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METEOROLOGICAL DATA REPORT

19702A GSRS
Missile No. BR-4
Round No. b-37
4 September 1979

by

White Sands Meteorological Team

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WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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19702A GSRS
Missile Number BR-4,
Round Number B-37, 4 September 1979.

AUTHOR
9
White Sands Meteorological Team
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SUPPLEMENTARY NOTES

- 1. Ballistics
- 2. Meteorology
- 3. Winds

Meteorological data gathered for the launching of 19702A GSRS, Missile Number BR-4, Round Number B-37, are presented in tabular form.

410 663

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Unannounced

Justification

By _____

Distribution/Availability codes

Dist	Available or special
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INTRODUCTION

19702A GSRS _____, Missile Number BR-4, Round Number R-37, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1145 MST, 4 September 1979. The scheduled launch time was 1145 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gr/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 global observation at:

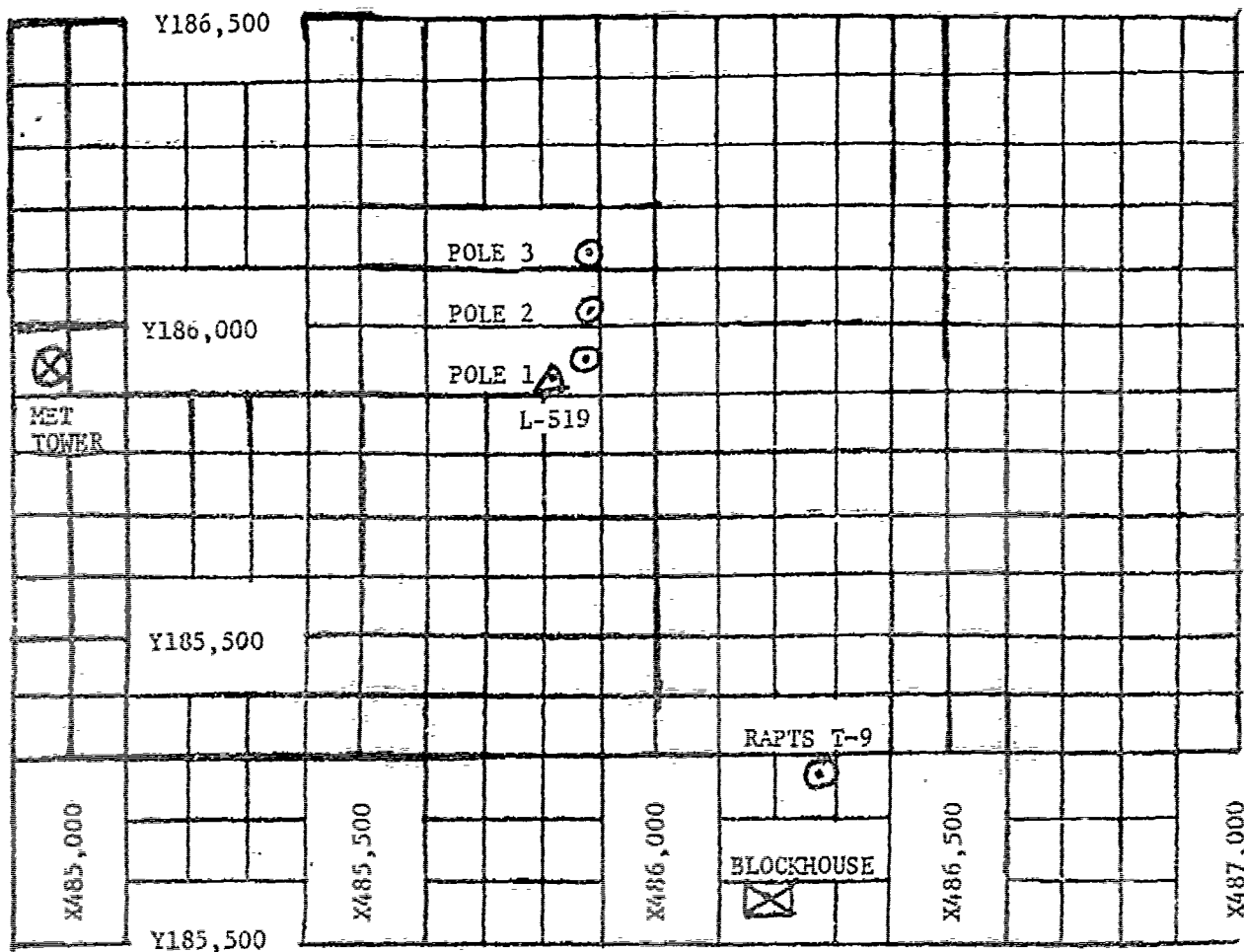
SITE AND ALTITUDE

LC-33	2040 Meters
NICK	2160 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 99,000 feet in 500-foot increments.

SITE AND TIME

SMR	1015 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. RAPT'S T-9 Radar Automatic Pilot-Balloon Tracking system T-9 Radar.

TABLE 1. Surface observations taken at 1145 MDT,
 4 September 1979, at LC-53, 1970CA GSRS
 Missile Number BR-4, Round Number B-37.

ELEVATION	3977.30	FT/MSL
PRESSURE	878.1	MBS
TEMPERATURE	28.2	°C
RELATIVE HUMIDITY	42	%
DEW POINT	14.0	°C
DENSITY	1007	GM/M ³
WIND SPEED	Calm	KTS
WIND DIRECTION		DEGREES
CLOUD COVER	1	Cu

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	134	03	-30	152	03	-30	135	02
-20	134	03	-20	146	03	-20	135	03
-10	132	04	-10	188	03	-10	125	03
0.0	159	04	0.0	126	03	0.0	126	03
+10	122	04	+10	-	02	+10	148	05

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft AGL

TABLE 2

TYPE 19702A GSRS MISSILE NO. BR-4 ROUND NO. B-37

LAUNCHED FROM LC-33 DATE 4 September 1979 TIME 1145 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 Feet			LEVEL #2 62 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	317	01	-30	297	02
-20	298	02	-20	294	03
-10	313	03	-10	294	03
0.0	310	01	0.0	288	03
+10	310	01	+10	286	03
LEVEL #3 102 Feet			LEVEL #4 202 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	328	01	-30		CALM
-20	319	02	-20		CALM
-10	319	01	-10		CALM
0.0	289	03	0.0		CALM
+10	302	01	+10		CALM

WTSM COORDINATES: X484,982.64 Y185, 1.73 H3983.00 (base)

TABLE 3

TYPE 19702A GSRS MISSILE NO. BR-4 ROUND NO. B-37

LAUNCHED FROM LC-33 DATE 4 September 1979 TIME 1745 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33 DATE 4 September 1979 TIME 1135 MDT

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

MISSILE TYPE 19702A GSRS MISSILE NO. BR-4 ROUND NO. B-37

MISSILE LAUNCHED FROM LC-33 DATE 4 September 1979 TIME 1145 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
500		CALM
60		CALM
120	222	01
180	189	06
240	159	06
300	186	05
360	161	04
420	167	04
480	171	05
540	140	03
600		CALM
660	014	03
720	097	04
780	099	01
840	007	03
900	322	03
960	344	02
1020	316	03
1080	270	05

HEIGHTS AGL	DIRECTION DEGREES	SPEED KTS
1140	275	05
1200	290	04
1260	291	05
1320	306	06
1380	319	07
1440	319	07
1500	345	10
1560	345	12
1620	351	14
1680	352	15
1740	350	15
1800	354	12
1860	355	12
1920	356	12
1980	352	11
2040	346	09
2100		
2160		
2220		

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33 DATE 4 September 1979 TIME 1145 MDT

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

MISSILE TYPE 19702A GSRS MISSILE NO. BR-4 ROUND NO. B-37

MISSILE LAUNCHED FROM LC-33 DATE 4 September 1979 TIME 1145 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
300		CALM
60	172	03
120	119	02
180	MISG	MISG
240	MISG	MISG
300	MISG	MISG
360	MISG	MISG
420	MISG	MISG
480	MISG	MISG
540	MISG	MISG
600	211	01
660	200	04
720	165	04
780	225	03
840	156	02
900	008	03
960	349	02
1020	003	02
1080	305	03

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1140	279	04
1200	278	06
1260	299	04
1320	327	05
1380	321	08
1440	323	07
1500	340	09
1560	341	11
1620	349	14
1680	346	15
1740	354	13
1800	355	14
1860	352	12
1920	350	14
1980	002	10
2040	345	10
2100		
2160		
2220		

PILOT BALLOON MEASURED WIND DATA

TABLE 6

RELEASED FROM NICK DATE 4 September 1979 TIME 1135 MDT

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

MISSILE TYPE 19702A GSR MISSILE NO. BR-4 ROUND NO. B-37

MISSILE LAUNCHED FROM LC-33 DATE 4 September 1979 TIME 1145 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
		CALM
60		CALM
120		CALM
180	333	03
240	315	03
300	017	02
360	011	02
420		CALM
480	276	01
540	312	01
600		CALM
660		CALM
720	183	02
780	175	03
840	193	03
900	173	04
960	191	04
1020	148	04
1080	158	03

HEIGHTS AGL	DIRECTION DEGREES	SPEED KTS
1140	143	03
1200	140	03
1260	122	04
1320	117	05
1380	105	05
1440	109	07
1500	098	08
1560	096	09
1620	091	08
1680	085	08
1740	083	07
1800	074	06
1860	085	06
1920	080	05
1980	084	04
2040	098	04
2100	086	05
2160	090	08
2220		

STATION ALTITUDE 3597.30 FEET MSL
 4 SEP 79
 (ASCENDING) 1000 290

SIGNIFICANT LEVEL DATA
 2470000290
 S M R

CELESTIC COORDINATES
 32.48034 LAT DEG
 100.42307 LONG DEG

TABLE 7

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT
878.0	3997.3	26.0	60.0
873.2	4155.2	25.7	51.0
850.0	4951.4	22.3	58.0
824.4	5803.9	20.5	62.0
785.8	7167.1	20.6	45.0
700.0	10413.4	13.8	52.0
639.4	12890.6	7.5	59.0
571.0	15919.2	-9.5	65.0
542.0	16308.8	-1.1	52.0
511.5	18788.0	-7.7	65.0
500.0	19355.3	-8.5	41.0
488.9	19933.5	-7.1	16.0
485.4	21030.0	-8.0	15.0
463.8	21448.9	-6.9	15.0
400.0	25032.9	-13.9	16.0
330.0	29692.4	-25.2	18.0
300.0	31994.1	-31.8	20.0
282.6	33347.5	-35.7	21.0
255.0	35701.8	-38.9	
250.0	36148.2	-40.1	
200.0	41040.1	-51.3	
165.0	44981.2	-60.2	
150.0	47023.8	-63.9	
135.2	49107.5	-68.1	
125.0	50633.9	-68.7	
114.2	51753.7	-70.0	
111.6	51893.2	-70.6	
105.0	52353.9	-72.8	
100.0	53009.8	-72.5	
70.0	55000.6	-72.5	
68.2	57474.5	-66.0	
60.2	59370.1	-65.6	
70.0	62113.0	-63.6	
50.0	64037.3	-57.3	
30.0	70013.4	-53.3	
20.0	76010.5	-45.0	
12.0	82015.1	-43.0	

STATION ALTITUDE 3997.30 FEET MSL
 4 SEP. 79 1015 HRS MST
 ASCENSION NO. 290

UPPER AIR DATA
 2470000290
 S M R

GEOMETRIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 8

GEOMETRIC ALTITUDE (MSL) FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND SPEED (M/S)	WIND DIRECTION (IN)	WIND SPEED (KNOTS)	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE						
3997.30	873.0	20.0	17.6	60.0	1013.6	676.8	00	0	1.000311
4000.00	877.9	26.0	17.6	59.8	1013.5	676.7	310.5	0	1.000311
4500.00	862.8	24.2	14.3	54.1	1003.6	674.2	310.5	0.9	1.000294
5000.00	848.0	22.2	13.6	58.3	993.4	671.6	310.5	1.9	1.000259
5500.00	833.2	21.1	13.2	60.6	979.0	670.0	310.5	2.8	1.000285
6000.00	818.7	20.5	12.4	59.6	964.8	669.6	305.0	3.2	1.000276
6500.00	804.5	20.6	10.7	53.3	948.4	669.7	249.0	3.7	1.000268
7000.00	790.4	20.6	8.9	47.1	932.3	669.5	233.5	4.6	1.000258
7500.00	776.5	19.9	7.9	45.7	915.3	668.3	232.5	4.3	1.000252
8000.00	762.8	18.9	7.2	46.8	905.5	667.4	291.5	4.0	1.000247
8500.00	749.4	17.8	6.6	47.9	892.8	666.2	327.1	7.6	1.000243
9000.00	736.1	16.8	6.0	49.0	880.3	664.9	341.0	9.9	1.000238
9500.00	723.1	15.7	5.3	50.0	865.0	663.7	349.5	12.1	1.000234
10000.00	710.4	14.7	4.7	51.1	855.9	662.4	352.0	12.1	1.000230
10500.00	697.8	13.6	4.0	52.1	844.1	661.1	354.0	11.7	1.000225
11000.00	685.2	12.3	3.0	52.9	832.7	659.0	350.1	9.9	1.000221
11500.00	672.8	11.0	2.0	53.8	821.4	658.1	357.5	8.1	1.000216
12000.00	660.7	9.8	1.1	54.6	810.4	656.5	358.0	6.2	1.000212
12500.00	648.7	8.5	0.1	55.4	799.5	655.0	352.5	4.2	1.000208
13000.00	636.9	7.2	-0.9	56.3	788.7	653.4	340.0	2.3	1.000203
13500.00	625.1	5.9	-1.8	57.6	777.9	651.0	330.7	1.6	1.000199
14000.00	613.5	4.6	-2.7	59.3	767.2	650.2	347.9	1.7	1.000195
14500.00	602.2	3.3	-3.6	60.8	756.7	648.0	13.7	2.7	1.000192
15000.00	591.0	1.9	-4.5	62.3	746.3	647.0	24.5	4.4	1.000188
15500.00	580.0	0.6	-5.4	63.8	736.1	645.4	24.5	6.4	1.000185
16000.00	569.2	0.0	-6.9	62.3	725.9	643.9	23.9	8.5	1.000180
16500.00	558.5	-1.6	-9.9	53.0	715.1	642.0	9.0	10.1	1.000174
17000.00	547.8	-2.9	-10.5	55.0	704.9	641.0	358.7	11.9	1.000171
17500.00	537.3	-4.3	-11.2	58.2	694.9	639.4	345.5	12.8	1.000168
18000.00	527.1	-5.8	-11.9	60.9	685.1	637.6	335.5	13.8	1.000166
18500.00	517.0	-6.9	-12.7	63.5	673.4	636.2	330.7	14.8	1.000163
19000.00	507.1	-8.0	-15.2	56.1	665.3	634.0	335.0	14.3	1.000158
19500.00	497.3	-8.2	-20.9	54.9	655.1	634.5	340.5	13.2	1.000152
20000.00	487.6	-7.2	-28.7	15.9	636.4	633.5	1	13.4	1.000145
20500.00	478.2	-7.6	-29.3	15.5	627.0	633.0	14.7	13.4	1.000143
21000.00	468.9	-8.0	-30.0	15.0	615.0	634.5	10.7	13.5	1.000140
21500.00	459.9	-7.0	-29.2	15.0	601.7	633.7	8.9	10.1	1.000137
22000.00	450.9	-8.0	-26.9	15.2	582.1	634.5	3.5	13.5	1.000135
22500.00	442.1	-9.0	-36.0	15.3	562.7	633.4	359.0	13.0	1.000132
23000.00	433.4	-9.9	-31.3	15.4	573.4	632.2	350.0	15.2	1.000130

STATION ALTITUDE 3997.30 FEET MSL
 10 SEP 79
 ASCENSION NO. 250

UPPER AIR DATA
 2470000290
 S M R

METRIC COORDINATES
 32.4034 LAT DEG
 106.42307 LON DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC MLTER	SPEED SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
4500.0	425.0	-10.9	15.6	564.3	611.0	354.0	15.3	1.000128
4400.0	416.6	-11.9	15.7	555.4	629.8	356.9	15.2	1.000126
4300.0	408.5	-12.9	15.9	546.5	646.0	359.0	15.1	1.000124
4200.0	400.5	-13.8	16.0	537.4	662.4	37	14.5	1.000122
4100.0	392.4	-15.0	16.2	529.5	678.0	2.0	14.0	1.000120
4000.0	384.5	-16.2	16.4	521.2	694.5	356.2	14.3	1.000118
3900.0	376.7	-17.5	16.6	513.1	711.0	350.7	14.7	1.000116
3800.0	369.0	-18.7	16.8	505.1	727.5	347.4	14.7	1.000114
3700.0	361.6	-19.9	17.1	497.3	744.1	344.1	14.7	1.000112
3600.0	354.3	-21.1	17.3	489.6	760.8	343.7	14.0	1.000110
3500.0	347.1	-22.3	17.5	482.0	777.1	343.4	13.4	1.000108
3400.0	340.1	-23.5	17.7	474.5	793.6	341.9	13.1	1.000107
3300.0	333.2	-24.7	17.9	467.2	810.1	339.9	13.0	1.000105
3200.0	326.3	-26.1	18.3	460.0	826.6	339.0	13.5	1.000103
3100.0	319.5	-27.5	18.7	453.0	843.1	340.0	13.9	1.000102
3000.0	312.8	-29.0	19.1	446.2	859.6	340.2	15.6	1.000100
2900.0	306.2	-30.4	19.6	439.4	876.0	339.1	18.1	1.000098
2800.0	299.8	-31.8	20.0	432.8	892.4	338.9	20.4	1.000097
2700.0	293.4	-33.3	20.4	426.0	908.8	335.9	22.3	1.000095
2600.0	287.1	-34.7	20.7	419.4	925.2	329.0	23.9	1.000094
2500.0	280.9	-35.9	19.6**	412.5	941.6	324.0	25.3	1.000092
2400.0	274.8	-36.6	15.2**	404.7	958.0	321.7	25.3	1.000090
2300.0	268.8	-37.3	10.7**	397.0	974.3	320.5	24.6	1.000089
2200.0	263.0	-37.9	6.3**	389.5	990.6	320.4	23.0	1.000087
2100.0	257.3	-38.6	1.8**	382.2	1006.9	322.9	20.1	1.000085
2000.0	251.8	-39.7		375.5	1023.2	321.7	18.7	1.000084
1900.0	246.0	-40.9		369.0	1039.5	321.1	18.0	1.000082
1800.0	240.5	-42.0		362.5	1055.8	324.9	19.1	1.000081
1700.0	235.1	-43.2		356.1	1072.1	323.1	20.2	1.000079
1600.0	229.8	-44.3		349.8	1088.4	323.5	21.0	1.000078
1500.0	224.6	-45.5		343.7	1104.7	320.4	21.3	1.000077
1400.0	219.5	-46.0		337.0	1121.0	320.7	21.7	1.000075
1300.0	214.6	-47.3		331.7	1137.3	320.0	22.3	1.000074
1200.0	209.3	-48.9		325.9	1153.6	325.2	23.0	1.000073
1100.0	205.0	-50.1		320.2	1169.9	324.0	23.5	1.000071
1000.0	200.4	-51.2		314.6	1186.2	322.0	24.1	1.000070
900.0	195.7	-52.3		308.8	1202.5	323.9	24.6	1.000069
800.0	191.1	-53.5		303.0	1218.8	323.9	24.1	1.000067
700.0	186.6	-54.6		297.4	1235.1	325.1	23.0	1.000066
600.0	182.2	-55.7		292.0	1251.4	320.0	22.0	1.000065

** 1 LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
 9 SEPT 79
 ASCENSION NO. 290

UPPER AIR DATA
 24700L0290
 S M H

GEODETIC COORDINATES
 52.48034 LAT DEG
 106.42307 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSE FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPLD OF SOUND KNOTS	WAVELENGTH (M)	WIND SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE						
43500.0	177.9	-56.8			28.6	573.0	328.0	21.7	1.000064
44000.0	173.7	-58.0			281.3	571.5	329.2	20.3	1.000063
44500.0	169.7	-59.1			276.1	570.0	330.7	18.6	1.000061
45000.0	165.7	-60.2			271.0	568.5	332.0	16.6	1.000060
45500.0	161.6	-61.1			265.6	567.3	334.8	14.7	1.000059
46000.0	157.7	-62.0			260.3	566.0	337.2	12.9	1.000058
46500.0	153.9	-63.0			255.1	564.6	340.5	11.1	1.000057
47000.0	150.2	-63.9			250.0	563.0	343.5	10.7	1.000056
47500.0	146.5	-64.9			245.0	562.2	346.4	10.3	1.000055
48000.0	142.9	-65.9			240.1	560.9	349.0	10.1	1.000053
48500.0	139.3	-66.9			235.3	559.5	351.1	9.9	1.000052
49000.0	135.9	-67.9			230.8	558.1	353.1	8.7	1.000051
49500.0	132.5	-68.3			225.3	557.7	355.1	6.2	1.000050
50000.0	129.2	-68.4			219.9	557.4	357.0	3.7	1.000049
50500.0	126.0	-68.6			214.6	557.1	359.0	1.8	1.000048
51000.0	122.8	-69.3			209.9	556.2	361.0	2.0	1.000047
51500.0	119.7	-70.2			205.5	555.0	362.2	3.6	1.000046
52000.0	116.7	-70.6			200.7	554.4	363.3	4.4	1.000045
52500.0	113.8	-70.6			195.7	554.4	364.2	5.1	1.000044
53000.0	110.9	-70.9			191.0	554.0	365.5	5.4	1.000043
53500.0	108.1	-71.9			187.1	552.7	367.0	6.1	1.000042
54000.0	105.3	-72.8			183.2	551.4	368.1	6.1	1.000041
54500.0	102.7	-72.6			178.4	551.6	369.1	6.1	1.000040
55000.0	100.1	-72.5			173.7	551.8	370.3	4.7	1.000039
55500.0	97.5	-72.5			169.3	551.8	371.0	1.6	1.000038
56000.0	95.1	-71.2			164.0	552.0	371.0	2.1	1.000037
56500.0	92.7	-69.5			159.5	552.0	370.0	4.4	1.000035
57000.0	90.3	-67.7			153.2	550.4	367.0	7.9	1.000034
57500.0	88.1	-66.0			146.1	548.7	362.5	11.9	1.000033
58000.0	85.9	-66.2			144.6	548.5	364.4	16.4	1.000032
58500.0	83.8	-66.3			141.1	548.0	365.5	22.3	1.000031
59000.0	81.7	-66.5			137.6	548.1	366.5	21.5	1.000031
59500.0	79.7	-65.9			134.3	548.0	367.0	20.5	1.000030
60000.0	77.8	-65.4			130.7	548.3	367.0	18.5	1.000029
60500.0	75.8	-64.6			127.2	548.0	367.0	15.5	1.000028
61000.0	74.0	-64.6			123.7	547.5	367.0	13.4	1.000028
61500.0	72.2	-64.3			120.4	547.0	367.0	13.1	1.000027
62000.0	70.4	-63.7			117.1	546.0	367.0	12.8	1.000026
62500.0	68.7	-63.2			114.0	544.4	367.0	12.5	1.000025
63000.0	67.0	-62.0			111.0	543.0	367.0	11.1	1.000025

GEODETIC COORDINATES
32.40034 LAT DEG
100.42307 LONG DEG

UPPER AIR DATA
2470000290
S W K

STATION ALTITUDE 3997.30 FEET MSL
4 SEP 79
ASCENDING NO. 290

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC MLTER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (T)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	65.4	-62.3			100.1	505.0	131.2	11.7	1.000024
64000.0	65.9	-61.9			105.3	500.3	121.7	12.6	1.000023
64500.0	62.3	-61.4			102.0	500.9	115.2	13.9	1.000023
65000.0	60.8	-61.0			95.9	567.3	107.0	15.2	1.000022
65500.0	59.4	-60.5			97.3	566.1	107.5	15.7	1.000022
66000.0	58.0	-60.1			94.7	568.7	107.3	16.3	1.000021
66500.0	56.6	-59.6			92.3	569.3	100.8	15.9	1.000021
67000.0	55.2	-59.2			89.9	569.9	105.1	14.8	1.000020
67500.0	53.9	-58.7			87.5	570.5	105.2	13.8	1.000019
68000.0	52.6	-58.2			85.2	571.1	97.3	12.5	1.000019
68500.0	51.3	-57.8			83.0	571.7	87.1	11.4	1.000018
69000.0	50.1	-57.3			80.9	572.3	78.4	11.1	1.000018
69500.0	48.9	-57.1			78.9	572.8	78.4	12.0	1.000018
70000.0	47.7	-56.9			77.0	572.8	79.3	12.8	1.000017
70500.0	46.7	-56.8			75.1	573.1	79.6	13.9	1.000017
71000.0	45.6	-56.6			73.3	573.3	64.2	15.8	1.000016
71500.0	44.5	-56.4			71.5	573.8	67.0	17.7	1.000016
72000.0	43.4	-56.2			68.8	573.8	69.6	19.1	1.000016
72500.0	42.4	-56.0			66.1	574.1	90.0	19.3	1.000015
73000.0	41.4	-55.8			63.4	574.3	90.4	19.6	1.000015
73500.0	40.5	-55.6			61.7	574.8	91.2	19.9	1.000014
74000.0	39.5	-55.5			60.2	575.0	92.5	20.4	1.000014
74500.0	38.6	-55.3			61.7	575.0	93.7	20.9	1.000014
75000.0	37.7	-55.1			60.2	575.3	95.1	21.5	1.000013
75500.0	36.8	-54.9			58.7	575.5	95.5	22.0	1.000013
76000.0	35.9	-54.7			57.3	575.8	97.9	22.5	1.000013
76500.0	35.1	-54.5			55.9	576.0	98.0	22.9	1.000012
77000.0	34.3	-54.3			54.6	576.3	98.0	23.0	1.000012
77500.0	33.5	-54.2			53.3	576.5	94.1	23.1	1.000012
78000.0	32.7	-54.0			52.0	576.8	91.0	23.2	1.000012
78500.0	31.9	-53.8			50.7	577.0	83.0	23.3	1.000011
79000.0	31.2	-53.6			49.5	577.2	64.5	23.4	1.000011
79500.0	30.4	-51.4			48.3	577.3	63.0	23.6	1.000011
80000.0	29.7	-53.1			47.1	577.9	65.1	24.4	1.000010
80500.0	29.1	-52.7			45.9	578.5	67.2	25.0	1.000010
81000.0	28.4	-52.2			44.0	579.1	69.2	25.7	1.000010
81500.0	27.8	-51.7			43.7	579.7	91.3	26.5	1.000010
82000.0	27.1	-51.2			42.6	580.3	93.3	27.4	1.000009
82500.0	26.5	-50.8			41.5	581.0	94.9	28.2	1.000009
83000.0	25.9	-50.3			40.5	581.6	94.0	29.1	1.000009

STATION ALTITUDE 3997.30 FEET MSL
 4 SEP. 79
 ASCENSION NO. 290

UPPLK AIR DATA
 247000256
 S M R

3997.30 FEET MSL
 1015 HRS MST

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE (MSL) FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED SOUND KNOTS	ANGLE OF DEVIATION DEGREES (W)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	25.3	-49.8		39.5	582.2	94.4	30.0	1.000009
64000.0	24.7	-49.4		39.5	582.6	94.1	30.9	1.000009
64500.0	24.2	-48.9		37.6	583.4	95.1	32.4	1.000008
65000.0	23.6	-48.4		36.6	584.0	96.1	34.0	1.000008
65500.0	23.1	-47.9		35.7	584.6	97.1	35.6	1.000008
66000.0	22.6	-47.5		34.8	585.3	97.9	36.5	1.000008
66500.0	22.0	-47.0		34.0	585.9	98.4	36.4	1.000007
67000.0	21.5	-46.5		33.1	586.5	99.0	36.4	1.000007
67500.0	21.1	-46.1		32.3	587.1	99.3	36.1	1.000007
68000.0	20.6	-45.6		31.5	587.7	99.4	34.7	1.000007
68500.0	20.1	-45.1		30.7	588.3	97.5	33.2	1.000007
69000.0	19.7	-44.9		30.0	588.5	96.5	31.7	1.000007
69500.0	19.2	-44.8		29.3	588.7	96.1	30.5	1.000007
90000.0	18.8	-44.7		28.7	588.8	95.9	29.4	1.000006
90500.0	18.4	-44.6		28.0	588.9	95.7	28.2	1.000006
91000.0	18.0	-44.5		27.4	589.0	96.1	27.2	1.000006
91500.0	17.6	-44.4		26.8	589.2	97.0	26.2	1.000006
92000.0	17.2	-44.4		26.2	589.3	99.2	25.2	1.000006
92500.0	16.8	-44.3		25.6	589.4	101.0	24.3	1.000006
93000.0	16.4	-44.2		25.0	589.5	99.9	24.1	1.000006
93500.0	16.1	-44.1		24.4	589.6	98.7	24.0	1.000005
94000.0	15.7	-44.0		23.9	589.6	97.6	24.0	1.000005
94500.0	15.3	-43.9		23.3	589.9	97.0	24.8	1.000005
95000.0	15.0	-43.8		22.8	590.0	98.5	26.3	1.000005
95500.0	14.7	-43.7		22.3	590.1	99.2	27.8	1.000005
96000.0	14.3	-43.6		21.8	590.3	99.2		1.000005
96500.0	14.0	-43.5		21.3	590.4			1.000005
97000.0	13.7	-43.4		20.8	590.5			1.000005
97500.0	13.4	-43.3		20.3	590.6			1.000005
98000.0	13.1	-43.2		19.9	590.6			1.000004
98500.0	12.8	-43.1		19.4	590.9			1.000004
99000.0	12.5	-43.0		19.0	591.0			1.000004

STATION ALTITUDE 3997.30 FEET MSL
 4 SEP. 79
 ASCENSION NO. 290

MANDATORY LEVELS
 24700.0290
 S M R

GEODETTIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG DEG

TABLE 9

PRESSURE		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION (IN)	SPEED KNOTS	
850.0	4928.	22.3	13.0	58.	316.5	1.7	
800.0	6653.	20.6	10.2	51.	238.7	4.3	
750.0	8478.	17.9	6.7	48.	226.4	7.5	
700.0	10403.	13.6	4.1	52.	354.0	12.0	
650.0	12436.	8.6	.2	55.	353.1	4.4	
600.0	14569.	3.0	-3.8	61.	10.9	3.0	
550.0	16880.	-2.7	-10.4	55.	1.0	11.6	
500.0	19332.	-8.5	-19.3	41.	342.8	13.4	
450.0	22022.	-8.1	-29.9	15.	3.0	13.5	
400.0	24991.	-13.9	-34.2	16.	.8	14.5	
350.0	28267.	-21.8	-40.0	17.	343.5	13.6	
300.0	31914.	-31.8	-47.1	20.	337.1	20.3	
250.0	36065.	-40.1			324.4	18.3	
200.0	40945.	-51.3			322.8	24.2	
175.0	43752.	-57.6			328.8	20.7	
150.0	46895.	-63.9			339.5	10.7	
125.0	50506.	-68.7			288.4	1.5	
100.0	54836.	-72.5			256.9	4.8	
80.0	59228.	-66.5			131.8	20.7	
70.0	61698.	-63.6			133.7	12.8	
60.0	65024.	-60.7			107.7	15.4	
50.0	68776.	-57.3			78.4	11.1	
40.0	73423.	-55.6			91.7	20.1	
30.0	79470.	-53.3			84.2	24.1	
25.0	83355.	-49.6			94.3	30.3	
20.0	86190.	-43.0			97.4	33.0	
15.0	94522.	-43.8			98.4	20.1	