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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

1. REPORT NUMBER DR-1877		2. GOVERNMENT AGENCY NAME AND ADDRESS		3. REPORT TYPE AND PERIOD COVERED	
4. AUTHOR(s) White Sands Meteorological Team		5. PERFORMING ORG. REPORT NUMBER		6. CONTRACT OR GRANT NUMBER(s) DA Task 1F6657820127-02	
7. AUTHORING ORGANIZATION NAME AND ADDRESS data rept.		8. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, NM 88002		9. REPORT DATE October 1979	
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Cmd Adelphi, MD 20783		11. NUMBER OF PAGES 28	
11. CONTROLLING OFFICE NAME AND ADDRESS		12. SECURITY CLASS. (of this report) UNCLASSIFIED		13. DECLASSIFICATION/DOWNGRADING SCHEDULE	
14. DISTRIBUTION STATEMENT (of this Report) 13, 24					
15. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved of public release; distribution unlimited.					
16. SUPPLEMENTARY NOTES					
17. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind					
18. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19702A GSRS, Missile Numbers BR-5, BR-6, Round Numbers B-41, B-42, are presented in tabular form.					

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INTRODUCTION

19702A GSRS _____, Missile Numbers BR-5 and BR-6, Round Numbers B-41 and B-42, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0905:35 AND 0945:06 MDT 17 October 1979. The scheduled launch times were 0900 and 0945 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

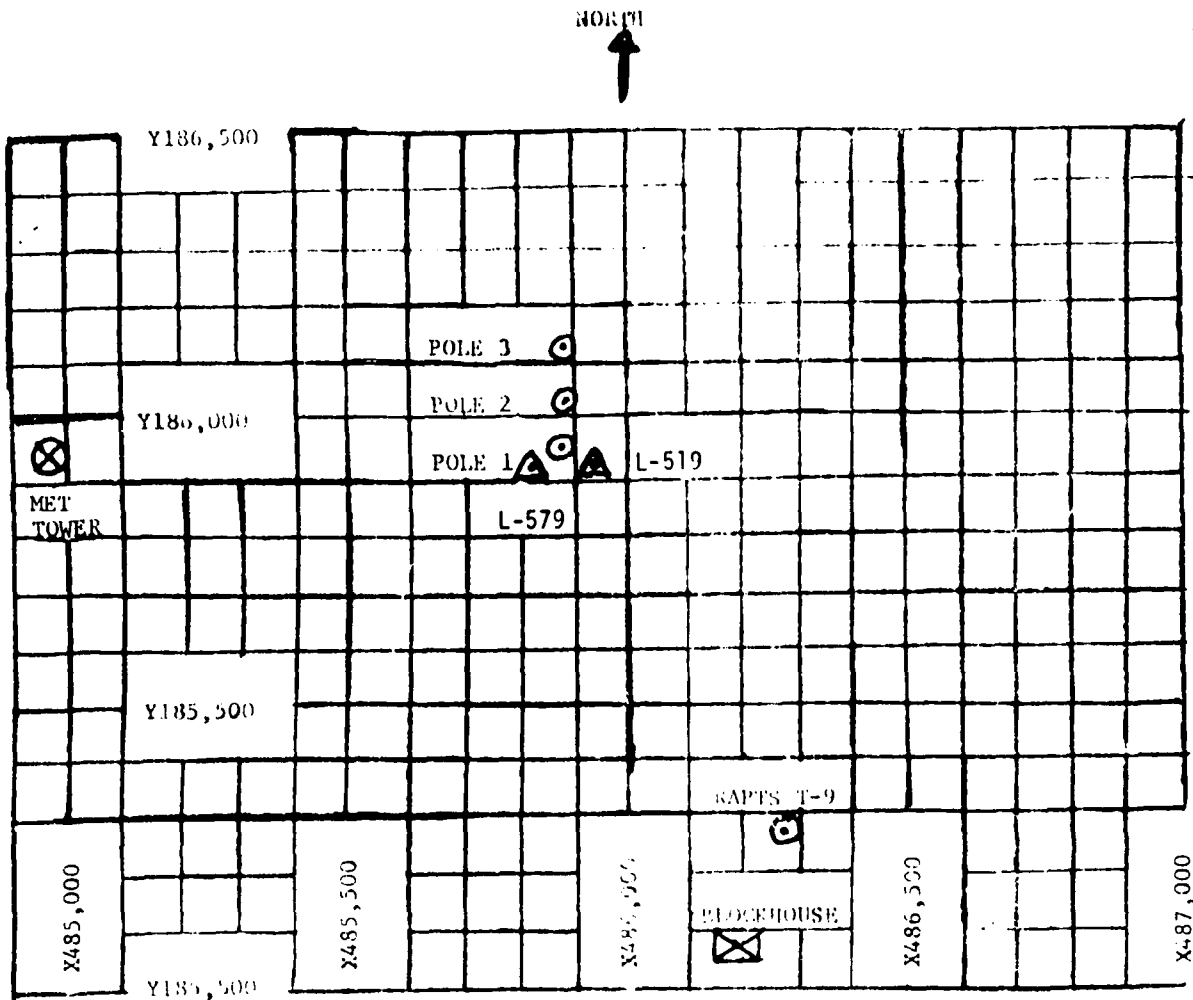
LC-33 2 Km
NICK 2 Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 81,000 feet in 500-foot increments.

SITE AND TIME

SMR 0815 MST

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DOC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/ _____	
Availability Codes	
Dist	Avail and/or special
A	254



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 10 ft, 30 ft, 102 ft, and 102 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.

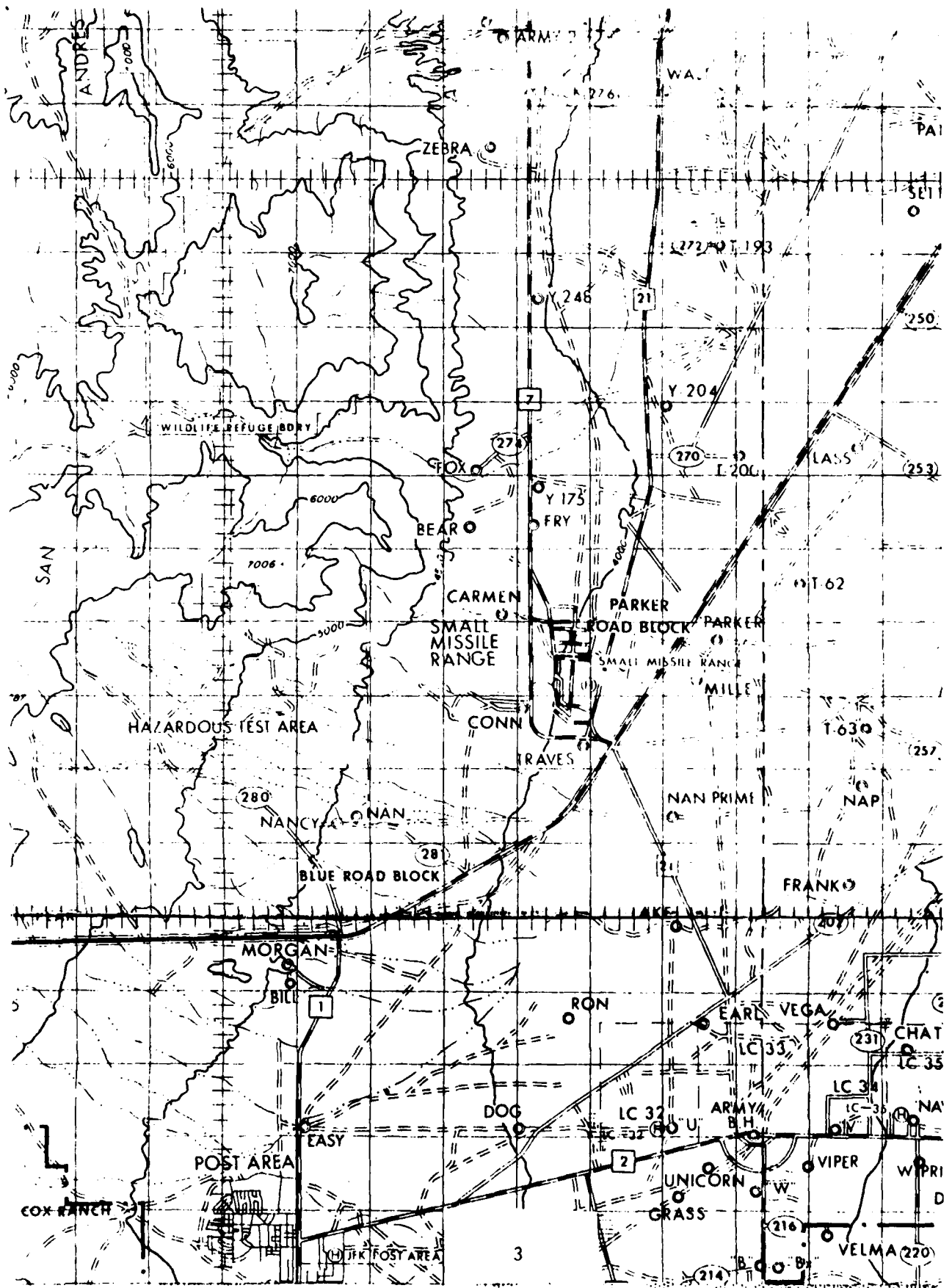


TABLE 1. Surface Observations taken at 0600 Jt,
 17 October 1979, at LC-33, 19702A GSRS,
 Missile Number BR-5, Round Number B-41.

ELEVATION	3977.30	FT/MSL
PRESSURE	881.9	MBS
TEMPERATURE	15.5	°C
RELATIVE HUMIDITY	48	%
DEW POINT	4.5	°C
DENSITY	1059	GM/M ³
WIND SPEED	03	KTS
WIND DIRECTION	190	DEGREES
CLOUD COVER	2	Ac
CLOUD COVER	4	Ci

LC-33 FIXED POLE ANEMOMETER MEASUREMENTS

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	180	01	-30		CALM	-30	122	01
-20	180	01	-20		CALM	-20	140	02
-10	174	01	-10	153	01	-10	121	02
0.0	174	01	0.0	153	02	0.0	114	02
+10	174	02	+10	160	02	+10	128	03

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 GSR MISSILE NO. BR-5 ROUND NO. B-41

LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0905:35 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASUREMENTS (17 OCT 1979)

LEVEL #1 12 Feet			LEVEL #2 60 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	135	02	-30	120	03
-20	134	03	-20	120	02
-10	134	03	-10	120	01
0.0	134	02	0.0	120	01
+10	134	02	+10		CALM
LEVEL #3 102 Feet			LEVEL #4 202 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	096	03	-30	072	03
-20	088	03	-20	072	04
-10	092	03	-10	087	03
0.0	110	03	0.0	084	03
+10	114	02	+10	084	03

WTSM COORDINATES: X484,982.64 Y185,057.73 H3983.00 (base)

TABLE 3

TYPE 19702A GSRs MISSILE NO. BR-5 ROUND NO. B-41

LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0905:35 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33 DATE 17 October 1979 TIME 0905 MDT
 TRACKER _____ COORDINATES (WSTM) X= 486.037.24 Y= 182.350.16 H= 3977.30
 MISSILE TYPE 19702A GSRS MISSILE NO. BR-5 ROUND NO. B-41
 MISSILE LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0905:35 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	180	02						
90	131	04						
150	037	07						
210	015	09						
270	017	12						
330	017	15						
390	015	07						
500	MISG	MISG						
650	124	05						
800	109	11						
950	116	13						
1150	167	09						
1350	207	07						
1550	217	08						
1750	230	08						
2000	236	09						

TABLE 1. Surface Observations taken at 0945 MDT,
 17 October 1979, at LC-33, 19702A GSRs,
 Missile Number BR-6, Round Number B-42.

ELEVATION	3977.30	FT/MSL
PRESSURE	882.2	MBS
TEMPERATURE	19.0	°C
RELATIVE HUMIDITY	39	
DEW POINT	4.8	°C
DENSITY	1047	GM/M ³
WIND SPEED	08	KTS
WIND DIRECTION	360	DEGREES
CLOUD COVER	1	Ac
CLOUD COVER	4	Ci

LC-33 FIXED POLE ANEMOMETER MEASURED WIND

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	027	05	-30	009	06	-30	036	06
-20	030	06	-20	015	06	-20	024	07
-10	024	06	-10	023	05	-10	016	08
0.0	016	05	0.0	018	06	0.0	033	07
+10	028	06	+10	012	06	+10	027	06

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 9

TYPE 1970A GSRS MISSILE NO. BR-6 ROUND NO. B-42

LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0945:06 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	021	02	-30	005	05
-20	014	03	-20	006	05
-10	357	04	-10	017	06
0.0	360	04	0.0	023	06
+10	012	04	+10	002	04
LEVEL #3 102 Feet			LEVEL #4 202 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	005	04	-30	009	06
-20	005	04	-20	009	04
-10	015	05	-10	360	06
0.0	352	05	0.0	346	06
+10	353	05	+10	357	05

WTSM COORDINATES: X484,982.64 Y185,057.73 H3983.00 (base)

TABLE 10

TYPE 19702A GSRS MISSILE NO. BR-6 ROUND NO. B-42

LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0945:06 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 11

RELEASED FROM LC-33 DATE 17 October 1979 MI 0900 MDT
 TRACKER COORDINATES (WSTM) X=486,037.24 Y=182,350.16 H=3977.30
 MISSILE TYPE 19702A GSRS MISSILE NO. BR-6 ROUND NO. B-42
 MISSILE LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0945:06 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	070	04						
90	MISG	MISG						
150	036	07						
210	017	09						
270	021	12						
330	012	14						
390	006	12						
500	034	05						
650	092	05						
800	101	11						
950	114	14						
1150	143	08						
1350	181	08						
1550	205	09						
1750	220	09						
2000	222	08						

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 12

RELEASED FROM LC-33 DATE 17 October 1979 TIME 0945 MDT
 TRACKER COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30
 MISSILE TYPE 19702A GSRS MISSILE NO. BR-6 ROUND NO. B-42
 MISSILE LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0945:06 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	360	07						
90	MISG	MISG						
150	009	09						
210	017	09						
270	003	10						
330	359	09						
390	024	07						
500	073	05						
650	090	06						
800	104	13						
950	122	13						
1150	144	09						
1350	192	06						
1550	211	10						
1750	212	08						
2000	218	09						

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 13

RELEASED FROM NICK DATE 17 October 1979 TIME 0935 MDT
 TRACKER COORDINATES (WSTM) X= 470,734.56 Y= 255,775.64 H= 4126.57
 MISSILE TYPE 19702A GSRS MISSILE NO. BR-6 ROUND NO. B-42
 MISSILE LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0945:06 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	310	02						
90	MISG	MISG						
150	276	10						
210	277	09						
270	251	10						
330	236	07						
390	233	07						
500	188	06						
650	152	06						
800	114	05						
950	085	06						
1150	066	10						
1350	063	08						
1550	134	05						
1750	172	07						
2000	178	06						

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 14

RELEASED FROM NICK DATE 17 October 1979 TIME 0945 MDT
 TRACKER COORDINATES (WSTM) X= 470,734.56 Y= 255,775.64 H= 4126.57
 MISSILE TYPE 19702A GSRS MISSILE NO. BR-6 ROUND NO. B-42
 MISSILE LAUNCHED FROM LC-33 DATE 17 October 1979 TIME 0945:06 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	300	02						
90	MISG	MISG						
150	320	10						
210	291	08						
270	255	09						
330	291	04						
390	301	07						
500	230	09						
650	180	05						
800	130	07						
950	115	04						
1150	116	08						
1350	120	09						
1550	134	08						
1750	154	06						
2000	191	04						

STATION ALTITUDE 3997.30 FEET MSL
 17 OCT. 79 0815 MRS MST
 ASCENSION NO. 303

SIGNIFICANT LEVEL DATA
 290000353
 5 M R

GEODETIC COORDINATES
 32.40034 LAT DEG
 106.42307 LON DEG

TABLE 15

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUMID. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	
600.9	3997.3	17.0	0.0	51.0
673.0	4246.5	14.5	.4	58.0
650.0	4990.1	15.1	.5	57.0
603.8	6370.1	14.5	-.8	55.0
778.0	7444.9	13.1	-1.0	56.0
728.8	9252.5	11.9	-3.0	55.0
704.0	10349.2	9.8	-9.3	25.0
699.8	10709.3	9.5	-12.3	20.0
602.2	14397.7	1.7	-14.0	50.0
573.2	15697.7	-1.7	-10.7	50.0
501.0	16239.1	-3.5	-12.9	48.0
545.0	17008.8	-5.6	-12.5	58.0
533.8	17553.7	-6.1	-15.5	47.0
514.4	18492.2	-8.9	-29.2	23.0
500.0	19213.0	-10.5	-25.4	28.0
459.3	21340.3	-16.0	-24.7	50.0
444.3	21912.5	-16.9	-31.0	26.0
402.4	24574.4	-23.3	-35.0	53.0
400.0	24718.3	-24.1	-30.0	58.0
308.6	30764.9	-38.8	-40.7	62.0
300.0	31402.2	-40.0	-42.1	50.0
263.0	34314.9	-47.5	-49.3	51.0
250.0	35411.4	-50.4		
235.0	36733.9	-52.8		
226.0	37503.3	-53.0		
200.0	40140.9	-56.3		
181.0	42220.5	-57.1		
154.4	45509.2	-61.4		
150.0	46100.7	-61.2		
119.6	50679.5	-66.5		
100.0	54248.4	-67.1		
61.0	58233.8	-68.9		
75.0	59801.3	-66.7		
70.0	61330.8	-68.6		
63.6	63244.0	-65.1		
55.2	66111.5	-62.7		
50.0	66150.9	-60.5		
46.0	69504.6	-61.0		
40.8	72343.4	-55.7		
35.2	75449.8	-56.7		

STATION ALTITUDE 3997.30 FEET MSL
17 OCT. 79 0815 HRS MST
ASCENSION NO. 303

SIGNIFICANT LEVEL DATA
29000.035J
5 M R

GEOLYTIC COORDINATES
32.40034 LAT DLG
100.42307 LON DLG

TABLE 15 (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEGREE DEGREES CENTIGRADE	REL. HUMID. PERCENT
30.0 76607.2	-55.9	
26.8 81200.5	-52.4	

STATION ALTITUDE 3997.30 FEET MSL
 17 OCT. 79 0615 HRS MST
 ASCENSION NO. 353

UPPER AIR DATA
 2900000353
 S M K

GEODETIC COORDINATES
 32.40034 LAT DEG
 100.42307 LONG DEG

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/S	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (T)	SPEED M/S	
3997.3	800.9	17.0	51.0	1053.2	005.0	105.0	6.0	1.000279
4000.0	800.8	17.0	50.9	1053.2	005.0	105.0	6.0	1.000279
4500.0	805.1	14.7	37.7	1044.1	001.9	100.0	5.6	1.000251
5000.0	849.7	15.1	37.0	1024.0	002.4	100.4	5.2	1.000257
5500.0	834.5	14.9	36.3	1000.6	002.1	190.0	4.8	1.000252
6000.0	819.0	14.7	35.5	989.4	001.0	193.1	4.4	1.000248
6500.0	805.0	14.5	35.1	972.9	001.4	100.3	5.4	1.000245
7000.0	790.0	13.7	35.6	957.7	000.7	145.1	8.4	1.000239
7500.0	775.4	13.1	35.9	942.0	000.0	142.4	10.5	1.000235
8000.0	762.5	12.7	35.1	925.8	009.5	148.0	11.1	1.000230
8500.0	740.8	12.0	34.2	911.2	009.1	159.0	10.1	1.000226
9000.0	735.3	12.1	33.4	895.9	000.7	195.2	8.0	1.000222
9500.0	722.0	11.4	31.2	881.9	007.9	221.0	8.7	1.000216
10000.0	709.0	10.5	27.5	865.2	000.7	230.5	9.1	1.000210
10500.0	696.1	9.7	22.9	850.2	005.7	230.5	9.9	1.000204
11000.0	683.4	8.9	20.0	843.0	004.7	223.2	11.3	1.000199
11500.0	670.8	7.3	22.1	830.0	003.5	219.0	13.4	1.000190
12000.0	658.4	6.8	23.5	810.5	002.2	217.7	15.9	1.000194
12500.0	646.3	5.7	24.9	800.5	001.0	210.0	16.9	1.000191
13000.0	634.4	4.7	26.2	794.4	009.0	210.4	17.1	1.000188
13500.0	622.7	3.6	27.6	782.8	006.5	215.4	15.4	1.000185
14000.0	611.2	2.5	28.9	771.3	007.3	213.7	12.7	1.000182
14500.0	599.9	1.4	31.6	760.0	006.0	211.9	10.6	1.000180
15000.0	588.6	.1	39.3	749.2	004.5	210.1	9.0	1.000179
15500.0	577.5	-1.2	47.0	730.5	003.0	203.7	9.4	1.000178
16000.0	566.0	-2.7	48.9	720.6	001.2	201.4	11.3	1.000175
16500.0	555.8	-4.2	51.2	710.7	009.4	199.0	13.0	1.000172
17000.0	545.2	-5.6	57.9	700.0	007.0	197.5	14.5	1.000170
17500.0	534.7	-6.1	48.1	690.5	007.1	197.0	15.6	1.000165
18000.0	524.4	-7.4	35.6	680.9	005.3	193.7	16.4	1.000160
18500.0	514.2	-8.9	23.1	677.0	003.4	201.1	17.8	1.000155
19000.0	504.2	-10.0	26.5	667.2	002.1	204.1	19.8	1.000153
19500.0	494.3	-11.2	31.9	657.1	000.7	200.9	21.7	1.000151
20000.0	484.5	-12.5	38.4	647.2	009.1	209.0	23.6	1.000149
20500.0	475.0	-13.8	44.9	637.0	007.6	211.5	24.0	1.000147
21000.0	465.6	-15.1	51.5	625.1	006.0	213.0	25.4	1.000145
21500.0	456.3	-16.3	47.0	610.4	004.0	215.2	25.5	1.000142
22000.0	447.2	-17.1	26.2	600.2	003.5	210.3	25.3	1.000138
22500.0	438.1	-18.3	27.5	590.7	002.0	221.9	25.2	1.000136
23000.0	429.2	-19.5	20.9	589.3	020.5	220.2	25.4	1.000133

GEODETIC COORDINATES
 32°40'05.4" LAT DEG
 106°42'50.7" LONG DEG

UPPER AIR DATA
 29000000000
 S M R

STATION ALTITUDE 3997.30 FEET MSL
 17 OCT. 79 0015 HRS MST
 ASCENSION NO. 353

TABLE 16 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SOUND METERS PER SECOND	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DWPOINT CENTIGRADE				DIRECTION DEGREES (T...)	SPEED KNOTS	
23500.0	429.5	-20.7	-33.6	30.2	580.1	019.1	229.7	26.1	1.000131
24000.0	412.0	-21.9	-34.3	31.5	571.1	017.0	231.6	27.7	1.000129
24500.0	403.5	-23.1	-34.9	32.8	562.2	016.1	233.4	29.1	1.000127
25000.0	395.2	-24.8	-35.4	34.1	554.0	014.1	234.2	30.4	1.000126
25500.0	386.9	-26.0	-35.2	35.1	545.0	012.0	235.0	31.7	1.000124
26000.0	378.6	-27.2	-35.1	36.1	536.1	011.1	235.9	33.1	1.000122
26500.0	370.3	-28.4	-34.9	37.1	527.3	009.0	236.9	34.4	1.000120
27000.0	362.7	-29.6	-34.8	38.1	518.7	008.5	238.4	35.2	1.000118
27500.0	355.0	-30.9	-34.6	39.0	510.3	008.0	240.0	35.8	1.000116
28000.0	347.5	-32.1	-35.5	40.0	502.0	007.0	242.2	35.4	1.000114
28500.0	340.1	-33.3	-36.4	41.0	493.8	006.4	244.0	35.6	1.000112
29000.0	332.9	-34.5	-37.4	42.0	485.6	005.9	244.5	37.2	1.000110
29500.0	325.8	-35.7	-38.3	43.0	477.9	005.4	244.0	38.9	1.000108
30000.0	318.9	-36.9	-39.2	44.0	470.2	005.0	244.5	40.4	1.000106
30500.0	312.1	-38.2	-40.2	45.0	462.6	004.5	239.7	41.8	1.000104
31000.0	305.4	-39.2	-41.2	46.0	454.7	004.0	238.1	42.0	1.000102
31500.0	298.7	-40.3	-42.3	47.0	446.7	003.5	232.7	42.5	1.000100
32000.0	292.0	-41.5	-43.6	48.0	439.1	003.0	231.5	44.4	1.000099
32500.0	285.5	-42.8	-44.8	49.0	431.7	002.5	230.5	46.4	1.000097
33000.0	279.1	-44.1	-46.1	50.0	424.3	002.0	230.9	47.8	1.000095
33500.0	272.9	-45.4	-47.3	51.0	417.3	001.5	231.5	49.2	1.000094
34000.0	266.8	-46.7	-48.6	52.0	410.3	001.0	231.5	51.2	1.000092
34500.0	260.8	-48.0	-51.4	53.0	403.4	000.5	231.6	53.3	1.000090
35000.0	254.8	-49.3	-53.1	54.0	396.5	000.0	232.0	55.6	1.000088
35500.0	249.0	-50.6	-54.8	55.0	389.6	000.0	232.5	58.4	1.000087
36000.0	243.2	-51.5	-56.4	56.0	382.2	000.0	233.1	57.7	1.000085
36500.0	237.6	-52.4	-57.9	57.0	374.9	000.0	233.6	56.7	1.000083
37000.0	232.1	-52.9	-59.0	58.0	367.0	000.0	234.0	55.4	1.000082
37500.0	226.7	-53.0	-60.1	59.0	359.7	000.0	235.9	54.0	1.000080
38000.0	221.4	-53.6	-61.1	60.0	351.2	000.0	237.1	52.1	1.000078
38500.0	216.2	-54.2	-62.1	61.0	344.0	000.0	238.0	49.8	1.000077
39000.0	211.1	-54.8	-63.1	62.0	336.9	000.0	239.6	47.1	1.000075
39500.0	206.2	-55.5	-64.1	63.0	330.0	000.0	240.1	43.7	1.000073
40000.0	201.3	-56.1	-65.1	64.0	323.2	000.0	239.4	41.7	1.000072
40500.0	196.6	-56.4	-66.1	65.0	316.0	000.0	239.0	42.9	1.000070
41000.0	191.9	-56.8	-67.1	66.0	308.8	000.0	239.0	44.4	1.000069
41500.0	187.4	-57.1	-68.1	67.0	301.6	000.0	239.0	46.5	1.000067
42000.0	183.0	-57.0	-69.1	68.0	294.9	000.0	239.1	48.6	1.000066
42500.0	178.6	-57.5	-70.1	69.0	288.5	000.0	239.5	49.5	1.000064
43000.0	174.3	-58.1	-71.1	70.0	282.4	000.0	237.6	49.9	1.000063

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

STATION ALTITUDE 3997.30 FEET MSL
 17 OCT. 79 0315 HRS MST
 ASCENDING NO. 353

UPPER AIR DATA
 290000055
 S M R

GEODETIC COORDINATES
 32.48054 LAT DEG
 106.42307 LONG DEG

TABLE 16 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED KNOTS	DIR. REL. TO DEG. (true)	WIND DATA DEGREES (true)	SPEED KNOTS	INDEX OF REFRACTION
4350.0	170.2	-58.8		270.5	570.4	253.5		49.6	1.000062
4400.0	169.1	-59.4		270.7	569.5	258.9		48.8	1.000060
4450.0	162.1	-60.1		265.1	563.7	259.5		47.1	1.000059
4500.0	158.3	-60.7		259.5	567.8	240.3		44.2	1.000058
4550.0	154.5	-61.4		254.1	560.9	241.5		41.6	1.000057
4600.0	150.7	-61.2		247.8	567.1	242.3		40.7	1.000055
4650.0	147.1	-61.7		242.2	566.0	243.5		39.9	1.000054
4700.0	143.5	-62.2		237.0	563.8	244.3		39.9	1.000053
4750.0	140.0	-62.8		231.8	565.0	245.2		40.0	1.000052
4800.0	136.5	-63.4		226.8	564.2	245.6		39.3	1.000051
4850.0	133.2	-64.0		221.9	563.4	246.3		38.2	1.000049
4900.0	130.0	-64.6		217.0	562.7	247.1		36.9	1.000048
4950.0	126.8	-65.1		212.3	561.9	248.1		35.6	1.000047
5000.0	123.7	-65.7		207.7	561.1	250.0		34.5	1.000046
5050.0	120.7	-66.3		203.2	560.3	254.5		34.2	1.000045
5100.0	117.7	-66.9		198.5	560.0	253.5		34.1	1.000044
5150.0	114.8	-66.6		193.6	559.8	268.0		28.5	1.000043
5200.0	111.9	-66.7		188.9	559.7	276.6		23.6	1.000042
5250.0	109.2	-66.8		184.3	559.6	281.6		20.8	1.000041
5300.0	106.5	-66.9		179.8	559.5	288.2		18.4	1.000040
5350.0	103.8	-67.0		175.4	559.4	291.1		19.0	1.000039
5400.0	101.3	-67.1		171.2	559.3	273.5		21.2	1.000038
5450.0	98.7	-67.2		167.0	559.1	288.0		21.1	1.000037
5500.0	96.3	-67.4		163.0	558.8	262.5		19.4	1.000036
5550.0	93.9	-67.6		159.1	558.6	254.0		17.7	1.000035
5600.0	91.6	-67.8		155.3	558.3	258.5		16.3	1.000035
5650.0	89.3	-67.9		151.5	558.1	221.5		16.2	1.000034
5700.0	87.1	-68.1		147.9	557.8	212.1		17.0	1.000033
5750.0	84.9	-68.3		144.4	557.6	203.9		18.1	1.000032
5800.0	82.8	-68.5		140.9	557.3	206.2		17.6	1.000031
5850.0	80.7	-68.6		137.3	557.5	212.6		17.0	1.000031
5900.0	78.7	-67.7		133.5	558.4	220.2		16.0	1.000030
5950.0	76.8	-67.1		129.8	559.3	229.7		14.6	1.000029
6000.0	74.8	-66.9		126.4	559.4	240.0		13.8	1.000028
6050.0	73.0	-67.6		123.7	558.6	247.9		10.8	1.000028
6100.0	71.2	-68.2		121.0	557.7	252.1		7.7	1.000027
6150.0	69.4	-68.3		118.0	557.0	271.9		6.3	1.000026
6200.0	67.7	-67.4		114.6	558.3	262.2		5.2	1.000026
6250.0	66.0	-66.5		111.3	560.1	291.5		4.5	1.000025
6300.0	64.4	-65.5		108.0	561.3	288.2		4.2	1.000024

STATION ALTITUDE 3997.30 FEET MSL
 17 OCT 79 0015 HRS MST
 OBSERVATION NO. 333

UPPER AIR DATA
 2900000000
 S M R

GEODETTIC COORDINATES
 32.40034 LAT DEG
 106.42507 LONG DEG

TABLE 16 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT DEGREES CANTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TR)	SPEED KNOTS	
0500.0	02.8	-64.9		105.0	502.2	278.0	4.0	1.000023
0400.0	01.3	-64.5		102.3	502.8	280.7	3.7	1.000023
0300.0	00.6	-64.0		99.0	503.3	281.0	3.7	1.000022
0200.0	00.3	-63.6		97.0	503.9	285.0	3.8	1.000022
0100.0	00.9	-63.2		94.4	504.5	283.4	4.0	1.000021
0000.0	00.5	-62.8		91.9	505.0	283.0	5.6	1.000020
0000.0	04.2	-62.3		89.5	505.7	281.0	6.6	1.000020
0700.0	32.9	-61.7		87.1	506.5	282.4	8.6	1.000019
0700.0	31.6	-61.2		84.8	507.2	283.0	10.4	1.000019
0000.0	00.3	-60.8		82.5	507.9	281.0	11.3	1.000018
0000.0	47.1	-60.0		80.5	507.9	283.0	11.8	1.000018
0900.0	47.9	-60.8		76.7	507.7	289.2	12.3	1.000018
0900.0	40.8	-61.0		70.8	507.5	289.5	12.4	1.000017
7000.0	43.7	-60.2		74.7	508.5	280.5	12.9	1.000017
7000.0	44.6	-59.2		72.0	509.8	280.9	13.5	1.000016
7400.0	43.5	-58.3		70.0	511.1	283.9	13.5	1.000016
7100.0	42.5	-57.3		68.0	512.3	280.0	13.5	1.000015
7200.0	41.5	-56.4		66.7	513.0	276.0	10.7	1.000015
7250.0	40.5	-55.7		64.9	514.4	293.4	6.7	1.000014
7300.0	39.0	-55.9		63.4	514.2	338.0	4.5	1.000014
7350.0	38.6	-56.1		62.0	514.0	344.0	2.9	1.000014
7400.0	37.7	-56.2		60.0	513.0	300.0	1.4	1.000013
7500.0	36.0	-56.4		59.2	513.0	221.9	2.8	1.000013
7500.0	35.1	-56.7		57.0	513.3	224.2	5.9	1.000013
7600.0	34.3	-56.0		55.5	513.2	231.0	10.0	1.000013
7600.0	33.5	-56.0		53.2	513.3	233.9	14.1	1.000012
7600.0	32.7	-55.3		50.8	513.5	230.2	16.0	1.000012
7700.0	31.9	-55.2		52.5	513.0	246.5	15.3	1.000012
7800.0	31.2	-56.1		51.3	513.0	255.4	14.9	1.000011
7800.0	30.4	-56.0		50.0	514.0	283.9	14.8	1.000011
7900.0	29.7	-55.0		48.0	514.1	270.5	14.6	1.000011
7900.0	29.0	-54.9		47.0	514.0	277.0	14.6	1.000011
8000.0	28.4	-54.2		45.1	513.0			1.000010
8000.0	27.7	-53.4		43.9	511.0			1.000010
8100.0	27.1	-52.7		42.0	510.4			1.000010

STATION ALTITUDE 3997.50 FEET MSL
 17 OCT. 73 0815 HRS EST
 ASCENDING NO. 553

MANDATORY LEVELS
 29000, 0555
 5 M R

GEODEIC COORDINATES
 32.48034 LAT DEG
 101.42507 LONG DEG

TABLE 17

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FLEET	AIR DEGREES CENTIGRADE	SE POINT TEMP	PERCENT	UL KNOTS	DIR KNOTS	SPEED
650.0	4780.	15.1	0	37.	188.4	5.2	
600.0	6660.	14.1	-1.0	35.	150.8	0.3	
750.0	8440.	12.4	-2.0	34.	157.4	10.4	
700.0	10339.	9.8	-9.0	29.	230.4	9.5	
650.0	12345.	6.0	-12.7	24.	218.9	10.8	
600.0	14477.	1.4	-13.0	31.	211.9	10.6	
550.0	16751.	-4.9	-12.0	35.	198.2	13.8	
500.0	19185.	-10.5	-25.4	29.	205.2	20.0	
450.0	21813.	-10.8	-30.4	29.	217.3	25.4	
400.0	24677.	-24.1	-30.0	50.	233.7	29.6	
350.0	27620.	-31.7	-35.2	70.	241.0	35.5	
300.0	31340.	-40.0	-42.1	80.	233.3	42.3	
250.0	35354.	-50.4			252.3	57.8	
200.0	40044.	-50.3			230.3	41.9	
175.0	42019.	-50.0			237.2	47.8	
150.0	45970.	-61.2			242.4	40.6	
125.0	49853.	-63.5			243.7	34.9	
100.0	54001.	-67.1			270.7	22.1	
80.0	58453.	-68.1			214.8	10.8	
70.0	61121.	-63.6			208.8	0.6	
60.0	64190.	-64.1			254.5	3.6	
50.0	67002.	-60.5			218.5	11.4	
40.0	72476.	-55.8			309.5	5.3	
30.0	78472.	-55.9			274.1	14.6	

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