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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
17901A HONEST JOHN, MISSILE NUMBERS 197 (AD), 217 (AK) AND 241 --ETC(U)
JUN 78

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METEOROLOGICAL DATA REPORT

17901A HONEST JOHN
MISSILE NOS. 197 (AD), 217 (AK), & 241 (BC)
ROUND NOS. UNKNOWN
(23 MAY 1978)

BY

WSMR METEOROLOGICAL TEAM

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

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17. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 17901A Honest John, Missile Numbers 197 (AD), 217 (AK) and 241 (BC), Round Numbers Unknown, are presented in tabular form.		

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INTRODUCTION

17901A Honest John, Missile Numbers 197 (AD), 217 (AK), and 241 (BC), Round Numbers UNKNOWN, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1155 (AD), 1140 (AK), and 1530 (BC) HRS MDT, 23 May 1978. The scheduled launch times were 0900 (AD), 1130 (AK), and 1530 (BC) HRS MDT.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	3,987	FEET/MSL
PRESSURE	876.0	MBS
TEMPERATURE	31.5	°C
RELATIVE HUMIDITY	15	%
DEW POINT	1.2	°C
DENSITY	995.4	GM/M ³
WIND SPEED	06	MPH
WIND DIRECTION	150	DEGREES
CLOUD COVER	1 1	Ac Cs

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-33,
1150 HRS MDT/23 MAY 1978
MISSILE NUMBER 197 (AD)

ELEVATION	3,987	FEET/MSL
PRESSURE	876.1	MBS
TEMPERATURE	30.5	°C
RELATIVE HUMIDITY	15	%
DEW POINT	1.4	°C
DENSITY	998.8	GM/M ³
WIND SPEED	08	MPH
WIND DIRECTION	150	DEGREES
CLOUD COVER	1 1	Ac Cs

TABLE II. SURFACE OBSERVATIONS TAKEN AT LC-33
1140 HRS MDT/23 MAY 1978
MISSILE NUMBER 217 (AK)

ELEVATION	3,987	FEET/MSL
PRESSURE	873.5	MBS
TEMPERATURE	33.1	°C
RELATIVE HUMIDITY	12	%
DEW POINT	-0.3	°C
DENSITY	987.4	GM/M ³
WIND SPEED	10	MPH
WIND DIRECTION	240	DEGREES
CLOUD COVER	1 1	Cb Cc

TABLE III. SURFACE OBSERVATIONS TAKEN AT LC-33,
1530 HRS MDT/23 MAY 1978
MISSILE NUMBER 241 (BC)

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	170	8.0
100	177	9.5
200	183	10.5
300	193	12.0
400	202	13.5
500	196	14.5
600	190	15.5
700	197	13.5
800	204	11.0
900	200	12.5
1000	195	14.0
1100	188	15.0
1200	180	15.5
1300	177	15.0
1400	174	14.0
1500	167	15.0
1600	159	16.0
1700	158	16.5
1800	156	17.0
1900	161	17.0
2000	165	17.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	165	18.5
2200	164	20.0
2300	170	17.5
2400	175	15.0
2500	177	15.0
2600	178	15.0
2700	174	16.0
2800	169	17.0
2900	176	16.5
3000	182	16.0
3100	188	14.0
3200	193	12.0
3300	190	12.5
3400	186	13.0
3500	184	12.0
3600	181	11.0
3700	184	9.5
3800	187	8.0
3900	183	7.0
4000	179	6.0
4100	183	5.5

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASED FROM LC-33
1156 HRS MDT/23 MAY 1978
17901A HONEST JOHN, MISSILE NUMBER 197 (AD), ROUND NUMBER UNK

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,302.67 Y = 185,283.13 Z = 3,989.47

APPROXIMATELY: 0.5 MILES SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	187	5.0
4300	202	4.5
4400	216	4.0
4500	209	4.0
4600	201	4.0
4700	217	4.5
4800	232	5.0
4900	226	5.5
5000	220	5.5
5100	230	5.0
5200	239	4.5
5300	240	5.0
5400	241	5.0
5500	240	5.0
5600	239	5.0
5700	229	6.0
5800	219	6.5
5900	219	6.5
6000	219	6.5
6100	205	6.5
6200	191	6.5
6300	194	7.5
6400	196	8.0
6500	196	8.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	196	9.0
6700	196	9.5
6800	195	9.5
6900	199	9.5
7000	203	9.0
7100	198	9.0
7200	193	8.5
7300	187	9.0
7400	181	9.5
7500	174	11.0
7600	167	12.0
7700	165	13.0
7800	162	14.0
7900	162	14.5
8000	161	15.0
8100	161	15.0
8200	160	15.0
8300	162	16.0
8400	164	16.5
8500	164	17.0
8600	164	17.0
8700	164	18.5
8800	163	19.5
8900	163	21.5

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	163	23.0
9100	167	24.0
9200	170	24.5
9300	170	25.5
9400	169	26.0
9500	173	26.5
9600	176	26.5
9700	180	26.5
9800	183	26.5
9900	185	26.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10000	187	26.0
10100	190	26.0
10200	192	26.0
10300	192	25.5
10400	192	25.5
10500	191	24.5
10600	190	23.5
10700	190	24.0
10800	189	24.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	150	8.0	1800	175	17.5
100	159	9.5	1900	173	18.0
200	167	10.5	2000	170	18.5
300	090	11.5	2100	175	18.5
400	012	12.0	2200	179	18.5
500	094	15.5	2300	180	19.0
600	175	18.5	2400	181	19.5
700	173	17.0	2500	186	18.5
800	171	15.5	2600	191	17.0
900	177	14.0	2700	193	15.5
1000	182	12.5	2800	195	14.0
1100	189	13.5	2900	196	16.0
1200	195	14.5	3000	196	18.0
1300	193	15.5	3100	196	18.0
1400	190	16.5	3200	196	17.5
1500	189	17.5	3300	200	17.0
1600	188	18.0	3400	203	16.5
1700	182	18.0	3500	201	17.0

TABLE V. PILOT-BALLOON-MEASURED WIND DATA, RELEASED FROM LC-33
1140 HRS MDT/23 MAY 1978
17901A HONEST JOHN, MISSILE NO. 217 (AK), ROUND NO. UNK

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,802.67 Y = 185,283.13 Z = 3,989.47

APPROXIMATELY: 0.5 MILES SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
3600	199	17.0
3700	197	16.0
3800	195	14.5
3900	187	15.5
4000	179	16.5
4100	178	15.5
4200	176	14.5
4300	183	12.0
4400	189	9.5
4500	203	7.0
4600	217	4.5

TABLE V. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	240	10.0	2100	189	21.0
100	324	8.5	2200	187	19.0
200	048	6.5	2300	188	19.0
300	118	9.5	2400	189	19.0
400	188	12.0	2500	194	21.0
500	193	14.0	2600	198	23.0
600	197	16.0	2700	194	22.0
700	194	16.5	2800	189	21.0
800	191	17.0	2900	195	21.5
900	192	20.0	3000	200	21.5
1000	192	22.5	3100	196	21.0
1100	191	22.5	3200	192	20.0
1200	189	22.5	3300	187	18.0
1300	184	23.0	3400	182	15.5
1400	179	23.5	3500	186	16.0
1500	184	22.5	3600	189	16.5
1600	189	21.0	3700	190	18.5
1700	187	21.0	3800	190	20.5
1800	185	21.0	3900	191	21.5
1900	188	22.0	4000	192	22.5
2000	191	23.0	4100	194	22.5

TABLE VI. PILOT-BALLOON-MEASURED WIND DATA, RELEASED FROM LC-33
1530 HRS MDT/23 MAY 1978
17901A HONEST JOHN, MISSILE NO. 241 (BG), ROUND NO. UNK

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,302.67 Y = 185,283.13 Z = 3,989.47

APPROXIMATELY: 1 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	196	22.0	6600	197	19.0
4300	193	21.5	6700	198	24.0
4400	189	21.0	6800	199	28.5
4500	196	20.5	6900	201	31.0
4600	203	20.0	7000	203	33.0
4700	202	21.0	7100	207	32.0
4800	200	21.5	7200	210	31.0
4900	195	21.0	7300	207	26.5
5000	190	20.0	7400	204	21.5
5100	197	21.0	7500	204	20.5
5200	204	21.5	7600	204	19.5
5300	202	22.0	7700	197	22.0
5400	199	22.5	7800	190	24.0
5500	197	22.5	7900	188	23.5
5600	195	22.5	8000	186	23.0
5700	201	22.0	8100	190	20.5
5800	207	21.5	8200	194	17.5
5900	203	20.5	8300	201	22.0
6000	199	19.5	8400	208	26.0
6100	205	20.5	8500	202	25.5
6200	210	21.0	8600	195	25.0
6300	198	22.5	8700	195	25.5
6400	186	23.5	8800	194	26.0
6500	195	21.5	8900	204	25.0

TABLE VI. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	204	24.0
9100	209	25.5
9200	204	27.0
9300	201	27.5
9400	198	28.0
9500	197	28.5
9600	195	28.5
9700	199	31.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9800	202	33.0
9900	206	33.0
10000	209	33.0
10100	209	33.5
10200	208	34.0
10300	208	34.5
10400	207	34.5
10500	209	35.5

TABLE VI. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (SEC)	DIR DEG	SPEED (MPH)
-120	155	16.0
-110	168	16.0
-100	162	16.5
-90	151	16.0
-80	165	17.5
-70	152	20.5
-60	152	17.5
-50	172	17.5
-40	165	13.0
-30	165	17.0
-20	182	14.0
-10	176	15.5
-00	182	12.0
+10	176	14.5
+20	161	13.5
+30	177	12.0

TABLE VII. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, LEVEL NO. 1
 LAUNCHED FROM LC-33, 1156 HRS MDT/23 MAY 1978
 17901A HONEST JOHN, MISSILE NO. 197 (AD), ROUND NO. UNK

WSTM COORDINATES: X = 484,982.64 Y = 185,957.73 Z = 3,983.00

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (SEC)	DIR DEG	SPEED (MPH)	T-TIME (SEC)	DIR DEG	SPEED (MPH)
-300	149	13.0	-130	165	15.0
-290	150	13.5	-120	160	17.0
-280	136	16.0	-110	165	16.5
-270	137	13.0	-100	150	14.0
-260	150	15.0	-90	163	12.0
-250	150	16.5	-80	175	16.0
-240	141	12.0	-70	148	16.0
-230	143	12.0	-60	160	15.5
-220	154	14.0	-50	167	15.0
-210	165	15.5	-40	165	16.5
-200	153	19.0	-30	165	16.5
-190	165	18.5	-20	163	17.0
-180	180	19.5	-10	165	19.0
-170	178	16.0	-00	164	16.0
-160	165	18.5	+10	172	17.0
-150	177	21.0	+20	174	16.0
-140	164	18.0	+30	180	14.5

TABLE VIII. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, LEVEL NO. 1
 LAUNCHED FROM LC-33, 1140 HRS MDT/23 MAY 1978
 17901A HONEST JOHN, MISSILE NO. 217 (AK), ROUND NO. UNK

WSTM COORDINATES: X = 484,982.64 Y = 185,957.73 Z = 3,983.00

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (SEC)	DIR DEG	SPEED (MPH)	T-TIME (SEC)	DIR DEG	SPEED (MPH)
-300	193	5.0	-130	198	4.0
-290	204	6.0	-120	184	7.0
-280	193	6.0	-110	180	9.5
-270	195	4.0	-100	193	12.0
-260	220	4.0	-90	180	8.0
-250	178	5.5	-80	194	4.5
-240	188	5.5	-70	222	4.0
-230	199	3.0	-60	242	6.5
-220	227	8.0	-50	223	12.5
-210	239	13.0	-40	221	8.5
-200	215	11.5	-30	213	8.5
-190	198	9.5	-20	197	7.0
-180	180	10.0	-10	199	6.5
-170	193	7.0	-00	197	6.0
-160	195	7.0	+10	188	5.5
-150	200	9.0	+20	180	10.0
-140	195	8.0	+30	199	8.0

TABLE IX. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, LEVEL NO. 1
 LAUNCHED FROM LC-33, 1530 HRS MDT/23 MAY 1978
 17901A HONEST JOHN, MISSILE NO. 241 (BC), ROUND NO. UNK

WSTM COORDINATES: X = 484,982.64 Y = 185,957.73 Z = 3,983.00

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION: ALTITUDE 3989.00 FEET MSL
 23 MAY 78
 ASCENSION NO. 321

SIGNIFICANT LEVEL DATA
 1430020321
 WHITE SANDS
 TABLE X.

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
877.0	3989.0	24.6	8.5	36.0
850.0	4884.6	22.0	5.4	34.0
833.3	5449.1	20.9	4.0	33.0
823.3	5791.7	20.9	-2.2	21.0
763.8	7901.6	16.3	-7.3	19.0
700.0	10310.6	10.5	-11.5	20.0
626.3	13312.3	3.0	-11.3	34.0
623.1	13448.6	2.8	-7.9	45.0
609.8	14021.9	1.7	-7.6	50.0
-544.3	16992.3	-6.0	-14.0	53.0
541.3	17134.6	-6.6	-15.5	49.0
519.8	18170.8	-9.4	-17.4	52.0
500.0	19133.7	-11.9	-20.9	47.0
490.8	19620.7	-12.6	-33.1	16.0
469.3	20745.3	-12.6	-32.5	17.0
446.8	21973.8	-14.8	-34.9	16.0
400.0	24690.6	-22.0	-37.0	24.0
367.3	26731.7	-27.8	-39.0	33.0
341.8	28418.9	-32.1	-45.4	25.0
317.3	30131.3	-36.7	-47.6	31.0
311.8	30529.1	-37.7	-49.7	27.0
300.0	31400.6	-40.1		
284.3	32602.3	-42.6		
274.3	33397.7	-43.1		
250.0	35435.6	-47.7		
200.0	40173.8	-58.5		
179.9	42344.9	-63.1		
173.2	43104.3	-62.3		
169.3	43504.1	-58.3		
165.3	44061.1	-57.5		

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA
1430020321
WHITE SANDS
TABLE X. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 321
0900 HRS MDT

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
157.3	45122.7	-53.9	
153.3	45608.4	-53.6	
150.0	46132.1	-51.4	
146.3	46670.6	-48.4	
123.8	50234.6	-56.0	
116.3	51545.5	-56.1	
100.0	54657.3	-63.7	
91.3	56462.9	-67.6	
74.9	60400.7	-69.4	
70.0	61741.7	-67.0	
62.8	63923.9	-63.6	
50.0	68570.8	-61.3	
45.8	70378.8	-59.2	
39.3	73580.2	-55.0	
30.0	79306.5	-53.4	
20.0	88054.2	-47.7	
16.3	92571.6	-43.2	
11.2	100959.8	-42.4	
10.0	103512.6	-39.9	

UPPER AIR DATA
1430020321
WHITE SANDS
TABLE XI.

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 321

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 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
3989.0	877.0	24.6	36.0	1021.2	673.9	180.0	12.0	1.000275
4000.0	876.7	24.6	36.0	1020.9	673.8	180.2	12.1	1.000275
4500.0	861.5	23.1	34.9	1008.6	672.0	189.4	13.3	1.000267
5000.0	846.6	21.8	33.8	996.0	670.4	196.8	14.9	1.000260
5500.0	831.8	20.9	31.2	982.0	669.2	202.6	16.6	1.000253
6000.0	817.2	20.4	20.8	967.4	668.3	207.6	18.2	1.000238
6500.0	802.8	19.4	20.3	954.1	667.0	212.5	15.4	1.000233
7000.0	788.7	18.3	19.9	940.9	665.7	219.3	12.8	1.000228
7500.0	774.8	17.2	19.4	928.0	664.4	226.6	10.8	1.000224
8000.0	761.1	16.1	19.0	915.2	663.1	233.5	9.6	1.000220
8500.0	747.4	14.9	19.2	902.6	661.7	231.6	9.7	1.000216
9000.0	734.0	13.7	19.5	890.2	660.3	229.5	9.6	1.000212
9500.0	720.8	12.5	19.7	876.0	658.9	226.2	8.9	1.000209
10000.0	707.9	11.2	19.9	865.9	657.5	219.4	8.2	1.000205
10500.0	695.1	10.0	20.9	853.9	656.0	202.5	8.2	1.000202
11000.0	682.3	8.8	23.2	841.9	654.6	186.5	8.9	1.000200
11500.0	669.8	7.5	25.5	830.1	653.2	172.4	11.0	1.000198
12000.0	657.5	6.3	27.9	818.5	651.7	163.3	13.7	1.000195
12500.0	645.4	5.0	30.2	807.0	650.3	157.3	15.4	1.000193
13000.0	633.6	3.8	32.5	795.8	648.8	152.5	17.1	1.000190
13500.0	621.9	2.7	45.4	783.8	647.7	152.1	17.8	1.000191
14000.0	610.3	1.7	49.8	771.8	646.6	154.2	17.6	1.000189
14500.0	598.7	.5	50.5	760.8	645.1	158.1	17.1	1.000186
15000.0	587.4	-.8	51.0	750.0	643.5	164.2	16.4	1.000182
15500.0	576.3	-2.1	51.5	739.4	641.9	169.0	16.4	1.000179
16000.0	565.4	-3.4	52.0	729.0	640.3	172.4	16.8	1.000175
16500.0	554.6	-4.7	52.5	718.7	638.8	178.3	17.0	1.000172
17000.0	544.1	-6.0	52.8	708.6	637.2	185.9	17.2	1.000169
17500.0	533.6	-7.6	50.1	699.1	635.2	196.3	17.9	1.000165
18000.0	523.3	-8.9	51.5	689.2	633.6	206.8	19.2	1.000162

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
1430020321
WHITE SANDS
TABLE XI. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78 0900 HRS MDT
ASCENSION NO. 321

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
18500.0	513.1	-10.2	-18.6	50.3	679.1	632.0		216.7	21.9	1.000159
19000.0	503.0	-11.5	-20.3	47.8	669.2	630.4		224.4	25.3	1.000156
19500.0	493.2	-12.4	-28.7	24.0	656.6	629.2		230.0	25.8	1.000150
20000.0	483.4	-12.6	-32.9	16.3	646.2	628.9		235.0	25.9	1.000146
20500.0	473.9	-12.6	-32.6	16.8	633.4	628.9		238.0	22.6	1.000143
21000.0	464.5	-13.1	-33.0	16.8	622.0	628.4		240.0	20.1	1.000141
21500.0	455.3	-14.0	-34.0	16.4	611.8	627.3		238.0	19.3	1.000138
22000.0	446.3	-14.9	-34.9	16.1	601.8	626.2		236.5	19.3	1.000136
22500.0	437.3	-16.2	-35.2	17.5	592.7	624.6		236.4	20.6	1.000134
23000.0	428.5	-17.5	-35.5	19.0	583.8	623.0		236.6	21.4	1.000132
23500.0	419.9	-18.8	-35.9	20.5	575.0	621.3		237.5	21.2	1.000130
24000.0	411.4	-20.2	-36.3	22.0	566.4	619.7		237.5	20.8	1.000128
24500.0	403.1	-21.5	-36.8	23.4	557.9	618.1		234.9	20.0	1.000126
25000.0	394.9	-22.9	-37.2	25.4	549.5	616.4		232.2	19.2	1.000124
25500.0	386.7	-24.3	-37.7	27.6	541.2	614.6		229.7	18.1	1.000122
26000.0	378.7	-25.7	-38.2	29.8	533.1	612.9		226.8	17.2	1.000120
26500.0	370.9	-27.1	-38.8	32.0	525.1	611.1		223.5	17.2	1.000118
27000.0	363.1	-28.5	-40.0	31.7	516.9	609.4		220.2	17.5	1.000116
27500.0	355.5	-29.8	-41.9	29.4	508.7	607.8		217.6	18.7	1.000114
28000.0	348.0	-31.0	-43.8	27.0	500.6	606.2		215.5	19.9	1.000112
28500.0	340.6	-32.3	-45.5	25.3	492.6	604.6		215.8	20.3	1.000110
29000.0	333.3	-33.7	-46.1	27.0	484.7	602.9		216.0	20.7	1.000109
29500.0	326.1	-35.0	-46.7	28.8	477.0	601.2		215.1	21.2	1.000107
30000.0	319.1	-36.3	-47.4	30.5	469.4	599.5		214.3	21.8	1.000105
30500.0	312.2	-37.6	-49.5	27.3	461.7	597.9		213.1	23.0	1.000103
31000.0	305.4	-39.0	-57.2	12.4**	454.3	596.1		211.9	24.2	1.000101
31500.0	298.7	-40.3			446.9	594.5		214.0	25.8	1.000100
32000.0	292.1	-41.3			438.9	593.1		216.7	27.5	1.000098
32500.0	285.6	-42.4			431.2	591.8		219.5	29.3	1.000096
33000.0	279.3	-42.9			422.4	591.2		222.2	31.0	1.000094

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

STATION ALTITUDE 3989.00 FEET MSL
 23 MAY 78
 ASCENSION NO. 321 0900 HRS MDT

UPPER AIR DATA
 1430020321
 WHITE SANDS
 TABLE XI. (CONT)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INJEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	273.0	-43.3		413.9	590.6	223.1	34.0	1.000092
34000.0	266.9	-44.5		406.5	589.1	223.1	37.6	1.000091
34500.0	260.9	-45.6		399.4	587.7	222.6	39.2	1.000089
35000.0	255.0	-46.7		392.3	586.2	221.7	39.5	1.000087
35500.0	249.2	-47.8		385.4	584.8	220.8	38.4	1.000086
36000.0	243.4	-49.0		378.3	583.3	219.8	36.3	1.000084
36500.0	237.8	-50.1		371.4	581.8	217.7	35.8	1.000083
37000.0	232.2	-51.3		364.6	580.3	215.2	36.5	1.000081
37500.0	226.8	-52.4		358.0	578.8	214.1	36.6	1.000080
38000.0	221.6	-53.5		351.5	577.3	213.6	36.3	1.000078
38500.0	216.4	-54.7		345.1	575.8	214.6	37.8	1.000077
39000.0	211.4	-55.8		338.8	574.3	215.8	39.7	1.000075
39500.0	206.4	-57.0		332.7	572.8	215.9	41.0	1.000074
40000.0	201.6	-58.1		326.7	571.3	215.3	41.9	1.000073
40500.0	196.8	-59.2		320.5	569.9	215.5	41.1	1.000071
41000.0	192.1	-60.3		314.3	568.4	216.5	38.6	1.000070
41500.0	187.5	-61.3		308.3	567.0	218.3	36.8	1.000069
42000.0	183.0	-62.4		302.4	565.6	221.7	36.5	1.000067
42500.0	178.5	-62.9		295.9	564.8	225.9	36.7	1.000066
43000.0	174.2	-62.4		287.9	563.5	233.4	39.0	1.000064
43500.0	170.0	-59.0		276.5	570.1	239.7	41.5	1.000062
44000.0	165.9	-57.6		268.2	571.9	244.4	43.2	1.000060
44500.0	162.0	-56.1		260.0	574.0	247.9	44.9	1.000058
45000.0	158.2	-54.3		251.9	576.3	247.8	45.4	1.000056
45500.0	154.5	-53.7		245.3	577.1	247.7	45.9	1.000055
46000.0	150.9	-52.0		237.8	579.3	247.7	46.1	1.000053
46500.0	147.5	-49.4		229.5	582.8	247.6	46.4	1.000051
47000.0	144.1	-49.1		224.0	583.1	248.5	43.6	1.000050
47500.0	140.7	-50.2		219.9	581.7	249.6	40.3	1.000049
48000.0	137.5	-51.2		215.8	580.3	251.0	38.3	1.000048

STATION ALTITUDE 3989.00 FEET MSL				UPPER AIR DATA				GEODETIC COORDINATES			
23 MAY 78				1430020321				32.40043 LAT DEG			
ASCENSION 110. 321				WHITE SANDS				106.37033 LON DEG			
				0900 HRS MDT							
TABLE XI. (CONT)											
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION		
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS			
48500.0	134.3	-52.3			211.8	579.0	252.5	37.0	1.000047		
49000.0	131.2	-53.4			207.9	577.6	253.5	35.9	1.000046		
49500.0	128.1	-54.4			204.1	576.2	252.7	35.3	1.000045		
50000.0	125.2	-55.5			200.3	574.7	251.8	34.7	1.000045		
50500.0	122.2	-56.0			196.1	574.1	250.0	32.3	1.000044		
51000.0	119.4	-56.1			191.5	574.0	247.6	29.5	1.000043		
51500.0	116.6	-56.1			187.1	574.0	245.0	25.8	1.000042		
52000.0	113.8	-57.2			183.5	572.5	242.3	20.0	1.000041		
52500.0	111.0	-58.4			180.1	570.9	237.5	14.3	1.000040		
53000.0	108.4	-59.7			176.8	569.2	234.2	12.1	1.000039		
53500.0	105.8	-60.9			173.6	567.6	231.3	10.6	1.000039		
54000.0	103.2	-62.1			170.4	566.0	229.5	10.8	1.000038		
54500.0	100.8	-63.3			167.3	564.3	230.8	14.6	1.000037		
55000.0	98.3	-64.4			164.1	562.8	231.6	18.4	1.000037		
55500.0	95.9	-65.5			160.9	561.4	230.0	19.2	1.000036		
56000.0	93.5	-66.6			157.7	559.9	228.1	19.6	1.000035		
56500.0	91.2	-67.6			154.6	558.5	226.1	19.6	1.000034		
57000.0	88.9	-67.8			150.9	558.2	223.8	19.2	1.000034		
57500.0	86.7	-68.1			147.3	557.9	221.5	19.0	1.000033		
58000.0	84.6	-68.3			143.8	557.6	219.6	20.1	1.000032		
58500.0	82.5	-68.5			140.4	557.3	217.9	21.2	1.000031		
59000.0	80.4	-68.8			137.0	557.0	217.1	20.5	1.000031		
59500.0	78.4	-69.0			133.8	556.7	216.9	18.8	1.000030		
60000.0	76.4	-69.2			130.6	556.3	216.7	16.9	1.000029		
60500.0	74.5	-69.2			127.3	556.3	217.6	14.0	1.000028		
61000.0	72.7	-68.3			123.6	557.6	218.8	11.0	1.000028		
61500.0	70.9	-67.4			120.0	558.8	214.9	8.2	1.000027		
62000.0	69.1	-66.6			116.6	559.9	204.6	5.6	1.000026		
62500.0	67.4	-65.8			113.3	561.0	175.3	3.3	1.000025		
63000.0	65.8	-65.0			110.1	562.0	112.6	3.5	1.000025		

UPPER AIR DATA
1430020321
WHITE SANDS
TABLE XI. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 321

0900 HRS MDT

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
03500.0	64.1	-64.3		107.0	563.1	84.9	6.3	1.000024
64000.0	62.6	-63.6		104.0	564.0	91.6	8.1	1.000023
04500.0	61.1	-63.3		101.4	564.3	99.6	9.8	1.000023
65000.0	59.6	-63.1		98.8	564.7	108.0	11.0	1.000022
65500.0	58.1	-62.8		96.3	565.0	124.9	10.9	1.000021
66000.0	56.7	-62.6		93.8	565.3	140.6	11.8	1.000021
06500.0	55.3	-62.3		91.5	565.7	151.7	11.7	1.000020
07000.0	54.0	-62.1		89.1	566.0	162.2	11.3	1.000020
07500.0	52.7	-61.8		86.9	566.3	172.1	11.3	1.000019
68000.0	51.4	-61.6		84.7	566.7	174.7	11.1	1.000019
08500.0	50.2	-61.3		82.5	567.0	177.4	10.9	1.000018
09000.0	49.0	-60.8		80.3	567.7	170.6	9.6	1.000018
09500.0	47.8	-60.2		78.2	568.5	149.4	7.9	1.000017
70000.0	46.6	-59.6		76.1	569.3	122.8	7.7	1.000017
70500.0	45.5	-59.0		74.1	570.1	111.8	8.2	1.000016
71000.0	44.5	-58.4		72.1	570.9	106.1	8.6	1.000016
71500.0	43.4	-57.7		70.2	571.8	101.0	9.2	1.000016
72000.0	42.4	-57.1		68.3	572.7	112.5	9.1	1.000015
72500.0	41.4	-56.4		66.5	573.5	125.0	9.5	1.000015
73000.0	40.4	-55.8		64.7	574.4	132.5	10.2	1.000014
73500.0	39.5	-55.1		63.0	575.3	103.2	11.7	1.000014
74000.0	38.5	-54.9		61.5	575.6	84.2	15.3	1.000014
74500.0	37.6	-54.7		60.0	575.7	74.7	18.7	1.000013
75000.0	36.8	-54.6		58.6	575.9	72.4	17.9	1.000013
75500.0	35.9	-54.5		57.2	576.1	69.9	17.2	1.000013
76000.0	35.1	-54.3		55.8	576.3	71.0	15.1	1.000012
76500.0	34.2	-54.2		54.5	576.5	84.1	10.9	1.000012
77000.0	33.4	-54.0		53.2	576.7	109.9	7.9	1.000012
77500.0	32.7	-53.9		51.9	576.8	133.3	7.3	1.000012
78000.0	31.9	-53.8		50.7	577.0	139.5	7.2	1.000011

UPPER AIR DATA
1430020321
WHITE SANDS
TABLE XI. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 321

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
78500.0	31.2	-53.6			49.5	577.2		145.7	7.2	1.000011
79000.0	30.4	-53.5			48.3	577.4		150.0	7.1	1.000011
79500.0	29.7	-53.3			47.1	577.7		148.9	6.6	1.000010
80000.0	29.1	-52.9			46.0	578.1		147.7	6.1	1.000010
80500.0	28.4	-52.6			44.8	578.5		146.2	5.7	1.000010
81000.0	27.7	-52.3			43.7	579.0		151.4	5.8	1.000010
81500.0	27.1	-52.0			42.7	579.4		156.2	6.1	1.000010
82000.0	26.5	-51.6			41.6	579.8		160.7	6.3	1.000009
82500.0	25.9	-51.3			40.6	580.2		171.0	6.7	1.000009
83000.0	25.3	-51.0			39.6	580.7		182.1	7.4	1.000009
83500.0	24.7	-50.7			38.7	581.1		191.1	8.3	1.000009
84000.0	24.1	-50.3			37.7	581.5		197.7	8.5	1.000008
84500.0	23.6	-50.0			36.8	581.9		204.0	7.9	1.000008
85000.0	23.0	-49.7			35.9	582.4		211.3	7.4	1.000008
85500.0	22.5	-49.4			35.0	582.8		219.1	7.0	1.000008
86000.0	22.0	-49.0			34.2	583.2		225.7	6.5	1.000008
86500.0	21.5	-48.7			33.4	583.6		233.1	6.2	1.000007
87000.0	21.0	-48.4			32.6	584.1		241.2	6.0	1.000007
87500.0	20.5	-48.1			31.8	584.5		243.8	6.1	1.000007
88000.0	20.1	-47.7			31.0	584.9		245.4	6.4	1.000007
88500.0	19.6	-47.3			30.2	585.5		247.0	6.6	1.000007
89000.0	19.2	-46.8			29.5	586.2		248.9	6.8	1.000007
89500.0	18.7	-46.3			28.8	586.8		251.1	7.0	1.000006
90000.0	18.3	-45.8			28.1	587.5		253.1	7.3	1.000006
90500.0	17.9	-45.3			27.4	588.1		255.2	7.7	1.000006
91000.0	17.5	-44.8			26.7	588.7		257.4	8.9	1.000006
91500.0	17.1	-44.3			26.0	589.4		259.1	10.2	1.000006
92000.0	16.7	-43.8			25.4	590.0		260.5	11.4	1.000006
92500.0	16.4	-43.3			24.8	590.7		253.2	11.0	1.000006
93000.0	16.0	-43.2			24.2	590.8		243.8	10.6	1.000005

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 321

UPPER AIR DATA
1430020321
WHITE SANDS
TABLE XI. (CONT)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
93500.0	15.6	-43.1			23.7	590.9	233.8	10.5	1.000005
94000.0	15.3	-43.1			23.2	590.9	224.8	10.7	1.000005
94500.0	15.0	-43.0			22.6	591.0	226.0	11.5	1.000005
95000.0	14.6	-43.0			22.1	591.1	227.1	12.2	1.000005
95500.0	14.3	-42.9			21.6	591.1	228.0	12.9	1.000005
96000.0	14.0	-42.9			21.2	591.2	229.9	13.6	1.000005
96500.0	13.7	-42.8			20.7	591.2	241.7	13.3	1.000005
97000.0	13.4	-42.8			20.2	591.3	253.5	13.6	1.000005
97500.0	13.1	-42.7			19.8	591.4	264.3	14.4	1.000004
98000.0	12.8	-42.7			19.3	591.4	273.4	15.5	1.000004
98500.0	12.5	-42.6			18.9	591.5	280.3	15.4	1.000004
99000.0	12.2	-42.6			18.5	591.5	287.2	15.5	1.000004
99500.0	12.0	-42.5			18.1	591.6	294.0	15.8	1.000004
100000.0	11.7	-42.5			17.7	591.7			1.000004
100500.0	11.4	-42.4			17.3	591.7			1.000004
101000.0	11.2	-42.4			16.9	591.8			1.000004
101500.0	10.9	-41.9			16.5	592.5			1.000004
102000.0	10.7	-41.4			16.1	593.1			1.000004
102500.0	10.5	-40.9			15.7	593.7			1.000003
103000.0	10.2	-40.4			15.3	594.3			1.000003
103500.0	10.0	-39.9			14.9	595.0			1.000003

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 321

MANDATORY LEVELS
1430020321
WHITE SANDS
TABLE XII.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4981.	22.0	5.4	34.	195.2	14.5
800.0	6598.	19.1	-4.2	20.	213.7	14.8
750.0	8402.	15.1	-8.2	19.	232.0	9.7
700.0	10300.	10.5	-11.5	20.	209.1	8.1
650.0	12300.	5.5	-10.9	29.	159.4	14.7
600.0	14434.	.6	-8.5	50.	157.4	17.2
550.0	16702.	-5.3	-13.4	53.	181.6	17.0
500.0	19127.	-11.9	-20.9	47.	226.0	25.4
450.0	21762.	-14.5	-34.6	16.	236.7	18.9
400.0	24649.	-22.0	-37.0	24.	234.0	19.8
350.0	27815.	-30.7	-43.3	28.	216.0	19.6
300.0	31338.	-40.1			213.3	25.4
250.0	35358.	-47.7			221.0	38.8
200.0	40077.	-58.5			215.1	42.2
175.0	42790.	-62.5			231.7	38.4
150.0	46007.	-51.4			247.7	46.2
125.0	49887.	-55.6			251.8	34.7
100.0	54487.	-63.7			231.1	15.6
80.0	58905.	-68.8			217.1	20.3
70.0	61529.	-67.0			211.5	7.1
60.0	64610.	-63.1			103.3	10.9
50.0	68312.	-61.3			177.6	10.9
40.0	72915.	-55.5			121.7	10.4
30.0	78967.	-53.4			149.4	6.8
25.0	82839.	-50.8			185.4	7.7
20.0	87640.	-47.7			245.5	6.4
15.0	93954.	-43.0			225.7	11.3
10.0	102950.	-39.9				

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

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA
1430020322
WHITE SANDS
TABLE XIII.

STATION ALTITUDE 3989.00 FEET MSI
23 MAY 78
ASCENSION NO. 322
1130 HRS MDT

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
876.1	3989.0	29.5	14.0
847.1	4961.4	24.4	19.0
800.3	6580.3	20.0	22.0
788.3	7006.7	19.1	21.0
700.0	10303.6	10.3	24.0
660.3	11888.8	6.5	39.0
649.3	12341.6	5.9	45.0
637.7	12826.9	5.8	42.0
574.8	15585.3	-1.4	46.0
500.0	19172.7	-11.2	43.0
488.3	19799.9	-11.7	16.0
460.3	21253.7	-13.1	16.0
438.3	22474.8	-15.8	17.0
400.0	24718.3	-21.4	22.0
359.8	27253.2	-28.4	40.0

STATION ALTITUDE 3989.00 FEET MSL
 23 MAY 78
 ASCENSION NO. 322
 1130 HRS MDT
 UPPER AIR DATA
 1430020322
 WHITE SANDS
 TABLE XIV.
 GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	876.1	28.5	-1.6	14.0	1009.4	677.4	180.0	9.9	1.000248
4000.0	875.8	28.5	-1.5	14.1	1009.2	677.4	180.1	9.9	1.000248
4500.0	860.7	26.3	-0.9	16.6	998.7	675.0	184.9	10.9	1.000247
5000.0	846.0	24.3	-0.7	19.1	988.2	672.8	188.9	12.0	1.000245
5500.0	831.2	22.9	-1.2	20.0	975.5	671.2	192.2	13.1	1.000242
6000.0	816.8	21.6	-1.7	20.9	963.0	669.6	195.4	13.3	1.000238
6500.0	802.6	20.2	-2.2	21.9	950.7	668.1	199.7	11.6	1.000235
7000.0	788.5	19.1	-3.7	21.0	937.7	666.8	204.6	9.6	1.000230
7500.0	774.4	17.8	-4.5	21.4	925.3	665.2	211.3	7.0	1.000226
8000.0	760.6	16.4	-5.4	21.9	913.1	663.6	216.3	5.2	1.000222
8500.0	747.0	15.1	-6.2	22.4	901.0	662.1	217.9	3.8	1.000218
9000.0	733.7	13.8	-7.1	22.8	889.1	660.5	215.6	3.6	1.000215
9500.0	720.6	12.4	-7.9	23.3	877.4	659.0	212.0	3.9	1.000211
10000.0	707.7	11.1	-8.8	23.7	865.8	657.4	200.5	5.1	1.000208
10500.0	695.0	9.8	-8.8	25.9	854.1	655.9	192.7	6.8	1.000205
11000.0	682.3	8.6	-7.7	30.6	841.9	654.6	180.4	9.0	1.000204
11500.0	669.8	7.4	-6.9	35.3	829.9	653.2	172.5	11.6	1.000202
12000.0	657.6	6.4	-6.1	40.5	817.8	652.0	168.8	14.6	1.000201
12500.0	645.5	5.9	-5.4	44.0	804.0	651.5	167.0	17.6	1.000199
13000.0	633.6	5.3	-6.4	42.3	790.7	650.9	169.5	19.6	1.000195
13500.0	621.7	4.0	-7.4	43.0	779.7	649.3	172.1	21.0	1.000191
14000.0	610.1	2.7	-8.4	43.7	768.9	647.7	175.7	21.1	1.000187
14500.0	598.8	1.4	-9.3	44.4	758.2	646.2	179.4	21.2	1.000184
15000.0	587.6	.1	-10.3	45.2	747.7	644.6	183.4	21.2	1.000181
15500.0	576.6	-1.2	-11.3	45.9	737.4	643.0	187.7	21.5	1.000177
16000.0	565.6	-2.5	-12.6	45.7	727.0	641.4	192.5	22.1	1.000174
16500.0	554.7	-3.9	-14.0	45.2	716.7	639.7	196.9	23.0	1.000170
17000.0	544.1	-5.3	-15.4	44.8	706.6	638.0	200.9	24.7	1.000167
17500.0	533.6	-6.6	-16.7	44.4	696.6	636.4	204.9	26.7	1.000164
18000.0	523.3	-6.0	-18.1	44.0	686.8	634.7	209.5	29.5	1.000161

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
1430020322
WHITE SANDS
TABLE XIV. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 322
1130 HRS MDT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
18500.0	513.2	-9.4	43.6	677.2	633.0	214.2	31.3	1.00015A
19000.0	503.4	-10.7	43.1	667.6	631.4	219.8	31.7	1.000155
19500.0	493.6	-11.5	28.2	656.7	630.4	224.9	30.8	1.000150
20000.0	483.8	-11.9	16.0	645.0	629.8	230.3	28.9	1.000146
20500.0	474.3	-12.4	16.0	633.5	629.2	234.7	27.5	1.000143
21000.0	465.0	-12.9	16.0	622.1	628.6	239.0	26.4	1.000141
21500.0	455.8	-13.6	16.2	611.7	627.7	240.0	24.9	1.000138
22000.0	446.7	-14.8	16.6	602.1	626.3	240.8	23.4	1.000136
22500.0	437.8	-15.9	17.1	592.7	625.0	238.7	22.2	1.000134
23000.0	429.0	-17.1	18.2	583.6	623.5	236.0	21.2	1.000132
23500.0	420.4	-18.4	19.3	574.6	621.9	231.1	21.5	1.000130
24000.0	411.9	-19.6	20.4	565.8	620.4	226.5	22.1	1.000128
24500.0	403.6	-20.9	21.5	557.1	618.9	222.0	23.6	1.000126
25000.0	395.3	-22.2	24.0	548.6	617.2	218.1	25.2	1.000124
25500.0	387.1	-23.6	27.6	540.2	615.5	216.9	25.9	1.000122
26000.0	379.1	-24.9	31.1	532.0	613.8			1.000120
26500.0	371.3	-26.3	34.7	523.9	612.1			1.000118
27000.0	363.6	-27.7	38.2	516.0	610.4			1.000116

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78 1130 HRS MDT
ASCENSION NO. 322

MANDATORY LEVELS
1430020322
WHITE SANDS
TABLE XV.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4860.	24.8	-7	18.	187.9	11.7
800.0	6586.	20.0	-2.4	22.	200.6	11.4
750.0	8394.	15.4	-6.0	22.	217.5	4.1
700.0	10293.	10.3	-9.4	24.	195.3	0.1
650.0	12299.	5.9	-5.2	45.	167.2	16.5
600.0	14437.	1.6	-9.2	44.	179.0	21.2
550.0	16713.	-4.5	-14.6	45.	198.8	23.8
500.0	19146.	-11.2	-21.3	43.	221.6	32.0
450.0	21780.	-14.3	-34.3	10.	240.7	25.9
400.0	24677.	-21.4	-37.4	22.	220.3	24.2

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 324

SIGNIFICANT LEVEL DATA
1430020324
WHITE SANDS
TABLE XVI.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
873.3	3989.0	32.5	14.0
850.0	4780.9	28.2	19.0
832.3	5391.1	26.5	20.0
700.0	10281.8	12.8	30.0
612.8	13885.5	2.6	33.0
555.8	16452.9	-3.3	26.0
531.3	17619.2	-6.2	31.0
500.0	19170.2	-10.0	21.0
422.3	23392.7	-17.5	23.0
400.0	24717.7	-22.1	30.0
372.3	26442.8	-25.5	24.0

UPPER AIR DATA
1430020324
WHITE SANDS
TABLE XVII.

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 78
ASCENSION NO. 324
1530 HRS MDT

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KN			
3989.0	873.3	32.5	1.6	14.0	992.4	682.1		210.0	18.1	1.000249
4000.0	873.0	32.4	1.6	14.1	992.2	682.0		209.9	18.1	1.000249
4500.0	858.2	29.7	2.3	17.2	984.0	679.1		206.6	17.3	1.000249
5000.0	843.6	27.6	2.2	19.4	974.1	676.7		203.0	16.7	1.000247
5500.0	829.1	26.2	1.6	20.2	961.8	675.1		199.1	16.1	1.000243
6000.0	814.6	24.8	1.2	21.2	949.5	673.5		195.0	15.6	1.000240
6500.0	800.3	23.4	.7	22.3	937.3	671.9		192.8	14.6	1.000236
7000.0	786.2	22.0	.1	23.3	925.3	670.3		190.7	13.6	1.000233
7500.0	772.4	20.6	-.5	24.3	913.4	668.7		189.1	14.1	1.000229
8000.0	758.9	19.2	-1.1	25.3	901.8	667.0		187.6	14.9	1.000226
8500.0	745.6	17.8	-1.8	26.4	890.3	665.4		186.2	16.4	1.000222
9000.0	732.5	16.4	-2.4	27.4	879.0	663.8		186.6	17.1	1.000219
9500.0	719.6	15.0	-3.2	28.4	867.8	662.1		188.6	17.2	1.000215
10000.0	707.0	13.6	-3.9	29.4	856.9	660.5		192.9	16.9	1.000212
10500.0	694.4	12.2	-4.8	30.2	845.8	658.8		198.9	16.5	1.000208
11000.0	681.7	10.8	-5.8	30.6	834.6	657.2		202.1	17.4	1.000205
11500.0	669.2	9.4	-6.9	31.0	823.5	655.5		203.8	18.8	1.000201
12000.0	657.0	7.9	-7.9	31.4	812.7	653.8		203.7	20.9	1.000197
12500.0	645.0	6.5	-9.0	31.8	801.9	652.1		203.4	23.2	1.000194
13000.0	633.2	5.1	-10.1	32.3	791.4	650.4		204.8	24.6	1.000190
13500.0	621.6	3.7	-11.2	32.7	780.9	648.7		207.0	25.6	1.000187
14000.0	610.1	2.3	-12.4	32.7	770.4	647.1		209.2	26.4	1.000183
14500.0	598.6	1.2	-13.9	31.3	759.2	645.7		211.6	27.1	1.000180
15000.0	587.4	.0	-15.4	30.0	748.1	644.3		214.1	28.1	1.000176
15500.0	576.3	-1.1	-17.0	28.6	737.2	642.9		217.0	29.5	1.000172
16000.0	565.5	-2.3	-18.6	27.2	726.5	641.5		219.5	31.1	1.000169
16500.0	554.8	-3.4	-20.0	26.2	715.9	640.1		220.7	34.0	1.000166
17000.0	544.2	-4.7	-20.2	28.3	705.5	638.6		221.8	36.9	1.000164
17500.0	533.8	-5.9	-20.4	30.5	695.2	637.1		223.3	37.0	1.000161
18000.0	523.4	-7.1	-22.3	28.5	685.0	635.6		225.0	36.6	1.000158

STATION ALTITUDE 3989.00 FEET MSL				UPPER AIR DATA				GEODETIC COORDINATES			
23 MAY 78				1430020324				32.40043 LAT DEG			
ASCENSION NO. 324				1530 HRS MDT				106.37033 LON DEG			
				TABLE XVII. (CONT)							
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION			
18500.0	513.3	-8.4	25.3	674.9	634.1	226.9	34.1	1.000155			
19000.0	503.3	-9.6	22.1	665.0	632.6	229.4	30.4	1.000152			
19500.0	493.4	-10.6	21.2	654.4	631.4	231.1	28.1	1.000149			
20000.0	483.7	-11.5	21.4	643.6	630.3	230.8	27.7	1.000146			
20500.0	474.1	-12.4	21.6	633.1	629.3	230.4	27.3	1.000144			
21000.0	464.7	-13.3	21.9	622.7	628.2	229.8	27.0	1.000141			
21500.0	455.5	-14.1	22.1	612.4	627.1	228.5	26.4	1.000139			
22000.0	446.5	-15.0	22.3	602.4	626.0	226.1	25.5	1.000137			
22500.0	437.7	-15.9	22.6	592.5	624.9	222.7	26.7	1.000134			
23000.0	429.0	-16.8	22.8	582.8	623.9	219.2	29.8	1.000132			
23500.0	420.4	-17.9	23.6	573.6	622.5	217.1	31.1	1.000130			
24000.0	411.9	-19.6	26.2	565.8	620.4	215.4	31.3	1.000128			
24500.0	403.8	-21.3	28.9	558.2	618.3	213.5	30.4	1.000126			
25000.0	395.3	-22.7	29.0	549.6	616.7	211.3	29.3	1.000124			
25500.0	387.2	-23.6	27.3	540.5	615.4			1.000122			
26000.0	379.2	-24.6	25.5	531.5	614.2			1.000120			

STATION ALTITUDE 3989.00 FEET MSL
23 MAY 76
ASCENSION NO. 324

MANDATORY LEVELS
1430020324
WHITE SANDS
TABLE XVIII.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4777.	28.2	2.4	19.	204.6	17.0	
800.0	6524.	23.4	.6	24.	192.7	14.6	
750.0	8353.	18.3	-1.5	26.	180.5	16.0	
700.0	10272.	12.8	-4.3	30.	196.2	16.6	
650.0	12292.	7.1	-8.6	32.	203.5	22.2	
600.0	14428.	1.3	-13.7	31.	211.3	27.1	
550.0	16704.	-4.0	-20.1	27.	221.2	35.3	
500.0	19143.	-10.0	-28.1	21.	230.4	29.2	
450.0	21785.	-14.7	-31.5	24.	227.0	25.8	
400.0	24670.	-22.1	-34.9	30.	212.6	30.0	