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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
12815C LANCE MISSILE NUMBER 4043, ROUND NUMBER 294 RSL (18 JANU--ETC(U)
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January 1977

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METEOROLOGICAL DATA REPORT

12815C LANCE
MISSILE NO. 4043, ROUND NO. 294 RSL
(18 January 1977)

BY

WSMR METEOROLOGICAL TEAM

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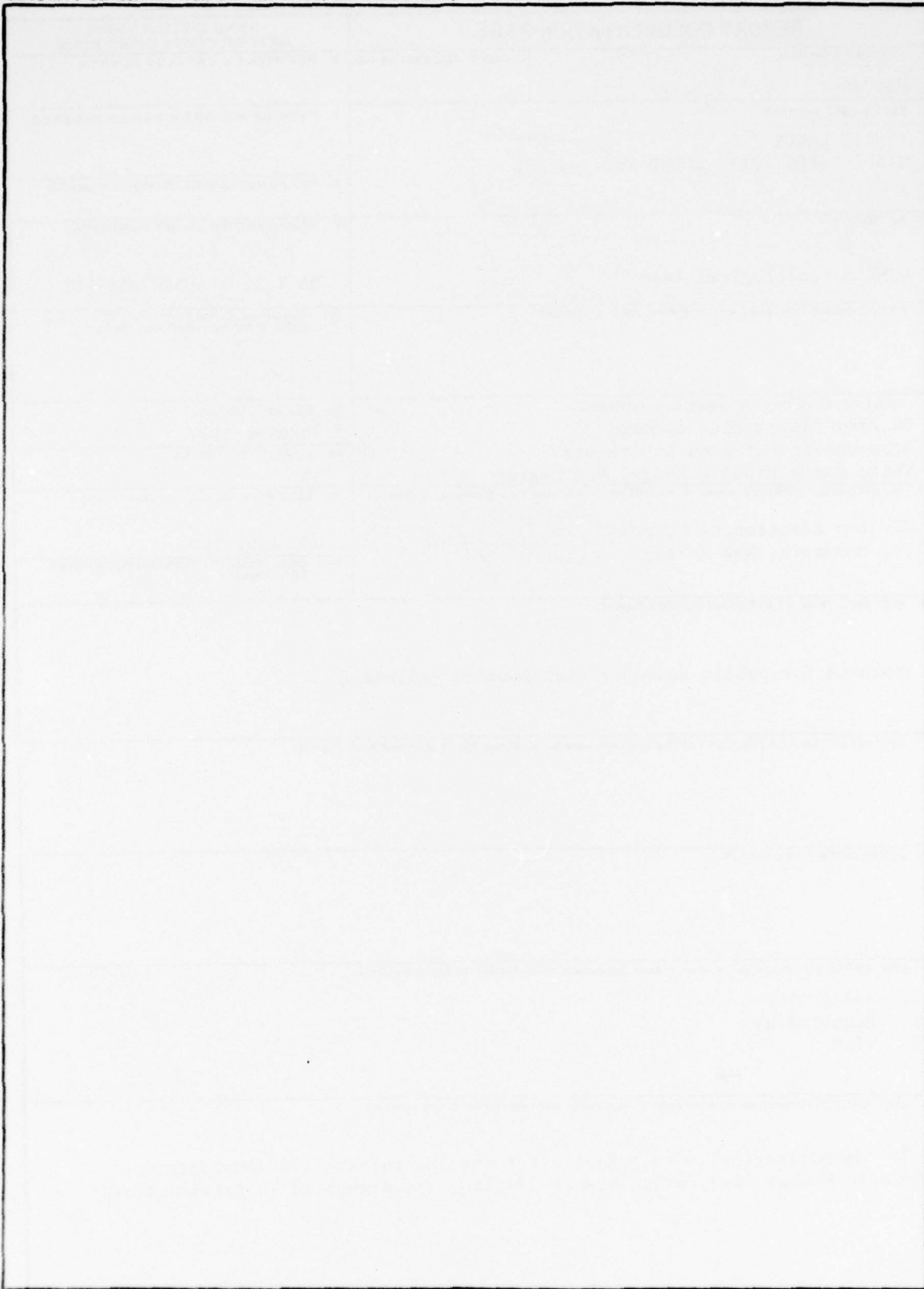
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 12815C Lance, Missile Number 4043, Round Number 294 RSL, are presented in tabular form.		

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SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)



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CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
TABLES	
I. Surface Observations Taken at WSD -----	1
II. Surface Observations Taken at LC-33 -----	2
III. Pilot-Balloon-Measured Wind Data, Release No. 1 at 1358 MST -----	3
IV. Pilot-Balloon-Measured Wind Data, Release No. 2 at 1404 MST -----	5
V. Holloman Significant Level Data (Release Time: 1310 MST) -----	8
VI. Holloman Upper Air Data (Release Time: 1310 MST) -----	10
VII. Holloman Mandatory Levels (Release Time: 1310 MST) -----	16
VIII. Jallen Significant Level Data (Release Time: 1320 MST) -----	17
IX. Jallen Upper Air Data (Release Time: 1320 MST) -----	19
X. Jallen Mandatory Levels (Release Time: 1320 MST) -----	24
XI. WSD Significant Level Data (Release Time: 1320 MST) -----	25
XII. WSD Upper Air Data (Release Time: 1320 MST) -----	27
XIII. WSD Mandatory Levels (Release Time: 1320 MST) -----	32

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INTRODUCTION

12815C Lance, Missile Number 4043, Round Number 294 RSL, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1401 HRS MST, 18 January 1977. The scheduled launch time was 1330 HRS MST.

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	3,990.0	FEET/MSL
PRESSURE	889.6	MBS
TEMPERATURE	11.2	°C
RELATIVE HUMIDITY	31	%
DEW POINT	-5.2	°C
DENSITY	1,084.0	GM/M ³
WIND SPEED	06	MPH
WIND DIRECTION	250	DEGREES
CLOUD COVER	9	Cs

TABLE I. SURFACE OBSERVATIONS TAKEN AT WSD,
1350 HRS MST/18 JANUARY 1977.

ELEVATION	3,987.0	FEET/MSL
PRESSURE	889.6	MBS
TEMPERATURE	11.6	°C
RELATIVE HUMIDITY	44	%
DEW POINT	-0.1	°C
DENSITY	1,084.0	GM/M ³
WIND SPEED	08	MPH
WIND DIRECTION	190	DEGREES
CLOUD COVER	8	CI

TABLE II. SURFACE OBSERVATIONS TAKEN AT LC-33,
1401 HRS MST/18 JANUARY 1977.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	170	8.0	2100	203	9.5
100	180	8.0	2200	203	9.5
200	186	8.0	2300	202	8.5
300	191	8.5	2400	197	10.0
400	196	9.0	2500	198	10.5
500	197	9.5	2600	202	10.0
600	207	10.0	2700	206	9.5
700	197	10.0	2800	217	8.5
800	195	10.0	2900	235	9.0
900	196	9.0	3000	246	9.0
1000	203	11.5	3100	242	8.0
1100	199	11.0	3200	256	6.5
1200	199	10.5	3300	273	5.5
1300	197	11.0	3400	275	5.5
1400	192	11.5	3500	275	4.5
1500	202	12.0	3600	266	4.0
1600	207	12.0	3700	233	4.5
1700	207	11.5	3800	235	6.0
1800	211	11.5	3900	238	5.0
1900	204	11.0	4000	259	5.0
2000	204	9.5	4100	266	6.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33, AT 1358 HRS MST/18 JANUARY 1977
12815C LANCE, MISSILE NO. 4043, ROUND NO. 294 RSL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 813 FEET SOUTHEAST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	278	6.5
4300	278	5.0
4400	279	7.0
4500	294	1.5
4600	336	4.5
4700	028	2.5
4800	344	3.5
4900	335	3.5
5000	326	4.5
5100	326	5.0
5200	334	5.0
5300	349	4.5
5400	011	3.5
5500	040	2.5
5600	046	3.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
5700	041	4.5
5800	043	5.5
5900	046	7.0
6000	049	8.0
6100	050	9.0
6200	046	11.0
6300	047	12.0
6400	043	13.0
6500	041	14.5
6600	040	15.5
6700	046	16.0
6800	045	13.5
6900	044	13.5
7000	047	11.5

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	190	8.0
100	237	10.0
200	233	10.0
300	231	10.5
400	227	10.5
500	210	9.5
600	213	10.0
700	201	13.0
800	193	12.0
900	182	7.0
1000	196	6.0
1100	161	9.0
1200	171	8.5
1300	170	9.5
1400	180	9.5
1500	171	6.5
1600	182	12.5
1700	184	10.5
1800	167	7.0
1900	181	5.0
2000	177	5.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	187	8.5
2200	201	7.5
2300	211	9.5
2400	208	4.5
2500	195	5.0
2600	216	2.0
2700	245	2.5
2800	261	2.0
2900	309	4.5
3000	312	6.0
3100	343	4.0
3200	357	2.0
3300	000	2.5
3400	290	3.0
3500	245	3.5
3600	261	7.5
3700	258	7.5
3800	247	3.5
3900	250	5.0
4000	259	3.0
4100	287	5.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 1404 HRS MST/18 JANUARY 1977
12815C LANCE, MISSILE NO. 4043, ROUND NO. 294 RSL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 813 FEET SOUTHEAST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	270	3.0
4300	231	5.5
4400	275	4.0
4500	285	5.5
4600	339	5.0
4700	348	5.0
4800	338	4.0
4900	326	8.5
5000	300	11.5
5100	266	4.5
5200	012	4.0
5300	359	5.0
5400	040	7.0
5500	081	6.5
5600	097	7.5
5700	106	7.5
5800	091	8.5
5900	084	10.5
6000	062	12.5
6100	070	15.5
6200	066	18.0
6300	050	16.5
6400	046	15.5
6500	037	11.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	042	14.5
6700	061	19.0
6800	065	20.5
6900	064	18.0
7000	067	14.5
7100	057	11.0
7200	068	9.5
7300	072	10.5
7400	067	8.0
7500	055	9.5
7600	068	9.0
7700	070	9.5
7800	068	9.0
7900	066	12.0
8000	060	11.5
8100	050	9.5
8200	056	9.5
8300	046	12.0
8400	042	13.0
8500	040	13.0
8600	018	11.0
8700	028	8.0
8800	033	9.5
8900	037	8.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	024	9.5
9100	015	8.5
9200	011	8.0
9300	003	10.0
9400	008	12.0
9500	025	9.0
9600	032	7.0
9700	040	8.0
9800	014	8.5
9900	019	15.0
10000	029	13.5
10100	022	13.0
10200	021	17.5
10300	020	15.0
10400	022	13.0
10500	035	8.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10600	033	11.5
10700	010	12.5
10800	017	10.5
10900	002	11.0
11000	351	12.0
11100	349	12.0
11200	012	12.0
11300	011	13.0
11400	360	10.5
11500	355	12.5
11600	360	18.5
11700	358	19.0
11800	360	21.0
11900	357	20.0
12000	352	19.5

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 4126.59 FEET MSL
 18 JAN. 77 1310 HRS MST
 ASCENSION NO. 77

SIGNIFICANT LEVEL DATA
 0180010037
 HOLL OMAN

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

TABLE V

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM.
MILLIBARS	MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT
885.9	4126.6	11.0	-5.0	32.0
874.5	4475.8	7.5	-7.3	34.0
850.0	5245.1	6.1	-7.8	36.0
794.5	7041.6	1.1	-9.8	44.0
760.2	8212.6	2.0	-11.5	36.0
719.4	9673.0	1.4	-13.5	32.0
709.2	10051.7	3.0	-12.8	30.0
700.0	10398.8	2.5	-13.7	29.0
590.0	14887.2	-3.6	-21.7	23.0
554.8	16480.5	-4.9	-27.5	15.0
500.0	19133.9	-11.6	-32.3	16.0
475.6	20339.7	-12.4	-35.0	13.0
400.0	24643.8	-23.9	-43.7	14.0
344.8	28152.6	-32.0	-49.8	15.0
300.0	31329.5	-40.7		
250.0	35321.7	-51.4		
238.8	36297.8	-53.3		
218.0	39222.5	-55.1		
200.0	40016.4	-59.7		
176.8	42512.6	-67.0		
160.8	44385.8	-70.1		
150.0	45750.0	-69.7		
111.2	51570.1	-73.8		
100.0	53622.2	-72.3		
82.2	57389.3	-76.2		
76.9	58689.8	-74.1		
70.0	60467.0	-75.6		
64.6	62010.5	-73.0		
59.0	62756.5	-74.6		
50.0	66976.5	-69.4		

STATION ALTITUDE 4125.59 FEET MSI
 18 JAN. 77 1310 HRS MST
 ASCENSION NO. 77

SIGNIFICANT LEVEL DATA
 C18G010C37
 HOLLDMAN

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

TABLE V (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSI FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
37.4 72727.2	-67.6	
30.0 77220.7	-57.6	
24.0 81925.0	-53.3	

STATION ALTITUDE 4125.59 FEET MSL
 18 JAN. 77 1310 HRS MST
 ASCENSION NO. 77

UPPER AIR DATA
 0180010037
 HOLLoman

TABLE VI

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENPOINT CENTIGRADC	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4126.6	685.9	11.0	32.0	1084.2	657.3	180.0	6.0	1.000261
4500.0	672.8	7.5	34.1	1063.2	653.1	187.2	6.0	1.000258
5000.0	657.8	6.5	35.4	1066.7	652.0	196.5	6.2	1.000254
5500.0	641.9	5.4	37.1	1051.4	650.7	205.2	6.5	1.000250
6000.0	626.3	4.0	39.4	1037.1	649.0	208.7	6.5	1.000247
6500.0	610.9	2.6	41.6	1023.0	647.4	204.2	6.0	1.000243
7000.0	795.8	1.2	43.8	1009.1	645.7	201.7	5.0	1.000240
7500.0	781.0	1.5	40.9	989.4	646.0	207.2	3.0	1.000234
8000.0	766.3	1.8	37.5	969.6	646.4	243.9	1.1	1.000229
8500.0	752.0	1.9	35.2	951.3	646.5	233.3	2.3	1.000224
9000.0	737.9	1.7	33.8	934.3	646.2	353.2	4.5	1.000220
9500.0	724.1	1.5	32.5	917.5	646.0	12.6	6.8	1.000215
10000.0	710.6	2.8	30.3	896.0	647.5	23.4	9.1	1.000211
10500.0	697.3	2.4	28.9	880.7	647.0	34.7	10.5	1.000207
11000.0	684.2	1.7	28.2	866.3	646.2	23.6	10.1	1.000203
11500.0	671.2	1.0	27.5	852.1	645.4	247.7	10.4	1.000199
12000.0	658.6	.3	26.9	838.1	644.6	356.2	12.1	1.000195
12500.0	646.2	-.4	26.2	824.4	643.7	17.0	15.0	1.000192
13000.0	634.0	-1.0	25.5	810.4	642.9	30.2	17.5	1.000188
13500.0	622.0	-1.7	24.9	797.7	642.1	41.0	18.9	1.000185
14000.0	610.3	-2.4	24.2	784.6	641.3	41.1	18.1	1.000181
14500.0	598.8	-3.1	23.5	771.8	640.5	14.0	14.0	1.000178
15000.0	587.4	-3.7	22.4	759.0	639.7	348.0	14.3	1.000175
15500.0	576.2	-4.1	19.9	745.6	639.2	345.8	15.9	1.000171
16000.0	565.2	-4.5	17.4	732.5	638.7	243.7	17.5	1.000167
16500.0	554.4	-4.9	15.0	719.8	638.1	341.2	19.1	1.000154
17000.0	543.0	-6.2	15.2	709.2	636.6	239.8	20.8	1.000161
17500.0	533.1	-7.5	15.4	698.7	635.1	341.0	22.6	1.000159
18000.0	522.7	-8.7	15.6	688.4	633.6	242.7	24.4	1.000156
18500.0	512.5	-10.0	15.8	678.3	632.1	346.5	26.4	1.000154

STATION ALTITUDE 4126.59 FEET MSL
 18 JAN. 77 1310 HRS MST
 ASCENSION NO. 47

UPPER AIR DATA
 0180010037
 HULLOMAN

WSTM SITE COORDINATES
 571759.24 FEET E
 362745.21 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIP DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
19000.0	502.6	-11.3	-32.0	15.9	668.4	630.5	349.8	28.4	1.000151
19500.0	492.8	-11.8	-33.1	15.1	656.8	629.8	352.9	30.0	1.000148
20000.0	483.1	-12.2	-34.2	13.8	644.7	629.4	355.8	31.5	1.000145
20500.0	473.5	-12.8	-35.4	13.0	633.5	628.6	359.0	31.3	1.000143
21000.0	464.0	-14.2	-36.4	13.2	623.9	627.0	1.6	30.9	1.000140
21500.0	454.6	-15.5	-37.4	13.3	614.6	625.4	2.9	30.0	1.000138
22000.0	445.5	-16.8	-38.4	13.4	605.3	623.8	4.1	29.5	1.000136
22500.0	436.5	-18.2	-39.4	13.5	596.2	622.1	5.0	29.7	1.000134
23000.0	427.7	-19.5	-40.4	13.6	587.3	620.5	5.8	31.0	1.000132
23500.0	419.1	-20.8	-41.4	13.7	578.5	618.9	6.3	33.4	1.000130
24000.0	410.6	-22.2	-42.4	13.9	569.9	617.2	7.2	33.9	1.000128
24500.0	402.2	-23.5	-43.4	14.0	561.4	615.6	8.2	33.8	1.000126
25000.0	394.0	-24.7	-44.3	14.1	552.5	614.1	9.4	33.8	1.000124
25500.0	385.8	-25.9	-45.2	14.2	543.4	612.6	10.7	33.9	1.000122
26000.0	377.7	-27.0	-46.1	14.4	534.5	611.2	10.6	34.2	1.000120
26500.0	369.8	-28.2	-46.9	14.5	525.8	609.8	9.0	34.8	1.000118
27000.0	362.0	-29.3	-47.8	14.7	517.2	608.3	6.4	34.6	1.000116
27500.0	354.5	-30.5	-48.7	14.8	508.8	606.9	.8	32.6	1.000114
28000.0	347.0	-31.6	-49.5	15.0	500.6	605.4	354.5	30.9	1.000112
28500.0	339.6	-33.0	-51.6	13.4**	492.5	603.8	247.5	29.4	1.000110
29000.0	332.2	-34.3	-54.3	11.0**	484.5	602.1	340.1	28.5	1.000108
29500.0	325.0	-35.7	-57.4	8.6**	476.8	600.3	337.0	29.0	1.000106
30000.0	318.0	-37.1	-60.9	6.3**	469.2	598.6	334.1	29.5	1.000105
30500.0	311.1	-38.4	-65.4	3.9**	461.7	596.9	330.3	31.5	1.000103
31000.0	304.4	-39.8	-72.8	1.6**	454.4	595.1	326.9	33.7	1.000101
31500.0	297.7	-41.2			447.0	593.4	221.8	35.8	1.000100
32000.0	291.0	-42.5			439.4	591.7	316.7	38.1	1.000098
32500.0	284.4	-43.8			432.0	589.9	311.6	40.3	1.000096
33000.0	278.0	-45.2			424.8	588.2	306.4	42.3	1.000095
33500.0	271.7	-46.5			417.6	586.5	302.3	44.4	1.000093

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

UPPER AIR DATA
 C180010037
 40110MAN

STATION ALTITUDE 4125.59 FEET MSL
 19 JAN. 77 1710 40S 115T
 ASCENSION NO. 77

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
34000.0	265.6	-47.0			410.6	584.7	299.9	45.8	1.000091
34500.0	259.6	-49.2			403.8	583.0	297.7	47.3	1.000090
35000.0	253.7	-50.5			397.0	581.3	298.0	49.0	1.000088
35500.0	247.9	-51.7			390.1	579.7	298.2	50.7	1.000087
36000.0	242.2	-52.7			382.7	578.4	298.6	53.4	1.000085
36500.0	236.5	-53.5			375.1	577.4	298.9	56.4	1.000084
37000.0	231.0	-54.0			367.1	576.8	300.0	60.9	1.000082
37500.0	225.6	-54.4			359.3	576.2	301.5	66.3	1.000080
38000.0	220.3	-54.9			351.6	575.5	302.2	71.0	1.000078
38500.0	215.1	-55.8			344.8	574.3	302.2	74.8	1.000077
39000.0	210.0	-57.1			338.6	572.6	301.5	76.1	1.000075
39500.0	205.0	-58.4			332.5	570.9	299.9	74.7	1.000074
40000.0	200.2	-59.7			326.6	569.2	298.9	74.7	1.000073
40500.0	195.3	-61.1			320.8	567.3	298.6	76.2	1.000071
41000.0	190.5	-62.6			315.2	565.3	299.1	77.9	1.000070
41500.0	185.9	-64.0			309.6	563.4	300.5	80.0	1.000069
42000.0	181.3	-65.5			304.2	561.4	300.9	80.8	1.000068
42500.0	176.9	-67.0			298.9	559.4	298.3	78.1	1.000067
43000.0	172.5	-67.8			292.6	558.3	295.3	75.2	1.000065
43500.0	168.2	-68.6			286.5	557.1	290.2	69.0	1.000064
44000.0	164.0	-69.5			280.4	556.0	284.1	63.4	1.000062
44500.0	159.9	-70.1			274.2	555.2	284.5	62.4	1.000061
45000.0	155.8	-69.9			267.1	555.4	286.0	62.0	1.000060
45500.0	151.9	-69.8			260.2	555.6	287.7	63.5	1.000058
46000.0	148.1	-69.9			253.8	555.4	289.4	66.4	1.000057
46500.0	144.3	-70.2			247.8	555.0	290.9	69.3	1.000055
47000.0	140.7	-70.6			241.9	554.5	290.7	68.2	1.000054
47500.0	137.1	-70.9			236.2	554.0	290.5	67.2	1.000053
48000.0	133.6	-71.3			230.6	553.5	291.1	65.8	1.000051
48500.0	130.2	-71.6			225.1	553.0	292.6	64.3	1.000050

UPPER AIR DATA
 0180010037
 HOLL OMAN
 WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

STATION ALTITUDE 4126.59 FEET MSL
 18 JAN. 77 1310 HRS MST
 ASCENSION NO. 77
 TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIP DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
49000.0	126.9	-72.0		219.8	552.5	294.2	62.9	1.000049
49500.0	123.7	-72.3		214.8	552.1	294.7	63.0	1.000048
50000.0	120.6	-72.7		209.5	551.6	295.3	63.2	1.000047
50500.0	117.5	-73.0		204.5	551.1	295.0	62.8	1.000045
51000.0	114.5	-73.4		199.7	550.6	294.0	62.1	1.000044
51500.0	111.6	-73.8		195.0	550.1	293.4	61.4	1.000043
52000.0	108.8	-73.5		189.7	550.5	293.5	60.8	1.000042
52500.0	106.0	-73.1		184.8	551.0	293.6	60.2	1.000041
53000.0	103.3	-72.8		179.5	551.5	295.1	59.7	1.000040
53500.0	100.6	-72.4		174.6	552.0	296.5	59.1	1.000039
54000.0	98.1	-72.7		170.4	551.6	297.3	56.6	1.000038
54500.0	95.5	-73.2		166.5	550.9	297.3	52.1	1.000037
55000.0	93.1	-73.7		162.6	550.2	297.3	47.6	1.000036
55500.0	90.7	-74.2		158.8	549.4	299.4	47.0	1.000035
56000.0	88.4	-74.8		155.2	548.7	301.6	46.5	1.000035
56500.0	86.1	-75.3		151.6	548.0	304.0	46.0	1.000034
57000.0	83.9	-75.8		148.1	547.3	306.5	45.5	1.000033
57500.0	81.7	-76.0		144.4	547.0	309.1	45.2	1.000032
58000.0	79.6	-75.2		140.1	548.1	310.6	44.6	1.000031
58500.0	77.6	-74.4		136.0	549.2	310.2	43.4	1.000030
59000.0	75.5	-74.4		132.4	549.3	309.8	42.2	1.000029
59500.0	73.6	-74.8		129.3	548.7	309.9	42.2	1.000029
60000.0	71.7	-75.2		126.7	548.1	310.6	43.2	1.000028
60500.0	69.9	-75.5		123.7	547.6	311.3	44.2	1.000027
61000.0	68.1	-74.7		119.5	548.8	312.3	44.4	1.000027
61500.0	66.3	-73.9		116.0	550.0	313.4	44.4	1.000026
62000.0	64.6	-73.0		112.5	551.1	314.5	44.4	1.000025
62500.0	63.0	-73.4		109.9	550.5	315.2	44.0	1.000024
63000.0	61.4	-73.9		107.3	549.9	315.9	43.7	1.000024
63500.0	59.8	-74.4		104.8	549.3	317.0	43.1	1.000023

UPPER AIR DATA
 0180010037
 HOLL OMAN
 WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

STATION ALTITUDE 4126.59 FEET MSL
 18 JAN. 77 1710 HRS MST
 ASCENSION NO. 77
 TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
54000.0	58.3	-74.2		102.0	549.5	318.6	42.4	1.000023
64500.0	56.8	-73.4		99.0	550.6	320.3	41.6	1.000022
65000.0	55.4	-72.6		96.1	551.7	321.0	41.6	1.000021
65500.0	53.9	-71.8		93.2	552.8	321.4	41.6	1.000021
66000.0	52.6	-71.0		90.6	553.9	321.7	41.7	1.000020
66500.0	51.2	-70.2		87.9	555.0	321.3	41.6	1.000020
67000.0	49.9	-69.4		85.4	556.1	320.9	41.6	1.000019
67500.0	48.7	-69.2		83.2	556.3	320.6	41.4	1.000019
68000.0	47.5	-59.1		81.1	556.5	320.4	41.2	1.000018
68500.0	46.3	-68.9		79.0	556.7	320.1	40.9	1.000018
69000.0	45.1	-58.8		77.0	557.0	319.3	40.8	1.000017
69500.0	44.0	-68.6		75.0	557.2	318.5	40.6	1.000017
70000.0	42.9	-68.5		73.0	557.4	317.6	40.1	1.000016
70500.0	41.9	-68.3		71.2	557.6	316.8	39.3	1.000016
71000.0	40.8	-68.1		69.3	557.8	315.9	38.5	1.000015
71500.0	39.8	-68.0		67.6	558.0	315.8	37.5	1.000015
72000.0	38.8	-67.8		65.8	558.2	315.9	36.5	1.000015
72500.0	37.8	-67.7		64.1	558.4	316.2	35.5	1.000014
73000.0	36.9	-67.0		62.4	559.4	317.5	34.9	1.000014
73500.0	36.0	-65.9		60.5	560.9	318.8	34.4	1.000013
74000.0	35.1	-64.8		58.7	562.4	318.5	33.9	1.000013
74500.0	34.2	-63.7		57.0	563.9	316.2	33.7	1.000013
75000.0	33.5	-62.5		55.3	565.4	313.9	33.5	1.000012
75500.0	32.6	-61.4		53.7	566.9	308.5	34.0	1.000012
76000.0	31.9	-60.3		52.1	568.3	301.7	35.4	1.000012
76500.0	31.1	-59.2		50.6	569.8	295.5	37.1	1.000011
77000.0	30.3	-58.1		49.1	571.3	289.9	37.9	1.000011
77500.0	29.5	-57.3		47.8	572.3	284.5	38.7	1.000011
78000.0	28.9	-56.9		46.6	572.9	279.4	39.9	1.000010
78500.0	28.2	-56.4		45.4	573.5	279.0	40.0	1.000010

UPPER AIR DATA
 O180010037
 HDLIDMAN
 TABLE VI (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 18 JAN. 77 1310 HRS MST
 ASCENSION NO. 77

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
79000.0	27.6	-56.0		49.2	574.1	278.7	40.1	1.000010
79500.0	26.9	-55.5		43.1	574.7			1.000010
80000.0	26.3	-55.1		42.0	575.3			1.000009
80500.0	25.7	-54.5		40.9	575.9			1.000009
81000.0	25.1	-54.1		39.9	576.5			1.000009
81500.0	24.5	-53.7		38.9	577.1			1.000009

MANDATORY LEVELS
 C180010037
 HOLLoman
 TABLE VII

STATION ALTITUDE 4126.59 FEET MSI
 18 JAN. 77 1310 HRS MST
 ASCENSION NO. 77

WSTM SITE COORDINATES
 571739.24 FEET E
 362745.21 FEET N

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5743.	6.1	-7.8	36.	200.9	6.3
800.0	6860.	1.6	-9.5	43.	200.9	5.6
750.0	8566.	1.9	-11.9	35.	336.7	2.6
700.0	10392.	2.5	-17.7	29.	32.6	10.1
650.0	12348.	-0.1	-17.1	26.	11.9	14.0
600.0	14438.	-3.0	-20.9	24.	17.5	14.3
550.0	16689.	-5.5	-27.9	15.	340.3	19.8
500.0	19114.	-11.6	-32.3	16.	350.7	28.8
450.0	21746.	-16.2	-37.9	13.	3.6	29.5
400.0	24611.	-23.9	-43.7	14.	8.5	33.8
350.0	27762.	-31.2	-49.2	15.	357.1	31.6
300.0	31278.	-40.7			323.7	35.0
250.0	35257.	-51.4			296.1	50.0
200.0	39934.	-59.7			298.9	74.8
175.0	42622.	-67.2			297.1	77.0
150.0	45643.	-69.7			288.5	64.9
125.0	49186.	-72.2			294.5	63.0
100.0	52477.	-72.2			296.9	59.0
80.0	57738.	-75.4			310.7	44.8
70.0	60783.	-75.6			311.2	44.2
60.0	63234.	-74.2			316.8	43.3
50.0	66754.	-69.4			320.9	41.6
40.0	71138.	-68.0			315.8	37.8
30.0	76925.	-57.6			287.6	38.2
25.0	80723.	-54.1				

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

STATION ALTITUDE 4051.00 FEET MSI
 16 JAN. 77 1320 HRS MST
 ASCENSION NO. 33

SIGNIFICANT LEVEL DATA
 G180C30C23
 JALLFN
 TABLE VIII

WSTM SITE COORDINATES
 450491.60 FEET E
 464023.05 FEET N

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
988.1	4051.0	12.4	23.0
977.8	4369.6	8.4	38.0
850.0	5238.8	6.0	40.0
907.0	6623.8	1.6	49.0
787.6	7269.3	2.8	44.0
755.4	8375.6	1.1	46.0
717.6	9738.9	3.8	37.0
700.0	10401.0	3.3	36.0
596.4	14616.9	-3.2	33.0
585.4	15101.3	-3.0	28.0
500.0	19141.2	-11.4	26.0
494.3	19430.7	-10.9	23.0
400.0	24643.1	-24.2	24.0
324.4	29551.8	-35.8	24.0
300.0	31322.2	-40.8	
250.0	35317.8	-50.9	
241.2	36083.3	-52.5	
231.6	36946.7	-53.0	
200.0	40014.1	-59.8	
169.4	43359.8	-68.9	
153.6	45287.4	-69.5	
150.0	45755.4	-68.0	
146.2	46265.4	-66.6	
116.4	50757.1	-71.9	
100.0	53700.1	-72.6	
82.8	57321.1	-76.6	
76.8	58763.6	-72.9	
70.0	60553.0	-74.1	
65.4	61871.3	-71.0	
60.0	63543.0	-74.1	

STATION ALTITUDE 4051.00 FEET MSL
18 JAN. 77 1320 HRS MST
ASCENSION NO. 13

SIGNIFICANT LEVEL DATA
0180030023
JALLEN

WSTM SITE COORDINATES
450491.60 FEET E
454023.05 FEET N

TABLE VIII (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPNT DEGREES CENTIGRADE	REL. HUM. PERCENT
50.0 67094.3	-69.4	
37.8 72650.8	-65.8	

UPPER AIR DATA
 C180030023
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 23

WSTM SITE COORDINATES
 450491.60 FEET E
 464023.05 FEET N

TABLE IX

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE					SPEED KNOTS	SPEED KNOTS	
4051.0	388.1	12.4	-8.1	23.0	1081.9	658.8	180.0	1.9	1.000255	
4500.0	873.6	8.0	-5.3	38.3	1080.3	653.9			1.000260	
5000.0	857.5	6.7	-6.1	39.5	1065.8	652.2			1.000255	
5500.0	841.7	5.2	-6.8	41.7	1051.8	650.5			1.000252	
6000.0	825.1	3.6	-7.2	44.9	1038.2	648.6			1.000249	
6500.0	810.8	2.0	-7.8	48.2	1024.9	646.7			1.000245	
7000.0	795.6	2.3	-8.1	46.1	1004.7	647.1			1.000240	
7500.0	780.8	2.4	-8.4	44.4	985.4	647.2	243.0	1.4	1.000236	
8000.0	766.2	1.7	-8.9	45.3	969.7	646.3	296.2	4.8	1.000232	
8500.0	751.9	1.3	-9.2	45.2	952.7	645.9	300.9	6.4	1.000228	
9000.0	737.8	2.3	-9.3	41.9	931.6	647.1	304.4	7.4	1.000223	
9500.0	724.1	3.3	-9.4	38.6	910.9	648.3	326.1	5.5	1.000216	
10000.0	710.6	3.6	-9.8	36.6	893.1	648.6	358.7	5.5	1.000213	
10500.0	697.4	3.1	-10.5	35.9	878.0	648.0	18.5	8.5	1.000209	
11000.0	684.2	2.4	-11.3	35.6	863.9	647.1	28.6	10.7	1.000205	
11500.0	671.4	1.6	-12.1	35.2	850.1	646.2	37.8	11.6	1.000202	
12000.0	658.7	.8	-12.9	34.9	836.5	645.3	39.6	11.2	1.000198	
12500.0	646.3	.1	-13.7	34.5	822.1	644.3	36.7	9.9	1.000194	
13000.0	634.2	-.7	-14.5	34.2	810.0	643.4	27.1	9.7	1.000191	
13500.0	622.3	-1.5	-15.3	33.8	797.0	642.5	16.5	10.2	1.000187	
14000.0	610.5	-2.2	-16.1	33.4	784.3	641.6	6.4	11.7	1.000184	
14500.0	599.1	-3.0	-17.0	33.1	771.8	640.6	258.8	13.2	1.000180	
15000.0	587.7	-3.0	-18.5	29.0	757.3	640.6	352.7	13.5	1.000175	
15500.0	576.4	-3.8	-19.7	27.8	744.9	639.6	246.9	14.2	1.000173	
16000.0	565.2	-4.9	-20.7	27.6	733.4	638.4	342.0	15.8	1.000170	
16500.0	554.3	-5.9	-21.7	27.3	722.0	637.1	338.7	18.2	1.000167	
17000.0	543.6	-6.9	-22.7	27.1	710.9	635.8	336.9	21.3	1.000164	
17500.0	533.1	-8.0	-23.7	26.8	699.0	634.6	338.2	23.4	1.000161	
18000.0	522.8	-9.0	-24.7	26.6	689.1	633.3	341.6	24.7	1.000158	
18500.0	512.7	-10.1	-25.7	26.3	678.5	632.1	345.0	26.2	1.000155	

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

UPPER AIR DATA
 0180030023
 JALLEN

WSTM SITE COORDINATES
 450451.60 FEET E
 464023.05 FEET N

STATION ALTITUDE 4051.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION '40. 23

TABLE IX (CONT)

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	METERS	DIRECTION DEGREES(TN)	SPEED KNOTS	
19000.0	500.0	-11.1	-26.7	26.1	668.0	630.8	248.1	27.9	1.000153	
19500.0	492.9	-11.1	-28.0	23.0	654.9	630.8	348.6	28.9	1.000149	
20000.0	483.0	-12.4	-29.1	23.1	644.9	629.3	348.8	29.3	1.000147	
20500.0	473.3	-13.6	-30.1	23.2	635.1	627.7	350.9	27.2	1.000144	
21000.0	462.8	-14.9	-31.2	23.3	625.4	626.2	352.7	25.4	1.000142	
21500.0	454.5	-16.2	-32.3	23.4	615.0	624.6	353.6	24.3	1.000140	
22000.0	445.3	-17.5	-33.3	23.5	606.5	623.0	354.2	24.5	1.000137	
22500.0	436.4	-18.7	-34.4	23.6	597.3	621.5	354.5	25.6	1.000135	
23000.0	427.6	-20.0	-35.4	23.7	588.3	619.9	356.1	26.9	1.000133	
23500.0	419.0	-21.3	-36.5	23.8	579.4	618.3	357.9	28.1	1.000131	
24000.0	410.6	-22.6	-37.6	23.9	570.7	616.8	.0	29.6	1.000129	
24500.0	402.3	-23.8	-39.6	24.0	562.1	615.2	2.1	31.2	1.000126	
25000.0	394.0	-25.0	-39.7	24.0	553.0	613.7	4.8	32.6	1.000124	
25500.0	385.6	-26.2	-40.7	24.0	544.0	612.2	7.4	34.0	1.000122	
26000.0	377.5	-27.4	-41.7	24.0	535.1	610.8	8.9	34.0	1.000120	
26500.0	369.5	-28.6	-42.7	24.0	526.3	609.3	10.0	33.8	1.000118	
27000.0	361.7	-29.8	-43.8	24.0	517.7	607.8	5.6	32.0	1.000116	
27500.0	354.1	-31.0	-44.8	24.0	509.2	606.3	.7	30.5	1.000114	
28000.0	346.6	-32.1	-45.8	24.0	500.9	604.8	354.4	29.3	1.000112	
28500.0	339.3	-33.3	-46.8	24.0	492.8	603.4	347.5	28.5	1.000110	
29000.0	332.1	-34.5	-47.9	24.0	484.8	601.9	341.5	27.9	1.000108	
29500.0	325.1	-35.7	-48.9	24.0	476.9	600.4	335.6	27.4	1.000107	
30000.0	318.0	-37.1	-52.6	17.9**	469.7	598.6	330.6	28.3	1.000105	
30500.0	311.1	-38.5	-57.6	11.1**	461.8	596.8	326.3	29.6	1.000103	
31000.0	304.2	-39.9	-65.8	4.4**	454.5	595.0	325.1	30.9	1.000101	
31500.0	297.0	-41.2			447.0	593.3	324.7	32.1	1.000100	
32000.0	290.9	-42.5			439.3	591.6	320.0	34.4	1.000098	
32500.0	284.3	-43.8			431.8	590.0	315.0	37.3	1.000096	
33000.0	277.9	-45.0			424.4	588.4	310.1	40.1	1.000095	
33500.0	271.6	-46.3			417.1	586.8	305.7	43.0	1.000093	

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

UPPER AIR DATA
 C180030023
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL
 18 JAN. 77 1300 HRS MST
 ASCENSION NO. 03

WSTM SITE COORDINATES
 450491.50 FEET E
 464023.05 FEET N

TABLE IX (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
34000.0	265.5	-47.6		410.0	595.1	303.6	45.0	1.000091
34500.0	259.5	-46.8		403.0	583.5	302.3	46.7	1.000090
35000.0	253.7	-50.1		396.0	581.8	301.9	49.2	1.000088
35500.0	247.9	-51.3		389.7	580.3	302.0	52.2	1.000097
36000.0	242.1	-52.3		382.0	578.9	302.0	55.2	1.000085
36500.0	236.5	-52.7		373.8	578.4	301.9	58.5	1.000083
37000.0	231.0	-53.1		365.7	577.9	302.3	62.0	1.000081
37500.0	225.6	-54.2		358.9	576.4	303.2	66.0	1.000080
38000.0	220.2	-55.3		352.2	575.0	303.7	70.0	1.000078
38500.0	215.0	-56.4		345.7	573.5	303.7	73.9	1.000077
39000.0	209.9	-57.6		339.2	572.0	303.4	77.1	1.000076
39500.0	205.0	-59.7		332.9	570.6	302.7	79.3	1.000074
40000.0	200.1	-59.8		326.7	569.1	301.8	79.4	1.000073
40500.0	195.7	-61.1		320.8	567.3	300.3	76.5	1.000071
41000.0	190.4	-62.5		314.9	565.5	299.1	74.1	1.000070
41500.0	185.8	-63.8		309.2	563.6	298.3	73.0	1.000069
42000.0	181.2	-65.2		303.6	561.8	298.1	72.1	1.000068
42500.0	176.8	-66.6		298.1	559.9	299.8	72.2	1.000066
43000.0	172.5	-67.9		292.7	558.1	301.6	72.4	1.000065
43500.0	168.2	-68.9		286.9	556.7	299.1	69.7	1.000064
44000.0	164.0	-69.1		280.0	556.5	296.1	67.1	1.000062
44500.0	159.9	-69.3		273.1	556.3	292.4	65.1	1.000061
45000.0	155.9	-69.4		266.5	556.1	288.3	63.5	1.000059
45500.0	152.0	-68.8		259.1	556.9	285.5	62.8	1.000058
46000.0	148.2	-67.3		250.6	558.9	285.7	63.5	1.000056
46500.0	144.5	-66.9		244.0	559.5	287.8	64.3	1.000054
47000.0	140.8	-67.5		238.5	558.7	287.9	67.0	1.000053
47500.0	137.3	-68.1		233.2	557.9	287.8	70.0	1.000052
48000.0	133.9	-68.6		228.0	557.1	288.0	69.7	1.000051
48500.0	130.5	-69.2		223.0	556.3	288.3	67.0	1.000050

UPPER AIR DATA
 O180030023
 JALLEN
 TABLE XI (CONT)

STATION ALTITUDE 4051.00 FEET MSL
 18 JAN. 77 1720 HRS MST
 ASCENSION NO. 22

WSM SITE COORDINATES
 450491.50 FEET E
 464027.05 FEET N

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 DEGREES			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
49000.0	127.2	-69.8			218.0	555.5		288.9	64.1	1.000049
49500.0	124.0	-70.4			213.2	554.7		290.3	60.8	1.000047
50000.0	120.9	-71.0			208.4	553.9		291.4	58.3	1.000046
50500.0	117.9	-71.6			203.8	553.1		291.0	59.5	1.000045
51000.0	114.9	-72.0			199.0	552.6		290.7	60.6	1.000044
51500.0	112.0	-72.1			194.1	552.4		291.0	60.4	1.000043
52000.0	109.2	-72.2			189.2	552.3		291.4	60.2	1.000042
52500.0	106.4	-72.3			184.5	552.1		291.2	58.2	1.000041
53000.0	103.7	-72.4			179.9	551.9		290.8	56.1	1.000040
53500.0	101.0	-72.6			175.5	551.8		291.0	53.8	1.000039
54000.0	98.4	-72.9			171.3	551.3		291.5	51.4	1.000038
54500.0	95.9	-73.5			167.3	550.5		292.9	49.8	1.000037
55000.0	93.4	-74.0			163.5	549.7		296.4	50.6	1.000036
55500.0	91.0	-74.6			159.7	549.0		299.8	51.7	1.000036
56000.0	88.7	-75.1			156.1	548.2		303.0	50.9	1.000035
56500.0	86.4	-75.7			152.5	547.4		306.3	50.1	1.000034
57000.0	84.2	-76.2			149.0	546.7		308.7	49.3	1.000033
57500.0	82.0	-76.1			145.1	546.8		310.3	48.5	1.000032
58000.0	79.9	-74.9			140.4	548.6		311.6	47.8	1.000031
58500.0	77.9	-73.6			135.9	550.4		311.2	46.8	1.000030
59000.0	75.9	-73.1			132.1	551.1		310.9	45.9	1.000029
59500.0	73.9	-73.4			128.9	550.6		310.6	43.1	1.000029
60000.0	72.0	-73.7			125.8	550.2		310.3	39.7	1.000028
60500.0	70.2	-74.1			122.2	549.7		310.2	37.4	1.000027
61000.0	68.4	-73.0			119.1	551.1		310.9	38.6	1.000027
61500.0	66.7	-71.9			115.4	552.7		311.5	39.7	1.000026
62000.0	65.0	-71.2			112.1	553.6		311.7	40.4	1.000025
62500.0	63.3	-72.2			109.7	552.3		311.7	40.8	1.000024
63000.0	61.7	-73.1			107.4	551.0		311.9	41.3	1.000024
63500.0	60.1	-74.0			105.2	549.7		312.7	41.7	1.000023

UPPER AIR DATA
 0180030023
 JALLEN
 TABLE IX (CONT)

STATION ALTITUDE 4051.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 33

WSTM SITE COORDINATES
 450491.60 FEET E
 464023.05 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
54000.0	58.6	-73.5		102.3	550.5	313.4	42.2	1.000023
54500.0	57.1	-72.8		99.3	551.4	315.1	41.1	1.000022
55000.0	55.7	-72.2		96.5	552.3	317.3	39.4	1.000021
55500.0	54.3	-71.5		93.8	553.2	319.7	38.0	1.000021
56000.0	52.9	-70.8		91.1	554.1	322.1	38.0	1.000020
56500.0	51.5	-70.2		88.5	555.0	324.4	37.9	1.000020
57000.0	50.2	-59.5		86.0	555.9	324.6	40.3	1.000019
57500.0	49.0	-69.1		83.7	556.4	323.7	43.8	1.000019
58000.0	47.8	-68.8		81.4	556.9	323.1	47.0	1.000018
58500.0	46.6	-68.5		79.3	557.3	324.3	47.0	1.000018
59000.0	45.4	-58.2		77.2	557.8	325.4	47.0	1.000017
59500.0	44.3	-67.8		75.2	558.2	326.5	45.5	1.000017
70000.0	43.2	-67.5		73.2	558.7	327.6	42.8	1.000016
70500.0	42.1	-67.2		71.2	559.1			1.000016
71000.0	41.1	-66.9		69.4	559.5			1.000015
71500.0	40.1	-66.5		67.6	560.0			1.000015
72000.0	39.1	-66.2		65.8	560.4			1.000015
72500.0	38.1	-65.9		64.0	560.8			1.000014

STATION ALTITUDE 4051.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 03

MANDATORY LEVELS
 0180030023
 JALLEN
 TABLE X

WSTM SITE COORDINATES
 450491.60 FEET E
 464023.05 FEET N

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5237.	6.0	-6.6	40.	9999.0	9999.0XX
800.0	6852.	2.0	-8.0	47.	9999.0	9999.0XX
750.0	8561.	1.5	-9.2	45.	301.3	6.6
700.0	10394.	3.3	-10.3	36.	15.7	7.8
650.0	12355.	.7	-13.5	35.	37.6	10.3
600.0	14448.	-3.0	-16.9	33.	359.3	13.2
550.0	16699.	-6.2	-22.1	27.	337.8	19.5
500.0	19121.	-11.4	-27.0	26.	348.6	28.3
450.0	21750.	-16.8	-32.8	23.	354.0	24.0
400.0	24611.	-24.2	-38.9	24.	2.7	31.6
350.0	27759.	-31.6	-45.3	24.	357.0	29.7
300.0	31271.	-40.8			324.8	31.7
250.0	35254.	-50.9			302.0	51.1
200.0	39932.	-59.8			301.7	79.3
175.0	42623.	-67.1			300.6	72.2
150.0	45649.	-68.0			786.1	63.2
125.0	49239.	-70.2			289.9	81.7
100.0	53555.	-72.6			291.2	52.9
80.0	57809.	-74.9			311.6	47.8
70.0	60369.	-74.1			310.2	37.5
60.0	63341.	-74.1			312.7	41.8
50.0	66870.	-69.4			324.4	40.9
40.0	71270.	-66.5				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.
 XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3989.00 FEET MSL
 18 JAN. 77
 ASCENSION NO. 44

SIGNIFICANT LEVEL DATA
 C180020044
 WHITE SANDS

WSTM SITE COORDINATES
 488580.00 FEET E
 185045.00 FEET N

TABLE XI

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM. PERCENT
MILLIBARS	MSL FEET	AIR DEGREES	DEKPOINT CENTIGRADE	
890.2	3989.0	11.9	-3.4	34.0
883.3	4201.6	9.1	-5.9	34.0
850.0	5240.3	5.8	-7.4	38.0
807.3	6616.6	2.4	-10.1	39.0
736.7	9052.1	.7	-13.0	35.0
700.0	10398.4	1.8	-12.7	33.0
677.3	11262.1	2.1	-14.5	28.0
613.3	13877.2	1.4	-18.4	26.0
579.3	15360.9	-4.8	-22.2	24.0
555.3	16455.8	-4.2	-24.3	19.0
500.0	19143.7	-10.1	-29.3	19.0
452.3	21657.5	-15.7	-34.0	19.0
400.0	24660.0	-23.4	-40.5	19.0
356.3	27410.4	-29.5	-45.6	19.0
338.3	28619.2	-33.0	-49.1	18.0
300.0	31362.4	-39.6		
250.0	35395.0	-47.9		
228.3	37353.3	-51.2		
200.0	40139.8	-58.6		
163.8	44169.7	-69.4		
150.0	45891.0	-71.7		
145.3	46513.0	-69.9		
141.3	47066.5	-65.7		
128.3	48985.4	-68.8		
100.0	53844.7	-73.7		
93.3	55179.5	-74.2		
86.8	56579.4	-70.9		
80.3	58087.8	-74.4		
74.3	59588.0	-72.2		
70.0	60735.0	-76.1		

STATION ALTITUDE 3989.00 FEET MSL
18 JAN. 77 1320 HRS MST
ASCENSION NO. 44

SIGNIFICANT LEVEL DATA
0180020044
WHITE SANDS

WSTM SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

TABLE XI (CONT)

PRESSURE	GEOMETRIC	TEMPERATURE	REL. HUM.
MILLIBARS	ALTITUDE	AIR	PERCENT
	MSL FEET	DEGREES	
		CENTIGRADE	
66.3	61773.0	-74.6	
50.0	67286.0	-67.4	

UPPER AIR DATA
 0180020044
 WHITE SANDS
 TABLE XII

STATION ALTITUDE 3989.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 44

WSTM SITE COORDINATES
 488580.00 FEET E
 185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PPESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
3989.0	890.2	11.9	34.0	1085.7	658.4	180.0	5.1	1.000264
4000.0	889.8	11.8	34.0	1085.9	658.2	180.2	5.1	1.000264
4500.0	873.6	8.2	35.1	1080.1	653.9	188.4	5.9	1.000259
5000.0	857.6	6.6	37.1	1066.4	652.1	194.5	6.8	1.000255
5500.0	841.8	5.2	38.2	1052.1	650.4	199.1	7.8	1.000251
6000.0	826.2	3.9	38.6	1037.3	648.9	212.5	8.0	1.000246
6500.0	810.8	2.7	38.9	1022.7	647.5	232.6	8.5	1.000242
7000.0	795.7	2.1	38.4	1005.0	646.8	239.8	7.9	1.000238
7500.0	780.8	1.8	37.5	988.1	646.4	242.2	6.3	1.000233
8000.0	766.2	1.4	36.7	970.0	645.9	208.2	2.7	1.000229
8500.0	751.8	1.1	35.9	953.9	645.5	113.9	2.2	1.000224
9000.0	737.8	.7	35.1	937.3	645.1	72.3	4.5	1.000220
9500.0	723.9	1.1	34.3	918.6	645.5	57.3	7.3	1.000216
10000.0	710.4	1.5	33.6	900.0	646.0	49.6	10.3	1.000212
10500.0	697.1	1.8	32.4	882.0	646.4	47.9	11.2	1.000208
11000.0	684.0	2.0	29.5	865.0	646.6	47.7	11.2	1.000203
11500.0	671.2	1.8	27.8	849.6	646.3	50.2	10.8	1.000199
12000.0	658.6	1.1	27.4	835.7	645.5	53.8	10.2	1.000195
12500.0	646.2	.4	27.1	822.0	644.7	43.0	9.7	1.000192
13000.0	634.1	-0.2	26.7	808.6	643.9	29.7	9.7	1.000188
13500.0	622.1	-0.9	26.3	795.3	643.1	9.9	10.2	1.000185
14000.0	610.4	-1.7	25.8	782.6	642.2	355.3	11.7	1.000182
14500.0	598.8	-2.8	25.2	771.1	640.8	355.5	13.4	1.000178
15000.0	587.4	-4.0	24.5	759.7	639.4	355.4	15.4	1.000175
15500.0	576.2	-4.7	23.4	747.3	638.5	354.3	18.4	1.000172
16000.0	565.2	-4.4	21.1	732.3	638.8	352.2	20.9	1.000168
16500.0	554.3	-4.3	19.0	717.9	639.0	348.4	22.7	1.000164
17000.0	543.6	-5.4	19.0	706.9	637.6	345.5	23.8	1.000162
17500.0	533.1	-6.5	19.0	696.1	636.3	343.0	23.9	1.000159
18000.0	522.8	-7.6	19.0	685.5	635.0	343.8	24.2	1.000156

UPPER AIR DATA
 O180020044
 WHITE SANDS
 TABLE XII (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 44

WSTM SITE COORDINATES
 488580.00 FEET E
 185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REF. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
18500.0	512.7	-8.7	19.0	675.1	633.7	348.1	24.6	1.000154
19000.0	502.8	-9.6	19.0	664.8	632.4	354.1	25.4	1.000151
19500.0	492.9	-10.9	19.0	654.5	631.0	1.4	26.9	1.000149
20000.0	483.2	-12.0	19.0	644.4	629.7	4.0	28.1	1.000146
20500.0	473.7	-13.1	19.0	634.4	628.3	4.7	29.0	1.000144
21000.0	464.3	-14.2	19.0	624.5	627.0	4.9	29.6	1.000141
21500.0	455.1	-15.3	19.0	614.9	625.6	4.9	30.2	1.000139
22000.0	446.0	-16.6	19.0	605.4	624.1	6.4	29.7	1.000137
22500.0	437.0	-17.9	19.0	596.1	622.5	8.3	28.9	1.000134
23000.0	428.1	-19.1	19.0	587.0	621.0	9.9	28.4	1.000132
23500.0	419.4	-20.4	19.0	578.1	619.4	11.4	28.0	1.000130
24000.0	411.0	-21.7	19.0	569.3	617.8	13.0	28.9	1.000128
24500.0	402.6	-23.0	19.0	560.6	616.2	14.4	30.3	1.000126
25000.0	394.3	-24.2	19.0	551.6	614.8	13.5	30.2	1.000124
25500.0	386.1	-25.3	19.0	542.5	613.4	11.7	29.5	1.000122
26000.0	378.1	-26.4	19.0	533.6	612.0	7.0	27.7	1.000120
26500.0	370.2	-27.5	19.0	524.9	610.7	359.6	25.5	1.000118
27000.0	362.5	-28.6	19.0	516.3	609.3	351.2	23.8	1.000116
27500.0	354.9	-29.8	18.9	508.0	607.8	341.9	22.6	1.000114
28000.0	347.4	-31.2	18.5	500.2	606.0	333.7	23.0	1.000112
28500.0	340.0	-32.7	18.1	492.5	604.2	327.6	24.6	1.000110
29000.0	332.7	-33.9	15.5**	484.4	602.6	323.6	27.2	1.000108
29500.0	325.5	-35.1	12.2**	476.4	601.1	321.1	30.5	1.000106
30000.0	318.4	-36.3	8.9**	468.4	599.5	318.7	33.1	1.000104
30500.0	311.5	-37.5	5.7**	460.6	598.0	316.0	34.6	1.000103
31000.0	304.8	-38.7	2.4**	452.9	596.5	313.4	36.1	1.000101
31500.0	298.1	-39.9		445.2	595.0	310.9	37.4	1.000099
32000.0	291.5	-40.9		437.2	593.7	308.4	38.7	1.000097
32500.0	285.0	-41.9		429.4	592.4	305.5	40.3	1.000096
33000.0	278.6	-43.0		421.6	591.1	302.4	42.5	1.000094

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

UPPER AIR DATA
 C180020044
 WHITE SANDS
 TABLE XII (CONT)

STATION ALTITUDE 3980.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 44

WSTM SITE COORDINATES
 488580.00 FEET E
 185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	272.4	-44.0			414.1	589.7	298.9		1.000092
34000.0	266.3	-45.0			406.6	588.4	296.1		1.000091
34500.0	260.3	-46.1			399.3	587.1	294.2		1.000089
35000.0	254.5	-47.1			392.2	585.7	293.1		1.000087
35500.0	248.9	-48.1			385.1	584.5	293.1		1.000086
36000.0	243.1	-48.9			377.7	583.4	293.4		1.000084
36500.0	237.5	-49.8			370.4	582.3	295.0		1.000082
37000.0	232.1	-50.6			363.3	581.2	296.5		1.000081
37500.0	226.7	-51.6			356.5	579.9	295.8		1.000079
38000.0	221.4	-52.9			350.2	578.1	295.0		1.000078
38500.0	216.2	-54.2			344.1	576.4	293.9		1.000077
39000.0	211.1	-55.6			338.0	574.6	292.5		1.000075
39500.0	206.2	-56.9			332.1	572.9	292.4		1.000074
40000.0	201.3	-58.2			326.3	571.1	293.7		1.000073
40500.0	196.5	-59.6			320.4	569.4	294.5		1.000071
41000.0	191.7	-60.9			314.6	567.6	294.8		1.000070
41500.0	187.0	-62.2			308.8	565.8	294.8		1.000069
42000.0	182.4	-63.6			303.2	564.0	294.0		1.000068
42500.0	177.9	-64.9			297.7	562.2	293.3		1.000066
43000.0	173.6	-66.3			292.3	560.4	292.6		1.000065
43500.0	169.3	-67.6			287.0	558.5	292.0		1.000064
44000.0	165.2	-68.9			281.8	556.7	290.5		1.000063
44500.0	161.1	-69.8			276.0	555.5	288.8		1.000061
45000.0	157.0	-70.5			269.4	554.6	287.6		1.000060
45500.0	153.0	-71.2			263.9	553.7	286.4		1.000059
46000.0	149.2	-71.4			257.5	553.4	285.9		1.000057
46500.0	145.4	-69.9			249.3	555.4	286.4		1.000055
47000.0	141.8	-66.2			238.7	560.4	287.0		1.000053
47500.0	138.3	-66.4			232.9	560.2	287.7		1.000052
48000.0	134.8	-67.2			228.1	559.1	288.4		1.000051

UPPER AIR DATA
 C180020C44
 WHITE SANDS
 TABLE XII (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 44

WSM SITE COORDINATES
 488580.00 FEET E
 185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
48500.0	131.5	-68.0		223.3	558.0	288.4	59.3	1.000053
49000.0	128.2	-68.8		218.6	556.9	268.2	59.8	1.000049
49500.0	125.0	-69.3		213.6	556.2	288.6	60.2	1.000048
50000.0	121.8	-69.8		208.7	555.5	290.3	60.1	1.000046
50500.0	118.7	-70.3		203.9	554.8	292.1	60.1	1.000045
51000.0	115.7	-70.8		199.2	554.1	293.0	58.4	1.000044
51500.0	112.8	-71.3		194.7	553.4	293.9	56.6	1.000043
52000.0	109.9	-71.8		190.2	552.8	293.8	55.8	1.000042
52500.0	107.1	-72.3		185.9	552.1	293.2	55.4	1.000041
53000.0	104.4	-72.8		181.6	551.4	293.4	55.4	1.000040
53500.0	101.8	-73.4		177.5	550.7	294.9	56.0	1.000040
54000.0	99.2	-73.8		173.3	550.1	296.1	56.4	1.000039
54500.0	96.7	-73.9		169.0	549.9	295.6	56.0	1.000038
55000.0	94.2	-74.1		164.8	549.6	295.1	55.5	1.000037
55500.0	91.8	-73.4		160.1	550.5	295.1	53.5	1.000036
56000.0	89.4	-72.3		155.1	552.2	295.3	50.6	1.000035
56500.0	87.2	-71.1		150.3	553.8	295.7	47.8	1.000033
57000.0	84.9	-71.9		147.0	552.7	301.0	44.6	1.000033
57500.0	82.8	-73.0		144.1	551.1	307.0	41.9	1.000032
58000.0	80.7	-74.2		141.2	549.5	312.0	39.9	1.000031
58500.0	78.6	-73.8		137.4	550.1	314.0	38.6	1.000031
59000.0	76.6	-73.1		133.4	551.1	316.1	37.3	1.000030
59500.0	74.6	-72.3		129.5	552.1	312.0	36.5	1.000029
60000.0	72.7	-73.6		127.0	550.3	307.2	35.9	1.000028
60500.0	70.9	-75.3		124.8	548.0	305.0	36.6	1.000028
61000.0	69.0	-75.8		121.8	547.3	305.1	38.2	1.000027
61500.0	67.3	-75.1		118.3	548.2	305.7	39.5	1.000025
62000.0	65.6	-74.5		114.9	549.1	309.4	40.0	1.000026
62500.0	63.9	-73.8		111.6	550.0	313.0	40.6	1.000025
63000.0	62.3	-73.2		108.5	550.9	314.9	40.1	1.000024

UPPER AIR DATA
 O180020044
 WHITE SANDS
 TABLE XII (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 44

WESTM SITE COORDINATES
 488580.00 FEET E
 185045.00 FEET N

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 CENTIGRADE	DEWPOINT CENTIGRADE			DEGREES(TN)	SPEED KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
53500.0	60.7	-72.5		105.4	551.9	316.1	39.0	316.1	39.0	1.000023
64000.0	59.2	-71.8		102.4	552.8	316.8	38.2	316.8	38.2	1.000023
64500.0	57.7	-71.1		99.4	553.7	315.0	38.0	315.0	38.0	1.000022
65000.0	56.2	-70.5		96.6	554.6	313.2	37.9	313.2	37.9	1.000022
65500.0	54.8	-69.8		93.9	555.5					1.000021
66000.0	53.4	-69.1		91.2	556.5					1.000020
66500.0	52.1	-68.5		88.6	557.4					1.000020
67000.0	50.7	-67.8		86.1	558.3					1.000019

STATION ALTITUDE 3989.00 FEET MST
 18 JAN. 77 1320 HRS MST
 ASCENSION NO. 44

MANDATORY LEVELS
 0180020044
 WHITE SANDS

WSTM SITE COORDINATES
 488580.00 FEET E
 185045.00 FEET N

TABLE XIII

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5239.	5.8	38.	196.8	7.3
800.0	6855.	2.2	39.	238.0	8.1
750.0	8561.	1.0	36.	104.7	2.4
700.0	10382.	1.8	33.	48.0	11.2
650.0	12341.	.6	27.	46.9	9.8
600.0	14437.	-2.7	25.	355.5	13.3
550.0	16688.	-4.7	19.	347.0	23.5
500.0	19123.	-10.1	19.	356.3	25.8
450.0	21757.	-16.0	19.	5.6	30.1
400.0	24627.	-23.4	19.	14.6	30.6
350.0	27786.	-30.7	19.	336.0	22.5
300.0	31310.	-39.6		311.6	37.0
250.0	35329.	-47.9		293.1	60.3
200.0	40056.	-58.6		294.0	70.2
175.0	42763.	-65.8		292.8	68.0
150.0	45783.	-71.7		285.7	56.6
125.0	49373.	-69.3		288.5	60.2
100.0	53697.	-73.7		295.9	56.4
80.0	57988.	-74.3		312.6	39.5
70.0	60548.	-75.1		305.0	37.3
60.0	63496.	-72.2		316.6	38.7
50.0	67059.	-67.4			

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