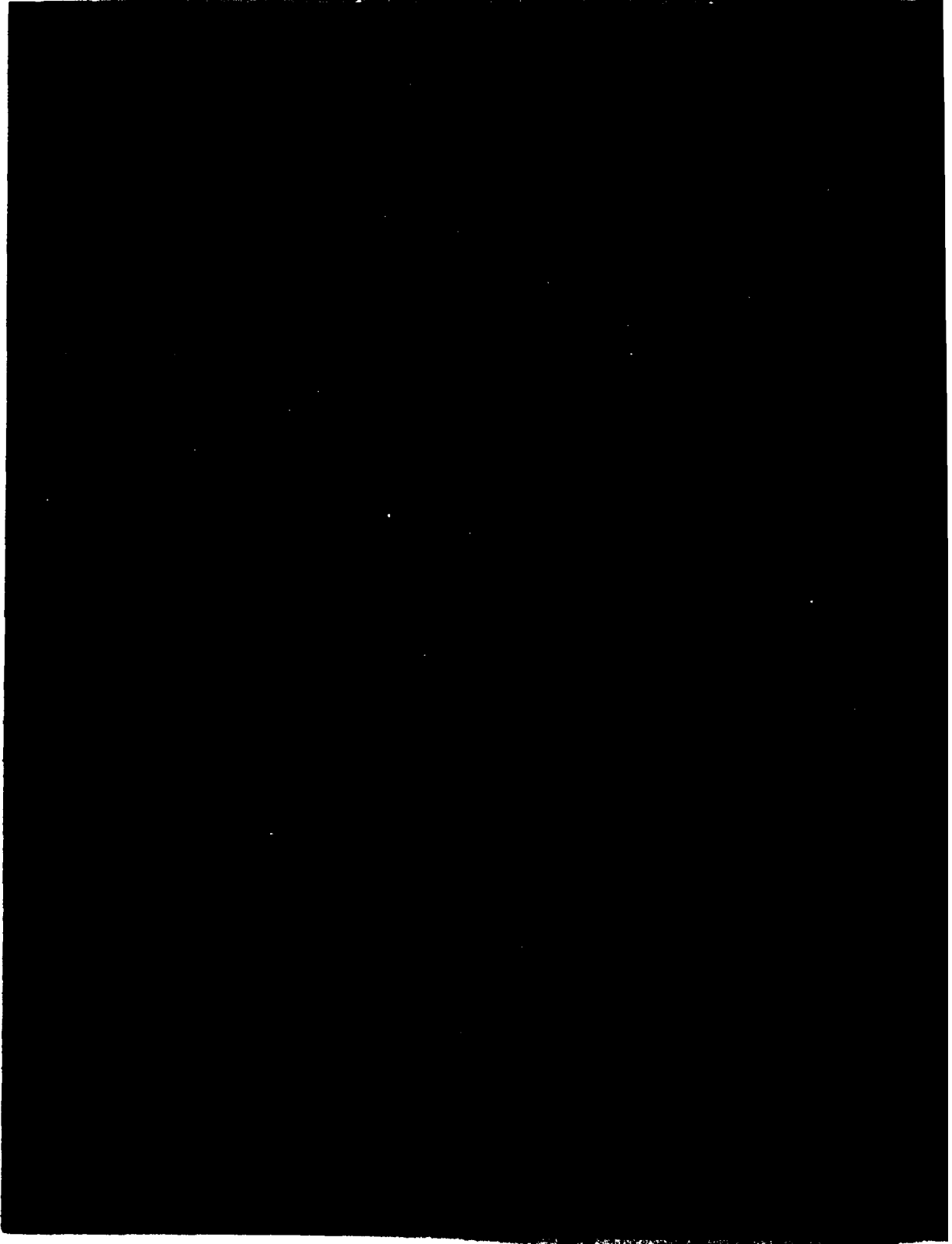




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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 14821AT LANCE, Missile Number 2419, Round Number 349APT, are presented in tabular form.		

410 663

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INTRODUCTION

14821AT LANCE _____, Missile Number 2419, Round Number 349 APT,
was launched from LC-39, White Sands Missile Range (WSMR), New Mexico,
at 0815 MDT on 12 May 1980. The scheduled launch time was
0815 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-39 Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was 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-39	2160m	0805 MDT
LC-39	3660m	0815 MDT

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to as high as possible in 500-foot increments.

SITE AND TIME

WSD	0815 MDT
Jallen	0815 MDT
Stallion	0815 MDT

TABLE 1. SURFACE OBSERVATIONS TAKEN AT 0815 MDT,
12 May 1980, at LC-39, 14821AT LANCE,
Missile Number 2419, Round Number 349 APT.

ELEVATION	4064	FT/MSL
PRESSURE	876.5	MBS
TEMPERATURE	15.5	°C
RELATIVE HUMIDITY	38	%
DEW POINT	1.1	°C
DENSITY	1053	GM/M ³
WIND SPEED	6	KTS
WIND DIRECTION	300	DEGREES
CLOUD COVER	1	Cu

PILOT BALLOON MEASURED WIND DATA

TABLE 2.

RELEASED FROM LC-39

DATE 12 May 1980

TIME 0805 MDT

COORDINATES (WSTM) X= 530,938.82

186,564.96

4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL _____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
sfc	300	05
60	MISG	MISG
120	289	12
180	323	10
240	327	08
300	317	10
360	315	10
420	301	09
480	298	06
540	296	10
600	307	11
660	306	11
720	294	12
780	277	13
840	274	17
900	274	16
960	272	16
1020	267	16
1080	268	16
1140	258	16
1200	255	16
1260	259	14
1320	262	13
1380	260	10
1440	248	12
1500	256	11
1560	246	12
1620	246	13
1680	251	12
1740	256	16
1800	259	17

[illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 3.

RELEASED FROM	LC-39	DATE	12 May 1980	TIME	0815 MDT
COORDINATES (WSTM)	X=	530,938.82	Y=	186,564.96	H 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
sfc	280	04
60	MISG	MISG
120	287	05
180	282	11
240	287	10
300	275	14
360	265	14
420	282	12
480	274	10
540	284	12
600	280	13
660	274	15
720	266	14
780	273	15
840	267	14
900	264	14
960	263	15
1020	257	15
1080	252	12
1140	258	15
1200	243	10
1260	240	11
1320	240	12
1380	249	11
1440	247	10
1500	246	12
1560	231	10
1620	241	11
1680	243	11
1740	253	14
1800	258	18

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1860	270	21
1920	275	24
1980	276	24
2040	274	25
2100	268	26
2160	275	28
2220	269	27
2280	273	29
2340	273	30
2400	272	31
2460	269	34
2520	259	38
2580	260	39
2640	261	37
2700	259	38
2760	260	37
2820	262	36
2880	262	37
2940	259	34
3000	261	35
3060	262	34
3120	259	35
3240	258	36
3300	266	34
3360	265	38
3420	276	36
3480	260	37
3540	270	38
3600	276	44
3660	270	47

[illegible]

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

SIGNIFICANT LEVEL DATA
1330020200
WHITE SANDS

TABLE 4.

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		REL. HUM. PERCENT
878.7	15.8	1.2	37.0
850.0	12.8	-1.5	37.0
800.0	8.2	-3.0	45.0
766.1	6.0	-12.0	26.0
758.2	7.5	-14.0	19.0
700.0	2.1	-21.8	15.0
657.0	-1.2	-24.5	15.0
636.8	-1.5	-24.7	15.0
586.0	-7.8	-29.2	16.0
568.8	-7.8	-29.8	15.0
500.0	-15.2	-35.3	16.0
471.2	-18.3	-37.2	17.0
433.2	-23.2	-41.3	17.0
418.4	-22.5	-40.2	18.0
400.0	-24.8	-41.6	19.0
368.6	-29.6	-45.7	19.0
329.0	-33.7	-49.2	19.0
300.0	-38.9		
250.0	-47.3		
200.0	-56.4		
168.6	-58.0		
150.0	-56.0		
147.8	-55.4		
132.4	-57.5		
114.6	-56.7		
111.2	-55.1		
100.0	-58.8		
85.8	-64.5		
77.0	-66.8		
70.0	-64.0		
67.2	-64.0		
63.2	-55.9		

STATION ALTITUDE 3989.00 FEET MSL
12 MAY 80
ASCENSION NO. 200

STATION ALTITUDE 3989.00 FEET MSL
 12 MAY 03
 ASCENSION NO. 260

SIGNIFICANT LEVEL DATA
 1330020200
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 4 (continued)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
50.0 68446.8	-55.7		
46.5 69974.1	-55.7		
40.2 73083.2	-49.4		
37.6 74527.3	-50.8		
30.2 79254.7	-50.1		

UPPER AIR DATA
1330020200
WHITE SANDS

STATION ALTITUDE 3939.00 FEET MSL
12 MAY 60
ASCESSION NO. 200

0815 HRS MDT

GEODETIC COORDINATES
32.40043 LAT (LEG
106.37033 LON (LEG

TABLE 5.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	RELAT HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
3689.0	973.7	15.8	37.0	1056.4	663.2	300.0	12.0	1.000266
4000.0	875.4	15.8	37.0	1056.1	663.1	299.9	12.1	1.000265
4500.0	862.7	14.1	37.0	1043.3	661.2	296.4	13.3	1.000260
5000.0	847.2	12.5	37.4	1030.5	659.3	293.4	14.5	1.000255
5500.0	831.8	11.2	39.8	1016.8	657.7	290.9	15.7	1.000251
6000.0	816.8	9.8	42.3	1003.3	656.1	288.6	17.0	1.000248
6500.0	802.0	8.4	44.7	990.0	654.4	281.5	18.3	1.000244
7000.0	787.3	7.4	38.0	975.8	653.1	274.3	19.9	1.000236
7500.0	772.9	6.4	29.9	961.6	651.9	269.6	21.7	1.000228
8000.0	758.7	7.4	19.4	941.1	652.9	270.7	22.4	1.000219
8500.0	744.6	6.3	18.1	927.5	651.5	274.9	22.6	1.000215
9000.0	730.9	5.0	17.2	914.6	650.0	274.4	23.4	1.000211
9500.0	717.3	3.8	16.2	901.8	648.5	273.2	24.5	1.000207
10000.0	704.1	2.5	15.3	889.3	647.0	270.0	26.3	1.000204
10500.0	690.9	1.4	15.0	876.1	645.7	267.5	28.2	1.000200
11000.0	677.9	.4	15.0	862.8	644.5	267.6	30.2	1.000197
11500.0	665.2	-0.6	15.0	849.6	643.4	268.2	32.2	1.000194
12000.0	652.6	-1.3	15.0	835.8	642.5	268.1	34.3	1.000190
12500.0	640.3	-1.5	15.0	820.6	642.3	267.9	36.3	1.000187
13000.0	628.0	-2.7	15.2	808.7	640.8	268.0	37.8	1.000184
13500.0	616.0	-4.2	15.4	797.4	639.1	268.1	39.0	1.000181
14000.0	604.2	-5.6	15.6	786.3	637.4	269.1	40.5	1.000178
14500.0	592.6	-7.0	15.9	775.4	635.7	270.5	42.2	1.000176
15000.0	581.2	-7.8	15.7	762.8	634.7	271.6	44.6	1.000173
15500.0	570.0	-7.8	15.1	748.0	634.7	272.0	48.2	1.000169
16000.0	558.8	-8.8	15.1	736.2	633.5	272.2	51.7	1.000167
16500.0	547.8	-10.0	15.3	724.9	632.1	271.2	54.5	1.000164
17000.0	537.1	-11.1	15.4	713.7	630.7	270.3	57.3	1.000161
17500.0	526.5	-12.2	15.6	702.8	629.4	269.1	58.1	1.000159
18000.0	516.2	-13.4	15.8	692.0	628.0	268.0	59.1	1.000156
18500.0	506.0	-14.5	15.9	681.4	626.6	267.2	60.9	1.000154
19000.0	496.0	-15.6	16.1	670.8	625.3	266.0	62.3	1.000151

STATION ALTITUDE 3989.00 FEET MSL
12 MAY 60
ASCESSION NO. 200

UPPER AIR DATA
1330020200
WHITE SANDS

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEODETTIC 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				DIRECTION DEGREES (TN)	SPEED KNOTS	
19500.0	486.1	-16.7	-35.2	16.5	660.1	624.0	204.5	63.5	1.000149
20000.0	476.3	-17.7	-36.9	16.8	649.5	622.7	202.5	63.0	1.000140
20500.0	460.7	-18.9	-37.7	17.0	639.3	621.3	260.9	63.0	1.000144
21000.0	457.2	-20.1	-38.7	17.0	629.2	619.8	200.5	68.2	1.000141
21500.0	447.9	-21.3	-39.7	17.0	619.4	618.4	259.9	73.2	1.000139
22000.0	436.8	-22.5	-40.7	17.0	609.7	616.9	259.4	78.7	1.000137
22500.0	429.8	-23.0	-41.1	17.2	598.6	616.2	258.2	85.2	1.000134
23000.0	421.0	-22.6	-40.4	17.8	585.4	616.7	256.0	87.0	1.000131
23500.0	412.4	-23.2	-40.7	18.3	574.7	615.9	254.9	89.9	1.000129
24000.0	403.9	-24.3	-41.3	18.8	565.3	614.6	253.1	91.9	1.000127
24500.0	395.5	-25.5	-42.2	19.0	556.2	613.2	251.3	93.3	1.000125
25000.0	387.3	-26.7	-43.3	19.0	547.3	611.6	249.4	92.2	1.000123
25500.0	379.2	-27.9	-44.3	19.0	538.0	610.1	247.6	91.2	1.000121
26000.0	371.3	-29.2	-45.4	19.0	530.1	608.5	247.2	89.2	1.000119
26500.0	363.4	-30.1	-46.2	19.0	520.9	607.4	247.2	87.7	1.000117
27000.0	355.7	-30.9	-46.8	19.0	511.4	606.4	248.6	87.6	1.000114
27500.0	348.1	-31.7	-47.5	19.0	502.2	605.4	249.9	87.6	1.000112
28000.0	340.7	-32.4	-48.1	19.0	493.1	604.5	251.3	87.7	1.000110
28500.0	333.5	-33.2	-48.8	19.0	484.2	603.5	252.2	87.0	1.000108
29000.0	326.4	-34.2	-50.4	17.3**	475.7	602.3	253.0	86.1	1.000106
29500.0	319.3	-35.4	-53.9	12.8**	467.6	600.7	251.0	87.3	1.000104
30000.0	312.4	-36.6	-58.4	8.3**	460.1	599.2	250.5	88.8	1.000103
30500.0	305.6	-37.9	-65.2	3.8**	452.5	597.6	248.9	91.0	1.000101
31000.0	299.0	-39.1			444.9	596.1	247.4	93.2	1.000099
31500.0	292.3	-40.1			436.9	594.7	246.7	94.0	1.000097
32000.0	285.8	-41.1			429.1	593.4	245.9	94.8	1.000096
32500.0	279.4	-42.2			421.4	592.1	245.6	95.2	1.000094
33000.0	273.2	-43.2			413.9	590.7	245.7	95.6	1.000092
33500.0	267.1	-44.2			406.5	589.4	245.3	94.8	1.000091
34000.0	261.2	-45.3			399.3	588.1	244.9	94.0	1.000089
34500.0	255.4	-46.3			392.2	586.7	243.4	92.2	1.000087
35000.0	249.6	-47.4			385.2	585.4	241.7	90.6	1.000086

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

STATION ALTITUDE 3900.00 FEET MSL
12 MAY 50
ASCESSION NO. 260

UPPER AIR DATA
1330020Z
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
100.37033 LONG DEG

TABLE 5 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³	SOUND SPEED KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
35500.0	243.9	-48.3			377.9	544.2	239.9	90.2	1.000004
36000.0	230.2	-49.3			370.7	502.9	238.0	90.8	1.000003
36500.0	232.7	-50.2			363.7	501.7	238.0	92.8	1.000001
37000.0	227.3	-51.2			356.6	500.4	237.9	94.6	1.000009
37500.0	222.1	-52.1			350.0	579.2	238.0	96.4	1.000007
38000.0	216.9	-53.1			343.4	577.9	237.8	94.9	1.000006
38500.0	211.9	-54.0			336.9	576.7	237.4	92.2	1.0000075
39000.0	207.0	-55.0			330.6	575.4	235.9	87.2	1.0000074
39500.0	202.2	-56.0			324.3	574.1	233.6	81.6	1.0000072
40000.0	197.5	-56.5			317.0	573.4	231.7	79.6	1.0000071
40500.0	192.8	-56.7			310.3	573.1	229.8	79.0	1.0000069
41000.0	188.2	-57.0			303.3	572.8	229.9	81.7	1.0000068
41500.0	183.8	-57.2			296.4	572.5	231.1	86.1	1.0000060
42000.0	179.4	-57.4			289.7	572.2	233.0	89.1	1.0000055
42500.0	175.2	-57.6			283.1	571.9	235.6	90.9	1.0000053
43000.0	171.0	-57.9			276.7	571.6	237.9	92.4	1.0000052
43500.0	167.0	-57.8			270.1	571.7	239.7	91.1	1.0000050
44000.0	163.0	-57.4			263.2	572.2	241.0	90.0	1.0000059
44500.0	159.1	-57.0			256.5	572.7	242.2	89.0	1.0000057
45000.0	155.4	-56.6			250.0	573.3	242.5	88.0	1.0000056
45500.0	151.7	-56.2			243.0	573.8	243.1	87.3	1.0000054
46000.0	148.1	-55.5			237.1	574.8	243.6	86.8	1.0000053
46500.0	144.6	-55.8			231.8	574.3	244.6	85.3	1.0000052
47000.0	141.2	-50.3			226.8	573.7	240.2	81.8	1.0000051
47500.0	137.9	-50.7			221.9	573.1	247.5	78.6	1.0000049
48000.0	134.6	-57.2			217.1	572.5	248.1	76.1	1.0000048
48500.0	131.4	-57.5			212.3	572.2	248.1	76.7	1.0000047
49000.0	128.3	-57.3			207.1	572.3	247.7	79.9	1.0000046
49500.0	125.3	-57.2			202.1	572.5	240.8	80.3	1.0000045
50000.0	122.3	-57.1			197.2	572.7	245.5	78.0	1.0000044
50500.0	119.4	-56.9			192.4	572.9	241.0	66.6	1.0000043
51000.0	116.6	-56.8			187.7	573.0	236.1	55.1	1.0000042

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

UPPER AIR DATA
1330020200
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
12 MAY 80
ASBESTOS NO. 260
0815 HRS MDT

TABLE 5 (continued)

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
51500.0	113.8	-56.3		182.9	573.6	227.7	46.0	1.000041
52000.0	111.2	-55.1		177.6	575.3	215.6	38.4	1.000040
52500.0	108.5	-55.9		174.1	574.2	213.9	41.3	1.000039
53000.0	106.0	-56.8		170.6	573.1	210.6	48.1	1.000038
53500.0	103.5	-57.6		167.2	571.9	213.6	55.3	1.000037
54000.0	101.0	-58.4		163.9	570.6	220.3	62.7	1.000037
54500.0	98.6	-59.3		160.6	569.7	221.2	69.3	1.000036
55000.0	96.2	-60.2		157.4	568.5	219.5	68.7	1.000035
55500.0	93.9	-61.1		154.3	567.2	217.6	68.2	1.000034
56000.0	91.6	-62.1		151.2	566.0	217.4	66.5	1.000034
56500.0	89.4	-63.0		148.2	564.8	217.3	64.6	1.000033
57000.0	87.2	-63.9		145.2	563.6	219.1	62.6	1.000032
57500.0	85.1	-64.7		142.2	562.5	223.3	61.0	1.000032
58000.0	83.0	-65.2		139.1	561.4	227.7	59.5	1.000031
58500.0	81.0	-65.7		136.0	561.1	234.2	56.1	1.000030
59000.0	79.0	-66.3		133.0	560.4	241.4	53.6	1.000030
59500.0	77.1	-66.8		130.1	559.6	245.7	49.2	1.000029
60000.0	75.2	-66.1		126.4	560.0	248.6	43.6	1.000028
60500.0	73.3	-65.4		122.9	561.6	251.0	36.2	1.000027
61000.0	71.5	-64.6		119.5	562.6	246.5	23.1	1.000027
61500.0	69.8	-64.0		116.2	563.4	230.6	10.5	1.000026
62000.0	68.0	-64.0		113.3	563.4	125.3	7.1	1.000025
62500.0	66.4	-62.4		109.6	565.5	94.5	19.6	1.000024
63000.0	64.8	-59.2		105.5	569.8	94.4	23.0	1.000023
63500.0	63.3	-56.0		101.5	574.0	102.6	18.4	1.000023
64000.0	61.8	-55.9		99.0	574.2	121.2	13.2	1.000022
64500.0	60.3	-55.9		96.7	574.3	195.1	12.2	1.000022
65000.0	58.9	-55.8		94.4	574.3	226.5	24.3	1.000021
65500.0	57.5	-55.8		92.2	574.3	230.6	29.6	1.000021
66000.0	56.2	-55.8		90.0	574.3	231.5	31.0	1.000020
66500.0	54.8	-55.8		87.9	574.4	231.6	30.0	1.000020
67000.0	53.6	-55.8		85.8	574.4	223.6	19.6	1.000019

STATION ALTITUDE 3989.00 FEET MSL
12 MAY 68
ASCENSION NO. 260 0815 HRS MDT

UPPER AIR DATA
1330020200
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 5 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
67500.0	52.3	-55.7		83.8	574.4	202.0	10.2	1.000019
68000.0	51.1	-55.7		81.8	574.5	151.9	5.1	1.000010
68500.0	49.9	-55.7		79.9	574.5	85.2	7.1	1.000018
69000.0	48.7	-55.7		78.0	574.5	64.9	11.9	1.000017
69500.0	47.6	-55.7		76.2	574.5	55.6	12.8	1.000017
70000.0	46.4	-55.6		74.4	574.5	47.7	14.0	1.000017
70500.0	45.4	-54.6		72.3	575.9	46.8	15.7	1.000016
71000.0	44.3	-53.6		70.3	577.2	49.4	17.6	1.000016
71500.0	43.3	-52.6		68.4	578.5	51.5	19.6	1.000015
72000.0	42.3	-51.6		66.5	579.9	51.2	16.3	1.000015
72500.0	41.3	-50.6		64.7	581.2	50.2	12.3	1.000014
73000.0	40.4	-49.6		62.9	582.5	47.8	8.0	1.000014
73500.0	39.4	-49.8		61.5	582.2	32.1	2.7	1.000014
74000.0	38.5	-50.3		60.2	581.8	254.2	3.2	1.000013
74500.0	37.6	-50.8		59.0	581.0	236.1	4.5	1.000013
75000.0	36.8	-50.7		57.6	581.0	150.3	2.3	1.000013
75500.0	35.9	-50.7		56.3	581.1	104.3	6.2	1.000013
76000.0	35.1	-50.6		55.0	581.2	92.0	13.1	1.000012
76500.0	34.3	-50.5		53.7	581.3	87.0	21.4	1.000012
77000.0	33.5	-50.4		52.4	581.4	85.6	29.7	1.000011
77500.0	32.8	-50.4		51.2	581.5			1.000011
78000.0	32.0	-50.3		50.0	581.6			1.000011
78500.0	31.3	-50.2		48.9	581.7			1.000011
79000.0	30.6	-50.1		47.7	581.8			1.000011

STATION ALTITUDE 3989.00 FEET MSL
 12 MAY 60
 ASCENSION NO. 260

MANDATORY LEVELS
 1330020260
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 6

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4906.	12.8	-1.5	37.	293.9	14.3	
800.0	6562.	8.2	-3.0	45.	280.5	18.5	
750.0	8303.	6.8	-15.6	18.	273.3	22.5	
700.0	10145.	2.1	-21.8	15.	269.1	26.8	
650.0	12092.	-1.3	-24.6	15.	268.0	34.7	
600.0	14169.	-6.1	-27.9	16.	269.6	41.1	
550.0	16388.	-9.7	-31.2	15.	271.4	54.0	
500.0	18776.	-15.2	-35.3	16.	266.7	61.9	
450.0	21360.	-21.0	-39.5	17.	260.1	71.9	
400.0	24193.	-24.8	-41.6	19.	252.3	92.8	
350.0	27332.	-31.5	-47.3	19.	249.8	87.6	
300.0	30863.	-38.9			247.8	92.9	
250.0	34894.	-47.3			241.9	90.6	
200.0	39639.	-56.4			232.8	80.0	
175.0	42413.	-57.7			235.6	90.9	
150.0	45612.	-56.0			243.4	87.1	
125.0	49435.	-57.2			246.7	80.3	
100.0	54044.	-58.8			220.8	65.5	
80.0	58555.	-66.0			237.3	54.9	
70.0	61218.	-64.0			236.4	13.0	
60.0	64380.	-55.9			203.5	13.7	
50.0	68189.	-55.7			92.7	8.3	
40.0	72099.	-49.5			45.8	6.3	

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

STATION ALTITUDE 4051.00 FEET MSL
12 MAY 80
ASCENSION NO. 138

SIGNIFICANT LEVEL DATA
1330030138
JALLEN

GEODETIC COORDINATES
13.16712 LAT DEG
106.49511 LON DEG

TABLE 7.

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
876.2 4051.0	15.7	-0.9	32.0
850.0 4891.7	12.5	-2.9	34.0
805.8 6357.3	8.0	-4.4	41.0
746.9 8384.9	1.7	-5.9	57.0
742.1 8555.6	1.4	-8.9	46.0
736.5 8756.2	2.0	-13.3	31.0
730.0 8991.8	3.0	-21.4	14.0
700.0 10106.7	2.0	-22.6	14.0
667.0 11360.1	-0.6	-24.7	14.0
556.2 16038.8	-13.1	-33.5	16.0
548.2 16401.5	-13.3	-33.7	16.0
524.4 17507.7	-15.5	-35.5	16.0
500.0 18687.2	-16.8	-36.6	16.0
400.0 24059.0	-29.8	-47.4	16.0
384.4 24988.7	-31.5	-48.3	17.0
369.2 25930.3	-30.5	-48.0	16.0
356.4 26752.9	-32.1	-48.8	17.0
300.0 30696.6	-39.3		
258.6 33996.9	-46.1		
250.0 34736.6	-46.7		
209.0 38583.6	-54.4		
200.0 39511.7	-54.9		
189.6 40640.4	-53.4		
182.4 41459.6	-54.4		
169.6 43000.6	-53.1		
150.0 45592.5	-56.0		
135.0 47786.2	-59.1		
128.0 48885.8	-59.6		
114.2 51238.6	-59.7		
110.8 51860.0	-61.0		
103.5 53267.4	-57.9		
100.0 53982.9	-57.9		
85.4 57245.1	-60.7		

STATION ALTITUDE 4051.00 FEET MSL
12 MAY 80 0815 HRS MDT
ASCENSION NO. 138

UPPER AIR DATA
1330030138
JALLEN

GEODTIC COORDINATES
13.16712 LAT DEG
1.0649511 LONG DEG

TABLE 8.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE 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	
4051.0	876.2	15.7	32.0	1054.1	662.9	220.0	12.0	1.000261
4500.0	862.1	14.0	33.1	1043.5	660.9	222.4	12.8	1.000257
5000.0	846.6	12.2	34.5	1031.5	658.8	224.7	13.7	1.000253
5500.0	831.3	10.6	36.9	1018.3	657.0	226.8	14.6	1.000249
6000.0	816.2	9.1	39.3	1005.3	655.2	228.6	15.6	1.000246
6500.0	801.3	7.6	42.1	992.4	653.4	231.2	14.7	1.000242
7000.0	786.5	6.0	46.1	979.5	651.6	235.4	12.8	1.000239
7500.0	772.0	4.4	50.0	966.8	649.8	249.0	12.5	1.000236
8000.0	757.7	2.9	54.0	954.3	647.9	263.0	15.0	1.000233
8500.0	743.7	1.5	49.6	941.6	646.2	271.7	21.1	1.000227
9000.0	729.8	3.6	14.0	918.1	648.3	272.8	25.6	1.000210
9500.0	716.2	2.9	14.0	903.4	647.4	271.6	27.9	1.000206
10000.0	702.8	2.2	14.0	888.9	646.6	269.0	28.5	1.000203
10500.0	689.6	1.2	14.0	875.3	645.4	265.5	29.8	1.000200
11000.0	676.7	.2	14.0	862.0	644.2	262.4	31.2	1.000196
11500.0	663.9	-.9	14.1	849.2	642.9	261.3	31.8	1.000193
12000.0	651.1	-2.3	14.3	830.9	641.3	260.8	32.4	1.000190
12500.0	638.5	-3.6	14.5	824.9	639.7	264.4	32.6	1.000187
13000.0	626.2	-4.9	14.7	813.0	638.1	268.0	33.0	1.000184
13500.0	614.1	-6.3	14.9	801.4	636.5	272.5	33.4	1.000182
14000.0	602.2	-7.6	15.1	789.9	634.9	276.1	34.3	1.000179
14500.0	590.6	-9.0	15.3	776.6	633.3	277.0	36.0	1.000176
15000.0	579.2	-10.3	15.6	767.4	631.7	277.6	37.8	1.000173
15500.0	568.0	-11.7	15.8	750.5	630.1	277.2	40.5	1.000171
16000.0	557.0	-13.0	16.0	745.7	628.4	276.9	43.1	1.000168
16500.0	546.0	-13.5	16.0	732.4	627.8	275.6	46.7	1.000165
17000.0	535.2	-14.5	16.0	720.6	626.6	274.1	50.9	1.000162
17500.0	524.6	-15.5	16.0	709.1	625.4	271.6	54.9	1.000160
18000.0	514.1	-16.0	16.0	696.4	624.7	268.6	58.9	1.000157
18500.0	503.8	-16.6	16.0	683.9	624.1	266.3	61.8	1.000154
19000.0	493.5	-17.6	16.0	672.6	622.9	264.5	63.2	1.000151
19500.0	483.4	-18.8	16.0	661.9	621.4	263.7	64.1	1.000149
20000.0	473.5	-20.0	16.0	651.4	619.9	263.7	64.5	1.000146
20500.0	463.7	-21.2	16.0	641.1	618.4	263.1	64.6	1.000144
21000.0	454.2	-22.4	16.0	630.9	616.9	262.1	64.4	1.000142
21500.0	444.9	-23.6	16.0	621.0	615.5	260.6	64.7	1.000139
22000.0	435.7	-24.8	16.0	611.2	614.0	258.9	64.4	1.000137
22500.0	426.8	-26.0	16.0	601.5	612.5	257.4	67.8	1.000135
23000.0	418.0	-27.2	16.0	592.1	610.9	250.1	71.3	1.000133
23500.0	409.4	-28.4	16.0	582.8	609.4	254.0	74.9	1.000130

UPPER AIR DATA
1330030138
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
12 MAY 80
ASCENSION NO. 138 0815 HRS MDT

GEODETIC COORDINATES
33.16712 LAT DEG
1.0649511 LON DEG

TABLE 8 (continued)

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
24000.0	401.0	-29.7	16.0	573.6	607.9	253.3	78.6	1.000128
24500.0	392.5	-30.6	16.5	563.7	606.7	252.2	81.8	1.000126
25000.0	384.2	-31.5	17.0	553.8	605.6	251.7	85.9	1.000124
25500.0	376.1	-31.0	16.5	540.9	606.3	252.2	91.7	1.000121
26000.0	368.1	-30.6	16.1	528.7	606.7	252.7	96.4	1.000118
26500.0	360.3	-31.6	16.7	519.6	605.5	253.2	100.7	1.000116
27000.0	352.6	-32.6	15.9**	510.5	604.3	252.7	99.6	1.000114
27500.0	345.0	-33.5	13.8**	501.3	603.2	252.2	98.0	1.000112
28000.0	337.5	-34.4	11.6**	492.4	602.0	251.8	98.7	1.000110
28500.0	330.2	-35.3	9.5**	483.6	600.8	251.5	99.9	1.000108
29000.0	323.1	-36.2	7.3**	475.0	599.7	251.6	103.5	1.000106
29500.0	316.1	-37.1	5.2**	466.5	598.5	252.0	108.4	1.000104
30000.0	309.3	-38.0	3.0**	458.2	597.4	252.3	112.5	1.000102
30500.0	302.6	-38.9	.8**	450.1	596.2	252.3	114.1	1.000100
31000.0	295.9	-39.9		442.0	595.0	252.2	114.8	1.000098
31500.0	289.3	-41.0		434.1	593.8	251.2	111.4	1.000097
32000.0	282.9	-42.0		426.3	592.3	249.9	108.1	1.000095
32500.0	276.6	-43.0		418.7	591.0	248.4	105.2	1.000093
33000.0	270.5	-44.0		411.3	589.7	247.3	105.9	1.000092
33500.0	264.4	-45.1		403.9	588.3	246.4	107.8	1.000090
34000.0	258.6	-46.1		396.7	587.0	245.2	109.8	1.000088
34500.0	252.7	-46.5		388.4	586.5	244.0	111.7	1.000087
35000.0	247.0	-47.2		380.8	585.6	242.5	112.0	1.000085
35500.0	241.3	-48.2		373.7	584.3	241.2	112.5	1.000083
36000.0	235.7	-49.2		366.7	583.0	240.9	113.8	1.000082
36500.0	230.3	-50.2		359.9	581.7	240.3	114.1	1.000080
37000.0	225.0	-51.2		353.2	580.4	239.2	111.8	1.000079
37500.0	219.8	-52.2		346.6	579.0	237.9	108.9	1.000077
38000.0	214.8	-53.2		340.2	577.7	235.8	103.4	1.000076
38500.0	209.8	-54.2		333.9	576.4	233.5	98.3	1.000074
39000.0	204.9	-54.6		326.7	575.9	233.6	98.2	1.000073
39500.0	200.1	-54.9		319.4	575.5	233.6	98.0	1.000071
40000.0	195.4	-54.3		311.0	576.4	233.3	95.5	1.000069
40500.0	190.9	-53.6		302.8	577.3	233.0	92.7	1.000067
41000.0	186.4	-53.8		296.1	576.9	233.0	90.1	1.000066
41500.0	182.1	-54.4		289.9	576.2	233.7	87.7	1.000065
42000.0	177.8	-53.9		282.6	576.8	234.4	85.4	1.000063
42500.0	173.7	-53.5		275.4	577.3	235.4	82.0	1.000061
43000.0	169.6	-53.1		268.5	577.9	236.6	78.0	1.000060
43500.0	165.6	-53.7		262.9	577.2	237.9	74.0	1.000059

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

STATION ALTITUDE 4051.00 FEET MSL
12 MAY 80
ASCENSION NO. 138 0815 HRS MDT

UPPER AIR DATA
1330030138
JALLEN

GEODETIC COORDINATES
13.16712 LAT DEG
106.49511 LON DEG

TABLE 8 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE 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	
44000.0	161.8	-54.2		257.4	576.4	239.4	70.1	1.000057
44500.0	158.0	-54.8		252.0	575.7	240.0	67.0	1.000056
45000.0	154.3	-55.3		246.7	575.0	240.1	64.1	1.000055
45500.0	150.7	-55.9		241.6	574.2	240.0	65.2	1.000054
46000.0	147.1	-56.6		236.6	573.3	239.6	76.0	1.000053
46500.0	143.6	-57.3		231.7	572.4	239.1	83.5	1.000052
47000.0	140.2	-58.0		227.0	571.4	238.2	83.3	1.000051
47500.0	136.9	-58.7		222.3	570.5	237.2	81.5	1.000050
48000.0	133.6	-59.2		217.5	569.8	235.6	76.2	1.000048
48500.0	130.4	-59.4		212.6	569.5	233.9	71.6	1.000047
49000.0	127.3	-59.6		207.7	569.3	232.2	69.4	1.000046
49500.0	124.2	-59.6		202.7	569.3	230.9	68.3	1.000045
50000.0	121.3	-59.6		197.9	569.2	232.3	72.6	1.000044
50500.0	118.4	-59.7		193.1	569.2	233.7	76.8	1.000043
51000.0	115.5	-59.7		188.5	569.2	236.1	79.8	1.000042
51500.0	112.8	-60.2		184.5	568.4	238.3	83.0	1.000041
52000.0	110.1	-60.7		180.4	567.8	238.7	76.3	1.000040
52500.0	107.4	-59.6		175.2	569.3	239.1	69.5	1.000039
53000.0	104.8	-58.5		170.2	570.8	239.2	63.8	1.000038
53500.0	102.3	-57.9		165.6	571.6	239.2	58.4	1.000037
54000.0	99.9	-57.9		161.7	571.5	239.2	55.8	1.000036
54500.0	97.5	-58.3		158.2	571.0	239.1	55.4	1.000035
55000.0	95.2	-58.8		154.7	570.4			1.000034
55500.0	92.9	-59.2		151.3	569.8			1.000033
56000.0	90.7	-59.6		148.0	569.3			1.000032
56500.0	88.5	-60.1		144.7	568.7			1.000032
57000.0	86.4	-60.5		141.6	568.1			1.000032

STATION ALTITUDE 4031.00 FEET MSL
 12 MAY 80
 ASCENSION NO. 138

MANDATORY LEVELS
 1330030138
 JALLEN

0815 HRS MDT

GEODETTIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 9.

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4888.	12.5	-2.9	34.	224.2	13.5	
800.0	6541.	7.4	-4.5	42.	231.6	14.6	
750.0	8268.	2.0	-5.6	56.	268.5	18.3	
700.0	10097.	2.0	-22.6	14.	268.4	28.7	
650.0	12043.	-2.4	-26.0	14.	261.2	32.4	
600.0	14106.	-7.9	-29.8	15.	276.3	34.7	
550.0	16300.	-13.3	-33.7	16.	276.3	45.2	
500.0	18662.	-18.8	-36.6	16.	265.6	62.3	
450.0	21227.	-22.9	-41.7	16.	261.5	64.3	
400.0	24021.	-29.8	-47.4	16.	253.2	78.9	
350.0	27126.	-32.9	-50.4	15.**	252.5	99.1	
300.0	30638.	-39.3			252.3	114.7	
250.0	34664.	-46.7			243.3	111.8	
200.0	39420.	-54.9			233.6	98.0	
175.0	42232.	-53.7			234.9	63.4	
150.0	45473.	-56.0			240.0	66.8	
125.0	49237.	-59.0			230.9	68.0	
100.0	53820.	-57.9			239.2	55.8	

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

STATION ALTITUDE 4940.00 FEET MSL
12 MAY 68 0815 HRS MDT
ASCL:51071.0. 42

SIGNIFICANT LEVEL DATA
13300400HZ
STATION

TABLE 10.

GEODETIC COORDINATES 33.81920 LAT :LG 106.88501 LONG :JEG	PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
	847.8	4940.0	11.3	.7	48.0
	837.8	5265.7	11.8	-5.2	30.0
	782.8	7112.7	6.5	-8.0	33.0
	700.0	10097.5	1.0	-22.2	15.0
	624.4	13083.6	-5.2	-20.5	14.0
	520.6	17250.2	-15.6	-35.0	16.0
	500.0	18608.4	-18.7	-38.2	16.0
	443.2	21590.5	-24.5	-42.4	17.0
	400.0	24027.9	-28.5	-46.9	15.0
	371.4	25763.4	-32.3	-49.0	17.0
	351.0	27671.9	-33.4	-49.9	17.0
	300.0	30665.1	-30.1		
	250.0	34729.3	-45.9		
	236.6	35931.6	-47.9		
	231.0	36452.0	-48.0		
	226.0	36925.3	-49.4		
	219.3	37575.9	-49.1		
	205.8	38941.2	-51.8		
	200.0	39550.8	-52.5		
	191.6	40463.7	-52.9		
	185.3	41179.0	-50.0		
	169.0	43147.7	-53.3		
	156.4	44787.0	-54.7		
	150.0	45570.4	-53.0		
	140.6	47045.9	-52.5		
	126.0	49363.3	-56.1		
	122.6	49937.8	-55.3		
	100.0	54189.1	-59.1		
	82.6	58115.3	-62.2		
	77.4	59453.0	-58.5		
	70.0	61516.9	-63.0		
	69.0	61809.0	-63.5		
	60.0	64494.6	-55.0		
	57.8	65094.9	-54.1		

UPPER AIR DATA
1330040042
STALLION

STATION ALTITUDE 4940.00 FEET MSL
12 MAY 80 0815 HRS MDT
ASCENDING NO. 42

GEOMETRIC ALTITUDE
MSL FEET

TEMPERATURE
AIR DEGREE
DEGREES CENTIGRADE

DENSITY
GM/CM³
METER

SPEED OF
SOUND
METERS
PER SECOND

WIND DATA
DIRECTION
DEGREES TRUE

SPEED
KNOTS

INDEX
OF
REFRACTION

TABLE 11.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE DEGREES CENTIGRADE	DENSITY GM/CM ³ METER	SPEED OF SOUND METERS PER SECOND	WIND DATA DIRECTION DEGREES TRUE	SPEED KNOTS	INDEX OF REFRACTION
4500.0	847.8	11.3	1035.3	658.0	0	0	1.000201
5000.0	845.9	11.4	1032.9	658.0	254.1	7	1.000208
5500.0	838.6	11.1	1016.0	657.5	254.1	6.6	1.000205
6000.0	815.5	9.7	1002.7	655.6	254.1	12.5	1.000241
6500.0	800.6	8.3	989.5	654.1	254.1	18.4	1.000257
7000.0	780.1	6.8	970.5	652.4	250.0	18.8	1.000253
7500.0	771.5	5.9	962.0	651.2	259.1	19.3	1.000228
8000.0	757.2	5.0	947.1	650.2	261.2	21.6	1.000223
8500.0	743.2	4.2	932.4	649.2	263.0	24.4	1.000218
9000.0	729.4	3.4	918.0	648.1	260.9	26.4	1.000213
9500.0	715.8	2.6	903.0	647.1	267.2	31.8	1.000208
10000.0	702.6	1.8	889.0	646.1	271.2	32.0	1.000204
10500.0	689.3	0.7	876.5	644.8	273.1	33.8	1.000200
11000.0	676.2	-0.5	863.5	643.5	274.0	34.1	1.000197
11500.0	663.0	-1.6	850.7	642.1	274.5	33.7	1.000194
12000.0	650.8	-2.7	838.1	640.8	274.4	33.5	1.000190
12500.0	638.5	-3.9	825.7	639.4	273.9	33.7	1.000187
13000.0	626.4	-5.0	813.5	638.0	273.5	34.0	1.000184
13500.0	614.2	-6.2	801.4	636.6	273.4	34.1	1.000181
14000.0	602.2	-7.5	789.4	635.1	272.6	35.1	1.000179
14500.0	590.4	-8.7	777.0	633.6	271.5	36.1	1.000176
15000.0	578.9	-10.0	765.0	632.1	269.0	35.0	1.000173
15500.0	567.5	-11.2	754.0	630.6	267.9	33.3	1.000170
16000.0	556.4	-12.5	743.4	629.1	266.0	32.1	1.000168
16500.0	545.5	-13.7	732.4	627.5	265.1	37.1	1.000165
17000.0	534.9	-15.0	721.6	626.0	263.1	42.2	1.000162
17500.0	524.5	-16.1	710.5	624.0	261.9	47.6	1.000160
18000.0	513.7	-17.2	699.2	623.3	261.1	51.0	1.000157
18500.0	503.4	-18.3	688.1	621.9	260.2	53.0	1.000155
19000.0	493.2	-19.4	676.9	620.7	260.2	56.0	1.000152
19500.0	483.1	-20.4	665.7	619.5	260.1	58.3	1.000149
20000.0	473.5	-21.3	654.7	618.2	260.1	60.2	1.000147
20500.0	463.6	-22.3	643.0	617.0	260.0	61.9	1.000144
21000.0	454.1	-23.3	633.2	615.8	260.0	63.4	1.000142
21500.0	444.9	-24.3	622.7	614.6	260.0	64.8	1.000140
22000.0	435.0	-25.2	611.9	613.5	260.0	65.4	1.000137
22500.0	425.6	-26.0	601.2	612.5	260.0	65.5	1.000135
23000.0	417.7	-26.8	590.6	611.5	260.0	66.5	1.000132
23500.0	409.0	-27.6	580.5	610.5	260.0	67.7	1.000130
24000.0	400.5	-28.5	570.1	609.4	260.0	73.5	1.000123

STATION ALTITUDE 4940.00 FEET MSL
12 HRS 00
ASCL 510.00 42 0815 HRS MDT

UPPER AIR DATA
13300400.42
STALLION

CLOUDTIC COORDINATES
33.81420 LAT DEG
100.00501 LONG DEG

TABLE 11 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND METERS PER SECOND	DIRECTION, DEGREES (10)	WIND SPEED KNOTS	INDEX OF REFRACTION
245.00.0	392.0	-29.5	15.5	560.5	600.1	205.2	80.3	1.000115
250.00.0	385.7	-30.6	16.1	551.1	606.7	203.2	89.1	1.000125
255.00.0	375.6	-31.7	16.7	541.9	615.3	201.0	96.9	1.000131
260.00.0	367.6	-32.5	17.0	532.1	614.4	200.5	103.3	1.000113
265.00.0	359.8	-32.9	17.0	521.7	615.8	204.2	108.6	1.000117
270.00.0	352.1	-33.3	17.0	511.4	615.3	200.2	111.3	1.000114
275.00.0	344.5	-34.0	15.0**	501.7	612.5	207.2	113.6	1.000112
280.00.0	337.1	-34.6	12.6**	492.2	611.7	200.5	113.8	1.000110
285.00.0	329.8	-35.3	10.2**	482.9	610.9	200.5	113.8	1.000104
290.00.0	322.6	-35.9	7.9**	473.0	610.0	204.7	114.3	1.000106
295.00.0	315.7	-36.6	5.5**	464.0	599.2	201.1	115.3	1.000104
300.00.0	308.8	-37.2	3.1**	456.0	599.4	203.4	116.1	1.000102
305.00.0	302.2	-37.9	0.8**	447.4	597.0	202.7	113.5	1.000100
310.00.0	295.5	-38.7		439.2	590.5	202.0	111.0	1.000098
315.00.0	289.0	-39.7		431.2	595.2	201.2	106.2	1.000096
320.00.0	282.6	-40.7		423.4	594.0	200.5	100.6	1.000094
325.00.0	276.3	-41.6		415.7	592.6	200.0	97.8	1.000093
330.00.0	270.2	-42.6		408.2	591.0	200.3	97.7	1.000091
335.00.0	264.2	-43.5		400.0	590.3	200.5	97.8	1.000089
340.00.0	258.3	-44.5		393.6	589.1	200.5	96.7	1.000087
345.00.0	252.6	-45.5		386.5	587.9	200.4	99.7	1.000086
350.00.0	246.9	-46.4		379.3	586.7	204.2	102.8	1.000084
355.00.0	241.3	-47.2		372.0	585.6	203.1	106.0	1.000083
360.00.0	235.9	-47.9		364.8	584.4	216.4	110.4	1.000081
365.00.0	230.5	-48.1		356.6	584.4	204.9	114.9	1.000079
370.00.0	225.2	-49.4		350.0	582.6	203.4	115.1	1.000078
375.00.0	220.1	-49.1		342.2	583.1	201.9	114.7	1.000076
380.00.0	215.0	-49.9		335.6	582.0	200.7	113.3	1.000075
385.00.0	210.1	-50.9		329.3	580.8	200.7	111.3	1.000073
390.00.0	205.2	-51.9		323.1	579.5	200.5	107.4	1.000072
395.00.0	200.5	-52.4		316.4	578.8	200.9	100.0	1.000070
400.00.0	195.8	-52.7		309.4	578.4	207.1	92.5	1.000069
405.00.0	191.3	-52.8		302.3	578.4	204.0	83.2	1.000067
410.00.0	186.9	-50.7		292.7	578.0	202.6	73.8	1.000065
415.00.0	182.5	-50.5		285.7	581.3	204.5	72.3	1.000064
420.00.0	178.3	-51.4		280.1	580.2	207.4	73.6	1.000062
425.00.0	174.2	-52.2		274.7	579.1	200.5	77.0	1.000061
430.00.0	170.2	-53.1		269.3	578.0	203.6	85.9	1.000060
435.00.0	166.2	-53.6		263.7	577.2	200.1	94.3	1.000059
440.00.0	162.3	-54.0		258.1	576.7	207.0	98.5	1.000057

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

STATION ALTITUDE 4940.00 FEET MSL
12 MAY 60 0815 HRS MDT
ACQUISITION NO. 42

UPPER AIR DATA
1330040042
STATION

GEODETTIC COORDINATES
33.61920 LAT DEG
106.66501 LONG DEG

TABLE 11 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND METERS PER SECOND	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
44,000.0	150.5	-54.5		252.5	570.1	247.7	102.5	1.000036
43,000.0	154.8	-54.4		246.6	576.1	247.6	102.2	1.000035
42,000.0	151.2	-53.3		240.2	577.0	245.9	93.9	1.000033
41,000.0	147.7	-53.3		234.1	577.6	245.6	85.8	1.000032
40,000.0	144.3	-52.9		228.2	578.1	240.6	76.1	1.000031
47,000.0	140.4	-52.5		222.5	578.6	239.7	63.9	1.000030
46,000.0	137.6	-53.2		216.0	577.6	240.3	52.6	1.000029
45,000.0	134.4	-54.0		210.5	576.7	241.1	45.0	1.000028
44,000.0	131.3	-54.8		209.4	575.7	240.3	41.1	1.000027
43,000.0	128.2	-55.5		205.2	574.7	241.1	37.6	1.000026
42,000.0	125.2	-55.9		200.7	574.2	240.2	36.4	1.000025
41,000.0	122.2	-55.4		195.5	574.9	240.7	36.9	1.000024
40,000.0	119.3	-55.8		191.3	574.3	242.1	37.5	1.000023
39,000.0	116.5	-56.2		187.1	573.8	240.1	42.1	1.000022
38,000.0	113.8	-56.7		183.1	573.2	240.0	48.6	1.000021
37,000.0	111.1	-57.1		179.1	572.6	240.3	55.4	1.000020
36,000.0	108.4	-57.6		175.2	572.0	239.5	65.7	1.000019
35,000.0	105.9	-58.0		171.4	571.4	237.2	76.4	1.000018
34,000.0	103.4	-58.5		167.7	570.8	239.9	86.7	1.000017
33,000.0	100.9	-58.9		164.1	570.2	240.6	86.2	1.000016
32,000.0	98.5	-59.3		160.5	569.6	241.7	91.0	1.000015
31,000.0	96.1	-59.7		156.9	569.1	242.5	93.2	1.000014
30,000.0	93.8	-60.1		153.4	568.6	241.5	80.4	1.000013
29,000.0	91.6	-60.5		150.0	568.1	239.7	65.7	1.000012
28,000.0	89.4	-60.9		146.7	567.5	238.9	51.1	1.000011
27,000.0	87.2	-61.3		143.4	567.0	231.0	34.2	1.000010
26,000.0	85.1	-61.7		140.2	566.5	243.6	17.3	1.000009
25,000.0	83.1	-62.1		137.1	566.0	241.3	10.0	1.000008
24,000.0	81.1	-61.1		133.2	567.3	240.3	8.1	1.000007
23,000.0	79.1	-59.8		129.2	569.1	240.1	6.0	1.000006
22,000.0	77.2	-58.6		125.4	570.6	240.6	8.9	1.000005
21,000.0	75.4	-59.7		123.0	569.2	240.1	17.8	1.000004
20,000.0	73.6	-60.8		120.7	567.7	240.6	27.3	1.000003
19,000.0	71.4	-61.9		118.4	566.3	249.4	36.5	1.000002
18,000.0	70.1	-63.0		116.1	564.8	250.3	43.6	1.000001
17,000.0	68.4	-62.9		113.3	564.9	250.9	50.7	1.000000
16,000.0	66.7	-61.3		109.7	567.0			1.000000
15,000.0	65.1	-59.7		106.3	569.1			1.000000
14,000.0	63.6	-58.1		103.0	571.2			1.000000
13,000.0	62.1	-56.6		99.8	573.3			1.000000

STATION ALTITUDE 4940.00 FEET MSL	UPPER AIR DATA	GEODETIC COORDINATES
12 MAY 80	1330040042	53.81920 LAT EPG
ASUSLST01, 140. 42 0815 HRS MDT	STATION	109.00501 LONG DEG

TABLE 11 (continued)

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND METERS PER SECOND	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (T)	SPEED KNOTS	
04500.0	60.6	-55.0			90.7	575.4		1.000022
05000.0	59.2	-54.5			94.5	570.0		1.000021

STATION ALTITUDE 4940.00 FEET MSL
12 MAY 60
ASCENSION I.O. 42 0815 HRS MDT

MANDATORY LEVELS
1530040042
STATION

GEODETIC COORDINATES
33.81920 LAT LEG
106.00501 LONG LEG

TABLE 12.

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
800.0	6521.	8.2	-7.5	32.	254.1	10.6	
750.0	8256.	4.6	-13.1	26.	262.1	22.7	
700.0	10039.	1.6	-22.2	15.	271.0	33.0	
650.0	12031.	-2.8	-26.3	14.	274.4	33.5	
600.0	14092.	-7.7	-30.1	14.	272.3	33.4	
550.0	16289.	-13.2	-33.9	10.	267.5	39.1	
500.0	18645.	-18.7	-38.2	16.	272.9	54.4	
450.0	21106.	-23.8	-41.9	17.	277.5	64.0	
400.0	23991.	-28.5	-46.9	15.	267.0	73.7	
350.0	27092.	-33.5	-50.1	17.**	257.9	112.0	
300.0	30609.	-38.1			252.5	112.7	
250.0	34659.	-45.9			249.9	101.0	
200.0	39461.	-52.5			230.8	99.4	
175.0	42303.	-52.0			239.7	75.8	
150.0	45553.	-53.6			245.3	91.4	
125.0	49394.	-55.9			209.3	36.4	
100.0	54028.	-59.1			241.1	67.5	
80.0	56563.	-60.4			173.4	7.3	
70.0	61313.	-63.0			250.3	43.5	
60.0	64480.	-54.8					

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

DATE
FILMED
8-8