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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
148248 LANCE, MISSILE NUMBER 5339; ROUND NUMBER 366-AST, 19 JUN--ETC(U)  
JUN 81 D C KELLER  
ERADCOM/ASL-DR-1187

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⑨ Meteorological data report

⑪ 11/02

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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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 14824B LANCE, Missile No. 5339, Round No. 366-AST, presented in tabular form.		

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## INTRODUCTION

14824B LANCE, Missile Number 5339, Round Number 366-AST, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 1434:52 MDT, 19 June 1981. The scheduled launch time was 1430 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 ( $\text{gm}/\text{m}^3$ ), 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:

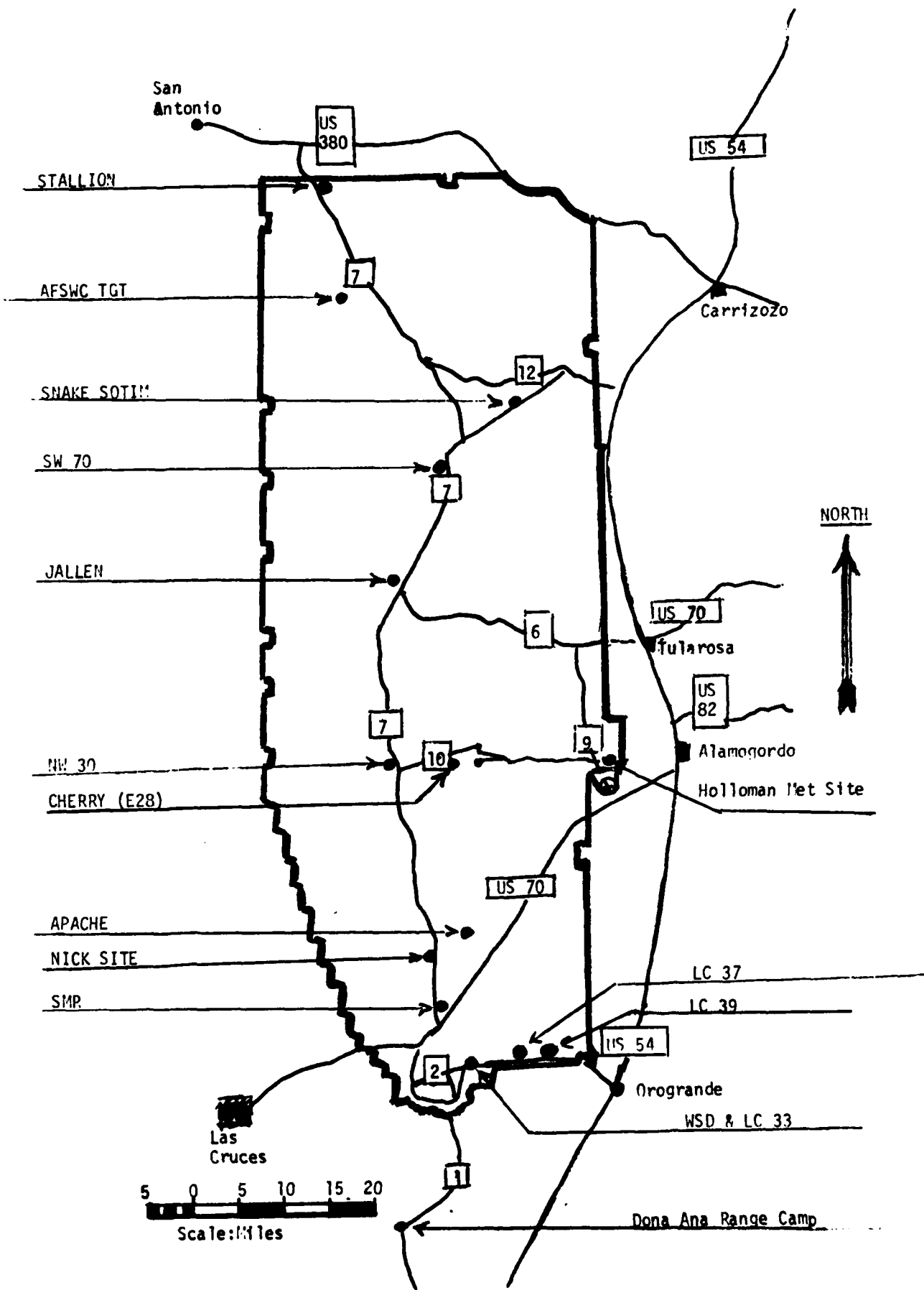
### SITE AND ALTITUDE

LC-39 2760 Meters

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

### SITE AND TIME

WSD 1435 MDT  
LC-37 1730 MDT  
JAL 1300 MDT



PROJECT SURFACE OBSERVATION

TABLE 1											
STATION LC-39											
DATE 19 1981		JUNE 1981		YEAR		X= 530,938.82		Y= 186,564.96		H= 4063.75	
TIME M D J	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY gm/m <sup>3</sup>	DIRECTION degs	WIND SPEED kts	CHARACTER kts	VISIBILITY		
1434	877.0	38.1	5.5	14	974	250	02		50+		

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	HGT	AMT	HGT	AMT	HGT	
C L E A R							

PSYCHROMETRIC COMPUTATION

TIME:	MDT	1434	
DRY BULB TEMP.		38.1	
WET BULB TEMP.		17.9	
WET BULB DEPR.		20.2	
DEW POINT		5.5	
RELATIVE HUMID.		14	



## COMPUTER MET MESSAGES

19 June 1981

WSD 1435 MDT  
METCM1324064  
192060122878  
00213002 31050878  
01286003 30970868  
02223001 30750845  
03383003 30360808  
04394003 29870763  
05459006 29370720  
06398009 28900680  
07397008 28440640  
08446007 27980603  
09254010 27500567  
10569010 27060533  
11636011 26770500  
12578009 26330454  
13565010 25580398  
14596015 24740348  
15568021 24040302  
16571018 23400262  
17578012 22700226  
18545017 22070194  
19564013 21430166  
20535014 20860142  
21578013 20440120  
22572017 20260102  
23056007 20490086  
24157008 20770073  
25161007 21140062  
26183015 21550053

JAL 1300 MDT  
METCM1332065  
191900124876  
00356002 31200876  
01326009 30800866  
02277007 30440843  
03243001 30080805  
04627005 29710761  
05570002 29230718  
06485009 28780677  
07402011 28360638  
08412009 27930600  
09437009 27440564  
10531010 27000530  
11581009 26770498  
12528007 26250452  
13549017 25470396  
14559020 24642346  
15578022 23960301  
16042015 23200260  
17599015 22520224  
18540021 21990192  
19551018 21300165  
20519010 20760140  
21599015 20410119  
22543010 20250100  
23558011 20290085  
24112010 20770072  
25194007 21260061  
26176016 21590052

STATION ALTITUDE 3989.00 FEET MSL  
 19 JUNE 81 1435 HRS MDT  
 ASCENSION NO. 399

SIGNIFICANT LEVEL DATA  
 1700020399  
 WHITE SANDS  
 TABLE 4

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
877.8 3989.0	5.0	14.0
850.0 4947.4	10.4	25.0
736.8 9097.7	2.6	29.0
700.0 10544.8	-.1	31.0
627.8 13553.0	-7.1	31.0
534.6 17835.3	-14.9	39.0
500.0 19569.3	-5.9	28.0
486.2 20290.2	-21.4	25.0
400.0 25210.6	-22.8	30.0
340.4 29111.9	-30.7	38.0
300.0 32069.9	-37.4	34.0
265.4 34866.8	-43.7	31.0
250.0 36204.2	-50.4	
226.4 38391.4	-42.7	
200.0 41074.9	-46.4	
172.6 44187.2	-51.4	
150.0 47073.2	-57.3	
127.2 50384.3	-63.1	
106.2 53933.3	-67.4	
100.0 55106.8	-71.8	
70.0 62186.9	-70.8	
50.0 69108.1	-64.9	
42.8 72371.2	-56.2	
32.8 78066.5	-56.5	
30.0 80018.8	-47.8	
23.0 85860.3	-46.8	
20.0 88967.5	-45.8	
	-41.9	

STATION ALTITUDE 3989.00 FEET MSL  
 19 JUNE 81 1435 HRS MDT  
 ASCENSION NO. 599

UPPER AIR DATA  
 1700020399  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 5

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	877.8	36.9	5.0	14.0	982.6	687.3	120.0	1.9	1.000253
4000.0	877.5	36.9	5.1	14.1	982.3	687.2	120.1	1.9	1.000254
4500.0	862.9	34.9	8.5	19.9	971.1	685.4	123.6	1.6	1.000261
5000.0	848.5	33.0	10.3	25.1	960.2	683.5	129.1	1.3	1.000265
5500.0	834.0	31.5	9.4	25.5	948.4	681.9	187.5	1.0	1.000260
6000.0	819.7	30.1	8.5	26.0	936.8	680.2	214.2	2.0	1.000255
6500.0	805.7	28.7	7.6	26.5	925.3	678.5	213.9	2.9	1.000250
7000.0	792.0	27.3	6.7	27.0	914.0	676.9	210.1	2.5	1.000245
7500.0	778.5	25.9	5.7	27.5	902.8	675.2	219.7	2.2	1.000240
8000.0	765.2	24.5	4.8	27.9	891.8	673.5	220.3	2.0	1.000235
8500.0	752.1	23.1	3.8	28.4	880.9	671.9	225.9	2.5	1.000231
9000.0	739.3	21.7	2.8	28.9	870.2	670.2	248.7	4.4	1.000227
9500.0	725.4	20.2	1.9	29.6	859.4	668.5	250.0	5.7	1.000222
10000.0	713.6	18.8	1.0	30.2	848.6	666.8	248.6	6.7	1.000218
10500.0	701.1	17.3	.0	30.9	838.0	665.1	237.6	7.2	1.000214
11000.0	688.6	16.0	-1.1	31.0	827.1	663.5	228.9	8.1	1.000210
11500.0	675.2	14.6	-2.3	31.0	816.2	661.8	224.6	9.3	1.000206
12000.0	664.1	13.3	-3.5	31.0	805.5	660.2	224.2	9.0	1.000201
12500.0	652.2	11.9	-4.6	31.0	794.9	658.6	223.5	8.3	1.000197
13000.0	640.5	10.6	-5.8	31.0	784.5	657.0	224.0	7.7	1.000193
13500.0	629.0	9.2	-7.0	31.0	774.3	655.4	228.9	7.5	1.000190
14000.0	617.4	7.8	-7.9	31.8	763.8	653.7	238.5	7.2	1.000186
14500.0	605.9	6.4	-8.7	32.8	753.4	652.1	251.7	7.0	1.000183
15000.0	594.6	5.0	-9.6	33.7	743.2	650.4	266.4	7.4	1.000180
15500.0	582.6	3.6	-10.5	34.6	733.2	648.7	278.8	8.3	1.000177
16000.0	572.7	2.2	-11.4	35.6	723.3	647.0	286.4	9.2	1.000174
16500.0	562.1	.8	-12.3	36.5	713.5	645.4	291.9	10.1	1.000171
17000.0	551.6	-2.0	-13.3	37.4	703.9	643.7	298.1	10.5	1.000168
17500.0	541.4	-3.4	-14.2	38.4	694.4	642.0	307.0	10.4	1.000165
18000.0	531.2	-3.2	-15.5	38.0	684.6	640.5	324.8	9.9	1.000162
18500.0	521.1	-4.0	-17.3	34.8	673.8	639.4	348.6	10.3	1.000158
19000.0	511.1	-4.9	-19.2	31.6	663.1	638.4	354.9	10.7	1.000155
19500.0	501.3	-5.8	-21.1	28.4	652.7	637.3	358.8	11.0	1.000151
20000.0	491.7	-6.0	-22.2	26.2	640.6	637.1	346.7	10.1	1.000148
20500.0	482.2	-6.5	-23.1	25.2	629.4	636.4	334.4	9.7	1.000145
21000.0	472.7	-7.6	-23.9	25.7	619.8	635.0	331.4	9.6	1.000143
21500.0	463.4	-8.6	-24.6	26.2	610.2	633.6	328.5	9.5	1.000140
22000.0	454.3	-9.9	-25.4	26.7	600.9	632.3	326.2	9.4	1.000138
22500.0	445.4	-11.1	-26.2	27.2	591.7	630.9	323.8	9.2	1.000136
23000.0	436.7	-12.2	-27.0	27.8	582.6	629.5	321.3	9.0	1.000133

UPPER AIR DATA  
 1700020399  
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL  
 19 JUNE 81  
 ASCENSION NO. 399

1435 HRS MDT

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 5 CON'T

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 DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	428.1	-13.4	-27.8	28.3	573.7	628.1	319.3	8.9	1.000131
24000.0	419.7	-14.5	-28.7	28.8	565.0	626.7	318.7	9.2	1.000129
24500.0	411.4	-15.7	-29.5	29.3	556.4	625.3	317.7	9.5	1.000127
25000.0	403.4	-16.8	-30.3	29.8	547.9	623.9	314.6	9.9	1.000125
25500.0	395.2	-18.1	-31.1	30.6	539.5	622.4	312.6	10.3	1.000123
26000.0	387.2	-19.4	-31.9	31.6	531.2	620.7	316.9	11.2	1.000121
26500.0	379.2	-20.7	-32.8	32.6	523.1	619.1	320.8	12.0	1.000119
27000.0	371.5	-22.0	-33.6	33.7	515.0	617.5	320.1	12.9	1.000117
27500.0	363.9	-23.3	-34.5	34.7	507.1	615.9	330.7	13.8	1.000115
28000.0	356.4	-24.6	-35.4	35.7	499.4	614.3	330.7	14.9	1.000113
28500.0	349.1	-25.9	-36.3	36.7	491.8	612.7	330.8	15.9	1.000111
29000.0	342.0	-27.2	-37.2	37.8	484.3	611.0	330.4	17.5	1.000109
29500.0	334.8	-28.5	-38.2	37.5	476.2	609.7	330.0	19.1	1.000107
30000.0	327.7	-29.2	-39.3	36.8	468.0	608.5	329.0	19.5	1.000106
30500.0	320.8	-30.2	-40.4	36.1	459.9	607.3	327.7	19.3	1.000104
31000.0	314.0	-31.2	-41.4	35.4	452.1	606.0	325.6	18.7	1.000102
31500.0	307.4	-32.2	-42.5	34.8	444.3	604.8	322.4	18.0	1.000100
32000.0	300.9	-33.2	-43.5	34.1	436.7	603.6	320.5	17.8	1.000098
32500.0	294.4	-34.3	-44.7	33.5	429.3	602.1	321.5	18.7	1.000096
33000.0	288.0	-35.5	-45.9	33.0	422.1	600.7	322.5	19.5	1.000095
33500.0	281.8	-36.6	-47.1	32.5	415.0	599.2	323.1	19.2	1.000093
34000.0	275.7	-37.8	-48.3	31.9	408.0	597.7	323.7	18.8	1.000091
34500.0	269.7	-38.9	-49.5	31.4	401.1	596.2	322.7	18.3	1.000090
35000.0	263.8	-40.1	-51.5	27.9**	394.3	594.8	320.9	17.6	1.000088
35500.0	258.0	-41.2	-56.8	16.3**	387.4	593.4	319.7	17.0	1.000086
36000.0	252.3	-42.3	-67.0	4.7**	380.6	592.0	319.3	16.6	1.000085
36500.0	246.7	-43.2			373.7	590.8	319.7	16.0	1.000083
37000.0	241.1	-44.0			366.7	589.7	324.2	15.1	1.000082
37500.0	235.7	-44.9			359.8	588.6	329.2	14.3	1.000080
38000.0	230.5	-45.7			353.0	587.5	327.2	13.1	1.000079
38500.0	225.3	-46.6			346.4	586.4	324.0	11.8	1.000077
39000.0	220.1	-47.5			339.9	585.2	315.9	11.0	1.000076
39500.0	215.1	-48.5			333.5	584.0	305.5	10.8	1.000074
40000.0	210.2	-49.4			327.2	582.7	301.5	11.5	1.000073
40500.0	205.4	-50.3			321.1	581.5	304.6	12.8	1.000072
41000.0	200.7	-51.3			315.1	580.3	307.0	14.2	1.000070
41500.0	196.0	-52.2			309.1	579.1	308.6	15.9	1.000069
42000.0	191.4	-53.2			303.1	577.8	309.8	17.5	1.000068
42500.0	187.0	-54.1			297.3	576.6	311.1	17.9	1.000066
43000.0	182.6	-55.0			291.6	575.3	312.6	17.6	1.000065

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

UPPER AIR DATA  
 1700020399  
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL  
 19 JUNE 81 1435 HRS MDT  
 ASCENSION NO. 399

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 5 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE						
43500.0	175.3	-56.0		286.0	574.1	313.4	16.9	1.000064	
44000.0	174.1	-56.9		280.6	572.8	313.3	15.5	1.000062	
44500.0	170.0	-57.9		275.2	571.5	313.7	14.2	1.000061	
45000.0	165.9	-58.9		269.8	570.2	316.1	13.2	1.000060	
45500.0	161.9	-59.9		264.6	568.9	318.8	12.2	1.000059	
46000.0	158.0	-60.9		259.4	567.5	319.6	11.7	1.000058	
46500.0	154.2	-61.9		254.4	566.2	320.1	11.4	1.000057	
47000.0	150.5	-63.0		249.5	564.8	317.4	11.5	1.000056	
47500.0	146.8	-63.7		244.2	563.9	311.2	12.6	1.000054	
48000.0	143.2	-64.3		238.9	563.0	306.0	13.8	1.000053	
48500.0	139.7	-65.0		233.8	562.1	301.9	15.1	1.000052	
49000.0	136.3	-65.6		228.7	561.2	298.4	16.4	1.000051	
49500.0	132.9	-66.3		223.8	560.4	298.1	17.7	1.000050	
50000.0	129.7	-66.9		219.0	559.5	298.1	18.8	1.000049	
50500.0	126.5	-67.5		214.3	558.6	307.6	20.2	1.000048	
51000.0	123.3	-68.2		209.5	557.8	313.1	19.9	1.000047	
51500.0	120.2	-68.8		204.9	556.9	319.5	19.1	1.000046	
52000.0	117.2	-69.4		200.3	556.1	325.7	18.3	1.000045	
52500.0	114.2	-70.0		195.9	555.2	327.0	15.2	1.000044	
53000.0	111.4	-70.6		191.6	554.4	328.9	12.2	1.000043	
53500.0	108.6	-71.3		187.3	553.5	329.2	10.6	1.000042	
54000.0	105.8	-71.7		183.1	552.9	327.3	10.4	1.000041	
54500.0	103.2	-71.3		178.1	553.5	325.3	10.2	1.000040	
55000.0	100.5	-70.9		173.2	554.1	326.5	11.4	1.000039	
55500.0	98.0	-70.5		168.5	554.6	327.9	12.8	1.000038	
56000.0	95.6	-70.1		164.0	555.2	329.9	13.9	1.000037	
56500.0	93.2	-69.6		159.6	555.8	336.6	13.2	1.000036	
57000.0	90.9	-69.2		155.3	556.3	343.9	12.7	1.000035	
57500.0	88.6	-68.8		151.1	556.9	356.3	11.1	1.000034	
58000.0	86.4	-68.4		147.1	557.5	21.1	9.2	1.000033	
58500.0	84.3	-68.0		143.1	558.0	50.5	9.5	1.000032	
59000.0	82.2	-67.6		139.3	558.6	65.5	10.2	1.000031	
59500.0	80.1	-67.1		135.5	559.2	76.3	11.0	1.000030	
60000.0	78.2	-66.7		131.9	559.7	84.9	11.9	1.000029	
60500.0	76.2	-66.3		128.3	560.3	90.4	11.0	1.000028	
61000.0	74.3	-65.9		124.9	560.9	96.7	10.2	1.000028	
61500.0	72.5	-65.5		121.6	561.4	104.2	9.2	1.000027	
62000.0	70.7	-65.1		118.3	562.0	114.2	7.8	1.000026	
62500.0	68.9	-64.5		115.1	562.7	127.9	6.8	1.000026	
63000.0	67.3	-63.9		112.0	563.6	134.2	5.2	1.000025	

UPPER AIR DATA  
 1700020J99  
 WHITE SANDS  
 TABLE 5 CON'T

STATION ALTITUDE 3989.00 FEET MSL  
 19 JUNE 81 1435 HRS MDT  
 ASCENSION NO. 399

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		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
63500.0	65.7	-63.2		109.0	564.4	141.7	3.4	1.000024
64000.0	64.1	-62.6		106.1	565.3	156.1	1.9	1.000024
64500.0	62.6	-62.0		103.2	566.1	95.9	3.7	1.000023
65000.0	61.1	-61.4		100.4	566.9	82.0	6.8	1.000022
65500.0	59.6	-60.7		97.7	567.8	83.4	10.1	1.000022
66000.0	58.2	-60.1		95.1	568.6	92.9	13.9	1.000021
66500.0	56.8	-59.5		92.5	569.5	98.2	18.0	1.000021
67000.0	55.4	-58.8		90.1	570.3	101.2	18.4	1.000020
67500.0	54.1	-58.2		87.6	571.1	104.2	16.9	1.000020
68000.0	52.8	-57.6		85.3	572.0	107.8	15.4	1.000019
68500.0	51.5	-57.0		83.0	572.8	101.4	12.4	1.000018
69000.0	50.3	-56.3		80.8	573.6	90.0	9.6	1.000018
69500.0	49.1	-56.2		78.8	573.8	77.1	8.3	1.000018
70000.0	47.9	-56.3		77.0	573.7	81.6	10.7	1.000017
70500.0	46.8	-56.3		75.2	573.7	84.5	13.1	1.000017
71000.0	45.7	-56.4		73.4	573.6	85.9	15.1	1.000016
71500.0	44.6	-56.4		71.7	573.5	86.3	16.7	1.000016
72000.0	43.6	-56.5		70.0	573.5	86.7	18.2	1.000016
72500.0	42.5	-56.3		68.3	573.7	85.0	19.3	1.000015
73000.0	41.6	-55.5		66.5	574.7	82.5	20.3	1.000015
73500.0	40.6	-54.8		64.8	575.7	80.2	21.2	1.000014
74000.0	39.7	-54.0		63.1	576.7	80.6	23.0	1.000014
74500.0	38.7	-53.2		61.4	577.7	81.2	25.0	1.000014
75000.0	37.9	-52.5		59.8	578.7	81.8	27.0	1.000013
75500.0	37.0	-51.7		58.2	579.7	82.6	27.9	1.000013
76000.0	36.1	-51.0		56.6	580.7	83.5	28.7	1.000013
76500.0	35.3	-50.2		55.1	581.7	84.2	29.6	1.000012
77000.0	34.5	-49.4		53.7	582.7	86.6	29.5	1.000012
77500.0	33.7	-48.7		52.3	583.7	89.3	29.3	1.000012
78000.0	32.9	-47.9		50.9	584.7	92.1	29.1	1.000011
78500.0	32.2	-47.6		49.7	585.1	93.9	28.6	1.000011
79000.0	31.4	-47.3		48.5	585.4	95.5	28.0	1.000011
79500.0	30.7	-47.1		47.3	585.8	97.1	27.4	1.000011
80000.0	30.0	-46.8		46.2	586.1	94.4	26.3	1.000010
80500.0	29.4	-46.7		45.2	586.2	89.1	25.2	1.000010
81000.0	28.7	-46.6		44.1	586.3	83.4	24.3	1.000010
81500.0	28.0	-46.5		43.1	586.4	84.2	23.9	1.000010
82000.0	27.4	-46.5		42.1	586.6	90.6	24.0	1.000009
82500.0	26.8	-46.4		41.2	586.7	96.9	24.4	1.000009
83000.0	26.2	-46.3		40.2	586.8	103.0	25.1	1.000009

STATION ALTITUDE 3989.00 FEET (ASL)  
 19 JUNE 81 1435 HRS MDT  
 ASCENSION NO. 399

UPPER AIR DATA  
 1700020399  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 5 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION (DEGREES(TN))	SPEED KNOTS	
83500.0	25.6	-46.2		39.3	586.9	109.1	26.1	1.000009
84000.0	25.0	-46.1		38.4	587.0	114.6	27.3	1.000009
84500.0	24.5	-46.0		37.5	587.1	119.6	28.7	1.000008
85000.0	23.9	-45.9		36.7	587.2	116.3	27.1	1.000008
85500.0	23.4	-45.9		35.8	587.3	112.6	25.5	1.000008
86000.0	22.9	-45.6		35.0	587.6	108.4	24.0	1.000008
86500.0	22.3	-45.0		34.1	588.4			1.000008
87000.0	21.9	-44.4		33.3	589.3			1.000007
87500.0	21.4	-43.7		32.4	590.1			1.000007
88000.0	20.9	-43.1		31.6	590.9			1.000007
88500.0	20.4	-42.5		30.8	591.7			1.000007

STATION ALTITUDE 3989.00 FEET MSL  
 19 JUNE 81 1435 HRS MDT  
 ASCENSION NO. 599

MANDATORY LEVELS  
 1700020399  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 6

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4944.	33.1	10.4	25.	128.4	1.3
800.0	6723.	28.1	7.2	27.	212.3	2.7
750.0	8583.	22.9	3.7	29.	227.0	2.6
700.0	10534.	17.2	-1.1	31.	236.7	7.3
650.0	12588.	11.7	-4.9	31.	223.3	8.2
600.0	14761.	5.7	-9.2	33.	259.8	7.2
550.0	17070.	-1.8	-13.4	38.	299.6	10.5
500.0	19541.	-5.9	-21.4	28.	357.5	10.9
450.0	22232.	-10.5	-25.8	27.	325.0	9.3
400.0	25168.	-17.3	-30.7	30.	313.5	10.0
350.0	28398.	-25.7	-36.2	37.	330.8	15.8
300.0	32005.	-33.3	-43.7	34.	320.6	17.9
250.0	36124.	-42.7			319.2	16.4
200.0	40974.	-51.4			307.2	14.4
175.0	43785.	-56.7			313.3	15.8
150.0	46944.	-63.1			316.7	11.6
125.0	50582.	-67.8			309.5	20.4
100.0	54934.	-70.8			326.7	11.6
80.0	59313.	-67.1			75.9	11.0
70.0	61971.	-64.9			118.1	7.4
60.0	65086.	-60.9			78.5	8.6
50.0	68845.	-56.2			87.8	9.2
40.0	73501.	-54.3			80.2	22.1
30.0	79673.	-46.8			94.6	26.4
25.0	83645.	-46.1			114.4	27.3
20.0	88545.	-41.9				

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

STATION ALTITUDE 4051.37 FEET MSL  
 19 JUNE 81  
 ASCENSION NO. 130

SIGNIFICANT LEVEL DATA  
 1700180130  
 LC-37  
 TABLE 7

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
873.3	4051.4	37.5	-6.1	6.0
850.0	4858.9	35.3	5.7	16.0
777.8	7470.9	28.0	-1	16.0
700.0	10486.7	19.0	-7.4	16.0
673.6	11563.1	15.5	-10.2	16.0
575.6	15841.9	2.8	-16.2	23.0
515.6	18730.9	-4.6	-22.5	23.0
500.0	19525.2	-5.2	-26.4	17.0
483.2	20405.8	-6.4	-28.0	16.0
459.6	21688.7	-8.3	-29.6	16.0
444.4	22543.7	-10.5	-31.4	16.0
421.8	23856.8	-13.8	-33.5	17.0
400.0	25174.6	-17.3	-35.3	19.0
350.8	28356.6	-26.1	-39.5	27.0
337.6	29267.4	-27.7	-39.9	30.0
318.2	30661.7	-30.0	-45.6	20.0
300.0	32033.8	-33.2	-49.3	18.0
269.2	34509.7	-39.2		
250.0	36168.3	-42.4		
240.8	36999.3	-44.5		
230.0	38008.6	-45.9		
200.0	41033.4	-51.9		
172.4	44175.2	-56.1		
149.4	47126.1	-63.4		

STATION ALTITUDE 4051.37 FEET MSL  
 19 JUNE 81 1730 HRS MDT  
 ASCENSION NO. 130

UPPER AIR DATA  
 1700180130  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 8

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 DEGREES CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.4	873.3	37.5	-6.1	6.0	977.7	687.2	200.0	4.9	1.000233
4500.0	860.3	36.3	1.8	11.6	965.6	686.3	200.6	5.4	1.000243
5000.0	845.9	34.9	5.4	16.0	952.8	685.1	201.1	6.0	1.000248
5500.0	831.7	33.5	4.3	16.0	941.2	683.5	201.5	6.6	1.000243
6000.0	817.7	32.1	3.1	16.0	929.8	681.9	201.9	7.2	1.000238
6500.0	803.9	30.7	2.0	16.0	918.6	680.2	202.2	7.8	1.000234
7000.0	790.3	29.3	.9	16.0	907.4	678.6	204.2	8.0	1.000229
7500.0	777.0	27.9	-.2	16.0	896.5	677.0	207.8	7.9	1.000225
8000.0	763.6	26.4	-1.4	16.0	885.5	675.2	211.5	7.8	1.000221
8500.0	750.3	24.9	-2.6	16.0	874.7	673.5	213.3	7.9	1.000216
9000.0	737.3	23.4	-3.8	16.0	864.0	671.7	214.5	8.1	1.000212
9500.0	724.6	21.9	-5.0	16.0	853.5	670.0	215.6	8.3	1.000209
10000.0	712.0	20.5	-6.2	16.0	843.1	668.2	214.0	8.0	1.000205
10500.0	699.7	19.0	-7.4	16.0	832.8	666.5	210.6	7.4	1.000201
11000.0	687.3	17.3	-8.7	16.0	822.8	664.6	206.7	6.9	1.000198
11500.0	675.1	15.7	-10.0	16.0	812.9	662.6	204.5	6.4	1.000194
12000.0	662.9	14.2	-10.7	16.7	802.4	660.9	204.7	5.8	1.000191
12500.0	650.8	12.7	-11.3	17.5	791.9	659.2	217.9	5.8	1.000188
13000.0	639.0	11.2	-11.9	18.4	781.6	657.4	239.3	7.1	1.000186
13500.0	627.3	9.8	-12.6	19.2	771.4	655.7	243.9	8.5	1.000183
14000.0	615.9	8.3	-13.3	20.0	761.4	654.0	244.5	9.8	1.000180
14500.0	604.7	6.8	-14.1	20.8	751.6	652.2	252.1	10.0	1.000177
15000.0	593.7	5.3	-14.9	21.6	741.8	650.5	261.1	10.2	1.000175
15500.0	582.9	3.8	-15.7	22.4	732.3	648.7	278.4	9.8	1.000172
16000.0	572.1	2.4	-16.6	23.0	722.6	647.0	294.6	10.0	1.000169
16500.0	561.3	1.1	-17.7	23.0	712.3	645.5	309.1	10.2	1.000166
17000.0	550.8	-.2	-18.8	23.0	702.2	644.0	317.3	10.6	1.000163
17500.0	540.4	-1.4	-19.8	23.0	692.2	642.4	323.0	10.9	1.000161
18000.0	530.2	-2.7	-20.9	23.0	682.4	640.9	338.6	11.4	1.000158
18500.0	520.2	-4.0	-22.0	23.0	672.8	639.4	352.0	12.7	1.000155
19000.0	510.3	-4.8	-23.7	21.0	662.0	638.4	354.5	13.9	1.000152
19500.0	500.5	-5.2	-26.2	17.2	650.3	637.9	354.9	14.9	1.000149
20000.0	490.9	-5.8	-27.3	16.5	639.4	637.1	346.9	14.6	1.000146
20500.0	481.4	-6.5	-28.1	16.0	628.8	636.3	334.8	14.3	1.000143
21000.0	472.1	-7.3	-28.7	16.0	618.3	635.4	330.2	14.6	1.000141
21500.0	463.0	-8.0	-29.3	16.0	608.1	634.5	326.0	14.6	1.000138
22000.0	454.0	-9.1	-30.2	16.0	598.7	633.2	322.4	13.8	1.000136
22500.0	445.2	-10.4	-31.3	16.0	590.0	631.6	319.0	12.7	1.000134
23000.0	436.4	-11.6	-32.1	16.3	581.2	630.1	315.5	11.5	1.000132
23500.0	427.8	-12.9	-32.9	16.7	572.5	628.6	311.7	10.9	1.000130

STATION ALTITUDE 4051.37 FEET MSL  
 19 JUNE 81 1730 HRS MDT  
 ASCENSION NO. 130

UPPER AIR DATA  
 1700180130  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 8 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
24000.0	419.4	-14.2	-33.7	17.2	564.0	627.0	308.5	10.5	1.000128
24500.0	411.0	-15.5	-34.4	18.0	555.6	625.4	307.7	10.2	1.000126
25000.0	402.8	-16.8	-35.1	18.7	547.3	623.8	307.6	10.0	1.000124
25500.0	394.7	-18.2	-35.7	19.8	539.1	622.1	309.2	10.2	1.000122
26000.0	386.6	-19.6	-36.2	21.1	531.0	620.4	310.5	10.4	1.000120
26500.0	378.7	-21.0	-36.8	22.3	523.0	618.7	311.2	11.0	1.000118
27000.0	371.0	-22.3	-37.5	23.6	515.2	617.0	312.0	11.4	1.000116
27500.0	363.4	-23.7	-38.2	24.8	507.5	615.3	314.7	11.3	1.000114
28000.0	356.0	-25.1	-38.9	26.1	499.9	613.6	317.4	11.3	1.000113
28500.0	348.7	-26.4	-39.5	27.5	492.1	612.1	329.3	11.8	1.000111
29000.0	341.4	-27.2	-39.7	29.1	483.6	611.0	340.4	12.9	1.000109
29500.0	334.3	-28.1	-40.7	28.3	475.1	609.9	353.6	15.0	1.000107
30000.0	327.3	-28.9	-42.7	24.7	466.7	608.9	2.0	17.1	1.000105
30500.0	320.4	-29.7	-44.9	21.2	458.5	607.9	5.6	17.9	1.000103
31000.0	313.6	-30.8	-46.5	19.5	450.7	606.5	11.9	16.1	1.000101
31500.0	307.0	-32.0	-47.8	18.8	443.3	605.1	25.6	12.3	1.000099
32000.0	300.4	-33.1	-49.2	18.0	436.0	603.6	38.9	7.8	1.000098
32500.0	293.9	-34.3	-52.0	14.6*	428.7	602.1	57.8	4.2	1.000096
33000.0	287.6	-35.5	-55.3	11.0**	421.6	600.5	6.6	3.3	1.000094
33500.0	281.4	-36.8	-59.5	7.3**	414.6	599.0	346.9	4.7	1.000092
34000.0	275.3	-38.0	-65.5	3.7**	407.7	597.5	350.1	6.3	1.000091
34500.0	269.3	-39.2	-90.6	.1**	401.0	595.9	349.5	6.8	1.000089
35000.0	263.4	-40.1			393.8	594.7	347.8	7.0	1.000088
35500.0	257.6	-41.1			386.7	593.4	345.6	7.1	1.000086
36000.0	251.9	-42.1			379.7	592.2	343.8	7.3	1.000085
36500.0	246.3	-43.2			373.2	590.7	348.8	9.3	1.000083
37000.0	240.8	-44.5			366.9	589.1	351.4	11.3	1.000082
37500.0	235.4	-45.2			359.7	588.2	349.2	13.2	1.000080
38000.0	230.1	-45.9			352.7	587.3	346.5	14.5	1.000079
38500.0	224.8	-46.9			346.1	586.0	338.7	13.2	1.000077
39000.0	219.7	-47.9			339.7	584.7	329.2	12.5	1.000076
39500.0	214.7	-48.9			333.4	583.4	319.0	12.7	1.000074
40000.0	209.8	-49.9			327.3	582.2	315.3	14.5	1.000073
40500.0	205.0	-50.8			321.2	580.9	314.5	16.8	1.000072
41000.0	200.3	-51.8			315.3	579.6	316.2	19.9	1.000070
41500.0	195.6	-52.5			308.9	578.7	315.5	22.6	1.000069
42000.0	191.1	-53.2			302.6	577.8	310.0	24.0	1.000067
42500.0	186.6	-53.9			296.4	576.9	312.0	22.5	1.000066
43000.0	182.2	-54.5			290.4	576.0	320.0	19.5	1.000065
43500.0	178.0	-55.2			284.5	575.1	324.1	19.6	1.000063

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

STATION ALTITUDE 4051.37 FEET MSL  
 19 JUNE 81 1730 HRS MDT  
 ASCENSION NO. 130

UPPER AIR DATA  
 1700180130  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 8 CON'T

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 DEGREES CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
44000.0	173.8	-55.9			278.7	574.3	328.0	20.0	1.000062
44500.0	169.7	-56.9			273.4	572.9	320.9	18.9	1.000061
45000.0	165.6	-58.1			268.4	571.2	311.9	18.2	1.000060
45500.0	161.7	-59.4			263.5	569.6			1.000059
46000.0	157.8	-60.6			258.6	568.0			1.000058
46500.0	154.0	-61.9			253.9	566.3			1.000057
47000.0	150.3	-63.1			249.3	564.6			1.000056

STATION ALTITUDE 4051.37 FEET MSL  
 19 JUNE 81 1730 HRS MDT  
 ASCENSION NO. 130

MANDATORY LEVELS  
 1700180130  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 9

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4855.	35.3	51.7	16.	201.0	5.8
800.0	6644.	30.3	1.7	16.	202.3	7.9
750.0	8515.	24.9	-2.6	16.	213.4	7.9
700.0	10476.	19.0	-7.4	16.	210.7	7.4
650.0	12537.	12.6	-11.3	18.	220.2	5.9
600.0	14713.	6.2	-14.4	21.	255.4	10.2
550.0	17023.	-3	-18.8	23.	317.7	10.6
500.0	19497.	-5.2	-26.4	17.	355.0	15.0
450.0	22191.	-9.7	-30.7	16.	320.7	13.4
400.0	25132.	-17.3	-35.3	19.	308.1	10.1
350.0	28358.	-26.2	-39.5	27.	326.8	11.7
300.0	31969.	-33.2	-42.4	18.	39.6	7.6
250.0	36088.	-42.4	-51.9		345.6	7.9
200.0	40933.	-51.9	-55.7		316.3	20.0
175.0	43747.	-55.7	-63.2		326.8	19.9
150.0	46916.	-63.2				

STATION ALTITUDE 4051.00 FEET MSL  
 19 JUNE 81 130 HRS MDT  
 ASCENSION NO. 50

SIGNIFICANT LEVEL DATA  
 1700030050  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
876.0	4051.0	36.8	10.2	20.0
865.8	4399.1	32.1	4.8	18.0
850.0	4940.7	30.9	3.0	17.0
781.4	7381.7	24.1	-1.7	18.0
753.8	8410.9	23.0	-3.3	17.0
744.6	8760.7	21.5	-5.3	16.0
700.0	10500.1	16.4	-8.7	17.0
646.4	12701.7	10.7	-12.6	18.0
595.4	14928.0	5.1	-16.6	19.0
545.8	17231.0	-2.0	-18.9	26.0
529.6	18016.4	-3.5	-18.5	30.0
521.2	18430.9	-4.8	-21.8	25.0
500.0	19504.3	-5.1	-26.9	16.0
490.0	20024.9	-6.4	-28.0	16.0
454.4	21949.4	-10.4	-32.7	14.0
400.0	25132.6	-17.9	-36.3	18.0
356.8	27906.4	-24.9	-39.9	23.0
343.4	28817.5	-27.7	-41.2	26.0
330.4	29727.8	-29.4	-41.7	29.0
311.2	31127.3	-32.1	-44.1	29.0
305.0	31593.7	-33.5	-46.0	27.0
300.0	31975.7	-33.6	-46.7	25.0
292.6	32551.4	-34.7	-49.2	21.0
280.8	33493.5	-37.0		
250.0	36104.2	-43.4		
219.4	38961.4	-49.3		
200.0	40952.5	-51.3		
189.4	42111.5	-54.0		
171.4	44199.7	-59.1		
158.6	45795.9	-61.2		
150.0	46930.6	-63.6		
138.2	48579.3	-66.0		
123.2	50861.7	-69.0		
112.6	52635.4	-69.2		
107.8	53489.8	-71.2		
100.0	54958.2	-70.5		
87.2	57641.1	-70.5		
72.6	61262.6	-67.0		
70.0	61997.8	-62.4		
64.4	63697.4	-62.4		

STATION ALTITUDE 4051.00 FEET MSL  
19 JUNE 81  
ASCENSION NO. 50

SIGNIFICANT LEVEL DATA  
17000J0050  
JALLEN

GEODETTIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 10 CON'T

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
61.8 64542.8	-59.8	
50.0 68951.5	-56.4	
44.6 71360.2	-54.4	
37.4 75102.7	-52.8	

STATION ALTITUDE 4051.00 FEET MSL  
 19 JUNE 81 1300 HRS M DT  
 ASCENSION NO. 50

UPPER AIR DATA  
 1700030050  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 11

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
4051.0	876.0	36.8	10.2	20.0	979.3	687.7	200.0	1.9	1.000267
4500.0	862.8	31.9	4.5	17.8	981.8	681.7	185.2	2.7	1.000253
5000.0	848.3	30.7	2.9	17.0	969.2	680.3	176.6	3.7	1.000247
5500.0	833.8	29.3	2.0	17.2	957.1	678.6	171.7	4.8	1.000242
6000.0	819.5	27.9	1.0	17.4	945.3	677.0	166.9	5.1	1.000238
6500.0	805.5	26.6	.0	17.6	933.6	675.4	145.0	2.8	1.000234
7000.0	791.8	25.2	-0.9	17.8	922.1	673.8	82.1	1.9	1.000230
7500.0	778.2	24.0	-1.9	17.9	910.0	672.4	32.1	3.2	1.000226
8000.0	764.7	23.4	-2.7	17.4	896.0	671.8	1.7	4.5	1.000221
8500.0	751.4	22.6	-3.8	16.7	883.0	670.8	341.6	5.8	1.000217
9000.0	738.3	20.8	-5.8	16.1	873.2	668.6	331.9	5.8	1.000212
9500.0	725.3	19.3	-6.7	16.4	862.2	666.9	326.9	5.5	1.000208
10000.0	712.5	17.9	-7.7	16.7	851.4	665.2	320.2	5.2	1.000205
10500.0	700.0	16.4	-8.7	17.0	840.8	663.5	297.7	5.0	1.000202
11000.0	687.5	15.1	-9.6	17.2	829.5	662.0	271.3	6.0	1.000198
11500.0	675.1	13.8	-10.5	17.5	818.3	660.5	252.2	8.3	1.000195
12000.0	663.0	12.5	-11.3	17.7	807.4	658.9	240.7	9.4	1.000192
12500.0	651.1	11.2	-12.3	17.9	796.6	657.4	232.3	10.3	1.000189
13000.0	639.3	9.9	-13.1	18.1	785.7	655.9	226.6	10.5	1.000186
13500.0	627.6	8.7	-14.0	18.4	774.8	654.4	225.4	10.1	1.000182
14000.0	616.2	7.4	-14.9	18.6	764.1	653.0	227.7	9.3	1.000179
14500.0	604.9	6.2	-15.8	18.8	753.5	651.5	231.4	8.8	1.000177
15000.0	593.8	4.9	-16.6	19.2	743.2	649.9	235.4	8.5	1.000174
15500.0	582.7	3.3	-17.0	20.7	733.4	648.1	238.0	9.0	1.000171
16000.0	571.8	1.8	-17.5	22.3	723.7	646.3	242.7	9.2	1.000169
16500.0	561.1	.3	-18.0	23.8	714.2	644.5	252.0	9.0	1.000167
17000.0	550.6	-1.3	-18.6	25.3	704.8	642.7	266.4	8.9	1.000164
17500.0	540.2	-2.5	-18.7	27.4	694.7	641.2	285.6	9.2	1.000162
18000.0	529.9	-3.5	-18.5	29.9	683.9	640.1	301.7	9.6	1.000160
18500.0	519.8	-4.8	-22.0	24.4	674.3	638.4	316.3	10.3	1.000156
19000.0	509.9	-5.0	-24.3	20.2	661.9	638.2	322.6	9.9	1.000152
19500.0	500.1	-5.1	-26.9	16.0	649.6	638.0	327.5	9.2	1.000148
20000.0	490.5	-6.3	-28.0	16.0	640.1	636.5	322.3	8.2	1.000146
20500.0	481.0	-7.4	-29.2	15.5	630.2	635.2	314.7	7.4	1.000143
21000.0	471.6	-8.4	-30.4	15.0	620.4	634.0	302.5	6.8	1.000141
21500.0	462.5	-9.5	-31.6	14.5	610.8	632.7	290.7	6.7	1.000138
22000.0	453.5	-10.5	-32.7	14.1	601.3	631.4	286.3	7.0	1.000136
22500.0	444.5	-11.7	-33.2	14.7	592.1	630.0	286.8	7.5	1.000134
23000.0	435.7	-12.9	-33.8	15.3	583.0	628.6	299.8	8.6	1.000132
23500.0	427.0	-14.1	-34.4	15.9	574.0	627.2	307.7	10.2	1.000130

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

UPPER AIR DATA  
1700030050  
JALLEN

STATION ALTITUDE 4051.00 FEET MSL  
19 JUNE 81  
1300 HRS MDT  
ASCENSION NO. 50

TABLE 11 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
24000.0	418.6	-15.2	-34.9	16.6	565.2	625.7	310.5	12.2	1.000128
24500.0	410.3	-16.4	-35.5	17.2	556.5	624.3	309.6	14.2	1.000126
25000.0	402.1	-17.6	-36.2	17.8	548.0	622.9	306.2	16.2	1.000124
25500.0	394.0	-18.8	-36.8	18.7	539.5	621.4	306.0	17.8	1.000122
26000.0	386.0	-20.1	-37.4	19.6	531.2	619.8	307.4	19.2	1.000120
26500.0	378.1	-21.4	-38.0	20.5	523.0	618.3	309.3	19.9	1.000118
27000.0	370.4	-22.6	-38.7	21.4	514.9	616.7	311.3	20.4	1.000116
27500.0	362.8	-23.9	-39.4	22.3	506.9	615.1	311.9	19.9	1.000114
28000.0	355.4	-25.2	-40.1	23.3	499.2	613.5	312.2	19.3	1.000112
28500.0	348.0	-26.7	-40.7	25.0	491.9	611.6	313.9	19.4	1.000111
29000.0	340.8	-28.0	-41.3	26.6	484.2	610.0	315.5	19.8	1.000109
29500.0	333.6	-29.0	-41.6	28.2	475.9	608.8	316.7	21.0	1.000107
30000.0	326.6	-29.9	-42.1	29.0	467.7	607.6	317.3	22.4	1.000105
30500.0	319.7	-30.9	-43.0	29.0	459.6	606.4	316.8	23.8	1.000103
31000.0	312.9	-31.9	-43.9	29.0	451.7	605.2	316.9	24.8	1.000101
31500.0	306.2	-33.2	-45.6	27.4	444.6	603.5	318.9	24.1	1.000100
32000.0	299.7	-33.6	-46.8	24.8	435.9	602.9	322.6	22.8	1.000098
32500.0	293.3	-34.6	-49.0	21.4	428.2	601.7	334.0	19.6	1.000096
33000.0	286.9	-35.8	-55.5	11.0**	421.1	600.2	348.4	17.3	1.000094
33500.0	280.7	-37.0			414.1	598.7	4.4	15.9	1.000092
34000.0	274.5	-38.2			407.1	597.1	19.4	15.7	1.000091
34500.0	268.5	-39.5			400.3	595.5	27.4	15.7	1.000089
35000.0	262.6	-40.7			393.5	594.0	32.4	15.8	1.000088
35500.0	256.8	-41.9			386.9	592.4	26.9	15.4	1.000086
36000.0	251.2	-43.1			380.4	590.8	20.4	15.0	1.000085
36500.0	245.5	-44.2			373.6	589.5	9.2	14.1	1.000083
37000.0	240.0	-45.2			366.8	588.1	357.5	13.8	1.000082
37500.0	234.6	-46.3			360.2	586.8	349.9	13.4	1.000080
38000.0	229.3	-47.3			353.6	585.5	341.9	13.3	1.000079
38500.0	224.1	-48.3			347.2	584.1	335.5	14.8	1.000077
39000.0	219.0	-49.3			340.9	582.8	330.3	16.4	1.000076
39500.0	214.0	-49.8			333.8	582.2	325.7	18.1	1.000074
40000.0	209.1	-50.3			326.9	581.5	321.8	19.9	1.000073
40500.0	204.3	-50.8			320.1	580.9	315.0	20.1	1.000071
41000.0	199.6	-51.4			313.5	580.1	307.1	20.0	1.000070
41500.0	194.9	-52.6			307.8	578.6	301.9	20.6	1.000069
42000.0	190.4	-53.7			302.3	577.1	298.2	21.3	1.000067
42500.0	185.9	-54.9			296.8	575.5	297.4	21.6	1.000066
43000.0	181.5	-56.2			291.4	573.9	300.0	21.5	1.000065
43500.0	177.2	-57.4			286.2	572.2	302.7	21.3	1.000064

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

STATION ALTITUDE 4051.00 FEET MSL  
 19 JUNE 81 1.30 HRS MDT  
 ASCENSION NO. 50

UPPER AIR DATA  
 1700030050  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 11 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
44000.0	173.0	-58.6		281.0	570.6	306.1	20.6	1.000063
44500.0	168.9	-59.5		275.4	569.4	309.7	19.9	1.000061
45000.0	164.9	-60.2		269.6	568.6	311.2	18.7	1.000060
45500.0	160.9	-60.8		264.0	567.7	312.8	17.6	1.000059
46000.0	157.0	-61.6		258.6	566.6	312.7	15.7	1.000058
46500.0	153.2	-62.7		253.6	565.2	312.1	13.7	1.000056
47000.0	149.5	-63.7		248.6	563.8	308.4	12.2	1.000055
47500.0	145.8	-64.4		243.4	562.8	302.4	11.1	1.000054
48000.0	142.2	-65.2		238.2	561.9	295.5	10.8	1.000053
48500.0	138.7	-65.9		233.2	560.9	289.5	11.5	1.000052
49000.0	135.3	-66.6		228.1	560.0	286.5	12.1	1.000051
49500.0	131.9	-67.2		223.2	559.1	296.5	11.9	1.000050
50000.0	128.7	-67.9		218.3	558.2	306.6	12.0	1.000049
50500.0	125.5	-68.5		213.6	557.3	317.8	11.9	1.000048
51000.0	122.3	-69.0		208.8	556.6	329.0	12.2	1.000046
51500.0	119.3	-69.1		203.6	556.5	329.2	12.0	1.000045
52000.0	116.3	-69.1		198.6	556.5	326.0	11.6	1.000044
52500.0	113.4	-69.2		193.6	556.4	322.8	11.3	1.000043
53000.0	110.5	-70.1		189.6	555.2	319.6	10.9	1.000042
53500.0	107.7	-71.2		185.9	553.6	318.6	10.6	1.000041
54000.0	105.0	-71.0		180.9	554.0	319.7	10.4	1.000040
54500.0	102.4	-70.7		176.2	554.3	319.7	10.4	1.000039
55000.0	99.8	-70.5		171.5	554.6	318.7	10.8	1.000038
55500.0	97.3	-70.5		167.2	554.6	317.8	10.9	1.000037
56000.0	94.8	-70.5		163.0	554.6	317.1	10.9	1.000036
56500.0	92.4	-70.5		158.9	554.6	315.9	11.0	1.000035
57000.0	90.1	-70.5		154.9	554.6	313.8	11.2	1.000034
57500.0	87.8	-70.5		151.0	554.6	312.6	11.5	1.000034
58000.0	85.6	-70.2		147.0	555.1	314.9	11.8	1.000033
58500.0	83.5	-69.7		142.9	555.7	317.2	12.1	1.000032
59000.0	81.4	-69.2		139.0	556.4	336.1	9.7	1.000031
59500.0	79.4	-68.7		135.2	557.0	2.8	8.8	1.000030
60000.0	77.4	-68.2		131.6	557.7	27.4	10.0	1.000029
60500.0	75.5	-67.7		128.0	558.4	43.9	12.7	1.000028
61000.0	73.6	-67.3		124.5	559.0	53.4	12.4	1.000028
61500.0	71.8	-65.5		120.4	561.4	63.4	11.7	1.000027
62000.0	70.0	-62.4		115.7	565.6	84.1	8.7	1.000026
62500.0	68.3	-62.4		112.9	565.6	126.8	7.3	1.000025
63000.0	66.6	-62.4		110.2	565.6	152.1	8.3	1.000025
63500.0	65.0	-62.4		107.5	565.6	163.0	8.8	1.000024

STATION ALTITUDE 4051.00 FEET MSL  
 19 JUNE 81 1300 HRS MDT  
 ASCENSION NO. 50

UPPER AIR DATA  
 1700030050  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 11 CON'T

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				DIRECTION DEGREES(TN)	SPEED KNOTS	
64000.0	63.5	-61.5			104.4	566.8	154.6	7.3	1.000023
64500.0	61.9	-59.9			101.2	568.9	108.1	5.8	1.000023
65000.0	60.5	-59.4			98.6	569.5	78.6	8.9	1.000022
65500.0	59.0	-59.1			96.0	570.0	73.7	13.7	1.000021
66000.0	57.6	-58.7			93.6	570.5	75.8	16.8	1.000021
66500.0	56.3	-58.3			91.2	571.0	85.7	17.5	1.000020
67000.0	54.9	-57.9			88.9	571.6	92.8	17.8	1.000020
67500.0	53.6	-57.5			86.6	572.1	95.7	16.0	1.000019
68000.0	52.3	-57.1			84.4	572.6	98.9	14.4	1.000019
68500.0	51.1	-56.7			82.3	573.1	101.0	13.6	1.000018
69000.0	49.9	-56.4			80.2	573.6	102.9	13.1	1.000018
69500.0	48.7	-55.9			78.1	574.2	97.7	14.3	1.000017
70000.0	47.6	-55.5			76.2	574.7	93.4	15.5	1.000017
70500.0	46.5	-55.1			74.2	575.3	90.1	17.8	1.000017
71000.0	45.4	-54.7			72.3	575.8	87.6	20.2	1.000016
71500.0	44.3	-54.3			70.5	576.3	88.8	19.9	1.000016
72000.0	43.3	-54.1			68.8	576.6	91.5	18.7	1.000015
72500.0	42.3	-53.9			67.2	576.8	91.5	17.9	1.000015
73000.0	41.3	-53.7			65.5	577.1	89.1	17.5	1.000015
73500.0	40.3	-53.5			64.0	577.4			1.000014
74000.0	39.4	-53.3			62.4	577.7			1.000014
74500.0	38.5	-53.1			60.9	578.0			1.000014
75000.0	37.6	-52.8			59.4	578.2			1.000013

STATION ALTITUDE 4051.00 FEET (MSL)  
 19 JUNE 81  
 ASCENSION NO. 50

MANDATORY LEVELS  
 1700030050  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 12

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4937.	30.9	3.0	17.	177.4	3.6
800.0	6700.	26.0	-3	18.	124.5	2.2
750.0	8548.	22.4	-4.2	17.	340.6	5.8
700.0	10490.	16.4	-8.7	17.	297.9	5.0
650.0	12537.	11.1	-12.3	18.	231.8	10.3
600.0	14705.	5.6	-16.2	19.	233.2	8.6
550.0	17009.	-1.4	-18.6	25.	267.3	8.8
500.0	19478.	-5.1	-26.9	16.	327.5	9.2
450.0	22162.	-11.0	-32.9	14.	284.7	7.2
400.0	25092.	-17.9	-36.3	18.	305.6	16.7
350.0	28315.	-26.3	-40.6	25.	313.4	19.4
300.0	31913.	-33.6	-46.7	25.	321.8	23.0
250.0	36026.	-43.4			18.5	14.8
200.0	40855.	-51.3			308.1	20.0
175.0	43658.	-58.0			304.4	20.9
150.0	46805.	-63.6			309.4	12.4
125.0	50431.	-68.6			319.0	11.9
100.0	54790.	-70.5			318.8	10.7
80.0	59142.	-68.9			352.1	8.9
70.0	61787.	-62.4			82.2	8.9
60.0	64922.	-59.3			77.0	10.1
50.0	68694.	-56.4			102.9	13.1
40.0	73379.	-53.4				