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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
12828F LANCE, MISSILE NUMBER 2491, ROUND NUMBER 339-DSL, 5 DECE--ETC(U)
DEC 79

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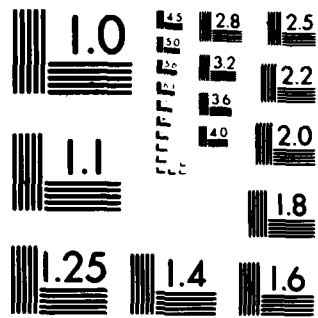
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METEOROLOGICAL DATA REPORT

12000F Launch
Missile No. 2091
Round No. 339-DSL
5 DECEMBER 1979

White Sands Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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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 12828F Lance, Missile Number 2491, Round Number 339-DSL are presented in tabular form.		

410663

JOB

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INTRODUCTION

12828F Lance, Missile Number 2491, Round Number 339-DSL,
was launched from LC-33, White Sands Missile Range (WSMR), New Mexico,
at 1550 MST on 05 December 1979. The scheduled launch time was
1545 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), Wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

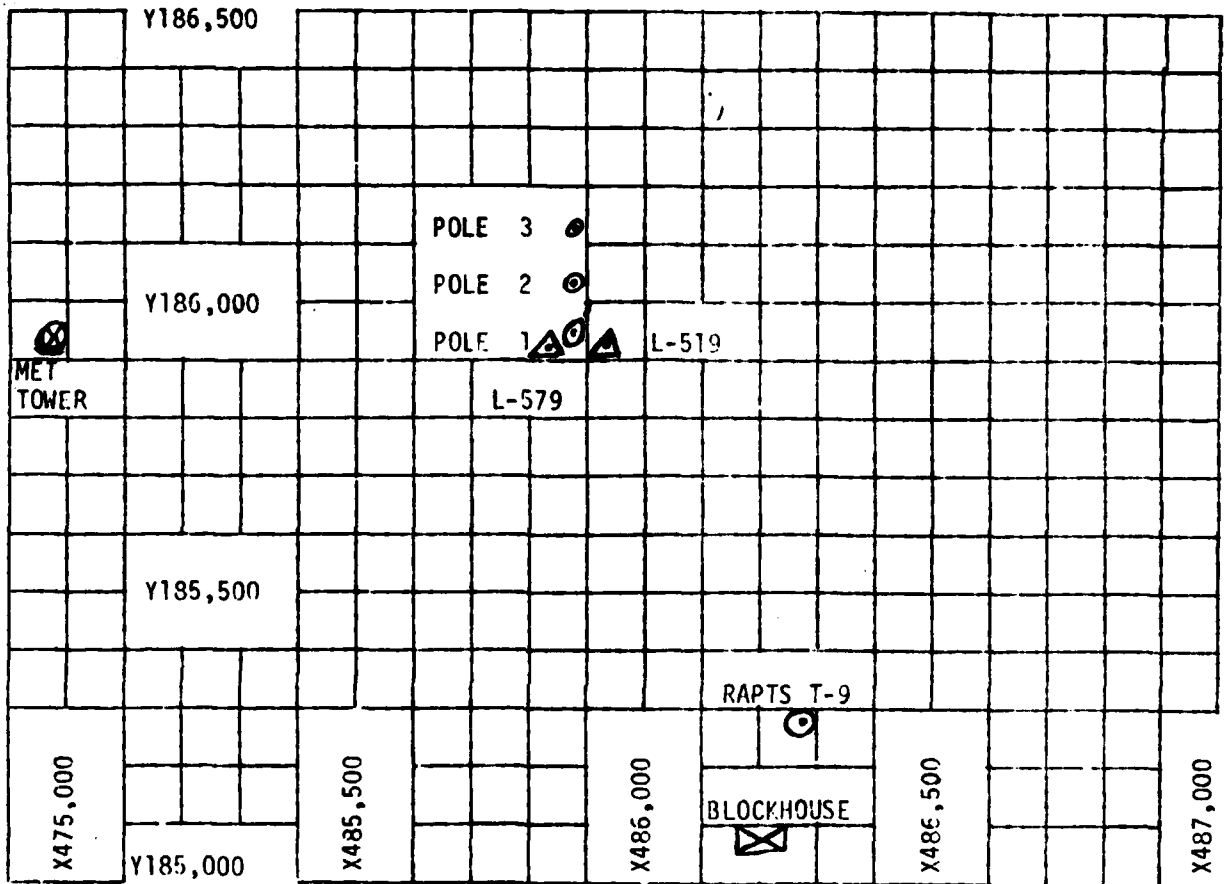
LC-33 2760 meters

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

SITE AND TIME

WSD 1535 MST
JAL 1415 MST

NORTH



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft.
 - (b) Pole #2 - 53.0 ft.
 - (c) Pole #3 - 83.6 ft.
3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

TABLE 1. Surface Observations taken at 1550 MST,
 05 December 1979, at LC-33, 12828F Lance,
 Missile Number 2491, Round Number 339-DSL.

ELEVATION	3987	FT/MSL
PRESSURE	872.6	MBS
TEMPERATURE	17.4	°C
RELATIVE HUMIDITY	16	%
DEW POINT	-8.8	°C
DENSITY	1043	GM/M ³
WIND SPEED	06	KTS
WIND DIRECTION	350	DEGREES
CLOUD COVER	3	AC
CLOUD COVER	5	C1

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM LC-33 DATE 05 December 1979 TIME 1550 MST

TRACKER _____ COORDINATES (WSiM) X= 486.037.24 Y= 182.35 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL _____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	351	06.
30	355	05.
60	358	04.
90	001	03.
120	004	02.
150	005	03.
180	005	05.
210	005	06.
240	005	08.
270	005	08.
300	004	08.
330	003	08.
360	002	08.
390	002	08.
420	002	08.
450	002	08.
480	002	08.
510	354	08.
540	346	07.
570	338	07.
600	329	06.
630	323	07.
660	316	08.
690	310	09.
720	303	10.
750	305	11.
780	307	12.
810	309	12.
840	310	13.
870	313	14.
900	316	15.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
930	319	16.
960	322	17.
990	322	18.
1020	322	18.
1050	322	19.
1080	321	19.
1110	322	21.
1140	323	23.
1170	324	25.
1200	325	26.
1230	326	27.
1260	326	28.
1290	327	29.
1320	327	30.
1350	327	30.
1380	327	29.
1410	327	29.
1440	327	29.
1470	327	29.
1500	327	29.
1530	327	29.
1560	326	28.
1590	326	29.
1620	326	29.
1650	326	30.
1680	325	30.
1710	325	31.
1740	325	31.
1770	325	32.
1800	324	32.
1830	324	32.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1860	324	32.
1890	324	32.
1920	324	32.
1950	325	32.
1980	326	32.
2010	327	32.
2040	327	32.
2070	327	33.
2100	327	33.
2130	327	33.
2160	327	33.
2190	327	33.
2220	327	33.
2250	327	33.
2280	327	33.
2310	328	34.
2340	328	34.
2370	328	34.
2400	328	34.
2430	329	34.
2460	329	35.
2490	329	35.
2520	329	36.
2550	330	36.
2580	331	36.
2610	332	37.
2640	333	37.
2670	333	37.
2700	333	38.
2730	333	38.
2760	332	38.

GEODETTIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

SIGNIFICANT LEVEL DATA
 3390020505
 WHITE SANDS

TABLE 3

STATION ALTITUDE 9889.00 FEET MSL
 5 DEC. 79 1535 HRS MST
 ASCENSION NO. 503

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE AIR		REL. HUM.
MILLIBARS	MSL FEET	DEGREES	DEMPONT	PERCENT
		CENTIGRADE		
873.3	3989.0	17.4	-6.4	19.0
850.0	4742.9	15.1	-9.0	18.0
826.4	5521.8	13.0	-10.7	18.0
766.6	7580.9	9.9	-12.6	19.0
700.0	10031.6	3.7	-17.7	19.0
577.2	15048.1	-10.0	-28.1	21.0
548.4	16345.5	-10.0	-29.7	18.0
523.4	17524.0	-11.9	-31.9	17.0
500.0	18657.9	-15.2	-34.1	18.0
430.0	22349.0	-24.5	-42.4	17.0
400.0	24071.9	-27.4	-45.4	16.0
366.6	26114.9	-32.7	-49.3	17.0
300.0	30670.6	-41.4		
266.6	33295.1	-45.2		
250.0	34698.8	-48.4		
208.6	38547.8	-57.2		
203.3	39086.3	-55.5		
200.0	39429.6	-56.0		
194.2	40044.1	-57.6		
172.0	42578.7	-56.1		
159.2	44187.0	-59.4		
150.0	45114.1	-59.9		
132.6	47943.4	-61.6		
126.8	48868.8	-56.3		
114.4	51015.2	-58.2		
100.0	53758.6	-64.5		
86.6	56621.4	-71.5		
73.0	60015.0	-63.9		
70.0	60363.0	-64.5		
65.2	62302.3	-62.8		
55.4	65595.5	-65.5		
50.6	67425.2	-63.5		
50.0	67668.9	-60.6		
46.0	69391.0	-58.9		
32.6	76452.0	-63.8		
30.0	78145.5	-61.8		
25.8	81295.9	-53.3		
20.0	86729.4	-52.7		
15.9	91634.8	-52.6		
12.0	97716.6	-48.2		

STATION ALTITUDE 3989.00 FEET MSL
 5 DEC. 79
 ASCENSION NO. 503

UPPER AIR DATA
 3390020505
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 4

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DENPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
3989.0	673.0	17.4	-6.4	19.0	1045.4	664.6	340.0	4.1	1.000250
4000.0	673.0	17.4	-6.5	19.0	1045.1	664.6	340.1	4.1	1.000250
4500.0	657.4	15.8	-8.2	18.3	1032.1	662.8	343.4	5.4	1.000245
5000.0	642.1	14.4	-9.5	18.0	1018.9	661.1	345.4	6.7	1.000241
5500.0	627.1	13.1	-10.7	18.0	1005.4	659.5	346.7	8.1	1.000237
6000.0	612.1	12.3	-11.2	18.2	990.0	658.6	347.4	9.5	1.000233
6500.0	597.4	11.5	-11.6	18.5	974.7	657.7	340.5	11.8	1.000229
7000.0	583.0	10.8	-12.1	18.7	959.6	656.8	318.4	15.3	1.000225
7500.0	569.9	10.0	-12.5	19.0	944.8	655.9	319.5	19.0	1.000221
8000.0	554.9	8.8	-13.5	19.0	931.4	654.6	324.0	21.7	1.000218
8500.0	540.9	7.5	-14.5	19.0	918.5	653.1	326.1	24.1	1.000214
9000.0	527.3	6.3	-15.6	19.0	905.8	651.6	324.7	25.6	1.000211
9500.0	513.9	5.0	-16.6	19.0	893.2	650.1	322.6	27.3	1.000207
10000.0	500.8	3.8	-17.7	19.0	880.9	648.6	320.2	29.2	1.000204
10500.0	487.3	2.4	-18.7	19.2	868.5	647.0	321.0	30.7	1.000200
11000.0	474.4	1.1	-19.7	19.4	856.2	645.3	322.3	32.1	1.000197
11500.0	461.6	-0.3	-20.7	19.6	844.1	643.7	324.9	34.4	1.000194
12000.0	449.0	-1.7	-21.8	19.8	832.3	642.1	327.2	36.7	1.000191
12500.0	436.5	-3.0	-22.8	20.0	820.6	640.5	329.8	37.9	1.000188
13000.0	424.3	-4.4	-23.8	20.2	809.1	638.8	332.3	38.9	1.000185
13500.0	412.6	-5.8	-24.9	20.4	797.8	637.2	334.8	39.2	1.000182
14000.0	400.9	-7.1	-25.9	20.6	786.6	635.5	336.7	40.6	1.000179
14500.0	389.3	-8.5	-27.0	20.8	775.6	633.9	338.2	42.6	1.000176
15000.0	378.3	-9.9	-28.0	21.0	764.8	632.3	340.2	44.4	1.000174
15500.0	367.0	-10.0	-28.7	20.0	750.3	632.1	340.9	47.2	1.000170
16000.0	355.9	-10.2	-29.3	18.8	735.7	631.8	340.5	50.6	1.000167
16500.0	345.1	-10.2	-30.0	17.9	722.0	631.8	336.2	54.0	1.000164
17000.0	334.4	-11.1	-30.9	17.4	710.0	630.8	332.7	55.0	1.000161
17500.0	323.9	-11.9	-31.9	17.0	698.3	629.8	329.6	53.6	1.000158
18000.0	313.3	-13.3	-32.8	17.4	688.2	628.1	329.4	50.5	1.000155
18500.0	303.4	-14.7	-33.8	17.9	678.4	626.4	329.9	47.1	1.000153
19000.0	293.2	-16.0	-34.8	17.9	668.1	624.8	332.0	46.3	1.000151
19500.0	283.2	-17.3	-36.0	17.8	657.8	623.2	334.2	46.0	1.000148
20000.0	273.4	-18.6	-37.1	17.6	647.7	621.7	336.3	47.5	1.000146
20500.0	263.8	-19.8	-38.2	17.5	637.8	620.1	338.2	48.9	1.000143
21000.0	254.4	-21.1	-39.4	17.4	628.0	618.6	339.6	49.9	1.000141
21500.0	245.2	-22.4	-40.5	17.2	618.3	617.0	341.2	50.9	1.000139
22000.0	235.2	-23.5	-41.6	17.1	608.9	615.4	343.0	51.3	1.000137
22500.0	227.3	-24.8	-42.7	16.9	599.2	614.0	345.0	52.9	1.000134
23000.0	218.4	-25.6	-43.6	16.6	588.7	613.0	347.0	56.2	1.000132

UPPER AIR DATA
 3390020505
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
 5 DEC. 79
 1535 HRS MST

ASCENSION NO. 505

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	499.7	-26.4	-44.4	16.3	570.5	611.9	348.8	59.3	1.000130
24000.0	401.2	-27.3	-45.3	16.0	568.4	610.9	350.4	62.2	1.000127
24500.0	392.8	-28.5	-46.2	16.2	559.2	609.4	351.7	63.8	1.000125
25000.0	384.5	-29.8	-47.2	16.5	550.4	607.7	352.8	64.1	1.000123
25500.0	376.3	-31.1	-48.1	16.7	541.6	606.1	353.3	63.6	1.000121
26000.0	368.4	-32.4	-49.1	16.9	533.0	604.5	353.2	62.1	1.000119
26500.0	360.5	-33.4	-50.7	15.6**	523.8	603.2	352.4	59.5	1.000117
27000.0	352.5	-34.4	-52.6	13.7**	514.5	602.0	350.9	55.9	1.000115
27500.0	345.3	-35.3	-54.5	11.8**	505.3	600.8	348.2	52.7	1.000113
28000.0	337.5	-36.3	-56.7	10.0**	496.3	599.6	344.8	49.6	1.000111
28500.0	330.1	-37.2	-59.1	8.1**	487.5	598.4	341.4	49.7	1.000109
29000.0	323.0	-38.2	-61.8	6.3**	478.9	597.2	338.3	50.6	1.000107
29500.0	315.9	-39.2	-65.2	4.4**	470.4	595.9	336.0	53.9	1.000105
30000.0	309.1	-40.1	-68.8	2.5**	462.0	594.7	334.3	56.6	1.000103
30500.0	302.4	-41.1	-79.0	.7**	453.8	593.5	333.3	58.3	1.000101
31000.0	295.7	-41.9			445.4	592.5	332.6	59.8	1.000099
31500.0	289.1	-42.6			436.8	591.5	333.2	59.6	1.000097
32000.0	282.5	-43.3			428.4	590.6	333.8	59.4	1.000095
32500.0	276.3	-44.0			420.2	589.7	334.6	59.2	1.000094
33000.0	270.2	-44.8			412.1	588.7	335.4	59.0	1.000092
33500.0	264.1	-45.7			404.5	587.6	335.7	58.5	1.000090
34000.0	258.1	-46.3			397.3	586.1	336.0	58.0	1.000088
34500.0	252.3	-47.0			390.3	584.6	335.7	56.5	1.000087
35000.0	246.5	-47.1			383.2	583.1	335.2	54.7	1.000085
35500.0	240.8	-48.2			376.2	581.7	333.8	51.5	1.000084
36000.0	235.2	-49.4			369.4	580.2	331.2	47.1	1.000082
36500.0	229.7	-50.7			362.7	578.7	327.7	43.3	1.000081
37000.0	224.4	-51.7			356.1	577.2	322.6	40.7	1.000079
37500.0	219.1	-52.8			349.5	575.7	317.0	38.9	1.000078
38000.0	214.0	-54.3			343.3	574.2	312.3	40.3	1.000076
38500.0	209.1	-55.9			337.1	572.6	308.0	41.9	1.000075
39000.0	204.1	-57.1			327.1	574.4	305.5	44.4	1.000073
39500.0	199.3	-58.2			320.0	573.8	303.2	46.9	1.000071
40000.0	194.8	-59.5			314.4	572.1	302.3	49.6	1.000070
40500.0	190.0	-61.0			306.7	572.3	301.5	52.3	1.000068
41000.0	185.5	-62.5			299.0	572.7	301.4	54.9	1.000067
41500.0	181.1	-64.1			291.6	573.1	301.1	57.3	1.000065
42000.0	176.8	-65.4			284.3	573.5	300.5	59.2	1.000063
42500.0	172.6	-66.1			277.2	573.9	299.8	61.0	1.000062
43000.0	168.5	-67.0			271.6	572.8	298.9	62.5	1.000060

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

UPPER AIR DATA
 339020505
 WHITE SANDS

STATION ALTITUDE 9989.00 FEET MSL
 5 DEC. 79 1535 HRS MST
 ASCENSION NO. 505

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 4 (CONT)

GEOMETRIC ALTI-TUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GW/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
43500.0	164.5	-58.0		266.4	571.4	298.1	64.0	1.000059
44500.0	150.0	-59.0		261.3	570.1	297.8	64.4	1.000058
45500.0	135.8	-59.5		255.7	569.4	297.5	64.7	1.000057
46500.0	123.2	-59.7		249.8	569.1	297.6	63.4	1.000056
47500.0	112.4	-60.0		244.1	568.8	297.6	61.6	1.000054
48500.0	102.8	-60.3		238.6	568.4	297.7	59.2	1.000053
49500.0	94.2	-60.6		233.2	567.9	297.6	56.4	1.000052
50500.0	86.5	-61.0		227.9	567.5	297.7	53.9	1.000051
51500.0	79.5	-61.3		222.8	567.0	298.2	51.5	1.000050
52500.0	73.2	-61.5		217.4	567.1	299.5	47.8	1.000048
53500.0	67.4	-61.4		209.4	570.9	301.7	43.4	1.000047
54500.0	62.0	-61.4		202.5	573.5	304.4	37.7	1.000045
55500.0	57.0	-61.9		198.1	572.9	308.2	31.2	1.000044
56500.0	52.2	-62.3		193.8	572.4	313.3	26.2	1.000043
57500.0	47.5	-62.7		189.6	571.8	319.9	22.4	1.000042
58500.0	43.0	-63.2		185.5	571.2	329.1	19.1	1.000041
59500.0	38.7	-63.3		182.0	569.7	340.3	17.9	1.000041
60500.0	34.6	-63.5		178.6	568.2	352.6	17.5	1.000040
61500.0	30.6	-63.6		175.2	566.6	3.4	17.5	1.000039
62500.0	26.8	-63.7		171.9	565.1	13.0	17.8	1.000038
63500.0	23.2	-63.9		168.7	563.6	20.4	18.1	1.000037
64500.0	19.8	-64.1		165.5	562.0	24.8	18.0	1.000036
65500.0	16.6	-64.3		162.3	560.3	26.2	17.7	1.000035
66500.0	13.5	-64.5		159.2	558.6	22.0	17.4	1.000035
67500.0	10.5	-64.7		156.2	557.0	15.1	16.7	1.000035
68500.0	7.6	-64.8		153.2	555.3	3.3	15.9	1.000034
69500.0	4.8	-64.9		150.3	553.6	349.5	15.3	1.000033
70500.0	2.1	-64.9		146.2	554.4	332.6	15.0	1.000033
71500.0	0.0	-64.9		141.8	555.9	316.6	16.0	1.000032
72500.0	0.0	-64.9		137.5	557.4	304.5	17.4	1.000031
73500.0	0.0	-64.9		133.3	559.0	294.3	19.4	1.000030
74500.0	0.0	-64.9		129.3	560.5	293.3	20.7	1.000029
75500.0	0.0	-64.9		125.4	562.0	293.1	21.9	1.000028
76500.0	0.0	-64.9		121.6	563.5	296.8	22.2	1.000027
77500.0	0.0	-64.9		118.8	563.1	302.5	22.2	1.000026
78500.0	0.0	-64.9		116.0	563.0	304.0	22.2	1.000026
79500.0	0.0	-64.9		112.8	563.8	313.4	22.0	1.000025
80500.0	0.0	-64.9		109.8	564.5	318.8	22.1	1.000024
81500.0	0.0	-64.9		107.0	564.8	321.0	21.1	1.000024
82500.0	0.0	-64.9		104.6	564.5	323.4	20.1	1.000023

UPPER AIR DATA
 396020505
 WHITE SANDS

STATION ALTITUDE 9989.00 FEET MSL
 5 DEC. 79 1335 HRS MST
 ASCENSLON: NO. 503

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	61.4	-63.0		102.2	563.7	323.7	18.8	1.000023
64000.0	59.9	-64.2		99.9	563.2	322.6	17.4	1.000022
64500.0	58.5	-64.6		97.7	562.6	320.9	16.4	1.000022
65000.0	57.1	-65.0		95.5	562.0	318.0	17.0	1.000021
65500.0	55.7	-65.4		93.3	561.5	315.3	17.7	1.000021
66000.0	54.3	-65.1		90.9	562.0	314.1	19.1	1.000020
66500.0	53.0	-64.5		88.4	562.7	313.5	20.8	1.000020
67000.0	51.7	-64.0		86.1	563.5	313.7	21.9	1.000019
67500.0	50.4	-62.6		83.4	565.3	315.5	22.1	1.000019
68000.0	49.2	-60.9		80.5	568.4	317.2	22.3	1.000018
68500.0	48.0	-59.8		78.4	569.1	322.1	21.3	1.000017
69000.0	46.8	-59.3		76.4	569.7	327.9	20.4	1.000017
69500.0	45.8	-59.0		74.4	570.1	333.6	19.8	1.000017
70000.0	44.7	-59.3		72.7	569.7	339.0	19.4	1.000016
70500.0	43.5	-59.7		71.1	569.2	344.6	19.1	1.000016
71000.0	42.5	-60.0		69.5	568.8	348.8	17.8	1.000015
71500.0	41.5	-60.4		67.9	568.5	353.4	16.4	1.000015
72000.0	40.5	-60.7		66.4	567.8	1.9	15.5	1.000015
72500.0	39.5	-61.1		64.9	567.4	15.2	15.7	1.000014
73000.0	38.5	-61.4		63.5	566.9	27.5	16.6	1.000014
73500.0	37.5	-61.8		62.0	566.4	44.7	15.3	1.000014
74000.0	36.7	-62.1		60.6	566.0	65.8	15.0	1.000014
74500.0	35.9	-62.4		59.3	565.5	85.0	16.6	1.000013
75000.0	35.0	-62.8		57.9	565.0	102.6	15.5	1.000013
75500.0	34.1	-63.1		56.6	564.6	120.9	15.9	1.000013
76000.0	33.3	-63.5		55.4	564.1	136.1	15.1	1.000012
76500.0	32.5	-63.7		54.1	563.8	155.1	9.5	1.000012
77000.0	31.7	-63.2		52.6	564.6	209.6	6.4	1.000012
77500.0	31.0	-62.6		51.2	565.3	252.5	9.6	1.000011
78000.0	30.2	-62.0		49.8	566.1	267.0	13.2	1.000011
78500.0	29.5	-60.8		48.4	567.6	275.1	17.2	1.000011
79000.0	28.8	-59.2		47.0	569.4	275.6	18.1	1.000010
79500.0	28.1	-59.1		45.6	571.2	271.6	16.4	1.000010
80000.0	27.5	-58.8		44.2	572.0	266.6	14.7	1.000010
80500.0	26.9	-58.4		42.9	574.6	263.3	14.1	1.000010
81000.0	26.2	-58.1		41.6	576.6	261.0	13.9	1.000009
81500.0	25.5	-58.3		40.5	577.7	258.5	13.7	1.000009
82000.0	24.9	-58.2		39.5	577.7	255.7	12.0	1.000009
82500.0	24.1	-58.2		38.6	577.8	251.9	10.3	1.000009
83000.0	23.8	-58.1		37.7	577.9	246.6	8.6	1.000008

UPPER AIR DATA
 3390020505
 WHITE SANDS

STATION ALTITUDE 8089.00 FEET MSL
 5 DEC 79 1535 HRS MST
 ASCENSION NO. 505

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
83500.0	23.0	-53.2		36.8	578.0	241.8	7.0	1.000008
84000.0	22.7	-53.0		36.0	578.0	234.4	5.5	1.000008
84500.0	22.2	-52.9		35.1	578.1	226.4	4.2	1.000008
85000.0	21.7	-52.9		34.3	578.2	239.9	3.4	1.000008
85500.0	21.2	-52.8		33.5	578.3	260.0	2.9	1.000007
86000.0	20.7	-52.8		32.7	578.3	275.3	3.3	1.000007
86500.0	20.2	-52.7		32.0	578.4	272.8	5.1	1.000007
87000.0	19.7	-52.7		31.2	578.4	271.6	6.8	1.000007
87500.0	19.3	-52.7		30.5	578.5	269.6	8.4	1.000007
88000.0	18.8	-52.7		29.8	578.5	266.8	9.9	1.000007
88500.0	18.4	-52.7		29.1	578.5	264.8	11.4	1.000006
89000.0	18.0	-52.7		28.4	578.5	266.8	12.4	1.000006
89500.0	17.6	-52.6		27.8	578.5	270.9	13.0	1.000006
90000.0	17.2	-52.5		27.1	578.5	274.7	13.6	1.000006
90500.0	16.8	-52.5		26.5	578.5	275.0	13.1	1.000006
91000.0	16.4	-52.5		25.9	578.5	274.0	12.1	1.000006
91500.0	16.0	-52.5		25.3	578.5	272.8	11.1	1.000006
92000.0	15.6	-52.5		24.7	578.9	275.8	12.0	1.000005
92500.0	15.2	-52.0		24.1	579.4	280.5	14.8	1.000005
93000.0	14.8	-51.8		23.5	579.9	283.7	17.7	1.000005
93500.0	14.4	-51.8		22.9	580.3	285.6	20.6	1.000005
94000.0	14.0	-50.2		22.3	580.8	283.9	23.8	1.000005
94500.0	13.6	-50.5		21.8	581.3	282.7	27.0	1.000005
95000.0	13.2	-50.2		21.3	581.7	281.7	30.2	1.000005
95500.0	12.8	-49.8		20.7	582.2			1.000005
96000.0	12.4	-49.4		20.2	582.7			1.000005
96500.0	12.0	-49.1		19.7	583.2			1.000004
97000.0	11.6	-48.7		19.3	583.6			1.000004
97500.0	11.2	-48.3		18.8	584.1			1.000004

MANDATORY LEVELS
 300020505
 WHITE SANDS

STATION ALTITUDE 5939.00 FEET MSL
 5 FEB 76
 1335 HRS MST
 ASCENSION NO. 505

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 5

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4733.	15.1	-9.0	18.	344.4	6.1
800.0	5099.	11.7	-11.5	18.	323.0	11.4
750.0	5469.	8.4	-13.8	19.	325.3	22.6
700.0	5832.	3.7	-17.7	19.	320.1	29.3
650.0	6196.	-1.6	-21.7	20.	327.2	36.7
600.0	6561.	-7.2	-26.0	21.	335.9	40.8
550.0	6921.	-10.0	-29.6	18.	330.1	52.4
500.0	7282.	-15.2	-34.1	18.	330.5	46.8
450.0	7632.	-21.7	-39.9	17.	340.4	50.5
400.0	7982.	-27.4	-45.4	16.	350.6	62.5
350.0	8335.	-34.7	-53.2	13.**	350.2	54.8
300.0	8681.	-41.4			333.0	58.9
250.0	9024.	-48.4			335.5	55.8
200.0	9356.	-56.0			303.6	46.5
175.0	9410.	-56.3			300.2	60.0
150.0	9493.	-59.9			297.7	62.0
125.0	9525.	-55.6			305.3	35.8
100.0	9584.	-64.5			22.5	18.0
90.0	9590.	-68.0			301.2	17.9
70.0	9655.	-64.5			306.2	22.3
50.0	9750.	-64.2			322.7	17.5
30.0	9786.	-60.6			315.9	22.1
20.0	9791.	-60.9			8.3	15.5
10.0	9785.	-61.8			259.1	14.0
25.0	91905.	-53.2			256.2	12.3
20.0	90127.	-52.7			272.3	5.7
15.0	93926.	-51.7			282.8	16.7

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

STATION ALTITUDE 4051.00 FEET MSL
 5 DEC. 79 1015 HRS MST
 ASCENSION NO. 191

SIGNIFICANT LEVEL DATA
 3390030191
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 6

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
871.0	13.5	25.0
850.0	12.0	26.0
799.8	10.0	25.0
718.8	2.7	31.0
700.0	.5	32.0
643.6	-4.2	28.0
582.8	-10.6	27.0
541.8	-14.6	32.0
526.4	-14.4	26.0
500.0	-16.8	24.0
400.0	-31.6	25.0
350.0	-36.7	22.0
321.8	-40.3	
300.0	-43.0	
274.0	-46.5	
269.2	-46.2	
250.0	-48.9	
213.2	-54.8	
204.6	-54.8	
200.0	-52.0	
192.4	-52.9	
164.0	-60.0	
150.0	-58.0	
123.4	-65.9	
122.3	-63.5	
100.0	-66.5	
82.8	-72.7	
72.3	-68.8	
70.0	-67.1	
50.0	-66.4	
45.2	-59.4	
36.0	-60.9	

STATION ALTITUDE 4051.00 FEET MSL
 9 DEC. 79
 ASCENSION NO. 191

UPPER AIR DATA
 3390030191
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.0	871.0	13.5	-6.1	25.0	1056.8	660.1	140.0	2.9	1.000253
4500.0	856.9	12.5	-6.6	25.7	1043.3	659.0	118.5	1.2	1.000250
5000.0	841.4	11.7	-7.2	25.8	1027.6	658.0	6.3	1.3	1.000245
5500.0	826.2	11.1	-7.9	25.5	1011.1	657.3	346.1	3.2	1.000241
6000.0	811.3	10.5	-8.6	25.2	995.0	656.6	341.3	5.2	1.000237
6500.0	796.5	9.7	-9.2	25.2	979.5	655.7	335.4	10.8	1.000233
7000.0	781.9	8.5	-9.8	26.3	965.9	654.2	333.5	16.4	1.000229
7500.0	767.5	7.2	-10.4	27.3	952.5	652.7	332.2	21.0	1.000226
8000.0	753.4	5.9	-11.0	28.4	939.2	651.2	331.3	25.5	1.000222
8500.0	739.5	4.6	-11.7	29.4	926.2	649.7	329.9	26.6	1.000219
9000.0	725.9	3.4	-12.3	30.4	913.4	648.2	328.2	26.8	1.000215
9500.0	712.4	2.0	-13.2	31.3	901.1	646.6	326.0	27.7	1.000212
10000.0	699.1	.4	-14.3	31.9	889.2	644.7	323.0	29.9	1.000208
10500.0	685.9	-6.6	-15.6	31.0	875.9	643.4	320.5	32.3	1.000204
11000.0	672.9	-1.7	-16.9	30.1	862.8	642.1	319.4	35.5	1.000201
11500.0	660.1	-2.8	-18.2	29.2	849.8	640.8	318.9	38.5	1.000197
12000.0	647.8	-3.9	-19.5	28.3	837.1	639.5	320.2	39.4	1.000193
12500.0	635.2	-5.1	-20.7	27.9	824.7	638.1	321.9	40.3	1.000190
13000.0	622.9	-6.3	-21.9	27.7	812.7	636.6	325.2	41.2	1.000187
13500.0	610.8	-7.6	-23.1	27.5	800.8	635.1	328.6	42.5	1.000183
14000.0	599.0	-8.8	-24.3	27.3	789.0	633.5	333.0	45.3	1.000180
14500.0	587.4	-10.1	-25.4	27.1	777.5	632.0	336.8	48.3	1.000177
15000.0	575.9	-11.3	-26.2	27.8	765.7	630.6	339.8	51.4	1.000175
15500.0	564.8	-12.3	-26.6	29.2	753.7	629.3	342.3	54.7	1.000172
16000.0	553.4	-13.4	-27.1	30.5	742.0	628.0	339.8	58.3	1.000169
16500.0	542.5	-14.5	-27.6	31.9	730.4	626.6	337.6	62.0	1.000166
17000.0	531.7	-14.5	-28.9	28.1	715.8	626.7	333.8	63.6	1.000163
17500.0	521.1	-14.9	-30.2	25.6	702.7	626.2	329.9	65.3	1.000159
18000.0	510.8	-15.8	-31.3	24.8	691.2	625.1	328.2	64.7	1.000156
18500.0	500.6	-16.7	-32.5	24.0	679.9	623.9	327.1	63.2	1.000154
19000.0	490.5	-18.1	-33.6	24.1	669.5	622.2	326.2	61.7	1.000151
19500.0	480.2	-19.5	-34.8	24.2	659.2	620.5	325.3	60.1	1.000149
20000.0	470.2	-20.9	-35.9	24.3	649.2	618.8	324.5	59.0	1.000146
20500.0	460.5	-22.3	-37.1	24.4	639.3	617.1	323.8	58.2	1.000144
21000.0	451.0	-23.6	-38.2	24.5	629.6	615.4	324.0	58.1	1.000142
21500.0	441.7	-25.0	-39.4	24.6	620.1	613.7	324.8	58.4	1.000139
22000.0	432.6	-26.4	-40.6	24.7	610.7	612.0	325.4	58.2	1.000137
22500.0	423.7	-27.8	-41.7	24.7	601.5	610.3	326.0	57.5	1.000135
23000.0	415.0	-29.2	-42.9	24.8	592.4	608.6	326.5	56.9	1.000133
23500.0	406.4	-30.5	-44.1	24.9	583.5	606.8	327.2	56.2	1.000131

STATION ALTITUDE 4051.00 FEET MSL
 5 DEC. 75 1415 HRS MST
 ASCENSION NO. 191

UPPER AIR DATA
 3390030191
 JALLEN

GEOGETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 7 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
24000.0	597.9	-31.8	-45.2	24.9	574.3	605.3	327.9	55.5	1.000129
24500.0	589.4	-32.6	-46.1	24.4	563.9	604.2	327.9	55.0	1.000126
25000.0	581.0	-33.5	-47.0	23.9	553.7	603.2	327.5	54.6	1.000124
25500.0	572.8	-34.3	-47.9	23.4	543.7	602.1	326.1	53.9	1.000122
26000.0	564.8	-35.1	-48.8	22.9	533.9	601.1	323.7	52.9	1.000119
26500.0	557.0	-35.9	-49.7	22.4	524.3	600.0	321.3	52.0	1.000117
27000.0	549.3	-36.8	-50.8	21.5**	514.8	599.0	319.1	51.2	1.000115
27500.0	541.7	-37.7	-51.2	15.7**	505.6	597.8	317.1	50.3	1.000113
28000.0	534.2	-38.7	-51.7	9.9**	496.6	596.5	316.0	49.3	1.000111
28500.0	526.9	-39.6	-52.7	4.1**	487.7	595.3	314.8	48.5	1.000109
29000.0	519.7	-40.5	-53.6		478.9	594.2	313.3	48.2	1.000107
29500.0	512.7	-41.4	-54.5		470.0	593.1	312.0	48.3	1.000105
30000.0	505.7	-42.3	-55.4		461.3	592.0	311.5	49.6	1.000103
30500.0	298.9	-43.1	-56.3		452.8	590.8	311.4	51.3	1.000101
31000.0	292.2	-44.0	-57.2		444.3	589.7	313.3	54.7	1.000099
31500.0	285.7	-44.9	-58.1		436.0	588.6	314.9	58.0	1.000097
32000.0	279.3	-45.8	-59.0		427.8	587.5	316.0	60.2	1.000095
32500.0	273.0	-46.4	-59.9		419.5	586.6	317.0	62.3	1.000093
33000.0	266.8	-46.5	-60.8		410.1	586.5	316.7	61.7	1.000091
33500.0	260.7	-47.4	-61.7		402.3	585.4	315.6	59.3	1.000090
34000.0	254.8	-48.2	-62.6		394.6	584.3	314.3	56.9	1.000088
34500.0	249.0	-49.0	-63.5		387.1	583.2	311.2	54.1	1.000086
35000.0	243.3	-49.9	-64.4		379.6	582.1	307.8	51.4	1.000085
35500.0	237.6	-50.8	-65.3		372.3	580.9	304.2	49.9	1.000083
36000.0	232.1	-51.6	-66.2		365.1	579.8	300.6	49.5	1.000081
36500.0	226.7	-52.5	-67.1		358.0	578.7	297.0	49.2	1.000080
37000.0	221.3	-53.4	-68.0		351.1	577.5	294.5	48.7	1.000078
37500.0	216.4	-54.3	-68.9		344.3	576.4	291.9	48.4	1.000077
38000.0	211.3	-54.8	-69.8		337.2	575.7	290.6	47.9	1.000075
38500.0	206.4	-54.8	-70.7		329.3	575.7	289.7	47.2	1.000073
39000.0	201.6	-55.0	-71.6		318.9	578.1	289.3	46.4	1.000071
39500.0	196.9	-52.4	-72.5		310.6	578.9	289.4	45.2	1.000069
40000.0	192.3	-52.9	-73.4		304.2	578.1	289.5	44.2	1.000068
40500.0	187.8	-54.0	-74.3		298.5	576.7	289.6	43.7	1.000066
41000.0	183.3	-55.0	-75.2		292.8	575.3	289.7	43.3	1.000065
41500.0	179.0	-56.1	-76.1		287.3	573.9	290.0	45.6	1.000064
42000.0	174.8	-57.2	-77.0		281.9	572.5	290.3	48.2	1.000063
42500.0	170.8	-58.2	-77.9		276.6	571.1	290.7	51.0	1.000062
43000.0	166.8	-59.3	-78.8		271.4	569.7	291.2	54.0	1.000060
43500.0	162.7	-59.8	-79.7		265.6	569.0	291.9	56.1	1.000059

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

STATION ALTITUDE 4051.00 FEET MSL
 5 DEC. 79 1415 HNS MST
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UPPER AIR DATA
 3390U30191
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GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 7 (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	
44000.0	158.0	-59.3		258.6	569.7	293.3	55.8	1.000058
44500.0	155.0	-58.7		251.8	570.5	294.8	55.6	1.000056
45000.0	151.5	-58.2		245.2	571.2	297.6	53.5	1.000055
45500.0	147.6	-58.6		239.8	570.6	300.7	51.6	1.000053
46000.0	144.1	-59.6		235.0	569.3	303.5	51.5	1.000052
46500.0	140.6	-60.6		230.4	567.9	306.2	52.0	1.000051
47000.0	137.2	-61.8		225.9	566.6	308.3	51.8	1.000050
47500.0	133.8	-62.6		221.5	565.3	309.2	49.6	1.000049
48000.0	130.6	-63.6		217.1	563.9	310.2	47.4	1.000048
48500.0	127.4	-64.6		212.9	562.6	311.3	45.2	1.000047
49000.0	124.4	-65.6		208.7	561.3	312.5	39.5	1.000046
49500.0	121.5	-65.6		201.7	563.9	314.2	33.9	1.000045
50000.0	118.5	-64.0		197.1	563.4	316.3	30.5	1.000044
50500.0	115.4	-64.4		192.6	562.9	318.3	30.3	1.000043
51000.0	112.6	-64.7		188.2	562.4	320.5	30.9	1.000042
51500.0	109.8	-65.1		183.9	561.9	322.6	33.4	1.000041
52000.0	107.1	-65.5		179.7	561.4	325.2	35.0	1.000040
52500.0	104.5	-65.8		175.6	560.9	330.9	33.6	1.000039
53000.0	101.9	-66.2		171.6	560.4	337.0	32.5	1.000038
53500.0	99.4	-66.7		167.8	559.8	345.5	28.4	1.000037
54000.0	96.9	-67.5		164.2	558.6	356.9	24.8	1.000037
54500.0	94.5	-68.4		160.7	557.5	3.2	22.3	1.000036
55000.0	92.1	-69.2		157.3	556.4	4.8	19.8	1.000035
55500.0	89.8	-70.0		154.0	555.2	2.7	18.0	1.000034
56000.0	87.6	-70.9		150.8	554.1	350.3	18.2	1.000034
56500.0	85.4	-71.7		147.6	552.9	338.7	19.3	1.000033
57000.0	83.2	-72.5		144.5	551.8	331.3	20.9	1.000032
57500.0	81.1	-72.1		140.6	552.4	326.7	22.6	1.000031
58000.0	79.1	-71.4		136.5	553.4	322.8	24.5	1.000030
58500.0	77.1	-70.6		132.6	554.4	323.5	25.5	1.000030
59000.0	75.1	-69.9		128.8	555.4	323.1	26.3	1.000029
59500.0	73.2	-69.2		125.1	556.4	323.7	27.0	1.000028
60000.0	71.4	-68.1		121.3	557.8	325.1	26.9	1.000027
60500.0	69.6	-67.1		117.7	559.2	326.6	26.7	1.000026
61000.0	67.9	-67.0		114.8	559.3	327.8	26.5	1.000026
61500.0	66.2	-67.0		111.9	559.4	323.8	25.5	1.000025
62000.0	64.6	-66.9		109.1	559.4	319.5	24.7	1.000024
62500.0	63.0	-66.9		106.4	559.5	315.1	23.5	1.000024
63000.0	61.4	-66.8		103.7	559.6	309.4	18.4	1.000023
63500.0	59.9	-66.8		101.1	559.7	299.6	13.6	1.000023

UPPER AIR DATA
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STATION ALTITUDE 4021.00 FEET MSL
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GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 7 (CONT)

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	
64000.0	58.4	-66.7		98.6	559.7	283.5	9.8	1.000022
64500.0	57.0	-66.7		96.1	559.8	272.4	7.8	1.000021
65000.0	55.6	-66.6		93.7	559.9	254.6	6.2	1.000021
65500.0	54.2	-66.6		91.4	559.9	241.5	6.3	1.000020
66000.0	52.9	-66.5		89.1	560.0	250.0	8.7	1.000020
66500.0	51.6	-66.5		86.9	560.1	254.8	11.3	1.000019
67000.0	50.3	-66.4		84.7	560.2	258.6	13.0	1.000019
67500.0	49.1	-65.1		82.1	562.0	262.7	13.6	1.000018
68000.0	47.9	-63.4		79.5	564.3	265.5	14.4	1.000018
68500.0	46.7	-61.7		76.9	566.5	276.1	13.5	1.000017
69000.0	45.6	-60.0		74.5	568.8	292.8	12.3	1.000017
69500.0	44.5	-59.5		72.5	569.4	311.2	12.3	1.000016
70000.0	43.4	-59.7		70.8	569.2	328.2	12.8	1.000016
70500.0	42.4	-59.8		69.2	569.0	343.3	13.9	1.000015
71000.0	41.4	-60.0		67.6	568.8	355.5	15.8	1.000015
71500.0	40.4	-60.1		66.0	568.6			1.000015
72000.0	39.4	-60.3		64.5	568.4			1.000014
72500.0	38.5	-60.5		63.0	568.2			1.000014
73000.0	37.5	-60.6		61.5	567.9			1.000014
73500.0	36.6	-60.8		60.1	567.7			1.000013

MANDATORY LEVELS
 3390030191
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL
 5 DEC. 79 1415 MMS MST
 ASCENSION NO. 191

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 8

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4720.	12.0	-6.9	20.	69.4	.7
800.0	6378.	10.0	-9.1	25.	336.2	9.4
750.0	8123.	5.6	-11.2	29.	331.1	26.5
700.0	9957.	.5	-14.2	32.	323.2	29.8
650.0	11893.	-3.6	-19.3	28.	319.9	39.2
600.0	13948.	-8.7	-24.2	27.	332.6	45.1
550.0	16139.	-13.8	-27.2	31.	339.1	59.4
500.0	18503.	-16.2	-32.5	24.	327.1	63.2
450.0	21064.	-23.8	-38.4	24.	324.2	58.1
400.0	23843.	-31.6	-45.0	25.	327.7	55.7
350.0	26910.	-36.7	-50.5	22.	319.3	51.2
300.0	30365.	-43.0			311.1	50.7
250.0	34344.	-48.9			311.8	54.6
200.0	39075.	-52.0			289.3	46.0
175.0	41883.	-57.1			290.3	48.0
150.0	45058.	-58.0			298.6	52.9
125.0	48763.	-65.4			312.2	40.9
100.0	53226.	-66.5			342.8	29.5
80.0	57583.	-71.7			324.7	23.5
70.0	60194.	-67.1			326.2	26.7
60.0	63248.	-66.3			301.1	14.1
50.0	66867.	-66.4			259.3	13.1
40.0	71412.	-60.2				

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