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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
12821A LANCE, MISSILE NUMBER 4998, ROUND NUMBER 342 NCL, 5 MARC--ETC(U)

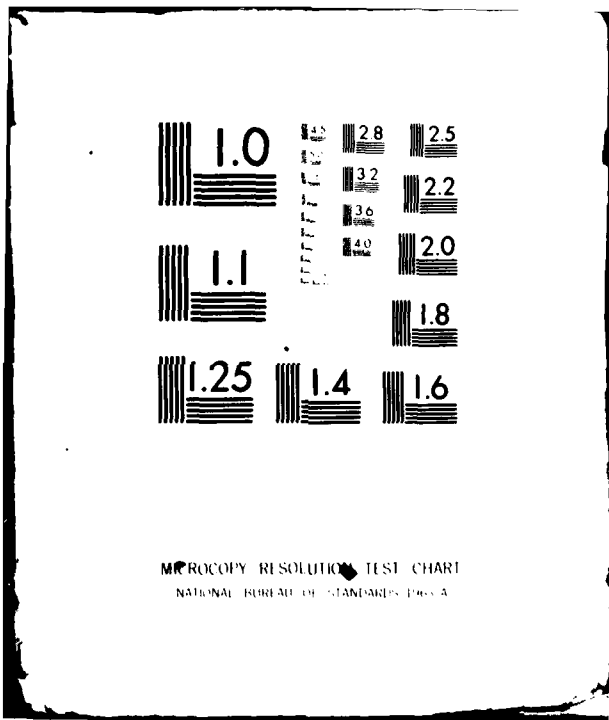
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MARCH 1980

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METEOROLOGICAL DATA REPORT

12821A LANCE
Missile Number 4998
Round Number 342 NCL
5 March 1980

by

White Sands Meteorological Team

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WHITE SANDS MISSILE RANGE, NEW MEXICO

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 12821A LANCE, Missile Number 4998, Round Number 342 NCL are presented in tabular form.		

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INTRODUCTION

12821A LANCE, Missile Number 4998, Round Number 342 NCL,
was launched from RATSCAT, White Sands Missile Range (WSMR), New Mexico,
at 0919:01 MST on 5 March 1980. The scheduled launch time was
0900 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 RATSCAT 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

RATSCAT 7,000 and 11,500 FEET

(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

HOLLOMAN 0915 MST
JALLEN 0915 MST

TABLE 1. Surface Observations taken at 0915 MST,
 5 March 1980, at RATSCAT, 12821A LANCE,
 Missile Number 4998, Round Number 342 NCL.

ELEVATION	3957	FT/MSL
PRESSURE	882.9	MBS
TEMPERATURE	5.2	°C
RELATIVE HUMIDITY	69	
DEW POINT	0.0	°C
DENSITY	1100	GM/M ³
WIND SPEED	04	KTS
WIND DIRECTION	300	DEGREES
CLOUD COVER	CLEAR	

TABLE 3

RELEASED FROM

RATSCAT

DATE 5 March 1980

TIME 0923 MST

COORDINATES (WSTM)

X= 513.312.04

Y 357,958.56

3964.61

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL OR FEET AGL XX

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	300	04	3100	191	04	6200	251	17
100	360	01	3200	205	06	6300	260	15
200	351	02	3300	202	07	6400	262	18
300	284	05	3400	211	06	6500	260	20
400	281	05	3500	214	07	6600	258	24
500	310	04	3600	219	08	6700	262	23
600	180	00	3700	231	09	6800	265	22
700	022	04	3800	242	10	6900	267	22
800	014	05	3900	245	10	7000	269	21
900	014	06	4000	256	11	7100	277	25
1000	023	05	4100	259	11	7200	275	27
1100	033	05	4200	262	12	7300	278	28
1200	033	04	4300	259	14	7400	286	29
1300	027	03	4400	255	16	7500	284	33
1400	024	03	4500	255	16	7600	278	34
1500	033	03	4600	255	17	7700	279	36
1600	013	03	4700	256	16	7800	278	38
1700	354	03	4800	251	17	7900	277	40
1800	355	01	4900	251	16	8000	276	37
1900	270	01	5000	251	16	8100	278	39
2000	180	02	5100	258	15	8200	277	38
2100	205	02	5200	261	16	8300	278	39
2200	203	03	5300	263	14	8400	275	36
2300	208	04	5400	262	15	8500	275	34
2400	217	05	5500	257	14	8600	275	36
2500	214	05	5600	257	13	8700	270	35
2600	203	05	5700	260	12	8800	269	33
2700	200	05	5800	253	12	8900	267	33
2800	198	05	5900	251	13	9000	264	31
2900	195	06	6000	251	14	9100	268	32
3000	194	05	6100	253	16	9200	269	31

STATION ALTITUDE 4126.59 FEET MSL
 5 MAR. 80
 ASCENSION NO. 71

SIGNIFICANT LEVEL DATA
 0650010071
 HOLLOWMAN

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

TABLE 4

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
876.5	10.9	1.2	51.0
867.4	8.6	-1.6	48.0
850.0	8.3	-2.3	47.0
797.8	4.3	-4.9	51.0
714.0	-9	-13.7	37.0
700.0	-7	-16.1	30.0
658.4	-4	-20.0	20.0
579.0	-7.3	-25.3	22.0
500.0	-16.9	-32.0	24.0
400.0	-30.4	-42.3	30.0
345.6	-38.7	-49.4	31.0
300.0	-47.6		
250.0	-56.0		
244.4	-56.5		
213.6	-52.8		
200.0	-55.5		
155.0	-57.4		
150.0	-58.8		
137.8	-58.6		
114.2	-66.1		
104.4	-64.5		
100.0	-65.0		
98.2	-66.2		
70.0	-63.3		
66.4	-62.9		
62.5	-59.2		
56.2	-62.9		
50.0	-58.1		
41.6	-59.0		
31.8	-55.7		

STATION ALTITUDE 4126.59 FEET MSL
 5 MAR. 80 0915 HRS MST
 ASCENSION NO. 71

UPPER AIR DATA
 0650010071
 HOLLOWMAN

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

TABLE 5

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4126.6	870.5	10.9	51.0	1071.9	657.5	250.0	6.0	1.000270
4500.0	864.6	8.6	47.8	1060.7	654.6	247.4	4.5	1.000263
5000.0	848.8	8.2	47.1	1048.5	654.2	238.7	2.4	1.000258
5500.0	833.2	7.0	48.3	1033.6	652.8	178.5	.8	1.000254
6000.0	817.9	5.9	49.4	1019.0	651.4	115.7	1.2	1.000249
6500.0	802.8	4.7	50.6	1004.5	650.0	230.8	1.5	1.000245
7000.0	787.9	3.7	49.4	989.5	648.8	243.8	4.4	1.000240
7500.0	773.2	2.8	47.0	974.3	647.7	244.7	7.7	1.000235
8000.0	758.7	1.9	44.7	959.3	646.7	247.6	8.8	1.000229
8500.0	744.5	1.1	42.3	944.5	645.6	251.3	9.5	1.000224
9000.0	730.6	.2	39.9	930.0	644.5	261.4	9.3	1.000220
9500.0	716.9	-.7	37.5	915.7	643.4	271.1	10.1	1.000215
10000.0	703.4	-.7	31.7	890.7	643.3	277.6	12.7	1.000210
10500.0	690.1	-.6	27.7	881.4	643.4	281.7	15.4	1.000205
11000.0	677.1	-.5	24.6	864.6	643.5	284.3	18.4	1.000200
11500.0	664.4	-.4	21.5	848.1	643.6	284.2	21.8	1.000195
12000.0	651.7	-.9	20.2	833.5	643.0	282.1	25.9	1.000192
12500.0	639.3	-2.0	20.5	820.8	641.7	279.3	28.0	1.000188
13000.0	627.1	-3.0	20.8	808.2	640.5	276.0	28.9	1.000185
13500.0	615.1	-4.1	21.1	795.9	639.3	275.9	28.0	1.000182
14000.0	603.4	-5.1	21.4	783.7	638.0	277.0	26.9	1.000179
14500.0	591.9	-6.1	21.7	771.7	636.8	281.3	28.5	1.000176
15000.0	580.6	-7.2	22.0	760.0	635.5	285.1	30.2	1.000173
15500.0	569.2	-8.4	22.2	748.6	634.0	288.2	32.2	1.000171
16000.0	558.0	-9.7	22.5	737.6	632.4	289.2	33.9	1.000168
16500.0	547.0	-11.0	22.8	726.6	630.9	289.4	35.4	1.000165
17000.0	536.2	-12.3	23.0	715.9	629.3	288.3	36.7	1.000163
17500.0	525.7	-13.6	23.3	705.4	627.7	287.4	37.6	1.000160
18000.0	515.3	-14.9	23.6	695.0	626.1	287.1	37.7	1.000157
18500.0	505.2	-16.2	23.9	684.8	624.5	287.0	37.3	1.000155
19000.0	495.0	-17.5	24.3	674.4	623.0	287.7	35.8	1.000152
19500.0	484.8	-18.8	24.8	663.8	621.4	288.6	35.6	1.000150
20000.0	474.8	-20.0	25.4	653.3	619.9	289.9	36.7	1.000147
20500.0	465.1	-21.3	25.9	643.1	618.3	290.3	38.4	1.000145
21000.0	455.5	-22.5	26.5	633.0	616.8	290.3	40.4	1.000143
21500.0	446.1	-23.8	27.1	623.1	615.2	287.5	41.6	1.000140
22000.0	436.9	-25.1	27.6	613.4	613.7	284.6	42.9	1.000138
22500.0	428.0	-26.3	28.2	603.9	612.1	281.8	44.1	1.000136
23000.0	419.1	-27.6	28.7	594.5	610.6	279.4	45.4	1.000134
23500.0	410.5	-28.8	29.3	585.3	609.0	280.2	47.6	1.000131

UPPER AIR DATA
 0650010071
 HOLLOWMAN
 TABLE 5 (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 5 MAR. 80 0915 HRS MST
 ASCENSION NO. 71

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT DEGREES CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
24000.0	402.1	-30.1	-42.0	29.9	576.2	607.4	281.4	49.5	1.000129
24500.0	393.5	-31.3	-43.0	30.1	560.8	605.9	283.6	50.3	1.000127
25000.0	385.1	-32.6	-44.1	30.3	557.5	604.3	285.1	50.3	1.000125
25500.0	376.8	-33.8	-45.2	30.4	546.3	602.7	286.0	49.5	1.000123
26000.0	368.7	-35.0	-46.2	30.6	539.3	601.2	286.0	49.5	1.000121
26500.0	360.7	-36.3	-47.3	30.7	530.5	599.6	285.5	50.5	1.000119
27000.0	353.0	-37.5	-48.3	30.9	521.8	598.1	285.1	50.2	1.000117
27500.0	345.4	-38.7	-49.4	30.9**	513.2	596.5	284.8	49.1	1.000115
28000.0	337.7	-40.2	-52.2	25.9**	504.9	594.7	284.9	48.9	1.000113
28500.0	330.2	-41.6	-55.2	21.0**	490.6	592.9	285.1	49.0	1.000111
29000.0	322.8	-43.0	-58.5	16.0**	480.6	591.0	285.8	50.6	1.000109
29500.0	315.6	-44.4	-62.5	11.1**	480.6	589.2	286.2	51.6	1.000107
30000.0	308.6	-45.8	-67.9	6.2**	472.9	587.4	285.7	50.7	1.000105
30500.0	301.7	-47.2	-79.5	1.2**	465.2	585.5	284.2	49.9	1.000104
31000.0	294.8	-48.4			456.9	584.0	281.5	49.6	1.000102
31500.0	287.9	-49.5			448.5	582.0	279.8	51.6	1.000100
32000.0	281.3	-50.6			440.2	581.2	278.7	54.5	1.000098
32500.0	274.8	-51.6			432.1	579.8	278.8	58.7	1.000096
33000.0	268.4	-52.7			424.2	578.4	278.9	62.6	1.000094
33500.0	262.2	-53.8			416.4	577.0	278.7	65.9	1.000093
34000.0	256.1	-54.9			408.8	575.6	278.6	69.1	1.000091
34500.0	250.2	-56.0			401.3	574.1	278.8	72.3	1.000089
35000.0	244.3	-56.5			392.8	573.4	278.7	76.5	1.000087
35500.0	238.6	-55.8			382.4	574.3	278.5	81.6	1.000085
36000.0	233.0	-55.2			372.3	575.2	277.7	87.2	1.000083
36500.0	227.5	-54.5			362.5	576.0	276.8	93.0	1.000081
37000.0	222.2	-53.9			353.0	576.9	276.0	98.6	1.000079
37500.0	217.0	-53.2			343.7	577.7	275.2	104.3	1.000077
38000.0	211.9	-53.1			335.5	577.9	274.5	108.4	1.000075
38500.0	206.9	-54.1			329.1	576.6	273.9	111.8	1.000073
39000.0	202.1	-55.1			322.8	575.3	272.9	112.8	1.000072
39500.0	197.3	-55.6			316.0	574.6	271.7	112.0	1.000070
40000.0	192.7	-55.8			308.8	574.4	270.5	110.7	1.000069
40500.0	188.1	-56.0			301.7	574.1	269.4	108.8	1.000067
41000.0	183.7	-56.1			294.9	573.9	268.8	107.4	1.000066
41500.0	179.3	-56.3			288.1	573.7	269.2	106.7	1.000064
42000.0	175.1	-56.5			281.6	573.4	269.7	106.1	1.000063
42500.0	171.0	-56.7			275.1	573.2	270.7	106.0	1.000061
43000.0	166.9	-56.8			268.9	573.0	271.2	104.6	1.000060
43500.0	163.0	-57.0			262.7	572.7	271.1	100.4	1.000059

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

STATION ALTITUDE 4126.59 FEET MSL
 5 MAR. 80 0915 HRS MST
 ASCENSION NO. 71

UPPER AIR DATA
 0650010071
 HOLLoman

GEODETIC COORDINATES
 32.88865 LAT LEG
 106.09965 LON DEG

TABLE 5 (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	
44000.0	159.1	-57.2	256.7	572.5	270.9	96.4	1.000057	
44500.0	155.4	-57.4	250.9	572.3	270.9	92.4	1.000056	
45000.0	151.7	-58.3	245.0	571.0	271.0	90.4	1.000055	
45500.0	148.1	-58.8	240.6	570.4	271.4	90.8	1.000054	
46000.0	144.5	-58.7	234.8	570.5	271.0	90.0	1.000052	
46500.0	141.1	-58.7	229.2	570.6	269.9	88.1	1.000051	
47000.0	137.7	-58.6	223.7	570.6	268.6	85.4	1.000050	
47500.0	134.4	-59.6	219.2	569.3	266.9	81.9	1.000049	
48000.0	131.1	-60.6	214.9	568.0	265.8	80.1	1.000048	
48500.0	127.9	-61.6	210.7	566.7	265.3	80.0	1.000047	
49000.0	124.8	-62.5	206.5	565.4	265.5	80.2	1.000046	
49500.0	121.6	-63.5	202.4	564.1	265.9	80.9	1.000045	
50000.0	118.4	-64.5	198.5	562.7	266.5	81.2	1.000044	
50500.0	115.0	-65.5	194.6	561.4	267.2	79.3	1.000043	
51000.0	111.1	-65.9	190.2	560.8	267.9	77.5	1.000042	
51500.0	110.4	-65.5	185.2	561.4	268.0	73.5	1.000041	
52000.0	107.7	-65.0	180.2	562.0	268.0	69.1	1.000040	
52500.0	105.0	-64.6	175.4	562.6	268.3	66.9	1.000039	
53000.0	102.4	-64.7	171.2	562.4	268.7	66.4	1.000038	
53500.0	99.9	-65.1	167.3	562.0	269.4	67.9	1.000037	
54000.0	97.5	-66.1	164.0	560.5	270.2	70.5	1.000037	
54500.0	95.1	-65.9	159.8	560.8	270.5	69.4	1.000036	
55000.0	92.7	-65.7	155.7	561.1	270.0	66.8	1.000035	
55500.0	90.5	-65.5	151.8	561.4	270.9	61.4	1.000034	
56000.0	88.3	-65.3	147.9	561.7	271.2	55.3	1.000033	
56500.0	86.1	-65.1	144.1	562.0	271.6	49.1	1.000032	
57000.0	84.0	-64.9	140.5	562.3	272.3	42.7	1.000031	
57500.0	81.9	-64.6	136.9	562.5	273.3	36.3	1.000030	
58000.0	79.9	-64.4	133.4	562.8	269.7	31.8	1.000030	
58500.0	78.0	-64.2	130.0	563.1	264.0	27.8	1.000029	
59000.0	76.0	-64.0	126.7	563.4	255.4	24.7	1.000028	
59500.0	74.2	-63.8	123.4	563.7	243.1	23.3	1.000027	
60000.0	72.4	-63.6	120.3	564.0	231.1	22.7	1.000027	
60500.0	70.6	-63.4	117.2	564.3	227.2	20.6	1.000026	
61000.0	68.9	-63.2	114.3	564.5	222.4	18.7	1.000025	
61500.0	67.2	-63.0	111.4	564.8	224.4	16.6	1.000025	
62000.0	65.6	-62.1	108.2	565.9	228.5	14.5	1.000024	
62500.0	64.0	-60.6	104.9	567.9	233.1	13.2	1.000023	
63000.0	62.4	-59.2	101.7	569.8	237.9	12.5	1.000023	
63500.0	60.9	-60.1	99.6	568.7	243.1	11.9	1.000022	

STATION ALTITUDE 4126.59 FEET MSL
 5 MAR. 80 0915 HRS MST
 ASCENSION NO. 71

UPPER AIR DATA
 0650010071
 HOLLOWMAN

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

TABLE 5 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	59.5	-60.9		97.6	567.5	245.0	10.4	1.000022
64500.0	58.0	-61.8		95.7	566.4	247.6	8.8	1.000021
65000.0	56.6	-62.6		93.7	565.3	249.4	7.3	1.000021
65500.0	55.3	-62.2		91.3	565.8	248.4	5.9	1.000020
66000.0	54.0	-61.2		88.7	567.1	246.6	4.4	1.000020
66500.0	52.7	-60.2		86.2	568.5	238.6	3.2	1.000019
67000.0	51.4	-59.2		83.7	569.8	221.1	2.3	1.000019
67500.0	50.2	-58.2		81.3	571.1	189.8	1.9	1.000018
68000.0	49.0	-58.2		79.4	571.2	149.9	2.2	1.000018
68500.0	47.8	-58.3		77.5	571.0	127.4	3.1	1.000017
69000.0	46.7	-58.4		75.7	570.9	118.1	4.2	1.000017
69500.0	45.6	-58.6		74.0	570.7	115.9	4.7	1.000016
70000.0	44.5	-58.7		72.2	570.5	114.2	5.3	1.000016
70500.0	43.4	-58.8		70.6	570.4	111.1	5.5	1.000016
71000.0	42.4	-58.9		68.9	570.2	106.4	5.5	1.000015
71500.0	41.4	-58.9		67.3	570.2	101.7	5.6	1.000015
72000.0	40.4	-58.6		65.6	570.6	86.5	5.3	1.000015
72500.0	39.4	-58.3		64.0	571.0	67.1	5.4	1.000014
73000.0	38.5	-58.1		62.4	571.4	50.4	6.1	1.000014
73500.0	37.6	-57.8		60.8	571.8	33.6	6.5	1.000014
74000.0	36.7	-57.5		59.3	572.1	19.3	7.3	1.000013
74500.0	35.8	-57.2		57.8	572.5	8.3	8.5	1.000013
75000.0	35.0	-56.9		56.4	572.9			1.000013
75500.0	34.2	-56.6		55.0	573.3			1.000012
76000.0	33.4	-56.3		53.6	573.7			1.000012
76500.0	32.6	-56.0		52.3	574.1			1.000012
77000.0	31.8	-55.7		50.9	574.5			1.000011

STATION ALTITUDE 4126.59 FEET MSL
 5 MAR. 80
 ASCENSION NO. 71

MANDATORY LEVELS
 0650010071
 HOLLOWMAN

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

TABLE 6

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMID. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4958.	8.3	47.	239.9	2.6
800.0	6590.	4.5	51.	236.8	1.9
750.0	8305.	1.4	43.	249.4	9.3
700.0	10118.	-.7	30.	278.8	13.3
650.0	12061.	-1.1	20.	281.8	20.5
600.0	14138.	-5.4	21.	278.3	27.4
550.0	16357.	-10.7	23.	289.5	35.0
500.0	18734.	-16.9	24.	267.5	30.6
450.0	21297.	-23.3	27.	288.6	41.2
400.0	24085.	-30.4	30.	281.9	49.6
350.0	27152.	-38.0	31.	285.0	49.7
300.0	30565.	-47.6		283.6	49.9
250.0	34443.	-56.0		278.8	72.3
200.0	39128.	-55.5		272.4	112.5
175.0	41915.	-56.5		269.7	106.1
150.0	45114.	-58.8		271.2	90.6
125.0	48854.	-62.5		265.3	60.2
100.0	53322.	-65.0		269.3	67.7
80.0	57778.	-64.4		270.3	32.3
70.0	60464.	-63.3		225.9	20.0
60.0	63600.	-60.6		244.1	11.0
50.0	67318.	-58.1		186.7	1.9
40.0	71919.	-58.5		79.9	5.3

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

STATION ALTITUDE 4051.00 FEET MSL
 5 MAR. 80
 ASCENSION NO. 64

SIGNIFICANT LEVEL DATA
 0650030064
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 7

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
879.0	4051.0	9.2	55.0
868.5	4377.5	8.2	43.0
850.0	4960.3	7.1	47.0
789.4	6946.7	3.9	45.0
779.4	7286.8	3.5	43.0
720.8	9352.6	-1.2	41.0
718.1	9451.1	-1.2	29.0
700.0	10121.9	-0.3	17.0
656.4	11813.3	0.3	12.0
555.6	16126.7	-9.3	13.0
500.0	18772.9	-15.9	14.0
400.0	24147.9	-30.4	18.0
370.6	25918.5	-34.6	19.0
353.2	27018.0	-37.3	
300.0	30651.2	-47.3	
250.0	34550.3	-55.5	
236.0	35751.7	-58.6	
231.6	36141.0	-58.8	
218.4	37364.8	-55.2	
209.8	38212.2	-53.9	
200.0	39224.8	-53.7	
189.2	40396.4	-55.2	
184.0	40984.7	-53.7	
158.2	44148.0	-58.8	
150.0	45249.5	-58.8	
125.4	48924.7	-62.6	
111.0	51234.2	-67.2	
110.4	51484.4	-68.1	
105.0	52484.5	-65.4	
100.0	53464.0	-65.4	
82.2	57392.3	-66.2	
71.9	60082.7	-64.4	
63.6	62554.8	-65.1	
60.4	63604.9	-60.6	
51.4	66303.2	-63.1	
50.0	67467.6	-60.8	
39.2	72484.3	-59.5	
36.4	74025.9	-57.1	

STATION ALTITUDE 4051.00 FEET MSL
 5 MAR. 60 0915 HRS MST
 ASCENSION NO. 64

UPPER AIR DATA
 0650030064
 JALLEN

GEODETTIC COORDINATES
 33.16712 LAT DEG
 106.49511 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	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.0	879.0	9.2	.6	55.0	1081.5	655.5	80.0	1.9	1.000271
4500.0	864.6	8.0	-3.6	43.8	1069.2	653.9	88.7	1.4	1.000261
5000.0	848.7	7.0	-3.5	47.0	1053.1	652.8	113.0	.8	1.000257
5500.0	833.1	6.2	-4.4	46.5	1036.7	651.8	171.1	.7	1.000252
6000.0	817.7	5.4	-5.3	46.0	1020.6	650.8	211.2	2.1	1.000248
6500.0	802.6	4.6	-6.1	45.4	1004.8	649.9	217.4	4.3	1.000243
7000.0	787.8	3.8	-7.1	44.7	989.1	648.9	215.5	5.3	1.000238
7500.0	773.1	3.0	-8.4	42.8	973.7	647.9	215.2	6.0	1.000233
8000.0	758.6	1.9	-9.6	42.3	959.5	646.6	218.6	6.4	1.000229
8500.0	744.4	.7	-10.7	41.8	945.6	645.2	230.0	7.3	1.000224
9000.0	730.5	-.4	-11.9	41.3	931.8	643.8	242.8	9.2	1.000220
9500.0	716.8	-.3	-16.5	28.1	914.3	643.8	254.3	11.4	1.000212
10000.0	703.5	-.3	-21.0	19.2	897.3	643.7	262.9	14.0	1.000206
10500.0	690.0	-.2	-23.0	15.9	880.1	643.8	272.6	17.7	1.000201
11000.0	677.0	.0	-23.9	14.4	863.0	644.0	278.3	21.8	1.000197
11500.0	664.5	.2	-25.0	12.9	846.2	644.2	281.5	26.2	1.000193
12000.0	651.7	-.1	-26.0	12.0	831.1	643.9	279.4	28.3	1.000189
12500.0	639.2	-1.2	-26.8	12.2	816.6	642.5	275.6	29.5	1.000186
13000.0	627.0	-2.3	-27.6	12.3	806.2	641.2	271.8	28.6	1.000183
13500.0	615.0	-3.5	-28.4	12.4	794.1	639.9	271.1	28.5	1.000180
14000.0	603.2	-4.6	-29.1	12.5	782.1	638.6	274.3	29.3	1.000177
14500.0	591.7	-5.7	-29.9	12.6	770.4	637.2	279.2	30.7	1.000174
15000.0	580.5	-6.8	-30.7	12.7	758.8	635.9	283.3	32.5	1.000172
15500.0	569.2	-7.9	-31.5	12.9	747.4	634.6	284.6	34.4	1.000169
16000.0	558.5	-9.0	-32.3	13.0	736.2	633.2	284.9	36.4	1.000166
16500.0	547.4	-10.2	-33.2	13.1	725.1	631.8	284.4	38.4	1.000164
17000.0	536.6	-11.5	-34.0	13.3	714.2	630.5	283.9	39.2	1.000161
17500.0	526.0	-12.7	-34.9	13.5	703.5	628.8	283.5	39.6	1.000158
18000.0	515.6	-14.0	-35.8	13.7	692.9	627.2	284.1	38.5	1.000156
18500.0	505.5	-15.2	-36.7	13.9	682.6	625.7	284.9	37.7	1.000154
19000.0	495.5	-16.5	-37.5	14.2	672.2	624.2	285.8	37.4	1.000151
19500.0	485.1	-17.9	-38.4	14.5	661.9	622.5	285.4	38.6	1.000149
20000.0	475.2	-19.2	-39.3	14.9	651.8	620.9	284.5	40.6	1.000146
20500.0	465.4	-20.6	-40.1	15.3	641.8	619.2	283.9	42.4	1.000144
21000.0	455.8	-21.9	-41.0	15.7	632.0	617.5	283.1	43.6	1.000142
21500.0	446.5	-23.5	-41.9	16.0	622.3	615.9	282.0	43.9	1.000140
22000.0	437.5	-24.6	-42.9	16.4	612.9	614.2	280.5	44.8	1.000137
22500.0	428.5	-26.0	-43.8	16.8	603.6	612.5	278.6	45.9	1.000135
23000.0	419.5	-27.5	-44.7	17.1	594.4	610.9	278.6	47.3	1.000133
23500.0	410.9	-28.7	-45.6	17.5	585.4	609.2	279.2	48.8	1.000131

STATION ALTITUDE 4051.00 FEET MSL
 5 MAR. 80 0915 HRS MST
 ASCENSION NO. 64

UPPER AIR DATA
 0650030004
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TAB LE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
24000.0	402.5	-30.0	-46.6	17.9	576.6	607.5	281.7	48.8	1.000129
24500.0	394.0	-31.2	-47.5	18.2	567.3	606.0	284.1	48.9	1.000127
25000.0	385.6	-32.4	-48.4	18.5	557.9	604.5	285.3	49.6	1.000125
25500.0	377.3	-33.6	-49.2	18.8	548.7	603.0	285.7	50.3	1.000123
26000.0	369.3	-34.8	-50.8	17.6**	539.7	601.5	284.9	51.1	1.000121
26500.0	361.3	-36.0	-57.4	9.0**	530.8	599.9	284.0	51.4	1.000118
27000.0	353.5	-37.3	-81.2	.3**	522.0	598.3	283.1	51.5	1.000116
27500.0	345.6	-38.6			513.4	596.6	283.9	50.9	1.000114
28000.0	338.0	-40.0			505.0	594.9	285.2	50.1	1.000112
28500.0	330.4	-41.4			496.7	593.1	268.0	49.9	1.000111
29000.0	323.1	-42.8			488.5	591.3	290.2	50.0	1.000109
29500.0	315.9	-44.1			480.6	589.6	289.0	51.9	1.000107
30000.0	308.9	-45.5			472.7	587.8	287.7	53.6	1.000105
30500.0	302.0	-46.9			465.0	586.0	286.1	55.0	1.000104
31000.0	295.1	-48.0			457.7	584.5	285.4	55.8	1.000102
31500.0	288.3	-49.1			448.3	583.2	285.4	56.1	1.000100
32000.0	281.7	-50.1			440.0	581.8	284.8	57.3	1.000098
32500.0	275.2	-51.2			431.8	580.4	283.8	59.1	1.000096
33000.0	268.8	-52.2			423.9	579.0	282.4	62.5	1.000094
33500.0	262.6	-53.3			416.1	577.7	281.0	66.4	1.000093
34000.0	256.5	-54.3			408.4	576.3	280.5	70.4	1.000091
34500.0	250.6	-55.4			400.9	574.9	280.1	74.4	1.000089
35000.0	244.7	-56.7			393.7	573.2	280.2	78.1	1.000088
35500.0	238.9	-58.0			386.7	571.5	280.3	81.9	1.000086
36000.0	233.2	-58.7			379.8	570.5	279.4	86.2	1.000084
36500.0	227.6	-57.7			362.2	571.8	278.6	90.6	1.000082
37000.0	222.3	-56.3			357.0	573.7	276.6	95.5	1.000080
37500.0	217.0	-55.0			346.5	575.4	274.8	100.6	1.000077
38000.0	211.9	-54.2			337.2	576.4	273.5	105.0	1.000075
38500.0	207.0	-53.8			328.8	576.9	272.4	109.4	1.000073
39000.0	202.1	-53.7			320.9	577.1	272.0	113.4	1.000071
39500.0	197.4	-54.1			313.9	576.7	271.6	117.3	1.000070
40000.0	192.8	-54.7			307.4	575.8	271.4	119.8	1.000068
40500.0	188.3	-54.9			300.6	575.5	271.2	122.0	1.000067
41000.0	183.9	-53.7			291.9	577.1	270.7	121.9	1.000065
41500.0	179.5	-54.5			286.1	576.0	270.1	120.7	1.000064
42000.0	175.3	-55.3			280.4	575.0	269.4	120.2	1.000062
42500.0	171.2	-56.1			274.8	573.9	268.8	120.4	1.000061
43000.0	167.1	-56.9			269.3	572.8	268.4	120.7	1.000060
43500.0	163.2	-57.8			263.9	571.8	269.2	121.3	1.000059

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

UPPER AIR DATA
 0650030004
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL
 5 MAR. 80 0915 HRS MST
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GEOMETRIC ALTITUDE MSL FEET
 PRESSURE MILLIBARS
 TEMPERATURE AIR DEGREES
 DENSITY POINT DEGREE
 REL. HUM. PERCENT
 WIND DATA DIRECTION DEGREES (TN)
 SPEED KNOTS
 INDEX OF REFRACTION

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DENSITY POINT DEGREE	REL. HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4400.0	159.3	-58.6	250.6	570.7	270.0	121.8	1.000058
4450.0	155.5	-58.8	252.8	570.4	270.8	115.3	1.000056
4500.0	151.8	-58.8	246.7	570.4	271.7	105.8	1.000055
4550.0	148.2	-59.1	241.1	570.0	272.3	96.2	1.000054
4600.0	144.6	-59.6	235.9	569.3	272.1	86.1	1.000053
4650.0	141.1	-60.1	230.8	568.6	271.9	76.0	1.000051
4700.0	137.7	-60.6	225.8	568.0	271.3	76.4	1.000050
4750.0	134.4	-61.1	220.9	567.3	270.8	77.2	1.000049
4800.0	131.2	-61.6	216.1	566.6	269.8	79.4	1.000048
4850.0	128.0	-62.2	211.4	565.9	268.7	82.5	1.000047
4900.0	124.9	-62.7	206.9	565.1	267.4	85.5	1.000046
4950.0	121.9	-63.7	202.7	563.8	265.7	88.2	1.000045
5000.0	118.9	-64.7	198.7	562.4	264.1	91.0	1.000044
5050.0	116.0	-65.7	194.8	561.1	264.0	90.1	1.000043
5100.0	113.1	-66.7	190.9	559.7	264.0	88.8	1.000043
5150.0	110.3	-68.1	187.4	557.9	264.5	85.2	1.000042
5200.0	107.6	-66.7	181.5	559.8	265.6	78.3	1.000040
5250.0	104.9	-65.4	175.9	561.5	267.4	71.4	1.000039
5300.0	102.3	-65.4	171.6	561.5	268.3	66.9	1.000038
5350.0	99.8	-65.4	167.4	561.5	269.3	62.6	1.000037
5400.0	97.4	-65.5	163.3	561.4	269.6	59.4	1.000036
5450.0	95.0	-65.6	159.4	561.2	269.5	57.9	1.000035
5500.0	92.6	-65.7	155.5	561.1	269.2	56.4	1.000035
5550.0	90.3	-65.8	151.8	561.0	268.4	52.9	1.000034
5600.0	88.1	-65.9	146.1	560.8	267.5	49.0	1.000033
5650.0	85.9	-66.0	144.5	560.7	268.4	45.2	1.000032
5700.0	83.8	-66.1	141.0	560.5	265.3	41.6	1.000031
5750.0	81.8	-66.1	137.6	560.5	264.0	37.9	1.000031
5800.0	79.8	-65.8	134.0	561.0	262.9	35.9	1.000030
5850.0	77.8	-65.5	130.5	561.4	262.2	35.0	1.000029
5900.0	75.9	-65.1	127.1	561.9	261.4	34.0	1.000028
5950.0	74.0	-64.8	123.7	562.3	261.0	33.7	1.000028
6000.0	72.2	-64.5	120.5	562.8	260.7	33.5	1.000027
6050.0	70.4	-64.5	117.6	562.7	260.2	32.9	1.000026
6100.0	68.7	-64.7	114.8	562.5	259.3	31.5	1.000026
6150.0	67.0	-64.8	112.1	562.3	258.3	30.2	1.000025
6200.0	65.4	-64.9	109.4	562.1	257.7	29.8	1.000024
6250.0	63.8	-65.1	105.8	561.9	257.4	29.9	1.000024
6300.0	62.2	-63.2	103.2	564.5	257.1	30.0	1.000023
6350.0	60.7	-61.0	99.7	567.4	257.6	31.1	1.000022

STATION ALTITUDE 4051.00 FEET MSL
 5 MAR. 80 0915 HRS MST
 ASCENSION NO. 64

UPPER AIR DATA
 0650030004
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 8 (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	
6400.0	59.2	-60.9		97.2	567.6	258.1	32.1	1.000022
6450.0	57.8	-61.3		95.1	567.1	258.0	32.1	1.000021
6500.0	56.4	-61.7		92.9	566.6	255.5	28.6	1.000021
6550.0	55.1	-62.0		90.8	566.0	252.3	25.2	1.000020
6600.0	53.7	-62.4		88.8	565.5	248.6	20.2	1.000020
6650.0	52.4	-62.8		86.8	565.0	233.9	14.1	1.000019
6700.0	51.2	-62.7		84.7	565.2	206.3	9.6	1.000019
6750.0	49.9	-60.8		81.9	567.7	167.4	3.0	1.000018
6800.0	48.7	-60.7		79.9	567.9	132.6	9.2	1.000018
6850.0	47.6	-60.5		77.9	568.1	111.6	12.7	1.000017
6900.0	46.4	-60.4		76.0	568.2	100.2	11.6	1.000017
6950.0	45.3	-60.3		74.1	568.4	77.8	6.7	1.000017
7000.0	44.2	-60.1		72.3	568.6	18.8	5.2	1.000016
7050.0	43.2	-60.0		70.5	568.8	326.5	10.3	1.000016
7100.0	42.1	-59.9		68.8	568.9	309.3	19.5	1.000015
7150.0	41.1	-59.8		67.1	569.1	303.4	29.4	1.000015
7200.0	40.1	-59.6		65.5	569.3			1.000015
7250.0	39.2	-59.5		63.9	569.5			1.000014
7300.0	38.2	-58.7		62.1	570.5			1.000014
7350.0	37.3	-57.9		60.4	571.5			1.000013
7400.0	36.4	-57.1		58.8	572.6			1.000013

STATION ALTITUDE 4051.00 FEET MSL
 5 MAR. 60
 ASCENSION NO. 64

MANDATORY LEVELS
 0650030004
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE 9

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4957.	7.1	-3.4	47.	109.8	.8
800.0	6585.	4.5	-6.3	45.	217.2	4.5
750.0	8301.	1.2	-10.3	42.	223.1	0.7
700.0	10113.	-.3	-22.3	17.	265.6	14.8
650.0	12059.	-.3	-26.1	12.	278.9	20.5
600.0	14141.	-4.9	-29.4	13.	275.5	29.6
550.0	16364.	-9.9	-33.0	13.	284.5	37.9
500.0	18748.	-15.9	-37.2	14.	285.4	37.5
450.0	21318.	-22.7	-41.0	16.	282.3	43.8
400.0	24110.	-30.4	-46.9	18.	282.4	40.8
350.0	27177.	-37.9			283.2	51.3
300.0	30593.	-47.3			285.7	53.3
250.0	34478.	-55.5			280.1	74.6
200.0	39134.	-53.7			271.8	113.0
175.0	41940.	-55.4			269.4	120.2
150.0	45132.	-58.8			272.2	101.5
125.0	48854.	-62.7			267.5	85.3
100.0	53304.	-65.4			269.1	63.1
80.0	57750.	-65.8			263.1	30.1
70.0	60421.	-64.6			260.0	32.6
60.0	63520.	-60.7			257.8	31.5
50.0	67221.	-60.8			172.0	8.1
40.0	71787.	-59.6				

DATE
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