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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2  
12817C LANCE MISSILE NUMBER 2162, ROUND NUMBER 291 ECT, (15 OCT--ETC(U)  
OCT 76

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METEOROLOGICAL DATA REPORT

12817C LANCE  
MISSILE NO. 2162, ROUND NO. 291 ECT  
(15 October 1976)

BY

WSMR METEOROLOGICAL TEAM

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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) A Meteorological data gathered for the launching of 12817C Lance, Missile Number 2162, Round Number 291 ECT, are presented in tabular form. A		

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## INTRODUCTION

12817C Lance, Missile Number 2162, Round Number 291 ECT, was launched from Red Rio, White Sands Missile Range (WSMR), New Mexico, at 0820 HRS MDT, 15 October 1976. The scheduled launch time was 0815 HRS MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	6,333.83	FEET/MSL
PRESSURE	807.3	MBS
TEMPERATURE	8.8	°C
RELATIVE HUMIDITY	96	%
DEW POINT	8.2	°C
DENSITY	992.0	GM/M <sup>3</sup>
WIND SPEED	06	MPH
WIND DIRECTION	045	DEGREES
CLOUD COVER	6	Ac

TABLE I. SURFACE OBSERVATIONS TAKEN AT RED RIO,  
0820 HRS MDT/15 OCTOBER 1976.

T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG
-0.30	5.0	062
-0.20	7.0	059
-0.10	7.0	046
0.00	5.0	045

TABLE II. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 1  
 12817C LANCE, MISSILE NO. 2162, ROUND NO. 291 ECT  
 LAUNCHED FROM RED RIO, 0823 MDT/15 OCTOBER 1976

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	060	2.0
100	234	
200	235	
300	239	
400	180	2.0
500	180	3.0
600	207	3.0
700	188	4.0
800	193	2.0
900	213	4.0
1000	192	1.0
1100	012	2.0
1200	327	4.0
1300	342	4.5
1400	343	5.0
1500	342	5.0
1600	348	6.0
1700	347	6.0
1800	359	7.0
1900	010	6.0
2000	028	5.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	005	6.0
2200	353	3.0
2300	013	6.0
2400	005	6.0
2500	355	9.0
2600	003	9.0
2700	002	9.0
2800	355	13.0
2900	002	13.5
3000	018	12.0
3100	025	9.0
3200	021	12.0
3300	025	15.0
3400	032	15.0
3500	026	16.0
3600	013	18.0
3700	012	22.0
3800	019	19.0
3900	027	21.0
4000	041	21.0
4100	043	24.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1  
RELEASED FROM RED RIO, AT 0736 MDT/15 OCTOBER 1976  
12817C LANCE, MISSILE NO. 2162, ROUND NO. 291 ECT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 525,550.72    Y = 686,348.91    Z = 6,333.83

APPROXIMATELY: 1/4 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	041	24.0
4300	041	24.0
4400	046	21.0
4500	046	21.0
4600	043	23.0
4700	048	22.0
4800	049	25.0
4900	045	28.0
5000	045	30.0
5100	046	27.0
5200	048	24.0
5300	043	23.0
5400	049	24.0
5500	056	22.0
5600	047	26.0
5700	051	23.0
5800	048	24.0
5900	052	22.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6000	053	19.0
6100	061	16.0
6200	058	14.0
6300	063	16.0
6400	056	20.0
6500	052	19.0
6600	057	20.0
6700	055	18.0
6800	056	17.0
6900	056	17.0
7000	057	17.0
7100	063	19.0
7200	066	17.0
7300	046	18.0
7400	051	16.0
7500	055	17.0
7600	059	19.0

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR		CALM
100	030	2.0
200	045	3.0
300	066	6.0
400	070	9.0
500	071	8.0
600	084	5.0
700	094	4.0
800	090	3.0
900	060	7.0
1000	077	6.0
1100	071	7.0
1200	048	12.0
1300	034	11.0
1400	017	9.0
1500	008	8.0
1600	351	6.0
1700	338	7.0
1800	334	8.0
1900	352	7.0
2000	001	9.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	004	11.0
2200	014	10.0
2300	029	11.0
2400	029	12.0
2500	028	16.0
2600	032	17.0
2700	027	19.0
2800	027	21.0
2900	035	20.0
3000	035	23.0
3100	036	22.0
3200	029	21.0
3300	026	24.0
3400	023	21.0
3500	028	25.0
3600	026	24.0
3700	031	22.0
3800	034	23.0
3900	036	24.0
4000	039	20.0
4100	036	21.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2  
RELEASED FROM RED RIO, AT 0820 MDT/15 OCTOBER 1976  
12817C LANCE, MISSILE NO. 2162, ROUND NO. 291 ECT

PIBAL RELEASE POINT WSTM COORDINATES:

X = 525,550.72    Y = 686,348.91    Z = 6,333.83

APPROXIMATELY: 1/4 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	037	22.0
4300	039	23.0
4400	045	22.0
4500	042	22.0
4600	045	23.0
4700	045	22.0
4800	050	21.0
4900	055	21.0
5000	056	21.0
5100	052	20.0
5200	049	19.0
5300	051	19.0
5400	056	18.0
5500	063	18.0
5600	061	18.0
5700	069	17.0
5800	075	17.0
5900	071	16.0
6000	072	17.0
6100	070	17.0
6200	069	16.0
6300	062	14.0
6400	076	16.0
6500	078	15.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	080	14.0
6700	073	13.0
6800	070	12.0
6900	068	11.0
7000	072	12.0
7100	072	12.0
7200	066	14.0
7300	073	12.0
7400	073	13.0
7500	069	13.0
7600	078	11.0
7700	068	11.0
7800	075	14.0
7900	078	13.0
8000	073	9.0
8100	073	8.0
8200	072	11.0
8300	076	12.0
8400	078	11.0
8500	070	11.0
8600	077	12.0
8700	076	10.0
8800	080	10.0
8900	062	8.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	061	8.0
9100	063	8.0
9200	054	8.0
9300	050	9.0
9400	047	10.0
9500	070	10.0
9600	067	12.0
9700	087	10.0
9800	088	9.0
9900	090	9.0
10000	079	11.0
10100	071	12.0
10200	070	14.0
10300	067	16.0
10400	064	18.0
10500	063	20.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10600	063	21.0
10700	061	23.0
10800	059	24.0
10900	058	24.0
11000	055	25.0
11100	052	25.0
11200	051	25.0
11300	050	25.0
11400	050	26.0
11500	049	27.0
11600	049	28.0
11700	048	28.0
11800	048	27.0
11900	049	27.0
12000	049	26.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 4051.00 FEET MSL  
 15 OCT. 70  
 0805 HRS MDT  
 ATTENTION NO. 715

SIGNIFICANT LEVEL DATA  
 2890030315  
 JALLCH  
 TABLE V

WSTM SITE COORDINATES  
 460491.60 FEET E  
 464023.05 FEET N

PRESSURE HILL IBARS	GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM. PERCENT
	MSL FEET	DEGREES	AIR DEGREES	DEWPOINT CENTIGRADE	
876.3	4051.0	8.4	5.5	84.0	
863.0	4404.6	8.6	2.6	66.0	
850.0	4817.3	8.5	4.3	76.0	
840.0	5130.1	9.6	5.2	79.0	
825.0	5239.2	9.8	5.0	77.0	
777.0	7436.6	8.0	-1.5	55.0	
700.0	10074.3	4.4	-5.4	49.0	
660.0	11638.2	.9	-7.6	54.0	
608.0	13782.3	-5.0	-8.6	76.0	
567.0	15577.4	-9.1	-10.8	58.0	
527.0	16947.7	-12.6	-16.7	71.0	
525.0	17513.7	-14.0	-19.7	62.0	
518.0	17940.3	-13.3	-22.5	18.0	
500.0	18733.4	-14.0	-31.5	21.0	
420.0	22404.5	-22.4	-37.0	25.0	
400.0	24168.8	-27.4	-39.6	30.0	
356.0	28093.7	-33.6	-44.2	33.0	
325.0	29980.1	-37.5	-49.8	26.0	
200.0	30768.0	-40.2			
278.0	32482.3	-44.6			
258.0	34120.2	-44.2			
250.0	34823.5	-45.0			
222.0	37412.7	-49.3			
211.0	38510.1	-49.3			
200.0	39663.7	-50.4			
150.0	45745.8	-57.7			
142.0	46885.6	-57.8			
119.0	50691.0	-53.9			
107.0	53419.2	-55.4			
100.0	54014.7	-53.9			

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STATION ALTITUDE 4051.00 FEET MSL  
 15 OCT. 7F 0805 HRS MDT  
 ASCENSION NO. 315

SIGNIFICANT LEVEL DATA  
 2990030315  
 JALLEN

WSTM SITE COORDINATES  
 450491.60 FEET E  
 464023.05 FEET N

TABLE V (CONT)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MEL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
80.0	58496.5	-87.6		
70.0	61152.7	-65.8		
60.0	64963.0	-61.9		
50.0	67994.3	-62.4		
40.0	73666.1	-56.7		
30.0	79622.8	-55.4		
24.0	83380.8	-65.6		
20.0	87332.8	-49.3		
10.0	94313.8	-49.1		

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NSTM SITE COORDINATES  
450491.60 FEET E  
464073.05 FEET N

UPPER AIR DATA  
2890070315  
JALLEN

TABLE VI

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY CM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	FEET	DIRECTION DEGREES(TN)	SPEED KNOTS	
4751.0	874.7	8.4	5.9	54.0	1077.4	855.0	10.0	10.0	1.5	1.000284
4500.0	900.0	8.6	3.1	58.3	1059.8	855.0	22.3	22.3	1.8	1.000273
4000.0	944.3	8.6	4.0	77.7	1040.0	855.1	37.9	37.9	1.7	1.000273
3500.0	978.9	9.4	5.2	74.7	1017.8	856.2	53.3	53.3	1.8	1.000269
3000.0	913.9	9.1	3.8	69.6	1000.9	855.7	65.8	65.8	1.9	1.000261
2500.0	799.0	8.7	2.4	64.5	984.2	855.2	84.8	84.8	1.1	1.000254
2000.0	786.5	8.3	.9	55.4	967.9	854.6	.0	.0	.8	1.000247
1500.0	770.2	7.9	-1.6	54.9	951.9	854.1	334.3	334.3	2.2	1.000240
8000.0	755.0	7.2	-1.5	52.7	936.8	853.2	249.4	249.4	3.7	1.000235
9500.0	742.1	6.5	-2.4	52.6	921.9	852.4	7.3	7.3	5.7	1.000230
9000.0	728.5	5.6	-3.4	51.4	907.3	851.5	19.1	19.1	7.6	1.000225
9500.0	715.1	5.2	-4.3	50.3	892.9	850.7	27.1	27.1	9.7	1.000221
10000.0	701.9	4.5	-5.2	49.2	878.7	849.9	32.9	32.9	11.1	1.000216
10500.0	688.9	3.4	-6.0	50.4	865.0	848.5	39.3	39.3	12.5	1.000212
11000.0	676.0	2.2	-6.7	52.0	853.7	847.1	45.6	45.6	13.4	1.000209
11500.0	663.4	.9	-7.4	53.6	841.6	845.6	50.7	50.7	14.3	1.000205
12000.0	650.9	-2.3	-7.8	57.7	829.6	844.1	54.2	54.2	14.8	1.000202
12500.0	638.6	-1.7	-7.8	52.8	817.7	842.6	55.9	55.9	15.5	1.000200
13000.0	626.5	-3.0	-8.0	58.0	805.1	841.0	55.3	55.3	16.3	1.000197
13500.0	614.6	-4.3	-8.3	73.1	794.7	839.5	53.0	53.0	16.8	1.000194
14000.0	602.9	-5.6	-9.4	73.8	783.2	838.0	50.1	50.1	17.2	1.000190
14500.0	591.2	-6.8	-11.4	58.8	771.6	836.5	44.7	44.7	17.0	1.000186
15000.0	579.8	-7.8	-12.4	63.8	760.1	835.1	39.0	39.0	16.9	1.000181
15500.0	569.6	-8.9	-15.5	58.7	748.8	833.6	34.8	34.8	17.7	1.000177
16000.0	557.5	-10.0	-16.0	62.0	737.7	832.1	31.8	31.8	18.0	1.000174
16500.0	545.6	-11.5	-15.4	56.8	725.8	830.6	31.4	31.4	20.2	1.000171
17000.0	535.0	-12.7	-17.0	70.2	715.0	829.0	21.5	21.5	21.5	1.000169
17500.0	525.7	-14.0	-19.6	62.2	705.4	827.5	32.2	32.2	22.4	1.000164
18000.0	514.9	-13.4	-32.3	19.5	690.4	827.9	32.1	32.1	23.4	1.000156
18500.0	504.7	-13.8	-31.7	20.2	677.7	827.5	31.4	31.4	24.6	1.000153

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UPPER AIR DATA  
 280000031F  
 JALLEN

STATION ALTITUDE 4647.00 FEET MSL  
 15 OCT. 76  
 0805 HRS MDT  
 ACCENSION NO. 215

WSTM SITE COORDINATES  
 450491.60 FEET E  
 484027.00 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
19000.0	494.6	-14.6	21.3	666.2	626.5	29.9	25.6	1.000151
19500.0	484.6	-15.7	21.8	657.1	625.2	29.1	26.3	1.000148
20000.0	474.9	-16.8	22.3	645.2	623.8	28.4	25.9	1.000146
20500.0	465.3	-17.6	22.9	635.0	622.4	28.2	25.2	1.000143
21000.0	455.9	-19.1	23.4	624.9	621.1	30.4	25.6	1.000141
21500.0	446.7	-20.2	23.9	615.0	619.7	31.5	26.2	1.000139
22000.0	437.7	-21.7	24.5	605.3	618.3	30.8	27.1	1.000136
22500.0	428.9	-22.8	25.0	595.8	616.9	30.1	28.0	1.000134
23000.0	420.0	-23.9	26.5	587.0	615.1	29.1	28.9	1.000132
23500.0	411.3	-25.4	28.0	578.3	613.3	28.6	30.2	1.000130
24000.0	402.8	-26.9	29.5	569.8	611.4	28.7	32.1	1.000128
24500.0	394.4	-28.2	30.4	560.7	609.8	27.8	33.3	1.000126
25000.0	386.0	-29.7	30.9	551.4	608.4	25.7	33.4	1.000124
25500.0	377.9	-30.4	31.5	542.2	607.0	23.3	33.6	1.000122
26000.0	369.9	-31.6	32.0	533.3	605.6	20.6	34.0	1.000120
26500.0	362.0	-32.7	32.5	524.5	604.1	20.2	35.0	1.000118
27000.0	354.4	-33.8	32.6	515.7	602.8	21.7	36.7	1.000116
27500.0	346.7	-34.7	31.0	506.5	601.6	25.5	38.2	1.000113
28000.0	339.2	-35.7	29.3	497.5	600.4	30.8	39.9	1.000111
28500.0	331.9	-36.6	27.5	489.7	599.2	34.3	41.9	1.000109
29000.0	324.7	-37.5	25.7**	480.1	598.0	36.9	44.0	1.000107
29500.0	317.6	-38.3	18.5**	471.0	597.1	35.5	45.6	1.000105
30000.0	310.7	-39.0	11.3**	462.2	596.1	34.7	47.1	1.000103
30500.0	303.8	-39.8	4.1**	453.5	595.2	33.0	48.8	1.000101
31000.0	297.0	-40.6		445.4	593.9	31.6	50.6	1.000099
31500.0	290.6	-41.0		438.0	592.2	31.0	51.8	1.000098
32000.0	284.1	-42.0		430.7	590.6	32.8	52.7	1.000096
32500.0	277.6	-44.2		423.4	589.0	32.9	51.1	1.000094
33000.0	271.1	-44.5		417.7	588.1	32.9	48.4	1.000092
33500.0	265.5	-44.4		404.2	589.3	28.5	45.5	1.000090

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

STATION ALTITUDE 4000.00 FEET MSL  
 16 OCT. 76  
 ASCENSION NO. 414  
 0805 HRS MDI

UPPER AIR DATA  
 2690000016  
 JALLFN

WSTM SITE COORDINATES  
 450491.60 FEET E  
 464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREEFS	TEMPERATURE DEWPOINT DEGREEFS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA			INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION	
34000.0	259.5	-44.2			794.9	689.4	22.7	32.7	42.9	1.000088
34500.0	257.7	-44.0			788.7	688.9	18.1	31.4	40.6	1.000086
35000.0	249.0	-45.7			779.1	688.1	13.4	31.4	38.4	1.000084
35500.0	242.6	-46.1			771.9	687.0	9.1	31.4	37.2	1.000083
36000.0	235.9	-47.0			764.8	685.9	5.3	31.4	36.4	1.000081
36500.0	231.5	-47.8			757.8	684.8	2.8	31.4	36.1	1.000080
37000.0	225.2	-48.5			751.0	683.8	1.8	31.4	36.1	1.000078
37500.0	221.1	-49.3			744.1	682.9	1.1	31.4	34.3	1.000077
38000.0	215.0	-49.3			738.2	682.9	.6	31.4	30.6	1.000075
38500.0	211.1	-49.7			732.5	682.9	358.8	31.4	27.8	1.000073
39000.0	205.3	-49.8			727.7	682.3	355.6	31.4	26.0	1.000072
39500.0	201.5	-50.2			724.0	681.6	350.2	31.4	22.7	1.000070
40000.0	195.8	-50.8			709.4	680.9	340.5	31.4	18.5	1.000069
40500.0	192.2	-51.4			702.0	680.1	327.5	31.4	16.3	1.000067
41000.0	187.7	-52.0			695.8	679.3	313.6	31.4	16.1	1.000066
41500.0	183.4	-52.6			689.6	678.6	310.3	31.4	18.3	1.000065
42000.0	179.1	-53.2			683.6	677.8	313.4	31.4	21.8	1.000063
42500.0	174.9	-53.8			677.8	677.0	312.6	31.4	24.1	1.000062
43000.0	170.8	-54.4			672.0	676.2	309.8	31.4	25.6	1.000061
43500.0	165.8	-55.0			666.4	675.4	307.9	31.4	25.5	1.000059
44000.0	162.9	-55.6			660.9	674.6	306.5	31.4	23.8	1.000058
44500.0	159.1	-56.2			655.5	673.9	306.4	31.4	21.6	1.000057
45000.0	155.4	-56.8			650.2	673.0	308.7	31.4	18.6	1.000056
45500.0	151.8	-57.4			645.0	672.2	308.8	31.4	16.2	1.000055
46000.0	148.2	-57.7			639.8	671.8	299.0	31.4	15.6	1.000053
46500.0	144.7	-57.8			634.0	671.7	298.7	31.4	15.4	1.000052
47000.0	141.0	-58.0			628.0	671.5	277.2	31.4	18.0	1.000051
47500.0	137.3	-58.8			624.0	670.4	268.8	31.4	21.2	1.000050
48000.0	134.5	-59.6			619.4	669.3	266.7	31.4	22.3	1.000049
48500.0	131.2	-60.4			614.9	668.2	266.0	31.4	22.6	1.000048

STATION ALTITUDE 4051.00 FEET MSL  
 15 OCT. 74 0805 HRS MDT  
 ASCENSION NO. 311

UPPER AIR DATA  
 2900070316  
 JALLEN

WSTM SITE COORDINATES  
 450491.60 FEET E  
 464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY CM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
4000.0	109.1	-61.2		210.5	567.2	266.5	22.8	1.000047
4450.0	125.0	-62.0		205.2	566.1	267.7	22.9	1.000046
5000.0	122.0	-62.8		202.0	565.0	269.4	23.1	1.000045
5350.0	119.0	-63.6		197.9	563.9	272.7	23.8	1.000044
5700.0	116.1	-64.1		193.8	563.3	275.6	24.6	1.000043
5150.0	113.3	-64.3		189.0	562.9	277.1	24.4	1.000042
5700.0	110.5	-64.8		184.6	562.6	278.5	24.3	1.000041
5250.0	107.8	-64.9		180.3	562.2	278.5	23.2	1.000040
5700.0	105.2	-65.2		176.2	561.8	277.7	21.8	1.000039
5350.0	102.6	-65.2		171.9	561.8	277.5	19.9	1.000038
5900.0	100.1	-65.0		168.0	562.5	278.3	17.4	1.000037
5450.0	97.6	-64.7		162.8	563.0	279.3	15.0	1.000036
5000.0	95.0	-64.7		159.1	562.4	280.5	15.3	1.000035
5550.0	92.3	-65.1		155.5	561.9	281.7	15.7	1.000035
5800.0	90.6	-65.5		152.0	561.3	282.8	16.7	1.000034
5650.0	88.3	-65.0		148.5	560.8	283.7	18.1	1.000033
5700.0	86.2	-65.4		145.2	560.2	284.4	18.0	1.000032
5750.0	84.0	-65.8		141.9	559.6	284.0	17.2	1.000032
5800.0	82.0	-67.2		138.6	559.1	283.5	15.5	1.000031
5950.0	79.9	-67.6		135.5	558.6	292.6	13.5	1.000030
5900.0	78.0	-67.2		131.9	559.1	281.3	11.5	1.000029
5950.0	76.0	-66.8		128.4	559.6	278.8	9.8	1.000029
5900.0	74.2	-66.5		125.0	560.1	273.7	9.2	1.000028
6050.0	72.3	-66.1		121.7	560.6	267.9	8.6	1.000027
6100.0	70.5	-65.7		118.5	561.1	265.2	8.2	1.000026
6150.0	68.8	-65.2		115.0	561.7	263.2	7.9	1.000026
6200.0	67.1	-64.7		112.0	562.5	262.2	7.7	1.000025
6250.0	65.5	-64.0		109.2	563.2	263.5	7.7	1.000024
6300.0	63.9	-63.7		106.7	563.9	264.9	7.6	1.000024
6350.0	62.3	-63.1		103.4	564.6	263.0	7.5	1.000023

UPPER AIR DATA  
 2800030715  
 JALLEN

STATION ALTITUDE 4647.00 FEET MSL  
 15 OCT. 76  
 0805 HRS MDT  
 ADDENSION NO. 715

WSTM SITE COORDINATES  
 450491.50 FEET E  
 464722.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
64000.0	60.9	-52.6		100.6	565.3	260.6	8.4	1.000022
64500.0	59.3	-52.1		97.9	566.0	259.8	8.6	1.000022
65000.0	57.9	-61.4		95.3	566.6	261.3	9.5	1.000021
65500.0	56.5	-61.7		97.1	566.4	262.9	8.5	1.000021
66000.0	55.1	-61.9		90.9	566.3	262.9	8.8	1.000020
66500.0	53.8	-62.0		88.8	566.1	262.9	9.1	1.000020
67000.0	52.5	-62.1		86.7	565.9	265.7	9.7	1.000019
67500.0	51.2	-62.2		84.6	565.7	271.0	10.6	1.000019
68000.0	50.0	-62.4		82.6	565.6	275.5	11.6	1.000018
68500.0	48.8	-61.9		80.5	566.2	282.9	12.1	1.000018
69000.0	47.6	-61.4		78.3	566.9	285.6	12.7	1.000017
69500.0	46.5	-60.9		76.3	567.6	294.8	13.5	1.000017
70000.0	45.4	-60.4		74.3	568.3	294.3	14.5	1.000017
70500.0	44.3	-59.9		72.3	568.9	293.9	15.4	1.000016
71000.0	43.2	-59.4		70.5	569.6	292.1	16.2	1.000016
71500.0	42.2	-58.9		69.6	570.3	291.1	16.3	1.000015
72000.0	41.2	-58.4		68.8	570.9	289.2	16.5	1.000015
72500.0	40.2	-57.9		65.1	571.6	287.9	16.9	1.000014
73000.0	39.2	-57.4		63.4	572.3	288.1	17.6	1.000014
73500.0	38.3	-56.9		61.7	572.9	299.2	18.3	1.000014
74000.0	37.4	-56.7		60.2	573.2	297.8	18.6	1.000013
74500.0	36.5	-56.6		59.8	573.2	286.8	19.0	1.000013
75000.0	35.7	-56.6		57.4	573.7	285.9	19.3	1.000013
75500.0	34.8	-56.6		56.0	573.3	294.7	18.3	1.000012
76000.0	34.0	-56.6		54.7	573.3	282.9	16.2	1.000012
76500.0	33.2	-56.5		53.4	573.4	280.6	14.1	1.000012
77000.0	32.4	-56.5		52.1	573.4	275.6	12.7	1.000012
77500.0	31.7	-56.5		50.9	573.5	267.8	12.3	1.000011
78000.0	30.9	-56.4		49.7	573.5	259.7	12.1	1.000011
78500.0	30.2	-56.4		48.5	573.5	253.6	12.5	1.000011

UPPER AIR DATA  
 2890030315  
 JALLEN  
 WSTM SITE COORDINATES  
 460491.60 FEET E  
 464023.05 FEET N

STATION ALTITUDE 4051.00 FEET MSL  
 15 OCT. 7F  
 ASCENSION NO. 315  
 0805 HRS MDT

TABLE VI (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	
79000.0	29.5	-55.9		47.2	574.2	250.7	13.2	1.000011
79500.0	29.8	-55.1		46.0	575.7	248.0	13.9	1.000010
80000.0	29.1	-54.4		44.8	576.2	247.7	14.4	1.000010
80500.0	27.5	-53.7		43.6	577.1	251.1	14.4	1.000010
81000.0	26.8	-53.0		42.5	578.0	254.5	14.5	1.000009
81500.0	25.2	-52.3		41.3	579.0	257.3	14.6	1.000009
82000.0	25.6	-51.6		40.2	579.9	258.5	14.8	1.000009
82500.0	25.0	-50.9		39.2	580.8	259.6	15.0	1.000009
83000.0	24.4	-50.1		38.2	581.8	261.1	15.3	1.000008
83500.0	23.9	-49.6		37.2	582.5	264.4	16.1	1.000008
84000.0	23.3	-49.6		36.3	582.5	267.5	17.0	1.000008
84500.0	22.8	-49.5		35.5	582.6	270.3	17.9	1.000008
85000.0	22.3	-49.5		34.7	582.6	275.5	18.7	1.000008
85500.0	21.8	-49.4		33.9	582.7	280.3	19.7	1.000008
86000.0	21.3	-49.4		33.1	582.7	284.6	20.8	1.000007
86500.0	20.8	-49.4		32.4	582.8	284.5	21.3	1.000007
87000.0	20.3	-49.3		31.6	582.8	281.1	21.3	1.000007
87500.0	19.8	-49.3		30.9	582.9	277.8	21.5	1.000007
88000.0	19.4	-49.3		30.2	582.9	274.5	21.7	1.000007
88500.0	19.0	-49.3		29.5	582.9	268.5	21.4	1.000007
89000.0	18.5	-49.3		28.8	582.9	261.1	21.2	1.000006
89500.0	18.1	-49.2		28.2	583.0	253.7	21.4	1.000006
90000.0	17.7	-49.2		27.5	583.0	246.5	21.6	1.000006
90500.0	17.3	-49.2		26.9	583.0	243.5	21.8	1.000006
91000.0	16.9	-49.2		26.3	583.0	241.1	21.5	1.000006
91500.0	16.5	-49.2		25.7	583.0	236.7	21.3	1.000006
92000.0	16.1	-49.2		25.1	583.0	235.2	21.2	1.000006
92500.0	15.8	-49.2		24.5	583.1			1.000005
93000.0	15.4	-49.1		24.0	583.1			1.000005
93500.0	15.1	-49.1		23.4	583.1			1.000005

STATION ALTITUDE 4051.00 FEET MSL  
 15 OCT. 78  
 ASCENSION NO. 71F

UPPER AIR DATA  
 285003021F  
 JALLEN

WESTM SITE (COORDINATES  
 450491.50 FEET E  
 484027.01 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	INDEX OF REFRACTION
94000.0	14.7	-49.1			22.9	543.1	1.000005

STATION ALTITUDE 4051.00 FEET MSL  
 15 OCT. 76  
 ASCENSION NO. 316

MANDATORY LEVELS  
 2990030316  
 JALLEN

WSTM SITE COORDINATES  
 050451.60 FEET E  
 464023.05 FEET N

TABLE VII

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TM)	SPEED KNOTS
950.0	4816.	8.7	76.	32.1	1.7
800.0	5466.	8.7	65.	56.0	1.1
750.0	6215.	8.9	53.	255.2	4.5
700.0	10068.	4.4	49.	34.7	11.3
650.0	12032.	-4	58.	54.5	14.9
600.0	14113.	-5.8	73.	48.9	17.2
550.0	16330.	-11.1	85.	21.5	19.7
500.0	18717.	-14.0	21.	31.0	25.2
450.0	21309.	-19.8	24.	31.2	26.0
400.0	24137.	-27.4	30.	28.7	32.7
350.0	27245.	-34.3	32.	23.1	37.5
300.0	30737.	-40.2		32.2	49.8
250.0	34759.	-45.0		15.2	39.2
200.0	39581.	-50.4		347.6	21.3
175.0	42418.	-53.8		312.8	24.1
150.0	45639.	-57.7		304.2	15.9
125.0	49399.	-62.0		267.7	22.9
100.0	53866.	-63.9		279.3	17.4
80.0	58314.	-67.6		282.7	13.6
70.0	60964.	-65.6		264.6	8.1
60.0	64063.	-62.3		255.4	8.6
50.0	67763.	-62.4		275.4	11.6
40.0	72332.	-57.8		288.0	17.0
30.0	78317.	-56.4		252.9	12.6
25.0	82163.	-50.9		255.6	15.0
20.0	86957.	-49.3		279.0	21.4
15.0	93148.	-49.1			

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

STATION ALTITUDE 4331.00 FEET MSL  
 15 OCT 76  
 0805 HRS MDT  
 ASCENSION. NU. 5

SIGNIFICANT LEVEL DATA  
 ZBTJBSUUUS  
 RED K10

W. 5TH SILE COORDINATES  
 525345.62 FEET E  
 066434.18 FEET N

TABLE VIII

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT PERCENT	REL. HUM. PERCENT
605.2	6321.9	5.1	2.1	87.0
766.2	6974.9	6.5	2.6	76.0
738.6	6659.1	6.3	-5.3	43.0
700.0	6096.7	2.9	-3.6	62.0
642.6	6230.1	-3.1	-5.7	82.0
600.0	6424.3	-6.9	-7.7	94.0
583.6	6463.3	-8.1	-11.2	78.0
575.4	6517.9	-9.6	-11.1	89.0
557.4	6600.5	-11.0	-11.9	93.0
554.2	6614.9	-11.4	-36.8	10.0
549.4	6636.5	-8.1	-34.2	10.0
500.0	6874.6	-14.0	-34.9	15.0
471.6	7019.1	-18.0	-35.9	19.0
439.6	7186.5	-21.7	-42.6	13.0
419.0	7306.7	-24.9	-40.8	21.0
400.0	7416.3	-27.4	-34.8	49.0
394.4	7450.7	-28.1	-41.2	27.0
384.0	7512.9	-29.5	-49.0	13.0
333.8	7836.3	-37.5		
300.0	8076.2	-41.6		
282.4	8210.1	-44.6		
267.0	8335.1	-44.9		
250.0	8470.6	-47.6		
241.0	8556.3	-46.9		
216.8	8786.8	-51.6		
208.2	8873.5	-50.3		
200.0	8959.8	-51.2		
162.6	9399.6	-57.5		
150.0	9566.0	-58.2		
135.2	9773.8	-59.8		

STATION ALTITUDE 4331.82 FEET MSL  
 15 OCT. 76  
 ASCENSION NO. 5  
 0805 HRS MDT

SIGNIFICANT LEVEL DATA  
 2890350005  
 REL RIC

WSTM SITE COORDINATES  
 525345.62 FEET E  
 686454.18 FEET N

TABLE VIII (CONT)

PRESSURE MILLIBARS	GEOMETRICAL ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
125.2	49395.1	-63.0		
104.4	53029.9	-65.0		
100.0	53894.0	-65.3		
85.4	57042.4	-68.1		
70.0	61005.5	-65.8		
50.0	67801.8	-62.7		
46.2	69433.1	-57.0		
36.4	74365.2	-60.0		
30.0	78428.0	-54.4		
24.2	83015.1	-51.0		
20.0	87118.2	-51.0		
17.9	89502.7	-51.8		
12.7	96951.2	-46.8		

OFFER AIR DATA  
 283030005  
 RED RIC

STATION ALTITUDE 331.86 FEET MSL  
 15 OCT. 76  
 0805 HRS MDT

ASCENSION NO. 4  
 W. SITE COORDINATES  
 25345.62 FEET E  
 080454.18 FEET N

TABLE IX

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEFPUNT	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC CM	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (IN)	WIND SPEED KNOTS	INDEX OF REFRACTION
6331.9	605.2	5.1	3.1	87.0	1004.5	651.0	00.0	1.9	1.000261
6500.0	600.2	5.5	3.0	64.1	996.9	651.4	16.2	2.2	1.000259
7000.0	785.5	6.5	2.5	75.5	975.0	652.6	23.2	3.5	1.000253
7500.0	771.0	7.4	.5	65.7	957.7	652.4	13.4	5.1	1.000244
8000.0	756.3	6.4	-1.8	55.7	940.7	652.2	8.5	6.7	1.000238
8500.0	743.0	6.3	-4.4	46.1	924.1	652.0	4.5	8.2	1.000227
9000.0	729.3	5.5	-4.8	47.5	909.7	651.0	18.9	9.5	1.000224
9500.0	715.2	4.3	-4.1	54.1	896.5	649.7	22.6	11.1	1.000222
10000.0	702.5	3.1	-3.7	60.7	883.6	648.4	27.8	13.5	1.000220
10500.0	689.4	1.8	-3.9	65.6	871.2	646.0	31.6	15.9	1.000217
11000.0	676.4	.5	-4.3	70.0	859.0	645.2	37.0	18.9	1.000214
11500.0	663.7	-0.8	-4.8	74.5	847.0	643.7	41.5	21.4	1.000211
12000.0	651.2	-2.2	-5.3	78.9	835.2	642.1	48.9	20.1	1.000207
12500.0	638.9	-3.4	-5.9	83.0	823.2	640.0	57.7	18.7	1.000204
13000.0	626.7	-4.5	-6.4	86.4	810.7	639.3	70.6	18.1	1.000200
13500.0	614.7	-5.6	-7.0	89.8	798.4	638.0	83.1	14.5	1.000197
14000.0	602.3	-6.6	-7.6	93.2	786.3	636.7	94.8	13.0	1.000194
14500.0	591.3	-7.5	-9.5	85.5	774.0	635.5	88.0	11.7	1.000188
15000.0	579.8	-8.8	-11.1	83.1	762.6	634.0	86.3	10.7	1.000184
15500.0	568.5	-10.1	-11.4	90.5	751.7	632.4	82.0	11.7	1.000181
16000.0	557.4	-11.0	-11.9	93.0	739.5	631.3	77.4	13.4	1.000178
16500.0	546.5	-8.4	-14.2	10.3	719.0	633.9	83.0	15.1	1.000182
17000.0	535.0	-9.7	-14.2	11.3	708.2	632.1	51.5	17.8	1.000160
17500.0	523.3	-10.9	-14.3	12.4	697.8	630.9	46.3	19.4	1.000157
18000.0	515.0	-12.2	-14.5	13.4	687.2	629.3	42.1	21.4	1.000155
18500.0	504.9	-13.4	-14.6	14.5	676.9	628.0	42.4	22.7	1.000153
19000.0	494.9	-14.7	-15.0	15.7	666.9	626.7	42.5	24.4	1.000150
19500.0	485.0	-16.1	-15.3	17.1	657.1	624.7	40.8	25.3	1.000148
20000.0	475.3	-17.5	-15.7	18.5	647.4	623.0	38.7	26.1	1.000146
20500.0	465.7	-18.7	-17.0	17.9	637.4	621.5	38.0	26.8	1.000143

UPPER AIR DATA  
 2870350005  
 REP #10

STATION ALTITUDE 6331.00 FEET MSL  
 15 OCT. 76  
 0805 HRS MDT  
 ASCENSION NO. 6

W.5TH SLIP COORDINATES  
 25319.22 FEET E  
 680434.10 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEMPUNT	HUMIDITY PERCENT	DENSITY GM/CCUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
41000.0	456.3	-19.0	-36.9	16.4	627.2	920.2	37.4	27.9	1.000141
21500.0	447.0	-20.0	-40.9	14.4	617.1	916.7	37.9	28.7	1.000139
24000.0	437.9	-22.0	-42.3	13.7	607.3	917.1	38.3	30.0	1.000136
23500.0	428.9	-23.4	-41.4	17.1	598.1	915.8	36.4	31.6	1.000134
23000.0	420.1	-24.7	-40.8	20.2	589.0	914.1	36.5	33.3	1.000132
23500.0	411.4	-25.9	-37.0	32.1	579.3	912.7	36.7	35.0	1.000131
24000.0	402.8	-27.0	-35.4	44.8	570.0	911.3	36.0	36.1	1.000129
24500.0	394.4	-28.1	-41.2	27.0	560.6	909.7	36.9	40.1	1.000126
25000.0	386.1	-29.2	-47.0	15.9	551.4	908.5	38.4	42.2	1.000123
25500.0	377.9	-30.4	-50.8	11.5**	542.3	907.0	39.6	43.8	1.000121
26000.0	369.8	-31.7	-53.4	9.5**	533.4	905.4	40.5	45.5	1.000119
26500.0	361.9	-32.9	-56.3	7.5**	524.7	903.9	43.4	47.0	1.000117
27000.0	354.1	-34.1	-59.7	5.5**	516.1	902.3	46.3	48.5	1.000115
27500.0	346.5	-35.4	-64.0	3.5**	507.7	900.7	49.4	49.7	1.000113
28000.0	339.1	-36.6	-71.0	1.5**	499.4	899.2	51.6	51.0	1.000111
28500.0	331.8	-37.7			491.0	897.7	51.5	52.2	1.000109
29000.0	324.5	-38.8			482.0	896.7	50.8	53.3	1.000107
29500.0	317.4	-39.4			473.1	895.0	47.8	54.3	1.000105
30000.0	310.4	-40.3			464.4	894.5	44.8	55.2	1.000103
30500.0	303.6	-41.1			455.9	893.4	41.2	55.5	1.000102
31000.0	296.9	-42.1			447.7	892.2	38.1	55.9	1.000100
31500.0	290.3	-43.2			439.8	890.7	36.9	55.8	1.000098
32000.0	283.8	-44.4			432.1	889.3	35.9	55.8	1.000096
32500.0	277.4	-44.7			425.1	888.8	35.0	54.5	1.000094
33000.0	271.2	-44.8			418.6	888.7	33.2	53.6	1.000092
33500.0	265.1	-45.2			405.1	888.2	33.1	52.8	1.000090
34000.0	259.1	-46.1			397.6	887.0	30.9	52.2	1.000089
34500.0	253.3	-47.1			390.3	885.8	28.7	46.7	1.000087
35000.0	247.5	-47.4			382.0	885.3	26.1	44.7	1.000085
35500.0	241.9	-47.0			372.6	885.9	21.4	39.8	1.000083

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

STATION ALTITUDE 6331.86 FEET MSL  
 15 OCT. 78  
 ASCENSION NO. 5  
 0805 HRS MDT

UPPER AIR DATA  
 2890550005  
 RED RIO

WSTM SITE COORDINATES  
 523375.02 FEET E  
 006454.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUMID. PERCENT	DENSITY GRAMS/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
36000.0	236.4	-47.0		365.4	584.9	14.0	35.0	1.000001
36500.0	231.0	-46.0		366.0	583.5	9.5	33.0	1.000000
37000.0	225.7	-45.5		352.1	562.2	6.4	35.0	1.000078
37500.0	220.5	-50.8		345.6	560.9	3.9	35.0	1.000077
38000.0	215.5	-51.4		336.3	560.1	2.9	35.2	1.000073
38500.0	210.5	-50.7		347.6	561.1	1.8	34.5	1.000073
39000.0	205.7	-50.6		321.9	561.2	357.5	29.7	1.000072
39500.0	200.9	-51.1		315.2	560.5	351.5	24.9	1.000070
40000.0	196.2	-51.0		308.6	579.0	347.5	22.6	1.000069
40500.0	191.0	-52.5		302.6	575.7	343.7	20.6	1.000067
41000.0	187.2	-53.2		296.5	577.7	338.0	19.7	1.000066
41500.0	182.8	-53.9		290.5	576.0	331.3	19.0	1.000065
42000.0	178.5	-54.7		284.6	575.5	322.4	18.7	1.000063
42500.0	174.3	-55.4		278.9	574.7	310.1	19.4	1.000062
43000.0	170.2	-56.1		273.2	573.7	299.1	20.9	1.000061
43500.0	166.3	-56.8		267.7	573.0	296.0	22.2	1.000060
44000.0	162.4	-57.5		262.3	572.1	283.9	23.4	1.000058
44500.0	158.5	-57.7		256.3	571.8	292.3	23.4	1.000057
45000.0	154.7	-57.9		250.5	571.5	290.7	22.2	1.000056
45500.0	151.1	-58.1		244.7	571.2	288.5	21.2	1.000055
46000.0	147.6	-58.5		239.3	570.8	284.8	20.7	1.000053
46500.0	143.9	-58.8		234.0	570.5	281.0	20.3	1.000052
47000.0	140.5	-59.2		228.6	569.8	279.5	20.6	1.000051
47500.0	137.1	-59.6		223.7	569.5	278.6	21.0	1.000050
48000.0	133.8	-60.2		219.0	568.5	277.9	21.4	1.000049
48500.0	130.6	-61.2		214.7	567.1	277.7	21.6	1.000048
49000.0	127.5	-62.3		210.5	565.8	277.4	21.9	1.000047
49500.0	124.4	-63.1		206.3	564.0	277.8	22.4	1.000046
50000.0	121.3	-63.5		201.5	561.2	278.2	23.0	1.000045
50500.0	118.4	-63.8		196.9	563.7	279.1	23.6	1.000044

STATION ALTITUDE 33100 FEET MSL  
 15 OCT. 76  
 ASCENSION NO. 5

UPPER AIR DATA  
 2640350005  
 RLO K10

0805 HRS MDT  
 52545.04 FEET L  
 000454.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	WET-BULB PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
31000.0	115.5	-64.2		192.4	563.2	260.5	24.3	1.0000043
31500.0	112.6	-64.5		186.1	562.7	261.8	25.1	1.0000042
32000.0	109.5	-64.9		183.8	562.2	261.2	25.3	1.0000041
32500.0	107.2	-65.2		179.6	561.6	260.7	25.6	1.0000040
33000.0	104.6	-65.6		175.3	561.2	260.0	24.9	1.0000039
33500.0	102.0	-65.9		171.0	561.0	270.8	22.9	1.0000038
34000.0	99.5	-65.4		166.6	561.5	277.5	20.9	1.0000037
34500.0	97.0	-65.8		163.0	560.7	275.0	19.4	1.0000036
35000.0	94.6	-66.3		159.3	560.3	271.9	17.9	1.0000035
35500.0	92.3	-66.7		155.7	559.7	269.0	17.1	1.0000035
36000.0	90.0	-67.2		152.2	559.1	267.7	17.9	1.0000034
36500.0	87.8	-67.6		148.7	558.5	266.6	18.6	1.0000033
37000.0	85.8	-68.1		145.4	557.9	265.4	18.9	1.0000032
37500.0	83.5	-67.6		141.6	556.2	264.1	19.0	1.0000032
38000.0	81.4	-67.5		137.9	555.6	262.0	19.1	1.0000031
38500.0	79.4	-67.3		134.3	559.0	261.3	17.5	1.0000030
39000.0	77.4	-67.0		130.8	557.4	257.4	15.7	1.0000029
39500.0	75.5	-66.7		127.4	559.6	257.4	14.0	1.0000028
40000.0	73.6	-66.4		124.0	560.2	258.1	12.8	1.0000028
40500.0	71.6	-66.1		120.8	560.6	258.9	11.6	1.0000027
41000.0	70.0	-65.8		117.6	561.0	259.1	10.6	1.0000026
41500.0	68.3	-65.6		114.6	561.3	258.4	10.3	1.0000026
42000.0	66.6	-65.3		111.7	561.6	257.6	10.2	1.0000025
42500.0	65.0	-65.1		106.9	561.9	256.1	9.5	1.0000024
43000.0	63.4	-64.9		106.1	562.2	257.2	8.7	1.0000024
43500.0	61.8	-64.7		103.4	562.5	260.6	6.0	1.0000023
44000.0	60.4	-64.4		100.7	562.9	260.0	6.1	1.0000022
44500.0	58.9	-64.2		96.2	563.1	271.1	6.4	1.0000022
45000.0	57.4	-64.0		95.7	563.4	275.9	6.6	1.0000021
45500.0	56.0	-63.7		93.2	563.7	277.9	9.2	1.0000021

STATION ALTITUDE 6331.00 FEET (MSL)  
 15 OCT. 75  
 ASCENSION NO. 5  
 0805 HRS MDT

UPPER AIR DATA  
 ZNYC350005  
 REV R10

WSTN SITE COORDINATES  
 26315.64 FEET L  
 000454.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
6000.0	54.7	-63.5		90.6	564.1	279.6	9.7	1.000020
6050.0	53.3	-63.3		88.5	564.4	281.2	10.2	1.000020
6700.0	52.0	-63.1		88.3	564.7	282.7	10.9	1.000019
6750.0	50.8	-62.8		84.1	565.0	284.0	11.7	1.000019
6800.0	47.5	-62.0		81.7	566.4	285.1	12.4	1.000018
6900.0	46.3	-60.3		79.1	566.4	288.4	13.7	1.000018
6950.0	47.2	-58.5		76.6	570.8	288.0	10.7	1.000017
7000.0	46.1	-57.0		74.2	572.7	289.9	9.6	1.000017
7000.0	45.0	-57.3		72.6	572.3	289.5	9.6	1.000016
7050.0	43.9	-57.6		70.9	571.9	287.7	9.8	1.000016
7100.0	42.8	-57.9		67.4	571.5	286.0	10.0	1.000015
7150.0	41.8	-58.3		67.8	571.1	284.5	10.8	1.000015
7200.0	40.8	-58.6		66.3	570.7	283.3	12.2	1.000015
7250.0	39.9	-58.9		64.8	570.3	282.3	13.7	1.000014
7300.0	38.5	-57.2		63.3	569.9	281.4	14.5	1.000014
7350.0	38.0	-57.5		61.7	569.5	279.5	14.8	1.000014
7400.0	37.1	-57.8		60.5	569.1	277.6	14.0	1.000013
7450.0	36.2	-59.8		59.1	569.0	275.7	14.5	1.000013
7500.0	35.3	-59.1		57.5	569.9	274.0	14.7	1.000013
7550.0	34.5	-58.5		56.0	570.8	272.4	14.9	1.000012
7600.0	33.7	-57.8		54.5	571.7	270.8	15.0	1.000012
7650.0	32.9	-57.1		53.0	572.7	270.0	15.2	1.000012
7700.0	32.1	-56.4		51.6	573.6	270.3	15.4	1.000011
7750.0	31.4	-55.7		50.2	574.5	270.6	15.6	1.000011
7800.0	30.6	-55.0		48.7	575.4	270.9	15.8	1.000011
7850.0	27.9	-54.3		47.6	576.3	269.8	15.9	1.000011
7900.0	27.2	-54.0		46.4	576.0	268.6	16.0	1.000010
7950.0	28.5	-53.6		45.3	577.2	267.4	16.2	1.000010
8000.0	27.9	-53.2		44.1	577.7	266.6	16.3	1.000010
8050.0	27.2	-52.9		43.1	578.2	266.5	16.3	1.000010

STATION ALTITUDE 5331.00 FEET MS.  
 13 OCT. 70 0805 HRS MDT  
 ASCENSION NO. 5

OPTIC AIR DATA  
 ZRYP350005  
 RED K10

W5TH SITE COORDINATES  
 22345.62 FEET C  
 000454.18 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	WIND DIRECTION DEGREES (TN)	SPEED OF WIND KNOTS	WIND SPEED KNOTS	INDEX OF REFRACTION
81000.0	20.6	-52.5	72.0	266.3	570.7	16.3	1.000000
81500.0	20.0	-52.1	40.7	266.2	574.2	16.3	1.000000
82000.0	19.4	-51.6	34.7	265.1	574.7	16.3	1.000000
82500.0	18.8	-51.4	30.7	263.9	580.2	16.3	1.000000
83000.0	18.2	-51.2	28.0	262.5	580.6	16.4	1.000000
83500.0	17.7	-51.0	27.1	261.5	580.7	16.5	1.000000
84000.0	17.1	-51.0	26.3	260.7	580.7	16.8	1.000000
84500.0	16.6	-51.0	25.4	259.9	580.7	17.1	1.000000
85000.0	16.1	-51.0	24.6	259.1	580.7	17.4	1.000000
85500.0	15.6	-51.0	23.8	258.3	580.7	17.7	1.000000
86000.0	15.1	-51.0	23.0	256.8	580.7	17.8	1.000000
86500.0	14.6	-51.0	22.3	255.3	580.7	17.9	1.000000
87000.0	14.1	-51.0	21.5	253.8	580.7	18.0	1.000000
87500.0	13.6	-51.1	20.8	252.4	580.5	18.1	1.000000
88000.0	13.2	-51.3	20.1	251.1	580.5	19.0	1.000000
88500.0	12.8	-51.5	19.5	249.9	580.5	19.9	1.000000
89000.0	12.3	-51.6	18.8	248.6	577.6	20.6	1.000000
89500.0	11.9	-51.8	18.2	247.8	579.6	21.7	1.000000
90000.0	11.5	-51.5	17.5	246.8	580.0	23.5	1.000000
90500.0	11.1	-51.1	16.8	245.9	580.5	25.3	1.000000
91000.0	10.7	-50.9	16.2	245.2	580.9	27.2	1.000000
91500.0	10.3	-50.5	15.5	244.5	581.4	29.0	1.000000
92000.0	10.0	-50.1	14.7	243.5	581.6	30.7	1.000000
92500.0	9.6	-49.8	14.0	242.4	582.2	32.3	1.000000
93000.0	9.2	-49.5	13.3	241.5	582.7	34.0	1.000000
93500.0	8.9	-49.1	12.6	240.7	583.1	35.7	1.000000
94000.0	8.5	-48.9	12.0	240.0	583.5	37.5	1.000000
94500.0	8.2	-48.4	11.3	240.0	584.0	39.3	1.000000
95000.0	7.9	-48.1	10.6	240.0	584.4	41.1	1.000000
95500.0	7.6	-47.8	10.0	240.0	584.9	42.9	1.000000

STATION ALTITUDE 3301.00 FEET ASL  
 IS VCT. 70  
 ASCENSION NO. 5  
 0805 HRS MDT  
 UPPER AIR DATA  
 2670000000  
 REF. NO.  
 WIND DATA  
 000434.10 FEET H  
 000434.00 FEET L  
 000434.00 FEET M

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
90000.0	13.3	-47.4		0.00	303.2			1.0000005
96500.0	13.0	-47.1		20.0	303.7			1.0000004

STATION ALTITUDE 2501.00 FEET MSL  
 15 OCT. 76  
 ASCENSION NO. 2

MANUATION LEVELS  
 2690000000  
 ALL RIO

0805 HRS MDT

WSTN SITE COORDINATES  
 26945.02 FEET C  
 886434.18 FEET N

TABLE X

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS
800.0	6501.0	5.5	84.0	75.0	4.2
750.0	6245.0	6.5	81.0	8.0	7.0
700.0	5991.0	2.7	82.0	48.5	13.7
650.0	5743.0	-2.5	79.0	75.7	20.0
600.0	5493.0	-5.7	77.0	35.2	12.0
550.0	5247.0	-8.5	70.0	87.6	17.5
500.0	4925.0	-14.0	63.0	12.4	23.0
450.0	4615.0	-20.5	65.0	37.7	28.5
400.0	4315.0	-27.4	49.0	88.0	38.0
350.0	4025.0	-34.8	41.0	48.0	45.1
300.0	3737.0	-41.0	41.0	85.0	55.0
250.0	3472.0	-47.6	47.0	47.3	48.4
200.0	3210.0	-51.2	35.0	350.1	24.2
175.0	2935.0	-55.3	31.0	311.9	19.2
150.0	2630.0	-58.2	28.0	287.5	21.1
125.0	2372.0	-63.0	27.0	277.7	22.5
100.0	2140.0	-65.3	27.0	277.8	21.4
80.0	1916.0	-67.3	26.0	261.8	18.1
70.0	1717.0	-68.8	25.0	259.1	10.0
60.0	1589.0	-64.4	27.0	267.0	8.2
50.0	1474.0	-62.7	24.0	244.7	12.1
40.0	1375.0	-59.6	28.0	282.5	13.4
30.0	1285.0	-54.4	27.0	270.0	15.7
25.0	1198.0	-51.5	26.0	264.4	18.3
20.0	1127.0	-51.0	23.0	233.5	18.0
15.0	1067.0	-49.2	24.0	241.0	35.0

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