

AD-A117 887 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/O 4/2  
148208 LANCE MISSILE NUMBER 4500 ROUND NUMBER 377-APT.(U)

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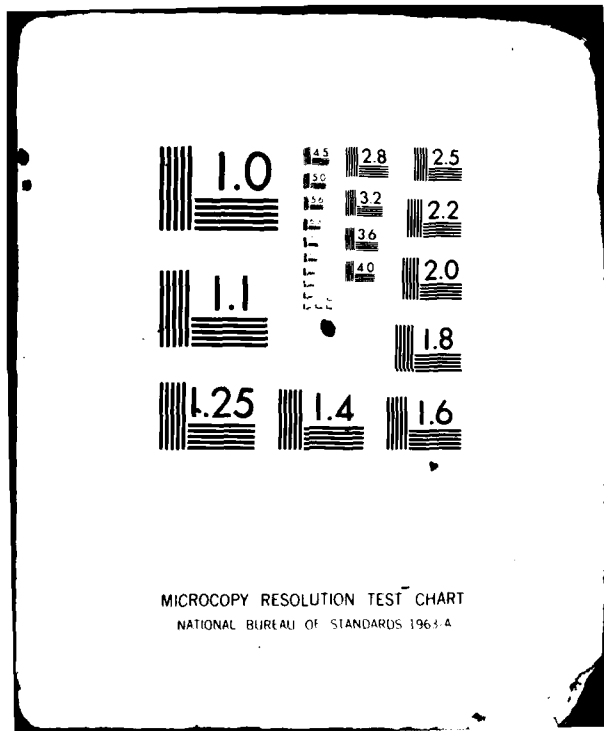
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May 82

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METEOROLOGICAL DATA REPORT  
14820B Lance  
Missile Number 4580  
Round Number 377-APT  
17 May 1982

by

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Program Support Coordinator  
Phone Number (505) 679-9568  
AVN Number 349-9568

ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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1. REPORT NUMBER DR 1241	2. GOVT ACCESSION NO. AD-A111 677	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 14820B Lance, Missile Number 4580, Round Number 377-APT	5. TYPE OF REPORT & PERIOD COVERED	
	6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) White Sands Meteorological Team	8. CONTRACT OR GRANT NUMBER(s) DA TASK 1F665702D127-02	
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, NM 88002	12. REPORT DATE May 82	
	13. NUMBER OF PAGES 34	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Cmd Adelphi, MD 20783	15. SECURITY CLASS. (of this report) UNCLASSIFIED	
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report)		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)  Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Meteorological data gathered for the launching of the 14820B Lance, Missile Number 4580, Round Number 377-APT presented in tabular form.		

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## INTRODUCTION

148208 Lance, Missile Number 4580, Round Number 377-APT, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 0901:06 MDT, 17 May 1982. The scheduled launch time was 0900 MDT.

## DISCUSSION

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

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the LC-39 Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

#### b. Upper Air

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

### SITE AND ALTITUDE

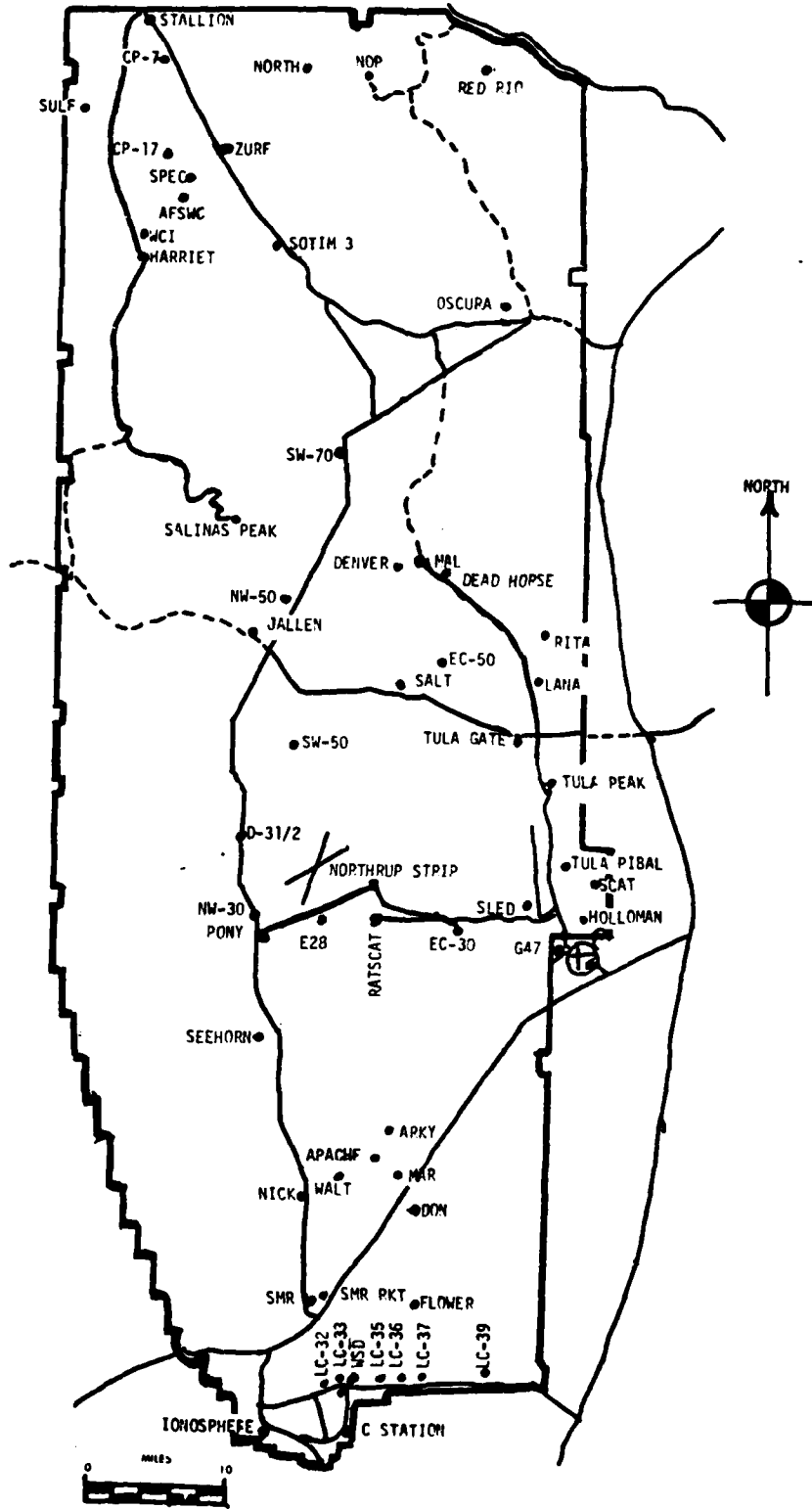
LC-36      3660 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

### SITE AND TIME

LC-37	0900 MDT (Launch Area Data)
Jallen	0730 MDT (Mid-course Data)
AFSWC	0850 MDT (Impact Area Data)

# WSMR METEOROLOGICAL SITES



PROJECT SURFACE OBSERVATION

TABLE 1		STATION LC-39											
DATE 17		May		82		YEAR		X= 530,938.82		Y= 186,564.96		H= 4,063.75	
TIME	MO	DAY	MONTH	YEAR	TEMPERATURE OF	DEW POINT OF	RELATIVE HUMIDITY %	WIND SPEED	DIRECTION	WIND SPEED	WIND DIRECTION	WIND SPEED	WIND DIRECTION
M D I					°C	°C	%	kts	degs	kts	degs	kts	degs
0901					21.5	1.1	26			CALM			40

DIRECTION TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	AMT	TYPE	AMT	TYPE	
	0	CU	6,000				FEW CU NW HALQDS

PSYCHROMETRIC COMPUTATION

TIME:	0901
DRY BULB TEMP.	21.5
WET BULB TEMP.	10.6
WET BULB DEPR.	10.9
DEW POINT	1.1
RELATIVE HUMID.	26





TABLE 4

## COMPUTER MET MESSAGES

17 May 1982

LC-37 0900 MDT	JALLEN 0730 MDT	AFSWC 0850 MDT
METCM1324063	METCM1332065	METCM1336066
171500124878	171350124877	171480143856
00000000 29080878	00604002 28960877	00000000 28700856
01212002 29250868	01002003 29010867	01489003 28680846
02182003 29080843	02081003 29090842	02003005 28890821
03017007 28970804	03039001 28860803	03032006 28730783
04115005 28550758	04042006 28510757	04592004 28320738
05487008 28120713	05632002 28070713	05505003 27890694
06502017 27680671	06412004 27590670	06459007 27440653
07495018 27180631	07486007 27120630	07439013 26960613
08488021 26800592	08477012 26650591	08470014 26490575
09489018 26500555	09479019 26300554	09489015 26140539
10493023 26190521	10495019 25950519	10506017 25790505
11500030 25830488	11490023 25670486	11512021 25460472
12505031 25180441	12498026 25110439	12512025 24890427
13499033 24310384	13505032 24250383	13531033 24090371
14506037 23420333	14515036 23390332	14529035 23250322
15510040 22460287	15520035 22540286	15521036 22470277
16525048 22170247	16516045 21980246	16530039 22110238
17497051 22090212	17501054 22090210	17522046 22070204
18488056 22000181	18492050 22090180	18508048 21970175
19486047 21970155	19487047 21930155	19493048 21920150
20489039 21530133	20473035 21600132	20482039 21640128
21460040 21090113	21467038 21080113	21467036 21170109
22497023 20950096	22495037 20900096	22491031 21130093
23485006 21210082	23456014 21210082	23492008 21390079
24145014 21300070	24085012 21300070	24158018 21220068
25255011 21180060	25188012 21280059	25275008 21230058
26211011 21740051	26147005 21530051	26203006 21620049

STATION ALTITUDE 4051.37 FEET MSL  
 17 MAY 82  
 ASCENSION NO. 45

SIGNIFICANT LEVEL DATA  
 1370180043  
 LC-37  
 TABLE 5

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
677.7	4051.4	17.0	31.0
671.0	4247.3	19.3	32.0
650.0	4952.7	17.0	37.0
830.4	5336.9	16.3	35.0
816.0	6094.0	16.8	38.0
700.0	10304.5	6.2	37.0
656.6	12013.9	1.5	40.0
614.6	13747.2	-3.8	44.0
564.6	15925.1	-7.6	26.0
500.0	19009.3	-13.4	27.0
441.0	22104.0	-21.4	30.0
400.0	24441.7	-27.8	33.0
330.2	28673.1	-39.1	32.0
300.0	31010.1	-45.1	
270.0	33303.5	-49.8	
250.0	34955.3	-51.5	
231.4	36605.2	-52.4	
226.4	37071.3	-51.6	
216.0	38075.0	-52.3	
201.4	39567.0	-52.2	
200.0	39715.5	-52.7	
191.8	40605.3	-53.2	
182.6	41649.6	-52.9	
178.2	42167.2	-53.8	
169.2	43267.4	-52.7	
156.6	44913.8	-52.9	
150.0	45827.4	-54.0	
119.0	50645.3	-61.4	
108.8	52471.0	-63.2	
100.0	54179.8	-63.8	
91.0	56087.7	-63.9	
87.4	56900.5	-61.7	
81.8	58263.8	-61.2	
80.8	58516.3	-60.4	
78.1	59214.1	-61.2	
76.6	59613.2	-59.5	
70.0	61474.8	-59.5	
61.0	64266.9	-64.3	
58.6	65103.0	-61.7	
56.2	65068.2	-56.9	

STATION ALTITUDE 4651.37 FEET MSL  
 17 MAY 82  
 ASCENSION NO. 45

SIGNIFICANT LEVEL DATA  
 1370100043  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 100.31232 LONG DEG

TABLE 5 Cont'd

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
50.0	68422.3	-55.5	
49.0	68848.1	-55.2	
41.2	72499.4	-56.0	
37.8	74329.9	-51.3	
35.6	75616.1	-52.0	
30.0	79304.7	-49.3	
26.4	82082.9	-48.4	
20.0	88179.8	-44.8	
16.4	92604.6	-41.7	

STATION ALTITUDE 451.7 FEET MSL  
 17 MAY 52  
 ASCENSION NO. 45

UPPER AIR DATA  
 137010.045  
 LC-37  
 TABLE 6

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES TRUE	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.4	877.7	17.0	-2.2	31.0	1051.1	064.5	00	0.0	1.000261
4500.0	863.8	18.5	2.3	33.8	1023.0	060.5	29.1	0.8	1.000261
5000.0	848.6	16.9	2.1	36.8	1015.9	064.6	29.1	1.8	1.000258
5500.0	833.5	16.4	1.0	35.2	999.8	063.9	29.1	2.7	1.000253
6000.0	818.7	16.7	1.6	35.9	980.0	064.3	11.5	4.9	1.000249
6500.0	804.0	15.8	.8	36.1	960.5	063.2	0.6	6.5	1.000245
7000.0	789.5	14.5	-3.3	36.2	953.4	061.7	28.4	5.8	1.000240
7500.0	775.3	13.3	-1.3	36.3	940.4	060.2	42.0	5.1	1.000235
8000.0	761.3	12.0	-2.4	36.5	927.7	059.7	59.3	4.2	1.000231
8500.0	747.5	10.7	-3.5	36.6	915.1	057.2	61.2	2.1	1.000226
9000.0	734.1	9.5	-4.6	36.7	902.7	055.7	277.1	1.3	1.000222
9500.0	720.8	8.2	-5.6	36.8	890.5	054.2	276.0	5.5	1.000218
10000.0	707.8	7.0	-6.7	36.9	878.5	052.7	278.4	10.3	1.000214
10500.0	694.9	5.7	-7.7	37.3	866.6	051.1	282.2	13.5	1.000210
11000.0	682.0	4.3	-8.7	38.2	854.9	049.5	283.8	16.3	1.000206
11500.0	669.4	2.9	-9.6	39.1	843.3	047.8	281.0	16.9	1.000203
12000.0	656.9	1.5	-10.6	40.0	831.8	046.2	279.2	17.4	1.000199
12500.0	644.5	.0	-11.6	41.1	820.8	044.5	278.9	17.3	1.000196
13000.0	632.4	-1.5	-12.6	42.3	809.9	042.5	276.8	18.4	1.000192
13500.0	620.4	-3.0	-13.7	43.4	799.1	040.7	278.3	20.4	1.000189
14000.0	608.6	-4.2	-15.2	41.9	787.5	039.2	276.0	21.1	1.000185
14500.0	596.9	-5.1	-17.2	37.8	775.0	038.1	274.0	21.2	1.000181
15000.0	585.4	-6.0	-19.4	33.6	762.7	037.0	274.8	19.8	1.000177
15500.0	574.2	-6.9	-21.7	29.5	750.6	036.0	275.1	18.2	1.000173
16000.0	563.1	-7.7	-23.8	26.0	738.7	034.9	275.0	17.8	1.000169
16500.0	552.1	-8.7	-24.6	26.2	726.6	033.7	274.9	17.9	1.000165
17000.0	541.3	-9.6	-25.3	26.3	715.2	032.0	274.5	19.2	1.000164
17500.0	530.7	-10.6	-26.1	26.5	703.7	031.5	275.0	21.0	1.000161
18000.0	520.3	-11.5	-26.8	26.7	692.5	030.3	277.7	23.4	1.000158
18500.0	510.2	-12.4	-27.6	26.8	681.4	029.2	279.2	25.8	1.000155
19000.0	500.2	-13.4	-28.3	27.0	670.5	028.0	280.3	28.1	1.000153
19500.0	490.1	-14.7	-29.3	27.5	660.3	026.5	281.0	29.7	1.000150
20000.0	480.3	-16.0	-30.2	28.0	650.3	024.9	281.5	31.2	1.000148
20500.0	470.7	-17.3	-31.2	28.4	640.5	023.3	282.2	31.3	1.000145
21000.0	461.2	-18.5	-32.1	28.9	630.8	021.7	282.9	31.3	1.000143
21500.0	451.9	-19.8	-33.1	29.4	621.5	020.1	283.1	31.2	1.000141
22000.0	442.9	-21.1	-34.1	29.9	612.0	018.5	283.4	31.1	1.000138
22500.0	433.8	-22.5	-35.1	30.5	602.7	016.9	284.4	30.9	1.000136
23000.0	424.8	-23.9	-36.1	31.1	593.5	015.2	285.4	30.7	1.000134
23500.0	416.0	-25.2	-37.1	31.8	584.4	013.5	285.7	31.8	1.000132

STATION ALTITUDE 4051.37 FEET MSL  
 17 MAY 82  
 ASCENSION NO. 45 0900 MDT

UPPER AIR DATA  
 1370160045  
 LC-37  
 TABLE 6 Cont'd

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LONG DEG

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(TIN)	SPEED KNOTS	
24000.0	407.4	-26.6	-38.1	32.4	575.0	611.8	235.9	32.9	1.000130
24500.0	399.0	-27.9	-39.2	33.0	560.0	610.1	233.4	33.4	1.000128
25000.0	390.5	-29.2	-40.3	32.9	557.5	608.5	230.5	33.9	1.000125
25500.0	382.1	-30.5	-41.5	32.8	548.5	606.9	270.9	33.8	1.000123
26000.0	373.9	-31.8	-42.7	32.6	539.0	605.3	277.5	33.5	1.000121
26500.0	365.9	-33.0	-43.9	32.5	530.0	603.7	278.5	34.0	1.000119
27000.0	358.1	-34.3	-45.0	32.4	522.3	602.1	280.4	34.9	1.000117
27500.0	350.4	-35.6	-46.2	32.3	513.8	600.5	281.4	35.7	1.000115
28000.0	342.9	-36.9	-47.4	32.2	505.5	598.4	282.0	36.4	1.000113
28500.0	335.6	-38.1	-48.6	32.1	497.4	597.2	283.3	36.7	1.000111
29000.0	328.3	-39.5	-50.3	30.1**	489.4	595.6	285.1	36.9	1.000109
29500.0	321.0	-40.9	-53.9	22.6**	481.4	593.8	280.0	37.5	1.000107
30000.0	313.9	-42.3	-58.4	15.1**	473.6	592.0	280.0	38.7	1.000106
30500.0	306.9	-43.7	-64.7	7.6**	460.0	590.2	284.9	39.5	1.000104
31000.0	300.1	-45.1	-90.0	.2**	450.1	588.4	282.5	40.1	1.000102
31500.0	293.3	-46.1			441.0	587.0	262.3	40.2	1.000100
32000.0	286.7	-47.1			441.0	585.7	265.9	39.4	1.000098
32500.0	280.2	-48.2			433.8	584.4	269.6	39.2	1.000097
33000.0	273.8	-49.2			425.9	583.0	293.2	40.9	1.000095
33500.0	267.5	-50.0			417.7	582.0	290.1	42.7	1.000093
34000.0	261.4	-50.5			409.0	581.3	296.0	44.4	1.000091
34500.0	255.4	-51.0			400.5	580.6	290.0	46.0	1.000089
35000.0	249.5	-51.5			392.1	580.0	296.3	47.4	1.000087
35500.0	243.7	-51.8			383.5	579.6	296.6	48.8	1.000085
36000.0	238.1	-52.1			375.1	579.3	293.4	48.7	1.000084
36500.0	232.5	-52.3			366.9	578.9	289.5	45.6	1.000082
37000.0	227.2	-51.7			357.4	579.7	285.9	48.0	1.000080
37500.0	221.9	-51.9			349.4	579.5	282.2	47.3	1.000078
38000.0	216.8	-52.2			341.8	579.0	280.5	48.9	1.000076
38500.0	211.7	-52.3			333.9	579.0	280.0	51.8	1.000074
39000.0	206.8	-52.2			326.2	579.0	279.3	54.0	1.000073
39500.0	202.0	-52.2			318.5	579.1	278.4	55.5	1.000071
40000.0	197.3	-52.9			312.1	578.2	277.7	56.4	1.000069
40500.0	192.8	-53.1			305.2	577.9	277.4	56.5	1.000068
41000.0	188.3	-53.1			298.0	577.9	277.1	56.7	1.000066
41500.0	183.9	-52.9			290.9	578.1	275.7	56.6	1.000065
42000.0	179.6	-53.5			284.9	577.4	274.1	56.5	1.000063
42500.0	175.4	-53.5			278.2	577.4	272.3	54.9	1.000062
43000.0	171.3	-53.0			271.1	578.1	270.1	51.5	1.000060
43500.0	167.4	-52.7			264.5	578.4	268.3	48.8	1.000059

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

UPPER AIR DATA  
 13701000403  
 LC-37

STATION ALTITUDE 4051.37 FLEET MSL  
 17 MAY 62  
 ASCENSION NO. 450900 MDT

GEOMETRIC ALTITUDE MSL FEET

REL. HUM. PERCENT

TEMPERATURE AIR DEGREES CENTIGRADE

PRESSURE MILLIBARS

DENSITY GM/CUBIC METER

SPEED OF SOUND KNOTS

WIND DATA WIND DIRECTION (IN DEGREES (IN))

WIND SPEED (KNOTS)

INDEX OF REFRACTION

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION (IN DEGREES (IN))	WIND SPEED (KNOTS)	INDEX OF REFRACTION
44000.0	163.5	-52.8		258.4	578.3	270.0	49.2	1.000058
44500.0	159.7	-52.8		252.5	578.2	271.6	49.6	1.000056
45000.0	156.0	-53.0		246.8	578.0	273.5	49.5	1.000055
45500.0	152.3	-53.6		241.7	577.2	275.3	49.3	1.000054
46000.0	148.8	-54.3		236.8	576.4	275.1	47.3	1.000053
46500.0	145.2	-55.0		232.0	575.4	273.0	43.7	1.000052
47000.0	141.8	-55.8		227.2	574.3	270.9	40.0	1.000051
47500.0	138.4	-56.6		222.6	573.3	270.3	36.1	1.000050
48000.0	135.1	-57.3		218.1	572.3	269.5	32.2	1.000049
48500.0	131.9	-58.1		213.7	571.3	274.3	31.7	1.000048
49000.0	128.8	-58.9		209.4	570.3	279.7	32.0	1.000047
49500.0	125.7	-59.6		205.1	569.3	272.8	34.4	1.000046
50000.0	122.7	-60.4		201.0	568.2	261.5	39.3	1.000045
50500.0	119.8	-61.2		196.9	567.2	255.2	43.9	1.000044
51000.0	116.9	-61.7		192.7	566.4	253.3	46.3	1.000043
51500.0	114.1	-62.2		188.5	565.8	252.6	48.1	1.000042
52000.0	111.3	-62.7		184.3	565.1	264.3	43.1	1.000041
52500.0	108.6	-63.2		180.3	564.5	270.3	40.3	1.000040
53000.0	106.0	-63.4		176.0	564.2	264.9	36.1	1.000039
53500.0	103.4	-63.6		171.9	564.0	290.0	31.1	1.000038
54000.0	100.9	-63.7		167.8	563.8	291.0	27.8	1.000037
54500.0	98.4	-63.8		163.8	563.7	285.0	26.5	1.000036
55000.0	96.0	-63.8		159.8	563.6	280.0	24.7	1.000036
55500.0	93.7	-63.9		155.9	563.6	277.6	21.1	1.000035
56000.0	91.4	-63.9		152.2	563.6	275.2	17.5	1.000034
56500.0	89.2	-62.8		147.7	563.0	274.7	13.1	1.000033
57000.0	87.0	-61.7		143.3	562.5	273.7	8.8	1.000032
57500.0	84.9	-61.5		139.7	562.8	274.3	8.5	1.000031
58000.0	82.9	-61.3		136.3	567.0	275.0	8.3	1.000030
58500.0	80.9	-60.5		132.4	568.2	277.4	6.9	1.000029
59000.0	78.9	-61.0		129.6	567.5	283.3	4.7	1.000029
59500.0	77.0	-60.0		125.9	568.8	294.2	2.7	1.000028
60000.0	75.2	-59.5		122.6	569.8	323.2	1.0	1.000027
60500.0	73.4	-59.5		119.7	569.4	70.0	1.4	1.000027
61000.0	71.6	-59.5		116.6	569.4	80.7	0.8	1.000026
61500.0	69.9	-59.5		114.0	569.4	80.6	12.3	1.000025
62000.0	68.2	-60.4		111.7	568.2	93.3	18.0	1.000025
62500.0	66.6	-61.2		109.4	567.1	98.0	23.8	1.000024
63000.0	65.0	-62.1		107.2	566.0	102.0	27.0	1.000024
63500.0	63.4	-63.0		105.1	564.8	110.6	22.8	1.000023

GEODETIC COORDINATES  
 52.40175 LAT DEG  
 106.31232 LON DEG

UPLR AL DATA  
 1370180045  
 LC-37

TABLE 6 Cont'd

STATION ALTITUDE 4051.77 FEET MSL  
 17 MAY 62 0900 MDT  
 ASCENSION NO. 45

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND VELOCITY IN DEGREES (IN)	WIND DATA SPEED KNOTS	INCLINATION OF REFRACTION
64000.0	61.9	-63.8		102.9	563.7	123.1	19.5	1.000023
64500.0	60.4	-63.6		100.4	563.9	122.9	14.6	1.000022
65000.0	58.9	-62.0		97.2	560.1	120.0	10.2	1.000022
65500.0	57.5	-62.5		93.7	569.4	157.7	8.9	1.000021
66000.0	56.1	-58.9		90.4	572.9	149.9	9.0	1.000020
66500.0	54.8	-58.6		88.1	573.3	143.0	9.3	1.000020
67000.0	53.5	-56.3		86.0	573.7	137.7	9.4	1.000019
67500.0	52.2	-56.0		83.6	574.0	132.5	9.6	1.000019
68000.0	51.0	-55.7		81.7	574.4	125.9	8.3	1.000018
68500.0	49.8	-55.4		79.7	574.8	116.4	6.9	1.000018
69000.0	48.6	-55.2		77.8	575.1	110.8	6.4	1.000017
69500.0	47.5	-55.3		76.0	575.1	110.9	6.3	1.000017
70000.0	46.4	-55.5		74.2	574.8	111.7	6.3	1.000017
70500.0	45.3	-55.6		72.5	574.7	113.6	6.6	1.000016
71000.0	44.2	-55.7		70.9	574.5	119.6	7.0	1.000016
71500.0	43.2	-55.8		69.2	574.4	116.7	5.6	1.000015
72000.0	42.2	-55.9		67.6	574.2	108.4	3.9	1.000015
72500.0	41.2	-56.0		66.1	574.1	85.4	3.7	1.000015
73000.0	40.2	-54.7		64.2	573.8	69.3	6.0	1.000014
73500.0	39.3	-53.4		62.3	577.5	62.6	8.6	1.000013
74000.0	38.4	-52.1		60.5	579.2	72.6	12.6	1.000013
74500.0	37.5	-51.4		58.9	580.1	77.9	16.8	1.000013
75000.0	36.6	-51.7		57.6	579.8	87.0	18.1	1.000013
75500.0	35.8	-51.9		56.4	579.4	100.1	18.2	1.000013
76000.0	35.0	-51.7		55.0	579.7	112.1	18.5	1.000012
76500.0	34.2	-51.4		53.7	580.2	123.4	16.2	1.000012
77000.0	33.4	-51.0		52.4	580.7	137.6	14.7	1.000012
77500.0	32.6	-50.6		51.1	581.2	142.7	12.3	1.000011
78000.0	31.9	-50.3		49.8	581.6	143.1	9.3	1.000011
78500.0	31.1	-49.9		48.6	582.1	142.2	6.6	1.000011
79000.0	30.4	-49.5		47.4	582.6	134.6	5.2	1.000011
79500.0	29.7	-49.2		46.2	583.0	121.7	3.9	1.000010
80000.0	29.1	-49.1		45.2	583.2	76.1	2.9	1.000010
80500.0	28.4	-48.9		44.1	583.4	30.3	4.4	1.000010
81000.0	27.7	-48.8		43.1	583.6	11.3	6.3	1.000010
81500.0	27.1	-48.6		42.1	583.8	35.1	7.0	1.000009
82000.0	26.5	-48.4		41.1	584.0	34.7	8.1	1.000009
82500.0	25.9	-48.2		40.1	584.4	33.4	9.0	1.000009
83000.0	25.3	-47.9		39.2	584.7	33.7	9.8	1.000009
83500.0	24.8	-47.6		38.2	585.1	33.5	10.6	1.000009

UPPER AIR DATA  
 1370100045  
 LC-37

STATION ALTITUDE 4051.37 FEET MSL  
 17 MAY 62 0900 MDT  
 ASCENSION 10. 45

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31252 LON DEG

TABLE 6 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA WIND DIRECTION (IN) DEGREES (IN) KNOTS	INDEX OF REFRACTION
84000.0	24.2	-47.3		37.3	585.5	338.8	1.000008
84500.0	23.6	-47.0		36.4	585.9	344.4	1.000008
85000.0	23.1	-46.7		35.6	586.3	349.2	1.000008
85500.0	22.6	-46.4		34.7	586.7	350.7	1.000008
86000.0	22.1	-46.1		33.9	587.0	352.1	1.000008
86500.0	21.6	-45.8		33.1	587.4	353.6	1.000007
87000.0	21.1	-45.5		32.3	587.8	355.5	1.000007
87500.0	20.6	-45.2		31.5	588.2	3.2	1.000007
88000.0	20.2	-44.9		30.6	588.6	141.0	1.000007
88500.0	19.7	-44.6		30.0	589.0	86.3	1.000007
89000.0	19.3	-44.2		29.3	589.4	74.2	1.000007
89500.0	18.9	-43.9		28.6	589.9	68.2	1.000006
90000.0	18.4	-43.5		28.0	590.3	49.2	1.000006
90500.0	18.0	-43.2		27.3	590.8	35.2	1.000006
91000.0	17.6	-42.8		26.7	591.2		1.000006
91500.0	17.2	-42.5		26.0	591.7		1.000006
92000.0	16.9	-42.1		25.4	592.1		1.000006
92500.0	16.5	-41.8		24.8	592.6		1.000006

STATION ALTITUDE 4051.37 FEET MSL  
 17 MAY 62  
 ASCENSION NO. 45 0900 MDT

MANDATORY LEVELS  
 137010104J  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LONG DEG

TABLE 7

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUMID. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	SEA POINT DEGREES CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4949.	17.0	2.2	37.	29.1	1.7
800.0	6641.	15.4	.5	36.	13.4	6.3
750.0	8422.	11.0	-3.3	37.	63.6	2.5
700.0	10294.	6.2	-7.4	37.	280.6	12.3
650.0	12268.	.7	-11.1	41.	279.0	17.3
600.0	14353.	-4.9	-16.7	39.	275.4	21.2
550.0	16582.	-8.9	-24.7	26.	274.6	16.1
500.0	18983.	-13.4	-28.3	27.	280.3	26.1
450.0	21500.	-20.1	-33.3	30.	283.1	31.2
400.0	24401.	-27.6	-39.0	33.	283.6	35.4
350.0	27499.	-35.7	-46.3	32.	281.5	35.7
300.0	30949.	-45.1			282.7	40.1
250.0	34879.	-51.5			290.3	47.3
200.0	39620.	-52.7			270.0	50.0
175.0	42443.	-53.4			272.2	54.7
150.0	45704.	-54.0			275.9	46.7
125.0	49493.	-59.8			270.0	35.3
100.0	54012.	-63.8			289.2	27.4
80.0	58527.	-60.6			279.2	0.0
70.0	61264.	-59.5			68.5	11.7
60.0	64390.	-63.2			133.2	13.7
50.0	68165.	-55.5			118.8	7.2
40.0	72831.	-54.4			67.7	6.5
30.0	78965.	-49.3			128.7	4.5
25.0	82899.	-47.7			334.6	10.1
20.0	87765.	-44.8			116.8	2.0

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

STATION ALTITUDE 4051.00 FLEET MSL  
 17 MAY 82  
 ASCENSION 140. 44 0730 MDT

SIGNIFICANT LEVEL DATA  
 1370030044  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	
877.2	4051.0	15.6	1.7	39.0
850.0	4930.6	17.0	1.4	35.0
839.5	5278.6	17.1	1.5	35.0
735.8	8922.6	9.6	-4.0	38.0
700.0	10272.6	5.4	-6.2	43.0
640.3	12638.6	-1.2	-10.0	51.0
583.2	15056.7	-8.1	-13.1	67.0
562.5	15976.9	-9.8	-20.5	24.0
540.8	16972.3	-11.2	-29.0	20.0
514.0	18246.8	-14.6	-23.9	45.0
500.0	18933.4	-15.7	-27.0	37.0
472.6	20326.6	-17.5	-30.0	18.0
423.0	23020.6	-24.5	-40.5	21.0
400.0	24350.8	-28.0	-42.0	23.0
337.5	28281.3	-38.3	-51.2	24.0
300.0	30909.1	-45.2		
275.9	32731.4	-49.8		
250.0	34834.2	-54.2		
244.0	35346.3	-55.0		
239.9	35704.2	-53.4		
212.9	38243.2	-52.1		
200.0	39576.8	-52.0		
191.9	40459.4	-51.9		
184.1	41343.3	-53.0		
176.2	42277.7	-51.9		
160.5	44266.1	-53.0		
150.0	45698.5	-54.8		
144.5	46486.5	-54.6		
122.1	50002.2	-59.5		
101.5	53755.9	-66.3		
100.0	54054.0	-65.7		
84.1	57573.8	-60.0		
79.5	58725.9	-62.6		
74.9	59949.7	-59.0		
70.0	61345.5	-60.6		
50.1	65899.8	-60.3		
51.7	67586.7	-59.1		
50.0	68282.3	-57.2		
42.8	71569.8	-52.2		
33.7	76635.1	-56.4		

STATION ALTITUDE 4051.0 FEET MSL  
 17 MAY 82 0730 MDT  
 ASCENSION NO. 44

SIGNIFICANT LEVEL DATA  
 1370031044  
 JALLEN

GEODTIC COORDINATES  
 33.10712 LAJ DEG  
 106.49511 LOJ DEG

TABLE 8 Cont'd

GEOMETRIC ALTITUDE	TEMPERATURE	RELATIVE HUMIDITY
FEET	DEGREES CENTIGRADE	PERCENT
30.0	-51.1	
25.2	-47.3	
20.0	-45.3	
19.8	-45.4	

UPPER AIR DATA  
 1370030044  
 JALLEN  
 TABLE 9

STATION ALTITUDE 45100 FEET MSL  
 17 MAY 82 0730 MDT  
 ASCENSION NO. 44

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND METER	WIND DIRECTION DEGREES (IN)	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.0	871.2	15.6	39.0	1055.2	663.0	340.0	1.9	1.000267
4500.0	863.2	16.3	37.0	1035.7	663.0	340.1	1.6	1.000262
5000.0	847.9	17.0	35.0	1014.9	664.0	335.9	1.3	1.000257
5500.0	832.8	16.6	35.2	996.1	664.2	10.7	1.1	1.000252
6000.0	817.9	15.6	35.6	985.0	663.0	31.4	1.0	1.000248
6500.0	803.2	14.6	36.0	969.7	661.8	25.9	2.0	1.000243
7000.0	788.8	13.6	36.4	955.8	660.5	23.1	3.1	1.000239
7500.0	774.7	12.5	37.2	942.2	659.3	23.2	4.1	1.000235
8000.0	760.8	11.5	37.7	929.7	658.1	24.7	5.0	1.000231
8500.0	747.1	10.5	37.7	915.5	656.9	23.0	5.5	1.000226
9000.0	733.7	9.4	38.3	902.0	655.0	20.4	4.2	1.000222
9500.0	720.3	7.8	40.1	891.1	653.7	11.7	2.9	1.000219
10000.0	707.1	6.2	42.0	879.7	651.9	338.4	1.3	1.000215
10500.0	694.0	4.8	43.8	868.2	650.1	250.7	1.6	1.000212
11000.0	681.1	3.4	45.5	856.3	648.5	240.0	2.9	1.000208
11500.0	668.4	2.0	47.2	844.7	646.8	244.4	3.7	1.000205
12000.0	655.9	.6	48.0	833.2	645.1	250.0	4.5	1.000201
12500.0	643.7	-8	50.5	821.9	643.5	239.7	5.5	1.000198
13000.0	631.4	-2.2	53.4	810.0	641.8	233.9	6.7	1.000195
13500.0	619.3	-3.7	56.7	799.3	640.1	207.0	8.0	1.000192
14000.0	607.5	-5.1	60.0	788.2	638.3	207.7	9.4	1.000189
14500.0	595.9	-6.5	63.3	777.3	636.0	208.1	11.5	1.000186
15000.0	584.5	-7.9	66.6	766.0	634.9	260.3	13.9	1.000183
15500.0	573.1	-8.9	46.3	754.9	633.6	260.9	16.0	1.000176
16000.0	562.0	-9.8	23.9	743.2	632.3	209.7	17.7	1.000169
16500.0	551.0	-10.5	21.9	730.0	631.5	270.7	19.2	1.000166
17000.0	540.2	-11.3	20.5	716.4	630.0	273.0	19.0	1.000163
17500.0	529.5	-12.6	30.4	707.7	629.0	270.5	18.6	1.000162
18000.0	519.1	-13.9	40.2	697.2	627.4	277.4	19.3	1.000160
18500.0	508.8	-15.0	42.1	686.2	626.1	277.0	20.1	1.000157
19000.0	498.7	-15.8	36.1	674.0	625.1	277.5	21.3	1.000154
19500.0	488.7	-16.4	29.3	662.9	624.3	277.1	23.0	1.000150
20000.0	478.9	-17.1	22.5	651.3	623.5	270.9	24.5	1.000147
20500.0	469.2	-18.0	18.7	640.4	622.4	277.0	24.7	1.000144
21000.0	459.7	-19.2	18.7	630.0	620.0	270.0	24.9	1.000142
21500.0	450.3	-20.5	19.3	620.9	619.2	279.2	25.2	1.000140
22000.0	441.1	-21.8	19.9	611.4	617.0	279.7	25.4	1.000137
22500.0	432.2	-23.1	20.4	602.1	616.0	280.1	26.0	1.000135
23000.0	423.4	-24.4	21.0	592.9	614.4	280.4	27.1	1.000133
23500.0	414.6	-25.8	21.7	583.7	612.0	280.0	28.2	1.000131

STATION ALTITUDE 4051.00 FLFT MSL  
 17 MAY 82  
 ASCENSION NO. 44 0730 MDT

UPPER AIR DATA  
 1.70030044  
 JALLEN

GEODETIC COORDINATES  
 33.10712 LAT DEG  
 106.49511 LONG DEG

TABLE 9 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (MAGNETIC)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	405.9	-27.1	22.5	574.6	611.2	261.5	29.3	1.000129
24500.0	397.4	-28.4	23.0	565.6	609.5	262.2	30.5	1.000127
25000.0	388.9	-29.7	23.2	556.5	607.9	263.0	31.7	1.000125
25500.0	380.6	-31.0	23.3	547.5	606.2	264.5	32.8	1.000123
26000.0	372.5	-32.3	23.4	538.7	604.6	265.9	33.9	1.000121
26500.0	364.5	-33.6	23.5	530.1	603.0	267.0	34.9	1.000119
27000.0	356.7	-34.9	23.7	521.6	601.3	267.8	35.7	1.000117
27500.0	349.1	-36.3	23.8	513.3	599.6	268.0	36.4	1.000115
28000.0	341.6	-37.6	23.9	505.1	598.0	269.2	36.2	1.000113
28500.0	334.2	-38.9	22.0**	496.9	596.3	270.0	35.7	1.000111
29000.0	326.8	-40.2	17.4**	488.7	594.6	270.5	35.1	1.000109
29500.0	319.6	-41.5	12.9**	480.6	592.9	289.7	34.3	1.000107
30000.0	312.5	-42.8	8.3**	472.6	591.3	288.8	33.6	1.000105
30500.0	305.6	-44.1	3.7**	464.6	589.6	289.1	33.8	1.000104
31000.0	298.8	-45.4		457.0	587.9	290.0	34.5	1.000102
31500.0	292.2	-46.7		449.1	586.3	291.1	35.0	1.000100
32000.0	285.3	-48.0		441.4	584.6	293.4	35.1	1.000098
32500.0	278.9	-49.2		433.8	583.0	293.0	35.2	1.000097
33000.0	272.4	-50.4		426.0	581.5	295.0	36.6	1.000095
33500.0	266.1	-51.4		418.1	580.1	295.1	38.3	1.000093
34000.0	260.0	-52.5		410.4	578.6	294.0	40.1	1.000091
34500.0	253.9	-53.5		402.8	577.4	292.4	42.1	1.000090
35000.0	248.0	-54.5		395.1	576.1	290.9	44.1	1.000088
35500.0	242.2	-54.3		385.6	575.3	289.3	46.0	1.000086
36000.0	236.6	-53.2		374.8	577.7	287.5	46.0	1.000085
36500.0	231.1	-53.0		365.7	576.0	288.0	50.1	1.000081
37000.0	225.7	-52.7		356.7	578.4	285.6	52.1	1.000079
37500.0	220.5	-52.5		348.1	578.7	284.5	53.0	1.000078
38000.0	215.3	-52.2		339.6	579.1	283.0	53.0	1.000076
38500.0	210.4	-52.1		331.2	579.2	281.5	52.8	1.000074
39000.0	205.5	-52.0		323.7	579.3	280.1	52.5	1.000072
39500.0	200.7	-52.0		316.2	579.3	278.9	52.3	1.000070
40000.0	196.1	-52.0		308.8	579.4	278.0	52.7	1.000069
40500.0	191.5	-52.0		301.6	579.4	278.4	53.1	1.000067
41000.0	187.1	-52.6		295.5	578.6	278.1	52.8	1.000066
41500.0	182.8	-52.8		289.9	578.2	277.7	52.5	1.000064
42000.0	178.5	-52.2		281.5	579.0	277.0	50.9	1.000063
42500.0	174.4	-52.0		274.7	579.3	275.0	48.6	1.000061
43000.0	170.3	-52.3		268.7	579.0	274.9	47.4	1.000060
43500.0	166.4	-52.6		262.8	578.6	274.5	47.6	1.000059

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

UPPER AIR DATA  
 1370030044  
 JALLEN  
 TABLE 9 Cont'd

STATION ALTITUDE 4651.00 FEET MSL  
 17 MAY 82 0730 MDT  
 ASCENSION NO. 44

GEOMETRIC ALTITUDE 4651.00 FEET MSL  
 17 MAY 82 0730 MDT  
 ASCENSION NO. 44

GEOMETRIC COORDINATES  
 33.10712 LAT DEG  
 106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND MNOTS	WIND DIRECTION (DEGREES (T))	WIND SPEED KNOTS	INDEX OF REFRACTION
44000.0	102.5	-52.9		257.0	570.7	274.2	48.0	1.000057
44500.0	100.7	-53.3		251.5	571.0	274.1	48.5	1.000050
45000.0	99.0	-53.9		246.4	570.8	274.0	48.9	1.000055
45500.0	97.4	-54.6		241.3	570.6	273.1	46.3	1.000054
46000.0	95.9	-54.7		235.0	570.0	272.0	43.8	1.000053
46500.0	94.4	-54.6		230.2	570.9	271.0	41.8	1.000051
47000.0	93.0	-55.3		225.5	570.0	270.0	39.9	1.000050
47500.0	91.7	-56.0		220.8	574.1	269.9	38.0	1.000049
48000.0	90.4	-56.7		216.3	573.1	268.9	36.3	1.000048
48500.0	89.2	-57.4		211.9	572.2	268.4	34.6	1.000047
49000.0	88.1	-58.1		207.5	571.5	267.0	32.9	1.000046
49500.0	87.1	-58.8		203.3	570.4	267.0	31.9	1.000045
50000.0	86.2	-59.5		199.1	569.4	265.4	32.0	1.000044
50500.0	85.4	-60.4		195.1	568.2	263.1	33.8	1.000043
51000.0	84.7	-61.3		191.2	567.0	261.2	36.2	1.000043
51500.0	84.2	-62.2		187.3	565.8	261.2	38.6	1.000042
52000.0	83.7	-63.1		183.6	564.6	260.5	39.8	1.000041
52500.0	83.2	-64.0		179.9	563.4	270.0	40.4	1.000040
53000.0	82.8	-64.9		176.3	562.2	270.1	40.3	1.000039
53500.0	82.4	-65.8		172.7	560.9	274.6	39.3	1.000038
54000.0	82.0	-66.7		169.5	561.0	270.5	38.5	1.000038
54500.0	81.7	-67.6		166.7	562.1	277.8	37.8	1.000036
55000.0	81.4	-68.5		164.1	563.2	279.2	37.3	1.000035
55500.0	81.1	-69.4		161.6	564.3	270.7	36.3	1.000034
56000.0	80.9	-70.3		159.1	565.4	277.7	35.3	1.000033
56500.0	80.7	-71.2		156.6	566.4	275.1	34.5	1.000033
57000.0	80.5	-72.1		154.1	567.5	270.0	33.3	1.000032
57500.0	80.4	-73.0		151.6	568.6	267.1	32.4	1.000031
58000.0	80.3	-73.9		149.1	569.7	263.7	31.6	1.000030
58500.0	80.2	-74.8		146.6	570.8	260.0	30.9	1.000029
59000.0	80.1	-75.7		144.1	571.9	257.4	30.3	1.000028
59500.0	80.0	-76.6		141.6	573.0	255.0	29.7	1.000027
60000.0	80.0	-77.5		139.1	574.1	252.6	29.1	1.000026
60500.0	80.0	-78.4		136.6	575.2	250.0	28.5	1.000025
61000.0	80.0	-79.3		134.1	576.3	247.4	27.9	1.000024
61500.0	80.0	-80.2		131.6	577.4	244.8	27.3	1.000023
62000.0	80.0	-81.1		129.1	578.5	242.2	26.7	1.000022
62500.0	80.0	-82.0		126.6	579.6	239.6	26.1	1.000021
63000.0	80.0	-82.9		124.1	580.7	237.0	25.5	1.000020
63500.0	80.0	-83.8		121.6	581.8	234.4	24.9	1.000019
64000.0	80.0	-84.7		119.1	582.9	231.8	24.3	1.000018
64500.0	80.0	-85.6		116.6	584.0	229.2	23.7	1.000017
65000.0	80.0	-86.5		114.1	585.1	226.6	23.1	1.000016
65500.0	80.0	-87.4		111.6	586.2	224.0	22.5	1.000015
66000.0	80.0	-88.3		109.1	587.3	221.4	21.9	1.000014
66500.0	80.0	-89.2		106.6	588.4	218.8	21.3	1.000013
67000.0	80.0	-90.1		104.1	589.5	216.2	20.7	1.000012
67500.0	80.0	-91.0		101.6	590.6	213.6	20.1	1.000011
68000.0	80.0	-91.9		99.1	591.7	211.0	19.5	1.000010
68500.0	80.0	-92.8		96.6	592.8	208.4	18.9	1.000009
69000.0	80.0	-93.7		94.1	593.9	205.8	18.3	1.000008
69500.0	80.0	-94.6		91.6	595.0	203.2	17.7	1.000007
70000.0	80.0	-95.5		89.1	596.1	200.6	17.1	1.000006
70500.0	80.0	-96.4		86.6	597.2	198.0	16.5	1.000005
71000.0	80.0	-97.3		84.1	598.3	195.4	15.9	1.000004
71500.0	80.0	-98.2		81.6	599.4	192.8	15.3	1.000003
72000.0	80.0	-99.1		79.1	600.5	190.2	14.7	1.000002
72500.0	80.0	-100.0		76.6	601.6	187.6	14.1	1.000001
73000.0	80.0	-100.9		74.1	602.7	185.0	13.5	1.000000
73500.0	80.0	-101.8		71.6	603.8	182.4	12.9	1.000000
74000.0	80.0	-102.7		69.1	604.9	179.8	12.3	1.000000
74500.0	80.0	-103.6		66.6	606.0	177.2	11.7	1.000000
75000.0	80.0	-104.5		64.1	607.1	174.6	11.1	1.000000
75500.0	80.0	-105.4		61.6	608.2	172.0	10.5	1.000000
76000.0	80.0	-106.3		59.1	609.3	169.4	9.9	1.000000
76500.0	80.0	-107.2		56.6	610.4	166.8	9.3	1.000000
77000.0	80.0	-108.1		54.1	611.5	164.2	8.7	1.000000
77500.0	80.0	-109.0		51.6	612.6	161.6	8.1	1.000000
78000.0	80.0	-109.9		49.1	613.7	159.0	7.5	1.000000
78500.0	80.0	-110.8		46.6	614.8	156.4	6.9	1.000000
79000.0	80.0	-111.7		44.1	615.9	153.8	6.3	1.000000
79500.0	80.0	-112.6		41.6	617.0	151.2	5.7	1.000000
80000.0	80.0	-113.5		39.1	618.1	148.6	5.1	1.000000
80500.0	80.0	-114.4		36.6	619.2	146.0	4.5	1.000000
81000.0	80.0	-115.3		34.1	620.3	143.4	3.9	1.000000
81500.0	80.0	-116.2		31.6	621.4	140.8	3.3	1.000000
82000.0	80.0	-117.1		29.1	622.5	138.2	2.7	1.000000
82500.0	80.0	-118.0		26.6	623.6	135.6	2.1	1.000000
83000.0	80.0	-118.9		24.1	624.7	133.0	1.5	1.000000
83500.0	80.0	-119.8		21.6	625.8	130.4	0.9	1.000000
84000.0	80.0	-120.7		19.1	626.9	127.8	0.3	1.000000
84500.0	80.0	-121.6		16.6	628.0	125.2	0.0	1.000000
85000.0	80.0	-122.5		14.1	629.1	122.6	0.0	1.000000
85500.0	80.0	-123.4		11.6	630.2	120.0	0.0	1.000000
86000.0	80.0	-124.3		9.1	631.3	117.4	0.0	1.000000
86500.0	80.0	-125.2		6.6	632.4	114.8	0.0	1.000000
87000.0	80.0	-126.1		4.1	633.5	112.2	0.0	1.000000
87500.0	80.0	-127.0		1.6	634.6	109.6	0.0	1.000000
88000.0	80.0	-127.9		0.0	635.7	107.0	0.0	1.000000
88500.0	80.0	-128.8		0.0	636.8	104.4	0.0	1.000000
89000.0	80.0	-129.7		0.0	637.9	101.8	0.0	1.000000
89500.0	80.0	-130.6		0.0	639.0	99.2	0.0	1.000000
90000.0	80.0	-131.5		0.0	640.1	96.6	0.0	1.000000
90500.0	80.0	-132.4		0.0	641.2	94.0	0.0	1.000000
91000.0	80.0	-133.3		0.0	642.3	91.4	0.0	1.000000
91500.0	80.0	-134.2		0.0	643.4	88.8	0.0	1.000000
92000.0	80.0	-135.1		0.0	644.5	86.2	0.0	1.000000
92500.0	80.0	-136.0		0.0	645.6	83.6	0.0	1.000000
93000.0	80.0	-136.9		0.0	646.7	81.0	0.0	1.000000
93500.0	80.0	-137.8		0.0	647.8	78.4	0.0	1.000000
94000.0	80.0	-138.7		0.0	648.9	75.8	0.0	1.000000
94500.0	80.0	-139.6		0.0	650.0	73.2	0.0	1.000000
95000.0	80.0	-140.5		0.0	651.1	70.6	0.0	1.000000
95500.0	80.0	-141.4		0.0	652.2	68.0	0.0	1.000000
96000.0	80.0	-142.3		0.0	653.3	65.4	0.0	1.000000
96500.0	80.0	-143.2		0.0	654.4	62.8	0.0	1.000000
97000.0	80.0	-144.1		0.0	655.5	60.2	0.0	1.000000
97500.0	80.0	-145.0		0.0	656.6	57.6	0.0	1.000000
98000.0	80.0	-145.9		0.0	657.7	55.0	0.0	1.000000
98500.0	80.0	-146.8		0.0	658.8	52.4	0.0	1.000000
99000.0	80.0	-147.7		0.0	659.9	49.8	0.0	1.000000
99500.0	80.0	-148.6		0.0	661.0	47.2	0.0	1.000000
100000.0	80.0	-149.5		0.0	662.1	44.6	0.0	1.000000
100500.0	80.0	-150.4		0.0	663.2	42.0	0.0	1.000000
101000.0	80.0	-151.3		0.0	664.3	39.4	0.0	1.000000
101500.0	80.0	-152.2		0.0	665.4	36.8	0.0	1.000000
102000.0	80.0	-153.1		0.0	666.5	34.2	0.0	1.000000
102500.0	80.0	-154.0		0.0	667.6	31.6	0.0	1.000000
103000.0	80.0	-154.9		0.0	668.7	29.0	0.0	1.000000
103500.0	80.0	-155.8		0.0	669.8	26.4	0.0	1.000000
104000.0	80.0	-156.7		0.0	670.9	23.8	0.0	1.000000
104500.0	80.0	-157.6		0.0	672.0	21.2	0.0	1.000000
105000.0	80.0	-158.5		0.0	673.1	18.6	0.0	1.000000
105500.0	80.0	-159.4		0.0	674.2	16.0	0.0	1.000000
106000.0	80.0	-160.3		0.0	675.3	13.4	0.0	1.000000
106500.0	80.0	-161.2		0.0	676.4	10.8	0.0	1.000000
107000.0	80.0	-162.1		0.0	677.5	8.2	0.0	1.000000
107500.0	80.0	-163.0		0.0	678.6	5.6	0.0	1.000000
108000.0	80.0	-163.9		0.0	679.7	3.0	0.0	1.000000
108500.0	80.0	-164.8		0.0	680.8	0.4	0.0	1.000000
109000.0	80.0	-165.7		0.0	681.9	0.0	0.0	1.000000
109500.0	80.0	-166.6		0.0	683.0	0.0	0.0	1.000000
110000.0	80.0	-167.5						

STATION ALTITUDE 4551.0 FT MSL  
 17 MAY 52  
 ASCENSION NO. 44  
 C730 MDT

UPPER AIR DATA  
 1370030044  
 JALLEN

GEODETIC COORDINATES  
 33.15712 LAT DEG  
 108.49511 LON DEG

TABLE 9 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/S	WIND VELOCITY (KNOTS)	WIND DIRECTION (DEGREES)	WIND VELOCITY (KNOTS)	INDEX OF REFRACTION
64000.0	61.5	-40.4		100.8	568.2	100.2		13.3	1.000022
65000.0	60.0	-40.4		98.3	568.2	109.2		11.5	1.000022
65000.0	58.6	-40.4		93.9	568.3	108.0		9.5	1.000021
65500.0	57.2	-40.3		93.0	568.3	105.9		7.8	1.000021
66000.0	55.8	-50.2		91.3	568.5	95.9		6.8	1.000020
66500.0	54.5	-59.9		89.0	568.9	83.1		6.1	1.000020
67000.0	53.2	-59.5		86.7	569.4	70.2		5.5	1.000019
67500.0	51.9	-59.2		84.5	569.9	80.0		4.8	1.000019
68000.0	50.7	-48.0		82.1	571.5	83.7		4.2	1.000018
68500.0	49.3	-56.9		79.7	572.9	77.5		3.0	1.000018
69000.0	48.3	-56.1		77.6	573.9	61.6		1.8	1.000017
69500.0	47.2	-55.3		75.6	574.9	47.9		2.0	1.000017
70000.0	46.1	-54.6		73.5	575.9	55.6		4.2	1.000016
70500.0	45.0	-53.8		71.5	576.9	58.5		6.3	1.000016
71000.0	44.0	-53.1		69.6	577.9	57.9		9.1	1.000015
71500.0	42.9	-52.3		67.7	578.9	74.4		12.1	1.000015
72000.0	41.9	-52.6		66.2	578.6	88.9		14.8	1.000015
72500.0	41.0	-53.0		64.8	578.1	84.0		16.0	1.000014
73000.0	40.0	-53.4		63.4	577.5	88.4		17.4	1.000014
73500.0	39.1	-53.8		62.1	577.0	88.9		17.9	1.000014
74000.0	38.2	-54.2		60.7	576.4	87.6		18.0	1.000014
74500.0	37.3	-54.6		59.4	575.9	86.7		17.9	1.000013
75000.0	36.4	-55.0		58.1	575.3	88.0		16.2	1.000013
75500.0	35.6	-55.5		56.9	574.8	89.7		14.4	1.000013
76000.0	34.7	-55.9		55.7	574.3	93.1		12.5	1.000012
76500.0	33.9	-56.3		54.5	573.7	102.5		10.3	1.000012
77000.0	33.1	-55.6		53.0	573.0	115.7		8.6	1.000012
77500.0	32.4	-54.5		51.6	572.0	122.9		7.4	1.000011
78000.0	31.6	-53.5		50.1	571.4	119.1		6.5	1.000011
78500.0	30.9	-52.4		48.7	570.6	114.0		5.5	1.000011
79000.0	30.2	-51.3		47.4	569.2	109.7		5.0	1.000011
79500.0	29.5	-50.7		46.1	568.0	103.6		4.6	1.000010
80000.0	28.8	-50.2		45.0	567.7	101.0		4.2	1.000010
80500.0	28.1	-49.7		43.9	567.4	95.5		3.7	1.000010
81000.0	27.5	-49.2		42.8	567.0	87.9		3.2	1.000010
81500.0	26.9	-48.7		41.7	566.7	77.7		2.8	1.000009
82000.0	26.3	-48.2		40.7	566.3	59.8		2.8	1.000009
82500.0	25.7	-47.7		39.6	565.0	43.6		3.1	1.000009
83000.0	25.1	-47.3		38.7	565.5	29.5		3.6	1.000009
83500.0	24.5	-47.1		37.6	565.8	15.0		4.5	1.000008

UPPER AIR DATA  
 1370030044  
 JALLEN

STATION ALTITUDE 4051.0 FEET MSL  
 17 MAY 62 0730 MDT  
 ASCENSION NO. 44

GEOMETRIC ALTITUDE 4051.0 FEET MSL  
 17 MAY 62 0730 MDT  
 ASCENSION NO. 44

GEOMETRIC ALTITUDE 4051.0 FEET MSL  
 17 MAY 62 0730 MDT  
 ASCENSION NO. 44

UPPER AIR DATA  
 1370030044  
 JALLEN

TABLE 9 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	INDEX OF REFRACTION	WIND DATA DIRECTION (IN) KNOTS	INDEX OF REFRACTION
04000.0	24.0	-46.9		36.9	586.0		7.2	1.000008
04500.0	23.4	-46.7		36.0	586.3		1.4	1.000008
05000.0	22.9	-46.5		35.2	586.5		336.3	1.000008
05500.0	22.4	-46.3		34.4	586.8		351.9	1.000008
06000.0	21.9	-46.1		33.6	587.1			1.000007
06500.0	21.4	-45.9		32.8	587.3			1.000007
07000.0	20.9	-45.7		32.0	587.6			1.000007
07500.0	20.4	-45.5		31.3	587.8			1.000007
08000.0	20.0	-45.3		30.5	588.0			1.000007

STATION ALTITUDE 4051.00 FEET MSL  
 17 MAY 82  
 ASCENSION NO. 44 0730 MDT

MANDATORY LEVELS  
 13700J0044  
 JALLEN  
 TABLE 10

GEODETLIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LONG DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4927.	17.0	1.4	35.	354.3	1.4
800.0	6617.	14.4	-0.5	36.	25.0	2.2
750.0	8393.	10.7	-3.2	30.	25.0	5.7
700.0	10263.	5.4	-6.2	43.	263.0	1.1
650.0	12231.	-1.1	-9.3	50.	255.1	3.0
600.0	14312.	-6.0	-12.1	62.	268.0	10.7
550.0	16526.	-10.6	-18.3	22.	270.9	19.2
500.0	18908.	-15.7	-27.0	37.	277.0	21.0
450.0	21495.	-20.6	-37.9	19.	279.2	25.2
400.0	24312.	-28.0	-42.6	23.	281.9	30.1
350.0	27406.	-36.1	-49.3	24.	288.5	35.4
300.0	30850.	-45.2			289.0	34.3
250.0	34761.	-54.2			291.5	43.4
200.0	39465.	-52.0			278.0	52.3
175.0	42319.	-52.0			276.1	49.1
150.0	45579.	-54.8			272.7	45.4
125.0	49378.	-58.8			257.8	31.9
100.0	53891.	-65.7			276.6	36.4
80.0	58409.	-62.3			255.2	15.2
70.0	61139.	-60.6			53.2	15.2
60.0	64289.	-60.4			109.3	11.6
50.0	68030.	-57.2			81.5	3.6
40.0	72727.	-53.4			88.2	17.3
30.0	78773.	-51.1			109.2	4.9
25.0	82699.	-47.2			28.4	3.6
20.0	87564.	-45.3				

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

STATION ALTITUDE 4700.63 FEET MSL  
 17 MAY 62  
 ASCENSION NO. 3 0850 MDT

SIGNIFICANT LEVEL DATA  
 1370170003  
 AFS/C

GEODESIC COORDINATES  
 33.04886 LAT DEG  
 100.58581 LON DEG

TABLE 11

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEMPWIN; DEGREES CENTIGRADE	REL. HUM. PERCENT
855.7	4700.6	13.1	-0.2	40.0
850.0	4885.1	13.1	.2	41.0
831.6	5488.8	12.5	.6	44.0
824.9	5712.6	14.8	2.0	42.0
810.7	6196.1	15.9	2.3	40.0
759.0	8020.5	11.6	-1.2	41.0
700.0	10221.4	6.0	-4.7	46.0
647.2	12314.9	1.3	-9.6	44.0
611.2	13816.8	-3.2	-12.4	49.0
564.7	15854.3	-9.0	-12.3	77.0
558.8	16121.5	-9.6	-13.0	76.0
550.2	16515.3	-10.0	-10.0	52.0
515.8	18141.9	-13.5	-22.6	46.0
500.0	18918.0	-15.1	-25.6	40.0
475.2	20176.9	-17.6	-24.6	34.0
459.6	20996.9	-18.8	-31.3	32.0
400.0	24341.3	-27.8	-37.7	38.0
376.8	25745.9	-30.7	-41.4	34.0
348.6	27547.4	-35.1	-45.9	32.0
321.6	29378.9	-39.9	-49.9	33.0
300.0	30920.5	-44.1		
270.6	33181.2	-49.2		
250.0	34882.0	-51.7		
213.0	38304.7	-51.6		
200.0	39649.2	-52.2		
190.0	40742.9	-52.2		
182.2	41633.0	-54.1		
177.2	42222.4	-53.3		
174.9	42500.7	-51.7		
163.4	43949.1	-53.4		
150.0	45765.8	-53.1		
136.8	47717.5	-54.4		
128.6	49019.2	-55.8		
124.8	49646.6	-57.4		
119.7	50516.0	-57.5		
104.1	53389.6	-62.8		
100.0	54208.6	-61.7		
87.0	57056.6	-61.4		
83.9	57806.3	-57.4		
76.4	59748.7	-59.8		

STATION ALTITUDE 4700.63 FEET MSL  
 17 MAY 82  
 ASCENSION NO. 3 0850 MDT

SIGNIFICANT LEVEL DATA  
 137017 000  
 AFSWC

GEODETIC COORDINATES  
 33.64686 LAT DEG  
 106.56581 LON DEG

TABLE 11 Cont'd

GEOMETRIC ALTITUDE	TEMPERATURE	REL. HUM.
ALTITUDE	AIR TEMPERATURE	PERCENT
MILLIBARS MSL FEET	DEGREES CENTIGRADE	
70.0 61557.9	-58.8	
63.8 63463.9	-62.5	
50.0 68486.4	-57.8	
47.0 69785.8	-54.5	
33.6 76895.3	-54.2	
30.0 79321.2	-50.1	
25.4 82918.3	-50.1	
20.0 88128.6	-46.4	
10.0 103549.3	-41.3	
9.0 105928.5	-39.9	

UPPER AIR DATA  
13701700Z  
AFSWC

STATION ALTITUDE 4700.0 FEET MSL  
17 MAY 02 0850 MDT  
ASCENSION NO. 3

GEOMETRIC COORDINATES  
33.84886 LAT DEG  
106.58581 LO. DEG

TABLE 12

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
4700.0	855.7	13.1	40.0	1030.0	060.0	00	0.0	1.000259
5000.0	840.5	13.0	41.6	1027.7	059.9	13.2	.9	1.000258
5500.0	831.3	12.6	43.9	1010.4	059.5	13.2	2.3	1.000255
6000.0	810.4	15.5	40.8	982.2	062.9	13.2	3.6	1.000251
6500.0	801.8	15.2	40.2	965.0	062.0	13.2	5.2	1.000247
7000.0	787.5	14.0	40.4	952.4	061.2	12.4	5.4	1.000242
7500.0	773.4	12.8	40.7	939.4	059.8	11.2	5.3	1.000237
8000.0	759.6	11.6	41.0	926.5	058.8	.9	4.8	1.000233
8500.0	745.7	10.4	42.1	913.8	058.9	347.1	4.5	1.000229
9000.0	732.2	9.1	43.2	901.3	058.4	330.0	4.0	1.000225
9500.0	718.8	7.8	44.4	889.0	058.0	311.0	3.8	1.000221
10000.0	705.7	6.6	45.5	876.8	052.3	299.0	3.1	1.000217
10500.0	692.7	5.4	45.7	864.5	050.9	285.3	2.7	1.000213
11000.0	679.9	4.3	45.3	852.0	049.5	285.9	3.1	1.000208
11500.0	667.3	3.1	44.8	839.7	048.2	274.0	4.1	1.000204
12000.0	654.9	2.0	44.3	827.0	046.8	260.5	6.3	1.000200
12500.0	642.7	.7	44.6	816.0	045.3	249.4	8.8	1.000196
13000.0	630.5	-.8	46.3	803.1	043.5	242.7	11.5	1.000193
13500.0	618.6	-2.3	47.9	794.5	041.7	245.4	12.4	1.000190
14000.0	608.9	-3.7	51.5	783.5	039.9	248.0	13.0	1.000187
14500.0	595.2	-5.1	58.4	772.5	038.3	235.2	13.2	1.000185
15000.0	583.7	-6.6	65.3	761.6	036.8	200.0	13.8	1.000183
15500.0	572.5	-8.0	72.1	751.0	034.9	205.3	14.5	1.000180
16000.0	561.5	-9.3	76.5	740.5	033.3	263.7	14.9	1.000177
16500.0	550.5	-10.0	82.9	726.0	032.3	271.7	15.1	1.000170
17000.0	539.7	-11.0	50.2	710.7	031.0	274.8	15.0	1.000167
17500.0	529.1	-12.1	48.4	703.5	029.7	278.1	14.8	1.000164
18000.0	518.7	-13.2	46.5	694.6	028.4	281.3	15.4	1.000160
18500.0	508.4	-14.2	43.2	685.7	027.1	284.2	16.2	1.000157
19000.0	498.3	-15.3	39.6	677.0	025.8	284.9	17.1	1.000154
19500.0	488.4	-16.3	37.2	661.9	024.6	285.7	18.1	1.000151
20000.0	478.6	-17.2	34.8	651.3	023.3	287.0	19.9	1.000148
20500.0	469.0	-18.1	33.2	640.5	022.3	288.5	21.7	1.000145
21000.0	459.5	-18.8	32.0	629.2	021.4	290.5	23.5	1.000143
21500.0	450.1	-20.2	32.9	619.0	019.8	290.6	24.5	1.000140
22000.0	440.8	-21.5	33.8	610.1	018.1	287.2	24.7	1.000138
22500.0	431.8	-22.8	34.7	600.8	016.4	287.5	24.6	1.000136
23000.0	422.9	-24.2	35.6	591.0	014.8	285.0	24.2	1.000134
23500.0	414.2	-25.5	36.5	582.0	013.1	286.5	24.9	1.000131
24000.0	405.7	-26.9	37.4	573.0	011.4	288.5	25.9	1.000129

STATION ALTITUDE 4/00.53 FLT MSL  
 17 MAY 82  
 ASCENSION NO. 3

UPPLR AIR DATA  
 137017.003  
 AFSWC  
 TABLE 12 Cont'd

GEODETIC COORDINATE,  
 33.64686 LAT DEC  
 106.58581 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	"INDU DATA" REFR. INDEX	"INDU DATA" REFR. INDEX
24500.0	397.3	-28.1	37.5	564.0	609.9	291.0	1.000127
25000.0	388.9	-29.2	36.1	555.2	605.6	294.9	1.000125
25500.0	380.8	-30.2	34.7	545.9	607.3	290.3	1.000123
26000.0	372.7	-31.3	33.7	536.8	603.9	299.1	1.000121
26500.0	364.7	-32.5	33.2	526.0	604.3	299.2	1.000118
27000.0	356.9	-33.8	32.6	514.4	602.8	300.5	1.000116
27500.0	349.3	-35.0	32.1	510.9	601.3	301.2	1.000114
28000.0	341.7	-36.3	32.2	502.5	599.6	300.9	1.000113
28500.0	334.3	-37.6	32.5	494.3	597.9	299.3	1.000111
29000.0	327.0	-38.9	32.0	486.3	596.5	296.9	1.000109
29500.0	319.9	-40.2	30.4**	478.4	594.0	297.1	1.000107
30000.0	312.8	-41.6	19.8**	470.5	592.8	297.2	1.000105
30500.0	305.8	-42.9	9.1**	462.8	591.1	294.0	1.000103
31000.0	299.0	-44.3		455.1	589.4	292.0	1.000101
31500.0	292.3	-45.4		447.0	587.9	291.7	1.000100
32000.0	285.6	-46.5		439.1	586.5	292.5	1.000098
32500.0	279.2	-47.7		431.3	585.0	294.2	1.000096
33000.0	272.9	-48.8		423.7	583.5	294.5	1.000094
33500.0	266.6	-49.7		415.6	582.4	294.0	1.000093
34000.0	260.5	-50.4		407.4	581.4	294.4	1.000091
34500.0	254.5	-51.1		399.3	580.5	294.3	1.000089
35000.0	248.6	-51.7		391.1	579.7	295.4	1.000087
35500.0	242.9	-51.7		382.0	579.8	296.0	1.000085
36000.0	237.3	-51.7		373.2	579.8	296.0	1.000083
36500.0	231.8	-51.7		364.5	579.8	300.0	1.000081
37000.0	226.4	-51.6		356.1	579.8	300.2	1.000079
37500.0	221.2	-51.6		347.8	579.8	299.6	1.000077
38000.0	216.1	-51.6		339.7	579.9	290.1	1.000076
38500.0	211.1	-51.7		332.0	579.0	296.3	1.000074
39000.0	206.2	-51.9		324.0	579.5	293.8	1.000072
39500.0	201.4	-52.1		317.4	579.2	291.9	1.000071
40000.0	196.7	-52.2		310.2	579.1	291.5	1.000069
40500.0	192.2	-52.2		303.0	579.1	291.1	1.000067
41000.0	187.7	-52.7		296.7	578.4	290.9	1.000066
41500.0	183.3	-53.8		291.2	577.0	289.9	1.000065
42000.0	179.1	-53.6		284.1	577.2	287.5	1.000063
42500.0	174.9	-51.7		279.2	579.7	283.2	1.000061
43000.0	170.8	-52.3		269.5	579.0	283.2	1.000060
43500.0	166.9	-52.9		263.9	578.2	281.4	1.000059
44000.0	163.0	-53.4		258.4	577.5	279.9	1.000058

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

UPPLR AIR DATA  
 137017000J  
 AFSWC

STATION ALTITUDE 4700.0 FEET MSL  
 17 MAY 82 3 0850 MDT  
 ASCENDING NO. 3

GEODETIC COORDINATES  
 33.04086 LAT DEG  
 106.58581 Lon DEG

TABLE 12 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBI METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						TEMPERATURE DEGREE CENTIGRADE	DIR (REL. TO GREGG) (IN)	
44500.0	159.2	-53.3		252.3	577.6	270.0	47.7	1.000050
45000.0	159.5	-53.2		240.3	577.7	277.5	48.0	1.000055
45500.0	151.9	-53.1		240.5	577.8	277.0	48.3	1.000054
46000.0	146.4	-53.3		235.0	577.7	277.1	48.5	1.000052
46500.0	144.9	-53.6		229.9	577.3	277.1	48.1	1.000051
47000.0	141.5	-53.9		224.9	576.6	276.9	47.1	1.000050
47500.0	136.2	-54.3		220.0	576.4	276.7	45.8	1.000049
48000.0	135.0	-54.7		215.3	575.8	276.3	43.7	1.000048
48500.0	131.8	-55.2		210.7	575.1	275.7	41.7	1.000047
49000.0	128.7	-55.8		206.3	574.4	275.0	39.7	1.000046
49500.0	125.7	-57.0		202.6	572.7	270.0	37.9	1.000045
50000.0	122.7	-57.4		198.2	572.2	268.0	36.9	1.000044
50500.0	119.8	-57.5		193.5	572.1	266.1	36.1	1.000043
51000.0	116.9	-58.4		189.7	570.9	264.6	35.3	1.000042
51500.0	114.1	-59.3		185.9	569.7	263.0	34.6	1.000041
52000.0	111.4	-60.2		182.2	568.5	262.0	34.9	1.000041
52500.0	108.7	-61.2		178.6	567.2	260.1	35.9	1.000040
53000.0	106.1	-62.1		175.1	566.0	260.3	36.3	1.000039
53500.0	103.5	-62.7		171.3	565.2	262.0	36.0	1.000038
54000.0	101.0	-62.0		166.7	566.1	265.3	35.4	1.000037
54500.0	98.6	-61.7		162.4	566.5	269.3	34.0	1.000036
55000.0	96.2	-61.6		158.4	566.6	273.2	32.8	1.000035
55500.0	93.9	-61.6		154.6	566.7	276.1	32.4	1.000034
56000.0	91.6	-61.5		150.8	566.8	279.0	32.0	1.000034
56500.0	89.4	-61.5		147.1	566.9	280.3	27.6	1.000033
57000.0	87.2	-61.4		143.5	566.9	282.1	23.3	1.000032
57500.0	85.2	-59.0		138.5	570.1	290.1	18.2	1.000031
58000.0	83.1	-57.6		134.4	571.9	295.0	13.0	1.000030
58500.0	81.1	-58.3		131.5	571.1	298.5	10.2	1.000029
59000.0	79.2	-58.9		128.8	570.3	299.3	9.0	1.000029
59500.0	77.3	-59.5		126.1	569.4	292.7	6.9	1.000028
60000.0	75.5	-59.7		123.2	569.2	305.4	4.2	1.000027
60500.0	73.7	-59.4		120.1	569.6	4.3	4.3	1.000027
61000.0	71.9	-59.1		117.0	570.0	9.7	7.9	1.000026
61500.0	70.2	-58.8		114.1	570.3	71.4	13.6	1.000025
62000.0	68.5	-59.7		111.6	569.2	80.0	16.9	1.000025
62500.0	66.9	-70.6		109.6	567.9	88.4	19.7	1.000024
63000.0	65.3	-71.6		107.5	566.6	94.0	20.6	1.000024
63500.0	63.7	-72.5		105.3	565.5	102.0	19.0	1.000023
64000.0	62.2	-72.0		102.6	565.1	111.6	17.4	1.000023

UPPLR AIR DATA  
 137017000J  
 AF5WC

STATION ALTITUDE 4700.0 FEET MSL  
 17 MAY 82  
 ASCENSION NO. 3 0850 MDT

GEODETIC COORDINATES  
 33.64686 LAT DEG  
 106.38581 LON DEG

TABLE 12 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INEX OF REFRACTION
64500.0	60.7	-61.5		99.9	560.7	122.7	14.1	1.000022
65000.0	59.2	-61.1		97.3	567.4	139.5	11.6	1.000022
65500.0	57.8	-60.6		94.7	568.0	148.8	9.7	1.000021
66000.0	56.4	-60.1		92.3	568.6	160.3	8.0	1.000021
66500.0	55.1	-59.7		89.8	569.2	160.1	7.0	1.000020
67000.0	53.7	-59.2		87.5	569.9	152.3	6.2	1.000019
67500.0	52.5	-58.7		85.2	570.5	142.5	5.5	1.000019
68000.0	51.2	-58.3		83.0	571.1	130.6	5.0	1.000018
68500.0	50.0	-57.8		80.8	571.7	119.5	4.8	1.000018
69000.0	48.8	-56.5		78.5	573.4	113.5	4.6	1.000017
69500.0	47.6	-55.2		76.2	575.1	107.1	4.5	1.000017
70000.0	46.5	-54.5		74.1	576.1	97.5	4.7	1.000017
70500.0	45.4	-54.5		72.4	576.1	88.7	5.3	1.000016
71000.0	44.4	-54.4		70.7	576.1	83.5	6.0	1.000016
71500.0	43.3	-54.4		69.0	576.2	87.9	7.3	1.000015
72000.0	42.3	-54.4		67.4	576.2	91.0	8.6	1.000015
72500.0	41.3	-54.4		65.8	576.2	96.1	9.8	1.000015
73000.0	40.4	-54.4		64.3	576.2	102.3	11.0	1.000014
73500.0	39.4	-54.3		62.8	576.3	107.2	12.4	1.000014
74000.0	38.5	-54.3		61.3	576.3	108.3	12.4	1.000014
74500.0	37.6	-54.3		59.9	576.3	109.2	12.3	1.000013
75000.0	36.7	-54.3		58.5	576.4	110.4	12.0	1.000013
75500.0	35.9	-54.3		57.1	576.4	112.6	11.1	1.000013
76000.0	35.1	-54.2		55.8	576.4	115.1	10.2	1.000012
76500.0	34.2	-54.2		54.5	576.4	117.0	9.5	1.000012
77000.0	33.4	-54.0		53.2	576.7	120.0	8.9	1.000012
77500.0	32.7	-53.2		51.7	577.0	122.7	8.4	1.000012
78000.0	31.9	-52.3		50.3	578.9	123.0	8.0	1.000011
78500.0	31.2	-51.5		49.0	580.0	124.7	7.6	1.000011
79000.0	30.5	-50.6		47.7	581.1	124.7	7.1	1.000011
79500.0	29.8	-50.1		46.5	581.8	116.3	6.5	1.000010
80000.0	29.1	-50.1		45.4	581.8	110.7	6.0	1.000010
80500.0	28.4	-50.1		44.4	581.8	101.6	5.5	1.000010
81000.0	27.8	-50.1		43.4	581.8	90.9	4.9	1.000009
81500.0	27.1	-50.1		42.4	581.8	77.7	4.6	1.000009
82000.0	26.5	-50.1		41.4	581.8	63.0	4.5	1.000009
82500.0	25.9	-50.1		40.4	581.8	50.4	4.7	1.000009
83000.0	25.3	-50.0		39.5	581.9	36.6	5.2	1.000009
83500.0	24.7	-49.7		38.6	582.4	20.2	5.2	1.000009
84000.0	24.2	-49.3		37.6	582.8	1.0	5.8	1.000008

STATION ALTITUDE 4700.63 FEET MSL  
 17 MAY 82 0850 MDT  
 ASCENSION NO. 3

UPPER AIR DATA  
 1370170003  
 AFSWC

GEODETIC COORDINATES  
 33.64686 LAT DEG  
 106.58581 LONG DEG

TABLE 12 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC MLTGR	SPEED OF SOUND M/SEC	WIND DIRECTION (IN)	WIND SPEED KNOTS	INDEX OF REFRACTION
84500.0	23.6	-49.0		36.7	583.3	347.4	0.8	1.000008
85000.0	23.1	-48.6		35.8	583.8	337.6	7.6	1.000008
85500.0	22.6	-48.3		35.0	584.2	329.0	8.1	1.000008
86000.0	22.1	-47.9		34.1	584.7	322.7	8.8	1.000008
86500.0	21.6	-47.6		33.3	585.1	318.0	9.4	1.000007
87000.0	21.1	-47.2		32.5	585.6	322.0	9.8	1.000007
87500.0	20.6	-46.8		31.7	586.1	326.2	10.3	1.000007
88000.0	20.1	-46.5		30.9	586.5	329.0	10.7	1.000007
88500.0	19.7	-46.3		30.2	586.9	322.2	11.3	1.000007
89000.0	19.2	-46.1		29.5	587.0	334.0	11.9	1.000007
89500.0	18.8	-45.9		28.8	587.2	338.7	12.5	1.000006
90000.0	18.4	-45.8		28.2	587.4	340.0	12.0	1.000006
90500.0	18.0	-45.6		27.5	587.6	346.3	10.3	1.000006
91000.0	17.6	-45.5		26.9	587.9	354.9	8.8	1.000006
91500.0	17.2	-45.3		26.3	588.1	5.7	7.5	1.000006
92000.0	16.8	-45.1		25.7	588.3	8.0	6.0	1.000006
92500.0	16.4	-45.0		25.1	588.5	13.4	4.5	1.000006
93000.0	16.1	-44.8		24.5	588.7	23.1	3.0	1.000005
93500.0	15.7	-44.6		23.9	588.9	28.7	2.6	1.000005
94000.0	15.4	-44.5		23.4	589.1	29.1	2.6	1.000005
94500.0	15.0	-44.3		22.9	589.4	29.5	2.6	1.000005
95000.0	14.7	-44.1		22.3	589.6	27.7	2.9	1.000005
95500.0	14.4	-44.0		21.8	589.8	23.0	3.9	1.000005
96000.0	14.0	-43.8		21.3	590.0	20.3	5.0	1.000005
96500.0	13.7	-43.6		20.8	590.2	18.3	6.1	1.000005
97000.0	13.4	-43.5		20.4	590.4	18.9	6.5	1.000005
97500.0	13.1	-43.3		19.9	590.6	19.4	6.9	1.000004
98000.0	12.8	-43.1		19.4	590.8	20.0	7.2	1.000004
98500.0	12.5	-43.0		19.0	591.1	20.4	7.5	1.000004
99000.0	12.3	-42.8		18.6	591.3	18.2	6.6	1.000004
99500.0	12.0	-42.6		18.1	591.5	15.0	5.6	1.000004
100000.0	11.7	-42.5		17.7	591.7	10.6	4.7	1.000004
100500.0	11.5	-42.3		17.3	591.9	1.9	3.8	1.000004
101000.0	11.2	-42.1		16.9	592.1	328.2	4.2	1.000004
101500.0	11.0	-42.0		16.5	592.3	308.1	5.6	1.000004
102000.0	10.7	-41.8		16.1	592.5			1.000004
102500.0	10.5	-41.6		15.8	592.8			1.000004
103000.0	10.2	-41.5		15.4	593.0			1.000003
103500.0	10.0	-41.3		15.1	593.2			1.000003
104000.0	9.8	-41.0		14.7	593.5			1.000003

STATION ALTITUDE 4700.63 FEET NSL  
 17 MAY 02 0850 MDT  
 ASCENSION NO. 3

UPPER AIR DATA  
 137017000J  
 AFSWC  
 TABLE 12 Cont'd

GEOMETRIC ALTITUDE  
 104500.0  
 105000.0  
 105500.0

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/NOTS	WIND DATA DIRECTION SPEED KNOTS	INDEX OF REFRACTION
104500.0	9.6	-40.7		14.4	583.9		1.000003
105000.0	9.4	-40.4		14.0	594.3		1.000003
105500.0	9.2	-40.2		13.7	594.7		1.000003

GEODESIC COORDINATES  
 33.64686 LAT DEG  
 106.58581 LON DEG

STATION ALTITUDE 4700.03 FEET MSL  
 17 MAY 62  
 ASCENSION NO. 3 0050 PDT

MANDATORY LEVELS  
 1370170003  
 AFSWC

GEODETIC COORDINATES  
 33.64486 LAT DEG  
 106.58581 LON DEG

TABLE 13

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	*IND DATA DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4882.	13.1	41.	13.2	5
800.0	6562.	15.0	40.	13.2	5.4
750.0	8341.	10.8	42.	351.0	4.6
700.0	10212.	6.0	40.	292.2	2.8
650.0	12189.	1.6	44.	250.5	7.2
600.0	14282.	-4.6	50.	252.6	13.2
550.0	16505.	-10.0	52.	271.8	13.1
500.0	18973.	-15.1	40.	284.8	16.9
450.0	21482.	-20.2	33.	290.6	24.5
400.0	24303.	-27.8	36.	290.5	20.9
350.0	27409.	-34.9	32.	301.2	30.6
300.0	30871.	-44.1		292.8	34.6
250.0	34810.	-51.7		293.1	30.1
200.0	39558.	-52.2		291.8	49.1
175.0	42385.	-51.8		285.3	45.0
150.0	45648.	-53.1		277.1	43.4
125.0	49476.	-57.3		269.5	37.6
100.0	54047.	-61.7		266.8	34.8
80.0	58608.	-58.6		269.3	9.5
70.0	61353.	-58.8		71.9	14.0
60.0	64493.	-61.3		126.4	13.0
50.0	68235.	-57.8		119.9	4.8
40.0	72915.	-54.4		104.1	11.5
30.0	78990.	-50.1		121.1	0.8
25.0	82898.	-49.9		31.3	3.2
20.0	87723.	-46.4		330.2	10.8
15.0	94021.	-44.3		29.3	2.6
10.0	102997.	-41.3			

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

DATE  
FILMED  
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