

AD A118934

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1250	2. GOVT ACCESSION NO. AD-A118934	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19310A MLRS Missile Number BN-130, BN-129, BN-128, BN-146, BN-114, BN-166, Round Number V-283/PQ-23 thru V-288/PQ-28	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 and Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002	12. REPORT DATE 21 July 1982	
	13. NUMBER OF PAGES 44	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research and 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 19310A MLRS, Missile Number BN-130, BN-129, BN-128, BN-146, BN-114, BN-166, Round Number V-283/PQ-23 thru V-288/PQ-28 are presented in tabular form.		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CONTENTS	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3
TABLES	
1. Surface Observation Taken at 1352 & 1624 MDT at D-3 $\frac{1}{2}$ -----	4
2. Launch and Impact Area pilot-balloon Measured Wind Data at 1352 MDT-----	5
3. Launch and Impact Area pilot-balloon Measured Wind Data at 1623 MDT-----	6
4. Aiming and T-Time Computer Met Messages-----	7
5. NW-30 Significant Level Data at 0915 MDT-----	9
6. NW-30 Upper Air Data at 0915 MDT-----	10
7. NW-30 Mandatory Levels at 0915 MDT-----	14
8. E-28 Significant Level Data at 1015 MDT-----	15
9. E-28 Upper Air Data at 1015 MDT-----	17
10. E-28 Mandatory Levels at 1015 MDT-----	21
11. E-28 Significant Level Data at 1325 MDT-----	22
12. E-28 Upper Air Data at 1325 MDT-----	24
13. E-28 Mandatory Levels at 1325 MDT-----	28
14. NW-30 Significant Level Data at 1352 MDT-----	29
15. NW-30 Upper Air Data at 1352 MDT-----	30
16. NW-30 Mandatory Levels at 1352 MDT-----	34
17. E-28 Significant Level Data at 1623 MDT-----	35
18. E-28 Upper Air Data at 1623 MDT-----	36
19. E-28 Mandatory Levels at 1623 MDT-----	40

INTRODUCTION

19310A MLRS, Missile Numbers BN-130, BN-129, BN-128, BN-146, BN-114, and BN-166, Round Numbers V-283/PQ-23 thru V-288/PQ-28, were launched from Brillo, White Sands Missile Range (WSMR), New Mexico, at 1352:01, 1352:06, 1352:10, 1622:59, 1623:04, and 1623:09 MDT, 21 Jul 82. The scheduled launch times were 1315, 1315:04.5, 1315:09, 1600, 1600:04.5, and 1600:09. MST.

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

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the D-3 $\frac{1}{2}$ 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 pilot-balloon observations at:

SITE AND ALTITUDE

D-3 $\frac{1}{2}$	2 km	1352 MDT
MAL	2 km	1356 MDT
MAL	2 km	1627 MDT

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

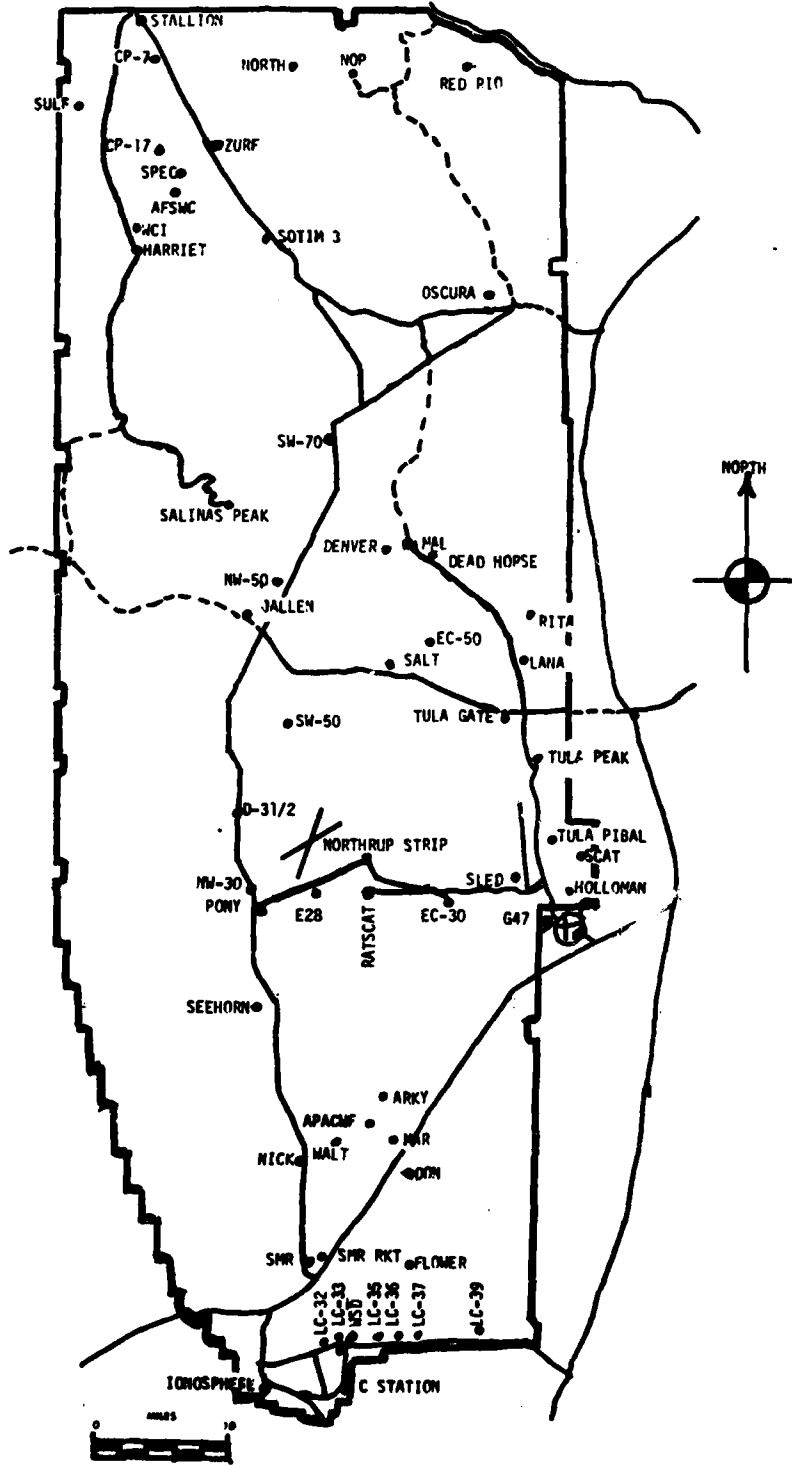
SITE AND TIME

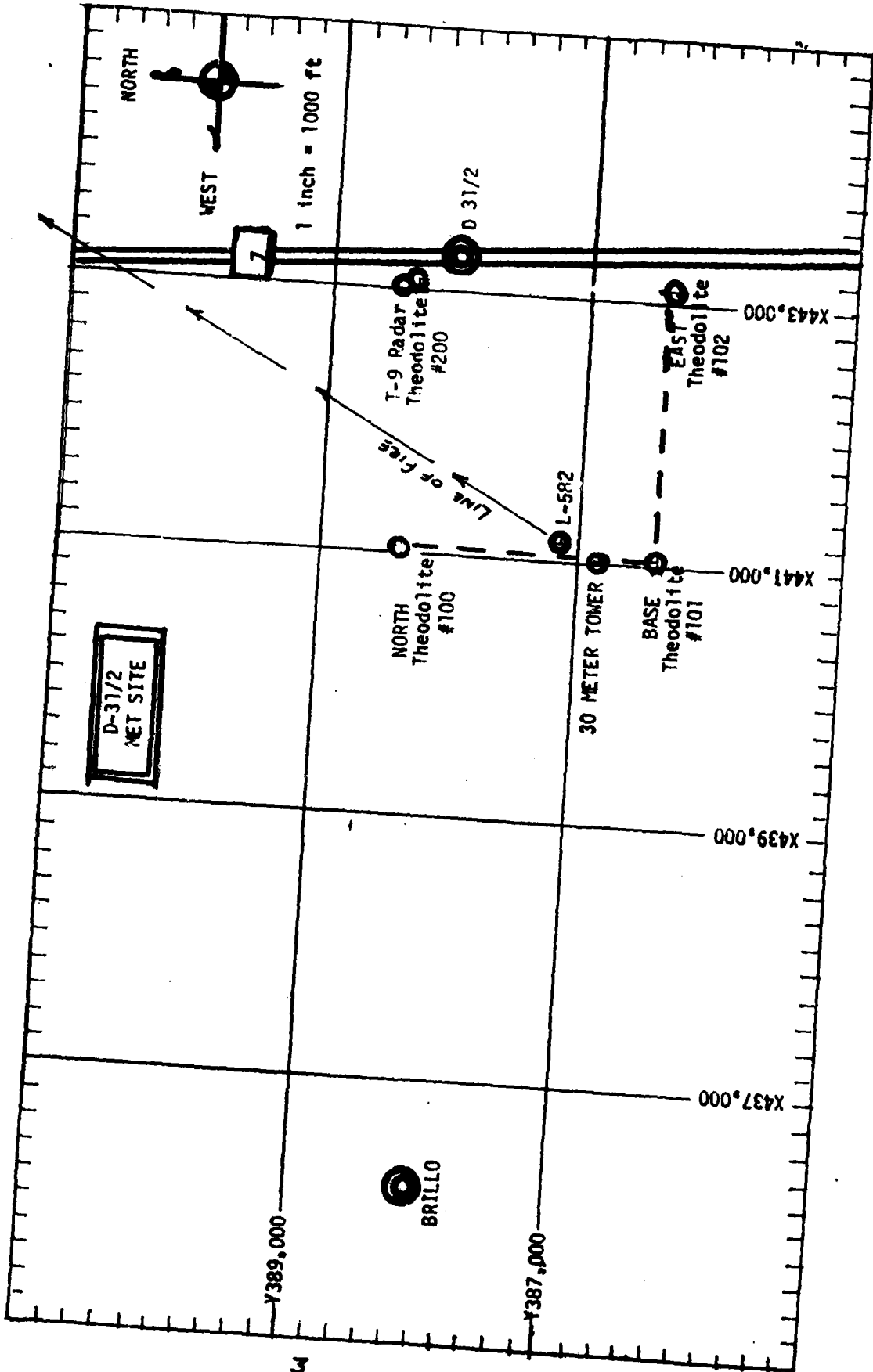
NW-30	0915 MDT
E-28	1015 MDT
E-28	1325 MDT
NW-30	1352 MDT
E-28	1623 MDT



Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE 1 STATION D34

DATE 21 JUL 82 X = 441,121.6 Y = 387,107.8 H = 4005.2

TIME M D I	PRESSURE INCS	TEMPERATURE OF OC	DEW POINT OF OC	RELATIVE HUMIDITY %	DENSITY SW/CS	WIND		VISIBIL- ITY
						DIRECTION DEGS IN	SPEED KTS	
1352	880.2	93.5	56.4	29	990	120	09	40
1624	879.1	96.6	64.4	35	980	100	13	40

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	HGT	AMT	TYPE	HGT	
	7	SC	5000	2	AS	12,000	
	6	SC	6000	1	AS	12,000	

PSYCHROMETRIC COMPUTATION

TIME: MST	1352	1624
DRY BULB TEMP.	93.5	96.6
WET BULB TEMP.	68.2	73.3
WET BULB DEPR.	25.3	23.3
DEW POINT	56.4	64.4
RELATIVE HUMID.	29	35

TABLE 2

U-TIME PILOT-BALLOON MEASUREMENT DATA
 DATE 21 July 1982

SITE: D-3½
 TIME: 1352 MDT
 WSTN COORDINATES:
 X= 441,053.12
 Y= 386,316.94
 H= 4,008.31

SITE: MAL
 TIME: 1356 MDT
 WSTN COORDINATES:
 X= 509,421.05
 Y= 495,563.18
 H= 4,126.81

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	120	09
150	124	04
210	125	05
270	125	05
330	124	06
390	124	06
500	122	06
650	127	06
800	132	07
950	136	10
1150	142	15
1350	146	20
1550	152	17
1750	029	03
2000	093	06

Data obtained from double
 Theodolite Tracked
 pilot-balloon observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	200	02
150	211	11
210	210	12
270	208	12
330	207	12
390	206	12
500	207	12
650	195	11
800	179	10
950	179	11
1150	175	08
1350	168	05
1550	188	03
1750	107	05
2000	079	07

Data obtained from single
 Theodolite Tracked pilot-balloon
 observation.

TABLE 3

WIND PROFILE-OBSERVED METEOROLOGICAL DATA

DATE 21 July 1982

SITE: D-3½
 TIME: 1623 MDT
 WSTN COORDINATES:
 X= 441,053.12
 Y= 386,316.94
 H= 4,008.31

SITE: MAJ
 TIME: 1627 MDT
 WSTN COORDINATES:
 X= 509,421.05
 Y= 495,563.18
 H= 4,126.81

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		
150	DATA	
210	NOT	
270	AVAILABLE	
330		
390		
500		
650		
800		
950		
1150		
1350		
1550		
1750		
2000		

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	170	03
150	141	09
210	140	10
270	142	10
330	144	10
390	144	09
500	140	06
650	130	04
800	120	04
950	107	04
1150	083	04
1350	072	04
1550	047	03
1750	032	03
2000	024	02

Data obtained from single Theodolite
 Tracked pilot-balloon observation.

TABLE 4

AIMING AND T-TIME COMPUTER MET MESSAGES

21 July 1982

NW-30 0915 MDT	E-28 1015 MDT	E-28 1325 MDT
METCM1329065	METCM1329064	METCM1329064
211530121882	211630119885	211940119884
00000000 29900882	00000000 30110885	00000000 31150884
01576004 29930872	01034002 30000875	01275005 30810874
02296004 29940848	02353004 29990850	02253006 30460850
03234007 29670810	03252007 29790812	03257008 30120812
04630004 29410764	04057002 29520767	04161002 29720767
05078002 29040721	05050006 29070723	05131005 29280724
06055001 28610680	06079006 28650682	06120007 28830683
07111008 28170640	07092009 28300642	07102008 28350643
08187006 27770602	08124006 27830604	08097009 27900606
09185006 27380566	09193003 27380568	09018003 27440569
10165006 27010532	10173003 27030534	10630004 27110535
11100007 26700499	11093005 26670501	11091005 26810502
12030004 26250453	12052005 26260455	12141003 26350456
13133006 25650397	13153006 25720399	13182007 25790400
14096016 25000347	14155012 24990349	14187013 25080350
15132017 24240303	15152017 24280304	15159017 24330305
16145013 23420262	16155011 23520264	16102012 23570265
17021009 22630226	17085011 22740227	17123016 22780229
18053011 21920194	18079014 21980195	18166018 21960196
19155015 21210166	19122013 21170167	19142015 21320168
20162014 20650141	20177015 20720142	20176013 20750143
21110020 20370120	21123019 20290120	21130020 20280121
22125025 20350101	22136027 20320102	22146028 20270102
23192022 20840086	23166025 20870086	23173024 20670087
24177018 21130073	24152021 21080073	24163026 20940074
25156029 21100062	25161026 21150063	25191028 21450063
26163031 21490053	26167030 21550053	26173027 21660054

AIMING AND T-TIME COMPUTER MET MESSAGES

21 July 1982

NW-30 1352 MDT	E-28 1623 MDT
METCM1329065	METCM1329064
211990121881	212240119882
00000000 30970881	00160004 31030882
01257006 30820871	01192007 30860872
02154005 30470847	02245008 30560848
03303001 30110810	03274007 30180811
04112003 29670765	04259004 29710766
05140003 29210722	05195002 29230723
06109006 28760681	06181004 28800682
07109006 28300641	07130007 28390642
08092008 27840603	08024006 27940605
09038003 27430567	09015008 27540569
10093003 27180533	10639006 27120534
11141008 26880500	11210004 26860502
12117003 26390455	12203008 26330456
13167007 25740399	13141010 25630400
14181011 25010349	14160011 25050349
15173013 24250304	15155013 24270304
16115012 23470263	16118011 23500264
17126014 22690227	17158012 22660228
18167014 21920195	18174012 21850196
19122014 21280167	19107014 21220167
20165012 20680142	20133014 20610142
21118021 20220120	21145028 20230120
22149029 20350102	22183032 20380102
23166021 20670086	23198016 20660086
24172024 21020073	24208023 20980073
25187025 21320062	25172027 21280062
26161028 21610053	26151028 21540053

STATION ALTITUDE 4010.40 FEET MSL
 21 JULY 62 0915 MDT
 ASCENSION NO. 17

SIGNIFICANT LEVEL DATA
 2020220017
 NM 30

GEODETIC COORDINATES
 32.06497 LAT LLG
 106.49714 LONG LLG

TABLE-5

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
882.5	4010.4	24.2	10.5	42.0
869.1	4444.1	24.3	11.9	46.0
863.4	4633.7	24.9	12.0	47.0
850.0	5084.9	24.6	12.9	48.0
785.1	7356.3	19.9	10.5	54.0
767.1	8014.1	19.8	9.4	51.0
700.0	10581.5	13.8	4.7	54.0
626.1	13633.1	5.7	2.0	77.0
590.0	15224.0	2.4	-2.3	71.0
565.4	16352.1	-1.4	-2.4	86.0
541.1	17503.7	-3.2	-4.5	51.0
500.0	19550.6	-6.5	-9.1	82.0
473.2	20959.3	-10.4	-12.1	67.0
471.0	21076.7	-9.3	-14.0	54.0
463.4	21490.8	-9.3	-15.8	59.0
421.4	23884.2	-14.8	-18.7	72.0
412.3	24427.8	-15.3	-23.1	51.0
400.0	25178.5	-17.0	-23.5	57.0
386.4	26031.8	-17.9	-22.5	67.0
377.4	26611.1	-18.8	-25.2	57.0
314.0	31034.8	-28.8	-36.1	49.0
300.0	32104.3	-31.3	-40.0	39.0
260.2	35370.1	-39.3	-49.4	33.0
250.0	36267.2	-42.0		
200.0	41126.2	-53.0		
182.4	43069.1	-56.5		
164.6	45168.1	-61.5		
150.0	47071.3	-65.9		
132.0	49500.5	-67.4		
123.4	50950.9	-69.9		
113.0	52681.2	-69.6		
103.3	54439.7	-71.2		
100.0	55075.9	-69.6		
80.4	59441.5	-62.7		
70.0	62269.9	-61.3		
60.4	65281.3	-62.9		
50.0	69187.0	-56.2		
34.0	74672.0	-52.2		

STATION ALTITUDE 4010.40 FEET MSL
 21 JULY 82 0915 NDT
 ASCENSION NO. 17

UPPER AIR DATA
 2020220017
 HW 30
 TABLE-6

GEODETIC COORDINATES
 32.80497 LAT DEG
 106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
4010.4	482.3	24.5	10.5	42.0	1026.0	0730.0	.0	.0	1.000284
4500.0	867.4	24.5	12.2	46.3	1009.0	0740.2	144.4	1.8	1.000286
5000.0	852.5	24.7	12.9	47.8	990.7	0745.5	144.4	3.6	1.000284
5500.0	837.8	23.7	12.4	49.1	976.0	0735.5	144.4	5.4	1.000280
6000.0	823.2	22.7	11.9	50.4	963.1	0725.2	140.0	6.1	1.000275
6500.0	809.0	21.7	11.3	51.7	949.9	0715.0	131.7	5.7	1.000270
7000.0	794.9	20.6	10.7	53.1	936.6	0695.0	119.4	4.1	1.000266
7500.0	781.1	19.9	10.1	53.3	923.1	0685.0	72.5	1.9	1.000260
8000.0	767.5	19.8	9.4	51.1	907.3	0675.0	17.1	2.3	1.000254
8500.0	753.9	18.7	8.5	51.6	893.0	0667.4	0.4	2.4	1.000249
9000.0	740.6	17.5	7.6	52.2	882.9	0655.9	12.0	2.3	1.000244
9500.0	727.5	16.3	6.7	52.7	871.1	0645.5	30.7	2.1	1.000238
10000.0	714.7	15.2	5.7	53.3	859.3	0635.1	30.1	1.8	1.000233
10500.0	702.0	14.0	4.8	53.9	847.6	0625.7	18.6	1.4	1.000229
11000.0	689.4	12.7	4.4	57.2	835.3	0616.2	17.0	1.3	1.000225
11500.0	676.9	11.4	4.1	60.9	823.0	0606.6	30.9	1.5	1.000222
12000.0	664.6	10.0	3.7	64.7	811.9	0597.1	30.4	3.2	1.000219
12500.0	652.6	8.7	3.2	68.5	803.0	0587.5	37.1	5.9	1.000216
13000.0	640.8	7.4	2.7	72.2	792.2	0577.9	06.1	7.1	1.000212
13500.0	629.2	6.1	2.2	76.0	781.0	0568.4	74.7	8.0	1.000209
14000.0	617.6	4.9	1.0	75.6	770.3	0559.0	85.3	7.3	1.000204
14500.0	606.2	3.9	.3	73.7	759.4	0549.7	100.0	6.4	1.000199
15000.0	595.0	2.9	-1.7	71.8	748.3	0540.3	108.2	6.2	1.000194
15500.0	583.9	1.7	-2.3	74.7	737.3	0531.0	111.7	6.2	1.000190
16000.0	573.0	.5	-2.3	81.3	727.0	0521.4	107.3	6.1	1.000184
16500.0	562.2	-0.8	-2.7	86.6	716.6	0511.9	100.1	6.1	1.000185
17000.0	551.6	-2.0	-3.6	84.8	706.3	0502.5	97.3	5.7	1.000182
17500.0	541.2	-3.2	-4.4	91.0	695.2	0493.1	95.7	5.3	1.000178
18000.0	530.8	-4.0	-5.0	88.8	685.1	0483.7	88.1	5.5	1.000174
18500.0	520.7	-4.8	-6.7	86.6	674.1	0474.0	80.1	5.9	1.000170
19000.0	510.7	-5.6	-7.8	84.4	663.4	0464.0	67.6	6.3	1.000166
19500.0	501.0	-6.4	-8.9	82.2	652.4	0454.0	50.4	7.0	1.000162
20000.0	491.3	-7.7	-10.0	83.6	643.4	0444.4	31.4	6.6	1.000159
20500.0	481.8	-9.1	-11.1	85.4	634.4	0434.7	40.0	6.2	1.000156
21000.0	472.4	-10.0	-13.0	78.9	624.3	0425.2	37.3	4.8	1.000151
21500.0	463.2	-9.3	-15.8	59.0	610.6	0415.5	23.1	3.8	1.000146
22000.0	454.1	-10.5	-16.4	61.8	601.4	0405.9	9.2	3.9	1.000143
22500.0	445.2	-11.6	-16.9	64.5	592.2	0396.5	39.5	4.2	1.000141
23000.0	436.5	-12.8	-17.6	67.2	583.2	0387.1	1.7	3.9	1.000138
23500.0	427.9	-13.9	-18.2	69.9	574.3	0377.7	4.4	3.6	1.000136

UNPLR AIR DATA
2020220017
1.W 30
TABLE-6 cont'd

STATION ALTITUDE 419.40 F AT MSL
21 JULY 62 0915 MDT
ASCENSION NO. 17

GEOMETRIC ALTITUDE
MSL FEET

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	419.4	-14.9	-19.5	67.5	565.2	620.4	12.2	2.4	1.000133
25000.0	411.1	-15.5	-23.1	51.6	555.3	625.0	33.3	1.3	1.000129
25500.0	402.9	-16.6	-23.4	55.6	540.0	624.3	71.3	3.2	1.000127
25500.0	394.8	-17.3	-23.1	60.8	537.2	621.4	77.7	6.1	1.000125
26000.0	380.9	-17.9	-22.5	66.6	527.5	622.8	77.9	9.2	1.000123
26500.0	374.1	-18.6	-24.6	50.9	518.5	621.0	77.1	12.5	1.000120
27000.0	371.3	-19.7	-26.1	56.3	510.0	620.5	70.5	14.0	1.000118
27500.0	365.7	-20.8	-27.4	55.4	501.6	619.1	60.0	14.7	1.000116
28000.0	356.2	-21.9	-28.6	54.5	493.7	617.7	52.3	15.4	1.000113
28500.0	340.9	-23.1	-29.8	53.6	485.0	616.2	40.1	16.0	1.000111
29000.0	341.7	-24.2	-31.1	52.7	477.9	614.8	48.7	16.1	1.000109
29500.0	334.7	-25.3	-32.3	51.8	470.3	613.4	55.4	16.0	1.000107
30000.0	327.8	-26.5	-33.5	50.9	462.7	612.0	61.0	16.3	1.000105
30500.0	321.1	-27.6	-34.8	50.0	455.3	610.6	67.3	16.9	1.000103
31000.0	314.5	-28.7	-36.0	49.1	448.0	609.2	70.4	17.0	1.000102
31500.0	307.8	-29.9	-38.0	44.7	440.7	607.7	72.2	16.9	1.000100
32000.0	301.3	-31.1	-40.2	40.0	433.5	606.2	74.0	16.8	1.000098
32500.0	294.9	-32.3	-41.7	38.3	426.4	604.7	77.3	16.8	1.000096
33000.0	288.5	-33.5	-43.0	37.4	419.3	603.2	79.9	16.6	1.000094
33500.0	282.3	-34.7	-44.3	36.4	412.4	601.6	82.1	16.3	1.000093
34000.0	276.2	-35.9	-45.7	35.5	405.0	600.0	84.3	16.0	1.000091
34500.0	270.3	-37.2	-47.0	34.6	398.9	598.5	83.8	14.8	1.000089
35000.0	264.4	-38.4	-48.4	33.7	392.4	596.9	83.2	13.6	1.000088
35500.0	258.7	-39.7	-51.1	28.2**	386.0	595.3	80.9	12.4	1.000086
36000.0	253.0	-41.2	-60.8	9.8**	380.0	593.3	77.2	11.2	1.000085
36500.0	247.3	-42.5			373.0	591.0	70.9	9.8	1.000083
37000.0	241.7	-43.7			366.9	590.2	57.3	8.1	1.000082
37500.0	236.2	-44.8			360.4	589.7	38.0	7.2	1.000080
38000.0	230.9	-45.9			354.0	587.3	17.7	7.9	1.000079
38500.0	225.6	-47.1			347.7	585.0	2.0	9.4	1.000077
39000.0	220.5	-48.2			341.5	584.3	33.1	11.0	1.000076
39500.0	215.5	-49.3			335.4	582.0	33.3	12.3	1.000075
40000.0	210.6	-50.5			329.3	581.4	0.0	13.3	1.000073
40500.0	205.8	-51.6			323.0	579.9	0.0	13.1	1.000072
41000.0	201.2	-52.7			317.9	578.4	10.9	13.1	1.000071
41500.0	196.5	-53.6			311.8	577.2	21.0	11.5	1.000069
42000.0	191.9	-54.5			305.7	576.1	30.0	10.0	1.000068
42500.0	187.4	-55.3			299.7	575.0	37.0	9.7	1.000067
43000.0	183.0	-56.2			293.6	573.0	43.0	10.5	1.000065
43500.0	178.6	-57.4			288.4	572.3	46.9	11.9	1.000064

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

STATION ALTITUDE 4010.40 FEET MSL
 21 JULY 62 0915 MDT
 ASCENSION NO. 17

UPPER AIR DATA
 2020220017
 RW 30
 TABLE-6 cont'd

GEODETIC COORDINATES
 32.66497 LAT DEG
 106.49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA		INDEX OF REFRACTION
							WIND SPEED KNOTS	WIND DIRECTION DEGREES(TN)	
44000.0	174.4	-58.6		283.1	570.0	07.5	13.9	1.000063	
44500.0	170.2	-59.8		278.0	569.0	07.0	15.8	1.000062	
45000.0	166.1	-61.1		272.9	567.3	07.1	16.7	1.000061	
45500.0	162.1	-62.3		267.8	565.7	06.5	17.1	1.000060	
46000.0	158.2	-63.4		262.7	564.2	06.4	17.1	1.000059	
46500.0	154.3	-64.6		257.7	562.6	06.7	16.3	1.000057	
47000.0	150.5	-65.7		252.6	561.1	91.5	15.5	1.000056	
47500.0	146.8	-66.2		247.1	560.5	92.5	15.1	1.000055	
48000.0	143.2	-66.5		241.5	560.1	93.6	14.7	1.000054	
48500.0	139.6	-66.8		235.7	559.7	93.2	14.3	1.000052	
49000.0	136.2	-67.1		230.2	559.2	06.2	13.3	1.000051	
49500.0	132.8	-67.4		224.9	558.8	70.1	12.6	1.000050	
50000.0	129.5	-68.3		220.2	557.6	70.7	13.4	1.000049	
50500.0	126.2	-69.1		215.0	556.5	05.7	15.5	1.000048	
51000.0	123.1	-69.9		211.0	555.4	02.4	17.7	1.000047	
52000.0	117.0	-69.8		205.0	555.5	01.9	20.1	1.000046	
52500.0	114.0	-69.7		200.3	555.7	01.6	22.5	1.000045	
53000.0	111.2	-69.6		195.2	555.8	01.4	23.0	1.000043	
53500.0	108.4	-70.3		190.5	555.4	01.2	23.0	1.000042	
54000.0	105.6	-70.8		186.2	554.8	01.0	23.0	1.000041	
54500.0	103.0	-70.8		181.9	554.2	04.1	23.5	1.000041	
55000.0	100.4	-71.0		177.5	553.8	06.0	24.3	1.000040	
55500.0	97.9	-69.8		172.0	553.0	71.0	25.1	1.000038	
56000.0	95.5	-68.9		167.0	550.7	77.9	25.7	1.000037	
56500.0	93.1	-68.1		162.3	557.8	05.9	26.5	1.000036	
57000.0	90.8	-67.3		157.6	550.9	93.2	27.8	1.000035	
57500.0	88.6	-66.6		153.2	560.0	97.0	26.6	1.000034	
58000.0	86.4	-65.8		148.0	561.0	102.2	24.6	1.000033	
58500.0	84.3	-65.0		144.6	562.1	107.5	22.8	1.000032	
59000.0	82.2	-64.2		140.5	563.2	109.0	21.4	1.000031	
59500.0	80.2	-63.4		136.5	564.2	110.2	20.0	1.000030	
60000.0	78.2	-62.7		132.7	565.2	112.1	18.7	1.000030	
60500.0	76.2	-62.4		129.5	565.5	110.5	18.1	1.000029	
61000.0	74.5	-62.2		126.1	565.9	108.0	17.7	1.000028	
61500.0	72.7	-61.9		122.9	566.2	105.4	17.3	1.000027	
62000.0	70.9	-61.7		119.7	566.5	100.7	18.0	1.000027	
62500.0	69.2	-61.4		116.7	566.9	95.0	20.1	1.000026	
63000.0	67.5	-61.4		113.9	566.9	90.4	22.3	1.000025	
63500.0	65.9	-61.7		111.3	566.2	07.7	24.3	1.000025	
		-62.0		108.7	566.2	07.9	25.9	1.000024	

UPPER AIR DATA
 2020220017
 NW 30
 TABLE-6 cont'd

STATION ALTITUDE 4010.00 Feet 1 NSL
 21 JULY 82 0915 PDT
 ASCENSION NO. 17

GEODETLIC COORDINATES
 32.86497 LAT DEG
 106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	WEIGHTY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
04000.0	64.3	-62.2		100.2	565.8	88.0	27.5	1.000024
04500.0	62.8	-62.5		103.6	565.4	88.0	28.4	1.000023
05000.0	61.2	-62.8		101.4	565.1	87.7	28.1	1.000023
05500.0	59.8	-62.5		96.8	565.4	87.3	27.8	1.000022
06000.0	58.3	-61.7		90.1	566.5	87.5	28.1	1.000021
06500.0	56.9	-60.8		93.4	567.7	88.5	29.3	1.000021
07000.0	55.6	-60.0		90.8	568.8	89.3	30.6	1.000020
07500.0	54.3	-59.1		89.3	570.0	90.2	31.9	1.000020
08000.0	53.0	-58.2		85.6	571.1	90.7	32.6	1.000019
08500.0	51.7	-57.4		83.5	572.3	91.1	33.1	1.000019
09000.0	50.5	-56.5		81.1	573.4	91.5	33.6	1.000018
09500.0	49.3	-56.0		79.0	574.1	91.9	34.1	1.000018
70000.0	48.1	-55.6		77.1	574.6	92.7	33.4	1.000017
70500.0	47.0	-55.2		75.1	575.1	93.6	32.6	1.000017
71000.0	45.9	-54.9		73.3	575.6	94.5	31.9	1.000016
71500.0	44.8	-54.5		71.4	576.0	95.4	31.0	1.000016
72000.0	43.8	-54.1		69.6	576.5	96.2	29.8	1.000016
72500.0	42.8	-53.8		67.9	577.0	97.2	28.5	1.000015
73000.0	41.8	-53.4		66.2	577.5			1.000015
73500.0	40.8	-53.1		64.6	578.0			1.000014
74000.0	39.8	-52.7		63.0	578.4			1.000014
74500.0	38.9	-52.3		61.4	578.9			1.000014

STATION ALTITUDE 4010.40 FEET MSL
 21 JULY 52
 ASCENSION NO. 17

MANDATORY LEVELS
 2020220017
 MW 30
 TABLE-7

GEODETIC COORDINATES
 32.88497 LAT DEG
 106.49714 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	MEL. HUMID. PERCENT	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS
650.0	5081.	24.6	12.9	40.	144.4	3.9
600.0	6617.	21.0	11.0	53.	125.1	5.1
750.0	8644.	18.3	8.2	52.	3.0	2.5
700.0	10571.	13.8	4.7	51.	14.9	1.3
650.0	12605.	8.4	3.1	69.	57.9	0.5
600.0	14759.	3.3	-1.1	73.	105.6	0.2
550.0	17056.	-2.2	-3.7	89.	97.1	5.7
500.0	19523.	-6.5	-9.1	62.	55.8	7.0
450.0	22202.	-11.0	-16.0	63.	3.4	4.1
400.0	25137.	-17.0	-23.5	57.	74.5	4.1
350.0	28394.	-22.9	-29.6	54.	46.9	15.9
300.0	32040.	-31.3	-40.6	39.	75.1	10.8
250.0	36188.	-42.0			75.0	10.6
200.0	41026.	-53.0			12.0	13.1
175.0	43820.	-58.4			67.3	13.5
150.0	46944.	-65.9			91.0	15.5
125.0	50552.	-69.5			64.3	10.2
100.0	54906.	-69.6			71.9	25.2
80.0	59346.	-62.6			112.2	16.7
70.0	62056.	-61.3			92.6	21.1
60.0	65182.	-62.7			87.4	27.9
50.0	68927.	-50.2			91.7	33.8
40.0	73616.	-52.8				

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

GEODETIC COORDINATES
 32-09927 LAT DEG
 106-40591 LON DEG

SIGHT ICANI LEVEL DATA
 2020290000
 1-28
 TABLE-8

STATION ALTITUDE 3412.75 FEET MSL
 21 JULY 02 1015 JDT
 ASCENSION NO. 80

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
384.5	3912.7	26.0	44.0
376.3	4161.7	24.2	51.0
359.5	4740.5	25.6	51.0
350.0	5061.6	24.4	51.0
325.0	5820.6	23.5	50.0
317.3	6189.9	23.3	51.0
288.1	7230.5	21.1	54.0
269.1	7925.5	20.9	50.0
200.0	10570.2	13.5	57.0
227.3	13570.4	7.2	74.0
592.1	15127.9	2.4	73.0
566.0	16284.3	-0.6	95.0
534.3	17830.9	-3.6	92.0
516.1	18730.3	-5.4	97.0
500.0	19586.8	-7.4	98.0
490.4	20043.5	-8.2	87.0
477.1	20745.3	-9.4	97.0
468.9	21185.8	-10.5	80.0
453.1	22054.9	-10.3	67.0
427.2	23537.9	-13.8	73.0
413.6	24346.6	-14.3	40.0
400.0	25179.3	-15.6	50.0
350.3	28425.0	-23.5	59.0
336.7	29376.0	-24.8	40.0
300.0	32105.6	-31.1	29.0
260.3	35368.6	-38.6	24.0
250.0	36277.3	-41.1	
200.0	41155.7	-52.1	
161.9	45550.6	-63.4	
150.0	47093.7	-64.3	
123.3	50992.2	-70.2	
104.8	54165.4	-72.1	
102.7	54559.2	-71.6	
100.0	55081.9	-68.7	
80.4	59459.1	-62.5	
70.0	62282.2	-62.3	
61.2	65024.2	-62.0	
55.8	66925.2	-58.9	
50.0	69217.2	-55.8	
42.3	72521.6	-51.4	

GEODETIC COORDINATES
32.09927 LAT DEG
106.40591 LONG DEG

SIGNI, ICAIT LEVEL DATA
2020230030
L-28

STATION ALTITUDE 3412.75 FEET MSL
21 JULY 62 1015 MDT
ASCENSION NO. 80

TABLE-8 cont'd

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	REL. HUM. PERCENT
MILLIBARS	MSL FEET	DEGREES CENTIGRADE	
38.0	75072.7	-51.9	
34.6	77099.7	-47.8	

STATION ALTITUDE 3912.75 FEET MSL
 21 JULY 62 1015 PDT
 ASCENSION NO. 80

UPPER AIR DATA
 2020290000
 1-28

ULODETIC COORDINATES
 32-09927 LAT DEG
 106-40591 LONG DEG

TABLE-9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT	REL. HUM. PERCENT	DENSITY G/M ³ CUBIC METER	SOUND SPEED METERS PER SECOND	WIND DIRECTION DEGREES (TW)	WIND SPEED KNOTS	INDEX OF REFRACTION
3912.7	844.5	26.0	12.6	44.0	1023.5	076.0	0	1.000291	
4000.0	841.8	25.4	13.0	46.3	1022.5	075.5	0.3	1.000292	
4500.0	800.7	25.0	14.2	51.0	1005.5	075.1	2.0	1.000293	
5000.0	811.8	24.6	13.8	51.0	989.5	074.0	3.6	1.000288	
5500.0	837.1	23.9	13.0	50.5	975.0	073.0	5.3	1.000282	
6000.0	822.7	23.4	12.5	50.3	959.9	073.2	5.9	1.000277	
6500.0	800.5	22.6	12.3	51.9	945.0	072.5	7.0	1.000273	
7000.0	794.5	21.6	11.7	53.3	932.9	071.0	4.5	1.000268	
7500.0	780.7	21.0	10.9	52.4	910.0	070.5	3.4	1.000262	
8000.0	767.1	20.7	10.0	50.2	903.9	069.0	2.6	1.000255	
8500.0	753.5	19.3	9.1	51.5	892.4	068.2	2.8	1.000250	
9000.0	740.2	17.9	8.1	52.8	881.1	066.5	3.2	1.000245	
9500.0	727.2	16.5	7.2	54.2	870.0	064.8	3.3	1.000240	
10000.0	714.4	15.1	6.3	55.5	859.0	063.1	3.5	1.000235	
10500.0	701.8	13.7	5.3	56.8	840.2	061.4	3.9	1.000230	
11000.0	689.1	12.6	4.9	59.4	836.1	060.1	4.7	1.000227	
11500.0	676.7	11.6	4.6	62.3	824.0	058.9	6.1	1.000223	
12000.0	664.4	10.5	4.2	65.1	812.2	057.7	7.2	1.000220	
12500.0	652.4	9.5	3.8	67.9	800.5	056.4	8.3	1.000217	
13000.0	640.6	8.4	3.4	70.7	789.0	055.2	9.5	1.000213	
13500.0	629.1	7.4	3.0	73.6	777.7	054.0	9.7	1.000210	
14000.0	617.5	5.9	1.0	73.7	767.7	052.1	9.0	1.000204	
14500.0	606.1	4.3	0	73.4	750.0	050.2	6.4	1.000199	
15000.0	594.9	2.8	-1.5	73.1	740.5	048.5	4.3	1.000194	
15500.0	583.8	1.4	-1.6	80.1	730.1	046.7	3.9	1.000192	
16000.0	572.9	0.1	-1.4	69.6	727.0	045.2	3.7	1.000190	
16500.0	562.2	-1.0	-1.8	94.6	717.0	043.8	3.5	1.000187	
17000.0	551.5	-2.0	-2.9	93.0	706.1	042.0	3.3	1.000183	
17500.0	541.1	-3.0	-4.0	92.6	693.4	041.4	3.0	1.000179	
18000.0	530.8	-3.9	-4.9	92.9	684.5	040.2	2.9	1.000175	
18500.0	520.7	-4.9	-5.5	95.7	674.5	039.0	3.3	1.000172	
19000.0	510.7	-6.1	-6.4	97.3	664.5	037.0	4.5	1.000168	
19500.0	500.9	-7.3	-7.6	97.9	654.0	035.1	5.5	1.000164	
20000.0	491.2	-8.1	-9.8	88.0	644.3	034.9	5.6	1.000159	
20500.0	481.7	-9.0	-9.8	93.5	633.8	033.9	4.7	1.000157	
21000.0	472.3	-10.0	-11.3	90.0	624.1	032.0	4.5	1.000153	
21500.0	463.1	-10.4	-13.3	79.1	613.0	032.0	4.7	1.000149	
22000.0	454.1	-10.3	-15.0	68.2	600.9	032.1	5.3	1.000144	
22500.0	445.2	-11.4	-15.9	68.8	591.5	030.0	5.6	1.000142	
23000.0	436.4	-12.5	-16.7	70.8	582.5	029.4	5.4	1.000139	

STATION ALTITUDE 3412.75 FT ASL
 21 JULY 52 1015 MDT
 ASCENSION NO. 80

UPPER AIR DATA
 2P2029000
 1-29
 TABLE-9 cont'd

GEOMETRIC COORDINATES
 32.39927 LAT DEG
 106.40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	DEW-POINT TEMPERATURE DEGREES	RELATIVE HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
2500.0	427.8	-13.7	-17.5	72.8	573.7	627.9	37.3	5.1	1.000136
2400.0	419.4	-14.1	-20.4	58.7	563.3	627.4	48.0	4.5	1.000132
2300.0	411.1	-14.5	-22.7	49.5	553.2	626.8	67.0	4.5	1.000129
2200.0	402.9	-15.3	-22.4	54.3	543.0	625.8	85.0	5.7	1.000127
2150.0	394.8	-16.4	-23.0	56.3	535.1	624.5	94.0	7.2	1.000125
2100.0	386.8	-17.6	-24.1	56.8	526.8	623.0	95.4	8.8	1.000122
2050.0	379.0	-18.8	-25.1	57.2	518.7	621.5	95.7	9.5	1.000120
2000.0	371.3	-20.0	-26.2	57.7	510.7	620.0	93.7	9.8	1.000118
1950.0	363.8	-21.2	-27.3	58.1	502.6	618.5	92.6	10.1	1.000116
1900.0	356.4	-22.5	-28.3	58.6	495.0	617.0	91.6	10.5	1.000114
1850.0	349.2	-23.6	-29.5	58.0	487.2	615.5	90.9	11.6	1.000112
1800.0	342.0	-24.3	-31.5	51.1	478.5	614.7	90.0	12.7	1.000109
1750.0	334.9	-25.1	-33.5	45.2	470.2	613.7	88.0	13.9	1.000107
1700.0	327.9	-26.2	-35.2	42.1	462.5	612.3	88.0	15.0	1.000105
1650.0	321.1	-27.4	-37.1	39.0	455.0	610.8	86.2	15.8	1.000103
1600.0	314.4	-28.5	-38.9	35.9	447.6	609.4	87.1	16.2	1.000101
1550.0	307.8	-29.7	-40.8	32.8	440.3	607.9	85.4	16.4	1.000099
1500.0	301.3	-30.9	-42.8	29.7	433.2	606.5	82.4	16.5	1.000097
1450.0	294.9	-32.0	-44.2	26.4	426.0	605.0	78.8	16.7	1.000096
1400.0	288.6	-33.2	-45.4	27.6	418.8	603.6	78.0	15.5	1.000094
1350.0	282.3	-34.3	-46.7	26.9	411.6	602.1	80.4	13.8	1.000092
1300.0	276.3	-35.5	-48.0	26.1	404.9	600.7	83.0	11.6	1.000091
1250.0	270.3	-36.6	-49.2	25.3	398.1	599.2	86.7	9.3	1.000089
1200.0	264.5	-37.8	-50.5	24.6	391.4	597.7	89.2	10.0	1.000088
1150.0	258.8	-39.0	-53.1	20.5**	384.9	596.2	89.1	11.0	1.000086
1100.0	253.1	-40.3	-52.3	7.3**	378.7	594.4	86.9	11.4	1.000084
1050.0	247.5	-41.6			372.3	592.8	84.4	11.8	1.000083
1000.0	241.9	-42.7			365.7	591.4	76.1	11.1	1.000081
950.0	236.4	-43.9			359.2	589.9	85.9	10.6	1.000080
900.0	231.1	-45.0			352.6	588.5	51.2	10.8	1.000079
850.0	225.8	-46.1			346.5	587.0	39.1	11.2	1.000077
800.0	220.7	-47.2			340.4	585.5	30.7	11.2	1.000076
750.0	215.7	-48.4			334.3	584.1	44.0	11.6	1.000074
700.0	210.4	-49.5			328.4	582.6	30.0	12.2	1.000073
650.0	205.1	-50.6			322.6	581.1	36.2	13.0	1.000072
600.0	201.4	-51.7			316.9	579.7	42.2	14.2	1.000071
550.0	196.7	-53.0			311.2	578.1	47.3	15.5	1.000069
500.0	192.0	-54.3			305.7	576.4	46.0	15.0	1.000068
450.0	187.5	-55.6			300.2	574.7	49.3	14.2	1.000067
400.0	183.0	-56.8			294.8	573.0	53.6	13.2	1.000066

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

STATION ALTITUDE 3412.75 FEET MSL
 21 JULY 62
 ASCENSION NO. 60

UPPER AIR DATA
 2020250000
 E-28

GEODETIC COORDINATES
 32.89927 LAT DEG
 106.40591 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 DIRECTION (MILES PER HOUR)	WIND SPEED (KNOTS)	INDEX OF REFRACTION
43500.0	178.7	-58.1		289.5	571.5	58.0	12.2	1.000064
44000.0	174.4	-59.4		284.5	569.0	64.1	12.4	1.000063
44500.0	170.3	-60.7		279.2	567.0	69.1	12.8	1.000062
45000.0	166.2	-62.0		274.3	565.1	70.2	12.9	1.000061
45500.0	162.3	-63.3		269.4	564.4	70.9	13.0	1.000060
46000.0	158.5	-63.7		265.5	563.9	77.3	12.9	1.000059
46500.0	154.5	-64.0		257.2	563.5	84.2	13.0	1.000057
47000.0	150.7	-64.2		251.5	563.1	95.6	13.8	1.000056
47500.0	147.0	-64.9		245.9	562.2	104.0	15.0	1.000055
48000.0	143.3	-65.7		240.0	561.2	104.9	15.1	1.000054
48500.0	139.8	-66.4		235.5	560.1	105.2	15.1	1.000052
49000.0	136.3	-67.2		230.5	559.1	95.3	14.7	1.000051
49500.0	132.9	-67.9		225.6	558.1	84.0	14.7	1.000050
50000.0	129.6	-68.7		220.0	557.0	78.7	14.9	1.000049
50500.0	126.4	-69.5		216.2	556.0	73.6	15.3	1.000048
51000.0	123.3	-70.2		211.0	555.0	70.7	16.8	1.000047
51500.0	120.1	-70.5		206.5	554.6	69.4	18.9	1.000046
52000.0	117.1	-70.8		201.6	554.2	68.5	21.1	1.000045
52500.0	114.1	-71.1		196.8	553.0	67.9	23.4	1.000044
53000.0	111.2	-71.4		192.1	553.4	67.5	25.6	1.000043
53500.0	108.4	-71.7		187.5	552.9	69.0	25.6	1.000042
54000.0	105.7	-72.0		183.0	552.5	70.5	25.6	1.000041
54500.0	103.0	-71.7		178.1	553.0	73.5	26.2	1.000040
55000.0	100.4	-69.2		171.5	550.4	76.3	26.9	1.000038
55500.0	97.9	-68.1		166.4	557.9	80.0	28.1	1.000037
56000.0	95.5	-67.4		161.7	558.8	85.5	29.7	1.000036
56500.0	93.2	-66.7		157.2	559.8	89.6	30.1	1.000035
57000.0	90.9	-66.0		152.8	560.7	93.5	28.5	1.000034
57500.0	88.6	-65.3		148.0	561.7	96.7	26.7	1.000033
58000.0	86.5	-64.6		144.4	562.0	94.9	24.0	1.000032
58500.0	84.3	-63.9		140.4	563.0	92.7	21.4	1.000031
59000.0	82.3	-63.2		136.5	564.0	93.0	21.2	1.000030
59500.0	80.2	-62.5		132.7	565.4	95.0	20.9	1.000030
60000.0	78.3	-62.5		129.5	565.5	95.4	21.0	1.000029
60500.0	76.4	-62.4		126.5	565.5	95.7	21.2	1.000028
61000.0	74.5	-62.4		123.2	565.0	90.0	21.4	1.000027
61500.0	72.7	-62.4		120.2	565.0	85.5	21.9	1.000027
62000.0	71.0	-62.3		117.5	565.7	78.5	22.7	1.000026
62500.0	69.5	-62.3		114.4	565.7	76.2	23.6	1.000025
63000.0	67.6	-62.2		111.6	565.8	68.0	24.5	1.000025

UNPLR AIR DATA
2020290000
L-28
TABLE-9 cont'd

STATION ALTITUDE 3912.75 FEET MSL
21 JULY 52 1015 MDT
ASLMSJUH: NO. 80

GEOMETRIC ALTITUDE MSL FEET

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) SPEED (KNOTS)	INDEX OF REFRACTION
63500.0	63.9	-62.2	100.0	100.9	565.9	93.1	25.1	1.000024
64000.0	64.3	-62.1	100.0	100.2	565.9	87.5	25.7	1.000024
64500.0	64.8	-62.1	100.0	100.0	566.0	91.4	26.4	1.000023
65000.0	65.3	-62.0	101.1	98.5	567.1	91.2	26.4	1.000022
65500.0	65.8	-61.2	98.5	95.0	566.2	92.1	26.8	1.000021
66000.0	66.4	-60.4	92.9	92.9	569.3	93.5	27.2	1.000021
66500.0	67.0	-59.6	87.9	90.4	570.4	94.4	27.7	1.000020
67000.0	67.6	-58.8	87.9	87.9	571.5	94.7	28.2	1.000020
67500.0	68.1	-58.1	85.0	85.0	572.2	94.6	28.7	1.000019
68000.0	68.7	-57.4	83.5	83.5	573.1	95.6	28.3	1.000019
68500.0	69.3	-56.8	81.1	81.1	574.0	96.3	27.9	1.000018
69000.0	69.9	-56.1	78.9	78.9	574.5	98.7	27.5	1.000018
69500.0	70.5	-55.4	76.9	76.9	575.7	102.7	27.5	1.000017
70000.0	71.1	-54.8	74.9	74.9	576.8	100.3	27.5	1.000017
70500.0	71.7	-54.1	72.9	72.9	577.5	105.0	27.2	1.000016
71000.0	72.3	-53.4	71.0	71.0	578.4	105.2	26.9	1.000016
71500.0	72.9	-52.8	69.1	69.1	579.2	102.6	26.7	1.000015
72000.0	73.5	-52.1	67.5	67.5	580.1	96.9	26.7	1.000015
72500.0	74.1	-51.4	65.6	65.6	580.0	96.0	26.8	1.000015
73000.0	74.7	-51.5	64.5	64.5	579.9	95.5	27.1	1.000014
73500.0	75.3	-51.6	62.8	62.8	579.8	95.0	27.3	1.000014
74000.0	75.9	-51.7	61.4	61.4	579.8	97.5	27.5	1.000014
74500.0	76.5	-51.8	60.0	60.0	579.5	100.6	27.5	1.000013
75000.0	77.1	-51.9	58.4	58.4	580.8			1.000013
75500.0	77.7	-51.0	56.6	56.6	581.9			1.000013
76000.0	78.3	-50.0	55.3	55.3	583.2			1.000012
76500.0	78.9	-49.0	53.8	53.8	584.8			1.000012
77000.0	79.5	-48.0						1.000012

STATION ALTITUDE 3412.75 FEET MSL
 21 JULY 62
 ASCENSION NO. 80

MANDATORY LEVELS
 2120250000
 L-28
 TABLE-10

GEODETIC COORDINATES
 32.89927 LAT DEG
 106.40591 LON DEG

PRESSURE (GEOPOTENTIAL MILLIBARS)	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	WIND DATA		
					DIRECTION DEGREES(TN)	SPEED KNOTS	SPEED KNOTS
850.0	5058.	24.4	13.0	51.	163.0	3.8	
800.0	6798.	22.0	11.9	53.	105.0	3.4	
750.0	8631.	18.9	8.8	52.	23.7	2.9	
700.0	10560.	13.5	5.2	57.	29.6	3.9	
650.0	12596.	9.2	3.8	60.	52.5	5.6	
600.0	14757.	3.5	-0.8	73.	84.2	5.0	
550.0	17053.	-2.1	-3.0	93.	98.3	3.2	
500.0	19520.	-7.4	-7.7	98.	51.2	3.6	
450.0	22195.	-10.7	-10.7	60.	20.7	3.5	
400.0	25138.	-15.6	-15.6	53.	90.4	0.1	
350.0	28394.	-23.5	-23.5	59.	91.0	11.4	
300.0	32042.	-31.1	-43.2	29.	81.7	10.6	
250.0	36198.	-41.1			85.9	11.7	
200.0	41056.	-52.1			43.7	14.6	
175.0	43847.	-59.2			63.5	12.3	
150.0	46966.	-64.3			96.7	14.0	
125.0	50577.	-69.8			71.7	13.5	
100.0	54912.	-68.7			76.6	27.0	
80.0	59364.	-62.5			93.2	20.9	
70.0	62068.	-62.3			77.2	23.2	
60.0	65195.	-61.3			91.2	26.4	
50.0	68957.	-55.8			96.6	27.7	
40.0	73678.	-51.7			95.1	27.3	

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

STATION ALTITUDE 3912.75 FEET MSL
 21 JULY 62 1325 (DT)
 ASCENSION NO. 81

SIGNIFICANT LEVEL DATA
 202090001

GEODLTIC COORDINATES
 32.3927 LAT UEG
 106.40591 LON UEG

L-23

TABLE-11
 TEMPERATURE
 AIR DEWPOINT
 DEGREES CENTIGRADE

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
883.5	3912.7	35.3	38.0
877.9	4102.3	32.7	40.0
850.0	5054.3	29.0	43.0
761.1	8248.5	21.7	46.0
700.0	10610.9	15.5	53.0
614.5	14184.7	5.6	73.0
581.5	15662.4	1.9	92.0
570.6	16163.9	.0	95.0
554.7	16908.1	-1.4	97.0
500.0	19611.0	-6.0	94.0
476.7	20837.5	-8.0	80.0
454.4	22057.1	-10.9	89.0
434.7	23177.1	-11.8	89.0
406.1	24883.4	-14.8	58.0
400.0	25260.3	-15.2	54.0
390.1	25882.2	-16.6	51.0
385.5	26175.4	-17.1	33.0
371.7	27071.9	-19.2	43.0
358.3	27967.3	-21.4	31.0
351.3	28445.6	-22.1	49.0
330.0	29948.9	-25.9	58.0
306.7	31680.8	-30.0	51.0
300.0	32198.5	-30.4	42.0
294.3	32646.7	-31.4	25.0
270.7	34576.3	-36.3	21.0
257.6	35683.7	-39.8	22.0
250.0	36374.8	-40.2	
211.7	40035.8	-49.8	
200.0	41252.9	-52.9	
178.5	43666.5	-58.0	
150.0	47208.8	-63.8	
136.0	49171.5	-67.7	
110.2	53298.3	-72.5	
100.0	55191.6	-70.4	
95.5	56100.9	-67.3	
77.6	60249.7	-65.5	
70.0	62336.0	-62.2	
62.3	64737.6	-58.0	
56.8	66666.0	-57.0	
50.0	69338.7	-56.1	

GEODETIC COORDINATES
32.34927 LAT DEG
106.40591 LON DEG

SIGNIFICANT LEVEL DATA
2020290081
1-78

STATION ALTITUDE 3912.75 FEET MSL
21 JULY 62
ASCENSION NO. 81 1325 MDT

TABLE-11 cont'd

PRESSURE	GEOMETRIC	TEMPERATURE	REL HUM.
MILLIBARS	ALTITUDE	AIR	PERCENT
	MSL FEET	DEGREES	
		CENTIGRADE	
43.5	7285.5	-53.0	

STATION ALTITUDE 3912.75 FEET MSL
 21 JULY 82
 ASCENSION NO. 81 1325 MDT

UPPER AIR DATA
 2020290001
 L-28
 TABLE-12

GEODETIC COORDINATES
 32.09927 LAT DEG
 106.40591 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION OF WIND DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3912.7	863.5	35.3	18.8	38.0	988.5	687.4	0.0	0.0	1.000307
4000.0	860.9	34.1	18.1	38.9	989.8	686.0	147.9	.4	1.000304
4500.0	850.1	31.2	16.4	41.3	983.4	682.4	147.9	2.6	1.000296
5000.0	851.6	29.2	15.3	42.8	973.0	680.1	147.9	4.8	1.000289
5500.0	837.0	28.0	14.4	43.4	961.1	678.0	140.0	7.0	1.000283
6000.0	822.6	26.8	13.5	43.9	948.5	677.2	143.5	7.6	1.000277
6500.0	808.5	25.7	12.7	44.4	930.1	675.8	137.9	7.5	1.000271
7000.0	794.7	24.6	11.8	44.8	923.6	674.4	120.5	6.0	1.000265
7500.0	781.1	23.4	10.9	45.3	911.7	673.0	94.2	4.1	1.000259
8000.0	767.7	22.3	10.0	45.8	899.0	671.0	64.5	2.4	1.000254
8500.0	754.3	21.0	9.2	46.7	886.0	670.2	54.0	3.3	1.000249
9000.0	741.1	19.7	8.5	48.2	870.5	668.6	03.0	4.7	1.000244
9500.0	728.1	18.4	7.7	49.7	863.2	667.0	09.5	5.3	1.000240
10000.0	715.3	17.1	6.9	51.2	854.0	665.5	73.9	5.9	1.000235
10500.0	702.8	15.8	6.2	52.7	843.0	663.9	71.3	6.2	1.000227
11000.0	690.1	14.4	5.6	55.2	831.9	662.3	06.0	6.8	1.000223
11500.0	677.7	13.0	5.0	58.0	820.9	660.7	06.0	7.0	1.000219
12000.0	665.4	11.7	4.3	60.8	810.1	659.0	00.0	7.2	1.000216
12500.0	653.4	10.3	3.7	63.6	799.5	657.4	50.1	8.2	1.000212
13000.0	641.6	8.9	3.0	66.4	789.0	655.7	50.0	9.0	1.000208
13500.0	630.0	7.5	2.2	69.2	778.7	654.1	50.0	9.4	1.000204
14000.0	618.7	6.1	1.4	72.0	768.5	652.4	55.0	8.7	1.000201
14500.0	607.5	4.8	1.1	77.1	758.0	650.9	52.0	7.3	1.000199
15000.0	596.1	3.6	1.0	83.5	747.3	649.4	43.0	5.2	1.000193
15500.0	585.0	2.3	.8	89.9	736.8	647.9	34.2	2.8	1.000188
16000.0	574.1	.6	-2	94.0	727.7	646.9	34.0	2.9	1.000185
16500.0	563.4	-6	-1.2	95.9	717.5	645.3	18.9	3.6	1.000176
17000.0	552.7	-1.6	-2.0	96.9	706.4	643.2	35.9	4.3	1.000169
17500.0	542.2	-2.4	-2.9	96.3	695.3	642.1	00.1	5.8	1.000161
18000.0	531.9	-3.3	-3.8	95.8	684.3	641.1	00.0	5.9	1.000156
18500.0	521.8	-4.1	-4.8	95.2	673.5	640.0	04.0	5.1	1.000150
19000.0	511.9	-5.0	-5.7	94.7	662.9	638.9	04.0	2.7	1.000148
19500.0	502.1	-5.8	-6.6	94.1	652.5	637.9	00.0	1.8	1.000144
20000.0	492.5	-6.6	-8.1	89.6	642.1	636.0	00.0	1.5	1.000140
20500.0	483.0	-7.4	-9.7	83.9	631.8	635.0	00.0		
21000.0	473.7	-8.4	-11.0	81.2	621.9	634.0	00.0		
21500.0	464.5	-9.6	-11.6	84.9	612.0	633.1	00.0		
22000.0	455.4	-10.8	-12.3	88.6	603.5	631.7	00.0		
22500.0	446.5	-11.3	-13.8	81.1	592.9	631.0	00.0		
23000.0	437.8	-11.7	-15.6	72.2	582.5	630.5	00.0		

STATION ALTITUDE 3947 FT MSL
 21 JULY 62
 ASLMSV: NO. 61

UPLR AIR DATA
 2620290001
 L-23
 TABLE-12 cont'd

GEODETIK COORDINATES
 32.09927 LAT DEG
 106.40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION SPEED KNOTS	INDEX OF REFRACTION
23500.0	429.1	-12.4	-17.2	66.9	572.5	629.0	115.0	1.000136
24000.0	420.7	-13.2	-19.6	63.7	563.1	620.5	110.5	1.000133
24500.0	412.4	-14.1	-20.1	60.5	554.0	627.4	103.7	1.000130
25000.0	404.2	-14.9	-21.6	56.8	544.7	620.5	96.0	1.000128
25500.0	396.2	-15.7	-23.1	52.8	535.7	625.5	90.0	1.000125
26000.0	388.2	-16.8	-24.2	43.8	527.2	624.0	100.4	1.000122
26500.0	380.4	-17.9	-29.1	36.6	518.9	622.0	102.0	1.000119
27000.0	372.8	-19.0	-28.6	42.2	510.6	621.2	104.7	1.000117
27500.0	365.2	-20.3	-31.0	37.3	502.9	619.7	102.9	1.000115
28000.0	357.8	-21.4	-33.6	32.2	495.0	618.2	100.0	1.000112
28500.0	350.5	-22.2	-29.9	49.3	486.4	617.5	106.7	1.000111
29000.0	343.3	-23.5	-30.5	52.3	478.6	615.7	110.2	1.000110
29500.0	336.2	-24.8	-31.1	55.3	471.5	614.1	106.1	1.000108
30000.0	329.3	-26.0	-31.8	57.8	464.0	612.0	105.5	1.000106
30500.0	322.4	-27.2	-33.3	55.8	456.5	611.1	100.7	1.000104
31000.0	315.7	-28.4	-34.8	53.8	449.1	609.0	97.1	1.000102
31500.0	309.1	-29.6	-36.3	51.7	441.9	606.1	93.0	1.000100
32000.0	302.6	-30.2	-38.2	45.5	433.8	607.3	89.0	1.000098
32500.0	296.2	-31.1	-42.7	30.6	426.1	606.2	80.9	1.000096
33000.0	289.8	-32.3	-45.9	24.3	419.2	604.0	72.9	1.000094
33500.0	283.6	-33.6	-47.4	23.2	412.4	603.0	64.9	1.000092
34000.0	277.5	-34.8	-48.9	22.2	405.7	601.4	61.5	1.000091
34500.0	271.6	-36.1	-50.4	21.2	399.1	599.0	61.0	1.000089
35000.0	265.7	-37.6	-51.6	21.4	393.0	597.9	59.0	1.000088
35500.0	259.9	-39.2	-52.8	21.8	387.0	595.9	58.5	1.000087
36000.0	254.2	-40.0	-58.3	11.9**	379.6	594.9	58.2	1.000085
36500.0	248.6	-40.5			372.5	594.2	58.1	1.000083
37000.0	243.0	-41.8			366.0	592.5	61.5	1.000082
37500.0	237.5	-43.2			359.8	590.0	65.0	1.000080
38000.0	232.2	-44.5			353.7	589.1	60.0	1.000079
38500.0	227.0	-45.8			347.6	587.4	68.1	1.000077
39000.0	221.9	-47.1			341.5	585.0	71.2	1.000076
39500.0	216.9	-48.4			336.2	584.0	74.0	1.000075
40000.0	212.0	-49.7			330.0	582.5	60.1	1.000074
40500.0	207.2	-51.0			324.6	580.7	65.7	1.000072
41000.0	202.4	-52.3			319.2	579.0	90.4	1.000071
41500.0	197.7	-53.4			313.4	577.5	94.0	1.000070
42000.0	193.0	-54.5			307.5	576.1	95.9	1.000068
42500.0	188.5	-55.5			301.7	574.7	96.0	1.000067
43000.0	184.0	-56.6			296.1	573.5	93.1	1.000066

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

UPPER AIR DATA
 2020290061
 L-28

STATION ALTITUDE 3912.75 FEET MSL
 21 JULY 62 1325 MDT
 ASCENSION NO. 81

GEODETIC COORDINATES
 32.8927 LAT DEG
 106.40591 LONG DEG

TABLE-12 cont'd

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 DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	179.7	-57.6		290.5	571.9	97.3	12.7	1.000065
44000.0	175.4	-58.5		284.8	570.7	74.6	13.0	1.000063
44500.0	171.2	-59.4		279.0	569.8	75.0	13.7	1.000062
45000.0	167.1	-60.2		273.3	568.5	79.2	14.8	1.000061
45500.0	163.0	-61.0		267.7	567.4	83.0	15.9	1.000060
46000.0	159.1	-61.8		262.3	566.3	87.0	16.0	1.000058
46500.0	155.3	-62.6		257.0	565.2	92.5	16.2	1.000057
47000.0	151.5	-63.5		251.7	564.1	96.2	16.2	1.000056
47500.0	147.8	-64.4		246.7	562.9	99.6	16.3	1.000055
48000.0	144.2	-65.4		241.8	561.8	97.5	14.8	1.000054
48500.0	140.6	-66.4		236.9	560.2	94.4	13.3	1.000053
49000.0	137.2	-67.4		232.2	558.9	87.9	11.2	1.000052
49500.0	133.7	-68.1		227.2	557.9	78.4	9.5	1.000051
50000.0	130.4	-68.7		222.1	557.1	76.0	10.9	1.000049
50500.0	127.1	-69.2		217.1	556.3	75.7	12.9	1.000048
51000.0	123.9	-69.8		212.3	555.5	76.3	17.0	1.000047
51500.0	120.8	-70.4		207.5	554.7	76.9	21.8	1.000046
52000.0	117.7	-71.0		202.9	553.9	77.4	24.8	1.000045
52500.0	114.8	-71.6		198.4	553.1	78.0	27.0	1.000044
53000.0	111.9	-72.2		193.9	552.3	77.0	27.8	1.000043
53500.0	109.1	-72.3		189.1	552.2	77.1	27.3	1.000042
54000.0	106.3	-71.7		183.8	552.9	77.3	27.1	1.000041
54500.0	103.6	-71.2		178.7	553.7	79.0	27.0	1.000040
55000.0	101.0	-70.6		173.7	554.4	81.0	27.2	1.000039
55500.0	98.5	-69.3		168.3	555.2	89.2	28.3	1.000037
56000.0	96.0	-67.6		162.7	556.5	95.9	29.8	1.000036
56500.0	93.6	-67.1		156.3	559.2	97.0	28.9	1.000035
57000.0	91.3	-66.9		154.2	559.3	94.4	27.8	1.000034
57500.0	89.0	-66.7		150.2	559.8	98.3	25.3	1.000033
58000.0	86.8	-66.5		146.4	560.1	95.0	22.2	1.000032
58500.0	84.7	-66.3		142.8	560.4	92.2	20.1	1.000031
59000.0	82.6	-66.0		138.9	560.7	92.2	19.9	1.000030
59500.0	80.6	-65.8		135.4	560.9	92.0	19.9	1.000030
60000.0	78.6	-65.6		131.9	561.2	91.0	21.6	1.000029
60500.0	76.6	-65.1		128.3	561.9	90.2	23.3	1.000029
61000.0	74.8	-64.3		124.7	563.0	90.9	25.1	1.000028
61500.0	73.0	-63.5		121.2	564.1	91.0	26.9	1.000027
62000.0	71.2	-62.7		117.8	565.1	95.3	28.2	1.000026
62500.0	69.4	-61.9		114.5	566.2	101.0	29.2	1.000025
63000.0	67.8	-61.0		111.3	567.4	105.2	30.1	1.000025

STATION ALTITUDE 3412.75 Ft. 1 MSL
 21 JULY 62 1325 MDT
 ASCENSION NO. 81

UNPLD. AIR DATA
 2020290001
 E-28

GEODETIC COORDINATES
 32.09927 LAT UEG
 106.40591 LOJ UEG

TABLE-12 cont'd

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 DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	60.2	-60.2		105.2	508.0	106.4	29.9	1.000024
64000.0	64.6	-59.3		105.2	569.7	107.6	29.7	1.000023
64500.0	63.0	-58.4		102.2	570.9	106.5	29.1	1.000023
65000.0	61.5	-57.9		99.6	571.0	104.2	28.5	1.000022
65500.0	60.1	-57.6		97.1	572.0	102.1	27.8	1.000022
66000.0	58.6	-57.3		94.7	572.9	101.2	26.7	1.000021
66500.0	57.3	-57.1		92.3	572.8	100.3	25.7	1.000021
67000.0	55.9	-56.9		90.0	572.9	99.1	25.8	1.000020
67500.0	54.6	-56.7		87.9	573.1	97.6	26.5	1.000020
68000.0	53.3	-56.6		85.7	573.4	96.7	27.3	1.000019
68500.0	52.0	-56.4		83.6	573.0	96.1	27.7	1.000019
69000.0	50.8	-56.2		81.6	573.0	95.5	28.1	1.000018
69500.0	49.6	-55.9		79.6	574.2	95.2	27.4	1.000018
70000.0	48.5	-55.4		77.5	574.9	95.1	26.3	1.000017
70500.0	47.3	-54.9		75.5	573.0			1.000017
71000.0	46.2	-54.4		73.6	570.3			1.000016
71500.0	45.1	-53.8		71.7	570.9			1.000016
72000.0	44.1	-53.3		69.9	577.0			1.000016

STATION ALTITUDE 3912.75 FEET MSL
 21 JULY 62
 ASCENSION NO. 01 1325 YDT

MANDATORY LEVELS
 2020290001
 L-28
 TABLE-13

GEODETIC COORDINATES
 32.09927 LAT DEG
 106.40591 LONG DEG

PRESSURE MILLIBARS	POTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	WIND DATA DIRECTION SPEED KNOTS
850.0	5051.	29.0	43.	147.9
800.0	6812.	25.0	45.	140.3
750.0	8659.	20.6	47.	60.2
700.0	10601.	15.5	53.	73.8
650.0	12646.	9.9	64.	59.1
600.0	14809.	4.0	81.	53.7
550.0	17110.	-1.0	97.	32.9
500.0	19584.	-6.0	94.	53.9
450.0	22269.	-11.1	85.	87.9
400.0	25218.	-15.2	54.	94.4
350.0	28483.	-22.3	50.	106.9
300.0	32134.	-30.4	42.	80.3
250.0	36295.	-40.2		58.2
200.0	41153.	-52.9		92.4
175.0	43941.	-58.6		79.1
150.0	47081.	-63.8		97.5
125.0	50691.	-69.6		70.0
100.0	55021.	-70.4		84.3
80.0	59441.	-65.8		91.0
70.0	62122.	-62.2		98.9
60.0	65286.	-57.6		102.1
50.0	69077.	-56.1		95.3

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

STATION ALTITUDE 4010.40 FEET MSL
 21 JULY 62 1352 PDT
 ASSURSION NO. 19

SIGNIFICANT LEVEL DATA
 202020019
 1 M 30
 TABLE-14

GEODETIC COORDINATES
 32.00497 LAT DEG
 106.44714 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
880.7	4010.4	35.0	20.0
850.0	5058.9	30.1	27.0
772.3	7830.0	22.7	40.0
700.0	10612.8	15.3	40.0
570.3	16174.7	.0	94.0
543.4	17447.1	-1.3	82.0
500.0	19517.6	-5.0	74.0
458.7	21829.2	-9.8	71.0
441.2	22816.7	-10.3	55.0
420.0	24022.2	-13.3	40.0
400.0	25274.3	-16.0	32.0
376.8	26748.8	-18.6	34.0
360.6	27822.0	-21.3	51.0
348.7	28633.9	-23.3	38.0
300.0	32200.4	-31.4	59.0
283.5	33511.8	-34.3	26.0
275.3	34185.5	-36.1	22.0
250.0	36365.9	-41.3	
200.0	41234.6	-52.8	
193.6	41822.8	-55.1	
188.7	42462.0	-55.4	
150.0	47185.9	-64.6	
120.5	50573.1	-70.1	
112.9	52793.0	-72.2	
109.9	53316.9	-71.5	
106.1	54003.4	-69.9	
100.0	55169.4	-69.0	
70.0	62319.9	-62.0	
50.0	69291.4	-56.0	
30.2	74488.2	-52.5	

GEOMETRIC COORDINATES
 32.66497 LAT DEG
 106.49714 LONG DEG

UNPLD AIR DATA
 2020220019
 JAN 30
 TABLE-15

STATION ALTITUDE 4010.40 FEET MSL
 21 JULY 62
 ASCENSION NO. 19

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TW)	WIND SPEED KNOTS	INDEX OF REFRACTION
4010.4	880.7	35.0	20.0	990.6	685.5	00	0.0	1.000260
4500.0	860.2	32.7	23.3	981.6	683.1	117.5	0.3	1.000265
5000.0	851.7	30.4	26.6	972.5	680.5	117.5	0.6	1.000264
5500.0	837.2	28.9	29.1	960.4	675.9	117.5	0.9	1.000262
6000.0	822.8	27.6	31.4	948.0	677.4	117.5	1.2	1.000260
6500.0	808.8	26.3	33.7	935.9	675.9	117.5	1.2	1.000257
7000.0	794.9	24.9	36.1	924.0	674.4	122.0	1.0	1.000255
7500.0	781.3	23.6	38.4	912.2	672.9	125.0	0.8	1.000252
8000.0	767.8	22.3	40.4	900.0	671.4	05.0	1.4	1.000248
8500.0	754.4	20.9	41.4	889.0	669.8	06.0	2.6	1.000243
9000.0	741.1	19.6	42.5	877.6	668.2	06.0	3.1	1.000238
9500.0	728.1	18.3	43.6	866.3	666.6	70.0	3.2	1.000234
10000.0	715.4	16.9	44.7	855.2	665.0	09.7	3.7	1.000229
10500.0	702.8	15.6	45.8	844.2	663.4	00.2	4.4	1.000225
11000.0	690.1	14.2	49.3	832.0	661.9	04.2	5.1	1.000222
11500.0	677.5	12.9	53.7	821.5	660.3	04.2	5.7	1.000219
12000.0	665.1	11.5	58.0	810.4	658.7	04.2	6.0	1.000217
12500.0	653.0	10.1	62.3	799.5	657.1	04.0	6.1	1.000215
13000.0	641.1	8.7	66.6	788.7	655.3	02.0	6.5	1.000212
13500.0	629.4	7.4	70.9	778.2	653.9	00.2	7.0	1.000208
14000.0	617.9	6.0	75.2	767.8	652.3	06.0	7.5	1.000205
14500.0	606.6	4.6	79.5	757.0	650.8	07.1	8.0	1.000202
15000.0	595.5	3.2	83.9	747.5	649.0	03.4	7.3	1.000199
15500.0	584.7	1.9	88.2	737.7	647.3	00.0	6.5	1.000195
16000.0	574.0	0.5	92.5	727.9	645.7	07.0	4.9	1.000192
16500.0	563.3	-0.3	90.9	718.7	644.0	23.7	3.8	1.000187
17000.0	552.7	-0.8	86.2	704.7	644.0	20.7	3.5	1.000182
17500.0	542.3	-1.4	81.8	693.0	643.2	26.2	3.3	1.000178
18000.0	532.0	-2.2	80.0	682.1	642.2	05.7	3.2	1.000173
18500.0	521.9	-3.1	78.1	671.4	641.1	00.0	4.3	1.000169
19000.0	512.0	-3.9	76.3	660.8	640.0	70.0	5.8	1.000165
19500.0	502.3	-4.8	74.4	650.5	639.0	70.0	7.2	1.000162
20000.0	492.6	-5.8	73.5	640.5	637.7	02.2	8.1	1.000158
20500.0	483.1	-6.9	72.8	630.8	636.3	00.4	7.5	1.000155
21000.0	473.8	-8.0	72.1	621.3	635.0	77.1	6.7	1.000151
21500.0	464.6	-9.1	71.4	611.9	633.6	07.0	5.2	1.000148
22000.0	455.6	-9.9	68.2	601.9	632.6	00.0	3.9	1.000145
22500.0	446.7	-10.1	60.1	590.9	632.0	40.2	2.6	1.000141
23000.0	438.0	-10.8	52.7	580.8	631.4	44.0	1.5	1.000137
23500.0	429.4	-12.0	46.5	572.2	629.9	74.0	1.5	1.000134

UPPER AIR DATA
2020220015
11X 30

STATION ALTITUDE 4010.00 FT MSL
21 JULY 52 1352 PDT
ASCENSION NO. 19

GEODETIC COORDINATES
32-58497 LAT UEG
106-49714 LONG DEG

TABLE-15 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TIN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4000.0	421.0	-13.2	40.3	563.8	628.3	93.1	2.0	1.000131
4500.0	412.6	-14.3	48.4	554.9	627.0	94.2	3.3	1.000129
5000.0	404.4	-15.4	57.2	546.1	625.7	94.0	4.7	1.000128
5500.0	396.4	-16.4	57.7	537.3	624.5	94.3	6.8	1.000125
6000.0	388.4	-17.3	48.2	528.4	623.4	94.4	8.9	1.000122
6500.0	380.6	-18.2	38.7	519.7	622.3	94.7	10.3	1.000119
7000.0	372.9	-19.2	38.0	511.4	620.9	95.2	11.6	1.000117
7500.0	365.4	-20.5	45.9	503.5	619.4	95.5	11.6	1.000115
8000.0	358.0	-21.7	48.1	495.7	617.9	103.6	11.7	1.000114
8500.0	350.6	-23.0	40.1	486.0	616.5	106.5	11.5	1.000111
9000.0	343.4	-24.1	40.2	480.2	614.9	108.2	11.4	1.000109
9500.0	336.2	-25.3	43.1	472.3	613.5	105.5	11.4	1.000107
10000.0	329.2	-26.4	46.0	464.6	612.1	103.2	11.6	1.000105
10500.0	322.3	-27.5	49.0	457.0	610.7	102.4	12.0	1.000104
11000.0	315.6	-28.7	51.9	449.5	609.2	101.4	12.4	1.000102
11500.0	309.0	-29.8	54.9	442.2	607.8	100.5	12.8	1.000100
12000.0	302.5	-30.9	57.8	435.0	606.4	97.7	12.9	1.000099
12500.0	296.1	-32.1	51.5	427.0	605.0	91.5	12.7	1.000097
13000.0	289.8	-33.2	38.9	420.0	603.5	84.2	12.5	1.000095
13500.0	283.6	-34.3	26.3	413.0	602.2	72.9	12.2	1.000093
14000.0	277.5	-35.6	23.1	407.0	600.9	61.5	12.4	1.000091
14500.0	271.5	-36.9	18.8**	400.2	599.5	60.0	11.8	1.000089
15000.0	265.6	-38.0	13.8**	393.5	597.4	58.7	11.3	1.000088
15500.0	259.8	-39.2	8.7**	386.8	595.6	62.0	10.9	1.000086
16000.0	254.1	-40.4	3.7**	380.3	594.3	66.9	10.8	1.000085
16500.0	248.5	-41.6		373.5	592.8	68.3	11.2	1.000083
17000.0	242.8	-42.8		367.2	591.5	67.2	12.1	1.000082
17500.0	237.3	-44.0		360.0	589.8	67.7	12.9	1.000080
18000.0	232.0	-45.2		354.4	588.2	69.1	13.7	1.000079
18500.0	226.7	-46.3		348.2	586.7	72.2	14.3	1.000078
19000.0	221.6	-47.5		342.1	585.2	76.9	14.8	1.000076
19500.0	216.5	-48.7		336.1	583.6	82.5	15.6	1.000075
20000.0	211.6	-49.9		330.2	582.1	90.9	17.0	1.000074
20500.0	206.8	-51.1		324.5	580.6	98.0	18.7	1.000072
21000.0	202.2	-52.2		318.8	579.0	106.3	17.9	1.000071
21500.0	197.5	-53.7		313.5	577.1	102.6	17.2	1.000070
22000.0	192.9	-55.1		308.2	575.2	96.4	14.1	1.000069
22500.0	188.4	-56.5		301.4	574.0	81.2	10.7	1.000067
23000.0	183.8	-56.4		295.5	573.5	65.5	10.1	1.000066
23500.0	179.4	-57.4		289.7	572.2	50.4	11.3	1.000065

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

STATION ALTITUDE 4010.0 FT ET MSL
 21 JULY 62 1352 MDT
 ASCENSION NO. 19

UPPER AIR DATA
 202020019
 14M 30
 TABLE-15 cont'd

GEODTLIC COORDINATES
 32.88497 LAT DEG
 106.49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION OF WIND DEGREES (11)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	175.1	-58.4		284.1	570.9	55.2	12.5	1.000063
44500.0	170.9	-59.4		278.5	569.6	62.3	13.7	1.000062
45000.0	166.8	-60.3		273.1	568.3	68.3	14.9	1.000061
45500.0	162.8	-61.3		267.7	567.0	74.6	15.1	1.000060
46000.0	158.9	-62.3		262.3	565.7	80.6	15.6	1.000058
46500.0	155.1	-63.3		257.4	564.4	85.5	16.2	1.000057
47000.0	151.4	-64.2		252.4	563.1	89.9	17.0	1.000056
47500.0	147.6	-65.1		247.2	561.9	92.9	16.2	1.000055
48000.0	144.0	-65.9		242.0	560.8	96.1	15.1	1.000054
48500.0	140.4	-66.7		237.0	559.7	97.0	12.7	1.000053
49000.0	136.9	-67.5		232.0	558.6	96.0	9.4	1.000052
49500.0	133.5	-68.4		227.1	557.5	82.1	8.1	1.000051
50000.0	130.2	-69.2		222.4	556.4	80.0	10.2	1.000050
50500.0	127.0	-70.0		217.7	555.3	51.0	13.4	1.000048
51000.0	123.8	-70.5		212.8	554.6	58.9	18.0	1.000047
51500.0	120.6	-71.0		207.9	553.9	63.1	22.8	1.000046
52000.0	117.6	-71.4		203.1	553.3	68.6	24.0	1.000045
52500.0	114.6	-71.9		198.4	552.6	74.1	25.2	1.000044
53000.0	111.7	-71.9		193.4	552.0	75.7	25.8	1.000043
53500.0	108.9	-71.1		187.7	551.8	76.0	26.1	1.000042
54000.0	106.1	-69.9		181.9	551.4	77.7	27.0	1.000041
54500.0	103.5	-69.8		177.2	550.6	80.6	28.8	1.000039
55000.0	100.9	-69.6		172.7	550.0	83.3	30.3	1.000038
55500.0	98.4	-69.2		168.1	549.3	86.3	30.8	1.000037
56000.0	95.9	-68.7		163.5	547.0	89.3	31.4	1.000036
56500.0	93.6	-68.2		159.0	547.7	90.3	30.1	1.000035
57000.0	91.3	-67.7		154.7	548.3	91.2	28.5	1.000034
57500.0	89.0	-67.1		150.5	549.2	92.0	26.5	1.000034
58000.0	86.8	-66.6		146.4	549.9	92.6	24.1	1.000033
58500.0	84.7	-66.1		142.5	549.6	93.3	21.9	1.000032
59000.0	82.6	-65.5		138.6	549.3	94.3	21.4	1.000031
59500.0	80.6	-65.0		134.8	549.1	95.4	20.9	1.000030
60000.0	78.6	-64.5		131.2	549.0	96.4	21.3	1.000029
60500.0	76.7	-63.9		127.6	549.3	97.3	21.9	1.000028
61000.0	74.8	-63.4		124.2	549.2	98.2	22.1	1.000028
61500.0	72.9	-62.9		120.8	549.9	99.0	21.6	1.000027
62000.0	71.1	-62.3		117.5	549.0	100.9	21.3	1.000026
62500.0	69.4	-61.8		114.4	548.3	102.4	21.5	1.000025
63000.0	67.7	-61.4		111.3	548.9	111.4	21.9	1.000025
63500.0	66.1	-61.0		108.6	548.5	111.7	22.5	1.000024

UPPER AIR DATA
 2020220019
 NW 30
 TABLE-15 cont'd

STATION ALTITUDE 4010.40 Ft. 1 MSL
 21 JULY 62 1352 MDT
 ASCENSION NO. 19

GEODETIC COORDINATES
 32.88497 LAT DEG
 106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND ANOIS	WIND DIRECTION (DEGREES(TN))	WIND SPEED KNOTS	INDEX OF REFRACTION
6400.0	64.5	-60.6		105.8	568.0	111.6	23.0	1.000024
6450.0	63.0	-60.1		103.0	568.6	107.6	23.6	1.000023
6500.0	61.5	-59.7		100.4	569.2	101.1	24.4	1.000022
6550.0	60.0	-59.3		97.8	565.8	95.0	25.5	1.000022
6600.0	58.6	-58.8		95.3	570.3	92.1	26.7	1.000021
6650.0	57.2	-58.4		92.8	570.9	89.5	28.0	1.000021
6700.0	55.8	-58.0		90.4	571.5	88.0	28.4	1.000020
6750.0	54.5	-57.5		86.1	572.0	89.6	28.1	1.000020
6800.0	53.2	-57.1		85.6	572.0	90.4	27.8	1.000019
6850.0	51.9	-56.7		83.6	573.2	91.7	27.6	1.000019
6900.0	50.7	-56.3		81.4	573.0	93.0	27.4	1.000018
6950.0	49.5	-55.9		79.4	574.3	94.4	27.1	1.000018
7000.0	48.4	-55.5		77.4	574.7	96.1	26.8	1.000017
7050.0	47.2	-55.2		75.5	575.2	97.9	26.3	1.000017
7100.0	46.1	-54.8		73.6	575.0	100.9	24.9	1.000016
7150.0	45.1	-54.5		71.8	576.1	104.3	23.6	1.000016
7200.0	44.0	-54.2		70.0	576.5	92.0	22.4	1.000016
7250.0	43.0	-53.8		68.3	577.0	69.7	24.4	1.000015
7300.0	42.0	-53.5		66.6	577.4			1.000015
7350.0	41.0	-53.1		64.9	577.8			1.000014
7400.0	40.0	-52.8		63.3	578.3			1.000014

STATION ALTITUDE 4010.40 FEET MSL
 21 JULY 62 1352 MDT
 ASCENSION NO. 19

MANDATORY LEVELS
 2620220019
 TIM 30
 TABLE-16

GEODETTIC COORDINATES
 32.88497 LAT DEG
 106.49714 LONG DEG

GEOPOTENTIAL MILLIBARS	FEET	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEPT POINT	REL. HUM. PERCENT	WIND DATA DIRECTION (DEGREES TN)	SPEED KNOTS
850.0	5055.	30.1	9.1	27.	117.5	.6
800.0	6818.	25.4	8.9	35.	120.8	1.1
750.0	8664.	20.5	7.1	42.	64.1	3.0
700.0	10603.	15.3	5.3	43.	65.0	4.6
650.0	12646.	9.8	3.2	63.	64.0	6.2
600.0	14808.	3.8	1.0	82.	54.9	7.6
550.0	17108.	-1.0	-3.2	83.	19.9	3.4
500.0	19590.	-5.0	-8.9	74.	79.6	7.5
450.0	22282.	-10.0	-15.7	63.	51.0	3.1
400.0	25232.	-16.0	-21.6	62.	94.2	5.8
350.0	28492.	-23.1	-30.0	39.	106.7	11.5
300.0	32136.	-31.4	-36.7	59.	95.4	12.8
250.0	36286.	-41.3			68.8	11.0
200.0	41134.	-52.8			101.4	17.6
175.0	43923.	-58.4			55.4	12.5
150.0	47058.	-64.6			91.1	17.0
125.0	50660.	-70.3			58.2	16.0
100.0	54999.	-69.6			84.2	30.5
80.0	59415.	-64.8			95.6	20.9
70.0	62106.	-62.0			104.0	21.4
60.0	65254.	-59.3			95.4	25.4
50.0	69030.	-56.0			93.7	27.3
40.0	73721.	-52.8				

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

STATION ALTITUDE 5912.75 FLE1 MSL
 21 JULY 62 1623 MDT
 ASCENSION NO. 02

SIGNIFICANT LEVEL DATA
 L-28
 TABLE-17

GEODETIC COORDINATES
 32.59927 LAT DEG
 106.40591 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	MILLIUM. MERCUIT
881.9	3912.7	34.7	10.1	33.0
874.0	4180.7	33.1	10.9	38.0
850.0	5003.5	30.1	15.0	42.0
788.1	7204.3	24.4	11.0	43.0
700.0	10564.6	15.2	5.1	51.0
658.0	12278.3	11.5	1.7	51.0
607.2	14464.8	5.4	-4	60.0
581.9	15605.1	3.0	-3.0	61.0
527.3	18201.2	-3.7	-5.4	88.0
510.5	19042.5	-4.0	-5.0	91.0
500.0	19580.9	-5.2	-9.0	71.0
472.5	21035.9	-8.2	-11.0	75.0
457.2	21874.7	-10.1	-14.3	71.0
449.8	22280.6	-10.5	-15.2	69.0
411.1	24530.1	-18.0	-19.4	89.0
400.0	25213.0	-15.7	-21.7	60.0
385.0	26159.1	-18.0	-22.0	67.0
364.5	27498.4	-20.4	-31.2	37.0
331.5	29788.4	-25.5	-34.8	41.0
300.0	32145.1	-31.4	-37.6	54.0
292.4	32741.5	-33.0	-30.2	59.0
280.3	33717.2	-34.7	-40.3	41.0
250.0	36312.5	-41.3		
200.0	41169.3	-53.9		
181.0	43262.7	-57.9		
176.3	43809.2	-58.1		
163.7	45334.2	-62.2		
150.0	47101.6	-65.3		
111.5	52041.5	-71.3		
		-70.8		
107.4	53585.8	-69.2		
104.5	54215.0	-70.4		
100.0	55074.4	-69.5		
91.5	56081.7	-67.1		
77.0	60290.9	-65.2		
70.0	62224.3	-61.6		
54.3	67455.2	-58.9		
50.0	69179.3	-55.5		
43.3	72374.5	-52.4		

STATION ALTITUDE 3912.75 FEET MSL
 21 JULY 62 1623 MDT
 ASCENSION NO. 82

UPLINK AIR DATA
 2020250004
 L-28

GEODETIC COORDINATES
 32-49927 LAT DEG
 106-40591 LON DEG

TABLE-18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION OF WIND (IN) DEGREES	WIND DATA SPEED KNOTS	INCLX UP REFRACTION
3912.7	881.9	24.7	16.1	33.0	990.1	680.2	90.0	4.1	1.001294
4000.0	879.3	34.2	16.4	34.6	988.7	683.7	94.1	4.1	1.000295
4500.0	864.6	31.9	16.5	39.6	979.2	683.3	143.0	4.6	1.000293
5000.0	850.1	30.1	15.8	42.0	968.7	681.2	131.0	5.6	1.000290
5500.0	835.6	28.8	14.7	42.2	956.7	679.6	141.2	6.9	1.000283
6000.0	821.4	27.5	13.6	42.5	944.8	678.0	147.4	6.8	1.000276
6500.0	807.4	26.2	12.5	42.7	933.1	676.4	152.0	6.6	1.000270
7000.0	793.7	24.9	11.5	42.9	921.6	674.6	153.3	6.0	1.000263
7500.0	779.9	23.6	10.5	43.7	910.0	673.2	153.1	5.4	1.000258
8000.0	766.3	22.2	9.7	44.4	898.4	671.5	148.4	4.5	1.000253
8500.0	752.9	20.9	8.8	46.1	887.0	669.9	141.3	3.6	1.000248
9000.0	739.7	19.5	8.0	47.3	875.8	668.3	128.0	2.7	1.000243
9500.0	726.8	18.1	7.1	48.5	864.7	666.6	115.1	2.2	1.000238
10000.0	714.1	16.7	6.2	49.7	853.8	665.0	109.9	2.0	1.000233
10500.0	701.6	15.4	5.3	50.8	843.0	663.3	107.3	2.5	1.000228
11000.0	689.1	14.3	4.3	51.0	831.4	661.6	107.0	3.5	1.000223
11500.0	676.8	13.2	3.3	51.0	819.8	660.0	99.0	5.0	1.000218
12000.0	664.6	12.1	2.3	52.0	808.4	658.3	91.0	6.7	1.000214
12500.0	652.7	10.9	1.6	52.5	797.3	657.9	80.9	6.7	1.000210
13000.0	640.8	9.5	1.1	56.0	786.7	656.2	69.0	6.3	1.000207
13500.0	629.1	8.1	.7	59.4	776.3	654.6	50.7	5.2	1.000204
14000.0	617.7	6.7	.1	62.8	766.0	652.9	49.2	5.4	1.000201
14500.0	606.4	5.3	-.5	65.8	755.8	651.3	13.3	6.4	1.000197
15000.0	595.2	4.3	-2.0	63.7	744.9	650.0	8.3	7.7	1.000192
15500.0	584.2	3.2	-3.5	61.5	734.1	648.6	8.9	8.4	1.000187
16000.0	573.2	2.0	-3.9	65.1	723.6	647.2	8.3	8.3	1.000184
16500.0	562.5	.7	-4.1	70.3	713.4	645.7	7.7	7.9	1.000182
17000.0	551.9	-.6	-4.4	75.5	703.3	644.1	5.6	7.4	1.000179
17500.0	541.5	-1.9	-4.8	80.7	693.4	642.6	1.2	6.5	1.000177
18000.0	531.3	-3.2	-5.2	85.9	683.6	641.1	2.3	5.1	1.000174
18500.0	521.3	-4.0	-5.5	89.1	672.8	640.0	18.1	3.3	1.000171
19000.0	511.3	-4.6	-5.8	90.8	661.3	639.4	62.2	2.6	1.000168
19500.0	501.6	-5.1	-6.1	74.0	650.4	638.0	149.1	4.8	1.000161
20000.0	491.9	-6.1	-10.2	72.2	640.2	637.4	123.2	4.8	1.000158
20500.0	482.4	-7.1	-11.0	73.5	630.4	636.1	125.9	8.8	1.000155
21000.0	473.2	-8.1	-11.8	74.9	620.7	634.8	124.3	9.6	1.000152
21500.0	464.0	-9.3	-13.2	72.8	611.4	633.4	121.8	9.7	1.000148
22000.0	454.9	-10.2	-14.6	70.1	601.8	632.2	118.8	9.5	1.000145
22500.0	446.0	-11.2	-15.6	70.0	592.2	631.0	108.8	8.8	1.000142
23000.0	437.2	-12.9	-16.4	74.6	584.3	629.5	92.7	8.4	1.000140

STATION ALTITUDE 3412.75 FT. T HSL
 21 JULY 52
 ASSENSIUM NO. 82 1623 MDT

UPPER AIR DATA
 202029000z
 E-LR

GEODETIC COORDINATES
 32.09927 LAT DEG
 106.40391 LONG DEG

TABLE-18 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMP AIR DEGREES	TEMPATURE DEGREE CENTIGRADE	REL HUMID PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION OF WIND DEGREES (IN)	WIND VELOCITY KNOTS	INDEX OF REFRACTION
23500.0	420.5	-14.5	-17.3	79.3	570.4	620.9	79.8	8.5	1.000137
24000.0	420.0	-16.2	-18.3	84.0	568.7	624.4	73.0	8.8	1.000135
24500.0	411.7	-17.9	-19.3	88.7	561.2	622.0	71.4	9.0	1.000133
25000.0	403.5	-16.4	-20.7	69.1	546.9	624.0	70.0	8.9	1.000129
25500.0	393.4	-16.4	-21.9	62.1	533.9	624.0	61.0	8.9	1.000125
26000.0	387.5	-17.6	-22.4	65.8	527.7	623.1	60.1	9.1	1.000123
26500.0	379.7	-18.6	-24.5	59.3	519.2	621.0	64.7	9.0	1.000121
27000.0	372.0	-19.5	-27.6	48.2	510.6	620.0	64.2	9.0	1.000117
27500.0	364.5	-20.4	-31.2	37.0	502.1	619.5	64.5	9.0	1.000114
28000.0	357.0	-21.5	-32.0	37.9	494.0	610.1	66.9	9.9	1.000113
28500.0	349.7	-22.6	-32.8	38.7	486.1	610.7	69.0	10.9	1.000111
29000.0	342.5	-23.7	-33.6	39.6	478.2	615.4	93.0	11.9	1.000109
29500.0	335.5	-24.9	-34.4	40.5	470.5	614.0	90.1	12.6	1.000107
30000.0	328.5	-26.0	-35.0	42.2	463.0	612.5	97.1	13.2	1.000105
30500.0	321.7	-27.3	-35.6	44.9	455.0	611.0	92.9	13.7	1.000103
31000.0	314.9	-28.5	-36.1	47.7	448.5	609.4	90.0	13.5	1.000102
31500.0	308.3	-29.8	-36.7	50.4	441.2	607.8	87.0	13.1	1.000100
32000.0	301.8	-31.0	-37.4	53.2	434.2	606.3	87.1	12.6	1.000098
32500.0	295.5	-32.4	-38.0	57.0	427.3	604.5	82.9	12.2	1.000097
33000.0	289.1	-33.5	-39.5	54.2	420.1	603.2	70.0	12.1	1.000095
33500.0	282.9	-34.3	-42.0	45.0	412.6	602.1	70.7	11.5	1.000093
34000.0	276.8	-35.4	-45.0	36.5**	405.6	600.7	66.1	11.0	1.000091
34500.0	270.8	-36.7	-48.3	28.6**	398.9	599.1	65.5	10.9	1.000089
35000.0	264.9	-38.0	-52.1	20.7**	392.5	597.5	65.1	10.9	1.000088
35500.0	259.1	-39.2	-57.1	12.8**	385.9	595.0	64.9	10.9	1.000086
36000.0	253.5	-40.5	-65.3	4.9**	379.5	594.2	67.1	11.1	1.000085
36500.0	247.9	-41.8			373.2	592.0	70.1	11.3	1.000083
37000.0	242.2	-43.1			366.8	590.7	75.1	11.5	1.000082
37500.0	236.7	-44.4			360.5	589.2	79.7	11.8	1.000080
38000.0	231.3	-45.7			354.5	587.0	63.0	12.0	1.000079
38500.0	226.1	-47.0			348.2	585.9	67.7	12.4	1.000078
39000.0	221.0	-48.3			342.5	584.2	94.1	13.3	1.000076
39500.0	215.9	-49.6			336.5	582.5	98.0	13.6	1.000075
40000.0	211.0	-50.9			330.7	580.8	102.0	13.5	1.000074
40500.0	206.2	-52.2			325.1	579.1	104.1	12.7	1.000072
41000.0	201.6	-53.5			319.0	577.4	104.7	11.8	1.000071
41500.0	196.9	-54.5			313.7	576.0	101.5	12.2	1.000070
42000.0	192.2	-55.5			307.7	574.0	96.7	12.5	1.000069
42500.0	187.7	-56.4			301.7	573.5	88.4	12.9	1.000067
43000.0	183.3	-57.4			295.9	572.2	76.0	13.3	1.000066

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

UPPER AIR DATA
 2020290000
 E-28
 TABLE-18 cont'd

GEODETIC COORDINATES
 32.8927 LAT DEG
 106.40591 LON DEG

STATION ALTITUDE 3912.75 FT MSL
 21 JULY 62
 ASCENSION NO. 82

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE	REL. HUM. PERCENT	DENSITY GM/CUBIC MLTER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (IN)	WIND SPEED KNOTS	INDEX OF REFRACTION
43500.0	170.9	-58.0		289.7	571.5	06.5	13.9	1.000005
44000.0	174.7	-58.6		283.6	570.8	57.9	14.7	1.000003
44500.0	170.5	-60.0		276.6	569.0	53.7	15.3	1.000002
45000.0	160.4	-61.3		273.0	567.0	54.5	15.2	1.000001
45500.0	162.4	-62.5		268.5	565.4	61.3	14.4	1.000000
46000.0	158.4	-63.4		263.0	564.3	67.4	14.0	1.000059
46500.0	154.5	-64.2		257.7	563.1	72.9	13.9	1.000057
47000.0	150.8	-65.1		252.5	561.9	76.6	14.0	1.000056
47500.0	147.0	-66.0		247.2	560.6	79.6	14.2	1.000055
48000.0	143.3	-66.8		242.0	559.7	80.5	14.3	1.000054
48500.0	139.8	-67.6		236.9	558.5	61.1	14.4	1.000053
49000.0	136.3	-68.4		231.9	557.4	70.6	13.7	1.000052
49500.0	132.9	-69.3		227.0	556.3	60.1	13.6	1.000051
50000.0	129.6	-70.1		222.3	555.2	57.9	15.4	1.000050
50500.0	126.3	-70.9		217.6	554.0	59.0	17.5	1.000048
51000.0	123.2	-71.2		212.5	553.0	76.6	22.7	1.000047
51500.0	120.0	-71.1		207.0	552.7	85.8	28.9	1.000046
52000.0	117.0	-71.0		201.7	552.9	88.6	34.5	1.000045
52500.0	114.0	-70.9		196.4	554.0	90.1	38.7	1.000044
53000.0	111.2	-70.7		191.2	553.4	90.2	38.7	1.000043
53500.0	108.4	-69.4		185.3	550.1	91.9	38.1	1.000041
54000.0	105.6	-70.0		181.2	555.3	97.6	36.5	1.000040
54500.0	103.0	-70.1		176.7	553.1	103.4	34.6	1.000039
55000.0	100.4	-69.6		171.6	553.6	107.4	30.9	1.000038
55500.0	97.9	-68.9		167.0	550.7	111.6	27.4	1.000037
56000.0	95.5	-68.3		162.3	557.6	114.6	23.7	1.000036
56500.0	93.1	-67.6		157.8	558.5	117.3	20.4	1.000035
57000.0	90.8	-67.0		153.4	559.3	115.1	18.4	1.000034
57500.0	88.5	-66.8		149.4	559.7	112.4	16.4	1.000033
58000.0	86.3	-66.5		145.3	560.1	108.9	14.9	1.000032
58500.0	84.2	-66.2		141.7	560.4	104.5	13.5	1.000031
59000.0	82.1	-65.9		138.1	560.8	110.6	14.4	1.000030
59500.0	80.1	-65.6		134.5	561.2	116.1	15.5	1.000030
60000.0	78.1	-65.4		131.0	561.6	121.1	17.3	1.000029
60500.0	76.2	-64.8		127.4	562.3	125.2	19.2	1.000028
61000.0	74.4	-63.9		123.6	563.6	120.2	21.8	1.000028
61500.0	72.5	-62.9		120.2	564.8	114.7	24.9	1.000027
62000.0	70.8	-62.0		116.6	566.1	111.1	27.2	1.000026
62500.0	69.1	-61.5		113.7	569.0	106.5	29.0	1.000025
63000.0	67.4	-61.2		110.8	567.2	102.2	29.1	1.000025

STATION ALTITUDE 5912.75 F. I HSL
 21 JULY 62 1623 MDT
 ASCENDING NO. 82

UPPER AIR DATA
 2020290002
 L-28

TABLE-18 cont'd

GEODETIC COORDINATES
 32.89927 LAT DEG
 106.40591 LONG DEG

GEOMETRIC ALTITUDE HSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
03500.0	63.8	-60.9		108.0	367.3	100.0	27.3	1.000024
04000.0	64.2	-60.7		105.3	367.9	104.0	25.9	1.000023
04500.0	64.7	-60.4		102.6	368.2	98.0	25.3	1.000023
05000.0	61.2	-60.2		100.1	368.5	91.0	25.0	1.000022
05500.0	59.7	-59.9		97.5	368.9	85.2	25.2	1.000022
06000.0	58.3	-59.7		95.1	369.2	80.1	25.7	1.000021
06500.0	56.9	-59.4		92.7	369.6	77.8	26.7	1.000021
07000.0	55.5	-59.1		90.4	369.9	77.5	27.4	1.000020
07500.0	54.2	-58.8		88.1	370.4	81.9	27.2	1.000020
08000.0	52.9	-57.8		85.6	371.7	86.4	27.5	1.000019
08500.0	51.7	-56.8		83.2	373.0	91.0	28.9	1.000019
09000.0	50.4	-55.9		80.8	374.3	94.9	30.5	1.000018
09500.0	49.2	-55.2		78.7	375.2	96.6	32.7	1.000018
70000.0	48.1	-54.7		76.7	375.6	98.4	34.6	1.000017
70500.0	47.0	-54.2		74.8	376.4	99.4	34.6	1.000017
71000.0	45.9	-53.7		72.9	377.1			1.000016
71500.0	44.8	-53.3		71.0	377.7			1.000016
72000.0	43.8	-52.8		69.2	378.3			1.000015

STATION ALTITUDE 3912.75 F (1 MSL)
 21 JULY 82 1623 MDT
 ASCENSION NO. 82

MAINTENANCE LEVELS
 2020290062
 E-28

GEODETLIC COORDINATES
 32.69427 LAT DEG
 106.40591 LON DEG

TABLE-19

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUMID. PERCENT	WIND DATA	
				DIRECTION (DEGREES/10N)	SPEED KNOTS
650.0	5000.	30.1	42.	131.0	5.6
600.0	6766.	25.5	43.	152.9	6.3
750.0	8615.	20.6	46.	139.9	5.4
700.0	10554.	15.2	51.	107.3	4.6
650.0	12601.	10.6	53.	70.5	6.7
600.0	14768.	4.7	65.	10.4	7.1
550.0	17077.	-8.	76.	5.1	7.2
500.0	19554.	-5.2	71.	120.3	5.1
450.0	22243.	-10.5	68.	112.7	9.1
400.0	25171.	-15.7	60.	79.0	8.8
350.0	28432.	-22.0	39.	89.4	10.8
300.0	32081.	-31.4	54.	86.9	14.5
250.0	36233.	-41.3		68.9	11.2
200.0	41070.	-53.9		103.7	11.9
175.0	43850.	-58.5		50.4	14.6
150.0	46974.	-65.3		77.1	14.0
125.0	50564.	-71.2		67.0	19.2
100.0	54909.	-69.5		107.9	30.5
80.0	59327.	-65.6		116.1	15.5
70.0	62011.	-61.6		110.0	27.9
60.0	65157.	-60.0		86.9	25.1
50.0	68919.	-55.5		95.5	31.1

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

DATE
FILMED
8