

AD-A143 586

19319A MLRS MISSILE NUMBERS 469 414 447 ROUND NUMBERS
584/AV-4 585/AV-5 S. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM. . D C KELLER MAY 84
ERADCOM/ASL-DR-1342

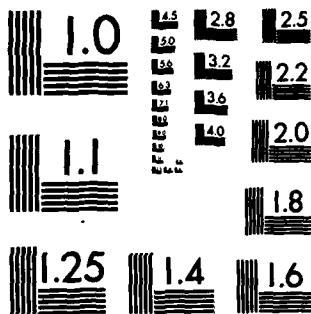
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MICROCOPY RESOLUTION TEST CHART
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DR-1342

May 84

AD

(12)

AD-A143 586

METEOROLOGICAL DATA REPORT
19319A MLRS
Missile Number 469, 414, 447
Round Number 584/AV-4, 585/AV-5, 586/AV-6
18 May 1984

by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

DTIC

JUL 30 1984

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UNITED STATES ARMY ELECTRONICS COMMAND

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Meteorological data gathered for the launching of the 19319A MLRS, Missile Number 469, 414, 447, Round Number 584/AV-4, 585/AV-5, 586/AV-6 are presented in tabular form.		

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Date		Time	
Latitude		Longitude	
Altitude		Pressure	
Dist		Remarks	
A1			



INTRODUCTION

19319A MLRS, Missile Numbers 469, 414 and 447, Round Numbers 584/AV-4, 585/AV-5 and 586/AV-6, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico at 1413:35, 1413:39 and 1413:44 MDT, 18 May 84. The scheduled launch times were 1400:00, 1400:03.5 and 1400:07 MDT.

DISCUSSION

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

1. Observations

a. Surface

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

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

b. Upper Air

(1) Low level wind data were obtained from Pilot-balloon observations at:

SITE AND ALTITUDE

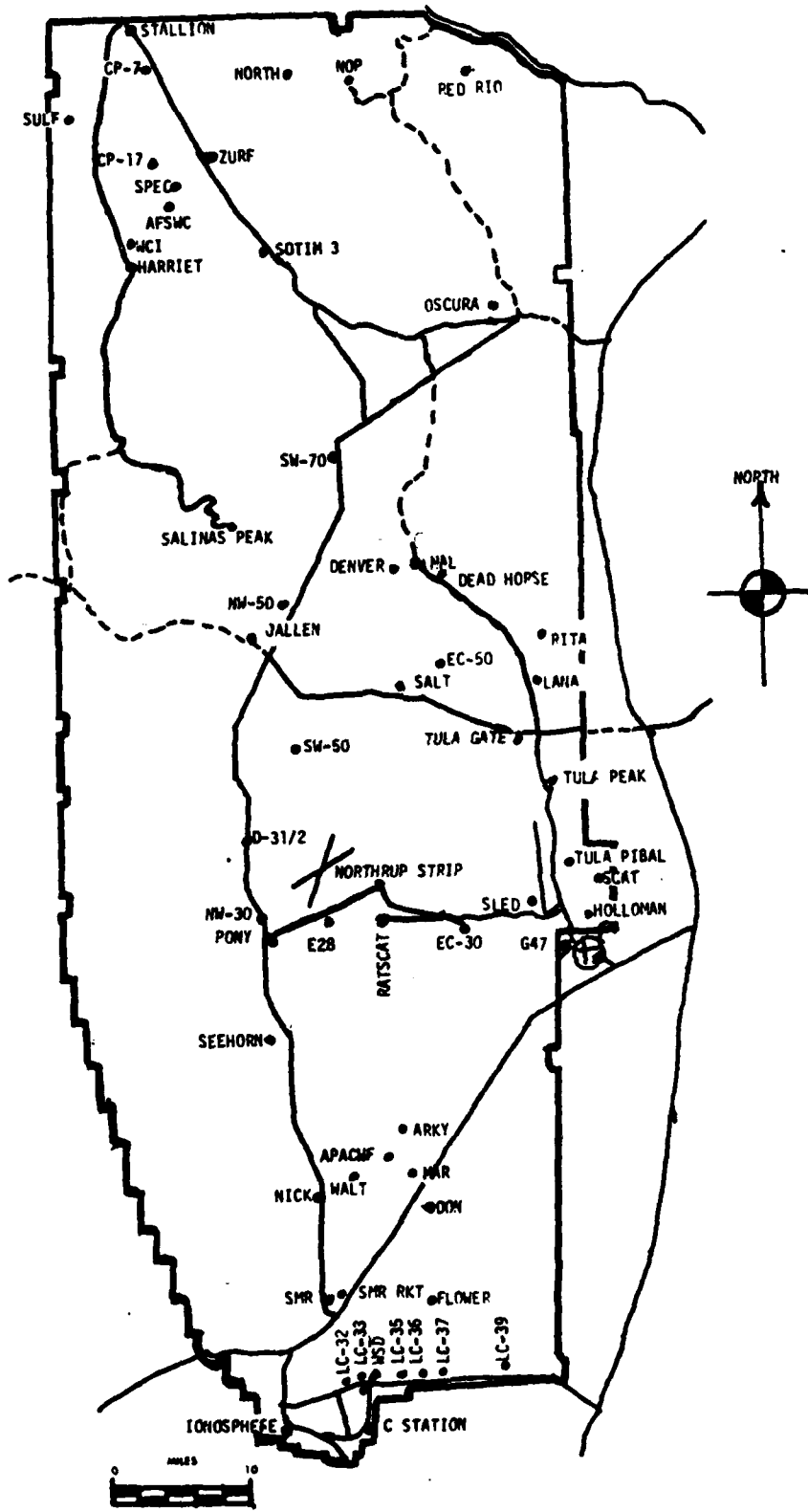
LC-33 2 km

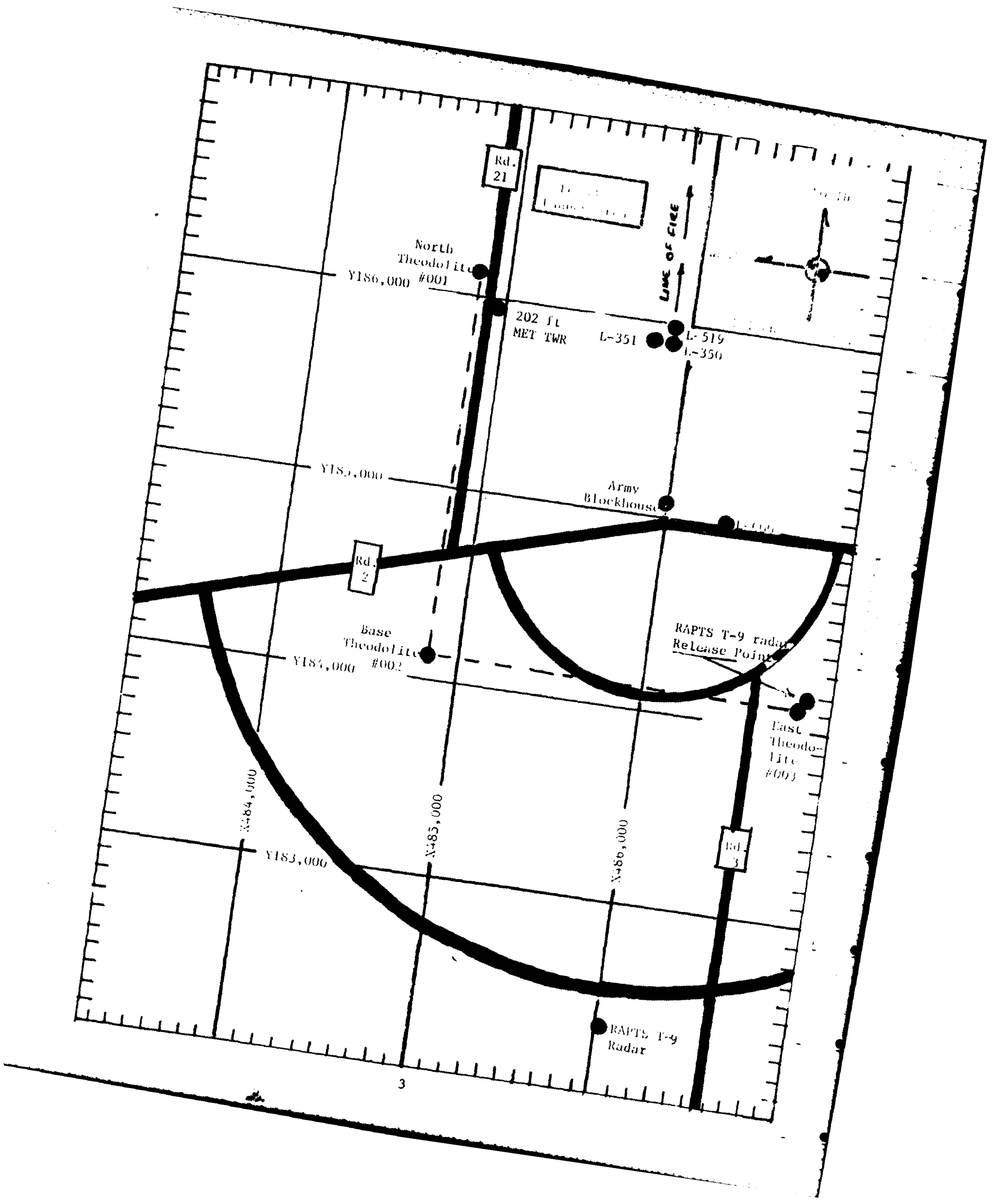
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

WSD	1230 MDT
SMR	1230 MDT
DON	1230 MDT
SMR	1315 MDT
SMR	1413 MDT
DON	1413 MDT
WSD	1512 MDT

WSMR METEOROLOGICAL SITES



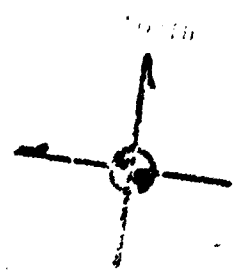


Rd. 21

Target
Location

North
Theodolite
#001
Y186,000

LINE OF FIRE



202 ft
MET TWR

L-351

L-519

L-350

Y185,000

Army
Blockhouse

Rd. 2

Base
Theodolite
#002
Y184,000

RAPTS T-9 radar
Release Point

East
Theodo-
lite
#003

X-84,000

Y183,000

X-85,000

X-86,000

Rd. 3

RAPTS T-9
Radar

PERFECT SURFACE OBSERVATION

TABLE 1
 DATE 18 May 1984
 STATION LC-33
 Y= 484.982.64 X= 185.957.73 H= 3995.00

TIME M D I	PRESSURE hPa	TEMPERATURE °C	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY g/m ³	WIND		VISIBIL- ITY
						DIRECTION degs	SPEED kts	
1413	8804	28.5	11.7	36		320	04	50

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	HGT	AMT	HGT	AMT	HGT	
	5	CB 7000					CB E MOUC SW

PSYCHROMETRIC COMPUTATION

TIME: MDT	1413
DRY BULB TEMP.	28.5
WET BULB TEMP.	17.5
WET BULB DEPR.	11.0
DEW POINT	11.7
RELATIVE HUMID.	36

LC-33 METEOROLOGICAL TOWER
ANEMOMETER MEASURED WIND DATA

WSTM COORDINATES X=484,982.64 Y=185,957.73 H=3983.00(BASE)

TABLE NO. 2

DATE 18 May 1984 1413:35 M D T
DAY MONTH YEAR TIME

LEVEL #1 12 FT AGL			LEVEL #2 62 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	323	12	T-30	288	12
T-20	285	11	T-20	326	15
T-10	313	19	T-10	310	20
T- 0 (1st T)	318	14	T- 0 (1st T)	314	20
T+10	315	13	T+10	308	19
T+20	325	14	T+20	303	13
T+30	322	12	T+30	307	13
T+40			T+40		
T+50			T+50		
T+60			T+60		
LEVEL #3 102 FT AGL			LEVEL #4 202 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	320	12	T-30	305	21
T-20	320	20	T-20	297	22
T-10	307	24	T-10	294	19
T- 0 (1st T)	312	20	T- 0 (1st T)	300	20
T+10	301	20	T+10	303	19
T+20	296	17	T+20	311	18
T+30	315	15	T+30	304	13
T+40			T+40		
T+50			T+50		
T+60			T+60		

TABLE 3

PILOT-BALLOON MEASURED WIND DATA

DATE 18 May 1984

SITE: LC-33
TIME: 1315 MDT
WSTM COORDINATES:
X= 486,037.24
Y= 182,350.16
H= 3,977.30

SITE: LC-33
TIME: 1345 MDT
WSTM COORDINATES:
X= 486,037.24
Y= 182,350.16
H= 3,977.30

<u>LAYER MIDPOINT</u>	<u>DIRECTION</u>	<u>SPEED</u>
<u>METERS AGL</u>	<u>DEGREES</u>	<u>KNOTS</u>
SURFACE	160	06
150	136	03
210	133	09
270	147	09
330	147	04
390	167	06
500	115	06
650	059	07
800	050	07
950	350	04
1150	016	04
1350	338	07
1550	308	07
1750	315	07
2000	288	07

<u>LAYER MIDPOINT</u>	<u>DIRECTION</u>	<u>SPEED</u>
<u>METERS AGL</u>	<u>DEGREES</u>	<u>KNOTS</u>
SURFACE		CALM
150	158	01
210	152	06
270	094	07
330	184	02
390	345	03
500	205	02
650	274	04
800	262	05
950	245	08
1150	240	06
1350	235	03
1550	210	09
1750	240	06
2000	249	11

All data obtained from RAPTS T-9 radar Tracked pilot-balloon observations.

TABLE 3 Con't

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 18 May 1984

SITE: LC-33
 TIME: 1414 MDT
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3,977.30

SITE:
 TIME
 WSTM COORDINATES:
 X=
 Y=
 H=

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	320	04
150	266	02
210	290	09
270	287	05
330	255	06
390	260	10
500	261	10
650	247	12
800	261	11
950	264	07
1150	MISG	
1350	273	11
1550	273	08
1750	242	08
2000	251	08

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		
150		
210		
270		
330		
390		
500		
650		
800		
950		
1150		
1350		
1550		
1750		
2000		

TABLE 4

AIMING AND T-TIME COMPUTER MET MESSAGES

18 May 1984

WSD 1230 MDT		SMR 1230 MDT		DON 1230 MDT		SMR 1315 MDT	
METCM1324064		METCM1325064		METCM1326063		METCM1325064	
181850122881		181850122881		181850122879		181930122880	
00160005	30140881	00089004	30200881	00604007	30150879	00000000	30360880
01015007	29890871	01147007	29840871	01071019	29920869	01343002	29900870
02570004	29610846	02249006	29600846	02638008	29630845	02460005	29620846
03586010	29210808	03123003	29190808	03028008	29160806	03511006	29250807
04553008	28720762	04608004	28710762	04529009	28680760	04507013	28800761
05550018	28300718	05522014	28270717	05530016	28300716	05486013	28330717
06505017	27970675	06497021	27980675	06512017	27910674	06504016	27870675
07489020	27600635	07481022	27580635	07486019	27500634	07497023	27510635
08470018	27200597	08474020	27040597	08478019	27100595	08510023	27220596
09549020	26940561	09532021	26860560	09535022	26820559	09557020	26960560
10551020	26610526	10555019	26550526	10546019	26560524		
11568015	26210493	11554021	26180493	11556017	26200492		
12558019	25730447	12561020	25730446	12554020	25750446		
SMR 1413 MDT		DON 1413 MDT		WSD 1512 MDT			
METCM1325064		METCM1326063		METCM1324064			
182020122880		182020122878		182120122879			
00427008	30410880	00213010	30260878	00516010	30410879		
01571015	30190870	01341002	30070868	01465008	30270869		
02499011	29780845	02348009	29770844	02451011	29840844		
03497010	29400807	03361004	29380806	03469010	29450806		
04552009	28920762	04439007	28890760	04463009	28990761		
05555011	28420718	05463015	28410716	05491010	28500717		
06530012	27960675	06488017	27900674	06512008	27990675		
07502013	27510635	07481024	27530634	07479028	27520635		
08480020	27110597	08496023	27200595	08516019	27120596		
09528025	26790560	09548022	26880559	09531023	26790560		
10552021	26650526	10561024	26450525	10546024	26470525		
11580019	26300493	11560023	26170492	11567022	26200492		
12569016	25740447	12563017	25770445	12566016	25760446		

GEODETIC COORDINATES
 32.60043 LAT DEG
 106.37033 LON DEG

SIGNIFICANT LEVEL DATA

1790020285
 WHITE SANDS

TABLE 5

STATION ALTITUDE 3909.70 FEET MSL
 18 MAY 84
 ASCENSION NO. 285 1230 MDT

PRESSURE MILLIBARS	GLOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
581.0	3989.0	27.0	8.9	32.0
875.9	4156.8	24.9	5.7	29.0
850.0	5016.7	22.0	6.7	37.0
796.6	6849.4	16.4	5.7	49.0
746.4	8654.0	11.1	4.3	63.0
722.6	9540.7	9.1	1.0	57.0
713.7	9876.0	8.7	-5.5	36.0
700.0	10404.2	8.0	-6.1	36.0
640.3	12799.8	3.0	-9.3	40.0
603.3	14373.1	-1.2	-9.1	55.0
572.6	15736.9	-3.4	-23.7	19.0
549.4	16810.1	-4.3	-25.0	18.0
500.0	19222.7	-10.5	-30.2	18.0
427.1	23153.9	-18.1	-37.1	17.0
400.0	24755.0	-21.4	-40.4	16.0
367.1	26816.0	-26.7	-43.8	18.0

UPPER AIR DATA
 1°00'20.285
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
 18 MAY 84
 ASCENSION NO. 285

GEODETIC COORDINATES
 32.60043 LAT DEG
 106.37033 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						TEMPERATURE DEWPOINT CENTIGRADE	DIRECTION DEGREES(TN)	
3989.0	881.0	27.0	32.0	1017.5	676.6	90.0	5.1	1.000275
4000.0	880.7	26.9	31.8	1017.7	676.4	89.7	5.0	1.000274
4500.0	865.5	23.7	32.2	1011.3	672.7	64.0	3.2	1.000266
5000.0	850.5	22.1	36.8	999.3	670.8	14.1	2.8	1.000265
5500.0	835.6	20.5	40.2	986.8	669.1	340.3	4.4	1.000263
6000.0	820.9	19.0	43.4	974.6	667.3	326.4	5.6	1.000260
6500.0	806.5	17.5	46.7	962.5	665.6	320.9	8.5	1.000256
7000.0	792.3	16.0	50.2	950.5	663.9	321.7	8.4	1.000253
7500.0	778.1	14.5	54.0	938.3	662.2	322.3	8.5	1.000250
8000.0	764.2	13.0	57.9	926.3	660.5	316.3	9.7	1.000247
8500.0	750.6	11.6	61.8	914.5	658.7	311.7	10.9	1.000243
9000.0	737.0	10.3	60.7	902.2	657.2	308.3	12.7	1.000237
9500.0	723.7	9.2	57.3	889.8	655.8	305.8	14.6	1.000230
10000.0	710.5	8.5	36.0	876.8	654.5	303.9	16.6	1.000214
10500.0	697.5	7.8	36.2	861.1	653.7	298.2	17.3	1.000211
11000.0	684.7	6.8	37.0	850.4	652.4	292.6	18.2	1.000207
11500.0	672.0	5.7	37.8	837.9	651.2	287.5	19.1	1.000204
12000.0	659.6	4.7	38.7	825.6	650.0	282.4	19.2	1.000200
12500.0	647.5	3.6	39.5	813.5	648.7	277.3	19.6	1.000197
13000.0	635.5	2.5	41.9	801.7	647.4	272.7	19.3	1.000194
13500.0	623.6	1.1	46.7	790.5	645.8	268.5	19.0	1.000192
14000.0	611.9	-0.2	51.4	779.5	644.2	266.7	18.8	1.000189
14500.0	600.4	-1.4	51.7	768.3	642.8	269.1	18.6	1.000186
15000.0	589.0	-2.2	38.5	756.3	641.7	273.1	18.3	1.000179
15500.0	577.8	-3.0	25.3	744.6	640.6	286.2	18.3	1.000172
16000.0	566.8	-3.6	18.8	732.2	639.8	298.6	19.3	1.000168
16500.0	556.0	-4.0	18.3	719.3	639.3	305.0	19.4	1.000165
17000.0	545.3	-4.8	18.0	707.5	638.4	310.8	19.7	1.000152
17500.0	534.8	-6.1	18.0	697.2	636.8	312.2	19.2	1.000159
18000.0	524.5	-7.4	18.0	687.1	635.3	312.1	18.4	1.000156
18500.0	514.3	-8.6	18.0	677.1	633.7	313.4	17.6	1.000154
19000.0	504.4	-9.9	18.0	667.3	632.2	315.9	16.8	1.000151
19500.0	494.5	-11.0	17.9	656.9	630.8	318.6	16.1	1.000149
20000.0	484.7	-12.0	17.8	646.3	629.7	320.6	16.3	1.000146
20500.0	475.0	-13.0	17.7	635.9	628.5	322.5	16.5	1.000144
21000.0	465.6	-13.9	17.5	625.6	627.3	321.9	17.2	1.000141
21500.0	456.4	-14.9	17.4	615.5	626.1	318.3	18.5	1.000139
22000.0	447.3	-15.9	17.3	605.5	625.0	315.2	19.9	1.000137
22500.0	438.4	-16.8	17.2	595.8	623.8	311.9	19.5	1.000134
23000.0	429.7	-17.6	17.0	586.2	622.6	308.4	19.2	1.000132

UPPER AIR DATA
 1190020285
 WHITE SANDS
 TABLE 6 Con't

STATION ALTITUDE 3909.00 FEET MSL
 10 MAY 84
 ASCENSION NO. 285

GEODETIC COORDINATES
 32.40043 LAY DEG
 106.37033 LON 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 CENTIGRADE	DEWPOINT				DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	421.1	-18.8	-37.8	16.8	576.6	621.4	308.6	18.9	1.000130
24000.0	412.6	-19.8	-38.8	16.5	567.3	620.1	311.9	18.8	1.000128
24500.0	404.2	-20.9	-39.9	16.2	558.1	618.8			1.000125
25000.0	395.9	-22.0	-40.8	16.2	549.2	617.4			1.000123
25500.0	387.8	-23.5	-41.6	16.7	540.6	615.8			1.000121
26000.0	379.8	-24.6	-42.4	17.2	532.2	614.2			1.000119
26500.0	372.0	-25.9	-43.2	17.7	524.0	612.6			1.000118

STATION ALTITUDE 3989.00 FEET MSL
 18 MAY 84
 ASCENSION NO. 285

MANDATORY LEVELS
 1390020285
 WHITE SANDS

GEODETTIC COORDINATES
 32.60043 LAT DEG
 106.37033 LON DEG

TABLE 7

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEMOINT CFNTRGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5013.	22.0	6.7	37.	32.7	2.9	
800.0	6725.	16.8	5.8	48.	321.3	8.5	
750.0	8514.	11.5	4.5	62.	311.5	11.0	
700.0	10396.	8.0	-6.1	36.	299.4	17.2	
650.0	12385.	3.8	-8.7	39.	278.3	19.3	
600.0	14500.	-1.4	-10.2	51.	269.1	18.6	
550.0	16760.	-4.3	-25.0	18.	308.2	19.5	
500.0	19195.	-10.5	-30.2	18.	317.0	16.5	
450.0	21830.	-15.6	-34.8	17.	316.1	19.5	
400.0	24713.	-21.4	-40.4	16.			

STATION ALTITUDE 3997.70 FEET MSL
 18 MAY 24
 ASCENSION NO. 52 1230 MDT

SIGNIFICANT LEVEL DATA
 1790060352
 S M P

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 8

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
81.0	27.2	36.0
976.4	24.3	17.0
866.6	23.4	39.0
850.0	21.8	41.0
771.5	13.6	55.0
700.0	6.7	73.0
664.6	6.5	34.0
571.6	6.3	35.0
614.2	-4	49.0
591.2	-4.7	60.0
573.3	-4.4	34.0
559.6	-4.5	18.0
543.9	-5.5	17.0
500.0	-11.0	21.0
460.7	-14.1	19.0
400.0	-21.9	18.0

UPPER AIR DATA
 1390060052
 S P R

STATION ALTITUDE 5997.70 FEET MSL
 13 MAY 84
 ASCENSION NO. 5

1230 MDT

TABLE 9

GEODETIC COORDINATES
 32.48036 LAT DEG
 106.42307 LPN DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENITGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.3	681.0	27.2	36.0	1016.1	677.1	50.0	4.1	1.000281
4000.0	680.9	27.1	35.7	1016.3	677.0	50.0	4.1	1.000280
4500.0	665.7	23.3	39.1	1012.3	672.4	57.0	3.8	1.000274
5000.0	650.7	21.4	40.9	999.7	670.7	64.9	3.6	1.000270
5500.0	635.7	20.4	43.4	987.2	669.0	73.5	3.5	1.000266
6000.0	621.0	18.9	46.0	974.9	667.3	82.7	3.4	1.000262
6500.0	606.5	17.4	48.6	962.8	665.5	74.3	2.8	1.000258
7000.0	792.3	15.8	51.2	950.8	663.7	60.1	2.2	1.000254
7500.0	778.3	14.3	53.7	939.1	662.0	359.9	2.6	1.000250
8000.0	764.4	12.9	56.7	926.9	660.3	323.2	4.1	1.000246
8500.0	750.6	11.6	60.1	914.3	658.8	309.3	6.4	1.000242
9000.0	737.0	10.4	63.5	901.9	657.3	299.8	9.3	1.000239
9500.0	723.6	9.1	66.9	889.7	655.8	294.3	12.5	1.000235
10000.0	710.5	7.8	70.2	877.7	654.2	290.5	15.2	1.000231
10500.0	697.7	6.7	73.1	865.5	652.8	286.7	16.9	1.000225
11000.0	684.9	6.5	76.7	851.5	652.1	283.7	18.6	1.000220
11500.0	672.3	6.3	80.0	836.5	651.9	279.3	19.6	1.000213
12000.0	659.8	5.0	83.8	824.9	650.3	275.1	20.6	1.000200
12500.0	647.5	3.6	87.5	813.6	648.7	272.4	21.3	1.000197
13000.0	635.5	2.2	91.3	802.6	647.0	270.9	21.6	1.000194
13500.0	623.6	.7	95.1	791.8	645.3	269.4	21.9	1.000192
14000.0	612.0	-.8	98.9	781.4	643.5	271.0	21.5	1.000189
14500.0	600.4	-3.0	102.6	772.8	640.9	273.5	21.0	1.000186
15000.0	589.0	-4.7	106.3	763.0	638.8	276.1	20.5	1.000183
15500.0	577.7	-6.5	110.0	748.2	638.9	283.3	19.9	1.000176
16000.0	566.7	-8.4	113.7	734.1	638.8	290.6	19.7	1.000170
16500.0	555.8	-10.3	117.4	721.0	638.4	297.2	19.5	1.000165
17000.0	545.2	-12.2	121.1	709.0	637.6	302.9	19.4	1.000162
17500.0	534.6	-14.1	124.8	698.4	636.2	308.6	19.4	1.000159
18000.0	524.2	-16.0	128.5	688.2	634.6	310.5	19.5	1.000157
18500.0	514.1	-17.9	132.2	678.1	633.1	312.0	19.7	1.000154
19000.0	504.1	-19.8	135.9	668.2	631.5	313.3	19.9	1.000152
19500.0	494.2	-21.7	139.6	657.6	630.4	314.1	20.3	1.000149
20000.0	484.5	-23.6	143.3	646.5	629.4	314.8	20.7	1.000147
20500.0	474.9	-25.5	147.0	635.6	628.5	315.2	20.8	1.000144
21000.0	465.6	-27.4	150.7	624.9	628.0	315.0	20.4	1.000141
21500.0	456.3	-29.3	154.4	614.7	626.5	314.9	20.1	1.000139
22000.0	447.1	-31.2	158.1	605.0	625.1	315.0	20.0	1.000137
22500.0	438.1	-33.1	161.8	595.4	623.7	315.0	20.0	1.000134
23000.0	429.3	-35.0	165.5	586.0	622.4	314.9	20.0	1.000132

STATION ALTITUDE 3997.30 FEET MSL
 12 MAY 84
 ASCENSION NO. 5. 1230 MDT

UPPER AIR DATA
 1390060052
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 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 KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TM)	SPEED KNOTS	
23500.0	420.7	-19.1	18.4	576.7	621.0			1.000130
24000.0	412.2	-20.2	18.2	567.6	619.6			1.000128
24500.0	403.9	-21.4	18.1	559.7	618.2			1.000126

STATION ALTITUDE 1097.73 FEET MSL
 16 MAY 84 1230 MDT
 ASCENSION NO. 52

MANDATORY LEVELS
 1390660052
 S W R

GEODETTIC COORDINATES
 32.46034 LAT DEG
 106.62307 LON DEG

TABLE 10

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
857.0	5020.	21.8	8.0	41.	65.2	3.6
807.0	6731.	16.7	6.1	50.	60.4	2.4
757.0	8520.	11.6	4.2	60.	305.9	6.5
707.0	10399.	6.7	2.2	73.	287.4	16.6
650.0	12391.	3.8	-8.4	40.	272.7	21.2
600.0	14501.	-3.0	-10.6	56.	273.5	20.9
550.0	16750.	-5.1	-25.3	19.	300.2	19.4
500.0	19181.	-11.0	-29.0	21.	313.6	20.1
450.0	21815.	-15.4	-33.8	19.		
400.0	24697.	-21.9	-39.7	18.		

STATION ALTITUDE 4033.69 FEET MSL
 18 MAY 84
 ASCENSION NO. 5 1230 MDT

SIGNIFICANT LEVEL DATA
 190200005
 00M

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 11

GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
679.6	26.9	46.0
859.2	24.5	27.0
1350.0	22.6	33.0
1788.4	15.0	47.0
2759.4	12.4	55.0
3721.0	9.6	35.0
4700.0	7.9	45.0
5693.0	7.0	48.0
6711.5	5.2	31.0
7846.4	-3.9	61.0
8967.0	-4.7	19.0
10133.6	-6.6	18.0
11314.2	-10.6	19.0
12509.0	-11.8	17.0
13744.3	-13.2	17.0
15000.9	-17.4	17.0
16299.9	-19.2	16.0
17600.2	-22.0	18.0

UPPER AIR DATA
 1390200005
 NON

STATION ALTITUDE 4003.69 FEET MSL
 16 MAY 84
 ASCENSION NO. 5 1230 MDT

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 12

GLOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
4003.7	879.4	26.9	46.0	1013.8	677.2	340.0	7.0	1.000295
4500.0	864.4	24.0	28.5	1009.5	672.8	343.0	6.8	1.000262
5000.0	849.4	22.5	33.1	996.7	671.2	346.1	6.6	1.000261
5500.0	834.5	20.7	36.4	985.2	669.2	349.4	6.5	1.000259
6000.0	819.8	18.9	39.7	973.9	667.2	352.9	6.3	1.000256
6500.0	805.4	17.2	43.0	962.7	665.1	356.5	6.2	1.000252
7000.0	791.3	15.4	46.3	951.7	663.0	353.7	6.1	1.000249
7500.0	777.2	14.0	50.1	939.1	661.5	325.6	6.6	1.000246
8000.0	763.3	12.8	53.9	926.4	660.0	305.7	8.4	1.000243
8500.0	749.5	11.7	57.9	913.5	658.6	297.8	10.9	1.000236
9000.0	736.0	10.7	62.9	900.7	657.3	294.3	13.5	1.000227
9500.0	722.7	9.7	68.0	888.0	656.0	293.2	15.4	1.000218
10000.0	709.5	8.7	73.9	874.9	654.8	295.2	15.4	1.000217
10500.0	696.6	7.5	80.5	862.5	653.5	296.7	15.6	1.000215
11000.0	683.8	6.2	88.0	850.9	651.9	291.3	16.4	1.000208
11500.0	671.2	5.2	96.4	838.8	650.4	286.5	17.4	1.000200
12000.0	658.6	3.9	105.0	826.7	649.0	281.9	17.9	1.000198
12500.0	646.3	2.7	114.8	814.8	647.6	277.6	18.6	1.000196
13000.0	634.1	1.4	125.1	803.1	646.1	274.1	19.0	1.000194
13500.0	622.2	.2	136.7	791.6	644.7	271.5	19.0	1.000191
14000.0	610.6	-1.0	149.5	780.2	643.2	269.0	19.0	1.000189
14500.0	599.1	-2.3	163.9	769.1	641.8	273.2	19.9	1.000186
15000.0	587.9	-3.5	180.2	758.1	640.3	279.0	19.9	1.000184
15500.0	576.7	-4.3	198.0	746.2	639.2	286.0	19.0	1.000176
16000.0	565.7	-4.8	217.4	733.9	638.4	293.9	19.5	1.000168
16500.0	554.8	-5.4	238.5	721.4	637.7	300.9	20.3	1.000165
17000.0	544.1	-6.0	261.2	709.2	636.9	303.0	20.2	1.000162
17500.0	533.7	-6.6	286.9	697.1	636.2	305.2	20.1	1.000159
18000.0	523.3	-7.8	315.6	686.7	634.8	307.0	19.6	1.000156
18500.0	513.2	-9.0	347.6	676.5	633.3	308.6	18.7	1.000154
19000.0	503.2	-10.2	381.4	666.4	631.8	310.6	18.0	1.000151
19500.0	493.4	-11.1	417.6	655.6	630.8	312.3	17.7	1.000149
20000.0	483.7	-11.9	466.6	644.6	629.8	314.3	17.5	1.000146
20500.0	474.1	-12.7	519.0	634.0	628.8	316.0	17.6	1.000143
21000.0	464.8	-13.6	583.3	623.6	627.7	313.5	17.8	1.000141
21500.0	455.5	-14.6	661.7	613.5	626.5	312.2	18.4	1.000139
22000.0	446.4	-15.6	756.4	603.6	625.3	310.5	19.4	1.000136
22500.0	437.5	-16.5	871.8	593.8	624.1	310.7	20.1	1.000134
23000.0	428.8	-17.5	1006.9	584.3	622.9	312.5	20.7	1.000132
23500.0	420.2	-18.6	1164.6	574.8	621.7			1.000129

STATION ALTITUDE 40J3.69 FEET MSL
 16 MAY 84 1230 MDT
 ASCENSION NO. 5

UPPER AIR DATA
 17902000US
 DON

GEOGETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 12 Con't

GLOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	411.7	-19.8	-38.8	16.4	566.0	620.2			1.000127
24500.0	403.3	-21.4	-39.5	17.6	557.9	618.2			1.000175

STATION ALTITUDE 4003.69 FEET MSL
 18 MAY 84
 ASCENSION NO. 5

MANDATORY LEVELS
 1190200005
 DON
 TABLE 13

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29459 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4977.	22.6	5.5	33.	345.0	6.6	
800.0	6669.	16.5	4.3	44.	357.9	6.2	
750.0	8476.	11.7	1.7	50.	298.0	10.8	
700.0	10357.	7.9	-3.3	45.	296.6	15.5	
650.0	12345.	3.1	-9.8	38.	275.9	18.4	
600.0	14453.	-2.2	-9.0	55.	272.8	18.9	
550.0	16704.	-5.6	-25.8	19.	301.9	20.2	
500.0	19156.	-10.6	-29.7	19.	311.0	17.9	
450.0	21775.	-15.2	-34.6	17.	311.2	19.0	
400.0	24659.	-22.0	-39.8	18.			

STATION ALTITUDE 3997.30 FEET MSL
 18 MAY 84
 ASCENSION NO. 51

SIGNIFICANT LEVEL DATA

1790060953

S M R

TABLE 14

GEODETIC COORDINATES
 32.48036 LAT DEG
 106.42307 LON DEG

PRESSURE MILLIBARS	GLOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
860.2	3997.3	28.7	10.8	33.0
378.3	4060.0	25.5	5.1	27.0
350.0	4999.2	22.2	4.7	32.0
770.8	7753.5	14.7	3.2	46.0
724.9	9446.0	9.8	2.6	61.0
700.0	10397.2	7.4	.6	62.0
682.4	11084.7	5.7	-5.9	43.0
657.0	12100.2	3.2	-9.7	38.0
637.2	12913.5	2.0	-16.9	23.0
512.3	13965.7	-0.6	-11.3	44.0
596.1	14658.9	-1.5	-24.0	16.0
582.2	15286.7	-1.2	-23.7	16.0
527.2	17856.2	-7.6	-27.7	18.0

STATION ALTITUDE 3997.30 FEET MSL
 18 MAY 84 1315 MDT
 ASCENSION NO. 53

UPPER AIR DATA
 1190060053
 5 M R

TABLE 15

GEOMETRIC ALTITUDE 32.46034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE			KNOTS	FEET	DIRECTION DEGREES(TN)	SPEED KNOTS	
3997.3	880.2	28.7	16.8	33.0	1010.2	678.7	.0	.0	1.000279	
4000.0	880.1	28.6	10.6	32.7	1010.6	678.6	.0	287.7	1.000279	
4500.0	864.9	24.0	5.0	29.3	1010.3	672.8	1.3	287.7	1.000263	
5000.0	850.0	22.2	4.7	32.0	998.7	670.8	2.7	287.7	1.000260	
5500.0	835.0	20.6	4.6	34.5	985.7	669.3	4.0	287.7	1.000257	
6000.0	820.3	19.5	4.4	37.1	972.8	667.7	5.3	287.7	1.000254	
6500.0	805.9	18.1	4.2	39.6	960.2	666.2	6.7	286.8	1.000251	
7000.0	791.7	16.8	3.8	42.2	947.7	664.6	8.4	280.0	1.000247	
7500.0	777.8	15.4	3.4	44.7	935.5	663.0	10.2	275.5	1.000244	
8000.0	763.9	14.0	3.2	48.2	923.3	661.4	11.4	275.8	1.000241	
8500.0	750.2	12.5	3.1	52.6	911.3	659.8	12.2	277.4	1.000239	
9000.0	736.7	11.1	2.9	57.0	899.4	658.1	13.3	279.4	1.000236	
9500.0	723.5	9.7	2.5	61.1	887.7	656.4	14.5	282.2	1.000233	
10000.0	710.3	8.4	1.5	61.6	875.7	654.9	15.8	284.5	1.000228	
10500.0	697.3	7.1	-0.3	59.2	863.9	653.3	16.9	284.5	1.000221	
11000.0	684.5	5.9	-5.0	45.3	852.6	651.6	17.9	283.5	1.000210	
11500.0	671.9	4.7	-7.4	41.0	840.8	650.0	18.8	282.5	1.000204	
12000.0	659.5	3.4	-9.3	38.5	829.1	648.5	19.2	282.3	1.000200	
12500.0	647.2	2.6	-12.9	30.6	816.5	647.4	19.5	282.1	1.000193	
13000.0	635.1	1.8	-16.2	24.7	803.9	646.3	20.4	280.3	1.000188	
13500.0	623.2	.6	-13.2	34.7	792.1	644.9	21.4	277.9	1.000188	
14000.0	611.5	-0.6	-11.7	42.6	780.5	643.6	21.8	279.8	1.000187	
14500.0	600.0	-1.3	-19.8	22.7	768.2	642.6	21.4	286.5	1.000178	
15000.0	588.6	-1.3	-23.9	16.0	756.0	642.5	21.1	293.9	1.000172	
15500.0	577.4	-1.7	-24.1	16.2	749.7	642.0	20.3	303.6	1.000169	
16000.0	566.4	-3.0	-24.8	16.6	749.9	640.5	20.1	313.8	1.000167	
16500.0	555.5	-4.2	-25.6	16.9	719.3	639.0			1.000164	
17000.0	544.9	-5.5	-26.4	17.3	708.8	637.5			1.000162	
17500.0	534.5	-6.7	-27.2	17.7	698.5	636.1			1.000159	

STATION ALTITUDE 3997.30 FEET MSL
 18 MAY 84 1315 MDT
 ASCENSION NO. 53

MANDATORY LEVELS
 1790060053
 S M R
 TABLE 16

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TW)	SPEED KNOTS
850.0	4996.	22.2	4.7	32.	287.7	2.7
800.0	6709.	17.8	4.1	41.	283.5	7.4
750.0	8504.	12.5	3.1	53.	277.4	12.3
700.0	10367.	7.4	.6	62.	284.8	16.7
650.0	12372.	2.8	-12.0	33.	282.2	19.4
600.0	14481.	-1.3	-19.8	23.	286.4	21.4
550.0	16746.	-4.9	-26.0	17.		

STATION ALTITUDE 3997.30 FEET MSL
 16 MAY 84
 ASCENSION NO. 54 1413 MDT

SIGNIFICANT LEVEL DATA
 1Y97040754
 S M P

GEODETTIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 17

PRESSURE GEOMETRIC ALTITUDE	TEMPERATURE AIR	REL. HUM. PERCENT.
MILLIBARS MSL FEET	DEGREES CENTIGRADE	
979.8 3997.3	29.8 5.8	22.0
955.0 4826.3	24.7 .3	20.0
950.0 4994.6	24.2 -.2	20.0
808.2 6431.3	20.3 -2.1	22.0
739.4 8917.7	12.9 -3.8	31.0
700.0 10416.3	8.2 -3.9	42.0
690.9 10771.0	7.7 -8.8	30.0
673.4 11463.0	5.5 -9.5	33.0
670.5 11578.9	5.3 -4.0	51.0
653.7 12258.4	3.3 -3.9	59.0
652.0 12327.8	3.1 -7.7	45.0
635.7 13070.2	1.4 -11.0	39.0
627.2 13356.0	.4 -6.9	58.0
624.6 13465.6	.3 -10.2	45.0
609.4 14113.7	-0.9 -15.1	33.0
589.4 14985.6	-3.3 -14.3	42.0
565.6 16053.3	-5.4 -27.2	16.0
548.8 16830.7	-5.7 -26.2	18.0
523.4 18049.8	-6.6 -28.2	16.0
500.0 19217.9	-9.6 -30.0	17.0
400.0 24754.5	-21.8 -40.7	16.0

STATION ALTITUDE 3997.30 FEET MSL
 18 MAY 84
 ASCENSION NO. 54

UPPER AIR DATA
 1790060054
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG 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	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3997.3	879.8	29.8	5.8	22.0	1007.7	679.4	278.9	11.2	1.000263
4000.0	879.7	29.8	5.8	22.0	1007.6	679.4	278.9	11.2	1.000263
4500.0	864.7	26.7	2.4	20.8	1001.4	675.7	278.9	11.2	1.000254
5000.0	849.8	24.2	-2.2	20.0	993.0	672.7	278.9	11.2	1.000247
5500.0	835.1	22.8	-8.8	20.0	980.3	671.1	278.9	11.2	1.000243
6000.0	820.5	21.5	-1.5	21.4	967.9	669.5	275.9	11.2	1.000240
6500.0	806.2	20.1	-2.1	22.2	955.4	667.9	281.3	11.2	1.000236
7000.0	791.9	18.6	-2.3	24.1	943.2	666.3	293.6	11.2	1.000233
7500.0	777.9	17.1	-2.6	25.9	931.3	664.6	295.3	11.2	1.000230
8000.0	764.1	15.6	-2.9	27.7	919.5	662.8	302.3	11.2	1.000227
8500.0	750.5	14.1	-3.4	29.5	907.9	661.1	303.7	11.2	1.000224
9000.0	737.2	12.6	-3.8	31.6	896.5	659.4	302.8	11.2	1.000221
9500.0	723.8	11.1	-3.7	33.3	885.0	657.6	301.9	11.2	1.000219
10000.0	710.7	9.5	-3.8	36.9	873.8	655.8	301.1	11.2	1.000217
10500.0	697.8	8.1	-5.0	39.2	862.4	654.1	301.4	11.2	1.000212
11000.0	685.1	7.0	-9.0	31.0	850.5	652.6	301.8	11.2	1.000204
11500.0	672.5	5.4	-7.5	38.7	839.3	650.9	299.7	11.2	1.000206
12000.0	660.0	4.1	-3.9	56.0	827.3	649.5	293.5	11.2	1.000207
12500.0	647.8	2.7	-8.5	43.5	816.6	647.6	288.1	11.2	1.000198
13000.0	635.7	1.4	-11.0	39.0	805.4	646.0	282.1	11.2	1.000193
13500.0	623.8	.2	-10.5	44.4	793.5	644.7	276.3	11.2	1.000191
14000.0	612.0	-7.7	-14.2	33.1	781.6	643.5	271.7	11.2	1.000185
14500.0	600.5	-2.0	-14.7	37.0	770.4	641.9	274.7	11.2	1.000182
15000.0	589.1	-3.3	-14.5	41.6	759.6	640.5	278.7	11.2	1.000181
15500.0	577.8	-4.3	-19.4	29.5	748.1	639.0	284.2	11.2	1.000173
16000.0	566.8	-5.3	-26.3	17.3	736.9	637.7	291.5	11.2	1.000168
16500.0	555.9	-5.6	-26.6	17.1	725.4	637.4	297.6	11.2	1.000165
17000.0	545.2	-5.8	-26.4	17.7	710.1	637.1	302.8	11.2	1.000162
17500.0	534.7	-6.2	-27.3	16.9	697.4	636.7	308.4	11.2	1.000159
18000.0	524.4	-6.6	-28.1	16.1	685.0	636.2	312.9	11.2	1.000156
18500.0	514.3	-7.6	-28.9	16.4	674.8	634.8	318.1	11.2	1.000153
19000.0	504.3	-9.0	-29.7	16.8	664.9	633.2	321.9	11.2	1.000151
19500.0	494.3	-10.2	-30.6	16.9	654.7	631.8	321.9	11.2	1.000148
20000.0	484.5	-11.3	-31.5	16.9	644.4	630.5	322.0	11.2	1.000146
20500.0	474.8	-12.4	-33.5	16.8	634.2	629.1	321.7	11.2	1.000143
21000.0	465.3	-13.5	-33.5	16.7	624.2	627.8	320.6	11.2	1.000141
21500.0	456.1	-14.0	-34.4	16.6	614.4	626.5	319.4	11.2	1.000139
22000.0	447.0	-15.7	-35.4	16.5	604.7	625.1	319.4	11.2	1.000136
22500.0	438.0	-16.8	-36.4	16.4	595.2	623.8	319.4	11.2	1.000134
23000.0	429.3	-17.9	-37.3	16.3	585.9	622.4	319.4	11.2	1.000132

STATION ALTITUDE 3997.30 FEET PSL
 16 MAY 84 1413 MDT
 ASCENSION NO. 54

UPPER AIR DATA
 1790060054
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 18 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DEGREES	DIRECTION DEGREES(TN)	
23500.0	420.7	-19.0	16.2	576.7	621.1			1.000130
24000.0	412.4	-20.1	16.1	567.7	619.7			1.000128
24500.0	404.1	-21.2	16.0	558.9	618.4			1.000126

STATION ALTITUDE 3997.70 FEET MSL
 18 MAY 84 1413 MDT
 ASCENSION NO. 54

MANDATORY LEVELS
 1790060054
 S M R

TABLE 19

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TM)	SPEED KNOTS
850.0	4991.	24.2	-2.7	20.	278.9	9.7
800.0	6714.	19.5	-2.2	25.	290.5	2.3
750.0	8516.	14.1	-3.6	30.	303.7	13.8
700.0	10406.	8.2	-3.9	42.	301.3	13.5
650.0	12396.	2.9	-3.1	44.	289.1	12.9
600.0	14504.	-2.0	-14.7	37.	274.8	19.6
550.0	16753.	-5.7	-26.2	18.	300.3	24.4
500.0	19191.	-9.6	-30.0	17.	321.9	18.5
450.0	21831.	-15.4	-35.1	17.	318.5	16.5
400.0	24713.	-21.8	-40.7	16.		

GEODETIC COORDINATES
 32.66034 LAT DEG
 106.62307 LON DEG

STATION ALTITUDE 4003.62 FEET MSL
 18 MAY 84 1413 MDT
 ASCENSION NO. C

SIGNIFICANT LEVEL DATA
 1390200006
 DON

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 20

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
878.4	4303.7	28.0	30.0
871.8	4222.6	26.7	25.0
850.0	4952.4	24.1	25.0
722.0	9530.0	10.8	63.0
710.7	9991.4	9.5	52.0
700.0	10374.3	8.1	67.0
679.8	11166.0	5.8	60.0
669.0	11596.3	4.6	54.0
646.7	12500.6	1.8	75.0
638.5	12839.2	1.9	43.0
636.1	12939.3	2.9	31.0
630.5	13174.2	1.9	34.0
600.7	14450.6	-1.2	29.0
565.5	16026.1	-3.6	19.0
514.3	18461.2	-10.1	22.0
500.0	19174.6	-11.1	20.0
483.0	20046.8	-11.9	19.0
454.8	21554.7	-14.2	19.0
402.3	24573.5	-21.4	17.0

STATION ALTITUDE 4003.69 FEET MSL
 18 MAY 84
 ASCENSION NO. 5

UPPER AIR DATA
 1790200DD6
 DOWN

TABLE 21

GEODETIC COORDINATES
 32.57209 LAY DEG
 106.29439 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TM) SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE					
4003.7	876.4	28.0	8.8	30.0	1011.2	677.7	120.0	1.000273
4500.0	863.4	25.7	4.2	25.0	1002.8	674.7	127.5	1.000259
5000.0	848.6	24.0	2.9	25.2	991.6	672.6	139.4	1.000253
5500.0	833.6	22.5	2.7	27.2	978.9	671.0	158.1	1.000250
6000.0	818.8	21.1	2.4	29.1	966.3	669.3	183.5	1.000247
6500.0	804.4	19.0	2.1	31.1	954.0	667.7	208.7	1.000244
7000.0	790.2	18.4	1.7	33.1	941.8	666.0	223.5	1.000241
7500.0	776.2	16.7	1.2	35.0	929.9	664.3	234.0	1.000237
8000.0	762.5	15.2	.7	37.0	918.1	662.6	241.8	1.000234
8500.0	749.0	13.8	.1	38.9	906.5	660.9	250.4	1.000230
9000.0	735.8	12.3	-.5	40.9	895.1	659.2	257.0	1.000227
9500.0	722.8	10.9	-1.2	42.9	883.9	657.5	262.1	1.000223
10000.0	709.7	9.4	-1.1	51.5	872.3	655.9	267.0	1.000223
10500.0	696.8	7.7	-2.3	49.1	861.7	653.8	271.0	1.000217
11000.0	684.0	6.3	-1.5	57.3	850.1	652.2	272.9	1.000216
11500.0	671.4	4.9	-3.3	55.3	839.0	650.5	273.1	1.000210
12000.0	659.0	3.3	-4.9	63.4	827.9	648.7	273.0	1.000209
12500.0	646.7	1.8	-2.1	75.0	816.9	647.0	271.5	1.000208
13000.0	634.6	2.6	-12.5	31.8	800.5	647.4	270.2	1.000190
13500.0	622.8	1.1	-13.4	32.7	790.0	645.6	271.8	1.000187
14000.0	611.1	-.1	-15.3	30.8	778.7	644.1	274.7	1.000183
14500.0	599.6	-1.3	-17.1	28.7	767.5	642.7	277.7	1.000179
15000.0	588.2	-2.0	-19.1	25.5	755.1	641.7	283.5	1.000175
15500.0	577.0	-2.8	-21.3	22.3	743.0	640.8	290.7	1.000171
16000.0	566.1	-3.6	-23.7	19.2	731.0	639.8	298.5	1.000168
16500.0	555.2	-4.9	-24.5	19.6	720.5	638.3	304.1	1.000165
17000.0	544.4	-6.2	-25.3	20.2	710.1	636.7	308.6	1.000162
17500.0	533.9	-7.5	-26.1	20.8	699.9	635.1	312.6	1.000160
18000.0	523.6	-8.9	-26.9	21.4	689.9	633.5	314.1	1.000157
18500.0	513.5	-10.2	-27.8	21.9	679.9	631.9	315.5	1.000155
19000.0	503.5	-10.9	-29.1	20.5	668.4	631.1	316.3	1.000152
19500.0	493.6	-11.4	-30.0	19.6	656.7	630.4	316.5	1.000149
20000.0	483.9	-11.9	-30.7	19.1	644.9	629.9	316.7	1.000146
20500.0	474.3	-12.6	-31.3	19.0	634.0	629.0	316.0	1.000144
21000.0	465.0	-13.4	-32.0	19.0	623.3	628.0	315.2	1.000141
21500.0	455.6	-14.1	-32.6	19.0	612.8	627.1	315.5	1.000139
22000.0	446.6	-15.3	-33.8	18.7	603.2	625.7	317.0	1.000136
22500.0	437.7	-16.5	-34.9	18.4	593.8	624.3	318.5	1.000134
23000.0	428.9	-17.6	-36.1	18.0	584.6	622.8	318.7	1.000132
23500.0	420.2	-18.6	-37.3	17.7	575.5	621.3	318.5	1.000130

UPPER AIR DATA
 1790200006
 DON

STATION ALTITUDE 4007.69 FEET MSL
 18 MAY 84 1413 MDT
 ASCENSION NO. 6

TABLE 21 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEGREE POINT	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	411.6	-20.0	-38.5	17.4	566.6	619.9			1.000127
24500.0	403.5	-21.2	-39.7	17.0	557.9	618.4			1.000125

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

STATION ALTITUDE 4001 FEET MSL
 16 MAY 84
 ASCENSION NO. 6

MANDATORY LEVELS
 1390200006
 00W

GEODETIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 22

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
857.0	4949.	24.1	2.9	25.	137.9	6.5	
800.0	6672.	19.2	2.0	32.	214.8	5.6	
757.0	8474.	13.9	.1	39.	250.1	9.5	
700.0	10364.	8.1	-2.5	47.	270.0	14.7	
657.0	12352.	2.2	-2.3	72.	271.9	22.1	
600.0	14464.	-1.2	-17.0	29.	277.6	24.0	
550.0	16724.	-5.5	-24.9	20.	306.3	22.1	
500.0	19148.	-11.1	-29.6	20.	316.4	22.9	
450.0	21786.	-14.8	-33.3	19.	316.4	17.5	

STATION ALTITUDE 3905.0 FEET MSL
 10 MAY 64
 ASCENSION NO. 046

SIGNIFICANT LEVEL DATA

17000206
 WHITE SANDS

TABLE 23

GEODETIC COORDINATES
 32.40243 LAT DEG
 106.37033 LON DEG

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	REL. HUM. PERCENT
MILLIBARS	MET FEET	DEGREES CENTIGRADE	
379.6	3989.0	29.8	23.0
363.7	4501.1	27.6	25.0
350.0	4949.6	24.4	27.0
333.2	7636.6	17.1	35.0
300.0	10384.3	8.9	52.0
274.3	11397.2	5.7	62.0
259.2	12045.9	4.2	56.0
250.8	13177.2	0	57.0
233.0	13911.1	-1.0	42.0
206.3	15095.2	-2.9	14.0
219.6	15241.0	-9.5	20.0
210.0	15676.2	-28.2	21.0
200.0	19178.5	-9.2	20.0
191.3	19631.4	-10.7	20.0
178.0	20312.1	-11.9	19.0
164.1	21597.1	-12.1	18.0
150.0	24713.0	-14.3	18.0
158.6	27321.9	-22.3	21.0
		-28.5	

UPPER AIR DATA
 1790070756
 WHITE SANDS

STATION ALTITUDE 3909.00 FEET MSL
 18 MAY 84 1512 MDT
 ASCENSION NO. 120

GEODETIC COORDINATES
 32.40743 LAT DEG
 106.37033 LON DEG

TABLE 24

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DWP POINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3909.0	876.5	22.2	6.5	23.0	1004.1	679.5	290.0	9.9	1.000244
4000.0	878.3	22.5	3.4	23.0	1005.0	679.4	289.0	9.9	1.000244
4500.0	843.3	27.6	5.8	25.0	994.0	677.0	286.6	9.7	1.000241
5000.0	848.5	26.3	4.2	27.1	990.2	673.1	283.1	9.5	1.000256
5500.0	813.7	22.9	3.0	28.6	977.4	671.5	279.5	9.3	1.000252
6000.0	819.1	21.5	3.3	30.1	964.9	670.0	275.7	9.2	1.000244
6500.0	804.8	20.2	2.8	31.6	957.4	668.4	271.9	9.1	1.000245
7000.0	790.7	19.0	2.3	33.1	945.2	666.8	268.0	9.0	1.000242
7500.0	776.9	17.5	1.7	34.6	928.2	665.3	264.1	9.0	1.000276
8000.0	763.1	16.0	1.4	37.2	914.2	663.6	264.2	9.1	1.000275
8500.0	749.4	14.5	1.2	40.3	904.5	661.9	265.1	9.1	1.000232
9000.0	736.0	13.0	.9	43.4	892.9	660.2	265.9	9.1	1.000279
9500.0	722.3	11.5	.5	46.5	881.5	658.4	269.7	9.3	1.000226
10000.0	709.8	10.0	.0	49.6	870.3	656.7	274.5	9.6	1.000273
10500.0	697.0	8.5	-.4	53.1	859.2	654.9	279.0	10.1	1.000270
11000.0	684.3	7.0	-.7	56.1	848.3	653.1	278.7	12.6	1.000217
11500.0	671.7	5.5	-1.4	59.1	837.3	651.3	278.3	15.1	1.000213
12000.0	659.3	4.3	-3.5	54.4	825.6	649.8	275.2	17.0	1.000297
12500.0	647.1	3.9	-4.9	56.4	814.6	648.0	272.8	18.9	1.000203
13000.0	635.1	1.4	-6.4	56.8	803.8	646.3	273.2	19.3	1.000198
13500.0	623.1	.1	-8.9	56.6	792.9	644.6	273.5	19.6	1.000192
14000.0	611.4	-1.1	-12.8	40.6	781.9	643.0	277.9	19.4	1.000186
14500.0	599.8	-1.5	-15.9	30.8	769.6	641.9	262.4	19.3	1.000150
15000.0	588.4	-2.7	-22.0	7.0	757.6	640.8	287.2	19.5	1.000174
15500.0	577.1	-3.7	-23.9	15.1	745.9	639.6	292.1	20.2	1.000171
16000.0	566.0	-4.8	-24.6	15.3	734.4	638.4	296.7	21.2	1.000156
16500.0	555.1	-5.8	-25.4	15.4	723.1	637.1	299.7	22.3	1.000145
17000.0	544.4	-6.9	-26.4	15.6	711.9	635.9	301.8	23.5	1.000162
17500.0	534.0	-7.9	-27.0	15.8	701.0	634.6	303.4	24.8	1.000160
18000.0	523.7	-9.0	-27.8	15.9	690.2	633.4	306.4	24.6	1.000157
18500.0	513.5	-9.3	-27.8	25.6	677.9	632.9	307.2	24.3	1.000154
19000.0	503.5	-10.4	-28.6	26.4	664.7	631.9	311.8	24.1	1.000152
19500.0	493.7	-11.6	-30.0	20.0	652.2	630.2	313.5	23.6	1.000149
20000.0	484.0	-12.0	-30.6	15.5	645.4	629.7	315.6	23.2	1.000146
20500.0	474.4	-12.4	-31.2	15.0	637.7	629.2	316.7	22.5	1.000144
21000.0	465.1	-13.2	-31.9	15.0	629.2	628.1	316.7	21.1	1.000141
21500.0	455.9	-14.1	-32.5	15.0	620.4	627.1	316.7	19.7	1.000139
22000.0	446.7	-15.3	-33.7	15.9	607.4	625.6	316.9	18.3	1.000136
22500.0	437.7	-16.8	-34.9	15.7	594.2	624.1	318.6	16.8	1.000134
23000.0	428.9	-17.9	-36.1	15.5	585.2	622.5	320.5	15.4	1.000132

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UPPER AIR DATA
 17902023A
 WMTT SANDS

STATION ALTITUDE (0.0.0) FEET -SL
 13 MAY 84
 ASCENSION NO. -25

1512 MDT

TABLE 24 Con't

GLOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		RELHUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CELSIUS	WETPOINT CELSIUS				DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	420.2	-19.2	-77.2	18.4	576.3	670.9	721.4	14.9	1.000170
24000.0	411.0	-20.3	-73.4	18.2	567.6	619.3	721.1	15.6	1.000128
24500.0	403.5	-21.3	-74.5	18.1	559.0	617.8	720.7	16.3	1.000176
25000.0	395.2	-23.0	-40.5	18.3	550.3	616.2	718.4	16.4	1.000124
25500.0	387.0	-24.2	-41.2	18.9	541.5	614.7	715.2	16.2	1.000122
26000.0	379.0	-25.4	-41.9	19.5	532.9	613.2			1.000120
26500.0	371.2	-26.6	-42.7	20.1	524.4	611.7			1.000118
27000.0	363.5	-27.6	-43.5	20.6	514.1	610.2			1.000116

STATION ALTITUDE 1512 MDT
 18 MAY 84
 ASCENSION NO. 190

MANDATORY LEVELS
 170020286
 WHITE SANDS

GEODETIC COORDINATES
 32.60043 LAT DEG
 106.37053 LON DEG

TABLE 25

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		AIR DEGREES CENTIGRADE	WETPOINT CENTIGRADE		DIRECTION DEGREES(TM)	SPEED KNOTS
820.0	4944.	14.4	4.7	27.	283.5	9.5
800.0	6672.	19.7	7.6	32.	270.6	9.1
750.0	5479.	14.6	1.2	40.	265.1	9.1
700.0	10774.	8.9	-4.	52.	278.0	9.9
650.0	12167.	3.2	-4.4	56.	273.2	18.5
600.0	14475.	-1.2	-16.8	31.	282.2	19.3
550.0	16727.	-6.7	-25.8	20.	300.7	22.9
500.0	19151.	-10.7	-29.2	20.	312.4	23.9
450.0	21700.	-14.0	-33.7	19.	316.7	16.8
400.0	24677.	-12.7	-40.0	18.	320.2	16.5

END

FILMED

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