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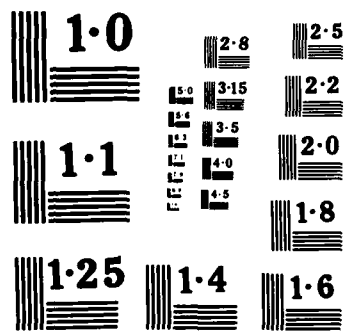
19320A MLRS MISSILE NUMBER V6165 V6131 V6132 V6133
ROUND NUMBER V593/AT2- (U) ARMY ELECTRONICS RESEARCH
AND DEVELOPMENT COMMAND NSMR NM ATM. D C KELLER
JUN 84 ERADCOM/ASL/DR-1345 F/G 4/2

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Jun 84

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AD-A144 836

METEOROLOGICAL DATA REPORT

Missile Number V6165, V6131, V6132, V6133
Round Number V593/AT2-55, V594/AT2-56, V595/AT2-57, VV596/AT2-58
12 June 1984

by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19320A MLRS, Missile Number V6165, V6131, V6132, V6133, Round Number V593/AT2-55, V594/AT2-56, V595/AT2-57 V596/AT2-58 are presented in tabular form.		

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INTRODUCTION

19320A MLRS, Missile Numbers V6165, V6131, V6132, and V6133, Round Numbers V593/AT2-55 Thru V594/AT2-58, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico at 1000:48, 1010:31, 1010:35 and 1010:40 MDT, 12 Jun 84. The scheduled launch times were 0956 MDT, 1006:00, 1006:4.5 and 1006:09 MDT.

DISCUSSION

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

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (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 pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

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

SITE AND ALTITUDE

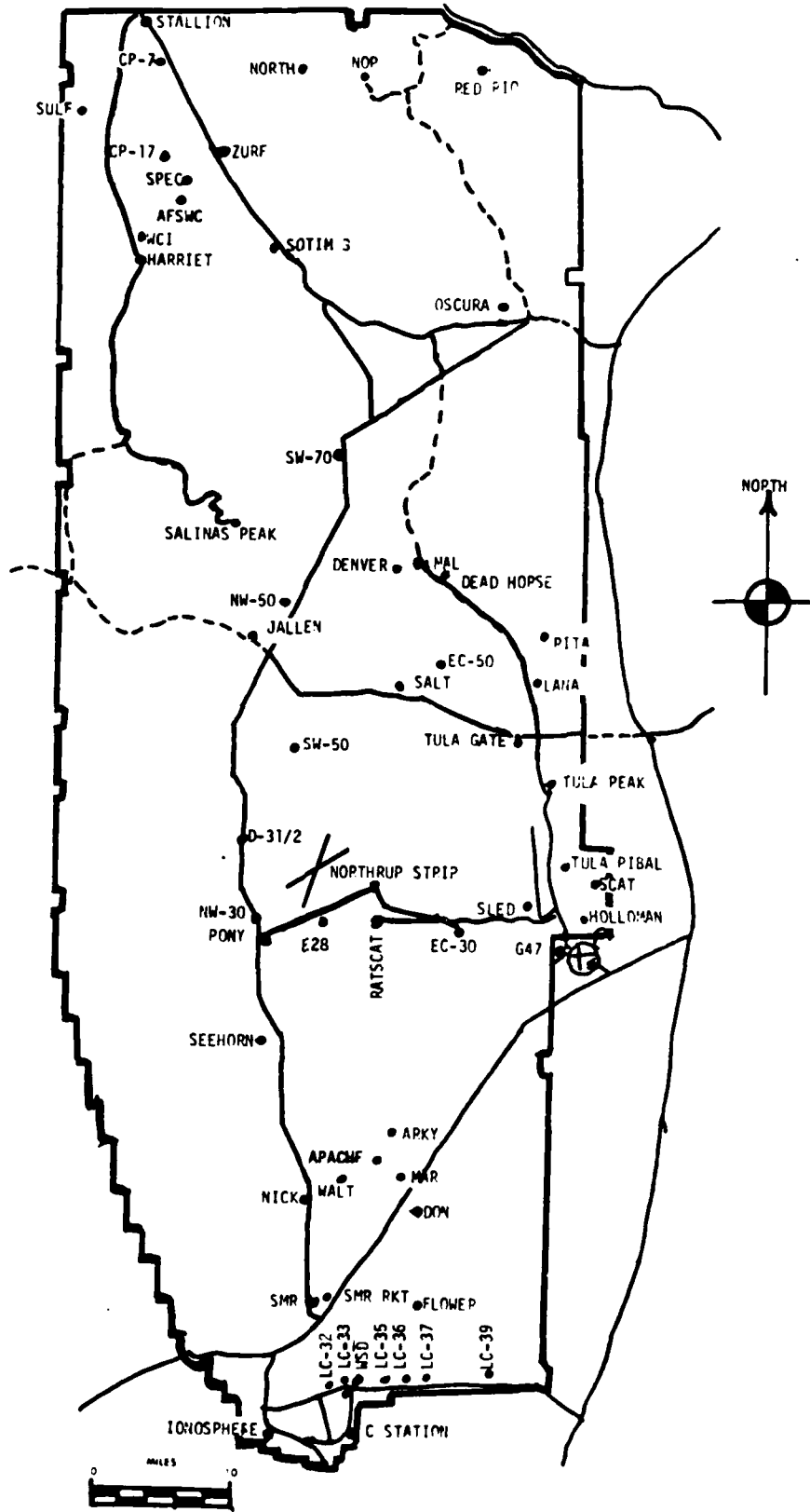
SMR	2 km
LC-33	2 km

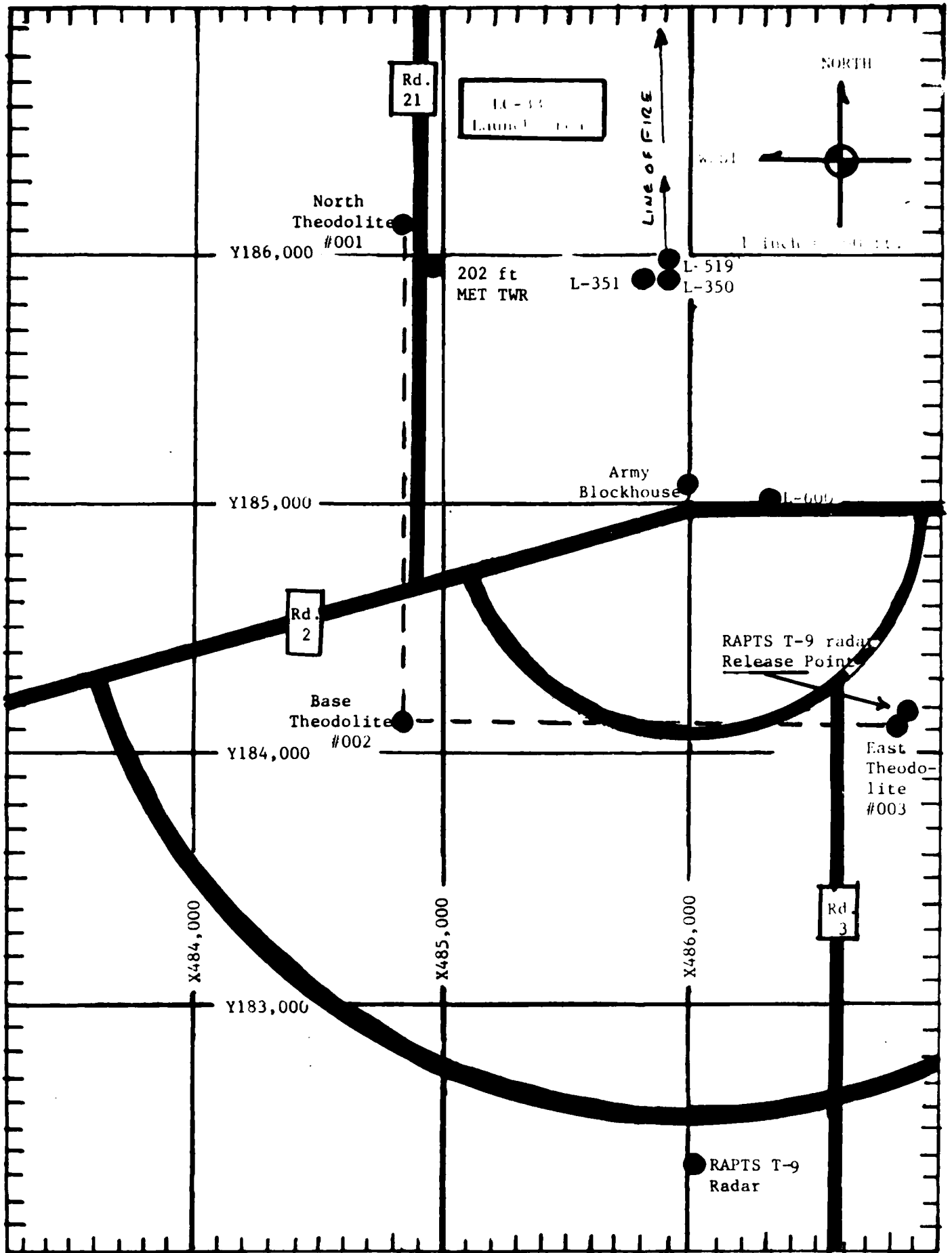
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

WSD	0656 MDT
SMR	0656 MDT
WSD	0826 MDT
SMR	0826 MDT
WSD	0911 MDT
SMR	0911 MDT
WSD	1000 MDT
SMR	1002 MDT

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE 1 _____ STATION IC-33

DATE 12 Jun 84 1200H Y = 484,982.64 X = 185,957.73 H = 3995.00

TIME M D T	PRESSURE hps	TEMPERATURE OF OC	DEW POINT OF OC	RELATIVE HUMIDITY %	DENSITY g/m ³	WIND		VISIBIL- ITY
						DIRECTION degs Tn	SPEED kts	
1001	877.1	31.8	8.8	24		320	10	40
1011	877.0	31.4	8.2	24		320	10	40

OBSERVATIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	HGT	AMT	TYPE	HGT	
	2	ci	25000				
	2	ci	25000				

PSYCHROMETRIC COMPUTATION

TIME: MDT	1001	1011
DRY BULB TEMP.	31.8	31.4
WET BULB TEMP.	17.2	16.8
WET BULB DEPR.	14.6	14.6
DEW POINT	8.8	8.2
RELATIVE HUMID.	24	24

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 12 Jun 84 1001 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	MISG	MISG	T-30	MISG	MISG
T-20	MISG	MISG	T-20	MISG	MISG
T-10	306	03	T-10	306	14
T- 0 (1st T)	306	01	T- 0 (1st T)	314	12
T+10	316	08	T+10	309	12
T+20	297	10	T+20	303	12
T+30	297	08	T+30	308	12
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	MISG	MISG	T-30	MISG	MISG
T-20	MISG	MISG	T-20	MISG	MISG
T-10	305	14	T-10	296	12
T- 0 (1st T)	303	14	T- 0 (1st T)	300	12
T+10	303	12	T+10	291	11
T+20	300	13	T+20	303	14
T+30	308	12	T+30	316	11
T+40			T+40		
T+50			T+50		
T+60			T+60		

**LC-33 METEOROLOGICAL TOWER
ANEMOMETER MEASURED WIND DATA**

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

TABLE NO. 3

DATE 12 Jun 84 1011 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	333	12	T-30	330	12
T-20	335	08	T-20	332	12
T-10	339	10	T-10	333	10
T- 0 (1st T)	334	07	T- 0 (1st T)	339	10
T+10	342	08	T+10	340	09
T+20	343	06	T+20	336	08
T+30	352	05	T+30	329	08
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	327	12	T-30	319	12
T-20	328	12	T-20	323	11
T-10	330	10	T-10	324	10
T- 0 (1st T)	334	10	T- 0 (1st T)	321	10
T+10	326	10	T+10	321	09
T+20	332	08	T+20	319	11
T+30	319	10	T+30	326	14
T+40			T+40		
T+50			T+50		
T+60			T+60		

PILOT-BALLOON MEASURED WIND DATA

DATE 12 June 1984

SITE: LC-33
 TIME: 0941 MDT
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3,977.30

SITE: SMR
 TIME: 0941 MDT
 WSTM COORDINATES:
 X= 472,444.85
 Y= 213,781.95
 H= 4,000.99

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	300	12
150	290	13
210	279	14
270	282	13
330	279	14
390	289	15
500	293	12
650	284	11
800	290	10
950	282	13
1150	313	05
1350	332	07
1550	195	02
1750	169	06
2000	MISG	MISG

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	215	05
150	274	04
210	280	16
270	265	16
330	303	13
390	297	15
500	305	11
650	292	04
800	320	04
950	346	01
1150	016	02
1350	250	01
1550	036	04
1750	254	02
2000	MISG	MISG

Data obtained for RAPTS T-9 radar tracked pilot-balloon observations.

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 12 June 1984

SITE: LC-33
 TIME: 1001 MDT
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3,977.30

SITE: SMR
 TIME 1001 MDT
 WSTM COORDINATES:
 X= 472,444.85
 Y= 213,781.95
 H= 4,000.99

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	320	10
150	303	11
210	286	12
270	285	15
330	286	13
390	297	11
500	297	10
650	315	08
800	289	11
950	306	09
1150	317	09
1350	337	06
1550	332	04
1750	190	02
2000	239	07

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	260	02
150	313	02
210	315	06
270	310	04
330	260	06
390	291	06
500	300	04
650	313	05
800	319	03
950	267	04
1150	270	03
1350	268	04
1550	278	04
1750	285	03
2000	245	05

Data obtained from RAPTS-T-9 radar tracked pilot-balloon observations.

TABLE 6

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 12 June 1984

SITE: LC-33
TIME: 1011 MDT
WSTM COORDINATES:
X= 486,037.24
Y= 182,350.16
H= 3,977.30

SITE: SMR
TIME 1011 MDT
WSTM COORDINATES:
X= 472,444.85
Y= 213,781.95
H= 4,000.99

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	320	10
150	307	10
210	294	11
270	288	11
330	291	10
390	287	12
500	284	09
650	289	07
800	286	06
950	307	11
1150	338	07
1350	325	07
1550	338	09
1750	276	03
2000	219	08

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	240	03
150	265	03
210	301	06
270	281	11
330	274	12
390	274	06
500	281	03
650	279	07
800	304	06
950	245	05
1150	257	04
1350	263	03
1550	206	01
1750	255	03
2000	294	02

Data obtained from RAPTS T-9 radar tracked pilot-balloon observations.

TABLE 7

AIMING AND T-TIME COMPUTER MET MESSAGE DATA

12 June 1984

WSD 0656 MDT	SMR 0656 MDT	WSD 0826 MDT	SMR 0826 MDT
METCM1324064	METCM1325064	METCM1324064	METCM1325064
121290122876	121290122876	121440122876	121440122876
00373006 29750876	00356004 29630876	00427008 30180876	00427014 30280876
01355019 29920866	01369011 29790866	01399013 30090866	01468016 30130866
02359027 29830842	02358014 29750842	02553009 29900842	02472014 29870842
03379018 29490804	03442014 29480804	03494010 29660804	03453014 29570804
04464009 29080759	04450016 29110758	04404011 29320759	04393012 29280759
05368008 28770715	05338009 28780715	05375014 28930716	05350013 28930716
06351011 28480674	06369015 28460674	06363013 28520675	06352013 28500674
WSD 0911 MDT	SMR 0911 MDT	WSD 1000 MDT	SMR 1002 MDT
METCM1324064	METCM1325064	METCM1324064	METCM1325064
121520122876	121520122876	121600122877	121600122876
00533006 30430876	00427008 30430876	00587010 30500877	00462002 30610876
01519015 30250867	01456006 30340866	01522017 30390867	01596002 30390866
02520014 29970842	02518007 30070847	02583008 30150843	02508006 30070842
03520009 29580805	03460010 29710805	03613006 29750805	03499004 29700805
04521002 29150759	04397005 29270759	04631008 29260760	04472004 29200759
05380013 28890716	05349008 28830716	05414005 28830717	05425005 28750716
06378013 28490675	06377016 28440675	06408015 28470675	06388014 28410675

STATION ALTITUDE 2929.00 FEET MSL
 12 JUNE 84
 0656 MDT
 ASCENSION NO. 326

SIGNIFICANT LEVEL DATA

1440020326
 WHITE SANDS

GEOGETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
375.1	3999.0	22.7	65.0
367.9	4255.7	25.0	39.0
550.0	4655.3	24.3	39.0
762.5	7948.9	15.9	33.0
703.5	9953.6	13.6	24.0
700.0	10375.5	12.5	24.0
574.9	11329.9	11.3	41.0
541.0	12736.3	7.3	38.0
599.6	14534.6	2.2	56.0

STATION ALTITUDE 2209.0 FEET MSL
 12 JUNE 94
 ASCENSION NO. 320 0656 MDT

UPPER AIR DATA
 1640020325
 WHITE SANDS

GEODETIC COORDINATES
 32.60043 LAT DEG
 106.37033 LON DEG

TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEFWPOINT DEGRS	REL. HUM. PERCENT	DENSITY SM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
5989.0	375.3	22.7	10.5	46.0	1726.2	671.9	210.0	5.0	1.000284
4000.0	575.0	22.8	10.5	45.7	1025.5	572.0	210.0	5.1	1.000283
4500.0	860.9	24.7	9.8	39.0	1001.4	574.2	210.5	8.8	1.000275
5000.0	865.0	24.0	9.1	38.7	986.3	573.3	210.8	11.5	1.000270
5500.0	531.2	22.8	7.9	37.9	973.9	671.8	211.7	14.2	1.000262
6000.0	815.7	21.6	6.2	36.8	961.1	570.3	211.1	17.0	1.000255
6500.0	876.4	20.4	4.8	35.9	948.5	559.3	213.6	17.7	1.000249
7000.0	785.4	19.2	3.3	34.8	936.1	557.3	224.5	15.1	1.000243
7500.0	774.7	18.0	1.9	33.9	923.8	665.9	241.3	11.4	1.000237
8000.0	751.1	15.8	.4	32.8	911.5	556.4	246.2	9.6	1.000231
8500.0	747.5	15.0	-1.3	30.5	898.1	553.6	248.2	7.9	1.000225
9000.0	734.2	15.2	-3.1	28.3	884.9	552.3	234.1	7.0	1.000219
9500.0	721.2	14.3	-4.9	26.0	871.9	661.3	215.8	5.8	1.000214
10000.0	708.3	13.5	-6.7	24.0	859.2	550.2	205.1	7.7	1.000209
10500.0	695.6	12.4	-6.1	27.0	846.9	559.0	198.2	5.9	1.000207
11000.0	683.0	11.7	-3.0	35.4	833.0	558.4	195.6	10.1	1.000208
11500.0	670.7	10.8	-2.0	40.5	820.4	557.5	199.4	11.2	1.000203
12000.0	658.5	9.4	-3.6	39.6	809.3	555.7	202.7	11.9	1.000203
12500.0	646.5	8.0	-5.3	38.5	799.3	554.0	205.3	12.6	1.000198
13000.0	536.7	5.5	-5.8	40.7	789.7	552.3			1.000195
13500.0	523.0	5.1	-5.6	45.7	779.0	650.7			1.000193
14000.0	611.5	3.7	-5.5	50.7	767.5	549.0			1.000191
14500.0	600.2	2.3	-5.6	55.7	757.1	547.6			1.000189

STATION ALTITUDE 3000.0 FEET "SL
 14 JUNE 34
 ASCENSION NO. 320 0656 MDT

MANDATORY LEVELS
 1440023325
 4HTF SANDS

GEODETIC COORDINATES
 32.63343 LAT DEG
 136.37033 LON DEG

TABLE 10

PRESSURE GEOPOTENTIAL MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
			DIRECTION DEGREES(TV)	SPEED (KNOTS)
950.0	26.3	39.	217.8	13.8
800.0	20.2	35.	215.3	17.0
750.0	15.1	31.	247.4	8.3
700.0	12.5	24.	200.4	8.4
650.0	9.4	39.	236.5	12.4
600.0	2.3	55.		

STATION ALTITUDE 3997.33 FEET MSL
 12 JUNE 84
 ASCENSION VO. 50 0652 MDT

SIGNIFICANT LEVEL DATA
 1447060355
 S M R

SECTETIC COORDINATES
 32.63034 LAT DEG
 135.42337 LON DEG

TABLE 11

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
375.2	3977.3	22.6	63.0
353.9	4255.9	23.5	61.0
333.0	4537.7	23.6	60.0
319.3	4953.5	21.9	27.0
215.7	7713.3	13.7	23.0
200.0	10327.1	13.1	33.0
592.3	10632.5	12.9	33.0
545.0	12525.0	7.5	35.0

STATION ALTITUDE 3997. TO FFET MSL
 12 JUNE 34
 ASCENSION NO. 50

UPPER AIR DATA
 1540060055
 S W R

GEOMETRIC COORDINATES
 52.65034 LAT DEG
 106.42107 LON DEG

0652 MDT

TABLE 12

GEOMETRIC ALTITUDE MSL FLEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY SM/CUBIC FT	SPEED OF SOUND KNOTS	SPEED OF WIND KNOTS	DIRECTION DEGREES (T)	WIND DATA	INDEX OF REFRACTION
3997.3	376.2	22.4	10.9	48.0	1027.0	571.5	210.7		6.1	1.000245
4000.0	375.1	22.4	10.3	47.9	1026.8	671.5	210.1		6.1	1.000245
4500.0	361.0	23.5	9.4	40.5	1035.3	572.8	228.3		5.8	1.000275
5000.0	345.1	23.2	8.3	38.4	959.7	572.5	237.5		7.8	1.000263
5500.0	331.4	22.5	5.2	32.6	975.9	571.2	241.0		10.0	1.000255
6000.0	315.9	21.7	1.9	27.0	957.1	570.0	245.5		12.2	1.000245
6500.0	302.5	20.6	1.1	27.1	948.7	553.8	249.9		16.4	1.000240
7000.0	288.4	19.5	.2	27.3	935.5	557.5	249.7		15.2	1.000245
7500.0	274.4	18.5	-.5	27.6	927.5	555.2	249.9		16.9	1.000242
8000.0	260.3	17.4	-1.5	27.5	909.7	555.0	250.0		16.7	1.000227
8500.0	247.3	16.3	-2.6	27.7	897.1	553.7	240.5		12.3	1.000273
9000.0	234.1	15.2	-3.2	27.9	834.5	552.6	225.9		10.3	1.000219
9500.0	221.2	14.2	-4.1	27.9	872.6	551.1	211.6		9.9	1.000215
10000.0	208.3	13.4	-2.5	32.7	858.9	550.4	203.5		10.8	1.000215
10500.0	195.5	13.0	-2.0	35.2	844.5	559.9	197.1		11.9	1.000213
11000.0	183.1	11.9	-3.7	33.6	832.3	553.5	225.0		2.7	1.000207
11500.0	170.7	10.4	-4.8	33.9	821.9	555.9	158.9		9.3	1.000203
12000.0	158.5	9.0	-5.3	34.6	811.2	555.1				1.000200
12500.0	146.5	7.5	-6.9	35.0	800.7	553.6				1.000195

STATION ALTITUDE 3097.0 FEET MSL
 12 JUNE 36
 ASCENSION NO. 56

MANDATORY LEVELS
 1640060055
 S W R

GEODETIC COORDINATES
 32.48336 LAT DES
 136.42337 LON DES

TABLE 13

MILLIBARS	PRESSURE GEOPOTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		AIR DEGREES CENTIGRADE	DEWPOINT °		DIRECTION DEGREES(TN)	SPEED (KNOTS)
950.0	6356.	23.6	9.0	60.	235.5	7.3
900.0	5591.	20.6	.9	27.	249.3	14.9
750.0	8406.	15.5	-2.2	29.	242.7	12.7
700.0	10317.	13.1	-0.9	33.	199.3	11.5
650.0	12346.	8.0	-6.6	35.		

STATION ALTITUDE 3999.0 FEET MSL
 14 JUNE 84
 ASCENSION NO. 327 0826 MDT

SIGNIFICANT LEVEL DATA
 1640020327
 WHITE SANDS
 TABLE 14

SEDDIMENT COORDINATES
 32.60043 LAT DEG
 106.37033 LONG DEG

PRESSURE GEOMETRIC MILLIBARS MSL FEET	ALTITUDE	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	
375.5	5999.0	26.9	11.0	57.0
965.7	6373.3	25.6	7.4	30.0
350.0	6370.1	25.2	5.4	23.0
910.7	5227.5	22.7	-2.1	19.0
801.5	5553.2	22.3	-2.5	19.0
747.5	5229.3	18.5	-7.8	15.0
700.0	10351.6	16.0	-5.2	26.0
557.7	12076.5	7.5	-3.0	23.0
515.1	13333.1	6.0	-5.7	19.0
593.7	14825.1	1.7	-8.9	65.0

STATION ALTITUDE 3989.0 FEET MSL
 12 JUNE 84
 ASCENSION NO. 327 0826 MDT

UPPER AIR DATA
 140020327
 WHITE SANDS

SEDDETIC COORDINATES
 32.6J045 LAT NEG
 135.87033 LON NEG

TABLE 15

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE						
399.0	375.3	25.9	11.0	17.0	1011.5	575.7	260.0	3.0	1.000281
400.0	876.0	25.9	10.9	36.8	1011.4	575.7	260.0	3.0	1.000280
450.0	351.0	25.0	5.3	29.3	998.3	575.3	250.0	7.9	1.000259
500.0	345.2	25.0	4.3	27.1	985.0	573.9	250.0	3.1	1.000258
550.0	531.5	24.0	2.1	23.8	971.5	572.7	259.6	8.5	1.000247
600.0	317.2	23.1	-0.7	20.5	958.3	571.5	277.5	9.1	1.000244
650.0	893.0	22.9	-2.5	18.2	942.7	571.1	278.0	2.2	1.000242
700.0	749.0	21.9	-3.3	17.5	929.4	569.9	256.3	9.1	1.000237
750.0	775.2	20.8	-5.1	17.0	916.3	568.5	236.6	11.0	1.000225
800.0	761.5	19.7	-5.6	16.5	904.3	567.3	230.0	12.6	1.000216
850.0	743.3	18.5	-7.7	16.0	892.0	566.0	218.3	13.5	1.000215
900.0	735.0	17.3	-5.3	18.5	879.3	564.5	213.1	13.5	1.000211
950.0	721.9	16.1	-5.0	21.3	857.7	563.3	207.8	13.3	1.000209
1000.0	702.1	14.9	-5.5	24.0	855.3	561.9	205.6	13.1	1.000203
1050.0	596.5	13.5	-5.6	26.2	844.1	560.5	204.8	12.8	1.000200
1100.0	583.9	12.4	-5.2	26.7	832.7	559.0	201.7	12.4	1.000197
1150.0	671.6	11.1	-7.0	27.3	821.5	557.5	193.0	12.2	1.000195
1200.0	559.5	9.8	-7.9	32.9	799.7	556.2	189.5	12.2	1.000194
1250.0	547.6	8.3	-7.0	44.5	779.0	552.5	189.5	12.2	1.000193
1300.0	635.5	5.7	-5.3	48.5	758.7	549.0	189.5	12.2	1.000193
1350.0	523.9	5.2	-5.3	46.4	758.0	547.5	189.5	12.2	1.000193
1400.0	512.6	3.7	-5.1	46.4	758.0	547.5	189.5	12.2	1.000193
1450.0	501.0	2.5	-7.8	46.4	758.0	547.5	189.5	12.2	1.000193

STATION ALTITUDE 3959.0 FEET MSL
 12 JJNE 84
 ASCENSION NO. 327

MANDATORY LEVELS
 140000327
 WHITE SANDS

GEODETIC COORDINATES
 52.40703 LAT DEG
 106.37037 LON DEG

TABLE 16

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL.HUM. PERCENT	WIND DATA	
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TW)	SPEED (KNOTS)
857.0	4367.	25.2	5.4	23.	257.5	8.0
800.0	5501.	22.3	-2.8	19.	276.6	9.9
750.0	8429.	19.7	-7.5	15.	224.9	12.2
700.0	10351.	16.0	-5.2	26.	205.7	13.2
650.0	12382.	9.5	-7.7	32.	194.6	12.3
600.0	14522.	2.6	-9.0	65.		

STATION ALTITUDE 3997.73 FEET WSL
 12 JUNE 84 0826 MDT
 ASCENSION NO. 57

SIGNIFICANT LEVEL DATA
 16400A0057
 S M R

GEODETIC COORDINATES
 32.49034 LAT DES
 136.62107 LON DES

TABLE 17

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE WSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	
375.1	3997.3	28.2	5.9	26.0
373.9	4170.4	27.5	6.6	23.0
350.0	4872.3	25.2	3.2	26.0
323.1	5399.2	22.6	-0.2	22.0
256.5	8183.9	19.0	-5.8	13.0
200.0	10355.9	16.1	-5.1	26.0
550.2	12379.3	9.3	-7.3	31.0

STATION ALTITUDE 3997.0 FEET MSL
 12 JUNE 84
 ASCENSION NO. 57

UPPER AIR DATA
 146700Z057
 S V R

3997.0 FEET MSL
 0826 MDT

SEDDETIC COORDINATES
 32.43033 LAT DEG
 135.42337 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	WIND DIRECTION DEGREES(TW)	WIND SPEED (KNOTS)	INDEX OF REFRACTION
3997.3	375.1	23.2	5.9	26.0	1038.6	577.7	240.0	14.0	1.000265
4000.0	375.0	23.2	5.9	26.0	1038.6	577.7	240.0	14.0	1.000265
4500.0	351.0	25.5	4.0	23.5	997.5	575.5	241.5	13.5	1.000257
5000.0	326.2	24.9	2.8	23.8	935.9	573.7	243.6	13.8	1.000252
5500.0	301.6	23.5	1.2	22.8	877.3	572.1	245.2	13.0	1.000245
6000.0	277.2	22.4	-0.4	21.8	820.6	570.7	247.1	12.6	1.000240
6500.0	252.9	21.7	-1.5	20.9	766.8	569.8	249.1	12.8	1.000235
7000.0	228.9	20.9	-2.9	20.1	716.5	568.3	249.7	11.9	1.000229
7500.0	205.1	20.1	-4.1	19.2	669.3	567.8	235.8	10.2	1.000225
8000.0	181.5	19.3	-5.4	18.3	625.3	566.9	219.3	9.6	1.000220
8500.0	158.1	18.3	-5.8	18.9	582.6	565.7	210.9	10.2	1.000217
9000.0	134.3	17.2	-5.8	20.3	540.0	564.5	203.1	11.1	1.000214
9500.0	111.8	15.0	-5.9	21.5	507.7	563.2	199.9	11.8	1.000211
10000.0	90.0	14.9	-6.0	23.0	485.5	561.9	198.8	12.4	1.000208
10500.0	69.3	13.7	-5.2	24.5	463.9	560.5	195.9	13.1	1.000205
11000.0	48.8	12.3	-5.5	26.2	442.9	558.8			1.000203
11500.0	28.4	10.8	-7.0	28.0	422.0	557.2			1.000200
12000.0	8.3	9.4	-7.4	29.7	411.2	555.5			1.000197

STATION ALTITUDE 3997.33 FEET MSL
 12 JUNE 84
 ASCENSION NO. 57 0826 MDT

MANDATORY LEVELS
 1540060067
 S M R

SECTETIC COORDINATES
 32.65036 LAT DEG
 135.62337 LON DEG

TABLE 19

MILLIBARS	PRESSURE SECPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES(TN)	SPEED (KNOTS)
850.0	4869.	25.2	3.2	24.	247.9	13.6
700.0	5500.	21.5	-1.9	21.	249.5	12.3
550.0	8423.	13.6	-5.8	19.	217.1	10.1
700.0	10365.	16.1	-6.1	24.	177.3	12.9

STATION ALTITUDE 3269.0 FEET MSL
 12 JUNE 34 0911 MDT
 ASCENSION NO. 328

SIGNIFICANT LEVEL DATA
 1440020323
 WHITE SANDS

GEODETIC COORDINATES
 32.60763 LAT DEG
 106.37733 LON DEG

TABLE 20

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
375.4	3939.0	29.9	24.0
470.7	4179.5	23.5	21.0
450.0	4977.5	25.4	13.0
756.3	7325.5	17.8	23.0
720.7	9565.2	15.5	20.0
700.0	10354.4	16.0	23.0
543.3	12555.9	7.3	33.0
599.7	14550.2	3.0	25.0

STATION ALTITUDE 3989.0 FEET MSL
 12 JUNE 84 0911 MDT
 ASCENSION NO. 323

UPPER AIR DATA
 1540020124
 WHITE SANDS

GEODETIC COORDINATES
 32.63065 LAT DEG
 106.37033 LON DEG

TABLE 21

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY SM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TD)	SPEED (KNOTS)	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE						
3989.0	375.6	29.9	7.2	24.0	1003.0	579.7	300.0	5.0	1.000255
4000.0	375.1	29.6	7.0	23.3	1003.0	579.5	300.0	5.0	1.000265
4500.0	361.1	27.5	2.4	19.6	994.3	575.7	298.7	5.5	1.000252
5000.0	345.6	25.1	.1	18.2	982.7	574.9	297.7	7.1	1.000245
5500.0	331.5	24.5	-0.5	19.0	970.3	573.2	296.9	7.5	1.000241
6000.0	317.1	23.2	-1.1	19.9	958.1	571.5	295.0	8.2	1.000233
6500.0	302.9	21.8	-1.7	20.7	946.0	569.9	295.5	9.5	1.000234
7000.0	289.0	20.6	-2.3	21.5	934.1	568.2	294.0	5.7	1.000227
7500.0	275.2	18.9	-3.0	22.3	922.4	566.5	302.1	5.9	1.000227
8000.0	261.7	17.7	-3.6	22.3	910.3	565.1	275.8	3.5	1.000223
8500.0	248.2	17.0	-4.9	21.9	896.5	564.3	234.5	4.5	1.000219
9000.0	234.9	15.3	-6.1	21.0	882.8	563.4	219.1	7.2	1.000214
9500.0	221.9	15.5	-7.2	20.1	869.4	562.5	215.3	17.5	1.000210
10000.0	209.0	14.7	-5.4	24.5	856.3	561.6	214.4	12.7	1.000209
10500.0	195.3	13.5	-4.4	28.3	843.9	560.5	215.1	13.5	1.000208
11000.0	183.7	12.1	-5.2	29.6	832.0	559.3	214.3	13.7	1.000205
11500.0	171.3	10.7	-5.0	30.5	822.1	557.1	210.8	13.1	1.000202
12000.0	159.2	9.2	-5.8	31.5	811.5	555.3	206.1	13.3	1.000198
12500.0	147.2	7.8	-7.5	32.5	801.0	553.5	201.1	13.9	1.000195
13000.0	135.4	5.5	-9.1	31.5	790.9	552.1	199.5	16.1	1.000191
13500.0	123.6	5.6	-11.0	29.5	778.7	550.7			1.000185
14000.0	112.1	4.3	-12.9	27.3	757.5	549.3			1.000182
14500.0	100.8	5.1	-14.9	25.2	756.7	547.9			1.000178

STATION ALTITUDE 3900.00 FEET MSL
 12 JUNE 34 0911 MDT
 ASCENSION NO. 325

MANDATORY LEVELS
 14400000
 WHITE SANDS

GEODETIC COORDINATES
 32.63333 LAT DEG
 106.37033 LON DEG

TABLE 22

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TV)	SPEED (KNOTS)
850.0	6876.	25.6	-0.2	19.	297.9	7.0
800.0	5509.	21.5	-1.8	21.	295.0	3.1
750.0	8425.	17.1	-4.8	22.	250.1	6.3
700.0	10344.	14.0	-4.2	28.	214.9	13.3
650.0	12373.	3.1	-7.4	32.	202.2	15.7
400.0	14520.	3.0	-15.0	25.		

STATION ALTITUDE 3997.77 FEET MSL
 12 JUNE 36
 ASCENSION NO. 50

SIGNIFICANT LEVEL DATA
 16400/0059
 S W R

GEODETIC COORDINATES
 32.68036 LAT DEG
 136.62307 LON DEG

TABLE 23

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUMIDITY PERCENT
375.2	3997.3	30.2	20.0
370.7	4174.9	30.0	17.0
350.0	4832.0	27.2	17.0
700.0	13371.6	12.9	22.0
555.5	12125.6	9.1	50.0
596.6	16799.2	1.7	23.0

STATION ALTITUDE 3997.0 FEET MSL
 12 JJVE 34
 ASCENSION NO. 58 0911 MDT

UPPER AIR DATA
 1540000053
 S M R

GEODETIC COORDINATES
 32.68034 LAT DEG
 106.62807 LON DEG

TABLE 24

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY SM/CUBIC METER	SOUND SPEED KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT DEGREES CENTIGRADE				DIRECTION DEGREES(T4)	SPEED (KNOTS)	
3997.3	976.2	30.2	4.8	20.0	1002.5	579.8	260.0	3.0	1.000254
4000.0	975.1	30.2	4.7	20.0	1002.6	679.8	260.0	3.0	1.000259
4500.0	861.2	28.7	1.3	17.0	991.0	577.9	242.2	3.0	1.000249
5000.0	845.5	25.9	-0.1	17.1	930.1	575.7	244.4	3.0	1.000244
5500.0	831.6	25.6	-0.8	17.5	957.2	674.2	265.5	3.0	1.000240
6000.0	817.0	24.3	-1.5	18.0	954.5	572.7	248.3	3.1	1.000235
6500.0	802.7	23.0	-2.2	18.5	942.0	571.2	250.9	3.1	1.000232
7000.0	788.7	21.7	-3.0	18.9	929.7	569.7	249.3	7.5	1.000229
7500.0	774.8	20.4	-3.7	19.4	917.5	568.2	260.5	5.4	1.000225
8000.0	751.2	19.1	-4.5	19.8	905.5	566.7	230.0	5.5	1.000221
8500.0	747.9	17.3	-5.3	20.3	893.7	565.2	219.0	5.9	1.000218
9000.0	734.8	15.5	-6.0	20.3	882.1	563.7	211.9	7.0	1.000214
9500.0	721.9	13.9	-6.8	21.2	870.5	562.1	205.3	3.3	1.000211
10000.0	709.3	12.6	-7.7	21.7	859.3	560.5	207.3	10.1	1.000207
10500.0	695.7	11.5	-8.2	22.5	847.3	559.2	203.6	12.0	1.000204
11000.0	684.1	10.5	-7.9	24.9	835.5	557.9	209.2	13.9	1.000202
11500.0	671.8	10.5	-7.5	27.1	823.5	555.7	208.9	16.4	1.000200
12000.0	559.5	9.4	-7.5	29.6	811.7	555.5	208.3	16.4	1.000197
12500.0	547.5	3.1	-8.9	29.6	800.9	553.9	207.7	16.6	1.000193
13000.0	635.6	5.7	-10.5	27.7	789.9	552.2			1.000189
13500.0	523.8	5.3	-12.6	26.4	779.6	550.5			1.000185
14000.0	512.3	3.9	-14.2	25.1	759.0	548.9			1.000181
14500.0	601.0	2.5	-15.1	23.8	758.7	547.2			1.000178

STATION ALTITUDE 3997.73 FEET *SL
 12 JUNE 54
 ASCENSION NO. 59 0911 MDT

MANDATORY LEVELS
 14000000R
 S W R

GEODETIC COORDINATES
 32.83038 LAT DES
 135.62337 LON DES

TABLE 25

PRESSURE GEOPOTENTIAL		TEMPERATURE	REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREE CENTIGRADE	PERCENT	DIRECTION DEGREE(TV)	SPEED KNOTS
850.0	6379.	27.2	17.	243.9	8.0
800.0	5520.	22.7	19.	251.6	3.1
750.0	8446.	18.0	20.	219.9	5.7
700.0	10351.	12.9	22.	208.1	11.5
650.0	12337.	3.5	29.	237.9	16.6
600.0	14532.	2.6	26.		

STATION ALTITUDE 3999.0 FEET MSL
 12 JUNE 94
 ASCENSION NO. 329

SIGNIFICANT LEVEL DATA
 146000729
 WHITE SANDS

STATION ALTITUDE 3999.0 FEET MSL
 12 JUNE 94
 ASCENSION NO. 329

GEODETIC COORDINATES
 32.60008 LAT DEG
 136.87038 LON DEG

TABLE 26

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
375.5	3999.0	30.9	17.0
375.5	4335.2	30.6	17.0
350.0	4855.2	28.1	18.0
237.3	8987.2	15.3	20.0
217.7	9537.0	14.7	22.0
200.0	10378.6	13.5	22.0
532.7	13149.0	5.8	52.0
592.3	14907.2	2.3	19.0

STATION ALTITUDE 3222.00 FEET MSL
 12 JUNE 84
 ASCENSION NO. 329

UPPER AIR DATA
 1440023520
 WHITE SANDS

GEODETIC COORDINATES
 32.63363 LAT DEG
 106.37333 LON DEG

TABLE 27

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE						
5250.0	376.5	33.7	3.0	17.0	1001.0	580.6	330.0	9.9	1.000254
4330.0	376.2	33.8	3.0	17.0	1000.9	580.6	330.0	9.9	1.000254
4500.0	661.3	29.2	2.1	17.5	939.3	578.5	331.8	9.3	1.000250
5000.0	345.5	27.8	1.3	18.1	977.1	575.8	333.3	9.7	1.000245
5500.0	331.9	25.3	.6	18.3	954.9	575.1	336.1	8.1	1.000242
6000.0	317.4	24.9	-.7	18.6	952.9	573.4	338.7	7.6	1.000237
6500.0	303.2	23.6	-1.7	18.3	961.1	571.7	341.7	7.0	1.000233
7000.0	789.2	21.9	-2.7	19.0	929.6	570.0	345.0	5.5	1.000229
7500.0	775.5	23.5	-3.7	19.3	917.9	569.3	348.0	5.1	1.000225
8000.0	752.0	19.0	-4.7	19.5	906.5	555.5	351.5	5.7	1.000221
8500.0	749.7	17.6	-5.9	19.8	895.6	556.9	347.5	6.7	1.000217
9000.0	735.5	15.2	-5.7	20.2	886.1	553.3	341.1	3.2	1.000214
9500.0	722.5	15.1	-6.7	21.5	871.5	552.1	265.0	3.9	1.000211
10000.0	709.5	14.1	-7.3	22.0	859.1	550.9	242.5	5.6	1.000206
10500.0	696.9	13.0	-7.9	22.6	846.3	552.5	236.2	10.1	1.000204
11000.0	584.2	11.6	-7.9	24.3	834.9	558.3	239.2	12.9	1.000202
11500.0	571.6	10.7	-8.0	26.1	823.1	555.9	227.0	13.6	1.000199
12000.0	559.5	9.5	-3.1	27.9	811.5	555.5	226.0	14.0	1.000195
12500.0	547.7	8.3	-8.4	29.7	800.1	554.2	220.2	13.9	1.000194
13000.0	635.9	7.1	-3.5	31.5	739.2	552.8	216.0	18.7	1.000191
13500.0	524.2	5.0	-10.5	29.3	777.3	551.4			1.000187
14000.0	512.7	6.9	-13.2	25.7	755.7	550.0			1.000182
14500.0	601.4	3.7	-15.0	32.0	755.3	563.5			1.000177

STATION ALTITUDE 1700.0 FEET MSL
 12 JUNE 84
 ASCENSION NO. 329

MANDATORY LEVELS
 14002329
 WHITE SANDS

SECTETIC COORDINATES
 32.63063 LAT DEG
 106.37033 LON DEG

TABLE 28

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TW)	SPEED KNOTS	
937.0	4982.	29.1	1.6	19.	733.3	3.3	
900.0	5527.	25.1	-1.9	19.	167.5	5.9	
757.0	8452.	17.7	-5.7	20.	349.5	4.9	
700.0	10369.	13.3	-7.9	22.	235.7	7.2	
650.0	12375.	9.5	-9.3	29.	221.1	16.0	
600.0	14545.	5.5	-16.4	22.			

STATION ALTITUDE 3007.73 FEET MSL
 12 JUNE 84
 ASCENSION NO. 59 1002 MDT

SIGNIFICANT LEVEL DATA
 1440060069
 S W R

GEODETIC COORDINATES
 52.68934 LAT DEG
 135.62337 LON DEG

TABLE 29

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
375.2	3927.3	31.5	20.0
269.3	4212.6	30.1	13.0
350.0	4833.1	27.3	13.0
319.3	5244.3	24.5	19.0
212.3	9333.6	12.9	24.0
200.0	10353.9	12.9	24.0
520.3	13650.6	6.3	28.0

STATION ALTITUDE 3997.73 FEET MSL
 12 JUNE 84
 ASCENSION NO. 59

UPPER AIR DATA
 160000Z
 S M R

1002 MDT

SECTETIC COORDINATES
 32.63034 LAT DEG
 105.62337 LON DEG

TABLE 30

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY SM/CUBIC METER	SOUND SPEED KNOTS	WIND DIRECTION DEGREES(T)	WIND SPEED (KNOTS)	INDEX OF REFRACTION
3997.3	576.2	31.5	20.0	997.5	581.5	257.0	1.9	1.000240
4000.0	375.1	31.5	20.0	997.5	581.5	250.0	1.9	1.000250
4500.0	351.3	28.9	18.0	997.2	573.1	255.1	2.2	1.000250
5000.0	846.6	27.0	18.1	979.7	575.9	259.3	2.4	1.000245
5500.0	332.0	25.7	18.5	957.5	574.6	272.7	2.5	1.000242
6000.0	317.7	24.3	19.1	955.0	572.8	275.5	2.9	1.000239
5500.0	303.3	22.9	19.7	942.9	571.1	277.9	3.1	1.000234
7000.0	759.1	21.4	20.3	931.0	559.6	277.2	3.6	1.000230
7500.0	775.2	19.9	21.0	919.3	557.7	273.7	3.6	1.000225
8000.0	751.5	18.4	21.5	907.3	555.0	270.7	3.9	1.000225
8500.0	743.2	17.0	22.2	896.5	556.3	263.7	4.2	1.000219
9000.0	735.0	15.5	22.9	885.2	552.5	250.3	4.9	1.000215
9500.0	722.1	14.0	23.5	874.2	550.3	240.5	5.8	1.000212
10000.0	709.3	12.9	24.0	862.2	559.5	232.0	7.3	1.000209
10500.0	696.5	12.5	24.2	857.5	559.1	225.5	7.6	1.000205
11000.0	593.8	11.3	24.3	835.3	557.7	221.6	11.5	1.000202
11500.0	571.6	10.1	25.6	826.2	555.2	220.2	12.9	1.000198
12000.0	659.1	3.9	26.0	812.3	556.3	220.0	14.0	1.000195
12500.0	567.1	7.6	26.5	801.5	553.3			1.000192
13000.0	535.3	5.4	27.2	790.5	551.9			1.000189
13500.0	523.7	5.2	27.8	779.5	550.4			1.000185

STATION ALTITUDE 3997.70 FEET *5L
 12 JUNE 34
 ASCENSION NO. 59 1002 MDT

MANDATORY LEVELS
 1540060059
 S * R

GEODEIC COORDINATES
 32.43334 LAT DEG
 134.42807 LON DEG

TABLE 31

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREES	PERCENT	PERCENT	DIRECTION DEGREES(TND)	SPEED KNOTS
850.0	6967.	27.3	.0	13.		258.4	2.3
900.0	5521.	22.5	-1.6	23.		278.4	3.2
750.0	9447.	17.2	-6.4	22.		255.4	4.1
700.0	10354.	12.9	-7.2	26.		227.0	8.8
650.0	12777.	7.9	-10.1	25.		219.3	14.3