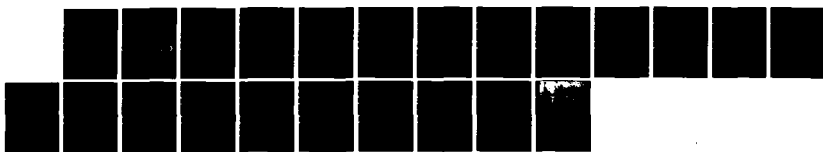
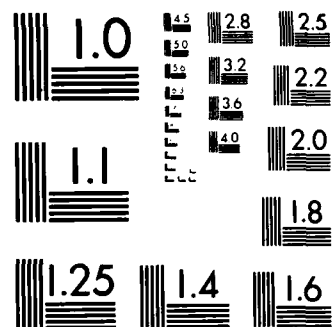


AD-A131 951 193188 MLRS MISSILE NUMBER BN-306 BN-315 BN-311 BN-318 1/1
BN-321 ROUND NUMBER. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM. D C KELLER JUL 83
UNCLASSIFIED ERADCOM/ASL-DR-1309 F/G 4/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

(12)

AD A 131951

METEOROLOGICAL DATA REPORT

19318B MLRS
Missile Number BN-306, BN-315,
BN-311, BN-318, BN-321
Round Number 473/DL-19 thru 478/DL-24
18 JUL 1983

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

DTIC

AUG 30 1983

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19318B MLRS, Missile Number BN-306, BN-315, BN-311, BN-318, BN-314, BN-321, Round Number 473/DL-19 thru 478/DL-24 are presented in tabular form.		

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INTRODUCTION

19318B MLRS, Missile Numbers BN-306, BN-315, BN-311, BN-318, BN-314 and BN-321, Round Numbers 473/DL-19 thru 478/DL-24, were launched from LC-33, White Sands Missile Range (WSMR). New Mexico, at 1400:0, 1400:05, 1400:14, 1400:19 and 1400:23 MDT, 18 JUL 83. The Scheduled launch times were 1400 MDT with a 4.5 second separation.

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

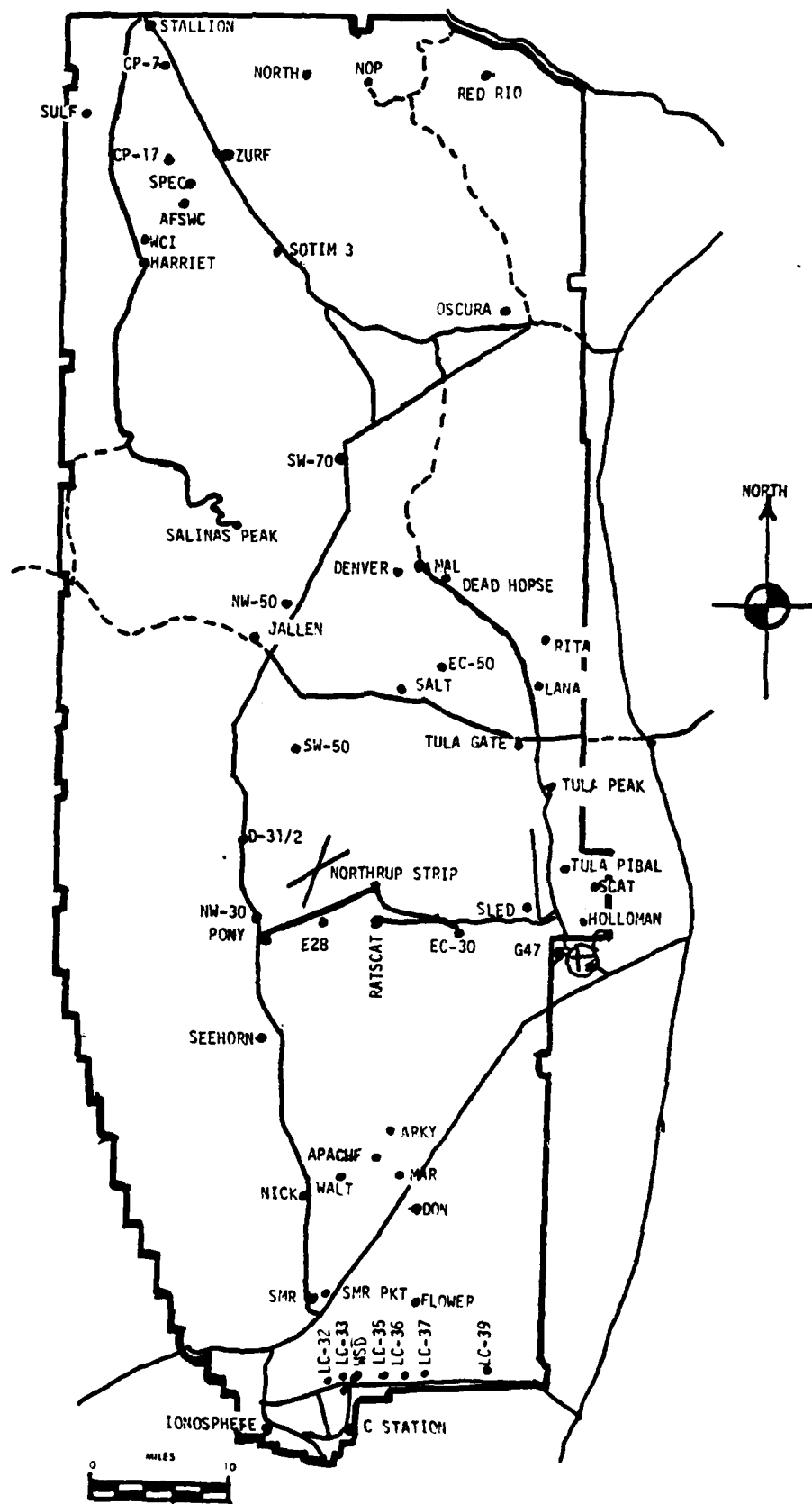
LC-33	2 Km
DON	2 Km

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

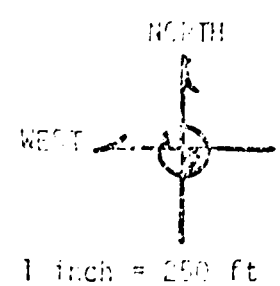
SITE AND TIME

LC-37	1200 MDT
WSD	1228 MDT
WSD	1400 MDT

WSMR METEOROLOGICAL SITES



LC-33
Launch Area



Line of Fire
Anemometer Pole #1



Anemometer Pole #3

Anemometer Pole #2

MET
Tower

T-9 Radar

L-579A

L-519A

L-351A

L-350A

Y186,500

Y186,000

Y185,500

Y185,000

X485,000

X485,500

X486,000

L-500

PROJECT SURFACE OBSERVATION

TABLE <u>1</u>		STATION <u>LC-33 E and A</u>	
DATE <u>18</u>	<u>JUL</u> <u>83</u>	X= <u>484,982.73</u>	Y= <u>185,957.73</u> H= <u>3995.00</u>

TIME M D Y	PRESSURE in/s	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY gm/m ³	WIND			VISIBIL- ITY
						DIRECTION degs	In	SPEED kts	CHARACTER kts
1400	879.9	34.8	13.6	28		120		12	50

OBSERVATIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	HGT	AMT	TYPE	HGT	
	5	SC	6500				

PSYCHROMETRIC COMPUTATION

TIME:	MDT	1400	
DRY BULB TEMP.		34.8	
WET BULB TEMP.		20.4	
WET BULB DEPR.		14.4	
DEW POINT		13.6	
RELATIVE HUMID.		28	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

DATE 18 JUL 83 1400 M D T
 DAY MONTH YEAR TIME

**

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	120	16	T-30	115	09	T-30	126	16
T-20	120	15	T-20	114	09	T-20	132	14
T-10	120	14	T-10	109	09	T-10	128	15
T 0.0	120	15	T 0.0	121	08	T 0.0	125	15
T +10	120	09	T+10	105	03	T+10	121	12

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	118	10	T-30	125	15
T-20	124	13	T-20	123	15
T-10	124	10	T-10	121	14
T 0.0	120	12	T 0.0	120	15
T +10	MISS	MISS	T+10	MISS	MISS

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	105	16	T-30	123	17
T-20	108	17	T-20	105	17
T-10	108	19	T-10	105	15
T 0.0	110	18	T 0.0	108	18
T +10	108	17	T+10	117	17

** Pole #1 Dirs are estimated

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 18 JUL 83

SITE: LC-33

TIME: 1400 MDT

WSTM COORDINATES:

X= 484,837.34

Y= 184,124.44

H= 3,975.57

SITE: DON

TIME 1400 MDT

WSTM COORDINATES:

X= 511,988.37

Y= 247,396.36

H= 3,996.83

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	120	12
150	123	18
210	127	17
270	130	16
330	131	15
390	131	14
500	128	13
650	103	10
800	103	12
950	106	11
1150	104	10
1350	122	10
1550	137	12
1750	123	13
2000	099	08

Data obtained from Double Theodolite
tracked pilot-balloon observation.

LAYER MIDPOINT METERS AGL	DIREC DEGREES	SPEED KNOTS
SURFACE	130	03
150	142	10
210	141	12
270	137	12
330	134	13
390	133	13
500	132	13
650	126	12
800	126	11
950	131	12
1150	132	15
1350	134	15
1550	142	15
1750	139	15
2000	128	09

Data obtained from a Single Theodolite
tracked pilot-balloon observation.

AIMING AND T-TIME COMPUTER MET MESSAGES

18 July 1983

LC-37 1200 MDT

METCML324063

181800124879

00258006 30550879

01278013 30410869

02258008 30100845

03211006 29710807

04181014 29250762

05143016 28770719

06173016 28440677

07126016 28120637

08182016 27820600

09221017 27580564

WSD 1228 MDT

METCML324064

181850122881

00240010 30750881

01250014 30540871

02258011 30260847

03281011 29850810

04256007 29320764

05171013 28790721

06152014 28480679

07148013 28170639

08187014 27850602

09233017 27630566

WSD 1400 MDT

METCML324064

182000122880

00267010 30930880

01265012 30560870

02220008 30290846

03222012 29860809

04206013 29350763

05207012 28870720

06180013 28450678

07165015 28060639

08193010 27800601

09224015 27610565

STATION ALTITUDE 4051.37 FEET MSL
18 JULY 63
ASCENSION I.O. 104

SIGNIFICANT LEVEL DATA
1990160104
LC-37

CEQUATIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 6

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		REL. HUM. PERCENT
679.2	30.3	15.2	40.0
667.6	28.7	14.1	41.0
650.0	26.2	12.0	43.0
739.4	15.2	5.7	65.0
721.4	13.3	5.0	70.0
700.0	10.6	5.0	70.0
686.4	10.8	4.7	66.0
631.8	6.7	.6	65.0
660.5	4.1	-2.3	63.0
592.2	3.9	-6.1	41.0
581.3	3.5	-7.0	46.0
567.3	2.8	-10.8	36.0
534.9	-1.3	-11.7	45.0
518.9	-2.6	-19.9	25.0
500.0	-2.1	-24.5	16.0

GEODLTIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

UPPER AIR DATA
1990180104
1C-37

TABLE 7

STATION ALTITUDE 4051.37 FEET MSL
14 JULY 83 1200 MDT
ASCENSION NO. 104

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	879.2	30.3	40.0	1001.8	681.2	145.0	6.0	1.000294
4500.0	865.8	28.5	41.2	983.1	678.9	142.8	6.2	1.000288
551.1	851.1	26.4	42.9	983.5	676.4	140.5	6.5	1.000281
5500.0	836.3	24.0	45.6	971.1	674.6	138.4	6.7	1.000278
6000.0	821.7	23.5	48.3	958.6	673.2	136.5	7.0	1.000274
6500.0	807.4	22.1	51.1	946.4	671.6	122.4	7.2	1.000270
7000.0	793.3	20.8	53.9	934.4	670.0	108.4	7.9	1.000266
7500.0	779.5	19.4	56.7	922.6	668.4	101.1	9.6	1.000262
8000.0	765.9	18.6	59.4	911.0	666.7	98.7	11.9	1.000258
8500.0	752.6	16.6	62.2	899.5	665.1	96.3	13.1	1.000254
9000.0	739.5	15.2	65.0	888.2	663.5	94.0	14.0	1.000249
9500.0	726.3	13.8	68.6	876.7	661.8	84.8	15.2	1.000245
10000.0	713.3	12.3	72.3	865.8	660.0	80.6	16.3	1.000241
10500.0	700.5	10.7	75.9	855.3	658.0	80.2	16.8	1.000236
11000.0	687.3	10.8	67.1	839.9	658.0	83.4	16.1	1.000228
11500.0	675.4	10.0	65.8	827.2	657.0	84.2	15.5	1.000222
12000.0	663.1	9.0	65.6	815.1	655.8	83.2	14.9	1.000218
12500.0	651.0	8.1	65.3	803.1	654.7	82.8	14.7	1.000213
13000.0	639.2	7.1	65.1	791.3	653.5	83.1	14.7	1.000208
13500.0	627.5	6.2	64.6	779.0	652.4	85.8	15.5	1.000204
14000.0	615.9	5.3	63.9	767.8	651.3	90.4	16.0	1.000199
14500.0	604.6	4.4	63.3	756.3	650.1	99.9	16.0	1.000195
15000.0	592.4	3.9	44.3	744.4	649.2	109.2	16.2	1.000184
15500.0	582.4	3.5	45.5	731.6	648.8	113.7	16.3	1.000181
16000.0	571.6	3.6	39.1	719.6	648.0	124.4	16.4	1.000175
16500.0	560.9	2.0	37.7	708.9	646.8	124.4	16.2	1.000171
17000.0	550.4	.7	40.6	698.9	645.3	124.0	15.1	1.000169
17500.0	540.1	-6	43.5	689.2	643.7	122.9	13.3	1.000166
18000.0	529.0	-1.7	38.8	679.1	642.3	114.8	11.4	1.000162
18500.0	519.9	-2.5	26.3	668.6	641.2	101.4	9.9	1.000156
19000.0	510.0	-2.4	20.8	655.6	641.3			1.000152
19500.0	500.4	-2.1	16.2	642.7	641.6			1.000148

STATION ALTITUDE 4951.37 FEET MSL
18 JULY 83
ASCENSION NO. 104

MANDATORY LEVELS
1900160104
LC-37

GEODETTIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 8

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FLEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT		DIRECTION DEGREES (IND)	SPEED KNOTS
850.0	5034.	26.2	12.0	43.		140.4	6.5
800.0	6775.	21.4	11.3	53.		114.3	7.5
750.0	8597.	16.3	9.2	63.		95.8	13.3
700.0	10509.	10.6	6.0	70.		80.3	16.8
650.0	12532.	8.0	1.9	65.		82.8	14.7
600.0	14688.	4.1	-2.6	62.		103.0	10.1
550.0	17001.	.6	-11.2	41.		123.9	15.1
500.0	19491.	-2.1	-24.5	16.			

STATION ALTITUDE 5330.00 FEET MSL
18 JULY 83
ASCENSION NO. 353

SIGNIFICANT LEVEL DATA
1990020355
WIND 50005

GEODLTIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 9

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS HGL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
681.2	3789.0	31.7	15.6	38.0
671.2	4325.0	29.8	12.7	35.0
656.0	5045.1	27.8	12.6	39.0
796.4	7140.9	21.4	11.1	52.0
741.8	8032.5	15.5	9.4	67.0
714.6	9016.2	12.7	9.0	78.0
703.0	10539.7	10.9	8.0	82.0
691.5	10875.1	10.4	4.1	85.0
690.7	10906.3	10.2	6.4	77.0
685.4	11118.0	10.5	3.5	62.0
681.5	11274.5	10.3	4.0	65.0
672.0	11659.5	10.8	2.6	57.0
656.6	13160.5	7.1	5.5	62.0
662.5	14618.3	4.3	-2.1	63.0
586.8	15370.8	3.9	-6.4	47.0
568.6	16160.4	3.0	-6.9	41.0
539.9	17538.9	.0	-11.1	45.0
514.4	18605.1	-2.3	-16.7	32.0
506.0	19547.4	-3.1	-24.6	17.0

GEODTIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

UPPER AIR DATA
1990020350
WHITE SANDS

TABLE 10

STATION ALTITUDE 3980.00 FEET MSL
19 JULY 63 1228 MDT
ASCENSION NO. 308

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METEOR	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3980.0	881.2	31.7	38.0	999.3	682.8	135.0	9.4	1.000295
4000.0	880.9	31.6	37.9	999.2	682.7	135.1	9.9	1.000295
4500.0	865.0	29.3	36.0	991.0	679.7	138.9	9.9	1.000282
5000.0	851.3	27.9	38.7	978.6	676.2	142.7	10.0	1.000279
5500.0	836.7	26.4	41.8	966.7	676.5	146.4	10.1	1.000276
6000.0	822.3	24.9	44.9	954.9	674.8	150.0	10.2	1.000273
6500.0	808.2	23.4	48.0	943.4	673.0	153.5	10.4	1.000270
7000.0	794.3	21.8	51.1	932.0	671.2	153.5	10.0	1.000266
7500.0	780.4	20.2	55.0	920.9	669.4	149.7	9.0	1.000263
8000.0	766.7	18.6	59.2	909.9	667.5	145.1	8.0	1.000259
8500.0	753.3	16.9	63.4	899.1	665.6	131.5	7.8	1.000255
9000.0	740.0	15.3	67.8	888.4	663.0	114.0	8.7	1.000252
9500.0	726.8	13.7	74.1	877.3	661.8	100.8	10.2	1.000249
10000.0	713.8	12.2	79.9	866.1	660.1	92.4	12.6	1.000245
10500.0	701.0	11.0	81.8	854.4	658.6	86.9	15.2	1.000241
11000.0	688.4	10.3	70.4	841.8	657.5	86.5	14.9	1.000229
11500.0	675.9	10.0	60.3	826.3	657.7	86.1	14.3	1.000220
12000.0	663.7	10.0	58.1	813.3	656.8	85.9	13.5	1.000215
12500.0	651.0	8.7	59.8	802.1	655.4	85.7	13.4	1.000211
13000.0	639.8	7.5	61.5	791.1	653.9	85.7	13.6	1.000207
13500.0	628.6	6.4	62.2	779.7	652.6	89.1	13.8	1.000203
14000.0	616.5	5.5	62.6	768.1	651.4	93.5	14.1	1.000199
14500.0	605.2	4.5	62.9	756.7	650.3	102.7	14.0	1.000195
15000.0	594.0	4.1	54.9	744.2	649.6	113.9	14.3	1.000188
15500.0	583.0	3.8	46.0	731.7	649.0	122.7	14.8	1.000181
16000.0	572.2	3.2	42.3	719.7	648.3	129.4	15.3	1.000176
16500.0	561.5	2.3	41.5	708.8	647.2	131.3	15.3	1.000173
17000.0	551.0	1.2	42.2	698.3	645.9	127.8	14.7	1.000170
17500.0	540.7	.1	42.9	688.1	644.6	124.1	13.1	1.000167
18000.0	530.5	-1.0	38.2	678.0	643.2	119.2	10.9	1.000162
18500.0	520.5	-2.1	33.1	668.0	641.8			1.000158
19000.0	510.0	-2.6	25.7	658.9	641.1			1.000153
19500.0	500.9	-3.1	17.8	645.7	640.5			1.000148

STATION ALTITUDE 3289.00 FEET MSL
18 JULY 83 1228 MDT
ASCENSION NO. 356

MANDATORY LEVELS
1990020356
WHITE SANDS

GEODOLIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 11

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES (IN)	SPEED KNOTS
853.0	5061.	27.8	12.6	39.	143.0	10.0
803.0	6700.	22.5	11.5	50.	154.9	10.4
753.0	8617.	16.5	9.8	64.	126.9	7.9
700.0	10529.	10.9	8.0	82.	86.9	15.2
650.0	12556.	8.6	1.3	60.	85.7	13.4
600.0	14712.	4.2	-2.7	61.	107.7	14.1
550.0	17027.	1.1	-10.3	42.	127.5	14.7
500.0	19519.	-3.1	-24.6	17.		

STATION ALTITUDE 3989.00 FEET MSL
18 JULY 83
ASCENSION NO. 59

SIGNIFICANT LEVEL DATA

1990020359

WHITE SANDS

TABLE 12

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

PRESSURE	GEOMETRIC	TEMPERATURE	REL. HUM.
MILLIBARS	ALTITUDE	AIR	PERCENT
MEL FEET		TEMPERATURE	
		DEGREES	
		CENTIGRADE	
840.1	3989.0	33.9	30.0
876.1	4123.7	30.8	32.0
856.0	5009.7	28.2	37.0
771.1	7209.7	19.5	49.0
718.8	9779.2	13.9	63.0
700.0	10512.6	11.3	71.0
684.4	10932.7	11.2	67.0
675.3	11499.5	9.7	69.0
647.5	12643.2	6.6	83.0
615.2	14022.7	5.0	53.0
662.7	14572.7	3.6	55.0
594.1	14950.9	3.9	51.0
582.8	15470.2	3.8	55.0
568.3	16142.5	3.1	57.0
530.1	17530.9	-2.6	41.0
500.0	19504.7	-4.2	20.0

UPPER AIR DATA
1930020359
WHITE SANDS
TABLE 13

STATION ALTITUDE 3489.00 FEET MSL
18 JULY 83
ASCENSION NO. 354

GEOGRAPHIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

GEOGRAPHIC ALTITUDE	PRESSURE	AIR TEMPERATURE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KIOTS	WIND DATA DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX OF REFRACTION
MSL FEET	MILLIBARS	DEGREES CELSIUS						
3489.0	980.1	33.0	30.0	991.7	685.0	150.0	9.9	1.000205
4000.0	879.8	33.6	30.2	992.2	684.7	149.9	9.9	1.000205
4500.0	864.9	29.7	34.1	988.7	680.1	142.7	9.2	1.000279
5000.0	850.3	28.2	36.9	976.7	678.5	134.6	8.7	1.000277
5500.0	835.6	26.7	39.1	964.9	676.7	125.7	8.4	1.000273
6000.0	821.2	25.1	41.2	953.3	674.9	121.8	9.3	1.000269
6500.0	807.0	23.6	43.4	941.9	673.1	124.6	11.7	1.000264
7000.0	793.1	22.0	45.5	930.7	671.2	124.3	13.2	1.000260
7500.0	779.5	20.5	47.7	919.7	669.4	121.9	14.0	1.000255
8000.0	765.9	19.0	50.4	908.4	667.7	119.5	13.8	1.000252
8500.0	752.3	17.5	53.9	896.7	666.0	113.1	12.5	1.000248
9000.0	739.1	16.1	57.5	885.3	664.4	116.6	12.3	1.000245
9500.0	725.0	14.7	61.0	874.0	662.7	118.1	12.2	1.000241
10000.0	711.1	13.3	65.4	862.7	661.1	115.1	12.0	1.000238
10500.0	697.3	11.8	70.9	851.5	659.4	106.6	12.9	1.000236
11000.0	683.7	11.0	67.2	839.0	658.3	102.7	13.2	1.000228
11500.0	670.3	9.7	68.0	827.8	656.7	99.9	12.9	1.000224
12000.0	657.0	8.3	75.1	816.6	655.2	97.1	12.1	1.000221
12500.0	643.9	7.0	81.2	805.6	653.6	94.7	13.0	1.000219
13000.0	630.8	6.2	76.5	793.5	652.5	93.2	13.9	1.000212
13500.0	617.7	5.6	67.5	781.0	651.6	93.1	14.5	1.000204
14000.0	604.7	5.0	58.4	768.7	650.8	96.2	14.1	1.000196
14500.0	591.5	4.4	55.4	758.1	649.2	104.2	12.7	1.000191
15000.0	578.1	3.9	49.7	743.9	649.3	114.5	11.9	1.000186
15500.0	564.2	3.8	35.1	731.0	648.9	125.8	11.8	1.000177
16000.0	551.3	3.2	36.6	718.8	648.3	128.1	12.3	1.000174
16500.0	538.7	2.7	38.0	708.2	647.0	129.1	12.7	1.000171
17000.0	526.2	2.8	39.5	696.3	645.4	126.8	11.3	1.000169
17500.0	513.4	2.5	40.4	688.7	643.8	123.6	9.6	1.000166
18000.0	500.7	1.4	36.1	678.1	642.6	117.3	6.9	1.000161
18500.0	487.6	2.4	30.7	667.7	641.4			1.000157
19000.0	474.8	3.3	25.4	657.4	640.3			1.000153
19500.0	462.1	4.2	20.1	647.3	639.1			1.000149

STATION ALTITUDE 1900.00 FEET MSL
18 JULY 83
ASCLIN/STATION NO. 359

NAVIGATORY LEVELS
1990020359
WHITE SANDS

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 14

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5006.	28.2	12.1	37.		134.5	8.7
800.0	6757.	22.8	10.1	44.		125.6	12.9
750.0	6504.	17.3	8.0	55.		112.5	12.4
700.0	10502.	11.8	6.7	71.		106.5	12.9
650.0	12525.	6.9	4.0	82.		94.6	13.1
600.0	14675.	3.7	-4.8	54.		107.6	12.2
550.0	16989.	.8	-11.4	39.		126.8	11.3
500.0	19077.	-4.2	-23.7	20.			

END

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