

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

**LEVEL II**

12

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DR 1218  
December 1981

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METEOROLOGICAL DATA REPORT

Missile Numbers BN-040, BN-041, BN-042, BN-043, BN-044 and BN-045  
Round Numbers V-194/MD-48, V-195/MD-49, V-196/MD-50, V-197/MD-51,  
V-198/MD-52 and V-199/MD-53  
17 December 1981.

by

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Program Support Coordinator  
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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND,

82 01 29 126

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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 19304A MLRS, Missile Nos. BN040, BN041, BN042, BN043, BN044 and BN045, Round Nos. V194/MD-48, V195/MD-49, V196/MD-50, V197/MD-51, V198/MD-52 and V199/MD-53 presented in tabular form.		

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## CONTENTS

	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA MAP-----	3
TABLES:	
1. Surface Observations taken at 1505 MST at LC-33-----	4
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, taken at 1505 MST-----	5
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3 and 4, taken at 1505 MST-----	5
4. Launch and Impact Pilot-Balloon Measured Wind Data-----	6
5. Aiming and T-Time Computer Met Messages-----	7
6. WSD Significant Level Data at 1200 MST-----	8
7. WSD Upper Air Data at 1200 MST-----	9
8. WSD Mandatory Levels at 1200 MST-----	10
9. LC-37 Significant Level Data at 1300 MST-----	11
10. LC-37 Upper Air Data at 1300 MST-----	12
11. LC-37 Mandatory Levels at 1300 MST-----	13
12. WSD Significant Level Data at 1410 MST-----	14
13. WSD Upper Air Data at 1410 MST-----	15
14. WSD Mandatory Levels at 1410 MST-----	16
15. LC-37 Significant Level Data at 1500 MST-----	17
16. LC-37 Upper Air Data at 1500 MST-----	18
17. LC-37 Mandatory Levels at 1500 MST-----	19

## INTRODUCTION

19304A MLRS, Missile Numbers BN-040, BN-041, BN-042, BN-043, BN-044 and BN-045, Round Numbers V-194/MD-48, V-195/MD-49, V-196/MD-50, V-197/MD-51, V-198/MD-52, and V-199/MD-53, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1505:11, 1505:16, 1505:20, 1505:25, 1505:30 and 1505:34 MST, 17 December 1981. The scheduled launch times were 1500, 1500:04.5, 1500:09, 1500:13.5, 1500:18 and 1500:22.5 MST.

## DISCUSSION

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

### 1. Observations.

#### a. Surface:

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind speed and direction, 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 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

WSD 2 KM  
NICK 2 KM

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

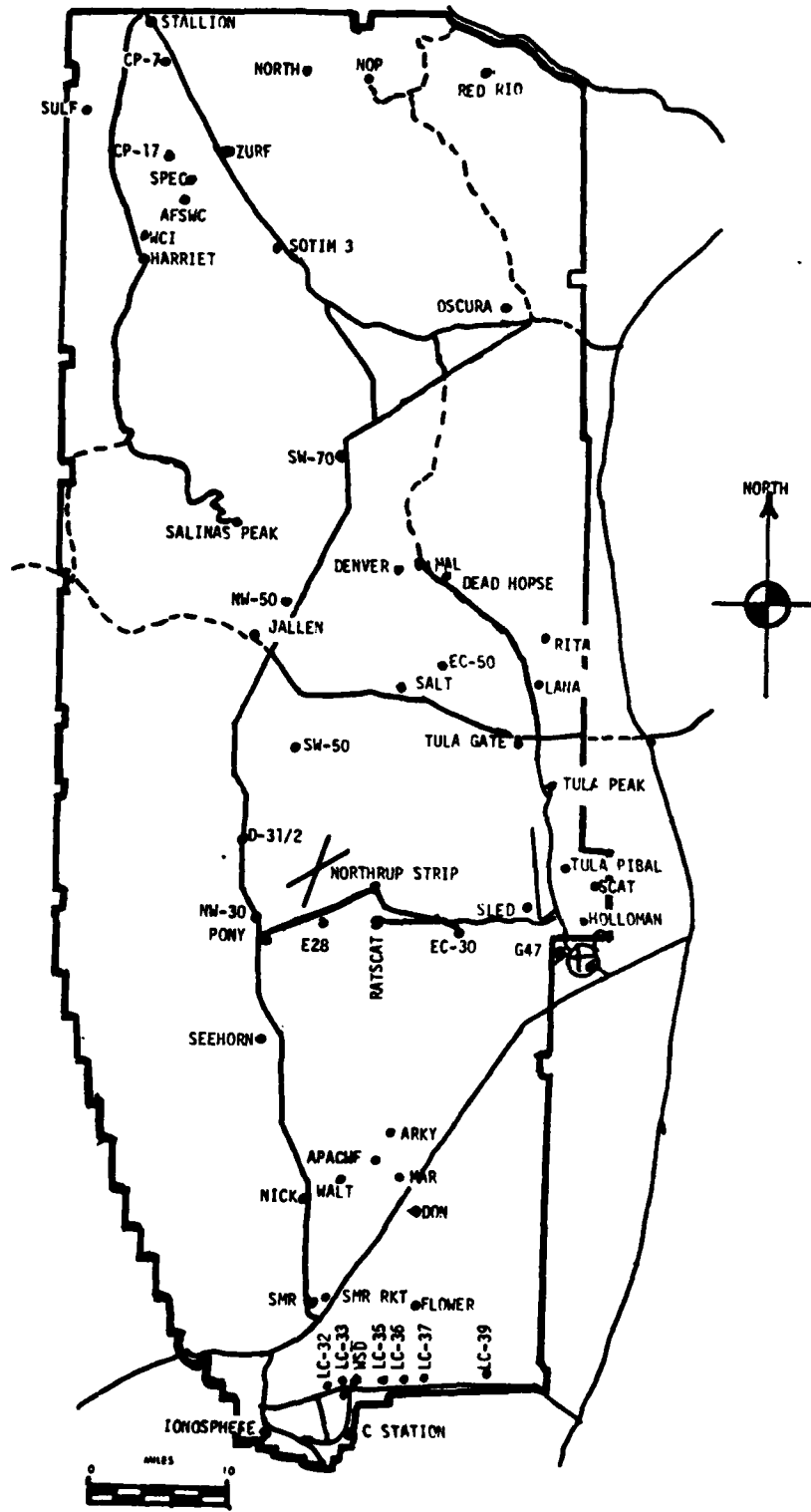
### SITE AND TIME

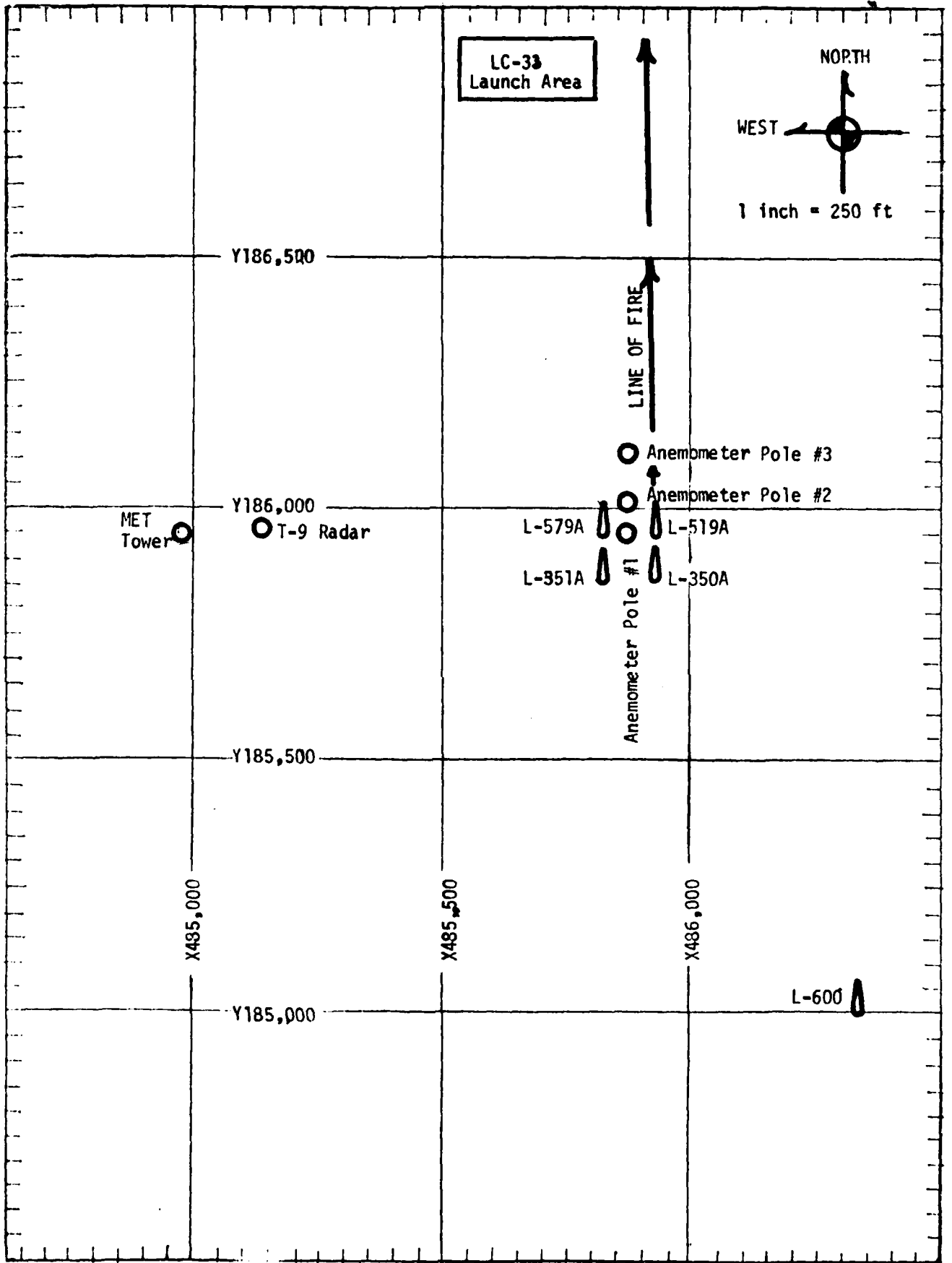
WSD 1200 MST  
LC-37 1300 MST  
WSD 1410 MST  
LC-37 1500 MST

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
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Distribution/	
Availability Codes	
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# WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE 1 STATION LC-33 X= \_\_\_\_\_ Y= \_\_\_\_\_ H= \_\_\_\_\_

DATE 17 DAY Dec MONTH 1981 YEAR

TIME M S T	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY gm/m <sup>3</sup>	WIND		VISIBIL- ITY
						DIRECTION degs Tn	SPEED kts	
1505	883.8	13.8	-8.2	21	1070	030	08	65

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	HGT	AMT	HGT	AMT	HGT	
	0	CI 25,000					

PSYCHROMETRIC COMPUTATION

TIME: MST	1505
DRY BULB TEMP.	13.8
WET BULB TEMP.	4.6
WET BULB DEPR.	9.2
DEW POINT	-8.2
RELATIVE HUMID.	21

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X495,877.29 Y136,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	014	07	T-30	023	04	T-30	032	09
T-20	015	06	T-20	025	06	T-20	042	09
T-10	023	09	T-10	032	07	T-10	031	10
T-0	016	06	T-0	044	07	T-0	043	07
T+10	027	08	T+10	006	07	T+10	040	08

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 KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	016	09	T-30	064	07
T-20	062	06	T-20	042	06
T-10	018	06	T-10	037	05
T-0	030	08	T-0	039	07
T+10	025	06	T+10	022	05

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	038	07	T-30	021	09
T-20	030	07	T-20	013	09
T-10	037	07	T-10	012	08
T-0	012	07	T-0	003	08
T+10	015	06	T+10	008	07

## T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 17 December 1981

SITE: WSD  
 TIME: 1511 MST  
 WSTM COORDINATES:  
 X= 488,580.00  
 Y= 185,045.00  
 H= 3,989.00

SITE: NICK  
 TIME: 1505 MST  
 WSTM COORDINATES:  
 X= 470,734.56  
 Y= 255,775.64  
 H= 4,126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	030	08
150	023	06
210	024	08
270	025	09
330	357	11
390	016	06
500	006	09
650	023	07
800	016	08
950	021	07
1150	316	07
1350	301	12
1550	311	20
1750	322	27
2000	318	29

Data obtained from NIKE-HERC Radar  
 tracked pilot-balloon observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	040	06
150	020	09
210	017	09
270	018	09
330	020	08
390	019	07
500	014	06
650	002	04
800	289	03
950	265	08
1150	293	10
1350	313	14
1550	323	22
1750	324	25
2000	322	28

Data obtained from Single Theodolite  
 tracked pilot-balloon observation.

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES  
17 December 1981

WSD 1200 MST	LC-37 1300 MST	WSD 1410 MST	LC-37 1500 MST
METCM1324064	METCM1324063	METCM1324064	METCM1324063
171800122886	171900124885	172020122885	172100124885
00027004 28560886	00587003 28580885	00018004 28670885	00053002 28640885
01017017 28310876	01037013 28460875	01059011 28600875	01003011 28530874
02043013 28050849	02032012 28150849	02031010 28270849	02636010 28260848
03025014 27790809	03003012 27810808	03005008 27890808	03620006 27930808
04561008 27470761	04571013 27530760	04553012 27630760	04544012 27590760
05537022 27440715	05549021 27330714	05557022 27410715	05570025 27370714
06548033 27340672	06554033 27260671	06563033 27280671	06564029 27320671

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

SIGNIFICANT LEVEL DATA

3510020746  
 WHITE SANDS

TABLE 6

STATION ALTITUDE 3989.00 FEET MSL  
 17 DEC. 81  
 ASCESSION NO. 746

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
886.5	3989.0	12.0	27.0
882.4	4115.9	10.0	27.0
850.0	5130.8	7.0	33.0
833.0	5674.7	5.6	31.0
814.7	6270.4	4.9	32.0
758.9	8157.4	.9	47.0
740.9	8790.4	.0	51.0
714.2	9757.9	.9	27.0
700.0	10288.7	1.7	15.0
661.7	11772.1	-5	16.0
619.3	13503.1	-3.0	15.0
561.2	16037.4	-9.1	14.0
501.8	18851.4	-15.0	17.0

STATION ALTITUDE 3989.00 FEET MSL  
 17 DEC. 51  
 ASCENSION NO. 746

UPPER AIR DATA  
 3511020740  
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL  
 17 DEC. 51  
 ASCENSION NO. 746

UPPER AIR DATA  
 3511020740  
 WHITE SANDS

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.5	12.0	-6.4	1081.3	658.4	15.0	4.1	1.000259
4000.0	880.1	11.8	-6.5	1081.5	658.2	15.1	4.1	1.000258
4500.0	870.0	8.9	-8.1	1073.1	654.7	17.7	6.9	1.000255
5000.0	854.1	7.4	-8.1	1059.1	653.0	18.9	9.6	1.000252
5500.0	838.4	6.0	-9.5	1044.7	651.4	19.5	12.4	1.000247
6000.0	823.0	5.2	-10.3	1028.0	650.4	19.9	15.1	1.000243
6500.0	807.7	4.4	-10.1	1012.4	649.5	14.4	12.6	1.000239
7000.0	792.7	3.4	-9.7	997.3	648.3	4.9	10.1	1.000237
7500.0	777.9	2.3	-9.3	982.4	647.0	344.0	7.9	1.000234
8000.0	763.4	1.2	-9.2	967.8	645.0	319.4	8.3	1.000231
8500.0	749.1	.4	-9.0	952.4	644.9	304.9	11.3	1.000228
9000.0	735.0	.2	-10.1	935.4	644.6	300.6	15.1	1.000223
9500.0	721.2	.7	-13.6	916.6	643.0	301.3	19.4	1.000215
10000.0	707.7	1.3	-18.3	897.7	643.6	304.5	23.6	1.000207
10500.0	694.4	1.4	-22.3	880.7	645.7	308.0	27.8	1.000201
11000.0	681.4	.6	-22.6	866.5	644.8	308.3	30.6	1.000198
11500.0	669.6	-.1	-23.0	852.5	643.9	308.2	32.9	1.000195
12000.0	658.0	-.8	-23.5	838.7	643.1	311.0	33.5	1.000191
12500.0	643.5	-1.6	-24.3	825.0	642.2	314.1	34.4	1.000188
13000.0	631.3	-2.3	-25.1	811.6	641.3	318.7	35.7	1.000185
13500.0	619.4	-3.0	-25.9	798.3	640.5	321.7	36.7	1.000182
14000.0	607.5	-4.2	-27.0	786.5	639.0	322.6	37.0	1.000179
14500.0	595.8	-5.4	-28.2	774.8	637.6	321.6	37.2	1.000176
15000.0	584.3	-6.6	-29.3	763.4	636.1	319.2	37.4	1.000173
15500.0	573.0	-7.8	-30.4	752.1	634.7	316.4	37.6	1.000170
16000.0	562.0	-9.0	-31.5	741.0	633.2	313.2	37.9	1.000167
16500.0	551.0	-10.1	-32.1	729.4	632.0	311.8	38.9	1.000165
17000.0	540.1	-11.1	-32.5	717.9	630.7	310.9	40.1	1.000162
17500.0	529.5	-12.2	-33.0	706.6	629.4	309.4	39.8	1.000159
18000.0	519.1	-13.2	-33.6	695.5	628.2	308.0	39.8	1.000157
18500.0	508.9	-14.3	-34.1	684.6	626.9	306.6	39.8	1.000154

STATION ALTITUDE 3989.00 FEET MSL  
 17 DEC. 61 1200 HRS MST  
 ASCENSION NO. 746

MANDATORY LEVELS  
 3510020740  
 WHITE SANDS  
 TABLE 8

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
		DEGREES	CENTIGRADE		(DEGREES(TN))	KNOTS
850.0	5127.	7.0	-8.1	33.	19.1	10.3
800.0	6752.	3.9	-9.9	30.	10.7	11.4
750.0	8461.	.5	-9.0	49.	305.7	11.1
700.0	10279.	1.7	-22.1	15.	306.7	26.0
650.0	12227.	-1.2	-23.9	16.	312.2	33.9
600.0	14307.	-5.0	-27.8	15.	322.5	37.2
550.0	16528.	-10.2	-32.1	15.	311.8	39.0

STATION ALTITUDE 4051.37 FEET MSL  
 17 DEC. 61 1300 HRS MST  
 ASCENSION NO. 231

SIGNIFICANT LEVEL DATA  
 3510160231  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 9

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE D-WPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
885.1	4051.4	12.2	-6.7	26.0
850.0	5155.5	7.9	-6.2	36.0
799.2	6111.6	3.6	-8.4	41.0
733.2	9097.6	.5	-8.4	51.0
714.4	9781.1	-0.8	-9.9	50.0
700.0	10316.0	-0.2	-10.5	28.0
632.6	12970.3	-1.8	-19.6	24.0
606.6	14063.2	-3.9	-21.4	24.0
547.0	16714.2	-10.3	-26.1	26.0
500.0	18970.5	-14.7	-29.9	26.0

STATION ALTITUDE 4051.37 FEET MSL  
 17 DEC. 81  
 ASCENSION NO. 231

UPPER AIR DATA  
 3510180231  
 LC-37  
 TABLE 10

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KILOTS	DIRECTION DEGREES(TN)	WIND DATA		INDEX OF REFRACTION
							SPEED KNOTS	REFRACTION	
4051.4	883.1	12.2	26.0	1.076.9	058.6	330.0	2.9	1.000258	
4500.0	870.7	10.5	30.1	1.067.7	056.0	349.1	4.6	1.000256	
5000.0	854.9	8.5	34.0	1.055.5	054.4	358.0	6.8	1.000254	
5500.0	839.2	7.0	37.0	1.041.7	052.0	2.0	9.1	1.000250	
6000.0	823.7	5.7	39.5	1.027.4	051.1	5.0	11.4	1.000246	
6500.0	808.5	4.4	40.1	1.013.2	049.6	337.7	11.9	1.000242	
7000.0	793.5	3.3	41.8	998.3	048.3	351.0	12.5	1.000238	
7500.0	778.7	2.7	44.0	982.0	047.5	338.9	12.3	1.000235	
8000.0	764.2	2.0	46.2	966.0	046.7	326.4	12.7	1.000232	
8500.0	749.9	1.3	48.4	950.3	045.9	316.6	14.2	1.000228	
9000.0	735.9	.6	50.6	934.8	045.1	309.3	16.2	1.000225	
9500.0	722.1	-.3	50.4	920.3	044.1	309.6	19.7	1.000220	
10000.0	708.5	-.6	41.0	904.2	043.6	311.5	23.8	1.000214	
10500.0	695.1	-.3	27.7	886.7	043.8	312.0	27.5	1.000206	
11000.0	682.0	-.6	27.0	871.0	043.4	312.1	31.0	1.000202	
11500.0	669.1	-.9	26.2	855.5	043.1	312.0	32.4	1.000198	
12000.0	656.5	-1.2	25.5	840.3	042.7	312.0	32.8	1.000194	
12500.0	644.1	-1.5	24.7	825.3	042.3	313.1	33.2	1.000191	
13000.0	631.9	-1.9	24.0	810.8	041.9	314.7	33.6	1.000187	
13500.0	619.9	-2.8	24.0	798.2	040.8	314.6	33.9	1.000184	
14000.0	608.1	-3.8	24.0	785.9	039.6	315.7	34.2	1.000181	
14500.0	596.4	-5.0	24.3	774.1	038.2	312.5	34.8	1.000178	
15000.0	584.8	-6.2	24.7	762.6	036.8	311.2	35.7	1.000175	
15500.0	573.5	-7.4	25.1	751.3	035.3	310.8	36.1	1.000172	
16000.0	562.5	-8.6	25.5	740.2	033.9	310.7	36.4	1.000169	
16500.0	551.6	-9.8	25.8	729.2	032.4	310.6	36.1	1.000167	
17000.0	540.8	-10.9	26.0	717.9	031.1	310.4	36.1	1.000164	
17500.0	530.1	-11.8	26.0	706.4	029.9			1.000161	
18000.0	519.7	-12.8	26.0	695.1	028.7			1.000158	
18500.0	509.5	-13.8	26.0	684.0	027.5			1.000155	

STATION ALTITUDE 4051.37 FEET MSL  
 17 DEC. 61  
 ASCENSION NO. 231

MANDATORY LEVELS  
 3510180231  
 LC-3/

TABLE 11

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR	DEWPOINT	PERCENT	DIRECTION	SPEED	
		DEGREES	CENTIGRADE		DEGREES(TN)	KNOTS	
850.0	5152.	7.9	-0.2	36.	359.7	7.5	
800.0	6779.	3.7	-0.4	41.	353.8	12.2	
750.0	8491.	1.3	-0.4	48.	316.7	14.2	
700.0	10306.	-0.2	-16.5	28.	311.9	26.2	
650.0	12247.	-1.4	-18.0	25.	312.2	33.0	
600.0	14330.	-4.6	-21.9	24.	312.9	34.6	
550.0	16554.	-10.0	-25.8	26.	310.6	36.0	
500.0	18944.	-14.7	-29.9	26.			

STATION ALTITUDE 3989.00 FEET MSL  
 17 DEC. 81 1410 HRS MST  
 ASCENSION NO. 747

SIGNIFICANT LEVEL DATA  
 3519020747  
 WHITE SANDS  
 TABLE 12

GEODETIC COORDINATES  
 32.40043 LAT UEG  
 106.37033 LON UEG

GEOMETRIC ALTITUDE	AIR TEMPERATURE	REL. HUM.
MILLIBARS MSL FEET	DEGREES CENTIGRADE	PERCENT
885.1 3989.0	13.0 -7.1	24.0
880.6 4129.5	12.9 -8.9	21.0
850.0 5096.9	8.8 -9.6	26.0
787.6 7146.8	3.1 -10.5	36.0
778.4 7459.5	3.1 -9.8	38.0
742.0 8730.5	1.4 -9.5	44.0
723.2 9408.4	.7 -10.1	27.0
700.0 10266.8	-.3 -22.3	17.0
688.0 10720.5	-1.0 -23.6	16.0
653.2 12081.4	-.8 -23.4	16.0
619.0 13486.3	-3.0 -25.2	16.0
500.0 18919.9	-14.9 -35.0	16.0

UPPER AIR DATA  
 351020747  
 WHITE SANDS  
 TABLE 13

STATION ALTITUDE 3989.00 FEET MSL  
 17 DEC. 61 1410 HRS MST  
 ASCENSION NO. 747

GEODETIC COORDINATES  
 32.40043 LAT UEG  
 106.37033 LON UEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE						
3989.0	885.1	13.0	-7.1	24.0	1075.9	659.5	10.0	4.1	1.000256
4000.0	884.7	13.0	-7.2	23.8	1075.5	659.5	10.0	4.1	1.000256
4500.0	868.8	11.3	-9.1	22.9	1062.4	657.5	8.9	5.1	1.000251
5000.0	853.0	9.2	-9.5	25.5	1051.0	655.1	6.1	6.1	1.000248
5500.0	837.4	7.7	-9.7	28.0	1037.4	653.3	7.6	7.0	1.000245
6000.0	821.9	6.3	-9.8	30.4	1023.3	651.7	7.2	8.0	1.000242
6500.0	805.8	4.9	-10.1	32.8	1009.5	650.0	355.2	7.4	1.000239
7000.0	791.9	3.5	-10.4	35.3	995.9	648.4	340.9	7.0	1.000236
7500.0	777.2	3.0	-9.8	38.2	970.9	647.9	322.4	8.9	1.000233
8000.0	762.7	2.4	-9.6	40.6	962.9	647.1	311.0	11.6	1.000229
8500.0	748.5	1.7	-9.5	42.9	947.2	646.4	309.8	14.9	1.000226
9000.0	734.5	1.1	-11.8	37.2	931.7	645.6	309.8	18.2	1.000220
9500.0	720.7	.6	-16.7	25.9	916.4	644.8	313.4	20.9	1.000212
10000.0	707.1	.0	-20.2	20.1	901.2	644.1	316.7	23.6	1.000207
10500.0	693.8	-.7	-23.0	16.5	886.5	643.3	317.0	26.3	1.000202
11000.0	680.7	-1.0	-23.5	16.0	870.8	642.9	316.8	29.0	1.000199
11500.0	667.8	-.9	-23.5	16.0	854.1	643.0	317.4	30.8	1.000195
12000.0	655.2	-.8	-23.4	16.0	837.7	643.1	318.2	32.3	1.000191
12500.0	642.8	-1.5	-24.0	16.0	823.8	642.3	319.2	32.3	1.000188
13000.0	630.6	-2.2	-24.6	16.0	810.5	641.4	320.5	31.9	1.000185
13500.0	618.7	-3.0	-25.2	16.0	797.5	640.4	318.8	31.8	1.000182
14000.0	606.6	-4.1	-26.1	16.0	785.2	639.1	316.9	31.9	1.000179
14500.0	594.8	-5.2	-27.0	16.0	773.1	637.8	315.5	32.3	1.000176
15000.0	583.3	-6.3	-27.9	16.0	761.2	636.5	314.8	32.8	1.000173
15500.0	571.9	-7.4	-28.8	16.0	749.5	635.2	314.8	33.6	1.000170
16000.0	560.8	-8.5	-29.7	16.0	737.9	633.9	314.9	34.4	1.000167
16500.0	549.9	-9.6	-30.6	16.0	726.6	632.6	315.1	35.4	1.000164
17000.0	539.2	-10.7	-31.5	16.0	715.5	631.2	314.4	36.7	1.000162
17500.0	528.7	-11.8	-32.4	16.0	704.5	629.9	312.7	38.2	1.000159
18000.0	518.4	-12.9	-33.4	16.0	693.7	628.6			1.000157
18500.0	508.3	-14.0	-34.3	16.0	683.1	627.2			1.000154

STATION ALTITUDE 3989.00 FEET MSL  
 17 DEC. 61 1410 HRS MST  
 ASCENSION NO. 747

MANDATORY LEVELS  
 351020747  
 WHITE SANDS  
 TABLE 14

GEODLTIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		HLL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5093.	8.8	-9.6	26.	8.0	0.2	
800.0	6725.	4.3	-10.2	34.	348.9	7.1	
750.0	8439.	1.8	-9.5	43.	309.8	14.5	
700.0	10257.	-1.3	-22.3	17.	317.2	25.0	
650.0	12197.	-1.0	-23.6	16.	318.5	32.6	
600.0	14278.	-4.7	-26.6	16.	316.1	32.1	
550.0	16503.	-9.6	-30.6	16.	315.1	35.5	
500.0	18893.	-14.9	-35.0	16.			

STATION ALTITUDE 4051.37 FEET MSL  
 17 DEC. 61 1500 HRS MST  
 ASCENSION NO. 232

SIGNIFICANT LEVEL DATA  
 3510180232  
 LC-37  
 TABLE 15

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

PRECIPITATION MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AT 2 M MOUNTAIN DIFFERENCES CENTIGRADE	REL. HUM. PERCENT
884.7	4051.4	-5.4	28.0
850.0	5145.0	-8.1	29.0
794.2	6976.7	-9.0	37.0
784.0	7322.2	-8.6	39.0
754.6	8339.2	-9.4	43.0
735.4	9020.7	-13.2	34.0
700.0	10320.6	-20.8	19.0
678.4	11144.8	-20.4	20.0
669.4	11496.2	-20.6	19.0
650.6	12245.0	-21.5	19.0
641.8	12602.3	-21.5	19.0
561.6	16051.0	-27.3	21.0

STATION ALTITUDE 4051.37 FEET MSL  
 17 DEC. 81 1500 HRS MST  
 ASCENSION NO. 232

UPPER AIR DATA  
 3510180232  
 LC-37

GEODLTIC COORINATES  
 32.40175 LAT UEG  
 106.31232 LON UEG

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.4	884.7	12.6	28.0	1076.7	659.1	30.0	1.9	1.000259
4500.0	870.3	11.1	28.4	1064.8	657.4	11.4	3.2	1.000255
5000.0	854.5	9.5	28.9	1051.7	655.4	3.3	4.9	1.000251
5500.0	836.9	8.1	30.5	1037.5	653.8	359.2	6.5	1.000247
6000.0	823.5	6.9	32.7	1023.0	652.4	355.4	7.8	1.000244
6500.0	808.4	5.6	34.9	1008.8	650.9	343.1	7.1	1.000240
7000.0	793.5	4.4	37.1	994.6	649.5	328.9	7.0	1.000237
7500.0	778.8	3.7	39.7	978.5	648.7	315.8	8.8	1.000234
8000.0	764.3	2.6	41.7	964.2	647.4	307.7	10.9	1.000230
8500.0	750.0	1.6	40.9	949.8	646.2	310.0	14.4	1.000226
9000.0	736.0	.8	34.3	934.7	645.2	311.8	18.0	1.000219
9500.0	722.1	.5	28.5	918.4	644.8	317.2	21.6	1.000214
10000.0	708.6	.2	22.7	902.4	644.3	320.2	25.1	1.000208
10500.0	695.2	-.0	19.2	886.3	644.0	320.1	27.3	1.000203
11000.0	682.1	-.2	19.8	869.9	643.9	319.9	28.8	1.000200
11500.0	669.3	.3	19.0	852.1	644.4	319.6	29.8	1.000196
12000.0	656.7	-.4	19.0	838.3	643.6	320.4	30.4	1.000192
12500.0	644.3	-.8	19.0	823.6	643.1	321.4	31.0	1.000189
13000.0	632.0	-1.8	19.2	810.7	642.0	318.7	31.3	1.000186
13500.0	619.9	-3.0	19.5	798.8	640.6	315.9	31.6	1.000183
14000.0	608.0	-4.2	19.8	787.0	639.1	315.9	31.6	1.000180
14500.0	596.3	-5.4	20.1	775.4	637.7	314.0	31.8	1.000177
15000.0	584.9	-6.6	20.4	764.0	636.2	314.0	31.8	1.000174
15500.0	573.7	-7.8	20.7	752.8	634.8	314.0	31.8	1.000171
16000.0	562.7	-9.0	21.0	741.7	633.5	314.0	31.8	1.000169

MANDATORY LEVELS  
 3510180232  
 LC-37  
 TABLE 17

STATION ALTITUDE 4051.37 FEET MSL  
 17 DEC. 81 1500 HRS MST  
 ASCENSION NO. 232

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA		
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT		DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5142.	9.0	-8.1	29.	1.8	5.3	
800.0	6776.	4.9	-8.8	36.	335.4	6.9	
750.0	8493.	1.6	-10.3	41.	310.0	14.4	
700.0	10310.	.0	-20.8	19.	320.1	20.5	
650.0	12256.	-0.8	-21.5	19.	321.0	30.8	
600.0	14339.	-5.0	-24.4	20.	312.7	32.0	

