

AD-A106 697 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/1  
19304D MLRS, MISSILE NUMBER BN-049, ROUND NUMBER V-188/MD-42, 1--ETC(U)  
UNCLASSIFIED SEP 81 D C KELLER  
ERADCOM/ASL-DR-1207 NL

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DR 1207  
Sept 1981

AD

**LEVEL II**

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METEOROLOGICAL DATA REPORT

19304D MLRS  
Missile Number BN-049  
Round Number V-188/MD-42  
11 Sept 1981

by

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Program Support Coordinator  
Phone Number (505) 679-9568  
AVN Number 349-9568

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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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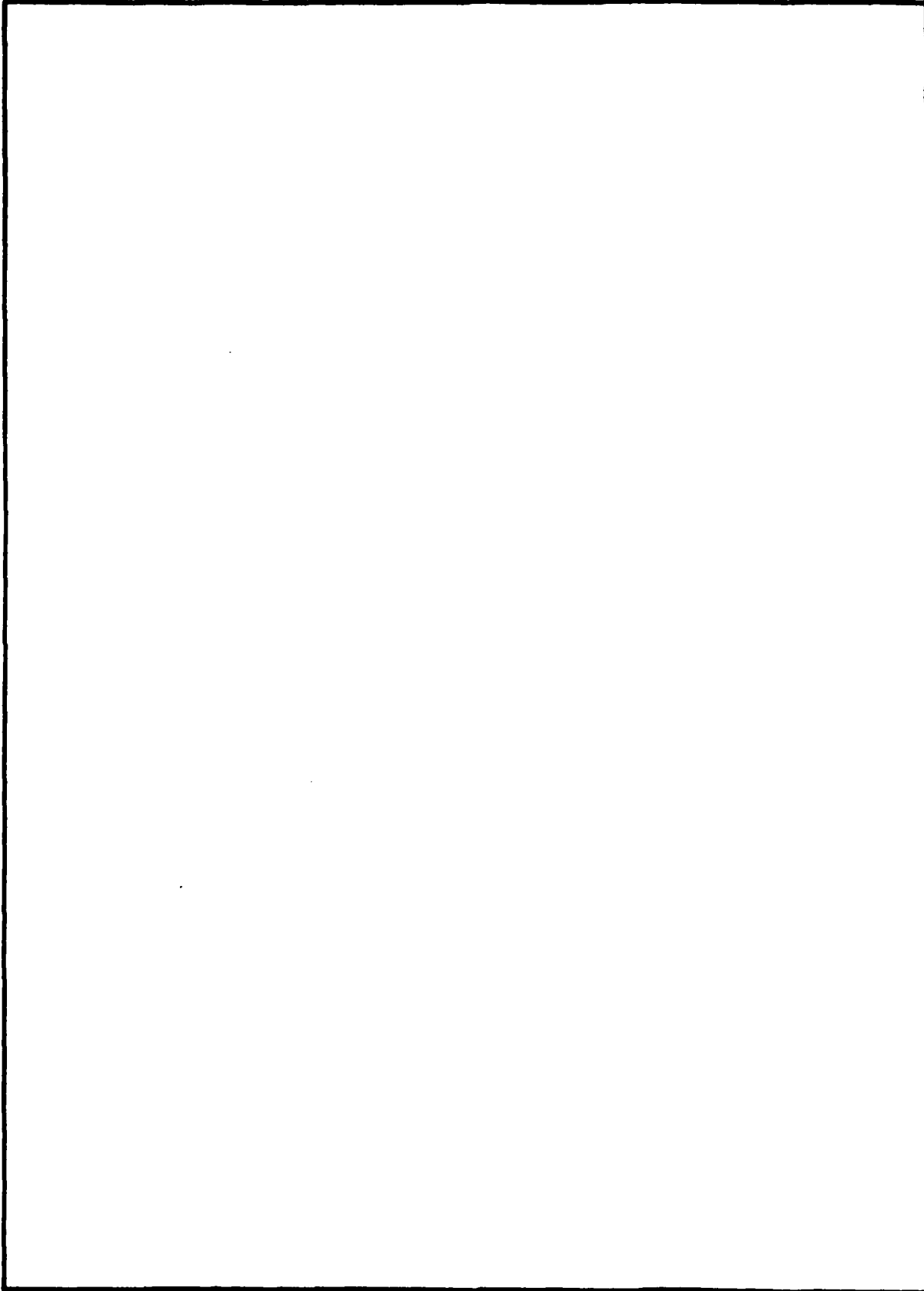
(1) Meteorological data report

REPORT DOCUMENTATION PAGE

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1. REPORT NUMBER DR 1207 <b>(6)</b> 19304D MLRS		2. GOVT ACCESSION NO. AD-A106697		3. RECIPIENT'S CATALOG NUMBER	
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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 19304D MLRS, Missile Number BN-049, Round Number V-188/MD-42 presented in tabular form.					

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**SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)**

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Station For  
 CFA&I   
 TAB   
 Unused   
 Identification

Station/ Availability Codes	
Dist	Avail and/or Special
<b>A</b>	

## INTRODUCTION

19304D MLRS, Missile Number BN-049, Round Number V-188/MD-42, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0904:24 MDT, 11 Sept 1981. The scheduled launch time was 0900 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 ( $^{\circ}$ C), relative humidity, dew point ( $^{\circ}$ C), density ( $\text{gm}/\text{m}^3$ ), wind speed and direction, and cloud cover were made at the LC-33 Met Sites at T-0 minutes.

(2) Anemometer data were provide 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

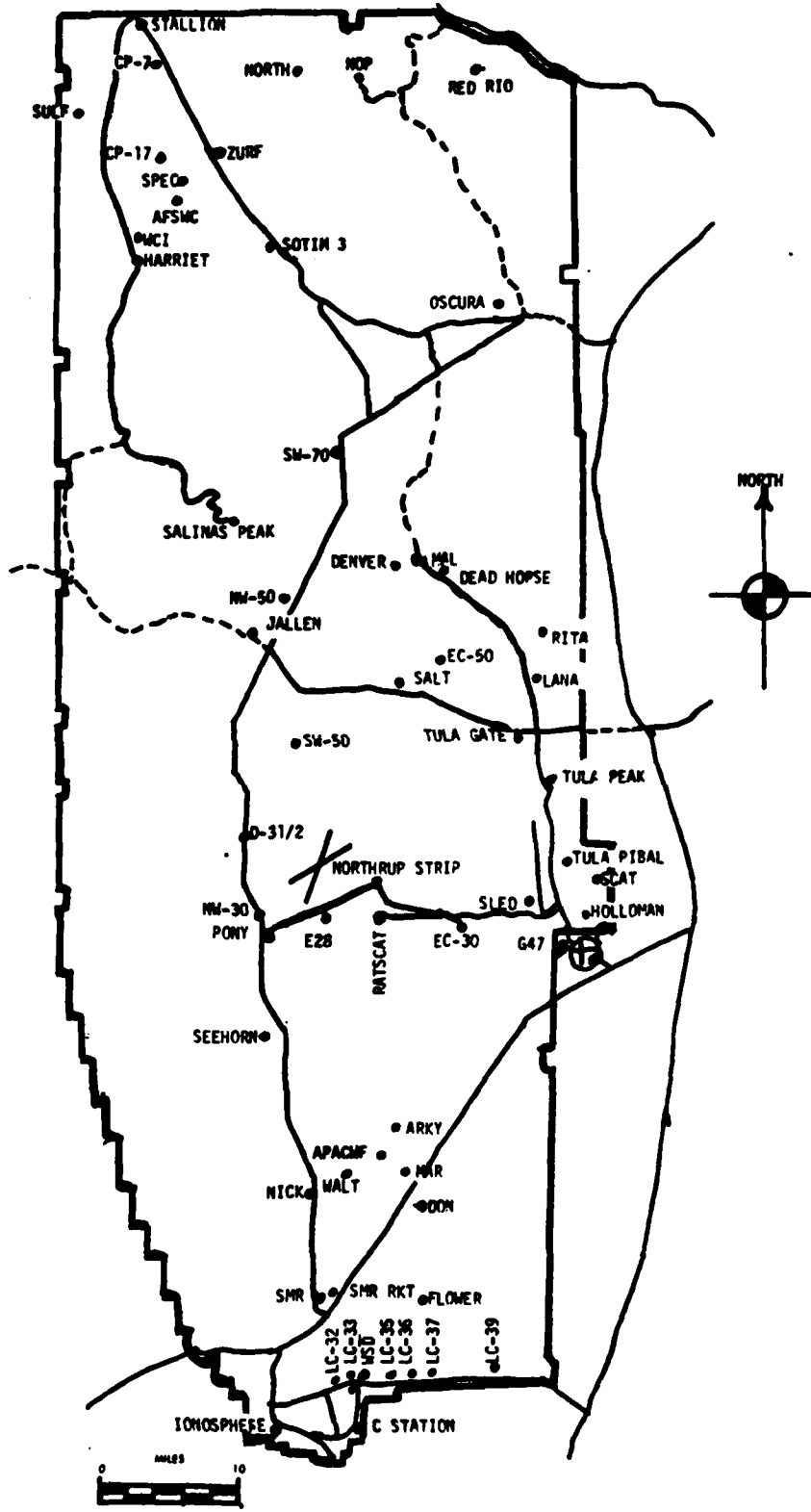
LC-33	2 KM
NICK	2 KM

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

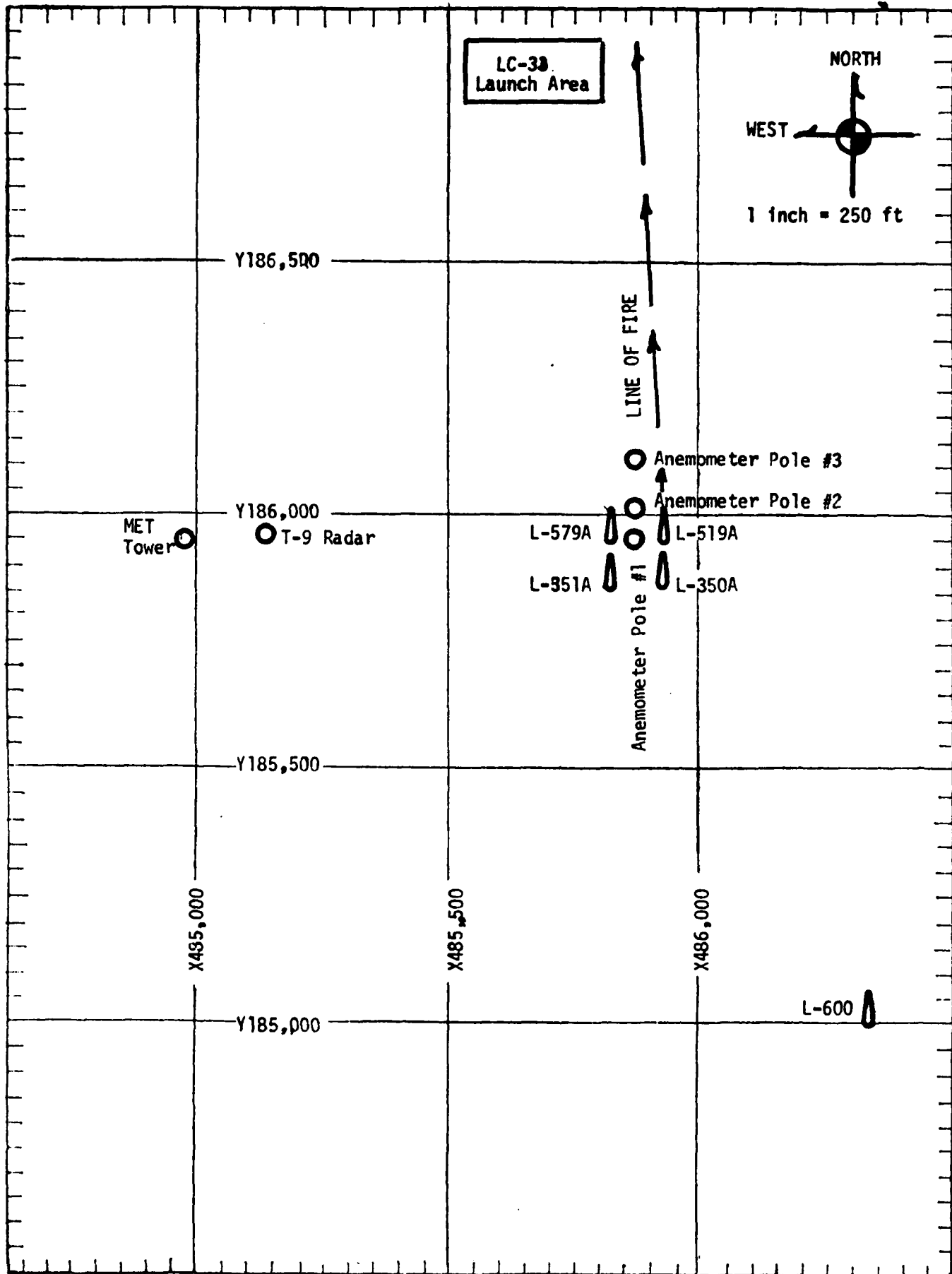
#### SITE AND TIME

WSD	0600 MDT
LC-37	0700 MDT
WSD	0800 MDT
LC-37	0904 MDT

# WSMR METEOROLOGICAL SITES







PROJECT SURFACE OBSERVATION

TABLE <u>1</u>											
STATION <u>LC-33</u>											
DATE <u>11</u> DAY		Sept MONTH		1981 YEAR		X= <u>485,135.76</u>		Y= <u>185,919.24</u>		H= <u>3,988.57</u>	
TIME M D I	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY gm/m <sup>3</sup>	DIRECTION degs Tn	WIND SPEED kts	CHARACTER kts	VISIBIL- ITY		
0904	883.5	24.4	14.6	54	1033		CALM		40		

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS				
	1st LAYER		2nd LAYER		3rd LAYER						
	AMT	TYPE	HGT	AMT	TYPE	HGT					
	0	CU	6,500	6	AC	12,000	1	CI	25,000	CU NE	

PSYCHROMETRIC COMPUTATION

TIME:	MDT	0904
DRY BULB TEMP.		24.4
WET BULB TEMP.		17.8
WET BULB DEPR.		6.6
DEW POINT		14.6
RELATIVE HUMID.		54

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 X485,877.29 Y186,116.06 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	C A L M		T-30	340	01	T -30	C A L M	
T-20	C A L M		T-20	340	01	T -20	C A L M	
T-10	C A L M		T-10	340	01	T -10	C A L M	
T0.0	C A L M		T0.0	340	01	T 0.0	C A L M	
T+10	C A L M		T+10	340	01	T +10	C A L M	

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	050	01	T-30	C A L M	
T-20	C A L M		T-20	C A L M	
T-10	C A L M		T-10	C A L M	
T0.0	C A L M		T0.0	C A L M	
T+10	036	01	T+10	C A L M	

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	C A L M		T-30	C A L M	
T-20	C A L M		T-20	C A L M	
T-10	C A L M		T-10	C A L M	
T0.0	C A L M		T0.0	C A L M	
T+10	C A L M		T+10	C A L M	

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA  
 DATE 11 Sept 1981

SITE: LC-33  
 TIME: 0904 MDT  
 WSTM COORDINATES:  
 X= 484,837.34  
 Y= 184,124.44  
 H= 3,975.60

SITE: NICK  
 TIME: 0904 MDT  
 WSTM COORDINATES:  
 X= 470,734.56  
 Y= 255,775.64  
 H= 4,126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES		SPEED KNOTS	
	C	A	L	M
SURFACE				
150	021		04	
210	013		05	
270	005		06	
330	360		08	
390	360		08	
500	006		08	
650	029		06	
800	037		05	
950	015		03	
1150	305		04	
1350	343		06	
1550	342		07	
1750	342		08	
2000	327		07	

Data obtained from Double-Theodolite  
 Tracked Pilot-Balloon Observations.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES		SPEED KNOTS	
	C	A	L	M
SURFACE				
150	319		02	
210	318		03	
270	317		04	
330	317		06	
390	318		06	
500	321		06	
650	355		04	
800	021		04	
950	025		05	
1150	354		06	
1350	318		06	
1550	333		06	
1750	347		08	
2000	337		08	

Data obtained from Single-Theodolite  
 Tracked Pilot-Balloon Observation.

AIMING AND T-TIME COMPUTER MET MESSAGES  
11 Sept 1981

WSD 0600 MDT	LC-37 0700 MDT	WSD 0800 MDT	LC-37 0904 MDT
METCM1324064	METCM1324063	METCM1324064	METCM1324881
111200122881	111300124880	111400122882	111510124881
00036002 29140881	00000000 29130880	00036001 29360882	00000000 29460881
01033010 29430871	01025013 29280869	01129005 29470872	01017006 29510871
02019010 29600846	02018007 29480845	02014007 29500847	02005007 29560846
03548007 29380808	03617006 29310806	03060007 29330809	03034007 29330807
04497009 29010762	04529006 28990760	04561006 29070763	04554005 29070762
05537009 28650718	05560009 28610717	05603009 28720719	05604007 28690718
06567006 28260676	06577004 28170675	06587006 28310677	06557003 28250676
07253003 27830637	07222003 27720635	07244002 27880637	07226004 27820636
08374005 27410598	08352006 27310597	08389006 27460599	08315005 27400598
09437008 27040562	09407007 26990560	09417006 27090563	09423004 27060562
10447012 26810528	10448011 26780526	10422010 26780529	10433009 26760527
11411017 26580495	11419014 26490493	11411016 26560496	11418014 26530495
12421019 26070449	12411016 25970447	12391015 26050450	12389013 26100449

STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 61  
 ASCENSION NO. 592

SIGNIFICANT LEVELL DATA  
 25400.0592  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
880.9	16.2	91.0
864.4	14.7	67.0
850.0	14.8	59.0
832.2	12.7	54.0
700.0	10.8	44.0
625.6	-1.8	53.0
566.8	-5.4	33.0
564.3	-10.8	14.0
542.4	-26.4	18.0
526.2	-24.8	52.0
510.6	-14.0	67.0
500.0	-11.1	71.0
494.8	-11.6	58.0
468.4	-14.4	67.0
463.8	-15.6	49.0
456.2	-19.9	37.0
448.8	-24.0	54.0
446.1	-20.8	32.0
439.8	-26.8	26.0
432.0	-29.3	17.0
400.0	-32.8	17.0
375.6	-30.7	23.0
361.8	-37.6	38.0
355.0	-34.9	84.0
342.0	-27.1	79.0
	-26.4	

STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 81 0600 HRS MDT  
 ASCENSION NO. 592

UPPER AIR DATA  
 2540020592  
 WHITE SANDS  
 TABLE 7

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.9	16.2	91.0	1052.9	665.1	20.0	1.9	1.000311
4000.0	880.6	16.3	90.5	1052.1	665.2	19.3	2.0	1.000310
4500.0	865.1	21.0	68.1	1017.1	670.6	1.4	3.4	1.000301
5000.0	850.1	21.0	59.0	1000.2	670.4	354.5	5.0	1.000287
5500.0	835.3	20.5	54.9	984.9	669.6	351.0	6.7	1.000278
6000.0	820.5	19.6	53.2	970.8	668.5	332.0	6.7	1.000270
6500.0	805.9	18.7	52.1	957.1	667.3	305.5	7.2	1.000263
7000.0	791.6	17.7	51.1	943.5	666.0	294.3	7.8	1.000257
7500.0	777.6	16.7	50.1	930.2	664.8	286.6	8.4	1.000250
8000.0	763.8	15.7	49.0	917.0	663.6	281.7	8.7	1.000244
8500.0	750.2	14.8	48.0	904.0	662.4	285.0	9.3	1.000238
9000.0	736.9	13.8	47.0	891.2	661.2	290.1	9.8	1.000233
9500.0	723.8	12.8	45.9	878.6	660.0	298.9	9.1	1.000227
10000.0	711.0	11.8	44.9	866.2	658.8	308.0	7.9	1.000222
10500.0	698.3	10.8	44.2	854.0	657.5	319.7	6.3	1.000217
11000.0	685.5	9.5	45.7	842.2	656.0	320.0	5.4	1.000213
11500.0	673.0	8.3	47.2	830.6	654.5	317.3	4.2	1.000210
12000.0	660.6	7.0	48.6	819.3	653.0	309.0	1.7	1.000206
12500.0	648.5	5.7	50.1	808.0	651.4	176.1	.6	1.000202
13000.0	636.7	4.4	51.6	797.0	649.9	148.8	2.1	1.000199
13500.0	625.0	3.1	52.8	786.1	648.3	160.1	2.9	1.000195
14000.0	613.2	2.0	49.0	774.8	646.9	188.7	3.8	1.000190
14500.0	601.7	.8	45.1	763.7	645.4	212.5	4.7	1.000185
15000.0	590.4	.3	41.3	752.7	644.0	228.9	5.8	1.000180
15500.0	579.3	-1.5	37.4	741.9	642.6	241.8	6.5	1.000176
16000.0	568.4	-2.6	33.6	731.2	641.1	246.0	7.2	1.000172
16500.0	557.6	-3.1	15.2	719.1	640.3	242.2	7.9	1.000164
17000.0	547.0	-3.8	17.1	707.1	639.5	246.1	9.2	1.000162
17500.0	536.6	-4.7	30.1	695.6	638.6	251.1	10.8	1.000162
18000.0	526.3	-5.7	51.8	684.5	637.6	250.5	12.4	1.000163
18500.0	516.2	-5.9	61.6	671.6	637.5	247.3	13.9	1.000162
19000.0	506.3	-6.5	68.6	660.2	636.7	236.8	15.4	1.000161
19500.0	496.5	-7.5	62.3	650.0	635.5	230.2	17.0	1.000156
20000.0	486.9	-8.5	60.7	639.9	634.2	227.7	18.5	1.000153
20500.0	477.4	-9.6	63.9	630.2	632.9	228.4	18.9	1.000151
21000.0	468.1	-10.7	65.9	620.6	631.5	231.6	18.3	1.000148
21500.0	458.9	-12.0	41.3	611.8	629.8	234.0	18.2	1.000142
22000.0	449.9	-13.3	51.5	602.7	628.2	235.3	18.3	1.000141
22500.0	441.0	-13.9	27.1	592.4	627.4	237.7	18.5	1.000135
23000.0	432.3	-15.0	17.3	578.7	626.4	241.2	18.9	1.000131

STATION ALTITUDE 3289.00 FEET MSL  
 11 SEP. 81  
 ASCENSION NO. 592

UPPER AIR DATA  
 2540020392  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 7 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	425.7	-14.2	17.0	569.4	627.0	242.2	18.3	1.000129
24000.0	415.2	-15.4	17.0	561.1	625.5	241.8	17.2	1.000127
24500.0	400.9	-16.6	17.0	552.6	624.0	234.8	15.4	1.000125
25000.0	398.8	-17.9	17.3	544.2	622.5	229.8	14.2	1.000123
25500.0	390.7	-19.4	19.2	536.2	620.7	229.5	13.3	1.000121
26000.0	382.8	-20.8	21.2	528.4	618.9	229.1	13.8	1.000119
26500.0	375.0	-22.3	23.6	520.7	617.1	228.7	14.8	1.000117
27000.0	367.3	-23.7	31.9	512.8	615.4	230.7	16.1	1.000116
27500.0	359.8	-24.8	51.6	504.5	614.0			1.000115
28000.0	352.3	-25.4	83.0	495.2	613.4			1.000114
28500.0	345.0	-26.1	80.2	486.2	612.5			1.000112



STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 61 0600 HRS MDT  
 ASCENSION NO. 592

MANDATORY LEVELS  
 2540020592  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 8

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4999.	21.0	12.7	59.	354.5	5.0
800.0	6715.	18.3	8.2	52.	300.4	7.4
750.0	8520.	14.7	3.9	48.	285.2	9.4
700.0	10424.	11.0	-0.8	44.	317.7	6.5
650.0	12435.	5.9	-3.8	50.	188.8	.5
600.0	14566.	.7	-10.0	45.	215.5	4.8
550.0	16838.	-3.6	-25.3	17.	244.3	4.7
500.0	19293.	-7.3	-11.6	71.	231.3	16.5
450.0	21960.	-13.3	-21.2	51.	235.3	16.3
400.0	24886.	-17.7	-36.7	17.	229.8	14.3
350.0	28107.	-25.7	-27.8	82.		

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 81  
 ASCENSION NO. 201

SIGNIFICANT LEVEL DATA  
 25401.00201  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.51232 LONG DEG

TABLE 9

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
079.6	4051.4	16.2	91.0
861.2	4647.3	19.4	73.0
850.0	5018.9	20.4	64.0
822.0	5969.5	19.6	56.0
753.0	8433.8	15.4	48.0
700.0	10451.2	10.6	48.0
650.8	12427.7	4.9	57.0
597.4	14704.9	.1	42.0
571.8	15852.2	-3.1	46.0
546.4	17034.1	-3.7	38.0
526.6	17989.2	-5.7	19.0
500.0	19321.0	-7.8	80.0
465.4	21144.7	-11.5	84.0
434.4	22870.5	-15.9	87.0
427.2	23286.0	-15.0	57.0
416.6	23910.2	-16.1	35.0
400.0	24913.5	-18.4	43.0
369.2	26863.3	-23.2	36.0
362.4	27310.0	-24.8	40.0
348.8	28224.5	-25.7	69.0
335.4	29156.3	-27.4	55.0
300.0	31761.6	-34.6	47.0

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 61 0700 HRS MDT  
 ASCENSION NO. 201

UPPER AIR DATA  
 2540100201  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 10

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 CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.4	879.6	16.2	14.7	91.0	1051.4	665.1	.0	1.000310	
4500.0	863.7	18.6	14.6	77.4	1026.2	667.9	6.6	1.000303	
5000.0	850.6	20.3	13.4	64.5	1002.6	669.7	6.6	1.000291	
5500.0	835.7	20.0	12.0	60.0	986.8	669.1	6.6	1.000282	
6000.0	821.1	19.5	10.5	55.9	971.5	668.5	6.6	1.000273	
6500.0	806.6	18.7	9.3	54.3	957.6	667.4	346.5	1.000266	
7000.0	792.4	17.8	8.0	52.7	943.8	666.3	317.8	1.000259	
7500.0	778.4	17.0	6.8	51.0	930.2	665.2	305.7	1.000252	
8000.0	764.7	16.1	5.6	49.4	916.7	664.1	301.9	1.000245	
8500.0	751.2	15.2	4.3	48.0	903.6	663.0	307.1	1.000239	
9000.0	737.7	14.1	3.2	48.0	891.3	661.5	311.4	1.000234	
9500.0	724.5	12.9	2.1	48.0	879.2	660.1	315.0	1.000229	
10000.0	711.5	11.7	1.0	48.0	867.2	658.6	316.4	1.000224	
10500.0	698.7	10.5	-0.7	48.2	855.4	657.2	316.8	1.000219	
11000.0	686.0	9.0	-1.4	50.5	844.2	655.5	319.0	1.000216	
11500.0	673.4	7.6	-2.2	52.8	833.1	653.7	325.1	1.000212	
12000.0	661.1	6.1	-3.1	55.1	822.2	652.0	342.7	1.000208	
12500.0	649.0	4.7	-4.9	56.5	811.3	650.4	92.9	1.000205	
13000.0	636.9	3.7	-6.7	53.2	799.5	649.0	137.4	1.000199	
13500.0	625.1	2.6	-8.6	49.9	787.8	647.7	153.5	1.000194	
14000.0	613.4	1.6	-10.5	46.6	776.3	646.4	174.6	1.000189	
14500.0	602.0	.5	-11.7	43.3	765.0	645.0	189.1	1.000184	
15000.0	590.7	-0.7	-12.5	43.0	754.2	643.5	205.1	1.000181	
15500.0	579.5	-2.1	-13.4	44.8	743.6	641.9	217.6	1.000178	
16000.0	569.6	-3.2	-14.6	45.0	732.6	640.6	226.1	1.000175	
16500.0	557.7	-4.4	-15.8	41.6	719.4	639.9	231.5	1.000171	
17000.0	547.1	-5.7	-20.1	38.2	706.4	639.6	244.0	1.000167	
17500.0	536.7	-7.3	-25.3	28.7	695.7	638.6	255.4	1.000161	
18000.0	526.4	-8.2	-32.2	19.5	685.3	637.3	252.4	1.000157	
18500.0	516.2	-9.5	-37.3	19.5	673.7	636.5	250.9	1.000159	
19000.0	506.3	-10.8	-42.4	42.4	662.3	635.8	248.5	1.000160	
19500.0	496.5	-12.1	-47.5	65.3	651.4	634.8	241.0	1.000159	
20000.0	486.8	-13.4	-52.6	80.4	641.2	633.6	234.6	1.000156	
20500.0	477.3	-14.7	-57.7	81.5	631.2	632.3	233.4	1.000153	
21000.0	468.1	-16.0	-62.8	82.6	621.4	631.1	232.3	1.000150	
21500.0	458.8	-17.3	-67.9	83.7	612.4	629.6	232.0	1.000147	
22000.0	449.8	-18.6	-73.0	84.6	602.9	628.0	231.6	1.000145	
22500.0	440.9	-19.9	-78.1	85.5	594.0	626.4	230.0	1.000142	
23000.0	432.1	-21.2	-83.2	86.4	583.8	625.6	228.4	1.000138	
23500.0	423.5	-22.5	-88.3	77.7	571.9	625.7	227.7	1.000133	

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 81 0700 HRS MDT  
 ASCENSION NO. 201

UPPER AIR DATA  
 2540100201  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT UEG  
 106.31232 LON UEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	413.1	-16.3	35.7	562.7	624.5	226.8	16.0	1.000129
24500.0	400.8	-17.5	39.7	553.9	623.1	224.7	14.1	1.000127
25000.0	390.6	-18.6	42.7	545.2	621.7	223.1	12.4	1.000125
25500.0	390.5	-19.8	40.9	536.7	620.2	224.4	11.3	1.000123
26000.0	382.5	-21.1	39.1	528.4	618.7	225.8	11.2	1.000120
26500.0	374.8	-22.3	37.3	520.2	617.1	227.0	12.4	1.000118
27000.0	367.1	-23.7	37.2	512.5	615.4	229.1	14.8	1.000116
27500.0	359.5	-25.0	46.0	504.5	613.8	231.1	18.1	1.000115
28000.0	352.1	-25.5	61.9	495.0	613.3	231.3	20.4	1.000113
28500.0	344.8	-26.2	64.9	486.1	612.4	231.3	22.6	1.000111
29000.0	337.6	-27.1	57.3	477.8	611.2	232.0	27.3	1.000109
29500.0	330.5	-28.3	53.9	470.2	609.6	233.0	32.1	1.000107
30000.0	323.5	-29.7	52.4	462.8	607.9	235.1	35.9	1.000105
30500.0	316.6	-31.1	50.9	455.6	606.2			1.000103
31000.0	309.9	-32.5	49.3	448.6	604.4			1.000101
31500.0	303.4	-33.9	47.8	441.6	602.7			1.000099

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 81  
 ASCENSION NO. 201

MANDATORY LEVELS  
 2540160201  
 LC-37

CELESTIC COORDINATES  
 32.40175 LAT DEG  
 106.51232 LON DEG

TABLE 11

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE		REL. HUM. PERCENT	WIN. DATA	
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5015.	20.4	13.4	64.	6.6	2.9
800.0	6731.	18.3	8.7	54.	332.7	4.5
750.0	8537.	15.1	4.2	48.	307.4	7.3
700.0	10441.	10.6	.1	48.	316.7	8.5
650.0	12447.	4.8	-3.0	57.	85.3	1.1
600.0	14573.	.3	-10.8	43.	191.7	5.9
550.0	16842.	-3.6	-15.5	39.	234.4	8.2
500.0	19294.	-7.8	-10.0	80.	243.8	13.3
450.0	21957.	-13.6	-15.5	85.	231.6	16.7
400.0	24871.	-18.4	-27.8	43.	222.8	12.6
350.0	28091.	-25.6	-30.0	66.	231.3	21.0
300.0	31698.	-34.6	-41.9	47.		

SYNOPTIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

SIGNIFICANT LEVEL DATA  
 25400.0593  
 WHITE BANDS

STATION ALTITUDE 3980.00 FEET MSL  
 11 SLP. BT  
 0800 HRS MDT  
 ASCENSION: 110. 593

TABLE 12

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
882.0	18.0	15.6	86.0
864.4	20.1	14.0	88.0
860.0	19.1	12.6	86.0
850.0	20.1	12.6	63.0
755.8	15.9	3.4	43.0
700.0	11.3	.4	47.0
647.0	5.4	-1.7	60.0
617.2	2.6	-7.8	46.0
578.0	-1.6	-9.7	54.0
561.0	-2.5	-24.1	17.0
544.8	-4.0	-10.2	38.0
535.2	-5.5	-10.1	70.0
528.6	-6.0	-13.3	56.0
520.6	-6.2	-23.9	23.0
500.0	-7.6	-10.0	83.0
492.8	-8.5	-9.2	95.0
487.2	-8.1	-9.0	93.0
446.5	-14.4	-10.9	81.0
436.6	-13.6	-16.6	66.0
426.2	-14.4	-22.3	51.0
404.2	-17.0	-36.8	16.0
400.0	-17.5	-36.0	18.0
367.8	-22.6	-34.7	32.0
354.0	-24.3	-29.1	64.0
340.6	-25.4	-34.0	44.0
334.0	-26.6	-36.3	39.0
300.0	-33.5	-41.5	44.0
289.6	-35.7	-43.3	45.0
254.2	-43.4	-49.9	48.0
250.0	-44.1		
243.0	-45.8		
200.0	-53.7		
159.4	-61.7		
150.0	-62.8		
142.8	-63.5		
135.0	-66.4		
113.0	-69.2		
100.0	-69.8		
96.6	-67.5		
90.4	-67.7		

STATION ALTITUDE 3949.00 FEET MSL  
 11 SEP. 51 0800 HRS MDT  
 ASCENSION IS. 393

SIGHT, ANT LEVEL DATA  
 2540020993  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 12 CON'T

PRESSURE	GEOMETRIC	TEMPERATURE	REL. HUM.
MILLIBARS	ALTITUDE	AIR	PERCENT
MSL FEET	FEET	DEGREES	
		CENTIGRADE	
70.0	61952.9	-61.9	
60.2	65051.8	-59.6	
52.6	67860.7	-56.5	
50.0	68923.6	-56.5	
47.8	69863.6	-58.1	
43.8	71693.0	-55.7	

STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 61 0800 HRS MDT  
 ASCENSION. NO. 593

UPPER AIR DATA  
 2540020593  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
3989.0	882.0	18.0	86.0	1047.3	667.3	20.0	1.000313
4000.0	881.7	18.0	85.7	1046.7	667.3	20.3	1.000313
4500.0	860.2	19.9	69.9	1022.5	669.3	25.2	1.000300
5000.0	851.1	20.0	63.3	1004.7	669.2	20.2	1.000269
5500.0	830.1	19.5	60.2	989.1	668.5	20.7	1.000261
6000.0	821.4	18.9	57.2	974.2	667.7	27.0	1.000273
6500.0	800.9	18.2	54.1	959.6	666.8	27.6	1.000257
7000.0	792.7	17.6	51.1	945.1	665.9	4.6	1.000257
7500.0	776.8	17.0	48.1	930.9	665.1	320.6	1.000249
8000.0	765.1	16.3	45.1	916.9	664.2	321.7	1.000242
8500.0	751.5	15.6	43.3	903.3	663.2	322.1	1.000236
9000.0	730.1	14.5	44.2	890.6	661.9	332.9	1.000232
9500.0	724.9	13.4	45.2	878.1	660.7	337.4	1.000228
10000.0	711.9	12.3	46.1	865.7	659.4	336.6	1.000224
10500.0	699.2	11.2	47.2	853.6	658.1	334.1	1.000224
11000.0	686.4	9.8	50.2	842.2	656.5	329.2	1.000217
11500.0	673.9	8.5	53.3	830.9	654.8	330.4	1.000213
12000.0	661.6	7.1	56.3	819.8	653.2	340.0	1.000210
12500.0	649.6	5.7	59.3	808.9	651.6	347.5	1.000207
13000.0	637.6	4.5	55.6	797.7	650.1	357.6	1.000201
13500.0	625.8	3.4	50.1	786.4	648.7	190.4	1.000195
14000.0	614.2	2.3	46.6	775.2	647.2	202.4	1.000189
14500.0	602.6	1.1	48.9	764.0	645.8	210.5	1.000186
15000.0	591.3	-0.1	51.2	753.0	644.3	217.2	1.000184
15500.0	580.2	-1.4	53.5	742.3	642.9	219.9	1.000181
16000.0	569.3	-2.1	55.1	730.6	641.8	221.9	1.000172
16500.0	558.5	-2.7	20.3	718.9	640.9	228.5	1.000165
17000.0	547.8	-3.7	34.0	707.5	639.8	235.1	1.000166
17500.0	537.4	-5.2	62.7	697.2	638.3	240.5	1.000169
18000.0	527.1	-6.0	49.7	686.4	637.2	245.0	1.000163
18500.0	510.9	-6.4	33.6	674.6	636.5	242.2	1.000157
19000.0	500.9	-7.1	62.5	662.7	635.9	237.0	1.000160
19500.0	497.2	-8.0	87.7	651.6	635.1	231.6	1.000161
20000.0	487.5	-8.1	93.1	639.3	634.8	226.9	1.000159
20500.0	478.0	-9.5	90.4	630.2	633.3	223.6	1.000155
21000.0	466.6	-10.9	87.7	621.4	631.5	220.9	1.000151
21500.0	459.5	-12.3	84.9	612.7	629.7	220.6	1.000148
22000.0	450.5	-13.8	82.2	604.1	627.9	221.1	1.000144
22500.0	441.6	-14.0	73.6	592.8	627.6	222.3	1.000141
23000.0	432.8	-13.9	60.6	580.9	627.6	223.7	1.000137



UPPER AIR DATA  
 2540020593  
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 61  
 ASCENSION NO. 393

GEODETIC COORDINATES  
 32.40093 LAT DEG  
 106.57033 LON DEG

TABLE 13 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIR. (TN) DEGREES	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	424.3	-14.6	-23.2	48.0	571.2	626.7	227.1	13.6	1.000133
24000.0	413.8	-15.6	-27.6	34.7	562.1	623.4	230.5	13.7	1.000129
24500.0	407.5	-16.6	-33.5	21.4	553.2	624.1	235.3	13.1	1.000125
25000.0	399.3	-17.6	-35.9	18.3	544.2	622.9	240.7	12.6	1.000123
25500.0	391.2	-18.8	-35.3	15.9	535.8	621.3	242.8	11.9	1.000121
26000.0	383.3	-20.1	-34.9	25.1	527.5	619.8	244.7	11.1	1.000119
26500.0	375.5	-21.3	-34.7	28.5	519.4	618.3	242.5	12.7	1.000118
27000.0	367.9	-22.6	-34.7	31.9	511.3	616.8	240.3	14.6	1.000116
27500.0	360.4	-23.5	-31.2	49.1	502.6	615.7	239.2	18.7	1.000115
28000.0	352.9	-24.4	-27.5	62.5	494.0	614.6	236.6	23.1	1.000113
28500.0	345.7	-25.0	-32.0	51.6	485.0	613.9	238.5	26.3	1.000111
29000.0	338.5	-25.8	-34.7	42.4	476.5	612.8	238.5	29.3	1.000108
29500.0	331.4	-27.1	-36.7	39.4	469.1	611.2	236.8	31.9	1.000106
30000.0	324.4	-28.5	-37.7	40.4	461.8	609.5	234.6	34.5	1.000104
30500.0	317.6	-29.8	-38.7	41.3	454.6	607.8	232.8	36.2	1.000103
31000.0	310.9	-31.2	-39.7	42.3	447.5	606.0	230.9	37.5	1.000101
31500.0	304.3	-32.6	-40.8	43.3	440.6	604.3	230.0	38.4	1.000099
32000.0	297.9	-33.9	-41.9	44.2	433.7	602.6	229.9	39.2	1.000098
32500.0	291.5	-35.3	-43.0	44.8	426.8	600.9	229.9	40.6	1.000096
33000.0	285.1	-36.6	-44.1	45.4	419.9	599.2	230.1	42.8	1.000094
33500.0	278.9	-37.9	-45.2	45.9	412.9	597.5	229.8	45.1	1.000093
34000.0	272.7	-39.2	-46.3	46.4	406.1	595.9	228.5	47.4	1.000091
34500.0	266.8	-40.6	-47.5	46.9	399.5	594.2	227.4	49.7	1.000090
35000.0	260.9	-41.9	-48.6	47.4	392.9	592.5	228.3	49.8	1.000088
35500.0	255.2	-43.2	-49.7	47.9	386.5	590.8	229.2	50.0	1.000087
36000.0	249.5	-44.2	-49.4		379.7	589.4	232.5	47.1	1.000085
36500.0	243.9	-45.6	-49.4		373.4	587.7	236.7	43.9	1.000083
37000.0	238.3	-46.6	-49.4		366.4	586.4	240.2	40.7	1.000082
37500.0	232.9	-47.5	-48.5		359.5	585.2	243.8	37.7	1.000080
38000.0	227.5	-48.5	-48.5		352.8	584.0	244.8	36.3	1.000079
38500.0	222.3	-49.4	-49.4		346.1	582.7	244.7	35.5	1.000077
39000.0	217.2	-50.4	-50.4		339.6	581.5	243.5	36.2	1.000076
39500.0	212.2	-51.3	-51.3		333.2	580.3	242.2	37.1	1.000074
40000.0	207.4	-52.2	-52.2		327.0	579.0	242.6	36.0	1.000073
40500.0	202.6	-53.2	-53.2		320.9	577.8	243.0	34.8	1.000071
41000.0	197.9	-54.1	-54.1		314.7	576.6	242.1	32.7	1.000070
41500.0	193.2	-54.9	-54.9		308.4	575.5	240.7	30.3	1.000069
42000.0	188.6	-55.8	-55.8		302.2	574.4	238.4	29.0	1.000067
42500.0	184.1	-56.6	-56.6		296.2	573.3	235.7	28.3	1.000066
43000.0	179.7	-57.5	-57.5		290.3	572.1	233.3	28.7	1.000065

STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 61  
 ASCENSION NO. 593

UPPER AIR DATA  
 2540020593  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 13 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION (DEGREES (TN))	WIND SPEED (KNOTS)	INDEX OF REFRACTION
43500.0	175.5	-58.3		284.5	571.0	237.0	30.1	1.000063
44000.0	171.3	-59.2		278.9	569.9	230.6	31.4	1.000062
44500.0	167.2	-60.0		273.3	568.8	240.2	32.5	1.000061
45000.0	163.3	-60.9		267.9	567.6	242.1	32.7	1.000060
45500.0	159.4	-61.7		262.6	566.5	245.3	30.9	1.000058
46000.0	155.5	-62.1		256.8	565.9	248.8	29.2	1.000057
46500.0	151.8	-62.6		251.1	565.3	252.7	26.9	1.000056
47000.0	148.1	-63.0		245.4	564.8	257.3	24.6	1.000055
47500.0	144.5	-63.3		239.9	564.3	257.7	22.5	1.000053
48000.0	140.9	-64.2		234.9	563.2	255.5	20.5	1.000052
48500.0	137.5	-65.5		230.6	561.4	251.6	18.8	1.000051
49000.0	134.1	-66.5		226.0	560.0	245.2	17.4	1.000050
49500.0	130.7	-66.9		220.8	559.5	237.9	16.3	1.000049
50000.0	127.5	-67.3		215.8	558.9	230.4	15.6	1.000048
50500.0	124.3	-67.7		210.8	558.4	222.3	15.2	1.000047
51000.0	121.2	-68.1		205.9	557.9	217.1	15.4	1.000046
51500.0	118.2	-68.5		201.2	557.3	212.2	15.7	1.000045
52000.0	115.3	-68.9		196.6	556.8	208.2	16.1	1.000044
52500.0	112.4	-69.2		192.0	556.3	204.7	16.5	1.000043
53000.0	109.6	-69.4		187.3	556.2	203.6	16.6	1.000042
53500.0	106.8	-69.5		182.7	556.0	209.1	15.5	1.000041
54000.0	104.1	-69.6		178.2	555.8	213.3	14.6	1.000040
54500.0	101.5	-69.7		173.9	555.6	214.1	9.1	1.000039
55000.0	99.0	-69.1		169.0	556.5	203.6	3.1	1.000038
55500.0	96.5	-67.5		163.5	558.7	99.6	1.9	1.000036
56000.0	94.1	-67.6		159.5	558.6	89.1	4.3	1.000036
56500.0	91.8	-67.7		155.6	558.5	67.9	6.2	1.000035
57000.0	89.5	-67.5		151.6	558.7	104.6	4.7	1.000034
57500.0	87.3	-66.9		147.5	559.5	131.8	3.9	1.000033
58000.0	85.2	-66.3		143.5	560.2	114.1	4.9	1.000032
58500.0	83.1	-65.8		139.6	561.0	95.3	7.1	1.000031
59000.0	81.1	-65.2		135.8	561.4	65.5	9.4	1.000030
59500.0	79.1	-64.7		132.1	562.5	78.5	11.2	1.000029
60000.0	77.1	-64.1		128.5	563.3	73.7	13.1	1.000029
60500.0	75.2	-63.5		125.0	564.0	79.2	14.5	1.000028
61000.0	73.4	-63.0		121.6	564.8	63.7	16.0	1.000027
61500.0	71.6	-62.4		118.3	565.5	89.5	17.0	1.000026
62000.0	69.8	-61.9		115.2	566.3	96.8	17.7	1.000026
62500.0	68.2	-61.5		112.2	566.8	103.4	18.7	1.000025
63000.0	66.5	-61.1		109.3	567.3	105.5	18.2	1.000024

STATION ALTITUDE 3983.00 FEET MSL  
 11 SLP. & I  
 ASCENSION NO. 593

UPPER AIR DATA  
 2540020593  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 13 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIR (DEGREES (TN))	WIND SPEED (KNOTS)	INDEX OF REFRACTION
6350.0	64.9	-60.8		106.4	567.8	107.3	17.6	1.000024
6400.0	63.4	-60.4		103.7	568.3	109.0	16.6	1.000023
6450.0	61.8	-60.0		101.1	568.8	110.1	14.6	1.000023
6500.0	60.4	-59.6		98.5	569.3	111.7	12.7	1.000022
6550.0	58.9	-59.1		95.9	570.0	112.1	11.5	1.000021
6600.0	57.5	-58.6		93.4	570.7	111.5	10.9	1.000021
6650.0	56.2	-58.0		90.9	571.4	110.7	10.3	1.000020
6700.0	54.8	-57.4		88.5	572.2	109.7	11.0	1.000020
6750.0	53.5	-56.9		86.2	572.9	109.6	12.1	1.000019
6800.0	52.3	-56.5		84.0	573.4	96.3	13.4	1.000019
6850.0	51.0	-56.5		82.0	573.4	92.6	13.8	1.000018
6900.0	49.8	-56.6		80.2	573.3	89.1	14.3	1.000018
6950.0	48.6	-57.5		78.6	572.1			1.000017
7000.0	47.5	-57.9		76.9	571.5			1.000017
7050.0	46.4	-57.3		74.8	572.4			1.000017
7100.0	45.3	-56.6		72.8	573.3			1.000016
7150.0	44.2	-56.0		70.9	574.1			1.000016

STATION ALTITUDE 3989.00 FEET MSL  
 11 SEP. 61  
 ASCENSION NO. 593

MANDATORY LEVELS  
 2540020593  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

TABLE 14

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		AIR DEGREES CENTIGRADE	DEWPOINT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5032.	20.1	12.8	63.	26.3	5.0
800.0	6744.	17.9	8.1	53.	20.5	5.1
750.0	8551.	15.4	3.1	43.	323.4	7.0
700.0	10457.	11.3	.4	47.	334.4	7.6
650.0	12470.	5.7	-1.0	59.	347.1	1.1
600.0	14601.	.8	-8.6	49.	212.2	5.2
550.0	16875.	-3.5	-18.1	31.	233.8	7.8
500.0	19327.	-7.6	-10.0	83.	233.5	15.0
450.0	21994.	-13.8	-16.2	82.	221.1	13.4
400.0	24917.	-17.5	-36.0	18.	240.1	12.6
350.0	28149.	-24.6	-30.5	58.	238.5	24.4
300.0	31772.	-33.5	-41.5	44.	229.9	36.9
250.0	35676.	-44.1			232.0	47.5
200.0	40679.	-53.7			242.8	33.8
175.0	43465.	-58.4			237.2	30.3
150.0	46609.	-62.8			254.6	25.9
125.0	50250.	-67.6			224.4	15.2
100.0	54628.	-69.8			211.1	5.8
80.0	59047.	-64.9			82.2	10.1
70.0	61739.	-61.9			95.7	17.6
60.0	64885.	-59.5			112.0	12.4
50.0	68662.	-56.5			89.8	14.2

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

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 61 0904 HRS MDI  
 ASCENSION NO. 202

STATION ALTITUDE 4051.37 FEET MSL  
 25401.0202  
 LC-37

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 61 0904 HRS MDI  
 ASCENSION NO. 202

STATION ALTITUDE 4051.37 FEET MSL  
 25401.0202  
 LC-37

STATION ALTITUDE 4051.37 FEET MSL  
 25401.0202  
 LC-37

TABLE 15

GEOMETRIC ALTITUDE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
800.7	4051.4	19.5	14.5	73.0
850.0	5059.5	21.0	12.4	58.0
792.8	7030.9	17.5	8.9	57.0
773.2	7733.5	16.8	4.6	45.0
754.0	8437.1	16.3	2.0	38.0
734.8	9155.8	14.5	1.1	40.0
700.0	10495.0	11.0	-1.4	42.0
614.0	14031.3	1.6	-4.3	65.0
605.2	14413.6	.8	-7.7	53.0
596.2	14808.9	-.2	-7.0	60.0
558.4	16523.4	-3.2	-25.4	16.0
544.6	17172.5	-4.7	-24.2	20.0
528.0	17970.6	-6.6	-18.2	39.0
519.8	18373.1	-6.3	-18.2	45.0
511.6	18781.5	-7.5	-12.9	65.0
500.0	19369.1	-7.9	-9.1	91.0
453.8	21829.6	-12.5	-18.6	71.0
445.8	22276.7	-12.7	-19.0	59.0
423.0	23590.9	-14.4	-32.9	19.0
400.0	24977.0	-17.5	-39.2	13.0
386.6	25812.9	-19.8	-39.7	15.0
365.2	27194.6	-23.2	-30.6	28.0
351.4	28120.1	-24.8	-29.8	63.0
331.2	29530.6	-27.5	-35.5	46.0
317.8	30505.0	-29.6	-36.3	52.0
311.4	30981.5	-31.1	-35.0	68.0
300.0	31847.8	-33.6	-39.8	53.0

STATION ALTITUDE 4051.37 FEET MSL  
 11 SLP. CL 0904 HRS MDI  
 ASCENSION NO. 202

UPPER AIR DATA  
 234013020  
 LC-37

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEMPONT CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SOUND KNOTS	WIND DIR. DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	880.7	19.5	14.5	73.0	1040.4	668.4	.0	1.000305	
4500.0	860.9	20.2	13.7	66.3	1022.6	669.5	.9	1.000297	
5000.0	851.8	20.9	12.6	58.9	1002.5	670.2	1.9	1.000267	
5500.0	830.9	20.2	11.6	57.8	987.6	669.3	2.9	1.000260	
6000.0	822.2	19.3	10.7	57.5	973.5	668.2	3.5	1.000274	
6500.0	807.8	18.4	9.8	57.3	959.6	667.1	2.8	1.000268	
7000.0	793.7	17.6	9.0	57.0	945.9	666.1	2.5	1.000262	
7500.0	779.7	17.0	6.2	49.0	931.7	665.2	3.2	1.000250	
8000.0	765.9	16.6	3.8	42.3	917.1	664.5	4.2	1.000241	
8500.0	752.3	16.1	1.9	38.2	902.7	663.8	5.2	1.000233	
9000.0	736.9	14.9	1.3	39.6	890.6	662.3	6.0	1.000229	
9500.0	723.7	13.6	.4	40.5	878.7	661.8	6.7	1.000225	
10000.0	712.7	12.3	-.5	41.3	867.0	661.2	6.7	1.000221	
10500.0	699.9	11.0	-1.4	42.0	855.5	660.7	5.9	1.000217	
11000.0	687.0	9.7	-1.6	45.3	843.7	660.1	4.4	1.000214	
11500.0	674.4	8.3	-1.9	48.5	832.2	659.6	2.4	1.000211	
12000.0	662.0	7.0	-2.2	51.8	820.8	659.0	.1	1.000208	
12500.0	649.9	5.7	-2.6	55.0	809.6	658.5	2.5	1.000205	
13000.0	637.9	4.3	-3.1	58.3	798.6	649.9	5.1	1.000202	
13500.0	626.2	3.0	-3.6	61.5	787.7	648.3	5.3	1.000199	
14000.0	614.7	1.7	-4.2	64.8	777.0	646.7	5.2	1.000196	
14500.0	602.2	.6	-7.5	54.5	766.0	645.3	3.8	1.000188	
15000.0	591.9	-.5	-8.4	55.1	754.8	643.9	4.0	1.000185	
15500.0	583.7	-1.4	-12.6	42.3	743.3	642.7	3.9	1.000178	
16000.0	569.7	-2.3	-17.7	29.4	731.9	641.5	3.9	1.000171	
16500.0	556.9	-3.2	-24.9	16.6	720.8	640.3	4.0	1.000165	
17000.0	543.2	-4.3	-24.4	18.9	710.0	639.0	5.5	1.000163	
17500.0	537.7	-5.5	-21.1	27.8	699.3	637.6	7.3	1.000162	
18000.0	527.4	-6.6	-18.1	39.4	688.5	636.4	9.2	1.000161	
18500.0	517.2	-6.7	-15.0	51.2	675.2	635.4	11.0	1.000161	
19000.0	507.3	-7.6	-11.3	74.7	664.3	635.4	12.6	1.000162	
19500.0	497.4	-8.1	-8.5	89.9	652.4	634.9	13.8	1.000161	
20000.0	487.7	-9.1	-11.0	85.9	642.1	633.7	14.5	1.000157	
20500.0	478.2	-10.0	-12.5	81.8	631.9	632.5	14.9	1.000154	
21000.0	468.9	-10.9	-14.1	77.7	621.4	631.4	15.0	1.000150	
21500.0	459.7	-11.9	-15.6	73.7	612.1	630.2	14.4	1.000146	
22000.0	450.7	-12.6	-17.5	66.4	601.8	629.3	12.9	1.000143	
22500.0	441.8	-13.0	-20.7	52.2	591.0	628.7	11.7	1.000138	
23000.0	433.1	-13.6	-25.2	37.0	581.0	627.8	10.9	1.000134	
23500.0	424.5	-14.3	-31.4	21.8	571.1	626.9	10.9	1.000130	

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP. 61 09 04 HRS MDT  
 ASCENSION: 10. 02

UPFLR AIR DATA  
 25401.0202  
 LC-37

GEOMETRIC ALTITUDE  
 ALTITUDE  
 MSL FEET

REL. HUM. PERCENT  
 TEMPERATURE AIR DEGREES  
 DEWPOINT CENTIGRADE

DENSITY GM/CUBIC METER  
 SPEED KNOTS  
 SOUND KNOTS

TABLE 16 CON'T

GEOMETRIC ALTITUDE MSL FEET	REL. HUM. PERCENT	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	DENSITY GM/CUBIC METER	SPEED KNOTS	SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
2400.0	17.2	-15.3	-34.6	562.0	025.0	025.0	239.8	11.1	1.000127
2450.0	15.1	-16.4	-36.9	553.2	024.3	024.3	240.9	11.6	1.000125
2500.0	13.1	-17.6	-39.2	544.6	022.9	022.9	241.5	12.0	1.000122
2550.0	14.3	-18.9	-39.5	536.5	021.2	021.2	240.6	12.0	1.000121
2600.0	16.8	-20.3	-39.0	528.4	019.6	019.6	239.8	12.3	1.000119
2650.0	21.5	-21.5	-37.7	520.1	018.1	018.1	239.2	13.2	1.000117
2700.0	26.2	-22.7	-36.8	512.0	016.0	016.0	238.3	14.8	1.000116
2750.0	39.5	-23.7	-33.6	503.4	015.4	015.4	236.9	18.1	1.000114
2800.0	58.5	-24.6	-30.4	494.7	014.4	014.4	235.1	19.6	1.000113
2850.0	58.4	-25.5	-31.3	486.3	013.2	013.2	228.9	15.4	1.000111
2900.0	52.4	-26.5	-33.3	478.1	012.0	012.0	208.7	9.7	1.000109
2950.0	46.4	-27.4	-35.4	470.0	010.8	010.8	119.6	11.1	1.000107
3000.0	48.9	-28.5	-35.9	462.2	009.4	009.4	100.5	19.1	1.000105
3050.0	52.0	-29.6	-36.3	454.5	008.1	008.1	101.9	17.1	1.000103
3100.0	67.7	-31.2	-35.1	447.8	006.1	006.1			1.000102
3150.0	59.0	-32.6	-37.8	440.9	004.3	004.3			1.000100

STATION ALTITUDE 4051.37 FEET MSL  
 11 SEP 61  
 ASCENSION NO. 202

MANDATORY LEVELS  
 2540100202  
 LC-37

...ODL TIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LONG DEG

TABLE 17

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DIR DIRECTION DEGREES (TN)	SPEED KNOTS
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE			
850.0	5056.	21.0	12.4	58.	32.4	2.0
800.0	6771.	18.0	9.4	57.	25.9	2.4
750.0	8578.	15.9	1.0	38.	324.2	5.3
700.0	10485.	11.0	-1.4	42.	328.3	8.0
650.0	12495.	5.7	-2.0	55.	136.3	2.5
600.0	14624.	.2	-7.3	57.	195.6	3.8
550.0	16895.	-4.1	-24.6	18.	231.0	5.1
500.0	19342.	-7.9	-9.1	91.	238.5	13.6
450.0	22007.	-12.6	-17.7	65.	214.7	12.8
400.0	24935.	-17.5	-30.2	13.	241.5	12.0
350.0	28164.	-25.0	-30.1	62.	232.9	17.9
300.0	31783.	-33.6	-39.6	53.		



END

DATE  
FILMED

11-81

DTIC