AD-A123 330 19319A MLRS MISSILE NUMBERS RC-003 BN-117 RD-058 RC-002 1/1
RC-001 RD-026 ROU..(U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER OCT 82
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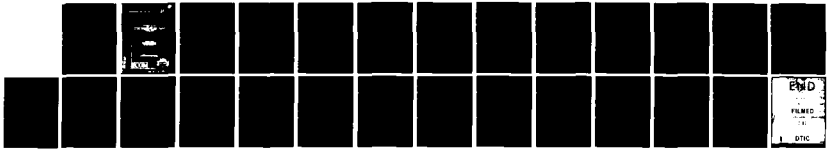

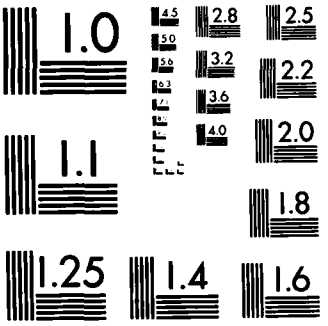

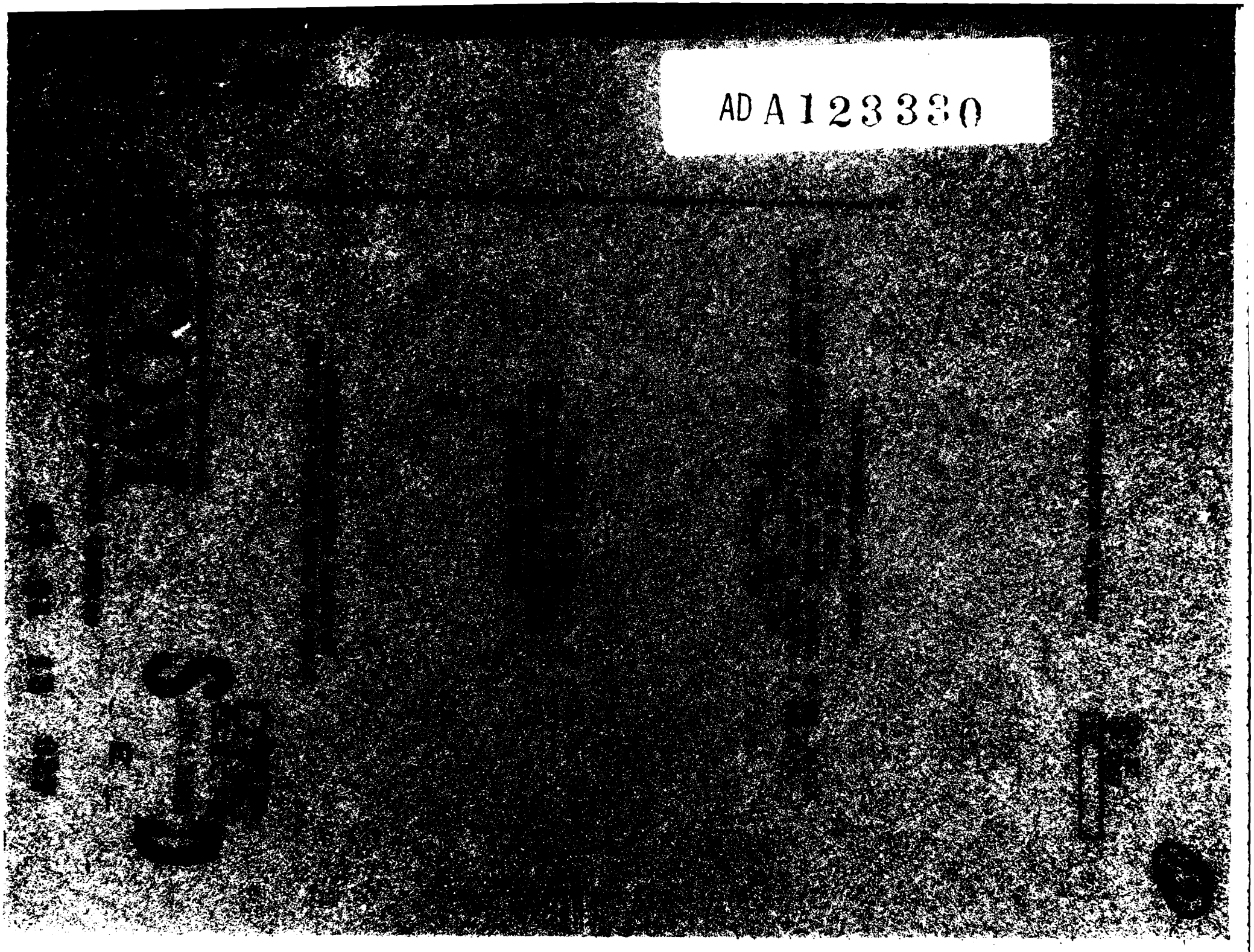

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REPORT DOCUMENTATION PAGE

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1. REPORT NUMBER: DR 1269	2. GOVT ACCESSION NO.: AD-A123330
3. RECIPIENT'S CATALOG NUMBER:	
4. TITLE *(and Subtitle)*: 19319A MLRS Missile Numbers RC-003, BN-117, RD-058, RC-002, RC-001, RD-026, Round Numbers V-351/DL-1, V-352/DL-2 V-353/DL-3, V-354/DL-4, V-355/DL-5, V-356/DL-06	5. TYPE OF REPORT & PERIOD COVERED:
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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 19319A MLRS, Missile Numbers RC-003, BN-117, RD-058, RC-002, RC-001, RD-026, Round Numbers V-351/DL-1 V-352/DL-2, V-353/DL-3, V-354/DL-4, V-355/DL-5, V-356/DL-06 are presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

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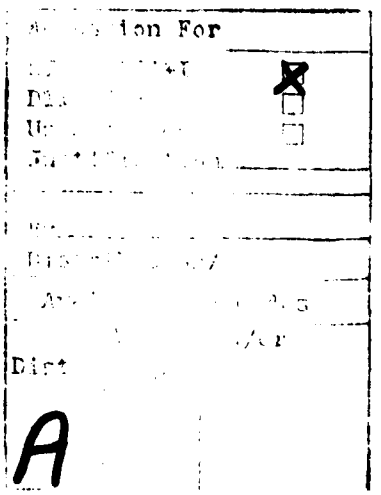
CONTENTS PAGE



INTRODUCTION

[0319A MLRS, Missile Numbers RC-003, RC-117, RD-058, RC-002, RC-001 and RD-026, Round Numbers V-351/DL-1, V-352/DL-2, V-353/DL-3, V-354/DL-4, V-355/DL-5 and V-356/DL-06, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0838:17, 0838:21, 0838:26, 0838:30, 0838:35 and 0838:40 MDT, 29 Oct 82. The scheduled launch times were 0830 MDT. (6 T's with 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 (^{o}C), relative humidity, dew point (^{o}C), density (gm/m^{3}), wind direction and speed, and cloud 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

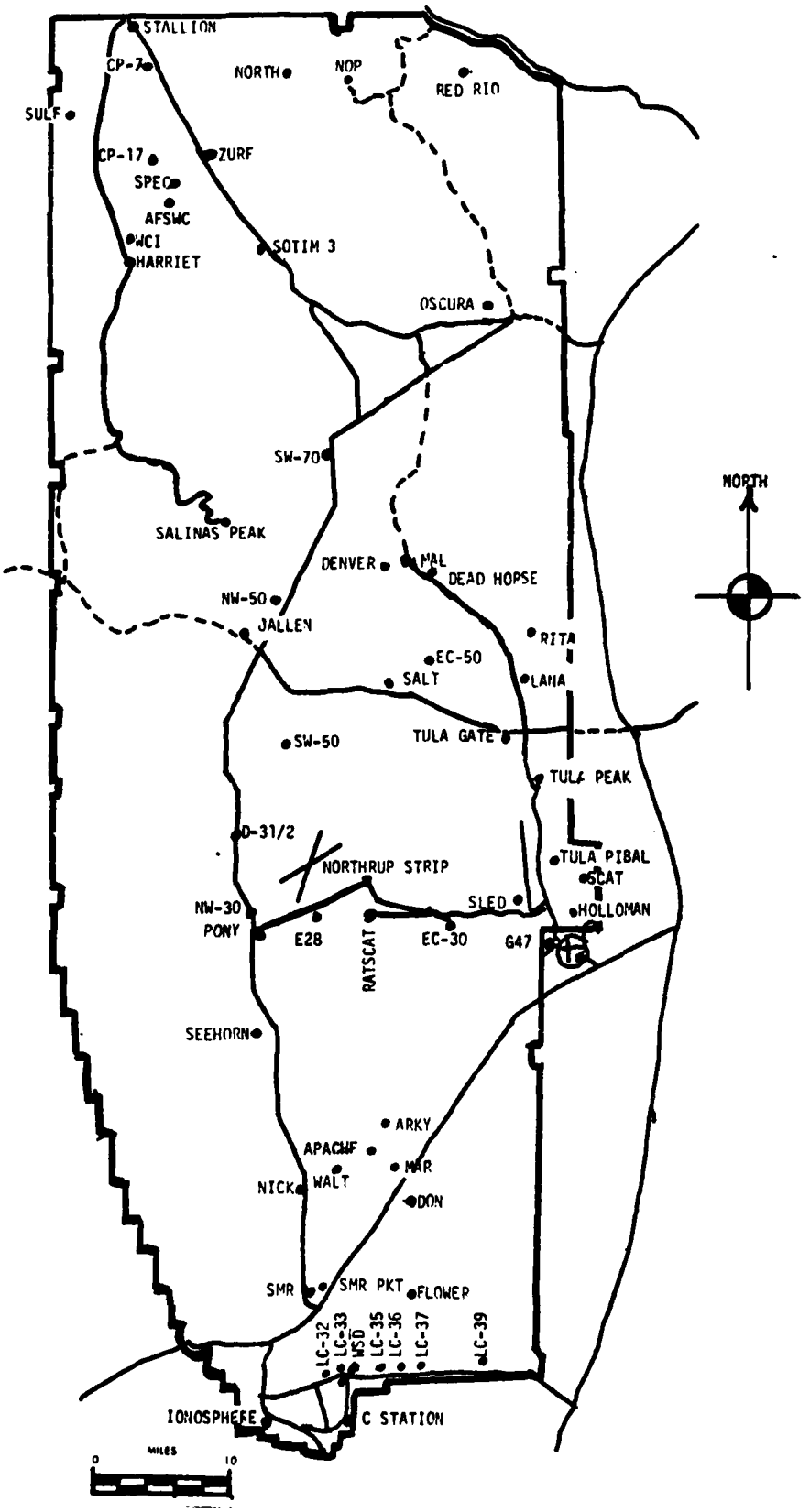
(1) Low level wind data were obtained from pilot-balloon observations at:

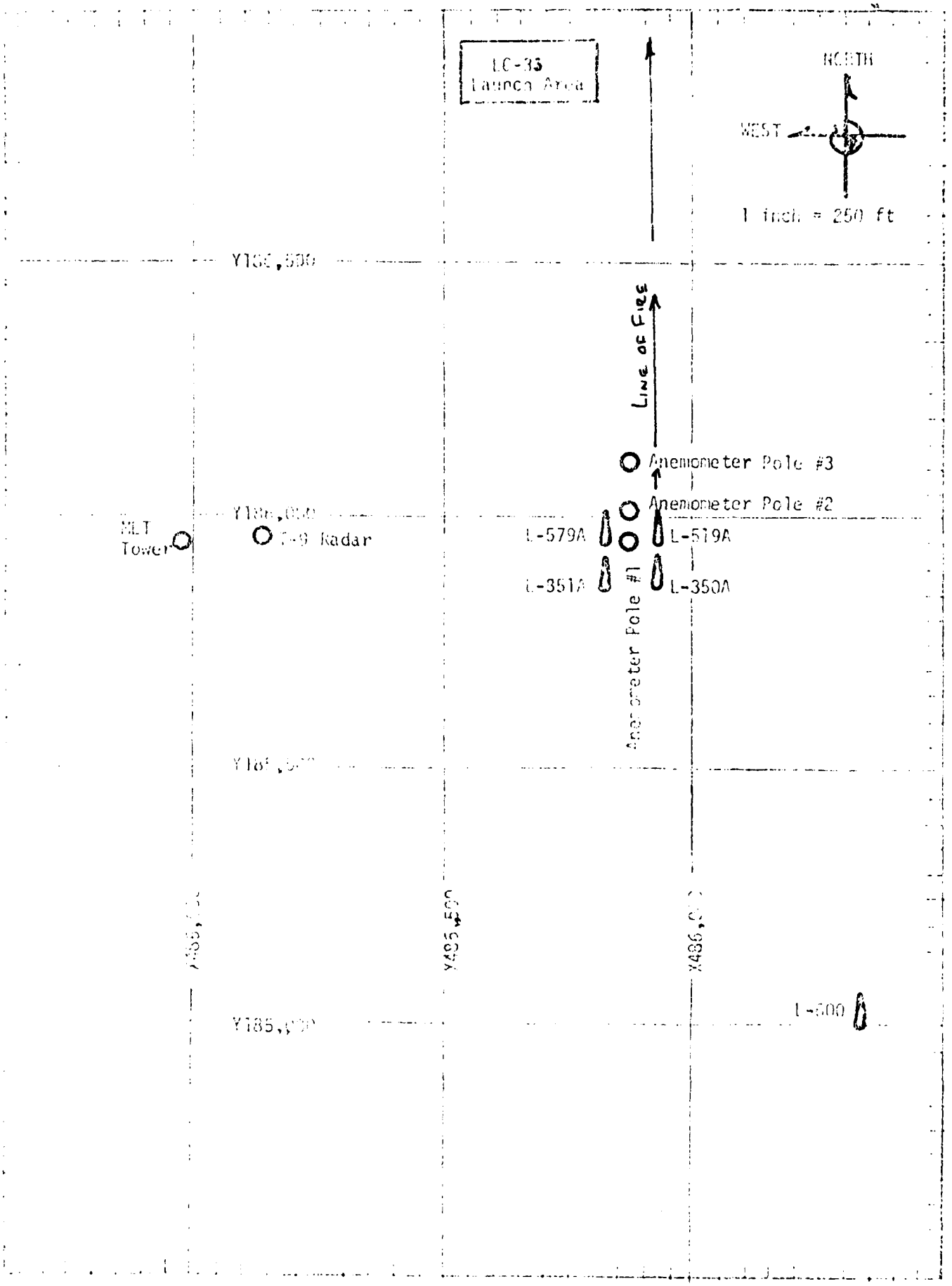
SITE AND ALTITUDE
WSD 2km
DOW 2km

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

SITE AND TIME	
WSD	0630 MDT
LC-37	0730 MDT
WSD	0830 MDT

WSMR METEOROLOGICAL SITES




LC-33
Launch Area
NORTH
WEST
1 inch = 250 ft
Y186,500
Line of Fire
Anemometer Pole #3
Anemometer Pole #2
MLT
Tower
Y186,000
C-9 Radar
L-579A
L-519A
L-351A
L-350A
Anemometer Pole #1
Y185,500
X435,500
X436,000
L-500

PROJECT SURFACE OBSERVATION

TABLE 1

STATION LC-33 E & A

DATE 29 (DAY) Oct (MONTH) 82 (YEAR)

X= 484,982.64 Y= 35,957.73 H= 3995.00

TIME M D T	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
0838	882.9		4.0		-9.9	35	1109	135	01		50

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
	1	AC	12,000	3	CI	22,000				

PSYCHROMETRIC COMPUTATION

TIME: MDT	0838		
DRY BULB TEMP.	4.0		
WET BULB TEMP.	-1.0		
WET BULB DEPR.	5.0		
DEW POINT	-9.9		
RELATIVE HUMID.	35		

TABLE 2 , LC-33 FIXED POLE ANEMOMETER MEASUREMENTS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y185,912.30 H4033.57 53.9 ft. AGL			POLE #3 X485,827.69 Y185,912.30 H4035.90 55.6 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		CALM	T-30		CALM	T-30		CALM
T-20		CALM	T-20		CALM	T-20		CALM
T-10		CALM	T-10		CALM	T-10		CALM
T0.0		CALM	T0.0		CALM	T0.0	030	CALM
T+10	047	CALM	T+10		CALM	T+10	032	CALM

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, 52 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	144	01	T-30		CALM
T-20	144	01	T-20		CALM
T-10	144	01	T-10		CALM
T0.0	135	01	T0.0		CALM
T+10	133	01	T+10		CALM

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		CALM	T-30	021	04
T-20		CALM	T-20	021	04
T-10		CALM	T-10	021	04
T0.0		CALM	T0.0	021	04
T+10		CALM	T+10	021	03

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 29 Oct 82

SITE: WSD
TIME: 0838 MDT
WSTM COORDINATES:
X= 488,852.29
Y= 184,982.45
H= 3,993.75

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		CALM
150	006	06
210	010	11
270	017	07
330	010	03
390	043	04
500	045	01
650	046	01
800	199	04
950	237	09
1150	233	12
1350	230	13
1550	244	12
1750	248	14
2000	243	15

Data obtained from a NIKE-HERCULES Radar Tracked pilot-balloon observation.

SITE: WSD
TIME 0838 MDT
WSTM COORDINATES:
X= 511,988.37
Y= 247,396.36
H= 3,996.83

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	320	01
150	356	06
210	360	06
270	007	04
330	025	03
390	037	02
500	069	01
650	192	07
800	201	09
950	246	09
1150	248	12
1350	245	11
1550	237	11
1750	252	10
2000	267	11

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

AIMING AND T-TIME COMPUTER MET MESSAGES

29 Oct 82

WSD 0630 MDT

METCM1324064

291250122881

00000000	27100881
01621007	27700871
02048003	28240845
03287003	28140805
04420009	27960757
05451013	27710712
06473016	27630670
07503014	27460629
08497017	27120591
09448005	26850555
10583010	26560521
11545016	26160488

LC-37 0730 MDT

METCM1324063

291350124880

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01617007	27950869
02040003	28310843
03362004	28260803
04408010	28040756
05438013	27760711
06468015	27650669
07491012	27500629
08492015	27190591
09411006	26960555
10515010	26730521
11520015	26420488
12524022	25680443

WSD 0830 MDT

METCM1324064

291460122832

00000000	27410832
01002007	27750872
02037004	28170845
03409003	28130805
04421013	28050758
05441014	27730713
06452015	27620671
07472013	27460630
08511013	27150592
09437012	26970556
10499007	26670522
11529017	26260489
12532024	25600443

STATION ALTITUDE 3989.00 FEET MSL
29 OCT. 82 0630 MDT
ASCENSION NO. 525

SIGNIFICANT LEVEL DATA
82002052S
WHITE SANDS
TABLE 6

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
881.4	3989.0	-2.6	-10.8	53.0
868.0	4394.0	5.4	-10.8	30.0
859.3	4665.7	8.4	-10.5	25.0
850.0	4961.1	9.1	-11.5	22.0
831.9	5546.0	8.9	-11.6	22.0
820.4	5923.6	8.2	-12.8	21.0
796.7	6717.5	7.9	-13.6	20.0
751.3	8299.9	5.0	-15.9	19.0
701.0	10190.4	2.9	-19.0	18.0
664.3	11582.3	3.1	-18.9	18.0
637.9	12660.0	2.1	-18.5	20.0
600.5	14251.9	-1.5	-19.9	23.0
589.2	14747.9	-2.8	-21.5	22.0
579.6	15175.9	-2.6	-23.0	19.0
539.3	17041.6	-6.3	-27.9	16.0
517.9	18079.7	-7.8	-29.2	16.0
500.0	18975.4	-9.9	-30.3	17.0
444.8	21895.1	-18.4	-35.7	20.0

STATION ALTITUDE 3989.00 FEET MSL
29 OCT. 82 0630 MDT
ASCENSION NO. 525

UPPER AIR DATA
3020020525
WHITE SANDS
TABLE 7

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	881.4	-2.6	-10.8	53.0	1133.6	641.2	.0	.0	1.000266
4000.0	881.0	-2.4	-10.8	52.4	1132.2	641.4	142.5	.0	1.000266
4500.0	864.6	6.6	-10.6	28.0	1075.5	652.0	142.5	.6	1.000253
5000.0	848.8	9.1	-11.5	22.0	1046.5	654.9	142.5	1.2	1.000245
5500.0	833.3	8.9	-11.6	22.0	1028.0	654.7	142.5	1.9	1.000241
6000.0	818.1	8.2	-12.9	20.9	1012.0	653.8	142.5	2.5	1.000236
6500.0	803.1	8.0	-13.4	20.3	994.2	653.5	137.3	3.3	1.000232
7000.0	788.4	7.5	-14.0	19.8	977.5	653.0	125.4	4.9	1.000228
7500.0	773.9	6.9	-14.8	19.5	961.8	652.3	119.4	6.6	1.000224
8000.0	759.7	6.3	-15.5	19.2	946.3	651.5	71.6	4.5	1.000220
8500.0	745.7	5.6	-16.2	18.9	931.2	650.7	13.7	7.8	1.000216
9000.0	731.9	4.8	-17.1	18.6	916.6	649.8	345.0	10.9	1.000212
9500.0	718.3	4.0	-17.9	18.4	902.2	648.8	291.9	14.2	1.000208
10000.0	705.0	3.2	-18.7	18.1	888.1	647.9	270.1	23.5	1.000205
10500.0	691.9	2.9	-19.0	18.0	872.4	647.6	255.9	27.0	1.000201
11000.0	679.0	3.0	-18.9	18.0	855.9	647.7	243.5	30.3	1.000197
11500.0	666.4	3.1	-18.9	18.0	839.7	647.7	237.6	30.6	1.000194
12000.0	653.9	2.7	-18.7	18.8	825.2	647.3	239.8	23.8	1.000191
12500.0	641.8	2.2	-18.5	19.7	811.1	646.8	243.9	16.9	1.000188
13000.0	629.7	1.3	-18.7	20.6	798.6	645.7	250.7	14.6	1.000185
13500.0	617.9	.2	-19.2	21.6	786.8	644.4	257.7	14.5	1.000182
14000.0	606.3	-.9	-19.6	22.5	775.2	643.0	264.8	14.7	1.000179
14500.0	594.8	-2.2	-20.7	22.5	764.1	641.6	272.4	13.7	1.000176
15000.0	583.5	-2.7	-22.3	20.2	751.1	640.9	281.4	12.6	1.000173
15500.0	572.4	-3.2	-23.8	18.5	738.3	640.2	291.8	12.0	1.000169
16000.0	561.4	-4.2	-25.1	17.7	726.9	639.0	302.1	10.2	1.000166
16500.0	550.7	-5.2	-26.5	16.9	715.7	637.8	310.2	8.9	1.000163
17000.0	540.2	-6.2	-27.8	16.1	704.7	636.6	320.4	8.6	1.000160
17500.0	529.7	-7.0	-28.5	16.0	693.0	635.7	321.9	9.6	1.000157
18000.0	519.5	-7.7	-29.1	16.0	681.5	634.9	318.2	10.6	1.000155
18500.0	509.4	-8.8	-29.7	16.5	671.0	633.5	313.6	12.0	1.000152
19000.0	499.5	-10.0	-30.3	17.0	660.9	632.1	309.1	13.9	1.000150
19500.0	489.6	-11.4	-31.2	17.5	651.5	630.4	305.7	15.8	1.000148
20000.0	479.9	-12.9	-32.1	18.1	642.1	628.6			1.000145
20500.0	470.4	-14.3	-33.1	18.6	632.9	626.8			1.000143
21000.0	461.0	-15.8	-34.0	19.1	623.9	625.1			1.000141
21500.0	451.9	-17.2	-35.0	19.6	615.0	623.3			1.000139

STATION ALTITUDE 3989.00 FEET MSL
29 OCT. 62 0630 MDT
ASCENSION NO. 525

RAWINSONDE OBSERVATORY LEVELS
30200205
WHITE SANDS
TABLE 3

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	4957.	9.1	-11.5	22.	142.5	1.2
800.0	6600.	7.9	-13.5	20.	134.0	3.6
750.0	8339.	5.8	-16.0	19.	24.9	6.2
700.0	10180.	2.8	-19.0	18.	265.1	25.7
650.0	12148.	2.0	-18.0	19.	240.8	21.6
600.0	14257.	-1.6	-20.0	23.	268.6	14.2
550.0	16514.	-5.3	-26.6	17.	317.0	8.8
500.0	18949.	-9.9	-30.3	17.	309.4	13.8
450.0	21576.	-17.6	-35.2	20.		

STATION ALTITUDE 4051.37 FEET MSL
29 OCT. 82 0730 MDT
ASCENSION NO. 110

SIGNIFICANT LEVEL DATA
3020160110
LC-37
TABLE 9

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
879.7	4051.4	-2.6	-8.1	66.0
874.6	4205.0	5.0	-10.7	31.0
868.1	4656.5	9.5	-9.5	25.0
858.0	4978.1	9.7	-9.3	25.0
804.6	6472.6	9.3	-10.7	25.0
738.4	8795.1	6.0	-13.0	24.0
700.0	10224.4	3.3	-15.3	24.0
684.2	10831.9	2.8	-16.2	23.0
675.4	11176.3	3.3	-16.3	22.0
666.8	11517.4	3.0	-16.6	22.0
658.0	11871.2	3.4	-16.3	22.0
649.4	12221.2	2.6	-16.4	23.0
632.6	12917.3	2.3	-16.2	24.0
615.8	13629.1	.2	-14.9	31.0
604.4	14120.6	-.7	-16.5	29.0
588.1	14836.6	-2.1	-18.5	27.0
575.5	15402.5	-1.9	-19.7	24.0
544.2	16856.2	-4.9	-23.3	22.0
536.5	17224.6	-4.9	-23.3	22.0
521.5	17956.3	-5.9	-24.1	22.0
500.0	19037.6	-7.4	-25.4	22.0
405.5	24247.0	-22.9	-37.0	26.0
400.0	24575.9	-23.7	-37.3	27.0

STATION ALTITUDE 4051.37 FEET MSL
29 OCT. 82 0730 MDT
ASCENSION NO. 110

UPPER AIR DATA
3020180110
LC-37
TABLE 10

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.4	879.7	-2.6	-8.1	66.0	1131.1	641.3	.0	.0	1.000269
4500.0	865.1	7.9	-9.8	27.1	1070.0	653.6	212.9	.7	1.000252
5000.0	849.3	9.7	-9.4	25.0	1044.7	655.6	212.9	1.5	1.000247
5500.0	833.9	9.6	-9.8	24.3	1026.2	655.5	212.9	2.3	1.000242
6000.0	818.7	9.4	-10.3	23.6	1008.0	655.3	212.9	3.1	1.000238
6500.0	803.8	9.3	-10.8	23.0	990.3	655.1	212.9	3.9	1.000233
7000.0	789.1	8.6	-11.2	23.2	974.0	654.3	220.5	5.6	1.000229
7500.0	774.6	7.8	-11.7	23.4	959.2	653.4	225.9	7.7	1.000226
8000.0	760.4	7.1	-12.2	23.7	944.0	652.6	229.1	9.7	1.000222
8500.0	746.5	6.4	-12.7	23.9	929.1	651.8	230.2	10.7	1.000218
9000.0	732.8	5.6	-13.3	24.0	914.7	650.8	242.0	11.7	1.000214
9500.0	719.2	4.7	-14.1	24.0	900.9	649.7	246.8	12.6	1.000211
10000.0	705.9	3.7	-14.9	24.0	887.3	648.6	251.3	13.1	1.000207
10500.0	692.8	3.1	-15.7	23.5	872.9	647.8	255.4	13.7	1.000203
11000.0	679.9	3.0	-16.3	22.5	856.7	647.8	259.1	14.1	1.000199
11500.0	667.2	3.0	-16.6	22.0	840.9	647.7	262.5	13.9	1.000196
12000.0	654.8	3.1	-16.3	22.4	824.9	647.8	266.0	13.7	1.000192
12500.0	642.6	2.5	-16.3	23.4	811.4	647.1	268.0	13.6	1.000189
13000.0	630.6	2.1	-16.0	24.8	797.4	646.6	266.9	13.6	1.000186
13500.0	618.8	.6	-15.1	29.7	786.6	644.9	265.8	13.6	1.000185
14000.0	607.2	-.5	-16.1	29.5	774.9	643.6	265.4	13.2	1.000181
14500.0	595.7	-1.4	-17.6	27.9	763.0	642.5	265.7	12.4	1.000178
15000.0	584.4	-2.0	-18.9	26.1	750.3	641.7	266.1	11.6	1.000174
15500.0	573.3	-2.1	-20.0	23.9	736.3	641.6	268.1	10.5	1.000170
16000.0	562.4	-3.1	-21.2	23.2	725.1	640.4	275.1	8.7	1.000167
16500.0	551.7	-4.2	-22.4	22.5	714.0	639.2	285.5	7.1	1.000164
17000.0	541.2	-4.9	-23.3	22.0	702.4	638.3	292.4	7.1	1.000161
17500.0	530.8	-5.3	-23.6	22.0	689.9	637.8	293.3	8.2	1.000158
18000.0	520.6	-6.0	-24.2	22.0	678.4	637.0	294.0	9.3	1.000156
18500.0	510.6	-6.7	-24.8	22.0	667.0	636.2	293.9	10.7	1.000153
19000.0	500.7	-7.3	-25.4	22.0	655.9	635.3	292.3	12.8	1.000150
19500.0	490.8	-8.8	-26.4	22.4	646.4	635.0	291.1	14.9	1.000148
20000.0	481.0	-10.3	-27.5	22.7	637.1	634.8	290.6	16.9	1.000145
20500.0	471.4	-11.8	-28.6	23.1	628.0	634.0	291.2	18.7	1.000143
21000.0	462.1	-13.2	-29.7	23.5	619.0	633.2	291.7	20.4	1.000141
21500.0	452.9	-14.7	-30.8	23.9	610.2	632.4			1.000139
22000.0	443.8	-16.2	-31.9	24.3	601.6	631.6			1.000136
22500.0	435.0	-17.7	-33.0	24.7	593.1	630.8			1.000134
23000.0	426.4	-19.2	-34.2	25.0	584.7	630.9			1.000132
23500.0	417.9	-20.7	-35.3	25.4	576.4	629.1			1.000130

STATION ALTITUDE 4051.37 FEET MSL
29 OCT. 62 0730 MDT
ASCENSION NO. 116

UPPER AIR DATA
3020160110
LC-37

TABLE 10 Cont'd

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	409.5	-22.2	-36.4	25.8	568.3	617.3			1.000128
24500.0	401.3	-23.5	-37.3	26.8	559.8	615.6			1.000126

STATION ALTITUDE 4051.37 FEET MSL
29 OCT. 62 0730 MDT
ASCENSION NO. 110

MANDATORY LEVELS
30201A0110
LC-37

TABLE 11

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4974.	9.7	-9.3	25.	212.9	1.5
800.0	6623.	9.1	-10.9	23.	213.1	4.2
750.0	8368.	6.6	-12.6	24.	234.5	10.4
700.0	10214.	3.3	-15.3	24.	253.2	13.4
650.0	12184.	2.7	-16.4	23.	267.4	13.6
600.0	14295.	-1.1	-17.0	28.	265.6	12.7
550.0	16560.	-4.3	-22.6	22.	287.4	6.9
500.0	19011.	-7.4	-25.4	22.	292.2	12.9
450.0	21663.	-15.2	-31.1	24.		
400.0	24535.	-23.7	-37.3	27.		

STATION ALTITUDE 3989.00 FEET MSL
29 OCT. 82 0838 MDT
ASCENSION NO. 526

SIGNIFICANT LEVEL DATA
30200205Z6
WHITE SANDS
TABLE 12

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
882.4	3989.0	.3	-8.9	50.0
872.4	4289.9	1.7	-12.6	33.0
865.7	4496.2	7.9	-11.4	24.0
850.0	4992.0	8.5	-13.1	20.0
793.8	6845.2	7.9	-16.3	16.0
768.3	7729.1	8.1	-15.4	17.0
700.0	10227.6	2.9	-19.0	18.0
654.4	12018.6	2.9	-20.4	16.0
623.2	13311.6	.3	-20.0	20.0
587.5	14855.7	-3.2	-25.4	16.0
573.7	15474.4	-2.7	-25.7	15.0
523.1	17862.4	-6.7	-29.7	14.0
500.0	19015.3	-9.7	-32.1	14.0
400.0	24529.0	-23.8	-41.3	18.0
347.3	27867.1	-32.3	-44.9	27.0
322.6	29566.2	-36.3	-40.9	62.0
307.4	30661.9	-39.2	-42.4	71.0
300.0	31210.2	-40.5		
288.0	32121.0	-43.1		
284.4	32399.6	-43.8		
276.6	33012.9	-45.2		
250.0	35206.4	-51.3		
200.0	39864.9	-62.3		
187.0	41226.5	-64.2		
178.2	42205.3	-61.4		
163.2	44001.2	-61.8		
150.0	45712.7	-64.2		
144.2	46509.7	-63.5		
136.2	47660.2	-65.4		
128.6	48818.8	-63.1		
117.3	50757.5	-46.8		
108.9	52314.4	-65.8		
100.0	54029.4	-64.2		
70.0	61302.0	-60.3		
61.9	63851.0	-57.4		
52.1	67450.5	-57.2		
50.0	68316.7	-54.0		
36.0	75311.7	-52.4		
30.0	79210.1	-52.4		

STATION ALTITUDE 3989.00 FEET MSL
29 OCT. 82 0938 MDT
ASCENSION NO. 526

UPPER AIR DATA
30, 002, 000
WHITE SANDS

TABLE 13

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	882.4	.3	-8.9	50.0	1122.6	644.6	.0	.0	1.000266
4000.0	882.0	.4	-9.0	49.4	1122.0	644.7	24.2	.0	1.000266
4500.0	865.6	7.9	-11.4	24.0	1071.7	653.5	24.2	.7	1.000251
5000.0	849.8	8.5	-13.2	20.0	1050.8	654.1	24.2	1.3	1.000244
5500.0	834.2	8.3	-14.0	18.9	1031.4	653.9	24.2	1.9	1.000240
6000.0	819.0	8.2	-14.8	17.8	1013.2	653.7	297.3	.5	1.000235
6500.0	804.0	8.0	-15.7	16.7	995.3	653.5	231.8	2.9	1.000230
7000.0	789.3	7.9	-16.2	16.2	977.4	653.4	234.3	6.8	1.000226
7500.0	774.8	8.0	-15.7	16.7	959.1	653.6	235.6	9.9	1.000222
8000.0	760.6	7.5	-15.8	17.1	943.1	653.0	237.1	12.1	1.000219
8500.0	746.5	6.5	-16.5	17.3	929.2	651.6	239.0	13.0	1.000215
9000.0	732.8	5.5	-17.3	17.5	915.5	650.5	241.3	13.1	1.000212
9500.0	719.2	4.4	-18.0	17.7	902.0	649.3	243.3	13.7	1.000208
10000.0	706.0	3.4	-18.7	17.9	888.7	648.1	245.4	14.3	1.000205
10500.0	692.9	2.9	-19.2	17.7	873.7	647.5	249.6	14.6	1.000201
11000.0	680.0	2.9	-19.6	17.1	857.5	647.5	254.0	14.9	1.000197
11500.0	667.3	2.9	-20.0	16.6	841.5	647.5	259.0	15.0	1.000194
12000.0	654.9	2.9	-20.4	16.0	825.6	647.5	261.3	14.6	1.000190
12500.0	642.6	1.9	-20.2	17.5	813.2	646.4	261.7	13.7	1.000187
13000.0	630.6	.9	-20.0	19.0	800.9	645.2	265.9	14.0	1.000185
13500.0	618.7	-.1	-20.6	19.5	786.9	643.9	270.9	14.8	1.000182
14000.0	607.0	-1.3	-22.3	18.2	777.3	642.6	276.1	15.2	1.000178
14500.0	595.5	-2.4	-24.1	16.9	765.6	641.2	281.1	15.7	1.000175
15000.0	584.3	-3.1	-25.5	15.8	753.3	640.4	276.3	13.1	1.000172
15500.0	573.1	-2.7	-25.7	15.0	738.0	640.8	267.3	10.4	1.000168
16000.0	562.2	-3.6	-26.6	14.8	726.1	639.8	248.8	8.7	1.000165
16500.0	551.4	-4.4	-27.4	14.6	714.5	638.8	239.7	7.7	1.000163
17000.0	540.8	-5.3	-28.2	14.4	703.0	637.8	245.0	6.6	1.000160
17500.0	530.5	-6.1	-29.1	14.2	691.7	636.6	264.7	6.9	1.000157
18000.0	520.3	-7.1	-30.0	14.0	680.9	635.6	282.4	8.5	1.000154
18500.0	510.2	-8.4	-31.0	14.0	671.0	634.0	290.6	11.6	1.000152
19000.0	500.3	-9.7	-32.1	14.0	661.3	632.5	295.4	14.7	1.000150
19500.0	490.3	-10.9	-32.9	14.4	651.2	630.9	300.3	16.8	1.000147
20000.0	480.5	-12.2	-33.7	14.7	641.3	629.4	303.3	18.8	1.000145
20500.0	470.8	-13.5	-34.5	15.1	631.5	627.3	304.0	20.4	1.000142
21000.0	461.4	-14.8	-35.3	15.4	622.0	626.3	301.9	22.1	1.000140
21500.0	452.2	-16.1	-36.1	15.8	612.5	624.7	297.3	23.9	1.000138
22000.0	443.1	-17.3	-36.9	16.2	603.3	623.2	296.2	24.5	1.000136
22500.0	434.2	-18.6	-37.8	16.5	594.2	621.6	297.3	24.1	1.000134
23000.0	425.5	-19.9	-38.6	16.9	585.2	620.0	300.3	24.3	1.000132

STATION ALTITUDE 3989.00 FEET MSL
29 OCT. 62 0838 MDT
ASCENSION NO. 526

UPPER AIR DATA
30200620526
WHITE SANDS
TABLE 13 Cont'd

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	417.0	-21.2	-39.5	17.3	576.4	618.5	304.0	24.8	1.000130
24000.0	406.7	-22.4	-40.4	17.6	567.8	616.9	305.7	24.1	1.000128
24500.0	400.5	-23.7	-41.3	18.0	559.2	615.3	307.5	23.3	1.000126
25000.0	392.1	-25.0	-41.7	19.3	550.4	613.7	310.0	23.0	1.000124
25500.0	383.9	-26.3	-42.1	20.6	541.6	612.2	312.1	23.6	1.000122
26000.0	375.9	-27.5	-42.6	22.0	533.0	610.6	313.1	26.0	1.000120
26500.0	368.0	-28.8	-43.2	23.3	524.6	609.0	315.4	28.8	1.000118
27000.0	360.3	-30.1	-43.8	24.7	516.3	607.4	318.4	32.2	1.000116
27500.0	352.7	-31.4	-44.4	26.0	508.2	605.8	321.9	34.8	1.000114
28000.0	345.3	-32.6	-44.3	29.7	500.0	604.2	325.4	37.2	1.000112
28500.0	337.9	-33.8	-42.6	40.0	491.7	602.8	327.7	38.0	1.000110
29000.0	330.6	-35.0	-41.6	50.3	483.5	601.3	329.6	38.3	1.000109
29500.0	323.5	-36.1	-41.0	60.6	475.4	599.8	330.3	38.9	1.000107
30000.0	316.5	-37.4	-41.5	65.6	467.7	598.2	330.8	39.6	1.000105
30500.0	309.6	-38.8	-42.2	69.7	460.1	596.5	333.0	39.7	1.000103
31000.0	302.8	-40.0	-51.6	27.2**	452.4	594.9	335.1	39.8	1.000101
31500.0	296.1	-41.3			445.0	593.2	336.5	39.9	1.000099
32000.0	289.6	-42.8			437.8	591.5	337.3	40.4	1.000098
32500.0	283.1	-44.0			430.4	589.7	337.1	41.3	1.000096
33000.0	276.8	-45.2			422.9	588.2	337.8	42.2	1.000094
33500.0	270.5	-46.6			415.8	586.4	338.9	42.9	1.000093
34000.0	264.3	-47.9			408.8	584.6	341.3	44.2	1.000091
34500.0	258.3	-49.3			402.0	582.8	343.7	45.6	1.000090
35000.0	252.4	-50.7			395.3	581.0	346.4	46.9	1.000088
35500.0	246.5	-52.0			388.3	579.4	349.1	48.2	1.000086
36000.0	240.7	-53.2			381.1	577.8	352.5	48.6	1.000085
36500.0	235.0	-54.4			374.1	576.3	355.8	49.5	1.000083
37000.0	229.4	-55.5			367.3	574.7	357.9	52.7	1.000082
37500.0	224.0	-56.7			360.5	573.1	359.4	55.6	1.000080
38000.0	218.7	-57.9			353.9	571.6	359.9	57.8	1.000079
38500.0	213.5	-59.1			347.5	570.0	.2	60.1	1.000077
39000.0	208.5	-60.3			341.1	568.4	360.0	62.6	1.000076
39500.0	203.5	-61.4			334.9	566.8	359.5	63.7	1.000075
40000.0	198.7	-62.5			328.5	565.4	358.5	62.2	1.000073
40500.0	193.8	-63.2			321.6	564.5	355.6	59.5	1.000072
41000.0	189.1	-63.9			314.8	563.6	349.0	55.0	1.000070
41500.0	184.5	-63.4			308.4	564.2	343.6	51.3	1.000068
42000.0	180.0	-62.0			302.0	566.1	339.9	47.9	1.000066
42500.0	175.6	-61.5			295.1	566.8	338.7	41.3	1.000064
43000.0	171.4	-61.6			288.2	566.7	339.6	32.6	1.000063

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

STATION ALTITUDE 3989.00 FT MSL
29 OCT. 62 0838 PDT
ASCENSION NO. 526

GRAPHIC RTP DATA
30.00%,0.02%
WHITE SANDS
TABLE 13 CORRECTED

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	RELATIVE HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IND)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	157.3	-61.7			275.5	560.5	330.5	25.7	1.000061
44000.0	153.2	-61.8			269.0	560.4	328.8	19.8	1.000060
44500.0	149.2	-62.5			263.3	559.4	335.0	18.3	1.000059
45000.0	145.4	-63.2			257.8	558.5	300.9	19.4	1.000057
45500.0	141.6	-63.9			252.4	557.5	294.0	24.4	1.000056
46000.0	137.9	-63.9			246.3	557.5	292.8	30.6	1.000055
46500.0	134.3	-63.5			239.7	558.1	295.1	35.7	1.000053
47000.0	130.7	-64.3			234.8	557.3	298.5	40.6	1.000052
47500.0	127.3	-65.1			229.9	556.9	304.1	42.3	1.000051
48000.0	123.9	-64.7			225.8	557.4	309.7	43.9	1.000050
48500.0	120.6	-63.7			217.3	558.0	314.8	38.2	1.000048
49000.0	117.5	-61.6			209.9	559.7	319.6	32.3	1.000047
49500.0	114.5	-57.4			201.0	562.5	320.6	24.6	1.000045
50000.0	111.6	-53.2			192.6	564.8	317.9	16.3	1.000043
50500.0	108.7	-49.0			184.5	567.3	301.2	10.5	1.000041
51000.0	106.0	-49.8			180.3	566.3	280.9	10.5	1.000040
51500.0	103.2	-55.9			181.5	564.5	264.6	14.5	1.000040
52000.0	100.5	-62.0			182.4	563.1	249.4	19.9	1.000041
52500.0	97.9	-65.6			181.1	563.2	232.1	25.2	1.000040
53000.0	95.3	-65.2			176.3	563.4	260.1	26.7	1.000039
53500.0	92.7	-64.7			171.6	563.5	278.6	29.5	1.000038
54000.0	90.1	-64.2			167.0	563.1	286.0	29.3	1.000037
54500.0	87.7	-63.9			162.7	563.5	292.6	28.6	1.000036
55000.0	85.4	-63.7			158.6	563.6	294.7	27.0	1.000035
55500.0	83.0	-63.4			154.5	564.2	294.5	25.0	1.000034
56000.0	80.8	-63.1			150.6	564.6	293.7	23.2	1.000034
56500.0	78.6	-62.9			146.8	564.9	292.3	21.5	1.000033
57000.0	76.4	-62.6			143.0	565.3	289.6	20.0	1.000032
57500.0	74.3	-62.3			139.4	565.6	285.5	18.7	1.000031
58000.0	72.3	-62.1			135.8	566.0	282.3	17.4	1.000030
58500.0	70.3	-61.8			132.4	566.4	280.2	16.2	1.000029
59000.0	68.4	-61.5			129.0	566.7	278.8	15.1	1.000029
59500.0	66.5	-61.3			125.7	567.1	275.6	14.1	1.000028
60000.0	64.6	-61.0			122.5	567.4	273.9	13.4	1.000027
60500.0	62.8	-60.7			119.4	567.8	278.4	14.7	1.000027
61000.0	61.0	-60.5			116.4	568.2	282.1	15.9	1.000026
61500.0	59.3	-60.1			113.4	568.7	282.6	16.0	1.000025
62000.0	57.7	-59.5			110.4	569.4	282.6	15.9	1.000025
62500.0	56.1	-58.9			107.4	570.2	276.8	13.4	1.000024
63000.0	54.5	-58.4			104.6	570.9	261.3	9.9	1.000023

STATION ALTITUDE 3989.00 FEET MSL
29 OCT. 62 0838 MDT
ASCENSION NO. 526

UPPER AIR DATA
30200[illegible]
WHITE SANDS

TABLE 13 Cont'd

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	63.0	-57.8			101.8	571.7	243.9	8.3	1.000023
64000.0	61.5	-57.4			99.2	572.2	237.9	8.3	1.000022
64500.0	60.0	-57.4			96.9	572.3	234.6	8.4	1.000022
65000.0	58.6	-57.3			94.6	572.3	241.9	9.1	1.000021
65500.0	57.2	-57.3			92.3	572.4	248.3	9.8	1.000021
66000.0	55.8	-57.3			90.1	572.4	246.6	9.1	1.000020
66500.0	54.5	-57.3			88.0	572.4	244.4	8.3	1.000020
67000.0	53.2	-57.2			85.9	572.5	243.9	7.6	1.000019
67500.0	52.0	-57.0			83.8	572.7	243.8	6.9	1.000019
68000.0	50.8	-55.2			81.1	575.2	242.8	6.3	1.000018
68500.0	49.6	-54.0			78.6	576.8	240.9	5.8	1.000018
69000.0	48.4	-53.8			76.9	576.9	238.6	5.3	1.000017
69500.0	47.3	-53.7			75.1	577.1	236.3	5.0	1.000017
70000.0	46.2	-53.6			73.3	577.2	233.7	4.7	1.000016
70500.0	45.1	-53.5			71.6	577.4	236.9	3.8	1.000016
71000.0	44.1	-53.4			69.9	577.5	242.6	2.9	1.000016
71500.0	43.1	-53.3			68.2	577.7	245.4	1.8	1.000015
72000.0	42.1	-53.2			66.6	577.8	242.8	.7	1.000015
72500.0	41.1	-53.0			65.0	578.0	226.3	.2	1.000014
73000.0	40.1	-52.9			63.5	578.1	242.6	.7	1.000014
73500.0	39.2	-52.8			62.0	578.3	244.6	1.3	1.000014
74000.0	38.3	-52.7			60.5	578.4	290.0	3.4	1.000013
74500.0	37.4	-52.6			59.1	578.6	305.3	6.2	1.000013
75000.0	36.5	-52.5			57.7	578.7	315.0	6.6	1.000013
75500.0	35.7	-52.4			56.3	578.8	329.8	6.0	1.000013
76000.0	34.9	-52.4			55.0	578.8	346.2	5.6	1.000012
76500.0	34.1	-52.4			53.7	578.8	0.0	5.0	1.000012
77000.0	33.3	-52.4			52.5	578.8			1.000012
77500.0	32.5	-52.4			51.3	578.8			1.000011
78000.0	31.7	-52.4			50.1	578.8			1.000011
78500.0	31.0	-52.4			48.9	578.8			1.000011
79000.0	30.3	-52.4			47.8	578.8			1.000011

STATION ALTITUDE 3095 FEET MSL
[illegible] OCT 82 0536 MDT
ASCENSION NO. 526

MANDATORY LEVELS
[illegible]
UNITS SHOWN
TABLE 14

MAGNETIC COORDINATES
52.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(GN)	KNOTS
850.0	4988.	8.5	-13.1	20.	24.2	1.3
800.0	6629.	5.0	-15.9	16.	233.0	5.9
750.0	8373.	6.8	-16.4	17.	238.4	12.9
700.0	10218.	2.9	-19.0	15.	247.3	14.4
650.0	12185.	2.5	-20.3	17.	261.4	14.2
600.0	14290.	-2.0	-23.4	17.	279.1	15.5
550.0	16549.	-4.5	-27.5	15.	240.3	7.6
500.0	18989.	-9.7	-32.1	14.	295.5	14.6
450.0	21623.	-16.4	-36.3	10.	296.1	24.5
400.0	24488.	-23.8	-41.3	18.	307.5	25.3
350.0	27637.	-31.8	-44.7	27.	325.2	35.7
300.0	31148.	-40.5			335.7	39.9
250.0	35130.	-51.3			347.5	47.4
200.0	39769.	-62.3			356.8	52.7
175.0	42468.	-61.5			338.8	40.4
150.0	45590.	-64.2			293.5	26.7
125.0	49261.	-58.1			321.6	26.6
100.0	53863.	-64.2			286.0	29.3
80.0	58370.	-61.8			280.1	16.1
70.0	61092.	-60.3			282.5	16.1
60.0	64271.	-57.4			234.1	8.4
50.0	68060.	-54.0			241.8	6.0
40.0	72771.	-52.9			242.8	.7
30.0	78871.	-52.4				

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

END

FILMED

2-83

DTIC