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NATIONAL BUREAU OF STANDARDS-1963-A

DR 1349  
Jul 84

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AD

AD-A144 786

METEOROLOGICAL DATA REPORT  
19320BT MLRS  
Missile Number 426, 497, 392, 473, 442  
Round Number V608/AV-13 thru V612/AV-17  
2 July 1984

by

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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND



08 20

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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 19320 BT MLRS, Missile Number 426, 497, 392, 473, 442, Round Number V608/AV-13 thru V612/AV-17 are presented in tabular form.		

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NTIS GRA&I	<input checked="" type="checkbox"/>
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Distribution/ _____	
Availability Codes	
Dist	Avail and/or Special
A-1	



## INTRODUCTION

19320BT MLRS, Missile Numbers 426, 497, 392, 473, and 442, Round Numbers V608/AV-13 thru V612/AV-17, were launched from LC-33, White Sands Missile Range (WSMR). New Mexico, at 1318:47, 1318:52, 1318:56, 1319:01, and 1319:05 MDT, 2 Jul 84. The scheduled launch times were 1300 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 ( $\text{gm}/\text{m}^3$ ), wind direction and speed and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Speed and direction from one anemometer was provided in the launch control room.

#### b. Upper Air

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

#### SITE AND ALTITUDE

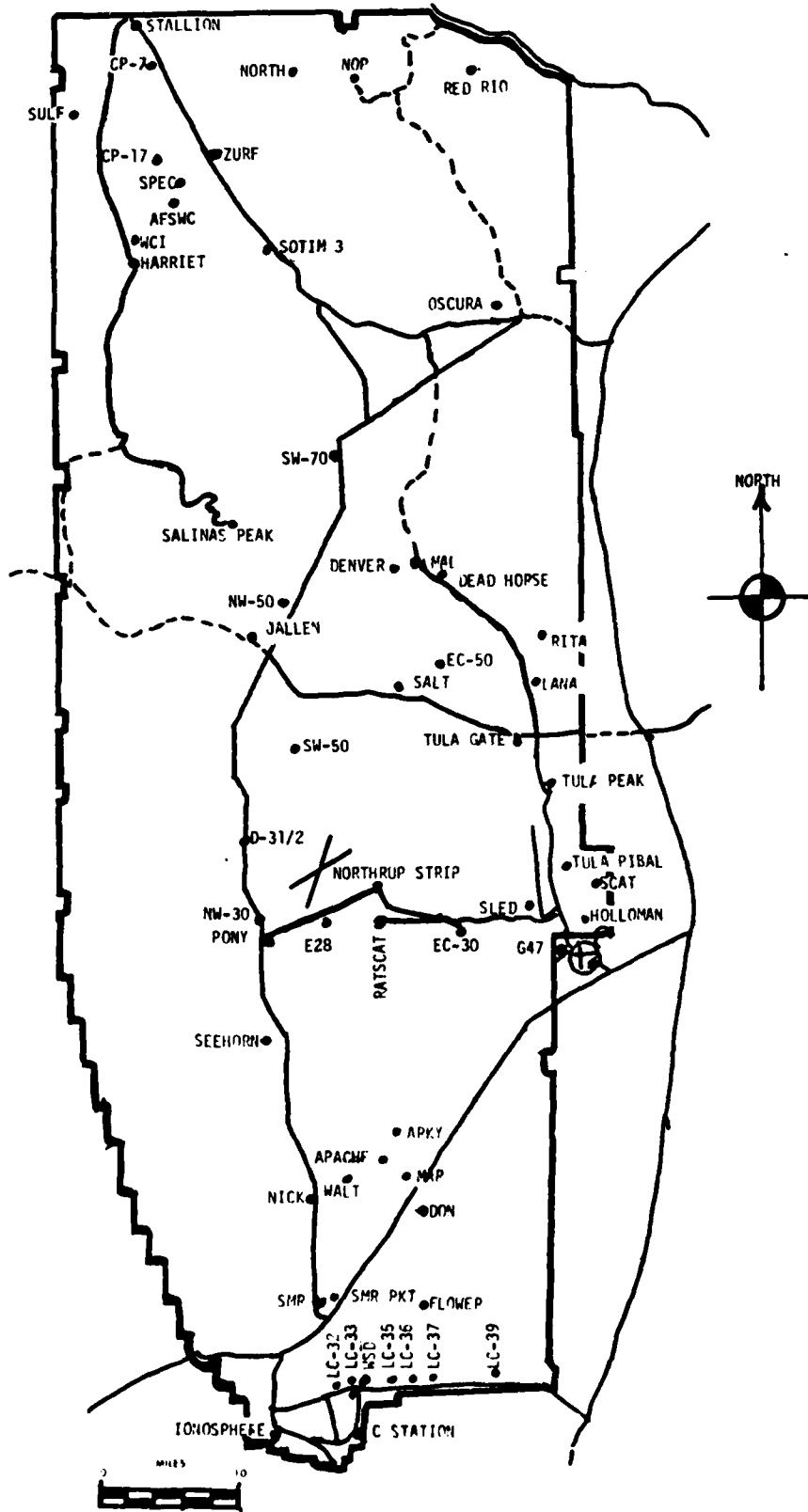
LC-33 2 km

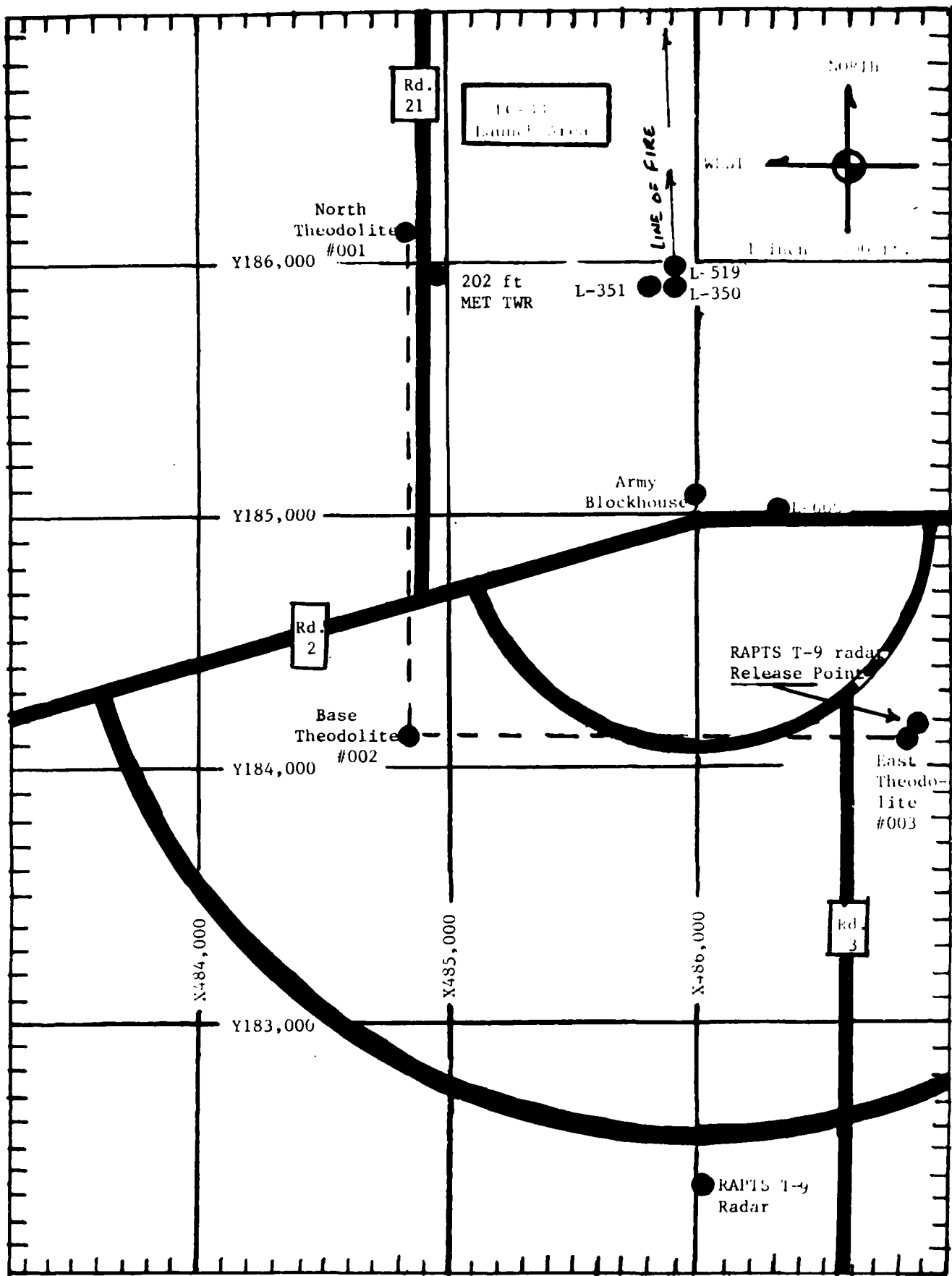
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

#### SITE AND TIME

WSD 1000, 1130 and 1319 MDT  
SMR 1000, 1130 and 1319 MDT  
DON 1000, 1130 and 1319 MDT

# WSMR METEOROLOGICAL SITES





Rd. 21

T-9 Launch Area

NORTH

WEST

North Theodolite #001

Y186,000

202 ft MET TWR

L-351

L-519  
L-350

LINE OF FIRE

Y185,000

Army Blockhouse

Rd. 2

RAPTS T-9 radar Release Point

Base Theodolite #002

Y184,000

East Theodolite #003

X+84,000

X+85,000

X+86,000

Rd. 3

Y183,000

RAPTS T-9 Radar

PROJECT SURFACE OBSERVATION

TABLE 1  
 STATION LC-33 (E&A)  
 DATE            MONTH            YEAR             
 Y = 484,982.64    X = 185,957.73    H = 3,995.00

TIME M D Y	PRESSURE hPa	TEMPERATURE °C	Dew POINT °C	RELATIVE HUMIDITY %	DENSITY g/m <sup>3</sup>	WIND			VISIBIL- ITY
						DIRECTION degs In	SPEED kts	CHARACTER kts	
1319	880.3	32.6	14.4	33		180	04		40

OBSTRUCT:ONS TO VISIBILITY	CLOUDS						REMARKS						
	1st LAYER		2nd LAYER		3rd LAYER		ATM	HGT					
	AMT	TYPE	AMT	TYPE	AMT	TYPE							
	1	cu	6500	1	AS	10000	1	AC	12000	5	CI	25000	CB E MOWGS

PSYCHROMETRIC COMPUTATION

TIME: MDT	1319	
DRY BULB TEMP.	32.6	
WET BULB TEMP.	20.1	
WET BULB DEPR.	12.5	
Dew POINT	14.4	
RELATIVE HUMID.	33	



TABLE 3

## LAUNCH AREA PILOT-BALLOON MEASURED WIND DATA

02 July 1984

LC-33 RAPTS T-9 RADAR WSTM X= 486,037.24 Y= 182,350.16 H= 3977.30

TIME (MDT)	1223 MDT		1246 MDT		1324 MDT	
	DIR DEGS	SPEED KNOTS	DIR DEGS	SPEED KNOTS	DIR DEGS	SPEED KNOTS
SURFACE	190	03	200	05	180	04
150	112	01	MISC	MISC	MISC	MISC
210	145	06	136	06	MISC	MISC
270	158	07	145	09	151	09
330	133	04	154	12	150	07
390	150	06	151	08	127	09
500	153	06	158	06	145	07
650	161	07	161	07	164	06
800	155	07	169	04	171	10
950	130	07	164	06	172	08
1150	133	03	169	04	182	06
1350	167	04	276	01	223	04
1550	241	04	235	08	248	05
1750	238	07	259	11	269	14
2000	266	11	276	12	283	10

ALL DATA OBTAINED FROM RAPTS T-9 RADAR TRACKED PILOT-BALLOON OBSERVATIONS

TABLE 4

 AIMING AND T-TIME COMPUTER MET MESSAGE DATA  
 2 July 1984

WSD 1000 MDT	SMR 1000 MDT	DON 1000 MDT	WSD 1130 MDT
METCM1324064	METCM1325064	METCM1326063	METCM1324064
021600122882	021600122882	021600123880	021750122881
00238004 30020882	00249004 30140882	00320014 30100880	00320008 30350881
01293006 29910872	01285007 29960872	01317015 29890870	01313008 30170871
02278005 29630847	02290010 29650847	02293016 29540845	02348006 29900847
03302011 29330809	03311013 29360809	03299015 29200807	03285008 29410809
04367015 29100763	04363013 29170763	04386011 29160761	04423008 29160763
05440009 28780719	06440011 28810719	05448009 28770718	05466008 28780719
06495010 28400677	06484011 28380678	06500010 28360676	06530011 28380678
07579008 27990638	07588009 27980638	07569009 27980636	07599010 28090638
08020011 27620600	08639011 27580600	08638012 27600599	08035009 27690600
09078014 27250564	09064014 27190564	09067014 27220563	09081011 27290564
10104007 26940529	10092012 26860529	10079012 26860528	10122005 26910530
11011006 26580497	11067015 26520497	11079009 26490496	11187003 26570497
12117005 26190451	12515002 26120451	12506003 26130450	12453006 26190451
SMR 1130 MDT	DON 1130 MDT	WSD 1319 MDT	SMR 1319 MDT
METCM1325064	METCM1326063	METCM1324064	METCM1325064
021750122881	021750123880	021930122880	021930122880
00213006 30450881	00302013 30410880	00267008 30670880	00320008 30520880
01301009 30090871	01241008 30080870	01291008 30440870	01319013 30320870
02322008 29760847	02266010 29760845	02289007 30050846	02329011 30100846
03323009 29390809	03311011 29390807	03327008 29680808	03367008 29730808
04415008 29100763	04425011 29160762	04427006 29240763	04427006 29280763
05499010 28800719	05486009 28830718	05530012 28860719	05520014 28870720
06541010 28420678	06537010 28440677	06585011 28440678	06633010 28510678
07597011 28030638	07617010 28040637	07021008 27990638	07035011 28080638
08044010 27640600	08047011 27650599	08070010 27540600	08080011 27630601
09110010 27280564	09100011 27260563	09098008 27220564	09096007 27260564
10128007 26980530	10072006 26910529	10018006 26960530	10628006 26980530
11152005 26680497	11108001 26540496	11542007 26660497	11552007 26720497
12454007 26060451	12474007 26190450	12463008 26300451	12468009 26300452
DON 1319 MDT			
METCM1326063			
021930123879			
00320012 30690879			
01316014 30430869			
02304010 30060845			
03332009 29670807			
04407007 29200762			
05547010 28860718			
06624009 28500677			
07008009 28070637			
08077009 27650599			
09098008 27290563			
10632005 26980529			
11562006 26700497			
12476011 26380451			

STATION ALTITUDE 3000.00 FEET WSI  
 7 JULY 64  
 ASCENSION NO. 700  
 1000 MDI

SIGNIFICANT LEVEL DATA  
 1640039160  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40047 LAT DEG  
 104.37037 LON DEG

TABLE 5

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AT DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT																																																																																																																																																																																																																																		
				75.0	73.0	71.3	69.5	67.6	65.7	63.8	61.9	60.0	58.1	56.2	54.3	52.4	50.5	48.6	46.7	44.8	42.9	41.0	39.1	37.2	35.3	33.4	31.5	29.6	27.7	25.8	23.9	22.0	20.1	18.2	16.3	14.4	12.5	10.6	8.7	6.8	4.9	3.0	1.1	-0.8	-2.7	-4.6	-6.5	-8.4	-10.3	-12.2	-14.1	-16.0	-17.9	-19.8	-21.7	-23.6	-25.5	-27.4	-29.3	-31.2	-33.1	-35.0	-36.9	-38.8	-40.7	-42.6	-44.5	-46.4	-48.3	-50.2	-52.1	-54.0	-55.9	-57.8	-59.7	-61.6	-63.5	-65.4	-67.3	-69.2	-71.1	-73.0	-74.9	-76.8	-78.7	-80.6	-82.5	-84.4	-86.3	-88.2	-90.1	-92.0	-93.9	-95.8	-97.7	-99.6	-101.5	-103.4	-105.3	-107.2	-109.1	-111.0	-112.9	-114.8	-116.7	-118.6	-120.5	-122.4	-124.3	-126.2	-128.1	-130.0	-131.9	-133.8	-135.7	-137.6	-139.5	-141.4	-143.3	-145.2	-147.1	-149.0	-150.9	-152.8	-154.7	-156.6	-158.5	-160.4	-162.3	-164.2	-166.1	-168.0	-169.9	-171.8	-173.7	-175.6	-177.5	-179.4	-181.3	-183.2	-185.1	-187.0	-188.9	-190.8	-192.7	-194.6	-196.5	-198.4	-200.3	-202.2	-204.1	-206.0	-207.9	-209.8	-211.7	-213.6	-215.5	-217.4	-219.3	-221.2	-223.1	-225.0	-226.9	-228.8	-230.7	-232.6	-234.5	-236.4	-238.3	-240.2	-242.1	-244.0	-245.9	-247.8	-249.7	-251.6	-253.5	-255.4	-257.3	-259.2	-261.1	-263.0	-264.9	-266.8	-268.7	-270.6	-272.5	-274.4	-276.3	-278.2	-280.1	-282.0	-283.9	-285.8	-287.7	-289.6	-291.5	-293.4	-295.3	-297.2	-299.1	-301.0	-302.9	-304.8	-306.7	-308.6	-310.5	-312.4	-314.3	-316.2	-318.1	-320.0	-321.9	-323.8	-325.7	-327.6	-329.5	-331.4	-333.3	-335.2	-337.1	-339.0	-340.9	-342.8	-344.7	-346.6	-348.5	-350.4	-352.3
98.0	3000.0	75.0	51.0																																																																																																																																																																																																																																		
97.0	2941.0	73.0	54.0																																																																																																																																																																																																																																		
96.0	5033.3	71.3	59.0																																																																																																																																																																																																																																		
95.0	4299.6	69.5	43.0																																																																																																																																																																																																																																		
94.0	3843.7	67.6	52.0																																																																																																																																																																																																																																		
93.0	10474.2	65.7	57.0																																																																																																																																																																																																																																		
92.0	11245.5	63.8	42.0																																																																																																																																																																																																																																		
91.0	12348.6	61.9	77.0																																																																																																																																																																																																																																		
90.0	14796.1	60.0	81.0																																																																																																																																																																																																																																		
89.0	15547.2	58.1	88.0																																																																																																																																																																																																																																		
88.0	18509.7	56.2	79.0																																																																																																																																																																																																																																		
87.0	10405.2	54.3	89.0																																																																																																																																																																																																																																		
86.0	23308.7	52.4	80.0																																																																																																																																																																																																																																		
85.0	31909.6	50.5	41.0																																																																																																																																																																																																																																		
84.0	22461.8	48.6	35.0																																																																																																																																																																																																																																		
83.0	35074.9	46.7	41.0																																																																																																																																																																																																																																		

STATION ALTITUDE 2000.00 FEET MSL  
 2 JULY 64  
 ASCENSTON: NO. 159 1000 MDT

UPPER AVE DATA  
 19407035R  
 WHITE SANDS

GEOMETRIC COORDINATES  
 32.40043 LAT DEG  
 106.77033 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIR/FREQ(°N)	SPEED KNOTS	INDEX OF REFRACTION
1950.0	804.5	75.0	51.0	1022.8	675.0	134.0	4.1	1.000207
1900.0	801.2	75.0	51.1	1022.6	675.0	134.0	4.1	1.000207
1850.0	805.0	73.2	51.1	1010.0	673.0	145.0	4.0	1.000203
1800.0	803.0	71.4	55.3	990.7	670.9	152.5	5.8	1.000208
1750.0	805.1	70.2	40.6	984.5	669.4	157.0	4.8	1.000283
1700.0	801.5	70.0	42.3	973.6	668.0	164.0	8.7	1.000278
1650.0	802.1	68.2	41.8	959.7	667.0	174.8	11.4	1.000271
1600.0	797.8	67.6	50.8	944.5	666.2	185.4	13.1	1.000264
1550.0	798.8	67.0	57.7	930.0	665.4	194.0	15.1	1.000258
1500.0	745.1	66.4	55.6	915.7	664.6	203.7	13.7	1.000251
1450.0	741.6	65.8	53.5	901.4	663.9	213.7	12.4	1.000245
1400.0	739.7	65.1	52.4	889.5	663.0	224.8	10.6	1.000239
1350.0	735.1	63.9	54.0	874.1	661.5	230.1	9.5	1.000235
1300.0	717.1	62.6	55.5	864.5	660.0	252.5	9.8	1.000230
1250.0	699.7	61.5	57.2	857.4	658.6	263.2	10.2	1.000226
1200.0	695.7	60.5	40.4	839.7	657.6	271.7	10.0	1.000223
1150.0	674.3	60.6	45.4	827.8	656.2	287.1	9.5	1.000221
1100.0	672.0	60.0	72.1	814.8	654.6	289.2	8.8	1.000219
1050.0	659.9	60.6	77.2	805.7	653.1	304.8	9.1	1.000216
1000.0	637.9	59.6	78.0	793.7	651.9	325.2	9.0	1.000212
950.0	636.1	49.6	78.9	787.2	650.5	344.6	8.7	1.000207
900.0	614.6	48.5	79.7	770.0	649.3	3.2	10.2	1.000203
850.0	603.2	48.5	90.5	750.5	648.0	11.1	11.2	1.000199
800.0	592.0	48.2	92.9	748.7	646.6	19.4	12.3	1.000195
750.0	597.9	47.1	97.6	738.4	644.9	28.5	12.0	1.000192
700.0	549.9	46.0	96.6	727.7	643.7	37.3	13.3	1.000187
650.0	549.1	44.1	95.1	715.0	642.6	45.8	13.1	1.000183
600.0	548.5	42.8	97.6	704.8	641.5	50.7	12.1	1.000179
550.0	549.1	41.7	97.1	693.8	640.4	52.2	10.0	1.000174
500.0	577.0	40.6	90.5	683.1	639.2	45.0	8.2	1.000171
450.0	517.0	39.5	79.0	672.5	638.1	28.7	6.8	1.000167
400.0	507.0	38.6	94.5	667.4	636.7	19.2	5.0	1.000164
350.0	493.1	37.8	98.6	657.5	635.3	9.0	5.0	1.000162
300.0	488.4	36.9	94.3	647.5	634.0	51.4	4.7	1.000158
250.0	473.0	36.0	56.1	637.6	632.7	69.0	2.5	1.000154
200.0	449.6	34.0	91.8	627.0	631.4	67.7	9.8	1.000151
150.0	449.4	31.6	75.2	617.4	630.5	64.4	6.7	1.000147
100.0	451.4	29.8	52.9	590.5	629.5	41.5	7.3	1.000141
50.0	442.6	27.3	75.1	588.4	628.4	35.1	4.2	1.000136
0.0	433.5	24.4	36.3	570.5	627.3	35.7	0.0	1.000134

UPPER AIR DATA  
 104000750  
 WHITE SANDS

STATION ALTITUDE 3000.0 FEET MSL  
 2 JULY 64  
 ASCENSION NO. 352

GEODETIC COORDINATES  
 37.6004° LAT DEG  
 106.7703° LON DEG

TABLE 6 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE °C	TEMPERATURE °F	REL. HUM. PERCENT	DENSITY GM/CUBIC METERS	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
2500.0	475.2	-17.5	-7.0	77.5	570.2	677.9	292.6	292.6	1.000132
4000.0	413.8	-14.6	-7.6	78.6	561.3	626.6	282.0	282.0	1.000129
2450.0	408.5	-15.7	-7.6	79.8	557.5	625.2			1.000127
2500.0	400.4	-16.8	-7.6	40.9	543.0	623.0			1.000125

STATION ALTITUDE 2000.00 FEET MSL  
 2 JULY 64 1000 MDT  
 ASCENSION NO. 155

MANDATORY LEVELS  
 194000750  
 WHITE SAIDS

GEODEIC COORDINATES  
 32.40047 LAT DEG  
 104.17037 LONG DEG

TABLE 7

PRESSURE MILLIBARS	GEOCENTRAL FEET	TEMPERATURE ATR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA		
					DIRECTION DEGREES(TN)	SPEED KNOTS	SPFD
850.0	5020.	21.7	17.0	59.	152.0	5.9	
800.0	6745.	17.0	10.2	61.	170.6	12.3	
750.0	8457.	15.9	6.2	53.	214.8	12.2	
700.0	10164.	11.5	3.7	57.	262.7	10.3	
650.0	12487.	6.4	2.0	77.	304.5	8.1	
600.0	14427.	2.2	-2	81.	13.0	11.6	
550.0	16215.	-2.3	-5.0	84.	57.5	12.4	
500.0	18179.	-7.4	-9.1	89.	17.7	5.1	
450.0	20441.	-11.1	-12.6	50.	30.5	1.9	
400.0	24984.	-16.0	-22.0	41.			

STATION ALTITUDE 1007.70 FEET MSL  
 2 JULY 64  
 ASCENSION NO. 108

SIGNIFICANT LEVEL DATA  
 1840047125  
 S W P

GEOMETRIC COORDINATES  
 17.48034 LAT DEG  
 106.42707 LON DEG

TABLE 8

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM.
WILLYBARS	MET FEET	AIR	DWPOINT	PERCENT
		DEGREES	CENTIGRADE	
981.7	1507.3	26.2	15.0	50.0
974.7	4377.0	24.7	14.0	57.0
950.0	5040.6	21.5	12.9	58.0
921.7	4025.8	19.1	12.4	46.0
781.7	7433.0	17.2	0.5	41.0
757.7	8706.1	17.1	5.9	51.0
700.0	10408.6	11.5	3.5	58.0
567.4	14140.1	-1.8	-3.5	98.0
510.7	19448.0	-6.1	-8.4	84.0
500.0	12416.0	-9.1	-8.5	97.0
460.0	20908.8	-11.8	-13.8	85.0
441.0	21471.0	-11.8	-17.8	41.0
430.0	23185.7	-11.7	-19.5	52.0
430.0	22707.8	-12.5	-25.6	73.0
400.0	25033.6	-17.5	-29.3	38.0

STATION ALTITUDE 1900.00 FEET MSL  
 2 JULY 64  
 CREWSTATION NO. 126

UPPER AIR DATA  
 184000125  
 S M 2

1000 MDI

GEOMETRIC COORDINATES  
 32.68034 LAT DEG  
 106.42107 LONG DEG

TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REF. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
3000.0	891.7	76.2	50.0	1019.4	476.5	140.0	6.1	1.000209
2800.0	891.6	76.2	50.0	1018.5	476.5	140.4	4.1	1.000209
2600.0	894.5	73.6	54.2	1010.3	473.6	154.4	5.2	1.000203
2400.0	894.5	71.7	57.0	999.4	471.2	164.5	6.5	1.000208
2200.0	894.6	70.4	61.7	984.2	469.7	173.0	8.0	1.000205
2000.0	892.0	68.2	65.8	973.1	468.3	177.4	9.6	1.000282
1800.0	892.6	68.5	64.3	958.4	467.4	190.4	11.2	1.000275
1600.0	893.4	67.8	64.5	944.7	466.5	192.0	12.8	1.000248
1400.0	890.5	67.2	60.4	920.8	465.7	193.7	12.2	1.000261
1200.0	885.7	65.1	55.7	913.0	465.6	204.5	11.0	1.000253
1000.0	882.2	63.1	51.0	898.3	465.4	215.3	11.6	1.000245
900.0	879.8	61.7	52.8	884.7	463.7	225.2	10.8	1.000240
800.0	875.6	60.3	54.5	875.3	462.0	234.2	10.5	1.000276
700.0	872.7	58.9	56.3	864.1	460.4	248.2	10.2	1.000231
600.0	870.0	57.5	58.0	853.0	458.7	257.2	10.0	1.000227
500.0	867.1	56.1	60.7	840.8	457.3	264.3	10.1	1.000223
400.0	864.4	54.7	63.3	828.8	455.9	274.0	9.6	1.000220
300.0	861.0	53.0	66.0	817.0	454.5	284.4	9.2	1.000216
200.0	857.7	51.4	68.5	805.4	453.1	294.2	9.1	1.000212
100.0	853.8	49.6	71.3	794.0	451.7	303.4	9.0	1.000209
0	850.0	47.8	74.0	782.2	450.3	324.7	9.1	1.000205
1500.0	846.5	46.2	76.6	770.6	448.9	347.7	10.1	1.000201
1400.0	843.1	44.7	79.3	760.2	447.4	357.3	11.3	1.000198
1300.0	839.7	43.0	81.9	750.0	446.0	370.8	12.8	1.000194
1200.0	836.4	41.3	84.6	739.4	444.6	383.0	13.3	1.000191
1100.0	833.1	39.6	87.3	729.0	443.2	390.0	13.0	1.000187
1000.0	829.8	37.9	90.4	718.0	441.9	397.2	12.8	1.000183
900.0	826.5	36.2	93.6	707.0	440.8	403.3	12.4	1.000179
800.0	823.2	34.5	96.8	696.0	439.6	408.4	11.7	1.000175
700.0	819.9	32.8	100.0	685.0	438.4	398.0	11.0	1.000171
600.0	816.6	31.1	103.2	674.0	437.3	388.0	10.1	1.000168
500.0	813.3	29.4	106.4	663.0	436.0	390.0	10.2	1.000165
400.0	810.0	27.7	109.6	652.0	434.8	400.8	10.4	1.000161
300.0	806.7	26.0	112.8	641.0	433.3	413.3	10.6	1.000159
200.0	803.4	24.3	116.0	630.0	431.8	414.1	10.0	1.000155
100.0	800.1	22.6	119.2	619.0	430.3	408.8	8.4	1.000151
0	796.8	20.9	122.4	608.0	428.8	348.0	5.1	1.000145
1500.0	793.5	19.2	125.6	597.0	427.6	357.1	5.2	1.000137
1400.0	790.2	17.5	128.8	586.0	426.4			1.000134

STATION ALTITUDE 3000.70 FEET MSL  
 5 JULY 54  
 ASCENSION NO. 176

UPPER AIR DATA  
 194004012E  
 C M O

GEOMETRIC COORDINATES  
 37.48034 LAT DEG  
 106.42307 LONG DEG

TABLE 9 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBAR	TEMPERATURE °F	TEMPERATURE °C	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3850.0	475.2	-14.2	-76.4	74.7	571.0	627.1			1.000131
3400.0	415.0	-15.3	-77.0	75.8	567.7	625.8			1.000129
3450.0	408.5	-16.4	-77.6	76.0	557.0	624.5			1.000127
3500.0	400.4	-17.4	-78.3	77.0	545.2	623.1			1.000125

STATION ALTITUDE 1007.30 FEET MSL  
 2 JULY 84  
 ASCENSION NO. 125

MANDATORY LEVELS  
 1040040125  
 C M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

TABLE 10

PRESSURE GEOPOTENTIAL MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TM)	SPEED KNOTS
950.0	21.5	17.9	58.	167.2	6.7
900.0	19.1	11.0	63.	181.9	12.0
750.0	14.0	6.8	51.	216.9	11.4
700.0	11.5	3.5	58.	257.1	10.0
650.0	6.8	1.4	69.	294.5	9.1
600.0	1.7	-1.3	80.	2.4	11.5
550.0	-3.7	-5.2	87.	40.3	12.5
500.0	-9.1	-8.5	97.	40.5	13.2
450.0	-11.7	-10.3	53.	294.3	2.4
400.0	-17.5	-20.7	38.		

STATION ALTITUDE 4007.49 FEET MSL  
 5 JULY 64  
 WASHINGTON DC. '2

SIGNIFICANT LEVEL DATA  
 1740200015  
 NON

STATION ALTITUDE 4007.49 FEET MSL  
 5 JULY 64  
 WASHINGTON DC. '2

STATION ALTITUDE 4007.49 FEET MSL  
 5 JULY 64  
 WASHINGTON DC. '2

STATION ALTITUDE 4007.49 FEET MSL  
 5 JULY 64  
 WASHINGTON DC. '2

TABLE 11

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE ATR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
877.7 4003.7	25.7 15.7	54.0
877.7 4247.4	23.9 14.0	54.0
850.0 5001.8	21.0 12.2	57.0
814.4 4203.8	16.7 9.4	62.0
784.0 2278.3	17.1 9.8	62.0
755.5 9170.4	17.5 7.3	51.0
700.0 10438.6	11.3 4.1	61.0
679.7 11241.2	9.3 4.3	71.0
554.6 14680.7	-2.7 -3.2	94.0
500.0 19359.4	-8.4 -8.8	97.0
470.2 20919.9	-11.7 -14.4	80.0
455.5 21721.8	-11.2 -20.7	45.0
441.1 22531.4	-12.4 -21.6	66.0
434.0 22939.0	-13.0 -25.2	35.0
424.0 23449.8	-13.8 -22.9	46.0
410.7 23777.2	-14.8 -27.8	32.0
400.0 24967.8	-17.8 -27.8	41.0

UPPER AIR DATA  
 1740200012  
 NON

STATION ALTITUDE 4003.69 FEET \*SL  
 7 JULY 64  
 ASCENSION NO. 12 1000 MDT

GEODETIC COORDINATES  
 32.57209 LAT DEG  
 106.29439 LONG DEG

TABLE 12

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMP DEMPNTY CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA		INDEX OF REFRACTION
								SPEED KNOTS	SPEED KNOTS	
4003.7	890.1	35.7	15.7	54.0	1018.0	676.1	180.0	180.0	14.0	1.000303
4500.0	845.0	32.0	13.4	55.0	1017.0	672.6	174.7	174.7	14.3	1.000292
5000.0	800.1	28.0	12.2	57.0	1000.3	670.3	173.4	173.4	14.7	1.000285
5500.0	755.1	24.2	11.0	59.1	980.2	668.1	170.4	170.4	15.1	1.000279
6000.0	710.5	20.4	9.9	61.2	978.1	666.0	167.5	167.5	15.5	1.000273
6500.0	665.0	16.8	9.5	62.0	963.0	665.2	172.6	172.6	16.4	1.000268
7000.0	620.0	13.2	9.2	62.0	945.2	665.5	180.6	180.6	17.3	1.000265
7500.0	575.0	9.6	9.2	59.3	928.0	665.7	191.0	191.0	17.7	1.000259
8000.0	530.0	6.0	7.8	53.1	911.3	665.8	209.3	209.3	17.1	1.000251
8500.0	485.0	2.4	6.9	52.5	897.0	666.5	227.6	227.6	9.5	1.000245
9000.0	440.0	-1.2	6.2	54.7	886.2	663.2	239.7	239.7	9.0	1.000241
9500.0	395.0	-3.9	5.5	56.9	874.7	661.6	252.8	252.8	8.9	1.000236
10000.0	350.0	-6.6	4.7	59.1	863.3	659.9	259.8	259.8	8.9	1.000232
10500.0	305.0	-9.3	4.1	79.0	852.0	658.3	266.5	266.5	9.1	1.000228
11000.0	260.0	-12.0	4.0	72.1	840.1	657.0	273.8	273.8	9.1	1.000226
11500.0	215.0	-14.7	4.0	74.4	828.1	655.6	282.7	282.7	9.9	1.000223
12000.0	170.0	-17.4	3.4	76.7	814.1	654.3	290.8	290.8	8.9	1.000219
12500.0	125.0	-20.1	2.8	79.0	806.2	653.0	306.2	306.2	8.7	1.000215
13000.0	80.0	-22.8	2.1	83.6	792.5	651.6	321.4	321.4	9.1	1.000211
13500.0	35.0	-25.5	1.4	85.9	781.0	650.3	336.3	336.3	9.6	1.000207
14000.0	-10.0	-28.2	0.7	88.2	769.7	649.0	350.2	350.2	10.5	1.000204
14500.0	-65.0	-30.9	0.0	90.6	758.6	647.6	1.7	1.7	11.5	1.000200
15000.0	-120.0	-33.6	-0.7	92.9	747.6	646.3	12.5	12.5	11.8	1.000196
15500.0	-175.0	-36.3	-1.4	95.2	734.8	644.9	22.5	22.5	12.5	1.000192
16000.0	-230.0	-39.0	-2.1	96.1	726.2	643.6	30.0	30.0	12.7	1.000188
16500.0	-285.0	-41.7	-2.8	96.3	715.8	642.2	36.4	36.4	12.5	1.000185
17000.0	-340.0	-44.4	-3.5	96.5	705.1	640.9	43.0	43.0	12.4	1.000181
17500.0	-395.0	-47.1	-4.2	96.7	694.5	639.6	44.3	44.3	11.9	1.000177
18000.0	-450.0	-49.8	-4.9	96.9	684.0	638.2	45.4	45.4	11.4	1.000173
18500.0	-505.0	-52.5	-5.6	95.5	673.7	636.9	45.1	45.1	10.8	1.000169
19000.0	-560.0	-55.2	-6.3	95.5	663.5	635.6	42.5	42.5	10.0	1.000166
19500.0	-615.0	-57.9	-7.0	90.0	653.5	634.3	39.4	39.4	9.2	1.000162
20000.0	-670.0	-60.6	-7.7	84.6	643.7	632.9	33.5	33.5	7.3	1.000158
20500.0	-725.0	-63.3	-8.4	76.5	633.7	631.5	20.4	20.4	5.0	1.000154
21000.0	-780.0	-66.0	-9.1	65.3	623.4	630.5	350.2	350.2	3.3	1.000150
21500.0	-835.0	-68.7	-9.8	46.0	613.7	630.7	209.0	209.0	2.9	1.000146
22000.0	-890.0	-71.4	-10.5	36.3	592.5	630.3	275.8	275.8	1.7	1.000140
22500.0	-945.0	-74.1	-11.2	26.6	580.4	629.4				1.000137
23000.0	-1000.0	-76.8	-11.9	16.9	570.5	628.5				1.000134
23500.0	-1055.0	-79.5	-12.6	7.2	560.8	627.5				1.000132

STATION ALTITUDE 4003.49 FEET MSL  
 2 JULY 84  
 ASCENSION NO. 12

UPPER AIR DATA  
 1740200012  
 90N

GEOMETRIC COORDINATES  
 32.57208 LAT DEG  
 106.29439 LON DEG

TABLE 12 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIR. DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3400.0	415.9	-15.4	33.7	561.8	625.7			1.000129
3450.0	407.6	-16.6	37.5	559.7	626.1			1.000127

STATION ALTITUDE 4000.00 FEET MSL  
 2 JULY 64  
 ASCENSION 10. 12

MANDATORY LEVELS  
 134020011  
 P0N

GEODETIC COORDINATES  
 32.57209 LAT DEG  
 106.79439 LON DEG

TABLE 13

PRESSURE GEOPOTENTIAL MILLIBARS	AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
950.0	21.0	17.2	57.	173.4	16.7
900.0	14.0	9.4	62.	175.8	13.9
850.0	14.5	4.8	53.	228.0	9.5
800.0	11.7	4.1	61.	265.7	9.0
750.0	4.7	7.8	76.	194.8	8.7
700.0	2.0	-1	86.	1.9	11.6
650.0	-3.2	-3.7	96.	41.5	12.4
600.0	-8.4	-8.8	97.	40.4	9.4
550.0	-11.7	-21.1	45.	275.0	3.8
500.0	-17.8	-27.9	41.		

STATION ALTITUDE 1000.0 FEET MSL  
 2 JULY 64  
 ASCENSION NO. 159

1130 MDT  
 SIGNIFICANT LEVEL DATA  
 194007050  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40047 LAT DEG  
 106.77037 LON DEG

TABLE 14

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
98.17	1000.0	28.2	43.0
86.77	4447.0	25.8	45.0
95.00	5020.7	24.4	48.0
914.00	4252.6	19.8	56.0
795.00	6033.6	17.4	44.0
775.00	7643.4	18.1	53.0
730.00	9313.1	14.4	53.0
700.00	10495.3	11.6	59.0
677.00	11400.2	9.8	64.0
654.00	12245.9	9.5	62.0
550.00	14401.2	-1.7	91.0
524.00	15009.7	-4.9	95.0
510.00	15404.9	-6.6	75.0
500.00	15915.9	-6.9	71.0
500.00	16433.3	-7.6	48.0
484.00	20178.6	-9.1	47.0
474.00	20672.1	-10.2	70.0
460.00	21001.1	-10.2	58.0
447.00	22264.6	-11.4	35.0
400.00	25041.0	-17.3	32.0

STATION ALTITUDE 3099.00 FEET MSL  
 2 JULY 64  
 ASCENSION NO. 350 1130 MDT

UPPER AIR DATA  
 1940020750  
 WHITE SANDS

GEOMETRIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

TABLE 15

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REF. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3000.0	881.1	28.2	43.0	1011.4	678.7	180.0	9.0	1.000294
4000.0	857.8	28.1	43.0	1011.2	678.6	180.0	8.0	1.000294
4500.0	845.7	25.7	45.3	1007.7	675.7	179.5	7.8	1.000287
5000.0	837.0	24.5	47.8	982.4	674.3	179.0	7.6	1.000283
5500.0	826.1	22.6	51.1	978.5	672.1	179.3	7.4	1.000279
6000.0	821.6	20.8	54.3	967.0	669.9	177.7	7.2	1.000274
6500.0	807.3	18.9	58.0	957.1	667.8	177.0	7.0	1.000271
7000.0	793.1	17.5	63.0	945.0	666.1	193.1	6.8	1.000267
7500.0	779.2	18.0	65.2	927.3	666.5	209.7	7.1	1.000258
8000.0	745.4	17.3	53.0	913.2	665.7	225.3	7.2	1.000251
8500.0	751.8	16.2	53.0	900.7	664.3	240.8	7.5	1.000245
9000.0	739.5	15.1	53.0	889.4	663.0	250.5	7.8	1.000239
9500.0	725.4	14.0	54.0	874.2	661.6	258.7	8.2	1.000235
10000.0	712.4	12.8	56.5	864.2	660.2	270.7	8.6	1.000231
10500.0	699.6	11.6	59.1	852.3	658.8	281.5	9.3	1.000228
11000.0	697.0	10.0	61.8	841.4	657.0	292.5	9.7	1.000223
11500.0	676.5	8.8	63.8	830.1	655.6	302.9	10.1	1.000219
12000.0	662.3	8.6	62.6	815.6	655.2	312.0	9.9	1.000215
12500.0	650.1	7.9	63.7	802.6	654.4	323.2	10.0	1.000211
13000.0	638.0	6.7	67.2	791.2	653.0	334.4	9.8	1.000208
13500.0	626.2	5.5	70.6	770.0	651.6	345.8	9.8	1.000205
14000.0	614.6	4.3	74.0	769.8	650.1	356.8	9.4	1.000202
14500.0	603.2	3.1	77.4	757.2	648.7	371.1	9.2	1.000198
15000.0	592.0	1.9	90.8	747.2	647.3	380.7	10.0	1.000195
15500.0	581.1	.7	84.2	734.4	645.8	401.2	10.6	1.000191
16000.0	570.3	-.5	97.6	724.2	644.6	451.2	10.8	1.000188
16500.0	559.7	-1.7	91.0	714.0	642.0	471.1	9.8	1.000185
17000.0	549.1	-2.7	92.3	705.1	641.7	491.5	9.4	1.000181
17500.0	538.6	-3.7	93.5	694.3	640.4	541.8	5.6	1.000177
18000.0	528.4	-4.7	94.8	683.8	639.2	661.2	5.0	1.000174
18500.0	518.3	-5.6	95.0	674.0	636.7	781.6	4.0	1.000166
19000.0	508.3	-6.9	91.1	664.8	636.3	931.0	3.2	1.000162
19500.0	498.5	-7.8	87.9	653.2	635.2	781.8	2.5	1.000158
20000.0	488.8	-8.8	67.2	647.2	633.9	341.4	1.4	1.000155
20500.0	479.3	-9.8	49.0	641.2	632.2	200.6	1.0	1.000149
21000.0	470.0	-10.2	40.6	621.8	632.2	257.0	5.0	1.000144
21500.0	460.8	-10.6	49.0	610.8	631.6	231.0	4.5	1.000139
22000.0	451.8	-11.1	39.0	600.2	630.9	230.7	6.7	1.000136
22500.0	442.0	-11.9	34.7	590.0	629.0	238.5	6.9	1.000134
23000.0	434.1	-12.0	34.2	580.0	628.6	238.5	6.9	1.000134

UPPER AIR DATA  
 104000150  
 WHITE SANDS

STATION ALTITUDE 769.0 FEE - WSL  
 5 JULY 54  
 ASCENSION NO. 150

GEODETIC COORDINATES  
 37.40047 LAT DEG  
 106.37037 LON DEG

TABLE 15 Cont'd

GEOMETRIC ALTITUDE WSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE POINT CENTIGRADE	REF. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIR. OF WIND DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	475.5	-14.0	-26.6	73.7	571.7	627.3			1.000131
24000.0	477.0	-15.1	-27.7	74.1	569.7	626.0			1.000129
24500.0	478.8	-16.2	-28.8	72.6	557.8	624.7			1.000127
25000.0	479.7	-17.2	-29.9	72.0	545.1	623.4			1.000124

MANDATORY LEVELS  
 194000150  
 WHITE SANDS

STATION ALTITUDE 1000.00 FEET MSL  
 2 JULY 84 1130 MDT  
 ASPENSTON NC. 350

GEODETIC COORDINATES  
 32.60047 LAT DEG  
 106.87033 LON DEG

TABLE 16

PRESSURE GEOPOTENTIAL MILLIBARS	TEMPERATURE ATP DEGREES CENTIGRADE	TEMPERATURE NEUMPOINT PERCENT	WIND DATA DIRECTION DEGRES(TN)	SPEED KNOTS	REL. HUM. PERCENT
950.0	24.6	12.7	179.0	7.6	48.
900.0	19.0	10.4	184.6	6.8	62.
750.0	14.1	6.5	242.9	7.6	53.
700.0	11.6	3.0	281.1	9.2	59.
650.0	7.0	1.5	323.2	10.0	64.
600.0	7.7	-0.4	19.1	9.4	78.
550.0	-2.6	-3.7	49.3	8.5	92.
500.0	-7.6	-17.5	91.9	2.6	48.
450.0	-11.2	-22.7	241.4	6.5	38.
400.0	-17.3	-30.0			32.

STATION ALTITUDE 1997.10 FEET MSL  
 7 JULY 94  
 ASCENSION NO. 176

SIGNIFICANT LEVEL DATA  
 1R470A012A  
 S W P

1130 MDT

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LONG DEG

TABLE 17

PRECIPITATION MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE ATR DEGREES CENTIGRADE	REL. HUM. PERCENT
881.7	1997.3	29.1	15.2
875.4	4202.0	25.9	12.7
850.0	5040.0	22.8	11.5
785.1	7202.2	16.7	9.6
754.0	8350.7	16.3	7.8
700.0	10480.0	12.0	4.5
671.0	11649.5	9.2	2.1
598.4	14775.8	2.2	-1.8
577.4	15680.9	-0.7	-1.8
500.0	19479.6	-6.9	-7.2
477.0	20676.7	-8.6	-9.0
471.5	20871.7	-10.7	-12.2
465.3	21266.3	-11.7	-19.3
449.0	22177.3	-12.7	-20.9
441.0	22562.9	-13.9	-26.3
410.5	23855.0	-17.1	-33.2
400.0	25076.8	-18.5	-30.7
			63.0
			64.0
			49.0
			67.0
			57.0
			60.0
			61.0
			75.0
			89.0
			98.0
			97.0
			89.0
			53.0
			50.0
			34.0
			23.0
			33.0

STATION ALTITUDE 1097.10 FEET "SL  
 7 JULY 64  
 ASCENSION NO. 126

UPPER AIR DATA  
 1840040126  
 S W R  
 TABLE 18

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE SIP DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRFCTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3097.3	881.3	29.1	15.2	43.0	1008.2	679.8	120.0	8.0	1.000297
4000.0	841.2	29.1	15.2	43.0	1008.2	679.8	120.0	8.0	1.000297
4500.0	815.1	26.8	12.3	45.8	1006.3	674.6	136.7	7.3	1.000286
5000.0	791.2	23.0	11.6	48.8	995.4	672.4	155.0	7.3	1.000281
5500.0	766.3	21.6	11.2	51.9	987.7	670.8	171.5	8.0	1.000277
6000.0	741.7	20.2	10.9	55.0	979.0	669.3	182.0	8.8	1.000274
6500.0	717.4	18.8	10.4	58.1	970.5	667.7	184.7	8.6	1.000270
7000.0	693.2	17.5	9.9	61.2	965.2	666.1	194.5	7.9	1.000266
7500.0	679.3	16.6	9.3	61.8	961.6	665.1	212.2	7.5	1.000260
8000.0	665.5	16.4	8.4	59.0	955.9	664.8	231.2	7.7	1.000254
8500.0	651.9	16.0	7.5	57.2	951.2	664.2	249.0	8.6	1.000248
9000.0	638.5	15.0	6.8	57.9	948.4	663.0	260.0	8.0	1.000243
9500.0	625.4	14.0	6.0	58.6	945.7	661.8	272.5	9.5	1.000238
10000.0	612.4	13.0	5.2	59.3	943.2	660.5	283.5	10.0	1.000233
10500.0	599.7	12.0	4.5	60.0	941.0	659.3	292.0	10.7	1.000229
11000.0	587.1	10.8	3.4	60.4	939.4	657.9	300.0	10.5	1.000224
11500.0	574.7	9.6	2.4	60.9	938.0	656.6	307.6	10.5	1.000219
12000.0	562.3	8.4	1.7	62.6	936.3	655.0	318.0	10.3	1.000215
12500.0	550.2	7.3	1.1	64.0	934.6	653.6	328.7	10.3	1.000211
13000.0	538.2	6.1	.5	67.1	933.1	652.3	337.7	10.1	1.000208
13500.0	526.5	5.0	-.1	69.4	931.8	650.9	347.8	10.0	1.000204
14000.0	515.0	3.9	-.8	71.7	930.4	649.5	4.4	9.6	1.000200
14500.0	503.6	2.7	-1.5	74.0	929.7	648.2	21.0	9.8	1.000197
15000.0	492.4	1.5	-1.7	79.0	928.8	646.8	49.1	10.4	1.000194
15500.0	481.4	.3	-1.7	86.3	928.2	645.3	52.0	11.1	1.000192
16000.0	470.4	-.8	-2.2	89.8	927.8	644.1	57.8	10.4	1.000188
16500.0	459.5	-1.7	-2.9	91.0	927.4	643.0	61.7	9.5	1.000185
17000.0	448.9	-2.6	-3.6	92.2	927.0	641.9	62.7	8.3	1.000181
17500.0	438.4	-3.5	-4.4	93.4	926.3	640.8	63.2	7.2	1.000178
18000.0	428.2	-4.3	-5.1	94.6	925.5	639.7	62.7	6.6	1.000174
18500.0	418.2	-5.2	-5.8	95.8	924.8	638.6	65.0	5.7	1.000171
19000.0	408.3	-6.1	-6.5	97.0	924.3	637.5	76.2	5.3	1.000167
19500.0	408.6	-7.0	-7.3	97.5	923.9	636.4	84.2	4.5	1.000164
20000.0	409.0	-7.7	-8.0	97.5	923.0	635.5	84.4	2.6	1.000161
20500.0	409.6	-8.4	-8.9	97.1	922.5	634.7	75.4	.2	1.000157
21000.0	410.2	-10.9	-13.4	91.7	922.6	631.4	267.4	3.4	1.000151
21500.0	411.0	-12.0	-19.8	52.2	914.3	629.9	264.1	6.4	1.000144
22000.0	411.0	-12.6	-20.7	50.4	907.4	629.2	254.1	7.4	1.000141
22500.0	413.0	-13.7	-25.5	36.2	894.5	627.7	248.7	8.4	1.000137
23000.0	414.2	-15.0	-28.5	30.3	885.4	626.1	249.2	8.6	1.000134

UPPER AIR DATA  
 126004012A  
 S W R

STATION ALTITUDE 1007.10 FEET MSL  
 2 JULY 64  
 ASCENSION NO. 126

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42107 LON DEG

TABLE 18 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REFLUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	475.5	-16.2	26.0	576.8	624.6			1.000131
24000.0	477.0	-17.3	24.2	567.6	623.3			1.000129
24500.0	479.7	-17.9	28.5	557.6	622.6			1.000127
25000.0	480.4	-18.5	22.9	547.5	621.9			1.000125

STATION ALTITUDE 3907.70 FEET MSL  
 2 JULY 64  
 STATION NO. 176

MANDATORY LEVELS  
 184004012A  
 S \* R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

TABLE 19

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TM)	SPEED KNOTS
850.0	5037.	22.8	11.5	49.	154.3	7.3
800.0	5759.	18.1	10.2	60.	187.0	8.4
750.0	8564.	15.0	7.4	57.	249.9	8.6
700.0	10470.	12.0	4.5	60.	292.4	10.7
650.0	12500.	7.7	1.1	65.	328.8	10.3
600.0	14644.	2.3	-1.7	75.	27.8	9.9
550.0	16034.	-2.5	-3.5	92.	67.6	8.4
500.0	19403.	-6.0	-7.7	98.	84.3	4.8
450.0	22074.	-12.7	-20.9	50.	252.5	7.7
400.0	24085.	-18.5	-30.7	33.		

STATION ALTITUDE 4033.7 FEET MSL  
 6 JULY 64  
 ASCENSION NO. 12 1130 MDT

SIGNIFICANT LEVEL DATA

104°20'00"E  
 00°

TABLE 20

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
379.7	4033.7	28.8	15.3	44.0
375.5	4176.5	25.8	10.9	37.0
353.0	4325.1	22.9	11.9	50.0
704.3	7275.5	15.5	10.2	55.0
757.7	7577.7	17.5	9.2	58.0
748.8	9333.4	14.9	5.7	54.0
700.0	10450.5	12.1	6.3	59.0
655.1	11714.5	5.0	.1	55.0
572.9	15332.4	-5	-1.3	91.0
500.0	19248.7	-7.5	-7.3	89.0
466.4	20322.7	-9.5	-11.1	39.0
450.5	21275.2	-11.2	-17.6	51.0
450.2	22011.3	-10.8	-13.9	47.0
419.7	23815.6	-13.9	-23.0	29.0
400.0	25010.4	-15.9	-28.7	35.0

STATION ALTITUDE 4003.69 FEET MSL  
 2 JULY 54  
 ASCENSION NO. 13 1130 MDT

UPPER AIR DATA  
 1640203013  
 00H

SENETIC COORDINATES  
 32.5709 LAY DEG  
 135.29439 LON DEG

TABLE 21

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY SM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX OF REFRACTION
4003.67	579.7	28.3	15.3	44.0	1007.8	579.5	170.0	13.0	1.000297
4500.0	564.7	29.1	11.5	42.3	1004.7	674.9	171.0	12.4	1.000292
5000.0	549.9	29.9	11.9	50.0	997.9	572.4	176.0	11.8	1.000282
5500.0	535.0	21.5	11.7	53.3	990.9	570.9	176.5	11.2	1.000279
6000.0	520.4	20.1	11.3	56.5	984.2	559.3	179.2	10.5	1.000275
6500.0	505.1	18.9	10.9	59.9	975.7	557.8	182.9	10.0	1.000271
7000.0	492.0	17.3	10.5	53.2	967.6	555.2	185.0	9.1	1.000267
7500.0	478.1	17.1	9.9	52.6	962.4	555.7	185.0	9.0	1.000262
8000.0	464.4	17.4	8.9	57.7	911.8	555.9	232.0	9.4	1.000259
8500.0	450.5	16.4	7.7	56.3	898.4	564.7	247.3	9.1	1.000248
9000.0	437.5	15.0	5.5	54.9	885.5	553.5	252.2	9.5	1.000241
9500.0	424.4	14.0	5.5	54.7	877.3	552.3	271.7	9.3	1.000235
10000.0	411.5	13.2	4.9	57.0	867.3	550.8	280.5	9.1	1.000232
10500.0	398.7	12.0	4.3	59.1	860.8	559.3	289.5	8.9	1.000228
11000.0	385.0	10.5	3.5	50.6	837.9	557.9	299.9	8.6	1.000224
11500.0	373.0	9.7	2.7	51.8	824.2	555.5	308.9	9.4	1.000219
12000.0	361.3	8.5	1.9	53.1	814.5	555.2	321.6	8.4	1.000215
12500.0	349.3	7.4	1.1	54.6	808.2	653.8	335.7	8.8	1.000211
13000.0	337.5	6.4	0.3	55.7	792.0	552.4	345.7	9.2	1.000207
13500.0	325.7	5.1	-0.0	59.6	780.5	551.0	357.1	9.4	1.000204
14000.0	314.1	3.9	-0.3	74.1	750.4	569.5	360.0	9.9	1.000201
14500.0	302.7	2.7	-0.5	78.7	758.6	568.2	360.0	10.0	1.000198
15000.0	291.3	1.2	-1.0	83.2	747.5	565.3	31.9	10.3	1.000195
15500.0	280.5	0.3	-1.4	87.8	734.3	565.4	40.7	10.5	1.000192
16000.0	269.7	-0.6	-2.1	90.9	724.1	566.0	64.9	10.2	1.000189
16500.0	258.8	-1.8	-3.2	90.5	715.1	662.8	69.6	9.8	1.000184
17000.0	248.1	-3.0	-4.2	90.4	706.3	561.5	50.2	8.8	1.000180
17500.0	237.7	-3.9	-5.3	90.1	697.7	560.2	68.3	7.5	1.000175
18000.0	227.5	-4.5	-6.3	89.8	688.2	558.9	65.3	5.2	1.000172
18500.0	217.4	-5.0	-7.4	89.5	677.9	637.5	66.7	6.7	1.000169
19000.0	207.3	-7.0	-8.5	89.2	667.7	555.5	40.3	5.3	1.000165
19500.0	197.3	-3.1	-9.5	89.0	657.3	535.0	22.0	1.9	1.000161
20000.0	188.2	-9.4	-10.8	89.0	647.4	533.4	115.1	1.5	1.000158
20500.0	179.6	-13.4	-13.2	78.3	637.0	532.3	273.8	2.9	1.000153
21000.0	170.5	-13.9	-16.0	66.1	626.5	531.3	258.4	4.3	1.000148
21500.0	162.1	-11.1	-15.1	56.1	616.3	531.1	256.1	5.8	1.000144
22000.0	154.1	-10.0	-19.7	47.8	605.4	531.3	252.7	7.2	1.000140
22500.0	146.2	-11.5	-21.3	42.6	594.5	630.3	252.9	3.3	1.000137
23000.0	138.3	-12.0	-24.0	37.2	583.9	529.2	253.6	7.3	1.000134
23500.0	130.5	-13.3	-25.6	32.1	573.5	528.1	253.6	3.3	1.000131

UPPER AIR DATA  
 196000013  
 90"

STATION ALTITUDE 4203.69 FEET MSL  
 2 JULY 54  
 1130 MDT  
 ASCENSION NO. 13

GEODETIC COORDINATES  
 32.97239 LAT DEG  
 136.24439 LON DEG

TABLE 21 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE WET BULB POINT DEGREES	REL. HUM. PERCENT	DENSITY SM/CUBIC METER	SPEED SOJND KNOTS	SPEED OF WIND DATA DIRECTION DEGREES(TW)	SPEED KNOTS	INDEX OF REFRACTION
24300.0	416.6	-16.4	-23.1	29.9	550.5	525.9			1.000125
24500.0	405.3	-15.6	-26.3	32.4	552.0	525.4			1.000125
25000.0	400.2	-15.9	-25.7	34.9	548.7	523.9			1.000174

STATION ALTITUDE 4007.69 FEET MSL  
 2 JULY 84  
 ASCENSION NO. 13

MANDATORY LEVELS  
 1940210013  
 00N

SEDCATIC COORDINATES  
 32.57239 LAT DEG  
 136.22653 LON DEG

TABLE 22

MILLIBARS	PRESSURE GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TW)	SPEED KNOTS
500.0	4991.	22.9	50.	174.1	11.5
500.0	5713.	18.3	51.	156.0	9.7
750.0	8525.	15.6	55.	242.2	9.1
700.0	10441.	12.1	59.	238.5	9.0
650.0	12454.	7.5	54.	337.2	9.7
600.0	14511.	2.6	80.	27.8	10.0
550.0	16621.	-2.7	90.	50.8	9.0
500.0	18751.	-7.3	89.	30.9	2.2
450.0	22027.	-12.3	67.	252.1	7.3
400.0	26353.	-15.7	45.		

STATION ALTITUDE 1000.00 FEET MSL  
 2 JULY 64  
 ASCENSION NO. 14C

SIGNIFICANT LEVEL DATA  
 1040000700  
 WHITE SANDS

1319 MDT

TABLE 23

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
98.7	1000.0	14.3	36.0
94.4	4354.7	12.7	37.0
95.0	5010.0	12.2	47.0
79.1	4800.1	10.2	51.0
77.7	7509.4	10.0	57.0
76.7	8104.4	9.9	58.0
73.7	9033.6	7.2	57.0
70.0	10402.8	5.9	56.0
67.4	11047.4	5.6	48.0
67.9	15386.3	5.2	48.0
60.0	14041.7	-2.4	48.0
58.0	14577.7	-2.8	47.0
55.7	17656.4	-5.1	47.0
51.1	19553.5	-7.1	46.0
50.0	19619.8	-8.5	46.0
46.7	21046.9	-12.3	45.0
43.7	21122.5	-11.1	36.0
40.0	21058.5	-11.9	28.0
		-17.3	36.0

GEOMETRIC COORDINATES  
 32.40043 LAT DEG  
 106.77033 LON DEG

STATION ALTITUDE 3065.00 FEET MSL  
 3 JULY 64  
 ASCENSION NO. 740

UPPER AIR DATA  
 10400707AN  
 WHITE SANDS

GEOMETRIC COORDINATES  
 32.40043 LAT DEG  
 105.77037 LONG DEG

TABLE 24

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE FIP DEGREES	RELHUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
3000.0	890.3	71.1	76.0	1000.0	681.0	150.0	9.0	1.000290
4000.0	890.0	71.0	76.0	1000.0	681.8	150.1	9.0	1.000290
4500.0	845.1	70.1	78.3	997.0	678.4	154.5	7.5	1.000283
5000.0	850.3	75.8	42.0	984.8	675.7	150.5	7.1	1.000280
5500.0	815.6	74.4	45.1	973.0	674.1	165.0	6.8	1.000276
6000.0	821.2	73.1	47.2	950.0	672.6	175.0	7.1	1.000272
6500.0	807.0	71.7	49.3	947.6	671.0	184.0	7.5	1.000267
7000.0	793.0	70.4	51.0	935.6	669.5	192.6	7.0	1.000263
7500.0	779.2	19.0	56.2	923.0	667.8	202.0	7.0	1.000261
8000.0	745.5	17.7	57.7	911.6	666.3	230.3	6.0	1.000256
8500.0	752.0	16.6	57.6	900.0	665.0	266.0	9.0	1.000250
9000.0	738.7	15.7	57.0	884.1	663.9	285.0	10.7	1.000244
9500.0	725.5	14.6	56.7	873.0	662.5	295.0	11.7	1.000238
10000.0	712.5	13.5	56.3	861.0	661.1	304.9	11.3	1.000232
10500.0	699.8	12.4	56.0	850.1	659.7	314.7	11.0	1.000227
11000.0	687.1	11.0	56.4	839.0	658.2	325.1	10.7	1.000223
11500.0	674.6	9.7	60.7	827.4	656.6	334.3	10.2	1.000219
12000.0	662.4	8.4	63.1	816.3	655.0	343.2	9.7	1.000215
12500.0	650.3	7.1	65.4	805.4	653.4	353.1	9.1	1.000211
13000.0	638.5	5.7	67.8	794.0	651.8	4.0	8.5	1.000207
13500.0	626.7	4.4	71.0	783.0	650.2	18.0	8.5	1.000204
14000.0	615.0	3.0	74.1	773.0	648.5	31.5	9.2	1.000201
14500.0	603.6	1.7	80.4	762.4	647.0	41.0	9.0	1.000198
15000.0	592.3	.3	84.7	751.0	645.4	50.0	10.0	1.000194
15500.0	581.2	-.8	88.0	740.0	644.0	54.0	9.7	1.000191
16000.0	570.2	-1.1	89.0	729.8	643.0	58.6	8.6	1.000188
16500.0	559.4	-2.4	84.0	719.4	642.0	49.5	7.1	1.000182
17000.0	548.6	-3.0	80.2	709.8	641.2	35.8	6.1	1.000178
17500.0	538.5	-3.4	77.0	699.4	640.0	19.6	6.0	1.000174
18000.0	529.3	-4.3	77.5	689.8	639.4	6.1	7.2	1.000170
18500.0	519.2	-5.5	79.8	679.8	638.1	355.0	6.4	1.000167
19000.0	509.2	-6.2	72.3	669.0	637.1	332.5	5.5	1.000162
19500.0	499.4	-7.0	67.6	659.3	636.1	298.0	5.8	1.000157
20000.0	489.8	-7.6	64.0	649.0	635.3	280.0	7.3	1.000153
20500.0	479.3	-8.2	65.7	639.4	634.6	260.8	9.1	1.000148
21000.0	470.1	-8.7	76.8	629.0	633.9	263.4	9.1	1.000144
21500.0	460.0	-9.5	74.3	618.6	632.9	258.6	8.0	1.000141
22000.0	451.0	-10.2	73.6	608.3	631.9	258.8	9.1	1.000138
22500.0	443.1	-11.0	70.6	598.3	631.0	250.0	7.8	1.000135
23000.0	434.6	-11.7	78.5	588.5	630.1	260.0	7.0	1.000133

UPPER AIR DATA  
 1940000760  
 WHITE SANDS

STATION ALTITUDE TOPOG. FT. MSL  
 2 JULY 64 1319 MDT  
 ASSEMBLY NO. 340

TABLE 24 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	RFL. HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIR. DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
71500.0	675.8	-17.0	-27.0	29.6	569.8	628.6	266.0	8.1	1.000171
74000.0	677.3	-14.3	-27.5	31.6	561.5	626.9			1.000129
76500.0	679.1	-15.7	-28.0	33.7	553.7	625.2			1.000127
79000.0	680.9	-17.1	-28.7	35.8	545.3	623.5			1.000125

STATION ALTITUDE 2950.00 FEET MSL  
 7 JULY 62  
 ASCENSTON NC. 74C 1319 MDT

MANDATORY LEVELS  
 1940020760  
 WHITE SANDS  
 TABLE 25

MANDATORY LEVELS  
 1940020760  
 WHITE SANDS  
 TABLE 25

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AT DEGREES CENTIGRADE	TEMPERATURE NEPPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DATA		
					DIRECTION DEGREES(TN)	SPEED KNOTS	SPEED
950.0	5007.	25.7	12.2	43.	150.6	7.1	
900.0	6746.	21.4	10.4	50.	189.5	7.7	
850.0	8566.	16.5	8.1	58.	260.0	8.3	
800.0	10487.	12.6	7.0	56.	314.5	11.0	
750.0	12505.	7.0	1.7	65.	353.6	9.1	
700.0	14646.	1.3	-1.5	82.	44.8	10.1	
650.0	16029.	-2.0	-5.8	81.	38.0	6.1	
600.0	17977.	-6.0	-12.7	65.	307.8	5.6	
550.0	20774.	-10.6	-23.9	32.	259.8	7.9	
500.0	25714.	-17.7	-29.7	16.			

STATION ALTITUDE 2000.0 FEET ASL  
 - JULY 34  
 ASCENSION NO. 127 1319 MDT

SIGNIFICANT LEVEL DATA

1P40CAJ127

S W P

TABLE 26

GEODETIC COORDINATES  
 32.63036 LAT DEG  
 106.62307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
80.2	3927.3	30.0	16.9	43.0
67.8	4311.3	27.3	12.2	39.0
50.0	5013.9	26.4	11.7	40.0
70.3	7465.9	19.5	10.0	54.0
70.0	7721.7	13.9	9.0	53.0
70.0	10502.1	12.5	5.1	50.0
65.5	11620.3	9.6	1.5	57.0
591.8	15068.9	1.0	-1.1	95.0
556.2	16654.2	-2.2	-4.2	96.0
555.7	18152.1	-4.3	-7.3	98.0
500.0	19447.6	-5.4	-11.5	97.0
484.8	20261.2	-7.0	-15.6	46.0
453.2	21955.2	-11.0	-25.9	28.0
443.2	22523.0	-10.1	-28.7	20.0
407.7	24615.7	-16.0	-28.8	12.0
300.0	25088.8	-16.7	-25.6	45.0

STATION ALTITUDE 2997.0 FEET MSL  
 JULY 54  
 ASCENSION NO. 127

UPPER AIR DATA  
 1640060127  
 C U D

SEDDETIC COORDINATES  
 32.46034 LAT DEG  
 136.62307 LON DEG

TABLE 27

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY ALTITUDE FT	SPEED OF SOUND KNOTS	DIRECTION OF WIND DEGREES (TV)	SPEED OF WIND KNOTS	INDEX OF REFRACTION
3097.0	293.2	10.0	40.0	1004.1	590.8	180.0	8.0	1.000204
3000.0	303.1	10.0	40.0	1004.1	590.8	180.0	8.0	1.000204
2900.0	313.0	10.1	38.5	994.5	677.5	184.7	8.6	1.000281
2800.0	322.8	11.7	40.0	982.8	675.4	188.7	9.2	1.000277
2700.0	332.7	11.5	42.8	970.3	674.8	192.2	9.9	1.000274
2600.0	342.6	11.2	45.5	958.1	673.2	199.3	9.1	1.000271
2500.0	352.5	10.8	48.5	944.1	671.5	204.8	8.2	1.000267
2400.0	362.4	10.4	51.3	928.2	670.0	205.4	7.4	1.000264
2300.0	372.3	9.9	54.2	922.5	668.3	218.5	5.4	1.000260
2200.0	382.2	9.6	57.3	910.1	666.9	239.2	6.1	1.000255
2100.0	392.1	9.2	50.4	895.0	665.4	256.8	8.4	1.000253
2000.0	402.0	8.7	53.5	881.1	663.9	280.5	11.3	1.000249
1900.0	411.9	8.2	56.6	874.3	662.5	290.0	12.6	1.000245
1800.0	421.8	7.7	55.1	862.1	661.2	299.2	13.3	1.000242
1700.0	431.7	7.1	50.0	849.4	660.1	316.8	11.7	1.000239
1600.0	441.6	6.5	58.9	837.5	658.3	337.0	13.2	1.000234
1500.0	451.5	5.9	57.6	825.3	657.4	359.5	9.6	1.000229
1400.0	461.4	5.2	56.0	814.3	656.0	371.6	9.8	1.000224
1300.0	471.3	4.5	52.5	803.2	654.4	384.0	10.4	1.000221
1200.0	481.2	3.8	57.2	792.2	652.8	397.1	11.0	1.000218
1100.0	491.1	3.1	71.8	781.5	651.2	410.4	11.4	1.000215
1000.0	501.0	2.4	76.6	770.3	649.6	424.7	11.4	1.000212
900.0	510.9	1.7	81.0	760.5	648.0	439.8	10.8	1.000209
800.0	520.8	1.0	85.5	750.3	646.4	454.8	10.4	1.000205
700.0	530.7	0.3	86.0	739.1	645.1	469.8	9.4	1.000199
600.0	540.6	-0.4	86.0	728.1	643.9	484.8	8.3	1.000197
500.0	550.5	-1.1	86.0	717.1	642.6	499.7	5.7	1.000193
400.0	560.4	-1.7	81.5	706.7	641.5	514.7	5.8	1.000193
300.0	570.3	-2.4	75.8	696.3	640.7	529.7	5.0	1.000193
200.0	580.2	-3.1	69.8	683.1	639.8	544.7	5.4	1.000189
100.0	590.1	-3.9	57.7	672.1	638.8	559.7	5.4	1.000185
0.0	600.0	-4.7	57.3	661.3	637.3	574.7	5.1	1.000185
	610.0	-5.5	55.6	650.5	636.3	589.7	7.0	1.000183
	620.0	-6.3	52.4	639.2	635.3	604.7	9.7	1.000179
	630.0	-7.1	48.3	628.3	635.2	619.7	9.7	1.000174
	640.0	-7.9	43.0	617.2	633.3	634.7	9.7	1.000164
	650.0	-8.7	38.0	606.2	633.3	649.7	9.7	1.000144
	660.0	-9.5	32.6	595.2	632.3	664.7	7.9	1.000124
	670.0	-10.3	27.4	584.2	631.0	679.7	8.3	1.000104
	680.0	-11.1	20.3	573.3	629.5	694.7	8.3	1.000084
	690.0	-11.9	12.7	562.5	628.0	709.7	8.8	1.000064

UPPER AIR DATA  
 1940060127  
 S V R

STATION ALTITUDE 127.70 FEET MSL  
 1 JULY 64  
 ASCENSION NO. 127

1318 MDT

GEODETIC COORDINATES  
 52.60034 LAT DEG  
 106.42307 LON DEG

TABLE 27 Cont'd

BLOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOJMS KNOTS	WIND DATA DIRECTION DEGREES(TW)	SPEED KNOTS	INDEX OF REFRACTION
235 0.0	429.3	-12.9	25.5	570.2	528.7	772.8	9.1	1.000170
240 0.0	417.9	-14.3	26.5	567.0	527.0			1.000125
245 0.0	409.6	-15.7	27.3	557.9	525.3			1.000127
250 0.0	401.4	-16.0	42.5	544.7	624.2			1.000125

STATION ALTITUDE 3927.70 FEET MSL  
 2 JULY 84  
 ASCENSION NO. 177

WIND DATA  
 1940060127

GEODETIC COORDINATES  
 52.68336 LAT DEG  
 136.42337 LON DEG

TABLE 28

PRESSURE GEOPOTENTIAL MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES (IN)	SPEED KNOTS
850.0	25.4	11.7	40.	162.8	9.3
800.0	21.5	10.6	50.	205.1	7.8
750.0	15.7	9.1	51.	269.6	3.9
700.0	12.6	8.1	60.	314.7	11.7
650.0	7.2	1.2	53.	19.1	13.4
600.0	2.0	-0.6	83.	42.9	13.5
550.0	-2.5	-5.3	82.	37.4	5.9
500.0	-5.6	-11.5	67.	315.5	5.9
450.0	-10.7	-26.6	25.	259.6	7.9
400.0	-16.7	-25.9	45.		

GEODETIC COORDINATES  
 32.57209 LAT DEG  
 105.29639 LON DEG

SIGNIFICANT LEVEL DATA  
 1840200116  
 70M

STATION ALTITUDE 4073.7 FEET MSL  
 1 JULY 84  
 RECENSION NO. 1- 1319 MDT

TABLE 29

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
878.9	4073.7	11.7	14.4	35.0
852.6	4559.2	27.5	11.7	53.0
850.0	4979.7	25.2	11.5	40.0
787.6	4045.6	17.2	8.6	57.0
725.2	3480.7	14.3	8.0	56.0
700.0	17451.3	13.1	3.2	51.0
627.2	13458.4	5.4	-0.4	50.0
496.9	14276.9	1.8	-0.3	35.0
579.2	15581.0	0.2	-2.0	35.0
568.6	16309.5	-0.9	-7.9	59.0
540.2	17410.6	-3.0	-5.3	56.0
500.0	19413.1	-5.9	-10.9	73.0
478.6	20547.5	-7.0	-16.4	67.0
451.4	22007.5	-9.3	-21.5	55.0
430.6	23226.8	-11.7	-26.1	29.0
400.0	25067.1	-15.8	-28.0	37.0

STATION ALTITUDE 203.67 FEET MSL  
 JULY 24 1319 MDT  
 ASCENSION NO. 1

UPPER AIR DATA  
 19620014  
 90°

SENETIC COORDINATES  
 32.57239 LAT DEG  
 105.27639 LON DEG

TABLE 30

GEOMETRIC ALTITUDE MIL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TV)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4500.0	878.9	71.7	75.0	977.3	532.5	130.7	12.0	1.000289
4500.0	866.1	71.9	77.7	977.5	578.1	181.5	11.2	1.000291
4500.0	854.6	72.1	80.1	982.7	676.0	153.2	10.6	1.000277
4500.0	844.6	72.7	82.9	970.6	574.6	135.7	9.6	1.000273
4500.0	835.1	73.2	85.7	958.3	572.7	187.6	8.8	1.000270
4500.0	826.1	73.7	88.4	946.4	571.0	190.5	8.1	1.000265
4500.0	817.9	74.3	91.2	934.7	569.3	232.7	5.8	1.000262
4500.0	810.0	74.9	94.0	923.2	567.5	226.8	6.0	1.000255
4500.0	802.0	75.5	96.7	911.9	565.8	268.0	5.1	1.000256
4500.0	794.1	76.3	99.8	899.7	564.5	269.5	5.5	1.000251
4500.0	787.2	77.0	103.0	886.1	563.5	235.1	7.9	1.000247
4500.0	780.7	77.7	106.2	873.6	562.3	235.5	7.5	1.000244
4500.0	774.7	78.4	109.4	860.3	561.4	237.9	7.2	1.000236
4500.0	769.0	79.0	112.6	847.5	560.4	223.7	7.2	1.000224
4500.0	763.3	79.7	115.8	835.9	558.9	239.0	7.7	1.000221
4500.0	757.9	80.4	119.0	824.5	557.4	249.2	8.4	1.000217
4500.0	752.6	81.1	122.2	813.3	555.8	257.6	9.2	1.000214
4500.0	747.6	81.8	125.4	802.3	554.3	25	9.1	1.000210
4500.0	742.8	82.5	128.6	791.6	552.8	7.5	9.1	1.000206
4500.0	738.2	83.2	131.8	780.7	551.2	15.3	8.7	1.000203
4500.0	733.9	83.9	135.0	770.5	549.8	27.8	8.6	1.000199
4500.0	729.7	84.6	138.2	760.3	548.3	39.4	8.7	1.000194
4500.0	725.7	85.3	141.4	750.1	546.9	51.1	9.1	1.000189
4500.0	721.9	86.0	144.6	740.3	545.4	55.7	9.1	1.000184
4500.0	718.2	86.7	147.8	730.2	544.2	53.7	8.2	1.000177
4500.0	714.7	87.4	151.0	720.2	543.1	66.0	7.0	1.000172
4500.0	711.4	88.1	154.2	710.7	542.1	27.3	5.0	1.000177
4500.0	708.2	88.8	157.4	702.7	541.0	8.6	5.4	1.000175
4500.0	705.1	89.5	160.6	695.1	539.9	152.5	6.9	1.000171
4500.0	702.1	90.2	163.8	688.5	538.5	338.1	5.0	1.000167
4500.0	699.2	90.9	167.0	682.3	537.3	228.1	5.5	1.000163
4500.0	696.4	91.6	170.2	676.3	535.3	114.9	5.6	1.000159
4500.0	693.7	92.3	173.4	670.5	533.0	133.2	3.2	1.000154
4500.0	691.1	93.0	176.6	664.5	530.0	222.9	9.0	1.000149
4500.0	688.6	93.7	179.8	658.5	525.1	230.5	9.4	1.000145
4500.0	686.2	94.4	183.0	652.1	523.1	271.7	9.8	1.000142
4500.0	683.9	95.1	186.2	646.1	521.1	263.6	9.8	1.000137
4500.0	681.7	95.8	189.4	640.2	518.9	250.3	10.1	1.000135
4500.0	679.6	96.5	192.6	634.3	517.5	255.4	10.8	1.000133
4500.0	677.6	97.2	195.8	628.3	515.2	259.3	10.8	1.000131
4500.0	675.7	97.9	199.0	622.3	512.2	259.3	10.2	1.000129

UPPER AIR DATA  
 1946200116  
 90M

STATION ALTITUDE 603.6 FEET MSL  
 4 JULY 54  
 1319 MDT  
 ASCENSION MC. 1.

GEODETIC COORDINATES  
 52.57209 LAT DEG  
 106.27459 LON DEG

TABLE 30 Cont'd

GEOGRAPHIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE FIP DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(T)	SPEED KNOTS	
24000.0	417.5	-15.8	32.4	560.5	527.3			1.000129
24500.0	409.2	-15.6	34.5	552.8	525.8			1.000127
25000.0	401.1	-15.5	36.7	544.3	524.2			1.000125

MANDATORY LEVELS  
 1840200014  
 03N  
 1319 MDT  
 2 JULY 54  
 ASCENSION NO. 14

MANDATORY LEVELS  
 1840200014  
 03N

STATION ALTITUDE 4000 FEET MSL  
 2 JULY 54  
 ASCENSION NO. 14

TABLE 31

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA		
				DIRECTION DEGREES(TN)	SPEED KNOTS	
950.0	4975.	25.2	40.	137.1	10.5	
930.0	5715.	21.1	50.	174.3	7.5	
910.0	5535.	15.2	50.	274.0	5.7	
890.0	10457.	13.1	51.	322.3	7.2	
870.0	12457.	7.9	51.	2.3	7.1	
850.0	14563.	2.6	33.	42.2	8.9	
830.0	15213.	-2.1	73.	37.1	5.1	
810.0	19756.	-5.9	73.	317.5	5.3	
790.0	22077.	-9.5	35.	251.9	9.3	
770.0	25025.	-15.4	37.			

END

FILMED

9-84

END