

AD-A131 977

19320C MLRS MISSILE NUMBER FV3-19 FV3-17 FV3-09 ROUND
NUMBER 464/AT2-34 4. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM. D C KELLER 09 JUL 83
ERADCOM/ASL-DR-1307 F/G 4/2

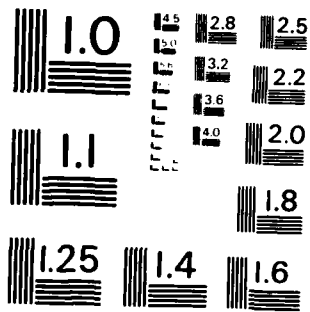
1/1

UNCLASSIFIED

NL



END
DATE
FORMED
DTIC



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

JUL 83
DR 1307

AD

(12)

METEOROLOGICAL DATA REPORT

19320C MLRS
Missile Number FV3-19,
FV3-17, FV3-09
Round Number 464/AT2-34,
465/AT2-35, 466/AT2-36
9 JUL 83

by

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

S
AUG 30 1983
H

AD A 131 977

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

Copy available to DTIC does not
permit fully legible reproduction

DTIC FILE COPY

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

83 08 30 05 5

DISCLAIMER NOTICE

THIS DOCUMENT IS BEST QUALITY PRACTICABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1307	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19320C MLRS Missile Number FV3-19, FV3-17, FV3-09 Round Number 464/AT2-34, 465/AT2-35, 466/AT2-36		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) White Sands Meteorological Team		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s) DA Task 1F665702D127-02
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE 9 July 1983
		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
16. DISTRIBUTION STATEMENT (of this Report)		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		Accession For
Approved for public release; distribution unlimited		NTIS GRA&I <input checked="" type="checkbox"/>
		DTIC TAB <input type="checkbox"/>
		Unannounced <input type="checkbox"/>
		Justification
18. SUPPLEMENTARY NOTES		By _____
		Distribution/
		Availability Codes
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		Avail and/or
		Dist Special
		A
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
<p>Meteorological data gathered for the launching of the 19320C MLRS, Missile Number FV3-19, FV3-17, FV3-09, Round Number 464/AT2-34, 465/AT2-35, 466/AT2-36 are presented in tabular form.</p>		

DISPOSITION INSTRUCTIONS

OVERSE OF
COIER

Destroy this report when it is no longer needed. Do not return to the originator.

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services referenced herein.

CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
GENERAL AREA MAP -----	2
LAUNCH AREA DIAGRAM -----	3
 TABLES:	
1. Surface Observations taken at 1000 MDT at LC-33 -----	4
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, taken at 1000 MDT -----	5
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1000 MDT -----	5
4. Launch and Impact Pilot-Balloon Measured Wind Data ---	6
5. Aiming and T-Time Computer Met Messages -----	7
6. LC-37 Significant Level Data at 0810 MDT -----	8
7. LC-37 Upper Air Data at 0810 MDT -----	9
8. LC-37 Mandatory Levels at 0810 MDT -----	10
9. WSD Significant Level Data at 0830 MDT -----	11
10. WSD Upper Air Data at 0830 MDT -----	12
11. WSD Mandatory Levels at 0830 MDT -----	13
12. WSD Significant Level Data at 1010 MDT -----	14
13. WSD Upper Air Data at 1010 MDT -----	15
14. WSK Mandatory Levels at 1010 MDT -----	16

INTRODUCTION

19320C MLRS, Missile Numbers FV3-19, FV3-17, and FV3-09, Round Numbers 464/AT2-34, 465/AT2-35 and 466/AT2-36, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1000:00, 1000:05, and 1000:10 MDT, 9 July 82. The scheduled launch times were 1000, 1010 and 1020 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 ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

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

SITE AND ALTITUDE

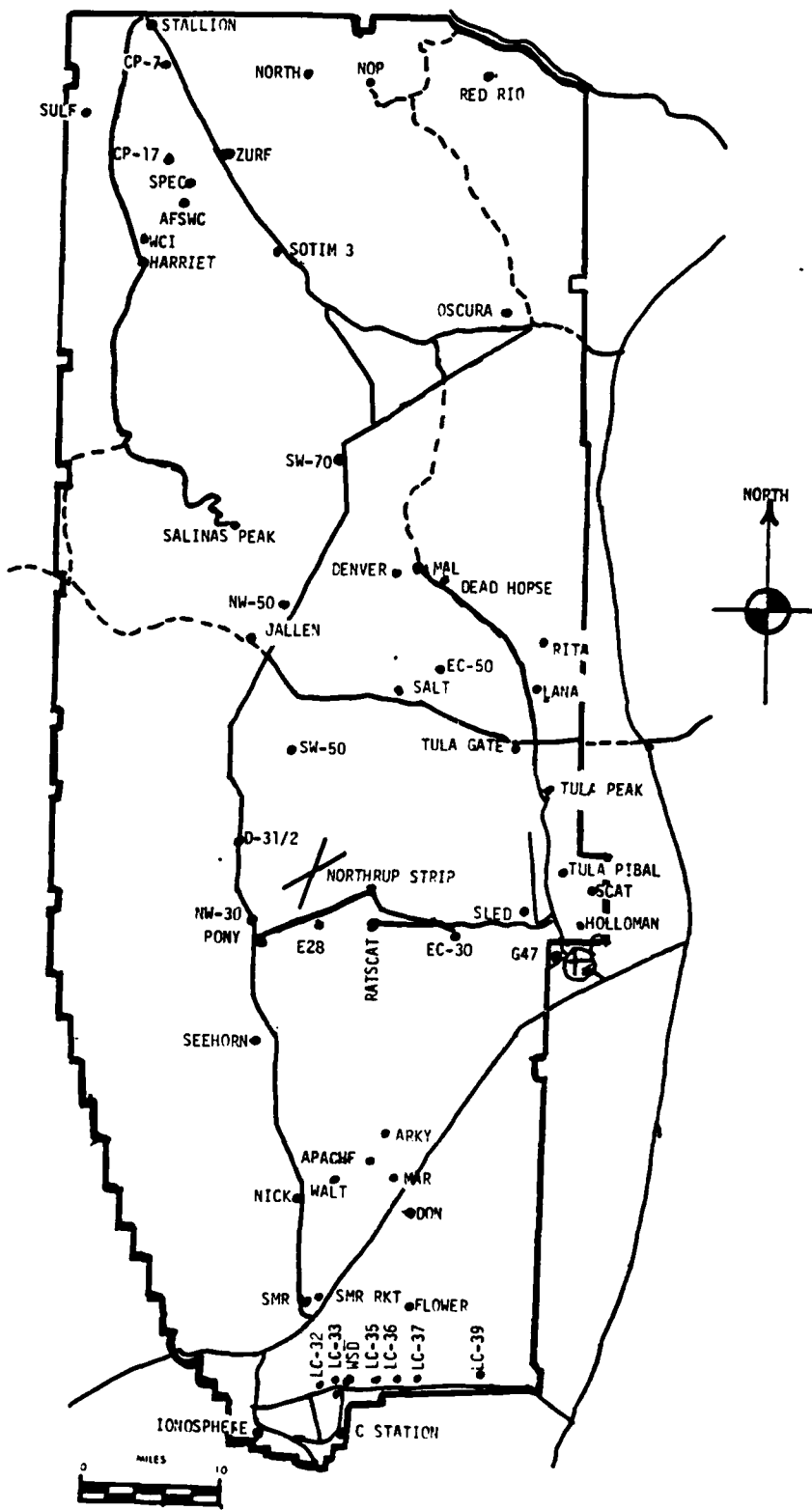
LC-33	1350 meters
DON	2000 meters

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

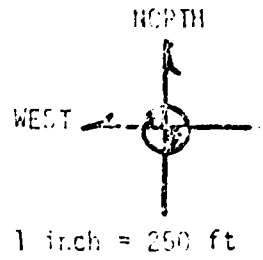
SITE AND TIME

LC-37	0810 MDT
WSD	0830 MDT
WSD	1010 MDT

WSMR METEOROLOGICAL SITES



LC-33
Launch Area



Y185,500

LINE OF FIRE

Anemometer Pole #3

Y186,000

MET
Tower

T-9 Radar

L-579A

Anemometer Pole #2

L-519A

L-351A

Anemometer Pole #1

L-350A

Y185,500

X485,000

X495,500

X486,000

Y135,000

L-000

4

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 X485,874.29 Y186.012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	119	05	T-30	177	02	T-30	175	06
T-20	118	05	T-20	180	01	T-20	182	05
T-10	131	05	T-10	188	01	T-10	183	05
T0.0	134	03	T0.0	188	01	T0.0	182	04
T+10	132	03	T+10	186	00	T+10	189	05

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

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	136	02	T-30	152	05
T-20	141	03	T-20	131	03
T-10	125	06	T-10	138	05
T0.0	123	05	T0.0	135	07
T+10	136	04	T+10	138	06

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	151	03	T-30	147	03
T-20	101	02	T-20	139	02
T-10	136	05	T-10	139	03
T0.0	138	06	T0.0	158	05
T+10	134	06	T+10	139	04

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 9 July 83

SITE: LC-33

TIME: 1000 MDT

WSTM COORDINATES:

X= 424,837.34

Y= 184,124.44

H= 3,975.57

SITE: DON

TIME 1000 MDT

WSTM COORDINATES:

X= 511,988.37

Y= 247,396.36

H= 3,996.83

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	120	05
150	174	05
210	163	04
270	150	04
330	147	04
390	152	05
500	156	05
650	170	05
800	171	10
950	177	09
1150	175	05
1350	147	06
1550	END OF DATA	
1750		
2000		

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

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	S K	Q S
SURFACE	160		
150	180	10	
210	180	10	
270	178	08	
330	174	07	
390	172	06	
500	168	05	
650	164	06	
800	161	09	
950	166	11	
1150	172	12	
1350	168	11	
1550	155	12	
1750	151	10	
2000	162	08	

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

AIMING AND T-TIME COMPUTER MET MESSAGES

9 July 1983

LC-37 0810 MDT
METCML324063
091420124882
00213008 29950882
01214012 29900872
02271005 29780847
03327007 29490809
04308006 29190763
05348005 28780720
06059002 28400678
07089018 28050638
08089022 27570600
09148018 27310564

WSD 0830 MDT
METCML324064
091450122884
00213002 29980884
01200006 29950874
02236005 29770849
03290007 29430811
04325008 29140765
05360007 28770721
06325001 28340680
07073014 28000640
08087020 27600602
09145017 27330566

WSD 1010 MDT
METCML324064
091620122884
00302008 30420884
01280005 30270874
02257004 29950849
03257006 29520811
04271006 29200766
05343003 28800722
06427001 28360680
07078017 28010640
08112020 27640602
09213010 27470566

STATION ALTITUDE 4051.77 FEET MSL
 4 JULY 63
 ASCENSION NO. 99

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

SIGNIFICANT LEVEL DATA
 10001RUM99
 LC-37

PRESSURE MILLIBARS	GLOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	WFWPOINT CENTIGRADE	
831.5	4051.4	24.5	14.3	53.0
700.0	5097.2	22.8	12.4	52.0
659.2	5453.4	22.4	12.1	52.0
797.6	7158.8	18.4	10.7	51.0
751.8	8204.0	17.7	9.2	52.0
700.0	10556.1	11.1	5.4	63.0
647.2	12907.2	7.1	-0.6	56.0
594.2	14985.7	.6	-2.3	78.0
529.9	15177.8	.6	-4.0	71.0
572.3	15953.3	-0.4	-18.0	25.0
547.3	17460.3	-0.4	-20.6	20.0
507.0	19510.4	-4.7	-73.6	21.0

STATION ALTITUDE 4051.77 FEET MSL
 9 JULY 83
 ASCENSION NO. 95

UPPER AIR DATA
 100170000
 LC-37

GEOMETRIC ALTITUDE 4051.77 FEET MSL
 0810 1100P

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

GEOMETRIC ALTITUDE	PRESSURE	TEMPERATURE	REL. HUM.	DENSITY	SPEED OF	WIND DATA	INDEX
MSL FEET	MILLIBARS	AIR DEGREES	PERCENT	GM/CUBIC	SOUND KNOTS	DIRECTION DEGREES(TN)	OF REFRACTION
		CELSIUS		MTER			
4531.4	871.5	74.5	53.0	1024.5	674.5	120.0	1.000296
4500.0	867.6	73.8	52.6	1011.3	673.6	128.4	1.000294
4000.0	852.9	73.0	52.1	996.7	672.6	141.2	1.000285
5500.0	838.1	72.3	52.2	981.9	671.8	157.8	1.000280
6000.0	823.5	71.7	54.8	968.7	670.4	175.0	1.000276
6500.0	809.1	70.0	57.5	955.7	559.4	178.5	1.000272
7000.0	795.0	68.8	60.2	942.7	557.7	190.5	1.000268
7500.0	781.1	68.0	60.3	928.8	666.8	177.6	1.000263
8000.0	767.3	67.3	59.4	914.3	666.1	174.2	1.000257
8500.0	753.7	66.5	60.1	901.3	664.9	176.3	1.000252
9000.0	740.3	65.4	62.0	889.5	663.4	189.1	1.000247
9500.0	727.1	64.9	64.0	877.8	661.8	190.6	1.000242
10000.0	714.1	64.6	55.9	866.3	660.4	195.2	1.000238
10500.0	701.4	64.2	67.8	855.0	658.6	189.4	1.000233
11000.0	688.7	63.3	66.1	842.4	557.4	116.5	1.000227
11500.0	676.2	62.5	64.0	829.2	656.4	42.8	1.000221
12000.0	663.9	61.8	61.9	817.5	655.3	41.4	1.000215
12500.0	651.9	61.3	59.7	805.3	554.2	41.3	1.000210
13000.0	640.0	60.8	58.9	793.6	653.0	45.5	1.000203
13500.0	628.1	60.2	53.7	783.3	651.1	50.5	1.000202
14000.0	616.3	59.7	58.5	772.2	649.3	52.3	1.000199
14500.0	605.1	59.1	73.3	761.3	647.4	52.8	1.000196
15000.0	593.9	58.6	77.5	751.4	645.6	56.1	1.000193
15500.0	582.7	58.1	51.9	741.1	644.8	59.2	1.000181
16000.0	571.6	57.6	24.8	729.6	643.7	72.3	1.000170
16500.0	561.0	57.1	23.2	715.9	643.7	86.6	1.000165
17000.0	550.4	56.6	21.5	702.4	643.7	99.2	1.000153
17500.0	540.1	56.1	20.0	689.5	643.5	110.0	1.000150
18000.0	529.8	55.6	20.3	679.1	642.3	112.4	1.000157
18500.0	519.7	55.1	20.5	669.7	641.0	19.1	1.000154
19000.0	509.9	54.6	20.8	658.5	639.8	17.5	1.000152
19500.0	500.2	54.1	21.0	648.5	639.5	15.6	1.000149

STATION ALTITUDE 4051.37 FFLT MSL
 5 JULY 85
 ASCENSION NO. 99

MANDATORY LEVELS
 190018JJ90
 LC-37

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA		
MILLIHARS	FLFT	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIPECTION DEGREES(TN)	SPEED KNOTS	
550.0	5097.0	22.8	12.4	52.	144.0	5.0	
600.0	6119.0	19.2	11.0	59.	180.2	7.4	
750.0	8534.0	15.2	8.6	61.	176.8	5.7	
700.0	10545.0	11.1	5.4	58.	188.7	3.6	
650.0	12566.0	7.7	.7	59.	41.3	14.6	
700.0	14711.0	1.4	-2.4	75.	54.1	21.1	
750.0	16990.0	-4.4	-19.8	21.	100.1	15.0	
700.0	19482.0	-4.7	-23.6	21.			

STATION ALTITUDE 3009.00 FEET HSL
 9 JULY 65
 0830 MDT
 ASCLESI, R 110. 004

STRIKELIGHT LEVEL DATA
 1900.0544
 WHITE SANDS

GEOCLTIC COORDINATES
 32.40003 LAT DEG
 106.37033 LON DEG

PRESSURE MILLIBARS	GEOCLTIC ALTITUDE MFL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
683.0	3089.0	24.5	14.6	54.0
685.1	4047.8	25.0	12.9	47.0
656.0	5115.9	22.9	12.2	51.0
60.3	6750.5	18.4	10.7	61.0
780.5	7533.2	17.9	9.8	59.0
721.9	9714.2	13.4	6.7	64.0
706.0	10564.4	10.9	5.1	72.0
667.0	11883.7	7.8	3.5	74.0
653.7	12029.3	6.9	.8	65.0
624.7	13081.6	5.1	-1	69.0
59.3	14030.5	1.3	-6	87.0
536.1	15222.4	-6	-3.0	84.0
572.1	15987.6	-7	-13.9	56.0
568.0	16362.4	-2	-20.4	20.0
555.3	16724.4	.3	-21.2	18.0
540.7	17086.8	.1	-20.7	19.0
500.0	19512.6	-4.8	-25.4	18.0

STATION ALTITUDE 3089.00 FEET SL
 0 JULY 83 0830 MDT
 ASCENDING NO. 340

UPPER AIR DATA
 1900020344
 WHITE SANDS

GEOMETRIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

GEOMETRIC ALTITUDE (MSL FEET)	PRESSURE (MILLIBARS)	AIR TEMPERATURE (DEGREES CELSIUS)	TEMPERATURE DEWPOINT (DEGREES CELSIUS)	REL. HUM. PERCENT	DENSITY (GM/CUBIC METER)	SPEED OF SOUND (KNOTS)	WIND DIRECTION (DEGREES TRUE)	WIND SPEED (KNOTS)	INDEX OF REFRACTION
3089.0	803.9	24.5	14.0	54.0	1027.1	674.5	120.0	1.9	1.000300
4000.0	803.6	24.6	14.3	52.7	1026.6	674.0	120.3	2.0	1.000299
4500.0	803.3	24.1	12.0	48.7	1011.1	673.0	131.6	2.6	1.000288
5000.0	853.4	23.1	12.3	50.6	997.0	672.7	138.4	3.3	1.000284
5500.0	830.5	21.8	11.9	53.4	984.0	671.2	142.7	4.0	1.000280
6000.0	823.9	20.5	11.5	56.4	971.4	669.7	155.0	5.1	1.000276
6500.0	803.0	19.1	11.0	59.4	959.1	668.1	169.7	7.1	1.000272
7000.0	793.4	18.2	10.4	60.4	945.2	667.0	176.6	8.4	1.000267
7500.0	781.4	17.9	9.0	59.1	929.7	666.0	181.1	9.4	1.000262
8000.0	767.6	16.4	9.1	60.1	916.5	665.4	181.9	8.1	1.000257
8500.0	754.0	15.3	8.5	61.2	903.6	664.2	183.3	6.6	1.000252
9000.0	740.6	14.9	7.8	62.4	890.9	663.0	191.8	6.4	1.000247
9500.0	727.5	13.8	7.0	63.5	878.4	661.7	198.3	6.1	1.000242
10000.0	714.5	12.6	6.5	66.7	866.7	660.2	202.0	5.6	1.000238
10500.0	701.6	11.1	6.1	71.4	855.6	658.5	203.4	4.4	1.000235
11000.0	688.9	9.9	5.2	72.7	843.6	657.0	199.2	2.4	1.000230
11500.0	676.4	8.7	4.2	73.4	832.2	655.6	77.5	.7	1.000225
12000.0	664.1	7.6	2.9	72.1	820.5	654.2	40.4	4.3	1.000219
12500.0	652.0	6.8	.7	65.3	808.4	653.0	40.3	8.4	1.000211
13000.0	640.0	5.9	.3	67.2	796.0	652.0	43.0	12.9	1.000208
13500.0	628.3	5.1	-.1	69.2	783.8	651.0	44.9	16.5	1.000204
14000.0	616.6	3.7	-.2	75.6	773.0	649.4	47.2	18.7	1.000202
14500.0	605.2	2.4	-.4	82.0	762.4	647.8	49.4	20.1	1.000200
15000.0	593.9	1.0	-1.0	86.6	751.9	646.2	51.9	20.6	1.000196
15500.0	582.8	-.3	-2.6	84.5	741.6	644.6	59.4	19.7	1.000191
16000.0	571.8	-.7	-14.0	35.5	730.1	643.5	70.4	18.7	1.000173
16500.0	561.1	-.0	-20.7	19.2	715.0	644.1	87.1	16.4	1.000165
17000.0	550.5	.1	-20.8	18.8	701.2	644.3	104.2	15.4	1.000162
17500.0	540.1	-.7	-21.5	18.8	690.1	643.2	112.4	14.7	1.000159
18000.0	529.8	-1.7	-22.5	18.6	679.6	642.0	114.9	14.6	1.000157
18500.0	519.8	-2.8	-23.5	18.4	669.2	640.8	112.5	14.9	1.000154
19000.0	509.9	-3.8	-24.4	18.2	659.0	639.6	112.5	14.9	1.000151
19500.0	500.2	-4.8	-25.4	18.0	649.0	638.4	112.5	14.9	1.000149

STATION ALTITUDE 5989.00 FEET MSL
 0 JULY 63
 ASCENSION IS. 344

MANDATORY LEVELS
 1900026344
 WHITE SANDS

GEODETIC COORDINATES
 32°41'04.3" LAT DEG
 106°37'03.5" LONG DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE		DIRECTION DEGREES (IN)	SPEED KNOTS
650.0	5110.	22.0	12.2	51.	139.5	3.4
600.0	5332.	18.3	10.0	61.	174.8	6.1
750.0	8694.	15.6	8.2	62.	185.7	6.5
700.0	10554.	10.9	6.1	72.	203.1	4.2
650.0	12570.	6.6	.7	60.	40.9	9.1
600.0	14713.	1.7	-5	85.	50.5	20.3
550.0	17002.	.1	-20.8	19.	104.4	15.4
500.0	19445.	-4.8	-25.4	18.		

STATION ALTITUDE 3989.00 FEET MSL
 9 JULY 63
 ASCENDING 10. 345

SIGNIFICANT LEVEL DATA
 19000 20345
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METER FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
885.8	3989.0	29.0	43.0
860.6	4461.3	26.6	40.0
856.0	5120.8	24.2	54.0
815.5	6305.8	20.0	60.0
789.4	7551.2	18.5	57.0
713.8	10043.6	12.8	62.0
700.0	10581.8	11.1	64.0
675.4	11520.3	8.6	72.0
657.8	12270.0	7.8	65.0
611.9	14224.7	2.8	73.0
595.0	14925.4	2.6	18.0
561.4	16510.9	1.3	17.0
500.0	19533.0	-6.0	17.0

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LO.1 DEG

UPPER AIR DATA
1900020345
WITF SAHUS

STATION ALTITUDE 3989.00 FT MSL
9 JULY 63
ASCENSION NO. 345
1010 NDT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE OF WIND DIRECTION DEGREE	REL. HUM. PERCENT	DEENSITY GM/CUBIC METER	SPEED OF WIND KNOTS	WIND DIRECTION (REGRESSTH)	WIND SPEED (KNOTS)	INDEX OF REFRACTION
3989.0	883.8	29.0	15.2	43.0	1011.5	679.7	170.0	8.0	1.000297
4000.0	883.5	28.9	15.1	43.1	1011.3	679.7	169.9	8.0	1.000297
4500.0	868.4	26.5	14.7	48.4	1002.4	676.8	164.8	7.3	1.000294
5000.0	853.6	24.6	14.4	52.9	991.5	674.7	158.8	6.8	1.000291
5500.0	838.8	22.9	13.8	55.9	980.2	672.9	151.7	6.3	1.000286
6000.0	824.3	21.1	12.6	58.5	969.4	670.5	143.7	5.9	1.000280
6500.0	809.9	19.8	11.7	59.5	957.1	668.9	147.0	6.0	1.000274
7000.0	795.7	19.2	10.8	58.3	942.5	668.1	152.9	6.3	1.000268
7500.0	781.8	18.6	9.9	57.1	928.1	667.4	153.4	6.3	1.000261
8000.0	768.0	17.5	9.1	57.9	915.3	666.0	152.2	6.3	1.000256
8500.0	754.3	16.3	8.3	58.0	902.8	664.7	153.3	5.7	1.000251
9000.0	741.0	15.2	7.5	59.9	890.5	663.3	156.0	4.8	1.000246
9500.0	727.8	14.0	6.6	60.9	878.4	661.9	172.2	3.8	1.000241
10000.0	714.9	12.9	5.8	61.9	866.4	660.5	201.7	3.5	1.000236
10500.0	702.1	11.4	4.7	63.7	853.7	658.6	220.0	3.3	1.000231
11000.0	689.4	10.0	4.3	67.6	844.3	657.0	233.3	3.1	1.000227
11500.0	676.9	8.7	3.9	71.8	833.0	655.5	1.6	.9	1.000224
12000.0	664.6	8.1	2.5	67.6	819.6	654.7	33.0	5.2	1.000218
12500.0	652.9	7.2	1.3	65.9	807.4	653.6	33.6	11.0	1.000212
13000.0	640.9	5.9	.5	68.0	796.3	652.1	39.7	15.5	1.000208
13500.0	628.6	4.7	-0.3	70.0	785.4	650.5	48.0	19.0	1.000204
14000.0	617.0	3.4	-1.2	72.1	774.7	649.0	56.5	20.2	1.000200
14500.0	605.6	2.7	-6.3	51.4	762.9	647.8	66.2	20.6	1.000189
15000.0	594.3	2.5	-10.4	18.0	750.4	647.1	73.1	18.0	1.000174
15500.0	583.2	2.1	-10.9	17.6	737.5	646.6	81.9	14.7	1.000171
16000.0	572.3	1.7	-20.5	17.3	724.6	646.1	100.6	11.2	1.000167
16500.0	561.6	1.3	-21.0	17.0	712.3	645.7	124.7	10.1	1.000164
17000.0	551.0	.1	-22.0	17.0	701.9	644.2	137.4	11.1	1.000162
17500.0	540.5	-1.1	-23.0	17.0	691.7	644.0	137.4	11.7	1.000159
18000.0	530.3	-2.3	-24.0	17.0	681.0	641.4	133.5	12.0	1.000156
18500.0	520.2	-3.5	-25.0	17.0	671.7	639.9	120.9	11.8	1.000154
19000.0	510.3	-4.7	-26.0	17.0	661.9	638.5			1.000151
19500.0	500.6	-5.9	-27.0	17.0	652.3	637.0			1.000149

STATION ALTITUDE 3 809.00 FEET MSL
 10 JULY 63
 ASCENDING NO. 545

MAJORITY LEVELS
 190020345
 WHITE SANDS

GEOMETRIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

MILLIBARS	PRESSURE (POTENTIAL) FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	5117.	24.2	14.3	54.	157.2	6.6
803.0	6044.	19.3	11.1	59.	151.1	9.2
750.0	8660.	16.0	8.0	59.	154.1	5.4
700.0	10571.	11.1	4.0	64.	222.3	3.3
650.0	12508.	7.0	1.1	60.	33.9	12.1
600.0	14730.	2.7	-12.4	32.	69.8	19.8
550.0	17030.	.0	-22.1	17.	130.8	11.2
500.0	19506.	-6.0	-27.0	17.		

ME

-8