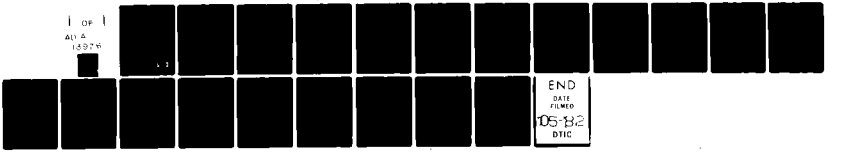
AD-A113 976 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19317A MLRS MISSILE NUMBERS BC-050 AND BC-057 THRU BC-067 ROUND--ETC(U)
FEB 82 D C KELLER
UNCLASSIFIED ERADCOM/ASL-DR-1221 NL



(12)

DR 1221
FEB 1982

METEOROLOGICAL DATA REPORT
19317A MLRS
Missile Numbers BC-050 and BC-057 Thru BC-067
Round Numbers V-213/MD-67 Thru V-223/MD-77
10 Feb 82

by

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

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

DISPOSITION INSTRUCTIONS

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.

UNCLASSIFIED

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

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1221	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* 19317A MLRS, Missile Numbers BC-050 and BC-057 Thru BC-067 Round Numbers V-213/MD-67 Thru V-223/MD-77		5. TYPE OF REPORT & PERIOD COVERED 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) White Sands Meteorological Team		8. CONTRACT OR GRANT NUMBER(s) DA TASK 1F665702D127-02
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		12. REPORT DATE Feb 82 13. NUMBER OF PAGES
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)* US Army Electronics Research & Development Cmd Adelphi, MD 20783		15. SECURITY CLASS. *(of this report)* UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*
Approved for public release; distribution unlimited.

18. SUPPLEMENTARY NOTES

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 BC-050 and BC-057 Thru BC-067, Round Number V-213/MD67 Thru V-223/MD-77 presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

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

CONTENTS PAGE

INTRODUCTION

19317A MLRS, Missile Numbers BC-50 and BC-057 thru BC-067, Round Numbers V-213/MD-67 thru V-224/MD-78, were launched from Miracle Site, White Sands Missile Range (WSMR), New Mexico, at 1120 thru 1120:57 MST, 10 Feb 1982. The scheduled launch times were 1100 thru 1100:49.5 MST.

DISCUSSION

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

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind direction and speed, and cloud cover were made at the Miracle Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

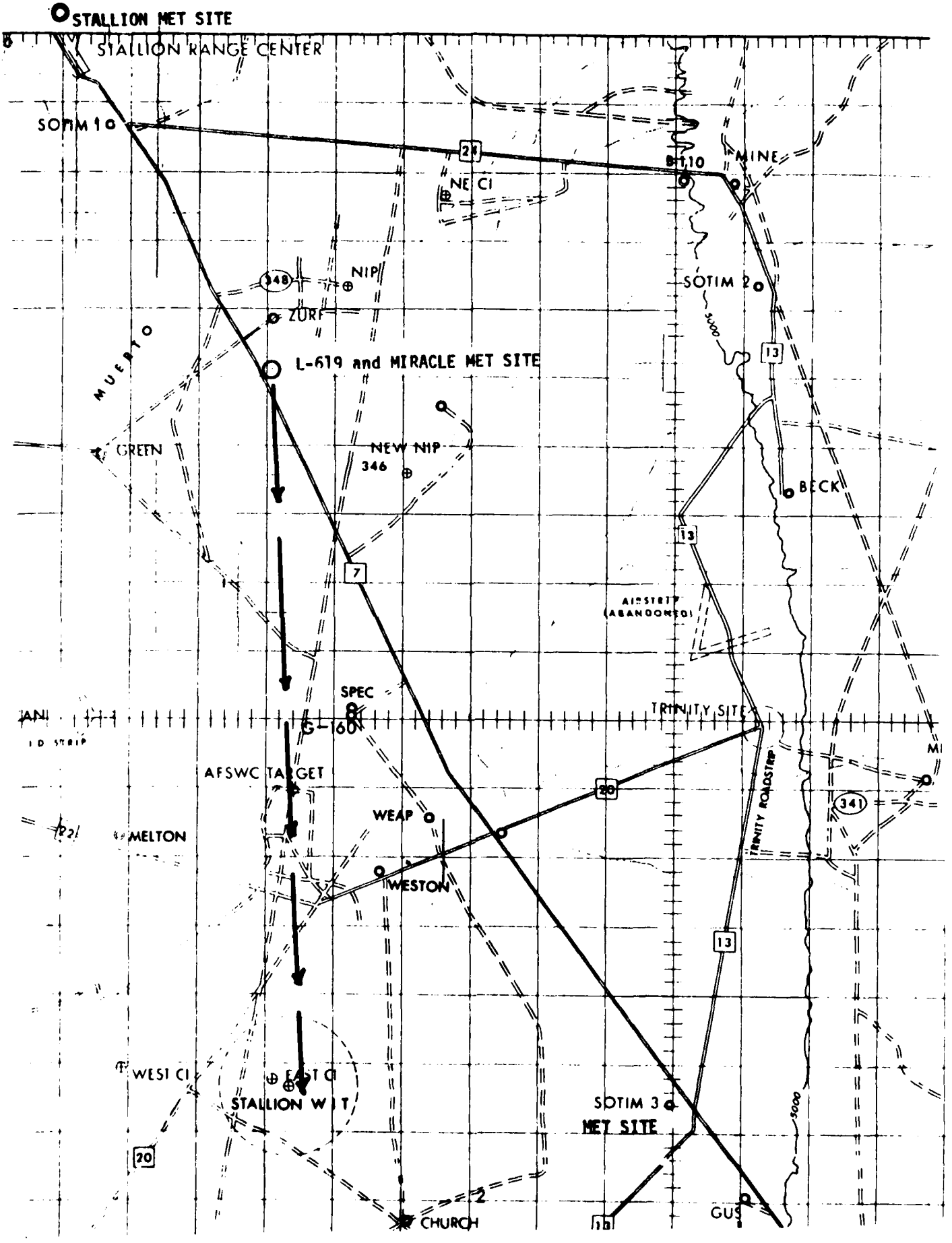
b. Upper Air

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

SITE AND ALTITUDE	
Miracle	2 Km
Sotim 3	2 Km

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

SITE AND TIME	
Sotim 3	0800 MST
Stallion	0930 MST
Stallion	1000 MST
Sotim 3	1120 MST


STALLION MET SITE
STALLION RANGE CENTER
SOTIM 1
21
BT 10
MINE
NE CI
348
NIP
SOTIM 2
ZURF
5000
13
MUERTO
L-619 and MIRACLE MET SITE
GREEN
NEW NIP
346
BECK
7
AIRSTRIP
(ABANDONED)
SPEC
TRINITY SITE
G-160
AFSWC TARGET
20
341
TRINITY ROADSTRIP
WEAP
MELTON
WESTON
WEST CI
EAST CI
STALLION W I T
SOTIM 3
MET SITE
CHURCH
GUS

PROJECT SURFACE OBSERVATION

TABLE 1 STATION Miracle

DATE 10 (DAY) Feb (MONTH) 82 (YEAR) X= Y= H=

TIME M S 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
1120	852.3		11.1		0.3	47	1040	350	02		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	CU	5000	3	AC	12000	3	C1	22000	

PSYCHROMETRIC COMPUTATION

TIME: MST	1120		
DRY BULB TEMP.	11.1		
WET BULB TEMP.	5.8		
WET BULB DEPR.	5.3		
DEW POINT	0.3		
RELATIVE HUMID.	47		

TABLE 2

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 10 Feb 1982

SITE: Miracle
TIME: 1120 MST
WSTM COORDINATES:
X= 420,576.31
Y= 675,956.28
H= 4,778.13

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	350	02
150	228	02
210	216	03
270	212	04
330	208	04
390	207	05
500	207	06
650	212	07
800	212	07
950	240	07
1150	246	09
1350	241	11
1550	259	13
1750	264	14
2000	275	18

SITE: Sotim 3
TIME: 1120 MST
WSTM COORDINATES:
X= 451,408.42
Y= 627,063.23
H= 4,848.11

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	110	06
150	269	04
210	270	06
270	262	06
330	256	06
390	254	06
500	249	05
650	283	04
800	280	05
950	251	06
1150	263	12
1350	280	15
1550	292	20
1750	290	28
2000	277	30

All data obtained form single theodolite tracked pilot-balloon observations.

TABLE 3

AIMING AND T-TIME COMPUTER MET MESSAGES

10 February 1982

SOTIM 3 0800 MST

METCM1336065

101500148849

00293006 27980849
01258007 27880839
02403007 27720814
03449014 27430744
04485020 27060727
05499021 26690683
06512037 26590640
07502042 26340600
08494048 26100563
09489054 25770527

STALLION 0930 MST

METCM1338067

10165051846

00000000 27650846
01262004 27880836
02230003 27650810
03460008 27440771
04510018 27120724
05520024 26730680
06502036 26610638
07497041 26430598

STALLION 1000 MST

METCM1338067

101700151847

00000000 28180847
01117001 27950837
02186002 27670811
13412004 27300772
04534013 27000725
05517020 26650680
06505040 26510638

SOTIM 3 1120 MST

METCM1336065

101830148851

00196006 2853851
01416007 2829841
02532007 2799816
13484010 2762777
04509014 2718730
05505025 2685685
06503036 2670643
07502042 2634603
08486047 2608565
09476050 2594529

STATION ALTITUDE 4847.49 FEET MSL
10 FEB. 82 0809 HRS MST
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
041042000₂
SOTIN 3

GEODETIC COORDINATES
33.60146 LAT DEG
106.49307 LON DEG

TABLE 4

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
849.2	4847.5	5.7	2.4	79.0
843.3	5034.7	4.9	-1.3	64.0
823.5	5670.8	4.1	-2.5	62.0
774.9	7286.8	.7	-4.5	68.0
700.0	9940.9	-5.4	-6.6	91.0
680.9	10652.6	-7.3	-8.4	92.0
653.1	11720.2	-7.7	-8.9	91.0
635.3	12428.0	-7.2	-11.7	70.0
597.2	14003.7	-10.5	-13.3	60.0
565.7	15371.6	-12.0	-16.8	57.0
532.3	16894.5	-15.0	-18.6	74.0
500.0	18441.1	-18.6	-25.6	54.0
491.3	18870.9	-19.4	-29.8	39.0
467.3	20091.5	-21.0	-35.0	27.0
443.4	21363.4	-22.4	-37.0	25.0
400.0	23825.1	-27.9	-42.1	24.0

UPPER AIR DATA
041042000Z
SOTIN 3

STATION ALTITUDE 4847.49 FEET MSL
10 FEB. 82 0800 HRS MST
ASCENSION NO. 2

TABLE 5

GEODETIC COORDINATES
33...0146 LAT DEG
106.49307 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 DIR DEG	WIND DATA .0 OF IN	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4847.5	849.2	5.7	2.4	79.0	1057.5	651.6	165.0		6.0	1.000271
5000.0	844.4	5.0	-.6	66.8	1054.6	650.6	174.2		5.7	1.000264
5500.0	828.8	4.3	-2.2	62.5	1038.1	649.7	206.5		5.9	1.000257
6000.0	813.4	3.4	-2.9	63.2	1022.2	648.6	250.1		7.6	1.000252
6500.0	798.2	2.4	-3.5	65.1	1007.0	647.4	243.7		10.1	1.000248
7000.0	783.3	1.3	-4.1	66.9	992.1	646.1	251.3		12.3	1.000244
7500.0	768.6	.2	-4.6	69.8	977.4	644.8	256.0		13.4	1.000240
8000.0	754.0	-.9	-4.9	74.2	962.9	643.4	261.0		14.5	1.000236
8500.0	739.7	-2.1	-5.3	78.5	948.7	642.1	264.7		15.5	1.000233
9000.0	725.7	-3.2	-5.7	82.8	934.7	640.7	267.9		16.5	1.000229
9500.0	711.9	-4.4	-6.2	87.2	920.9	639.3	272.9		18.5	1.000225
10000.0	698.4	-5.6	-6.8	91.1	907.4	637.9	277.6		21.0	1.000222
10500.0	685.0	-6.9	-8.0	91.8	894.5	636.3	281.9		24.2	1.000217
11000.0	671.7	-7.4	-8.5	91.7	879.1	635.6	285.6		28.2	1.000213
11500.0	658.7	-7.6	-8.8	91.2	862.7	635.4	287.4		32.1	1.000209
12000.0	646.0	-7.5	-9.9	82.7	845.7	635.5	287.7		35.8	1.000204
12500.0	633.5	-7.4	-11.8	70.5	829.1	635.6	286.9		38.7	1.000198
13000.0	621.2	-8.4	-12.2	73.6	816.2	634.4	285.4		40.7	1.000195
13500.0	609.1	-9.4	-12.7	76.8	803.5	633.1	283.6		41.1	1.000191
14000.0	597.3	-10.5	-13.3	80.0	791.1	631.8	281.5		40.8	1.000188
14500.0	585.6	-11.0	-15.1	71.7	777.3	631.1	279.9		42.3	1.000184
15000.0	574.1	-11.6	-17.1	63.2	763.8	630.4	278.5		44.3	1.000179
15500.0	562.8	-12.3	-19.7	58.4	750.8	629.6	277.4		47.4	1.000175
16000.0	551.7	-13.2	-18.6	64.0	738.7	628.4	276.5		50.5	1.000172
16500.0	540.8	-14.2	-18.5	69.6	726.6	627.2	275.7		51.3	1.000170
17000.0	530.0	-15.2	-19.0	72.6	715.3	625.9	275.1		52.1	1.000167
17500.0	519.4	-16.4	-21.2	66.2	704.2	624.5	274.9		53.5	1.000163
18000.0	509.0	-17.6	-23.5	59.7	693.3	623.0	275.7		54.1	1.000160
18500.0	498.8	-18.7	-26.1	51.9	682.6	621.6	277.6		53.8	1.000156
19000.0	488.7	-19.6	-30.3	37.7	671.1	620.5	279.9		54.0	1.000152
19500.0	478.8	-20.2	-32.3	32.8	659.2	619.7	282.0		54.7	1.000149
20000.0	469.1	-20.9	-34.5	27.9	647.6	618.8	281.7		58.5	1.000146
20500.0	459.5	-21.4	-35.6	26.4	635.8	618.1	280.9		63.1	1.000143
21000.0	450.1	-22.0	-36.4	25.6	624.2	617.5	280.1		66.0	1.000141
21500.0	440.9	-22.7	-37.3	24.9	613.1	616.6	279.4		68.9	1.000138
22000.0	431.7	-23.8	-38.3	24.7	603.1	615.2	279.0		70.3	1.000136
22500.0	422.8	-24.9	-39.4	24.5	593.5	613.8				1.000133
23000.0	414.1	-26.1	-40.4	24.3	583.7	612.4				1.000131
23500.0	405.5	-27.2	-41.5	24.1	574.2	611.0				1.000129

STATION ALTITUDE 4847.49 FEET MSL
10 FEB. 82 0800 HRS MST
ASCENSION NO. 2

MANDATORY LEVELS
04104200Z
SOTIN 5

GEODETIC COORDINATES
33.60146 LAT DEG
106.49307 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA DIR DEG W OF TN	WIND DATA SPEED KNOTS
800.0	6438.	2.5	-3.4	69.	242.4	9.8
750.0	8140.	-1.3	-5.0	75.	262.1	14.8
700.0	9932.	-5.4	-6.6	91.	277.1	20.7
650.0	11831.	-7.6	-9.3	87.	287.6	34.6
600.0	13871.	-10.3	-13.1	79.	282.0	40.9
550.0	16059.	-13.4	-18.6	65.	276.4	50.7
500.0	18417.	-18.6	-25.6	54.	277.5	55.8
450.0	20977.	-22.0	-36.4	26.	280.1	60.0
400.0	23788.	-27.9	-42.1	24.		

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 62 0936 HRS MST
ASCENSION NO. 4

SIGNIFICANT LEVEL DATA
0410040006
STALLION.

TABLE 7

GEODETIC COORDINATES
33.81920 LAT DEG
106.66501 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
845.9	4940.0	3.2	.6	83.0
845.5	4952.6	4.9	.9	75.0
838.7	5168.8	4.0	-3.0	60.0
793.4	6647.0	2.0	-3.3	68.0
766.0	7576.5	.3	-4.3	71.0
720.6	9178.3	-2.8	-5.6	80.0
700.6	9931.4	-4.9	-6.9	86.0
673.3	10933.0	-7.1	-8.2	92.0
650.8	11803.8	-7.8	-9.0	91.0
645.5	12013.3	-7.0	-9.5	82.0
633.6	12490.5	-7.2	-13.4	61.0
605.7	13641.3	-8.8	-14.5	63.0
591.6	14240.3	-9.7	-17.0	55.0
583.0	14611.9	-9.9	-20.9	40.0
575.0	14962.0	-10.3	-24.5	30.0
564.4	15432.1	-11.5	-22.6	39.0
540.1	16538.1	-13.0	-32.2	18.0
526.4	17179.7	-14.8	-26.5	30.0
500.0	18454.5	-17.1	-36.2	17.0
441.4	21496.9	-22.5	-42.6	14.0
410.5	23239.5	-25.4	-45.6	13.0
400.0	23855.6	-27.4	-47.3	13.0

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 0930 HRS MST
ASCENSION NO. 4

UPPER AIR DATA
0410040004
STATION

GEODETIC COORDINATES
33.1920 LAT DEG
106.66501 LON DEG

TABLE 8

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 DIR DEG	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4940.0	845.9	3.2	.6	83.0	1063.3	648.6	.0	.0	1.000269
5000.0	844.0	4.7	.0	71.7	1055.3	650.5	220.4	.1	1.000265
5500.0	828.3	3.6	-3.1	61.8	1040.5	646.8	220.4	.9	1.000256
6000.0	812.9	2.9	-3.1	64.5	1025.7	648.0	220.4	1.7	1.000252
6500.0	797.8	2.2	-3.2	67.2	1007.0	647.2	220.4	2.5	1.000248
7000.0	782.9	1.4	-3.7	69.1	991.3	646.2	221.0	4.7	1.000244
7500.0	768.2	.4	-4.2	70.8	976.0	645.1	204.5	8.2	1.000240
8000.0	753.7	-.5	-4.7	73.4	961.0	644.0	274.5	11.7	1.000236
8500.0	739.5	-1.5	-5.1	76.2	946.3	642.8	280.5	15.2	1.000232
9000.0	725.5	-2.5	-5.6	79.0	931.7	641.6	285.9	17.9	1.000228
9500.0	711.7	-3.7	-6.2	82.6	918.3	640.1	289.3	20.3	1.000225
10000.0	698.1	-5.1	-7.0	86.4	905.4	638.5	291.2	22.3	1.000221
10500.0	684.7	-6.1	-7.6	89.4	891.7	637.2	290.4	24.8	1.000217
11000.0	671.5	-7.2	-8.2	91.9	877.9	636.0	288.9	27.5	1.000213
11500.0	658.6	-7.6	-8.7	91.3	862.2	635.5	286.8	30.7	1.000209
12000.0	645.8	-7.1	-9.5	82.6	844.0	636.1	284.0	34.0	1.000204
12500.0	633.4	-7.2	-13.4	61.0	828.6	635.7	282.6	36.8	1.000196
13000.0	621.1	-7.9	-13.9	61.9	814.7	634.9	280.4	39.3	1.000193
13500.0	609.1	-8.6	-14.4	62.8	801.0	634.0	278.0	40.1	1.000189
14000.0	597.2	-9.3	-16.0	58.2	787.8	633.1	277.5	39.8	1.000185
14500.0	585.6	-9.8	-19.6	44.5	774.1	632.4	276.7	39.3	1.000179
15000.0	574.1	-10.4	-24.3	30.7	760.6	631.7	276.1	38.6	1.000174
15500.0	562.9	-11.6	-23.1	37.7	749.2	630.3	275.8	40.6	1.000172
16000.0	551.8	-12.3	-26.9	28.2	736.5	629.4	275.5	42.9	1.000168
16500.0	540.9	-12.9	-31.8	18.7	724.0	628.5	274.2	44.4	1.000164
17000.0	530.2	-14.3	-29.3	26.6	713.3	626.9	273.1	46.0	1.000162
17500.0	519.6	-15.4	-30.2	26.7	702.0	625.6	274.5	47.9	1.000159
18000.0	509.3	-16.3	-33.1	21.6	690.5	624.5	275.9	49.6	1.000156
18500.0	499.1	-17.2	-36.3	17.0	679.1	623.4	278.6	51.4	1.000153
19000.0	488.9	-18.1	-37.4	16.5	667.6	622.3	280.9	53.1	1.000150
19500.0	479.0	-19.0	-38.4	16.0	656.4	621.2	281.5	54.0	1.000147
20000.0	469.3	-19.8	-39.4	15.5	645.3	620.1	282.0	55.4	1.000145
20500.0	459.8	-20.7	-40.5	15.0	634.5	619.0	281.4	59.2	1.000142
21000.0	450.5	-21.6	-41.5	14.5	623.8	617.9	280.9	62.9	1.000140
21500.0	441.3	-22.5	-42.6	14.0	613.3	616.8	278.9	63.6	1.000137
22000.0	432.2	-23.3	-43.4	13.7	602.7	615.8			1.000135
22500.0	423.3	-24.2	-44.3	13.4	592.3	614.8			1.000133
23000.0	414.6	-25.0	-45.2	13.1	582.0	613.7			1.000130
23500.0	406.0	-26.2	-46.3	13.0	572.8	612.8			1.000128

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 0930 HRS MST
ASCENSION NO. 4

MANDATORY LEVELS
0410040004
STALLION
TABLE 9

GLOBETTE COORDINATES
33.41920 LAT DEG
106.06501 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL HUM PERCENT	WIND DATA DIR DEG W OF TN	WIND DATA SPEED KNOTS
800.0	6423.	2.3	-3.2	67.	220.4	6.4
750.0	8126.	-.8	-4.6	74.	270.3	12.7
700.0	9923.	-4.9	-6.9	86.	291.0	22.0
650.0	11824.	-7.7	-9.1	90.	285.4	32.9
600.0	13868.	-9.2	-15.5	60.	277.8	39.9
550.0	16064.	-12.4	-27.0	27.	275.3	45.1
500.0	18431.	-17.1	-36.2	17.	270.3	51.3
450.0	21001.	-21.7	-41.6	14.	280.8	62.9
400.0	23819.	-27.4	-47.3	13.		

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 1000 HRS MST
ASCENSION NO. 5

SIGNIFICANT LEVEL DATA
0410040005
STALLION

GEODETIC COORDINATES
33.81920 LAT DEG
106.06501 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
846.9	4940.0	7.5	4.6	82.0
841.4	5116.0	6.1	-3.3	51.0
776.4	7254.1	-.6	-5.6	69.0
740.2	8505.4	-2.0	-5.7	76.0
700.0	9954.4	-6.0	-6.9	93.0
661.2	11417.7	-8.0	-9.1	92.0
642.8	12139.3	-7.8	-12.5	69.0
617.2	13175.5	-9.4	-14.7	65.0
597.3	14006.2	-10.9	-14.4	75.0
583.2	14608.8	-11.8	-23.2	38.0
550.2	16072.5	-12.8	-25.7	33.0
518.0	17575.7	-16.0	-29.9	29.0
500.0	18450.6	-16.7	-32.9	23.0
494.6	18718.9	-16.7	-33.8	21.0
434.0	21898.5	-24.6	-39.3	24.0
419.6	22705.8	-25.1	-41.0	21.0
400.0	23843.7	-27.5	-43.0	21.0

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 1000 HRS MST
ASCENSION NO. 5

UPPER AIR DATA
0410040005
STALLION

GEODETIC COORDINATES
33.81920 LAT DEG
106.66501 LON DEG

TABLE 11

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
4940.0	846.9	7.5	4.6	82.0	1047.2	653.9	.0	.0	1.000274
5000.0	845.0	7.0	2.2	71.4	1047.3	653.1	218.0	.1	1.000268
5500.0	829.3	4.9	-3.6	54.2	1036.9	650.3	218.0	.6	1.000254
6000.0	813.9	3.3	-4.0	58.4	1023.3	648.5	218.0	1.1	1.000250
6500.0	798.7	1.8	-4.6	62.7	1010.1	646.6	218.0	1.5	1.000247
7000.0	783.9	.2	-5.2	66.9	997.0	644.7	218.0	2.0	1.000243
7500.0	769.1	-.9	-5.6	70.4	982.1	643.5	203.7	3.6	1.000239
8000.0	754.6	-1.4	-5.6	73.2	965.5	642.8	281.7	6.6	1.000236
8500.0	740.4	-2.0	-5.6	76.0	949.2	642.2	291.4	9.8	1.000232
9000.0	726.2	-3.4	-6.0	81.8	935.9	640.5	295.6	13.0	1.000229
9500.0	712.4	-4.7	-6.5	87.7	922.7	638.9	294.4	14.7	1.000225
10000.0	698.8	-6.1	-7.0	93.0	909.6	637.3	293.4	16.5	1.000222
10500.0	685.3	-6.7	-7.7	92.6	894.4	636.5	291.5	20.4	1.000217
11000.0	672.1	-7.4	-8.5	92.3	879.5	635.6	290.2	24.2	1.000213
11500.0	659.1	-8.0	-9.4	89.4	864.4	634.9	287.4	29.8	1.000209
12000.0	646.3	-7.8	-11.7	73.4	847.4	635.0	285.4	35.5	1.000202
12500.0	633.8	-8.4	-13.3	67.6	832.7	634.4	283.4	38.5	1.000197
13000.0	621.5	-9.1	-14.3	65.7	819.0	633.4	281.6	41.0	1.000193
13500.0	609.3	-10.0	-14.6	68.9	805.6	632.4	280.6	39.2	1.000190
14000.0	597.4	-10.9	-14.4	74.9	792.6	631.3	279.4	37.7	1.000188
14500.0	585.7	-11.6	-21.2	44.7	779.7	630.2	277.8	37.9	1.000180
15000.0	574.2	-12.1	-23.8	36.7	765.7	629.7	276.5	38.8	1.000175
15500.0	562.9	-12.4	-24.7	35.0	751.6	629.2	275.8	41.6	1.000172
16000.0	551.8	-12.8	-25.5	33.2	737.8	628.8	275.2	43.7	1.000169
16500.0	540.8	-13.7	-26.8	31.9	725.9	627.6	274.7	44.2	1.000165
17000.0	530.1	-14.8	-28.2	30.5	714.4	626.3	274.6	44.7	1.000162
17500.0	519.6	-15.8	-29.7	29.2	703.2	625.0	275.5	45.0	1.000160
18000.0	509.2	-16.3	-31.3	26.1	690.5	624.4	276.8	47.0	1.000156
18500.0	499.0	-16.7	-33.0	22.6	677.7	624.0	278.5	51.1	1.000153
19000.0	488.9	-17.4	-34.3	21.3	665.8	623.1	279.8	53.4	1.000150
19500.0	479.0	-18.6	-35.1	21.7	655.4	621.6	280.9	54.0	1.000148
20000.0	469.2	-19.9	-36.0	22.2	645.3	620.1	281.2	53.1	1.000145
20500.0	459.7	-21.1	-36.8	22.7	635.3	618.5	281.0	51.3	1.000143
21000.0	450.3	-22.4	-37.7	23.2	625.4	617.0	279.2	52.3	1.000141
21500.0	441.2	-23.6	-38.6	23.6	615.8	615.5	276.8	55.1	1.000138
22000.0	432.2	-24.7	-39.5	23.6	605.8	614.2	274.3	58.5	1.000136
22500.0	423.2	-25.0	-40.5	21.8	594.0	613.8	271.8	62.1	1.000133
23000.0	414.4	-25.7	-41.5	21.0	583.4	612.8			1.000131
23500.0	405.8	-26.8	-42.4	21.0	573.7	611.5			1.000129

STATION ALTITUDE 4940.00 FEET MSL
10 FEB. 82 1000 HRS MST
ASCENSION NO. 5

MANDATORY LEVELS
0410040005
STALLION

GEODETIC COORDINATES
33.61920 LAT DEG
106.66501 LON DEG

TABLE 12

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES	CENTIGRADE		DEGREES(TN)	KNOTS
800.0	6459.	1.9	-4.5	62.	218.0	1.5
750.0	8155.	-1.6	-5.6	74.	285.7	7.6
700.0	9946.	-6.0	-6.9	95.	293.5	16.3
650.0	11843.	-7.9	-11.0	78.	286.0	33.8
600.0	13878.	-10.7	-14.5	74.	279.7	37.7
550.0	16063.	-12.8	-25.7	33.	275.2	43.8
500.0	18427.	-16.7	-32.9	23.	278.3	50.6
450.0	20999.	-22.4	-37.7	23.	279.1	52.4
400.0	23808.	-27.5	-43.0	21.		

STATION ALTITUDE 4847.49 FEET MSL
10 FEB. 82 1128 HRS MST
ASCENSION NO. 3

SIGNIFICANT LEVEL DATA
04104200U5
SOTIN 3

GEODETIC COORDINATES
33.60146 LAT DEG
106.49307 LON DEG

TABLE 13

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	RELATIVE PERCENT
651.0	4847.5	12.1	2.8	53.0
647.9	4947.5	9.8	-3.6	38.0
307.4	6271.3	5.1	-3.7	53.0
709.0	10033.2	-4.7	-6.4	88.0
668.2	11234.3	-5.8	-7.5	88.0
642.8	12232.4	-6.2	-11.9	64.0
615.6	13340.2	-8.5	-12.6	72.0
576.7	14990.3	-13.3	-14.9	88.0
570.4	15265.3	-13.5	-16.3	87.0
561.6	15655.8	-11.5	-23.5	36.0
518.0	18067.3	-15.4	-27.3	35.0
500.0	18558.7	-15.8	-28.3	33.0
429.2	22283.9	-24.1	-36.0	32.0
408.0	23963.8	-27.4	-39.0	32.0

STATION ALTITUDE 4847.49 FEET MSL
10 FEB. 82 1120 HRS MST
ASCENSION NO. 3

UPPER AIR DATA
041042000
SOTIN 3

TABLE 14

GEODETIC COORDINATES
33.60146 LAT DEG
106.49307 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 DIR DEG	WIND DATA SPEED OF IN KNOTS	INDEX OF REFRACTION
4847.5	851.0	12.1	2.8	53.0	1035.8	659.1	110.0	6.0	1.000266
5000.0	840.3	9.6	-3.8	38.6	1040.4	655.8	108.3	5.3	1.000254
5500.0	830.8	7.8	-3.6	44.3	1027.8	653.7	90.0	2.9	1.000252
6000.0	815.5	6.1	-3.6	49.9	1015.3	651.7	54.0	1.2	1.000249
6500.0	800.4	4.5	-3.7	55.1	1002.1	649.9	327.7	2.7	1.000246
7000.0	785.4	3.2	-3.8	59.8	987.9	648.3	315.2	5.1	1.000243
7500.0	770.6	1.9	-4.1	64.4	973.9	646.8	282.9	7.9	1.000240
8000.0	756.1	.6	-4.4	69.1	960.1	645.3	264.3	11.4	1.000236
8500.0	741.9	-.7	-4.8	73.7	946.6	643.7	265.6	14.1	1.000233
9000.0	728.0	-2.0	-5.3	78.4	933.3	642.2	266.1	16.3	1.000229
9500.0	714.3	-3.3	-5.8	83.0	920.2	640.6	265.9	18.2	1.000226
10000.0	700.9	-4.6	-6.3	87.7	907.4	639.1	265.6	20.0	1.000222
10500.0	687.5	-5.1	-6.8	88.0	891.7	638.4	263.1	23.5	1.000218
11000.0	674.3	-5.6	-7.2	88.0	876.2	637.9	261.1	27.4	1.000214
11500.0	661.3	-5.9	-8.5	81.6	860.5	637.5	261.8	31.1	1.000209
12000.0	648.6	-6.1	-10.7	69.6	844.8	637.1	262.4	34.6	1.000203
12500.0	636.1	-6.8	-12.0	65.9	830.7	636.3	263.5	37.1	1.000198
13000.0	623.8	-7.8	-12.4	69.5	817.8	635.1	264.0	39.4	1.000195
13500.0	611.7	-9.0	-12.8	73.5	805.5	633.7	263.1	41.4	1.000192
14000.0	599.7	-10.4	-13.4	78.4	794.1	631.9	262.0	43.0	1.000189
14500.0	588.0	-11.9	-14.1	83.2	783.0	630.1	260.4	44.1	1.000186
15000.0	576.5	-13.3	-15.0	87.3	771.9	628.4	277.6	44.8	1.000183
15500.0	565.1	-12.3	-20.9	48.4	754.1	629.4	273.3	45.3	1.000174
16000.0	553.9	-12.1	-24.1	35.9	738.6	629.7	270.0	46.5	1.000169
16500.0	543.0	-12.9	-24.9	35.6	726.3	628.7	267.5	48.1	1.000166
17000.0	532.2	-13.7	-25.7	35.4	714.2	627.7	267.8	49.2	1.000163
17500.0	521.7	-14.5	-26.4	35.2	702.2	626.7	269.3	50.2	1.000160
18000.0	511.4	-15.3	-27.2	35.0	690.5	625.7	271.3	50.6	1.000158
18500.0	501.2	-15.8	-28.2	33.2	678.0	625.2	273.5	50.9	1.000154
19000.0	491.0	-16.8	-29.2	32.9	667.0	623.9	275.3	51.5	1.000152
19500.0	481.1	-17.9	-30.3	32.7	656.3	622.5	276.9	52.2	1.000149
20000.0	471.3	-19.0	-31.3	32.6	645.8	621.2	278.9	52.9	1.000146
20500.0	461.8	-20.1	-32.3	32.5	635.5	619.8	279.2	53.9	1.000144
21000.0	452.4	-21.2	-33.4	32.3	625.4	618.4	280.3	55.5	1.000141
21500.0	443.2	-22.4	-34.4	32.2	615.5	617.0	280.3	57.1	1.000139
22000.0	434.2	-23.5	-35.4	32.1	605.7	615.7	280.0	58.4	1.000137
22500.0	425.3	-24.5	-36.4	32.0	595.8	614.4			1.000134
23000.0	416.5	-25.5	-37.3	32.0	585.8	613.1			1.000132
23500.0	407.9	-26.5	-38.2	32.0	575.9	611.9			1.000130

STATION ALTITUDE 4847.49 FEET MSL
19 FEB. 82 1120 HRS MST
ASCENSION NO. 3

MANDATORY LEVELS
0410420003
SOTIN 3
TABLE 15

GEODETIC COORDINATES
33.00146 LAT DEG
106.49307 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL HEIGHT FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIR. DEG ,, OF TN	WIND DATA SPEED KNOTS
850.0	4877.	11.4	.8	46.	109.7	5.9
800.0	6513.	4.5	-3.7	55.	327.0	2.8
750.0	8225.	.0	-4.6	71.	285.3	12.9
700.0	10024.	-4.7	-6.4	88.	285.6	20.1
650.0	11934.	-6.1	-10.5	71.	282.3	34.3
600.0	13978.	-10.4	-13.4	78.	282.9	45.0
550.0	16162.	-12.3	-24.4	30.	269.1	47.0
500.0	18535.	-15.8	-28.3	33.	273.7	51.0
450.0	21112.	-21.5	-33.6	32.	267.3	56.0
400.0	23927.	-27.4	-39.0	32.		


FILMED
5-8