

AD-A082 981 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19306B MLRS, MISSILE NUMBERS 1107, 1104, 1106, ROUND NUMBERS V---ETC(U)
FEB 80
UNCLASSIFIED ERADCOM/ASL-DR-1139 NL

1 of 1
AD
000198



END
DATE
FORMED
9-80
DTIC

LEVEL II

12

ADA 082981

APR 11 1981
E

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 11 39	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19306B MLRS, Missile Numbers 1107, 1104, 1106, Round Numbers V-125, V-126, V-127, 19 February 1980.	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 FEBRUARY 1980	13. NUMBER OF PAGES 17
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) (M) ETAL / ACH-DR-1131		
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 19306B MLRS, Missile Numbers 1107, 1104, 1106, Round Numbers V-125, V-126 and V-27 are presented in tabular form.		

CONTENTS

	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
MAP-----	2
TABLES:	
1. Surface Observations taken at 1100 MST at Snake-----	3
2. DENVER Pilot Balloon Measured Wind Data at 1115 MST-----	4
3. JAL Significant Level Data at 1100 MST-----	5
4. JAL Upper Air Data at 1100 MST-----	7
5. JAL Mandatory Levels at 1100 MST-----	13

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced Justification	<input type="checkbox"/>
By _____	
Distribution/_____	
Availability Codes	
Dist	Avail and/or Special
H	23 P

INTRODUCTION

19306B MLRS _____, Missile Numbers 1107, 1104 _____ and 1106 _____, Round Numbers V-125, V-126 _____ and V-127 _____, were launched from Snake Site, White Sands Missile Range (WSMR), New Mexico, at 1112:59, 1113:04 _____ and 1113:11 _____, on 19 February 1980 _____. The schedule launch times were 1100, 1100:04 _____ and 1100:08 _____.

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 Snake _____ 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 RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

DENVER 2Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 104,500 _____ feet in 500-foot increments.

SITE AND TIME

JALLEN 1100 MST

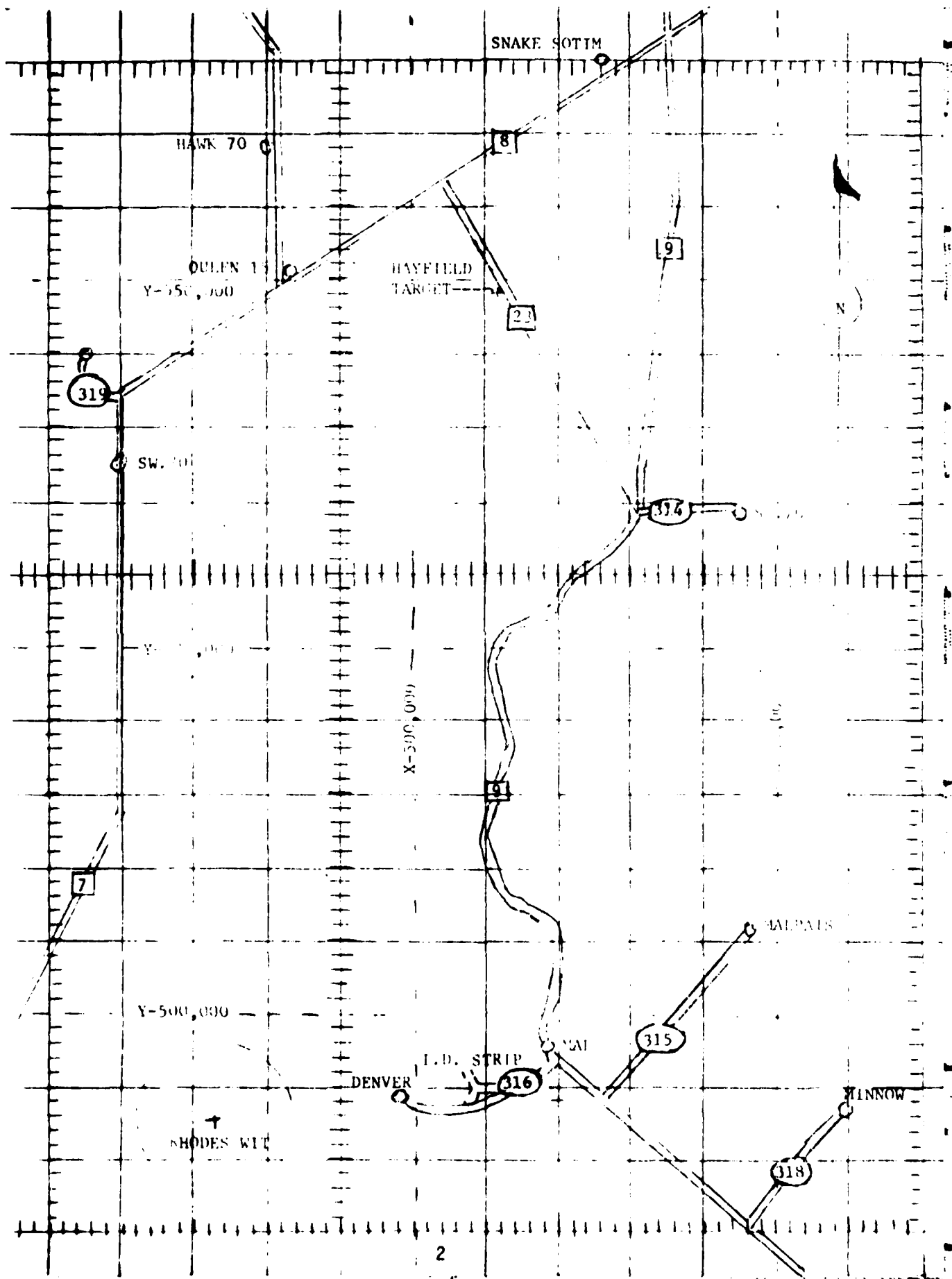


TABLE 1. Surface Observations taken at 1100 MST,
 19 February 1980, at Snake Site, 19306B MLRS,
 Missile Numbers 1107, 1104, 1106, Round
 Number V-125, V-126, V-127.

ELEVATION	UNKNOWN	FT/MSL
PRESSURE	864.9	HRS
TEMPERATURE	16.3	^o C
RELATIVE HUMIDITY	41	
DEW POINT	3.0	^o C
DENSITY	1036	GM/M ³
WIND SPEED	01	KTS
WIND DIRECTION	260	DEGREES
CLOUD COVER	10	Ac

GEODETIC COORDINATES
 33.10712 LAT 1EG
 100.49511 LONG DEG

SIGNIFICANT LEVEL DATA
 05000J0047
 JALLEI

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 60
 1100 HRS MST
 ASCENSION NO. 47

TABLE 3

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
876.5	4051.0	13.5	12.4	33.0
866.6	4364.2	10.8	3.1	39.0
850.0	4894.7	11.3	2.9	30.0
718.9	9413.6	2.5	-7.0	47.0
713.1	9635.4	4.1	-10.5	34.0
700.0	10137.3	3.6	-16.0	21.0
642.2	12403.0	-1.3	-12.0	41.0
615.4	13521.9	-2.7	-15.7	36.0
597.0	14297.4	-12.0	-19.0	32.0
512.0	18123.0	-17.4	-19.9	73.0
500.0	18713.2	-17.4	-20.1	79.0
482.8	19574.2	-18.6	-21.5	79.0
467.2	20381.8	-18.3	-19.9	67.0
451.6	21215.0	-18.5	-20.5	64.0
400.0	24152.7	-25.6	-28.0	74.0
300.0	30902.0	-41.3	-45.7	32.0
279.4	32380.0	-45.0	-49.0	39.0
250.0	34790.2	-51.8		
213.9	37631.0	-51.2		
213.9	38127.5	-49.7		
200.0	39577.5	-48.7		
174.4	42527.6	-51.6		
150.0	45707.8	-57.6		
128.0	48943.7	-66.2		
114.4	51163.7	-70.0		
100.0	53901.9	-70.1		
92.8	55263.5	-72.5		
81.4	57823.4	-69.4		
80.6	58025.7	-61.6		
70.0	60983.3	-65.2		
63.7	62776.0	-66.3		
57.4	64887.9	-61.1		
50.0	67715.0	-61.8		
42.2	71174.3	-63.0		
36.4	74215.1	-58.3		
30.0	78227.4	-59.6		
21.6	83021.6	-59.8		
20.0	86620.3	-56.3		
16.2	91071.4	-54.6		
15.0	92723.3	-49.9		

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 60
 ASSEMBLER NO. 47 1100 MMS MSI

SIGNIFICANT LEVEL DATA
 0300030047
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

TABLE 3 (CONT)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE REL. HUM. PERCENT
12.3	97052.4	-46.7	
10.8	99899.9	-48.4	
10.0	101587.0	-45.7	
8.6	104944.0	-42.4	

UPPER AIR DATA
 0500030047
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 50 1100 HRS MST
 ASCENSION NO. 47

GEOLYTIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

TABLE 4

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED SOUND KNOTS	WIND DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX	
								REFRACTIVE	OF
4051.0	876.5	13.5	95.0	1055.6	621.6	00.0	2.9	1.000302	
4500.0	862.5	10.9	58.2	1053.9	637.7	130.5	8.0	1.000271	
5000.0	846.7	11.1	55.6	1054.5	637.9	251.0	3.1	1.000245	
5500.0	831.2	10.1	54.8	1019.0	650.7	268.0	6.1	1.000259	
6000.0	815.9	9.2	53.8	1009.0	655.5	240.5	9.2	1.000253	
6500.0	801.0	8.2	52.8	989.1	634.5	257.0	10.9	1.000249	
7000.0	786.5	7.2	51.8	974.5	653.1	259.2	13.3	1.000245	
7500.0	771.8	6.2	50.8	960.1	651.9	270.0	16.3	1.000237	
8000.0	757.7	5.5	49.8	945.0	650.6	261.6	19.7	1.000242	
8500.0	743.8	4.5	48.8	931.0	649.6	263.4	23.3	1.000243	
9000.0	730.2	3.5	47.8	916.5	648.4	262.9	27.2	1.000243	
9500.0	716.7	3.1	42.2	902.5	648.0	262.2	31.2	1.000217	
10000.0	703.4	3.7	24.4	884.1	648.6	261.5	34.4	1.000217	
10500.0	690.5	2.8	24.2	870.5	647.5	260.6	37.5	1.000205	
11000.0	677.5	1.7	28.0	857.5	648.5	273.4	38.8	1.000201	
11500.0	664.6	1.7	33.0	844.6	645.0	278.2	48.0	1.000193	
12000.0	652.2	1.4	37.4	832.0	645.6	272.2	39.7	1.000197	
12500.0	639.9	1.4	40.6	819.5	642.0	263.7	39.0	1.000194	
13000.0	627.6	2.0	38.5	805.6	641.3	265.9	37.1	1.000170	
13500.0	615.9	2.7	36.1	792.4	641.1	264.0	35.6	1.000170	
14000.0	604.0	8.4	45.8	779.4	634.2	265.2	34.4	1.000185	
14500.0	592.2	12.5	53.4	766.1	639.5	267.7	33.5	1.000183	
15000.0	580.5	12.9	56.8	753.4	640.7	269.6	33.8	1.000170	
15500.0	568.9	13.6	60.2	740.9	637.9	271.2	34.2	1.000177	
16000.0	557.6	14.2	63.5	729.6	627.2	271.1	32.9	1.000174	
16500.0	546.6	14.9	66.9	720.5	626.4	271.0	32.0	1.000171	
17000.0	535.7	15.5	70.3	723.7	625.6	270.4	33.7	1.000169	
17500.0	525.1	16.2	73.7	711.2	624.8	270.1	33.7	1.000166	
18000.0	514.0	16.8	77.1	698.8	624.0	273.2	40.9	1.000163	
18500.0	504.5	17.5	78.6	695.9	623.5	275.4	46.1	1.000160	
19000.0	494.2	17.8	79.0	673.6	622.8	274.9	52.3	1.000157	
19500.0	484.5	18.5	79.0	661.9	622.0	274.2	58.5	1.000154	
20000.0	474.5	18.4	83.2	646.4	622.0	268.4	64.0	1.000151	
20500.0	464.9	18.5	86.6	635.0	622.2	265.4	69.6	1.000149	
21000.0	455.6	18.4	84.8	622.5	622.1	257.0	70.2	1.000146	
21500.0	446.5	19.2	83.0	611.6	621.1	251.0	71.3	1.000145	
22000.0	437.2	20.4	81.5	602.1	619.6	246.9	69.8	1.000140	
22500.0	428.5	21.6	79.6	592.6	618.1	243.4	68.9	1.000137	
23000.0	419.5	22.8	77.9	583.4	618.6	243.9	69.2	1.000135	
23500.0	410.9	24.0	76.2	574.5	615.1	244.6	70.2	1.000132	

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 60
 ASL/ISSUR NO. 47

UPPER AIR DATA
 0500Z0047
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.40511 LONG DEG

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC MLTER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES TRUE) SPEED (KNOTS)	INDEX OF REFRACTION
24000.0	402.0	-25.2	74.5	565.3	613.0	247.4 73.5	1.000150
24500.0	394.0	-26.4	73.4	550.1	612.1	249.9 76.9	1.000127
25000.0	385.0	-27.0	72.5	546.8	610.0	252.3 80.4	1.000115
25500.0	377.4	-28.8	71.6	537.7	609.1	254.1 82.9	1.000122
26000.0	369.3	-30.0	70.7	523.8	607.0	255.1 84.4	1.000110
26500.0	361.4	-31.1	69.8	520.0	605.2	255.5 84.8	1.000113
27000.0	353.0	-32.3	68.9	511.4	604.7	255.0 84.5	1.000110
27500.0	346.1	-33.5	68.0	502.9	603.2	255.5 84.9	1.000114
28000.0	338.7	-34.7	67.1	494.0	601.7	255.3 85.4	1.000112
28500.0	331.4	-35.9	66.2	485.5	600.2	255.0 86.0	1.000110
29000.0	324.2	-37.0	65.3	478.4	598.7	254.7 86.5	1.000108
29500.0	317.4	-38.2	64.3	470.6	597.2	254.5 86.8	1.000100
30000.0	310.0	-39.4	63.4	462.8	595.7	254.4 87.8	1.000104
30500.0	303.9	-40.6	62.5	455.2	594.1	253.1 90.4	1.000102
31000.0	297.3	-41.8	61.0	447.0	592.0	250.0 93.9	1.000100
31500.0	290.7	-42.9	60.7	439.9	591.1	257.3 99.0	1.000099
32000.0	284.2	-44.1	59.7	432.3	589.0	250.1 103.8	1.000097
32500.0	277.9	-45.3	58.1**	424.9	588.0	253.5 108.2	1.000095
33000.0	271.5	-46.7	43.8**	417.0	586.2	258.3 112.6	1.000093
33500.0	265.3	-48.2	31.6**	410.8	584.4	257.7 117.0	1.000092
34000.0	259.3	-49.6	19.3**	404.0	582.5	257.1 122.2	1.000090
34500.0	253.4	-51.0	7.1**	397.3	580.7	250.5 128.1	1.000089
35000.0	247.6	-51.4		389.5	579.7	250.2 135.0	1.000087
35500.0	241.8	-51.7		389.4	579.0	250.1 137.2	1.000085
36000.0	236.2	-51.5		371.4	579.9	250.3 136.3	1.000083
36500.0	230.8	-51.4		362.0	580.1	250.0 132.8	1.000081
37000.0	225.3	-51.3		354.1	580.2	257.4 126.8	1.000079
37500.0	220.2	-51.2		345.7	580.4	259.4 119.9	1.000077
38000.0	215.2	-50.1		336.0	581.8	259.0 118.7	1.000075
38500.0	210.2	-49.4		327.4	582.7	250.9 118.9	1.000073
39000.0	205.4	-49.1		319.4	583.1	251.9 118.3	1.000071
39500.0	200.7	-48.8		311.0	583.0	253.0 117.7	1.000069
40000.0	196.1	-49.1		305.0	583.1	253.1 112.4	1.000068
40500.0	191.0	-49.6		298.6	582.5	252.9 105.9	1.000067
41000.0	187.2	-50.1		292.4	581.8	251.2 99.0	1.000065
41500.0	182.9	-50.6		286.3	581.2	253.7 92.1	1.000064
42000.0	178.7	-51.1		280.4	580.5	255.7 85.7	1.000062
42500.0	174.0	-51.6		274.5	579.9	252.2 80.4	1.000061
43000.0	170.3	-52.3		269.2	576.7	248.1 75.5	1.000060
43500.0	166.3	-53.4		264.1	577.3	245.4 73.8	1.000059

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

UPPER AIR DATA
 0500030047
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB 80
 ASCENSION NO. 47

GEODETIC COORDINATES
 33.15712 LAT (EG
 106.49511 LO. (LLG

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND METERS PER SECOND	DIRECTION OF WIND DEGREES (TRUE)	WIND SPEED KNOTS	INDEX OF REFRACTION
4400.0	162.6	-54.4		259.0	576.2	243.3	73.5	1.000058
4450.0	158.8	-55.3		254.0	573.0	241.4	73.4	1.000057
4500.0	155.1	-56.3		249.2	570.7	244.0	75.7	1.000055
4550.0	151.5	-57.2		244.4	572.5	246.5	78.2	1.000054
4600.0	147.9	-58.4		239.8	570.9	248.9	80.7	1.000053
4650.0	144.3	-59.7		235.5	569.2	251.4	82.9	1.000052
4700.0	140.8	-61.0		231.2	567.4	253.6	85.3	1.000051
4750.0	137.4	-62.4		227.1	565.8	254.1	85.9	1.000051
4800.0	134.1	-63.7		223.0	563.8	254.0	81.7	1.000050
4850.0	130.8	-65.0		219.0	562.0	254.3	78.8	1.000049
4900.0	127.6	-66.3		215.0	560.3	253.3	74.4	1.000048
4950.0	124.5	-67.2		210.5	559.2	250.3	70.2	1.000047
5000.0	121.4	-68.0		206.1	558.0	255.7	70.4	1.000046
5050.0	118.3	-68.9		201.8	556.8	255.1	70.7	1.000045
5100.0	115.4	-69.7		197.6	555.7	252.6	74.2	1.000044
5150.0	112.5	-70.0		192.9	554.3	250.8	78.3	1.000043
5200.0	109.7	-70.0		183.1	553.2	250.0	80.7	1.000042
5250.0	106.9	-70.1		183.4	553.2	250.2	82.3	1.000041
5300.0	104.2	-70.1		175.8	553.2	251.0	80.1	1.000040
5350.0	101.6	-70.1		174.3	553.1	252.0	73.7	1.000039
5400.0	99.0	-70.4		170.2	554.7	254.7	66.1	1.000038
5450.0	96.5	-71.2		160.5	553.6	258.2	54.7	1.000037
5500.0	94.1	-72.1		163.0	552.4	263.4	43.6	1.000036
5550.0	91.7	-72.2		159.0	552.2	264.3	41.6	1.000035
5600.0	89.4	-71.6		154.5	553.1	263.3	39.4	1.000034
5650.0	87.1	-71.0		150.1	553.9	263.1	40.6	1.000033
5700.0	84.9	-70.4		145.9	554.7	260.1	42.9	1.000032
5750.0	82.8	-69.8		141.6	555.5	257.9	43.8	1.000032
5800.0	80.7	-62.6		133.6	553.2	250.2	42.9	1.000030
5850.0	78.7	-62.2		130.0	553.8	254.4	41.9	1.000029
5900.0	76.8	-62.8		127.2	553.0	253.2	39.7	1.000028
5950.0	75.0	-63.5		124.5	564.1	251.9	37.5	1.000027
6000.0	73.1	-64.1		121.9	563.3	249.5	35.7	1.000027
6050.0	71.3	-64.7		119.2	562.4	246.3	34.3	1.000027
6100.0	69.6	-65.3		115.6	561.7	242.3	33.6	1.000026
6150.0	67.9	-65.6		113.9	561.3	235.4	36.8	1.000025
6200.0	66.2	-65.8		111.3	560.9	229.5	40.5	1.000025
6250.0	64.6	-66.1		108.7	560.5	224.4	40.1	1.000024
6300.0	63.0	-65.3		105.8	561.0	212.3	37.1	1.000024
6350.0	61.3	-64.5		102.6	562.7	201.4	35.4	1.000023

UPPER AIR DATA
0500000047
JALLEN

STATION ALTITUDE 4021.00 FEET MSL
19 FEB. 60 1100 HRS MSL
ASCEN. STOP NO. 47

GEOMETRIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY 6M/CUBIC METER	SPEED OF SOUND		WIND DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX OF REFRACTION
					KT	M/S			
6400.0	60.0	-63.3		99.6	56.4		103.1	28.0	1.000022
6450.0	58.5	-62.1		96.6	56.0		132.7	23.9	1.000022
6500.0	57.1	-61.1		93.8	55.7		122.1	27.5	1.000021
6550.0	55.7	-61.3		91.0	56.7		109.2	24.8	1.000020
6600.0	54.4	-61.4		89.4	56.9		94.3	23.7	1.000020
6650.0	53.1	-61.5		87.3	56.6		80.9	23.1	1.000019
6700.0	51.8	-61.6		85.3	56.4		73.3	17.5	1.000019
6750.0	50.5	-61.7		83.3	56.4		64.6	12.2	1.000019
6800.0	49.3	-61.9		81.3	56.2		50.5	8.4	1.000018
6850.0	48.1	-62.1		79.4	56.0		54.7	6.6	1.000018
6900.0	46.9	-62.2		77.5	55.8		61.4	5.2	1.000017
6950.0	45.8	-62.4		75.7	55.5		74.2	5.8	1.000017
7000.0	44.7	-62.6		74.0	55.3		81.3	9.8	1.000016
7050.0	43.6	-62.8		72.2	55.1		84.2	13.6	1.000016
7100.0	42.6	-62.9		70.5	54.8		84.6	18.0	1.000016
7150.0	41.5	-62.5		69.7	54.4		84.4	22.4	1.000015
7200.0	40.5	-61.7		66.8	53.9		84.2	26.7	1.000015
7250.0	39.6	-61.0		65.0	53.7		83.9	28.4	1.000014
7300.0	38.6	-60.2		63.2	53.5		83.7	27.7	1.000014
7350.0	37.7	-59.4		61.4	53.6		83.4	27.1	1.000014
7400.0	36.8	-58.6		59.7	53.6		83.1	25.5	1.000013
7450.0	35.9	-58.4		56.2	53.9		82.9	23.2	1.000013
7500.0	35.1	-58.6		56.9	53.7		82.5	20.8	1.000013
7550.0	34.2	-58.7		55.6	53.5		81.6	19.1	1.000012
7600.0	33.4	-58.9		54.3	53.3		80.7	18.0	1.000012
7650.0	32.6	-59.0		53.0	53.1		79.3	16.9	1.000012
7700.0	31.8	-59.2		51.8	52.8		78.4	16.3	1.000012
7750.0	31.1	-59.4		50.6	52.6		78.4	16.4	1.000011
7800.0	30.3	-59.5		49.5	52.4		78.4	16.5	1.000011
7850.0	29.6	-59.6		48.3	52.3		80.3	17.0	1.000011
7900.0	28.9	-59.6		47.1	52.3		85.3	18.3	1.000010
7950.0	28.2	-59.6		46.0	52.3		90.0	19.8	1.000010
8000.0	27.5	-59.7		44.9	52.2		95.8	21.3	1.000010
8050.0	26.9	-59.7		43.9	52.2		97.5	21.8	1.000010
8100.0	26.2	-59.7		42.8	52.2		100.9	22.3	1.000010
8150.0	25.6	-59.7		41.8	52.2		104.2	23.0	1.000009
8200.0	25.0	-59.7		40.8	52.2		106.0	22.7	1.000009
8250.0	24.4	-59.7		39.6	52.1		107.2	22.0	1.000009
8300.0	23.8	-59.7		38.9	52.1		103.4	21.3	1.000009
8350.0	23.2	-59.8		38.0	52.1		106.5	21.2	1.000008

STATION ALTITUDE 4021.00 FEET MSL
 19 FEB. 60 1100 HRS MST
 ASCENSION NO. 47

UPPLR AIR DATA
 0500030047
 JALLET

GEODETIC COORDINATES
 33.16712 LAT (L.G)
 106.49511 LONG (L.G)

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED KNOTS	WIND DATA DIRECTION (TR) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
8400.0	22.7	-59.8		37.0	5.9.1	105.8	22.9	1.000004
8450.0	22.2	-59.8		36.2	5.9.1	105.4	24.1	1.000008
8500.0	21.6	-59.8		35.3	5.9.0	101.5	26.3	1.000008
8550.0	21.1	-58.8		34.3	5.7.4	97.1	30.2	1.000008
8600.0	20.6	-57.7		33.3	5.7.9	95.7	34.5	1.000007
8650.0	20.1	-56.6		32.4	5.5.3	91.0	38.8	1.000007
8700.0	19.6	-56.2		31.5	5.3.9	89.1	41.5	1.000007
8750.0	19.2	-56.0		30.8	5.4.1	87.8	42.6	1.000007
8800.0	18.7	-55.8		30.0	5.4.4	86.4	43.8	1.000007
8850.0	18.3	-55.6		29.3	5.4.6	85.3	46.6	1.000007
8900.0	17.9	-55.4		28.6	5.4.9	85.8	41.0	1.000006
8950.0	17.5	-55.2		27.9	5.5.1	86.0	37.3	1.000006
9000.0	17.0	-55.0		27.2	5.5.4	86.5	33.7	1.000006
9050.0	16.6	-54.8		26.6	5.5.6	87.4	30.2	1.000006
9100.0	16.3	-54.6		25.9	5.5.9	88.7	26.8	1.000006
9150.0	15.9	-53.4		25.2	5.7.5	90.4	23.3	1.000006
9200.0	15.5	-52.0		24.4	5.9.4	92.7	19.9	1.000005
9250.0	15.2	-50.5		23.7	5.1.3	93.4	18.4	1.000005
9300.0	14.8	-49.7		23.1	5.2.8	93.8	17.2	1.000005
9350.0	14.5	-49.3		22.5	5.2.8	94.1	16.8	1.000005
9400.0	14.1	-49.0		22.0	5.3.3	94.8	14.8	1.000005
9450.0	13.8	-48.6		21.4	5.3.6	93.4	14.4	1.000005
9500.0	13.5	-48.2		20.9	5.4.3	91.8	14.2	1.000005
9550.0	13.2	-47.8		20.4	5.4.8	89.7	14.0	1.000005
9600.0	12.9	-47.5		19.9	5.5.2	87.6	13.8	1.000004
9650.0	12.6	-47.1		19.4	5.5.7	92.4	14.3	1.000004
9700.0	12.3	-46.7		19.0	5.6.2	100.2	15.5	1.000004
9750.0	12.1	-47.0		18.6	5.5.9	100.9	16.9	1.000004
9800.0	11.8	-47.3		18.2	5.5.5	112.5	18.4	1.000004
9850.0	11.5	-47.6		17.8	5.5.1	120.7	20.8	1.000004
9900.0	11.3	-47.9		17.4	5.4.7	130.1	24.7	1.000004
9950.0	11.0	-48.2		17.0	5.4.4	130.3	29.0	1.000004
10000.0	10.8	-48.2		16.7	5.4.3	141.0	33.6	1.000004
10050.0	10.5	-47.4		16.2	5.5.3	145.3	35.9	1.000004
10100.0	10.3	-46.6		15.8	5.6.3	152.8	33.5	1.000004
10150.0	10.0	-45.8		15.4	5.7.4	159.8	31.6	1.000003
10200.0	9.8	-45.3		15.0	5.6.1	167.8	30.2	1.000003
10250.0	9.6	-44.8		14.8	5.6.7			1.000003
10300.0	9.4	-44.3		14.3	5.9.3			1.000003
10350.0	9.2	-43.8		13.9	5.9.0			1.000003

UPPER AIR DATA
 0500030047
 JALLEN

STATION ALTITUDE 4021.00 FEET MSL
 19 FEB. 60 1100 HRS MST
 ASCENSION NO. 47

GEODETTIC COORDINATES
 33.13712 LAT 166
 190.49511 LONG 126

TABLE 4 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KILOMETERS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (T)	SPEED KNOTS	
10400.0	9.0	-43.5		13.6	550.6			1.000013
10450.0	8.8	-42.8		13.3	541.2			1.000013

STATION ALTITUDE 4051.00 FEET MSL
 19 FEB. 60
 ASCENSION NO. 47

MANDATORY LEVELS
 0500010047
 JALLEN

GEODETIC COORDINATES
 33.16712 LAT N
 106.49511 LONG W

TABLE 5

MILLIBARS	PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
	FEET	DEGREES	AIR DEGREES	UP WIND		DIRECTION DEGREES (TR)	SPEED KNOTS
850.0	4891.	11.3	2.9	50.	227.2	2.5	
800.0	6594.	8.1	-9	53.	250.3	11.1	
750.0	8283.	4.7	-5.0	49.	282.8	21.6	
700.0	10121.	3.6	-10.0	41.	281.2	33.2	
650.0	12079.	-6	-13.1	30.	271.5	33.7	
600.0	14157.	-10.5	-19.0	49.	260.7	34.0	
550.0	16333.	-14.7	-19.0	60.	271.1	32.1	
500.0	18648.	-17.4	-20.1	79.	275.2	40.6	
450.0	21271.	-18.7	-20.0	64.	255.3	70.9	
400.0	24114.	-23.6	-28.8	74.	240.1	74.4	
350.0	27295.	-32.0	-30.7	60.	255.3	64.7	
300.0	30743.	-41.3	-45.7	62.	250.2	91.8	
250.0	34717.	-51.8			250.2	131.2	
200.0	39407.	-44.7			263.1	117.6	
175.0	42350.	-51.5			252.0	61.1	
150.0	45588.	-57.6			247.4	79.2	
125.0	49279.	-67.0			250.1	70.9	
100.0	53667.	-70.1			253.7	70.1	
80.0	57992.	-61.8			255.0	42.6	
70.0	60883.	-65.2			244.2	33.2	
60.0	63761.	-63.3			183.2	23.7	
50.0	67467.	-61.8			50.2	10.4	
40.0	71987.	-61.3			84.1	20.7	
30.0	77901.	-59.6			78.4	10.6	
25.0	81642.	-59.7			105.9	27.8	
20.0	86230.	-50.3			90.0	37.6	
15.0	92273.	-49.9			93.0	10.0	
10.0	101052.	-45.7			160.5	31.4	

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