

AD-A087 642

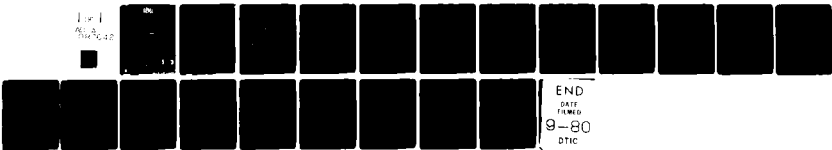
ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2  
12822A LANCE, MISSILE NUMBER 4382, ROUND NUMBER 3\*5ECL.(U)  
APR 80

UNCLASSIFIED

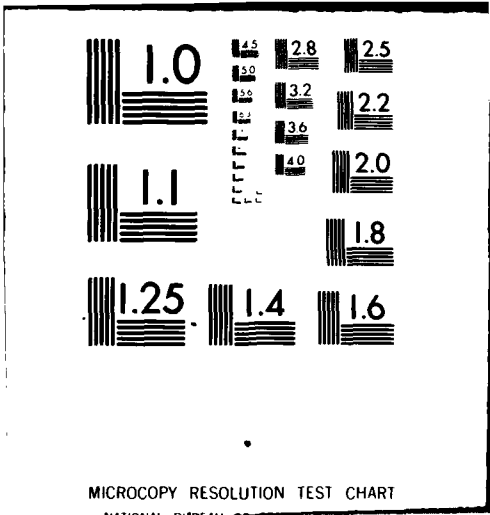
ERADCOM/ASL-DR-1150

NL

1 of 1  
9/20/80



END  
DATE  
FORMED  
9-80  
DTIC



ADA 087642

22-159

22-159

22-159

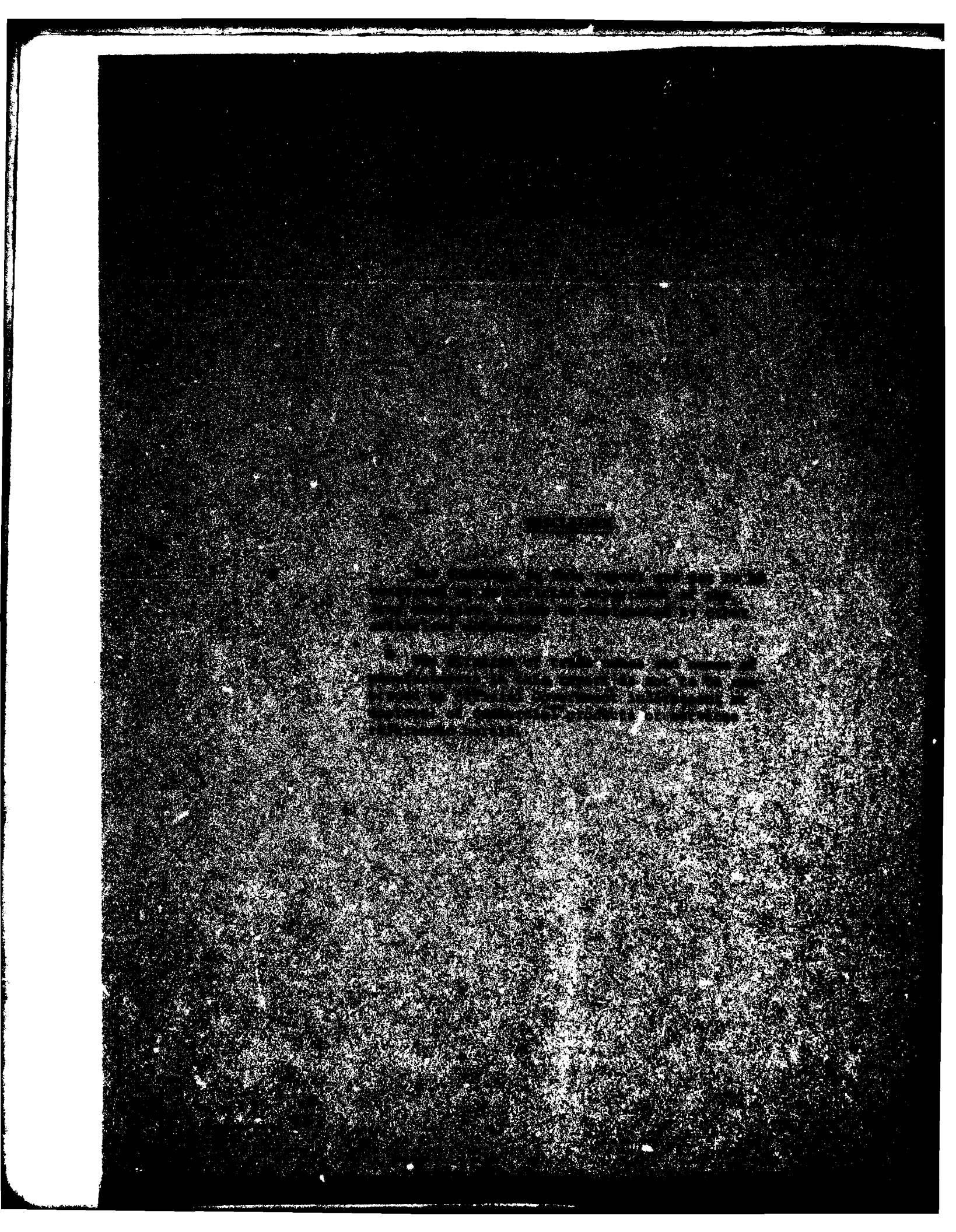
22-159

THIS DOCUMENT IS BEST QUALITY PRACTICABLE.  
IF A COPY IS AVAILABLE TO DDC, IT CONTAINED A  
SIGNIFICANT NUMBER OF PAGES WHICH DO NOT  
REPRODUCE LEGIBLY.

REC'D  
1-10-68

ADAM

1-10-68



## **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 1150	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 12822A LANCE Missile Number 4382 Round Number 345ECL		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 & Dev Command Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		12. REPORT DATE April 1980
		13. NUMBER OF PAGES 18
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Dev Command Adelphi, MD 20783		15. SECURITY CLASS. (of this report)  UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
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 12822A LANCE, Missile Number 4382, Round Number 345ECL, are presented in tabular form.		

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

ACCESSION for	
NTIS	White Section <input checked="" type="checkbox"/>
ORC	Buff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
IDENTIFICATION/AVAILABILITY CODES	
ORC	AVAIL and/or SPECIAL
A	

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

CONTENTS

	<u>PAGE</u>
INTRODUCTION -----	1
DISCUSSION -----	1
TABLES:	
1. Surface Observation Taken at 0737 MST at LC-33 -----	2
2. Red Rio Significant Level Data at 0800 MST -----	3
3. Red Rio Upper Air Data at 0800 MST -----	4
4. Red Rio Mandatory Levels at 0800 MST -----	8
5. Jallen Significant Level Data at 0755 MST -----	9
6. Jallen Upper Air Data at 0755 MST -----	11
7. Jallen Mandatory Levels at 0755 MST -----	15

Accession For	
NTIS Grant	<input checked="" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Date	
Number of Pages	
Number of	
Serial	

A 27

## INTRODUCTION

12822A LANCE, Missile Number 4382, Round Number 345 ECL,  
was launched from Red Rio, White Sands Missile Range (WSMR), New Mexico,  
at 0737 MST on 25 April 1980. The scheduled launch time was  
0730 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 ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), Wind direction and speed, and cloud cover were made at the Red Rio 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 RAPTS T-1 pibal observation at:

## SITE AND ALTITUDE

**Not available - radar inoperative.**

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to as high as possible in 500-foot increments.

## SITE AND TIME

Red Rio	0800 MST
Jallen	0755 MST

TABLE 1. Surface Observations Taken at 0737 MST,  
 25 April 1980, at Red Rio, 12822A LANCE,  
 Missile Number 4382, Round Number 345 ECL.

ELEVATION	6332	FT/MSL
PRESSURE	802.6	MBS
TEMPERATURE	3.6	°C
RELATIVE HUMIDITY	70	%
DEW POINT	- 1.4	°C
DENSITY	1007	GM/M <sup>3</sup>
WIND SPEED	02	KTS
WIND DIRECTION	330	DEGREES
CLOUD COVER	6	Ac

STATION ALTITUDE 6331.86 FEET MSL  
 25 APR. 1960 0800 HRS MST  
 ASCENSION NO. 2

SIGNIFICANT LEVEL DATA  
 1160350002  
 RED RIO

GEODETTIC COORDINATES  
 33.77850 LAT ULLG  
 106.24993 LON DEG

TABLE 2.

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT	
	AIR DEGREES CENTIGRADE	DEWPOINT PERCENT		
803.0	6331.9	4.5	.1	73.0
792.8	6673.1	2.6	-1.2	76.0
700.0	9935.0	-5.4	-9.1	75.0
656.4	11985.8	-8.3	-10.7	63.0
629.4	12657.0	-8.7	-16.7	52.0
612.0	13371.6	-8.5	-19.1	42.0
561.0	15574.8	-12.2	-18.7	58.0
544.0	16347.0	-13.3	-21.7	49.0
511.0	17903.2	-16.9	-22.0	61.0
500.0	18440.0	-17.4	-26.2	46.0
441.2	21453.7	-24.0	-29.4	61.0
434.8	21834.4	-24.2	-30.8	54.0
400.0	23916.2	-29.1	-36.0	48.0
377.2	25186.6	-32.7	-38.5	56.0
356.8	26467.4	-35.6	-44.3	40.0
324.2	28637.1	-40.9	-48.7	42.0
300.0	30358.9	-45.0		
250.0	34291.9	-53.9		
246.1	34624.6	-53.7		
240.9	35080.6	-49.9		
232.0	35492.5	-49.2		
211.8	37848.4	-52.0		
203.8	38671.9	-51.0		
200.0	39078.2	-47.8		
196.0	39518.6	-46.7		
170.6	42520.6	-51.4		
162.0	43630.3	-50.4		
150.0	45281.7	-51.4		
127.0	48813.1	-55.5		
119.8	50042.9	-54.5		
100.0	53921.7	-58.8		
90.2	55962.8	-57.9		
70.0	61193.4	-61.6		
50.6	64474.2	-62.9		
50.0	66065.8	-58.3		
37.0	74379.7	-56.1		
30.0	78845.9	-50.4		

STATION ALTITUDE 6331.66 FEET MSL  
 25 APR. 60  
 ASCENSION NO.

UPPER AIR DATA  
 116035000Z  
 RED RIO

GEODETIC COORDINATES  
 33.77850 LAT DEG  
 106.24993 LONG DEG

TABLE 3.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (T)	WIND VELOCITY KNOTS	INDEX OF REFRACTION
6331.9	803.0	4.5	.1	73.0	1004.6	650.1	330.0	6.0	1.000254
6500.0	798.0	3.6	-0.5	74.5	1001.8	649.0	341.3	6.5	1.000252
7000.0	785.0	1.8	-2.0	75.9	989.5	646.8	4.4	9.0	1.000247
7500.0	768.2	.6	-3.2	75.7	975.3	645.3	16.4	12.3	1.000242
8000.0	753.7	-0.7	-4.4	75.6	961.4	643.6	23.2	15.8	1.000237
8500.0	739.4	-1.9	-5.6	75.4	947.6	642.3	29.2	17.1	1.000232
9000.0	725.4	-3.1	-6.8	75.3	934.0	640.8	37.7	15.8	1.000227
9500.0	711.7	-4.3	-8.1	75.1	920.7	639.3	37.3	15.8	1.000223
10000.0	696.2	-5.5	-9.2	75.3	907.3	637.9	30.7	16.7	1.000218
10500.0	684.8	-6.4	-9.6	77.7	892.8	636.8	23.0	16.8	1.000215
11000.0	671.6	-7.3	-10.1	80.2	878.5	635.7	16.0	16.8	1.000211
11500.0	658.6	-8.1	-10.6	82.6	864.4	634.7	10.8	17.4	1.000207
12000.0	645.8	-8.5	-12.7	71.0	848.8	634.2	5.9	18.3	1.000201
12500.0	633.3	-8.6	-15.7	56.5	833.2	633.9	359.6	20.7	1.000195
13000.0	621.0	-8.6	-17.8	47.2	817.0	633.9	350.1	22.8	1.000190
13500.0	608.9	-8.7	-19.0	42.9	801.5	633.8	355.1	24.1	1.000186
14000.0	597.0	-9.6	-18.8	46.6	783.3	632.8	335.0	25.4	1.000183
14500.0	585.3	-10.4	-18.7	50.2	775.3	631.8	337.7	26.5	1.000180
15000.0	573.9	-11.2	-18.7	53.8	762.6	630.8	330.8	27.2	1.000178
15500.0	562.7	-12.1	-18.7	57.5	750.1	629.8	333.5	27.8	1.000175
16000.0	551.6	-12.8	-20.3	53.0	737.4	628.9	332.4	27.0	1.000171
16500.0	540.7	-13.7	-21.8	50.2	725.3	627.8	332.1	27.8	1.000168
17000.0	529.9	-14.8	-22.0	54.0	714.0	626.4	354.0	29.3	1.000165
17500.0	519.4	-16.0	-23.3	57.9	703.0	625.0	355.4	30.8	1.000162
18000.0	509.0	-17.0	-23.2	58.3	691.7	623.7	354.0	32.1	1.000160
18500.0	498.8	-17.5	-26.2	46.3	679.4	623.0	353.1	33.5	1.000155
19000.0	488.6	-18.6	-26.7	48.8	668.4	621.7	356.8	34.9	1.000153
19500.0	478.7	-19.7	-27.2	51.2	657.6	620.4	.0	36.4	1.000150
20000.0	468.9	-20.8	-27.7	53.7	647.0	619.0	2.4	37.8	1.000148
20500.0	459.4	-21.9	-28.2	56.2	636.6	617.7	3.0	39.0	1.000145
21000.0	450.1	-23.0	-28.8	58.6	626.3	616.4	333.2	39.9	1.000143
21500.0	440.9	-24.0	-29.4	60.7	616.2	615.1	334.7	41.8	1.000140
22000.0	431.8	-24.6	-31.3	53.5	605.0	614.3	349.9	44.8	1.000137
22500.0	422.8	-25.8	-32.8	52.0	595.4	612.8	340.0	46.6	1.000135
23000.0	414.0	-27.1	-34.2	50.5	585.9	611.2	342.7	47.6	1.000133
23500.0	405.4	-28.3	-35.7	49.0	576.6	609.7	340.0	47.4	1.000130
24000.0	396.9	-29.6	-36.8	49.1	567.5	608.1	338.5	47.1	1.000128
24500.0	388.5	-30.9	-37.5	52.0	558.5	606.4	337.7	46.9	1.000126
25000.0	380.2	-32.2	-39.2	54.9	549.6	604.8	338.7	47.5	1.000124
25500.0	372.1	-33.4	-39.8	52.1	540.6	603.3	339.2	47.8	1.000122

STATION ALTITUDE 6331-80 FEET MSL  
 25 APR. 50 0800 HRS MST  
 ASCENSION NO. 2

UPPER AIR DATA  
 1160350002  
 RED RIO

GEODETIC COORDINATES  
 33.77850 LAT DEG  
 106.24993 LON DEG

TABLE 3 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUMID. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION, DEGREES (T)	SPEED, KNOTS	
2600.0	304.1	-34.5	-42.1	45.8	531.5	601.8	337.4	47.0	1.000119
2550.0	356.3	-35.7	-44.4	40.0	522.6	600.4	335.2	46.5	1.000117
2700.0	346.5	-36.9	-45.4	40.5	513.8	596.8	332.5	46.5	1.000115
2750.0	340.9	-38.1	-46.4	41.0	505.2	597.3	330.0	47.2	1.000113
2800.0	335.5	-39.3	-47.4	41.4	496.8	595.7	330.3	48.6	1.000111
2850.0	326.2	-40.6	-48.5	41.9	488.5	594.2	332.0	48.8	1.000109
2900.0	318.9	-41.8	-51.6	33.1**	480.2	592.6	335.3	48.1	1.000107
2950.0	311.8	-43.0	-56.4	21.0**	471.9	591.1	340.2	49.0	1.000105
3000.0	304.9	-44.1	-64.0	8.8**	463.2	589.5	345.4	51.0	1.000103
3050.0	298.0	-45.3			455.7	588.0	347.0	51.1	1.000102
3100.0	291.2	-46.5			447.5	586.6	340.0	49.9	1.000100
3150.0	284.5	-47.6			439.4	585.1	347.6	47.6	1.000098
3200.0	278.0	-48.7			431.5	583.6	349.4	44.7	1.000096
3250.0	271.7	-49.8			423.8	582.2	353.5	44.3	1.000094
3300.0	265.4	-51.0			416.2	580.7	358.5	45.9	1.000093
3350.0	259.3	-52.1			408.7	579.2	2.1	46.6	1.000091
3400.0	253.4	-53.2			401.4	577.7	4.8	46.4	1.000089
3450.0	247.6	-53.8			393.1	577.0	5.1	45.4	1.000088
3500.0	241.8	-50.6			378.5	581.2	2.2	43.1	1.000084
3550.0	236.3	-49.5			368.1	582.6	357.5	40.1	1.000082
3600.0	230.8	-49.4			359.3	582.8	347.4	35.4	1.000080
3650.0	225.5	-50.1			352.2	581.9	336.4	32.2	1.000078
3700.0	220.3	-50.8			345.2	580.9	331.8	30.5	1.000077
3750.0	215.3	-51.5			338.3	580.0	327.7	29.0	1.000075
3800.0	210.3	-51.8			331.0	579.6	329.9	27.6	1.000074
3850.0	205.4	-51.2			322.5	580.4	322.1	26.1	1.000072
3900.0	200.7	-48.4			311.1	584.0	329.8	23.5	1.000069
3950.0	196.2	-48.7			301.8	588.2	328.9	20.9	1.000067
4000.0	191.7	-47.5			295.9	585.3	324.5	19.4	1.000066
4050.0	187.3	-48.2			290.1	584.5	321.5	18.3	1.000065
4100.0	183.0	-49.0			284.5	583.2	318.6	17.3	1.000063
4150.0	178.8	-49.8			278.9	582.2	315.6	16.3	1.000062
4200.0	174.8	-50.6			273.5	581.2	312.0	15.4	1.000061
4250.0	170.8	-51.4			268.2	580.2	307.5	14.6	1.000060
4300.0	166.8	-51.0			261.8	580.7	302.8	13.9	1.000058
4350.0	163.0	-50.5			255.0	581.3	293.7	13.6	1.000057
4400.0	159.2	-50.6			249.3	581.1	294.3	13.5	1.000056
4450.0	155.6	-50.9			243.9	580.8	288.0	14.6	1.000054
4500.0	152.0	-51.2			238.8	580.4	282.7	15.8	1.000053
4550.0	148.5	-51.7			233.5	579.8	274.8	14.9	1.000052

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

GEODETIC COORDINATES  
 33.77850 LAT DEG  
 106.24993 LONG DEG

UPPER AIR DATA  
 1160350002  
 KED RIO

STATION ALTITUDE 6331.86 FEET MSL  
 25 APR. 60 0800 HRS MST  
 ASCENSION NO. 2

TABLE 3 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T,) SPEED KNOTS	INDEX OF REFRACTION
4000.0	145.0	-52.2		228.7	579.0	204.3	1.000051
4050.0	141.6	-52.8		223.9	578.5	250.4	1.000050
4700.0	138.3	-53.4		219.3	577.5	249.7	1.000049
4750.0	135.1	-54.0		214.7	576.8	240.5	1.000048
4800.0	132.0	-54.6		210.3	576.0	250.7	1.000047
4850.0	128.9	-55.1		206.0	575.2	272.4	1.000046
4900.0	125.9	-55.3		201.5	574.9	263.0	1.000045
4950.0	122.9	-54.9		196.2	575.5	294.2	1.000044
5000.0	120.0	-54.5		191.5	576.0	301.5	1.000043
5050.0	117.2	-55.0		187.2	575.4	307.2	1.000042
5100.0	114.4	-55.6		183.2	574.6	302.2	1.000041
5150.0	111.7	-56.2		179.4	573.9	246.4	1.000040
5200.0	109.1	-56.7		175.6	573.1	201.0	1.000039
5250.0	106.5	-57.3		171.9	572.4	202.6	1.000038
5300.0	104.0	-57.9		168.3	571.6	204.1	1.000037
5350.0	101.5	-58.4		164.8	570.9	213.3	1.000037
5400.0	99.1	-58.7		161.1	570.5	245.1	1.000036
5450.0	96.8	-58.5		157.1	570.8	203.0	1.000035
5500.0	94.5	-58.3		153.2	571.0	200.9	1.000034
5550.0	92.2	-58.1		149.4	571.3	258.0	1.000033
5600.0	90.0	-57.9		145.7	571.5	204.0	1.000032
5650.0	87.9	-58.3		142.5	571.1	277.0	1.000032
5700.0	85.8	-58.6		139.3	570.6	291.9	1.000031
5750.0	83.7	-59.0		136.2	570.1	302.2	1.000030
5800.0	81.7	-59.3		133.1	569.7	315.0	1.000030
5850.0	79.8	-59.7		130.2	569.2	271.5	1.000029
5900.0	77.9	-60.0		127.3	568.7	252.0	1.000028
5950.0	76.0	-60.4		124.4	568.2	216.4	1.000028
6000.0	74.2	-60.8		121.6	567.8	209.1	1.000027
6050.0	72.4	-61.1		118.9	567.5	200.2	1.000026
6100.0	70.7	-61.5		116.3	566.8	186.4	1.000026
6150.0	69.0	-61.7		113.6	566.5	168.0	1.000025
6200.0	67.3	-61.9		111.0	566.2	155.3	1.000025
6250.0	65.7	-62.1		108.4	565.9	141.7	1.000024
6300.0	64.1	-62.3		105.9	565.7	129.7	1.000024
6350.0	62.5	-62.5		103.4	565.4	123.2	1.000023
6400.0	61.0	-62.7		101.0	565.1	120.0	1.000022
6450.0	59.5	-62.9		98.6	564.9	110.4	1.000022
6500.0	58.1	-62.2		96.0	564.6	99.3	1.000021
6550.0	56.7	-61.5		93.4	564.6	94.9	1.000021

STATION ALTITUDE 6331.66 FEET MSL  
 25 APR. 60 0800 HRS MST  
 ASCENSION NO. 2

UPPER AIR DATA  
 1160350002  
 NEJ RIO

TABLE 3 (continued)

GEODETIC COORDINATES  
 33.77850 LAT DEG  
 106.24993 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION, DEGREES(T)	SPEED KNOTS	
6600.0	55.3	-61.0	90.6	567.5	107.6	3.8	1.000020	
6500.0	54.0	-60.3	86.4	568.3	117.5	4.4	1.000020	
6400.0	52.7	-59.7	86.0	569.2	114.5	6.4	1.000019	
6300.0	51.4	-59.0	83.7	570.0	112.8	6.5	1.000019	
6200.0	50.2	-58.4	81.5	570.9	108.6	10.1	1.000018	
6100.0	49.0	-58.2	79.4	571.2	103.9	11.4	1.000018	
6000.0	47.9	-58.0	77.5	571.5	100.2	12.8	1.000017	
5950.0	46.7	-57.8	75.6	571.7	105.7	12.5	1.000017	
7060.0	45.6	-57.6	73.7	571.9	111.4	12.4	1.000016	
7050.0	44.5	-57.5	71.9	572.2	119.3	12.1	1.000016	
7100.0	43.5	-57.3	70.2	572.4	130.6	11.9	1.000016	
7150.0	42.5	-57.1	68.5	572.6	142.4	12.1	1.000015	
7200.0	41.5	-56.9	66.8	572.9	150.7	11.2	1.000015	
7250.0	40.5	-56.8	65.2	573.1	179.2	10.9	1.000015	
7300.0	39.5	-56.6	63.6	573.3	197.3	11.6	1.000014	
7350.0	38.6	-56.4	62.0	573.5	209.1	10.0	1.000014	
7400.0	37.7	-56.2	60.5	573.8	224.2	9.0	1.000013	
7450.0	36.8	-55.9	59.0	574.2	233.9	7.7	1.000013	
7500.0	35.9	-55.3	57.5	575.0	237.9	5.6	1.000013	
7550.0	35.1	-54.7	56.0	575.8	246.3	3.6	1.000012	
7600.0	34.3	-54.0	54.5	576.7	220.2	2.3	1.000012	
7650.0	33.5	-53.4	53.1	577.5	177.5	2.3	1.000012	
7700.0	32.7	-52.8	51.7	578.4	149.1	3.6	1.000012	
7750.0	32.0	-52.1	50.4	579.2			1.000011	
7800.0	31.2	-51.5	49.1	580.0			1.000011	
7850.0	30.5	-50.8	47.8	580.9			1.000011	

STATION ALTITUDE 6331.86 FEET MSL  
 25 APR 60  
 ASCENSION: 110. 2  
 0800 HRS MST

MANDATORY LEVELS  
 1160350002  
 RED RIO

GEODETIC COORDINATES  
 33.77650 LAT DEG  
 106.24993 LON DEG

TABLE 4.

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
800.0	6428.	3.9	-3	74.	330.0	0.3	
750.0	6133.	-1.0	-4.7	70.	24.5	10.8	
700.0	9927.	-5.4	-9.1	75.	31.0	10.0	
650.0	11825.	-8.4	-11.9	70.	7.7	17.9	
600.0	13061.	-9.3	-18.9	46.	355.0	20.1	
550.0	16054.	-12.9	-20.6	52.	352.3	27.6	
500.0	18417.	-17.4	-20.2	40.	352.9	30.3	
450.0	20979.	-23.0	-23.8	59.	359.2	37.9	
400.0	23730.	-29.1	-30.6	48.	330.8	47.2	
350.0	26362.	-30.7	-45.2	40.	333.0	40.5	
300.0	30303.	-45.0			347.1	51.5	
250.0	34223.	-53.0			0.3	40.4	
200.0	38990.	-47.6			329.5	20.1	
175.0	41074.	-50.5			312.3	15.5	
150.0	45166.	-51.4			270.9	10.5	
125.0	49013.	-55.2			285.9	7.8	
100.0	53063.	-58.8			234.4	10.3	
80.0	58264.	-59.7			270.7	0.7	
70.0	60901.	-61.6			160.7	0.4	
60.0	64110.	-62.0			122.1	0.5	
50.0	67330.	-50.3			100.2	10.3	
40.0	72463.	-56.7			107.9	11.2	
30.0	78519.	-50.4					

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

STATION ALTITUDE 4051.00 FEET MSL  
 25 APR. 60 0755 HRS MST  
 ASCENSION NO. 125

SIGNIFICANT LEVEL DATA  
 1160030125  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 5.

PRESSURE MILLIBARS	PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM. PERCENT
	MSL FEET	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
873.6	4051.0	99.5	9.5	4.1	69.0
863.7	4360.9	7.7	7.7	1.5	65.0
850.0	4792.6	5.9	5.9	-0.6	62.0
817.4	5842.7	4.7	4.7	-1.7	63.0
794.2	6611.4	2.7	2.7	-3.2	65.0
747.6	8209.2	-0.9	-0.9	-4.4	77.0
709.0	9595.4	-3.0	-3.0	-7.9	69.0
700.0	9927.9	-3.4	-3.4	-9.0	62.0
690.0	10301.9	-3.4	-3.4	-11.0	53.0
652.6	11742.7	-6.3	-6.3	-14.5	52.0
625.4	12836.2	-6.9	-6.9	-16.3	47.0
572.4	15093.8	-10.3	-10.3	-17.6	55.0
564.0	15468.1	-10.6	-10.6	-17.4	57.0
535.8	16757.0	-14.3	-14.3	-17.3	78.0
511.2	17924.4	-16.7	-16.7	-19.3	60.0
500.0	18471.4	-17.3	-17.3	-20.6	74.0
489.2	19009.6	-17.6	-17.6	-23.1	62.0
473.6	19805.2	-19.3	-19.3	-27.7	47.0
418.1	22811.3	-26.5	-26.5	-33.0	51.0
400.0	23857.0	-29.5	-29.5	-39.0	59.0
370.8	25622.1	-33.6	-33.6	-42.9	38.0
350.4	26919.3	-37.1	-37.1	-43.5	51.0
317.6	29114.8	-42.8	-42.8	-49.5	47.0
300.0	30383.9	-46.8	-46.8		
281.2	31790.8	-48.6	-48.6		
253.0	34049.8	-54.4	-54.4		
250.0	34301.7	-54.0	-54.0		
242.2	34975.9	-51.3	-51.3		
226.4	36413.5	-53.2	-53.2		
200.0	39068.2	-49.3	-49.3		
183.2	40954.8	-51.4	-51.4		
178.8	41475.0	-51.5	-51.5		
157.8	44133.9	-53.9	-53.9		
150.0	45209.4	-52.9	-52.9		
145.0	45814.1	-52.4	-52.4		
120.6	49935.1	-55.1	-55.1		
100.0	53746.0	-59.0	-59.0		
86.4	56771.6	-59.0	-59.0		
83.6	57653.8	-59.9	-59.9		
70.0	61090.6	-63.7	-63.7		

STATION ALTITUDE 4051.00 FEET MSL  
 25 APR. 50  
 ASCENSION NO. 125

SIGNIFICANT LEVELL DATA  
 11600301.5  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LONG DEG

TABLE 5 (continued)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
65.6	62415.0	-60.7		
55.6	65802.0	-62.2		
53.2	66705.0	-61.1		
50.0	67978.1	-61.0		
46.2	69620.1	-56.0		
44.0	70648.4	-54.8		
37.0	74293.5	-56.9		
30.0	78734.5	-52.1		

STATION ALTITUDE 4051.00 FEET MSL  
 25 APR. 60  
 ASCENSION NO. 125

UPPER AIR DATA  
 1160030125  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT JEG  
 106.49511 LONG DEG

TABLE 6.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	DEWPOINT TEMPERATURE DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION OF WIND DEGREES (TN)	WIND DATA SPEED KNOTS	INCL OF REFRACTION
4051.0	873.6	9.5	4.1	69.0	1072.9	650.1	10.0	2.9	1.000278
4500.0	859.3	7.1	.8	64.0	1065.0	653.1	7.1	3.5	1.000269
5000.0	843.5	5.7	-1.0	62.2	1051.2	651.3	4.8	4.1	1.000262
5500.0	827.9	5.1	-1.4	62.7	1033.9	650.7	3.1	4.8	1.000257
6000.0	812.6	4.3	-2.0	63.4	1017.6	649.7	3.0	5.4	1.000253
6500.0	797.5	3.0	-3.0	64.7	1003.6	646.1	3.0	6.2	1.000248
7000.0	782.6	1.8	-3.5	67.9	989.2	645.8	3.0	7.7	1.000244
7500.0	767.9	.7	-3.8	71.7	974.7	645.4	3.0	9.4	1.000240
8000.0	753.5	-.4	-4.2	75.4	960.4	644.1	3.0	11.7	1.000237
8500.0	739.3	-1.3	-5.1	75.3	945.5	643.0	3.0	13.7	1.000232
9000.0	725.3	-2.1	-6.4	72.4	930.4	642.0	3.0	15.6	1.000227
9500.0	711.6	-2.9	-7.6	69.6	915.4	641.1	3.0	16.5	1.000222
10000.0	698.1	-3.4	-10.0	60.3	900.1	640.3	3.0	17.0	1.000215
10500.0	684.7	-3.8	-12.0	52.9	884.4	639.3	3.0	16.9	1.000210
11000.0	671.6	-4.8	-13.0	52.5	870.8	638.6	3.0	17.9	1.000202
11500.0	658.8	-5.8	-14.0	50.8	857.4	637.4	3.0	19.6	1.000200
12000.0	646.1	-6.4	-14.9	48.5	843.0	636.2	3.0	21.9	1.000194
12500.0	633.6	-6.7	-15.7	47.6	827.6	635.7	3.0	24.2	1.000190
13000.0	621.4	-7.1	-16.4	49.4	813.0	635.7	3.0	27.5	1.000187
13500.0	609.3	-7.9	-16.6	51.1	799.4	634.8	3.0	28.6	1.000184
14000.0	597.5	-8.7	-16.9	52.9	786.1	633.9	3.0	29.6	1.000181
14500.0	585.9	-9.4	-17.2	54.7	773.1	633.0	3.0	30.5	1.000178
15000.0	574.5	-10.2	-17.5	57.5	760.2	632.1	3.0	31.4	1.000175
15500.0	563.3	-10.7	-17.4	65.7	746.9	631.3	3.0	32.5	1.000173
16000.0	552.2	-12.1	-17.2	73.2	736.2	629.8	3.0	33.5	1.000171
16500.0	541.3	-13.6	-17.2	78.4	725.6	628.0	3.0	34.1	1.000168
17000.0	530.6	-14.8	-17.7	79.3	714.7	626.5	3.0	35.0	1.000165
17500.0	520.0	-15.8	-18.6	73.4	703.3	625.3	3.0	36.4	1.000162
18000.0	509.6	-16.8	-19.5	79.2	691.9	624.1	3.0	37.7	1.000156
18500.0	499.4	-17.3	-20.9	62.2	679.5	623.4	3.0	38.9	1.000154
19000.0	489.4	-17.6	-23.0	52.8	666.6	621.7	3.0	40.2	1.000150
19500.0	479.5	-18.6	-25.9	47.9	656.0	620.3	3.0	40.1	1.000145
20000.0	469.8	-19.8	-28.1	43.6	645.6	620.3	3.0	39.4	1.000140
20500.0	460.2	-21.0	-29.1	47.9	635.4	618.8	3.0	39.4	1.000137
21000.0	450.7	-22.2	-30.0	43.6	625.3	617.3	3.0	40.2	1.000135
21500.0	441.5	-23.4	-31.0	48.8	615.4	615.8	3.0	41.0	1.000133
22000.0	432.4	-24.6	-32.0	43.1	605.7	614.4	3.0	41.6	1.000130
22500.0	423.5	-25.8	-32.9	43.1	596.2	612.9	3.0		
23000.0	414.8	-27.0	-34.5	43.1	586.9	611.3	3.0		
23500.0	406.1	-28.5	-37.1	43.1	578.1	609.5	3.0		

MODELL COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

UPPER AIR DATA  
1160030125  
JALLEN

STATION ALTITUDE 4051.00 FEET MSL  
25 APR. 60 0755 HRS MST  
ASL. STATION NO. 125

TABLE 6. (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/S	DIRECTION DEGREES (T)	WIND DATA		INDEX UP REFLECTION
							SPEED KNOTS	WIND VELOCITY	
2400.0	597.6	-29.8	38.9	569.1	607.7	320.4	42.0	1.000128	
2450.0	589.1	-31.0	38.6	559.7	606.3	319.5	41.9	1.000126	
2500.0	580.8	-32.2	38.4	550.4	604.8	322.5	41.4	1.000124	
2550.0	572.8	-33.3	38.1	541.4	603.4	322.5	40.6	1.000121	
2600.0	564.7	-34.6	41.8	532.6	601.7	324.9	40.1	1.000120	
2650.0	556.9	-36.0	46.8	524.1	600.0	327.4	40.0	1.000118	
2700.0	549.1	-37.3	50.9	515.7	598.3	323.0	40.1	1.000116	
2750.0	541.5	-38.6	49.9	507.1	596.7	315.2	41.2	1.000114	
2800.0	534.0	-39.9	49.0	498.7	595.0	306.7	42.5	1.000112	
2850.0	526.6	-41.2	48.1	490.5	593.3	303.2	44.1	1.000110	
2900.0	519.4	-42.5	47.2	482.4	591.7	302.0	44.0	1.000108	
2950.0	512.3	-44.0	32.7**	474.6	589.7	306.2	42.5	1.000106	
3000.0	505.3	-45.6	14.2**	467.3	587.7	310.7	41.2	1.000104	
3050.0	498.4	-46.9		459.6	585.9	310.3	40.3	1.000102	
3100.0	491.6	-47.6		450.4	584.1	322.3	39.9	1.000100	
3150.0	485.0	-48.2		441.4	582.3	320.7	40.1	1.000098	
3200.0	478.5	-49.1		433.0	580.1	334.7	40.8	1.000096	
3250.0	472.0	-50.4		425.5	578.4	340.0	41.9	1.000095	
3300.0	465.7	-51.7		418.0	579.7	344.9	43.2	1.000093	
3350.0	459.6	-53.0		410.8	576.1	348.3	43.5	1.000091	
3400.0	453.6	-54.3		403.6	570.4	351.5	43.9	1.000090	
3450.0	447.7	-55.2		392.3	577.8	345.8	38.7	1.000087	
3500.0	441.9	-51.3		379.9	580.2	337.0	33.4	1.000085	
3550.0	436.3	-52.0		372.2	579.4	323.2	30.6	1.000083	
3600.0	430.8	-52.7		364.7	578.5	312.0	29.5	1.000081	
3650.0	425.5	-53.1		356.9	577.9	313.0	30.0	1.000079	
3700.0	420.3	-52.3		347.5	578.9	317.6	30.9	1.000077	
3750.0	415.2	-51.6		338.4	579.9	313.2	29.9	1.000075	
3800.0	410.2	-50.9		329.5	580.8	317.9	27.0	1.000073	
3850.0	405.4	-50.1		320.8	581.8	315.3	24.2	1.000071	
3900.0	400.6	-49.4		312.4	582.7	305.6	22.3	1.000070	
3950.0	396.0	-49.8		305.7	582.2	294.3	21.1	1.000068	
4000.0	391.5	-50.3		299.4	581.5	288.9	21.4	1.000067	
4050.0	387.1	-50.9		293.3	580.6	280.0	22.2	1.000065	
4100.0	382.8	-51.4		287.2	580.1	284.3	22.6	1.000064	
4150.0	378.6	-51.5		280.7	580.0	285.5	22.2	1.000063	
4200.0	374.4	-52.0		274.8	579.4	280.7	21.8	1.000061	
4250.0	370.4	-52.4		268.9	578.8	284.9	22.0	1.000060	
4300.0	366.4	-52.9		263.2	578.2	293.6	22.3	1.000059	
4350.0	362.6	-53.3		257.6	577.6	290.4	22.3	1.000057	

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

UPPER AIR DATA  
 1160030125  
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL  
 25 APR. 60  
 ASCENSION, NO. 125

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 6 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (T.D.)	WIND SPEED KNOTS	INDEX OF REFRACTION
4400.0	150.8	-53.8	252.2	577.0	290.7	21.1	1.000056	
4450.0	150.1	-53.6	246.1	577.3	297.1	20.0	1.000055	
4500.0	151.5	-53.1	239.8	577.9	290.3	17.3	1.000053	
4550.0	148.0	-52.7	233.8	578.5	294.0	14.2	1.000052	
4600.0	144.5	-52.5	228.2	578.7	291.1	11.3	1.000051	
4650.0	141.2	-52.9	223.2	578.2	283.1	8.9	1.000050	
4700.0	137.9	-53.2	218.4	577.8	289.7	6.8	1.000049	
4750.0	134.6	-53.5	213.6	577.3	265.1	7.2	1.000048	
4800.0	131.5	-53.9	208.9	576.9	262.3	7.8	1.000047	
4850.0	128.4	-54.2	204.4	576.5	262.3	8.5	1.000046	
4900.0	125.4	-54.5	199.9	576.0	265.9	9.3	1.000045	
4950.0	122.5	-54.9	195.5	575.6	268.8	10.2	1.000044	
5000.0	119.7	-55.3	191.3	575.1	272.1	11.0	1.000043	
5050.0	116.8	-55.8	187.2	574.4	275.0	11.9	1.000042	
5100.0	114.1	-56.3	183.2	573.7	273.3	12.3	1.000041	
5150.0	111.4	-56.8	179.3	573.1	266.0	11.3	1.000040	
5200.0	108.7	-57.3	175.4	572.4	255.3	10.7	1.000039	
5250.0	106.1	-57.8	171.7	571.8	237.4	10.1	1.000038	
5300.0	103.6	-58.3	168.0	571.1	214.3	10.8	1.000037	
5350.0	101.2	-58.8	164.4	570.4	196.3	12.8	1.000037	
5400.0	98.8	-59.0	160.7	570.1	197.1	13.4	1.000036	
5450.0	96.4	-59.0	156.9	570.1	200.7	13.6	1.000035	
5500.0	94.1	-59.0	153.1	570.1	204.3	13.6	1.000034	
5550.0	91.9	-59.0	149.5	570.1	207.7	12.6	1.000033	
5600.0	89.7	-59.0	145.9	570.1	212.0	11.4	1.000032	
5650.0	87.5	-59.0	142.4	570.1	213.5	9.9	1.000032	
5700.0	85.5	-59.0	139.0	570.1	205.2	7.6	1.000031	
5750.0	83.4	-59.0	135.7	570.2	190.3	5.6	1.000030	
5800.0	81.4	-59.6	132.8	569.3	174.9	4.4	1.000030	
5850.0	79.4	-60.3	130.0	568.4	162.0	3.6	1.000029	
5900.0	77.5	-60.9	127.3	567.5	144.7	3.0	1.000028	
5950.0	75.7	-61.6	124.6	566.6	164.2	2.8	1.000028	
6000.0	73.8	-62.3	122.0	565.7	192.2	3.2	1.000027	
6050.0	72.0	-62.9	119.4	564.9	210.3	4.2	1.000026	
6100.0	70.3	-63.6	116.9	564.0	213.0	4.3	1.000026	
6150.0	68.6	-62.8	113.8	563.1	215.6	4.2	1.000025	
6200.0	66.9	-61.6	110.3	562.6	217.7	4.2	1.000025	
6250.0	65.3	-60.7	107.1	561.8	208.4	1.4	1.000024	
6300.0	63.8	-61.0	104.7	561.5	27.1	1.6	1.000023	
6350.0	62.2	-61.2	102.2	561.2	48.0	4.9	1.000023	

GEODLTIC COORDINATES  
33.10712 LAT DEG  
106.49511 LON DEG

UPPER AIR DATA  
1160030125  
JALLEN

STATION ALTITUDE 4051.00 FEET MSL  
25 APR 50 0755 HRS MST  
ASCENSION NO. 125

TABLE 6 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CURIC MLTER	SPLD OF SOUND KNOTS	DIRECTION DEGREES(T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
0400.0	60.7	-61.4		99.9	566.9	39.9	6.2	1.000022
0450.0	59.2	-61.6		97.6	560.6	33.7	7.5	1.000022
0500.0	57.8	-61.8		95.3	550.3	29.0	6.7	1.000021
0550.0	56.4	-62.1		93.1	500.0	29.7	7.6	1.000021
0600.0	55.1	-62.0		90.8	566.2	29.9	6.4	1.000020
0650.0	53.7	-61.3		88.4	567.0	30.5	5.3	1.000020
0700.0	52.4	-61.1		86.1	567.3	33.1	4.5	1.000019
0750.0	51.2	-61.0		84.1	567.4	37.0	3.7	1.000019
0800.0	49.9	-60.9		82.0	567.5	40.9	3.1	1.000019
0850.0	48.6	-59.4		79.5	569.0	67.5	3.2	1.000018
0900.0	47.6	-57.9		77.0	571.6	64.7	3.7	1.000017
0950.0	46.5	-56.4		74.7	573.6	90.4	5.5	1.000017
1000.0	45.4	-55.0		72.6	574.7	104.9	9.2	1.000016
1050.0	44.3	-55.0		70.6	575.4	107.6	12.9	1.000016
1100.0	43.3	-55.0		69.1	575.4	111.2	15.5	1.000015
1150.0	42.3	-55.3		67.6	575.0	116.5	16.6	1.000015
1200.0	41.3	-55.6		66.1	574.6	120.9	18.1	1.000015
1250.0	40.3	-55.9		64.6	574.5	123.7	17.2	1.000014
1300.0	39.3	-56.2		63.2	573.3	133.1	14.2	1.000014
1350.0	38.4	-56.4		61.6	573.5	144.1	11.6	1.000014
1400.0	37.5	-56.7		60.4	573.1	153.7	8.9	1.000013
1450.0	36.6	-56.7		59.0	573.2	157.7	5.7	1.000013
1500.0	35.8	-56.1		57.4	573.9	171.0	2.5	1.000013
1550.0	35.0	-55.6		56.0	574.6	203.5	1.1	1.000012
1600.0	34.1	-55.1		54.5	573.5	203.8	.7	1.000012
1650.0	33.3	-54.5		53.1	576.0	157.0	1.3	1.000012
1700.0	32.6	-54.0		51.6	576.8	142.9	2.2	1.000012
1750.0	31.8	-53.4		50.4	577.5			1.000011
1800.0	31.1	-52.9		49.1	578.2			1.000011
1850.0	30.3	-52.4		47.9	578.9			1.000011

STATION ALTITUDE 9051.00 FEET MSL  
 25 APR. 60  
 ASSEMBLY NO. 125

MANDATORY LEVELS  
 1160030125  
 JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 7.

MILLIBARS	PRESSURE GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE LEWPOINT CENTIGRADE	REL. HUMIDITY PERCENT	DIRECTION DEGREES (T)	WIND VELOCITY KNOTS
850.0	4789.	5.9	-0.8	64.	5.7	3.9
800.0	6413.	3.2	-2.8	64.	348.0	0.1
750.0	6118.	-7	-4.3	76.	354.0	14.2
700.0	9919.	-3.4	-9.6	62.	357.0	17.0
650.0	11634.	-6.4	-14.7	54.	338.5	21.2
600.0	13682.	-8.5	-16.8	51.	329.0	20.4
550.0	16083.	-12.4	-17.2	57.	325.1	32.7
500.0	18447.	-17.3	-20.8	74.	325.6	37.6
450.0	21018.	-22.3	-30.1	49.	329.4	39.5
400.0	23819.	-29.5	-39.0	39.	320.6	42.0
350.0	26899.	-37.2	-43.5	51.	324.0	40.1
300.0	30327.	-46.8			314.3	40.5
250.0	34231.	-54.0			346.8	41.1
200.0	36976.	-49.3			304.5	42.1
175.0	41832.	-51.9			280.4	21.9
150.0	45002.	-52.9			295.8	10.1
125.0	48943.	-54.6			200.2	7.4
100.0	53585.	-59.0			195.0	13.3
80.0	58175.	-60.1			167.2	3.8
70.0	60880.	-63.7			213.9	4.3
60.0	64020.	-61.5			37.0	0.8
50.0	67726.	-61.0			44.7	3.1
40.0	72374.	-56.0			127.3	10.4
30.0	78404.	-52.1				

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