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ATMOSPHERIC STRUCTURE

WHITE SANDS MISSILE RANGE, NEW MEXICO

PART 3

UPPER AIR DATA: JALLEN SITE

ATMOSPHERIC SCIENCES RESEARCH OFFICE  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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ATMOSPHERIC STRUCTURE  
WHITE SANDS MISSILE RANGE, NEW MEXICO

PART 3

UPPER AIR DATA: JALLEN SITE

By

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March 1969

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ATMOSPHERIC SCIENCES RESEARCH OFFICE  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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**ATMOSPHERIC STRUCTURE**

**UPPER AIR DATA**

**JALLEN SITE**

ABSTRACT

A statistical analysis of upper air data is presented for Jallen Site, White Sands Missile Range, New Mexico. Atmospheric parameters covered, for the layer 6,000 to 100,000 feet above mean sea level, are: wind, temperature, pressure, density, moisture, index of refraction, and freezing level. This climatological information is based on the period of observation from 1962-1967.

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## INTRODUCTION

Activities of various projects on Range often necessitate a knowledge of upper air atmospheric conditions weeks or months in advance of the scheduled mission. As this exceeds the capability of the usual 24-56 hour forecast, or the longer five-day outlook, a statistical analysis of exoteric meteorological data is desirable. Missions at specific launch complexes frequently demand a detailed knowledge of conditions aloft for that particular area as opposed to data for the entire Range; for this reason an analysis will be presented for individual test sites.

This report presents the frequency of occurrence of the critical meteorological condition, mean and median values, and the extreme conditions classified by months and seasons, that can be expected from 6,000 to 100,000 feet above mean sea level (MSL) at Jallen Site, latitude 33° 11' north, longitude 106° 29' west, elevation 4,051 feet MST. The seven parameters so analyzed are wind, temperature, pressure, density, moisture, index of refraction, and freezing level. The statistical information is based on the observational period 1962-1967. Note should be made at this point that White Sands Missile Range (WSMR) radiosonde releases do not follow a routine schedule, but are taken at random depending upon the mission requirements for any given date (Table I).

Upper air data has been published for Holloman, Apache, White Sands Desert, Stallion, and Small Missile Range (Figure 1) (1,2,3, 4,5). Reports 1 and 2 in this series presented analyses of surface Range data for 'A' Station (6,7).

### EXPLANATION OF TERMS

#### 1. Winds Aloft

- A. Wind directions are given as the true direction from which the wind is blowing.
- B. Wind speeds are measured in knots (nautical miles per hour).

#### 2. Standard Vector Deviation of the Wind (8)

The standard vector deviation of the wind is a measure of dispersion about the end of the mean resultant wind vector. A circle drawn with the center at the end of the mean resultant wind vector and a radius of the standard vector deviation includes 63 per cent of the vector winds.

$$\sigma^2 = \left[ \frac{v^2}{N} - v_R^2 \right]$$

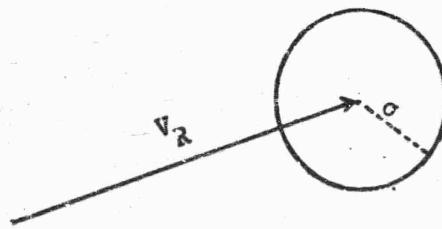
where,

$\sigma$  = Standard vector deviation, knots

N = Number of cases

$v_R$  = Speed of vector mean wind

v = Module of the vector wind



#### 3. Constancy (8)

Constancy is a term used to show how constant the direction of the wind is. It is determined by dividing the mean scalar wind into the magnitude of the mean resultant wind.

$$Q = \frac{100 v_R}{v_S} \quad (\text{per cent})$$

### EXPLANATION OF TERMS

#### 3. Constancy (8)

where,

$Q$  = Constancy of wind direction (per cent)

$v_R$  = Module or speed of vector mean wind

$v_S$  = Speed of scalar mean wind

The constancy of a set of winds is zero when they blow equally frequently from all directions, with the same average speed; the constancy is 100 when they blow from exactly the same direction, but not necessarily all with the same speed.

#### 4. Density (9)

$$\rho_X = 348.43 \left[ \frac{P}{K_{VX}} \right] \text{ grams/cubic meter}$$
$$K_{VX} = K \left[ \frac{P}{P - 0.378e} \right]$$
$$\left( \frac{7.5C}{C + 237.3} \right)$$
$$e = 0.0611 f 10$$

where,

$\rho_X$  = Density, in grams/cubic meter

$P$  = Pressure, in millibars

$K_{VX}$  = Virtual temperature, in degrees Kelvin

$e$  = Partial pressure of aqueous vapor, in millibars

$C$  = Temperature, in degrees Celsius

$K$  =  $C + 273.16$ , Temperature, Absolute, in degrees Kelvin

$f$  = Relative humidity, in per cent

#### 5. Index of Refraction (9)

$$n_X = 1 + \frac{77.6}{K} \left[ P + e \left( \frac{4830}{K} - \frac{11}{77.6} \right) \right] \cdot 10^{-6}$$

### EXPLANATION OF TERMS

#### 5. Index of Refraction (9)

$$n_x = \frac{7.5C}{C + 237.3}$$

e = 0.0611 f 10

where,

$n_x$  = Index of refraction, dimensionless

K = C + 273.16, Temperature, Absolute, in degrees Kelvin

C = Temperature, in degrees Celsius

p = Pressure, in millibars

f = Relative humidity, in per cent

e = Partial pressure of aqueous vapor, in millibars

#### 6. Mixing Ratio (10,11)

In a system of moist air, the dimensionless ratio of the mass of water vapor to the mass of dry air.

$$\omega = \frac{0.622e}{p - e} \times 10^3$$

where,

$\omega$  = Mixing ratio, grams/kilogram

p = Pressure, in millibars

e = Partial pressure of aqueous vapor, in millibars

$$e = r e_s$$

where,

r = Relative humidity, in per cent

$e_s$  = Saturation vapor pressure, in millibars

### EXPLANATION OF TERMS

#### 6. Mixing Ratio (10,11)

$$\log_{10} e_s = -7.90298 \left[ \frac{T_s}{T} - 1 \right] + 5.02808 \log_{10} \left( \frac{T_s}{T} \right) - 1.3816 \times 10^{-7}$$
$$\left[ 10^{11.344} \left( 1 - \frac{T}{T_s} \right) - 1 \right] + 8.1328 \times 10^{-3} \left[ 10^{-3.49149} \left( \frac{T_s}{T} - 1 \right) - 1 \right] + \log_{10} e_{w_s}$$

where,

$T$  = Dry bulb temperature, in degrees Kelvin

$T_s$  = Steam point temperature, 373.16 degrees Kelvin

$e_{w_s}$  = Saturation pressure of pure ordinary liquid water at steam point temperature ( $T_s$ ), 1013.246 millibars

#### 7. Precipitable Water (10,11)

Precipitable water is defined as the total atmospheric water vapor contained in a vertical column of unit cross-sectional area extending between any two specified levels. It may be expressed as the height to which that water substance would stand if completely condensed and collected in a vessel of the same unit cross section.

Mathematically,

$$W = \frac{1}{g} \int_{p_1}^{p_2} \omega dp$$

where,

$W$  = Precipitable water vapor, centimeters

$\omega$  = Mixing ratio, grams/kilogram

$p$  = Pressure, bounded by  $p_1$  and  $p_2$ , millibars

$g$  = Acceleration of gravity, centimeters per sec<sup>2</sup>

If  $g$  is expressed in cm sec<sup>-2</sup>,  $p$  in millibars, and  $\omega$  in g kg<sup>-1</sup>, then  $W$  is in centimeters. With these units, the above equation may be written as:

$$W_{(cm)} = 0.001 \int_{p_1}^{p_2} \omega dp$$

### EXPLANATION OF TERMS

#### 7. Precipitable Water (10,11)

To determine the precipitable water within the various layers, the preceding equation will be numerically integrated. Since the mixing ratio,  $w$ , may be expressed as

$$w = \frac{0.622e}{p - e}$$

it is seen that

$$W_{(cm)} = 0.622 \int_{P_1}^{P_2} \frac{e}{p - e} dp$$

where  $e$  and  $p$  are expressed in millibars. Note that a factor of  $10^3$  has been introduced to compensate for units.

### ACCURACY OF DATA

The standard accuracies (12) of the instrumentation and the derived data are as follows:

Parameter	Operating Range	Accuracy (Root Mean Square)
<b>TEMPERATURE</b>		
AN/GMD-1 (AMT-4, AMT-12)	Surface - 120,000 Feet	0.7° Celsius (from -90°C to +60°C)
AN/GMD-2 (AMQ-9)	Surface - 120,000 Feet	0.7° Celsius
<b>RELATIVE HUMIDITY</b>		
AN/GMD-1 (carbon element)	$T > 0^\circ$ Celsius	5 per cent
AN/GMD-2	$0^\circ \geq T \geq -40^\circ$ Celsius	10 per cent
	$T < -40^\circ$ Celsius	Questionable
<b>PRESSURE</b> (computer processed)		
AN/GMD-1	10,000 Feet	0.7 Millibar
AN/GMD-2	20,000 Feet	1.0 Millibar
	30,000 Feet	1.2 Millibars
	40,000 Feet	1.0 Millibar
	50,000 Feet	0.7 Millibar
	60,000 Feet	0.55 Millibar
	70,000 Feet	0.40 Millibar
	80,000 Feet	0.30 Millibar
	90,000 Feet	0.20 Millibar
	100,000 Feet	0.12 Millibar
		hygro- meter equipped sonde for GMD-1

### ACCURACY OF DATA

#### DENSITY

AN/GMD-1	10,000 Feet	0.3 Per cent
AN/GMD-2	20,000 Feet	0.3 Per cent
	30,000 Feet	0.4 Per cent
	40,000 Feet	0.5 Per cent
	50,000 Feet	0.6 Per cent
	60,000 Feet	0.7 Per cent
	70,000 Feet	0.8 Per cent
	80,000 Feet	0.9 Per cent
	90,000 Feet	1.0 Per cent
	100,000 Feet	1.2 Per cent

#### INDEX OF REFRACTION

AN/GMD-1; AN/GMD-2	5,000 Feet	2.6 Per cent
	15,000 Feet	1.7 Per cent
	25,000 Feet	0.6 Per cent
	30,000 Feet	0.5 Per cent

#### WIND

AN/GMD-1

AN/GMD-2 (considered to  
be more reliable than  
GMD-1 in mean wind  
speeds > 50 knots)

Note: Accuracies are  
averages over a 1  
minute interval to  
45,000 feet, 2  
minute intervals at  
higher altitudes and  
4 minutes for certain  
elevation angles.

If the magnitude of the  
mean wind vector from the  
surface to the level in  
question is:

	Knots		
<30	30-60	60-90	
3	7	15	
4	14	30	
The RMS (Vector) 6	21	45	
in knots is: 8	28	--	
10	35	--	
12	42	--	

ACCURACY OF DATA

Manual and computer verification techniques were employed to insure the highest degree of accuracy of input data for this analysis.

## REFERENCES

1. Hoidale, M. M., B. J. Gee and G. W. Harmon, May 1968, "Atmospheric Structure, White Sands Missile Range, New Mexico, Part 3, Upper Air Data: Holloman Site", DR-321, Meteorological Support Division, Environmental Sciences Department, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.
2. Hoidale, M. M., B. J. Gee and G. W. Harmon, June 1968, "Atmospheric Structure, White Sands Missile Range, New Mexico, Part 3, Upper Air Data: Apache Site", DR-322, Meteorological Support Division, Environmental Sciences Department, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.
3. Hoidale, M. M., B. J. Gee, M. B. Seagraves and G. W. Harmon, August 1968, "Atmospheric Structure, White Sands Missile Range, New Mexico, Part 3, Upper Air Data: White Sands Desert Site", DR-327, Meteorological Support Division, Environmental Sciences Department, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.
4. Hoidale, M. M., B. J. Gee and M. A. Seagraves, November 1968, "Atmospheric Structure, White Sands Missile Range, New Mexico, Part 3, Upper Air Data: Stallion Site", DR-323, Meteorological Support Division, Environmental Sciences Department, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.
5. Hoidale, M. M., B. J. Gee, M. A. Seagraves, and G. W. Harmon, 1968, "Atmospheric Structure, White Sands Missile Range, New Mexico, Part 3, Upper Air Data: Small Missile Range", DR-324, Meteorological Support Division, Environmental Sciences Department, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.
6. Hoidale, M. M., B. J. Gee and G. W. Harmon, July 1968, "Atmospheric Structure, White Sands Missile Range, New Mexico, Part 1, Surface Wind, Cloud Cover, Visibility", ECOM-5202, Meteorological Support Division, Environmental Sciences Department, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.
7. Hoidale, M. M., January 1964, "Atmospheric Structure, White Sands Missile Range, New Mexico, Part 2, Temperature, Relative Humidity, Dew Point, Station Pressure, Density, Clouds, Hydrometeors, and Lithometeors", Report ERDA-106, Meteorological Support Division, Environmental Sciences Department, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.

REFERENCES

8. Brooks, C. E. and N. Carruthers, 1953: "Handbook of Statistical Methods in Meteorology". M. O. 538, Air Ministry, Meteorological Office, Her Majesty's Stationery Office, Lond, pp. 173, 179, 195-199.
9. Stidham, L. R., March 1962: "Computation of Rawinsonde Program". Data Reduction Division North, Holloman Air Force Base, New Mexico.
10. Huschke, R. E., edited by, 1959: "Glossary of Meteorology", pp. 374, 437, American Meteorological Society, Boston, Massachusetts.
11. Hoidale, G. B., C. W. Quarfeld, et al, September 1964: "Spectral Transmissivity of the Earth's Atmosphere in the 250 to 500 Wave Number Interval. Part I. Meteorological Data Processing". Report ERDA-186, Environmental Sciences Directorate, U. S. Army Electronics Research and Development Activity, White Sands Missile Range, New Mexico.
12. "Meteorological Equipment Data Accuracies", March 1965, IRIG Document 110-64, Inter-Range Instrumentation Group, White Sands Missile Range, New Mexico.

## SECTION I

### UPPER AIR WIND DATA

#### A. By Months

1. Upper Air Wind Data at Selected Levels ----- 12
2. Relative Frequency Distribution of Upper Air Wind Directions at Selected Levels  
(In Per Cent) ----- 24
3. Relative Frequency Distribution of Upper Air Scalar Wind Speeds at Selected Levels  
(In Per Cent) ----- 36

#### B. By Seasons

1. Upper Air Wind Data at Selected Levels ----- 48
2. Relative Frequency Distribution of Upper Air Wind Directions at Selected Levels  
(In Per Cent) ----- 52
3. Relative Frequency Distribution of Upper Air Scalar Wind Speeds at Selected Levels  
(In Per Cent) ----- 56

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

JANUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREES)	VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTU DEVIAT (KNOT
+N	-S	+E	-W						
6000.	118.	29.	0.	1.4	-4.7	286.	5.	10.	52.
8000.	117.	39.	3.	2.8	-10.4	285.	11.	16.	65.
10000.	117.	47.	2.	5.9	-14.7	292.	16.	22.	72.
12000.	57.	57.	3.	7.9	-17.6	294.	19.	26.	74.
14000.	116.	62.	2.	9.0	-20.4	294.	22.	30.	74.
15000.	116.	72.	3.	9.4	-21.6	294.	24.	32.	74.
16000.	116.	90.	4.	9.9	-23.0	293.	25.	34.	74.
18000.	116.	102.	5.	10.6	-25.5	293.	28.	38.	75.
20000.	115.	104.	2.	10.8	-27.2	292.	29.	41.	72.
25000.	115.	140.	5.	11.8	-32.6	290.	35.	50.	69.
30000.	109.	120.	2.	11.5	-36.6	287.	38.	55.	70.
35000.	103.	117.	12.	9.5	-44.8	282.	46.	60.	77.
40000.	102.	118.	4.	6.1	-49.7	277.	50.	60.	83.
45000.	95.	107.	7.	3.2	-50.4	274.	50.	57.	88.
50000.	84.	94.	15.	1.8	-50.5	272.	51.	55.	92.
55000.	69.	97.	6.	-0.8	-39.4	269.	39.	43.	93.
60000.	56.	83.	4.	2.2	-21.8	276.	22.	25.	88.
65000.	50.	49.	0.	1.6	-15.9	276.	16.	20.	80.
70000.	44.	39.	1.	3.8	-9.9	291.	11.	16.	67.
75000.	38.	47.	3.	2.9	-6.4	295.	7.	13.	52.
80000.	37.	73.	2.	3.0	-9.7	287.	10.	17.	61.
85000.	35.	75.	2.	2.9	-11.1	285.	11.	18.	64.
90000.	31.	86.	5.	0.7	-15.9	272.	16.	22.	72.
95000.	23.	72.	1.	-4.5	-21.0	258.	22.	28.	76.
100000.	15.	104.	6.	-8.9	-30.1	253.	31.	35.	89.

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

FEBRUARY

GEOMETRIC ALTITUDE HSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREES)			VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTOR DEVIAT (KNOT)
					+N	-S	+E				
6000-	112-	28-	0-	1-1	-3-3	289-	289-	3-	9-	40-	10-
8000-	112-	42-	1-	2-3	-7-5	287-	8-	13-	59-	59-	13-
10000-	111-	54-	2-	4-3	-11-7	290-	12-	17-	73-	73-	15-
12000-	111-	60-	3-	6-4	-16-3	292-	18-	23-	77-	77-	19-
14000-	111-	59-	3-	6-9	-20-7	288-	22-	28-	78-	78-	22-
15000-	110-	76-	4-	7-6	-22-3	289-	24-	30-	78-	78-	23-
16000-	111-	83-	5-	8-0	-23-6	289-	25-	32-	77-	77-	25-
18000-	110-	70-	7-	8-6	-25-5	289-	27-	35-	76-	76-	28-
20000-	110-	74-	7-	8-6	-28-2	287-	30-	40-	74-	74-	31-
25000-	107-	113-	9-	8-1	-36-3	283-	37-	49-	76-	76-	39-
30000-	105-	118-	5-	7-2	-44-0	279-	45-	58-	77-	77-	44-
35000-	100-	128-	9-	9-3	-49-1	281-	50-	62-	81-	81-	46-
40000-	93-	132-	5-	5-7	-54-3	276-	55-	62-	88-	88-	39-
45000-	90-	118-	8-	2-9	-52-2	273-	52-	58-	90-	90-	34-
50000-	75-	95-	9-	4-6	-46-9	276-	47-	52-	91-	91-	27-
55000-	64-	83-	8-	3-7	-35-0	276-	35-	40-	88-	88-	25-
60000-	58-	70-	5-	3-3	-22-6	278-	23-	26-	89-	89-	19-
65000-	56-	78-	3-	1-9	-16-5	277-	17-	22-	76-	76-	20-
70000-	54-	59-	5-	1-2	-9-6	277-	10-	17-	57-	57-	17-
75000-	50-	45-	1-	0-3	-10-8	272-	14-	19-	57-	57-	18-
80000-	47-	58-	4-	-2-4	-10-4	257-	11-	22-	49-	49-	23-
85000-	43-	56-	3-	-3-0	-10-4	254-	11-	24-	45-	45-	25-
90000-	38-	55-	4-	-2-2	-7-4	254-	8-	26-	30-	30-	28-
95000-	30-	53-	3-	-2-1	-9-2	257-	9-	25-	37-	37-	28-
100000-	25-	55-	3-	-6-4	-6-4	293-	7-	30-	24-	24-	33-

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JALA)  
PERIOD OF RECORD 1962-1967

MARCH

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT VECTOR SPEED (DEGREES)			SCALAR MEAN SPEED (KNOTS)	CONSTANT (PERCENT)	STANDARD DEVIATION (KNOTS)
					+N	-S	+E			
6000.	161.	30.	1.	-3.5	-2.9	219.	5.	9.	53.	9.
8000.	161.	33.	1.	-2.9	-7.2	248.	8.	12.	65.	14.
10000.	160.	46.	2.	-1.7	-11.8	262.	12.	14.	73.	14.
12000.	158.	52.	2.	-1.0	-16.3	266.	16.	21.	77.	16.
14000.	158.	60.	4.	-0.8	-20.8	268.	21.	24.	80.	21.
15000.	155.	64.	4.	-0.4	-22.5	269.	23.	28.	82.	21.
16000.	159.	78.	3.	-1.0	-24.1	268.	24.	30.	81.	23.
18000.	158.	90.	0.	-1.1	-26.7	268.	27.	33.	81.	25.
20000.	157.	99.	9.	-2.1	-30.1	266.	30.	33.	81.	28.
25000.	152.	110.	0.	-2.5	-37.7	266.	35.	47.	81.	37.
30000.	154.	134.	0.	-4.2	-47.3	265.	47.	59.	80.	46.
35000.	147.	160.	10.	-3.2	-56.1	267.	56.	68.	83.	50.
40000.	145.	170.	4.	-3.4	-58.6	267.	59.	66.	89.	42.
45000.	132.	156.	3.	-5.3	-55.6	265.	56.	59.	94.	32.
50000.	129.	116.	11.	-4.3	-51.0	265.	51.	54.	95.	26.
55000.	112.	105.	0.	-2.7	-40.1	266.	40.	43.	94.	23.
60000.	102.	96.	0.	-1.7	-25.5	266.	26.	30.	85.	24.
65000.	88.	83.	0.	-0.8	-19.6	268.	20.	23.	80.	21.
70000.	85.	78.	0.	-2.0	-11.0	260.	11.	16.	68.	17.
75000.	70.	73.	0.	-1.3	-13.4	265.	14.	18.	76.	17.
80000.	57.	73.	0.	-1.1	-17.1	266.	17.	20.	86.	19.
85000.	47.	62.	2.	-2.1	-17.6	263.	18.	20.	89.	15.
90000.	43.	63.	6.	-0.0	-22.7	270.	23.	25.	90.	17.
95000.	39.	86.	5.	-1.2	-25.7	267.	26.	28.	92.	18.
100000.	29.	115.	0.	-3.6	-34.2	264.	34.	37.	92.	26.

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALAHEN SITE (JALA)  
PERIOD OF RECORD 1962-1967

APRIL

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT VECTOR DIRECTION (DEGREES)	MEAN SPEED (KNOTS)	SCALAR SPEED (KNOTS)	CONSTANCY	STANDAR	
								PERCENTA	VECTON	DEVIAT
6000-	139-	31-	-4.3	-3.5	220-	6-	14-	12	16	12
8000-	137-	41-	-4.2	-7.7	241-	9-	14-	63-	74-	51.
10000-	137-	54-	-6.0	-12.9	249-	14-	19-	16	19-	51.
12000-	137-	67-	-5.6	-18.0	253-	19-	24-	19-	22	51.
14000-	137-	69-	-6.7	-22.7	253-	24-	29-	81-	81-	51.
15000-	136-	67-	-7.1	-24.9	254-	26-	31-	62-	24-	51.
16000-	136-	72-	-7.5	-21.2	255-	26-	34-	62-	25-	51.
18000-	137-	88-	-7.6	-30.9	256-	22-	38-	62-	27	51.
20000-	137-	97-	-8.6	-32.6	256-	35-	41-	64-	29	51.
25000-	136-	106-	-11.6	-40.2	254-	42-	49-	85-	33	51.
30000-	135-	126-	-14.7	-48.3	253-	51-	53-	85-	40	51.
35000-	129-	145-	-16.0	-54.9	254-	57-	68-	84-	45	51.
40000-	124-	149-	-18.6	-55.6	252-	59-	67-	83-	41	51.
45000-	115-	130-	-18.2	-49.7	250-	53-	59-	90-	33	51.
50000-	109-	94-	-15.5	-46.0	251-	49-	52-	86-	26	51.
55000-	101-	88-	-11.2	-36.1	253-	38-	42-	91-	25	51.
60000-	92-	57-	-6.5	-17.1	249-	18-	22-	85-	16	51.
65000-	84-	40-	-2.3	-5.3	246-	6-	13-	44-	15	51.
70000-	81-	51-	-2.0	1.2	147-	2-	11-	21-	13	51.
75000-	78-	41-	-1.6	1.4	139-	2-	11-	20-	13	51.
80000-	75-	46-	1-	-2.7	171-	3-	11-	24-	14	51.
85000-	70-	38-	1-	-3.2	-3.8	229-	5-	11-	43-	13
90000-	65-	44-	0-	-3.0	-5.4	249-	6-	13-	48-	14
95000-	57-	44-	0-	-3.3	-9.1	250-	10-	13-	82-	14
100000-	41-	52-	0-	-5.7	-15.4	250-	16-	81-	20-	17

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JALA)  
PERIOD OF RECORD 1962-1967

MAY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MEAN WIND COMPONENTS (KNOTS)	RESULTANT VECTOR MEAN SPEED (DEGREES)			CONSTANCY (PERCENT)	STANDOFF VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDOFF VECTOR MEAN SPEED (KNOTS)	VECTOR MEAN SPEED (KNOTS)	
			+N	-S	+E							
6000.	128.	32.	0.	-3.6	-7.0	209.	9.	46.	21.	10.	10.	10.
8000.	126.	37.	1.	-4.6	-5.4	220.	7.	65.	13.	11.	11.	11.
10000.	125.	36.	1.	-4.5	-8.3	243.	10.	75.	13.	14.	14.	14.
12000.	124.	52.	1.	-5.5	-12.0	134.	12.	78.	17.	18.	18.	18.
14000.	124.	69.	3.	-7.0	-15.1	245.	17.	78.	21.	20.	20.	20.
15000.	121.	73.	2.	-7.8	-16.8	245.	19.	79.	23.	20.	20.	20.
16000.	121.	72.	1.	-8.4	-18.6	246.	20.	81.	25.	21.	21.	21.
18000.	120.	81.	1.	-9.0	-22.1	248.	24.	85.	28.	23.	23.	23.
20000.	120.	92.	2.	-8.4	-25.1	251.	26.	87.	31.	28.	28.	28.
25000.	119.	109.	4.	-8.7	-31.3	254.	32.	88.	37.	34.	34.	34.
30000.	121.	131.	0.	-10.2	-36.1	254.	36.	89.	42.	31.	31.	31.
35000.	114.	132.	4.	-9.5	-44.9	258.	46.	90.	54.	35.	35.	35.
40000.	115.	146.	0.	-8.7	-50.5	261.	52.	93.	55.	35.	35.	35.
45000.	103.	109.	0.	-7.7	-66.5	261.	47.	95.	59.	28.	28.	28.
50000.	100.	103.	-6.9	-39.5	263.	49.	94.	42.	23.	18.	18.	18.
55000.	68.	67.	0.	-3.6	-21.3	260.	22.	89.	25.	13.	13.	13.
60000.	94.	55.	1.	-1.8	-8.7	258.	9.	87.	17.	10.	10.	10.
65000.	91.	35.	0.	0.8	-1.1	309.	1.	8.	4.	5.	5.	5.
70000.	90.	40.	0.	-0.4	6.2	93.	4.	42.	10.	10.	10.	10.
75000.	81.	41.	2.	-0.0	5.3	90.	5.	54.	10.	11.	11.	11.
80000.	78.	52.	0.	-1.7	5.6	108.	5.	51.	10.	11.	11.	11.
85000.	73.	30.	2.	-1.3	5.4	109.	6.	54.	12.	12.	12.	12.
90000.	71.	44.	0.	-1.1	4.5	126.	2.	43.	14.	13.	13.	13.
95000.	64.	34.	0.	-2.2	1.1	153.	2.	43.	14.	12.	12.	12.
100000.	51.	27.	0.	-1.7	-0.3	190.	2.	24.	2.	14.	14.	14.

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1963

JUNE

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREESA)				CONSTANCY (PERCENTA)	SCALAR MEAN SPEED (KNOTS)	STANDAR VECTOU DEVIAT 1 KNOT.
				+N	-S	+E	-W			
6000-	127-	31-	-5.7	-2.3	202-	9-	9-	9-	14-	10.
3000-	127-	35-	-6.8	-5.2	218-	10-	10-	10-	13-	75-
10000-	127-	39-	-6.7	-7.5	228-	12-	12-	12-	15-	77-
12000-	128-	39-	-7.0	-9.2	253-	13-	13-	13-	15-	76-
14000-	127-	45-	-8.1	-9.9	234-	18-	18-	18-	18-	72-
15000-	126-	49-	-9.0	-10.3	229-	14-	14-	14-	19-	73-
16000-	126-	49-	-9.5	-11.6	234-	15-	15-	15-	20-	75-
18000-	125-	56-	-9.6	-13.6	235-	17-	17-	17-	22-	76-
20000-	125-	61-	-9.4	-15.9	239-	18-	18-	18-	23-	79-
25000-	124-	71-	-8.3	-19.9	247-	22-	22-	22-	27-	81-
30000-	120-	80-	-10.0	-26.2	249-	28-	28-	28-	33-	85-
35000-	114-	93-	-12.2	-33.9	250-	36-	36-	36-	42-	86-
40000-	115-	116-	-10.3	-41.6	256-	43-	43-	43-	49-	88-
45000-	112-	106-	-10.4	-40.1	255-	41-	41-	41-	46-	89-
50000-	105-	70-	-9.5	-28.4	252-	30-	30-	30-	34-	89-
55000-	99-	56-	-6.2	-10.5	240-	12-	12-	12-	17-	76-
60000-	97-	30-	-4.4	-4.8	133-	6-	6-	6-	12-	53-
65000-	95-	23-	0-	-2.9	106-	11-	11-	11-	13-	85-
70000-	32-	41-	0-	-1.0	13.0	95-	12-	12-	15-	90-
75000-	89-	39-	4-	-0.8	17.7	92-	18-	18-	18-	97-
80000-	79-	43-	3-	-2.9	18.7	99-	19-	19-	20-	8
85000-	74-	36-	0-	-1.1	18.7	93-	19-	19-	20-	11-
90000-	66-	39-	4-	-1.0	21.2	93-	22-	22-	22-	93-
95000-	59-	42-	8-	-1.4	23.2	93-	23-	23-	24-	96-
100000-	54-	47-	0-	-3.3	26.0	97-	26-	26-	27-	98-

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JALA)  
PERIOD OF RECORD 1962-1967

JULY

GEOMETRIC ALTITUDE IN FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT VECTOR DIRECTION (DEGREES)	MEAN SPEED (KNOTS)	SCALAR CONSTANCY (PERCENT)	STANDARD VECTOR DEVIATION (KNOTS)
+N	-S	+E	-W					
6000.	149.	21.	0.	-2.1	0.6	164.	36.	7.
8000.	149.	26.	0.	-2.8	-0.6	192.	41.	8.
10000.	149.	19.	0.	-2.2	-0.4	190.	32.	8.
12000.	149.	22.	0.	-1.9	1.2	147.	28.	9.
14000.	149.	29.	1.	-2.0	2.5	129.	34.	10.
15000.	141.	29.	1.	-2.3	3.1	126.	39.	10.
16000.	149.	26.	0.	-2.3	3.5	123.	42.	10.
18000.	148.	28.	1.	-2.4	3.6	124.	44.	10.
20000.	147.	31.	2.	-3.7	2.7	146.	5.	11.
25000.	139.	32.	1.	-5.5	1.8	161.	6.	12.
30000.	145.	37.	1.	-6.5	2.0	163.	7.	14.
35000.	133.	43.	2.	-8.0	1.8	167.	8.	17.
40000.	137.	44.	2.	-7.6	2.5	162.	8.	18.
45000.	121.	49.	1.	-6.7	3.0	156.	7.	18.
50000.	118.	46.	1.	-5.5	5.4	135.	8.	17.
55000.	104.	35.	3.	-5.5	9.0	121.	11.	13.
60000.	102.	32.	2.	-3.1	13.4	103.	14.	15.
65000.	91.	34.	6.	-2.1	17.9	97.	18.	19.
70000.	89.	37.	8.	-1.4	21.2	94.	21.	22.
75000.	81.	42.	11.	-0.7	24.6	92.	25.	25.
80000.	81.	45.	14.	-0.5	28.2	91.	28.	29.
85000.	72.	43.	21.	-0.4	31.0	91.	31.	32.
90000.	68.	51.	15.	0.4	33.6	89.	34.	34.
95000.	59.	51.	25.	-0.6	37.1	91.	37.	38.
100000.	57.	58.	26.	-2.3	40.2	93.	40.	41.

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)			RESULTANT DIRECTION (DEGREES)	VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTOR DEVIATION (KNOTS)
				+N	-S	+E					
6000-	156.	20.	0.	-1.7	0.3	169.	2.	6.	29.	7.	7.
8000-	156.	21.	1.	-1.8	-0.0	180.	2.	7.	25.	8.	8.
10000-	157.	25.	0.	0.2	0.1	27.	0.	8.	3.	3.	3.
12000-	157.	45.	1.	1.5	0.8	29.	2.	9.	19.	10.	10.
14000-	157.	35.	1.	2.6	1.7	32.	3.	10.	32.	11.	11.
15000-	150.	37.	1.	3.0	1.9	32.	3.	11.	33.	12.	12.
16000-	156.	40.	0.	2.7	1.6	31.	3.	11.	28.	13.	13.
18000-	156.	41.	1.	2.3	1.1	25.	3.	11.	23.	13.	13.
20000-	156.	38.	1.	2.2	0.9	22.	2.	11.	21.	13.	13.
25000-	149.	30.	1.	2.3	-2.2	316.	3.	13.	25.	14.	14.
30000-	152.	42.	1.	2.5	-4.9	297.	6.	17.	33.	18.	18.
35000-	144.	56.	0.	4.7	-8.7	298.	10.	21.	47.	22.	22.
40000-	145.	66.	3.	4.9	-10.9	294.	12.	24.	49.	26.	26.
45000-	134.	60.	4.	6.2	-8.8	305.	11.	23.	46.	25.	25.
50000-	132.	49.	2.	4.4	-3.2	324.	5.	17.	32.	19.	19.
55000-	119.	28.	1.	0.7	3.4	78.	3.	10.	35.	11.	11.
60000-	110.	29.	1.	-1.7	9.6	100.	10.	12.	79.	9.	9.
65000-	96.	29.	4.	-0.5	15.1	92.	15.	16.	95.	7.	7.
70000-	93.	30.	0.	-2.0	19.8	96.	20.	20.	97.	7.	7.
75000-	85.	35.	10.	-0.8	23.9	92.	24.	24.	98.	7.	7.
80000-	80.	41.	0.	-0.9	26.3	92.	26.	27.	98.	8.	8.
85000-	70.	42.	19.	0.3	29.4	89.	29.	30.	99.	7.	7.
90000-	64.	42.	13.	1.3	32.1	88.	32.	33.	98.	9.	9.
95000-	60.	52.	0.	0.2	36.0	90.	36.	37.	98.	10.	10.
100000-	55.	57.	19.	-0.9	36.6	91.	37.	37.	98.	11.	11.

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

SEPTEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)			RESULTANT VECTOR DIRECTION (DEGREES)	MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTOR DEVIATION (KNOTS)
				+N	-S	+E -W					
6000.	124.	31.	0.	-1.9	-0.7	200.	2.	6.	32.	7.	7.
8000.	123.	23.	1.	-2.1	-2.3	228.	3.	8.	37.	9.	9.
10000.	123.	38.	1.	-1.8	-3.7	244.	4.	11.	37.	12.	12.
12000.	122.	42.	2.	-1.7	-3.5	244.	4.	13.	30.	14.	14.
14000.	122.	46.	1.	-1.3	-4.5	254.	5.	15.	31.	17.	17.
15000.	118.	47.	1.	-1.1	-5.1	258.	5.	16.	33.	18.	18.
16000.	122.	49.	1.	-1.2	-6.2	259.	6.	16.	39.	18.	18.
18000.	121.	55.	1.	-0.5	-8.1	267.	8.	17.	47.	19.	19.
20000.	122.	61.	1.	-0.8	-10.1	265.	10.	19.	55.	19.	19.
25000.	116.	73.	1.	-1.1	-14.7	266.	15.	24.	61.	23.	23.
30000.	120.	92.	2.	-2.1	-26.4	264.	20.	29.	70.	26.	26.
35000.	115.	123.	8.	-1.4	-30.0	267.	30.	39.	76.	32.	32.
40000.	124.	97.	0.	1.9	-36.6	273.	37.	44.	82.	34.	34.
45000.	106.	89.	7.	1.2	-33.9	272.	34.	39.	86.	26.	26.
50000.	105.	60.	0.	0.3	-22.3	271.	22.	28.	81.	20.	20.
55000.	92.	40.	3.	0.2	-17.2	271.	7.	14.	52.	14.	14.
60000.	63.	24.	1.	0.9	2.7	72.	3.	10.	29.	11.	11.
65000.	77.	26.	1.	-0.2	7.6	91.	8.	10.	73.	9.	9.
70000.	75.	30.	2.	0.5	9.3	87.	9.	12.	79.	9.	9.
75000.	73.	32.	1.	0.3	12.4	89.	12.	14.	91.	9.	9.
80000.	72.	35.	3.	-0.3	15.2	91.	15.	16.	93.	10.	10.
85000.	70.	37.	1.	-0.5	15.2	92.	15.	16.	93.	10.	10.
90000.	66.	37.	2.	-1.1	15.5	94.	16.	17.	93.	11.	11.
95000.	62.	37.	3.	-1.3	17.3	94.	17.	19.	93.	11.	11.
100000.	55.	38.	2.	-4.8	16.1	107.	17.	19.	90.	11.	11.

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

OCTOBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREES)	VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTOR DEVIAT (KNOT)
6000	145	21.	0.	-1.1	229.	2.	7.	8.	25.
8000	145	30.	0.	-1.0	253.	3.	9.	10.	37.
10000	145	39.	1.	0.4	276.	4.	12.	13.	37.
12000	145	45.	1.	1.7	285.	6.	15.	17.	42.
14000	142	57.	2.	3.1	293.	8.	18.	20.	44.
15000	137	59.	1.	2.6	289.	9.	19.	20.	46.
16000	141	59.	1.	3.4	291.	9.	20.	21.	47.
18000	140	65.	1.	4.1	292.	11.	22.	23.	52.
20000	140	68.	1.	3.8	286.	12.	24.	25.	52.
25000	136	85.	1.	3.8	285.	15.	30.	33.	49.
30000	137	132.	2.	3.4	280.	19.	38.	51.	41.
35000	132.	118.	5.	3.9	279.	26.	44.	44.	59.
40000	134	121.	6.	3.0	276.	30.	45.	42.	68.
45000	117	117.	2.	3.9	277.	31.	40.	35.	76.
50000	107	91.	3.	6.1	285.	24.	30.	25.	79.
55000	94	89.	0.	5.6	291.	16.	20.	20.	78.
60000	89	34.	2.	2.7	292.	7.	13.	13.	56.
65000	82	27.	1.	1.8	297.	4.	9.	10.	42.
70000	79	32.	1.	1.5	291.	4.	8.	9.	52.
75000	75	22.	1.	0.3	273.	5.	10.	10.	51.
80000	71	39.	2.	1.3	283.	6.	13.	13.	45.
85000	57	36.	3.	0.2	271.	11.	16.	15.	68.
90000	53	48.	2.	-0.7	267.	14.	20.	18.	74.
95000	46	68.	3.	-0.9	267.	19.	22.	18.	86.
100000	33	51.	0.	-2.4	265.	25.	27.	18.	93.

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

NOVEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREES)	VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANT (PERCENT)	STANDARD VECTOR DEVIAT (KNOT)
									7.
6000-	159-	27-	1-	-1.4	-2.8	243-	48-	7-	11-
8000-	160-	38-	1-	-1.7	-7.6	258-	67-	12-	11-
10000-	159-	45-	1-	0.1	-11.2	270-	60-	16-	15-
12000-	159-	49-	1-	2.4	-14.2	280-	71-	20-	19-
14000-	160-	71-	1-	3.4	-16.3	282-	70-	24-	22-
15000-	156-	67-	1-	3.3	-17.0	281-	70-	25-	23-
16000-	156-	70-	1-	3.3	-17.9	280-	68-	27-	25-
18000-	157-	84-	1-	3.3	-20.0	279-	68-	30-	27-
20000-	157-	90-	1-	2.9	-22.7	277-	70-	23-	29-
25000-	156-	110-	8-	3.8	-29.3	277-	74-	30-	34-
30000-	154-	130-	6-	3.6	-35.3	276-	35-	48-	42-
35000-	138-	146-	8-	4.2	-40.2	276-	40-	53-	44-
40000-	126-	144-	14-	5.7	-46.8	277-	47-	58-	43-
45000-	111-	106-	8-	2.1	-45.1	273-	45-	52-	33-
50000-	99-	96-	4-	2.7	-39.7	274-	40-	45-	27-
55000-	85-	72-	0-	2.2	-29.8	274-	30-	32-	19-
60000-	77-	61-	4-	2.6	-18.9	278-	19-	22-	16-
65000-	74-	43-	0-	2.1	-12.2	280-	12-	15-	13-
70000-	62-	41-	0-	2.1	-11.7	280-	12-	15-	14-
75000-	54-	47-	2-	0.3	-11.9	271-	12-	17-	16-
80000-	50-	44-	0-	-1.3	-15.2	265-	15-	20-	18-
85000-	44-	63-	5-	-0.7	-20.6	268-	21-	25-	22-
90000-	41-	79-	8-	-1.9	-25.3	266-	25-	29-	23-
95000-	41-	84-	5-	-4.2	-32.5	263-	33-	36-	26-
100000-	34-	94-	0-	-3.3	-35.7	265-	41-	32-	32-

UPPER AIR WIND DATA AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

DECEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT VECTOR MEAN SPEED (DEGREES) (KNOTS)			CONSTANCY (PERCENT)	STANDARD VECTOR DEVIAT (KNOTS)
				+N	-S	+E -W		
6000-	148-	32-	-1.9	-3.7	243-	4-	47-	10-
8000-	149-	43-	-1.4	-8.0	260-	8-	13-	14-
10000-	149-	50-	1-	0.7	12.7	13-	18-	17-
12000-	149-	53-	1-	1.7	-16.0	276-	16-	21-
14000-	149-	63-	1-	2.3	-18.8	277-	19-	25-
15000-	149-	74-	2-	1.9	-20.6	275-	21-	27-
16000-	148-	80-	3-	1.4	-22.1	274-	22-	28-
18000-	147-	86-	1-	1.2	-24.4	273-	24-	30-
20000-	146-	93-	3-	0.7	-27.1	272-	27-	33-
25000-	136-	122-	3-	-2.5	-34.9	266-	35-	40-
30000-	134-	161-	2-	-4.7	-42.2	264-	42-	47-
35000-	126-	174-	2-	-4.8	-46.7	264-	47-	50-
40000-	116-	148-	8-	-4.6	-49.3	265-	50-	57-
45000-	107-	137-	4-	-0.7	-46.8	269-	47-	53-
50000-	91-	100-	7-	1.4	-40.1	272-	40-	44-
55000-	81-	71-	0-	2.9	-29.3	276-	29-	33-
60000-	73-	51-	4-	2.5	-19.3	277-	19-	23-
65000-	65-	48-	4-	3.9	-14.0	286-	15-	17-
70000-	63-	40-	2-	3.9	-8.8	294-	10-	14-
75000-	61-	42-	2-	2.6	-11.9	282-	12-	16-
80000-	57-	57-	1-	1.7	-16.1	276-	16-	18-
85000-	53-	69-	2-	-0.2	-22.8	269-	23-	24-
90000-	52-	82-	6-	-2.5	-32.8	266-	33-	34-
95000-	42-	100-	9-	-5.5	-47.3	263-	48-	49-
100000-	37-	126-	11-	-7.7	-57.9	262-	58-	60-

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JANUARY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM
		≥ 90 < 120	≥ 120 < 90	≥ 150 450	≥ 180 < 210	≥ 210 < 240	≥ 240 < 270	≥ 270 < 300	≥ 300 < 330	
6000-	118-	2-	2-	3-	1-	2-	0-	1-	12-	21-
8000-	117-	9-	1-	1-	3-	2-	0-	1-	10-	12-
10000-	117-	4-	0-	5-	2-	0-	0-	2-	8-	16-
12000-	116-	7-	2-	2-	3-	0-	0-	2-	10-	26-
14000-	116-	9-	2-	2-	2-	0-	0-	2-	15-	26-
15000-	116-	8-	3-	2-	2-	0-	0-	2-	15-	26-
16000-	116-	8-	3-	2-	2-	0-	0-	2-	15-	26-
18000-	116-	9-	3-	2-	2-	0-	0-	3-	13-	26-
20000-	115-	7-	4-	2-	2-	1-	0-	0-	7-	19-
25000-	115-	109-	8-	4-	5-	0-	0-	0-	13-	26-
30000-	103-	4-	1-	4-	1-	0-	0-	0-	22-	28-
35000-	102-	1-	0-	1-	0-	0-	0-	0-	13-	28-
40000-	95-	2-	2-	0-	0-	0-	0-	0-	13-	28-
45000-	84-	0-	1-	1-	0-	0-	0-	0-	13-	28-
50000-	69-	1-	0-	0-	0-	0-	0-	0-	13-	28-
55000-	56-	0-	0-	0-	0-	0-	0-	0-	13-	28-
60000-	50-	4-	4-	2-	2-	0-	0-	0-	13-	28-
65000-	44-	9-	2-	11-	2-	2-	0-	0-	14-	30-
70000-	38-	16-	11-	8-	0-	3-	0-	0-	18-	32-
75000-	37-	14-	11-	5-	3-	0-	0-	0-	11-	32-
80000-	35-	6-	11-	6-	0-	0-	0-	0-	26-	11-
85000-	31-	3-	10-	3-	0-	0-	0-	0-	19-	32-
90000-	23-	4-	4-	9-	4-	0-	0-	0-	22-	9-
95000-	15-	0-	0-	0-	0-	0-	0-	0-	47-	0-
100000-	0-	0-	0-	0-	0-	0-	0-	0-	7-	0-

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

FEBRUARY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)												
		≥ 360	≥ 30	≥ 60	≥ 90	≥ 120	≥ 150	≥ 180	≥ 210	≥ 240	≥ 270	< 300	≥ 330	CALM
6000.	112.	10.	9.	0.	1.	1.	1.	0.	0.	0.	0.	15.	12.	1.
8000.	112.	5.	5.	3.	4.	0.	0.	0.	0.	0.	0.	14.	8.	0.
10000.	111.	5.	2.	4.	0.	0.	0.	0.	0.	0.	0.	5.	19.	0.
12000.	111.	3.	5.	2.	0.	0.	0.	0.	0.	0.	0.	6.	20.	0.
14000.	111.	3.	5.	2.	0.	0.	0.	0.	0.	0.	0.	4.	22.	0.
15000.	110.	4.	3.	3.	4.	0.	0.	0.	0.	0.	0.	3.	24.	0.
16000.	111.	5.	3.	3.	4.	0.	0.	0.	0.	0.	0.	3.	26.	0.
18000.	110.	5.	3.	3.	4.	0.	0.	0.	0.	0.	0.	3.	27.	0.
20000.	110.	5.	3.	3.	4.	0.	0.	0.	0.	0.	0.	3.	27.	0.
25000.	107.	3.	4.	3.	3.	0.	0.	0.	0.	0.	0.	1.	3.	0.
30000.	105.	5.	3.	3.	2.	0.	0.	0.	0.	0.	0.	1.	5.	0.
35000.	100.	4.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	32.	0.
40000.	93.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.	0.
45000.	90.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	75.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	64.	2.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	58.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	56.	4.	4.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	54.	6.	6.	6.	9.	7.	0.	0.	0.	0.	0.	6.	2.	0.
75000.	50.	2.	2.	2.	2.	2.	0.	0.	0.	0.	0.	2.	40.	0.
80000.	47.	2.	2.	2.	13.	9.	0.	0.	0.	0.	0.	2.	32.	0.
85000.	43.	2.	2.	2.	16.	2.	0.	0.	0.	0.	0.	0.	49.	0.
90000.	38.	0.	0.	0.	14.	5.	2.	0.	0.	0.	0.	0.	8.	0.
95000.	30.	0.	0.	0.	16.	3.	0.	0.	0.	0.	0.	0.	37.	0.
100000.	25.	0.	0.	0.	17.	3.	0.	0.	0.	0.	0.	0.	7.	0.
					16.	0.	0.	0.	0.	0.	0.	0.	4.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

MARCH

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM
		$\geq 360$	$\geq 30$	$\geq 240$	$\geq 180$	$\geq 120$	$\geq 60$	$< 60$	$< 120$	
6000.	161.	5..	15..	20..	17..	9..	6..	6..	12..	0..
8000.	161.	2..	2..	5..	8..	28..	16..	12..	14..	0..
10000.	160.	3..	1..	0..	2..	4..	20..	29..	19..	0..
12000.	158.	3..	1..	1..	0..	3..	17..	32..	20..	0..
14000.	158.	3..	1..	0..	1..	1..	39..	32..	20..	0..
15000.	155..	3..	2..	2..	1..	0..	1..	15..	35..	0..
16000.	159..	2..	4..	2..	3..	0..	1..	12..	7..	0..
18000.	158..	2..	3..	3..	0..	0..	1..	11..	37..	1..
20000.	157..	2..	3..	3..	1..	0..	0..	3..	8..	4..
25000.	152..	1..	3..	3..	1..	0..	0..	1..	10..	1..
30000.	154..	3..	2..	4..	0..	0..	1..	1..	44..	10..
35000.	147..	4..	3..	3..	0..	0..	0..	2..	5..	9..
40000.	145..	3..	1..	3..	0..	0..	0..	1..	40..	10..
45000.	132..	0..	0..	0..	0..	0..	0..	0..	44..	0..
50000.	129..	0..	0..	0..	0..	0..	0..	0..	53..	0..
55000.	112..	0..	0..	0..	0..	0..	0..	0..	54..	0..
60000.	102..	0..	0..	3..	1..	2..	0..	1..	47..	1..
65000.	88..	1..	1..	1..	1..	0..	0..	3..	58..	1..
70000.	85..	1..	0..	6..	4..	6..	1..	4..	32..	2..
75000.	70..	0..	4..	3..	0..	1..	3..	7..	35..	0..
80000.	57..	4..	5..	2..	0..	2..	4..	2..	13..	3..
85000.	47..	2..	0..	0..	0..	0..	4..	6..	40..	0..
90000.	43..	0..	0..	2..	0..	0..	0..	0..	12..	0..
95000.	39..	3..	0..	0..	0..	0..	0..	3..	35..	0..
100000.	29..	0..	0..	0..	0..	0..	0..	0..	44..	0..

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JALS)  
 PERIOD OF RECORD 1962-1967

APRIL

GEOMETRIC ALTITUDE MSLIFT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM
		≥ 360 < 30	≥ 30 < 90	≥ 90 < 120	≥ 120 < 150	≥ 150 < 180	≥ 180 < 210	≥ 210 < 240	≥ 240 < 270	
6000.	139.	6.	9.	1.	2.	2.	1.	1.	1.	3.
8000.	137.	6.	4.	1.	1.	4.	0.	0.	0.	0.
10000.	137.	1.	1.	1.	1.	1.	1.	1.	1.	0.
12000.	137.	4.	0.	0.	0.	0.	0.	0.	0.	0.
14000.	137.	3.	0.	1.	0.	0.	0.	0.	0.	0.
15000.	136.	4.	1.	1.	1.	1.	1.	1.	1.	0.
16000.	136.	4.	0.	0.	0.	0.	0.	0.	0.	0.
18000.	137.	1.	0.	0.	0.	0.	0.	0.	0.	0.
20000.	137.	1.	2.	0.	1.	0.	0.	0.	0.	0.
25000.	136.	4.	0.	0.	0.	0.	0.	0.	0.	0.
30000.	135.	4.	0.	0.	0.	0.	0.	0.	0.	0.
35000.	129.	4.	3.	0.	0.	0.	0.	0.	0.	0.
40000.	124.	4.	3.	0.	0.	0.	0.	0.	0.	0.
45000.	115.	5.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	109.	5.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	101.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	92.	0.	1.	1.	1.	1.	1.	1.	1.	0.
65000.	84.	2.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	81.	4.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	78.	6.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	75.	17.	15.	17.	17.	17.	17.	17.	17.	0.
85000.	70.	3.	3.	3.	3.	3.	3.	3.	3.	0.
90000.	65.	2.	2.	2.	2.	2.	2.	2.	2.	0.
95000.	57.	0.	2.	2.	2.	2.	2.	2.	2.	0.
100000.	61.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

MAY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM
		≥ 360	≥ 30	≥ 60	≥ 90	≥ 120	≥ 150	≥ 180	≥ 210	
6000-	128-	5-	5-	4-	4-	4-	4-	4-	4-	4-
8000-	126-	6-	6-	5-	5-	5-	5-	5-	5-	5-
10000-	125-	3-	3-	2-	2-	2-	2-	2-	2-	3-
12000-	124-	3-	1-	1-	2-	2-	2-	2-	2-	2-
14000-	124-	3-	2-	0-	3-	3-	4-	4-	4-	3-
15000-	121-	2-	2-	2-	2-	2-	2-	2-	2-	2-
16000-	121-	2-	2-	2-	2-	2-	2-	2-	2-	2-
18000-	120-	1-	2-	2-	2-	2-	2-	2-	2-	2-
20000-	120-	2-	2-	2-	2-	2-	2-	2-	2-	2-
25000-	219-	2-	1-	2-	2-	2-	2-	2-	2-	2-
30000-	221-	2-	2-	2-	1-	1-	1-	1-	1-	2-
35000-	114-	3-	3-	1-	0-	0-	0-	0-	0-	3-
40000-	115-	2-	2-	1-	0-	0-	0-	0-	0-	2-
45000-	103-	0-	0-	0-	0-	0-	0-	0-	0-	1-
50000-	100-	0-	0-	0-	0-	0-	0-	0-	0-	0-
55000-	98-	0-	0-	0-	0-	0-	0-	0-	0-	0-
60000-	94-	3-	2-	1-	0-	0-	0-	0-	0-	0-
65000-	91-	8-	7-	7-	5-	9-	11-	12-	3-	2-
70000-	90-	6-	10-	18-	19-	8-	12-	7-	2-	6-
75000-	81-	4-	10-	26-	27-	6-	4-	2-	5-	5-
80000-	78-	6-	6-	15-	23-	5-	4-	2-	4-	4-
85000-	73-	3-	3-	14-	32-	10-	4-	4-	1-	1-
90000-	71-	1-	8-	13-	21-	14-	0-	0-	17-	17-
95000-	64-	0-	0-	17-	16-	8-	5-	5-	5-	5-
100000-	51-	0-	0-	10-	20-	10-	4-	2-	10-	2-

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR MIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JUNE

GEOMETRIC ALTITUDE HSL FT	TOTAL OBS	MIND DIRECTIONS (DEGREES)								CALM									
		> 90°	< 120°	> 120°	< 150°	> 150°	< 180°	> 180°	< 210°	> 210°	< 240°	> 240°	< 270°	> 270°	< 300°	> 300°	< 330°	> 330°	< 360°
6000.	127.	2.	2.	6.	20.	28.	17.	6.	2.	8.	8.	2.	1.	5.	0.	0.	0.	0.	0.
8000.	127.	2.	1.	1.	4.	13.	20.	17.	27.	26.	9.	9.	6.	2.	2.	2.	2.	0.	0.
10000.	127.	1.	2.	1.	2.	8.	17.	17.	27.	26.	9.	9.	4.	8.	0.	0.	0.	0.	0.
12000.	128.	5.	5.	0.	1.	5.	13.	32.	23.	5.	5.	5.	1.	5.	0.	0.	0.	0.	0.
14000.	127.	6.	6.	3.	1.	6.	9.	35.	22.	5.	5.	5.	2.	2.	0.	0.	0.	0.	0.
15000.	124.	3.	10.	2.	0.	6.	10.	34.	23.	4.	4.	21.	6.	3.	0.	0.	0.	0.	0.
16000.	126.	2.	19.	5.	1.	4.	13.	32.	21.	6.	6.	10.	2.	2.	0.	0.	0.	0.	0.
18000.	125.	2.	6.	4.	3.	2.	2.	13.	26.	29.	29.	10.	2.	2.	0.	0.	0.	0.	0.
20000.	125.	4.	6.	1.	2.	2.	2.	9.	27.	29.	12.	12.	6.	2.	2.	0.	0.	0.	0.
25000.	124.	1.	3.	1.	1.	2.	2.	6.	27.	31.	15.	15.	6.	6.	0.	0.	0.	0.	0.
30000.	120.	1.	0.	0.	0.	0.	0.	0.	0.	0.	28.	35.	19.	10.	1.	1.	0.	0.	0.
35000.	114.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	32.	16.	0.	0.	0.	0.	0.	0.
40000.	115.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	34.	35.	23.	3.	3.	0.	0.	0.
45000.	112.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	29.	23.	8.	2.	2.	0.	0.	0.
50000.	105.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	26.	39.	25.	5.	5.	0.	0.	0.
55000.	99.	2.	2.	4.	1.	4.	3.	18.	23.	19.	19.	19.	1.	1.	0.	0.	0.	0.	0.
60000.	97.	3.	5.	4.	1.	4.	16.	13.	5.	3.	3.	16.	4.	4.	4.	4.	4.	4.	0.
65000.	95.	4.	2.	4.	2.	4.	23.	36.	23.	4.	4.	1.	2.	0.	0.	0.	0.	0.	0.
70000.	92.	1.	4.	4.	37.	39.	11.	4.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	89.	0.	1.	1.	36.	54.	8.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	79.	0.	0.	0.	24.	59.	15.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	74.	0.	1.	1.	39.	47.	8.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	66.	0.	2.	0.	36.	52.	9.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	59.	2.	2.	37.	51.	7.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	54.	0.	28.	63.	63.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JARLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JULY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM
		≥ 360°	280°	≥ 90°	≥ 120°	≥ 150°	< 180°	< 210°	< 240°	
6000.	169.	6.	6.	5.	5.	5.	5.	5.	5.	1.
8000.	149.	2.	7.	7.	7.	7.	7.	7.	7.	1.
10000.	149.	4.	5.	5.	5.	5.	5.	5.	5.	1.
12000.	149.	5.	6.	6.	6.	6.	6.	6.	6.	1.
14000.	149.	9.	9.	9.	9.	9.	9.	9.	9.	0.
15000.	141.	8.	6.	4.	14.	13.	11.	12.	12.	0.
16000.	149.	8.	5.	5.	9.	17.	15.	12.	12.	0.
18000.	148.	5.	4.	4.	11.	18.	10.	10.	10.	0.
20000.	147.	4.	4.	4.	12.	13.	16.	17.	17.	0.
25000.	139.	4.	5.	5.	9.	12.	12.	12.	19.	0.
30000.	145.	5.	6.	6.	8.	10.	22.	18.	12.	0.
35000.	133.	2.	5.	5.	5.	11.	14.	15.	15.	0.
40000.	137.	5.	5.	6.	6.	11.	12.	17.	9.	0.
45000.	121.	3.	5.	5.	9.	10.	21.	12.	12.	0.
50000.	118.	7.	8.	8.	8.	16.	16.	10.	13.	0.
55000.	104.	0.	0.	18.	28.	24.	14.	6.	3.	0.
60000.	102.	2.	5.	22.	46.	21.	2.	0.	1.	0.
65000.	91.	0.	0.	33.	55.	10.	2.	0.	0.	0.
70000.	89.	0.	0.	38.	60.	2.	0.	0.	0.	0.
75000.	81.	0.	0.	35.	65.	0.	0.	0.	0.	0.
80000.	81.	0.	0.	43.	56.	0.	0.	0.	0.	0.
85000.	72.	0.	0.	40.	60.	0.	0.	0.	0.	0.
90000.	68.	0.	0.	47.	53.	0.	0.	0.	0.	0.
95000.	59.	0.	0.	42.	58.	0.	0.	0.	0.	0.
100000.	57.	0.	0.	37.	63.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM												
		≥ 30	< 60	≥ 60	< 90	≥ 90	< 120	≥ 120	< 150	≥ 150	< 180	≥ 180	< 210	≥ 210	< 240	≥ 240	< 270	≥ 270	< 300	≥ 300	< 330	≥ 330
6000.	156.	6.	10.	4.	8.	19.	13.	13.	6.	5.	6.	2.	2.	2.	2.	2.	5.	5.	6.	2.	0.	0.
8000.	156.	4.	6.	6.	10.	9.	18.	11.	15.	6.	3.	8.	4.	7.	7.	13.	4.	6.	8.	4.	11.	1.
10000.	157.	7.	10.	6.	8.	12.	8.	7.	7.	7.	6.	6.	6.	6.	6.	6.	6.	6.	7.	7.	12.	0.
12000.	157.	9.	12.	8.	13.	8.	3.	5.	10.	10.	6.	4.	4.	4.	4.	4.	4.	4.	4.	7.	14.	0.
14000.	157.	10.	10.	18.	11.	4.	1.	5.	10.	10.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	14.	0.
15000.	150.	9.	15.	15.	11.	5.	3.	2.	8.	8.	7.	5.	5.	5.	5.	5.	5.	5.	5.	5.	16.	0.
16000.	156.	11.	13.	13.	12.	6.	3.	4.	10.	10.	6.	2.	2.	2.	2.	2.	2.	2.	2.	2.	4.	15.
18000.	156.	12.	9.	12.	12.	8.	3.	7.	10.	10.	4.	3.	3.	3.	3.	3.	3.	3.	3.	3.	6.	13.
20000.	156.	10.	11.	14.	9.	6.	2.	10.	12.	4.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	6.	13.
25000.	149.	6.	5.	10.	8.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.	10.	0.
30000.	152.	5.	8.	7.	3.	6.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	12.	0.
35000.	144.	8.	6.	3.	0.	3.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	9.	26.
40000.	145.	10.	4.	2.	6.	3.	1.	1.	4.	4.	10.	12.	8.	8.	8.	8.	8.	8.	8.	8.	12.	1.
45000.	134.	7.	10.	1.	4.	6.	5.	5.	2.	2.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	19.	0.
50000.	132.	13.	8.	7.	3.	5.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	13.	1.
55000.	119.	8.	14.	21.	10.	6.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	11.	1.
60000.	110.	3.	9.	26.	28.	15.	7.	8.	8.	8.	8.	8.	8.	8.	8.	8.	8.	8.	8.	8.	0.	0.
65000.	96.	0.	3.	41.	6.	9.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.	0.	0.
70000.	93.	0.	0.	0.	33.	62.	2.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
75000.	85.	0.	0.	0.	39.	61.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	80.	0.	1.	31.	65.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.
85000.	70.	0.	0.	47.	53.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	64.	0.	2.	47.	52.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	60.	0.	3.	33.	62.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	55.	0.	2.	38.	60.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)**  
**JALLEN SITE (JAL)**  
**PERIOD OF RECORD 1962-1967**

SEPTEMBER

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD : 1962-1967

OCTOBER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM			
		$\geq 360$	$\geq 30$	$\geq 60$	$\geq 90$	$\geq 120$	$\geq 150$	$\geq 180$	$\geq 210$	$\geq 240$	$\geq 270$	$\geq 300$	$\geq 330$
6000.	145.	10.	9.	2.	3.	6.	10.	13.	13.	8.	6.	11.	1.
8000.	145.	10.	4.	2.	6.	3.	8.	12.	11.	12.	6.	11.	1.
10000.	145.	8.	8.	5.	4.	3.	4.	12.	11.	11.	14.	9.	0.
12000.	145.	11.	10.	5.	5.	0.	1.	10.	10.	12.	12.	10.	0.
14000.	142.	13.	6.	3.	5.	4.	1.	9.	7.	15.	15.	13.	0.
15000.	137.	13.	7.	3.	4.	0.	0.	11.	8.	15.	15.	11.	0.
16000.	141.	11.	9.	4.	1.	0.	1.	9.	9.	13.	13.	13.	0.
18000.	140.	12.	9.	4.	1.	1.	1.	4.	13.	12.	16.	16.	0.
20000.	140.	15.	7.	4.	3.	1.	1.	1.	1.	15.	15.	17.	0.
25000.	136.	12.	8.	5.	1.	0.	3.	1.	16.	12.	12.	15.	0.
30000.	137.	16.	4.	4.	1.	0.	1.	2.	17.	12.	20.	9.	0.
35000.	132.	14.	3.	4.	0.	0.	0.	1.	17.	16.	17.	20.	0.
40000.	131.	8.	4.	2.	0.	0.	0.	0.	0.	15.	19.	24.	0.
45000.	117.	8.	1.	0.	0.	0.	0.	1.	10.	21.	33.	19.	0.
50000.	107.	2.	3.	0.	0.	0.	0.	1.	10.	20.	26.	25.	13.
55000.	94.	6.	1.	1.	0.	0.	1.	0.	11.	20.	20.	28.	11.
60000.	89.	8.	1.	1.	4.	1.	3.	7.	13.	8.	11.	10.	0.
65000.	82.	6.	2.	5.	4.	5.	6.	10.	13.	13.	13.	10.	21.
70000.	79.	6.	8.	3.	6.	4.	3.	3.	8.	19.	25.	9.	8.
75000.	75.	5.	4.	7.	4.	4.	7.	3.	9.	21.	21.	12.	3.
80000.	71.	4.	8.	4.	3.	1.	1.	4.	4.	25.	25.	6.	7.
85000.	57.	4.	9.	7.	4.	4.	4.	4.	4.	28.	25.	5.	5.
90000.	53.	8.	4.	2.	4.	4.	8.	0.	6.	32.	21.	6.	4.
95000.	46.	2.	4.	2.	2.	0.	0.	7.	4.	37.	35.	2.	2.
100000.	33.	0.	0.	0.	6.	0.	0.	3.	3.	45.	33.	0.	3.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JALI)  
 PERIOD OF RECORD 1962-1967

NOVEMBER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM	
		≥ 360	≥ 30	≥ 90	≥ 120	≥ 150	≥ 180	≥ 210	≥ 240		
< 30	< 60	< 90	< 120	< 150	< 180	< 210	< 240	< 270	< 300	< 330	< 360
6000.	159.	2.	2.	2.	1.	1.	1.	1.	1.	1.	0.
8000.	160.	4.	3.	2.	1.	1.	1.	1.	1.	1.	0.
10000.	159.	5.	1.	1.	1.	1.	1.	1.	1.	1.	0.
12000.	159.	6.	3.	2.	2.	0.	0.	0.	0.	0.	0.
14000.	160.	5.	3.	1.	1.	1.	1.	1.	1.	1.	0.
15000.	156.	5.	3.	2.	2.	0.	0.	0.	0.	0.	0.
16000.	156.	9.	2.	2.	1.	1.	1.	1.	1.	1.	0.
18000.	157.	6.	3.	1.	1.	1.	1.	1.	1.	1.	0.
20000.	157.	6.	3.	1.	1.	1.	1.	1.	1.	1.	0.
25000.	156.	4.	1.	1.	1.	1.	1.	1.	1.	1.	0.
30000.	154.	3.	2.	1.	1.	1.	1.	1.	1.	1.	1.
35000.	138.	4.	1.	1.	1.	1.	1.	1.	1.	1.	0.
40000.	126.	3.	3.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	111.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	99.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	85.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	77.	3.	3.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	74.	1.	3.	3.	3.	0.	0.	0.	0.	0.	0.
70000.	62.	5.	6.	2.	0.	0.	0.	0.	0.	0.	0.
75000.	54.	2.	6.	9.	2.	0.	0.	0.	0.	0.	0.
80000.	50.	0.	8.	6.	2.	0.	0.	0.	0.	0.	0.
85000.	44.	2.	5.	5.	0.	0.	0.	0.	0.	0.	0.
90000.	41.	0.	5.	5.	0.	0.	0.	0.	0.	0.	0.
95000.	41.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	34.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

DECEMBER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM
		≥ 90 < 120	≥ 120 < 150	≥ 150 < 180	≥ 180 < 210	≥ 210 < 240	≥ 240 < 270	≥ 270 < 300	≥ 300 < 330	
6000.	148.	9.	5.	3.	5.	13.	20.	16.	6.	1.
8000.	149.	7.	3.	2.	4.	1.	5.	17.	13.	0.
10000.	149.	5.	1.	0.	0.	1.	4.	10.	22.	15.
12000.	149.	6.	1.	1.	0.	0.	3.	1.	14.	0.
14000.	149.	4.	1.	1.	1.	2.	1.	5.	17.	10.
15000.	149.	5.	0.	0.	2.	2.	1.	3.	12.	0.
16000.	148.	5.	1.	1.	2.	2.	1.	3.	12.	0.
18000.	147.	5.	0.	0.	1.	1.	1.	3.	12.	0.
20000.	146.	5.	0.	0.	1.	1.	1.	4.	14.	0.
25000.	138.	4.	1.	1.	1.	1.	1.	1.	18.	8.
30000.	134.	4.	1.	1.	1.	1.	0.	1.	20.	10.
35000.	126.	5.	0.	0.	0.	0.	0.	0.	15.	37.
40000.	116.	1.	1.	0.	0.	0.	0.	1.	15.	35.
45000.	107.	0.	0.	0.	0.	0.	0.	3.	10.	41.
50000.	91.	0.	0.	0.	0.	0.	0.	9.	29.	43.
55000.	81.	2.	0.	0.	0.	0.	0.	9.	25.	42.
60000.	73.	3.	1.	0.	0.	0.	0.	4.	8.	27.
65000.	65.	8.	2.	0.	0.	0.	0.	5.	5.	32.
70000.	63.	8.	3.	0.	0.	0.	0.	6.	8.	37.
75000.	61.	3.	3.	0.	0.	0.	0.	6.	5.	36.
80000.	57.	0.	0.	0.	0.	0.	0.	2.	5.	44.
85000.	53.	2.	0.	0.	0.	0.	0.	0.	2.	43.
90000.	52.	0.	0.	0.	0.	0.	0.	0.	60.	35.
95000.	42.	0.	0.	0.	0.	0.	0.	2.	64.	33.
100000.	37.	0.	0.	0.	0.	0.	0.	3.	59.	38.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JANUARY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)						>150		
			≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100	≥ 100 < 125
6000.	118.	2.	58.	31.	8.	0.	0.	0.	0.	0.	0.
8000.	117.	0.	21.	48.	24.	8.	0.	0.	0.	0.	0.
10000.	117.	0.	9.	31.	41.	14.	5.	0.	0.	0.	0.
12000.	116.	0.	9.	18.	38.	26.	6.	3.	0.	0.	0.
14000.	116.	0.	5.	16.	28.	29.	14.	5.	3.	0.	0.
15000.	116.	0.	4.	17.	22.	32.	15.	7.	3.	0.	0.
16000.	116.	0.	4.	14.	16.	34.	20.	8.	2.	0.	0.
18000.	115.	0.	5.	9.	12.	28.	26.	11.	3.	0.	0.
20000.	115.	0.	4.	7.	13.	23.	26.	14.	7.	1.	0.
25000.	115.	0.	3.	7.	8.	16.	18.	21.	4.	1.	0.
30000.	109.	0.	4.	3.	9.	13.	16.	19.	6.	2.	0.
35000.	103.	0.	0.	0.	8.	9.	11.	13.	8.	8.	0.
40000.	102.	0.	2.	4.	7.	7.	11.	11.	12.	10.	9.
45000.	95.	0.	2.	4.	5.	11.	11.	18.	13.	15.	2.
50000.	84.	0.	0.	5.	11.	7.	17.	15.	21.	14.	2.
55000.	69.	0.	4.	12.	16.	12.	23.	13.	7.	3.	0.
60000.	55.	0.	12.	34.	25.	11.	9.	5.	0.	2.	0.
65000.	50.	0.	2.	22.	32.	20.	12.	0.	0.	0.	0.
70000.	44.	0.	45.	23.	14.	20.	0.	0.	0.	0.	0.
75000.	38.	0.	58.	21.	13.	5.	0.	0.	0.	0.	0.
80000.	37.	0.	32.	43.	11.	5.	0.	0.	0.	0.	0.
85000.	35.	0.	31.	43.	14.	3.	3.	0.	3.	0.	0.
90000.	31.	0.	19.	45.	13.	6.	6.	3.	0.	3.	0.
95000.	23.	0.	13.	39.	17.	9.	0.	4.	0.	0.	0.
100000.	15.	0.	7.	27.	20.	13.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

FEBRUARY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)						
			$\geq 10$	$\geq 20$	$\geq 30$	$\geq 40$	$\geq 50$	$\geq 60$	$\geq 70$
6000.	142.	0.	28.	8.	0.	0.	0.	0.	0.
8000.	112.	0.	50.	15.	1.	2.	0.	0.	0.
10000.	111.	0.	44.	30.	6.	0.	1.	0.	0.
12000.	111.	0.	33.	32.	14.	9.	0.	1.	0.
14000.	111.	0.	7.	20.	20.	16.	5.	0.	1.
15000.	110.	0.	4.	13.	31.	26.	15.	5.	1.
16000.	111.	0.	3.	14.	30.	28.	9.	14.	1.
18000.	110.	0.	3.	13.	23.	25.	17.	11.	0.
20000.	110.	0.	2.	9.	21.	25.	14.	14.	4.
25000.	107.	0.	1.	7.	12.	15.	20.	15.	9.
30000.	105.	0.	3.	2.	8.	11.	21.	19.	12.
35000.	100.	0.	1.	4.	11.	12.	7.	11.	14.
40000.	93.	0.	2.	6.	6.	14.	11.	15.	11.
45000.	90.	0.	1.	2.	7.	8.	18.	19.	17.
50000.	75.	0.	1.	3.	4.	12.	24.	23.	17.
55000.	64.	0.	3.	6.	17.	14.	39.	13.	5.
60000.	58.	0.	14.	26.	24.	21.	10.	3.	0.
65000.	56.	0.	18.	32.	18.	27.	4.	0.	2.
70000.	54.	0.	28.	41.	22.	9.	0.	0.	0.
75000.	50.	0.	16.	38.	32.	12.	2.	0.	0.
80060.	47.	0.	14.	23.	38.	9.	9.	2.	0.
85000.	43.	0.	16.	26.	26.	21.	7.	5.	0.
90000.	38.	0.	13.	24.	29.	18.	11.	5.	0.
95000.	30.	0.	17.	23.	10.	27.	17.	7.	0.
100000.	25.	0.	16.	16.	12.	20.	32.	4.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	>10 <20	WIND SPEED (KNOTS)								2125 <150	2150 <150	
				>20 <30	>30 <40	>40 <50	>50 <60	>60 <70	>70 <80	>80 <90	>90 <100	>100 <125		
6000.	161.	0.	67.	27.	6.	1.	0.	0.	0.	0.	0.	0.	0.	0.
8000.	161.	0.	60.	48.	10.	2.	0.	0.	0.	0.	0.	0.	0.	0.
10000.	160.	0.	24.	45.	21.	8.	1.	0.	0.	0.	0.	0.	0.	0.
12000.	159.	0.	15.	38.	22.	16.	8.	1.	0.	0.	0.	0.	0.	0.
14000.	158.	0.	11.	30.	20.	17.	9.	3.	1.	0.	0.	0.	0.	0.
15000.	155.	0.	8.	26.	21.	21.	16.	6.	1.	0.	0.	0.	0.	0.
16000.	151.	0.	5.	27.	19.	24.	15.	10.	4.	1.	0.	0.	0.	0.
18000.	158.	1.	1.	22.	22.	21.	13.	4.	1.	0.	0.	0.	0.	0.
20000.	157.	0.	1.	15.	21.	22.	17.	12.	9.	0.	0.	0.	0.	0.
25000.	152.	1.	1.	7.	19.	16.	17.	9.	14.	5.	5.	2.	0.	0.
30000.	154.	1.	6.	5.	10.	11.	17.	14.	8.	9.	8.	5.	2.	0.
35000.	147.	0.	5.	7.	9.	12.	12.	4.	11.	10.	10.	3.	1.	0.
40000.	145.	0.	4.	2.	6.	14.	12.	10.	8.	7.	7.	6.	4.	1.
45000.	132.	0.	3.	2.	6.	12.	12.	14.	17.	14.	12.	10.	7.	1.
50000.	129.	0.	0.	2.	6.	16.	21.	18.	15.	13.	13.	10.	7.	1.
55000.	112.	1.	1.	7.	17.	24.	13.	21.	19.	14.	14.	12.	8.	2.
60000.	102.	1.	3.	28.	30.	13.	10.	9.	7.	5.	5.	5.	3.	0.
65000.	88.	2.	10.	41.	19.	12.	8.	6.	2.	2.	2.	2.	1.	0.
70000.	85.	2.	29.	34.	22.	7.	1.	2.	0.	0.	0.	0.	0.	0.
75000.	70.	3.	23.	47.	14.	4.	4.	3.	0.	0.	0.	0.	0.	0.
80000.	57.	2.	25.	40.	18.	4.	5.	2.	2.	0.	0.	0.	0.	0.
85000.	47.	0.	23.	30.	30.	13.	2.	0.	0.	0.	0.	0.	0.	0.
90000.	43.	0.	7.	26.	37.	23.	0.	5.	2.	0.	0.	0.	0.	0.
95000.	39.	0.	10.	28.	28.	13.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	29.	3.	7.	17.	3.	24.	10.	7.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

APRIL

GEOMETRIC ALTITUDE ASL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)					
			$\geq 20$	$\geq 30$	$\geq 50$	$\geq 70$	$\geq 100$	$\geq 150$
< 30	< 40	< 50	< 70	< 100	< 125	< 150		
6000-	139-	0-	0-	0-	0-	0-	0-	0-
8000-	137-	0-	39-	41-	4-	1-	0-	0-
10000-	137-	0-	20-	42-	12-	2-	1-	0-
12000-	137-	0-	14-	28-	19-	10-	2-	0-
14000-	137-	0-	12-	15-	27-	20-	7-	0-
15000-	136-	0-	12-	12-	20-	18-	10-	0-
16000-	136-	0-	7-	15-	17-	22-	12-	0-
18000-	137-	0-	3-	13-	16-	20-	16-	0-
20000-	137-	0-	3-	9-	14-	21-	19-	5-
25000-	136-	0-	4-	14-	6-	10-	20-	7-
30000-	135-	0-	0-	5-	9-	7-	13-	4-
35000-	129-	0-	0-	3-	7-	6-	12-	1-
40000-	124-	2-	0-	1-	3-	11-	8-	15-
45000-	115-	1-	0-	0-	5-	12-	11-	7-
50000-	109-	2-	2-	3-	5-	9-	13-	12-
55000-	101-	1-	1-	1-	3-	16-	12-	6-
60000-	92-	0-	11-	11-	35-	27-	3-	2-
65000-	84-	0-	0-	45-	36-	42-	6-	0-
70000-	81-	0-	53-	40-	5-	1-	0-	0-
75000-	78-	0-	50-	42-	5-	1-	0-	0-
80000-	75-	0-	49-	40-	7-	3-	0-	0-
85000-	70-	0-	56-	33-	7-	4-	0-	0-
90000-	65-	2-	42-	40-	11-	3-	5-	0-
95000-	57-	7-	32-	42-	11-	22-	12-	0-
100000-	41-	2-	15-	39-	2-	0-	0-	0-

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (KM PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

MAY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)											
			≥ 10	≥ 20	≥ 30	≥ 40	≥ 50	≥ 60	< 70	≥ 70	≥ 80	≥ 90	≥ 100	≥ 125
6000.	128.	1.	63.	30.	5.	2.	0.	0.	0.	0.	0.	0.	0.	0.
8000.	126.	0.	50.	42.	6.	2.	0.	0.	0.	0.	0.	0.	0.	0.
10000.	125.	0.	33.	49.	17.	2.	0.	0.	0.	0.	0.	0.	0.	0.
12000.	124.	0.	24.	44.	20.	9.	2.	1.	0.	0.	0.	0.	0.	0.
14000.	124.	0.	16.	35.	31.	9.	4.	5.	1.	0.	0.	0.	0.	0.
15000.	121.	0.	14.	31.	31.	12.	5.	4.	2.	0.	0.	0.	0.	0.
16000.	121.	0.	8.	32.	32.	15.	7.	2.	0.	0.	0.	0.	0.	0.
18000.	120.	0.	7.	26.	29.	21.	8.	3.	2.	0.	0.	0.	0.	0.
20000.	120.	0.	7.	25.	22.	23.	12.	6.	2.	0.	0.	0.	0.	0.
25000.	119.	0.	8.	18.	13.	20.	15.	11.	6.	0.	0.	0.	0.	0.
30000.	121.	1.	4.	15.	11.	18.	17.	12.	0.	0.	0.	0.	0.	0.
35000.	114.	0.	4.	8.	14.	9.	11.	20.	0.	0.	0.	0.	0.	0.
40000.	115.	2.	3.	8.	7.	12.	13.	12.	0.	0.	0.	0.	0.	0.
45000.	103.	1.	2.	3.	8.	14.	18.	15.	12.	0.	0.	0.	0.	0.
50000.	100.	0.	0.	9.	16.	21.	26.	10.	0.	0.	0.	0.	0.	0.
55000.	98.	3.	3.	35.	33.	13.	5.	5.	0.	0.	0.	0.	0.	0.
60000.	94.	0.	37.	45.	14.	3.	0.	1.	0.	0.	0.	0.	0.	0.
65000.	91.	2.	63.	32.	2.	4.	6.	0.	0.	0.	0.	0.	0.	0.
70000.	90.	1.	66.	29.	3.	0.	1.	0.	0.	0.	0.	0.	0.	0.
75000.	81.	0.	57.	40.	2.	0.	1.	0.	0.	0.	0.	0.	0.	0.
80000.	78.	1.	51.	64.	3.	0.	1.	0.	0.	0.	0.	0.	0.	0.
85000.	73.	0.	49.	44.	5.	1.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	71.	1.	44.	45.	7.	1.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	64.	5.	41.	44.	9.	2.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	51.	2.	31.	47.	20.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JALS)  
 PERIOD OF RECORD : 1962-1967

JUNE

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)									
			≤ 20	210	≥ 220	≥ 230	≥ 240	≥ 250	≥ 260	≥ 270	≥ 280	≥ 290
6000-	127-	1-	32-	6-	1-	0-	0-	0-	0-	0-	0-	0-
8000-	127-	0-	46-	61-	13-	1-	0-	0-	0-	0-	0-	0-
10000-	127-	0-	38-	41-	20-	2-	0-	0-	0-	0-	0-	0-
12000-	128-	0-	32-	36-	25-	7-	0-	0-	0-	0-	0-	0-
14000-	127-	0-	27-	33-	25-	13-	2-	0-	0-	0-	0-	0-
15000-	124-	0-	27-	29-	27-	10-	7-	0-	0-	0-	0-	0-
16000-	126-	0-	21-	30-	27-	13-	9-	0-	0-	0-	0-	0-
18000-	125-	0-	24-	24-	22-	21-	6-	3-	0-	0-	0-	0-
20000-	125-	0-	21-	23-	22-	21-	9-	3-	1-	0-	0-	0-
25000-	124-	0-	17-	19-	22-	19-	18-	4-	1-	1-	1-	0-
30000-	120-	0-	8-	12-	27-	16-	17-	16-	2-	1-	1-	0-
35000-	114-	0-	4-	14-	11-	18-	20-	15-	11-	4-	2-	0-
40000-	115-	1-	1-	7-	12-	14-	21-	14-	13-	9-	2-	0-
45000-	112-	0-	2-	4-	13-	19-	21-	10-	8-	6-	1-	0-
50000-	105-	0-	4-	13-	22-	30-	18-	9-	4-	0-	0-	0-
55000-	99-	0-	26-	36-	25-	6-	4-	2-	0-	0-	0-	0-
60000-	97-	0-	36-	52-	11-	1-	0-	0-	0-	0-	0-	0-
65000-	95-	1-	32-	57-	11-	0-	0-	0-	0-	0-	0-	0-
70000-	92-	1-	21-	57-	20-	1-	0-	0-	0-	0-	0-	0-
75000-	89-	0-	11-	45-	38-	6-	0-	0-	0-	0-	0-	0-
80000-	79-	0-	5-	41-	49-	4-	1-	0-	0-	0-	0-	0-
85000-	74-	1-	11-	32-	46-	9-	0-	0-	0-	0-	0-	0-
90000-	66-	0-	9-	36-	30-	24-	0-	0-	0-	0-	0-	0-
95000-	54-	0-	3-	37-	19-	37-	3-	0-	0-	0-	0-	0-
100000-	54-	2-	6-	19-	31-	30-	13-	0-	0-	0-	0-	0-

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR MIND SPEEDS AT SELECTED LEVELS (IN PER CENT)**  
**JALLEN SITE (JAL)**  
**PERIOD OF RECORD 1962-1967**

JULY

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	$\geq 10$ $< 20$	MIND SPEED (KNOTS)				$\geq 80$ $< 90$	$\geq 90$ $< 100$	$\geq 100$ $< 125$	$\geq 125$ $< 150$	$\geq 150$ $< 2150$	
				$\geq 40$ $< 50$	$\geq 50$ $< 60$	$\geq 60$ $< 70$	$\geq 70$ $< 80$						
6000.	149.	1.	82.	17.	1.	0.	0.	0.	0.	0.	0.	0.	0.
8000.	149.	1.	79.	19.	1.	0.	0.	0.	0.	0.	0.	0.	0.
10000.	149.	1.	75.	24.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12000.	149.	1.	71.	26.	2.	0.	0.	0.	0.	0.	0.	0.	0.
14000.	149.	0.	60.	37.	3.	0.	0.	0.	0.	0.	0.	0.	0.
15000.	141.	0.	51.	44.	5.	0.	0.	0.	0.	0.	0.	0.	0.
16000.	149.	1.	54.	39.	7.	0.	0.	0.	0.	0.	0.	0.	0.
18000.	148.	0.	50.	43.	7.	0.	0.	0.	0.	0.	0.	0.	0.
20000.	147.	0.	50.	45.	3.	1.	0.	0.	0.	0.	0.	0.	0.
25000.	139.	0.	40.	42.	16.	2.	0.	0.	0.	0.	0.	0.	0.
30000.	145.	0.	30.	49.	14.	6.	0.	0.	0.	0.	0.	0.	0.
35000.	133.	0.	25.	41.	23.	1.	2.	0.	0.	0.	0.	0.	0.
40000.	137.	0.	25.	32.	31.	7.	6.	0.	0.	0.	0.	0.	0.
45000.	121.	0.	26.	31.	24.	15.	3.	0.	0.	0.	0.	0.	0.
50000.	118.	0.	24.	42.	24.	8.	3.	0.	0.	0.	0.	0.	0.
55000.	104.	0.	25.	61.	11.	4.	0.	0.	0.	0.	0.	0.	0.
60000.	102.	0.	20.	51.	28.	1.	0.	0.	0.	0.	0.	0.	0.
65000.	91.	0.	3.	49.	42.	5.	0.	0.	0.	0.	0.	0.	0.
70000.	89.	0.	1.	28.	66.	4.	0.	0.	0.	0.	0.	0.	0.
75000.	81.	0.	0.	15.	65.	19.	1.	0.	0.	0.	0.	0.	0.
80000.	81.	0.	0.	5.	48.	44.	2.	0.	0.	0.	0.	0.	0.
85000.	72.	0.	0.	0.	36.	53.	14.	0.	0.	0.	0.	0.	0.
90000.	68.	0.	0.	1.	25.	54.	18.	1.	0.	0.	0.	0.	0.
95000.	59.	0.	0.	0.	14.	47.	32.	7.	0.	0.	0.	0.	0.
100000.	57.	0.	0.	0.	7.	42.	37.	14.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)							≥ 150
			≥ 20	≥ 30	≥ 40	≥ 50	≥ 60	≥ 70	≥ 80	
6000.	156.	2.	82.	15.	1.	0.	0.	0.	0.	0.
8000.	156.	0.	76.	22.	1.	0.	0.	0.	0.	0.
10000.	157.	1.	69.	29.	1.	0.	0.	0.	0.	0.
12000.	157.	0.	63.	31.	5.	0.	1.	0.	0.	0.
14000.	157.	0.	51.	46.	2.	1.	0.	0.	0.	0.
15000.	150.	0.	47.	48.	4.	1.	0.	0.	0.	0.
16000.	156.	1.	42.	49.	6.	1.	1.	0.	0.	0.
18000.	156.	0.	46.	45.	8.	1.	1.	0.	0.	0.
20000.	156.	0.	44.	48.	6.	2.	0.	0.	0.	0.
25000.	149.	0.	36.	44.	19.	1.	0.	0.	0.	0.
30000.	152.	0.	25.	41.	22.	1.	1.	0.	0.	0.
35000.	144.	1.	15.	33.	27.	15.	7.	1.	0.	0.
40000.	145.	0.	17.	23.	28.	15.	10.	5.	2.	0.
45000.	134.	0.	12.	42.	18.	13.	8.	7.	1.	0.
50000.	132.	0.	23.	44.	24.	8.	2.	0.	0.	0.
55000.	119.	0.	52.	41.	7.	0.	0.	0.	0.	0.
60000.	110.	0.	30.	62.	8.	0.	0.	0.	0.	0.
65000.	96.	0.	12.	65.	23.	0.	0.	0.	0.	0.
70000.	93.	1.	1.	37.	59.	2.	0.	0.	0.	0.
75000.	85.	0.	0.	15.	71.	14.	0.	0.	0.	0.
80000.	80.	3.	0.	5.	58.	33.	3.	0.	0.	0.
85000.	70.	0.	0.	1.	50.	44.	4.	0.	0.	0.
90000.	64.	0.	0.	2.	25.	64.	9.	0.	0.	0.
95000.	60.	2.	0.	5.	60.	32.	2.	0.	0.	0.
100000.	55.	0.	0.	0.	56.	27.	5.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

SEPTEMBER

GEOMETRIC ALTITUDE MSL FT	TOTAL CBS	CALM	$\geq 10$ $< 20$	WIND SPEED (KNOTS)						$\geq 100$ $< 125$	$\geq 125$ $< 150$	$\geq 150$	
				$\geq 20$ $< 30$	$\geq 30$ $< 40$	$\geq 40$ $< 50$	$\geq 50$ $< 60$	$\geq 60$ $< 70$	$\geq 70$ $< 80$				
6000-	124.			81.	16.	0.	0.	0.	0.	0.	0.	0.	0.
8000-	123.	0.	68.	29.	2.	0.	0.	0.	0.	0.	0.	0.	0.
10000-	123.	0.	49.	43.	6.	11.	2.	1.	0.	0.	0.	0.	0.
12000-	122.	0.	32.	55.	22.	4.	2.	0.	0.	0.	0.	0.	0.
14000-	122.	0.	26.	45.	20.	4.	4.	0.	0.	0.	0.	0.	0.
15000-	118.	0.	25.	47.	20.	4.	4.	0.	0.	0.	0.	0.	0.
16000-	122.	0.	25.	47.	19.	7.	3.	2.	0.	0.	0.	0.	0.
18000-	121.	0.	23.	46.	18.	10.	3.	2.	1.	0.	0.	0.	0.
20000-	122.	0.	16.	49.	32.	15.	6.	3.	2.	1.	0.	0.	0.
25000-	116.	0.	9.	32.	32.	15.	6.	3.	2.	1.	0.	0.	0.
30000-	120.	0.	8.	21.	21.	7.	9.	2.	1.	0.	0.	0.	0.
35000-	115.	0.	2.	11.	24.	21.	14.	11.	10.	5.	1.	0.	0.
40000-	114.	1.	0.	8.	13.	23.	18.	16.	14.	5.	1.	0.	0.
45000-	106.	0.	3.	8.	15.	28.	17.	15.	8.	3.	0.	0.	0.
50000-	105.	1.	2.	21.	32.	29.	10.	5.	1.	0.	0.	0.	0.
55000-	92.	0.	35.	43.	15.	5.	1.	0.	0.	0.	0.	0.	0.
60000-	83.	0.	52.	46.	2.	0.	0.	0.	0.	0.	0.	0.	0.
65000-	77.	0.	43.	55.	3.	0.	0.	0.	0.	0.	0.	0.	0.
70000-	75.	0.	33.	56.	9.	1.	0.	0.	0.	0.	0.	0.	0.
75000-	73.	0.	29.	47.	23.	1.	0.	0.	0.	0.	0.	0.	0.
80000-	72.	0.	14.	64.	15.	7.	0.	0.	0.	0.	0.	0.	0.
85000-	70.	0.	21.	47.	23.	9.	0.	0.	0.	0.	0.	0.	0.
90000-	66.	0.	24.	41.	23.	12.	0.	0.	0.	0.	0.	0.	0.
95000-	62.	0.	16.	34.	40.	10.	0.	0.	0.	0.	0.	0.	0.
100000-	55.	0.	13.	38.	40.	9.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JALA)  
 PERIOD OF RECORD 1962-1967

OCTOBER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)						≥ 150
			≥ 10	≥ 20	≥ 30	≥ 40	≥ 50	≥ 60	
6000.	145.	80.	17.	2.	0.	0.	0.	0.	0.
8000.	145.	56.	38.	4.	1.	0.	0.	0.	0.
10000.	145.	0.	44.	11.	3.	0.	0.	0.	0.
12000.	145.	0.	32.	39.	19.	9.	1.	0.	0.
14000.	142.	0.	23.	37.	23.	13.	3.	1.	0.
15000.	137.	0.	23.	36.	23.	15.	3.	1.	0.
16000.	141.	0.	22.	34.	23.	16.	4.	1.	0.
18000.	140.	0.	21.	26.	28.	15.	7.	3.	1.
20000.	140.	0.	21.	20.	27.	16.	10.	4.	2.
25000.	236.	0.	13.	20.	21.	17.	11.	10.	4.
30000.	137.	0.	9.	18.	13.	21.	12.	7.	5.
35000.	132.	0.	2.	17.	19.	8.	19.	11.	6.
40000.	131.	0.	5.	15.	15.	11.	20.	11.	2.
45000.	147.	0.	3.	16.	18.	15.	20.	15.	9.
50000.	107.	0.	7.	23.	24.	25.	7.	7.	4.
55000.	94.	1.	16.	46.	21.	9.	2.	3.	0.
60000.	89.	0.	39.	40.	17.	3.	0.	0.	0.
65000.	82.	0.	56.	29.	5.	0.	0.	0.	0.
70000.	79.	0.	63.	33.	3.	1.	0.	0.	0.
75000.	75.	0.	52.	44.	4.	0.	0.	0.	0.
80000.	71.	0.	32.	49.	15.	3.	0.	0.	0.
85000.	57.	0.	30.	37.	19.	14.	0.	0.	0.
90000.	53.	0.	32.	21.	25.	17.	6.	0.	0.
95000.	46.	0.	28.	22.	15.	24.	9.	2.	0.
100000.	33.	3.	12.	18.	18.	24.	18.	6.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

NOVEMBER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)						WIND SPEED (KNOTS)					
			≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100	≥ 100 < 125	≥ 125 < 150	≥ 150
6000.	159.	0.	81.	16.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.
8000.	160.	0.	47.	41.	9.	30.	6.	2.	0.	0.	0.	0.	0.	0.
10000.	159.	0.	26.	37.	30.	18.	6.	0.	0.	0.	0.	0.	0.	0.
12000.	159.	0.	19.	35.	23.	10.	4.	0.	1.	0.	0.	0.	0.	0.
14000.	160.	0.	15.	26.	26.	19.	10.	4.	0.	1.	0.	0.	0.	0.
15000.	156.	0.	15.	23.	27.	19.	10.	5.	1.	0.	0.	0.	0.	0.
16000.	156.	0.	13.	21.	24.	21.	11.	8.	1.	0.	0.	0.	0.	0.
18000.	157.	0.	9.	20.	25.	22.	9.	4.	13.	1.	2.	0.	0.	0.
20000.	157.	0.	6.	21.	20.	21.	12.	13.	13.	3.	1.	0.	0.	0.
25000.	156.	0.	3.	15.	17.	19.	21.	10.	4.	7.	3.	1.	1.	0.
30000.	154.	1.	1.	13.	13.	15.	18.	11.	9.	7.	4.	5.	3.	0.
35000.	138.	0.	1.	7.	14.	12.	16.	15.	15.	1.	5.	6.	6.	0.
40000.	126.	0.	0.	2.	13.	12.	16.	13.	13.	13.	10.	5.	4.	0.
45000.	111.	0.	1.	2.	14.	16.	16.	21.	6.	12.	9.	3.	1.	0.
50000.	99.	0.	1.	4.	13.	32.	21.	19.	20.	16.	4.	0.	1.	0.
55000.	85.	1.	4.	1.	4.	13.	32.	21.	18.	8.	2.	1.	0.	0.
60000.	77.	0.	12.	31.	35.	16.	4.	1.	1.	0.	0.	0.	0.	0.
65000.	74.	1.	28.	50.	8.	9.	3.	0.	0.	0.	0.	0.	0.	0.
70000.	62.	2.	31.	39.	16.	10.	3.	0.	0.	0.	0.	0.	0.	0.
75000.	54.	0.	22.	39.	24.	13.	2.	0.	0.	0.	0.	0.	0.	0.
80000.	50.	2.	24.	26.	12.	12.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	44.	0.	11.	34.	25.	7.	11.	7.	5.	0.	0.	0.	0.	0.
90000.	41.	0.	5.	32.	27.	10.	7.	12.	2.	5.	0.	0.	0.	0.
95000.	41.	0.	7.	17.	27.	10.	7.	17.	17.	2.	0.	0.	0.	0.
100000.	34.	12.	6.	3.	18.	15.	12.	6.	15.	9.	3.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

DECEMBER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	CALM	WIND SPEED (KNOTS)									
			≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100	≥ 100 < 125
6000-	148-	1-	67-	22-	8-	3-	0-	0-	0-	0-	0-	0-
8000-	149-	0-	40-	15-	5-	1-	0-	0-	0-	0-	0-	0-
10000-	149-	0-	19-	44-	17-	16-	2-	1-	0-	0-	0-	0-
12000-	149-	0-	15-	32-	26-	14-	11-	3-	0-	0-	0-	0-
14000-	149-	0-	15-	24-	23-	13-	13-	10-	1-	0-	0-	0-
15000-	149-	0-	12-	19-	28-	13-	12-	8-	5-	2-	0-	0-
16000-	148-	0-	9-	22-	26-	16-	7-	13-	4-	3-	1-	0-
18000-	147-	0-	10-	18-	24-	14-	10-	10-	10-	10-	4-	0-
20000-	146-	0-	8-	12-	26-	14-	10-	12-	10-	3-	1-	0-
25000-	138-	0-	5-	13-	17-	13-	17-	9-	3-	5-	8-	0-
30000-	134-	0-	7-	7-	7-	21-	17-	7-	4-	3-	7-	0-
35000-	126-	0-	4-	8-	11-	10-	10-	20-	7-	3-	6-	0-
40000-	116-	0-	1-	7-	11-	12-	14-	19-	7-	8-	6-	0-
45000-	107-	0-	2-	8-	4-	12-	18-	17-	20-	11-	4-	1-
50000-	91-	0-	1-	9-	11-	18-	23-	21-	11-	6-	1-	0-
55000-	81-	1-	4-	10-	30-	26-	15-	7-	1-	0-	0-	0-
60000-	73-	0-	8-	36-	26-	22-	7-	1-	0-	0-	0-	0-
65000-	65-	0-	18-	45-	32-	3-	2-	0-	0-	0-	0-	0-
70000-	63-	0-	32-	52-	11-	3-	2-	0-	0-	0-	0-	0-
75000-	61-	0-	34-	36-	15-	13-	2-	0-	0-	0-	0-	0-
80000-	57-	0-	23-	39-	25-	9-	4-	2-	0-	0-	0-	0-
85000-	53-	0-	19-	25-	23-	21-	6-	6-	2-	0-	0-	0-
90000-	52-	0-	10-	17-	17-	23-	13-	8-	6-	4-	2-	0-
95000-	42-	0-	2-	5-	21-	7-	26-	10-	10-	5-	5-	3-
100000-	37-	0-	3-	16-	5-	11-	27-	11-	11-	8-	5-	3-

UPPER AIR WIND DATA AT SELECTED LEVELS BY SEASONS  
JALLEN SITE (JALS)  
PERIOD OF RECORD 1962-1967

WINTER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREES)			CONSTANCY (PERCENT)	VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	STANDARD VECTOR DEVIATION (KNOTS)
					+N	-S	+E				
6000-	378-	32-	0-	0-0	-3-9	271-	4-	43-	9-	9-	10-
8000-	378-	43-	1-	1-0	-8-6	277-	9-	14-	14-	60-	14-
10000-	377-	54-	1-	3-4	-13-0	284-	13-	17-	19-	70-	17-
12000-	376-	60-	1-	5-0	-16-6	287-	17-	24-	24-	73-	20-
14000-	376-	63-	1-	5-7	-19-9	286-	21-	28-	28-	73-	24-
15000-	375-	76-	2-	5-9	-21-4	285-	22-	30-	30-	73-	26-
16000-	375-	90-	3-	6-0	-22-8	285-	24-	32-	32-	74-	27-
18000-	373-	102-	1-	6-3	-25-1	284-	26-	35-	35-	73-	30-
20000-	371-	104-	2-	6-2	-27-5	283-	28-	39-	39-	72-	33-
25000-	360-	140-	3-	5-2	-34-6	279-	35-	48-	48-	73-	41-
30000-	348-	161-	2-	4-0	-41-0	276-	41-	55-	55-	74-	47-
35000-	329-	174-	2-	3-9	-46-8	275-	47-	60-	60-	79-	48-
40000-	311-	148-	4-	2-0	-51-0	272-	51-	60-	60-	86-	48-
45000-	292-	137-	4-	1-7	-49-6	272-	50-	56-	56-	89-	34-
50000-	250-	100-	7-	2-5	-45-6	273-	46-	50-	50-	91-	28-
55000-	214-	97-	0-	2-0	-34-3	273-	34-	38-	38-	90-	25-
60000-	187-	83-	4-	2-6	-21-1	277-	21-	25-	25-	86-	48-
65000-	171-	78-	0-	2-6	-15-4	279-	16-	20-	20-	80-	19-
70000-	161-	40-	1-	3-0	-9-4	288-	10-	15-	15-	91-	16-
75000-	149-	47-	1-	1-9	-10-1	281-	10-	16-	16-	64-	16-
80000-	141-	73-	1-	0-7	-12-6	273-	13-	19-	19-	66-	19-
85000-	131-	75-	2-	-0-3	-15-6	269-	16-	22-	22-	70-	21-
90000-	121-	86-	4-	-1-6	-20-5	266-	21-	28-	28-	73-	26-
95000-	95-	108-	1-	-4-2	-28-9	262-	29-	36-	36-	80-	33-
100000-	77-	126-	3-	-4-6	-35-7	263-	36-	45-	45-	80-	39-

UPPER AIR WIND DATA AT SELECTED LEVELS BY SEASONS  
JALLEN SITE (JAL)  
— PERIOD OF RECORD 1962-1967

SPRING

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREES)	VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTOR DEVIAT. (KNOT)
40									
6000-	428-	32.	0.	-3.8	217.	5.	5.	9.	10.
8000-	424-	41.	1.	-3.8	241.	8.	12.	12.	12.
10000-	422-	54.	1.	-3.6	252.	12.	16.	14.	14.
12000-	419-	67.	1.	-3.8	256.	16.	21.	18.	18.
14000-	419-	69.	2.	-4.6	257.	20.	26.	21.	21.
15000-	412-	73.	2.	-4.8	257.	22.	28.	22.	22.
16000-	416-	78.	1.	-5.3	257.	24.	30.	23.	23.
18000-	415-	90.	0.	-5.5	258.	25.	33.	25.	25.
20000-	414-	99.	2.	-6.1	258.	30.	37.	22.	22.
25000-	407-	110.	0.	-7.4	259.	37.	45.	33.	33.
30000-	410-	134.	0.	-9.4	258.	45.	54.	34.	34.
35000-	390-	160.	4.	-9.3	260.	53.	63.	45.	45.
40000-	384-	170.	0.	-9.6	260.	56.	63.	41.	41.
45000-	350-	156.	0.	-10.2	259.	52.	56.	32.	32.
50000-	338-	116.	0.	-8.7	259.	47.	50.	34.	34.
55000-	311-	105.	0.	-5.8	260.	33.	37.	21.	21.
60000-	288-	96.	0.	-3.3	259.	18.	22.	31.	31.
65000-	263-	83.	0.	-0.7	265.	9.	15.	58.	58.
70000-	256-	78.	0.	-1.4	232.	2.	12.	15.	15.
75000-	229-	73.	0.	-1.0	241.	2.	12.	16.	16.
80000-	210-	73.	0.	-1.9	235.	3.	13.	17.	17.
85000-	190-	62.	1.	-2.4	237.	4.	12.	33.	33.
90000-	179-	63.	0.	-1.5	257.	7.	15.	45.	45.
95000-	160-	88.	0.	-2.3	256.	9.	26.	58.	58.
100000-	121-	115.	0.	-3.5	255.	14.	24.	23.	23.

UPPER AIR WIND DATA AT SELECTED LEVELS BY SEASONS  
JALLEN SITE (JALA)  
PERIOD OF RECORD 1962-1967

SUMMER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)				RESULTANT DIRECTION (DEGREES)	MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTOR DEVIATE (KNOTS)
				+N	-S	+E	-W					
6000.	432-	31-	0-	-3.0	-0.4	187-	3-	7-	44-	8-	48-	8-
8000.	432-	35-	0-	-3.6	-1.8	206-	4-	4-	39-	9-	39-	10-
10000.	433-	39-	0-	-2.7	-2.3	221-	4-	4-	29-	10-	29-	12-
12000.	434-	45-	0-	-2.2	-2.0	223-	3-	3-	21-	12-	21-	14-
14000.	433-	45-	1-	-2.1	-1.4	214-	3-	3-	13-	13-	13-	15-
15000.	415-	47-	1-	-2.4	-1.3	209-	3-	3-	13-	13-	13-	16-
16000.	431-	47-	0-	-2.6	-1.6	212-	3-	3-	13-	13-	13-	17-
18000.	429-	58-	1-	-2.8	-2.3	220-	4-	4-	14-	14-	14-	17-
20000.	428-	61-	1-	-3.2	-3.4	227-	5-	5-	14-	14-	14-	17-
25000.	412-	71-	1-	-3.5	-6.2	240-	7-	7-	17-	17-	17-	19-
30000.	417-	80-	1-	-4.2	-8.7	244-	10-	10-	21-	21-	21-	23-
35000.	391-	93-	0-	-4.5	-12.5	250-	13-	13-	26-	26-	26-	28-
40000.	397-	116-	0-	-3.8	-15.1	256-	16-	16-	29-	29-	29-	32-
45000.	367-	106-	1-	-3.1	-14.4	258-	15-	15-	29-	29-	29-	31-
50000.	355-	70-	1-	-3.0	-7.8	249-	8-	8-	38-	38-	38-	24-
55000.	322-	56-	1-	-3.4	0.9	165-	4-	4-	26-	26-	26-	15-
60000.	309-	32-	1-	-3.0	9.3	108-	10-	10-	13-	13-	13-	11-
65000.	282-	34-	0-	-1.8	14.4	97-	14-	14-	16-	16-	16-	9-
70000.	274-	41-	0-	-1.5	18.0	95-	18-	18-	19-	19-	19-	9-
75000.	255-	42-	4-	-0.8	21.9	92-	22-	22-	22-	22-	22-	8-
80000.	240-	45-	0-	-1.4	24.4	93-	24-	24-	25-	25-	25-	9-
85000.	216-	43-	0-	-0.4	26.2	91-	26-	26-	27-	27-	27-	10-
90000.	198-	51-	4-	0.2	29.0	90-	29-	29-	30-	30-	30-	11-
95000.	178-	52-	0-	-0.6	32.1	91-	32-	32-	33-	33-	33-	12-
100000.	166-	58-	0-	-2.2	34.4	94-	34-	34-	35-	35-	35-	13-

UPPER AIR WIND DATA AT SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

FALL

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	MAXIMUM SPEED (KNOTS)	MINIMUM SPEED (KNOTS)	MEAN WIND COMPONENTS (KNOTS)	RESULTANT DIRECTION (DEGREES)	VECTOR MEAN SPEED (KNOTS)	SCALAR MEAN SPEED (KNOTS)	CONSTANCY (PERCENT)	STANDARD VECTOR DEVIATION (KNOTS)
+N	-S	+E	-W						
6000.	428.	31.	0.	-1.4	-1.7	229.	2.	7.	8.
8000.	428.	38.	0.	-1.6	-4.6	251.	5.	10.	49.
10000.	427.	45.	1.	-0.4	-6.7	267.	7.	13.	50.
12000.	426.	49.	1.	-1.0	-8.4	277.	8.	16.	51.
14000.	424.	71.	1.	1.9	-9.5	281.	10.	19.	52.
15000.	411.	67.	1.	1.9	-10.7	280.	11.	20.	53.
16000.	419.	70.	1.	2.0	-11.4	280.	12.	21.	54.
18000.	418.	84.	1.	2.5	-13.4	281.	14.	23.	58.
20000.	419.	90.	1.	2.1	-15.3	278.	15.	26.	60.
25000.	408.	110.	1.	2.4	-20.2	277.	20.	32.	63.
30000.	411.	132.	0.	1.9	-25.5	274.	26.	39.	65.
35000.	385.	146.	5.	2.4	-32.2	274.	32.	46.	70.
40000.	371.	144.	0.	3.6	-37.7	275.	38.	49.	77.
45000.	334.	117.	2.	2.5	-36.5	274.	37.	44.	83.
50000.	311.	96.	0.	3.1	-28.0	276.	28.	34.	83.
55000.	271.	89.	0.	2.7	-16.9	279.	17.	22.	79.
60000.	249.	61.	1.	2.0	-7.3	286.	8.	15.	52.
65000.	233.	43.	0.	1.2	-2.6	296.	3.	12.	53.
70000.	216.	41.	0.	1.3	-1.6	309.	2.	12.	18.
75000.	202.	47.	1.	0.3	-0.5	297.	1.	13.	5.
80000.	193.	44.	0.	0.0	-0.4	276.	0.	16.	3.
85000.	171.	63.	1.	-0.3	-2.8	264.	3.	19.	15.
90000.	160.	79.	2.	-1.2	-4.9	256.	5.	21.	22.
95000.	149.	84.	3.	-2.0	-7.7	256.	8.	25.	24.
100000.	122.	94.	0.	-3.7	-9.5	249.	10.	27.	38.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

WINTER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM
		≥ 360	≥ 30	≥ 60	≥ 90	≥ 120	≥ 150	≥ 180	≥ 210	
6000-	378-	7.	5.	1.	2.	1.	2.	1.	2.	1.
8000-	378-	7.	3.	2.	2.	1.	2.	1.	2.	1.
10000-	377-	6.	5.	1.	3.	1.	2.	1.	2.	0.
12000-	376-	5.	5.	2.	3.	1.	2.	0.	2.	0.
14000-	376-	5.	5.	2.	2.	1.	1.	0.	2.	0.
15000-	375-	5.	5.	2.	2.	1.	1.	1.	2.	0.
16000-	375-	6.	6.	2.	2.	1.	1.	1.	2.	0.
18000-	373-	6.	6.	2.	2.	1.	1.	1.	2.	0.
20000-	371-	6.	6.	2.	2.	1.	1.	2.	2.	0.
25000-	360-	4.	4.	2.	2.	1.	1.	0.	3.	0.
30000-	348-	5.	3.	2.	2.	1.	1.	0.	0.	1.
35000-	329-	4.	2.	2.	1.	1.	0.	0.	0.	0.
40000-	311-	1.	2.	0.	0.	0.	0.	0.	0.	0.
45000-	292-	1.	1.	0.	0.	0.	0.	0.	1.	0.
50000-	250-	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000-	214-	2.	0.	0.	0.	0.	0.	0.	0.	0.
60000-	187-	2.	2.	0.	1.	0.	1.	1.	2.	0.
65000-	171-	5.	3.	1.	1.	0.	0.	1.	1.	0.
70000-	161-	7.	3.	9.	3.	1.	1.	1.	4.	0.
75000-	149-	6.	5.	9.	3.	1.	1.	1.	1.	0.
80000-	141-	4.	4.	6.	4.	0.	0.	0.	2.	0.
85000-	131-	2.	5.	6.	5.	1.	1.	1.	5.	0.
90000-	121-	2.	2.	6.	6.	1.	1.	1.	6.	0.
95000-	95-	1.	1.	6.	6.	3.	3.	3.	7.	0.
100000-	77-	0.	0.	5.	5.	1.	1.	1.	6.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

SPRING

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)										CALM
		≥ 360° < 30°	≥ 30° < 60°	≥ 60° < 90°	≥ 90° < 120°	≥ 120° < 150°	≥ 150° < 180°	≥ 180° < 210°	≥ 210° < 240°	≥ 240° < 270°	≥ 270° < 300°	
6000.	428.	5.	3.	2.	4.	16.	19.	16.	9.	6.	7.	0.
8000.	424.	5.	2.	2.	2.	6.	13.	25.	17.	11.	10.	0.
10000.	422.	3.	1.	1.	3.	2.	6.	23.	28.	16.	9.	0.
12000.	419.	4.	1.	1.	2.	1.	5.	20.	32.	20.	8.	0.
14000.	419.	3.	1.	1.	1.	1.	5.	21.	32.	19.	9.	0.
15000.	412.	3.	2.	1.	1.	1.	4.	22.	33.	19.	8.	0.
16000.	416.	2.	3.	1.	0.	1.	1.	4.	20.	36.	19.	4.
18000.	415.	1.	2.	2.	0.	4.	1.	3.	18.	38.	20.	0.
20000.	414.	1.	1.	2.	1.	0.	1.	4.	14.	43.	19.	5.
25000.	407.	2.	1.	2.	0.	0.	1.	2.	17.	43.	20.	3.
30000.	410.	3.	2.	2.	0.	0.	2.	1.	17.	43.	20.	6.
35000.	390.	2.	2.	2.	0.	0.	1.	2.	13.	46.	22.	7.
40000.	384.	2.	1.	1.	0.	1.	0.	2.	11.	50.	22.	5.
45000.	350.	1.	0.	0.	0.	0.	1.	1.	12.	57.	20.	1.
50000.	338.	0.	0.	0.	0.	0.	0.	1.	11.	54.	27.	6.
55000.	311.	0.	0.	0.	0.	1.	0.	3.	14.	46.	27.	6.
60000.	288.	1.	1.	2.	2.	3.	3.	4.	14.	39.	20.	9.
65000.	264.	4.	3.	5.	4.	3.	8.	8.	10.	17.	16.	8.
70000.	256.	4.	5.	14.	12.	7.	7.	5.	4.	20.	9.	4.
75000.	229.	2.	7.	17.	16.	6.	5.	4.	7.	19.	10.	5.
80000.	210.	4.	5.	12.	14.	10.	7.	6.	8.	17.	10.	4.
85000.	190.	3.	2.	8.	17.	5.	6.	8.	13.	22.	9.	4.
90000.	179.	1.	4.	8.	11.	3.	1.	1.	11.	25.	20.	6.
95000.	160.	1.	1.	8.	9.	4.	4.	12.	31.	15.	8.	1.
100000.	121.	0.	3.	10.	4.	2.	3.	3.	12.	33.	17.	2.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

SUMMER

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)								CALM	
		≥ 360	2 360	2 90	≥ 120	2 150	≥ 180	≥ 240	≥ 270	≥ 300	≥ 330
6000.	432.	6.	4.	4.	4.	10.	18.	19.	13.	6.	1.
8000.	432.	3.	4.	4.	5.	7.	17.	14.	21.	9.	0.
10000.	433.	4.	7.	4.	6.	8.	10.	12.	16.	15.	0.
12000.	434.	6.	6.	6.	9.	7.	7.	10.	15.	11.	0.
14000.	433.	9.	7.	11.	9.	6.	7.	8.	17.	10.	0.
15000.	415.	7.	11.	9.	9.	8.	7.	8.	15.	12.	0.
16000.	431.	7.	9.	10.	8.	6.	10.	15.	10.	3.	0.
18000.	429.	6.	7.	9.	11.	7.	8.	10.	15.	11.	0.
20000.	428.	5.	7.	10.	8.	8.	5.	12.	15.	13.	0.
25000.	412.	4.	5.	7.	7.	6.	6.	10.	18.	14.	0.
30000.	417.	4.	5.	5.	4.	6.	9.	9.	17.	15.	0.
35000.	391.	4.	4.	3.	6.	6.	8.	6.	20.	15.	1.
40000.	397.	6.	1.	3.	6.	5.	6.	5.	18.	17.	0.
45000.	367.	4.	5.	4.	5.	5.	7.	5.	14.	15.	0.
50000.	355.	8.	6.	5.	6.	5.	7.	5.	10.	11.	0.
55000.	322.	3.	6.	15.	13.	11.	8.	8.	3.	1.	0.
60000.	309.	3.	6.	21.	32.	16.	8.	8.	0.	1.	0.
65000.	282.	0.	2.	32.	45.	13.	2.	2.	0.	0.	0.
70000.	234.	0.	1.	36.	54.	5.	2.	1.	0.	0.	0.
75000.	255.	0.	0.	36.	60.	3.	0.	0.	0.	0.	0.
80000.	240.	0.	1.	33.	60.	5.	0.	0.	0.	0.	0.
85000.	216.	0.	0.	42.	53.	3.	1.	0.	0.	0.	0.
90000.	198.	0.	1.	43.	22.	3.	1.	0.	0.	0.	0.
95000.	178.	1.	2.	38.	57.	2.	1.	0.	0.	0.	0.
100000.	166.	0.	2.	34.	62.	1.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR WIND DIRECTIONS AT SELECTED LEVELS (IN PER CENT)  
 JALEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

FALL

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WIND DIRECTIONS (DEGREES)						CALM
		≥ 360	≥ 30	≥ 60	≥ 90	≥ 120	≥ 150	
6000.	428.	6.	8.	3.	4.	3.	4.	14.
8000.	428.	6.	4.	3.	2.	5.	8.	14.
10000.	427.	6.	5.	4.	3.	2.	7.	17.
12000.	426.	8.	5.	5.	4.	4.	1.	13.
14000.	424.	8.	5.	4.	4.	1.	2.	20.
15000.	411.	8.	6.	4.	3.	1.	1.	12.
16000.	419.	9.	6.	4.	2.	1.	6.	14.
18000.	413.	8.	7.	2.	2.	1.	1.	4.
20000.	419.	10.	5.	3.	2.	1.	2.	3.
25000.	408.	6.	4.	3.	1.	1.	1.	14.
30000.	411.	7.	3.	2.	1.	0.	1.	2.
35000.	385.	7.	2.	2.	0.	1.	0.	13.
40000.	371.	4.	2.	1.	0.	1.	1.	14.
45000.	336.	4.	0.	0.	0.	0.	1.	23.
50000.	311.	1.	1.	0.	0.	0.	1.	15.
55000.	271.	7.	3.	1.	0.	1.	1.	21.
60000.	249.	7.	6.	5.	6.	3.	4.	10.
65000.	233.	3.	6.	9.	13.	5.	3.	5.
70000.	216.	5.	9.	17.	10.	5.	3.	1.
75000.	202.	3.	5.	20.	15.	4.	3.	7.
80000.	193.	1.	7.	24.	16.	6.	1.	17.
85000.	17.	2.	6.	22.	17.	4.	3.	4.
90000.	166.	3.	4.	16.	19.	7.	1.	21.
95000.	149.	1.	2.	17.	21.	4.	3.	4.
100000.	122.	2.	1.	11.	24.	10.	1.	2.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JAILEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FT	TOTAL OBS	WINTER									
		CALM	$\geq 1$	$\geq 10$	$\geq 20$	$\geq 30$	$\geq 40$	$\geq 50$	$\geq 60$	$\geq 70$	$\geq 80$
6000.	378.	26.	8.	1.	0.	0.	0.	0.	0.	0.	0.
8000.	378.	31.	45.	18.	5.	1.	0.	0.	0.	0.	0.
10000.	377.	0.	16.	40.	28.	12.	2.	1.	0.	0.	0.
12000.	376.	0.	12.	28.	31.	18.	9.	2.	0.	0.	0.
14000.	376.	0.	10.	20.	27.	20.	14.	7.	1.	0.	0.
15000.	375.	0.	7.	18.	27.	23.	14.	7.	3.	1.	0.
16000.	375.	0.	6.	17.	24.	25.	14.	12.	2.	1.	0.
18000.	373.	0.	5.	14.	20.	21.	17.	10.	8.	2.	0.
20000.	371.	0.	5.	9.	20.	20.	16.	13.	10.	2.	1.
25000.	360.	0.	3.	9.	13.	14.	18.	14.	8.	6.	7.
30000.	348.	0.	5.	4.	3.	16.	15.	14.	7.	10.	8.
35000.	329.	0.	2.	7.	10.	10.	9.	17.	9.	7.	9.
40000.	311.	0.	2.	4.	8.	11.	12.	19.	11.	9.	7.
45000.	292.	0.	2.	5.	5.	10.	15.	18.	18.	13.	11.
50000.	250.	0.	1.	6.	9.	12.	21.	20.	16.	4.	1.
55000.	214.	0.	4.	10.	21.	17.	25.	11.	6.	1.	0.
60000.	187.	0.	11.	32.	25.	18.	9.	3.	0.	1.	0.
65000.	171.	1.	19.	37.	24.	13.	5.	0.	1.	0.	0.
70000.	161.	0.	34.	40.	15.	10.	1.	0.	0.	0.	0.
75000.	149.	0.	34.	33.	20.	10.	3.	0.	0.	0.	0.
80000.	141.	0.	24.	35.	26.	8.	5.	1.	0.	0.	0.
85000.	131.	0.	21.	30.	21.	16.	5.	1.	0.	0.	0.
90000.	121.	0.	13.	26.	20.	17.	11.	6.	3.	2.	0.
95000.	95.	0.	9.	19.	17.	14.	17.	7.	5.	2.	0.
100000.	77.	0.	6.	12.	16.	12.	19.	14.	5.	3.	4.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

SPRING

GEOMETRIC ALTITUDE MSL FT	TOTAL 085	WIND SPEED (KNOTS)																							
		≤ 10	> 10	≤ 20	> 20	≤ 30	> 30	≤ 40	> 40	≤ 50	> 50	≤ 60	> 60	≤ 70	> 70	≤ 80	> 80	≤ 90	> 90	≤ 100	> 100	≤ 125	> 125	≤ 150	> 150
6000.	428.	0.	59.	32.	9.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
8000.	424.	0.	42.	44.	12.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10000.	422.	0.	25.	45.	20.	8.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12000.	419.	0.	17.	37.	23.	15.	7.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
14000.	419.	0.	13.	26.	26.	15.	15.	5.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15000.	412.	0.	11.	23.	24.	19.	14.	7.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
16000.	416.	0.	7.	24.	22.	20.	15.	8.	3.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
18000.	415.	0.	3.	20.	22.	21.	15.	11.	6.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20000.	414.	0.	3.	16.	19.	22.	16.	11.	8.	3.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25000.	407.	0.	3.	12.	14.	15.	17.	13.	13.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30000.	410.	0.	1.	8.	10.	12.	16.	13.	12.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35000.	390.	0.	1.	5.	9.	8.	11.	14.	11.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	384.	1.	1.	3.	5.	14.	11.	12.	10.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	350.	1.	2.	4.	7.	13.	14.	13.	19.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	338.	1.	1.	1.	4.	10.	15.	20.	19.	14.	7.	3.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	311.	2.	2.	16.	22.	18.	15.	14.	13.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	288.	1.	17.	36.	24.	12.	5.	2.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	263.	2.	40.	36.	11.	6.	3.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	256.	1.	50.	34.	10.	2.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	229.	1.	44.	43.	7.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	210.	1.	43.	41.	8.	2.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	190.	0.	45.	36.	12.	5.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	179.	1.	34.	39.	16.	7.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	160.	4.	30.	37.	14.	9.	4.	3.	2.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	121.	2.	20.	37.	17.	10.	8.	3.	2.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

SUMMER

GEOMETRIC ALTITUDE HSL FT	TOTAL OBS	WIND SPEED (KNOTS)										WIND SPEED (KNOTS)												
		≤ 10	< 20	≥ 20	< 30	≥ 30	< 40	≥ 40	< 50	≥ 50	< 60	≥ 60	< 70	≥ 70	< 80	≥ 80	< 90	≥ 90	< 100	≥ 100	< 125	≥ 125	< 150	≥ 150
6000.	432.																							
8000.	432.																							
10000.	433.																							
12000.	434.																							
14000.	433.																							
15000.	415.																							
16000.	431.																							
18000.	429.																							
20000.	428.																							
25000.	412.																							
30000.	417.																							
35000.	391.																							
40000.	397.																							
45000.	367.																							
50000.	355.																							
55000.	322.																							
60000.	309.																							
65000.	282.																							
70000.	274.																							
75000.	255.																							
80000.	240.																							
85000.	216.																							
90000.	198.																							
95000.	178.																							
100000.	166.																							

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR SCALAR WIND SPEEDS AT SELECTED LEVELS (IN PER CENT)  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

FALL

GEOMETRIC ALTITUDE HSL FT	TOTAL OBS	CALM						WIND SPEED (KNOTS)					
		< 10	< 20	< 30	< 40	> 30	> 40	< 50	> 50	< 60	> 60	< 70	> 70
6000-	428-	1-	61-	17-	2-	0-	0-	0-	0-	0-	0-	0-	0-
8000-	423-	0-	56-	37-	5-	1-	0-	0-	0-	0-	0-	0-	0-
10000-	427-	0-	37-	42-	4-	10-	3-	0-	0-	0-	0-	0-	0-
12000-	426-	0-	27-	42-	18-	10-	5-	2-	0-	0-	0-	0-	0-
14000-	424-	0-	21-	35-	24-	13-	6-	2-	0-	0-	0-	0-	0-
15000-	411-	0-	21-	34-	24-	13-	6-	3-	0-	0-	0-	0-	0-
16000-	419-	0-	20-	33-	22-	15-	6-	0-	0-	0-	0-	0-	0-
18000-	418-	0-	17-	29-	24-	15-	7-	6-	0-	0-	0-	0-	0-
20000-	419-	0-	14-	29-	22-	16-	9-	7-	2-	0-	0-	0-	0-
25000+	408-	0-	8-	21-	23-	17-	12-	8-	3-	0-	0-	0-	0-
30000+	411-	0-	6-	17-	18-	18-	9-	6-	5-	0-	0-	0-	0-
35000+	385-	0-	2-	12-	19-	23-	16-	12-	9-	5-	4-	0-	0-
40000+	371-	0-	2-	9-	14-	15-	18-	13-	9-	8-	4-	2-	0-
45000+	334-	0-	2-	9-	16-	20-	13-	8-	7-	2-	1-	0-	0-
50000-	311-	0-	3-	15-	25-	12-	10-	7-	0-	0-	0-	0-	0-
55000-	271-	0-	1-	18-	35-	23-	11-	7-	4-	1-	0-	0-	0-
60000+	249-	0-	0-	35-	39-	18-	6-	4-	0-	0-	0-	0-	0-
65000-	233-	0-	0-	43-	48-	5-	3-	1-	0-	0-	0-	0-	0-
70000-	216-	0-	0-	44-	43-	9-	4-	1-	0-	0-	0-	0-	0-
75000-	202-	0-	0-	36-	44-	16-	4-	3-	0-	0-	0-	0-	0-
80000-	193-	0-	0-	23-	49-	18-	7-	3-	0-	0-	0-	0-	0-
85000-	171-	0-	0-	22-	40-	22-	10-	3-	0-	0-	0-	0-	0-
90000-	160-	0-	0-	22-	32-	24-	12-	4-	0-	0-	0-	0-	0-
95000-	149-	0-	0-	17-	26-	29-	14-	5-	2-	0-	0-	0-	0-
100000-	122-	0-	0-	11-	23-	28-	15-	8-	4-	0-	0-	0-	0-

## SECTION II

### UPPER AIR TEMPERATURE DATA

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MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES (°CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JANUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	116.	13.	4.	4.	-6.
8000.	116.	9.	1.	2.	-10.
10000.	117.	6.	-2.	-1.	-14.
12000.	116.	2.	-5.	-4.	-16.
14000.	116.	-1.	-9.	-8.	-20.
15000.	115.	-3.	-11.	-10.	-23.
16000.	116.	-2.	-13.	-12.	-25.
18000.	116.	-9.	-17.	-16.	-30.
20000.	115.	-12.	-22.	-21.	-36.
25000.	115.	-24.	-33.	-33.	-45.
30000.	110.	-37.	-45.	-44.	-53.
35000.	103.	-44.	-53.	-53.	-61.
40000.	102.	-46.	-57.	-58.	-68.
45000.	95.	-51.	-59.	-60.	-71.
50000.	84.	-56.	-63.	-63.	-71.
55000.	69.	-55.	-64.	-65.	-75.
60000.	56.	-59.	-64.	-64.	-72.
65000.	50.	-57.	-62.	-62.	-67.
70000.	44.	-54.	-60.	-60.	-67.
75000.	38.	-53.	-58.	-58.	-63.
80000.	37.	-45.	-57.	-57.	-61.
85000.	35.	-48.	-55.	-56.	-61.
90000.	31.	-48.	-53.	-52.	-60.
95000.	22.	-45.	-51.	-52.	-55.
100000.	15.	-45.	-49.	-49.	-57.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( $^{\circ}$  CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 JALIFEN SITE (JAI)  
 PERIOD OF RECORD 1962-1967

FEBRUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM	FEBRUARY	
						1	2
6000.	112.	18.	5.	5.	-6.	-10.	
8000.	112.	12.	1.	1.	-10.	-13.	
10000.	112.	7.	-3.	-3.	-13.	-17.	
12000.	112.	3.	-6.	-5.	-17.	-21.	
14000.	112.	-1.	-10.	-9.	-21.	-24.	
15000.	111.	-3.	-12.	-11.	-24.	-26.	
16000.	112.	-4.	-14.	-13.	-31.	-35.	
18000.	111.	-9.	-18.	-18.	-35.	-47.	
20000.	111.	-12.	-22.	-22.	-45.	-52.	
25000.	107.	-24.	-34.	-34.	-52.	-62.	
30000.	105.	-36.	-45.	-45.	-62.	-67.	
35000.	100.	-39.	-54.	-55.	-67.	-73.	
40000.	93.	-45.	-56.	-56.	-74.	-81.	
45000.	90.	-51.	-58.	-58.	-70.	-77.	
50000.	74.	-52.	-62.	-62.	-71.	-78.	
55000.	64.	-56.	-65.	-65.	-73.	-81.	
60000.	57.	-53.	-65.	-65.	-74.	-81.	
65000.	55.	-56.	-63.	-63.	-70.	-77.	
70000.	54.	-54.	-61.	-61.	-69.	-77.	
75000.	50.	-51.	-58.	-59.	-63.	-71.	
80000.	47.	-50.	-56.	-56.	-61.	-68.	
85000.	44.	-48.	-53.	-53.	-58.	-65.	
90000.	39.	-45.	-51.	-50.	-58.	-65.	
95000.	30.	-42.	-49.	-49.	-58.	-65.	
100000.	24.	-42.	-46.	-47.	-50.	-58.	

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES (°CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM	
					MARCH	JULY
6000.	161.	21.	8.	9.	-9.	-9.
8000.	161.	15.	4.	5.	-15.	-15.
10000.	160.	10.	-0.	0.	-18.	-18.
12000.	159.	6.	-4.	-4.	-24.	-24.
14000.	159.	1.	-8.	-7.	-28.	-28.
15000.	156.	-2.	-10.	-9.	-29.	-29.
16000.	160.	-4.	-12.	-12.	-29.	-29.
18000.	159.	-9.	-17.	-16.	-31.	-31.
20000.	157.	-13.	-21.	-21.	-36.	-36.
25000.	152.	-24.	-32.	-32.	-45.	-45.
30000.	154.	-35.	-43.	-43.	-53.	-53.
35000.	147.	-44.	-54.	-54.	-61.	-61.
40000.	145.	-43.	-58.	-60.	-69.	-69.
45000.	132.	-50.	-60.	-60.	-70.	-70.
50000.	129.	-51.	-63.	-63.	-71.	-71.
55000.	112.	-57.	-64.	-64.	-74.	-74.
60000.	102.	-56.	-64.	-64.	-71.	-71.
65000.	88.	-56.	-62.	-61.	-66.	-66.
70000.	85.	-54.	-59.	-59.	-64.	-64.
75000.	69.	-51.	-56.	-56.	-65.	-65.
80000.	58.	-49.	-54.	-54.	-57.	-57.
85000.	48.	-46.	-52.	-52.	-56.	-56.
90000.	44.	-43.	-49.	-49.	-54.	-54.
95000.	40.	-41.	-47.	-47.	-52.	-52.
100000.	30.	-36.	-44.	-43.	-52.	-52.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( $^{\circ}$  CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

APRIL

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000	139.	21.	13.	13.	4.
8000	137.	16.	8.	8.	-2.
10000	137.	12.	3.	3.	-7.
12000	137.	7.	-1.	-1.	-12.
14000	137.	2.	-5.	-5.	-14.
15000	136.	0.	-7.	-7.	-16.
16000	136.	-2.	-9.	-9.	-18.
18000	137.	-7.	-13.	-13.	-23.
20000	137.	-11.	-18.	-18.	-28.
25000	136.	-24.	-29.	-29.	-41.
30000	135.	-35.	-41.	-41.	-46.
35000	130.	-45.	-52.	-52.	-58.
40000	124.	-48.	-58.	-58.	-66.
45000	115.	-52.	-60.	-59.	-70.
50000	110.	-54.	-63.	-63.	-75.
55000	103.	-57.	-64.	-64.	-74.
60000	93.	-57.	-64.	-65.	-71.
65000	84.	-55.	-61.	-61.	-67.
70000	82.	-50.	-58.	-58.	-63.
75000	78.	-50.	-55.	-55.	-60.
80000	75.	-47.	-52.	-52.	-59.
85000	70.	-45.	-50.	-49.	-55.
90000	64.	-41.	-37.	-47.	-52.
95000	57.	-39.	-44.	-44.	-50.
100000	41.	-36.	-41.	-41.	-50.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( °CELSIUS )  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

MAY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	128.	27.	18.	18.	5.
8000.	127.	21.	13.	13.	-1.
10000.	126.	15.	8.	9.	-6.
12000.	125.	10.	3.	4.	-11.
14000.	125.	6.	-2.	-1.	-13.
15000.	122.	3.	-4.	-3.	-15.
16000.	122.	1.	-6.	-6.	-16.
18000.	121.	-4.	-10.	-10.	-21.
20000.	121.	-8.	-15.	-14.	-26.
25000.	119.	-20.	-26.	-26.	-32.
30000.	121.	-30.	-37.	-38.	-45.
35000.	114.	-42.	-49.	-48.	-55.
40000.	115.	-46.	-58.	-58.	-64.
45000.	103.	-55.	-62.	-61.	-68.
50000.	100.	-57.	-63.	-63.	-70.
55000.	98.	-58.	-64.	-65.	-71.
60000.	94.	-57.	-65.	-65.	-70.
65000.	91.	-56.	-61.	-61.	-68.
70000.	90.	-53.	-57.	-57.	-63.
75000.	81.	-49.	-54.	-54.	-60.
80000.	78.	-47.	-51.	-51.	-56.
85000.	73.	-44.	-48.	-48.	-54.
90000.	71.	-41.	-46.	-46.	-50.
95000.	63.	-36.	-43.	-43.	-48.
100000.	50.	-36.	-40.	-41.	-46.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES (°CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JUNE

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	128.	31.	21.	21.	9.
8000.	126.	24.	17.	17.	5.
10000.	126.	19.	12.	12.	2.
12000.	126.	12.	7.	7.	-1.
14000.	125.	7.	2.	2.	-5.
15000.	122.	4.	-0.	-0.	-7.
16000.	124.	1.	-2.	-2.	-9.
18000.	123.	-3.	-7.	-7.	-12.
20000.	123.	-5.	-11.	-11.	-18.
25000.	122.	-13.	-22.	-22.	-29.
30000.	118.	-27.	-33.	-33.	-42.
35000.	111.	-37.	-44.	-44.	-51.
40000.	114.	-48.	-54.	-54.	-64.
45000.	110.	-55.	-61.	-62.	-68.
50000.	104.	-58.	-67.	-67.	-73.
55000.	98.	-62.	-68.	-68.	-75.
60000.	96.	-57.	-64.	-64.	-69.
65000.	94.	-57.	-60.	-60.	-64.
70000.	91.	-54.	-57.	-57.	-60.
75000.	88.	-51.	-54.	-54.	-57.
80000.	78.	-47.	-51.	-51.	-55.
85000.	73.	-44.	-48.	-48.	-51.
90000.	65.	-41.	-45.	-45.	-50.
95000.	58.	-39.	-43.	-43.	-48.
100000.	53.	-36.	-40.	-40.	-45.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( $^{\circ}$ CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JULY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	149.	30.	22.	14.	
8000.	148.	24.	18.	11.	
10000.	150.	19.	13.	7.	
12000.	150.	13.	9.	5.	
14000.	150.	8.	4.	-1.	
15000.	141.	5.	2.	-3.	
16000.	149.	3.	0.	-5.	
18000.	146.	-1.	-4.	-9.	
20000.	146.	-5.	-8.	-12.	
25000.	139.	-14.	-17.	-21.	
30000.	145.	-23.	-28.	-32.	
35000.	132.	-35.	-40.	-45.	
40000.	137.	-48.	-52.	-56.	
45000.	121.	-60.	-63.	-67.	
50000.	117.	-65.	-71.	-74.	
55000.	103.	-67.	-71.	-77.	
60000.	102.	-61.	-66.	-70.	
65000.	90.	-56.	-61.	-65.	
70000.	89.	-53.	-56.	-60.	
75000.	79.	-50.	-54.	-57.	
80000.	81.	-48.	-51.	-55.	
85000.	70.	-44.	-49.	-54.	
90000.	69.	-41.	-46.	-52.	
95000.	57.	-40.	-44.	-50.	
100000.	57.	-36.	-41.	-47.	

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES (° CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 "JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	157.	30.	22.	21.	13.
8000.	157.	24.	17.	17.	10.
10000.	157.	18.	13.	12.	5.
12000.	157.	13.	8.	8.	2.
14000.	157.	8.	3.	3.	-1.
15000.	151.	6.	1.	1.	-3.
16000.	156.	3.	-1.	-1.	-4.
18000.	156.	-2.	-5.	-5.	-9.
20000.	156.	-5.	-9.	-9.	-12.
25000.	149.	-13.	-18.	-18.	-22.
30000.	152.	-25.	-29.	-29.	-34.
35000.	144.	-36.	-41.	-41.	-46.
40000.	145.	-49.	-52.	-52.	-55.
45000.	134.	-55.	-62.	-62.	-66.
50000.	132.	-62.	-69.	-69.	-74.
55000.	119.	-62.	-70.	-69.	-76.
60000.	110.	-59.	-64.	-64.	-68.
65000.	96.	-57.	-60.	-60.	-65.
70000.	93.	-53.	-57.	-57.	-60.
75000.	85.	-51.	-54.	-54.	-58.
80000.	80.	-47.	-51.	-51.	-51.
85000.	69.	-46.	-49.	-49.	-52.
90000.	63.	-42.	-46.	-46.	-51.
95000.	60.	-39.	-44.	-44.	-49.
100000.	55.	-37.	-41.	-41.	-48.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( $^{\circ}$ Celsius)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

SEPTEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	122.	25.	18.	19.	10.
8000.	123.	19.	14.	14.	6.
10000.	123.	14.	10.	10.	1.
12000.	121.	10.	5.	5.	-4.
14000.	121.	5.	1.	1.	-7.
15000.	117.	3.	-1.	-1.	-9.
16000.	121.	2.	-3.	-3.	-11.
18000.	120.	-1.	-6.	-6.	-16.
20000.	122.	-5.	-10.	-9.	-21.
25000.	116.	-15.	-20.	-20.	-34.
30000.	120.	-25.	-32.	-31.	-44.
35000.	115.	-34.	-43.	-42.	-49.
40000.	114.	-46.	-53.	-53.	-61.
45000.	106.	-54.	-62.	-62.	-66.
50000.	105.	-59.	-69.	-69.	-74.
55000.	92.	-59.	-70.	-70.	-76.
60000.	83.	-58.	-65.	-65.	-71.
65000.	76.	-55.	-61.	-61.	-66.
70000.	73.	-53.	-57.	-57.	-63.
75000.	73.	-49.	-55.	-55.	-60.
80000.	71.	-47.	-52.	-52.	-57.
85000.	70.	-41.	-49.	-49.	-54.
90000.	66.	-39.	-47.	-47.	-51.
95000.	62.	-41.	-45.	-45.	-50.
100000.	55.	-38.	-43.	-42.	-47.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( $^{\circ}$ Celsius)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

OCTOBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	144.	23.	14.	14.	3.
8000.	144.	18.	10.	11.	-2.
10000.	145.	14.	6.	7.	-9.
12000.	145.	9.	3.	3.	-12.
14000.	142.	5.	-1.	-1.	-18.
15000.	139.	3.	-3.	-3.	-18.
16000.	142.	1.	-5.	-5.	-18.
18000.	141.	-4.	-9.	-9.	-20.
20000.	141.	-7.	-13.	-13.	-26.
25000.	137.	-11.	-24.	-25.	-31.
30000.	138.	-20.	-36.	-37.	-42.
35000.	133.	-40.	-47.	-47.	-55.
40000.	132.	-50.	-56.	-56.	-64.
45000.	117.	-57.	-63.	-62.	-72.
50000.	108.	-60.	-67.	-67.	-74.
55000.	94.	-60.	-69.	-69.	-75.
60000.	89.	-61.	-66.	-67.	-71.
65000.	82.	-56.	-62.	-62.	-67.
70000.	80.	-54.	-59.	-59.	-63.
75000.	75.	-51.	-55.	-55.	-59.
80000.	71.	-49.	-53.	-53.	-58.
85000.	57.	-46.	-50.	-50.	-54.
90000.	52.	-44.	-48.	-48.	-55.
95000.	46.	-44.	-47.	-47.	-53.
100000.	33.	-43.	-46.	-46.	-52.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( °CELSIUS )  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

NOVEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	159.	18°	10°	11°	-1°
8000.	160.	18°	7°	7°	-3°
10000.	159.	10°	4°	4°	-8°
12000.	159.	8°	0°	0°	-12°
14000.	160.	3°	-3°	-3°	-16°
15000.	157.	1°	-5°	-4°	-18°
16000.	157.	-1°	-7°	-6°	-20°
18000.	158.	-4°	-11°	-11°	-24°
20000.	158.	-8°	-15°	-16°	-28°
25000.	156.	-19°	-26°	-26°	-41°
30000.	154.	-31°	-38°	-37°	-45°
35000.	138.	-40°	-49°	-49°	-55°
40000.	126.	-46°	-58°	-59°	-67°
45000.	111.	-54°	-64°	-64°	-72°
50000.	101.	-57°	-67°	-67°	-76°
55000.	86.	-62°	-68°	-68°	-78°
60000.	78.	-61°	-67°	-67°	-72°
65000.	74.	-57°	-64°	-64°	-69°
70000.	62.	-56°	-61°	-61°	-65°
75000.	54°	-52°	-58°	-58°	-62°
80000.	50°	-50°	-55°	-56°	-60°
85000.	44°	-47°	-53°	-52°	-59°
90000.	41°	-46°	-51°	-50°	-56°
95000.	41°	-44°	-49°	-49°	-54°
100000.	34°	-41°	-46°	-46°	-53°

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES (° CELSIUS)  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

DECEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	148.	15.	6.	6.	-5.
8000.	149.	9.	2.	3.	-10.
10000.	149.	7.	-1.	-0.	-16.
12000.	149.	6.	-4.	-4.	-19.
14000.	149.	2.	-7.	-7.	-23.
15000.	149.	-0.	-9.	-9.	-26.
16000.	148.	-3.	-11.	-10.	-22.
18000.	147.	-7.	-15.	-14.	-25.
20000.	146.	-11.	-19.	-19.	-30.
25000.	138.	-2.	-31.	-31.	-42.
30000.	134.	-34.	-42.	-42.	-49.
35000.	126.	-41.	-52.	-52.	-59.
40000.	119.	-49.	-58.	-58.	-68.
45000.	107.	-52.	-62.	-62.	-73.
50000.	92.	-57.	-65.	-64.	-75.
55000.	81.	-58.	-66.	-66.	-76.
60000.	73.	-58.	-66.	-66.	-71.
65000.	65.	-56.	-64.	-64.	-68.
70000.	63.	-55.	-62.	-62.	-66.
75000.	61.	-52.	-60.	-60.	-64.
80000.	57.	-51.	-56.	-56.	-62.
85000.	53.	-52.	-56.	-56.	-60.
90000.	52.	-49.	-54.	-54.	-59.
95000.	42.	-47.	-51.	-51.	-58.
100000.	37.	-43.	-49.	-49.	-57.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967**

JANUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	TEMPERATURE °CELSIUS											
		< -30	-30 < -25	-25 < -20	-20 < -15	-15 < -10	-10 < -5	-5 < 0	0 < 5	5 < 10	10 < 15	15 < 20	20 < 25
5000.	116.	0.	0.	0.	0.	1.	22.	36.	30.	10.	0.	0.	0.
8000.	116.	0.	0.	0.	0.	15.	28.	34.	22.	0.	0.	0.	0.
10000.	117.	0.	0.	0.	0.	9.	16.	36.	3.	0.	0.	0.	0.
12000.	116.	0.	0.	0.	6.	14.	23.	45.	12.	0.	0.	0.	0.
14000.	116.	0.	0.	2.	13.	19.	47.	19.	0.	0.	0.	0.	0.
15000.	115.	0.	0.	3.	17.	25.	49.	5.	0.	0.	0.	0.	0.
< -55	116.	2	-55 < -50	-50 < -45	-45 < -40	-40 < -35	-35 < -30	-30 < -25	-25 < -20	-20 < -15	-15 < -10	-10 < -5	< 0
16000.	116.	0.	0.	0.	0.	0.	1.	10.	19.	36.	32.	2.	0.
18000.	116.	0.	0.	0.	0.	1.	9.	19.	31.	38.	3.	0.	0.
20000.	115.	0.	0.	0.	0.	1.	5.	20.	31.	37.	5.	0.	0.
25000.	115.	0.	0.	1.	10.	27.	37.	24.	2.	0.	0.	0.	0.
30000.	110.	0.	9.	35.	45.	10.	0.	0.	0.	0.	0.	0.	0.

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	$\geq -80$	$\geq -75$	$\geq -70$	$\geq -65$	$\geq -60$	$\geq -55$	$\geq -50$	$\geq -45$	$\geq -40$	$\geq -35$	$\geq -30$
35000.	103.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	102.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	95.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	84.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	69.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	56.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	50.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	44.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	38.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	37.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	35.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	31.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	23.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	15.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)**  
**JALLEN SITE (JAL)**  
**PERIOD OF RECORD 1962-1967**

FEBRUARY



RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

MARCH

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	TEMPERATURE ° CELSIUS												
		≥ -30	≤ -25	≥ -20	≤ -15	≥ -10	≤ -5	≥ 0	≤ 5	≥ 10	≤ 20	≥ 25	≤ 20	≥ 20
6000.	161.	0.	0.	0.	0.	3.	7.	14.	30.	31.	14.	1.	0.	0.
8000.	161.	0.	0.	0.	0.	3.	4.	13.	29.	34.	17.	1.	0.	0.
10000.	160.	0.	0.	0.	2.	3.	13.	29.	37.	16.	0.	0.	0.	0.
12000.	159.	0.	0.	1.	2.	11.	23.	44.	18.	1.	0.	0.	0.	0.
14000.	159.	0.	1.	1.	6.	18.	48.	22.	2.	0.	0.	0.	0.	0.
15000.	156.	0.	1.	3.	13.	28.	45.	11.	0.	0.	0.	0.	0.	0.
≥ -55	≥ -50	≥ -50	≤ -45	≥ -40	≤ -35	≤ -30	≤ -25	≤ -20	≤ -15	≤ -10	≤ -5	< 0	≥ 0	≥ 0
< -55	< -50	0.	0.	0.	0.	0.	1.	1.	3.	15.	42.	35.	4.	0.
16000.	160.	0.	0.	0.	0.	0.	1.	2.	11.	45.	34.	7.	0.	0.
18000.	159.	0.	0.	0.	0.	0.	1.	2.	26.	2.	0.	0.	0.	0.
20000.	157.	0.	0.	0.	0.	0.	3.	19.	19.	0.	0.	0.	0.	0.
25000.	152.	0.	0.	0.	0.	0.	3.	46.	32.	0.	0.	0.	0.	0.
30000.	154.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.



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APRIL

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	TEMPERATURE °CELSIUS							≥ 30 ≥ 25 ≥ 20 ≥ 15 < 20 < 15	≥ 25 ≥ 30		
		≥ 30	≥ 25	≥ 20	≥ 15	≥ 10	≥ 5	≥ 0				
6000.	139.	0.	0.	0.	0.	2.	19.	47.	29.	4.	0.	0.
8000.	137.	0.	0.	0.	0.	1.	15.	53.	28.	2.	0.	0.
10000.	137.	0.	0.	0.	0.	2.	12.	51.	31.	3.	0.	0.
12000.	137.	0.	0.	0.	1.	9.	50.	39.	1.	0.	0.	0.
14000.	137.	0.	0.	0.	7.	42.	5.	0.	0.	0.	0.	0.
15000.	136.	0.	0.	0.	1.	12.	55.	31.	1.	0.	0.	0.
16000.	136.	0.	0.	0.	0.	0.	19.	47.	29.	4.	0.	0.
18000.	137.	0.	0.	0.	0.	0.	15.	53.	28.	2.	0.	0.
20000.	137.	0.	0.	0.	0.	1.	12.	51.	31.	3.	0.	0.
25000.	136.	0.	0.	0.	4.	53.	42.	34.	55.	8.	0.	0.
30000.	135.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	> -25																				
		> -30	< -30	> -35	< -35	> -40	< -40	> -45	< -45	> -50	< -50	> -55	< -55	> -60	< -60	> -65	< -65	> -70	< -70	> -75	< -75	> -80
35000.	130.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	124.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	115.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	110.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	103.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	93.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	84.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	82.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	76.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	75.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	70.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	64.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	57.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	41.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967**

三



RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JALS)  
PERIOD OF RECORD 1962-1967

JUNE

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS.	TEMPERATURE °CELSIUS																			
		≥ -15	< -10	≥ -5	< 5	≥ 0	< 5	≥ 10	< 15	≥ 15	< 20	≥ 20	< 25	≥ 25	< 30	≥ 30	< 35	≥ 35	< 40	≥ 40	
6000.	128.	0.	0.	0.	0.	1.	1.	3.	33.	45.	18.	1.	0.	0.	0.	0.	0.	0.	0.	0.	
8000.	126.	0.	0.	0.	0.	1.	1.	26.	54.	18.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
10000.	126.	0.	0.	0.	0.	2.	2.	24.	56.	18.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
12000.	126.	0.	0.	0.	0.	2.	2.	20.	64.	14.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
14000.	125.	0.	0.	0.	0.	14.	76.	10.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
15000.	122.	0.	0.	0.	0.	3.	49.	48.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
< -45	≥ -40	≥ -45	< -40	≥ -35	< -30	≥ -30	< -25	≥ -25	< -20	≥ -20	< -15	≥ -15	< -10	≥ -10	< -5	≥ -5	< 0	≥ 0	< 5	≥ 5	> 10
16000.	124.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	10.	77.	12.	0.	0.	0.	0.
18000.	123.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	7.	71.	22.	0.	0.	0.	0.
20000.	123.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.	59.	37.	0.	0.	0.	0.
25000.	122.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	12.	57.	2.	0.	0.	0.	0.
30000.	118.	0.	0.	0.	0.	1.	28.	56.	15.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	$\geq -80$	$-75$	$-70$	$-65$	$-60$	$\geq -55$	$-50$	$-45$	$\geq -40$	$-35$	$\geq -30$	$-25$
35000.	111.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	114.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	110.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	104.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	98.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	96.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	94.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	91.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	88.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	78.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	73.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	65.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	58.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	53.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967**

JULY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	TEMPERATURE °CELSIUS																				
		≥ -10	< -5	≥ -5	< 0	≥ 0	< 5	≥ 5	< 10	≥ 10	< 15	≥ 15	< 20	≥ 20	< 25	≥ 25	< 30	≥ 30	< 35	≥ 35	< 40	≥ 40
6000.	149.	0.	0.	0.	0.	0.	0.	1.	21.	60.	19.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
8000.	148.	0.	0.	0.	0.	0.	0.	0.	12.	71.	17.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10000.	150.	0.	0.	0.	0.	0.	0.	5.	77.	18.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12000.	150.	0.	0.	0.	0.	0.	0.	2.	77.	21.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
14000.	150.	0.	0.	0.	1.	69.	29.	0.	0.	6.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15000.	141.	0.	0.	0.	0.	0.	0.	0.	93.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -45	≥ -45	≥ -40	< -35	≥ -35	< -30	≥ -30	< -25	≥ -25	< -20	≥ -20	< -15	≥ -15	< -10	≥ -10	< -5	≥ -5	< 0	≥ 0	< 5	≥ 5	< 10	≥ 10
16000.	149.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	25.	91.	6.	0.	0.	0.
18000.	146.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	7.	75.	0.	0.	0.	0.	0.
20000.	146.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3.	91.	6.	0.	0.	0.	0.
25000.	139.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	13.	81.	6.	0.	0.	0.	0.
30000.	145.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.



RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	TEMPERATURE °CELSIUS									
		≥ -10	≤ -5	≥ 0	≤ 5	≥ 10	≤ 15	≥ 20	≤ 25	≥ 30	≤ 35
6000.	157.	0.	0.	0.	0.	2.	37.	41.	19.	1.	0.
8000.	157.	0.	0.	0.	0.	1.	25.	57.	17.	0.	0.
10000.	157.	0.	0.	0.	0.	11.	73.	17.	0.	0.	0.
12000.	157.	0.	0.	0.	0.	4.	78.	18.	0.	0.	0.
14000.	157.	0.	0.	1.	81.	18.	0.	0.	0.	0.	0.
15000.	151.	0.	0.	0.	23.	75.	1.	0.	0.	0.	0.
< -45	156.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -40	156.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -35	156.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -30	156.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -25	149.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -20	152.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -15	16000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -10	18000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< -5	20000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< 0	25000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
< 5	30000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
≥ 5											
≥ 10											

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	> -25									
		> -30	< -30	> -35	< -35	> -40	< -40	> -45	< -45	> -50	< -50
35000.	144.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	145.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	134.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	132.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	119.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	110.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	96.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	93.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	85.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	80.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	69.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	63.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	60.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	55.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967**

SEPTEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS.	TEMPERATURE °CELSIUS									
		≥ -15	< -10	≥ -5	< 0	≥ 5	< 10	≥ 15	< 20	≥ 25	< 30
6000.	122.	0.	0.	0.	0.	20.	42.	36.	2.	0.	0.
8000.	123.	0.	0.	0.	0.	50.	43.	0.	0.	0.	0.
10000.	123.	0.	0.	0.	0.	50.	49.	0.	0.	0.	0.
12000.	121.	0.	0.	0.	2.	40.	59.	0.	0.	0.	0.
14000.	121.	0.	0.	2.	22.	76.	0.	0.	0.	0.	0.
15000.	117.	0.	0.	2.	61.	38.	0.	0.	0.	0.	0.
< -45	< -40	≥ -45	< -35	≥ -30	< -25	≥ -20	< -15	≥ -10	< -5	≥ -5	< 0
16000.	121.	0.	0.	0.	0.	0.	1.	11.	83.	5.	0.
18000.	120.	0.	0.	0.	0.	1.	1.	74.	24.	0.	0.
20000.	122.	0.	0.	0.	0.	1.	1.	33.	64.	2.	0.
25000.	116.	0.	0.	0.	1.	3.	42.	54.	0.	0.	0.
30000.	120.	0.	1.	7.	63.	29.	1.	0.	0.	0.	0.



RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

OCTOBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL UBS	TEMPERATURE ° CELSIUS									
		≥ -20	< -15	≥ -10	< -5	≥ 0	< 5	≥ 5	< 10	≥ 10	< 20
6000.	144.	0.	0.	0.	0.	1.	5.	35.	48.	35.	0.
8000.	144.	0.	0.	0.	0.	1.	5.	35.	49.	10.	0.
10000.	145.	0.	0.	0.	0.	1.	2.	25.	59.	12.	0.
12000.	145.	0.	0.	0.	0.	1.	12.	67.	19.	0.	0.
14000.	142.	0.	0.	0.	0.	5.	58.	36.	0.	0.	0.
15000.	139.	0.	0.	0.	0.	1.	15.	68.	15.	0.	0.
16000.	142.	0.	0.	0.	0.	0.	0.	1.	1.	42.	53.
18000.	161.	0.	0.	0.	0.	0.	0.	1.	26.	65.	9.
20000.	141.	0.	0.	0.	0.	0.	0.	1.	14.	70.	15.
25000.	137.	0.	0.	0.	0.	0.	1.	46.	48.	0.	0.
30000.	138.	0.	0.	0.	0.	0.	0.	1.	1.	0.	0.

GEOMETRIC ALTITUDE MSL FEET		$\geq -75$	$\geq -70$	$\geq -65$	$\geq -60$	$\geq -55$	$\geq -50$	$\geq -45$	$\geq -40$	$\geq -35$	$\geq -30$	$\geq -25$
TOTAL	085	0.	0.	0.	0.	0.	0.	23.	52.	23.	2.	0.
35000.	133.	0.	0.	0.	0.	0.	0.	36.	1.	0.	0.	0.
40000.	132.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	117.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	108.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	94.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	89.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	82.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	80.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	75.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	71.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	57.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	53.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	46.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	33.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967**

NOVEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBS	TEMPERATURE °CELSIUS									
		≥ -25 < -20	≥ -20 < -15	≥ -15 < -10	≥ -10 < -5	≥ -5 < 0	≥ 0 < 5	≥ 5 < 10	≥ 10 < 15	≥ 15 < 20	≥ 20 < 25
6000.	159.	0.	0.	0.	0.	1.	14.	27.	50.	9.	0.
8000.	160.	0.	0.	0.	0.	6.	22.	54.	17.	1.	0.
10000.	159.	0.	0.	0.	0.	3.	12.	52.	33.	1.	0.
12000.	159.	0.	0.	0.	2.	3.	42.	49.	4.	0.	0.
14000.	160.	0.	0.	1.	2.	27.	57.	13.	0.	0.	0.
15000.	157.	0.	0.	1.	6.	36.	52.	5.	0.	0.	0.
< -55	≥ -50	≥ -50	≥ -45	≥ -40	≥ -35	≥ -30	≥ -25	≥ -20	≥ -15	≥ -10	≥ -5
16000.	157.	0.	0.	0.	0.	0.	0.	1.	1.	18.	27.
18000.	158.	0.	0.	0.	0.	0.	0.	5.	58.	34.	2.
20000.	158.	0.	0.	0.	0.	0.	1.	3.	55.	38.	3.
25000.	156.	0.	0.	0.	1.	0.	12.	49.	34.	4.	0.
≥ 20000.	154.	0.	0.	1.	27.	53.	19.	0.	0.	0.	0.

GEOMETRIC ALTITUDE HSL FEET	TOTAL OBS	>-30									
		>-35	<-35	>-40	<-40	>-45	<-45	>-50	<-50	>-60	<-60
35000.	138.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	126.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45000.	111.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	101.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55000.	86.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60000.	78.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65000.	74.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70000.	62.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75000.	54.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80000.	50.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85000.	44.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90000.	41.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95000.	41.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100000.	34.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR TEMPERATURES  
AT SELECTED LEVELS (IN PER CENT)  
JALLEN SITE (JALI)  
PERIOD OF RECORD 1962-1967**

DECEMBER



MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( $^{\circ}$ Celsius)  
 AT SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	WINTER			MINIMUM.
		MAXIMUM	MEAN	MEDIAN	
6000.	376.	10.	5.	5.	-6.
8000.	377.	12.	1.	2.	-10.
10000.	378.	7.	-2.	-1.	-16.
12000.	377.	6.	-5.	-4.	-19.
14000.	377.	2.	-9.	-8.	-23.
15000.	375.	-0.	-10.	-10.	-26.
16000.	376.	-2.	-12.	-12.	-26.
18000.	374.	-7.	-17.	-16.	-31.
20000.	372.	-11.	-21.	-21.	-36.
25000.	360.	-24.	-33.	-32.	-47.
30000.	349.	-34.	-44.	-44.	-53.
35000.	329.	-39.	-53.	-53.	-62.
40000.	314.	-45.	-57.	-57.	-68.
45000.	292.	-51.	-60.	-60.	-73.
50000.	250.	-52.	-64.	-64.	-75.
55000.	214.	-55.	-65.	-65.	-76.
60000.	186.	-53.	-63.	-65.	-74.
65000.	170.	-56.	-63.	-64.	-70.
70000.	161.	-54.	-61.	-61.	-69.
75000.	149.	-51.	-59.	-59.	-64.
80000.	141.	-45.	-57.	-57.	-62.
85000.	132.	-48.	-55.	-55.	-61.
90000.	122.	-45.	-53.	-53.	-60.
95000.	95.	-42.	-50.	-50.	-58.
100000.	76.	-42.	-48.	-48.	-57.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES ( $^{\circ}$  CELSIUS)  
 AT SELECTED LEVELS BY SEASONS  
 JAALEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SPRING			SUMMER		
		MAXIMUM	MEAN	MEDIAN	MAXIMUM	MEAN	MEDIAN
6000.	428.	27.	13.	-9.	-9.	-15.	-15.
8000.	425.	21.	8.	4.	-18.	-24.	-24.
10000.	423.	15.	3.	-1.	-24.	-28.	-28.
12000.	421.	10.	-1.	-5.	-29.	-29.	-29.
14000.	421.	6.	-5.	-5.	-29.	-29.	-29.
15000.	414.	3.	-7.	-7.	-31.	-31.	-31.
16000.	418.	1.	-9.	-9.	-36.	-36.	-36.
18000.	417.	-4.	-14.	-14.	-45.	-45.	-45.
20000.	415.	-8.	-18.	-18.	-53.	-53.	-53.
25000.	407.	-20.	-29.	-29.	-61.	-61.	-61.
30000.	410.	-30.	-41.	-41.	-69.	-69.	-69.
35000.	391.	-42.	-52.	-52.	-75.	-75.	-75.
40000.	384.	-43.	-58.	-58.	-74.	-74.	-74.
45000.	350.	-50.	-60.	-60.	-70.	-70.	-70.
50000.	339.	-51.	-63.	-63.	-75.	-75.	-75.
55000.	313.	-57.	-64.	-64.	-74.	-74.	-74.
60000.	289.	-56.	-64.	-64.	-71.	-71.	-71.
65000.	263.	-55.	-61.	-61.	-68.	-68.	-68.
70000.	257.	-50.	-58.	-58.	-64.	-64.	-64.
75000.	228.	-43.	-55.	-55.	-65.	-65.	-65.
80000.	211.	-47.	-52.	-52.	-58.	-58.	-58.
85000.	191.	-44.	-50.	-50.	-56.	-56.	-56.
90000.	179.	-43.	-47.	-47.	-54.	-54.	-54.
95000.	160.	-36.	-44.	-44.	-52.	-52.	-52.
100000.	121.	-36.	-42.	-42.	-52.	-52.	-52.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES (° CELSIUS)  
 AT SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SUMMER			MINIMUM
		MAXIMUM	MEAN	MEDIAN	
6000.	434.	31.	22.	22.	9.
8000.	431.	24.	17.	17.	5.
10000.	433.	19.	13.	13.	2.
12000.	433.	13.	8.	8.	-1.
14000.	432.	6.	3.	3.	+5.
15000.	414.	6.	1.	1.	-7.
16000.	429.	3.	-1.	-1.	-9.
18000.	425.	-1.	-5.	-5.	+12.
20000.	425.	-5.	-9.	-9.	-18.
25000.	410.	-13.	-19.	-18.	-29.
30000.	415.	-23.	-30.	-29.	-42.
35000.	387.	-35.	-41.	-41.	-51.
40000.	396.	-48.	-53.	-52.	-64.
45000.	365.	-55.	-62.	-62.	-66.
50000.	353.	-58.	-69.	-69.	-74.
55000.	320.	-62.	-70.	-70.	-77.
60000.	308.	-57.	-65.	-65.	-70.
65000.	280.	-56.	-60.	-60.	-65.
70000.	273.	-53.	-57.	-57.	-60.
75000.	252.	-50.	-54.	-54.	-58.
80000.	239.	-47.	-51.	-51.	-56.
85000.	212.	-44.	-49.	-48.	-54.
90000.	197.	-41.	-46.	-46.	-52.
95000.	175.	-39.	-43.	-43.	-50.
100000.	165.	-36.	-41.	-40.	-48.

MEAN, MEDIAN AND EXTREME UPPER AIR TEMPERATURES (° CELSIUS)  
 AT SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	FALL			MINIMUM
		MAXIMUM	MEAN	MEDIAN	
6000.	425.	25.	14.	14.	-1.
8000.	427.	19.	10.	10.	-3.
10000.	427.	14.	6.	7.	-9.
12000.	425.	10.	2.	3.	-12.
14000.	423.	5.	-1.	-1.	-18.
15000.	413.	3.	-3.	-3.	-18.
16000.	420.	2.	-5.	-5.	-20.
18000.	419.	-1.	-9.	-9.	-24.
20000.	421.	-5.	-13.	-13.	-28.
25000.	409.	-15.	-24.	-24.	-41.
30000.	412.	-25.	-35.	-36.	-45.
35000.	386.	-34.	-46.	-47.	-56.
37200.	372.	-46.	-56.	-56.	-67.
40000.	334.	-54.	-63.	-63.	-72.
45000.	314.	-57.	-68.	-68.	-76.
50000.	272.	-59.	-69.	-69.	-78.
55000.	250.	-58.	-66.	-66.	-72.
60000.	232.	-55.	-62.	-62.	-69.
65000.	215.	-53.	-59.	-59.	-65.
70000.	202.	-49.	-56.	-56.	-62.
75000.	192.	-47.	-53.	-53.	-60.
80000.	171.	-41.	-50.	-50.	-59.
85000.	160.	-39.	-48.	-48.	-56.
90000.	149.	-41.	-47.	-46.	-54.
95000.	122.	-38.	-45.	-44.	-53.
100000.					

### SECTION III

#### UPPER AIR PRESSURE DATA

##### A. By Months

1. Mean and Extreme Upper Air Pressures  
(Millibars) at Selected Levels ----- 100

##### B. By Seasons

1. Mean and Extreme Upper Air Pressures  
(Millibars) at Selected Levels ----- 112

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

JANUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	116.	829.	816.	805.
8000.	116.	768.	757.	747.
10000.	117.	713.	702.	690.
12000.	116.	661.	649.	637.
14000.	116.	612.	601.	588.
15000.	115.	589.	577.	564.
16000.	116.	567.	555.	541.
18000.	116.	524.	512.	497.
20000.	115.	483.	472.	456.
25000.	115.	394.	382.	364.
30000.	110.	318.	306.	290.
35000.	103.	254.	243.	231.
40000.	102.	200.	191.	183.
45000.	95.	155.	150.	144.
50000.	84.	121.	118.	114.
55000.	69.	95.	92.	89.
60000.	56.	74.	72.	70.
65000.	50.	58.	56.	55.
70000.	44.	45.5	44.0	42.5
75000.	38.	36.0	34.5	33.5
80000.	37.	28.5	27.0	26.5
85000.	35.	22.5	21.5	20.5
90000.	31.	17.9	16.9	16.4
95000.	23.	14.2	13.4	13.0
100000.	15.	11.3	10.7	10.4

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

FEBRUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	112.	827.	817.	805.
8000.	112.	767.	758.	746.
10000.	112.	711.	702.	690.
12000.	112.	659.	650.	637.
14000.	112.	611.	601.	586.
15000.	111.	588.	577.	563.
16000.	112.	566.	555.	540.
18000.	111.	523.	512.	496.
20000.	111.	484.	471.	455.
25000.	107.	395.	382.	363.
30000.	105.	319.	306.	288.
35000.	100.	254.	242.	229.
40000.	93.	203.	191.	182.
45000.	90.	161.	150.	144.
50000.	74.	127.	118.	114.
55000.	64.	97.	92.	89.
60000.	57.	75.	72.	70.
65000.	55.	59.	56.	54.
70000.	54.	46.0	43.5	42.5
75000.	50.	36.0	34.5	33.0
80000.	47.	28.5	27.0	26.0
85000.	44.	22.5	21.5	20.5
90000.	39.	17.9	16.9	16.4
95000.	30.	14.2	13.4	13.0
100000.	24.	11.3	10.7	10.4

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MARCH		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	823.	816.	805.		
8000.	161.	765.	747.		
10000.	160.	711.	702.	691.	
12000.	159.	660.	651.	636.	
14000.	159.	612.	602.	585.	
15000.	156.	589.	579.	561.	
16000.	160.	566.	556.	537.	
18000.	159.	524.	513.	494.	
20000.	157.	484.	473.	454.	
25000.	152.	394.	383.	364.	
30000.	154.	318.	307.	289.	
35000.	147.	253.	244.	230.	
40000.	145.	200.	192.	182.	
45000.	132.	156.	151.	145.	
50000.	129.	122.	118.	114.	
55000.	112.	95.	92.	89.	
60000.	102.	75.	72.	69.	
65000.	88.	59.	56.	54.	
70000.	85.	46.0	44.0	43.0	
75000.	69.	36.5	34.5	33.5	
80000.	58.	29.0	27.5	26.5	
85000.	48.	23.0	21.5	21.0	
90000.	44.	18.1	17.2	16.7	
95000.	40.	14.3	13.6	13.2	
100000.	30.	11.4	10.9	10.5	

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	APRIL		
		MAXIMUM	MEAN	MINIMUM
6000.	139.	827.	816.	803.
8000.	137.	768.	759.	745.
10000.	137.	713.	704.	692.
12000.	137.	661.	653.	641.
14000.	137.	613.	605.	593.
15000.	136.	590.	581.	569.
16000.	136.	567.	559.	547.
18000.	137.	525.	516.	505.
20000.	137.	485.	476.	465.
25000.	136.	396.	387.	374.
30000.	135.	320.	311.	299.
35000.	130.	256.	248.	238.
40000.	122.	200.	195.	187.
45000.	115.	156.	153.	147.
50000.	110.	123.	120.	115.
55000.	103.	97.	94.	90.
60000.	93.	75.	73.	71.
65000.	84.	59.	57.	55.
70000.	82.	46.0	45.0	43.0
75000.	78.	36.5	35.5	34.0
80000.	75.	29.0	28.0	27.0
85000.	70.	23.0	22.0	21.5
90000.	64.	18.3	17.6	17.0
95000.	57.	14.5	14.0	13.5
100000.	41.	11.6	11.2	10.8

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOGRAPHIC ALTITUDE HSL FEET	OBSERVATIONS	MAY		MINIMUM	
		TOTAL	MAXIMUM	MEAN	MEAN
6000.	128.	827.	818.	808.	808.
8000.	127.	769.	761.	751.	751.
10000.	126.	715.	707.	697.	697.
12000.	125.	664.	656.	646.	646.
14000.	125.	616.	608.	597.	597.
15000.	122.	591.	585.	574.	574.
16000.	122.	571.	563.	551.	551.
18000.	121.	527.	521.	508.	508.
20000.	121.	487.	481.	467.	467.
25000.	119.	398.	392.	377.	377.
30000.	121.	323.	316.	304.	304.
35000.	114.	259.	252.	242.	242.
40000.	115.	205.	199.	191.	191.
45000.	103.	161.	156.	151.	151.
50000.	100.	125.	122.	118.	118.
55000.	98.	98.	95.	93.	93.
60000.	94.	76.	74.	73.	73.
65000.	91.	60.	58.	57.	57.
70000.	90.	47.0	45.5	44.5	44.5
75000.	81.	37.0	36.0	35.0	35.0
80000.	78.	29.5	28.5	27.5	27.5
85000.	73.	23.5	22.5	22.0	22.0
90000.	71.	18.6	18.0	17.5	17.5
95000.	63.	14.9	14.4	13.9	13.9
100000.	50.	11.8	11.5	11.1	11.1

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JUNE		MINIMUM
		MAXIMUM	MEAN	
6000.	128.	825.	817.	812.
8000.	126.	768.	762.	756.
10000.	126.	715.	709.	702.
12000.	126.	664.	658.	651.
14000.	125.	617.	611.	603.
15000.	122.	595.	588.	580.
16000.	124.	573.	566.	558.
18000.	123.	531.	524.	515.
20000.	123.	491.	485.	476.
25000.	122.	402.	396.	387.
30000.	118.	327.	321.	312.
35000.	111.	264.	257.	249.
40000.	114.	210.	204.	195.
45000.	110.	165.	160.	154.
50000.	105.	130.	125.	120.
55000.	98.	100.	97.	94.
60000.	96.	78.	76.	74.
65000.	94.	61.	59.	58.
70000.	91.	48.0	46.5	45.5
75000.	88.	37.5	36.5	36.0
80000.	78.	30.0	29.0	28.5
85000.	73.	24.0	23.0	22.5
90000.	65.	19.0	18.4	18.0
95000.	58.	15.1	14.7	14.3
100000.	53.	12.1	11.7	11.4

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JALI)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JULY		MEAN MINIMUM
		MAXIMUM	MEAN	
6000.	149.	826.	821.	816.
8000.	147.	769.	765.	760.
10000.	150.	716.	712.	705.
12000.	150.	666.	662.	656.
14000.	150.	619.	614.	610.
15000.	141.	595.	592.	587.
16000.	149.	574.	570.	565.
18000.	146.	532.	528.	523.
20000.	146.	492.	489.	483.
25000.	139.	404.	400.	395.
30000.	145.	329.	326.	321.
35000.	133.	266.	262.	258.
40000.	137.	212.	209.	204.
45000.	121.	167.	164.	160.
50000.	118.	130.	128.	124.
55000.	104.	101.	99.	96.
60000.	101.	78.	77.	75.
65000.	90.	61.	60.	58.
70000.	89.	48.0	47.0	45.5
75000.	81.	38.0	37.0	36.0
80000.	81.	30.0	29.5	28.5
85000.	72.	24.0	23.5	22.5
90000.	69.	19.0	18.6	17.9
95000.	59.	15.2	14.8	14.2
100000.	57.	12.1	11.8	11.3

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	157.	825.	816.	816.
8000.	157.	770.	755.	760.
10000.	157.	717.	712.	706.
12000.	157.	667.	661.	656.
14000.	157.	620.	614.	608.
15000.	151.	597.	591.	586.
16000.	156.	576.	569.	564.
18000.	156.	534.	527.	522.
20000.	156.	494.	488.	483.
25000.	149.	405.	399.	395.
30000.	152.	329.	324.	320.
35000.	144.	266.	261.	257.
40000.	145.	212.	208.	203.
45000.	134.	167.	163.	160.
50000.	132.	130.	127.	124.
55000.	119.	100.	99.	96.
60000.	110.	79.	77.	75.
65000.	96.	61.	60.	59.
70000.	93.	43.0	47.5	46.0
75000.	85.	38.0	37.5	36.5
80000.	80.	30.5	29.5	28.5
85000.	70.	24.0	23.5	23.0
90000.	64.	19.1	18.6	18.1
95000.	60.	15.3	14.9	14.4
100000.	55.	12.3	11.9	11.4

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	OBSERVATIONS	SEPTEMBER		MEAN MINIMUM
		MAXIMUM	TOTAL	
6000.	121.	926.	820.	811.
8000.	123.	768.	763.	756.
10000.	123.	715.	710.	703.
12000.	124.	664.	659.	652.
14000.	121.	617.	611.	604.
15000.	117.	594.	589.	581.
16000.	121.	572.	567.	559.
18000.	120.	520.	525.	517.
20000.	122.	490.	485.	476.
25000.	116.	402.	397.	386.
30000.	120.	327.	322.	309.
35000.	115.	264.	258.	246.
40000.	114.	212.	205.	196.
45000.	106.	168.	161.	155.
50000.	104.	125.	126.	122.
55000.	91.	100.	98.	95.
60000.	82.	78.	76.	74.
65000.	76.	61.	59.	58.
70000.	74.	47.5	46.5	45.5
75000.	72.	37.5	36.5	35.5
80000.	71.	29.5	29.0	28.0
85000.	69.	23.5	23.0	22.5
90000.	65.	18.8	18.3	17.6
95000.	62.	15.0	14.6	14.0
100000.	55.	12.0	11.6	11.1

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JAILEN SITE (JAL)

PERIOD OF RECORD 1962-1967

OCTOBER

GEOMETRIC ALTITUDE HSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	143.	830.	820.	811.
8000.	144.	770.	763.	754.
10000.	145.	715.	709.	694.
12000.	145.	664.	657.	642.
14000.	142.	615.	610.	594.
15000.	139.	592.	587.	571.
16000.	142.	570.	564.	549.
18000.	141.	527.	522.	507.
20000.	141.	487.	482.	466.
25000.	137.	399.	393.	381.
30000.	137.	324.	318.	306.
35000.	133.	260.	254.	244.
40000.	132.	207.	201.	193.
45000.	117.	163.	158.	154.
50000.	108.	127.	123.	119.
55000.	94.	98.	95.	92.
60000.	89.	76.	74.	72.
65000.	82.	59.	58.	56.
70000.	80.	46.5	45.5	43.5
75000.	75.	36.5	35.5	34.5
80000.	71.	29.0	28.0	27.0
85000.	57.	23.0	22.5	21.5
90000.	53.	18.3	17.8	17.1
95000.	46.	14.6	14.1	13.6
100000.	33.	11.6	11.2	10.8

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

NOVEMBER

GEOMETRIC ALTITUDE MSL FEET	OBSERVATIONS	TOTAL	MAXIMUM	MEAN	MINIMUM
6000.	159.	827.	219.	807.	748.
8000.	160.	769.	761.	693.	641.
10000.	159.	715.	706.	592.	568.
12000.	159.	664.	655.	545.	502.
14000.	160.	616.	607.	462.	429.
15000.	157.	593.	584.	371.	338.
16000.	157.	571.	561.	296.	236.
18000.	158.	529.	519.	198.	165.
20000.	158.	489.	479.	149.	117.
25000.	156.	400.	390.	91.	71.
30000.	154.	324.	314.	55.	43.0
35000.	138.	260.	251.	34.0	34.0
40000.	126.	206.	198.	26.5	26.5
45000.	111.	161.	155.	21.0	21.0
50000.	101.	125.	120.	16.5	16.5
55000.	86.	97.	94.	13.1	13.1
60000.	78.	75.	73.	10.4	10.4
65000.	74.	58.	57.	10.9	10.9
70000.	62.	45.5	44.5	11.3	11.3
75000.	54.	36.0	35.0	9.1	9.1
80000.	50.	28.5	27.5	7.1	7.1
85000.	44.	22.5	21.5	5.5	5.5
90000.	41.	17.7	17.2	4.3	4.3
95000.	41.	14.1	13.6	3.4	3.4
100000.	34.	11.3	10.9	2.5	2.5

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	DECEMBER		MEAN MINIMUM
		MAXIMUM	MEAN	
6000.	147.	824.	816.	805.
8000.	148.	765.	757.	747.
10000.	149.	710.	702.	690.
12000.	149.	659.	650.	639.
14000.	149.	611.	602.	590.
15000.	149.	587.	578.	566.
16000.	148.	565.	556.	543.
18000.	147.	523.	513.	501.
20000.	146.	483.	472.	461.
25000.	138.	394.	384.	371.
30000.	134.	318.	308.	295.
35000.	126.	255.	245.	237.
40000.	119.	201.	193.	187.
45000.	107.	158.	152.	147.
50000.	92.	123.	119.	116.
55000.	81.	95.	92.	90.
60000.	73.	73.	72.	71.
65000.	65.	57.	56.	55.
70000.	63.	44.5	44.0	43.0
75000.	61.	35.0	34.5	33.5
80000.	57.	27.5	27.0	26.5
85000.	53.	21.5	21.5	20.5
90000.	52.	17.4	16.8	16.3
95000.	42.	13.6	13.3	12.9
100000.	37.	10.8	10.5	10.2

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	WINTER		MINIMUM
		MAXIMUM	MEAN	
6000.	375.	829.	817.	805.
8000.	376.	768.	757.	746.
10000.	378.	713.	702.	690.
12000.	377.	661.	650.	637.
14000.	377.	612.	601.	586.
15000.	375.	589.	578.	63.
16000.	376.	567.	555.	540.
18000.	374.	524.	512.	496.
20000.	372.	484.	472.	455.
25000.	360.	395.	383.	363.
30000.	349.	319.	307.	288.
35000.	329.	255.	243.	229.
40000.	314.	203.	192.	182.
45000.	292.	161.	151.	144.
50000.	250.	127.	118.	114.
55000.	214.	97.	92.	89.
60000.	186.	75.	72.	70.
65000.	170.	59.	56.	54.
70000.	161.	46.0	44.0	42.5
75000.	149.	36.0	34.5	33.0
80000.	141.	28.5	27.0	26.0
85000.	132.	22.5	21.5	20.5
90000.	122.	17.9	16.9	16.3
95000.	95.	14.2	13.4	12.9
100000.	76.	11.3	10.6	10.2

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

SPRING

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	428.	827.	817.	803.
8000.	425.	769.	759.	745.
10000.	423.	715.	704.	691.
12000.	421.	664.	653.	636.
14000.	421.	616.	605.	585.
15000.	414.	591.	582.	561.
16000.	418.	571.	559.	537.
18000.	417.	527.	516.	494.
20000.	415.	487.	476.	454.
25000.	407.	398.	387.	364.
30000.	410.	323.	311.	289.
35000.	391.	259.	248.	230.
40000.	382.	205.	195.	182.
45000.	350.	161.	153.	145.
50000.	339.	125.	120.	114.
55000.	313.	98.	94.	89.
60000.	289.	76.	73.	69.
65000.	263.	60.	57.	54.
70000.	257.	47.0	45.0	43.0
75000.	228.	37.0	35.5	33.5
80000.	211.	29.5	28.0	26.5
85000.	191.	23.5	22.0	21.0
90000.	179.	18.6	17.7	16.7
95000.	160.	14.9	14.1	13.2
100000.	121.	11.3	11.3	10.5

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SUMMER		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	434-	826-	820-	812-	756-
8000.	430-	770-	764-	756-	702-
10000.	433-	717-	711-	651-	651-
12000.	433-	667-	661-	603-	603-
14000.	432-	620-	613-	580-	580-
15000.	414-	597-	591-	558-	558-
16000.	429-	576-	569-	515-	515-
18000.	425-	534-	527-	476-	476-
20000.	425-	494-	487-	387-	387-
25000.	410-	405-	399-	312-	312-
30000.	415-	329-	324-	249-	249-
35000.	388-	266-	260-	195-	195-
40000.	396-	212-	207-	154-	154-
45000.	365-	167-	163-	120-	120-
50000.	355-	130-	127-	94-	94-
55000.	321-	101-	98-	74-	74-
60000.	307-	79-	76-	58-	58-
65000.	280-	61-	60-	45.5	45.5
70000.	273-	48-0	47-0	36.0	36.0
75000.	254-	38-0	37-0	28.5	28.5
80000.	239-	30-5	29-5	22.5	22.5
85000.	215-	24-0	23-5	17.9	17.9
90000.	198-	19-1	18-5	14.2	14.2
95000.	177-	15-3	14-8	11-8	11-8
100000.	165-	12-3	11-3		

MEAN AND EXTREME UPPER AIR PRESSURES (MILLIBARS)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

FALL

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	423.	830.	820.	807.
8000.	427.	770.	762.	748.
10000.	427.	715.	708.	693.
12000.	425.	664.	657.	641.
14000.	423.	617.	609.	592.
15000.	413.	594.	586.	568.
16000.	420.	572.	564.	545.
18000.	419.	530.	522.	502.
20000.	421.	490.	482.	462.
25000.	409.	402.	393.	371.
30000.	411.	327.	318.	296.
35000.	386.	264.	254.	236.
40000.	372.	212.	201.	188.
45000.	334.	168.	158.	149.
50000.	313.	129.	123.	117.
55000.	271.	100.	96.	91.
60000.	249.	78.	74.	71.
65000.	232.	61.	58.	55.
70000.	216.	47.5	45.5	43.0
75000.	201.	37.5	36.0	34.0
80000.	192.	29.5	28.5	26.5
85000.	170.	23.5	22.5	21.0
90000.	159.	18.8	17.8	16.5
95000.	149.	15.0	14.2	13.1
100000.	122.	12.0	11.3	10.4

## SECTION IV

### UPPER AIR DENSITY DATA

#### A. By Months

1. Mean and Extreme Upper Air Densities  
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#### B. By Seasons

1. Mean and Extreme Upper Air Densities  
(Grams/Cubic Meter) at Selected Levels ----- 128

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JANUARY		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	116.	1068.	1027.	993.	
8000.	116.	1002.	963.	932.	
10000.	117.	940.	901.	877.	
12000.	116.	879.	845.	822.	
14000.	116.	822.	792.	771.	
15000.	115.	796.	767.	749.	
16000.	116.	771.	743.	727.	
18000.	116.	715.	697.	681.	
20000.	115.	670.	654.	639.	
25000.	115.	567.	555.	546.	
30000.	110.	476.	467.	441.	
35000.	103.	399.	384.	352.	
40000.	102.	330.	303.	283.	
45000.	95.	267.	245.	229.	
50000.	84.	207.	195.	184.	
55000.	69.	161.	153.	144.	
60000.	56.	124.	119.	115.	
65000.	50.	96.	92.	89.	
70000.	44.	74.	72.	69.	
75000.	38.	58.	56.	54.	
80000.	37.	46.	44.	41.	
85000.	35.	36.	34.	33.	
90000.	31.	28.	27.	26.	
95000.	23.	22.	21.	20.	
100000.	15.	18.	17.	16.	

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

FEBRUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	112.	1067.	1022.	978.
3000.	112.	1000.	962.	927.
10000.	112.	933.	904.	870.
12000.	112.	876.	848.	819.
14000.	112.	821.	794.	769.
15000.	111.	795.	769.	747.
16000.	112.	763.	745.	725.
18000.	111.	720.	698.	683.
20000.	111.	670.	654.	643.
25000.	107.	566.	555.	545.
30000.	105.	476.	467.	449.
35000.	100.	399.	386.	353.
40000.	93.	330.	307.	282.
45000.	90.	262.	243.	227.
50000.	74.	211.	195.	180.
55000.	64.	167.	153.	145.
60000.	57.	132.	120.	113.
65000.	55.	97.	93.	89.
70000.	54.	75.	72.	69.
75000.	50.	59.	56.	54.
80000.	47.	46.	43.	41.
85000.	44.	36.	34.	33.
90000.	39.	28.	27.	25.
95000.	30.	22.	21.	20.
100000.	24.	18.	16.	16.

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MARCH		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	161.	1077.	1008.	965.	917.
8000.	161.	1018.	950.	825.	867.
10000.	160.	952.	842.	819.	772.
12000.	159.	888.	791.	767.	752.
14000.	159.	832.	720.	743.	728.
15000.	156.	801.	697.	683.	640.
16000.	160.	767.	674.	654.	543.
18000.	159.	720.	674.	566.	445.
20000.	157.	674.	476.	476.	352.
25000.	152.	566.	400.	400.	284.
30000.	154.	476.	387.	387.	229.
25000.	147.	400.	331.	331.	182.
40000.	144.	321.	266.	266.	146.
45000.	132.	266.	206.	206.	113.
50000.	129.	196.	161.	161.	89.
55000.	112.	154.	125.	125.	69.
60000.	102.	119.	96.	96.	53.
65000.	88.	93.	75.	75.	42.
70000.	85.	72.	58.	58.	34.
75000.	69.	56.	46.	46.	33.
80000.	58.	43.	36.	36.	27.
85000.	48.	34.	28.	28.	26.
90000.	44.	27.	21.	21.	20.
95000.	40.	18.	17.	17.	16.
100000.	30.				

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS / CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

APRIL

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
6000.	139.	1022.	991.	961.
8000.	137.	968.	938.	912.
10000.	137.	914.	886.	865.
12000.	137.	859.	835.	817.
14000.	137.	800.	785.	768.
15000.	136.	775.	761.	743.
16000.	136.	751.	737.	721.
18000.	137.	706.	692.	679.
20000.	137.	662.	650.	639.
25000.	136.	563.	552.	540.
30000.	135.	475.	467.	453.
35000.	130.	399.	390.	371.
40000.	122.	332.	317.	292.
45000.	115.	265.	250.	235.
50000.	110.	213.	199.	185.
55000.	103.	163.	156.	148.
60000.	93.	128.	122.	117.
65000.	84.	98.	94.	91.
70000.	82.	75.	73.	69.
75000.	78.	58.	56.	54.
80000.	75.	45.	44.	42.
85000.	70.	36.	35.	33.
90000.	64.	28.	27.	26.
95000.	57.	22.	21.	20.
100000.	41.	18.	17.	16.

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAY		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	128.	1022.	977.	946.	
8000.	127.	969.	925.	899.	
10000.	125.	904.	875.	853.	
12000.	124.	851.	827.	809.	
14000.	124.	798.	780.	761.	
15000.	121.	770.	756.	740.	
16000.	121.	748.	734.	714.	
18000.	121.	702.	690.	671.	
20000.	121.	659.	648.	632.	
25000.	119.	559.	551.	542.	
30000.	119.	475.	467.	457.	
35000.	112.	400.	392.	376.	
40000.	113.	333.	323.	302.	
45000.	103.	272.	257.	245.	
50000.	100.	212.	202.	192.	
55000.	98.	166.	159.	150.	
60000.	94.	130.	125.	118.	
65000.	91.	100.	96.	91.	
70000.	90.	76.	74.	72.	
75000.	81.	59.	57.	55.	
80000.	78.	46.	45.	43.	
85000.	73.	36.	35.	34.	
90000.	71.	28.	28.	27.	
95000.	63.	23.	22.	21.	
100000.	50.	18.	17.		

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JUNE		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	128.	1001.	964.	926.	885.
8000.	126.	945.	912.	885.	839.
10000.	126.	886.	863.	839.	802.
12000.	126.	832.	817.	802.	772.
14000.	125.	784.	772.	762.	742.
15000.	122.	760.	750.	742.	721.
16000.	124.	737.	728.	721.	674.
18000.	123.	695.	685.	633.	633.
20000.	123.	654.	643.	537.	537.
25000.	122.	558.	548.	456.	456.
30000.	118.	472.	465.	378.	378.
35000.	111.	396.	391.	307.	307.
40000.	113.	331.	324.	253.	253.
45000.	110.	273.	264.	195.	195.
50000.	104.	222.	211.	156.	156.
55000.	98.	174.	165.	120.	120.
60000.	96.	132.	126.	94.	94.
65000.	94.	99.	97.	73.	73.
70000.	91.	77.	75.	57.	57.
75000.	88.	60.	58.	44.	44.
80000.	78.	47.	46.	35.	35.
85000.	73.	37.	36.	27.	27.
90000.	65.	29.	28.	22.	22.
95000.	58.	23.	22.	18.	18.
100000.	53.	18.	17.		

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JULY		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	149.	990.	962.	936.	
8000.	147.	935.	911.	893.	
10000.	150.	880.	862.	847.	
12000.	150.	828.	815.	801.	
14000.	150.	780.	770.	760.	
15000.	141.	758.	748.	739.	
16000.	149.	735.	726.	718.	
18000.	146.	691.	683.	675.	
20000.	146.	650.	640.	634.	
25000.	139.	550.	544.	539.	
30000.	145.	469.	462.	455.	
35000.	132.	397.	391.	388.	
40000.	137.	332.	329.	324.	
45000.	121.	276.	272.	266.	
50000.	117.	226.	220.	212.	
55000.	103.	177.	170.	165.	
60000.	101.	133.	129.	126.	
65000.	89.	100.	98.	96.	
70000.	89.	77.	76.	73.	
75000.	79.	60.	59.	57.	
80000.	61.	47.	46.	45.	
85000.	70.	37.	36.	35.	
90000.	69.	29.	28.	27.	
95000.	57.	23.	22.	21.	
100000.	57.	18.	17.		

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	AUGUST	MEAN	MINIMUM
			MAXIMUM	
6000.	157.	994.	965.	934.
8000.	157.	942.	913.	890.
10000.	157.	888.	864.	847.
12000.	157.	835.	817.	805.
14000.	157.	784.	772.	763.
15000.	151.	759.	749.	742.
16000.	156.	735.	727.	721.
18000.	156.	694.	684.	677.
20000.	156.	652.	642.	634.
25000.	149.	554.	545.	538.
30000.	152.	471.	463.	456.
35000.	144.	399.	391.	386.
40000.	145.	333.	327.	322.
45000.	134.	276.	270.	262.
50000.	132.	225.	217.	208.
55000.	119.	178.	169.	162.
60000.	110.	133.	128.	124.
65000.	96.	100.	98.	95.
70000.	93.	78.	76.	74.
75000.	85.	60.	59.	58.
80000.	80.	47.	46.	45.
85000.	69.	37.	36.	36.
90000.	63.	29.	29.	28.
95000.	60.	23.	23.	22.
100000.	55.	18.	18.	17.

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SEPTEMBER		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	121.	1009.	975.	952.	
8000.	123.	952.	922.	905.	
10000.	123.	895.	871.	859.	
12000.	121.	845.	822.	812.	
14000.	121.	791.	775.	769.	
15000.	117.	767.	752.	738.	
16000.	121.	744.	729.	714.	
18000.	120.	700.	684.	671.	
20000.	122.	658.	641.	62.	
25000.	116.	562.	546.	537.	
30000.	120.	473.	464.	455.	
35000.	115.	397.	390.	374.	
40000.	114.	331.	324.	302.	
45000.	106.	273.	266.	247.	
50000.	104.	223.	215.	199.	
55000.	91.	173.	167.	155.	
60000.	82.	131.	127.	122.	
65000.	76.	100.	97.	93.	
70000.	73.	77.	75.	73.	
75000.	72.	60.	59.	57.	
80000.	71.	47.	46.	44.	
85000.	69.	37.	36.	35.	
90000.	65.	29.	28.	27.	
95000.	62.	23.	22.	22.	
100000.	55.	18.	18.	17.	

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	OCTOBER		MINIMUM
		MAXIMUM	MEAN	
6000.	143.	1036.	992.	959.
8000.	144.	980.	935.	909.
10000.	145.	927.	881.	860.
12000.	145.	870.	829.	810.
14000.	142.	820.	780.	763.
15000.	139.	788.	756.	740.
16000.	142.	756.	732.	714.
18000.	141.	703.	687.	677.
20000.	141.	657.	645.	629.
25000.	137.	558.	550.	534.
30000.	137.	476.	467.	451.
35000.	133.	402.	391.	373.
40000.	132.	330.	323.	303.
45000.	117.	271.	261.	253.
50000.	108.	218.	208.	200.
55000.	94.	172.	163.	154.
60000.	89.	130.	125.	121.
65000.	82.	99.	95.	91.
70000.	80.	76.	74.	71.
75000.	75.	59.	57.	55.
80000.	71.	46.	45.	43.
85000.	56.	36.	35.	33.
90000.	53.	28.	28.	27.
95000.	46.	22.	22.	21.
100000.	33.	18.	17.	17.

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	NOVEMBER	
					MINIMUM
6000.	157.	1052.	1005.	972.	920.
8000.	159.	986.	945.	920.	871.
10000.	158.	922.	898.	871.	815.
12000.	158.	862.	834.	815.	
14000.	160.	609.	783.	769.	
15000.	157.	783.	758.	743.	
16000.	157.	757.	734.	718.	
18000.	158.	709.	689.	673.	
20000.	158.	661.	647.	633.	
25000.	156.	562.	550.	534.	
30000.	154.	473.	465.	448.	
35000.	137.	397.	390.	370.	
40000.	125.	332.	322.	299.	
45000.	110.	274.	258.	244.	
50000.	100.	218.	204.	194.	
55000.	86.	169.	159.	152.	
60000.	78.	128.	123.	119.	
65000.	74.	98.	94.	91.	
70000.	62.	75.	73.	71.	
75000.	54.	58.	57.	55.	
80000.	50.	46.	44.	43.	
85000.	44.	36.	34.	34.	
90000.	41.	28.	27.	26.	
95000.	41.	22.	21.	20.	
100000.	34.	17.	16.	17.	

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	DECEMBER		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	147.	1067.	1019.	976.	976.
8000.	148.	995.	957.	928.	928.
10000.	149.	939.	898.	874.	874.
12000.	149.	877.	841.	815.	815.
14000.	149.	823.	786.	768.	768.
15000.	149.	796.	763.	743.	743.
16000.	148.	755.	738.	720.	720.
18000.	147.	708.	693.	678.	678.
20000.	146.	665.	650.	634.	634.
25000.	138.	566.	553.	535.	535.
30000.	134.	474.	466.	448.	448.
35000.	126.	397.	386.	365.	365.
40000.	119.	330.	314.	297.	297.
45000.	107.	266.	250.	237.	237.
50000.	92.	211.	198.	189.	189.
55000.	81.	166.	156.	148.	148.
60000.	73.	126.	121.	117.	117.
65000.	65.	96.	93.	89.	89.
70000.	63.	74.	72.	70.	70.
75000.	61.	57.	56.	56.	56.
80000.	57.	45.	44.	43.	43.
85000.	53.	35.	34.	34.	34.
90000.	52.	27.	27.	26.	26.
95000.	42.	21.	21.	20.	20.
100000.	37.	17.	16.	16.	16.

**MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY SEASONS**

**JALLEN SITE (JAL)**

**PERIOD OF RECORD 1962-1967**

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	WINTER	MAXIMUM	MEAN	MINIMUM
6000.	375.		1068.	1022.	976.
8000.	376.		1002.	960.	927.
10000.	378.		940.	901.	870.
12000.	377.		879.	844.	815.
14000.	377.		823.	791.	768.
15000.	375.		796.	766.	743.
16000.	376.		771.	742.	720.
18000.	374.		720.	696.	678.
20000.	372.		670.	652.	634.
25000.	369.		567.	554.	535.
30000.	349.		476.	466.	441.
35000.	329.		399.	385.	352.
40000.	314.		330.	310.	282.
45000.	292.		267.	246.	227.
50000.	250.		211.	196.	180.
55000.	214.		167.	154.	144.
60000.	186.		132.	120.	113.
65000.	170.		97.	93.	89.
70000.	161.		75.	72.	69.
75000.	149.		59.	56.	54.
80000.	141.		46.	44.	41.
85000.	132.		36.	34.	33.
90000.	122.		28.	27.	25.
95000.	95.		22.	21.	20.
100000.	76.		18.	16.	16.

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	SPRING
6000.	428.	1077.	993.	946.	
8000.	425.	1018.	939.	899.	
10000.	422.	952.	886.	853.	
12000.	420.	888.	835.	809.	
14000.	420.	832.	786.	761.	
15000.	413.	801.	762.	740.	
16000.	417.	767.	738.	714.	
18000.	417.	720.	693.	671.	
20000.	415.	674.	651.	632.	
25000.	407.	566.	553.	540.	
30000.	408.	476.	467.	445.	
35000.	389.	400.	389.	352.	
40000.	379.	333.	317.	284.	
45000.	350.	272.	251.	229.	
50000.	339.	213.	199.	182.	
55000.	313.	166.	156.	146.	
60000.	289.	130.	122.	113.	
65000.	263.	100.	94.	89.	
70000.	257.	76.	73.	69.	
75000.	228.	59.	57.	53.	
80000.	211.	46.	44.	42.	
85000.	191.	36.	35.	33.	
90000.	179.	28.	27.	26.	
95000.	160.	23.	21.	20.	
100000.	121.	18.	17.	16.	

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SUMMER		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	434.	1001.	963.	926.	
8000.	430.	945.	912.	885.	
10000.	433.	888.	863.	839.	
12000.	433.	835.	816.	801.	
14000.	432.	784.	771.	760.	
15000.	414.	760.	749.	739.	
16000.	429.	737.	727.	718.	
18000.	425.	695.	684.	674.	
20000.	425.	654.	642.	633.	
25000.	410.	558.	546.	537.	
30000.	415.	472.	463.	455.	
35000.	387.	399.	391.	378.	
40000.	395.	333.	327.	307.	
45000.	365.	276.	269.	253.	
50000.	353.	226.	216.	195.	
55000.	320.	178.	168.	156.	
60000.	307.	133.	128.	120.	
65000.	279.	100.	98.	94.	
70000.	273.	78.	76.	73.	
75000.	252.	60.	59.	57.	
80000.	239.	47.	46.	44.	
85000.	212.	37.	36.	35.	
90000.	197.	29.	28.	27.	
95000.	175.	23.	22.	22.	
100000.	165.	18.	18.	17.	

MEAN AND EXTREME UPPER AIR DENSITIES (GRAMS/CUBIC METER)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	FALL
6000.	421.	1052.	992.	952.	
8000.	426.	986.	935.	905.	
10000.	426.	927.	881.	859	
12000.	424.	870.	829.	810.	
14000.	423.	820.	780.	763.	
15000.	413.	788.	756.	738.	
16000.	420.	757.	732.	714.	
18000.	419.	709.	687.	671.	
20000.	421.	661.	645.	629.	
25000.	409.	562.	549.	534.	
30000.	411.	476.	466.	448.	
35000.	385.	402.	391.	370.	
40000.	371.	332.	323.	299.	
45000.	333.	274.	262.	244.	
50000.	312.	223.	209.	194.	
55000.	271.	173.	163.	152.	
60000.	249.	131.	125.	119.	
65000.	232.	100.	96.	91.	
70000.	215.	77.	74.	71.	
75000.	201.	60.	57.	55.	
80000.	192.	47.	45.	43.	
85000.	169.	37.	35.	33.	
90000.	159.	29.	28.	26.	
95000.	149.	23.	22.	20.	
100000.	122.	18.	17.	16.	

## SECTION V

### UPPER AIR MOISTURE DATA

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MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JANUARY		MINIMUM
		MAXIMUM	MEAN	
6000.	116.	5.098	2.171	0.643
8000.	114.	4.405	1.899	0.587
10000.	115.	3.779	1.542	0.480
12000.	115.	2.439	1.236	0.103
14000.	114.	2.063	0.950	0.086
16000.	112.	2.165	0.761	0.099
18000.	113.	2.172	0.570	0.082
20000.	111.	1.502	0.413	0.030
22000.	111.	1.221	0.296	0.009
24000.	107.	0.645	0.213	0.019
26000.	102.	1.570	0.159	0.006
28000.	78.	0.416	0.099	0.006
30000.	54.	0.250	0.052	0.003
32000.	28.	0.119	0.021	0.001
34000.	10.	0.040	0.009	0.001
36000.	3.	0.003	0.002	0.002
38000.	0.	0.	0.	0.
40000.	0.	0.	0.	0.
42000.	0.	0.	0.	0.
44000.	0.	0.	0.	0.
46000.	0.	0.	0.	0.
48000.	0.	0.	0.	0.
50000.	0.	0.	0.	0.

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MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	FEBRUARY	
		MAXIMUM	MEAN
6000.	112-	6.779	2.262
8000.	112-	5.360	1.917
10000.	112-	3.891	1.531
12000.	111-	3.781	1.151
14000.	109-	2.900	0.870
16000.	108-	3.099	0.651
18000.	107-	1.947	0.530
20000.	107-	1.439	0.416
22000.	106-	1.519	0.325
24000.	104-	0.879	0.236
26000.	98-	0.596	0.155
28000.	84-	0.319	0.094
30000.	51-	0.231	0.050
32000.	21-	0.077	0.021
34000.	6-	0.034	0.010
36000.	2-	0.012	0.007
38000.	1-	0.002	0.002
40000.	0-	0-	0-
42000.	0-	0-	0-
44000.	0-	0-	0-
46000.	0-	0-	0-
48000.	0-	0-	0-
50000.	0-	0-	0-

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
BY MONTHS  
JALLEN SITE (JALL)  
PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MARCH		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	161.	6.428	2.560	0.535	0-
8000.	161.	5.505	2.188	0.407	0-
10000.	160.	4.328	1.793	0.277	0-
12000.	159.	3.284	1.401	0.375	0-
14000.	159.	2.334	1.066	0.175	0-
16000.	159.	1.960	0.810	0.148	0-
18000.	158.	2.284	0.623	0.103	0-
20000.	155.	1.802	0.475	0.046	0-
22000.	153.	1.374	0.358	0.008	0-
24000.	152.	0.973	0.265	0.023	0-
26000.	142.	0.725	0.199	0.012	0-
28000.	123.	0.438	0.136	0.007	0-
30000.	96.	0.317	0.081	0.002	0-
32000.	62.	0.155	0.037	0.001	0-
34000.	32.	0.054	0.018	0.001	0-
36000.	15.	0.014	0.007	0.001	0-
38000.	5.	0.026	0.006	0.000	0-
40000.	0.	0.	0.	0.	0-
42000.	0.	0.	0.	0.	0-
44000.	0.	0.	0.	0.	0-
46000.	0.	0.	0.	0.	0-
48000.	0.	0.	0.	0.	0-
50000.	0.	0.	0.	0.	0-

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	OBSERVATIONS	APRIL	
		MAXIMUM	MINIMUM
6000.	139.	7.447	1.129
8000.	137.	6.533	0.276
10000.	136.	6.325	0.548
12000.	136.	4.868	0.469
14000.	135.	4.015	0.329
16000.	131.	3.466	0.033
18000.	135.	2.511	0.776
20000.	133.	1.920	0.617
22000.	132.	1.639	0.474
24000.	130.	1.299	0.345
26000.	128.	0.917	0.241
28000.	127.	0.568	0.160
30000.	117.	0.316	0.097
32000.	87.	0.165	0.048
34000.	50.	0.066	0.022
36000.	21.	0.046	0.009
38000.	6.	0.030	0.007
40000.	1.	0.018	0.018
42000.	1.	0.008	0.008
44000.	1.	0.001	0.001
46000.	0.	0.	0.
48000.	0.	0.	0.
50000.	0.	0.	0.

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS

BY MONTHS

JALLEN SITE (JALA)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	MAY
6000.	125-	11.348	4.691	1.273	
8000.	126-	8.474	3.935	1.127	
10000.	125-	6.513	3.222	0.842	
12000.	125-	6.457	2.561	0.640	
14000.	124-	6.099	2.069	0.395	
16000.	120-	5.233	1.667	0.134	
18000.	120-	4.464	1.218	0.097	
20000.	120-	3.857	0.863	0.056	
22000.	121-	3.339	0.624	0.165	
24000.	120-	2.875	0.483	0.117	
26000.	120-	1.512	0.330	0.020	
28000.	120-	1.091	0.229	0.010	
30000.	119-	0.657	0.145	0.011	
32000.	108-	0.383	0.079	0.005	
34000.	70-	0.214	0.033	0.002	
36000.	32-	0.041	0.011	0.001	
38000.	9-	0.008	0.003	0.-	
40000.	0-	0-	0-	0-	
42000.	0-	0-	0-	0-	
44000.	0-	0-	0-	0-	
46000.	0-	0-	0-	0-	
48000.	0-	0-	0-	0-	
50000.	0-	0-	0-	0-	

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JUNE		MINIMUM
		MAXIMUM	MEAN	
6000.	128.	12.334	6.417	1.326
8000.	126.	10.601	5.466	0.570
10000.	126.	8.779	4.521	0.424
12000.	126.	7.891	3.720	0.487
14000.	125.	7.090	3.057	0.415
16000.	124.	5.274	2.366	0.448
18000.	122.	4.384	1.697	0.403
20000.	120.	3.524	1.159	0.452
22000.	120.	2.310	0.811	0.037
24000.	120.	1.307	0.576	0.043
26000.	117.	1.398	0.435	0.093
28000.	115.	0.950	0.304	0.008
30000.	109.	0.627	0.216	0.005
32000.	97.	0.468	0.147	0.022
34000.	88.	0.302	0.077	0.003
36000.	52.	0.168	0.039	0.002
38000.	28.	0.065	0.018	0.001
40000.	12.	0.017	0.006	0.001
42000.	1.	0.006	0.006	0.006
44000.	0.	0.	0.	0.
46000.	0.	0.	0.	0.
48000.	0.	0.	0.	0.
50000.	0.	0.	0.	0.

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JULY		MINIMUM
		MAXIMUM	MEAN	
6000-	149-	13..616	9.603	6.109
8000-	147-	10..984	8.329	5..965
10000-	150-	9..861	7.050	3..479
12000-	150-	8..772	5.958	1..636
14000-	150-	7..928	4.880	0..880
16000-	149-	6..128	3.999	1..082
18000-	146-	5..399	3..147	0..910
20000-	146-	4..302	2..361	0..141
22000-	146-	3..351	1..673	0..348
24000-	146-	2..628	1..160	0..279
26000-	144-	2..068	0..829	0..142
28000-	142-	1..318	0..593	0..016
30000-	142-	0..915	0..401	0..011
32000-	135-	0..598	0..276	0..008
34000-	133-	0..385	0..160	0..027
36000-	120-	0..207	0..089	0..003
38000-	86-	0..096	0..035	0..002
40000-	46-	0..038	0..014	0..001
42000-	14-	0..016	0..005	0..001
44000-	3-	0..005	0..003	0..001
46000-	0-	0..-	0..-	0..-
48000-	0-	0..-	0..-	0..-
50000-	0.	0..-	0..-	0..-

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	AUGUST	
		MAXIMUM	MEAN
6000.	157.	14.642	9.454
8000.	157.	11.772	8.117
10000.	157.	9.879	6.920
12000.	157.	9.393	3.600
14000.	157.	8.04	2.307
16000.	156.	6.152	5.714
18000.	156.	5.242	4.596
20000.	156.	4.285	0.827
22000.	154.	3.328	0.429
24000.	154.	2.568	0.429
26000.	154.	1.923	0.429
28000.	150.	1.444	0.429
30000.	148.	1.012	0.429
32000.	148.	0.680	0.429
34000.	135.	0.436	0.429
36000.	93.	0.266	0.429
38000.	56.	0.121	0.429
40000.	24.	0.043	0.429
42000.	5.	0.006	0.429
44000.	0.	0.	0.429
46000.	0.	0.	0.429
48000.	0.	0.	0.429
50000.	0.	0.	0.429

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	SEPTEMBER
6000.	121.	12.021	8.305	3.318	
8000.	123.	11.013	7.107	3.149	
10000.	123.	9.588	5.932	2.677	
12000.	121.	8.408	4.686	0.594	
14000.	121.	6.615	3.650	0.463	
16000.	121.	5.621	2.804	0.105	
18000.	117.	4.806	2.009	0.458	
20000.	118.	3.518	1.464	0.042	
22000.	116.	2.864	1.097	0.096	
24000.	116.	2.382	0.775	0.056	
26000.	117.	1.812	0.571	0.121	
28000.	117.	1.286	0.412	0.075	
30000.	117.	0.913	0.301	0.018	
32000.	112.	0.568	0.199	0.011	
34000.	89.	0.377	0.114	0.004	
36000.	50.	0.285	0.053	0.002	
38000.	22.	0.124	0.029	0.002	
40000.	9.	0.025	0.008	0.001	
42000.	1.	0.009	0.009	0.009	
44000.	1.	0.002	0.002	0.002	
46000.	0.	0.	0.	0.	
48000.	0.	0.	0.	0.	
50000.	0.	0.	0.	0.	

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	OCTOBER		MINIMUM
		MAXIMUM	MEAN	
6000.	143-	10.777	4.969	2.012
8000.	144-	9.484	4.312	1.900
10000.	145-	8.150	3.584	0.630
12000.	145-	7.432	2.708	0.275
14000.	139-	5.669	1.919	0.279
16000.	136-	3.779	1.357	0.048
18000.	130-	2.898	1.048	0.030
20000.	126-	2.505	0.808	0.192
22000.	125-	2.001	0.620	0.071
24000.	125-	1.911	0.477	0.052
26000.	125-	1.373	0.348	0.012
28000.	123-	1.009	0.250	0.062
30000.	120-	0.641	0.170	0.013
32000.	110-	0.391	0.094	0.002
34000.	76-	0.256	0.051	0.001
36000.	35-	0.080	0.030	0.001
38000.	12-	0.034	0.018	0.002
40000.	5-	0.012	0.008	0.001
42000.	2-	0.002	0.001	0.001
44000.	0-	0-	0-	0-
46000.	0-	0-	0-	0-
48000.	0-	0-	0-	0-
50000.	0-	0-	0-	0-

**MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS**  
**BY MONTHS**  
**JALLEN SITE (JAL)**  
**PERIOD OF RECORD 1962-1967**

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	NOVEMBER	
		MAXIMUM	MINIMUM
6000.	159.	8.328	1.727
6000.	159.	6.933	0.814
10000.	157.	6.964	0.849
12000.	156.	6.057	0.493
14000.	155.	5.389	0.327
16000.	150.	4.607	0.328
18000.	153.	3.190	0.035
20000.	152.	2.773	0.163
22000.	154.	2.283	0.015
24000.	153.	1.663	0.065
26000.	151.	1.194	0.027
28000.	143.	0.819	0.018
30000.	132.	0.535	0.009
32000.	109.	0.297	0.005
34000.	72.	0.166	0.001
36000.	30.	0.067	0.001
38000.	14.	0.033	0.001
40000.	3.	0.014	0.003
42000.	1.	0.005	0.005
44000.	1.	0.001	0.001
46000.	0.	0.	0.
48000.	0.	0.	0.
50000.	0.	0.	0.

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	DECEMBER	
		MAXIMUM	MINIMUM
6000.	147.	6.736	1.115
8000.	148.	6.354	0.849
10000.	149.	5.725	0.223
12000.	146.	5.140	0.029
14000.	144.	4.138	0.126
16000.	140.	3.413	0.240
18000.	138.	3.226	0.925
20000.	134.	2.693	0.685
22000.	130.	2.178	0.559
24000.	129.	1.534	0.418
26000.	128.	0.770	0.306
28000.	119.	0.459	0.203
30000.	94.	0.304	0.138
32000.	49.	0.294	0.085
34000.	15.	0.078	0.043
36000.	4.	0.016	0.046
38000.	2.	0.003	0.009
40000.	0.	0.	0.002
42000.	0.	0.	0.001
44000.	0.	0.	0.002
46000.	0.	0.	0.002
48000.	0.	0.	0.002
50000.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JANUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM
4051.- 6000.	102.-	0-308	0-152	0-063
6000.- 8000.	114.-	0-262	0-121	0-038
8000.- 10000.	114.-	0-228	0-095	0-031
10000.- 12000.	114.-	0-155	0-072	0-016
12000.- 14000.	114.-	0-109	0-054	0-016
14000.- 16000.	111.-	0-090	0-040	0-004
16000.- 18000.	112.-	0-093	0-029	0-005
18000.- 20000.	111.-	0-073	0-020	0-002
20000.- 22000.	109.-	0-051	0-014	0-003
22000.- 24000.	107.-	0-031	0-009	0-001
24000.- 26000.	102.-	0-029	0-006	0-001
26000.- 28000.	78.-	0-026	0-004	0-001
28000.- 30000.	54.-	0-009	0-002	0-000
30000.- 32000.	28.-	0-005	0-001	0-000
32000.- 34000.	10.-	0-002	0-001	0-000
34000.- 36000.	3.-	0-000	0-000	0-000
36000.- 38000.	0-	0-	0-	0-
38000.- 40000.	0-	0-	0-	0-
40000.- 42000.	0-	0-	0-	0-
42000.- 44000.	0-	0-	0-	0-
44000.- 46000.	0-	0-	0-	0-
46000.- 48000.	0-	0-	0-	0-
48000.- 50000.	0-	0-	0-	0-

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	FEBRUARY	
		MAXIMUM	MEAN
4051.-	6000.	104.-	0.485
6000.-	8000.	112.-	0.353
8000.-	10000.	112.-	0.253
10000.-	12000.	111.-	0.190
12000.-	14000.	109.-	0.160
14000.-	16000.	107.-	0.135
16000.-	16000.	107.-	0.107
18000.-	20000.	107.-	0.060
20000.-	22000.	106.-	0.055
22000.-	24000.	103.-	0.041
24000.-	26000.	98.-	0.024
26000.-	28000.	84.-	0.013
28000.-	30000.	51.-	0.008
30000.-	32000.	21.-	0.004
32000.-	34000.	6.-	0.001
34000.-	36000.	2.-	0.001
36000.-	38000.-	1.-	0.000
38000.-	40000.-	0.-	0.-
40000.-	42000.-	0.-	0.-
42000.-	44000.-	0.-	0.-
44000.-	46000.-	0.-	0.-
46000.-	48000.-	0.-	0.-
48000.-	50000.-	0.-	0.-

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MARCH		MINIMUM
		MAXIMUM	MEAN	
4051.- 6000.-	154.-	0.441	0.186	0.083
6000.- 8000.-	161.-	0.307	0.138	0.029
8000.- 10000.-	160.-	0.271	0.109	0.020
10000.- 12000.-	159.-	0.177	0.083	0.018
12000.- 14000.-	158.-	0.121	0.060	0.017
14000.- 16000.-	158.-	0.093	0.043	0.007
16000.- 18000.-	158.-	0.074	0.031	0.007
18000.- 20000.-	155.-	0.081	0.022	0.003
20000.- 22000.-	153.-	0.059	0.016	0.001
22000.- 24000.-	149.-	0.041	0.011	0.002
24000.- 26000.-	142.-	0.028	0.008	0.001
26000.- 28000.-	123.-	0.017	0.005	0.001
28000.- 30000.-	96.-	0.010	0.003	0.001
30000.- 32000.-	62.-	0.006	0.002	0.000
32000.- 34000.-	32.-	0.003	0.001	0.000
34000.- 36000.-	15.-	0.001	0.000	0.000
36000.- 38000.-	5.-	0.000	0.000	0.000
38000.- 40000.-	0.-	0.-	0.-	0.-
40000.- 42000.-	0.-	0.-	0.-	0.-
42000.- 44000.-	0.-	0.-	0.-	0.-
44000.- 46000.-	0.-	0.-	0.-	0.-
46000.- 48000.-	0.-	0.-	0.-	0.-
48000.- 50000.-	0.-	0.-	0.-	0.-

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	APRIL		MEAN MINIMUM
		MAXIMUM	MEAN	
4051.-	6000.	136.-	0.483	0.070
6000.-	6000.-	136.-	0.395	0.058
8000.-	10000.-	136.-	0.327	0.048
10000.-	12000.-	135.-	0.287	0.036
12000.-	14000.-	135.-	0.202	0.025
14000.-	16000.-	132.-	0.162	0.018
16000.-	18000.-	133.-	0.123	0.009
18000.-	20000.-	133.-	0.087	0.002
20000.-	22000.-	132.-	0.065	0.003
22000.-	24000.-	130.-	0.052	0.004
24000.-	26000.-	128.-	0.036	0.002
26000.-	28000.-	127.-	0.023	0.001
28000.-	30000.-	117.-	0.012	0.001
30000.-	32000.-	87.-	0.006	0.000
32000.-	34000.-	50.-	0.003	0.000
34000.-	36000.-	21.-	0.001	0.000
36000.-	38000.-	6.-	0.001	0.000
38000.-	40000.-	1.-	0.000	0.000
40000.-	42000.-	1.-	0.000	0.000
42000.-	44000.-	1.-	0.000	0.000
44000.-	46000.-	0.-	0.-	0.-
46000.-	48000.-	0.-	0.-	0.-
48000.-	50000.-	0.-	0.-	0.-

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAIL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAY		MEAN		MINIMUM	
		MAXIMUM	MEAN	MAXIMUM	MEAN	MAXIMUM	MEAN
4051.- 6000.	124.	0.678	0.289	0.063	0.063	0.244	0.071
6000.- 8000.	124.	0.556	0.192	0.054	0.054	0.192	0.054
8000.- 10000.	125.	0.359	0.147	0.039	0.039	0.147	0.039
10000.- 12000.	125.	0.312	0.111	0.027	0.027	0.111	0.027
12000.- 14000.	124.	0.300	0.111	0.013	0.013	0.111	0.013
14000.- 16000.	120.	0.254	0.084	0.005	0.005	0.084	0.005
16000.- 18000.	119.	0.292	0.061	0.006	0.006	0.061	0.006
18000.- 20000.	119.	0.162	0.044	0.004	0.004	0.044	0.004
20000.- 22000.	120.	0.132	0.029	0.006	0.006	0.029	0.006
22000.- 24000.	120.	0.106	0.019	0.002	0.002	0.019	0.002
24000.- 26000.	119.	0.071	0.013	0.002	0.002	0.013	0.002
26000.- 28000.	119.	0.040	0.009	0.001	0.001	0.009	0.001
28000.- 30000.	119.	0.025	0.005	0.001	0.001	0.005	0.001
30000.- 32000.	108.	0.014	0.003	0.000	0.000	0.003	0.000
32000.- 34000.	70.	0.007	0.002	0.000	0.000	0.007	0.000
34000.- 36000.	32.	0.002	0.000	0.000	0.000	0.002	0.000
36000.- 38000.	9.	0.000	0.	0.	0.	0.000	0.
38000.- 40000.	0.	0.	0.	0.	0.	0.	0.
40000.- 42000.	0.	0.	0.	0.	0.	0.	0.
42000.- 44000.	0.	0.	0.	0.	0.	0.	0.
44000.- 46000.	0.	0.	0.	0.	0.	0.	0.
46000.- 48000.	0.	0.	0.	0.	0.	0.	0.
48000.- 50000.	0.	0.	0.	0.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	OBSERVATIONS	JUNE	MEAN	MAXIMUM	MINIMUM
4051.- 6000.	128.	0.818	0.395	0.094	0.053
6000.- 8000.	126.	0.625	0.334	0.053	0.018
8000.- 10000.	126.	0.518	0.264	0.008	0.008
10000.- 12000.	126.	0.421	0.206	0.014	0.014
12000.- 14000.	125.	0.339	0.161	0.023	0.023
14000.- 16000.	123.	0.249	0.121	0.012	0.012
16000.- 18000.	122.	0.197	0.086	0.015	0.015
18000.- 20000.	120.	0.154	0.057	0.004	0.004
20000.- 22000.	119.	0.096	0.037	0.003	0.003
22000.- 24000.	119.	0.058	0.024	0.002	0.002
24000.- 26000.	117.	0.037	0.017	0.003	0.003
26000.- 28000.	113.	0.036	0.011	0.001	0.001
28000.- 30000.	108.	0.023	0.008	0.001	0.001
30000.- 32000.	97.	0.014	0.005	0.001	0.001
32000.- 34000.	88.	0.009	0.003	0.001	0.001
34000.- 36000.	52.	0.006	0.002	0.000	0.000
36000.- 38000.	28.	0.003	0.001	0.000	0.000
38000.- 40000.	12.	0.001	0.000	0.000	0.000
40000.- 42000.	1.	0.000	0.	0.	0.
42000.- 44000.	0.	0.	0.	0.	0.
44000.- 46000.	0.	0.	0.	0.	0.
46000.- 48000.	0.	0.	0.	0.	0.
48000.- 50000.	0.	0.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JULY	
		MAXIMUM	MEAN
4051.- 6000.	148.	0.893	0.598
6000.- 8000.	147.	0.654	0.503
8000.- 10000.	147.	0.552	0.407
10000.- 12000.	150.	0.438	0.325
12000.- 14000.	150.	0.372	0.256
14000.- 16000.	149.	0.298	0.198
16000.- 18000.	146.	0.237	0.150
18000.- 20000.	145.	0.188	0.109
20000.- 22000.	145.	0.138	0.075
22000.- 24000.	146.	0.099	0.049
24000.- 26000.	144.	0.068	0.032
26000.- 28000.	141.	0.048	0.022
28000.- 30000.	141.	0.032	0.014
30000.- 32000.	135.	0.020	0.009
32000.- 34000.	133.	0.012	0.006
34000.- 36000.	119.	0.007	0.003
36000.- 38000.	86.	0.003	0.002
38000.- 40000.	46.	0.001	0.001
40000.- 42000.	14.	0.001	0.000
42000.- 44000.	3.	0.000	0.000
44000.- 46000.	0.	0.	0.
46000.- 48000.	0.	0.	0.
48000.- 50000.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JAILEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	AUGUST		MINIMUM	
		MAXIMUM	MEAN	MAXIMUM	MEAN
4051.-	6000.	154.	0.795	0.574	0.217
4000.-	6000.	157.	0.722	0.492	0.199
8000.-	10000.	157.	0.559	0.399	0.184
10000.-	12000.	157.	0.473	0.317	0.179
12000.-	14000.	157.	0.398	0.244	0.079
14000.-	16000.	156.	0.321	0.186	0.032
16000.-	18000.	155.	0.238	0.138	0.024
18000.-	20000.	156.	0.187	0.097	0.019
20000.-	22000.	154.	0.136	0.064	0.014
22000.-	24000.	154.	0.101	0.041	0.009
24000.-	26000.	153.	0.072	0.029	0.004
26000.-	28000.	150.	0.051	0.019	0.004
28000.-	30000.	148.	0.034	0.015	0.004
30000.-	32000.	145.	0.022	0.008	0.002
32000.-	34000.	135.	0.014	0.005	0.001
34000.-	36000.	93.	0.008	0.003	0.000
36000.-	38000.	56.	0.004	0.001	0.000
38000.-	40000.	24.	0.002	0.001	0.000
40000.-	42000.	5.	0.000	0.000	0.000
42000.-	44000.	0.	0.	0.	0.
44000.-	46000.	0.	0.	0.	0.
46000.-	48000.	0.	0.	0.	0.
48000.-	50000.	0.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967.

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	SEPTEMBER
4051.-	6000.-	121.-	0.748	0.533	0.235
6000.-	8000.-	121.-	0.643	0.437	0.195
8000.-	10000.-	123.-	0.547	0.349	0.168
10000.-	12000.-	121.-	0.446	0.269	0.128
12000.-	14000.-	120.-	0.345	0.199	0.060
14000.-	16000.-	121.-	0.269	0.145	0.013
16000.-	18000.-	117.-	0.211	0.103	0.030
18000.-	20000.-	114.-	0.157	0.069	0.019
20000.-	22000.-	116.-	0.117	0.047	0.003
22000.-	24000.-	114.-	0.090	0.032	0.004
24000.-	26000.-	114.-	0.068	0.022	0.003
26000.-	28000.-	116.-	0.047	0.015	0.003
28000.-	30000.-	117.-	0.031	0.010	0.001
30000.-	32000.-	111.-	0.020	0.007	0.002
32000.-	34000.-	89.-	0.011	0.004	0.001
34000.-	36000.-	50.-	0.008	0.002	0.001
36000.-	38000.-	22.-	0.004	0.001	0.000
38000.-	40000.-	9.-	0.001	0.000	0.000
40000.-	42000.-	1.-	0.000	0.000	0.000
42000.-	44000.-	1.-	0.000	0.-	0.-
44000.-	46000.-	0.-	0.-	0.-	0.-
46000.-	48000.-	0.-	0.-	0.-	0.-
48000.-	50000.-	0.-	0.-	0.-	0.-

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	
				OCTOBER	OCTOBER
4051.-	6000.	142.	0.670	0.148	0.118
6000.-	8000.	143.	0.582	0.260	0.102
8000.-	10000.	144.	0.473	0.214	0.039
10000.-	12000.	145.	0.368	0.160	0.025
12000.-	14000.	139.	0.311	0.112	0.012
14000.-	16000.	136.	0.190	0.074	0.006
16000.-	18000.	130.	0.141	0.052	0.010
18000.-	20000.	125.	0.106	0.037	0.009
20000.-	22000.	123.	0.076	0.027	0.002
22000.-	24000.	125.	0.068	0.019	0.002
24000.-	26000.	124.	0.054	0.013	0.002
26000.-	28000.	123.	0.030	0.009	0.002
28000.-	30000.	120.	0.023	0.006	0.001
30000.-	32000.	109.	0.014	0.004	0.000
32000.-	34000.	76.	0.008	0.002	0.000
34000.-	36000.	35.	0.004	0.001	0.000
36000.-	38000.	12.	0.001	0.000	0.000
38000.-	40000.	5.	0.000	0.000	0.000
40000.-	42000.	2.	0.000	0.000	0.000
42000.-	44000.	0.	0.	0.	0.
44000.-	46000.	0.	0.	0.	0.
46000.-	48000.	0.	0.	0.	0.
48000.-	50000.	0.	0.	0.	0.

**MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
SELECTED LEVELS BY MONTHS  
JALLEN SITE (JALI)  
PERIOD OF RECORD 1962-1967**

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	NOVEMBER
					4051
6000.-	6000.	159.	0.465	0.252	0.120
8000.-	10000.	158.	0.446	0.206	0.090
10000.-	12000.	157.	0.376	0.162	0.058
12000.-	14000.	156.	0.337	0.121	0.038
14000.-	16000.	154.	0.270	0.089	0.022
16000.-	18000.	150.	0.224	0.067	0.017
18000.-	20000.	150.	0.154	0.049	0.008
20000.-	22000.	150.	0.094	0.037	0.005
22000.-	24000.	153.	0.070	0.020	0.001
24000.-	26000.	150.	0.046	0.014	0.002
26000.-	28000.	143.	0.030	0.010	0.002
28000.-	30000.	132.	0.019	0.006	0.002
30000.-	32000.	108.	0.011	0.004	0.001
32000.-	34000.	72.	0.006	0.002	0.000
34000.-	36000.	30.	0.003	0.001	0.000
36000.-	38000.	14.	0.001	0.000	0.000
38000.-	40000.	3.	0.000	0.000	0.000
40000.-	42000.	1.	0.000	0.000	0.000
42000.-	44000.	1.	0.000	0.000	0.000
44000.-	46000.	0.	0.	0.	0.
46000.-	48000.	0.	0.	0.	0.
48000.-	50000.	0.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
SELECTED LEVELS BY MONTHS  
JALLEN SITE (JALI)  
PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	OBSERVATIONS	TOTAL	MAXIMUM	MEAN	MINIMUM
4051.-	6000.	147.	147.	0.453	0.045
6000.-	8000.	147.	0.387	0.171	0.060
8000.-	10000.	148.	0.332	0.130	0.042
10000.-	12000.	146.	0.276	0.096	0.009
12000.-	14000.	144.	0.224	0.070	0.008
14000.-	16000.	140.	0.165	0.050	0.009
16000.-	18000.	136.	0.139	0.035	0.005
18000.-	20000.	134.	0.117	0.025	0.001
20000.-	22000.	130.	0.089	0.018	0.002
22000.-	24000.	129.	0.062	0.013	0.002
24000.-	26000.	126.	0.037	0.006	0.002
26000.-	28000.	119.	0.019	0.005	0.001
28000.-	30000.	94.	0.011	0.003	0.000
30000.-	32000.	49.	0.007	0.002	0.000
32000.-	34000.	15.	0.005	0.001	0.000
34000.-	36000.	4.	0.001	0.000	0.000
36000.-	38000.	2.	0.000	0.	0.
38000.-	40000.	0.	0.	0.	0.
40000.-	42000.	0.	0.	0.	0.
42000.-	44000.	0.	0.	0.	0.
44000.-	46000.	0.	0.	0.	0.
46000.-	48000.	0.	0.	0.	0.
48000.-	50000.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

JANUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	117.	99.	36.	32.	17.
8000.	115.	99.	37.	32.	14.
10000.	115.	95.	34.	30.	14.
12000.	115.	89.	32.	28.	6.
14000.	114.	85.	29.	26.	2.
16000.	112.	80.	29.	27.	3.
18000.	113.	79.	29.	26.	4.
20000.	111.	69.	28.	26.	2.
22000.	111.	78.	28.	26.	2.
24000.	107.	60.	27.	26.	2.
26000.	102.	60.	25.	25.	3.
28000.	78.	58.	23.	22.	2.
30000.	54.	52.	17.	15.	0.
32000.	28.	40.	10.	8.	0.
34000.	10.	22.	7.	5.	0.
36000.	3.	3.	3.	3.	2.
38000.	0.	0.	0.	0.	0.
40000.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

FEBRUARY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	112.	77.	33.	33.	13.
8000.	112.	98.	35.	31.	12.
10000.	112.	99.	35.	31.	4.
12000.	111.	93.	31.	28.	4.
14000.	109.	91.	29.	25.	5.
16000.	108.	71.	26.	24.	6.
18000.	107.	71.	27.	24.	9.
20000.	107.	82.	28.	25.	7.
22000.	106.	87.	29.	25.	5.
24000.	104.	69.	29.	25.	1.
26000.	98.	65.	27.	25.	1.
28000.	84.	56.	22.	21.	2.
30000.	51.	46.	15.	14.	1.
32000.	21.	29.	10.	10.	1.
34000.	6.	20.	7.	5.	1.
36000.	2.	12.	7.	2.	1.
38000.	1.	4.	4.	4.	4.
40000.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

MARCH

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	161.	86.	30.	28.	13.
8000.	161.	99.	32.	29.	15.
10000.	160.	99.	33.	30.	11.
12000.	159.	81.	32.	30.	13.
14000.	159.	96.	31.	28.	10.
16000.	159.	83.	30.	27.	9.
18000.	158.	74.	30.	29.	4.
20000.	155.	69.	30.	27.	4.
22000.	153.	69.	30.	26.	1.
24000.	152.	69.	30.	26.	10.
26000.	142.	74.	30.	27.	4.
28000.	123.	59.	26.	26.	3.
30000.	96.	52.	22.	19.	1.
32000.	62.	43.	15.	13.	1.
34000.	32.	24.	11.	11.	1.
36000.	15.	15.	7.	7.	2.
38000.	5.	46.	12.	4.	1.
40000.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	APRIL			MINIMUM
		MAXIMUM	MEAN	MEDIAN	
6000.	132.	79.	26.	26.	3.
8000.	137.	68.	30.	29.	3.
10000.	136.	94.	31.	30.	11.
12000.	136.	98.	31.	30.	9.
14000.	137.	83.	29.	26.	9.
16000.	133.	99.	30.	25.	1.
18000.	135.	92.	29.	24.	3.
20000.	133.	88.	30.	24.	7.
22000.	132.	98.	31.	23.	1.
24000.	130.	99.	31.	25.	5.
26000.	128.	98.	30.	25.	2.
28000.	127.	90.	29.	25.	1.
30000.	117.	61.	24.	21.	1.
32000.	87.	49.	17.	14.	1.
34000.	50.	31.	11.	10.	1.
36000.	21.	25.	7.	5.	1.
38000.	6.	19.	6.	3.	1.
40000.	1.	13.	13.	13.	13.
42000.	7.	7.	7.	7.	7.
44000.	1.	1.	1.	1.	2.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

MAY

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	125.	74.	31.	29.	9.
8000.	126.	86.	32.	32.	10.
10000.	125.	84.	34.	35.	10.
12000.	125.	84.	35.	37.	10.
14000.	124.	98.	36.	37.	7.
16000.	120.	98.	38.	35.	3.
18000.	120.	98.	36.	34.	3.
20000.	120.	99.	37.	29.	2.
22000.	121.	99.	31.	28.	0.
24000.	120.	99.	32.	29.	0.
26000.	120.	85.	31.	28.	2.
28000.	120.	82.	30.	29.	0.
30000.	119.	78.	27.	26.	5.
32000.	108.	74.	20.	17.	3.
34000.	70.	45.	12.	10.	1.
36000.	32.	21.	6.	3.	1.
38000.	9.	6.	0.	0.	0.
40000.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JUNE			MEDIAN	MINIMUM
		MAXIMUM	MEAN	90%		
6000.	128.	85.	34.	32.	34.	4.
8000.	123.	99.	35.	34.	35.	4.
10000.	128.	99.	37.	35.	37.	1.
12000.	128.	94.	39.	37.	2.	6.
14000.	127.	99.	41.	41.	41.	6.
16000.	126.	99.	42.	42.	42.	6.
18000.	124.	99.	39.	37.	2.	2.
20000.	122.	99.	34.	32.	2.	2.
22000.	122.	99.	31.	29.	3.	3.
24000.	122.	65.	29.	27.	2.	6.
26000.	119.	75.	30.	29.	1.	1.
28000.	117.	87.	29.	29.	1.	1.
30000.	109.	80.	29.	29.	1.	1.
32000.	98.	61.	27.	26.	1.	1.
34000.	89.	55.	19.	17.	0.	0.
36000.	52.	38.	13.	11.	0.	0.
38000.	28.	23.	8.	8.	0.	0.
40000.	12.	11.	4.	3.	6.	6.
42000.	1.	6.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JULY			MINIMUM
		MAXIMUM	MEAN	MEDIAN	
6000.	150.	80.	47.	46.	21.
8000.	150.	86.	50.	49.	27.
10000.	150.	87.	53.	52.	27.
12000.	150.	96.	57.	55.	15.
14000.	150.	99.	59.	59.	10.
16000.	149.	99.	61.	61.	16.
18000.	148.	99.	59.	60.	16.
20000.	147.	99.	55.	55.	3.
22000.	146.	98.	47.	45.	10.
24000.	146.	92.	41.	39.	8.
26000.	144.	98.	37.	36.	8.
28000.	142.	72.	36.	35.	1.
30000.	142.	67.	33.	34.	1.
32000.	136.	73.	33.	33.	1.
34000.	134.	60.	31.	32.	5.
36000.	121.	49.	22.	23.	1.
38000.	86.	31.	13.	13.	1.
40000.	46.	18.	8.	8.	1.
42000.	14.	12.	5.	5.	1.
44000.	3.	6.	4.	5.	1.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	157.	87.	49.	50.	16.
8000.	157.	99.	52.	53.	4.
10000.	157.	96.	55.	54.	25.
12000.	157.	99.	57.	56.	24.
14000.	157.	99.	58.	56.	10.
16000.	156.	99.	59.	59.	10.
18000.	156.	99.	58.	59.	10.
20000.	156.	99.	50.	48.	10.
22000.	154.	99.	41.	38.	10.
24000.	154.	99.	37.	36.	4.
26000.	154.	93.	37.	36.	1.
28000.	150.	92.	35.	35.	6.
30000.	148.	95.	34.	34.	10.
32000.	148.	71.	33.	34.	3.
34000.	135.	67.	29.	31.	2.
36000.	93.	53.	19.	18.	1.
38000.	56.	37.	12.	13.	1.
40000.	24.	21.	8.	8.	2.
42000.	5.	5.	4.	5.	4.
44000.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SEPTEMBER			MINIMUM
		MAXIMUM	MEAN	MEDIAN	
6000.	122.	99.	52.	51.	18.
8000.	123.	99.	54.	53.	25.
10000.	123.	99.	56.	55.	29.
12000.	122.	99.	55.	55.	7.
14000.	122.	99.	54.	54.	9.
16000.	122.	99.	51.	50.	2.
18000.	118.	95.	44.	40.	10.
20000.	118.	92.	38.	33.	1.
22000.	116.	99.	36.	32.	3.
24000.	116.	92.	33.	31.	2.
26000.	117.	80.	33.	31.	6.
28000.	117.	74.	33.	31.	9.
30000.	117.	83.	34.	32.	7.
32000.	112.	76.	31.	31.	2.
34000.	89.	70.	24.	22.	1.
36000.	50.	46.	15.	14.	1.
38000.	22.	27.	12.	9.	1.
40000.	9.	13.	5.	4.	1.
42000.	1.	7.	7.	7.	7.
44000.	1.	2.	2.	2.	2.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM	
					OCTOBER	1967
6000.	145.	89.	40.	37.	18.	17.
8000.	145.	95.	42.	38.	17.	12.
10000.	145.	99.	42.	37.	12.	5.
12000.	145.	98.	39.	35.	5.	5.
14000.	139.	94.	34.	31.	1.	1.
16000.	136.	78.	29.	29.	1.	1.
18000.	130.	67.	28.	27.	1.	1.
20000.	126.	64.	27.	27.	8.	8.
22000.	125.	78.	28.	28.	3.	3.
24000.	125.	93.	29.	29.	3.	3.
26000.	125.	92.	30.	29.	1.	1.
28000.	123.	63.	31.	30.	10.	10.
30000.	121.	65.	30.	30.	3.	3.
32000.	110.	61.	22.	22.	1.	1.
34000.	76.	46.	15.	12.	1.	1.
36000.	35.	25.	11.	9.	1.	1.
38000.	12.	16.	9.	6.	2.	2.
40000.	5.	9.	6.	7.	1.	1.
42000.	2.	2.	2.	2.	0.	0.
44000.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

NOVEMBER

GEOMETRIC ALTITUDE MSL. FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM
6000.	159.	99.	40.	38.	18.
8000.	159.	99.	41.	38.	13.
10000.	157.	99.	39.	35.	10.
12000.	156.	99.	36.	31.	10.
14000.	155.	99.	34.	30.	7.
16000.	150.	99.	33.	28.	8.
18000.	153.	91.	32.	28.	1.
20000.	152.	99.	34.	28.	9.
22000.	154.	99.	34.	29.	1.
24000.	153.	99.	36.	31.	6.
26000.	151.	98.	36.	32.	2.
28000.	143.	90.	36.	31.	2.
30000.	132.	85.	33.	30.	2.
32000.	105.	73.	24.	22.	2.
34000.	72.	72.	17.	15.	1.
36000.	30.	32.	12.	10.	1.
38000.	14.	24.	9.	5.	1.
40000.	3.	17.	10.	9.	4.
42000.	1.	11.	11.	11.	11.
44000.	1.	5.	5.	5.	5.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY MONTHS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

DECEMBER

GEOMETRIC ALTITUDE HSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM										
						1962-1967									
6000.		147.	98.	45.	43.	17.	13.	13.	13.	13.	13.	13.	13.	13.	13.
8000.		148.	99.	45.	40.	13.	13.	13.	13.	13.	13.	13.	13.	13.	13.
10000.		148.	99.	42.	35.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
12000.		145.	99.	37.	29.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
14000.		143.	99.	35.	29.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
16000.		139.	91.	30.	26.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
18000.		137.	93.	29.	27.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
20000.		133.	95.	31.	29.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
22000.		129.	94.	32.	29.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
24000.		128.	98.	32.	28.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
26000.		127.	84.	30.	28.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
28000.		118.	72.	28.	26.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
30000.		94.	60.	22.	19.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
32000.		49.	63.	15.	13.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
34000.		15.	27.	10.	9.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
36000.		4.	10.	6.	6.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
38000.		2.	3.	2.	2.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
40000.		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JALI)

PERIOD OF RECORD 1962-1967

JANUARY

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)									
		≤ 10	< 20	< 30	< 40	< 50	< 60	< 70	< 80	< 90	≤ 100
6000.	117.	0.	1.	36.	43.	9.	3.	3.	0.	3.	0.
8000.	115.	0.	2.	37.	37.	13.	3.	3.	0.	1.	3.
10000.	115.	0.	9.	42.	27.	10.	6.	2.	1.	2.	0.
12000.	115.	2.	14.	38.	24.	10.	2.	6.	2.	0.	0.
14000.	114.	4.	12.	47.	19.	10.	2.	4.	1.	1.	0.
16000.	112.	2.	13.	43.	25.	8.	4.	4.	0.	0.	0.
18000.	113.	2.	15.	49.	21.	6.	4.	1.	2.	0.	0.
20000.	111.	2.	12.	55.	17.	3.	0.	3.	0.	0.	0.
22000.	111.	3.	12.	54.	23.	5.	2.	2.	0.	0.	0.
24000.	107.	3.	12.	57.	17.	7.	4.	1.	0.	0.	0.
26000.	102.	6.	24.	43.	18.	5.	4.	1.	0.	0.	0.
28000.	78.	14.	23.	41.	12.	8.	3.	0.	0.	0.	0.
30000.	54.	35.	26.	26.	11.	0.	2.	0.	0.	0.	0.
32000.	28.	54.	39.	4.	0.	0.	0.	0.	0.	0.	0.
34000.	10.	70.	20.	10.	0.	0.	0.	0.	0.	0.	0.
36000.	3.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
38000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

FEBRUARY

RELATIVE HUMIDITY (IN PER CENT)

GEOMETRIC ALTITUDE  
MSL FEET

	TOTAL OBSERVATIONS	< 10	≥ 10 - < 20	≥ 20 - < 30	≥ 30 - < 40	≥ 40 - < 50	≥ 50 - < 60	≥ 60 - < 70	≥ 70 - < 80	≥ 80 - < 90	≥ 90 - ≤ 100
6000.	112.	0.	4.	37.	34.	15.	6.	2.	1.	0.	0.
8000.	112.	0.	5.	43.	18.	19.	10.	3.	1.	1.	1.
10000.	112.	1.	16.	29.	25.	12.	7.	3.	5.	1.	1.
12000.	111.	1.	26.	30.	19.	8.	5.	3.	0.	1.	1.
14000.	109.	1.	26.	35.	23.	6.	6.	2.	0.	0.	0.
16000.	108.	1.	34.	37.	19.	3.	2.	2.	0.	0.	0.
18000.	107.	1.	30.	38.	17.	7.	1.	6.	0.	0.	0.
20000.	107.	1.	20.	44.	25.	1.	4.	4.	0.	0.	0.
22000.	105.	2.	18.	41.	23.	5.	8.	0.	0.	0.	0.
24000.	104.	2.	17.	47.	12.	10.	9.	4.	0.	0.	0.
26000.	98.	3.	21.	44.	16.	9.	4.	2.	0.	0.	0.
28000.	84.	19.	29.	27.	12.	11.	2.	0.	0.	0.	0.
30000.	51.	35.	35.	18.	8.	4.	0.	0.	0.	0.	0.
32000.	21.	52.	38.	10.	0.	0.	0.	0.	0.	0.	0.
34000.	6.	67.	17.	17.	0.	0.	0.	0.	0.	0.	0.
36000.	2.	50.	50.	0.	0.	0.	0.	0.	0.	0.	0.
38000.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

MARCH

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	161.	0.	13.	45.	26.	9.	4.	4.	1.	1.	0.
8000.	161.	0.	1.	41.	26.	14.	4.	4.	1.	1.	0.
10000.	160.	0.	9.	40.	27.	12.	5.	4.	3.	3.	0.
12000.	159.	0.	18.	33.	24.	12.	7.	3.	2.	2.	0.
14000.	159.	0.	21.	33.	24.	13.	4.	3.	3.	3.	0.
16000.	159.	1.	23.	33.	23.	8.	7.	3.	3.	3.	0.
18000.	158.	1.	23.	31.	26.	11.	4.	3.	3.	2.	0.
20000.	155.	1.	16.	37.	25.	11.	7.	2.	2.	2.	0.
22000.	153.	1.	10.	48.	23.	8.	7.	3.	3.	1.	0.
24000.	152.	0.	13.	48.	18.	9.	8.	3.	3.	1.	0.
26000.	142.	2.	14.	44.	15.	12.	11.	0.	0.	0.	0.
28000.	123.	11.	14.	38.	15.	13.	9.	0.	0.	0.	0.
30000.	96.	18.	35.	18.	15.	11.	3.	0.	0.	0.	0.
32000.	62.	40.	26.	19.	13.	2.	0.	0.	0.	0.	0.
34000.	32.	44.	44.	13.	0.	0.	0.	0.	0.	0.	0.
36000.	15.	73.	27.	0.	0.	0.	0.	0.	0.	0.	0.
38000.	5.	80.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

APRIL

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (IN PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	139.	0.	26.	39.	20.	9.	4.	4.	4.	0.	0.
8000.	137.	1.	17.	35.	30.	10.	4.	1.	1.	0.	0.
10000.	136.	0.	15.	35.	29.	15.	4.	2.	1.	0.	0.
12000.	136.	1.	18.	32.	26.	15.	4.	1.	1.	0.	0.
14000.	135.	1.	28.	29.	19.	13.	6.	1.	1.	0.	0.
16000.	133.	1.	33.	29.	14.	11.	5.	5.	1.	0.	0.
18000.	125.	2.	28.	36.	13.	7.	7.	3.	1.	0.	0.
20000.	133.	1.	29.	32.	13.	11.	8.	4.	2.	0.	0.
22000.	132.	2.	27.	36.	11.	11.	4.	1.	1.	0.	0.
24000.	130.	1.	22.	42.	15.	9.	3.	6.	2.	0.	0.
26000.	128.	1.	17.	48.	16.	7.	5.	5.	1.	0.	0.
28000.	127.	3.	21.	40.	16.	9.	8.	4.	2.	0.	0.
30000.	117.	13.	32.	23.	15.	11.	0.	0.	0.	0.	0.
32000.	87.	31.	38.	11.	17.	2.	0.	0.	0.	0.	0.
34000.	50.	50.	36.	12.	2.	0.	0.	0.	0.	0.	0.
36000.	21.	67.	23.	5.	0.	0.	0.	0.	0.	0.	0.
38000.	6.	83.	17.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	1.	0.	100.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	1.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JALI)

PERIOD OF RECORD 1962-1967

MAY

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBservATIONS	RELATIVE HUMIDITY (PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	125.	1.	30.	23.	17.	18.	10.	0.	0.	0.	0.
8000.	126.	0.	23.	24.	27.	11.	13.	1.	1.	0.	0.
10000.	125.	0.	18.	21.	27.	22.	10.	2.	1.	0.	0.
12000.	125.	0.	14.	24.	21.	30.	10.	1.	1.	1.	1.
14000.	124.	2.	15.	16.	22.	25.	13.	6.	0.	0.	2.
16000.	120.	2.	17.	17.	23.	14.	12.	2.	2.	2.	2.
18000.	120.	2.	16.	25.	24.	11.	7.	6.	2.	2.	2.
20000.	120.	2.	19.	32.	22.	9.	3.	5.	2.	0.	0.
22000.	121.	2.	21.	35.	21.	7.	5.	2.	0.	0.	0.
24000.	120.	1.	18.	34.	22.	11.	7.	2.	2.	0.	0.
26000.	120.	2.	19.	32.	22.	14.	8.	1.	0.	0.	0.
28000.	120.	1.	20.	30.	24.	18.	5.	0.	0.	0.	0.
30000.	119.	3.	29.	27.	24.	12.	4.	0.	0.	0.	0.
32000.	108.	18.	43.	20.	8.	6.	5.	0.	0.	0.	0.
34000.	70.	51.	30.	10.	7.	1.	0.	0.	0.	0.	0.
36000.	32.	78.	16.	6.	0.	0.	0.	0.	0.	0.	0.
38000.	9.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

JUNE

RELATIVE HUMIDITY (IN PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (IN PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
60000.	128.	1.	17.	26.	24.	14.	12.	0.	2.	0.	0.
58000.	128.	1.	12.	23.	29.	20.	9.	0.	1.	1.	1.
100000.	128.	1.	10.	23.	27.	22.	8.	5.	2.	2.	2.
120000.	128.	1.	9.	19.	27.	23.	10.	7.	1.	1.	1.
140000.	127.	1.	10.	14.	22.	27.	13.	6.	6.	3.	2.
160000.	126.	1.	16.	12.	17.	21.	17.	7.	3.	2.	2.
182400.	124.	1.	21.	21.	13.	18.	12.	6.	2.	2.	2.
200000.	122.	2.	20.	25.	22.	17.	6.	2.	2.	0.	0.
220000.	122.	3.	20.	30.	24.	13.	5.	3.	3.	0.	0.
240000.	122.	2.	16.	39.	25.	10.	5.	0.	1.	1.	0.
260000.	119.	2.	13.	40.	28.	10.	4.	0.	1.	1.	0.
280000.	117.	3.	13.	41.	27.	11.	3.	3.	2.	2.	0.
300000.	109.	3.	12.	41.	32.	6.	3.	2.	0.	0.	0.
320000.	98.	3.	21.	40.	28.	4.	2.	0.	0.	0.	0.
340000.	89.	22.	38.	24.	9.	6.	1.	0.	0.	0.	0.
360000.	52.	44.	40.	10.	6.	0.	0.	0.	0.	0.	0.
380000.	28.	61.	32.	7.	0.	0.	0.	0.	0.	0.	0.
400000.	12.	83.	17.	0.	0.	0.	0.	0.	0.	0.	0.
420000.	1.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
440000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
460000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
480000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
500000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

## RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

JULY

## RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	150.	0.	0.	4.	19.	43.	19.	11.	3.	1.	0.
8000.	150.	0.	0.	2.	11.	43.	27.	11.	5.	1.	0.
10000.	150.	0.	0.	1.	6.	33.	33.	21.	4.	2.	0.
12000.	150.	0.	1.	0.	5.	23.	34.	19.	4.	1.	5.
14000.	150.	0.	1.	3.	5.	14.	33.	23.	13.	4.	5.
149.	149.	0.	1.	2.	6.	13.	26.	26.	14.	8.	4.
148.	148.	0.	2.	3.	11.	15.	19.	22.	14.	6.	8.
147.	147.	1.	3.	6.	12.	20.	16.	17.	14.	5.	4.
146.	146.	0.	4.	14.	22.	18.	16.	13.	6.	3.	1.
22000.	146.	0.	6.	25.	23.	16.	16.	10.	2.	0.	0.
24000.	144.	1.	6.	28.	26.	17.	13.	6.	1.	0.	0.
26000.	142.	2.	6.	26.	32.	19.	11.	4.	1.	0.	0.
28000.	142.	4.	4.	29.	40.	17.	4.	2.	0.	0.	0.
30000.	136.	2.	6.	24.	49.	13.	4.	1.	0.	0.	0.
32000.	134.	1.	7.	33.	44.	10.	3.	1.	0.	0.	0.
34000.	121.	12.	24.	45.	13.	7.	0.	0.	0.	0.	0.
36000.	86.	30.	51.	17.	1.	0.	0.	0.	0.	0.	0.
38000.	46.	65.	35.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	14.	86.	14.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	3.	106.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

AUGUST

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE M.S.L. FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)							
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80
6000.	157.	0.	3.	3.	15.	27.	33.	33.	15.
8000.	157.	1.	5.	10.	23.	38.	15.	6.	1.
10000.	157.	0.	0.	4.	7.	24.	31.	19.	11.
12000.	157.	0.	0.	2.	10.	18.	32.	15.	1.
14000.	157.	0.	1.	2.	7.	18.	32.	17.	7.
156.	156.	0.	1.	5.	6.	15.	24.	22.	5.
156.	156.	0.	3.	5.	12.	11.	20.	21.	9.
156.	156.	0.	7.	9.	17.	22.	15.	10.	5.
154.	154.	0.	12.	16.	29.	16.	12.	5.	3.
154.	154.	1.	18.	12.	32.	20.	7.	3.	2.
154.	154.	1.	15.	16.	31.	19.	12.	1.	1.
150.	150.	1.	14.	23.	30.	17.	7.	2.	1.
148.	148.	0.	12.	23.	36.	18.	5.	1.	1.
148.	148.	5.	9.	20.	44.	14.	3.	5.	1.
135.	135.	10.	13.	23.	34.	16.	3.	2.	0.
93.	93.	20.	32.	27.	15.	4.	1.	0.	0.
56.	56.	37.	46.	12.	4.	0.	0.	0.	0.
24.	24.	71.	25.	4.	0.	0.	0.	0.	0.
5.	5.	100.	0.	0.	0.	0.	0.	0.	0.
44000.	44000.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	46000.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	48000.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	50000.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

SEPTEMBER

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)							
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80
6000.	122.	0.	1.	2.	16.	25.	30.	16.	4.
8000.	123.	0.	0.	1.	12.	26.	32.	15.	8.
10000.	123.	0.	0.	1.	8.	28.	33.	15.	9.
12000.	122.	1.	2.	2.	7.	22.	34.	18.	7.
14000.	122.	1.	2.	3.	11.	20.	27.	19.	9.
16000.	122.	2.	3.	10.	14.	20.	19.	13.	8.
18000.	118.	0.	8.	21.	21.	18.	10.	6.	8.
20000.	118.	3.	8.	31.	25.	9.	8.	7.	5.
22000.	116.	1.	14.	28.	28.	9.	7.	7.	4.
24000.	116.	2.	15.	31.	29.	8.	7.	3.	2.
26000.	117.	1.	12.	34.	30.	10.	6.	2.	1.
28000.	117.	1.	12.	33.	32.	6.	8.	5.	3.
30000.	117.	1.	10.	30.	35.	10.	8.	3.	1.
32000.	112.	4.	12.	26.	34.	16.	3.	4.	1.
34000.	89.	17.	27.	25.	17.	10.	1.	2.	0.
36000.	50.	38.	30.	22.	2.	8.	0.	0.	0.
38000.	22.	59.	23.	18.	0.	0.	0.	0.	0.
40000.	9.	78.	22.	0.	0.	0.	0.	0.	0.
42000.	1.	100.	0.	0.	0.	0.	0.	0.	0.
44000.	1.	100.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.

## RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

OCTOBER

## RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	145.	0.	1.	12.	49.	21.	8.	3.	1.	4.	0.
8000.	145.	0.	1.	15.	45.	17.	10.	6.	3.	2.	3.
10000.	145.	0.	3.	15.	45.	12.	6.	7.	6.	1.	4.
12000.	145.	2.	8.	21.	33.	14.	7.	3.	5.	4.	2.
14000.	139.	4.	12.	32.	27.	11.	4.	7.	2.	1.	1.
16000.	136.	5.	12.	40.	27.	7.	5.	1.	2.	0.	0.
18000.	130.	3.	17.	45.	23.	6.	2.	2.	0.	0.	0.
20000.	126.	1.	16.	48.	29.	5.	2.	1.	0.	0.	0.
22000.	125.	3.	13.	45.	29.	7.	2.	0.	0.	0.	0.
24000.	125.	3.	8.	47.	30.	8.	0.	1.	1.	0.	0.
26000.	125.	3.	8.	42.	35.	6.	3.	2.	0.	1.	0.
28000.	123.	0.	7.	45.	34.	7.	6.	2.	0.	0.	0.
30000.	121.	2.	7.	43.	37.	5.	4.	2.	0.	0.	0.
32000.	110.	15.	29.	32.	19.	3.	1.	1.	0.	0.	0.
34000.	76.	39.	30.	20.	8.	3.	0.	0.	0.	0.	0.
36000.	35.	54.	23.	23.	0.	0.	0.	0.	0.	0.	0.
38000.	12.	58.	42.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	5.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	2.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

NOVEMBER

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	159.	0.	1.	13.	47.	21.	9.	5.	2.	1.	3.
8000.	159.	0.	5.	18.	35.	19.	3.	4.	4.	3.	3.
10000.	157.	0.	9.	24.	32.	13.	9.	4.	4.	3.	3.
12000.	156.	0.	16.	31.	24.	12.	4.	2.	3.	1.	6.
14000.	155.	1.	16.	35.	24.	10.	4.	3.	1.	2.	5.
16000.	150.	1.	16.	41.	19.	7.	3.	1.	2.	3.	3.
18000.	153.	2.	14.	39.	24.	8.	7.	1.	3.	1.	2.
20000.	152.	1.	11.	46.	16.	11.	5.	3.	3.	1.	1.
22000.	154.	1.	9.	42.	24.	7.	6.	1.	4.	3.	2.
24000.	153.	2.	7.	37.	27.	8.	6.	2.	6.	1.	3.
26000.	151.	2.	7.	34.	30.	8.	6.	2.	5.	1.	3.
28000.	143.	1.	6.	36.	27.	12.	8.	6.	2.	2.	1.
30000.	132.	2.	14.	35.	24.	11.	8.	4.	2.	1.	0.
32000.	109.	17.	28.	23.	15.	10.	6.	1.	1.	0.	0.
34000.	72.	33.	32.	17.	11.	6.	0.	0.	0.	0.	0.
36000.	30.	47.	33.	10.	10.	0.	0.	0.	0.	0.	0.
38000.	14.	64.	29.	7.	0.	0.	0.	0.	0.	0.	0.
40000.	3.	67.	33.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	1.	0.	100.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	1.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

DECEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)								
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90
6000.	147.	0.	1.	20.	24.	22.	18.	5.	2.	3.
8000.	148.	0.	5.	20.	26.	15.	13.	7.	5.	3.
10000.	148.	3.	19.	19.	16.	9.	5.	8.	4.	8.
12000.	145.	4.	23.	23.	16.	9.	4.	4.	5.	6.
14000.	143.	3.	26.	23.	21.	8.	4.	3.	4.	4.
16000.	139.	4.	26.	33.	14.	10.	6.	2.	2.	1.
18000.	137.	3.	22.	39.	18.	11.	3.	1.	0.	1.
20000.	133.	2.	17.	40.	21.	13.	3.	2.	2.	1.
22000.	129.	2.	13.	41.	20.	13.	5.	2.	2.	1.
24000.	128.	2.	13.	40.	22.	13.	4.	2.	2.	1.
26000.	127.	5.	14.	43.	19.	10.	5.	2.	2.	0.
28000.	118.	7.	19.	36.	22.	9.	6.	0.	0.	0.
30000.	94.	20.	34.	18.	13.	7.	6.	1.	0.	0.
32000.	49.	45.	29.	16.	6.	2.	0.	0.	0.	0.
34000.	15.	60.	33.	7.	0.	0.	0.	0.	0.	0.
36000.	4.	75.	25.	0.	0.	0.	0.	0.	0.	0.
38000.	2.	100.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

**MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS**  
**BY SEASONS**  
**JALLEN SITE (JAL)**  
**PERIOD OF RECORD 1962-1967**

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	WINTER	
		MAXIMUM	MEAN
6000-	375-	6.779	2.590
8000-	374-	6.354	2.200
10000-	376-	5.725	1.744
12000-	372-	5.140	1.355
14000-	367-	4.138	1.040
16000-	360-	3.413	0.792
18000-	358-	3.226	0.603
20000-	352-	2.693	0.469
22000-	347-	2.178	0.350
24000-	340-	1.534	0.255
26000-	328-	1.570	0.175
28000-	281-	0.459	0.114
30000-	199-	0.304	0.067
32000-	98-	0.294	0.032
34000-	31-	0.078	0.015
36000-	9-	0.016	0.006
38000-	3-	0.003	0.002
40000-	0-	0-	0-
42000-	0-	0-	0-
44000-	0-	0-	0-
46000-	0-	0-	0-
48000-	0-	0-	0-
50000-	0-	0-	0-

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SPRING	
		MAXIMUM	MEAN
6000.	425.	11.348	3.402
8000.	424.	8.474	2.867
10000.	421.	6.513	2.340
12000.	420.	6.457	1.847
14000.	418.	6.099	1.437
16000.	412.	5.233	1.132
18000.	413.	4.464	0.846
20000.	408.	3.857	0.635
22000.	406.	3.339	0.474
24000.	402.	2.875	0.356
26000.	390.	1.512	0.253
28000.	370.	1.091	0.174
30000.	332.	0.657	0.109
32000.	257.	0.383	0.058
34000.	152.	0.214	0.026
36000.	68.	0.046	0.009
38000.	20.	0.030	0.005
40000.	1.	0.018	0.018
42000.	1.	0.008	0.008
44000.	1.	0.001	0.001
46000.	0.	0.	0.
48000.	0.	0.	0.
50000.	0.	0.	0.

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
 BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SUMMER		MEAN	MINIMUM
		MAXIMUM	MEAN		
6000.	434-	14.642	8.609	1.326	0.570
8000.	430-	11.772	7.413	0.121	0.121
10000.	433-	9.879	6.267	0.137	0.137
12000.	433-	9.393	5.219	0.415	0.415
14000.	432-	8.404	4.249	0.448	0.448
16000.	429-	6.152	3.417	0.103	0.103
18000.	424-	5.399	2.632	0.052	0.052
20000.	422-	4.302	1.900	0.087	0.087
22000.	420-	3.351	1.323	0.043	0.043
24000.	420-	2.628	0.928	0.017	0.017
26000.	415-	2.068	0.687	0.008	0.008
28000.	407-	1.444	0.485	0.005	0.005
30000.	399-	1.012	0.339	0.006	0.006
32000.	380-	0.680	0.233	0.003	0.003
34000.	356-	0.436	0.145	0.002	0.002
36000.	265-	0.266	0.074	0.001	0.001
38000.	170-	0.121	0.031	0.001	0.001
40000.	82-	0.043	0.012	0.001	0.001
42000.	20-	0.016	0.005	0.001	0.001
44000.	3-	0.005	0-	0-	0-
46000.	0-	0-	0-	0-	0-
48000.	0-	0-	0-	0-	0-
50000.	0-	0-	0-	0-	0-

MEAN AND EXTREME UPPER AIR MIXING RATIOS (GRAMS/KILOGRAM) AT SELECTED LEVELS  
BY SEASONS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MINIMUM	
				FALL	SPRING
6000.	423.	12.021	5.490	1.727	0.814
8000.	426.	11.013	4.733	0.630	0.630
10000.	425.	9.568	3.918	0.275	0.275
12000.	422.	8.408	3.038	0.279	0.279
14000.	415.	6.645	1.317	0.648	0.648
16000.	407.	5.621	1.772	0.312	0.312
18000.	400.	4.806	1.312	0.042	0.042
20000.	396.	3.518	1.014	0.015	0.015
22000.	395.	2.854	0.769	0.575	0.052
24000.	394.	2.382	0.423	0.423	0.012
26000.	393.	1.812	0.305	0.305	0.018
28000.	383.	1.286	0.918	0.213	0.009
30000.	369.	0.918	0.568	0.130	0.002
32000.	331.	0.568	0.377	0.073	0.001
34000.	237.	0.377	0.038	0.038	0.001
36000.	115.	0.265	0.124	0.021	0.001
38000.	48.	0.002	0.025	0.008	0.001
40000.	17.	0.009	0.004	0.004	0.001
42000.	4.	0.002	0.001	0.001	0.001
44000.	2.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JALI)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	WINTER	
		MAXIMUM	MEAN
4051.-	6000.	353.	0.485
6000.-	6000.	373.	0.387
8000.-	10000.	374.	0.332
10000.-	12000.	371.	0.278
12000.-	14000.	367.	0.224
14000.-	16000.	358.	0.165
16000.-	18000.	355.	0.139
18000.-	20000.	352.	0.117
20000.-	22000.	345.	0.089
22000.-	24000.	339.	0.062
24000.-	26000.	326.	0.037
26000.-	28000.	281.	0.026
28000.-	30000.	199.	0.011
30000.-	32000.	98.	0.007
32000.-	34000.	31.	0.005
34000.-	36000.	9.	0.001
36000.-	38000.	3.	0.000
38000.-	40000.	0.	0.
40000.-	42000.	0.	0.
42000.-	44000.	0.	0.
44000.-	46000.	0.	0.
46000.-	48000.	0.	0.
48000.-	50000.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SPRING		MEAN MINIMUM
		MAXIMUM	MEAN	
4051.-	6000.	414.	0.678	0.063
6000.-	6000.	421.	0.556	0.029
60.00.-	10000.	421.	0.359	0.020
10000.-	12000.	419.	0.312	0.018
12000.-	14000.	417.	0.300	0.017
14000.-	16000.	410.	0.254	0.007
16000.-	18000.	410.	0.202	0.005
18000.-	20000.	407.	0.162	0.003
20000.-	22000.	405.	0.132	0.001
22000.-	24000.	399.	0.106	0.001
24000.-	26000.	389.	0.071	0.001
26000.-	28000.	369.	0.040	0.001
28000.-	30000.	332.	0.025	0.001
30000.-	32000.	257.	0.014	0.000
32000.-	34000.	152.	0.007	0.000
34000.-	36000.	68.	0.002	0.000
36000.-	38000.	20.	0.001	0.000
38000.-	40000.	1.	0.000	0.000
40000.-	42000.	1.	0.000	0.000
42000.-	44000.	1.	0.000	0.000
44000.-	46000.	0.	0.	0.
46000.-	48000.	0.	0.	0.
48000.-	50000.	0.	0.	0.

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
 SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SUMMER		MINIMUM
		MAXIMUM	MEAN	
4051.-	6000.	430.-	0.898	0.094
6000.-	8000.-	430.-	0.722	0.053
8000.-	10000.-	430.-	0.559	0.018
10000.-	12000.-	433.-	0.473	0.068
12000.-	14000.-	432.-	0.398	0.014
14000.-	16000.-	428.-	0.321	0.023
16000.-	18000.-	423.-	0.238	0.012
18000.-	20000.-	421.-	0.188	0.015
20000.-	22000.-	418.-	0.138	0.004
22000.-	24000.-	419.-	0.101	0.003
24000.-	26000.-	414.-	0.072	0.002
26000.-	28000.-	404.-	0.051	0.003
28000.-	30000.-	397.-	0.034	0.001
30000.-	32000.-	377.-	0.022	0.001
32000.-	34000.-	356.-	0.014	0.001
34000.-	36000.-	264.-	0.008	0.000
36000.-	38000.-	170.-	0.004	0.000
38000.-	40000.-	82.-	0.002	0.001
40000.-	42000.-	20.-	0.001	0.000
42000.-	44000.-	3.-	0.000	0.000
44000.-	46000.-	0.-	0.-	0.-
46000.-	48000.-	0.-	0.-	0.-
48000.-	50000.-	0.-	0.-	0.-

MEAN AND EXTREME UPPER AIR PRECIPITABLE WATER (CENTIMETERS) BETWEEN  
SELECTED LEVELS BY SEASONS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	FALL		MINIMUM
		MAXIMUM	MEAN	
4051.- 6000.	422.	0.748	0.355	0.120
6000.- 8000.	422.	0.643	0.293	0.090
8000.- 10000.	424.	0.547	0.234	0.058
10000.- 12000.	422.	0.446	0.177	0.038
12000.- 14000.	413.	0.345	0.129	0.022
14000.- 16000.	407.	0.269	0.092	0.012
16000.- 18000.	397.	0.211	0.066	0.006
18000.- 20000.	389.	0.157	0.046	0.005
20000.- 22000.	389.	0.117	0.033	0.003
22000.- 24000.	392.	0.090	0.023	0.001
24000.- 26000.	388.	0.068	0.016	0.002
26000.- 28000.	382.	0.047	0.011	0.002
28000.- 30000.	369.	0.031	0.007	0.001
30000.- 32000.	328.	0.020	0.005	0.001
32000.- 34000.	237.	0.014	0.003	0.000
34000.- 36000.	115.	0.008	0.002	0.000
36000.- 38000.	48.	0.004	0.001	0.000
38000.- 40000.	17.	0.001	0.000	0.000
40000.- 42000.	4.	0.000	0.000	0.000
42000.- 44000.	2.	0.000	0.000	0.000
44000.- 46000.	0.	0.	0.	0.
46000.- 48000.	0.	0.	0.	0.
48000.- 50000.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY SEASONS

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	WINTER			SUMMER		
		MAXIMUM	MEAN	MEDIAN	MAXIMUM	MEAN	MEDIAN
6000.	376.	99.	39.	35.	13.	12.	12.
8000.	375.	99.	39.	34.	34.	32.	4.
10000.	375.	99.	37.	32.	32.	28.	1.
12000.	371.	99.	34.	28.	28.	27.	2.
14000.	366.	99.	31.	27.	27.	25.	2.
16000.	359.	91.	29.	25.	25.	25.	1.
18000.	357.	93.	28.	25.	25.	26.	2.
20000.	351.	95.	29.	26.	26.	27.	1.
22000.	346.	94.	30.	27.	27.	26.	1.
24000.	339.	98.	30.	27.	25.	25.	1.
26000.	327.	84.	27.	25.	24.	24.	2.
28000.	280.	72.	25.	25.	24.	24.	2.
30000.	199.	60.	17.	17.	17.	17.	1.
32000.	98.	63.	12.	11.	11.	11.	1.
34000.	31.	27.	8.	7.	7.	7.	1.
36000.	9.	12.	5.	4.	4.	4.	1.
38000.	3.	4.	3.	3.	3.	3.	1.
40000.	0.	0.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES ( PER CENT )  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE ( JAL )

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	MEDIAN	MINIMUM	SPRING
						PERIOD OF RECORD
6000.	425.	88.	30.	28.	9.	
8000.	424.	99.	32.	30.	3.	
10000.	421.	99.	33.	31.	10.	
12000.	420.	98.	33.	31.	9.	
14000.	418.	98.	32.	30.	7.	
16000.	412.	99.	32.	29.	1.	
18000.	413.	98.	31.	28.	3.	
20000.	408.	99.	31.	27.	2.	
22000.	406.	99.	30.	26.	1.	
24000.	402.	99.	31.	26.	5.	
26000.	390.	98.	30.	27.	2.	
28000.	370.	90.	29.	26.	1.	
30000.	332.	78.	25.	23.	1.	
32000.	257.	74.	18.	15.	1.	
34000.	152.	45.	12.	10.	1.	
36000.	68.	25.	7.	6.	1.	
38000.	20.	46.	6.	3.	1.	
40000.	1.	13.	13.	13.	13.	
42000.	1.	7.	7.	7.	7.	
44000.	1.	1.	1.	1.	1.	
45000.	0.	0.	0.	0.	0.	
46000.	0.	0.	0.	0.	0.	
50000.	0.	0.	0.	0.	0.	

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SUMMER			MINIMUM
		MAXIMUM	MEAN	MEDIAN	
6000.	435.	87.	44.	45.	8.
8000.	435.	99.	46.	47.	4.
10000.	435.	99.	49.	50.	1.
12000.	435.	99.	52.	51.	2.
14000.	434.	99.	54.	54.	6.
16000.	431.	99.	55.	55.	8.
18000.	428.	99.	53.	54.	2.
20000.	425.	99.	47.	45.	2.
22000.	422.	99.	40.	37.	3.
24000.	422.	99.	36.	35.	2.
26000.	417.	98.	35.	34.	1.
28000.	409.	92.	33.	33.	1.
30000.	399.	95.	32.	32.	1.
32000.	382.	73.	31.	32.	1.
34000.	358.	67.	27.	29.	1.
36000.	266.	53.	19.	20.	1.
38000.	170.	37.	12.	12.	1.
40000.	82.	21.	7.	7.	1.
42000.	20.	12.	5.	5.	1.
44000.	3.	6.	4.	5.	1.
46000.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.

MEAN, MEDIAN AND EXTREME UPPER AIR RELATIVE HUMIDITIES (PER CENT)  
AT SELECTED LEVELS BY SEASONS

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	FALL			MEDIAN	MINIMUM
		MAXIMUM	MEAN	44.		
6000.	426.	99.	44.	40.	18.	
8000.	427.	99.	45.	41.	13.	
10000.	425.	99.	45.	41.	10.	
12000.	423.	99.	42.	39.	5.	
14000.	416.	99.	40.	35.	5.	
16000.	408.	99.	37.	32.	1.	
18000.	401.	95.	34.	30.	1.	
20000.	396.	99.	33.	29.	1.	
22000.	395.	99.	33.	30.	1.	
24000.	394.	99.	33.	30.	2.	
26000.	393.	98.	33.	31.	1.	
28000.	383.	90.	33.	31.	2.	
30000.	370.	85.	32.	30.	2.	
32000.	331.	76.	26.	25.	1.	
34000.	237.	72.	19.	16.	1.	
36000.	115.	46.	13.	11.	1.	
38000.	48.	27.	10.	9.	1.	
40000.	17.	17.	6.	6.	1.	
42000.	4.	11.	5.	4.	1.	
44000.	2.	5.	4.	4.	2.	
46000.	0.	0.	0.	0.	0.	
48000.	0.	0.	0.	0.	0.	
50000.	0.	0.	0.	0.	0.	

## RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JALI)

PERIOD OF RECORD 1962-1967

## WINTER

## RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)								
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90
6000.	376.	0.	2.	30.	33.	16.	10.	4.	3.	2.
8000.	375.	0.	4.	32.	27.	15.	9.	5.	2.	3.
10000.	375.	2.	15.	29.	22.	10.	6.	5.	2.	4.
12000.	371.	2.	21.	30.	19.	9.	4.	6.	3.	3.
14000.	366.	2.	22.	34.	21.	8.	4.	3.	2.	2.
16000.	359.	2.	25.	37.	19.	7.	4.	2.	2.	0.
18000.	357.	2.	22.	42.	19.	8.	3.	2.	1.	0.
20000.	351.	1.	16.	46.	21.	8.	3.	3.	1.	1.
22000.	346.	2.	14.	45.	22.	8.	5.	3.	1.	0.
24000.	339.	2.	14.	47.	17.	10.	5.	2.	1.	0.
26000.	327.	5.	19.	43.	18.	8.	4.	2.	1.	0.
28000.	280.	12.	23.	35.	16.	9.	4.	0.	0.	0.
30000.	199.	28.	32.	20.	11.	5.	0.	0.	0.	0.
32000.	98.	49.	34.	11.	3.	2.	0.	0.	0.	0.
34000.	31.	65.	26.	10.	0.	0.	0.	0.	0.	0.
36000.	9.	78.	22.	0.	0.	0.	0.	0.	0.	0.
38000.	3.	100.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

SPRING

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	425.	0.	22.	36.	21.	12.	6.	2.	0.	0.	0.
8000.	424.	0.	16.	34.	28.	12.	7.	2.	0.	0.	0.
10000.	421.	0.	13.	33.	28.	16.	6.	3.	0.	0.	0.
12000.	420.	0.	17.	30.	24.	18.	7.	2.	0.	0.	0.
14000.	418.	1.	22.	27.	22.	16.	7.	4.	1.	0.	0.
16000.	412.	1.	25.	27.	20.	11.	8.	5.	1.	0.	0.
18000.	413.	2.	23.	31.	21.	10.	6.	4.	2.	0.	0.
20000.	408.	1.	22.	34.	20.	10.	6.	3.	1.	0.	0.
22000.	406.	1.	19.	40.	18.	9.	6.	3.	0.	0.	0.
24000.	402.	0.	17.	42.	18.	10.	6.	4.	1.	0.	0.
26000.	390.	2.	17.	42.	17.	11.	8.	2.	1.	0.	0.
28000.	370.	5.	18.	36.	18.	14.	7.	1.	0.	0.	0.
30000.	332.	11.	32.	23.	18.	11.	4.	2.	0.	0.	0.
32000.	257.	28.	37.	17.	12.	4.	0.	0.	0.	0.	0.
34000.	152.	49.	35.	11.	4.	1.	0.	0.	0.	0.	0.
36000.	68.	74.	22.	4.	0.	0.	5.	0.	0.	0.	0.
38000.	20.	90.	5.	0.	0.	0.	0.	0.	0.	0.	0.
40000.	1.	0.	100.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	1.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

## RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

SUMMER

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE HSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)								
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90
6000.	435.	0.	6.	10.	19.	29.	22.	11.	2.	0.
8000.	435.	0.	4.	9.	16.	29.	25.	11.	4.	1.
10000.	435.	0.	3.	9.	13.	26.	25.	15.	6.	1.
12000.	435.	0.	3.	6.	13.	21.	26.	14.	4.	2.
14000.	434.	0.	4.	6.	11.	19.	27.	16.	10.	3.
16000.	431.	0.	5.	6.	9.	16.	23.	19.	10.	6.
18000.	428.	0.	8.	9.	12.	14.	17.	17.	11.	4.
20000.	425.	1.	10.	13.	17.	20.	12.	10.	8.	5.
22000.	422.	1.	12.	19.	25.	16.	11.	7.	4.	2.
24000.	422.	1.	14.	24.	27.	16.	9.	5.	2.	1.
26000.	417.	1.	12.	27.	29.	16.	10.	2.	1.	1.
28000.	409.	2.	11.	29.	30.	16.	7.	2.	1.	0.
30000.	399.	2.	9.	30.	56.	14.	4.	2.	0.	0.
32000.	382.	3.	11.	26.	41.	11.	3.	1.	0.	0.
34000.	358.	10.	17.	27.	32.	11.	0.	0.	0.	0.
36000.	266.	21.	30.	32.	12.	5.	0.	0.	0.	0.
38000.	170.	38.	46.	14.	2.	0.	0.	0.	0.	0.
40000.	82.	70.	29.	1.	0.	0.	0.	0.	0.	0.
42000.	20.	90.	10.	0.	0.	0.	0.	0.	0.	0.
44000.	3.	100.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

## RELATIVE FREQUENCY DISTRIBUTION OF UPPER AIR RELATIVE HUMIDITIES

AT SELECTED LEVELS (IN PER CENT)

JALLEN SITE (JAL)

PERIOD OF RECORD 1962-1967

FALL

RELATIVE HUMIDITY (PER CENT)

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	RELATIVE HUMIDITY (PER CENT)									
		< 10	≥ 10 < 20	≥ 20 < 30	≥ 30 < 40	≥ 40 < 50	≥ 50 < 60	≥ 60 < 70	≥ 70 < 80	≥ 80 < 90	≥ 90 < 100
6000.	426.	0.	1.	10.	39.	22.	15.	8.	2.	2.	2.
8000.	427.	0.	2.	12.	32.	20.	17.	8.	4.	2.	3.
10000.	425.	0.	4.	14.	29.	17.	15.	8.	6.	3.	3.
12000.	423.	1.	9.	19.	22.	16.	14.	7.	5.	3.	4.
14000.	416.	2.	11.	25.	21.	13.	11.	9.	4.	2.	3.
16000.	408.	3.	11.	32.	20.	11.	10.	5.	4.	1.	3.
18000.	401.	2.	13.	36.	23.	11.	6.	3.	3.	1.	2.
20000.	396.	1.	12.	42.	23.	9.	5.	3.	3.	3.	1.
22000.	395.	2.	12.	39.	27.	8.	5.	3.	3.	2.	1.
24000.	394.	2.	10.	39.	29.	8.	4.	2.	4.	1.	1.
26000.	393.	2.	9.	27.	32.	8.	7.	4.	2.	1.	0.
28000.	383.	1.	8.	38.	31.	8.	5.	2.	3.	1.	0.
30000.	370.	2.	11.	36.	32.	9.	6.	3.	2.	1.	0.
32000.	331.	12.	23.	27.	23.	12.	6.	0.	0.	0.	0.
34000.	237.	29.	30.	21.	12.	3.	0.	0.	0.	0.	0.
36000.	115.	45.	29.	19.	3.	0.	0.	0.	0.	0.	0.
38000.	48.	60.	29.	10.	0.	0.	0.	0.	0.	0.	0.
40000.	17.	82.	18.	0.	0.	0.	0.	0.	0.	0.	0.
42000.	4.	75.	25.	0.	0.	0.	0.	0.	0.	0.	0.
44000.	100.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
46000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
48000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50000.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

## SECTION VI

### UPPER AIR INDEX OF REFRACTION DATA

#### A. By Months

1. Mean and Extreme Upper Air Indexes of  
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#### B. By Seasons

1. Mean and Extreme Upper Air Indexes of  
Refraction at Selected Levels ----- 208

MEAN AND EXTREMES OF UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JAILLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	JANUARY		GRADIENT	MINIMUM
		MAXIMUM	MEAN		
6000.	116.	1.000258	1.000242	0.	1.000235
8000.	115.	1.000242	1.000225	-0.000017	1.000213
10000.	117.	1.000223	1.000209	-0.000016	1.000198
12000.	116.	1.000203	1.000194	-0.000015	1.000186
14000.	116.	1.000188	1.000181	-0.000014	1.000175
15000.	115.	1.000181	1.000175	-0.000006	1.000169
16000.	115.	1.000175	1.000169	-0.000006	1.000164
18000.	116.	1.000165	1.000157	-0.000011	1.000153
20000.	115.	1.000152	1.000147	-0.000010	1.000144
25000.	115.	1.000126	1.000124	-0.000023	1.000122
30000.	110.	1.000106	1.000104	-0.000020	1.000098
35000.	103.	1.000089	1.000085	-0.000019	1.000078
40000.	102.	1.000073	1.000068	-0.000017	1.000062
45000.	95.	1.000059	1.000054	-0.000014	1.000050
50000.	64.	1.000046	1.000043	-0.000011	1.000040
55000.	69.	1.000036	1.000034	-0.000009	1.000032
60000.	56.	1.000028	1.000026	-0.000008	1.000025
65000.	50.	1.000021	1.000020	-0.000006	1.000020
70000.	44.	1.000017	1.000016	-0.000004	1.000015
75000.	38.	1.000013	1.000012	-0.000004	1.000012
80000.	37.	1.000010	1.000009	-0.000003	1.000009
85000.	35.	1.000008	1.000007	-0.000002	1.000007
90000.	31.	1.000006	1.000006	-0.000002	1.000005
95000.	23.	1.000005	1.000005	-0.000001	1.000004
100000.	15.	1.000004	1.000004	-0.000001	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	FEBRUARY		GRADIENT	MINIMUM
		MAXIMUM	MEAN		
6000.	112.	1.000265	1.000241	0.	1.000232
8000.	112.	1.000243	1.000225	-0.000016	1.000218
10000.	112.	1.000221	1.000210	-0.000016	1.000202
12000.	112.	1.000205	1.000195	-0.000015	1.000188
14000.	112.	1.000188	1.000181	-0.000014	1.000175
15000.	111.	1.000183	1.000174	-0.000006	1.000170
16000.	112.	1.000178	1.000169	-0.000006	1.000164
18000.	111.	1.000163	1.000157	-0.000011	1.000154
20000.	111.	1.000151	1.000147	-0.000010	1.000145
25000.	107.	1.000126	1.000124	-0.000023	1.000121
30000.	105.	1.000106	1.000104	-0.000020	1.000099
35000.	100.	1.000089	1.000086	-0.000018	1.000078
40000.	93.	1.000073	1.000068	-0.000018	1.000062
45000.	90.	1.000058	1.000054	-0.000014	1.000050
50000.	74.	1.000047	1.000043	-0.000011	1.000040
55000.	64.	1.000037	1.000034	-0.000009	1.000032
60000.	57.	1.000029	1.000026	-0.000006	1.000029
65000.	55.	1.000022	1.000020	-0.000006	1.000019
70000.	54.	1.000017	1.000016	-0.000005	1.000015
75000.	50.	1.000013	1.000012	-0.000004	1.000012
80000.	47.	1.000010	1.000009	-0.000002	1.000009
85000.	44.	1.000008	1.000007	-0.000002	1.000007
90000.	39.	1.000006	1.000006	-0.000001	1.000005
95000.	30.	1.000005	1.000005	-0.000001	1.000004
100000.	24.	1.000004	1.000004	-0.000001	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

MARCH

GEOMETRIC ALTITUDE  
 MSL FEET

TOTAL  
 OBSERVATIONS

MINIMUM

GRADIENT

MEAN

MAXIMUM

MINIMUM

6000.	161.	1.0000262	0.	1.000229
8000.	161.	1.0000245	-0.000016	1.000216
10000.	160.	1.0000225	-0.000015	1.000203
12000.	159.	1.0000202	1.0000195	1.000189
14000.	159.	1.0000188	1.0000181	1.000177
15000.	156.	1.0000181	1.0000175	1.000171
16000.	160.	1.0000175	1.0000169	1.000165
18000.	159.	1.0000164	1.0000157	1.000155
20000.	156.	1.0000151	1.0000147	1.000144
25000.	152.	1.0000126	1.0000124	1.000121
30000.	153.	1.0000106	1.0000104	1.000099
35000.	147.	1.0000089	1.0000086	1.000078
40000.	145.	1.0000073	1.0000069	1.000062
45000.	132.	1.0000059	1.0000054	1.000051
50000.	129.	1.0000046	1.0000043	1.000040
55000.	112.	1.0000036	1.0000034	1.000032
60000.	102.	1.0000028	1.0000026	1.000025
65000.	88.	1.0000021	1.0000020	1.000020
70000.	85.	1.0000017	1.0000016	1.000015
75000.	69.	1.0000013	1.0000012	1.000012
80000.	58.	1.0000010	1.0000009	1.000009
85000.	48.	1.0000008	1.0000007	1.000007
90000.	44.	1.0000006	1.0000006	1.000005
95000.	40.	1.0000005	1.0000005	1.000004
100000.	30.	1.0000004	1.0000004	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

APRIL

GEOMETRIC ALTITUDE  
 MSL FEET

TOTAL  
 OBSERVATIONS

MINIMUM

MEAN

GRADIENT

MAXIMUM

6000.	139.	1.000262	1.000240	0.
8000.	137.	1.000242	1.000224	-0.000016
10000.	137.	1.000232	1.000209	-0.000015
12000.	137.	1.000212	1.000195	-0.000014
14000.	137.	1.000194	1.000181	-0.000014
15000.	136.	1.000189	1.000174	-0.000014
16000.	136.	1.000182	1.000169	-0.000014
18000.	137.	1.000165	1.000157	-0.000012
20000.	137.	1.000153	1.000147	-0.000010
25000.	136.	1.000127	1.000124	-0.000023
30000.	135.	1.000106	1.000104	-0.000020
35000.	130.	1.000089	1.000087	-0.000017
40000.	122.	1.000074	1.000070	-0.000016
45000.	115.	1.000059	1.000055	-0.000015
50000.	110.	1.000047	1.000044	-0.000011
55000.	103.	1.000036	1.000034	-0.000010
60000.	93.	1.000028	1.000027	-0.000009
65000.	84.	1.000022	1.000021	-0.000006
70000.	82.	1.000017	1.000016	-0.000005
75000.	78.	1.000013	1.000012	-0.000003
80000.	75.	1.000010	1.000009	-0.000003
85000.	70.	1.000008	1.000008	-0.000002
90000.	64.	1.000006	1.000006	-0.000002
95000.	57.	1.000005	1.000005	-0.000001
100000.	41.	1.000004	1.000004	-0.000001

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
AT SELECTED LEVELS BY MONTHS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967

MAY

GEOMETRIC ALTITUDE  
MSL FEET

MINIMUM

GRADIENT

MEAN

TOTAL  
OBSERVATIONS

6000.	1.27	1.000244	0.	1.000214
8000.	1.26	1.000223	-0.000017	1.000204
10000.	1.26	1.000232	-0.000016	1.000193
12000.	1.25	1.000216	-0.000015	1.000186
14000.	1.25	1.000202	-0.000014	1.000171
15000.	122	1.000193	-0.000014	1.000166
16000.	122	1.000185	-0.000013	1.000161
18000.	120	1.000171	-0.000012	1.000152
20000.	121	1.000157	-0.000011	1.000143
25000.	119	1.000127	-0.000024	1.000122
30000.	121	1.000106	-0.000020	1.000101
35000.	114	1.000089	-0.000017	1.000082
40000.	115	1.000074	-0.000015	1.000064
45000.	103	1.000061	-0.000015	1.000054
50000.	160	1.000047	-0.000012	1.000043
55000.	98	1.000037	-0.000010	1.000033
60000.	94	1.000029	-0.000008	1.000026
65000.	91	1.000022	-0.000006	1.000020
70000.	90	1.000017	-0.000005	1.000016
75000.	81	1.000013	-0.000003	1.000012
80000.	78	1.000010	-0.000003	1.000009
85000.	73	1.000009	-0.000002	1.000007
90000.	71	1.000006	-0.000002	1.000005
95000.	63	1.000005	-0.000001	1.000004
100000.	50	1.000004	-0.000001	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

JUNE

GEOMETRIC ALTITUDE  
 MSL FEET

TOTAL  
 OBSERVATIONS

MAXIMUM

GRADIENT

MINIMUM

6000.	1.000286	1.000251	0.	1.000225
8000.	1.000266	1.000233	-0.000018	1.000208
10000.	1.000242	1.000216	-0.000017	1.000193
12000.	1.000223	1.000200	-0.000015	1.000183
14000.	1.000206	1.000186	-0.000014	1.000174
15000.	1.000195	1.000179	-0.000013	1.000170
16000.	1.000187	1.000173	-0.000007	1.000164
18000.	1.000171	1.000140	-0.000013	1.000151
20000.	1.000157	1.000148	-0.000012	1.000141
22000.	1.000127	1.000124	-0.000024	1.000119
24000.	1.000106	1.000104	-0.000019	1.000101
25000.	1.000098	1.000087	-0.000017	1.000084
40000.	1.000074	1.000072	-0.000015	1.000067
45000.	1.000061	1.000058	-0.000014	1.000056
50000.	1.000050	1.000047	-0.000012	1.000044
55000.	1.000039	1.000036	-0.000010	1.000035
60000.	1.000029	1.000028	-0.000008	1.000027
65000.	1.000022	1.000021	-0.000006	1.000021
70000.	1.000017	1.000014	-0.000005	1.000016
75000.	1.000013	1.000013	-0.000004	1.000012
80000.	1.000010	1.000010	-0.000003	1.000009
85000.	1.000008	1.000008	-0.000002	1.000007
90000.	1.000006	1.000006	-0.000002	1.000006
95000.	1.000005	1.000005	-0.000001	1.000004
100000.	1.000004	1.000004	-0.000001	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JALI)  
 PERIOD OF RECORD 1962-1967

JULY

GEOMETRIC ALTITUDE  
 HSL FEET

TOTAL  
 OBSERVATIONS

MAXIMUM

GRADIENT

MINIMUM

6000.	149.	1.000287	1.000268	0..
8000.	147.	1.000266	1.000248	-0..000020
10000.	150.	1.000245	1.000229	-0..000015
12000.	150.	1.000225	1.000211	-0..000017
14000.	150.	1.000210	1.000195	-0..000017
15000.	141.	1.000201	1.000187	-0..000018
16000.	149.	1.000190	1.000180	-0..000018
18000.	146.	1.000175	1.000165	-0..000014
20000.	146.	1.000160	1.000152	-0..000013
25000.	139.	1.000129	1.000124	-0..000028
30000.	145.	1.000106	1.000104	-0..000021
35000.	132.	1.000098	1.000087	-0..000017
40000.	137.	1.000074	1.000073	-0..000014
45000.	121.	1.000062	1.000060	-0..000013
50000.	117.	1.000050	1.000048	-0..000014
55000.	103.	1.000040	1.000037	-0..000021
60000.	101.	1.000030	1.000028	-0..000019
65000.	89.	1.000022	1.000022	-0..000017
70000.	89.	1.000017	1.000016	-0..000015
75000.	79.	1.000013	1.000013	-0..000014
80000.	81.	1.000011	1.000010	-0..000013
85000.	70.	1.000008	1.000008	-0..000012
90000.	69.	1.000007	1.000006	-0..000012
95000.	57.	1.000005	1.000005	-0..000011
100000.	57.	1.000004	1.000004	-0..000011

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

AUGUST

GEOMETRIC ALTITUDE  
 MSL FEET

	TOTAL OBSERVATIONS	MAXIMUM	MEAN	GRADIENT	MINIMUM
6000.	157.	1.000289	1.000268	0.	1.000234
8000.	157.	1.000266	1.000248	-0.000021	1.000220
10000.	157.	1.000247	1.000228	-0.000019	1.000210
12000.	157.	1.000228	1.000211	-0.000018	1.000195
14000.	157.	1.000211	1.000194	-0.000017	1.000176
15000.	151.	1.000200	1.000186	-0.000007	1.000171
16000.	156.	1.000191	1.000179	-0.000008	1.000166
18000.	156.	1.000175	1.000165	-0.000014	1.000155
20000.	156.	1.000161	1.000151	-0.000013	1.000144
25000.	149.	1.000129	1.000124	-0.000027	1.090121
30000.	152.	1.000106	1.000104	-0.000020	1.000102
35000.	144.	1.000089	1.000087	-0.000017	1.000086
40000.	145.	1.000074	1.000072	-0.000015	1.000072
45000.	134.	1.000061	1.000059	-0.000013	1.000058
50000.	132.	1.000050	1.000048	-0.000011	1.000046
55000.	119.	1.000040	1.000037	-0.000011	1.000036
60000.	110.	1.000030	1.000028	-0.000009	1.000027
65000.	96.	1.000022	1.000022	-0.000006	1.000021
70000.	93.	1.000017	1.000016	-0.000005	1.000016
75000.	85.	1.000013	1.000013	-0.000012	1.000012
80000.	80.	1.000011	1.000010	-0.000010	1.000010
85000.	69.	1.000008	1.000008	-0.000007	1.000007
90000.	63.	1.000007	1.000006	-0.000006	1.000006
95000.	60.	1.000005	1.000005	-0.000004	1.000004
100000.	55.	1.000004	1.000003	-0.000003	1.000003

W.M.E. 1967

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

SEPTEMBER

GEOGRAPHIC ALTITUDE  
 MSL FEET

TOTAL  
 OBSERVATIONS

MINIMUM

GRADIENT

		MAXIMUM	MEAN	GRADIENT	MINIMUM
6000.	121.	1.000296	1.000265	0-	1.000234
8000.	123.	1.000269	1.000245	-0.000020	1.000224
10000.	123.	1.000246	1.000225	-0.000019	1.000210
12000.	121.	1.000225	1.000207	-0.000018	1.000188
14000.	121.	1.000205	1.000190	-0.000017	1.000176
15000.	117.	1.000196	1.000182	-0.000017	1.000168
16000.	121.	1.000188	1.000175	-0.000017	1.000161
18000.	120.	1.000173	1.000161	-0.000015	1.000150
20000.	122.	1.000158	1.000148	-0.000012	1.000141
25000.	116.	1.000129	1.000124	-0.000025	1.000121
30000.	120.	1.000166	1.000164	-0.000020	1.000101
35000.	115.	1.000089	1.000087	-0.000017	1.000093
40000.	114.	1.000074	1.000072	-0.000015	1.000067
45000.	106.	1.000061	1.000059	-0.000013	1.000055
50000.	104.	1.000050	1.000048	-0.000011	1.000044
55000.	91.	1.000038	1.000037	-0.000011	1.000034
60000.	82.	1.000029	1.000028	-0.000009	1.000027
65000.	76.	1.000022	1.000022	-0.000006	1.000020
70000.	73.	1.000017	1.000016	-0.000005	1.000016
75000.	72.	1.000013	1.000013	-0.000004	1.000012
80000.	71.	1.000010	1.000010	-0.000003	1.000009
85000.	69.	1.000006	1.000006	-0.000002	1.000007
90000.	65.	1.000005	1.000005	-0.000002	1.000006
95000.	62.	1.000004	1.000004	-0.000001	1.000004
100000.	55.	1.000003	1.000003	-0.000001	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JALL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	OCTOBER		MINIMUM
		MAXIMUM	MEAN	
6000.	143.	1.000264	1.000250	0.
8000.	144.	1.000262	1.000233	-0.000018
10000.	145.	1.000261	1.000216	-0.000017
12000.	145.	1.000222	1.000158	-0.000017
14000.	142.	1.000201	1.000182	-0.000016
15000.	139.	1.000158	1.000175	-0.000017
16000.	142.	1.000180	1.000169	-0.000017
18000.	141.	1.000165	1.000157	-0.000012
20000.	141.	1.000153	1.000147	-0.000010
25000.	137.	1.000128	1.000124	-0.000023
30000.	137.	1.000106	1.000104	-0.000019
35000.	133.	1.000089	1.000087	-0.000017
40000.	132.	1.000074	1.000071	-0.000016
45000.	117.	1.000060	1.000057	-0.000014
50000.	108.	1.000048	1.000046	-0.000011
55000.	94.	1.000038	1.000036	-0.000010
60000.	89.	1.000029	1.000027	-0.000008
65000.	82.	1.000022	1.000021	-0.000005
70000.	80.	1.000017	1.000016	-0.000005
75000.	75.	1.000013	1.000012	-0.000004
80000.	71.	1.000010	1.000009	-0.000003
85000.	57.	1.000008	1.000007	-0.000002
90000.	53.	1.000006	1.000006	-0.000002
95000.	46.	1.000005	1.000005	-0.000001
100000.	33.	1.000004	1.000004	-0.000001

BY A. W. HORN

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

NOVEMBER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	GRADIENT	MINIMUM
6000.	159.	1.000277	1.000247	0.	1.0000236
8000.	160.	1.000253	1.000229	-0.000018	1.0000217
10000.	159.	1.000236	1.000212	-0.000017	1.0000201
12000.	159.	1.000217	1.000196	-0.000016	1.0000186
14000.	160.	1.000200	1.000182	-0.000014	1.0000173
15000.	157.	1.000192	1.000175	-0.000006	1.0000167
16000.	157.	1.000184	1.000169	-0.000006	1.0000163
18000.	157.	1.000167	1.000157	-0.000012	1.0000153
20000.	158.	1.000156	1.000147	-0.000013	1.0000144
25000.	156.	1.000127	1.000124	-0.000023	1.0000120
30000.	154.	1.000106	1.000104	-0.000020	1.0000100
35000.	138.	1.000086	1.000087	-0.000017	1.0000080
40000.	126.	1.000074	1.000071	-0.000015	1.0000065
45000.	111.	1.000061	1.000057	-0.000014	1.0000053
50000.	101.	1.000049	1.000045	-0.000012	1.0000041
55000.	86.	1.000038	1.000035	-0.000010	1.0000033
60000.	78.	1.000029	1.000027	-0.000009	1.0000026
65000.	74.	1.000022	1.000021	-0.000006	1.0000020
70000.	62.	1.000017	1.000016	-0.000005	1.0000015
75000.	54.	1.000013	1.000012	-0.000004	1.0000012
80000.	50.	1.000010	1.000010	-0.000003	1.0000009
85000.	44.	1.000008	1.000008	-0.000002	1.0000007
90000.	41.	1.000006	1.000006	-0.000002	1.0000005
95000.	41.	1.000005	1.000005	-0.000001	1.0000004
100000.	34.	1.000004	1.000004	-0.000001	1.0000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY MONTHS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	DECEMBER		MINIMUM
		MAXIMUM	MEAN	
6000.	147.	1.000268	1.000247	0.
8000.	148.	1.000250	1.000229	-0.000019
10000.	149.	1.000230	1.000211	-0.000017
12000.	149.	1.000213	1.000195	-0.000016
14000.	149.	1.000195	1.000181	-0.000014
15000.	149.	1.000187	1.000174	-0.000007
16000.	148.	1.000177	1.000168	-0.000006
18000.	147.	1.000166	1.000157	-0.000012
20000.	146.	1.000154	1.000147	-0.000010
25000.	138.	1.000127	1.000124	-0.000023
30000.	134.	1.000106	1.000104	-0.000020
35000.	126.	1.000088	1.000086	-0.000018
40000.	119.	1.000073	1.000070	-0.000016
45000.	106.	1.000059	1.000055	-0.000014
50000.	92.	1.000047	1.000044	-0.000011
55000.	81.	1.000036	1.000034	-0.000010
60000.	73.	1.000028	1.000027	-0.000009
65000.	65.	1.000021	1.000021	-0.000006
70000.	63.	1.000017	1.000016	-0.000005
75000.	61.	1.000013	1.000012	-0.000003
80000.	57.	1.000010	1.000010	-0.000003
85000.	53.	1.000008	1.000008	-0.000002
90000.	52.	1.000006	1.000006	-0.000002
95000.	42.	1.000005	1.000005	-0.000001
100000.	37.	1.000004	1.000004	-0.000001

**MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
AT SELECTED LEVELS BY SEASONS  
JALLEN SITE (JAL)  
PERIOD OF RECORD 1962-1967**

WINTER

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM MEAN	GRADIENT MINIMUM
6000.	375.	1.000244	0.
8000.	375.	1.000250	-0.000017
10000.	378.	1.000230	-0.000017
12000.	377.	1.000213	-0.000015
14000.	377.	1.000195	-0.000014
15000.	375.	1.000187	-0.000006
16000.	375.	1.000178	-0.000006
18000.	374.	1.000166	-0.000011
20000.	372.	1.000154	-0.000010
25000.	360.	1.000127	-0.000023
30000.	349.	1.030106	-0.000020
35000.	329.	1.000089	-0.000018
40000.	314.	1.000073	-0.000017
45000.	291.	1.000059	-0.000014
50000.	250.	1.000047	-0.000011
55000.	214.	1.000037	-0.000009
60000.	186.	1.000029	-0.000008
65000.	170.	1.000022	-0.000006
70000.	161.	1.000017	-0.000005
75000.	149.	1.000013	-0.000004
80000.	141.	1.000010	-0.000003
85000.	132.	1.000008	-0.000002
90000.	122.	1.000006	-0.000002
95000.	95.	1.000005	-0.000001
100000.	76.	1.000004	-0.000001

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SPRING		GRADIENT	MINIMUM
		MAXIMUM	MEAN		
6000.	427.	1.000279	1.000241	0.	1.000214
8000.	424.	1.000255	1.000225	-0.000016	1.000204
10000.	423.	1.000232	1.000210	-0.000015	1.000193
12000.	421.	1.000216	1.000195	-0.000015	1.000186
14000.	421.	1.000202	1.000182	-0.000014	1.000171
15000.	414.	1.000193	1.000175	-0.000006	1.000166
16000.	418.	1.000185	1.000169	-0.000006	1.000161
18000.	416.	1.000171	1.000158	-0.000012	1.000152
20000.	414.	1.000157	1.000147	-0.000010	1.000143
25000.	407.	1.000127	1.000124	-0.000023	1.000121
30000.	409.	1.000106	1.000104	-0.002323	1.000099
35000.	391.	1.000089	1.000086	-0.000018	1.000078
40000.	382.	1.000074	1.000070	-0.000016	1.000062
45000.	350.	1.000061	1.000055	-0.000015	1.000051
50000.	339.	1.000047	1.000044	-0.000011	1.000040
55000.	313.	1.000037	1.000034	-0.000010	1.000032
60000.	289.	1.000029	1.000027	-0.000008	1.000025
65000.	263.	1.000022	1.000021	-0.000006	1.000020
70000.	257.	1.000017	1.000016	-0.000005	1.000015
75000.	228.	1.000013	1.000012	-0.000003	1.000012
80000.	211.	1.000010	1.000009	-0.000003	1.000009
85000.	191.	1.000008	1.000007	-0.000002	1.000007
90000.	179.	1.000006	1.000006	-0.000002	1.000005
95000.	160.	1.000005	1.000005	-0.000001	1.000004
100000.	121.	1.000004	1.000004	-0.000001	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY SEASONS  
 AT JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	SUMMER		WINTER	
		MAXIMUM	MEAN	GRADIENT	MINIMUM
6000.	434.	1.000289	1.000263	0.	1.000225
8000.	430.	1.000266	1.000243	-0.000020	1.000208
10000.	433.	1.000247	1.000225	-0.000019	1.000193
12000.	433.	1.000228	1.000208	-0.000017	1.000193
14000.	432.	1.000211	1.000192	-0.000016	1.000174
15000.	414.	1.000201	1.000185	-0.000007	1.000170
16000.	429.	1.000191	1.000177	-0.000007	1.000164
18000.	425.	1.000175	1.000163	-0.000014	1.000151
20000.	425.	1.000161	1.000150	-0.000013	1.000141
25000.	410.	1.000129	1.000124	-0.000026	1.000119
30000.	415.	1.000106	1.000104	-0.000020	1.000101
35000.	387.	1.000089	1.000087	-0.000017	1.000084
40000.	396.	1.000074	1.000072	-0.000015	1.000067
45000.	365.	1.000067	1.000059	-0.000013	1.000056
50000.	353.	1.000055	1.000048	-0.000011	1.000044
55000.	320.	1.000040	1.000037	-0.000014	1.000035
60000.	307.	1.000030	1.000028	-0.000009	1.000027
65000.	279.	1.000022	1.000022	-0.000006	1.000021
70000.	273.	1.000017	1.000016	-0.000005	1.000016
75000.	252.	1.000013	1.000013	-0.000004	1.000012
80000.	239.	1.000011	1.000010	-0.000003	1.000009
85000.	212.	1.000008	1.000008	-0.000002	1.000007
90000.	197.	1.000007	1.000006	-0.000002	1.000006
95000.	175.	1.000005	1.000005	-0.000001	1.000004
100000.	165.	1.000004	1.000004	-0.000001	1.000003

MEAN AND EXTREME UPPER AIR INDEXES OF REFRACTION  
 AT SELECTED LEVELS BY SEASONS  
 JALLEN SITE (JAL)  
 PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE MSL FEET	TOTAL OBSERVATIONS	MAXIMUM	MEAN	GRADIENT	MINIMUM	FALL	
						MEAN	GRADIENT
6000.	423.	1.000290	1.000253	0.	-0.000018	1.000234	1.000217
8000.	427.	1.000269	1.000235	-0.000018	-0.000018	1.000217	1.000201
10000.	427.	1.000243	1.000217	-0.000017	-0.000017	1.000185	1.000172
12000.	425.	1.000225	1.000200	-0.000016	-0.000016	1.000165	1.000165
14000.	423.	1.000205	1.000184	-0.000007	-0.000007	1.000160	1.000150
15000.	413.	1.000196	1.000177	-0.000007	-0.000007	1.000144	1.000144
16000.	420.	1.000188	1.000171	-0.000013	-0.000013	1.000120	1.000120
18000.	418.	1.000173	1.000158	-0.000011	-0.000011	1.000100	1.000080
20000.	421.	1.000158	1.000147	-0.000024	-0.000024	1.000080	1.000065
25000.	409.	1.000129	1.000124	-0.000020	-0.000020	1.000053	1.000041
30000.	411.	1.000106	1.000104	-0.000017	-0.000017	1.000033	1.000026
35000.	386.	1.000089	1.000087	-0.000015	-0.000015	1.000015	1.000012
40000.	372.	1.000074	1.000071	-0.000014	-0.000014	1.000009	1.000007
45000.	334.	1.000061	1.000058	-0.000011	-0.000011	1.000005	1.000005
50000.	313.	1.000050	1.000046	-0.000010	-0.000010	1.000004	1.000004
55000.	271.	1.000038	1.000036	-0.000008	-0.000008	1.000002	1.000002
60000.	249.	1.000029	1.000028	-0.000006	-0.000006	1.000001	1.000001
65000.	232.	1.000022	1.000021	-0.000005	-0.000005	1.000000	1.000000
70000.	215.	1.000017	1.000016	-0.000004	-0.000004	1.000000	1.000000
75000.	201.	1.000013	1.000013	-0.000003	-0.000003	1.000000	1.000000
80000.	192.	1.000010	1.000008	-0.000002	-0.000002	1.000000	1.000000
85000.	170.	1.000008	1.000008	-0.000002	-0.000002	1.000000	1.000000
90000.	159.	1.000006	1.000006	-0.000001	-0.000001	1.000000	1.000000
95000.	149.	1.000005	1.000005	-0.000001	-0.000001	1.000000	1.000000
100000.	122.	1.000004	1.000004	-0.000001	-0.000001	1.000000	1.000000

### FREEZING LEVEL

For this report the freezing level is defined as any altitude at which the temperature is 0° centigrade. Multiple freezing levels may occur on a single rawinsonde observation. Section VII presents data based on all freezing level occurrences.

## SECTION VII

### UPPER AIR FREEZING LEVEL DATA

#### A. By Months And By Seasons

1. Mean and Extreme Heights (Feet MSL) of the Freezing Level ----- 218
2. Relative Frequency Distribution of the Freezing Level (In Per Cent)----- 214

MEAN AND EXTREME HEIGHTS (FEET MSL) OF THE FREEZING LEVEL BY MONTHS AND BY SEASONS

JAILEN SITE (JAL)

PERIOD OF RECORD 1962-1967

MONTH	TOTAL RAWINSONDE ASCENSIONS	MAXIMUM	MEAN	MINIMUM					
					SEASON	WINTER	SPRING	SUMMER	FALL
JANUARY	119	13700	8300	4100					
FEBRUARY	113	13500	8400	4100					
MARCH	162	14200	9900	4200					
APRIL	142	15100	11500	7300					
MAY	129	16400	13200	7700					
JUNE	128	16700	14900	11300					
JULY	150	17600	15900	13600					
AUGUST	161	17200	15500	13300					
SEPTEMBER	123	17000	14600	10300					
OCTOBER	145	16500	13400	7100					
NOVEMBER	165	15600	11800	4200					
DECEMBER	149	14800	9500	4100					
					SEASON	WINTER	SPRING	SUMMER	FALL
						381	14800	8900	
						433	16400	11400	
						439	17600	15500	
						433	17000	13100	

RELATIVE FREQUENCY DISTRIBUTION OF THE FREEZING LEVEL BY MONTHS AND BY SEASONS (EX. PERCENT)

JALLEN SITE (JALI)

PERIOD OF RECORD 1962-1967

GEOMETRIC ALTITUDE HSL FEET

MONTH	TOTAL RAWINSONDE ASCENSIONS	GEOMETRIC ALTITUDE HSL FEET							SEASON
		$\geq 4K$	$\geq 5K$	$\geq 6K$	$\geq 7K$	$< 8K$	$< 9K$	$\geq 10K$	
JANUARY	119	16	9	11	12	5	11	13	9
FEBRUARY	113	11	7	16	9	15	11	16	5
MARCH	162	5	4	5	7	10	15	13	20
APRIL	142	0	0	0	1	6	22	4	24
MAY	129	0	0	0	0	1	4	5	9
JUNE	128	0	0	0	0	0	0	2	12
JULY	150	0	0	0	0	0	0	0	40
AUGUST	161	0	0	0	0	0	0	0	53
SEPTEMBER	123	0	0	0	0	0	2	2	21
OCTOBER	145	0	0	0	0	1	0	1	27
NOVEMBER	165	1	1	2	2	3	7	11	21
DECEMBER	149	9	4	4	7	1	16	12	12
							21		
SEASON									
WINTER	301	11	7	12	9	11	13	14	14
SPRING	433	2	2	2	3	0	28	20	20
SUMMER	439	0	0	0	0	0	0	5	5
FALL	433	0	0	1	1	1	1	1	1

FIGURE I

MAP OF RADIOSONDE SITES

AT

WHITE SANDS MISSILE RANGE ----- 215



FIGURE I

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TABLE I

FREQUENCY DISTRIBUTION OF  
UPPER AIR SOUNDINGS BY HOUR -----216

FREQUENCY DISTRIBUTION OF UPPER AIR SOUNDINGS BY HOURS AND MONTHS  
 PERIOD OF RECORD 1962-1967  
 JALLEN SITE (JAL)

HOUR (MST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL BY HOURS
1	1	1	2	0	1	0	2	3	4	9	0	1	15
2	2	1	0	0	2	1	3	10	2	5	3	0	17
3	0	0	1	5	3	2	6	4	3	1	0	3	38
4	1	1	2	4	4	4	3	3	2	5	3	7	33
5	2	0	2	5	9	3	10	12	7	5	1	1	34
6	3	3	7	7	7	4	7	11	7	4	1	1	57
7	7	3	8	7	7	7	4	7	4	7	4	4	76
8	6	6	13	13	13	11	18	13	16	22	9	14	105
9	9	12	23	17	11	19	15	6	13	9	11	20	185
10	17	12	23	17	11	10	9	17	13	6	10	18	120
11	9	10	19	12	10	9	7	15	10	9	11	10	147
12	13	15	13	11	6	7	13	12	15	14	11	10	133
13	17	6	9	14	11	13	12	15	11	11	10	4	136
14	11	9	14	9	16	9	7	11	11	21	26	14	156
15	11	15	13	10	14	6	4	8	6	7	10	16	118
16	10	6	5	8	3	3	3	1	2	3	0	5	12
17	0	0	8	0	0	2	0	1	1	1	1	1	3
18	2	2	3	2	3	1	2	3	3	2	3	2	27
19	2	0	1	1	0	1	1	0	1	1	0	3	17
20	2	3	2	1	0	1	1	1	3	3	4	3	23
21	0	1	2	1	0	1	0	1	1	3	2	2	16
22	2	1	0	1	1	0	1	2	3	1	2	1	18
23	1	1	2	0	1	0	0	0	0	0	0	0	10
24	1	1	0	2	0	0	0	0	0	0	0	0	2
TOTAL BY MONTHS	119	113	162	142	129	128	150	161	123	145	165	147	1684

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13. ABSTRACT

A statistical analysis of upper air data is presented for Jallen Site, White Sands Missile Range, New Mexico. Atmospheric parameters covered, for the layer 6,000 to 100,000 feet above mean sea level, are: wind, temperature, pressure, density, moisture, index of refraction, and freezing level. This climatological information is based on the period of observation from 1962-1967. ( )



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