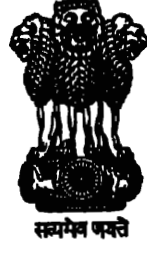


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## KODAIKANAL OBSERVATORY

Bulletin No CLXVII

Published on

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### PART I

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#### *Summary of prominence and calcium flocculus observations for the second half of 1961*

The results of observations of prominences and calcium flocculi made at Kodaikanal Observatory during the second half of 1961, supplemented by data derived from photographs supplied by the Mount Wilson and Meudon Observatories for those days on which Kodaikanal had imperfect or no observations due to cloudy sky conditions are summarised in Part I of this Bulletin. Our thanks are due to the co-operating observatories for the photographs supplied by them.

#### *Calcium Prominences on the limb*

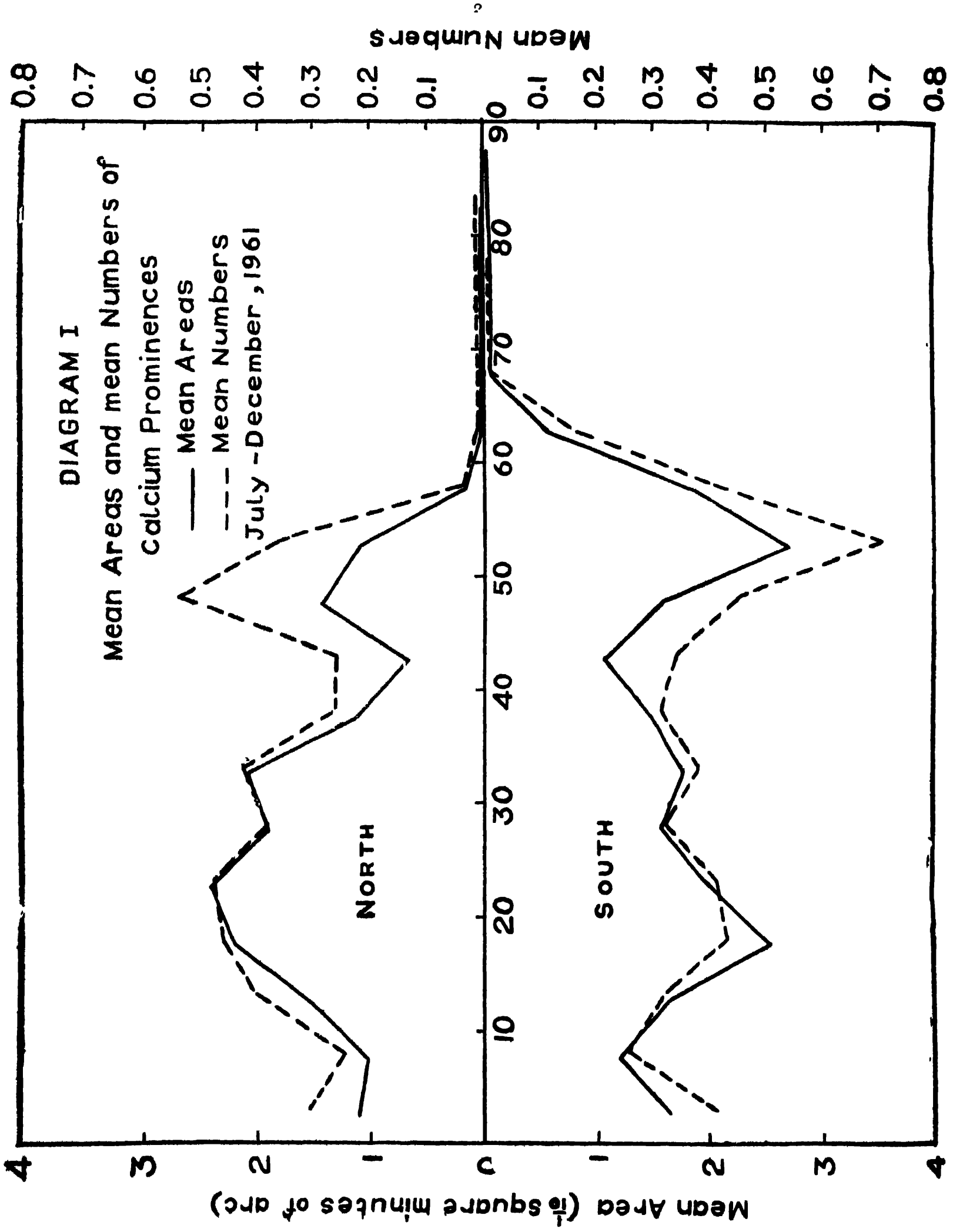
During the half-year under review photographs of calcium prominences were secured at Kodaikanal on 113 days. Spectroheliograms for 43 days were received from the Meudon Observatory and for 10 days from the Mount Wilson Observatory. In all, observations were available for 129 effective days after giving due weightage to the quality of the photographs.

The mean daily areas (in square minutes of arc) and the mean daily numbers of prominences derived from all the above records are as follows:

	Combined data	
	Mean daily areas	Mean daily numbers
North . . . . .	1.63	4.25
South . . . . .	2.17	4.93
TOTAL	3.80	9.18

These figures, when compared with the previous half-year's values show a decrease of 14.2% in areas whereas in the case of numbers there is an increase of 10.3%.

The distribution of areas and numbers in five degree ranges of latitude, as obtained from the combined data is represented in diagram I. The peak of activity of areas in the northern hemisphere is centered in the latitude belt 20°—25° whereas the numbers show maximum activity in the belt 45°—50°. In the southern hemisphere there are two peaks of activity of both areas and numbers in the latitude belts 15°—20° and 50°—55°.



The monthly, quarterly and half-yearly areas, numbers, heights and extents of prominences as derived from all the available records are tabulated below

TABLE I

1961 Months	No of effective days	Areas in sq mts	Numbers	Mean daily area in sq minutes	Mean daily numbers	Mean height "	Mean extent °
July	21½	54.5	140	2.53	6.51	39.2	3.1
August	24½	98.9	189	4.04	7.71	42.1	3.6
September	21	1.7	218	4.84	10.38	39.8	3.3
October	22½	103.5	237	4.65	10.65	40.8	3.4
November	16½	65.9	179	9.99	10.85	39.5	3.1
December	23½	65.3	221	2.81	9.51	34.4	2.9
3rd Quarter	67	255.1	547	3.81	8.16	40.5	3.3
4th Quarter	62	234.7	637	3.79	10.27	38.2	3.1
2nd half year	129	489.8	1,184	3.80	9.18	39.3	3.2

The distribution of prominences about the sun's axis of rotation is given below —

1961 July—December

	East	West	Percentage East
Total areas (sq minutes)	250.0	239.8	51.1
Total numbers	594	590	50.2

*Observations with the Hale Spectroheliograph*

Details of Doppler displacements in the H-alpha line, observed in prominences and dark markings are given below

TABLE II

	North	South	East	West	Displacement to red and violet
Displacements in darkmarkings	18	2	10	10	20
Displacements in prominences	18	9	16	11	27



*Prominences projected on the disc as dark-markings*

During the half-year under review, photographs of the sun's disc in H-alpha line were obtained at Kodaikanal on 97 days. Spectroheliograms for 65 days were obtained from the Meudon Observatory and for 21 days from the Mount Wilson Observatory. On the whole, records were available for 121 effective days.

The mean daily areas in millionths of the sun's visible hemisphere (uncorrected for foreshortening) and the mean daily numbers of the H-alpha darkmarkings as derived from the combined photographs are given below.

	Combined data	
	Mean daily area (Millionths of the sun's visible hemisphere)	Mean daily number
North	1962	14.55
South	1409	10.50
TOTAL	3371	25.05

On comparing with the previous half-year's values, these figures show an increase of activity, the increase being 5.9% in areas and 27.8% in numbers.

The distribution of the areas of the absorption markings in 5 degree ranges of latitude as obtained from the combined data is shown in diagram II.

There is a broad peak of activity in the northern hemisphere in the latitude belt 15°—30°.

The distribution of total areas and numbers of the dark markings east and west of the sun's axis of rotation is given below:

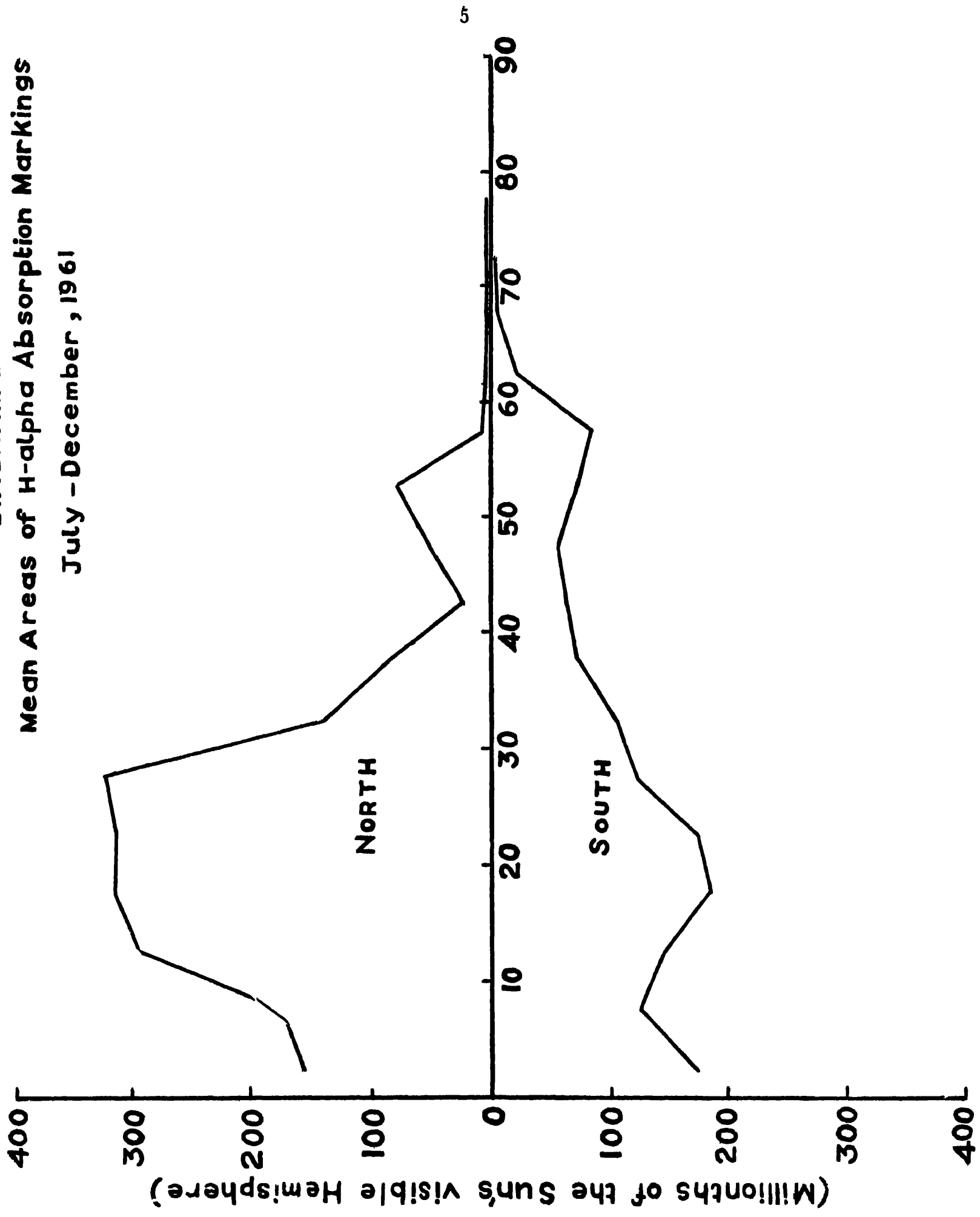
	July—December, 1961		
	Combined data		
	East	West	Percentage East
Total area (Millionths of the sun's visible hemisphere)	2,100.31	1,978.75	51.50
Total numbers	1,503	1,528	49.58

The area shows a slight eastern increase whereas there is no appreciable difference in the numbers.

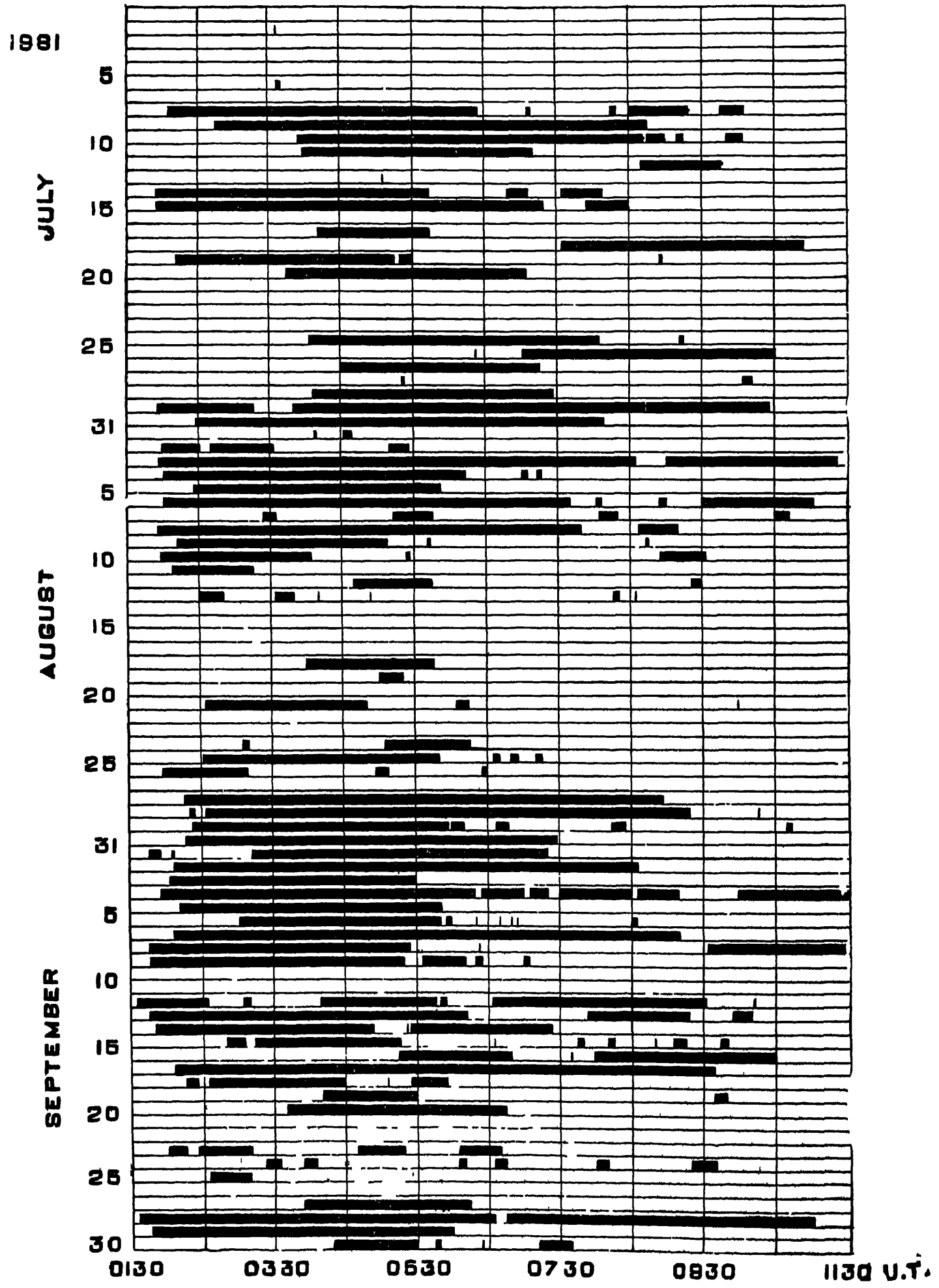
Particulars of solar flares, sudden disappearance of prominences and dark markings, surges and active prominences are given in Tables III—V.

The hours of solar patrol with the spectrohelioscope and the Lyot Filter are shown in the accompanying charts.

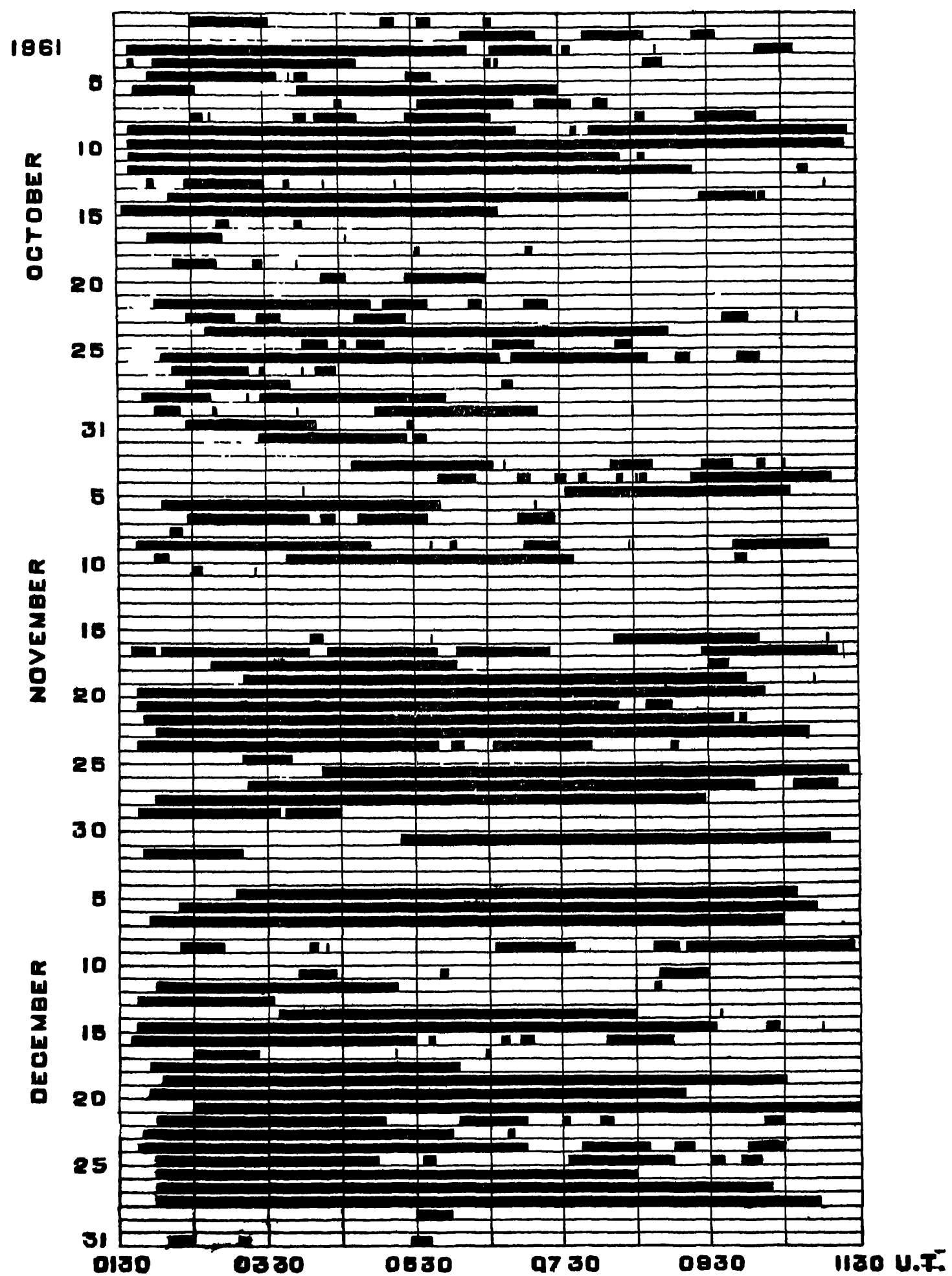
**DIAGRAM II**  
**Mean Areas of H-alpha Absorption Markings**  
**July - December, 1961**



EFFECTIVE HOURS OF SOLAR PATROL WITH  
SPECTROHELIOSCOPE AND LYOT FILTER



EFFECTIVE HOURS OF SOLAR PATROL WITH  
SPECTROHELIOSCOPE AND LYOT FILTER



*Summary of calcium flocculus observations*

During the half-year under review, calcium flocculus photographs were obtained at Kodaikanal on 133 days. Spectroheliograms for 17 days were received from the Mount Wilson Observatory and for 44 days from the Meudon Observatory. On the whole, records were available for 154½ effective days.

The distribution of the areas of calcium flocculus east and west of the sun's axis of rotation is given below.

July—December, 1961

	Combined data		
	East	West	Percentage East
Total area (Millionths of the sun's visible hemisphere uncorrected for foreshortening)	7,490,62	7,298,13	50.66

The mean daily area in millionths of the sun's visible hemisphere (uncorrected for foreshortening) of the calcium flocculi as derived from the combined photographs are given below.

	North	South	Total
Mean daily area (Millionths of the sun's visible hemisphere)	6,515	3,073	9,588

Compared to the previous half-year there is a slight increase in the activity, the increase being 4.67%.

TABLE III  
*Solar flares*

	Time U T			Coordinates		Importance	Maximum width of H-alpha line observed
	Beginning H M	Maximum H M	End H M	Mean Latitude °	Mean Longitude °		
1	2	3	4	5	6	7	8
<b>1961 July</b>							
10	0700	0710	0710	09°S	52°E	1-	1.32
12	0909	0926	0926	09°S	29°E	1	..
14	0255	0307	0309	07°S	03°W	1	1.44
14	0210	0220	0240	08°S	03°W	1-	
14	0340	0400	0400	08°S	03°W	1-	
14	0447	0459	0525	08°S	04°W	1-	
15	0425	..		08°S	17°W	1-	
17	0334			07°S	42°W	1-	
18	*0813		0831	07°S	55°W	1+	
18	*1043		**1053	07°S	55°W	Probably 2	
19	0210	0225	0230	06°S	70°W	1	1.60
30	0406			06°N	66°W	1-	
30	0458		0516	06°N	66°W	1-	

TABLE III—*contd.*

	1	Time U T				Coordinates		Import- ance	Maximum width of H-alpha line observed
		Beginning H M	Maximum H M	End H M	Mean Latitude	Mean Longitude			
		2	3	4	5	6	7	8	
<i>August</i>	4	0435	0445	0450	22°N	72°W	1	1 32	
	6	0651			12°S	80°W	1		
	13	0340		0348	08°N	42°E	1		
	18	*0400		**0430	08°N	28°W	1		
<i>September</i>	1	0323	0323	0330	12°N	45°E	1		
	1	0452			12°N	45°E	1-		
	2	0323	0330	0341	12°N	28°E	1	2.48	
	2	*0613		**0620	08°N	30°E	1	1 60	
	2	0728			12°N	28°E	1-		
	3	0222			12°N	15°E	1-	..	
	3	*0433	..	**0434	12°N	11°E	1-	1 92	
	4	*0730	0734	0745	11°N	04°W	1	2 08	
	4	1025			11°N	04°W	1-		
	7	0618	0618	0622	11°N	40°W	1	1 44	
	9	0507	0509	0514	12°N	67°W	1+	2 24	
	14	0230	0245	0255	08°S	12°E	1-	1 40	
	17	0243	0245	0249	10°S	38°W	1-	2 32	
	17	0452	0454	0457	11°S	37°W	1	2 00	
	17	0922	0923	0926	10°S	38°W	1-	2 20	
	17	*0930	0930	0933	19°N	46°W	1-	1 48	
	23	*0631	0631	**0641	07°N	09°E	1	..	
	25	*0301	0302	**0309	05°N	53°E	1	2 92	
<i>October</i>	3	0505	0505	0515	17°N	68°E	1+	1 68	
	4	0311			13°S	03°E	1-	..	
	9	0307	0307	0309	04°N	01°E	1		
	9	0602	0603	0608	08°N	53°E	1	1 84	
	10	0427			04°N	15°W	1-		
	12	0208	0210	0213	08°S	04°W	1	1 52	
	26	0746			03°N	44°E	1-		
	26	0824			02°N	40°E	1-		

TABLE III—*conclq.*

	Time U T						Coordinates		Importance	Maximum width of H-alpha line observed
	Beginning H M	Maximum H M	End H M		Mean Latitude	Mean Longitude				
	1	2	3	4	5	6	7	8		
<i>November</i>										
9		0237	0239	0246	22°N	32°W	1	1 80		
11		*0235		**0236	17°N	13 W	1—	1 56		
21		0410	0410	0412	06°N	55 W	1—	1 20		
22		0239	0244	0248	07°N	65°W	1—	2 00		
23		0445	0447	0452	07°N	75°W	1	2 40		
23		0748	0750	0753	07°N	77°W	1	2 00		
<i>December</i>										
5		*0516	0516	0518	15°N	03 E	1—	1 48		
6		1041			17°N	20 W	1—			
9		*0903			07°N	7° W	1—	1 40		
22		1015	1016	**1019	03°S	65°E	1			
25		0413	0417	0420	21°N	42°E	1	1 68		
26		0343	0343	0352	14°N	45°W	1	1 68		
26		0534	0535	**0538	12°N	36° E	1—	1 68		

\* Time of Commencement of observation and not the beginning of the flare

\*\*Time of end of observation and not the end of flare

TABLE IV  
*Details of Surges, Eruptive and Active Prominences*

Date	Phenomenon	Importance	Position		Time U T		Direction of outflow	Remarks*
			Latitude	Longitude difference from central meridian	Beginning	End		
1	2	3	4	5	6	7	8	9
<i>August</i>								
1961								
3 . . .	BSL	1	45°S	90°E	02 19	02 29	r	
4 . . .	DSD	1	25°S	60°E		05 07	r	Beginning not observed
6 . . .	BSL	1	12°S	90°W	08 56	11 01	r	
<i>September</i>								
2 . . .	DSD	1	05°N	27°E	03 46		1	B Beginning and end not observed Time given is the beginning of observation
4 . . .	DSD	1	16°N	09°E	03 04	03 45		Displaced to violet 1.4Å and to red 1.4 Å at 0306 U T
4 . . .	DSD	1	13°N	07°W	07 30	08 05	.	B Disappeared at 0805 U T
7 . . .	BSD	1	04°S	40°W	02 02	02 36	.	A
8 . . .	BSL	1	18°N	90°E	03 00	03 08	r	A Displaced to violet 1.60Å and to red 1.68 Å at 0302 U T
9 . . .	DSD	1	22°N	57°W	02 05	02 40		A
9 . . .	AFR	2	20°N	22°W	02 45	07 10		A
15 . . .	APR	1	22°N	90°W	07 51	09 10	r	J
17 . . .	BSL	2	10°N	90°W	02 12	05 15	r	A
17 . . .	BSL	1	10°N	90°W	07 55	08 05	r	A
25 . . .	DSD	1	07°N	53°E	03 01		.	B
28 . . .	APR	1	27°S	90°W	03 45	04 52	r	J
29 . . .	APR	1	30°N	90°W	02 35	05 55	r	J
30 . . .	DSD	1	03°N	15°W	04 57	05 05	..	Beginning not observed
<i>October</i>								
9 . . .	BSL	1	11°N	90°E	02 40	02 50	r	A Disappeared at 0250 U.T.
9 . . .	BSL	1	11°N	90°W	01 50	05 50	r	A. (To red 1.8 Å and to violet 1.4 Å at 0417 U.T. Disappeared at 0550 U T.)
9 . . .	DSD	1	10°N	57°E	03 40	03 52		A
10 . . .	APR	1	05°S	90°W	01 40	02 50	r	J. (To red 1.64 Å and to violet 0.44 Å Disappeared at 0250 U.T.)
10 . . .	DSD	1	12°N	77°E	02 50	03 18		G. To red 0.48 Å and to violet 1.60 Å at 0255 U.T.)
10 . . .	BSL	1	07°N	90°E	02 55	03 05	r	G (To red 0.8 Å and to violet 1.2 Å at 0255 U T.)



TABLE IV—*contd*

Date	Phenomenon	Importance	Position		Time U T		Direction of outflow	Remarks*
			Latitude	Longitude difference from central meridian	Beginning	End		
1	2	3	4	5	6	7	8	9
<i>October—contd</i>								
14	BSD	1	05°N	66°W	03 34	03 41	r	A (To red 0 72 A and to violet 1 04 A at 0335 U T)
15	DSD	1	11°S	46°W	02 25	03 05	r	G
22	DSD	1	05°N	35°W	02 29	02 39		A
22	DSD	1	05°N	35°W	03 17	03 27		A (To violet 2 2 A at 0325 U T)
22	APR	2	07°N	90°E	07 00	07 20	r	K (To violet 0 8 A and to red 1 8 A at 0710 U T. Observations stopped at 0720 U T due to clouds)
<i>November</i>								
9	DSD	1	22°N	33°W	02 06			A End could not be observed due to passing clouds
21	DSD	1	06°N	56°W	07 34	08 10	r	G Beginning and end could not be observed due to bad sky
22	DSD	1	04°N	72°W	02 43	02 52	r	B
23	BSL	1	08°N	90°W	10 18		r	G
24	BSL	1	06°N	90°W	02 17	02 50	r	A
24	BSL	1	07°N	90°W	02 04	02 13	r	A
24	BSL	1	08°N	90°E	03 35	04 00	r	A
26	BSL	1	02°N	90°E	07 29	0 40	r	A
26	APR	1	15°S	90°W	07 20	09 30	r	A Almost disappeared by 0930 U T
29	DSD	1	08°N	30°E	04 05	04 17	r	G
<i>December</i>								
19	BSL	1	04°S	90°E	02 45	02 59	r	A
19	BSL	1	04°S	90°E	03 20	04 20	r	A
20	BSL	1	05°N	90°W	02 32	03 05	r	A
20	BSL	1	05°S	90°E	04 20	04 45	r	A
20	BSL	1	05°S	90°E	05 04	05 25	r	A
24	BSL	1	12°S	90°E	03 06	03 56	r	A (To violet 2 A and to red 2 A at 0312 U T)
26	DSD	1	07°N	35°E	05 34	05 49	r	B

\*The symbols used are the same as those given in the I G Y Instruction Manual

Code —DSD=Dark Surge on Disk, BSL = Bright Surge at Limb, APR=Active Prominence Region, BSD=Bright Surge on Disk, AFR=Active Filament Region

TABLE V

*Sudden Disappearances*

Date and Phenomenon	Time when object last observed before activation U T	Time when disintegration was observed first U T	Time when Object has disappeared U T	Position		Greatest Extension of filament	Importance	Remarks
				Mean Latitude	Longitude difference from Central Meridian			
1	2	3	4	5	6	7	8	9
<i>August 6</i>								
Prominence	05 53	06 19	06 23	16°S	90°W	5"	1+	
<i>October 3</i>								
Dark-Marking	07 30			10 S	04°W	14"	1	Actual disintegration not observed Dark-marking was not seen on 4th
<i>October 10</i>								
Prominence	02 14	02 11	*02 50	05 S	90°W	10	1+	*Completely disappeared at 0250 U T
<i>October 22</i>								
Prominence	06 25	07 00	07 20	07°N	90°E	14"	1+	Observations stopped at 0720 U T due to clouds The time of complete disappearance not observed
<i>October 25</i>								
Dark-Marking	08 30			20°N	05°W	30"	2	Actual disintegration not observed Dark-marking was not seen on 26th
<i>November 6</i>								
Dark-Marking	05 15			18°N	02°E	20"	2	Actual disintegration not observed Dark-marking was not seen on 7th
<i>November 26</i>								
Prominence	07 20	07 20	09 30	15 S	90°W	10"	1+	The Prominence almost disappeared at 0930 U T
<i>December 21</i>								
Dark-Marking	08 05	08 05	08 22	25°N	32°W	10"	1	The dark-marking disappeared by 0822 U T

## PART II

*Magnetic Observations for the Second-half of 1961*

Brief descriptions of the absolute instruments, the variometers and the system of observations are available in Bulletins Nos CXXXII and CXXXVI of this observatory. The data given in this bulletin are derived mainly from the records of La Cour instruments, but in case of failure of La Cour records, Watson magnetograms have been used.

The adopted values of the scale co-efficients for the Horizontal Force were 28r/cm from July to November, 1961 and 20r/cm for December 1961. The scale co-efficients for Vertical Force were 1151/cm for July, August and September 1961 and 120r/cm for October, November and December. The scale co-efficient for Declination was 14'/cm for the whole period.

## PART III

*Ionospheric Observations for the second half of 1961*

A description of the system of ionospheric observations at Kodaikanal with a brief description of the Ionosphere Recorder has been given in Bulletin No 146 of this observatory. The present Bulletin contains half-hourly values of eleven ionospheric parameters viz foF<sub>2</sub>, Fof<sub>1</sub>, foE, foEs, fbEs, f-min, h'F<sub>2</sub>, h'F, h'E, h'Es and (M3000) F<sub>2</sub> with symbols and terminology as recommended by the Special Committee on World-Wide Ionospheric Soundings to the URSI/AGI in its First Report (Brussels, September 2, 1956).

## PART IV

*Observations of Solar Radio Emission*

*Introduction* Observations of solar radio emission at a frequency of 100 Mc/sec have been in progress at this observatory for some years. The radiometer consists of a drift interferometer type antenna using two stacked Yagis separated by 6 wavelengths in an east-west direction, a converter of noise factor 1.4 and a five stage broad-band I F amplifier. The bandwidth of the receiver is approximately 1.5 Mc/sec. The voltage across the detector load resistance actuates a recording milliammeter through a differential D C amplifier. The receiver is calibrated at frequent intervals with a noise generator using a CV 172 temperature limited diode.

In this bulletin all outstanding occurrences observed during the 6-month period, July-December 1961 are listed. The following symbols have been used in the tables.

- S = Simple rise and fall of intensity
- C = Complex variation of intensity
- A = Appears to be part of general activity
- D = Distinct from (s), apparently superimposed upon) the general activity.
- M = Two or more peaks separated by relatively long periods of quietness.
- E = Sudden commencement of activity.
- F = Multiple peaks separated by relatively short periods of quietness.

KODAIKANAL OBSERVATORY,  
31st October, 1964.

M. K. VAINU BAPPU,  
Director.

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**MAGNETIC DATA**

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**TABLE 1**  
**Hourly values of Declination (Westerly), 1961**  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2°Plus tabular quantities

**JULY**

Date	Hours G.M.T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	37 5	37 0	36 0	36 2	37 8	37 9	39 0	40 7	40 6	39 4	39 0	37 3	37 5	38 0	38 3
2	38 0	37 8	36 6	37 3	38 1	38 6	40 4	40 4	39 5	39 5	39 3	39 0	38 7	38 1	39 0
3	38 0	37 0	36 3	36 4	38 1	39 1	40 8	40 6	40 9	40 9	38 6	38 9	37 8	38 2	38 2
4	38 0	36 8	36 0	36 5	38 3	39 3	40 4	41 1	41 3	41 1	41 0	40 7	39 6	39 5	39 9
5††	38 5	37 4	35 5	36 5	37 0	36 6	38 6	39 5	40 3	39 5	39 3	38 4	37 6	38 0	37 9
6	37 6	36 5	36 3	37 0	37 3	38 3	38 5	39 4	39 7	38 8	38 5	38 4	38 3	38 3	39 5
7	38 3	36 0	36 0	37 1	38 0	38 8	39 9	40 2	40 2	39 9	39 8	38 0	38 9	38 1	38 1
8	38 0	37 1	37 1	37 4	37 7	38 5	39 7	39 7	40 6	39 9	39 2	38 5	38 3	37 8	38 5
9	38 0	37 8	37 4	37 8	38 1	39 1	39 5	40 0	39 8	39 6	39 9	39 5	38 6	38 5	38 6
10	38 2	37 7	37 4	38 2	39 2	39 2	39 5	39 9	40 0	38 8	38 5	37 8	37 4	37 8	38 6
11†	38 1	37 2	36 8	36 5	36 5	38 2	39 2	39 8	39 9	40 2	39 3	38 2	38 4	38 2	38 6
12†	38 1	37 1	37 2	36 6	38 9	39 9	41 4	39 9	40 3	40 1	39 2	38 2	38 5	38 6	38 9
13††	38 2	36 8	36 5	37 2	38 5	40 6	42 1	42 4	42 1	40 0	39 6	40 3	42 5	42 9	42 8
14††	37 8	37 3	35 8	35 8	37 3	38 9	40 1	41 4	42 4	39 8	36 1	35 0	38 7	34 5	35 4
15	36 7	35 8	35 0	35 6	36 0	37 2	37 3	38 6	38 7	39 1	39 0	38 6	37 7	38 1	37 7
16	38 0	36 7	34 9	35 5	38 0	39 1	39 0	40 2	40 2	40 1	39 7	39 5	39 6	38 3	38 3
17	37 6	36 6	36 6	36 6	37 4	39 4	40 2	40 4	40 4	40 2	39 7	39 6	38 3	37 4	38 3
18††	37 0	35 8	34 5	34 7	36 7	37 3	37 1	38 2	39 4	39 2	40 2	39 4	37 7	35 9	36 1
19	37 7	36 7	35 7	36 0	37 4	38 9	40 3	41 5	41 7	40 5	39 1	40 1	38 9	38 5	38 7
20	38 1	37 0	36 1	36 3	38 7	39 5	40 2	41 0	40 8	39 8	39 2	39 1	39 1	38 9	39 5
21	37 5	37 1	36 9	37 1	38 8	38 9	39 6	39 7	40 9	39 7	39 2	38 6	37 5	37 5	37 4
22	38 1	37 1	36 5	36 8	38 6	39 9	40 3	41 1	40 4	39 0	39 2	38 5	39 0	38 9	38 8
23	38 5	37 8	37 4	37 8	38 8	39 7	40 7	39 9	41 6	40 6	39 9	38 5	38 3	38 5	38 9
24	38 5	37 2	36 9	37 5	39 0	40 4	41 7	40 5	40 3	39 0	38 9	37 9	38 0	38 4	39 0
25	38 6	38 2	37 6	37 5	38 9	38 0	38 7	40 4	40 0	39 9	38 3	38 0	37 7	38 7	39 1
26	38 6	37 3	37 2	37 3	38 4	40 2	40 4	39 8	39 7	39 1	38 9	38 9	38 3	38 4	39 0
27††	38 3	37 7	37 7	37 9	40 0	40 5	41 4	40 7	41 5	38 9	36 3	34 9	37 5	38 4	39 1
28	36 3	37 0	37 2	36 2	38 7	39 8	41 4	41 6	41 2	39 0	39 1	38 9	38 2	38 0	38 9
29†	37 5	36 2	36 2	37 2	38 7	39 6	41 5	41 7	41 2	40 5	40 3	39 0	38 6	38 7	39 7
30†	37 7	37 5	36 2	37 3	37 9	39 1	39 8	40 0	40 4	38 9	39 0	38 6	38 4	38 7	39 1
31†	38 6	38 0	37 2	37 7	39 1	40 3	40 7	41 7	41 7	41 7	40 5	39 7	38 9	38 6	39 1
Mean	37 9	37 1	36 5	36 8	38 1	39 1	40 0	40 4	40 6	39 7	39 2	38 5	38 3	38 3	38 7
Mean†	38 0	37 2	36 7	37 1	38 2	39 4	40 5	40 6	40 7	40 3	39 7	38 7	38 6	38 6	39 1
Mean††	38 0	37 0	36 0	36 4	37 9	38 8	39 9	38 4	41 1	39 5	38 3	37 8	37 8	37 9	38 3

†Five international quiet days  
 †† Five international disturbed days  
 ΔLoss of record, day omitted for means

TABLE I

Hourly values of Declination (Westerly), 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2° Plus tabular quantities

JULY

Hours G M I										Mean		Maximum		Minimum		Range		Date
15	16	17	18	19	20	21	22	23		Time	Mag	Time	Mag	Time	Mag			
										H	M	H	M					
38 9	38 9	38 5	38 3	38 3	38 2	38 0	37 9	38 0	38 2	07	00	40 7	02	00	36 0	4 7	1	
38 9	38 4	38 4	38 1	38 1	38 1	38 1	38 1	38 4	38 6	06	10	40 4	01	55	36 5	3 9	2	
38 4	39 1	38 5	38 7	38 5	38 4	38 1	38 1	37 8	39 6	08	00	40 9	02	55	36 3	4 6	3	
39 7	39 0	38 8	38 8	39 3	39 2	38 6	38 9	38 6	39 2	07	30	41 4	02	00	36 0	5 4	4	
37 2	37 6	38 1	38 4	38 3	38 3	38 3	38 2	37 2	38 0	08	00	40 3	02	20	35 4	4 9	5††	
38 8	38 8	38 4	38 3	38 1	38 5	38 4	38 4	38 4	38 3	07	30	39 8	01	30	36 2	3 6	6	
38 1	38 4	39 1	38 5	38 5	38 5	38 7	38 5	38 5	38 5	07	30	40 8	01	25	36 9	3 9	7	
38 4	38 4	38 7	38 7	39 4	38 7	38 5	38 5	38 5	38 5	08	15	40 9	02	30	37 0	3 9	8	
39 1	38 6	38 5	38 8	38 9	38 6	38 5	38 5	38 2	38 7	07	00	40 0	02	00	37 4	2 6	9	
38 6	38 2	38 5	38 8	38 6	38 6	38 6	38 6	38 2	38 5	07	00	40 2	01	45	37 2	3 0	10	
38 8	39 5	38 9	38 8	38 8	38 8	38 6	38 4	38 1	38 5	09	00	40 2	02	48	36 4	3 8	11†	
49 0	39 0	39 4	39 0	38 9	38 9	38 7	38 6	38 3	38 9	06	30	40 6	01	00	37 1	3 5	12†	
41 1	39 0	38 6	37 8	38 6	38 3	37 6	38 2	38 6	39 6	13	00	42 9	02	00	36 5	6 4	13††	
35 7	36 8	36 1	36 9	38 0	37 8	37 6	38 0	37 5	37 3	08	00	42 4	12	30	33 3	9 1	14††	
38 1	38 1	38 3	38 4	38 6	38 6	38 6	38 1	37 4	37 7	09	00	39 1	02	00	35 0	4 1	15	
38 6	38 8	38 8	38 3	38 1	37 7	37 9	37 9	38 0	38 4	07	15	40 5	01	50	34 8	5 7	16	
38 8	38 3	38 8	38 8	38 7	38 4	38 4	37 2	36 9	38 4	07	23	41 5	01	30	36 5	5 0	17	
36 1	36 4	37 1	37 4	37 1	37 3	37 4	37 4	38 1	37 2	10	18	40 3	01	55	34 5	5 8	18††	
38 7	38 5	38 4	38 0	38 4	38 7	38 5	38 4	38 4	38 7	08	15	41 9	02	00	35 7	6 2	19	
39 5	39 1	38 9	38 7	38 5	38 1	37 5	37 4	37 4	38 7	06	19	41 9	01	55	34 5	7 4	20	
37 5	37 9	37 9	38 3	38 9	39 3	39 0	38 3	38 3	38 4	08	00	40 9	02	15	35 8	5 1	21	
38 9	38 9	39 5	39 2	39 0	39 0	39 0	38 8	38 9	38 9	07	20	41 6	02	00	36 5	5 1	22	
38 5	38 2	38 9	39 2	39 0	38 9	39 0	39 0	38 8	39 0	08	15	41 7	02	00	37 4	4 3	23	
39 0	39 1	39 1	39 1	39 3	39 3	39 4	39 1	39 0	39 0	06	00	41 7	01	35	36 7	5 0	24	
39 6	39 4	39 7	39 1	39 1	39 0	39 0	38 9	38 9	38 6	07	00	40 4	03	00	36 5	3 9	25	
39 3	39 4	39 7	39 3	39 1	40 0	40 0	38 9	38 0	39 0	06	00	40 4	02	00	37 2	3 2	26	
38 7	38 9	38 2	37 6	37 6	37 2	36 5	37 7	37 3	38 4	08	04	41 8	11	00	34 9	6 9	27††	
38 9	38 4	38 7	38 6	38 6	38 3	38 4	38 3	38 2	38 7	07	00	41 8	00	30	35 8	6 0	28	
39 7	39 4	39 7	39 1	39 0	38 9	38 9	38 7	38 3	39 1	07	30	41 8	02	30	36 1	5 7	29†	
39 6	39 3	39 1	39 0	38 9	38 9	38 7	38 6	38 6	38 7	06	45	40 5	02	00	36 2	4 3	30†	
39 4	39 4	39 1	39 1	39 1	39 1	39 0	39 4	39 0	39 4	08	35	41 8	02	00	37 2	4 6	31†	
38 7	38 6	38 6	38 6	38 7	38 6	38 4	38 3	38 2	38 6							4 9	Mean	
39 3	39 3	39 2	39 0	38 9	38 9	38 8	38 7	38 5									Mean†	
37 5	37 7	37 7	37 6	37 9	37 8	37 5	37 7	37 9									Mean††	

† Five international quiet days  
 †† Five international disturbed days  
 ^ Loss of record, day omitted for means

TABLE 2  
Hourly values of Declination (Westerly), 1961  
(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2° Plus tabular quantities

AUGUST

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	39 0	38 0	37 7	38 0	39 0	39 8	40 4	40 4	40 3	39 8	39 7	39 4	39 6	39 4	39 6
2††	38 9	37 5	37 0	37 6	39 0	39 6	39 6	39 2	39 7	40 1	40 3	39 3	38 2	37 2	37 5
3	38 3	37 6	37 9	38 3	38 8	38 3	39 2	39 9	39 6	39 6	39 6	39 3	38 9	38 6	39 0
4††	38 5	37 5	36 8	37 2	37 8	39 0	39 6	40 6	41 8	41 0	39 7	38 9	38 6	38 6	38 8
5	38 8	38 1	37 5	37 8	39 3	40 7	41 7	41 0	40 4	39 6	38 9	38 3	38 9	38 9	39 2
6	38 8	37 9	37 1	37 1	38 8	40 4	41 0	40 7	39 7	39 6	39 3	39 0	39 0	38 9	39 0
7†	38 6	38 1	38 2	38 2	39 5	40 6	41 3	41 9	41 6	40 9	39 5	38 8	38 8	38 5	39 1
8	38 5	37 4	36 7	37 3	38 7	40 2	41 3	40 8	40 9	40 5	39 4	38 4	38 1	38 2	39 1
9†	38 1	37 0	36 7	37 1	38 8	Δ	Δ	Δ	Δ	Δ	Δ	39 6	39 5	39 2	39 2
10	38 7	37 3	36 6	36 6	37 5	38 7	39 8	41 0	40 9	40 0	38 9	38 4	38 5	38 5	38 1
11††	38 5	37 7	37 4	38 0	39 5	41 2	42 3	42 9	42 2	40 9	40 9	38 1	38 0	37 8	37 7
12	37 4	36 7	36 6	38 0	42 2	41 6	42 4	42 6	42 2	41 0	40 2	39 2	38 8	38 9	39 4
13†	38 1	37 3	36 3	36 6	38 0	40 2	41 5	42 0	41 6	40 9	39 8	39 1	38 8	39 1	39 5
14	38 1	37 5	36 8	37 8	39 5	41 5	42 3	42 3	42 0	40 6	39 6	38 8	38 7	39 4	39 6
15	38 1	37 0	36 4	36 9	38 8	40 5	41 2	42 9	41 4	40 8	40 0	39 4	39 4	39 4	39 7
16	38 7	38 0	37 2	37 2	38 6	40 1	41 4	42 0	41 8	40 8	40 6	39 4	39 2	39 0	39 3
17	38 6	37 9	37 3	37 1	38 5	39 8	41 0	41 6	41 4	41 4	40 5	39 1	38 8	38 9	39 3
18	38 5	37 1	37 0	37 2	38 4	39 2	40 0	41 2	41 3	40 5	39 3	38 5	38 4	38 8	39 3
19	38 6	37 5	36 8	36 4	38 4	39 8	40 8	41 3	40 5	40 1	39 1	37 8	37 4	37 6	38 3
20	38 4	37 6	37 0	37 4	39 0	40 5	41 6	41 8	41 3	41 1	40 4	39 6	38 7	38 7	38 7
21	38 4	37 4	36 6	36 3	37 7	39 3	41 1	41 5	41 0	39 7	38 4	37 6	37 6	38 3	38 9
22†	38 0	38 3	36 9	37 7	39 0	40 3	41 1	41 1	40 5	39 8	39 6	39 0	38 7	39 0	39 1
23†	38 6	37 5	37 0	37 4	38 9	40 3	41 1	41 3	40 7	39 9	38 9	38 9	38 8	38 8	38 9
24	38 8	37 8	37 5	38 1	39 4	41 0	42 3	43 0	42 3	41 6	40 2	38 9	38 8	39 3	39 8
25	38 4	37 4	37 1	37 8	38 8	40 2	41 9	41 2	40 2	39 4	38 8	38 7	38 4	38 8	38 8
26	38 1	37 4	37 4	38 3	37 8	41 4	42 8	43 3	42 9	41 6	40 0	38 7	38 7	38 7	39 4
27	37 9	36 6	35 5	36 5	38 1	39 5	40 2	39 8	39 8	39 8	39 2	38 1	38 0	38 3	38 7
28	37 4	36 6	36 0	36 8	37 5	38 6	39 7	39 9	39 9	39 1	38 3	37 9	37 9	38 3	38 6
29	38 8	36 6	35 8	36 8	38 6	40 1	41 5	42 8	42 2	41 0	39 7	38 6	38 3	38 5	38 6
30††	38 3	36 8	35 7	35 8	37 2	38 6	39 9	41 0	41 8	39 7	38 6	37 1	36 6	35 7	36 9
31††	38 3	36 5	35 2	35 4	36 9	37 9	38 9	39 9	39 9	40 0	39 9	38 6	37 5	37 3	37 3
Mean	38 4	37 4	36 8	37 3	38 6	39 6	41 0	41 4	41 1	40 4	39 6	38 7	38 5	38 6	38 8
Mean†	38 3	37 8	37 1	37 5	38 8	40 4	41 2	41 6	41 1	40 4	39 4	39 0	38 8	38 8	39 2
Mean††	38 5	37 2	36 4	36 8	38 1	39 3	40 1	40 7	41 1	40 3	39 9	38 4	37 8	37 3	37 6

†Five international quiet days  
††Five international disturbed days  
Δ Loss of record, day omitted for means

TABLE 2  
 Hourly values of Declination (Westerly), 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2° Plus tabular quantities

AUGUST

Hours G.M.T										Mean	Maximum		Minimum		Range	Date	
15	16	17	18	19	20	21	22	23			Time	Mag	Time	Mag			
										H M		H M					
39.7	39.8	39.7	39.6	39.6	39.8	39.0	39.0	39.0	39.4	06	10	40.5	01	45	37.6	2.9	1
38.2	38.2	38.8	38.9	38.9	38.9	38.9	38.9	38.8	38.7	10	00	40.3	01	15	36.6	3.7	2††
38.9	39.0	39.3	39.2	39.2	38.9	38.9	39.2	39.0	38.9	06	58	40.2	01	15	37.5	2.7	3
39.0	39.3	39.3	39.2	39.2	38.9	39.0	39.2	38.9	39.0	07	40	42.1	02	00	36.8	5.3	4††
39.2	39.3	39.6	39.3	39.3	39.2	39.0	38.9	39.0	39.2	06	00	41.7	02	00	37.5	4.2	5
39.2	39.2	38.9	39.2	39.2	38.9	38.9	38.9	38.8	38.7	06	00	41.0	02	00	37.1	3.9	6
39.5	39.5	39.5	39.5	39.4	39.1	39.1	39.1	38.9	39.5	07	16	42.0	01	28	37.8	4.2	7†
39.4	39.2	39.1	38.8	38.2	38.5	38.8	38.7	38.7	38.9	06	15	41.6	02	00	36.7	4.9	8
39.2	39.2	39.1	39.1	39.2	39.2	39.1	38.9	38.8	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	9†
38.1	38.8	39.1	39.2	39.2	39.4	39.1	39.1	38.9	38.8	07	12	42.6	02	00	36.6	6.0	10
38.7	38.8	39.1	38.8	38.2	38.1	38.1	38.1	37.4	39.1	06	43	43.0	13	05	36.7	6.3	11††
39.5	39.5	39.5	39.5	39.1	38.8	38.8	38.8	38.4	39.5	07	00	42.6	01	05	36.3	6.9	12
39.5	39.5	39.4	39.2	39.2	39.2	38.9	38.8	38.7	39.2	07	10	42.2	02	00	36.3	5.9	13†
39.6	39.6	39.4	39.2	39.1	38.7	38.5	38.4	38.2	39.4	06	00	42.3	02	00	36.8	5.5	14
39.4	39.3	39.3	39.0	39.1	39.1	39.1	38.8	38.7	39.3	06	28	43.0	02	00	36.3	6.7	15
39.3	39.3	39.3	39.3	39.3	39.3	39.2	39.0	38.9	39.4	07	00	42.0	01	56	37.9	4.1	16
39.7	39.8	39.7	39.7	39.2	39.2	39.2	39.2	38.8	39.4	08	30	41.7	02	45	37.0	4.7	17
39.3	39.5	39.5	39.3	39.3	39.2	39.2	39.2	39.2	39.1	08	00	41.3	01	25	36.8	4.5	18
38.4	38.8	39.1	39.0	38.7	38.7	38.8	38.8	38.8	38.7	06	45	41.5	02	45	36.3	5.2	19
38.7	38.7	38.5	38.4	38.8	39.1	39.1	39.0	38.8	39.2	07	00	41.8	02	00	37.0	4.8	20
39.0	38.9	39.0	38.6	38.7	39.0	38.9	38.7	38.6	38.7	07	00	41.5	02	45	36.3	5.2	21
39.1	39.1	39.1	39.0	39.0	38.9	38.7	38.7	38.6	39.1	06	36	41.2	01	20	36.8	4.4	22†
39.0	39.0	39.0	38.9	38.9	38.9	38.8	38.9	38.9	39.0	06	25	41.4	01	25	36.8	4.6	23†
39.8	39.8	39.6	39.4	39.9	38.8	38.7	38.4	38.5	39.7	07	00	43.0	02	00	37.5	5.5	24
38.5	38.8	38.8	38.8	38.7	38.4	38.4	38.2	38.2	38.9	07	24	41.5	01	24	37.0	4.5	25
39.4	39.4	39.2	39.0	38.7	38.7	38.4	38.1	38.0	39.4	06	45	43.6	01	25	37.3	6.3	26
38.7	38.7	38.7	38.7	38.7	38.4	38.4	38.1	38.0	38.4	06	00	40.2	01	45	35.3	4.9	27
38.7	38.6	38.7	38.6	38.6	38.5	38.2	38.2	38.2	38.3	07	30	40.0	01	07	35.9	4.1	28
38.7	38.7	39.1	38.7	39.4	38.5	38.3	38.3	38.5	39.0	07	00	42.8	01	45	35.7	7.1	29
36.9	36.8	37.6	37.8	38.0	38.0	38.2	38.6	38.3	37.9	06	12	41.1	12	50	35.1	6.0	30††
37.9	38.2	38.5	38.5	38.5	38.3	38.5	38.5	38.2	38.1	09	00	40.1	02	30	35.1	5.0	31††
39.0	39.0	39.1	39.0	39.0	38.8	38.8	38.7	38.6	39.0						5.0		Mean
39.3	39.3	39.2	39.1	39.1	38.8	38.9	38.9	38.8									Mean†
38.1	38.3	38.7	38.6	38.6	38.4	38.5	38.7	38.3									Mean††

† Five international quiet days.  
 †† Five international disturbed days  
 Δ Loss of record, day omitted for means.



TABLE 3  
Hourly values of Declination (Wetaly), 1961  
(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2' Plus tabular quantities

SEPTEMBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	37 9	36 6	36 2	36 5	37 8	38 9	39 3	39 9	39 9	39 0	38 1	36 9	37 2	37 9	38 0
2	37 2	35 8	35 2	35 8	37 3	39 4	40 7	40 7	40 7	39 9	37 6	36 1	36 1	36 9	37 6
3	37 8	36 4	35 4	36 6	38 0	39 3	40 6	40 8	40 7	40 4	39 3	38 2	37 8	37 6	38 2
4	37 6	36 5	35 4	36 1	37 8	39 2	40 3	41 0	40 4	40 1	38 0	37 6	37 9	38 2	38 3
5	37 9	36 8	36 6	37 5	38 6	40 4	41 7	41 7	40 7	40 1	39 0	37 9	37 8	37 9	37 9
6	37 8	36 4	35 2	36 1	37 5	39 3	40 7	40 6	40 4	39 9	39 3	38 2	37 9	38 2	38 1
7†	37 8	37 1	36 5	37 2	38 7	40 4	42 0	42 8	42 4	40 6	39 0	38 0	38 0	38 5	39 0
8†	38 0	37 2	36 5	37 7	39 3	41 6	42 5	43 0	42 3	40 9	39 5	38 6	38 6	38 8	38 8
9	38 0	36 7	36 3	37 6	40 1	41 1	41 9	40 9	39 5	37 7	36 6	36 5	36 7	38 0	38 1
10	36 6	35 9	36 2	37 1	40 4	41 9	41 8	41 2	40 4	39 0	38 1	38 1	38 1	38 7	38 7
11	38 0	37 0	36 0	36 7	39 5	40 9	41 6	42 1	41 1	39 8	39 1	39 0	38 7	39 1	39 1
12	37 1	36 9	37 0	38 3	39 4	40 9	41 5	41 1	40 5	39 3	38 3	38 3	36 9	37 1	37 9
13	37 9	36 2	36 2	37 3	40 1	41 8	42 5	43 2	42 6	40 1	38 7	38 0	38 1	38 1	38 6
14††	37 6	36 6	36 3	37 0	38 8	40 4	41 6	42 5	41 6	40 9	39 5	38 8	37 9	36 5	36 9
15	35 2	35 8	35 5	36 0	38 1	40 0	41 1	41 2	40 7	38 1	37 0	35 8	36 5	37 3	38 0
16	37 9	36 5	35 5	36 3	38 8	40 3	41 0	42 3	41 6	40 1	38 5	37 9	37 1	38 1	38 1
17	38 0	36 7	36 0	36 0	37 5	39 4	39 8	40 6	41 1	39 1	38 1	37 1	37 0	37 7	38 0
18	37 5	37 0	36 6	36 6	38 0	39 5	41 1	41 9	41 1	40 1	39 0	38 3	38 1	38 3	38 3
19†	38 0	36 9	36 6	36 5	37 9	40 9	41 5	42 0	41 3	40 6	39 0	38 2	38 0	38 0	37 9
20	37 8	37 5	36 7	37 7	38 5	37 8	39 6	39 9	38 6	37 8	36 5	36 5	37 4	37 7	37 7
21†	37 8	36 7	36 5	36 6	38 8	40 2	40 6	40 5	41 4	39 2	38 1	37 7	37 7	38 0	38 4
22	37 7	36 4	36 6	37 6	39 0	39 8	40 8	41 1	40 8	39 8	39 0	38 6	38 3	38 4	38 1
23†	37 6	36 3	36 3	37 1	38 3	39 0	40 2	40 2	40 2	39 0	37 6	37 5	37 8	38 2	38 2
24††	38 2	37 5	37 5	38 2	39 8	41 1	42 3	42 3	41 0	38 9	37 6	36 0	37 8	38 3	37 5
25††	37 5	36 2	35 8	35 9	37 0	38 2	39 1	39 2	39 9	38 7	37 5	37 1	37 0	36 3	36 8
26	37 0	36 3	36 1	37 0	38 2	39 4	40 3	40 8	39 5	37 7	36 4	36 0	36 1	37 3	37 3
27	37 5	37 3	37 4	37 9	39 1	40 0	39 8	39 0	38 3	38 6	36 0	35 8	35 8	36 6	37 2
28	37 2	36 5	36 5	37 2	38 6	39 8	40 1	40 0	39 1	38 6	38 0	37 1	37 6	37 7	38 0
29	37 4	36 9	36 9	37 2	37 3	38 1	38 8	39 8	38 8	38 0	37 1	37 0	37 3	37 3	37 1
30††	37 2	36 9	36 0	36 5	37 3	38 6	38 6	38 6	38 6	38 5	38 3	37 5	37 3	37 2	37 5
Mean	37.6	36.7	36.2	36.9	38.5	39.9	40.8	41.0	40.1	39.1	38.2	37.5	37.5	37.8	38.0
Mean†	37.8	36.8	36.5	37.0	38.6	40.3	41.4	41.7	41.3	40.1	38.7	38.6	38.0	38.3	38.5
Mean††	37.7	36.8	36.4	36.8	38.1	39.1	40.2	40.4	40.1	39.2	38.2	37.3	37.4	37.3	37.3

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record, day omitted for means.

TABLE 3  
 Hourly values of Declination (Westerly), 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2° Plus tabular quantities

SEPTEMBER

Hours G M T										Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23	24		Time	Mag	Time	Mag		
										H	M	H	M			
17 9	18 0	18 2	18 3	18 6	18 6	18 0	18 6	18 0	18 1	07 00	39 6	09 00	36 1	3 5	1††	
17 9	18 2	18 0	18 3	18 5	18 3	18 2	18 0	17 9	17 9	04 24	11 1	01 15	35 1	6 3	2	
18 0	18 3	18 3	18 5	18 2	18 3	18 2	18 0	17 9	18 1	06 35	37 7	02 00	35 1	2 3	3	
18 5	18 2	18 5	18 3	18 2	18 0	17 9	16 8	16 6	18 2	06 18	11 3	02 00	35 4	5 9	4	
17 9	17 8	18 0	18 2	18 2	18 2	18 5	18 5	18 2	18 6	06 30	12 1	02 30	36 5	5 6	5	
18 3	18 5	18 5	18 5	18 1	18 2	18 0	18 0	18 0	18 3	06 30	40 8	02 00	35 2	5 6	6	
18 9	18 9	18 9	18 7	18 6	18 5	18 3	18 3	18 5	19 0	06 50	42 9	02 00	36 5	6 1	7†	
19 1	19 3	19 1	19 1	19 0	18 6	18 6	18 6	18 1	19 3	07 00	13 3	02 00	36 5	6 8	8†	
18 3	18 1	18 1	18 1	18 0	18 0	17 7	17 1	17 6	18 2	06 03	12 1	02 00	36 3	5 8	9	
18 7	18 6	18 1	18 1	18 4	18 1	18 3	18 3	18 3	18 7	05 30	42 1	01 05	35 6	6 5	10	
19 1	18 7	18 0	17 9	18 0	18 0	18 0	18 0	18 0	18 8	06 15	12 2	02 00	36 0	6 2	11	
18 3	18 1	18 1	18 1	18 1	18 0	18 0	17 9	17 9	18 5	07 23	11 6	01 00	36 9	1 7	12	
18 7	18 7	18 1	18 1	18 1	18 0	17 9	17 9	17 9	18 9	07 16	43 5	01 30	36 2	7 3	13	
17 6	17 7	17 6	17 7	17 7	17 7	17 9	17 6	17 7	17 3	07 15	42 6	01 30	36 2	6 4	14††	
18 0	17 2	18 3	18 1	18 1	18 1	18 1	18 4	18 0	17 9	07 00	11 8	01 25	35 2	6 6	15	
18 1	18 3	18 8	18 7	18 1	18 7	18 5	18 1	18 1	18 6	06 50	12 1	02 00	35 3	7 1	16	
18 0	18 2	18 1	18 2	18 2	18 1	18 2	18 1	18 0	18 1	06 50	10 8	01 15	35 6	5 2	17	
18 9	18 0	18 1	18 3	18 1	18 3	18 1	18 1	18 1	18 0	06 35	12 1	02 00	36 1	5 7	18	
18 0	18 2	18 0	18 5	18 3	18 2	18 0	18 0	18 0	18 6	07 00	12 1	01 30	36 5	5 6	19†	
17 8	17 8	18 1	17 9	17 8	17 9	17 8	17 7	17 8	17 8	07 15	40 3	10 00	36 1	3 9	20	
18 3	18 0	18 0	17 8	17 7	17 7	17 7	17 7	17 7	18 3	06 00	10 8	02 00	36 1	4 1	21†	
18 6	18 2	18 3	18 2	17 7	17 6	17 6	17 7	17 9	18 5	07 00	11 7	01 00	36 1	5 3	22	
18 2	18 2	18 2	18 1	17 8	17 6	17 9	17 9	18 2	18 2	07 00	40 3	01 10	36 1	1 2	23†	
16 2	16 7	16 7	17 1	17 5	17 1	17 5	17 8	17 6	18 3	06 20	12 4	11 00	35 1	7 0	24††	
17 3	17 1	17 1	17 5	17 4	17 5	17 5	17 3	17 3	17 5	08 02	40 2	02 00	35 7	1 5	25††	
17 3	17 1	17 5	18 0	17 5	17 5	17 7	17 5	17 5	17 6	07 00	11 2	01 52	35 9	5 3	26	
17 2	17 3	17 7	17 6	17 4	17 4	17 4	17 4	17 4	17 1	07 05	25 40	11 15	35 3	4 8	27	
18 0	17 6	17 6	17 1	17 6	17 1	17 1	17 1	17 1	17 9	06 00	10 1	01 37	36 0	4 1	28	
17 6	17 7	17 4	17 4	17 1	17 1	17 3	17 3	17 1	17 6	07 20	10 0	02 25	36 5	3 5	29	
17 8	17 9	17 8	17 5	17 8	17 6	19 2	19 0	18 7	17 8	21 20	19 3	02 15	35 8	3 5	30††	
18 1	18 0	18 1	18 1	18 0	18 0	18 0	17 9	17 9	18 4					5 3	Mean	
18 5	18 5	18 5	18 1	18 3	18 1	18 1	18 1	18 2							Mean†	
17 1	17 5	17 5	17 6	17 8	17 8	18 0	18 1	17 8							Mean††	

† Five international quiet days.  
 †† Five international disturbed days.  
 Δ Low of record, day omitted for means

TABLE 4  
 Hourly values of Declination (Westerly), 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2° Plus tabular quantities

OCTOBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	38 2	36 5	35 1	34 4	33 8	36 9	34 1	33 1	33 0	33 0	33 4	35 2	35 4	34 5	35 5
2	36 1	35 8	35 2	35 1	35 3	36 4	36 8	37 0	37 0	36 7	37 0	36 7	36 4	36 0	36 1
3	37 0	36 5	36 0	35 7	36 8	37 4	37 8	37 8	37 4	36 7	36 4	36 7	37 0	37 0	37 0
4	36 7	36 4	36 4	36 7	37 3	38 0	38 3	38 0	37 3	36 9	36 9	36 9	37 0	37 0	36 9
5	37 0	36 3	36 3	36 6	37 7	38 4	39 3	38 7	38 0	36 9	36 5	36 6	36 9	37 0	36 9
6	36 9	36 6	36 2	35 7	36 1	37 4	38 1	38 3	37 5	36 7	36 1	35 8	36 1	36 4	36 2
7	36 7	36 0	35 4	35 4	36 8	38 7	39 4	39 1	38 1	37 3	36 7	36 7	36 8	37 0	36 8
8	36 7	36 3	36 0	36 6	38 0	38 3	38 7	38 3	37 3	36 6	36 0	36 3	37 2	37 3	37 3
9	37 3	37 0	37 0	36 7	38 0	38 7	39 4	39 0	38 1	37 7	37 3	36 7	37 2	36 9	36 7
10†	36 9	36 6	36 5	36 2	36 8	36 8	39 4	39 3	38 5	37 2	36 4	36 2	36 5	37 1	36 9
11	36 6	36 6	36 4	36 6	38 2	39 4	39 6	40 0	39 0	37 3	36 5	36 4	36 5	36 5	36 5
12	36 6	36 4	35 8	35 0	35 9	37 3	38 0	37 9	37 6	36 5	36 4	36 5	36 6	36 5	36 2
13	36 5	36 5	35 9	35 9	36 6	37 4	38 8	39 4	38 1	36 7	36 6	36 2	37 0	37 2	36 9
14	37 3	36 6	36 3	36 7	37 9	39 3	39 5	39 4	38 6	37 6	36 7	36 7	36 6	36 7	36 7
15†	37 2	37 2	36 7	36 9	37 9	38 6	39 5	39 4	38 1	37 3	36 6	36 6	36 9	37 2	37 3
16†	37 4	37 3	36 9	36 7	37 2	38 6	39 5	40 1	39 1	38 0	37 2	36 6	36 7	37 0	37 0
17†	37 3	37 0	36 6	36 7	36 8	38 0	38 8	38 7	37 8	36 8	36 6	36 6	36 7	36 8	36 8
18†	38 1	37 5	37 1	37 4	37 7	38 8	39 2	38 2	37 5	37 1	36 7	37 0	37 1	37 3	37 3
19	37 3	36 7	36 7	36 7	36 8	37 1	38 0	37 4	36 6	36 3	36 1	36 4	37 0	37 0	37 0
20	36 6	36 4	36 3	36 6	36 8	37 3	37 7	37 4	36 4	36 4	36 6	36 7	36 7	36 7	36 7
21	36 8	37 1	36 8	37 1	37 5	38 2	38 9	38 8	37 9	36 5	36 8	36 7	36 9	36 8	36 8
22	36 9	37 2	37 1	37 2	37 6	38 3	38 9	38 3	37 6	36 9	36 6	36 9	37 2	37 0	36 9
23	37 5	37 0	36 9	37 0	37 5	38 3	39 0	38 9	38 3	37 5	36 9	36 8	36 9	36 9	36 9
24	37 6	37 5	37 2	37 1	37 1	38 0	38 7	39 0	38 4	37 8	37 3	37 0	36 6	36 4	36 9
25	37 6	37 7	37 6	38 3	38 1	38 0	39 4	39 4	38 4	37 8	37 1	36 9	37 0	37 0	36 7
26††	37 8	37 6	37 7	38 5	38 5	38 6	38 4	38 5	37 7	36 3	36 3	35 8	35 8	36 1	36 5
27††	37 0	37 1	37 2	37 0	37 4	37 8	37 7	37 1	36 4	36 4	36 4	36 5	37 0	37 0	37 1
28††	37 4	37 3	37 0	37 2	36 8	37 6	37 9	37 8	37 3	36 6	36 1	35 4	32 3	30 9	31 6
29††	36 1	36 6	36 4	34 8	34 4	34 7	35 2	37 1	36 2	36 1	36 8	37 1	36 5	36 5	36 5
30	36 5	36 5	36 1	35 8	36 2	37 6	37 7	37 3	36 3	35 9	35 8	36 0	37 2	37 2	37 2
31	37 0	36 6	36 2	35 9	36 6	37 4	37 4	37 4	37 0	36 3	36 0	36 5	37 3	37 3	37 3
Mean	37 1	36 8	36 5	36 5	37 0	37 9	38 3	38 0	37 5	36 8	36 5	36 5	36 6	36 6	36 6
Mean†	37 4	37 1	36 8	36 8	37 3	38 2	39 3	39 1	38 2	37 3	37 0	36 6	36 8	37 1	37 1
Mean††	37 3	37 0	36 7	36 4	36 2	37 1	36 7	36 7	36 1	35 7	35 8	36 0	35 4	35 0	35 4

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record; day omitted for means

TABLE 4  
 Hourly values of Declination (Westerly), 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2' Plus tabular quantities

OCTOBER

Hours G M 1										Maximum		Minimum		Range		Date
15	16	17	18	19	20	21	22	23	Mean		Range		Range			
									Time	Mag	Time	Mag				
									H	M	H	M				
35 7	35 7	35 7	35 8	35 8	35 7	35 8	35 9	36 1	35 2	00 01	38 2	09 10	32 6	5 6	1††	
35 1	36 3	36 4	36 8	36 8	36 7	36 7	36 7	36 7	36 4	07 00	37 0	02 20	31 6	2 1	2	
35 7	36 8	36 8	36 7	36 4	36 4	36 5	36 7	36 7	36 8	07 01	38 1	03 00	35 7	2 4	3	
36 6	36 9	36 9	36 9	37 0	37 0	37 0	37 0	37 0	37 0	06 08	38 1	01 30	36 3	2 1	4	
36 9	36 9	36 9	36 9	36 9	36 9	36 9	36 9	36 9	37 1	07 22	39 6	01 36	35 7	3 9	5	
36 5	36 8	36 8	36 7	36 5	36 7	36 8	36 8	36 8	36 7	07 01	38 3	03 00	35 7	2 6	6	
37 0	36 8	36 8	36 8	36 7	36 7	36 7	36 8	36 8	37 0	06 50	39 5	02 40	35 0	4 5	7	
37 2	37 0	36 7	36 7	36 7	36 7	36 7	37 2	37 2	37 0	07 28	39 1	02 01	35 9	3 2	8	
36 7	36 7	36 9	36 9	36 7	36 7	36 9	36 9	36 9	37 3	06 00	39 4	16 16	36 6	2 8	9	
36 9	37 1	37 1	36 9	36 6	36 6	36 6	36 6	36 6	37 0	06 00	39 4	02 40	35 8	3 6	10†	
36 6	36 6	36 8	36 8	36 6	36 6	36 5	36 6	36 6	37 2	07 00	40 1	02 30	36 2	1 2	11	
37 7	36 1	36 5	36 5	36 5	36 5	36 5	36 6	36 5	36 5	06 23	38 5	02 51	35 1	3 4	12	
37 3	37 2	36 7	36 7	36 9	37 0	37 3	37 2	37 3	37 1	06 45	39 1	02 30	35 5	3 9	13	
37 2	37 2	37 0	37 3	37 2	37 9	37 5	37 1	37 4	37 1	06 00	39 5	01 31	36 0	3 5	14	
37 2	37 3	37 4	37 4	37 6	37 4	37 6	37 7	37 1	37 5	06 00	39 5	10 15	36 5	3 0	15†	
37 0	37 2	37 3	37 3	37 3	37 1	37 4	37 4	37 3	37 5	06 25	40 7	11 15	36 3	1 4	16†	
37 0	37 3	37 4	37 4	37 4	37 1	37 4	37 7	38 0	37 3	06 01	39 1	10 56	36 4	3 0	17†	
37 3	37 1	37 3	37 3	37 3	37 3	37 1	37 1	37 3	37 5	06 15	39 8	11 01	36 6	3 2	18†	
36 8	37 0	37 1	37 0	37 3	37 0	37 0	37 1	37 0	36 9	06 00	38 0	10 15	36 0	2 0	19	
36 7	36 7	36 7	36 7	36 7	36 7	36 7	36 7	36 7	36 7	05 50	38 7	18 31	36 1	2 6	20	
36 4	36 4	36 4	36 1	36 1	36 4	36 8	36 9	36 8	37 0	07 53	39 5	18 30	36 1	3 4	21	
36 9	36 9	36 9	36 9	37 0	37 2	37 3	37 5	37 6	37 4	06 23	39 0	14 11	37 8	1 2	22	
36 9	36 9	36 9	37 0	36 9	37 2	37 0	37 2	37 6	37 3	06 25	39 1	10 13	36 6	2 5	23	
36 9	37 1	37 1	37 1	37 3	37 1	37 3	37 3	37 6	37 4	07 00	39 0	13 00	36 4	2 6	24	
36 6	36 7	37 0	37 0	37 1	37 1	37 6	38 0	37 7	37 6	06 15	39 7	15 00	36 6	3 1	25	
36 4	36 1	37 0	37 1	37 1	37 8	37 1	37 1	37 1	37 2	06 01	39 9	11 07	35 7	1 2	26††	
37 1	37 1	36 8	36 1	36 7	37 1	37 2	37 5	37 2	37 0	05 35	38 1	10 00	36 0	2 1	27††	
32 3	32 6	31 9	31 2	32 7	33 0	35 0	36 4	36 5	35 0	06 00	37 9	17 33	30 2	7 7	28††	
36 8	36 2	36 1	36 5	36 1	36 4	36 5	36 4	36 5	36 2	10 00	37 2	03 53	31 3	2 9	29††	
37 2	37 2	37 2	37 2	37 2	36 9	36 9	36 9	37 2	36 8	06 01	37 9	03 00	35 8	2 1	30††	
37 2	37 2	37 3	37 2	37 2	37 2	37 3	37 3	37 3	37 1	06 31	37 6	03 00	35 9	1 7	31	
36 6	36 7	36 7	36 7	36 7	36 8	36 9	37 0	37 0	36 9					3 2	Mean	
37 1	37 2	37 3	37 3	37 2	37 2	37 2	37 4	37 3							Mean†	
35 7	35 5	35 5	35 3	35 7	36 0	36 4	36 7	36 7							Mean††	

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record, day omitted for means

TABLE 5  
 Hourly values of Declination (Westerly), 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2° Plus tabular quantities

NOVEMBER

Date	Hours G M T												12	13	14	
	00	01	02	03	04	05	06	07	08	09	10	11				
1	37 4	37 3	36 6	36 9	36 9	37 7	38 7	38 7	37 9	37 3	37 3	37 2	37 2	37 4	37 4	37 4
2	38 0	38 3	38 6	37 9	38 0	38 3	38 8	38 4	38 1	37 1	37 3	36 9	36 7	36 9	36 9	36 9
3	38 0	37 7	37 9	37 4	38 0	38 7	39 4	39 3	38 0	37 9	37 4	37 3	37 3	37 3	37 3	37 3
4	38 0	38 0	38 0	38 1	38 6	38 7	39 1	39 3	38 7	38 4	38 0	37 9	37 9	37 9	37 9	37 9
5††	38 4	38 3	38 0	38 0	38 0	38 7	39 1	38 7	38 0	37 6	37 2	37 4	37 6	37 6	37 6	37 6
6	38 0	38 0	38 0	38 1	38 6	38 7	38 7	38 7	37 9	37 3	37 3	37 7	37 4	37 4	37 4	37 4
7†††	38 7	38 0	38 0	37 7	37 9	38 3	38 8	38 4	37 6	36 6	35 8	35 6	35 6	35 6	35 6	35 6
8†††	38 0	37 0	37 7	38 0	37 9	38 0	38 0	37 4	37 2	37 1	37 3	37 2	37 2	37 2	37 2	37 2
9	37 3	37 3	36 6	37 3	38 0	38 0	38 0	37 0	37 0	37 0	36 5	36 7	36 7	36 7	36 7	36 7
10	38 0	38 4	38 6	38 4	38 7	39 3	39 4	38 7	38 1	38 0	38 1	38 3	38 3	38 3	38 3	38 3
11	38 0	38 3	38 4	38 6	39 4	39 5	39 4	38 7	38 7	38 4	38 0	38 0	37 4	37 4	37 4	37 4
12	38 4	38 7	38 7	38 6	38 6	38 7	38 7	38 0	37 4	37 2	37 3	37 0	36 7	36 6	36 6	36 6
13	38 0	38 1	38 0	38 3	38 3	38 4	38 7	38 3	38 1	37 7	37 4	37 3	37 3	37 3	37 3	37 3
14	38 7	39 5	39 5	38 6	39 7	39 1	39 7	39 4	38 6	38 0	37 9	37 6	37 6	37 6	37 6	37 6
15†	38 4	38 7	38 8	38 6	38 6	38 6	39 4	39 1	38 4	38 0	37 1	37 1	37 6	37 6	37 6	37 6
16	38 2	38 2	38 6	38 6	37 9	38 0	38 2	37 9	37 9	37 9	37 9	37 6	37 6	37 6	37 6	37 6
17††	38 7	39 3	39 7	39 1	38 3	37 9	37 6	37 9	37 2	36 1	35 5	35 9	35 4	35 4	35 4	35 4
18†††	38 2	38 5	38 7	39 0	39 6	39 3	38 7	38 0	37 3	37 2	37 5	37 6	37 9	37 9	37 9	37 9
19	40 0	40 1	40 1	38 9	38 0	38 2	38 5	37 5	37 8	37 9	37 8	37 5	37 5	37 5	37 5	37 5
20	38 3	39 0	39 2	38 6	37 9	37 5	37 3	37 1	37 1	37 1	37 6	37 5	37 2	36 9	36 9	36 9
21	38 9	39 6	40 1	39 3	38 6	38 0	38 5	38 5	38 5	38 6	38 6	38 3	37 9	37 9	37 9	37 9
22†	38 6	38 7	38 5	38 5	38 6	38 7	38 9	38 6	38 2	37 9	37 9	38 5	38 5	38 5	38 5	38 5
23†	38 4	38 6	38 8	38 5	38 1	38 4	38 8	39 0	39 0	38 6	38 5	37 9	38 5	38 5	38 5	38 5
24†	39 3	39 3	39 7	38 7	38 6	38 9	39 2	38 6	38 3	37 8	37 6	37 9	38 5	38 5	38 5	38 5
25	38 6	38 9	39 3	39 3	39 0	40 0	39 9	39 0	38 5	37 6	37 3	37 3	37 9	37 9	37 9	37 9
26	39 0	38 3	40 0	39 9	40 0	40 4	40 4	40 3	40 3	39 3	38 7	37 9	37 4	37 9	37 9	37 9
27	38 7	39 0	39 2	38 6	39 0	39 9	39 9	39 9	38 7	38 5	38 2	37 9	38 3	38 3	38 3	38 3
28	39 0	39 6	39 7	39 3	38 9	39 7	39 7	39 9	38 7	38 5	38 3	37 8	38 0	38 5	38 5	38 5
29	38 7	39 4	39 9	39 2	38 9	38 9	39 0	38 9	38 7	38 6	38 5	38 3	38 0	38 0	38 0	38 0
30†	39 0	39 7	40 0	39 7	38 9	38 9	38 7	38 9	39 0	38 7	38 6	38 0	38 0	38 0	38 0	38 0
Mean	38 4	38 6	38 8	38 5	38 5	38 7	38 9	38 6	38 2	37 8	37 6	37 5	37 6	37 6	37 6	37 6
Mean†	38 7	39 0	39 2	38 8	38 6	38 7	39 0	38 8	38 6	38 2	38 0	37 9	38 2	38 2	38 2	38 2
Mean††	38 4	38 2	38 4	38 4	38 3	38 4	38 4	38 1	37 5	37 0	36 7	36 7	37 0	36 8	36 8	36 8

†Five international quiet days  
 ††Five international disturbed days  
 ΔLoss of record, day omitted for means

TABLE 5  
 Hourly values of Declination (Westaly), 1961  
 (Averages for six minutes centered at the full hours of Greenwich Mean Time)  
 \*Plus tabular quantities

NOVEMBER

Hours G M I										Mean	Maximum	Minimum	Range	Date	
15	16	17	18	19	20	21	22	23	24	Time Mag	Time Mag	Time Mag			
										II M	II M				
37.3	37.4	37.4	37.3	37.4	37.1	37.4	37.6	37.9	37.4	06 00	38.7	02 15	36.3	2.4	1
36.7	37.2	37.1	37.2	37.4	37.4	37.4	37.7	38.0	37.6	06 00	38.8	12 01	36.6	2.9	2
37.3	37.3	37.4	37.4	37.4	37.4	37.1	37.6	38.0	37.8	06 00	39.4	15 20	37.9	2.2	3
37.4	37.4	37.4	37.1	37.1	38.0	38.0	38.0	38.4	38.0	07 01	39.7	18 25	37.3	2.1	4
37.6	36.5	36.3	36.7	37.3	37.4	37.9	38.0	38.1	37.7	04 40	39.3	19 25	35.9	3.4	5††
37.6	37.4	37.4	37.4	37.6	37.6	37.3	38.0	38.1	37.8	05 15	38.8	09 01	37.2	1.6	6
35.9	36.2	35.6	35.5	35.3	35.2	35.9	35.9	36.5	36.7	05 50	39.1	19 50	35.1	1.0	7†
37.0	37.2	37.2	37.9	37.2	37.3	37.2	37.3	37.2	37.1	05 15	38.1	12 52	36.6	1.5	8††
37.3	37.3	37.4	37.4	37.6	37.3	37.6	37.4	37.7	37.3	05 03	38.1	11 30	36.3	1.8	9
38.6	38.4	38.4	38.4	38.4	38.4	38.3	38.4	38.7	38.5	06 30	39.4	10 55	37.2	2.2	10
37.3	37.4	37.6	37.6	37.9	37.7	38.1	38.1	38.4	38.2	05 34	39.7	15 35	37.2	2.5	11
36.6	36.9	36.9	37.0	37.3	37.7	37.6	37.9	38.0	37.6	05 40	38.8	14 05	36.0	2.8	12
37.4	37.1	37.7	37.7	37.9	38.0	38.1	38.1	38.0	37.9	06 15	38.8	11 00	37.3	1.5	13
37.9	38.0	38.0	37.7	37.7	37.7	38.0	38.0	38.4	38.4	06 30	40.0	11 30	37.4	2.6	14
37.9	37.9	37.9	38.0	37.9	38.0	38.0	38.0	38.1	38.2	06 31	39.7	11 30	37.2	2.5	15†
37.9	37.6	37.9	37.9	38.0	38.0	38.3	38.3	38.7	38.0	23 55	38.9	14 00	37.3	1.6	16
35.9	36.4	36.9	36.9	37.1	37.1	37.1	37.5	38.4	37.4	02 05	39.9	10 00	35.1	4.5	17††
37.3	37.6	37.8	37.9	37.9	37.9	38.8	38.6	38.9	38.1	01 00	39.6	15 15	36.6	3.0	18††
37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	38.0	01 40	41.1	13 00	37.2	3.9	19
37.2	37.6	37.9	37.9	37.8	37.8	37.8	38.2	38.6	37.8	01 31	39.3	13 23	36.8	2.5	20
37.9	38.5	38.5	38.5	38.5	38.5	38.3	38.5	38.5	38.5	01 45	40.3	13 30	37.6	2.7	21
38.3	38.3	38.2	38.3	38.3	38.3	38.3	38.2	38.2	38.4	06 00	39.0	09 00	37.9	1.1	22†
38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.7	38.7	38.6	07 00	39.0	11 00	37.9	1.1	23†
38.5	38.5	38.5	38.6	38.6	38.6	38.6	38.6	38.6	38.6	01 15	40.0	09 30	37.5	2.5	24†
38.2	38.5	38.6	38.5	38.5	38.5	38.6	38.6	38.7	38.6	05 00	40.0	10 08	37.2	2.8	25
38.3	38.2	38.5	38.5	38.6	38.3	38.6	38.6	38.7	38.9	06 01	40.7	11 00	37.5	3.2	26
38.3	38.3	38.5	38.3	38.3	38.5	38.6	38.6	38.7	38.7	06 25	40.0	10 15	37.8	2.2	27
38.3	38.5	38.5	38.3	38.2	38.3	38.5	38.6	38.7	38.7	02 00	39.9	10 53	37.6	2.3	28
38.2	38.3	38.5	38.5	38.5	38.5	38.6	38.7	38.7	38.6	01 53	40.0	12 15	37.8	2.2	29
38.2	38.3	38.2	38.2	38.2	38.6	38.7	39.0	38.4	38.7	02 02	40.1	11 00	38.0	2.1	30†
37.6	37.7	37.7	37.7	37.8	37.9	37.4	38.1	38.3	38.1					2.4	Mean
38.3	38.3	38.3	38.3	38.3	38.4	38.4	38.5	38.4							Mean†
36.7	36.8	36.6	36.6	37.0	37.0	37.0	37.5	37.8							Mean††

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record, day omitted for means

**TABLE 6**  
**Hourly values of Declination (Westerly), 1961**  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2° Plus tabular quantities

**DECEMBER**

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	39 9	40 3	40 3	39 9	39 9	40 0	40 1	40 0	39 9	37 5	36 5	35 8	36 4	36 4	34 8
2††	40 0	40 0	39 4	38 7	38 0	38 0	38 6	39 0	37 9	37 2	35 9	35 1	36 4	35 5	35 1
3††	38 2	39 3	38 7	38 6	37 9	37 3	37 1	37 1	37 2	36 4	36 8	35 9	35 1	35 9	36 1
4	38 2	38 5	38 3	38 6	38 6	38 6	38 7	39 0	39 2	38 9	37 9	37 3	37 3	37 6	38 2
5	38 6	38 6	38 7	37 9	37 9	38 3	38 3	38 5	37 9	37 5	37 2	37 2	37 5	37 9	38 0
6	38 7	39 2	39 9	40 0	39 4	38 6	38 5	38 7	38 2	37 5	37 6	37 3	37 6	37 5	37 3
7	38 5	38 9	39 3	39 1	38 9	39 3	39 8	39 6	38 9	39 5	37 7	37 7	37 2	37 5	37 8
8†	38 4	38 8	39 1	38 0	37 8	38 1	38 1	37 8	38 0	38 0	38 3	38 0	37 8	38 0	37 8
9	38 8	39 1	39 2	39 4	38 8	37 8	37 7	37 7	37 8	37 7	37 7	37 7	37 7	37 8	37 8
10	38 4	38 8	39 1	39 1	38 7	38 9	39 4	39 4	39 4	39 4	39 0	37 9	37 5	37 6	37 6
11	38 4	38 7	39 3	38 9	38 6	38 4	38 9	39 4	38 4	37 5	37 0	36 9	36 9	36 9	36 9
12	38 0	38 3	38 6	38 5	37 5	38 1	39 6	39 7	39 3	38 5	37 9	37 2	37 1	37 2	37 4
13	38 3	38 5	38 3	38 1	37 5	37 5	38 1	38 2	38 3	38 3	38 2	37 5	37 5	37 5	37 5
14	38 5	38 5	38 8	38 3	37 5	37 6	38 1	38 5	38 5	39 0	38 8	37 6	37 5	37 6	37 6
15	38 5	38 5	38 8	38 1	37 6	37 4	37 5	38 5	38 2	38 2	38 2	37 4	37 4	37 4	37 2
16	38 5	38 9	39 0	39 0	38 8	38 5	38 6	39 3	39 0	38 8	38 2	37 6	37 9	38 1	37 9
17	38 5	38 5	38 5	38 4	38 2	38 0	37 7	38 1	37 7	37 4	37 4	37 3	37 4	37 8	37 7
18†	38 2	38 4	38 5	38 4	38 1	38 0	38 2	38 2	38 0	38 0	38 2	38 0	37 8	38 0	38 0
19†	38 4	38 9	39 1	38 4	37 7	38 1	38 7	39 1	38 9	38 4	38 2	38 0	37 8	38 0	37 8
20†	38 8	39 1	38 9	38 4	37 4	37 4	38 1	38 2	38 1	38 1	38 1	37 8	37 7	38 0	37 8
21	38 9	39 5	39 6	39 4	38 3	38 0	38 7	39 4	39 3	38 8	38 0	37 7	37 6	37 6	37 6
22	38 6	38 7	39 0	38 8	38 1	38 0	38 4	39 5	39 5	39 0	38 4	37 4	37 6	37 6	37 3
23	38 4	38 7	39 0	37 9	37 4	37 3	37 3	38 1	38 1	37 7	37 0	36 6	36 7	36 7	36 9
24	38 8	39 1	39 1	38 6	38 0	37 9	38 0	38 1	38 3	38 3	37 3	36 7	36 9	37 4	37 4
25†	38 0	38 0	38 0	38 0	37 4	37 6	38 3	39 1	38 7	38 0	37 2	36 9	37 2	37 6	37 6
26	38 1	38 1	38 6	38 4	38 0	38 3	39 3	39 5	39 4	38 6	37 9	37 6	37 4	37 3	37 3
27	39 3	40 5	41 8	39 8	39 4	38 3	38 1	38 7	40 0	39 5	38 6	38 0	37 9	38 0	37 9
28††	39 3	39 3	39 8	39 5	39 3	38 3	38 1	38 8	39 0	38 3	37 4	36 6	36 6	37 2	37 4
29	39 1	39 3	39 7	39 7	39 4	39 5	39 4	39 5	39 8	39 7	38 7	38 0	37 7	37 4	37 2
30††	39 0	39 1	39 3	39 0	38 6	38 0	38 3	38 8	39 0	38 6	38 3	37 9	37 3	37 4	37 3
31	38 6	38 7	38 4	37 8	36 9	36 6	37 6	38 0	37 9	38 0	37 8	37 3	37 5	37 3	37 3
Mean	38 6	39 0	39 1	38 7	38 1	38 2	38 4	38 8	38 6	38 3	37 8	37 3	37 3	37 4	37 3
Mean†	38 4	38 6	38 7	38 2	37 7	37 8	38 3	38 5	38 1	38 1	38 0	37 7	37 7	37 9	37 8
Mean††	39 3	39 6	39 5	39 3	38 7	38 3	38 4	38 7	38 5	37 6	37 0	36 3	36 4	36 5	36 1

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record, day omitted for means

TABLE 6  
 Hourly values of Declination (Westerly), 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 † Plus tabular quantities

DECEMBER

Hours G M T									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag	Time	Mag		
35 0	34 4	35 2	36 1	36 6	36 6	37 6	38 6	39 9	37 8	01	37 40 1	14 23	34 3	6 1	1††
35 1	35 5	35 8	35 5	35 7	37 1	37 9	37 6	38 2	37 2	00	15 40 3	10 51	34 4	5 9	2††
80 1	35 9	36 5	37 1	37 2	37 3	37 5	37 5	37 6	37 1	00	45 39 9	12 14	34 5	5 4	3††
38 3	38 5	38 5	38 5	38 6	38 6	38 6	38 6	38 6	38 4	07	38 39 3	12 45	37 2	2 1	4
68 3	37 9	37 3	37 5	37 5	37 6	37 9	38 3	38 6	37 9	01	16 38 7	17 16	37 1	1 6	5
37 5	37 3	37 3	37 5	37 9	37 9	38 2	38 3	38 5	38 2	03	00 40 0	18 10	37 1	2 9	6
37 9	38 1	38 1	38 2	37 9	37 9	37 8	38 1	38 4	38 4	06	31 39 9	12 08	37 1	2 8	7
37 8	38 3	38 3	38 3	38 1	38 0	38 5	38 5	38 7	38 2	01	31 39 1	11 01	37 7	1 4	8†
37 8	37 8	37 8	37 8	37 7	37 7	37 8	37 8	38 1	38 0	03	31 39 5	09 15	37 6	1 9	9
37 9	37 9	38 2	38 0	37 6	37 5	37 6	37 9	38 4	38 4	07	15 39 6	11 30	37 9	2 3	10
36 9	36 9	36 8	36 9	36 9	36 9	37 0	37 5	37 7	37 7	07	01 39 6	17 00	36 8	2 8	11
37 5	37 6	37 8	37 8	37 6	37 8	38 1	38 1	38 1	38 1	07	00 39 7	11 45	36 9	2 8	12
37 6	37 9	37 6	37 8	37 9	38 1	38 1	38 2	38 5	38 0	01	32 38 8	11 30	37 4	1 4	13
37 6	37 6	37 9	37 8	37 8	37 6	37 6	38 1	38 5	38 0	09	00 39 0	04 31	37 4	1 6	14
37 5	37 6	37 8	38 1	38 1	38 1	38 1	38 1	38 3	37 9	02	00 38 8	05 31	37 1	1 7	15
37 8	38 1	38 1	38 1	38 1	38 1	38 2	38 3	38 5	38 4	07	00 39 3	11 15	37 5	1 8	16
37 7	37 8	37 8	38 0	38 0	38 0	38 1	38 1	38 2	37 9	02	46 39 7	11 01	37 1	2 6	17
38 0	38 0	38 1	38 1	38 0	38 1	38 2	38 2	38 2	38 1	02	11 39 7	11 43	36 3	3 4	18†
38 0	38 0	38 0	38 0	38 1	38 1	38 1	38 2	38 4	38 3	01	37 39 4	12 31	37 7	1 7	19†
37 8	38 0	38 0	38 0	38 0	38 1	38 1	38 2	38 2	38 1	01	28 39 4	11 31	37 5	1 9	20†
37 7	37 9	38 0	38 0	37 9	37 9	38 0	38 0	38 3	38 3	02	13 39 8	11 42	37 1	2 4	21
37 2	37 2	37 4	37 6	37 9	38 0	38 0	38 1	38 3	38 2	07	00 39 5	15 20	37 0	2 5	22
37 3	37 4	37 9	37 9	38 0	38 0	38 0	38 3	38 1	37 7	01	54 39 3	11 00	36 6	2 7	23
37 7	37 7	37 9	37 9	37 9	37 9	38 0	38 0	38 0	38 0	02	25 39 7	11 30	36 6	3 1	24
37 6	37 9	38 0	38 0	38 0	38 0	38 0	38 1	37 9	07	00 39 1	11 00	36 9	2 2	25†	
37 6	37 9	37 9	37 9	37 9	38 0	38 0	38 0	38 6	38 2	02	41 38 7	13 00	37 3	1 4	26
37 9	37 9	37 9	38 0	38 0	38 1	38 8	39 3	38 8	01	45 42 1	11 30	37 7	4 4	27	
36 5	36 6	36 7	37 7	38 0	38 0	38 1	38 1	38 8	38 1	02	00 40 1	15 03	36 3	3 8	28††
37 4	37 9	37 9	37 9	38 0	38 0	38 3	39 1	39 3	38 7	08	29 40 1	13 31	36 9	3 2	29
37 0	37 3	37 4	37 3	37 7	37 9	37 9	38 1	38 4	38 1	02	45 39 5	12 16	37 0	2 5	30††
37 3	37 2	37 3	37 3	37 5	37 8	38 0	38 2	38 6	37 7	01	11 38 7	10 33	36 5	2 2	31
37 5	37 5	37 6	37 7	37 8	37 8	38 0	38 2	38 4	38 1					2 7	Mean
37 8	38 0	38 1	38 1	38 0	38 1	38 2	38 2	38 3							Mean†
35 9	35 9	36 3	36 7	37 0	37 4	37 8	38 0	38 6							Mean††

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record, day omitted for means



TABLE 7

## Hourly values of Horizontal Force, 1961

(Averages for sixty minutes centered at the full hours of Greenwich Mean Time)  
39000γ plus tabular quantities

JULY

Day	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	553	555	551	557	589	610	611	601	581	557	598	525	593	545	549
2	552	558	561	579	599	631	637	623	604	599	589	561	558	562	569
3	548	570	573	583	608	633	637	617	609	587	571	541	519	546	539
4	556	561	570	587	611	633	639	646	634	622	615	594	588	582	582
5†	529	531	507	505	515	505	511	511	548	512	591	518	516	525	517
6	533	511	553	561	584	589	596	537	579	580	771	557	547	548	550
7	511	550	557	561	578	607	612	601	581	571	556	547	545	541	551
8	551	558	561	568	570	598	623	628	614	585	565	557	545	547	550
9	559	559	561	576	590	606	607	590	576	590	587	571	555	554	550
10	559	561	580	600	614	613	619	600	582	569	556	539	530	530	540
11†	549	553	555	568	592	611	623	598	622	610	584	569	560	553	555
12†	554	566	579	602	623	631	633	608	591	566	540	521	549	558	561
13††	500	562	566	583	610	624	634	627	617	599	582	597	678	645	642
14††	516	523	529	541	572	580	591	592	603	522	405	362	381	367	386
15	486	488	489	494	505	509	512	510	507	507	508	492	476	475	495
16	500	492	493	500	538	576	577	589	575	557	538	526	517	514	521
17	522	529	512	562	587	619	619	629	609	586	554	512	496	494	493
18††	513	505	499	512	550	556	542	506	557	547	576	557	473	439	430
19	489	488	486	502	515	550	579	585	579	564	546	532	521	515	512
20	516	524	536	567	613	625	640	605	562	547	547	547	546	544	547
21	550	556	551	546	566	583	569	585	565	527	508	497	489	482	475
22	529	544	511	563	585	614	592	591	574	543	533	521	527	537	529
23	539	544	549	567	586	601	621	631	632	605	572	544	552	551	537
24	516	547	552	570	598	612	584	573	572	545	534	537	531	531	537
25	598	598	543	553	566	569	562	573	556	536	531	537	538	540	543
26	510	557	564	575	582	587	597	580	580	578	570	557	544	537	543
27††	569	579	593	635	662	651	620	590	609	468	310	241	328	375	407
28	487	477	481	503	517	511	531	515	534	507	506	517	514	506	501
29†	504	513	531	548	571	590	601	597	589	570	548	528	523	529	533
30	535	541	545	564	596	620	624	598	587	562	545	534	531	533	532
31†	599	513	551	572	608	638	652	650	641	622	590	547	538	541	543
Mean	535	539	544	559	581	596	601	593	586	563	542	525	523	524	527
Mean†	536	544	552	571	598	618	627	610	606	586	561	540	540	541	545
Mean††	537	541	539	556	582	583	586	567	587	530	481	455	465	470	476

†Five international quiet days

††Five international disturbed days

Δ Loss of record, day omitted for means

TABLE 7  
 Hourly values of Horizontal Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 39000γ plus tabular quantities

JULY

Hours G M T															Mean	Maximum		Minimum		Date
15	16	17	18	19	20	21	22	23	Time	Mag	Time	Mag	Range							
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H	M	γ	H	M	γ	γ				
551	550	547	550	554	558	558	555	552	560	05	20	625	11	00	522	103	1			
566	554	552	565	564	561	556	557	561	576	06	00	643	16	36	542	101	2			
538	549	553	558	566	566	561	559	558	571	05	40	643	12	02	512	131	3			
581	575	577	573	578	580	572	544	524	588	06	45	655	23	20	517	138	4			
502	508	519	523	523	530	530	533	535	522	07	55	572	15	24	490	82	5††			
547	541	528	531	539	540	539	540	538	555	06	04	606	17	17	522	84	6			
546	550	517	547	549	558	556	556	555	561	06	09	626	13	05	538	88	7			
550	548	547	547	552	553	554	554	550	566	07	15	635	12	28	541	94	8			
550	548	551	552	553	554	555	555	558	567	05	58	618	16	14	544	74	9			
544	546	536	541	544	547	546	549	547	562	05	40	626	12	40	523	103	10			
557	558	558	561	558	555	554	553	552	571	06	13	634	00	01	548	86	11†			
558	561	563	561	558	561	561	558	559	572	05	47	640	10	32	505	135	12†			
565	483	495	462	461	479	481	489	520	565	11	45	720	18	55	417	303	13††			
400	390	417	418	458	467	472	475	474	476	08	16	636	12	10	322	314	14††			
496	496	499	502	502	505	505	508	506	499	05	13	538	13	10	474	64	15			
516	519	521	521	520	519	521	523	522	529	06	25	600	02	12	484	116	16			
510	517	522	524	529	510	527	527	517	543	06	30	637	14	19	491	146	17			
411	442	447	437	499	452	462	469	491	492	10	00	593	14	35	391	202	18††			
512	512	513	515	518	520	519	516	525	525	06	45	588	00	35	479	109	19			
550	545	550	550	553	560	552	518	531	559	05	32	657	00	01	516	141	20			
470	472	482	477	506	521	516	519	522	522	04	29	601	15	43	468	133	21			
528	530	535	535	537	538	538	538	538	548	06	24	633	11	05	517	116	22			
520	509	523	543	538	537	537	544	541	559	07	40	639	16	00	506	133	23			
526	537	538	543	546	543	548	543	541	551	05	03	630	12	20	524	106	24			
543	543	548	548	548	550	545	546	545	547	07	18	590	10	05	529	61	25			
546	547	518	547	547	574	575	567	549	561	06	15	603	12	48	536	67	26			
406	405	421	447	413	442	481	508	490	487	03	22	674	10	55	220	454	27††			
503	498	500	501	503	508	515	516	507	508	07	22	554	00	52	472	82	28			
531	531	535	536	534	531	530	531	532	544	05	18	615	00	02	503	112	29†			
529	526	529	531	531	546	546	543	543	553	05	36	630	16	00	526	104	30†			
545	543	543	543	547	544	540	547	547	570	06	00	654	12	20	536	118	31†			
522	520	524	526	529	533	534	535	533	546						132		Mean			
544	544	546	546	546	547	546	546	547								Mean†				
437	446	460	463	465	474	485	495	502								Mean††				

†Five international quiet days

††Five international disturbed days.

Δ Loss of record, day omitted for means

**TABLE 8**  
**Hourly values of Horizontal Force, 1961**  
 (Averages for sixty minutes centred at the full hour of Greenwich Mean Time)  
 39000γ plus tabular quantities

**AUGUST**

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	550	553	560	566	582	592	608	605	595	581	569	558	552	553	552
2††	556	553	564	566	615	602	575	536	547	536	540	517	503	490	482
3	531	539	551	566	579	559	542	539	573	559	561	550	532	522	531
4††	536	526	534	527	541	545	559	574	583	582	566	546	543	538	535
5	543	550	563	581	611	622	631	606	600	585	553	545	538	536	534
6	534	558	566	588	614	633	626	608	593	579	567	552	547	548	546
7†	554	559	570	594	620	632	632	629	615	604	591	575	561	554	552
8	557	552	579	608	651	668	677	628	624	592	537	515	523	532	543
9†	544	552	566	590	620	Δ	Δ	Δ	Δ	Δ	Δ	564	553	545	540
10	553	559	563	585	618	657	683	655	602	553	515	499	504	513	504
11††	540	543	558	590	599	632	659	648	632	593	551	524	508	491	497
12	535	543	560	589	615	632	634	618	607	582	559	547	549	555	554
13†	555	556	569	600	629	648	642	634	619	602	584	571	564	562	561
14	560	569	589	618	644	657	645	626	602	584	576	568	564	564	566
15	559	570	578	598	631	648	676	635	586	573	562	553	565	569	574
16	549	556	566	592	621	665	674	672	651	630	606	585	571	570	567
17	560	561	562	587	617	637	651	651	647	648	618	582	569	571	573
18	557	561	578	588	621	643	653	643	633	620	599	579	574	581	573
19	572	571	575	590	628	635	632	622	598	575	556	537	526	523	523
20	549	551	561	591	629	644	644	632	616	596	587	574	559	551	547
21	549	549	554	576	606	633	654	646	621	590	579	566	562	564	563
22†	563	567	577	595	624	634	635	626	606	589	587	585	581	580	575
23†	564	567	580	605	629	638	633	614	597	586	575	565	565	566	562
24	569	573	584	605	624	641	652	656	630	633	611	595	591	588	586
25	579	580	588	605	623	635	627	626	599	587	584	575	568	568	555
26	570	576	601	625	643	677	692	675	650	618	599	584	580	583	586
27	550	542	558	592	621	639	612	584	585	565	551	546	555	564	563
28	559	569	587	601	625	632	628	609	594	577	572	566	563	563	564
29	562	567	588	620	647	663	671	670	651	633	615	592	575	574	574
30††	552	547	536	555	593	607	617	613	590	554	518	486	479	462	479
31††	531	526	518	522	551	561	545	561	552	559	561	555	543	538	521
Mean	554	556	567	588	615	630	634	622	607	589	572	556	550	549	548
Mean†	559	562	574	598	625	638	635	626	609	595	584	574	568	565	562
Mean††	543	539	542	558	580	589	591	586	581	565	547	526	515	504	503

†Five international quiet days  
 ††Five international disturbed days  
 ΔLoss of record, day omitted for means

TABLE 8  
 Hourly values of Horizontal Force, 1961  
 (Averages for sixty minutes centered at the full hours of Greenwich Mean Time)  
 39000γ plus tabular quantities

AUGUST

Hours G M T									Mean	Maximum		Minimum		Range	Date		
15	16	17	18	19	20	21	22	23		Time	Mag	Time	Mag				
551	553	559	551	551	549	555	559	558	565	06	12	621	00	42	545	76	1
483	500	519	514	519	514	522	522	525	534	05	27	637	14	26	479	158	2††
526	526	527	539	511	539	537	538	536	541	04	15	593	12	30	518	75	3
511	514	514	543	540	541	546	546	543	547	07	26	589	01	10	519	70	4††
534	539	538	537	513	545	544	546	546	561	05	55	638	14	20	529	109	5
548	546	546	548	551	550	552	551	555	568	05	14	644	13	20	540	104	6
551	553	556	557	557	556	557	553	555	576	04	58	634	15	00	550	84	7†
549	542	529	519	517	527	534	537	528	565	05	30	686	19	20	511	175	8
539	537	539	545	550	549	550	550	551	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	9†
501	504	511	516	522	528	530	534	536	552	05	58	694	11	10	497	197	10
199	198	501	499	503	511	510	528	524	549	06	35	673	13	08	487	186	11††
550	548	551	551	552	552	551	552	554	568	05	51	638	00	01	535	103	12
557	556	557	557	558	558	558	558	559	580	05	11	654	00	05	554	100	13†
565	563	548	551	555	556	556	558	559	581	05	05	659	16	58	545	114	14
557	551	547	546	548	549	549	548	549	575	05	47	692	18	20	543	149	15
563	559	558	559	559	559	560	560	559	588	06	00	686	00	18	548	138	16
572	569	569	568	561	555	558	555	554	587	06	40	659	20	20	553	106	17
578	569	570	568	566	564	568	567	572	589	05	40	656	00	01	557	99	18
526	532	536	540	540	513	543	545	546	563	04	46	639	13	32	519	120	19
547	540	526	523	532	544	544	546	548	570	05	00	647	17	44	520	127	20
563	559	556	556	559	564	567	567	566	578	06	30	657	01	36	546	111	21
573	570	570	569	567	568	561	561	564	584	05	46	641	20	45	560	81	22†
564	563	563	561	563	563	564	566	571	580	05	02	642	18	00	561	81	23†
583	584	582	574	573	578	573	571	580	598	06	52	660	21	31	566	94	24
555	561	563	564	565	565	575	577	569	583	05	08	650	14	30	552	98	25
583	580	576	577	577	569	565	569	566	601	05	25	702	23	40	544	158	26
558	554	555	557	556	558	560	561	560	568	05	26	647	01	18	537	110	27
564	561	566	566	565	561	558	559	561	578	01	40	636	21	15	556	80	28
575	572	580	572	575	537	541	544	544	593	06	07	674	20	08	531	143	29
474	463	482	493	510	519	519	540	528	530	03	42	625	15	52	454	171	30††
524	535	542	545	545	533	536	540	544	541	06	53	573	02	30	505	68	31††
547	547	547	547	549	548	551	552	552	570						116		Mean
561	560	562	561	561	560	560	560	562									Mean†
504	508	518	519	522	524	533	535	533									Mean††

†Five international quiet days  
 ††Five international disturbed days  
 ΔLoss of record, day omitted for means.

TABLE 9

## Hourly values of Horizontal Force, 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
19000γ plus tabular quantities

SEPTEMBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	541	537	548	571	601	611	583	582	569	556	537	533	538	541	541
2	544	539	539	565	590	620	643	618	608	584	543	529	531	540	556
3	541	543	551	583	614	628	626	617	599	583	569	552	551	544	543
4	549	551	564	594	618	621	616	600	581	556	554	558	558	551	549
5	554	548	560	578	603	629	634	624	604	586	565	554	551	549	541
6	552	550	567	601	622	630	635	633	616	595	574	563	559	560	558
7†	557	559	580	622	659	684	685	678	653	606	581	570	573	573	567
8†	566	568	586	626	666	693	692	673	643	611	588	578	579	578	575
9	578	582	611	658	704	725	710	664	626	594	559	550	553	559	557
10	556	556	567	601	631	644	640	631	611	593	577	574	577	572	563
11	566	571	598	641	674	691	681	665	641	611	594	589	584	585	577
12	546	549	568	596	618	635	621	583	551	552	552	542	524	525	523
13	549	548	557	601	626	640	631	621	604	587	576	571	569	569	566
14†	571	582	598	528	672	670	656	666	635	610	592	585	560	525	501
15	541	530	541	588	641	661	657	630	598	556	525	511	520	532	541
16	540	542	561	597	632	645	638	614	586	572	560	552	550	547	542
17	548	540	547	564	596	622	611	590	588	569	565	555	546	543	539
18	541	538	546	564	592	609	615	602	579	564	555	563	566	561	552
19†	559	551	560	581	609	638	650	643	629	618	598	581	569	560	552
20	555	552	556	584	615	633	635	623	588	561	548	549	556	551	543
21†	562	565	575	603	635	652	646	628	613	600	585	566	566	566	562
22	567	568	586	618	651	670	672	649	629	610	603	592	584	568	569
23†	564	564	585	616	648	662	658	630	602	578	568	575	580	578	576
24††	581	584	601	637	674	713	723	695	642	588	562	543	573	586	538
25††	525	529	546	560	586	588	596	572	564	546	529	527	519	516	511
26	536	533	548	598	643	684	684	655	620	579	545	528	524	538	537
27	540	536	555	591	632	633	624	596	552	525	509	485	509	518	516
28	541	543	562	598	636	654	647	624	605	589	574	562	563	561	557
29	554	559	570	596	631	657	663	644	612	591	575	560	550	549	552
30††	556	549	554	580	608	656	617	601	588	584	577	572	559	551	553
Mean	552	552	566	595	631	650	646	628	605	582	565	556	555	559	548
Mean†	560	561	577	610	643	666	666	650	628	603	584	574	573	571	566
Mean††	555	556	569	575	628	648	635	623	600	577	559	552	550	544	529

†Five international quiet days  
 ††Five international disturbed days  
 ΔLoss of record, day omitted for means

TABLE 9

Hourly values of Horizontal Force, 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
39000γ plus tabular quantities

SEPTEMBER

										Maximum		Minimum		Range				
15	16	17	18	19	20	21	22	23	Mean	Time	Mag	Time	Mag	Y	Y			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H	M	Y	Y	Y	Y			
536	534	534	532	533	548	533	554	547	552	04	58	626	17	48	525	101	1††	
541	540	537	542	548	550	548	546	546	559	06	23	655	11	23	525	190	2	
539	541	540	544	541	544	546	546	548	564	05	15	635	14	50	535	100	3	
549	551	555	557	557	559	538	560	557	568	04	27	628	13	52	546	82	4	
537	532	536	543	540	540	553	554	553	565	06	13	641	15	45	532	109	5	
553	554	556	557	559	558	558	559	559	576	05	07	638	00	50	549	89	6	
561	562	564	567	568	567	570	568	570	594	05	12	690	00	25	554	136	7†	
573	575	575	573	572	576	573	577	578	600	05	10	700	00	30	564	136	8†	
552	550	549	549	548	550	553	553	556	591	05	27	729	11	13	542	187	9	
560	553	549	555	563	563	565	563	564	580	05	24	647	17	15	546	101	10	
572	557	539	530	527	525	533	535	546	589	04	52	698	20	30	523	173	11	
530	534	534	532	536	538	538	538	544	555	05	30	647	13	47	520	127	12	
560	569	565	553	548	546	545	544	558	575	05	02	644	22	07	540	104	13	
513	518	520	525	526	542	539	531	541	571	04	57	684	13	53	494	190	14††	
540	539	539	540	540	542	544	544	542	560	05	11	666	11	00	511	155	15	
545	545	547	543	542	544	551	550	550	566	05	05	649	18	34	538	111	16	
537	538	536	536	538	541	541	543	543	557	04	53	634	17	22	535	99	17	
539	529	535	544	549	549	551	552	553	560	05	33	619	15	55	528	91	18	
550	550	550	553	552	551	553	554	556	578	06	19	653	16	10	549	104	19†	
537	534	537	540	548	554	554	555	561	563	05	54	639	16	05	529	110	20	
560	561	562	560	559	560	562	565	567	582	05	45	654	19	37	559	95	21†	
565	555	559	561	553	548	559	561	564	590	06	00	682	20	13	546	136	22	
575	573	575	573	571	572	573	576	579	590	05	13	664	01	00	561	103	23†	
509	482	494	539	528	525	514	538	534	579	05	44	740	16	12	475	265	24††	
523	529	530	533	536	541	539	534	536	542	05	50	609	14	32	507	102	25††	
536	524	531	538	534	538	544	542	541	566	05	39	696	11	48	519	177	26	
518	516	536	537	533	533	542	545	543	547	04	25	653	10	36	480	173	27	
555	552	549	549	549	553	556	554	552	574	05	09	659	00	44	540	119	28	
552	549	554	551	552	552	555	558	560	577	05	45	672	16	15	547	125	29	
555	556	556	556	555	544	608	605	534	574	21	07	692	23	58	489	203	30††	
546	543	545	547	548	548	552	553	553	572							131	Mean	
564	564	565	565	564	565	566	568	570										Mean†
527	524	527	537	540	540	547	552	538										Mean††

†Five international quiet days  
 ††Five international disturbed days.  
 ΔLoss of record, day omitted for means

TABLE 10  
 Hourly values of Horizontal Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 39000γ plus tabular quantities

OCTOBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	501	469	446	427	487	646	532	418	360	292	328	581	596	592	424
2	478	478	487	514	543	563	566	555	544	536	528	518	508	498	490
3	507	510	529	558	585	596	590	568	540	518	520	527	531	523	519
4	516	522	545	582	614	631	622	601	572	55	544	538	529	516	512
5	526	521	534	569	609	627	623	594	565	535	531	542	547	544	540
6	537	539	555	592	625	645	643	612	575	556	550	550	546	537	534
7	532	529	541	584	631	654	638	603	573	554	555	556	550	540	540
8	548	550	570	609	648	666	652	609	560	526	528	545	539	557	557
9	561	568	589	629	648	672	662	638	606	578	563	564	566	561	552
10†	552	549	559	594	642	682	687	656	617	584	564	560	565	567	561
11	557	556	564	607	652	690	683	678	640	591	556	549	530	532	538
12	538	524	525	553	580	616	610	591	568	540	540	545	546	539	519
13	546	540	539	567	611	636	625	613	575	535	535	543	549	544	541
14	588	535	539	577	616	647	656	633	590	566	553	546	539	535	537
15†	546	544	556	592	631	661	666	640	601	571	537	560	568	567	563
16†	561	557	565	590	643	653	665	639	602	574	559	559	566	565	561
17†	559	556	568	592	623	652	669	656	629	608	588	586	581	576	573
18†	588	583	587	611	646	684	688	657	629	601	587	582	582	579	573
19	564	568	586	604	612	630	629	615	590	573	576	576	573	563	560
20	539	534	538	558	580	594	588	557	549	559	564	557	547	539	536
21	587	585	547	578	611	634	642	626	598	574	565	578	572	558	560
22	541	539	551	582	609	622	620	603	580	564	555	559	557	547	537
23	552	549	562	590	622	640	642	625	601	578	564	558	563	561	555
24	558	560	567	600	618	639	643	630	613	583	563	555	550	545	541
25	558	560	566	586	612	640	653	648	628	607	582	573	567	561	548
26††	550	552	566	592	614	613	625	609	588	546	521	496	486	488	491
27††	549	529	539	550	568	568	558	544	536	541	535	543	537	522	533
28††	538	535	545	566	575	572	569	559	579	594	567	463	322	235	251
29††	412	417	423	425	419	411	433	480	451	457	510	505	486	483	482
30	491	494	507	533	563	580	574	556	535	524	511	510	515	511	514
31	510	507	516	535	564	590	592	592	583	566	553	540	531	523	521
Mean	535	533	542	569	600	624	621	600	573	551	544	541	534	526	524
Mean†	561	558	567	596	637	666	674	650	616	588	571	569	573	571	566
Mean††	510	509	504	512	533	562	543	522	503	486	492	478	445	424	436

†Five international quiet days  
 ††Five international disturbed days  
 Δ Loss of record, day omitted for means

TABLE 10  
Hourly values of Horizontal Force, 1961  
(Averages for sixty minutes centered at the full hours of Greenwich Mean Time)  
39000γ plus tabular quantities

OCTOBER

Hours					G M T					Mean	Maximum		Minimum		Range	Date	
15	16	17	18	19	20	21	22	23	Y	Time	Mag	Time	Mag	Y	Y		
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H	M	Y	H	M	Y	Y	
438	446	452	460	466	469	472	475	476	444	04	45	719	09	32	270	449	1††
489	490	492	505	505	504	506	508	508	513	05	54	573	01	05	476	97	2
515	511	511	518	517	515	517	516	517	532	04	52	599	00	01	507	92	3
506	511	509	508	512	519	521	525	522	543	05	07	634	14	44	506	128	4
537	534	536	534	536	538	538	538	538	552	05	38	634	01	02	520	114	5
533	531	530	529	524	531	537	538	534	558	06	09	650	18	43	523	127	6
542	542	542	543	543	544	547	547	549	562	05	30	662	00	52	527	135	7
554	547	544	547	550	552	554	555	558	569	05	04	674	09	20	520	154	8
550	548	548	549	549	549	550	551	552	579	04	42	680	16	35	547	133	9
559	557	558	555	553	550	557	557	558	581	05	35	694	00	58	548	146	10†
542	543	544	546	547	538	542	541	542	575	04	55	698	12	20	525	173	11
502	514	538	530	523	532	532	546	544	546	04	55	627	15	32	499	128	12
540	535	535	532	535	538	540	537	533	555	04	57	647	09	15	526	121	13
537	537	538	541	543	544	544	543	544	562	05	35	661	13	25	531	130	14
561	559	561	563	564	567	565	564	562	579	05	28	671	00	50	544	127	15†
557	557	557	556	550	559	560	560	560	578	06	00	668	17	37	553	113	16†
570	569	568	569	571	573	575	581	592	591	06	00	671	01	52	556	115	17†
569	567	563	567	565	560	561	561	559	594	05	19	695	23	22	539	196	18†
559	559	559	559	560	559	557	562	555	577	05	08	643	23	58	539	104	19
535	534	531	529	532	534	536	536	537	548	05	50	619	17	30	526	93	20
560	534	523	516	519	527	533	540	541	563	05	47	647	18	31	514	133	21
536	536	541	546	547	549	548	552	553	561	05	02	632	15	15	533	99	22
547	542	547	551	552	552	555	558	555	572	05	46	647	15	58	541	106	23
542	544	544	546	547	550	552	570	557	572	05	25	654	14	00	541	113	24
525	519	528	542	541	535	541	552	529	571	06	05	656	15	38	517	139	25
490	492	516	526	526	543	543	527	513	542	06	00	637	12	20	482	155	26††
541	524	510	503	512	516	533	552	540	537	04	13	581	18	25	499	82	27††
299	248	164	142	285	391	327	339	386	416	08	09	629	18	19	135	494	28††
482	482	482	483	483	488	488	489	490	465	10	10	536	06	02	395	141	29††
514	511	525	519	514	510	510	513	513	523	05	20	583	00	01	491	92	30
522	523	525	526	527	527	527	527	527	540	07	10	597	01	05	506	91	31
524	521	520	521	526	529	531	534	534	548						144	Mean	
563	562	561	562	562	562	564	565	566								Mean†	
450	438	425	423	454	469	473	476	481								Mean††	

†Five international quiet days

††Five international disturbed days

Δ Loss of record, day omitted for means.



TABLE 11  
 Hourly values of Horizontal Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 39000γ plus tabular quantities

NOVEMBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	527	530	538	556	584	606	609	601	579	559	549	540	530	530	550
2	533	541	553	575	600	620	625	615	596	575	554	537	524	521	514
3	540	541	542	558	579	601	608	600	582	565	550	555	550	546	541
4	544	547	555	574	593	612	622	619	605	592	575	565	561	558	555
5††	556	561	561	577	606	624	611	610	591	563	541	547	545	520	454
6	542	544	555	576	595	596	586	579	559	536	533	522	514	511	510
7††	564	558	561	591	629	637	638	607	558	506	468	484	458	458	456
8††	496	507	528	536	556	550	553	530	526	523	521	520	514	516	510
9	523	530	542	582	612	618	602	582	552	541	534	527	513	521	517
10	533	540	554	579	601	612	610	603	592	580	575	567	558	552	547
11	542	549	568	594	622	634	627	614	599	584	570	563	558	554	551
12	559	566	577	587	622	638	627	603	578	558	542	525	506	489	477
13	545	544	550	568	587	602	606	606	598	586	571	560	553	550	548
14	560	571	585	606	625	631	645	655	621	607	593	579	566	561	557
15†	546	553	563	576	597	620	636	634	618	598	582	571	563	559	557
16	556	562	574	590	611	624	624	613	604	597	588	575	570	565	561
17††	572	574	586	600	607	610	602	594	583	582	578	576	579	572	577
18††	567	588	567	546	542	555	574	609	580	540	510	494	504	476	463
19	528	529	532	545	556	552	555	539	540	541	544	540	540	553	548
20	551	560	578	602	628	634	632	624	590	585	579	561	537	515	510
21	541	551	571	585	588	589	582	574	574	573	578	573	561	551	541
22†	552	562	578	601	625	637	633	617	595	582	575	571	570	570	568
23†	544	548	560	579	599	618	626	628	624	601	584	572	568	562	564
24†	564	567	582	598	614	626	626	608	587	569	561	565	570	567	564
25	570	575	589	612	640	660	667	650	621	592	581	577	572	573	570
26	565	568	578	594	621	636	631	622	607	586	574	564	571	575	570
27	560	563	569	582	606	622	627	625	615	593	576	569	564	562	560
28	568	571	580	577	621	633	625	603	589	581	576	575	574	568	562
29	568	575	589	601	617	625	627	617	608	591	578	574	572	570	569
30†	563	574	589	604	623	642	647	639	626	607	588	577	573	571	568
Mean	549	555	565	582	604	615	616	607	590	579	562	554	549	543	541
Mean†	554	561	574	592	612	629	634	625	610	591	578	571	568	566	564
Mean††	551	558	561	570	588	595	596	590	568	543	528	526	520	508	498

††Five international disturbed days  
 †Five international quiet days  
 ΔLoss of record, day omitted for means

TABLE 11  
 Hourly values of Horizontal Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 39000γ plus tabular quantities

NOVEMBER

Hours G M T										Mean		Maximum		Minimum		Range		Date
15	16	17	18	19	20	21	22	23		Time	Mag	Time	Mag	Time	Mag	Time	Mag	
533	534	533	533	533	542	539	538	535	550	05	15	611	00	03	525	86		1
530	530	532	534	536	536	535	538	539	554	06	05	629	13	16	519	110		2
539	541	540	539	538	536	538	540	544	555	05	23	610	20	00	536	74		3
555	552	549	545	548	545	542	548	550	567	06	25	624	21	30	544	80		4
498	498	502	514	527	533	535	530	545	550	04	57	636	14	19	488	148		5†
536	538	539	541	543	547	548	552	561	551	05	03	601	11	54	521	80		6
451	488	475	462	470	490	512	506	495	523	05	19	651	14	52	475	176		7††
521	521	522	522	522	530	531	524	523	526	05	43	563	00	16	494	69		8††
530	531	535	533	551	542	540	537	534	548	04	10	622	12	43	516	106		9
544	540	541	540	539	541	541	542	542	561	04	45	617	00	01	533	84		10
547	546	549	549	554	555	555	558	566	571	04	45	696	00	01	542	94		11
489	500	499	516	523	527	540	538	541	547	04	35	650	14	32	485	165		12
546	545	545	547	552	552	555	558	559	564	06	05	608	01	08	543	65		13
555	522	543	533	533	532	536	541	545	575	06	45	665	19	30	530	135		14
556	553	552	552	551	550	552	551	555	573	05	45	640	00	01	546	94		15†
561	560	560	560	561	561	558	560	565	578	05	18	627	21	40	555	72		16
533	530	545	546	556	554	546	546	549	571	04	30	613	15	15	513	100		17††
461	467	488	508	505	530	520	525	532	527	06	22	630	14	45	458	172		18††
540	537	538	539	541	543	514	548	548	541	04	20	568	00	30	526	42		19
525	534	544	537	530	526	531	533	536	562	04	45	641	13	18	506	135		20
553	553	553	553	553	554	554	553	550	563	04	38	597	00	01	540	57		21
564	558	553	554	554	553	551	549	547	576	05	25	638	23	58	543	95		22†
565	566	567	561	560	561	564	565	567	577	06	22	630	18	45	559	71		23†
561	561	559	559	561	563	565	567	570	576	04	55	629	17	56	559	70		24†
567	567	565	564	564	565	564	564	565	589	05	45	676	18	35	564	112		25
570	569	566	562	566	567	566	561	563	581	05	05	638	22	05	560	78		26
556	555	556	562	569	565	566	568	568	577	05	56	631	15	30	554	77		27
560	555	553	556	559	560	562	565	567	577	05	14	636	17	40	550	86		28
569	569	569	569	568	566	566	565	564	583	06	07	630	23	40	560	70		29
566	563	561	560	562	564	568	572	576	587	05	21	649	18	10	559	90		30†
539	539	541	542	544	546	547	548	550	563								96	Mean
562	560	558	557	558	558	560	561	563									Mean†	
493	501	506	510	516	527	529	526	529									Mean††	

†† Five international disturbed days  
 † Five international quiet days  
 Δ Loss of records, day omitted for mean.

TABLE 12

## Hourly values of Horizontal Force, 1961

(Averages for sixty minutes centered at the full hours of Greenwich Mean Time)  
(9000γ plus tabular quantities)

## DECEMBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1††	588	593	612	634	670	685	698	679	645	586	542	496	476	439	362
2††	509	500	504	507	524	546	574	588	562	545	508	478	479	450	414
3††	487	509	513	513	517	517	512	502	492	486	472	459	443	459	467
4	525	536	553	568	589	606	596	589	574	545	535	529	524	524	526
5	538	547	558	572	603	624	631	619	602	576	563	557	553	549	555
6	538	547	566	599	602	615	617	617	600	582	570	562	546	524	502
7	534	543	555	576	602	617	626	613	595	573	560	550	532	526	537
8†	545	555	570	581	598	615	621	618	603	584	571	569	563	563	562
9	563	567	574	587	596	602	604	610	604	593	583	577	568	563	563
10	563	566	572	593	613	623	639	641	635	620	596	567	548	549	557
11	549	554	564	573	598	618	633	638	616	583	547	530	519	518	510
12	533	537	549	560	576	598	610	611	604	586	566	551	543	540	547
13	563	566	572	581	591	603	609	616	621	612	593	583	579	576	573
14	568	568	570	575	583	596	599	599	596	588	580	573	570	570	571
15	567	567	581	590	607	605	617	618	609	596	584	568	553	552	549
16	564	566	570	581	596	601	605	606	594	590	580	570	568	565	563
17	563	566	569	573	578	589	607	615	600	579	561	557	564	564	563
18†	567	572	578	584	598	612	623	630	625	616	600	586	579	576	574
19†	572	579	587	595	607	620	631	631	625	610	596	588	588	586	582
20†	577	585	590	604	610	621	634	632	619	607	588	570	565	571	574
21	578	586	599	607	622	639	661	666	652	624	601	587	584	583	583
22	580	582	588	597	610	625	652	673	667	644	614	592	574	563	551
23	568	575	588	592	606	608	611	619	614	611	590	566	548	542	548
24	599	602	589	601	608	625	637	644	631	619	598	572	561	562	561
25†	565	562	564	571	589	612	633	651	641	613	588	576	568	567	567
26	571	573	579	584	599	621	633	652	650	632	605	586	573	566	561
27	581	610	631	598	603	622	647	651	645	622	595	573	561	555	558
28††	575	577	582	583	603	608	607	622	628	623	588	561	544	551	550
29	548	548	552	556	565	587	597	601	606	598	581	571	567	557	554
30††	571	573	583	597	590	593	595	594	601	601	597	583	560	546	539
31	554	559	558	564	579	595	607	607	608	596	583	573	560	555	553
Mean	558	564	572	581	596	608	618	621	612	595	576	560	551	546	541
Mean†	565	571	578	587	600	616	628	632	623	606	589	578	573	573	572
Mean††	545	550	559	567	581	590	597	597	586	568	541	515	500	489	466

† Five international quiet days

†† Five international disturbed days

Δ Loss of record, day omitted for means.

TABLE 12  
 Hourly values of Horizontal Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 39000γ plus tabular quantities

DECEMBER

Hours G M T										Mean	Maximum		Minimum		Range	Date		
15	16	17	18	19	20	21	22	23			Time	Mag	Time	Mag				
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ		H M	γ	H M	γ	γ			
347	334	374	420	447	449	462	476	504	521	06	14	702	15	50	324	378	1††	
400	448	451	442	444	472	505	500	481	493	05	30	619	14	57	394	225	2††	
467	470	484	496	509	513	516	525	523	494	04	24	527	12	05	435	92	3††	
527	529	536	535	536	536	536	537	538	547	05	05	614	12	30	521	93	4	
554	544	512	511	516	514	523	527	535	557	05	42	634	17	08	498	136	5	
499	474	481	504	513	519	531	537	535	549	05	07	622	16	28	464	158	6	
541	542	542	543	545	547	546	544	544	560	08	36	633	12	54	520	113	7	
560	560	560	560	560	560	560	561	562	573	06	22	644	00	01	565	79	8†	
563	563	560	560	559	557	557	559	561	575	07	30	614	19	30	555	59	9	
557	558	564	558	552	540	542	550	550	577	06	45	641	20	14	537	104	10	
501	493	488	490	490	500	514	526	531	545	06	44	644	17	15	486	158	11	
548	551	554	555	557	559	561	561	561	564	06	20	614	00	01	533	81	12	
570	561	563	568	571	571	570	572	572	582	08	00	623	16	16	559	64	13	
573	574	573	571	567	567	565	562	569	577	07	15	602	22	10	561	41	14	
554	560	564	564	563	563	563	571	566	576	07	00	619	13	50	548	71	15	
565	565	565	565	562	563	565	565	566	575	05	46	611	18	55	562	49	16	
562	559	558	558	561	562	565	567	567	571	07	00	616	10	50	555	61	17	
574	573	572	571	571	570	571	571	571	586	07	01	633	00	01	566	67	18†	
578	576	574	570	570	570	572	573	575	590	06	02	632	18	00	570	62	19†	
573	569	566	563	565	567	568	572	574	586	06	24	637	18	35	562	75	20†	
582	580	578	577	575	572	572	572	575	598	06	46	669	21	47	571	98	21	
551	552	551	546	548	544	556	564	567	587	07	14	676	17	48	544	32	22	
560	564	566	566	569	568	567	572	605	580	06	35	626	12	44	537	89	23	
555	555	551	550	552	556	563	565	568	584	06	55	649	18	13	546	103	24	
568	567	567	567	567	566	565	568	569	582	07	10	654	01	00	562	92	25†	
566	565	563	560	560	559	561	563	573	586	07	15	658	19	20	558	100	26	
566	572	571	569	571	581	583	584	579	593	06	10	659	13	16	554	105	27	
532	504	505	528	535	539	551	548	542	566	07	56	634	16	18	488	148	28††	
555	560	560	556	557	556	559	566	575	568	08	00	608	01	32	545	63	29	
533	549	543	536	542	548	554	553	551	568	04	33	612	15	20	531	81	30††	
550	549	552	553	564	558	559	560	562	569	07	32	611	16	22	547	64	31	
540	539	540	542	545	547	551	554	556	567							101	Mean	
571	569	568	566	567	567	567	569	570										Mean†
456	461	471	484	495	504	518	520	520										Mean††

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record; day omitted for means

TABLE 13

## Hourly values of Vertical Force, 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2000γ plus tabular quantities

JULY

Date	Hours GMT															
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	
1	256	259	261	267	261	252	243	244	242	261	262	259	257	250	252	
2	264	253	253	253	250	239	228	227	227	228	230	238	239	256	258	
3	261	261	259	260	251	246	230	216	223	237	242	249	239	246	251	
4	256	261	261	253	244	245	238	236	229	232	242	241	249	246	246	
5††	250	264	241	261	251	272	251	251	260	258	254	251	249	256	249	
6	253	252	254	256	258	253	250	249	257	259	250	249	248	248	246	
7	250	259	248	244	242	240	241	243	243	249	255	252	246	244	249	
8	249	252	252	252	251	249	251	237	227	236	241	249	249	249	249	
9	252	258	252	249	243	241	243	248	260	259	245	243	250	251	249	
10	249	249	246	238	231	237	234	220	231	237	238	238	248	248	248	
11†	250	253	252	251	241	235	235	236	239	233	237	240	243	245	242	
12†	249	253	245	242	229	219	219	225	227	236	250	260	257	248	248	
13††	252	253	252	255	249	248	255	257	257	251	250	249	295	246	253	
14††	255	255	252	250	248	241	241	243	255	197	186	223	238	241	241	
15	259	253	251	242	236	227	225	225	225	225	229	229	233	241	253	
16	253	252	264	251	243	242	242	248	248	241	236	241	248	248	248	
17	252	258	257	262	250	247	239	245	243	244	249	249	246	246	243	
18††	249	260	256	250	242	232	229	261	262	262	247	232	219	232	238	
19	259	272	257	244	230	220	215	215	215	226	232	238	246	249	250	
20	251	259	254	252	236	226	220	226	237	250	250	252	250	250	250	
21	261	260	250	260	228	227	216	215	226	243	256	241	250	242	239	
22	259	265	260	253	238	236	227	227	226	236	249	250	249	244	241	
23	252	258	254	250	242	241	239	227	227	236	244	254	259	250	239	
24	258	260	251	252	243	229	232	239	239	239	244	260	251	250	250	
25	252	252	255	255	254	251	261	280	275	284	275	275	262	250	248	
26	255	261	252	240	232	237	243	250	251	259	248	243	251	245	245	
27††	262	267	263	263	240	228	229	240	241	171	228	206	252	253	261	
28	261	251	251	245	240	240	245	247	245	244	256	261	252	249	246	
29†	252	255	246	240	234	229	222	228	236	241	246	252	259	253	252	
30†	244	252	241	249	252	239	239	239	241	243	249	252	249	245	244	
31†	251	259	258	263	253	250	246	230	230	230	238	247	250	253	252	
Mean	254	257	259	252	249	239	236	238	240	240	244	246	249	248	248	
Mean†	249	254	248	249	242	234	232	232	233	237	244	250	252	249	248	
Mean††	254	260	253	256	246	244	241	250	255	228	233	232	251	246	248	

†Five international quiet days

††Five international disturbed days

Δ Loss of record; day omitted for means

TABLE 13  
 Hourly values of Vertical Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2000γ plus tabular quantities

JULY

Hours G M T									Maximum		Minimum		Range	Date	
15	16	17	18	19	20	21	22	23	Mean	Time	Mag	Time			Mag
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H M	γ	H M	γ	γ	
251	251	249	250	252	252	254	252	251	254	09 00	267	08 00	242	25	1
253	251	250	252	261	258	256	254	251	247	17 45	262	07 15	226	36	2
249	259	259	259	260	259	253	251	251	249	00 07	262	07 00	216	46	3
249	250	251	247	251	252	250	242	242	242	01 20	264	07 55	227	37	4
244	250	253	253	253	254	253	254	259	254	05 03	273	02 00	241	32	5†
244	242	240	248	250	248	248	248	248	250	08 07	260	16 57	237	23	6
244	249	249	249	249	251	255	252	251	252	01 20	261	07 05	237	21	7
249	252	251	250	252	252	251	252	249	248	03 20	261	08 00	227	34	8
248	251	249	250	249	249	249	249	250	249	08 05	261	05 45	238	23	9
249	244	246	250	249	249	248	250	245	243	21 52	251	07 00	220	31	10
248	248	244	249	248	246	246	248	246	243	00 45	259	08 05	227	32	11†
248	252	252	249	249	248	248	248	251	244	11 05	261	05 05	215	46	12†
246	204	242	225	226	241	249	249	266	248	11 52	303	15 55	208	100	13††
249	241	253	264	253	255	259	256	253	244	18 25	266	07 15	179	87	14††
249	250	252	252	251	252	251	255	252	242	00 03	260	07 20	223	37	15
248	252	251	253	252	253	253	251	252	249	02 00	264	10 00	236	28	16
251	256	259	254	261	253	265	259	252	252	21 00	265	05 52	238	27	17
248	253	247	249	251	253	253	253	264	247	23 00	264	12 12	204	60	18††
249	251	256	253	254	250	251	252	249	243	01 00	272	06 38	214	58	19
252	253	256	256	258	251	250	253	244	248	01 05	261	06 30	214	47	20
244	244	249	251	251	259	251	258	258	245	00 01	261	07 33	214	47	21
245	244	251	250	251	249	249	251	251	246	00 50	267	07 35	221	46	22
249	249	252	259	253	249	251	254	251	247	17 30	260	07 38	223	37	23
250	250	251	252	253	251	252	253	252	248	01 00	260	05 25	221	39	24
251	251	252	251	251	252	252	252	252	258	09 00	284	13 20	247	37	25
251	251	251	250	251	274	260	259	251	250	20 00	274	04 02	229	45	26
263	262	262	264	254	259	275	274	258	249	21 25	297	09 28	149	48	27††
251	249	251	251	252	251	252	253	251	240	00 15	262	05 45	239	23	28
252	253	252	253	252	252	252	252	245	246	12 00	259	06 05	217	42	29
246	249	252	252	249	255	252	252	252	247	20 18	256	05 55	230	26	30
252	252	252	253	253	250	252	253	253	249	02 50	263	07 07	229	34	31†
248	248	251	252	252	253	253	253	252	248					41	Mean
248	250	250	251	250	250	250	251	250							Mean
246	242	251	251	247	252	258	257	260							Mean †

†Five international quiet days  
 ††Five international disturbed days  
 ΔLoss of record, day omitted for means.

TABLE 14

## Hourly values of Vertical Force, 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2000γ plus tabular quantities

AUGUST

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	253	253	248	252	241	247	252	253	253	253	250	250	252	252	249
2††	253	263	253	253	230	218	210	231	225	218	241	238	241	212	242
3	253	253	214	247	242	240	240	241	241	214	240	219	233	211	212
4††	253	253	261	262	258	265	251	264	261	260	251	254	255	253	248
5	254	251	250	249	231	224	230	230	233	230	220	239	242	251	245
6	255	254	215	212	230	217	225	240	237	242	240	219	242	243	248
7†	254	254	217	211	239	241	210	232	241	212	240	240	243	242	242
8	251	255	254	242	228	209	219	220	212	230	226	241	251	247	250
9†	255	260	260	255	231	Δ	Δ	Δ	Δ	Δ	Δ	247	246	243	244
10	255	263	258	257	254	236	219	211	219	231	242	213	212	243	243
11††	258	256	257	251	212	236	231	227	232	232	234	242	242	243	242
12	255	258	261	248	233	221	220	226	233	234	213	244	244	245	242
13†	251	255	251	242	229	219	229	226	229	233	241	242	212	241	242
14	254	256	252	217	211	231	242	250	255	257	266	266	255	253	253
15	258	265	257	251	243	228	211	210	221	235	241	247	244	243	244
16	256	258	256	255	244	244	244	243	233	233	232	234	237	243	243
17	253	255	255	255	244	214	241	231	232	221	221	232	242	244	245
18	255	256	256	211	213	213	244	241	241	239	214	245	253	252	245
19	258	258	256	259	214	226	228	222	233	234	216	242	244	244	244
20	256	258	257	256	214	234	233	234	213	214	211	241	211	244	244
21	256	258	262	266	255	244	243	244	215	245	252	256	256	245	245
22†	257	258	215	212	234	233	233	243	245	255	253	245	245	245	211
23†	256	257	219	212	226	221	221	229	239	245	250	256	218	211	241
24	255	256	255	215	210	229	226	227	233	233	242	214	244	214	244
25	255	255	215	245	211	231	239	211	213	244	211	244	242	256	255
26	255	255	252	211	233	222	225	221	215	221	243	211	244	244	244
27	250	253	215	236	228	221	221	221	230	239	252	257	256	244	245
28	255	256	214	211	232	221	220	229	212	239	213	243	213	248	243
29	255	256	251	235	228	220	220	221	236	218	229	252	238	241	243
30††	258	259	251	216	213	212	213	215	216	250	250	253	242	231	242
31††	254	254	253	251	251	253	218	232	231	231	237	247	218	253	251
Mean	255	256	252	218	239	232	232	233	237	238	212	245	245	245	215
Mean†	255	255	218	212	232	228	229	232	238	241	246	246	244	243	243
Mean††	255	257	256	253	245	243	237	240	239	242	243	247	246	242	245

† Five international quiet days.

†† Five international disturbed days.

Δ Loss of record; day omitted for means.

TABLE 14  
Hourly values of Vertical Force, 1961

(Averages for sixty minutes centered at the full hours of Greenwich Mean Time)  
2000γ plus tabular quantities

AUGUST

Hours G M T										Maximum		Minimum		Range	Date	
15	16	17	18	19	20	21	22	23	Mean	Time	Mag	Time	Mag			
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	II	M	γ	II	M	γ	γ
250	259	253	252	259	252	253	253	251	251	23	30	255	01	00	241	11
219	251	259	253	252	259	251	253	251	211	16	25	264	05	50	206	50
216	242	217	252	253	245	252	252	253	245	00	25	255	12	05	242	23
218	253	251	253	251	251	255	251	253	255	02	10	269	13	40	215	18
245	251	251	251	251	253	253	253	253	219	00	45	255	09	45	219	36
218	219	251	250	259	251	259	253	251	241	00	15	256	05	00	217	39
243	245	253	259	259	219	259	253	251	216	00	52	255	06	39	241	21
253	250	243	213	213	259	259	251	255	212	01	05	256	01	52	208	18
247	219	254	254	251	254	251	254	251	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ
211	246	251	255	255	255	255	255	255	236	00	15	251	06	37	210	11
211	211	251	211	251	256	256	251	252	215	21	00	256	07	15	226	30
213	246	251	254	254	254	249	252	251	244	01	10	251	06	00	220	11
219	241	248	254	254	252	219	252	251	213	01	00	245	05	00	219	36
251	256	255	256	256	258	257	257	257	251	10	15	267	04	53	233	31
215	244	211	214	217	217	245	218	256	243	00	50	267	07	00	210	57
213	219	215	245	211	218	219	253	253	215	01	00	258	09	15	230	28
214	245	215	259	219	245	217	211	214	213	02	15	256	09	15	220	36
250	215	253	253	259	255	256	255	256	249	09	10	257	09	10	247	20
245	255	256	256	256	256	256	256	256	217	01	20	259	07	08	221	38
245	211	243	245	248	255	259	255	256	247	01	25	259	06	00	233	26
255	253	253	255	255	255	256	256	256	253	01	50	265	06	00	213	22
245	245	251	259	259	253	253	253	255	247	01	00	258	05	40	232	26
245	248	249	250	219	249	252	255	253	245	00	15	258	04	35	220	38
244	248	218	243	250	255	250	250	255	214	01	00	257	06	20	225	32
256	259	259	255	256	255	255	256	251	219	21	08	263	01	15	233	30
244	245	211	248	250	245	245	241	215	210	01	50	256	06	30	210	16
244	245	217	251	252	253	255	255	255	214	11	00	257	05	05	219	38
249	246	244	250	249	249	216	251	252	212	00	30	257	06	00	220	37
214	244	251	247	249	233	219	216	217	239	01	00	256	08	07	209	17
241	235	246	251	254	254	254	261	253	248	21	50	265	12	50	228	37
253	293	259	254	254	254	253	254	255	249	02	50	263	08	30	231	32
246	247	250	251	252	251	252	253	259	246							Mean
244	246	250	252	252	251	252	253	259								Mean†
247	248	251	251	253	254	256	256	259								Mean††

† Five international quiet days  
 †† Five international disturbed days.  
 Δ Loss of record, day omitted for means.



TABLE 15  
 Hourly values of Vertical Force, 1961  
 (Averages for sixty minutes centred at the full of hours of Greenwich Mean Time)  
 2000γ plus tabular quantities

SEPTEMBER

Date	Hours G M T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	251	251	245	240	229	225	202	210	219	219	219	236	245	242	242
2	250	252	250	247	241	241	240	237	240	231	236	242	247	241	239
3	250	253	246	236	225	212	207	207	217	226	229	227	225	238	240
4	250	254	250	239	229	229	229	229	232	240	240	249	230	230	238
5	248	246	244	237	230	228	224	217	225	239	241	241	239	217	238
6	251	247	253	240	230	215	210	209	215	222	236	239	237	233	235
7†	241	249	243	236	222	223	200	193	199	207	216	225	228	210	236
8†	243	250	243	228	213	191	182	186	193	205	214	220	228	232	246
9	248	250	239	225	214	202	193	197	211	219	224	229	236	232	235
10	246	243	230	220	205	196	204	205	213	223	230	228	229	229	231
11	243	250	243	219	214	199	193	198	207	219	228	229	228	231	236
12	240	245	243	236	216	205	208	200	228	213	247	240	229	230	232
13	251	251	242	229	217	216	222	228	230	213	250	248	239	239	239
14††	252	255	242	224	213	201	191	197	202	219	224	232	229	225	230
15	248	251	246	237	228	216	206	201	209	227	237	239	238	237	239
16	240	248	230	218	204	204	204	219	226	229	224	229	226	227	239
17	239	243	238	221	214	204	204	209	222	227	228	227	227	228	234
18	242	247	239	231	228	219	215	216	228	236	239	238	237	237	238
19†	245	250	245	234	222	216	213	215	216	217	219	227	228	229	229
20	240	247	250	251	240	239	230	229	233	240	245	246	240	230	230
21†	244	249	238	229	222	217	216	216	217	216	228	235	239	233	237
22	241	245	235	218	210	207	200	204	212	223	230	230	230	229	232
23†	241	241	231	219	211	207	207	208	216	226	238	236	230	230	232
24††	241	245	238	231	224	210	207	202	207	216	223	223	235	237	230
25††	240	245	238	223	220	210	206	193	209	212	219	227	232	233	233
26	243	247	246	244	233	221	210	210	219	221	229	224	226	233	235
27	242	240	242	238	222	216	216	212	216	226	225	229	229	244	243
28	245	244	237	226	217	212	211	215	217	222	232	238	242	238	239
29	247	249	244	234	214	213	201	199	200	208	215	223	229	235	239
30††	245	246	246	239	223	220	223	223	227	234	226	229	234	235	236
Mean	245	248	242	232	221	214	209	209	217	225	230	233	233	233	235
Mean†	243	248	240	229	218	211	204	204	208	214	223	229	231	231	234
Mean††	246	248	242	231	222	213	206	205	213	220	222	229	235	234	230

† Five international quiet days  
 †† Five international disturbed days  
 Δ Loss of record, day omitted for means.

TABLE 15

Hourly values of Vertical Force, 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2000γ plus tabular quantities

SEPTEMBER

Hourly values of Vertical Force, 1961															Range		
Hourly G M T										Maximum		Minimum		Range			
15	16	17	18	19	20	21	22	23	Mean	Time	Mag	Time	Mag	γ	γ		
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H	M	γ	II	M	γ	γ	
241	211	242	242	253	215	212	253	252	237	22	08	262	06	25	198	64	1†
246	211	241	242	215	247	242	244	249	243	01	15	253	09	45	230	23	2
240	242	242	244	242	247	248	217	250	235	01	00	253	06	25	203	50	3
239	240	241	241	241	241	240	243	244	239	00	55	255	04	15	228	27	4
238	239	210	243	240	240	235	214	249	238	01	55	251	07	00	217	34	5
247	238	241	243	243	213	214	213	243	236	01	40	251	06	45	207	17	6
236	239	240	240	240	240	242	210	243	230	02	15	251	07	00	193	58	7
237	239	239	239	210	242	210	240	243	226	02	30	251	06	00	182	69	8
236	239	242	241	212	243	215	245	215	231	00	55	251	06	53	191	60	9
236	236	239	210	211	241	212	242	241	229	00	35	248	01	30	194	54	10
238	234	231	230	231	224	217	239	247	228	21	20	251	06	00	193	58	11
238	240	240	239	242	242	212	211	248	234	23	30	251	05	30	196	55	12
238	246	239	239	239	239	239	239	239	248	00	10	252	05	00	216	36	13
231	239	240	246	216	241	217	243	250	230	00	10	260	05	25	192	68	14
238	239	239	239	239	239	240	240	210	234	02	20	253	06	45	196	57	15
236	236	237	236	236	238	239	238	219	229	01	23	250	05	00	204	46	16
236	236	237	238	238	239	239	239	239	229	00	15	247	05	24	203	44	17
230	230	238	239	239	239	239	240	213	234	01	30	249	06	00	215	34	18
232	237	238	239	239	240	240	210	240	231	01	30	250	06	15	210	40	19
238	236	240	241	241	247	245	211	243	240	02	25	251	07	00	229	22	20
239	240	240	240	240	241	240	211	241	233	00	31	251	07	30	216	35	21
237	232	239	211	239	238	241	241	211	229	00	50	249	05	45	198	51	22
239	239	240	241	239	239	241	241	241	231	00	36	245	05	30	207	98	23
219	217	233	251	240	242	237	246	241	229	02	20	246	04	50	199	47	24
242	243	243	243	243	244	243	243	243	230	00	40	246	06	18	186	60	25
236	234	237	243	242	213	244	244	243	234	00	58	250	06	03	209	41	26
244	244	251	245	245	245	248	246	244	236	17	00	257	06	50	211	46	27
241	241	243	244	215	247	246	245	215	235	20	00	247	05	37	207	40	28
237	237	245	244	245	245	246	246	246	236	01	02	250	07	00	199	51	29
238	241	244	245	246	237	268	254	220	237	21	02	314	23	30	213	101	30
238	238	240	241	242	242	243	243	244	233						49	Mean	
237	239	239	240	240	240	241	241	242								Mean†	
235	236	240	245	246	244	247	248	241								Mean††	

| Five international quiet days  
† Five international disturbed days  
Δ Loss of record, day omitted for means

TABLE 16

## Hourly values of Vertical Force, 1961

(Averages for sixty minute, centred at the full hours of Greenwich Mean Time)]  
2000γ plus tabular quantities

## OCTOBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	259	250	212	266	271	278	228	235	256	238	262	265	261	266	282
2	270	270	268	266	263	252	245	244	241	245	247	256	258	260	260
3	269	271	270	258	256	255	253	256	259	268	269	264	262	259	262
4	268	269	267	259	215	216	246	253	257	258	257	256	256	257	258
5	269	270	269	269	259	256	251	249	257	258	258	258	258	249	267
6	269	270	270	271	269	258	219	251	257	259	259	257	256	259	261
7	268	270	268	261	250	238	238	213	250	256	258	257	256	257	262
8	268	269	258	252	216	237	234	241	232	261	262	259	257	258	261
9	268	269	263	230	234	220	221	229	238	244	245	246	252	257	257
10†	267	269	270	269	264	248	211	245	252	256	257	257	256	256	256
11	266	269	272	268	255	261	215	251	244	243	219	247	213	249	255
12	261	257	259	256	211	238	232	243	243	247	255	255	255	255	255
13	267	267	268	265	213	230	225	230	234	242	254	253	249	254	254
14	262	266	262	218	242	230	223	232	211	244	214	247	234	254	254
15†	261	266	265	254	251	235	229	230	239	247	253	253	253	253	253
16†	251	259	255	252	211	229	229	236	211	251	259	264	254	253	254
17†	263	263	255	251	215	230	236	240	240	246	252	252	252	252	253
18†	264	261	262	263	250	235	235	241	250	250	252	253	251	252	254
19	263	260	259	263	263	263	262	262	263	264	262	252	251	251	252
20	251	252	257	250	213	231	231	245	253	250	249	249	250	251	252
21	257	261	263	262	257	255	248	249	249	250	252	257	250	248	254
22	260	261	262	255	218	210	239	239	239	239	238	244	218	250	249
23	254	255	254	250	219	240	239	210	239	240	249	250	251	251	251
24	256	260	257	260	239	235	225	226	226	226	235	211	245	249	249
25	256	259	259	261	261	251	249	248	218	244	248	248	248	249	247
26††	253	259	255	256	238	217	219	218	236	230	234	236	210	248	249
27††	219	253	252	218	217	215	252	259	257	238	246	249	253	248	259
28††	215	217	217	252	216	215	218	257	263	260	216	206	178	181	216
29††	278	269	263	268	268	273	286	306	282	269	273	262	251	256	255
30	257	258	256	251	211	238	240	245	211	244	241	244	244	246	252
31	251	256	256	218	211	238	236	210	242	233	236	234	242	244	244
Mean	262	263	261	258	251	215	242	245	218	248	252	251	249	250	254
Mean†	262	261	261	260	250	237	235	238	213	248	253	256	253	253	254
Mean††	257	256	252	258	259	258	253	261	259	249	252	244	237	240	252

†Five international quiet days

††Five international disturbed days

ΔLoss of record, day omitted for means.

TABLE 16  
 Hourly values of Vertical Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2000γ plus tabular quantities

OCTOBER

Hours G M T										Maximum		Minimum		Range		Date		
15	16	17	18	19	20	21	22	23	Mean	Time	Mag	Time	Mag	Y	Y			
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H	M	Y	H	M	Y	Y		
281	281	271	271	271	270	270	270	270	268	04	45	312	05	15	210	102	1}†	
262	269	269	271	270	270	270	270	269	261	17	16	272	08	05	211	31	2	
267	264	268	269	269	268	268	268	268	261	01	24	272	06	30	251	21	3	
261	268	267	267	269	269	269	269	269	261	21	30	270	04	05	215	25	4	
265	268	268	269	269	269	269	269	269	263	01	27	271	07	31	217	24	5	
261	267	268	267	268	269	269	269	268	263	02	40	273	06	30	215	28	6	
267	267	267	267	267	267	268	265	268	260	00	38	271	05	23	233	38	7	
263	259	262	267	268	268	268	268	268	259	01	16	270	05	30	233	37	8	
258	238	263	264	262	265	267	265	267	253	01	00	269	05	18	216	53	9	
256	257	261	263	264	264	260	267	261	259	02	45	275	06	01	213	32	10	
257	257	261	266	266	257	256	256	259	256	02	07	271	09	05	242	32	11	
251	260	269	266	261	267	267	267	267	255	16	38	271	05	55	231	40	12	
251	251	251	251	255	259	256	255	258	251	01	10	268	05	37	223	15	13	
255	255	258	261	261	259	256	259	261	250	01	00	266	07	01	219	17	14	
253	254	251	257	259	257	257	251	255	251	01	00	266	06	00	229	37	15	
254	255	255	257	258	258	258	258	258	252	21	31	264	05	30	229	35	16	
253	253	258	260	263	263	263	264	264	264	254	22	10	265	05	30	236	29	17
251	253	257	256	253	254	257	257	262	253	00	30	264	05	10	229	35	18	
252	252	255	253	257	253	252	256	252	257	02	31	265	10	58	250	15	19	
255	257	261	256	262	261	261	258	261	252	19	00	262	05	16	228	34	20	
250	250	250	250	252	256	260	263	262	251	02	00	263	06	30	245	18	21	
250	251	253	255	255	255	251	251	251	250	02	00	262	10	00	238	24	22	
251	250	256	260	260	257	261	260	252	251	21	52	262	06	30	238	24	23	
250	251	251	260	259	259	259	259	256	247	01	00	262	06	00	225	37	24	
241	217	253	259	255	251	256	261	259	252	03	36	262	15	20	239	23	25	
250	252	261	261	260	267	260	254	248	250	19	50	272	08	50	225	47	26	
258	257	255	257	260	263	260	264	257	254	21	45	271	03	34	237	34	27	
251	243	215	222	280	277	257	263	276	242	19	20	318	13	15	175	143	28	
255	256	256	256	256	257	257	256	256	265	06	30	311	11	30	216	65	29	
252	246	255	252	218	218	249	252	251	218	17	01	260	05	16	233	27	30	
246	250	255	255	250	250	252	252	254	246	01	00	256	10	38	232	24	31	
256	256	258	260	261	262	262	261	261	255							39	Mean	
254	254	257	259	259	259	259	260	261									Mean†	
259	256	252	253	265	267	261	261	261									Mean††	

†Five international quiet days.  
 ††Five international disturbed days.  
 ΔLoss of record; day omitted for means.

TABLE 17

Hourly values of Vertical Force, 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2000γ plus tabular quantities

NOVEMBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	248	250	248	244	236	230	225	224	224	230	236	239	243	245	245
2	245	250	256	255	248	236	231	225	220	216	222	230	236	243	245
3	218	214	248	251	214	214	239	243	237	236	238	240	240	243	244
4	215	245	244	215	243	234	225	222	224	230	239	237	243	245	244
5†	248	251	254	255	251	237	242	240	226	226	228	230	230	234	232
6	246	244	243	237	230	225	231	231	222	222	231	232	238	236	249
7	216	219	236	239	238	229	219	211	207	211	220	227	224	234	239
8	249	213	217	243	241	233	235	231	235	237	238	241	243	247	249
9	213	245	243	243	227	221	224	224	225	230	231	231	232	238	243
10	242	242	244	242	243	241	243	245	245	243	241	241	242	244	242
11	213	243	243	243	243	237	235	231	233	231	232	236	237	242	242
12	243	245	244	243	242	241	226	219	221	223	223	225	229	229	231
13	248	245	243	243	242	237	213	241	231	225	229	231	237	242	243
14	244	249	254	249	243	245	242	231	217	220	225	229	232	233	235
15†	243	243	250	255	250	244	235	229	224	225	229	231	242	247	242
16	242	242	241	236	242	240	242	238	230	230	230	234	236	247	241
17	241	237	236	232	254	255	259	258	240	222	219	228	236	229	240
18	242	211	241	211	240	243	219	253	218	244	241	232	232	237	232
19	244	213	242	238	246	243	243	242	244	243	241	236	240	237	241
20	238	236	236	235	230	225	229	222	217	222	225	226	219	220	230
21	241	234	234	233	227	223	223	227	229	230	233	239	239	240	239
22	237	230	231	240	231	225	221	227	228	229	228	228	229	245	223
23†	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	217	217	217	221	223	227	229
24†	240	230	235	230	229	229	223	218	229	229	230	230	230	230	230
25	240	230	229	229	229	229	229	227	217	217	223	229	229	229	229
26	237	235	235	232	236	240	238	236	230	227	232	234	229	241	229
27	215	212	211	215	216	217	218	220	222	223	226	222	222	233	217
28	229	228	228	234	228	228	228	229	235	239	238	229	229	238	228
29	238	234	230	234	234	229	236	228	227	221	222	226	228	229	229
30	229	229	230	229	240	233	230	235	234	229	229	229	234	240	240
Mean	241	239	240	240	238	234	234	231	228	228	230	232	233	235	237
Mean†	237	234	238	238	240	235	229	227	229	228	229	230	232	236	237
Mean  †	244	243	243	242	245	239	241	237	231	228	229	232	233	236	236

| Five international quiet days  
 † Five international disturbed days  
 Δ Loss of record, day omitted for means.

TABLE 17  
 Hourly values of Vertical Force, 1961  
 (Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
 2000γ plus tabular quantities

NOVEMBER

Hours G M T										Mean		Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag	Time	Mag	Y	Y		
250	250	245	248	245	252	248	248	245	242	23	50	256	08	222	94	1	
246	246	246	248	249	248	246	248	249	241	02	10	257	09	213	44	2	
244	245	246	245	245	244	244	243	246	243	02	45	254	08	232	22	3	
245	244	244	243	244	246	242	243	246	240	19	21	249	07	222	27	4	
240	242	244	249	250	251	250	245	252	242	02	15	256	08	226	30	5††	
248	245	246	246	246	248	245	245	249	239	23	30	254	08	220	34	6	
237	237	247	241	243	259	256	249	243	226	20	21	269	08	206	63	7††	
248	247	248	248	245	248	245	242	242	242	13	30	254	07	230	24	8††	
243	244	245	243	254	243	243	243	243	238	19	00	255	04	220	35	9	
242	242	243	243	244	244	244	243	244	243	07	26	247	01	239	8	10	
242	242	243	244	245	245	245	248	249	240	23	45	253	09	230	23	11	
237	242	243	249	250	248	251	247	245	237	21	16	254	08	219	35	12	
242	242	242	243	244	243	243	243	243	240	00	30	249	08	224	25	13	
237	237	235	235	233	236	241	243	243	237	02	15	259	08	211	48	14	
242	241	242	242	242	241	242	242	242	239	02	36	255	08	223	32	15†	
241	241	241	241	241	241	241	242	242	239	04	35	243	09	229	14	16	
231	235	246	232	244	254	242	243	243	240	04	25	272	09	216	56	17††	
228	231	240	242	244	242	236	236	240	240	06	50	254	15	219	35	18††	
241	241	241	241	240	240	240	241	240	241	00	40	248	12	235	13	19	
236	237	242	236	231	231	238	238	241	231	17	10	243	07	212	31	20	
234	240	240	240	237	240	239	235	234	233	19	30	241	04	221	20	21	
231	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	22†	
235	240	240	235	235	240	241	240	240	240	Δ	Δ	Δ	Δ	Δ	Δ	23†	
230	231	231	235	240	237	240	240	241	232	16	15	241	07	218	23	24†	
229	230	230	235	235	240	235	240	235	230	00	05	241	08	217	24	25	
232	233	229	229	236	235	234	229	234	233	05	00	240	09	227	13	26	
217	217	217	217	216	217	216	216	216	218	10	01	227	01	206	21	27	
229	229	229	229	234	239	238	239	239	232	09	53	240	06	227	13	28	
229	229	239	238	230	229	230	234	234	231	17	30	240	10	217	23	29	
241	244	248	246	242	241	244	241	246	237	18	20	251	09	228	23	30†	
238	239	240	241	241	242	241	241	242	237						28	Mean	
238	239	240	241	241	240	242	241	243								Mean†	
237	242	245	246	245	251	246	243	244								Mean††	

†Five international quiet days  
 ††Five international disturbed days  
 ΔLoss of record, day omitted for means.

TABLE 18  
Hourly values of Vertical Force, 1961  
(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2000γ plus tabular quantities

DECEMBER

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1††	229	229	232	237	238	227	216	208	208	197	198	197	203	202	184
2††	233	227	237	247	244	239	243	239	237	232	215	222	227	216	213
3††	228	241	240	235	227	221	228	215	214	208	215	219	221	231	248
4	234	227	235	239	228	219	204	205	215	215	217	221	226	227	228
5	229	231	229	227	227	225	219	215	216	222	225	226	226	227	229
6	228	227	227	237	232	228	220	215	215	214	214	218	215	214	214
7	232	228	226	234	238	238	228	218	203	204	219	216	222	222	226
8†	227	226	233	238	232	226	214	207	210	216	221	225	226	226	226
9	233	227	232	236	237	231	227	227	224	218	215	218	220	226	226
10	226	226	225	226	224	226	225	214	204	202	207	212	215	222	226
11	226	227	233	230	226	220	207	195	191	200	208	214	214	215	215
12	226	226	226	225	223	217	215	209	205	211	215	219	223	224	223
13	225	225	225	226	225	225	221	215	206	203	207	219	221	225	225
14	224	223	226	235	237	232	226	225	221	217	217	221	220	223	225
15	224	224	224	225	224	223	215	212	206	205	212	213	220	221	221
16	224	224	223	229	236	235	233	225	231	225	224	220	221	224	224
17	225	224	224	224	226	229	224	212	211	219	225	227	225	224	224
18†	225	225	223	224	224	223	214	207	200	200	207	213	213	217	2 0
19†	224	224	221	223	225	224	224	217	213	213	214	219	2 3	220	220
20†	224	225	224	224	223	217	214	212	202	202	212	213	215	224	224
21	224	219	220	226	235	231	223	213	206	203	212	213	214	217	219
22	223	219	217	221	225	225	209	198	190	202	207	213	213	212	212
23	223	220	218	227	237	238	234	208	203	203	202	202	203	208	215
24	219	218	209	210	213	204	201	196	202	203	203	207	208	214	214
25†	225	225	225	226	222	215	214	202	200	197	203	212	213	214	215
26	225	224	222	226	226	225	218	208	202	201	202	202	207	210	213
27	224	231	228	218	214	214	210	190	185	191	200	207	212	213	215
28††	214	215	214	215	220	219	224	215	215	210	201	201	203	214	214
29	221	219	218	220	214	214	214	207	203	214	215	216	214	214	214
30††	215	215	216	215	214	216	215	214	213	206	202	202	218	209	213
31	216	216	218	226	226	219	211	210	204	201	202	209	213	214	216
Mean	225	224	225	227	227	224	220	212	208	208	210	214	217	218	219
Mean†	225	225	225	227	225	222	218	210	201	204	210	216	218	220	221
Mean††	224	225	228	229	229	224	225	218	216	211	206	208	214	214	212

†Five international quiet days.  
††Five international disturbed days  
Δ Loss of record; day omitted for means.

TABLE 18

Hourly values of Vertical Force, 1961

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)  
2000γ plus tabular quantities

DECEMBER

Hours G M T.										Mean	Maximum		Minimum		Range	Date	
15	16	17	18	19	20	21	22	23	24		Time	Mag	Time	Mag			Y
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	H	M	H	M	Y	Y		
202	205	237	243	241	239	235	237	238	220	18	30	251	14	25	178	73	1††
214	237	233	227	226	238	245	227	225	231	05	35	261	14	13	209	52	2††
237	238	239	239	239	239	239	239	237	250	01	00	241	08	54	204	37	3††
228	231	231	228	235	228	227	228	233	225	02	30	239	06	25	203	36	4
229	225	217	222	227	226	227	228	232	225	14	01	238	17	15	213	25	5
220	214	225	236	237	228	237	228	227	224	18	10	239	16	20	213	26	6
227	227	228	222	233	232	227	227	227	225	04	30	238	14	24	202	36	7
226	226	226	232	227	226	227	226	227	225	03	01	239	07	45	204	35	8†
226	226	226	226	227	226	227	226	226	226	04	00	237	10	01	214	23	9
227	226	226	226	226	222	224	226	226	221	17	25	228	09	01	201	27	10
215	214	215	222	225	226	228	232	227	218	02	16	234	08	01	190	44	11
224	225	225	226	226	226	228	225	225	221	19	10	227	08	01	202	25	12
223	220	224	226	225	225	225	225	225	221	22	01	229	08	51	202	27	13
223	224	224	225	223	224	214	219	225	224	03	30	238	09	15	215	23	14
223	225	225	225	225	225	226	226	225	221	22	01	227	08	42	202	25	15
224	225	225	225	224	224	224	224	224	226	04	30	236	11	00	220	16	16
224	224	224	224	224	224	224	224	225	223	05	00	230	07	20	208	22	17
224	221	224	224	224	224	224	224	224	219	04	35	225	08	31	199	26	18†
219	219	223	221	223	223	224	223	224	221	04	31	225	08	30	213	12	19†
225	224	224	224	224	224	224	225	225	220	00	40	227	08	30	202	25	20†
221	219	219	221	220	219	219	220	223	219	03	02	236	08	35	203	33	21
214	217	214	215	218	221	220	224	223	214	03	01	231	07	30	189	42	22
224	224	225	224	222	220	221	220	230	219	05	31	239	10	30	202	37	23
214	215	215	215	222	224	225	225	225	213	21	30	226	07	01	196	30	24
218	218	221	220	220	220	221	224	224	216	02	58	227	08	20	194	33	25†
215	215	215	214	215	215	218	219	224	216	03	30	226	10	01	201	25	26
220	220	218	216	216	213	218	215	214	213	03	01	238	07	36	180	58	27
208	198	209	220	219	218	221	219	215	213	05	30	226	16	15	191	35	28††
215	218	219	215	215	214	215	220	221	216	02	58	225	09	15	202	23	29
213	220	216	214	219	219	219	219	218	214	16	15	224	10	00	201	23	30††
216	216	219	219	221	217	219	217	219	215	03	30	227	08	30	197	30	31
221	221	223	224	225	224	225	225	225	220						32		Mean
222	222	224	224	224	223	224	224	225									Mean†
215	220	227	229	229	231	232	228	227									Mean††

†Five international quiet days.  
††Five international disturbed days.  
ΔLoss of record; day omitted for means.



TABLE 19  
PRINCIPAL MAGNETIC STORMS  
JULY—DECEMBER 1961

Observatory	Greenwich Date 1961	Storm Time				Sudden commencements			C-Figure Degree of activity (iv)	Maximum activity on K-scale 0 to 9			Ranges		
		GMT of beginning	GMT of ending (1)	Type (ii)	Amplitude (iii)	D	H	Z		Greenwich 3 day	Greenwich 3 hour index	K index	D	H	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
		hr	mt	d	hr	'	γ	γ				'	γ	γ	
Astrophysical Observatory, Kodaiikanal	July, 13	11	12	16	09	S C	2	58	35	ms	14	9	368	121	
	July, 17	18	25	19	05	S C	<1	24	14	m	18	5	204	68	
	July, 26	19	50	28	23	S C	1	47	25	s	27	8	442	150	
	August, 29	17	06	31	10	S C	<1	13	6	m	30	4	172	35	
	September, 24	01	37	25	16					ms	24	6	271	75	
	September, 30	21	10oct	1st	20	S C	<1 3	17 108	11 58	s	Oct 1st	10	452	127	
	October, 26	19	36	27	23	S C	<1	28	12	m	26	3	88	23	
	October, 28	08	04	29	11	S C	2	76	21	s	28	9	447	138	
	November, 18	06	18	19	07	S C	2	74	16	m	18	..	7	178	60
	December, 1	07	10	9	13	.	.	.	.	ms	1	.	6	334	78

The following symbols and conventions have been used according to recognised practice

- (i) Approximate time of ending of storm construed as the time of cessation of reasonably marked disturbance movements in the traces.
- (ii) S.C. = Sudden commencement; (. .) = Gradual commencement
- (iii) Signs of amplitudes of 'D' and 'Z' taken algebraically, (D = reckoned negative being westerly) (Z = reckoned positive being vertically downwards)
- (iv) Storm described by three degrees of activity, (m) — for moderate (when range is less than 250 γ)  
(ms) — for moderately severe (when range is between 251 γ and 400 γ)  
(s) — for severe (when range is above 400 γ).

**IONOSPHERIC DATA**

Characteristic : fo F2  
Unit : Mc  
Month July 1961

TABLE 1  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude : 77 5°E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	u5.4 <sub>F</sub>	F	F	E	E	E	5.9	7.1	8.5	8.8	8.5	7.8
2	2.4 <sub>F</sub>	F	E	E	E	F	5.3	7.4	8.3	8.1	C	C
3	4.6	3.4	2.6	1.9	2.0	1.6	5.6	7.8	8.8	9.4	9.5	8.5
4	u4.0 <sub>F</sub>	F	F	F	F	2.1	5.5	7.9	9.1	8.4	7.5	7.1
5	F	F	u 3.3 <sub>F</sub>	2.6	E	1.9	5.5	6.4	7.9	8.5	9.7	9.7
6	3.7	3.1	2.6	2.5	2.1	E	5.7	7.6	8.4	8.6	8.6	9.2
7	F	F	F	F	E	F	5.5 <sub>r</sub>	7.9	8.3	8.5	8.1	8.1
8	4.0	3.0	2.6	R	F	F	5.4 <sub>r</sub>	8.0	8.8	9.4	10.4	8.8
9	u6.4 <sub>F</sub>	5.2	4.5	4.2	3.8	2.7	5.3	8.0	9.0	9.0	9.2	8.6
10	9.2	6.6 <sub>F</sub>	5.4	4.6	u 3.3 <sub>r</sub>	u2.5 <sub>F</sub>	u5.6 <sub>F</sub>	7.8	8.5	C	C	7.8
11	F	4.4	2.9	2.4	1.9	A	5.9	8.7	9.6	9.8	u9.8 <sub>r</sub>	8.6
12	5.1	4.3	3.7	3.0	2.5	2.2	5.5	7.5	8.2	8.0	7.7	7.9
13	F	F	4.5	3.4 <sub>r</sub>	3.0	2.6	6.0	8.6	9.2	10.0	10.3	10.0
14	2.3	F	F	F	E	E	6.1	8.2	9.0	u9.9 <sub>u</sub>	10.0	10.0
15	F	F	F	u5.2 <sub>s</sub>	F	F	5.7	8.4	C	10.4	10.9	9.8
16	7.9	6.5	u 5.1 <sub>s</sub>	4.5	2.7 <sub>i</sub>	C	6.0	7.9	8.9	C	10.4	9.5
17	F	F	F	F	F	F	6.3 <sub>r</sub>	8.6	9.6	9.4	8.6	8.4
18	6.0 <sub>F</sub>	4.4	3.6	F	A	2.5 <sub>r</sub>	6.2	8.3	9.4	10.1	10.4	10.8
19	7.2 <sub>s</sub>	S	6.0	5.1	5.2	4.4	6.3	8.2	9.2	10.1	10.4	9.4
20	8.0	7.1 <sub>s</sub>	F	F	F	4.7	6.5	8.5	9.1	8.9	7.9	8.5
21	7.2	5.9	4.8	4.3	3.9	4.3	6.2	8.3	9.3	10.7	10.9	9.5 <sub>r</sub>
22	F	F	F	F	F	F	u6.3 <sub>s</sub>	8.0	9.4	9.6	8.9	8.8
23	5.8	4.2	3.3 <sub>F</sub>	2.9	2.5	1.9	5.7	8.0	9.4	10.1	C	C
24	5.3	u 3.7 <sub>F</sub>	F	3.9 <sub>F</sub>	3.5 <sub>F</sub>	2.7	6.0	8.3	9.0	9.2	8.8	8.7
25	6.1	5.3	u 4.9 <sub>s</sub>	4.4	3.0	2.8 <sub>r</sub>	u 6.0 <sub>s</sub>	8.6	9.7	9.6	10.1	10.0
26	3.4	u 2.8 <sub>F</sub>	F	F	A	R	5.7	8.0	9.4	9.5	8.7	9.1
27	3.4	2.8	2.5	E	E	1.9	6.0	7.6	8.0	8.6	8.4	9.1
28	u 6.2 <sub>F</sub>	F	u 4.7 <sub>F</sub>	3.2	1.9	1.7	5.3	8.3	9.7	10.6	11.7	11.5
29	u 4.1 <sub>F</sub>	3.7	A	F	F	F	4.9	7.0	7.8	7.9	7.7	7.5
30	4.0	2.7	u 2.2 <sub>F</sub>	2.2 <sub>F</sub>	2.0 <sub>F</sub>	E	5.3	7.7	8.5	8.4	7.7	7.5
31	4.0	3.2	2.7	2.2	2.2	R	5.0	7.6	8.7	8.8 <sub>r</sub>	8.1	7.3
Count	24	19	20	21	22	20	31	31	30	29	28	29
Median	4.8	4.2	3.4	3.0	2.2	2.2	5.7	8.0	9.0	9.4	9.0	8.8
Mean	5.2	4.3	3.8	3.5	2.8	2.7	5.7	7.9	8.9	9.3	9.2	8.9

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds.

Characteristic . fo F2  
Unit · Mc  
Month · July 1961

TABLE 1  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date
7·7	8·2	8·6	8·9	10·0	10·6	9·1	9·3	7·9	5·1	3·1	2·9	1
C	7·3	7·9	7·7	A	9·1	10·0	9·9	8·1	6·7	5·4	5·1	2
7·6	7·6	8·2	9·1	10·0	10·8	9·9	9·2	7·9	6·5	5·4	4·6	3
7·4	7·7	7·8	8·3	9·1	9·5	9·4	8·6	8·1	u7·4 <sub>F</sub>	F	F	4
9·9	10·2	10·9	11·4	11·3	12·6	11·4	9·9	7·6	6·2	u5·4 <sub>F</sub>	4·3	5
9·6	9·7	10·5	10·8	11·0	11·3	12·3	10·0	8·4	7·0	u5·8 <sub>F</sub>	F	6
8·4	8·6	8·8	9·0	10·4	11·0	10·8	9·7	7·6	6·5	u6·0 <sub>s</sub>	5·5	7
8·0	7·8 <sub>EX</sub>	8·4	8·7	9·0	9·8	10·4	u10·3 <sub>s</sub>	F	C	F	u6·4 <sub>F</sub>	8
8·5	8·4	9·0	9·0	8·4	8·3	9·2	9·7	8·7	7·9	u7·2 <sub>r</sub>	F	9
7·8	8·3	9·0	9·0	9·2	9·8	11·0	11·6	8·8	6·9	u5·4 <sub>F</sub>	F	10
8·6	7·9	8·2	8·9	9·5	9·8	9·9	10·6	9·9	7·8	6·8	6·1	11
8·2	8·6	9·0	9·7	11·0	11·1	12·0	11·4	9·2	8·1	6·9	6·7	12
9·6	9·5	9·2	10·1	11·0	10·6	10·0	9·8	u8·4 <sub>F</sub>	7·4	6·2	5·9	13
9·6	9·7	9·2	7·6	9·2	10·2	9·8	8·8	C	6·8	u8·2 <sub>F</sub>	F	14
10·1	9·8	10·0	10·1	9·8	u10·2 <sub>s</sub>	11·2	u11·8 <sub>s</sub>	u10·0 <sub>r</sub>	8·8	9·3	8·9	15
9·1	9·2	9·9	9·8	9·9	9·8	10·0	u9·6 <sub>s</sub>	8·2	u7·1 <sub>s</sub>	u6·5 <sub>F</sub>	F	16
8·4	8·8	10·0	10·6	11·2	11·6	12·4	11·6	10·2	8·6	8·4	7·6	17
9·9	10·9	11·6	10·8	11·6	11·4	11·0	u9·7 <sub>s</sub>	F	F	8·8	8·3	18
8·6	8·4	8·5	8·6	8·8	9·1 <sub>s</sub>	9·4	8·9	8·7	8·9	9·4	9·0	19
8·3	9·2	9·6	11·0	11·5	12·0	11·5	11·0	9·7	8·9	8·5	9·4	20
8·8	8·5	8·8	10·1	11·2	10·6	u11·7 <sub>s</sub>	10·8	u9·1 <sub>r</sub>	F	F	F	21
9·6	9·4	9·8	9·8	11·1	11·5	11·2	u10·5 <sub>s</sub>	F	u8·3 <sub>F</sub>	8·6	8·4	22
C	C	C	9·7	11·0	10·7	11·5	11·1	F	F	F	8·2	23
9·7	9·7	u10·1 <sub>s</sub>	10·1 <sub>s</sub>	10·6	10·8	11·6	10·7	u9·5 <sub>s</sub>	8·8	8·4	u7·2 <sub>s</sub>	24
10·5	10·7	11·2	11·4	12·6	12·4	12·9	10·4	F	F	F	4·7	25
C	9·7	9·8	11·0	11·0	11·4	12·1	10·6	9·1	7·6	6·6	4·8	26
9·4	10·7	9·8 <sub>EX</sub>	7·7 <sub>EX</sub>	8·8	10·4	10·2	9·5	7·7	6·8	6·2	6·2	27
10·7	10·2	10·4	11·0	11·6	11·6	11·8	10·7	u9·8 <sub>s</sub>	F	7·5 <sub>F</sub>	F	28
7·6	7·8	8·4	8·8	9·1	9·5	11·0	10·3	9·2	7·5	u6·3 <sub>s</sub>	u5·5 <sub>R</sub>	29
8·0	9·0	9·2	9·5	9·8	11·1	11·1	10·6	8·4	u6·8 <sub>s</sub>	5·3	4·9	30
7·3	7·4	7·6	7·7	8·6	8·9	9·9	9·4 <sub>s</sub>	8·7	6·4	5·7	5·2	31
28	30	30	31	30	31	31	31	25	25	26	23	Count
8·6	8·9	9·2	9·7	10·2	10·6	11·0	10·3	8·7	7·4	6·6	6·1	Median
8·8	9·0	9·3	9·5	10·2	10·6	10·9	10·2	8·8	7·4	6·8	6·3	Mean

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : fo F2  
Unit : Mc  
Month : July 1961

TABLE 1 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2°N  
Longitude : 77·5°E

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1												
2	u4 1 <sub>F</sub>	F	E	u1·9 <sub>F</sub>	E	3·6	6·2	7·8	8·8	9·0	8·2	7·8
3	F	E	E	E	E	3·5	6·3	8·1	8·2	C	C	C
4	3·9	3·0	2·1	2·1	1·9	3·8	7·1	8·4	9·0	9·3	8·8 <sub>M</sub>	7·9
5	F	F	F	F	2·0	3·7	6·9	8·0	9·2	7·9	7·2	7·3
6	F	F	u2 8 <sub>F</sub>	2·3	E	4·1	6·2	7·1	8·4	8·9	9·6	9·6
7	3·2	2·7	2·6	2·3	1·7	3·7	6·6	8·3	8·6	8·6	8·7	9·5
8	F	F	F	F	E	u3 8 <sub>F</sub>	6·9	8·3	8·3	8·5	7·9	8·1
9	3·3	2·8	2·5	u2 1 <sub>F</sub>	2·0	u3 4 <sub>F</sub>	7·1	8·4	9·2	9·9	9·7	8·5
10	6·0	C	4·4	4·1	3·3	3·8	6·7	9·1	9·0	9·2	8·9	8·4
11	u8 0 <sub>F</sub>	u6 1 <sub>s</sub>	4·9	4·0	u2 8 <sub>F</sub>	u3 9 <sub>F</sub>	6·8	8·5	8·6	8·0	7·8	7·8
12	u5 6 <sub>F</sub>	3·6	A	A	A	3·7	7·8	9·9	10·0	10·2	9·2	8·4
13	4·6	4·3	3·3	2·7	2·4	3·8	6·6	8·2	8·3	7·9	7·7	8·0
14	F	4·9	F	3·0	2·9	4·1	7·5	9·2	9·8	10·2	10·6	9·8
15	A	1·8 <sub>F</sub>	F	E	E	4·1	7·2	8·6	9·4	9·8	10·4	9·9
16	F	F	C	4·5	F	F	u7 1 <sub>C</sub>	9·4	10·3	10·5	10·6	10·0
17	u7 2 <sub>s</sub>	5·8	5·1	3·4	C	4·1 <sub>M</sub>	7·4	8·1	9·5	9·5	10·1	8·9
18	F	F	F	F	F	u4 9 <sub>F</sub>	7·7	8·9	9·9	8·8	8·3	8·6
19	5·8	3·8	3·4 <sub>M</sub>	F	2·7 <sub>F</sub>	4·2	7·4	8·6	9·6	10·4	10·8	10·4
20	u7 4 <sub>F</sub>	u7 0 <sub>s</sub>	5·3	5·2	5·0	5·2	7·0	9·0	9·4	10·8	10·0	8·8
21	7·5	6·6	F	F	u5 6 <sub>F</sub>	4·8	7·5	9·0	9·2	8·9	8·2	8·9
22	u6·2 <sub>s</sub>	5·5	4·5	4·0	4·3	5·0	7·7	8·7	10·0	10·8 <sub>M</sub>	10·3 <sub>M</sub>	9·0
23	F	F	F	F	F	4·9	u7 1 <sub>s</sub>	8·7	9·8	9·2	8·8	9·2
24	4·7	3·6	3·1	2·7	2·2	3·5	7·1	8·4	10·0	C	C	C
25	4·2	u3·7 <sub>F</sub>	F	3·8 <sub>F</sub>	2·9 <sub>F</sub>	4·2	7·5	8·8	9·2	8·9	8·5	9·2
26	5·6	u5 2 <sub>s</sub>	4·9	3·7	2·8 <sub>M</sub>	4·2	7·5	9·0	9·4	9·9	9·9	10·6
27	3·0	2·7 <sub>M</sub>	F	A	A	3·5 <sub>v</sub>	7·1 <sub>s</sub>	8·8	9·4	9·2	8·8	9·4
28	3·0	2·7	2·1	1·7	1·4	4·0	7·0	8·5	8·3	8·4	8·8	9·5
29	F	F	u3 9 <sub>F</sub>	2·4	1·6	3·0	6·8	9·2	10·2	11·4	11·5	11·0
30	3·9	3·5 <sub>F</sub>	F	F	F	3·3	5·9	7·4	7·9	7·7	7·6	7·6
31	3·2	2·3	2·3	2·1 <sub>F</sub>	1·8	3·1	6·9	8·3	8·5	8·1	7·5	7·7
31	3·8	2·9	2·4	2·3	2·1	3·2	6·3	8·3	9·1	8·6 <sub>M</sub>	7·6	7·2
Count	21	22	19	22	24	30	31	31	31	29	29	29
Median	4·6	3·6	3·1	2·6	2·0	3·8	7·1	8·5	9·2	9·2	8·8	8·8
Mean	5·0	4·0	3·5	3·0	2·7	3·9	7·0	8·5	9·2	9·2	9·0	8·8

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic · fo F2  
Unit · Mc  
Month : July 1961

TABLE 1 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude : 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
8 1	8 4	9 1	9 4	10 7	9 7	9 5	8 7	6 5	4 0	2 7	3 0	1
7 4	7 4	8 0	7 4	A	9 6	10 1	8 9	7 1	5 7	5 2	5 1	2
7 5	7 8	8 6	9 3	10 5	10 7	9 5	8 6	7 5	6 2	4 9	4 5	3
7 6	7 8	8 1	8 5	9 5	9 5	9 1	8 5	7 7	F	F	F	4
9·6	10 1	11 4	11 2	11 6	11 7	10 5	8 6	6 9	5 5	4·7	4 0	5
9 4	10 1	10 7	11 0	10 8	11 6	12 0	8 9	7·7	∞6 4 <sub>F</sub>	F	F	6
8 6	8 7	9 0	9 5	10 9	11 3	11 3	8 2	∞7 0 <sub>F</sub>	∞6 0 <sub>F</sub>	∞6 0 <sub>F</sub>	4 8	7
8 0	8 0	8 6	8 9	9 0	10 3	10 4	∞9 8 <sub>F</sub>	F	F	F	∞6 3 <sub>F</sub>	8
8 4	8 7	9 2	8 8	8 2	8 6	9 4	9 5	8 5	7 5	∞8 2 <sub>F</sub>	∞9 7 <sub>F</sub>	9
8 0	8 8	8 8	9 1	9 4	10 4	11 4	10 4	7 7	∞6 3 <sub>F</sub>	∞5 3 <sub>F</sub>	5 8	10
8 2	8 2	8 5	8 9	9 6	10 2	10 0	10 4	9 2	7 4	7 2	5 4	11
8 4	8 8	9 5	B	10 9	11 6	12 3	10 8	8 8	7 5	6 8	F	12
9 6	9 2	9 6	10 9	10 9	10 2	10 2	8 9	8 0	6 5	6 2	4 0	13
9 6	9 8	8 4 <sub>F</sub>	7 9	9 5	10 3	9 1	8 1	C	F	F	F	14
9 9	9 9	10 0	10 0	9 8	10 7	11 3	11 2	∞9 2 <sub>F</sub>	9 0	9·6	8 9	15
9 0	9 5	9 8	9 8	9 8	9 9	9 8	∞9 1 <sub>F</sub>	7 7	6 7	F	F	16
8 6	9 4	10 1	10 8	11 0	12 1	12 4	10 7	9 4	8 4	8 1	7 4 <sub>F</sub>	17
10 4	11 2	11 6	11 4	11 4	11 2	11 0	F	F	9 3	8 4	7 6 <sub>F</sub>	18
8 2	8 5	8 5	8 8	8 8	∞9 2 <sub>F</sub>	9 3	8 4	8 8	9 3 <sub>F</sub>	9 5	8 4	19
8 6	9 5	10 2	11 4	12 3	11 6	11 4	10 2	9 5	8 7	8 8	8 5	20
8 6 <sub>F</sub>	8 7	9 0	10 9	11 4	10 7	11 7	∞9 9 <sub>F</sub>	F	F	F	F	21
9 7	9 6	9·7	10 1	11 8	11 0	11 3	∞9 5 <sub>F</sub>	∞8 6 <sub>F</sub>	8 3 <sub>F</sub>	8 7	∞7 3 <sub>F</sub>	22
C	C	C	9 7	10 8	10 8	11 3	∞10 6 <sub>F</sub>	F	F	F	7 1 <sub>F</sub>	23
10 0	9 7	10 0	10 3	11 0	11 6	11 5	∞10 2 <sub>F</sub>	9 2	8 9	8 0	6 8	24
10 8	11 1	11·1	11 8	12 8	12 4	∞11 8 <sub>F</sub>	9 5 <sub>F</sub>	F	6 6	∞5 3 <sub>F</sub>	4 2	25
9 6	10 0	10 3	10 9	11 0	11 7	12 1	9·5	7 9	6 9	5 7	3 9	26
10 1	10 4	8 8 <sub>HW</sub>	8 2	9 8	10 9	9 6	8 8	7 2	6 1	5 9	6 2	27
10 2	10 4	11 1	11 0	10 8	11 6	11 4	10 4	F	F	F	∞4 7 <sub>F</sub>	28
7 7	8 1	8 7	9 0	9 3	10 0	11 0	10 2	8 3	7 1	∞5 8 <sub>F</sub>	4 6	29
8 2	9 1	9 0	9 3	10 0	11 0	11 5	9 3	7 7	5 8	5 3	4·7	30
7 5	7 5	7·5	8 0	8 7	8 9	10 5	∞9 2 <sub>F</sub>	7·6	∞6 1 <sub>F</sub>	5 5	4 9	31
30	30	30	30	30	31	31	30	24	25	23	25	Count
8 6	9 2	9 2	9 6	10 8	10 7	11 0	9·5	7 8	6 7	6 0	5 4	Median
8 8	9 1	9 4	9 7	10 4	10 7	10 8	9 5	8 1	7 0	6 6	5 9	Mean

Sweep 1 0 Mc to 25·0 Mc. in 27 seconds

Characteristic : fo F1  
 Unit : Mc  
 Month : July 1961

TABLE 2  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude : 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	4 6	4 6
2								L	L	L	C	C
3								L	L	L	L	L
4								L	L	L	L	4 7
5								L	L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	A	L	L	L
9								L	L	L	L	L
10								L	L	C	C	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	US 2L
14							L	L	L	L	L	L
15								L	L	L	L	L
16								L	L	C	L	L
17								L	L	L	L	L
18								L	L	L	L	5 2
19								L	L	L	L	L
20								L	L	L	LH	LH
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	C	C
24							L	L	L	L	L	L
25								L	L	L	L	L
26								L	L	LH	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	LH	LH	L
30							L	L	L	L	L	L
31								L	L	L	L	L
Count											1	4
Median												
Mean												

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fo F1  
 Unit Mc  
 Month : July 1961

TABLE 2  
 Ionospheric Data  
 75°E Mean Time

Latitude · 10 2°N  
 Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date/Hour
L	L	L	L	L	L							1
Q	4 7	4 6 <sup>H</sup>	L	L	L							2
L	4 6	L	L	L	L							3
4 7	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
US 2L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
A	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L <sup>H</sup>	L	L	L	L							21
5 1	L	L	L	L	L							22
C	L	L	L	L	L							23
L	4 9	L	L	L	L							24
A	L	L	L	L	L							25
O	L	A	L	L	L							26
4 8	L	L	L	L	L							27
L	L	L	L	L	L							28
4 9	L	L	L	L	L							29
4 8	L <sup>H</sup>	L <sup>H</sup>	L	L	L							30
4 9	4 7	L	L	L	L							31
7	4	1										Count
4 9												Median
4 9												Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic fo F1  
Unit Mc  
Month July 1961

TABLE 2 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	4 6	L
2								L	L	C	C	L
3							L	L	L	L	L	L
4							L	L	L	L	L	L
5							L	L	L	L	L	L
6								L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	A	A	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11							L	L	L	L	4 9	L
12							L	L	L	L	L	5 0
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15								L	L	L	u4 8L	L
16								L	L	L	L	L
17							A	L	L	L	L	L
18							L	L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	LH	LH
21								LH	L	LH	L	L'
22								L	L	L	L	LH
23							L	L	L	C	C	C
24							L	L	L	LH	L	L
25								L	L	L	L	L
26								L	LH	4 8	4 9	u4 9L
27								L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	LH	LH	LH	4 9
30							L	L	L	L	LH	L
31							L	L	L	L	LH	LH
Count										1	4	3
Median												
Mean												

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic fF1  
Unit Mc  
Month July 1961

TABLE 2 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
4.8	L	L	L	L	L								1
4.7	L	L	L	L	L								2
L	L	L	L	L	L								3
L	L	L	L	L	L								4
L	L	L	L	L	L								5
L	L	L	L	L	L	L							6
L	L	L	L	L	L	L							7
L	L	L	L	L	L	L							8
L	L	L	L	L	L	L							9
L	L	L	L	L	L	L							10
L	L	L	L	L	L	L							11
A	L	L	L	L	L	L							12
L	L	L	L	L	L	L							13
L	L	L	L	L	L	L							14
L	L	L	L	L	L	L							15
L	L	L	L	L	L	L							16
L	L	L	L	L	L	L							17
L	L	L	L	L	L	L							18
L	L	L	L	L	L	L							19
B	L <sub>EX</sub>	A	A	A	A	L							20
L	L	L	L	L	L	L							21
5.1	L	L	L	L	L	L							22
C	C	C	C	C	C	C							23
A	A	A	A	A	A	A							24
A	L	L	L	L	L	L							25
A	L	A	L	L	L	L							26
A	L	L <sub>EX</sub>	L	L	L	L							27
L	L	L	L	L	L	L							28
L	L	L	L	L	L	L							29
L	L <sub>EX</sub>	L	L	L	L	L							30
L	L	L	L	L	L	L							31
3	..												Count
													Median
													Mean

Sweep 1.0 Mc. to 25.0 Mc. in 25 seconds.

Characteristic : fo E  
Unit . Mc  
Month July 1961

TABLE 3  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1							1 8	2 7	3 1	A	A	A
2							2 0	A	A	L	C	C
3							1 9	2 7	A	A	A	A
4							R	2 6	A	A	A	A
5							2 1	2 6	3 1	R	3 6	A
6							A	A	A	A	A	A
7							1 9	A	A	A	A	A
8							A	A	A	A	A	A
9								2 7	A	A	A	A
10								A	A	C	C	A
11							A	A	A	A	A	A
12							A	A	A	A	A	A
13							R	2 2	3 2	A	A	A
14								A	A	A	A	A
15								A	A	A	A	A
16							R	2 7 <sup>H</sup>	3 1	C	A	A
19							1 9 <sup>H</sup>	A	A	A	A	A
18							R	2 6	A	A	A	A
19							R	2 7	A	A	A	A
20							R	A	A	A	A	A
21							R	A	3 1 <sup>H</sup>	A	A	A
22							R	A	A	A	A	A
23							1 9 <sup>H</sup>	A	A	A	C	C
24							1 8	A	A	A	A	A
25							1 8 <sup>H</sup>	A	A	A	A	A
26									A	A	A	A
27							1 7	A	A	A	A	A
28							1 8	2 3	B	A	A	A
29							1 9 <sup>H</sup>	A	A	A	A	A
30								A	A	A	A	A
31							1 9 <sup>H</sup>	A	A	A	A	A
Count							13	10	5		1	
Median							1 9	2 6	3 1			
Mean							1 9	2 6	3 1			

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic fo E  
Unit Mc  
Month · July 1961

TABLE 3  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N  
Longitude · 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	3 9	3 4	3·1	2 5							1
C	A	A	A	A	A							2
A	A	A	3 4	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	3 3 <sub>H</sub>	A	2 5							7
A	A	A	A	A	A	1 7						8
A	3 6	A	A	A	A							9
A	A	3 9	3 9	A	2 6 <sub>H</sub>							10
A	A	A	A	A	A							11
A	A	A	3 5	B	B							12
A	A	3 8	3 6	A	2 5							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	A	A	2 6							16
A	B	A	A	3 2	2 7	1 8						17
A	A	A	A	B	A	2 0						18
A	A	A	A	A	A							19
A	B	A	A	A	A							20
A	A	A	A	A	R							21
B	A	A	3 6 <sub>H</sub>	3 1 <sub>H</sub>	A		A					22
C	A	C	A	A	A							23
A	A	A	A	A	A							24
A	3 7	A	3 3	R	2 4							25
C	A	A	A	A	A	A						26
A	A	A	A	A	A							27
A	A	A	3 3	A	A							28
A	A	A	A	A	A							29
A	A	A	3 4	A	A							30
A	A	A	A	3 0	2 5 <sub>H</sub>							31
	2	3	10	4	9	3						Count
			3 4		2 5							Median
			3 5		2 5							Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic : fo E  
Unit Mc  
Month · July 1961

TABLE 3 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2 3	3 0	3 3	A	A	A
2							A <sup>1</sup>	A	A	C	C	C
3							2 4	A	A	A	A	A
4							2 4 <sup>1</sup>	A	A	A	A	A
5							2 4	A	3 2	A	3 7	A
6							A	A	A	A	A	A
7							A	A	A	A	A	A
8							A	A	A	A	A	A
9							A	2 9	A	A	A	A
10							A	A	A	A	A	A <sup>1</sup>
11							A	A	A <sup>1</sup>	A	A	A
12							A	A	A	A	A	A
13							2 3	3 0	A	A	A	A
14							2 0	2 8	A	A	A	A
15							A	A	A	A	A	A
16							2 3 <sup>H</sup>	2 9 <sup>H</sup>	A	A	A	A
17							A	A	A	A	A	A
18							2 3	2 8	A	A	A	A
19							2 1	2 9	A	A	A	A
20							C	2 9 <sup>A</sup>	B	A	A	A
21							2 4 <sup>H</sup>	A	3 4 <sup>H</sup>	A	A	A
22							2 3	A	A	C	C	C
23							2 4 <sup>H</sup>	A	A	A	A	A
24							A	A	A	A	A	A
25							A	A	A	A	A	A
26								A	A	A	A	A
27							2 3	A	A	A	A	A
28							2 4	A	A	A	A	A
29							A	A	A	A	A	A
30							2 3 <sup>H</sup>	A	A	A	A	A
31							A	A	A	A	A	A
Count							15	8	3		1	
Median							2 3	2 9				
Mean							2 3	2 9				

Sweep 1 0 Mc to 25 0 Mc in 27 records

Characteristic fo E  
Unit . Mc  
Month July 1961

TABLE 3 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude . 10 2°N  
Longitude . 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
A	A	3 6	3 3	2 7	2 2							1
A	A	A	A	A	A							2
A	A	A	3 2	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	2 0							6
A	A	A	3 1 <sub>H</sub>	2 9	A							7
A	A	A	A	A	2 2							8
A	A	A	A	A	A							9
B	A	3 9	A	2 8	2 2							10
A	A	A	A	A	A							11
A	A	3 7	B	B	A							12
A	A	3 7	3 4	2 8	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	u3 6A	u3 1A								16
A	B	A	A	3 0	2 2							17
A	A	A	A	A	A							18
A	A	A	A	A	A							19
B	A	A	A	A	A							20
A	A	A	3 2	2 8	2 3							21
B	A	3 8 <sub>H</sub>	3 3	^	A		A					22
C	C	C	A	A	2 3 <sub>H</sub>							23
A	A	A	A	A	A							24
A	A	3 4	A	2 8 <sub>x</sub>	A							25
A	A	A	A	A	A							26
A	A	A	A	2 7	2 3							27
A	A	3 3	3 2	A	A							28
A	A	A	A	A	A							29
A	A	3 4	A	A	A							30
A	A	A	A	2 8 <sub>x</sub>	2 2 <sub>H</sub>							31
		8	8	10	9							Count
		3 6	3 2	2 8	2 2							Median
		3.6	3 3	2 8	2 2							Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic fo Es  
Unit Mc  
Month July 1961

TABLE 4  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°  
Longitude 77 5°

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1							G	G	G	8.6	12.0	12.0
2							5.0	∇8.0s	11.6	10.0		
3				2.4			G	G	8.4	8.4	11.6	12.0
4	3.5	3.0			4.9		G	G	8.2	9.8	10.6	10.0
5							G	G	G	G	G	11.8
6	2.4	5.7	8.0	2.3		4.6	6.8	11.0	11.2	9.2	17.6	11.4
7	8.0	4.0					5.8	8.1	8.6	9.8	10.8	11.4
8		2.2	2.6	5.6	5.0		6.4	7.8	16.0	14.6	13.0	12.6
9			4.8	4.0				3.6	9.8	9.8	11.0	12.6
10	∇7.0s	3.8	5.4	2.1			4.8	8.4	9.4	C	C	12.5
11	4.2	4.0	9.4	6.3	4.6	5.8	6.8	8.0	8.4	10.2	11.0	11.2
12			6.7				5.2	8.4	9.4	10.6	11.8	12.6
13							G	2.7	8.0	9.8	11.2	12.0
14	3.8	6.6				1.8		7.2	10.4	∇8.7s	11.6	11.8
15		C	C	7.0	6.6		4.4	7.6	C	9.8	11.0	11.8
16	3.8	3.8	∇7.0s					G	G	C	12.0	12.0
17					4.2	3.2	G	12.6	9.4	10.6	12.6	11.6
18				2.8	8.6		G	G	13.2	11.7	12.0	11.8
19	4.8	∇6.0s		∇6.9s				G	9.0	10.0	12.0	12.2
20			3.3					7.0	9.0	10.8	12.0	12.4
21	3.8	3.6	3.9	4.4			G	6.8	G	9.6	12.4	11.9
22	3.5			4.8			G	∇7.8s	7.6	10.8	12.2	11.2
23		5.7	6.9				G	∇7.8s	8.7	10.1		
24		7.4	6.7				G	7.8	9.6	10.3	12.6	13.2
25							G	8.0	8.2	9.0	11.0	11.8
26	6.0		5.4	5.0	9.6	1.5	8.8	8.4	10.8	10.8	12.4	12.0
27	4.6						G	7.0	10.6	10.8	11.6	10.8
28			2.2	3.4		3.0	G	5.6	G	7.4	12.2	11.5
29	∇7.1s	6.8	8.7	3.3	2.7		G	8.6	9.9	10.6	11.9	12.2
30	2.9							7.8	9.6	10.4	12.2	12.3
31					∇4.7s		G	∇7.6s	9.6	8.8	11.6	12.4
Count	14	13	14	14	9	6	25	31	30	29	28	29
Median	4.0	4.0	6.0	4.2	4.9	3.1	G	7.6	9.2	10.0	12.0	12.0
Mean	4.7	4.8	5.8	4.3	5.7	3.3	6.0	7.6	9.8	9.7	12.0	11.9

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic fo Es  
Unit Mc  
Month . July 1961

TABLE 4  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date	
12 1	12 0	8 6	G	G	G							1	
	11 4	11 2	12 4	18 0	12 6	6 2		4 6		3 2		2	
12 0	12 4	11 0	5 8	9 0	10 6s	12 6	6 6	8 6	4 6	6 0	5 0	3	
11 0	10 6	12 0	12 2	10 8	14 0	7 0		4 4	4 0	3 6		4	
9 2	10 0	10 0	8 0	7 0	6 2	4 8	4 4		2 5	3 0		5	
12 8	11 4	20 6	13 4	14 8	11 6	5 6	7 4	6 8	3 6		2 3	6	
12 0	15 2	11 6	8 8	7 8	5 0			2 5	3 6			7	
12 6	12 8	12 4	9 6	6 6	6 8	3 2	2 4	3 8	C	6 6		8	
12 0	7 2	10 8	10 8	10 8	7 0	7 0	6 4	5 0	5 8		5 8	9	
12 6	12 0	11 6	9 4	8 6	3 3	4 6	6 6	2 5	2 0		5 8	10	
12 2	12 6	11 6	11 0	14 4	12 4		2 4	7 3		3 8	2 2	11	
12 0	17 4	12 4	7 6	B	G	2 1	3 6	4 0	8 4	5 4	3 7	12	
12 2	11 6	10 8	G	5 7	7 2		3 6					13	
11 3	10 8	11 6	11 6	10 4	10 8	10 2	4 6	C	4 2	3 2	4 0	14	
12 8	12 0	14 2	13 4	10 0a	17 0a	4 0	2 7	2 4	3 8	4 0	4 2	15	
12 6	12 6	12 2	11 2	9 8	6 6	6 4	10 0s	2 8	3 8		2 6	16	
11 4	11 2	11 8	10 4	G	G	G	2 2	2 2				17	
22 5	12 4	12 8	B	11 8	9 2	G	3 2	2 9	5 8	6 6	5 7	18	
12 8	12 4	12 4	12 0	9 4	7 0	2 0	3 2			3 8		19	
12 0	11 0	11 6	11 0	12 0	10 0	8 2	8 6	7 0	8 0	5 6	3 8	20	
12 1	12 6	10 6	10 5	6 4	G				10 6s	4 8	5 2	21	
12 5	12 5	9 2	G	G	7 8	1 9	10 8s	4 8		4 8	3 6	22	
			15 6	18 6	17 6s	4 6	2 7		3 2	4 3	3 9	23	
14 6	13 0	18 6	22 5	21 6	16 8	8 8	8 0	S	3 7	10 2s		24	
18 4	8 0	12 2	8 6	4 0	3 4	2 8	6 0	6 0	1 9	4 6	4 1	25	
	G	21 5	20 2	11 8	9 6	13 2	12 4	6 6	6 8	7 0	7 6	8 6	26
12 7	23 5	13 2	11 2	11 6	8 2	G				4 2	3 4		27
10 8	10 8	8 8	6 8	8 2	7 8		5 8						28
12 4	12 3	11 6s	11 2	11 0	7 6						10 4 3s		29
12 9	12 8	11 3	G	8 8	11 4		10 2 7s	8 2	10 6 2s				30
12 4	12 0	12 2	10 6	7 0	G	1 8	10 0s	4 2	4 6	4 8s	10 5 0s		31
28	30	30	30	30	31	23	24	20	21	20	18	Count	
12 4	12 2	11 6	10 7	9 5	7 6	4 6	4 7	4 5	4 2	4 4	4 2	Median	
12 7	12 6	12 3	11 1	10 5	8 9	5 8	4 9	4 8	4 6	4 7	4 4	Mean	

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds



Characteristic . fo Es  
Unit : Mc  
Month July 1961

TABLE 4 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	G	G	11.0	12.0	12.0
2							∇7.0s	12.6	10.6	C	C	C
3			2.6				G	7.2	8.0	10.8	12.0	12.2
4	4.4	3.6					G	8.0	8.2	10.8	11.8	11.8
5							G	3.8	G	7.6	G	9.4
6						6.4	8.8	16.6	18.6	12.6	12.0	8.8
7	7.0	5.2	4.4				6.4	8.8	9.4	10.8	12.0	11.4
8	4.0	2.9					7.6	8.7	17.4	19.8	12.6	12.0
9	4.6	3.8	2.0	4.4	6.8		4.4	G	10.8	11.6	12.0	11.8
10		4.6		5.0	1.8		7.8	8.6	10.8	12.0	12.0	12.8
11	6.4	7.0	8.8	5.8	5.6	4.8	7.0	9.5	9.4	11.4	12.0	12.2
12							6.8	8.8	10.6	12.2	12.4	12.6
13							G	3.8	8.2	11.4	12.0	12.0
14	7.2	3.8		5.7		4.0	5.8	6.8	8.8	11.0	12.0	11.8
15	3.8	3.4	C	6.6	3.0		∇6.4s	8.4	8.4	11.4	12.0	13.0
16	3.0	∇7.0s					G	G	8.4	12.0	11.4	12.8
17				5.2	4.0		16.0	9.0	10.4	11.8	12.0	12.6
18				6.3	7.2		G	G	13.4	12.4	12.0	11.4
19	∇6.0s	3.0	∇5.0s	∇6.0s			G	G	9.2	11.0	12.6	12.8
20			3.6				G	8.2	10.0	11.0	12.0	12.8
21	3.6		3.9	1.6			4.6	4.0	G	11.8	12.0	12.6
22	4.0		4.4				G	8.6	10.0	11.3	11.6	12.6
23		6.7					G	8.7	9.6	C	C	C
24		4.8	4.8				∇7.6s	8.6	10.6	11.6	12.2	12.6
25							∇7.0s	6.6	9.8	11.0	12.8	13.0
26	6.0	5.0	8.6	12.0	7.0		10.0	9.4	10.4	12.4	12.0	12.2
27							G	8.8	10.2	11.7	10.7	11.6
28			3.2			1.8	6.6	7.2	7.8	8.6	9.2	10.9
29	7.9	8.6	4.4	3.5			∇7.8s	9.7	9.7	12.1	11.8	12.8
30							G	8.9	10.0	13.0	12.4	12.8
31				∇4.1s	2.3		3.9	8.8	9.6	11.2	12.1	12.4
Count	13	14	13	12	8	4	31	31	31	29	29	29
Median	4.6	4.7	4.4	5.4	4.8		4.6	8.6	9.7	11.4	12.0	12.2
Mean	5.2	4.9	4.4	5.5	4.7		7.3	8.4	10.3	11.6	11.9	12.0

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic fo Es  
Unit Mc  
Month July 1961

TABLE 4 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N  
Longitude : 77·5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
12·2	12·0	G	G	G	G							1
11·0	11·8	11·0	17·0	19·0	8·0		4·8			2·2		2
12·0	11·0	8·2	G	13·0	13·6	11·0	8·0	8·0	u5·0s	7·0	5·0	3
11·0	11·4	12·6	11·0	10·0	11·0	3·6	4·0	4·3	4·2	2·2		4
8·0	9·4	7·4	7·4	8·4	5·0	3·0		3·2		2·0		5
12·6	20·4	12·6	9·8	18·2	8·4	7·4	5·6	4·8		1·9	3·8	6
11·8	16·0	16·8	5·4	6·6	4·6	3·5		4·8		4·2		7
12·2	12·3	10·4	8·8	8·8	3·0	3·3		2·7	4·0	4·8		8
9·8	10·4	11·4	8·8	8·6	6·0	7·4	6·0	5·8	4·8		8·0	9
12·5	11·6	9·8	9·7	6·4	3·0	7·6	3·4	1·9			3·4	10
18·0	11·0	11·2	12·8	12·4	8·4		4·4	7·2	2·6	2·8		11
15·4	19·4	8·5	B	B	7·0	2·0	3·8	4·6	9·2	3·8	2·3	12
12·3	11·0	4·3	4·8	G	6·0	4·6						13
12·0	11·8	11·8	6·7	13·6	10·0	7·0s	6·0	C		4·2	3·0	14
11·8	12·0	18·0	11·0	8·6	u7·0s	3·8	2·0	4·2	u6·0s	7·0	3·8	15
12·8	12·4	11·8	10·8	7·0	8·2	u5·8s	3·4	4·5		1·7		16
12·7	11·6	10·4	13·0	G	G		3·0	2·3		2·0		17
15·4	10·7	10·8	B	10·8	7·8	4·2	3·0	7·4	6·5	7·0	7·6	18
12·0	12·6	11·2	10·4	8·6	6·8				4·0	3·0	2·1	19
11·0	9·2	12·0	11·0	11·0	10·0	9·2	8·8	7·0	u7·0s	3·2	3·4	20
12·6	11·4	10·8	G	G	G	1·8		u4·8s	4·4	4·9	4·0	21
12·5	11·6	G	G	10·8	7·2	4·6	4·4				4·4	22
C	C	C	21·3	12·2	G				4·4	3·3	2·9	23
19·8	19·8	19·8	20·0	18·8	19·8	11·8	6·6	u6·6s	4·6			24
17·0	9·0	8·6	8·0	3·4	3·3	9·0	7·0s	3·8		4·5	2·8	25
15·6	13·2	19·0									8·0	26
23·5	11·4	11·2	8·2	G	G				4·2	3·8		27
11·4	11·7	9·2	4·2	8·2	6·8	5·8	3·6					28
12·1	12·0	10·8	11·3	10·2	6·8						2·8	29
12·9	12·6	6·6	7·8	10·3	10·4		10·8	10·1	S			30
11·4	11·6	10·6	9·0s	2·5	G		u4·0s		u6·8s	u5·0s		31
30	30	30	28	29	30	20	20	19	15	21	16	Count
12·2	11·6	10·8	8·9	8·6	6·8	5·2	4·4	4·8	4·6	3·8	3·6	Median
13·1	12·4	10·6	10·3	10·3	7·8	5·8	5·1	5·2	5·2	3·8	4·2	Mean

Sweep 1·0 Mc. to 25·0 Mc in 27 seconds

Characteristic . fb Es  
Unit . Mc  
Month July 1961

TABLE 5  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude . 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1							G	G	G	3.3	3.5	3.8
2							1.9	2.6	3.9	3.3		
3							G	G	3.2	3.5	3.6	3.8
4	2.3	2.3					G	G	3.4	3.6	3.6	3.7
5							G	G	G	G	G	3.8
6	2.2	2.1	1.9	1.5			2.6	2.3	4.5	3.5	4.0	3.7
7	1.9	1.7					2.0	2.7	3.0	3.5	3.6	3.6
8		1.5	1.5	1.4	1.4		1.9	2.7	3.8	3.8	4.8	3.8
9			2.0	1.8				2.8	3.2	3.6	3.6	3.8
10	2.3	2.1	2.3	1.9			2.3	2.7	3.2	C	C	3.9
11	2.2	1.9	1.9	1.5	1.4	A	1.9	2.6	3.3	3.6	3.6	3.8
12			1.9				1.9	2.7	3.2	3.6	3.8	4.0
13							G	2.7	3.2	3.6	3.7	3.8
14	1.4	1.2						2.7	4.0	3.5 <sup>a</sup>	3.6	3.9
15		C	G	2.0	1.5		1.9	2.6	C	3.6	3.8	3.8
16	1.7		1.8					G	G	C	3.8	3.9
17							G	4.4	3.4	3.6	3.7	3.8
18				1.3	A		G	G	4.4	4.1	3.6	4.0
19	2.4							G	3.2	3.4	3.7	3.9
20			1.7					2.8	3.2	3.8	3.8	4.0
21	2.5	1.8	1.7	1.4				2.7		3.6	3.9	4.0
22	2.3			2.0				2.8	3.1	3.5	3.6	3.8
23			2.4				G	2.8	3.3	3.6		
24		1.8	2.0				G	2.6	3.2	3.6	3.9	3.9
25								2.8	3.2	3.6	3.8	4.3
26	2.2		1.4	1.9			2.4	3.6	3.2	3.5	3.7	3.8
27	1.9							2.6	3.2	3.5	3.6	3.8
28			1.5	1.4			G	2.6	G	3.6	3.8	3.8
29		1.4	2.5				G	2.6	3.1	3.4	3.5	3.6
30								2.7	3.1	3.4	3.6	3.8
31					1.6			2.6	3.1	3.7	3.5	3.6
Count	12	10	14	11	4		20	31	29	29	28	29
Median	2.2	1.8	1.9	1.5			G	2.6	3.2	3.6	3.6	3.8
Mean	2.1	1.8	1.9	1.6			2.1	2.7	3.4	3.6	3.7	3.8

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic f b Es  
Unit Mc  
Month July 1961

TABLE 5  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date/Hour
3 8	3 8	3 6	G	G	G							1
		3 5	4 3	A	3 8	2 7		2 3		1 6		2
		3 6	3 4	4 4	3 8	5 0	2 5	3 2	2 6	4 0	2 8	3
		4 3	3 4	3 8	5 0	2 3		3 1	2 8	2 4		4
		3 6	3 4	3 0	3 5	2 9	3 2		1 7	2 0		5
		7	4 3	5 0	2 8	2 3	2 8	2 2	1 8		1 4	6
		3 8	3 5	3 0	2 7							7
		3 7	3 4	3 0	2 8	1 8		1 2	C	1 9		8
		3 8	3 4	2 8	2 5	5 6	1 8	2 5	2 8		2 1	9
		3 8	3 8	3 4	2 7	2 0	2 8	2 5	2 0		1 8	10
		3 7	3 4	3 6	5 8		1 7	3 0		1 5	1 3	11
		4 8	4 9	B	G			1 8	3 4	2 4	1 4	12
		3 9	G	4 3	2 6		1 6					13
		3 7	3 5	3 5	4 8	5 0	2 0	C			1 8	14
		4 0	3 5	2 3	2 7	2 7	1 8	1 6	1 8	2 0	2 4	15
		3 8	3 6	3 2	2 7	2 6	2 2	1 5	1 9		2 2	16
		4 2	4 0	G	G	G						17
		4 0	B		3 2	G	1 7	1 7	2 2	2 4	2 3	18
		3 8	5 0	3 1	2 6	2 0				2 0		19
		3 8	4 6	3 6	3 0	4 0	2 8	3 2	2 5	2 6	2 8	20
		3 7	3 4	3 1					2 4	2 4	2 8	21
		3 8			2 8		2 5	2 4		2 6		22
			4 8	3 3	2 7	1 9	1 9		1 4	1 4	1 8	23
		6 0	6 1	6 2	5 9	2 3	2 0	2 2	2 0	2 1		24
		4 0	3 5	3 4	2 7	2 0	2 2	1 5		1 6	1 5	25
		7 4	4 1	3 2	5 6	4 2	3 0	3 1	2 6	2 4	2 4	26
		3 8	3 4	3 2	G				2 2	2 1		27
		4 0	4 8	3 2	2 7		1 7					28
		3 6	3 5	3 9	2 7						1 4	29
		3 5		3 1	3 2		2 9	3 4	2 3			30
		3 5	3 4	3 0					1 7	2 2	2 0	31
		30	28	28	29	19	19	18	18	19	17	Count
		3 8	3 8	3 2	2 7	2 3	2 2	2 4	2 2	2 1	2 0	Median
		4 1	3 9	3 5	3 3	3 0	2 3	2 3	2 2	2 2	2 0	Mean

Sweep 1 0 Mc, to 25 0 Mc, in 27 seconds.

Characteristic fb Es  
Unit Mc  
Month July 1961

TABLE 5 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	G	G	3.4	3.7	3.8
2							2.4	3.7	4.0	C	C	C
3							G	3.0	3.2	3.5	3.7	3.8
4	2.0	2.2					G	3.3	3.4	3.5	4.1	3.7
5							G	2.9	G	3.7	G	4.1
6	2.1	1.9	1.6			1.7	2.6	3.0	4.6	4.5	3.8	3.8
7	1.7						2.3	2.9	3.2	3.5	3.7	3.7
8		1.8		1.4	1.5		2.4	3.0	3.0	3.2	4.3	3.8
9	2.1			1.8			2.4	G	3.5	3.5	3.8	3.8
10		2.4			1.7		2.4	3.1	3.4	3.7	3.8	3.9
11	2.4	2.0	A	A	A	1.7	2.3	3.4	3.6	3.6	3.7	4.0
12							2.4	3.0	3.4	3.8	3.9	4.0
13							G	3.0	3.4	3.6	3.8	3.8
14	A	1.3					2.4	3.0	3.3	3.5	3.7	3.8
15	2.2	2.0	C	1.9			2.5	3.0	3.4	3.7	3.8	4.0
16	1.6	1.7						G	3.4	3.7	3.9	4.0
17				1.7	1.7		6.0	3.2	3.4	3.6	3.8	3.8
18			1.3	2.4	2.1		G	G	3.6	3.8	4.0	4.0
19	2.4	1.9	1.8	1.9			G	G	3.3	3.8	3.8	4.0
20			1.8					3.0	3.8	2.6	3.8	4.0
21	1.9		1.4					3.0		3.7	3.9	3.9
22			1.9					2.9	3.3	3.5	3.7	4.0
23							G	3.1	3.5	C	C	C
24		2.1	1.8				2.3	2.9	3.2	3.6	4.0	3.9
25							2.4	3.0	3.4	3.6	4.4	4.4
26	1.8		1.9				3.0	3.0	3.4	3.6	3.8	3.8
27							3.0	3.2	3.6	3.6	3.8	3.9
28			1.7				2.4	3.0	3.4	3.6	3.8	3.8
29	2.1	2.2		1.5			2.3	2.9	3.3	3.5	3.6	3.7
30							2.3	2.9	3.2	3.5	3.6	3.8
31				1.3	1.3		2.5	2.9	3.2	3.7	3.8	3.8
Count	12	11	10	9	6	2	25	30	31	29	29	29
Median	2.1	2.0	1.8	1.8	1.7		2.4	3.0	3.4	3.6	3.8	3.8
Mean	2.0	1.9	1.7	1.7	1.7		2.6	3.1	3.6	3.7	3.8	3.9

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic : f b Es  
 Unit : Mc  
 Month : July 1961

TABLE 5 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10·2°N  
 Longitude : 77·5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
3·8	3·7	G	G	G	G							1
3·7	3·7	3·5	5·4	A	3·1		3·4			1·6		2
3·7	3·8	3·4	G	3·5	3·0	4·7	2·3	2·9	2·6	3·6	3·0	3
3·7	3·6	4·5	3·9	4·2	3·5	2·2	3·1	2·4	1·7	2·4		4
4·4	3·9	3·6	3·2	3·5	2·5	2·0		2·1		1·7		5
3·8	7·9	4·0	3·3	3·3	2·3	2·8	2·5	2·0			1·5	6
3·7	3·6	6·4	3·3	3·0	2·4					1·4		7
3·8	3·6	3·5	3·2	3·2	2·2			1·6	1·8	1·7		8
3·8	3·9	4·0	3·2	2·8	4·8	6·0	2·8	2·6	2·6		2·4	9
	3·8	3·7	3·3	3·1	2·4	2·2	2·5				2·1	10
4·1	3·9	3·6	3·8	3·6	3·0			2·3	1·3	1·6		11
3·2	3·0	4·6	B	B	3·0		1·7	1·5	3·4	1·7	1·9	12
3·8	4·2	3·8	3·6	G	2·3							13
3·9	3·8	3·6	3·2	6·6	3·5	3·0	1·8	C		1·9	1·8	14
4·0	3·8	3·6	2·4	2·9	2·5	1·9		2·0	2·2	2·2	1·9	15
3·9	3·9	3·7	3·4	3·1	2·4	3·0	1·6	1·8		1·6		16
4·2	3·9	3·9	6·1	G	G		1·4	1·2		1·5		17
4·3	4·1	4·0	B	3·4	2·7		1·5	2·8	2·4	2·6	2·2	18
4·0	3·8	3·7	3·3	2·9	2·4			2·0	2·0	2·2	2·2	19
	3·9	5·4	4·5	3·5	3·2	3·4	3·2	3·0	2·4	3·0	2·6	20
3·9	3·8	3·7						2·7	2·1	2·5	2·5	21
4·1	3·8			3·0	2·4	2·3	2·5					22
C	C	C	6·7	2·9	G				1·7	1·7	1·5	23
5·6	5·0	5·4	7·2	6·1	2·8	2·8	2·4	2·0	1·9			24
4·6	4·6	3·9	3·6	3·2	2·4		2·0	1·3		1·5		25
7·2	4·8	5·6	3·5	5·0	6·4	4·0	3·4	2·8	2·4	2·6	2·2	26
7·5	3·8	2·2	3·2	G	G				2·1	2·2		27
4·5	4·0	7·4	3·7	3·0	2·3	2·1	1·9					28
3·7	3·8	3·5	3·9	3·8	2·3						1·3	29
3·7	3·6	3·9	3·2	3·6	3·0		5·0	2·5	2·1			30
3·8	3·4	3·4	3·2						2·0	2·2		31
28	29	29	27	28	29	15	18	18	17	21	14	Count
3·9	3·8	3·7	3·3	3·2	2·4	2·8	2·4	2·2	2·1	1·9	2·2	Median
4·3	4·0	4·1	3·9	3·6	2·9	2·9	2·5	2·2	2·1	2·1	2·0	Mean

Sweep 1 0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : fmin  
 Unit : Mc  
 Month : July 1961

TABLE 6  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude . 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	1.8	1.5	1.5	E	E	E	1.3	1.3	1.9	2.1	2.1	2.3
2	1.7	1.7	E	E	E	1.9	1.2	1.3	1.5	1.8	C	C
3	2.1	1.5	1.2	1.1	1.1	1.8	1.3	1.6	2.0	2.1	2.1	2.3
4	1.3	E	1.6	1.6	E	1.6	1.7	1.5	1.8	2.1	2.1	2.3
5	2.3	2.0	2.0	2.1	E	1.3	1.3	1.7	1.8	2.6	2.7	2.5
6	1.3	1.2	1.2	1.3	1.6	1.4	1.2	1.3	1.7	2.2	2.1	2.3
7	1.1	1.1	1.5	1.2	E	1.5	1.2	1.4	1.6	2.1	2.1	2.2
8	1.4	1.3	1.0	1.1	E	1.4	1.4	1.7	1.8	2.2	2.2	2.1
9	1.9	1.9	1.5	1.7	1.4	1.7	2.0	1.7	1.8	2.3	2.1	2.2
10	1.7	1.6	2.3	E	1.6	1.7	1.7	1.7	2.4	C	C	2.5
11	E	1.8	1.6	1.3	1.1	1.3	1.1	1.5	2.0	2.1	2.2	2.3
12	1.2	1.3	1.3	1.5	1.4	1.1	1.2	1.5	1.9	2.4	2.6	2.8
13	1.3	1.5	1.2	1.2	1.2	1.3	1.4	1.7	1.8	2.6	2.4	2.8
14	E	E	1.1	1.2	E	E	1.9	1.6	2.2	2.2 <sup>a</sup>	2.1	2.4
15	1.8	C	C	E	1.1	1.6	1.3	1.6	C	2.0	2.1	2.4
16	1.4	1.5	1.3	1.6	1.3	C	1.5	1.7	2.0	C	2.4	2.4
17	1.9	1.6	1.4	1.4	1.4	1.5	1.3	1.3	2.0	2.4	2.3	2.5
18	1.3	2.0	1.4	1.1	1.1	1.3	1.2	1.5	2.0	2.3	2.1	2.7
19	2.2	2.1	1.6	1.6	1.7	1.5	1.7	1.8	2.2	2.0	2.4	2.4
20	1.7	1.8	1.3	1.3	1.7	1.6	1.4	1.6	1.9	2.2	2.2	2.6
21	1.1	1.6	1.4	1.1	1.6	1.2	1.4	1.6	2.3	2.4	2.6	3.0
22	1.4	1.4	1.9	1.4	1.7	1.6	1.1	1.4	1.8	2.3	2.2	2.5
23	1.9	1.8	1.7	1.7	1.8	1.6	1.5	1.5	1.9	2.4	C	C
24	1.9	1.4	1.3	1.8	1.6	1.3	1.4	1.7	1.8	2.3	2.9	2.5
25	1.4	1.3	1.3	1.4	1.2	1.3	1.3	1.3	1.8	2.0	2.2	2.4
26	1.4	1.7	1.4	1.7	1.1	1.3	1.6	1.5	1.8	2.1	2.2	2.2
27	1.3	1.4	1.7	E	E	E	1.3	1.6	1.7	2.0	2.2	2.4
28	1.4	1.3	1.1	1.3	1.3	1.4	1.2	1.5	4.0	2.7	2.6	2.7
29	1.4	1.4	1.3	1.3	1.5	1.5	1.3	1.4	1.6	2.1	2.1	2.5
30	1.3	1.4	1.3	1.3	1.4	E	1.8	1.8	2.2	2.3	2.3	2.3
31	1.6	1.4	1.4	E	1.1	E	1.6	1.6	1.9	2.1	2.1	2.2
Count	31	30	30	31	31	30	31	31	30	29	28	29
Median	1.4	1.5	1.4	1.3	1.2	1.4	1.4	1.6	1.9	2.2	2.2	2.4
Mean	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.5	2.0	2.2	2.3	2.4

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
Unit : Mc  
Month : July 1961

TABLE 6  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2.4	2.5	2.5	2.4	2.0	1.9	1.7	1.3	1.5	1.3	1.2	1.2	1
C	2.2	2.4	1.9	1.9	1.6	1.4	2.2	2.3	2.0	1.4	1.8	2
2.3	2.2	2.4	2.2	2.0	1.4	1.6	1.4	1.7	1.7	1.5	1.9	3
2.2	2.3	2.2	2.2	1.7	1.4	1.8	2.4	2.0	1.1	E	2.3	4
2.8	2.2	2.3	2.0	1.9	1.7	1.6	1.4	1.7	1.7	E	2.0	5
2.5	2.7	2.3	2.2	1.7	1.6	1.7	1.5	1.8	1.4	1.5	1.1	6
2.3	2.1	2.2	2.4	2.2	1.7	2.2	2.0	1.4	1.7	1.6	1.5	7
2.3	2.1	2.1	2.0	1.7	1.7	1.4	1.2	1.2	C	1.1	1.6	8
2.4	2.1	2.2	2.0	1.8	1.5	1.7	1.6	1.4	1.5	2.0	1.3	9
2.5	2.7	3.0	3.7	2.2	2.0	2.0	1.2	E	E	1.4	1.6	10
2.5	2.5	2.2	2.2	1.7	1.4	1.8	1.5	1.5	1.3	1.2	1.3	11
2.7	2.8	2.6	2.2	5.8	3.4	1.4	1.8	1.7	1.5	1.9	1.1	12
2.7	2.6	2.5	2.4	2.0	1.5	1.8	1.1	1.4	1.6	1.3	1.1	13
2.5	2.4	2.3	2.2	1.7	1.7	1.5	1.5	1.0	1.9	1.5	1.5	14
2.6	2.3	2.2	2.0	1.8	1.4	1.2	1.3	1.2	E	1.5	1.5	15
2.7	2.6	2.4	2.2	1.9	1.5	1.4	1.2	E	1.1	1.5	E	16
2.6	5.0	3.2	2.6	2.0	1.9	1.5	1.3	1.1	1.2	1.3	1.5	17
2.9	2.4	2.3	2.2	4.4	2.4	1.5	1.2	1.4	1.4	1.2	1.1	18
2.6	2.5	2.4	2.4	2.0	1.9	1.7	1.5	1.5	1.6	1.6	1.8	19
2.4	3.0	2.6	2.2	2.0	1.5	1.6	1.3	1.2	1.5	E	E	20
2.5	2.5	2.4	1.9	1.9	2.1	2.1	1.4	1.8	1.4	1.4	1.2	21
4.5	3.3	2.6	2.7	2.1	1.6	1.1	1.7	1.6	2.4	2.2	2.5	22
C	C	C	2.2	2.3	1.9	1.5	1.4	1.4	E	1.1	1.4	23
2.7	2.3	2.2	2.1	1.8	1.6	1.4	1.4	2.0	1.6	1.9	1.8	24
2.4	2.4	2.4	2.4	2.0	1.9	1.7	1.4	1.1	1.3	E	E	25
C	2.3	2.1	2.2	2.0	1.7	1.8	1.5	1.6	2.0	1.2	1.8	26
2.5	2.3	2.3	2.1	1.7	2.6	2.1	1.5	1.6	1.6	1.4	1.9	27
2.6	2.6	2.5	2.2	2.2	1.7	1.9	1.2	1.7	1.8	1.8	1.5	28
2.3	2.4	2.2	2.0	1.6	1.5	1.9	1.6	1.7	1.3	1.3	1.3	29
2.3	2.4	2.4	2.4	2.0	1.8	3.1	2.1	1.9	1.6	2.1	2.1	30
2.1	2.2	2.0	1.9	1.8	1.6	1.6	1.9	1.5	1.6	E	E	31
28	30	30	31	31	31	31	31	31	30	31	31	Count
2.5	2.4	2.4	2.2	2.0	1.7	1.7	1.4	1.5	1.5	1.4	1.5	Median
2.6	2.5	2.4	2.4	2.1	1.8	1.7	1.5	1.5	1.5	1.5	1.6	Mean

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds



Characteristic : fmin  
Unit : Mc  
Month : July 1961

TABLE 6 (Cont'd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77.5°E

Hour/Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.6	1.4	E	1.1	E	1.5	1.3	1.6	1.9	2.0	2.2	2.3
2	1.4	E	E	E	E	1.4	1.3	1.4	1.8	C	C	C
3	1.5	E	1.2	1.3	1.2	1.5	1.3	1.7	2.1	2.1	2.1	2.2
4	1.8	E	2.0	1.4	1.4	1.6	1.6	1.8	2.0	2.1	2.3	2.3
5	2.2	1.9	2.2	1.8	E	1.5	1.6	1.9	2.2	2.1	2.6	2.6
6	1.1	1.1	1.2	1.6	1.4	1.3	1.2	1.5	1.9	1.9	2.2	2.2
7	1.0	1.4	1.1	1.1	E	1.4	1.5	1.7	1.8	2.2	2.3	2.3
8	1.5	1.1	1.1	1.0	1.0	1.9	1.5	1.9	2.2	2.2	2.2	2.2
9	1.9	C	1.9	1.4	1.4	1.6	1.4	1.8	1.9	1.8	2.2	2.2
10	1.7	2.3	2.0	1.8	1.3	1.5	1.8	2.1	2.3	2.5	2.5	2.5
11	1.7	1.4	1.3	1.1	E	E	1.4	1.9	2.2	2.3	2.3	2.5
12	1.2	1.3	1.3	1.5	1.4	1.1	1.2	1.5	1.9	2.3	2.6	2.6
13	1.4	1.5	1.2	1.2	1.2	1.3	1.6	1.7	3.0	2.3	2.5	2.7
14	E	1.0	1.2	E	E	1.6	1.4	1.8	2.2	2.0	2.5	2.3
15	1.7	1.5	C	1.3	1.5	1.9	1.5	1.8	1.7	2.0	2.2	2.4
16	1.3	1.3	1.7	1.7	C	1.6	1.6	1.9	2.0	2.2	2.4	2.5
17	1.8	1.6	1.5	1.2	1.7	1.6	1.3	2.1	2.2	2.0	2.6	2.5
18	2.0	2.2	1.3	E	2.0	1.4	1.3	1.7	2.1	2.2	2.8	2.7
19	2.1	1.8	1.4	1.4	1.7	1.8	1.7	2.0	2.0	2.2	2.4	2.2
20	1.6	1.5	1.1	1.8	1.5	1.5	C	1.7	3.4	2.0	2.2	2.4
21	1.3	1.9	1.1	1.3	1.4	1.4	1.7	2.0	2.5	2.7	2.6	2.7
22	1.8	1.9	1.6	1.6	1.6	1.6	1.3	1.7	2.0	2.1	2.2	3.0
23	1.8	1.7	1.7	1.6	1.4	1.6	1.4	1.6	2.1	C	C	C
24	1.5	1.3	1.6	1.9	1.3	1.5	1.4	1.7	2.1	2.5	3.2	2.8
25	1.3	1.5	1.2	1.2	1.4	1.3	1.4	1.6	1.8	2.1	2.4	2.6
26	1.7	1.6	1.4	1.7	E	2.0	1.6	1.6	1.9	2.0	2.2	2.2
27	1.4	1.6	1.7	1.4	1.2	1.3	1.4	1.8	1.9	2.0	2.3	2.5
28	1.4	1.4	1.2	1.4	1.1	1.3	1.3	1.6	3.2	2.5	2.6	2.6
29	1.4	1.3	2.1	E	1.2	1.5	1.4	1.7	2.2	2.1	2.3	2.3
30	1.2	E	1.1	1.2	1.1	1.5	1.7	1.8	2.3	2.3	2.2	2.3
31	1.7	1.3	1.2	E	1.2	1.5	1.6	1.8	2.1	1.9	2.1	2.2
Count	31	30	30	31	30	31	30	31	31	29	29	29
Median	1.5	1.4	1.3	1.3	1.2	1.5	1.4	1.7	2.1	2.1	2.3	2.4
Mean	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.7	2.1	2.2	2.4	2.4

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic · fmin  
Unit · Mc  
Month : July 1961

TABLE 6 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2°N  
Longitude · 77·5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2·4	2·6	2·4	2·0	2·1	1·6	1·8	1·6	1·3	1·0	1·5	1·4	1
2·3	2·3	2·2	1·8	1·7	1·5	2·1	2·2	1·8	1·7	2·1	2·2	2
2·4	2·3	2·2	1·9	1·9	1·3	1·7	1·5	1·4	1·5	1·7	1·3	3
2·8	2·3	2·3	2·0	1·7	1·4	1·6	2·2	1·0	1·1	E	2·3	4
2·7	2·4	2·3	1·9	1·8	1·8	1·7	1·8	1·7	1·7	1·3	1·5	5
2·5	2·2	2·2	2·0	1·6	1·7	1·8	1·8	1·6	1·7	1·4	1·1	6
2·4	2·4	2·6	2·3	2·4	2·1	1·8	1·2	1·9	1·9	1·4	1·7	7
2·2	2·3	2·2	1·8	1·5	1·4	1·2	1·2	1·1	1·2	1·2	1·9	8
2·4	2·3	2·2	1·8	1·9	1·6	1·8	1·7	1·3	1·4	1·9	1·7	9
4·0	2·9	2·5	2·2	2·0	2·0	1·4	E	E	2·0	1·7	E	10
2·5	2·5	2·3	2·1	1·6	1·6	1·4	1·3	1·0	1·3	1·2	1·5	11
2·6	2·8	2·6	B	4·2	2·6	1·3	1·6	1·3	1·4	1·6	1·0	12
2·8	2·6	2·5	2·2	1·9	1·4	1·1	1·4	1·2	1·2	1·2	E	13
2·4	2·5	2·4	2·0	1·7	1·2	1·5	1·2	C	2·0	1·5	1·5	14
2·4	2·2	2·0	1·7	1·8	1·3	1·2	1·3	1·2	1·6	1·7	1·7	15
2·6	2·6	2·4	2·2	2·0	1·4	E	E	E	1·7	E	1·9	16
3·3	4·6	3·1	2·4	1·9	1·7	1·5	1·1	1·2	1·7	1·2	1·3	17
2·6	3·0	2·6	2·2	3·0	1·8	1·3	1·1	1·6	1·1	1·4	E	18
2·4	2·4	2·6	2·2	2·1	1·7	1·4	1·5	1·5	1·5	1·5	1·2	19
3·2	2·4	2·6	1·9	1·8	1·5	1·2	E	1·4	E	E	E	20
2·5	2·4	2·3	2·3	2·4	1·6	1·4	1·4	1·6	1·9	1·2	1·4	21
4·0	2·8	2·8	2·4	2·0	1·7	1·2	1·4	2·4	2·2	2·4	2·1	22
C	C	C	2·1	2·5	1·9	2·0	1·7	1·4	1·1	1·4	1·4	23
2·5	2·3	2·3	1·9	1·6	1·4	1·2	1·4	1·4	1·4	1·7	1·6	24
2·4	2·4	2·2	2·2	2·2	1·9	1·4	1·4	E	1·3	1·1	1·4	25
2·3	2·4	2·3	2·1	1·9	1·8	1·7	1·5	1·5	1·8	1·7	1·5	26
2·3	2·3	2·3	2·1	1·9	1·9	1·5	1·5	1·2	1·2	1·2	1·4	27
2·6	2·4	2·4	2·2	2·0	1·6	1·5	1·6	1·8	1·8	1·8	1·6	28
2·4	2·1	2·2	1·8	1·6	1·6	1·8	1·7	1·4	1·3	1·3	1·1	29
2·3	2·5	2·3	2·4	1·9	1·8	3·2	2·6	1·6	1·8	2·3	1·6	30
2·2	2·2	2·0	1·8	1·8	1·5	1·3	1·5	S	1·4	E	1·6	31
30	30	30	30	31	31	31	31	29	31	31	31	Count.
2·4	2·4	2·3	2·1	1·9	1·6	1·5	1·5	1·4	1·5	1·4	1·5	Median
2·6	2·5	2·4	2·2	2·0	1·7	1·6	1·5	1·5	1·5	1·5	1·5	Mean.

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'F2  
 Unit : Km  
 Month : July 1961

TABLE 7  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude : 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								L	295	325	340	380
2								L	L	340	C	C
3								L	L	320	L	380 <sub>M</sub>
4								L	350	L	L	380
5								L	280	300	300	345
6								L	L	L	L	L
7								L	L	L	L	L
8								L	A	L	330	340
9								L	L	L	L	360
10								L	L	C	C	L
11								L	L	L	365	L
12								L	L	L	L	L
13							L	L	L	L	L	345
14								L	L	L	L	L
15									L	L	320	L
16									L	C	L	L
17								L	L	L	L	L
18								L	L	L	L	360
19								L	L	L	L	L
20								L	L	320	L	L
21								L	L	300	L	L <sub>M</sub>
22								L	L	L	L	L
23								L	L	L	C	C
24							L	L	L	L	L	L
25								L	L	310	330	L
26								L <sub>M</sub>	L	L <sub>M</sub>	L	L
27								L	L	L	L	L
28								L	L	L	310	L
29								L	L	L	L	L
30							L	L	L	L	L	L
31								L <sub>M</sub>	L	320	L	L
Count									9	8	7	8
Median										320	330	360
Mean										315	330	360

Sweep 1.0 Mc. to 25.0 Mc in 27 seconds.

Characteristic . h'F2  
 Unit . Km  
 Month . July 1961

TABLE 7  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10.2°N  
 Longitude . 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
L	380 <sub>H</sub>	360	L	320	280							1
G	375	400	L	A	L							2
400	370	360	360	320	280							3
400	385	375	350	300	A							4
L	350	345	320	L	L							5
L <sub>H</sub>	L	L	L	L	L							6
L <sub>H</sub>	L <sub>H</sub>	L	L <sub>H</sub>	L	L							7
L <sub>H</sub>	400	L <sub>H</sub>	L	L	L							9
L	L	L	L	L	L							9
L <sub>H</sub>	360	L	L	L	L							10
L	L	L	L	L	L							11
L	A	L	L	L	B							12
L	L	385	L	L	L							13
L	L	L	L	L	L							14
u340 <sub>L</sub>	L	L	L	L								15
L	L	L	L	L	L							16
L	L	370	L	L	L							17
L	370	L	B	L	L							18
L	L	L	L	L	L							19
L	360	L	L	L	L							20
380	L	L	365	L	L							21
365	L	340	L	L	L							22
C	C	C	A	A	L							23
L	330	A	A	A	A							24
L	340	310	L	L	L							25
C	A	A	L		L		L					26
315	L	L <sub>H</sub>	L		L							27
L	L	L	L		L							28
395	L	L	L	L	L		L					29
370	360	325	340	L	L							30
400	370	L	L	L								31
9	13	10	5	3	2							Count
380	370	360	350									Median
375	365	355	345									Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds.

Characteristic : h'F2  
 Unit . Km  
 Month . July 1961

TABLE 7 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10°2'N  
 Longitude : 77 5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	300	360	370	L
2							L	L	L	C	C	C
3							L	L	305	L	340 <sub>H</sub>	370 <sub>H</sub>
4							L	L	295	L	360	450
5							L	L	280	320	310	325
6								L	L	L	L	L <sub>H</sub>
7							L	L	L	L	L	L
8							L	L	A	A	315	450
9							L	L	L	L	370	L
10							L	L	L	L <sub>H</sub>	340 <sub>L</sub>	L <sub>H</sub>
11							L	L	L	L	320	L
12							L	L	L	L	L	375
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15								L	L	L	L	L
16								L	L	L	L	L
17							A	L	L	L	L	L
18							L	L	L	L	L	320
19								L	L	L	L	L
20								L	L	L	L <sub>H</sub>	L <sub>H</sub>
21								L	320	305 <sub>H</sub>	L <sub>H</sub>	L
22								L	L	L	L	L
23							L	L	L	C	C	C
24							L	L	L	L	L	L
25								L	L	330 <sub>L</sub>	325	L
26								L	L <sub>H</sub>	320	335	320 <sub>L</sub>
27								L	L	L	L	L
28							L	L	L	L	310	L
29							L	L	L	L	L	405
30							L	L	L	340	L	L
31							L	295	L	L <sub>H</sub>	360	L <sub>H</sub>
Count								1	5	6	12	8
Median								.	300	325	340	370
Mean								..	300	330	345	375

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds.

Characteristic h'F2                      TABLE 7 (Contd)                      Latitude 10.2°N  
 Unit : Km                                      Ionospheric Data                      Longitude · 77.5°E  
 Month July 1961                              75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
395	380	355	335	300								1
410	395	365	A	A	L							2
400	L	360	L	300								3
380	370	L	330	L]								4
340	L	320	L	L]								5
L	L	L	L	L	L							6
L <sub>H</sub>	L	A	L	L	L							7
L <sub>H</sub>	400 <sub>H</sub>	L	L	L								8
L	400	360	L	L <sub>H</sub>								9
390	360	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	B	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L								16
L	L	L	L	L	L							17
L	330	L	B	L	L							18
L	L	L	L	L	L							19
B	L <sub>H</sub>	L	L	L	L							20
L <sub>H</sub>	L	L	315	L	L							21
380	L	L	L	L	L							22
C	C	C	A	L	L							23
A	A	A	A	A	A							24
L	L	L	L	L	L							25
A	L	A		L	L							26
A	L	L <sub>H</sub>	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
360	360	L	L	L	L							30
L	L	L	L									31
8	8	5	3	2								Count
385	375	360										Median
380	375	350										Mean

Sweep 10 Mc to 250 Mc in 27 seconds.

Characteristic : h'F  
Unit · Km  
Month · July 1961

TABLE 8  
Ionospheric Data  
75°E Mean Time

Latitude 10·2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	300	345	380	E	E	E	235	220	200	190	180	200
2	320	400	E	E	E	F	240	220	A	200	C	C
3	270	295	340	300	240	240	240	220	200	200	195	195
4	280	300	F	F	E	280	240	210	210	180 <del>xx</del>	175 <del>xx</del>	180 <del>xx</del>
5	280	300 <del>w</del>	260	340	E	240	225	225	220	200 <del>xx</del>	200	200
6	310	305	300	260	270	E	250	240	A	200	210	190
7	F	F	<del>v400F</del>	F	E	F	240 <del>w</del>	220 <del>w</del>	200 <del>xx</del>	195 <del>xx</del>	190 <del>xx</del>	195
8	240	300	310	405	F	F	245	225	A	215	A	185
9	260	270 <del>w</del>	<del>v300w</del>	340	290	260	250	230	220	210	195	190
10	240	250	280	260	235	260	255	220	215	C	C	200
11	280	285	300	A	260	A	250	230	220	200	175 <del>xx</del>	190
12	250	275	330	320	280	220	250	230	210	205	200	200
13	300	F	325	350	305	230	240	225	210	200	190	180
14	480	F	F	F	E	E	250	230	<del>v240A</del>	210	205	195
15	280	310	300	280	300	280	260	230	220	200	200	200
16	290	310	300	220	240	C	260	235	215	C	200	200
17	400	370	F	<del>v300w</del>	260	230	240	A	220	190 <del>xx</del>	180 <del>xx</del>	180 <del>xx</del>
18	215	220	265	280	A	230	245	225	A	230	200	195 <del>xx</del>
19	360	320	360	355	280	220	250	240	220	200	200	200
20	310	340	360	340	260	205	250	215	205	200	180	190
21	285	300	<del>360</del>	360	300	250	260	235	225	215	200	195
22	<del>v340w</del>	340	F	F	F	260	250	225	215	200	195	290
23	260	260	A	260	275	270	250	240	230	215	C	C
24	<del>v360w</del>	390	F	305 <del>w</del>	250	260	250	220	220	195	220	205
25	300	300	280	230	220	225	255	230	200	190	200	220
26	420	380	310	300	A	R	240	220	210	200	200	200
27	340	305	240	E	E	310	250	230	200	190 <del>xx</del>	190	195 <del>xx</del>
28	<del>v230w</del>	F	<del>v270w</del>	245	280	L	250	230	240	215	210	200
29	<del>v315w</del>	260	F	250	F	F	260	225	200	185 <del>xx</del>	185 <del>xx</del>	185 <del>xx</del>
30	320	340	325	300	280	E	245	230	205	<del>v210A</del>	200	200
31	325	310	305	310	300	250	245	225	205	215	190	200
Count	30	27	24	26	26	23	31	30	27	29	21	29
Median	300	305	310	305	280	260	250	225	215	200	200	195
Mean	305	310	315	300	270	250	250	225	215	200	195	200

Sweep 1·0 Mc to 25·0 Mc in 27 seconds

8g

Characteristic : h'F  
Unit : Km  
Month July 1961

TABLE 8  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
180 <sub>H</sub>	190	195	200	215	220	240	235	225	290	210	200	1
C	195	190 <sub>H</sub>	A	A	A	245	230	240	240	250	270	2
180	180	195	220	A	A	265	245	250	240	A	A	3
200	200	A	205	A	A	250	260	300	300	280	F	4
195	220	210	200	205	230	245	275	280	340	340	335	5
200	205	A	A	A	235	255	260	v260 <sub>F</sub>	v320 <sub>F</sub>	F	F	6
190	180 <sub>H</sub>	215	215 <sub>H</sub>	215	220	245	250	v260 <sub>F</sub>	270	270	260	7
180 <sub>H</sub>	180	205	205	200	225	245	265	v300 <sub>F</sub>	C	v300 <sub>F</sub>	v265 <sub>F</sub>	8
180 <sub>H</sub>	190 <sub>H</sub>	215	190 <sub>H</sub>	200 <sub>H</sub>	v200 <sub>H</sub>	A	260	280	310	v340 <sub>F</sub>	v275 <sub>F</sub>	9
200	200	195 <sub>H</sub>	225 <sub>H</sub>	230	235	250	250	260	270	v310 <sub>F</sub>	v330 <sub>F</sub>	10
195	200 <sub>H</sub>	190	210	220	A	240	245	250	220	240	245	11
195	A	A	A	B	260	260	260	280	305	320	315	12
180	200	220	200	A	220	250	260	F	300	310	350	13
180 <sub>H</sub>	180	200	205	210	A	290	290	960	340	320	290	14
220	200	210	210	210	230	260	280	280 <sub>F</sub>	280	300	300	15
200	200	200	200	200	230	260	280	305	360	350	380	16
175 <sub>H</sub>	B	220	180 <sub>H</sub>	220	230	250	240	F	240	250	260	17
A	205	215	B	B	265	270	305	v380 <sub>F</sub>	345	350	340	18
200	200	200	200	200	210	260	280	300	290	270	275	19
180	200	200	A	230	295	270	270	270	260	280	295	20
190	190 <sub>H</sub>	205	205	215	235	260	275	F	F	F	F	21
B	200	200	210	220	240	265	310	F	F	300	300	22
C	C	C	A	220	230	260	295	F	F	F	320 <sub>F</sub>	23
220	A	A	A	A	A	260	265	300	300	295	300	24
A	220	220	210	215	225	250	280	F	F	310	360	25
C	A	A	230	210	A	A	265	280	285	295	350	26
210	A	200	205	215	245	260	240	250	255	245	260	27
205	200	210	A	215	230	250	245	F	v250 <sub>F</sub>	280	320 <sub>F</sub>	28
190	190	205	205	A	240	250	270	285	255	260	310	29
195	180 <sub>H</sub>	180 <sub>H</sub>	200	215	v260 <sub>A</sub>	260	260	265	255	280	310	30
190	195	185	190	200	230	250	220	225	220	240	270	31
25	25	25	23	22	25	29	31	24	26	27	27	Count
195	200	200	205	215	230	255	260	280	275	295	300	Median
195	195	205	205	215	235	255	265	280	280	290	300	Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds.



Characteristic : h'F  
Unit : Km  
Month : July 1961

TABLE 8 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude : 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	320	360	E	320	E	240	225	220	200	190	180	180
2	F	E	E	E	E	260	220	A	A	C	C	C
3	270	310	320	260	240	255	220	205	200	200	185	190
4	F	F	F	F	320	260	225	220	195	175 <sub>H</sub>	170 <sub>H</sub>	180
5	300	F	380	270	E	290	225	215	205	200 <sub>H</sub>	195 <sub>H</sub>	200
6	300	295	275	260	260	275	235	A	A	A	195	185
7	u310 <sub>F</sub>	F	u450 <sub>F</sub>	F	E	u270 <sub>F</sub>	u200 <sub>F</sub>	200	200 <sub>H</sub>	180 <sub>H</sub>	185 <sub>H</sub>	185
8	265	320	305	u380 <sub>F</sub>	395	u275 <sub>F</sub>	235	225	A	A	225	180 <sub>H</sub>
9	265	C	320	u325 <sub>r</sub>	245	280	235	210	220	190 <sub>H</sub>	185	180 <sub>H</sub>
10	225	260	275	290	250	270	235	220	210	200	200	200
11	280	305	A	A	A	280	230	230	220	190 <sub>H</sub>	200	200
12	265	280	335	305	250	270	235	220	210	200	200	200
13	300	305	345 <sub>r</sub>	340	260	260	230	215	210	190	180	180
14	A	F	F	E	E	270	245	230	215	210	200	190
15	300	280	290	280	300	290	245	220	200	200	200	200
16	315	310	260	230	C	260	240	220	215	210	200	200
17	330	F	F	285	250	235	A	220	205	200	180 <sub>H</sub>	180
18	230	270	240	A	300	260	235	215	A	210	190 <sub>H</sub>	180 <sub>H</sub>
19	320	320	380	320	230	230	240	230	220	200	205	200
20	320	340	350	320	220	240	C	210	220	190 <sub>F</sub>	180	180
21	295	340	360	315	285	260	240	225 <sub>H</sub>	210	210 <sub>H</sub>	200	190
22	325	F	F	F	u280 <sub>F</sub>	290	240	200	200	210	200	190 <sub>H</sub>
23	260	260	260	260	255	270	240	225	215	C	C	C
24	380	380	F	260	245	270	230	225	205	190 <sub>H</sub>	200	205
25	300	300	240	220	220	260	235	215	200	190	230	220
26	400	340	280	A	A	270	250	200	200	200	200	200
27	330	280	260	260	L	260	240	205	205	200	190 <sub>H</sub>	200 <sub>H</sub>
28	u220 <sub>F</sub>	275	250	255	300	300	240	225	220	210	205	205
29	F	F	240	265	275	280	235	215	185 <sub>H</sub>	180 <sub>H</sub>	180 <sub>H</sub>	190
30	320	325	320	285	245	250	240	210	190	200	190 <sub>H</sub>	195
31	320	300	310	300	260	255	230	210	u200 <sub>A</sub>	205	190 <sub>H</sub>	180
Count	27	23	25	25	27	31	29	29	27	27	29	29
Median	300	305	310	285	260	260	235	220	205	200	195	190
Mean	300	305	305	285	270	265	235	215	205	200	195	190

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic h'F  
Unit · Km  
Month July 1961

TABLE 8 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude . 10·2°N  
Longitude 77·5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
180 <sub>H</sub>	180	200	200 <sub>H</sub>	210	230	240	235	225	205	215	260	1
200	195	195	A	A	A	240	245	240	245	260	280	2
180	190	175	205	A	260	260	240	245	260	A	A	3
190	190	A	A	A	A	240	295	300	F	260	275	4
A	215	210	200	A	245	250	260	305	345	340	310	5
190	A	A	200	220	235	250	265	v300 <sub>F</sub>	340 <sub>F</sub>	F	F	6
180	180 <sub>H</sub>	A	215	205 <sub>H</sub>	240	255	260 <sub>r</sub>	v280 <sub>F</sub>	275	280	250	7
180 <sub>H</sub>	180 <sub>H</sub>	200	200	220	245	260	v300 <sub>F</sub>	F	v300 <sub>F</sub>	F	v270 <sub>F</sub>	8
180 <sub>H</sub>	200	A	200 <sub>H</sub>	205 <sub>H</sub>	A	A	280	280	335	v300 <sub>F</sub>	255	9
200	195	180 <sub>H</sub>	180 <sub>H</sub>	225	250	250	245	265	300	v340 <sub>F</sub>	305	10
200	200	210	220	240	245	245	285	240	220	245	250	11
A	A	A	B	B	260	260	260	280	325	310	305	12
170 <sub>H</sub>	215	205	205	215	240	250	F	275	280	320	430	13
200	210	200	210	A	260	280	910	360	325	310	275	14
200	200	200	205	210	250	255	260	260 <sub>F</sub>	285	300	290	15
200	200	200	200	230	250	270	290	340	360	350	400	16
200	B	210	A	225	240	250	F	220	250	255	250	17
210	215	220	B	260	265	280	365	380	F	350	340	18
200	200	200	210	210	250	270	300	300	280	265	295	19
B	200	A	A	230	260	270	270	260	270	290	290	20
185	195	215	215	230	250	260	F	F	F	F	F	21
215	200	220	215	220	245	280	v330 <sub>r</sub>	F	305 <sub>F</sub>	300	295	22
C	C	C	A	215	240	270	v325 <sub>F</sub>	F	F	F	345	23
A	A	A	A	A	245	v270 <sub>A</sub>	300	305	285	295	300	24
L	A	220	210	215	240	250	260 <sub>F</sub>	300	300	340	380	25
A	A	A	205	A	A	255	280	270	280	330	360	26
A	205	200	205	230	270	255	240	230	235	250	270	27
220	210	A	230	220	240	245	260	v260 <sub>F</sub>	v245 <sub>F</sub>	300 <sub>F</sub>	330	28
190	200	205	v235 <sub>A</sub>	v295 <sub>A</sub>	240	255	280	250 <sub>F</sub>	250	290	320	29
185	180 <sub>H</sub>	200	205	v240 <sub>A</sub>	250	260	v270 <sub>A</sub>	255	270	300	310	30
190	185	190	200	210	235	230	230	220	240	255	270	31
23	24	21	23	23	27	30	28	27	27	26	28	Count
190	200	200	205	220	245	255	270	270	280	300	295	Median
195	200	200	205	225	245	255	275	275	285	295	305	Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds.

Characteristic h'E  
Unit . Km  
Month July 1961

TABLE 9  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2°N  
Longitude · 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1							105	100	100	A	A	A
2							110	A	A	A	C	C
3							120 <sub>H</sub>	105 <sub>H</sub>	A	A	A	A
4							135	105	A	A	A	A
5							110 <sub>H</sub>	100 <sub>H</sub>	100	100	100	A
6							A	A	A	A	A	A
7							110	A	A	A	A	A
8							A	A	A	A	A	A
9								110	105	A	A	A
10								A	A	C	C	A
11							A	A	A	A	A	A
12							A	A	A	A	A	A
13							110	110	105	A	A	A
14								105	A	A	A	A
15								110	A	A	A	A
16							120	110	110	C	A	A
17							110	A	A	A	A	A
18							115	105	A	A	A	A
19							140	110	A	A	A	A
20							120	110	110	A	A	A
21							120	105	105	A	A	A
22							105	A	A	A	A	A
23							130 <sub>H</sub>	110	A	A	C	C
24							120 <sub>J</sub>	A	A	A	A	A
25							120 <sub>J</sub>	A	A	A	A	A
26									A	A	A	A
27							110 <sub>J</sub>	A	A	A	A	A
28							110	105	B	A	A	A
29							125 <sub>J</sub>	A	A	A	A	A
30								110	A	A	A	A
31							130	A	A	A	A	A
Count							21	16	7	1	1	
Median							120	110	105			
Mean							120	115	105			

Sweep 1 0 Mc. to 25 0 Mc. in 27 seconds

Characteristic h'E  
Unit . Km  
Month July 1961

TABLE 9  
Ionospheric Data  
75°E Mean Time

Latitude . 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	105	105	105	110							1
C	A	A	A	A	A							2
A	A	A	105 <sub>z</sub>	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	110	A	120							7
A	A	A	A	105	115	135						8
A	105	A	A	A	A							9
A	A	115	110	A	115							10
A	A	A	A	A	A							11
A	A	A	115	B	B							12
A	A	105	110	A	110							13
A	A	A	A	A	A							14
110	A	A	A	110								15
A	A	A	110	110	105							16
A	B	A	A	105	115	105						17
A	A	A	B	B	A	120						18
A	A	A	110	110	110							19
A	B	A	A	A	A							20
A	A	A	A	A	120							21
B	A	A	110	110	A		A					22
C	C	C	A	A	A							23
A	A	A	A	A	A							24
A	110	A	110	110	120							25
C	A	A	A	A	A	A						26
A	A	A	A	A	C							27
A	A	A	105	110	110							28
A	A	A	A	A	A							29
A	A	A	110	A	A							30
A	A	A	A	110	110							31
1	2	3	12	10	12							Count
			110	110	110							Median
			110	110	115							Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic · h'E  
Unit . Km  
Month July 1961

TABLE 9 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude : 77·5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							105	105	100	A	A	A
2							105	A	A	C	C	C
3							105 <del>H</del>	A	A	A	A	A
4							105	100	A	A	A	A
5							105 <del>H</del>	A	100	A	100	A
6							A	A	A	A	A	A
7							110	A	A	A	A	A
8							A	A	A	A	A	A
9							110	105	A	A	A	A
10							A	A	A	A	A	A
11							A	A	A	A	A	A
12							A	A	A	A	A	A
13							110	105	A	A	A	A
14							110	105	A	A	A	A
15							110	105	A	A	A	110
16							110	110	110	A	A	A
17							A	105	A	A	A	A
18							110	105	A	A	A	A
19							110	110	A	A	A	A
20							C	110	B	A	A	A
21							110	105	105	A	A	A
22							110	A	A	A	A	A
23							110 <del>H</del>	105	A	C	C	C
24							115	A	A	A	A	A
25							110	A	A	A	A	A
26								A	A	A	A	A
27							110	A	A	A	A	A
28							105	105	A	A	A	A
29							A	A	A	A	A	A
30							110	A	A	A	A	A
31							120	A	A	A	A	A
Count							22	14	4		1	1
Median							110	105				
Mean							110	105				

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic · h'E  
Unit Km  
Month July 1961

TABLE 9 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N  
Longitude · 77·5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
A	A	105	100	105	110							1
A	A	A	A	A	A							2
A	A	105	105	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	115							6
A	A	A	110	120								7
A	A	A	A	A	120							8
A	A	A	A	A	A							9
B	A	115	A	115	135							10
A	A	A	A	A	A							11
A	A	115	B	B	A							12
A	105	110	110	110	A							13
A	A	A	105	A								14
A	A	A	A	110								15
A	A	A	110	110								16
A	B	A	A	105	120							17
A	A	A	B	A	A							18
A	A	110	110	110								19
B	110	A	A	A								20
A	A	A	110	115	120							21
A	A	115	110	A	A		A					22
C	C	C	A	A	130							23
A	A	A	A	A	A							24
A	A	110	110	120								25
A	A	A	A	A	A							26
A	A	A	A	110	140							27
A	A	105	105	110	110							28
A	A	A	A	A	A							29
A	A	110	A	A	A							30
A	A	A	A	115	120							31
	2	10	11	13	10							Count
		110	110	110	120							Median
		110	110	110	120							Mean

Sweep 1 0 Mc. to 25 0 Mc. in 27 seconds.

Characteristic : h'Es  
 Unit : Km  
 Month : July 1961

TABLE 10  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1							G	G	G	100	100	100
2							100	100	100	100	C	C
3				105			G	G	100	100	100	100
4	100	100			100		G	G	100	100	100	100
5							G	G	G	G	G	100
6	100	110	105	105		100	100	100	100	100	100	100
7	100	115					105	105	100	100	100	100
8		115	120	115	105		110	105	105	105	100	100
9			115	115				110	100	100	100	100
10	115	100	100	100			120	105	100	C	C	100
11	110	120	110	105	110	105	105	100	100	100	100	100
12			110				105	100	100	100	100	100
13							G	105	100	100	100	100
14	115	110				95		100	100	100	100	100
15		120	110	110	100		110	100	100	100	100	100
16	120	120	110					G	G	C	100	100
17					190	115	G	100	100	100	100	100
18				105	100		G	G	100	100	100	100
19	100	120		110				G	100	100	100	100
20			110					100	100	100	100	100
21	100	100	100	105			G	105	G	100	100	100
22	100			110			G	100	100	100	100	100
23		115	115				C	100	100	100	C	C
24		120	120				G	100	100	100	100	100
25							G	100	100	100	100	100
26	120		120	115	105	100	100	100	100	100	100	100
27	100						G	100	100	100	100	100
28			105	110		110	G	100	G	100	100	100
29	160	115	110	110	105		G	100	100	100	100	100
30	110							100	100	100	100	100
31					115		G	115	100	100	100	100
Count	14	14	15	14	9	6	9	24	26	28	27	29
Median	105	115	110	110	105	100	105	100	100	100	100	100
Mean	110	115	110	110	110	105	105	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic h'Es  
Unit · Km  
Month · July 1961

TABLE 10  
Ionospheric Data  
75°E Mean Time

Latitude , 10°2'N  
Longitude : 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
100	100	100	G	G	G							1
C	100	100	100	100	100	100		100		120		2
100	100	100	100	105	100	100	100	100	100	100	100	3
100	100	100	100	100	100	100		100	100	100	95	4
100	100	100	100	100	100	100	100		100	100		5
100	100	100	100	100	100	100	100	120	100		115	6
100	100	100	130	100	100			100	100			7
100	100	100	100	100	115	100	140	140	C	115		8
100	100	100	100	100	100	100	100	100	100		100	9
100	100	100	100	100	145	105	100	95	95		115	10
100	100	100	100	100	100		125	115		120	115	11
100	100	100	100	B	G	95	110	135	110	120	120	12
100	100	100	G	110	105		105					13
100	100	100	100	100	100	100	100	100	100	120	120	14
100	100	100	100	100	100	100	125	115	100	115	115	15
100	100	100	100	100	100	100	100	100	100		100	16
100	100	100	100	G	G	G	100	120				17
100	100	100	B	100	100	G	180	120	100	100	100	18
100	100	100	100	100	100	140	110			100		19
100	100	100	100	100	100	100	100	100	100	100	100	20
100	100	100	100	100	G				100	100	100	21
100	100	100	G	G	100	100	100	100		130	130	22
C	C	C	100	100	100	140	100	120	120	120	120	23
100	100	100	100	100	100	100	100	100	100	100	100	24
100	115	100	100	130	130	130	120	130	125	120	110	25
100	100	100	100	100	100	100	100	100	100	100	100	26
100	100	100	100	100	G				100	100		27
100	100	100	115	105	105		110					28
100	100	100	100	100	100						120	29
100	100	100	G	100	100		100	115	100			30
100	100	100	100	100	G	140	100	100	120	110	110	31
29	30	30	26	27	25	20	24	22	21	20	20	Count
100	100	100	100	100	100	100	100	100	100	105	110	Median
100	100	100	100	100	105	110	110	110	105	110	110	Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds



Characteristic h'Es  
 Unit: Km  
 Month July 1961

TABLE 10 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10°2'N  
 Longitude 77°5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	G	G	100	100	100
2							100	100	100	C	C	C
3	—	—	105	—	—	—	G	100	100	100	100	100
4	105	100	—	—	—	—	G	100	100	100	100	100
5	—	—	—	—	—	—	G	100	G	100	G	100
6	100	110	105	—	—	100	100	100	100	100	100	100
7	100	140	—	—	—	—	105	100	100	100	100	100
8	—	120	120	115	105	—	105	105	100	100	100	100
9	110	C	—	110	—	—	105	G	100	100	100	100
10	—	115	—	—	100	—	105	100	100	100	100	100
11	115	110	105	105	105	105	100	100	100	100	100	100
12	—	—	—	—	—	—	100	100	100	100	100	100
13	—	—	—	—	—	—	G	105	100	100	100	100
14	115	110	—	—	—	115	100	100	100	100	100	100
15	120	110	110	110	120	—	100	100	100	100	100	100
16	120	115	—	—	—	—	G	G	100	100	100	100
17	—	—	—	105	120	—	100	100	100	100	100	100
18	—	—	115	110	100	—	G	G	100	100	100	100
19	110	120	110	110	—	—	G	G	100	100	100	100
20	—	—	110	—	—	—	G	100	100	100	100	100
21	100	—	105	95	—	—	110	105	G	100	100	100
22	125	—	115	—	—	—	G	100	100	100	100	100
23	—	115	—	—	—	—	G	100	100	C	C	C
24	—	120	115	—	—	—	105	100	100	100	100	100
25	—	—	—	—	—	—	100	100	100	100	100	100
26	120	130	110	100	120	—	110	100	100	100	100	100
27	—	—	—	—	—	—	G	100	100	100	100	100
28	—	—	100	—	—	115	100	100	100	100	100	100
29	115	110	115	105	—	—	100	100	100	100	100	100
30	—	—	—	—	—	—	G	100	100	100	100	100
31	—	—	—	120	115	—	120	100	100	100	100	100
Count	18	14	14	11	8	4	18	26	28	29	28	29
Median	115	115	110	110	110		100	100	100	100	100	100
Mean	110	115	110	110	110		105	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic h'Es  
Unit · Km  
Month · July 1961

TABLE 10 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude ·  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
100	100	G	G	G	G	—	100	—	—	100	—	1
100	100	100	100	100	100	—	100	—	—	100	—	2
100	100	100	G	110	100	100	100	100	100	100	100	3
100	100	100	100	100	100	100	100	100	100	95	—	4
100	100	100	100	100	100	100	—	120	—	95	—	5
100	100	100	100	100	120	100	100	120	—	130	105	6
100	100	100	110	100	100	100	—	100	—	115	—	7
100	100	100	100	100	120	100	—	140	120	105	—	8
100	100	100	100	100	100	100	100	100	100	—	100	9
100	100	100	100	100	135	100	100	95	—	—	100	10
100	100	100	100	100	100	—	120	110	120	120	—	11
100	100	100	B	B	100	95	103	125	110	120	—	12
100	100	120	G	G	105	110	—	—	—	—	—	13
100	100	100	100	100	100	100	100	100	—	115	120	14
100	100	100	100	100	100	100	110	100	110	115	120	15
100	100	100	100	100	100	100	100	100	—	100	—	16
100	100	100	100	G	G	—	100	120	—	95	—	17
100	100	100	B	100	105	200	145	100	100	100	115	18
100	100	100	100	100	100	120	—	—	100	100	100	19
100	100	100	100	100	100	100	100	100	100	100	100	20
100	100	100	G	G	G	100	—	100	105	95	100	21
100	100	G	G	100	100	100	100	—	—	—	140	22
G	G	G	100	100	G	—	—	—	120	120	115	23
100	100	100	100	100	100	100	100	100	100	—	—	24
100	100	100	100	130	125	120	130	120	—	110	120	25
100	100	100	100	100	100	100	100	100	100	105	100	26
100	100	100	100	G	G	—	—	—	100	95	—	27
100	100	115	115	105	105	110	130	—	—	—	—	28
100	100	100	100	100	100	—	—	—	—	—	115	29
100	100	100	100	100	100	—	115	120	100	—	—	30
100	100	100	100	160	G	—	100	—	110	110	120	31
30	30	28	25	25	25	22	21	21	17	22	16	Count
100	100	100	100	100	100	100	100	100	100	100	110	Median
100	100	100	100	105	105	105	105	110	105	105	11	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic (M3000) F2  
 Unit . .  
 Month · July 1961

TABLE 11  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude : 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	o2 90 <sub>F</sub>	F	F	E	E	E	3 30	3 25	3 10	2 90	2.40	2 45
2	2 60 <sub>F</sub>	F	E	E	E	F	3 05	2 90	2 70	2 50	C	C
3	3 15	2 90	2 60	2 90	3 35	3 45	3 35	3 30	3 05	2 90	2 50	2 20 <sub>E</sub>
4	v3 05 <sub>F</sub>	F	F	F	E	3 25	3 10	3 15	2 90	2 45	2 25	2 55
5	F	F	v2 70 <sub>F</sub>	2 95	E	3 40	3 60	3 30	3 30	3 15	3 10	2 95
6	2 85	3 00	3 10	3 30	3 45	E	3 15	2 90	2 70	2 50	2 60	2 65
7	F	F	F	F	E	F	3 10	3 00	2 60	2 45	2 45	2 50
8	3 15	2 85	2 80	R	F	F	3 20 <sub>F</sub>	3 10	2 90	2 75	2 70	2 30
9	v3 00 <sub>F</sub>	2 90	2 85	2 75	2 95	3 20	3 05	3 00	2 90	2 60	2.40	2 40
10	3 30	3 10	3 00	3 00	v3 40 <sub>F</sub>	v3 30 <sub>F</sub>	v3 05 <sub>F</sub>	2 90	2 65	C	C	2 35
11	F	2 95	2 95	3 20	3 45	A	3 00	3 10	2 90	2 65	v2 10 <sub>E</sub>	2 40
12	2 95	2 75	2 70	2 50	3 15	3 30	2 90	2 80	2 50	2 40	2 30	2 40
13	F	F	2 60	2 60 <sub>F</sub>	2 65	3 35	3 25	3 10	2 80	2 40	2 40	2 30
14	2 35	F	F	F	E	E	3 15	3 05	2 85	v2 65 <sub>C</sub>	2 30	2 45
15	F	F	F	2 80 <sub>E</sub>	F	F	2 90	2 90	2 90	2 70	2 50	2 40
16	2 75	2 75	2 85	3 45	3 20 <sub>F</sub>	C	3 40	3 25	2 95	C	2 40	2 25
17	F	F	F	F	F	F	3 00 <sub>F</sub>	2 95	2 65	2 50	2 25	2 35
18	3 30 <sub>F</sub>	3 40	3 25	F	A	3 45 <sub>F</sub>	3 25 <sub>F</sub>	3 20 <sub>F</sub>	3 00 <sub>F</sub>	2 80	2 45	2 15
19	2 40 <sub>E</sub>	S	2.45	2 55	2 80	3 35	3 20	3 20	3 00	2 70	2 30	2 20
20	2 75	2 60 <sub>E</sub>	F	F	F	3 60	3 25	3 05	2 70	2 35	2 65	2 35
21	3 00	2 80	2 65	2 60	2.70	3 00	3 10	2 95	2 85	2 70	2 45	2 30 <sub>E</sub>
22	F	F	F	F	F	F	v3 05 <sub>E</sub>	3 10	2 75	2 70	2 45	2 40
23	3 00	3 25	3 10 <sub>F</sub>	3 15	3 15	3 30	3 25	3 20	2.95	2 65	C	C
24	2 55	v2.55 <sub>F</sub>	F	2.95 <sub>F</sub>	3 30 <sub>F</sub>	3 20	3 00	3 00	2 85	2 60	2 50	2 45
25	2 80	2 80	v2 85 <sub>E</sub>	3 30	3 50	3 10 <sub>E</sub>	v3 20 <sub>E</sub>	3 10	2 90	2 60	2.55	2 50
26	2 55	v2 90 <sub>F</sub>	F	F	A	R	3 20	3.15	2 85	2 45	2 60	2 55
27	2.75	2 90	3 40	E	E	3 20	3.15	3 10	2 65	2 45	2 55	2 55
28	v2 95 <sub>F</sub>	F	v2 90 <sub>F</sub>	3 20 <sub>F</sub>	3 35	2 95	3 15	3 25	3 10	2 95	2 85	2 65
29	v2 70 <sub>F</sub>	3 00	A	F	F	F	3 00	2 90	2 65	2 60	2 45	2 45
30	2.65	2 70	v2 80 <sub>F</sub>	2 95 <sub>F</sub>	3 30	E	3.30	3 15	2 85	2 45	2 45	2 40
31	2 85	2 90	2.85	2 90	3 05	R	3 30	3.20	3 00	2 40 <sub>E</sub>	2.40	2 55
Count	24	19	19	18	16	16	31	31	31	29	28	29
Median	2 85	2 90	2 85	2 95	3 25	3 30	3 15	3 10	2 90	2 60	2 45	2 40
Mean	2 85	2 90	2.85	2 95	3 15	3.30	3 15	3 10	2 85	2 65	2 50	2 45

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic (M3000) F2  
 Unit : .  
 Month : July 1961

TABLE 11  
 Ionospheric Data  
 75°E Mean Time

Latitude 10.2°N  
 Longitude 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 45	2 25	2 45	2 60	2 80	3 05	3 05	3 10	3 25	3 25	3 25	3 10	1
C	2 60	2 40	2 50	A	2 70	3 10	3 20	3 20	3 15	3 00	2 90	2
2 35	2 50	2 55	2 70	2 85	3 15	3 20	3 10	3 10	3 20	3 15	3 20	3
2 45	2 45	2 50	2 50	2 60	2 75	3 00	2 95	2 85	u2 85 <sub>F</sub>	F	F	4
2 80	2 85	2 85	2 90	2 90	3 05	3 05	3 00	2 80	2 55	2 40	2 60	5
2 65	2 65	2 70	2 70	2 70	2 80	3 00	3 05	2 85	2 70	u2 60 <sub>F</sub>	F	6
2 50	2 50	2 60	2 60	2 65	2 80	3 05	3 15	3 00	2 85	u2 95 <sub>F</sub>	3 05	7
2 15	2 45 <sub>F</sub>	2 45	2 50	2 50	2 65	2 80	u2 85 <sub>F</sub>	F	C	F	u2 90 <sub>F</sub>	8
2 35	2 50	2 45	2 35	2 30	2 40	2 80	2 90	2 80	2 70	u2 60 <sub>F</sub>	F	9
2 40	2 50	2 60	2 50	2 50	2 65	2 80	3 05	3 05	2 85	u2 60 <sub>F</sub>	F	10
2 20	2 20	2 30	2 35	2 50	2 65	2 80	2 90	3 05	3 05	3 00	3 00	11
2 35	2 40	2 45	2 55	2 70	2 80	2 95	2 90	2 90	2 75	2 70	2 70	12
2 30	2 30	2 30	2 40	2 70	2 75	2 70	2 80	u2 65 <sub>F</sub>	2 65	2 70	2 45	13
2 40	2 30	2 10	2 20	2 40	2 60	2 90	2 75	C	2 50	2 60 <sub>F</sub>	F	14
2 45	2 45	2 45	2 40	2 35	2 35	2 65	2 70	2 60 <sub>F</sub>	2 65	2 65	2 80	15
2 35	2 45	2 50	2 45	2 50	2 55	2 65	2 65	2 55	2 50	2 50 <sub>F</sub>	F	16
2 40	2 30	2 50	2 55	2 70	2 80	2 90	2 95	2 95	2 95	2 95	3 00	17
2 70	2 60	2 60	2 60	2 50	2 40	2 25	2 45	F	F	2 45	2 50	18
2 40	2 35	2 35	2 40	2 50	2 55 <sub>F</sub>	2 60	2 60	2 60	2 70	2 90	2 90	19
2 50	2 60	2 60	2 60	2 70	2 85	2 90	3 00	2 95	2 95	2 90	2 90	20
2 45	2 30	2 40	2 55	2 85	2 80	u2 80 <sub>F</sub>	2 90	u2 70 <sub>F</sub>	F	F	F	21
2 55	2 45	2 40	2 55	2 60	2 90	2 90	u2 75 <sub>F</sub>	F	u2 70 <sub>F</sub>	2 80	2 80	22
C	C	C	2 50	2 65	2 85	2 90	2 85	F	F	F	u2 70 <sub>F</sub>	23
2 60	2 55	u2 45 <sub>F</sub>	2 50 <sub>F</sub>	2 55	2 60	2 75	2 70	u2 75 <sub>F</sub>	2 75	2 85	u2 90 <sub>F</sub>	24
2 65	2 65	2 70	2 80	2 90	3 05	3 05	2 90	F	F	F	2 50	25
C	2 55	2 55	2 55	2 60	2 60	2 75	3 00	3 00	2 85	2 80	2 70	26
2 45	2 55	2 10	2 30 <sub>F</sub>	2 70	2 90	3 00	2 95	2 85	3 00	3 05	3 10	27
2 55	2 50	2 45	2 70	2 65	2 75	2 80	2 90	u3 00 <sub>F</sub>	F	2 85 <sub>F</sub>	F	28
2 45	2 40	2 50	2 60	2 65	2 85	2 90	3 05	3 10	3 05	u3 05 <sub>F</sub>	u2 75 <sub>F</sub>	29
2 60	2 60	2 70	2 70	2 80	2 95	3 00	3 15	3 15	3 20	3 05	2 90	30
2 40	2 50	2 55	2 50	2 75	2 90	3 10	3 10 <sub>F</sub>	3 30	3 30	3 30	3 05	31
28	30	30	31	30	31	31	31	25	25	26	23	Count
2 45	2 50	2 45	2 55	2 65	2 80	2 90	2 90	2 95	2 85	2 85	2 90	Median
2 45	2 50	2 50	2 55	2 65	2 75	2 85	2 90	2 90	2 85	2 85	2 85	Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic (M3000) F2  
Unit  
Month July 1961

TABLE 11 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10·2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	v2 50v	F	E	v2 60v	E	3 30	3 30	3 10	3 00	2 70	2 45	2 45
2	F	E	E	E	E	3 00	3 00	2 80	2 50	C	C	C
3	3 10	2 70	2 75	3 15	3 50	3 05x	3 30	3 20	3 00	2 70	2 20x	2 25x
4	F	F	F	F	3 05	3 20	3 20	2 95	2 60	2 30	2 40	2 30
5	F	F	v2 75v	3 30	E	3 35	3 45	3 20	3 20	3 00	3 05	2 90
6	2 90	3 05	3 15	3 30	3 45	2 85	3 00	2 80	2 60	2 45	2 60	2 65
7	F	F	F	F	E	v3 15v	3 05	2 80	2 50	2 40	2 45	2 50
8	2 95	2 85	2 90	v2 50v	2 60	v3 10v	3 20	3 00	2 85	2 60	2 50	2 25
9	3 05	C	2 80	2 80	3 10	2 95	3 00	3 00	2 70	2 45	2 40	2 30
10	v3 35v	3 00	3 05	3 25	v3 25v	v3 00v	3 00	2 80	2 50	2 50	2 45	2 35
11	v2 90v	2 80	A	A	A	3 00	3 10	3 05	2 80	2 50	2 10	2 35
12	2 90	2 75	2 75	2 80	3 30	2 90	3 00	2 65	2 50	2 40	2 40	2 35
13	F	2 70	F	2 60	3 10	3 10	3 25	3 10	2 95	2 65	2 35	2 30
14	A	2 45v	F	E	E	2 85	3 10	3 00	2 75	2 45	2 30	2 35
15	F	F	2 80	2 80	F	F	3 00	2 95	2 80	2 60	2 35	2 45
16	2 70	2 65	3 15	3 45	C	3 15x	3 25	3 10	2 90	2 55	2 30	2 35
17	F	F	F	F	F	v3 15v	3 15	2 75	2 45	2 35	2 30	2 40
18	3 40	3 10	2 85x	F	3 10v	3 00	3 30	3 10	2 90	2 65	2 30	2 40
19	2 40v	v2 65v	2 40	2 65	2 75	3 10	3 20	3 10	2 70	2 60	2 20	2 25
20	2 65	2 55	F	F	v3 20v	3 20	3 20	2 90	2 40	2 45	2 50	2 45
21	2 95	2 75	2 60	2 65	2 80	3 15	3 10	2 85	2 75	2 60	2 20x	2 40
22	F	F	F	F	F	3 05	v3 10x	2 90	2 70	2 60	2 35	2 40
23	3 05	3 15	3 15	3 15	3 20	3 10	3 20	3 10	2 80	C	C	C
24	2 60	v2 60v	F	3 15v	3 15v	3 05	3 10	3 00	2 65	2 50	2 45	2 55
25	2 80	v2 75v	3 10	3 40	3 30x	3 00	3 15	2 90	2 70	2 60	2 60	2 60
26	2 60	3 10x	F	A	A	2 95v	3 20v	3 00	2 60	2 50	2 60	2 50
27	2 80	3 05	3 40	3 25	3 20	3 00	3 15	2 90	2 35	2 55	2 50	2 60
28	F	F	v3 10v	3 30	3 05	2 85	3 10	3 10	3 00	2 90	2 75	2 50
29	2 85	3 05	F	F	F	3 15	2 90	2 80	2 60	2 55	2 40	2 40
30	2 75	2 80	3 00	3 15v	3 30	3 20	3 35	3 00	2 65	2 50	2 40	2 50
31	2 85	2 90	2 95	3 00	3 15	3 00	3 25	3 15	2 80	2 10x	2 60	2 35
Count	21	21	18	20	19	30	31	31	31	29	29	29
Median	2 85	2 80	2 90	3 15	3 15	3 05	3 15	3 00	2 70	2 55	2 40	2 40
Mean	2 85	2 85	2 90	3 00	3 15	3 05	3 15	2 95	2 70	2 55	2 45	2 45

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000) F2  
 Unit .  
 Month . July 1961

TABLE 11 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude : 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2 50	2 40	2 60	2 75	3 00	3 10	3 15	3 20	3 30	3 10	3 15	2 85	1
2 50	2 40	2 50	2 45	A	2 90	3 15	3 20	3 15	3 10	2 80	3 05	2
2 45	2 50	2 65	2 70	3 00	3 20	3 10	3 15	3 20	3 05	3 15	3 10	3
2 50	2 40	2 40	2 55	2 70	2 85	3 00	2 85	2 90	F	F	F	4
2 85	2 80	2 90	2 90	2 90	3 05	3 05	2 90	2 70	2 55	2 60	2 70	5
2 60	2 65	2 65	2 70	2 70	2 85	3 05	2 95	2 70	∩2 60 <sub>m</sub>	F	F	6
2 55	2 50	2 60	2 60	2 70	2 95	3 10	3 10	∩2 90 <sub>m</sub>	∩2 75 <sub>m</sub>	∩2 85 <sub>m</sub>	3 25	7
2 30	2 40	2 50	2 55	2 55	2 75	2 90	∩2 80 <sub>m</sub>	F	F	F	∩2 90 <sub>m</sub>	8
2 50	2 50	2 45	2 30	2 40	2 65	2 80	2 90	2 70	2 70	∩2 70 <sub>m</sub>	∩3 20 <sub>m</sub>	9
2 55	2 55	2 50	2 45	2 50	2 70	3 00	3 15	3 00	∩2 70 <sub>m</sub>	∩2 60 <sub>m</sub>	2 80	10
2 35	2 25	2 30	2 40	2 60	2 80	2 85	3 00	3 10	3 05	3 00	2 95	11
2 35	2 45	2 50	B	2 75	2 90	2 90	2 90	2 80	2 60	2 65	F	12
2 35	2 30	2 35	2 60	2 70	2 70	2 80	2 65	2 60	2 70	2 60	2 00	13
2 35	2 30	2 00 <sub>m</sub>	2 20	2 40	2 70	2 85	2 65	2 55	F	F	F	14
2 50	2 40	2 40	2 35	2 35	2 50	2 60	2 60	2 60 <sub>m</sub>	2 70	2 80	2 80	15
2 40	2 45	2 45	2 40	2 40	2 60	2 75	2 65 <sub>m</sub>	2 50	2 50	F	F	16
2 35	2 40	2 45	2 55	2 65	2 90	3 00	2 90	2 95	2 90	3 00	3 00 <sub>m</sub>	17
2 60	2 60	2 60	2 30	2 45	2 35	2 20	F	F	2 45	2 40	2 50 <sub>m</sub>	18
2 45	2 30	2 35	2 45	2 50	2 60 <sub>m</sub>	2 60	2 50	2 65	2 80 <sub>m</sub>	3 00	2 80	19
2 45	2 60	2 55	2 65	2 80	2 90	2 90	3 00	3 00	2 95	2 90	2 95	20
2 35	2 35	2 45	2 65	2 85	2 80	2 95	∩2 75 <sub>m</sub>	F	F	F	F	21
2 50	2 35	2 50	2 50	2 85	2 90	2 80	∩2 70 <sub>m</sub>	∩2 65 <sub>m</sub>	2 75 <sub>m</sub>	2 75	∩2 90 <sub>m</sub>	22
C	C	C	2 55	2 85	2 95	2 85	∩2 85 <sub>m</sub>	F	F	F	2 65 <sub>m</sub>	23
2 60	2 45	2 50	2 55	2 60	2 70	2 75	∩2 70 <sub>m</sub>	2 65	2 75	2 85	2 80	24
2 60	2 65	2 70	2 80	3 00	3 00	∩3 00 <sub>m</sub>	2 80 <sub>m</sub>	F	2 75	∩2 60 <sub>m</sub>	2 40	25
2 75	2 55	2 55	2 60	2 60	2 75	2 95	3 00	2 95	3 00	2 65	2 55	26
2 50	2 35	1 95 <sub>m</sub> W	2 55	2 75	2 95	3 00	2 85	2 90	3 05	3 05	3 05	27
2 50	2 50	2 55	2 55	2 70	2 75	2 85	3 00	F	F	F	∩2 75 <sub>m</sub>	28
2 40	2 45	2 55	2 60	2 75	2 80	3 00	3 05	3 05	3 05	∩2 75 <sub>m</sub>	2 60	29
2 55	2 65	2 65	2 70	2 80	2 95	3 00	3 15	3 20	3 05	2 95	2 85	30
2 30	2 40	2 40	2 50	2 80	2 90	3 30	3 20 <sub>m</sub>	3 30	∩3 20 <sub>m</sub>	3 10	3 00	31
30	30	30	30	30	31	31	30	25	25	23	25	Count
2 50	2 45	2 50	2 55	2 70	2 85	2 95	2 90	2 90	2 75	2 80	2 85	Median
2 50	2 45	2 50	2 55	2 70	2 80	2 90	2 90	2 90	2 85	2 80	2 80	Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds.

Characteristic fo F2  
 Unit : Mc  
 Month August 1961

TABLE 12  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hours	00	01	02	03	04	05	06	07	08	09	10	11
1	4.5	3.8	2.8 <sub>F</sub>	2.3 <sub>F</sub>	1.9 <sub>F</sub>	B	4.7	7.1	8.3	8.0	8.2	8.2
2	5.9	4.2	3.4	F	2.6	A	5.3	7.1	8.1	9.5	8.8	7.5
3	5.5	4.5	F	F	2.7	2.7	4.8	7.0	8.3	9.0	9.0	9.2
4	F	F	F	F	F	F	5.4	7.2	7.9	9.1	9.0	9.8
5	u3.9 <sub>R</sub>	3.7	3.6	3.7	4.6	3.4	5.3	6.6	7.5	7.5	6.6	7.0
6	6.7	5.8	5.0	4.2	3.4	3.1	5.4	7.2	8.5	7.8	7.1	7.8
7	4.8	4.4	4.3	3.6	2.7	1.5	5.0	7.6	8.4	7.6	7.5	7.6
8	7.8	u6.2 <sub>s</sub>	3.9	2.4	E	E	4.9	7.7	8.2	7.1	6.6	6.9
9	4.8	4.3	u3.5 <sub>F</sub>	3.0	3.0	u2.1 <sub>F</sub>	C	8.0	8.2	7.7	7.5	7.4
10	7.4	6.9	6.2	5.9	4.7	3.2	5.9	8.4	9.1	9.0	8.2	7.8
11	FS	7.8 <sub>m</sub>	6.3 <sub>m</sub>	5.5	4.7	3.0 <sub>v</sub>	5.6	8.2	9.8	9.8	9.2	C
12	6.2	6.2	5.5	4.8	4.6	3.9	6.4	8.4	9.4	9.4	9.0	9.4
13	7.7	5.5	4.4	4.0	4.4	3.1	5.6	8.4	9.1	8.8	9.0	8.6
14	6.1	4.6	4.3	4.3	4.0	3.1	5.8	8.4	8.8	8.8	8.4	C
15	6.3	5.4	4.3	3.8	3.4	3.4	5.8	8.6	9.3	9.3	9.2	8.4
16	8.0	7.7 <sub>F</sub>	7.5	6.4	5.8	4.4	6.3	8.5	9.2	9.8	8.8	8.4
17	9.4	8.5	7.5 <sub>m</sub>	6.1	4.8	3.0	6.2	8.6	9.7	10.3	9.9	9.1
18	10.4	8.4	6.3	5.2	3.9	2.7	5.5	8.2	9.7	10.1	9.2	9.3
19	F	8.1	F	7.7	u7.1 <sub>F</sub>	5.3	6.1	8.5	9.4	9.8	9.0	8.6
20	8.8	8.4	6.5	5.5	4.4	3.5	6.0	8.6	10.0	C	C	8.8
21	F	F	F	F	F	F	6.9	8.7	9.8	10.4	10.3	9.4
22	6.7	u6.1 <sub>s</sub>	5.7	5.2	4.5	2.8	5.5	8.1	9.1	9.0	8.7	8.8
23	F	F	F	5.8	4.8	2.5	5.3	8.2	9.3	8.8	8.4	8.7
24	6.4	4.8	3.9	3.3	2.7	2.2	5.3	8.0	9.1	9.6	9.2	8.8
25	8.0	5.7	3.8	2.7	u1.9 <sub>R</sub>	E	4.8	7.4	9.0	9.3	8.9	8.6
26	5.7	5.4	5.5	4.5	3.0	u2.1 <sub>R</sub>	5.1	7.9	7.9	7.5 <sub>R</sub>	7.7	7.6
27	8.1	5.7	4.0	2.7	2.1 <sub>H</sub>	1.7 <sub>H</sub>	5.2	8.6	9.1	C	C	C
28	4.2	3.5	2.7	R	1.7	E	4.9	7.9	8.1	7.8	8.1	8.3
29	u5.7 <sub>s</sub>	5.3 <sub>F</sub>	4.8	4.0	3.3	2.3	5.2	7.1 <sub>s</sub>	7.7	7.1	7.5	7.5
30	5.3	4.6	3.9	2.5	1.9	E	5.1	7.7	9.1	9.7	10.4 <sub>H</sub>	9.3
31	3.8	2.9	3.1	2.6	2.2	2.1	5.7	8.1	9.0	10.1	10.8 <sub>R</sub>	10.7 <sub>R</sub>
Count	26	28	26	26	29	27	30	31	31	29	29	28
Median	6.2	5.4	4.3	4.1	3.4	2.7	5.4	8.1	9.1	9.1	8.9	8.6
Mean	6.5	5.7	4.7	4.3	3.6	2.9	5.5	7.9	8.9	8.9	8.6	8.5

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic fo F2  
Unit Mc  
Month August 1961

TABLE 12  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
8 5	8 8	8 9	9 7	9 2	9 3	10 3	11 5	10 8 <sub>F</sub>	7 5	6 4	6 7	1
8 9	9 4	9 7	10 2	10 4	10 4	10 5	9 5	8 4	8 5	7 4	7 3	2
9 6	10 0	9 5	9 1	8 6	8 6	9 1	9 2	F	F	F	F	3
8 8	8 9	9 8	9 6	10 2	10 8	10 9	11 8	9 2	6 7	6 0	4 8	4
7 3	7 7	7 8	8 2	7 8	7 7	9 1	9 1	8 4	7 3	C	7 7	5
8 2	9 0	9 3	S	10 7 <sub>S</sub>	10 4	11 9	10 6	8 5	8 1	8 1	8 4	6
7 9	8 4	9 0	9 0	8 8	9 0	10 6 <sub>S</sub>	9 3	10 0	8 7	8 5	8 0	7
7 4	8 2	8 9	A	9 5	11 4	11 2	10 7	8 7	6 9	5 9	5 2	8
7 9	8 4	9 2	9 8	10 2	9 7	9 8	10 0	10 4	9 9	8 9	8 3	9
7 9	8 0	9 0	10 7	11 7 <sub>S</sub>	11 8	11 4	10 5	10 4 <sub>F</sub>	10 2 <sub>F</sub>	9 6	9 4	10
8 8	9 0	9 0	C	10 5	12 2 <sub>S</sub>	12 0 <sub>S</sub>	10 4	9 4	9 2 <sub>S</sub>	8 4	6 9	11
9 8	9 9	10 4	11 3	11 8	12 3	12 5	11 0	10 4	9 6	9 2	9 1	12
8 8	9 0	9 8	9 8	10 2	10 8	11 4	10 8	10 6	10 4	10 0	8 8	13
8 8	9 5	9 7	10 4	11 0	13 0	11 3	10 1	9 9	9 5	8 5	6 7	14
8 1	8 8	A	10 7	11 3	11 9	11 2	10 5	10 6	10 5	9 4	8 8	15
8 6	8 9	9 0	9 0	9 6	10 4	11 2	9 7	F	F	9 0	9 4	16
9 5	9 5	9 3	8 8	8 8	9 8	10 2	9 8	9 5	F	F	8 7	17
9 5	9 7	10 0	10 9	11 0	11 0	11 3	11 3	F	F	F	8 7	18
8 9	8 7	9 7	9 9	10 6	10 6	9 9	9 6	9 8	9 6	9 4	9 6	19
8 8	9 2	10 0	10 4	10 1	11 0	10 4	9 4	9 4	9 6	9 4	9 0	20
8 9	9 0	9 8	10 4	11 0	12 3	12 0	10 9	9 7	9 5	8 8	18 0 <sub>S</sub>	21
9 0	10 3	10 4	10 8	10 8	11 4	11 7 <sub>S</sub>	11 5	10 9 <sub>S</sub>	F	F	8 7 <sub>F</sub>	22
C	C	C	11 0	11 4	11 1	11 6	11 0	9 5	8 7	7 9	7 3	23
8 6	9 0	9 1	9 3	9 5	10 1	10 4	9 5	9 5	8 3	7 5	7 5	24
8 6	9 1	9 7	10 5	11 6	11 2	11 5	10 8	10 6 <sub>S</sub>	F	9 8	7 0	25
7 9	8 1	8 1	8 5	8 9	10 0	10 5	10 2 <sub>S</sub>	9 4	9 1	8 9	10 1 <sub>S</sub>	26
C	C	9 7	11 1	11 7	10 5	10 5 <sub>S</sub>	9 1	9 2	8 9	6 6	4 7	27
8 7	9 3	9 4	10 5	11 0	11 6	11 4	10 3	9 6	8 7	F	10 3 <sub>S</sub>	28
7 7	7 7	7 7	8 0	8 5	9 1	9 4	9 0	8 3	7 7 <sub>F</sub>	10 0 <sub>F</sub>	10 7 <sub>F</sub>	29
9 7	A	10 7	10 8	12 5	12 0 <sub>S</sub>	10 7 <sub>S</sub>	9 0	7 0	5 3	10 5 <sub>S</sub>	4 4	30
10 5	10 0	9 7	9 8	10 0	9 8	9 1	9 0	8 3	9 5	10 1	10 2 <sub>S</sub>	31
29	28	29	28	31	31	31	31	28	25	25	30	Count
8 8	9 0	9 5	10 2	10 2	10 8	10 9	10 1	9 5	8 9	8 5	7 8	Median
8 7	9 0	9 4	9 9	10 2	10 7	10 8	10 1	9 4	8 7	8 2	7 5	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic fo F2  
 Unit Mc  
 Month August 1961

TABLE 12--(Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	4.2	3.0	u2.5 <sub>v</sub>	u2.0 <sub>v</sub>	F	2.9 <sub>v</sub>	6.3	7.8	8.1	7.8	8.4	8.5
2	5.0	3.7	3.1	F	A	3.0	6.5	8.0	8.6	8.8	8.9	8.0
3	4.8	4.3	F	F	3.0	3.2	6.2	7.4	8.9	8.8	9.1	9.5
4	F	F	F	F	F	u3.4 <sub>v</sub>	7.0	7.7	8.9	9.3	9.5	9.4
5	3.8	3.6	3.5	u5.3 <sub>v</sub>	4.2	3.5 <sub>v</sub>	6.2	7.1	7.8	7.0	6.8	7.2
6	6.4	5.3	4.7	3.8	3.1	3.8	6.6	8.0	8.9	7.6	7.4	7.8
7	4.6	4.3	4.2	3.4	2.1	3.0	6.3	8.3	8.0	7.6	7.7	7.7
8	6.9	u5.2 <sub>s</sub>	3.1	1.9	E	u3.0 <sub>s</sub>	6.5	8.2	8.2	6.6	6.8	7.2
9	4.6	3.7	u3.3 <sub>v</sub>	3.0	2.5	3.2	6.7	8.5	8.0	7.4	7.3	7.7
10	7.0	6.5	u6.2 <sub>s</sub>	5.5	3.8	3.9	u7.3 <sub>s</sub>	8.8	9.9	8.8	7.9	7.9
11	FS	6.6 <sub>s</sub>	6.1 <sub>s</sub>	5.4	4.1	3.6	7.2	9.1	9.7	9.7	9.0	8.8
12	6.2	5.6	5.1	4.8	4.6	4.4	7.8	9.0	9.8	9.1	9.0	9.7
13	6.8	4.9	4.1	4.0	4.3	3.7	7.4	9.0	9.1	8.7	9.0	8.6
14	5.2	4.6	4.3	4.2	3.5	3.8	7.0	8.6	8.6	8.5	C	8.6
15	6.0	4.8	3.9	3.3	3.6	3.8	7.3	9.0	9.4	9.3	8.8	8.2
16	7.7	7.7	7.0	5.9	5.3	4.2	7.7	9.0	9.4	9.4	8.6	8.7
17	9.3	8.0	6.5	5.4	3.6	3.8 <sub>v</sub>	7.4	9.5	9.9	10.1	9.1	9.1
18	9.8	7.0	5.7	4.6	3.3	3.9	7.0	9.0	10.0	10.1	9.3	9.4
19	8.2	8.3	7.8	F	6.4	4.6	7.3	9.2	9.9	9.7	8.7	8.8
20	8.6	7.5	5.9	4.8	4.1	3.9	7.4	9.5	9.4	C	C	8.8
21	F	F	F	F	F	5.6 <sub>v</sub>	8.1	9.0	10.4	10.2	10.0	8.9
22	6.4	6.1	5.4	4.9	3.8	3.3	7.1	8.9	9.0	9.0	8.9	8.7
23	F	F	6.1	5.0	3.6	3.5 <sub>H</sub>	6.9	9.0	9.1	8.4	8.6	C
24	5.3	4.3	3.7	3.1	2.5	3.2	6.6	8.7	9.3	9.6	9.0	8.5
25	7.0	4.6	3.1	2.3	E	3.1	6.4	8.6	9.0	9.1	8.7	8.5
26	5.7	5.7	5.0	3.6	2.7	3.2	6.6	7.7	7.8 <sub>H</sub>	7.5	7.8	7.7
27	6.9	4.7	3.3	2.4	2.0	3.1	6.7	8.7	8.9	C	C	C
28	4.0	3.1	2.3	u1.7 <sub>s</sub>	E	3.0	6.4	7.7	7.8	8.2	8.0	8.5
29	F	5.0	4.4	3.8	2.8	3.0	u6.5 <sub>s</sub>	7.6	7.5	7.4	7.5	7.7
30	5.1	3.9	3.3	2.1	1.8	3.0	6.4	8.8	9.5	9.9	9.5	9.5
31	3.3	A	2.8	u2.5 <sub>s</sub>	2.2	3.4 <sub>H</sub>	u7.3 <sub>s</sub>	8.5	10.1	10.7	11.1 <sub>H</sub>	10.2
Count	26	27	28	26	27	31	31	31	31	29	28	29
Median	6.2	4.9	4.2	3.8	3.3	3.4	6.9	8.7	9.0	8.8	8.7	8.6
Mean	6.1	5.3	4.5	3.8	3.5	3.5	6.9	8.5	9.0	8.8	8.6	8.5

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic fo F 2  
Unit Mc  
Month August 1961

TABLE 12(Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2° N  
Longitude 77 5° E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
8 5	8 7	9 7	9 5	9 5	9 6	11 2	10 9	8 5	6 8	6 2	7 0	1
9 1	9 4	9 7	10 2	10 1	10 8	10 3	8 8	8 2	7 9	7 4	6 5	2
9 7	9 6	9 4	8 5	8 8	8 7	9 2	9 5	F	F	u8 2 <sub>F</sub>	F	3
8 7	9 2	9 7	9 9	10 7	11 0	11 6	11 2	8 1	6 7	C	4 5	4
7 4	7 9	8 0	7 9	7 6	8 5	9 3	8 8	7 8	7 1	u7 4 <sub>s</sub>	7 6	5
8 7	9 3	9 4	u9 0 <sub>s</sub>	9 5	11 3	11 6	9 4	8 1	7 9	u7 2 <sub>s</sub>	5 5	6
8 0	8 6	9 0	8 8	8 8	9 2	9 3	u10 0 <sub>s</sub>	9 4	8 0	8 3	8 0	7
7 9	8 4	8 6	A	10 3	11 4	11 2	9 7	7 7	6 5	5 8	u5 0 <sub>s</sub>	8
8 0	8 6	9 4	10 2	9 8	9 8	10 0	10 0	10 4	u9 8 <sub>s</sub>	8 3	7 6	9
7 9	8 6	9 6	11 2	11 9	C	11 0	9 8	F	u9 1 <sub>s</sub>	10 0	FS	10
9 0	8 8	C	10 2	11 4	13 0	11 4	9 5	9 4	9 0	u7 4 <sub>s</sub>	6 2	11
9 8	10 0	10 4	11 6	12 2	12 6	11 6	10 6	10 0	9 4	9 0	8 6	12
8 9	9 4	9 8	10 2	10 6	11 2	11 4	10 6	10 3	10 7	9 0	7 5	13
9 0	9 7	10 0	10 6	12 0	12 8	10 6	9 8	10 0	9 1	7 4	6 3	14
8 6	9 5	9 6	11 0	11 7	11 8	10 8	10 4	11 0 <sub>s</sub>	9 6	9 2	8 5	15
8 7	9 2	9 0	9 2	10 0	11 0	10 8	8 9	F	8 6	8 9	9 7	16
9 6	9 7	8 8	8 9	9 0	10 1	10 3	9 8	F	k	7 7	9 8	17
9 6	9 8	10 3	10 9	10 9	11 2	12 0	11 3	F	F	F	F	18
8 7	9 4	9 8	10 1	10 8	10 4	9 8	S	9 5	9 8	9 1	9 0	19
C	9 6	10 3	10 2	10 6	11 0	9 6	9 2	9 6	9 4	9 4	F	20
8 8	9 3	10 2	10 7	11 5	12 4	11 6	10 1	9 7	9 4	8 2	u7 2 <sub>s</sub>	21
9 5	10 6	10 8	10 9	11 0	11 6	12 0	10 6	F	9 4 <sub>F</sub>	9 0 <sub>F</sub>	8 5	22
C	C	C	11 6	11 0	11 4	11 6	10 3	8 9	8 4	7 9	6 9	23
8 8	9 1	9 1	9 4	9 5	10 0	10 0	9 5	9 0	7 9	7 5	7 6	24
9 0	9 3	10 0	11 1	11 9	10 7	11 5	u10 0 <sub>s</sub>	F	u9 6 <sub>s</sub>	F	5 8	25
7 9	8 0	8 3	8 6	9 5	10 2	10 5	9 8	9 1	9 4	8 4	8 2	26
C	C	10 6	11 7	11 1	10 1	9 3	9 0	9 2	8 1	5 2	4 2	27
9 0	9 5	9 7	10 9	11 6	u11 8 <sub>s</sub>	10 8	u9 4 <sub>s</sub>	9 3	F	6 5	5 9	28
7 8	7 5	7 8	8 3	8 7	A	9 5	8 7	7 9	7 7 <sub>F</sub>	6 4	5 3	29
10 0	10 6	10 5	11 3	12 9	10 9	9 5	8 1	6 0	u4 9 <sub>s</sub>	4 7	4 3	30
10 6	10 0	9 9	9 8	9 9	9 4	9 1	8 6	9 0	u9 7 <sub>s</sub>	u9 7 <sub>s</sub>	8 9	31
28	29	29	30	31	29	31	30	24	27	28	27	Count
8 8	9 3	9 7	10 2	10 6	11 0	10 8	9 8	9 2	9 0	8 0	7 2	Median
8 8	9 2	9 6	10 1	10 5	10 8	10 6	9 7	9 0	8 5	7 8	7 0	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic fo F1  
 Unit Mc  
 Month August 1961

TABLE 13  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5									L	L	L	L
6								L	L	L	L	L
7								L	L	L	L	L
8								L	L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11										L	L	C
12								L	L	L	L	L
13								L	L	L	L	L
14									L	L	L	C
15								L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18							L	L	L	L	L	L
19								L	L	L	L	L
20								L	L	C	C	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	4.9	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	C	C	C
28								L	L	L	L	L
29								L	LH	LH	L	L
30							L	L	L	L	L	L
31								L	L	L	L	L
Count											1	.
Median												
Mean												

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fo F1  
Unit Mc'  
Month August 1961

TABLE 13  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
4 7	L	L	L	L	L							1
A	L	L	L	L	L							2
4 6	L	L	L	L	L							3
L	L	L	L	L	L							4
4 8	4 7	L	L	L	L							5
L	4 8	L	L	A	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	C	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	A	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
C	C	C	L	L	L	L						23
L	L	L	L	L	L		L					24
L	L	A	L	L	A							25
L	L	L	L	L	L							26
C	C	L <sub>H</sub>	L	L	L							27
L	L	A	L <sub>H</sub>	L <sub>H</sub>	L							28
L <sub>w</sub>	L	L	L	L	L							29
L	A	L	L	L	L							30
L	L <sub>w</sub>	L	L	L	L							31
3	2											Count
												Median
												Mean

Sweep, 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic . fo F1  
Unit . Mc  
Month August 1961

TABLE 13 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude . 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2							L	L	L	L	L	4.8
3								L	L	L	L	L
4							L	L	L	L	L	L
5								L	L	L	L	L
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9								L	L	L	L	L
10							L	L	L	L	L	L
11										L	L	L
12							L	L	L	L	L	L
13							L	L	L	L	5.1	L
14								L	L	L	C	L
15							L	L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	L	L	L	L
20							L	L	L	C	C	L
21								L	L	L	L	L
22							L	L	L	L	L	L
23							L	L	L	L	L	C
24							L	L	L	L	5.0	L
25							L	L	L	L	L	L
26							L	L	L	L	L	L
27							L	L	L	C	C	C
28							L	L	L	L	L	L <sub>h</sub>
29							L	L	L <sub>h</sub>	L	L	L
30							L	L <sub>h</sub>	L	L	L	L
31							L	L	L	L	L	4.8
Count											2	2
Median												
Mean												

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic : fo F1  
 Unit Mc  
 Month : August 1961

TABLE 13 (Contd.)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10°2'N  
 Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
L	L	L	L	L	L							1
4.7	L	L	L	3.7	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
4.7	L	L	L	L	L							5
L	L	L	A	L								6
L	L	L	L	L								7
L	L	L	A	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	O	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	A	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
O	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
O	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
O	L	L	L	L	L							27
L	L	L	L	L <sub>R</sub>	L							28
L <sub>R</sub>	L	L	L	L	L							29
A	L	L	L	L	L							30
L <sub>R</sub>	L	L	L	L	L							31
2				1								Count
												Median
												Mean

Sweep 1 0 Mc. to 25 0 Mc. in 27 seconds.

Characteristic fo E  
Unit : Mc  
Month : August 1961

TABLE 14  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1							—	A	A	A	A	A
2							1.9	2.7	A	A	A	A
3							—	A	A	A	A	A
4							1.8	A	A	A	A	A
5							1.7 <sub>H</sub>	A	A	A	A	A
6							1.7	A	A	A	A	A
7							1.7 <sub>H</sub>	A	A	A	A	A
8							1.7 <sub>H</sub>	A	A	A	A	A
9							C	A	A	A	A	A
10							—	A	A	A	A	A
11							2.3	F	A	A	A	A
12							1.4	A	A	A	A	A
13							—	A	A	A	A	A
14							1.9	A	A	A	A	C
15							1.7	A	A	A	A	A
16							1.9	A	A	A	A	A
17							1.8	2.6	A	A	A	A
18							A	A	A	A	A	A
19							A	A	A	A	A	A
20							1.8	A	A	C	C	A
21							—	2.7	A	A	A	A
22							—	A	A	A]	A	A
23							A	A	A	A	A	A
24							1.9	A]	A	A	A	A
25							1.8 <sub>H</sub>	A	A	A	A	A
26							R]	A	A	A	A	A
27							1.7	A	A	C	C	C
28							R	A	A	A	A	A
29							1.7 <sub>H</sub>	A	A	A	A	A
30							1.8 <sub>H</sub>	2.7 <sub>H</sub>	A	A	A	A
31							—	R	2.9	A	A	1.9 7 <sub>F</sub>
Count							18	4	1			1
Median							1.8				..	
Mean							1.8					.

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic : fo E  
 Unit : Mc  
 Month : August 1961

TABLE 14  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10·2°N  
 Longitude : 77·5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A	A						4
A	A	A	A	A	A							5
												6
A	A	A	A	A	A							7
A	A	A	A	A	A	A						8
A	A	A	A	A	A							9
A	A	A	3·5	3·1	2·6							10
												11
A	A	A	C	R	2·7							12
A	A	A	A	A	A	A						13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
												16
A	A	A	A	A	2·7	A						17
A	A	A	A	A	..							18
A	A	A	A	A	A	A						19
A	A	A	A	A	A							20
												21
A	A	A	A	3·0	2·6							22
A	A	A	A <sub>1</sub>	A	A							23
A	C	C	R <sub>1</sub>	2·9	A	A						24
A	A	A	A <sub>1</sub>	A	A							25
												26
A	A	A	A <sub>1</sub>	A	2·4							27
C	C	3·5	A <sub>1</sub>	3·0	2·5 <sub>H</sub>							28
A	A	A	A	2·9 <sub>H</sub>	A <sub>1</sub>							29
A	A	A	A <sub>1</sub>	A	A <sub>1</sub>							30
												31
A	A	A	A	A <sub>1</sub>	A							Count
		1	1	5	6							Median
.		..	..	3·0	2·6							Mean
~		..		3·0	2·6	.						

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds



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Characteristic : fo E  
Unit Mc  
Month : August 1961

TABLE 14 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude : 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							A	A	A	A	A	A
2							2 3	2 9	A	A	A	A
3							A	A	A	A	A	A
4							2 3	A	A	A	A	A
5							A	A	A	A	A	A
6							A	A	A	A	A	A
7							u2 3 <sub>F</sub>	A	A	A	A	A
8							2 3	A	A	A	A	A
9							2 3	A	A	A	A	A
10							A	A	A	A	A	A
11							2 4	F	A	A	A	A
12							A	A	A	A	A	A
13							A	A	A	A	A	A
14							A	A	A	A	C	A
15							A	A	A	A	A	A
16							2 4	A	A	A	A	A
17							2 4	A	A	A	A	A
18							A	A	A	A	A	A
19							A	A	A	A	A	A
20							A	A	A	C	C	A
21							2 3	2 8	A	A	A	A
22							A	A	A	A	A	A
23							A	A	A	A	A	C
24							A	A	A	A	A	A
25							A	A	A	A	A	A
26							A	A	A	A	A	A
27							2 3 <sub>u</sub>	A	A	C	C	C
28							A	A	A	A	A	A
29							A	A	A	A	A	A
30							2 3 <sub>u</sub>	A	A	A	A	A
31							2 2 <sub>u</sub>	2 8 <sub>u</sub>	A	A	A	A
Count							12	9				
Median							2 3					
Mean							2 3					

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

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Characteristic : fo E  
 Unit : Mc  
 Month . August 1961

TABLE 14 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
												6
A	A	A	A	A	A							7
A	A	A	A	A	A				A			8
A	A	A	A	A	A							9
A	A	A	A	A	2.9							10
A	A	C	3.4	A	R							11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
									2.1			16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	A	A	A	A							19
C	A	A	A	A	A							20
												21
A	A	A	A	A	2.8				2.2			22
A	A	A	A	A	A				A			23
C	C	C	3.2	A	A				A			24
A	A	A	A	A	A				A			25
												26
A	A	A	A	A	A				2.1M			27
C	C	3.4	3.1M	2.7M	2.0M				2.0M			28
A	A	A	A	A	A							29
A	A	A	A	A	A							30
A	A	A	A	A	A							31
-----												Count
		1	3	3	4							Median
-----												Mean
..												Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic : fo Es  
Unit : Mc  
Month : August 1961

TABLE 15  
Ionospheric Data  
75°E Mean Time

- Latitude : 10 2°N  
Longitude : 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	8.2	—	3.6	—	4.0	—	5.0	9.4	11.2	10.8	10.0	10.0
2	6.4	4.6	3.5	3.8	6.4	8.2	G	G	9.0	9.6	17.0	11.6
3	4.4	2.2	—	—	4.4	—	4.8	6.6	9.4	10.4	8.0	7.4
4	5.4	3.0	4.0	5.0	9.0	—	G	9.0	9.0	8.0	8.6	10.0
5	—	5.0	5.0	—	—	—	G	9.0	10.0	11.0	12.6	12.8
6	2.4	—	1.8	—	—	—	4.6	8.0	10.8	11.6	12.6	13.0
7	—	—	—	—	—	—	G	7.0	10.8	12.0	12.8	13.0
8	—	—	—	—	—	—	2.5	7.4	8.8	11.4	12.7	12.2
9	9.4	—	—	3.6	—	—	C	6.5	11.6	11.8	12.8	12.6
10	—	—	—	—	—	—	7.2	8.4	11.8	12.2	12.6	11.4
11	—	—	—	—	—	—	—	7.0	9.0	11.0	13.0	C
12	—	—	—	—	—	—	4.8	6.8	9.4	10.6	12.6	12.2
13	—	—	—	5.7	—	—	4.4	8.6	8.8	11.0	12.0	11.8
14	6.6	5.4	—	—	—	—	G	8.0	9.2	11.4	12.4	C
15	—	2.8	—	3.6	—	—	5.4	10.0	11.4	10.4	12.2	12.6
16	4.2	—	—	—	—	—	G	7.8	10.8	11.7	12.5	12.4
17	2.0	—	—	—	—	—	G	8.6	9.8	12.4	12.4	12.4
18	—	—	—	—	2.6	—	6.0	8.2	12.2	11.4	13.0	13.2
19	3.8	—	4.8	4.2	—	—	7.0	7.8	9.7	10.4	12.8	12.0
20	—	—	—	—	—	—	G	9.0	10.8	C	C	11.7
21	—	—	—	—	—	—	—	6.8	7.8	9.8	11.7	11.8
22	2.5	3.0	—	3.3	—	—	4.8	8.6	10.4	10.3	12.0	12.4
23	2.9	—	—	—	—	—	6.7	7.8	9.2	10.6	12.0	12.6
24	—	—	—	—	—	—	G	7.7	9.2	8.7	12.2	12.0
25	—	—	—	—	5.5	—	6.3	8.6	9.6	11.0	12.6	13.1
26	5.6	—	—	—	—	—	G	8.3	11.1	11.2	12.2	12.6
27	—	—	—	—	—	—	G	8.2	11.3	C	C	C
28	—	—	—	—	—	—	G	8.8	10.8	12.0	12.4	13.3
29	—	8	—	—	—	—	G	8.4	9.2	11.1	12.3	12.0
30	—	—	2.7	—	—	—	G	7.6	10.4	10.8	22.2	20.2
31	6.9	7.0	4.8	—	—	—	—	G	6.5	9.6	12.4	G
Count	14	8	8	7	6	1	27	31	31	29	29	28
Median	4.9	3.8	3.8	3.8	4.8	—	G	8.0	9.7	11.0	12.4	12.3
Mean	5.0	4.1	3.8	4.2	5.3	—	5.3	8.0	9.9	10.7	12.6	12.3

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

III

Characteristic : fo Es  
 Unit Mc  
 Month . August 1961

TABLE 15  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10°2'N  
 Longitude . 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
10 0	9 4	8 4	9 4	9 0	10 0	4 6	5 0	10 0	—	—	—	1
12 6	12 0	8 6	10 0	9 8	7 0	7 0	6 6	6 0	—	—	4 2	2
10 2	12 0	11 4	11 2	12 2	11 0	9 0	4 6	4 0	2 0	—	4 4	3
10 8	11 0	11 6	10 6	9 0	7 0	6 0	—	—	—	3 0	—	4
12 6	12 0	12 0	11 0	10 4	7 6	3 4	7 0	7 0	2 5	C	3 6	5
17 0s	12 6	14 0	20 6	21 6	7 6	—	2 4	2 0	1 7	1 6	—	6
13 6	12 4	12 8	12 8	11 0	10 8	6 6	8 2	17 0s	—	2 8	2 2	7
16 6	19 6	14 6	21 0	19 8	7 8	3 8	1 7	4 6	—	—	—	8
12 7	12 7	12 6	11 6	10 8	17 8s	6 0	—	4 0	—	—	—	9
12 8	12 6	12 4	7 4	G	G	—	—	—	—	—	—	10
12 6	11 4	12 0	C	G	G	3 6	6 8	6 8	6 6s	7 0	2 8	11
12 6	12 0	12 2	10 6	6 6	8 0	8 0	7 0	6 0	5 4	4 4	3 8	12
12 6	12 2	14 2	12 0	11 2	9 0	9 0	7 4	4 0	—	4 9	6 0	13
12 5	11 0	9 4	10 4	7 8	5 6	4 7	—	6 8	4 2	2 2	2 0	14
12 2	12 0	23 0	10 9	13 4	8 2	6 4	4 0	3 8	—	—	—	15
12 6	12 5	12 2	11 2	10 4	7 0	3 8	—	3 7	4 4	4 8	2 8	16
13 2	12 0	12 6	12 2	10 0	10 0	9 2	8 2	—	—	—	—	17
12 6	12 3	11 6	12 0	10 0	12 5	10 0	6 0	3 0	3 4	—	4 8	18
12 2	12 7	12 8	12 2	11 4	10 4	5 8	3 3	9 2	8 8	5 7	—	19
12 4	11 6	11 3	10 4	9 4	8 7	—	4 2	—	3 2	—	—	20
12 4	11 4	11 6	14 4	6 5	4 7	4 2	3 8	2 5	—	3 6	—	21
12 6	12 2	14 4	13 8	10 6	7 6	4 4	—	—	4 2	3 8	2 1	22
C	C	C	G	G	7 7	6 4	—	—	2 8	—	—	23
12 4	12 6	13 0	11 6	9 4	8 5	3 4	—	2 6	2 2	2 1	—	24
12 7	12 8	14 8	10 8	9 6	4 8	—	—	—	—	3 1	4 8	25
12 9	12 2	12 1	11 8	8 8	7 8	3 9	8 0	4 6	4 8	—	2 7	26
C	C	G	7 8	G	G	—	4 1	—	17 3s	—	—	27
12 4	13 6	15 0	7 8	6 9	3 0	—	S	17 6s	S	14 3s	3 8	28
13 2	12 6	12 6	10 8	11 6	18 4	12 8	8 4	2 6	4 1	2 0	—	29
19 8	23 0	11 0	8 8	7 8	6 9	4 8	11 0	—	—	—	3 0	30
11 8	12 1	11 6	11 2	10 6	7 8	—	S	S	S	3 9	3 3	31
29	29	30	30	31	31	24	20	21	16	16	16	Count
12 6	12 2	12 2	11 1	9 8	7 7	5 9	6 3	4 6	4 2	3 7	3 4	Median
12 9	12 7	12 6	11 6	10 6	8 3	6 1	5 9	5 1	4 3	3 7	3 5	Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic : fo Es  
 Unit Mc  
 Month August 1961

TABLE 15 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10°2'N  
 Longitude : 77°5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	3.5	5.0	—	3.0	2.3	—	7.0	8.6	11.4	10.6	10.0	9.4
2	4.4	6.6	2.8	4.6	8.2	6.4	G	G	8.6	10.0	12.0	10.0
3	3.8	—	—	—	7.0	3.6	8.0	7.6	10.0	11.8	12.0	9.0
4	—	3.0	3.2	7.0	9.0	—	G	8.0	9.0	12.4	7.6	9.0
5	7.0	6.0	—	—	—	—	7.2	9.4	10.8	12.0	12.4	12.6
6	2.0	—	5.4	3.8	—	—	7.8	9.8	10.8	13.0	16.8	21.2
7	—	—	—	—	—	—	5.0	8.6	11.8	14.8	13.0	12.6
8	—	—	—	—	—	—	7.0s	8.8	11.0	12.2	12.6	12.2
9	3.4	6.6	—	—	—	—	6.8	9.8	11.4	13.6	12.8	13.4
10	—	—	—	—	—	—	6.9	10.4	11.0	11.8	13.0	12.4
11	—	—	7.0s	—	—	—	—	8.6	12.0	12.4	12.4	12.6
12	—	—	—	—	—	—	4.1	9.6	10.0	13.0	12.8	12.8
13	—	—	5.2	6.4	—	—	6.5	9.2	10.7	12.0	12.4	12.6
14	—	4.4	—	—	—	—	6.4	8.8	10.8	12.4	—	12.0
15	—	—	3.2	3.0	10.4	—	6.4	9.4	12.2	11.8	13.4	12.4
16	—	—	—	—	—	—	G	8.6	10.8	11.5	12.0	13.0
17	—	—	3.2	—	—	—	G	8.4	10.2	12.0	12.2	12.2
18	—	—	—	—	—	—	6.5	10.0	12.2	12.8	12.3	12.7
19	2.4	5.8	3.8	2.3	—	—	7.4	9.0	10.4	12.2	11.8	12.4
20	—	—	—	—	—	—	8.0	9.3	10.5	C	C	12.3
21	—	—	3.3	—	—	—	G	7.8	9.1	11.7	11.8	12.6
22	2.7	—	3.3	4.4	—	—	6.8	8.8	9.2	12.0	12.8	13.2
23	3.0	—	—	—	—	—	7.2	9.0	10.4	11.6	12.7	C
24	—	—	—	—	—	—	5.6	8.7	9.2	11.6	12.6	12.8
25	—	—	—	—	—	—	8.4	9.0	10.3	11.6	12.4	12.6
26	6.9	—	—	—	—	—	7.2s	10.4	11.4	12.6	12.0	12.6
27	—	—	—	—	—	—	G	8.8	10.6	C	C	C
28	—	—	—	—	—	—	8.0	9.2	11.8	12.8	12.8	12.6
29	7.6s	7.5s	—	—	—	—	7.8	8.8	10.3	12.2	12.4	12.4
30	—	—	—	1.9	—	—	3.5	8.8	10.5	16.8	19.8	22.0
31	8.8	6.8	—	—	—	—	G	G	9.7	12.6	12.1	10.6
Count	12	9	10	9	5	2	30	31	31	29	28	29
Median	3.6	5.8	3.2	3.8	8.2	—	6.6	8.8	10.6	12.2	12.4	12.6
Mean	4.4	5.5	3.6	4.0	7.4	—	6.8	9.0	10.6	12.4	12.6	12.7

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic fo Es  
 Unit Mc  
 Month August 1961

TABLE 15 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
9 8	10 2	8 6	10 8	9 0	8 0	4 0	9 0	6 4	—	—	3 0	1
12 0	11 0	10 8	10 0	8 8	5 0	7 0	3 8	4 6	7 8	—	7 6	2
10 0	11 6	11 2	10 6	10 4	7 6	6 0	—	4 0	—	5 0	7 0	3
11 0	12 0	11 4	9 4	8 0	7 0	4 6	—	—	—	—	—	4
12 4	12 4	11 4	11 0	8 6	3 0	5 0	9 1	6 6	2 5	2 8	4 6	5
12 2	12 2	19 0	21 6	11 6	3 6	1 7	2 4	1 9	—	—	—	6
12 4	12 0	12 0	11 2	9 6	v9 0s	7 6	v7 0s	2 4	—	—	2 0	7
12 8	16 4	12 6	22 6	8 8	7 8	2 2	5 0	4 2	—	—	—	8
13 6	12 6	12 0	10 6	8 6	6 0	4 0	—	—	—	—	—	9
13 4	13 0	11 6	8 0	G	—	—	—	—	—	1 9	v4 2s	10
13 0	12 4	G	G	7 8	G	4 8	v6 2s	v7 4s	v6 8s	7 0	2 7	11
12 2	12 7	17 0	12 3	9 8	8 0	8 4	5 6	—	—	5 0	7 0	12
12 2	9 0	11 1	9 2	6 6	5 8	4 6	3 8	4 6	3 5	2 0	—	13
13 8	12 0	22 5	8 0	8 2	8 0	4 2	—	v4 0s	—	—	2 0	14
12 6	12 7	12 2	10 8	8 2	4 6	—	4 0	—	4 6	4 6	3 0	15
13 4	12 4	11 4	10 8	9 0	15 0	9 4	4 4	—	—	9 6	—	16
12 4	11 8	11 2	10 2	11 0	12 5	8 8	4 0	2 8	2 2	5 0	4 8	17
12 7	11 2	11 6	11 6	10 4	8 4	3 7	5 2	7 0	4 1	5 8	—	18
G	11 4	10 7	10 8	8 8	v6 4s	3 8	2 8	—	3 8	2 2	—	19
12 6	11 6	11 6	7 4	G	G	5 4	2 9	—	—	4 3	—	20
14 0	13 0	11 0	11 6	9 2	8 8	2 5	—	9 2	4 4	3 6	—	21
G	G	G	6 1	6 5	7 0	4 6	—	—	—	—	—	22
13 4	12 6	11 4	9 4	7 6	9 7	9 4	9 8	2 0	2 1	—	—	23
12 8	22 0	10 4	9 6	6 6	5 6	—	—	—	2 6	3 1	8 6	24
12 9	12 6	12 0	10 4	6 4	G	6 2	8 8	v6 8s	—	2 8	—	25
G	G	G	G	G	G	—	2 2	—	S	—	—	26
13 4	12 6	12 0	7 8	G	G	5 2	4 6	S	v4 2s	v3 8s	—	27
12 4	12 6	11 8	11 5	8 6	18 6	9 0	8 4	1 7	4 1	—	—	28
20 4	19 8	8 0	8 7	7 4	v5 8s	6 8	4 8	—	—	3 1	—	29
11 6	11 7	11 0	10 6	9 6	S	S	2 7	3 9	3 8	3 3	2 0	30
27	29	29	31	31	28	26	23	18	15	19	13	Count
12 6	12 4	11 4	10 4	8 6	6 7	4 9	4 6	4 1	4 1	3 6	4 2	Median
12 8	12 8	12 1	10 7	9 0	7 6	5 4	5 0	4 4	4 1	3 8	4 5	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fb Es  
Unit Mc  
Month August 1961

TABLE 16  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	2 1	—	1 7	—	—	—	1 8	2 6	3 0	3 4	3 7	4 0
2	2 1	2 3	1 7	1 8	1 8	A	G	G	3 0	3 4	4 0	3 8
3	2 5	2 0	—	—	—	—	1 7	2 6	3 0	3 4	3 5	3 8
4	2 2	1 8	2 0	2 0	1 5	—	G	2 8	3 1	3 4	3 6	3 8
5	—	2 0	1 4	—	—	—	G	2 6	3 1	3 4	3 6	3 7
6	2 0	—	1 6	—	—	—	1 9	2 7	3 0	3 4	3 6	3 7
7	—	—	—	—	—	—	G	2 7	3 1	3 5	3 6	3 8
8	—	—	—	—	—	—	1 8	2 7	3 2	3 5	3 7	3 9
9	2 2	—	—	1 2	—	—	G	2 7	3 2	3 6	3 8	3 9
10	—	—	—	—	—	—	2 0	2 8	3 7	3 6	3 7	4 0
11	—	—	—	—	—	—	—	2 8	3 2	3 6	3 8	C
12	—	—	—	—	—	—	2 0	2 7	3 2	3 6	3 8	4 0
13	—	—	—	1 8	—	—	1 9	2 7	3 2	3 9	3 8	4 0
14	1 9	1 7	—	—	—	—	G	2 8	3 2	3 6	3 8	C
15	—	1 5	—	1 7	—	—	1 9	2 8	3 2	3 5	3 8	3 9
16	2 4	—	—	—	—	—	G	2 8	3 2	3 6	3 8	3 9
17	—	—	—	—	—	—	G	G	3 2	3 6	3 8	4 0
18	—	—	—	—	—	—	1 9	2 6	3 2	3 6	3 8	4 0
19	—	—	1 9	1 5	—	—	2 0	2 8	3 2	3 6	3 8	3 9
20	—	—	—	—	—	—	G	2 7	3 2	C	C	3 9
21	—	—	—	—	—	—	—	2 7	3 2	3 6	3 8	3 8
22	—	1 5	—	1 3	—	—	2 1	2 7	3 2	3 6	3 7	4 0
23	1 7	—	—	—	—	—	1 8	2 7	3 2	3 5	3 6	3 9
24	—	—	—	—	—	—	G	2 8	3 2	3 4	3 6	3 8
25	—	—	—	—	—	—	—	2 7	3 1	3 4	3 6	3 8
26	1 9	—	—	—	—	—	G	2 7	3 1	3 5	3 6	3 7
27	—	—	—	—	—	—	G	2 5	3 0	C	C	C
28	—	—	—	—	—	—	G	2 6	3 2	3 5	3 5	3 7
29	—	—	—	—	—	—	G	2 5	3 0	3 4	3 6	3 8
30	—	—	—	1 5	—	—	G	2 7	3 1	3 5	3 9	5 0
31	1 8	1 7	1 6	—	—	—	—	G	3 1	3 5	3 7	G
Count	11	8	7	8	2		26	31	31	29	29	28
Median	2 2	1 8	1 7	1 6			G	2 7	3 2	3 5	3 7	3 9
Mean	2 1	1 8	1 7	1 6			1 9	2 7	3 2	3 5	3 7	3 9

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic fb Es  
Unit Mc  
Month August 1961

TABLE 16  
Ionospheric Data  
75°E Mean Time

Latitude . 10 2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
3.8	3.7	3.5	3.3	3.2	3.4	3.8	3.2	5.0	—	—	—	1
4.8	3.6	3.5	3.3	3.0	2.5	2.5	2.3	2.4	—	—	2.1	2
3.8	3.7	3.6	3.3	3.6	3.0	2.6	1.8	2.8	2.3	—	2.4	3
4.0	3.8	3.6	3.6	3.4	2.8	2.4	—	—	—	—	—	4
3.8	3.6	3.6	3.3	3.0	2.5	1.8	2.4	2.4	2.2	C	1.4	5
3.7	3.8	3.6	7.4	8.0	2.8	—	2.4	—	—	1.7	1.5	6
3.8	3.8	3.7	3.9	3.4	4.0	3.0	2.7	2.2	—	—	—	7
3.9	4.2	3.7	8.0	3.7	2.7	2.4	—	1.6	—	—	—	8
4.0	3.9	3.6	3.4	4.0	2.8	2.0	—	2.6	—	—	—	9
4.0	3.9	3.9	3.7	G	G	—	—	—	—	—	—	10
4.0	4.0	3.7	C	G	G	—	2.8	2.1	3.0	3.3	2.6	11
4.0	4.0	4.0	3.9	3.7	2.9	3.1	2.6	2.4	2.3	2.4	2.0	12
4.0	3.9	4.2	3.9	3.7	3.0	3.6	2.9	2.1	—	2.1	2.0	13
4.0	4.0	3.8	4.6	3.2	2.7	2.4	—	2.8	2.1	1.7	1.6	14
4.0	4.0	A	3.7	1.2	2.6	2.3	1.5	—	—	—	—	15
4.0	4.0	3.7	3.5	3.2	—	1.8	—	1.9	2.4	2.6	2.2	16
4.0	4.0	3.9	3.6	3.1	2.7	3.2	3.0	—	—	—	—	17
3.9	3.9	3.8	3.4	2.8	A	A	2.2	F	2.0	—	1.7	18
4.0	3.8	3.6	3.8	3.4	4.5	2.1	2.4	3.0	2.8	2.4	—	19
4.0	3.8	3.8	3.5	3.2	2.6	—	—	—	2.2	—	—	20
3.9	3.8	3.8	5.8	3.0	2.5	2.5	1.9	1.8	—	—	—	21
3.9	4.0	4.4	4.6	3.2	2.7	1.7	—	—	2.4	2.6	1.9	22
C	C	C	G	G	3.0	2.3	—	—	2.0	—	—	23
3.8	3.8	3.7	3.4	3.0	2.5	—	—	2.4	1.7	1.7	—	24
3.9	3.9	4.6	3.9	4.1	3.1	—	—	—	—	—	1.9	25
3.8	3.7	3.6	3.3	3.0	2.4	2.4	2.3	3.0	2.1	—	2.1	26
C	C	G	3.5	G	G	—	1.4	—	1.9	—	—	27
3.8	4.0	4.4	3.3	3.0	2.4	—	2.5	2.7	2.2	1.8	2.0	28
3.8	3.8	3.6	3.3	2.8	7.0	7.0	4.1	—	—	1.7	—	29
5.1	A	4.0	3.6	3.0	2.5	2.9	2.6	—	—	—	1.3	30
3.9	3.9	3.6	3.4	2.9	2.4	—	1.8	1.8	2.3	2.0	1.7	31
29	28	29	30	31	29	21	20	18	16	12	16	Count
3.9	3.9	3.7	3.6	3.2	2.7	2.4	2.4	2.4	2.2	2.2	2.0	Median
4.0	3.9	3.8	4.0	3.5	3.0	2.8	2.4	2.5	2.2	2.2	1.9	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds



Characteristic : fb Es  
 Unit Mc  
 Month : August 1961

TABLE 16 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude . 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	19	18	—	13	14	—	23	28	32	35	38	39
2	20	21	18	24	A	20	G	G	32	34	36	39
3	20	—	—	—	21	16	22	29	33	35	37	39
4	—	15	18	15	17	—	G	30	35	35	36	40
5	21	20	—	—	—	—	22	29	32	36	37	38
6	17	—	—	—	—	—	23	28	32	35	37	38
7	—	—	—	—	—	—	24	30	33	36	38	38
8	—	—	—	—	—	—	24	29	33	36	38	38
9	13	20	—	—	—	—	23	30	24	37	39	40
10	—	—	—	—	—	—	24	31	35	36	38	39
11	—	—	18	—	—	—	—	30	34	37	39	41
12	—	—	—	—	—	—	24	30	34	37	40	40
13	—	—	—	—	—	—	24	30	35	38	38	40
14	—	—	—	—	—	—	24	30	34	38	38	40
15	—	—	14	—	—	—	24	30	34	36	39	40
16	—	—	—	—	—	—	G	30	35	37	39	40
17	—	—	—	—	—	—	G	31	34	37	39	40
18	—	—	—	—	—	—	22	34	34	38	39	40
19	—	18	17	14	—	—	24	29	34	36	38	40
20	—	—	—	—	—	—	28	30	34	C	C	39
21	—	—	—	—	—	—	G	30	34	36	40	38
22	—	—	15	16	—	—	24	30	33	37	39	42
23	—	—	—	—	—	—	24	30	33	36	39	C
24	—	—	—	—	—	—	23	30	33	35	37	38
25	—	—	—	—	—	—	23	29	33	36	37	39
26	21	—	—	—	—	—	23	29	33	35	37	37
27	—	—	—	—	—	—	G	28	32	C	C	C
28	—	—	—	—	—	—	22	29	33	35	36	37
29	23	22	—	—	—	—	23	28	32	36	37	38
30	—	—	—	13	—	—	24	29	35	38	48	49
31	24	20	—	—	—	—	G	G	33	35	37	39
Count	9	8	6	6	3	2	30	31	31	29	28	29
Median	20	20	18	14	—	—	23	30	33	36	38	39
Mean	19	19	17	16	—	—	24	30	33	36	38	39

Sweep 10 Mc to 250 Mc. in 27 seconds.

Characteristic fb Es  
Unit . Mc  
Month August 1961

TABLE 16 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
3.7	3.6	3.5	3.2	3.6	2.6	2.8	1.0	3.8	—	—	1.7	1
3.8	3.6	3.5	3.2	2.9	2.2	1.8	1.8	2.9	2.0	—	2.2	2
3.9	3.6	3.4	3.2	3.1	2.3	2.0	—	2.7	—	2.4	2.4	3
3.9	3.7	3.5	3.7	3.0	2.6	1.8	—	—	—	—	—	4
3.7	3.6	3.4	3.2	2.7	2.2	2.3	2.6	2.0	2.9	2.4	1.9	5
3.8	3.7	4.0	7.2	3.7	2.7	—	2.1	—	—	—	—	6
3.8	3.8	4.0	3.8	1.4	3.8	3.0	2.5	—	—	1.7	1.6	7
4.1	3.8	3.9	3.8	3.6	2.1	—	2.5	1.5	—	—	—	8
4.0	3.8	3.6	3.4	3.0	2.6	1.8	—	—	—	—	—	9
4.0	3.9	4.2	3.4	G	—	—	—	—	—	1.7	—	10
4.0	1.0	G	G	3.0	G	2.6	2.4	2.9	3.0	2.6	2.5	11
4.0	4.0	4.1	3.6	3.0	3.0	2.4	2.4	2.4	2.3	2.0	—	12
4.0	4.2	4.8	4.0	3.8	3.0	3.2	2.4	—	—	1.9	1.9	13
4.0	3.9	4.8	3.7	3.0	2.1	2.3	2.1	1.8	—	1.8	—	14
4.0	3.9	6.5	3.4	2.8	2.5	1.7	—	—	—	—	—	15
4.0	3.8	3.7	3.4	2.9	2.2	—	1.5	—	1.6	2.5	2.5	16
4.0	3.9	3.6	3.4	2.9	2.4	3.0	1.6	—	—	2.2	—	17
3.8	3.8	3.7	3.4	A	A	3.3	1.8	1.5	F	2.0	1.6	18
4.0	3.8	3.6	3.5	3.2	3.1	1.7	2.8	2.4	2.2	2.0	—	19
G	3.8	3.6	3.3	2.9	2.9	1.4	1.6	—	2.0	1.8	—	20
3.9	3.8	4.8	3.2	G	G	2.1	1.7	—	—	—	—	21
4.2	4.3	4.0	4.0	3.3	2.2	1.6	—	—	2.6	2.2	—	22
C	C	C	—	2.9	2.9	1.7	—	—	—	—	—	23
3.8	3.8	3.6	3.2	2.8	2.1	—	2.2	1.9	1.7	—	—	24
3.9	4.0	3.9	3.5	3.9	2.5	—	—	—	—	—	3.2	25
3.8	3.6	3.5	3.8	2.9	G	1.9	2.0	3.0	—	2.1	—	26
C	C	G	G	G	G	—	—	—	—	—	—	27
3.8	3.7	3.2	3.3	G	1.9	2.2	2.4	2.7	1.8	1.9	—	28
3.8	3.7	3.6	3.2	5.7	5.8	1.9	1.6	1.6	1.9	—	—	29
7.9	5.0	3.7	3.3	2.9	2.2	2.7	2.0	—	—	—	—	30
3.8	3.7	3.5	3.2	2.8	2.1	1.6	1.8	2.3	1.9	1.8	1.8	31
28	29	29	29	30	28	21	22	15	12	17	11	Count
3.9	3.8	3.6	3.4	3.0	2.4	2.2	2.2	2.3	2.0	2.0	1.9	Median
4.0	3.9	3.9	3.6	3.3	2.5	2.4	2.2	2.3	2.1	2.1	2.1	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic : fmin  
 Unit : Mc  
 Month . August 1961

TABLE 17  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude . 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	16	12	16	13	12	B	15	15	18	22	21	23
2	17	18	13	11	15	14	16	19	20	23	22	23
3	14	13	15	14	16	14	14	16	16	18	20	20
4	15	15	11	11	E	22	15	15	23	23	21	22
5	17	15	12	14	14	12	13	14	19	22	23	24
6	E	17	13	11	14	16	13	13	16	18	20	21
7	12	12	10	10	E	10	E	19	17	19	20	24
8	17	15	16	15	E	E	12	14	18	21	20	20
9	14	11	13	10	11	10	C	12	16	19	20	23
10	12	13	14	15	16	14	16	18	21	23	24	25
11	20	20	16	15	14	16	13	15	17	22	20	C
12	19	17	15	14	12	12	11	14	17	21	22	22
13	15	16	15	13	15	14	14	16	18	24	23	24
14	17	16	18	15	13	13	11	13	18	22	25	C
15	17	14	13	E	17	13	12	13	16	21	20	21
16	20	22	17	18	14	14	16	17	19	23	24	27
17	14	20	18	14	13	13	15	17	20	22	22	22
18	14	15	17	12	14	13	12	14	17	20	22	22
19	16	14	13	12	14	14	11	16	18	23	21	24
20	21	19	17	14	14	13	14	17	20	C	C	27
21	14	14	15	16	14	13	18	17	21	23	24	25
22	15	15	19	13	12	14	15	16	21	24	25	25
23	14	16	18	17	15	13	13	15	18	21	23	23
24	22	20	15	13	12	13	13	17	19	22	24	26
25	17	17	16	16	14	E	14	15	17	22	23	24
26	18	19	19	16	14	14	14	16	17	21	22	23
27	17	15	16	14	12	12	14	13	16	C	C	C
28	13	12	13	14	12	E	14	16	26	24	23	26
29	23	23	20	16	16	14	13	16	18	21	20	23
30	18	16	14	12	12	E	15	17	21	24	24	25
31	14	14	12	16	E	12	20	19	21	24	26	27
Count	31	31	31	31	31	30	30	31	31	29	29	28
Median	16	15	15	14	14	13	14	16	18	22	22	24
Mean	16	16	15	14	14	14	14	15	19	22	22	24

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds

Characteristic fmin  
Unit · Mc  
Month August 1961

TABLE 17  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude · 77·5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 3	2 2	2 1	2 2	1 6	1 7	1 3	1 6	1 3	2 5	1 9	1 4	1
2 5	2 5	2 4	2 2	2 0	1 6	1 4	1 1	1 2	1 7	1 7	1 9	2
2 1	2 4	2 1	2 0	1 7	1 5	1 5	1 2	E	E	2 4	2 0	3
2 0	2 0	2 0	1 8	1 8	1 5	1 5	1 7	1 7	1 5	1 6	1 5	4
2 4	2 5	2 2	2 2	1 4	1 6	1 5	1 1	E	E	Q	1 1	5
2 3	2 0	2 2	1 8	1 6	1 6	2 5	E	E	E	1 2	1 4	6
2 3	2 3	2 2	2 4	1 8	1 3	1 1	E	1 3	2 0	E	E	7
2 3	2 3	2 0	1 9	1 8	1 3	1 3	E	1 4	1 5	1 3	1 5	8
2 3	2 4	2 3	2 2	1 6	1 3	1 4	1 6	1 7	1 7	1 3	1 1	9
2 6	2 5	2 4	2 1	2 2	1 7	1 7	1 2	1 2	1 6	1 8	1 7	10
2 5	2 4	2 2	C	2 1	2 2	2 1	1 5	1 4	1 5	1 1	E	11
2 4	2 4	2 3	2 0	1 8	1 2	E	1 5	1 7	1 6	1 7	1 8	12
2 5	2 4	2 3	2 0	1 8	1 7	1 7	1 5	1 8	2 2	2 0	1 6	13
2 4	2 5	2 3	2 2	1 9	1 2	1 8	1 7	1 3	1 1	1 2	E	14
2 5	2 4	2 2	2 3	1 6	1 8	1 4	E	1 6	1 8	2 0	1 9	15
2 5	2 6	2 3	2 2	1 8	1 6	1 3	1 1	1 5	1 3	E	1 0	16
2 3	2 5	2 3	2 2	1 8	1 7	1 5	1 3	1 8	1 8	1 9	1 5	17
2 6	2 5	2 2	2 2	1 8	1 6	E	E	E	E	1 6	1 5	18
2 6	2 3	2 3	2 0	1 7	1 1	1 3	1 2	1 6	1 1	1 7	1 9	19
2 7	2 6	2 4	2 1	1 7	1 6	1 7	1 3	1 3	1 2	2 0	1 7	20
2 6	2 3	2 2	2 0	2 1	1 7	1 5	1 2	1 5	1 5	1 5	1 3	21
2 5	2 3	2 2	2 0	1 8	1 4	1 2	1 4	1 4	1 5	1 9	E	22
C	C	C	2 4	2 2	1 4	1 3	1 5	1 4	1 7	2 0	1 9	23
2 6	2 5	2 2	2 1	2 0	1 9	1 8	1 5	E	E	1 1	1 6	24
2 3	2 3	2 5	2 0	1 8	1 6	1 8	1 4	1 2	1 2	1 3	1 3	25
2 3	2 4	2 3	2 2	1 8	1 8	1 2	E	1 3	1 6	1 4	1 3	26
C	C	2 5	2 1	2 1	1 7	1 4	1 1	1 6	1 6	1 5	1 2	27
2 6	2 5	2 4	2 2	1 9	1 7	2 0	1 3	1 4	1 2	1 6	1 5	28
2 5	2 3	2 3	2 0	1 6	1 4	1 6	1 5	1 4	1 5	1 3	1 4	29
2 5	2 3	2 3	2 2	2 4	1 9	1 4	1 4	1 4	1 6	1 3	1 3	30
2 6	2 7	2 4	2 2	1 9	1 7	1 5	1 3	1 6	E	1 1	E	31
29	29	30	30	31	31	31	31	31	31	30	31	Count
2 5	2 4	2 3	2 2	1 8	1 6	1 5	1 3	1 4	1 5	1 6	1 4	Median
2 4	2 4	2 3	2 1	1 9	1 6	1 6	1 4	1 5	1 6	1 6	1 5	Mean

Sweep 1 0 Mc, to 25 0 Mc, in 27 seconds

Characteristic fmin  
Unit Mc  
Month August 1961

TABLE 17 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	17	14	14	10	14	16	13	15	19	20	22	23
2	17	16	12	11	12	22	15	21	22	21	24	23
3	14	16	16	16	15	13	12	17	17	18	22	24
4	18	13	11	12	15	20	16	16	22	20	23	22
5	15	14	15	12	11	13	14	16	20	20	23	25
6	E	15	13	13	15	15	12	17	16	17	20	23
7	14	E	11	11	11	12	11	16	18	18	22	22
8	17	15	16	14	E	14	14	17	19	19	20	24
9	12	E	14	10	11	12	13	14	18	18	22	23
10	12	12	15	15	16	17	14	19	22	23	24	26
11	21	19	16	13	16	15	14	16	20	20	22	25
12	18	15	15	14	13	13	12	15	18	21	23	22
13	17	15	14	17	15	14	15	17	20	22	24	25
14	18	18	15	15	13	14	12	16	21	23	C	26
15	15	14	11	11	14	13	12	14	18	20	22	23
16	25	18	15	15	13	15	18	18	24	21	26	27
17	20	16	17	14	14	15	16	19	20	21	23	23
18	16	14	13	12	13	15	14	16	18	28	23	24
19	15	12	13	13	14	13	13	15	21	22	23	25
20	20	17	15	15	14	13	14	18	20	C	C	25
21	13	14	15	14	13	14	18	19	21	24	23	25
22	13	16	13	12	15	17	17	18	22	22	23	25
23	14	18	16	14	14	15	14	16	19	23	23	C
24	17	15	15	12	12	14	14	18	20	23	25	26
25	18	17	16	18	E	16	14	16	20	21	23	25
26	16	18	18	16	25	13	13	17	19	21	23	23
27	18	16	14	13	12	14	14	14	19	C	C	C
28	14	13	16	E	E	14	15	19	23	22	25	25
29	23	16	17	16	14	13	14	17	18	19	23	23
30	18	14	14	12	E	16	16	19	22	22	25	24
31	15	13	13	16	13	16	18	21	22	25	26	28
Count	31	31	31	31	31	31	31	31	31	29	28	29
Median	17	15	15	13	13	14	14	17	20	21	23	24
Mean	17	15	14	14	14	15	14	17	20	21	23	24

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic : fmm  
 Unit : Mc  
 Month August 1961

TABLE 17 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2 4	2 2	2 3	1 9	2 1	1 7	1 3	1 7	2 4	2 4	1 7	1 5	1
2 3	2 3	2 6	2 0	1 8	1 4	1 6	1 9	1 5	1 3	1 7	1 6	2
2 2	2 1	2 1	1 9	1 7	1 4	1 2	2 0	E	2 2	2 2	1 7	3
2 1	2 0	1 9	2 0	1 7	1 6	1 8	1 7	1 7	1 5	C	1 8	4
2 4	2 2	2 2	2 0	2 0	1 5	1 5	E	E	E	E	1 0	5
2 3	2 0	2 0	1 7	1 6	2 3	2 4	E	E	2 3	1.6	1 4	6
2 2	2 2	2 7	1 8	1 9	1 4	E	2 3	1 8	1 8	E	E	7
2 4	2 1	2 0	1 8	1 8	1 0	E	1 8	1 1	1 4	1 4	1 5	8
2 3	2 2	2 2	1 7	1 5	1 5	1 2	1 5	1 7	1 3	1 4	1 1	9
2 6	2 5	2 3	2 2	1 7	C	1 5	1 1	1 5	1 7	E	1 6	10
2 5	2 4	C	2 3	1 8	1 8	1 5	1 2	1 3	1 2	E	1 6	11
2 4	2 4	2 2	1 8	1 7	E	1 2	1 5	1 2	1 8	1 5	1 9	12
2 6	2 4	2 3	1 9	1 8	1 6	1 6	1 6	2 4	2 4	1 9	1 6	13
2 6	2 4	2 3	1 8	1 5	1 4	1 5	1 5	1 5	2 1	E	1 7	14
2 5	2 4	2 0	2 2	1 7	1 6	1 2	1 5	1 9	1 9	1 9	1 0	15
2 6	2 3	2 3	2 0	1 7	1 5	1 5	1 3	1 5	1 1	1 1	1 4	16
2 4	2 4	2 3	1 9	1 8	1 5	1 3	1 3	2 0	2 0	1 5	1 4	17
2 4	2 4	2 3	2 2	1 7	1 5	E	E	E	E	1 4	1 6	18
2 5	2 5	2 2	1 9	1 7	1 6	1 1	1 6	1 2	1 8	2 0	2 0	19
C	2 4	2 3	2 0	1 7	1 6	1 4	1 5	1 4	2 0	1 8	1 5	20
2 6	2 4	2 2	1 9	1 8	1 5	1 3	1 2	1 7	1 5	1.4	1 5	21
2 4	2 3	2 1	1 8	1 6	1 2	1 2	1 4	1 2	1 4	1 4	1 8	22
C	C	C	2 3	1.7	1 5	1 3	1 4	1 7	1 8	1 6	2 1	23
2 5	2 5	2 4	2 0	2 0	1 6	1 3	E	E	1 0	1 7	1 8	24
2 3	2 5	2.5	1 9	1 6	1 4	1 4	1 2	1 4	1 3	1 3	1 3	25
2 5	2 3	2 1	2.2	1 9	1 7	1 2	E	1 8	2 0	1 3	1 8	26
C	C	2 7	2 6	1 8	1 6	1 2	1 3	1 5	1 8	1 4	1 4	27
2 5	2 4	2 3	1 8	1 9	1 8	1 6	1 3	1 4	1 2	1 4	2 1	28
2 4	2 4	2 5	1 8	1 6	1 4	1 6	1 5	1 5	1 4	1 4	1 8	29
2 5	2 4	2 3	2 2	2 1	1 9	1 3	1 4	1 6	1 6	1 4	1 3	30
2 7	2 5	2 4	2 2	1 9	1 7	1 3	1 3	E	E	1 1	E	31
28	29	29	31	31	30	31	31	31	31	30	31	Count
2 4	2 4	2 3	1 9	1 7	1 5	1 3	1 4	1 5	1 6	1 4	1 6	Median
2 4	2 4	2 3	2 0	1 8	1 6	1 4	1 5	1 6	1 7	1 5	1 6	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic · h'F2  
Unit Km  
Month . August 1961

TABLE 18  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2°N  
Longitude . 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	360
2								L	L	310	L <sub>IR</sub>	400 <sub>IR</sub>
3								L	L	L	340	300 <sub>IR</sub>
4								L	L	300	L	340
5									L	320	L	450
6								L	300	L	L	380
7								L	L	L	L	L
8								L	L <sub>IR</sub>	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11										L	L	C
12								L	L	L	L	L
13								L	L	L	L	L
14									L	L	L	C
15								L	L	L	L	L
16												
17								L	L	L	L	L
18								L	L	L	L	L
19							L	L	L	L	L	L
20								L	L	C	C	L
21								L	L	L	L	L
22								L	L	L	L	L
23								L	L	L	L	L
24								L	L	L	315	L
25								L	L	L	L	L
26												
27								L	L	L	380	L
28								L	L	C	C	C
29								L	L	L	L	L
30							L	L	L	L	L <sub>IR</sub>	350
31								285	L	L	L <sub>IR</sub>	350
Count								1	1	3	3	8
Median												355
Mean												365

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'F2  
Unit . Km  
Month August 1961

TABLE 18  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
340	365	355	320	L	L							1
340	370	L	L	L	L							2
L	360	L	L	L	L							3
L	380	340	L	L	L							4
390	400	L	L	L	L							5
395	355	L	A	A	L							6
390	390	350	L	L	L							7
370	L	390	A	L	L							8
380	L <sub>M</sub>	L	L	L	L							9
L <sub>M</sub>	L	L	L	L	L							10
L	L	L	C	L	L							11
L	L	L	L	L	L							12
375	L	360	L	L	L							13
L	L	L	L	L	L							14
L	L	A	L	L	L							15
L	L	L	L	L	L							16
400	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
C	C	C	L	295	L	L						23
L	L	L	L	L	L	L						24
360	340	L	320	L	L							25
L	L	L	L	L	L							26
C	C	L	L	300	280							27
L	L	L	L	L	L							28
L	L	L	L	L	A							29
345	A	330	315	295	265							30
340	L	L	L	L	L							31
12	9	6	3	3	2							Count
370	365	350										Median
370	370	355										Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds.



Characteristic h' F2  
 Unit Km  
 Month August 1961

TABLE 18 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude . 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	
1								L	L	310	360	350	
2							L	L	L	370 <del>H</del>	L <del>H</del>	360 <del>H</del>	
3							L	L	310	L	320	320	
4							L	L	300	300	340	340	
5							..	L	L	L	L	400	
6							L	L	L	L	400 <del>L</del>	L <del>H</del>	
7							L	L	L	L	400	L	
8							L	L	355	L	L	L	
9							L	L	L	L	L	L	
10							L	L	L	L	365	L	
11							.	L	L	L	L	420	
12							L	L	L	L	L	L	
13							L	L	L	L	L	L	
14							L	L	L	L	O	L	
15							L	L	L	L	L	L	
16							L	L	L	L	L	L	
17							L	L	L	L	L	L	
18							L	L	L	L	L	L	
19							L	L	L	L	L	L	
20							L	L	L	C	C	L	
21							.	L	L	L	L	L	
22							L	L	L	L	345	L	
23							L	L	L	L	L	C	
24							L	L	L	L	330	L	
25							L	L	L	L	L	L	
26							L	L	L <del>H</del>	L	L	L	
27							L	L	L	C	C	C	
28							L	L	L	L	L	L	
29							L	L	L	L	L	L	
30							L	L	L	L	350	340	
31							L	L	310	L	L <del>H</del>	310	
Count										4	3	9	8
Median												350	345
Mean												355	345

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic h'F2  
 Unit . Km  
 Month . August 1961

TABLE 18 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
380	340	345	L	L	L							1
320	L	L	L	L	L							2
370	L	365	L	L	L							3
380	360	L	L	L	L							4
390	380	L	L	L	L							5
380L	360	L	A	L	L							6
400	L	L	L	L	L							7
370	380	L	A	L	L							8
L <sub>3000</sub>	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	C	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
400	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
365	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
C	L	L	L	L	L							20
L	L	L	L	L	L							21
360	325	L	L	L	L							22
C	C	C	L	L	L							23
L	360	L	L	L	L							24
365	340	L	325	L	L							25
L	L	L	L	L	L							26
C	C	L	300	290	L							27
L	340	L	L	L	L							28
L	L	L	L	A	A							29
A	330	325	315	275	L							30
L	L	L]	L]	L	L							31
12	10	9	9	2	..							Count
375	350											Median
375	350											Mean

Sweep 1 0 Mc. to 25 0 Mc. in 27 seconds.

Characteristic . h'F  
Unit : Km  
Month : August 1961

TABLE 19  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77.5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	A	305	390	350	340	B	245	220	210	200	190	190
2	260	290	305	F	260	A	240	220	200	190	A	190 <sub>H</sub>
3	260	300	305	300	330	320	260	220	220	205	190 <sub>H</sub>	200
4	F	F	F	300	F	F	240	220	205	200	200	200
5	340	300	245	240	220	220	250	200	200	200	190	195 <sub>H</sub>
6	280	295	320	330	300	260	255	220	210 <sub>H</sub>	200	190	190 <sub>H</sub>
7	280	260	240	225	220	250	250	200 <sub>H</sub>	210	200	190	200
8	260	240	225	230	E	E	245	220	200 <sub>H</sub>	185 <sub>H</sub>	180 <sub>H</sub>	195
9	270	300	300 <sub>F</sub>	280	245	240	C	225	215	200	195	185 <sub>H</sub>
10	270	255	240	230	220	230	250	220	215	200 <sub>H</sub>	190	180 <sub>H</sub>
11	245	270	280	270	220	210	240	220	200	200	200	C
12	320	305	320	225	235	240	260	230	205	200	200	195
13	305	330	360	350	280	220	250	225	205	200	190	190
14	315	310	285	255	225	220	240	220	205	190	185	C
15	300	310	320	320	290	215	250	220	205	195	190	195
16	305	280	255	245	235	220	250	220	210	200	200	190
17	255	240	230	230	220	225	245	230	205 <sub>H</sub>	200	200	190
18	250	215	220	220	235	225	255	220	215	200	195	190
19	310	290	285	245	225	210	245	215	205	200	195	185
20	255	250	245	240	240	225	250	225	205	C	C	180
21	310	355	F	335	280	240	240	225	195 <sub>H</sub>	200	200	185
22	335	340	300	250	220	220	250	220	200	200	200	200
23	265	235	230	225	205	220	245	220	200	195	185	200
24	260	245	245	235	225	235	240	220	210	200	190	190
25	245	210	215	235	240	E	250	220	215	205	195	200
26	320	270	240	225	230	240	260	220	220	195	190	185
27	240	220	230	225	230	230	245	220	205	C	C	C
28	240	225	220	240	240	E	220	225	200	200	180	180
29	F	315 <sub>F</sub>	280	255	225	230	240	220	190 <sub>H</sub>	185 <sub>H</sub>	185	190
30	275	230	305	400	350	E	240	230	215	210	220 <sub>A</sub>	A
31	295	295	300	290	L	270	250	240	215	215	215	200
Count	28	30	29	30	29	28	30	31	31	29	28	27
Median	270	285	280	250	235	230	250	220	205	200	190	190
Mean	280	275	275	270	250	235	245	220	205	200	195	190

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic . h'F  
Unit : Km  
Month August 1961

TABLE 19  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
195	200	195	200	200	A	260	260	F	245	260	260	1
A	180	175 <sub>H</sub>	200	215	225	240	240	245	240	230	240	2
200 <sub>H</sub>	190 <sub>H</sub>	200	200	A	A	265	255	F	250	305	295	3
200	180	200	200	A	A	235	250	240	240	250	340	4
190	195	180	200 <sub>H</sub>	200	220	240	245	260	260	C	280	5
180 <sub>H</sub>	200	200	A	A	235	250	250	250	250	260	290	6
200	195	195	225	220	A	270	285	275	260	260	260	7
195	200	195	A	A	235	255	260	255	235	235	260	8
200	200	195	200	A	230	260	275	250	225	230	250	9
180 <sub>H</sub>	185 <sub>H</sub>	215	215	215	235	265	320	∩360 <sub>F</sub>	∩260 <sub>F</sub>	260	240	10
200	200	200	C	220	230	255	300	320	300	305	330	11
190	180	200	220	230	240	260	295	300	275 <sub>F</sub>	285	275	12
180 <sub>H</sub>	180 <sub>H</sub>	210	210	220	240	270	300	300	∩265 <sub>F</sub>	265	300	13
200	200	200	A	220	225	255	300	280	260	255	280	14
190	200	A	210	A	230	260	310	F	F5	255	275	15
185	185	190	190 <sub>H</sub>	200 <sub>H</sub>	225	260	280	F	F	∩295 <sub>F</sub>	280	16
185	200	200	200	215	290	290	300	F	F	F	300	17
190	195	200	200	205	A	A	280	F	F	270 <sub>F5</sub>	320	18
195	200	205	210	220	A	260	300	290	280	270	250	19
195	195	200	190	215	220 <sub>H</sub>	260	280	F	∩260 <sub>F</sub>	285	300	20
180 <sub>H</sub>	195	195	A	205	230	260	275	280	260	260	310	21
185 <sub>H</sub>	205	∩240 <sub>A</sub>	A	215	235	260	280	300	∩295 <sub>F</sub>	310 <sub>F</sub>	300 <sub>F</sub>	22
C	C	C	200	200 <sub>H</sub>	240	255	255	245	255	255	255	23
180 <sub>H</sub>	200	190	195	185	230	260	255	275	240	255	255	24
200	200	A	∩220 <sub>A</sub>	A	245	265	290	F	F	∩275 <sub>S</sub>	320	25
185	190	190	200	220	240	260	280	∩280 <sub>A</sub>	245	255	240	26
C	C	180 <sub>H</sub>	210	215	235	255	250	235	230	225	235	27
190	200	A	200 <sub>H</sub>	210 <sub>H</sub>	235	250	285	290	280	F	∩310 <sub>S</sub>	28
195 <sub>H</sub>	200 <sub>H</sub>	190	200	∩220 <sub>F</sub>	A	A	A	290 <sub>F</sub>	280	F	300 <sub>F</sub>	29
A	A	∩205 <sub>A</sub>	∩210 <sub>A</sub>	220	230	255	∩260 <sub>A</sub>	235	235	260	260	30
200	200	205	205	210	240	260	295	285	260	250	270	31
27	28	27	25	24	25	29	30	23	26	27	31	Count
190	200	200	200	215	235	260	280	280	260	260	280	Median
190	195	200	205	210	235	260	275	275	260	265	280	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month . August 1961

TABLE 19 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10·2°N  
Longitude · 77·5°E

Date/Hour	0080	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	300	A	360	360	F	295	230	215	205	190	190	200
2	260	300	F	300	A	260	230	205	185 <sub>H</sub>	190	180 <sub>H</sub>	200
3	280	305	300	340	340	300	240	220	220	200	200	200
4	280	F	F	F	F	240	240	210	200	200	200	200
5	320	260	240	235	220	240	240	200	200	200	190	195
6	280	300	330	320	270	260	235	215	205	195	185	185
7	280	250	230	220	230	270	235	220	200	195	180	200
8	245	230	220	260	250	260	235	215 <sub>H</sub>	195 <sub>H</sub>	180 <sub>H</sub>	185 <sub>H</sub>	190
9	275	300	300 <sub>F</sub>	270	235	270	240	220	210	195	180 <sub>H</sub>	195 <sub>H</sub>
10	260	245	240	225	220	235	235	220	200	195	180 <sub>H</sub>	180 <sub>H</sub>
11	260	280	280	240	220	230	240	230	200	200	200	200
12	315	305	315	255	230	260	240	220	210	200	200	195
13	310	350	360	315	230	250	240	210	200	195	185	190
14	315	300	265	245	215	245	230	200 <sub>H</sub>	195	190 <sub>H</sub>	C	180 <sub>H</sub>
15	300	320	320	300	245	255	240	200	200	195	200	190
16	300	265	245	240	220	235	230	210	205	200	190	185
17	240	230	230	225	220	235	235	220	205	200	190	190
18	225	215	220	235	220	260	235	A	205	200	195	190
19	310	285	275	230	210	225	230	205	200	190	190	185
20	245	245	250	240	235	250	240	215	205	C	C	195
21	335	365 <sub>H</sub>	F	310	265	250	230	210	190 <sub>H</sub>	200	190	180 <sub>H</sub>
22	335	320	275	235	220	255	235	215	200	200	200	200
23	255	230	225	220	210	245	230	210	200	180 <sub>H</sub>	195	C
24	250	240	245	230	220	250	230	200	200	180 <sub>H</sub>	195	190
25	220	220	225	245	E	280	230	220	200	195	190	200
26	290	250	220	220	225	240	240	220	205	190	195	185
27	235	220	230	230	235	260	235	210	200	C	C	C
28	240	220	240	240	E	255	240	200	200	185	180	180 <sub>H</sub>
29	F	300	260	235	230	240	230	205	185 <sub>H</sub>	180	200	200
30	235	260	380	400	L	270	235	200 <sub>H</sub>	215	205	A	A
31	A	A	280	285	270	270	240	225	215	210	205	200
Count	29	28	28	30	27	31	31	30	31	29	27	28
Median	280	260	255	240	225	255	235	210	200	195	190	190
Mean	275	270	270	265	235	255	235	210	200	195	190	190

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.

Characteristic : h'F  
Unit : Km  
Month : August 1961

TABLE 19 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
180H	200	195	195	A	250	245	260	260	260	260	260	1
200	180H	200	200	220	240	250	240	245	240	230	245	2
200H	190	210	210	220	230	260	260	260F	260	300	280	3
200	190	200	A	220	245	250	240	240	260	C	350	4
190	190	180H	195	220	220	245	265	260	265	275	280	5
190H	200	205	A	A	255	250	250	250	260	275	v290F	6
195	195	210	220	A	A	270	280	255	255	255	260	7
200	195	210	A	A	240	250	260	235	235	250	260	8
200	200	210	200	220	240	270	260	230	225	240	260	9
200	195H	A	215	220	C	280	v360F	F	v280r	240	240	10
200	200	C	200	230	220	270	310	310	295	300	330	11
180	190	220	220	225	250	260	300	290	280	280	295	12
180H	195H	A	v230A	v240A	250	270	305	280r	265	280	305	13
200	200	A	215	220	235	280	v280F	255	260	275	295	14
195	190H	A	210	225	240	290	v290F	F	260	260	300	15
185	195	195	200H	220	245	270	v280F	F	v280F	285	270	16
180	200	200	205	220	300	285	290	F	F	320	275	17
190	195	200	210	A	A	280	300	F	F	310rs	305	18
200	200	200	220	230	260	280	300	270	260	250	245	19
C	200	195	190H	220	235	270	F	260	275	300	305	20
200	190H	A	200H	220	235	270	280	270	250	280	325	21
220	220	210	v235A	235	250	265	300	v300F	F	300F	285	22
C	C	C	200H	210	255	250	v240F	250	245	250	260	23
185H	200	190	200	215	215	245	270	260	245	255	260	24
200	v200A	v200A	210	A	240	280	320	F	F	v290F	340	25
190	190	200	215	220	240	275	A	260	255	250	240	26
C	C	220	210	225	240	250	240	235	225	230	240	27
190	190	200	210H	250	240	260	300	285	270	295	325	28
190H	190	200	210	A	A	A	v310A	v290F	v270F	280	305	29
A	A	v205A	215	225	245	v280A	240	225	240	270	255	30
200H	200	200	210	220	260	280	300	280	250	260	270	31
27	28	24	28	24	27	30	29	25	27	30	31	Count
195	195	200	210	220	240	270	280	260	260	275	280	Median
195	195	200	210	225	245	265	270	260	260	270	280	Mean

Sweep 1 0 Mc 25 0 Mc in 27 seconds

Characteristic h'E  
Unit : Km  
Month : August 1961

TABLE 20  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2							120	110 <sub>H</sub>	A	A	A	A
3								A	A	A	A	A
4							120	A	A	A	A	A
5							120	A	A	A	A	A
6							120	A	A	A	A	A
7							105	A	A	A	A	A
8							120	A	A	A	A	A
9							C	A	A	A	A	A
10								A	A	A	A	A
11							130	100	A	A	A	A
12							100	A	A	A	A	A
13								105	A	A	A	A
14							120	A	A	A	A	C
15							105	100	100	A	A	A
16							135	110	A	A	A	A
17							115	100	100	A	A	A
18							A	A	A	A	A	A
19							A	A	A	A	A	A
20							120	105	A	C	C	A
21								110	105	A	A	A
22								105	A	A	A	A
23							110	105	A	A	A	A
24							115	110	A	A	A	A
25							120	A	A	A	A	A
26							130	A	A	A	A	A
27							130	A	A	C	C	C
28							120	A	A	A	A	A
29							115 <sub>H</sub>	A	A	A	A	A
30							130	105	A	A	A	A
31								115	110	A	A	110
Count							21	13	4			1
Median							120	105				..
Mean							120	105				

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic h'E  
 Unit Km  
 Month August 1961

TABLE 20  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A	A						4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A	A						8
A	A	A	A	A	A							9
A	A	A	100	110	120							10
A	A	A	C	110	110							11
A	A	A	A	A	A							12
A	A	A	A	A	A	A						13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	A	105	110	A						16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	A	A	A	A	A						19
A	A	A	A	105	A							20
A	A	A	A	110	110							21
A	A	A	A	A	A							22
C	C	C	110	110	A	A						23
A	A	A	A	A	105	A						24
A	A	A	A	A	A							25
A	A	A	A	A	120							26
C	C	115	110	110	115 <sub>ur</sub>							27
A	A	A	A	100	A							28
A	A	A	A	A	A							29
A	A	A	A	A	A							30
A	A	A	A	A	A							31
		1	3	9	6							Count
				110	110							Median
				105	115							Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic h'E  
Unit Km  
Month August 1961

TABLE 20 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N  
Longitude 77°5'E

Date/Hour	0330	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							A	A	A	A	A	A
2							110 <sub>ur</sub>	105 <sub>ur</sub>	A	A	A	A
3							A	A	A	A	A	A
4							110 <sub>ur</sub>	A	A	A	A	A
5							A	A	A	A	A	A
6							A	A	A	A	A	A
7							105	A	A	A	A	A
8							110	A	A	A	A	A
9							110	A	A	A	A	A
10							A	A	A	A	A	A
11							105	100	A	A	A	A
12							A	A	A	A	A	A
13							105	A	A	A	A	A
14							105	A	A	A	C	A
15							105	100	100	A	A	A
16							120	105	A	A	A	A
17							100	100	100	A	A	A
18							A	A	A	A	A	A
19							A	A	A	A	A	A
20							105	A	A	C	C	A
21							115	110	A	A	A	A
22							110	105	A	A	A	A
23							110	A	A	A	A	C
24							110	A	A	A	A	A
25							A	A	A	A	A	A
26							A	A	A	A	A	A
27							115	A	A	C	C	A
28							A	A	A	A	A	A
29							A	A	A	A	A	A
30							110	A	A	A	A	A
31							115	105	A	A	A	A
Count							19	8	2			
Median							110	105				
Mean							110	105				

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic · h'E  
 Unit Km  
 Month August 1961

TABLE 20 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2'N  
 Longitude 77 5"E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	A	A	A	A							5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
A	A	A	110	A	A							9
A	A	A	A	105	A							10
A	A	C	115	A	120							11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	A	110	115							16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	A	A	A	A							19
C	A	A	A	A	A							20
A	A	A	A	110	110							21
A	A	A	A	A	A							22
C	C	C	110	A	A							23
A	A	A	A	115	A							24
A	A	A	A	A	A							25
A	A	A	A	115	120							26
C	C	110	100	115	120H							27
A	A	A	A	105	A							28
A	A	A	A	A	A							29
A	A	A	A	A	A							30
A	A	AJ	A	A								31
		1	4	7	5							Count
				110	120							Median
				110	115							Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'Es  
Unit Km  
Month August 1961

TABLE 21  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	120	110	120		110		105	100	100	100	100	100
2	110		110	110	100		G	G	100	100	100	100
3	100				120		110	100	100	100	100	100
4	110	120	100	105	100		G	100	100	100	100	100
5		105	105				G	100	100	100	100	100
6	100		100				130	100	100	100	100	100
7							G	100	100	100	100	100
8							130	100	100	100	100	100
9	110			115			C	100	100	100	100	100
10							135	100	100	100	100	100
11								100	100	100	100	C
12							100	100	100	100	100	100
13				105			110	100	100	100	100	100
14	110	110					G	100	100	100	100	C
15		115		105			100	100	100	100	100	100
16	110						G	100	100	100	100	100
17	95						G	G	100	100	100	100
18					110		100	100	100	100	100	100
19	145		110	110			105	100	100	100	100	100
20							G	100	100	C	C	100
21								100	100	100	100	100
22	120	120		110			110	100	100	100	100	100
23	120						105	100	100	100	100	100
24							G	100	100	100	100	100
25					110		100	100	100	100	100	100
26	120						G	100	100	100	100	100
27							G	100	100	C	C	C
28							G	100	100	100	100	100
29		130					G	100	100	100	100	100
30				120			G	105	100	100	100	100
31	105	105	110					G	100	100	100	G
Count	14	8	7	8	6	1	13	28	31	29	29	27
Median	110	110	110	110	110		105	100	100	100	100	100
Mean	110	115	110	110	110		110	100	100	100	100	100

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'Es  
 Unit Km  
 Month · August 1961

TABLE 21  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude · 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date/Hour
100	100	100	100	100	100	100	100	100			100	1
100	100	100	100	100	100	100	100	100			100	2
100	100	100	100	100	100	105	100	125	100		100	3
100	100	100	100	100	100	100	100	100		110		4
100	100	100	100	100	100	100	100	100	100	C	100	5
100	100	100	100	100	100		100	100	95	90		6
100	100	100	100	100	100	100	100	100		100	100	7
100	100	100	100	100	100	100	100	120				8
100	100	100	100	100	100	100		115				9
100	100	100	100	G	G							10
110	105	100	C	110	110							11
100	100	100	100	100	100	100	100	100	100	120	135	12
100	100	100	100	100	100	100	100	100		110	105	13
100	100	100	100	100	100	100	100	120	120	95	95	14
100	100	100	100	100	100	100	100	100				15
100	100	100	100	100	100	100		100	100	100	95	16
100	100	100	100	100	100	100	100	100	100		120	17
100	100	100	100	100	100	100	100	100	100		120	18
100	100	100	100	100	100	100	100	120	100	120		19
100	100	100	100	100	100	100	100	100	100			20
100	100	100	100	100	100	100	100	100		120		21
100	100	100	100	100	100	110			100	100	100	22
C	C	C	G	G	100	100			110			23
100	100	100	100	100	100	130		95	95	95		24
100	100	100	100	100	100					140	120	25
100	100	100	100	100	115	105	100	100	100		100	26
C	C	G	120	110	115 <sub>h</sub>							27
100	100	100	100	100	120		100	100	100	100	100	28
100	100	100	100	100	100	100	100	100	105	100		29
100	100	100	100	100	100	100	120				115	30
100	100	100	100	100	100		100	100	100	95	95	31
29	29	29	29	29	90	23	20	21	16	15	15	Count
100	100	100	100	100	100	100	100	100	100	100	100	Median
100	100	100	100	100	100	100	100	105	100	105	105	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic h'Es  
Unit · Km  
Month · August 1961

TABLE 21 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude : 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	120	110		120	105		105	100	100	100	100	100
2	120	110	110	100	100	100	G	G	100	100	100	100
3	100				100	105	100	100	100	100	100	100
4		120	110	100	100		G	100	100	100	100	100
5	110	105					100	100	100	100	100	100
6	100		100	100			100	100	100	100	100	100
7							100	100	100	100	100	100
8							105	100	100	100	100	100
9	120	110					105	100	100	100	100	100
10							105	100	100	100	100	100
11			115					100	100	100	105	105
12							100	100	100	100	100	100
13			115	105			100	100	100	100	100	100
14		120					100	100	100	100	100	100
15			105	125	125		100	100	100	100	100	100
16							G	100	100	100	100	100
17			130				G	100	100	100	100	100
18							100	100	100	100	100	100
19	125	110	110	110			105	100	100	100	100	100
20							105	100	100	C	C	100
21			140				G	100	100	100	100	100
22	120		110	110			105	100	100	100	100	100
23	130						100	100	100	100	100	C
24							100	100	100	100	100	100
25							100	100	100	100	100	100
26	115						100	100	100	100	100	100
27							G	100	100	C	C	C
28							100	100	100	100	100	100
29	130	120					100	100	100	100	100	100
30				120			110	100	100	100	100	100
31	105	115					G	G	100	100	100	100
Count	12	9	10	9	5	2	23	29	31	29	28	29
Median	120	110	110	110	110		100	100	100	100	100	100
Mean	115	115	115	110	105		100	100	100	100	100	100

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic · h'Es

TABLE 21 (Contd)

Latitude · 10 2°N

Unit : Km

Ionospheric Data

Longitude 77 5°E

Month August 1961

75°E Mean Time

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
100	100	100	100	100	100	100	100	120			110	1
100	100	100	100	100	100	100	100	100	120		100	2
100	100	100	100	100	105	105		100		100	105	3
100	100	100	100	100	100	100						4
100	100	100	100	100	120	100	100	100	100	100	100	5
100	100	100	100	100	120	100	100	100				6
100	100	100	100	100	100	100	120			100	100	7
100	100	100	100	100	100	100	100	115				8
100	100	100	100	100	100	100	100					9
100	100	100	100	G						100	100	10
105	100	C	G	100	G	100	100	100	100	100	95	11
100	100	100	100	100	100	95	100	100	120	115		12
100	100	100	100	100	100	100	100	100		110	110	13
100	100	100	100	100	100	100	100	115	120	95		14
100	100	100	100	100	100	100	100	100			95	15
100	100	100	100	100	100		100		100	100	100	16
100	100	100	100	100	100	100	100		100	100		17
100	100	100	100	100	100	100	100	100	100	120	130	18
100	100	100	100	100	100	100	125	100	125	125		19
C	100	100	100	100	110	100	100		100	100		20
100	100	100	100	G	G	100	100			120		21
100	100	100	100	100	100	100		120	100	100		22
C	C	C	120	100	100	100						23
100	100	100	100	100	100	135	100	95	95			24
100	100	100	100	100	100				130	140	115	25
100	100	100	100	100	G	100	100	100		100		26
C	C	G	G	G	G	120	100		100			27
100	100	100	100	G	110	100	100	100	100	100		28
100	100	100	100	100	100	100	100	100	140	100		29
100	100	100	100	100	100	120	105			120		30
100	100	100	100	100	115	100	100	100	100	95	100	31
28	29	28	29	27	26	27	23	18	16	20	13	Count
100	100	100	100	100	100	100	100	100	100	100	100	Median
100	100	100	100	100	105	100	105	105	105	105	105	Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds.

Characteristic (M3000) F2  
 Unit —  
 Month - August 1961

TABLE 22  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude : 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	3 00	2 70	2 55 <sup>w</sup>	2 65 <sup>w</sup>	2 60 <sup>w</sup>	B	3 20	2 90	2 80	2 65	2 55	2 50
2	2 90	3 00	2 90	F	3 20	A	3 45	3 40	3 25	2 85	2 50	2 35 <sup>m</sup>
3	3 20	3 05	F	F	2 65 <sup>w</sup>	2 85	2 90	2 95	2 65	2 50	2 55	2 60
4	F	F	F	F	F	F	3 35	3 40	3 20	3 05	2 85	2 70
5	2 70 <sup>m</sup>	2 90	3 15	3 10	3 25	3 40	3 05	2 90	2 60	2 60	2 50	2 40
6	2 90	2 90	2 75	2 75	3 05	3 20	3 10	3 05	2 70	2 50	2 50	2 65
7	3 00	3 10	3 25	3 55	3 50	3 25	3 25	3 00	2 60	2 40	2 55	2 50
8	3 10	3 20 <sup>s</sup>	3 50	3 45	E	E	3 20	3 00	2 60	2 65	2 60	2 40
9	3 25	3 00	2 90 <sup>w</sup>	3 05	3 05	3 50 <sup>w</sup>	C	2 85	2 60	2 50	2 45	2 40
10	3 10	3 10	3 25	3 40	3 50	3 35	3 20	3 00	2 85	2 40	2 35	2 40
11	FS	3 00	2 85 <sup>s</sup>	3 00	3 30	3 40	3 20	3 10	2 80	2 35	2 55	C
12	2 70	2 80	2 80	2 90	3 20	3 30	3 15	3 00	2 60	2 40	2 45	2 55
13	2 65	2 55	2 60	2 75	3 00	3 40	3 20	2 95	2 60	2 50	2 45	2 45
14	2 65	2 80	3 05	3 20	3 50	3 45	3 15	2 90	2 60	2 45	2 50	C
15	2 90	2 80	2 70	2 85	3 10	3 35	3 10	2 95	2 65	2 50	2 40	2 25
16	2 80	2 90	3 00	3 10	3 25	3 40	3 30	3 10	2 75	2 25	2 40	2 05
17	3 10	3 20	3 20	3 35	3 50	3 50	3 20	3 20	3 10	2 55	2 35	2 40
18	3 15	3 30	3 20	3 40	3 50	3 50	3 15	3 05	2 80	2 50	2 55	2 44
19	F	2 75	F	3 15	3 45 <sup>w</sup>	3 50	3 15	2 95	2 70	2 45	2 30	2 45
20	3 05	3 20	3 15	3 30	3 30	3 25	3 15	3 00	2 70	C	C	2 35
21	F	F	F	F	F	F	3 15	3 15	2 95	2 60	2 30	2 30
22	2 60	2 60	2 85	3 20	3 40	3 50	3 15	3 00	2 70	2 45	2 45	2 50
23	F	F	F	3 35	3 45	3 50	3 20	3 10	2 70	2 40	2 50	2 50
24	3 15	3 25	3 20	3 40	3 45	3 50 <sup>m</sup>	3 30	3 10	2 85	2 50	2 50	2 50
25	3 25	3 45	3 45	3 45	3 50	E	3 05	3 00	2 80	2 60	2 45	2 45
26	2 70	3 05	3 40	3 55	3 35	3 45 <sup>m</sup>	3 05	2 90	2 65	2 50	2 45	2 45
27	3 30	3 45	3 50	3 50	3 30 <sup>m</sup>	3 50 <sup>m</sup>	3 45	3 35	2 85	C	C	C
28	3 35	3 40	3 50	3 35 <sup>m</sup>	3 20	E	3 30	3 05	2 50	2 60	2 60	2 60
29	2 70 <sup>s</sup>	2 70 <sup>r</sup>	3 00	3 25	3 55	3 60	3 40	3 05	2 55	2 55	2 50	2 45
30	3 00	3 45	2 90	2 50	2 70	E	3 40	3 40	3 20	2 75	2 30 <sup>m</sup>	2 55
31	2 90	3 00	3 00	3 05	3 15	3 30	3 20	3 20	3 10	2 75	2 30	2 50
Count	26	28	26	27	28	23	30	31	31	29	29	28
Median	3 00	3 00	3 00	3 20	3 30	3 40	3 20	3 00	2 70	2 50	2 50	2 45
Mean	3 00	3 00	3 05	3 20	3 25	3 40	3 20	3 05	2 75	2 55	2 55	2 45

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds

Characteristic . (M3000) F2  
Unit  
Month . August 1961

TABLE 22  
Ionospheric Data  
75°E Mean Time

Latitude . 10 2°N  
Longitude . 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 30	2 60	2 55	2 70	2 70	2 75	2 95	3 10	3 15	3 00	2 95	2 80	1
2 55	2 65	2 50	2 50	2 50	2 50	2 50	2 75	2 85	3 00	3 15	3 20	2
2 70	2 60	2 40	2 20	2 50	2 65	2 70	2 75	F	F	F	F	3
2 40	2 50	2 60	2 55	2 60	2 70	2 85	3 00	3 15	2 95	2 85	2 45	4
2 45	2 50	2 40	2 45	2 40	2 50	2 85	2 90	2 90	2 85	C	2 80	5
2 55	2 55	2 55	S	u2 60s	2 85	3 00	3 10	3 05	3 10	2 90	2 90	6
2 45	2 50	2 55	2 60	2 50	2 60	u2 60s	2 70	2 90	3 00	3 00	3 00	7
2 70	2 50	2 45	A	2 70	2 90	3 00	3 10	3 10	3 00	3 10	3 10	8
2 40	2 40	2 40	2 50	2 70	2 70	2 70	2 75	3 05	3 10	3 20	3 15	9
2 45	2 10	2 15	2 70	u2 85s	3 00	2 90	2 65	u2 50s	u2 70p	3 10	3 20	10
2 40	2 45	2 40	C	2 65	2 85s	3 00s	2 80	2 70	2 85s	2 70	2 60	11
2 55	2 45	2 45	2 55	2 70	2 85	2 80	2 70	2 75	2 85	2 90	2 90	12
2 45	2 35	2 55	2 50	2 55	2 55	2 60	2 65	2 80	2 90	2 85	2 55	13
2 35	2 40	2 40	2 45	2 55	2 85	2 75	2 75	2 90	3 00	2 80	2 80	14
2 40	2 40	A	2 60	2 75	2 90	2 80	2 65	2 70	2 85	3 00	2 90	15
2 30	2 30	2 25	2 25	2 35	2 55	2 65	2 60	F	F	2 70	2 80	16
2 30	2 35	2 30	2 15	2 25	2 65	2 70	2 75	2 70	F	F	2 60	17
2 45	2 40	2 45	2 50	2 50	2 60	2 80	2 80	F	F	F	2 70	18
2 30	2 30	2 40	2 35	2 35	2 35	2 40	2 45	2 60	2 85	2 90	3 10	19
2 40	2 35	2 50	2 45	2 40	2 50	2 50	2 45	2 50	2 65	2 70	2 75	20
2 40	2 40	2 50	2 55	2 65	2 80	2 80	2 80	2 95	2 95	2 85	2 50	21
2 40	2 55	2 60	2 65	2 65	2 65	2 75	2 60	u2 70s	F	F	2 80p	22
C	C	C	2 70	2 80	2 90	2 90	2 90	3 05	3 00	3 05	3 10	23
2 35	2 40	2 40	2 45	2 60	2 75	2 70	2 75	2 85	3 00	2 95	3 05	24
2 55	2 50	2 60	2 65	2 80	2 90	2 85	2 75	u2 85s	F	2 85	2 65	25
2 45	2 55	2 50	2 50	2 55	2 75	2 95	2 90	3 15	3 05	3 05	3 15	26
C	C	2 60	2 85	3 05	3 20	u3 20s	3 10	3 20	3 35	3 45	3 35	27
2 50	2 60	2 65	2 75	2 80	2 85	3 00	2 95	2 95	3 05	F	u2 85s	28
2 40	2 50	2 35	2 40	2 55	2 70	2 95	2 85	2 70	2 80	u2 90p	u2 70i	29
2 55	A	2 80	2 85	3 10	3 20	3 15	3 10	3 20	3 30	u3 10s	3 10	30
2 65	2 50	2 30	2 40	2 15	2 60	2 65	2 60	2 65	2 85	3 05	u3 00s	31
29	28	29	28	31	31	31	31	28	25	25	30	Count
2 40	2 50	2 45	2 50	2 60	2 75	2 80	2 75	2 90	3 00	2 95	2 90	Median
2 45	2 45	2 50	2 50	2 60	2 75	2 75	2 80	2 90	2 95	2 95	2 90	Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds



Characteristic (M3000) F2  
Unit  
Month August 1961

TABLE 22 (Cont'd)  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	2 90	2 65	υ2 60 <sub>w</sub>	υ2 70 <sub>w</sub>	F	2 80 <sub>w</sub>	3 10	2 85	2 75	2 70	2 55	2 40
2	3 05	2 95	2 65	F	A	3 15	3 55	3 40	3 00	2 55	2 30	2 25 <sub>m</sub>
3	3 05	2 85	F	F	2 75	2 65	3 05	2 80	2 50	2 40	2 60	2 65
4	F	F	F	F	F	υ3 00 <sub>w</sub>	3 50	3 30	3 10	2 90	2 75	2 50
5	2 75	3 05	3 35	υ3 40 <sub>w</sub>	3 30	3 20	2 95	2 70	2 45	2 40	2 35	2 40
6	3 00	2 90	2 70	2 80	3 10	3 30	3 15	2 80	2 45	2 50	2 45	2 50
7	3 00	3 20	3 40	3 45	3 50	3 00	3 15	2 85	2 60	2 50	2 45	2 50
8	3 10	υ2 95 <sub>s</sub>	3 45	3 40	EU	3 10 <sub>s</sub>	3 10	2 75	2 35	2 35	2 45	2 45
9	3 10	3 00	υ2 90 <sub>w</sub>	3 05	3 40	3 10	3 10	2 60	2 50	2 50	2 40	2 35
10	3 10	3 20	υ3 20 <sub>s</sub>	3 40	3 45	3 15	υ3 20 <sub>s</sub>	3 00	2 60	2 35	2 50	2 30
11	FS	2 95 <sub>s</sub>	2 95 <sub>s</sub>	2 80	3 60	2 70	3 20	2 95	2 60	2 35	2 30	2 40
12	2 80	2 75	2 75	3 00	3 40	3 15	3 10	2 85	2 45	2 50	2 50	2 50
13	2 50	2 60	2 65	2 90	3 35	2 95	3 15	2 70	2 50	2 50	2 45	2 35
14	2 75	2 90	3 10	3 30	3 50	3 10	3 05	2 60	2 50	2 50	C	2 40
15	2 85	2 75	2 70	3 00	3 20	3 05	3 10	2 80	2 60	2 35	2 35	2 25
16	2 85	2 90	3 05	3 10	3 40	3 30	3 25	2 95	2 50	2 35	2 40	2 30
17	3 15	3 20	3 25	3 35	3 45	3 40	3 25	3 15	2 75	2 30	2 40	2 40
18	3 35	3 30	3 30	3 40	3 50	2 80	3 10	3 00	2 60	2 40	2 50	2 40
19	2 70	2 85	3 00	F	3 45	3 45	3 10	2 80	2 60	2 30	2 40	2 40
20	3 10	3 20	3 20	3 25	3 40	3 10	3 10	2 85	2 50	C	C	2 40
21	F	F	F	F	F	3 05 <sub>w</sub>	3 25	3 05	2 80	2 45	2 30	2 35
22	2 60	2 65	3 00	3 30	3 50	3 10	3 10	2 85	2 50	2 40	2 50	2 40
23	F	F	3 30	3 45	3 40	2 80 <sub>m</sub>	3 10	2 90	2 45	2 35	2 40	C
24	3 30	3 25	3 20	3 35	3 45	3 00	3 20	3 00	2 65	2 40	2 50	2 40
25	3 40	3 40	3 45	3 50	E	3 00	3 10	2 85	2 70	2 50	2 40	2 50
26	2 95	3 25	3 45	3 45	3 40	2 95	3 00	2 75	2 45	2 55	2 45	2 40
27	3 35	3 50	3 50	3 50	3 50	3 10	3 40	3 05	2 45	C	C	C
28	3 35	3 40	3 50	υ3 40 <sub>m</sub>	E	3 00	3 15	2 65	2 55	2 55	2 60	3 60
29	F	2 90	3 15	3 40	3 60	3 60	υ3 20 <sub>s</sub>	2 75	2 55	2 50	2 45	2 40
30	3 40	3 25	2 45	2 55	3 20	3 10	3 40	3 40	3 00	2 55	2 45	2 50
31	2 95	A	3 10	υ3 25 <sub>m</sub>	3 20	2 80 <sub>m</sub>	υ3 25 <sub>s</sub>	3 20	3 00	2 55	2 35 <sub>m</sub>	2 70
Count	26	27	28	26	27	31	31	31	31	29	28	29
Median	3 00	2 95	3 10	3 35	3 40	3 10	3 15	2 85	2 55	2 50	2 45	2 40
Mean	3 00	3 05	3 10	3 20	3 40	3 05	3 15	2 90	2 60	2 45	2 45	2 45

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000) F2  
 Unit :  
 Month August 1961

TABLE 22 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude : 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2.45	2.60	2.65	2.70	2.75	2.90	3.05	3.20	3.20	3.05	3.00	2.90	1
2.75	2.55	2.45	2.45	2.50	2.55	2.60	2.75	2.95	3.15	3.05	3.20	2
2.70	2.50	2.30	2.35	2.60	2.65	2.75	2.75	F	F	u2.65F	F	3
2.40	2.50	2.60	2.60	2.65	2.80	2.90	3.10	3.05	2.95	C	2.20	4
2.50	2.40	2.40	2.35	2.50	2.70	2.90	2.90	2.90	2.85	u2.85a	2.90	5
2.40	2.55	2.60	u2.40a	2.70	2.90	3.10	3.15	3.05	3.10	u2.95a	2.90	6
2.45	2.45	2.65	2.50	2.50	2.65	2.70	u2.75a	2.95	3.00	3.00	3.00	7
2.50	2.45	2.35	A	2.70	2.95	3.00	3.10	3.10	3.15	3.10	u3.20a	8
2.40	2.40	2.45	2.60	2.70	2.80	2.70	2.90	3.30	u3.30a	3.15	3.00	9
2.40	2.45	2.60	2.80	3.00	C	2.80	2.55	F	u2.90a	3.20	FS	10
2.50	2.40	C	2.55	2.70	3.00	2.70	2.75a	2.75	2.90	2.60	2.70	11
2.55	2.50	2.40	2.55	2.75	2.90	2.80	2.70	2.75	2.95	2.85	2.80	12
2.45	2.40	2.45	2.50	2.55	2.60	2.60	2.70	2.85	2.95	2.85	2.70	13
2.35	2.40	2.40	2.50	2.60	2.85	2.70	2.80	3.00	2.90	2.80	2.90	14
2.40	2.60	2.55	2.65	2.80	2.80	2.70	2.70	2.70a	3.00	2.90	2.80	15
2.80	2.35	2.20	2.30	2.45	2.65	2.65	2.55	F	2.60	2.70	2.95	16
2.30	2.40	2.20	2.15	2.55	2.50	2.80	2.70	F	F	2.60	2.90	17
2.40	2.40	2.50	2.30	2.55	2.70	2.80	2.70	F	F	F	F	18
2.25	2.30	2.40	2.40	2.40	2.40	2.45	S	2.75	2.85	2.95	3.00	19
C	2.40	2.45	2.45	2.45	2.50	2.55	2.50	2.60	2.70	2.70	F	20
2.45	2.45	2.55	2.60	2.65	2.80	2.80	2.80	2.95	2.90	2.70	2.55	21
2.45	2.60	2.65	2.70	2.60	2.70	2.70	2.65	F	2.70F	2.75F	2.85	22
C	C	C	2.75	2.85	2.90	2.90	3.00	3.00	3.00	3.10	3.05	23
2.35	2.40	2.40	2.45	2.35	2.65	2.75	2.80	2.95	2.95	3.05	3.20	24
2.45	2.55	2.60	2.70	2.90	2.85	2.85	u2.75a	F	u2.95a	F	2.65	25
2.50	2.50	2.45	2.50	2.65	2.80	2.80	2.95	3.10	3.05	3.10	3.40	26
C	C	2.75	2.95	3.20	3.20	3.15	3.20	3.35	3.45	3.35	3.35	27
2.60	2.70	2.70	2.75	2.85	u3.00a	2.95	u2.95a	3.00	F	2.90	2.80	28
2.40	2.40	2.30	2.45	2.60	A	2.90	2.75	2.70	2.80	2.80	2.80	29
2.50	2.75	2.80	3.00	3.25	3.30	3.00	3.30	3.20	u3.20a	3.10	3.10	30
2.60	2.40	2.30	2.50	2.60	2.65	2.60	2.60	2.75	u2.90a	u3.00a	3.00	31
28	29	29	30	31	29	31	30	24	27	28	27	Count
2.45	2.45	2.45	2.50	2.65	2.80	2.80	2.75	2.95	2.95	2.90	2.90	Median
2.45	2.45	2.50	2.55	2.70	2.80	2.80	2.85	2.95	2.95	2.90	2.90	Mean

Sweep 1.0 Mc. to 2.5 Mc in 27 seconds

Characteristic fo F2  
Unit Mc  
Month September 1961

TABLE 23  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	8.6	7.6	5.5	4.2	3.1	2.1	5.3	8.1	9.2	9.8	8.6	8.2
2	F	u5.4 <sub>F</sub>	3.8	3.2	2.0	1.5	5.4	8.3	9.1	9.5	9.4	9.3
3	5.8	4.3	3.4	2.5	u2.0 <sub>F</sub>	E	5.3	8.0	9.4	9.0	8.0	C
4	5.5	4.3	3.6	3.1	2.7	2.1	5.6	7.7	9.0	8.3	8.1	8.6
5	5.7	4.3	F	u2.7 <sub>F</sub>	F	3.2 <sub>F</sub>	5.2	7.9	9.0	9.1	8.4	8.0
6	6.8	5.8	u5.1 <sub>s</sub>	3.6	3.6	3.2	5.7	8.0	9.5	8.7	8.7	9.4
7	6.8	6.0	3.9	E	E	E	5.4	8.0	8.6	7.6	7.4	7.5
8	9.2	8.5	FS	4.6	3.1 <sub>F</sub>	E	5.3	8.3	9.0	7.8	7.5	7.8
9	8.5	8.5	6.9	F	4.1	2.1	5.4	8.2	8.4 <sub>H</sub>	7.7	C	C
10	8.7	F	5.6	F	F	F	5.3	8.3	9.6	9.7	8.8	8.9
11	u10.5 <sub>s</sub>	9.0	7.2	5.0	2.2	E	5.7	8.8	9.6	8.2	8.2	8.2
12	u10.4 <sub>s</sub>	10.0	8.0	6.4	F	5.4	6.7	9.2	10.7	10.3	9.2	9.0
13	7.0	5.4	3.8	2.1	1.7	E	6.0	8.8	10.0	10.0	9.0	9.8
14	F	F	u8.7 <sub>s</sub>	F	F	u3.0 <sub>s</sub>	6.0	8.6	9.9	8.7	8.0	8.6
15	9.5	7.5	5.4	3.9	2.9	2.3	6.4	9.2	10.0	10.4	9.8	10.0
16	9.2	8.0	5.5	4.4	2.8	E	5.6	8.2	9.8	9.2	8.8	8.9
17	9.0	8.4	6.9	5.9	5.5	4.6	6.2	8.8	10.3	C	C	C
18	F	F	8.2	5.6	3.7	2.7	5.9	8.5	10.2	10.7	10.0	9.8
19	9.9	F	6.4	J4.1 <sub>F</sub>	2.7	1.7	5.6	8.2	C	9.6	9.0	9.0
20	F	8.8	F	F	u4.9 <sub>F</sub>	4.1	5.9	8.4	9.8	9.9	9.9 <sub>H</sub>	9.0
21	9.0	9.8	6.8	5.3	5.6	3.7	6.2	8.7	9.6	9.1	8.4	8.7
22	7.5	7.8	4.6	3.1	2.0	E	5.2	8.1	9.0	7.6	7.1	7.2
23	7.6	7.6	4.8	3.4	3.5	2.5	5.2	7.8	8.6	7.4	7.4	7.8
24	u7.0 <sub>s</sub>	6.7	4.8	2.8	u1.9 <sub>F</sub>	E	5.4	8.0	8.7	C	C	C
25	8.6	FS	FS	FS	3.4	2.6	6.0	8.4	9.1	9.6	9.0	9.0
26	8.4	6.3	3.1	E	E	E	5.4	8.0	9.6	8.0	7.5	7.6
27	9.6	8.3	5.6	4.6	C	C	5.6	8.4	9.7	10.1 <sub>H</sub>	8.3	8.8
28	8.0	7.5	4.6	3.3	2.2	u1.7 <sub>F</sub>	3.6	7.6	8.1	7.9	7.8	8.0
29	8.0	7.6	4.8	2.7	2.3	1.7	5.4	8.4	9.2	9.3	8.0	8.0
30	F	8.4	6.2	5.3	F	F	F	8.2	9.7	9.6 <sub>H</sub>	8.6	9.0
Count	25	25	26	25	24	27	29	30	29	28	27	26
Median	8.5	7.6	5.4	3.6	2.8	2.1	5.6	8.2	9.5	9.2	8.4	8.8
Mean	8.2	7.3	5.5	4.0	3.1	2.9	5.6	8.3	9.4	9.1	8.5	8.6

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic · fo F2  
Unit · Mc  
Month September 1961

TABLE 23 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
8 6	9 5	9 9	10 2	11 0	11 5	11 6	10 5	10 3	10 4	9 3	9 1	1
9 2	9 4	9 5	10 3	11 4	11 8	10 4	9 5	9 6	9 1	8 1	6 9	2
C	C	C	C	C	C	C	9 6	8 9	8 4	8 1	7 3	3
C	C	C	C	13 0	12 3	11 7	11 4	10 0	8 5	7 7	6 8	4
8 8	8 4	9 0	9 8	10 4	11 4	10 7	10 3	∞9 9 <sub>w</sub>	9 9	9 2	7 5	5
9 5	9 3	10 0	11 2	11 7	12 3	11 5	9 6	9 6	9 5	9 1	∞7 7 <sub>s</sub>	6
7 9	8 0	8 4	9 6	10 7	10 8	10 4	9 7	9 1	9 1	9 4	9 2	7
8 0	8 3	8 7	9 5	10 5	10 5	∞10 9 <sub>s</sub>	8 5	F	C	C	F	8
C	8 3	9 2	C	10 5	11 3	11 6	10 3	∞9 7 <sub>s</sub>	9 4	F	F	9
8 9	9 3	9 7	10 5	11 4	10 8	11 3	10 5	F	10 1	∞10 3 <sub>rs</sub>	F	10
8 7	9 2	9 4	10 2	11 0	11 2	11 2	9 8	9 8	10 7	10 0	9 6	11
9 2	10 2	11 2	12 0	12 0	12 6	13 0	13 2	13 2	11 3	8 6	7 4	12
10 2	11 2	11 6	12 2	12 4	12 8	13 0	∞12 4 <sub>s</sub>	F	12 6	11 8	10 2	13
9 0	9 5	9 8	10 1	10 3	10 1	9 7	7 8	8 3	11 0	10 5	9 5	14
10 1	10 8	11 0	11 8	12 8	13 5	12 7	11 0	F	F	F	F	15
9 6	10 4	11 5	12 2	13 0	13 1	12 2	10 9	11 2	11 2	10 6	9 9	16
C	C	C	C	12 4	12 2	11 3	10 8	10 6	F	10 4	11 4	17
9 8	10 4	11 3	12 0	12 2	12 0	11 6	10 6	10 1	10 1 <sub>F</sub>	F	F	18
C	9 0	9 0	C	9 3	9 6	10 0	9 2	8 2	7 8	8 2	F	19
9 2	9 8	10 6	11 8	12 1	12 4	11 1	10 4	10 7	11 2	11 3	9 5	20
8 8	9 0	9 0	9 6	10 2	10 8	10 4	10 2	10 1	9 7	9 0	8 6	21
7 4	8 4	9 2	9 6	9 8	9 8	9 1	9 1	9 4	9 3	8 8	8 8	22
8 0	8 5	9 6	10 8	11 0	10 6	10 8	∞9 6 <sub>w</sub>	FS	∞9 6 <sub>w</sub>	∞9 1 <sub>w</sub>	7 8	23
C	C	C	C	11 0	11 2	10 3	10 4	∞9 3 <sub>w</sub>	FS	FS	∞9 4 <sub>w</sub>	24
8 8	9 6	10 0	10 8	10 4	10 8	10 4	9 6	10 6	12 2	∞11 4 <sub>w</sub>	9 4	25
7 9	8 4	9 0	10 2	11 0	11 0	10 8	9 8	FS	FS	FS	9 8	26
9 0	9 6	10 8	11 4	11 2	11 2	11 2	10 2	11 4	12 0	9 0	8 5	27
8 3	9 0	9 5	10 3	10 1	9 4	9 0	8 8	9 6	10 2	11 0	9 4	28
8 0	8 4	9 2	9 7	9 3	8 7	8 8	F	F	F	10 2	9 6	29
9 5	10 5	11 3	11 3	10 8	10 6	9 5	F	F	F	F	F	30
24	26	26	24	29	29	29	28	22	23	23	23	Count
8 8	9 3	9 6	10 4	11 0	11 2	10 8	10 2	9 8	10 1	9 3	9 2	Median
8 8	9 3	9 9	10 7	11 1	11 3	10 9	10 1	10 0	10 1	9 6	8 8	Mean

Sweep 1 0 Mc. to 25 0 Mc. in 27 seconds

Characteristic · fo F2  
Unit . Mc  
Month September 1961

TABLE 23—(Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	8.2	6.5	4.9	3.7	2.7	3.3	6.5	8.4	9.9	9.1	8.1	8.4
2	F	4.4	3.4	2.6	1.7	3.1	7.5	8.6	10.0	9.4	9.5	9.0
3	5.0	3.7	2.9	2.2	E	3.2	7.0	8.5	9.4	8.4	C	C
4	4.5	3.9	3.4	2.9	2.4	3.4	C	8.4	8.4	8.2	8.4	9.0
5	5.1	F	F	F	F	3.1	6.8	8.4	9.1	8.6	8.2	9.0
6	6.5	5.5	4.1	3.1	3.5	F	6.7	9.3	9.2	8.5	8.9	9.3
7	6.7	5.0	2.8	E	E	2.9	7.0	8.3	8.1	7.3	7.5	7.8
8	8.9	FS	5.7	F	2.3 <sub>F</sub>	3.0	6.9	8.6	8.7 <sub>H</sub>	C	7.7	7.8
9	8.7	7.9	6.1	4.9	3.1	3.1	6.9	8.7	7.8	C	C	C
10	8.1	7.3	4.4	F	F	3.2	7.3	9.2	10.0	9.4	8.8	8.8
11	w10.0s	8.3	6.3	3.2	E	3.9	7.6	9.6	9.2	8.3	8.2	8.2
12	10.5	9.0	6.8	5.6	F	5.4	8.0	10.1	10.8	9.5	9.2	9.0
13	6.5	4.8	2.9	1.8	E	3.2	7.3	9.5	10.0	9.3	9.1	10.0
14	F	w9.2s	F	F	F	3.5	7.6	9.6	9.7	8.2	8.0	8.9
15	8.9	6.5	4.5	3.3	2.4	3.6	8.7	9.7	10.2	10.1	9.8	10.0
16	9.2	6.8	5.1	3.6	2.0	3.5	7.3	9.2	9.9	8.8	8.8	9.4
17	8.8	7.6	6.2	5.8	5.2	4.2	7.6	9.6	10.6	C	C	C
18	10.8	9.2	7.0	4.5	3.2	3.5	7.4	9.6	10.8	10.7	9.8	9.7
19	F	F	4.7	3.1	2.1	3.4	7.1	8.9	10.0	9.5	C	C
20	F	F	w6.6 <sub>F</sub>	F	F	4.0	7.3	9.0	9.8	10.0	9.1	9.3
21	8.2	8.8	5.8	5.4	5.7	5.3	7.2	9.5	9.5	8.5	8.6	8.9
22	7.3	6.3	3.8	2.3	E	3.2	6.8	8.6	w8.2 <sub>F</sub>	7.1	7.0	7.3
23	7.7	5.7	4.2	3.3	3.3	3.3	7.2	8.3	8.0	7.3	7.6	8.0
24	w6.9 <sub>F</sub>	6.3	3.5	2.3	w1.6 <sub>F</sub>	3.2	7.2	8.5	8.5	C	C	C
25	8.4	FS	FS	4.0	2.9	w3.5 <sub>F</sub>	7.6	8.8	9.6	9.1	9.1	9.0
26	7.9	4.6	2.4	E	E	3.0	7.1	8.8	8.8	7.8	7.4	7.8
27	9.5	6.8	4.9	C	C	3.5	7.4	9.0	10.4	9.0	8.4	8.9
28	8.0	6.2	3.7	2.8	1.8	3.3	7.0	8.1	8.0	7.7	7.9	8.0
29	7.6	6.6	3.2	2.4	2.0	3.0	7.0	8.7	9.3	8.5	7.8	7.9
30	FS	8.0	5.6	F	F	F	7.9	9.4	9.6	9.4 <sub>H</sub>	8.7	9.3
Count	25	25	27	23	23	28	29	30	30	26	25	25
Median	8.1	6.5	4.5	3.1	2.1	3.3	7.2	8.8	9.6	8.7	8.4	8.9
Mean	8.0	6.6	4.7	3.5	2.8	3.5	7.3	9.0	9.4	8.8	8.5	8.7

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic fo F2  
Unit : Mc  
Month . September 1961

TABLE 23 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10.2°N  
Longitude 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
9 0	9 8	10 0	10 5	11 4	11 7	11 0	10 6	10 1	9 7	9 3	∞8 7 <sub>F</sub>	1
9 4	9 5	9 9	10 8	11 8	10 8	10 0	9 6	9 5	8 6	7 5	6 4	2
C	C	C	C	C	C	C	9 2	8 7	8 4	7 7	6 5	3
C	C	C	12 6	12 8	11 9	11 8	10 8	9 2	8 0	7 2	6 2	4
8 6	8 6	9 3	10 4	11 2	10 9	10 3	10 1 <sub>F</sub>	10 1	9 4	8 4	7 0	5
9 1	9 5	10 7	11 5	12 0	12 8	10 0	9 4	9 6	9 4	8 5	6 8	6
8 0	8 1	8 9	10 1	11 0	10 7	∞10 1 <sub>s</sub>	F	9 0	9 3	9 3	9 2	7
8 1	8 5	9 1	9 8	10 8	10 7	∞9 6 <sub>s</sub>	F	F	C	C	F	8
8 0	8 8	9 8	10 2	10 8	11 7	10 8	∞9 6 <sub>s</sub>	F	F	∞9 2 <sub>s</sub>	F	9
9 1	9 5	10 1	11 0	11 2	11 1	11 0	F	10 3	F	F	FS	10
9 0	9 3	10 0	10 5	11 0	11 1	10 8	9 8	10 4	∞10 2 <sub>s</sub>	10 0	10 2	11
9 7	10 5	11 7	11 9	12 0	13 0	12 6	13 1	13 2	9 1	8 0	7 5	12
10 8	11 4	11 8	12 3	12 6	13 4	12 8	F	12 6	12 4	11 6	10 2	13
9 3	9 5	9 9	10 4	10 3	9 7	9 3	8 0	9 3	11 1	10 0	9 5	14
10 5	11 0	11 5	12 5	13 4	13 0	11 8	F	F	F	10 4	9 6	15
9 8	10 9	11 8	12 8	13 3	12 5	11 4	10 8	11 2	10 9	10 5	9 3	16
C	C	C	C	12 3	11 5	11 0	10 4	10 6	10 4	10 8	F	17
10 0	10 9	11 6	12 0	12 1	11 6	C	10 1	10 0	F	∞10 3 <sub>F</sub>	10 0	18
9 0	8 9	9 0	9 2	9 4	9 8	9 5	8 8	7 6	∞8 0 <sub>F</sub>	8 5	F	19
9 4	10 2	11 2	12 2	12 1	11 6	11 0	10 4	10 9	11 4	10 8	8 8	20
9 0	9 1	9 4	9 2	10 5	10 5	10 2	10 2	9 8	9 1	8 5	7 7	21
7 8	8 8	9 3	9 8	10 0	9 3	9 2	9 3	9 5	9 6	8 4	7 8	22
8 4	8 9	10 2	10 8	10 9	10 6	10 4	FS	∞9 2 <sub>F</sub>	∞9 1 <sub>F</sub>	∞8 4 <sub>F</sub>	∞7 0 <sub>ms</sub>	23
C	C	C	C	11 3	10 4	10 4	10 0	FS	FS	∞8 7 <sub>F</sub>	∞9 0 <sub>ms</sub>	24
9 3	10 0	10 4	10 4	10 6	10 6	9 8	10 2	11 8	∞12 0 <sub>F</sub>	10 4	8 6	25
8 0	8 4	9 6	10 8	11 0	11 0	10 0	9 4	FS	FS	∞10 3 <sub>F</sub>	9 4	26
9 4	10 2	11 3	11 4	11 0	11 2	10 5	10 6	12 4	10 2	8 8	8 0	27
8 8	9 2	9 7	10 8	10 4	9 0	9 0	9 2	10 0	10 8	10 3	8 7	28
8 2	8 7	9 6	9 7	9 0	9 0	8 5	F	F	F	10.0	F	29
10 0	10 9	11 5	11 3	10 7	10 3	∞8 7 <sub>R</sub>	7 0 <sub>F</sub>	F	F	F	F	30
26	26	26	27	29	29	28	23	23	21	27	23	Count
9 0	9 5	10 0	10 8	11 0	11 0	10 4	10 0	10 1	9 6	9 3	8 7	Median
9 1	9 6	10 3	10 9	11 3	11 1	10 4	9 9	10 2	9 9	9 3	8 4	Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds.

Characteristic - fo F1  
 Unit : Mc  
 Month : September 1961

TABLE 24  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	L
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6								L	L	L	L <sub>M</sub>	L
7								L	L	L	L	L
8							L	L	L	L	L <sub>49</sub>	L
9							L	L	L	L	L	L
10							L	L	L	L <sub>M</sub>	L	L
11							L	L	L	L	L	L
12							L	L	L	L	L	L
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15							L	L	L	L	L	L
16								L	L	L	L	L
17								L	L	L	L	L
18								L	L	L	L	L
19								L	L	L	L	L
20								L	L	L	L	L
21							L	L	L	L	L	L
22							L	L	L	L	L	L
23							L	L	L	L	L	L
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26							L	L	L	L	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	L	L <sub>M</sub>
Count												1
Median												
Mean												

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic fo F1  
 Unit Mc  
 Month September 1961

TABLE 24  
 Ionospheric Data  
 75°E Mean Time

Latitude · 10 2°N  
 Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
L	L	L	L	L	A							1
L	L	L	L	L	L							2
C	C	C	C	C	C	O						3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L <sub>EX</sub>	L <sub>EX</sub>	4.6	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	L							30
			1									Count
												Median
												Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic fo F1  
Unit . Mc  
Month . September 1961

TABLE 24 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							L	L	L	L	L	L
2							L	L	L	L	L	L
3							L	L	L	L	L	L
4							L	L	L	L	L	L
5							L	L	L	L	L	L
6								L <sup>H</sup>	L <sup>H</sup>	L	L	4 8
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10								L	L	L	L	L
11							L	L	L	L	L	L
12						L	L	L	L	L	L	L
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15						L	L	L	L	L	L	L
16								L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19							L	L	L	L	L	L
20								L	L	L	L	L
21							L	L	L	L	L	L
22							L	L	L	L	L	L
23						L	L	L	L	L	L	L
24						L	L	L	L	L	L	L
25							L	L	L	L	L	L
26							L	L	L	L	L	L
27				G	G		L	L	L	L	L	5 0
28						L	L	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	L	L
Count												2
Median												
Mean												

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic fo F<sub>1</sub>  
 Unit Mc  
 Month September 1961

TABLE 24 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
L	L	A	L	L								1
L	L	L	L	L	L							2
C	C	C	C	C								3
C	C	C	C	C								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
L	L	L	L	L								26
L	L	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
1												Count
												Median
												Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic : foE  
 Unit Mc  
 Month September 1961

TABLE 25  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								2 5	A	A	A	A
2							1 8	A	A	A	A	A
3							1 6	A	A	A	A	C
4							1 8	2 7	A	A	A	A
5							1 8	A	A	A	A	A
6							1 8 <sub>m</sub>	A	A	A	A	A
7							1 9	A	A	A	A	A
8							R	A	A	A	A	A
9							1 8 <sub>m</sub>	A	A	A	C	C
10							1 8	A	A	A	A	A
11							1 7	A	A	A	A	A
12							1 9	2 7	A	A	A	A
13								2 9	A	A	A	A
14							1 7	A	A	A	A	A
15							1 9	2 7	A	A	A	A
16								A	A	A	A	C
17								A	A	A	A	A
18								A	A	A	A	A
19								2 5	A	A	A	A
20								2 7 <sub>m</sub>	A	A	A	A
21								A	A	A	A	A
22								A	A	A	A	A
23								A	A	A	A	A
24								A	A	C	C	C
25								A	A	A	A	A
26								A	A	A	A	A
27								A	A	A	A	A
28								A	A	A	A	A
29								2 7	A	A	A	A
30								2 5	A	A	A	A
Count							12	9				
Median							1 8	2 7				
Mean							1 8	2 7				

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic foE  
Unit Mc  
Month September 1961

TABLE 25  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
C	C			C	C	C						3
C	C	3 7	C	3 0	A							4
A	A	A	A	A	2 4							5
A	A	A	A	A	2 3							6
A	A	A	A	A	A	A						7
C	A	A	A	2 9 <sub>H</sub>	A							8
A	A	A	A	A	A							9
A	A	A	A	A	A							10
A	A	A	A	A	A							11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	A	A	A							16
C	C	A	A	A	A							17
A	A	A	A	A	A							18
C	A	A	A	2 9	A							19
A	A	A	A	A	A							20
A	A	A	A	A	A							21
A	A	4 2	A	3 3	A							22
C	A	A	A	A	A							23
A	A	A	A	A	1 9							24
A	A	A	A	A	A							25
A	A	A	A	A	A							26
A	A	A	A	A	A							27
A	A	A	A	A	A							28
A	A	A	A	A	A							29
A	A	A	A	A	A							30
												Count
												Median
												Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic . foE  
 Unit Mc  
 Month September 1961

TABLE 25 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2 2	A	A	A	A	A
2							2 3	A	B	A	A	B
3							2 3	A	A	A	A	C
4							A	A	A	A	A	A
5							2 3	A	A	A	A	A
6							2 2	A	A	A	A	A
7							A	A	A	A	A	A
8							2 3	A	A	C	A	A
9							2 4 <sub>R</sub>	A	A	C	A	C
10							A	A	A	A	A	A
11							A	A	A	A	A	A
12							2 4	A	A	A	A	A
13							2 4	A	A	A	A	A
14							A	A	A	A	A	A
15							2 3	A	A	A	A	A
16							2 2	A	A	A	A	A
17							2 4 <sub>R</sub>	A	A	C	C	C
18							2 3	A	A	A	A	A
19							R	A	A	A	A	C
20							2 8	A	A	A	A	A
21							2 6	A	A	A	A	A
22							2 9	A	A	A	A	A
23							2 6	A	A	A	A	A
24							2 3	A	A	C	C	C
25							3 1	A	A	A	A	A
26								A	A	A	A	A
27							A	A	A	A	A	A
28								A	A	A	A	A
29								A	A	A	A	A
30							u2 1 <sub>R</sub>	A	A	A	A	A
Count							20					
Median							2 3					
Mean							2 4					

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.



Characteristic foEs  
 Unit : Mc  
 Month - September 1961

TABLE 26  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11	
1	2 1							7 0	10 0	10 2	12 6	12 4	
2		3 0	8 0				G	9 0	9 0	10 0	12 0	12 6	
3	4 0						G	8 4	9 0	10 6	12 6	C	
4							G	6 4	10 6	11 0	12 6	12 0	
5							G	8 0	10 0	11 4	12 6	12 6	
6							G	6 8	9 3	12 0	12 2	12 8	
7		5 8	7 0	9 2			G	8 8	10 7	11 0	12 5	12 8	
8							G	7 8	11 8	11 3	12 0	13 3	
9							G	7 6	10 4	11 8	C	C	
10							G	8 8	10 3	12 4	12 8	13 2	
11							G	8 0	11 2	12 0	12 2	13 2	
12							G	10 0	10 0	11 0	12 0	12 6	
13							G	10 0	10 0	11 2	13 0	12 0	
14	03 8	04 8	3 0				G	7 8	9 8	10 4	11 6	12 0	
15							G	10 4	10 0	12 2	13 0		
16								8 0	8 6	9 6	11 2	11 0	
17								6 4	8 6	C	C	C	
18								7 2	8 2	9 2	10 6	10 8	
19								G		8 4	10 7	10 8	
20								G	7 8	8 4	10 8	10 8	
21								6 6	8 3	9 8	10 0	10 6	
22								6 0	8 4	9 8	10 8	11 2	
23								7 0	8 6	10 0	12 0	11 4	
24								7 0	8 2	C	C	C	
25								3 5	9 0	9 1	10 4	10 4	
26								3 4	7 8	9 8	10 4	11 0	
27	2 8			9 9	G	C		6 8	8 1	8 6	10 8	11 2	
28								6 0	9 6	9 6	11 0	11 1	
29								6 0	8 6	9 4	9 6	10 0	
30								G	8 8	9 6	11 2	11 0	
Count	4	3	3	2				13	30	29	28	27	26
Median								G	6 8	9 0	10 0	12 0	11 7
Mean									7 0	9 3	10 3	11 5	11 8

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foEs  
 Unit Mc  
 Month September 1961

TABLE 26  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77°5'E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
12 0	17 0	18 0	17 0	14 0	18 0	10 0	5 0				3 6	1
12 0	12 0	12 0	12 0	20 0	7 0	5 0	5 0				8 0	2
C	C	C	C	C	C	C	6 2		5 2			3
C	C	G	C	G	8 0				4 2		3 6	4
13 0	12 4	11 4	10 0	10 0	5 0	2 6						5
13 2	12 3	10 7	4 1	9 8	G		7 6	4 0		4 4		6
12 8	12 6	12 4	10 9	7 0	8 8	S	3 4					7
12 8	12 7	12 6	11 8	10 7	v7 7s	S						8
C	13 2	12 4	21 8	G	4 6	4 7				3 8		9
13 0	12 0	11 6	16 4	13 6	9 0				v4 5s		v5 6s	10
12 8	12 0	12 0	10 4	8 6	4 8					3 4		11
12 8	6 0	9 8	8 8	8 8	9 0	4 4	4 0	4 0				12
12 3	12 2	12 0	8 2	7 8	3 9				4 4	4 0	3 8	13
12 2	12 4	12 0	11 0	9 8	7 4							14
12 0	11 0	9 8	10 8	9 6	8 8	4 0				4 0	4 4	15
10 8	9 2	11 8	8 0	9 4	6 4							16
C	C	C	C	10 8	8 6	3 4						17
10 7	9 8	8 6	9 7	8 4	6 8							18
C	11 2	11 0	C	8 8	7 0							19
11 3	9 6	11 5	9 0	G	4 2					5 0		20
10 9	10 8	11 0	9 2	8 0	8 4							21
11 0	10 7	10 2	8 0	7 4	6 0							22
11 6	10 4	G	6 0	G	6 0							23
C	C	C	C	6 8	3 8						v3 4s	24
11 4	10 8	9 0	9 1	8 4	G							25
11 2	11 8	10 2	8 0	8 4	8 0				3 4	3 4	3 6	26
11 6	11 0	12 0	8 2	6 6								27
11 6	11 1	10 6	8 8	8 2	4 4					4 4		28
9 2	9 8	10 8	8 8	8 6	v6 0s				3 0	3 2	4 0	29
11 4	11 3	12 4	10 0	8 0								30
24	26	27	25	29	27	7	6	2	6	9	9	Count
11 8	11 2	11 4	9 2	8 4	6 8	4 4	5 0		4 3	4 0	3 8	Median
11 8	11 4	11 4	10 2	9 5	7 1	4 9	5 2		4 1	4 0	4 4	Mean

Sweep 1 0 Mc to 25 0 Mc, in 27 seconds.



Characteristic fo Es  
 Unit Mc  
 Month September 1961

TABLE 26 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0340	0530	0630	0730	0830	0930	1030	1130
1							G	9 2	9 4	11 4	12 0	12 0
2							G	8 0	9 0	10 8	12 4	12 0
3		3 0	6 0				6 0	10 0	11 0	12 4	C	C
4							C	9 8	11 0	12 2	12 0	11 0
5							G	8 8	11 0	11 6	13 0	13 0
6							G	9 8	11 0	12 6	12 8	12 0
7	3 0	S					8 2	10 6	11 6	12 4	12 6	13 8
8							G	10 0	11 4	C	12 6	12 8
9							G	9 3	10 4	C	C	C
10							6 4	9 8	11 8	13 3	13 0	13 4
11							7 0	10 0	11 6	12 2	12 2	13 4
12							G	8 8	11 0	12 0	12 0	13 0
13							G	9 0	11 8	12 8	13 0	12 0
14		u5 0s	u4 0s				6 0	9 0	11 2	12 0	12 8	12 8
15							G	8 0	9 6	12 2	12 0	11 6
16							G	8 5	9 2	11 4	11 4	11 0
17							G	7 8	8 8	C	C	C
18							G	8 2	8 6	10 4	10 8	10 8
19							G	7 0	8 2	10 7	C	C
20							G	7 8	7 8	10 2	10 8	11 3
21							G	7 8	8 8	10 8	10 4	10 8
22							G	7 6	9 0	11 6	10 3	10 4
23							5 8	7 8	8 5	11 0	11 6	11 4
24							G	7 7	8 8	C	C	C
25		2 4					G	7 8	8 6	11 2	10 4	11 0
26								7 6	8 4	10 0	10 8	10 8
27	4 5	3 8	3 0	C	C		3 0	7 8	8 7	10 7	11 4	11 2
28								7 8	9 6	11 0	12 0	11 3
29								8 5	9 4	10 6	10 0	9 0
30							G	8 6	9 6	11 0	11 6	11 0
Count	4	3	2				25	30	30	26	25	25
Median							G	8 5	9 5	11 4	12 0	11 4
Mean							6 0	8 6	9 9	11 5	11 8	11 7

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic foEs  
Unit Mc  
Month September 1961

TABLE 26 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
14 0	19 0	22 0	17 0	12 4	13 0	9 0		4 6	3 4	4 4	2 5	1
12 0	12 0	11 8	12 0	12 0	7 0	5 0	3 4		5 0		7 2	2
C	C	C	C	C	C	C	4 0		4 0			3
C	C	C	G	7 0								4
12 4	12 0	9 0	9 8	7 8	u6 0s							5
13 0	12 6	10 8	8 8	7 8	S		4 7			3 7		6
13 7	12 0	12 0	8 8	8 9	S	2 9		2 9				7
12 9	12 4	10 8	10 4	8 8	S							8
11 8	11 6	14 6	7 4	5 7	u± 7s	3 1				3 2		9
12 2	11 8	11 2	13 6	11 2	9 0			S	3 8	u6 8s		10
12 7	12 0	8 5	9 0	7 0	4 0				4 0			11
11 0	11 8	8 8	8 8	9 0	7 8	4 2	4 7			3 1		12
11 6	11 0	9 2	8 1	7 0	3 2			2 8	4 8	3 8	4 3	13
11 8	11 0	12 0	11 0	8 2								14
12 0	11 0	9 2	10 0	8 0	6 8					5 6		15
9 4	10 4	9 2	12 2	8 8								16
C	C	C	C	8 7	6 4							17
9 8	9 4	9 2	9 2	7 8	5 8	C					3 4	18
11 4	12 0	10 2	8 5	7 8								19
10 8	17 5	11 8	G	3 0						3 6		20
11 3	11 0	9 8	9 8	8 2	7 8							21
10 6	10 8	10 2	8 0	6 8			3 1	2 4				22
10 5	7 6	5 8	8 2	6 0								23
C	C	C	C	8 0	4 1					4 4	6 3	24
11 6	10 4	8 2	10 4	7 8								25
12 0	11 2	9 4	7 8	8 0	8 0				3 1	3 2	2 5	26
11 0	8 6	7 4	7 5	6 0								27
11 3	10 8	8 6	9 3	4 2					6 4	4 0		28
9 6	10 8	9 6	8 2	7 8	u3 4s		2 6		u5 8s			29
10 8	11 7	10 0	8 8	8 0								30
26	26	26	27	29	15	5	4	5	10	11	6	Count
11 6	11 4	9 7	8 8	7 8	6 4	4 2		2 9	4 0	3 8	3 8	Median
11 6	11 6	10 4	9 7	7 9	6 5	4 8		3 2	4 3	4 2	4 4	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fbEs  
Unit Mc  
Month September 1961

TABLE 27  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	1 9							2 5	3 1	3 5	3 7	3 7
2			1 7					2 8	3 2	3 4	3 6	3 8
3								2 7	3 2	3 4	3 7	C
4								2 7	3 2	3 6	3 8	3 8
5								2 6	3 2	3 6	3 7	3 8
6							G	2 7	3 2	3 6	3 6	3 7
7		1 9	2 1				G	2 7	3 2	3 6	3 7	3 8
8							G	2 7	3 2	3 6	3 8	3 9
9							G	2 8	3 2	3 6	C	C
10							G	2 7	3 2	3 6	3 6	3 9
11							G	2 8	3 2	3 6	3 8	4 0
12							G	C	3 2	3 6	3 8	3 8
13								G	3 3	3 4	3 9	3 9
14	1 7	1 5					G	2 8	3 3	3 7	3 8	3 8
15							G	3 2	3 5	3 8	3 8	3 9
16								2 8	3 4	3 8	3 8	4 0
17								2 8	3 4	C	C	C
18								2 8	3 2	3 8	3 8	4 0
19								G		3 7	3 9	4 0
20								G	3 2	3 8	3 7	3 8
21								2 6	2 1	3 5	3 6	3 8
22								3 7	3 2	3 5	3 8	3 9
23								2 7	3 2	3 6	3 7	3 8
24								2 6	3 2	C	C	C
25								2 8	3 4	3 4	3 8	3 9
26								2 6	3 2	3 5	3 8	3 9
27	1 8			1 9	C	C		2 7	3 3	3 8	3 8	3 9
28								2 7	3 1	3 6	3 7	4 0
29								2 8	3 2	3 5	4 0	4 0
30								G	2 5	3 5	3 8	3 7
Count	3	2	2	1			9	30	29	28	27	26
Median							[G	2 7	3 2	3 6	3 8	3 9
Mean								2 8	3 2	3 6	3 8	3 9

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic f<sub>o</sub>F<sub>2</sub>  
 Unit Mc  
 Month . September 1961

TABLE 27  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
3.8	4.1	3.8	3.7	3.9	7.0	2.7	1.6					1
3.8	3.9	3.7	3.8	10.0	2.7	2.6	2.4		2.0		1.9	2
C	C	C	C	C	C	C	2.6		3.0			3
C	C				2.4		2.6					4
3.8	3.7	3.6	3.5	3.1	2.4	1.7						5
3.8	3.8	3.6	3.4	3.1	G		1.9	2.1		2.3		6
3.9	3.9	3.6	3.5	3.9	3.6	2.2						7
4.0	3.8	3.6	3.5	3.1	2.6	1.9						8
C	4.0	3.8	8.0	G	2.7	2.1				1.6		9
4.0	3.9	3.8	7.0	5.0	3.4				1.9		1.9	10
4.0	4.0	3.8	3.4	3.0	2.4					1.9		11
3.9	3.9	4.4	3.6	3.8	2.7	2.6	2.6	2.2				12
3.8	3.9	3.6	3.5	3.0	2.4				1.7	1.4	1.7	13
3.9	3.9	3.8	3.4	3.1	2.4							14
4.0	4.0	3.9	4.8	3.3	2.4					1.9	2.4	15
4.2	4.0	4.8	3.8	3.8								16
C	C	C	C	3.8	3.8							17
3.9	4.0	3.8	4.1	3.6	2.5							18
C	4.0	3.8	C	3.1	2.4							19
3.9	3.8	4.2	3.6	G	2.7					2.3		20
3.9	3.9	3.7	3.6	3.3	3.4							21
3.8	3.8	3.6	3.4	2.9	2.3							22
3.8	3.9	G	u2.8s	G	2.3							23
C	C	C	C	2.8	2.3						1.6	24
3.9	3.9	3.5	3.3	2.8	G							25
3.9	3.7	3.6	3.2	3.7	3.4				2.0	2.0	1.9	26
3.9	3.9	4.4	3.3	2.8								27
3.8	3.8	3.4	3.3	3.0	3.6					1.9		28
4.0	4.0	3.5	3.3	2.8	2.2					1.8	2.2	29
3.8	3.7	4.4	3.4	3.0								30
2.4	2.6	2.6	2.5	2.8	2.6	7	5	2	5	9	7	Count
3.9	3.9	3.8	3.5	3.1	2.4	2.2	2.4		2.0	1.9	1.9	Median
3.9	3.9	3.8	3.8	3.5	2.9	2.3	2.2		2.1	1.9	1.9	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic fbEs  
Unit Mc  
Month September 1961

TABLE 27 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								2.8	3.3	3.4	3.7	3.8
2			1.9					3.0	4.0	3.7	3.7	3.9
3							2.4	3.0	3.4	3.7	C	C
4							G	3.0	3.3	3.6	3.7	3.8
5								3.0	3.4	3.8	3.8	3.8
6							G	3.0	3.3	3.6	3.6	3.7
7		1.9	1.8				2.8	3.0	3.4	3.6	3.8	3.9
8							G	3.0	3.4	C	3.8	3.9
9							G	3.0	3.6	C	C	C
10							2.4	3.0	3.4	3.7	3.8	4.0
11							2.4	3.0	3.5	3.8	3.8	4.1
12							G	3.0	3.4	3.8	3.8	3.9
13							G	3.0	3.4	3.7	3.9	4.0
14		1.7	1.7				2.4	3.0	3.5	3.7	4.0	4.0
15							G	3.1	3.2	3.6	3.9	4.0
16							G	3.2	3.5	3.8	4.0	4.0
17							G	3.2	3.6	C	C	C
18							G	3.0	3.4	3.8	4.0	4.1
19							G	3.0	3.4	3.7	4.0	4.0
20							G	3.4	3.6	3.8	3.8	4.0
21							G	2.0	3.3	3.7	3.8	4.0
22							G	2.8	3.4	3.7	3.9	4.0
23							2.5	3.0	3.4	3.6	3.9	4.0
24							G	3.0	3.4	C	C	C
25			1.7				G	3.2	3.6	3.6	3.8	4.0
26								3.0	3.4	3.6	3.8	4.0
27		2.8		1.7	C	C	2.4	3.0	3.5	3.6	3.9	3.9
28								3.0	3.4	3.6	3.8	4.0
29								3.0	3.3	3.6	3.8	4.0
30							G	3.1	3.5	3.5	3.6	3.8
Count	3	3	2				22	30	30	26	26	25
Median							G	3.0	3.4	3.6	3.8	4.0
Mean							2.4	3.0	3.4	3.7	3.8	3.9

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds.

Characteristic fbEs  
 Unit Mc  
 Month September 1961

TABLE 27 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
3.8	4.0	4.6	3.2	3.4	3.4	2.0		1.6		1.6	1.6	1
3.8	3.9	4.1	6.3	4.3	2.5	2.1	2.2		2.0			2
C	C	C	C	C	C	C	3.2		4.8			3
C	C	C		2.7								4
3.8	3.7	3.5	3.3	2.7	2.2							5
3.8	3.6	3.5	3.2	2.8	2.1		2.1					6
3.9	3.7	3.6	3.3	4.4	3.0	1.7		1.9				7
4.0	3.8	3.6	3.3	2.8	2.2							8
3.9	3.8	4.2	3.4	2.9	2.5	1.8				1.4		9
4.0	3.8	4.9	6.0	4.1	2.9			1.8	1.8	2.4		10
4.0	3.8	3.6	3.4	2.8	2.0				1.5			11
3.9	4.2	3.6	3.6	3.0	2.8	2.6	2.2			1.7		12
4.0	3.8	3.6	3.2	2.7	2.4			1.5	1.7	1.6		13
4.0	3.8	3.6	3.4	2.8								14
4.0	3.9	4.4	3.8	3.0	2.4					2.2		15
4.0	4.0	5.4	4.8	3.7								16
C	C	C	C	4.0	2.8							17
4.0	3.9	4.0	4.2	3.0	2.2	C						18
4.0	3.8	3.6	3.2	2.6								19
4.0	4.7	5.2	G	2.8						2.1		20
3.8	3.8	3.6	3.6	3.6	2.8							21
3.9	3.7	3.6	3.2	2.5								22
4.8	3.8	3.5	3.2	2.6								23
C	C	C	C	2.9	2.6					1.7	2.2	24
3.8	3.8	3.5	3.1	2.5								25
3.8	3.8	3.4	3.4	4.0	2.6				2.1	1.8	1.6	26
3.9	3.8	3.5	3.1	2.7								27
3.9	3.7	3.6	3.2	3.2					2.0	1.8		28
4.0	3.6	3.4	3.0	2.6				2.0				29
3.9	3.9	3.4	3.1	2.7								30
26	26	26	26	29	17	5	4	5	7	10	3	Count
3.9	3.8	3.6	3.3	2.8	2.6	2.0		1.8	2.0	1.8		Median
4.0	3.8	3.9	3.6	3.1	2.6	2.0		1.8	2.3	1.8		Mean

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds

Characteristic fmin  
Unit . Mc  
Month September 1961

TABLE 28  
Ionospheric Data  
75°E Mean Time

Latitude · 10·2°N  
Longitude 77·5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	11	17	17	14	14	15	18	18	19	22	22	23
2	15	14	14	20	14	11	12	16	23	28	26	26
3	16	19	15	15	E	E	14	16	20	22	22	C
4	18	17	15	12	12	17	14	17	20	26	22	23
5	18	16	14	15	15	15	14	15	20	22	23	24
6	15	15	17	13	11	12	14	16	19	20	21	22
7	17	17	20	18	E	E	15	18	20	24	24	26
8	14	13	14	15	13	E	15	16	20	21	23	24
9	14	14	15	14	12	13	16	16	22	23	C	C
10	15	17	13	12	13	13	13	16	18	23	23	25
11	14	13	14	16	15	E	15	16	21	26	28	27
12	14	15	13	14	14	14	15	18	20	22	23	26
13	16	18	16	15	ul 4m	E	16	15	20	24	23	25
14	14	11	14	17	15	18	16	17	20	22	23	27
15	15	15	13	13	15	13	15	18	19	22	22	23
16	16	15	15	15	17	E	19	19	23	25	30	30
17	16	16	13	15	14	17	20	19	20	C	C	C
18	21	16	19	16	16	17	19	18	22	27	26	29
19	18	17	18	16	17	14	20	21	C	26	26	28
20	19	18	17	18	17	17	18	19	22	24	25	26
21	17	18	18	14	14	12	18	19	20	24	24	25
22	15	16	14	13	13	E	19	18	22	24	26	27
23	12	12	15	13	11	11	19	16	19	24	24	26
24	20	17	13	17	14	E	20	18	20	C	C	C
25	18	15	14	17	15	13	19	18	22	26	26	30
26	17	14	16	E	E	E	20	20	24	28	26	28
27	13	17	17	15	C	C	22	19	26	30	28	29
28	12	12	15	14	13	ul 4p	20	18	24	19	25	27
29	17	17	15	13	12	12	21	18	22	24	30	28
30	15	15	11	12	12	11	20	18	23	23	25	25
Count	30	30	30	30	29	29	30	30	29	28	27	26
Median	16	16	15	15	14	12	18	18	20	24	24	26
Mean	16	16	15	15	14	14	17	18	21	24	25	26

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic fmin  
Unit Mc  
Month . September 1961

TABLE 28  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 3	2 4	2 1	1 9	1 8	1 5	1 4	1 2	1 6	1 5	1 7	1 5	1
2 8	2 4	2 2	1 9	1 8	1 8	1 4	1 4	2 0	1 1	1 8	1 8	2
C	C	C	C	C	C	C	1 8	2 3	2 6	2 4	1 9	3
C	C	C	C	2 8	1 6	1 5	1 6	1 9	1 9	1 7	1 5	4
2 5	2 3	2 2	2 0	1 8	1 5	1 3	1 3	1 4	1 5	1 7	1 6	5
2 5	2 5	2 5	2 7	2 0	1 9	2 1	1 5	1 7	1 8	1 8	1 7	6
2 6	2 5	2 5	2 3	2 0	1 9	1 2	1 1	1 4	1 8	1 6	1 6	7
2 5	2 4	2 1	2 0	1 8	1 4	1 2	1 2	1 2	C	C	1 4	8
C	2 5	2 2	2 3	1 9	1 6	1 6	1 6	1 7	1 6	1 3	1 5	9
2 6	2 5	2 4	2 1	1 9	1 8	2 1	1 7	1 6	1 5	1 9	1 7	10
2 8	2 8	2 3	2 0	1 7	1 4	1 7	1 3	1 5	1 5	1 5	1 6	11
2 4	2 6	2 3	2 0	1 9	1 4	2 0	1 5	1 3	1 8	1 8	1 7	12
2 6	2 7	2 6	2 4	2 2	2 0	1 4	1 2	1 5	1 1	1 3	1 2	13
2 6	2 7	2 4	2 3	2 0	1 8	1 5	1 4	1 5	1 5	1 6	1 6	14
2 6	2 6	2 2	2 0	2 0	2 0	1 8	1 8	1 7	2 0	1 6	1 6	15
3 1	2 6	2 5	2 3	2 4	2 5	1 8	1 6	1 9	2 0	2 2	1 8	16
C	C	C	C	2 0	1 7	2 1	2 2	2 1	2 0	2 0	1 9	17
3 0	2 4	2 5	2 3	1 9	1 9	1 8	1 3	1 5	1 8	1 8	1 9	18
C	2 8	2 6	C	2 1	2 0	1 7	1 7	1 7	1 8	1 9	1 9	19
2 7	2 7	1 9	2 3	2 5	1 7	2 1	2 2	2 0	1 9	1 6	1 6	20
2 8	2 4	2 2	2 4	1 9	1 8	2 4	2 2	2 0	2 2	1 6	1 6	21
2 8	2 6	2 1	1 8	1 5	2 0	1 6	1 8	1 6	1 6	1 4	1 4	22
2 6	2 6	2 5	u2 6 <sub>sp</sub>	2 5	1 7	1 9	1 5	1 6	1 5	1 3	1 4	23
C	C	C	C	2 5	1 7	2 1	2 1	1 5	u1 3 <sub>sp</sub>	u1 3 <sub>sp</sub>	1 3	24
3 0	2 8	2 6	2 4	2 1	1 7	1 5	2 2	2 0	1 8	1 7	1 6	25
2 8	2 6	2 4	2 0	1 9	1 6	2 0	1 3	1 4	1 8	1 5	1 5	26
2 8	2 4	2 5	2 6	2 5	2 3	1 9	1 9	1 6	1 5	1 5	1 5	27
2 6	2 8	2 1	2 6	2 4	2 4	2 2	1 5	1 6	1 5	1 6	2 1	28
2 8	3 0	2 2	2 2	2 0	1 7	1 7	1 7	1 6	1 7	1 5	1 4	29
2 5	2 4	2 2	2 3	2 0	2 3	1 9	1 8	1 7	1 5	1 7	1 4	30
24	26	27	26	29	29	29	30	30	29	29	30	Count
2 6	2 6	2 3	2 3	2 0	1 8	1 8	1 6	1 6	1 8	1 6	1 6	Median
2 7	2 6	2 3	2 2	2 1	1 8	1 8	1 6	1 7	1 7	1 7	1 6	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic fmin  
Unit Mc  
Month September 1961

TABLE 28 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	17	14	17	15	14	16	15	18	24	21	23	23
2	13	15	16	18	14	13	14	18	40	28	26	35
3	16	16	16	22	E	14	16	17	19	25	C	C
4	14	15	12	13	10	13	C	19	23	22	22	26
5	15	14	14	15	13	13	14	18	21	25	24	26
6	17	14	14	12	13	14	16	16	20	21	21	22
7	16	16	19	E	E	16	15	20	23	24	24	27
8	14	14	13	15	14	14	16	18	21	C	23	25
9	15	14	18	14	13	14	16	19	22	C	C	C
10	14	14	14	13	13	14	12	16	20	23	25	25
11	17	15	15	15	E	14	15	18	23	27	26	28
12	13	14	14	14	14	15	18	20	22	22	26	26
13	19	17	16	U15B	1	17	17	18	21	23	25	26
14	11	12	16	15	16	17	18	18	21	22	24	26
15	14	15	14	14	14	14	17	17	20	21	22	26
16	15	15	15	17	16	16	19	22	25	26	28	29
17	16	13	12	14	15	18	17	19	22	C	C	C
18	17	17	14	16	16	17	18	19	25	26	27	30
19	19	14	16	17	16	17	18	22	25	26	26	C
20	18	18	18	18	15	18	24	22	22	22	26	28
21	17	17	15	15	13	16	19	19	22	24	25	26
22	14	12	14	16	E	14	17	19	23	24	28	24
23	14	15	19	15	11	13	15	17	24	24	26	28
24	17	14	15	15	13	14	19	19	22	C	C	C
25	15	14	15	17	12	14	19	21	28	26	27	30
26	17	15	16	E	E	17	24	20	24	24	26	26
27	18	19	17	C	C	18	17	23	32	26	28	30
28	13	13	14	13	14	14	23	20	26	24	24	28
29	19	18	15	14	11	14	24	21	24	24	26	28
30	17	13	13	13	12	13	18	20	25	23	23	25
Count	30	30	30	29	29	30	29	30	30	26	26	25
Median	16	14	15	15	13	14	17	19	23	24	26	26
Mean	16	15	15	15	13	15	17	19	24	24	25	27

Sweep 10 Mc to 250 Mc in 27 seconds

Characteristic  $f_{min}$  Unit Mc Month September 1961  
 TABLE 28 (Contd) Ionospheric Data 75°E Mean Time  
 Latitude 10 2°N Longitude 77 5°E

	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2 3	2 2	2 0	1 8	1 8	1 7	1 6	1 5	1 5	1 2	1 4	1 5		1
2 6	2 2	2 0	1 8	1 8	1 6	1 4	1 3	1 4	1 6	1 8	1 5		2
C	C	C	C	C	C	C	C	2 2	2 5	2 1	1 7		3
C	C	C	2 8	2 0	1 8	1 6	1 6	2 0	1 9	1 6	1 8		4
2 5	2 2	2 2	1 9	1 6	1 3	1 4	1 3	1 4	1 7	1 7	1 8		5
2 5	2 4	2 5	1 9	2 1	1 7	1 9	1 7	1 6	1 8	1 6	1 6		6
2 6	2 4	2 3	2 2	2 2	1 5	1 3	1 8	1 2	1 8	1 5	1 3		7
2 4	2 7	2 3	1 8	1 6	1 3	1 5	1 2	E	C	C	1 3		8
2 6	2 3	2 1	2 2	1 6	1 8	1 4	1 6	1 6	1 6	1 3	1 3		9
2 7	2 3	2 2	2 2	1 9	1 8	2 0	1 5	1 4	1 6	1 6	1 8		10
2 6	2 6	2 1	2 0	1 6	1 4	1 7	1 5	1 3	1 4	1 5	1 7		11
2 7	2 3	2 1	1 9	2 1	1 3	1 3	1 4	1 7	1 9	1 4	1 6		12
2 7	2 6	2 6	2 2	2 2	1 9	1 3	1 4	1 3	1 3	1 3	1 4		13
2 6	2 4	2 5	2 3	1 9	2 0	1 7	1 4	1 5	1 5	1 5	1 6		14
2 8	2 6	2 0	2 0	2 0	1 8	1 9	1 7	1 6	2 0	1 4	1 4		15
3 1	2 7	2 6	2 4	3 1	2 2	1 9	1 8	1 9	1 9	2 2	1 8		16
C	C	C	C	2 1	1 9	2 2	2 1	2 1	1 8	1 8	1 8		17
3 0	2 6	2 5	2 0	2 2	1 8	C	1 5	1 3	1 8	1 8	2 2		18
2 8	2 6	2 6	2 5	2 0	2 0	1 4	1 7	1 4	2 0	2 0	1 9		19
2 7	2 2	2 2	2 8	2 1	2 7	1 9	2 2	1 7	1 8	1 7	1 8		20
2 6	2 2	2 4	1 9	1 8	1 9	2 6	1 7	1 9	1 8	1 7	1 6		21
2 7	2 5	2 1	1 7	2 1	2 0	1 5	1 6	1 5	1 4	1 5	1 1		22
2 7	2 5	3 3	2 4	2 4	2 1	1 5	1 6	1 6	1 4	1 8	1 3		23
C	C	C	C	2 2	1 4	2 2	1 4	01 4 <sup>30</sup>	01 6 <sup>30</sup>	1 3	1 3		24
2 8	2 8	2 8	2 4	2 1	1 8	2 0	2 0	1 8	1 8	1 8	1 5		25
2 6	2 6	2 2	2 2	1 6	1 4	1 3	1 4	2 0	1 5	1 3	1 3		26
2 7	2 4	2 7	2 3	2 7	2 1	2 4	1 8	1 7	1 7	1 5	1 5		27
2 4	2 6	2 0	2 6	2 6	2 0	1 6	1 5	1 5	1 5	1 7	1 7		28
2 9	2 4	2 1	2 4	2 2	1 8	2 1	1 7	1 5	1 5	1 5	1 7		29
2 4	2 5	2 3	2 2	2 2	1 9	2 1	1 5	1 6	1 4	1 7	1 5		30
26	26	26	27	29	29	28	30	30	29	29	30		Count
2 6	2 4	2 2	2 2	2 1	1 8	1 6	1 6	1 6	1 7	1 6	1 6		Median
2 7	2 5	2 3	2 2	2 1	1 8	1 7	1 6	1 6	1 7	1 6	1 6		Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic h'F2  
 Unit Km  
 Month September 1961

TABLE 29  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11	
1								L	L	310	L	L	
2								L	L	LH	L	340	
3								L	L	LH	350	C	
4								L	L	L	325	L	
5								L	L	L	L	350	
6								280	L	L	L	345	
7								L	L	L	L	L	
8							L	L	L	L	360	L	
9								L	L	L	C	C	
10								L	L	L	L	L	
11							L	L	L	L	L	L	
12							L	L	L	L	L	L	
13							L	L	L	L	L	L	
14							L	L	L	L	L	L	
15							L	L	L	L	L	L	
16							L	L	L	L	L	L	
17								L	L	L	C	L	
18								L	L	L	L	L	
19								L	L	L	L	L	
20								L	L	L	335	L	
21							L	L	L	L	L	L	
22							L	L	L	L	L	L	
23							L	L	L	L	L	L	
24							L	L	L	C	C	L	
25							L	L	L	L	L	L	
26							L	L	L	L	L	L	
27							L	L	L	L	L	L	
28							L	L	L	L	L	L	
29							L	L	L	L	L	L	
30							L	L	L	L	L	L	
Count									1		1	4	3
Median													
Mean													

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'F2  
 Unit Km  
 Month September 1961

TABLE 29  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
340	320	L	L	L	A							1
350	320	L	L	L	A							2
C	C	C	C	C	C	C						3
C	C	325	C	310	L							4
350	L	L	L	L	L							5
L	L	L	320	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
C	L	L	A	A	L							9
L	L	L	A	A	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L	L						14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
C	C	C	C	L	L	L						17
L	L	L	L	L	L	L						18
C	L	L	C	L	L	L						19
L	335	L	L	L	L	L						20
L	L	L	L	L	L							21
L	L	L	L	L	L	L						22
L	L	L	L	L	L	L						23
C	C	C	C	C	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L	L						28
L	L	L	L	L	L	L						29
L	L	A	L	L	L							30
3	3	1	1	1								Count
												Median
												Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic h'F2  
 Unit Km  
 Month September 1961

TABLE 29 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude : 77·5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							L	L	L	L	L	L
2							L	L	L	L <sub>M</sub>	340	340
3							L	L	L <sub>M</sub>	L	C	C
4							C	L	L	340	L	350
5								L	L	340	360	370
6								L	L	L	L	340
7							L	L	L	L	L	L
8								L	L	C	L	L
9							L	L	L	C	C	C
10								L	L	L	L	L
11							L	L	L	L	L	L
12						L	L	L	L	L	L	L
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15						L	L	L	L	L	L	L
16								L	L	L	L	L
17							L	L	L	C	L	C
18							L	L	L	L	L	L
19							L	L	L	L	L	L
20								L	L	L	310	L
21							L	L	L	L	L	L
22							L	L	L	L	L	L
23						L	L	L	L	L	L	L
24						L	L	L	L	C	C	C
25							L	L	L	L	L	L
26							L	L	L	L	L	L
27							L	L	L	L	L	320
28						L	L	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	L	L
Count										2	3	5
Median												340
Mean												345

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'F2  
 Unit Km  
 Month September 1961

TABLE 29 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10°2'N  
 Longitude 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
340	L	A	L	L								1
350	L	L	L	L								2
C	C	C	C	C	L	C						3
C	C	C	C	310	L							4
340	L	345	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	L	L	L	L	L							8
L	L	L	L	L	L							9
L	L	A	A	L	L							10
L	L	L	L	L	L	L						11
L	L	L	L	L	L							12
L	L	L	L	L	L	L						13
L	L	L	L	L	L	L	L					14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L	L						17
L	L	L	L	L	L	L	C					18
355	L	L	L	L	L							19
L	L	L	300	L	L							20
L	L	L	L	L	L							21
L	L	L	L	L	L	L						22
L	L	L	L	L	L	L						23
C	C	C	C	C	L	L						24
L	L	L	L	L	L	L						25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L	L						28
L	L	L	L	L	L	L						29
L	L	L	L	L	L							30
4		1	2									Count
												Median
												Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds.

Characteristic h'F  
Unit Km  
Month September 1961

TABLE 30  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	280	275	280	240	220	220	240	215	200	200	200	200
2	300	280	265	270	240	260	240	220	210	175 <sub>H</sub>	185	180
3	260	240	230	240	E	E	240	215	200 <sub>H</sub>	200	195	C
4	300	300	280	260	240	230	240	220	200	200	180 <sub>H</sub>	180
5	300	320	320	300	260	220	245	220	200	200	195	190
6	300	290	250	240	240	220	245	220	205	190	190 <sub>H</sub>	195
7	270	250	240	E	E	E	240	230	220	195	195	200
8	240	225	220	220	220	E	250	230	205	200	195	190
9	280	240	225	220	215	230	240	220	200	190	C	C
10	270	240	215	220	F	240	250	230	210	195 <sub>H</sub>	190	195
11	260	240	220	210	240	E	240 <sub>H</sub>	220 <sub>H</sub>	200	195	195	185
12	235	235	220	230	235	220	245	225	200	200	190	180
13	235	220	215	v240 <sub>H</sub>	v255 <sub>H</sub>	E	240	220	200	190	190	180
14	275	265	240	220	230	220	250	220	205	195	195	190
15	235	205	220	215	230	245	240	220	200	195	190	180
16	255	220	220	235	240	E	245	220	200	200	190	185
17	260	235	220	235	230	220	245	225	200	C	C	C
18	230	220	210	215	230	240	245	225	205	200	200	195
19	270	230	215	225	240	265	240	220	C	195	195	200
20	275	235	215	220	225	220	245	225	200	200	190	195
21	280	250	220	255	250	235	245	225	200	200	180	195
22	255	220	220	230	235	E	240	215	200	195	190	185
23	240	220	220	225	230	210	240	225	200	195	185	185
24	270	230	205	235	v240 <sub>H</sub>	E	240	220	200	C	C	C
25	280	240	240	235	245	245	260	240	225	220	185	200
26	245	215	225	E	E	E	245 <sub>H</sub>	225	210	200	200	195
27	255	220	220	240	C	C	245	230	215	200	200	200
28	245	230	220	235	250	v260 <sub>H</sub>	250	230	200	205	200	200
29	240	235	220	240	240	220	250	235	220	200	200	190
30	230	220	225	255	240	235	250	230	200	200	200	180 <sub>H</sub>
Count	30	30	30	30	28	29	30	30	29	28	27	26
Median	260	235	220	235	240	240	245	220	200	200	195	190
Mean	260	240	230	235	235	230	245	225	205	200	195	190

Sweep 1 0 Mc to 25 0 Mc, in 27 seconds,





Characteristic h'E  
 Unit Km  
 Month September 1961

TABLE 31  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2'N  
 Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	A	A	A	A							1
A	A	A	A	A	A							2
C	C	C	C	C	C	C						3
C	C	100	C	100	A							4
A	A	A	A	A	105							5
A	A	A	A	A	120	A						6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
C	A	A	A	100	100							9
A	A	A	A	A	A							10
A	A	A	A	A	A							11
A	A	A	A	A	A							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	A	A	A							16
C	C	C	C	A	A							17
A	A	A	A	A	A							18
C	A	A	A	110	120							19
A	A	A	A	120	A							20
A	A	A	A	A	A							21
A	A	A	A	A	A							22
A	A	110	A	115	A							23
C	C	C	C	A	A							24
A	A	A	A	A	115							25
A	A	A	A	A	A							26
A	A	A	110	A	A							27
A	A	A	A	A	A							28
A	A	A	A	A	A							29
A	A	A	A	A	A							30
		2	1	5	5							Count
				110	115							Median
				110	110							Mean

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds

Characteristic h'E  
Unit Km  
Month September 1961

TABLE 31 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude : 77.5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0740	0830	0930	1030	1130
1							100	A	A	A	A	A
2							105m	A	B	A	A	B
3							105	A	A	A	C	C
4							C	A	A	A	A	A
5							105	A	A	A	A	A
6							120	A	A	A	A	A
7							A	A	A	A	A	A
8							120	A	A	C	A	C
9							120	A	A	C	C	C
10							105	A	A	A	A	A
11							A	A	A	A	A	A
12							110	A	A	A	A	A
13							105	A	A	A	A	A
14							A	A	A	A	A	A
15							110	A	A	A	A	A
16							115	105	A	A	A	A
17							110	A	A	C	C	C
18							110	A	A	A	A	A
19							115	A	A	A	A	C
20								110	105	105	A	A
21							115	A	A	A	A	A
22							115	A	A	A	A	A
23							105	A	A	A	A	A
24							115	A	A	C	C	C
25							120	A	A	A	A	A
26								A	A	A	A	A
27							A	A	A	A	A	A
28								A	A	A	A	A
29								A	A	A	A	A
30							120	A	A	A	A	A
Count							21	2	1	1		
Median							110					
Mean							110					

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic h'Es  
 Unit Km  
 Month September 1961

TABLE 32  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	100							100	100	100	100	100
2		120	110				G	100	100	100	100	100
3	110						G	100	100	100	100	C
4							G	100	100	100	100	100
5							G	100	100	100	100	100
6							G	100	100	100	100	100
7							G	100	100	100	100	100
8		115	120	115			G	100	100	100	100	100
9							G	100	100	100	C	C
10							G	100	100	100	100	100
11							G	100	100	100	100	100
12							G	100	100	100	100	100
13							G	100	100	100	100	100
14	110	105	100				G	100	100	100	100	95
15							G	100	100	100	100	100
16								100	100	100	100	100
17								105	100	C	C	C
18								100	100	100	100	100
19								G	100	100	100	100
20								G	100	100	100	100
21								100	100	100	100	100
22								100	100	100	100	100
23								100	100	100	100	100
24								100	100	C	C	C
25								105	100	100	100	100
26								105	100	100	100	100
27	105			105	C	C		105	100	100	100	100
28								100	100	100	100	100
29								100	100	100	100	100
30								G	100	100	100	100
Count	4	3	3	2				24	29	28	27	26
Median								100	100	100	100	100
Mean								100	100	100	100	100

Sweep 1 0.1 Mc to 25.0 Mc in 27 seconds

Characteristic h'Es  
Unit Km  
Month September 1961

TABLE 32  
Ionospheric Data  
75°E Mean Time

Latitude 10 2'N  
Longitude 77 5'E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
100	100	100	100	100	100	100	100				140	1
100	100	100	100	100	100	100	100				115	2
C	C	C	C	C	C	C	100		100			3
C	C	G	C	G	100				120			4
100	100	100	100	100	100	140					120	5
100	100	100	100	100	G		110	120		120		6
100	100	100	100	100	100	100	130					7
100	100	100	100	100	100	100						8
C	100	100	100	G	100	100				120		9
100	100	100	100	100	100				125		115	10
100	100	100	100	100	100					100		11
100	100	100	100	100	100	100	100	100				12
100	100	100	100	100	100							13
100	100	100	100	100	100				105	105	100	14
100	100	100	100	100	100	100				120	120	15
100	100	100	100	100	100							16
C	C	C	C	100	100	105						17
100	100	100	100	100	100							18
C	100	100	C	105	110							19
100	100	100	100	G	100					115		20
100	100	100	100	100	100							21
100	100	100	100	100	100							22
100	100	G	100	G	100							23
C	C	C	C	100	100						115	24
100	100	100	100	100	G							25
100	100	100	100	100	100				120	120	115	26
100	100	100	100	100	100							27
100	100	100	100	100	140					120		28
100	100	100	100	100	100				130	120	125	29
100	100	100	100	100	100							30
24	26	25	25	25	25	9	6	2	6	9	9	Count
100	100	100	100	100	100	100	100		120	120	115	Median
100	100	100	100	100	100	105	105		115	115	120	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic h'Es  
 Unit Km  
 Month September 1961

TABLE 32 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	100	100	100	100	100
2		110	100				G	100	100	100	100	100
3							100	100	100	100	C	C
4							C	100	100	100	100	100
5							G	100	100	100	100	100
6							G	100	100	100	100	100
7		115	115				100	100	100	100	100	100
8							G	100	100	C	100	100
9							G	100	100	C	C	C
10							100	100	100	100	100	100
11							100	100	100	100	100	100
12							G	100	100	100	100	100
13							G	100	100	100	100	100
14		105	100				100	100	100	100	100	95
15							G	100	100	100	100	100
16							G	100	100	100	100	100
17							G	100	100	C	C	C
18							G	100	100	100	100	100
19							G	100	100	100	100	100
20							G	100	100	100	100	100
21							G	100	100	100	100	100
22							G	100	100	100	100	100
23							100	100	100	100	100	100
24							G	100	100	C	C	C
25		115					G	100	100	100	100	100
26								100	100	100	100	100
27		110	120	105	C	C		105	105	100	100	100
28								100	100	100	100	100
29								100	100	100	100	100
30							G	100	100	100	100	100
Count	4	4	2				7	29	30	26	26	26
Median							100	100	100	100	100	100
Mean							100	100	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic h'Es  
Unit Km  
Month September 1961

TABLE 32 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
100	100	100	100	100	100	100		120	105	120		1
100	100	100	100	100	100	100	100		100		110	2
C	C	C	C	C	C	C			125		120	3
C	C	C	C	G	100							4
100	100	100	100	100	100							5
100	100	100	100	100	100		120			115		6
100	100	100	100	100	100	100		125				7
100	100	100	100	100	100							8
C	100	100	100	100	100	100				120		9
100	100	100	100	100	100			130	130	105		10
100	100	100	100	100	100				100			11
100	100	100	100	100	100	100	100			100		12
100	100	100	100	100	100					105		13
100	100	100	100	100	100			110	105	105	100	14
100	100	100	100	100	100					115		15
100	100	100	100	100	100							16
C	C	C	C	100	100	100						17
100	100	100	100	100	100		C					18
100	100	100	100	105	105							19
100	100	100	G	100						120		20
100	100	100	100	100	100							21
100	100	100	100	100	100			110	110			22
100	100	100	100	100	100							23
C	C	C	C	100	100					105		24
100	100	100	100	100	100						120	25
100	100	100	100	100	100	100			115	115		26
100	100	100	100	100	100						105	27
100	100	100	100	140					115	120		28
100	100	100	100	100	100	100		120	130			29
100	100	100	100	100								30
25	26	26	25	29	18	5	4	6	10	11	5	Count
100	100	100	100	100	100	100		120	110	115	120	Median
100	100	100	100	100	100	100		120	115	115	115	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic (M3000) F2  
 Unit —  
 Month September 1961

TABLE 33  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	3 00	3 00	3 20	3 30	3 60	3 70	3 40	3 30	2 90	2 50	2 90	2 60
2	F	3 00 <sub>F</sub>	3 15	3 30	3 65	3 50	3 30	3 40	3 10	2 60	2 50	2 15
3	3 20	3 30	3 45	3 40	3 40	E	3 30	3 30	2 90	2 30	2 60	C
4	2 90	2 95	3 00	3 10	3 50	3 60	3 50	3 20	2 70	2 55	2 50	2 55
5	2 90	2 80	F	3 00 <sub>r</sub>	F	3 70 <sub>r</sub>	3 40	3 10	2 80	2 55	2 45	2 40
6	2 80	2 85	3 15	3 20	3 30	3 50	3 30	3 30	2 80	2 40	2 15	2 15
7	3 00	3 40	3 40	E	E	R	3 35	3 10	2 45	2 55	2 10	2 50
8	3 30	3 40	F <sub>s</sub>	3 60	3 60 <sub>F</sub>	E	3 30	3 30	2 50	2 45	2 50	2 35
9	3 00	3 30	3 45	F	3 50	3 60	3 35	3 10	2 35 <sub>II</sub>	2 50	C	C
10	3 20	F	3 50	F	F	F	3 25	3 05	2 80	2 30	2 10	2 45
11	3 00	3 30	3 40	3 40	3 50	E	3 20	3 05	2 45	2 60	2 50	2 15
12	3 20	3 40	3 35	3 30	F	3 35	3 35	3 20	2 85	2 90	2 10	2 40
13	3 25	3 45	3 60	3 50	3 45	E	3 40	3 30	2 95	2 30	2 50	2 50
14	F	F	3 20 <sub>s</sub>	F	F	3 50 <sub>s</sub>	3 30	3 10	2 55	2 30	2 55	2 55
15	3 30	3 30	3 45	3 40	3 50	3 50	3 40	3 40	3 00	2 50	2 35	2 10
16	3 15	3 35	3 35	3 40	3 45	R	3 25	3 10	2 65	2 40	2 45	2 40
17	3 10	3 35	3 30	3 20	3 20	3 35	3 35	3 20	2 85	C	C	C
18	F	F	3 40	3 40	3 30	3 40	3 20	3 20	2 90	2 55	2 40	2 45
19	3 10	F	3 45	3 45 <sub>r</sub>	3 35	3 35	3 35	3 15	C	2 50	2 40	2 45
20	F	3 30	F	F	3 35 <sub>r</sub>	3 40	3 30	3 35	3 05	2 60	2 25 <sub>II</sub>	2 45
21	3 00	3 25	3 50	3 25	3 20	3 30	3 40	3 15	2 75	2 45	2 50	2 45
22	3 20	3 50	3 40	3 50	3 65 <sub>r</sub>	E	3 35	3 20	2 60	2 65	2 60	2 60
23	3 10	3 40	3 40	3 40	3 45	3 50	3 30	3 15	2 50	2 55	2 50	2 50
24	3 15 <sub>r</sub>	3 35	3 50	3 50	3 50 <sub>r</sub>	E	3 40	3 20	2 55	C	C	C
25	3 00	F <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	3 30	3 45	3 20	3 00	2 65	2 35	2 55	2 65
26	3 25	3 50	3 40	E	E	E	3 30	3 20	2 60	2 55	2 55	2 50
27	3 20	3 40	3 35	3 30	C	C	3 30	3 25	2 85	2 25 <sub>II</sub>	2 45	2 45
28	3 25	3 35	3 30	3 30	3 40	3 45 <sub>r</sub>	3 30	3 00	2 45	2 50	2 50	2 50
29	3 35	3 40	3 50	3 50	3 45	3 70	3 35	3 30	2 85	2 30	2 55	2 60
30	F	3 40	3 30	3 20	F	F	F	3 30	3 00	2 40	2 50	2 60
Count	25	25	26	23	22	18	29	30	29	28	27	26
Median	3 15	3 35	3 40	3 40	3 45	3 50	3 30	3 20	2 80	2 50	2 50	2 45
Mean	3 10	3 30	3 35	3 35	3 45	3 50	3 35	3 20	2 75	2 45	2 45	2 50

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic . (M3000) F<sup>2</sup>

TABLE 33

Latitude 10 °N

Unit

Ionospheric Data

Longitude 77 °E

Month September 1961

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 50	2 55	2 60	2 55	2 60	2 80	2 90	3 00	3 10	3 30	3 25	3 10	1
2 45	2 55	2 50	2 50	2 70	2 95	3 10	3 00	3 10	3 25	3 10	3 00	2
C	C	C	C	C	C	C	C	2 70	3 00	3 05	3 00	3
C	C	C	C	2 95	2 90	2 90	3 05	3 25	3 30	3 10	3 00	4
2 45	2 50	2 50	2 65	2 70	2 75	2 70	2 70	2 85 <sub>F</sub>	3 00	3 10	2 95	5
2 50	2 45	2 50	2 60	2 70	3 00	2 90	2 80	2 95	3 15	3 25	3 15	6
2 35	2 45	2 45	2 50	2 80	2 90	2 80	2 60	2 70	2 90	3 10	3 05	7
2 50	2 40	2 50	2 55	2 65	2 80	2 70 <sub>F</sub>	2 25	F	C	C	F	8
C	2 60	2 50	C	2 75	2 90	2 90	2 60	2 60 <sub>F</sub>	2 80	F	F	9
2 40	2 40	2 15	2 55	2 70	2 80	2 70	2 50	F	2 70	2 90 <sub>F</sub>	F	10
2 35	2 15	2 50	2 60	2 65	2 70	2 60	2 50	2 60	2 85	3 00	3 00	11
2 40	2 60	2 70	2 75	2 80	2 85	2 85	2 95	3 10	3 25	3 10	3 05	12
2 55	2 60	2 60	2 65	2 75	2 75	2 70	2 65 <sub>F</sub>	F	3 10	3 15	3 20	13
2 45	2 35	2 50	2 50	2 15	2 45	2 35	2 55	2 55	2 85	2 90	2 95	14
2 40	2 40	2 15	2 65	2 80	2 90	2 80	2 60	F	F	F	F	15
2 50	2 55	2 60	2 70	2 80	2 80	2 70	2 55	2 65	2 85	2 95	2 95	16
C	C	C	C	2 60	2 60	2 50	2 40	2 45	F	2 80	3 00	17
2 45	2 45	2 55	2 70	2 70	2 75	2 60	2 45	2 50	2 70 <sub>F</sub>	F	F	18
C	2 35	2 10	C	2 45	2 55	2 55	2 45	2 40	2 65	2 70	F	19
2 45	2 45	2 55	2 70	2 85	2 85	2 65	2 50	2 65	2 85	2 95	2 90	20
2 50	2 50	2 50	2 50	2 65	2 75	2 70	2 65	2 90	3 10	3 10	3 05	21
2 55	2 55	2 55	2 70	2 70	2 65	2 55	2 60	2 90	3 05	3 00	3 00	22
2 60	2 55	2 70	2 65	2 85	2 85	2 70	2 55 <sub>F</sub>	F <sub>F</sub>	2 75 <sub>F</sub>	2 90 <sub>F</sub>	2 90	23
C	C	C	C	2 80	2 85	2 75	2 70	2 65	F <sub>F</sub>	F <sub>F</sub>	2 80 <sub>F</sub>	24
2 35	2 55	2 60	2 60	2 55	2 55	2 55	2 60	2 85	3 20	3 10 <sub>F</sub>	3 00	25
2 50	2 50	2 55	2 70	2 70	2 95	2 75	2 60	F <sub>F</sub>	F <sub>F</sub>	F <sub>F</sub>	2 95	26
2 50	2 50	2 60	2 70	2 70	2 65	2 60	2 60	2 85	3 25	3 10	3 20	27
2 50	2 50	2 50	2 60	2 70	2 70	2 50	2 60	2 70	2 95	3 20	3 20	28
2 60	2 50	2 55	2 60	2 60	2 50	2 50	F	F	F	3 15	3 20	29
2 55	2 60	2 65	2 65	2 45	2 40	2 20	F	F	F	F	F	30
24	26	26	24	29	29	29	28	22	23	23	23	Count
2 50	2 50	2 50	2 60	2 70	2 80	2 70	2 60	2 80	3 00	3 10	3 00	Median
2 45	2 50	2 55	2 60	2 70	2 75	2 70	2 60	2 80	3 00	3 05	3 00	Mean

Sweep 1 0 Mc. to 25 0 Mc. in 27 seconds.

Characteristic (M3000)F<sup>s</sup>      TABLE 33 (Contd.)      Latitude 10 2°N  
 Unit      Ionospheric Data      Longitude 77 5°E  
 Month September 1961      75°E Mean Time

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	3 00	3 05	3 30	3 50	3 60	3 00	3 35	3 05	2 75	2 45	2 45	2 50
2	F	3 20	3 20	3 70	3 50	3 00	3 50	3 15	2 90	2 40	2 50	2 50
3	3 30	3 50	3 40	3 50	E	3 00	3 40	3 10	2 60	2 35	C	C
4	2 90	3 00	3 00	3 20	3 60	3 10	C	2 90	2 55	2 60	2 50	2 65
5	2 85	F	F	F	F	3 10	3 30	2 95	2 60	2 50	2 50	2 45
6	2 80	3 00	3 20	3 15	3 40	F	3 40	3 10	2 45	2 40	2 40	2 50
7	3 15	3 45	3 50	E	E	3 10	3 30	2 80	2 35	2 45	2 50	2 35
8	3 35	FS	3 50	F	3 65r	3 00	3 30	2 90	2 40	C	2 45	2 45
9	3 10	3 40	3 50	3 45	3 75	3 00	3 25	2 70	2 40	C	C	C
10	3 30	3 40	3 50	F	F	2 95	3 30	3 00	2 55	2 25	2 45	2 45
11	3 05	3 35	3 55	3 50	E	2 90	3 30	2 80	2 30	2 45	2 50	2 45
12	3 35	3 40	3 35	3 20	F	3 30	3 25	3 10	2 60	2 25	2 40	2 40
13	3 25	3 50	3 60	3 35	E	2 95	3 40	3 10	2 60	2 45	2 55	2 50
14	F	v3 20 <sup>a</sup>	F	F	F	2 80	3 30	2 80	2 45	2 50	2 50	2 50
15	3 45	3 50	3 45	3 40	3 50	3 00	3 50	3 30	2 80	2 30	2 30	2 45
16	3 40	3 35	3 35	3 45	3 45	2 80	3 25	2 90	2 35	2 40	2 40	2 50
17	3 20	3 35	3 20	3 20	3 30	3 15	3 25	3 05	2 65	C	C	C
18	3 40	3 40	3 45	3 30	3 35	2 90	3 25	3 10	2 75	2 35	2 40	2 50
19	F	F	3 40	3 50	3 45	2 90	3 30	3 05	2 65	2 40	C	C
20	F	F	v3 40 <sup>r</sup>	F	F	3 10	3 40	3 25	2 85	2 35	2 35	2 45
21	3 15	3 45	3 40	3 10	3 25	3 50	3 35	3 00	2 45	2 50	2 50	2 45
22	3 35	3 40	3 45	3 50	E	2 85	3 35	2 90	v2 50 <sup>r</sup>	2 50	2 55	2 55
23	3 20	3 50	3 40	3 35	3 60	2 85	3 25	2 85	2 45	2 55	2 45	2 55
24	v3 20 <sup>r</sup>	3 50	3 50	3 50	v3 45 <sup>r</sup>	2 85	3 35	2 80	2 30	C	C	C
25	3 05	FS	FS	3 40	3 20	v3 10 <sup>r</sup>	3 20	2 85	2 40	2 40	2 65	2 50
26	3 45	3 50	3 40	E	E	2 80	3 40	2 95	2 35	2 60	2 50	2 60
27	3 35	3 35	3 30	C	C	3 05	3 35	3 10	2 60	2 25	2 50	2 50
28	3 40	3 40	3 30	3 35	3 40	3 40	3 20	2 70	2 50	2 55	2 45	2 50
29	3 35	3 50	3 50	3 45	3 50	3 05	2 90	3 00	2 55	2 50	2 55	2 55
30	FS	3 40	3 40	F	F	F	3 40	3 10	2 85	2 35	2 55	2 60
Count	25	25	27	21	17	28	29	30	30	26	25	25
Median	3 25	3 40	3 40	3 40	3 45	3 00	3 30	3 00	2 55	2 40	2 50	2 50
Mean	3 20	3 35	3 40	3 40	3 45	3 00	3 30	3 00	2 55	2 40	2 45	2 50

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000)F<sup>a</sup>  
 Unit  
 Month September 1961

TABLE 33 (Cont'd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude . 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2 55	2 60	2 60	2 50	2 60	2 80	2 90	3 05	3 25	3 30	3 20	2 90	1
2 50	2 50	2 50	2 60	2 95	3 05	3 00	3 05	3 20	3 20	3 15	3 05	2
C	C	C	C	C	C	C	C	3 00	3 10	3 00	2 90	3
C	C	C	2 90	2 90	2 90	3 00	3 15	3 30	3 20	3 15	3 00	4
2 50	2 50	2 60	2 70	2 80	2 75	2 75	2 70 <sub>F</sub>	2 95	3 10	3 00	2 85	5
2 50	2 45	2 55	2 65	2 80	2 95	2 85	2 85	3 05	3 20	3 20	3 00	6
2 40	2 40	2 45	2 70	2 90	2 80	2 60	F	2 75	3 00	3 00	3 15	7
2 45	2 45	2 50	2 65	2 75	2 70	2 50 <sub>s</sub>	F	F	C	C	F	8
2 55	2 50	2 60	2 70	2 80	3 00	2 70	2 60 <sub>s</sub>	F	F	2 90 <sub>s</sub>	F	9
2 40	2 40	2 55	2 80	2 80	2 80	2 60	F	2 75	F	F	FS	10
2 45	2 50	2 55	2 60	2 70	2 65	2 45	2 50	2 80	2 85 <sub>s</sub>	3 00	3 20	11
2 50	2 65	2 70	2 75	2 80	2 85	2 85	3 00	3 25	3 20	3 10	3 10	12
2 55	2 65	2 65	2 70	2 75	2 85	2 65	F	3 05	3 10	3 25	3 00	13
2 35	2 40	2 55	2 50	2 45	2 35	2 30	2 30	2 80	2 90	2 90	3 10	14
2 40	2 50	2 55	2 75	2 90	2 90	2 70	F	F	F	3 00	3 05	15
2 50	2 60	2 70	2 75	2 80	2 80	2 60	2 50	2 70	2 95	2 90	3 00	16
C	C	C	C	2 60	2 50	2 40	2 45	2 60	2 75	2 90	F	17
2 45	2 50	2 60	2 70	2 75	2 70	C	2 50	2 60	F	2 80 <sub>F</sub>	3 00	18
2 40	2 35	2 40	2 50	2 50	2 60	2 45	2 40	2 55	2 75 <sub>F</sub>	2 80	F	19
2 40	2 50	2 60	2 80	2 85	2 75	2 55	2 60	2 75	2 90	2 90	2 90	20
2 55	2 50	2 50	2 55	2 70	2 80	2 65	2 30	3 10	3 15	3 05	3 05	21
2 55	2 55	2 60	2 60	2 65	2 65	2 55	2 75	3 05	3 10	3 00	3 10	22
2 60	2 55	2 50	2 85	2 90	2 75	2 55	FS	2 85 <sub>F</sub>	2 90 <sub>F</sub>	3 00 <sub>F</sub>	3 00 <sub>FS</sub>	23
C	C	C	C	2 85	2 85	2 75	2 70	FS	FS	2 90 <sub>F</sub>	2 95 <sub>FS</sub>	24
2 40	2 55	2 60	2 55	2 60	2 60	2 55	2 70	3 00	3 20 <sub>F</sub>	3 10	3 05	25
2 55	2 50	2 60	2 75	2 90	2 80	2 60	2 60	FS	FS	2 90 <sub>F</sub>	3 15	26
2 50	2 55	2 70	2 70	2 65	2 65	2 55	2 70	3 05	3 15	3 10	3 20	27
2 50	2 50	2 55	2 65	2 70	2 65	2 45	2 60	2 90	3 05	3 25	3 35	28
2 55	2 55	2 60	2 55	2 60	2 55	2 40	F	F	F	3 15	F	29
2 55	2 60	2 65	2 60	2 40	2 30	2 10 <sub>s</sub>	2 40 <sub>F</sub>	F	F	F	F	30
26	26	26	27	29	29	28	23	23	21	27	23	Count
2 50	2 50	2 60	2 70	2 75	2 75	2 60	2 70	2 95	3 10	3 00	3 05	Median
2 50	2 50	2 60	2 65	2 75	2 75	2 60	2 70	2 90	3 05	3 00	3 05	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic · foF2  
Unit · Mc  
Month October 1961

TABLE 34  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	F	10.2	7.4	E	E	E	5.9	6.0	9.0 <sub>H</sub>	C	C	C
2	4.3	4.2	4.2	3.4 <sub>F</sub>	3.4 <sub>F</sub>	3.0	6.3	9.1	10.0	10.5	9.7	9.4
3	F	9.7	7.3	5.4	4.3	C	C	C	10.1	9.8	9.2	9.5
4	8.3	8.2	5.7	4.4	3.6	3.1	6.0	8.5	9.2	8.6	8.4	8.6
5	F	F	F	F	F	u4.1 <sub>F</sub>	6.3	8.8	10.3	11.4	10.0	9.7
6	11.0	9.8 <sub>F</sub>	7.0	4.8	3.3	2.3	6.0	8.4	10.0	9.8	8.9	9.0
7	F	F	F	F	F	F	6.3	8.9	10.0	9.4	8.9	8.9
8	10.6	10.5	8.6	5.0	3.3	2.3	6.0	8.4	9.6	9.1	8.8	8.6
9	F	10.0	7.3	4.3	2.3	1.5 <sub>R</sub>	5.5	8.2	9.3	8.5	8.0	8.0
10	9.6	F	7.6	4.8	2.9	1.8	5.6	8.1	9.7	10.3	9.0	8.4
11	F	6.7	F	3.1	2.3 <sub>F</sub>	1.7	5.8	8.5	10.0	10.2 <sub>H</sub>	8.8	8.4
12	F	u7.4 <sub>s</sub>	6.3	F	5.7 <sub>F</sub>	5.7	6.9	9.0	10.7	11.3	10.2	9.2
13	F	F	8.1	1.6 <sub>F</sub>	4.7	3.7	6.4	8.6	10.4	11.2	9.2	8.6
14	F	F	F	u7.4 <sub>F</sub>	4.9	2.4	5.9	8.5	10.4	10.8 <sub>H</sub>	8.7	8.4
15	9.5 <sub>F</sub>	9.0 <sub>F</sub>	7.1	5.0	4.0	u2.2 <sub>R</sub>	6.0	8.4	10.0	10.6	8.8	8.4
16	u9.3 <sub>F</sub>	8.8	6.5	5.3	4.2	3.2	5.8	7.9	9.8	10.0	9.0	8.2
17	8.6	6.6	5.4	4.4	3.2	2.3	5.8	8.7	9.5	9.4	8.4	8.2
18	7.4	7.4	6.4	5.8	5.3	4.7	5.8	7.7	9.0	9.6	8.8	8.0
19	9.6	9.0	7.2	5.3	3.1	2.5	5.4	8.0	9.4	9.5	9.5	9.4
20	C	C	C	5.5	C	C	5.5	C	C	C	10.0	9.0
21	10.8	10.8	9.0	6.9	4.1	2.2	5.6	8.3	9.7	10.4	9.6	9.0
22	F	9.2	7.7	5.9	4.5	3.9	6.3	8.6	9.8	C	C	C
23	F	7.9 <sub>F</sub>	6.9	F	F	3.9	5.9	8.6	9.6	9.6	8.6	8.8
24	7.0	F	4.4	2.5	R	2.5	5.8	7.8	8.7	9.6	8.7	8.0
25	6.6	u5.9 <sub>s</sub>	5.1	4.0	3.7	3.5	5.7	7.9	9.4	10.9	10.5 <sub>H</sub>	9.1
26	7.1 <sub>F</sub>	F	7.9 <sub>F</sub>	F	F	4.9	6.9	8.7	9.5	9.4	9.3	9.3
27	7.3	6.8	5.1	2.4	F	R	5.2	8.0	10.0 <sub>H</sub>	9.0	9.6	10.2
28	9.0	9.6	9.7	6.7	4.3	4.1	6.5	8.8	10.1	10.5	10.7	10.9
29	F	F	u3.3 <sub>F</sub>	3.8	F	R	u5.0 <sub>s</sub>	7.5	8.3 <sub>H</sub>	RH	u7.1 <sub>R</sub>	7.4
30	F	F	F	F	F	2.0	5.7	8.5	9.5	u10.2 <sub>R</sub>	9.3	9.1
31	F	u6.3 <sub>F</sub>	F	4.9	3.1	E	5.3	7.8	9.3	10.6	9.6 <sub>H</sub>	8.4
Count	16	21	24	25	22	26	30	29	30	27	29	29
Median	8.8	8.8	7.0	4.9	3.6	2.5	5.8	8.4	9.7	10.0	9.0	8.8
Mean	8.5	8.3	6.7	4.9	3.8	3.1	5.9	8.3	9.7	10.0	9.1	8.8

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds

Characteristic foF2  
 Unit, Mc  
 Month October 1961

TABLE 34  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude . 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
C	C	C	u11 4a	C	12 7	12 7	12 2	8 4	6 9	5 6	4 6	1
9 7	9 9	10.3	10 4	10 4	10 6	10 5	8 1	6 7 <sub>F</sub>	F	F	F	2
9 9	10 9	12 5	12 3	12 5	12 9	12 5	11 6	F	F	10 5	9 3	3
8 8	9 6	11 1	12 2	12 0	11 2	10 6	F	F	F	F	F	4
10 2	11 0	12 0	12 4	13 0	12 6	12 4	u11 0 <sub>F</sub>	10 1	F	F	F	5
9 3	10 5	11 6	13 0	13.0	12 8	11 2	9 0	F	F	F	F	6
9 6	10 5	11 7	12 5	12 3	12 0	11 5	11 2	10 5	10 9	10 0	F	7
9.1	10 2	12 1	12 6	12 5	12 1	11 0	9 6	F	F	F	u9 5 <sub>F</sub>	8
8 4	9 5	10 6	11 0	11 4	11 6	10 1	F	F	F	F	F	9
8 8	9 5	10 5	11 0	11 7	12 1	11 5	F	F	F	F	9 0	10
8 7		10 0	10 6	11 2	11 2	10 6	9 4 <sub>F</sub>	F	F	F	F	11
9 6	10 2	10 7	11 2	11 4	10 9	10 5	10 0	9 1	F	F	F	12
9 4	10 4	11 2	11 7	12 3	12 2	11 6	F	F	u10 2 <sub>F</sub>	u10 2 <sub>F</sub>	u9 6 <sub>F</sub>	13
8 8	9 4	10 2	11 0	11 4	11 3	10 6	9 5	9 8	u10 0 <sub>F</sub>	10 7	u10 0 <sub>F</sub>	14
8 8	10 0	11 0	11 5	12 0	12 0	11 4	9 6	FS	FS	FS	F	15
8 4	9 4	10 8	11.8	11.8	11 8	11 0	9 2	FS	FS	FS	u10 0 <sub>s</sub>	16
8 0	8 8	9 8	10 2	11 2	10 4	9 8	FS	FS	FS	FS	8 6	17
8 5	9 2	10 1	10 6	11 0	11 6	11 6	9 4	9 0 <sub>FS</sub>	FS	FS	9 8 <sub>FS</sub>	18
9 6	10 4	11 0	12 0	11 6	C	9 6	8 0	FS	FS	FS	FS	19
9 8	10 7	11 0	11 4	11 2	11 0	10 0	8 8	C	9 6	10 4	10 6	20
9 0	10 0	11 0	11 8	12.5	12 0	10 7	FS	FS	FS	FS	9 0	21
C	C	10 6	11 5	11 5	11 6	10 6	u8 4 <sub>F</sub>	F	F	F	F	22
9 2	9 7	10 5	11 1	11 8	12 2	10 6	9 1	F	8 6 <sub>F</sub>	8 4	7 7	23
8 2	8 5	8 8	9 4	9 9	9 8	9 1	7 9	7 5	F	F	7 8	24
8 5	8 8	9.2	9 3	9.3	9.5	8 7	7 7	F	F	F	u7 5 <sub>F</sub>	25
9 3	9 6	9 8	9 6	10 0	10 2	9.7	8 8	9 0	8 9	8 5	7.9	26
10 7	11 2	11 1	10 7	9 0	8 0	7 6	6 8	7 7	7.9	7 7	8 6	27
11 4	11 8	12 0	12 4	u11 6 <sub>s</sub>	10 8	u9.8 <sub>R</sub>	F	F	F	F	F	28
8 0	7 3	7.3	7.8	8 0	8 0	8 1	F	F	F	8 1 <sub>F</sub>	F	29
9 3	9 7	10 4	C	12 0	12 1	9 3	u8 7 <sub>s</sub>	F	F	F	F	30
8 3	8.6	C	C	9 3	8 9	7 8	u7 4 <sub>s</sub>	7 7	u8 0 <sub>F</sub>	7 5	FS	31
29	29	29	29	30	30	31	23	11	9	11	16	Count
9.1	9 7	10 7	11 4	11 6	11 6	10 6	9.1	9 0	8 9	8 5	9 0	Median
9 1	9.8	10 7	11 2	11 3	11 2	10 4	9.2	8 7	9.0	8.9	8 7	Mean

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds

Characteristic foF2  
 Unit , Mc  
 Month October 1961

TABLE 34 (Cont'd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	9.2	4.6	E	E	4.2	6.2	7.2	11.0	C	C	C
2	4.3	4.3	3.8 <sub>F</sub>	3.3	3.2	4.2	8.0	9.8	10.5	10.1	9.3	9.6
3	u9.2 <sub>F</sub>	9.2	6.3	4.7	C	C	C	9.6	10.0	9.1	9.3	9.6
4	8.3	7.0	4.7	4.0	3.4	4.0	7.6	9.3	8.7	8.4	8.4	8.7
5	F	F	u5.8 <sub>r</sub>	F	4.5	F	7.9	9.6	11.0	11.0 <sub>H</sub>	9.6	9.8
6	10.9	8.4	5.4 <sub>F</sub>	3.8	2.8	3.5	8.0	9.4	10.2	9.5	9.0	8.9
7	F	F	F	4.9	F	4.2	8.0	9.5	10.0 <sub>H</sub>	9.0	8.9	9.2
8	10.5	10.3	6.5	4.1	2.6	3.5	7.6	9.0	9.5	8.9	8.7	8.6
9	F	9.0	5.6	3.3	2.1	3.4	7.2	9.0	9.1	8.3	7.9	8.0
10	F	9.6	6.0	3.5	2.4	3.6	7.0	9.0	10.6	10.1	8.6	8.2
11	F	F	F	2.5 <sub>v</sub>	2.1	3.6	7.7	9.0	10.5	10.0 <sub>H</sub>	8.4	8.5
12	8.2	7.3	5.6	F	5.9	5.3 <sub>F</sub>	8.1	10.0	11.2	11.1	9.4	9.2
13	11.2	9.4	6.8	5.4	4.2	4.4	8.0	9.4	10.9	10.6	8.6	9.0
14	F	F	F	6.2	3.7	3.6	7.6	9.4	10.8	9.8 <sub>H</sub>	8.5 <sub>H</sub>	8.4
15	9.4 <sub>F</sub>	8.2	6.1	4.0	2.4	3.4	7.7	9.1	10.0	9.6	8.4	8.6
16	F	8.6	5.6	4.9	4.0	3.6	7.0	8.7	9.8	9.6	8.4	8.4
17	7.6	6.0	4.8	3.8	2.8	3.6	7.2	9.2	10.0	8.8	8.4	8.0
18	7.3	7.0	6.1	5.6	5.0	4.3	7.1	8.4	9.6	9.6 <sub>H</sub>	8.0	8.0
19	9.2	8.6	6.8	4.5	2.6	4.0	7.2	8.8	9.6	9.6	9.6	9.6
20	C	C	6.4	C	4.1	3.8	8.6	C	C	11.4	9.4	9.0
21	11.0	10.3	7.7	5.4	4.0	3.5	7.6	9.0	10.6	10.6	9.0	9.1
22	9.6	8.8	6.7	5.0	4.2	4.1	7.6	9.1	C	C	C	C
23	F	7.5	F	5.3 <sub>F</sub>	4.6	4.1	7.4	9.0	9.8	9.0	8.6	8.9
24	6.4	6.0	3.1	R	2.2	3.6	7.2	8.4	9.5	8.8	8.2	8.0
25	u6.1 <sub>s</sub>	5.7	4.4	3.8	3.7	4.0	7.1	8.8	10.1	11.2	9.8 <sub>H</sub>	8.5
26	u6.8 <sub>F</sub>	F	u7.2 <sub>F</sub>	F	5.3	5.7	8.4	9.1	9.5	9.0	9.3	9.1
27	7.4	6.2	3.4	R	R	3.0	7.0	9.3	9.1	9.5	9.8	10.3
28	9.4	9.8	8.3	5.3	4.1	4.8	8.0	9.6	10.1	10.5	10.7	10.7
29	5.6	F	F	F	F	3.3 <sub>H</sub>	6.7	7.8	RH	RH	u7.3 <sub>H</sub>	7.8
30	F	F	F	F	F	3.2	7.0	9.1	10.0	9.6	9.3	9.3
31	6.2	F	5.6	3.9	1.6	2.9	6.8	8.7	10.0	10.4	8.7	8.3
Count	20	22	25	23	26	29	30	30	28	28	29	29
Median	8.2	8.5	5.7	4.1	3.6	3.6	7.6	9.1	10.0	9.6	8.7	8.9
Mean	8.2	8.0	5.7	4.4	3.5	3.9	7.5	9.0	10.1	9.8	8.9	8.9

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic foF2  
Unit Mc  
Month October 1961

TABLE 34 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
C	C	C	C	12.4	12.0	12.9	10.1	7.4	6.5	4.7	4.3	1
9.9	10.2	10.3	10.4	10.5	10.6	9.3	7.2	F	F	F	F	2
10.2	11.7	12.5	12.3	13.0	12.9	12.1	11.0	F	u10.2 <sub>v</sub>	9.9	8.6	3
9.3	10.3	11.7	12.2	11.6	11.1	u9.8 <sub>a</sub>	F	F	F	F	F	4
10.6	11.6	12.4	12.6	12.9	12.5	u11.8 <sub>s</sub>	10.4	F	F	F	11.4 <sub>v</sub>	5
9.8	11.1	12.1	13.0	12.8	12.0	10.0	F	F	F	F	F	6
9.8	10.9	12.2	12.5	12.0	12.0	11.3	10.6	10.8	10.4	F	10.1	7
9.6	11.2	12.8	12.7	12.5	11.9	10.0	F	F	F	F	9.2	8
8.9	10.2	10.8	11.0	11.6	11.5	8.9	F	F	F	F	9.1	9
9.2	10.1	10.8	11.4	12.0	12.1	10.4	F	F	F	F	8.7	10
9.0	9.6	10.4	10.9	11.4	11.2	10.0	F	F	F	F	F	11
9.9	10.6	11.0	11.2	11.2	10.8	10.4	9.5	F	F	F	F	12
10.0	10.8	11.4	12.0	12.3	11.7	10.6	F	F	F	u10.3 <sub>v</sub>	F	13
9.0	9.8	10.7	11.4	11.6	11.0	10.0	9.6	F	u10.2 <sub>v</sub>	F	FS	14
9.4	10.2	11.2	12.0	11.8	11.6	10.6	FS	FS	u9.4 <sub>v</sub>	FS	F	15
8.6	10.0	11.0	11.6	12.0	11.0	10.4	FS	FS	FS	FS	9.6	16
8.6	9.2	10.0	11.0	11.0	10.0	8.6	FS	FS	F	F	8.0	17
9.0	10.0	10.2	11.0	11.2	C	10.8	9.2	FS	9.0 <sub>v</sub>	FS	9.9	18
9.8	10.6	11.6	11.8	11.8	C	8.6	FS	FS	FS	FS	C	19
10.2	11.0	11.0	11.6	C	11.0	9.4	C	9.0	10.0	10.6	10.6	20
9.8	10.7	11.6	12.0	12.4	11.6	9.6 <sub>v</sub>	FS	FS	FS	9.0	F	21
C	10.1	11.0	11.5	11.6	11.4	9.4	F	F	F	F	F	22
9.6	10.0	10.0	11.5	12.0	11.4	9.8	F	F	9.4	8.2	7.6	23
8.4	8.7	9.2	9.7	10.0	10.0	8.4	7.6	F	F	F	7.3	24
8.6	9.0	9.4	9.2	9.4	9.1	8.2	u6.9 <sub>s</sub>	F	F	F	u7.4 <sub>v</sub>	25
9.4	9.8	9.5	9.8	10.0	9.7	9.4	8.7	9.0	8.7	8.3	7.9	26
10.9	11.2	10.9	9.8	8.4	7.7	7.0	7.1	7.8	7.8	7.9	8.8	27
11.7	11.6	12.3	11.7	11.1	10.7	F	F	F	F	F	F	28
7.5	7.0	7.7	8.0	8.0	8.3	7.7	F	F	F	8.6	F	29
9.4	10.3	10.7	11.3	12.1	10.7	9.0	F	F	F	F	F	30
8.5	8.8	C	9.4	9.1	8.5	7.5	7.7	8.2	7.8	u7.9 <sub>v</sub>	u7.3 <sub>v</sub>	31
29	30	29	30	30	29	30	19	6	11	10	17	Count
9.4	10.2	11.0	11.4	11.6	11.1	9.8	9.2	8.6	9.4	8.4	8.7	Median
9.4	10.2	10.9	11.2	11.3	10.9	9.7	8.9	8.7	9.0	8.5	8.6	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic foF1  
 Unit Mc  
 Month October 1961

TABLE 35  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	C	C	C
2								L	L	L	L	L
3								L	L	L	L	L
4								L	L	L	L	L
5								L	L	L	L	L
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15							L	L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	5.0	L
19							L	L	L	L	L	5.3
20							L	C	C	C	L	5.4
21								L	L	L	L	L
22							L	L	L	L	L	5.5
23								L	L	L	L	L
24							L	L	L	L	L	L
25								L	L	L	L	L
26								L	L	L	L	L
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	L	L	L
30								LH	L	L	4.4	4.3
31								L	L	L	L	LH
Count											2	4
Median												
Mean												

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds



Characteristic foF1  
Unit · Mc  
Month October 1961

TABLE 35  
Ionospheric Data  
75°E Mean Time

Latitude . 10 2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
C	C	C	L	C	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
L	L	L	L	L	L							4
L	L	L	L	L	L							5
L	L	A	A	L	L							6
L	L	L	L	L	L							7
L	A	L	L	L	L							8
L	L	L	L	L	L							9
L	L	L	A	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L	L						16
L	L	L	L	L	L	L	L					17
L	L	L	L	L	L	L	L					18
5.0	4.8	4.6	L	L	L	L	C					19
5.3	5.2	L	L	L	L	L	L					20
5.3	5.3	L	L	L	L	L	L	L				21
C	C	L	L	L	L	L	L	L				22
4.9	L	L	L	L	L	L	L	L				23
L	L	L	L	L	L	L	L	L	L			24
L	L <sub>N</sub>	L	L	L	L	L	L	L	L			25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
4.5	4.5	4.4	4.4	4.4	L							29
L <sub>N</sub>	L <sub>N</sub>	L	C	L	L	L						30
L	L	C	C	L	L							31
5	4	2	1									Count
5.0												Median
5.0												Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic foF1  
Unit Mc  
Month October 1961

TABLE 35 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	C	C	C
2								L	L	L	L	L
3								L	L	L	L	L 8
4								L	L	L	L	L
5								L	L	L	L	L
6						L	L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11							L	L	L	L	L	L
12							L	L	L	L	L	L
13							L	L	L	L	L	L
14							L	L	L	L	L	L
15							L	L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19						L	L	L	L	L	L	5 0
20						L	L	C	C	L	5 6	5 2
21						L	L	L	L	L	5 4	5 5
22						L	L	L	C	L	C	C
23							L	L	L	L	4 9	5 0
24							L	L	L	L	L	L
25							L	L	L	L	L	L
26							L	LH	L	L	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	L	4 6	4 3	4 5
30						L	LH	L	L	LH	LH	LH
31								L	L	L	LH	LH
Count										1	4	6
Median												5 0
Mean												5 0

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foF1  
 Unit - Mc  
 Month October 1961

TABLE 35 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
Q	C	Q	Q	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	A	L	L	L							6
L	L	A	A	L	L							7
L	L	A	L	L	L							8
L	L	L	L	L	L							9
L	L	A	L	L	L							10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	L	L	L	L	L							18
5 0	4 8	L	L	L	L							19
5 4	L	L	L	L	C							20
5 3	5 2	L	L	L	L							21
C	L	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
4 5	4 4	4 6	4 3	L	L							29
L <sub>HR</sub>	L	L	L	L	L							30
L	L	C	L	L								31
4	3	1	1									Count
												Median
												Mean

Sweep 1 0 Mc to 25 0 Mc, in 27 seconds.

Characteristic foI  
 Unit Mc  
 Month October 1961

TABLE 36  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								2 7	3 1	C	C	C
2								2 6	A	A	A	A
3								C	A	A	A	A
4							2 1	A	A	A	A	A
5								2 7	A	A	A	A
6								2 9	A	A	A	A
7							A	A	A	A	A	A
8								2 6	A	A	A	A
9								A	A	A	A	A
10								2 5	A	A	A	A
11								2 4	A	A	A	A
12								2 6	A	A	A	A
13								2 5	A	A	A	A
14								R	A	A	A	A
15								2 7	A	A	A	A
16								2 6	A	A	A	A
17								A	A	A	A	A
18								2 4	A	A	A	A
19								A	A	A	A	A
20								C	C	C	A	A
21									A	A	A	A
22								2 6	A	C	C	C
23								A	A	A	A	A
24								2 4	A	A	A	A
25								R	A	A	A	A
26							1-8	A	A	A	A	A
27								A	A	A	A	A
28							A	A	A	A	A	A
29								A	A	u2.8r	u3.2 r	u3.0r
30								B	A	A	A	A
31									A	A	A	A
Count							2	14	2	1	1	1
Median								2 6				
Mean								2.6				

Sweep 1 0 Mc. to 25 0 Mc. in 27 seconds.

Characteristic foE  
Unit Mc  
Month October 1961

TABLE 36  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N  
Longitude · 77·5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
C	C	C	C	C	B							1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A 3 7	A 3 3	A	A							4
A	A	A	A 3 2	A	A							5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	A 3 4	A 3 2	A								8
A	A	A	A	A	A							9
A	A	A	A	A 2 7	A							10
A	A	A	A 3 3	A 2 7								11
A	A	A	A R	A 2 9	A							12
A	A	A	A	A	A							13
A	A	A	A 3 2	A	A							14
A	A	A	A	A	A							15
A	A	A	A	A								16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	A	A	A	A							19
A	A 4 1	A	A	A	A							20
A	A	A	A 2·8	A								21
C	A	A	A	A	A							22
A	A	A	A	A	A							23
A	A	A	A	A	A							24
A	A	A	A	A	A							25
A	A	A	A	A								26
A	A	A	A	A								27
A	A	A	A	A	A							28
u3 4x	R	u3 2x	B	A								29
A	A	A	C	B								30
A	A	C	C	A								31
1	1	3	6	3								Count
			3 2									Median
			3 2									Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic foE  
Unit Mc  
Month October 1961

TABLE 36 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10·2°N  
Longitude 77·5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2 2	A	R	C	C	C
2								A	A	A	A	A
3							C	A	A	A	A	A
4							F	A	A	A	A	A
5							2 1	3 0	A	A	A	A
6								A	A	A	A	A
7							A	A	A	A	A	A
8							2 3	A	A	A	A	A
9							2 2	A	A	A	A	A
10								2 7	A	A	A	A
11							2 4	A	A	A	A	A
12							2 3	2 8	A	A	A	A
13							R	R	A	A	A	A
14								2 7	A	A	A	A
15							2 6	A	A	A	A	A
16								A	A	A	A	A
17							2 7	A	A	A	A	A
18								2 8	A	A	A	A
19							A	A	A	A	A	A
20							3 0	C	C	A	A	A
21									A	A	A	A
22							v2 2x	A	A	A	A	A
23								R	A	A	A	A
24								A	A	A	A	A
25							v2 1x	A	A	A	A	A
26							B	A	A	A	A	A
27							v1 9x	A	A	A	A	A
28							A	A	A	A	A	A
29							A	A	A	A	R	3·5
30							A	A	A	A	A	A
31								R	A	A	A	A
Count							12	5				1
Median							2 2	2 8				
Mean							2 3	2 8				

Sweep 1 0 to 25 0 Mc in 27 seconds.

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Characteristic · foE  
Unit Mc  
Month October 1961

TABLE 36 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2°N  
Longitude : 77·5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
C	C	C	C	2 5								1
A	A	A	A	A								2
3 8	A	3 4	3 0	B								3
A	A	3 6	A	A								4
A	3 7	A	R	A								5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	3 3	3 1	A								8
A	A	A	A	A								9
A	A	A	A	A								10
A	A	A	R									11
A	A	3 4	2 8	2 6								12
A	A	A	A	A								13
A	A	A	2 9	A								14
A	A	A	A	A	A							15
A	A	A	A	A								16
A	A	A	A	A								17
A	A	A	A	A								18
A	A	A	A	A								19
A	A	A	A	C								20
A	A	3 0	2 8	A								21
A	A	A	A	A								22
A	A	A	2 8	A								23
A	A	A	A	A								24
A	A	A	A	A								25
A	A	A	A	A								26
A	A	A	A	A								27
A	A	A	A	A								28
u3 5 <sub>z</sub>	R	B	B	A								29
A	A	B	B	B								30
A	A	C	A	A								31
2	1	5	6	2								Count
		3 4	2 8									Median
		3 3	2 9									Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic  $f_oE_s$   
 Unit Mc  
 Month October 1961

TABLE 37  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								G	G	C	C	C
2	2 0	..	3.0	2.8	2 6			5 0	8 2	8 8	9 8	11 0
3						G		C	8 4	8 8	10 2	10.4
4							C	G	7 0	8 2	9 0	10 6
5								G	8 6	10 4	10 6	11 2
6	5 0							G	7 6	8 4	9 2	11 6
7			2 8				6 0	4 5	8 4	9 0	10 5	10 6
8								6 5	8 0	8 4	10 5	10 4
9								8 0	9 0	9 0	10 0	11 0
10								G	8 0	9 0	11 4	12 0
11								G	8 3	9 4	10 8	11 6
12	5 8	3 0						G	7 0	7 8	11 8	11 4
13								G	8 0	8 8	10 6	11 0
14	2 8							G	8 4	9 4	10 5	10 2
15								G	7 5	8 5	10 0	11 3
16								G	8 1	8 4	11 4	10 3
17								6 0	6 8	10 3	10 4	10 4
18								G	8 0	8 2	10 0	10 0
19								8 0	9 4	10 0	10 9	11 2
20	C	C	C					C	C	C	10 8	10 0
21									8 0	8 4	10 6	10 3
22	7 0	4 8						7 0	8 6	C	C	C
23	7 2					3 6			8 2	8 8	10 6	10 8
24	2 2	3 0						G	8 2	9 0	10 0	10 8
25	4 2							G	7 6	8 8	10 7	11 6
26	2 4						G	5 6s	8 2	9 5	11 6	10 8
27								6.4	8 2	8 6	10 2	9 8
28							04 85	4 6	8 3	10 6	10 8	9 7
29								07 35	G	G	G	G
30								G	7 8	8 2	10 6	10 5
31									6 6	8 7	10 7	10 8
Count	9	3	2	1	1	1	4	26	30	28	29	29
Median	4 2							G	8 2	8 8	10 6	10 8
Mean	4 3							6 3	8 1	9 0	10 6	10 8

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds



Characteristic foEs  
Unit . Mc  
Month . October 1961

TABLE 37  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
												1
G	C	C	C	C	G							2
11 0	10 8	10 8	9 6	8 2								3
9 4	7 0	G	G	G								4
10 6	10 4	7 4	8 2	8 0	3 6							5
10 8	8 4	11 0	G	G	3 0							6
											3 6	7
11 0	8 0	12 0	7 4	6 4								8
10 2	8 4	8 0	8 2	8 6							6 0	9
10 8	9 6	G	G									10
11 2	11 0	9 4	7 0	8 0	7 4						4 0	11
12 0	10 6	9 0	11 6	G								12
											9 0	13
10 7	10 6	10 4	G	G							3 6	14
10 8	10 8	9 2	G	7 0	6 0							15
11 4	10 6	8 3	7 8	7 0	4 0					5 6		16
10 8	10 8	9 0	7 6	7 0	6 4							17
10 4	10 0	9 0	7 8	6 0	4 6				5 8			18
												19
11 0	10 1	7 2	8 4	7 2							7 2	20
11 0	9 4	9 0	7 8	6 8	6 0						3 6	21
11 0	9 1	12 0	12 8	11 0	8 8						3 6	22
10 0	9 1	G	8 0	7 6	C						7 0	23
9 4	G	8 6	8 1	7 0							2 6	24
											3 3	25
												26
10 4	10 0	8 2	2 8	3 4							10 8	27
C	C	8 7	7 6	7 4							3 4	28
11 4	10 4	9 2	6 7	6 5	6 8						7 0	29
10 5	10 0	9 2	8 0	7 0	2 7						2 5	30
10 9	11 0	10 7	8 8	7 6							4 4	31
												26
11 0	11 0	10 4	8 2	7 9								27
9 2	9 8	9 3	8 4	8 0								28
8 8	8 4	8 2	6 8	6 7	C							29
G	G	G	G	6 8								30
11 0	9 4	7 6	C	G	4 3				2 4	6 6	2 4	31
11 3	10 4	C	C	7 8						5 5-6		
29	29	29	28	29	13				2	8	13	Count
10 8	10 0	9 0	7 8	7 0	6 0				..	3 5	6 0	Median
10 6	9 0	9 3	8 1	7 3	5 3				.	4 0	5 9	Mean

Sweep 1 0 Mc. to 25.0 Mc. in 27 secor (ls).

Characteristic  $f_oE_s$       TABLE 37 (Cont'd)      Latitude 10°2'N  
 Unit - Mc      Ionospheric Data      Longitude 77°5'E  
 Month October 1961      75°E Mean Time

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	8.4	G	C	C	C
2		2.0	3.2	3.2			7.0	7.0	8.4	10.2	11.0	10.6
3								7.8	9.0	10.4	10.4	11.0
4							G	8.0	8.4	10.8	10.6	11.0
5								G	9.2	11.0	11.4	11.4
6								7.2	8.2	9.0	11.4	11.4
7		5.2			2.8		7.0	7.0	9.0	10.0	10.4	11.0
8							G	7.6	8.4	10.5	11.2	10.8
9							7.0	8.5	8.8	9.5	10.2	10.6
10								G	8.6	11.0	11.2	11.6
11							G	7.4	8.6	11.0	11.4	11.8
12	7.0						G	6.6	8.2	10.6	10.6	11.2
13							G	G	8.4	10.3	10.8	12.0
14	2.8							7.0	9.2	10.6	11.0	10.8
15							G	7.0	8.1	10.0	10.2	9.6
16								6.3	8.8	8.5	10.3	10.2
17							G	7.4	8.0	11.4	9.6	10.4
18								G	8.6	9.0	10.0	10.2
19							7.0	8.0	9.2	10.3	11.0	12.0
20							G	C	C	10.4	10.0	9.8
21									8.5	10.4	10.6	10.4
22	7.2						G	8.2	C	C	C	C
23	8.2					4.0	6.8	7.0	8.6	10.2	10.6	11.2
24	2.0							6.4	8.8	10.0	11.0	10.2
25							G	4.8	8.0	10.7	11.4	10.7
26	4.0						G	8.0	9.3	10.6	11.1	11.0
27							G	7.8	7.8	9.6	9.8	8.8
28							5.2	7.6	8.4	10.6	10.0	9.8
29							5.6	7.6	7.0	8.0	C	C
30							5.6	7.7	9.0	9.6	10.4	9.6
31								G	7.8	9.4	10.7	10.1
Count	6	2	1	1	1	1	21	29	29	29	29	29
Median	5.5						G	7.2	8.5	10.3	10.6	10.7
Mean	5.2						6.4	7.3	8.5	10.1	10.7	10.7

Sweep 1.0 Mc. to 25.0 Mc in 27 seconds

Characteristic foEs  
 Unit Mc  
 Month October 1961

TABLE 37 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date/Hour
C	C	C	C	G								1
11 0	10 4	9 4	9 0	8 0					1 8			2
G	8 8	G	G	G						4 4		3
11 0	8 4	8 0	8 4	6 8							4 9	4
10 8	G	9 0	G	4 0								5
9 8	9 4	11 4	7 3						3 4	4 1		6
10 2	6 2	10 0	7 8	7 2								7
9 4	13 0	G	G									8
11 0	11 0	9 0	7 6	8 0	4 4							9
11 5	9 0	11 1	10 6						3 2			10
11 2	11 2	9 1	G									11
10 6	10 0	6 4	7 5	7 8								12
11 2	10 0	8 0	6 8	6 5				3 8	4 4			13
10 6	10 0	7 8	7 0	6 5								14
10 0	10 0	12 2	9 5	4 2	5 0			8 0		8 0		15
10 4	9 1	9 0	5 8									16
11 0	9 4	8 6	8 0	6 0					4 6	6 4		17
10 2	12 0	10 8	13 6	9 0	C							18
10 0	7 0	G	7 2	7 0	C							19
8 4	8 8	8 6	8 0	C								20
11 2	9 4	G	3 4						8 0	8 0		21
C	9 2	7 4	6 8	6 7				3 8	7 5	5 2		22
10 8	9 4	8 0	3 1	3 6				2 5	7 7	5 0		23
10 0	10 2	9 0	8 0	4 4					4 0	5 6 7 <sub>s</sub>		24
11 0	11 1	9 0	8 0	S								25
10 8	11 0	9 2	8 2	6 8								26
9 7	8 7	8 7	8 3	6 8								27
8 3	8 6	6 8	8 6	6 7					S			28
G	G	G	G	6 6				3 0	1 9			29
10 3	8 3	G	G	G	4 1			3 2				30
10 8	10 7	C	7 8	6 8						2 9		31
29	30	29	30	23	3				6	11	9	Count
10 6	9 4	8 6	7 6	6 7					3 5	4 0	5 2	Median
10 4	10 0	9 0	7 8	6 5					4 0	4 5	5 9	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic . fbEs  
 Unit : Mc  
 Month . October 1961

TABLE 38  
 Ionospheric Data  
 75°E Mean Time

Latitude 10·2°N  
 Longitude 77·5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1												
2	19	..	15	16	19			G	G	C	C	C
3						C		26	32	38	38	40
4								C	32	37	37	38
5								G	28	33	37	40
6								G	33	38	38	40
7	19							G	32	36	39	40
8			20				23	28	32	37	39	40
9								27	33	37	38	38
10								27	32	36	36	39
11								G	31	36	37	39
12			19					G	32	38	37	40
13								G	32	36	39	38
14								G	31	36	38	39
15	17							G	33	36	38	40
16								G	32	36	38	40
17								G	33	37	38	38
18								26	32	36	38	38
19								G	31	35	37	38
20	C	C	C					28	32	34	36	40
21								C	C	C	38	38
22	24	20							32	36	37	38
23	21								31	C	C	C
24	17	20				15			31	35	36	38
25	20							G	30	34	37	38
26								G	31	33	36	37
27	18							G	26	31	34	38
28									26	30	35	36
29									25	31	35	38
30								21	25	C	C	C
31									G	30	34	36
Count	8	3	2	1	1	1	4	25	30	28	29	29
Median	19	.	.	.	.	.	.	G	32	36	37	38
Mean	19	..	..	.	.	.	.	.	27	32	36	37

Sweep 1·0 Mc to 25·0 Mc in 27 seconds.

Characteristic fbEs  
Unit Mc  
Month October 1961

TABLE 38  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date	
C	C	C	C	C	G							1	
3.8	3.7	3.6	3.3	2.8								2	
4.0	4.0	G	G	G								3	
4.0	3.8	3.6	3.3	2.8	2.3							4	
4.0	3.9	4.4	G	G	1.4							5	
3.8	3.9	5.0	3.6	2.8						2.4		6	
3.9	3.8	4.5	4.4	3.2								7	
3.9	4.4	G	G							2.4		8	
3.8	3.8	3.6	3.4	3.1	2.6							9	
3.8	3.8	4.2	5.0	G						2.2		10	
4.0	3.8	3.6	G	G							4.4	11	
3.8	3.9	3.6	G	2.8	2.1						2.2	12	
4.0	3.9	3.6	3.2	3.0	2.3					2.3		13	
4.0	3.8	3.5	3.3	2.8	2.1							14	
3.9	3.8	3.6	4.6	2.8	2.6				1.8			15	
3.8	3.8	3.8	3.9	2.9							2.4	16	
3.8	3.6	3.6	3.2	2.8	2.0						1.9	17	
3.9	3.7	3.7	5.0	2.8	3.0					1.8		18	
4.0	3.6	3.6	3.4	3.0	C						1.5	19	
3.8	3.7	3.6	3.2	2.8						2.0	2.2	20	
3.9	3.8	3.6	G	2.8							3.4	21	
C	C	3.5	3.1	2.8						2.1	2.6	22	
3.8	2.6	3.5	3.3	2.8	2.2					1.9	2.4	23	
3.7	3.7	3.4	3.2	2.8	2.0						2.1	24	
3.7	3.6	3.4	3.3	2.8								25	
3.7	3.5	3.4	3.1	2.6								26	
3.7	3.5	3.4	3.1	2.6								27	
3.9	3.5	3.4	3.1	2.6	C					2.1		28	
G	G	G	G	2.7					G	1.5		29	
3.6	3.6	3.6	C	G	2.5							30	
3.6	3.7	C	C	2.8						1.9		31	
2.9	2.9	2.9	2.8	2.9	1.8					2	8	1.9	Count
3.8	3.8	3.6	3.2	2.8	2.2					2.0	2.4		Median
3.8	3.7	3.7	3.6	2.8	2.3					2.0	2.5		Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic fbEs  
Unit Mc  
Month October 1961

TABLE 38 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	3 0	G	C	C	C
2							3 4	3 0	3 4	3 6	3 8	4 0
3		1 9	1 8	2 0				3 6	3 6	3 7	3 8	4 0
4							G	3 1	3 6	3 8	4 0	4 0
5								G	3 5	3 7	3 8	4 0
6								3 0	3 4	3 8	4 0	4 0
7		1 7			1 9		2 6	3 0	3 6	3 7	3 9	4 0
8							G	3 0	3 4	3 6	3 8	3 8
9							2 4	3 0	3 2	3 6	3 8	3 9
10								G	3 4	3 6	3 8	3 8
11							G	3 0	3 5	3 6	3 8	4 0
12							G	2 9	3 6	3 7	3 8	3 8
13							G	C	3 4	3 6	3 8	4 0
14		1 4						3 1	3 4	3 7	4 0	4 0
15							G	3 0	3 6	3 6	3 8	4 0
16								3 0	3 5	3 0	3 8	3 8
17							G	3 0	3 2	3 6	3 8	3 8
18								G	3 5	3 6	3 6	4 0
19							2 3	3 0	3 2	3 6	3 8	4 0
20							G	C	C	3 6	3 8	3 7
21									3 4	3 6	3 8	3 7
22		2 8					G	2 9	C	C	C	C
23		2 6					3 0	3 0	3 4	3 5	3 8	3 9
24								2 8	3 3	3 5	3 7	3 7
25							G	3 0	3 3	3 5	3 6	3 7
26		2 2					G	2 9	3 2	3 5	3 7	3 9
27							G	2 8	3 2	3 6	3 7	3 7
28							2 6	2 9	3 3	3 5	3 8	3 7
29							2 2	2 8	3 2	3 5	G	G
30							2 4	3 0	3 2	3 5	3 7	3 7
31								G	3 4	3 5	3 7	3 7
Count	4	2	1	1	1		21	29	29	29	29	29
Median							G	3 0	3 4	3 6	3 8	3 9
Mean							2 6	3 0	3 4	3 6	3 8	3 9

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fbEs		TABLE 38 (Contd)										Latitude : 10 2'N	
Unit	Mc	Ionospheric Data										Longitude : 77.5'E	
Month	October 1961	75°E Mean Time											
1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date	
C	C	O	C	G									1
3.8	3.8	3.5	3.1	2.7									2
G	4.0	G	G	G							3.0		3
4.0	3.9	3.5	3.1	2.6									4
3.8	G	3.9	G	2.9							2.0		5
3.8	3.8	5.0	3.0								2.0		6
3.8	3.8	5.0	3.4	3.1									7
3.9	4.8	G	G										8
3.8	3.6	3.5	3.9	3.0	2.6								9
3.8	3.9	6.1	3.9								2.0		10
3.9	3.7	3.6	G								2.3		11
4.0	3.6	3.4	2.9	2.5							1.8		12
3.9	3.6	4.2	3.1	2.7				1.5					13
3.8	3.7	3.5	3.0	2.5									14
4.0	3.8	5.4	3.0	2.6	2.0				2.2		2.4		15
3.8	3.7	5.0	3.2										16
3.8	3.8	3.4	3.0	2.2							2.3	2.2	17
3.8	3.8	4.2	4.6	3.0									18
3.6	3.8	3.4	3.1	2.6	C								19
3.8	3.6	3.5	3.0	C									20
3.9	3.8	G	G								2.7	2.6	21
3.6	3.4	3.0	2.6						2.2		2.4	1.8	22
3.8	3.6	3.3	3.1	2.5							2.8	1.8	23
3.8	3.6	3.2	2.9	2.6							1.9	1.9	24
3.6	3.7	3.3	3.0	2.5									25
3.8	3.5	3.3	2.9	2.4									26
3.6	3.6	3.4	2.9	2.4									27
3.7	3.6	3.4	2.9	2.4							2.1		28
G	G	G	G	2.7							1.2		29
3.6	3.6	G	G	G					2.4				30
									2.3				
3.8	3.6	C	3.0	2.5									31
3.0	3.0	2.9	3.0	2.3	2				5	10	9		Count
3.8	3.7	3.4	3.0	2.5					2.2	2.2	2.0		Median
3.8	3.7	3.9	3.2	2.6					2.1	2.2	2.2		Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic fmin  
 Unit . Mc  
 Month . October 1961

TABLE 39  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude . 77.5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	16	17	13	E	E	E	19	20	23	C	C	C
2	16	13	15	17	13	16	18	17	21	23	25	26
3	14	17	14	14	16	C	C	C	21	25	27	28
4	21	16	16	15	16	14	17	21	24	27	27	27
5	17	15	19	14	14	16	21	24	24	26	26	28
6	14	17	16	17	17	16	20	20	22	26	30	26
7	18	17	19	21	22	19	15	16	23	28	27	29
8	18	22	16	17	14	16	20	19	23	26	23	24
9	14	13	17	16	13	E	22	17	22	25	25	25
10	15	15	14	13	14	12	19	19	20	24	24	26
11	19	17	16	13	12	14	19	15	20	24	25	27
12	17	18	18	15	12	16	21	19	20	25	25	27
13	19	18	18	14	13	13	20	18	22	25	24	28
14	12	16	18	16	19	17	20	21	24	28	27	28
15	18	14	16	15	14	vi 4a	20	20	20	23	26	28
16	24	17	16	14	13	16	20	21	22	26	26	27
17	19	20	13	13	13	14	20	20	22	24	24	26
18	20	22	20	17	13	14	19	20	22	26	24	23
19	18	18	14	15	11	14	19	20	22	26	24	27
20	C	C	C	19	C	C	22	C	C	C	24	26
21	22	16	16	19	13	13	18	28	22	24	23	26
22	24	20	18	16	12	17	18	18	23	C	C	C
23	16	17	15	15	14	13	23	26	22	24	24	26
24	15	15	22	22	R	13	21	21	20	24	22	24
25	17	17	18	13	14	12	18	19	19	23	23	25
26	14	18	16	14	16	15	15	16	18	26	25	26
27	17	17	16	15	E	B	19	17	23	26	25	27
28	17	15	17	15	12	11	12	17	21	23	28	27
29	20	16	17	17	18	R	17	16	20	27	26	32
30	16	17	14	16	13	15	19	27	20	25	24	25
31	19	20	16	15	14	E	19	26	23	31	25	25
Count	30	30	30	31	29	27	30	29	30	28	29	29
Median	17	17	16	15	13	14	19	20	22	25	25	26
Mean	18	17	16	16	14	15	19	20	22	25	25	27

Sweep 10 Mc to 250 Mc in 27 seconds



Characteristic fmin  
Unit Mc  
Month October 1961

TABLE 39  
Ionospheric Data  
75°E Mean Time

Latitude : 10·2°N  
Longitude · 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
C	C	C	C	C	2 4	1 5	1 6	1 7	1 6	1 6	1 6	1
2 4	2 5	2 5	2 4	2 2	2 3	1 9	1 2	1 5	1 5	1 6	1 6	2
2 9	2 5	3 6	2 7	3 0	2 3	1 6	1 8	1 8	2 0	1 6	1 6	3
2 7	2 8	2 7	2 8	2 1	2 2	1 6	1 7	1 8	1 6	1 7	1 6	4
3 0	2 8	2 0	2 6	3 0	2 0	2 0	1 5	1 4	1 4	1 4	1 7	5
2 6	2 6	2 2	2 0	1 8	2 2	2 0	1 6	1 7	1 7	1 7	1 6	6
2 9	2 8	2 1	2 1	1 8	2 6	1 7	1 7	1 8	1 8	1 8	1 6	7
2 4	2 5	2 8	2 6	2 8	2 2	1 8	1 6	1 8	1 5	1 5	1 6	8
2 6	2 5	2 5	2 4	2 0	1 7	2 4	2 0	2 0	1 9	1 8	1 4	9
2 5	2 8	2 3	2 0	2 1	2 2	1 8	1 5	1 7	1 5	1 6	1 7	10
2 6	2 6	2 5	2 6	2 2	2 3	2 4	1 8	1 7	1 6	1 7	1 8	11
2 7	2 6	2 5	2 5	2 0	1 7	1 2	1 3	1 4	1 6	1 6	1 7	12
2 8	2 7	2 6	2 8	1 8	2 1	1 3	1 7	1 5	1 3	1 3	1 4	13
2 7	2 6	2 5	2 4	2 0	1 6	1 3	1 7	1 3	1 5	1 3	1 7	14
2 9	2 6	2 5	2 2	2 2	2 2	2 4	2 0	1 9	1 2	2 2	2 2	15
2 6	2 4	2 2	2 2	2 2	2 3	2 2	v1 5p	2 0	2 0	1 8	2 4	16
2 6	2 4	2 4	2 6	1 8	1 5	2 0	2 0	2 0	1 8	2 0	1 8	17
2 6	2 4	2 2	2 0	1 8	1 5	1 8	1 5	1 7	1 9	1 5	2 1	18
2 6	2 8	2 6	2 4	1 9	C	1 7	2 0	1 8	1 5	1 8	1 6	19
2 6	2 4	2 4	2 2	2 2	2 2	2 0	1 5	C	1 5	1 5	1 8	20
2 6	2 6	2 6	2 6	2 4	2 3	2 2	2 0	1 8	1 6	1 5	2 1	21
C	C	2 5	2 2	1 7	2 0	1 4	1 7	1 5	1 6	1 3	1 7	22
2 6	2 5	2 4	2 1	2 0	1 7	1 8	1 8	1 7	1 9	1 9	1 7	23
2 4	2 3	2 3	2 2	2 0	1 7	1 6	1 4	1 5	1 7	1 6	1 6	24
2 5	2 5	2 5	2 4	2 4	2 1	1 8	1 8	1 6	1 4	1 6	1 4	25
2 5	2 5	2 3	2 3	2 1	2 1	2 2	2 2	2 0	2 2	1 9	1 6	26
2 6	2 6	2 3	2 1	1 9	2 1	1 7	1 7	1 9	1 7	1 6	1 4	27
2 6	2 4	2 5	2 3	1 9	C	1 7	1 6	1 6	1 8	1 5	2 1	28
3 1	3 1	3 0	3 4	2 8	2 1	1 8	1 6	1 6	1 3	1 4	1 6	29
2 8	2 5	2 3	C	2 6	2 0	2 4	2 1	1 6	2 0	2 0	2 1	30
2 6	2 6	C	C	2 2	2 2	1 9	1 6	1 9	1 6	1 7	2 3	31
29	29	29	28	30	29	31	31	30	31	31	31	Count
2 6	2 6	2 5	2 4	2 1	2 2	1 8	1 7	1 7	1 6	1 6	1 7	Median
2 7	2 6	2 5	2 4	2 2	2 1	1 9	1 7	1 7	1 7	1 6	1 7	Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic  $f_{min}$   
Unit Mc  
Month October 1961

TABLE 39 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N  
Longitude 77°5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	18	16	17	E	E	16	25	20	30	C	C	C
2	17	16	12	15	16	14	15	18	22	23	26	24
3	15	13	16	14	C	C	C	22	24	26	27	28
4	20	15	13	15	14	17	19	23	25	26	27	28
5	16	16	15	16	15	17	19	22	26	25	28	28
6	17	19	16	17	18	14	24	22	23	28	26	28
7	17	14	17	20	15	21	15	21	26	27	28	29
8	16	17	17	15	14	16	20	20	23	24	26	25
9	14	15	17	13	12	14	15	19	24	24	25	25
10	14	13	14	16	13	14	24	20	22	22	25	26
11	20	16	14	14	15	16	17	17	22	25	27	28
12	17	17	17	15	13	18	18	19	23	25	26	26
13	18	19	15	14	12	15	16	24	23	22	25	29
14	13	17	17	17	22	15	24	21	27	26	27	28
15	16	17	16	16	14	14	17	20	24	22	26	26
16	20	16	16	16	14	15	24	20	26	20	28	26
17	16	15	15	15	13	15	18	20	22	24	26	26
18	17	17	14	14	14	14	24	19	24	22	23	24
19	20	17	15	14	13	14	16	20	24	24	26	26
20	C	C	26	C	13	19	20	C	C	24	26	27
21	22	17	15	17	14	14	23	30	24	24	24	26
22	19	18	18	17	12	19	19	21	C	C	C	C
23	16	17	14	18	15	19	23	24	22	23	26	27
24	16	24	22	R	18	15	23	20	23	22	22	24
25	17	16	14	14	13	15	16	20	21	23	24	26
26	12	17	13	17	16	14	21	17	23	23	25	26
27	16	16	17	B	B	11	16	19	22	24	25	27
28	17	17	16	14	13	13	C	20	23	25	28	26
29	20	14	16	18	17	13	15	18	22	25	28	32
30	16	14	14	17	16	17	23	20	23	24	25	27
31	16	16	16	17	12	14	23	22	28	23	25	26
Count	30	30	31	28	29	30	29	30	29	29	29	29
Median	17	16	16	16	14	15	19	20	23	24	26	26
Mean	17	16	16	16	14	15	20	21	24	24	27	27

Sweep 10 Mc, to 250 Mc in 27 seconds

Characteristic fmin  
 Unit - Mc  
 Month October 1961

TABLE 39 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude . 77 5°

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
C	C	C	C	2 0	2 1	1 7	1 6	1 7	1 5	1 4	1 5	1
2 6	2 4	2 5	2 4	1 9	2 0	1 3	1 5	1 5	1 5	1 5	1 4	2
3 0	2 5	2 7	2 3	2 8	2 1	1 6	1 8	2 0	2 0	1 8	1 9	3
2 6	2 8	2 6	2 3	2 0	1 8	1 5	1 6	2 0	1 8	1 6	1 6	4
2 8	3 0	2 4	2 7	1 8	2 2	1 7	1 6	1 6	1 4	1 8	1 3	5
2 5	2 5	2 0	1 9	2 6	1 6	1 5	1 7	1 6	1 8	1 5	1 7	6
2 8	2 3	2 1	2 3	2 0	2 2	1 6	1 6	1 5	2 0	1 8	1 9	7
2 4	2 2	2 6	2 5	2 6	1 8	1 6	1 6	1 6	1 5	1 4	1 8	8
2 6	2 4	2 5	2 0	2 0	1 4	1 5	2 0	1 9	2 1	1 4	1 4	9
2 6	2 4	2 0	1 9	2 6	1 9	1 9	1 5	1 6	1 7	1 5	2 1	10
2 6	2 6	2 6	3 0	2 7	1 8	1 8	1 6	1 6	1 5	1 8	1 8	11
2 9	2 6	2 5	2 2	1 7	1 6	1 3	1 4	1 4	1 8	1 6	2 0	12
2 8	2 7	2 7	2 2	1 9	1 7	1 3	1 7	1 3	1 1	1 4	1 7	13
2 8	2 6	2 3	2 3	1 9	1 6	1 4	1 8	1 6	1 5	1 8	1 6	14
2 6	2 8	2 2	2 2	2 0	2 4	1 7	2 0	2 0	1 4	2 0	2 0	15
2 6	2 2	2 6	2 0	2 5	2 0	2 2	1 7	2 0	1 6	2 6	2 4	16
2 6	2 6	2 2	2 0	2 0	1 6	1 5	2 0	1 7	1 5	2 1	1 7	17
2 5	2 4	2 0	2 0	2 0	C	1 9	1 5	2 0	1 6	1 8	2 0	18
2 6	2 8	2 8	2 2	2 0	C	2 0	1 6	1 8	1 4	1 6	C	19
2 4	2 4	2 2	2 0	C	2 2	1 8	C	1 7	1 7	2 3	2 3	20
2 6	2 6	3 4	3 0	2 6	1 6	2 0	1 7	1 7	1 5	1 5	2 4	21
C	2 5	2 3	1 9	1 7	1 6	1 7	1 7	1 9	1 4	1 5	1 8	22
2 4	2 4	2 4	2 2	1 8	1 7	1 4	1 6	1 5	1 7	1 4	1 6	23
2 4	2 4	2 2	2 0	1 8	1 6	1 4	1 6	1 5	1 6	1 3	1 7	24
2 6	2 6	2 4	2 3	2 1	1 8	1 6	1 7	1 4	1 8	1 3	1 7	25
2 5	2 5	2 3	2 4	2 2	1 8	2 1	2 2	2 5	2 1	1 7	1 7	26
2 5	2 6	2 4	2 1	1 9	1 8	1 5	1 9	1 5	1 6	1 7	1 3	27
2 6	2 5	2 3	2 2	1 9	1 6	2 0	1 5	1 5	1 7	2 1	2 2	28
3 3	3 0	3 6	3 3	2 6	1 9	1 4	1 6	1 9	1 1	1 4	1 4	29
2 6	2 5	3 2	2 9	2 5	1 9	1 7	1 6	1 9	1 4	2 1	2 0	30
2 6	2 6	C	2 3	1 9	1 8	1 8	1 8	1 8	1 7	1 9	2 0	31
29	30	29	30	30	29	31	30	31	31	31	30	Count
2 6	2 5	2 4	2 2	2 0	1 8	1 6	1 6	1 6	1 6	1 6	1 8	Median
2 6	2 5	2 5	2 3	2 1	1 8	1 7	1 7	1 7	1 6	1 7	1 8	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic h'F2  
Unit Km  
Month . October 1961

TABLE 40  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L <sub>R</sub>	C	C	C
2								L	L	300	L	L
3								L	L	L	300	310
4								L	L	L	L	L
5								L	L	L <sub>R</sub>	300	L
6							L	L	L	L	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11								L	L	L	L	L
12								L	270	L	L	L
13								L	L	L	L	L
14								L	L	L	L	L
15							L	L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	345	L
19							L	L	L	L	L	320
20							L	C	C	C	L	320
21							L	L	L	L	L	320
22								L	L	C	C	C
23								L	L	L	L	L
24							L	L	L	L	L	L
25								L	L	L	L <sub>R</sub>	L
26								L	L	L	L	L
27								L	L <sub>R</sub>	L	L	L
28								L	L	L	L	L
29								L	L	L	530	495
30								L	L	L	L	L
31								L	290	L	L	L
Count									2	1	4	5
Median												320
Mean												355

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

TABLE 40  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude . 77 5°E

Characteristic	h'F2	Unit	Month	12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
G			October 1961													1
310																2
310																3
L																4
L																5
L																6
L																7
L																8
L																9
L																10
L																11
L																12
L																13
L																14
L																15
L																16
L																17
L																18
320																19
320																20
310																21
C																22
320																23
L																24
L																25
L																26
L																27
L																28
460																29
L																30
L																31
-----																
				7	7	4	1	1								Count
-----																
				320	310											Median
-----																
				335	330											Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic . h'F2  
 Unit . Mc  
 Month October 1961

TABLE 40 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2'N  
 Longitude 77 5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	C	C	C
2								L	L	300	L	320
3								L	L <sub>H</sub>	L	315	300
4								L	L	L	L	L
5								L	L	300 <sub>H</sub>	300	L
6						L	L	L	L	310	L	L
7							L	L	L	L	L	L
8							L	L	L	L	L	L
9							L	L	L	L	L	L
10							L	L	L	L	L	L
11							L	L	L	L	L	L
12							L	270	290	L	L	L
13							L	L	L	L	L	L
14							L	L	290	295	L	L
15							L	L	L	L	L	L
16							L	L	L	L	L	L
17							L	L	L	L	L	L
18							L	L	L	L	L	L
19						L	L	L	L	L	L	240
20						L	L	C	C	L	240	220
21						L	L	L	L	L	225	210
22							L	L	C	C	C	C
23							L	L	L	320	310	320
24							L	L	L	L	L	370
25							L	L	L	L	L <sub>H</sub>	L
26							265	L	L	315 <sub>L</sub>	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	L	520	520	485
30							L	L	L	L	L	L
31								L	L	L	L	L
Count							1	1	2	7	6	8
Median										310	305	310
Mean										335	320	310

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'F2  
 Unit . Km  
 Month October 1961

TABLE 40 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude : 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
C	G	C	C	L								1
300	L	L	L	L								2
L	300	L	L	L								3
L	L	L	L	L								4
L	300	L	L	L								5
L	L	A	L	L	L							6
L	L	A	L	L	L							7
L	A	L	L	L	L							8
L	L	L	L	L	L							9
L	L	A	L	L	L							10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
L	L	L	L	L	L							17
L	315	L	L	L	L							18
230	220	L	L	L	L							19
220	L	L	L	C	L							20
230	225	L	L	L	L							21
C	C	L	L	L	L							22
L	L	L	L	L	L							23
L	L	L	L	L	L							24
L	L	L	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	L	L	L	L							28
440	430	410	405	L	L							29
L	L	L	L	L	L							30
L	L	C	L	L								31
5	6	1	1									Count
230	300											Median
285	300											Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic h'F  
 Unit Km  
 Month . October 1961

TABLE 41  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	240	210	200	E	E	E	240	240	220	C	C	C
2	280	290	280	300	300	265	240	230	200	210	200	200
3	245	210	205	220	220	C	C	C	205	220	220	200
4	240	220	215	235	240	235	245	230	215	200	200	200
5	220	220	220	225	220	225	240	220	220	205	200	200
6	240	220	215	230	230	240	240	230	215	200	200	200
7	240	235	230	240	F	230	250	230	210H	200	190	200
8	240	230	215	220	220	235	240	215	200	190	190	180
9	240	220	215	220	230	245	250	230	215	200	195	195
10	235	220	210	215	230	230	240	225	205	200	200	190
11	225	220	220	225	250	260	240	225	205	200	185	200
12	230	235	240	270	260	230	245	225	215	205	200	195
13	230	220	220	225	225	235	250	235	220	210	200	200
14	270	260	230	225	220	240	235	225	215	205	200	200H
15	235	220	215	220	220	220	240	230	200	200	190	180
16	220	220	220	220	220	220	240	235	215	200	195	200
17	220	235	230	230	220	235	240	220	205	200	200	190
18	240	245	250	240	225	215	240	225H	200H	200	200	185
19	230	220	205	220	220	250	240	220	205	200	190	200
20	C	C	C	235	C	C	240	C	C	C	200	200
21	240	220	210	220	205	240	240	230	210	220	200	190
22	240	235	230	225	235	240	250	230	220	C	C	C
23	240	230	220	230	220	220	245	225	205	200	185H	200
24	220	220	220	A	R	260	240	220	205	200	195	195
25	245	230	235	245	250	225	240	230	215	210	205	195
26	240	240	235	240	230	225	245	240	220	200	200	200
27	235	220	210	230	F	B	285	240	225	200	200	200
28	290	230	220	225	240	280	260	230	220	200	200	200
29	235	225	260	230H	F	R	280	245	225	220	215	B
30	260	240	225	220	230	240	245	230H	205	195	190	180H
31	260	260	230	230	220	E	245	230	205	205	190	180H
Count	30	30	30	30	26	27	30	29	30	28	29	28
Median	240	220	220	230	230	235	240	230	210	200	200	200
Mean	240	230	225	235	230	240	245	230	210	205	200	195

Sweep 1.0 Mc to 25.0 Mc in 27 seconds



Characteristic h'F  
 Unit Km  
 Month October 1961

TABLE 41  
 Ionospheric Data  
 75°E Mean Time

Latitude · 10·2°N  
 Longitude · 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
C	C	C	220	C	260	240	230	220	220	220	260	1
200	200	205	205	215	240	265	360	F	340 <sub>F</sub>	300	280	2
200	210	200	215	225	240	270	300 <sub>F</sub>	F	F	240 <sub>F</sub>	240	3
200	200	200	200	215	245	285 <sub>z</sub>	340 <sub>F</sub>	F	265 <sub>r</sub>	280	260	4
200	200	A	200	220	250	275	F	320	280	F	240	5
200	210	A	A	220	250	300	F	320	280	250	240	6
200	200	A	A	230	260	280	310	300	265	270	270	7
200	A	200	210	220	255	310	F	F	260 <sub>F</sub>	250 <sub>F</sub>	260	8
200	200	205	210	230	250	310	F	F	F	260 <sub>F</sub>	240	9
180 <sub>z</sub>	200	A	A	220 <sub>z</sub>	250	300	F	F	295 <sub>F</sub>	235 <sub>F</sub>	225	10
200	200	205	200	225	250	300	F	F	220	260	260 <sub>F</sub>	11
190	200	200	220	225	250	285	345	F	F	250	240	12
200	200	210	215	235	260	305	F	F	220	260	250	13
200 <sub>z</sub>	200	205	210	220	255	300	F	310 <sub>F</sub>	270 <sub>F</sub>	230	250	14
190	200	200	A	220	250	300	340	360	280	255	240	15
200	200	205	A	220	240	300	340	310	260	240	240	16
180	200	200 <sub>z</sub>	205	220	240	300	320 <sub>z</sub>	360	240	240	230	17
200	200	200	A	220	260	280	340	340	280	260	240	18
200	210	200	200	235	C	300	280	300	300	240	240	19
200	200	210	210	230	260	300	320	C	250	240	240	20
200	200	215	200	220	255	300	300	240	210	230	260	21
C	C	200	200 <sub>z</sub>	225	250	300	F	280 <sub>F</sub>	330 <sub>F</sub>	265 <sub>F</sub>	265	22
210	200	200	215	220	250	305	350 <sub>F</sub>	310 <sub>F</sub>	260 <sub>F</sub>	245	230	23
180	205	200	200	235	255	300	340	300	270	235	230	24
195	185 <sub>z</sub>	200	210	230	250	300	345 <sub>r</sub>	365	320	F	240	25
200	200	210	220	230	260	280	270	260	240	235	230	26
210	210	210	220	240	260	300	310	260	240	240	230	27
205	210	205	210	225	C	310	F	F	285	240 <sub>F</sub>	250	28
225	225	225	235	240	280	320	360	F	F	250	245	29
180 <sub>z</sub>	175 <sub>z</sub>	215	C	240	230	300	330 <sub>F</sub>	340 <sub>F</sub>	F	F	F	30
190	200	C	C	230	260	300	295	280	255	250	245	31
29	28	25	23	30	29	31	21	19	25	28	30	Count
200	200	205	210	225	250	300	330	310	265	250	240	Median
200	200	205	210	225	255	295	320	305	275	250	245	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic , h'F  
Unit Km,  
Month · October 1961

TABLE 41 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	220	205	195	E	E	280	255	240	230	C	C	C
2	300	295	295	300	275	270	240	220	220	205	200	200
3	230	200	220	220	C	C	C	210	200	200	200	200
4	235	215	220	240	235	240	235	225	205	200	200	200
5	220	215	230	225	220	235	240	220	215	200	200	180 <del>m</del>
6	235	220	225	230	235	255	230	220	205	200	200	195
7	240	230	230	240	240	240	250	220 <del>m</del>	210 <del>m</del>	200	190	200
8	230	220	215	225	235	240	230	210	195	190	190	200
9	235	220	215	220	250	270	235	220	200	200	195	200
10	230	210	215	220	230	250	235	210 <del>m</del>	205	200	195	185
11	220	220	225	245	240	260	235	190 <del>m</del>	200	180	180 <del>m</del>	200
12	230	230	255	260	240	235	235	215	215	200	200	190
13	230	220	230	220	235	245	245	225	210	200	200	200
14	260	240	220	215	225	245	235	220	210	205	200	200
15	230	220	220	225	215	250	235	220	215 <del>m</del>	200	185	200
16	220	220	225	230	220	235	230	200	205	200	200	200
17	220	235	230	220	220	250	230	220	200	200	190	190
18	240	250	235	230	220	225	230	205 <del>m</del>	220	200	185	180
19	220	220	210	220	230	260	240	220	200	200	200	200
20	C	C	240	C	200	260	240	C	C	200	200	200
21	235	220	220	220	220	255	230	210	200	210	200	200
22	245	230	230	235	240	250	230	230	C	C	C	C
23	225 <del>m</del>	225	230	220	225	240	240	210	200	190 <del>m</del>	205 <del>m</del>	200 <del>m</del>
24	220	220	250	R	A	255	235	215	200	195	200	190
25	235	240	240	250	240	235	240	225	215	210	200	195
26	250	240	235	235	235	240	230	205 <del>m</del>	210	200	200	200
27	230	250	220	B	B	300	250	240	215	195	200	210
28	225	225	215	230	270	300	240	235	215	200	195	200
29	235	240	300	F	F	340	260	235	220	215	215	220
30	245	230	220	220	230 <del>m</del>	270	235	230 <del>m</del>	200	190 <del>m</del>	180 <del>m</del>	185 <del>m</del>
31	245	240	240	230	220	270	240	230	215	190	180 <del>m</del>	180 <del>m</del>
Count	30	30	31	27	27	30	30	30	29	29	29	29
Median	230	220	225	230	235	250	235	220	210	200	200	200
Mean	235	230	230	230	230	255	240	220	210	200	195	195

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

TABLE 41 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10°2'N  
 Longitude 77°5'E

Characteristic	h'F											Latitude	10°2'N
Unit	Km											Longitude	77°5'E
Month	October 1961												
1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date	
C	C	C	C	240	255	240	220	220	220	250	275	1	
200	200	210	210	230	255	310	395	F	320	320	280	2	
205	200	200	210	220	260	300	310 <sub>F</sub>	F	F	240	245	3	
200	200	200	205	220	260 <sub>H</sub>	320	F	320	260	270	240	4	
195 <sub>H</sub>	200	A	220	230	260 <sub>H</sub>	315	305	F	F	240	240	5	
200	200	A	205 <sub>H</sub>	235	260	355	F	320 <sub>F</sub>	300	235	250 <sub>F</sub>	6	
200	200	A	A	245	260	300	315	275	270	270	255	7	
200	A	205	220	235	215	355	F	F	250 <sub>F</sub>	260	240	8	
195	205	205	A	235	275	375	F	F	F	260 <sub>F</sub>	235	9	
200	205	A	A	235	260	370	F	F	F	210 <sub>F</sub>	225	10	
205	200	205	210	240	265	235	F	255	250	250	240	11	
200	210	205	220	240	270	320	F	F	300	240	230	12	
200	200	A	215	245	260	F	F	230 <sub>F</sub>	240	240	260	13	
180 <sub>H</sub>	200	210	210 <sub>H</sub>	240	265	340	330 <sub>H</sub>	300	240	245	240	14	
200	205	200	215	240	260	325	320	280	270	250	225	15	
200	200	A	220	230	260	340	340	320	220	240	235	16	
190	210 <sub>H</sub>	200 <sub>H</sub>	200	220	260	340	360	300	260	235	230	17	
200	200	260 <sub>F</sub>	280	240	C	320	360	320	270	240	240	18	
200	200	210	205	230	C	300	260	320	250	240	C	19	
200	200	220	210	C	270	320	C	270	250	260	250	20	
200	200	205	230	240	270	300	260	240	240	250	245	21	
C	210 <sub>H</sub>	210	200 <sub>H</sub>	240	270	F	320 <sub>F</sub>	F	270 <sub>F</sub>	270	250	22	
200 <sub>H</sub>	200 <sub>H</sub>	200	220	230	265	320 <sub>F</sub>	340 <sub>F</sub>	270	250 <sub>F</sub>	240	220	23	
200	200	205	220	240	270	330	325	280	240	235	245	24	
195	200	210	205	240	260	340	F	340	300	250 <sub>H</sub>	240	25	
200	200	220	220	250	280	280	270	250	240	230	230	26	
210	220	215	220	250	270	310	285	245	240	240	225	27	
200	210	220	210	250	260	F	F	F	F	245 <sub>F</sub>	235	28	
220	235	235 <sub>F</sub>	240 <sub>F</sub>	250	300	340	F	F	280 <sub>F</sub>	250	260	29	
170 <sub>H</sub>	200	220	230	245	280	320	F	F	F	F	250	30	
200	200	C	210	240	265	305 <sub>F</sub>	285	270	245	250	240	31	
29	29	23	27	30	29	28	18	20	25	30	30	Count	
200	200	210	215	240	260	320	320	280	250	245	240	Median	
200	205	210	215	240	265	320	300	280	260	250	240	Mean	

Sweep 10 Mc to 250 Mc in 27 seconds

Characteristic h'E  
Umt Km  
Month October 1961

TABLE 42  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								110	105	C	C	C
2								105	A	A	A	A
3								C	A	A	A	A
4							120	105	A	A	A	A
5								120	A	A	A	A
6								100	A	A	A	A
7							A	A	A	A	A	A
8								110	A	A	A	A
9								A	A	A	A	A
10								110	A	A	A	A
11								110	A	A	A	A
12								110	A	A	A	A
13								110	A	A	A	A
14								120	A	A	A	A
15								110	A	A	A	A
16								105	A	A	A	A
17								A	A	A	A	A
18								110	A	A	A	A
19								A	A	A	A	A
20								C	C	C	A	A
21									A	A	A	A
22								120	A	C	C	C
23									110	110	A	A
24								110	A	A	A	A
25								115	A	A	A	A
26							R	A	A	A	A	A
27								A	A	A	A	A
28							A	A	A	A	A	A
29								A	110	115	115	115
30								B	A	A	A	A
31									A	A	A	A
Count							1	17	3	2	1	1
Median								110				
Mean								110				

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic h'E  
Unit : Km  
Month October 1961

TABLE 42  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
C	C	C	C	C	B							1
A	A	A	A	A	A							2
A	A	B	110	B	A							3
\	A	110	110	A	A							4
A	A	A	110	B								5
\	A	A	A	A								6
A	A	A	A	A								7
A	A	115	115	A								8
A	A	A	A	A	A							9
A	A	A	A	110								10
A	A	A	115	115								11
A	A	110	120	110	120							12
A	A	A	A	A	A							13
A	A	110	110	115	A							14
A	A	A	A	A	A							15
A	A	A	A	A	A							16
A	A	A	A	A	A							17
A	A	A	A	A	A							18
A	A	110	A	A	A							19
A	100	A	A	A	C							20
A	A	A	110	A								21
C	C	110	110	115								22
A	A	A	110	A	A							23
A	A	A	A	A	A							24
A	A	A	A	A								25
A	A	A	A	A								26
A	A	A	A	A								27
A	A	A	115	A	C							28
115	115	115	B	A								29
A	A	A	C	B								30
A	A	C	C	A								31
1	2	7	11	5	1							Count
		110	110	115								Median
		110	110	115								Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic h'E  
 Unit Km  
 Month October 1961

TABLE 42 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2300	Hours/Date
G	C	C	G	105								1
A	A	A	A	A								2
105	A	105	110	B								3
A	A	110	A	A								4
A	110	A	110	A								5
A	A	A	A	A								6
A	A	A	A	A								7
A	A	115	115	A								8
A	A	A	A	A								9
A	A	A	A	A								10
A	A	110	R									11
A	A	510	110	115								12
A	A	A	A	A								13
A	A	110	110	120								14
A	A	A	A	A	A							15
A	A	A	A	A								16
A	A	A	A	A								17
A	A	A	A	A								18
A	A	110	A	A	C							19
A	A	A	A	C								20
A	A	110	110									21
C	A	110	110	A								22
110	110	110	110	A								23
A	A	A	A	A								24
A	A	A	A	A								25
A	A	A	A	A								26
A	A	A	A	A								27
A	A	A	A	A								28
115	115	B	B	A								29
A	110	B	B	B								30
A	A	C	A	A								31
3	4	10	8	3								Count
		110	110									Median
		110	110									Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds.

Characteristic h'Es  
 Unit Km  
 Month October 1961

TABLE 43  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								G	G	C	C	C
2	105		105	105	100			100	100	100	100	100
3						C		C	100	100	100	100
4							G	G	100	100	100	100
5								G	100	100	100	100
6	110							G	100	100	100	100
7			100				100	100	100	100	100	100
8								100	100	100	100	100
9								100	100	100	100	100
10								G	100	100	100	100
11								G	100	100	100	
12	160	115						G	100	100	100	100
13								G	100	100	100	100
14	110							G	100	100	100	100
15								G	100	100	100	100
16								G	100	100	100	100
17								100	100	100	100	100
18								G	100	100	100	100
19								100	100	100	100	100
20	C	C	C					C	C	C	100	100
21									100	100	100	100
22	115	120						120	100	C	C	C
23	105					100			100	100	100	100
24	105	100						G	100	100	100	100
25	110							G	100	100	100	100
26	100							G	100	100	100	100
27								100	100	100	100	100
28								100	100	100	100	100
29								100	G	G	G	G
30								G	100	100	100	100
31									100	100	100	100
Count	9	3	2	1	1	1	2	12	28	27	28	28
Median	110							100	100	100	100	100
Mean	115							100	100	100	100	100

Sweep 1.0 Mc to 25.0 Mc in 27 seconds



Characteristic  $h'E_s$   
 Unit Km  
 Month October 1961

TABLE 43 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	100	G	C	C	C
2							100	100	100	100	100	100
3		110	105	100			100	100	100	100	100	100
4							G	100	100	100	100	100
5							G	100	100	100	100	100
6								100	100	100	100	100
7							100	100	100	100	100	100
8		105			100		G	100	100	100	100	100
9							100	100	100	100	100	100
10								G	100	100	100	100
11							G	100	100	100	100	100
12	120						G	100	100	100	100	100
13							G	G	100	100	100	100
14	120							100	100	100	100	100
15							G	100	100	100	100	100
16								100	100	100	100	100
17							G	100	100	100	100	100
18							G	100	100	100	100	100
19							105	100	100	100	100	100
20							G	C	C	100	100	100
21									100	100	100	100
22	110						G	100	C	C	C	C
23	105					100	100	100	100	100	100	100
24	110							100	100	100	100	100
25							G	100	100	100	100	100
26	100						G	100	100	100	100	100
27							G	100	100	100	100	100
28							100	100	100	100	100	100
29							100	100	100	100	G	G
30							100	100	100	100	100	100
31								G	100	100	100	100
Count	6	2	1	1	1	1	8	25	28	29	28	28
Median	110						100	100	100	100	100	100
Mean	110						..	100	100	100	100	100

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'E<sub>s</sub>  
 Unit Km  
 Month October 1961

TABLE 43 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude : 77.5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
C	C	C	C	G								1
100	100	100	100	100						120		2
G	100	G	G	G							100	3
100	100	100	100	105								4
100	G	100	G	100							110	5
100	100	100	100							110	105	6
100	100	100	100	100								7
100	100	G	G									8
100	100	100	100	100	100							9
100	100	100	100		100					110		10
100	100	100	G							105		11
100	100	100	100	100						105		12
100	100	100	100	100				110		145		13
100	100	100	100	105								14
100	100	100	100	100	100			115				15
100	100	100	100							120	110	16
100	100	100	100	100								17
100	100	100	100	C								18
100	100	110	100	100								19
100	100	100	100	C								20
100	100	G	G							105	120	21
C	100	100	100	115				115		105	125	22
100	100	100	120	120						105	110	23
100	100	100	100	100						110	110	24
100	100	100	100	100								25
100	100	100	100	100								26
100	100	100	100	100								27
100	100	100	100	100						115		28
G	G	G	G	100					110	115		29
100	100	G	G	G	130				115			30
100	100	C	100	100						110		31
27	28	24	23	20	3				5	14	8	Count
100	100	100	100	100					115	110	110	Median
100	100	100	100	100					115	115	110	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000) F<sub>2</sub>      TABLE 44      Latitude 10 2°N  
 Unit      Ionospheric Data      Longitude 77 5°E  
 Month October 1961      75°E Mean Time

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	F	3 40	3 10	E	E	E	3 30	3 40	2 30 <sub>H</sub>	C	C	C
2	3 05	3 00	3 00	2 90 <sub>F</sub>	2 95 <sub>F</sub>	3 05	3 10	3 00	2 80	2 40	2 60	2 50
3	F	3 35	3 45	3 40	3 45	C	C	C	2 80	2 50	2 60	2 60
4	3 25	3 55	3 40	3 25	3 30	3 30	3 20	2 90	2 50	2 60	2 50	2 50
5	F	F	F	F	F	3 30 <sub>F</sub>	3 25	3 30	3 00	2 55	2 30	2 40
6	3 40	3 50	3 50	3 45	3 50	3 50	3 30	3 20	2 70	2 55	2 60	2 60
7	F	F	F	F	F	F	3 35	3 00	2 75	2 40	2 50	2 60
8	3 20	3 40	3 40	3 50	3 50	3 65	3 40	3 25	2 70	2 50	2 55	2 60
9	F	3 20	3 55	3 45	3 50	3 50 <sub>a</sub>	3 30	3 10	2 55	2 55	2 60	2 50
10	3 20	F	3 50	3 45	3 50	3 60	3 50	3 45	3 15	2 55	2 40	2 55
11	F	3 40	F	3 30	3 10	3 40	3 30	3 30	2 95	2 35 <sub>H</sub>	2 50	2 40
12	F	3 30 <sub>a</sub>	3 20	F	3 15 <sub>F</sub>	3 30	3 45	3 30	3 00	2 60	2 20	2 40
13	F	F	3 20	3 40 <sub>F</sub>	3 35	3 30	3 50	3 30	3 00	2 50	2 35	2 50
14	F	F	F	3 35 <sub>F</sub>	3 45	3 50	3 40	3 30	3 00	2 35 <sub>H</sub>	2 40	2 35
15	3 15 <sub>r</sub>	3 40 <sub>a</sub>	3 40	3 50	3 40	3 40 <sub>a</sub>	3 45	3 40	3 50	2 40	2 55	2 55
16	3 50 <sub>r</sub>	3 40	3 40	3 40	3 50	3 65	3 50	3 35	3 00	2 50	2 55	2 50
17	3 35	3 40	3 50	3 60	3 50	3 50	3 35	3 30	3 00	2 50	2 60	2 55
18	3 30	3 25	3 30	3 30	3 40	3 60	3 50	3 30	3 00	2 55	2 40	2 50
19	3 40	3 45	3 50	3 55	3 60	3 30	3 30	3 10	2 70	2 65	2 70	2 45
20	C	C	C	3 40	C	C	3 20	C	C	C	2 30	2 50
21	3 05	3 40	3 35	3 40	3 50	3 40	3 30	3 40	3 10	2 65	2 55	2 45
22	F	3 25	3 20	3 30	3 30	3 15	3 20	3 20	2 80	C	C	C
23	F	3 30 <sub>F</sub>	3 20	F	F	3 35	3 40	3 25	2 90	2 35	2 50	2 40
24	3 40	F	3 50	3 55	R	3 30	3 40	3 20	2 80	2 30	2 50	2 40
25	3 25	3 25 <sub>a</sub>	3 35	3 25	3 25	3 30	3 35	3 25	3 15	2 85	2 30 <sub>H</sub>	2 30
26	3 15 <sub>r</sub>	F	3 25	F	F	3 35	3 20	3 10	2 85	2 40	2 50	2 55
27	3 20	3 35	3 45	3 60	F	R	3 05	3 10	2 65 <sub>H</sub>	2 75	2 60	2 55
28	3 20	3 30	3 40	3 35	3 35	3 15	3 05	3 15	2 85	2 65	2 60	2 55
29	F	F	3 05 <sub>F</sub>	2 80	F	R	3 20 <sub>a</sub>	2 60	2 50 <sub>H</sub>	R.H	2 10 <sub>a</sub>	2 30
30	F	F	F	F	F	3 40 <sub>a</sub>	3 35	3 25	3 00	2 55 <sub>H</sub>	2 55	2 50
31	F	3 05 <sub>F</sub>	F	3 30	3 50	E	3 25	3 35	3 15	2 75	2 35 <sub>H</sub>	2 40
Count	16	21	24	24	21	24	30	29	30	27	29	29
Median	3 20	3 35	3 40	3 40	3 45	3 40	3 30	3 25	2 90	2 55	2 50	2 50
Mean	3 25	3 35	3 35	3 35	3 40	3 40	3 30	3 20	2 85	2 55	2 45	2 50

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000) F<sub>2</sub>  
 Unit  
 Month October 1961

TABLE 44  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
C	C	C	U2 65 <sub>o</sub>	C	2 75	2 85	3 10	3 20	3 20	3 25	3 15	1
2 60	2 50	2 50	2 45	2 40	2 50	2 60	2 90	2 10 <sub>r</sub>	F	F	F	2
2 60	2 70	2 85	2 90	2 90	3 00	2 80	2 65	F	F	3 00	3 10	3
2 55	2 55	2 60	2 70	2 65	2 55	2 30	F	F	F	F	F	4
2 45	2 50	2 70	2 80	2 85	2 80	2 70	U2 50 <sub>r</sub>	2 60	F	F	F	5
2 40	2 50	2 75	2 80	2 90	2 70	2 40	2 10	F	F	F	F	6
2 65	2 60	2 70	2 80	2 80	2 70	2 50	2 40	2 60	2 80	2 90	F	7
2 60	2 70	2 90	3 10	3 15	3 00	2 70	2 40	F	F	F	U3 20 <sub>r</sub>	8
2 55	2 60	2 65	2 60	2 60	2 60	2 40	F	F	F	F	F	9
2 55	2 60	2 70	2 70	2 80	2 95	2 70	F	F	F	F	3 45	10
2 30	2 40	2 40	2 50	2 60	2 60	2 50	2 40	F	F	F	F	11
2 35	2 40	2 40	2 45	2 45	2 45	2 35	2 30	2 35	F	F	F	12
2 40	2 50	2 55	2 60	2 70	2 65	2 45	F	F	U2 85 <sub>r</sub>	U2 90 <sub>r</sub>	U3 05 <sub>r</sub>	13
2 35	2 45	2 55	2 60	2 60	2 55	2 35	2 30	2 45	U2 80 <sub>r</sub>	2 95	U3 10 <sub>r</sub>	14
2 60	2 65	2 80	2 85	2 95	2 90	2 65	2 40	FS	FS	FS	F	15
2 50	2 60	2 80	2 95	3 00	2 90	2 75	2 50	FS	FS	FS	3 35 <sub>rs</sub>	16
2 50	2 60	2 70	2 75	2 80	2 60	2 30	FS	FS	FS	FS	3 20	17
2 65	2 65	2 70	2 75	2 85	2 85	2 75	2 55	2 45	FS	FS	3 20 <sub>rs</sub>	18
2 60	2 60	2 70	2 80	2 70	C	U2 10 <sub>r</sub>	2 25	FS	FS	FS	FS	19
2 60	2 65	2 70	2 60	2 55	2 40	2 40	2 35	C	2 65	2 80	2 90	20
2 60	2 60	2 65	2 80	2 85	2 80	2 50	F <sub>s</sub>	FS	FS	FS	3 20	21
C	C	2 50	2 70	2 75	2 60	2 40	U2 25 <sub>r</sub>	F	F	F	F	22
2 60	2 60	2 60	2 70	2 80	2 80	2 55	2 40	F	2 95 <sub>r</sub>	3 20	3 30	23
2 50	2 50	2 50	2 50	2 60	2 65	2 50	2 40	2 50	F	F	3 30	24
2 50	2 50	2 55	2 60	2 55	2 55	2 40	2 40	F	F	F	U2 90 <sub>r</sub>	25
2 55	2 45	2 40	2 40	2 50	2 60	2 60	2 65	2 75	3 00	3 15	3 20	26
2 55	2 55	2 45	2 25	2 30	2 40	2 50	2 50	2 70	2 90	3 05	3 05	27
2 55	2 65	2 65	2 55	2 40	2 50	U2 40 <sub>r</sub>	F	F	F	F	F	28
2 35	2 55	2 65	2 70	2 60	2 55	2 40	F	F	F	2 90 <sub>r</sub>	F	29
2 40	2 50	2 60	C	2 75	2 75	2 65	U2 55 <sub>r</sub>	F	F	F	F	30
2 50	2 50	C	C	2 50	2 45	2 55	U2 50 <sub>r</sub>	2 55	U2 80 <sub>r</sub>	3 05	FS	31
29	29	29	29	30	30	31	23	11	9	11	16	Count
2 55	2 55	2 65	2 70	2 70	2 60	2 50	2 40	2 55	2 85	3 00	3 20	Median
2 50	2 55	2 65	2 65	2 70	2 65	2 50	2 45	2 55	2 90	2 95	3 15	Mean

Sweep 1 0 Mc to 25 0 Mc. in 27 seconds

Characteristic (M3000)F<sub>2</sub>      TABLE 44 (Contd)      Latitude 10 2°N  
 Unit ..      Ionospheric Data      Longitude 77 5°E  
 Month October 1961      75°E Mean Time

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	3 45	3 50	E	E	2 85	3 30	2 85	3 20	C	C	C
2	3 00	3 00	3 05 <sub>v</sub>	3 00	3 00	2 95	3 20	3 00	2 60	2 50	2 40	2 55
3	u3 20 <sub>v</sub>	3 40	3 30	3 30	C	C	C	3 00	2 50	2 60	2 55	2 60
4	3 40	3 60	3 30	3 30	3 30	2 95	3 10	2 70	2 60	2 55	2 55	2 55
5	F	F	u3 25 <sub>v</sub>	F	3 35	F	3 40	3 15	2 80	2 15 <sub>EX</sub>	2 40	2 40
6	3 45	3 55	3 45	3 50	3 50	3 00	3 35	3 00	2 50	2 70	2 60	2 45
7	F	F	F	3 35	F	3 40	3 40	3 05	2 40 <sub>EX</sub>	2 45	2 60	2 60
8	3 30	3 50	3 50	3 60	3 55	2 90	3 40	3 00	2 40	2 50	2 50	2 60
9	F	3 50	3 60	3 70	3 50	2 90	3 30	2 90	2 35	2 60	2 60	2 50
10	F	3 30	3 55	3 50	3 60	2 90	3 50	3 30	2 90	2 30	2 55	2 55
11	F	F	F	3 30 <sub>v</sub>	3 30	2 80	3 40	3 10	2 70	2 20 <sub>EX</sub>	2 50	2 35
12	3 20	3 20	3 10	F	3 20	3 45	3 30	3 15	2 80	2 35	2 30	2 40
13	3 15	3 35	3 20	3 25	3 35	3 20	3 30	3 20	2 80	2 20 <sub>EX</sub>	2 45	2 40
14	F	F	F	3 40	3 60	2 95	3 40	3 15	2 65	2 40 <sub>EX</sub>	2 40	2 45
15	3 20 <sub>EX</sub>	3 40	3 45	3 50	3 50	3 05	3 50	3 25	2 75	2 40	2 60	2 50
16	F	3 20	3 35	3 45	3 50	3 20	3 45	3 15	2 75	2 45	2 55	2 55
17	3 35	3 45	3 50	3 50	3 60	3 00	3 40	3 15	2 70	2 60	2 50	2 60
18	3 30	3 25	3 35	3 40	3 45	3 35	3 45	3 20	2 80	2 20 <sub>EX</sub>	2 50	2 60
19	3 50	3 55	3 50	3 60	3 60	3 10	3 25	2 90	2 50	2 70	2 55	2 50
20	C	C	3 45	C	3 50	3 10	3 30	C	C	2 50	2 40	2 55
21	3 25	3 40	3 40	3 50	3 60	2 90	3 45	3 15	2 85	2 40	2 50	2 55
22	3 20	3 20	3 30	3 30	3 30	3 25	3 25	3 05	C	C	C	C
23	F	3 25	F	3 40 <sub>v</sub>	3 35	3 10	3 35	3 05	2 60	2 40	2 45	2 50
24	3 40	3 50	3 50	R	3 40	3 15	3 50	3 10	2 60	2 50	2 40	2 60
25	u3 25 <sub>v</sub>	3 35	3 25	3 30	3 30	3 15	3 35	3 25	3 05	2 70	2 15 <sub>EX</sub>	2 40
26	3 15	F	3 35	F	3 25	3 35	3 30	2 95	2 55	2 60	2 50	2 55
27	3 25	3 40	3 50	R	R	2 80	3 20	2 85	2 75	2 65	2 55	2 65
28	3 25	3 25	3 35	3 40	3 20	3 10	3 15	3 10	2 70	2 55	2 55	2 60
29	2 90	F	F	F	F	2 35 <sub>EX</sub>	2 65	2 55	R <sub>EX</sub>	R <sub>EX</sub>	u2 05 <sub>EX</sub>	2 30
30	F	F	F	F	F	2 85	3 25	3 15	2 75	2 40	2 50	2 45
31	3 05	F	3 15	3 35	3 45	2 95	3 40	3 20	2 95	2 45	2 35	2 35
Count	20	22	25	22	25	29	30	30	28	28	29	29
Median	3 25	3 40	3 35	3 40	3 35	3 00	3 35	3 10	2 70	2 50	2 50	2 55
Mean	3 25	3 35	3 35	3 40	3 40	3 05	3 30	3 05	2 70	2 45	2 45	2 50

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000)F<sub>2</sub>  
Unit  
Month October 1961

TABLE 44 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
C	C	C	C	2 75	2 75	2 90	3 20	3 25	3 30	3 20	3 10	1
2 50	2 50	2 50	2 40	2 45	2 60	2 40	2 30	F	F	F	F	2
2 65	2 75	2 90	2 90	2 90	2 90	2 70	2 60	F	u2 90r	3 10	3 15	3
2 55	2 55	2 65	2 70	2 60	2 40	u2 25a	F	F	F	F	F	4
2 45	2 55	2 80	2 80	2 90	2 80	u2 65a	2 55	F	F	F	3 20	5
2 50	2 70	2 85	2 90	2 80	2 60	2 30	F	F	F	F	F	6
2 60	2 65	2 80	2 80	2 75	2 60	2 40	2 50	2 75	2 85	F	3 15	7
2 60	2 80	3 05	3 15	3 10	2 90	2 50	F	F	F	F	3 30	8
2 50	2 60	2 70	2 65	2 60	2 60	2 20	F	F	F	F	3 20	9
2 60	2 65	2 70	2 70	2 90	2 90	2 40	F	F	F	F	3 40	10
2 35	2 40	2 50	2 60	2 65	2 60	2 45	F	F	F	F	F	11
2 40	2 45	2 40	2 50	2 50	2 40	2 35	2 30	F	F	F	F	12
2 40	2 50	2 55	2 65	2 70	2 60	2 35	F	F	F	u3 00w	F	13
2 40	2 50	2 60	2 60	2 60	2 45	2 30	2 40	F	u2 80r	F	F <sub>s</sub>	14
2 60	2 70	2 80	2 90	2 90	2 80	2 50	F <sub>s</sub>	F <sub>s</sub>	3 00F <sub>s</sub>	F <sub>s</sub>	F	15
2 60	2 70	2 85	2 90	3 00	2 90	2 60	F <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	3 45	16
2 50	2 65	2 75	2 70	2 70	2 55	2 20	F <sub>s</sub>	F <sub>s</sub>	F	F	3 30	17
2 70	2 75	2 80	2 70	2 85	C	2 60	2 40	F <sub>s</sub>	2 70w <sub>s</sub>	F <sub>s</sub>	3 30	18
2 60	2 70	2 75	2 80	2 65	C	2 10	F <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	C	19
2 60	2 70	2 65	2 60	C	2 25	2 30	C	2 70	2 75	2 85	3 00	20
2 60	2 65	2 75	2 80	2 85	2 65	2 30w <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	F <sub>s</sub>	3 15	F	21
C	2 40	2 60	2 75	2 70	2 50	2 30	F	F	F	F	F	22
2 55	2 60	2 70	2 70	2 80	2 75	2 40	F	F	2 95	3 30	3 50	23
2 50	2 50	2 50	2 60	2 60	2 60	2 30	2 40	F	F	F	3 20	24
2 50	2 55	2 55	2 55	2 50	2 50	2 35	2 35	F	F	F	u3 15w	25
2 50	2 45	2 45	2 45	2 60	2 65	2 65	2 65	2 90	3 05	3 20	3 15	26
2 55	2 55	2 40	2 20	2 40	2 55	2 50	2 65	2 85	3 00	3 00	3 15	27
2 60	2 60	2 60	2 50	2 40	2 45	F	F	F	F	F	F	28
2 30	2 65	2 60	2 65	2 60	2 50	2 35	F	F	F	3 00w	F	29
2 45	2 50	2 65	2 70	2 75	2 75	2 60	F	F	F	F	F	30
2 50	2 45	C	2 55	2 55	2 55	2 60	2 55	2 65	2 90	u3 15a	u3 15w	31
29	30	29	30	30	29	30	18	6	11	10	17	Count
2 50	2 60	2 65	2 70	2 70	2 60	2 40	2 50	2 80	2 90	3 10	3 20	Median
2 50	2 60	2 65	2 70	2 70	2 60	2 45	2 50	2 85	2 95	3 10	3 25	Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic foF2  
Unit Mc  
Month November 1961

TABLE 45  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	8 0	7 3	4 8	3 2	5 7	8 5	9 4	9 0	8 3	8 1
2	8 0	7 7	8 3	7 3	5 4	4 6	6 2	8 8	9 9	10 0	8 8	8 2
3	7 2	5 9	5 6	4 7	4 1	3 3	5 8	8 4	9 9	10 8	10 4	9 4
4	F	∇7 1 <sub>F</sub>	7 6	6 5	5 6	3 9	5 8	8 1	9 7	10 4	9 3	9 0
5	7 3	6 8	6 7	4 8	3 8	2 7	5 5	8 4	9 7	10 6	11 0	9 8
6	7 5	5 8	4 3	2 8	2 1	R	5 2	8 4	9 6	8 6	8 6	9 1
7	F	6 2	5 6	4 4	3 3	2 5	5 2	7 8	9 0	8 6	8 1	8 0
8	7 6	7 3	6 0	5 4	4 8	F	5 0	8 0	9 4	10 2	10 0	9 2
9	9 4	9 6	8 3	5 6	4 6	4 4	6 0	8 0	9 0	8 7	8 4	8 7
10	7 0	6 4	5 7	4 8	3 1	2 0	5 7	8 4	9 6	9 7	9 2	9 5
11	8 8	8 6	7 2	4 8	3 1	2 2	5 3	8 0	9 0	8 6	8 7	8 8
12	8 4	7 7	6 0	4 1	2 7	1 6	5 3	8 3	9 9	10 2	9 0	8 6
13	6 9	6 7	5 7	4 0	3 0	2 3	5 2	8 1	9 8	10 7	9 5	9 4
14	7 8	7 8	7 0	5 5	3 6	2 5	5 2	8 1	9 6	9 5	8 0	9 0
15	7 1	7 2	6 4	5 7	4 9	F	6 3 <sub>F</sub>	8 9	10 4	11 0	8 9	8 4
16	7 0	7 1	6 2	4 4	3 6	2 8	4 9	7 8	9 1	9 4	8 8	9 0
17	7 4	6 3	5 0	3 6	1 8	1 5	4 4	7 0	7 6	8 3	9 1	9 4
18	∇7 1 <sub>F</sub>	∇5 0 <sub>F</sub>	3 3	2 3	1 7	1 4 <sub>R</sub>	4 6	8 1	8 9	10 7	11 1	11 1
19	6 4	5 0	4 4	3 8	2 9	2 3	4 8	8 2	10 4	10 3	10 0	9 9
20	6 5	7 5	6 8	5 0	3 5	2 2	4 6	6 5	7 2	C	7 1	7 7
21	7 7	7 6	6 6	5 0	4 0	3 6	4 1	6 5	7 5	7 5	8 0	8 6
22	F	F	F	5 5	3 6	2 0	4 6	∇7 2 <sub>s</sub>	8 2	8 0	8 0	8 2
23	F	7 3 <sub>F</sub>	6 7	5 1	3 4	1 8	4 4	7 2	8 3	8 1	8 0	7 9
24	6 2	5 5	4 9	3 1	2 4	1 7	4 6	7 3 <sub>F</sub>	8 1	7 9	7 8	8 0
25	6 4	5 6	5 5	4 3	3 0	2 3	4 8	7 5	7 5	7 4	7 6	7 8
26	5 6	5 6	5 3	4 3	3 3	2 7	4 8	7 6	8 7	9 4	9 0	9 2
27	F	F	F	F	F	F	4 8	7 6	9 0	9 3	9 3	8 6
28	5 6	4 8	3 8	3 0	2 4	2 1	4 4	7 1	8 1	8 3	8 2	8 3
29	5 9	5 8	5 7	5 5	4 3	2 6	4 5	7 0	8 1	8 1	8 3	8 5
30	6 6	F	5 3	4 4	3 2	∇2 1 <sub>R</sub>	4 3	7 4	8 5	8 4	8 5	8 1
Count	24	26	28	29	29	26	30	30	30	29	30	30
Median	7 1	6 8	5 8	4 8	3 4	2 3	5 0	8 0	9 0	9 3	8 8	8 6
Mean	7 1	6 7	6 0	4 7	3 5	2 6	5 1	7 8	9 0	9 2	8 8	8 8

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic foF2  
 Unit Mc  
 Month November 1961

TABLE 45  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
8 2	9 0	9 2	9 5	9 6	9 1	8 2	7 6	7 6 <sub>F</sub>	F	∇7 5 <sub>F</sub>	7 8	1
8 1	8 2	8 3	8 7	9 0	9 0	8 4	7 0	7 0	F	F	7 5	2
9 3	9 7	10 1	10 2	10 5	10 5	10 2	9 8	9 2	F	F	F	3
8 6	8 6	8 9	9 0	9 3	9 3	9 2	8 9	8 7	8 4	F	∇7 8 <sub>F</sub>	4
9 6	10 2	10 2	10 0	10 1	11 0	10 7	8 9	F	∇8 6 <sub>F</sub>	F	8 7	5
10 0	10 3	10 4	10 5	11 0	10 7	10 0	10 7	10 6	11 0	F	9 0	6
8 1	8 6	9 3	10 0	10 6	10 6	10 0	9 6	F	10 0	9 3	8 0	7
9 6	10 6	10 8	11 1	11 1	10 7	10 3	10 8	10 4	10 0	10 0	9 7	8
9 6	10 6	11 4	11 7	11 7	11 6	11 0	11 0	10 5	10 1	8 3	7 5	9
9 8	10 2	10 7	10 3	10 0	9 2	8 2	7 4	7 6	F	F	∇8 8 <sub>F</sub>	10
8 9	9 4	9 6	9 6	9 6	9 6	8 6	7 6	F	F	F	8 1 <sub>F</sub>	11
8 8	9 4	10 0	10 0	10 4	10 2	9 6	9 9	9 5	9 4	8 3	7 6	12
9 2	9 5	9 4	9 2	9 3	8 8	7 8	6 7	F	F	F	∇7 1 <sub>F</sub>	13
9 1	8 4	8 2	8 6	9 0	9 0	8 8	7 9	7 0	∇6 6 <sub>F</sub>	∇6 9 <sub>F</sub>	7 2	14
8 2	8 3	8 3	8 9	9 2	8 8	8 2	7 4	F	F	F	∇6 8 <sub>F</sub>	15
8 6	9 0	9 0	8 7	8 6	9 0	8 4	7 7	7 8	7 9	8 0	8 0	16
10 0	10 6	11 2	11 4	11 6	11 0	9 7	8 5	F	F	F	F	17
10 6	10 4	10 0	9 6	9 4	10 0	8 7	7 6	8 4	8 7	8 1	8 2	18
10 0	11 0	10 8	C	11 2	10 9	10 0	10 3	11 8	10 2	7 0	6 8	19
7 9	8 2	8 4	8 4	8 5	8 2	7 0	6 6	∇6 8 <sub>s</sub>	8 5	8 7	7 6	20
9 0	9 2	9 5	10 0	9 3	8 4	7 8	7 1	∇6 8 <sub>v</sub>	F	6 4	F	21
8 6	9 0	9 3	9 5	10 0	10 3	9 9	8 8	9 2	8 4	F	F	22
8 0	8 4	8 6	8 4	8 6	8 7	7 8	6 8	F	F	7 6	6 9	23
8 3	9 0	9 5	9 9	10 6	10 2	9 8	7 8	7 7 <sub>F</sub>	8 5	8 0 <sub>F</sub>	8 0 <sub>F</sub>	24
7 8	8.1	8 5	C	8 8	9 1	8 9	8 3	8 0	8 0	∇7 2 <sub>s</sub>	6 0	25
9 5	10 0	10 0	10 1	10 3	∇10 1 <sub>s</sub>	9 4	8 5	7 6	F	F	F	26
8 8	8 8	8 9	9 3	∇10 1 <sub>s</sub>	10 0	8 9	8 7	8 3	∇7 2 <sub>s</sub>	6 8	6 5	27
8 5	9 7	9 8	10 4	10 5	10 3	10 0	8 6	8 7	7 9	7 1	6 3	28
8 6	8 9	9 2	9 3	9 3	9 4	8 8	8 1	8 1	∇7 3 <sub>F</sub>	F	∇6 9 <sub>F</sub>	29
8 1	8 2	8 3	8 5	C	C	8 4	7 9	7 9	8.1	∇7 4 <sub>F</sub>	6 6	30
8 9	9 3	9 5	9 7	9 9	9 8	9 1	8 4	8 5	8 7	7 8	7 6	Mean
8 8	9 1	9 4	9 6	10 0	10 0	8 9	8 2	8 1	8 5	7 6	7 6	Median
30	30	30	28	29	29	30	30	23	19	17	25	Count

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic  $f_oF_2$   
Unit Mc  
Month November 1961

TABLE 45 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	7.3	7.6	6.0	4.0	3.6	7.4	8.9	9.5	8.8	8.4	8.3
2	7.8	8.0	8.1	6.1	4.9	4.7	7.7	9.6	10.0	9.7	8.5	8.1
3	6.5	5.9	5.4	4.4	3.6	3.9	7.3	9.3	10.4	10.4	C	9.2
4	F	7.9	7.0	6.1	4.6	4.0	7.2	8.9	10.1	9.7	9.0	8.7
5	7.0	7.2	6.1	4.4	3.2	3.6	7.3	9.0	10.0	11.0	10.5	9.3
6	6.4	5.5	3.5	2.4	1.7	3.0	7.0	9.5	9.3	8.5	8.8	9.5
7	7.0	6.0	5.2	3.8	2.8	3.1	6.8	8.6	9.0	8.4	C	8.0
8	7.9	6.8	5.6	5.2	F	$\sqrt{2.7}$	6.8	8.7	10.4	10.0	9.6	9.2
9	9.7	9.4	6.8	4.8	4.4	4.4	7.2	8.8	9.0	8.6	8.6	9.1
10	6.5	6.2	5.2	4.0	2.4	3.2	7.1	9.1	9.8	9.0	9.4	9.6
11	8.9	8.0	5.8	3.9	2.6	3.3	6.8	8.6	8.8	8.6	8.8	8.8
12	8.4	6.7	4.9	3.1	2.1	3.0	7.1	9.2	10.2	9.7	8.5	8.6
13	6.8	6.6	4.3	3.6	2.7	3.1	6.8	9.0	10.6	9.9	9.2	9.4
14	8.1	8.0	6.3	4.5	3.1	3.1	6.9	8.8	9.8	8.0 <sub>H</sub>	8.6	9.2
15	7.2	6.9	6.4	F	F	F	7.6 <sub>F</sub>	9.8	11.0	10.2	8.4	8.2
16	7.2	6.8	5.2	4.0	3.0	3.2	6.8	8.6	9.2	8.9	8.8	8.8
17	6.6	5.8	4.3	2.6	1.5	2.8	6.2	7.6	8.0	8.6	9.1	9.6
18	F	3.8	2.9	2.0	E	2.7	6.8	8.4	9.7	10.9	11.5	10.9
19	5.7	4.7	4.0	3.5	2.7	3.0	6.9	9.5	10.7	10.1	10.1	9.9
20	7.0	7.6	5.8	4.3	2.6	2.7	5.8	7.0	7.4	C	7.2	7.9
21	7.5	7.5	5.9	4.5	3.8	4.0	5.6	7.0	7.6	7.7	8.1	8.8
22	F	F	6.8	4.6	2.8	2.7	6.2	8.0	8.0	7.8	7.9	8.3
23	F	7.1 <sub>F</sub>	6.1	4.6	2.6	2.6 <sub>H</sub>	6.1	8.1 <sub>H</sub>	8.4	8.0	8.0	8.0
24	5.8	5.0	4.0	2.6	2.0	2.5	6.5 <sub>F</sub>	7.8	7.8	7.8	8.0	8.4
25	6.1	5.5	4.8	3.6	2.5	2.8	6.7	7.7	7.7	7.5	7.8	7.7
26	5.5	5.7	4.9	3.7	3.1	2.9	6.5	8.7	9.1	9.1	9.0	9.4
27	F	F	F	F	F	$\sqrt{2.9}$	6.4	8.4	9.3	9.4	9.0	8.7
28	5.4	4.2	3.6	2.8	2.2	2.5	$\sqrt{6.0}$	7.8	8.2	8.0	8.1	8.3
29	5.6	5.7	5.5	$\sqrt{4.8}$	3.5	2.8	5.8	7.6	8.1	8.2	8.4	8.5
30	$\sqrt{5.8}$	5.5	4.8	3.5	2.7	2.5	6.1	8.1	8.5	8.3	8.3	8.0
Count	24	28	29	28	27	29	30	30	30	29	28	30
Median	6.9	6.6	5.4	4.0	2.7	3.0	6.8	8.6	9.2	8.8	8.6	8.8
Mean	6.9	6.5	5.4	4.0	3.0	3.1	6.7	8.5	9.2	9.0	8.8	8.8

Sweep 1.0 Mc. to 25.0 Mc in 27 seconds.

Characteristic foF2  
 Unit Mc  
 Month November 1961

TABLE 45 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude . 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
8 8	8 8	9 4	9 6	9 3	8 8	7 7	8 0	∇7 3 <sub>F</sub>	F	∇7 5 <sub>F</sub>	8 0	1
8 2	8 4	8 3	8 7	9 2	8 9	8 1	7 0	6 9 <sub>F</sub>	∇7 4 <sub>s</sub>	7 8 <sub>F</sub>	7 7	2
9 4	9 8	10 4	10 4	10 6	10 3	9 8	9 4	F	F	F	F	3
8 5	8 8	8 9	9 1	9 3	9 5	8 9	8 7	8 7	∇8 0 <sub>F</sub>	∇7 9 <sub>F</sub>	7 6	4
9 8	10 2	10 0	9 9	10 6	11 0	10 1	F	F	F	∇9 1 <sub>F</sub>	8 2	5
10 2	10 3	10 4	10 7	10 7	10 3	10 2	j10 6 <sub>m</sub>	10 6	F	F	F	6
8 4	9 0	9 7	10 5	10 6	10 4	9 6	F	9 4	9 9	8 4	7 6	7
10 0	10 8	11 0	11 4	11 0	10 4	10 0	11 0	10 4	10 2	9 6	9 5	8
10 0	10 8	11 5	11 6	12 0	11 4	10 7	10 8	10 7	9 4	8 0	7 4	9
10 0	10 7	10 8	10 3	10 0	8 8	8 0	7 4	∇7 7 <sub>F</sub>	F	∇8 4 <sub>F</sub>	8 8	10
9 0	9 4	9 6	9 6	9 6	9 3	8 0	F	F	F	7 6 <sub>F</sub>	8 2	11
9 0	10 0	10 1	10 2	10 5	9 8	9 8	9 4	9 5	9 0	8 0	7 3	12
9 3	9 2	9 2	9 2	9 0	8 3	7 1	6 6	F	F	∇6 1 <sub>F</sub>	7 3 <sub>F</sub>	13
8 8	8 3	8 4	8 8	8 8	9 0	8 4	7 3	6 8	∇6 7 <sub>F</sub>	7 1	7 1	14
8 2	8 2	8 6	9 2	9 0	8 4	7 7	7 4	F	F	F	6 8	15
9 0	9 1	8 9	8 7	9 0	8 7	7 9	7 4 <sub>F</sub>	7 8 <sub>s</sub>	8 0	7 8	7 7	16
10 2	11 0	11 6	11 7	11 4	10 8	9 1	F	F	F	F	F	17
10 5	10 1	9 7	9 6	9 8	9 5	8 0	∇8 5 <sub>F</sub>	8 9	8 4	8 4	7 2	18
10 7	10 9	11 1	11 4	10 7	10 5	9 8	11 4	11 1	8 2	6 9	6 5	19
8 0	8 4	8 6	8 4	8 4	7 7	6 7	∇6 7 <sub>s</sub>	8 1	8 8	8 4	7 7	20
9 4	9 6	10 0	9 8	8 8	8 2	7 5	7 3	6 6	F	F	F	21
8 5	9 1	9 2	9 8	10 3	10 3	9 1	9 0	F	∇7 7 <sub>F</sub>	F	F	22
8 2	8 4	8 6	8 6	8 6	8 6	7 4	6 9	F	7 6 <sub>F</sub>	7 3	6 6	23
8 4	9 1	10 0	10 4	10 1	10 2	8 8	7 8 <sub>F</sub>	8 4	8 2	7 6 <sub>F</sub>	∇7 3 <sub>s</sub>	24
8 0	8 3	C	9 0	8 8	9 0	8 5	8 3	8 1	8 0	6 3	5.9	25
9 6	9 9	10 1	10 3	10 3	9 9	9 0	8 0	∇7 3 <sub>F</sub>	F	F	F	26
8 7	8 6	8 8	9 7	9 9	9 7	8 4	8 8	7 6	7 1	∇7 1 <sub>S</sub>	6 1	27
9 2	9 7	9 7	10 3	10 5	10 7	∇9 2 <sub>m</sub>	8 6	8 6	7 5	6 9	6 0	28
8 6	9 2	9 3	∇9 4 <sub>s</sub>	9 5	9 4	8 5	8 1	∇7 6 <sub>F</sub>	∇7 2 <sub>F</sub>	F	6 5	29
8 1	8 2	8 4	8 5	C	8 8	8 0	7 8	8 1	∇7 7 <sub>F</sub>	∇7 1 <sub>F</sub>	∇6 0 <sub>s</sub>	30
30	30	29	30	29	30	30	26	22	19	22	24	Count
9 0	9 2	9 6	9 8	9 9	9 5	8 5	8 0	8 1	8 0	7 7	7 3	Median
9 1	9 4	9 7	9 8	9 9	9 6	8 7	8 4	8 5	8 2	7 7	7 3	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic · foF1  
 Unit : Mc  
 Month November 1961

TABLE 46  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77·5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11	
1								L	L	L	L	L	
2								L	L	L	L	L	
3								L	L	L	L	L	
4								L	L	L	L	L	
5								L	L	L	L	L	
6								L	L	L	L	L	
7							L	L	L	L	L	L	
8							L	L	L	L	L	L	
9							L	L	L	L	L	L	
10							L	L	L	L	L	L	
11								L	L	L	L	L	
12								L	L	L	L	5 0	
13								L	L	L	L	L	
14								L	L	L	L	L	
15								L	L	L	L	L	
16							L	L	L	L	5 1	5 2	
17							L	L	L	L	5 2	5 2	
18							L	L	L	L	L	L	
19							L	L	L	L	L	5 3	
20							L	L	L	C	L	L	
21							L	L	L	L	L	L	
22							L	L	L	L	L	L	
23							L	L	L	L	L	L	
24							L	L	L	4 6	L	L	
25							S	L	L	L	4 7	4 7	
26								L	L	L	L	L	
27								L	L	L	L	L	
28								L	LH	L	LH	L	
29								L	L	L	L	L	
30								L	L	LH	LH	L	
Count											1	3	5
Median													5 2
Mean													5 1

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic  $f_oF1$   
 Unit Mc  
 Month November 1961

TABLE 46  
 Ionospheric Data  
 75°E Mean Time

Latitude 10.2°N  
 Longitude : 77.5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
												6
L	L	L	L	L	L	L						7
L	L	L	L	L	L	L						8
L	A	A	A	A	L <sub>EX</sub>	L						9
L	L	L	L	L	L	L						10
L	L	L	L	L	L	L						11
L	L	L	L	L	L	.						12
L	L	L	L	L	L	.						13
L	L	L	L	L	L	.						14
L	L	L	L	L	L	.						15
												16
5.1	5.1	L	L	L	L	L	L					17
5.3	5.0	4.8	L	L	L	L	L					18
4.8	4.8	5.0	L	L	L	L	L					19
5.2	L	L	L	L	L	L	L					20
5.0	5.1	5.0	L	L	L	L	L					21
L	L	L	L	L	L	L	L					22
L	L	L	L	L	L	L	L					23
L	L	L	L	L	L	L	L					24
4.6	4.7	L	L	L	L	L	L					25
L	L	L <sub>EX</sub>	L	L	L	L	L					26
L	L <sub>EX</sub>	L	L	L	L	L	L					27
L	L	L	L	L	L	L	L					28
L	L	L	L	L	L	L	L					29
L	L <sub>EX</sub>	L	L	L	L	L	L					30
6	5	3										Count
5.0	5.0											Median
5.0	4.9											Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic foF1  
 Unit Mc  
 Month · November 1961

TABLE 46 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude . 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	
1								L	L	L	L	L	
2								L	L	L	L	L	
3								L	L	L	O	L	
4								L	L	L	L	L	
5									L	L	L	L	
6							L	L	L	L	L	L	
7							L	L	L	L	O	L	
8							L	L	L	L	L	L	
9						L	L	L	L	L	L	L	
10							L	L	L	L	L	L	
11							L	L	L	L	L	L	
12							L	L	L	L	L	L	
13							L	L	L	L	L	L	
14							L	L	L	L	L	L	
15								L	L	L	L	L	
16							L	L	L	5.2	5.2	5.2	
17						L	L	L	L	L	5.2	5.2	
18							L	L	L	L	L	L	
19						L	L	L	L	L	L	L	
20							L	L	L	C	L	5.1	
21							L	L	L	L	L	L	
22							L	L	L	L	L	L	
23							L	L	L	4.7	L	L	
24							L	L	4.5	5.0	4.9	4.7	
25							L	L	L	L	L	L	
26							L	L	L	L	L	L	
27							L	L	L	L	L <sub>H</sub>	L	
28							L <sub>H</sub>	L	L	L	L	L	
29							L	L <sub>H</sub>	L	L	L	L	
30							L	L	L	L	L <sub>H</sub>	L	
Count										1	3	3	4
Median													
Mean													

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic : foF1  
 Unit : Mc  
 Month : November 1961

TABLE 46 (Contd.)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10.2°N  
 Longitude : 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
L	L	L	L									1
L	L	L	L	L								2
L	L	L	L	L	A							3
L	L	L	L	L	L							4
L	L	L	L									5
L	L	L	L	L	L	L						6
L	L	L	L	L	L	L						7
L	A	A	L	L	L	L						8
L	L	L	L	L	L	L						9
L	E	L	L	L	L	L						10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
5.1	5.1	L	L	L	L	L						16
5.1	5.1	4.8	L	L	L	L						17
5.2	5.0	L	L	L	L	L						18
L	5.0	L	L	L	L	L						19
5.1	5.0	L	L	L	L	L						20
L	L	L	L	L	L	L						21
L	L	A	A	L	L	L						22
L	L	L	L	L	L	L						23
L	L	L	L	L	L	L						24
L	L	G	L	L	L	L						25
L	L	L	L	L	L	L						26
L	L	L	L	L	L	L						27
L	L	A	L	L	L	L						28
L	L	L	L	L	L	L						29
L	L	L	L	L	L	L						30
4	5	1	1									Count
	5.0											Median
	5.0											Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic · foE  
 Unit : Mc  
 Month November 1961

TABLE 47  
 Ionospheric Data  
 75°E Mean Time

Latitude 10·2°N  
 Longitude . 77·5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								2·6	A	A	A	A
2								2·6	A	A	A	A
3									2·9	A	A	A
4								2·5	A	A	A	A
5								2·5	3·0	A	A	A
6								A	A	A	A	A
7								2·7	A	A	A	A
8								2·9	A	A	A	A
9								A	A	A	A	A
10								2·5	A	A	A	A
11								A	A	B	A	A
12								2·5	3·0	A	A	A
13								2·8	A	A	A	A
14								2·5	A	A	A	A
15								A	A	A	A	A
16						2·9		A	A	A	A	A
17							A	A	A	A	A	A
18							1·4	A	A	A	A	A
19								A	A	A	A	A
20								A	A	C	A	A
21								A	A	A	A	A
22								A	A	A	A	A
23							1·6	A	A	A	A	A
24							A	A	A	A	A	A
25							..	A	A	A	A	A
26							R	2·4	A	A	A	A
27							R	A	A	A	A	A
28								A	A	A	A	A
29								A	A	A	A	A
30							1·6	A	A	A	A	A
Count						1	3	11	3			
Median								2·5				
Mean								2·5				

Sweep 1·0 Mc. to 25·0 Mc. in 27 seconds.





Characteristic foE  
Unit Mc  
Month November 1961

TABLE 47 (Cont'd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							2 3	A	A	A	A	A
2							2 2	2 9	A	A	A	A
3								2 8	3 2	A	C	A
4							2 2	A	A	A	A	A
5								2 8	3 2	A	A	A
6								A	A	A	A	A
7								A	A	A	C	A
8							3 0	2 8	A	A	A	A
9							3 1	A	A	A	A	A
10								A	A	A	A	A
11							A	A	A	A	A	A
12							2 2	2 7	A	A	A	A
13							2 2	2 8	A	A	A	A
14							2 2	2 8	A	A	A	A
15							2 2	A	A	A	A	A
16							A	A	A	A	A	A
17							A	A	A	A	A	A
18							A	A	A	A	A	A
19							A	A	A	A	A	A
20							A	A	A	C	A	A
21							A	A	A	A	A	A
22							A	A	A	A	A	A
23							A	A	A	A	A	A
24							A	A	A	A	A	A
25							A	A	A	A	A	A
26							2 0 <sub>H</sub>	A	A	A	A	A
27							A	A	A	A	A	A
28							A	A	A	A	A	A
29							A	A	A	A	A	A
30							A	A	A	A	A	A
Count							10	7	2			
Median							2 2	2 8			..	
Mean							2 4	2 8				..

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foE  
 Unit Mc  
 Month November 1961

TABLE 47 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	2 4							4
A	A	A	A	A	A							5
A	A	R	A	A								6
A	A	3 0	3 0	A								7
A	A	A	A	A	A							8
A	A	A	A	A	A							9
A	A	A	A	A								10
A	A	A	A	A								11
A	A	A	A	2 8	2 5							12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	A	A	A	A						16
3 9	3 9	3 4	A	A	A							17
A	A	A	A	A	A							18
A	R	3 0	2 8	A	A							19
A	A	A	A	A	A							20
A	A	A	A	A	A	A						21
A	A	A	A	A	A							22
A	A	A	A	A	A							23
A	A	A	2 7	2 3								24
A	A	C	A	A								25
A	A	A	2 9	A	A							26
A	A	A	A	A	R							27
A	A	A	A	R	A							28
A	A	A	A	A	A							29
A	A	A	A	C	A							30
1	1	3	5	3								Count
			2 8									Median
			2 8									Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foEs  
Unit Mc  
Month November 1961

TABLE 48  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	3 6	5 2						3 0	8 0	8 4	10 4	10 4
2								G	8 4	9 4	11 0	11 0
3									6 4	8 0	10 6	10 8
4									8 0	8 6	10 6	11 0
5								G	G	9 6	10 8	10 0
6								7 0	8 0	8 7	10 4	11 0
7								6 4	8 2	8 8	11 0	9 4
8								G	7 0	8 4	9 8	10 0
9								7 0	8 2	9 0	10 2	11 0
10								G	7 6	8 0	9 2	10 0
11	6 8		9 9					7 0	8 0	8 4	10 4	10 8
12		2 9						G	6 5	8 0	9 8	10 2
13							6 2	G	6 8	8 4	9 1	10 4
14								G	7 2	8 4	8 8	9 8
15		3 0	3 2	2 2	4 8	7 0		7 8	6 6	8 6	10 8	10 8
16						5 8		8 0	8 8	10 0	10 0	10 0
17	8 0	4 0				3 0	4 8	8 2	9 0	11 0	10 4	9 6
18							2 3	8 3	7 0	10 0	12 2	9 0
19								8 0	8 0	8 4	9 2	8 2
20								8 1	9 6	C	10 4	12 0
21			2 4	3 0	6 4			7 8	8 8	9 0	9 6	10 1
22							4 0	7 0	8 6	9 2	10 0	10 6
23	2 0						G	6 8	10 2	9 6	11 0	11 4
24							4 9	8 0	9 8	10 0	10 8	11 0
25								8 6	9 6	10 8	11 4	11 0
26							G	7 0	10 4	9 8	11 4	10 1
27	4 2		3 5		S		G	7 9	9 1	11 6	10 7	11 0
28								8 0	9 7	9 1	9 8	10 4
29		3 7	3 5	S				8 2	10 0	10 6	11 1	11 1
30							G	8 2	8 6	9 8	9 7	9 8
Count	5	5	5	2	2	3	9	29	30	29	30	30
Median	4 2	3 7	3 5				2 3	7 0	8 2	9 0	10 4	10 4
Mean	4 9	3 8	3 3				4 4	7 4	8 9	9 2	10 4	10 4

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foEs  
Unit Mc  
1961

TABLE 48  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
10 4	9 8	9 6	9 4	8 6								1
11 0	10 4	9 4	8 0	8 0								2
10 0	9 4	8 4	8 0	10 6	8 8							3
11 0	10 8	10 0	8 6	7 4	G							4
10 2	10 4	9 4	8 4	6 0	8 0							5
11 0	10 2	9 0	G	7 0								6
10 0	10 8	9 0	G	6 0								7
10 0	9 0	8 0	7 6	7 0				5 0	3 9			8
10 6	7 8	6 4	7 0	8 0							4 8	9
9 2	8 8	9 0	8 0	7 3				2 6	2 9		4 4	10
10 5	10 4	9 0	8 5	7 0								11
9 3	9 5	8 8	7 8	6 6								12
10 0	9 8	9 6	8 6	8 0								13
10 6	10 1	10 4	8 6	7 4	G	4 2			1 8	6 2		14
9 6	11 0	9 8	8 8	7 8	G						3 6	15
10 4	9 6	8 6	8 2	8 6	5 0				2 7	3 6	5 3	16
8 6	G	G	8 0	8 2								17
9 6	9 1	10 8	8 1	8 0								18
7 7	5 1	G	C	4 1								19
11 0	10 0	10 4	9 4	8 0	8 0	2 8						20
9 0	9 0	8 2	8 4	8 4	4 2		3 4				2 0	21
10 6	8 6	9 4	9 2	8 2	4 2	3 0			2 8		4 2	22
11 4	10 8	10 9	9 4	6 6	4 0				3 5	4 2		23
10 8	9 1	11 0	7 0	5 0					1 8	6 4		24
11 0	10 8	10 8	C	7 8	G					4 4		25
10 8	9 5	8 8	G	4 3	3 5	4 3						26
11 1	11 0	10 6	9 0	6 6	G							27
9 2	8 1	13 6	8 9	G	3 2							28
10 8	10 4	9 4	8 6	8 3	2 8							29
10 4	10 8	10 8	9 2	C	C							30
90	30	30	28	29	15	4	1	1	7	6	6	Count
10 4	9 8	9 4	8 4	7 4	3 5				2 8	4 3	4 3	Median
10 2	9 7	9 6	8 4	7 2	5 1				2 9	4 8	4 0	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foEs                      TABLE 48 (Contd)                      Latitude 10 2°N  
 Unit Mc                                      Ionospheric Data                                      Longitude 77.5°E  
 Month November 1961                      75° E Mean Time

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	4 0	3 8					G	7 6	8 4	10 0	10 6	10 4
2							G	7 8	8 6	9 8	10 6	10 8
3								G	7 6	9 6	C	10 2
4							G	7 0	8 2	10 8	11 8	12 2
5								G	G	10 8	10 0	10 4
6									8 0	8 4	9 0	11 0
7									8 0	8 2	10 0	C
8							G	G	8 0	11 0	10 4	9 8
9							G	8 2	8 8	11 0	11 0	10 0
10								7 2	8 0	10 0	9 4	10 2
11	3 7						5 6	7 8	8 6	10 2	10 4	9 7
12							G	6 5	8 0	9 5	10 2	9 8
13							G	G	8 5	10 7	9 8	10 0
14	2 3						G	6 3	8 0	9 8	9 4	10 4
15		3 1	2 7	4 0	6 8	3 6	G	5 4	8 2	10 6	10 6	9 7
16							6 4	8 6	10 1	10 4	10 0	10 2
17	6 4				3 9		8 2	8 6	10 0	10 8	10 3	8 0
18							8 0	8 1	10 6	12 6	10 0	10 8
19							2 8	8 0	8 0	10 0	4 7	3 8
20							8 0	8 4	10 3	C	11 3	11 1
21	2 9		2 9				u6 0s	8 2	9 1	9 0	9 8	9 8
22							u7 2s	8 8	9 0	10 0	10 0	10 4
23							7 4	9 0	9 4	10 8	10 4	10 4
24							7 0	9 0	9 8	9 8	10 8	11 0
25							u7 0s	9 4	10 8	10 4	10 8	11 4
26							G	7 8	10 2	10 6	10 4	9 4
27	3 2	3 6					S	7 2	10 6	10 1	11 2	11 4
28							u6 5s	8 4	10 2	10 4	10 6	9 4
29		4 4	3 2				u7 5s	u8 9s	9 6	10 7	10 8	11 1
30							S	u8 1s	8 8	10 3	9 6	10 6
Count	6	4	3	1	2	1	23	30	30	29	28	30
Median	3 4						6 0	8 0	8 7	10 3	10 4	10 3
Mean	3 8						6 7	7 9	9 0	10 3	10 2	10 1

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foEs  
 Unit Mc  
 Month November 1961

TABLE 48 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
10 6	9 8	8 4	9 0									1
10 6	9 8	8 4	8 0	8 0								2
10 0	9 2	7 4	8 4	9 8							3 2	3
10 8	10 6	11 4	8 0	G								4
10 0	9 8	8 6	6 0	6 6	7 6							5
10 3	10 0	G	7 0					3 4				6
10 4	11 0	G	G	3 0								7
8 8	8 6	8 0	8 0						4 4	2 6		8
9 2	7 6	6 0	7 2	7 0						3 2	4 8	9
9 6	9 4	8 2	8 0					2 8		6 0	6 6	10
10 6	8 8	7 8	7 8					2 2			2 8	11
9 6	9 2	8 5	7 8	G								12
9 6	10 5	8 6	8 0	7 6					2 7			13
10 6	9 8	9 0	8 2	5 8	7 0				4 2	3 8		14
10 4	10 6	8 7	7 7	6 0								15
10 8	8 6	8 4	8 2	8 0	4 0					4 2	8 0	16
G	G	G	9 0	8 0								17
10 0	9 5	9 6	7 2	7 0	4 0							18
4 6	4 2	4 1	5 0	3 8								19
9 6	10 5	9 6	8 2	7 4						2 6		20
8 6	8 4	8 6	9 0	8 0								21
9 8	8 7	9 2	8 6	7 0	3 8				2 8	3 9	3 0	22
10 8	10 7	8 8	7 8	4 8						5 4		23
10 6	8 8	9 0	6 0	G					3 4	7 4		24
11 8	10 5	C	8 6	7 4								25
9 6	9 0	7 0	G	5 6	4 1	3 8					3 8	26
10 8	10 8	8 4	8 0	G								27
8 2	6 0	12 0	G	3 7	2 7			2 4				28
11 1	9 3	8 6	8 3	7 4								29
11 0	11 1	9 7	8 1	C	3 8							30
30	30	29	30	24	8	1		4	5	9	7	Count
10 2	9 6	8 5	8 0	6 8	4 0				3 4	3 9	3 8	Median
9 9	9 3	8 5	7 8	6 6	4 6				3 5	4 3	4 6	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic f<sub>o</sub>E<sub>s</sub>  
 Unit Mc  
 Month November 1961

TABLE 49  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								2.7	3.1	3.5	3.6	3.7
2								G	3.0	3.5	3.6	3.8
3									3.0	3.5	3.6	3.8
4								G	3.1	3.5	3.6	3.8
5								G	G	3.4	3.6	3.6
6								2.5	3.1	3.6	3.7	3.7
7								2.6	3.0	3.5	3.6	3.7
8								G	3.1	3.4	3.6	3.8
9								2.6	3.0	3.4	3.6	3.6
10								G	3.1	3.4	3.6	3.6
11	2.0							2.6	3.1		3.8	3.6
12		1.7						G		3.4	3.6	3.8
13							1.8	G	3.0	3.5	3.6	3.8
14								G	3.0	3.4	3.5	3.8
15		1.9	1.9	2.1	1.7	2.4		2.6	3.0	3.5	3.6	3.8
16						3.0		2.4	3.0	3.3	3.4	3.7
17	2.0	2.0				1.4	1.6	2.4	3.0	3.3	3.5	3.6
18							1.7	2.4	3.0	3.2	4.4	3.6
19								2.6	3.0	3.3	3.5	3.6
20								2.4	2.8	C	3.6	3.6
21			1.7	2.0	1.2			2.4	2.9	3.2	3.4	3.5
22								1.9	2.5	3.0	3.2	3.4
23								G	2.4	3.0	3.3	3.6
24								1.7	2.5	2.9	3.2	3.5
25									2.5	2.9	3.2	3.6
26								G	2.5	2.9	3.2	3.5
27			1.4						2.5	3.0	3.3	3.5
28									2.6	2.8	3.2	3.4
29		1.6	1.8						2.4	2.9	3.3	3.5
30								G	2.4	2.9	3.3	3.6
Count	2	4	4	2	2	3	8	29	29	28	30	30
Median								1.6	2.4	3.0	3.4	3.6
Mean								1.7	2.5	3.0	3.4	3.7

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic f<sub>h</sub>E<sub>s</sub>      TABLE 49      Latitude 10°2'N  
 Unit Mc      Ionospheric Data      Longituded . 77°5'E  
 Month November 1961      75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
3.8	3.6	3.5	3.0	2.8								1
3.7	3.6	3.5	3.1	2.7								2
3.7	3.6	3.3	3.5	4.4	3.0							3
3.8	3.7	3.4	3.0	2.6	G							4
3.7	3.5	3.4	3.2	3.0	2.7							5
3.8	3.5	3.4	G	2.6								6
3.8	3.6	3.3	G	2.6								7
3.6	3.6	4.4	4.0	2.8					2.2	2.3		8
3.7	3.6	3.4	3.2	2.8							2.4	9
3.6	3.6	3.4	3.1	2.8				1.8	2.0		2.1	10
3.8	3.7	3.6	3.0	2.7								11
3.9	3.7	3.4	3.2	2.7								12
3.8	3.6	3.4	3.1	2.6								13
3.7	3.7	3.4	3.1	2.7	G	1.9				1.7		14
3.8	3.6	3.3	3.1	2.7	G							15
3.8	3.6	3.4	3.2	2.8	2.2				1.9	1.8	2.5	16
3.6	G	G	3.2	3.2								17
3.7	3.4	3.3	3.0	2.5								18
3.5	4.2	G	C	2.8								19
3.4	3.5	3.2	3.0	2.6	2.2	2.2						20
3.5	3.5	3.4	3.1	2.6	2.2		1.5					21
3.6	3.5	3.4	3.4	3.3	2.0	2.3			2.2		2.4	22
3.6	3.6	3.6	3.0	2.6	1.8				1.9			23
3.5	3.5	4.9	3.1	2.6					1.5	1.4		24
3.6	3.5	3.3	C	2.6	G					2.0		25
3.6	3.5	3.6	G	2.8	2.0	2.1						26
3.7	3.5	3.5	3.2	2.6	G							27
3.7	3.6	6.4	5.3	G	2.1							28
3.6	3.5	3.4	3.1	2.4	2.0							29
3.7	3.6	3.4	3.1	C	C							30
3.0	3.0	3.0	2.8	2.9	1.5	4	1	1	6	5	4	Count
3.7	3.6	3.4	3.1	2.7	2.0				2.0	1.8		Median
3.7	3.6	3.6	3.3	2.8	2.2				2.0	1.8		Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds



Characteristic fbEs  
Unit . Mc  
Month November 1961

TABLE 49 (Cont'd)  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N  
Longitude 77°5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1		2 0					G	2 8	3 4	3 5	3 7	3 8
2							G	2 9	3 2	3 7	3 6	3 7
3								G	3 3	3 6	C	3 8
4							G	2 9	3 2	3 5	3 6	3 8
5								G	G	3 4	3 6	3 7
6								2 9	3 3	3 6	3 7	3 8
7								2 8	3 2	3 5	C	3 8
8							G	G	3 2	3 4	3 8	3 7
9							G	2 8	3 2	3 5	3 6	3 8
10								2 9	3 3	3 6	3 8	3 8
11							2 3	2 9	3 3	3 7	3 8	3 8
12	2 0						G	2 9	3 2	3 5	3 8	3 8
13							G	G	3 2	3 5	3 7	3 7
14	1 7						G	2 8	3 2	3 4	3 6	3 8
15		2 4	1 7	2 4	2 5	2 3	G	2 8	3 2	3 5	3 6	3 6
16							2 1	2 7	3 2	3 4	3 5	3 8
17	1 8				1 2		2 2	2 6	3 1	3 4	3 5	3 6
18							2 1	2 7	3 0	4 4	3 6	3 6
19							2 1	2 7	3 1	3 4	3 4	3 5
20							2 1	2 7	3 0	C	3 5	3 6
21	1 8		1 7				2 0	2 7	3 0	3 3	3 6	3 6
22							2 1	2 6	3 1	3 4	3 5	3 7
23							2 1	2 7	3 1	3 4	3 6	3 6
24							1 9	2 7	3 0	3 4	3 6	3 6
25							2 1	2 8	3 1	3 3	3 6	3 6
26							G	2 8	3 1	3 3	3 6	3 6
27	1 4	1 8					2 3	2 8	3 2	3 5	3 5	3 6
28							2 0	2 7	3 1	3 3	3 5	3 6
29		2 3	1 8				2 1	2 7	3 1	3 4	3 5	3 6
30							2 0	2 7	3 1	3 5	3 5	3 7
Count	5	4	3	1	2	1	25	30	30	29	28	30
Median	1 8						2 1	2 7	3 2	3 5	3 6	3 7
Mean	1 7						2 3	2 8	3 2	3 5	3 6	3 7

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fbEs  
 Unit Mc  
 Month November 1961

TABLE 49 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude · 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
3 8	3 5	3 3	3 1									1
3 6	3 5	3 2	2 9	2 5								2
3 7	3 4	3 4	3 7	3 8							1 8	3
3 7	3 5	3 3	2 8	G								4
3 8	3 5	3 2	2 9	2 5	2 4							5
3 6	3 4	G	2 9				2 0					6
3 7	3 5	G	G	2 1								7
3 6	4 4	4 7	2 8					2 6	2 3			8
3 7	3 4	3 3	3 0	2 6					2 2			9
3 6	3 5	3 2	3 0					1 6		1 5	2 8	10
3 9	3 6	3 4	3 0					1 4			1 5	11
3 8	3 6	3 4	2 9	G								12
3 8	3 5	3 2	2 9	2 4					1 8			13
3 7	3 5	3 3	2 9	2 4	2 0				2 0	2 0		14
3 6	3 8	3 3	2 8	2 3								15
3 6	3 4	3 2	3 0	2 5	2 3					2 1	2 4	16
G	G	G	3 0	2 4								17
3 6	3 4	3 2	2 8	2 3	2 0							18
3 7	3 6	3 4	3 3	2 7								19
3 7	3 4	3 1	2 8	2 4						1 8		20
3 4	3 4	3 1	2 9	2 3								21
3 6	3 5	3 7	3 9	2 8	1 7					2 1	1 6	22
3 6	3 5	3 2	2 9	2 3						2 1		23
3 7	3 4	4 3	2 9	G					1 6	2 3		24
3 5	3 5	C	2 9	2 1								25
3 6	3 5	3 2	G	2 4	1 9	2 1					1 8	26
3 7	3 5	3 3	2 9	G								27
3 5	3 5	6 2	G	2 5	1 8			1 5				28
3 6	3 4	3 3	2 9	2 4								29
3 7	3 5	3 5	2 9	C	1 7							30
30	30	29	30	21	8	1		4	4	9	6	Count
3 6	3 5	3 3	2 9	2 4	2 0					2 1	2 1	Median
3 5	3 4	3 5	3 0	2 5	2 0					2 0	2 0	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fmin  
 Unit Mc  
 Month November 1961

TABLE 50  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	2 0	1 7	1 4	1 7	1 6	1 9	1 9	1 9	2 2	2 5	2 6	2 6
2	1 5	1 6	1 4	1 3	1 1	1 3	1 9	2 0	2 4	2 5	2 4	2 6
3	1 8	2 0	1 3	1 5	1 9	1 3	2 0	2 7	2 4	2 8	2 3	2 6
4	2 1	1 4	1 6	1 2	1 1	1 4	1 8	2 0	2 2	2 5	2 5	2 6
5	1 6	2 0	1 4	1 4	1 2	1 2	1 9	1 8	2 4	2 3	2 4	2 5
6	1 6	1 7	1 7	1 5	1 9	R	1 8	1 7	2 1	2 5	2 5	2 6
7	1 5	1 4	1 3	1 3	1 3	1 3	1 8	2 1	2 1	2 2	2 4	2 6
8	1 7	1 7	1 7	1 7	1 1	1 6	2 2	1 8	2 2	2 5	2 6	2 6
9	1 4	1 7	1 7	1 6	1 4	1 4	1 9	1 5	1 9	2 2	2 3	2 5
10	1 6	1 6	1 4	1 6	1 9	1 6	1 8	1 6	1 9	2 3	2 1	2 6
11	1 6	1 8	1 5	1 6	1 2	1 4	2 1	1 9	2 2	3 8	2 4	2 6
12	1 4	1 5	1 6	1 1	1 4	1 9	1 8	2 0	2 2	2 1	2 3	2 6
13	1 7	1 4	1 7	1 5	1 3	1 4	1 7	1 9	2 2	2 4	2 3	2 5
14	1 5	1 5	1 4	1 8	1 4	1 3	1 8	1 6	2 2	2 4	2 3	2 6
15	1 9	1 9	1 9	1 2	1 2	1 2	2 2	1 9	2 0	2 6	2 5	2 5
16	1 3	1 5	1 4	1 4	1 3	1 1	1 6	1 4	1 7	2 4	2 2	2 4
17	1 3	1 6	1 4	1 3	1 2	1 0	1 2	1 4	1 6	2 2	2 5	2 4
18	2 0	1 5	1 3	1 6	1 5	1 0	1 2	1 4	1 6	1 2	2 3	2 2
19	1 4	1 5	1 5	1 5	1 1	1 1	1 6	1 3	1 7	1 9	2 2	2 4
20	1 6	1 4	1 5	1 6	1 3	1 3	1 6	1 4	1 6	C	2 0	2 0
21	1 5	1 4	1 5	1 7	1 1	1 9	1 5	1 3	1 5	2 0	2 2	2 2
22	1 6	1 7	1 3	1 2	1 0	1 1	1 3	1 4	2 0	2 0	2 2	2 7
23	1 4	1 9	1 3	1 1	1 0	1 1	1 1	1 3	1 6	2 1	2 6	2 5
24	1 8	1 5	1 9	1 1	1 0	1 2	1 4	1 3	1 7	2 2	2 1	2 4
25	1 5	1 3	1 5	1 2	1 1	1 1	1 6	1 3	1 5	2 0	C	2 4
26	1 7	1 6	1 4	1 2	F <sub>2</sub>	1 1	1 4	1 4	1 7	2 0	2 2	2 2
27	1 5	1 2	1 2	1 0	1 2	1 3	1 1	1 5	1 8	2 0	2 3	2 4
28	1 4	1 4	1 7	1 2	1 2	1 3	1 7	1 6	1 9	2 1	2 4	2 3
29	1 4	1 3	1 3	1 2	1 1	1 1	1 4	1 4	1 7	2 0	2 2	2 3
30	1 7	1 4	1 6	1 2	1 2	1 4	1 4	1 4	1 9	2 1	2 2	2 5
Count	30	30	30	30	30	29	30	30	30	29	29	30
Median	1 6	1 5	1 4	1 4	1 2	1 3	1 7	1 6	1 9	2 2	2 3	2 5
Mean	1 6	1 6	1 5	1 4	1 2	1 3	1 7	1 6	1 9	2 3	2 3	2 5

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic f <sub>min</sub>		TABLE 50										Latitude	10 2°N
Unit	Mc	Ionospheric Data										Longituded	77 5°E
Month	November 1961	75°E Mean Time											
	12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 8	2 7	2 6	3 0	2 8	2 0	2 0	1 6	1 4	1 5	1 6	1 9	1	
2 5	2 4	2 2	2 0	2 2	2 3	2 5	2 0	1 5	1 4	1 6	1 8	2	
2 5	2 3	2 3	1 8	2 0	2 2	2 9	2 0	1 9	1 8	1 5	1 7	3	
2 7	2 4	2 3	2 2	1 8	1 7	1 7	1 7	1 5	1 5	1 6	1 7	4	
2 5	2 4	2 2	2 1	2 0	1 6	2 0	1 8	1 7	1 8	1 6	2 0	5	
2 6	2 6	2 2	2 4	2 0	2 1	2 1	1 8	1 5	2 2	1 9	1 7	6	
2 6	2 4	2 3	2 2	2 0	2 0	1 6	1 5	1 4	1 6	1 7	1 4	7	
2 6	2 7	2 4	2 3	2 0	2 0	1 9	1 6	1 5	1 4	1 2	1 6	8	
2 3	2 4	2 6	2 1	1 8	2 1	1 8	2 1	2 0	1 9	2 0	1 6	9	
2 5	2 5	2 5	2 3	2 0	2 4	2 0	2 1	1 5	1 3	1 4	1 1	10	
2 7	2 7	2 5	2 2	2 1	2 0	1 4	1 4	1 6	1 4	1 6	1 3	11	
2 6	2 5	2 3	2 2	1 9	2 0	1 8	1 8	1 5	1 7	1 5	2 0	12	
2 6	2 5	2 3	2 2	1 9	2 0	1 4	1 6	1 7	1 8	2 1	1 7	13	
2 5	2 4	2 2	2 2	2 0	1 7	1 4	2 1	1 6	1 5	1 7	1 4	14	
2 5	2 4	2 2	2 1	1 8	1 7	1 3	1 5	2 0	2 0	1 4	1 2	15	
2 6	2 2	2 0	2 0	1 8	1 3	2 0	1 7	1 7 <sup>II</sup>	1 6	1 4	1 7	16	
2 6	2 7	2 4	2 0	1 6	2 0	1 4	1 3	1 6	1 5	1 6	1 6	17	
2 5	2 5	2 2	2 1	1 8	2 0	1 7	2 0	2 0	1 7	1 8	1 4	18	
2 4	2 5	2 4	C	2 0	2 0	1 6	2 0	1 6	1 9	2 3	1 8	19	
2 2	2 1	2 0	2 0	1 7	2 0	1 2	2 0	2 0	2 2	2 0	1 6	20	
2 4	2 3	2 0	2 0	1 8	1 5	1 3	E	1 3	1 8	1 9	1 5	21	
2 2	2 2	2 1	1 6	1 6	1 6	1 9	1 9	2 8	2 1	1 7	1 4	22	
2 4	2 3	2 2	1 9	1 9	1 4	1 9	1 4	1 8	1 6	2 1	1 7	23	
2 4	2 3	2 2	2 3	1 8	2 0	1 5	1 7	1 4	1 3	1 4	1 6	24	
2 3	2 1	2 1	C	1 7	1 4	1 3	1 6	1 3	1 5	1 6	2 0	25	
2 5	2 4	2 1	2 1	1 8	1 5	1 2	2 0	1 9	2 3	1 4	1 6	26	
2 3	2 3	2 3	2 0	1 7	1 6	1 3	1 4	1 5	1 3	1 9	1 8	27	
2 4	2 2	2 1	1 9	2 0	1 7	1 4	1 4	1 5	1 6	1 6	1 7	28	
2 3	2 4	2 3	2 2	1 8	1 6	1 3	1 4	1 3	1 3	1 3	1 7	29	
2 5	2 4	2 0	2 3	C	C	1 5	1 4	1 8	1 9	1 4	1 5	30	
30	30	30	28	29	29	30	30	30	30	30	30	Count	
2 5	2 4	2 2	2 1	1 8	2 0	1 6	1 7	1 6	1 6	1 6	1 6	Median	
2 5	2 4	2 3	2 1	1 9	1 8	1 7	1 7	1 7	1 7	1 7	1 6	Mean	

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic  $f_{min}$   
 Unit Mc  
 Month November 1961

TABLE 50 (Contd.)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	16	20	14	15	15	14	18	20	23	24	26	27
2	13	14	13	12	13	15	19	22	25	27	25	25
3	18	17	16	16	13	14	24	21	24	25	C	24
4	19	18	14	13	13	14	18	19	25	25	26	26
5	15	16	15	14	15	12	22	12	25	24	26	25
6	14	14	14	17	12	14	22	20	22	23	24	27
7	15	13	13	13	12	14	21	22	22	23	C	25
8	17	17	16	14	13	14	17	20	24	24	26	26
9	17	15	19	16	14	13	15	17	21	22	24	22
10	18	17	13	17	14	14	20	16	21	22	24	25
11	18	15	15	14	15	13	16	21	25	26	26	24
12	14	17	18	14	13	14	19	22	23	23	24	26
13	22	19	14	14	12	13	16	21	23	23	25	26
14	16	15	18	16	12	14	19	19	22	23	24	23
15	13	14	11	18	11	23	19	20	23	23	25	25
16	17	15	14	15	11	13	15	17	19	22	22	30
17	14	16	15	18	10	14	13	15	19	22	26	24
18	14	17	14	13	E	14	12	14	17	22	23	24
19	16	12	14	15	10	12	13	18	18	20	24	26
20	18	16	15	13	11	13	13	16	19	C	20	22
21	15	15	13	15	14	11	12	15	17	22	21	24
22	16	16	11	13	12	11	14	17	19	23	22	23
23	13	14	15	E	11	11	13	14	17	21	23	25
24	18	13	12	10	11	10	14	14	17	17	24	23
25	13	13	16	12	11	12	12	15	C	21	25	24
26	18	14	16	11	13	21	16	17	20	21	23	21
27	14	E	14	11	12	14	14	17	21	21	23	23
28	12	13	13	12	12	14	15	15	18	22	25	23
29	17	14	17	14	11	13	14	16	19	22	23	23
30	15	16	15	11	13	12	13	17	19	23	23	24
Count	30	30	30	30	30	30	30	30	29	29	28	30
Median	16	15	14	14	12	14	16	17	21	23	24	24
Mean	16	15	15	14	12	14	16	18	21	23	24	24

Sweep 10 Mc to 25.0 Mc in 27 seconds

Characteristic fmin  
 Unit Mc  
 Month November 1961

TABLE 50 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude , 10 2°E  
 Longitude , 77 5°N

1230	1330	1430	1530	1630	1730	1830	1930	2000	2130	2230	2330	Hour/Date
2 8	2 6	2 4	2 3	2 6	1 8	1 5	1 5	1 7	1 7	1 8	1 3	1
2 4	2 3	2 2	2 0	2 2	2 1	2 3	1 5	1 5	2 1	1 8	1 5	2
2 5	2 3	2 5	2 1	2 0	2 5	2 1	2 0	2 3	1 6	1 4	1 6	3
2 5	2 3	2 3	2 0	1 8	1 6	1 4	1 7	1 5	1 6	1 8	1 8	4
2 6	2 3	2 4	2 4	1 8	1 5	1 5	1 8	2 0	2 1	1 5	1 6	5
2 4	2 4	2 3	2 3	2 4	1 8	2 0	1 7	1 6	1 8	1 7	1 8	6
2 7	2 4	2 3	2 0	2 0	1 6	1 3	1 4	1 5	1 9	1 7	1 9	7
2 6	2 4	2 4	2 2	2 3	1 5	1 4	1 4	1 6	1 5	1 9	1 8	8
2 3	2 2	2 4	2 0	2 0	2 0	1 8	2 1	1 8	2 0	1 7	1 6	9
2 5	2 5	2 3	2 2	2 5	2 0	2 2	2 3	1 3	1 5	1 2	1 6	10
2 8	2 4	2 6	2 4	2 4	1 6	1 3	1 4	1 1	1 5	1 3	1 5	11
2 7	2 3	2 4	2 2	1 7	1 6	1 5	1 4	1 5	1 5	1 6	1 8	12
2 5	2 4	2 3	1 9	1 8	1 7	1 5	1 5	1 7	1 2	1 8	1 4	13
2 4	2 3	2 3	2 2	2 0	1 7	1 9	1 7	1 9	1 4	1 8	1 7	14
2 4	2 3	2 3	2 1	1 8	1 5	1 4	1 6	2 0	1 7	1 4	1 4	15
2 2	2 1	2 1	1 8	1 4	1 4	1 7	2 1	2 1	1 6	1 6	1 6	16
2 6	2 5	2 4	1 9	1 7	1 4	1 5	1 5	1 7	1 7	1 5	1 6	17
2 3	2 2	2 1	1 8	1 7	1 3	1 6	1 7	2 0	1 8	2 0	1 7	18
2 9	2 3	2 5	2 4	1 8	1 4	1 6	2 0	1 6	1 9	1 6	1 4	19
2 2	2 1	2 2	1 7	1 8	1 7	2 0	1 8	2 2	2 0	1 6	1 4	20
2 3	2 2	2 0	1 9	1 6	1 4	1 4	1 5	1 8	2 0	1 5	1 9	21
2 2	2 2	1 9	1 6	1 5	1 5	1 9	2 2	2 1	1 8	1 9	1 2	22
2 4	2 3	1 9	1 9	1 6	1 5	1 4	1 4	1 6	1 9	1 8	1 4	23
2 5	2 4	2 1	2 4	1 7	1 6	1 4	1 6	1 3	1 2	1 6	1 7	24
2 4	2 2	C	1 8	1 5	1 4	1 3	1 4	1 3	1 9	1 9	2 0	25
2 4	2 3	2 0	1 9	1 6	1 1	1 2	1 9	1 4	1 3	1 6	1 4	26
2 3	2 2	2 3	2 0	1 7	1 4	1 3	1 4	1 4	1 6	1 7	1 8	27
2 3	2 3	2 1	2 2	1 7	1 3	1 6	2 0	1 5	1 7	1 9	1 7	28
2 4	2 4	2 2	1 9	1 6	1 4	1 4	1 4	1 5	1 3	1 4	1 4	29
2 4	2 3	2 2	2 0	C	1 5	1 4	1 6	1 6	1 8	1 6	1 7	30
30	30	29	30	29	30	30	30	30	30	30	30	Count
2 4	2 3	2 3	2 0	1 8	1 5	1 5	1 6	1 6	1 7	1 6	1 6	Median
2 5	2 3	2 3	2 0	1 9	1 6	1 6	1 7	1 7	1 7	1 7	1 6	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic : h'F2  
 Unit : Mc  
 Month : November 1961

TABLE 51  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10°2'N  
 Longitude 77°5'E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11	
1								L	300	L	L	L	
2								L	L	300	L	L	
3								L	L	280	320	L	
4								L	L	L	L	340	
5								L	L	L	L <sub>H</sub>	L <sub>H</sub>	
6								L	L	L	L	330	
7							L	L	L	L	L	L	
8							L	L	L	L	L	L	
9							L	L	L	L	L	L	
10							L	L	L	L	L	L	
11								L	L	L	L	325	
12								L	280	L	L	340	
13								L	L	L	L	L	
14								L	L	300	L	L	
15								L	L	280	L	L	
16							L	L	L	L	300	315	
17							L	L	L	L	300	310	
18							L	L	L	L	L	L	
19							L	L	L	L	L	300	
20							L	L	L	L	L	L	
21							L	L	L	L	L	L	
22							L	L	L	L	L	L	
23							L	L	L	285	L	L	
24							L	L	L	L	325	320	
25							L	L	L	L	340	L	
26								L	L	L	L	L	
27								L	L	L	L	L	
28								L	L	L	L	L	
29								L	L	L	L	L	
30								L	L	L	L	L	
Count										2	5	5	8
Median											285	320	320
Mean											290	315	320

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'F2  
 Unit Mc  
 Month November 1961

TABLE 51  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
L	325	L	L	L								1
L	L	L	L	L								2
L	L	305	L	L								3
L	L	L	L	L								4
L	310	L	L	L								5
L	L	L	L	L	L							6
L	L	L	L	L	L	L						7
L	A	A	A	A	L <sub>R</sub>	L						8
L	L	300	L	L	L	L						9
310	320	L	L	L	L	L						10
L	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
300	305	L	L	L	L	L						16
310	300	285	L	L	L	L	L					17
300	295	300	L	L	L	L						18
300	L	L	C	L	L	L						19
330	310	300	L	L	L	L						20
L	L	L	L	L	L	L						21
L	L	L	A	A	L	L						22
L	L	L	L	L	L	L						23
310	325	L	L	L	L	L						24
L	L	L	C	L	L	L						25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	A	L	L	L	L						28
L	L	L	L	L	L	L						29
L	L	L	L	C	C	L						30
7	8	5										Count
310	310	300										Median
310	310	300										Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic h'F2  
Unit Mc  
Month November 1961

TABLE 51 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N  
Longitude 77°5'E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	L	L	L	L
2								L	L	L	L	L
3								260	L	L	C	320
4								L	L	L	L	L
5								L	L	300 <sub>H</sub>	L <sub>H</sub>	L
6							L	L	L	L	L	L
7							L	L	L	L	C	L
8							L	L	L	L	L	L
9						L	L	L	L	L	L	L
10						L	L	L	L	L	L	915
11							L	L	L	L	L	L
12							L	L	L	L	L	L
13							L	L	L	L	L	L
14							L	L	L	L	310	L
15							L	L	280	305	L	L
16							L	L	L	295	310	920
17						L	L	L	L	L	300	310 <sub>H</sub>
18						L	L	L	L	L	L	L
19						L	L	L	L	L	L	L
20						L	L	L	L	C	L	300
21							L	L	L	L	310	L
22							L	L	L	L	L	L
23							L	L	L	280	L	L
24							L	L	900	315	340	335
25							L	L	L	L	L	L
26							L	L	L	L	L	L
27							L	L	L	L	L	L
28							L	L	L	L	L	L
29							L	L	L	L	L	L
30							L	L	L	L	L	L
Count								1	2	6	5	6
Median										300	310	320
Mean										300	315	315

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'F2  
 Unit Mc  
 Month November 1961

TABLE 51 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10.2°N  
 Longitude . 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
340	300	300	L									1
L	L	L	L	L								2
320	305	300	L	L								3
320	L	L	L	L								4
320	L	L	L	L								5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	A	A	L	L	L							8
L	L	L	L	L	L							9
L	L	L	L	L	L							10
320	L	L	L	L	L							11
L	L	L	L	L	L							12
L	L	L	L	L	L							13
L	L	L	L	L	L							14
L	L	L	L	L	L							15
310	300	L	L	L	L							16
300	300	280	L	L	L							17
300	300	L	L	L	L							18
L	300	L	L	L	L							19
320	320	L	L	L	L							20
L	L	L	L	L	L							21
L	L	A	A	L	L							22
L	L	L	L	L	L							23
L	L	L	280	L	L							24
L	L	G	L	L	L							25
L	L	L	L	L	L							26
L	L	L	L	L	L							27
L	L	A	L	L	L							28
L	L	L	L	L	L							29
L	L	L	L	L	C							30
9	7	9	1		.							Count
320	300				..							Median
315	300				..							Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic . h'F  
Unit . Km  
Month : November 1961

TABLE 52  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude : 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	250	235	230	215	215	220	240	225	200	200 <sub>H</sub>	195	180 <sub>H</sub>
2	200	240	240	230	240	230	255	230	210	200	200	200
3	220	225	215	230	235	240	240	230	220	205	200	200
4	240	240	225	220	215	225	245	225	210	205	205	200
5	230	225	220	220	220	245	240	230	220	205	200	200 <sub>H</sub>
6	225	230	230	240	250	R	255	235	215	220	200	195
7	220	220	220	235	235	240	250	230	215	200	195	200
8	240	240	230	250	<del>210</del>	<del>240</del>	265	230	200	205	195	210
9	250	230	210	210	235	230	245	220	200	195	190	180 <sub>H</sub>
10	240	235	220	230	225	240	240	220	205	200	200	200
11	240	230	225	220	225	245	250	210 <sub>H</sub>	200 <sub>H</sub>	200 <sub>H</sub>	180 <sub>H</sub>	180 <sub>H</sub>
12	220	220	220	220	240	260	250	225	215	200 <sub>H</sub>	200	195
13	220	230	220	230	230	235	250	235	220	210	200	200
14	230	240	225	220	220	225	245	225	215	210	200	200
15	220	245	260	F	275	255	250	230	215	210	195	195
16	220	230	220	220	225	230	250	220	210	210	200	200
17	215	220	215	220	220	220	250	220	215	200	200	200
18	215	210	220	215	245	R	240	220	225	215	A	210
19	220	255	250	240	230	240	250	225	230	220	220	200
20	240	240	230	225	220	240	255	225	220	C	200	195
21	240	235	240	240	255	230	260	230	220	200	195	200
22	260	240	220	210	215	230	240	230	220	180 <sub>H</sub>	200	195
23	250	230	220	225	210	240	245	225	210	200	200	180
24	220	220	210	225	235	260	255	230	200	200	190	200
25	235	230	230	220	225	260	260	240	220	200	200	195
26	240	225	215	230	230	220	250	230	215	190	200	200
27	265	280	270 <sub>F</sub>	240	245 <sub>F</sub>	240	260	230	215	200	190 <sub>H</sub>	200
28	225	220	220	225	240	225	260	240	200 <sub>H</sub>	220	200	200
29	230	235	240	230	230	235	260	240	210	210	195	200
30	225	235	235	225	230	260	260	210	210	195 <sub>H</sub>	190 <sub>H</sub>	190
Count	30	30	30	29	30	28	30	30	30	29	29	30
Median	230	230	220	225	230	240	250	230	215	200	200	200
Mean	230	235	230	225	235	245	250	225	215	205	200	195

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic · h'F

Unit · Km

Month · November 1961

TABLE 52  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2' N

Longitude : 77°5' E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
200	200	205	215	215	260	300	320	320	280	240	230	1
200	200	200	210	225	245	300	365	340	300	240	230	2
200	205	210	A	A	260	300	300	300	300	255	250	3
200	200	200	210	220	240	280	320	320	300	240	240	4
200	200	205	210	A	255	295	360	370	260	240	220	5
200	190	200x	215	220	250	280	305	250	245	230	220	6
195	180	200	215	210	260	315	320	250	220	225	230	7
200	A	A	A	220x	260	270	260	240	250	265	260	8
200	200	200	200	230	250	270	270	260	240	230	235	9
200	200	205	200	230	255	300	315	320	310	240x	250	10
200	200	200	180x	220	255	300	345	370	310	260	235	11
200	200	200	210	230	255	300	300	255	240	230	230	12
200	200	205	210	225	255	315	360	350	315	300	245	13
200	200x	200	200	230	250	300	350x	340	280	245	220	14
195	185	180x	200x	235	250	290	340	F	u245x	260	230	15
200	200	185	200	230	245	280	300	260x	235	230	220	16
200	200	200	200	255	250	300	300	340	350	260	220	17
200	200	200	205	220	255	320	340	260	240	240	220	18
200	240A	200	G	230	250	270	260	270	220	225	235	19
180	200	200	200	210	250	300	300	260	225	230	240	20
200	200	200	215	235	255	270	300	310	300	275x	270	21
190	200	200	A	A	240	275	280	295	270	250	270	22
185	180	215	215	230	240	290	360x	260x	235x	230	225	23
200	195	A	210	220	255	280	F	275x	245	220x	240	24
185x	185	180x	G	210	250	275	290	270	220	220	230	25
195	190x	200	205	225	250	270	300	300	280	290	255	26
195	200	200	215	220	255	270	270	250	230	225	225	27
200	200	A	A	225	255	260	290	260	240	245	230	28
195	190	200	205	225	250	275	280	260	240	230	230	29
185	185x	200	205	C	C	295	330	315	280	230	230	30
30	29	27	24	26	29	30	29	29	30	30	30	Count
200	200	200	210	225	250	290	300	275	250	240	230	Median
195	195	200	205	225	250	290	310	290	265	245	235	Mean

Sweep 1.0 Mc to 25.0 Mc. in 27 seconds.

Characteristic h'F  
Unit · Km  
Month : November 1961

TABLE 52 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2° N  
Longitude 77 5° E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	240	240	220	215	220	240	235	220	200H	195H	195	200
2	220	240	230	240	240	240	235	220	200	200	200	200
3	220	220	220	235	235	245	240	220	220	200	C	200H
4	240	240	220	220	220	240	235	220	210	200	200	200
5	220	220	215	225	220	260	235	225	215	200	200H	200
6	230	230	230	250	260	275	220	220	210	220	200	200
7	220	230	230	240	235	250	235	220	205	200	C	200
8	240	240	240	280	335	320	250	220H	205	200	220	200
9	240	220	220	220	235	240	230	205	200	185	195	180H
10	240	230	225	230	230	245	230	220	200	200	200	200
11	240	225	215	225	240	255	240	210H	200H	195H	205	200
12	220	220	220	230	245	265	235	225	210	200	200	200
13	230	230	230	230	240	250	240	220	215	210	200	195
14	235	240	220	220	225	255	235	220	205	200	200H	200
15	235	260	260	F	280	250	235	215	210	200	195	185
16	220	220	220	220	225	240	235	220	200	200	195	200
17	215	220	215	220	270	300	240	220	200	200	200	195
18	210	220	215	230	E	280	240	220	220	A	215	200
19	225	250	250	220	235	275	240	230	220	220	215	200
20	240	230	230	220	220	260	240	220	200	C	200	190
21	240	240	235	260	255	275	240	220	210	200	205	200
22	250	230	215	220	220	250	240	200H	210	200	195	190
23	240	220	230	210	220	260	240	220	205	200	185	180H
24	220	220	210	240	235	270	240	220	210	200	200	200
25	230	225	225	220	240	245	250	230	205	195	195	190
26	230	225	225	220	220	245	240	220	195	190	200	200
27	280	v270F	F	245	230	245	240	220	215	200	185H	200
28	220	225	215	240	240	260	220H	210	210	200	200	200
29	235	245	230	225	225	255	240	225H	200	200	195	200
30	220	240	220	240	225	250	220	220	205	195	190H	190
Count	30	30	29	29	30	30	30	30	30	28	28	30
Median	230	230	220	225	235	250	240	220	205	200	200	200
Mean	230	230	225	230	235	260	235	220	205	200	200	195

Sweep 1.0 Mc. to 25.0 Mc in 27 seconds

Characteristic : h'F  
Unit : Km  
Month : November 1961

TABLE 52 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77°5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
200	200	210	215	230	270	310	320	305	250	290	220	1
200	200	200	210	240	260	345	380	320	280	235	220	2
200	205	210	A	A	260	305	300	300	275	240	250	3
200	200	210	215	240	260	315	315	300	260	240	235	4
210	200	205	220	240	260	335	F	280	260	220	220	5
200	190 <sub>H</sub>	210	220	240	260	300	280	250	220	225	220	6
180	200	200	215	245	275	320	280	235	230	220	235	7
200	A	A	200 <sub>H</sub>	240	265	270	240	240	260	270	260	8
200	200	205	225	240	260	275	265	250	235	235	230	9
200	200	200	210	240	270	320	335	310	280	240	255	10
200	205	200	220	240	270	335	350	345	275	250	225	11
200 <sub>H</sub>	200 <sub>H</sub>	200	215	240	270	310	270	240	230	235	225	12
200	205	205	215	240	270	360	350	360 <sub>F</sub>	310	260	235	13
200	195 <sub>H</sub>	200	220	245	265	340	350	310	270	240	220	14
180	225	200 <sub>H</sub>	200 <sub>H</sub>	235	260	315	345	F	U250 <sub>F</sub>	235	220	15
200	190	200	200	240	250	300	F	240	240	230	215	16
205	200	200	210	240	260	300	330	380	320	230	220	17
200	200	205	200	235	270	340	300	250	240	240	215	18
200	220	220	230	250	260	270	250	220	220	230	235	19
200	200	200	200	240	270	315	300	240	220	230	240	20
200	200	210	220	240	260	290	300	300	300	265	270	21
200	200	A	A	240	255	280	285	280	255	260	260	22
180	180	195	200 <sub>H</sub>	240	260	335	320 <sub>F</sub>	F	240	235	220	23
200	200	A	215	235	260	305	F	265	240	240	235	24
190	190	C	220	240	260	290	U295 <sub>F</sub>	250	220	220	240	25
195	190 <sub>H</sub>	205	220	240	260	290	305	295	280	260	265	26
190	190	205	220	235	260	275	265	235	230	230	225	27
195	200	A	215	235	260	280	270	245	235	230	235	28
195	200	200 <sub>H</sub>	215	245	260	280	280	260	240	235	225	29
185	190	200	210	C	275	320	320	300	255	230	225	30
30	29	25	28	28	30	30	27	28	30	30	30	Count
200	200	200	215	240	265	310	300	270	250	235	230	Median
195	200	205	215	240	265	310	305	280	255	240	235	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic . h'E  
Unit : Km  
Month : November 1961

TABLE 53  
Ionospheric Data  
75°E Mean Time

Latitude · 10·2° N  
Longitude · 77 5° E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								115	A	A	A	A
2								115	A	A	A	A
3									110	A	A	A
4								115	A	A	A	A
5								115	115	A	A	A
6								A	A	A	A	A
7								100	100	A	A	A
8								105	100	A	A	A
9								A	A	A	A	A
10								100	A	A	A	A
11								115	A	B	A	A
12								115	110	A	A	A
13								115	110	A	A	A
14								110	A	A	A	A
15								A	A	A	A	A
16						190		A	A	A	A	A
17							A	A	A	A	A	A
18							130	A	A	A	A	A
19								A	A	A	A	A
20								A	A	C	A	A
21								A	A	A	A	A
22								100	A	A	A	A
23								140	105	A	A	A
24								A	A	A	A	A
25								.	A	A	A	A
26								140	110	A	A	A
27								130	A	A	A	A
28								A	A	A	A	A
29								A	A	A	A	A
30								120	A	A	A	A
Count						1	6	13	6			
Median							130	115	110			
Mean							125	110	110			

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic , h'E  
 Unit . Km  
 Month : November 1961

TABLE 53  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10·2° N  
 Longitude . 77 5° E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	A	A	B								1
A	A	A	A	A	A							2
A	A	A	A	A	A							3
A	A	A	A	105	120							4
A	A	A	A	A	A							5
A	A	A	110	A								6
A	A	A	100	A								7
A	A	A	A	A								8
A	A	A	A	A								9
A	A	A	A	A								10
A	A	A	110	110								11
A	A	A	110	110								12
A	A	A	A	A								13
A	A	A	A	110	120							14
A	A	A	A	110	140							15
A	A	A	A	A	A							16
A	115	110	A	A	A							17
A	A	A	A	A	A							18
A	110	105	C	A	A							19
A	A	A	A	A	A							20
A	A	A	A	A	A							21
A	A	A	A	A	A							22
A	A	A	A	110	120							23
A	A	A	A	110								24
A	A	A	C	A	120							25
A	A	A	105	A	A							26
A	A	A	A	A	125							27
A	A	A	A	A	115							28
A	A	A	A	A	A							29
A	A	A	A	C	C							30
	2	2	5	8	6							Count
..		-	110	110	120							Median
..			105	110	125							Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic h'E  
Unit Km  
Month · November 1961

TABLE 53 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude . 10 °5E  
Longitude 77 2°N

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							120	110	A	A	A	A
2							120	110	A	A	A	A
3								110	105	A	C	A
4							120	110	A	A	A	A
5								110	115	A	A	A
6								A	A	A	A	A
7								100	A	A	C	A
8							100	105	A	A	A	A
9							115	A	A	A	A	A
10								100	A	A	A	A
11							115	A	A	A	A	A
12							125	115	A	A	A	A
13							120	115	A	A	A	A
14							125	110	A	A	A	A
15							130	A	A	A	A	A
16							A	A	A	A	A	A
17							A	A	A	A	A	A
18							A	A	A	A	A	A
19							A	A	A	A	A	A
20							A	A	A	C	A	A
21							100	A	A	A	A	A
22							100	A	A <sup>1</sup>	A	A	A
23							110	A	A	A	A	A
24							A	A	A	A	A	A
25							A	A	A	A	A	A
26							115	110	A	A	A	A
27							120	A	A	A	A	A
28							A	A	A	A	A	A
29							A	A	A	A	A	A
30							A	A	A	A	A	A
Count							15	12	2			
Median							120	110				
Mean							115	110				..

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'E  
Unit Km  
Month November 1961

TABLE 53 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
A	A	110	A									1
A	A	A	A	120								2
A	A	110	A	A								3
A	A	A	A	105								4
A	A	A	A	A								5
A	A	110	A									6
A	A	100	105	A								7
A	A	A	A	A								8
A	A	A	A	A								9
A	A	A	A	A								10
A	A	A	A									11
A	A	A	A	110	120							12
A	A	A	A	A	115							13
A	A	A	A	115	120							14
A	A	A	A	A	120							15
A	A	A	A	A	A	A						16
115	110	110	A	A								17
A	A	A	A	A								18
105	110	110	120	A								19
A	A	A	A	A								20
A	A	A	A	A								21
A	A	A	A	A	A							22
A	A	A	A	A	110							23
A	A	A	A	100	120							24
A	A	C	A	A								25
A	A	A	110	110	A							26
A	A	A	A	115								27
A	A	A	110	A								28
A	A	A	A	A								29
A	A	A	A	C								30
2	2	6	7	10								Count
		110	110	120								Median
		110	110	115								Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'Es  
Unit Km  
Month : November 1961

TABLE 54  
Ionospheric Data  
75°E Mean Time

Latitude 10°2'N  
Longitude 77°5'E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	115	140						120	100	100	100	100
2								G	100	100	100	100
3									100	100	100	100
4								G	100	100	100	100
5								G	G	100	100	100
6								100	100	100	100	100
7								100	100	100	100	100
8								G	100	100	100	100
9								100	100	100	100	100
10								G	100	100	100	100
11	105		105					105	100	100	100	100
12		105						G	100	100	100	100
13							120	G	100	100	100	100
14								G	100	100	100	100
15		105	120	105	105	100		100	100	100	100	100
16							130	100	100	100	100	100
17	105	110				105	100	100	100	100	100	100
18							140	100	100	100	100	100
19								100	100	100	100	100
20								100	100	C	100	100
21			110	100	100			100	100	100	100	100
22							100	100	100	100	100	100
23	110						G	100	100	100	100	100
24							105	110	120	110	110	110
25								100	100	100	100	100
26							G	100	100	100	100	100
27	115		110		110		G	100	100	100	100	100
28								100	100	100	100	100
29		115	110	110				100	100	100	100	100
30							G	100	100	100	100	100
Count	5	5	5	3	3	3	5	21	29	29	30	30
Median	110	110	110					105	100	100	100	100
Mean	110	115	110					115	100	100	100	100

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic h'Es  
Unit Km  
Month - November 1961

TABLE 54  
Ionospheric Data  
75°E Mean Time

Latitude : 10°2'N  
Longitude : 77 5'E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
100	100	100	100	100								1
100	100	100	100	100								2
100	100	100	100	100	100							3
100	100	100	100	100	G							4
100	100	100	100	100	100							5
100	100	100	G	100								6
100	100	100	G	100								7
100	100	100	100	100					105	105		8
100	100	100	100	100							105	9
100	100	100	100	100				120	115		100	10
100	100	100	100	100								11
100	100	100	100	100								12
100	100	100	100	100								13
100	100	100	100	100	G	110			115	110		14
100	100	100	100	100	G						120	15
100	100	100	100	100	100				120	120	130	16
100	G	G	100	100								17
100	100	100	100	100								18
100	120	G	C	115								19
100	100	100	100	100	100	100						20
100	100	100	100	100	110		115				105	21
100	100	100	100	100	100	100			130		105	22
100	100	100	100	100	110				110	120		23
110	110	105	105	120					120	115		24
100	100	100	C	100	G					120		25
100	100	100	G	100	100	100						26
100	100	100	100	100	G							27
100	100	100	100	G	115							28
100	100	100	100	110	100							29
100	100	100	100	C	C							30
30	29	28	25	28	10	4	1	1	7	6	6	Count
100	100	100	100	100	100				115	120	105	Median
100	100	100	100	100	105				115	115	110	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic h'Es  
 Unit . Km  
 Month November 1961

TABLE 54 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	110	105					G	100	100	100	100	100
2							G	100	100	100	100	100
3								G	100	100	C	100
4							G	100	100	100	100	100
5								G	100	100	100	100
6								100	100	100	100	100
7								100	100	100	C	100
8							G	G	100	100	100	100
9							G	100	100	100	100	100
10								100	100	100	100	100
11	110						105	100	100	100	100	100
12							G	100	100	100	100	100
13							G	G	100	100	100	100
14	100						G	100	100	100	100	100
15		105	105	120	100	110	G	100	100	100	100	100
16							100	100	100	100	100	100
17	100				110		100	100	100	100	100	100
18							100	100	100	100	100	100
19							100	100	100	100	100	100
20							100	100	100	C	100	100
21	115		105				100	100	100	100	100	100
22							100	100	100	100	100	100
23							105	100	100	100	100	100
24							110	110	105	105	110	105
25							100	100	100	100	100	100
26							G	100	100	100	100	100
27	110	110					105	100	100	100	100	100
28							100	100	100	100	100	100
29		115	115				100	100	100	100	100	100
30							100	100	100	100	100	100
Count	6	4	3	1	2	1	15	26	29	29	28	90
Median	110						100	100	100	100	100	100
Mean	110						100	100	100	100	100	100

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic h'Es  
 Unit Km  
 Month : November 1961

TABLE 54 (Cont'd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date/Hour
100	100	100	100									1
100	100	100	100	115								2
100	100	100	100	100								3
100	100	100	100	G								4
100	100	100	100	100	100							5
100	100	G	100					105				6
100	100	G	G	120								7
100	100	100	100						105	105		8
100	100	100	100							105	120	9
100	100	100	100							100	105	10
100	100	100	100						120			11
100	100	100	100	G							105	12
100	100	100	100	105					105			13
100	100	100	100	110	110				110	110		14
100	100	100	100	110								15
100	100	100	100	100	100					120	105	16
G	G	G	100	100								17
100	100	100	100	100	100							18
125	125	125	120	120								19
100	100	100	100	100						120		20
100	100	100	100	105								21
100	100	100	100	100	100				135	110	105	22
100	100	100	100	100						115		23
110	110	105	100	G					115	115		24
100	100	C	100	100								25
100	100	100	G	110	100	100					110	26
100	100	100	100	G								27
100	100	100	G	115	105			130				28
100	100	100	100	110								29
100	100	100	100	C	100							30
29	29	26	27	20	8	1		4	5	9	6	Count
100	100	100	100	100	100				110	110	105	Median
100	100	100	100	105	100				115	110	110	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic · (M3000)F<sub>2</sub>  
 Unit ·  
 Month : November 1961

TABLE 55  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	3 30	3 50	3 50	3 50	3 20	3 20	2 90	2 50	2 55	2 60
2	3 30	3 30	3 30	3 40	3 25	3 40	3 25	3 10	2 90	2 55	2 55	2 50
3	3 45	3 50	3 40	3 35	3 30	3 35	3 40	3 35	3 15	2 85	2 50	2 45
4	F	3 25r	3 40	3 40	3 50	3 50	3 35	3 25	3 05	2 65	2 60	2 60
5	3 40	3 40	3 60	3 50	3 50	3 45	3 35	3 40	3 25	3 00	2 60	2 45
6	3 35	3 30	3 50	3 50	3 40	R	3 10	3 10	2 70	2 55	2 50	2 70
7	F	3 40	3 50	3 50	3 45	3 55	3 20	3 15	2 70	2 60	2 70	2 65
8	3 30	3 35	3 40	3 30	3 00	F	3 10	3 00	2 90	2 70	2 55	2 55
9	3 15	3 40	3 50	3 50	3 20	3 40	3 30	3 00	2 60	2 55	2 60	2 60
10	3 20	3 45	3 50	3 40	3 60	3 70	3 20	3 15	2 85	2 50	2 60	2 60
11	3 30	3 35	3 40	3 40	3 50	3 35	3 15	2 95	2 60	2 60	2 60	2 50
12	3 25	3 45	3 45	3 50	3 45	3 55	3 30	3 20	3 05	2 55	2 35	2 45
13	3 25	3 25	3 25	3 30	3 35	3 55	3 25	3 25	2 95	2 60	2 40	2 45
14	3 10	3 25	3 45	3 35	3 40	3 50	3 30	3 30	3 00	2 30r	2 80	2 65
15	3 25	3 20	3 05	3 00	3 00	F	3 20p	3 20	3 10	2 60	2 45	2 50
16	3 20	3 30	3 40	3 40	3 50	3 40	3 40	3 20	2 80	2 70	2 65	2 65
17	3 50	3 50	3 65	3 70	3 55	3 10	3 00	3 00	2 80	2 80	2 75	2 80
18	3 50p	3 55r	3 50	3 10	3 50	R	3 10	3 20	3 00	2 95	2 95	2 80
19	3 35	3 20	3 30	3 40	3 30	3 15	3 00	3 20	2 95	2 75	2 65	2 70
20	3 20	3 35	3 50	3 40	3 50	3 40	3 35	2 95	2 80	C	2 65	2 60
21	3 30	3 35	3 30	3 25	3 20	3 25	3 10	2 90	2 75	2 80	2 70	2 65
22	F	F	F	3 50	3 45	3 50	3 10	3 10p	2 70	2 55	2 65	2 65
23	F	3 15r	3 30	3 40	3 45	3 50	3 10	2 95	2 70	2 60	2 60	2 45
24	3 45	3 40	3 55	3 45	3 40	3 40	3 10	3 10p	2 65	2 75	2 65	2 60
25	3 30	3 40	3 35	3 45	3 35	3 30	3 15	3 05	2 90	2 60	2 60	2 60
26	3 30	3 35	3 45	3 45	3 35	3 50	3 30	3 35	3 05	2 70	2 60	2 65
27	F	F	F	F	F	F	3 15	3 05	2 85	2 65	2 60	2 60
28	3 50	3 45	3 50	3 45	3 35	3 35	3 30	3 05	2 75	2 70	2 70	2 70
29	3 35	3 35	3 35	3 30	3 30	3 50	3 05	3 00	2 85	2 70	2 65	2 70
30	3 45	F	3 30	3 40	3 50	3 45r	3 10	3 05	2 80	2 65	2 55	2 55
Count	24	26	28	29	29	25	30	30	30	29	30	30
Median	3 30	3 35	3 40	3 40	3 40	3 45	3 20	3 10	2 90	2 65	2 60	2 60
Mean	3 30	3 35	3 40	3 40	3 40	3 40	3 20	3 10	2 85	2 65	2 60	2 55

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic (M3000)F<sub>2</sub>      TABLE 55      Latitude 10 2°N  
 Unit      Ionospheric Data      Longitude : 77 5°E  
 Month November 1961      75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 50	2 65	2 55	2 60	2 60	2 50	2 45	2 40	2 60 <sub>F</sub>	F	u3 05 <sub>F</sub>	3 20	1
2 55	2 60	2 50	2 60	2 65	2 75	2 60	2 45	2 40	F	F	3 30	2
2 55	2 55	2 60	2 70	2 65	2 70	2 70	2 65	2 70	F	F	F	3
2 60	2 55	2 55	2 60	2 70	2 75	2 70	2 55	2 60	2 80	F	u3 20 <sub>F</sub>	4
2 55	2 55	2 50	2 65	2 70	2 75	2 70	2 50	F	u2 80 <sub>F</sub>	F	3 30	5
2 80	2 60	2 60	2 60	2 70	2 60	2 50	2 50	2 65	3 20	F	3 45	6
2 60	2 55	2 70	2 80	2 80	2 70	2 50	2 10	F	3 20	3 40	3 25	7
2 40	2 60	2 60	2 65	2 65	2 55	2 45	2 60	2 85	2 95	3 05	3 10	8
2 65	2 60	2 70	2 70	2 80	2 70	2 65	2 70	2 90	3 10	3 30	3 30	9
2 65	2 60	2 50	2 50	2 45	2 50	2 50	2 55	2 55	F	F	u3 10 <sub>F</sub>	10
2 50	2 50	2 50	2 55	2 65	2 55	2 40	2 25	F	F	F	3 15 <sub>F</sub>	11
2 55	2 55	2 55	2 50	2 50	2 50	2 50	2 50	2 70	2 90	3 10	3 20	12
2 50	2 40	2 40	2 45	2 50	2 50	2 40	2 30	F	F	F	u2 80 <sub>F</sub>	13
2 40	2 35	2 50	2 45	2 65	2 70	2 70	2 45	2 55	u2 80 <sub>F</sub>	u3 00 <sub>F</sub>	3 25	14
2 50	2 50	2 50	2 60	2 60	2 65	2 65	2 50	F	F	F	u3 20 <sub>F</sub>	15
2 60	2 60	2 60	2 60	2 70	2 70	2 70	2 60	2 80	3 00	3 15	3 30	16
2 85	2 80	2 90	2 85	2 80	2 65	2 50	2 35	F	F	F	F	17
2 60	2 45	2 50	2 55	2 60	2 70	2 45	2 10	2 65	2 95	3 10	3 30	18
2 70	2 70	2 80	C	2 75	2 65	2 70	2 90	3 30	3 45	3 50	3 15	19
2 60	2 60	2 55	2 50	2 50	2 55	2 50	2 30	u2 90 <sub>F</sub>	3 10	3 20	3 20	20
2 70	2 70	2 55	2 50	2 40	2 50	2 70	2 70	2 45	F	2 80	F	21
2 70	2 65	2 70	2 75	2 80	2 75	2 70	2 60	2 70	2 80	F	F	22
2 50	2 55	2 15	2 60	2 75	2 80	2 60	2 45	F	F	3 20	3 40	23
2 70	2 70	2 70	2 80	2 90	2 80	2 70	2 50	2 65 <sub>F</sub>	3 00	3 20 <sub>r</sub>	3 35 <sub>F</sub>	24
2 35	2 55	2 60	C	2 70	2 75	2 75	2 75	2 80	3 15	u3 45 <sub>s</sub>	3 35	25
2 70	2 70	2 75	2 65	2 75	u2 80 <sub>s</sub>	2 80	2 60	2 65	F	F	F	26
2 50	2 55	2 55	2 70	u2 75 <sub>s</sub>	2 85	2 80	2 80	2 90	u3 05 <sub>s</sub>	3 30	3 30	27
2 70	2 80	2 90	2 95	2 90	2 90	2 85	2 70	2 85	3 05	3 30	3 35	28
2 60	2 65	2 55	2 55	2 60	2 70	2 75	2 65	2 70	u2 80 <sub>r</sub>	F	u3 25 <sub>F</sub>	29
2 60	2 50	2 55	2 55	C	C	2 70	2 55	2 65	2 85	u3 20 <sub>F</sub>	3 40	30
30	30	30	28	29	29	30	30	23	19	17	25	Count
2 60	2 60	2 55	2 60	2 70	2 70	2 70	2 50	2 70	3 00	3 20	3 30	Median
2 60	2 60	2 60	2 60	2 65	2 65	2 60	2 55	2 70	3 00	3 20	3 25	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.



Characteristic (M3000)F<sub>2</sub>      TABLE 55 (Contd)      Latitude 10 2°N  
 Unit      Ionospheric Data      Longitude 77 5°E  
 Month November 1961      75°E Mean Time

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	F	3 30	3 45	3 50	3 50	3 10	3 30	3 00	2 60	2 50	2 50	2 50
2	3 30	3 30	3 50	3 35	3 30	3 25	3 20	3 10	2 70	2 45	2 55	2 55
3	3 40	3 40	3 50	3 40	3 25	3 20	3 50	3 25	3 00	2 65	C	2 50
4	F	3 35	3 30	3 50	3 50	3 35	3 45	3 10	2 90	2 50	2 55	2 60
5	3 40	3 50	3 60	3 40	3 45	3 10	3 40	3 30	3 10	2 80	2 50	2 60
6	3 40	3 50	3 40	3 45	3 50	2 90	3 25	3 00	2 40	2 55	2 65	2 75
7	3 40	3 45	3 45	3 40	3 50	2 95	3 30	3 00	2 55	2 60	C	2 60
8	3 30	3 40	3 35	3 20	F	2 70	3 10	3 00	2 75	2 50	2 55	2 50
9	3 20	3 40	3 50	3 50	3 20	3 30	3 20	2 85	2 50	2 70	2 60	2 70
10	3 30	3 45	3 40	3 15	3 60	2 85	3 30	3 00	2 60	2 60	2 55	2 70
11	3 30	3 40	3 45	3 40	3 25	2 90	3 10	2 75	2 55	2 60	2 50	2 55
12	3 30	3 40	3 40	3 45	3 35	2 90	3 25	3 15	2 85	2 25	2 40	2 50
13	3 15	3 35	3 25	3 30	3 40	2 90	3 30	3 10	2 80	2 50	2 45	2 50
14	3 15	3 35	3 40	3 40	3 50	2 90	3 45	3 20	2 70	2 60	2 80	2 50
15	3 20	3 10	3 00	F	F	F	3 20r	3 10	2 90	2 30	2 60	2 65
16	3 25	3 40	3 45	3 50	3 45	3 10	3 25	3 00	2 70	2 65	2 65	2 65
17	3 50	3 60	3 60	3 60	3 35	2 70	3 10	2 90	2 75	2 70	2 80	2 80
18	F	3 50	3 50	3 60	E	2 75	3 25	3 10	2 95	2 95	2 90	2 70
19	3 35	3 15	3 35	3 30	3 20	3 05	3 10	3 05	2 85	2 65	2 65	2 70
20	3 30	3 45	3 35	3 45	3 50	3 00	3 00	2 90	2 70	C	2 70	2 60
21	3 30	3 35	3 30	3 20	3 20	3 00	3 00	2 90	2 70	2 70	2 80	2 70
22	F	F	3 45	3 60	3 50	2 80	3 20	2 80	2 65	2 65	2 70	2 70
23	F	3 35r	3 35	3 50	3 55	2 70rr	3 05	2 85rr	2 60	2 60	2 50	2 45
24	3 50	3 50	3 50	3 45	3 35	2 85	3 25s	2 75	2 70	2 70	2 65	2 65
25	3 25	3 35	3 45	3 50	3 40	3 10	3 15	2 80	2 70	2 50	2 60	2 60
26	3 30	3 40	3 45	3 35	3 45	3 05	3 40	3 20	2 90	2 65	2 65	2 70
27	F	F	F	F	F	3 20r	3 10	3 00	2 80	2 45	2 50	2 55
28	3 45	3 45	3 35	3 30	3 35	3 10	3 20a	2 85	2 70	2 70	2 70	2 75
29	3 10	3 35	3 35	3 40s	3 40	2 85	3 05	2 90	2 75	2 70	2 70	2 65
30	3 35r	3 35	3 40r	3 40	3 50	2 85	3 05	2 95	2 85	2 55	2 60	2 55
Count	24	28	29	28	26	29	30	30	30	29	28	30
Median	3 30	3 40	3 40	3 40	3 40	2 95	3 20	3 00	2 70	2 60	2 60	2 60
Mean	3 30	3 40	3 40	3 40	3 40	3 00	3 20	3 00	2 75	2 60	2 60	2 60

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic (M3000)F<sub>2</sub>  
Unit  
Month November 1961

TABLE 55 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2 50	2 55	2 60	2 60	2 50	2 50	2 30	2 30	2 60 <sub>v</sub>	F	2 90 <sub>v</sub>	3 25	1
2 50	2 50	2 55	2 55	2 70	2 65	2 40	2 30	2 55	2 90 <sub>v</sub>	3 20 <sub>v</sub>	3 25	2
2 55	2 55	2 60	2 70	2 70	2 75	2 70	2 60	F	F	F	F	3
2 55	2 55	2 55	2 70	2 70	2 70	2 55	2 65	2 75	2 90 <sub>v</sub>	3 10 <sub>v</sub>	3 30	4
2 60	2 50	2 60	2 65	2 70	2 70	2 60	F	F	F	3 20 <sub>v</sub>	3 25	5
2 70	2 60	2 55	2 65	2 70	2 60	2 50	2 60 <sub>v</sub>	3 05	F	F	F	6
2 60	2 60	2 70	2 80	2 75	2 60	2 40	F	3 00	3 30	3 30	3 20	7
2 60	2 55	2 60	2 65	2 60	2 50	2 50	2 80	2 90	3 05	3 10	3 10	8
2 65	2 70	2 70	2 80	2 75	2 65	2 65	2 80	3 00	3 30	3 30	3 30	9
2 60	2 60	2 50	2 45	2 50	2 50	2 50	2 60	2 55 <sub>v</sub>	F	3 10 <sub>v</sub>	3 20	10
2 55	2 50	2 50	2 60	2 60	2 55	2 35	F	F	F	2 95 <sub>v</sub>	3 20	11
2 45	2 55	2 55	2 55	2 50	2 50	2 45	2 65	2 85	3 10	3 15	3 25	12
2 40	2 40	2 50	2 45	2 50	2 50	2 35	2 40	F	F	2 80 <sub>v</sub>	3 05 <sub>v</sub>	13
2 30	2 40	2 50	2 50	2 75	2 70	2 50	2 50	2 40	2 90 <sub>v</sub>	3 25	3 20	14
2 40	2 55	2 55	2 70	2 60	2 65	2 50	2 50	F	F	F	3 25	15
2 70	2 55	2 50	2 65	2 75	2 70	2 60	F	2 80	3 10	3 20	3 40	16
2 80	2 90	2 90	2 85	2 70	2 50	2 40	F	F	F	F	F	17
2 55	2 50	2 50	2 60	2 70	2 65	2 35	2 40 <sub>v</sub>	2 90	3 05	3 20	3 40	18
2 70	2 80	2 80	2 80	2 70	2 65	2 70	3 05	3 35	3 40	3 40	3 25	19
2 60	2 60	2 55	2 50	2 60	2 55	2 45	2 50 <sub>v</sub>	2 80	3 10	3 15	3 10	20
2 70	2 60	2 55	2 55	2 40	2 55	2 60	2 70	2 50	F	F	F	21
2 70	2 60	2 65	2 80	2 75	2 75	2 60	2 60	F	2 90 <sub>v</sub>	F	F	22
2 50	2 50	2 45	2 60	2 70	2 70	2 50	2 55	F	2 95 <sub>v</sub>	3 25	3 30	23
2 65	2 65	2 80	2 95	2 90	2 75	2 60	2 55	2 70	3 10	3 20 <sub>v</sub>	3 30 <sub>v</sub>	24
2 50	2 60	C	2 70	2 75	2 70	2 70	2 80	3 00	3 30	3 40	3 30	25
2 65	2 75	2 70	2 70	2 75	2 75	2 70	2 60	2 75 <sub>v</sub>	F	F	F	26
2 50	2 55	2 60	2 70	2 85	2 85	2 75	2 85	3 00	3 10	3 30 <sub>v</sub>	3 45	27
2 70	2 80	2 90	2 95	2 90	2 85	2 75 <sub>v</sub>	2 80	2 95	3 10	3 35	3 35	28
2 60	2 65	2 55	2 65 <sub>v</sub>	2 60	2 70	2 65	2 65	2 75 <sub>v</sub>	3 00 <sub>v</sub>	F	3 35	29
2 60	2 50	2 55	2 60	C	2 70	2 60	2 60	2 75	3 05 <sub>v</sub>	3 35 <sub>v</sub>	3 40 <sub>v</sub>	30
30	30	29	30	29	30	30	25	22	19	22	24	Count
2 60	2 55	2 55	2 65	2 70	2 65	2 50	2 60	2 80	3 10	3 20	3 25	Median
2 60	2 60	2 60	2 65	2 70	2 65	2 55	2 60	2 80	3 00	3 20	3 25	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foF2  
Unit . Mc  
Month . December 1961

TABLE 56  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	5.2	4.0	3.5	2.8	2.3	1.8	4.2	7.0	8.0	7.7	7.9	7.6
2	4.8r	u4.3w	3.7r	3.3r	F	F	4.5	7.7	9.8	10.5.	C	C
3	C	C	C	F	F	F	F	8.2	9.9	11.3	10.5	9.5
4	6.6	5.9	3.9	2.3	1.5	R	4.1	7.2	8.5	9.2	8.9	C
5	7.1	6.7	6.1	4.6	F	u2.7w	4.6	7.3	8.6	8.8	7.9	7.8
6	C	C	C	C	C	C	C	7.9	C	8.1	8.4	8.5
7	C	C	C	C	C	C	C	C	C	C	C	C
8	6.2	5.0	3.8	3.0	2.5	1.9	4.2	7.1	8.8	C	C	C
9	7.0	5.5	4.7	3.6	2.6	2.1	4.1	7.4	9.1	9.0	10.1	10.4
10	F	F	u5.0w	4.7r	F	u4.0w	u4.7w	7.5	9.3	9.2	8.5	8.0
11	6.5w	u6.5w	u6.5w	5.4	5.1	4.8	5.5	8.4	9.6	10.1	10.6w	8.8
12	u7.6r	F	F	F	F	u4.9w	u6.0w	7.7	9.2	8.7	9.0	8.0
13	6.4	5.4	5.0	5.2	F	F	u4.0w	7.5	8.9	9.4	8.9	8.5
14	u1.9r	u4.9r	4.4	4.0	2.6	u1.6w	4.1	7.3	8.8	9.1	9.7	9.3
15	F	u1.8r	u4.7r	4.4	3.4	2.4	4.0	6.7	7.8	8.0	8.0	8.1
16	F	5.6w	5.1	3.7	2.5	2.2	3.9	6.5	7.8	9.0	9.6	9.0w
17	7.2r	7.2	7.3r	5.3	3.0	2.0	3.6	6.5	8.0	8.5	8.8	8.2
18	6.0	5.0	4.4	3.8	2.5	1.7	3.4	6.2	7.6	C	8.0	7.1
19	F	F	4.7	3.4	1.9	1.3	3.2	6.3	7.5	8.0	7.6	7.5
20	4.1r	4.1r	4.0	F	2.3	1.7	3.4	6.5	8.0	8.0	7.8	8.0
21	6.3	5.4	4.6	3.8	2.8	1.6	3.2	u6.1s	7.2	7.8	8.3	8.4
22	F	F	4.8	3.4	2.8	2.2	3.7	6.5	7.9	C	8.4	7.9
23	5.6	5.0	4.8	4.3	3.4	2.9	4.0	6.2	7.5	8.6	9.1	9.3
24	6.2	6.4	6.2	u5.9a	3.9	3.0	4.3	7.1	8.0	7.6	8.1	8.0
25	6.2a	u6.1r	5.3	4.7	F	F	u4.5w	6.7	8.0	9.4	9.0	8.3
26	6.3	5.8	4.8	4.0	3.2	2.2	3.6	7.0	8.4	9.6	C	8.0
27	5.3	4.7	3.9	3.1	2.5	1.8	3.5	6.7	9.0	8.8	8.7	8.5
28	5.1	4.8	5.0	3.9	3.2	2.8	3.9	6.8	8.3	9.1	8.5	8.5
29	F	5.3	F	4.8	3.2	2.2	3.6	7.5	8.4	C	C	C
30	4.1	4.4	4.5	4.2	3.3	2.7	3.6	6.3	7.0	7.6	8.3	8.4
31	F	5.3	5.4	u4.8w	3.1	2.4	3.4	6.5	8.5	8.7	8.2	8.3
Count	21	21	26	26	22	24	28	30	29	26	26	26
Median	6.2	5.3	4.8	4.0	2.8	2.2	4.0	7.0	8.4	8.8	8.5	8.4
Mean	5.9	5.3	4.8	4.1	2.9	2.5	4.0	7.0	8.4	8.9	8.7	8.4

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic foF2  
 Unit Mc  
 Month December 1961

TABLE 56  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77·5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
7.2	7.4	7.6	8.2	8.5	8.8	8.6	F	F	F	6.6	5.9	1
9.5	9.8	10.4	10.5	11.4	11.9	12.0	10.7	9.5	F	F	9.0	2
9.4	9.7	9.5	9.3	9.5	10.1	10.8	9.9	9.4	10.0	8.4	7.2	3
9.0	9.5	10.0	10.2	10.4	10.2	9.7	8.7	8.8	8.1	7.7	7.0	4
8.1	8.7	9.2	9.7	10.2	10.2	10.4	7.7	7.7	7.3	C	C	5
8.5	8.6	8.8	9.3	10.0	9.4	9.0	8.3	7.0	u6.6r	F	F	6
C	C	C	C	9.2	8.4	7.9	F	8.5	8.7	u7.4r	7.2	7
C	C	C	9.0	9.6	9.6	9.3	8.3	u9.1l	F	u7.1s	6.6	8
9.9	9.8	9.4	9.2	8.8	8.5	8.1	7.0	F	F	F	F	9
7.6	7.6	7.3	7.8	8.0	8.1	7.9	8.2	8.3	C	6.3	u6.2r	10
7.6	8.0	8.3	8.4	9.1	10.1	9.7	10.1	9.5	8.9	8.6	8.0	11
8.4	7.8	8.0	8.7	9.3	9.6	8.7	8.2	7.2	6.8	6.9w	6.6	12
8.5	8.2	8.1	8.1	8.2	8.0	8.4	7.2	F	F	F	F	13
8.5	9.0	9.8	9.1	9.0	9.0	9.1	8.5	7.8r	u6.9w	F	F	14
7.9	7.7	8.3	8.5	8.3	8.3	8.1	7.2	7.1	8.0	6.8	u6.6w	15
8.2	9.2	9.2	9.7	10.8	9.8	8.6	7.8	8.0	F	6.6	2F	16
8.2	8.0	8.2	9.4	9.9	9.8	9.6	8.3	7.6	7.6	7.0w	6.4	17
7.4	7.1	7.3	7.3	8.2	8.5	8.4	7.2	7.0	7.1	6.5	F	18
7.6	8.0	7.6	8.5	8.8	8.7	8.3	7.1	u6.8r	F	F	F	19
7.4	7.8	8.4	8.7	8.7	8.6	8.4	7.6	7.2	7.9r	6.8w	6.2l	20
7.1	7.2	7.2	7.6	7.7	8.3	7.4	7.4	8.0	8.0	6.6	5.7	21
7.2	7.2	7.0	C	7.8	8.6	8.0	6.9	7.2w	6.6	6.2	7.1	22
9.0	8.8	8.8	8.3	8.0	8.7	8.3	8.4	8.6	8.0	7.1	6.2	23
C	C	C	8.2	8.6	9.0	8.8	8.1	8.3	7.6	7.3	6.8w	24
8.0	8.1	8.3	8.3	8.6	8.7	8.2	7.0	7.1	6.8	6.5	6.4	25
8.6	8.6	8.1	8.7	C	8.7	8.3	8.4	8.6	7.5	6.2	5.3	26
7.8	7.4	7.4	7.5	7.8	8.5	8.5	8.0	8.0	8.3	u6.8s	5.7	27
8.8	9.1	8.7	7.5	7.7	7.4	7.9	C	7.0	u5.6w	F	F	28
C	C	C	C	C	C	C	C	5.5	F	u5.2r	4.6	29
8.4	8.2	8.5	8.3	7.6	6.8	6.6	5.6	F	F	F	u4.9r	30
8.0	C	8.6	8.6	8.6	8.1	7.4	6.6	u6.0s	F	F	F	31
27	26	27	28	29	30	30	27	27	20	21	21	Count
8.2	8.2	8.3	8.6	8.7	8.7	8.4	8.0	7.8	7.6	6.8	6.4	Median
8.2	8.3	8.4	8.7	8.9	9.0	8.5	7.9	7.8	7.6	6.9	6.4	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic - foF2  
Unit Mc  
Month December 1961

TABLE 56 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	4 6	3 9	3 2	2 4	J2 1R	2 6	5 6	7 2	8 0	7 8	7 7	7 6
2	4 3r	3 9F	3 6F	3 3F	F	F	6 3	9 2	10 6	10 2	C	9 5
3	C	C	C	F	F	F	6 6	9 0	11 0	11 4	10 0	9 4
4	6 2	4 9	3 0	1 8	1 4	2-2	5-9	8 0	9 1	9 0	C	8 6
5	7 2	6 7	5 3	F	u3 1F	u2 4rH	6 3	8 1	9 1	8 3	7 8	7 8
6	C	C	C	C	C	C	C	7 7	C	8 0	8 5	8 4
7	C	C	C	C	C	C	C	C	C	C	C	C
8	5 5	4 4	3 2	2 9	2 6	2 5	6 0	7 9	C	C	C	C
9	6 5	5 2	4 2	3 0	2 3	2 6	6 0	8 3	9 9	10 1	10 5	9 9
10	F	F	4 7F	F	u3 8F	u3 4F	6 4	8 5	9 5	8 8	C	7 8
11	u6 6F	6 8F	5 8	5 5	5 1	4 3	7 1	9 3	10 2	10 4	C	8 2
12	F	F	F	F	F	u4 9F	u7 0r	8 4	9 3	8 8	9 1	8 6
13	5 9	5 3	5 0	u5 0F	F	F	6 0	7 9	9 4	9 0	8 5	8 6
14	u5 0F	u4 8F	4 7	3 1	2 1	u2 1R	6 1	8 2	9 1	9 8	9 5	9 0
15	F	u4 6F	4 5F	4 2	3 0	2 4	5 3	7 1	7 8	8 0	7 9	7 6
16	5 4F	5 7F	4 9	3 0	2 3	2 0	5 3	7 1	8 6	9 4	9 0	8 8
17	7 4	7 2F	6 0	4 4	2 3	1 9	5 4	7 8	8 1	8 7	8 2	8 1
18	5 6	5 0	4 1	3 1	1 9	1 5	5 0	7 1	8 2	8 6	7 8	7 2
19	F	4 8	3 9	2 6	1 6	1 2	5 2	7 2	7 8	7 6	7 3	7 0
20	4 3F	4 1F	3 6	F	2 0r	1 3	5 4	7 2	8 2	7 9	7 8	7-8
21	6 1	4 9	4 2	3 4	2 0	1 4	5 0	6 5	7 8	8 1	8 2	8 0
22	F	5 1	4 5	3 5	2 4	1 8	5 9	7 4	8 4	8 4	8 4	7 3
23	S	5 0	4 5	3 7	3 1	2 7	5 4	6 8	8 3	9 1	9 1	9 4
24	6 2	6 3	5 9	4 9	3 2	2 8	6 1	7 8	7 9	7 8	8 2	8 0
25	6 6F	6 2F	5 2	u4 7s	F	3 7F	5 7	7 8	9 0	9 1	8 9	8 0
26	6 0	5 2	4 5	3 4	2 6	1 9	5 8	7 8	9 0	C	C	8 9
27	5 2F	4 2	3 5	2 8	2 2	1 7	5 5	7 7	9 0	8 8	8 5	8 1
28	4 8	5 0	4 4	3 4	3 0	2 7	5 4	8 0	9 0	8 8	8 6	8 5
29	5 5	F	5 2	4 2	2 7	1 7	5 9	7 7	C	C	C	C
30	4 2	4 3	4 3	4 0	2 9	2 7	u5 1s	7 0	C	8 0	8 5	8 4
31	F	5 3	5 0	3 5F	2 7	2 2	5 2	7 4	9 0	8 0	8 1	8 1
Count	21	25	27	24	24	26	29	30	26	27	23	28
Median	5 6	5 0	4 5	3 4	2 5	2 3	5 6	7 8	9 0	8 8	8 5	8 2
Mean	5 7	5 2	4 5	3 6	2 6	2 4	5 8	7 8	8 9	8 8	8 5	8 3

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic foF2  
 Unit . Mc  
 Month December 1961

TABLE 56 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude . 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
7.3	7.5	8.0	8.3	8.8	8.7	u7.9 <sub>F</sub>	F	F	F	6.2	5.0 <sub>r</sub>	1
9.8	10.1	10.2	10.8	11.7	12.0	11.7	10.1	F	F	8.3	u8.9 <sub>r</sub>	2
9.6	9.5	9.5	9.3	9.6	10.4	10.3	9.4	10.0	9.3	7.8	7.2	3
9.3	9.9	10.2	10.2	9.8	10.3	8.7	8.6	8.4	8.0	7.5	6.8	4
8.3	8.9	9.3	10.0	10.1	10.1	8.6	7.6	7.4	C	C	C	5
8.5	8.8	9.0	9.8	9.8	9.0	9.0	7.8	6.8	F	F	F	6
C	C	C	C	8.5	8.4	F	u7.6 <sub>F</sub>	8.1	8.0	7.6	7.2	7
C	C	C	9.2	9.7	9.6	8.6	8.3	F	u7.9 <sub>F</sub>	6.9	6.7	8
9.9	9.5	9.5	9.0	8.6	8.3	7.4	u6.6 <sub>F</sub>	F	F	u6.0 <sub>F</sub>	F	9
7.6	7.4	7.3	8.0	7.7	7.7	8.1	8.4	8.2	C	6.3 <sub>F</sub>	6.6 <sub>F</sub>	10
7.7	8.2	8.4	8.6	9.7	10.1	9.6	9.7	9.1	8.8	8.0	7.8	11
8.0	7.7	8.2	8.6	9.4	9.2	8.4	7.0	6.7	7.1	6.8	6.4	12
8.5	8.2	8.0	8.2	8.3	8.1	8.0	6.8	F	F	F	u4.4 <sub>F</sub>	13
9.0	9.2	9.1	9.1	9.0	9.0	8.8	7.9	u7.8 <sub>r</sub>	F	F	F	14
7.8	8.3	8.4	8.5	8.3	8.1	7.8	7.1	8.0	7.4	6.2	6.1 <sub>F</sub>	15
8.4	9.0	9.7	10.0	10.5	9.0	8.2	7.9	8.0	F	6.2 <sub>F</sub>	F	16
8.2	8.0	8.6	10.1	9.5	10.0	8.6	7.8	7.7	7.2 <sub>F</sub>	7.0 <sub>F</sub>	6.2	17
7.3	7.2	7.1	7.5	8.4	8.5	7.8	7.0	7.4	7.0	6.0 <sub>F</sub>	F	18
8.0	8.0	8.0	8.7	9.0	8.5	7.6	6.8	F	F	F	F	19
7.2	8.1	9.0	8.6	C	8.5	8.0	7.6	7.5	7.3 <sub>r</sub>	F	6.1	20
7.3	7.3	7.2	7.6	8.0	8.0	7.1	7.4	8.0	7.5	6.1	4.9	21
6.8	7.0	7.0	7.6	8.6	8.4	7.2	7.3	6.1	6.4 <sub>F</sub>	6.5	6.4	22
8.7	8.9	8.4	8.1	8.4	8.8	8.3	8.3	8.5	7.6	6.6	6.2	23
C	C	C	8.5	8.9	9.1	8.7	8.0	7.9	7.4	7.1	6.5 <sub>r</sub>	24
8.0	8.0	8.1	8.1	8.6	8.6	7.2	7.0	7.0	6.6	6.7	6.6	25
8.4	8.0	8.6	8.6	8.5	8.5	8.0	8.6	8.3	u7.1 <sub>F</sub>	5.7	5.2	26
7.8	7.4	7.4	7.6	8.2	8.4	8.2	7.9	8.3	8.1	6.0	u5.6 <sub>F</sub>	27
9.0	9.0	8.4	7.6	7.7	7.5	C	C	6.3	u5.6 <sub>F</sub>	F	F	28
C	C	C	C	C	C	C	C	5.8	F	4.8	4.4	29
8.3	8.4	8.5	8.0	7.2	6.7	6.3	F	F	F	F	5.2	30
8.4	C	8.7	8.8	8.1	7.9	7.0	6.5	F	F	F	F	31
27	26	27	29	29	30	29	27	23	18	22	22	Count
8.3	8.2	8.4	8.6	8.6	8.6	8.1	7.8	7.9	7.4	6.6	6.3	Median
8.3	8.4	8.4	8.7	8.9	8.8	8.0	7.8	7.7	7.5	6.6	6.2	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds

Characteristic foF<sub>1</sub>  
Unit · Mc  
Month December 1961

TABLE 57  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								L	L	L	L	I
2								L	L	L	C	C
3								L	L	L	L	L
4								L	L	L	f <sub>1</sub>	C
5								I	L	L	L	L
6								L	C	L	L	L
7								C	C	C	C	C
8								L	L	C	C	C
9								L	I	I	L	I
10								L	L	L	L	L
11								L	L	L	I	L
12									L	u <sub>4</sub> 1r	L	L
13									L	u <sub>4</sub> 5r	L	f <sub>1</sub> 6
14									L	L	L	f <sub>1</sub> 5
15									L	L	u <sub>4</sub> 8L	u <sub>4</sub> 8L
16									L	L	L	f <sub>1</sub> 5
17							L	L	L	L	L	L
18							L	L	L	C	L	f <sub>1</sub> 1r
19							L	L	L	L	L	L
20							L	L	L	L	L	f <sub>1</sub> 2r
21							L	L	L	L	L	L
22								L	L	L	4 5	4 6
23								L	L	u <sub>4</sub> 5L	u <sub>4</sub> 7L	4 8
24								L	L	L	L	L
25								..	L	L	4 8	4 8
26							L	L	L	5 1	C	5 1
27								L	L	L	L	L
28								L	L	L	L	L
29								L	L	C	C	C
30								L	L	L	L	Lr
31								L	L	L	L	L
Count										4	5	10
Median											4 7	4 8
Mean											4 6	4 8

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foF1  
 Unit Mc  
 Month December 1961

TABLE 57  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L	L							5
L	L	L	L	L								6
C	C	C	C	L								7
C	C	C	C	L	L							8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
4.5	L	L	L	L								13
L	v4.7L	L	L	L								14
v4.7L	L	L	L	L								15
L	L	4.4	L	L	L							16
L	L	L	L	L	L							17
5.1L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	L	L	L	L	L							20
5.1L	L	L	L	L	L							21
L	4.8	4.7	C	L	L							22
4.8	L	L	L	L	L							23
C	C	C	L	L	L							24
L	L	L	L	L	L							25
4.8	L	L	L	C								26
L	L	L <sub>H</sub>	L <sub>H</sub>	L	L							27
L	L	L	L	L	L							28
C	C	C	C	C	L							29
L	L	L	L	L	L							30
L	C	L	L	L	L							31
6	2	2										Count
4.8												Median
4.8												Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.



Characteristic foF1  
Unit Mc  
Month December 1961

TABLE 57 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	
1								L	L	L	L	L	
2								L	L	L	G	L	
3								L	L	L	L	L	
4								L	L	4 4	G	L	
5								L	L	L	L	L	
6								L	C	L	I	L	
7								L	C	L	G	C	
8							L	L	C	L	C	C	
9							L	L	L	L	L	L	
10							L	L	L	L	G	L	
11								L	L	L	G	L	
12								L	L	L	L	L	
13								L	v4 5L	L	L	4 5	
14								L	L	L	L	4 6	
15								L	L	v4 7L	L	v4 8L	
16							L	L	L	L	v4 9L	v4 8L	
17							L	L	L	L	L	v4 9L	
18							L	L	L	L	5 1L	5 1L	
19							L	L	L	L	L	L	
20							L	L	L	L	L	5 0	
21							L	L	L	L	L	5 1L	
22							L	L	L	L	4 6	4 8	
23							L	L	v4 6L	v4 8L	L	4 7	
24							L	L	L	L	L	L	
25							L	L	L	L	L	4 9	
26							L	L	L	C	C	L	
27							L	L	L	L	L	L	
28							L	L	L	L	L	L	
29							L	L	C	C	C	C	
30							L	L	G	L	LH	L	
31								L	L	L	LH	L	
Count										2	4	3	11
Median													4 8
Mean										..	.		4 8

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foF1  
 Unit Mc  
 Month December 1961

TABLE 57 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date/Hour
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
L	L	L	L	L								6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	L	L	L								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
v4 6L	v4 6L	L	L	L								14
L	L	L	L	L								15
v4 9L	4 5	L	L	L								16
L	L	L	L	L								17
L	L	L	L	L								18
L	L	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
L	L	L	L	L								22
L	L	L	L	L								23
L	L	L	L	L								24
L	L	L	L	L								25
4 6	4 4	L	L	L								26
L	LH	L	L	L								27
L	L	L	L	L								28
L	L	L	L	L								29
L	L	L	L	L								30
LH	C	LH	L	L								31
3	3											Count
												Median
												Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foE  
Unit - Mc  
Month December 1961

TABLE 58  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2							1 6	2 4	2 9	A	A	A
3								2 3	A	A	A	A
4							1 5	A	A	A	A	A
5								A	A	A	A	A
6								A	C	A	A	A
7								C	C	C	C	C
8							1 4	A	A	A	A	A
9							1 4	A	A	A	A	A
10								2 2	A	A	A	A
11								2 3	A	A	A	A
12							1 9	2 2	A	A	A	A
13								2 4	A	A	A	A
14								2 1	U2 6R	A	A	A
15								A	A	A	A	A
16								A	A	A	A	A
17								2 8	A	A	A	A
18								A	A	C	A	A
19								A	A	A	A	A
20								2 8	A	A	A	A
21								A	A	A	A	A
22								A	A	A	A	A
23								A	A	A	A	A
24								A	A	A	A	A
25								2 3R	U2 8A	A	A	A
26								A	A	A	C	A
27								A	A	A	A	A
28								A	A	A	A	A
29								U2 1R	U2 7R	C	C	C
30								A	A	A	A	A
31								A	A	A	A	A
Count							5	11	4			
Median							1 5	2 3				
Mean							1 6	2 4				

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foE  
Unit Mc  
Month December 1961

TABLE 58  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Date/Hour
A	A	A	A	A	2 0							1
A	A	A	A	A	G							2
A	A	A	A	A	A							3
A	A	A	A	A	2 6							4
A	A	A	3 1	A	A							5
A	A	A	A	A	A							6
C	C	C	C	A	A							7
C	C	C	A	A	A							8
A	A	A	A	A	A							9
A	A	A	A	A	A							10
A	A	A	A	A	2 5H				R			11
A	A	A	A	A	2 6A				A			12
A	A	A	A	A	A				A			13
A	A	A	A	A	A				A			14
A	A	A	A	A	A				A			15
A	A	A	A	A	A				1 9			16
A	A	A	3 7	A	2 6				A			17
A	A	A	A	A	2 6				A			18
A	A	A	A	3 0	R				2 7			19
A	A	A	A	A	A				2 1			20
A	A	A	A	A	2 8				2 5			21
A	A	A	A	C	A				A			22
A	A	A	A	A	A				A			23
C	C	C	A	A	F				A			24
A	A	A	A	A	A				2 0			25
A	A	A	A	C	A				A			26
A	A	A	A	A	A				2 1			27
A	A	A	A	A	A				A			28
C	C	C	C	C	C				C			29
A	A	A	A	A	A				A			30
A	C	A	A	A	A							31
		1	2	6	13							Count
				2 6	2 0							Median
				2 6	2 1							Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foE  
Unit . Mc  
Month December 1961

TABLE 58 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								A	A	A	A	A
2							A	2 7	A	A	A	A
3							2 1	3 1	A	A	A	A
4							A	A	A	A	A	A
5							2 0	A	A	A	A	A
6												
7						C	C	A	C	A	A	A
8							C	C	C	C	C	C
9							A	A	A	A	A	A
10							2 0	A	A	A	A	A
11							1 9	A	A	A	A	A
12							1 8	2 6	A	A	C	A
13							1 9	2 6	A	A	A	A
14							2 0	2 6	A	A	A	A
15							1 6	R	A	A	A	A
16								A	A	A	A	A
17							1 8	A	A	A	A	A
18							A	R	A	A	A	A
19							1 9	A	A	A	A	A
20							A	A	A	A	A	A
21							1 9	A	A	A	A	A
22							A	A	A	A	A	A
23							1 6	A	A	A	A	A
24							A	A	A	A	A	A
25							A	A	A	A	A	A
26							1 9 <sub>H</sub>	R	A	A	A	A
27							1 7	A	A	C	C	A
28							1 9 <sub>H</sub>	A	A	A	A	A
29							1 8	A	A	A	A	A
30							1 8	u2 5 <sub>H</sub>	C	C	C	C
31							A	A	C	A	A	A
							R	2 6 <sub>H</sub>	A	A	A	A
Count							17	7				
Median							1 9	2 6				
Mean							1 9	2 7				

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds.

Characteristic foE  
 Unit Mc  
 Month December 1961

TABLE 58 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date/Hour	
A	A	A	A	A								1	
A	A	A	2 9	A								2	
A	A	A	A	A								3	
A	A	A	2 8	2 3								4	
A	A	A	A	2 4								5	
A	A	A	A	A								6	
C	C	C	C	A								7	
C	C	C	A	A								8	
A	A	A	A	A								9	
A	A	A	A	A								10	
A	A	A	2 8	2 5	A							11	
A	A	A	2 8	R								12	
A	A	A	A	A	A							13	
A	A	A	A	A								14	
A	A	A	A	A								15	
A	A	A	A	A								16	
A	A	A	A	A								17	
A	A	A	2 8	R								18	
A	A	A	A	2 8								19	
A	A	A	A	C								20	
A	A	A	A	2 8								21	
A	A	A	A	2 4								22	
A	A	A	A	A								23	
C	C	C	A	A								24	
A	A	A	A	A								25	
A	A	A	A	A								26	
A	A	A	A	2 4								27	
A	A	A	A	A								28	
C	C	C	A	C								29	
A	A	A	A	A								30	
A	C	A	A	A								31	
			5	7									Count
			2 8	2 4									Median
			2 8	2 5									Mean

Sweep 1 0 Mc. to 25 0 Mc in 27 seconds

Characteristic foEs  
Unit - Mc  
Month December 1961

TABLE 59  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1				4 0				7 2	8-6	9 4	9 0	9 5
2					4 0	3 0	G	7 8	G	9 0	C	C
3					6 4	4 0		G	8 6	9 4	10 4	9 2
4							G	8 4	9 2	10 2	9 8	C
5		2 9						8 0	9 4	9 2	9 0	9 6
6								8 4	C	9 8	10 8	9 8
7							C	C	C	C	C	C
8							G	7 0	7 6	C	C	C
9							G	5 8	8 8	10 0	9 8	11 0
10	5 0	7 8			4 8			G	8 4	9 8	10 5	11 0
11								G	6 9	8 4	9 5	9 8
12					6 1		G	4 6	8 1	8 6	9 1	9 7
13								2 6	7 2	9 7	10 6	9 6
14	3 7	2 4						2 6	G	7 0	9 0	8 7
15	2 6		4 4					6 8	8 0	9 4	9 2	9 8
16								4 8	8 6	9 6	9 2	8 8
17								4 3	7 4	7 0	8 2	10 6
18			2 1					u6 0s	8 0	C	9 8	10 0
19								u6 0s	8 0	8 0	9 2	9 6
20								4 8	7 0	8 4	9 6	10 8
21					3 2			u7 0s	7 0	8 6	9 2	9 6
22								6 8	7 0	C	9 8	10 0
23	3 8	2 1		1 8				6 6	8 4	9 4	12 0	9 6
24	2 6					3 2		7 0	9 0	9 8	10 4	11 0
25		2 6						G	6 0	8 0	9 2	10 8
26								2 8	3 4	8 2	C	10 0
27				2 5				4 8	7 6	8 8	10 8	11 0
28								7 0	8 0	9 1	9 8	9 4
29		2 5						G	G	C	C	C
30	4 8						3 4	7 0	8 0	10 6	10 8	10 3
31	3 8							S	7 7	9 4	9 7	10 1
Count	7	6	2	3	5	3	6	29	29	26	26	26
Median	3 8	2 6			4 8		G	6 0	8 0	9 3	9 8	9 8
Mean	3 8	3 4			4 9			6 0	7 8	9 0	9 8	10 0

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.

Characteristic foEs		TABLE 59											Latitude 10 2°N
Unit	Mc	Ionospheric Data											Longitude 77 5°E
Month	December 1961	75°E Mean Time											
	12	13	14	15	16	17	18	19	20	21	22	23	Date/Hour
9 8	9 4	9 0	8 4	6 6	G								1
10 4	9 4	9 0	7 0	3 4	6 4		4 0	7 6				4 2	2
10 2	10 0	9 4	8 4	7 6	G								3
9 6	9 6	9 4	7 2	4 0	G					3 4	3 6		4
9 6	10 0	9 0	7 8	4 8	G								5
12 0	10 6	10 8	8 6	8 2	G								6
C	C	C	C	7 6	G								7
C	C	C	8 6	8 0	G				4 0				8
10 4	10 6	10 4	8 8	8 2	6 0					2 2	6 0	6 2	9
11 0	11 0	9 8	8 0	7 4	G								10
10 5	11 0	10 2	8 0	G	G	3 4							11
9 3	9 6	9 2	7 0	2 9	4 0	4 8	2 8						12
9 8	9 4	10 2	9 6	8 2	6 0	4 2				3 0	3 0	6 7	13
9 0	9 7	9 2	8 0	7 6	2 9						3 3	4 6	14
9 4	9 9	9 0	8 4	7 6	3 0		2 1						15
8 4	7 2	11 3	7 3	8 0	G								16
10 2	9 8	7 4	6 0	G									17
10 0	9 7	9 6	8 2	6 0	G								18
10 0	9 4	8 6	6 0	G	G								19
10 0	10 0	9 0	7 6	8 0	G			2 4				3 2	20
11 0	10 2	9 6	8 0	G	G								21
10 6	10 8	10 2	C	7 3	9 0						6 6	6 6	22
9 8	10 4	9 4	8 8	7 6	4 6	3 5	4 6	4 4	4 2		3 1	3 8	23
C	C	C	7 6	G	3 0								24
11 2	11 5	10 8	9 0	7 4	G						5 0	6 6	25
12 0	11 0	10 0	8 4	C	4 2	7 2	4 4	6 6	8 4	3 2			26
11 6	11 0	10 9	9 0	7 6	G								27
11 2	10 8	10 3	9 0	8 6	4 0								28
C	C	C	C	C	C								29
9 4	10 2	10 2	8 8	7 8	6 2								30
10 6	C	8 9	7 9	8 1	3 8								31
27	26	27	28	29	27	6	6	3	5	8	8		Count
10 2	10 0	9 6	8 1	7 6	G	4 1	3 6		3 4	3 4	5 4		Median
10 3	10 1	9 6	8 0	7 0	4 9	4 5	4 0		4 2	4 2	5 2		Mean

Sweep 1 0 Mc to 25 0 Mc, in 27 seconds



Characteristic foEs  
Unit Mc  
Month December 1961

TABLE 59 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°E  
Longitude . 77 5°N

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1				6 6			6 0	9 2	9 2	10 0	9 6	9 6
2				3 4			7 0	G	8 6	9 2	C	11 0
3	C	C	C		7 8		G	G	8 6	10 4	10 2	9 2
4							7 2	9 4	10 4	10 6	C	10 0
5	2 7	2 8					4 8	8 0	9 4	9 6	10 4	9 8
6	G	C	G	G	C	C	G	9 7	C	8 9	9 6	11 2
7	G	C	C	C	C	C	C	C	C	C	C	C
8							u6 0s	8 3	C	C	C	C
9							4 0	7 0	8 7	9 6	10 8	10 0
10	7 6	7 8					G	7 6	9 0	10 4	C	12 0
11							G	G	8 3	10 0	C	10 5
12							G	7 1	8 2	9 6	10 7	10 4
13							2 1	6 4	8 5	9 2	10 5	10 6
14							G	G	8 0	8 0	9 1	9 4
15					5 2		3 8	7 6	8 4	9 6	10 0	9 0
16							3 6	6 8	8 8	9 2	9 0	9 2
17							2 6	6 2	7 6	6 8	8 4	10 7
18		2 3					u3 4s	u7 0s	8 8	8 9	10 0	10 2
19							u4 8s	u8 0s	8 0	9 0	9 6	9 6
20							G	6 2	8 2	9 2	10 4	10 0
21	2 4			5 6	3 2		5 0	7 0	8 0	9 0	9 2	9 2
22							1 9	7 7	8 2	8 6	9 4	10 2
23	6 3	2 2			3 6		4 8	7 0	8 8	10 4	11 6	12 6
24			3 8				4 3	7 0	9 3	9 2	10 8	10 8
25	2 9	4 0					G	G	8 0	9 6	10 4	10 8
26								3 1	8 0	C	C	11 0
27							G	5 4	8 4	10 1	11 9	11 8
28							G	5 8	8 9	10 4	9 6	9 4
29		8 0	2 6				G	C	C	C	C	C
30						3 2	5 2	8 2	C	10 7	9 4	10 2
31						2 7	G	G	9 8	9 6	9 7	10 7
Count	5	6	2	3	4	2	28	29	26	27	23	28
Median	2 9	3 4					3 1	7 0	8 6	9 6	10 0	10 2
Mean	4 4	4 5					4 4	7 2	8 6	9 5	10 0	10 3

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic foEs  
 Unit Mc  
 Month December 1961  
 TABLE 59 (Contd)  
 Ionospheric Data  
 75°E Mean Time  
 Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
9 4	10 0	8 2	6 6	6 2								1
10 4	10 4	8 0	6 6	9 2	6 0					5 0	2 7	2
9 0	9 4	9 0	8 2	6 6	6 0		3 6					3
10 8	9 4	8 2	6 6	G				2 8	4 4			4
10 0	10 0	7 8	6 8	G							C	5
11 6	10 4	9 8	8 0	7 0							C	6
C	C	C	C	6 5								7
C	C	C	8 6	6 6			3 3	2 4				8
10 6	11 0	10 0	8 4	6 6					3 2	7 6	6 8	9
10 8	10 4	8 0	8 0	6 0					C			10
11 4	11 0	8 7	6 0	G	3 8							11
10 2	9 7	8 2	8 2	G	5 0	5 0						12
10 0	9 7	9 2	8 3	6 8	5 0			2 9		3 8	5 8	13
9 1	10 0	8 0	7 0	6 0	2 6					4 2	4 6	14
9 2	9 6	8 9	8 0	5 8								15
8 0	11 8	9 8	8 0	6 0								16
10 0	9 7	8 2	G									17
10 2	9 6	8 2	8 0	G								18
9 6	9 6	7 6	5 0	G								19
11 0	10 4	8 4	6 0	C		3 2				2 8	3 2	20
11 0	11 0	8 0	7 4	G								21
11 0	7 4	8 6	8 7	5 4					3 2	6 4	7 5	22
11 0	10 6	9 0	8 4	6 6	5 8	2 6	6 5		4 3	4 6	3 3	23
C	C	C	6 8	G								24
11 6	10 6	9 8	8 0	6 2	4 8					5 6	3 9	25
10 0	10 4	9 0	8 3	7 8	8 0		2 5	5 6	10 4	4 6		26
11 1	11 0	9 8	8 3	6 0								27
10 9	11 1	9 0	8 0	7 0								28
C	C	C	C	C	C	C	C				4 2	29
9 6	9 8	9 6	8 3	7 8								30
10 7	C	8 2	7 7	5 8								31
27	26	27	29	28	9	3	4	4	5	9	9	Count
10 4	10 2	8 6	8 0	6 0	5 0				4 3	4 6	4 2	Median
10 3	10 2	8 7	7 4	6 3	5 2				5 1	5 0	4 7	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fbEs  
Unit - Mc  
Month December 1961

TABLE 60  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude . 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1				1 4				2 5	3 1	3 3	3 6	3 7
2					1 4	1 5	G	2 4	G	3 4	C	C
3					2 2	2 6		G	3 0	3 3	3 5	3 6
4							G	2 4	3 0	3 3	3 6	C
5		2 1						2 4	3 0	3 3	3 4	3 6
6								2.5	C	3 3	3 5	3 6
7								C	C	C	C	C
8							G	2 3	3 0	C	C	C
9							G	2 4	3 0	3 2	3 5	3 6
10	2 0	2 4			1 5			G	2 8	3 2	3 4	3 6
11								G	2 8	3 1	3 3	3 5
12								1 8	2 7	3 1	3 3	3 5
13								2 0	2 8	3 2	3 3	3 5
14	1 6	1 9						2 6	G	3 1	3 3	3 5
15	1 9		2 4					2 2	2 8	3 1	3 4	3 5
16								2 3	2 7	3 2	3 2	3 4
17								2 3	2 8	3 2	3 3	3 5
18								2 2	2 8	C	3 4	3 5
19								2 4	2 8	3 1	3 3	3 7
20								2 2	2 8	3 1	3 4	3 4
21								2.2	2 8	3 2	3 4	3 4
22								2 3	2 8	3 2	3 5	3 6
23	1 9	1 8		1 1				2 3	2 9	3 2	3 8	3 8
24	1 7							2 2	2 9	3 2	3 5	3 6
25		1 9						G	2 9	3 2	3 4	3 6
26								2 3	2 8	3 2	C	3 7
27								2 2	2 9	3 1	3 5	3 6
28								2 2	2 8	3 1	3 4	3 5
29										C	C	C
30	1 8						1 2	2 2	2 7	3 5	3 3	3 4
31								2 2	2 7	3 5	3 3	3 4
Count	6	6	1	2	3	2	5	29	28	27	26	26
Median	1 8	2 0					G	2 2	2 8	3 2	3 4	3 6
Mean	1 8	2 0						2 3	2 8	3 2	3 4	3 6

Sweep 1 0Mc to 25 0Mc in 27 seconds.

Characteristic fbEs  
Unit : Mc  
Month December 1961

TABLE 60  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
3 8	3 6	3 4	3 1	2 8	G							1
3 6	3 5	3 3	3 1	2 8	2 3						2 0	2
3 7	3 5	3 3	3 2	2 7	G		2 8					3
3 7	3 5	3 4	3 1	2 7	G				2 0	1 8		4
3 6	3 6	3 3	3 1	2 7								5
3 7	3 6	3 4	3 1	2 7	G							6
C	C	C	C	2 7	G							7
C	C	C	3 2	2 7	G			2 4				8
3 6	3 5	3 3	3 4	2 8	2 0				1 5	1 7	1 8	9
3 6	3 5	3 2	3 1	2 6	G							10
3 5	3 4	3 2	3 0	G	G							11
3 5	3 4	3 3	3 0	2 7	2 2	2 1	2 1					12
3 5	3 4	3 3	3 1	2 6	2 2	1 8			1 8	2 2	2 6	13
3 6	3 4	3 4	3 1	2 7	2 2					2 1	2 3	14
3 5	3 4	3 2	3 2	2 6	2 0		1 7					15
3 5	3 5	3 8	3 0	2 5	G							16
3 6	3 4	3 3	3 1	G								17
3 5	3 4	3 3	3 0	2 7								18
3 5	3 4	3 2	3 0	G	G							19
3 6	3 4	3 3	3 1	2 9	G		1 6					20
3 6	3 5	3 4	3 0	G	G							21
3 8	3 6	3 4	C	2 7	3 4					2 2	2 2	22
3 6	3 6	3 4	3 2	2 8	2 3	2 0	2 2	2 1	2 1	1 7		23
C	C	C	3 0	G	2 1							24
3 7	3 6	3 5	3 2	2 8	G					2 2	1 9	25
3 7	3 6	3 5	3 0	C	2 3	2 2	.	2 8	2 2	1 6		26
3 5	3 5	3 4	3 1	2 7	G							27
3 6	3 6	3 3	3 1	2 8	2 8							28
C	C	C	C									29
3 5	3 5	3 2	3 1	2 7	2 3							30
3 4	C	3 3	3 2	2 8	2 1							31
27	26	27	28	29	27	5	5	3	5	8	6	Count
3 6	3 5	3 3	3 1	2 7	G	2 1	2 1		2 0	2 0	2 1	Median
3 6	3 5	3 3	3 1	2 7	2 3	2 3	2 1		1 9	1 9	2 1	Mean

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds.

Characteristic fbEs  
 Unit · Mc  
 Month December 1961

TABLE 60 (Contd.)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1				1 5			2 1	2 8	3 4	3 5	3 6	3 8
2							2 2	G	3 0	3 4	C	3 6
3	G	C	C		3 1		G	G	3 2	3 5	3 6	3 6
4							2 0	2 8	3 2	3 4	C	3 8
5	2 1	2 2					2 0	2 6	3 2	3 4	3 6	3 7
6								2 7	C	3 3	3 5	3 8
7	G	G	C	C	C	C	C	C	C	C	C	C
8							2 0	2 7	C	C	C	C
9							2 0	2 7	3 1	3 2	3 6	3 6
10	2 0	2 4					G	2 8	3 0	3 4	C	3 6
11							G	G	3 0	3 3	C	3 5
12							G	2 4	2 9	3 2	3 5	3 5
13							1 8	2 4	3 0	3 2	3 4	3 5
14							G	G	3 0	3 2	3 4	3 5
15					1 1		1 9	2 6	2 9	3 3	3 4	3 5
16							1 8	2 5	2 8	3 2	3 3	3 5
17							1 9	2 6	3 0	3 2	3 4	3 6
18			1 8				1 9	2 4	3 0	3 2	3 4	3 4
19							1 9	2 6	3 0	3 2	3 5	3 6
20							G	2 6	3 0	3 2	3 4	3 5
21							1 8	2 6	3 0	3 2	3 4	3 5
22							1 9	2 6	3 0	3 3	3 6	3 5
23	2 4						1 8	2 6	3 1	3 3	3 9	3 8
24							1 8	2 4	3 0	3 4	3 6	3 8
25			1 3				G	G	3 1	3 3	3 5	3 6
26								2 6	3 0	C	C	3 6
27							G	2 5	3 0	3 4	3 6	3 5
28							G	2 6	3 0	3 3	3 3	3 5
29		2 0							C	C	C	C
30							1 9	2 5	C	3 2	3 5	3 5
31									2 9	3 4	3 4	3 5
Count	3	4	1	1	2		27	28	26	27	23	28
Median							1 8	2 6	3 0	3 3	3 5	3 6
Mean							1 9	2 6	3 0	3 3	3 5	3 6

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic fbEs  
Unit . Mc  
Month . December 1961

TABLE 60 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
3 7	3 4	3 3	3 0	2 4								1
3 7	3 4	3 3	3 0	2 6	2 3					2 2	2 0	2
3 4	3 3	3 4	2 9	2 3	1 7		2 3					3
3 6	3 4	3 3	3 0	G				2 0	2 6			4
3 7	3 5	3 2	2 9	G								5
3 7	3 5	3 2	3 0	2 4							G	6
C	C	C	C	2 3								7
C	C	C	3 0	2 3			2 0	1 5				8
3 6	3 5	3 5	3 0	2 5					1 8	1 4	1 3	9
3 5	3 5	3 2	2 9	2 4					C			10
3 5	3 4	3 1	2 5	G	2 2							11
3 4	3 3	3 2	2 8	G	2 9	2 4						12
3 4	3 4	3 2	2 9	2 4	2 3			2 4		2 5	2 4	13
3 5	3 4	3 2	2 8	2 5	1 8					2 4	2 2	14
3 6	3 4	3 1	2 9	2 4								15
3 5	3 4	3 2	2 8	2 4								16
3 2	3 3	3 3	G									17
3 5	3 4	3 2	3 0	G								18
3 5	3 4	3 2	2 8	G								19
3 5	3 4	3 2	2 9	C						1 5		20
3 5	3 4	3 2	2 9	G								21
3 6	3 5	3 3	3 1	2 4					2 2	2 2	3 8	22
3 6	3 6	3 4	3 0	2 6	2 0	1 8	2 5		1 6	2 2	1 6	23
C	C	C	3 0	C								24
3 6	3 7	3 4	3 0	2 5						2 1	1 8	25
3 5	3 6	3 3	3 0	2 7	2 6		2 0	2 0	3 0	1 8		26
3 6	3 5	3 3	3 0	2 4								27
3 7	3 4	3 3	3 0	2 5								28
C	C	C	C	C	C	C	C				1 9	29
3 5	3 4	3 2	2 9	2 5								30
3 5	C	3 2	3 0	2 5								31
27	26	27	29	28	8	2	4	4	5	9	8	Count
3 5	3 4	3 2	3 0	2 4	2 2				2 2	2 2	2 0	Median
3 5	3 4	3 3	2 9	2 4	2 2				2 2	2 0	2 1	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic : fmin  
 Unit : Mc  
 Month : December 1961

TABLE 61  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude . 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	1.8	1.7	1.6	1.1	1.4	1.2	1.5	1.5	1.9	2.0	2.2	2.4
2	1.8	1.8	1.4	E	1.1	1.1	1.3	1.6	2.1	2.2	C	C
3	C	C	C	C	C	C	1.8	1.8	2.1	2.0	2.2	2.4
4	2.3	1.7	1.7	1.4	1.1	R	1.1	1.4	1.7	2.0	2.3	C
5	2.0	1.6	1.8	C	C	C	C	C	C	C	C	2.3
6	C	C	C	C	C	C	C	1.5	C	1.9	2.4	2.3
7	C	C	C	C	C	C	C	C	C	C	C	C
8	2.2	1.9	1.7	C	1.4	C	C	1.3	1.6	C	C	C
9	1.9	1.8	1.5	1.0	E	1.1	1.2	1.4	1.8	2.0	2.3	2.4
10	1.2	1.5	1.5	1.1	1.1	1.2	1.4	1.6	1.6	1.8	2.0	2.4
11	1.3	1.4	1.2	E	1.1	E	1.3	1.4	1.6	1.8	1.9	2.2
12	1.4	1.5	1.3	1.2	E	1.2	1.2	1.3	1.6	1.8	2.0	2.1
13	1.3	1.4	1.4	E	E	E	1.3	1.2	1.6	1.8	2.0	2.2
14	1.4	1.4	1.3	1.1	1.1	E	1.2	1.3	1.7	1.8	2.0	2.3
15	1.8	1.6	1.3	1.4	1.1	E	E	1.2	1.5	1.8	2.0	2.2
16	1.3	1.3	1.2	1.0	E	E	1.3	1.1	1.3	1.7	1.9	2.2
17	1.3	1.6	1.7	1.2	E	E	1.2	1.1	1.3	1.7	1.8	2.2
18	1.4	1.5	1.5	1.2	1.1	E	1.2	1.2	1.4	C	1.9	2.0
19	1.4	1.3	1.5	1.0	1.1	1.0	1.2	1.1	1.4	1.7	1.8	2.1
20	1.4	1.5	1.3	E	E	E	1.2	1.1	1.5	1.7	2.0	2.0
21	1.3	1.6	1.2	E	1.0	1.1	1.2	1.2	1.3	1.7	2.0	2.1
22	1.4	1.2	1.3	E	1.0	E	1.2	1.3	1.4	1.6	1.9	2.0
23	1.7	1.8	1.3	E	E	1.0	1.2	1.3	1.5	1.7	2.1	2.1
24	1.4	1.7	1.3	1.3	1.0	1.0	1.3	1.2	1.6	2.2	2.3	2.2
25	1.4	1.3	1.2	1.1	1.0	1.0	1.2	1.2	1.4	1.4	2.1	2.3
26	1.4	1.5	1.1	1.0	1.2	1.1	1.3	1.4	1.6	2.0	C	2.3
27	1.3	1.3	1.4	1.1	1.1	1.1	1.5	1.3	1.4	1.7	2.1	2.3
28	1.8	1.3	1.2	E	1.1	E	1.1	1.3	1.8	1.9	2.0	2.2
29	1.7	1.6	1.4	1.3	1.2	1.3	1.3	1.4	1.8	C	C	C
30	1.2	1.5	1.4	1.0	1.2	E	E	1.4	1.5	1.8	2.0	2.0
31	1.3	1.3	1.3	1.1	E	2.1	1.3	1.3	1.5	1.7	2.0	2.2
Count	28	28	28	26	27	25	27	29	28	26	25	26
Median	1.4	1.5	1.4	1.0	1.1	1.0	1.2	1.3	1.6	1.8	2.0	2.2
Mean	1.5	1.5	1.4	1.1	1.1	1.2	1.3	1.3	1.6	1.8	2.0	2.2

Sweep 1.0 Mc to 25.0 Mc in 27 seconds.

Characteristic · fmin

Unit Mc

Month December 1961

TABLE 61  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N

Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2.5	2.3	2.3	2.2	1.8	1.6	1.7	1.7	1.8	1.9	2.2	2.2	1
2.5	2.3	2.2	2.1	C	C	C	C	C	C	2.0	1.9	2
2.4	2.2	2.2	2.2	1.8	1.5	1.6	1.1	2.1	2.6	2.6	1.7	3
2.4	2.4	2.2	2.1	1.8	1.6	C	1.7	2.2	C	1.7	1.5	4
2.4	2.4	2.2	2.3	2.1	2.0	1.9	1.6	1.6	1.9	C	C	5
2.4	2.3	2.2	2.0	1.7	1.2	1.0	1.3	1.5	1.4	1.5	1.9	6
C	C	C	C	1.7	1.5	1.5	1.4	1.7	2.0	1.3	1.3	7
C	C	C	2.0	1.6	1.4	1.1	1.5	1.4	1.8	1.6	1.8	8
2.3	2.4	2.3	2.0	1.7	1.4	1.2	1.3	1.5	E	E	1.5	9
2.2	2.2	2.2	2.0	1.6	1.4	1.1	E	1.3	C	1.2	1.5	10
2.2	2.1	2.1	2.0	2.1	2.0	1.6	1.5	1.5	1.7	1.4	1.8	11
2.2	2.2	2.0	2.1	2.0	2.1	1.7	1.6	1.7	1.9	1.8	1.7	12
2.2	2.2	2.1	1.8	1.6	1.7	1.5	1.9	1.5	1.7	2.0	1.4	13
2.2	2.2	2.2	2.0	1.7	1.8	1.8	1.7	1.1	1.7	1.3	1.7	14
2.3	2.2	2.0	1.8	1.7	1.6	1.4	1.3	1.5	1.4	1.1	1.3	15
2.3	2.2	1.9	2.2	1.6	1.4	1.5	1.4	1.4	1.4	1.2	1.3	16
2.3	2.3	2.3	2.2	2.0	2.0	1.7	1.6	1.8	1.3	1.7	1.4	17
2.2	2.2	2.1	2.0	2.0	2.1	2.0	1.8	1.8	1.4	1.3	1.4	18
2.2	2.1	2.1	2.0	1.8	1.4	1.3	1.8	1.7	1.4	1.5	1.5	19
2.2	2.1	2.0	1.7	1.3	1.6	1.7	1.3	1.4	1.4	1.3	1.1	20
2.1	2.2	2.0	2.0	1.9	1.6	1.4	1.9	1.4	1.4	1.6	1.3	21
2.3	2.1	2.1	C	2.0	1.7	1.5	1.5	2.0	2.3	1.6	1.5	22
2.3	2.3	2.1	2.1	1.9	2.2	1.9	1.6	1.9	1.7	1.4	1.6	23
C	C	C	2.2	1.6	1.7	1.5	2.2	1.7	2.2	1.9	1.5	24
2.3	2.2	2.1	2.1	1.7	1.8	2.0	1.9	2.2	1.9	1.6	1.5	25
2.2	2.2	2.1	2.0	C	1.7	1.5	1.4	1.6	1.5	1.5	1.5	26
2.2	2.3	2.2	1.9	1.8	1.5	1.4	1.9	1.7	1.6	1.8	1.6	27
2.5	2.4	2.4	2.0	1.9	1.7	1.4	C	1.4	1.5	1.5	1.6	28
C	C	C	C	C	C	C	C	1.5	1.4	1.5	1.5	29
2.2	2.1	2.0	1.9	1.7	1.5	1.6	1.4	1.4	1.6	1.3	1.4	30
2.3	C	2.2	2.0	1.9	1.8	1.6	1.4	1.3	1.5	1.4	1.4	31
27	26	27	28	28	29	28	28	30	28	30	30	Count
2.3	2.2	2.1	2.0	1.8	1.6	1.5	1.6	1.6	1.6	1.5	1.5	Median
2.3	2.2	2.1	2.0	1.8	1.7	1.5	1.6	1.6	1.7	1.6	1.5	Mean

Sweep 1.0 Mc to 25.0 Mc in 27 seconds



Characteristic  $\cdot$  fmin  
 Unit Mc  
 Month December 1961

TABLE 61 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	1.4	1.3	1.3	1.2	1.5	1.4	1.4	1.7	2.1	2.3	2.2	2.4
2	2.0	1.5	1.7	1.1	1.2	1.4	1.4	1.8	1.9	2.3	C	2.4
3	C	C	C	1.7	C	1.5	1.7	2.3	2.0	2.2	2.6	2.5
4	1.8	1.6	1.8	1.3	1.0	E	1.4	1.8	1.8	2.0	C	2.3
5	1.5	1.5	1.6	C	C	1.2	1.5	C	C	C	C	2.4
6	C	C	C	C	C	C	C	1.6	C	2.2	2.4	2.3
7	C	C	C	C	C	C	C	C	C	C	C	C
8	1.8	1.4	1.4	1.4	C	C	1.2	1.4	C	C	C	C
9	1.9	1.6	1.4	1.0	1.0	1.2	1.3	1.6	1.7	2.1	2.3	2.4
10	1.5	1.4	1.5	1.0	1.3	1.2	1.3	1.4	1.7	1.9	C	2.1
11	1.4	1.3	1.3	1.1	E	1.1	1.4	1.5	1.6	1.8	C	2.2
12	1.6	1.4	1.4	E	1.2	1.3	1.2	1.4	1.7	1.8	2.3	2.2
13	1.3	1.0	1.1	E	E	1.1	1.3	1.4	1.7	2.1	2.2	2.1
14	1.4	1.5	1.3	1.1	1.1	1.1	1.2	1.6	1.8	2.2	2.1	2.2
15	1.6	1.7	1.5	1.1	1.1	E	1.2	1.3	1.6	2.1	2.2	2.3
16	1.3	1.1	1.2	1.0	E	E	1.1	1.2	1.6	1.9	2.0	2.3
17	1.3	1.3	1.3	1.1	E	E	1.2	1.3	1.6	1.8	2.1	2.3
18	1.3	1.3	1.2	E	E	E	1.0	1.2	1.7	1.7	2.0	2.2
19	1.1	1.2	1.6	1.1	1.1	1.0	1.2	1.3	1.6	1.8	1.9	2.0
20	1.3	1.5	1.2	E	1.1	1.0	1.2	1.2	1.6	1.8	2.0	2.1
21	1.2	1.4	1.1	E	1.0	1.0	1.1	1.3	1.5	1.7	2.1	2.2
22	1.2	1.4	1.3	1.0	1.0	1.0	1.3	1.3	1.6	1.7	2.0	2.1
23	1.8	1.3	1.3	1.0	E	1.2	1.1	1.4	1.7	1.9	2.1	2.2
24	1.6	1.5	1.2	1.1	1.0	E	1.2	1.4	1.8	2.1	2.2	2.2
25	1.7	1.2	1.4	1.1	E	1.0	1.2	1.2	1.5	1.9	2.2	2.1
26	1.4	1.5	1.3	1.0	1.2	1.1	1.3	1.5	1.6	C	C	2.4
27	1.4	1.6	1.3	E	1.2	1.1	1.5	1.3	1.6	1.9	2.0	2.3
28	1.5	1.1	E	E	E	1.1	1.4	1.6	1.8	2.0	2.1	2.3
29	1.8	1.3	1.3	1.3	1.1	1.2	1.3	1.9	C	C	C	C
30	1.3	1.7	1.5	1.1	E	E	1.4	1.4	C	1.8	2.0	2.2
31	1.2	E	1.2	E	E	E	1.3	1.6	1.7	1.8	2.1	2.2
Count	28	28	28	28	26	28	29	29	25	26	22	28
Median	1.4	1.4	1.3	1.0	1.0	1.1	1.3	1.4	1.7	1.9	2.1	2.2
Mean	1.5	1.4	1.4	1.2	1.1	1.2	1.3	1.5	1.7	2.0	2.1	2.2

Sweep 1.0 Mc. to 25.0 Mc. in 27 seconds

Characteristic fmin  
Unit Mc  
Month December 1961

TABLE 61 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2 5	2 3	2 4	1 9	1 8	1 7	1 6	1 6	2 1	1 7	2 4	1 9	1
2 4	2 3	2 4	2 0	Q	Q	Q	Q	Q	Q	1 9	Q	2
2 6	2 2	2 4	2 0	1 8	1 4	2 0	1 6	2 5	2 6	2 3	2 0	3
2 6	2 4	2 2	1 9	1 8	Q	1 5	2 2	1 4	Q	1 7	1 6	4
2 4	2 3	2 2	2 3	1 8	1 5	1 6	1 6	2 2	Q	Q	Q	5
2 4	2 3	1 9	1 9	1 7	1 5	Q	1 2	1 3	1 3	1 4	Q	6
Q	Q	Q	Q	1 8	1 5	1 5	1 5	1 5	1 5	1 2	1 6	7
Q	Q	Q	1 7	1 7	1 5	1 1	1 4	1 3	1 3	1 6	1 7	8
2 3	2 4	2 3	1 7	1 8	1 5	1 3	1 5	1 1	1 1	E	E	9
2 2	2 3	2 3	1 8	1 8	1 4	E	1 5	1 4	Q	1 3	1 2	10
2 2	2 1	2 2	1 6	2 1	1 6	2 0	1 6	1 4	1 5	1 3	1 4	11
2 2	2 0	2 2	2 1	2 1	1 5	1 7	2 2	2 0	2 0	1 5	1 5	12
2 1	1 9	2 0	1 7	1 7	1 3	2 1	1 6	1 7	1 6	1 5	1 6	13
2 1	2 1	2 1	1 8	1 8	1 5	1 5	1 7	1 3	1 7	1 5	1 8	14
2 3	2 0	2 0	1 9	1 6	1 4	1 7	1 5	1 5	1 3	1 1	1 2	15
2 0	2 0	1 8	2 2	1 7	1 7	1 5	1 5	1 5	1 3	1 3	1 8	16
2 1	2 3	2 1	2 8	2 4	1 8	1 6	1 6	1 6	1 4	1 4	1 3	17
2 0	2 1	2 2	2 0	2 0	1 7	1 8	1 5	1 6	1 4	1 4	1 6	18
2 3	2 1	2 1	1 7	1 7	1 5	1 4	1 8	1 5	1 5	1 6	1 5	19
2 1	2 1	2 1	1 7	Q	2 0	1 6	1 6	1 5	1 5	1 1	1 7	20
2 2	2 2	2 0	1 9	1 8	2 0	1 4	1 5	1 3	1 3	1 2	1 4	21
2 1	1 9	2 2	2 4	1 8	1 7	1 7	1 9	2 3	2 0	1 3	1 7	22
2 3	2 3	2 2	1 9	1 6	1 8	1 8	1 6	2 0	1 1	1 7	1 4	23
Q	Q	Q	1 7	1 7	1 7	2 1	2 1	1 9	1 8	1 8	1 3	24
2 1	2 2	2 0	2 1	1 9	2 2	2 4	1 9	1 9	1 7	1 8	1 6	25
2 3	2 2	2 2	1 9	1 9	1 5	1 5	1 4	1 9	1 3	1 3	1 4	26
2 3	2 3	2 2	1 8	1 6	1 6	1 6	1 7	1 8	2 0	1 8	1 7	27
2 5	2 4	2 3	2 0	1 8	1 6	Q	Q	1 6	1 6	1 5	1 9	28
Q	Q	Q	Q	Q	Q	Q	Q	1 4	1 3	1 4	1 4	29
2 0	2 1	2 0	1 7	1 7	1 7	1 3	1 4	1 5	1 4	1 4	1 3	30
2 3	Q	2 3	2 2	1 9	1 6	1 7	1 6	1 5	1 3	1 4	1 4	31
27	26	27	29	28	28	27	28	30	27	30	28	Count
2 3	2 2	2 2	1 9	1 8	1 6	1 6	1 6	1 5	1 5	1 4	1 6	Median
2 3	2 2	2 2	1 9	1 8	1 6	1 6	1 6	1 6	1 5	1 5	1 5	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic · h'F2  
 Unit : Km  
 Month December 1961

TABLE 62  
 Ionospheric Data  
 75°E Mean Time

Latitude . 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11	
1								L	L	L	945	960	
2								L	L	L	C	C	
3								L	L	L	L	300	
4								L	L	260	260 <sub>H</sub>	G	
5								L	L	L	L	L	
6								L	G	L	L	L	
7								G	G	C	C	C	
8								L	L	G	G	C	
9								L	L	L	L	L	
10								L	L	L	L	L	
11								L	L	L	320	320	
12									L	360 <sub>L</sub>	330 <sub>L</sub>	L	
13									L	300	310 <sub>L</sub>	320	
14									260	300 <sub>L</sub>	L	310	
15									260 <sub>L</sub>	320 <sub>L</sub>	330	340	
16									L	L	305	335	
17							L	L	L	L	L	340	
18							L	L	L	C	L	335 <sub>t</sub>	
19							L	L	L	285	330 <sub>L</sub>	360	
20							L	L	L	300	L	L	
21							L	L	L	300	305 <sub>L</sub>	350 <sub>t</sub>	
22								L	L	315	320	325	
23								L	295	280	315	320	
24								L	L	L	L	L	
25									L	305	320	L	
26							L	L	L	310	C	370	
27								L	L	L	L	L	
28								L	L	L	L	L	
29								L	L	C	C	C	
30								L	L	L	L	L	
31								L	L	L	L	L	
Count										3	13	12	14
Median										300	320	330	
Mean										295	320	335	

Sweep 1 0 Mc to 25-0 Mc. in 27 seconds.

Characteristic · h'F2  
Unit Km  
Month . December 1961

TABLE 62  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude : 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
L	L	L	L	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L	L							4
L	L	L	L	L								5
LH	L	L	L	L								6
C	C	C	C	L								7
C	C	C	L	L	L							8
L	L	L	L	L								9
L	L	L	L	L								10
L	3360z	L	L	L								11
L	L	L	L	L								12
910	L	L	L	L								13
L	930	3320z	L	L								14
3360z	L	L	L	L								15
L	335	310	L	L	L							16
L	340z	330z	L	L	L							17
L	L	L	L	L	L							18
3380z	L	L	L	L	L							19
3390z	370z	340	L	L	L							20
L	L	L	L	L	L							21
L	L	390	L	L	L							22
330	L	L	L	L	L							23
C	C	C	L	L	L							24
L	L	L	L	L	L							25
340	L	L	L	C								26
L	L	LH	L	L	L							27
L	L	L	L	L	L							28
C	C	C	C	C	L							29
L	L	L	L	L	L							30
L	C	LH	L	L	L							31
6	5	5										Count
335	340	330										Median
340	345	340										Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'F2  
 Unit Km  
 Month December 1961

TABLE 62 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								L	300	L	L	375
2								L	L	L	C	L
3								L	L	L	L	L
4								L	L	260	C	320
5								280	L	L	L	L
6								L	C	L	L	L <sub>EX</sub>
7								C	C	C	C	C
8							L	L	C	C	C	C
9							L	L	L	L	L	L
10								L	L	L	C	L <sub>EX</sub>
11								L	L	L	C	320
12								L	280	u310L	u320L	L
13								u290L	280	u300L	u310L	320
14								L	u280L	u300L	340	320
15								L	L	330	390	340
16							L	L	290	310	340	335
17							L	L	300	310	305L	L
18							L	L	L	310	340L	350L
19							L	L	L	L	L	350L
20							L	L	L	L	L	345L
21							L	L	L	320	L	L
22								L	L	315	320	350
23							L	L	300	315	330	310
24							L	L	L	L	L	L
25								280	300	320	L	360
26							L	L	L	C	C	L
27								L	L	L	L	L
28								L	L	L	L	L
29							L	L	C	C	C	C
30							L	L	C	L	L	L
31								L	L	L	L <sub>EX</sub>	L
Count								9	8	12	9	13
Median									295	310	330	340
Mean									290	310	325	340

Sweep 1 0 to 25 0 Mc. in 27 seconds

Characteristic : h'F2  
 Unit Km  
 Month December 1961

TABLE 62 (Contd.)  
 Ionospheric Data  
 75°E Mean Time

Latitude : 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
L	L	L	240	L								1
L	L	L	L	L								2
L	L	L	L	L								3
L	L	L	L	L								4
L	L	L	L	L								5
												6
L	L	L	L	L								7
C	C	C	C	L								8
C	C	C	L	L								9
L	L	L	L	L								10
L	9360L	L	L	L								11
L	L	L	L	L								12
L	L	L	L	L								13
330	300	9300L	L	L								14
9360L	L	L	L	L								15
350	315	L	L	L								16
355	L	L	L	L								17
L	L	L	L	L								18
350L	L	L	L	L								19
L	340	333	L	C								20
												21
L	L	L	L	L								22
L	965	L	L	L								23
L	L	L	L	L								24
C	C	C	L	L								25
L	L	L	L	L								26
315	320	L	L	L								27
L	LH	L	L	L								28
L	L	L	L	L								29
C	C	C	C	C								30
L	L	L	L	L								31
LH	C	LH	L	L								31
6	6	2	1									Count
350	330											Median
345	335											Mean

Sweep 10 Mc to 250 Mc in 27 seconds

Characteristic h'F  
Unit : Km  
Month December 1961

TABLE 63  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N  
Longitude · 77·5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	220	220	220	240	240	260	265	295	220	200	195	195
2	240	240	260	300	300	F	285	240	220	210	C	C
3	C	C	C	240	260	280	280	235	220	205	200	200H
4	220	215	220	220	260	R	260	225	210	200	195	C
5	230	225	220	220	225	F	260	225H	210	200	185H	180H
6	C	C	C	C	C	C	C	225	C	195	195	180
7	C	C	C	C	C	C	C	C	C	C	C	C
8	235	260	300	260	225	245	260	230	225	C	C	C
9	230	220	220	220	240	240	260	235	220	200	200	195
10	F	F	2230F	240	240F	2230r	260	235	220	200	195	200
11	220	220	220	225	220	220	240	220	210	200	180H	175H
12	310	300	260	290	320	270	260	230	220	200	190H	200
13	2240W	250	260	250	240	220	260	230	210	200	180H	200
14	250	250	220	230	220	240	250	230	205	200	180H	200
15	230	230	260	230	220	240	260	230	210	200H	180H	210H
16	225	225	210	205	200	205	260	230	205	200H	180H	190H
17	240	230	220	220	220	E	260	230	200H	200	195	195
18	220	220	225	220	220	260	255	210H	220	C	260	200
19	225	220	215	220	230	270	260	240	220	195	185	205
20	220	215	215	215	220	230	260	230	215	195	200	195
21	215	220	235	230	220	245	260	220	220	200	200	195
22	2245W	235	215	225	225	240	260	230	220	205	200	180
23	220	210	240	250	275	255	265	230	215	200	220	205
24	240	240	250	220	225	250	260	240	225	210	200	200
25	230	240	225	225	235	215	240	235	215	205	200	180
26	225	220	220	220	230F	240	255	235	200	210	C	190
27	225	225	230	220	225	245	270	230	220	215	215	200
28	235	240	230	230	240	240	240	240	220	200	260	200
29	260	260	255	235	230	230	260	240	220	C	C	C
30	260	245	255	240	235	255	280	220	220	210	260	195H
31	230	235	225	220	240	240	280	245	220	220	200	190
Count	27	27	28	29	29	26	29	30	29	27	26	26
Median	230	230	225	225	230	240	260	230	220	210	200	195
Mean	235	235	235	235	235	245	260	230	215	205	195	195

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic : h'F

TABLE 63

Latitude . 10 2°N

Unit Km

Ionospheric Data

Longitude . 77 5°E

Month December 1961

75°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
195	190	195	200	205	260	310	F	F	300	300	240	1
185 <del>EX</del>	195 <del>EX</del>	180 <del>EX</del>	225	230	240	255	305	300	F	260	275	2
205	200	200 <del>EX</del>	235	230	255	260	260	240	230	225	220	3
180 <del>EX</del>	180 <del>EX</del>	200 <del>EX</del>	200	220	245	280	270	240 <del>F</del>	230 <del>F</del>	240 <del>F</del>	230	4
190 <del>EX</del>	200 <del>EX</del>	190 <del>EX</del>	200	220	250	260	280 <del>F</del>	265	240 <del>F</del>	C	C	5
200	200	195	200	230	250	265	290	340 <del>F</del>	320 <del>F</del>	305 <del>F</del>	280 <del>F</del>	6
C	C	C	C	230	245	300	270 <del>F</del>	240 <del>F</del>	250	240	225	7
C	C	C	200 <del>EX</del>	225	255	260	300 <del>F</del>	280 <del>F</del>	220 <del>F</del>	245	240	8
185	200	200	200	220	260	290	310 <del>F</del>	275 <del>F</del>	210 <del>F</del>	220 <del>F</del>	240 <del>F</del>	9
195	200	200	200	215	255	275	260	260	C	220	240	10
180 <del>EX</del>	180	180 <del>EX</del>	205 <del>EX</del>	220	240	260	260	240	210	230	260	11
20	190 <del>EX</del>	200	210	230	240	260	260	280	290	260	260	12
190	20	180 <del>EX</del>	200	210	210	260	300	300	280	260	280	13
170 <del>EX</del>	170 <del>EX</del>	210	210	220	210	260	290	300	280	280	260	14
190	200	200	210	210	260	270	310	280	260	220	230	15
180 <del>EX</del>	195 <del>EX</del>	215A	210	200 <del>EX</del>	225 <del>EX</del>	250	280	280	275 <del>F</del>	260	270	16
185	18	200	205	215	240	230	215	255	240	230	220	17
200	180	185	200	230	240	260	275	260	255	240	240	18
200	190	190 <del>EX</del>	195	215	240	260	300	300	300	260 <del>F</del>	235	19
190	180	185	200	220	235	240	260	280	275	230	220	20
180	180	180	200	220	240	260	280	255	235	220	220	21
180 <del>EX</del>	180 <del>EX</del>	180 <del>EX</del>	C	230	260	245	275	300	290 <del>F</del>	260	250	22
180 <del>EX</del>	185	195	210	225	250	265	265	260	245	230	245	23
C	C	C	210	220	250	255	270	270	295	270	235	24
180	170 <del>EX</del>	200	210 <del>EX</del>	220 <del>EX</del>	245	270	315	315	280 <del>F</del>	250	240	25
190	185	180	190	C	240	260	280	280	270	260	260	26
195	190	180 <del>EX</del>	180 <del>EX</del>	220	240	260	295	265	240	225	240	27
200	200	200	200	215	250	260	C	320	245	F	F	28
C	C	C	C	C	C	C	C	330	300	245	240	29
200	200	200	200	200	260	290	F	F	F	F	235	30
190	C	180 <del>EX</del>	210	225	240	280	335	345 <del>F</del>	330 <del>F</del>	330 <del>F</del>	1	31
27	26	27	28	29	30	30	27	29	28	28	28	Count
190	190	195	200	220	215	260	280	280	270	245	240	Median
190	190	195	205	220	245	265	280	280	270	250	245	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic h'F  
Unit Km  
Month December 1961

TABLE 63 (Contd.)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	215	220	225	240	240	280	240	225	215	200	195	190
2	240	240	295	320	F	F	260	225	215	200	C	180
3	C	C	C	280	F	320	260	230	220	205	205	200H
4	220	205	225	250	290	330	245	225	210	200	C	180H
5	220	230	220	230	220	230	240	220	200	195	185H	195H
6	C	C	C	C	C	C	C	220	C	195	180	200
7	C	C	C	C	C	C	C	C	C	C	C	C
8	245	270	280	235	235	260	245	220	C	C	C	C
9	220	220	220	225	250	250	245	220	200	200	200	195
10	F	F	240	240F	230	230	240	230	210	200	C	200
11	225	220	235	220	220	220	220	220	200	190H	C	170H
12	305	280	290	310	300	240	250	230	200	200H	200	200
13	2260H	260	260	240	230	220	240	210	200	190H	190H	200
14	240	240	220	210	230	280H	240	230H	200	200	190	190H
15	230	240	240	220	230	260	250	220H	190H	190	210H	200H
16	225	210	210	205	205	205	240	220	205H	190H	180H	195
17	230	225	220	220	E	E	240	225	200	195	195	195
18	210	230	220	230	240	260	240	200H	200	200	200	200
19	220	220	220	225	240	260	245	220	205	190	180	205
20	220	220	230	230	225	260	240	215H	200	200	200	190
21	215	235	230	220	240	270	240	220H	210	200	195	185
22	240	225	215	220	225	240	245	220	205	200	190	180H
23	230	235	245	265	260	260	245	225	210	195H	220	215
24	240	250	240	215	240	245	250	225	210	200	195	190
25	240	230	235	235	225	215	245	225	215	205	185	180H
26	220	220	220	230	240	240	245	230	210	C	C	190
27	240	230	225	225	250	260	250	230	215	205	210	200
28	240	240	230	240	240	245	245	230	210	210	200	200
29	280	265	235	225	240	245	250	230	C	C	C	C
30	230	260	245	225	245	290	260	230	C	200	200H	200
31	230	235	220	230	240	260	260	240	220	210	195	190
Count	27	27	28	29	27	28	29	30	26	27	23	28
Median	230	230	230	230	240	260	245	225	210	200	195	195
Mean	235	235	235	235	240	255	245	225	205	200	195	195

Sweep 1.0 Mc to 25.0 Mc. in 27 Seconds

TABLE 63 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Characteristic h'F  
 Unit Km  
 Month December 1961

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
195	195	205	200	240	280	F	270	300	320 <sub>F</sub>	260	240	1
200	180 <sub>H</sub>	210	220	240	255	260	305	320	F	270	280	2
200 <sub>H</sub>	200	225	235	240	260	265	255	240	220	225	225	3
220	175 <sub>H</sub>	200	220	230	260	280	260 <sub>F</sub>	240 <sub>F</sub>	225 <sub>F</sub>	235	230	4
195	200	200	200	240	260	275	275	260	C	C	C	5
200	200	195	230	235	260	275 <sub>C</sub>	310	2340 <sub>F</sub>	2310 <sub>F</sub>	2300 <sub>F</sub>	2255 <sub>C</sub>	6
C	C	C	C	235	260	2300 <sub>F</sub>	230 <sub>F</sub>	230	240	240	230	7
C	C	C	210 <sub>H</sub>	235	260	280	2280 <sub>F</sub>	2240 <sub>F</sub>	2225 <sub>F</sub>	240	240	8
200	200	205	195 <sub>H</sub>	240	270	2310 <sub>F</sub>	2300 <sub>F</sub>	2240 <sub>F</sub>	2215 <sub>F</sub>	2220 <sub>F</sub>	F	9
195	200	195	205	225	265	270	255	265	C	230	220	10
180	180 <sub>H</sub>	200	220	240	250	260	240	240	240	230	280	11
190 <sub>H</sub>	180 <sub>H</sub>	200	210	230	250	260	270	280	280	270	250	12
200	190	200 <sub>H</sub>	200	220	260	290	310	300	280	280	260	13
210 <sub>H</sub>	200	200 <sub>H</sub>	200 <sub>H</sub>	230	260	270	280	280	280	270	240	14
200	200	200	200	230	260	290	300	280	290	220	225	15
180 <sub>H</sub>	205	210	205	225	250	260	295	280 <sub>F</sub>	F	265 <sub>F</sub>	220 <sub>F</sub>	16
180	180	200	205 <sub>H</sub>	230	240	230	240	250	230	220	220	17
195	180	185	200 <sub>H</sub>	220	255	270	275	260	250	240	240	18
195	195	185	205	230	245	280	300	300	280 <sub>F</sub>	240	220	19
180	180	200	210	C	240	255	275	285	250 <sub>F</sub>	220	220	20
180	180	200	200	225	250	265	260	240	235	215	235	21
180	180 <sub>H</sub>	200	220	230	245	260	300	280 <sub>F</sub>	285	265	250	22
200	190	200	210	240	250	275	265	240	235	240	245	23
C	C	C	220	230	250	260	265	280	290	250	225	24
180	200	200	205	230	260	300	310	305	250	245	230	25
180	185	180	200	230	260	280	280	270	A	260	240	26
190	185 <sub>H</sub>	220	215	230	260	295	280	260	230	230	240	27
200	200	200	205	240	260	C	C	340	2340 <sub>F</sub>	F	2290 <sub>F</sub>	28
C	C	C	C	C	C	C	C	350	265	240	250	29
200	200	200	200	240	270	340	F	F	F	F	235	30
180 <sub>H</sub>	C	180 <sub>H</sub>	220	230	265	315	2340 <sub>F</sub>	360	F	320 <sub>F</sub>	290 <sub>F</sub>	31
27	26	27	29	29	30	28	28	30	25	28	29	Count
195	190	200	205	230	260	275	280	280	250	240	240	Median
195	190	200	210	230	255	280	280	280	255	245	240	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'E  
Unit · Km  
Month December 1961

TABLE 64  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	A	A	A
2							140	105	105	A	C	C
3								110	A	A	A	A
4							120	A	A	A	A	C
5								A	A	A	A	A
6								A	C	A	A	A
7								C	C	C	C	C
8							120 <sub>H</sub>	A	A	C	C	C
9							120 <sub>H</sub>	A	A	A	A	A
10								115	A	A	A	A
11								105	A	A	A	A
12							140	120 <sub>H</sub>	A	A	A	A
13								120 <sub>H</sub>	A	A	A	A
14								110	110	110	A	A
15								A	A	A	A	A
16								105	A	A	A	A
17								105	100	100	100	100
18								110	100	C	A	A
19								100	A	A	A	A
20								105	A	A	A	A
21								A	A	A	A	A
22								110	105	A	A	A
23								110	110	A	A	105
24								110	105	A	A	A
25								110	110	105	A	A
26								A	A	A	C	A
27								A	A	A	A	A
28								A	A	A	A	A
29								120	110	C	C	C
30								A	A	A	A	A
31								115	A	A	A	A
Count							5	18	9	3	1	2
Median							120	110	105			
Mean							130	110	105			

Sweep 1.0 Mc. to 25.0 Mc in 27 seconds.

Characteristic : h'E  
 Unit Km  
 Month December 1961

TABLE 64—(Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude . 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
A	A	A	A	105	125							1
A	A	A	A	C								2
A	A	A	A	A	115							3
A	A	A	105	105	125							4
A	A	105	105	115								5
A	A	A	105	110	125							6
C	C	C	C	115	120							7
C	C	C	A	115	120							8
105	A	110	A	A	A							9
A	A	A	A	A	120m							10
A	A	A	A	115	R							11
A	A	A	A	110								12
A	A	A	A	A	A							13
A	A	A	A	A	A							14
A	A	A	A	A	A							15
A	A	A	115	110	120							16
A	A	110	A	115								17
A	A	A	A	115								18
A	A	A	100	110	115							19
A	A	A	100	A	120							20
A	A	A	A	115	120							21
A	A	A	C	115	A							22
A	A	A	110	115	A							23
C	C	C	110	110	A							24
A	A	A	110	110	125							25
A	A	A	A	C	120							26
A	A	A	A	A	115							27
A	A	A	A	A	A							28
C	C	C	C	C	C							29
A	A	A	A	A	A							30
A	C	A	A	A	A							31
1		3	9	17	14							Count
			105	115	120							Median
			105	110	120							Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'E  
Unit Km  
Month December 1961

TABLE 64 (Cont'd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1								A				A
2							A	105	A	A	A	A
3							115	115	A	A	A	A
4							A	A	A	A	A	A
5							110	A	A	A	A	A
6								A	C	A	A	A
7							C	C	C	C	C	C
8							A	A	C	C	C	C
9							120 <sub>z</sub>	A	A	A	A	105
10							120 <sub>z</sub>	A	A	A	C	A
11							105	105	A	A	C	A
12							120 <sub>z</sub>	A	A	A	A	A
13							A	A	A	A	A	A
14							120	110	A	A	A	A
15								A	A	A	A	A
16							C	A	A	A	A	A
17							100	105	100	100	100	100
18							110	100	100	A	A	A
19							100	100	A	A	A	A
20							120	A	A	A	A	A
21							A	A	A	A	A	A
22							120	110	105	A	A	A
23							115	110	105	A	A	A
24							115	105	105	A	A	A
25							110	110	105	A	A	A
26							120	A	A	C	C	A
27							115	A	A	A	A	A
28							130	A	A	A	A	A
29							120	115	C	C	C	C
30							A	A	C	A	A	A
31							115	110	A	A	A	A
Count							20	13	6	1	1	2
Median							115	110	105			
Mean							115	110	105			

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



Characteristic h'E<sub>s</sub>  
Unit Km  
Month December 1961

TABLE 65  
Ionospheric Data  
75°E Mean Time

Latitude : 10 2°N  
Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1				100				100	100	100	100	100
2					100	120	G	100	G	110	C	C
3					100	100		G	100	100	100	100
4							G	100	100	100	100	C
5		100						100	100	100	100	100
6								100	C	100	100	100
7								C	C	C	C	C
8							G	100	100	C	C	C
9							G	105	100	100	100	100
10	105	100			100			G	100	100	100	100
11								G	100	100	100	100
12					100		G	100	100	100	100	100
13								110	100	100	100	100
14	110	110						140	G	100	100	100
15	110		110					110	100	100	100	100
16								105	100	100	100	100
17								100	100	100	100	100
18			110					100	100	C	100	100
19								100	100	100	100	100
20								100	100	100	100	100
21					120			100	100	100	100	100
22								105	100	100	100	100
23	110	100		110				105	100	100	100	100
24	120					100		105	100	100	100	100
25		110						G	100	100	100	100
26								120	115	110	C	110
27				110				100	100	100	100	100
28								100	100	100	100	100
29		115						G	G	C	C	C
30	115						110	100	100	100	100	100
31	130							100	100	100	100	100
Count	7	6	2	3	5	3	1	25	26	27	26	26
Median	110	100			100			100	100	100	100	100
Mean	115	105			105			105	100	100	100	100

Sweep 1 0 Mc. to 25 0 Mc. in 27 Seconds

Characteristic h'Es  
 Unit Km  
 Month December 1961

TABLE 65—(Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°  
 Longitude 77 5°

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
100	100	100	100	100	G							1
100	100	100	100	140	100	100					115	2
100	100	100	100	100	G		100					3
100	100	100	100	100	G				110	120		4
100	100	100	100	100								5
100	100	100	100	100	G							6
C	C	C	C	105	G							7
C	C	C	100	105	G			105				8
100	100	100	100	105	120				115	110	110	9
100	100	100	100	105	G							10
100	100	100	100	G	G	100						11
100	100	100	100	120	100	100	100					12
100	100	100	100	100	100	100						13
100	100	100	100	110	130				120	110	110	14
100	100	100	100	100	120		110					15
100	100	100	100	105	G							16
100	100	100	100	G								17
100	100	100	100	100	G							18
100	100	100	100	100	G							19
100	100	100	100	G	G			120			110	20
100	100	100	100	100	G							21
100	100	100	C	100	100					110	110	22
100	100	100	100	100	100	105	100	100	125	115	115	23
C	C	C	100	G	120							24
100	100	100	100	105	G					115	120	25
110	110	110	110	C	120	100	105	115	115	120		26
100	100	100	100	100	G							27
100	100	100	100	100	115							28
C	C	C	C	C	C							29
100	100	100	100	100	115							30
100	C	100	100	100	100							31
27	26	27	28	24	19	6	6	9	5	8	8	Count
100	100	100	100	100	115	100	100		115	110	110	Median
100	100	100	100	100	110	100	105		115	115	110	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds.



Characteristic · h'Es  
Unit Km  
Month December 1961

TABLE 65 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude · 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1				100			105	100	100	100	100	100
2				115			100	G	100	100	C	100
3	G	C	C		100		G	G	100	100	100	100
4							105	100	100	100	C	100
5	100	100					105	100	100	100	100	100
6	C	C	C	C	C	C	C	100	C	100	100	100
7	C	C	C	C	C	C	C	C	C	C	C	C
8							105	100	C	C	C	C
9							110	100	100	100	100	100
10	100	100					G	100	100	100	C	100
11							G	G	100	100	C	100
12							G	100	100	100	100	100
13							110	100	100	100	100	100
14							G	G	100	100	100	100
15					100		110	100	100	100	100	100
16							105	105	100	100	100	100
17							100	100	100	100	100	100
18			110				100	100	100	100	100	100
19							100	100	100	100	100	100
20							G	100	100	100	100	100
21	110			100	105		100	100	100	100	100	100
22							130	105	100	100	100	100
23	105	100			125		110	105	100	100	100	100
24			110				110	100	100	100	100	100
25	110	110					G	G	100	100	100	100
26								120	110	C	C	110
27							G	100	100	100	100	100
28							G	100	100	100	100	100
29		115	115				G	C	C	C	C	C
30						120	115	100	C	100	100	100
31						115	G	G	100	100	100	100
Count	5	6	2	3	1	2	17	23	26	27	23	28
Median	105	105					105	100	100	100	100	100
Mean	105	105					105	100	100	100	100	100

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic h'Es  
 Unit Km  
 Month December 1961

TABLE 65 (Contd)  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
100	100	100	100	100								1
100	100	100	100	120	100					115	130	2
100	100	100	100	105	110		100					3
100	100	100	100	G				115	110			4
100	100	100	100	G								5
100	100	100	100	105								6
C	C	C	C	110								7
C	C	C	100	110			105	100				8
100	100	100	100	110					110	110	110	9
100	100	100	100	105					C			10
100	100	100	100	G	100							11
100	100	100	120	G	100	100						12
100	100	100	100	100	100			110		110	110	13
100	100	100	100	110	120					110	110	14
100	100	100	100	110								15
100	100	100	105	105								16
100	100	100	G									17
100	100	100	100	G								18
100	100	100	100	G								19
100	100	100	100	C		115				110	105	20
100	100	100	100	G								21
100	100	100	105	100					115	115	110	22
100	100	100	105	100	100	100	100		120	115	120	23
C	C	C	100	G								24
100	100	100	100	110	100					115	120	25
110	110	110	110	110	100		120	120	115	120		26
100	100	100	100	100								27
100	100	100	100	100								28
C	C	C	C	C	C	C	C	C	C	C	115	29
100	100	100	100	100								30
100	C	100	100	100								31
27	26	27	28	20	9	3	4	4	5	9	9	Count
100	100	100	100	105	100				115	115	115	Median
100	100	100	100	105	105				115	115	115	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000) F2  
 Unit : Km  
 Month December 1961

TABLE 66  
 Ionospheric Data  
 75°E Mean Time

Latitude 10 2°N  
 Longitude 77 5°E

Date/Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	3 50	3 40	3 35	3 40	3 30	3 25	2 95	2 80	2 70	2 70	2 60	2 50
2	3 10r	3 20r	3 05r	2 80r	F	F	2 80	3 10	3 05	2 85	C	C
3	C	C	C	F	F	F	F	3 20	3 00	2 60	2 35	2 60
4	3 35	3 45	3 55	3 50	3 50	R	2 90	2 90	2 90	2 60	2 60	C
5	3 35	3 30	3 35	3 45	F	3 50r	3 25	3 10	2 75	2 60	2 55	2 60
6	C	C	C	C	C	C	C	3 00	C	2 80	2 70	2 55
7	C	C	C	C	C	C	C	C	C	C	C	C
8	3 20	3 00	2 80	3 25	3 50	3 20	2 90	3 00	2 85	C	C	C
9	3 35	3 50	3 40	3 40	3 30	3 40	3 15	3 20	3 00	2 80	2 70	2 70
10	F	F	3 20r	3 20r	F	3 40r	3 30r	3 25	3 00	2 60	2 75	2 50
11	3 30r	3 20r	3 20r	3 15	3 30	3 55	3 30	3 30	3 30	2 85	2 30r	2 60
12	3 20r	F	F	F	F	3 20r	3 30r	3 30	2 90	2 80	2 60	2 45
13	3 20	3 10	3 15	3 25	F	F	3 30r	3 30	3 05	2 80	2 80	2 75
14	3 20r	3 30r	3 40	3 50	3 60	3 40r	3 40	3 50	3 40	3 20	3 00	2 70
15	F	3 40r	3 20r	3 30	3 50	3 50	3 20	3 05	3 00	2 80	2 80	2 80
16	F	3 20r	3 40	3 45	3 55	3 40	3 15	3 15	3 00	2 85	2 70	2 65r
17	3 30r	3 30	3 50r	3 50	3 70	3 50	2 95	3 30	3 10	2 85	2 80	2 70
18	3 50	3 50	3 50	3 60	3 65	3 30	3 10	3 15	2 95	C	2 65	2 70
19	F	F	3 60	3 55	3 50	3 50	3 20	3 10	3 10	2 90	2 80	2 60
20	3 40r	3 50r	3 35	F	3 50	3 60	3 15	3 30	2 95	2 80	2 75	2 60
21	3 50	3 40	3 40	3 40	3 40	3 50	3 00	3 00r	3 00	3 00	2 85	2 65
22	F	F	3 40	3 45	3 25	3 40	3 20	3 10	3 00	C	2 70	2 65
23	3 40	3 40	3 30	3 20	3 15	3 25	3 05	2 90	2 85	2 80	2 75	2 75
24	3 15	3 10	3 20	3 35r	3 40	3 35	3 25	3 00	2 75	2 60	2 70	2 55
25	3 25r	3 35r	3 25	3 15	F	F	3 35r	3 30	3 15	2 95	2 60	2 50
26	3 30	3 50	3 35	3 50	3 45	3 25	3 20	3 40	3 20	2 95	C	2 65
27	3 20r	3 30	3 35	3 25	3 25	3 25	3 15	3 20	3 10	2 85	2 60	2 55
28	3 35	3 20	3 35	3 30	3 30	3 20	3 15	3 00	2 85	2 80	2 70	2 75
29	F	3 15	F	3 30	3 35	3 40	3 30	3 40	3 15	C	C	C
30	3 15	3 20	3 15	3 20	3 40	3 25	3 00	2 90	2 75	2 65	2 70	2 65
31	F	3 15	3 25	3 20	3 20	3 25	3 05	3 15	3 10	2 85	2 60	2 60
Count	21	24	26	26	22	24	28	30	29	26	26	26
Median	3 30	3 30	3 35	3 30	3 40	3 40	3 15	3 15	3 00	2 80	2 70	2 60
Mean	3 30	3 30	3 30	3 35	3 40	3 35	3 15	3 15	3 00	2 80	2 70	2 65

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M300) F2  
Unit Km  
Month December 1961

TABLE 66  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

12	13	14	15	16	17	18	19	20	21	22	23	Hour/Date
2 50	2 50	2 60	2 70	2 60	2 60	2 50	F	F	F	2 90	2 90	1
2 50	2 55	2 55	2 60	2 70	2 90	2 95	2 60	2 70	F	F	2 80	2
2 40	2 45	2 40	2 45	2 70	2 70	2 70	2 80	2 90	3 10	3 20	3 30	3
2 50	2 50	2 60	2 65	2 70	2 70	2 65	2 70	2 85	3 10	3 10	3 30	4
2 55	2 60	2 70	2 70	2 80	2 80	2 60	2 65	2 70	3 20	C	C	5
2 50	2 50	2 60	2 60	2 60	2 70	2 65	2 60	2 55	2 50	F	F	6
C	C	C	C	2 60	2 55	2 55	F	2 85	3 00	u3 10 <sub>F</sub>	3 20	7
C	C	C	2 65	2 75	2 80	2 75	2 70	u2 80 <sub>F</sub>	F	u3 15 <sub>s</sub>	3 20	8
2 70	2 50	2 50	2 50	2 60	2 60	2 60	2 50	F	F	F	F	9
2 50	2 50	2 50	2 50	2 60	2 75	2 75	2 85	2 80	C	3 15	u3 20 <sub>F</sub>	10
2 70	2 55	2 60	2 70	2 90	3 00	3 05	3 10	3 20	3 20	3 30	3 10	11
2 40	2 50	2 50	2 70	3 00	3 15	3 05	3 00	2 95	2 75	3 00 <sub>F</sub>	3 35	12
2 55	2 50	2 60	2 60	2 80	2 90	2 90	2 80	F	F	F	F	13
2 75	2 70	2 70	2 65	2 60	2 80	2 90	2 80	2 80 <sub>F</sub>	u2 80 <sub>F</sub>	F	F	14
2 60	2 55	2 60	2 60	2 60	2 80	2 80	2 70	2 85	3 00	3 10	u3 25 <sub>F</sub>	15
2 55	2 80	2 80	2 75	2 70	2 60	2 70	2 70	2 70	F	2 95	F	16
2 50	2 65	2 70	2 90	3 20	3 15	3 30	3 15	3 10	3 20	3 45 <sub>F</sub>	3 50	17
2 70	2 45	2 60	2 70	2 85	2 90	2 90	2 90	2 90	3 10	3 20	F	18
2 55	2 70	2 65	2 65	2 80	2 85	2 80	2 70	u2 70 <sub>F</sub>	F	F	F	19
2 75	2 60	2 70	2 80	2 70	3 00	3 10	3 00	3 00	2 95 <sub>F</sub>	3 30 <sub>F</sub>	3 40 <sub>F</sub>	20
2 55	2 50	2 50	2 60	2 80	2 80	3 00	2 85	3 00	3 20	3 30	3 30	21
2 45	2 40	2 50	C	2 75	2 90	3 00	2 90	2 85 <sub>F</sub>	2 65	3 00	3 20	22
2 55	2 40	2 40	2 45	2 55	2 70	2 90	2 95	3 00	3 10	3 25	3 15	23
C	C	C	2 60	2 65	2 80	2 80	2 85	2 75	2 80	3 00	u3 35 <sub>F</sub>	24
2 50	2 40	2 50	2 50	2 65	2 70	2 70	2 60	2 65	2 85	3 15	3 20	25
2 50	2 50	2 45	2 50	C	2 65	2 75	2 70	2 80	2 85	2 90	u3 05 <sub>F</sub>	26
2 45	2 35	2 40	2 40	2 55	2 65	2 70	2 75	2 80	3 05	3 25	3 25	27
2 60	2 50	2 40	2 35	2 50	2 70	2 75	C	2 65	2 60 <sub>F</sub>	F	F	28
C	C	C	C	C	C	C	C	2 65	F	u3 05 <sub>F</sub>	u3 15 <sub>F</sub>	29
2 55	2 50	2 45	2 30	2 45	2 45	2 55	2 40	F	F	F	3 05	30
2 55	C	2 40	2 35	2 45	2 55	2 65	2 50	2 50 <sub>s</sub>	F	F	F	31
27	26	27	28	29	30	30	27	27	20	21	21	Count
2 55	2 50	2 55	2 60	2 70	2 80	2 75	2 75	2 80	3 00	3 15	3 20	Median
2 55	2 50	2 55	2 60	2 70	2 75	2 80	2 75	2 80	2 95	3 15	3 20	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000) F2  
Unit  
Month December 1961

TABLE 66 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2°N  
Longitude 77 5°E

Date/Hour	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1	3 45	3 45	3 40	3 30	J3 30R	2 80	3 00	2 85	2 80	2 60	2 60	2 45
2	3 20r	3 10r	2 90r	2 80r	F	F	3 00	3 10	2 95	2 70	C	2 50
3	C	C	C	F	F	F	3 20	3 05	2 80	2 50	2 45	2 50
4	3 40	3 50	3 50	3 45	3 40	2 60	3 00	2 85	2 80	2 60	C	2 60
5	3 30	3 30	3 40	F	u3 50r	u3 55r	3 20	2 95	2 70	2 60	2 60	2 50
6	C	C	C	C	C	C	C	2 85	C	2 75	2 60	2 50
7	C	C	C	C	C	C	C	C	C	C	C	C
8	3 20	2 80	3 05	3 40	3 60	2 60	3 10	2 85	C	C	C	C
9	3 45	3 45	3 50	3 50	3 40	3 20	3 25	3 10	2 90	2 80	2 70	2 70
10	F	F	3 10r	F	u3 40r	u3 40r	3 30	3 10	2 90	2 55	C	2 55
11	u3 30r	3 20r	3 10	3 30	3 30	3 30	3 35	3 30	3 00	2 60	C	2 70
12	F	F	F	F	F	u3 30r	u3 00r	3 00	2 90	2 75	2 50	2 45
13	3 20	3 10	3 20	u3 30r	F	F	3 35	3 20	2 95	2 70	2 80	2 70
14	u3 30r	u3 30r	3 45	3 60	3 50	u2 70r	3 50	3 50	3 50	3 10	2 80	2 70
15	F	u3 30r	3 30r	3 50	3 55	3 40	3 30	3 00	2 90	2 70	2 80	2 70
16	3 05r	3 20r	3 45	3 50	3 40	3 25	3 20	3 05	2 90	2 75	2 65	2 70
17	3 25	3 40r	3 55	3 60	3 50	3 10	3 20	3 30	3 00	2 90	2 80	2 70
18	3 50	3 50	3 50	3 45	3 45	3 45	3 20	3 05	2 85	2 70	2 70	2 70
19	F	3 50	3 50	3 50	3 50	3 50	3 30	3 10	3 00	2 80	2 80	2 75
20	3 40r	3 50r	3 40	F	3 50	3 50	3 30	3 20	2 80	2 80	2 60	2 60
21	3 35	3 40	3 40	3 50	3 45	3 40	3 20	2 80	2 95	2 85	2 60	2 50
22	F	3 30	3 40	3 55	3 45	3 30	3 30	3 00	2 90	2 75	2 65	2 60
23	S	3 35	3 20	3 15	3 15	3 15	3 00	2 80	2 90	2 80	2 75	2 70
24	3 15	3 10	3 25	3 45	3 35	3 30	3 10	2 90	2 50	2 75	2 60	2 40
25	3 25r	3 35r	3 20	u3 25r	F	3 40r	3 40	3 30	3 05	2 65	2 55	2 50
26	3 30	3 35	3 30	3 30	3 35	3 50	3 40	3 30	3 10	C	C	2 65
27	3 20r	3 40	3 35	3 35	3 25	3 35	3 15	3 15	3 05	2 75	2 55	2 45
28	3 20	3 30	3 40	3 30	3 20	3 25	3 10	2 95	2 80	2 70	2 70	2 65
29	3 10	F	3 30	3 35	3 35	3 50	3 40	3 25	C	C	C	C
30	3 15	3 15	3 25	3 45	3 35	3 10	u3 10r	2 85	C	2 70	2 60	2 60
31	F	3 25	3 10	3 05	3 25	3 20	3 10	3 15	2 95	2 70	2 60	2 60
Count	21	25	27	24	24	26	29	30	26	27	23	28
Median	3 25	3 30	3 35	3 40	3 40	3 30	3 20	3 05	2 90	2 70	2 60	2 60
Mean	3 25	3 30	3 30	3 35	3 40	3 25	3 20	3 05	2 90	2 75	2 65	2 60

Sweep 1 0 Mc to 25 0 Mc in 27 seconds

Characteristic (M3000) F2  
Unit  
Month December 1961

TABLE 66 (Contd)  
Ionospheric Data  
75°E Mean Time

Latitude 10 2'N  
Longitude 77 5'E

1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Hour/Date
2 55	2 35	2 60	2 50	2 65	2 50	u2 40F	F	F	F	3 10	3 10F	1
2 50	2 55	2 55	2 60	2 80	3 00	2 80	2 60	F	F	2 80	u2 70F	2
2 35	2 50	2 30	2 60	2 70	2 80	2 70	2 85	3 00	3 20	3 30	3 30	3
2 45	2 50	2 50	2 65	2 70	2 70	2 60	2 70	3 00	3 10	3 20	3 30	4
2 60	2 60	2 65	2 70	2 80	2 70	2 65	2 60	3 10	C	C	C	5
2 50	2 60	2 60	2 65	2 60	2 70	2 60	2 55	2 50	F	F	F	6
C	C	C	C	2 60	2 60	F	u2 70F	3 05	3 10	3 20	3 30	7
C	C	C	2 65	2 75	2 80	2 70	2 70	F	u3 10F	3 20	3 20	8
2 60	2 40	2 45	2 50	2 60	2 60	2 60	u2 45F	F	F	u3 10F	F	9
2 50	2 60	2 50	2 60	2 60	2 70	2 80	2 85	2 90	C	3 10F	3 20F	10
2 50	2 70	2 60	2 75	3 00	3 10	3 00	3 10	3 20	3 30	3 30	3 00	11
2 60	2 40	2 50	2 70	3 00	3 20	3 00	3 00	2 80	2 90	3 20	3 30	12
2 50	2 45	2 65	2 80	2 80	2 95	2 80	2 75	F	F	F	u3 30F	13
2 60	2 65	2 60	2 65	2 70	2 80	2 85	2 70	u2 75F	F	F	F	14
2 70	2 55	2 65	2 60	2 75	2 80	2 70	2 70	2 85	3 30	3 25	u3 05F	15
2 70	2 80	2 80	2 75	2 70	2 65	2 70	2 65	2 75	F	2 90F	F	16
2 50	2 60	2 80	3 10	3 20	3 20	3 30	3 10	3 10	3 15F	3 50F	3 50	17
2 60	2 60	2 60	2 55	2 90	2 90	2 90	2 90	3 00	3 20	3 20F	F	18
2 70	2 70	2 60	2 70	2 90	2 90	2 80	2 70	F	F	F	F	19
2 60	2 65	2 80	2 70	C	3 00	3 10	3 00	2 90	3 20F	F	3 50	20
2 45	2 45	2 50	2 65	2 90	2 85	2 90	2 85	3 05	3 45	3 30	3 20	21
2 50	2 65	2 55	2 55	2 70	3 05	3 00	2 80	2 90	2 90F	3 05	3 45	22
2 40	2 45	2 40	2 50	2 65	2 90	2 90	2 90	3 05	3 15	3 15	3 05	23
C	C	C	2 60	2 70	2 85	2 90	2 85	2 80	2 90	3 15	3 35F	24
2 35	2 50	2 55	2 60	2 60	2 70	2 70	2 65	2 70	3 00	3 05	3 20	25
2 50	2 60	2 45	2 50	2 60	2 70	2 70	2 75	2 85	2 90	2 95	3 25	26
2 40	2 35	2 45	2 50	2 65	2 70	2 70	2 75	2 95	3 20	3 30	3 25	27
2 70	2 40	2 35	2 40	2 60	2 65	C	C	2 55	2 65F	F	F	28
C	C	C	C	C	C	C	C	2 60	F	u3 15F	3 20	29
2 50	2 50	2 35	2 35	2 50	2 50	2 45	F	F	F	F	3 10	30
2 50	C	2 35	2 40	2 50	2 60	2 55	2 45	F	F	F	F	31
27	26	27	29	29	30	28	27	23	18	22	22	Count
2 50	2 55	2 55	2 60	2 70	2 80	2 75	2 75	2 90	3 10	3 20	3 20	Median
2 55	2 55	2 55	2 60	2 75	2 80	2 80	2 75	2 90	3 10	3 15	3 20	Mean

Sweep 1 0 Mc to 25 0 Mc in 27 seconds



**SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES**

JULY—DECEMBER, 1961

Frequency 100 Mc sec  
Normal Observing { 0300 hrs to  
Period { 1000hrs U.T

Station Astrophysical Observatory, Kodikanal  
(Latitude 10 2° N Longitude 77 5° E)

Date	Starting time in U.T	Duration in minutes	Type	Maximum flux density ( $\times 10^{-22}$ W M <sup>-2</sup> (c/s) <sup>-1)</sup>		Remarks
				Instantaneous	Smooth	
1	2	3	4	5	6	7
	H M					
Septr 1	06 51	3 0	SD	>>9	5	Flare of importance 1
Septr 1	07 00	0 8	ESD	>>9	5	
Septr 2	04 33	1 0	SD	>>18		
Septr 2	04 34 5	1 0	SD	>>18		
Septr 2	06 00	1 0	SD	>262		Flare of Importance 1†
Septr 2	06 03	1 5	SD	>>11		
Septr 2	06 43 5	1 5	SD	>>9	>6	
Septr 2	06 56 3	2 3	SD	>9	>6	Flare of Importance 1
Septr 2	08 41 3	1 5	SD	>421		Do
Septr 5	06 57	1 0	ESD	>>6		
Septr 11	06 14 3	1 0	ESD	>>9	3	
Septr 11	06 16 5	1 0	ESD	>>9	3	
Septr 14	04 33 8	3 8	CA	>>24	9	
Septr 18	05 52 5	0 5	ESD	>>12		
Septr 21	03 55 5	0 8	ESD	>>16		
Septr 27	03 51 8	3 8	SD	>>14	>11	
Septr 27	05 57	3 0	SD	>>7		
Septr 27	06 44 2	0 8	ESD	>>7		
Septr 27	07 21	3 0	SD	>>7		
Septr 28	09 16 5	3 0	SD	>358		Flare of importance 1
Septr 29	05 27	0 8	ESD	>>11		
October 3	05 07 5	0 2	ESD	6		Flare of importance 1
October 9	04 38 2	1 5	CA	19	10	
October 9	06 00 8	1 0	CA	67	19	Flare of importance 1
October 9	06 40 5	2 2	CA	60	24	
October 10	05 11 2	0 8	SD	11	3	
October 10	06 33	1 5	CA	8	1 5	
October 11	06 04	0 4	ESD	11		
October 14	05 54 8	0 2	ESD	9 5		
October 17	05 19 5	1 0	SD	>10	5	
October 23	07 05 2	0 3	SD	>9	2	
October 26	05 36	0 8	SD	7		
October 29	05 48 8	0 4	SD	6		
Novr 3	03 07 5	7 0	SD	16		
Novr 12	03 47 2	0 8	ESD	>13		
Novr 12	04 22 5	0 8	ESD	>18		
Novr 18	05 50 2	3 0	SD	>9		
Decr 5	08 55	1 5	CA	>26		
Decr 14	05 38 2	3 8	SD	>11		
Decr 28	08 51	0 2	ESD			Flare of importance 1
Decr 29	05 51	1 0	ESD	>19	12	



ERRATA FOR MONTHLY BULLETIN NO. 314VII

Part I.

Page No.	Title	Column	For	Read
10	Ferro Data November 22	7	1-	1+
12	Surgas etc, November 23, BSL	7	0140	0740

Part II.

Magnetic Data

Page No.	Table No.	Date/Line	How Column	For	Read
14	--	4.	--	CLXXII and CLXXVI	CLXXI, CLXXVI and CLXXIII
22	4	mean +	10	27.0	33.7
27	3	3	15	30.1	36.1
27	3	5	15	33.3	38.1
30	3	13	01	551	532
32	9	14	03	528	523
32	9	mean	03	595	598
32	9	mean ++	03	575	595
33	9	14	mean	571	575
34	10	4	04	614	613
36	11	21	07	574	573
39	12	22	Range	32	132
39	12	mean	Range	101	105
41	13	14	lin./Time	0715	0915
43	14	11	21	256	233
43	14	11	Max./mag.	256	233
43	14	11	Range	30	17
43	14	18	Mag./Time	0340	2340
43	14	31	13	233	255
43	14	mean ++	22	255	255
44	15	3/Heading	--	full of hours	full hours
45	15	14	20	241	241
50	18	mean +	08	201	201
52	19	Heading	10	Greenwich 3 day	Greenwich day
52	19	Heading	11	Greenwich 3 hour index	Greenwich 3 hour period
52	19	September 30	3	1	1

Page No.	Table No.	Date/Line	Hour/Column	For	Read
54	1	1	00	U 5.4 F	U 4.5 F
72	8	-	Count	21	27
90	10	-	Mean	11	110
94	11	1	00	02.90 F	U 2.90F
94	11	14	09	U2 35 C	U 2.30S
134	21	2	05	--	100
140	22	8	0430	EU	L
153	23	-	0430	0340	0430
135	33	21	1030	2.30	3.30
137	34	11	13	--	9.4
139	34	30	1330	12.1	12.3
195	36	29	12	U 3.4 R	U 3.4R
198	37	23	03	U 4.85	U 4.3
217	41	29	1430	U 235 F	U 235B
217	41	29	1530	U 240 F	U 240L
217	41	15	2130	270	290
217	41	25	2230	U 250 H	U 250F
221	42	12	1430	510	110
222	43	11	11	--	100
223	43	19	14	100	110
234	43	24	6	3	--
251	50	15	14	2.2	2.4
254/255	51	Unit	--	Mc.	mm.
256/257	51	Unit	--	Mc.	Km.
257	51	22	1730	--	L
257	51	23	1730	L	--
257	51	24	1730	--	L
251	52	medi n	1730	265	260
274	56	5	05	4.5	4.7
275	53	24	23	3.3 F	U 3.3F
277	53	25	2130	U 7.1 F	U 7.1S
277	53	27	2330	U 5.3 F	U 5.3S
290	50	09	01	--	2.0
273	62	12	09	U 360 L	U 260 L
317	53	11	2130	3.30	3.20

bsr. j/-