Kodaikanal Observatory

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PART I

Summary of Prominence and Calcium Flocculus Observations for the first half of 1957

The results of observations of Prominences and Calcium Flocculi made at Kodaikanal Observatory during the first half of 1957 supplemented by data computed from photographs supplied by Mount Wilson and Meudon Observatories for those days on which Kodaikanal had imperfect or no observations are summarised in this Bulletin.

Calcium Prominences on the limb.—During the half-year under review, photographs of Calcium prominences at the limb were obtained at Kodaikanal on 158 days which were counted as 156¾ effective days after giving due weightage to the photographs according to their quality. Spectroheliograms for 15 days were received from the Mount Wilson Observatory and for 3 days from the Meudon Observatory. In all complete observations were available for 171 effective days.

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

	Combined data	
	Mean daily areas (square minutes)	Mean daily numbers
North	2·66	4·84
South	2·26	4·15
TOTAL .	4·92	8·99

These figures when compared with the corresponding values of the previous half-year indicate a slight decrease in activity, the decrease being 12·7% for areas and 1% in numbers. The values based on Kodaikanal observations alone are also given below for comparison with similar data published in bulletins prior to 1923 *i. e.* before the co-operation of the other observatories came into force.

	Kodaikanal data only	
	Mean daily areas (square minutes)	Mean daily numbers
North	2·72	4·91
South	2·32	4·19
TOTAL .	5·04	9·10

The distribution of areas and numbers in five-degree ranges of latitude as obtained from the combined data is represented in diagram I. For areas there are two peaks of activity in the northern hemisphere in the latitude belts 10°—15° and 60°—65°. In the southern hemisphere the maximum activity is in the belt 35°—40°,

1—1 D.D.G.Obs. Kodai/58

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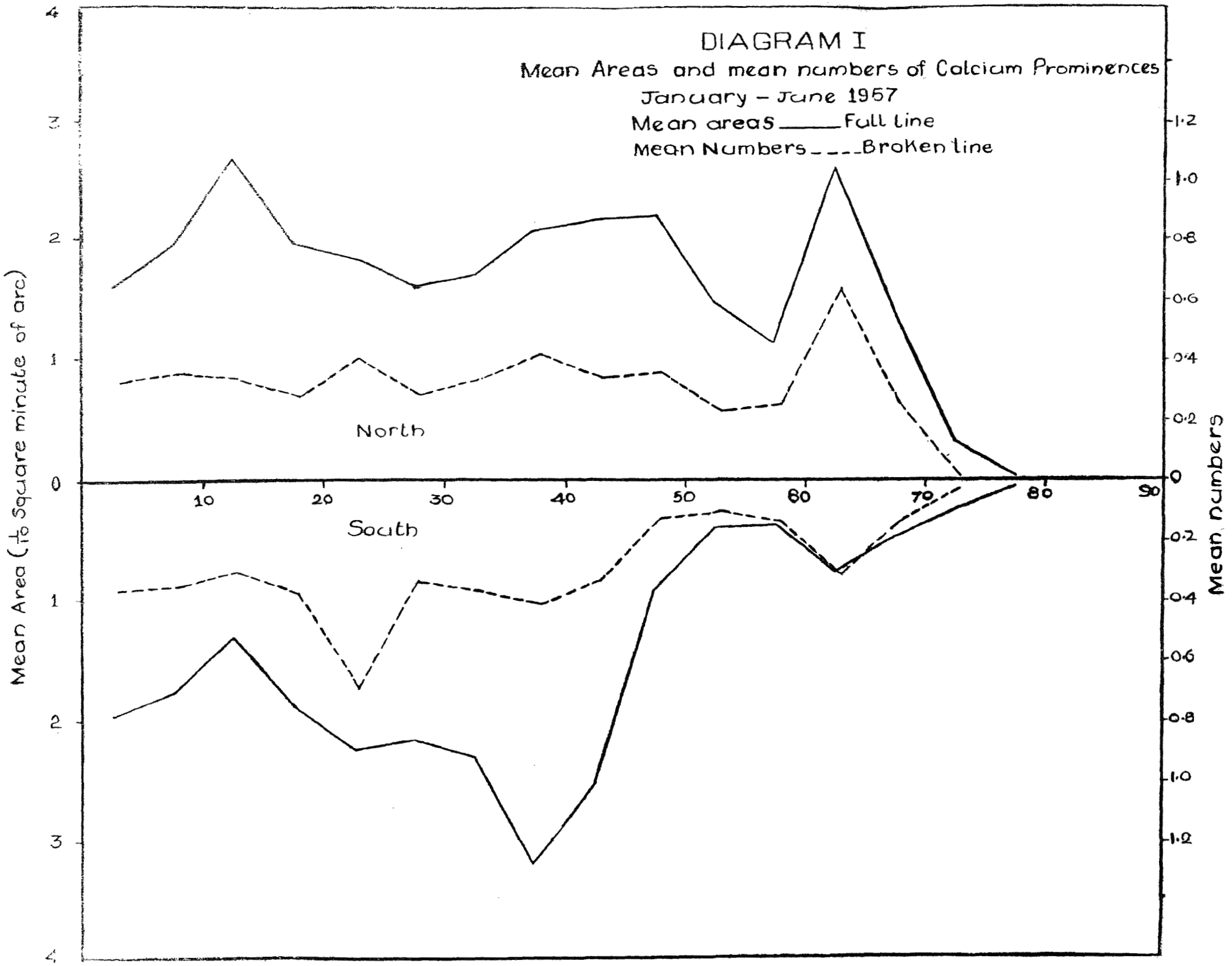


DIAGRAM I
Mean Areas and mean numbers of Calcium Prominences
January – June 1957
Mean areas ____ Full line
Mean Numbers - - - - Broken line
North
South
Mean Area (1/10 Square minute of arc)
Mean numbers
0
1
2
3
4
10
20
30
40
50
60
70
80
90
0·2
0·4
0·6
0·8
1·0
1·2

The monthly, quarterly and half-yearly areas, numbers, heights and extents of prominences derived from all the photographs are given in Table 1.

TABLE 1

1957 Months	No. of effective days	Areas (sq. minutes)	Numbers	Daily means		Mean height	Mean extent
				Areas (square minutes)	Numbers		
January	30	166·80	243	5·56	8·9	48·8	6·56
February	26¼	115·25	262	4·31	9·8	48·6	4·50
March	30½	176·80	323	5·80	10·6	51·1	4·14
April	29¾	152·75	258	5·13	8·7	47·4	4·75
May	26	114·05	227	4·38	8·7	44·9	3·66
June	28	115·80	226	4·13	8·1	48·8	4·09
First quarter	87¼	458·85	828	5·25	9·5	49·6	4·96
Second quarter	83¾	382·60	711	4·44	8·5	47·1	4·19
First half-year	171	841.45	1539	4·92	9·0	48·4	4·61

The distribution of prominences about the sun's axis of rotation is as follows :—

1957 January—June	East	West	Percentage East
Area (Sq. minutes)	411·75	429·70	48·9
Numbers	739	800	48·0

There is a slight western excess in the distribution.

Observations with the Prominence Spectroscope.—Only one metallic prominence was observed during the period. 14 reversals of H-alpha line and 4 reversals of D_3 line near sunspots were observed.

The mean heights in H-alpha, D_3 and H-beta lines of 36 prominences observed with the spectroscope and the mean height in the K-line of the same prominences as measured from the calcium spectroheliograms are as follows :—

	Mean height
K	84·3
H-alpha	71·7
D	55·5
H-beta	49·4

Observations with the Hale Spectrohelioscope.—Details of Doppler displacements in prominences and dark markings observed with the H-alpha line are tabulated below :—

	North	South	East	West	Displacements			Total
					To red	To violet	Both ways	
Displacements in prominences	76	69	75	70	..	..	145	145
Displacements in dark markings	3	10	6	7	..	..	13	13

Solar Flares.—Details of solar flares observed during the period are summarised in Table 2.

TABLE 2

Date 1957	Time in I.S.T. Beginning h. m.	Time in I.S.T. Maximum h. m.	Time in I.S.T. End h. m.	Mean latitude °	Mean longitude from central meridian	Intensity	Maximum width of H-alpha line observed	Remarks
January 6 . . .	07 40	08 07	08 15	18 N	47 W	1	4·0	Observed in spectrohelioscope.
January 7 . . .	09 30	09 37	10 05	20 N	90 W	2	7·7	Ditto.
January 24 . . .	08 20	08 30	08 36	16 N	28 W	2	2·8	Ditto.
February 14 . .	09 57	10 00	10 04	14 N	08 W	1	1·7	Ditto.
March 27 . . .	09 48	09 52	10 02	12 N	18 E	1	2·0	Ditto.
April 2 . . .	09 07*	09 09	09 23	16 S	44 W	2	2·4	Ditto.
April 17 . . .	09 10*	09 14	09 16	15 S	78 E	2	4·0	Ditto.
April 19 . . .	10 27	10 40	10 55	26 S	45 E	1	1·4	Ditto.
May 7 . . .	08 04	08 06	08 10	30 S	51 E	1	3·2	Ditto.
May 7 . . .	14 25	14 32	14 42	12 N	55 E	1	2·0	Ditto.
May 14 . . .	07 52	07 55	08 00	20 S	87 E	1	3·0	Ditto.
May 31 . . .	07 40	07 45	08 05	24 N	78 W	1	2·0	Ditto.

*Time when the flare was first observed and not the beginning of the flare.

Sudden disappearances of Prominences and H-alpha Dark-Markings.—There were 12 instances of sudden disappearance of prominences and dark-markings. The particulars of these occurrences are given in the following Table :—

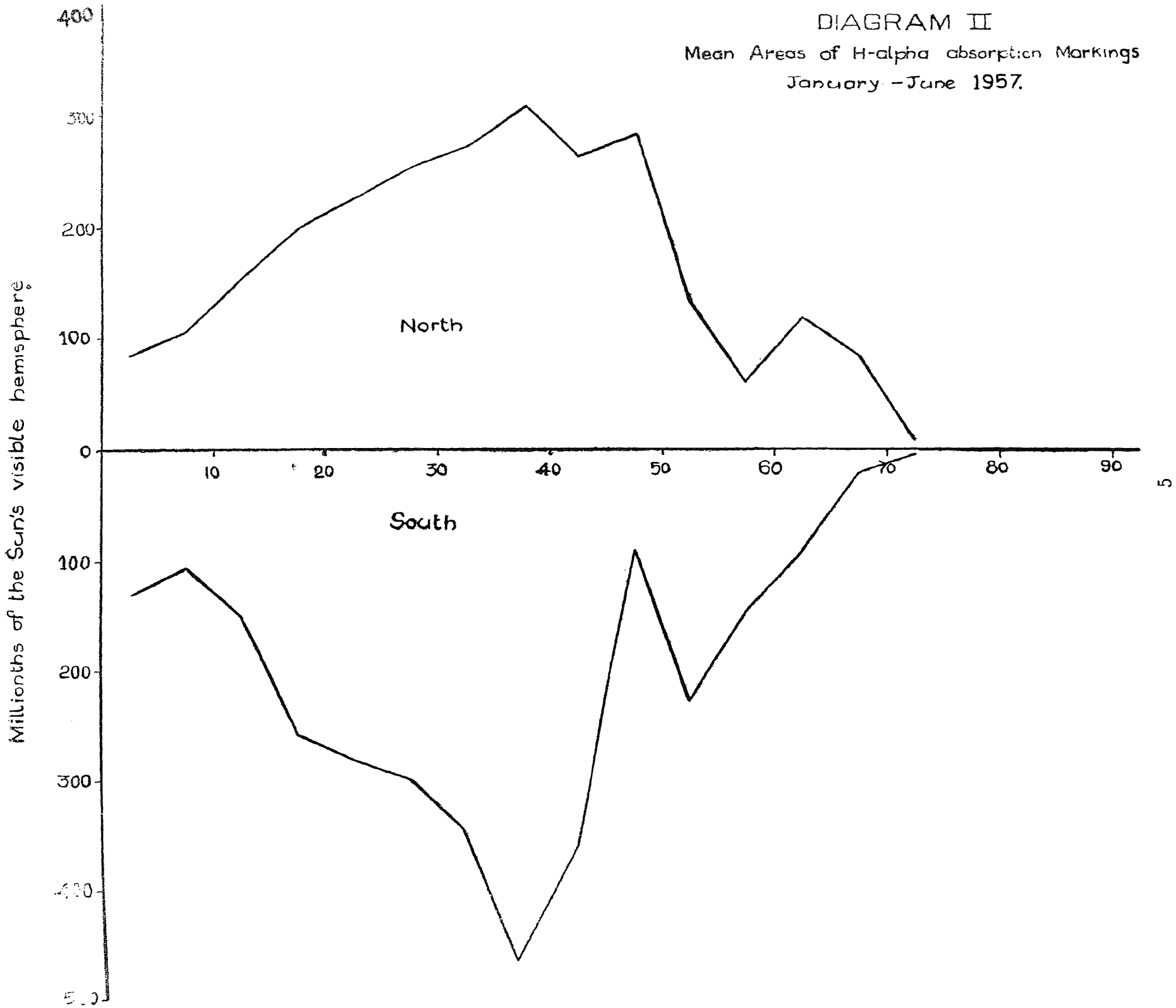
TABLE 3

Nature of phenomenon	Date and time (IST) of phenomenon when last seen		Coordinates of phenomnon Mean latitude °	Coordinates of phenomnon Mean longitude °	Remarks
		h. m.			
Prominence	January 13	10 06	15 N	90 W	Disappeared at 1006 hrs.
Do.	Do. 21	11 30	25 S	90 E	Disappeared at 1130 hrs.
Do.	Do. 26	12 00	27 S	90 W	Disappeared at 1200 hrs.
Do.	February 15	11 00	25 S	90 W	Disappeared before 1130 hrs.
Do .	March 20	09 58	28 N	90 E	Disappeared at about 0958 hrs.
Do.	Do. 27	08 30	21 N	90 E	Disappeared before 0930 hrs.
Do.	April 10	09 45	23 S	90 E	Disappeared at 0945 hrs.
Dark Marking	Do. 14	10 00	42 S	25 W	Disappeared between 14th & 15th.
Prominence	Do. 16	11 45	27 N	90 E	Disappeared at 1145 hrs.
Do.	Do. 26	08 10	18 S	90 W	Disappeared at 0810 hrs.
Dark Marking	May 4	14 30	35 N	20 E	Disappeared between 4th & 5th.
Do.	Do. 16	15 55	45 S	35 W	Disappeared between 16th & 17th.

DIAGRAM II

Mean Areas of H-alpha absorption Markings

January - June 1957.



Prominences projected on the disc as absorption markings.—During the period under review photographs of the sun's disc in H-alpha line were obtained at Kodaikanal on 161 days. Spectroheliograms were also received for 12 days from the Mount Wilson Observatory and for 3 days from the Meudon Observatory. On the whole records were available for 171¾ effective days.

The mean daily area in millionths of the sun's visible hemisphere (uncorrected for foreshortening) and the mean daily number of the H-alpha dark markings as derived from the combined data are given below :—

	Combined data	
	Mean daily area (Millionths of the sun's visible hemisphere)	Mean daily number
North	2586	13·9
South	2636	14·0
TOTAL	5222	27·9

In comparison with the previous half-year's values there has been a slight increase of 2·8% in areas while the numbers show a decrease of 8·2%. The figures based solely on Kodaikanal photographs are also given for purposes of comparison.

	Kodaikanal data only	
	Mean daily area (Millionths of the sun's visible hemisphere)	Mean daily numbers
North	2567	13·8
South	2558	13·6
TOTAL .	5125	27·4

The distribution of the areas of the markings in five-degree ranges of latitude as obtained from the combined data is shown in diagram II. The salient features of the distribution are the zone of activity in the northern hemisphere in the latitude belt 30°—50° and a well-marked peak of activity in the latitude belt 35°—40° in the southern hemisphere.

The distribution of total areas and numbers of the dark markings east and west of the sun's axis is as follows :—

	Combined data		
	East	West	Percentage East
Total area (millionths of the sun 's visible hemisphere uncorrected for foreshortening)	413,654	484,150	46.1
Total Numbers	2,275	2,528	47.4

There is a noticeable western excess in the distribution of dark markings.

Calcium Flocculus.—During the period under review Calcium Flocculus spectroheliograms were taken on 158 days at Kodaikanal, while Calcium spectroheliograms for 16 days were received from the Mount Wilson Observatory and for 3 days from the Meudon Observatory. In all observations were available for 174¼ effective days.

The mean daily areas (in millionths of the sun's visible hemisphere—uncorrected for foreshortening) computed from the combined data are given below :—

	Combined data Mean daily area (millionths of the sun's visible hemisphere)
North	8041
South	13261
TOTAL	21302

Compared to the previous half-year's value the area shows a decrease of 32·7%.

The distribution of flocculi east and west of the sun's axis of rotation is as follows :

	East	West	Percentage East
Total area in millionths of the sun's visible hemisphere	2,206,821	2,163,954	50·5

There is no significant difference in the east-west distribution of calcium flocculi.

Our thanks are due to the co-operating observatories for the photographs supplied by them.

PART II

Magnetic observations for the first half of 1957

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 coefficients of the Horizontal Force, Vertical Force and Declination magnetographs for the first half of 1957 are 28 /cm., 115 γ/cm. and 14′/cm. respectively.

Trends in magnetic variations

The mean value of and range in horizontal force for the first half of 1957 were 39509 γ and 176 γ respectively showing an increase over the corresponding values *viz.* 39499 γ and 153 γ for the second half of 1956. The mean value of vertical force decreased from 2376 γ to 2362 γ and the mean range increased from 53 γ to 58 γ. The mean westerly declination was 2°35′.5 and the mean range was 4′·8 showing an increase of 0′·2 and 0′·1 respectively over the corresponding values for the second half of 1956.

PART III

Ionospheric observations for the first half of 1957

A description of the system of ionospheric observations at Kodaikanal, together with a brief description of the ionosphere recorder used, has been given in Bulletin No. CXLVI of this observatory. The present bulletin contains the values of the ionospheric parameters, foEs., foE, foF1, foF2, h′E, h′F, h′F2 and (M 3000)F2 with symbols and terminology as recommended by the Special Committee on World-wide Ionospheric Soundings to the U.R.S.I/A.G.I. in its first report (Brussels, September 2, 1956).

Two new parameters *viz.* h′F and foEs have been introduced and h′F1 and fEs have been dropped. Explanation of the two new parameters *viz.* h′F and foEs is given below :—

h′F=The minimum virtual height of the F region.

foEs=The ordinary wave top frequency of Es trace corresponding to the highest frequency at which mainly continuous trace is observed.

KODAIKANAL OBSERVATORY;
March, 1958.

A. K. DAS,
Deputy Director-General of Observatories.

MAGNETIC DATA

2—1 D. D. G. Obs. Kodi./58

TABLE 1

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January 2° plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	35·0	35·5	36·2	36·5	36·2	36·4	36·7	35·8	36·4	36·8	36·5	35·8	35·3	35·0	35·0
2	35·5	36·1	36·7	36·9	36·9	36·1	35·8	35·5	34·8	34·8	34·7	34·4	34·4	34·6	34·4
3	33·2	34·0	35·7	35·8	36·1	35·8	36·1	36·4	36·2	35·4	34·6	34·0	34·4	34·7	34·7
4	34·8	35·4	36·1	36·0	35·5	35·1	34·7	34·1	34·1	35·1	35·4	36·1	35·8	35·4	35·0
5†	35·4	36·1	36·5	36·4	36·7	36·7	36·1	36·4	35·8	36·1	35·3	34·7	34·7	34·7	34·7
6	35·4	36·0	36·1	36·1	36·1	36·1	34·8	34·7	35·3	36·5	35·8	35·4	35·4	35·4	35·0
7	36·1	36·4	36·8	37·3	37·6	37·6	37·0	37·0	36·8	36·8	36·2	35·1	35·1	35·5	35·2
8	35·6	35·9	36·2	36 2	35·5	35·9	35·6	36·2	35·9	35·5	35·4	35·6	35·4	35·5	34·9
9	35·5	35·9	36·8	37 3	37·3	36·9	36·5	36·2	35·9	35·8	36·2	36·4	36·1	35·6	35·1
10††	35·9	36·1	36·3	36 6	36·5	36·8	37·2	35·6	35·5	34·8	34·7	34·8	34·7	34·9	34·8
11	34·8	34·8	35·5	35·9	35·5	35·5	35·9	36·3	35·8	35·1	34·8	34·8	35·1	35·1	34·7
12	34·8	35·4	36·2	36 8	36 5	36·2	36·8	36·6	36·2	35·5	35·5	34·8	34·8	34·9	34·8
13†	36·2	36·1	36·2	36 2	35·9	36·1	35·9	36·2	35·9	36·1	35·8	35·5	35·5	35·9	35·6
14†	36·2	36·3	36·8	36 6	36·2	35·4	35·1	36·5	37·5	37·5	37·5	36·8	36·8	36·2	35·5
15	36·2	36·8	36·8	36 2	35·4	35·1	34·8	35·1	35·5	35·5	35·6	35·8	35·5	35·4	35·1
16	36·5	36·8	37·5	37·2	36·6	35·4	35·1	36·1	36·2	34·8	34·2	34·2	35·1	35·4	35·1
17	35 9	36·2	36 2	36·2	36·2	36·2	36·2	35·6	35·6	35·5	35.4	35·1	35·1	35·5	35·5
18†	36·2	36·5	36·9	36 6	36·2	36·1	35·8	36·2	36·2	36·2	36·2	35·6	35·9	36·1	35·1
19	35·9	36·5	36·8	35·9	36·2	35·2	34·8	34·8	35·1	36·2	36·2	35·9	35·8	36·1	35·6
20†	35·6	36·1	36·8	37·1	37·7	37·7	37·6	37·7	37·3	36·0	35·2	35·0	35·3	35·6	35·2
21††	36·3	36·6	37·6	37·7	37·7	37·0	36·9	38·4	37·7	35·6	36·0	35·2	34·9	34·9	35·3
22††	32·2	32·9	33·2	34·9	35·6	36·0	35·9	35·6	35·5	34·9	34·2	34·2	33·8	33·9	33·5
23††	34·3	34·8	34·9	35·6	35·6	36·0	35·7	36·7	36·9	35·6	34·2	34·1	33·5	33·6	33·5
24	34·9	34·9	34·9	35·5	35·5	34·9	35·0	35·6	36·3	36·9	36·6	35·7	34·9	34·9	34·9
25	35·5	34·9	35·2	34·9	34·3	34·2	35·2	34·9	36·6	36·7	36·3	35·6	35·2	34·9	34·8
26	35·5	35·5	34·9	34·7	34·3	33·6	33·2	33·6	34·3	36·1	36·4	35·7	35·6	35·7	35.3
27	36·4	37·0	37·8	37·2	36·4	35·3	35·4	37·0	38·6	37·8	37·1	35·6	35·0	35·0	35.0
28	35·8	36·4	37·0	36·7	35·0	34·3	35·0	35·8	35·8	36·7	37·1	37·1	36·8	36·4	35.3
29	35·8	36 8	37·0	36·1	34·7	34·3	36·4	37·2	37·1	36·4	35·8	35·3	35·7	36·4	36.4
30††	35·8	36·5	37·0	36·8	35.3	34·2	34·3	34·3	35·0	34·2	33·9	34·2	34·3	35·0	34·7
31	35·0	35·7	37·1	37·8	36·5	36·8	37·2	37·6	36·8	35·1	34·4	34·4	35·1	35·1	35·1
Mean	35·4	35·8	36·3	36·4	36·1	35·8	35·8	36·0	36·1	35·9	35·6	35·3	35·2	35·3	35·0
Mean†	35·9	36·2	36·6	36·6	36·5	36·4	36·1	36·6	36·5	36·4	36·0	35·5	35·6	35·7	35·2
Mean††	34·9	35·4	35·8	36.3	36·1	36·0	36·0	36·1	36·1	35·0	34·6	34·5	35·2	34·5	34·4

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record;, (day omitted for means).

TABLE 1

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January — 2° plus tabular quantities

Hour G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
′	′	′	′	′	′	′	′	′	′	H. M.	′	H. M.	′	′	
35·4	35·0	35·0	34·8	34·7	35·3	35·0	35·1	35·4	35·6	06 59	36·9	18 50	34·6	2·3	1
34·7	34·7	34·6	34·6	33·7	32·9	31·9	31·8	31·9	34·7	01 58	36·4	21 25	30·6	5·8	2
34·7	34·7	34·7	34·8	35·0	34·8	34·7	34·8	35·0	35·0	07 00	36·4	00 01	33·2	3·2	3
34·8	35·1	35·3	35·3	35·1	34·8	34·8	35·3	35·3	35·2	02 22	36·4	06 52	34·0	2·4	4
34·7	34·7	34·7	34·7	34·7	34·7	34·7	34·7	35·0	35·4	04 26	36·9	11 38	34·4	2·5	5†
35·0	35·0	35·0	35·3	35·3	35·4	35·4	35·8	36·1	35·5	08 47	37·1	07 30	34·6	2·5	6
35·4	35·1	35·5	35·4	35·2	35·5	35·5	35·9	36·1	36·1	04 52	37·7	11 56	34·8	2·9	7
35·1	34·8	35·4	34·8	34·8	34·8	34·8	34·9	35·4	35·4	02 01	36·5	21 30	34·5	2·0	8
35·1	35·1	34·8	34·8	34·8	34·8	34·8	35·1	35·6	35·8	03 28	37·6	14 33	34·5	3·1	9
34·8	34·8	34·8	34·8	34·5	34·8	34·8	34·8	34·8	35·3	06 00	38·2	09 23	34·0	4·2	10††
34·8	34·8	34·8	34·8	34·8	34·8	34·8	34·8	34·8	35·1	07 08	36·8	14 45	34·2	2·6	11
34·8	34·8	34·9	35·1	35·1	35·4	35·4	35·5	35·5	35·5	07 14	37·0	11 32	34·5	2·5	12
35·4	35·4	35·5	35·5	35·5	35·5	35·5	35·9	36·2	35·8	02 00	36·3	16 02	35·1	1·2	13†
35·4	35·5	35·5	35·5	35·5	35·5	35·6	36·2	36·2	36·2	09 32	37·9	05 44	34·8	3·1	14†
35·1	35·1	35·1	35·1	34·8	35·1	35·4	35·8	36·2	35·5	02 05	37·0	05 06	34·7	2·3	15
35·1	35·1	35·1	35·1	35·1	35·4	35·5	35·5	35·5	35·6	02 19	37·9	10 39	34·1	3·8	16
35·2	35·5	35·5	35·5	35·5	35·5	35·5	35·6	36·2	35·7	04 30	36·3	11 46	34·8	1·5	17
34·8	35·1	35·2	35·5	35·5	35·5	35·5	35·5	35·9	35·8	01 48	37·0	14 50	34·7	2·3	18†
35·5	35·2	34·9	34·8	34·8	34·8	34·8	35·1	35·5	35·5	02 17	36·8	07 13	34·7	2·1	19
35·2	35·3	35·5	35·6	35·6	35·7	35·7	36·2	36·3	36·1	07 03	37·8	10 54	34·9	2·9	20†
35·0	33·9	33·8	32·9	31·3	29·9	29·7	28·7	29·9	34·7	07 40	38·5	22 34	26·8	11·7	21††
33·5	33·5	33·5	33·5	33·5	33·5	33·8	34·1	34·2	34·1	04 08	37·7	00 10	32·1	5·6	22††
33·5	33·5	33·5	33 5	33·5	34·1	33·9	34·2	34·6	34·6	07 17	37·0	12 09	33·2	3·8	23††
34·9	34·9	34·9	34·9	34·8	34·9	34·9	34·9	34·9	35·2	09 08	37·0	19 23	34·1	2·9	24
34·3	34·3	34·8	34·9	34·9	34·9	34·9	35·0	35·0	35·1	08 08	37·0	04 55	33·5	3·5	25
35·3	35·0	35·0	35·0	35·0	35·0	35·0	35·3	36·1	35·0	09 35	36·7	05 50	32·8	3·9	26
35·0	35·0	35·0	35·0	35·0	35·0	35·0	35·1	35·6	35·9	07 50	39·2	11 43	34·7	4·5	27
35·0	35·0	35·0	35·0	35·0	35·0	35·0	35·3	35·7	35·7	10 35	37·4	05 14	33·9	3·5	28
36·1	35·0	34·3	34·3	33·3	33·3	33·6	33·6	34·9	35·4	07 18	37·7	19 40	32·9	4·8	29
34·7	35·0	35·0	34·9	34·3	34·3	34·4	34·3	34·4	34·9	02 39	37·5	09 25	33·5	4·0	30††
35·1	35·1	35·1	35·1	35·1	35·1	35·1	34·8	35·1	35·6	07 20	37·9	10 25	34·3	3·6	31
35·0	34·9	34·9	34·9	34·7	34·7	34·7	34·8	35·1	35·4					3·5	Mean
35·1	35·3	35·3	35·5	35·4	35·4	35·4	35·7	35·9							Mean†
34·3	34·1	34·1	33·9	33·4	33·3	33·3	33·2	33·6							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 2

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February — 2° plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	35·1	35·7	36·5	37·2	36·9	37·2	37·9	37·9	36·5	35·1	34·5	35·1	35·1	35·7	35·4
2	35·7	36·5	37·2	37·2	37·1	37·2	38·3	38·6	37·2	35·4	34·8	34·8	35·7	35·8	35·4
3	35·4	35·8	37·3	37·8	38·2	39·9	40·3	39·0	37·6	35·4	34·8	35·1	35·7	36·5	35·8
4††	35·7	35·8	36·5	36·7	37·4	37·8	38·2	36·6	34·3	33·6	33·2	33·9	34·2	35·2	35·3
5††	35·3	35·9	36·7	37·2	36·9	37·5	36·9	34·9	34·7	34·1	34·1	34·7	34·8	34·8	34·7
6	36·2	36·9	36·9	37·1	37·1	37·5	37·7	37·7	36·7	35·7	35·7	35·7	35·7	35·7	35·7
7†	35·8	35·8	36·1	36·3	36·7	37·9	38·5	37·8	37·1	35·8	35·7	36·4	36·4	36·3	35·7
8	35·7	35·7	35·7	35·7	35·6	37·1	38·6	38·2	37·7	36·0	36·4	36·4	36·5	36·4	36·0
9	35·8	35·8	36·3	37·1	37·8	38·2	38·9	37·8	36·4	35·1	35·0	35·4	35·8	36·4	36·0
10†	35·0	35·4	35·3	37·4	38·2	38·8	39·9	39·9	39·1	37·1	36·0	35·1	35·4	35·7	35·7
11	36·3	35·7	36·0	37·1	37·7	37·7	38·2	38·5	37·1	36·4	35·8	36·4	37·1	37·1	36·4
12	36·3	35·7	36·3	37·4	37·8	37·1	37·1	37·1	36·3	35·7	35·6	35·7	36·3	36·5	36·3
13††	36·4	36·8	37·1	38·5	39·1	38·6	37·7	36·1	35·4	34·6	34·7	34·3	35·0	33·7	34·3
14	36·4	36·4	37·1	37·7	37·4	37·0	37·0	36·3	35·0	34·9	35·0	35·6	36·2	35·7	35·5
15	36·3	36·2	36·4	37·6	39·0	39·2	38·7	37·8	36·3	34·2	34·2	35·5	35·9	35·6	35·3
16	36·2	37·0	38·1	39·0	40·3	40·3	39·7	38·6	36·6	36·2	34·9	34·8	35·5	36·3	36·1
17	35·6	35·8	36·2	37·6	39·0	39·1	38·0	36·6	34·7	33·5	33·1	33·8	35·5	36·3	36·1
18	34·1	34·1	35·2	36·1	37·5	38·2	37·5	37·4	36·1	34·7	34·4	34·6	35·1	35·7	35·4
19	34·6	34·6	35·4	36·4	38·3	39·0	39·6	38·9	37·1	35·8	34·7	34·7	34·8	35·4	35·4
20	34·7	34·7	34·1	35·0	35·7	36·7	36·1	36·4	36·1	35·9	35·3	35·0	35·3	35·3	35·2
21††	35·3	35·3	35·3	35·4	35·9	36·4	37·4	37·0	35·9	35·3	34·5	34·6	35·0	35·3	35·0
22	35·0	34·7	35·3	35·2	35·8	36·6	36·9	36·5	35·9	35·2	35·8	35·9	35·8	35·2	35·2
23	35·2	35·5	35·8	35·9	36·5	37·2	37·2	36·9	35·8	35·0	34·8	35·1	35·1	35·1	35·1
24††	33·7	33·3	34·3	35·6	35·0	34·4	34·7	35·3	35·0	34·0	32·9	32·8	33·3	33·9	33·6
25	34·4	34·3	34·7	35·4	35·9	36·8	36·8	35·6	34·5	33·6	33·5	34·1	34·7	34·8	34·8
26†	34·8	35·1	35·4	35·8	36·8	37·1	37·1	36·8	35·3	34·0	33·6	33·9	34·0	34·7	35·1
27†	34·7	34·6	34·3	35·6	36·7	37·4	38·0	37·4	36·3	36·0	35·3	35·3	35·3	35·3	34·9
28†	34.6	34·6	34·6	35·2	35·9	35·9	36·5	36·5	35·8	35·2	35·2	35·1	35·2	35·2	35·2
Mean	35·4	35·5	35·9	36·6	37·2	37·6	37·8	37·3	36·2	35·1	34·8	35·0	35·4	35·6	35·4
Mean†	35·0	35·1	35·1	36·1	36·9	37·4	37·8	37·7	36·7	35·6	35·2	35·2	35·3	35·4	35·3
Mean††	35·3	35·4	36·0	36·1	36·9	36·9	37·0	36·0	35·1	34·3	33·7	34·1	34·5	34·6	34·6

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 2

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February 2°plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		H. M.	Mag.	Time	Mag.	Mag.	
′	′	′	′	′	′	′	′	′	′	Time	′	H. M.	′		
35·1	35·1	35·1	35·1	35·1	35·1	35·1	35·2	35·2	35·7	06 32	38·2	09 39	34·4	3·8	1
35·2	35·1	35·2	35·1	35·1	35·1	35·1	35·1	35·1	36·0	06 48	39·0	09 47	34·4	4·6	2
35·8	35·8	35·8	35·1	35·1	35·1	35·1	35·1	35·1	36·4	06 11	40·4	10 02	34·5	5·9	3
35·2	34·6	34·6	34·5	34·5	34·3	33·9	34·5	34·7	35·2	05 40	39·2	09 40	33·1	6·1	4††
34·8	34·8	34·8	34·8	34·7	34·7	34·8	34·8	35·5	35·3	05 13	38·3	08 55	33·8	4·5	5††
35·7	35·7	35·7	35·7	35·7	35·7	35·7	35·7	36·1	36·2	05 03	37·8	09 19	35·4	2·5	6
35·7	35·7	35·7	35·7	35·4	35·1	35·1	35·4	35·6	36 2	05 35	38·6	20 38	35·0	3·6	7†
36·0	36·1	36·0	36·0	35·7	35·7	34·8	35·7	35·8	36·2	06 14	38·8	03 34	35·4	3·4	8
36·3	36·0	36·0	35·7	35·7	35·6	35·4	35·0	35·0	36·2	06 12	39·2	10 05	34·7	4·5	9
36·0	36·3	36 3	36·4	36·4	36·3	36·3	36·0	36·4	36·7	06 15	40·2	11 08	34·9	5·3	10†
36·0	35·8	35·7	35·7	35·7	35·7	36·0	36·4	36·0	36·5	06 31	38·6	17 10	34·6	4·0	11
36·0	36·3	36·3	36·0	36·0	36·4	36·4	36·4	36·4	36·4	04 36	38·1	10 05	35·3	2·8	12
34·3	34·9	35·3	35·4	35·6	35·4	35·7	35·7	36·0	35·9	03 49	39·2	13 15	33·6	5·6	13††
35·5	35·6	35·6	35·6	35·6	35·6	35·6	35·6	35·9	36·0	03 10	37·8	08 44	34·8	3·0	14
35·6	35·3	35·5	35·6	35·6	35·6	35·6	35·9	35·7	36·2	04 45	39·8	09 25	33 5	6·3	15
35·6	35·6	35·5	35·5	35·5	35·5	35·5	35·5	35·5	36·6	04 15	40·4	10 31	34·7	5·7	16
36·1	36·1	35·5	35·5	35·5	34·9	34·7	34·1	34·1	35·7	01 59	39·4	09 50	33·0	6·4	17
35·4	35·7	36·1	36·1	36·0	35·4	35·3	34·7	34·6	35·6	05 00	38·5	09 52	34·0	4·5	18
35·4	35·4	35·4	35·1	35·3	35·3	34·8	34·8	34·8	35·9	06 25	39.9	10 50	34·6	5·3	19
35·3	35·3	35·3	35·3	35·3	35·3	35·3	35·3	35·3	35·4	05 35	37.4	01 55	33·9	3·5	20
34·6	34·6	35·0	35·3	35·0	35·3	35·0	34·6	34·6	35·3	06 39	37·7	23 04	34·0	3·7	21††
35·2	35·2	35·2	35·2	35·2	35·3	35·2	35·2	35·2	35·5	05 55	37·2	00 48	34·5	2·7	22
35·1	35·4	35·2	36·1	35·4	35·1	35·1	34·8	34·0	35·5	06 12	37·3	21 47	33·7	3·6	23
34·3	34·3	34·3	34·3	34·3	34·3	34·3	34·3	34·3	34·2	06 56	35·7	10 55	32·3	3·4	24††
34·8	35·1	35·1	34·8	34·8	34·8	34·8	34·8	34·8	34·9	05 12	35·9	08 48	33·4	2·5	25
35·3	33·9	34·0	34·7	34·7	34·7	34·7	34·7	34·7	35·0	05 31	37.2	09 40	33·3	3·9	26†
34·6	34·6	34·9	34·7	34·6	34·6	34·6	34·6	34·6	35·4	05 59	38·1	02 21	34·3	3·8	27†
34·8	35·1	35·2	35·1	34·8	34·8	34·8	34·8	35·1	35·2	06 15	36.6	01 08	34·5	2·1	28†
35·3	35·3	35·4	35·4	35·3	35·2	35·2	35·2	35·2	35·8					4.2	Mean
35·3	35·1	35·2	35·3	35·2	35·1	35·1	35·1	35·3							Mean†
34·6	34·6	34·8	34·9	34·8	34·8	34·7	34·8	35·0							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 3

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March 2° plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	35·2	35·2	35·6	36·7	37·3	38·0	39·3	39·3	38·0	36·6	35·2	34·9	34·9	34·5	34·5
2††	34·5	34·8	34·6	35·9	36·6	38·0	35·9	29·6	29·3	30·6	32·3	31·7	30·0	29·2	29·6
3	32·4	32·4	33·4	34·1	35·2	35·2	35·2	34·1	33·5	33·8	33·8	33·8	33·9	33·9	33·4
4	34·5	34·4	34·5	34·5	35·1	35·4	35·8	35·0	35·0	35·1	34·1	33·7	33·7	34·4	34·1
5	34·1	34·1	34·1	35·5	36·5	36·6	37·2	37·2	36·1	35·5	34·7	34·3	34·4	34·4	34·3
6	34·0	33·6	33·7	34·3	35·0	36·2	37·2	37·2	36·8	35·8	34·7	34·4	34.4	34·4	34·1
7†	34·4	34·3	33·8	33·9	34·4	35·1	36·2	36·4	36·1	35·8	36·0	36·0	36·0	34·4	34·4
8	34·4	34·4	34·4	34·1	34·4	35·0	35·8	36·5	35·5	35·0	34·7	34·4	34.4	34·4	34·6
9	34·3	34·6	34·6	34·3	34·1	△	△	△	△	△	△	△	△	△	△
10††	△	△	△	△	34·5	34·9	36.4	37·1	36.3	35·0	34·6	33·9	33·6	33·4	33·1
11†	32·6	33·1	33·8	34·6	35·7	36·3	36·5	36·9	36·4	35·5	34·4	34·4	34·4	34·4	34·3
12†	34·4	34·4	34·4	34·4	34·1	34·4	35·0	35·0	34·7	33·8	33·3	33·0	33·6	34·1	33·8
13†	34·5	34·4	34·4	34·4	34·4	35·4	36·5	36·5	36·5	36·4	35·1	34·4	34·4	34·4	34·1
14†	34·5	34·4	33·8	33·7	33·7	34·4	35·7	36·5	36·5	35·8	35·1	35·1	35·1	35·1	35·0
15	35·2	35·4	35·1	35·0	35·0	35·5	36·4	37·2	37·8	37·6	36·4	35·5	35·8	35·8	35·0
16	35·1	35·0	35·1	34·1	34·7	35·2	36·2	35·8	35·1	34·8	33·7	33·3	33·7	35·0	34·7
17	33·7	33·7	33·0	32·9	33·3	34·2	34·3	34·9	35·4	34·7	34·0	33·6	34·3	34·3	34·3
18	34·3	34·3	34·3	34·3	34·6	36·0	37·0	37·4	36·8	35·7	34·9	34·6	34·3	34·2	34·3
19	34·3	34·3	34·3	34·7	35·1	36·4	36·4	37·9	37·9	36·3	34·9	34·3	34·3	34·3	34·9
20	34·3	34·6	34·9	34·7	34·9	35·7	37·1	37·7	37·0	36·4	35·0	34·3	34·4	34·7	34·7
21	34·4	34·6	34·3	34·3	34·4	34·7	37·1	37·8	37·9	37·7	36·4	34·9	34·9	34·9	34·9
22	33·6	33·3	32·9	32·9	33·2	34·2	35·4	36·1	36·4	36·1	34·3	33·6	34·2	34·2	33·9
23	34·0	34·0	33·7	34·2	34·9	36·0	37·1	37·8	38·5	37·7	36·4	34·7	34·3	34·3	34·3
24	34·3	34·3	34·3	34·0	34·4	35·0	35·7	37·1	37·7	36·4	35·6	35·4	35·7	35·0	35·0
25	34·9	35·0	34·6	34·2	34·2	34·0	33·7	34·0	36·3	35·4	34·0	33·6	33·0	32·9	34·0
26	34·6	35·0	35·0	34·2	33·5	33·9	34·8	35·9	36·0	35·0	34·6	34·8	34·6	34·6	34·2
27††	34·9	34·5	33·6	32·8	32·7	33·1	34·8	36·0	35·7	35·6	34·6	33·5	34·1	34·8	34·2
28††	32·0	32·0	32·1	32·8	33·8	34·8	35·0	34·9	34·2	33·4	32·4	33·5	33·9	34·1	34·1
29††	34·5	34·1	33·1	32·8	34·1	35·0	35·0	36·3	36·6	35·6	34.9	34·9	35·5	34·9	35·9
30	32·5	32·0	31·8	31·4	32·1	33·5	34·6	35·6	36·2	35·6	34·9	34·1	34·1	34·1	34·1
31	34·2	34·2	33·5	33·5	33·8	34·8	36·3	36·7	36·2	35·6	35·5	34·2	34·1	34·2	34·2
Mean	34·1	34·1	34·0	34·1	34·5	35·2	36·0	36·2	36·1	35·5	34·7	34·2	34·3	34·3	34·2
Mean†	34·1	34·1	34·0	34·2	34·5	35·1	36·0	36·3	36·1	35·5	34·8	34·5	34·7	34·5	34·3
Mean††	34·0	33·9	33·4	33·6	34·3	35·2	35·2	34·2	34·5	33·8	33·6	33·4	33·4	33·3	33·4

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 3

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March — 2° plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
′	′	′	′	′	′	′	′	′	′	H. M.	′	H. M.	′	′	
34·6	34·8	34·6	34·6	34·9	34·5	34·8	34·5	34·5	35·7	06 30	39·4	23 00	34·1	5·3	1
30·3	31·4	32·3	31·6	31·0	30·9	31·0	32·3	32·4	32·3	05 11	39·4	07 45	26·4	13·0	2††
33·7	33·9	34·5	34·2	33·8	33·8	34·2	34·5	34·5	34·0	06 39	35·3	02 35	31·7	3·6	3
34·1	34·4	34·4	34·4	34·4	34·4	34·4	34·4	34·0	34·5	06 16	35·9	10 58	33·4	2·5	4
34·4	34·4	34·4	34·3	34·3	34·4	34·3	34·0	34·1	34·9	06 46	37·9	22 00	33·7	4·2	5
33·8	34·1	34·4	34·4	34·4	33·8	33·7	34·0	34·3	34·7	06 38	37·5	01 21	33·3	4·2	6
34·4	34·3	34·4	34·4	34·4	34·4	34·4	34·4	34·4	34·9	07 22	36·5	02 32	33·7	2·8	7†
34·6	34·6	34·6	34·6	34·5	34·4	34·2	34·1	34·1	34·7	07 18	36·0	03 11	33·3	2·7	8
△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	9
33·6	34·0	34·0	34·0	33·1	33·1	33·1	33·2	33·1	△	△	△	△	△	△	10††
34·0	33·8	34·1	34·1	34·4	34·4	34·4	34·4	34·4	34·6	07 00	36·9	00 01	32·5	4·4	11†
34·1	34·1	34·4	34·4	34·4	34·4	34·4	34·4	34·4	34·2	07 25	35·7	11 00	32·7	3·0	12†
34·0	34·3	34·1	33·8	34·1	34·4	34·7	34·5	34·5	34·8	08 04	36·6	18 30	33·7	2·9	13†
34·7	35·0	35·0	35·1	35·0	35·0	35·0	35·1	35·1	35·0	07 42	36·6	02 30	33·6	3·0	14†
35·1	35·1	34·7	34·5	34·7	35·0	35·1	35·4	35·5	35·6	08 18	38·2	18 50	34·4	3·8	15
34·4	34·4	34·4	34·1	33·6	33·6	33·1	33·6	33·7	34·4	05 57	37·2	21 10	32·7	4·5	16
34·3	34·3	34·2	34·2	34·2	34·0	34·2	34·3	34·3	34·1	07 03	35·7	03 03	32·8	2·9	17
34·3	34·6	34·3	34·3	34·3	34·3	34·3	34·7	34·6	34·9	06 57	37·7	13 31	33·7	4·0	18
34·9	35·0	34·9	34·3	34·3	34·3	34·3	34·6	34·3	35·0	07 24	38·5	20 56	34·0	4·5	19
34·9	34·6	34·9	34·9	34·9	34·4	34·6	35·0	34·7	35·1	07 08	37·8	10 55	34·2	3·6	20
35·0	34·3	34·0	33·6	33·3	33·3	33·6	33·6	33·6	34·9	08 32	38·1	19 46	32·9	5·2	21
34·3	34·2	34·2	33·7	33·9	34·2	34·2	34·3	34·3	34·2	07 52	36·7	01 57	32·8	3·9	22
34·3	34·3	34·3	34·3	34·3	34·3	34·3	34·6	34·7	35·1	08 00	39·1	02 29	33·6	5·5	23
35·0	34·9	34·9	34·9	34·3	34·3	34·0	34·3	34·6	35·0	07 56	37·8	20 55	33·6	4·2	24
34·4	34·3	34·3	34·3	34·3	34·3	34·3	34·6	34·9	34·3	08 17	37·0	12 41	32·3	4·7	25
33·9	34·1	33·9	33·6	34·1	34·2	34·2	34·5	34·9	34·5	07 44	36·3	03 21	33·4	2·9	26
33·9	33·9	34·2	34·2	33·9	32·9	32·5	32·5	32·0	34·0	07 30	36·4	21 37	31·7	4·7	27††
34·2	34·1	34·2	34·2	34·2	34·2	34·2	34·8	34·5	33·8	07 33	36·0	09 37	31·5	4·5	28††
33·6	32·4	32·8	32·7	32·5	33·1	33·4	33·2	32·8	34·2	08 04	37·8	18 28	32·1	5·7	29††
34·1	34·1	34·1	34·2	34·2	34·2	34·2	34·2	34·2	33·9	07 13	36·3	03 27	30·7	5·6	30
34·2	34·2	34·2	34·2	34·2	34·2	34·2	34·2	34·2	34·5	06 30	37·1	02 02	32·9	4·2	31
34·2	34·2	34·3	34·1	34·1	34·1	34·1	34·2	34·2	34·6					4·3	Mean′
34·2	34·3	34·4	34·4	34·5	34·5	34·6	34·6	34·6							Mean†
33·0	32·9	33·4	33·2	32·9	32·8	32·8	33·2	32·9							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 4

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April — 2° plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	33·9	33·2	32·2	32·1	32·8	33·8	36·4	38·3	37·7	36·3	34·8	33·5	33·5	33·6	34·2
2	33·5	32·8	32·1	32·1	32·5	34·3	35·9	36·3	35·9	34·9	34·2	33·6	33·9	34·2	34·2
3	33·9	34·1	33·6	33·5	34·1	34·5	36·0	37·6	37·0	37·3	35·9	34·9	34·2	34·2	34·2
4	33·6	33·4	32·5	32·5	33·4	33·5	35·2	36·9	36·6	35·6	35·9	34·2	34·2	34·5	34·6
5††	33·5	33·7	32·2	32·8	33·5	35·0	36·6	37·6	36·6	36·3	35·3	33·9	33·4	33·4	33·9
6	34·2	34·2	33·6	33·5	34·1	34·6	35·9	36·0	36·6	35·9	34·2	33·9	33·8	34·2	34·2
7†	34·2	34·2	34·2	34·2	34·5	34·9	36·3	37·1	36·7	35·6	34·9	34·9	34·6	34·4	34·9
8	34·3	34·1	33·6	34·1	35·6	36·2	37·3	37·7	37·4	36·6	35·6	34·9	34·2	34·2	33·6
9	33·9	33·6	33·5	33·5	34·2	34·5	34·9	35·2	35·3	34·8	34·3	34·2	34·1	34·2	34·2
10††	34·3	33·4	32·8	32·9	33·6	33·9	33·9	35·0	36·0	35·0	34·6	33·3	32·8	32·2	31·6
11	33·6	33·3	32·8	32·9	34·2	35·0	36·4	37·7	37·5	36·5	35·0	33·6	33·6	33·6	34·0
12	34·3	34·2	34·2	34·6	36·0	37·7	38·2	39·1	38·5	37·7	36·4	35·7	35·4	35·0	34·9
13†	34·3	33·6	32·9	33·7	34·9	36·0	36·8	37·5	37·5	36·4	35·8	35·0	34·9	34·3	34·3
14†	34·6	34·2	33·6	34·0	34·6	35·7	36·4	37·4	37·1	36·4	35·7	34·7	34·3	34·6	35·0
15	34·3	34·0	33·5	33·5	34·3	35·6	36·3	37·1	37·7	37·4	36·4	35·7	34·9	34·6	34·9
16	33·5	32·6	31·8	32·3	33·5	35·7	36·3	36·8	36·7	36·3	35·7	34·6	34·3	34·3	34·3
17††	34·3	33·0	32·8	33·6	34·3	35·6	36·4	36·4	36·5	36·3	35·7	35·0	35·4	36·1	36·3
18††	33·2	32·2	32·1	33·6	35·4	37·1	37·2	37·2	36·9	36·4	36·4	35·8	34·4	34·4	34·4
19††	32·0	30·8	30·6	31·0	32·6	33·8	35·2	36·7	36·4	36·2	35·1	34·3	33·0	32·3	33·0
20	34·0	33·0	32·6	33·0	33·7	34·4	35·1	35·5	35·7	35·1	35·0	34·4	33·8	34·1	34·4
21	33·7	33·0	33·7	35·1	35·8	35·8	36·1	36·5	36·1	35·1	34·4	34·4	33·8	33·7	33·6
22†	33·7	33·7	34·1	35·0	36·1	36·5	37·8	38·6	38·2	37·5	36·4	35·1	35·0	35·1	35·1
23	34·4	33·3	33·0	33·4	34·8	36·2	37·3	37·6	37·7	37·4	36·5	36·0	35·2	34·8	35·2
24	34·8	34·5	33·8	33·5	33·8	35·9	37·3	37·9	37·9	37·6	36·5	35·9	35·2	34·8	35·1
25†	34·5	34·4	33·9	34·9	36·0	37·0	37·7	38·4	38·0	36·7	35·4	35·3	34·5	33·8	33·9
26	34·6	34·0	33·6	33·8	34·9	36·3	37·7	37·7	38·4	36·0	35·2	33·9	33·5	33·1	33·2
27	33·5	32·4	32·1	33·2	35·2	35·3	36·0	36·7	36·6	35·0	34·0	33·5	33·2	33·8	34·3
28	34·3	33·9	33·8	33·9	34·9	36·0	36·7	37·1	37·0	36·4	35·3	34·9	34·5	34·0	34·3
29	34·2	33·2	32·9	33·9	34·6	35·3	36·3	37·1	37·3	36·7	35·7	34·6	33·8	33·2	33·8
30	34·6	33·9	33·6	34·3	35·6	36·7	36·8	37·5	37·3	36·6	35·4	35·3	34·9	34·7	35·2
Mean	34·0	33·5	33·1	33·5	34·4	35·4	36·4	37·1	37·0	36·3	35·4	34·7	34·2	34·1	34·3
Mean†	34·3	34·0	33·7	34.4	35·2	36·0	37·0	37·8	37·5	36·5	35·6	35·0	34·7	34·4	34·6
Mean††	33·5	32·6	32·1	32·8	33·9	35·1	35·9	36·6	36·5	36·0	35·4	34·5	33·8	33·7	33·8

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 4

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April — 2° plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
′	′	′	′	′	′	′	′	′	′	H. M.	′	H. M.	′	′	
34·1	33·6	33·5	33·8	34·1	33·5	34·1	33·9	33·9	34·2	06 51	38·5	02 57	31·8	6·7	1
34·3	34·5	34·5	34·2	34·2	34·2	34·2	33·9	34·1	34·1	06 49	36·7	02 07	32·0	4·7	2
34·2	34·2	33·9	34·1	34·1	34·2	33·6	33·6	33·5	34·6	06 50	37·7	23 20	33·4	4·3	3
34·2	34·2	33·8	33·9	34·1	34·1	33·9	33·6	33·5	34·2	06 22	37·1	02 20	32·2	4·9	4
34·1	34·2	34·2	34·2	34·1	33·8	33·6	33 6	33·5	34·3	07 07	38·1	01 58	32·0	6·1	5††
34·2	34·2	34·1	34·2	34·2	34·2	34·1	34·1	34·1	34·4	08 13	37·0	03 15	33·4	3 6	6
34·9	34·9	34·9	34·9	34·8	34·3	34·8	34·8	34·8	34·9	07 12	37·6	01 58	34·1	3·5	7†
33·6	33·6	33·6	33·6	33·6	33·9	33·6	33·9	34·2	34·7	07 15	37·8	01 38	33·5	4·3	8
33·9	33·9	34·2	34·1	34·1	34·2	34·2	34·3	34·5	34·2	07 42	35·9	02 00	33·2	3·7	9
31·8	32·6	33·3	33·6	33·6	33·6	33·7	33·7	33·7	33·5	07 53	36·7	06 13	31·5	5·3	10††
34·3	34·6	34·4	34·3	34·3	34·3	34·3	34·3	34·3	34·5	07 18	37·8	02 13	32·6	5·2	11
35·1	34·9	34·4	34·6	34·3	34·3	34·6	34·3	34·3	35·5	06 54	39·3	01 58	34·0	5·3	12
34·6	34·6	34·3	34·3	34·3	34·2	34·3	34·3	34·0	34·9	07 39	37·8	01 58	32·6	5·2	13†
34·9	34·9	35·0	35·0	35·0	34·6	34·6	34·9	34·9	35·1	07 22	37·7	01 55	33·5	5·2	14†
34·6	34·9	34·4	34·3	34·3	34·3	34·2	33·6	33·2	34·9	07 53	37·8	22 44	32·9	4·9	15
34·3	34·2	34·3	33·7	34·0	33·9	33·6	34·0	34·3	34·4	07 38	37·1	02 00	31·5	5·6	16
36·8	36·5	36·3	35·6	34·9	34·0	33·7	33·2	32·9	35·1	15 00	37·2	01 37	32·6	4·6	17††
35·0	34·8	33·7	33·7	33·7	33·1	33·6	33·3	33·0	34·6	05 17	37·9	01 28	31·5	6·4	18††
32·9	32·9	33·7	33·6	33·0	33·0	33·6	33·6	33·7	33·5	08 17	36·5	01 38	30·2	6·3	19††
34·4	34·4	34·4	34·4	34·4	34·3	34·4	34·4	34·4	34·3	07 10	35·9	01 55	32·3	3·6	20
33·7	34·3	34·4	34·4	34·4	34·4	34·4	34·4	34·4	34·6	06 31	36·6	01 08	32·7	3·9	21
35·1	35·1	35·0	34·4	34·4	34·4	34·4	34·4	34·4	35·4	07 21	38·7	01 08	33·3	5·4	22†
35·2	35·1	35·2	34·5	34·5	34·6	34·6	34·8	35·1	35·3	07 28	38·0	01 57	32·7	5·3	23
35·9	34·9	34·8	34·6	34·6	34·5	34·8	35·1	34·8	35·4	07 40	38·4	03 06	33·4	5·0	24
34·2	34·3	34·5	34·6	34·6	34·5	34·3	34·6	34·6	35·2	07 08	38·9	13 19	33·8	5·1	25†
33·8	33 9	34·5	33·9	33·9	33·9	33·9	33·9	33·9	34·6	07 44	38·5	13 19	32·9	5·6	26
34·6	34·6	34·6	34·6	34·5	34·3	34·3	34·5	34·3	34·4	07 25	37·1	02 12	31·8	5·3	27
34·3	33 8	33·8	33·9	33·9	33·5	33·6	33·8	33·9	34·6	06 18	37·4	15 38	33·5	3·9	28
34·2	34·0	34·6	34·6	34·6	34·3	34·5	34·6	34·7	34·7	07 19	37·4	01 35	32·6	4·8	29
35·3	34·9	35·3	34·9	34·6	34 6	34·5	34·3	34·6	35·2	07 11	38·0	01 44	33·5	4·5	30
34·4	34·4	34·4	34·3	34·2	34·1	34·1	34.1	34·1	34·6					4·9	Mean
34·7	34·8	34·7	34·6	34·6	34·4	34·5	34.6	34·5							Mean†
34·1	34·2	34·2	34·1	33·9	33·5	33·6	33·5	33·4							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

3—1 D, D, G. obs. Kodi./58

TABLE 5

Hourly Values of Declination (Westerly), 1957

(Average for sixty minutes centred at the full hours of Greenwich Mean Time)

May 2° plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1††	34·5	34·0	33·9	34·6	35·3	36·4	37·1	37·3	36·3	35·2	34·0	33·6	32 8	33·8	34·6
2	34·5	33 8	33·9	35 2	37·1	38·0	38·1	38 2	37·7	36·4	35·3	34·5	33 9	34·2	34·6
3	34·6	33·9	33·5	34 3	36 6	38 0	38·1	38 1	37·4	36·6	35·4	35·3	31·6	34·2	34 6
4	33·9	32·5	32·1	32 9	34·5	36·3	37·7	38·1	37·7	37·0	36·0	35·3	34·6	34·6	34·5
5	32·9	32·2	32·1	33 4	34 8	36 5	37 6	38 3	38 2	37·2	36 5	35·5	34 8	34 8	35·4
6	34·5	34·0	33·4	33·1	33·5	36·0	37·7	37·6	37·0	36·0	35·2	34·9	34·3	34·8	34·9
7	34·9	34·6	33·3	34·7	37·5	38 5	38 2	38 5	37·2	36·5	35·4	35·1	35·1	35·1	35·1
8	35·1	35·1	35·1	35 8	36 3	37·7	38·4	38 6	37·7	37·3	36 6	36·0	35 9	35 8	35 9
9††	35 5	35·5	34·5	34·7	35 6	37·3	37 8	37·0	37·7	36·4	35·3	34·6	35 2	35 2	35·2
10	35 0	34·0	34·2	34·7	36 2	38 2	39·3	39 5	37·6	36 9	35·7	35·3	35·4	35·7	35·7
11	35·4	34·7	34·7	34 9	36·1	37·7	38·0	38 0	38 0	37·7	36 9	36·5	35 8	35·5	35·9
12†	35·5	34·7	34·1	35 2	36 6	38 9	39·1	38 9	38 0	36·3	35 8	35·5	35·1	34 8	35·5
13	35·2	34·4	34·1	33 8	35 6	37·0	37·7	38 4	38 1	37·7	36 9	35 9	34 9	34·5	35 3
14	35 6	34·9	34·2	34 5	35 6	36·4	37·3	38 5	39·0	38 4	37·4	36·3	36·2	35 6	35·6
15†	35 6	35 0	34·2	34·4	35·4	36·5	37 9	39·1	39·2	38 6	37·9	36·5	36·0	35·4	36·0
16†	35·7	36 9	33 6	33 8	35·1	37·9	40·0	40·7	40·6	39 7	38 2	37·1	36·1	35 8	36·1
17	35 8	34·7	33·7	33 9	33·2	37·0	38 3	39·3	39·4	39·1	38·1	37·9	37·4	36 6	36 6
18	35 9	34·9	34 2	34·5	35·2	37·9	39·5	40 4	40 8	39·7	37 9	37·3	36 2	35·8	35·9
19	35 9	35·1	34·4	34 6	36·0	38·0	39·1	40·5	40 9	39 8	38 8	38 0	36·7	35 9	36·3
20††	35·7	33·9	33·5	34·0	35·3	36·7	38·2	39·6	39 5	38·3	37·5	36·5	36·1	35·5	35·4
21	35·5	34·4	34·4	35 3	37·7	38·5	39 9	40·8	40·8	40·1	39·5	38·4	37·6	36·7	37·0
22	35·3	33 8	33·2	33·5	34·3	36·3	38·4	40·2	40 5	39 9	38·7	37·7	37·7	37·0	37·0
23	36·0	35·5	34·2	35·6	36·7	37·5	38 5	39 5	39 8	39 8	39·2	37·8	37·0	36·4	36·4
24†	35·4	34·7	34·4	35 5	36 8	39·3	40·7	41·4	41·4	40·7	38 7	37·9	36 8	36·2	36·4
25	36·1	35·4	35·4	35 8	37·1	39·0	40 8	42·5	42·0	39 9	38 9	38 2	37·2	37·2	37·2
26††	35·7	34·4	33·4	33·7	35·4	37 9	38 6	39 9	40·0	38·7	38·2	36·5	35·4	35·5	36·1
27	36·1	35·1	35 1	35 8	36 9	38 3	39·3	39 9	39 6	38 3	37·1	36·5	35·9	35·5	35 8
28	36 2	35·1	35·4	36·1	36 6	38 2	40·0	40·7	40·1	39·3	38 5	36·2	35 8	35 8	36·5
29†	36·4	34 8	34·7	35·4	36·5	37·3	38·5	39·9	39·9	39·6	38·6	37·3	36·4	35 8	36·2
30††	36·4	35·1	35·1	35·8	36 8	38·5	40.6	41·4	41·4	41·1	38·6	36·5	36·2	35·5	36·5
31	35·4	33·7	33·3	33·7	35·4	37·1	37·6	40 0	40·4	39·3	37·9	36·5	36·4	36·5	36·5
Mean	35·4	34·5	34·0	34·6	35·9	37·6	38 6	39·4	39·2	38·3	37·2	36·4	35·8	35·5	35·8
Mean†	35·7	35·2	34·2	34 9	36·1	38 0	39 2	40 0	39·8	39·0	37 8	36·9	36·1	35·6	36·0
Mean††	35·6	34·6	34·1	34·6	35·7	37·3	38 5	39 0	38·5	37·7	36·7	35·5	35·1	35·1	35·6

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means),

TABLE 5

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May 2° plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
′	′	′	′	′	′	′	′	′	′	H. M.	′	H. M.	′	′	
34·6	34·6	34·6	34·6	34·6	34·6	34·6	34·5	34·6	34·8	06 41	37·5	12 00	32·5	5·0	1††
34·7	35·3	35·3	34·9	34·6	34·6	34·6	34·6	34·6	35·4	06 52	38·8	01 25	33·5	5·3	2
34·6	34·6	34·5	34·6	33·9	33·9	33·8	33·9	34·3	35·1	06 47	38·5	01 56	33·2	5·3	3
34·6	34·0	34·0	33·9	33·8	33·9	33·8	33·5	33·2	34·7	06 53	38·5	01 39	31·8	6·7	4
35·5	35·5	35·2	34·8	34·8	34·8	34·8	34·8	34·8	35·2	07 43	38·7	01 55	31·8	6·9	5
[redacted]															
35·2	35·6	35·5	35·6	35·2	35·3	35·5	35·5	35·5	35·2	06 29	38·3	03 20	32·8	5·5	6
35·7	35·5	35·1	35·1	35·1	35·7	35·5	35·1	35·1	35·7	05 11	38·7	01 34	34·2	4·5	7
36·3	35·9	36·6	35·9	35·8	35·2	35·2	35·2	35·2	36·2	06 48	38·7	01 15	35·0	3·7	8
35·2	35·3	35·3	35·3	35·3	35·2	35·2	35·2	35·2	35·6	07 15	38·1	02 35	34·4	3·7	9††
35·7	35·4	35·4	35·4	35·4	35·4	35·4	35·4	35·4	35·9	07 03	39·6	01 22	33·9	5·7	10
36·1	35·9	35·5	35·5	35·5	35·5	35·5	35·5	35·5	36·1	08 58	38·3	01 46	34·4	3·9	11
35·9	36·1	35·6	35·5	35·5	35·5	35·5	35·5	35·5	36·0	06 18	39·4	01 48	33·8	5·6	12†
35·6	35·6	35·3	35·3	35·3	35·3	35·3	35·6	35·6	35·8	07 40	38·8	02 04	34·0	4·8	13
36·0	36·0	35·6	35·6	35·6	35·6	35·6	35·6	35·6	36·1	07 48	39·1	02 20	33·9	5·2	14
36·1	35·8	35·7	35·7	35·7	35·6	35·4	35·7	35·7	36·2	07 57	39·3	01 53	34·1	5·2	15†
36·4	36·2	36·1	35·8	35·8	35·8	35·8	35·9	35·8	36·7	08 00	40·8	02 28	33·5	7·3	16†
36·6	36·6	36·2	36·0	35·9	35·9	35·9	35·9	35·9	36·5	07 10	39·8	02 18	33·4	6·4	17
35·9	35·9	35·9	35·8	35·6	35·9	35·9	36·0	36·0	36·6	08 12	41·2	02 04	34·1	7·1	18
36·6	36·7	36·6	36·3	36·0	36·1	36·4	36·6	36·6	37·0	07 36	41·2	01 58	34·2	7·0	19
35·8	36·1	36·1	36·0	36·0	36·1	36·1	35·9	36·1	36·2	07 50	39·7	01 40	33·2	6·5	20††
37·0	36·6	36·5	36·3	36·3	36·3	36·2	35·7	35·6	37·2	07 11	41·3	01 29	34·0	7·3	21
37·0	37·0	36·6	36·3	36·3	36·3	36·3	36·3	36·3	36·7	07 52	40·6	01 54	33·1	7·5	22
36·4	36·4	35·7	36·3	36·1	36·1	36·0	36·0	35·8	36·9	08 00	39·9	02 11	34·1	5·8	23
36·5	36·5	36·5	36·5	36·4	36·5	36·5	36·4	36·4	37·3	07 41	42·0	01 28	34·3	7·7	24†
37·2	37·2	37·2	37·1	36·9	36·5	36·1	35·7	35·8	37·6	07 29	42·8	01 21	35·1	7·7	25
36·5	35·8	35·7	35·8	35·8	35·8	35·9	36·2	36·4	36·4	08 22	40·3	02 34	32·7	7·6	26††
36·4	36·5	36·5	36·5	36·4	36·2	36·5	36·5	36·5	36·8	07 39	40·0	01 47	34·8	5·2	27
36·5	36·5	36·5	36·4	36·5	36·5	36·5	36·5	36·5	37·0	06 35	40·8	01 31	35·0	5·8	28
36·4	36·4	36·4	36·4	36·5	36·5	36·5	36·5	36·5	36·9	07 30	40·1	01 40	34·4	5·7	29†
37·1	36·5	35·8	35·5	35·4	35·1	35·1	35·8	35·7	37·0	08 25	41·8	01 06	35·0	6·8	30††
36·6	36·8	36·5	36·5	36·5	36·5	36·1	36·5	36·5	36·6	07 49	40·7	02 08	33·1	7·6	31
36·0	36·0	35·8	35·7	35·6	35·6	35·6	35·6	35·6	36·2					6·0	Mean
36·3	36·2	36·1	36·0	36·0	36·0	35·9	36·0	36·0							Mean†
35·8	35·7	35·5	35·4	35·4	35·4	35·4	35·5	35·6							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 6

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

June — 2° plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1†	36·4	35·0	34·0	34·1	35·9	38·5	39·3	39·6	39·3	38·7	37·6	37·5	36·8	36·6	36·5
2†	36·5	35·5	35·0	35·0	36·2	37·8	39·2	40·3	40·4	39·3	38·6	37·9	37·5	36·8	36·9
3	36·5	35·5	35·1	35·4	36·4	37·1	37·8	38·3	38·2	37·9	37·9	37·1	36·5	36·5	36·9
4††	35·5	34·8	34·4	34·9	35·8	37·1	37·9	38·5	37·9	37·9	36·8	35·7	35·0	35·0	36·1
5	36·3	34·7	33·7	34·8	36·9	38·4	39·3	40·3	39·3	37·9	37·5	36·9	36·2	36·2	36·2
6††	34·7	33·7	33·4	33·4	34·7	36·1	36·2	36·2	36·2	36·2	36·1	35·5	35·0	34·7	35·5
7	35·7	34·1	33·2	33·6	35·0	35·6	37·7	38·4	37·8	37·4	36·8	36·1	36·0	36·0	36·1
8	35·9	34·6	34·3	34·6	35·6	36·1	36·6	37·1	37·4	37·4	36·6	36·0	36·0	36·0	35·9
9†	35·9	34·9	34·6	34·6	36·0	38·1	39·8	40·4	40·5	39·0	37·3	36·0	35·9	35·8	35·9
10†	35·9	34·9	34·5	34·5	34·8	37·0	37·9	38·7	38·6	38·6	37·6	36·7	36·2	36·2	35·9
11†	35·6	34·4	34·4	34·5	36·0	37·7	39·1	40·1	39·8	38·4	37·0	35·9	35·9	35·9	36·2
12	35·9	34·8	34·5	35·7	37·1	38·9	40·1	41·3	40·4	38·7	37·5	36·6	35·8	35·8	35·9
13	35·5	34·3	33·3	34·1	35·9	37·6	39·3	40·4	40·7	39·4	38·9	36·5	35·8	35·8	35·9
14	35·8	35·0	34·7	35·5	37·5	38·6	39·9	40·1	39·9	38·5	37·1	36·2	36·1	35·9	36·4
15	35·7	34·4	34·5	35·1	37·1	38·5	39·8	40·3	40·0	38·5	37·4	37·1	36·5	35·8	35·8
16	35·7	35·0	34·4	35·4	36·3	37·7	38·2	38·5	38·5	38·4	38·2	37·0	36·0	35·8	36·1
17	35·6	34·3	33·9	34·1	35·2	36·8	37·2	38·2	38·3	38·0	37·2	36·8	35·6	35·5	36·6
18	35·8	35·2	34·8	34·9	35·6	38·1	38·9	39·6	39·1	38·2	37·7	36·7	35·6	35·4	35·9
19	35·3	35·0	34·6	34·4	35·2	37·8	38·6	38·7	38·6	38·5	37·6	35·5	35·1	35·7	34·4
20	35·1	33·8	33·3	33·1	33·6	36·0	37·0	38·0	37·4	37·3	36·4	36·2	35·6	35·7	35·9
21	34·8	33·6	33·4	33·5	34·6	37·1	38·8	39·0	38·0	37·0	35·6	36·0	36·2	35·7	36·0
22	34·9	34·1	33·4	34·1	35·2	36·4	37·3	38·4	39·1	38·5	37·0	36·3	35·7	35·2	35·6
23	34·6	34·3	33·8	34·9	36·3	38·0	38·8	39·4	39·5	38·8	38·0	37·1	36·2	35·9	36·0
24	35·2	34·3	33·5	34·3	35·5	37·0	38·0	38·1	△	△	△	△	△	△	△
25††	△	△	△	△	33·7	36·1	37·0	38·0	38·4	38·3	37·7	37·6	38·6	36·3	36·5
26††	33·4	30·3	31·7	32·4	34·2	36·2	37·0	37·9	36·6	36·1	35·6	34·5	32·8	32·7	32·6
27	34·5	33·5	33·5	34·1	34 9	36·3	37·7	39·1	39·7	38·9	38·6	36·3	35·8	35·8	35·4
28	34·7	33·5	34·5	34·7	36 3	39·4	41·1	41·8	41·5	39·1	37·3	35·8	35·1	34·8	34·9
29	34·2	33·4	33·0	33·7	35·6	37·3	37·5	40·0	40·3	40·0	38·2	36·8	35·6	35·1	35·6
30††	35·4	34·4	33·3	33·3	34·9	36·9	38·6	38·7	39·7	39·7	38·7	38·4	34·5	35·6	35·6
Mean .	35·4	34·3	34·0	34·4	35·7	37·4	38·5	39·2	39·0	38·3	37·4	36·5	35·8	35·6	35·8
Mean† .	36·1	34·9	34·5	34·5	35·8	37·8	39·1	39·8	39·7	38·8	37·6	36·8	36·5	36·3	36·3
Mean††	34·8	32·6	33·2	32·5	34·9	36·6	37·4	37·8	37·6	37·5	36·8	36·0	34·3	34·5	35·0

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 6

Hourly Values of Declination (Westerly), 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

June — 2° plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
′	′	′	′	′	′	′	′	′	′	H. M.	′	H. M	′	′	
36·6	36·8	36·8	36·8	36·6	36·5	36·5	36·5	36·6	36·9	07 24	40·0	02 45	33·8	6·2	1†
37·8	37·8	37·9	36·9	36·6	36·6	36·5	36·5	36·5	37·3	07 31	40·8	02 21	34·7	6·1	2†
36·8	36·9	36·8	36·5	36·5	36·4	35·8	35·9	35·7	36·7	07 20	39·2	02 11	35·0	4·2	3
36·4	36·4	36·4	36·4	36·4	36·5	36·4	36·3	36·1	36·3	09 03	38·9	01 54	34·1	5·8	4††
36·6	36·3	36·2	36·2	36·2	36·1	35·9	35·1	36·2	36·6	07 36	40·3	01 54	33·7	6·6	5
35·8	36·1	36·1	36·1	36·0	36·1	36·1	35·7	35·4	35·5	06 54	36·9	01 57	33·1	3·8	6††
36·3	36·3	36·0	36·0	36·0	36·0	35·7	35·9	36·0	36·0	07 07	38·4	01 54	33·0	5·4	7
36·0	36·0	36·0	36·0	36·0	36·0	36·0	36·0	36·0	36·0	08 00	37·5	01 53	34·0	3·5	8
36·2	36·2	35·9	35·9	35·9	35·9	36·2	36·2	36·0	36·6	07 35	41·2	01 30	34·5	6·7	9†
35·9	36·0	36·0	35·9	35·9	35·9	35 9	35·9	35·8	36·3	07 09	39·0	02 19	34·2	4·8	10†
36·3	36·2	36·2	36·2	36·2	36·0	35·9	35·9	35·9	36·5	07 22	41·5	01 25	34·2	7·3	11†
36·1	36·1	35·9	35·8	35·8	35·8	35·8	35 8	35·8	36 7	07 30	40·1	01 35	33·4	6·7	12
36·5	36·4	36·4	35·9	35·9	35·8	35·8	35·9	35·9	36 6	07 30	42·7	01 42	34·1	8·6	13
37·1	36·9	36·6	35·9	35·8	35·8	35·8	35·8	35·8	36·8	07 32	40·3	01 30	34·3	6·0	14
35·8	35·7	35·7	35·7	35·7	35·6	35·3	35·4	35·6	36·5	07 00	40·9	02 30	34·4	6·5	15
36·4	36·4	36·1	36·0	35·7	35·7	35·7	35·7	35·7	36·4	10 00	38·5	01 35	34·4	4·1	16
36·3	36·3	36 9	36·9	36·8	36·2	36·1	35·9	35·9	36·3	07 32	38·7	01 45	34·2	4·5	17
36·0	36·6	36·6	36·1	36·1	35·9	35·7	35·4	35·6	36·5	06 37	39·8	00 58	34·5	5·3	18
35·1	35·2	35·2	35·2	35·4	35·4	35·4	35·1	35·2	35·9	06 43	39·0	01 30	34·3	4·7	19
36·3	36·3	36·3	35·7	35·3	35·5	35·0	35·2	35·2	35·6	06 45	38·4	02 27	33·1	5·3	20
36·3	35·9	35·6	34·9	34·9	34·9	34·9	34·9	35·0	35·7	06 53	39·5	02 00	33·4	6·1	21
36·0	36·3	36·2	35·7	35·5	35·5	35·2	34·9	34·9	35·9	08 13	39·2	01 40	33·1	6·1	22
36·6	36 6	36·4	35·9	35·7	35·0	35·2	35·3	35·3	36·4	08 00	39·5	02 21	33·6	5·9	23
△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	24
36·6	36·2	36·1	35·4*	34·8	34·8	34·8	34·5	34·4	△	△	△	△	△	△	25††
33·1	33·8	33·5	34·7	34·8	34·8	34.9	34·9	34·9	34·3	06 55	38·7	01 11	30·7	8·0	26††
35·1	34·9	35·1	35·1	34·9	34·9	34.9	34·8	34·8	35·8	08 00	39·7	00 41	33·4	6·3	27
35·6	35·9	35·2	35·2	34·8	34·8	34.8	34·8	34·8	36·3	07 26	42·1	01 25	33·3	8·8	28
35·9	36·2	36·1	36·1	35·6	35·8	35.8	35·9	35·9	35·9	07 10	40·4	02 02	32·7	7·7	29
34·4	34·7	34·8	34·9	34·1	34·2	32.3	31·9	31·7	35·4	08 48	40·5	23 11	30·7	9·8	30††
36·0	36·1	36·0	35·9	35·8	35·7	35·6	35·5	35·5	36·2					6·1	Mean
36·6	36·6	36·6	36·3	36·2	36·2	36·2	36·2	36·2							Mean†
35·0	35·3	35·2	35·5	35·2	35·4	34·9	34·7	34·5							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 7

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January — 39,000 γ plus tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	493	501	519	538	561	582	598	603	603	585	556	527	501	501	501
2	495	497	512	530	547	559	568	560	558	584	587	536	504	492	492
3	431	448	464	474	495	503	513	516	510	504	494	494	484	479	476
4	471	480	503	519	530	543	550	558	524	517	519	520	510	499	494
5†	489	499	523	547	571	599	616	624	616	588	550	526	519	517	511
6	495	497	509	519	535	571	568	572	572	582	574	558	542	525	519
7	521	521	539	575	620	634	636	644	612	606	574	538	523	520	518
8	507	504	505	530	535	542	561	583	581	566	548	525	500	490	497
9	484	490	505	530	555	568	542	526	519	523	501	527	521	503	473
10††	487	483	498	509	522	571	582	524	518	510	506	498	476	467	455
11	475	478	487	498	516	517	519	524	518	498	470	470	468	455	453
12	476	488	503	521	521	559	577	590	576	555	537	522	509	503	498
13†	502	505	516	535	556	565	564	554	552	547	540	531	520	510	504
14†	499	509	528	548	556	560	572	593	590	584	587	545	530	518	512
15	508	518	538	566	585	592	592	585	593	578	552	533	519	509	501
16	503	512	536	553	583	592	601	601	590	563	544	530	514	491	489
17	498	500	517	537	558	578	596	599	589	562	533	526	513	516	510
18†	509	513	529	553	574	604	618	618	606	576	553	531	522	515	505
19	504	512	531	553	577	591	611	616	636	644	606	577	557	516	532
20†	493	498	528	544	578	607	618	614	598	575	551	535	529	524	519
21††	522	525	538	556	583	592	583	611	621	587	572	532	504	510	491
22††	228	252	△	△	△	△	383	367	376	425	387	388	386	383	378
23††	409	406	411	450	480	535	570	589	591	522	452	410	369	371	376
24	420	424	429	448	485	513	543	551	544	529	511	490	471	462	460
25	437	420	423	443	478	480	515	506	489	490	477	471	466	455	449
26	465	463	463	466	475	511	519	537	539	543	525	511	500	488	476
27	475	483	507	547	567	596	619	630	662	603	560	517	475	463	471
28	474	480	494	511	534	562	583	585	576	555	536	511	509	496	493
29	485	495	517	537	571	596	606	584	567	542	524	509	497	506	473
30††	429	442	458	477	498	499	470	445	468	452	429	447	442	424	420
31	451	457	480	506	539	567	565	524	508	484	477	483	481	474	469
Mean	480	485	500	521	543	562	572	572	568	552	531	514	499	491	485
Mean†	498	505	525	545	567	587	598	601	592	574	556	534	524	517	510
Mean††	462	464	476	498	521	549	551	550	550	518	490	472	448	443	435

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 7

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January — 39,000 γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
495	481	480	482	489	492	491	490	492	524	07 38	607	17 58	477	130	1
493	491	488	491	475	442	433	409	431	507	09 10	641	22 12	400	241	2
442	462	462	469	471	468	467	469	469	478	07 09	528	00 12	426	102	3
489	490	491	491	489	487	486	481	485	505	05 33	555	00 02	470	85	4
508	507	505	502	500	507	503	501	498	534	06 54	627	00 10	486	141	5†
516	515	513	514	516	522	526	527	525	534	05 04	606	00 42	494	112	6
516	514	513	512	511	512	512	513	515	550	06 53	668	20 10	510	158	7
500	499	481	474	472	475	479	482	483	513	08 23	591	19 38	470	121	8
473	465	456	451	462	472	473	478	493	500	05 14	576	17 44	445	131	9
440	430	456	460	4 6	468	474	471	46	489	06 02	629	15 44	420	209	10††
467	474	476	475	478	481	477	475	472	481	07 16	530	13 33	448	82	11
499	498	498	499	499	499	499	498	499	518	07 15	602	00 06	471	131	12
500	501	500	501	502	505	505	505	503	522	11 48	569	17 50	470	99	13†
511	510	507	507	506	506	507	507	506	533	06 57	604	00 13	497	107	14†
502	497	499	498	495	500	506	503	500	532	07 51	597	18 50	493	104	15
488	493	493	494	494	494	501	498	498	527	07 10	613	14 22	484	129	16
505	509	511	508	505	506	505	507	508	529	07 21	606	00 29	494	112	17
500	501	502	503	502	503	503	503	503	535	06 42	626	14 52	498	128	18†
516	496	472	469	470	475	481	485	488	539	08 32	650	18 30	465	185	19
518	509	502	507	512	514	516	518	519	539	06 56	621	00 16	493	128	20†
465	391	364	346	317	317	221	135	198	462	07 42	635	22 20	119	516	21††
378	378	386	383	395	408	408	412	415	△	△	△	△	△	△	22††
372	368	380	386	404	419	420	422	420	439	06 21	608	12 08	362	236	23††
450	447	449	455	473	469	467	467	455	476	07 22	557	00 01	417	140	24
447	445	445	446	454	456	461	468	464	462	06 53	541	01 34	406	135	25
473	467	470	466	460	462	464	466	475	487	08 52	554	18 40	459	95	26
469	462	467	463	464	465	470	472	473	516	05 53	695	16 10	458	237	27
491	489	482	481	480	479	477	481	484	510	06 04	589	00 01	473	116	28
446	430	398	381	372	390	410	414	425	586	05 49	620	19 32	365	255	29
433	446	441	437	443	442	444	445	446	449	04 26	530	09 39	412	118	30††
462	458	458	450	455	464	463	457	457	483	05 36	614	19 23	446	168	31
479	475	472	471	472	473	471	468	472	505					155	Mean
507	506	503	501	504	507	507	507	506							Mean†
427	409	410	407	405	411	390	368	382							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means),

TABLE 8

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

39,000 γ plus tabular quantities

February

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	464	470	488	527	574	623	629	602	553	576	481	482	495	497	491
2	479	486	511	551	595	633	641	621	571	526	494	480	482	483	487
3	475	481	502	544	594	634	643	606	572	505	471	476	472	513	507
4††	459	457	496	551	618	638	639	581	497	438	429	452	477	462	450
5††	432	429	444	456	483	468	489	464	456	434	420	423	419	391	386
6	454	452	474	501	521	543	526	495	454	419	416	446	470	473	462
7†	461	477	493	517	558	584	572	533	477	436	433	461	482	491	485
8	474	486	501	521	555	570	570	528	484	467	461	502	501	498	488
9	485	485	510	560	598	625	618	583	523	487	475	488	505	506	499
10†	481	487	504	533	578	608	611	605	589	563	536	520	521	511	475
11	503	502	534	572	614	623	616	578	543	510	492	504	513	512	504
12	490	493	531	577	620	615	600	573	536	511	552	496	503	501	493
13††	495	501	522	564	607	606	577	508	456	440	473	453	449	423	427
14	454	466	498	538	558	557	528	510	465	461	464	487	501	493	480
15	474	476	505	550	592	609	602	578	530	479	459	487	496	487	476
16	483	487	517	566	616	646	646	611	554	517	504	502	504	499	488
17	481	492	523	569	612	641	635	594	538	494	483	513	523	512	496
18	470	480	503	540	579	592	569	545	510	485	483	497	502	493	471
19	481	477	498	545	589	622	612	577	527	478	478	497	506	494	486
20	462	463	465	492	532	548	533	512	506	494	482	430	482	481	476
21††	487	483	△	△	△	530	561	566	512	474	463	489	495	480	458
22	454	460	476	494	524	550	542	517	498	477	473	482	479	479	474
23	479	481	488	514	549	584	589	566	542	513	511	514	504	496	490
24††	432	406	423	444	461	451	452	393	422	422	387	374	400	414	416
25	447	445	459	492	522	547	554	542	524	490	492	495	493	482	472
26†	471	474	494	531	566	599	613	598	564	533	523	520	511	499	492
27†	483	480	492	523	570	594	605	587	552	528	506	505	514	509	497
28†	486	488	506	542	581	609	624	619	584	544	523	518	522	516	506
Mean	471	473	495	530	569	590	586	557	520	490	478	483	490	486	477
Mean†	476	481	498	529	571	599	605	588	553	521	504	505	510	505	491
Mean††	455	448	471	504	542	542	539	486	458	434	427	426	436	423	420

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record ; (day omitted for means).

TABLE 8

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February — 39,000 γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
489	486	485	479	474	482	483	480	479	512	05 41	636	00 01	464	172	1
483	488	478	467	463	472	474	473	473	513	05 54	647	18 43	457	190	2
507	497	486	469	471	472	485	477	470	514	06 10	676	18 00	462	214	3
442	436	425	421	420	435	421	419	414	478	05 39	666	23 02	406	260	4††
419	424	430	433	436	439	455	452	452	439	06 10	506	14 08	378	128	5††
455	447	449	457	462	463	461	461	462	468	05 03	562	09 17	403	159	6
483	481	478	477	474	472	472	473	474	489	05 17	589	09 43	425	164	7†
489	487	485	483	482	481	485	485	481	498	10 38	581	13 58	465	116	8
494	490	484	476	474	478	486	485	481	512	05 26	637	09 54	471	166	9
500	499	499	501	501	503	505	501	503	526	05 20	618	00 02	480	138	10†
496	487	478	475	477	481	483	487	490	520	05 23	635	18 34	471	164	11
486	491	491	488	505	508	507	505	498	524	04 30	642	18 14	484	158	12
430	436	458	470	474	466	457	447	451	483	04 10	616	12 36	418	198	13††
475	471	470	470	472	474	476	475	475	488	05 14	579	07 43	448	131	14
483	472	473	478	476	476	473	474	474	503	04 46	616	09 27	455	161	15
481	479	481	469	468	475	477	482	483	515	05 28	660	18 46	464	196	16
486	468	464	468	465	463	460	461	468	513	05 04	618	22 16	457	191	17
468	473	490	489	495	481	478	485	477	502	05 05	603	15 07	463	140	18
482	477	473	464	461	472	455	465	469	504	05 38	647	21 18	450	197	19
473	476	471	471	474	479	479	493	491	488	05 34	572	01 24	456	116	20
448	430	451	461	456	476	465	453	453	△	△	△	△	△	△	21††
474	484	384	472	477	492	481	476	475	487	04 46	570	00 30	454	116	22
485	474	464	504	513	469	455	455	444	503	05 26	604	23 59	434	170	23
418	420	435	436	436	447	446	446	448	426	04 24	481	06 31	339	142	24††
469	468	466	468	468	471	470	471	471	487	05 54	559	01 02	441	118	25
487	485	483	483	482	483	483	486	484	514	06 22	616	00 08	470	146	26†
493	491	490	490	486	492	489	489	487	514	05 56	611	00 58	478	133	27†
502	501	498	495	494	491	494	498	491	526	06 50	632	00 48	486	146	28†
476	474	473	472	473	475	474	474	473	498					160	Mean
493	491	490	489	487	486	489	489	488							Mean†
427	429	437	440	442	447	450	441	441							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

4—1 D. D. G. Obs. Kodr /58.

TABLE 9

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March — 39,000 γ plus tabular quantities

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	492	491	510	545	593	628	649	645	622	581	546	519	505	490	469
2††	489	483	462	469	484	560	470	299	218	314	392	323	229	182	202
3	365	372	396	436	464	495	520	484	446	440	446	451	454	437	414
4	440	438	460	488	521	555	574	561	538	513	488	468	456	451	453
5	457	459	474	512	568	600	609	592	548	508	484	471	470	470	456
6	459	461	475	510	555	589	605	590	548	504	496	489	488	477	464
7†	460	461	479	513	551	585	608	604	585	556	519	507	500	489	471
8	466	471	475	494	535	576	600	592	559	523	514	505	492	470	△
9	△	△	△	△	△	△	△	563	537	526	499	487	480	464	441
10††	461	490	521	550	600	580	609	647	577	524	507	473	319	240	153
11†	382	383	391	450	482	494	493	477	461	443	442	452	459	448	434
12†	442	445	480	516	542	602	608	609	554	516	502	487	481	475	464
13†	458	458	470	505	518	585	608	596	576	549	522	498	495	480	465
14†	466	468	484	516	558	596	614	605	569	534	508	513	516	506	494
15	484	485	503	544	597	652	675	671	622	581	543	525	521	516	504
16	479	489	503	498	575	636	680	641	580	527	485	475	491	497	487
17	443	443	471	512	567	602	593	574	545	520	491	484	487	480	465
18	469	470	494	540	598	651	646	615	565	535	513	501	469	455	461
19	471	474	485	529	574	618	622	618	586	540	500	476	477	473	479
20	477	481	491	521	583	620	627	602	546	514	489	491	498	495	486
21	486	479	491	526	570	594	621	618	600	576	553	529	523	521	501
22	456	453	467	508	553	573	578	566	554	514	496	485	482	468	443
23	454	462	475	486	540	586	619	602	601	569	536	501	491	478	475
24	477	478	498	527	566	599	618	615	592	549	529	527	518	509	498
25	480	481	512	532	551	546	520	534	550	522	483	446	420	432	442
26	467	466	475	502	545	578	588	572	543	520	511	515	500	478	458
27††	477	473	497	528	474	603	630	604	562	523	500	495	495	472	462
28††	437	415	403	445	507	578	540	470	402	400	373	423	428	424	417
29††	449	442	452	479	574	630	575	582	584	541	503	504	498	488	452
30	396	410	436	466	506	544	553	545	523	494	473	460	459	454	446
31	455	450	462	510	567	604	608	590	526	511	498	488	483	481	460
Mean	456	457	473	506	549	589	595	577	542	514	494	482	469	458	444
Mean†	442	443	461	500	536	572	586	578	549	520	499	491	490	480	466
Mean††	463	461	465	494	528	591	565	520	469	460	455	444	394	361	337

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record ; (day omitted for means).

Table 9

Hourly values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March — 39,000 γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
466	478	460	454	471	478	486	477	468	522	05 54	653	18 16	450	203	1
247	279	302	400	334	322	355	365	375	357	05 52	649	07 53	62	587	2††
410	423	444	432	427	425	436	444	442	428	06 28	534	14 18	462	72	3
455	457	459	459	462	462	460	466	463	481	06 24	582	01 00	433	149	4
461	455	442	437	447	456	461	462	460	490	05 20	617	17 42	430	187	5
451	454	462	459	458	452	454	460	462	493	05 40	611	15 36	443	168	6
458	455	470	472	474	468	476	468	462	504	06 34	613	15 56	448	165	7†
△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	8
433	436	432	437	418	459	456	459	460	△	△	△	△	△	△	9
155	198	210	238	320	329	351	347	350	406	07 10	678	14 18	125	553	10††
429	428	429	432	434	436	439	439	442	442	04 50	510	00 50	367	143	11†
458	458	459	460	462	461	462	463	463	495	05 30	618	00 30	440	178	12†
460	451	437	437	441	452	458	465	467	495	05 54	617	17 24	432	185	13†
489	488	488	487	486	487	488	486	484	514	06 22	619	00 34	466	153	14†
496	489	486	475	474	487	502	505	495	535	06 42	698	18 38	465	233	15
482	481	478	465	458	433	433	458	473	507	05 58	727	21 08	421	306	16
469	465	466	471	466	465	466	472	472	495	05 42	618	00 56	437	181	17
471	470	469	471	469	470	474	480	475	510	05 26	660	13 22	450	110	18
478	477	474	467	469	482	482	481	477	509	04 54	626	18 50	467	159	19
484	480	476	477	478	477	481	485	488	510	05 49	643	00 01	475	168	20
484	450	413	398	393	409	424	433	439	501	06 11	635	19 33	385	250	21
452	453	454	451	453	463	461	460	457	488	04 30	606	14 03	434	172	22
477	467	468	468	472	475	480	484	481	506	05 41	620	00 10	452	168	23
494	492	492	487	482	477	486	481	481	520	06 34	622	20 23	467	155	24
446	448	454	454	457	464	467	466	467	482	04 40	574	12 18	412	162	25
438	441	438	440	452	467	469	474	473	492	05 24	593	14 58	431	162	26
447	443	464	469	467	473	408	427	424	492	06 02	637	21 24	396	241	27††
420	434	436	436	436	445	450	453	449	443	04 35	597	09 38	315	282	28††
378	378	375	358	383	394	398	405	392	467	05 52	684	15 02	348	336	29††
443	440	439	445	449	447	447	452	447	466	06 33	566	00 44	391	175	30
454	457	464	448	441	444	463	459	452	466	06 14	629	19 22	437	192	31
440	441	442	443	445	448	452	456	454	484					214	Mean
459	456	457	458	459	461	465	464	464							Mean†
349	346	357	380	388	393	392	403	398							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 10

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

39,000 γ plus tabular quantities

April

Date	Hours G.M.T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	449	443	455	491	564	623	637	599	526	465	440	448	455	455	451
2	455	452	467	516	586	624	623	600	539	478	462	471	487	484	476
3	462	469	487	525	588	622	608	607	593	565	525	487	478	478	472
4	457	445	449	487	522	569	590	579	562	528	498	477	473	469	466
5††	458	449	454	488	537	581	613	597	539	529	525	507	457	442	435
6	464	467	462	492	524	580	584	555	532	496	458	456	452	452	449
7†	466	466	477	507	559	612	622	610	585	548	528	521	515	506	495
8	480	481	498	538	591	620	637	607	605	530	495	480	475	466	447
9	470	470	486	526	571	603	604	566	539	514	497	494	488	468	460
10††	469	465	468	494	498	494	450	443	455	395	402	396	395	366	340
11	436	440	462	492	525	557	569	566	516	520	499	478	450	436	436
12	463	474	504	535	572	621	629	604	557	534	517	511	514	506	495
13†	466	468	496	547	588	627	620	610	574	526	506	510	517	486	466
14†	485	482	497	536	575	608	623	617	592	564	543	531	526	523	513
15	503	500	521	565	625	666	681	674	654	613	565	542	522	520	526
16	481	461	465	509	548	620	625	609	581	550	544	508	506	504	487
17††	476	474	499	542	585	619	618	577	573	561	554	537	558	547	520
18††	510	492	489	542	582	628	607	592	577	567	559	536	517	504	495
19††	458	399	405	452	483	506	538	516	499	491	465	439	415	416	403
20	442	442	462	503	552	581	593	591	571	540	507	489	482	490	472
21	460	469	504	562	599	616	612	584	547	527	502	488	475	462	445
22†	476	486	520	563	592	610	612	602	597	563	543	520	525	516	504
23	483	484	505	541	607	645	639	615	599	585	552	540	529	517	503
24	491	485	501	537	599	619	664	660	627	592	539	527	517	512	509
25†	477	478	499	548	594	622	627	631	594	558	525	515	513	498	481
26	477	481	511	562	610	643	644	593	581	544	539	509	477	446	437
27	457	456	477	530	591	600	592	582	576	533	505	494	483	479	472
28	476	480	501	534	594	624	627	618	601	570	544	533	518	484	461
29	469	469	484	520	572	603	633	638	610	563	512	493	486	462	446
30	476	475	501	535	583	625	633	634	623	586	550	525	510	506	500
Mean	470	467	484	524	570	607	612	599	572	538	513	499	490	480	469
Mean†	474	476	498	540	582	616	621	614	586	552	529	521	519	506	492
Mean††	474	458	463	504	537	566	565	545	529	509	501	483	468	455	439

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

Table 10

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April — 39,000 γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
446	435	431	444	449	444	453	456	458	480	06 03	651	16 36	429	222	1
474	471	469	470	466	470	467	468	463	497	05 36	641	01 09	447	194	2
465	453	452	454	470	462	454	449	453	503	06 38	656	18 02	446	210	3
459	449	441	444	453	460	462	463	462	486	06 21	596	16 46	439	157	4
440	456	460	460	466	473	469	460	448	489	05 33	628	15 11	432	196	5††
447	446	446	452	456	458	462	463	463	480	05 19	617	16 27	446	171	6
492	490	490	491	488	489	490	488	483	517	05 23	628	00 01	466	162	7†
446	449	452	457	456	456	453	469	473	503	06 22	618	14 20	443	205	8
453	454	457	452	446	449	462	463	465	494	04 58	617	18 54	444	173	9
336	387	394	400	412	418	424	430	435	424	03 15	519	06 12	270	249	10††
448	457	458	460	464	465	460	463	466	481	05 28	611	13 02	430	181	11
498	493	476	476	465	468	470	468	465	513	05 19	666	18 02	463	203	12
468	472	470	483	477	479	480	489	489	513	04 55	634	14 10	461	173	13†
507	504	503	507	507	506	506	509	503	532	06 02	624	00 54	467	157	14†
495	490	486	483	478	474	482	466	462	541	06 10	686	23 04	454	232	15
468	452	443	449	452	461	466	471	472	506	05 30	674	17 04	439	235	16
529	522	521	514	509	491	495	472	476	532	05 19	646	22 20	467	179	17††
498	494	450	449	442	438	451	439	434	512	05 16	664	23 59	407	257	18††
382	385	389	411	392	403	424	434	437	439	06 12	551	15 44	375	176	19††
469	466	468	465	466	462	468	473	468	496	06 10	605	00 03	435	170	20
432	430	438	458	475	474	476	478	481	500	05 24	625	15 56	423	202	21
499	494	491	490	483	484	487	489	486	526	05 58	615	00 03	475	140	22†
504	508	509	507	502	506	505	505	496	537	05 08	657	00 38	479	178	23
518	488	485	489	486	490	484	480	475	534	05 59	675	22 34	471	204	24
470	468	471	478	478	477	478	482	478	518	07 01	626	15 40	465	161	25†
440	437	448	454	466	479	474	470	467	508	05 48	663	15 36	429	234	26
477	476	475	477	479	476	482	479	473	505	04 36	617	00 27	447	170	27
442	433	426	429	430	422	447	456	459	505	06 20	661	19 59	416	245	28
439	441	446	457	462	470	474	478	478	504	06 49	651	15 26	434	217	29
500	494	500	491	487	486	485	490	492	529	06 08	651	00 48	468	183	30
465	463	462	465	465	466	470	470	469	503					194	Mean
487	486	487	490	487	487	488	491	488							Mean†
437	449	443	447	440	465	453	447	446							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted of means).

TABLE 11

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May 39,000 γ plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1††	488	490	507	552	580	607	602	580	543	501	478	473	480	494	486
2	488	494	521	556	608	631	628	607	576	547	530	519	509	507	507
3	498	507	531	572	613	628	618	610	564	546	530	523	524	519	511
4	488	488	507	549	596	622	629	613	584	555	528	509	506	495	484
5	477	490	496	533	579	606	608	605	595	576	558	538	530	526	526
6	508	503	508	541	590	625	674	661	623	590	548	514	508	503	504
7	499	507	530	564	612	631	596	600	590	571	545	536	535	531	518
8	506	512	528	560	593	626	625	632	607	591	566	542	524	518	511
9††	526	526	551	573	560	590	586	523	556	555	547	521	511	493	482
10	491	498	509	543	587	621	620	612	601	582	565	542	524	516	506
11	510	515	535	582	609	640	648	639	612	582	569	559	552	541	533
12†	510	504	519	565	617	649	661	652	628	581	560	547	540	531	525
13	504	509	524	560	592	625	634	652	628	580	531	503	497	497	498
14	497	500	513	564	603	636	662	668	646	610	572	553	537	530	524
15†	508	502	503	539	588	654	666	681	675	642	593	552	523	530	524
16†	508	507	518	551	605	646	680	678	654	619	576	550	538	532	524
17	503	498	504	540	591	636	655	656	640	612	583	558	546	543	538
18	509	506	508	546	581	637	668	681	663	642	591	555	538	536	534
19	501	502	510	546	591	633	656	655	626	609	574	549	537	528	530
20††	509	506	532	555	618	604	599	593	596	579	543	529	518	498	475
21	499	512	533	562	618	653	659	648	633	606	573	527	520	512	511
22	497	511	523	551	600	642	673	667	642	615	589	561	557	548	536
23	516	515	512	529	556	604	641	656	645	616	587	553	530	523	518
24†	507	514	525	548	578	611	626	627	620	584	553	524	520	517	509
25	509	513	527	554	587	616	629	631	593	593	537	527	534	530	522
26††	510	513	502	517	546	576	603	621	623	564	493	457	439	467	469
27	475	475	483	525	553	586	649	620	606	573	548	520	508	504	503
28	500	497	508	535	580	623	656	654	635	587	533	508	509	514	511
29†	506	506	506	537	578	619	645	652	618	582	544	522	517	519	515
30††	503	504	511	546	585	636	671	675	666	661	560	471	472	481	486
31	478	481	479	499	553	583	604	610	602	570	535	510	508	515	511
Mean	501	503	515	548	589	622	638	634	616	588	553	527	519	516	511
Mean†	508	507	514	548	593	636	656	658	639	602	565	539	528	526	519
Mean††	507	508	521	549	578	603	612	598	597	572	524	490	484	487	480

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 11

Hourly Values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May — 39,000 γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
476	472	475	481	484	487	487	487	488	508	05 23	617	10 32	468	149	1††
506	504	503	500	501	501	499	497	496	531	05 04	640	00 01	488	152	2
500	489	487	484	468	465	469	480	491	526	05 22	633	19 55	464	169	3
471	468	470	460	453	457	467	468	475	514	05 33	633	19 17	453	180	4
521	514	510	508	511	513	513	510	501	535	05 07	613	00 11	477	136	5
499	500	500	500	501	504	505	505	510	538	06 10	693	14 45	497	196	6
516	512	499	498	508	510	508	507	506	539	05 00	647	17 31	490	157	7
518	518	526	526	528	529	533	537	518	549	05 19	649	00 01	505	144	8
479	481	486	486	487	489	491	489	490	520	05 35	613	15 03	477	136	9††
507	504	504	506	507	508	508	501	510	536	04 59	639	00 04	490	149	10
524	521	517	516	519	513	511	508	515	553	05 50	643	22 10	504	139	11
522	520	518	518	519	520	520	518	517	553	05 47	674	00 58	501	173	12†
495	496	497	505	505	505	503	503	498	535	06 48	658	11 39	493	165	13
520	518	516	515	517	516	514	515	512	552	06 45	673	01 35	497	176	14
516	517	517	519	520	516	513	513	510	555	07 52	684	01 59	498	186	15†
520	518	516	514	514	511	511	510	507	554	06 37	685	00 36	506	179	16†
536	530	525	530	527	525	520	516	515	555	07 08	665	00 53	497	168	17
526	519	514	511	511	508	504	505	507	554	08 12	700	01 45	499	201	18
529	517	511	505	495	502	513	521	516	548	07 20	666	19 00	492	174	19
471	481	485	485	488	501	498	501	500	528	04 45	614	14 30	467	147	20††
505	498	492	491	499	500	494	492	492	543	05 31	681	17 45	489	192	21
532	523	522	521	519	519	519	520	519	559	06 18	686	00 01	496	190	22
513	508	500	497	495	495	496	500	505	542	06 48	660	19 58	493	167	23
506	502	505	507	507	511	512	511	509	539	07 30	639	16 25	502	137	24†
517	521	525	523	525	520	512	505	506	544	05 25	643	21 52	503	140	25
470	451	453	462	470	477	478	482	477	505	07 32	636	11 52	430	206	26††
501	498	496	497	497	497	500	501	502	526	06 21	633	01 25	470	163	27
509	507	503	506	509	508	508	504	505	538	06 25	671	01 25	495	176	28
510	506	506	508	508	512	514	514	510	540	06 35	665	01 53	502	163	29†
490	486	469	455	453	463	466	479	476	528	08 22	696	18 18	444	252	30††
508	508	509	509	509	509	511	514	519	526	07 01	620	01 54	473	147	31
507	503	502	501	502	503	503	504	503	538					168	Mean
515	513	512	513	514	514	514	513	511							Mean†
477	474	474	474	476	483	484	488	486							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 12

Hourly values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

June — 39,000 γ plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1†	512	513	520	547	585	638	657	658	635	606	572	544	530	523	513
2†	514	514	516	542	582	598	626	642	634	607	586	548	539	535	529
3	538	538	551	572	611	645	629	627	621	571	564	538	507	513	518
4††	501	496	490	483	519	548	563	572	554	564	520	484	471	482	489
5	505	507	499	532	549	579	566	596	582	563	532	516	508	504	500
6††	495	502	498	534	551	548	542	553	536	523	510	502	486	475	469
7	481	487	486	484	539	565	577	577	564	552	537	510	503	506	503
8	502	506	521	548	580	605	617	614	605	592	569	541	518	505	493
9†	498	497	499	528	568	589	631	641	628	597	555	526	515	520	519
10†	511	516	528	549	577	603	632	638	622	587	556	532	528	530	526
11†	509	516	535	576	614	649	661	663	648	601	555	523	523	531	530
12	511	510	507	543	583	616	634	626	607	574	547	532	532	528	523
13	513	514	518	553	593	638	664	672	672	638	592	539	507	510	513
14	502	499	499	527	560	589	615	615	599	569	537	523	524	525	523
15	515	520	525	543	595	638	654	652	646	633	571	550	532	524	520
16	506	505	513	539	570	592	594	594	604	608	598	592	542	532	533
17	528	533	549	575	601	634	609	572	603	598	577	537	507	508	518
18	503	506	514	534	551	585	592	587	571	568	548	534	516	509	509
19	498	493	481	517	524	606	632	637	612	589	539	495	469	461	466
20	490	492	495	518	571	615	611	606	589	574	558	543	527	521	520
21	504	509	522	546	577	615	627	588	536	522	504	513	517	515	503
22	501	505	507	525	557	601	635	640	633	602	538	513	486	475	481
23	496	506	513	548	585	609	620	614	605	581	557	541	532	525	518
24	509	507	515	544	580	590	600	629	△	△	△	△	△	△	△
25††	△	△	△	△	516	536	573	575	580	584	567	552	536	508	507
26††	486	492	504	489	496	527	494	544	472	452	438	396	363	384	383
27	462	472	477	501	516	545	548	560	546	524	518	519	503	499	481
28	488	501	526	600	645	692	682	637	604	554	506	481	477	481	480
29	491	500	524	564	610	632	638	624	602	575	547	526	516	517	518
30††	507	515	532	552	619	634	689	620	612	593	578	528	380	390	404
Mean	502	506	512	538	572	605	616	613	598	576	547	522	502	501	500
Mean†	509	511	520	528	585	615	641	648	633	600	565	535	527	528	523
Mean††	497	501	506	514	546	564	572	572	543	533	511	477	425	433	429

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 12

Hourly values of Horizontal Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

June — 39,000 γ plus tabular quantities

Hours of G.M.T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
512	514	514	514	515	517	518	518	514	550	06 23	665	14 49	511	154	1†
532	537	536	535	530	529	529	531	535	554	06 54	646	01 21	512	134	2†
506	499	498	479	474	476	481	484	496	539	04 38	677	19 00	466	211	3
483	480	481	482	490	499	497	487	497	506	09 03	589	03 17	460	129	4††
501	496	486	492	488	484	482	480	483	518	06 22	603	21 49	479	124	5
464	465	472	475	480	489	510	509	500	504	06 50	566	15 24	463	103	6††
497	495	494	493	494	495	493	499	502	514	06 56	591	02 34	461	130	7
492	492	493	496	499	499	499	500	498	533	05 27	626	14 47	491	135	8
517	517	513	509	510	515	513	513	513	539	06 46	647	01 32	493	154	9†
523	521	519	518	519	520	518	514	510	546	06 52	639	23 22	507	132	10†
525	523	523	523	523	522	520	518	515	555	07 00	666	00 02	508	158	11†
518	512	513	517	518	516	513	515	516	542	06 00	638	01 14	506	132	12
513	513	514	513	514	510	510	509	509	552	08 18	680	21 34	503	177	13
524	523	522	518	516	515	518	517	516	536	05 56	621	02 18	495	126	14
497	496	499	491	493	488	493	499	504	545	07 42	665	15 30	486	179	15
530	526	524	526	525	525	524	529	528	548	09 14	612	01 28	505	107	16
508	511	517	519	517	511	510	510	506	544	05 22	647	12 18	499	148	17
502	503	503	500	511	500	493	492	492	526	05 06	607	21 42	487	120	18
466	465	462	469	478	485	488	485	491	513	06 53	649	12 43	458	191	19
516	518	511	503	500	508	510	510	510	534	05 32	643	02 20	485	158	20
496	491	484	480	480	489	490	496	498	521	05 36	640	18 18	477	163	21
488	487	489	489	494	496	497	498	492	526	05 52	644	12 44	473	171	22
515	517	517	516	508	504	509	506	509	540	05 50	622	19 52	497	125	23
△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	24
515	513	510	501	481	488	504	489	483	△	△	△	△	△	△	25††
377	371	394	405	424	429	436	454	460	445	06 53	590	12 16	357	233	26††
469	464	466	469	473	482	489	494	503	499	06 43	568	00 01	462	106	27
485	488	483	485	482	484	486	487	491	530	05 01	720	12 06	466	254	28
514	514	510	511	509	509	516	513	515	541	05 58	645	00 02	478	167	29
373	386	390	358	402	366	315	347	337	476	05 30	765	20 42	306	459	30††
494	494	494	492	495	495	495	497	498	528					164	Mean
522	522	521	520	519	521	520	519	517							Mean†
424	425	434	430	449	446	439	449	449							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

5—1 D. D. G. Obs. Kodi/58.

TABLE 13

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January — 2000γ plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	378	378	373	376	371	370	359	346	338	330	340	350	353	368	374
2	379	377	376	381	383	381	385	392	394	374	362	352	355	367	376
3	373	371	373	376	383	378	381	388	380	363	367	376	369	376	376
4	381	381	374	367	365	358	362	366	363	354	352	361	369	375	377
5†	381	380	380	384	375	372	366	349	335	340	351	370	372	374	377
6	378	380	378	377	380	389	390	388	351	342	345	354	362	369	377
7	377	377	376	371	362	354	359	358	361	354	350	356	367	374	376
8	377	377	379	376	376	381	388	382	368	358	357	350	353	365	373
9	375	377	375	380	364	353	354	369	367	359	365	365	365	366	361
10††	376	375	376	376	381	375	365	375	382	379	374	370	356	365	368
11	376	375	370	372	367	367	364	366	352	341	351	363	364	366	374
12	375	378	375	374	373	374	375	375	367	357	359	368	369	371	376
13†	377	377	376	376	373	366	366	371	367	365	362	365	366	371	375
14†	374	376	375	374	372	373	365	355	349	346	354	365	367	374	376
15	377	376	377	377	372	366	366	363	346	334	334	343	358	362	369
16	376	377	378	378	369	369	361	350	350	356	361	361	359	360	368
17	377	376	373	373	364	356	353	347	331	335	347	359	367	369	373
18†	377	378	378	373	364	360	355	347	344	343	345	352	356	363	367
19	378	376	373	370	366	363	355	355	350	347	338	350	358	363	367
20†	375	377	373	374	370	360	354	349	349	353	357	361	368	370	376
21††	380	378	374	374	368	364	369	359	354	341	344	348	357	374	364
22††	365	368	377	393	383	356	371	382	390	388	378	379	382	379	380
23††	380	380	378	382	377	364	360	347	337	323	330	344	347	362	371
24	378	382	379	380	369	354	342	334	332	332	341	355	362	368	375
25	361	363	366	369	370	365	361	355	346	346	353	357	363	370	375
26	375	375	375	376	372	370	375	358	330	330	343	352	358	365	369
27	373	373	375	375	373	366	345	331	319	332	342	340	343	357	370
28	375	375	373	379	377	373	361	357	347	336	346	354	358	370	376
29	374	376	378	385	382	357	347	353	363	366	364	357	359	367	364
30††	373	374	380	382	390	373	388	382	379	369	376	367	364	362	372
31	377	376	370	373	379	356	354	354	360	371	371	370	366	366	371
Mean	376	376	375	377	373	367	364	361	355	350	354	359	362	368	372
Mean†	377	378	376	376	371	366	369	354	349	349	354	363	366	370	374
Mean††	375	375	377	381	380	363	371	369	368	360	360	362	362	368	371

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 13

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

January — 2000γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
373	371	373	378	379	379	378	378	379	366	18 10	384	08 56	325	59	1
376	378	378	379	376	370	371	363	377	375	07 30	406	11 36	344	62	2
377	375	377	380	381	378	378	377	381	376	06 46	395	09 12	358	37	3
378	377	378	380	378	378	378	378	380	371	01 00	385	09 26	349	36	4
377	377	378	378	381	383	382	380	380	372	03 00	385	08 10	330	55	5†
377	376	376	377	381	382	382	380	379	374	06 34	399	08 35	329	70	6
376	376	376	376	377	377	377	377	380	369	23 00	384	09 55	345	39	7
376	375	368	371	371	374	376	376	376	372	06 06	395	11 09	338	57	8
369	365	365	371	374	376	376	376	380	369	22 41	385	05 35	345	40	9
364	370	381	378	378	380	380	375	373	374	07 35	393	12 14	349	44	10††
378	378	376	376	375	375	375	374	375	369	15 04	383	09 00	336	47	11
376	376	376	377	376	376	376	376	376	373	01 00	383	09 22	348	35	12
377	376	376	377	377	376	376	376	374	372	17 58	382	10 10	359	23	13†
377	377	376	377	377	376	378	377	377	370	21 18	383	09 12	343	40	14†
372	372	376	376	375	378	378	377	376	367	21 00	383	09 20	326	47	15
373	377	377	378	378	377	378	377	377	369	02 12	384	07 26	340	44	16
373	375	376	375	373	374	375	376	376	366	00 16	379	08 30	325	54	17
371	373	373	374	375	375	376	376	377	366	02 06	384	09 00	337	47	18†
363	360	359	367	371	375	376	375	375	364	00 50	384	09 45	327	57	19
376	374	372	377	379	379	379	379	379	369	19 12	383	08 17	341	42	20†
364	345	353	357	355	363	322	321	361	358	20 03	397	21 17	302	95	21††
379	380	382	379	385	386	380	380	380	379	02 52	410	04 18	339	71	22††
374	374	380	380	385	385	383	379	378	367	19 15	397	09 10	317	80	23††
371	372	375	375	384	375	375	373	369	365	01 06	387	08 36	327	60	24
375	375	375	375	376	375	377	377	375	367	21 22	386	08 22	340	46	25
369	370	371	372	370	370	373	375	375	365	03 22	380	08 30	318	62	26
371	370	375	375	375	375	372	375	375	362	03 58	377	08 02	317	60	27
374	376	372	376	376	376	373	374	376	368	03 10	387	09 20	330	57	28
359	363	357	367	359	371	379	378	378	363	03 22	389	06 14	341	48	29
378	381	380	378	380	378	376	376	378	377	05 50	399	11 32	355	44	30††
371	371	374	371	377	378	377	372	372	370	04 00	396	05 58	343	53	31
373	373	374	375	376	376	375	371	373	369					52	Mean
376	375	375	377	378	378	378	378	377							Mean†
372	370	375	374	377	378	368	366	374							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record ; (day omitted for means).

TABLE 14

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February — 2000γ plus tabular quantities

Date	Hours G. M. T. 00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	372	373	371	371	368	351	331	333	343	355	366	367	367	372	374
2	374	374	377	382	370	352	342	344	348	358	365	365	365	368	373
3	375	374	373	375	359	336	325	332	344	362	376	380	372	371	372
4††	367	372	379	383	365	345	349	352	372	388	387	375	361	360	364
5††	372	374	382	384	373	362	373	373	375	362	361	361	364	361	367
6	376	377	382	390	383	371	365	368	374	377	388	388	384	380	376
7†	378	381	385	386	372	353	353	363	382	393	392	383	375	376	377
8	378	378	378	372	352	325	328	340	360	370	364	360	363	371	375
9	375	376	371	360	341	329	320	326	340	357	369	371	367	369	375
10†	375	374	364	363	364	353	354	362	364	366	364	366	366	368	371
11	378	379	367	355	342	330	324	330	341	350	361	364	364	370	375
12	377	380	379	370	353	337	331	337	353	362	364	362	361	364	368
13††	375	375	372	364	352	341	337	350	368	376	371	354	354	361	369
14	376	380	377	372	363	355	354	364	368	370	375	370	368	370	376
15	377	383	376	356	348	340	340	350	357	363	376	369	360	363	371
16	376	376	372	368	358	348	340	341	347	362	365	362	354	361	364
17	377	379	376	365	354	345	342	353	368	383	387	380	361	360	364
18	379	384	369	356	345	336	341	349	363	372	382	378	367	364	364
19	376	371	367	361	353	350	344	344	352	361	378	380	372	365	370
20	375	375	370	360	350	342	339	344	355	367	375	371	364	369	372
21††	376	378	376	371	365	364	364	356	355	364	371	376	372	369	367
22	370	372	363	362	357	356	355	367	376	370	370	367	362	370	375
23	376	376	372	368	364	358	350	356	358	358	356	357	359	368	371
24††	364	361	370	354	359	359	364	381	374	358	356	366	383	383	383
25	376	374	371	368	356	348	354	354	362	369	377	372	366	368	370
26†	377	376	368	365	355	351	343	348	355	365	369	365	365	365	371
27†	377	378	377	375	373	371	370	367	373	372	372	372	373	375	378
28†	381	385	385	382	374	367	359	352	348	357	360	360	365	373	375
Mean	375	376	374	369	360	349	346	351	360	367	371	369	366	368	372
Mean†	378	379	376	374	368	359	356	358	364	371	371	369	369	371	374
Mean††	371	372	376	371	363	354	357	362	369	370	369	366	367	367	370

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record ; (day omitted for means).

TABLE 14

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

February — 2000γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
374	374	374	374	373	377	375	377	374	366	19 49	379	06 35	322	57	1
371	377	371	371	372	377	375	373	374	367	03 04	388	06 17	336	52	2
374	371	371	367	372	377	379	373	371	366	20 43	388	06 08	319	69	3
365	363	372	371	372	379	372	369	365	369	09 06	392	05 24	333	59	4††
384	383	382	382	379	379	385	377	375	374	20 54	390	12 56	350	40	5††
374	373	376	381	380	380	378	380	380	378	03 10	402	06 25	358	44	6
376	376	378	381	381	379	378	378	377	377	09 32	398	05 12	346	52	7†
375	375	376	375	375	376	376	375	375	366	01 10	386	05 18	311	75	8
375	375	375	374	375	375	381	376	375	364	21 12	387	05 38	311	76	9
371	375	375	376	375	375	375	375	376	369	23 10	381	05 26	345	36	10†
370	370	368	373	373	376	376	376	376	362	01 06	382	05 33	322	60	11
369	376	376	376	382	378	376	376	375	366	18 58	393	06 30	324	69	12
369	376	384	385	384	372	369	365	376	367	17 56	401	05 30	326	75	13††
376	376	376	376	376	377	377	377	378	372	01 34	391	06 30	347	44	14
376	371	375	377	376	376	376	379	377	367	01 10	392	05 42	333	59	15
368	375	372	369	372	377	377	377	378	365	23 12	383	06 00	333	50	16
365	364	368	376	376	376	377	376	380	369	10 32	393	06 00	337	56	17
367	372	379	377	378	375	377	379	376	368	09 42	384	04 50	330	54	18
370	371	375	372	375	372	371	380	378	367	22 26	393	06 46	336	57	19
372	376	372	373	376	377	376	382	378	367	21 56	385	05 54	327	58	20
367	364	377	377	376	384	376	372	372	370	20 02	393	07 20	347	46	21††
375	378	371	371	376	378	373	376	375	369	19 41	384	06 06	348	36	22
370	366	365	385	380	362	364	366	364	365	18 15	417	06 00	349	68	23
381	381	386	380	380	383	378	377	377	372	12 13	393	03 35	351	42	24††
374	376	377	376	377	377	377	377	377	370	10 00	380	05 00	348	32	25
371	371	374	377	377	377	377	377	377	367	01 04	381	07 00	348	33	26†
378	378	379	382	382	384	382	382	381	376	01 04	384	04 56	367	17	27†
377	377	377	381	381	380	330	381	381	372	01 08	386	07 41	344	42	28†
373	374	375	376	377	377	376	376	376	369					52	Mean
375	375	377	379	379	379	378	379	378							Mean†
373	373	380	379	378	379	376	372	373							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 15

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March — 2000γ plus tabular quantities

Date	Hours G. M. T. 00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	378	378	378	374	366	359	348	342	342	344	354	356	359	362	365
2††	384	378	370	370	373	363	298	347	396	388	390	356	332	344	369
3	381	379	379	388	381	378	373	374	379	377	375	367	369	370	367
4	384	386	380	371	365	355	347	349	354	355	356	360	359	367	374
5	378	378	378	372	370	357	352	347	355	362	366	366	365	367	367
6	381	387	380	373	366	354	347	346	349	352	355	360	367	369	372
7†	378	386	387	380	367	356	347	344	343	339	341	355	365	372	371
8	381	381	384	386	384	375	369	359	352	358	363	367	367	369	△
9	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△
10††	△	△	△	△	△	△	△	△	351	351	355	333	305	△	△
11†	△	△	△	△	372	366	367	371	373	372	375	372	378	378	379
12†	385	392	390	390	387	374	360	354	351	357	358	357	364	371	373
13†	384	388	392	389	384	374	364	354	352	356	357	365	367	367	369
14†	384	388	389	390	392	373	356	344	344	351	360	366	367	370	374
15	378	385	384	387	380	360	343	327	328	333	347	355	365	367	372
16	371	386	380	370	360	346	334	326	329	339	357	372	372	372	375
17	381	386	386	378	366	357	343	346	356	365	365	365	366	366	367
18	382	381	378	376	369	357	345	338	349	354	354	354	353	356	372
19	377	381	385	384	374	365	355	347	342	343	350	356	365	372	377
20	383	388	388	393	385	364	358	342	356	364	365	367	367	372	371
21	377	379	378	376	372	367	360	353	354	360	364	365	371	376	371
22	387	382	377	371	362	354	350	347	344	345	362	365	368	369	367
23	382	387	388	383	371	360	345	340	339	341	351	354	364	364	372
24	376	381	381	375	371	361	348	340	336	336	348	352	357	367	374
25	376	382	386	374	362	353	352	352	351	339	339	339	346	366	374
26	375	382	389	391	380	363	361	356	359	363	363	366	362	362	363
27††	377	383	378	375	365	348	337	329	330	342	351	360	361	363	367
28††	384	374	371	379	370	350	328	316	333	344	377	374	373	374	376
29††	380	384	388	396	403	395	360	357	366	355	350	351	359	370	360
30	375	385	384	383	364	358	346	336	328	332	338	349	359	368	372
31	380	379	380	373	361	341	335	329	340	346	350	356	361	371	366
Mean	380	383	382	380	373	361	352	344	348	347	344	360	362	367	370
Mean†	385	386	390	387	382	369	357	349	348	351	354	361	366	370	372
Mean††	381	380	372	380	378	364	356	337	356	357	367	360	356	363	368

† Five International quiet days.
†† Five International disturbed days.
△ Loss of record; (day omitted for means).

TABLE 15

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

March — 2000γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
371	374	367	371	381	385	385	379	374	366	20 12	393	07 44	336	57	1
388	394	400	395	397	388	395	395	386	375	21 20	424	05 46	280	144	2††
374	382	389	379	378	378	384	386	380	378	17 04	396	11 21	366	30	3
378	378	379	379	378	378	378	379	378	369	01 23	393	06 02	340	53	4
378	377	372	375	379	384	384	384	378	370	02 14	389	06 56	340	49	5
369	377	379	378	378	378	379	381	379	369	00 26	393	06 26	340	53	6
369	373	381	380	381	378	384	379	378	368	01 06	395	09 30	335	60	7†
△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	8
△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	9
△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	10††
378	380	381	384	384	386	384	384	385	△	△	△	△	△	△	11†
377	378	379	380	380	380	379	380	380	374	00 58	396	07 50	349	47	12†
372	372	369	377	381	381	384	385	382	374	01 34	397	07 45	348	49	13†
377	378	378	378	378	378	378	378	378	373	03 20	404	07 14	340	64	14†
372	373	377	373	375	381	386	385	378	367	03 13	396	07 14	320	76	15
377	379	380	380	372	371	375	386	380	366	21 32	397	07 55	314	83	16
377	377	381	382	380	379	379	384	382	371	01 24	394	06 06	338	56	17
377	377	377	378	377	377	377	377	377	367	00 54	384	07 06	337	47	18
377	378	378	377	379	385	383	381	378	370	19 46	392	09 20	339	53	19
376	376	376	377	378	377	379	382	380	374	03 10	401	07 22	346	55	20
368	358	355	362	365	379	382	381	382	369	22 36	393	07 26	349	44	21
376	377	378	376	380	383	379	377	376	365	00 01	393	08 14	336	57	22
375	374	376	375	381	378	381	381	376	368	01 50	394	08 26	335	59	23
375	375	375	375	375	372	377	375	375	366	00 50	390	08 30	329	61	24
375	380	380	380	380	375	374	374	374	366	01 38	392	09 12	331	61	25
365	373	374	376	384	385	383	384	375	372	03 02	400	07 45	348	52	26
371	377	386	388	386	375	368	377	373	365	18 24	393	07 31	322	71	27††
375	384	384	381	381	382	383	382	381	369	15 53	390	06 56	308	82	28††
369	361	366	367	381	382	381	383	376	373	03 44	424	21 06	327	97	29††
372	373	376	378	379	378	378	380	378	365	01 18	400	08 02	320	80	30
368	374	379	372	369	376	383	378	374	364	20 40	388	06 46	326	62	31
374	376	377	377	379	379	381	381	378	369					66	Mean
374	375	377	379	380	379	381	381	380							Mean†
376	379	384	383	386	382	382	384	379							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 16

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April — 2000γ plus tabular quantities

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	378	380	382	379	367	344	314	305	313	337	360	360	361	361	369
2	382	383	381	371	355	336	320	319	313	332	348	359	365	370	371
3	372	382	382	382	371	359	342	325	325	327	336	339	353	367	371
4	381	381	383	386	381	363	344	336	336	337	348	356	360	368	371
5††	377	382	386	380	363	352	341	331	338	344	354	344	346	358	365
6	382	381	374	369	362	349	328	339	351	346	342	350	357	367	371
7†	380	382	394	393	388	376	358	347	346	348	355	354	356	362	367
8	373	381	378	372	355	348	330	322	325	333	345	355	357	364	362
9	378	380	385	380	374	369	348	348	351	354	355	355	359	358	365
10††	382	378	372	359	341	334	324	340	329	340	346	352	353	352	353
11	384	383	376	370	362	351	340	330	327	333	342	340	340	355	362
12	373	382	380	373	363	358	342	327	331	339	350	357	362	364	363
13†	372	382	376	372	364	353	338	326	326	332	346	356	360	355	355
14†	372	373	373	372	372	367	358	350	350	356	362	363	367	363	362
15	372	381	383	375	361	343	327	315	316	326	331	343	350	360	358
16	377	372	376	377	368	355	347	342	344	348	355	356	367	368	363
17††	372	374	372	366	356	354	348	347	348	347	348	348	369	369	362
18††	381	376	371	371	359	357	353	354	349	345	341	342	351	360	360
19††	361	367	370	359	353	351	330	322	325	324	335	345	355	367	361
20	376	376	367	359	356	337	328	323	324	317	331	347	359	361	365
21	373	377	368	354	352	347	343	334	338	340	340	350	357	355	357
22†	375	375	375	375	370	368	359	357	351	345	345	352	358	359	359
23	374	377	375	368	357	341	334	333	334	337	342	354	363	363	359
24	368	374	372	369	362	335	316	305	305	309	331	348	355	360	360
25†	366	371	376	363	361	345	333	322	321	329	343	354	360	357	352
26	367	374	371	358	348	326	307	310	317	334	345	345	344	341	346
27	361	371	371	360	342	327	320	320	320	327	346	349	357	353	352
28	366	372	372	369	360	345	331	315	325	326	331	345	349	345	346
29	371	373	369	361	357	345	331	325	327	328	342	357	352	345	346
30	366	372	366	360	350	341	334	327	323	326	333	345	350	350	350
Mean	374	377	376	370	361	349	336	330	331	336	344	351	356	359	360
Mean†	373	377	379	375	371	362	349	340	339	342	350	356	360	359	359
Mean††	375	375	374	367	354	350	339	339	338	340	345	346	355	361	360

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 16

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

April — 2000γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
372	372	372	379	380	374	379	380	383	363	22 42	388	06 38	299	89	1
371	371	372	375	373	375	373	380	373	361	01 34	389	08 00	305	84	2
371	371	371	371	382	374	371	371	377	362	01 10	388	08 00	319	69	3
371	371	371	377	381	382	382	380	377	368	02 58	395	08 22	331	64	4
372	379	380	380	381	381	378	376	371	365	02 12	395	07 12	318	77	5††
373	376	377	381	380	381	389	378	379	366	00 01	387	06 10	321	66	6
370	370	371	376	374	376	373	373	371	369	03 00	401	07 40	339	62	7†
368	372	377	377	377	376	374	379	378	362	00 43	386	07 12	316	70	8
366	370	375	372	372	375	377	373	374	367	02 14	387	07 48	339	48	9
360	384	375	375	376	376	378	379	383	360	15 43	394	06 12	300	94	10††
369	373	373	373	373	372	368	368	372	360	00 14	387	07 54	322	65	11
369	366	362	365	362	368	368	368	371	361	01 18	388	07 23	317	71	12
361	367	367	372	372	372	371	373	373	360	01 06	388	07 46	318	70	13†
364	364	368	370	372	372	372	371	371	366	01 22	381	07 40	346	35	14†
361	364	365	368	367	367	372	370	365	356	01 10	387	07 00	309	78	15
360	360	361	367	368	371	371	372	371	363	03 18	380	07 12	333	47	16
370	370	371	371	372	369	371	361	372	363	23 36	413	07 06	331	82	17††
364	367	359	366	362	366	371	369	366	361	00 54	400	10 34	329	71	18††
359	363	381	371	367	370	379	378	378	357	21 02	385	07 04	313	72	19††
365	368	369	369	370	370	370	374	374	356	00 45	382	09 00	313	69	20
355	362	369	377	381	377	377	374	375	360	18 26	375	07 00	329	46	21
364	364	366	369	367	369	370	370	370	364	00 42	378	09 34	340	38	22†
365	368	368	368	368	371	368	368	367	359	00 42	381	07 09	327	54	23
366	355	361	364	365	369	365	364	365	352	06 38	373	08 00	293	80	24
351	360	362	363	363	362	363	365	363	354	01 30	379	07 30	312	67	25†
352	356	364	366	371	371	365	361	360	350	01 06	377	06 15	297	80	26
359	360	361	361	361	361	360	360	361	351	00 58	373	06 14	311	62	27
345	350	350	359	360	357	371	369	364	351	01 22	377	07 00	311	66	28
350	357	360	365	366	366	364	365	366	354	00 34	377	08 44	320	57	29
357	357	360	360	360	360	360	364	363	351	00 36	375	08 06	318	57	30
363	366	368	370	371	371	372	371	371	360					66	Mean
362	365	367	370	370	370	370	370	370							Mean†
365	371	373	373	372	372	375	373	374							Mean††

† Five International quiet Days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

6—1 D. D. G. Obs. Kodi/58.

TABLE 17

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May — 2000γ plus tabular quantities

Date	Hours G. M. T. 00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1††	366	371	368	366	355	345	338	336	341	355	363	365	363	360	358
2	369	372	363	357	346	338	329	335	338	349	352	357	358	360	360
3	369	374	373	360	343	330	320	326	333	342	349	358	360	360	360
4	372	380	375	371	363	353	341	337	343	341	349	357	360	360	359
5	374	381	373	365	352	347	342	341	340	344	348	354	359	358	359
6	370	371	371	371	365	355	347	337	347	348	341	347	354	355	359
7	364	365	362	357	350	335	339	341	347	348	351	354	357	358	357
8	369	370	371	372	358	345	338	334	335	345	346	346	347	356	356
9††	369	369	366	346	342	340	326	347	353	352	352	346	347	350	353
10	369	371	369	367	351	332	325	333	334	340	345	347	354	357	356
11	367	371	373	368	353	346	334	333	334	341	346	352	356	357	356
12†	368	375	370	368	355	345	341	336	345	351	352	356	357	360	356
13	368	377	371	362	355	344	334	323	311	323	332	346	359	357	357
14	370	377	379	374	358	344	328	321	321	324	336	346	354	356	355
15†	368	376	378	390	382	369	355	335	331	323	332	344	355	359	356
16†	367	377	378	378	364	344	330	323	326	335	343	351	356	361	355
17	369	378	383	370	360	338	317	315	315	326	336	353	361	361	356
18	367	372	371	371	359	352	343	326	322	329	336	350	362	364	360
19	369	377	374	357	345	337	322	339	308	319	332	349	355	360	361
20††	371	376	369	357	349	343	338	333	336	337	337	350	353	353	353
21	373	374	367	358	342	315	314	318	338	326	329	341	359	364	363
22	373	375	367	363	346	332	320	316	313	329	331	335	347	352	354
23	368	372	365	362	359	355	334	317	312	316	319	335	350	361	359
24†	372	359	362	361	350	349	349	346	344	344	342	349	358	360	356
25	368	366	366	363	355	351	343	337	329	346	352	362	364	362	359
26††	368	371	360	350	346	342	336	338	327	317	318	330	343	361	359
27	366	371	370	363	347	335	315	308	315	321	329	340	350	356	355
28	368	371	367	368	365	353	341	332	338	339	351	357	361	362	357
29†	367	370	366	363	362	357	351	334	328	332	337	344	349	358	354
30††	365	370	369	364	361	356	341	338	331	333	319	331	362	361	354
31	368	373	365	356	348	342	348	342	340	340	344	350	352	356	352
Mean	369	373	370	364	354	344	335	332	331	336	340	348	356	359	357
Mean†	368	371	371	372	363	353	345	335	335	337	341	349	355	360	355
Mean††	368	371	366	357	351	345	336	338	338	339	338	344	354	357	355

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 17

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

May — 2000γ plus tabular quantities

Hours G. M. T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
358	360	363	366	367	368	367	366	366	360	00 53	375	07 00	331	44	1††
360	361	361	366	367	366	365	364	366	357	00 46	377	06 18	321	56	2
359	359	364	365	360	361	366	373	374	356	22 30	379	06 26	317	62	3
359	361	367	364	363	367	372	371	372	361	01 00	383	07 10	331	52	4
360	360	363	365	365	367	367	366	366	359	00 34	385	07 34	332	53	5
359	359	360	365	365	365	367	366	366	359	00 30	376	10 12	330	46	6
358	358	358	359	364	364	364	364	364	356	01 06	373	05 18	320	53	7
360	360	369	369	369	369	370	371	363	358	02 52	377	07 02	328	49	8
357	360	363	363	366	365	368	364	369	356	01 02	374	06 22	317	57	9††
356	361	363	364	367	364	363	362	368	355	00 39	374	05 22	321	53	10
356	357	362	365	368	365	364	364	370	357	01 58	377	07 37	327	50	11
359	363	367	368	368	368	368	368	369	360	01 14	377	07 20	329	48	12†
359	365	368	368	368	368	367	367	367	355	01 08	383	08 00	308	75	13
356	366	367	367	367	367	367	367	367	356	01 42	385	07 10	315	69	14
356	360	362	367	367	366	362	366	364	359	03 00	396	08 52	315	81	15†
356	361	364	366	366	366	366	367	367	357	02 08	385	07 07	316	69	16†
361	361	362	367	366	366	361	363	366	355	01 48	390	06 40	306	84	17
361	362	361	363	364	364	363	366	367	356	00 54	379	07 42	315	64	18
361	360	362	363	360	366	370	371	369	354	01 10	383	07 52	303	80	19
357	366	367	367	367	373	366	370	372	357	00 38	382	06 44	324	58	20††
363	363	364	366	371	367	365	366	367	353	00 26	382	05 52	310	72	21
357	357	362	363	363	363	363	363	364	350	00 34	382	07 34	305	77	22
359	361	361	362	362	362	363	366	369	352	00 46	374	07 52	305	69	23
358	362	364	365	366	365	364	365	365	357	00 30	379	09 50	333	46	24†
360	363	367	365	368	367	365	364	365	359	18 46	372	07 46	319	53	25
361	355	361	364	366	367	366	364	363	351	00 50	377	09 46	307	70	26††
358	362	363	362	366	364	366	364	366	351	00 50	376	06 42	304	72	27
357	362	362	363	365	363	365	363	365	358	00 50	376	06 58	329	47	28
358	359	362	363	363	363	363	362	362	356	00 40	373	08 06	319	54	29†
360	361	359	354	360	367	365	371	367	355	01 30	375	10 24	311	64	30††
354	358	361	361	361	362	364	361	364	355	00 52	374	09 46	336	38	31
358	361	363	364	365	366	366	366	367	356					60	Mean
357	361	364	366	366	366	365	366	365							Mean†
359	360	363	363	365	368	366	367	365							Mean†

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 18

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

2000γ plus tabular quantities

June

Date	Hours G. M. T.														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1†	365	367	366	362	350	339	328	321	317	318	327	334	340	350	348
2†	363	367	367	365	359	345	342	335	328	329	332	336	345	352	351
3	367	367	373	374	370	355	348	344	335	336	345	332	344	352	355
4††	371	376	375	371	363	347	351	347	337	330	339	338	348	354	356
5	365	362	366	357	333	323	323	317	316	323	326	337	345	349	352
6††	369	371	360	351	334	313	310	313	316	316	327	338	335	344	347
7	360	368	370	369	360	350	340	340	337	342	343	344	350	352	351
8	359	367	360	355	345	337	330	330	331	330	322	325	334	344	350
9†	362	368	373	378	369	360	355	346	346	353	355	356	356	354	353
10†	359	366	369	362	359	351	341	334	331	335	347	346	347	353	353
11†	359	368	360	366	366	347	336	331	331	332	336	344	360	359	354
12	363	370	368	360	356	347	337	330	335	337	335	350	351	348	347
13	358	365	363	360	353	344	338	329	321	312	309	316	332	348	351
14	356	359	366	358	347	340	336	334	334	340	352	356	354	350	348
15	356	362	368	370	354	338	323	319	319	322	327	331	343	347	348
16	362	365	368	366	355	346	335	335	337	325	323	331	345	351	352
17	359	369	368	360	366	344	325	342	348	345	343	345	338	351	352
18	355	361	361	371	370	362	345	328	342	345	347	350	351	355	356
19	365	367	367	360	350	332	324	322	322	313	312	325	337	353	355
20	365	368	368	368	360	342	331	331	328	328	324	324	335	344	351
21	362	367	371	368	361	351	355	344	351	354	355	359	358	354	351
22	367	368	367	359	358	347	335	334	334	330	335	343	340	347	351
23	362	368	374	366	353	343	336	332	332	337	335	340	351	351	351
24	361	362	362	346	338	330	327	327	△	△	△	△	△	△	△
25††	△	△	△	△	374	360	359	359	356	352	351	355	356	347	351
26††	358	369	369	348	343	337	331	328	329	338	344	329	337	356	356
27	368	369	375	383	374	366	351	339	336	338	347	351	353	353	351
28	361	373	378	374	355	337	330	321	308	315	328	339	351	351	352
29	363	371	366	362	352	339	329	332	334	328	335	339	347	354	353
30††	362	368	368	361	343	321	327	320	314	312	310	306	289	335	350
Mean	362	367	368	364	356	343	336	331	330	331	322	338	343	350	352
Mean†	362	367	363	367	361	348	341	333	331	333	339	343	350	355	352
Mean††	365	371	368	358	316	330	330	327	324	324	330	328	327	347	352

† Five International quiet days.

†† Five International disturbed days.

△ Loss of record; (day omitted for means).

TABLE 18

Hourly values of Vertical Force, 1957

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

June 2000γ plus tabular quantities

Hours G.M.T.									Mean	Maximum		Minimum		Range	Date
15	16	17	18	19	20	21	22	23		Time	Mag.	Time	Mag.	Mag.	
γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	H. M.	γ	H. M.	γ	γ	
350	356	359	361	361	361	361	359	360	348	00 37	367	08 25	314	53	1†
356	360	361	361	361	361	361	361	367	353	00 57	369	08 28	327	42	2†
353	355	356	359	358	357	361	363	371	355	02 42	375	11 13	329	46	3
354	356	355	359	362	362	359	355	364	355	01 22	380	09 56	326	54	4††
352	355	354	358	357	357	358	360	362	346	01 49	369	08 02	314	55	5
348	353	356	360	360	363	368	361	356	345	00 45	377	06 25	310	67	6††
350	352	353	355	355	356	356	358	356	353	01 32	374	07 45	336	38	7
353	354	358	359	360	359	359	360	360	348	00 35	368	10 00	322	46	8
353	356	355	355	354	354	351	355	355	357	02 45	380	07 00	342	38	9†
354	355	356	356	358	359	358	356	359	353	02 00	369	07 55	325	44	10†
355	356	359	359	359	359	359	359	360	353	01 00	368	07 30	330	38	11†
350	351	353	355	355	355	354	355	356	351	01 00	370	07 00	327	43	12
351	353	355	354	355	355	355	355	354	345	00 32	366	09 51	305	61	13
355	356	356	356	356	356	356	355	355	351	01 49	367	07 45	331	36	14
345	350	354	353	356	356	356	359	360	346	02 50	374	06 35	317	57	15
353	354	356	359	359	358	358	359	359	350	02 15	369	09 58	319	50	16
351	356	358	358	358	355	355	355	355	352	00 40	370	06 13	322	48	17
351	355	358	359	363	354	355	356	359	355	03 18	374	06 52	327	47	18
353	355	359	362	362	362	362	362	362	348	00 05	368	09 35	306	62	19
352	359	354	352	355	356	356	358	362	349	01 00	368	10 21	321	47	20
351	352	352	356	358	362	359	360	362	357	02 00	371	07 21	342	29	21
354	356	359	359	361	361	362	362	362	352	01 36	373	09 07	325	48	22
351	354	355	356	355	353	356	355	356	351	02 00	374	09 30	328	46	23
△	△	△	△	△	△	△	△	△	△	△		△	△	△	24
356	358	358	358	351	358	365	354	355	△	△		△	△	△	25††
354	356	369	371	371	366	367	371	369	353	01 30	374	07 08	315	59	26††
351	355	358	362	362	362	368	367	368	359	02 59	385	08 50	335	50	27
356	361	360	362	360	360	361	360	362	351	02 15	382	08 00	308	74	28
351	353	353	358	356	356	356	356	360	351	01 00	371	09 14	327	44	29
344	352	356	350	374	354	340	367	368	341	01 45	371	12 04	269	102	30††
352	355	357	358	359	358	358	359	361	351					51	Mean
354	357	358	358	359	359	359	358	360							Mean†
350	354	359	359	367	361	359	363	364							Mean††

† Five International quiet days.

†† Five International disturbed days.

△ Loss of Record; (day omitted for means).

TABLE 19

PRINCIPAL MAGNETIC STORMS

January to June 1957

Observatory	Greenwich Date	Storm Time		Sudden commencements				C-figure Degree of Activity(iv)	Maximal Activity on K scale 0 to 9			Ranges		
		G.M.T. of Beginning	G.M.T. of Ending(i)	Type (ii)	Amplitude(iii)				Greenwich Day	Greenwich 3 hr. period	K-index	D.	H.	Z.
					D.	H.	Z.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		h. m.	d. h.		′	γ	γ					′	γ	γ
Astrophysical Observatory, Kodaikanal	January 2 . .	09 12	3 15	S.C.	2	81	23	m	2	..	..	6	244	44
	January 21 . .	12 53	25 09	S.C.	1	39	22	s	21	..	..	11	490	103
	January 29 . .	13 10	30 10	S.C.	1	15	12	m	30	..	..	4	165	31
	February 4 . .	03 54	05 16	..	..	..	..	ms	5	..	..	6	284	50
	February 12 . .	18 49	14 09	S.C.	1	22	12	m	13	..	..	5	203	62
	February 23 . .	18 07	24 13	S.C.	1	56	32	m	24	..	..	4	218	66
	March 1 . .	16 06	03 22	..	..	..	..	s	2	..	..	13	586	149
	March 10 . .	00 24	11 07	S.C.	Δ	Δ	Δ	Δ	10	..	..	Δ	Δ	Δ
	March 15 . .	19 38	16 22	..	..	..	..	ms	16	..	..	4	308	75
	March 27 . .	11 36	29 03	S.C.	1	14	10	ms	28	..	..	4	286	80
	March 29 . .	03 39	30 09	S.C.	2	94	28	ms	29	..	..	4	334	98
	April 9 . .	07 35	10 19	..	..	..	..	ms	10	..	..	6	290	84
	April 15 . .	20 45	16 18	S.C.	<1	13	10	m	15	..	..	5	240	38
	April 17 . .	11 34	20 02	S.C.	<2	53	23	ms	18	..	..	8	302	95
	May 30 . .	08 20	31 08	S.C.	1	59	13	m	30	..	..	9	249	60
	June 24 . .	03 28	27 13	S.C.	>1	46	10	ms	26	..	..	15	303	54
	June 30 . .	05 26	1st 21 July	S.C.	3	116	35	s	30	..	..	14	460	133

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 westwards). (Z—reckoned positive being vertically downwards).

(iv) Storm described by three degrees of activity : { (m)—for moderate (when range is less than 250γ). (ms)—for moderately severe (when range is between 251γ and 400γ). (s)—for severe (when range is above 400γ).

IONOSPHERIC DATA

47

Characteristic : h'F
Unit : Km
Month : January 1957

TABLE 1
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	350	335	290	275	260	255	295	280	260	255	240	220
2	320	285	260	260	240	250	295	280	255	240	230	230
3	275	240	C	300	420	F	350	270	260	240	A	225
4	310	260	250	260	225	240	310	295	260	245	240	235
5	U380F	325F	320	300	270F	245	285	285	265	250	C	C
6	340	300	265	285	280	275	300	280	260	245	250	240
7	355	300	270	265	255	240	295	280	260	C	240	B
8	320	300	300	300	270	240	280	280	260	250	260	L
9	U360F	U340F	360	U360F	U335F	U315F	310	280	260	270	250	240
10	F	275	270	245	260	255	285	280	265	250	240	230
11	315	290	270	280	310	260	260	270	260	240	240	235
12	290	265	250	240	240	240	300	260	245	C	220	230
13	290	280	250	250	C	C	C	C	C	C	C	C
14	U330F	U310F	275	265	U260F	265	305	280	255	250	240	230
15	325F	U370F	F	260	240	260	320	275	250	240	220	220
16	260	275	260	260	240	240	310	280	255	235	230	220
17	280	250	245	250	260	260	300	280	260	240	230	220
18	300	280	255	265	260	255	B300B	270	245	235	225	220
19	300	260	230	250	245	250	C	C	C	240	235	235
20	360	285	285	280	275	240	260	275	250	240	220	220
21	F	260	240	240	235	230	280	275	245	235	240	225
22	C	C	C	C	C	C	C	275	240	240	235	240
23	330	340	310	280	240	225	260	265	250	240	220	225
24	270	280	290	275	240	240	260	270	B	210	220	220
25	C	C	C	C	C	C	C	C	C	C	220	C
26	C	C	C	C	C	C	C	C	C	C	C	C
27	300	280	280	260	270	275	290	280	260	240	230	220
28	280	265	275	275	255	240	265	275	250	235	225	230
29	270	U295F	265	255	250	250	300	275	250	240	220	215
30	255	280	300	285	250	240	260	270	240	235	220	220
31	255	250	240	240	235	220	245	260	240	235	225	210
Mean	310	290	275	270	265	250	290	275	255	240	230	225
Median	305	280	270	265	255	250	295	275	255	240	230	225
Count	26	28	26	28	27	26	26	27	26	26	27	25

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F
Unit : Km
Month : January 1957

TABLE 1
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
235	220	225	240	260	295	255	480	460	415	400	320	1
230	220	220	250	260	285	350	420	440	395	315	300F	2
235	225	230	235	260	290	345	F	F	F	U260F	400	3
230	235	C	C	C	300	360	540	F	F	F	F	4
235	230	220	240	265	295	360	465	500	F	U435F	360	5
240	245	L	260	290	315	375	535	610	U540F	F	U415F	6
L	L	L	250	265	295	360	455	520	F	360	335	7
B	260	240	260	C	C	350	480	500	430	380	F	8
235	240	235	250	265	285	340	F	F	F	U415F	U340F	9
240	230	235	250	260	295	340	440	465	U440F	U330F	300	10
220	220	215	235	255	275	340	420	U420F	380	320	300	11
215	220	220	220	260	280	335	435	400	500	395	335	12
B	220	230	240	240	275	325	460	F	500	490	F	13
E230L	220	230	230	250	280	340	500	F	F	U430F	F	14
220	210	215	215	240	A	305	380	F	F	355F	320	15
215	210	230	240	255	280	330	420	U460F	U420F	400	365	16
220	215	220	235	250	270	310	380	410	U440F	U380F	310	17
220	215	205	225	245	270	315	450	460	F	380	320	18
C	C	220	230	250	275	320	405	410	400	460	400	19
220	215	225	235	260	290	320	450	500	F	F	F	20
220	215	E220L	235	245	275	320	480	F	C	C	C	21
240	220	225	260	250	C	C	400	U400F	F	U380F	340	22
220	210	210	240	255	290	330	450	U540F	U460F	U400F	300F	23
220	220	225	E240L	260	C	C	C	C	C	C	C	24
220	C	205	235	250	280	325	440	F	500	460	320	25
C	C	230	230	250	280	325	460	F	460	460	340	26
220	B	B	240	255	275	320	400	420	415	405	360	27
220	215	210	220	250	275	320	440	U450F	F	U410F	U330F	28
215	205	220	235	245	280	320	460	F	U560F	U420F	U275F	29
220	220	230	240	250	275	330	440	410	345	310	275	30
205	200	230	230	240	260	315	400	415	380	310	265	31
225	220	225	240	255	285	330	445	460	445	390	330	Mean
220	220	225	240	255	280	330	445	455	435	400	325	Median
26	26	27	30	29	27	29	28	20	18	26	24	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

7—1 D. D. G. Obs. Kodaikanal/58.

Characteristic : fo F2
Unit : Mc
Month : January 1957

TABLE 2
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	7·7F	7·6	6·6	6·0	9·6	11·5	11·8	11·9	11·6
2	u8·2F	8·7	8·2	8·1	8·3	5·8	5·9	9·6	u11·8s	13·3	13·5	13·3
3	u10·2F	RF	u8·1c	u7·1s	6·8	F	4·8	9·0	11·5	12·7	12·9	12·3
4	F	F	F	8·7	8·0	F	F	u9·6s	11·1	11·6	11·7	11·8
5	F	F	F	F	F	F	6·6	10·3	12·0	u12·6R	C	C
6	F	F	u8·0F	7·4	D7·0F	6·4	6·9	10·4	R	u13·5R	13·5	D13·0R
7	F	F	F	7·3F	6·6F	F	F	u9·1s	11·2	C	10·4	u10·2R
8	F	F	F	F	7·6	6·7	6·4	10·0	12·0	12·8	13·2J	13·2
9	F	F	F	F	F	F	F	F	D12·2R	12·8	12·3	12·0
10	F	u10·7R	10·5	9·1	6·6	4·8	5·7	9·1	11·7	12·6	D13·3R	13·1
11	u9·0F	10·1F	10·3	9·0	9·2	8·7	7·0	10·5	11·8	12·2	12·8	13·1
12	9·8	10·3	9 8	u7·3s	5·4	3·0	4·5	8·6	10·7	C	11·5,	D11·2W
13	F	F	u9·2s	7·5	C	C	C	C	C	C	C	C
14	F	F	F	7·6	F	5·6	5·5F	8·4	9·9	10·6	10·3	11·5
15	F	F	F	F	6·1	4·0	4·4	8·0	9·9	10·4	10·3	10·6
16	8·8	8·2	8·3	8·0	6·4	3·8	4·4	8·6	10·4	10·7	10 8	10·8
17	9·8	10·5	u9·1s	7·4	5·7	3·9	4·4	8·8	11·6	12·2	11·6	10·9
18	9·4	9·1	9·3	8·8	7·9	5·6	5·1	9·1	11·1	10 8	11·0	11·6
19	F	u9·2s	8·8	6·8	5·3	3·5	C	C	C	10·5	10·5	10·6
20	F	F	8·6F	8·2F	8·4F	7·6	5·8	D9·2s	11·0	11·3	10·7	10·4
21	F	F	F	7·9	6·6	4·9	D4·4s	8·7	11·0	11·3	11·1	11·3
22	C	C	C	C	C	C	C	8·8	10·6	11·8	11·0	10·8
23	10·8	10·7	10·4	10·6	10·6	7·4	5·0	8·8	11·3	12·6	12·6	11·3
24	9·8	9·1F	8·8	F	8·1	7·0	7·1	10·1	11·9	13·1	12·6	12·0
25	C	C	C	C	C	C	C	C	C	C	u13·0R	C
26	C	C	C	C	C	C	C	C	C	C	C	C
27	F	F	F	F	F	6·3	6·7	9·4	10·2	11·7	11·4	10·9
28	u8·5F	9·3	8·0	6·7	F	6·0	5·5	9 8	11·6	12·5	12·4	11·9
29	F	F	8·8	8·1F	7·4	7·3F	6·9	7·8	10·5	11·7	11·3	11·2
30	F	F	10·4F	11·0	F	10·0	8·8	10·5	11·7	13·4	13·8	14·0
31	F	11.0	10·6	9·0	7·2	5·8	5·5	9·8	11·5	11·8	12·0	12·0
Mean	9·4	9·7	9·2	8·2	7·3	5·9	5·8	9·3	11·2	12·0	11·9	11·7
Median	9·6	9·7	9·0	8·0	7·2	5·9	5·7	9·2	11·4	12·0	11·8	11·6
Count	10	12	18	22	21	22	23	26	26	26	28	27

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : fo F2
Unit : Mc
Month : January 1957

TABLE 2
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
11·2	10·9	D10·2W	D10·0W	9·9	U9·3R	U9·2R	8·7	8.8	8·5	7·9	8·5	1
13·1	13·1	12·8	12·5	11·6	10·6	10·7	10·6	9.2	9·1	F	9·7F	2
12·5	11·9	D11·5W	10·9	10·5	10·3	10·5	10·3F	F	F	F	F	3
11·6	11·5	C	C	C	11·1	D10·1S	D8·8W	F	F	F	F	4
D10·7W	10·5	10·4	11·0	U11·6S	D11·6S	11·4	10·5	D9·8W	U9·0F	U9·0F	9·0	5
13·5	13·1	12·4	U12·0S	11·7	D11·0W	U10 3R	D8·7W	F	F	F	F	6
R	D10·1W	10·4	D10·2W	D10·0W	U9·5S	9·6	9·3	8·3F	F	F	10·0	7
13·3	13·7	13·1	U13·2R	C	C	D11·2S	D10·8W	F	U10·3F	10·3	F	8
12·5	12·8	13·1	13·1	13·2	U12·7R	U11·7S	F	F	F	F	U8·7F	9
D12·3W	12·6	13·2	D13·7S	U13·1R	U12·6R	11·7	D10·6W	U8·6F	F	F	U9·2F	10
13·2	12·6	12·6	12·0	11·6	U10·8S	D10·7W	D10·3W	U8·8F	F	U9·6F	U9·1F	11
10·9	10·4	10·1	10·2	10·3	U10·1S	10·1	9·1	8·6	7·5F	U8·1F	F	12
11·9	12·2	12·2	12·4	U12·1S	U11·9S	11·5	D10·4R	F	F	F	F	13
11·4	D11·3W	10·7	10·5	10·5	10·4	9·9	D9·0W	U8.8R	F	F	F	14
10·7	11·2	11·0	10·8	11·2	11·4	11·2	10·8	U9.8F	9·0F	U8·7R	8·1F	15
10·5	10·5	10·5	10·7	10·8	10·9	10·4	U9·5R	U9·2F	U8·7F	8·6F	F	16
10·8	10·5	10·5	10·6	11·2	11·6	11·8	D12·0R	U12·0R	10·6F	10·4F	11·0	17
10·2	10·4	10·6	10 6	10·6	10·8	10·7	10·1	F	F	F	F	18
C	C	9·9	U9·5S	9·2	D9·4S	D9·3S	D9·3S	9·2	8·8	U6·9F	F	19
10·2	10·5	10·5	10·7	11·0	11·0	10·9	F	F	F	F	F	20
11·6	11·1	D9·7W	9·8	D9·8W	U9·6S	U9·2S	D8·0W	F	C	C	C	21
D10·2W	10·2	10·3	10·4	10·3	C	C	D9·2S	U9.1F	U9·4F	F	F	22
10·6	10·2	9·9	D9·3W	9·7	10·2	10·5	9·8	F	U9·0F	F	F	23
11·1	10·4	D10·0W	10·5	10·5	C	C	C	C	C	C	C	24
11·6	C	11·3	11·5	U11·8S	11·5	D11·0W	D9·4W	F	F	F	F	25
C	C	12·1	11·6	D10·7W	U10·6S	10·5	D9·0W	F	F	F	F	26
10·2	B	10·0	10·0	D10·0W	U9·8S	U9·7S	9·5	U9·3R	8·7	F	F	27
D11·3W	10·9	10·5	10·5	10·4	10·5	9·9	D9·3W	8·7F	F	F	U8·5F	28
11·0	11·2	11·8	12·0	12·0	11·4	D.105W	D9·0W	F	F	F	F	29
14.0	14·2	14·0	13·8	11·3	13·8	12·6	11·0F	F	F	U10·8F	F	30
11·8	12·3	12·9	13·4	13·5	13·4	13·0	11·7	U11·0F	F	F	R	31
11.6	11·5	11·3	11·2	11·1	11·0	10·7	9·8	9·3	9·0	9·0	9·2	Mean
11.4	11·2	10·6	10·8	10·8	10·8	10·5	9·5	9·2	9·0	8·8	9·0	Median
28	27	30	30	29	28	29	28	16	12	10	10	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2 | TABLE 3 | Latitude : 10°.2N

Unit : Km | Ionospheric Data | Longitude : 77°·5E

Month : January 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	L
2									L	L	L	L
3									L	L	L	L
4									L	L	L	L
5									L	L	C	C
6									L	L	L	L
7										C	L	L
8									L	L	L	L
9									L	L	L	L
10									L	L	L	L
11									L	L	L	L
12									L	C	L	L
13									C	C	C	C
14									L	L	L	L
15									L	L	L	L
16									L	L	L	L
17									L	L	L	L
18									L	L	L	L
19									C	L	L	L
20									L	L	L	L
21									L	L	L	L
22									L	L	L	635
23									L	L	L	L
24									L	L	L	L
25									C	C	L	C
26									C	C	C	C
27								L	L	L	L	L
28									L	L	L	L
29									L	L	L	L
30									L	L	L	L
31									L	L	L	L
Mean									..	..	..	..
Median									..	..	..	..
Count									..	..	..	1

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2 | TABLE 3 | Latitude : 10°.2N

Unit : Km. | Ionospheric Data | Longitude : 77°.5E

Month : January 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	U520L	L	L	L	L							2
570	615	635	L	L	L							3
L	L	C	C	C	L							4
L	L	L	L	L	L							5
E500L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	525	520	L	C	C							8
E495L	L	L	L	L	L							9
L	L	L	555	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								16
L	L	L	L	L								17
L	L	L	L	L								18
C	C	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
630	620	635	575	L	C							22
L	L	L	L	L								23
L	L	L	L	L	C							24
L	C	L	L	L	L							25
C	C	L	L	L	L							26
L	B	L	L	L	L							27
L	L	L	L	L								28
L	L	L	L	L	L							29
L	U500L	U530L	L	L	L							30
L	L	L	L	L	L							31
..	555	..	..	..	..							Mean
..	525	..	..	..	..							Median
4	5	4	2	..	..							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : fo F1 | TABLE 4 | Latitude : 10°·2N

Unit : Mc | Ionospheric Data | Longitude : 77°·5E

Month : January 1957 | 750·°E Mean Time

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

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : fo F1 | TABLE 4 | Latitude : 10°·2N

Unit : Mc | Ionospheric Data | Longitude : 77°·5E

Month : January 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L	L							1
L	L	L	L	L	L							2
6·6	6·2	5·8	L	L	L							3
L	L	C	C	C	L							4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	L	L							7
L	p6·9L	L	L	C	C							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								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								16
L	L	L	L	L								17
L	L	L	L	L								18
C	C	L	L	L								19
L	L	L	L	L								20
L	L	L	L	L								21
5·7	5·5	p5·6L	L	L	C							22
L	L	L	L	L								23
L	L	L	L	L	C							24
L	C	L	L	L	L							25
C	C	L	L	L	L							26
L	B	L	L	L	L							27
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							31
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
2	3	2	..	..	..							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'E
Unit : Km
Month : January 1957

TABLE 5
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									115	110	A	A
2								120	115	115	110	110
3									115	105	A	A
4								120	A	A	A	A
5									115	A	C	C
6										120	A	120
7									A	C	A	B
8												
9									A	120	120	A
10									120	A	A	115
11									A	110	A	110
12									105	C	A	A
13								C	C	C	C	C
14									120	120	A	A
15								130	A	110	A	A
16									120	A	A	A
17									A	115	A	A
18									u115L	A	A	A
19								C	C	115	A	A
20								120	A	A	A	A
21									A	110	A	115
22									115	A	A	115
23										120	A	115
24									B	105	A	A
25								C	C	C	110	C
26								C	C	C	C	C
27									110	A	A	A
28									115	115	A	B
29									115	A	A	A
30									120	A	115	115
31									115	B	A	A
Mean								..	115	115	..	115
Median								..	115	115	..	115
Count								4	15	14	4	8

Sweep 1 Mc. to 25 Mc. in $\frac{1}{8}$ min.

Characteristic : h'E | TABLE 5 | Latitude : 10°·2N

Unit : Km | Ionospheric Data | Longitude : 77°·5E

Month : January 1957 | 75·0°E Mean Time

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

Sweep 1 Mc. to 25 Mc. in ½ min.

8—1 D.D.G. Obs, Kodi/58,

Characteristic : foE
Unit : Mc
Month : January 1957

TABLE 6
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	A	A	A
2								2.9J	3.4	A	A	A
3									3.7	A	A	A
4								u3.1J	A	A	A	A
5									A	A	C	C
6										4·1	A	A
7									A	C	A	B
8												
9									A	A	A	A
10									A	A	A	A
11									A	A	A	A
12									L	C	A	A
13								C	C	C	C	C
14									A	A	A	A
15								L	A	A	A	A
16									A	A	A	A
17									A	A	A	A
18									L	A	A	A
19								C	C	A	A	A
20								F	A	A	A	A
21									A	A	A	A
22									u3.2L	A	A	4·0
23										A	A	A
24									B	A	A	A
25								C	C	C	A	C
26								C	C	C	C	C
27									A	A	A	A
28									A	A	A	A
29									A	A	A	A
30									u3.3R	A	4·0	4·1
31									F	B	A	A
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								2	4	1	1	2

Sweep 1 Mc. to 25 Mc. in ½ min,

Characteristic : foE
Unit : Mc
Month : January 1957

TABLE 6
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
A	A	A	A	A	F							2
A	A	A	A	A								3
A	A	C	C	C	A							4
A	A	A	A	A								5
A	A	A	A									6
A	A	A	A									7
B	B	B	A	A								8
B	B	A	B	C	C							9
u4.0B	A		A	u3.1A								10
A	A	A	A									11
A	B	A	A	A								12
A	A	A	A	A								13
B	A	A	A									14
A	A	A	A	A								15
A	A	A	A	A	A							16
A	A	A	A	A								17
A	A	A	A	A								18
C	C	A	A	A	u2.7F							19
A	A	A	A	A								20
A	A	A	A	A								21
R	A	4·0		A	C							22
A	A	A	A	3.4								23
A	A	A	A	A	C							24
A	C	u4.0F	A	A	u2.9F							25
C	C	A	A	A								26
A	B	B	B	A	A							27
A	A	A	A	A	A							28
A	A	A	A	A	A							29
B	4.1	A	3.7	A	A							30
A	A	A	3.8	3.3F	F							31
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
1	1	2	2	3	2							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foEs
Unit : Mc
Month : January 1957

TABLE 7
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									7·4	9·0F	11·0F	12·0F
2								u7·0s	7·7F	8·6F	10·2F	10·8F
3									8·0	9·6F	11·4F	10·6F
4									10·0F	11·0F	11·4F	12·0F
5								u8·0sF	8·9F	11·0F	C	C
6										8·0F	11·0F	10·8F
7									7·4F	C	11·0F	B
8												
9		u4·0s	7·4F	5.8					7·6F	10·2F	10·6F	11·0F
10									7·2F	8·0F	10·4F	11·6F
11		3·1							8·0F	8·8F	10·0F	9.8F
12										C	11·0F	12·0F
13					C	C	C	C	C	C	C	C
14									7·6F	8·2F	8·8F	8·8F
15									8·8F	9·2F	11·0F	11·2F
16			4·4						8·0F	u9·2s	11·0F	12·0F
17									8·4F	u9·2sF	10·4F	11·2F
18		u7·0s								8·6F	9·6F	10·6F
19										7·6F	8·8F	11·0F
20									8·0F	9·8F	9·0F	11·0F
21									8·0F	10·0F	10·0F	10·0F
22										9·8F	11·2F	10·2F
23										10·0F	12·0F	11·8F
24									B	11·0F	12·0F	12·0F
25										C	7·4F	C
26	C	C	C	C	C	C	C	C	C	C	C	C
27									9·0F	10·6F	11·2F	12·0F
28									8·0F	10·6F	11·8F	12·2F
29									7·6F	8·8F	10·8F	11·0F
30									8·4	5·8F	8·8F	7·0
31										u7·6B	11·0F	11·0F
Mean	..	..	..	..	..	..	..	..	8·1	9·2	10·5	10·9
Median	..	..	..	..	..	..	..	..	8·0	9·2	11·0	11·0
Count	3	2	1	..	..	..	..	2	19	25	27	25

Sweep 1 Mc. to 25 Mc. ½ min.

Characteristic : foEs | TABLE 7 | L titude : 10°·2N

Unit : Mc | Ionospheric Data | Longitude : 77°·5E

Month : January 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
12·0F	12·2F	12·0F	11·0F	u9·4s								1
9·5F	8·9F	11·8F	12·0F	9·0F	7·0F							2
9·8F	7·0F	10·0F	11·0F	8·0F	D6·0SF							3
12·0F	12·0F	C	C	C	D7·0SF							4
12·0F	12·7F	12·3F	u11·2SF	7·6F								5
10·4F	11·4F	11·6F	10·7F	10·0F								6
B	B	11·0F	11·8F	8·0F								7
11·0F	10·0F	10·0F	7·6F	C	C						2·6	8
9·5F	8·2F	7·4F	10·0F	7.6F								9
11·0F	9·8F	9·6F	7·6F									10
10·8F	10·2F	12·0F	10·4F	8·8F								11
12·0F	12·0F	11·4F	10·4F	7·6F	u7·0s							12
7·8	9·8F	10·0F	9·4F	8·0F								13
11·6F	10·6F	11·0F	10·2F	8·4F								14
11·8F	12·0F	10·4F	8·6F	8·4F	11·4F							15
11·4F	11·0F	11·0F	10·4F	8·2F	6·0F							16
11·6F	11·6F	11·0F	10·4F	7·4F	6·0F							17
12·0F	11·8F	11·8F	11·0F	8·8F								18
C	C	11·0F	10·2F	9·2F	6·0F	4·0F						19
12·0F	11·4F	12·0F	11·0F	9·0F	7·6F							20
10.6F	10·6F	11·2F	11·0F	10·0F								21
	8·8F	7·4F	7·8F	8·0F	C							22
12·0F	12·2F	12·4F	12·2F	10·6F								23
12·0F	11·8F	12·0F	11·0F	9·0F	C	C						24
11·0F	C	11·0F	10·4F	8·8F	8·0F							25
C	C	12·0F	10·6F	11·0F	u8·0SF							26
12·0F	B	12·0F	11·6F	11·0F	u9·0SF							27
12·0F	11·8F	11·6F	10·8F	u10·8SF	8·8F							28
11·4F	11·2F	10·6F	9·6F	10·6F	u8.0SF							29
B	8·6F	7·8F		8·0F	7·4F							30
11·0F	7·8F	11·0F	7·0F	8·4F	8·6F							31
11·2	10·6	10·9	10·2	8·9	7·6	..						Mean
11·5	11·1	11·0	10·4	8·8	7·5	..						Median
26	26	30	29	28	16	1					1	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : (M3000) F2
Unit : —
Month : January 1957

TABLE 8
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	2·65F	2·85	3·05	2·7	2·7	2·45	2·3	2·15	2·05
2	U2·2F	2·5	2·65	2·7	3·0	3·15	2·65	2·7	U2·6S	2·5	2·35	2·2
3	U2·5F	U2·85FR	U3·0C	U2·7S	2·25	F	U2·85S	2·5	2·45	2·35	2·15	2·05
4	F	F	F	2·8	3·05	F	F	2·35	2·45	2·2	2·1	2·0
5	F	F	F	F	F	F	2·75	2·6	2·4	2·25	C	C
6	F	F	U2·65F	2·85	2·7	2.8	2·8	2·75	R	U2·5R	2·3	U2·3R
7	F	F	F	2·8FS	2·85	F	F	2·65	2·4	C	E2·2	2·05
8	F	F	F	F	2·8	2·9	2·8	2·8	2·7	2·5	2·4J	2·4
9	F	F	F	F	F	F	F	F	U2·55R	2·3	2·1	2·2
10	F	U2.55R	U2·9R	3·05	3.1	3·05	2·65	2·7	2·6	2·5	U2·4R	2·1
11	U2·3F	U2·45FS	2·7	2·95	2·7	2·95	2·95	2·8	2·6	2·4	2·4	2·35
12	2·4	2·7	3·0	U3·2S	3·3	3·5	2·7	2·85	2·6	C	2·05	E2·0
13	F	F	U3·1S	2·85	C	C	C	C	C	C	C	C
14	F	F	F	2·85	F	3·1	U3·0R	2·8	2·55	2·4	2·35	2·2
15	F	F	F	F	3·15	3·3	2·65	2·75	2·55	2·35	2·2	2·25
16	2·7	2·7	2·75	2·9	3·15	U3·35R	2·6	2·7	2·6	2·35	2·35	2·1
17	U2·6S	2·9	3·1	3·1	3·1	3·25	2·65	2·9	2·7	2·4	2·2	2·2
18	2·6	2·75	3·0	2·95	3·0	3·15	2·9	2·85	2·6	2·5	2·3	E2·2
19	F	U2·8S	3·1	3·1	3·25	3·25	C	C	C	2·4	2·35	2·25
20	F	F	2·7	2·8	2·85F	3·1	3·0	2·7	2·6	2·35	2·2	2·2
21	F	F	F	3.05	3·1	3.3	2·55	2·75	2·6	2·85	2·25	2·3
22	C	C	C	C	C	C	C	2·7	2·6	2·35	2·05	E2·0W
23	2·5	2·6	2·6	2·75	3·1	3·35	2·7	3·05	2·85	2·6	2·3	E2·0
24	2·75	2·7	2·75	F	2·9	3·05	3·0	2·9	2·75	2·45	2·25	2·0
25	C	C	C	C	C	C	C	C	C	C	U2·35R	C
26	C	C	C	C	C	C	C	C	C	C	C	C
27	F	F	F	F	F	2·9	2·9	U2·45S	2·5	2·4	2·1	2·05
28	U2·4F	2·75	2·8	2·8	F	3·15	2·85	U2·8S	U2·65S	2·4	2·2	2·05
29	F	F	2·75	U2·9F	2·85	U3·0F	2·9	2·75	2·65	2·35	2·25	E2·1
30	F	F	2·55	2·65	F	3·1	2·95	2·6	2·6	2·45	2·3	2·35
31	F	2·8	2·9	3·0	3·1	3·3	2·8	2·8	2·4	2·35	2·25	2·1
Mean	U2·5	2·7	2·85	2·9	2·95	3·15	2·8	2·75	2·6	2·4	2·25	2·15
Median	U2·5	2·7	2·8	2·85	3·0	3·1	2·8	2·75	2·6	2·4	2·25	2·1
Count	10	13	18	22	21	22	23	26	26	26	28	27

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : (M3000) F2 | TABLE 8 | Latitude : 10°·2N

Unit : — | Ionospheric Data | Longitude : 77°·5E

Month : January 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2·0	E1·95	E1·9W	E1·9	E1·95	U2·1R	U2.1R	2·0	E2·0	E2·05	2·1	2·25	1
2·1	2·05	2·1	E2·0	E1·9W	2·05	2.05	E2·05	2·05	2·1	F	2·3	2
2·0	E2·0	E1·95	E1·95	E1·95	E1·95	E2.0	E1·95	F	F	F	F	3
E2·0	E2·0	C	C	C	E1·95W	E1.95	E1·95W	F	F	F	F	4
E2·0	E2·0	E1·95	E2·0	U2.0S	U2·0S	U2.1S	2·05	E2·0F	U2·0F	U2·15F	2·35	5
2·15	2·1	2·0	E2·0S	E1·9W	E1·95	2.0	W	F	F	F	F	6
U2·0R	E2·0	E2·0	E1·95W	E1·9	U2·05S	U2.05S	E2 0	E1·95F	F	F	2·25	7
2·2	2·2	2·15	2·1J	C	C	2.0	E1·9	F	U2·0F	U2·15F	F	8
2·15	2·15	2·2	2·15	2·15	U2·1R	U2.05S	F	F	F	F	U2·5F	9
2·05	2·15	2·2	2·2	2·1	U2·05R	E1.95	E1·9	2·2F	F	F	U2·4F	10
2·25	2·15	2·05	2·05	E2·05	E2·1	E1.95	E1·9	U2·0F	F	U2·2F	U2·35F	11
E2·1	E2·05	E2·05	2·0	E2·05	U2·15S	2.2	2·1	2·1	U2·1F	U2·3F	F	12
2·2	2·2	2·15	2·1	2·2	U2·2S	2.1	E1·95	F	F	F	F	13
2·05	E2·05	2·05	E2·05	E2·05	E2·1	E2.2S	2·15	U2·1R	F	F	F	14
2·15	2·15	2·05	E2·05	E2·05	2·2	2.3	2·15	U2·1F	U2·3F	U2·4R	U2·3F	15
2·1	2·05	E2·1	E2·1	2·1	2·1	2.1	U2·1R	2·0	U2·1F	U2·15F	F	16
2·15	2·1	2·05	2·15	2·25	2·35	2.4	U2·35R	U2·35R	2·25	2·35	2·45	17
E2·15	2·1	2·1	2·1	2·15	2·2	E2.2	2.05	F	F	F	F	18
C	C	E2·0	E2·0	E2·1	U2·15S	U2.4S	2.15	2·25	2·25	2·25F	F	19
2·1	2·05	E2·1	E2·1	2·1	U2·15S	2.2	F	F	F	F	F	20
2·15	2·0	E2·1W	2·0	E2·05	2·2	2.2	E2·0	F	C	C	C	21
E1·95	E2·0	2·0	2·0	E2·05	C	C	U2·2S	U2·0F	U2·05F	F	F	22
E2·05	2·0	E1·9	E1·95	2·05	2.1	2.2	U2·15S	F	U2·15F	F	F	23
E2·0	E2·0	E2·0	E2·0	E2·05	C	C	C	C	C	C	C	24
2·0	C	E2·05	2·05	U2·05S	2·0	E2.0	E1·95	F	F	F	F	25
C	C	2·0	E2·0	E2·0	U2·05S	2.0	E1·95	F	F	F	F	26
E2·0	B	E2·0	E2·0	1·95	E2·0S	E2.1S	2·05	2·1	2·1	U2·1F	F	27
E2·0	E2·0	E2·0	E1·95	2·0	E2·05	U2.1S	U2·0S	E1·95F	F	F	U2·4F	28
E2·1	E2·05	E2·05	2·1	2·1	2·05	E2.0	E1·95W	F	F	F	F	29
2·3	2·25	2·2	2·25	2·25	2·2	2.0	E2·0W	F	F	U2·15F	F	30
2·1	2·15	2·2	2·25	2·3	2·2	2·05	E2·0W	E2·0WF	F	F	R	31
2·1	2·05	E2·05	E2·05	2·05	2·1	2·1	E2·05	2·05	2·1	2·2	2·35	Mean
E2·1	2·05	E2·05	E2·0	E2·05	E2·1	E2·1	2·0	2·0	2·1	2·15	2·35	Median
29	27	30	30	29	28	29	27	16	12	11	10	Count

Sweep 1 Mc. to 25 Mc, in ½ min,

Characteristic : h'F
Unit : Km
Month : February 1957

TABLE 9
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	275	255	245	235	235	230	260	275	250	C	C	205
2	U270F	265F	265F	240	240F	240F	270	270	240	235	L	220
3	290F	C	C	C	C	C	C	265	240	C	C	C
4	F	300F	240	250	250	240	265	280	245	230	215	C
5	275	245	260	265	275	290	260	265	245	230	230	C
6	265	260	255	240	260	245	L	275	245	235	C	C
7	240	240	245	E260B	260	B	315	260	245	230	220	210
8	C	C	C	C	C	260	275	270	I245	230	B	C
9	245	255	270	240	230	240	260	260	250H	235	220	C
10	245	240	235	230	230	220	275	260	240	235	220	210
11	C	C	C	C	C	C	C	C	C	C	C	U230L
12	260	255	245	U235F	230	240	260	265	240	U235L	225	210
13	260	240	250	240	210	220	270	260	245	225	U225L	215
14	220	245	260	245	225	230	275	265	240	235	C	C
15	275	250	250	235	240	B	310	275	260	240	225	220
16	250	245	240	240	240	235	265	265	240	225	L	220
17	280	260	245	235	220	235	L	255	C	C	C	C
18	285	260	260	250	250	210	250	290	265L	250	240	230
19	255	240	240	260	260	260	290	260	240	225	E215L	L
20	260	240	255	245	240	255	310	265	255	240	230	L
21	245	255	235	225	250	240	280	260	240	225	U230L	U220L
22	255	245	225	220	260	320	320	265	240	U230L	220	U215L
23	255	240	235	245	240	240	255	260	240	U235L	220	215
24	C	C	C	C	C	C	C	C	C	C	C	C
25	255	265	260	235	240	240	260	260	245	235	U230L	220
26	240	240	240	240	230	235	U265F	270	255	240	U225L	C
27	U250F	245	235	230	220	235	270	260	235	E235L	U220L	U215A
28	290	245	230	240	235	230	260	255	240	220	E215L	210
Mean	260	250	245	240	240	245	275	265	245	235	225	215
Median	260	245	245	240	240	240	270	265	245	235	220	215
Count	24	24	24	24	24	23	23	26	25	23	18	16

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F
Unit : Km
Month : February 1957

TABLE 9
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
215	215	240	C	C	275	320	460	F	U490F	U410F	300F	1
200	215	220	L	240	260	300	385	F	F	F	280F	2
C	C	C	240	255	280	320	U410F	F	U320F	F	U310F	3
210	220	230	235	C	270	315	F	F	330	290	285	4
C	C	C	C	260	280	320	415	310	255	260	265	5
C	C	C	C	C	C	C	F	F	U275F	260	240	6
C	C	220	230	250	265	295	400	F	C	C	C	7
220	220	225	230	240	265	315	435	460	340	F	280	8
C	C	C	C	255	275	310	F	F	340F	320	275	9
U215L	U215L	215	220	C	C	C	C	C	C	C	C	10
220	230	U220L	230	250	265	300	410F	F	F	360F	285F	11
U215L	A	U225B	235	240	265	300	F	F	F	U280F	255F	12
220	B	220	225	235	260	310	325	320	300	280	245	13
C	C	C	C	C	C	C	465	F	U360F	U380F	260	14
C	220	230	235	245	270	315	440F	410	355	310	265	15
215L	210	210L	225	245	265	305	440	F	F	U325F	290	16
C	C	C	C	C	270	320	F	F	U345F	U335F	290	17
225	220	U235A	B	250	275	320	445	F	U330F	280	270	18
210	B	E220A	230	240	270	310	420	415	285	270	280	19
E235A	A	A	U245B	260	275	315	475	450	340	290	260	20
U220L	U225B	220	U230L	250	275	310	430	400F	310	260	250	21
A	A	C	240	250	275	315	460	U520F	U435F	U340F	280	22
220	220	220	235	240	265	300	U465F	F	C	C	C	23
C	C	C	C	C	C	C	C	325	305	280	260	24
220	L	A	L	240	260	300	400	U410F	F	U320F	U270F	25
U215A	E230L	U220L	U235L	245	275	300	U440FS	Fs	Fs	Fs	300F	26
215	235	C	C	C	265	300	U450F	490	F	Fs	295	27
U215L	U225L	215	215	235	265	295	U415S	F	355	F	275F	28
215	220	225	230	245	270	310	430	410	335	310	275	Mean
215	220	220	230	245	270	310	435	410	335	290	275	Median
18	14	17	17	20	24	24	21	11	18	19	25	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : fo F2
Unit : Mc
Month : February 1957

TABLE 10
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	10·5F	10·2	8·8	u8·1R	6·8	5·9	5·5	u9·4s	11·8	C	C	10·0
2	F	F	F	8·4F	F	F	F	8·5	10·7	10·9	9·9	10·2
3	F	C	C	C	C	C	C	8·7	u11·2R	C	C	C
4	F	F	u8·9F	F	F	u6·0s	5·4	9·3	10·7	9·8	9·8	C
5	10·5	9·0	u7·0s	6·7	6·3	6·0	5·7	u9·4s	u11·8s	13·0	13·1	C
6	D9·4s	u7·9s	u6·9s	5·5	4·2	3·6	4·3	8·7	10·9	u11·4R	C	C
7	9·2	6·3	4·8	u3·1R	2·4	S	4·0	8·9	11·6	11·9	11·9	11·6
8	C	C	C	C	C	5·2	4·6	8·9	r11·2	11·4	10·8	C
9	F	F	F	F	6·5F	u4·3J	u4·7s	u9·8s	10·8	10·4	10·0	C
10	u11.6Fs	11.3F	u10·2Fs	u7·9s	u6·7s	u5·4s	u4·6s	8·8	11·2	u11·5s	10·8	10·8
11	C	C	C	C	C	C	C	C	C	C	C	10·4
12	F	F	F	F	6·2	5·2	4·6	8·8	u9·4s	9·4	9·9	10·5
13	F	10.2	u9·2s	u8·0s	6·6	4·1	4·3	8·9	10·5	9·9	10·0	10·5
14	u11·0R	8.7	u9·0s	8·3	u6·1s	u4·3s	u4·7s	8·7	10·5	11·0	C	C
15	F	F	F	6·7	3·8	u2·5R	4·2s	8·7	10·7	10·5	10·8	11·0
16	D13·2Fs	D11·8Fs	u10·2s	u8·5s	D7·4s	5·3s	4·8s	8·6	9·8	9·8	9·6	9·4
17	F	F	u11·0F	u9·3s	6·9	u3·2R	4·1	u9·1s	C	C	C	C
18	F	u12·0F	u10·8s	u9·3s	F	Fs	5·7	9·4s	11·2	10·7	10·5	10·9
19	u11·6R	11·4	u9·1s	u8·1s	u7·2s	u6·9s	7·4	u10·0s	10·8	10·3	10·3	10·3
20	u11·6Fs	u11·3s	u10·5s	u9·2s	u7·7s	u6·8s	8·1	u10·4s	u11·6s	12·3	11·5	11·2
21	12·6	11·5	u10·2s	u7·4s	5·5	4·0	u4·6s	u9·1s	11·7	12·4	12·9	12·4
22	u11·8s	11·1	u9·7s	u6·4s	u4·4s	Fs	S	u9·2s	11·2	u11·7s	11·9	11·8
23	u11·5Fs	u11·7s	F	S	u7·9s	6·6	u5·8s	10·1	u12·4R	u12·5R	11·8	11·4
24	C	C	C	C	C	C	C	C	C	C	C	C
25	u11·9s	u11·9RS	u11.1R	10·4	8·5	u6·3s	5·3	10·0	12·4	12·7	11·4	11·4
26	u9·9s	Fs	9.8	u8.5s	u7·6s	S	Fs	u9·5s	11·1	10·6	D10· s	C
27	Fs	u10·8F	u9.8s	8·5	5·9	u4·6s	u4·9s	u9·6s	u11•7s	12·2	11·7	11·8
28	Fs	u11·3F	u10.4Fs	Fs	u7·6s	u6·2s	5·9s	u10·2Fs	u11·6s	11·2	11·0	10·8
Mean	u11·2	10·5	u9·3	u7.8	6·3	u5·1	5·1	9·3	11·1	11·2	10·9	10·9
Median	u11·6	11·3	u9·8	u8·1	6·6	u5·2	4·8	9·2	11·2	11·2	10·8	10·8
Count	14	17	19	19	21	20	22	26	25	23	21	18

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : fo F2
Unit : Mc
Month : February 1957

TABLE 10
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
10·2	10·8	11·2	C	C	12·6	u12·0s	u10·6s	F	F	F	F	1
10·5	10·7	11·4	11·6	12·6	12·6	12·7	12·2	11·4F	F	11·4	F	2
C	C	C	12·2	12·8	12·6	12·7	u11·2R	F	F	F	F	3
10·5	11.6	12·8	13·6	C	12·6	u11·8RS	10·9s	F	u11·8F	11·6	u11·0R	4
C	C	C	C	R	12·9	u11·0s	10·8	u10·8R	S	u11·8s	10·6	5
C	C	C	C	C	C	C	F	F	F	Rs	u12·0RS	6
C	C	14·2	14·2	13·8	13·5	R	R	F	C	C	C	7
11·6	12·4	12·8	13·2	13·2	12·6	D10·4W	D9·1W	u8·0F	F	F	F	8
C	C	C	C	u13·2R	D13·0s	12·5	u10·8F	F	F	F	F	9
11·0	11·4	12·0	u11·8s	C	C	C	C	C	C	C	C	10
10·9	11.3	12·0	12·8	13·4	13·4	R	F	F	F	Fs	Fs	11
10·7	11.4	12·0	12·8	u13·0R	13·4	u12·4R	F	F	F	u8.3FS	11·7	12
11·2	12.3	13·6	13·5	u13·4R	u13·3s	u12·8R	u13·0R	R	D12.0R	D12.0R	12·4	13
C	C	C	C	C	C	C	D11·0WH	F	F	F	F	14
C	12.1	13·0	13·3	u13·8s	u13·9s	u12·7R	u11·5F	F	F	F	Fs	15
10·0	10.5	11·2	u11·6s	u12·0s	12·6	u11·5s	F	F	F	F	F	16
C	C	C	C	C	13·7	12·4H	F	F	F	F	F	17
11·6	12.2	13·0	13·5	13·6	13·6s	Rs	u11·2FS	F	Fs	F	u12·3R	18
10·5	11.0	12·0	13·2	13·1	Rs	u11·5s	D10·0WH	u8·6F	Fs	u11·2FS	u11·4F	19
11·5	12.2	12·9	13·1	u13·2s	u13·4s	u12·9R	u10·8R	F	F	F	F	20
11·3	11.0	11·9	12·5	u13·1s	u12·8R	u11·8s	D9·7W	D9·3WF	10·6F	u11·0F	u12·0R	21
12·1	12.8	C	13·9	u14·0s	13·7	u13·0R	u11·0RH	F	F	F	F	22
11·4	12.9	13·1	13·6	u13·0R	u12·5J	N	D10·0W	F	C	C	C	23
C	C	C	C	C	C	C	C	u11·5R	u11.6R	u12·5R	u13·0R	24
11·6	11.6	11·8	12·5	Rs	12·4	u11·6s	u10·3s	Fs	Fs	F	u12·0RS	25
u10·3R	11.0	11·4	u12·0s	u11·8s	u12·0s	u10·6s	u9·4FS	Fs	Fs	Fs	u9·8s	26
11·8	u12.0R	C	C	C	13·8	u13·1R	u11·2RF	F	Fs	Fs	u11·8FS	27
10·7	10.8	11·2	u11·3R	12·4	u12·0s	u11·6s	u9·5F	F	F	F	F	28
11·0	11·6	12·3	12·8	u13·1	13·0	u12·0	u10·7	u9·9	..	u11·2	u11·7	Mean
11·0	11·5	12·0	13·0	u13·2	12·9	u12·2	u10·8	u10·0	..	u11·5	u11·9	Median
19	20	19	20	18	23	20	20	6	4	8	12	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2 | TABLE 11 | Latitude : 10°·2N

Unit : Km | Ionospheric Data | Longitude : 77°·5E

Month : February 1957 | 75·0°E Mean Time

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

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2 | TABLE 11 | Latitude : 10°·2N
Unit : Km | Ionospheric Data | Longitude : 77°·5E
Month : February 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	C	C	L							1
L	L	L	L	L	L							2
C	C	L	L	L								3
300	L	L	375	C	L							4
C	C	C	C	L	L							5
C	C	C	C	C	C							6
C	C	u365L	u365L	L	L							7
L	L	L	L	L	L							8
C	C	C	C	L	L							9
L	L	L	L	C	C							10
L	L	L	L	L	L							11
L	A	L	L	L	L							12
L	L	L	u440L	L	L							13
C	C	C	C	C	C							14
C	L	L	L	u420L	L							15
L	L	L	L	L	L							16
C	C	C	C	C	u445L	L						17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	A	L	L	L	L	L						20
L	L	L	L	L	L							21
L	L	C	u420L	L	L							22
L	L	L	L	L	L							23
C	C	C	C	C	C							24
L	L	L	L	L								25
L	L	L	L	L	L							26
L	L	C	C	C	L							27
L	L	L	L	L	L							28
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
1	..	1	4	1	1	..						Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : fo F1 | TABLE 12 | Latitude : 10°·2N

Unit : Mc | Ionospheric Data | Longitude : 77°·5E

Month : February 1957 | 75·0°E Mean Time

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

Sweep 1 Mc. 25 Mc. in ½ min.

Characteristic : fo F1
Unit : Mc
Month : February 1957

TABLE 12
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	C	C	L							1
L	L	L	L	L	L							2
L	L	L	L	L	L							3
C	C	C	L	L	L							4
5·4			L	L								5
C	C	C	C	C	C							6
C	C	L	L	L	L							7
L	L	L	L	L	L							8
C	C	L	L	L	C							9
L	L	L	L	C	C							10
L	L	L	L	L	L							11
L	A	L	L	L	L							12
L	L	L	L	L	L							13
C	C	C	C	C	L							14
L	L	L	L	L	L							15
L	L	L	L	L	L							16
C	C	C	C	C	L							17
L	L	L	L	L	L							18
L	L	L	L	L	L							19
L	A	L	L	L	L							20
L	L	L	L	L	L							21
A	A	C	L	L	L							22
L	L	C	L	L	L							23
C	C	L	L	L	C							24
L	L	L	L	L								25
L	L	L	L	L	L							26
L	L	C	C	C	L							27
L	L	LH	L	L	L							28
..	..	..	..	..	..	..						Mean
..	..	..	..	..	..	..						Median
1	..	..	..	..	..	..						Count

Sweep 1 Mc. to 25. Mc. in ¼ min.

Characteristic : h'E
Unit : Km.
Month : February 1957

TABLE 13
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

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

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'E
Unit : Km
Month : February 1957

TABLE 13
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
115	115	120	C	C	120							1
A	A	115	120	115	115							2
C	C	C	115	115								3
A	115	115	115	C	120							4
C	C	C	C	120	120							5
C	C	C	C	C	C							6
C	C	B	120	125								7
A	120	120	120	A	110							8
C	C	C	C	120	A							9
A	A	115	115	C	C							10
120	120	A	120	120	120							11
A	A	B	120	120	120							12
115	B	115N	110	115	120							13
C	C	C	C	C	C							14
C	120		115	120	A							15
A	115	115	110	115	A							16
C	C	C	C	C	B							17
A	A	A	B	B								18
A	B	A	B	A								19
A	A	A	B									20
110A	B	B	A	110	A							21
B	A	C	115	115								22
A	115	110	110	115								23
C	C	C	C	C	C							24
A	A	A	A									25
110	115	110	A	115								26
A	A	C	C	C								27
110	A	A	115	110								28
115	115	115	115	115	120							Mean
110	115	115	115	115	120							Median
6	8	9	14	15	8							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

10—1 D.D G. Obs. Kodi /58

Characteristic : foE
Unit : Mc
Month : February 1957

TABLE 14
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	C	C	A
2									A	A	A	A
3									A	C	C	C
4										A	A	C
5									3·2	A	u3·9A	C
6									A	A	C	C
7									3·6	A	A	A
8									A	A	B	C
9								L	A	A	A	C
10									A	3·3	A	A
11									C	C	C	A
12									A	A	A	A
13								N	A	A	A	A
14									A	A	C	C
15										A	A	A
16									A	B	A	A
17									C	C	C	C
18										A	A	
19									A	A	A	A
20							2·5	2·7	N	B	A	A
21										A	A	B
22								L	A	A	B	B
23									3·3	B	B	A
24							C	C	C	C	C	C
25									A	A	A	A
26									A	A	A	C
27									A	A	A	A
28									N	A	A	A
Mean							..	..	..	..	..	..
Median							..	..	..	..	..	..
Count							1	1	3	1	1	..

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foE
Unit : Mc
Month : February 1957

TABLE 14
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	C	C	2·5A							1
A	A	A	3·9	3·3	2·7							2
C	C	C	A	3·0								3
A	4·1	3·9	A	C	A							4
C	C	C	C	L	L							5
C	C	C	C	C	C							6
C	C	B	R	R								7
A	L	4·0	3·3	A	L							8
C	C	C	C	3·0	A							9
A	A	A	A	C	C							10
A	A	A	N	N	A							11
A	A	B	N	3·3	3·0N							12
A	B	N	U3·9R	2·8N	N							13
C	C	C	C	C	C							14
C	A		R	N	A							15
A	A	3·7A	U3·7R	U3·2R	A							16
C	C	C	C	C	B							17
A	A	A	B	B								18
A	B	A	B	A								19
A	A	A	B									20
A	B	B	A	A	A							21
B	A	C	N	N								22
A	A	3·8	3·5A	N								23
C	C	C	C	C	C							24
A	A	A	A									25
A	A	A	A	A								26
A	A	C	C	C								27
A	A	A	A	N								28
..	..	..	3·7	3·1	..							Mean
..	..	..	3·7	3·1	..							Median
..	1	4	5	6	3							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foEs
Unit : Mc
Month : February 1957

TABLE 15
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									8·0F	C	C	11·0F
2									7·8	8·5F	8·8	11·5F
3									7·6F	C	C	C
4									u8·9sF	9·8F	10·0F	C
5										10·5F	7·3	C
6									7·0F	7·6F	C	C
7									7·8F	7·6F	10·8F	9·4F
8									r7·1F	7·9F	B	C
9									8·0F	9·2F	9·6	C
10									7·4	8·0F	8·2F	11·0F
11	C	C	C	C	C	C	C	C	C	C	C	10·2F
12									7·6Fs	7·6F	7·7F	10·7F
13									u7·0s	7·4F	9·5F	10·8F
14									7·0Fs	10·8F	C	C
15										8·0F	10·6F	10·8F
16									u7·0s	7·4F	7·8	7·4
17									C	C	C	C
18								5·0F		7·5F	11·0	11·0
19									7·6	7·4	11·0	11·0
20		4·2	2·8						6·8F	7·4	7·7	10·4
21	3·9									7·4F	8·0F	9·8F
22									7·0F	7·6F	7·6	7·6
23										8·0F	8·8F	10·2F
24	C	C	C	C	C	C	C	C	C	C	C	C
25									7·4F	9·4F	10·6F	10·6F
26									7·6F	8·8F	11·0F	C
27									6·8F	7·8F	10·6F	11·2F
28									7·6F	10·0F	10·8F	11·0F
Mean	..	..	..	..	..	..	..	..	7·4	8·3	9·4	10·3
Median	..	..	..	..	..	..	..	..	7·5	7·9	9·6	10·8
Count	1	1	1	..	..	..	..	1	20	23	20	18

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : fo Es
Unit : Mc
Month : February 1957

TABLE 15
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
11·0F	11·3	9·6	C	C	u7·0s							1
11·2F	11·4F	10·6F										2
C	C	C		u3·9F								3
11·6F												4
C	C	C	C									5
C	C	C	C	C	C	C						6
C	C	B										7
10·6F			7·0F	8·0F								8
C	C	C	C		S			2·2	u3·4s			9
11·0F	10·8F	9·6F	7·8F	C	C	C	C	C	C	C	C	10
10·8F	10·7F	7·3F			S							11
11·0F	10·2F	8·2		7·0F								12
10·8F	B		7·6F		u7·0s							13
C	C	C	C	C	C	C						14
C	9·2F				Fs						2·9	15
10·8F	11·0F	8·8F			u7·0s							16
C	C	C	C	C								17
10·8F	10·0	7·6										18
11·0	10·8	10·2		4·8								19
11·4F	15·0F	11·8										20
10·8F	10·7F	7·0F	7·0F	7·8F	S			3·0				21
12·5F	11·7	C	C									22
11·0F	10·4F	7·6	7·8F						C	C	C	23
C	C	C	C	C	C	C	C					24
10·5F	10·9F	10·8F	7·4F									25
11·0F	11·0F	10·8F	9·7F	u8·0Fs								26
10·8F	8·2F	C	C	C								27
10·6F	10·8F	10·6F	7·6F									28
11·0	10·8	9·3	7·7	6·6	..	..	..	..	..	..	..	Mean
11·0	10·8	9·6	7·6	7·4	..	..	..	..	..	..	..	Median
19	17	14	8	6	3	..	..	2	1	..	1	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : (M3000) F2 | TABLE 16 | Latitude : 10°·2N

Unit : | Ionospheric Data | Longitude : 77°·5E

Month : February 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	2·7	2·9	E2·9	3·2	3·1	U3·2s	2·9	U2·8s	2·55	2·2	C	2·2
2	F	F	F	U2·9F	F	F	F	2·8	2·5	D2·35	2·35	2·3
3	F	C	C	C	C	C	C	2·8	E2·65	C	C	C
4	F	F	U3·15F	F	U3·2sF	3·05s	2·8)	2·8	2·35	2·45	E2·4	C
5	2.9	E3·05	E3·05	3·0	3·0	3·0	2·85	3·1	U2·95s	2·65	2·45	C
6	U3·05s	U3·1s	U3·25s	3·15	3·1	3·3	2·75	2·9	2·65	U2·4R	C	C
7	3·2	3·2	3·25	U3·3R	3·2	S	2·75	3·1	E2·85	U2·45s	2·3	E2·35
8	C	C	C	C	C	3·1	2·8	3·0	E2·65	2·5	E2·4	C
9	F	F	F	U3·1F	3·3	3·2	3·0	U2·9s	E2·45	2·5	2·4	C
10	U3·15FS	3·05	U3·1FS	U3·15s	U3·2s	U3·3s	U2·8s	E2·8	2·55	U2·4s	2·35	2·2
11	C	C	C	C	C	C	C	C	C	C	C	2·2
12	F	U2·8F	U3·1FS	U3·2F	3·3	3·2	3·0	2·75	U2·5s	2·5	2·4	2·3
13	F	U3·05FS	U3·1s	U3·15s	3·3	3·45	E2·65	D2·85	E2·4	D2·35	2·4	2·25
14	U3·2R	E3·1	2·9	3·0	U3·25s	U3·15s	U2·95s	2·7	2·15	2·5	C	C
15	F	F	F	3·3	3·2	3·3	2·7	E2·85	2·35	2·4	2·3	2·25
16	U2·9FS	U3·05FS	U3·1s	U3·1s	U3.15s	3·1	E2·85	2·7	E2·45	2·4	2·4	2·4
17	U2·75F	U2·95F	E2·95	3·1	3·25	U3·55R	E2·75	2·85	C	C	C	C
18	F	U3·05F	E2·95s	U2·95s	Fs	Fs	3·0	U2·75s	2·4	E2·3	2·35	2·25
19	U3·1R	3·1	U3·05s	U2·95s	U3·0s	U3·05s	2.9	U2·6s	2·45	2·5	2·4	2·25
20	U2·9FS	U3·0s	U3·0s	U2·95s	U2·9s	U2·8s	U2·8s	U2·55s	U2·65s	2·3	2·25	E2·25
21	3·0	3·05	U3·15s	U3·3s	3·2	3·3	U2·9s	U3·0s	2·65	2·55	2·4	2·2
22	U2·95s	3·0	U3·1s	U3·3s	U3·15s	Fs	S	U2·8s	2·75	U2·5s	2·3	2·25
23	U2·85FS	U3·0s	F	U3·05s	U3·1FS	3·15	U3·15s	3·0	U2·7R	U2·45R	2·3	2·3
24	C	C	C	C	C	C	C	C	C	C	C	C
25	U2·95s	U2·9RS	U3·05R	3·1	E3·15	U3·25s	2·95	2·9	E2·65	2·25	E2·35	2·3
26	U2·75s	Fs	U3·0s	U3·05s	U3·15s	Fs	Fs	U2·85s	2·45	2·45	U2·4s	C
27	Fs	U3·1FS	U2·9s	3·2	3·2	Fs	U2·9s	U2·85s	U2·7s	2·35	2·35	2·25
28	Fs	U2·9FS	U3·0s	Fs	U3·2s	U3·3s	U2·9FS	U2·85s	2·5	2·4	2·4	2·3
Mean	U2·95	U3·0	U3·05	U3·1	3·15	3·2	2·85	2·85	2·55	2·4	2·35	2·25
Median	U2·95	U3·05	U3·05	U3·1	3·2	3·2	2·9	2 85	2·55	2·4	E2·4	2·25
Count	15	19	20	22	22	19	22	26	25	24	21	18

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : (M3000) F2 | TABLE 16 | Latitude : 10°.2N

Unit : — | Ionospheric Data | Longitude : 77°.5E

Month : February 1957 | 75.0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2·1	2·1	2·15	C	C	2·2	U2·15S	U1·95S	F	F	F	F	1
2·1	2·1	2·15	2·25	2·35	2·4	2·3	2·2	U2·3F	F	2·6	U2·75R	2
C	C	C	2·4	2·5	2·5	E2·4	U2·15R	F	F	F	F	3
2·2	2·3	2·45	2·6	C	E2·5S	U2·4S	2·1	U2·2F	U2·45R	2·7	U2·75R	4
C	C	C	C	R	2·25	U2·55S	1·95	U2·05R	S	U2·75S	2·85	5
C	C	C	C	C	C	C	F	F	F	Rs	U3·2RS	6
C	C	2·65	2·7	2·75	2·65	R	R	F	C	C	C	7
2·3	2·35	2·35	2·35	2·25	2·15	U2·05S	U2·0F	U2·35F	F	F	F	8
C	C	C	C	U2·4R	U2·35S	E2·15	E1·95R	F	F	F	U3·0FS	9
D2·15	E2·15	2·15	U2·15S	C	C	C	C	C	C	C	C	10
E2·2	2·2	2·25	2·25	E2·35	2·3	R	U2·1FS	F	F	F	F	11
E2·2	2·15	2·35	2·35	U2·45R	E2·35	U2·25R	E1·95F	F	F	F	2·7	12
2·3	E2·4	E2·45	2·45	U2·4R	U2·3S	U2·25R	U2·2R	U2·45R	U2·45R	U2·85R	3·0	13
C	C	C	C	C	C	C	E1·95WH	F	F	F	F	14
C	2·2	2·3	2·4	U2·45S	U2·4S	E2·35	E2·05F	F	F	F	Fs	15
2·2	2·15	2·15	U2·25S	U2·3S	U2·2S	U2·1S	Fs	F	F	U2·9F	F	16
C	C	C	C	C	E2·45	2.25H	F	F	F	F	F	17
2·2	E2·25	2·3	2·35	E2·4	2·35	U2·35RS	U2·1FS	F	F	U2·8F	2·85	18
2·2	2·25	2·25	2·35	2·4	Rs	U2·15S	E1·85WH	U2·0F	Fs	U2·5FS	U2·7FS	19
2·2	2·3	2·25	2·25	U2·35S	U2·25S	U2·15R	E1·95R	F	F	F	F	20
2·1	2·2	2·25	2·3	E2·35S	U2·3R	U2·05S	E1·9W	U2·0WF	U2·25F	U2·75RS	U2·8R	21
2·3	2·3	C	2·4	U2·45S	2·35	U2·2R	U1·9R	F	F	F	F	22
E2·2	2·25	E2·25	2·3	U2·3R	U2·35R	N	U1·9W	F	C	C	C	23
C	C	C	C	C	C	C	C	2·25	U2·55R	U2·65R	U2·9R	24
2·25	E2·25	2·25	D2·25	Rs	2·25	U2·25S	U2·15S	Fs	Fs	F	U2·85RS	25
U2·35R	D2·25	2·2	U2·25S	U2·35S	U2·2S	U2·15S	U2.2F	Fs	Fs	Fs	U2·4S	26
2·15	2·2	C	C	C	E2·35	U2·2R	U2.05F	F	Fs	Fs	U2·6FS	27
2·25	2·2	E2·2	U2·35R	2·3	U2·35S	U2·15S	U1.9FS	Fs	U2·9FS	F	U2·8F	28
2·2	2·25	2·3	2·35	2·4	2·35	U2·2	U2·0	U2·2	U2·5	U2·7	U2·8	Mean
2·2	2·2	2·25	2·35	E2·4	E2·35	U2·2	U2·0	U2·2	U2·45	U2·75	U2·8	Median
19	20	19	20	18	23	21	22	8	5	9	15	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F
Unit : Km
Month : March 1957

TABLE 17
Ionospheric Data
75.0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	275	235	240	240	230	235	260	255	230	225	U220L	200H
2	275	250	250	240	240	260	225	260	240	230	U235L	L
3	280	310	275	300	305	280	350	275	255	240	U225L	220
4	270	260	260	240	230	215	250	250	235	220	215	220
5	255	245	235	220	225	235	280	265	255H	U230L	U230L	U220L
6	260	255	250	235	235	225	260	260	C	240	230H	220
7	255	255	250	E265	270	235	260	265	250	220	U220L	225
8	260	235	250	240	255	265	265	260	245	220	215	210
9	270	250	265	265	260	245	275	260	245	235	230	220
10	275	240	245	255	235	235	260	255	240	C	C	C
11	260	260	295	290	280	270	340	275	U250L	235H	U230L	225H
12	270	240	C	250	245	240	280	260	U245L	235H	220	220
13	300F	260	250	240	230	240F	C	255	245	235	225	230
14	270	280	275	245	235	240	245	260	235	235	220	220
15	280	250	255	240	240	225	285	260	250	U235LH	230	220
16	270	265	U280F	245	235	225	265	E260	240	225	225	210
17	220	245	U300F	F	U365F	260	C	265	C	C	C	C
18	265	260	E255	240	240	230	270	260	240	U225L	U220L	U200LH
19	245	240	250	E245	235	230	265	270	245	230	U240L	U220L
20	270	255	250	250	240	225	270	250	U250L	U230LH	U220L	U215L
21	260	235	230	230	225	235	265	250	235	225	220	E220B
22	300F	U330F	320F	300	275	265	280	270	255	U245B	225	220
23	265	260	275	250	230	225	265	255	240	230	215	210H
24	260	250	260	260	245	240	280	260	C	C	225H	220H
25	250	255	260	260	U285F	250F	260	255	240	220H	U220L	U210L
26	260	270	280	260	260	240	275	255	240	230	C	220
27	265	260	240	225	240	245	280	255	240H	U225L	B	U230L
28	260	275	240	260	315	285	280	255	U245L	225H	235	U220LH
29	265	270	250	225	225	225	255	245	240	U230B	215	U210L
30	305	330	305	275	215	285	305	260	240	230H	225	220H
31	265	255	250	245	230	225	260	250	230	230	220	210
Mean	265	260	260	250	250	245	275	260	245	230	225	215
Median	265	255	250	245	240	240	265	260	240	230	225	220
Count	31	31	30	30	31	31	29	31	28	28	27	28

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F
Unit : Km
Month : March 1957

TABLE 17
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
u215L	u220LH	220H	225H	225H	255	300	450	u400F	F	270	265	1
B	C	C	C	C	C	C	325	320	280	260	265	2
u220L	u225L	235	220H	260	270	310	435	F	335F	280	255	3
215	215H	230	235	235	260	300	395	u430S	380FS	280	270	4
220	L	L	235	245	270	315	470	F	u405F	u300F	260	5
L	235	220	240	250	275	320	500	u500F	u420F	u315F	275	6
u220L	220H	220	220	240	265	C	520	460	460	335	275	7
210	u220L	u215L	240	250	280	320	510	420	310	275	270	8
220H	220	220	u235L	245	270	310	455	F	430F	340	300	9
C	C	C	C	u275L	285	305	420	400	285	260	270	10
u225L	225	230	u220LH	240	260	305	F	F	F	320	380	11
u215LH	u225L	220	u230L	250	280	320	500	565F	u470F	410	400	12
210	210	230	230	245	270	310	480	F	360	320	300	13
215H	215H	220	235	265	265	320	500F	u515F	F	F	305	14
210H	u215L	u230L	250	A	A	320	500F	F	F	u350F	320	15
205H	u200L	u210L	A	245	260	320	500	F	u415F	310	270	16
C	C	B	u240L	u260L	280	320	u460F	410	350	275	275	17
u210L	u200L	220H	230	240	275	315	430	400	320	280	255	18
220	220H	220LH	u230L	245	270	325	470	440	u355F	290	270	19
u210A	205LH	210H	230	A	265	305	440	430	400	310	285	20
200L	220	215	u220LH	240H	260	305	460	450	410	350	u290F	21
C	C	u240L	u240L	255	280	E325	470	u470F	405F	265	260	22
E220L	205H	215H	225H	u240B	275	320	470	u465F	400	300	270	23
215H	220H	210	C	250	275	325	525	F	F	u355F	u300F	24
C	C	225	240	C	C	C	410	360	300	280	280	25
u220B	215	u220L	230	240	265	320	520	u475F	F	F	280	26
215L	u210L	220H	C	u255L	280	320	410	400	380	375	300	27
220	u220B	245	250	260	280	320	445	410	350	280	260	28
210H	215H	220	235H	u240LH	270	325	505	u510F	u400F	365F	305	29
220H	u200L	u205LH	240	240	260	305	470	u540F	u470F	370	285F	30
u230B	200H	210	230	245	260	300	u495F	520	385	300	u265F	31
215	215	220	225	245	270	315	465	445	380	310	285	Mean
215	215	220	230	245	270	320	470	440	385	300	275	Median
25	25	27	26	27	28	28	30	23	25	29	31	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

11—1 D.D.G. Obs. Kodi/58

Characteristic : foF2 | TABLE 18 | Latitude :10°·2N

Unit : Mc | Ionospheric Data | Longitude : 77°·5E

Month : March 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	FS	u9·2FS	FS	u7·5s	6·3	5·0	u5·1s	u9·4s	u11·7s	u11·8s	u10·2R	10·3
2	F	11·0FS	u10·1s	FS	FS	6·3	u7·1s	u10·7s	12·1	u13·4R	13·7	9·5
3	E9·7s	u9·8s	u9·4s	u8·0sR	7·4	7·0	u7·1s	u9·1s	11·3	u12·0R	u11·4R	11·8
4	u9·4s	10·4	u10·4s	10·2	8·4	6·7	5·4	u10·2R	u12·9R	D13·6R	u13·4R	12·0
5	u12·4R	12·8	11·6	u9·2s	u7·0s	5·6	u5·7s	10·2	12·1	u12·7R	11·4	11·3
6	F	13·4	u11·0R	u10·3F	u7·1s	u5·2R	5·4	u9·7s	C	D12·0R	11·3	11·0
7	11·0sF	u10·7R	D10·0RS	D10·0RS	u10·0s	U9·2s	8·3	11·1	13·0	12·0	11·5	10·8
8	F	10·7	F	7·5	6·4	6·6	D7·0s	u10·6s	13·2	D14·0R	u13·5R	12·4
9	D11·9F	u10·5s	9·3	8·8	8·2	6·4	5·9	10·3	12·7	D13·2R	12·7	11·8
10	FS	F	9·9	9·4s	9·1	8·1s	7·7	u11·2R	u12·7R	C	C	C
11	11·1	9·0	u7·6s	u7·5s	u7·0s	u6·0s	u7·0s	10·0	u11·8s	12·5	13·6	13·7
12	u10·1F	u11·0F	C	u9·8s	8·1	5·8	u6·0s	10·4	u12·4R	12·7	12·6	11·7
13	F	FS	u8·6F	7·8	F	u6·3F	C	u12·0R	13·4	R	u14·0R	12·4
14	F	FS	u12·1F	u11·4F	11·0	9·7s	7·5s	10·8	13·1	u13·6R	13·5	12·2
15	F	FS	u9·6FS	FS	u7·2s	5·5	u6·0s	10·4	12·5	u13·2R	11·6	10·6
16	F	u10·0F	F	FS	j8·4FS	6·3	u6·4s	10·5	u13·0R	R	11·8	10·8
17	F	u9·4FS	u8·0F	F	F	u9·6s	C	11·1	C	C	C	C
18	u11·6R	11·6s	10·1	8·9	7·8	6·8	6·8	10·8	u12·3R	11·8	11·2	10·8
19	12·4R	u11·4R	u9·4s	8·7	8·1R	u7·2s	u6·8R	u10·9s	13·4	u13·2R	u12·0R	11·6
20	u11·8s	u10·7R	10·3	u9·2s	8·0	5·3	6·4	10·8	13·0	13·8	u12·0R	11·4
21	u12.8FS	12·3	u10·6FS	F	6·9s	u5·7FS	6·8s	10·8	12·6	u13·3R	11·8	11·7
22	F	F	F	F	10·6	9·9	10·1	12·5	u13·4R	12·8R	u11·9R	11·7
23	u11·4s	u11·3s	10·6	u10·8s	10·8s	u7·9s	D7·9s	11·4	13·2	u14·4R	u14·3R	12·0
24	u11·4R	u11·4R	10·7	10·0	9·2	7·3	6·9	D10·6	C	C	11·8	u11·6W
25	u10·2R	F	8·8	8·2	u8·0FS	8·4	u8·3s	11·5s	13·3	12·6	12·0	12·5
26	u12·1R	u11·7s	10·3	10·1	7·8	5·9	7·0	11·1	u13·4R	R	C	12·1
27	u12·4FS	FS	FS	u10·0s	6·8	5·5	u7·4s	11·0	13·1	u12·3R	11·8	11·5
28	F	F	u8·8F	u7·8s	u7·6s	8·3	8·0s	11·3	13·6	R	u12·0R	11·0
29	RS	11·0RS	10·5RS	u10·0sF	8·6	6·5	u7·5s	11·1	13·5	14·7	j14·7R	13·1
30	FS	FS	FS	FS	u10·4FS	10·2FS	u11·4F	u11·8F	13·7	u14·1R	13·5	12·8
31	u10·4F	10·3	10·3	9·1	8·4	6·3	u7·1s	u11·5s	13·0	u13·2R	11·8	11·7
Mean	u11.3	u10·9	u9·9	u9·2	8·2	7·0	7·1	10·8	12·8	13·0	12·4	11·6
Median	u11·4	u10·8	u10·1	u9·2	8·0	6·5	7·0	10·8	13·0	13·2	12·0	11·7
Count	17	22	24	24	28	31	29	31	28	24	28	29

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foF2
Unit : Mc
Month : March 1957

TABLE 18
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
10·3	10·5H	10·5	10·9	11·3	u11·3s	u10·9s	R	FS	F	u10·8Fs	11·0	1
10·8	C	C	C	C	C	C	11·0	11·5	u12·2R	u12·1Rs	u11·1R	2
11·7	12·8	13·7	14·0	u14·2R	RS	u10·8s	u8·0Rs	F	u8·0F	8·8F	9·2	3
11·7	12·0	12·3	R	12·8	D12·4R	RS	10·9s	u9·8s	9·8s	10·9Rs	u12·1Rs	4
11·4	11·9	13·2	u13·8s	u14·6s	u14·2s	u13·6R	11·4	F	F	F	F	5
11·2	11·6	11·8	12·8	u13·2R	13·4	S	D10·0W	F	F	F	F	6
10·7	10·8	10 8	11·0	D11·3s	u11·3s	C	FR	D7 8R	R F	F	D10·9RF	7
10·6	11·6	u12·0R	12·4	12·8	u12·0s	D10·6R	D8·8WF	D8·8F	u10·2s	10·5	D11·4s	8
11·2	11·5	11·8	u12·4s	12·5	u11·5s	10·2	D8·6W	FS	S	FS	F	9
C	C	C	C	u12·0s	D11·0W	u10·2R	9·7s	u9·9s	12·4	u11·3s	u11·0Rs	10
13·8	14·6	14·7	14·7	14·7	14·0	u11·9s	u10·8R	F	F	F	F	11
D11·7W	11·9	12·3	u12·9R	u12·6R	u12·3R	u11·8Rs	u10·0W	F	F	F	F	12
12·0	12·0	12·3	12·8	12·8	u12·8R	12·8Rs	u10·6s	F	F	F	F	13
11·5	11·3	11·7	12·7	13·4	u13·4Rs	RS	D8·0Fs	F	F	F	F	14
10·1	10·4	10·8	11·2	u11·4s	u11·2Rs	u10·6s	u8·6R	F	F	F	F	15
10·5	11·2	11·9	13·1	13·6	u13·8s	R	RS	F	F	F	F	16
C	C	12·6	13·2	u13·6s	R	R	u12·0s	F	F	F	J12·0s	17
11·1	11·8	12·7	u13·0s	u13·2s	u12·8R	RS	R	u10·9R	R	R	RS	18
11·1	u11·0R	11·7	D12·0s	12·4	u12·1s	u11·6s	u10·3W	u10·4F	F	F	FS	19
11·7	11·9	12·5	13·2	u13·6s	13·5	u13·0R	u11·8s	F	F	F	F	20
11·6	11·5	11·6	D11·6Ws	u11·8s	u11·8s	u11·3s	u9·6s	u9·0s	FS	u9·6Fs	u9·8Fs	21
C	C	12·4	12·6	12·8	12·8	u11·8Rs	u9.9Ws	D8·8W	F	u11·1Rs	11·4	22
11·4	11·7	11·8	11·8	u12·0s	R	u11·6s	u10·2s	F	F	u11·0F	u11·6s	23
11·3	u11·6W	11·8	C	u13·0s	12·7	R	u8·7W	F	F	F	F	24
C	C	12·6	u11·7s	C	C	C	u11·1R	u11·6s	RS	u11·8s	RS	25
12·0	12·8	13·7	14.0	u14·0s	u13·8Zs	RS	F	F	F	F	F	26
11·2	11·2	11·8	C	13·1s	u13·2s	u12·8Rs	RS	S	u11·5F	F	F	27
11·3	12·1	13·6	14·0	13·4	u13·5s	S	u9·5s	u9·1s	u10·0s	10·4s	10·6s	28
12·8	u13·2R	13·7	13·7	13·7	u13·0R	u11·8Rs	u11·3WF	F	F	FS	FS	29
11·8	12·0	12·0	12·7	12·7R	12·1R	RS	u10·3Rs	F	F	F	FS	30
11·8	12·5	13·3	13·8	14·0s	RS	RS	u11·0Rs	F	F	u12·1Rs	F	31
11·5	11·8	12·3	12·8	13·0	u12·6	u11·6	u10·1	u9·8	u10·6	u10·9	11·0	Mean
11·4	11·8	12·3	12·8	13·0	u12·8	u11·6	u10·2	u9·8	u10·2	u11·0	11·0	Median
27	26	29	26	29	25	17	25	11	7	12	12	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2
Unit : Km
Month : March 1957

TABLE 19
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	L
2									L	L	L	L
3									L	L	L	L
4									L	L	L	L
5									L	L	L	L
6									C	L	L	L
7									L	L	L	u340L
8									L	L	u270L	L
9									L	L	L	u260L
10									L	C	C	C
11									L	L	L	L
12									L	L	L	L
13									L	L	L	L
14									L	L	L	L
15									L	L	L	L
16								L	L	L	L	L
17									C	C	C	C
18									L	L	L	L
19									L	L	L	L
20									L	L	L	L
21									L	L	L	L
22									L	L	L	L
23									L	L	L	L
24									C	C	L	L
25									L	L	L	L
26								L	L	L	C	L
27								L	L	L	L	L
28									L	L	L	L
29								L	L	L	L	L
30									L	L	L	L
31									L	L	L	L
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								..	..	..	1	2

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2 | TABLE 19 | Latitude : 10°·2N

Unit : Km. | Ionospheric Data | Longitude : 77°·5E

Month : March 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	LH	L	L	L	L							1
L	C	C	C	C	C							2
L	L	L	L	L	L							3
L	L	L	L	L								4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
285	L	L	L	L	L							7
L	L	L	L	L								8
L	L	L	L	L	L							9
C	C	C	C	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	L							14
L	L	L	L	L	A							15
L	L	L	L	u435L	L							16
C	C	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	L	L	L	L							21
C	C	L	L	L	L							22
L	L	L	L	L								23
L	L	L	C	L								24
C	C	L	L	C	C							25
L	L	L	L	L	L							26
L	L	L	C	L								27
L	L	u500L	L	u520L								28
L	L	L	L	L								29
L	L	L	L	L	L							30
L	L	L	L	L	L							31
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
1	..	1	..	2	..							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foF1
Unit : Mc.
Month : March 1957

TABLE 20
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	LH
2									L	L	L	L
3									L	L	L	L
4									L	L	L	L
5									LH	L	L	L
6									C	L	LH	L
7									L	L	L	L
8									L	L	L	L
9									L	L	L	U5.3L
10									L	C	C	C
11									L	LH	L	LH
12									L	LH	L	L
13									L	L	L	L
14									L	L	L	L
15									L	LH	L	L
16								L	L	L	L	L
17									C	C	C	C
18									L	L	L	LH
19									L	L	L	L
20									L	LH	L	L
21									L	L	L	L
22									L	L	L	L
23									L	L	L	LH
24									C	C	LH	LH
25								L	L	LH	L	L
26								L	L	L	C	L
27								L	LH	L	L	L
28									L	LH	L	LH
29									L	L	L	L
30								L	L	LH	L	LH
31									L	L	L	L
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								..	..	..	..	1

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foF1
Unit : Mc.
Month : March 1957

TABLE 20
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

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

Sweep 1 Mc. to 25 Mc. in ¼ min.

Characteristic : h'E
Unit : Km.
Month : March 1957

TABLE 21
Ionospheric Data
75.0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									115	A	A	A
2									120	115	A	A
3									120	120	A	A
4									115	115	A	A
5									A	A	115	A
6									C	A	A	A
7								125	115	115	A	A
8										115	A	A
9								120	120	A	A	A
10								120	115N	C	C	C
11									A	A	A	A
12								130	A	A	A	A
13									120	A	A	A
14									B	A	A	A
15									A	A	A	A
16									A	A	A	A
17									C	C	C	C
18									110	A	A	A
19									A	A	A	A
20									B	A	A	A
21								120	A	A	A	A
22										A	A	A
23									115	A	A	A
24								125	C	C	A	A
25									u125A	A	A	A
26										A	C	A
27								120	A	A	B	A
28									A	A	A	A
29										A	A	A
30									A	A	A	A
31									A	A	A	A
Mean								125	115	115	..	..
Median								120	115	115	..	..
Count								7	11	5	1	..

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'E
Unit : Km.
Month : March 1957

TABLE 21
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
B	C	C	C	C	C							2
A	A	120	120	115	120							3
A	A	A	A	120								4
A	A	A	A	110								5
A	A	120	120	A								6
A	A	110	A	A	120s							7
A	A	A	S	120	S							8
A	A	A	A	115								9
C	C	C	C	A								10
A	A	A	B	120								11
A	A	A	A	120								12
A	A	A	115	F								13
A	A	110	110	115	115							14
A	A	A	120	A	A							15
A	A	A	A	B	120							16
C	C	B	A	130	A							17
A	A	110	A	A								18
A	A	A	A	u110A								19
A	A	A	A	A								20
A	A	A	A	A	u120A							21
C	C	A	u115A	A	130							22
A	A	A	A	A								23
A	A	A	C	A	A							24
C	C	A	A	C	C							25
A	A	A	u110A	A	A							26
A	A	A	C	A	A							27
A	A	A	B	A								28
A	A	A	A	A								29
A	A	A	A	u120A								30
B	A	A	A	A	A							31
..	..	115	115	120	120							Mean
..	..	110	115	120	120							Median
..	..	5	7	11	6							Count

Sweep 1 Mc. to 20 Mc. in ½ min.

12 —1 D. D. G.Obs. Kodi/58.

Characteristic : foE
Unit : Mc.
Month : March 1957

TABLE 22
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	A	A	A
2									3.0	3·4	A	A
3									N	A	A	A
4									A	A	A	A
5									A	A	A	A
6									C	A	A	A
7								N	u3·0F	N	A	A
8										A	A	A
9								2·6	A	A	A	A
10								2·8	N	C	C	C
11									A	A	A	A
12								u2·8N	A	A	A	A
13									d3·2R	A	A	A
14									B	A	A	A
15									A	A	A	A
16								A	A	A	A	A
17									C	C	C	C
18									A	A	A	A
19									A	A	A	A
20									B	A	A	A
21								2·8	A	A	A	A
22										A	A	A
23									R	A	A	A
24								u2·7R	C	C	A	A
25									A	A	A	A
26										A	C	A
27								N	A	A	B	A
28									A	A	A	A
29										A	A	A
30									A	A	A	A
31									A	A	A	A
Mean								2·7	..	..	..	..
Median								2·8	..	..	..	..
Count								5	3	1	..	..

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foE
Unit : Mc.
Month : March 1957.

TABLE 22
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
B	C	C	C	C	C							2
A	A	N	3·7	A	A							3
A	A	A	A	N								4
A	A	A	A									5
A	A	A	A	N								6
A	A	A	A	A								7
A	A	A	A	A	S							8
A	A	A	S	A	S							9
A	A	A	A	A								10
C	C	C	C	A								
A	A	A	8	N								11
A	A	A	A	3.2								12
A	A	A	A	F								13
A	A	A	A	A	A							14
A	A	A	R	A	A							15
A	A	A	A	B	2·8							16
C	C	B	A	u3.1R	A							17
A	A	A	A	A								18
A	A	A	A	u3·4A								19
A	A	A	A	A								20
A	A	A	A	A	A							21
C	C	A	A	A	u2·6R							22
A	A	A	A	A								23
A	A	A	C	A	A							24
C	C	A	A	C	C							25
A	A	A	A	A	A							26
A	A	A	C	A	A							27
A	A	A	B	A								28
A	A	A	A	A								29
A	A	A	A	A								30
B	A	A	A	A	A							31
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	..	..	1	3	2							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foES
Unit : Mc.
Month : March 1957

TABLE 23
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									7·6F	7·6F	u7·4FS	10·4F
2										9·5F		9·2F
3									7·6F	7·8F	9·6F	10·0F
4									u7·0F	7·3F	10·6F	10·8F
									7·4F	9·0FS	11·0F	11·3F
5									C	7·3	11·0F	10·8F
6									7·4FS	7·4F	10·8F	11·0F
7										8·4F	11·0F	11·0F
8									7·4F	9·6F	10·8	11·2F
9									7·8F	C	C	C
10					2·3		u4.0FS	u3·3FS	u7·6FS	u10·2F	10·6F	11·2F
11									u7·2F	9·7F	u11·2F	11·0F
12			C						u7·0F	9·4F	10·2F	10·6F
13									B	7·9	10·8F	11·0F
14									..	9·8	11·0F	11·4F
15										7.5	10·0F	10·2F
16									C	C	C	C
17									u7·6F	7·6F	10·6F	11·0F
18									u7·2F	7·9F	10·2F	10·9F
19									B	u7·8F	10·8F	11·0F
20									u6·8FS	9·9F	10·6F	10·5F
21										7·5F	10·4F	10·8F
22									7·4F	10·4F	10·9F	11·0
23									C	C	11·0	u11·6F
24									u7·3F	10·3F	9·2F	10·3F
25										7·8	C	11·0
26									u9·6FS	9·7F	11·0F	11·0F
27									7·4F	10·1F	11·0F	11·0F
28										7·3F	10·8F	10·8F
29				u2·8s					7·7F	7·9F	9·8F	11·1F
30								u5.0F	7·6F	8·8F	9·8F	10·8F
31												
Mean			..	..	..	..	..	..	u7·5	8·6	10·4	10·9
Median			..	..	..	..	..	..	u7·4	7·9	10·7	11·0
Count			..	1	1	..	1	2	19	27	28	29

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foES | TABLE 23 | Latitude : 10°.2N

Unit : Mc. | Ionospheric Data | Longitude : 77°.5E

Month : March 1957 | 75.0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
u9·6FS	10·6	9·5F	9·2F	u7·3FS								1
B	C	C	C	C	C	C						2
10·4F	G	G	7·4	7·4S	7·0FS							3
11·6F	11·0F	10·8F	9·6	7·4F								4
11·4F	11·6F	9·4	8·2FS									5
11·0F	11·1F	8·0F	9·6F	6·9								6
11·0F	10·8F	10·2F	10·0F	7·6F		C						7
10·9F	11·0F	10·6F	9·6F	8·0F	S							8
11·0	11·4F	11·2F	10·7	8·0F								9
C	C	C	C	7·3								10
9·7F	8·0	u6·8F	B	B								11
11·8F	11·5F	11·1F	u10·6F	7·4F								12
10·9F	10·8F	10·8	9·7F	u8·9FS	u7·0FS							13
11·2F	10·9F	10·3F	7·2F	u7·0FS	FS							14
11·0F	11·5F	11·0F	7·6	7·2	u9·2FS							15
10·8F	10·7F	u9·3F	12·0						2·8			16
C	C	B	u6·4F	u4·8S	3·5F							17
11·0F	10·2F	u9·7F	7·8F	8·0FS	u5·0S							18
11·6F	10·9F	12·0F	u9·6F	7·2F	S							19
10·8F	9·6F	u6·6F	u11·0F	u8·0F	u6·9FS						u4·9S	20
11.0	11·0	10·7F	10·6F	7·4	S					2·7		21
C	C	10·1F	9·6F	u7·0FS	S							22
11·2F	11·0	11·0F	10·5F	7·2F								23
11·0F	10·9	11·2F	C	9·8S	u7.0FS							24
C	C	u11·0F	u11.0FS	C	C	C						25
11·4	10·6	10·4	9·4F	8·1	FS							26
11·8F	11·2F	11·0F	C	u9·8FS	u7·4FS							27
11·0F	9·4F	9·6F	B	7·6F	u7·1S							28
9·8F	8·8F	10·4F	10·8F	9·7F	8·0FS					2·9		29
11·0F	10·4F	11·0F	7·7F	7·0F	u4·4F							30
10·2F	9·9F	9·6F	12·3F	11·0FS	u7·0FS							31
10·9	10·6	10·1	9·5	7·8	u6·6	..	..	..	..	..	..	Mean
11·0	10·9	10·4	9·6	7·4	u7·0	..	..	..	..	..	..	Median
26	25	27	25	26	12	..	..	..	1	2	1	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : (M3000) F2 | TABLE 24 | Latitude : 10°·2N

Unit : | Ionospheric Data | Longitude : 77°·5E

Month : March 1957 | 75.0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	FS	U2·95FS	FS	U3·15s	3·2	3·25	U3·0s	U2·95s	U2·75s	U2·35s	U2·5R	2·3
2	F	U2·9FS	U3·0s	FS	FS	2·95	U2·9s	U3·2s	2·85	U2·75R	2·55	E2·45
3	E2·8s	U2·8s	U2·9s	U3·0RS	2·85	E3·0	U2·65s	U2·8s	2·6	U2·4R	U2·5R	2·3
4	U2·9s	2·9	U3·05s	3·2	3·25	3·3	3·0	U3·1R	U2·8R	E2·6R	U2·2R	2·35
5	U2·85s	3·0	3·15	E3·15s	U3·10s	3·15	U2·85s	2·9	2·65	E2·2R	2·3	E2·25
6	F	E3·0	U3·2R	U3·15F	U3·2s	3·3	2·9	U3·0s	C	E2:35R	2·35	2·2
7	2·65FS	U2·95R	U2·9RS	E3·0RS	U2·9s	U3·15s	2·95	2·9	2·5	2·4	2·3	2·3
8	F	3·05	F	3·1	3·05	3·0	U3·05s	U3·0s	2·75	E2·5R	2·2	2·15
9	2·7	E2·85s	2·85	2·9	2·9	3·25	2·95	E2·95	2·75	E2·4R	2·15	E2·2
10	FS	F	2·9	U2·95s	2·9	3·05s	E3·0	U2·75R	U2·7R	C	C	C
11	2·85	2·8	U2.75s	U2·65s	U2·8s	U2·85s	U2·5s	2·6	U2·45s	2·25	2·15	2·2
12	U2·9F	U3·0FS	C	3·05	3·1	3·2	U2·85s	2·75	U2·5R	E2·45	2·2	E2·15
13	F	FS	U2·9F	3·05	F	U3·1F	C	U3·05RS	2·8	R	2·2	2·05
14	F	FS	U2·75F	U3·05FS	3·05	3·3s	3.2s	3·0	2·75	R	2·2	2·1
15	F	FS	U2·8FS	FS	U3·15s	3·3	U2.85s	2·85	2·6	2·25R	2·2	E2·2W
16	F	E3·15F	F	F	J3·1FS	3·35	U2.9s	3·0	2·8R	R	E2·2	E2·2
17	F	U2·8FS	E2·7FS	F	F	U2·9s	C	E2·9	C	C	C	C
18	U2·85RS	2·85s	3·0	3·05	3·1	3·2	3.1	E3·05	U2·5R	2·4	2·3	E2·35
19	R	U3·05R	U3·05s	3·0	U2·95R	3·25	D3.0R	U3·0R	2·7	R	2·15	E2·2
20	U2·85s	U3·0R	2·95	U3·05s	E3·1	3·35	3.0	3·05	2·85	2·45	E2.15	2·2
21	U2·95FS	3·05	E3·1FS	F	3·2s	U3·1FS	3.0	3·05	E2·75	U2·25R	E2·4	2·2
22	F	F	F	F	2·7	E2·9	2.9	2·8	U2·55R	U2·2R	E2·2R	E2·25
23	U2·75s	2·8s	2·8	2·85s	3·1	U3·4s	E3.25s	E3·0	2·85	R	R	2·15
24	RS	U3·1R	E2·9	2·95	E3·1	3·2	E3.0	E2·9	C	C	2·25	E2·1W
25	U2·8R	F	3·0	2·9	U2·8FS	3·05	U3·15F	U2·95s	2·5	2·4	2·35	2·35
26	U3·1R	2·85	2·8	2·95	3·05	3·25	3·0	3·0	U2·8R	R	C	2·2
27	U2·85FS	FS	FS	U3·3s	3·2	E3·05	U3·0s	2·9	2·55	E2·35R	2·3	2·1
28	F	F	U3·1F	U3·0s	U2·7s	E2·85	2·95s	2·9s	2·65	R	E2·05R	2·2
29	RS	U2·55RS	U2·65RS	U3·0FS	3·2	3·25	U3·15s	3·1	2·9	2·6	J2·3R	E2·15
30	FS	FS	FS	FS	U3·1FS	U2·8FS	U2·8F	U2·7F	2·45	U2·5R	2·3	2·1
31	U2·7F	2·95	E2·95	3·0	3·1	3·4	U3·0s	U3·05s	E2·75	U2·2R	2·35	2·2
Mean	U2·85	2·9	U2·9	3·0	3·05	3·15	2·95	2·95	2·7	2·4	2·25	2·2
Median	U2·85	2·95	U2·9	3·0	E3·1	3·2	E3·0	2·95	E2·75	2·4	2·25	2·2
Count	15	22	24	24	28	31	29	31	28	21	27	29

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : (M3000) F2 | TABLE 24 | Latitude : 10°.2N

Unit : | Ionospheric Data | Longitude : 77°.5E

Month : March 1957 | 75.0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	
2·25	2·2H	E2·15	2·2	2·2	U2·25S	U2.15S	R	FS	F	U2·4FS	2·6	1
E2·25	C	C	C	C	C	C	E2·3	E2·4	U2·7R	U2·8RS	U2·9R	2
2·25	2·3	2·35	2·35	U2·8R	RS	U2·0S	U2·15RS	F	U2·75F	E2·8	2·9	3
2·2	E2·25	2·2	R	2·2	U2·3R	RS	U2·15S	U2·05S	2·2S	U2·5RS	U2·65RS	4
2·15	2·3	2·3	U2·4S	E2·4S	U2·4S	E2·25	E1·95W	F	F	F	F	5
2·25	2·2	E2·25	E2·25	2·25	2·2	S	E1·9W	F	F	F	F	6
E2·2W	E2·1	2·1	2·1	U2·15S	U2·15S	C	FR	U2·2R	F	F	U2·8FR	7
E2·15W	E2·1W	2·15	2·15	2·15	E2·1S	U2·15R	E1·95WF	U2·1R	U2·45R	2·6	E2·7S	8
2·05	2·15	2·05	2·05	E2·1	U2·05S	2·05	E1·9W	F	S	FS	F	9
C	C	C	C	E2·05S	E1·85W	U2·25R	E2·1	U2·15S	E2·5	U2·75S	U2·6RS	10
2·2	2·15	2·25	2·25	2·25	E2·25	U2·15S	U2·0R	F	F	F	F	11
2·1	2·05	E2·15	U2·1R	U2·15R	U2·2R	U2·05RS	U1·9W	F	F	F	F	12
2·1	2·1	2·1	2·1	E2·2	U2·25R	U2·05RS	W	F	F	F	F	13
E2·1	2·05	2·1	E2·2	E2·2	RS	RS	U1·9FS	F	F	F	F	14
E2·1	E2·1	2·0	2·05	E2·1S	E2·2RS	E2·05S	E1·95R	F	F	F	F	15
2·15	2·15	E2·2	2·2	2·35	2·4	R	RS	F	F	F	F	16
C	C	2·15	2·15	E2·25S	R	R	U2·0S	F	F	RS	J2·85S	17
2·15	E2·15	2·15	U2·2S	U2·2S	U2·15R	RS	R	U2·05R	R	R	RS	18
E2·1	E2·1	2·05	E2·1	E2·1	U2·15S	RS	E1·85W	F	F	F	U2·7FS	19
2·1	2·1	2·2	2·25	2·3	2·3	2·15R	E2·0	F	F	F	F	20
2·1	E2·1	E2·1	E2·05WS	U2·1S	U2·15S	2.05S	E2·0S	U2·1S	FS	U2·6FS	U2·85S	21
C	C	E2·1	2·15	2·15	E2·1	U2·05RS	E1·9WS	E1·9W	F	U2·5RS	E2·75	22
D2·2	E2·1W	2·15	D2·2	U2·25S	R	U2·05RS	U1·95S	F	F	F	U2·65S	23
D2·1	E2·1W	2·1	C	E2·2S	2·1	R	W	F	F	F	F	24
C	C	U2·05R	U2·0S	C	C	C	U2·05R	U2·2S	RS	U2·85S	RS	25
2·2	2·1	2·15	2·2	U2·15R	U2·15RS	RS	F	F	F	F	F	26
E2·15	E2·1	2·1	C	E2·25S	U2·25S	2·05S	RS	S	U2·05F	F	F	27
E2·15	2·15	2·2	E2·3	2·3	U2·15S	S	E2·0S	U2·05S	U2·2S	U2·45S	U2·65S	28
2·25	U2·2R	2·25	2·25	2·25	U2·2R	U2·15RS	U1·9WF	F	F	FS	FS	29
2·15	2·05	2·1	2·2	2·35R	2·2R	RS	U2·1RS	F	F	F	FS	30
E2·2	E2·2	2·2	E2·25	E2·25S	RS	RS	U2·05RS	F	F	U2.8R	F	31
2·15	2·15	2·15	2·2	2·25	2·2	U2·1	UE2·0	U2·1	U2·4	U2·65	U2·75	Mean
2·15	2·1	2·15	2·2	2·2	E2·2	U2·05	UE2·0	U2·1	U2·45	U2·6	U2·7	Median
27	26	29	26	29	24	16	23	10	7	11	13	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F
Unit : Km.
Month : April 1957

TABLE 25
Ionospheric Data
75.0°E Mean Time

Latitude : 10°·0N
Longit ude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	260	280	255	240	240	240	245	250	240	U225L	U220L	U210L
2	310	315	340	330	260	235	285	265	260	B	U240L	U235L
3	275	275	265	260	240	240	275	265	250	240	235	220
4	280	265	280	300	270	240	260	260	U255L	240	230	230
5	285	260	265F	275F	275F	245	275	260	250	240	230	230
6	290	275	270	260	240	225	265	260	250	U240B	240H	230
7	300	280	260	240	225	235	275	260	245	230	240	225
8	260	240	240	240	235	E230B	265	250	240	U240L	220	U220LH
9	280	270	240	245	260	250	280	245	240	235	225	U220L
10	300	300	280	260	270	240	280	270	260	U235C	U240L	U240B
11	300	280	240	230	230	225	275	255	240	230	230	220
12	260	260	260	255	230	225	265	250	240	220	220	220H
13	U325F	315	280	U265F	220	220	255	245	235	230	C	C
14	280	270	260	255	235	240	270	260	240	240	230	230
15	U280F	265	240F	245	F	240	280	255	240	225	220	B
16	270	260	230	225	225	235	260	260	240	230	225	220
17	330	300	300	240	225	235F	275	260	250	240	230	235
18	280	230	285	250	240	260	280	260	240	235	230	220
19	260	F	E340F	E320F	290	240	265	260	255	240L	B	225
20	260	275	300	300	235	210	275	250	240	230	220	U220H
21	C	C	C	C	C	C	C	C	C	C	U240B	235
22	260	260	265	260	235	225	290	260	245	235	235	240
23	320	360F	330F	U265F	220	220	260	245	235	220	220	220
24	325F	280F	275	280	260	245	C	260L	240	240	240H	220H
25	340F	F	285F	255	225	230	270	250	240	230	225	220
26	C	C	C	C	C	C	C	C	260	240	225H	U220L
27	300	290	270	265	265	265	280	260	240	235	U225L	225
28	340	315	300	280	260	235	275	260	245	C	C	C
29	300	300	325	280	270	255	290	280	250	250	220	220L
30	340	320	300	260	230	220	255	240	225	220	U210L	205
Mean	295	285	280	265	245	235	270	255	245	235	230	225
Median	290	280	270	260	240	235	275	260	240	235	230	220
Count	28	26	28	28	27	28	27	28	29	27	27	27

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F
Unit : Km.
Month : April 1957

TABLE 25
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
u200L	u230L	235	240	240	285	335	440	405	320	300	300	1
u225LH	u235L	u250L	A	A	285	335	420	u440F	345	310	310	2
E225	u230L	B	265	250	275	320	515F	445F	375F	295	270	3
230	225	240	250	255	270	325	450	420	390	350	300	4
220	225	210A	240	245	275	310	410	325	300	305	300	5
220	u220A	u230L	240	250	270	320	410	410	390	330	310	6
220	220	220	220	240	260	320	F	F	F	F	F	7
220H	215H	220H	225	240	265	310	470	F	F	300	285	8
215H	215H	225	230	245	265	310	475	610	u500F	F	300	9
A	230H	L	u260L	265	290	335	400	345	335	340	320	10
210H	205H	u220s	225	245	265	300	445	u420F	350	315	280	11
u200L	u225L	225H	225	245	265	300	460	F	F	F	u370F	12
C	220	u230A	u240L	265	280	320	u430F	470	u400F	315	285	13
225	225H	230H	250	250	275	320	465	F	F	F	u305F	14
u220B	B	u235LH	240H	245	260	315	u455F	u460F	400	300	275	15
220	220H	220H	225	B	B	335	F	F	F	430F	340F	16
220H	220H	215H	u235B	u260L	265	305	S	F	380	335	C	17
215H	230H	225H	235	260	285	325	Fs	495	450F	F	260	18
225	220H	230	240	255	270	305	380	350	320	300	u280C	19
u220H	u225L	u230L	240	265	285	320	C	C	C	C	C	20
225	E230L	E230L	250	245	270	305	u470F	500	465	370	300	21
230L	u220L	230H	235	245	265	310	505	F	F	F	F	22
E220	215	215	235	u260s	270	315	u500F	C	F	F	420	23
215H	215H	220	240	245	275	340	u540F	F	F	F	u310F	24
210	210	C	C	250	C	C	C	C	C	C	C	25
240	235	240H	255	A	270	310	420F	420F	370F	320	300	26
220	u220L	240	A	275	A	325	475	460	420	400	370	27
C	C	C	C	240	285	325	515	F	360	340	305	28
220	230	230H	235	A	265	315	460	F	u450F	420	380	29
220	210	220	235	245	280L	300	440	440	405	410	355	30
220	220	230	240	250	275	320	455	435	385	340	315	Mean
220	220	230	240	250	270	320	460	440	385	325	300	Median
27	28	26	26	26	27	29	24	17	20	20	25	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

13—1 D. D. G. Obs. Kodi./58

Characteristic : foF2
Unit : Mc
Month : April 1957

TABLE 26
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	FR	F	FS	u11·3Fs	9·9	u9·4sF	8·9	12·2	u13·9R	R	u13·0R	11·4
2	u13 9R	u12·8R	R	u12·4R	u12·8R	F	F	u12·4R	u13·6F	R	11·8	11·2
3	FS	12·8	u12·1s	11·6s	u10·3s	u8·7s	u9·3s	12·2	13·5	R	11·8	11 4
4	u11·4s	11·2	D10·6s	u10·3s	u10·4s	10·3	10·5	13·1	u13·7R	14·7	R	u12·4R
5	F	u13·1F	u11·8s	F	u10·6F	10·2s	FS	12·7	13·8	14·9	R	12·4
6	u13·8R	RS	u11·9RS	11·0	10·2	8·4	7·7	11·1	13·0	u13·6R	13·7	11·7
7	R	11·2F	u10·9R	10·6	8·8	6·2	7·8	11·3	13·7	u14·2R	13·2	11·5
8	F	u10·4R	F	8·0	6·8	4·4	6·9	10·7	u13·2R	14·3	14·1	12·2
9	F	u11·8Fs	F,S	F	F	8·5	u10·1s	12·4	13·6	u13·5R	11·7	11·0
10	F	D11·0F	D11·0F	10·7	u9·6s	u9·2s	u9·6s	u11·8s	D14·0R	14·4	R	u13·6R
11	u13·6R	13·4	u11·8s	u10·7s	u9·2s	5·0	u7·1s	11·0	13·0	u14·0R	13·8	12·4
12	F	F	u8·6F	u8·5F	8·4	6·7	8·0	11·4	12·8R	u12·8R	11·8	11·8
13	F	F	F	F	10·4	8·6	8·6	11·0	12·5	u13·0R	C	C
14	u10·4F	10·8	FS	u9·4s	8·2	6·4	7·9	11·0	13·0	13·5	12·7	11·8
15	F	F	u10·8Fs	7·4s	F	F	F	11·1	13·0	13·4	11·3	11·0
16	F	u12·1s	F	F	6·4	4·7	7·5	11·0	13·5	13·8	13·5	11·0
17	F	F	u11·4F	F	F,S	F,S	8·6	u11·9s	13·1	13·8	12·6	12·0
18	10·8	D10·4R	10·2	11·0	u10·2RS	7·3	9·5	12·3	13·6	13·8	u13·2R	R
19	Fs	Fs	Fs	Fs	Fs	u11·6s	11·4	u13·0F	u14·5F	15·2H	D14·9R	13·6
20	D13·0R	u12·4R	11·1	10·6	u10·0s	6·7Fs	8·5	11·6	u13·0R	u13·7R	u12·2R	11·9
21	C	C	C	C	C	C	C	C	C	C	u11·0R	11·3
22	D11·0	u10·1s	9·1	8·9	u9·5RS	7·7	8·8	11·4	12·0	11·8	11·8	12·0
23	F	F	F	F	F	F	8·5	11·0	12·6	u13·0R	12·0	11·6
24	F	F	F	9·2	8·7F	F	C	u11·4F	D13·0R	13·8	12·1	11·0
25	F	F	F	u11·0RS	9·2s	5·4	8·7	11·4	12·6	D12·4R	11·3	11·6
26	C	C	C	C	C	C	C	C	R	D12·4R	11·4	11·1
27	u12·4R	u11·4s	10·8	11·3	10·6	u9·6s	10·6	u12·4R	13·6	u13·6R	11·6	11·4
28	F	F	F	Fs	F	8·6	u9·5s	u11·8s	13·3	C	C	C
29	10·8	u10·4Fs	u10·2Fs	10·6	u10·3s	u10·2s	11·4	13·7	u14·4R	D14·5R	12·2	11·6
30	F	F	Fs	10·1F	D9·2	u7·6s	8·6	D11·2	D12·6	R	11·6	11·2
Mean	u12·1	u11·6	u10·8	10·2	u9·5	7·9	8·9	11·8	13·3	13·7	12·4	11·7
Median	u11·9	u11·3	u10·9	10·6	u9·8	8·4	8·6	11·5	13·2	13·8	12·1	11·6
Count	10	16	15	20	22	23	24	28	28	24	25	27

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foF2
Unit : Mc
Month : April 1957

TABLE 26
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 177°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
11·1	12·0	13·2	14·6	u14·7s	14·4	u14·0s	u13·2R	R	u13·8R	R	R	1
11·2	11·6	12·4	13·1	13·5	u13·5s	u13·2R	Rs	F	F	R	F	2
11·4	11·0	R	12·2	u11·7s	u11·5s	u10·8s	u9·0s	8·9	u9·3Fs	u10·6F	Fs	3
11·9	11·7	11·9	12·2	12·6	u12·6R	u11·8RS	11·4	u11·5s	F	F	u13·0F	4
11·2	11·8	12·6	13·4	u13·4s	u13·2R	u11·8RS	u11·0R	u11·7R	D13·4R	Rs	R	5
11·7	12·2	12·9	u13·2s	13·7	13·6	Rs	Rs	R	u10·6F	Fs	s	6
11·7	11·8	12·3	13·1	13·2	u11·8s	u11·4s	W	F	F	F	F	7
12·0	12·1	12·7	13·3	u13·6s	13·6	13·1	11·6	F	F	F	F	8
11·1	11·6	11·8	12 6	D12·5R	S	Rs	W	F	F	F	F	9
14·0	13·9	14·0	14·5	14·8	D14·0RS	u13·4R	Rs	S	S	R	R	10
11·7	12·2	12·6	13·2	u13·4s	D12·7R	S	Fs	F	Rs	F	u10·6Fs	11
11·4	12·0	13·0	13·8	u13·7s	13·8	Rs	Fs	F	F	F	F	12
C	11·3	11·7	12·8	13·5	u13·0R	12·4	Rs	Fs	F	u10·4F	u10·8F	13
12·2	12·3	12·3	12·8	13·1	12·8RS	Rs	D10·6R	F	F	F	F	14
11·0	11·0	11·5	11·6s	11·9s	D11·6s	u11·4s	u10·6RS	F	F	u11·4F	F	15
11·1	11·8	11·8	u11·8s	B	u12·3R	11·6s	10·8	F	F	F	F	16
12·0	12·2	12·2	12·6	11·4s	u11·4s	u10·9s	u9·3s	R	D9·6R	10·8	C	17
13·1	12·7	13·0	D12·4	u11·8s	D11·2	10·4	u9 2s	9·3	F	F	F	18
12·4	11·7	11·6	11·6s	u11·6s	u11·6s	u11·5s	D11·3R	Rs	Rs	D13·4R	u14·0RS	19
11·8	11·4	11·4	u11·5s	D11·6s	12·9	D12·0s	C	C	C	C	C	20
11·6	u11·8s	12·6	12·6	u12·4R	R	D11·8s	D10·2W	u9·5s	u9·8s	u10·4F	10·9	21
12·4	12·6	u12·4R	u12·8R	12·7	u12·2R	11·0	SW	F	F	F	F	22
11·8	12·0	D12·2R	R	D12·0s	R	u11·6s	u10·4F	C	F	F	F	23
10·8	10·6	10·6	10·8	11·4	u11·5s	u11·4s	WF	F	F	F	F	24
11·4	11·0	C	C	12·8	C	C	C	C	C	C	C	25
11·3	11·6	12·1	12·9	13·1	R	D12·8R	R	u12·4R	R	13·5	u13·6R	26
11·8	u11·8s	u11·7s	u11·7s	u11·8s	u12·2R	D11·6s	R	J10·5R	u10·4R	D11·0R	11·2F	27
C	C	C	C	D11·7s	12·2	11·3	F	F	u10·8FR	u11·0RS	u11·8s	28
11·0	11·0	11·1	11·5	u12·2s	13·0	S	u10·5s	F	F	F	u10·6F	29
10·8	10·6	10·6	11·0	D11·6s	12·8	R	u11·3R	10·8	D10·8	F	F	30
11·7	11·8	12·2	12·6	12·7	12·6	u11·9	u10·7	u10·6	u10·9	u11·4	11·8	Mean
11·6	11·8	D12·2	12·6	12·6	D12·7	D11·6	D10·6	u10·6	u10·6	u11·0	11·2	Median
28	29	27	27	29	25	22	15	8	9	9	9	Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2
Unit : Km
Month : April 1957

TABLE 27
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	u265L
2									L	L	L	L
3								L	L	L	L	270L
4									L	L	L	L
5									L	L	L	L
6									L	L	L	L
7									L	L	L	L
8									L	L	L	L
9								L	L	L	L	L
10								L	L	L	L	L
11									L	L	L	L
12									L	L	L	L
13								L	L	L	C	C
14									L	L	L	L
15									L	L	L	L
16									L	L	L	L
17									L	L	L	L
18									L	L	L	L
19									L	L	L	L
20								L	L	L	u275L	L
21								C	C	C	L	L
22									L	L	L	L
23									L	L	L	L
24								L	L	L	L	L
25								L	L	L	L	L
26								C	L	L	L	L
27									L	L	L	L
28								L	L	C	C	C
29									L	L	L	L
30									L	L	L	L
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								..	..	..	1	2

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'F2
Unit : Km
Month : April 1957

TABLE 27
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	u425L	u435L								1
L	L	L	L	L								2
L	L	B	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								9
L	L	L	L	L								10
L	L	L	L	L								11
L	L	L	L	L								12
C	L	L	L	L								13
L	L	L	L	L								14
L	L	L	L	L								15
L	L	L	L	B	L							16
L	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	L							23
L	L	L	L	L								24
L	L	C	C	L	C							25
L	L	L	L	L								26
L	L	L	L	L	L							27
C	C	C	C	L								28
L	L	L	L	L	L							29
L	L	L	L	L								30
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	..	..	1	1	..							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foF1 | TABLE 28 | Latitude : 10°.2N

Unit : Mc | Ionospheric Data | Longitude : 77°.5E

Month : April 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	U5.5L
2									L	L	L	L
3								L	L	L	L	U5.5L
4									L	L	L	L
5									L	L	L	L
6									L	L	LH	L
7									L	L	L	L
8									L	L	L	LH
9								L	L	L	L	L
10								L	L	L	L	L
11									L	L	L	L
12									L	L	L	LH
13								L	L	L	C	C
14									L	L	L	L
15									L	L	L	B
16									L	L	L	L
17									L	L	L	L
18									L	L	L	L
19									L	L	L	L
20								L	L	L	L	LH
21								C	C	C	L	L
22									L	L	L	L
23									L	L	L	L
24								L	L	L	LH	LH
25								L	L	L	L	L
26								C	L	L	LH	L
27									L	L	L	L
28								L	L	C	C	C
29									L	L	L	L
30									L	L	L	L
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								..	..	..	..	2

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foF1
Unit : Mc
Month : April 1957

TABLE 28
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L								1
LH	L	L	L	L								2
L	L	B	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
LH	LH	LH	L	L	L							8
LH	LH	L	L	L								9
A	LH	L	L	L								10
LH	LH	L	L	L								11
L	L	LH	L	L								12
C	L	L	L	L								13
L	LH	LH	L	L								14
L	B	LH	LH	L								15
L	LH	LH	L	B	B							16
LH	LH	LH	L	L	L							17
LH	LH	LH	L	L								18
L	L	L	L	L								19
LH	L	L	L	L								20
L	L	L	L	L								21
L	L	LH	L	L								22
L	L	L	L	L	C							23
LH	LH	L	L	L								24
L	L	C	C	L	C							25
L	L	L	L	L								26
L	L	L	L	L	L							27
C	C	C	C	L								28
L	L	LH	L	L	L							29
L	L	L	L	L								30
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	..	..	..	..	..							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : h'E
Unit : Km
Month : April 1957

TABLE 29
Ionospheric Data
75·0°E Mean Time.

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	A	A	A
2								115	120	B	A	A
3									A	A	A	A
4									A	A	A	A
5									u115B	A	A	A
6									A	A	A	A
7									115	A	A	A
8								A	115	A	A	A
9									A	A	A	A
10								A	115	A	A	B
11								A	A	A	A	A
12									A	A	A	A
13									A	A	C	C
14									120	A	A	A
15									A	A	A	B
16									110	A	A	A
17									A	A	A	A
18									110	A	A	A
19									A	A	B	A
20								105	115	A	A	A
21								C	C	C	B	A
22								120	125	A	A	A
23									115	A	A	A
24								105	A	A	A	A
25									A	A	A	A
26								C	A	A	A	A
27									110	A	A	A
28								A	A	C	C	C
29									120	A	A	A
30									A	A	A	A
Mean								..	115	..	..	..
Median								..	115	..	..	..
Count								4	13	..	..	..

Sweep 1 Mc. to 25 Mc in ½ min.

Characteristic : h'E
Unit : Km
Month : April 1957

TABLE 29
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	A	B	A	120	130							3
A	A	A	120	120	A							4
A	B	A	115	A								5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	120	A							8
A	A	110	A	A								9
A	A	A	A	A								10
A	A	S	A	A	A							11
A	A	A	A	A								12
C	A	A	A	120								13
A	A	A	A	u115s	u110s							14
A	B	A	A	115	A							15
A	A	A	A	B	B							16
A	A	110	A	A	A							17
A	A	A	110	A								18
A	A	A	110	120								19
A	A	A	A	A								20
A	A	A	S	A	A							21
A	A	A	A	A								22
A	A	A	A	S	S							23
A	A	A	A	115								24
A	A	C	C	A	C							25
A	A	125	120	A	A							26
A	A	A	A	A	A							27
C	C	C	C	120								28
A	A	A	115	A	A							29
A	A	A	A	A	A							30
..	..	..	115	120	..							Mean
..	..	..	115	120	..							Median
..	..	3	6	9	2							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

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Characteristic : foE
Unit : Mc
Month : April 1957

TABLE 30
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	A	A	A
2								A	A	B	A	A
3									A	A	A	A
4									A	A	A	A
5									A	A	B	A
6									A	A	A	A
7									A	A	A	A
8								A	A	A	A	A
9									A	A	A	A
10								A	A	A	A	A
11								A	A	A	A	A
12									A	A	A	A
13									A	A	C	C
14									A	A	A	A
15									A	A	A	B
16									A	A	A	A
17									A	A	A	A
18									A	A	A	A
19									A	A	B	A
20								A	A	A	A	A
21								C	C	C	B	A
22								A	A	A	A	A
23									B	A	A	A
24								4.5	A	A	A	A
25									A	A	A	A
26								C	A	A	A	A
27									A	A	A	A
28								A	A	C	C	C
29									u3.7A	A	A	A
30									A	A	A	A
Mean								..	..	..	..	..
Median									..	..	..	..
Count								1	1	..	..	..

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foE
Unit : Mc
Month : April 1957

TABLE 30
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A								1
A	A	A	A	A	A							2
A	A	B	A	3.4	A							3
A	A	A	A	A	A							4
A	A	A	A	A								5
A	A	A	A	A	A							6
A	A	A	A	A	A							7
A	A	A	A	N	A							8
A	A	3·8	A	A								9
A	A	A	A	A								10
A	A	S	A	A	A							11
A	A	A	A	A								12
C	A	A	A	A								13
A	A	A	A	u3·0s	A							14
A	B	A	A	u3·3s								15
A	A	A	A	B	B							16
A	A	A	A	A	A							17
A	A	A	A	A								18
A	A	A	A	A								19
A	A	A	A	A								20
A	A	A	S	A	A							21
A	A	A	A	A								22
A	A	A	A	S	S							23
A	A	A	A	3·6								24
A	A	C	C	A	C							25
A	A	A	A	A	A							26
A	A	A	A	A	A							27
C	C	C	C	A								28
A	A	A	u3.8A	A	A							29
A	A	A	A	A	A							30
..	..	..	..	..	..							Mean
..	..	..	..	..	..							Median
..	..	1	1	4	..							Count

Sweep 1 Mc. to 25 Mc. in ½ min.

Characteristic : foEs
Unit : Mc
Month : April 1957

TABLE 31
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									G	9·5	10·6	10·9F
2								G	8·0F	10·6F	11·0F	10·8F
3									7·6	9·8F	9·4	10·8F
4									G	9·4F	11·0F	11·0F
5									6·9	8·1	10·2	10·8
6									G	7·9	9·8F	11·5F
7									7·5	7·8	9·0F	11·0F
8								4·8F	G	7·3	10·9	10·8
9									7·8F	10·2F	10·2F	10·6
10									7·5	10·0F	7·6F	9·8F
11								u7·0sF	7·8F	10·0F	11·0F	11·0F
12									G	10·0F	11·0F	11·2F
13							u4.4R		7·8	u9·6s	C	C
14									7·4	10·0F	11·6F	11·0F
15									10·4F	10·6F	u11·0F	11·2F
16									u7·5s	9·4F	11·6F	11·6F
17									9·4	10·8F	11·4F	p11·6F
18									u10·8F	10·1F	10·8F	10·6F
19									7·4F	10·4F	B	11·2F
20								7·0s	7·4F	10·6F	11.0F	11·0F
21	C	C	C	C	C	C	C	C	C	C	9·6F	10·4F
22							u7.0FS	7·0F	8·6F	10·8F	11·0F	11·0F
23									8·0F	11·0F	10·8F	11·4F
24							C	6·7F	7·5F	10·6F	11·0F	12·1F
25	9.2								7·5F	9·3FS	10·8F	10·8F
26	C	C	C	C	C	C	C	C	7·3F	10·0F	11·0F	11·0F
27									8·8F	11·0F	12·0F	12·4F
28								u9·6sF	8·0F	C	C	C
29			2.7						9·2F	S	11·2F	11·1F
30									9·4F	10·8F	11·2F	11·4F
Mean	..	..	..	..	..	..	..	7·0	8·1	9·8	10·7	11·1
Median	..	..	..	..	..	..	..	7·0	7.5	10·0	11·0	11·0
Count	1	..	1	..	..	..	2	7	29	27	27	28

Sweep 1 Mc. to 25 Mc. in ½ min,

Characteristic : foEs | TABLE 31 | Latitude : 10°.2N

Unit : Mc | Ionospheric Data | Longitude : 77°.5E

Month : April 1957 | 75.0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
11·1F	10·7F	7·4F	9·4F	G								1
11·0F	10·8F	10·0F	12·0	12·2F	7·0F							2
10·8F	10·4F	B	10·6F	u7·8s	S							3
u11·2F	u10·8F	11·4F	10·0F	u7·4s	G							4
10·8F	10·8	9·9	9·6	7·7F	G							5
u11·0F	11·3F	u11·0F	11·0F	u9·4Fs	7·0s				2·6	u2·9s	u4·0s	6
11·6F	11·1F	10·0F	10·6F	9·8	u7·0s							7
10·6F	11·2F	10·8F	11·6F	u5·8F	u7·0Fs							8
10·0F	10·6	7·2	7·2	u7·0s								9
18·0	10·2F	11·0F	7·3F	7·4F	u7·0sF							10
11·0F	11·0F	u11·0s	9·6F	u9·6s	u8·0s							11
11·2F	11·1F	11·0F	10·0F	7·9F								12
C	11·8F	11·6F	10·8F	u8·0Fs								13
11·2F	11·5F	11·2F	u9·8Fs	u8·0Fs	n7·0s						n4·8s	14
11·0F	B	11·9	11·0Fs	10·8Fs								15
10·8F	11·4F	11·2F	10·8F	B	B							16
12·0F	12·5F	11·4F	u11·8Fs	10·0F	u7·0s							17
10·2F	11·0F	11·3F	u11·7Fs	9·9F								18
12·0F	11·6F	11·6F	11·1F	7·8F								19
11·0F	11·0F	11·0F	u10·2Fs	u9·6Fs			C	C	C	C	C	20
11·0F	10·6F	11·0F	8.0s	u8·0s	u7·0s							21
11·5F	11·2F	10·8F	11.4F	8·2F								22
11·2F	11·8F	11·0F	u10·8s	u7·0s								23
12·0F	12·2F	12·0F	10·9F	9·9F	u7·0s						u4·6s	24
12·0F	11·4F	C	C	7·8F	C	C	C	C	C	C	C	25
11·3F	11·0F	11·0F	10·6F	11·0sF	G				2·6			26
12·0F	12·0F	11·5F	u15·0s	12·1F	12·0	u7·4s						27
C	C	C	C	n8·3s					3·0			28
11·2F	11·2F	10·6F	9·4F	12·6	u7·0s				2·5			29
11·8F	11·2	11·4F	10·9F	7·6F	9·2F				n2·4	2.8		30
11·4	11·2	10·8	10·5	8·9	7·6	..	..	..	2·6	..	..	Mean
11·2	11·2	11·0	10·7	8·0	7·0	..	..	..	2·6	..	..	Median
28	28	27	28	29	16	1	..	..	5	2	3	Count

Sweep 1 Mc. to 25 Mc in ½ min.

Characteristic : (M3000)F2 | TABLE 32 | Latitude : 10°.2N

Unit : | Ionospheric Data | Longitude : 77°.5E

Month : April 1957 | 75.0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	FR	F	FS	FS	3·15	U3·1FS	3·05	3·0	U2·8R	R	E2·15W	2·2
2	U2·8R	U2·75R	R	U2·7R	U2·95R	F	F	U2·9R	U2·55F	R	E2·15R	2·1
3	FS	2·9	U2·85S	2·9S	U3·05S	U3·15S	E2.9S	E2·9	2·6	R	E2·2	2·15
4	2·8	2·9	2·85	2·75	2·8	E3·05	3·0	2·95	E2·75R	2·45	R	2·1
5	F	U2·8F	E2·8S	F	U2·85F	U2·95S	FS	3·0	2·9	2·55	R	2·05
6	U.2·75R	RS	U2·75RS	2·85	3·00	3·20	3·10	3·0	2·6	U2·45R	2·15	2·05
7	R	2·75F	U2·95R	3·2	3·2	3·15	3·0	2·95	2·85	E2·5R	2·1	2·3
8	F	U3·1R	F	3·1	3·25	3·5	3·0	3·0	U2·85R	2·5	2·1	2·25
9	F	U3·05FS	FS	F	F	2·95	U2·90S	2·8	2·55	U2·15R	2·2	2·25
10	F	U2·9F	U2·8F	2·90	U2.9S	E3·0S	U3·0S	U2·85S	U2·7R	2·35	R	U2·15R
11	E2·75R	2·70	U2·95S	U3·0S	E3·2S	3·3	U3·0S	E2·95	2·7	U2·4R	2·2	E2·2
12	F	F	U2·65F	U2·80F	3·00	3·2	U3·15S	2·9	2·65R	U2·35R	2·4	E2·3
13	F	F	F	F	3·1	3·2	3·05	2·85	2·55	U2·35R	C	C
14	U2·6F	2·9	FS	U3·1S	3·05	3·2	3·05	2·95	2·65	2·35	2·25	E2·2
15	F	F	U3·0FS	3·25S	F	F	F	2·95	2·65	2·3	D2·25	2·25
16	F	U3·0S	F	F	3·35	3·1	D3·0	3·0	2·8	2·45	2·05	D2·2
17	F	F	U2·7F	F	FS	FS	E2·9	U2·8S	E2·6	D2·2	E2·2	2·1
18	2·75	U2·95R	E2·8	E3·0	U3·1RS	E3·0	E2·9	2·95	2·6	2·3	E2·1R	R
19	FS	FS	FS	FS	FS	U3·0S	E3·05	U2·85F	U2·65F	U2·45H	U2·2R	E2·15
20	U2·85R	U2·9R	E2·8	2·8	U3·25S	E3·35	2·9	2·85	E2·6R	E2·25	2·25	2·25
21	C	C	C	C	C	C	C	C	C	C	2·35	2·25
22	E2·7	U2·85S	2·8	2·8	U3·05RS	3·3	2·8	2·65	2·3	2·3	2·25	E2·2
23	F	F	F	F	F	F	3·0	E2·9	2·6	E2·3	2·15	2·15
24	F	F	F	2·95	2·95F	F	C	U2·75F	E2·6R	2·2	2·05	E2·1W
25	F	F	F	U2·95R	3·2S	3·15	2·85	2·8	2·45	2·1	2·15	2·15
26	C	C	C	C	C	C	C	C	R	E2·05R	2·15	2·05
27	2·7	2·75	2·7	E2·85	2·9	E3·0S	E2·85	2·7	E2.55	U2·1R	E2·1	2·1
28	F	F	F	FS	F	3·25	3·00	2·9	2.55	C	C	C
29	2·5	U2·55FS	U2·55FS	2·7	U2·8S	U2·9S	2·8	2·75	U2.55R	U2·15R	2·15	2·1
30	F	F	FS	2·85F	3·1	3·25	2·95	3·0	2.65	R	2·15	2·25
Mean	2·7	2·85	2·8	2·9	U3·05	3·15	2·95	2·9	2·65	2·3	2·20	2·15
Median	E2·75	2·9	E2·8	2·9	U3·05	3·15	3·0	2·9	2·6	2·3	2·15	2·15
Count	10	16	15	19	22	23	24	28	28	24	25	27

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : (M3000)F2 | TABLE 32 | Latitude : 10°.2N

Unit : | Ionospheric Data | Longitude : 77°.5E

Month : April 1957 | 75.0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2·1	2.15	2·25	2·4	2·45	2·45	U2·35FS	U2·15R	R	R	R	R	1
2·1	2.05	E2·15	E2·2	E2·3	E2·25	E2·1	RS	F	F	R	F	2
E2·05	2.05	R	2·1	U2·1s	U2·1s	U2·05s	E1·9s	E1·95	U2·15FS	U2·35F	FS	3
2·1	2.05	2·0	2·1	E2·15	2.2	U2·2s	E2·0W	U2·1s	F	F	U2·5F	4
E2·15	2.15	2·15	E2·2	U2·15s	E2.05R	U2·1RS	U2·15R	U2·3R	U2·4R	U2·8RS	R	5
E2·20	2.10	2·10	U2·15s	2·20	2·20	Rs	RS	R	U2·05F	FS	S	6
2·2	E2.15	2·15	2·2	2·20	U2·25s	2·05	W	F	F	F	F	7
2·3	E2.25	2·2	2·2	U2·35s	2.3	2·15	E1·95W	F	F	F	F	8
2·2	2.2	2·2	2·2	2·25	S	RS	W	F	F	F	F	9
2·3	2.25	2·2	2.2	E2·25	U2.15RS	U2·0R	RS	S	S	R	R	10
2·25	E2.15	E2·2	2·2	U2·25s	U2·2R	S	FS	F	RS	F	U2·5FS	11
E2·25	2.3	2·25	2·3	U2·3s	2·3	RS	FS	F	F	F	F	12
C	2.15	2·15	2·2	2·25	2·25	2·05	RS	FS	F	U2·45F	U2·65F	13
2·15	2.15	2·15	E2·2	E2·25	2·3RS	RS	E2·05R	F	F	F	F	14
2·15	2.15	D2·10	2·15s	2·2s	U2·2s	U2·2s	E2·0RS	F	F	F	F	15
2·15	2.15	2·15	U2·15s	B	E2·2	2·2s	W	F	F	F	F	16
2·15	2.15	2·05	2·05	2·05s	U2·05s	U2·1s	U1·95s	R	U2·15R	2·45	C	17
E2·2	2.05	2·05	E2·0W	U2·0s	E2·0W	2·05	U2·0s	E2·0W	F	F	F	18
E2·05	2.05	E2·0W	E2·0s	U2·1s	U2·3s	U2·15s	U2·25R	RS	RS	U2·4R	U2·75RS	19
E2·15	E2.05	E2·05	U2·05s	U2·15s	2·2	U2·2s	C	C	C	C	C	20
2·15	U2.15s	2·15	2·15	2·15	R	2·1	E1·85W	1·9s	E2.0s	U2·15F	2·45	21
2·15	2.15	2·15	E2·1R	2·05	E2·1	E2·05	SW	F	F	F	F	22
2·15	E2.2	E2·15R	R	U2·1s	R	U2·15s	U1·9FW	C	F	F	F	23
2·05	E2.0W	2·05	2·05	2·1	U2·05s	2·0s	WF	F	F	F	F	24
2·05	2.05	C	C	2·15	C	C	C	C	C	C	C	25
2·1	E2.05	2·05	2·1	2·1	R	E2·2R	R	U2·2R	R	2·5	U2·65R	26
E2·1	2.0	E2·0W	E2·1s	U2·15s	E2.2R	S	R	E2·1R	U2·2R	U2·2R	U2·35F	27
C	C	C	C	E2·10	U2.05s	E2·0s	F	F	U2·1F	E2·35s	U2·45s	28
2·1	2.1	2·1	2·15	U2·3s	2.3	S	E1·95W	F	F	F	U2·25F	29
2·15	2.05	2·15	2·1	2·3	2.35	R	U2·15R	2·1	2·25	F	F	30
2·15	2·10	2·10	2·15	U2·2	2·2	2·1	2·0	2·1	U2·15	U2·4	U2·5	Mean
2·15	2·15	2·15	2·15	U2·15	2·2	2·1	E2·0	E2·1	U2·15	U2·4	U2·5	Median
28	29	27	27	29	25	21	14	8	8	9	9	Count

Sweep 1 Mc to 25 Mc in ¼ min.

Characteristic : h'F
Unit : Km
Month : May 1957

TABLE 33
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	320	335	320F	260	230	235	260	240	240	230	235	E230L
2	300	280	260	245	225	235	265	250	235	230	E220L	E225L
3	300	270	255	235	220	225	265	250	E240L	220	E220L	E220A
4	260	260	280	250	230	225	265	E250	E235	230	215	220
5	275	280	305	310F	300	240	260	255	260	240H	235	235
6	U320F	U300F	280F	255	240	235	260	260	255	C	C	C
7	300	280	260	240	240	U250F	280	255	245	240	225	220
9	300	F	U365F	U300F	U265F	235	270	250	240	220	240	220
9	255	280	280	260	235	230	270	260	250L	240	230	220
10	300	295	290F	275	250	235	280	260	250	U240H	225	220
11	275	280	295	260	240	240	265	250	E235A	225	E210A	220
12	C	C	C	C	C	C	C	C	C	240	E240B	E230
13	C	C	C	C	C	C	C	C	C	C	C	C
14	300	315	305	280	240	235	275	245	240	230	215H	220
15	265	280	290	280	240	225	260	245	235	225	220	215
16	300	285	285	250	260	245	270	250	230	U230L	220H	215H
17	300	310	360	F	300F	235	260	255	220H	220H	200H	205H
18	365	440	F	U400F	320	255	275	280	C	C	225	225
19	355	U365F	U375F	FS	305F	250	280	260	U250L	225H	235	220H
20	355	375	320	300	280F	255	280	260	240	220	230	U200L
21	360	360	360	350	280	245	265	240	230	220	220	220
22	320	U340F	300	280	240	240	270	245	240	230	210	210
23	290	275	270	265	240	220	260	U240L	235	240	220	220H
24	335	400F	U380F	F	U340F	260	280	255	235	235L	210	235
25	335	330	325	300	265	240	280	250	240	230	215H	200
26	300	295	260	255	E260	250	280	U280L	240	230	220H	215H
27	370	400	U400F	300	300	290	270	250	220	225	215H	215
28	305	300	295	265	255	240	270	250	240H	230	E240H	230H
29	305	305	280	245	230	240	270	240	240	225H	215	225
30	320	325	350	350	280	225	260	240	240	E210H	220	215H
31	320	410	440	410	320	U295F	275	260	U260L	225	205H	U205LH
Mean	310	320	315	285	265	240	270	250	240	230	220	220
Median	300	300	300	270	255	240	270	250	240	230	220	220
Count	29	28	28	26	29	29	29	29	28	28	29	29

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'F
Unit : Km
Month : May 1957

TABLE 33
Ionospheric Data
75·0°E Mean Time

Latitude: 10°.2N
Longitude : 77°.5E

12-	13	14	15	16	17	18	19	20	21	22	23	Date
E230L	220	220	A	C	C	325	380	400	390	360	315	1
U220A	U215A	220	230	235	255	310	U405F	440F	420	400	365	2
U220A	E210A	215	E225A	E245	265	300	E415	F	F	U415F	U320F	3
210H	U215A	E230A	U230L	240	265	300	U420F	F	410F	F	300	4
235	230	240H	245	260	U360A	315	U460L	F	F	335F	U340F	5
B	235	225	U240L	C	C	C	405	C	420F	380	315	6
U235L	225	225	240	E260	275	320	U465F	F	F	U400F	U360F	7
215H	220	C	240	260	280	310	C	C	F	F	280	8
E225B	225	235H	240H	250	255H	300	440F	C	F	U375F	340	9
210H	U210L	220	235	245	260	300	430	500	440	U400F	320	10
E200A	E210	E230	225	240	255	300	410	C	C	C	C	11
E220	230	C	C	C	C	C	C	C	C	C	C	12
C	230H	230	250H	260	U280S	310	380	410	400	365	340	13
215	215H	230	230	240	270	300	410	460	410	340	280	14
210H	205	210	205	225	265	300	400	F	400F	345	300	15
205H	200H	230	230	245	265	305	425	F	F	U410F	330	16
235LH	225	U200S	220	U260A	U260A	A	C	C	U440F	405	340	17
215H	U200C	240	240	U220C	280	310	415	C	C	C	C	18
215	200	220	225	240	U275A	320	U425S	460L	410	375	C	19
240	210	220	U240A	240	260	300	400	F	F	310	320	20
210H	E200LH	220	225	240	260	300	410	450	430	360	320	21
200	200	210	215	225	250	295	400	480	F	340	290	22
225H	220H	220	240	250H	290	330	U430F	U470S	440	420	360	23
235	220	225H	225H	230	265	300	400	FS	415	400	U380F	24
210H	215H	215	245	250	280	310	415	440F	470	405F	340	25
205	E220	220	225	230	A	U325L	390	400	365	365	375	26
205H	225H	230	240	250	C	310	U390S	U440S	E460S	U405F	U360F	27
225H	U220S	E235	U235S	A	S	300	400	E470S	FS	390	320	28
B	210H	220	230	250	270	300	C	U440F	U445F	360FS	315	29
205	205	205	235	235	250	295	355	360	305	270	260	30
U215L	215LH	225	235	235	A	A	F	U355F	F	E450F	U400F	31
220	215	225	230	245	270	305	410	435	415	375	330	Mean
215	215	220	235	240	265	300	410	440	420	380	320	Median
28	31	29	29	27	24	27	26	16	18	26	27	Count

Sweep 1 Mc to 25 Mc in ½ min.

15—1 D. D. G. Obs. Kodai/58

Characteristic : foF2
Unit : Mc
Month : May 1957

TABLE 34
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	FS	F	9·3	7·0	9·2	D11·6s	13·0	R	11·8	D11·5
2	D12·4R	11·4	10·4	10·4	8·2	4·8	J8·1C	11·0	12·2	11·8	11·2	11·1
3	F	U11·2R	D11·0C	U9·6s	U8·2R	R	7·6	11·0	12·2	11·1	10·8	10·8
4	U12·0FS	D11·3R	10·8	10·6	U9·5s	D8·2R	U9·1s	11·6	12·8	U13·2R	12·0	11·7
5	11·2	U10·3FS	U10·0F	F	U9·8s	U10·0s	D11·5s	13·0	14·2	14·0	D12·2	11·8
6	F	F	F	F	D9·5s	6·7	8·7	11·3	12·4	C	C	C
7	F	F	11·3	10·7	F	F	U7·6FS	10·8	11·8	11·4	10·7	10·8
8	F	F	F	F	F	U7·4F	F	F	12·4	U12·6R	12·0	12·0
9	F	FS	8·7	S	9·2	6·6	U8·9s	11·4	12·0	11·3	12·1	12·2
10	11·0	U10·8F	F	9·4FS	8·8	7·5	U9·0R	11·1	12·1	U12.0R	11·8	10·8
11	D9·3FS	U9·0F	U8·8F	F	8·9	6·7	8·9	11·1	12·0	11·7	11·3	11·3
12	C	C	C	C	C	C	C	C	C	U11·9H	10·8	10·8
13	C	C	C	C	C	C	C	C	C	C	C	C
14	10·1	U9·6s	U9·7s	U9·6s	8·7	7·8	U9·6s	11·8	12·5	12·4	10·7	10·4
15	9·9s	9·2S	8·4	8·8	D8·0R	6·4	8·6	11·2	12·4	13·0	13·1	D12·0R
16	9·3s	9·1	8·7	F	7·5	7·6	10·2	11·6	12·6	U13·2R	12·6	11·2
17	D9·6FS	9·0	F	F	F	7·8	D10·2	U12·4R	13·2	13·6	R	11·1
18	9·1	U8·8R	F	F	F	U9·8FS	11·1s	F	C	C	U13·0R	11·2
19	D9·0FS	FS	F	FS	U8·2FS	U8·7F	10·4	12·2	12·7	12·8	U11·6R	10·6
20	D9·3F	F	FS	U9·2F	F	8·0	9.6s	11·1	12·0	11·3	10·9	10·8
21	U9·4FS	8·9	8·4	U7·6F	U7·2F	U6·7F	9·4	11·4	12·0	11·2	10·0	10·0
22	U8·6FS	F	U8·5F	9·0	U9·6s	8·5	10·0	11·4	U12·0R	D12·2R	U11·8R	11·0
23	U9·7s	J9·7s	U9·1s	8·9	F	7·7	9·4	11·3	12·2	13·0	13·1	12·2
24	D8·6F	F	F	F	F	D7·6F	U9·4F	11·4	12·1	12·5	12·0	11·8
25	9·3	U9·4s	9·3s	D9·4s	9·3s	8·1	9·5	U11·6s	12·4	12·7	12·1	11·3
26	D10·2s	9·5s	D9·0	U9·6s	9·6s	D7·8	9·9	D11·6s	12·7	13·4	D13·2	11·4
27	U9·3s	8·6	U7·0F	6·3	6·3	6·7	9·5s	12·0	13·0	13·8	13·7H	D12·2RH
28	U8·9F	U9·2s	9·2s	D8·4	F8·4	7·5	9·4	11·2	12·4	D12·6	12·0	10·8
29	FS	F	7.8	F	6·8	5·0	8·5	11·2	12·2	12·8	U12·2R	10·9
30	9·0	8·4	7·8	8·1	8·4	8·3	9·1	11·0	11·6	11·7H	11·3H	10·2
31	8·7	7·8	6·1	U5·4F	U5·5F	U5·8F	8·8	11·4	12·5	U13·4R	13·0	12·1
Mean	9·7	U9·5	9·0	8·9	8·4	7·4	9·3	11·5	12·4	12·5	11·9	11·2
Median	D9·3	U9·2	D8·9	9·2	8·6	7·6	9·4	11.4	12·4	12·6	12·0	11·2
Count	22	19	20	17	22	27	28	27	28	27	26	29

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foF2 | TABLE 34 | Latitude : 10°.2N

Unit : Mc | Ionospheric Data | Longitude : 77°.5E

Month : May 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
11·7s	11·6	12·2	13·0	C	C	D13·4s	13·4	12·9	12·5	D12·4R	D12·9R	1
11·0	11·3	11·8	U12·6G	12·8	D12·0s	D11·8R	R	10·5	U10·3F	U10·0F	F	2
11·6	12·0	U12·1R	12·5	13·1	R	U13·0R	U11·8s	U10·7F	F	F	F	3
11·6	11·9	12·5	12·7	12·7	12·7	D11·8s	11·1	U10·6F	U10·2F	F	U10·6F	4
11·8	12·2	12·2	12·2	12·1	U11·8s	U11·6s	D10·8	U10·5F	F	F	F	5
10·6	11·1	11·4	11·6	C	C	C	U11·3s	C	U11.0s	U11·8s	U12·6R	6
11·6	11·8	12·1	12·6	U12·2R	12·5H	U12·3R	F	F	F	F	F	7
11·7	11·8	C	12·2	12·2	U12·0s	U11·7s	C	C	F	F	F	8
12·6	13·8	13·5	13·5	13·3	U13·1s	U11·6s	U10·6W	C	U9·6s	10·8	D11·0F	9
11·2	11 4	11·5	11·6	U11·6s	11·7s	11·0	U9·4s	U8·0F	U8·0F	F	Fs	10
11·0	11·2	11·6	12·0	D12·0s	Rs	S	10·7	C	C	C	C	11
10·5	10·6	C	C	C	C	C	C	C	C	C	C	12
C	10·0	10·1	10·4	11·0	U11·8s	12·1	U11·6s	11·4	11·3	10·8	10·8	13
10·2	10·1	10·5	10·8	U11·0s	11 4	11·5	D11·0R	U10·0F	U10·0F	10·6	10·9	14
10·5	10·2	9·9	10·3	10·9	U11·5s	U11·6s	U10·8s	10·2F	10·1	J9·8FS	10·2s	15
10·5	10·4	10·5	10·6s	11·0	11·0	10·8s	Rs	9·4F	F	F	F	16
10·6	10·5	11·0	11·0	U11·5s	U11·8s	Rs	C	C	U10·8R	10·4	10·2	17
10·5	10·6	10·7	10 9	11·0	11·6	S	U11·6s	C	C	C	C	18
10·3	10·4	10·4	10·6	11·0	U11·4s	U11·5s	11·0	10·3	10·5	10·6	C	19
11·1	11·5	11·7	11·1s	11·3s	U11·2s	10·7	U9·6s	U8·7R	F	U9·8s	U9·4s	20
10·1	10·2	10·2	10·4	U10·4s	U10·6s	U10·8s	U9·6s	9·0	U9·2s	8·7	U8·1s	21
10·7	10·7	10·8	11·0	11·0	U11·6s	D11·0RS	U10·2s	F	F	U9·2F	U9·8FS	22
U10·4W	U10·1W	U10·1W	10·2	U10·5s	U10·6s	10·7	S	9·3	9·4	9·0	F	23
11·4	11·5	11·4	11·6	U12·0s	12·6	J12·3s	U11·4s	U10·1SF	U9·6s	D9·6FS	F	24
10·6	10·6	10·8	11·4	J12·2s	U12·7R	12·9	U11·4R	U10·4RS	10·1F	10·6F	10·6F	25
10·8	10·4	D10·2WH	10·4	D10·6	11·2	10·8	U10·2R	U10·1R	10·1	10·0	U9·4s	26
10·1	10·2	10·4	10·3	U10·8s	C	U11·8s	10·9	10·6	U10·2R	Fs	Fs	27
10·2H	10·3	10·5	11·0	U12·0s	D12·4s	J12·1s	10·9	U9·4s	FS	FS	U8·6FS	28
10·4	10·6	10·6	11·3	U11·7s	12·9	12·8	C	10·8	U10·4F	U10·1F	U10·0s	29
9·9	9·9	10·2	9·8	10·0	J10·9s	U11·5s	U11·6s	11·3	11·0	11·5	10·7	30
12·0	12·1	U11·6HS	U11·7R	U12·0s	U12·4R	U12·6R	U12·5R	FS	U10·2FS	F	F	31
10·9	11·0	11·1	11·4	U11·6	U11·8	U11·8	U11·0	10·2	U10·2	10·3	U10·4	Mean
10·6	10·6	10·8	11·4	U11·6	U11·8	U11·6	U11·0	10·3	U10·2	10·2	U10·4	Median
30	31	29	30	28	25	26	23	21	20	18	16	Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'F2
Unit : Km
Month : May 1957

TABLE 35
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

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

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'F2
Unit : Km
Month : May 1957

TABLE 35
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	C	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								5
L	L	L	L	C	C	C						6
L	L	L	L	L								7
L	L	L	L	L								8
L	L	u510L	L	L	L							9
L	L	L	L	L	L							10
L	L	L	L	L	L							11
L	L	C	C	C	C	C						12
C	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								19
L	L	L	L	L	L							20
L	L	L	L	L								21
L	L	L	L	L	L							22
L	LH	L	L	L								23
L	L	L	300	L								24
L	L	L	L	L								25
L	L	LH	L	L	A							26
L	L	L	L	L	C							27
LH	L	L	L	L	L							28
L	L	L	L	L								29
L	L	L	L	L								30
L	L	LH	L	L	L							31
..	..	..	..	..	..	..						Mean
..	..	..	..	..	..	..						Median
..	..	1	1	..	..	..						Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foF1
Unit : Mc
Month : May 1957

TABLE 36
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

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

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foF1
Unit : Mc
Month : May 1957

TABLE 36
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

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

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'E | TABLE 37 | Latitude : 10°·2 N

Unit : Km | Ionospheric Data | Longitude : 77°·5 E

Month : May 1957 | 75·0°E Mean Time

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

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'E
Unit : Km
Month : May 1957

TABLE 37
Ionospheric Data
75·0°E Mean Time

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

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	C	C	110						1
A	A	115	115	120	A							2
A	A	A	115	A	A							3
A	A	A	A	120	A							4
A	A	120	u120A	A								5
B	A	A	120	C	C	C						6
A	A	A	A	A	125							7
A	A	C	A	A								8
B	A	A	115	A	A							9
A	A	A	A	115	A							10
A	A	120	A	S	A							11
A	A	C	C	C	C	C						12
C	A	A	A	A								13
A	A	A	A	A	110							14
A	A	A	115A	u110A	A							15
A	A	A	A	u110A	u115s							16
A	A	A	u120s	A	A							17
A	A	A	A	A								18
A	A	A	A	A	A							19
A	A	A	110	A	A							20
A	A	A	A	115	A							21
A	A	A	A	110								22
A	A	A	S	A								23
A	A	115	u115A	E120	120							24
A	A	A	120	125	135							25
A	A	A	A	u115A	A							26
A	A	A	A	A	C							27
A	A	A	S	S	A							28
B	A	A	115	A								29
A	A	A	A	105								30
A	A	A	A	A	A							31
..	..	..	115	115	120	..						Mean
..	..	..	115	115	120	..						Median
..	..	3	11	11	5	1						Count

Sweep 1 Mc to 25 Mc in ½ min.

16—1 D. D. G. Obs. Kodai/58.

Characteristic : foE | TABLE 38 | Latitude : 10°·2 N

Unit : Mc | Ionospheric Data | Longitude : 77°·5 E

Month : May 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									A	A	A	A
2									A	A	A	A
3									A	A	A	A
4									A	A	A	A
5									A	A	A	A
6									A	C	C	C
7								A	A	A	A	A
8									A	A	A	A
9								A	A	u3·8A	A	A
10									A	A	A	A
11									A	A	A	A
12								C	C	A	B	A
13								C	C	C	C	C
14									A	A	A	A
15									3·6	A	A	A
16									A	A	A	A
17										A	A	A
18									C	C	A	A
19								A	A	A	A	A
20								A	u3·8A	A	A	A
21								R	A	A	A	A
22								A	A	A	A	A
23								R	R	3·9	A	A
24							G	R	A	A	A	A
25								3·0	3·6	A	A	A
26							R		3·7	u4·0A	A	A
27									R	A	A	A
28										A	A	A
29									A	A	A	A
30									3·3	A	A	A
31										A	A	A
Mean							..	..	3·6	..	..	..
Median							..	..	3·6	..	..	..
Count							1	1	5	3	..	..

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foE
Unit : Mc
Month : May 1957

TABLE 38
Ionospheric Data
75·0°E Mean Time

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

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	C	C	A						1
A	A	A	u3·9F	A	A							2
A	A	A	A	A	A							3
A	A	A	A	A	A							4
A	A	C	A	A								5
B	A	A	A	C	C	C						6
A	A	A	A	A	2·8							7
A	A	C	A	A								8
B	A	A	A	A	A							9
A	A	A	A	u3·2A	A							10
A	A	A	A	S	A							11
A	A	C	C	C	C	C						12
C	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
A	A	A	A	A	A							17
A	A	A	A	A								18
A	A	A	A	A	A							19
A	A	A	u3·6A	A	A							20
A	A	A	A	u3·5s	A							21
A	A	A	A	u3·5s								22
A	A	A	S	A								23
A	A	A	A	A	A							24
A	A	A	3·6	3·0	A							25
A	A	A	A	A	A							26
A	A	A	A	A	C							27
A	A	A	S	S	A							28
B	A	A	A	A								29
A	A	A	A	A								30
A	A	A	A	A	A							31
..	..	..	..	..	..	..						Mean
..	..	..	..	..	..	..						Median
..	..	..	3	4	1	..						Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foEs
Unit : Mc
Month : May 1957

TABLE 39
Ionospheric Data
75·0°E Mean Time

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

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								5·6	9·2F	11·0	D10·4	11·0F
2									7·2	10·0F	10·4F	11·0F
3									7·8F	9·4	11·0	11·6F
4									7·4	8·0	10·0	11·0F
5	D6·2s								7·2	10·6F	11·6F	10·9F
6									10·6F	C	C	C
7								u7·8F	9·2F	9·8F	10·8F	11·4F
8									u7·4R	11·4F	11·0F	11·2F
9								G	8·2	u10·0F	11·0F	12·2F
10									7·2G	9·0	11·0F	11·6
11									7·6	10·0F	11·2F	12·5F
12	C	C	C	C	C	C	C	C	C	10·4F	11·0F	11·6F
13	C	C	C	C	C	C	C	C	C	C	C	C
14									9·3	10·8F	11·6F	11·8F
15								4·1	G	9·4F	11·0F	11·6F
16									7·2	10·6	12·0F	12·0F
17										11·6F	12·0F	12·3F
18									C	C	11·0F	12·0F
19								6·3	u7·9G	u9·6s	10·7F	12·0F
20		3·7	7·8					G	D9·4FS	10·3F	10·8F	11·0
21								G	8·0F	10·4F	10·8F	10·8
22								G	7·8	9·2F	10·6F	11·4F
23									G	D9·0	11·1F	11·0F
24								G	7·4G	7·4G	9·6	10·8
25								G	G	10·8F	11·0F	10·8F
26		u7·0s								9·0	11·6F	11·2F
27	3·4	u2·7G	S						G	u10·8s	10·6F	11·0F
28										u7·4s	10·8F	10·5F
29								u4·5G	u7·6s	9·3F	10·3F	11·0F
30									G	u9·3s	10·4F	10·8F
31										u9·0G	10·4F	11·8F
Mean	..	..	..	..	..	..	..	5·7	8·1	9·8	10·9	11·4
Median	..	..	..	..	..	..	..	..	7·5	9·9	11·0	11·2
Count	2	3	1	..	..	..	..	11	24	28	29	29

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foEs | TABLE 39 | Latitude : 10°·2 N

Unit : Mc | Ionospheric Data | Longitude : 77°·5 E

Month : May 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
D10·0	9·6	7·2F	9·2F	C	C	D7·0s	U2·8s		4·0			1
11·5	11·4F	11·0F	10·4F	7·4s	S				2·9	4·3		2
11·6	10·2	10·0F	9·8F	7·3F	U7·0s				2·5	2·7s		3
11·5F	11·4F	11·0F	9·8F	U7·6s	G					3·0		4
D11·0F	11·8F	11·0F	11·0F	7·8F	11·8F							5
7·4F	11·0F	12·0F	11·0s	C	C	C		C				6
11·6F	12·0F	11·4F	7·5	G	G							7
11·8F	11·4F	C	11·0F	7·2F			C	C				8
G	11·2F	D11·0F	U11·0s	U10·2FS	G			C				9
12·0F	11·6F	11·0F	11·4F	U11·0s	D7·0s					U7·0s		10
12·2	U12·0SF	11·0	9·6F	9·4FS	G			C	C	C	C	11
11·8F	11·5	C	C	C	C	C	C	C	C	C	C	12
C	12·2F	11·8F	9·8F	U7·2s								13
11·0F	12·1F	12·1F	D11·0s	U 9·0s	D5·0s							14
12·0F	11·0F	11·4F	10·8F	9·4s	U7·4s							15
U13·0F	12·6F	12·6	12·0s	D9·8FS	S							16
12·4F	12·0F	12·2F	U11·0FS	12·0	11·0F	10·8			3·6	U2·8G		17
12·2F	12·0F	11·5F	11·8	7·5				C	C	C	C	18
11·6F	11·8F	11·3F	11·0F	U7·0FS	S	D6·0s	2·8					19
10·8	11·0F	11·6s	11·0	9·4	D7·0s						3·5	20
11·0F	11·0F	11·4F	D10·2s	8·2F	U6·6s							21
11·3F	U11·4SF	11·6F	10·4F	8·0F								22
11·4F	11·0F	U11·2F	D10·6	U7·9s						4·4		23
11·2F	11·6F	11·4F	10·5F	U6·6G	U6·4s							24
11·5F	11·4F	11·0F	7·6F	G	G							25
11·8F	12·2	11·4	U11·4s	U8·0s	16·0	8·0			U4·6s	U6·0s	2·5	26
11·0F	11·0F	10·2FS	D9·0s	D7·0s					U3·2s			27
U10·6s	10·8	U11·0s	S	U8·0s	D7·0s							28
11·1F	U11·6s	11·2F	D10·2s	4·6			C		D4·0s			29
U11·6s	U11·6s	U10·9s	U10·1s	D7·0s								30
11·6F	10·8F	11·0FS	9·0	U9·4s	10·8	U7·0FS						31
11·4	11·4	11·2	10·3	8·2	8·6	7·8	..	..	3·5	4·3	..	Mean
11.5	11·4	11·2	10·5	7·8	7·0	D7·0	..	..	3·6	4·3	..	Median
30	31	29	29	28	17	5	2	..	7	7	2	Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : (M3000)F2 | TABLE 40 | Latitude : 10°·2 N

Unit : | Ionospheric Data | Longitude : 77°·5 E

Month : May 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	Fs	F	3·1	3·15	3·05	2·95	2·5	R	E2·15	2·1
2	E2·9R	2·9	2·85	3·05	3·25	3·3	J3·0C	2·85	2·45	2·15	2·25	2·2
3	F	U2·85R	E3·0C	U3·1S	U3·25R	R	3·1	2·9	2·5	2·3	E2·3	2·2
4	U2·95FS	U2·85R	2·85	3·0	U3·15S	U3·2R	U3·1S	E3·05	E2·7	U2·25R	2·25	2·2
5	2·75	F	2·65F	F	U2·65S	2 95FS	U3·1S	2·9	2·6	E2·2	E2·1	2·15
6	F	F	F	F	3·25	3·25	3·1	3·0	2·7	C	C	C
7	F	F	2·9	3·2	F	F	U3·0FS	2·7	2·4	2·25	2·2	2·3
8	F	F	F	F	F	U3·0F	F	F	E2·6R	U2·3R	2·2	E2·2
9	F	Fs	2·7	S	3·2	3·1	U3·0S	2·3	2·25	2·3	2·3	2·15
10	2·65	U2·65F	F	2·8FS	3·0	3·15	3·0	2·8	2·55	U2·3R	2·15	2·3
11	E2·7FS	U2·6F	U2·6F	F	3·1	3·2	3·05	2·95	2·5	E2·25	2·25	2·25
12	C	C	C	C	C	C	C	C	C	E2·1H	2·15	E2·15
13	C	C	C	C	C	C	C	C	C	C	C	C
14	D2·7	U2·6S	U2·6S	U2·8S	2·95	3·05	U3·05S	E2·9	2·55	E2·2	2·2	2·15
15	2·85S	2·8S	2·7	D2·8	3·1R	3·3	3·1	3·0	E2·9	2·5	D2·25	E1·95R
16	2·6S	2·8	2·8	F	3·0	3·05	3·0	2·95	2·7	U2·4R	2·05	2·0
17	E2·5SF	2·55	F	F	F	3·15	3·1	U3·05R	2·8	2·4	R	2·05
18	2·4	U2·3R	F	F	F	U2 95FS	U2·9S	F	C	C	U2·0R	2·1
19	E2·4SF	Fs	F	Fs	U2·65S	U2·9F	2·9	2·75	2·55	2·25	U2·05R	2·05H
20	U2·45F	F	Fs	U2·7F	F	3·0	E2·9	2·55	2·3	D2·2	E2·2	2·1
21	U2·3FS	2·25	E2·35	U2·6F	U2·65F	U2·85F	E2·9	2·6	2·4	2·25	2·25	E2·15
22	U2·35FS	F	U2·6F	2·7	U3·0S	2·95	E2·75	2·6	U2·45R	U2·35R	U2·1R	D2·15
23	U2·6S	J2·7S	U2·7S	2·9	F	3·25	2·9	2·8	2·6	2·35	2·15	1·95
24	U2·4F	F	F	F	F	U3·0F	U2·7F	E2·6	2·45	2·2	2·15	E2·1
25	2·5	2·6S	2·65S	U2·8S	2·9S	3·2	2·95	2·75S	2·55	2·25	2·15	D2·05
26	E2·6S	2·7S	E2·8	U2·95S	3·0S	3·15	E2·9	2·8S	2·65	2·45	2·15	2·05
27	2·4S	2·35	2·45F	2·3	2·6	2·75	E2·95S	E3·0	2·85	E2·65	2·3H	E2·1RH
28	U2·7F	2·65S	2·75S	2·9	E3·0	2·95	3·0	2·9	2·65	D2·35	E2·05	E2·15
29	Fs	F	2·75	F	3·1	3·15	2·9	2·9	2·7	2·4	U2·05R	2·05
30	2·7	2·65	2·6	2·55	2·8	3·25	3·1	3·0	2·75	2·4H	U2·0WH	2·05
31	E2·7	2·35	E2·3	U2·4F	U2·65F	U2·7F	E2·8	2·85	2·7	U2·5R	2·1	2·15
Mean	U2·6	2·6	2·7	2·8	2·95	3·05	3·0	2·85	2·60	2·3	2·15	2·10
Median	U2·6	2·65	2·7	2·8	3·0	3·1	3·0	2·90	E2·6	2·3	2·15	E2·15
Count	22	18	20	17	22	27	28	27	28	27	28	29

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : (M3000)F2 | TABLE 40 | Latitude : 10°·2 N

Unit : | Ionospheric Data | Longitude : 77°·5 E

Month : May 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
2·15	2·1	2·1	2·2	C	C	E2·4s	2·25	2·3	2·4	2·5	E2·75R	1
2·2	2·15	2·2	U2·2C	2·2	E2·3s	E2·25R	R	2·1	U2·15F	U2·3F	F	2
2·2	E2·35	U2·25R	2·2	2·2	R	U2·25R	U2·05s	E2·0F	F	F	F	3
2·15	2·2	2·15	E2·2	2·2	2·2	E2·25s	2·05	U2·05F	U2·15F	F	U2·35F	4
2 15	2·05	2·05	D2.05	2·1	U2·3s	U2·2s	2·05	U2·0F	F	F	F	5
2·1	2·15	2·05	E2·05	C	C	C	U2·15s	C	U2·2s	U2·4s	U2·6R	6
2·2	2·15	2·2	2·15	U2·25R	2·15H	U2·05R	F	F	F	F	F	7
2·2	E2·1	C	2·15	2·2	U2·2s	U2·15s	C	C	F	F	F	8
2·15	2·25	2·2	2·15	2·1	U2·05R	U2·15s	E1·95W	C	U2·0s	2·2	U2·4F	9
2 15	2·1	2·1	2·10	D2·1s	E2·25	2·25	U2·05s	U2·05s	U2.1F	F	Fs	10
2·15	E2·2	2·15	2·25	E2·25s	Rs	S	E1·95	C	C	C	C	11
E2·1	C·1W	C	C	C	C	C	C	C	C	C	C	12
C	2·05	2·05	2·1	2·2	U2·4s	E2·4	U2·35s	E2·3	2·35	2·45	2·55	13
2·15	2·1	E2·1W	2·1	U2·2s	2·2	2·25	U2·15R	U2·1F	U2·2F	E2·5	2·75	14
2·05	2·1	2·05	2·05	2·2	U2·35s	U2·35s	U2·2s	2·15F	2·2D	J2·4FS	2·6s	15
2·05	E2·05	2·05	2·05s	2·1	2·15	2·2s	Rs	2·1F	F	F	F	16
2·05	E2·1	2·1	E2·1	U2·2s	U2·35s	Rs	C	C	2·2	E2·25	E2·5	17
2·05	1·95	E2·0	2·0	E2·1	2·2	S	U2·15s	C	C	C	C	18
E2·0W	1·95	E2·0	2·05	2·1	U2·3s	U2·25s	2·1	2·15	2·25	2·35	C	19
2·1	E2·1	2·05	E2·1s	E2·1s	U2·15s	E2·2	D2·0	U2·0F	F	U2·2s	U2·45s	20
E2·1	E2·0	2·0	2·0	U2·1s	U2·1s	U2·2s	U2·15s	2·1	U2·1s	2·2	U2·35s	21
2·05	2·1	E2·1	E2·05	E2·15	U2·2s	U2·1sR	U2·1s	F	F	U2·3F	U2·6FS	22
E1·95W	E1·95W	E2·05W	E2·0	U2·05s	U2·15s	2·1	s	2·05	2·1	2·15	F	23
E2·1	2·0	E2·1	2·1H	U2·25s	E2·3	U2·25s	U2·05s	U2·05sF	E2·2s	E2·2FS	F	24
2·05	2·05	2·1	2·15	J2·25s	U2·3R	2·2	2·15R	U2·1Rs	D2·1F	2·25F	2·45F	25
E2·1	2·0	U1·95WH	2·1	E2·2	2·25	E2·3	U2·3R	U2·3R	2·35	E2·4	2·4s	26
2·1	2·1	E2·1	E2·1	2·15s	C	U2·3s	2·15	2·15	2·2s	Fs	Fs	27
E2·1H	D2·1	2·05	2·2H	U2·4s	2·5s	U2·6s	D2·3	U2·2s	Fs	Fs	U2·65s	28
2·1	2·1	2·1	2·15	U2·35s	2·4	2·45	C	2·25	U2·35F	U2·5F	U2·55s	29
2·15	2·05	2·05	D2·05	2·25	J2·4s	U2·7s	U2·55s	2·45	2·65	2·75	3·0	30
2·15	2·1	U2·15SH	U2·2s	U2·45s	U2·5R	U2·5sR	U2·35R	Fs	U2·3FS	F	F	31
2·1	2·10	2·1	2·1	U2·2	U2·25	U2·3	U2·15	U2·15	U2·25	U2·35	2·55	Mean
2·1	2·1	E2·1	2·1	U2·2	U2·25	U2·25	U2·15	U2·1	U2·20	U2·3	2·55	Median
30	31	29	30	28	25	26	23	21	20	18	16	Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'F

Unit : Km

Month : June 1957

TABLE 41

Ionospheric Data

75·0°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	F	U400F	F	U460F	F	U300F	260	260	240	B	U200LH	220H
2	300	280	255	255	245	250	275	260	245	220	230H	235
3	325	310	300	265	255	240	280	255	245	230	220	210
4	310	E380	455	425	275	240	265	255	A	B	210	220H
5	285	300	320	290	220	265	280	245	240	U205LH	210	210H
6	300	300	320	300	240	225	260	240	220	210	210	210
7	295	285	270	250	270	245	270	260	235	240	230	A
8	360	350	300	250	240	260	275	255	250	225	215	220H
9	350	380F	U370F	U345F	U290F	260	275	250	C	C	C	C
10	305	320	350	340	300	235	260	240	220	220	205	200H
11	U420F	U380F	U360F	320	U260F	230	255	240	230	220	E200A	210
12	285	U305F	325	310	260	215	255	235	220	230	200H	200
13	410	410	390	370	290	210	260	235	A	200H	B	B
14	405	410	380	330	295	260	270	240	B	240	230H	215H
15	U400F	U365F	360	340	300	260	280	235	245	B	B	230
16	450	470	500	460	360	260	260	250	235	215	E210B	200
17	420F	400F	390F	365F	275	240	260	240	225	215	220H	200
18	400F	400	400	U340F	U305F	260	260	240	230	245	220H	230
19	495F	485F	525	520	435	300	265	250	240	250	220	C
20	310	335	360	345	300	240	275	250	235	220	210	210
21	375	U360F	345	360	310	235	265	240	230	210H	200H	230
22	310	310	340	380	420	420	275	250	240	235	220H	210H
23	300	290	290	285	240	230	280	260	245	240	C	C
24	380	340	325	310	300	245	275	245	240	220H	215	200H
25	400	400	U400F	U365F	300	250	275	255	240	220	215H	220
26	420	400	U415F	420	395	275	280	260	225H	220	235	230
27	275	310	290	285	295	D295	290H	260	245	240	235	220
28	U360F	360	305	280	240	220	280	265	B	B	B	B
29	400	U440F	U480F	U425F	340	260	280	250	240	230	230	215
30	300	300	310	300	E260	225	280	255	240	225H	220	220
Mean	355	360	360	345	295	255	270	250	235	225	215	215
Median	360	360	350	340	290	250	275	250	240	220	215	215
Count	29	30	29	30	29	30	30	30	25	25	25	24

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'F
Unit : Km
Month : June 1957

TABLE 41
Ionospheric Data
75·0°E Mean Time

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

12	13	14	15	16	17	18	19	20	21	22	23	Date
190H	215	225	235	A	U280A	340	U405S	U305S	435	U375F	350	1
215H	210H	205H	245	245	280	310	400	FS	E	F	U370S	2
C	225	220	235	B	275	310	395	U425F	325	335	290	3
U240B	220H	220H	235H	235	260	300	370	U415FS	F	U360F	330	4
U210S	205H	210H	230	235	250	290	380	455	455	385	325	5
210	220H	210H	220	225	255	290	400	440	440	400	315	6
230	215	220H	240	A	A	310	400	550	510	480	430	7
240H	220H	220H	235H	240H	260	300	430	F	500	435	375	8
C	C	C	C	A	A	320	365	420	U410F	U395F	340	9
205H	205H	200H	210	A	280	280	360	405	F	455	440	10
215	210	205	215	230	245	280	U340F	F	U460F	U410F	335	11
200	200	210	230	A	A	300	335	U410F	400	440	U410F	12
B	220H	220H	220H	250	265	310	400	420	400	400	400	13
210	200H	220	240H	240	260	305	410	480	515	460	420	14
220H	B	225	230	240H	265	300	385	F	F	U440F	F	15
220H	210	225	220	240	255	290	350	410F	425	410	400	16
200	210	215	C	230	A	A	380	435	440	435	U400F	17
225	220	225	210	245	260	300	400	520	550	550	510F	18
E250B	230	230	230	240	A	360A	410	500	440	365	325	19
200	210	215	230	230	250	295	375	440	450	430F	420F	20
C	C	C	220H	260	285	305	375	F	410	365	320	21
210H	215H	230	240H	250	280	320	360	F	410	390	C	22
220H	220H	230	230	250	275	300	365	F	450	460	400	23
240	240H	B	235	U280A	U300A	330	360	420	420	410	400	24
220	215	210	220	230	280	300	360	400	420	440	395	25
230	230H	225H	U225A	245	260	300	380	420	400	330	290	26
225	220	C	220	240	270	300	380	U300F	F	U360F	U375F	27
B	B	U250B	240	255	265	300	370	U420F	U420F	420	U400F	28
215	225	235	230H	240	E260	295	340	F	F	360	310	29
220H	230	240H	A	265	280	A	320	320	400	440	440	30
220	215	220	230	245	270	305	375	425	435	410	375	Mean
220	220	220	230	240	265	300	380	420	435	410	385	Median
25	26	26	27	24	25	28	30	22	25	29	28	Count

Sweep 1 Mc to 25 Mc in ½ min.

17—1 D.D.G. Obs. Kodai./58

Characteristic : foF2 | TABLE 42 | Latitude : 10°·2N

Unit : Mc | Ionospheric Data | Longitude : 77°·5E

Month : June 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	F	F	F	u9·2F	11·3	u12·5R	u12·4R	u11·7R	10·7
2	9·0	9·3	8·4	6·5	5·2	R	7·8	10·4	11·4	11·8	11·5	11·4
3	F	F	F	F	7·0F	6·3	8 5	10·6	u11·7R	12 2	12·2	10·5
4	10·1	u8·5s	j7·2s	F	F	6·1	9·3	10·8	11·8	12·7	12·6	r12·6R
5	Fs	j9·0s	u8·3s	Fs	j6.1s	F3·4RS	7·6	10·6	12·2	13·0	j13·0R	12·2
6	10·3	D9.5s	9·1	8·4	7·7	5·7	8·6	10·8	11·9	D11 8R	10·7	10·5
7	10·4	10.5	u9·7s	9·2	8·5	7·9	8·5	10·7	12·0	13·1	13·4	13·8
8	F	F	F	7·1	5·1	3·9	8·3	11·0	12·0	12·0	11·4.	10·5
9	D7·0F	F	F	F	D7·4F	D6 8F	10·0	11·2	C	C	C	C
10	8·7	8·2F	F	F	F	F	9·0	10·7	11·6	11·7	11·4	11·0
11	F	F	F	F	D7·2F	D6·8F	D8·4F	10 8	11·3	11·0	10·6	10·5
12	F	F	F	F	F	D7·0F	8·8	10·6	11·6	12·3	12·3	11·9
13	F	F	F	F	F	u6·1F	8·5	11·0	12·1	12·2	12·0	10·8
14	F	F	F	F	F	7·9F	9·8	10·8	12·0	12·5	12·6	12·6
15	F	F	F	F	F	D7·4F	D8·5F	10·7	11·6	12·2	12·4	11·0
16	F	F	F	F	F	F	9·0	u11·7s	12·8	12·8	12·6	12·3H
17	F	F	F	F	F	7·0	9·2	11·1	12·0	12·3	12·6	12·0
18	F	F	F	F	F	8·1	9·6	10·7	11·8	12·4	12·2	11·8
19	F	F	F	F	F	F	10·0	11·4	12·1	12·8H	12·5	C
20	10·2	10·0	9·0	8·4	7·8	8·0	9·6	11·2	12·2	12·8	12·5	10·8
21	F	F	F	F	F	7·9	10·0	11·9	13·3	13·0	u12·4R	11·5
22	10·0	9·2	8·6	7·6	u6·8F	u6·6F	8·0	10·9	12 5	13·6	13·1	12·9
23	u9·9R	8·9	8·6	8·5	8·8	6·6	8·6	10·8	12·1	12·5	C	C
24	F	F	F	F	F	F	F	u10·8F	12·1	12·3	11·5	11·1
25	u8·4F	F	F	F	F	F	9·0	10·8	11·9	12·3	13·0	u13·1s
26	F	F	F	F	F	u6·5F	8·7	10·7	12·5	13·2	13·0	12·4
27	8·7	8·5	u7·2s	6·7	6·6	7·0	8·7H	10·6	12·0	13·1	13·9	13·4
28	F	F	F	Fs	u9·2s	7·5	8·4	11·1	j12·1s	11·6	11·3	11·0
29	u7·9F	F	F	F	F	u7·6F	8·9	11·0	12·0	11·2	10·3	10·2
30	u9·6s	8·9	8·5	8·1	7·4	6·4	8·0	10·6	12·3	12·2	u10·1W	9·9
Mean	9·3	9·1	8.5	7·8	7·2	6·7	8·8	10·9	12·0	12·4	12·1	11·6
Median	9·6	9·0	8 6	8·1	D7·3	D6·8	8·7	10 8	12·0	12·3	12·4	11·4
Count	13	11	10	9	14	23	29	30	29	29	28	27

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foF2
Unit : Mc
Month : June 1957

TABLE 42
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
10·4	10·4	10·4	10·5	10·7	u11·0R	11·1	10·9	F	F	11·0	F	1
11·2	u10·9R	10·8	11·2	11·6	d11·6s	u11·6s	u10·9R	Fs	E	F	F	2
C	10·9	11·3	11·4	11·6	u11·5s	u11·5s	11·6	u10·5Rs	u10·4R	10·5	d11·2s	3
12·8	11·9	12·2	d12 0R	11·4	11·6	12·6	u11·7s	F	F	F	Fs	4
11·1	10·9	10·8	11·1	11·0	11·6	u11·6s	u10·9R	9·7	9·2	10·0F	10·4	5
10·5	10·6	10·6	10·7	10·8	11·0	d10·5R	d9·4s	R	8·4	9·4	10·4	6
13·7	u13·2R	12·9	12·7	A	u13·7R	u12·8R	11·7	d9·8s	9·0	F	F	7
10·4	10·5	10·3	10·2	d10·1s	d10·0s	d9 6s	8·4	F	F	F	F	8
C	C	C	C	R	12·6	12·9	12·4	11·4	10.3	9·9	10·0	9
10·6	10·3	10·8	11·4	12·0	12·6	d11·6s	11·1	F	F	F	F	10
10·4	10·0	d10·3w	10·7	11·1	11·6	u11·9s	u11·7s	d10·4F	F	F	F	11
11·2	11·3	11·5	11·9	13·0	13·1.	13·2	12·1	10·3F	d9·5	d8·6F	F	12
9·9	9·6	9·4	9·2	9·4	10·0	10·3	10·4	9·4	9 6	F	F	13
12·4	11·8	11·9	12·5	d13·1s	13 2	12·7	11·2H	9·5H	F	F	F	14
d10·4w	10·4	9·8	10·0	10·0	10·1	10·4	d9·8s	d8·5s	F	F	F	15
12·0	11·5	11·4	10·6	10·3	10·1	10·8	11·2	10·3	10·4	10·8	F	16
11·4	11·7	11·6	C	10·6	11·0	A	11·1	10·8	10·0	u9·3s	F	17
10·9	10·8	11·0	10 9	10·8	10·5	u10·0s	10·0	8.7	F	F	F	18
10·3	10·4	10·1	9·9	10·3	10·8	11·0	10·3	F	d9·4s	10·6	11·0	19
11·0H	11·4	11·8	12·0	u11·9s	u12·0s	u12·0s	11·9	9·6	9·3	F	F	20
C	C	C	13·2	13·4	13·7	13·9	12·8	11·2	11·1	10·9	10·8	21
11·7	11·0	10·9	11·4	u11·6s	12·6	12·3	11·4	10·0	10·2	10·5	C	22
11·5	11·2	11·0	11·4	u11·6s	j12·3R	u12·0s	11·3	10·2	u9·2F	F	F	23
11·2	10·8	11·2	11·2	u11·7s	12·5	12·9	12·5	11·3	10·3	10·3	j10·0s	24
12·6	12·6	12·1	11·6	11·5	u12·0s	12·9	12·5	11·0	u10·0s	u9·2F	F	25
12·2	11·5	11·5	11·7	11·4	10·8	u10·4s	9·4	8·6	j8·3s	8·5	u9·2s	26
12·2	11·6	C	11·8	12·4	12·8	u13·1s	u11·6s	F	F	F	F	27
11·0	10·9	11·6	12·3	12·9	12·9	12·4	11·2	u10·0F	9·0	8·9	Fs	28
10·3	10·7	11·4	11·6	11·7	11·6	12.3	11·4	10·5	10·2	10·1	10·5	29
10·4	11·4	11·4H	11·1	11·6	10·8	11·5	12·6	12·3	9·1	7·8	u7·4s	30
11·2	11·1	11·1	11·3	11·4	11·7	11·8	11·2	10·2	9·6	9·8	10.1	Mean
11·1	10·9	11·2	11·4	11·6	11·6	11·9	11·4	10·2	d9·5	10·0	10·4	Median
27	28	27	28	28	30	29	30	22	21	17	10	Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'F2 | TABLE 43 | Latitude : 10°·2N
Unit : Km | Ionospheric Data | Longitude : 77°·5E
Month : June 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1									L	L	L	L
2									L	L	L	L
3								L	L	L	L	L
4									L	L	L	L
5								L	L	L	L	L
6									L	L	L	L
7									L	L	L	L
8								280	L	L	L	L
9									C	C	C	C
10									L	L	L	L
11								L	L	L	L	L
12								L	L	L	L	L
13									L	L	L	L
14								260	L	L	L	L
15									L	L	L	L
16								L	L	L	L	LH
17									L	L	L	L
18									L	L	L	L
19									L	LH	L	C
20								L	L	L	L	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
25								L	L	L	L	L
26									L	L	470	L
27									L	L	L	LH
28									L	L	L	L
29								L	L	L	L	L
30								L	L	L	L	L
Mean								..	..	..	..	..
Median								..	..	..	..	..
Count								2	..	..	1	..

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'F2 | TABLE 43 | Latitude : 10°·2N
Unit : Km | Ionospheric Data | Longitude : 77°·5E
Month : June 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
L	L	L	L	L								1
L	L	L	L	L								2
C	460	510	L	L								3
L	L	L	L	L								4
L	L	L	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	A	L							7
L	L	L	L	L	L							8
C	C	C	C	A	L							9
L	L	L	L	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
u490L	L	L	u490L	L	L							16
L	u500L	L	C	L	A							17
L	L	u500L	L	L	L							18
L	L	u520L	L	L	L							19
L	LH	L	L	L	L							20
C	C	C	u490L	500	u500L	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
u505L	L	L	L	L	L							26
L	L	C	L	L	L							27
L	L	L	L	L	L							28
L	L	L	L	L	L							29
L	L	LH	L	L								30
..	..	..	..	..	..	..						Mean
..	..	..	..	..	..	..						Median
2	2	3	2	1	1	..						Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foF1
Unit : Mc
Month : June 1957

TABLE 44
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

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

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foF1
Unit : Mc
Month : June 1957

TABLE 44
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
LH	L	L	L	L								1
LH	LH	LH	L	L								2
C	u5·9N	L	L	L								3
L	LH	LH	LH	L								4
L	LH	LH	L	L	L							5
L	L	L	L	L	L							6
L	L	L	L	A	L							7
L	L	L	L	L	L							8
C	C	C	C	A	L							9
L	L	L	L	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
LH	LH	L	u6·4L	L	L							16
LH	u6·6L	L	C	L	A							17
L	LH	u6·4L	L	L	L							18
LH	L	u6·4L	L	L	L							19
L	LH	L	L	L	L							20
C	C	C	LH	L	L	L						21
LH	LH	L	LH	L	L							22
LH	LH	L	L	L	L							23
L	LH	L	L	L	L							24
L	L	L	L	L	L							25
u6·7L	LH	LH	L	L	L							26
L	L	C	L	L	L							27
L	L	L	L	L	L							28
L	L	L	LH	L	L							29
LH	L	LH	A	L								30
..	..	..	..	..	..	..						Mean
..	..	..	..	..	..	..						Median
1	2	2	1	..	..	..						Count

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'E
Unit : Km
Month : June 1957

TABLE 45
Ionospheric Data
75·0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

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

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : h'E
Unit : Km.
Month : June 1957

TABLE 45
Ionospheric Data
75.0°E Mean Time

Latitude : 10°.2N
Longitude : 77°.5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	115	A							1
120	A	A	115	S	120							2
C	A	120	d15	B	120							3
B	A	A	A	b15								4
A	A	A	A	b05								5
A	A	100	100	100								6
A	A	110	110	A	A							7
B	A	A	110	110	115							8
C	C	C	C	A	A	A						9
A	A	A	A	100	A							10
A	A	100	110	b10	110							11
A	A	105	A	A	A							12
B	A	A	A	b10	115							13
A	A	105	100	110	115							14
A	B	110	110	A	110							15
115	110	A	A	A								16
A	A	A	C	uk10A								17
B	A	A	110	110	110							18
B	B	110	110	b15								19
A	A	A	A	A								20
C	C	C	120	b15	A							21
A	A	A	120	A	A							22
A	A	A	A	A	A	A						23
A	A	B	A	A	A							24
A	A	A	A	A	A							25
A	A	A	A	A	A							26
A	A	C	A	b15	A							27
B	B	B	A	120	120							28
A	A	A	A	A	A							29
A	A	A	A	A	u105A	A						30
..	..	110	110	110	115	..						Mean
..	..	110	110	110	115	..						Median
2	1	8	12	15	10	..						Count

Sweep ½ Mc to 25 Mc in ½ min.

18—D. D. G. Obs. Kodi/58.

Characteristic : foE
Unit : Mc
Month : June 1957

TABLE 46
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								A	A	B	B	B
2									A	A	A	A
3									~3·9A	A	B	A
4								3·6	R	B	A	B
5								3·0	A	B	A	A
6									A	B	B	~4.2A
7										B	A	A
8									B	A	A	A
9									C	C	G	C
10								3·1	A	A	A	A
11								2·8	A	A	A	A
12										A	A	A
13								3·2	R	R	B	B
14									B	B	B	B
15								R		B	B	A
16							R	3·1	A	~4·0A	B	A
17							2·4	3·2	3·8	A	A	A
18								A	A	A	A	A
19								~3·0A	C	A	A	C
20								3·0	B	A	A	A
21								3·1	A	A	A	A
22								3·1	A	A	A	A
23							~2·1C	3·1	A	A	C	C
24							2·7	A	A	A	A	A
25								3·0	3·6	3·8	A	A
26								2·7	B	3·7	A	A
27							U2·2R	~3·0R	R	A	A	A
28									B	B	B	B
29								A	A	A	A	A
30								3·0H	A	A	A	A
Mean							..	3·0	..	..	..	..
Median							..	3·0	..	..	..	..
Count							4	16	3	3	..	1

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : foE | TABLE 46 | Latitude : 10°·2N
Unit : Mc | Ionospheric Data | Longitude : 77°·5 E
Month : June 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
A	A	A	A	A	A							1
A	A	A	A	A	u3·1A							2
C	A	R	u3·6F	B	3·0							3
B	A	A	A	3·6								4
A	A	A	A	A								5
A	A	A	A	A								6
A	A	A	A	A	A							7
A	A	A	A	A	A							8
C	C	C	C	A	A	A						9
A	A	A	A	A	A							10
A	A	A	3·3	3·5	2·7							11
A	A	3·9	A	A	A							12
B	A	A	A	A	u3·0s							13
A	A	A	4·0	3·6	A							14
A	B	A	4·0	A	A							15
4·4	A	A	A	A								16
A	A	A	C	U3·5A								17
B	A	A	A	A	A							18
B	B	A	A	A								19
A	A	A	A	A								20
C	C	C	3·7	3·6	A							21
A	A	A	A	A	A							22
A	A	A	A	A	A	A						23
A	A	B	A	A	A							24
A	A	A	A	A	A							25
A	A	A	A	A	A							26
A	A	C	A	A	A							27
B	B	B	A	3·7	u3·1A							28
A	A	A	A	A	A							29
A	A	A	A	A	A	A						30
..	..	..	3·6	3·6	3·0	..						Mean
..	..	..	3·8	3·6	3·0	..						Median
1	..	1	5	6	5	..						Count

Sweep 1 Mc to 23 Mc in ½ min.

Characteristic : foEs | TABLE 47 | Latitude : 10·2N

Unit : Mc | Ionospheric Data | Longitude : 77°·3E

Month : June 1957 | 75·0°E. Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1								9·3F	7·9F	B	u9·4G	G
2									u7·3G	9·8	10·8G	10·7F
3									G7·2G	u7·4G	9·4F	10·6F
4								3·8	8·0	B	7·4	7·8
5									u7·0G	G	9·7	10·3F
6		2·8	6·2						4·8	G	7·6	10·0
7										8·0	10·0	9·2
8	6·3								G	10·6	11·4	11·0
9	3·2	3·3							G	G	C	C
10	6·8		4·2	4·0				4·3	7·0	9·8	11·0	12·0
11									8·8	8·6	10·8	10·6
12										8·6	8·8	11·0
13									6·6	8·0	11·0	11·0
14									B	G	8·0	11·0
15	4·8									B	12·0	12·0
16								5·8	G	u7·0	9·0	9·8
17		4·0							G	8·0	11·0	10·0
18	S	u7·2s	3·2					6·0	u7·2s	11·2	11·8	11·9
19								G	C	G	11·0	C
20								G	G	9·0	11·0	11·0
21								4·3	5·7	5·8	7·8	11·4
22								6·8	18·8	10·6	12·0	12·0
23								8·2	11·5	10·8	C	C
24	5·4							3·8	11·4	11·3	12·6	12·4
25											9·8	13·0
26									G	u5·2G	11·0	12·1
27										8·2	11·2	11·8
28									G	G	G	G
29	3·2	2·7	4·2	u8·8s	3·6			8·3	9·4	11·2	12·1	12·6
30							2·0	5·5H	9·0	12·3	11·7	12·3
Mean	5·0	4·0	..	..	..	..		6·0	8·6	9·1	10·3	11·1
Median	5·1	3·3	..	..	..	..	..	5·5	7·1	8·2	10·9	11·0
Count	6	5	4	2	1	..	1	13	22	25	28	27

Sweep 1 Mc to 25 Mc in 4 min.

Characteristic : foEs
Unit : Mc
Month : June 1957

TABLE 47
Ionospheric Data
75·0°E Mean Time

Latitude : 10°·2N
Longitude : 77°·5E

12	13	14	15	16	17	18	19	20	21	22	23	Date
10·8F	8·6F	11·0F	11·0F	8·0F	9·3	10·6F						1
11·8F	11·8F	11·4F	10·8F	8·2F	7·0							2
C	10·8F	10·7F	9·8F	B	G							3
9·3	7·6	u7·8G	9·6	7·0								4
9·8F	7·6	9·6	9·4	7·0								5
9·6	10·0	10·0	10·0	8·0								6
9·9	9·8	12·8	12·8	18·0	11·4	5·6						7
11·0	12·0	11·4	11·4	D9·0s	D7·0s							8
C	C	C	C	20·8	10·2	6·7						9
12·0	11·0	11·0	9·0	9·6	9·2							10
10·6	10·8	9·8	8·2	5·6	2·6G	6·8				2·7	2·2	11
10·8	11·0	9·0	17·8	21·6	12·0	9·4			3·8			12
12·0	12·2	11·8	12·0	10·0	7·0	7·0	2·2				3·8	13
11·6	12·0	11·0	8·0		6·0						6·0	14
12·2	12·0	11·8	11·0	10·8	8·4							15
9·0	8·8	9·0	9·6	8·6	G	6·0						16
7·4	9·4	8·8	C	7·6	10·0	14·0	D7·0			3·1	u7·6s	17
12·0	12·2	12·0	11·2	9·4	8·0	3·6						18
12·0	12·0	12·0	10·6	10·0	10·4	12·6	2·2G		3·6			19
11·0	11·6	10·8	12·1	12·2	8·0	D5·0s			3·5	6·0	u4·2s	20
C	C	C	G	6·8	u7·8s	8·4	4·4	3·0	2·4	S		21
11·8	12·1	11·8	10·1	8·0	8·1	6·0	3·7	2·4	3·0	4·6	C	22
12·2	11·8	11·6	11·0	12·3	14·6	8·8					3·0	23
12·2	12·0	B	12·0	15·0	11·8	9·2	4·0					24
12·2	12·2	12·8	12·2	11·2	11·0	8·6	u4·8s					25
12·2	12·3	u11·8s	U11·8s	11·0	u9·2s						u8·1s	26
12·1	u12·3s	C	u11·2s	u10·0s	S	S						27
u12·0G	12·2	12·3	11·8		u8·6s	S				3·2	4·0	28
12·5	12·2	12·4	u12·1s	u11·0s	u8·9s	G						29
11·5	12·1	12·1	14·2	u11·8s	u9·0s	u13·0s	S	2·7				30
11·2	11·1	11·0	11·1	10·7	9·0	8·3	4·0	..	3·3	3·9	4·8	Mean
11·8	11·9	11·4	11·0	10·0	8·9	7·7	4·0	..	3·5	3·2	4·1	Median
27	28	26	28	28	26	18	7	3	5	5	8	Count

Sweep 1 Mc to 25 Mc in ¼ min

Characteristic : (M3000)F2 | TABLE 48 | Latitude : 10°.2N

Unit : | Ionospheric Data | Longitude : 77°.5E

Month : June 1957 | 75·0°E Mean Time

Date	00	01	02	03	04	05	06	07	08	09	10	11
1	F	F	F	F	F	F	U2·9F	2·85	U2·65R	U2·4R	D2·1R	2·1
2	2·8	3·0	3·1	3·0	3·1	R	D3·05	2·9	D2·7	2·35	E2·1	2·15
3	F	F	F	F	3·05F	3·1	3·0	2·9	U2·7R	U2·45R	E2·1R	2·1
4	2·65	E2·5S	J2·3S	F	F	3·2	3·0	E3·0	2·75	E2·65	2·35	E2·2R
5	FS	E2·7S	E2·7S	FS	U3·25S	U3·2RS	2·85	2·8	2·7	E2·5	E2·25R	E2·0
6	2·8	E2·75S	2·6	2·8	3·15	3·45	3·05	2·8	2·55	E2·15R	2·25	E2·2
7	2·7	2·8	U2·85S	E2·9S	2·9	E3·2	3·2	3·05	E2·95R	2·65	2·45	2·35
8	F	F	F	3·25	D3·3	3·15	2·85	2·85	2·55	D2·25	2·1	2·0
9	E2·4F	F	F	F	F	E2·8F	2·95	2·9	C	C	C	C
10	E2·7	2·55F	F	F	F	F	2·95	2·8	2·5	2·3	2·2	2·1
11	F	F	F	F	F	U3·2F	3·0	2·75	2·45	E2·25	2·2	2·1
12	F	F	F	F	F	U3·3F	3·2	E3·0	2·75	2·5	2·25	2·1
13	F	F	F	F	F	3·2F	2·95	2·95	2·75	2·45	D2·05	E2·0
14	F	F	F	F	F	E3·0F	3·0	2·9	2·7	2·45	2·25	2·15
15	F	F	F	F	F	F	U2·8F	2·8	2·55	2·35	2·15	2·0
16	F	F	F	F	F	F	2·8	U2·8S	2·65	2·4	2·15	2·05H
17	F	F	F	F	F	3·05	3·0	2·85	2·60	2·35	2·15	E2·0W
18	F	F	F	F	F	3·00	3·05	2·75	2·50	2·25	2·15	2·00
19	F	F	F	F	F	F	2·95	2·95	2·6	2·35	2·1	C
20	2·6	2·6	2·45	2·5	2·6	3·0	2·9	2·8	2·65	2·35	2·05	E1·95W
21	F	F	F	F	F	3·05	3·05	2·9	E2·65	2·35	U2·0R	2·0
22	E2.5S	2·55	2·5	2·4	U2·2F	U2·2F	2·75	E2·8	2·55	2·5	2·3	U2·0W
23	U2·65R	D2·6	2·5	E2·7	3·0	3·25	E3·0	2·8	2·6	2·35	C	C
24	F	F	F	F	F	F	F	U2·65F	2·45	2·2	2·15	D2·1
25	U2·35F	F	F	F	F	F	3·0	2·8	E2·7	2·5	2·35	U2·25S
26	F	F	F	F	F	U2·7F	2·75	2·6	2·55	2·4	2·2	2·1
27	2·6	2·55	2·6	2·45	2·55	2·6	2·35H	2·7	2·6	2·4	2·3	D2·15
28	F	F	F	FS	U2·95S	3·2	2·85	2·8	2·5	2·25	2·3	2·2
29	U2·7F	F	F	F	F	U3·0F	2·9	2·8	2·45	E2·15	2·15	2·15
30	U2·65S	2·65	2·65	2·7	2·9	3·25	2·9	E2·8	E2·55	2·15	E2·15	E2·1
Mean	2·65	2·65	2·6	2·75	2·9	3.05	2·95	2·85	2·6	2·35	2·2	2·1
Median	2·65	D2·6	2·6	2·7	3·0	3.10	2·95	2·80	2·6	2·35	2·15	2·1
Count	13	11	10	9	12	22	29	30	29	29	28	27

Sweep 1 Mc to 25 Mc in ½ min.

Characteristic : (M3000)F2 | TABLE 48 | Latitude : 10°·2N

Unit : | Ionospheric Data | Longitude : 77°·5E

Month : June 1957 | 75·0°E Mean Time

12	13	14	15	16	17	18	19	20	21	22	23	Date
E2·1	E2·1	2·05	2·1	2·15	U2·3R	D2·3	E2·2	F	F	2·4	F	1
2·05	2·05	E2·1	2·1	U2·1s	E2·2s	E2·2s	U2·1R	Fs	E	F	F	2
C	D2·0	E2·05	2·1	D2·15	E2·2s	E2·3s	U2·2s	E2·25R	U2·4R	D2·4	U2·65s	3
E2·1R	E2·2	E2·1	U2·0R	2·1	E2·25s	2·3	D2·2	F	F	F	Fs	4
2·1	2·05	2·05	E2·1	U2·15R	U2·2s	U2·35s	E2·3R	E2·1	E2·15	U2·3F	2·6	5
E2·1	2·10	2·1	2·1	E2·2	2·15	E2·2R	E2·15s	R	2·0	D2·15	2·5	6
E2·2R	E2·05R	2·1	2·15	A	R	E2·45R	2·2	E2·15s	2·1	F	F	7
2·05	2·05	2·05	2·05	E2·1s	E2·2s	E2·25s	2·05	F	F	F	F	8
C	C	C	C	R	2·4	2·45	E2·4	2·25	2·25	2·35	2·5	9
E2·1	E2·05	2·0	2·2	E2·35	2·35	E2·4s	E2·2	F	F	F	F	10
2·05	2·05	D2·05	D2·15	D2·3	D2·4	U2·45s	U2·3s	F	F	F	F	11
E2·1	2·15	2·15	2·25	E2·4	2·45	E2·5	2·35	2·2F	E2·2F	U2·2F	F	12
2·05	1 95	2·0	2·0	E2·1	2·15	2·25	2·15	2·15	E2·25	F	F	13
E2·05	2·05	2·05	2·1	U2·3s	2·35	E2·3	2·15H	2·05H	F	F	F	14
1·95	D1·9	1·95	2·0	2·05	2·05	E2·15	E2·2s	E2·0	F	F	F	15
2·15	2·0	E2·0	2·0	2·05	2·15	2·3	2·3	2·2	2·2	2·25	F	16
2·15	2·15	2·05	C	2·05	2·2	A	2·3	2·25	2·15	2·20	F	17
2·00	2·00	2·0	2·0	E2·0	E2·0W	2·05	2.05	U1·9W	F	F	F	18
E2·0	E1·95W	E2·0W	1·95	2·0	2·15	2·2	2.05	F	E2·15s	2·3	2·55	19
2·1H	2·1	2·05	2·1	U2·1s	U2·1s	2·05	2.0	2·05	2·05	F	F	20
C	C	C	E2·3	2·3	2·3	2·3	2·2	2·1	D2·1	E2·3	2·4	21
W	E2·05	E2·0	2·05	U2·1s	2·2	E2·3	2·2	2·2	E2·25	2·3	C	22
E2·1	2·05	2·05	E2·1	U2·15s	J2·2R	U2·25s	D2·1	2·05	U2·1F	F	F	23
U2·0W	1·95	2·1	2·1	U2·15s	2·3	2·4	E2·4	2·25	2·2	E2·3	J2·4s	24
D2·1	2·0	E2·0	2·0	2·1	2·25	2·3	2·25	2·15	U2·25s	U2·15F	F	25
2·05	1·95	E2·05	2·10	2·05	1·95	E2·05	2·1	2·15	E2·2	2·30	2·45	26
2·1	E2·0	C	2·15	D2·15	2·2	U2·3s	U2·15s	F	F	F	F	27
E2·2	2·05	E2·0	2·05	2·1	2·2	2·3	2·2	U2·15F	U2·1F	2·15	Fs	28
2·1	2·05	E2·15	2·15	2·2	2·25	E2·4	2·3	2·2	2·25	2·35	2·55	29
2·2	2·2	2·05	2·0	E2·05	2·0	2·2	2·4	2·4	2·2	2·15	E2·2	30
2·1	2·05	2·05	2·1	2·15	2·2	2·3	2·2	2·15	2·2	2·25	2·5	Mean
E2·1	2·05	2·05	2·1	2·1	2·2	2·3	2·2	2·15	E2·2	E2·3	2·5	Median
26	28	27	28	28	29	29	30	21	20	17	10	Count

Sweep 1 Mc to 25 Mc in ½ min.

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E R R A T A.

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14	13		07	38.5	3-5
22	8		08	681	-81
23	2		15	498	49-
23	10		19	456	4-6
23	10		23	465	46-
24	25		11	495	49-
25	16		Mean	518	51-
25	22		17	484	384
27	16		19	438	4-8
27	16		23	448	-
27	17		21	466	4-6
34	11		10	351	3-1
34	17		11	359	3-9
34	26		11	352	3-2
34	Mean †		07	354	3-4
37	28		21	38[illegible]	330
46		June 24	Storm Time	0338	0328
			Part III		
51	29		18	D10.5W	D.105W
63	7		19	E2.0	E20
66	26		10	D10.2S	D10-S
67	14		21	FS	F
67	18		21	F	FS
78	4		04	U3.25F	U3.2SF
79	4		17	E2.55	E.25S
81	1		15	220H	225H
81	21		12	U200R	200L
82	18		00	U11.6RS	U11.6R
82	2		01	U11.0FS	11.0FS
"	29		01	U11.0RS	11.0RS
"	17		02	U8.0FS	U8.0F
"	29		02	U10.5RS	10.5RS
"	1		03	U7.2S	U7.5S
"	30		05	U10.2FS	10.2FS
"	28		07	12.3	11,3
83	8		12	11.6	10.6
"	5		17	U14.3S	U14.2S
"	22		19	U9.9WS	J9.9WS
84	25		07	L	-
87	5		17	L	-
94	23		04	3.1S	3.1
"	23		06	E3.2S	E3.25S
95	8		20	U2.1RF	U2.1R
97	7		15	225	220
109	2		15	12.0F	12.0
110	3		06	U2.3S	E2.9S
"	16		11	2.2	D2.2
124	28		15	10.5	10.5F
127	23		15	D2.05	E2.05
"	31		15	U2.55R	U2.5SR
128	4		23	E380S	E380
140	2		08	7.3	U7.3G
"	3		08	7.2	U7.2G
"	3		09	7.4	U7.4G
"	16		09	7.0	U7.0
"	26		[illegible]	6.2	U6.2G
"	1		10	9.4	U9.4G
"	2		10	10.3	10.3

P.T.O.

Table No.	Page No.	Line or Date.	Hour or Column.	Read.	For
	141	28	12	12.0	U12.0G
	"	4	14	7.8	U7,8G
	"	16	17	-	G
	"	17	19	7.0	D7,0
	"	19	19	2.2	2.2G
	"	Count	17	25	26
	142	22	00	E2.55	E2.5S
	143	18	16	E2.0W	E2.0
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