IRPL-F21

IONOSPHERIC DATA

ISSUED
MAY, 1946

PREPARED BY INTERSERVICE RADIO PROPAGATION LABORATORY
National Bureau of Standards
Washington, D.C.

IRPL-F 21 INTERSERVICE RADIO PROPAGATION LABORATORY
NATIONAL BUREAU OF STANDARDS
WASHINGTON, D.C.
Issued 20 May 1946

Organized under Joint U.S. Communications Board

IONOSPHERIC DATA

CONTENTS

Final data

Final data

TERMINOLOGY AND SCALING PRACTICES

The symbols and terminology used in this report are those adopted by the International Radio Propagation Conference, and given in detail on pages 24 to 26 of the report IRPL-C61, "Report of International Radio Propagation Conference," and in the Section on "Terminology", in reports IRPL-F1, 2, 3, 4, 5.

Beginning with data reported for September, a new symbol L, defined as follows, is adopted for use in detailed tabulations of hourly values of ionosphere characteristics observed at Washington:

> L or l = critical frequency, muf, or muf factor for F1 layer omitted because no definite and abrupt change in slope of the h'f curve occurs either for the first reflection or for any of the multiples. (See "Report of International Radio Propagation Conference," IRPL-C61, June 1944, VI 3c, p.37).

In the past, ionospheric conditions were summarized on a monthly basis by using average or mean values, for each hour of the day, for each month. However, following the recommendations of the International Radio Propagation Conference, held in Washington 17 April to 5 May 1944, beginning with data for 1 Jan. 1945, median values were used by IRPL wherever possible. Thus, median values are given for Washington, for all stations reporting directly to the IRPL, for the Canadian stations, and for all others sending in detailed tabulations to the IRPL, from which medians can be computed.

Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data existed.

The monthly median values used here are the values equalled or exceeded on half the days of the month at the given hour. The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given in the report referred to above, IRPL-C61.

a. For all ionospheric characteristics:

Values missing because of A, B, C or F (see terminology referred to above) are omitted from the median count.

b. For critical frequencies and virtual heights:

Values missing because of E are counted as equal to or less than the lower limit of the recorder.

Values missing because of D are counted as equal to or greater than the upper limit of the recorder.

Values missing because of G are counted:

1. For $f^{o}F2$, as equal to or less than $f^{o}F1$.
2. For $h'F2$, as equal to or greater than the median.

Values missing for any other reason are omitted from the median count.

c. For muf factors (M-factors):

Values missing because of G are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because no Es reflections appeared, the equipment functioning normally otherwise, are counted as equal to or less than the lower limit of the recorder.

Values of fEs missing for any other reason, and values of hEs missing for any reason at all, are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D.C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If only four values or less are available, no median value is computed, the data being considered insufficient.

2. For the F2 layer, if only five to nine values are available, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, so long as there are at least five values, the median is not considered as doubtful.

3. For all layers, if more than half of the values used to compute the median are doubtful (either doubtful or interpolated), the median is considered doubtful.

It is expected that this practice will be of assistance in evaluating the monthly median Washington data.

MONTHLY AVERAGE AND MEDIAN VALUES OF IONOSPHERIC DATA

The ionospheric data given here in graphical and tabular form were assembled by the Interservice Radio Propagation Laboratory for analysis and correlation, incidental to IRPL predictions of radio propagation conditions. The following are the sources of the data:

Australian Council for Scientific and Industrial Research,
Radio Research Board, Australia:
- Brisbane, Australia
- Canberra, Australia
- Cape York, Australia
- Hobart, Tasmania

British National Physical Laboratory, and Inter-Services Ionosphere Bureau:
- Slough, England
- Great Baddow, England
- Burghead, Scotland
- Capetown, Union of S. Africa
- Colombo, Ceylon
- Oslo, Norway
- Cairo, Egypt
- Falkland Is.

Canadian Radio Wave Propagation Committee:
- Churchill, Canada
- Ottawa, Canada
- St. John's, Newfoundland
- Prince Rupert, Canada
- Clyde, Baffin I.
- Victoria Beach, Canada.

New Zealand Radio Research Committee:
- Kermadec Is.
- Christchurch (Canterbury University College Observatory)
- Campbell I.
- Pitcairn I.
- Rarotonga I.

Scientific Research Institute of Terrestrial Magnetism, Moscow, U.S.S.R.:
- Bukhta Tikhaya, U.S.S.R.
- Tomsk, U.S.S.R.
- Sverdlovsk, U.S.S.R.
- Moscow, U.S.S.R.
- Leningrad, U.S.S.R.
- Alma Ata, U.S.S.R.

Carnegie Institution of Washington (Department of Terrestrial Magnetism):
Christmas I.
Fairbanks, Alaska (University of Alaska, College, Alaska)
Maui, Hawaii
Trinidad, Brit. West Indies
Huancayo, Peru
Watheroo, W. Australia
Adak, Alaska

United States Army Signal Corps:
Leyte, Philippine Is.
Guam I.
Tokyo, Japan

National Bureau of Standards:
Washington, D.C.

Stanford University,
San Francisco, California

Louisiana State University:
Baton Rouge, Louisiana

University of Puerto Rico:
San Juan, P.R.

Harvard University:
Boston, Massachusetts

All India Radio (Government of India), New Delhi, India:
Bombay, India
Delhi, India
Madras, India
Peshawar, India

Radio Wave Research Laboratories, Central Broadcasting Administration:
Chungking, China

National Wuhan University:
Loshan, China

The tables of "provisional data" give values as reported to the IRPL by telephone or telegraph. Any errors in these values will be corrected in later issues of the F-series reports. In final data tabulations, any omission of values previously given in provisional tabulations is indicated by a dash.

The tables and graphs of "final data" are correct for the values reported to the IRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of these errors are due to:

a. Differences in scaling records where spread echoes are present.

b. Omission of values where $f^{o}F2$ is less than or equal to $f^{o}F1$, leading to erroneously high values of monthly average or median values.

c. Omission of values where critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series reports, IRPL-F1, 2, 3, 4, and 5.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the IRPL-D series publications. Predictions for individual stations used to construct the charts may be more accurate than the values read from the chart since some smoothing of the contours is necessary to allow for the longitude effect within a zone.

Discrepancies between predicted and observed values are often ascribable to these effects.

IONOSPHERIC DATA FOR EVERY DAY AND HOUR

These data, observed at Washington, D.C., follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given under "Terminology and Scaling Practices" above.

IONOSPHERE DISTURBANCES

Table 82 presents ionosphere character figures for Washington, D.C., during April 1946, as determined by the criteria presented in the report IRPL-R5, "Criteria for Ionospheric Storminess", together with American magnetic K-figures which are usually covariant with them.

Table 86 gives provisional radio propagation quality figures for North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, March 1946, compared with IRPL daily radio disturbance warnings, which are primarily for the North Atlantic paths, and ISIB daily warnings, the IRPL weekly radio propagation forecasts for the A-zone, and the half-day American geomagnetic K-figures.

The radio propagation quality figures for the North Atlantic were prepared from radio traffic and ionospheric data, reported to the IRPL, in the manner described in detail in report IRPL-R31, "North Atlantic Radio Propagation Disturbances October 1943 through October 1945", issued 1 Feb. 1946.

The radio propagation quality figures for the North Pacific were prepared from radio traffic and ionospheric data, reported to the IRPL, in the manner described in detail in report IRPL-R13, "Ionospheric and Radio Propagation Disturbances, October 1943 through February 1945", issued 24 May 1945.

NOMOGRAMS RELATING GYROFREQUENCY, ORDINARY-WAVE CRITICAL FREQUENCY AND EXTRAORDINARY-WAVE CRITICAL FREQUENCY

The ordinary-wave critical frequency f^o, extraordinary-wave critical frequency f^x, and the gyrofrequency f_H are related by the equation

$$(f^o)^2 = f^x(f^x \pm f_H) \qquad (1)$$

Thus the ordinary-wave critical frequency is accompanied by two extraordinary-wave critical frequencies, one above it, the other (the "Z" critical frequency) below. In general, extraoradinary-wave ionospheric reflections tend to be absorbed more than ordinary-wave reflections, and the "Z" trace is much more absorbed than that of the extraordinary-wave reflected at frequencies higher than that of the ordinary-wave critical frequency. For most practical purposes, therefore, the above equation may be written

$$(f^o)^2 = f^x(f^x - f_H) \qquad (2)$$

This equation (or, equally well, the equation using the positive sign for the last term) may be represented in simple nomographic form, facilitating its solution, in the manner shown in the report IRPL-R11, "A Nomographic Method for Both Prediction and Observation Correlation of Ionosphere Characteristics," pp.2 and 3, Fig. 8. Solutions are obtained by the alignment of any three points each of which lie respectively in three scales which constitute the nomogram.

The condition for collinearity of any three points on a plane, with coordinates x, y, x_2, y_2, and x_3 y_3, is that

$$\frac{y_3 - y_2}{x_3 - x_2} = \frac{y_2 - y_1}{x_2 - x_1}$$

which may be expressed as the determinant:

$$\begin{vmatrix} x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \\ x_3 & y_3 & 1 \end{vmatrix} = 0$$

Taking the lowest point on the left-hand scale of the nomogram as the origin of coordinates, the condition of collinearity for three points lying respectively on the three nomographic scales which represent Eq. 2 may be attained if the corresponding x and y coordinates for each scale of the nomogram are the corresponding first and second elements in the rows of the determinant

$$\begin{vmatrix} 0 & \ell_1 f^{o2} & 1 \\ \delta & \ell_2 [f_H - H] & 1 \\ \dfrac{\ell_1 \delta}{1 + \dfrac{\ell_2}{f^x}} & \dfrac{\ell_1 \ell_2 [f_H - H]}{\ell_1 + \dfrac{\ell_2}{f^x}} & 1 \end{vmatrix} = 0, \qquad (3)$$

where ℓ_1 and ℓ_2 are the scale factors for the left and right-hand scales of the nomogram, representing, respectively, f^{o2} and f_H, H is the value of f_H corresponding to the height of the origin of coordinates, and δ is the width of the nomogram.

Figs. 86 and 87 presented here, as well as Fig. 8 of the report IRPL-R11, are nomograms of this type. For convenience, Figs. 86 and 87 of this report have at the right of the f_H scale a chart from which f_H may be obtained for any latitude and longitude.

At high frequencies, Eq. 2 may be approximated by

$$f^x - f^o = \tfrac{1}{2} f_H \qquad (4)$$

the solution of which is so simple that the nomographic method is of little advantage. Because of the greater advantage of the nomographic solution at low frequencies, Fig. 87 is constructed with less extended range of f^o and f^x than that shown in Fig. 86, but with these quantities represented by the use of greater scale factors.

NOTE ON FEBRUARY AND MARCH SUDDEN IONOSPHERE DISTURBANCES

A large number of sudden ionosphere disturbances have occurred since the appearance and recurrence of a large sunspot group, which was observed first on the east limb of the sun on 29 January. Reports received from England, South America, California, and Australia indicate that the SID in February were particularly severe, causing serious interruption to propagation on all frequencies. In all cases, the SID occurring in the morning at the receiving point exhibited greater effects on reception from the east than from the west and vice versa for the afternoon, because of passing through a region where the solar zenith angle is lower. In Washington, reception from stations in the southern hemisphere usually showed greater effects of the SID than reception from other directions, again because of passing through regions of lower solar zenith angles.

Since the time of the beginning of an SID depends upon the operating frequency and the equivalent vertical-incidence frequency, there was considerable variation in the times of beginning on the observed paths. If the burst of ionizing radiation from a bright eruption on the sun is sufficiently intense, the abnormal increase in the ionization of the D region may be sudden enough to cause the signals on all frequencies to drop out within a minute or two of each other. SID have been observed, however, where there was a difference of thirty or more minutes between the dropping out of signals on the medium and on the high frequencies. The SID on 1 March occurred twelve minutes later on GLH, 13525 kc, than on WWV 5000 kc, both recorded at Riverhead, Long Island, N.Y. The SID on 30 January began at 1900 GCT on the WSXAL, 6080 kc path to Sterling, Va. The beginning on the GLH, 13525 kc path to Riverhead was 1938 GCT, which was the time observed in Ottawa and Churchill for the dropping out of the WWV 10,000- and 15000-kc signals. It thus seems that the abnormal increase in the ionization of the D region over the latter paths was not sufficient to cause complete absorption of the GLH and WWV frequencies until sometime after the WSXAL frequency dropped out.

In two cases a strengthening of the sky wave was observed at the beginning of an SID. On 7 February the received field intensity of XEWW, 9500 kc, recorded at Sterling, Va. increased by a factor of 6 during the twenty minutes preceding the SID. On 27 February a slight increase in signal strength was observed in Brentwood, England, on the WQA2, 31420-kc path at the time of the SID. The strengthening of the sky wave during an SID has also been observed at very low frequencies, probably caused by an increase in the conductivity of the D region.

The SID on 6 February indicated the absorption effects on various frequencies. The WSXAL, 6080 kc, and XEWW, 9500 kc, intensities recorded at Sterling, Va., were so completely absorbed after the first SID at 1552 GCT that the seasonal SID at 1956 GCT was barely able to be observed, while the higher frequencies showed almost complete recovery before the occurrence later in the day from 2132-2205 GCT and was not intense enough to affect the paths eastward.

Plans are made to publish SID tables for world coverage regularly in this report. This will give us a measure of solar flare throughout the whole Greenwich day. As an example, SID were reported on 6 February at 0424 GCT from Canberra, Australia, at 0647 GCT from Brentwood, England, at 1552, 1956 and 2132 GCT from Washington, D.C., at 1630 GCT from Lobitos, California, at 1615 GCT from Norfolk Island, at 1730 GCT from Kihei, Hawaii, and at 2148 GCT from Canberra, Australia. The number of SID observed over the world indicates that 6 February was a day of unusually high solar flare activity.

ERRATA

1. In previous issues of IRPL-F series, values of F2-M3000 for the Indian stations (Delhi, Bombay, Peshawar, and Madras) were average values instead of medians.

Table 1 (Provisional Data)

Clyde, Baffin I. (70.5°W, 68.6°W) April 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		4.4						3.1
01		3.9						3.0
02		3.8						3.1
03		3.6						3.1
04		4.1						3.2
05		3.8						3.2
06		4.0						3.0
07		4.5						3.0
08		4.8						3.0
09		5.3						3.0
10		5.1						3.0
11		5.3						3.1
12		5.2						3.0
13		5.0						3.0
14		4.9						3.0
15		4.9						2.9
16		5.1						3.0
17		5.0						3.0
18		5.0						3.1
19		4.9						3.1
20		4.9						3.1
21		4.6						3.2
22		4.8						3.2
23		4.5						3.1

Time: 75.0°W.
Sweep: 2.0 Mc to 16.0 Mc in one minute.
Median values.

Table 2 (Provisional Data)

Fairbanks, Alaska (64.9°N, 147.8°W) April 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	330	4.0					3.4	2.6
01	340	3.6					4.0	2.6
02	340	3.8					5.2	2.6
03	360	4.0	290	3.2			5.0	2.7
04	370	4.2					4.2	2.6
05	390	4.7	290	3.2		2.1	4.8	2.6
06	410	4.9	280	3.6		2.4	3.8	2.6
07	420	5.0	260	3.9		2.7	3.3	2.6
08	440	5.2	240	4.1		2.9	3.2	2.6
09	420	5.5	240	4.3		3.0	3.0	2.6
10	420	5.7	240	4.4		3.1	3.1	2.5
11	400	6.0	230	4.4		3.2	3.1	2.7
12	380	6.2	240	4.5		3.2		2.7
13	360	6.4	240	4.5		3.2		2.7
14	350	6.5	230	4.4		3.1	3.0	2.7
15	320	6.7	240	4.3		2.9	3.0	2.8
16	260	6.8	240	4.2		2.7	2.7	2.8
17	250	6.8				2.4	2.5	2.9
18	260	6.4				2.1	2.6	2.9
19	270	6.4				1.7	2.9	2.9
20	260	5.4				1.2	3.0	2.9
21	280	5.0				1.2	3.1	2.8
22	280	4.8					3.0	2.8
23	320	3.8					3.9	2.6

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 3 (Provisional Data)

Churchill, Canada (58.8°N, 94.2°W) April 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		5.0						2.7
01		4.8						2.7
02		4.8						2.7
03		4.0						2.9
04		3.7						2.8
05		4.2						2.9
06		4.6						2.9
07		4.8						3.0
08		5.0						2.9
09		5.5						2.9
10		5.8						2.8
11		5.9						2.8
12		6.0						2.7
13		6.3						2.7
14		6.5						2.7
15		6.6						2.8
16		6.3						2.8
17		6.3						2.9
18		6.0						2.9
19		5.6						3.0
20		5.6						2.9
21		5.0						2.8
22		4.8						2.8
23		4.9						2.8

Time: 90.0°W.
Sweep: 2.0 Mc to 16.0 Mc in one minute.
Median values.

Table 4 (Provisional Data)

Prince Rupert, Canada (54.3°N, 130.3°W) April 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		3.9						2.9
01		3.4						2.8
02		3.3						2.8
03		3.3						2.7
04		3.1						2.8
05		3.3						2.8
06		4.0						3.0
07		4.8						3.0
08		5.3						2.9
09		5.8						2.9
10		6.1						2.9
11		6.5						2.9
12		7.1						2.9
13		6.9						2.9
14		7.0						2.9
15		7.1						3.0
16		7.0						3.0
17		7.0						3.1
18		6.9						3.2
19		6.7						3.2
20		6.6						3.2
21		5.9						3.2
22		5.2						3.1
23		4.4						3.0

Time: 120.0°W.
Sweep: Manual operation.
Median values.

Table 5 (Provisional Data)

Ottawa, Canada (45.5°N, 75.8°W) April 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.7						2.8
01		3.5						2.9
02		3.1						2.9
03		3.2						2.9
04		3.1						2.9
05		3.3						2.9
06		4.6						3.1
07		5.6						3.1
08		6.3						3.0
09		6.6						2.9
10		6.9						2.8
11		7.2						2.8
12		8.0						2.8
13		8.6						2.7
14		8.5						2.7
15		8.4						2.7
16		8.6						2.8
17		7.9						2.8
18		7.9						2.8
19		7.8						2.8
20		7.5						2.8
21		6.8						2.8
22		5.8						2.8
23		4.9						2.8

Time: 75.0°W.
Sweep: 1.93 Mc to 13.5 Mc. Manual operation.
Median values.

Table 6 (Provisional Data)

Boston, Massachusetts (42.4°N, 71.2°W) April 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.2						2.7
01		4.0						2.7
02		3.8						2.7
03		4.0						2.8
04		4.4						2.8
05		4.6						2.9
06		5.7						3.0
07		6.7						3.0
08		6.8						3.0
09		6.2						2.7
10		6.2						2.8
11		6.5						2.9
12		6.7						2.9
13		6.6						2.9
14		6.5						3.0
15		7.0						3.0
16		7.0						2.9
17		6.7						2.8
18		6.3						2.9
19		6.4						2.8
20		6.4						2.7
21		6.1						2.8
22		5.2						2.7
23		4.7						2.7

Time: 75.0°W.
Sweep: 0.85 Mc to 13.75 Mc in one minute.
Median values.

Table 7 (Provisional Data)

San Francisco, California (37.4°N, 122.2°W) April 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.6						2.6
01		4.7						2.6
02		4.6						2.7
03		4.6						2.8
04		4.3						2.8
05		4.2						2.8
06		5.4						3.0
07		6.6						3.1
08		7.4						3.0
09		7.6						2.9
10		8.3						2.8
11		9.1						2.8
12		9.6						2.8
13		9.7						2.9
14		10.0						2.9
15		9.6						2.9
16		9.2						3.0
17		8.7						3.2
18		8.5						3.1
19		8.0						3.1
20		6.6						3.1
21		5.8						2.9
22		5.4						2.8
23		5.0						2.7

Time: 120.0°W.
Sweep: 0.8 Mc to 12.0 Mc in six minutes. Record centered on the hour.
Median values.

Table 8 (Provisional Data)

Baton Rouge, Louisiana (30.5°N, 91.2°W) April 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.4						2.8
01		3.2						2.8
02		5.3						2.8
03		4.9						2.8
04		4.6						2.8
05		4.4						2.9
06		5.4						3.0
07		7.1						3.1
08		8.4						3.0
09		9.2						2.9
10		9.5						3.0
11		9.6						3.0
12		9.6						3.1
13		9.6						3.1
14		9.6						3.1
15		9.6						3.1
16		9.5						3.1
17		9.5						3.1
18		9.2						3.0
19		8.2						3.0
20		6.6						2.9
21		6.0						2.8
22		5.5						2.7
23		5.3						2.7

Time: 90.0°W.
Sweep: 1.9 Mc to 9.8 Mc in three minutes, thirty seconds.
Median values.

Table 9 (Provisional Data)

Trinidad, Brit. West Indies (10.6°N, 61.2°W) April 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	260	10.1						3.1
01	240	8.8						3.2
02	220	7.5						3.2
03	240	5.8						3.0
04	260	5.0						2.9
05	280	4.5						2.9
06	270	5.8						3.0
07	240	7.8				2.4	2.6	3.2
08	250	9.5	230	4.5		3.1	3.8	3.1
09	280	10.6	220	5.1		3.5	4.0	3.0
10	300	11.6	220	5.4		3.8	4.2	2.9
11	300	12.3	220	5.4		3.9	4.2	2.9
12	300	13.0	220	5.4		4.0	4.4	2.9
13	300	13.0	220	5.4		4.0	4.4	2.9
14	300	13.0	220	5.3		3.9	4.5	2.9
15	290	12.4	230	5.2		3.8	4.6	2.9
16	280	11.6	230	4.7		3.3	4.4	2.9
17	260	11.5	240	4.4		2.7	4.0	2.9
18	260	10.8					2.6	3.0
19	270	10.4					2.0	2.9
20	280	10.1						2.8
21	280	10.6						2.9
22	280	10.3						3.0
23	270	10.2						3.0

Time: 60.0°W.
Sweep: Manual operation.
Median values.

Table 10 (Provisional Data)

Christmas Island (1.9°N, 157.3°W) April 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	220	10.5					2.6	3.2
01	230	9.3					2.6	3.0
02	240	8.2					2.1	3.0
03	230	7.9					2.1	3.0
04	240	7.2					2.7	3.2
05	230	6.4					2.6	3.3
06	240	5.4					2.6	3.2
07	260	8.0				2.3	3.5	2.9
08	240	9.1				3.1	5.4	2.8
09	220	10.2				3.5	7.0	2.6
10	230	10.4	220				8.2	2.4
11	280	10.5	210	5.1			8.5	2.4
12	300	10.6	210	5.2			8.6	2.4
13	300	10.6	210	5.1			8.5	2.4
14	300	11.1	210	5.0			8.5	2.3
15	210	11.5	210				8.4	2.3
16	220	11.5	210			3.5	7.6	2.5
17	240	11.5				3.0	7.0	2.3
18	270	11.0					5.7	2.4
19	320	10.6					3.8	2.3
20	350	10.0					2.5	2.2
21	300	10.0					2.6	2.5
22	270	10.0					2.8	2.8
23	240	11.0					2.7	3.1

Time: 150.0°W.
Sweep: 1.5 Mc to 13.0 Mc in one minute, thirty seconds.
Median values.

Table 11 (Provisional Data)

Clyde, Baffin I. (70.5°N, 68.6°W) March 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		4.0						3.1
01		4.6						3.1
02		3.5						3.0
03		3.3						3.1
04		3.0						3.1
05		3.3						3.1
06		3.9						3.1
07		4.4						3.1
08		5.1						3.2
09		5.3						3.2
10		5.7						3.3
11		5.5						3.2
12		5.6						3.1
13		5.6						3.3
14		5.7						3.1
15		5.6						3.1
16		5.6						3.2
17		5.6						3.2
18		5.4						3.2
19		5.3						3.1
20		5.4						3.1
21		5.2						3.3
22		4.3						3.1
23		4.7						3.1

Time: 75.0°W.
Sweep: 2.0 Mc to 16.0 Mc in one minute.
Median values.

Table 12 (Provisional Data)

Chungking, China (29.4°N, 106.8°E) March 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		8.7						3.1
01		7.8						3.2
02		7.0						3.1
03		6.1						3.3
04		4.8						3.3
05		5.0						3.2
06		5.5						3.2
07		8.1						3.4
08		10.6						3.2
09		11.6						3.1
10		13.0D						3.1
11		13.5D						
12		14.2D						
13		14.0D						
14		14.0D						
15		13.7D						3.2
16		13.6D						3.3
17		13.3D						3.3
18		13.3D						3.4
19		12.7D						3.4
20		11.5						3.2
21		10.3						3.1
22		8.7						3.1
23		8.2						3.1

Time: 105.0°E.
Sweep: 3.3 Mc to 12.3 Mc in fifteen minutes. Manual operation.
Median values.

Table 13 (Provisional Data)

Christmas Island (1.9°N, 157.3°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	220	11.0					2.6	3.0
01	230	9.8					2.6	3.2
02	230	8.0					2.2	3.2
03	240	7.3					2.1	3.2
04	240	6.4					1.8	3.3
05	230	5.7					2.2	3.2
06	230	4.8					3.1	3.3
07	260	7.6				2.4	3.4	3.0
08	240	9.9				4.0	4.2	2.9
09	220	10.7				3.4	7.2	2.6
10	230	10.4	220	5.0			8.2	2.4
11	290	10.2	210	5.1			8.4	2.4
12	300	10.4	210	5.2			8.7	2.4
13	300	10.8	200	5.2			8.5	2.3
14	280	11.4	210	5.2			8.3	2.3
15	230	11.8	210				7.0	2.4
16	220	12.0				3.5	7.9	2.6
17	240	12.0				3.4	—	2.6
18	260	11.9				3.4	5.0	2.6
19	300	11.7					3.5	2.5
20	340	11.0					1.8	2.2
21	300	10.6					2.1	2.5
22	260	11.0					2.6	2.6
23	240	11.4					2.6	3.0

Time: 150.0°W.
Sweep: 1.5 Mc to 13.0 Mc in one minute, thirty seconds.
Median values.

Table 14 (Provisional Data)

Rarotonga Island (21.3°S, 159.8°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		9.6						
01		8.9						
02		7.4						
03		6.4						
04		6.7						
05		7.2						
06		9.2						
07		10.9						
08		11.8						
09		12.7						
10		13.5						
11		13.8						
12		14.3						
13		13.5						
14		13.6						
15		13.3						
16		12.6						
17		12.2						
18		11.2						
19		11.0						
20		10.5						
21		10.2						
22		9.9						
23		10.7						

Time: 157.5°W.
Sweep: 2.0 Mc to 16.0 Mc. Manual operation.
Median values.

Table 15 (Provisional Data)

Brisbane, Australia (27.5°S, 153.0°E) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		7.2						2.9
01		7.0						3.0
02		6.6						3.0
03		6.1						2.9
04		5.6						2.9
05		5.3						2.9
06		6.2						3.1
07		7.8						3.4
08		9.1						3.3
09		10.0						3.2
10		10.7						3.1
11		11.0						3.2
12		11.1						3.1
13		11.1						3.0
14		10.8						3.0
15		10.8						3.0
16		10.6						3.1
17		10.4						3.1
18		9.5						3.1
19		8.5						3.0
20		7.7						2.9
21		7.5						2.8
22		7.5						2.8
23		7.3						2.9

Time: Local.
Sweep: 2.2 Mc to 12.5 Mc in two minutes, thirty seconds.
Median values.

Table 16 (Provisional Data)

Kermadec Islands (29.2°S, 177.9°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		7.3						2.6
01								
02								
03		6.5						2.5
04								
05		5.8						2.6
06		6.7						2.9
07		9.0						3.1
08		10.3						3.1
09		10.5						3.0
10		10.9						2.9
11		11.2						2.9
12								2.8
13								2.8
14		11.3						2.7
15		10.8						2.8
16		10.4						2.7
17		10.2						2.8
18		9.4						2.8
19		8.4						2.6
20		8.2						2.6
21		8.0						2.5
22								
23								

Time: 180.0°E.
Sweep: 1.8 Mc to 12.0 Mc. Manual operation.
Median values.

Table 17 (Provisional Data)

Christchurch, N. Z. (43.5°S, 172.6°E) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	6.4						
01	280	6.0						
02	270	5.8						
03	270	5.3						
04	280	4.9						
05	290	4.0						
06	280	4.5				1.5		
07	250	6.3	240	3.7		2.5		
08	260	7.5	230	4.4		2.8		
09	270	8.6	220	4.7		3.1		
10	260	8.9	210	4.8		3.3		
11	280	9.7	210	5.0		3.5		
12	280	10.3	220	5.0		3.6		
13	280	10.0	220	5.3		3.6		
14	270	9.7	230	5.0		3.5		
15	260	9.5	230	4.7		3.3		
16	250	9.6	230	4.3		3.1		
17	240	9.5	240	3.8		2.5		
18	240	9.1				1.8		
19	240	8.7						
20	250	8.0						
21	250	7.3						
22	270	6.9						
23	290	6.7						

Time: 172.5°E.
Sweep: 1.0 Mc to 13.0 Mc. Automatic.
Median values.

Table 18 (Provisional Data)

Rarotonga Island (21.3°S, 159.8°W) February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		9.5						
01		8.8						
02		7.1						
03		6.7						
04		6.4						
05		6.1						
06		6.3						
07		7.9						
08		9.5						
09		9.8						
10		10.6						
11		11.7						
12		12.6						
13		13.4						
14		13.5						
15		13.0						
16		11.9						
17		10.9						
18		9.8						
19		9.5						
20		9.2						
21		9.7						
22		9.8						
23		9.5						

Time: 157.5°W.
Sweep: 2.0 Mc to 16.0 Mc. Manual operation.
Median values.

Table 19 (Provisional Data)

Kermadec Islands (29.2°S, 177.9°W) February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	7.7						2.7
01								
02								
03	320	6.0						2.6
04								
05	300	5.4						2.7
06	285	6.0				2.0		3.0
07	295	7.4	275	3.8	125	2.6		3.0
08	315	8.0	260	4.5	125	3.0		3.0
09	305	8.8	255	4.7	125	3.3		2.9
10	330	8.8	250	4.9	120	3.5		2.8
11	345	9.3	240	5.1	120	3.6		2.8
12	340	10.0	250	5.1	120	3.7		2.8
13	350	9.8	250	5.2	120	3.7		2.8
14	345	9.3	265	5.1	120	3.6		2.7
15	340	9.4	275	4.9	120	3.6		2.8
16	325	8.8	265	4.5	120	3.3		2.8
17	315	8.6	275	4.2	120	2.8		2.8
18	290	8.2			120	2.2		2.8
19	290	8.4						2.7
20	290	8.2						2.6
21	315	8.2						2.6
22								
23								

Time: 180.0°E.
Sweep: 1.8 Mc to 12.0 Mc. Manual operation.
Median values.

Table 20 (Provisional Data)

Campbell Island (52.5°S, 169.0°E) February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05	260	4.2			120	2.1	2.6	2.9
06								
07	250	5.4			125	2.9	3.1	2.8
08	330	5.9	280	4.5	125	3.0	3.2	2.9
09	350	6.4	230	4.5	125	3.1	3.5	2.9
10	350	6.9	230	4.6	125	3.2	3.8	2.8
11	330	6.7	230	4.7	130	3.2	3.7	2.9
12	350	6.9	225	4.7	125	3.3	3.7	2.8
13	340	6.7	230	4.7	125	3.3	3.6	2.9
14	340	6.9	240	4.7	125	3.3	3.4	2.8
15	340	7.0	230	4.5	130	3.2	3.4	2.8
16	320	7.0	245	4.4	130	3.0	3.6	2.8
17	300	7.4	240	4.0	125	2.7	3.0	2.9
18	280	7.4	255	3.8	130	2.4	2.9	2.8
19	265	7.2		3.6	140	2.0	3.5	2.8
20								
21	270	7.0					4.1	2.7
22								
23	300	6.1					3.7	2.6

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 21 (Provisional Data)

Campbell, Island (52.5°S, 169.0°E) January 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00								
01								
02								
03								
04								
05	250	4.5			120	2.1	3.1	3.0
06								
07	320	5.1	240	4.1	120	2.7	3.3	2.9
08	330	5.4	230	4.3	120	2.9	3.5	3.0
09	350	5.9	230	4.5	120	3.1	3.9	2.9
10	370	5.7	220	4.5	120	3.1	3.6	2.9
11	360	5.8	220	4.6	120	3.2	3.9	2.9
12	350	5.8	220	4.6	120	3.2	4.0	3.0
13	370	5.8	220	4.6	120	3.2	3.6	2.8
14	350	5.8	220	4.6	120	3.1	3.9	2.9
15	340	5.9	220	4.4	120	3.1	3.4	2.9
16	330	6.1	220	4.3	120	2.9	3.5	2.9
17	310	6.3	240	4.0	120	2.7	3.3	3.0
18	300	6.2	240	3.5	120	2.3	3.2	2.9
19	260	6.4	250	3.1	130	2.0	3.5	2.9
20								
21	260	6.2					4.0	2.8
22								
23	280	5.2					3.6	2.7

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 22 (Provisional Data)

Kermadec Islands (29.2°S, 177.9°W) December 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	300	6.6	260	3.6	120	2.2		3.0
07	300	7.4	250	4.2	120	2.7		2.9
08	310	8.0	250	4.6	120	3.1		2.9
09	325	8.6	235	4.8	120	3.3		2.8
10	325	9.0	240	4.8	120	3.4		2.8
11	345	9.3	225	4.9	120	3.5		2.8
12	335	9.5	225	5.0	120	3.6		2.8
13	350	9.2	230	4.8	120	3.6		2.8
14	340	8.8	250	4.8	120	3.5		2.8
15	330	8.6	250	4.7	120	3.4		2.8
16	325	8.6	250	4.5	120	3.2		2.8
17	305	8.8	260	4.1	120	2.7		2.9
18	290	8.6				2.6		2.8
19	270	8.5						2.8
20		8.0						2.7
21	310	8.3						2.7
22								
23								

Time: 180.0°E.
Sweep: 1.8 Mc to 12.0 Mc. Manual operation.
Median values.

*Above data sent by air mail from New Zealand and supersede provisional data published in Table 16, IRPL-F18.

Table 23 (Provisional Data)

Hobart, Tasmania (42.8°S, 147.4°E) December 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	250	5.7					3.1	2.9
01	250	5.4					2.8	3.0
02	245	4.8					3.2	3.0
03	240	4.2					3.5	3.0
04	250	3.8					3.1	3.0
05	245	4.4				1.9	3.2	3.2
06	235	4.9	225	3.7	100	2.5	3.6	3.2
07	320	5.2	225	4.1	100	2.8	3.6	3.1
08	350	5.7	210	4.4	100	3.0	3.6	3.0
09	355	6.0	200	4.6	100	3.2	4.0	3.0
10	345	6.4	200	4.6	100	3.3	5.0	3.0
11	345	6.5	195	4.7	100	3.4	4.1	3.0
12	340	6.4	200	4.7	100	3.5	4.1	3.0
13	350	6.9	200	4.7	100	3.5	5.0	2.9
14	345	6.4	200	4.6	100	3.5	4.7	2.9
15	350	6.4	200	4.6	100	3.3	3.8	3.0
16	315	6.5	200	4.4	100	3.2	3.8	3.0
17	300	6.4	220	4.2	100	2.8	3.1	3.0
18	280	6.7	225	3.8	110	2.4	2.7	3.1
19	250	6.6			115	1.9	3.8	3.0
20	250	7.0					4.6	3.0
21	250	6.7					4.2	2.9
22	265	6.5					3.8	2.9
23	260	6.2					3.5	2.9

Time: Local.
Sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.
Median values.

*Summary of data received by air mail, superseding provisional data previously published in IRPL-F18, Table 19.

Table 24

Washington, D.C. (39.0°N, 77.5°W) April 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	275	5.5						2.8
01	280	5.1						2.8
02	270	4.6						2.8
03	270	4.3						2.9
04	270	3.9						2.8
05	260	3.6						(2.9)
06	250	5.0			120	(1.8)	2.3	3.2
07	250	6.4	235		110	2.5	2.8	3.1
08	270	7.1	220	4.4	110	(2.9)	3.0	3.1
09	300	7.6	210	4.9	110	(3.2)	3.4	3.0
10	310	8.4	210	5.0	110	(3.4)		2.9
11	310	8.8	210	5.1	110	(3.6)		2.9
12	320	9.2	210	5.2	110	(3.7)		2.9
13	315	9.4	210	5.1	110	(3.7)		2.9
14	300	9.5	220	5.0	110	(3.6)		2.9
15	300	9.1	220	4.9	110	(3.3)		2.9
16	290	9.0	220	4.6	110	(3.0)		2.9
17	270	8.7	230		110	2.7		3.0
18	250	8.2	240		120	2.1	2.0	3.0
19	240	8.0						3.0
20	240	7.5						2.9
21	250	6.6						2.9
22	260	6.1						(2.8)
23	270	5.8						(2.8)

Time: 75.0°W.
Sweep: 0.75 Mc to 11.5 Mc in 3.4 minutes supplemented by 0.8 Mc to 14.0 Mc in two minutes.
Median values.

Table 25

(Revision of previously published provisional data)

Fairbanks, Alaska (64.9°N, 147.8°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	315	3.0					4.8	2.7
01	350	3.0					4.6	2.6
02	350	3.4					3.8	2.6
03	350	3.2					3.2	2.6
04	340	3.9					3.6	2.6
05	335	4.0					3.0	2.6
06	308	4.0				1.6	2.4	2.8
07	270	4.9				2.0	2.6	2.9
08	260	5.4				2.4	2.8	2.9
09	250	5.8	225	4.0		2.7	2.8	2.9
10	270	6.3	235	4.2		2.9	2.9	2.8
11	300	6.6	242	4.3		2.9	2.8	2.8
12	255	7.0	240	4.2		2.9	---	2.9
13	250	7.4	235	4.3		2.9	2.8	2.9
14	245	7.5		4.0		2.8	---	2.9
15	245	7.9				2.6	2.5	2.9
16	250	7.9				2.3	---	2.9
17	240	7.4				2.0	1.8	3.0
18	242	7.2				1.4	1.6	3.0
19	252	6.4					1.6	2.9
20	253	4.4					2.8	2.9
21	300	3.8					3.2	2.9
22	308	3.6					3.2	2.8
23	315	3.4					5.0	2.8

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 26

(Revision of previously published provisional data)

Churchill, Canada (58.8°N, 94.2°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	310	4.5					4.4	2.8
01	315	4.5					3.8	2.8
02	320	4.4					4.3	2.7
03	340	3.6					3.8	2.7
04	355	3.4					3.7	2.8
05	350	3.4					3.6	2.7
06	330	4.0					3.8	2.9
07	325	4.5			130	3.0	3.6	3.0
08	295	5.6	260	3.7	130	3.1		3.1
09	300	5.9	250	4.0	129	3.2	3.4	3.0
10	315	6.6	250	4.3	130	3.3		3.0
11	320	6.8	240	4.4	130	3.4		2.9
12	320	7.5	240	4.4	130	3.3		2.9
13	310	7.9	240	4.4	130	3.2		2.8
14	310	8.4	240	4.4	130	3.2		2.9
15	305	8.6	245	4.3	130	3.1		2.9
16	290	8.4	249	3.9	130	2.8		2.9
17	280	8.4	260	3.5	130	2.9		2.9
18	260	6.8	245		140	3.1	3.0	3.0
19	270	6.0					3.5	2.9
20	270	5.5					3.8	2.9
21	290	4.8					3.7	2.8
22	300	4.5					4.1	2.8
23	310	4.3					4.8	2.8

Time: 90.0°W.
Sweep: 2.0 Mc to 16.0 Mc in one minute.
Median values.

Table 27

(Revision of previously published provisional data)

Prince Rupert, Canada (54.3°N, 130.3°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	250	3.6						3.1
01	245	3.2						3.0
02	250	3.0						3.0
03	265	3.0						2.9
04	290	2.7						2.9
05	270	2.9						(2.8)
06	260	3.2						(2.9)
07	230	4.1				1.8		3.1
08	210	5.4	195	3.3	100	2.1		3.3
09	240	6.2	185	4.1	90	2.6		3.2
10	250	6.7	180	4.3	90	2.9		3.2
11	250	7.0	170	4.5	90	3.1		3.3
12	245	7.8	180	4.6	90	3.2		3.2
13	235	8.6	170	4.5	90	3.3		3.2
14	220	9.0	180	4.5	90	3.2		3.2
15	220	9.4	180	4.3	90	3.1		3.3
16	200	9.0	180	4.2	90	2.9		3.3
17	200	9.0	190	3.8	90	2.6		3.4
18	190	8.6			100	2.1		3.4
19	190	7.7						3.4
20	190	6.9						3.4
21	190	5.7						3.4
22	200	4.6						3.3
23	210	3.8						3.2

Time: 120.0°W.
Sweep: Manual operation.
Median values.

Table 28

(Revision of previously published provisional data)

St. John's, Newfoundland (47.7°N, 52.7°W) March 1946*

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	5.0						3.1
01	280	5.0						3.1
02	280	4.7						3.1
03	270	4.0						3.2
04	270	3.7						3.2
05	265	3.6					1.7	3.2
06	285	3.4						3.2
07	250	5.4			130	1.8	1.8	3.4
08	250	6.5	220	3.5	120	2.1		3.3
09	260	8.0	220	3.8	115	2.4		3.3
10	260	8.4	215	4.0	110	2.6		3.2
11	280	9.0	210	4.2	110	2.9		3.2
12	265	9.3	225	4.4	110	3.1		3.2
13	270	9.6	220	4.4	110	2.9		3.2
14	270	9.3	225	4.2	120	2.8		3.1
15	270	9.6	230	3.9	110	2.7	2.8	3.2
16	270	9.3	235	3.7	120	2.5		3.2
17	260	9.5	230	3.3	120	2.3		3.2
18	255	9.4	230	3.2	120	1.8		3.2
19	250	8.8	230	2.6				3.2
20	240	7.8						3.0
21	250	6.4						3.0
22	270	6.1						3.1
23	270	5.6						3.1

Time: 52.5°W.
Sweep: Manual operation.
Median values.

*Data for 1-10 March [illegible]

Table 29

(Revision of previously published provisional data)

Ottawa, Canada (45.5°N, 75.8°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	5.1						2.8
01	280	4.6						2.8
02	270	4.4						2.8
03	280	4.0						2.8
04	280	3.6						3.0
05	280	3.4						2.9
06	260	3.5						2.9
07	235	5.7				2.1		3.1
08	230	6.9	220	3.6	110	2.6		3.1
09	210	7.9	210	4.4	110	3.0		3.1
10	250	8.2	200	4.5	110	3.2		3.0
11	260	8.9	200	4.7	110	3.4		2.9
12	260	9.1	210	4.8	110	3.4		2.9
13	260	9.3	200	4.8	110	3.5		2.8
14	260	9.5	210	4.7	110	3.4		2.9
15	260	9.5	220	4.6	110	3.2		2.8
16	230	9.2	225	4.2	110	2.9		2.8
17	230	9.0	260	3.9	120	2.5		2.9
18	230	9.0				2.1		2.9
19	230	8.1						2.9
20	230	7.2						2.8
21	240	6.6						2.9
22	250	6.0						2.8
23	260	5.6						2.8

Time: 75.0°W.
Sweep: 1.93 Mc to 13.5 Mc. Manual operation.
Median values.

Table 30

(Revision of previously published provisional data)

Boston, Massachusetts (42.4°N, 71.2°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	278	5.0						2.7
01	280	4.9						2.7
02	280	4.7						2.7
03	270	4.2						2.7
04	270	4.0						2.7
05	270	3.8						2.8
06	250	5.5			130	2.0		3.0
07	250	6.5			125	2.7		3.1
08	250	7.3			120	3.0		3.0
09	262	9.4	245	4.7	122	3.2		3.0
10	261	10.0			125			3.0
11	260	10.7						2.9
12	286	10.8						2.8
13	297	10.8			123			2.8
14	269	10.9			125	3.3		3.0
15	261	10.0			125	2.9		3.0
16	250	9.7			130	2.4		2.9
17	247	9.5			125	2.5		3.0
18	245	8.9						3.0
19	242	7.5						2.9
20	250	6.6						2.9
21	257	6.0						2.8
22	270	5.2						2.7
23	283	5.0						2.7

Time: 75.0°W.
Sweep: 0.85 Mc to 13.75 Mc in one minute.
Median values.

Table 31

(Revision of previously published provisional data)

San Francisco, California (37.4°N, 122.2°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	4.7						2.7
01	270	4.3					2.5	2.7
02	280	4.2						2.6
03	280	4.1					2.3	2.7
04	280	4.2					2.5	2.6
05	280	4.0					2.6	2.7
06	270	4.4					2.5	-.7
07	240	7.0	250	3.5	120	2.3		3.1
08	240	8.7	230	4.2	110	2.8		3.1
09	255	9.4	220	4.6	110	3.3		3.0
10	260	10.5	220	4.7	110	3.5		2.9
11	270	10.8	210	4.9	110	3.6		2.8
12	270	11.1	210	4.9	110	3.7		2.8
13	270	10.8	220	4.9	110	3.7		2.8
14	260	11.0	220	4.8	110	3.7		2.8
15	260	10.5	225	4.6	110	3.5		2.8
16	250	10.1	230	4.3	110	3.1		2.8
17	240	9.6	240	3.8	120	2.6		3.0
18	230	8.8			120	2.0		3.1
19	220	7.3					2.3	3.0
20	230	6.1					2.4	2.8
21	250	5.5						2.8
22	260	5.0						2.8
23	260	4.9					2.5	2.7

Time: 120.0°W.
Sweep: 0.8 Mc to 12.8 Mc in six minutes. Record centered on hour.
Median values.

Table 32

(Revision of previously published provisional data)

Baton Rouge, Louisiana (30.5°N, 91.2°W) March 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	5.0						2.8
01	300	4.8						2.7
02	300	4.9						2.8
03	300	4.6						2.9
04	310	4.4						2.8
05	300	4.4						2.8
06	300	4.4						2.8
07	280	6.6			140	2.1		3.3
08	270	8.1	260	3.7	130	2.6		3.1
09	280	9.1	250	4.1	120	3.0		3.0
10	280	9.4	240	4.3	120	3.2		3.0
11	280	9.5	245	4.5	120	3.2		3.1
12	290	9.5	250	4.6	120	3.3		3.1
13	290	9.6	250	4.6	120	3.3		3.1
14	290	9.6	250	4.6	120	3.3		3.1
15	290	9.5	250	4.4	120	3.2		3.2
16	290	9.5	250	4.2	120	3.0		3.1
17	290	9.5	260	3.7	130	2.6		3.2
18	260	9.2				(2.0)		3.2
19	240	7.5						3.1
20	250	6.0						3.0
21	280	5.9						2.9
22	290	5.5						2.8
23	300	5.3						2.8

Time: 90.0°W.
Sweep: 1.9 Mc to 9.8 Mc in three minutes, thirty seconds.
Median values.

Table 33

Maui, Hawaii (20.8°N, 156.5°W) March 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	250	6.4						3.1
01	250	5.6						3.2
02	250	4.8						3.2
03	240	4.2						3.2
04	250	3.2						3.1
05	270	2.7						3.1
06	300	2.8						2.8
07	250	6.0				2.4		3.2
08	250	8.8				2.9		3.1
09	250	10.0	210	5.2		3.2		2.9
10	270	11.5	200	5.1		3.5		2.8
11	260	12.5	200	5.2		3.8		2.8
12	300	13.7	200	5.4		3.6		2.9
13	310	14.4	200	5.5		3.8		2.9
14	300	14.7	210	5.4		3.8		2.9
15	300	15.0	200	5.4		3.6		3.0
16	260	14.5	210	5.1		3.3		3.0
17	250	13.8				2.8		3.0
18	240	13.0				2.2		3.0
19	220	11.8					2.3	3.1
20	230	10.2						3.1
21	235	9.2						3.0
22	250	8.4						3.0
23	250	7.3						3.0

Time: 150.0°W.
Sweep: 2.2 Mc to 16.0 Mc in one minute.
Median values.

Table 34

San Juan, Puerto Rico (18.4°N, 66.1°W) March 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		7.0						2.8
01		6.8						2.8
02		6.4						2.9
03		5.7						2.9
04		5.0						2.8
05		3.8						2.7
06		3.8						2.7
07	250	6.8						3.0
08	260	8.7	220	3.6				3.0
09	290	9.8	220	4.1		3.1		2.9
10	300	10.8	230	4.8		3.4		2.9
11	315	11.2	230	5.0		3.5		2.8
12	320	11.6	230	5.0		3.5		2.8
13	320	11.9	230	5.0		3.6		2.8
14	320	11.8	230	5.0		3.5		2.8
15	320	11.4	240	4.9		3.4		2.8
16	300	11.0	230	4.1		3.2		2.9
17	280	10.8						2.9
18	250	10.0						3.0
19	270	9.0						2.9
20		8.1						2.8
21		7.2						2.8
22		7.0						2.7
23		6.9						2.7

Time: 60.0°W.
Sweep: Record centered on the hour.
Median values.

Table 35

Trinidad, Brit. West Indies (10.6°N, 61.2°W) March 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	260	9.0						3.0
01	250	8.3						3.1
02	240	7.6						3.2
03	235	6.2						3.2
04	230	4.4						3.1
05	275	3.8						2.8
06	270	4.1					2.0	2.8
07	250	7.4			120	2.1	2.3	3.2
08	250	9.4	230	4.3	120	3.0	3.5	3.2
09	270	10.9	220	4.8	120	3.4	3.9	3.0
10	280	11.6	220	5.3	120	3.7	4.2	3.0
11	290	12.6	220	5.4	120	3.9	4.4	3.0
12	300	13.2	220	5.5	120	3.9	4.4	2.9
13	300	13.2	220	5.5	120	4.0	4.4	2.9
14	300	13.4	220	5.5	120	3.9	4.3	2.9
15	280	12.2	220	5.2	120	3.6	4.6	2.9
16	270	(11.4)	230	4.7	120	3.2	4.3	3.0
17	250	(11.4)	240	4.4	120	2.8	3.8	2.9
18	250	(11.0)					2.6	3.0
19	255	10.0						3.0
20	260	(9.3)						2.9
21	260	(9.2)						2.9
22	275	(9.2)						2.8
23	280	9.2						2.9

Time: 60.0°W.
Sweep: Manual operation.
Median values.

Table 36

(Revision of previously published provisional data)

Huancayo, Peru (12.0°S, 75.3°W) March 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	230	9.0						3.0
01	230	8.1						3.0
02	240	7.2						3.0
03	250	6.3						2.9
04	250	5.2						3.1
05	260	4.4						3.0
06	270	5.4				1.7	2.9	3.0
07	250	9.3				2.6	3.2	3.1
08	230	10.9				3.3	8.4	2.8
09	280	12.1	230	5.2		3.7	11.9	2.6
10	290	12.4	220	5.2		4.0	11.9	2.4
11	300	11.2	210	5.2		4.1	11.9	2.3
12	300	11.1	210	5.2		4.2	11.9	2.4
13	290	11.4	210	5.2		4.0	11.9	2.3
14	280	11.8	210	5.0		4.0	11.9	2.2
15	230	11.9	210	4.8		3.7	11.9	2.3
16	230	11.6				3.4	11.9	2.3
17	260	11.6				2.6	8.4	2.3
18	290	11.4				1.6	2.9	2.2
19	380	10.0						2.1
20	260	9.6						2.4
21	320	9.7						2.6
22	250	9.8						2.7
23	230	9.2						2.9

Time: 75.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 37

Oslo, Norway (59.9°N, 11.0°E) — February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	*fEs	F2-M3000
00		2.6						
01		(2.2)						
02		(2.4)						
03		(2.4)						
04		(2.4)						
05		(2.0)						
06		2.4						
07		3.0						
08		4.5				1.8	2.6	
09		5.6				2.2		
10		6.5				2.6		
11		6.9				2.8		
12		7.6				2.8		
13						2.8		
14						2.8	2.7	
15						2.4		
16						2.2		
17		6.6				1.8		
18		6.3						
19		5.2						
20		4.4						
21		4.0						
22		4.2						
23		4.6						

Time: 15.0°E.
Sweep: 16.0 Mc to 1.63 Mc in ten minutes.
Median values.

*Original data sheet labeled "Extent of E."

Table 38

Great Baddow, England (51.7°N, 0.5°E) — February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.1						2.8
01		3.0					0.8	2.8
02		3.0					0.6	2.7
03		2.9					0.6	2.7
04		2.5					0.7	2.8
05		2.3					0.7	3.0
06		2.4					0.7	2.9
07		4.2				1.6		3.2
08		6.3				2.0		3.4
09		7.2				2.4		3.4
10		7.7				2.6	2.2	3.3
11		8.0				2.9		3.2
12		8.4				3.0		3.3
13		8.6				3.0		3.2
14		8.5				2.8		3.2
15		8.4				2.5	2.2	3.4
16		7.8				2.0	2.3	3.4
17		7.5					2.0	3.3
18		6.2					2.2	3.2
19		5.4					2.0	3.0
20		4.3						3.0
21		3.6						2.9
22		3.3						2.9
23		3.2						2.8

Time: 0.0°.
Sweep: Manual operation.
Median values.

Table 39

(Revision of previously published provisional data)

Boston, Massachusetts (42.4°N, 71.2°W) — February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	4.2						3.0
01	275	3.8						2.9
02	275	3.5						2.9
03	275	3.6						2.8
04	265	3.5						2.9
05	275	3.0						3.0
06	268	2.6						3.0
07	260	4.8						3.2
08	250	5.6				2.3		3.2
09	250	6.7						3.2
10	250	7.0						(3.0)
11	250							
12	250							
13	260							
14	255							
15	250	8.0						(3.1)
16	250	7.9						(3.2)
17	245	7.9						(3.0)
18	240	7.0						2.9
19	240	6.5						3.0
20	245	5.9						3.0
21	250	5.0						3.0
22	255	4.3						2.9
23	262	4.3						2.9

Time: 75.0°W.
Sweep: 0.85 Mc to 13.75 Mc in one minute.
Median values.

Table 40

(Revision of previously published provisional data)

Cairo, Egypt (30.0°N, 31.2°E) — February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	*fEs	F2-M3000
00		4.5						2.7
01		4.2						---
02		4.2						2.8
03		4.3						---
04		3.8						3.2
05		2.9						---
06		3.0						2.9
07		6.4						---
08		8.7				2.6	2.4	---
09		9.4				3.1		---
10		10.2				3.4	3.4	3.1
11		10.9				3.4	3.6	---
12		11.3				3.5	3.4	3.0
13		11.3				3.4	3.6	---
14		11.2				3.4	3.6	3.0
15		11.0				3.2	3.6	---
16		10.0				2.7	3.5	3.1
17		9.4				2.4	2.9	---
18		7.7					2.6	3.2
19		6.0					2.6	---
20		5.8					2.3	3.0
21		5.3					2.2	---
22		4.8						2.9
23		4.5						---

Time: 30.0°E.
Median values.

*Original data sheet labeled "Extent of E."

Table 41

(Revision of previously published provisional data)

Chungking, China (29.4°N, 106.8°E) February 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M300
00	300	(4.6)						3.0
01	(300)	(4.6)						(3.0)
02	(280)	4.4						3.2
03	(240)	(4.6)						(3.2)
04	(240)	(4.3)						(3.4)
05	(240)	(4.2)						(3.4)
06	(280)	(4.0)						(3.2)
07	260	6.6	220	4.1				3.3
08	220	9.1	180	4.2				3.4
09	220	10.2	190	4.5				(3.2)
10	240	10.6	200	5.2				(3.2)
11	260	(12.3)*	200	5.0				(3.1)
12	260	(13.0)*	200	5.0				---
13	295	(13.0)*	220	5.2				---
14	260	(13.0)*	200	5.1				(3.2)
15	240	(12.0)*	200	4.8				3.3
16	220	(12.8)*	200	4.9				3.3
17	210	(12.3)*	200					(3.3)
18	200	11.2						(3.4)
19	200	11.6						(3.4)
20	200	(8.0)						(3.4)
21	210	(6.3)						(3.4)
22	240	(7.4)						(3.2)
23	240	5.4						(3.2)

Time: 105.0°E.
Sweep: 3.3 Mc to 12.3 Mc in fifteen minutes. Manual operation.
Median values.

*Estimated values.

Table 42

Capetown, Union of S. Africa (33.9°S, 18.7°E) February 1946
(1 through 12, only)

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	*F2-M3000
00		(3.8)						(2.6)
01		(3.8)						(2.6)
02		(3.9)						(2.7)
03		(3.4)						(2.7)
04		(3.3)						(2.7)
05		(3.9)						(2.7)
06		5.7						2.8
07		(6.4)		4.4				(2.8)
08		(8.0)		4.7				(2.7)
09		9.4		4.9				2.6
10		(10.3)						(2.6)
11		10.1						(2.5)
12		(10.6)						(2.6)
13		10.4						(2.6)
14		10.2		4.8				(2.6)
15		9.4		4.9				(2.6)
16		8.4		4.6				2.8
17		7.8		4.1				(2.9)
18		(8.4)						(2.9)
19		(7.3)						(2.9)
20		(6.1)						(2.8)
21		(5.0)						(2.9)
22		(4.3)						(2.7)
23		(3.8)						(2.6)

Time: 15.0°E.
Sweep: 2.2 Mc to 16.0 Mc in one minute.
Median values.

*Probably low due to error in height reading.

Table 43

(Revision of previously published provisional data)

Burghead, Scotland (57.7°N, 3.5°W) January 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M300
00		2.2						
01		1.9						
02		2.3						
03		2.1						
04		2.3						
05		2.1						
06		2.1						
07		2.2						
08		3.1						
09		5.1						
10		6.2						
11		6.9						
12		7.1						
13		7.4						
14		7.0						
15		6.8						
16		6.2						
17		5.3						
18		3.8						
19		3.1						
20		2.8						
21		2.4						
22		2.3						
23		2.1						

Time: 0.0°.
Sweep: 1.0 Mc to 13.0 Mc. Manual operation.
Median values.

Table 44

Adak, Alaska (51.9°N, 176.6°W) January 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	(295)							2.8
01								
02								
03								
04								
05								
06								
07	(260)	3.0						3.0
08	222	4.9						3.3
09	220	6.1				2.3		3.4
10	225	6.5				2.4		3.4
11	225	6.8	200	3.1		2.6		3.5
12	230	7.0	200	3.1		2.7		3.4
13	225	7.4				2.7		3.4
14	225	6.7				2.4		3.4
15	215	6.2						3.5
16	210	5.0						3.5
17	222	4.2						3.4
18	238	2.9						3.3
19	(270)	2.4						(3.2)
20		(2.3)						
21		(2.3)						
22	(305)	(2.8)						(2.9)
23	(290)	2.9						(3.0)

Time: 180.0°W.
Sweep: Manual operation.
Median values.

Table 45

(Revision of previously published provisional data)

Cairo, Egypt (30.0°N, 31.2°E) January 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	*fEs	F2-M3000
00		3.2						2.9
01		3.2						2.9
02		3.3						3.1
03		3.2						3.2
04		3.0						3.2
05		2.7						3.1
06		2.7						3.2
07		5.0						3.3
08		7.1				2.4	2.7	3.5
09		7.2				2.8	3.1	3.4
10		7.7				3.0	3.2	3.4
11		7.8				3.1	3.4	3.4
12		7.8				3.2	3.3	3.2
13		7.8				3.2	3.5	3.2
14		7.8				3.1	3.4	3.2
15		7.4				2.8	3.2	3.3
16		7.0				2.5	2.9	3.4
17		6.2					2.4	3.4
18		4.7						3.3
19		4.2						3.1
20		4.3					2.2	3.2
21		3.6						3.0
22		3.2						3.0
23		3.2						2.9

Time: 30.0°E.
Median values.

*Original data sheet labeled "Extent of E."

Table 46

(Revision of previously published provisional data)

Cape York, Australia (11.0°S, 142.4°E) January 1946*

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	245	7.5					2.6	3.0
01	(240)	(7.1)					2.4	(3.0)
02	250	(7.0)					2.9	
03	(250)	(5.7)					2.3	(3.2)
04	235	(4.7)					2.7	(3.4)
05	(230)	(3.6)					2.3	(3.3)
06	(250)	(3.7)					3.5	(3.3)
07	(245)	(5.5)				(2.3)	3.2	(3.4)
08	(250)	(6.5)				3.0	4.5	(3.1)
09	(382)	(7.4)		4.9			4.0	(2.8)
10	(390)	7.5		4.9		(3.5)	7.6	2.7
11	390	9.3	200	5.0			7.5	2.7
12	400	(12.0)		5.0			7.6	(2.7)
13	350			5.0			7.7	
14	320			5.0			7.5	
15	305	11.1	200	5.0			7.5	(2.9)
16	(320)	(9.6)	200	4.9		3.4	6.2	(2.9)
17	(300)	(8.9)	222	4.5		(3.0)	5.6	(3.0)
18	(248)	(9.0)				(2.4)	3.8	(2.8)
19	(270)	(7.0)					4.0	(2.6)
20	325	(8.0)					3.0	(2.6)
21	310	8.0					2.8	2.8
22	290	(9.0)					2.7	(2.9)
23	250	(9.0)					2.8	(3.2)

Time: 150.0°E.
Sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.
Median values.

*No data for 1-14 January.

Table 47

Brisbane, Australia (27.5°S, 153.0°E) January 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	255	6.5					4.5	3.1
01	240	5.9					3.8	3.2
02	240	5.0					3.4	3.2
03	260	4.6					2.8	3.1
04	250	4.1					2.6	3.2
05	240	3.9						3.3
06	220	5.1					3.5	3.5
07	225	5.6		4.3	100	2.8	3.9	3.3
08	310	6.2	200	4.6	110	3.1	4.6	3.2
09	300	6.8	190	4.7	110	3.4	5.0	3.1
10	310	7.0	200	4.9	100	3.6	5.2	3.0
11	320	7.4	195	5.0	100	3.7	5.5	3.0
12	315	8.0	190	5.0	100	3.7	5.3	3.0
13	300	8.5	195	4.9	100	3.7	4.8	3.0
14	300	8.5	200	4.8	100	3.6	4.5	3.0
15	290	8.7	200	4.7		3.4	4.7	3.1
16	278	8.4	210	4.5	110	3.1	5.0	3.1
17	260	7.9	210	4.1		2.6	3.9	3.2
18	230	7.4					3.8	3.2
19	230	6.8					3.8	3.0
20	270	6.8					3.8	2.9
21	290	6.6					3.6	2.9
22	280	6.7					3.7	2.9
23	270	6.6					3.6	3.0

Time: 150.0°E.
Sweep: 2.2 Mc to 12.5 Mc in two minutes.
Median values.

Table 48

(Revision of previously published provisional data)

Canberra, Australia (35.3°S, 149.0°E) January 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	5.5					3.5	3.0
01	260	5.2					4.0	3.0
02	260	4.6					3.6	3.0
03	260	4.0						3.0
04	260	3.4						3.0
05	260	3.6						3.0
06	255	4.5			120	2.1		3.0
07	280	5.5	215	3.9	110	2.6	3.5	3.0
08	290	6.1			110	3.0		3.0
09	310	6.6	210	4.5	110	3.3	4.3	2.9
10	335	6.7	210	4.5	105	3.5	4.6	2.9
11	325	6.8	210	4.6	110	3.5	4.7	2.9
12	345	7.1	200	4.6	110	3.6	4.6	2.9
13	340	7.1	200	4.6	110	3.6	4.4	2.9
14	350	7.0	210	4.6	110	3.5	4.7	3.0
15	325	7.0	210	4.5	110	3.4	4.1	3.0
16	310	7.0	210	4.4	110	3.2	4.0	3.0
17	300	6.6	210	4.2	110	3.0	3.9	3.0
18	280	6.2	230	3.6	110	2.5	3.8	3.0
19	250	6.4					3.6	3.0
20	250	6.5					3.6	3.0
21	260	6.0					3.8	3.0
22	280	5.8					3.6	2.9
23	270	5.6					3.6	3.0

Time: 150.0°E.
Sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 49

Falkland I. (51.7°S, 58.0°W) January 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	*fEs	F2-M3000
00		7.0					2.6	2.8
01		6.8					2.6	
02		6.6					3.0	2.8
03		6.6						
04		6.5						2.8
05		7.0					3.0	
06		7.0				2.6	3.8	2.8
07		7.4		4.0		2.8	4.6	
08		7.5		4.4		3.1	4.9	2.9
09		7.6		4.6			5.1	
10		8.0		4.7			4.2	3.0
11		7.8		4.7		3.5	4.4	
12		7.8		4.7			3.8	3.1
13		7.2		4.7			4.0	
14		6.5		4.7			3.8	3.0
15		6.4		4.5		3.2	4.6	
16		6.6		4.3		3.1	4.8	3.2
17		6.9				2.8	4.6	
18		7.1					4.3	3.0
19		7.2					4.0	
20		7.2					4.3	3.0
21		7.4					3.4	
22		7.7					4.4	2.8
23		7.2					3.0	

Time: 60.0°W.
Median values.

*Original data sheet labeled "Extent of E."

Table 50

(Revision of previously published provisional data)

Burghead, Scotland (57.7°N, 3.5°W) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		2.5						
01		2.8						
02		2.5						
03		2.7						
04		3.2						
05		2.8						
06		2.4						
07		2.3						
08		3.1						
09		5.2						
10		6.4						
11		6.8						
12		7.1						
13		7.4						
14		7.2						
15		6.6						
16		5.7						
17		5.4						
18		3.9						
19		2.7						
20		2.3						
21		2.3						
22		2.4						
23		2.2						

Time: 0.0°.
Sweep: 1.0 Mc to 13.0 Mc. Manual operation.
Median values.

Table 51

(Revision of previously published data)

Adak, Alaska (51.9°N, 176.6°W) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	2.8						3.0
01								
02								
03								
04								
05								
06								
07	270	3.3						3.0
08	215	5.3						3.4
09	220	7.0				2.4	2.7	3.4
10	220	8.0				2.5		3.5
11	220	7.9				2.6		3.5
12	220	8.3				2.6		3.5
13	220	8.0				2.6		3.6
14	220	7.9				2.4		3.5
15	205	6.7				(2.1)		3.5
16	210	4.9						3.4
17	220	3.8						3.4
18	260	2.7						3.1
19	258	2.6						(3.0)
20	262	(2.6)						(3.0)
21	300	2.7						(2.9)
22	300	3.0						2.9
23	285	3.2						3.0

Time: 180.0°W.
Sweep: Manual operation.
Median values.

Table 52

Slough, England (51.5°N, 0.6°W) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		2.8						
01		2.8						
02		2.7						
03		2.4						
04		2.4						
05		2.3						
06		2.2						
07		2.3						
08		4.4				(1.6)		
09		6.0				(2.0)		
10		6.7				(2.3)		
11		7.1				(2.4)		
12		7.2				(2.5)		
13		7.0				(2.4)		
14		7.3				(2.2)		
15		6.6				(1.9)		
16		5.7						
17		4.5						
18		3.9						
19		3.1						
20		2.8						
21		2.5						
22		2.5						
23		2.8						

Time: 0.0°.
Sweep: 0.5 Mc to 16.0 Mc in four minutes.
Median values.

Table 53

Peshawar, India (34.0°N, 71.5°E) December 1945

Time	*h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	264	5.8						
08	276	6.8						3.3
09	276	6.9						
10	300	7.3						
11	300	7.6						
12	300	8.0						3.0
13	300	7.6						
14	294	7.3						
15	294	7.0						
16	276	7.1						3.1
17	276	5.8						
18	276	4.3						
19	294	4.0						
20	281	3.4						3.2
21	276	3.0						
22	276	2.9						
23	276	2.7						

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.

Table 54**

(Additions to previously published data)

Cairo (Quasessin) Egypt (30.0°N, 31.2°E) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	*fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07								
08							2.3	
09							2.6	
10							2.8	
11							2.9	
12							3.0	
13							3.3	
14							3.0	
15							3.0	
16							2.6	
17							2.4	
18							2.4	
19								
20								
21								
22								
23								

Time: 30.0°E.
Median values.

*Original data sheet labeled "Extent of E."

**See IRPL-F19, Table 47 and Fig. 36 for previously published data.

Table 55

(Revision of previously published provisional data)

Delhi, India (28.6°N, 77.2°E) December 1945

Time	*h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	330	2.9						2.8
01	300	3.0						
02	330	3.1						
03	330	2.9						
04	330	2.8						**2.6
05	300	2.7						
06	315	3.0						
07	330	5.4						
08	330	7.4						3.1
09	330	8.2						
10	360	8.4						
11	360	8.5						
12	360	9.4						2.8
13	360	9.0						
14	360	8.6						
15	360	8.5						2.7
16	360	8.0						
17	345	7.2						
18	330	5.2						
19	360	4.7						2.7
20		—						
21		—						
22	360	3.4						
23	330	3.2						

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.

**Approximate values.

Table 56

Bombay, India (19.0°N, 73.0°E) December 1945

Time	*h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	4.8						**3.4
01	240	2.9						
02	270	2.6						
03		2.9						
04		2.9						**3.4
05	270	3.2						
06	270	3.8						
07	270	6.4						
08	270	8.5						3.3
09	300	10.4						
10	300	10.9						
11	300	11.5						
12	300	11.8						3.0
13	330	12.1						
14	300	12.3						
15	300	12.2						
16	300	12.4						3.0
17	300	11.4						
18	270	10.5						
19	300	9.6						
20	300	7.8						3.2
21	270	7.8						
22	270	6.7						
23	270	5.5						

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.
**Approximate values.

Table 57

Madras, India (13.0°N, 80.2°E) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								**2.9
01								
02								
03								
04								*2.8
05								
06								
07	270	7.3						
08	300	8.6						3.0
09	360	9.3						
10	375	9.8						
11	420	9.9						
12	420	10.0						2.5
13	420	10.0						
14	420	10.2						
15	390	10.3						
16	360	10.4						**2.5
17	360	10.4						
18	330	10.0						
19	300	9.6						
20	300	9.0						2.7
21	300	8.8						
22	[illegible]	8.0						
23								

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.

**Approximate values.

Table 58

Cape York, Australia (11.0°S, 142.4°E) December 1945*

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	240	(8.8)					2.1	(3.1)
01	250	8.4					2.1	2.9
02	250	7.5					2.3	3.0
03	250	8.1					2.3	3.0
04	240	7.6					2.3	3.2
05	240	6.3					2.8	3.0
06	250	5.8					2.7	3.1
07	250	6.8				2.5	3.3	3.2
08	275	7.9	240	4.5		3.1	3.5	3.1
09	300	8.0	220	4.8		3.4	3.6	2.9
10	350	8.7	200	5.0		(3.6)	3.8	2.6
11	375	(9.8)		(5.2)		(3.6)	3.8	(2.6)
12	380		200	5.3			4.0	
13	368			5.1			4.0	
14	350		200	5.0		(3.6)	3.9	
15	308		215	4.8		(3.6)	3.9	
16	300	(10.5)	230	4.7		3.3	3.9	(3.0)
17	280			(4.3)		2.9	3.9	
18	265	(8.2)					3.9	(2.7)
19	300	8.4					4.2	2.7
20	335	(8.3)					3.8	2.7
21	300						2.7	
22	290	(9.2)					2.8	3.0
23	250	(8.6)					2.2	(3.2)

Time: 150.0°E.
Sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.
Median values.

*Data for December 1 thru 17 only.

Table 59

Brisbane, Australia (27.5°S, 153.0°E) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	240	8.0					5.1	3.1
01	230	7.2					5.3	3.2
02	240	6.0					3.7	3.0
03	250	5.7					3.3	3.0
04	240	5.3					2.7	3.1
05	230	5.2						3.2
06	220	5.8		3.7		2.3	2.3	3.3
07	265	6.4	210	4.5	110	2.8	4.1	3.2
08	300	7.1	200	4.7	110	3.2	5.3	3.1
09	310	7.9	200	4.8	110	3.4	5.2	3.0
10	300	8.4	200	5.0	105	3.5	5.6	3.0
11	310	8.6	195	5.0		3.7	4.5	2.9
12	315	9.3	190	5.1		3.7	4.6	2.9
13	320	9.0	200	5.0		3.6	4.5	2.9
14	300	9.3	210	4.9	110	3.5	3.8	3.0
15	290	9.0	210	4.7	105	3.3	3.7	3.0
16	275	8.5	210	4.5	112	3.0	2.8	3.1
17	250	8.0	215	3.9		2.5	4.2	3.2
18	240	7.5					4.5	3.1
19	240	7.6					4.0	2.9
20	270	7.4					4.0	2.9
21	290	7.6					4.5	2.9
22	290	7.8						2.9
23	265	8.1					5.5	3.0

Time: 150.0°E.
Sweep: 2.2 Mc to 12.5 Mc in two minutes, thirty seconds.
Median values.

Table 60

(Revision of previously published provisional data)

Canberra, Australia (35.3°S, 149.0°E) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	6.6					3.6	2.9
01	255	6.5					3.4	3.0
02	260	5.6					3.1	2.9
03	260	4.8					2.8	2.9
04	265	4.2					3.0	3.0
05	250	4.5				1.8		3.0
06	270	5.2	240	3.7	110	2.4	3.0	3.0
07	320	5.7	240	4.0	110	2.8	4.0	2.9
08	330	6.7	225	4.5	110	3.1	4.6	2.9
09	330	7.1	210	4.5	100	3.3	5.4	2.9
10	335	7.2	210	4.6	100	3.4	4.6	2.9
11	330	7.6	210	4.6	100	3.5	6.0	2.9
12	350	7.1	210	4.8	100	3.6	5.0	2.9
13	355	6.9	210	4.7	100	3.6	4.6	2.9
14	350	7.0	210	4.6	100	3.5	4.1	2.8
15	330	7.2	220	4.5	100	3.4	3.9	2.9
16	320	6.9	210	4.4	100	3.2		2.9
17	300	7.0	230	4.1	105	2.9	4.1	3.0
18	260	7.0	245	3.5	110	2.3	4.5	3.0
19	250	7.0					4.2	3.0
20	250	6.6					4.1	3.0
21	300	6.8					3.8	2.9
22	300	6.8					4.2	2.9
23	290	6.6					4.0	2.9

Time: 150.0°E.
Sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 61

Falkland I. (51.7°S, 58.0°W) December 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	*fEs	F2-M3000
00		8.1					2.8	2.8
01		7.8						2.8
02		7.3						2.9
03		7.4						2.8
04		7.2						2.8
05		7.3					3.1	2.8
06		7.6					3.8	2.8
07		7.8		4.4			5.0	2.8
08		9.0		4.5		3.2	5.2	2.8
09		9.5		4.8		3.3	5.3	2.8
10		9.2		4.7			5.4	2.8
11		9.6		4.8			4.7	2.8
12		9.4		4.8			4.5	3.0
13		8.8		4.8			4.8	2.9
14		8.3		4.7			4.3	3.0
15		7.6		4.6		3.2	3.8	3.1
16		7.4				3.0	4.8	3.0
17		7.5				2.8	5.5	3.2
18		7.6					4.4	3.0
19		7.9					4.7	3.0
20		7.8					3.4	3.0
21		8.1					2.7	2.8
22		8.0					3.8	2.8
23		7.8					3.7	2.8

Time: 60.0°W.
Median values.

*Original data sheet labeled "Extent of E."

Table 62

Adak, Alaska (51.9°N, 176.6°W) November 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	240	4.5				2.5		3.6
08	220	6.8				2.3	2.9	3.7
09	220	8.2				2.6	3.0	3.8
10	220	9.0	210	3.2		2.7	3.2	3.8
11	220	9.2	220	3.8		2.8	3.0	3.8
12	220	9.2	205	3.4		2.8		3.8
13	220	8.4	220	3.8		2.7	.	3.8
14	220	8.1				2.5		3.8
15	220	7.5				2.2		3.8
16	210	6.0						3.8
17	220	4.6						3.7
18	240	3.4						3.6
19	250	2.8						3.6
20	280	2.4						3.5
21	285	2.4						3.2
22	310	2.6						3.2
23	300	2.9						3.2

Time: 180.0°W.
Sweep: Manual operation.
Median values.

Table 63

Peshawar, India (34.0°N, 71.5°E) November 1945

Time	*h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	264	7.2						
08	267	7.9						3.3
09	276	8.2						
10	300	8.7						
11	300	8.8						
12	300	8.6						3.1
13	300	9.0						
14	300	9.0						
15	312	8.8						
16	300	7.8						3.0
17	288	6.8						
18	288	5.3						
19	276	4.6						
20	288	3.7						3.3
21	300	3.3						
22	300	3.0						
23	300	3.0						

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.

Table 64**

(Additions to previously published data)

Cairo, Egypt (30.0°N, 31.2°E) November 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	*fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07								
08							2.6	
09							3.1	
10							3.5	
11							3.2	
12							3.6	
13							3.8	
14							4.0	
15							3.9	
16							3.4	
17							2.6	
18							3.2	
19								
20								
21								
22								
23								

Time: 30.0°E.
Median values.

*Original data sheet labeled "Extent of E."

**See IRPL-F18, Table 41 and Fig. 37 for previously published data.

Table 65

(Revision of previously published provisional data)

Delhi, India (28.6°N, 77.2°E) November 1945

Time	*h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	330	3.2						
01	360	3.4						
02	330	3.2						
03	360	3.1						
04	360	2.9						2.7
05	360	2.7						
06	360	3.8						
07	360	7.2						
08	360	8.6						2.9
09	360	9.3						
10	360	9.7						
11	350	10.3						
12	360	10.1						2.8
13	360	11.0						
14	360	11.3						
15	390	11.7						2.8
16		---						
17	360	9.4						
18	345	7.2						
19	330	5.9						2.9
20		---						
21		---						
22	315	3.5						2.9
23	330	3.2						

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.

Table 66

Bombay, India (19.0°N, 73.0°E) November 1945

Time	*h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	330	(6.8)						3.0
01	330	(4.8)						
02	330	(2.8)						
03								
04								
05								
06	300	(5.2)						
07	270	8.2						
08	300	10.2						3.2
09	300	11.7						
10	300	12.2						
11	315	13.0						
12	360	13.4						2.9
13	360	13.7						
14	360	13.9						
15	360	14.3						
16	330	14.5						3.0
17	330	14.0						
18	300	13.2						
19	300	12.3						
20	300	11.7						3.0
21	300	10.6						
22	300	9.0						
23		(8.3)						

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.

Table 67

Madras, India (13.0°N, 80.2°E) November 1945

Time	*h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	270	8.0						
08	300	8.8						3.0
09	360	9.5						
10	405	10.2						
11	420	10.4						
12	420	10.5						2.5
13	420	10.8						
14	420	11.0						
15	420	11.2						
16	420	11.6						2.6
17	390	11.7						
18	375	11.0						
19	360	10.8						
20	360	10.4						2.9
21	300	9.7						
22	300	9.3						
23								

Time: Local.
Sweep: Manual operation.
Median values, f°F2 and height; average values, M3000.

*Height at 0.83 f°F2.

Table 68

(Revision of previously published provisional data)

Adak, Alaska (51.9°N, 176.6°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	(3.2)					2.4	2.9
01								
02								
03								
04								
05								
06								
07	220	6.5				(2.9)	2.6	3.3
08	220	7.4	---	---		2.6	3.3	3.5
09	220	8.4	---	3.8		2.8	3.8	3.3
10	225	8.7	220	4.0		3.0	3.9	3.4
11	235	9.0	210	4.6		3.0	3.9	3.3
12	230	9.2	210	4.4		2.9	3.0	3.2
13	230	9.4	230	4.3		3.0	---	3.4
14	220	8.7	---	---		2.9	3.0	3.4
15	230	8.3	230	4.2		2.6	3.0	3.5
16	220	7.7				2.3	2.6	3.6
17	220	6.6					2.8	3.4
18	220	5.4					2.9	3.3
19	230	4.2					2.8	3.4
20	250	3.4					2.6	3.3
21	270	3.1					2.4	3.1
22	275	3.0						3.0
23	280	3.1						3.0

Time: 180.0°W.
Sweep: Manual operation.
Median values.

Table 69

(Revision of previously published data)

Victoria Beach, Canada (50.8°N, 96.5°W) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	3.3						
01	270	2.9					1.9	
02	280	2.5						
03	300	2.5					3.4	
04	300	2.5					3.0	
05	250	3.4			120	1.7		
06	285	4.1	220	3.6	110	2.2		
07	400	4.4	220	3.8	110	2.6		
08	400	4.8	200	4.0	110	2.8		
09	420	5.0	200	4.2	110	3.0		
10	380	5.2	200	4.4	110	3.2		
11	415	5.3	200	4.4	110	3.4		
12	400	5.6	200	4.6	110	3.4		
13	400	5.3	200	4.6	110	3.3		
14	400	5.6	200	4.5	110	3.2		
15	400	5.6	200	4.4	110	3.2		
16	360	5.5	200	4.3	110	3.0		
17	350	5.6	200	4.0	110	2.8		
18	320	5.6	210	3.8	110	2.6		
19	290	5.8	230	3.4	110	2.3		
20	250	5.7					3.4	
21	250	5.4						
22	250	4.6						
23	250	3.9						

Time: 90.0°W.
Median values.

Previously reported values appeared in Table 27, IRPL-F13.

TABLE 70

IONOSPHERE DATA-I

Washington D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $h'F_2$ for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	260	250	270	260	320	280	260	230	260	270	290	270	300	300	300	290	(280)	250	240	240	240	220	260	280
2	300	290	280	300	280	240	240	240	240	320	310	320	[300]^C	300	270	270	270	e	e	e	e	e	e	e
3	e	e	e	e	e	e	e	e	e	280	300	290	300	300	300	290	270	240	240	220	240	240	260	270
4	260	270	270	250	250	250	250	240	240	250	[260]^K	290	290	290	[270]^C	280	260	260	250	230	240	250	250	260
5	260	260	270	280	290	280	280	290	310	350	310	310	300	310	300	290	280	270	250	240	250	270	(290)	270
6	260	300	280	280	270	270	290	280	330	(310)	310	280	320	300	310	300	290	270	250	230	240	250	270	270
7	280	290	300	290^K	290^K	260^K	270^K	300^K	(310)^K	410^K	(410)^K	420^K	380^K	350^K	380^K	370^K	350^K	300^K	260^K	260^K	260^K	260	250	270
8	290	300	350	300	270	290	250	230	250	(270)	290	310	320	320	310	300	290	270	250	230	250	250	260	280
9	290	280	280	250	230	260	250	250	260	(310)	[310]^K	[340]^C	300	290	300	300	290	290	260	240	240	260	260	270
10	270	250	260	270	250	260	240	220	280	[330]^C	(320)	300	300	(310)	300	290	280	250	250	220	220	240	250	260
11	260	280	290	270	270	260	240	220	(290)	280	(300)	290	320	290	280	280	(260)	270	250	240	230	230	250	260
12	280	270	270	260	260	250	250	250	270	280	290	310	310	300	290	[290]^C	290	270	250	250	230	230	270	290
13	300	270	280	260	230	240	250	240	250	290	300	300	300	320	290	290	290	270	250	240	230	250	250	270
14	260	260	250	230	230	220	230	260	(270)	(280)	(350)	(330)	340	320	330^K	(350)^K	330^K	(290)^K	(290)^K	270^K	240^K	260^K	300^K	310^K
15	290^K	290^K	320^K	320^K	400^K	350^K	290^K	250^K	C^K	C^K	C^K	420^K	580^K	430^K	370^K	340^K	290^K	280^K	250	250	240	250	290	290
16	300	280	260	250	240	270	240	240	260	310	280	310	300	310	290	290	270	260	230	230	230	240	270	260
17	250	260	250	250	250	240	240	230	260	300	270	290	290	280	280	270	270	260	240	240	230	230	250	270
18	260	270	270	250	250	260	280	260	270	360	(380)	380	320	340	300	310	270	270	250	240	250	260	270	270
19	280	290	280	270	270	240	240	250	260	290	310	300	300	320	310	290	290	270	260	250	230	240	260	270
20	270	280	270	260	250	250	260	260	270	270	290	300	290	310	290	280	280	270	250	240	230	240	250	270
21	270	270	260	260	270	250	240	250	260	280	290	310	320	300	300	300	280	270	260	250	230	240	240	270
22	270	270	260	250	240	300	260	260	260	270	280	270	300	320	300	290	270	270	250	240	230	250	280	290
23	290^K	270^K	260^K	340^K	(370)^K	(450)^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	580^K	350^K	380^K	[350]^K_R	320^K	A^K	A^K	A^K
24	A^K	(400)^K	380^K	[370]^K_R	[400]^K_R	380^K	290^K	B^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	540^K	470^K	330^K	280^K	290^K	310^K	340^K	(320)^K
25	(430)^K	(460)^K	360^K	(350)^K	350^K	(310)^K	270^K	G^K	470^K	410^K	440^K	450^K	360^K	370^K	340^K	320^K	300^K	280^K	270	250	230	270	280	270
26	270	280	260	260	280	270	220	(330)	390	400	390	(380)	(360)	(370)	350	340	310	290	270	240	250	270	280	270
27	270	280	270	300	280	300	240^K	400^K	530^K	600^K	540^K	540^K	480^K	380^K	350^K	340^K	330^K	310^K	290^K	260	250	270	280	300
28	300	300	290	290	300	300	240	330	370	370	380	360	400	350	310	350	310	310	290	250	240	250	270	270
29	290	(300)	[330]^A	300	(300)	300	270	(370)	330	300	320	(320)	350	370	360	330	320	[300]^B	270	250	250	250	250	290
30	280	290	270	270	270	250	240	260	(270)	280	330	330	320	310	310	310	290	270	240	240	230	230	250	270
31																								
Sum																								
Median	275	280	270	270	270	260	250	250	270	300	310	310	320	315	300	300	290	270	250	240	240	250	260	270

TABLE 71

IONOSPHERE DATA-2

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of f^0F_2 in [illegible] for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6.0	5.3	4.3^F	3.7^F	(2.3)^F	3.3^F	4.8	6.0	7.4	(7.4)	8.2	(8.8)	9.8	9.8	9.8	9.3	9.4	9.6	9.6	(9.2)^J	7.8	6.4	(5.6)^F	5.2^F
2	5.0^F	4.5^F	4.5^F	(3.1)^F	(4.0)^F	(3.3)^F	4.8^F	6.8	7.6	(8.2)	9.4	10.3	[10.2]	(10.4)	10.5	(10.0)	9.3	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	8.6	9.6	10.3	10.7	10.4	11.0	11.2	(10.6)	10.6	(10.1)	9.0	8.6	7.8	6.8	6.4^F
4	6.3^F	5.7	5.4	5.0	4.3^F	4.1	5.2	7.5	8.8	9.8	[10.2]^C	10.6	11.0	11.2	[11.1]^C	10.6	10.2	9.8	9.7	(9.2)	(8.4)	7.8	7.4	7.1
5	(6.4)	5.7	5.0	4.6	4.3	4.1	4.8	(5.7)	5.9	6.8	(8.4)	9.2	10.4	10.6	10.4	9.8	9.0	8.8	8.0	7.6^J	7.0	(6.4)^J	(6.5)^J	(6.0)
6	(5.4)	5.4	5.3	5.1	4.9	4.3	4.7	5.6	(7.1)^J	7.4	8.8	9.1^J	9.2	9.4	9.7	9.8	9.5	(9.7)	(9.2)	8.4	(7.1)	7.0	(7.2)^J	(5.9)
7	5.4	5.2	5.1	5.2^K	5.2^K	4.9^K	5.0^K	5.4^K	5.8^K	6.0^J_K	6.4^K	6.6^K	6.9^K	7.0^K	6.8^K	6.6^K	6.6^K	6.7^K	6.5^K	(6.4)^K	(6.3)^K	6.6	(5.7)^F	(5.2)^F
8	(4.9)^F	(4.5)^F	(3.8)^F	4.3	4.2	4.1	5.7	6.8	7.4	7.6	8.4	10.0	9.8	9.8	9.6	9.4	9.2	8.8	9.0	7.8	7.6	(6.8)^J	6.4	(6.2)
9	6.0	5.8	5.7	5.6	4.9	3.8^F	4.8^F	6.6	7.5	(9.1)	[9.8]^C	(9.4)	11.0	11.0	10.6	10.0	9.2	9.1	8.0	7.9	7.2	(6.3)	6.0	5.7
10	5.4	4.7	3.8^F	3.6^F	3.5^F	3.2^F	5.1	6.4	6.6	[7.2]^C	(7.6)	8.6	8.8	9.5	10.4	(10.4)	(10.3)	10.0	(9.7)	8.9	7.6	(7.1)	(6.4)	(6.1)
11	(6.0)^J	5.4^J	C	C	[4.7]^C	[4.1]^C	5.8^J	6.8	7.5	8.2	8.6	9.4	10.0	10.3	10.5	(10.2)	9.6	9.2	(9.2)	9.2	8.0	7.2	6.6	(6.6)
12	(5.8)	5.7	5.4	5.1	4.9^F	4.2^F	5.5	6.8	8.0	9.0	9.2	8.9	9.4	10.0	9.6	[9.5]^C	9.3	9.5	9.4	9.6	8.2	7.4	6.5	(6.2)
13	6.0	5.8^F	5.5	5.4	5.0	3.7	5.8	6.9	7.5	8.4	9.0	9.2	9.8	9.5	9.4	9.0	9.2	9.2	8.8	8.6	7.8	7.2	(6.0)^J	5.8
14	5.5	5.3	5.2	4.4	(3.9)	2.9	5.3	7.7	7.6	(7.7)	8.1	8.8	9.3	8.2	7.6^K	7.2^K	7.6^K	7.1^K	6.9^K	7.6^K	(7.3)^K	(6.1)^J	C^K	C^K
15	C^K	C^K	(2.6)^F_K	2.5^F_K	2.2^F_K	2.2^F_K	(3.1)^A	C^K	C^K	C^K	C^K	5.0^K	5.0^K	5.7^K	5.9^K	6.9^K	6.8^K	6.5^K	6.8	6.7	5.9	5.1	4.3	4.1
16	4.1	4.3	4.1	3.8^F	2.9^F	2.6^F	5.1	6.6	7.0	8.3	9.0	9.3	9.8	10.0	10.4	10.4	(9.8)	9.2	8.8	8.4	8.0	(7.1)	(6.8)^J	6.7
17	6.2	5.7	5.2	4.7	4.5	4.1	5.7	6.4	7.1	8.1	8.1	9.4	9.8	9.8	9.6	9.2	9.0	8.7	8.2	8.3	(8.2)	7.2	(6.3)	(5.6)
18	5.7	5.2	4.9^F	(4.4)^F	3.3^F	(3.3)^F	5.0	5.9	5.4	5.8	6.4	6.8	7.5	7.8	8.2	8.0	7.8	7.4	7.0	6.6	6.2	5.4	5.3	5.1
19	4.7	4.5	4.3	4.0^F	3.9^E	3.8^E	5.3	6.2	6.7	7.4	7.8	8.1	7.8	8.0	8.2	8.0	8.0	8.3	7.9	(8.0)	7.6	(6.7)	(6.1)	(5.6)
20	4.6	5.0^F	4.9^F	4.9	4.5	4.5^F	5.7	6.6	7.5	7.8	8.6	9.4	9.0	8.9	9.3	9.0	8.5	8.4	8.6	8.4	7.6	(6.4)	(6.0)	(5.9)
21	4.7	4.7	5.1^F	4.7^F	4.5^F	4.5^F	5.6	6.8	7.1	7.8	8.4	8.1	8.9	9.2	9.2	8.8	8.7	8.4	8.3	8.6	7.4	(6.7)	(6.3)	(5.9)
22	5.5	5.3	5.0	4.4^F	3.6^F	(3.0)	5.0^F	(6.7)^F	8.1	9.2	10.0	9.6	10.0	10.2	10.8	(10.6)	9.8	9.4	(9.1)	8.7	7.5	6.9	(6.3)	6.1
23	(4.0)^A	5.0^K	(4.8)^F	(1.9)^F_K	1.5^F_K	[1.6]^F_K	<2.7^G_K	<3.5^G_K	<3.8^G_K	<4.1^G_K	<4.3^G_K	<4.2^G_K	<4.3^G_K	<4.3^G_K	<4.3^G_K	<4.1^G_K	4.7^K	6.8^K	(6.0)^K	[4.0]^A_K	3.0^F_K	A^K	A^K	[2.0]^A_K
24	[1.5]^A_K	1.5^F_K	1.7^F_K	[1.8]^A_K	1.7^K	2.1^F_K	2.9^K	B^K	<3.9^G_K	<4.1^G_K	<4.3^G_K	<4.3^G_K	<4.4^G_K	<4.4^G_K	<4.4^G_K	<4.2^G_K	4.6^K	4.6^K	4.6^K	4.2^K	4.2^K	3.1^F_K	2.7^F_K	1.9^F_K
25	[1.6]^F_K	(1.6)^F_K	(1.5)^F_K	(1.2)^F_K	1.2^F_K	(1.9)^F_K	3.6^F_K	<4.2^G_K	4.7^K	5.1^K	5.3^K	5.4^K	6.0^K	6.3^K	6.5^K	6.8^K	6.5^K	6.6^K	6.8	6.2	5.5	4.9	4.8	4.5^F
26	4.1	3.6^F	3.1^F	2.6^F	2.1^F	2.7^F	4.3	5.1	5.3	(5.7)^J	6.3	(6.4)	6.8	7.0	7.4	7.4	7.4	7.4	7.8	7.4	(6.8)	(6.1)	5.7	5.5
27	5.1	4.8	3.9	3.4	2.7^F	2.9	4.1^K	4.5^K	4.5^K	4.8^K	5.1^K	5.3^K	(5.9)^K	6.3^K	6.6^K	6.7^K	6.4^K	6.3^K	6.3^K	6.2	6.0	5.6	4.9	4.7
28	4.5	4.4	4.0	3.6	3.1^F	2.9	4.3	5.3	5.7	6.2	6.6	(6.8)^J	7.4	8.2	8.4	7.9	7.8	7.3	7.6	(7.2)	(6.3)	5.7	5.2	4.3
29	3.8	3.7	(3.6)	2.9	2.4^F	3.6	5.2	5.3	6.1	6.6	6.9	(6.8)	7.2	7.6	7.5	7.6	7.6	[7.7]^B	7.8	7.5	7.4	6.4	5.3	5.3
30	5.1	5.0	4.6	4.3	4.0	4.1^E	6.0	7.2	7.4	7.7	8.4	9.5	9.5	10.0	9.8	9.5	9.1	8.7	8.4	8.5	(7.6)^J	6.8	(6.3)	5.8
31																								
Sum																								
Median	5.5	5.1	4.6	4.3	3.9	[illegible]	[illegible].0	6.4	7.1	7.6	8.4	8.8	9.2	9.4	9.5	9.1	9.0	8.7	8.2	8.0	7.5	6.6	6.1	5.8

TABLE 70

IONOSPHERE DATA-I

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $h'F_2$ in km for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	260	250	270	260	320	280	260	230	260	270	290	270	300	300	300	290	(280)	250	240	240	240	220	260	280
2	300	280	280	300	280	240	240	240	240	320	310	320	[300]^C	300	270	270	270	e	e	e	e	e	e	e
3	e	e	e	e	e	e	e	e	e	280	300	290	300	300	300	290	270	240	240	220	240	240	260	270
4	260	270	270	250	250	250	250	240	240	250	[260]^C	290	290	290	[270]^C	280	260	260	250	230	240	250	250	260
5	260	260	270	280	290	280	280	290	310	350	310	310	300	310	300	290	280	270	250	240	250	270	(290)	270
6	260	300	280	280	270	270	290	280	330	(310)	310	280	320	300	310	300	290	270	250	230	240	250	270	270
7	280	290	300	290^K	290^K	260^K	270^K	300^K	(310)^K	410^K	(410)^K	420^K	380^K	350^K	380^K	370^K	350^K	300^K	260^K	260^K	260^K	260	250	270
8	290	300	350	300	270	290	250	230	250	(270)	290	310	320	320	310	300	290	270	250	230	250	250	260	280
9	290	280	280	250	230	260	250	250	260	(310)	[310]^C	[340]^C	300	290	300	300	290	290	260	240	240	260	260	270
10	270	250	260	270	250	260	240	220	280	[330]^C	(320)	300	300	(310)	300	290	280	250	250	220	220	240	250	260
11	260	280	290	270	270	260	240	220	(290)	280	(300)	290	320	290	280	280	(260)	270	250	240	230	230	250	260
12	280	270	270	260	260	250	250	250	270	280	290	310	310	300	290	[290]^C	290	270	250	250	230	230	270	290
13	300	270	280	260	230	240	250	240	250	290	300	300	300	320	290	290	290	270	250	240	230	250	250	270
14	260	260	250	230	230	220	220	260	(270)	(280)	(350)	(380)	340	320	330^K	(350)^K	330^K	(290)^K	(290)^K	270^K	240^K	260^K	300^K	310^K
15	290^K	290^K	320^K	320^K	400^K	350^K	290^K	250^K	C^K	C^K	C^K	420^K	580^K	430^K	370^K	340^K	290^K	280^K	250	250	240	250	290	290
16	300	280	260	250	240	270	240	240	260	310	280	310	300	310	290	290	270	260	230	230	230	240	270	260
17	250	260	250	250	250	240	240	230	260	300	270	290	290	280	280	270	270	260	240	240	230	230	250	270
18	260	270	270	250	250	260	280	260	270	360	(380)	380	320	340	300	310	270	270	250	240	250	260	270	270
19	280	290	280	270	270	240	240	250	260	290	310	300	300	320	310	290	290	270	260	250	230	240	260	270
20	270	280	270	260	250	250	260	260	270	270	290	300	290	310	290	280	280	270	250	240	230	240	250	270
21	270	270	260	260	270	250	240	250	260	280	290	310	320	300	300	300	280	270	260	250	230	240	240	270
22	270	270	260	250	240	300	260	260	260	270	280	270	300	320	300	290	270	270	250	240	230	250	280	290
23	290^K	270^K	260^K	340^K	(370)^K	(450)^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	580^K	350^K	380^K	[350]^K_B	320^K	A^K	A^K	A^K
24	A^K	(400)^K	380^K	[370]^K_B	[400]^K_B	380^K	290^K	B^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	G^K	540^K	470^K	330^K	280^K	290^K	310^K	340^K	(320)^K
25	(430)^K	(460)^K	360^K	(350)^K	350^K	(310)^K	270^K	G^K	470^K	410^K	440^K	450^K	360^K	370^K	340^K	320^K	300^K	280^K	270	250	230	270	280	270
26	270	280	260	260	280	270	220	(330)	390	400	390	(380)	(360)	(370)	350	340	310	290	270	240	250	270	280	270
27	270	280	270	300	280	300	240^K	400^K	530^K	600^K	540^K	540^K	480^K	380^K	350^K	340^K	330^K	310^K	290^K	260	250	270	280	300
28	300	300	290	290	300	300	240	330	370	370	380	360	400	350	310	350	310	310	290	250	240	250	270	270
29	290	(300)	[330]^A	300	(300)	300	270	(370)	330	300	320	(320)	350	370	360	330	320	[300]^B	270	250	250	250	250	290
30	280	290	270	270	270	250	240	260	(270)	280	330	330	320	310	310	310	290	270	240	240	230	230	250	270
31	—																							
Sum																								
Median	275	280	270	270	270	260	250	250	270	300	310	310	320	315	300	300	290	270	250	240	240	250	260	270

TABLE 71

IONOSPHERE DATA-2

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of f^0F_2 in Mc for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6.0	5.3	4.3^{F}	3.7^{F}	(2.3)^{F}	3.3^{F}	4.8	6.0	7.4	(7.4)	8.2	(8.8)	9.8	9.8	9.8	9.3	9.4	9.6	9.6	(9.2)^{J}	7.8	6.4	(5.6)^{F}	5.2^{F}
2	5.0^{F}	4.5^{F}	4.5^{F}	(3.1)^{F}	(4.0)^{F}	(3.3)^{F}	4.8^{F}	6.8	7.6	(8.2)	9.4	10.3	[10.2]	(10.4)	10.5	(10.0)	9.3	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	8.6	9.6	10.3	10.7	10.4	11.0	11.2	(10.6)	10.6	(10.1)	9.0	8.6	7.8	6.8	6.4^{F}
4	6.3^{F}	5.7	5.4	5.0	4.3^{F}	4.1	5.2	7.5	8.8	9.8	[10.2]^{C}	10.6	11.0	11.2	[11.1]^{C}	10.6	10.2	9.8	9.7	(9.2)	(8.4)	7.8	7.4	7.1
5	(6.4)	5.7	5.0	4.6	4.3	4.1	4.8	(5.7)	5.9	6.8	(8.4)	9.2	10.4	10.6	10.4	9.8	9.0	8.8	8.0	7.6^{J}	7.0	(6.4)^{J}	(6.5)^{J}	(6.0)
6	(5.9)	5.4	5.3	5.1	4.9	4.3	4.7	5.6	(7.1)^{J}	7.4	8.8	9.1^{J}	9.2	9.4	9.7	9.8	9.5	(9.7)	(9.2)	8.4	(7.1)	7.0	(6.2)^{J}	(5.9)
7	5.4	5.2	5.1	5.2^{K}	5.2^{K}	4.9^{K}	5.0^{K}	5.4^{K}	5.8^{K}	6.0$^{J}_{K}$	6.4^{K}	6.6^{K}	6.9^{K}	7.0^{K}	6.8^{K}	6.6^{K}	6.6^{K}	6.7^{K}	6.5^{K}	(6.4)^{K}	(6.3)^{K}	6.6	(5.7)^{F}	(5.2)^{F}
8	(4.9)^{F}	(4.5)^{F}	(3.8)^{F}	4.3	4.2	4.1	5.7	6.8	7.4	7.6	8.4	10.0	9.8	9.8	9.6	9.4	9.2	8.8	9.0	7.8	7.6	(6.8)^{J}	6.4	(6.2)
9	6.0	5.8	5.7	5.6	4.9	3.8^{F}	4.8^{F}	6.6	7.5	(9.1)	[9.8]^{C}	(9.4)	11.0	11.0	10.6	10.0	9.2	9.1	8.0	7.9	7.2	(6.3)	6.0	5.7
10	5.4	4.7	3.8^{F}	3.6^{F}	3.5^{F}	3.2^{F}	5.1	6.4	6.6	[7.2]^{C}	(7.6)	8.6	8.8	9.5	10.4	(10.4)	(10.3)	10.0	(9.7)	8.9	7.6	(7.1)	(6.4)	(6.1)
11	(6.0)^{J}	5.4^{J}	C	C	[4.7]^{C}	[4.1]^{C}	5.8^{J}	6.8	7.5	8.2	8.6	9.4	10.0	10.3	10.5	(10.2)	9.6	9.2	(9.2)	9.2	8.0	7.2	6.6	(6.6)
12	(5.8)	5.7	5.4	5.1	4.9^{F}	4.2^{F}	5.5	6.8	8.0	9.0	9.2	8.9	9.4	10.0	9.6	[9.5]^{C}	9.3	9.5	9.4	9.6	8.2	7.4	6.5	(6.2)
13	6.0	5.8^{F}	5.5	5.4	5.0	3.7	5.8	6.9	7.5	8.4	9.0	9.2	9.8	9.5	9.4	9.0	9.2	9.2	8.8	8.6	7.8	7.2	(6.0)^{J}	5.8
14	5.5	5.3	5.2	4.4	(3.9)	2.9	5.3	7.7	7.6	(7.7)	8.1	8.8	9.3	8.2	7.6^{K}	7.2^{K}	7.6^{K}	7.1^{K}	6.9^{K}	7.6^{K}	(7.3)^{K}	(6.1)^{J}	C^{K}	C^{K}
15	C^{K}	C^{K}	(2.6)$^{F}_{K}$	2.5$^{F}_{K}$	2.2$^{F}_{K}$	2.2$^{F}_{K}$	(3.1)^{K}	C^{K}	C^{K}	C^{K}	C^{K}	5.0^{K}	5.0^{K}	5.7^{K}	5.9^{K}	6.9^{K}	6.8^{K}	6.5^{K}	6.8	6.7	5.9	5.1	4.3	4.1
16	4.1	4.3	4.1	3.8^{F}	2.9^{F}	2.6^{F}	5.1	6.6	7.0	8.3	9.0	9.3	9.8	10.0	10.4	10.4	(9.8)	9.2	8.8	8.4	8.0	(7.1)	(6.8)^{J}	6.7
17	6.0	5.7	5.2	4.7	4.5	4.1	5.7	6.4	7.1	8.1	8.1	9.4	9.8	9.8	9.6	9.2	9.0	8.7	8.2	8.3	(8.2)	7.2	(6.3)	(5.6)
18	5.7	5.2	4.9^{F}	(4.4)^{F}	3.3^{F}	(3.3)^{F}	5.0	5.9	5.4	5.8	6.4	6.8	7.5	7.8	8.2	8.0	7.8	7.4	7.0	6.6	6.2	5.4	5.3	5.1
19	4.7	4.5	4.3	4.0^{F}	3.9^{F}	3.8^{F}	5.3	6.2	6.7	7.4	7.8	8.1	7.8	8.0	8.2	8.0	8.0	8.3	7.9	(8.0)	7.6	(6.7)	(6.1)	(5.6)
20	(5.2)	5.0^{F}	4.9^{F}	4.9	4.5	4.5^{F}	5.7	6.6	7.5	7.8	8.6	9.4	9.0	8.9	9.3	9.0	8.5	8.4	8.6	8.4	7.6	(6.4)	(6.0)	(5.9)
21	(5.7)	(5.7)	5.1^{F}	4.7^{F}	4.5^{F}	4.5^{F}	5.6	6.8	7.1	7.8	8.4	8.1	8.9	9.2	9.2	8.8	8.7	8.4	8.3	8.6	7.9	(6.7)	(6.3)	(5.9)
22	(5.5)	(5.5)	5.0	4.4^{F}	3.6^{F}	(3.0)	5.0^{F}	(6.7)^{F}	8.1	9.2	10.0	9.6	10.0	10.2	10.8	(10.6)	9.8	9.4	(9.1)	8.7	7.5	6.9	(6.3)	6.1
23	(6.0)^{K}	5.0^{K}	(4.8)$^{F}_{K}$	(1.9)$^{F}_{K}$	1.5$^{F}_{K}$	[1.6]$^{F}_{K}$	<2.7$^{G}_{K}$	<3.5$^{G}_{K}$	<3.8$^{G}_{K}$	<4.1$^{G}_{K}$	<4.3$^{G}_{K}$	<4.2$^{G}_{K}$	<4.3$^{G}_{K}$	<4.3$^{G}_{K}$	<4.3$^{G}_{K}$	<4.1$^{G}_{K}$	4.7^{K}	6.8^{K}	(6.0)^{K}	[4.0]$^{A}_{K}$	3.0$^{F}_{K}$	A^{K}	A^{K}	[2.0]$^{A}_{K}$
24	[1.5]$^{A}_{K}$	1.5$^{F}_{K}$	1.7$^{F}_{K}$	[1.8]$^{A}_{K}$	1.7^{K}	2.1$^{F}_{K}$	2.9^{K}	B^{K}	<3.9$^{G}_{K}$	<4.1$^{G}_{K}$	<4.3$^{G}_{K}$	<4.3$^{G}_{K}$	<4.4$^{G}_{K}$	<4.4$^{G}_{K}$	<4.4$^{G}_{K}$	<4.2$^{G}_{K}$	4.6^{K}	4.6^{K}	4.6^{K}	4.2^{K}	4.2^{K}	3.1$^{F}_{K}$	2.7$^{F}_{K}$	1.9$^{F}_{K}$
25	[1.6]$^{F}_{K}$	(1.6)$^{F}_{K}$	(1.5)$^{F}_{K}$	(1.2)$^{F}_{K}$	1.2$^{F}_{K}$	(1.9)$^{F}_{K}$	3.6$^{F}_{K}$	<4.2$^{G}_{K}$	4.7^{K}	5.1^{K}	5.3^{K}	5.4^{K}	6.0^{K}	6.3^{K}	6.5^{K}	6.8^{K}	6.5^{K}	6.6^{K}	6.8	6.2	5.5	4.9	4.8	4.5^{F}
26	4.1	3.6^{F}	3.1^{F}	2.6^{F}	2.1^{F}	2.7^{F}	4.3	5.1	5.3	(5.7)^{J}	6.3	(6.4)	6.8	7.0	7.4	7.4	7.4	7.4	7.8	7.4	(6.8)	(6.1)	5.7	5.5
27	5.1	4.8	3.9	3.4	2.7^{F}	2.9	4.1^{K}	4.5^{K}	4.5^{K}	4.8^{K}	5.1^{K}	5.3^{K}	(5.9)^{K}	6.3^{K}	6.6^{K}	6.7^{K}	6.4^{K}	6.3^{K}	6.3^{K}	6.2	6.0	5.6	4.9	4.7
28	4.5	4.4	4.0	3.6	3.1^{F}	2.9	4.3	5.3	5.7	6.2	6.6	(6.8)^{J}	7.4	8.2	8.4	7.9	7.8	7.3	7.6	(7.2)	(6.3)	5.7	5.2	4.3
29	3.8	3.7	(3.6)	2.9	2.4^{F}	3.6	5.2	5.3	6.1	6.6	6.9	(6.8)	7.2	7.6	7.5	7.6	7.6	[7.7]^{C}	7.8	7.5	7.4	6.4	5.3	5.3
30	5.1	5.0	4.6	4.3	4.0	4.1^{F}	6.0	7.2	7.4	7.7	8.4	9.5	9.5	10.0	9.8	9.5	9.1	8.7	8.4	8.5	(7.6)^{J}	6.8	(6.3)	5.8
31																								
Sum																								
Median	5.5	5.1	4.6	4.3	3.9	[illegible]	[illegible].0	6.4	7.1	7.6	8.4	8.8	9.2	9.4	9.5	9.1	9.0	8.7	8.2	8.0	7.5	6.6	6.1	5.8

TABLE 72

IONOSPHERE DATA-3

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Half hourly values of f^0F_2 in Mc for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75°W MERIDIAN

Day	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
1	5.9	4.7	4.1 F	3.5 F	2.9 F	3.6	5.7	7.2	(7.2)	8.2	(8.4)	9.4	9.5	10.0	9.7	9.2	8.6	9.4	9.2	8.4	7.2	6.2	5.3 F	4.9 F
2	4.8 F	4.6 F	(4.3) F	(3.5) F	3.5 F	3.4 F	6.4	7.1	7.8	9.0	(9.0)	10.6	(10.3)	(10.4)	(10.2)	(9.2)	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	9.0	10.0	10.5	10.2	10.8	11.0	11.0	10.6	10.4	(9.9)	8.6	8.0	7.4	6.8	6.4
4	6.0	5.4	5.1	4.6 F	4.2 F	4.2 F	6.2	8.8	9.6	[10.0] C	10.4	10.7	11.2	11.2	10.9	10.2	10.0	(9.8)	(9.3)	8.8	7.8	7.6	7.2	6.8
5	6.0	5.2	4.8	4.4	4.3	4.1	5.2	(5.6)	6.3	7.8	9.0	9.8	10.2	(10.4)	10.4	9.8	9.0	8.5	7.8	(7.2)	(6.6) J	(6.3)	(6.3) J	(5.8)
6	5.3	5.5	5.2	5.0	4.4	4.2	5.3	(6.1) J	7.2	8.4	9.0	9.3	9.4	9.6	9.6	9.7	9.6	9.2	(9.0)	7.6	(7.1)	(6.4) J	(6.2) J	5.7
7	5.3	5.2	5.0	5.2 K	5.2 K	4.8 K	5.1 K	5.6 K	5.8 K	6.2 K	6.6 K	6.8 K	6.9 K	6.8 K	6.7 K	6.6 K	6.6 K	6.6 K	6.4 K	6.4 K	(6.5) K	6.3	(5.2) F	(4.7) F
8	(4.6) F	4.1 F	(4.2) F	4.4	4.1	4.7	6.6	7.4	7.6	8.2	9.2	9.7	9.8	9.8	9.6	9.2	9.0	9.0	8.6	7.8	(7.3)	6.8	6.4	6.2
9	5.8 F	5.7	5.6	5.2	4.2	4.0 F	6.0 F	7.0	7.6	(9.6)	(9.8)	(10.3)	(11.2)	10.9	10.4	9.4	9.0	8.8	7.9	7.5	6.8	6.0	5.9	5.6
10	5.0	4.3	3.8 F	3.7 F	3.3 F	3.9 F	6.0	6.6	7.0	[7.4] C	[8.3] C	8.8	9.1	10.3	(10.4)	(10.3)	10.1	9.8	(8.2)	8.2	(7.4)	(6.8) J	(6.4)	(6.0)
11	5.7 J	(5.1) J	C	C	[4.2] C	[4.5] C	6.5	7.0	8.2	8.8	9.2	9.7	10.1	10.5	10.3	9.8	9.4	9.2	(9.3)	8.8	7.6	6.6 J	6.5	6.0
12	(5.7)	5.7	5.4	4.9 F	4.5 F	4.6 F	6.2	7.7	8.4	9.4	9.2	9.0	9.8	10.1	[9.5] C	9.2	9.4	9.2	(9.3)	8.7	7.9	6.5 F	6.0	6.3
13	5.8 F	5.5	5.3	5.3	3.9	4.5	6.4	7.0	8.0	8.6	9.0	9.5	9.6	9.5	[9.3] C	8.9	9.2	8.8	8.7	8.5	7.6	6.8	6.0	5.7
14	5.4	5.2	4.9	4.3	3.4	4.0	6.3	7.6	7.7	8.0	7.7	9.4	9.4	7.8	7.6 K	7.6 K	7.4 K	6.9 K	7.2 K	7.9 K	6.9 K	(5.4) J K	C K	C K
15	C K	C K	2.2 F K	2.3 F K	2.2 F K	2.7 F K	C K	C K	C K	C K	C K	5.1 K	5.3 K	(5.7) K	6.3 K	7.0 K	6.7 K	6.7 K	6.8	6.4	5.4	4.6	4.3	4.1
16	4.2	4.2	3.9 F	3.3	2.4 F	3.9	6.0	6.7	7.6	8.0	9.0	9.6	9.9	10.2	10.2	10.0	9.2	9.3	8.6	8.2	7.6	6.5	6.8	6.7
17	5.8	5.6	5.0	4.6	4.3	4.7	6.1	6.8	7.6	8.0	8.8	9.7	(9.8)	9.8	9.6	9.0	8.8	8.4	(8.2)	8.3	7.8	6.4	(6.0)	(5.8) J
18	5.3	5.0 F	4.9 F	3.9 F	(3.5) F	4.0 F	5.6	5.7	(5.7)	(6.0)	(6.5)	7.2	7.3	8.2	7.8	8.2	7.5	7.1	6.7	6.4	5.7	5.4	5.2	5.0
19	4.6	4.5	4.2 F	4.0 F	3.9 F	4.4	5.8	6.6	7.0	7.5	7.9	8.2	7.8	8.0	8.4	7.9	8.3	8.2	7.8	8.2	7.0	(6.4)	(5.8)	(5.6)
20	5.0 F	4.9 F	4.9	4.7 F	4.4 F	5.0	6.3	7.3	7.6	8.4	8.9	9.1	8.9	9.3	9.2	8.9	8.5	8.6	8.6	8.2	6.9	(6.4)	(6.0)	(5.8)
21	(5.5)	5.2	5.0 F	4.5 F	4.6 F	4.9	6.4	7.1	7.4	7.9	8.2	8.4	9.2	9.4	9.0	8.8	8.5	8.3	8.7	8.5	7.4	6.8	(6.0)	(5.6) J
22	5.4	5.2	4.7	(4.2) F	(3.2) F	4.0	6.3	7.2	(8.6)	9.9	9.7	9.8	10.1	10.2	10.9	10.4	9.6	9.4	9.0	8.3	(7.0) J	6.5	6.1	6.0
23	5.8 K	4.2 K	(2.1) F K	1.6 F K	1.9 F K	< 2.4 G K	< 3.1 G K	< 3.6 G K	< 3.9 G K	< 4.2 G K	< 4.2 G K	< 4.2 G K	< 4.3 G K	< 4.3 G K	< 4.3 G K	< 4.2 G K	5.1 K	(7.6) K	[5.0] K	3.5 F K	A K	B K	(2.2) F K	1.8 F K
24	(1.6) F K	1.6 F K	[1.7] F K	(1.8) F K	(1.6) F K	2.8 K	B K	< 3.8 G K	< 4.0 G K	< 4.2 G K	< 4.3 G K	< 4.3 G K	< 4.3 G K	< 4.3 G K	< 4.3 G K	< 4.1 G K	4.6 K	4.7 K	4.5 K	4.2 K	3.6 F K	2.8 F K	2.2 F K	[1.7] F K
25	(1.7) F K	(1.6) F K	1.3 F K	1.2 F K	(1.2) F K	< 2.9 K	< 3.9 G K	4.5 K	4.9 K	(5.0) K	5.3 K	6.0 K	5.8 K	6.6 K	6.5 K	6.7 K	6.5 K	6.7 K	6.6	5.8	5.3	4.9	4.7	4.3
26	3.8 F	3.5 F	2.9 F	2.3 F	2.1 F	3.8	4.8	5.2	5.6	5.8	(6.3)	6.6	6.7	7.2	7.4	7.4	7.6	7.3	8.0	7.2	(6.1)	5.8	5.8	5.4
27	4.8	4.4	3.6	2.9	2.8	3.6	4.4 K	< 4.4 G K	4.6 K	4.9 K	5.2 K	5.6 K	(6.2) K	6.4 K	6.7 K	6.6 K	6.4 K	6.4 K	6.4 K	6.3	5.6	5.3	4.8	4.6
28	4.6	(4.2)	4.0	3.5 F	2.9 F	3.7	5.0	5.3	6.2	6.3	6.9	(7.1) J	7.9	8.6	8.0	8.0	7.8	7.2	7.6	6.8	6.1	5.4	4.8	4.1
29	3.8	3.5	3.6	2.6 F	2.9 F	4.5	5.4	5.9	(6.1)	7.0	7.0	7.0	7.4	7.6	7.7	7.6	7.5	7.8	7.1	7.4	6.9	5.9	5.3	4.5
30	4.9	4.8	4.4	4.2 F	4.0	4.7 K	6.4	(7.4)	7.8	8.1	9.0	9.6	9.8	9.9	9.8	9.3	9.1	8.6	8.6	8.2	7.3	6.5	(6.0)	(5.6)
31																								
Num																								
Median	5.3	4.8	4.3	4.1	3.5	4.0	6.0	6.8	7.3	8.0	8.8	9.2	9.4	9.6	9.4	9.0	8.8	8.5	8.2	7.9	7.0	6.4	6.0	5.6

TABLE 73

IONOSPHERE DATA-4

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $h'F_1$ in [illegible] for April (Month) 1946

Records measured by: JMC and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									240	210	210	220	220	220	220	220	230							
2										[230]^{C}	210	[230]^{C}	C	C	230	220	220	C						
3									C	210	210	210	220	200	240	230	[240]^{A}							
4									230	220	[210]^{C}	210	230	200	[220]^{C}	220	220	230						
5								250	230	220	210	220	(200)	210	220	220	220	240						
6								240	220	210	200	220	200	210^{H}	210	220	220	240						
7							K	230^{K}	(230)^{K}	230^{K}	210^{K}	210^{K}	220^{K}	220^{K}	230^{K}	220^{K}	230^{K}	240^{K}	K					
8									230	210	210	220	230	220	210	220	230	240						
9									220	C	C	C	240	(240)	(240)	220	220	230						
10									220	[240]^{C}	240	230	210	(210)	210	230^{H}	220	230						
11									C	C	C	180^{H}	230	210	220	220	230	230						
12								220	220	220	200	200	220	200	230	[220]^{C}	230	240						
13									210	210	200	220	220	210	210	210	230	240						
14								250	C	C	C	C	C	C	C^{K}	C^{K}	C^{K}	(230)^{K}	250^{K}					
15							K	250^{K}	C^{K}	C^{K}	C^{K}	200^{K}	210^{K}	240^{K}	230^{K}	220^{K}	220^{K}	230^{K}						
16									230	210	200	(220)	200^{H}	200	(220)	210	210	240						
17									230	210	200	200	210	210	220	200	240	230						
18							250	230	220	200	210	210	200	200^{H}	210	220	220	220						
19								240	210	210	220	200	200^{H}	200	220	210	210	230	250					
20							240	230	220	210	200	200	200	220	220	220	220	230						
21								230	220	200	210	220	210	(220)	220	220	220	230	240					
22								230	210	210	210	210	210	230	220	210^{H}	220	230						
23							(310)^{K}	250^{K}	250^{K}	220^{K}	240^{K}	220^{K}	210^{K}	240^{K}	220^{K}	240^{K}	230^{K}	250^{K}	K					
24							K	B^{K}	230^{K}	210^{K}	180^{K}	(200)^{K}	180^{K}	200^{K}	200^{K}	220^{K}	230^{K}	230^{K}	240^{K}					
25							K	240^{K}	210^{K}	200^{K}	200^{K}	200^{K}	200^{K}	210^{K}	220^{K}	210^{K}	210^{K}	210^{K}	230					
26								210	210	180	210^{H}	200	(180)	200	200^{H}	220	(210)	230	240					
27							K	260^{K}	220^{K}	200^{K}	180^{K}	200^{K}	200^{K}	240^{K}	220^{K}	(240)^{K}	220^{K}	240^{K}	260^{K}					
28								230	220	220	220	210	230	(240)	220	230	220	230	260					
29							250	250	220	210	200	200^{H}	220	220	220	220	220	[230]^{B}	240					
30								230	210	200	(220)	200	210	200^{H}	220	210	230	(250)						
31																								
Sum																								
Median								235	220	210	210	210	210	210	220	220	220	230	240					

TABLE 74

IONOSPHERE DATA - 5

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of f^oF_1 in {Mc} for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									L	(4.6)	4.8	[5.0]^L	(5.2)	L	L	5.0	L							
2										L	5.3	[5.4]^L	C	C	L	L	L	C						
3									C	L	C	L	L	L	L	L	L							
4									C	L	C	5.5	[5.3]^L	5.0	C	L	L	L						
5								L	L	5.2	5.1	[5.3]^L	(5.5)	[5.3]^L	5.0	(5.0)	(4.5)	L						
6								L	–	L	5.1	[5.3]^L	[5.5]^L	[5.4]^H_K	5.1	(5.0)	–	L						
7							K	L^K	L^K	L^K	4.4^K	5.0^K	5.0^K	5.0^K	5.0^K	4.9^K	4.6^K	L^K	L						
8									L	L	[5.1]^L	5.2	5.3	(5.3)	[5.0]^L	5.0	–	L						
9									L	(5.2)	C	C	L	L	5.0	(4.8)	–	L						
10									(4.6)	[5.0]^L	[5.1]^L	[5.2]^L	L	C	L	LH	–	L						
11									C	C	C	5.3^H	C	L	(5.0)	L	L	L						
12								L	L	(5.0)	4.9	[5.0]^L	(5.5)	(5.2)	(5.0)	[5.0]^L	L	L						
13									L	5.0	(5.1)	[5.1]^L	5.0	5.1	5.0	L	L	L						
14								L	C	C	C	C	C	C	C^K	C^K	C^K	C^K	C^K					
15							K	C^K	C^K	C^K	C^K	4.4^K	4.5^K	4.6^K	4.7^K	4.7^K	[4.2]^L_K	L^K						
16									L	5.0	(4.8)	(5.3)	5.1^H	5.2	5.0	4.9	(4.6)	L						
17									L	5.0	(4.9)	5.0	5.1	4.9	5.0	4.8	L	L						
18							–	L	L	5.0	5.0	5.2	5.1	5.1^H	5.0	(4.9)	(4.4)	L						
19								L	L	4.9	5.1	5.2	(5.2)^H	5.1	5.0	5.0	(4.9)	L	L					
20							L	L	L	[4.8]^L	5.0	5.2	5.2	5.2	5.0	4.9	L	L						
21								L	L	5.0	5.0	5.2	5.2	4.9	5.0	5.0	(4.5)	L	L					
22								L	4.4	[4.9]^L	(5.0)	[5.0]^L	(5.1)	5.2	5.0	(4.8)^H	–	L						
23							2.7^K_K	3.5^K_K	3.8^K	4.1^K	4.3^K	4.2^K	4.3^K	4.3^H_K	4.3^K	4.1^K	4.1^K	3.8^K	K					
24							K	3.^{K}	3.9^K	4.1^K	4.3^K	4.3^K	4.4^K	4.4^K	4.4^H_K	4.2^K	4.1^K	3.8^K	3.4^K					
25							K	4.2^K	4.2^K	4.6^H_K	4.7^K	4.8^K	4.9^K	4.9^K	5.0^K	4.7^K	4.6^K	L^K	L					
26								–	4.5	4.7	5.0^H	5.0	5.2	5.3	5.1^H	4.8	4.6	(4.1)	L					
27							K	–^{K}	4.3^K	4.5^K	4.7^H_K	4.8^H_K	(5.0)^K	5.0^K	(4.9)^K	4.7^K	4.6^K	L^K	L					
28								4.2	4.6	4.4	5.0	5.0	5.2	5.2	5.0	4.7	4.6	L	L					
29							–	[4.6]^L	4.5	4.7	4.7	(5.0)^H	5.0	5.3	5.0	4.7	(4.7)	B	L					
30								–	L	[5.1]^L	[5.2]^L	5.5	(5.4)	(5.4)^H	(5.0)	(5.1)	L	L						
31																								
Sum																								
No. Obs.								L	44	49	50	51	52	51	50	47	46	L	L					

TABLE 75

IONOSPHERE DATA-6

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of h'_E in {mm / km} for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							(130)	120	110	110	110	120	(120)	110	110	110	120	120	(120)					
2							(130)	120	120	(120)	[120]C	110	e	e	e	110	110	e	e					
3							e	e	e	120	120	120	120	110	120	120	110	110	120H					
4							eH	120	110	110	[110]e	110	110	110	[110]e	110	110	110	120					
5								120	110	110	110	110	110	110	110	110	110	110	120H					
6							(120)H	120	110	110	110	110	110	110	110	110	110	110	120					
7							120K	110K	110K	110K	110K	110K	110K	110K	110K	110K	110K	110K	120K	K				
8							120H	120	110	110	110	110	110	110	110	110	110	110	130					
9							120H	110	110	110	110	(110)	100	110	110	110	110	110	120					
10							130	110	110	[110]e	110	110	110	110	110	110	110	110	120					
11							eH	110H	110	110	110	100	110	110	110	110	110	110	120H	120				
12							(130)	110	110	110	110	110	110	110	110	[110]e	110	110	120					
13							120H	110H	110	110	110	110	110	100	110	110	110	110	120H					
14							120H	110	110	110	110	110	100	110	110K	110K	110K	110K	120HK	K				
15							120HK	110K	110K	110K	110K	110K	110K	110K	110K	110K	110K	110K	120					
16							120	110	110	110	110	110	110	110	110	110	110	110	120					
17							(110)H	110H	110	110	110	(110)	110	110	110	110	110	110	120					
18							(130)H	110	110	110	110	110	110	110	110	110	100	100	100					
19							110	110	110	110	110	100	110	110	110	110	110	110	110					
20							110	110	110	110	110	100	110	110	110	110	110	110	120					
21							110H	110	110	110	110	110	100	110	110	110	110	110	120					
22							130	110	100	110	110	110	110	110	110	110	110	110	120					
23							120K	110K	110H	110K	110K	110K	110K	110K	110K	110K	110K	120K	[120]BK	K				
24							100K	BK	100K	110K	110K	110K	110K	110K	110K	110K	110K	110K	100HK	K				
25							110HK	110HK	110K	110K	110K	100K	110K	100K	110K	110K	110K	110K	120					
26							110	120	110	110	110	100	110	100	100	110	110	120	120	130				
27							(120)HK	110K	100K	100K	110K	110K	110K	110K	110K	110K	110K	110K	120K					
28							120	110	110	110	110	110	110	110	110	110	110	120	120					
29							120	120	110	110	110	110	110	110	110	110	110	110	120					
30							120	110	110	110	[110]B	110	110	110	110	110	110	120	120					
31																								
Sum																								
Median							120	110	110	110	110	110	110	110	110	110	110	110	120					

TABLE 76

IONOSPHERE DATA - 7

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $f^{\circ}E$ in {Mc} for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							(1.9)	(2.4)	2.8	C	C	C	(3.7)	3.7	(3.6)	3.5	[3.2]^{C}	(2.8)	(2.1)					
2							A	(2.6)	(3.0)	C	C	C	C	C	C	(3.5)	B	C	C					
3							C	C	C	A	(3.2)	(3.6)	(3.6)	A	A	(3.5)	[3.2]^{A}	2.7	1.8^{H}					
4							C H	(2.4)	(2.9)	C	C	C	[3.7]^{C}	3.7	[3.6]^{C}	(3.5)	3.2	2.7	A					
5								2.4	(2.8)	(3.2)	[3.4]^{C}	(3.6)	[3.7]^{C}	(3.7)	A	A	(3.0)	2.7	1.7^{H}					
6							(1.7)^{H}	2.4	2.8	(3.1)	[3.3]^{C}	C	A	(3.8)	[3.6]^{A}	3.3	2.9	(2.6)	(2.0)					
7							[1.8]$^{C}_{K}$	(2.4)^{K}	[2.8]$^{A}_{K}$	(3.0)^{K}	[3.3]$^{C}_{K}$	(3.6)^{K}	(3.7)^{K}	(3.6)^{K}	[3.5]$^{C}_{K}$	(3.3)^{K}	[3.1]$^{C}_{K}$	2.7^{K}	(2.1)^{K}	^{K}				
8							(1.6)^{H}	2.5	2.8	(3.2)	[3.4]^{C}	(3.7)	C	C	C	C	(3.0)	2.7	2.0					
9							(1.5)^{H}	(2.4)	2.9	C	C	C	(3.7)	C	C	C	(3.0)	2.7	(1.9)					
10							(1.7)^{F}	[2.4]^{A}	2.9	C	C	C	C	C	C	C	C	2.7	1.9					
11							1.6^{H}	2.2^{H}	C	C	C	C	3.7	3.8	(3.6)	[3.5]^{C}	(3.2)	2.6	1.9^{H}	C				
12							(1.8)	2.5	2.9	(3.2)	(3.5)	3.6	[3.8]^{C}	[3.7]^{A}	3.6	[3.2]^{C}	(3.0)	2.7	2.1					
13							1.8^{H}	(2.5)^{H}	2.8	(3.3)	C	C	C	(3.6)	[3.4]^{C}	(3.3)	(3.0)	2.7	1.9^{H}					
14							1.7^{H}	2.5	2.8	C	C	C	C	C	C^{K}	C^{K}	(3.0)^{K}	2.5^{K}	1.9$^{H}_{K}$	^{K}				
15							(1.9)$^{H}_{K}$	2.5^{K}	(3.0)^{K}	C^{K}	C^{K}	(3.7)^{K}	(3.6)^{K}	[3.6]$^{A}_{K}$	(3.5)^{K}	3.2^{K}	(2.9)^{K}	2.6^{K}	2.1					
16							1.9	(2.5)	(2.9)	(3.3)	C	C	(3.8)	[3.7]^{C}	[3.5]^{A}	(3.3)	(2.9)	2.7	2.1					
17							(1.6)^{H}	(2.3)^{H}	2.9	(3.2)	(3.3)	C	C	C	C	(3.3)	2.9	(2.5)	(2.0)					
18							(1.5)^{H}	2.4	2.8	[3.2]^{C}	(3.3)	[3.5]^{C}	[3.6]^{C}	[3.5]^{C}	[3.4]^{C}	(3.3)	(3.1)	2.7	A					
19							(1.8)	[2.4]^{A}	(2.7)	[3.2]^{A}	(3.5)	(3.6)	[3.8]^{C}	(3.7)	(3.7)	[3.5]^{C}	[3.2]^{C}	2.7	2.2					
20							[1.9]^{A}	(2.7)	[3.0]^{A}	(3.2)	C	A	[3.7]^{C}	3.6	(3.5)	[3.3]^{C}	(3.0)	2.7	2.1					
21							1.8^{H}	2.6	(3.0)	[3.3]^{C}	[3.5]^{C}	(3.7)	3.7	C	C	C	(3.0)	2.7	2.2					
22							(1.8)^{F}	(2.5)	(3.0)	[3.3]^{A}	3.6	[3.7]^{A}	(3.8)	[3.7]^{A}	3.5	C	C	2.7	2.1					
23							[1.9]$^{A}_{K}$	(2.0)^{K}	2.9^{K}	(3.0)^{K}	A^{K}	C^{K}	C^{K}	C^{K}	C^{K}	(3.0)^{K}	2.9^{K}	(2.5)^{K}	B$^{H}_{K}$	^{K}				
24							A^{K}	B^{K}	(2.8)^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	2.9^{K}	[2.7]$^{A}_{K}$	2.0$^{H}_{K}$	^{K}				
25							2.1$^{H}_{K}$	2.7$^{H}_{K}$	(3.0)^{K}	C^{K}	C^{K}	(3.6)^{K}	[3.7]$^{C}_{K}$	3.6^{K}	C^{K}	C^{K}	(3.1)^{K}	2.7^{K}	A					
26							[1.8]^{A}	2.7	(2.9)	C	C	C	(3.8)	[3.8]^{C}	3.6	3.4	[3.2]^{C}	(2.8)	2.2	C				
27							(1.6)$^{H}_{K}$	2.5^{K}	(3.0)^{K}	C^{K}	A^{K}	C^{K}	3.7^{K}	3.6^{K}	3.6^{K}	A^{K}	A^{K}	2.7^{K}	(2.2)^{K}					
28							(2.0)	2.6	2.9	C	C	3.6	C	C	[3.5]^{C}	(3.4)	(3.2)	2.8	2.2					
29							[2.2]^{A}	2.7	[3.0]^{C}	(3.3)	A	A	A	C	[3.6]^{C}	[3.4]^{C}	[3.1]^{C}	[2.7]^{B}	2.2					
30							2.0	2.7	(3.1)	C	B	(3.8)	(3.8)	(3.7)	3.6	C	C	(2.9)	2.2					
31																								
Sum																								
Median							(1.8)	2.5	(2.9)	(3.2)	(3.4)	(3.6)	(3.7)	(3.7)	(3.6)	(3.3)	(3.0)	2.7	2.1					

TABLE 77

IONOSPHERE DATA-8

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of E_s in {Mc / km} for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							2.2 150	2.9 130	2.9 130							(5.2)120			(2.6)120	2.3 120		2.3 120		2.3 110
2		2.5 110	2.4 110	2.5 120	2.5 110	2.4 110	2.4 120						C						C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	(4.9)110				(5.2)110	(4.9)120	3.8 120	4.8 110					1.7 110		
4									(3.3)130	(3.4)120	C								2.3 120	(2.3)120	(0.8)120			
5								2.8 120	3.3 120	3.5 120				3.8 110	4.1 110	4.0 110					1.4 120	2.7 120	(2.3)120	2.3 120
6	2.2 120							2.8 120	3.0 130	3.4 120		3.9 110	3.8 110		3.8 110				2.3 120					
7		2.2 110	2.6 110		2.2 110	2.2 110	3.0 110	4.4 110	5.1 110	3.5 120	3.7 120	3.9 110		(3.7)110		3.7 140			1.7 120					
8									3.0 130	3.4 120														
9								3.8 110									3.2 130		2.2 130					
10				2.3 110	2.3 110		2.3 110	2.9 110		C		5.2 110							2.1 130					
11																				2.4 110				
12										4.0 110			4.0 110	3.9 110		(4.8)110		(2.8)130	(2.8)120	2.2 120				
13	2.3 120	2.2 120					(3.9)110		3.9 120	3.6 110	5.2 100		3.9 140		C			2.5 160	2.0 120	2.9 120	3.7 110	2.7 110	2.3 110	
14	2.2 110	2.1 110	2.3 110	2.0 110		1.3 130		3.8 110	2.9 140	C	C		C	C	C	C	C			1.6 130				
15								C	C	C	C			4.1 110	4.0 120	3.6 120			2.0 150	3.6 130	3.8 110	4.1 110		
16			3.5 130	5.1 120	5.3 130	3.8 120 H	2.9 140	3.8 110	3.9 130	3.8 120	3.8 110	4.0 110	3.9 110	3.9 110	3.8 110	(3.9)110								
17	1.7 130	(1.6) 140						3.9 110	3.5 130	3.8 120	3.9 120		3.9 120			(3.8)130	(3.8)110	2.9 110					2.9 120
18	5.2 110	(3.7) 110	4.2 110	5.2 110							4.3 120	3.9 120		3.7 140	3.7 130	3.7 130	3.3 130	2.9 100	3.6 100	3.7 100	2.3 100	2.9 110	2.3 120	
19				2.3 120	2.4 110	2.4 110	2.9 110	3.7 110	(3.2)110	3.8 110				4.0 130									2.4 100	
20	2.1 100	2.4 100					5.2 110	3.8 110	4.0 110			5.3 100						2.7 150	2.3 130			(2.3)120		
21				1.2 110			(3.8)110			3.9 110														
22							2.3 130	3.8 110	6.6 100	3.8 110	3.8 120	3.9 110	4.2 110	3.8 110			3.3 130	3.1 130	2.4 130					
23			2.3 110		2.2 170	2.3 130	5.2 100		3.7 120		3.7 110					4.1 110	5.1 140	4.0 130	6.8 110	6.4 110	3.9 130 H	3.8 130	2.8 140	(2.3)140
24	2.8 110			3.7 100	2.4 100	2.2 110	2.7 110 H	B		(5.1)100		3.8 110						2.8 110		1.7 160	1.7 170			2.4 130
25						4.0 120	5.0 110							3.9 120				2.7 120	2.3 120					
26			1.2 110	2.3 100		1.9 120	5.3 110					3.8 110												2.4 130
27	2.8 120	1.3 130	1.6 120	2.7 120		2.7 120	2.4 120	3.1 120		4.0 140	4.0 110				4.0 120	3.7 110	3.2 110		2.4 110	3.4 110	3.7 110	2.9 110		
28		2.3 130	2.8 120	(4.2)110	3.0 110	2.3 110					3.9 110					3.8 110	3.6 130	2.9 130		1.6 120				
29	2.1 110	3.7 110	3.8 110	(3.9)110		1.4 120	2.4 120	3.3 120	3.4 120	3.8 120	3.9 110	3.9 110	4.4 110					2.8 120	2.8 120	2.5 120	2.9 110	2.9 110	2.7 110	
30				2.4 110	2.4 120	2.3 120	2.8 120	3.0 120	3.3 120													2.0 110	2.8 110	2.8 110
31																								
Sum																								
Median	* *	* *	* *	* *	* *	* *	2.3	2.8	3.0	3.4	* *	* *	* *	* *	* *	* *	* *	* *	2.0	* *	* *	* *	* *	* *

* * Median fE_s less than median $f°_E$, or less than lower frequency limit of recorder.

TABLE 78

IONOSPHERE DATA - 9

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F2-M1500 for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.9	2.0	1.8 F	1.9 F	(2.8) F	(1.8) F	2.1	2.0	2.2	(2.0)	1.9	(1.9)	2.0	1.9	2.0	2.0	1.9	1.9	2.0	C	2.0	1.9	(1.9) D	(1.8) F
2	(1.7) F	(1.8) F	(1.8) F	(1.6) F	(1.9) F	(2.3) F	(2.0) F	2.1	2.0	(2.0)	(2.0)	2.0	C	(2.0)	(1.9)	(1.9)	1.9	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	2.0	2.0	1.8	1.9	1.8	1.8	1.8	(2.0)	2.0	(2.1)	2.0	1.8	1.9	1.9	(1.9) F
4	1.9 F	1.9	1.9	2.0	(1.9) F	(1.9)	2.2	2.2	2.2	2.1	C	2.0	2.0	2.0	C	2.0	2.0	(2.0)	(2.1)	(2.1)	2.0	1.9	1.9	1.9
5	(1.9)	1.8	1.8	1.8	1.8	1.8	1.9	(2.2)	2.1	1.8	(1.9)	1.9	1.9	1.8	(1.9)	1.9	1.9	1.9	2.0	(1.9) J	(1.8)	(1.8) J	(1.8) J	(1.9)
6	(2.0)	1.8	1.8	1.8	1.8	1.8	2.0	1.9	(2.1) J	1.8	1.9	(2.1) J	1.9	1.9	1.9	1.9	1.9	(2.1)	(2.0)	2.0	(1.9)	1.9	(1.9) J	(1.8)
7	1.7	1.7	1.7	1.7 K	1.7 K	1.9 K	2.0 K	2.1 K	(1.9) K	(1.8) J K	1.8 K	1.8 K	1.8 K	2.0 K	1.9 K	1.8 K	1.9 K	1.9 K	1.9 K	(1.9) K	(1.8) K	1.8	(2.0) F	(1.9) F
8	(1.9) F	(1.8) F	(1.6) F	1.7	1.8	1.8	2.0	2.1	2.2	2.1	1.8	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.8	(1.9) J	1.8	(1.8)
9	1.8	1.8	(1.9)	1.9	1.9	(1.9) F	(2.0) F	2.1	2.1	C	C	C	1.9	1.8	1.9	2.0	1.9	1.9	2.0	2.0	1.9	(1.9)	1.8	1.9
10	1.9	1.9	1.9 F	(1.9) F	1.9 F	(2.0) F	2.3	2.1	2.0	C	(2.0)	1.9	1.9	1.9	2.0	(2.0)	(2.1)	2.1	(2.1)	2.1	(1.9)	(1.9)	(1.9)	(1.8)
11	C	C	C	C	C	C	C	2.3	2.1	2.2	2.1	2.0	1.9	1.9	2.0	(2.0)	2.0	2.0	(2.1)	2.1	2.1	2.0	1.9	(1.8)
12	(1.8)	(1.9)	1.9	1.9	(1.9) F	(2.0) F	2.2	2.2	2.3	2.1	2.0	2.0	1.9	1.9	1.9	C	2.0	2.0	2.1	2.1	2.0	1.9	1.7	(1.8)
13	1.8	(1.9) F	1.7	1.8	1.8	1.8	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	(2.0)	1.9	1.8	1.9	(1.9) J	1.8
14	1.9	1.8	1.9	2.0	(2.0)	1.9	2.2	2.3	2.2	(1.9)	1.8	1.6	1.7	1.9	2.0 K	1.9 K	1.9 K	2.0 K	1.9 K	1.9 K	(2.0) K	C K	C K	C K
15	C K	C K	(1.7) F K	(1.8) F K	(1.6) F K	(1.6) F K	(2.1) K	C K	C K	C K	C K	1.4 K	1.5 K	1.8 K	(2.0) K	1.8 K	2.0 K	2.0 K	2.0	2.0	2.0	1.9	1.8	1.8
16	1.8	1.9	2.0	(2.1) F	(2.1) F	(2.0) F	2.3	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.0	(2.1)	2.0	2.2	2.0	2.0	(2.0)	(1.8) J	1.9
17	1.9	1.9	1.9	1.8	1.9	2.0	2.3	2.2	2.1	2.2	1.9	2.0	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.0	(2.1)	2.0	(2.1)	(1.9)
18	(2.0)	(1.9)	(2.0) F	(1.9) F	(2.0) F	(1.9) F	(2.3)	2.4	(2.3)	1.9	(1.9)	1.8	2.0	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9
19	1.8	1.8	1.8	1.9 F	1.9 F	(2.0) F	2.3	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.1	2.0	(2.0)	2.0	(1.9)	(1.9)	(1.9)
20	(1.9)	(1.8) F	(1.9) F	(1.8)	1.9	1.9 F	2.2	2.1	2.1	2.0	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.0	2.0	(2.0)	(1.9)	(1.9)
21	(2.0)	(1.9)	2.0 F	2.0 F	1.9 F	(2.0) F	2.2	2.3	2.1	2.2	2.1	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.1	2.0	(2.0)	(1.9)	(1.9)
22	(2.0)	1.9	1.9	1.9 F	(1.9) F	(1.9)	(2.0) F	(2.3) F	2.3	(2.1)	2.2	1.9	2.0	1.9	1.9	(2.0)	2.0	2.0	(2.1)	2.0	2.0	1.9	(1.9)	1.9
23	(1.9) K	1.9 K	(1.9) F K	(1.7) F K	(1.7) F K	F K	G K	G K	G K	G K	G K	G K	G K	G K	G K	G K	(1.5) K	1.8 K	(1.6) K	A K	(1.9) F K	A K	A K	A K
24	A K	(1.6) F K	(1.6) F K	A K	(1.5) K	(1.8) F K	2.2 K	B K	G K	G K	G K	G K	G K	G K	G K	G K	1.6 K	1.7 K	1.9 K	1.9 K	1.9 K	(1.7) F K	(1.7) F K	(1.8) F K
25	F K	(1.6) F K	(1.7) F K	(1.8) F K	(1.9) F K	(2.0) F K	2.1 F K	G K	1.8 K	1.9 K	1.8 K	1.7 K	2.0 K	1.9 K	1.9 K	2.0 K	2.0 K	2.0 K	2.1	2.3	2.0	1.8	1.8	1.9 F
26	1.9	1.9 F	1.9 F	(2.0) F	(2.0) F	(2.0) F	2.2	2.1	(1.9)	(1.9) J	(1.8)	(2.0)	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	(2.0)	(1.8)	1.8	2.0
27	1.9	1.8	1.8	1.7	1.9 F	1.9	1.9 K	(1.9) K	1.6 K	1.5 K	1.6 K	1.6 K	(1.6) K	1.9 K	1.9 K	1.9 K	1.9 K	2.0 K	2.0 K	2.0	2.0	1.9	1.8	1.8
28	1.8	1.8	1.9	1.9	(1.8) F	2.0	1.8	2.1	2.0	1.9	1.8	(1.9) J	1.8	1.9	1.9	1.8	1.9	1.9	2.0	(2.0)	(1.9)	2.0	1.9	1.7
29	1.8	1.8	(1.6)	1.9	(1.8) F	1.8	2.0	2.0	1.9	2.0	1.9	(1.9)	1.9	1.8	1.8	1.9	1.9	B	1.9	2.0	2.0	2.0	1.8	1.8
30	1.8	1.8	1.8	1.9	2.0	2.1 F	2.2	2.3	2.0	2.0	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	(2.0) J	2.0	(1.9)	1.9
31																								
Sum																								
Median	1.9	1.8	1.8	1.9	(1.9)	(1.9)	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	(1.9)	(1.9)

TABLE 79

IONOSPHERE DATA-10

Washington, D. C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F2-M3000 for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.8	3.0	2.7 F	2.9 F	(2.7) F	(2.7) F	3.1	3.0	3.2	(3.0)	2.9	(2.9)	3.0	2.8	2.9	3.0	2.8	2.8	2.9	C	3.0	2.8	(2.9) F	(2.7) F
2	(2.6) F	(2.7) F	(2.8) F	(2.5) F	(2.9) F	(3.3) F	(2.9) F	3.1	2.9	(3.0)	(3.0)	2.9	C	(3.0)	(2.9)	(2.9)	2.8	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	3.0	3.0	2.8	2.8	2.8	2.8	2.7	(3.0)	3.0	(3.1)	3.0	2.8	2.8	2.9	(2.9) F
4	2.9 F	2.8	2.8	2.9	(2.8) F	(2.9)	3.2	3.2	3.2	3.1	C	3.0	2.9	2.9	C	3.0	3.0	3.0	(3.1)	(3.1)	(3.0)	2.8	2.9	2.8
5	(2.8)	2.8	2.7	2.7	2.7	2.7	2.9	(3.2)	3.1	2.7	(2.8)	2.8	2.9	2.8	(2.9)	2.9	2.8	2.8	2.9	(2.9) J	(2.8)	(2.8) J	(2.7) J	(2.8)
6	(2.9)	2.7	2.7	2.7	2.7	2.7	3.0	2.9	(3.1) J	2.8	2.9	(3.1) J	2.8	2.9	2.9	2.8	2.9	(3.1)	(3.0)	2.9	(2.8)	2.8	(2.8) J	(2.8)
7	2.6	2.7	2.6	2.6 K	2.7 K	2.8 K	3.0 K	3.1 K	(2.8) K	(2.6) J K	2.7 K	2.7 K	2.8 K	3.0 K	2.8 K	2.8 K	2.8 K	2.8 K	2.9 K	(2.8) K	(2.8) K	2.8	(2.9) F	(2.8) F
8	(2.8) F	(2.7) F	(2.5) F	2.6	2.7	2.7	3.0	3.1	3.2	3.1	2.8	2.9	2.9	2.9	2.9	2.8	2.9	3.0	3.0	2.9	2.8	(2.8) J	2.8	(2.8)
9	2.8	2.8	(2.8)	2.9	2.9	(2.9) F	(3.0) F	3.1	3.1	C	C	C	2.8	2.8	2.8	2.9	2.8	2.9	2.9	3.0	2.9	(2.8)	2.7	2.8
10	2.8	2.8	2.9 F	(2.9) F	2.9 F	(3.0) F	3.3	3.1	3.0	C	(3.0)	2.9	2.9	2.9	2.9	(3.0)	(3.1)	3.1	(3.1)	3.1	(2.9)	(2.9)	(2.9)	(2.8)
11	C	C	C	C	C	C	C	3.3	3.1	3.2	3.1	2.9	2.9	2.9	3.0	(3.0)	3.0	3.0	(3.1)	3.1	3.1	3.0	2.8	(2.8)
12	(2.8)	(2.8)	2.8	2.9	(2.9) F	(3.0) F	3.2	3.2	3.4	3.1	3.0	2.9	2.9	2.9	2.9	C	3.0	3.0	3.1	3.1	3.0	2.9	2.7	(2.8)
13	2.7	(2.8) F	2.6	2.7	2.8	2.8	3.3	3.2	3.1	3.1	2.9	3.0	2.9	3.0	3.0	2.9	2.9	3.0	(2.9)	2.9	2.8	2.9	(2.8) J	2.8
14	2.8	2.7	2.9	2.9	(3.0)	2.9	3.2	3.3	3.3	(2.8)	2.8	2.5	2.6	2.8	3.0 K	2.9 K	2.9 K	3.0 K	2.8 K	2.9 K	(3.0) K	C K	C K	C K
15	C K	C K	(2.6) F K	(2.7) F K	(2.5) F K	(2.4) F K	(3.1) K	C K	C K	C K	C K	2.1 K	2.3 K	2.8 K	(3.0) K	2.8 K	3.0 K	3.0 K	3.0	3.0	3.0	2.8	2.7	2.8
16	2.7	2.9	3.0	(3.1) F	(3.1) F	(3.0) F	3.3	3.3	3.2	3.1	3.0	2.9	2.9	2.9	2.9	3.0	(3.1)	3.0	3.2	3.0	3.0	(2.9)	(2.8) J	2.9
17	2.9	2.9	2.9	2.8	2.9	3.0	3.3	3.2	3.1	3.2	2.9	3.0	3.1	3.0	3.1	3.1	3.0	3.1	3.1	3.0	(3.1)	3.0	(3.1)	(2.9)
18	(2.9)	(2.9)	(3.0) F	(2.9) F	(3.0) F	(2.9) F	(3.3)	3.4	(3.3)	2.9	(2.8)	2.8	3.0	2.9	3.0	3.0	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.8
19	2.8	2.7	2.7	2.9 F	2.9 F	(3.0) F	3.3	3.2	3.1	3.1	3.0	3.0	3.1	3.0	3.0	3.1	3.0	3.1	3.0	(2.9)	2.9	(2.9)	(2.9)	(2.8)
20	(2.8)	(2.8) F	(2.8) F	(2.8)	2.8	2.9 F	3.2	3.1	3.1	3.0	3.1	3.0	3.0	2.9	3.0	3.0	3.0	3.0	3.1	3.0	3.0	(3.0)	(2.9)	(2.9)
21	(2.9)	(2.9)	3.0 F	3.0 F	2.8 F	(3.0) F	3.2	3.3	3.1	3.2	3.1	3.0	2.9	2.9	3.0	3.0	3.0	3.0	2.9	3.1	3.0	(3.0)	(2.9)	(2.8)
22	(3.0)	2.9	2.9	2.9 F	(2.9) F	(2.8)	(3.0) F	(3.3) F	3.3	(3.1)	3.2	2.9	3.0	2.9	2.9	(3.0)	3.0	3.0	(3.1)	3.0	2.9	2.9	(2.9)	2.8
23	(2.9) K	2.8 K	(2.9) F K	(2.6) F K	(2.6) F K	F K	G K	G K	G K	G K	G K	G K	G K	G K	G K	G K	(2.3) K	2.7 K	(2.5) K	A K	(2.9) F K	A K	A K	A K
24	A K	(2.4) F K	(2.5) F K	A K	(2.3) K	(2.1) F K	3.2 K	B K	G K	G K	G K	G K	G K	G K	G K	G K	2.4 K	2.6 K	2.8 K	2.8 K	2.8 K	(2.7) F K	(2.6) F K	(2.7) F K
25	F K	(2.5) F K	(2.6) F K	(2.8) F K	(2.8) F K	(3.0) F K	3.1 F K	G K	2.7 K	2.8 K	2.7 K	2.7 K	3.0 K	2.9 K	2.9 K	3.0 K	3.0 K	3.0 K	3.1	3.3	2.9	2.8	2.7	2.8 F
26	2.9	2.9 F	2.9 F	(2.9) F	(2.9) F	(3.0) F	3.2	3.0	(2.9)	(2.9) J	(2.7)	(2.9)	2.8	2.8	2.8	2.8	2.8	2.9	3.0	2.9	(3.0)	(2.8)	2.8	2.9
27	2.8	2.8	2.8	2.7	2.8 F	2.9	2.9 K	(2.9) K	2.4 K	2.4 K	2.5 K	2.5 K	(2.5) K	2.8 K	2.9 K	2.9 K	2.9 K	3.0 K	3.0 K	3.0	2.9	2.8	2.8	2.7
28	2.8	2.7	2.8	2.8	(2.7) F	3.0	2.8	3.1	2.9	2.9	2.7	(2.9) J	2.7	2.8	2.9	2.7	2.8	2.8	2.9	(3.0)	(2.9)	2.9	2.8	2.7
29	2.7	2.7	(2.5)	2.9	(2.8) F	2.7	3.0	3.0	2.9	3.0	2.9	(2.9)	2.8	2.8	2.8	2.9	2.9	B	2.9	3.0	2.9	2.9	2.8	2.8
30	2.8	2.8	2.8	2.9	3.0	3.1 F	3.2	3.3	3.0	3.0	2.9	2.8	2.8	2.8	2.9	2.8	2.8	3.0	3.0	3.1	(3.0) J	3.0	(2.9)	2.8
31																								
Sum																								
Median	2.8	2.8	2.8	2.9	2.8	(2.9)	3.2	3.1	3.1	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.0	2.9	2.9	(2.8)	(2.8)

TABLE 80

IONOSPHERE DATA-II

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F1-M3000 for April (Month) 1946

Records measured by: J.M.C. and A.K.B.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									L	(3.7)	3.7	L	(3.7)	L	L	3.6	L							
2										L	3.4	L	C	C	L	L	L	C						
3									C	L	C	L	L	L	L	L	L							
4									L	L	C	3.7	L	3.8	C	L	L	L						
5								L	L	3.4	(3.6)	L	(3.4)	L	3.6	(3.6)	(3.5)	L						
6								L	L	L	3.6	L	L	L	3.6	(3.5)	L	L						
7							K	L K	L K	L K	3.6 K	3.6 K	3.5 K	3.4 K	3.4 K	3.5 K	3.5 K	L K	K					
8									L	L	L	3.5	(3.6)	(3.5)	L	3.5	L	L						
9									L	C	C	C	L	L	(3.5)	(3.5)	L	L						
10									(3.6)	C	C	L	L	C	L	L	L	L						
11									C	C	C	3.8 H	C	L	(3.8)	L	L	L						
12								L	L	(3.7)	(3.7)	L	(3.4)	(3.7)	(3.7)	C	L	L						
13									L	3.7	(3.7)	L	3.7	3.5	3.6	L	L	L						
14								L	C	C	C	C	C	C	C K	C K	C K	C K	C K					
15							K	C K	C K	C K	C K	3.7 K	3.6 K	3.5 K	3.5 K	3.3 K	L K	L K						
16									L	3.6	(4.0)	(3.5)	(3.6) H	3.5	(3.5)	(3.5)	(3.5)	L						
17									L	(3.6)	(3.9)	3.7	3.8	3.8	3.7	(3.7)	L	L						
18							L	L	L	3.3	3.5	3.5	3.5	(3.6) H	(3.5)	(3.5)	(3.7)	L						
19								L	L	(3.7)	3.7	(3.6)	(3.7) H	3.7	3.4	3.4	(3.5)	L	L					
20							L	L	L	L	3.6	3.6	3.6	3.5	3.6	(3.4)	L	L						
21								L	L	3.6	3.5	3.5	3.4	3.7	3.5	3.5	(3.7)	L	L					
22								L	3.7	L	(3.8)	L	(3.7)	3.6	3.6	(3.6) H	L	L						
23							(2.1) E K	(3.3) E K	3.5 K	3.8 K	3.5 K	3.7 K	3.7 K	(3.4) H K	3.7 K	3.7 K	(3.4)	3.3 K	K					
24							K	8 K	3.6 K	(3.6) K	3.8 K	(3.9) K	4.0 K	3.8 K	(3.6) H K	3.8 K	3.5 K	3.3 K	(3.3) K					
25							K	3.2 K	3.5 K	(3.6) H K	3.7 K	3.5 K	3.6 K	3.7 K	3.6 K	3.5 K	3.5 K	L K	L					
26								L	(3.5)	3.5	(3.5) H	3.7	(3.7)	3.6	(3.5) H	3.6	(3.4)	(3.7)	L					
27							K	L K	3.7 K	(3.9) K	(3.7) H K	(3.9) H K	(3.5) K	3.5 K	(3.6) K	3.5 K	3.4	L K	L K					
28								3.4	3.5	3.4	3.6	3.7	3.3	3.6	3.7	3.4	3.4	L	L					
29							L	L	3.5	3.8	3.9	(3.6) H	3.6	3.4	3.5	3.4	(3.5)	B	L					
30								L	L	L	L	3.5	(3.4)	(3.4) H	(3.7)	(3.5)	L	L						
31																								
Sum																								
Mean								L	3.5	3.6	3.7	3.6	3.6	3.6	3.6	3.5	(3.5)	L	L					

TABLE 81

IONOSPHERE DATA-12

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of E-MI500 for April (Month) 1946

Records measured by: ...

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							(3.7)	(4.0)	4.2	C	C	C	(4.0)	(3.9)	(4.0)	4.2	C	(3.9)	(3.7)					
2							A	(3.7)	(3.9)	C	C	C	C	C	C	(4.1)	B	C	C					
3							C	C	C	A	(4.1)	(3.8)	(3.9)	A	A	(4.1)	A	4.2	$(4.4)^{H}$					
4							C H	(4.1)	(4.3)	C	C	C	C	(4.2)	C	(4.2)	4.1	4.2	A					
5								4.2	(4.3)	(4.3)	C	(4.4)	C	(4.4)	A	A	(4.2)	4.3	$(4.3)^{H}$					
6							$(4.0)^{H}$	(4.1)	4.3	(4.3)	C	C	A	(4.2)	A	4.3	4.3	(4.2)	(4.1)					
7							C^{K}	A^{K}	A^{K}	$(4.4)^{K}$	C^{K}	$(4.5)^{K}$	$(4.5)^{K}$	$(4.2)^{K}$	C^{K}	$(4.1)^{K}$	C^{K}	4.1^{K}	$(4.0)^{K}$	K				
8							$(4.0)^{H}$	4.0	4.4	(4.3)	C	(4.3)	C	C	C	C	(4.2)	4.0	4.1					
9							$(4.3)^{H}$	(4.1)	4.3	C	C	C	(4.4)	C	C	C	(4.2)	4.2	(4.0)					
10							$(3.7)^{F}$	A	4.4	C	C	C	C	C	C	C	C	4.3	4.2					
11							$(3.9)^{H}$	$(4.5)^{H}$	C	C	C	C	4.3	(4.1)	(4.3)	C	(4.2)	4.4	$(4.1)^{H}$	C				
12							(4.1)	4.1	4.2	(4.2)	(4.2)	4.4	C	A	(4.4)	C	(4.2)	4.1	(4.2)					
13							$(4.0)^{H}$	$(4.0)^{H}$	4.3	(4.3)	C	C	C	(4.2)	C	(4.2)	(4.2)	4.2	$(4.1)^{H}$					
14							$(4.4)^{H}$	4.2	4.1	C	C	C	C	C	C^{K}	C^{K}	$(4.2)^{K}$	4.4^{K}	$(4.0)^{H}_{K}$	K				
15							$(4.2)^{H}_{K}$	4.2^{K}	$(4.3)^{K}$	C^{K}	C^{K}	$(4.3)^{K}$	$(4.3)^{K}$	A^{K}	$(4.3)^{K}$	4.2^{K}	$(4.4)^{K}$	4.2^{K}	4.2					
16							(4.1)	A	(4.2)	(4.3)	C	C	(4.4)	C	A	(4.4)	(4.3)	3.8	3.7					
17							$(4.1)^{H}$	$(4.3)^{H}$	4.1	(4.2)	C	C	C	C	C	C	4.3	A	(4.0)					
18							$(4.0)^{H}$	4.3	4.3	C	C	C	C	C	C	C	(4.1)	(4.4)	A					
19							A	A	(4.5)	A	(4.4)	(4.3)	C	A	(4.3)	C	C	4.3	4.2					
20							A	(4.6)	A	(4.3)	C	A	C	4.4	(4.2)	C	(4.2)	4.1	4.2					
21							$(4.1)^{H}$	4.1	(4.2)	C	C	(4.4)	4.3	C	C	C	(4.2)	4.1	4.0					
22							$(3.8)^{F}$	(4.3)	(4.3)	A	(4.3)	A	A	A	4.3	C	C	4.1	(4.2)					
23							A^{K}	$(4.0)^{K}$	4.2^{K}	$(4.2)^{K}$	A^{K}	C^{K}	C^{K}	C^{K}	C^{K}	$(4.2)^{K}$	$(4.1)^{K}$	$(4.2)^{K}$	B^{H}_{K}	K				
24							A^{K}	B^{K}	$(4.0)^{K}$	C^{K}	C^{K}	C^{K}	C^{K}	C	C^{K}	C^{K}	$(4.1)^{K}$	A^{K}	$(4.2)^{H}_{K}$	K				
25							$(4.2)^{H}_{K}$	$(4.1)^{H}_{K}$	$(4.2)^{K}$	C^{K}	C^{K}	$(4.2)^{K}$	C^{K}	$(4.3)^{K}$	C^{K}	C^{K}	$(4.1)^{K}$	4.1^{K}	A					
26							A	(4.3)	(4.5)	C	C	C	(4.4)	C	(4.2)	(4.0)	C	(4.1)	(3.8)	C				
27							$(4.2)^{H}_{K}$	4.1^{K}	$(4.3)^{K}$	C^{K}	A^{K}	C^{K}	$(4.1)^{K}$	4.2^{K}	4.3^{K}	A^{K}	A^{K}	4.2^{K}	A^{K}					
28							(4.1)	4.3	4.5	C	C	4.4	C	C	C	A	(4.1)	4.2	(4.3)					
29							A	4.2	C	(4.3)	A	A	A	C	C	C	C	B	(4.2)					
30							4.1	4.3	(4.3)	C	B	(4.4)	(4.3)	(4.3)	4.2	C	C	(4.2)	4.4					
31																								
Sum																								
Median							(4.1)	(4.2)	(4.3)	(4.3)	C	(4.4)	(4.3)	(4.2)	(4.3)	(4.2)	(4.2)	4.2	(4.2)					

Table 82

Ionospheric Storminess, April 1946

Day	Ionospheric Character* 00-12 GCT	12-24 GCT	Principal Storms Beginning GCT	End GCT	Geomagnetic Character** 00-12 GCT	12-24 GCT
April						
1	1	1			3	2
2	2	3			3	3
3	***	3			1	2
4	1	3			1	1
5	1	2			1	2
6	1	1			2	2
7	3	5	0800	—/	3	2
8	3	2	——	0200	2	2
9	1	3			3	4
10	1	2			2	1
11	1	3			1	1
12	1	1			1	3
13	1	1			3	3
14	0	3	1900	——	2	3
15	4	6	——	2300	5	4
16	2	3			2	2
17	0	2			2	1
18	2	3			2	2
19	1	3			1	1
20	1	2			1	1
21	1	1			0	1
22	1	3			2	3
23	4	7	0500	——	4	6
24	6	7	——	——	6	4
25	7	5	——	2300	3	0
26	3	3			1	2
27	1	5	1100	2400	2	1
28	2	3			1	3
29	3	2			2	2
30	1	3			1	1

*Ionosphere character figure (I-figure) for ionospheric storminess at Washington, D.C., during 12-hour period, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

**Average for 12 hours of American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

***No readable record.

/Dashes indicate continuing storm.

Table 83

Sudden Ionosphere Disturbances Observed at Washington, D.C.

Day	GCT Beginning	GCT End	Locations of transmitters	Relative intensity at minimum*	Other phenomena
April 3	2049	2120	Ohio, D.C., England, Mexico, New Brunswick, Surinam, Gold Coast	0.0	
10	1524	1545	Ohio, D.C., England, Mexico, Surinam, Chile, Gold Coast	0.02	
14	1356	1500	Ohio, D.C., England, Mexico, New Brunswick, Trinidad, Gold Coast	0.05	Terr.mag.pulse** 1324-1425
22	1438	1520	Ohio, D.C., England, Mexico, Trinidad, Chile, Gold Coast	0.05	
22	2049	2140	Ohio, D.C., England, Mexico, Trinidad, Chile	0.02	

*Ratio of received field intensity during SID to average field intensity before and after, for station W8XAL, 6080 kilocycles, 600 kilometers distant.

**As observed on Cheltenham magnetogram of the United States Coast and Geodetic Survey.

Table 84

Sudden Ionosphere Disturbances Reported by Engineer-in-Chief, Cable and Wireless, Ltd.

Day	GCT Beginning	GCT End	Receiving station	Locations of transmitters
March 8	1803	1840	Brentwood, England	Brazil, Chile, Colombia, New York, Surinam, Venezuela
8	1803	1827	Somerton, England	Argentina, Barbados, Canada, New York
18	1205	1230	Brentwood, England	Austria, Belgian Congo, Brazil, Bulgaria, Canary Islands, Chile, Colombia, Greece, India, Iran, Kenya, Madagascar, Mozambique, Palestine, Portugal, South Rhodesia, Spain, Switzerland, Thailand, Turkey, U.S.S.R., Yugoslavia, Zanzibar
18	1215	1235	Somerton, England	Argentina, Ascension Island, Barbados, Egypt, Gold Coast, India, New York, Union of South Africa
21	1020	1100	Brentwood, England	Austria, Belgian Congo, Brazil, Bulgaria, Greece, India, Iran, Kenya, Madagascar, Mozambique, Palestine, Portugal, South Rhodesia, Spain, Switzerland, Thailand, Turkey, U.S.S.R., Yugoslavia, Zanzibar
21	1022	1145	Somerton, England	Argentina, Ascension Island, Australia, Egypt, Gold Coast, India, Union of South Africa
April 10	1055	1120	Brentwood, England	Austria, Belgian Congo, Brazil, Bulgaria, Canary Islands, Chile, Greece, India, Iran, Kenya, Mozambique, Portugal, South Rhodesia, Spain Switzerland, Syria, Thailand, Turkey, Uruguay, U.S.S.R. Yogoslavia, Zanzibar

Table 84 (continued)

Day	GCT Beginning	GCT End	Receiving station	Locations of transmitters
April 10	1055	1130	Somerton, England	Argentina, Australia, Egypt, Gold Coast, India, Union of South Africa

Table 85

Sudden Ionosphere Disturbances Reported by RCAC as Observed at Riverhead, L.I., N.Y.

Day	GCT Beginning	GCT End	Locations of transmitters	Relative intensity at minimum*
April				
3	2100	2110	D.C., England	0.3
10	1528	1540	D.C., England	0.1
12	2328	2350	England	0.1
13	1834	1850	England	0.2
	1858	1915	England	0.05
	1920	1935	England	0.1
	1940	2000	England	0.1
14	1438	1455	England	0.1
22	1430	1515	England	0.1
	2050	2130	England	0.2

*Ratio of received field intensity during SID to average field intensity before and after, for station GLH, 13525 kilocycles, 5340 kilometers distant.

Table 86

Provisional Radio Propagation Quality Figures
March 1946
Compared with IRPL and ISIB Warnings and IRPL-A-Zone Forecasts.

Day	North Atlantic Quality Figure 00-12 GCT	North Atlantic Quality Figure 13-24 GCT	North Atlantic IRPL Warning 00-12 GCT	North Atlantic IRPL Warning 13-24 GCT	North Atlantic ISIB Warning 00-12 GCT	North Atlantic ISIB Warning 13-24 GCT	North Atlantic A-Zone Forecast	North Atlantic Geomagnetic K_A 00-12 GCT	North Atlantic Geomagnetic K_A 13-24 GCT	North Pacific Quality Figure 00-12 GCT	North Pacific Quality Figure 13-24 GCT	North Pacific IRPL Warning 00-12 GCT	North Pacific IRPL Warning 13-24 GCT	North Pacific A-Zone Forecast	North Pacific Geomagnetic K_A 00-12 GCT	North Pacific Geomagnetic K_A 13-24 GCT
1	(4)	5				X	(4)	4	2	5	5			(4)	4	2
2	5	5			X	X	(4)	3	2	6	(4)			(4)	3	2
3	5	5					5	1	1	6	(4)			5	1	1
4	5	5					5	3	3	7	6			5	3	3
5	(4)	(4)		X	X	X	5	3	3	7	5		X	5	3	3
6	(4)	5	X				(4)	3	2	6	(4)	X		(4)	3	2
7	5	5	X				(3)	2	2	7	6	X		(3)	2	2
8	5	5					(4)	1	2	8	6			(4)	1	2
9	5	5					(4)	1	3	6	6			(4)	1	3
10	(4)	(4)	X	X	X		5	4	4	6	5	X	X	5	4	4
11	(4)	(4)	X	X	X	X	6	3	3	7	6	X	X	6	3	3
12	(4)	5	X		X	X	6	1	1	6	6	X		6	1	1
13	5	5					5	1	1	6	6			5	1	1
14	5	5					5	1	1	7	6			5	1	1
15	5	5				X	6	2	2	5	(4)			6	2	2
16	5	6					6	0	2	7	5			6	0	2
17	5	5					5	3	3	6	5			5	3	3
18	5	5	X				5	2	1	6	6	X		5	2	1
19	5	6					(4)	1	2	6	5			(4)	1	2
20	5	6					(4)	2	2	7	6			(4)	2	2
21	5	7					(4)	3	1	7	6			(4)	3	1
22	5	6				X	(4)	3	3	7	6			(4)	3	3
23	5	5					5	2	3	6	5			5	2	3
24	(3)	(3)	X	X		X	6	5	5	5	5	X	X	6	5	5
25	(2)	(2)	X	X	X	X	6	6	7	5	5	X	X	6	6	7
26	(2)	(3)	X	X	X	X	6	5	3	5	6	X	X	6	5	3
27	(3)	(3)	X	X	X	X	5	3	3	5	5	X	X	5	3	3
28	(2)	(2)	X	X	X	X	(4)	6	8	(3)	(2)	X	X	(4)	6	8
29	(4)	(4)	X	X	X		5	4	2	5	6	X	X	5	4	2
30	5	6	X	X			6	1	1	7	5	X	X	6	1	1
31	5	5					5	2	2	6	6			5	2	2

Score:									
H			11		10		3		
M			1		2		9		
G			16		16		11		
(S)			3		2		8		
S			0		1		0		
							1		3
							4		2
							14		18
							8		2
							4		6

Quality Figure and Forecast Scale:
1 = Useless
2 = Very poor
3 = Poor
4 = Poor to fair
5 = Fair
6 = Fair to good
7 = Good
8 = Very good
9 = Excellent

Symbols
X = Warning given.
H = Quality 4 or worse on day or half-day of warning.
M = Quality 4 or worse on day or half-day of no warning.
G = Quality 5 or better on day of no warning.
(S) = Quality 5 on day of warning.
S = Quality 6 or better on day of warning.
( ) = Quality or forecast 4 or worse (disturbed)

Geomagnetic K_A on the standard scale of 0 to 9, 9 representing the greatest disturbance.

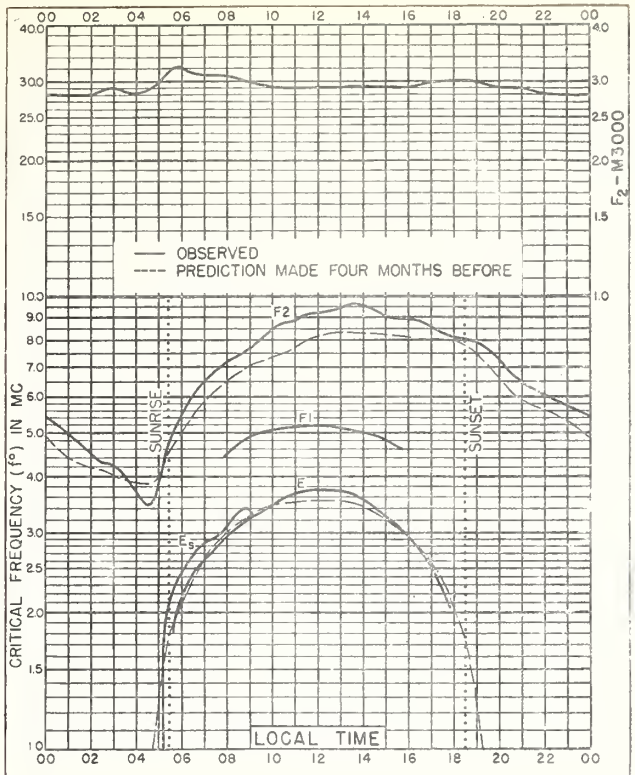


Fig. 1. WASHINGTON, D. C.
39.0°N, 77.5°W APRIL, 1946

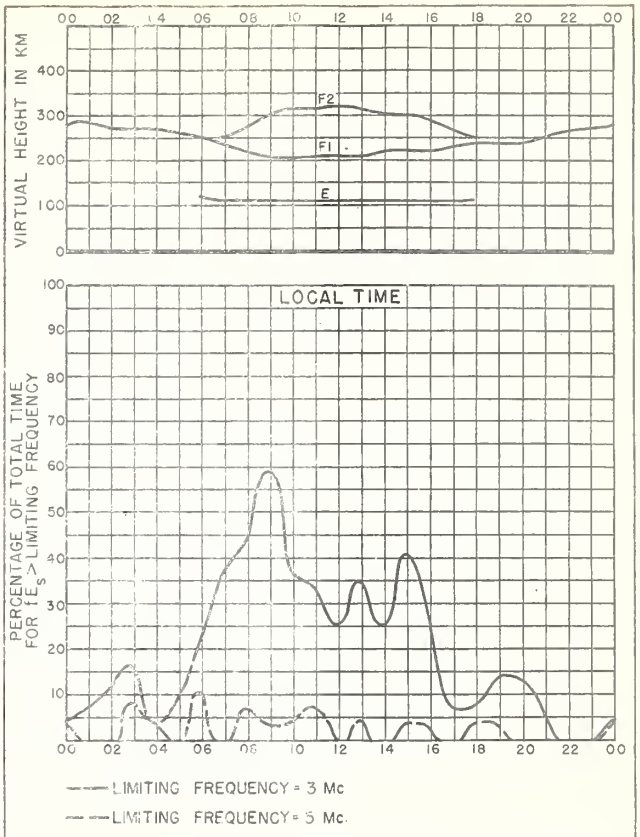


Fig. 2. WASHINGTON, D. C. APRIL, 1946

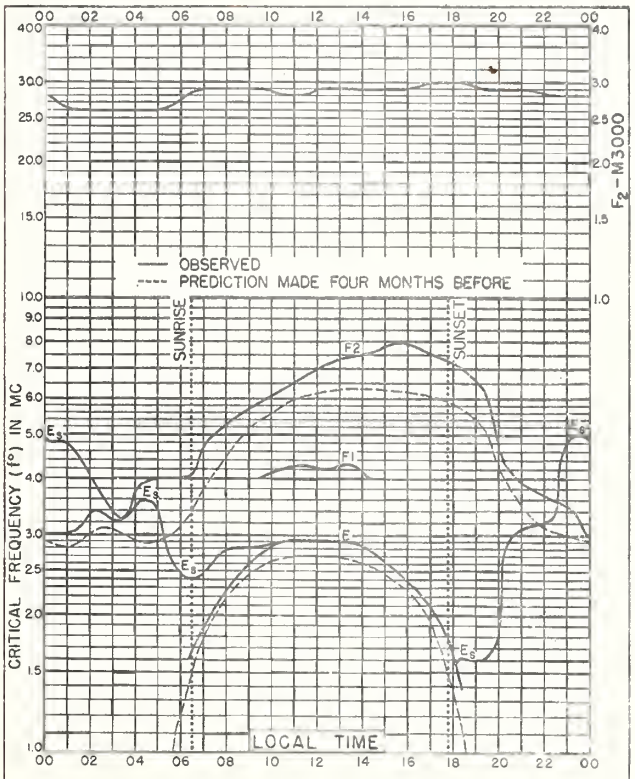


Fig. 3. FAIRBANKS, ALASKA
64.9°N, 147.8°W MARCH, 1946

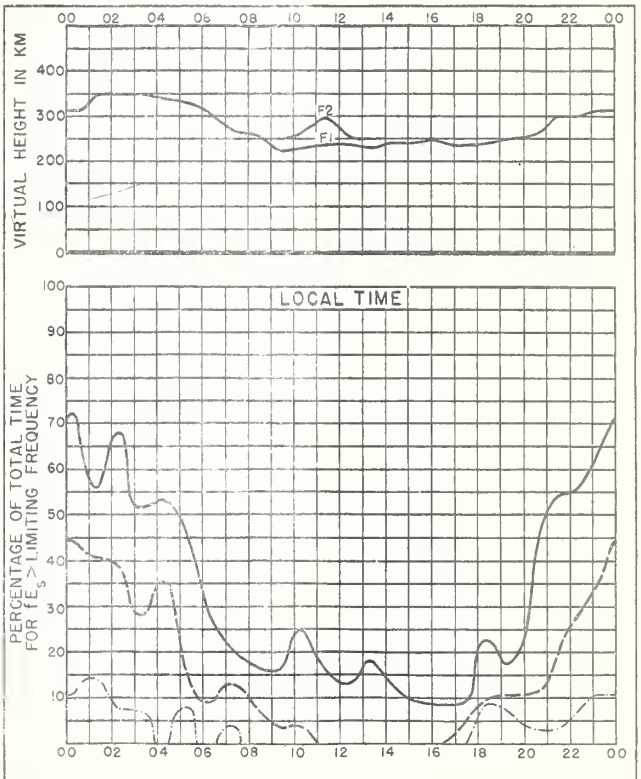


Fig. 4. FAIRBANKS, ALASKA MARCH, 1946

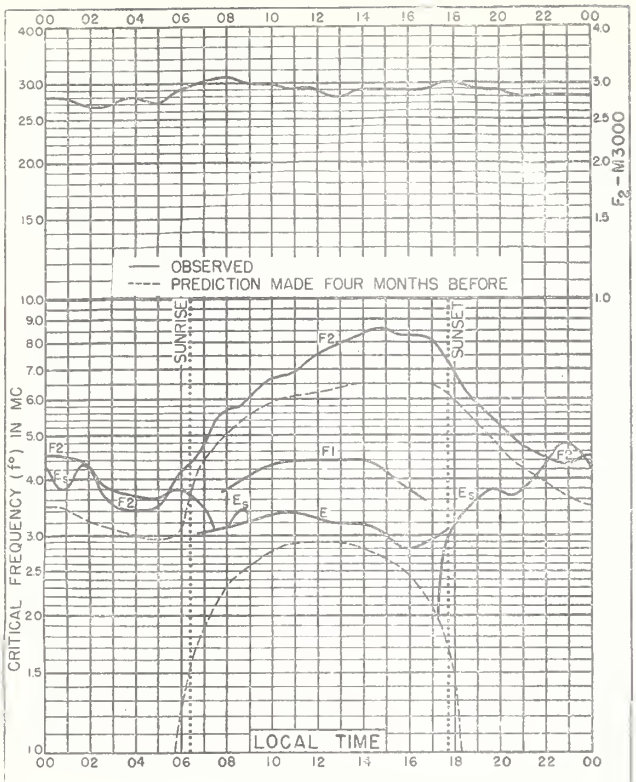


Fig. 5. CHURCHILL, CANADA
58.8°N, 94.2°W
MARCH, 1946

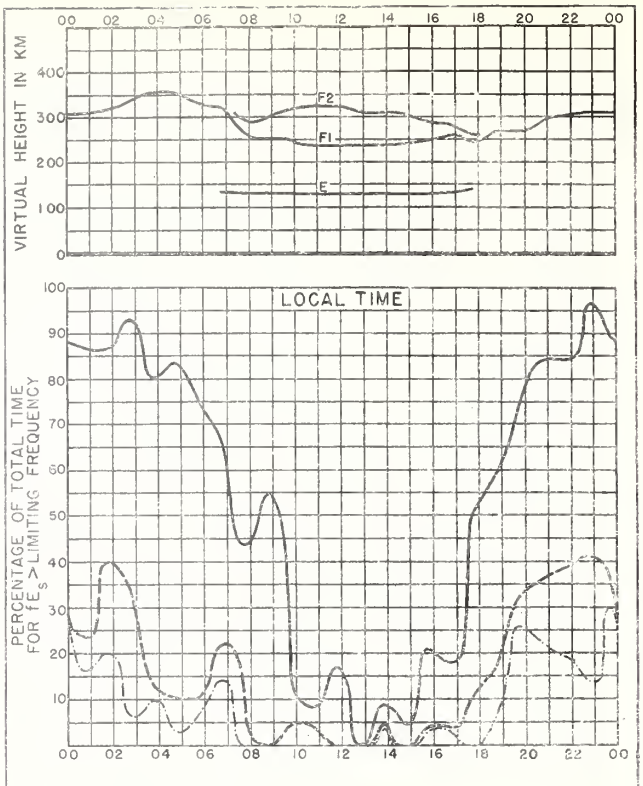


Fig. 6. CHURCHILL, CANADA
MARCH, 1946

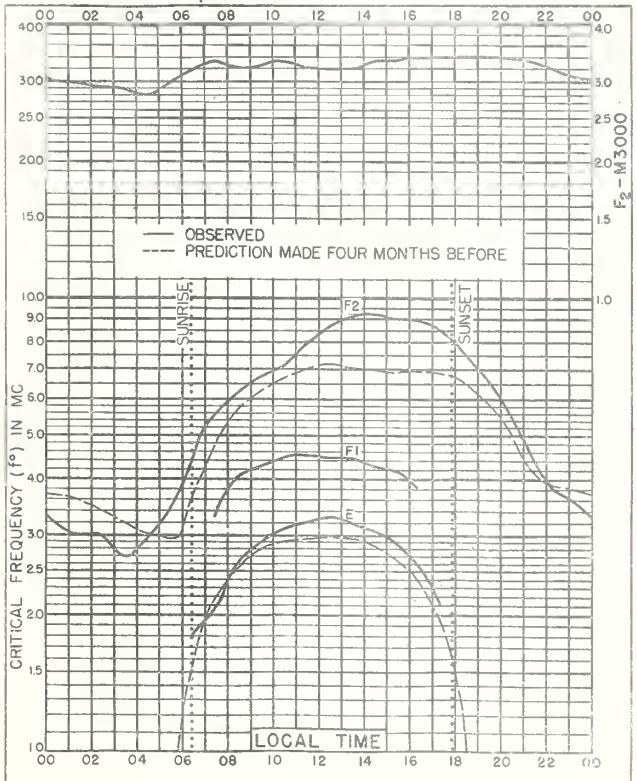


Fig. 7. PRINCE RUPERT, CANADA
54.3°N, 130.3°W
MARCH, 1946

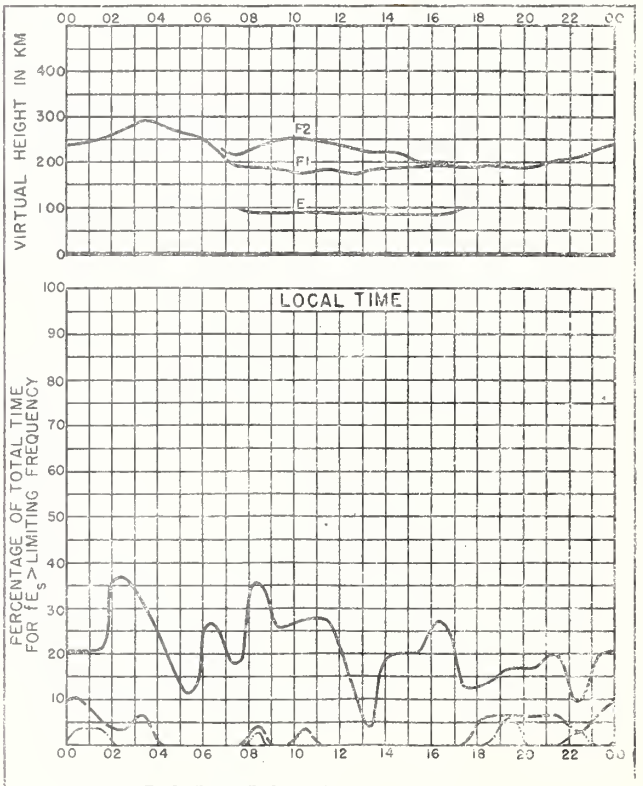


Fig. 8. PRINCE RUPERT, CANADA
MARCH, 1946

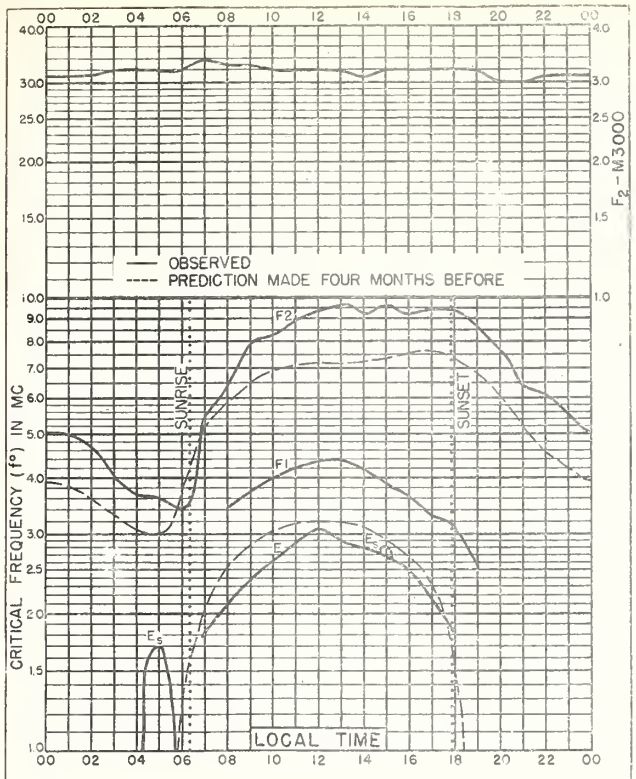


Fig. 9. ST. JOHN'S, NEWFOUNDLAND
47.7°N, 52.7°W MARCH, 1946

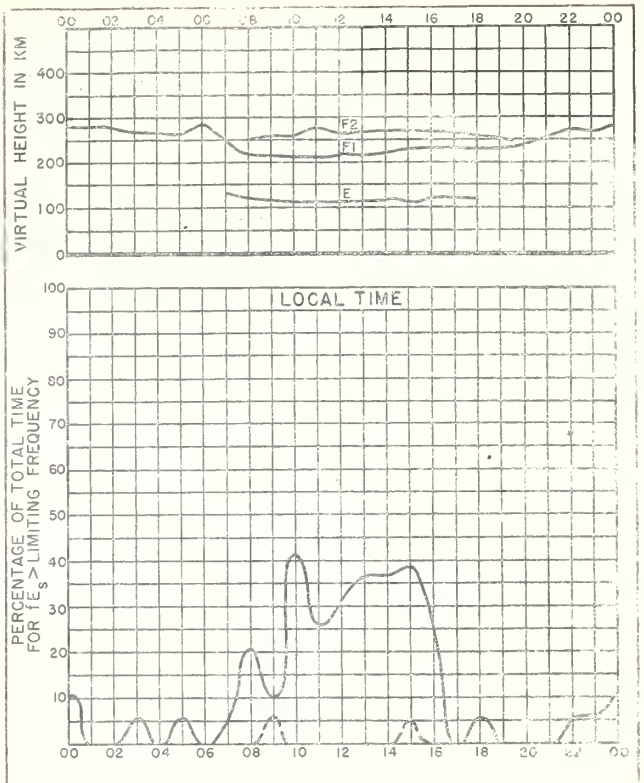


Fig. 10. ST. JOHN'S, NEWFOUNDLAND MARCH 194

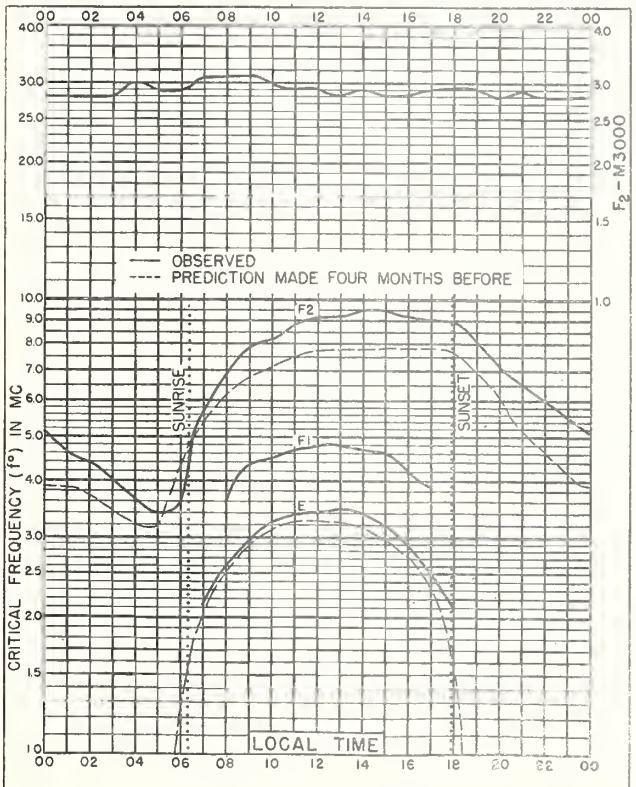


Fig. 11. OTTAWA, CANADA
45.5°N, 75.8°W MARCH, 1946

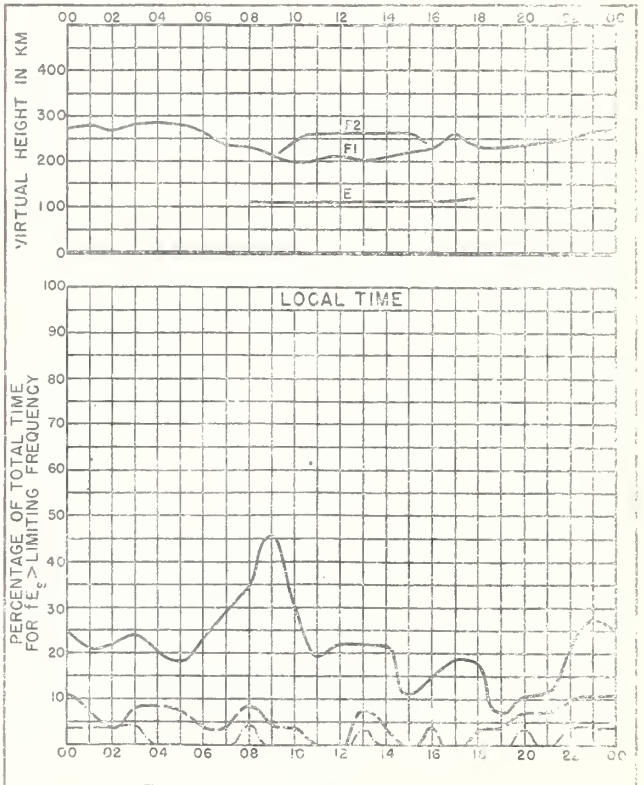


Fig. 12. OTTAWA, CANADA MARCH, 1946

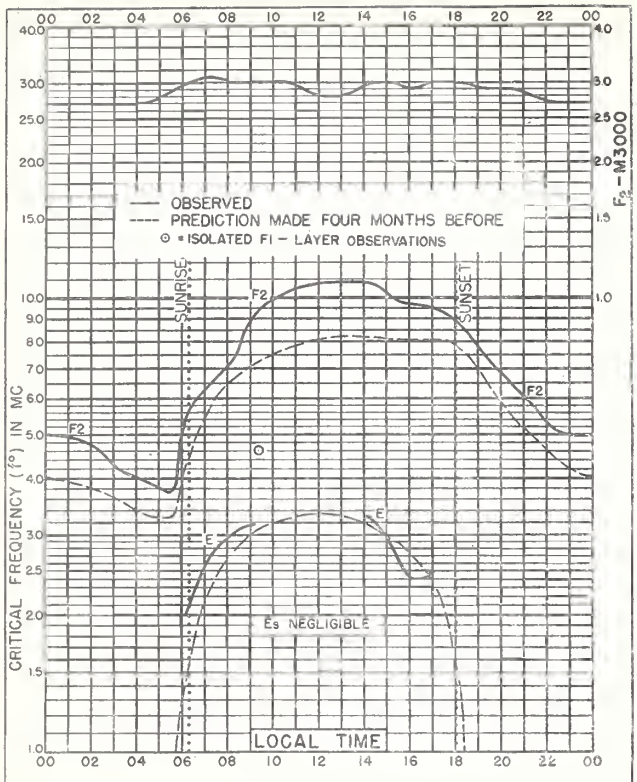


Fig. 13. BOSTON, MASSACHUSETTS
42.4°N, 71.2°W MARCH, 1946

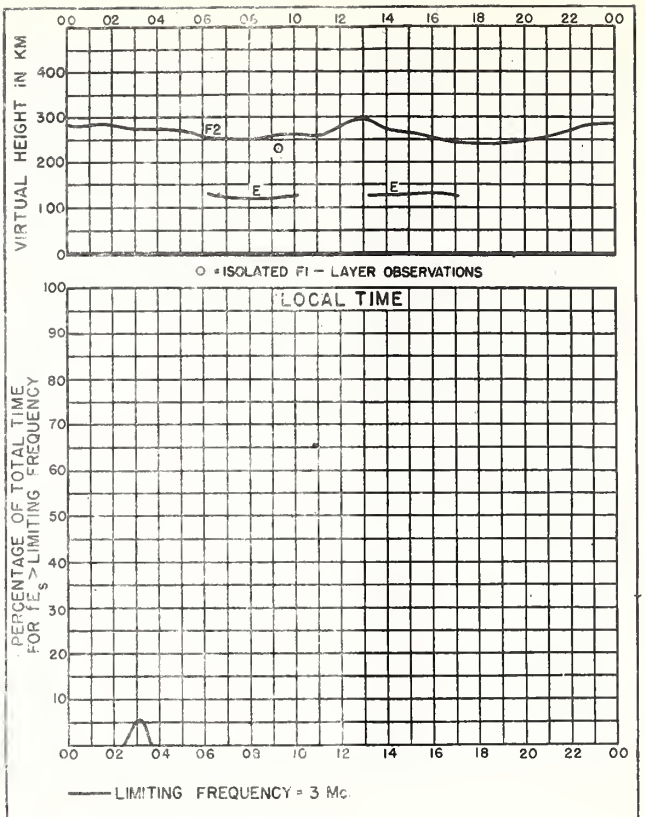


Fig. 14. BOSTON, MASSACHUSETTS MARCH, 1946

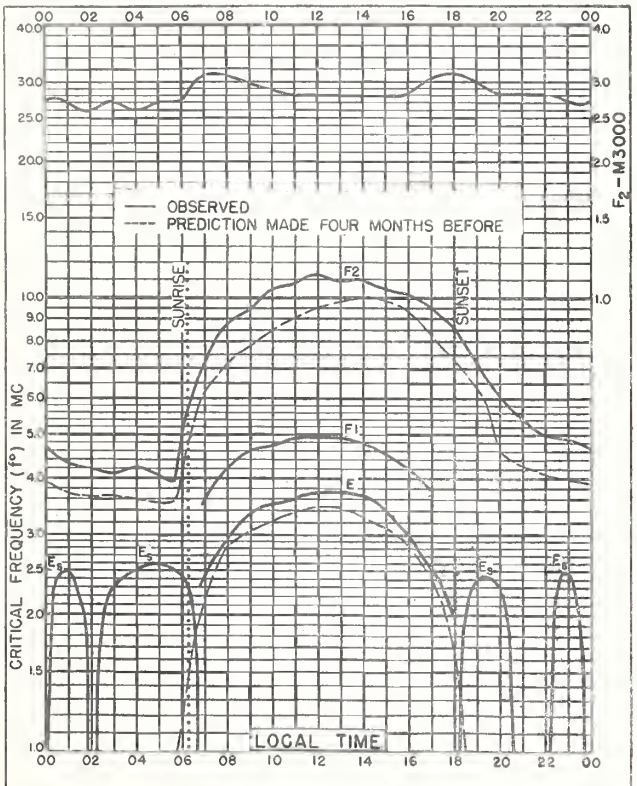


Fig. 15. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W MARCH, 1946

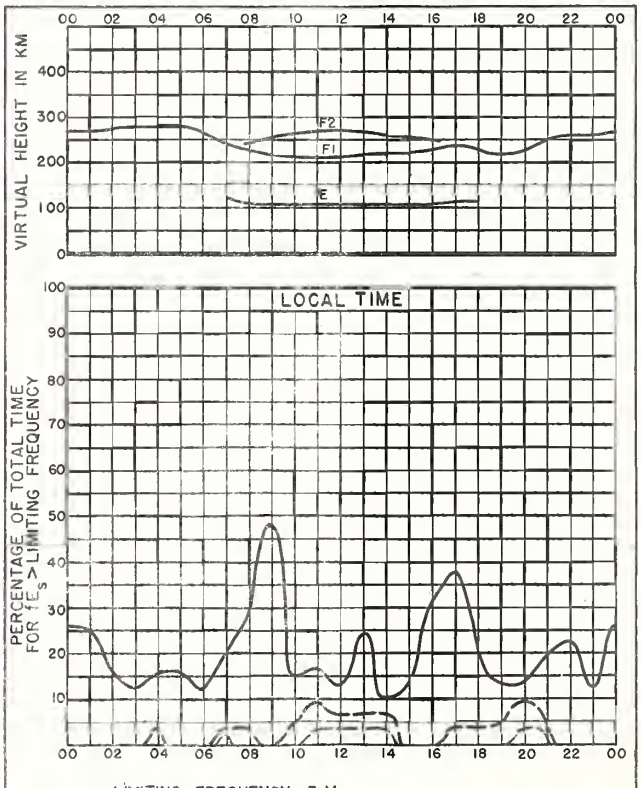


Fig. 16. SAN FRANCISCO, CALIFORNIA MARCH, 1946

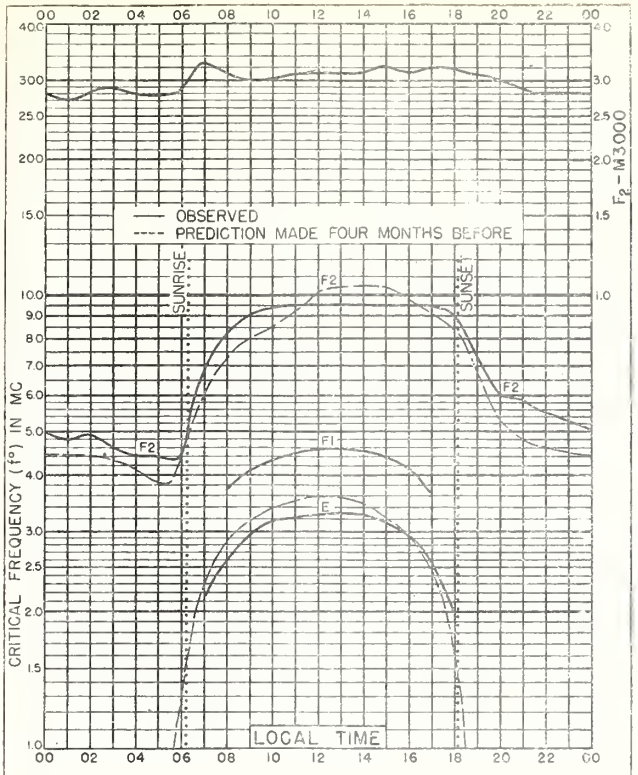


Fig. 17. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W MARCH, 1946

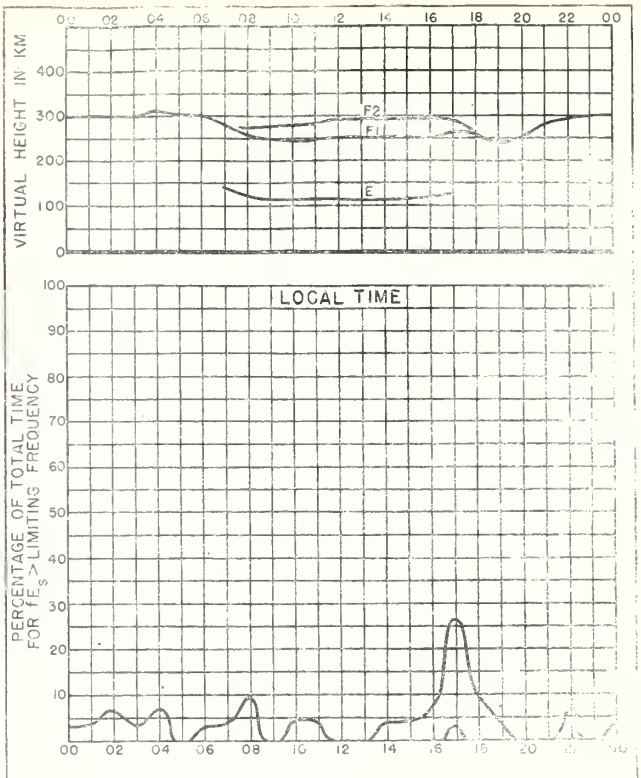


Fig. 18. BATON ROUGE, LOUISIANA MARCH, 1946

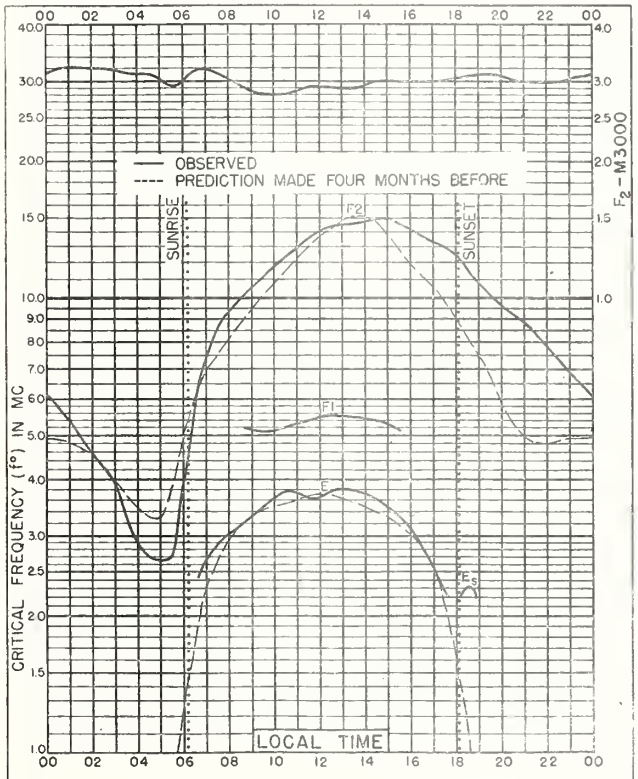


Fig. 19. MAUI, HAWAII
20.8°N, 156.5°W MARCH, 1946

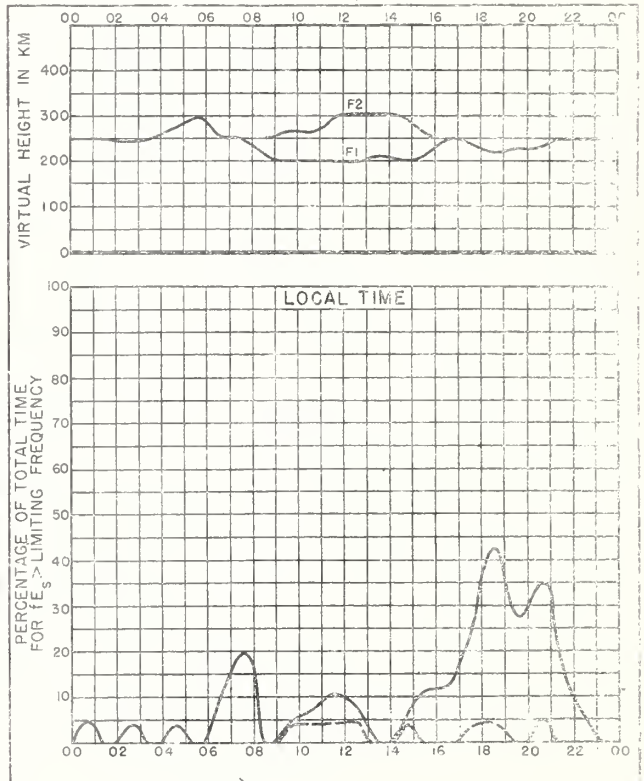


Fig. 20 MAUI, HAWAII MARCH, 1946

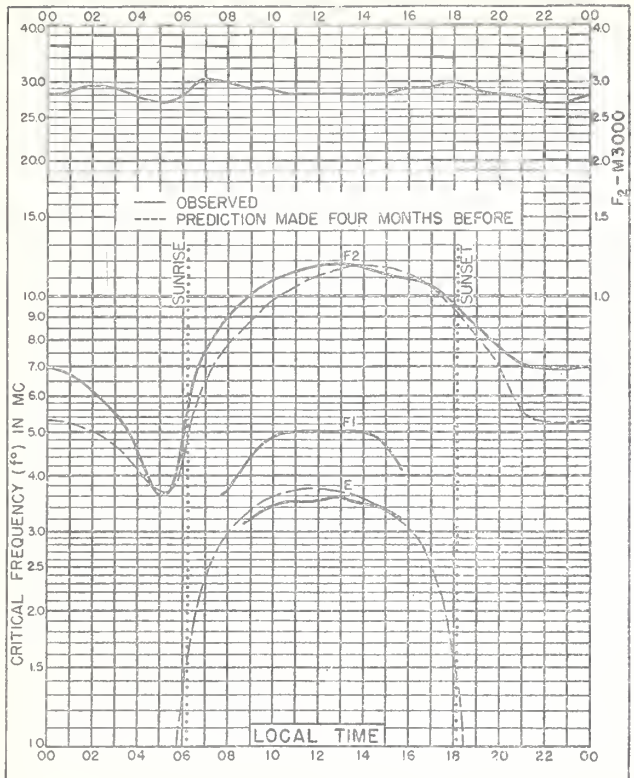


Fig. 21. SAN JUAN, PUERTO RICO
18.4°N, 66.1°W MARCH, 1946

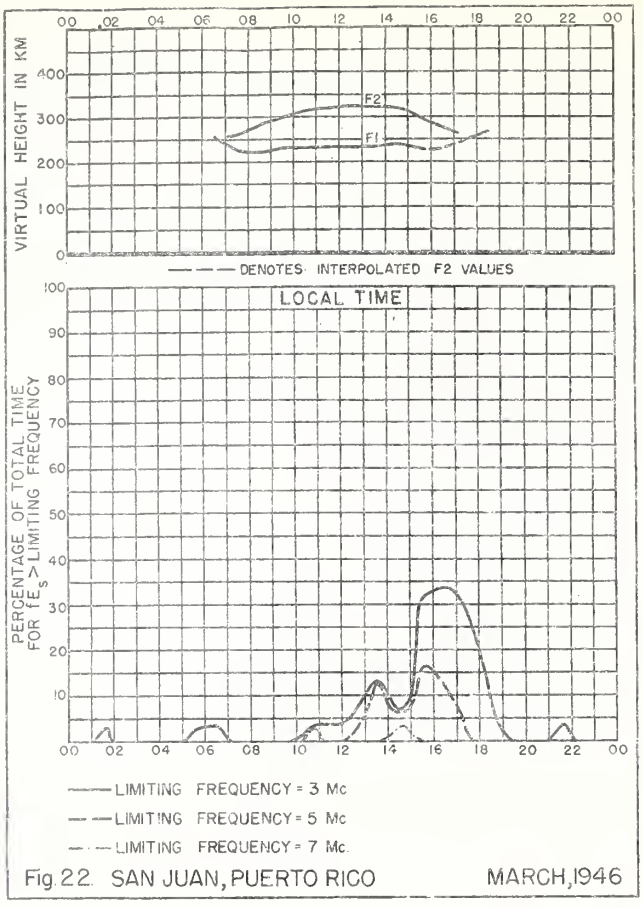


Fig. 22. SAN JUAN, PUERTO RICO MARCH, 1946

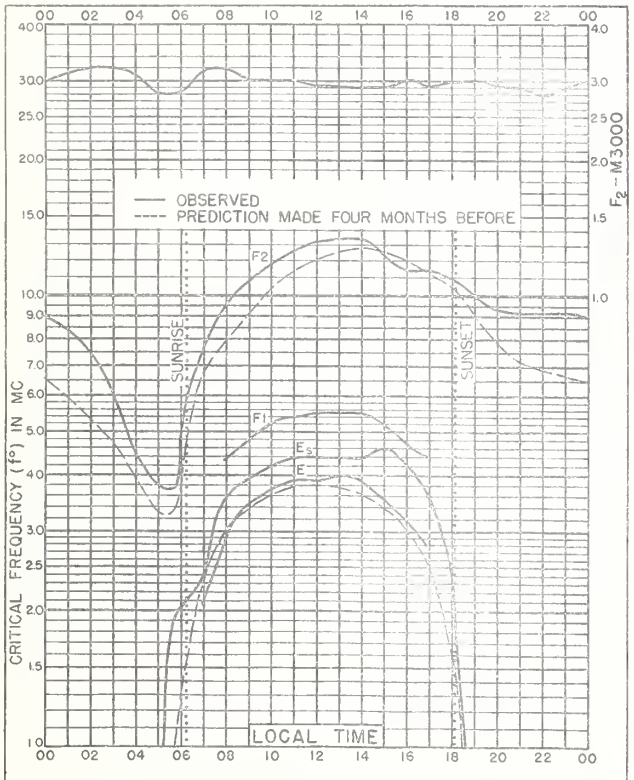


Fig. 23. TRINIDAD, BRIT. WEST INDIES
10.6°N, 61.2°W MARCH, 1946

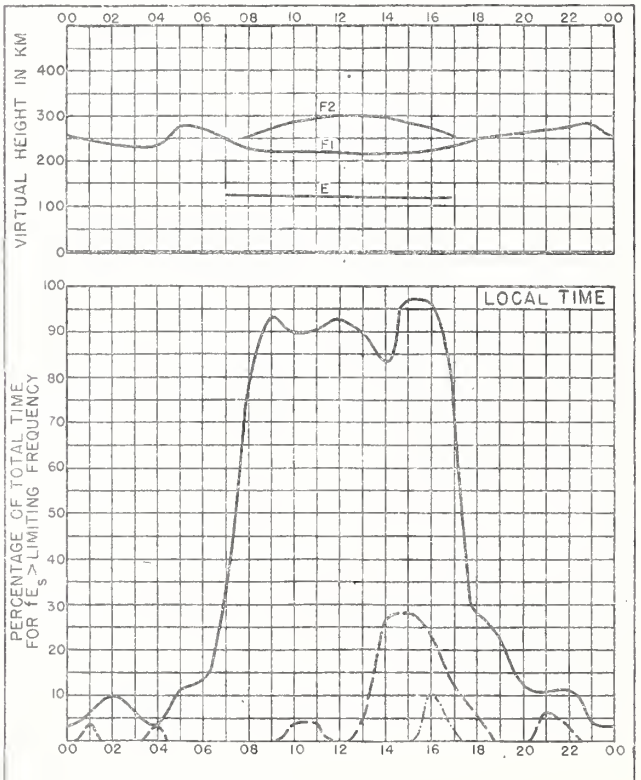


Fig. 24. TRINIDAD, BRIT. WEST INDIES MARCH, 1946

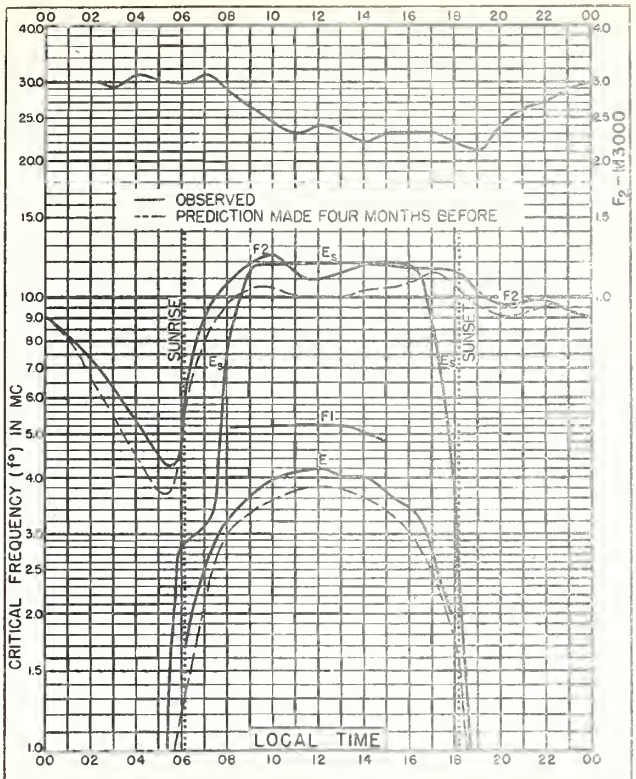


Fig.25. HUANCAYO, PERU
12.0°S, 75.3°W
MARCH, 1946

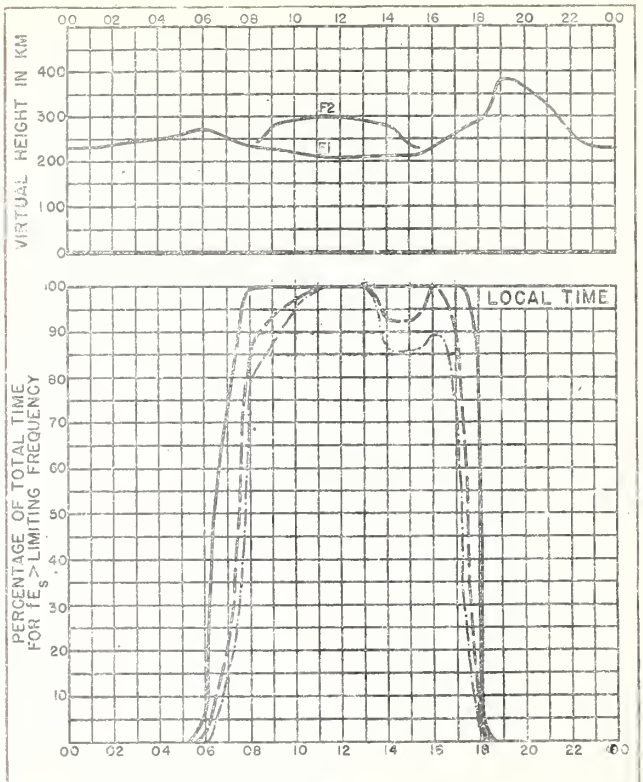
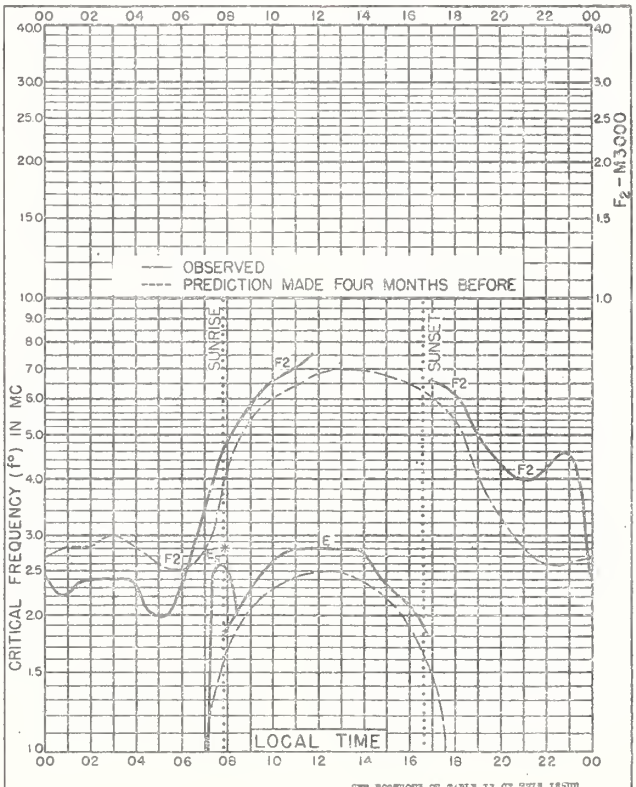


Fig.26. HUANCAYO, PERU
MARCH, 1946



SEE FOOTNOTE ON TABLE 37 OF THIS ISSUE.

Fig. 27. OSLO, NORWAY
59.9°N, 11.0°E
FEBRUARY, 1946

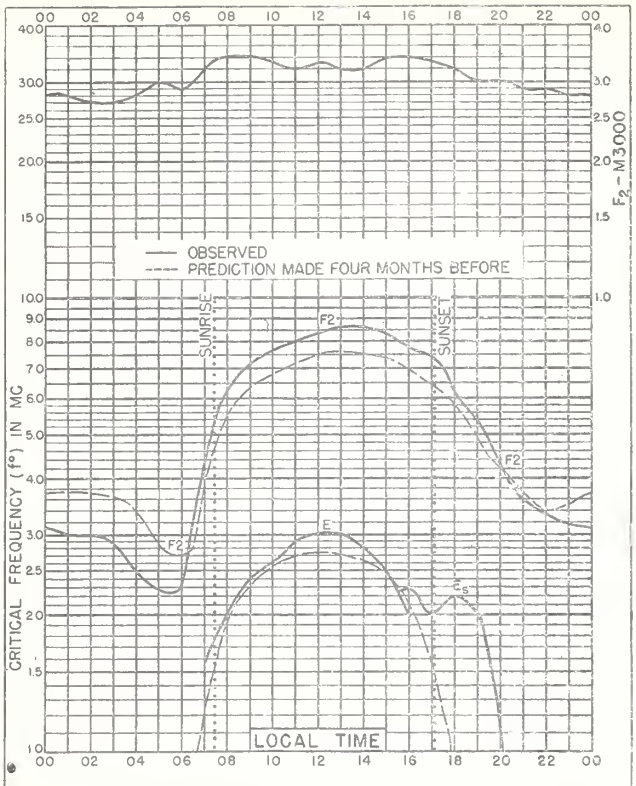


Fig. 28. GREAT BADDOW, ENGLAND
51.7°N, 0.5°E FEBRUARY, 1946

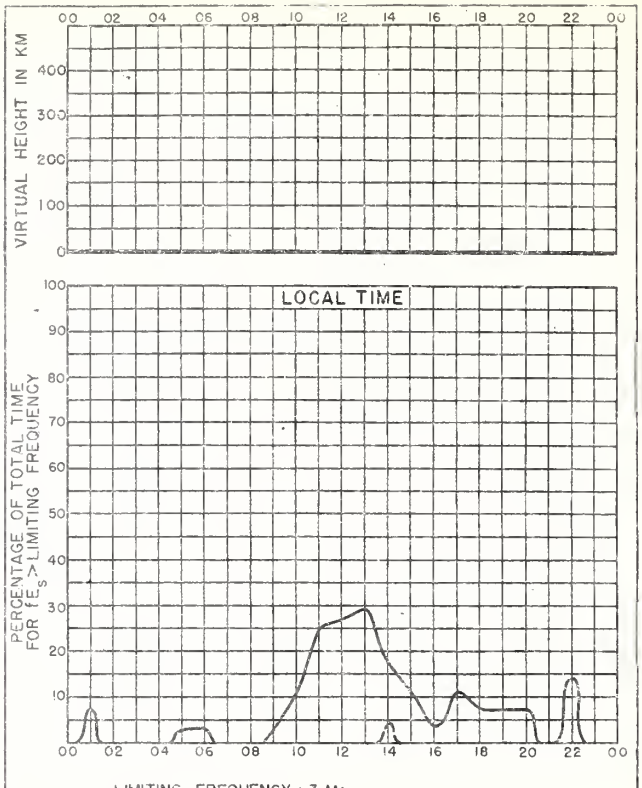


Fig. 29. GREAT BADDOW, ENGLAND FEBRUARY, 1946

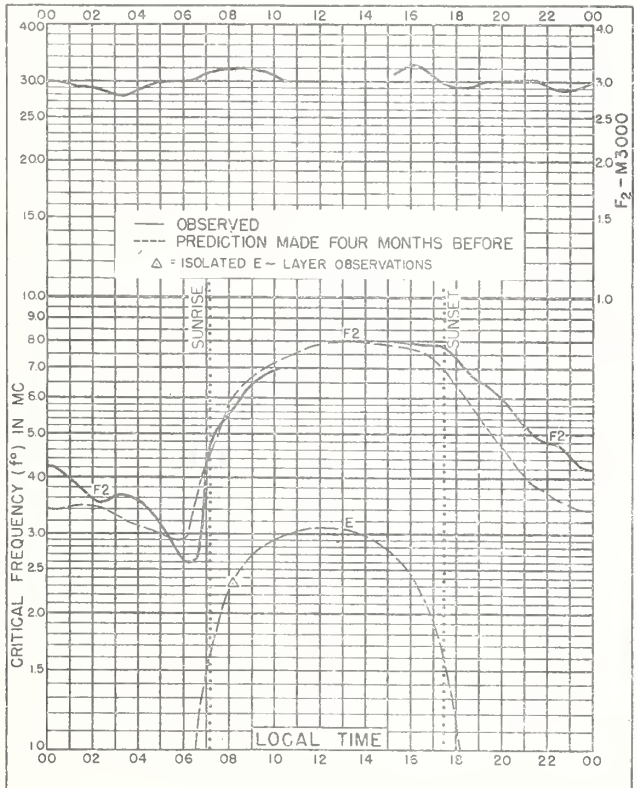


Fig. 30. BOSTON, MASSACHUSETTS
42.4°N, 71.2°W FEBRUARY, 1946

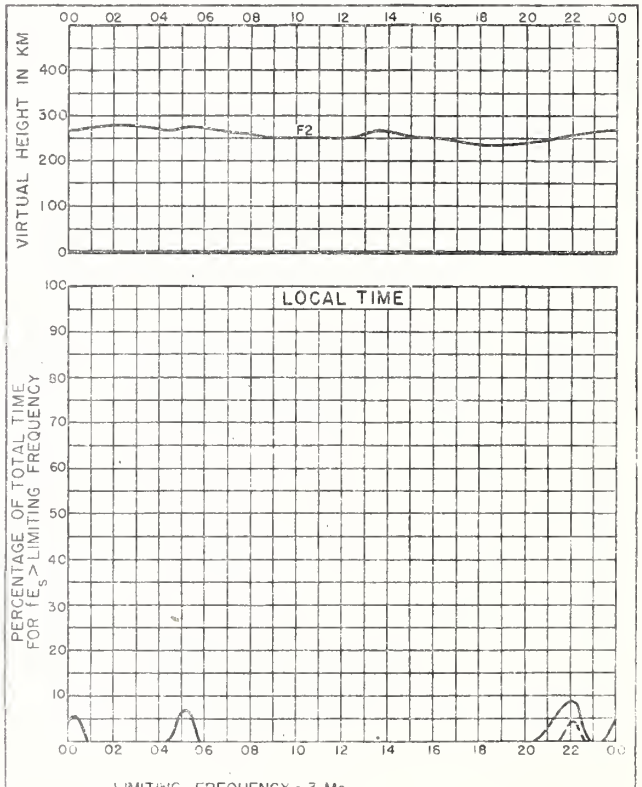
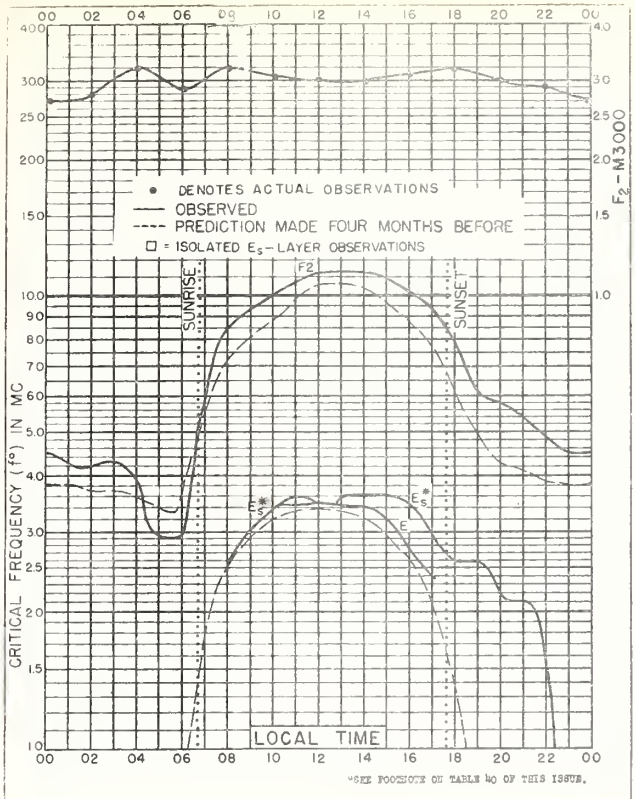


Fig 31 BOSTON, MASSACHUSETTS FEBRUARY, 1946



*SEE FOOTNOTE ON TABLE 40 OF THIS ISSUE.

Fig. 32. CAIRO, EGYPT
30.0°N, 31.2°E FEBRUARY, 1946

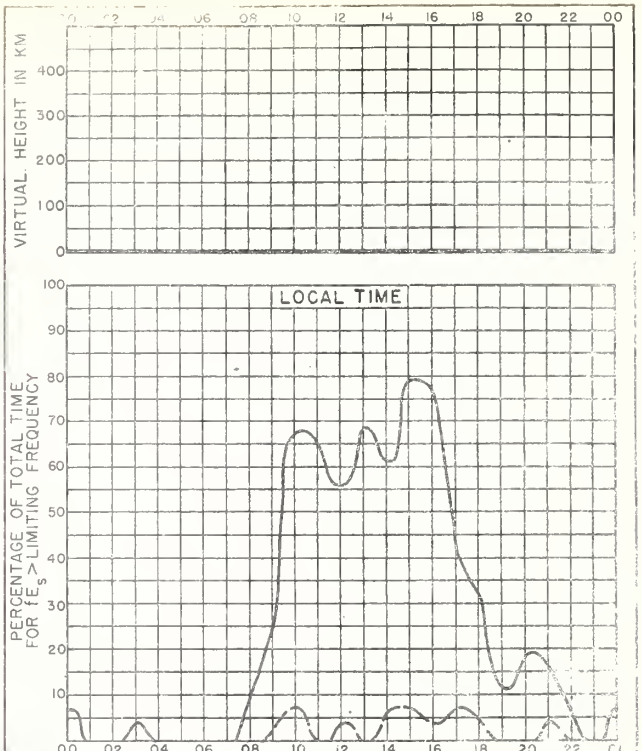


Fig. 33. CAIRO, EGYPT FEBRUARY, 1946

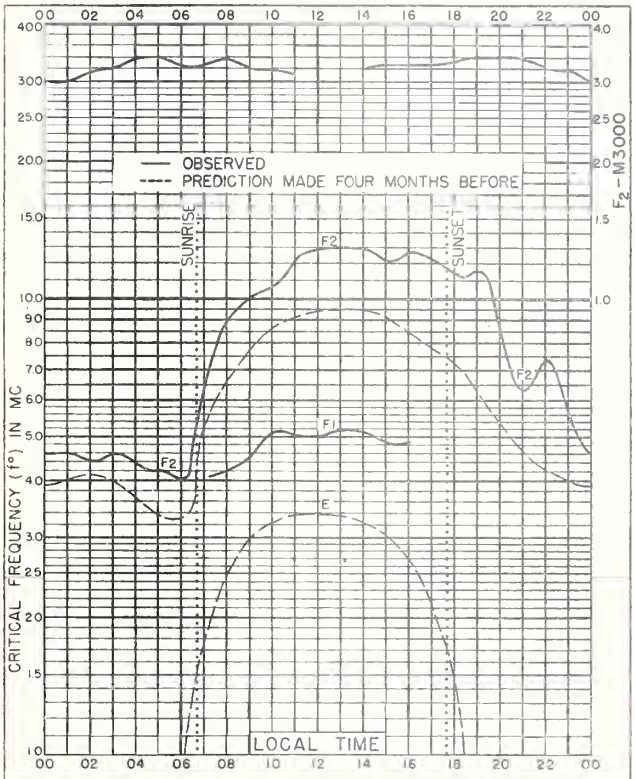


Fig 34 CHUNGKING, CHINA
29.4°N, 106.8°E FEBRUARY, 1946

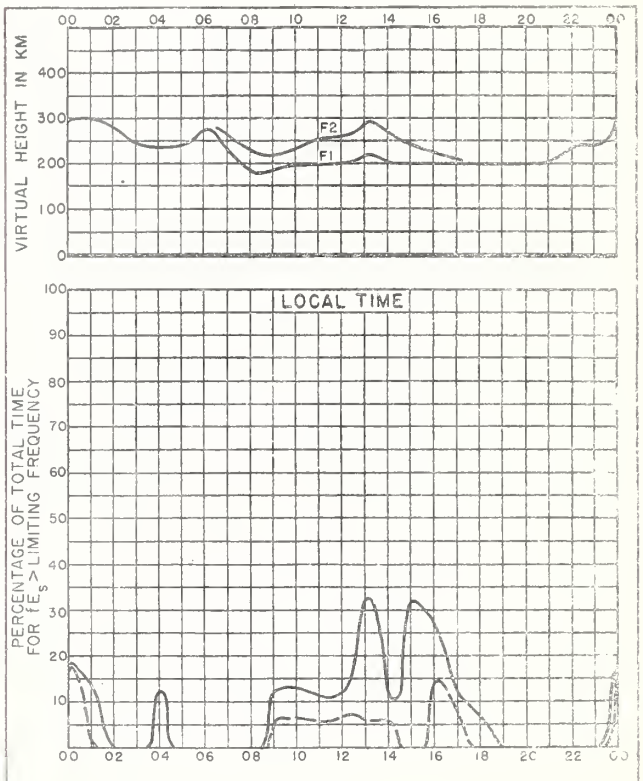


Fig. 35. CHUNGKING, CHINA FEBRUARY, 1946

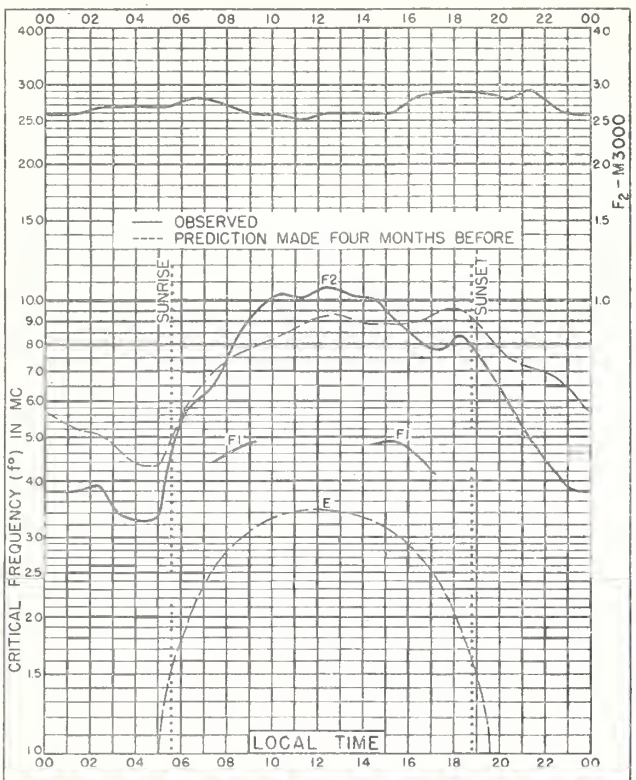


Fig. 36 CAPETOWN (SIMONSTOWN), UNION OF S AFRICA
33.9°S, 18.7°E FEBRUARY, 1946

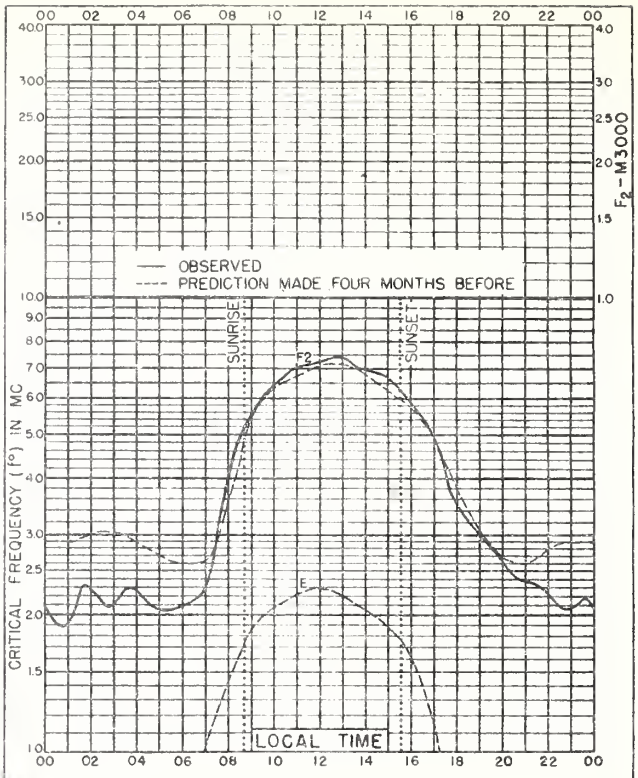


Fig. 37 BURGHEAD, SCOTLAND
57.7°N, 3.5°W JANUARY, 1946

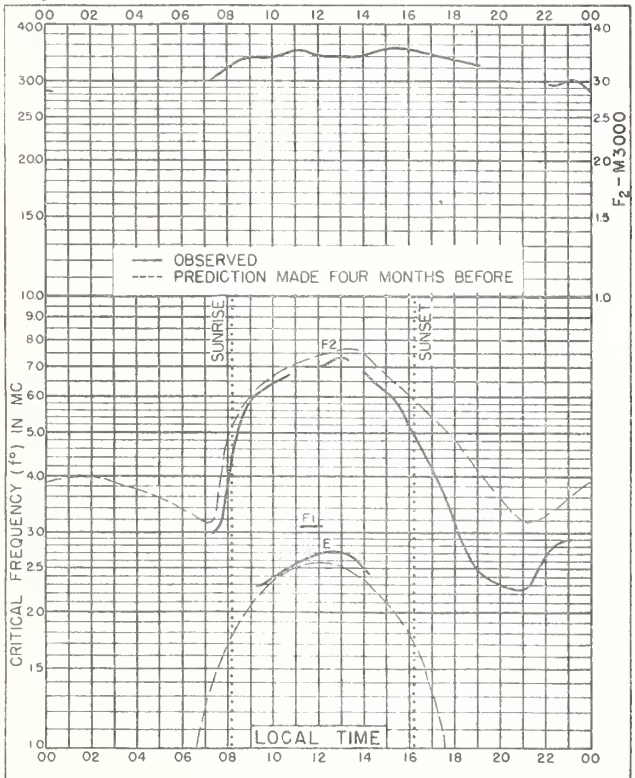


Fig. 38 ADAK, ALASKA
51.9°N, 176.6°W JANUARY, 1946

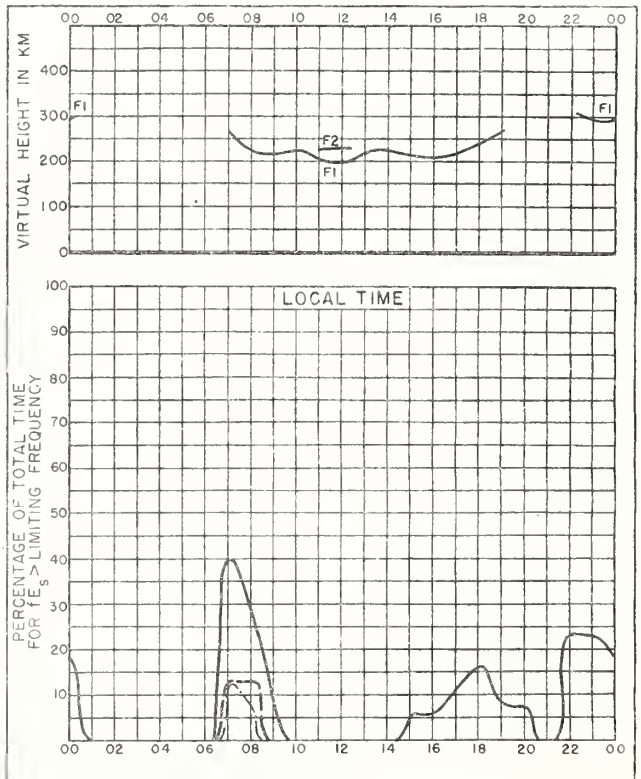


Fig. 39. ADAK, ALASKA JANUARY, 1946

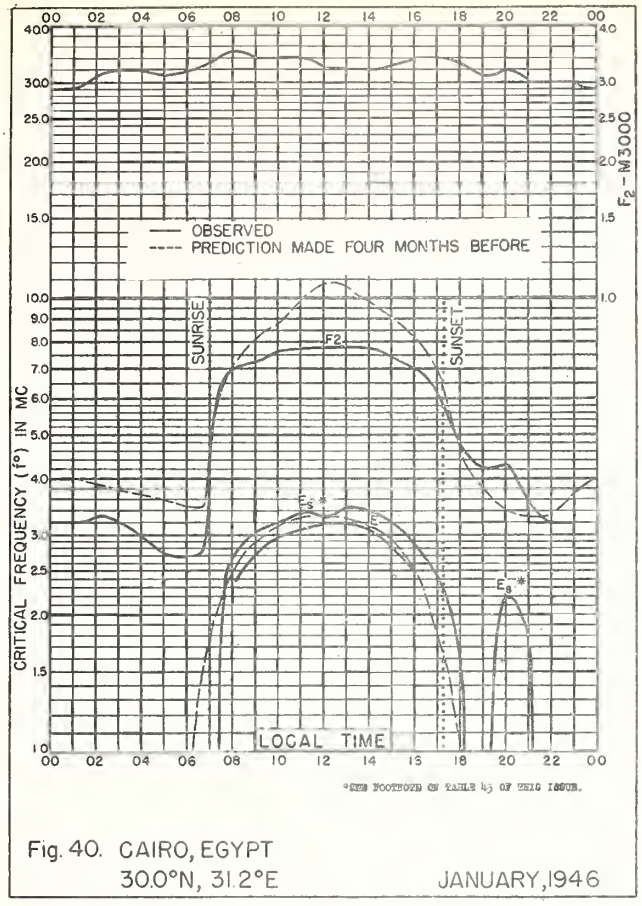


Fig. 40. CAIRO, EGYPT
30.0°N, 31.2°E JANUARY, 1946

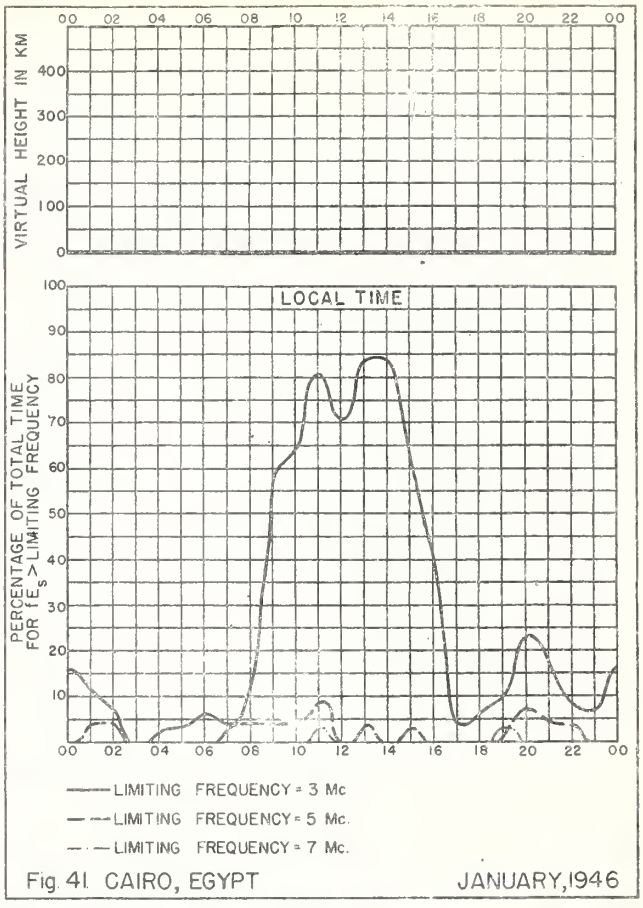


Fig. 41. CAIRO, EGYPT JANUARY, 1946

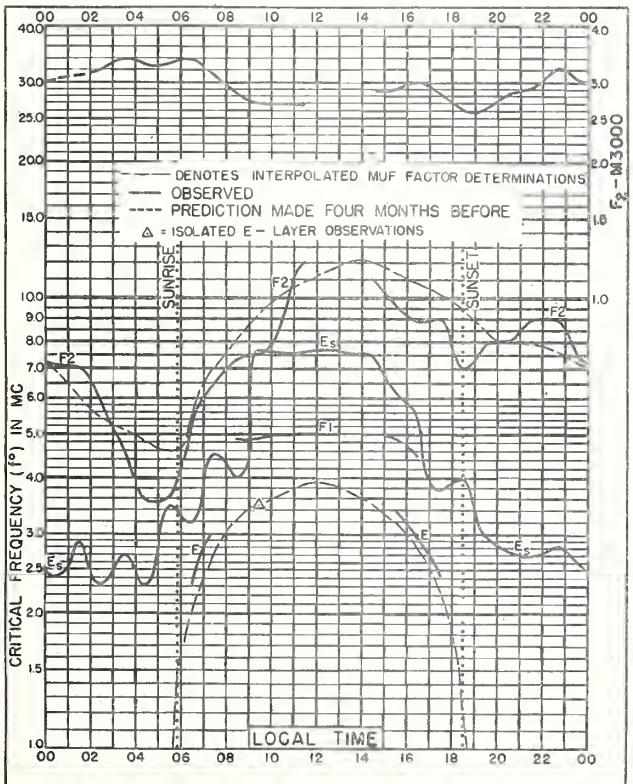


Fig. 42. CAPE YORK, AUSTRALIA
11.0°S, 142.4°E. JANUARY, 1946

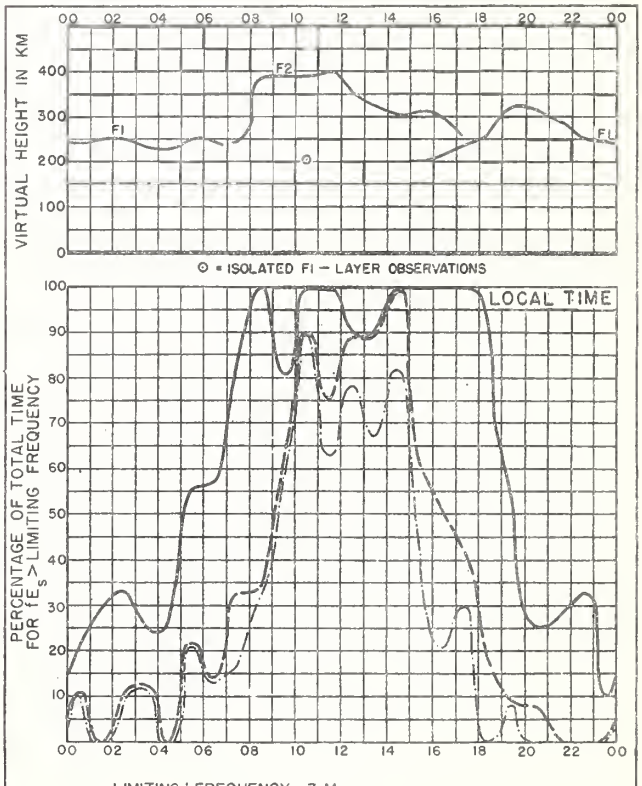


Fig. 43. CAPE YORK, AUSTRALIA JANUARY, 1946

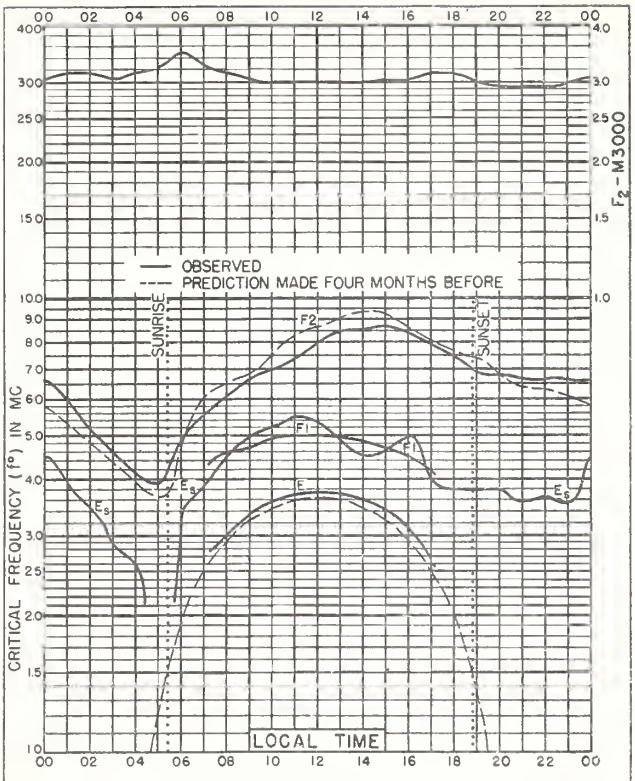


Fig. 44. BRISBANE, AUSTRALIA
27.5°S, 153.0°E JANUARY, 1946

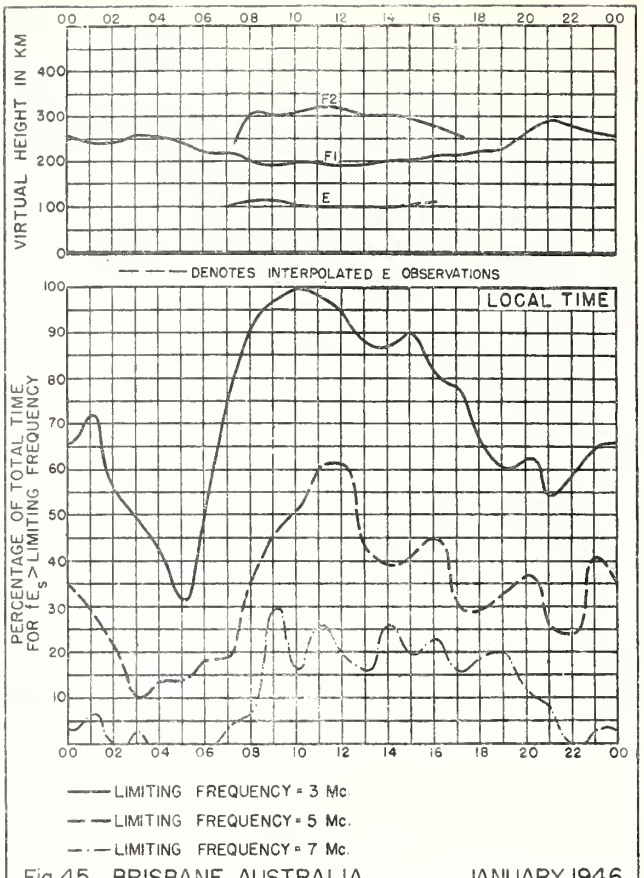


Fig. 45. BRISBANE, AUSTRALIA JANUARY, 1946

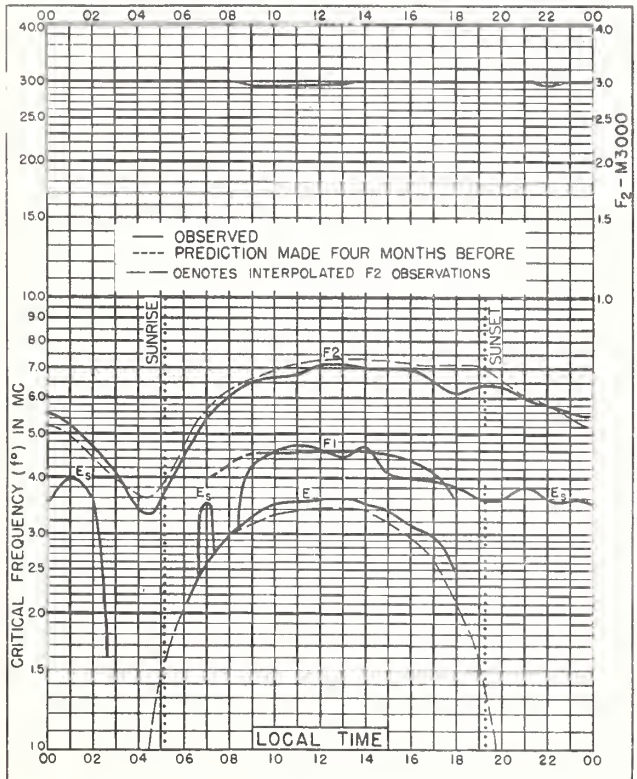


Fig. 46. CANBERRA, AUSTRALIA
35.3°S, 149.0°E JANUARY, 1946

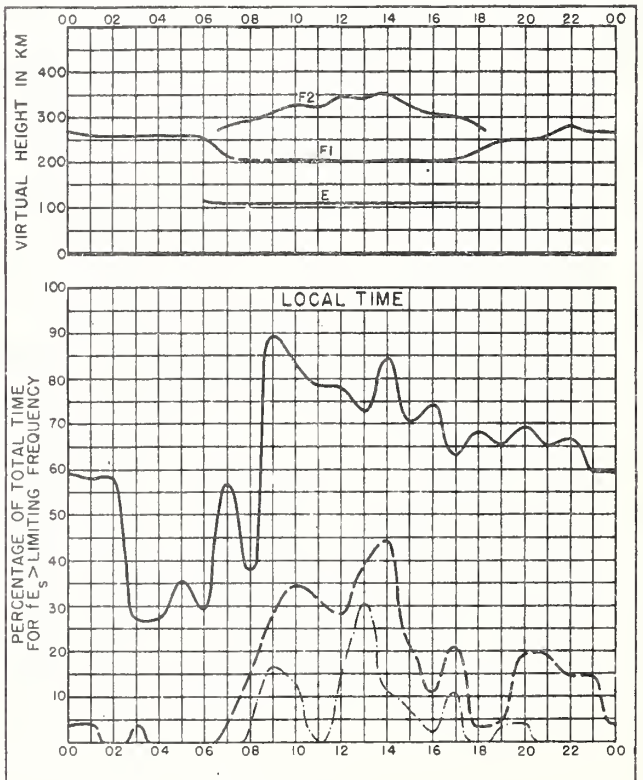
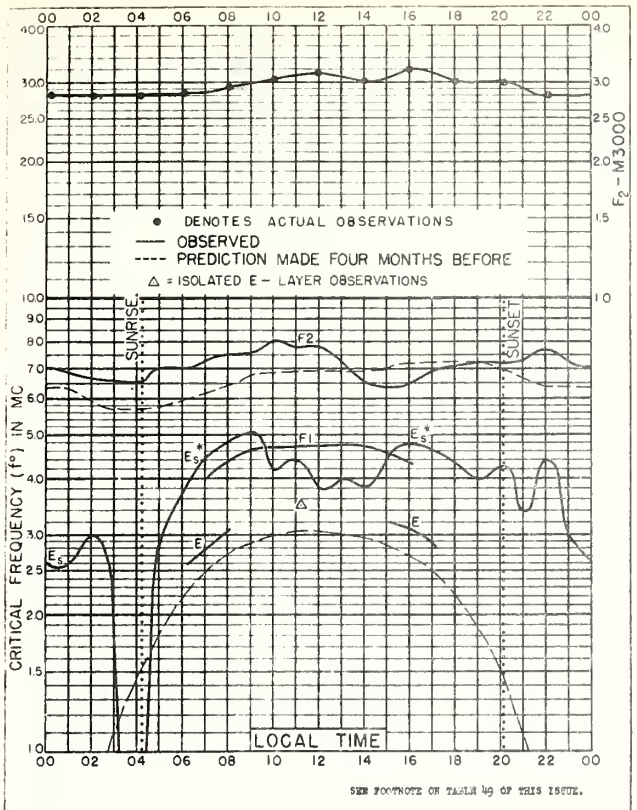


Fig. 47. CANBERRA, AUSTRALIA JANUARY, 1946



SEE FOOTNOTE ON TABLE 49 OF THIS ISSUE.

Fig. 48. FALKLAND IS.
51.7°S, 58.0°W JANUARY, 1946

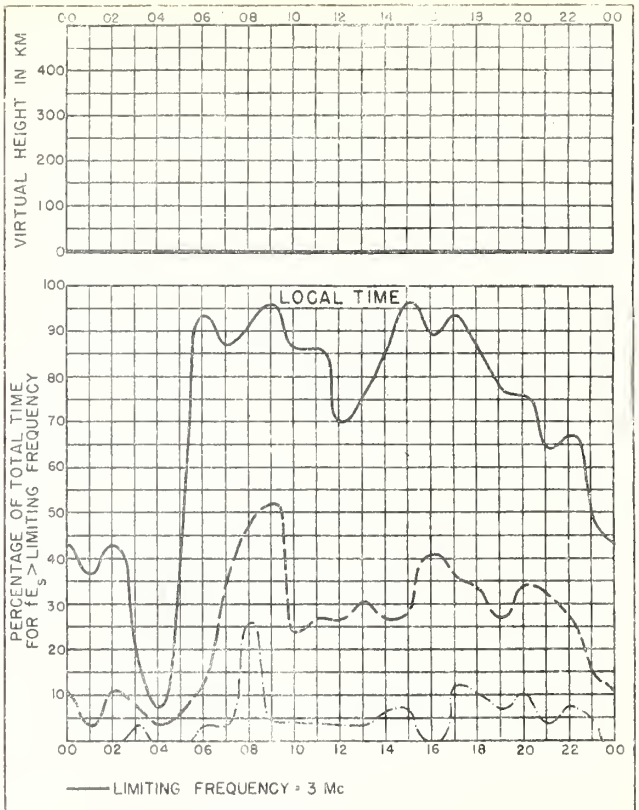


Fig. 49. FALKLAND IS. JANUARY, 1946

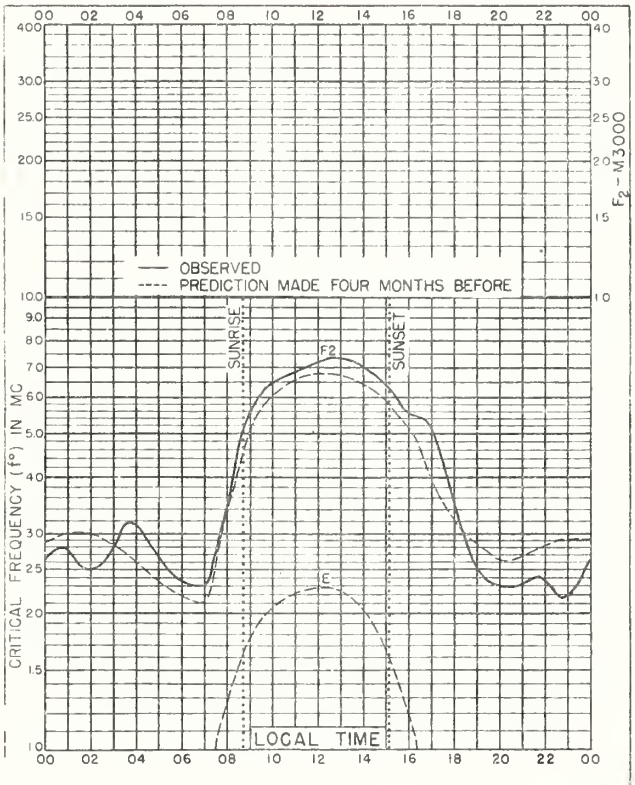


Fig. 50. BURGHEAD, SCOTLAND
57.7°N, 3.5°W DECEMBER, 1945

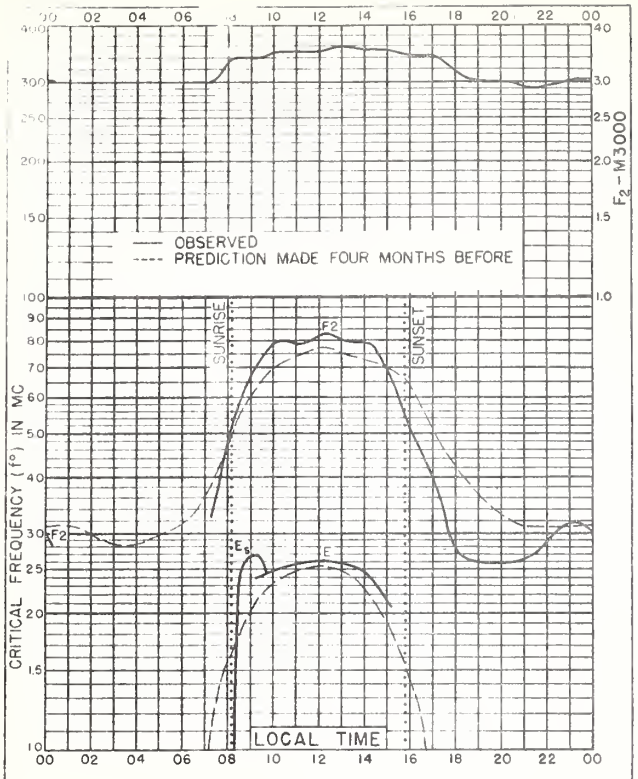


Fig. 51. ADAK, ALASKA
51.9°N, 176.6°W DECEMBER, 1945

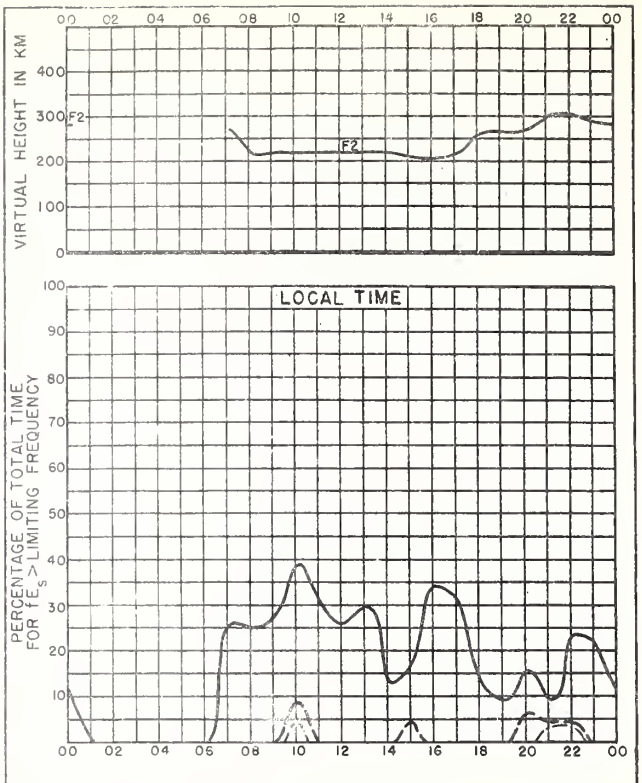


Fig. 52. ADAK, ALASKA DECEMBER, 1945

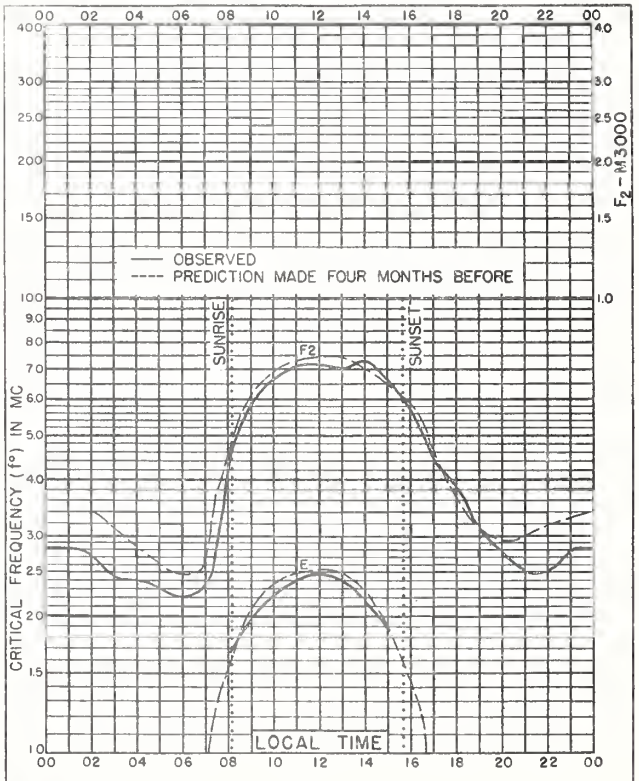


Fig. 53. SLOUGH, ENGLAND
51.5°N, 0.6°W DECEMBER, 1945

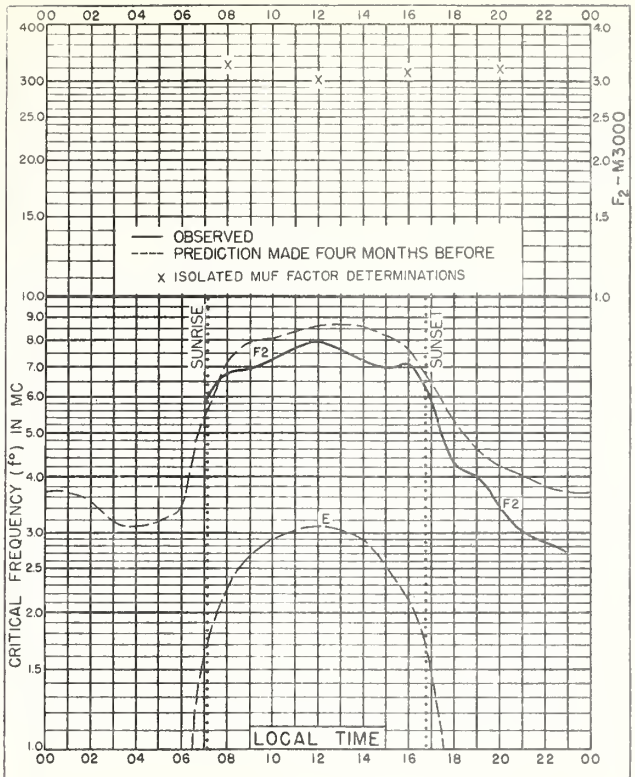


Fig. 54. PESHAWAR, INDIA
34.0°N, 71.5°E DECEMBER, 1945

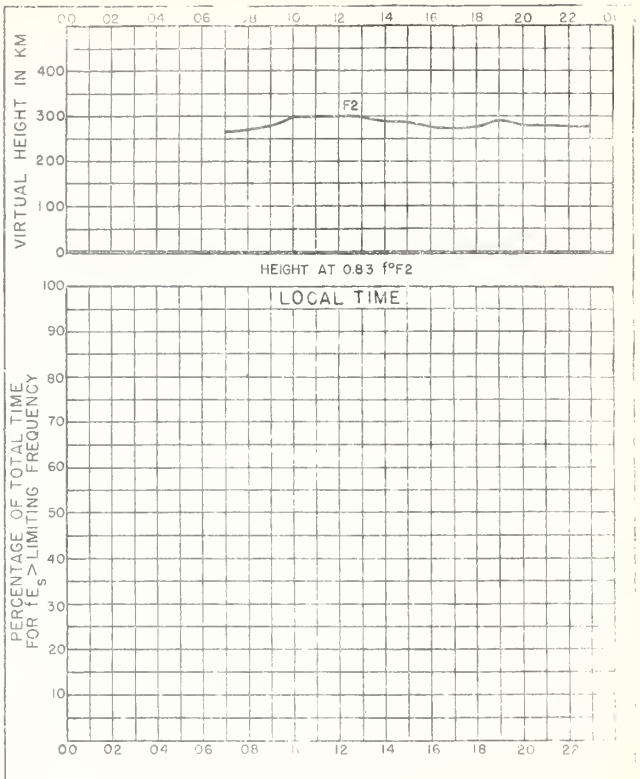


Fig. 55. PESHAWAR, INDIA DECEMBER, 1945

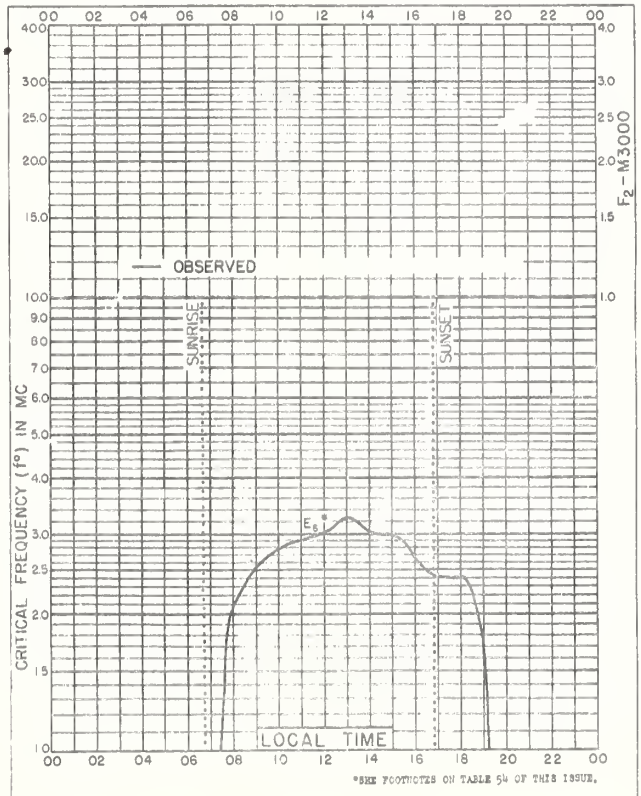


Fig. 56. CAIRO, EGYPT
30.0°N, 31.2°E DECEMBER, 1945

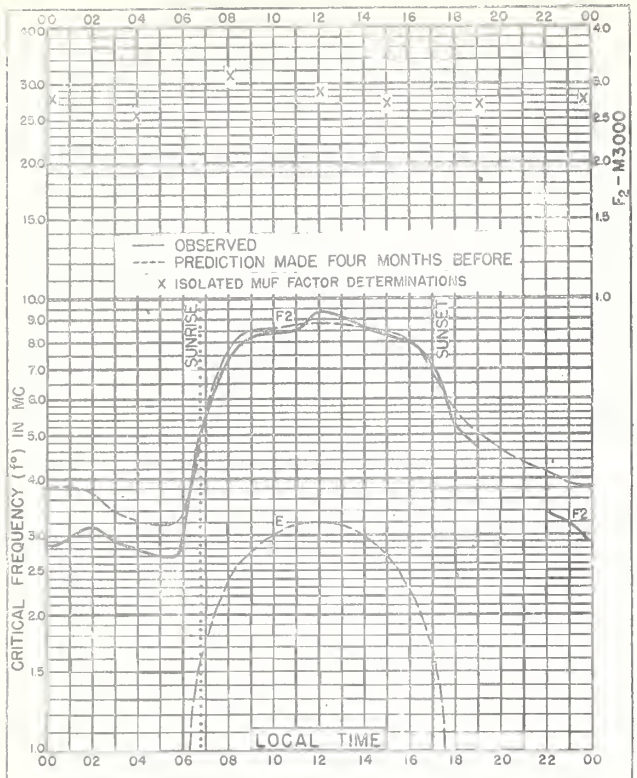


Fig. 57. DELHI, INDIA
28.6°N, 77.2°E DECEMBER, 1945

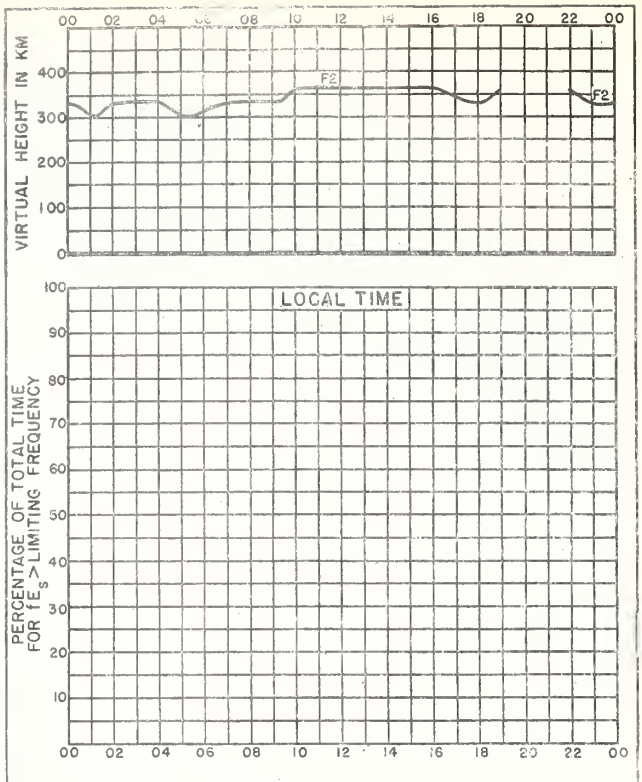


Fig. 58. DELHI, INDIA DECEMBER, 1945

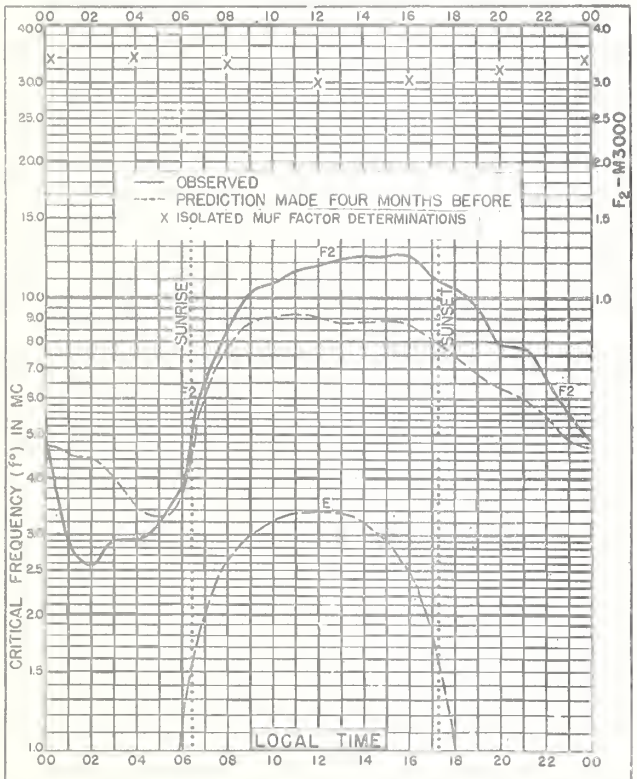


Fig. 59. BOMBAY, INDIA
19.0°N, 73.0°E DECEMBER, 1945

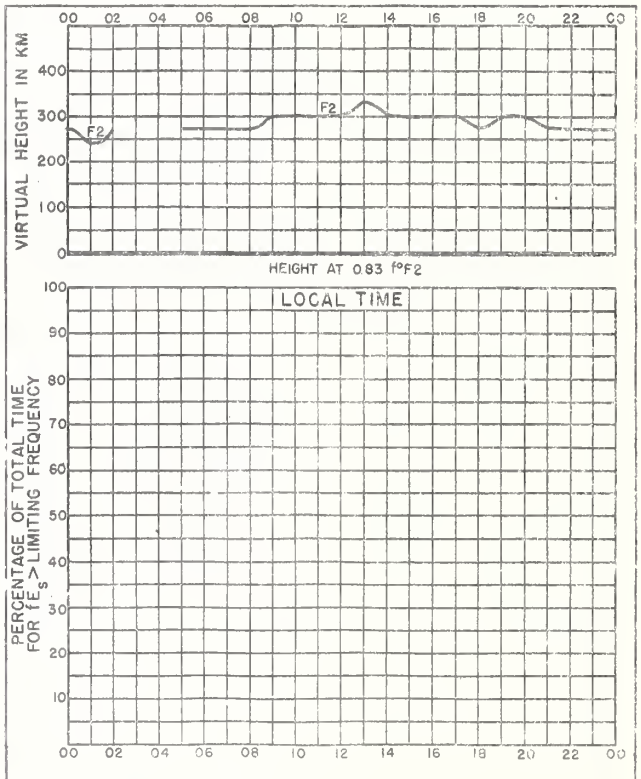


Fig. 60. BOMBAY, INDIA DECEMBER, 1945

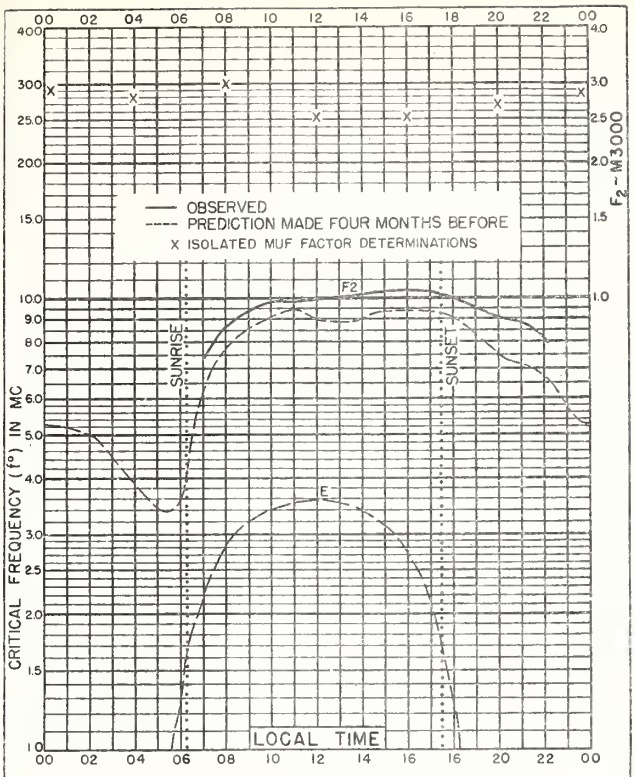


Fig. 61. MADRAS, INDIA
13.0°N, 80.2°E DECEMBER, 1945

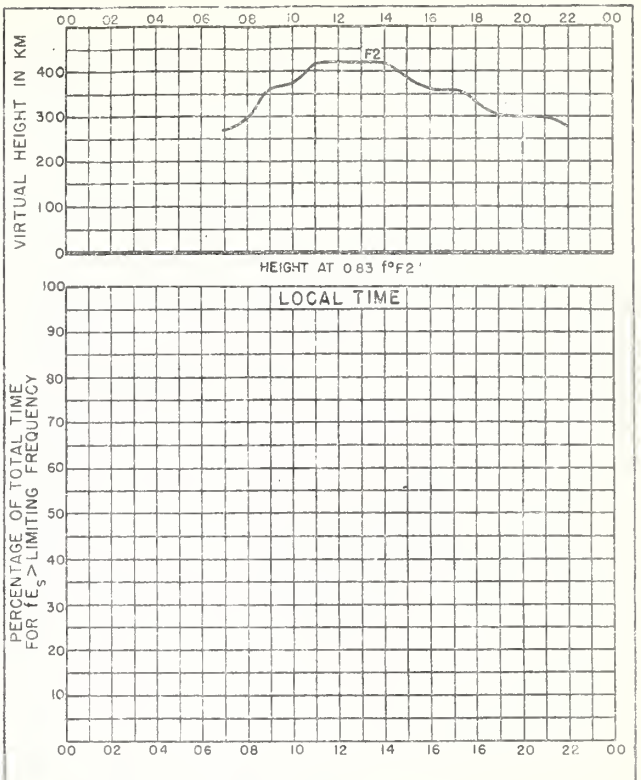


Fig. 62. MADRAS, INDIA DECEMBER, 1945

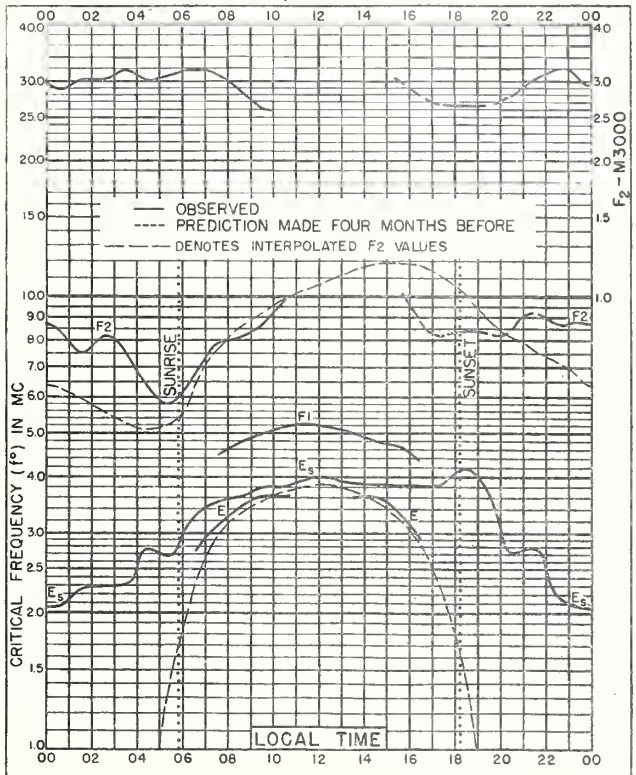


Fig. 63. CAPE YORK, AUSTRALIA
11.0°S, 142.4°E DECEMBER, 1945

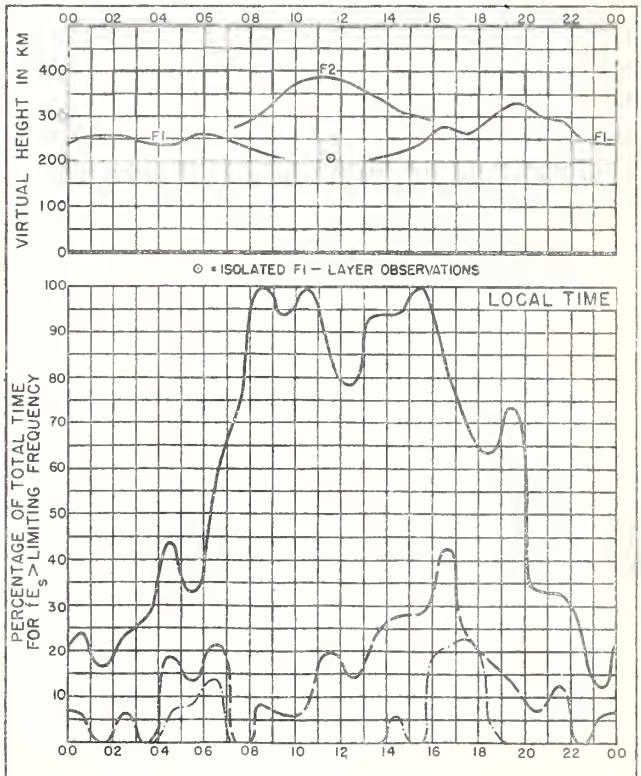


Fig. 64. CAPE YORK, AUSTRALIA DECEMBER, 1945

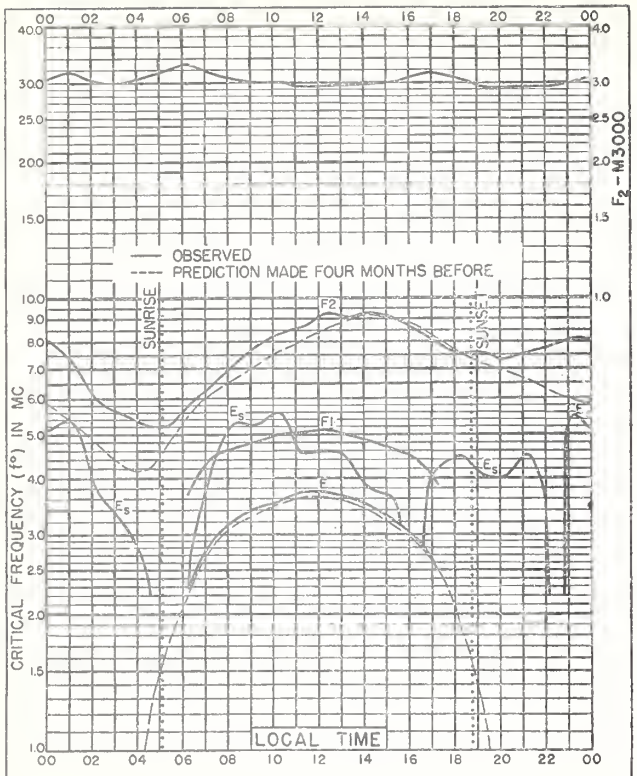


Fig. 65. BRISBANE, AUSTRALIA
27.5°S, 153.0°E DECEMBER, 1945

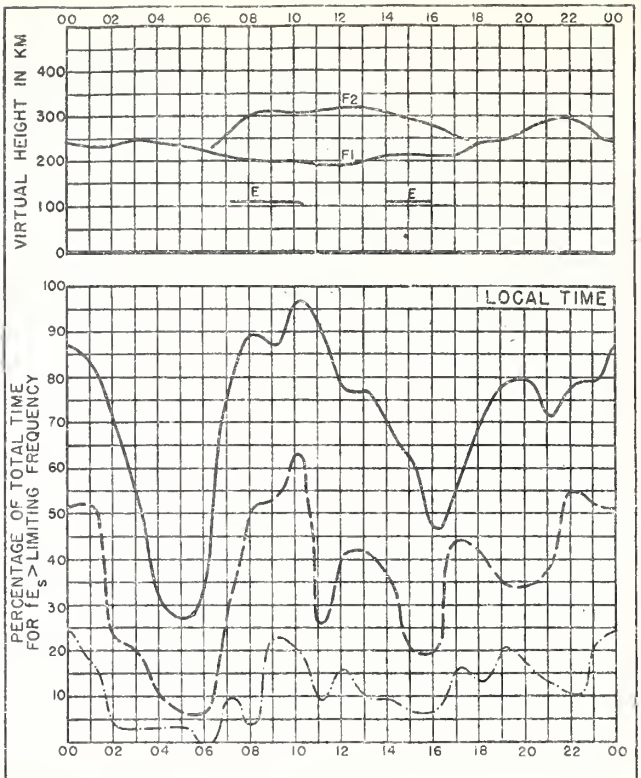


Fig. 66. BRISBANE, AUSTRALIA DECEMBER, 1945

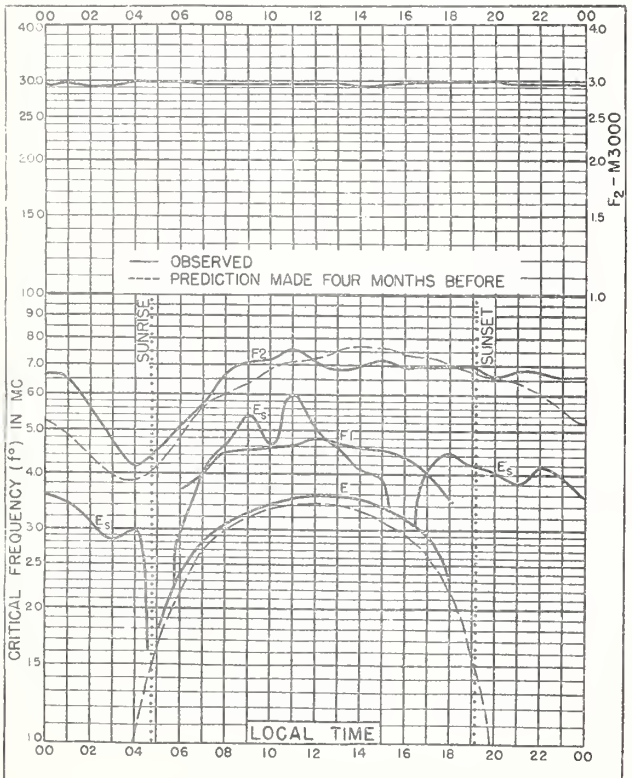


Fig. 67. CANBERRA, AUSTRALIA
35.3°S, 149.0°E DECEMBER, 1945

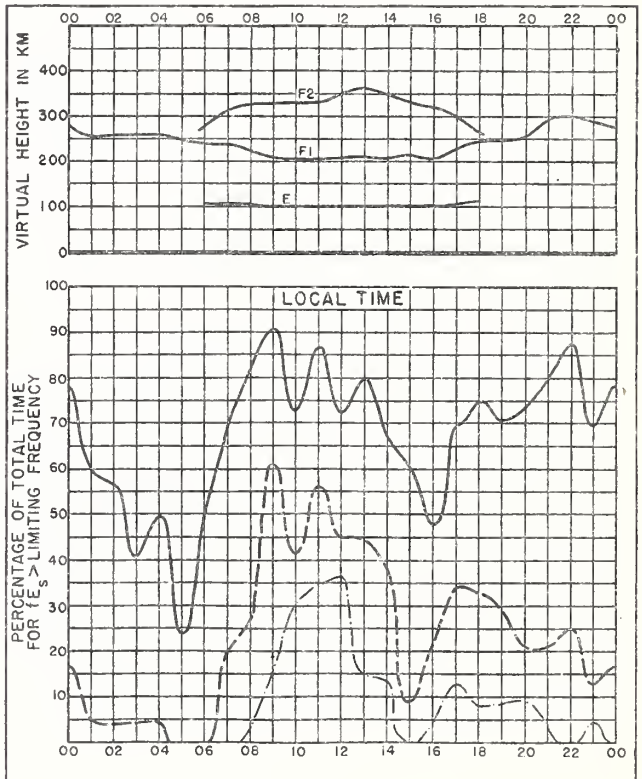
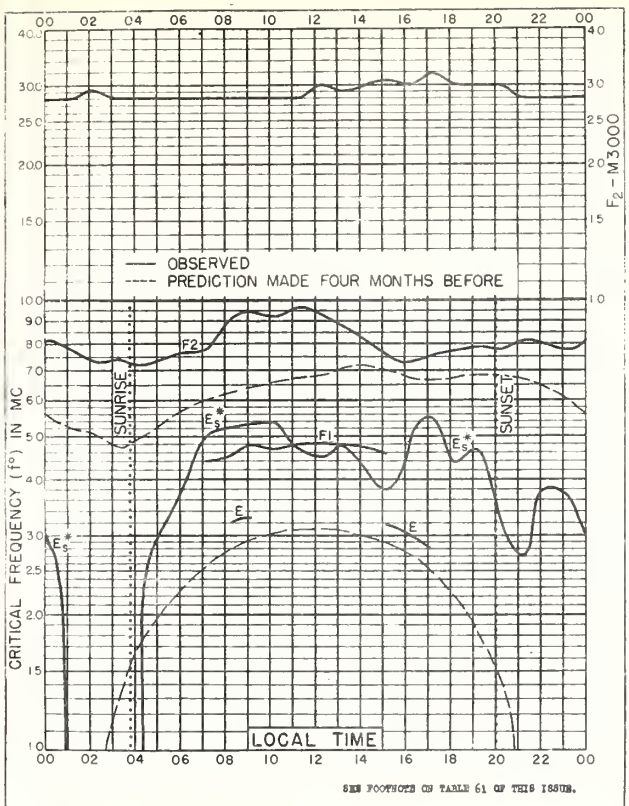


Fig. 68. CANBERRA, AUSTRALIA DECEMBER, 1945



SEE FOOTNOTE ON TABLE 61 OF THIS ISSUE.

Fig. 69. FALKLAND IS.
51.7°S, 58.0°W DECEMBER, 1945

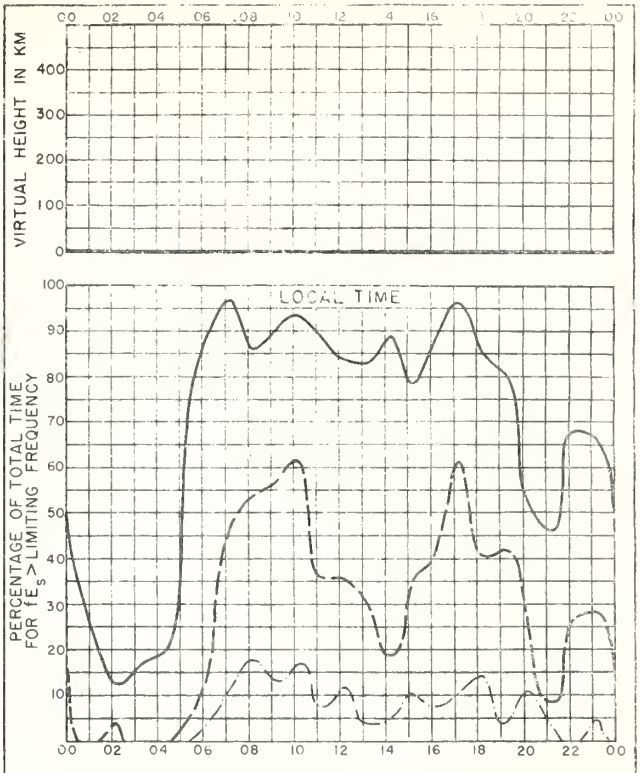


Fig. 70. FALKLAND IS. DECEMBER, 1945

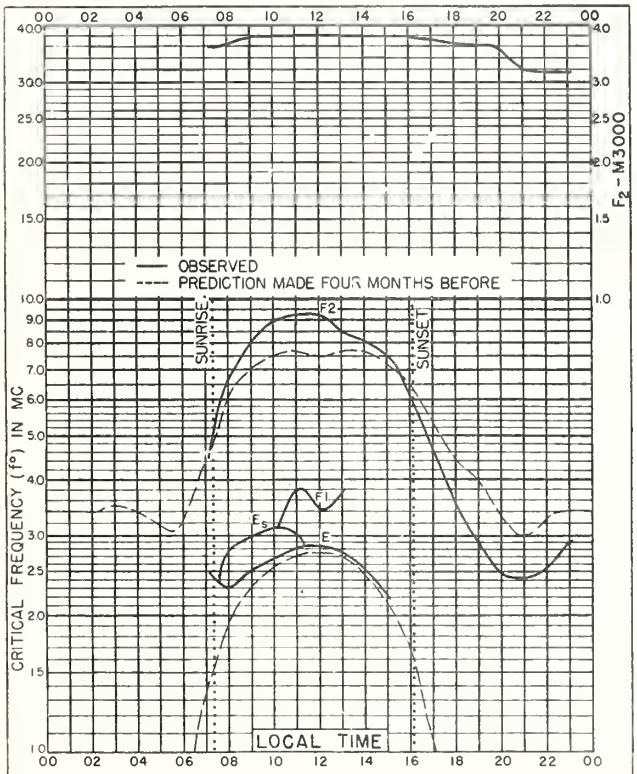


Fig. 71. ADAK, ALASKA
51.9°N, 176.6°W NOVEMBER, 1945

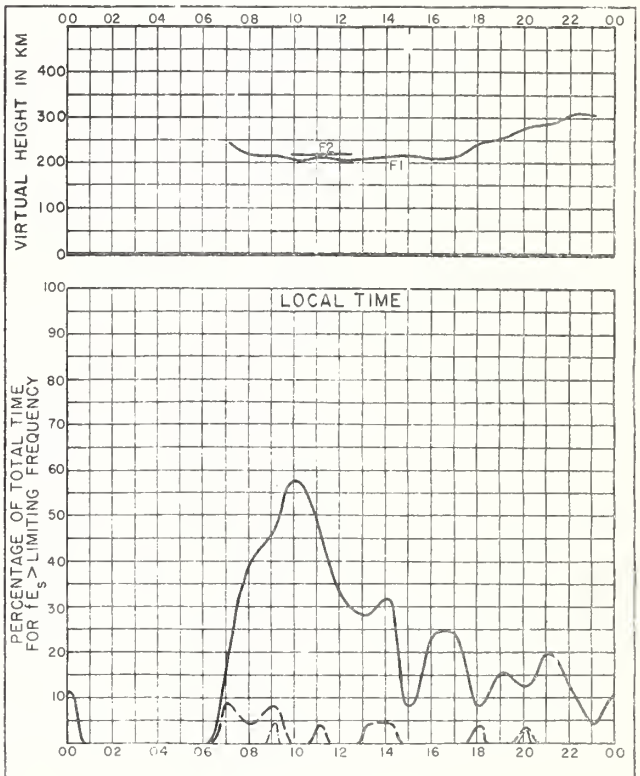


Fig. 72. ADAK, ALASKA NOVEMBER, 1945

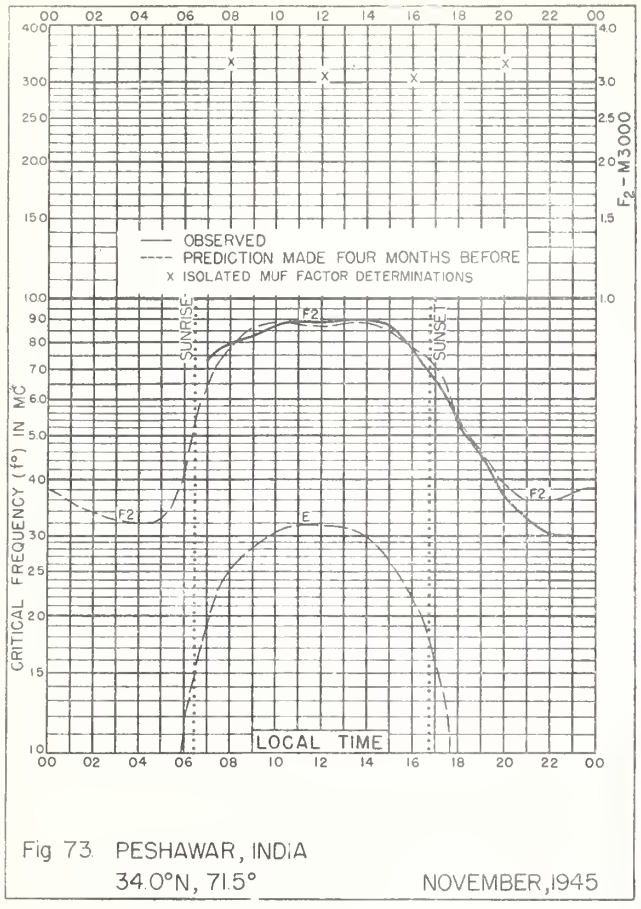


Fig. 73. PESHAWAR, INDIA
34.0°N, 71.5° NOVEMBER, 1945

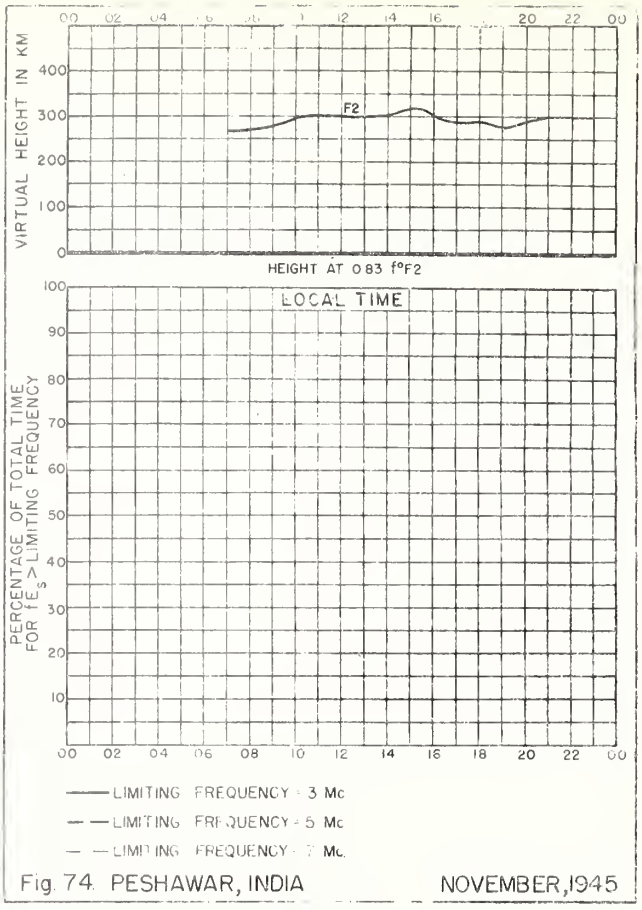


Fig. 74. PESHAWAR, INDIA NOVEMBER, 1945

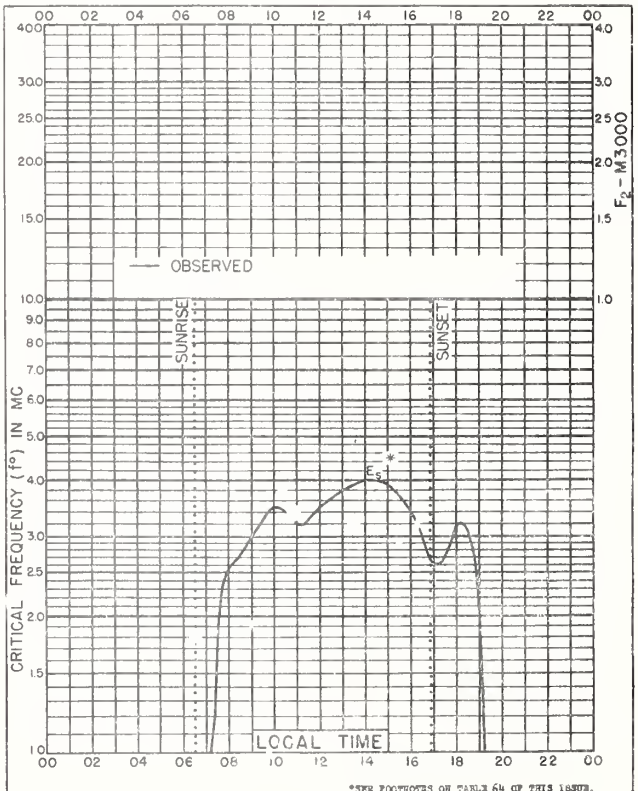


Fig. 75. CAIRO, EGYPT
30.0°N, 31.2°E NOVEMBER, 1945

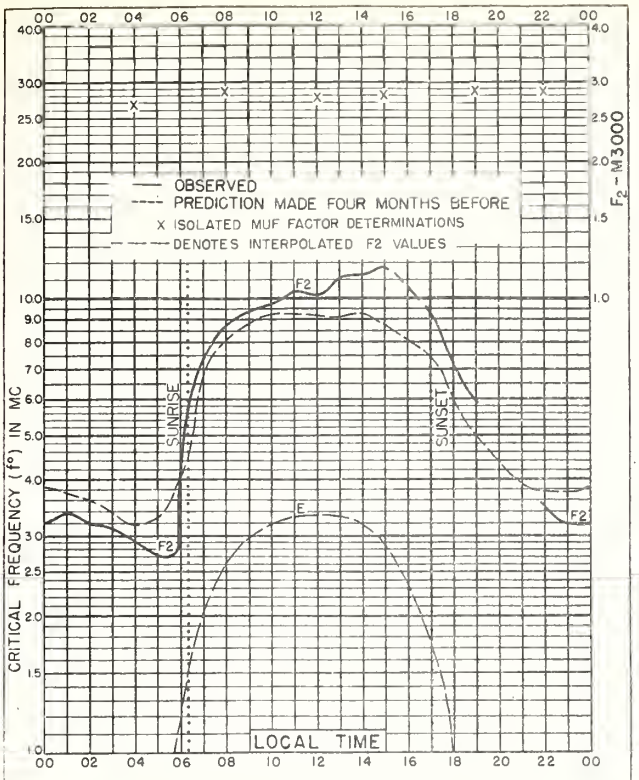


Fig. 76. DELHI, INDIA
28.6°N, 77.2°E NOVEMBER, 1945

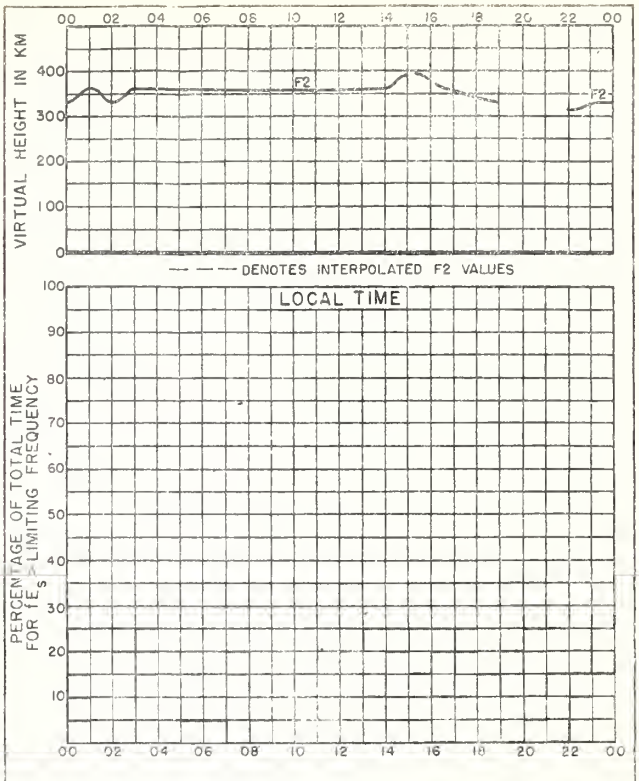


Fig. 77. DELHI, INDIA NOVEMBER, 1945

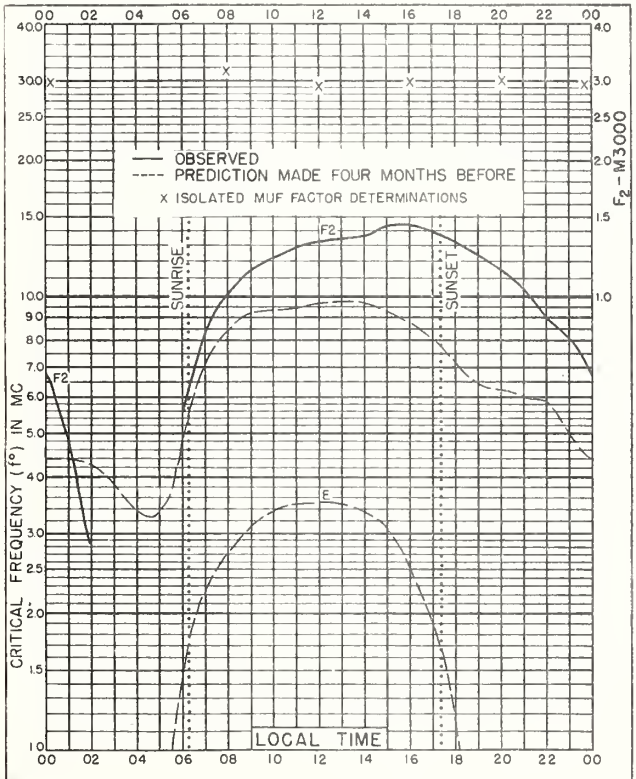


Fig. 78. BOMBAY, INDIA
19.0°N, 73.0°E NOVEMBER, 1945

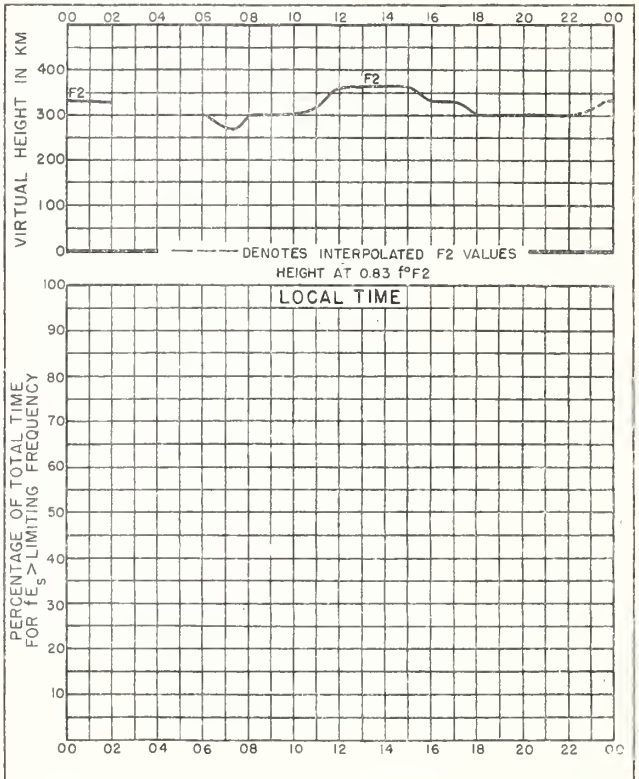


Fig. 79 BOMBAY, INDIA NOVEMBER, 1945

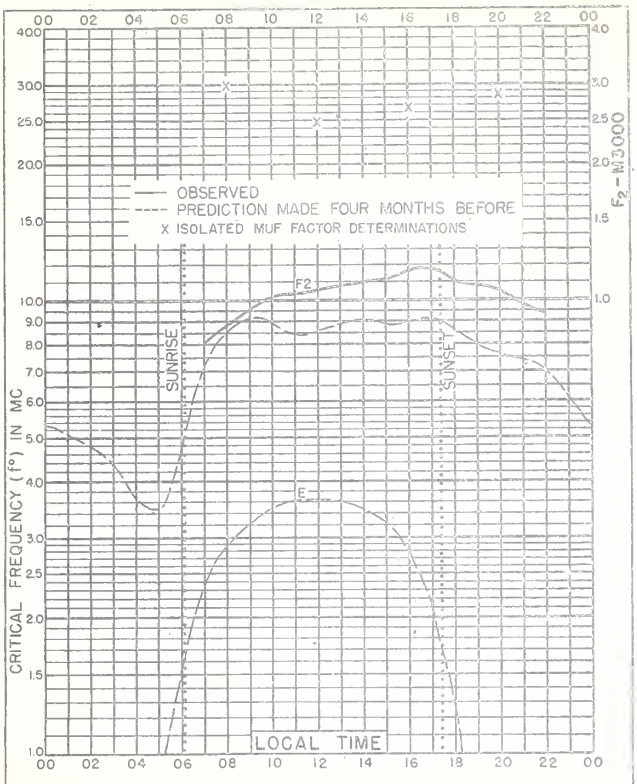


Fig. 80. MADRAS, INDIA
13.0°N, 80.2°E NOVEMBER, 1945

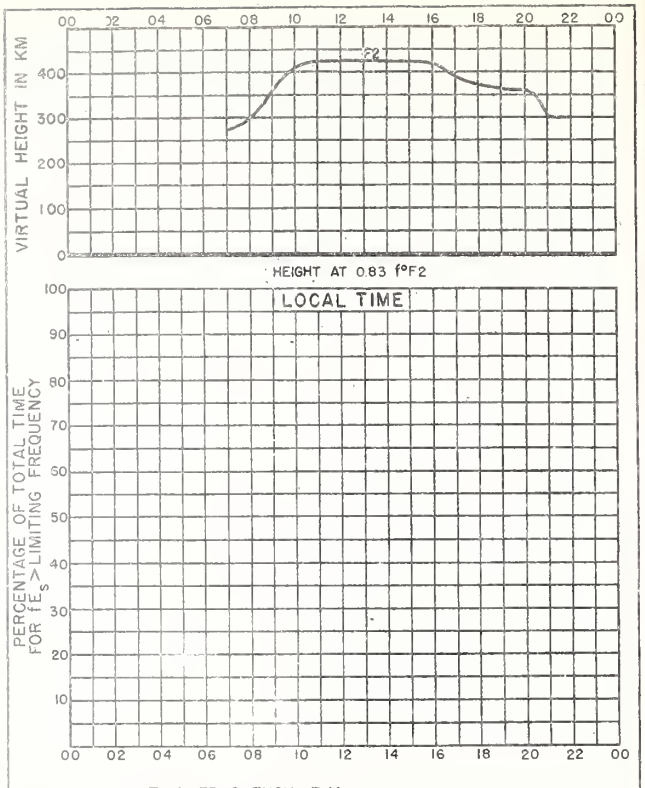


Fig. 81. MADRAS, INDIA NOVEMBER, 1945

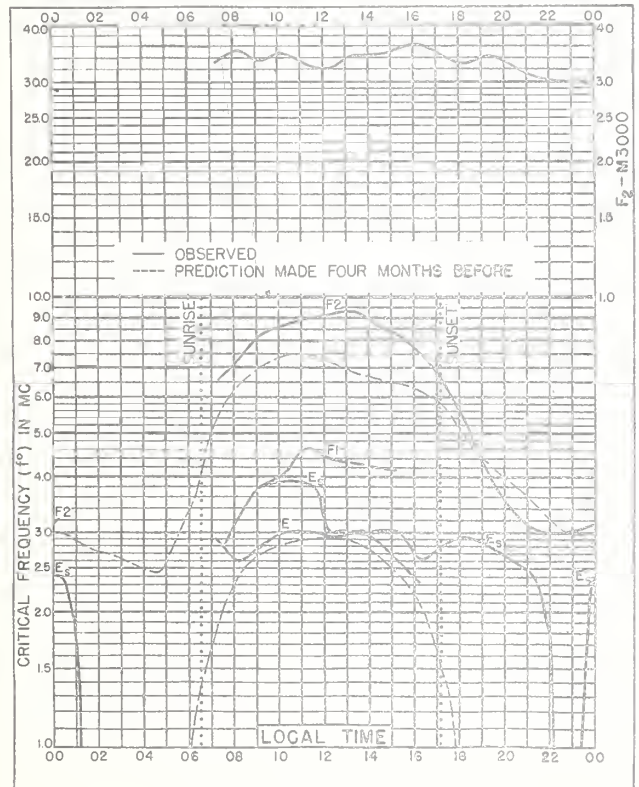


Fig. 82. ADAK, ALASKA
51.9°N, 176.6°W OCTOBER, 1945

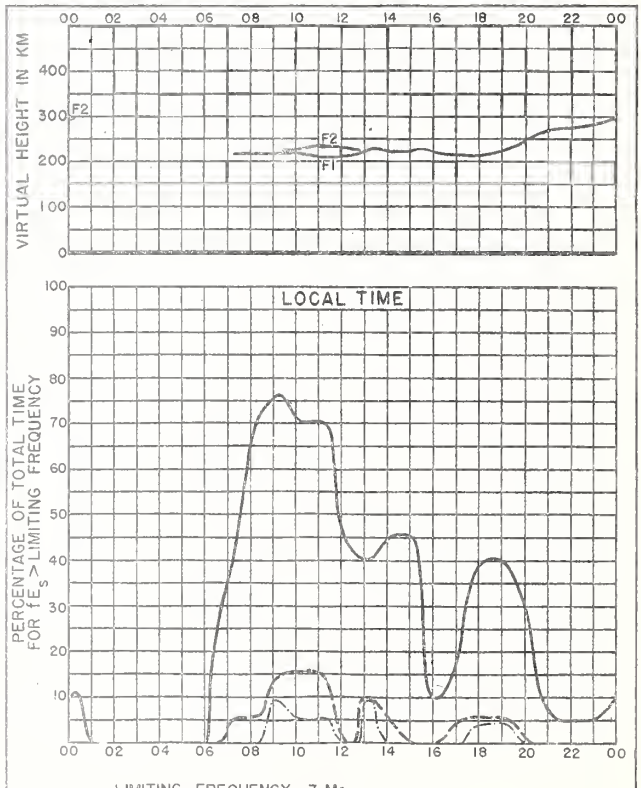


Fig. 83. ADAK, ALASKA OCTOBER, 1945

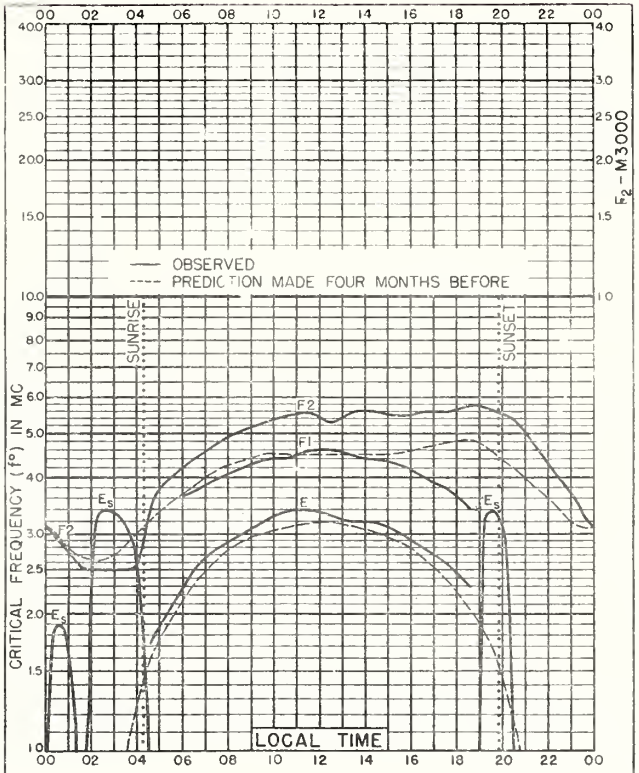


Fig. 84 VICTORIA BEACH, CANADA
50.8°N, 96.5°W JULY, 1945

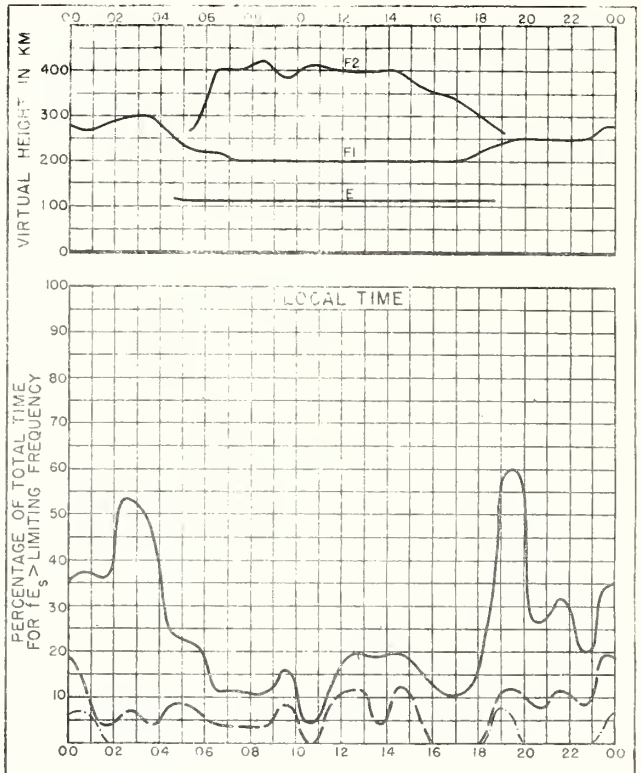


Fig. 85 VICTORIA BEACH, CANADA JULY, 1945

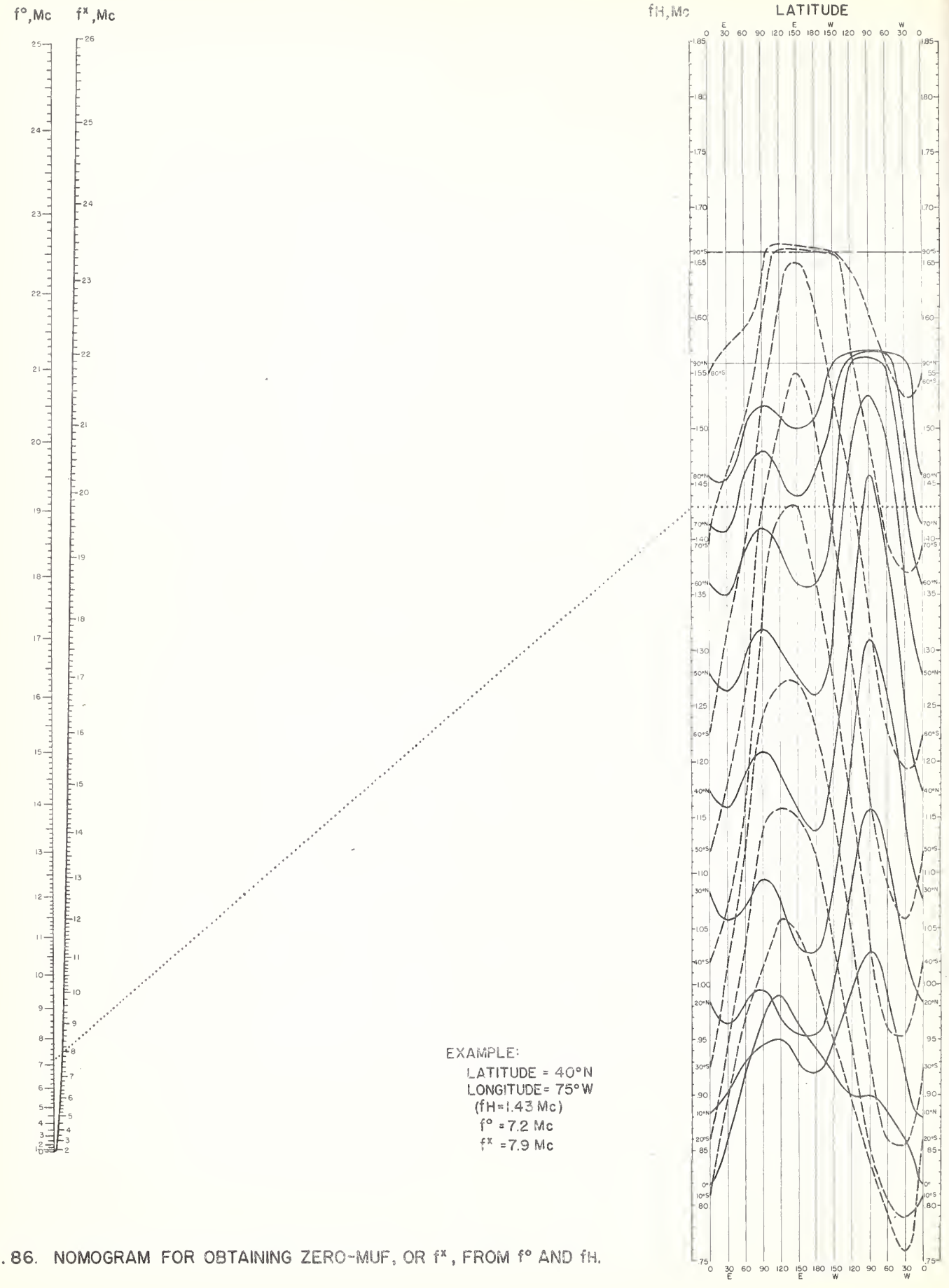


Fig. 86. NOMOGRAM FOR OBTAINING ZERO-MUF, OR f^x, FROM f° AND fH.

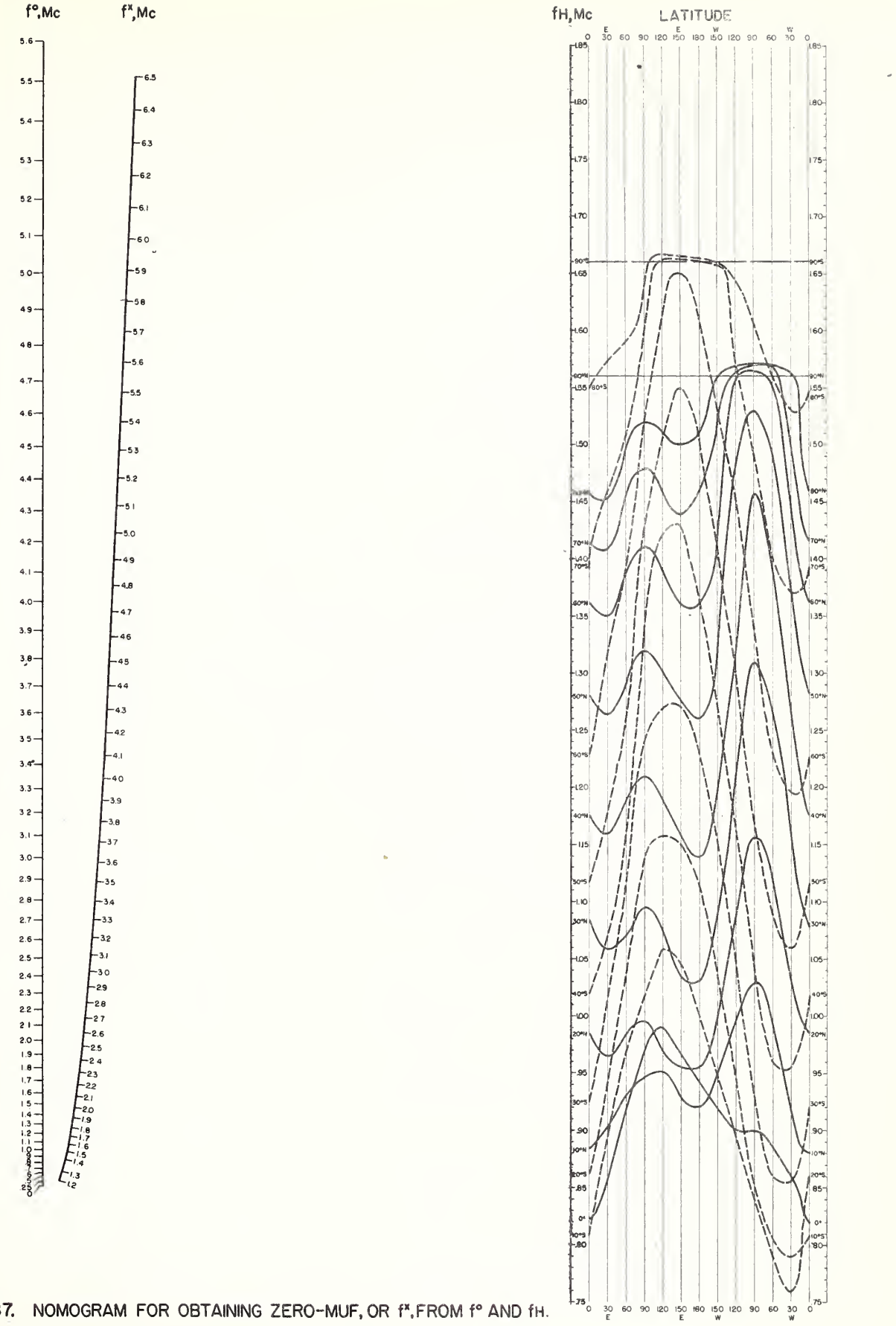


Fig. 87. NOMOGRAM FOR OBTAINING ZERO-MUF, OR f^x, FROM f° AND fH.

Daily:
Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data from various places.
Radio disturbance warnings.

Semiweekly:
IRPL-J. Radio Propagation Forecast.

Semimonthly:
IRPL-Ja. Semimonthly Frequency Revision Factors for IRPL Basic Radio Propagation Prediction Reports. (Issued with IRPL-J series approximately one week in advance.)

Monthly:
IRPL-D. Basic Radio Propagation Predictions - Three months in advance. War Dept. TB 11-499- , monthly supplements to TM 11-499; Navy Dept. (DNC-13-1( ), monthly supplements to DNC-13-1.)

IRPL-F. Ionospheric Data.

Bimonthly:

IRPL-G. Correlation of D. F. Errors With Ionospheric Conditions.

Quarterly:
*IRPL-A. Recommended Frequency Bands for Ships and Aircraft in the Atlantic and Pacific.
*IRPL-H. Frequency Guide for Operating Personnel.

Special Reports, etc.:
IRPL Radio Propagation Handbook, Part 1. (War Dept. TM 11-499; Navy Dept. DNC-13-1.)
IRPL-C1 through C61. Reports and papers of the International Radio Propagation Conference, 17 April to 5 May 1944.
IRPL-R. Unscheduled reports:
R1. Maximum Usable Frequency Graph Paper.
R2 and R3. Obsolete.
R4. Methods Used by IRPL for the Prediction of Ionosphere Characteristics and Maximum Usable Frequencies.
R5. Criteria for Ionospheric Storminess.
R6. Experimental Studies of Ionospheric Propagation As Applied to The Loran System.
R7. Second Report on Experimental Studies of Ionospheric Propagation As Applied to The Loran System.
R8. The Prediction of Usable Frequencies Over a Path of Short or Medium Length, Including the Effects of Es.
R9. An Automatic Instantaneous Indicator of Skip Distance and MUF.
R10. A Proposal for the Use of Rockets for the Study of the Ionosphere.
R11. A Nomographic Method for Both Prediction and Observation Correlation of Ionosphere Characteristics.
R12. Short Time Variations in Ionospheric Characteristics.
R13. Ionospheric and Radio Propagation Disturbances, October 1943 Through February 1945.
R14. A Graphical Method for Calculating Ground Reflection Coefficients.
R15. Predicted Limits for F2-layer Radio Transmission Throughout the Solar Cycle.
R16. Predicted F2-layer Frequencies Throughout the Solar Cycle, for Summer, Winter, and Equinox Season.
R17. Japanese Ionospheric Data - 1943.
R18. Comparison of Geomagnetic Records and North Atlantic Radio Propagation Quality Figures - October 1943 through May 1945.
R19. Nomographic Predictions of F2-layer Frequencies Throughout the Solar Cycle, for June.
R20. Nomographic Predictions of F2-layer Frequencies Throughout the Solar Cycle, for September.
R21. Notes on the Preparation of Skip-Distance and MUF Charts for Use by Direction-Finder Stations. (For distances out to 4000 km.)
R22. Nomographic Predictions of F2-layer Frequencies Throughout the Solar Cycle, for December.
R23. Solar-Cycle Data for Correlation With Radio Propagation Phenomena.
R24. Relations between Band Width, Pulse Shape and Usefulness of Pulses in The Loran System.
R25. The Prediction of Solar Activity as a Basis for Predictions of Radio Propagation Phenomena.
R26. The Ionosphere as a Measure of Solar Activity.
R27. Relationships Between Radio Propagation Disturbance and Central Meridian Passage of Sunspots Grouped by Distance From Center of Disc.
R28. Nomographic Predictions of F2-Layer Frequencies Throughout the Solar Cycle for January.
R29. Revised Classification of Radio Subjects Used in National Bureau of Standards (N.B.S. Letter Circular LC-814 superseding circular C385).
R30. Disturbance Rating in Values of IRPL Quality - Figure Scale From A. T. & T. Co. Transmission Disturbance Reports to Replace T.D. Figures as Reported.
R31. North Atlantic Radio Propagation Disturbances, October 1943 through October 1945.
R32. Nomographic Predictions of F2-Layer Frequencies Throughout the Solar Cycle, for February.
R33. Ionospheric Data on File at IRPL.
R34. The Interpretation of Recorded Values of fEs.
R35. Comparison of Percentage of Total Time of Occurrence of Second-Multiple Es Reflections and That of fEs in Excess of 3 Mc.

IRPL-T. Reports on Tropospheric Propagation.
T1. Radar Operation and Weather. (Superseded by JANP 101.)
T2. Radar Coverage and Weather. (Superseded by JANP 102.)

---

*Items bearing this symbol are distributed only by U.S. Navy in NONREGISTERED PUBLICATIONS MEMORANDA (NRPM). IRPL-A and -H issued under one cover with NRPM identifying numbers.