

# IONOSPHERIC DATA

ISSUED

SEPTEMBER , 1945

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



Organized under Joint U.S. Communications Board

## IONOSPHERIC DATA

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## 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.

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  $f^oF2$ , as equal to or less than  $f^oF1$ .
    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 for any 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.

## 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, Q., Australia  
 Mt. Stromlo, Canberra, NSW, Australia  
 Cape York, Q., Australia.

British National Physical Laboratory, and Inter-Services Ionosphere Bureau  
 Radio Research Station, Slough, England  
 Great Baddow, England  
 Burghead, Scotland  
 Delhi, India  
 Madras, India  
 Simonstown, Union of S. Africa  
 Colombo, Ceylon.

Canadian Radio Wave Propagation Committee  
 Churchill, Canada  
 Ottawa, Canada  
 St. John's, Newfoundland  
 Prince Rupert, Canada  
 Victoria Beach, Canada

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

Interdepartment Ionosphere Bureau, U.S.S.R. Scientific Experimental  
Institute of Terrestrial Magnetism, Moscow, U.S.S.R.

Tykhi Bay, 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)

Baffin I., Canada

Christmas I.

Fairbanks, Alaska (University of Alaska, College, Alaska)

Reykjavik, Iceland

Maui, Hawaii

Trinidad, Brit. West Indies

Huancayo, Peru

Watheroo, W. Australia

United States Army Signal Corps

Leyte

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, Mass.

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  $F^0F2$  is less than or equal to  $F^0F1$ , 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. 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. Beginning this month the table of values of F2-M3500 is omitted, since these values can be readily derived from the values of F2-M3000.

## IONOSPHERE DISTURBANCES

Table 63 presents ionosphere character figures for Washington, D.C., during August 1945, 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 64 presents sudden ionosphere disturbances as observed at Washington, D.C., during August 1945.

Table 65 gives provisional radio propagation quality figures for North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, July 1945, compared with the IRPL daily radio disturbance warnings, and ISIB daily warnings, the IRPL semiweekly radio propagation forecasts for the A-zone, and the half-day American geomagnetic K-figures.

The radio propagation quality figures were prepared from radio traffic data, reported to 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.

## PRELIMINARY REPORT ON IONOSPHERIC DATA FOR SOLAR ECLIPSE 9 JULY. 1945

The solar eclipse of 9 July 1945 was notable in that, although it was of shorter duration and somewhat narrower path than the average, its coverage by ionospheric measurements was undoubtedly more complete than that for any other. This was not only because of the recent establishment of additional ionosphere stations, but principally because the path of the eclipse lay in the geographical regions where regular observing stations, many of long standing, were located in greatest proximity.

The duration of the eclipse was between about 1200 to 1500 GCT, the path of totality beginning near Boise, Idaho, and ending near Tashkent, U.S.S.R. The partial phase was visible over practically all of the North American continent, all of Europe, and the northwest and northern part of Asia.

Maps showing the path of the eclipse, as well as tables giving the elements, local circumstances, and other pertinent data, are given in "The American Ephemeris and Nautical Almanac", 1945, p.325, 329-333, and, more completely, in the supplement to this, "Total Eclipse of the Sun, July 9, 1945," both issued by the U.S. Naval Observatory, Washington, D.C.

Solar activity during the eclipse period was rather low, thus insuring data for the eclipse day, as well as control data for a period before and after the eclipse day, reasonably free from effects other than those due to solar obscuration. Three spot groups of low activity were reported by Mt. Wilson Observatory, their heliographic latitudes and longitudes being, respectively, N $17^{\circ}$  W $71^{\circ}$ , N $18^{\circ}$  E $61^{\circ}$ , S $20^{\circ}$  E $75^{\circ}$ , all being too far from meridian passage for the disturbance of ionospheric conditions. Fairly large calcium flocculi in the neighborhood of these spot groups, as well as small flocculi at S $28^{\circ}$  W $22^{\circ}$ , N $27^{\circ}$  E $13^{\circ}$ , S $01^{\circ}$  E $33^{\circ}$ , N $23^{\circ}$  W $18^{\circ}$ , having areas respectively of 8300, 700, 2000, and 600 millionths of the solar disc, were reported by McMath-Hulbert Observatory.

Geomagnetic character figures covering the eclipse day and control periods preceding and following it are given in Table 69 of the preceding issue of this report, IRPL-F12. A short period of moderate disturbance on 6 July was associated with above-average green coronal intensity appearing at the east limb as late as 2 July, apparently indicating the active area in the neighborhood of the first of the small flocculi mentioned above. West limb green coronal intensity, associated with the same active area, was above average from 11 July to 16 July.

Ionospheric measurements were made at intervals of fifteen minutes or less during the eclipse day, and a control period of several days before and after 9 July, at a number of stations in Canada and the United States. Most of these data are not yet available at IRPL, since considerable time is needed for scaling of the records. Figs. 52 through 55 are plots of the regular-layer characteristics for the eclipse day (heavy line) with the control days all superimposed (light lines), for Boston, Mass., San Francisco, Calif., Baton Rouge, La. and San Juan, P.R. They were plotted in this manner to illustrate the variability of the data, even on normal days and to show the relationship of the values during the eclipse to the normal scatter. As may be seen, the normal variability of the ionosphere was great enough to obscure any significant eclipse effect.

San Juan, Puerto Rico, lay just outside the eclipse region. No anomalies inconsistent with the usual day-to-day variations were noted. The eclipse ended at about sunrise at San Francisco, Calif. Similarly, no variations in ionospheric behavior in excess of day-to-day variability were observed in this case. At Baton Rouge, Louisiana, there were likewise no anomalies ascribable to the eclipse, although this station lay in the region of partial eclipse, where the magnitude of eclipse was 0.52 at 1148 GCT (0548, 90°W), beginning at about sunrise and ending at 1239 GCT (0639, 90°W). Absence of any notable eclipse effect here is not surprising since the lower ionospheric layers, in which it would be most apparent, were barely forming at the time of eclipse. At Boston, Massachusetts, the magnitude of the eclipse was 0.58 at 1206 GCT (0706, 75°W), beginning at 1109 GCT (0609, 75°W) and ending at 1309 (0809, 75°W). Some indication is given of lowered frequencies in all three ionospheric layers during the latter part of the eclipse period, but the fragmentary nature of the data does not admit of significant exact analysis when used alone.

Intercomparison of data from all observing stations is necessary in the determination of eclipse effects. The data presented here, while in themselves showing no striking anomalies in behavior, are necessary in delineating the marginal effects of the eclipse, and, together with data from other places, in obtaining the quantitative time and geographical gradients in ionization resulting from solar observation.

Although final data are not yet available from other stations, preliminary analysis has shown that at Washington, D.C., E-layer critical frequencies rose more slowly than usual during the morning of the eclipse; F2-layer reflections were blanketed by Es.

Preliminary reports from the five Canadian stations making observations show marked eclipse effects. Estimates of the extent of ionization density decrease are:

	E %	F1 %	F2 %	F %
Victoria Beach, Man.	40	55	32	-
Churchill, Man.	-	37	34	-
Prince Rupert, B.C.	-	-	-	>34
Ottawa, Ont.	30	28	27	-
St. Johns, Newfoundland	-	25	27	-

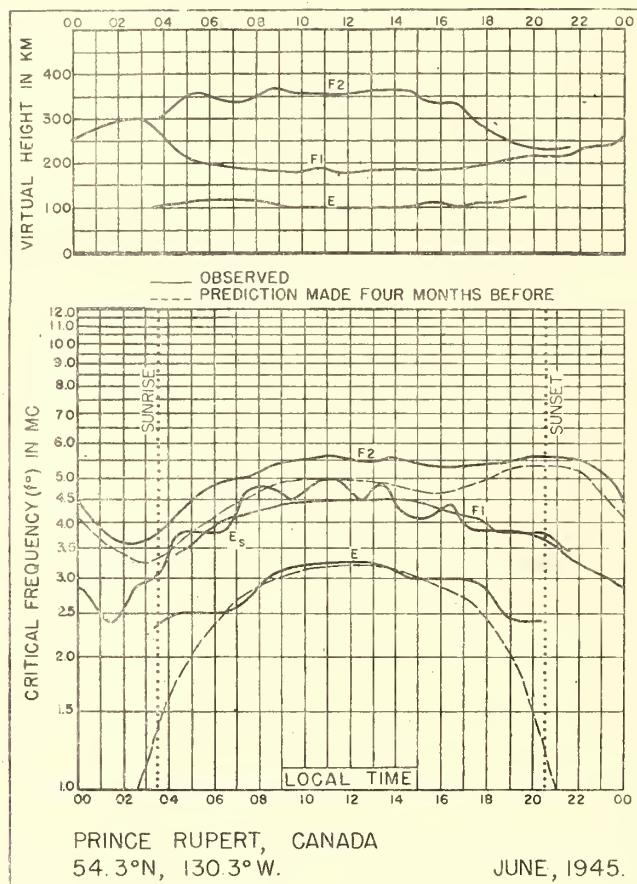
At Prince Rupert, B.C., the E layer was blanketed by Es, and the eclipse occurred before the separation of the F1 and F2 layers. Maximum eclipse effects were obtained at Victoria Beach, Man. No lag in E- or F1-layer density change was observed with respect to the maximum phase of the eclipse at any station, but a lag of 20 minutes was observed for the F2 layer at Victoria Beach.

Comparatively little radio field-intensity data are yet available for this period. Preliminary reports indicate, for the time of eclipse, unusually good reception on transmission paths between Washington, D.C. and most North

Atlantic stations, and between San Francisco and London, poor reception between Washington, D.C. and Stockholm, Sweden, and normal reception between New York City and Fairbanks, Alaska, and between Boston, Massachusetts, and Mexico City, Mexico, Washington, D.C., and Chicago, Illinois.

## ERRATA

1. The graphical presentation of data from Prince Rupert, Canada, for June 1945, Figs. 7 and 8, in the August issue of this report, was incomplete. Table 32 in the same issue presented complete data. The Figure below will complete the graphs.



2. Information was received that Simonstown data up to 1 August 1945 were received on 30°E meridian time. Beginning 1 August, all data from Simonstown will be reported on 15°E.

Table 1 (Provisional data)

Baffin Island, Canada (70°50'N, 68.6°W)

Time	h1F2	f1F2	h1F1	f1F1	h1S	f1S	h2-M2000
00	250	4.4			3.1		
01	260	4.2			3.2		
02	260	3.9			3.1		
03	260	3.7			3.2		
04	260	3.9			3.1		
05	250	4.2	240	3.4	160	2.3	3.2
06	250	4.5	250	3.5	160	2.4	3.1
07	400	4.4	240	3.7	140	2.5	2.9
08	400	4.7	240	3.8	130	2.6	3.0
09	390	4.8	240	3.8	120	2.7	3.0
10	360	5.1	240	3.9	120	2.8	3.0
11	370	5.0	240	4.0	120	2.8	2.9
12	340	4.9	230	4.0	120	2.8	2.9
13	390	4.9	230	3.9	130	2.8	3.0
14	390	4.8	230	3.9	130	2.7	2.9
15	350	5.0	240	3.8	140	2.6	2.9
16	350	4.8	250	3.8	140	2.5	2.9
17	340	4.9	240	3.5	150	2.6	2.9
18	290	4.8	250	3.4	160	2.3	2.9
19	260	4.7					
20	260	4.6					
21	260	4.7					
22	250	4.5					
23	250	4.4					

Time: 75°N.  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

Table 3 (Provisional data)

Prince Rupert, Canada (54°3'N, 130°39'W)

Time	h1F2	f1F2	h1F1	f1F1	h1S	f1S	h2-M2000
00		3.6			3.1		
01		3.1			3.1		
02		2.8			3.1		
03		2.9			3.0		
04		2.8			3.0		
05		2.9			3.2		
06		3.8			3.3		
07		4.3			3.2		
08		4.7			3.1		
09		4.9			3.1		
10		5.1			3.2		
11		5.2			3.1		
12		5.4			3.0		
13		5.3			3.1		
14		5.2			3.1		
15		5.1			3.2		
16		5.0			3.1		
17		5.0			3.5		
18		5.0			3.3		
19		4.9			3.4		
20		4.7			3.4		
21		4.7			3.5		
22		4.7			3.2		
23		4.2			3.2		

Time: 90°N.  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

Table 5 (Provisional data)

August 1946  
Prince Rupert, Canada (54°3'N, 130°39'W)

Time	h1F2	f1F2	h1F1	f1F1	h1S	f1S	h2-M2000
00		3.1			3.1		
01		3.1			3.1		
02		2.8			3.1		
03		2.9			3.0		
04		2.8			3.0		
05		2.9			3.2		
06		3.8			3.3		
07		4.3			3.2		
08		4.7			3.1		
09		4.9			3.1		
10		5.1			3.2		
11		5.2			3.1		
12		5.4			3.0		
13		5.3			3.1		
14		5.2			3.1		
15		5.1			3.2		
16		5.0			3.1		
17		5.0			3.5		
18		5.0			3.3		
19		4.9			3.4		
20		4.7			3.4		
21		4.7			3.5		
22		4.7			3.2		
23		4.2			3.2		

Time: 120°N.  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

Times: 120°N.  
Length of time sweep: Manual operation.  
Median values.

Table 2 (Provisional data)

Churchill, Canada (58°8'N, 94.2°W)

Time	h1F2	f1F2	h1F1	f1F1	h1S	f1S	h2-M3000
00		3.1			3.1		
01		3.1			3.1		
02		2.8			3.1		
03		2.9			3.0		
04		2.8			3.0		
05		2.9			3.2		
06		3.0			3.1		
07		3.1			3.1		
08		3.1			3.0		
09		3.1			3.0		
10		3.1			3.1		
11		3.2			3.1		
12		3.4			3.3		
13		3.3			3.1		
14		3.2			3.1		
15		3.1			3.2		
16		3.0			3.1		
17		3.0			3.5		
18		3.0			3.3		
19		3.1			3.4		
20		3.1			3.4		
21		3.1			3.5		
22		3.1			3.2		
23		3.1			3.2		

Time: 52.5°W.  
Length of time sweep: Manual operation.  
Median values.

Table 5 (Provisional data)

Ottawa, Canada (45.5°N, 75.8°W)

Time	h'F2	f'F2	h'F1	f'F1	h'F0	f'F0	f'Es	f'Es	F2-M3000
00	3.3		2.9		2.9		0.0		2.9
01	2.9		2.9		2.9		0.1		3.1
02	2.7		2.8		2.8		0.2		2.8
03	2.6		2.9		2.9		0.3		2.5
04	2.6		2.8		2.8		0.4		2.0
05	3.2		3.0		3.0		0.5		2.5
06	4.2		3.0		3.0		0.6		4.3
07	4.9		3.1		3.1		0.7		4.8
08	5.3		3.0		3.0		0.8		5.2
09	5.4		3.0		3.0		0.9		5.6
10	5.6		3.0		3.0		1.0		5.7
11	5.5		3.0		3.0		1.1		5.7
12	5.6		2.9		2.9		1.2		5.8
13	5.6		2.9		2.9		1.3		5.8
14	5.6		2.9		2.9		1.4		5.9
15	5.6		2.9		2.9		1.5		5.7
16	5.7		3.0		3.0		1.6		5.9
17	6.0		3.0		3.0		1.7		5.9
18	6.0		2.9		2.9		1.8		6.0
19	6.3		3.0		3.0		1.9		6.6
20	6.0		3.0		3.0		2.0		5.9
21	5.6		3.0		3.0		2.1		5.3
22	4.6		2.9		2.9		2.2		4.5
23	3.9		2.9		2.9		2.3		4.0

Time: 75%  
Length of time sweep: 1.93 Ms to 13.5 Ms. Manual operation.  
Median values.

Table 7 (Provisional data)

San Francisco, Calif. (37.4°N, 122.2°W)

Time	h'F2	f'F2	h'F1	f'F1	h'F0	f'F0	f'Es	f'Es	F2-M3000
00	3.8		2.9		2.9		0.0		3.8
01	3.7		2.9		2.9		0.1		3.7
02	3.7		2.9		2.9		0.2		3.6
03	3.5		2.9		2.9		0.3		3.5
04	3.5		2.9		2.9		0.4		3.3
05	3.4		3.2		3.2		0.5		3.2
06	4.3		3.1		3.1		0.6		4.3
07	5.2		3.0		3.0		0.7		5.5
08	5.5		3.0		3.0		0.8		6.0
09	5.9		2.9		2.9		0.9		6.0
10	6.1		2.9		2.9		1.0		6.2
11	6.2		2.9		2.9		1.1		6.3
12	6.3		2.9		2.9		1.2		6.6
13	6.4		2.9		2.9		1.3		7.1
14	6.3		3.0		3.0		1.4		7.4
15	6.3		3.0		3.0		1.5		7.5
16	6.1		3.0		3.0		1.6		7.2
17	6.1		3.1		3.1		1.7		7.0
18	5.9		3.2		3.2		1.8		6.8
19	5.9		3.2		3.2		1.9		6.4
20	5.8		3.1		3.1		2.0		5.8
21	5.1		3.1		3.1		2.1		4.9
22	4.6		3.0		3.0		2.2		4.5
23	4.0		2.8		2.8		2.3		4.0

Time: 75%  
Length of time sweep: 1.93 Ms to 13.5 Ms. Manual operation.  
Median values.

Table 5 (Provisional data)

August 1945

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

Time	h'F2	f'F2	h'F1	f'F1	h'F0	f'F0	f'Es	f'Es	F2-M3000
00	3.3		2.9		2.9		0.0		2.9
01	2.9		2.9		2.9		0.1		3.0
02	2.7		2.9		2.9		0.2		2.9
03	2.6		2.8		2.8		0.3		3.0
04	2.6		2.8		2.8		0.4		3.0
05	3.2		3.0		3.0		0.5		3.1
06	4.2		3.0		3.0		0.6		3.2
07	4.9		3.1		3.1		0.7		3.2
08	5.3		3.0		3.0		0.8		3.1
09	5.9		2.9		2.9		0.9		3.1
10	6.1		2.9		2.9		1.0		3.1
11	6.1		2.9		2.9		1.1		2.9
12	6.3		2.9		2.9		1.2		3.2
13	6.4		2.9		2.9		1.3		2.9
14	6.3		3.0		3.0		1.4		3.0
15	6.3		3.0		3.0		1.5		3.0
16	6.1		3.0		3.0		1.6		3.0
17	6.1		3.1		3.1		1.7		3.1
18	5.9		3.2		3.2		1.8		3.2
19	5.9		3.2		3.2		1.9		3.2
20	5.8		3.1		3.1		2.0		3.1
21	5.1		3.1		3.1		2.1		3.1
22	4.6		3.0		3.0		2.2		3.0
23	4.0		2.8		2.8		2.3		3.0

Time: 75%  
Length of time sweep: 1.93 Ms to 13.5 Ms. Manual operation.  
Median values.

Table 6 (Provisional data)

August 1945

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

Time	h'F2	f'F2	h'F1	f'F1	h'F0	f'F0	f'Es	f'Es	F2-M3000
00	3.8		2.9		2.9		0.0		2.9
01	3.7		2.9		2.9		0.1		3.0
02	3.7		2.9		2.9		0.2		3.0
03	3.5		2.9		2.9		0.3		3.0
04	3.5		2.9		2.9		0.4		3.0
05	3.4		3.2		3.2		0.5		3.1
06	4.3		3.1		3.1		0.6		4.3
07	5.2		3.0		3.0		0.7		5.5
08	5.5		3.0		3.0		0.8		6.0
09	5.9		2.9		2.9		0.9		6.0
10	6.1		2.9		2.9		1.0		6.2
11	6.1		3.1		3.1		1.1		6.3
12	6.3		2.9		2.9		1.2		6.6
13	6.4		2.9		2.9		1.3		7.1
14	6.3		3.0		3.0		1.4		7.4
15	6.3		3.0		3.0		1.5		7.5
16	6.1		3.0		3.0		1.6		7.2
17	6.1		3.1		3.1		1.7		7.0
18	5.9		3.2		3.2		1.8		6.8
19	5.9		3.2		3.2		1.9		6.4
20	5.8		3.1		3.1		2.0		5.8
21	5.1		3.1		3.1		2.1		4.9
22	4.6		3.0		3.0		2.2		4.5
23	4.0		2.8		2.8		2.3		4.0

Time: 75%  
Length of time sweep: 1.93 Ms to 13.5 Ms. Manual operation.  
Median values.

Time: 120%  
Length of time sweep: 0.8 Ms to 12 Ms in six minutes. Record centered on the hour.  
Median values.

Time: 90%  
Length of time sweep: 1.9 Ms to 9.8 Ms in three minutes, thirty seconds.  
Median values.

Table 9 (Provisional data)

Huancayo, Peru (12°0'S, 75°30'W)		August 1946	
Time	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>1</sub>
00	6.1	3.2	3.2
01	5.6	3.0	4.5
02	5.4	3.2	4.2
03	4.1	3.5	3.9
04	3.2	3.5	3.9
05	2.6	3.2	4.4
06	3.3	3.1	4.6
07	6.1	3.2	5.2
08	7.3	3.2	5.3
09	7.6	2.9	5.7
10	7.1	2.7	5.7
11	7.0	2.6	5.8
12	6.9	2.5	5.6
13	6.9	2.5	5.6
14	7.1	2.5	5.4
15	7.2	2.5	5.5
16	7.2	2.5	5.5
17	7.5	2.6	5.5
18	7.5	2.7	5.7
19	6.8	2.6	6.3
20	6.4	2.7	6.6
21	6.6	2.9	6.2
22	7.0	3.1	5.7
23	6.6	3.2	2.9

Time: 75°0'N.  
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.  
Median values.

Table 11 (Provisional data)

Honolulu, Hawaii (20°30'S, 156°55'W)		July 1945	
Time	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>1</sub>
00	290	6.2	2.9
01	260	6.1	3.0
02	250	5.8	3.0
03	250	5.1	3.0
04	270	4.8	3.0
05	270	4.5	3.0
06	250	4.6	3.0
07	250	5.9	3.0
08	260	6.2	3.2
09	320	6.2	3.2
10	420	6.2	2.7
11	430	7.0	2.6
12	440	7.9	2.5
13	405	8.5	2.5
14	390	9.1	2.6
15	370	9.6	2.6
16	335	10.1	2.7
17	300	10.6	2.8
18	260	10.5	2.4
19	240	9.7	1.7
20	240	8.5	3.0
21	250	7.1	2.1
22	260	6.7	2.2
23	275	6.6	2.5

Time: 150°W  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

July 1945

Great Barrier R., England (51°47'N, 0.50'E)

July 1945

Great Barrier R., England (51°47'N, 0.50'E)		July 1945	
Time	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>1</sub>
00	4.8	0.1	4.5
01	4.5	0.2	4.2
02	4.2	0.3	3.9
03	4.1	0.3	3.9
04	3.2	0.4	3.9
05	3.2	0.5	4.4
06	3.2	0.6	4.6
07	3.1	0.7	5.2
08	3.2	0.8	5.3
09	2.9	0.9	5.7
10	2.7	1.0	5.7
11	2.6	1.1	5.8
12	2.5	1.2	5.6
13	2.5	1.3	5.6
14	2.5	1.4	5.4
15	2.5	1.5	5.5
16	2.5	1.6	5.5
17	2.6	1.7	5.5
18	2.7	1.8	5.7
19	2.6	1.9	6.3
20	2.6	2.0	6.6
21	2.7	2.1	6.2
22	2.9	2.2	3.0
23	3.2	3.3	2.9

Time: 00  
Length of time sweep: Manual operation.  
Average values.

Table 10 (Provisional data)

Cape York, Q., Australia (11°0'S, 142°45'E)		July 1945	
Time	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>2</sub>	h <sup>1</sup> R <sub>1</sub>
00	3.5	0.1	3.3
01	3.3	0.2	2.6
02	3.5	0.3	2.0
03	3.4	0.4	2.0
04	3.0	0.5	2.3
05	3.1	0.6	3.1
06	3.2	0.7	6.0
07	3.2	0.8	7.2
08	3.0	0.9	7.5
09	3.0	1.0	7.7
10	2.9	1.1	7.7
11	2.9	1.2	7.5
12	2.9	1.3	7.6
13	2.9	1.4	7.7
14	2.9	1.5	7.5
15	2.9	1.6	7.5
16	2.9	1.7	7.1
17	2.9	1.8	6.9
18	3.0	1.9	6.3
19	3.2	2.0	5.3
20	3.2	2.1	4.3
21	3.3	2.2	3.1
22	3.2	2.3	3.2
23	3.5	2.3	3.0

Time: Local  
Average values.

Table 13 (Provisional data)

Rarotonga I. (21°4°S., 159°6°W.)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F
00							0000						
01	3.0		3.0		3.0		0100						
02	3.0		3.0		3.0		0200	270		3.0			
03							0300						
04							0400						
05							0500						
06							0600						
07	2.7						0730						
08	4.6		2.0		2.8		0800						
09	6.4		2.0		4.2		0930						
10	6.7		2.0		3.5		1000						
11	6.5		2.0		3.5		1130						
12	6.2		2.0		4.6		1200						
13							1330						
14							1400						
15							1530						
16							1600						
17							1700						
18							1800						
19							1930						
20							2000						
21							2100						
22							2250						
23							2300						

Time: 157°5'W.  
Length of time sweep: 2.0 Mc to 16.0 Mc. Manual operation.  
Median values.

Table 15 (Provisional data)

Brisbane, Q., Australia (27.5°S., 153°0'W.)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F
00	3.5						00						
01	3.7						01	280		3.8			
02	4.0						02	290		3.7			
03	4.0						03	275		3.7			
04	4.0						04	275		3.9			
05	3.5						05	250		3.9			
06	3.0						06	260		3.7			
07	4.6						07	250		3.4			
08	5.9						08	235		4.8			
09	6.4						09	250		5.6			
10	6.8						10	265		5.8			
11	6.7						11	270		6.6			
12	6.4						12	270		6.3			
13	6.3						13	285		6.4			
14	6.6						14	270		6.2			
15	6.8						15	265		6.2			
16	6.4						16	250		5.8			
17	5.8						17	240		5.6			
18	4.8						18	225		4.4			
19	3.8						19	215		3.6			
20	3.5						20	205		3.6			
21	3.7						21	280		3.6			
22	3.6						22	280		3.6			
23	3.6						23	275		3.5			

Time: 157°5'W.  
Length of time sweep: 1.0 Mc to 13 Mc. Manual operation.  
Median values.

Table 14 (Provisional data)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F
00							0000						
01	3.0		3.0		3.0		0100						
02	3.0		3.0		3.0		0200	270		3.3			
03							0300						
04							0400						
05							0500						
06							0600						
07							0730						
08							0800						
09							0930						
10							1000						
11							1130						
12							1200						
13							1330						
14							1400						
15							1530						
16							1600						
17							1700						
18							1800						
19							1930						
20							2000						
21							2100						
22							2250						
23							2300						

Time: 127°5'W.  
Length of time sweep: 1.0 Mc to 13 Mc. Manual operation.  
Median values.

Table 16 (Provisional data)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F
00							00						
01	3.1		3.1		3.0		01	280		3.8			
02	3.2		3.2		3.0		02	290		3.7			
03	3.2		3.2		3.0		03	275		3.9			
04	3.2		3.2		3.0		04	275		3.9			
05	3.4		3.4		3.2		05	250		3.9			
06	3.4		3.4		3.2		06	260		3.7			
07	3.2		3.2		3.0		07	250		3.4			
08	3.5		3.5		3.3		08	235		4.8			
09	3.5		3.5		3.3		09	250		5.6			
10	3.5		3.5		3.3		10	265		5.8			
11	3.5		3.5		3.3		11	270		6.6			
12	3.5		3.5		3.3		12	270		6.3			
13	3.5		3.5		3.3		13	285		6.4			
14	3.4		3.4		3.3		14	270		6.2			
15	3.4		3.4		3.3		15	265		6.2			
16	3.4		3.4		3.3		16	250		5.8			
17	3.5		3.5		3.3		17	240		5.6			
18	3.4		3.4		3.3		18	225		4.4			
19	3.4		3.4		3.3		19	215		3.6			
20	3.2		3.2		3.1		20	205		3.6			
21	3.1		3.1		3.0		21	280		3.6			
22	3.0		3.0		3.0		22	280		3.6			
23	3.1		3.1		3.0		23	275		3.5			

Time: 127°5'W.  
Length of time sweep: 1.0 Mc to 13 Mc. Manual operation.  
Median values.

Time: 180°E.  
Length of time sweep: 1.8 Mc to 12.0 Mc. Manual operation.  
Average values.

Table 17 (Provisional data)

Vatheroo, W. Australia (30°3' S., 115.9° E.)

July 1945

Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S	Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S	Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S
00	3.5	-	3.0	-	2.6	-	00	2.4	-	2.4	-	2.0	-	00	2.4	-	2.4	-	2.0	-
01	3.6	-	3.0	-	2.8	-	01	2.7	-	2.8	-	2.9	-	01	2.7	-	2.8	-	2.9	-
02	3.7	-	3.0	-	2.8	-	02	2.8	-	2.9	-	2.9	-	02	2.8	-	2.9	-	2.9	-
03	3.8	-	3.1	-	2.9	-	03	2.9	-	2.9	-	2.9	-	03	2.9	-	2.9	-	2.9	-
04	3.6	-	3.1	-	2.9	-	04	2.9	-	2.9	-	2.9	-	04	2.9	-	2.9	-	2.9	-
05	3.1	-	3.0	-	2.9	-	05	2.5	-	2.5	-	2.5	-	05	2.5	-	2.5	-	2.5	-
06	2.9	-	2.9	-	2.6	-	06	2.6	-	2.6	-	2.6	-	06	2.6	-	2.6	-	2.6	-
07	4.4	-	3.5	-	2.5	-	07	2.5	-	2.5	-	2.5	-	07	2.5	-	2.5	-	2.5	-
08	5.7	-	3.4	-	2.5	-	08	4.3	-	4.3	-	4.3	-	08	4.3	-	4.3	-	4.3	-
09	6.2	-	3.4	-	2.5	-	09	5.5	-	5.5	-	5.5	-	09	5.5	-	5.5	-	5.5	-
10	6.5	-	3.4	-	2.4	-	10	5.9	-	5.9	-	5.9	-	10	5.9	-	5.9	-	5.9	-
11	6.6	-	3.3	-	2.4	-	11	6.2	-	6.2	-	6.2	-	11	6.2	-	6.2	-	6.2	-
12	6.5	-	3.3	-	2.4	-	12	6.5	-	6.5	-	6.5	-	12	6.5	-	6.5	-	6.5	-
13	6.6	-	3.3	-	2.4	-	13	6.6	-	6.6	-	6.6	-	13	6.6	-	6.6	-	6.6	-
14	6.8	-	3.4	-	2.4	-	14	6.9	-	6.9	-	6.9	-	14	6.9	-	6.9	-	6.9	-
15	6.9	-	3.4	-	2.4	-	15	6.7	-	6.7	-	6.7	-	15	6.7	-	6.7	-	6.7	-
16	6.2	-	3.4	-	2.4	-	16	6.7	-	6.7	-	6.7	-	16	6.7	-	6.7	-	6.7	-
17	5.7	-	3.4	-	2.4	-	17	6.3	-	6.3	-	6.3	-	17	6.3	-	6.3	-	6.3	-
18	4.3	-	3.4	-	2.4	-	18	5.9	-	5.9	-	5.9	-	18	5.9	-	5.9	-	5.9	-
19	3.2	-	3.3	-	2.4	-	19	5.2	-	5.2	-	5.2	-	19	5.2	-	5.2	-	5.2	-
20	3.0	-	3.2	-	2.4	-	20	5.1	-	5.1	-	5.1	-	20	5.1	-	5.1	-	5.1	-
21	3.2	-	3.4	-	2.4	-	21	2.7	-	2.7	-	2.7	-	21	2.7	-	2.7	-	2.7	-
22	3.4	-	3.4	-	2.4	-	22	2.7	-	2.7	-	2.7	-	22	2.7	-	2.7	-	2.7	-
23	3.4	-	3.4	-	2.4	-	23	2.5	-	2.5	-	2.5	-	23	2.5	-	2.5	-	2.5	-

Time: Local.  
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.  
Average values.

Table 19 (Provisional data)

Mt. Stromlo, N.S.W., Australia (35°3' S., 149.0° E.)

July 1945

Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S	Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S	Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S
00	3.5	-	2.6	-	2.6	-	00	2.8	-	2.8	-	2.8	-	00	2.8	-	2.8	-	2.8	-
01	3.6	-	2.9	-	2.9	-	01	2.9	-	2.9	-	2.9	-	01	2.9	-	2.9	-	2.9	-
02	3.6	-	3.7	-	2.9	-	02	2.9	-	2.9	-	2.9	-	02	2.9	-	2.9	-	2.9	-
03	3.9	-	3.0	-	3.0	-	03	3.0	-	3.0	-	3.0	-	03	3.0	-	3.0	-	3.0	-
04	3.6	-	3.6	-	3.2	-	04	2.6	-	2.6	-	2.6	-	04	2.6	-	2.6	-	2.6	-
05	3.6	-	3.0	-	3.2	-	05	2.5	-	2.5	-	2.5	-	05	2.5	-	2.5	-	2.5	-
06	3.0	-	3.0	-	3.0	-	06	2.0	-	2.0	-	2.0	-	06	2.0	-	2.0	-	2.0	-
07	3.7	-	3.0	-	3.1	-	07	2.4	-	2.4	-	2.4	-	07	2.4	-	2.4	-	2.4	-
08	5.2	-	5.2	-	3.4	-	08	2.4	-	2.4	-	2.4	-	08	2.4	-	2.4	-	2.4	-
09	5.7	-	5.2	-	3.2	-	09	4.9	-	4.9	-	4.9	-	09	4.9	-	4.9	-	4.9	-
10	6.3	-	5.3	-	3.3	-	10	5.2	-	5.2	-	5.2	-	10	5.2	-	5.2	-	5.2	-
11	6.7	-	6.3	-	5.3	-	11	5.9	-	5.9	-	5.9	-	11	5.9	-	5.9	-	5.9	-
12	6.7	-	6.7	-	5.3	-	12	6.2	-	6.2	-	6.2	-	12	6.2	-	6.2	-	6.2	-
13	6.6	-	6.7	-	5.2	-	13	6.1	-	6.1	-	6.1	-	13	6.1	-	6.1	-	6.1	-
14	6.8	-	6.8	-	5.2	-	14	5.7	-	5.7	-	5.7	-	14	5.7	-	5.7	-	5.7	-
15	6.5	-	6.5	-	5.2	-	15	5.2	-	5.2	-	5.2	-	15	5.2	-	5.2	-	5.2	-
16	5.9	-	5.9	-	5.3	-	16	5.6	-	5.6	-	5.6	-	16	5.6	-	5.6	-	5.6	-
17	5.4	-	5.4	-	5.2	-	17	4.7	-	4.7	-	4.7	-	17	4.7	-	4.7	-	4.7	-
18	4.4	-	4.4	-	5.1	-	18	3.6	-	3.6	-	3.6	-	18	3.6	-	3.6	-	3.6	-
19	3.7	-	3.7	-	5.0	-	19	3.0	-	3.0	-	3.0	-	19	3.0	-	3.0	-	3.0	-
20	3.4	-	3.4	-	5.0	-	20	2.6	-	2.6	-	2.6	-	20	2.6	-	2.6	-	2.6	-
21	3.5	-	3.5	-	5.0	-	21	2.7	-	2.7	-	2.7	-	21	2.7	-	2.7	-	2.7	-
22	3.5	-	3.5	-	5.0	-	22	2.9	-	2.9	-	2.9	-	22	2.9	-	2.9	-	2.9	-
23	3.4	-	3.4	-	5.0	-	23	2.3	-	2.3	-	2.3	-	23	2.3	-	2.3	-	2.3	-

Time: Local.  
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.  
Median values.

Table 18 (Provisional data)

Simonstown, Union of S. Africa (33°9' S., 18°7' E.)

July 1945

Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S	Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S	Time	h <sup>1</sup> F2	f <sup>2</sup> F2	h <sup>1</sup> F1	f <sup>2</sup> F1	h <sup>1</sup> S	f <sup>2</sup> S
00	2.4	-	2.7	-	2.8	-	00	2.7	-	2.7	-	2.7	-	00	2.7	-	2.7	-	2.7	-
01	2.6	-	2.7	-	2.7	-	01	2.6	-	2.6	-	2.6	-	01	2.6	-	2.6	-	2.6	-
02	2.6	-	2.7	-	2.7	-	02	2.6	-	2.6	-	2.6	-	02	2.6	-	2.6	-	2.6	-
03	2.7	-	2.7	-	2.7	-	03	2.7	-	2.7	-	2.7	-	03	2.7	-	2.7	-	2.7	-
04	2.7	-	2.7	-	2.7	-	04	2.7	-	2.7	-	2.7	-	04	2.7	-	2.7	-	2.7	-
05	2.7	-	2.7	-	2.7	-	05	2.7	-	2.7	-	2.7	-	05	2.7	-	2.7	-	2.7	-
06	2.7	-	2.7	-	2.7	-	06	2.7	-	2.7	-	2.7	-	06	2.7	-	2.7	-	2.7	-
07	2.7	-	2.7	-	2.7	-	07	2.7	-	2.7	-	2.7	-	07	2.7	-	2.7	-	2.7	-
08	2.7	-	2.7	-	2.7	-	08	2.7	-	2.7	-	2.7	-	08	2.7	-	2.7	-	2.7	-
09	2.7	-	2.7	-	2.7	-	09	2.7	-	2.7	-	2.7	-	09	2.7	-	2.7	-	2.7	-
10	2.7	-	2.7	-	2.7	-	10	2.7	-	2.7	-	2.7	-	10	2.7	-	2.7	-	2.7	-
11	2.7	-	2.7	-	2.7	-	11	2.7	-	2.7	-	2.7	-	11	2.7	-	2.7	-	2.7	-
12	2.7	-	2.7	-	2.7	-	12	2.7	-	2.7	-	2.7	-	12	2.7	-	2.7	-	2.7	-
13	2.7	-	2.7	-	2.7	-	13	2.7	-	2.7	-	2.7	-	13	2.7	-	2.7	-	2.7	-
14	2.7	-	2.7	-	2.7	-	14	2.7	-	2.7	-	2.7	-	14	2.7	-	2.7	-	2.7	-
15	2.7	-	2.7	-	2.7	-	15	2.7	-	2.7	-	2.7	-	15	2.7	-	2.7	-	2.7	-
16	2.7	-	2.7	-	2.7	-	16	2.7	-	2.7	-	2.7	-	16	2.7	-	2.7	-	2.7	-
17	2.7	-	2.7	-	2.7	-	17	2.7	-	2.7	-	2.7	-	17	2.					

Table 21 (Provisional data)

Time	h <sub>1</sub> P2	f <sub>1</sub> P2	h <sub>1</sub> P1	f <sub>1</sub> P1	h <sub>1</sub>	f <sub>1</sub> H	h <sub>1</sub>	f <sub>1</sub> H	Time
00									July 1945
01									Campbell I. (52°5'S, 169°0'E)
02									
03									
04		2.4							
05									
06									
07	330	2.8							
08	240	3.9							
09	230	4.8	1.75	2.4	140	2.6	2.7	3.2	Delhi, India (28°6'N, 77°2'E)
10	240	5.3	210	3.2	135	2.4	3.2	3.2	June 1945
11	250	6.9	215	3.7	130	2.5	3.2	3.2	
12	245	6.1	225	3.6	125	2.5	3.2	3.2	
13	240	5.9	220	3.4	125	2.4	3.2	3.2	
14	233	6.0	220	3.0	130	2.3	3.2	3.2	
15	235	5.7	180	2.2					
16	230	4.0							
17	245	4.3							
18	260	3.9							
19	270	3.5							
20									
21	315	3.0							
22									
23	370	2.5							

Time: 165°W.  
Length of time sweep: 1.0 Mc to 15 Mc. Manual operation.  
Median values.

Table 22 (Provisional data)

Time	h <sub>1</sub> P2	f <sub>1</sub> P2	h <sub>1</sub> P1	f <sub>1</sub> P1	h <sub>1</sub>	f <sub>1</sub> H	h <sub>1</sub>	f <sub>1</sub> H	Time
00									July 1945
01									Campbell I. (52°5'S, 169°0'E)
02									
03									
04									
05	340	2.4							
06									
07	330	2.8							
08	240	3.9	1.75	2.4	140	2.6	2.7	3.2	Delhi, India (28°6'N, 77°2'E)
09	230	4.8	210	3.2	135	2.4	3.2	3.2	June 1945
10	240	5.3	215	3.7	130	2.5	3.2	3.2	
11	250	6.9	225	3.6	125	2.5	3.2	3.2	
12	245	6.1	220	3.4	125	2.4	3.2	3.2	
13	240	5.9	220	3.0	130	2.3	3.2	3.2	
14	233	6.0	220	3.0	130	2.3	3.2	3.2	
15									
16									
17									
18									
19									
20									
21									
22									
23									

Time: 75°W.  
Length of time sweep: Manual operation.  
Average values.

Table 23 (Provisional data)

Time	h <sub>1</sub> P2	f <sub>1</sub> P2	h <sub>1</sub> P1	f <sub>1</sub> P1	h <sub>1</sub>	f <sub>1</sub> H	h <sub>1</sub>	f <sub>1</sub> H	Time
00	260	3.7					2.8	3.0	August 1945
01	260	3.5					2.7	3.1	Washington, D.C. (38°0'N, 77.5°W)
02	260	3.4					2.7	3.0	
03	260	3.3					2.7	3.0	
04	270	2.7					2.7	3.0	
05	260	2.9					2.7	3.0	
06	240	4.0					1.10	2.2	
07	320	4.7	230	5.8	110	2.8	3.5	3.4	
08	300	5.2	220	4.1	110	3.2	4.3	5.1	
09	320	5.6	210	4.3	110	3.4	4.2	5.3	
10	320	5.6	200	4.4	110	3.5	4.5	5.3	
11	360	5.7	200	4.6	110	3.6	4.2	5.0	
12	360	5.8	200	4.6	110	3.5	4.2	5.4	
13	360	5.6	200	4.6	110	3.5	4.2	5.6	
14	340	5.8	210	4.5	110	3.5	4.0	5.4	
15	340	5.7	210	4.4	110	3.4	4.0	5.2	
16	320	5.8	220	4.2	110	3.3	3.7	5.2	
17	300	5.8	220	3.9	110	3.0	3.6	5.2	
18	280	5.7	220	3.5	120	2.5	3.3	5.3	
19	240	6.0							
20	240	5.9							
21	240	5.5							
22	240	4.6							
23	260	4.0							

Time: 75°W.  
Length of time sweep: 1.0 Mc to 14 Mc in two minutes.  
Median values.

Table 24

Time	h <sub>1</sub> P2	f <sub>1</sub> P2	h <sub>1</sub> P1	f <sub>1</sub> P1	h <sub>1</sub>	f <sub>1</sub> H	h <sub>1</sub>	f <sub>1</sub> H	Time
00							3.0	3.0	July 1945
01							2.7	3.1	Fairbanks, Alaska (64.9°N, 147.8°W)
02							2.7	3.0	
03							2.7	3.0	
04							2.7	3.0	
05							2.7	3.0	
06							2.7	3.0	
07							2.7	3.0	
08							2.7	3.0	
09							2.7	3.0	
10							2.7	3.0	
11							2.7	3.0	
12							2.7	3.0	
13							2.7	3.0	
14							2.7	3.0	
15							2.7	3.0	
16							2.7	3.0	
17							2.7	3.0	
18							2.7	3.0	
19							2.7	3.0	
20							2.7	3.0	
21							2.7	3.0	
22							2.7	3.0	
23							2.7	3.0	

(Corrections and additions to previously published provisional data)  
Length of time sweep: Manual operation.  
Median values.

Time: 150°W.  
Length of time sweep: 0.8 Mc to 0.5 Mc in fifteen minutes.  
Median values.

Table 26

(Corrections and additions to previously published provisional data)

## Churchill, Canada (68°8'N, 94°2'W)

July 1945

Time	h <sup>o</sup> T2	f <sup>o</sup> T2	h <sup>o</sup> T1	f <sup>o</sup> T1	h <sup>o</sup> T	f <sup>o</sup> T	F2-M5000
00	290		8.8				
01	280	4.8	6.1	3.0	0.1	250	5.4
02	280		5.3		0.2	280	3.2
03	270		3.9		0.3	300	3.0
04	290	250	3.0		0.4	290	3.0
05	320	260	3.5		0.6	260	2.4
06	385	260	3.9	120	3.4	370	3.1
07	400	4.8	4.1	120	4.2	370	3.0
08	420	240	4.2	125	3.4	370	2.6
09	420	220	4.4	110	3.3	370	4.0
10	400	210	4.3	110	3.3	365	4.1
11	420	220	4.4	110	3.3	346	3.8
12	390	210	4.4	110	3.4	345	3.2
13	410	220	4.4	110	3.4	350	4.7
14	400	220	4.4	110	3.4	340	3.8
15	395	220	4.4	110	3.4	360	3.9
16	370	220	4.2	120	3.2	340	3.8
17	350	235	4.0	120	2.9	320	4.0
18	320	240	3.9	130	3.1	305	3.2
19	320	255	3.5	120	2.8	195	2.7
20	300	280	3.4	130	3.0	205	3.1
21	300				4.0	250	3.7
22	290	4.4			2.2	230	3.2
23	285				5.3	220	4.0
					9.5	245	3.6

Time: 90°W.  
Length of time sweep: 2 Mo to 16 Mo in one minute.  
Median values.

Table 27

(Corrections of previously published provisional data)

## Victoria Beach, Canada (50°3'N, 96°5'W)

July 1945

Prince Rupert (54°3'N, 130°3'W)

July 1945

Time	h <sup>o</sup> T2	f <sup>o</sup> T2	h <sup>o</sup> T1	f <sup>o</sup> T1	h <sup>o</sup> T	f <sup>o</sup> T	F2-M5000
00		3.5			0.0	240	4.5
01			0.1		0.1	240	
02			0.2		0.2	250	3.6
03		2.4	0.3		0.3	250	3.5
04		2.5	0.4		0.4	280	3.4
05			0.5		0.5	230	2.5
06			0.6		0.6	240	4.5
07			0.7		0.7	270	4.8
08			0.8		0.8	280	
09			0.9		0.9	325	
10			1.0		1.0	300	5.4
11			1.1		1.1	330	5.4
12			1.2		1.2	350	4.6
13			1.3		1.3	350	4.5
14			1.4		1.4	330	4.6
15			1.5		1.5	320	195
16			1.6		1.6	310	4.2
17			1.7		1.7	290	4.0
18			1.8		1.8	270	3.6
19			1.9		1.9	240	6.2
20			2.0		2.0	230	
21			2.1		2.1	220	
22			2.2		2.2	220	
23			2.3		2.3	240	

Time: 90°W.  
Median values.  
Data from July to Aug. 1945.

Table 26

(Corrections and additions to previously published provisional data)

## Prince Rupert (54°3'N, 130°3'W)

July 1945

Time	h <sup>o</sup> T2	f <sup>o</sup> T2	h <sup>o</sup> T1	f <sup>o</sup> T1	h <sup>o</sup> T	f <sup>o</sup> T	F2-M5000
00	250		8.8		0.0	250	5.4
01	280	4.8	6.1	3.0	0.1	280	3.2
02	280		5.3		0.2	280	3.2
03	270		3.9		0.3	300	3.0
04	290	250	3.0		0.4	290	3.0
05	320	260	3.5		0.6	260	2.6
06	385	260	3.9	120	3.4	370	3.1
07	400	4.8	4.1	120	4.0	370	3.0
08	420	240	4.2	125	3.4	370	2.6
09	420	220	4.4	110	3.3	365	4.0
10	400	210	4.3	110	3.3	346	4.1
11	420	220	4.4	110	3.4	345	3.8
12	390	210	4.4	110	3.4	350	3.2
13	410	220	4.4	110	3.4	340	3.9
14	400	220	4.4	110	3.4	360	3.8
15	395	220	4.4	110	3.4	340	3.8
16	370	220	4.2	120	3.2	320	4.0
17	350	235	4.0	120	2.9	305	3.2
18	320	240	3.9	130	3.1	195	2.7
19	320	255	3.5	120	2.8	205	3.1
20	300	280	3.4	130	3.0	210	3.8
21	300				4.0	230	3.2
22	290	4.4			2.2	220	4.0
23	285				5.3	245	3.6

Time: 120°W.  
Length of time sweep: Manual operation.  
Median values.

Table 28

(Corrections and additions to previously published provisional data)

## St. John's, Newfoundland (47°7'N, 52°7'W)

July 1945

Time: 52°5'W.  
Length of time sweep: Manual operation.  
Median values.

Table 29

(Corrections and additions to previously published provisional data)

Ottawa, Canada (45°5'N, 75°8'W) July 1945

Boston, Massachusetts (42°49'N, 71°2'W) July 1945

Table 30

(Corrections and additions to previously published provisional data)

Time	h <sup>o</sup> F2	f <sup>o</sup> P2	h <sup>o</sup> P3	f <sup>o</sup> P3	h <sup>o</sup> E	f <sup>o</sup> E	h <sup>o</sup> S	f <sup>o</sup> S	Y2-15000	Y2-30000
00	260								00	265
01	295	2.6	2.6	2.6	0.1	278			01	290
02	290	2.6	2.6	2.6	02	275			02	297
03	300				03	2.7			03	3.0
04	280				04	2.7			04	2.7
05	250				05	2.7			05	2.7
06	240				06	2.7			06	2.7
07	365	4.6	2.15	3.0	07	2.7			07	1.6
08	350	6.1	210	4.0	08	2.7			08	1.9
09	370	5.3	200	4.2	09	2.7			09	1.3
10	345	5.4	200	4.6	10	2.7			10	1.2
11	376	6.5	200	4.7	11	2.7			11	2.6
12	380	5.4	190	4.7	12	2.7			12	2.7
13	375	5.6	200	4.7	13	2.7			13	3.0
14	370	5.6	200	4.6	14	2.7			14	2.8
15	360	200	4.5	3.2	15	2.7			15	2.9
16	350	210	4.3	3.1	16	2.7			16	4.7
17	330	220	4.1	3.0	17	2.7			17	4.5
18	300	220	4.1	2.9	18	2.7			18	4.6
19	260	235	3.2	2.5	19	2.7			19	4.1
20	250				20	2.7			20	3.0
21	250				21	2.7			21	3.2
22	260				22	2.6			22	2.6
23	280				23	2.6			23	2.2

Time: 75°W  
Length of time sweep: 1.93 hr to 13°5 Mc. Manual operation.  
Median values.

Table 31

(Additions to previously published provisional data)

San Francisco, Calif. (37°4'N, 122°2'W) July 1945

Baton Rouge, Louisiana (30°5'N, 91°2'W) July 1945

Time: 75°W  
Median values.

Table 32

(Corrections and additions to previously published provisional data)

Baton Rouge, Louisiana (30°5'N, 91°2'W) July 1945

Time	h <sup>o</sup> F2	f <sup>o</sup> P2	h <sup>o</sup> P3	f <sup>o</sup> P3	h <sup>o</sup> E	f <sup>o</sup> E	h <sup>o</sup> S	f <sup>o</sup> S	Y2-15000	Y2-30000
00	300	3.5	3.4	3.4	00	300	4.4		300	3.0
01	270	3.0	3.7	3.7	01	300			300	3.0
02	270		3.5	3.5	02	290			290	2.5
03	260		3.4	3.4	03	290			290	2.9
04	260		3.7	3.7	04	300			300	3.0
05	260		3.6	4.2	05	290			290	3.0
06	245		230	3.3	06	290			290	3.0
07	350		220	3.8	07	350			350	3.0
08	370		205	4.2	08	380			380	3.0
09	360		200	4.3	09	400			400	3.0
10	355		200	4.5	10	395			395	3.0
11	360		200	4.4	11	390			390	3.0
12	350		190	4.6	12	400			400	3.0
13	390		200	4.5	13	400			400	3.0
14	370		200	4.5	14	380			380	3.0
15	360		210	4.4	15	365			365	3.0
16	345		220	4.2	16	350			350	3.0
17	340		220	4.1	17	340			340	3.0
18	300		230	3.7	18	300			300	3.0
19	250		235	3.3	19	270			270	3.0
20	230		230	3.3	20	250			250	2.4
21	230		230	3.8	21	260			260	3.2
22	250		220	3.8	22	280			280	3.6
23	260		235	3.9	23	290			290	3.0

Time: 90°W  
Length of time sweep: 1.9 hr to 9.8 Mc in three minutes, thirty seconds.  
Median values.

Median values.

Table 34

(Corrections and additions to previously published provisional data)  
 Christiansen I. (1.9°N, 157.5°W)

Time	h <sup>1</sup> F2	f <sup>0</sup> F2	h <sup>1</sup> F1	f <sup>0</sup> F1	h <sup>1</sup> S	f <sup>0</sup> S	Y2-M5000
00	5.4				2.9		
01	5.8				2.9		
02	5.6				3.1		
03	4.7				3.0	0.3	
04	4.4				3.0	0.4	
05	4.4				3.0	0.5	
06	4.6				3.0	0.6	
07	260	3.4	3.05		3.1	0.7	
08	320	5.8	2.8	3.0	3.2	0.8	
09	340	6.1	2.00	4.3	3.1	0.9	
10	390	6.5	2.00	4.5	3.3	1.0	
11	400	6.8	2.05	4.7	3.4	1.1	
12	375	8.0	2.00	4.7	3.5	1.2	
13	350	9.2	2.00	4.6	3.5	1.3	
14	345	9.4	2.10	4.5	3.5	1.4	
15	330	9.4	2.10	4.4	3.3	1.5	
16	320	9.2	2.10	4.2	3.1	1.6	
17	300	9.0	2.10	4.0	2.8	1.7	
18	280	8.8	220	3.2	3.8	1.8	
19	240	7.6			3.9	1.9	
20	6.6				3.0	2.0	
21	6.1				2.9	2.1	
22	5.5				2.9	2.2	
23	5.4				2.9	2.5	

Time: 600<sup>0</sup><sub>w</sub>.  
 Length of time sweep: 2.7 Mc to 14 Mc in six minutes. Record centered  
 on the hour.  
 Median values.

Table 35

Time	h <sup>1</sup> F2	f <sup>0</sup> F2	h <sup>1</sup> F1	f <sup>0</sup> F1	h <sup>1</sup> S	f <sup>0</sup> S	Y2-M5000
00	230	5.6			3.2		
01	240	5.6			3.2	0.1	
02	240	4.6			3.2	0.2	
03	250	3.8			3.2	0.3	
04	260	3.2			3.2	0.4	
05	270	2.8			3.1	0.5	
06	280	3.1			3.0	0.6	
07	240	5.6	2.02	5.5	3.1	0.7	
08	300	6.8	220	4.2	2.7	0.8	
09	340	7.5	220	4.4	3.0	0.4	
10	360	6.9	210	4.5	3.5	0.7	
11	395	6.9	210	4.6	3.5	1.0	
12	400	6.7	210	4.6	10.5	2.5	
13	400	6.8	210	4.5	10.3	2.5	
14	370	6.9	210	4.5	2.2	0.5	
15	365	7.1	210	4.4	3.0	0.4	
16	220	7.1	210	4.3	2.6	0.5	
17	250	7.0			2.1	0.4	
18	270	7.0			1.1	0.7	
19	290	6.6			2.7	1.9	
20	280	6.4			2.8	2.0	
21	280	6.6			3.0	2.1	
22	230	6.0			3.1	2.2	
23	230	5.6			3.2	2.3	

Time: 75<sup>0</sup><sub>w</sub>.  
 Length of time sweep: 1.6 Mc to 0.6 Mc in fifteen minutes.  
 Median values.

Table 33

(Corrections and additions to previously published provisional data)  
 San Juan, Puerto Rico (18.4°N, 66.1°W)

Time	h <sup>1</sup> F2	f <sup>0</sup> F2	h <sup>1</sup> F1	f <sup>0</sup> F1	h <sup>1</sup> S	f <sup>0</sup> S	Y2-M5000
00	5.4				2.9		
01	5.8				2.9		
02	5.6				3.1		
03	4.7				3.0	0.3	
04	4.4				3.0	0.4	
05	4.4				3.0	0.5	
06	4.6				3.0	0.6	
07	260	3.4	3.05		3.1	0.7	
08	320	5.8	2.8	3.0	3.2	0.8	
09	340	6.1	2.00	4.3	3.1	0.9	
10	390	6.5	2.00	4.5	3.3	1.0	
11	400	6.8	2.05	4.7	3.4	1.1	
12	375	8.0	2.00	4.7	3.5	1.2	
13	350	9.2	2.00	4.6	3.5	1.3	
14	345	9.4	2.10	4.5	3.5	1.4	
15	330	9.4	2.10	4.4	3.3	1.5	
16	320	9.2	2.10	4.2	3.1	1.6	
17	300	9.0	2.10	4.0	2.8	1.7	
18	280	8.8	220	3.2	3.8	1.8	
19	240	7.6			3.9	1.9	
20	6.6				3.0	2.0	
21	6.1				2.9	2.1	
22	5.5				2.9	2.2	
23	5.4				2.9	2.3	

Time: 600<sup>0</sup><sub>w</sub>.  
 Length of time sweep: 2.7 Mc to 14 Mc in six minutes. Record centered  
 on the hour.  
 Median values.

Table 34

Time	h <sup>1</sup> F2	f <sup>0</sup> F2	h <sup>1</sup> F1	f <sup>0</sup> F1	h <sup>1</sup> S	f <sup>0</sup> S	Y2-M5000
00					0.0		
01					0.1		
02					0.2		
03					0.3		
04					0.4		
05					0.5		
06					0.6		
07					0.7		
08					0.8		
09					0.9		
10					0.7		
11					0.9		
12					0.7		
13					0.9		
14					0.7		
15					0.9		
16					0.7		
17					0.9		
18					0.7		
19					0.9		
20					0.7		
21					0.9		
22					0.7		
23					0.9		

Time: 150<sup>0</sup><sub>w</sub>.  
 Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.  
 Median values.

Table 36

Time	h <sup>1</sup> F2	f <sup>0</sup> F2	h <sup>1</sup> F1	f <sup>0</sup> F1	h <sup>1</sup> S	f <sup>0</sup> S	Y2-M5000
00					0.0		
01					0.1		
02					0.2		
03					0.3		
04					0.2		
05					0.4		
06					0.5		
07					0.6		
08					0.7		
09					0.8		
10					0.9		
11					0.7		
12					0.9		
13					0.7		
14					0.9		
15					0.7		
16					0.9		
17					0.7		
18					0.9		
19					0.7		
20					0.9		
21					0.7		
22					0.9		
23					0.7		

Time: 150<sup>0</sup><sub>w</sub>.  
 Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.  
 Median values.

Time: 75<sup>0</sup><sub>w</sub>.  
 Length of time sweep: 2 Mc to 16 Mc in one minute.  
 Median values.



Table 41

(Corrections and additions to previously published provisional data)

Colombo, Ceylon (6.6°N, 80°E) June 1945

Time	$h^{\circ}T_2$	$f^{\circ}T_2$	$h^{\circ}T_1$	$f^{\circ}T_1$	$h^{\circ}B$	$f^{\circ}B$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00	5.6				3.0				
01	4.7				3.4				
02	3.8				3.4				
03	3.2				3.4				
04	2.7				3.4				
05	2.4				3.7				
06					3.4				
07	6.8				2.5				
08	8.2				3.0				
09	8.6				3.4				
10	8.4				3.6				
11					6.3				
12	8.0				3.7				
13	8.1				6.4				
14	8.4				5.6				
15					5.0				
16	9.1				3.4				
17	9.3				4.4				
18					3.0				
19	9.5				3.3				
20	8.8				3.5				
21	7.6				3.6				
22	6.5				2.0				
23	6.0				2.2				
					2.8				

Time: Local  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

Table 43

(Corrections and additions to previously published provisional data)

Baffin Is., Canada (70.5°N, 68.6°W)

Time	$h^{\circ}T_2$	$f^{\circ}T_2$	$h^{\circ}T_1$	$f^{\circ}T_1$	$h^{\circ}B$	$f^{\circ}B$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00					150				
01					130				
02					120				
03					100				
04	2.90				100				
05					100				
06	4.50				100				
07	4.55				100				
08	4.60				100				
09					100				
10	4.60				100				
11					100				
12	4.36				100				
13	4.50				100				
14	4.20				100				
15					100				
16					125				
17					125				
18					140				
19					140				
20					140				
21					140				
22					140				
23					140				

Time: 75°W  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

Table 42

(Corrections and additions to previously published provisional data)

Christchurch, N.Z. (43.5°S, 172.6°E) June 1945

Time	$h^{\circ}T_2$	$f^{\circ}T_2$	$h^{\circ}T_1$	$f^{\circ}T_1$	$h^{\circ}B$	$f^{\circ}B$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00	5.6				3.0				
01	4.7				3.4				
02	3.8				3.4				
03	3.2				3.4				
04	2.7				3.4				
05	2.4				3.7				
06					3.4				
07	6.8				2.5				
08	8.2				3.0				
09	8.6				3.4				
10	8.4				3.6				
11					6.3				
12	8.0				3.7				
13	8.1				6.4				
14	8.4				5.6				
15					5.0				
16	9.1				3.4				
17	9.3				4.4				
18					3.0				
19	9.5				3.3				
20	8.8				3.5				
21	7.6				3.6				
22	6.5				2.0				
23	6.0				2.2				
					2.8				

Time: 172.6°E.  
Length of time sweep: 1.0 Mc to 13 Mc. Automatic.  
Median values.

Table 43

(Corrections and additions to previously published provisional data)

Reykjavik, Iceland (64.1°N, 21.7°W) May 1946

Time	$h^{\circ}T_2$	$f^{\circ}T_2$	$h^{\circ}T_1$	$f^{\circ}T_1$	$h^{\circ}B$	$f^{\circ}B$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00					150				
01					130				
02					120				
03					100				
04	2.90				100				
05					100				
06	4.50				100				
07	4.55				100				
08	4.60				100				
09					100				
10	4.60				100				
11					100				
12	4.36				100				
13	4.50				100				
14	4.20				100				
15					100				
16					125				
17					125				
18					140				
19					140				
20					140				
21					140				
22					140				
23					140				

Time: 15°W.  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

Table 42

(Corrections and additions to previously published provisional data)

Christchurch, N.Z. (43.5°S, 172.6°E) June 1945

Time	$h^{\circ}T_2$	$f^{\circ}T_2$	$h^{\circ}T_1$	$f^{\circ}T_1$	$h^{\circ}B$	$f^{\circ}B$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00	5.6				3.0				
01	4.7				3.4				
02	3.8				3.4				
03	3.2				3.4				
04	2.7				3.7				
05					3.4				
06	6.8				2.5				
07	8.2				3.0				
08	8.6				3.4				
09	8.4				3.6				
10					6.3				
11					3.7				
12	8.0				6.4				
13	8.1				5.6				
14	8.4				5.0				
15					4.0				
16					3.0				
17					3.4				
18					3.6				
19					3.9				
20					3.9				
21					3.9				
22					3.9				
23					3.9				

Time: 15°W.  
Length of time sweep: 1.0 Mc to 13 Mc. Automatic.  
Median values.

Corrections of previously published provisional data

(Corrections and additions to previously published provincial data)

**Time: 0°**  
Length of time sweep: Manual operation.

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Time	h 182	202	h 181	201	h 180	200	F2-M5000
00	2.7						2.8
01							2.8
02							2.8
03							2.8
04							2.8
05							2.8
06							2.8
07							2.8
08							2.8
09							2.8
10							2.8
11							2.8
12							2.8
13							2.8
14							2.8
15							2.8
16							2.8
17							2.8
18							2.8
19							2.8
20							2.8
21							2.8
22							2.8
23							2.8

Time: 150<sup>o</sup>. Length of time sweep: 2 Mo to 16 Mo in one minute.

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Time, 75 sec.  
Length of time sweep: 2 Mc to 16 Mc in one minute.

Table 49  
(Corrections and additions to previously published provisional data)

Time	hY2	F0F2	R0F1	R0F1	hY1	F0F1	F0F2	hY2	hY1	F0F1	F0F2	hY2	hY1	F0F1	F0F2	hY2	hY1	F0F1	F0F2
00								00				00				00			
01								01				01				01			
02								02				02				02			
03								03				03				03			
04								04				04				04			
05								05				05				05			
06								06				06				06			
07								07				07				07			
08	315							08	315			08				08			
09	340	245						09	120	100	2.9	09	335	7.0	250	4.6	4.6	4.6	3.2
10								10				10	315	8.6	250	4.7	4.7	4.7	3.0
11	350							11	100	115	3.0	11	325	9.4	245	4.7	4.7	4.7	3.1
12		235						12				12	315	10.5	235	4.7	4.7	4.7	3.1
13								13	110	115	2.9	13	302	10.6	250	4.7	4.7	4.7	3.0
14								14				14	300	10.7	250	4.7	4.7	4.7	3.0
15								15				15	300	10.4	250	4.5	4.5	4.5	3.0
16								16				16	295	10.0	240	4.3	4.3	4.3	3.0
17								17				17	270	9.2	300	4.8	4.8	4.8	3.0
18								18				18	250	8.6	302	4.5	4.5	4.5	3.0
19	266							19				19	242	7.0	302	4.5	4.5	4.5	3.0
20								20				20	240	5.9	300	4.0	4.0	4.0	3.0
21								21				21	270	4.9	300	4.8	4.8	4.8	3.0
22								22				22	300	4.8	302	4.5	4.5	4.5	3.0
23								23				23	302	4.5	302	4.5	4.5	4.5	3.0

Time: 75°W.  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

Time	hY2	F0F2	R0F1	R0F1	hY1	F0F1	F0F2	hY2	hY1	F0F1	F0F2	hY2	hY1	F0F1	F0F2	hY2	hY1	F0F1	F0F2
00								00				00				00			
01								01				01				01			
02								02				02				02			
03								03				03				03			
04								04				04				04			
05								05				05				05			
06								06				06				06			
07								07				07				07			
08								08				08				08			
09								09				09				09			
10								10				10				10			
11								11				11				11			
12								12				12				12			
13								13				13				13			
14								14				14				14			
15								15				15				15			
16								16				16				16			
17								17				17				17			
18								18				18				18			
19								19				19				19			
20								20				20				20			
21								21				21				21			
22								22				22				22			
23								23				23				23			

Time: 60°W.  
Length of time sweep: 2 Mc to 16 Mc in one minute.  
Median values.

March 1945

March

TABLE 51

Washington, D.C. Ionosphere Station  
 (Location) National Bureau Of Standards  
 (Institution)

## IONOSPHERE DATA - I

$h_{F_2}$  in km for August 1945  
 (Month)

Records measured by: J. M. G.  
 R.L.S.

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	240	(250)	240	240	260	240	320	260	340	(390)	340	370	520	440	380	320	340	320	240	240	230	290	300
2	(300)	250	220	(240)	280	280	240	3560	340	400	360	[410] <sup>c</sup>	480	(470)	360	360	[360] <sup>c</sup>	[340] <sup>c</sup>	(340)	240	220	(240)	260	270
3	260	230	240	260	270	260	240	(320)	(360)	380	400	360	A	A	350	340	320	320	250	[270] <sup>a</sup>	280	220	240	260
4	240	270	260	270	270	220	(240)	(300)	(470)	(410)	340	360	[360] <sup>c</sup>	360	330	310	350	(300)	250	220	230	220	250	250
5	250	240	240	250	240	240	240	320	380	330	380	(430)	390	340	340	350	310	280	260	240	270	270	270	280
6	260	260	270	290	280	260	240	340	(330) <sup>a</sup>	340	[310] <sup>c</sup>	360	280	400	(460)	360	370	330	260	240	260	260	(240)	280
7	270	270	280	280	290	260	240	360	300	300	[350] <sup>c</sup>	360	350	340	340	320	290	280	260	220	220	220	220	250
8	240	240	220	240	250	260	240	320	330	350	360	340	360	330	380	380	340	310	280	220	220	220	240	260
9	240	260	230	260	240	260	230	300	300	400	(220)	330	320	380	(380)	340	350	300	280	(270)	240	240	260	(240)
10	240	250	240	230	220	220	240	240	280	320	(300)	(330) <sup>c</sup>	360	360	340	340	320	290	260	240	240	240	240	250
11	250	240	260	260	250	240	220	(340)	340	290	[310] <sup>c</sup>	380	360	340	330	320	280	280	240	(230) <sup>a</sup>	230	240	240	230
12	250	240	270	270	260	260	220	340	360	340	420	420	340	360	360	340	340	300	280	230	(240)	220	(260)	280
13	260	270	280	260	300	300	220	(470)	460	370	630	520	580	(470)	440	400	380	400	400	240	260	(300)	260	260
14	280	280	270	280	280	300	230	540	G	650	(640)	440	420	(370) <sup>b</sup>	440	380	320	(280) <sup>c</sup>	(280) <sup>c</sup>	260	250	280	240	260
15	260	260	270	260	240	250	240	(260)	360	(280)	300	320	380	360	330	330	310	300	280	250	250	240	240	240
16	260	240	240	260	(300)	(300)	260	310	300	300	310	340	330	330	[330] <sup>a</sup>	360	300	320	280	240	240	A	(240)	(240)
17	260	260	260	280	280	260	240	300	260	310	340	340	340	340	350	320	320	310	280	290	260	(260)	240	260
18	260	(280)	270	260	(290)	240	240	260	300	[290] <sup>c</sup>	[300] <sup>c</sup>	320	340	360	360	330	330	290	300	260	240	240	240	(270)
19	280	260	230	250	240	220	(230)	270	280	280	270	330	320	340	320	320	320	280	280	260	240	240	220	240
20	260	240	260	260	250	240	240	250	300	300	320	360	330	340	340	340	330	300	260	240	220	220	(230)	250
21	260	260	250	240	250	260	240	360	300	300	330	360	360	360	360	320	320	300	280	260	230	220	(240)	(280)
22	(280)	270	280	[280] <sup>a</sup>	280	240	240	260	260	300	300	300	340	[340] <sup>c</sup>	[340] <sup>c</sup>	330	270	300	260	240	240	240	(280)	(300)
23	(280)	270	240	240	280	260	230	(300)	320	280	280	340	360	370	340	370	330	330	280	230	220	[280] <sup>a</sup>	[300] <sup>a</sup>	[300] <sup>a</sup>
24	280	280	280	280	290	(280)	220	260	420	320	(300)	360	360	390	[350] <sup>a</sup>	360	320	(320)	280	250	290	280	260	(260)
25	(300)	260	270	260	260	260	240	(220)	260	(300)	280	280	340	[310] <sup>c</sup>	340	320	320	300	280	240	230	230	230	260
26	260	260	270	260	280	280	240	220	260	260	300	330	[360] <sup>a</sup>	410	390	380	340	320	320	300	(260)	[250] <sup>a</sup>	[260] <sup>a</sup>	
27	290	(290) <sup>c</sup>	[260] <sup>c</sup>	280	250	260	[230] <sup>c</sup>	[240] <sup>c</sup>	[270] <sup>c</sup>	280	270	330	320	360	300	340	310	260	260	220	220	260	280	380
28	310	250	280	280	280	300	260	260	480	420	370	390	440	370	360	360	360	360	280	240	230	260	(260)	260
29	250	260	[270] <sup>a</sup>	(290)	(320)	240	340	360	390	370	(380)	440	320	360	360	360	320	310	250	250	250	240	260	260
30	260	250	240	230	240	260	220	250	(260)	270	280	300	320	320	300	300	320	320	300	280	280	220	240	240
31	260	260	260	240	[250] <sup>c</sup>	260	240	240	240	[240] <sup>c</sup>	300	300	310	340	330	310	310	300	270	240	240	240	240	240
Sum	260	260	260	260	270	260	260	240	300	300	320	320	360	340	340	360	360	320	320	280	290	240	240	260
Median	260	260	260	260	270	260	260	240	300	300	320	320	360	340	340	360	360	320	320	280	290	240	240	260



Washington, D. C.  
(Location) Ionosphere station

TABLE 53  
IONOSPHERE DATA-3

Day	TIME: 75°W MERIDIAN												TIME: 75°W MERIDIAN																		
	National Bureau Of Standards (Institution)				Half hourly values of $f_0 F_2$ in $\frac{1}{\text{sec}}$ for August				Half hourly values of $f_0 F_2$ in $\frac{1}{\text{sec}}$ for August				Half hourly values of $f_0 F_2$ in $\frac{1}{\text{sec}}$ for August				Half hourly values of $f_0 F_2$ in $\frac{1}{\text{sec}}$ for August				Half hourly values of $f_0 F_2$ in $\frac{1}{\text{sec}}$ for August										
	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	(3.4)	3.3	2.6	2.0	F	1.9	F	(3.4)	4.3	5.3	5.3	5.0	5.2	4.9	(4.9)	5.1	5.5	(5.4)	5.8	(6.2)	(5.9)	4.5	3.7	(3.1)							
2	3.5	3.5	2.6	(1.7)	1.6	3.4	(3.8)	F	4.4	(4.5)	5.0	5.0	5.1	(4.7)	5.1	5.4	[5.4]	5.9	6.0	(6.4)	4.9	3.8	(3.4)	(3.2)							
3	3.4	2.7	2.3	F	2.0	1.9	3.6	4.2	<4.3	4.7	F	4.8	(5.1)	(5.5)	A	A	5.2	5.5	5.3	5.7	5.7	5.1	4.1	3.4	(3.3)						
4	2.7	2.6	2.3	F	2.2	2.3	2.3	3.7	4.6	(4.8)	5.2	5.5	(5.6)	5.4	(5.3)	5.4	5.3	5.2	5.4	5.3	5.2	5.5	5.2	4.1	3.7						
5	3.5	(3.3)	3.1	2.8	2.2	F	2.3	3.5	4.1	4.8	(5.6)	5.5	5.5	5.4	5.5	5.7	5.6	5.4	(5.3)	5.3	5.2	5.5	5.3	5.0	4.2	4.2					
6	3.5	3.4	3.2	3.1	2.6	(3.4)	4.2	[5.0]	A	5.7	(6.6)	5.9	(6.1)	5.4	(5.4)	5.6	[5.3]	5.6	5.5	5.5	5.8	5.7	5.7	(5.2)	5.0	4.5					
7	3.9	(3.3)	3.1	2.9	2.3	F	3.4	4.3	5.5	6.3	(6.2)	5.8	6.0	6.1	6.4	6.4	6.3	6.2	(6.2)	(5.9)	5.0	4.6	4.3								
8	3.9	3.5	3.2	2.7	2.4	F	(3.5)	4.4	5.1	5.2	(5.4)	5.6	5.8	5.8	5.8	5.8	5.7	6.0	6.1	(6.4)	5.5	5.0	4.3	(4.1)							
9	3.5	(3.5)	(3.0)	F	2.4	F	2.2	F	(3.3)	4.2	(4.7)	5.3	5.9	(5.7)	5.8	5.4	5.9	5.7	5.8	5.7	5.7	5.9	6.5	5.5	5.1	4.6	3.9				
10	3.4	3.5	3.4	3.3	2.8	(3.7)	4.5	5.5	5.9	5.2	(6.0)	5.8	(5.8)	6.4	(5.9)	6.4	6.2	6.1	6.0	5.9	(5.6)	4.9	4.7								
11	4.2	3.7	3.4	3.4	3.3	3.6	(4.6)	F	5.2	(6.0)	6.0	6.0	6.4	6.5	6.3	6.4	6.0	6.8	6.0	6.4	5.6	5.1	4.5								
12	4.3	4.0	3.6	3.5	3.3	3.7	4.3	5.0	5.2	(5.3)	5.7	5.7	5.9	6.0	5.9	5.6	5.7	5.8	5.8	5.7	5.6	5.1	4.9	4.4							
13	4.2	3.8	3.5	3.4	3.0	3.4	[4.0]	F	<3.9	5.2	[5.1]	4.8	5.0	4.9	(5.4)	(5.0)	5.1	5.3	5.1	5.5	5.6	4.7	(4.4)	4.2	3.9						
14	(3.6)	F	(3.4)	3.3	3.3	(3.0)	3.9	<4.0	G	4.7	(4.4)	5.0	5.2	[5.1]	4.8	5.0	5.6	[5.4]	5.6	5.5	5.9	5.3	5.2	5.8	5.4	4.6	3.9				
15	3.5	F	[3.5]	A	3.7	F	3.6	J	3.4	F	4.0	F	(4.6)	5.9	(5.6)	6.4	5.9	5.9	6.6	6.2	6.2	6.6	6.4	(7.2)	(6.4)	6.3	(5.5)				
16	4.1	3.6	(3.0)	2.1	F	1.9	F	3.3	4.3	5.4	[5.6]	A	[6.0]	6.0	6.4	6.0	(6.2)	6.2	6.2	6.6	6.6	6.4	6.4	(6.6)	(6.4)	5.3	5.0				
17	4.3	3.5	(3.4)	3.3	2.7	F	[2.8]	G	4.7	5.7	6.1	5.8	(5.8)	6.1	6.1	6.5	7.0	(6.6)	6.7	(6.5)	6.6	6.6	6.6	6.6	(6.2)	5.2	4.7				
18	3.9	3.8	3.5	3.5	3.4	3.9	5.2	5.7	6.4	[6.3]	(6.3)	6.1	5.9	6.4	6.4	6.4	6.4	6.4	6.4	(6.5)	(6.5)	5.2	4.7	4.3							
19	4.3	4.2	3.6	(3.4)	3.6	3.5	5.1	(6.2)	6.4	(6.4)	(6.6)	6.4	6.2	6.2	6.2	6.4	6.4	6.4	6.4	(6.2)	(6.6)	(6.8)	5.8	4.8	4.0						
20	3.5	3.4	(3.2)	3.4	3.4	3.8	(4.5)	5.2	5.7	5.9	5.6	(6.0)	5.8	6.0	6.2	6.0	6.2	6.2	6.2	(6.4)	(6.4)	6.4	5.7	4.8	4.2						
21	4.0	3.8	3.8	3.4	3.5	3.5	(3.7)	(4.6)	5.5	(6.4)	5.9	5.9	6.3	6.4	6.4	6.4	6.4	6.4	6.4	(6.3)	(6.0)	5.3	5.0	4.5	3.8	3.5					
22	3.5	(3.4)	(3.4)	3.7	3.3	3.5	3.4	3.5	4.8	5.7	(6.3)	6.4	6.2	(6.2)	(6.6)	6.4	(7.3)	(7.0)	6.4	[6.6]	5.5	4.8	J	4.2	4.0						
23	3.7	3.6	[3.3]	C	2.8	2.4	F	(3.3)	4.0	5.1	5.4	5.9	5.6	(5.3)	5.5	5.6	5.2	5.2	5.5	5.4	5.9	5.5	3.5	[3.4]	3.4						
24	3.4	3.0	F	2.7	2.4	F	2.2	F	3.3	4.1	<3.8	5.2	(5.5)	5.4	5.4	5.3	5.5	5.5	5.4	5.1	5.2	5.8	5.7	4.7	3.7	3.4					
25	3.4	3.3	3.2	F	[3.7]	2.7	3.5	4.4	5.3	5.8	(6.8)	6.0	(5.7)	5.4	5.7	5.5	5.5	5.5	5.3	5.6	6.2	5.5	4.9	4.0	3.7						
26	3.4	3.4	3.3	(3.3)	F	3.3	3.4	3.4	4.8	4.9	4.8	5.5	5.2	5.2	5.3	5.5	5.2	4.9	5.1	5.2	5.6	5.7	[4.4]	4.2	[3.6]	(3.3)					
27	[3.2]	[3.3]	C	[3.2]	C	3.2	3.0	3.4	[4.5]	C	[5.2]	5.7	5.4	5.5	5.8	5.1	5.9	5.7	5.8	5.6	5.9	5.4	4.4	[3.2]	F	(2.1)					
28	3.2	F	2.7	F	(2.5)	2.2	F	1.6	F	[2.6]	3.4	3.9	4.6	4.8	5.0	4.9	5.4	5.3	5.4	5.8	5.8	5.3	5.6	4.5	3.9	3.7	3.5				
29	3.4	3.3	(3.0)	2.5	2.6	3.3	3.8	4.4	4.8	5.0	5.2	[4.9]	5.3	5.5	5.4	5.4	5.4	5.3	5.4	5.4	5.1	(4.4)	4.3	F	(3.5)	3.3	F				
30	2.4	2.2	F	2.2	F	(2.3)	1.8	F	(3.1)	F	4.0	4.7	5.5	5.6	5.8	5.7	5.8	5.5	5.7	5.8	6.5	(6.3)	5.8	4.7	(3.7)	F	(3.5)	F			
31	[2.8]	C	2.8	F	2.7	F	[2.6]	C	3.3	[4.9]	C	[5.3]	5.5	5.8	5.7	5.5	6.0	5.5	5.8	6.0	5.9	(6.0)	6.6	(5.5)	4.7	3.8	F	(3.6)			
Sum	3.5	3.4	3.2	3.1	2.6	3.5	4.3	5.1	5.5	5.5	5.7	5.6	5.6	5.7	5.6	5.7	5.6	5.7	5.6	5.7	5.6	5.6	5.6	5.6	5.6	4.2	3.9				
Median	3.5	3.4	3.2	3.1	2.6	3.5	4.3	5.1	5.5	5.5	5.7	5.6	5.6	5.7	5.6	5.7	5.6	5.7	5.6	5.7	5.6	5.6	5.6	5.6	5.6	4.2	3.9				

Records measured by: J. M. C.

R. L. S.

TABLE 54  
IONOSPHERE DATA - 4

Washington, D.C. Ionosphere Station

# National Bureau Of Standards (Institution)

Records measured by J. M. C.  
Pis.  
Pis.

TABLE 55  
TROPOSPHERE DATA - 5

Washington, D.C.

Ionosphere station

IONOSPHERE DATA - 5

Month	Year	J.M.C.	R.L.S.
August	1945	Records measured by J.M.C.	
Hourly values of $F_{1m}$ for August			

TABLE 56  
IONOSPHERE DATA - 6

Median obtained from four values or less.

TABLE 57

Washington, D.C.

Ionosphere Station

(Location) National Bureau Of Standards

Ionosphere Station

(Institution)

TIME: 75°W MERIDIAN  
 Hour<sup>17</sup> values of  $f_{E_{in}}$  for August 1945.  
 (Month)

Records measured by: J. M. C.  
R. L. S.

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																								
3																								
4																								
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27																								
28																								
29																								
30																								
31																								
Sum																								
Median																								

\* Median obtained from four values or less.

TABLE 58  
IONOSPHERE DATA-8

Washington, D.C. Ionosphere Station

(Location) National Bureau Of Standards  
(Institution)

TIME: 75° W MERIDIAN

Hourly values of  $E_s$  in  $\mu$  for August 1945  
(Month)

Records measured by J. M. C.  
R. L. S.

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	2.7	1.00	2.8	1.00	2.6	1.00	3.3	1.00	3.6	1.00	4.0	1.00	4.7	1.00	4.0	1.00	5.2	1.20	3.4	1.20	3.3	1.20	3.8	1.00		
2		1.0	1.20		2.6	1.00	2.8	1.00	3.7	1.00	5.6	1.00	3.5	1.00	5.2	1.00	5.2	1.00	3.5	1.20	3.2	1.20	3.8	1.00		
3	2.8	1.10	2.7	1.10	2.8	1.10	2.9	1.10	4.0	1.10	5.7	1.10	6.0	1.10	7.5	1.10	7.8	1.10	7.5	1.10	5.2	1.10	5.2	1.10		
4	2.6	1.00	0.9	1.20	1.1	1.10	0	2.0	(2.5)	1.10	2.8	1.20	3.4	1.20	4.3	1.00	4.2	1.10	3.8	1.10	4.4	1.10	4.2	1.10		
5	1.0	1.10									1.6	1.20	3.6	1.20	4.2	1.00	5.6	1.00	4.3	1.10	3.5	1.10	3.4	1.10		
6	2.9	1.10	2.7	1.00	2.8	1.10	2.7	1.10	4.3	1.10	7.6	1.10	7.4	1.00	5.9	1.10	4.9	1.10	4.0	1.10	3.5	1.10	2.7	1.10		
7	4.0	1.10	3.4	1.00	3.4	1.10	3.3	1.00	3.4	1.10	4.1	1.10	(4.5)	1.10	4.9	1.10	3.6	1.10	3.7	1.10	4.2	1.10	3.9	1.10		
8	2.8	1.10	2.7	1.20	2.5	1.10	2.6	1.00	2.7	1.10	3.4	1.20	4.1	1.20	4.2	1.10	4.1	1.10	4.2	1.10	4.2	1.10	4.1	1.10		
9	2.9	1.10	2.6	1.10	3.4	1.10	3.3	1.10	2.4	1.10	(2.7)	1.10	3.9	1.10	5.3	1.10	4.7	1.10	4.2	1.10	3.8	1.10	4.0	1.10		
10	3.4	1.00	2.8	1.10	5.0	1.10	(2.3)	2.0	(2.5)	1.10	2.7	1.00	4.0	1.10	6.3	1.00	(3.5)	1.10	4.2	1.10	4.3	1.10	3.6	1.00		
11	4.1	1.00	2.7	1.00	4.0	1.00	2.8	1.00	5.8	1.00	2.8	1.10	4.6	1.10	2.4	1.00	5.4	1.00	5.2	1.10	5.7	1.10	5.1	1.10		
12	2.6	1.00	2.8	1.10	2.7	1.10	4.9	1.00	2.1	1.10	2.9	1.10	2.8	1.10	2.9	1.10	4.6	1.10	4.6	1.10	4.6	1.10	4.6	1.10		
13	3.5	1.00	2.8	1.00	3.0	1.10	3.5	1.10	2.9	1.10	5.8	1.10	5.9	1.00	4.7	1.10	4.3	1.10	4.2	1.10	4.3	1.10	5.1	1.10		
14	2.7	1.10									2.5	1.10	4.0	1.00	4.7	1.10	4.3	1.00	4.1	1.10	4.2	1.10	4.4	1.10		
15											2.6	1.20	2.7	1.10	3.4	1.10	3.5	1.10	4.0	1.10	4.2	1.10	4.2	1.10		
16	1.0	1.20	1.4	1.20	2.8	1.10	2.7	1.00	(2.8)	1.10	5.9	1.20	5.9	1.10	5.1	1.10	4.7	1.10	4.6	1.10	4.6	1.10	4.6	1.10		
17	4.1	1.10	3.6	1.10	3.1	1.10	3.5	1.10	3.3	1.10	2.8	1.10	4.3	1.10	4.7	1.10	4.1	1.10	3.4	1.10	3.8	1.10	4.1	1.10		
18	4.1	1.00	4.0	1.00	3.3	1.00	3.4	1.00	3.9	1.00	4.0	1.00	4.2	1.00	4.4	1.10	4.2	1.10	4.3	1.10	4.2	1.10	4.8	1.10		
19	3.4	1.10	2.7	1.10	2.5	1.20	2.5	1.10	4.8	1.10	2.8	1.00	3.5	1.10	3.1	1.10	3.9	1.10	3.6	1.10	3.7	1.10	2.5	1.10		
20	2.7	1.00									2.6	1.00	3.3	1.00	3.5	1.10	3.1	1.10	3.6	1.10	3.5	1.10	3.4	(5.8)	1.10	
21	3.3	1.10	2.6	1.10	4.8	1.10	3.5	1.10	3.5	1.10	4.0	1.10	4.2	1.10	4.1	1.10	4.1	1.10	4.0	1.10	3.3	1.10	3.4	1.10		
22	3.4	1.10	4.0	1.10	4.0	1.10	4.5	1.10	4.5	1.10	5.1	1.10	5.7	1.10	4.4	1.10	4.1	1.10	4.1	1.10	4.7	1.10	4.2	1.10		
23	2.4	1.20	1.0	1.20							2.7	1.20	3.8	1.10	3.5	1.10	4.0	1.10	4.7	1.10	3.4	1.10	4.7	1.10	(3.3)	1.10
24	2.7	1.00	(3.5)	1.10	3.4	1.10	4.1	1.10	4.4	1.10	3.8	1.10	3.8	1.10	4.3	1.10	4.1	1.10	4.2	1.10	4.2	1.10	4.0	1.10		
25	5.5	1.10	3.6	1.10	4.8	1.10	3.4	1.10	3.3	1.10	2.7	1.10	2.6	1.10	3.8	1.10	3.8	1.10	3.4	1.10	3.5	1.10	3.3	1.00		
26	3.3	1.10	2.7	1.10	2.7	1.10	3.0	1.10	2.6	1.10	3.3	1.10	2.7	1.10	4.2	1.10	4.3	1.10	4.2	1.10	4.5	1.10	4.6	1.10		
27	3.6	1.00	3.7	1.00	2.7	1.00	2.7	1.00	2.8	1.00	5.7	1.10	5.7	1.10	4.2	1.10	4.2	1.10	4.2	1.10	4.5	1.10	4.1	1.10		
28	2.7	1.00	0.9	1.20	0.9	1.20	2.7	1.10	2.6	1.20	3.4	1.20	3.5	1.10	4.2	1.10	4.1	1.10	4.0	1.10	4.5	1.10	4.6	1.10		
29											2.7	1.10	3.4	1.10	3.5	1.10	4.2	1.10	4.0	1.10	3.7	1.10	3.6	1.10		
30											2.7	1.00	(2.6)	1.20	3.5	1.10	4.2	1.10	4.2	1.10	4.0	1.10	3.7	1.10	3.3	1.10
31											1.4	1.10	1.0	1.10	C	(2.6)	2.8	1.20	3.5	1.10	4.0	1.10	3.7	1.10	3.3	1.10
Sum											2.8	2.7	2.7	2.7	3.5	3.9	4.3	4.2	4.5	4.2	4.2	4.0	3.7	3.6	3.3	3.3
Median											2.7	2.7	2.7	2.7	3.5	3.9	4.3	4.2	4.5	4.2	4.2	4.0	3.7	3.6	3.3	3.3

TABLE 59  
ATMOSPHERE DATA - 9

IONOSPHERE DATA - 9

Ionosphere station

Washington, D.C.

## National Bureau Of Standards (Location)

Hourly values of F2 - M1500 or August  
(Month)

Records measured by J.M.G.

TABLE 60  
IONOSPHERE DATA-10  
Washington, D. C.  
Tsunameter station

**Washington, D. C.**      **Ionosphere Station**

tion)

National Bureau of Standards

(Institution)

Hourly values of F2-M3000 for August  
(Month)

Records measured by: J.W.C.  
R.L.S.

TABLE 61  
IONOSPHERE DATA - II

Washington, D.C. \_\_\_\_\_ Ionosphere Station  
(Loesian) \_\_\_\_\_  
National Bureau Of Standards \_\_\_\_\_  
Institution

Washington, D.C.  
 (Institution) Ionosphere Station  
 National Bureau Of Standards

(Loation) Ionosphere Station

TABLE 62

IONOSPHERE DATA-12

TIME: 75° W MERIDIAN  
 (Month) AUGUST 1945

Hourly values of E-M1500 for AUGUST 1945  
 (Institution) R.L.S.

Records measured by: J.M.C.

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																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
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27																								
28																								
29																								
30																								
31																								
Sum	3.8	4.1	4.2	4.3	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
Median																								

\* Median obtained from ion values or less.

(3.6)†

Table 63  
Ionospheric Storminess, August 1945

Day	Ionospheric Character*		Principal Storms/ Beginning GCT		Geomagnetic Character**	
	00-12 GCT	12-24 GCT	End GCT	00-12 GCT	12-24 GCT	
August						
1	2	3			1	2
2	3	3			3	2
3	2	1			2	2
4	2	2			2	1
5	1	1			2	2
6	2	2			2	1
7	2	1			1	1
8	0	1			1	2
9	1	1			1	1
10	1	1			1	1
11	1	0			1	2
12	1	1			2	1
13	2	3			2	2
14	2	3			3	2
15	2	1			2	2
16	1	1			2	1
17	1	1			1	1
18	1	0			1	1
19	1	0			1	1
20	1	1			1	1
21	1	1			2	2
22	2	1			1	3
23	2	3			1	0
24	3	3			1	0
25	2	2			1	1
26	2	3			1	2
27	2	2			4	2
28	3	3			2	1
29	3	3			0	1
30	3	2			1	
31	2	2				

\* 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 major ionosphere storms were observed at Washington during August, 1945.

Table 64  
Sudden Ionosphere Disturbances Observed  
at Washington, D.C.

Day	GCT		Locations of transmitters	Relative intensity at minimum*	Other phenomena
	Beginning	End			
August 17	2020	2145	Ohio, D.C., England, Mexico, Brazil, Chile	0.0	Terr. mag. pulse** 2019-2120

\*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.

Provisional Radio Propagation Quality Figures

July 1945

Compared with IRPL and ISIB Warnings and IRPL A-Zone Forecasts.

Day	North Atlantic			North Pacific			Quality Figure and Forecast Scale:						
	Quality Figure	IRPL	ISIB	A-Zone Forecast	Geo-magnetic ratio	K <sub>A</sub>	Quality Figure	IRPL Warning	A-Zone Forecast	Geo-magnetic ratio	K <sub>A</sub>		
1	(3)(4)	X	X	X	7	4	5	(4)	X	X	7	4	3
2	(4)	6	X	X	7	2	2	7	X	X	6	2	1
3	5	7	X	X	6	2	1	7	X	X	6	2	3
4	5	6	X	X	6	2	3	6	7	X	5	4	2
5	5	6	X	X	6	3	2	6	7	X	6	3	2
6	(4)	5	X	X	5	4	2	7	7	X	5	4	2
7	5	6	X	X	6	2	2	6	6	X	6	2	2
8	5	6	X	X	5	2	2	6	7	X	5	2	2
9	6	6	X	X	6	1	1	7	7	X	6	1	1
10	6	7	X	X	6	1	1	7	7	X	6	1	1
11	6	7	X	X	6	1	1	7	7	X	6	1	1
12	6	7	X	X	6	1	1	7	6	X	6	1	1
13	6	7	X	X	6	1	0	7	7	X	5	1	0
14	6	7	X	X	6	1	1	7	7	X	4	1	1
15	7	7	X	X	6	1	1	7	7	X	4	1	2
16	7	7	X	X	6	1	1	7	7	X	4	1	2
17	6	7	X	X	6	1	1	7	5	X	5	2	1
18	5	6	X	X	5	2	1	6	5	X	5	2	1
19	6	7	X	X	6	2	1	7	6	X	6	2	1
20	6	7	X	X	6	1	1	7	7	X	6	1	1
21	6	7	X	X	6	1	1	7	7	X	6	1	1
22	7	7	X	X	6	1	1	7	7	X	6	1	1
23	7	7	X	X	6	1	3	7	7	X	6	1	3
24	6	7	X	X	5	2	1	7	7	X	5	2	1
25	7	7	X	X	6	1	1	7	7	X	6	1	1
26	6	7	X	X	6	0	1	7	6	X	6	0	1
27	6	7	X	X	6	0	1	7	7	X	6	0	1
28	5	7	X	X	5	4	3	5	5	X	4	3	3
29	6	7	X	X	5	4	3	5	5	X	4	3	3
30	(4)	6	X	X	5	4	3	6	6	X	5	4	3
31	5	7	X	X	6	2	1	7	7	X	6	2	1

Score!

H	2	2	0	1
M	2	2	4	0
G	22	25	21	23
(S)	4	2	1	1
S	1	0	5	6

Symbols

X = Warning given.

H = Quality 4 or worse on day or half-day following warning.

M = Quality 4 or worse on day or half-day following no warning.

(S) = Quality 5 on day following warning.

G = Quality 5 or better on day following no warning.

( ) = Quality 6 or better on day following warning.

X = Quality 5 on day following warning.

S = Quality 6 or better on day following warning.

( ) = Quality 7 or forecast 4 or worse (disturbed)

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

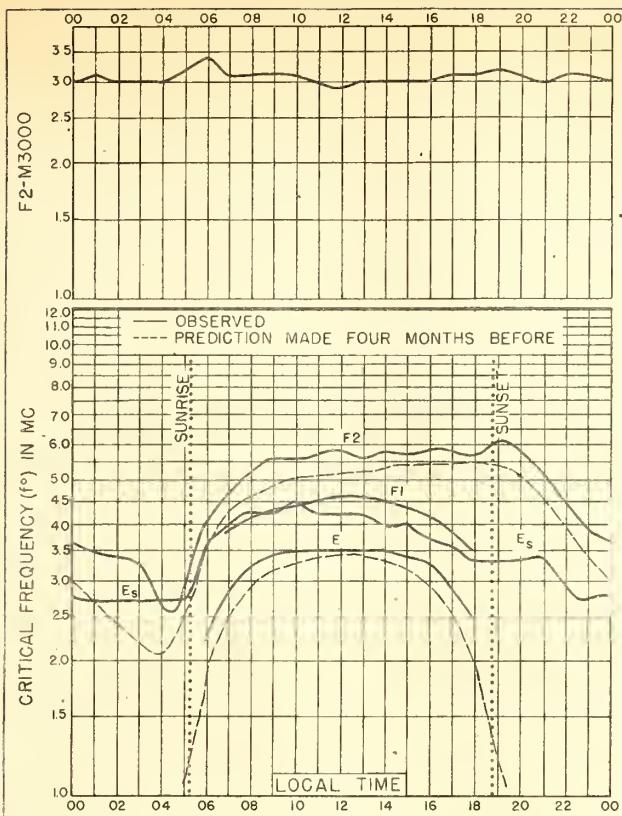


Fig. 1. WASHINGTON, D.C.  
39.0°N, 77.5°W

AUGUST, 1945

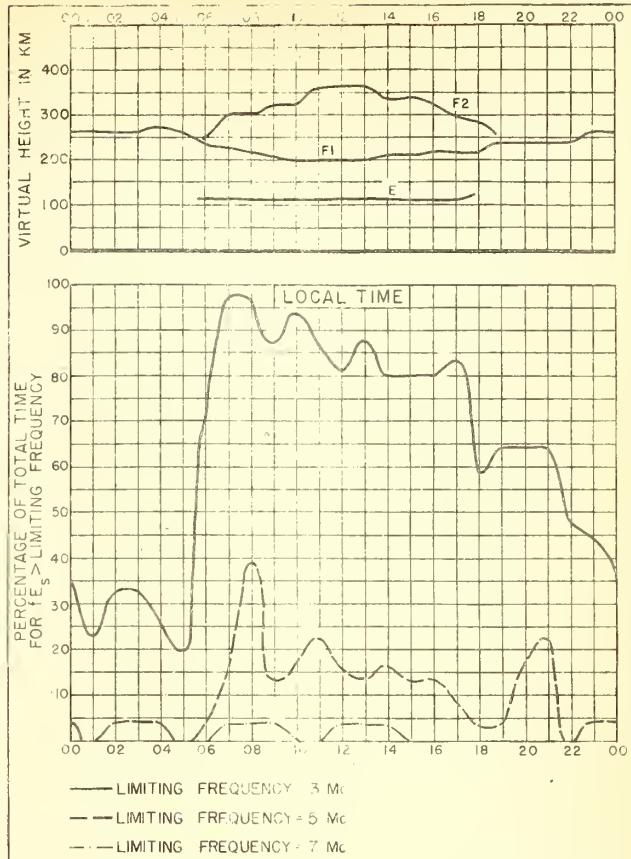


Fig. 2. WASHINGTON, D.C.

AUGUST, 1945

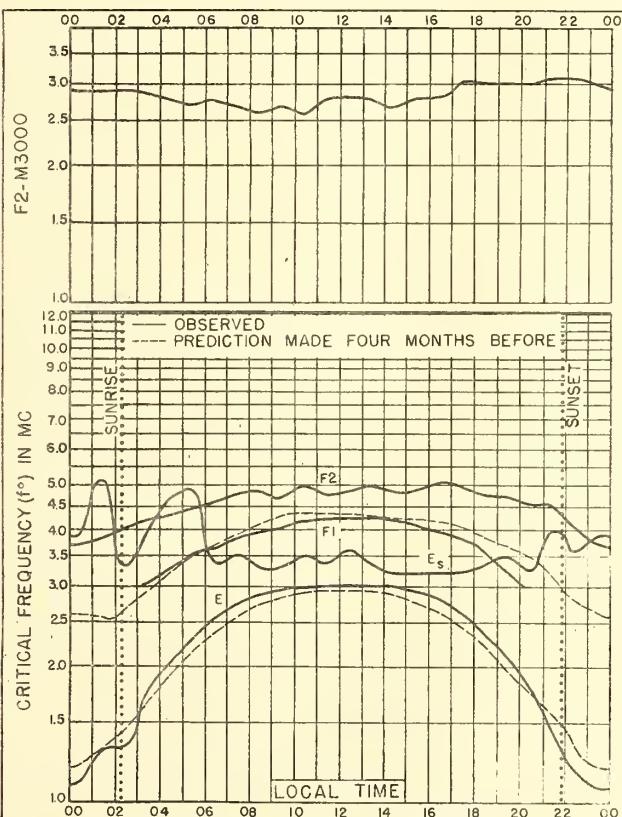


Fig. 3. FAIRBANKS, ALASKA  
64.9°N, 147.8°W

JULY, 1945

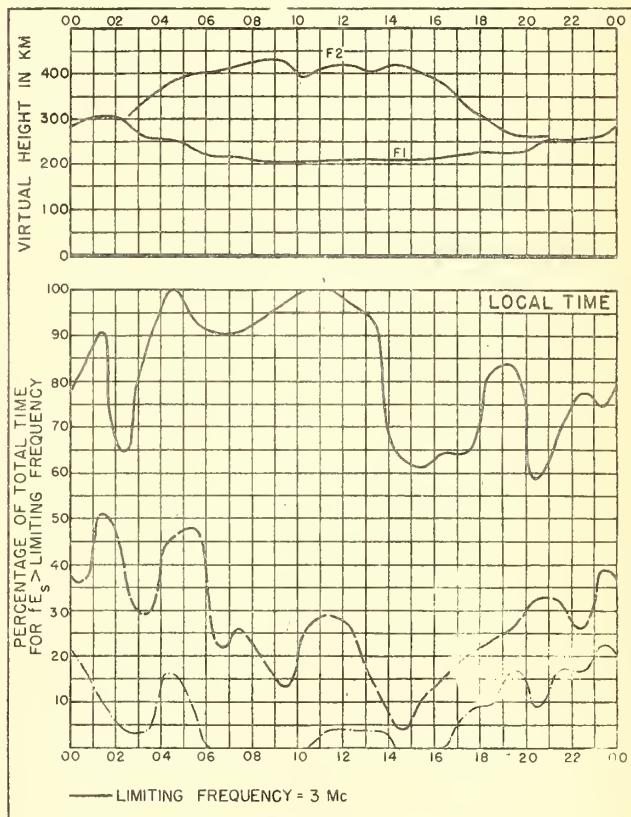
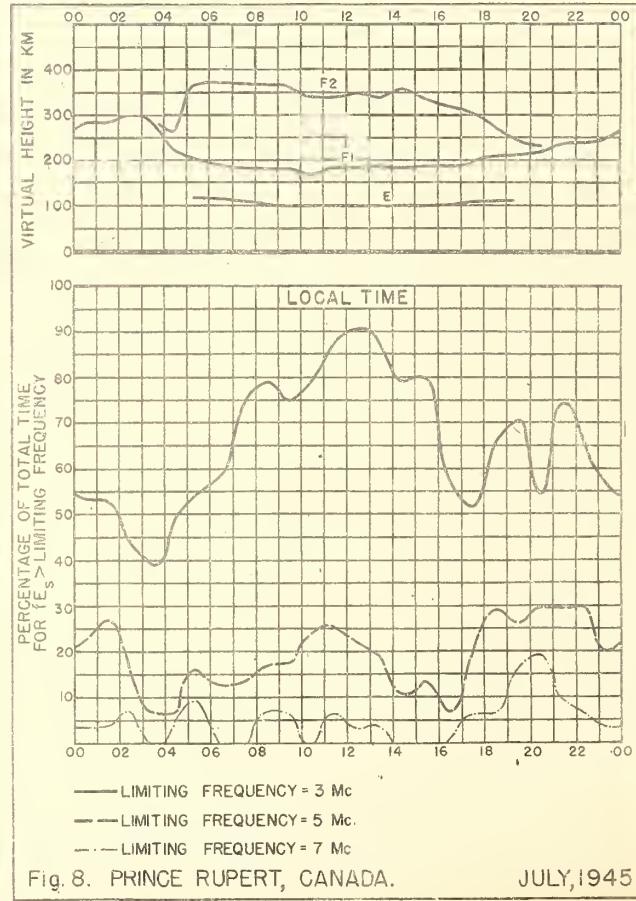
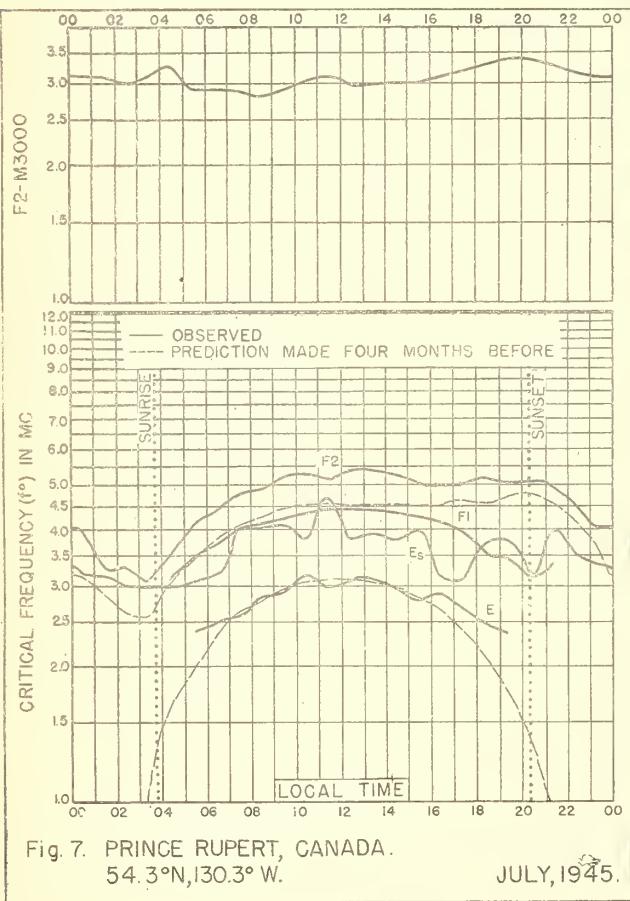
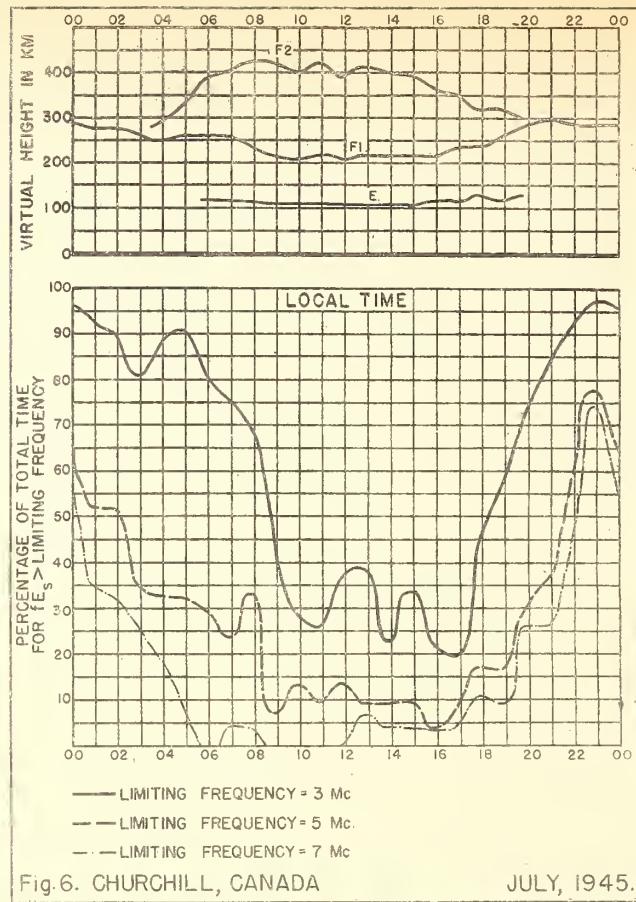
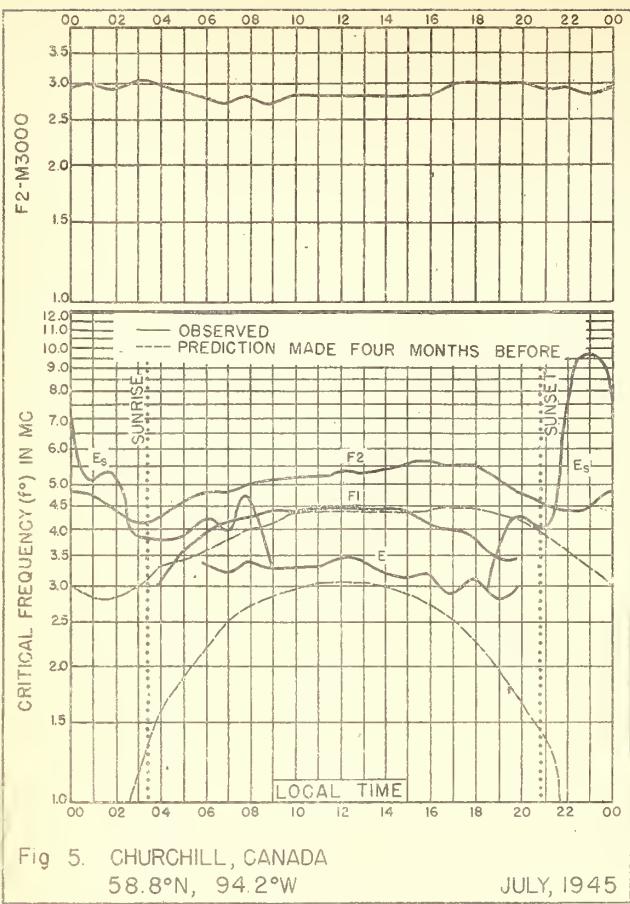


Fig. 4. FAIRBANKS, ALASKA.

JULY, 1945



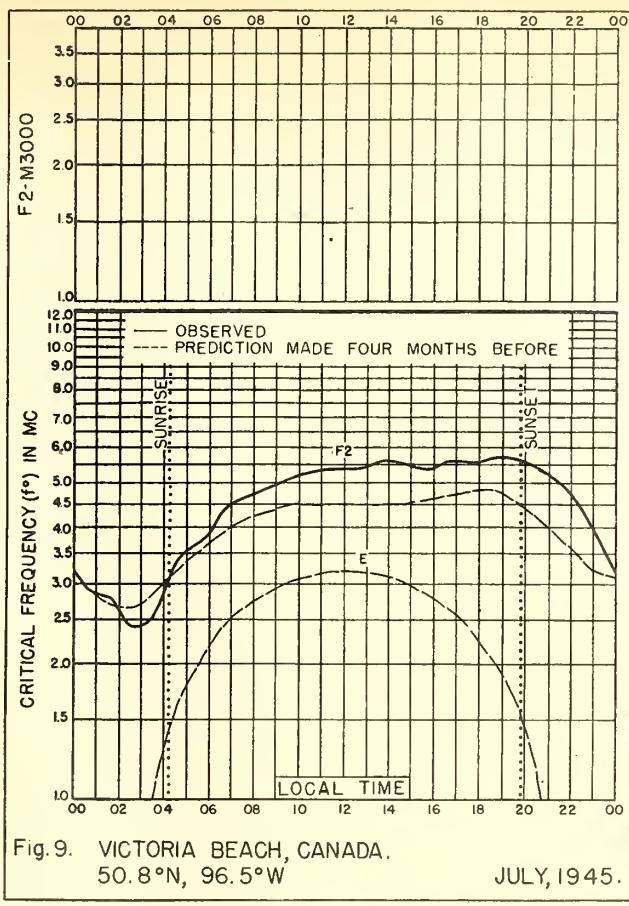


Fig. 9. VICTORIA BEACH, CANADA.

50.8°N, 96.5°W

JULY, 1945.

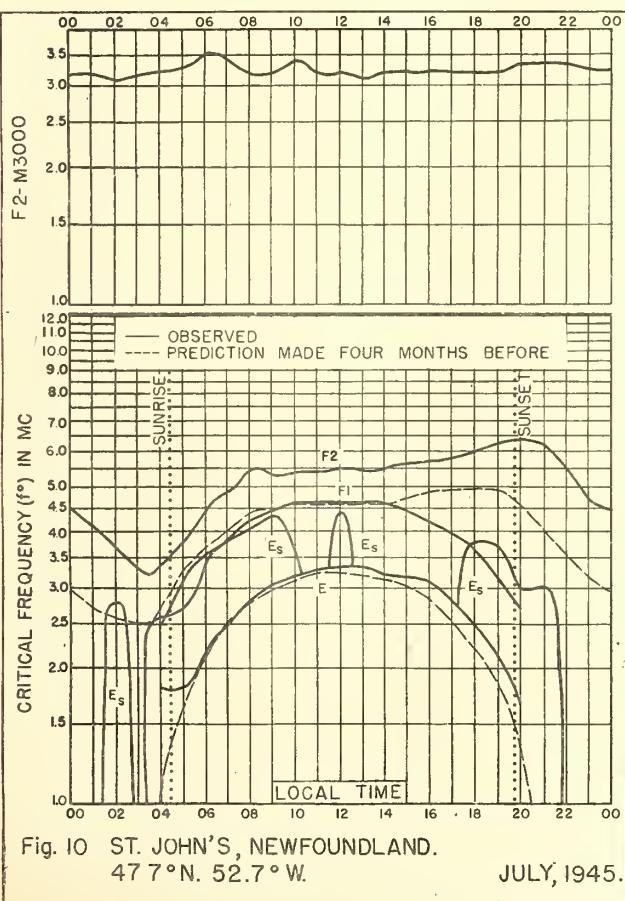


Fig. 10 ST. JOHN'S, NEWFOUNDLAND.

47.7°N. 52.7°W.

JULY, 1945.

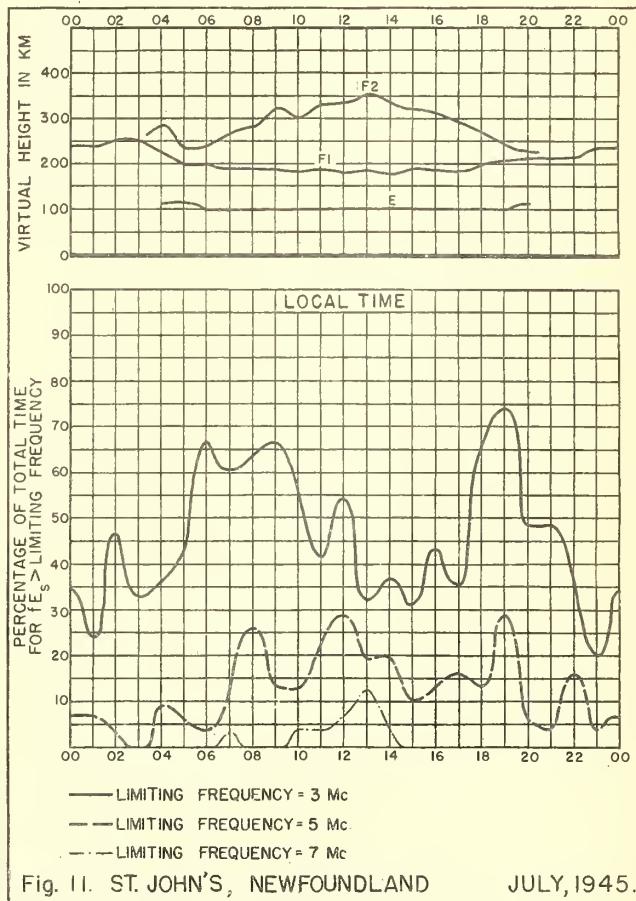


Fig. 11. ST. JOHN'S, NEWFOUNDLAND

JULY, 1945.

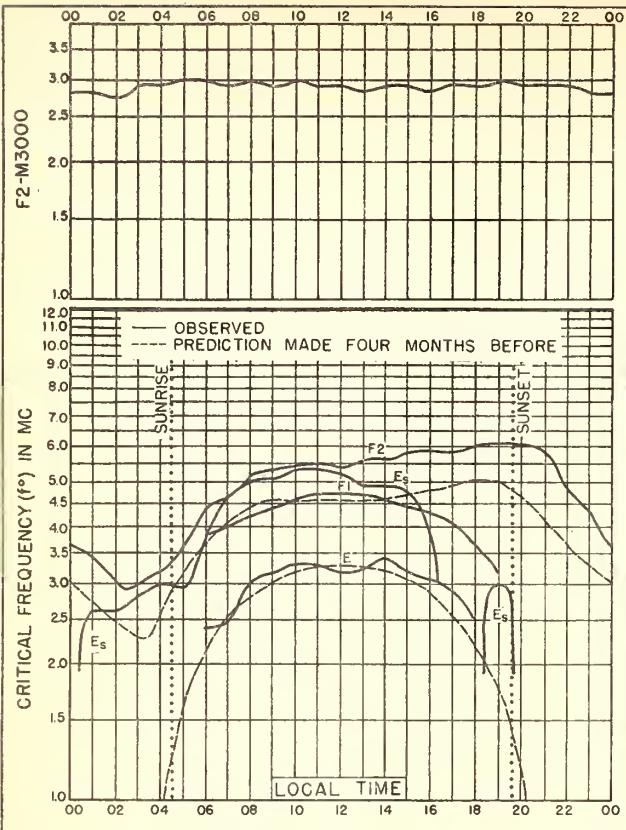


Fig. 12. OTTAWA, CANADA  
45.5°N, 75.8°W

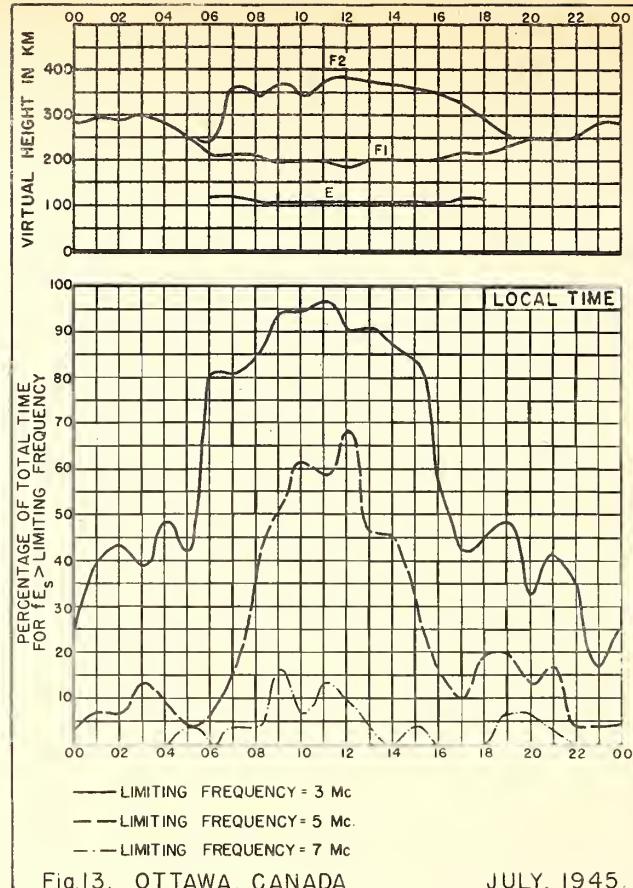


Fig. 13. OTTAWA, CANADA JULY, 1945.

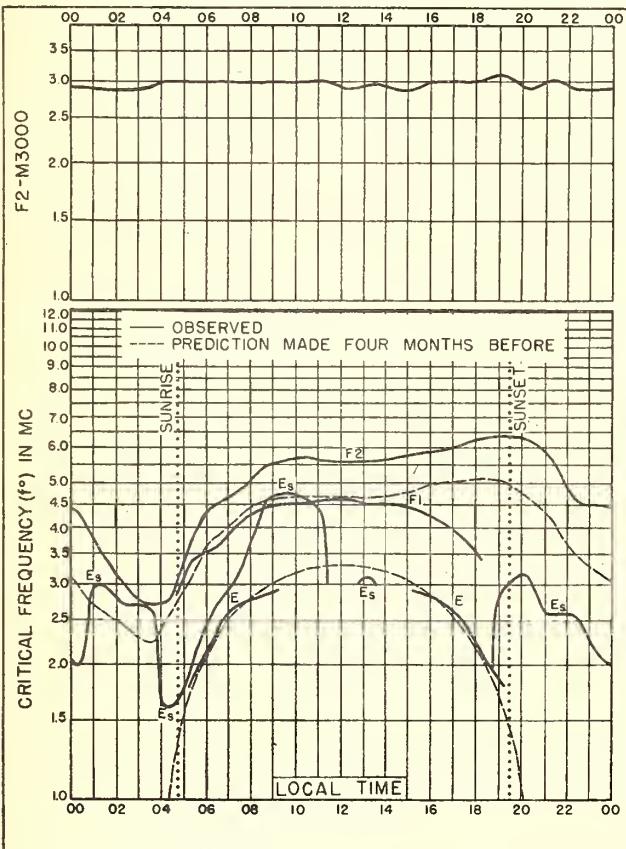


Fig. 14. BOSTON, MASSACHUSETTS  
42.4°N, 71.2°W

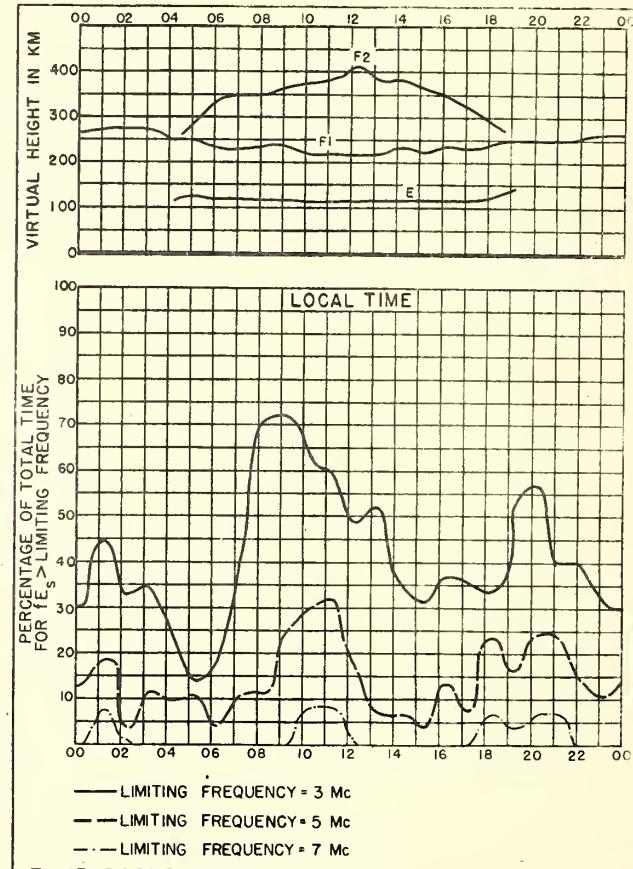


Fig. 15. BOSTON, MASSACHUSETTS JULY, 1945

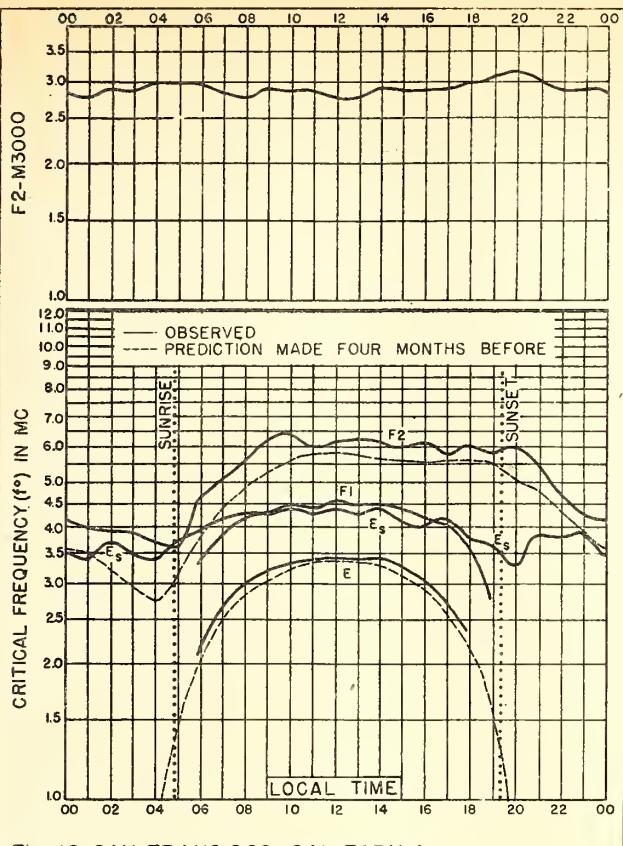


Fig. 16. SAN FRANCISCO, CALIFORNIA  
37.4°N, 122.2°W JULY, 1945

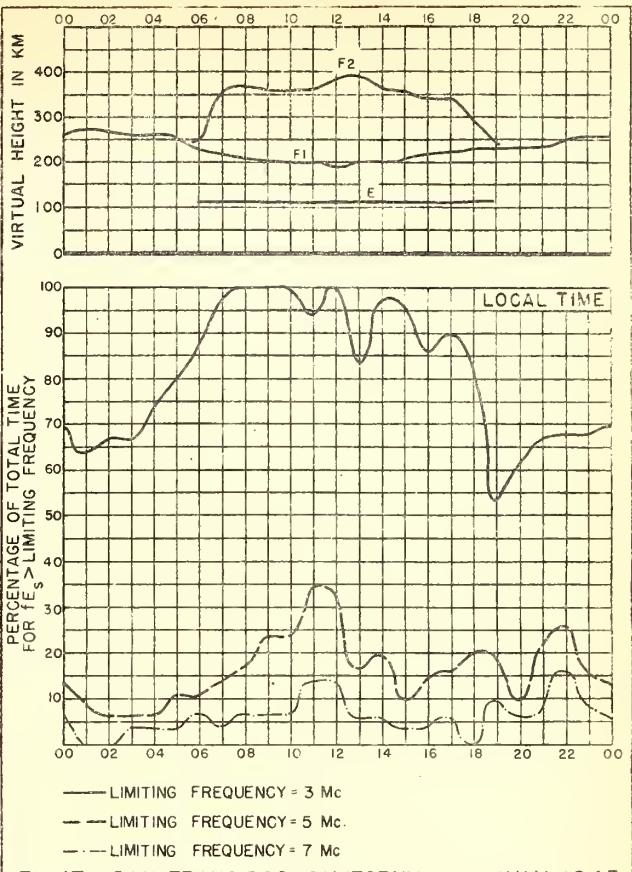


Fig. 17. SAN FRANCISCO, CALIFORNIA JULY, 1945.

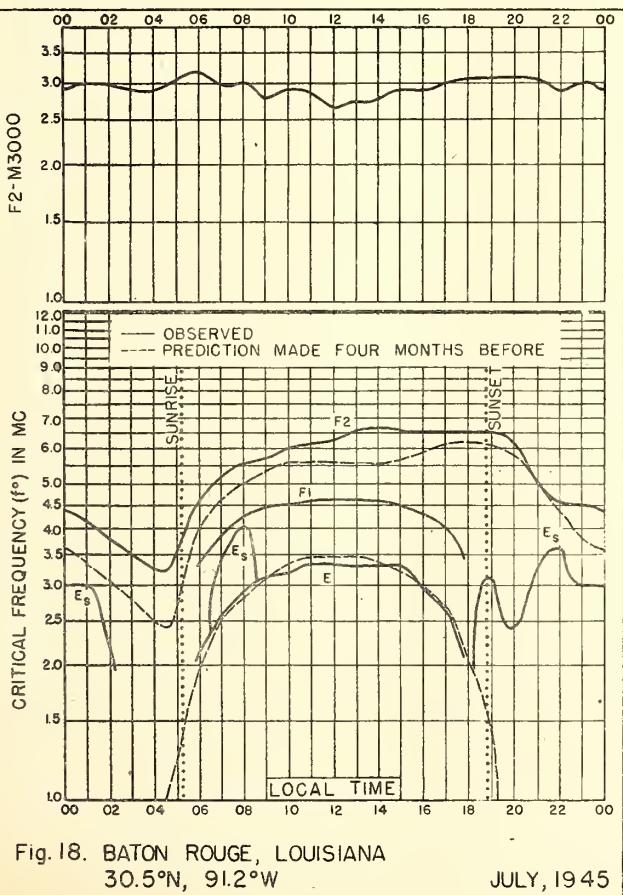


Fig. 18. BATON ROUGE, LOUISIANA  
30.5°N, 91.2°W JULY, 1945

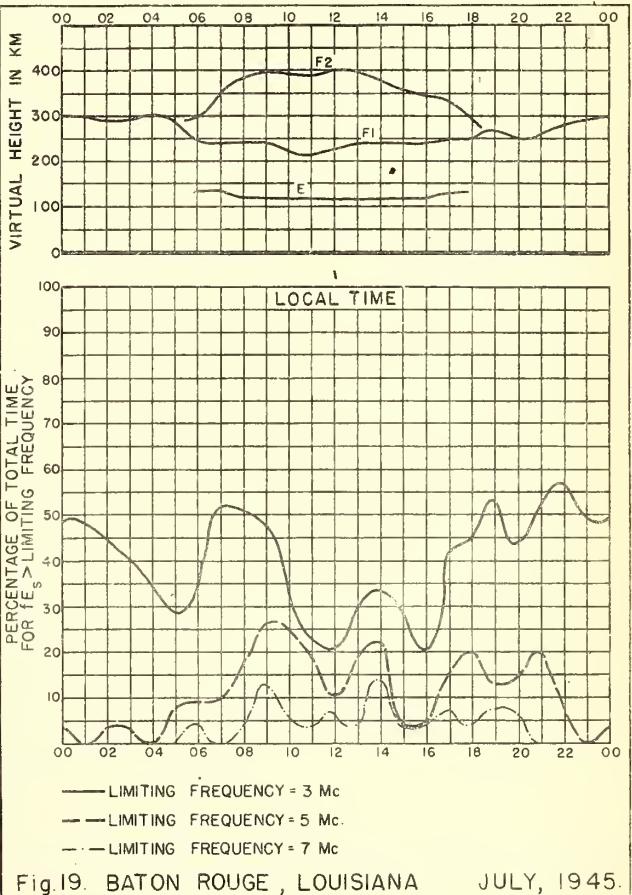


Fig. 19. BATON ROUGE, LOUISIANA JULY, 1945.

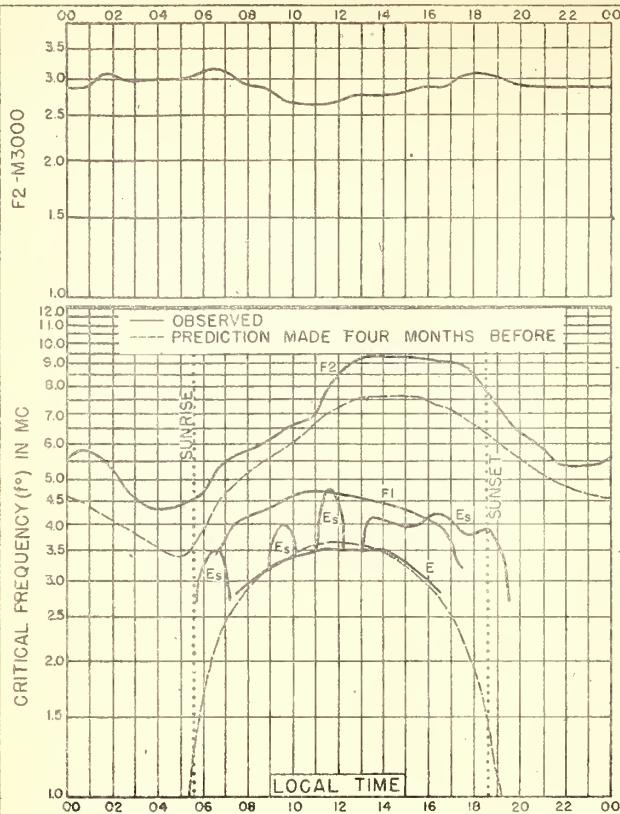


Fig. 20. SAN JUAN, PUERTO RICO  
18.4°N, 66.1°W JULY, 1945

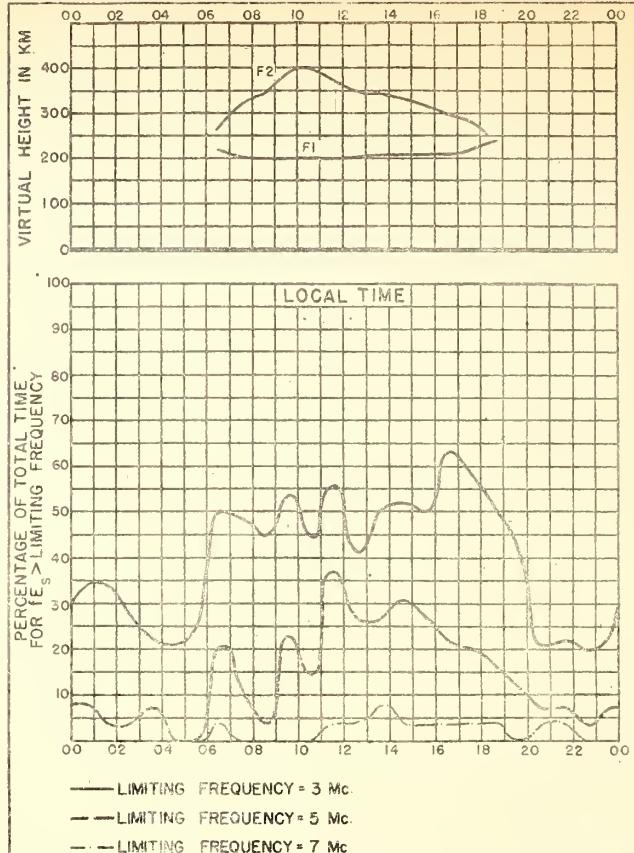


Fig. 21. SAN JUAN, PUERTO RICO JULY, 1945

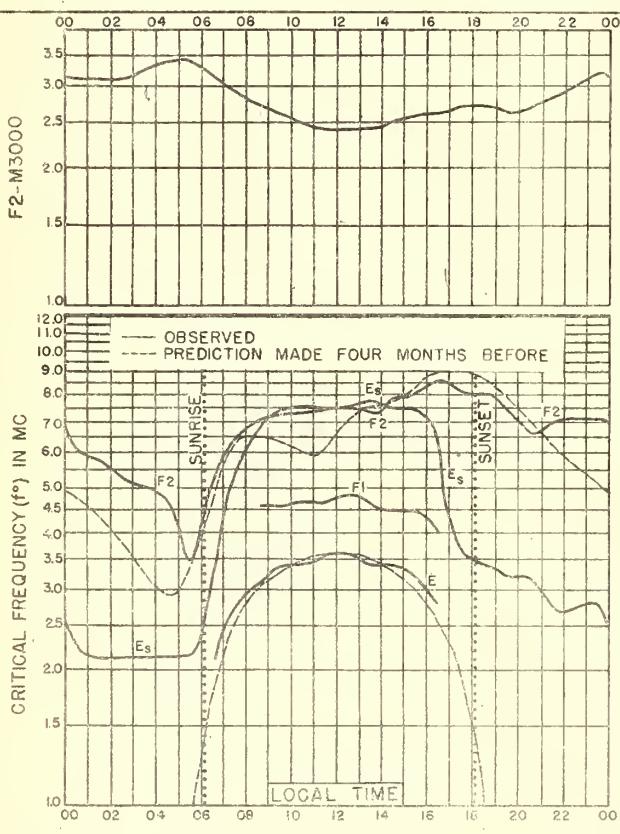


Fig. 22. CHRISTMAS I.  
19°N, 157.3°W JULY, 1945

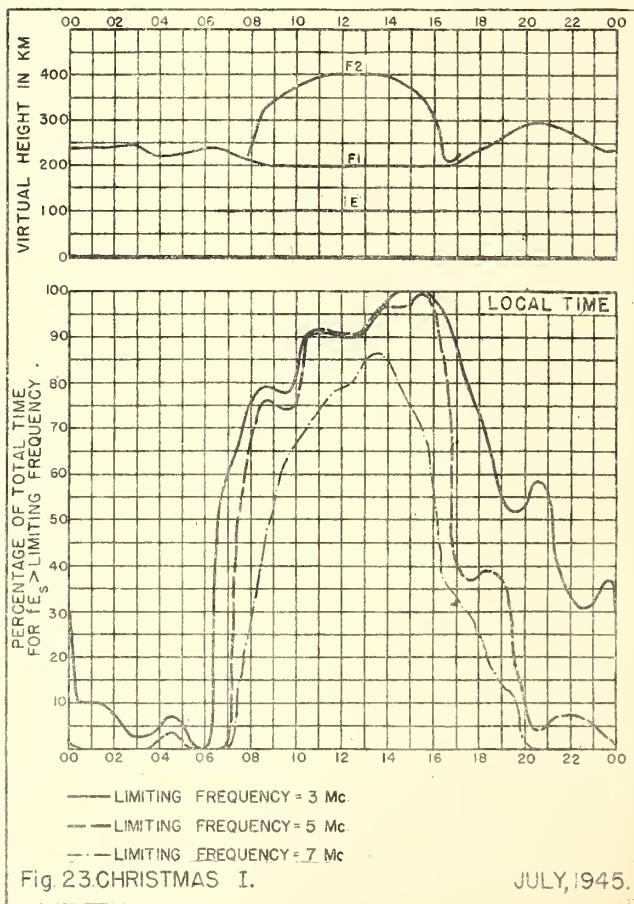


Fig. 23. CHRISTMAS I. JULY, 1945.

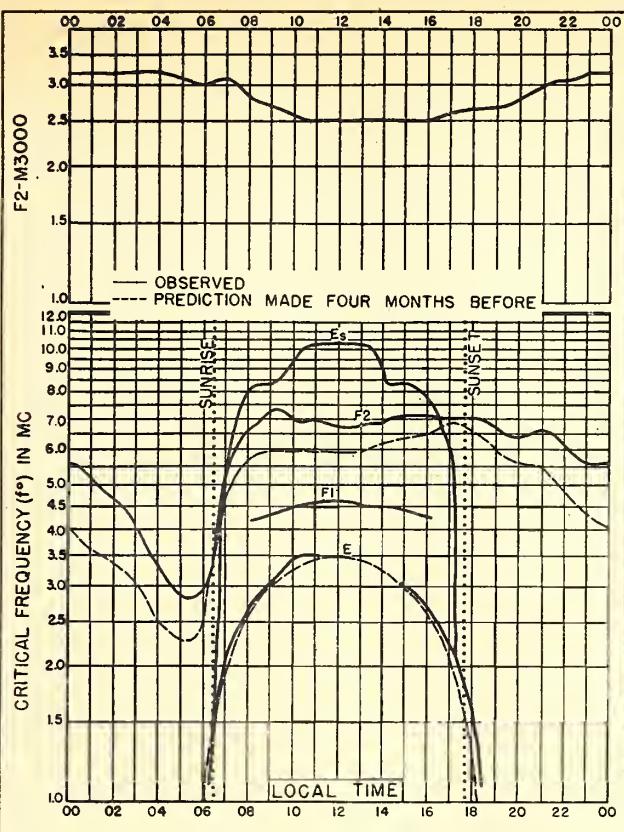


Fig. 24. HUANCAYO, PERU  
12.0°S, 75.3°W JULY, 1945

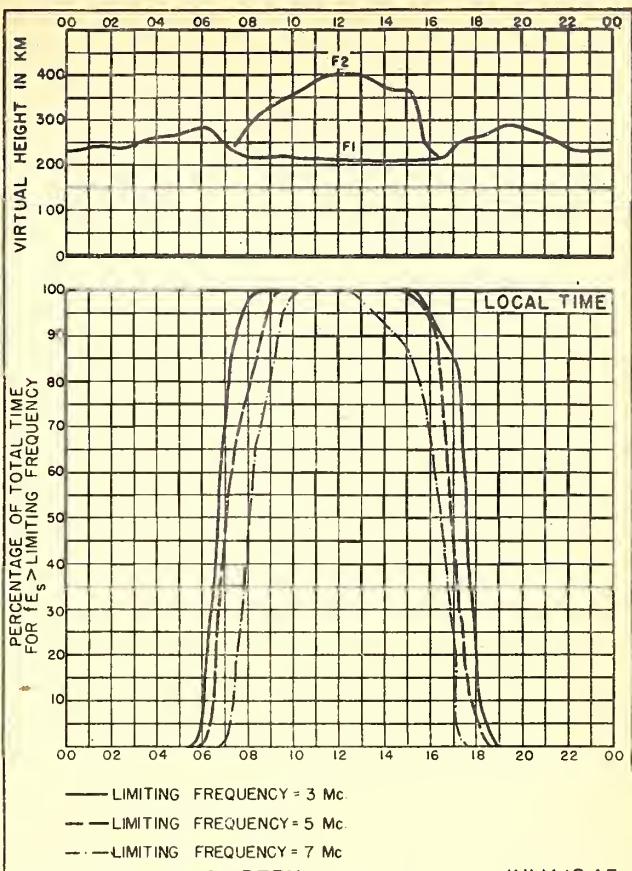


Fig. 25. HUANCAYO, PERU JULY, 1945.

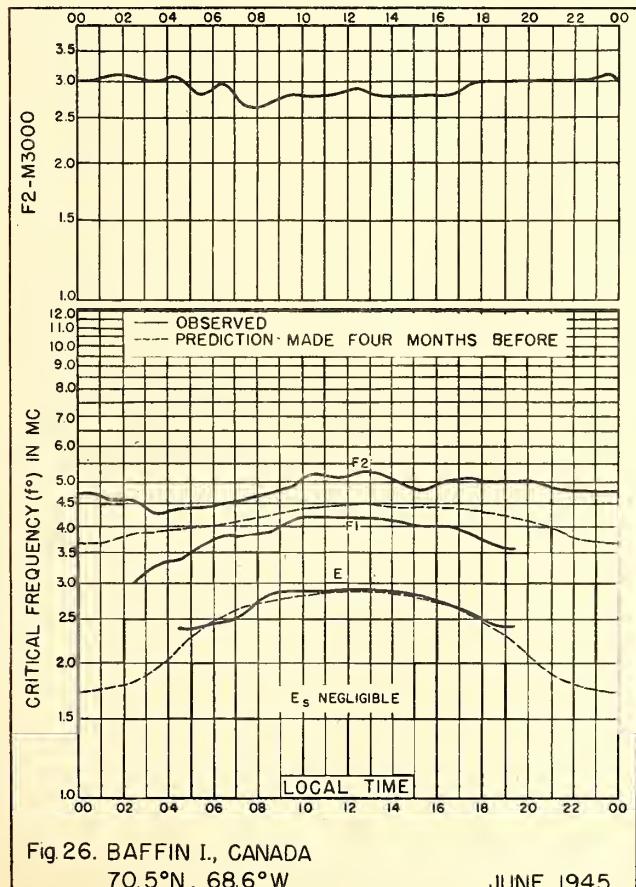


Fig. 26. BAFFIN I., CANADA  
70.5°N, 68.6°W JUNE, 1945

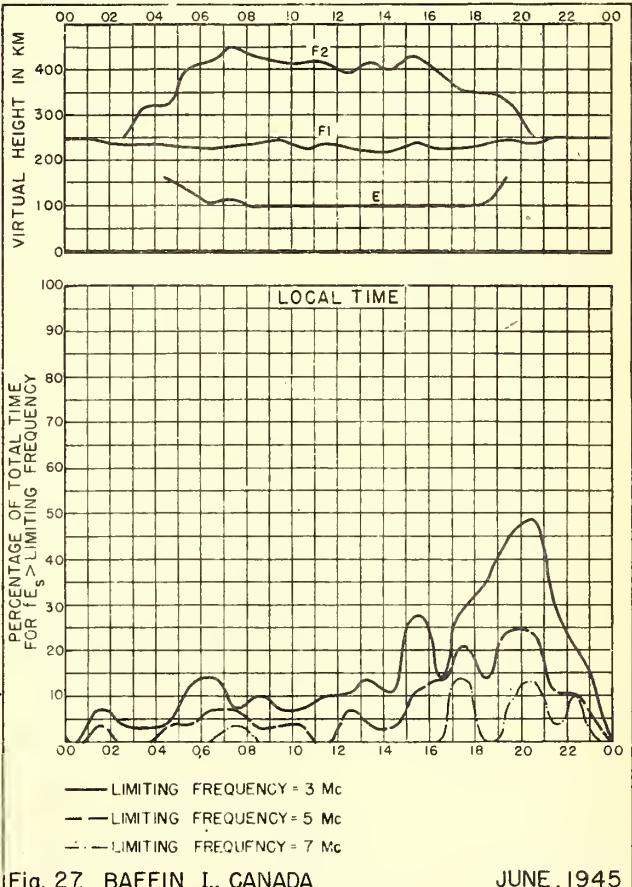
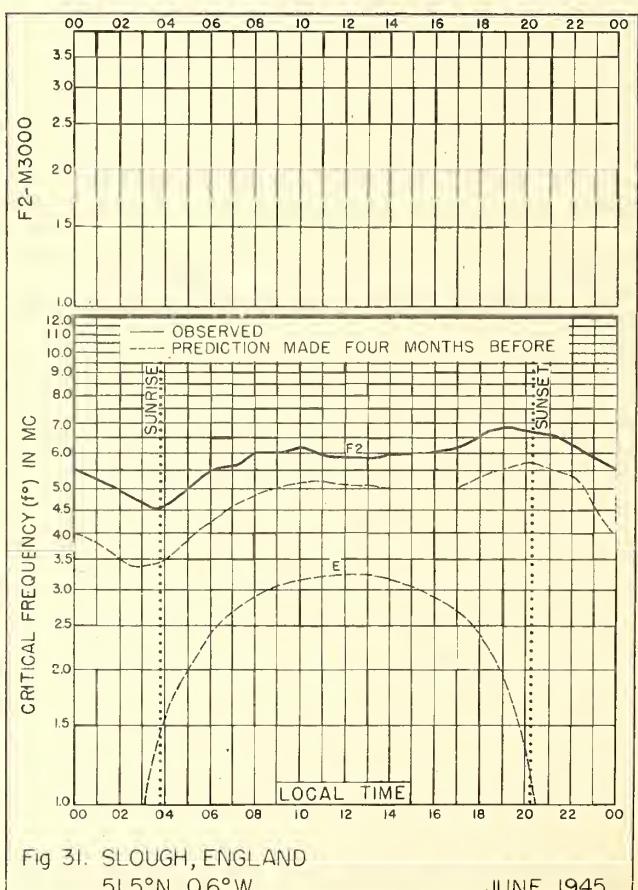
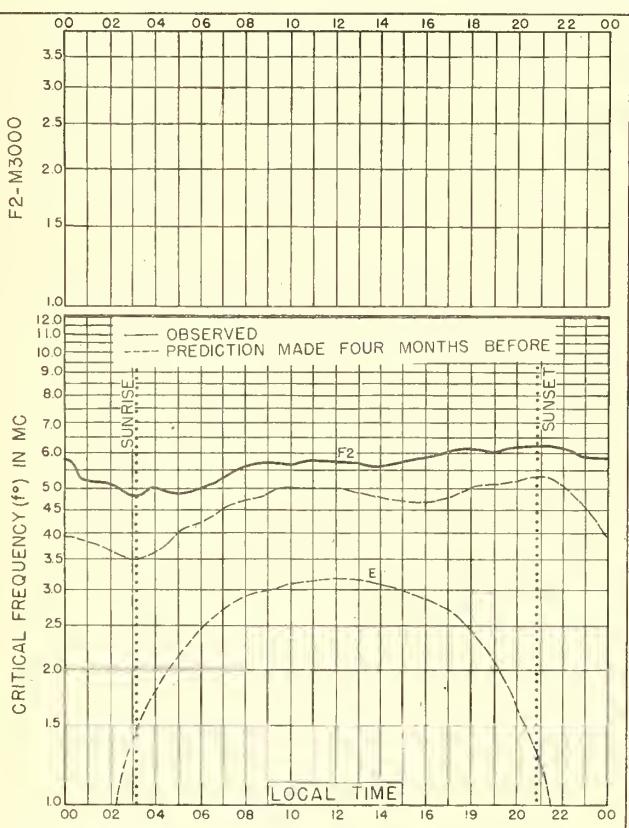
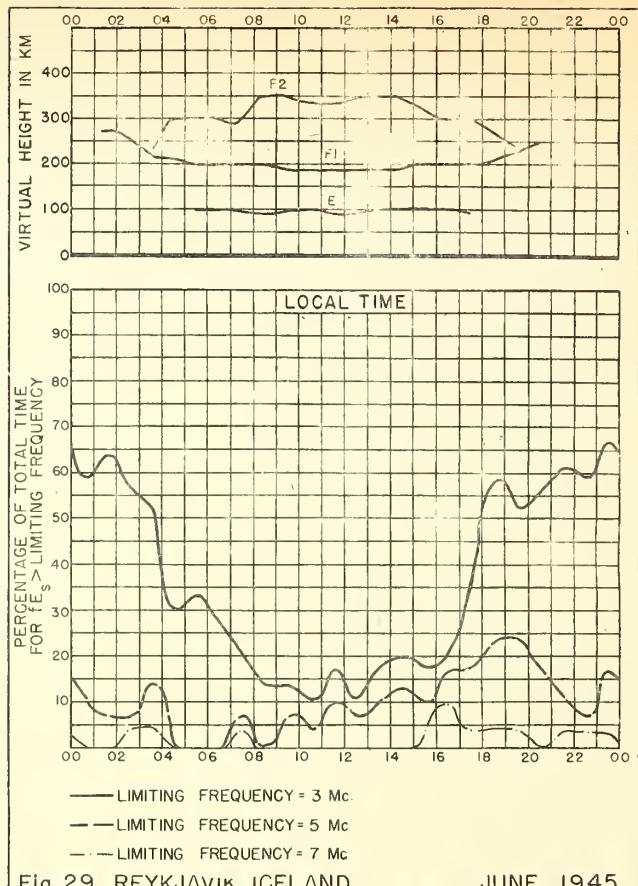
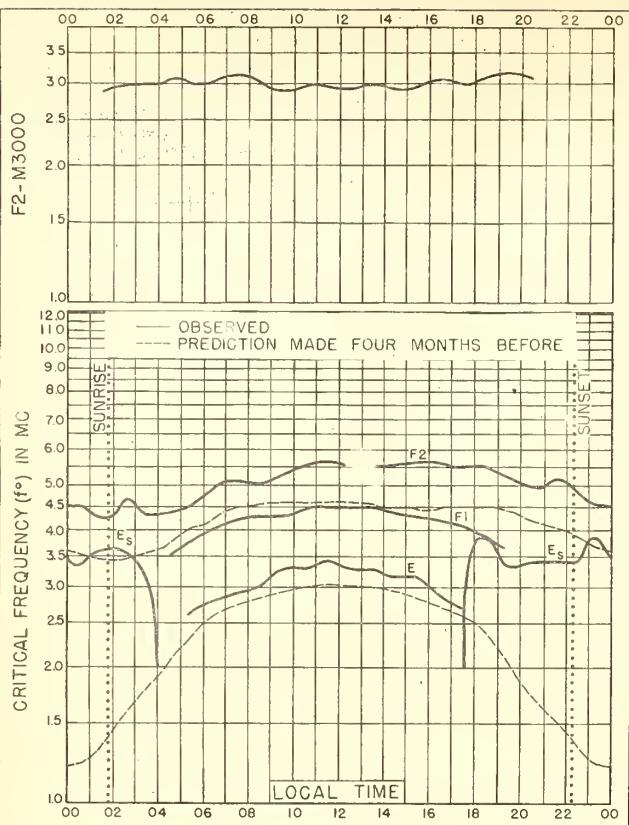


Fig. 27. BAFFIN I., CANADA JUNE, 1945



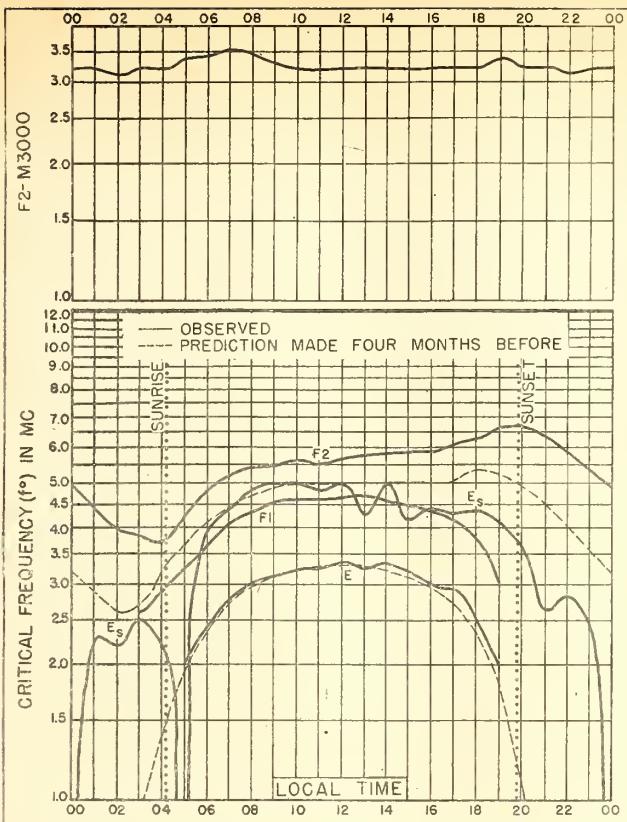


Fig. 32. ST. JOHN'S, NEWFOUNDLAND  
47.7°N, 52.7°W JUNE, 1945.

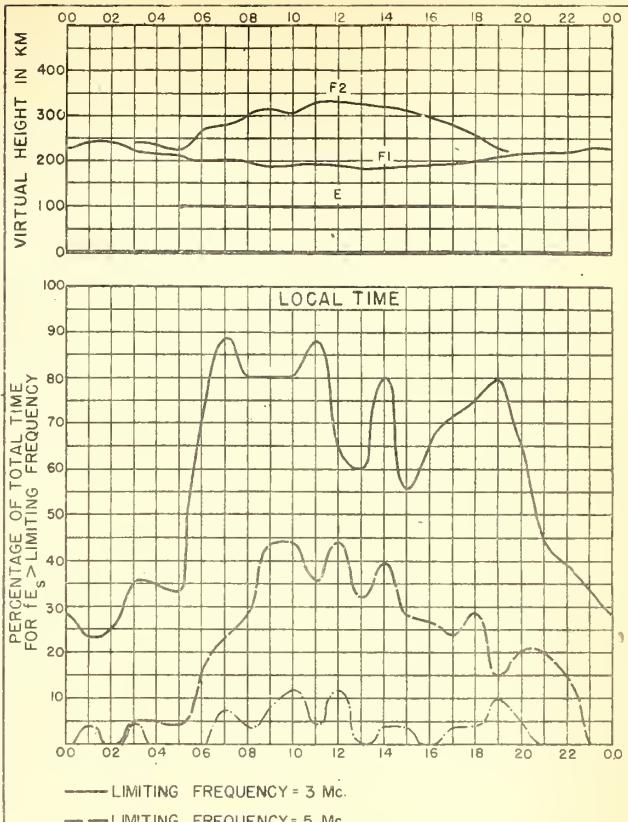


Fig. 33. ST. JOHN'S, NEWFOUNDLAND JUNE, 1945.

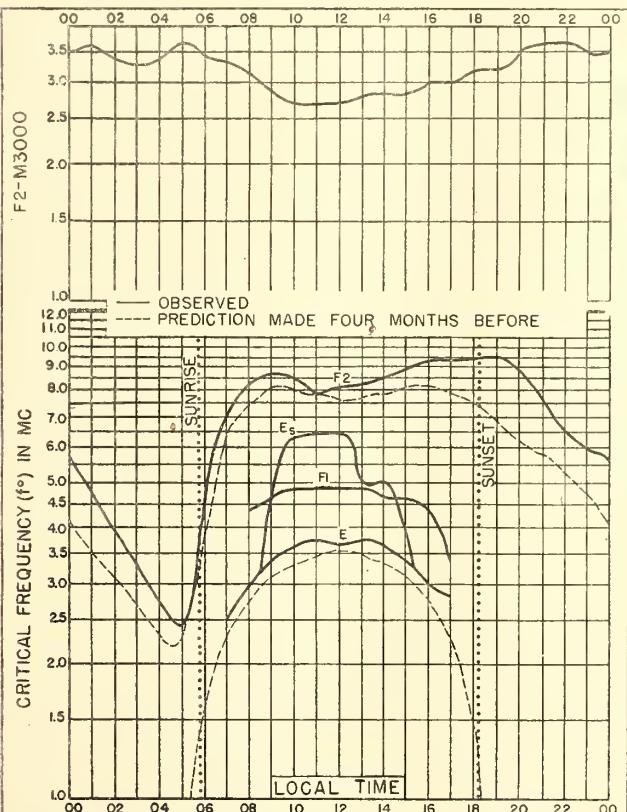


Fig. 34. COLOMBO, CEYLON  
6.6°N, 80.0°E JUNE, 1945.

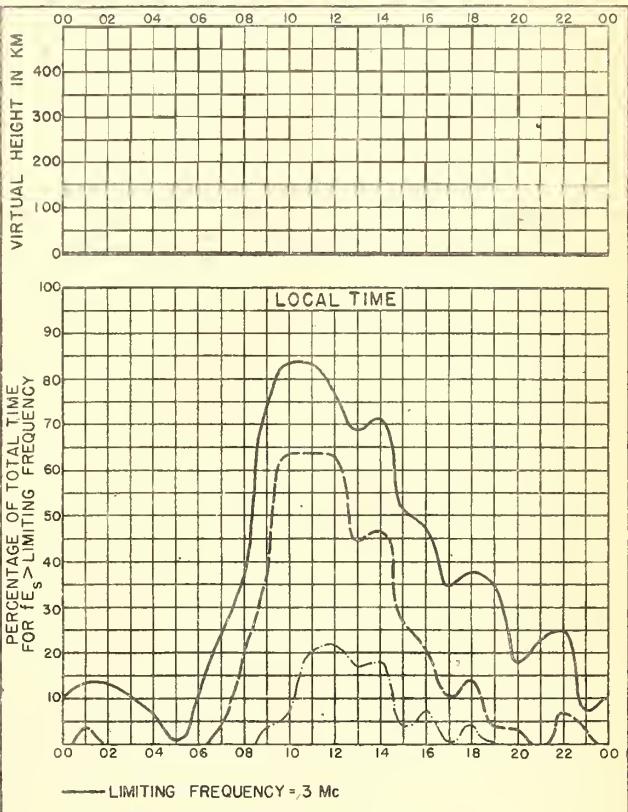
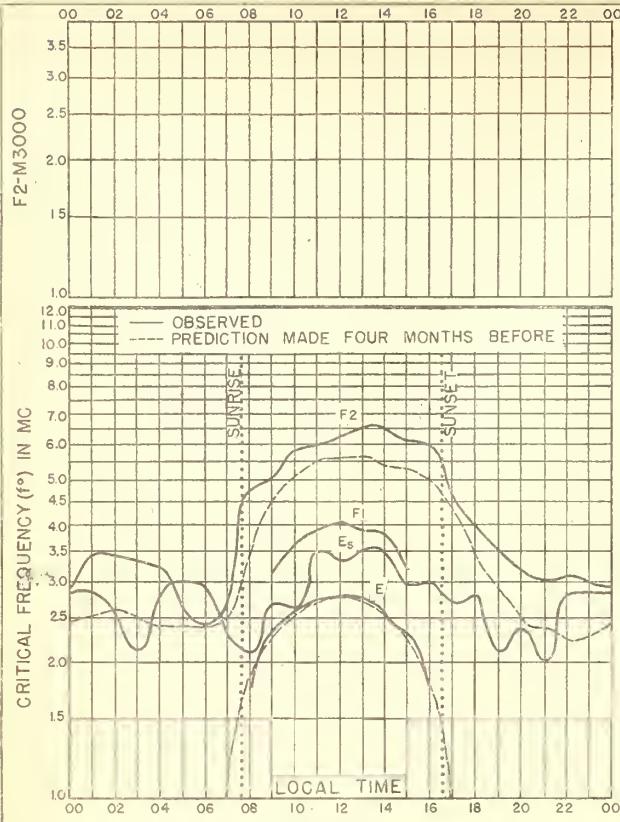
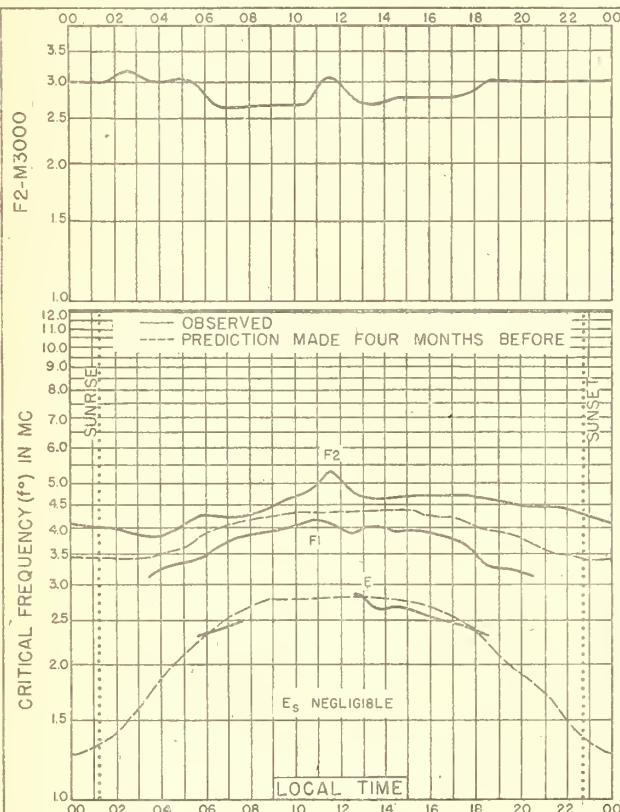
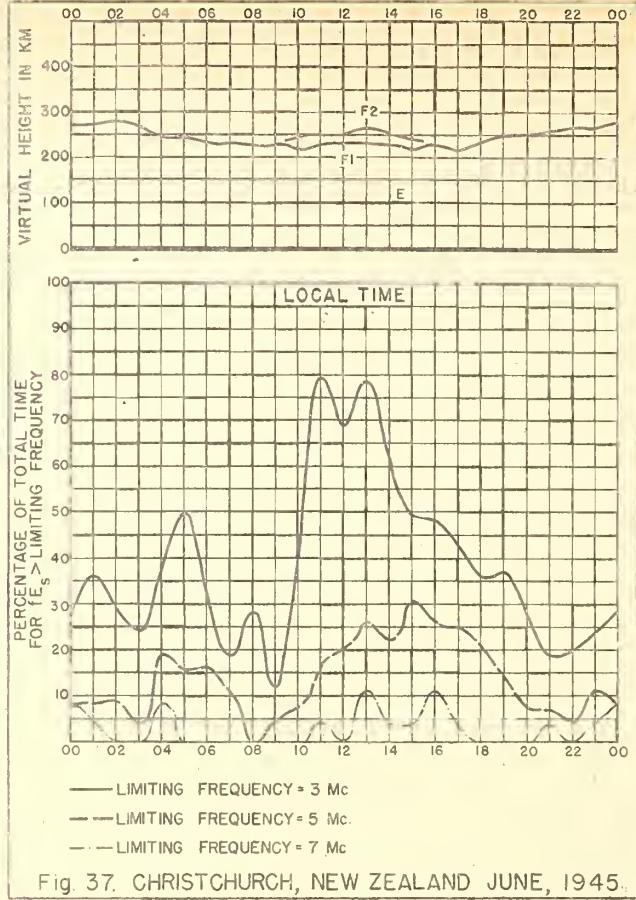


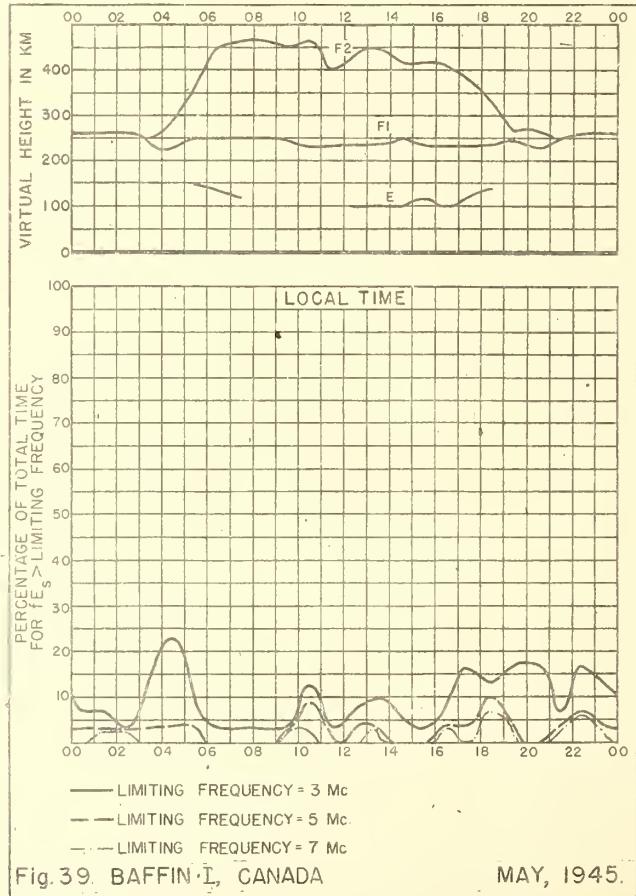
Fig. 35. COLOMBO, CEYLON JUNE, 1945.



JUNE, 1945



MAY, 1945



MAY, 1945.

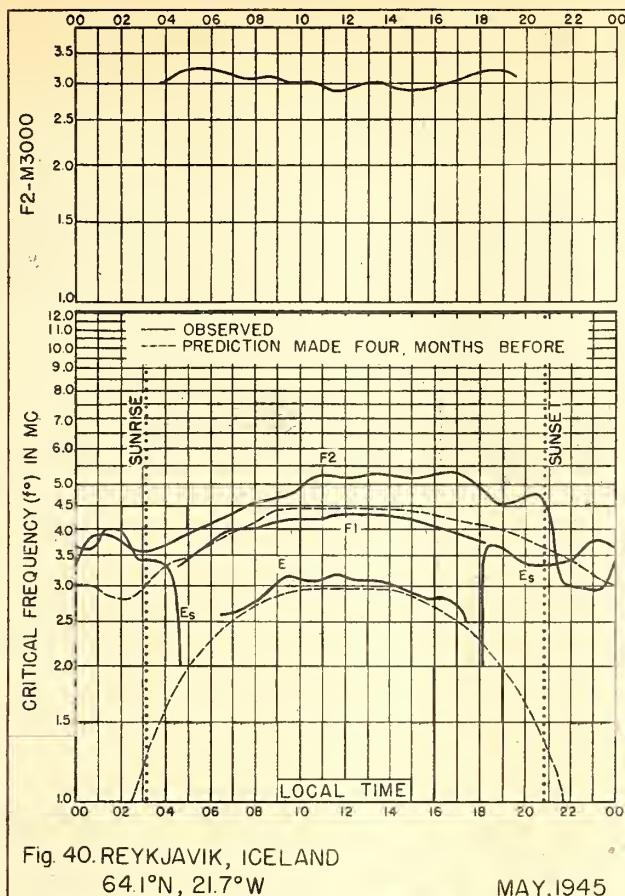


Fig. 40. REYKJAVIK, ICELAND  
64.1°N, 21.7°W

MAY, 1945

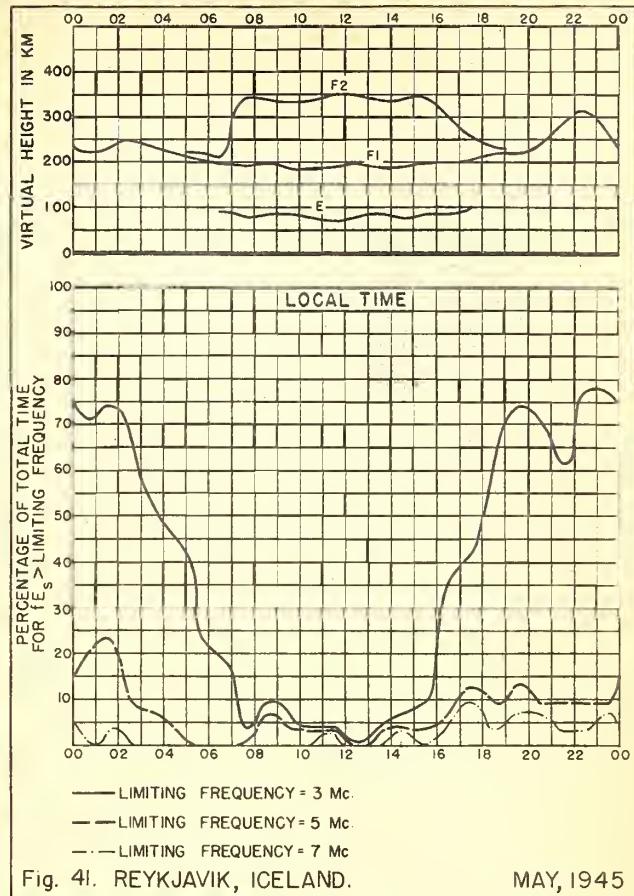


Fig. 41. REYKJAVIK, ICELAND.

MAY, 1945

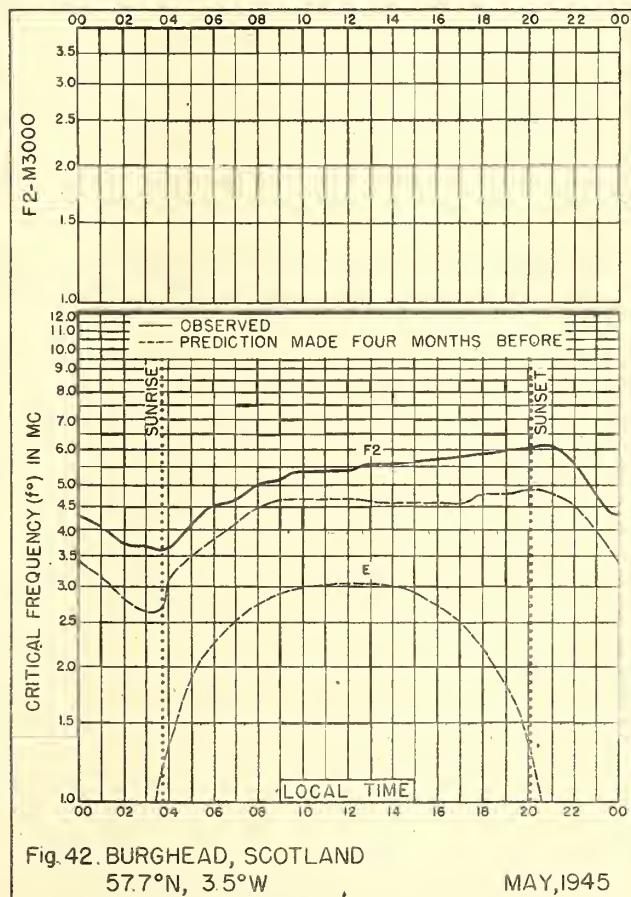


Fig. 42. BURGHEAD, SCOTLAND  
57.7°N, 3.5°W

MAY, 1945

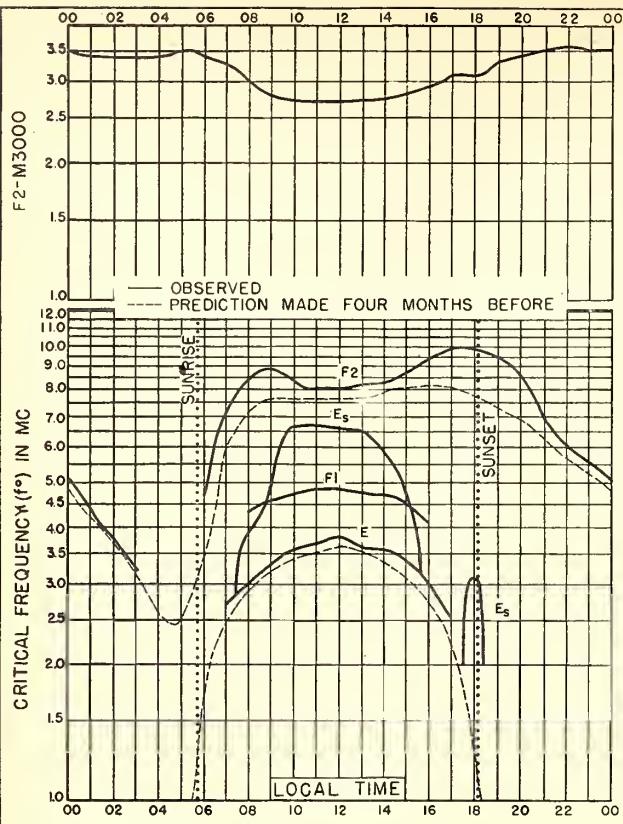


Fig. 43. COLOMBO, CEYLON  
6.6°N, 80°E.

MAY, 1945.

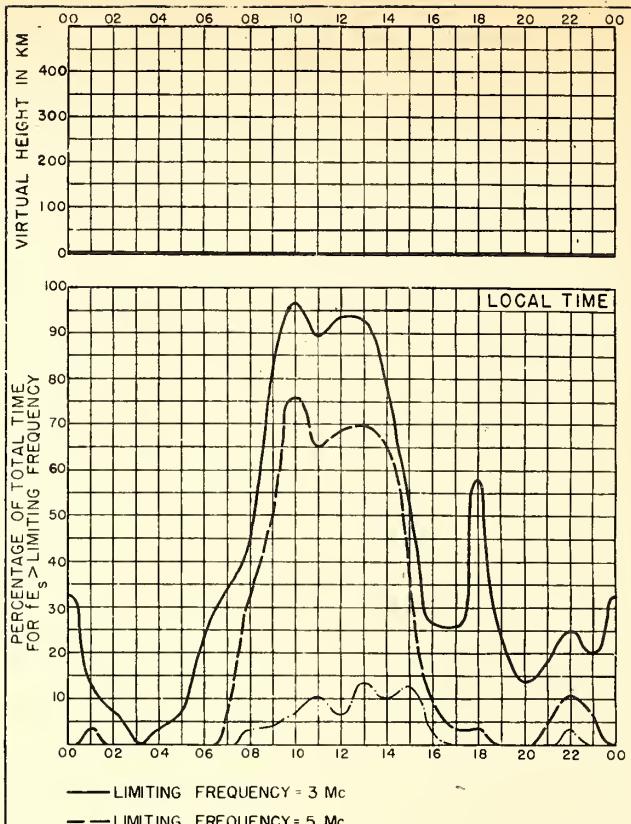


Fig. 44. COLOMBO, CEYLON.

MAY, 1945.

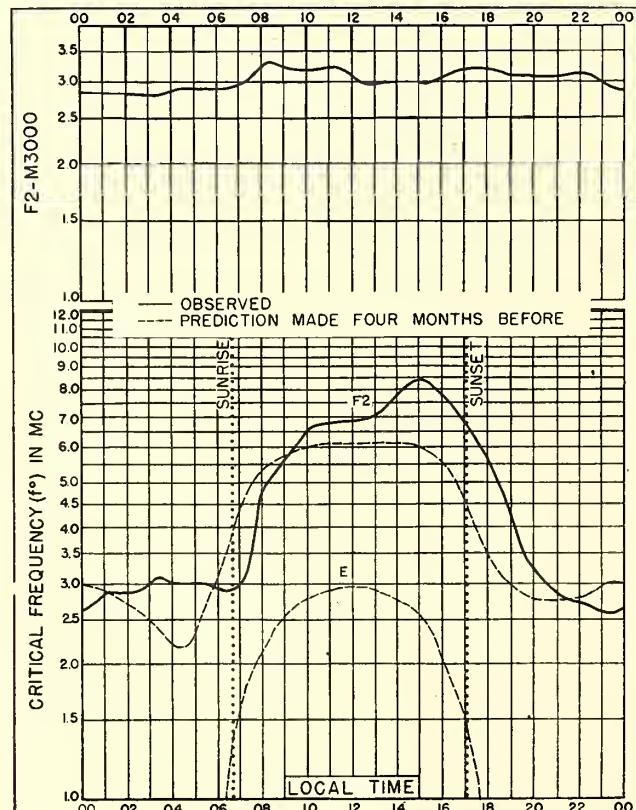


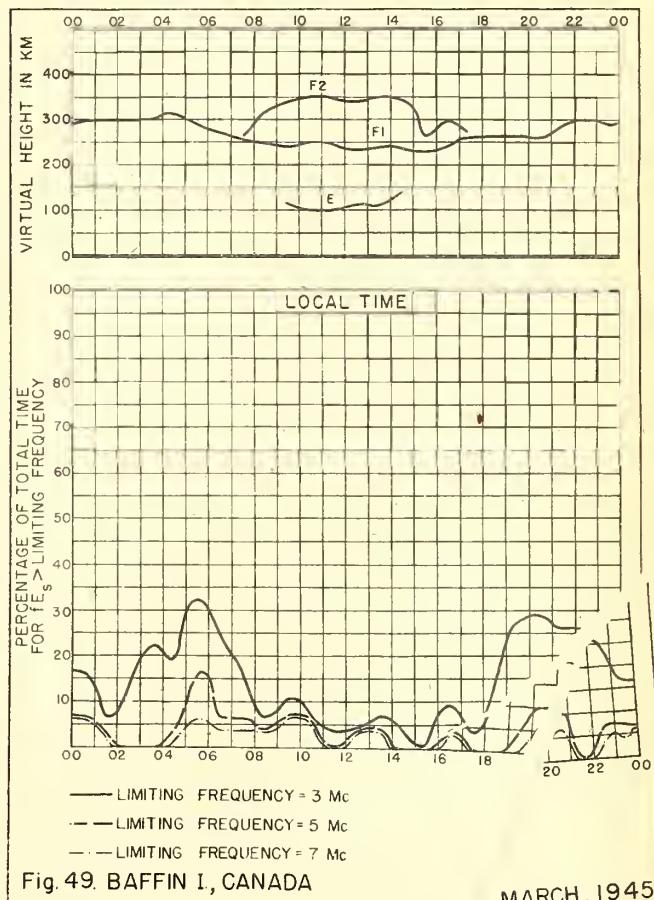
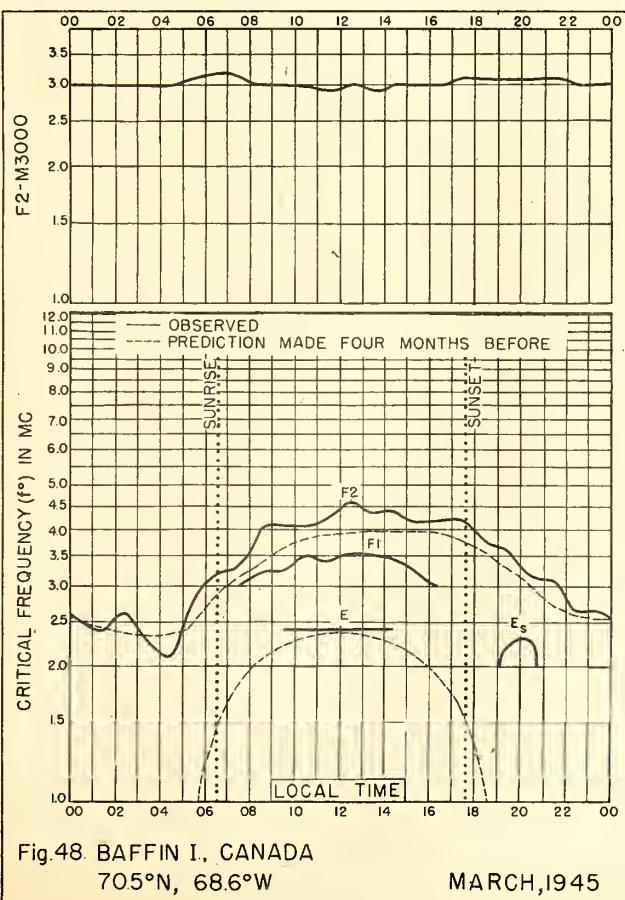
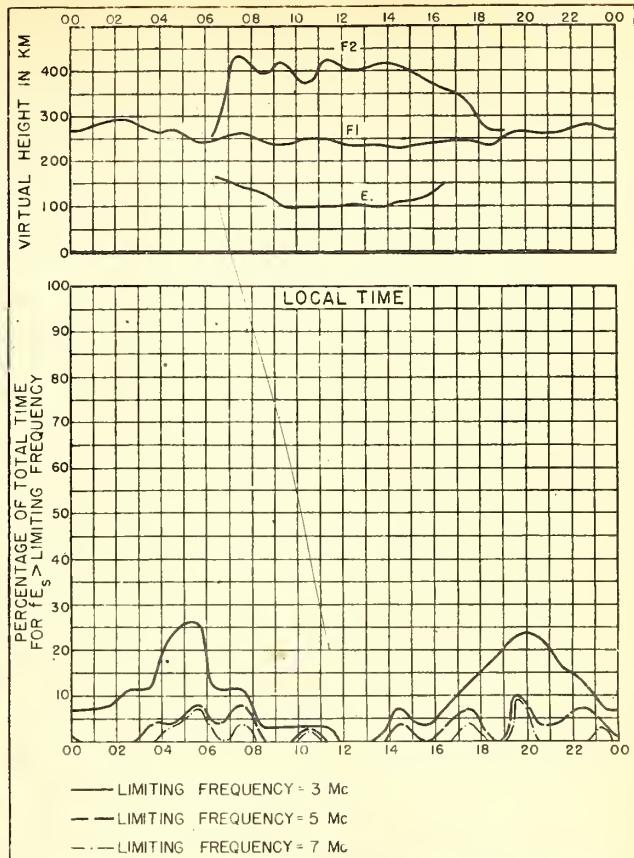
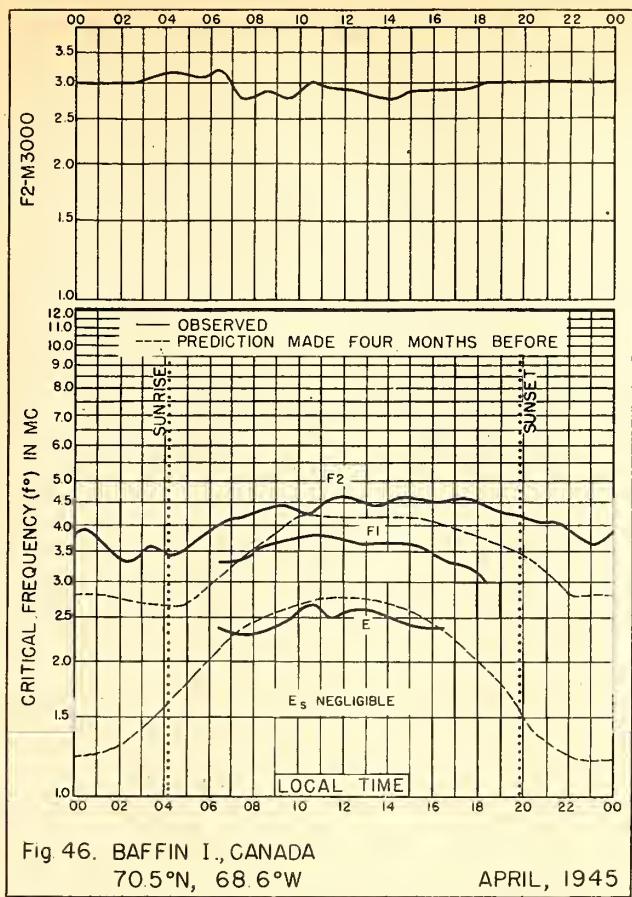
Fig. 45. SIMONSTOWN, UNION OF S. AFRICA

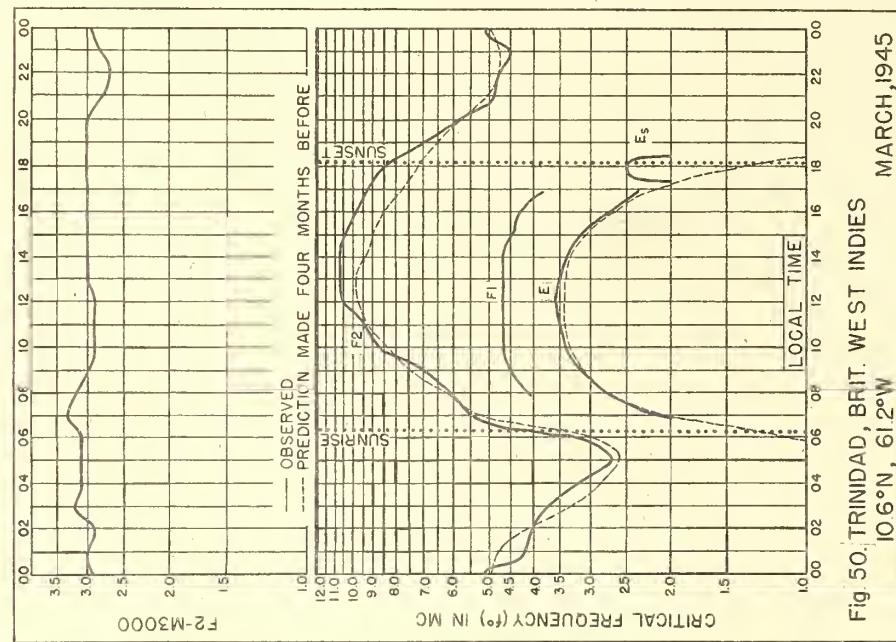
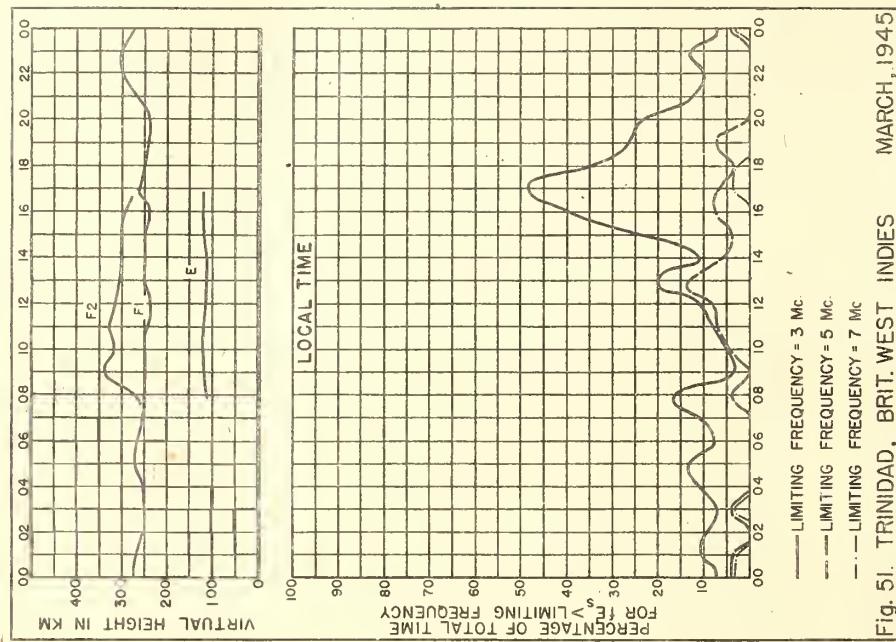
33.9°S, 18.7°E

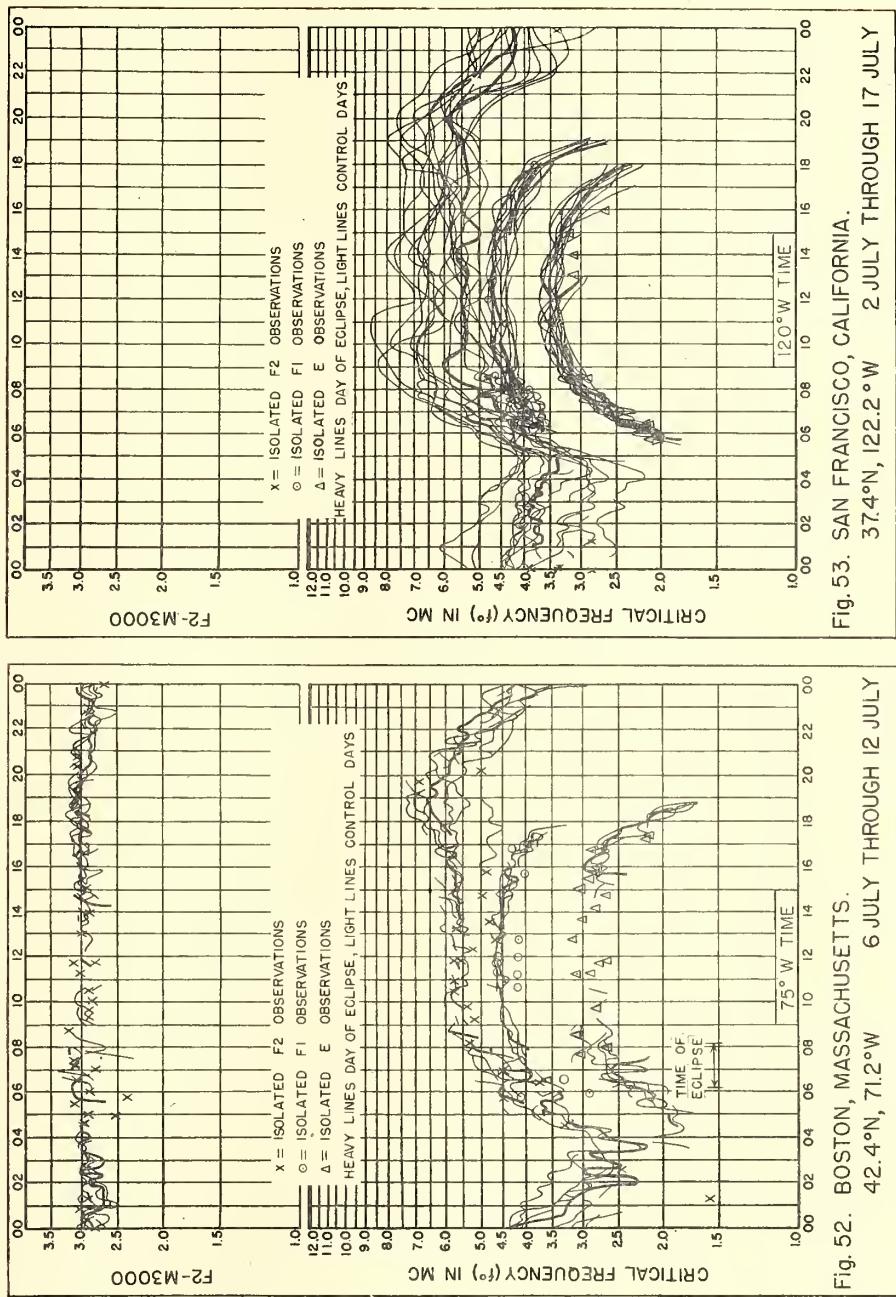
MAY, 1945

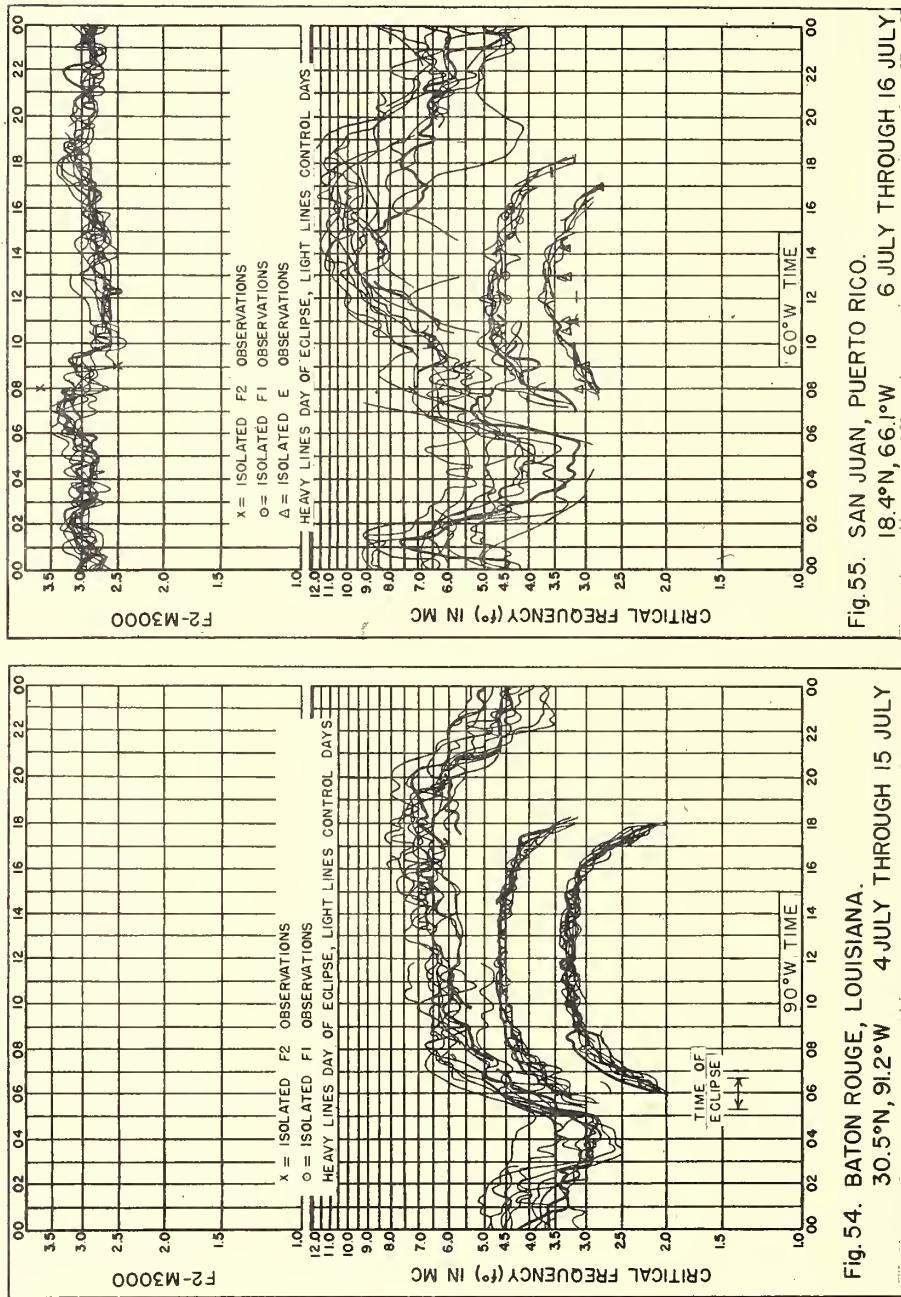
Note:

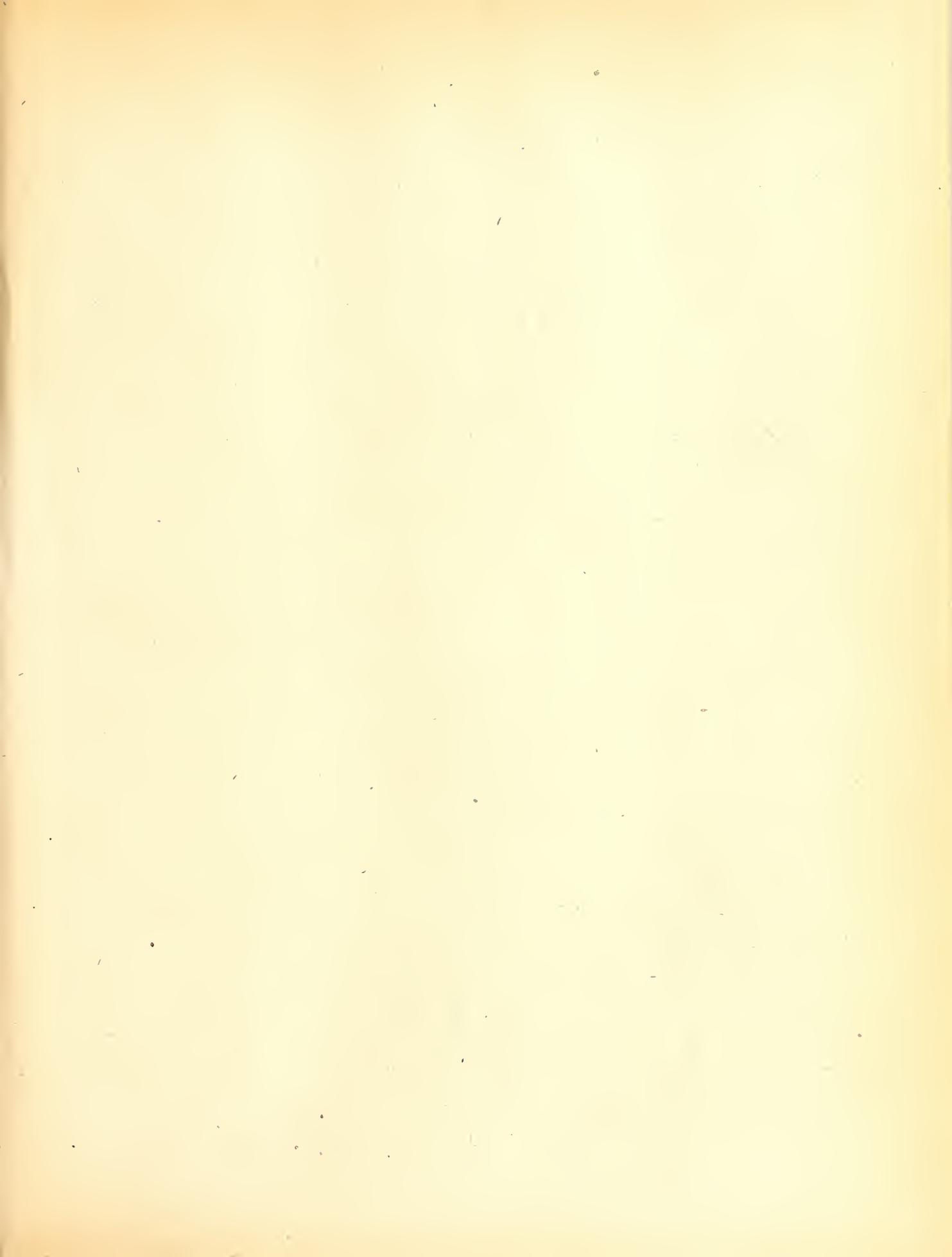
As this issue went to press, word was received that observed data from Simonstown have been reported one hour too late. Data for 00 should be for 2300 etc. See ERRATA section.

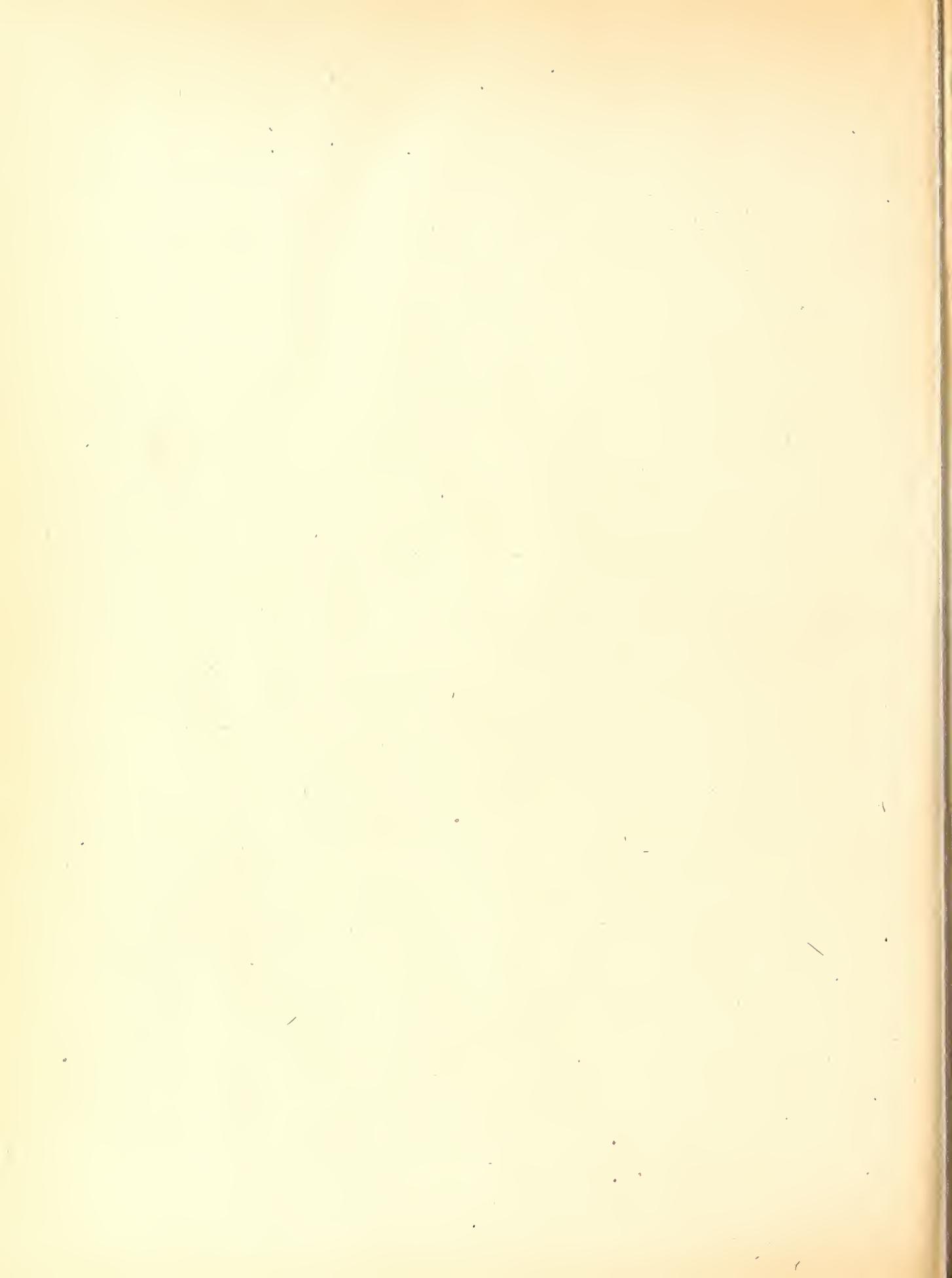












Daily:

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 from 4 to 7 days 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-B. Recommended Frequency Bands for Submarines in the Pacific.
- \*IRPL-H. Frequency Guide for Operating Personnel.
- \*\*IRPL-M. Frequency Guide for Merchant Ships.

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 a navigation system.
- R7. Further studies of ionospheric propagation as applied to a navigation system.
- R8. The Prediction of Usable Frequencies Over a Path of Short or Medium Length, Including the Effect of Es.
- R9. An Automatic Instantaneous Indicator of Skip Distance and MUF.
- R10. A method for study of the ionosphere.
- R11. A Nomographic Method for Both Prediction and Observation Correlation of Ionosphere Characteristics.
- R12. Ionospheric variations.
- 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.
- IRPL-T. Reports on Tropospheric Propagation.
- T1. Radar Operation and Weather. (Superseded by JANP 101).
- T2. Radar coverage and weather. (Superseded by JANP 102).

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