IRPL-F15

IONOSPHERIC DATA

ISSUED

NOVEMBER, 1945

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

IRPL-F15 INTERSERVICE RADIO PROPAGATION LABORATORY
NATIONAL BUREAU OF STANDARDS
WASHINGTON, D.C.
Issued 20 Nov. 1945

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 1 = 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.

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
Canberra, A.C.T. (Mt. Stromlo), Australia
Cape York, Q., Australia.

British National Physical Laboratory, and Inter-Services Ionosphere Bureau:
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
Baffin I., 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):
Christmas I.
Fairbanks, Alaska (University of Alaska, College, Alaska)
Reykjavik, Iceland (station closed July 31, 1945)
Maui, Hawaii
Trinidad, British West Indies
Huancayo, Peru
Watheroo, W. Australia

United States Army Signal Corps:
Leyte, Philippine Is.

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.

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. 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 89 presents ionosphere character figures for Washington, D.C., during October 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 90 presents sudden ionosphere disturbances as observed at Washington, D.C., during October 1945.

Table 91 gives provisional radio propagation quality figures for North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, September 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.

GEOGRAPHIC AND DIURNAL VARIATIONS IN F2- LAYER CRITICAL FREQUENCIES

Critical-frequency variations of the F2 layer of the ionosphere are of far greater complexity than those for the regular E and F1 layers. Besides the pronounced increase in critical frequency with increase of solar altitude, which is common to all regular ionospheric layers, there are relatively conspicuous lag effects caused by the much greater recombination time characteristic of F2-layer heights, together with variations manifesting some relation to variations in geomagnetic latitude, these latter being possibly indicative of ionization caused by solar charged corpuscular radiation. In addition, there are apparent less easily explicable differences between northern and southern hemisphere values, and other complex variations which may be the result of high-level atmospheric movement.

In order to present a simple survey illustrative only of geographic change, apart from seasonal and solar-activity changes, for each of several hours of the day, values of twelve-month running averages of $f^{o}F2$, for a sunspot number of zero, were estimated for a number of ionosphere stations, and plotted against geographic latitude for the hours 0000, 0400, 0800, 1200, 1600, and 2000 local time, as shown in Figs. 83 through 88.

Estimation of the twelve-month running-average $f^{o}F2$ for zero sunspot number was made in nearly all cases by extrapolation of the linear trend curves obtained by plotting twelve-month running-average observed $f^{o}F2$ against twelve-month running-average sunspot number. (Cf. IRPL-R4, "Methods Used by IRPL for the Prediction of Ionosphere Characteristics and Maximum Usable Frequencies."). The precision of these estimated values, for a given ionosphere station, is thus generally proportional to the time during which the station has been in operation.

Much less precise estimates were made for several rather recent stations, located in geomagnetically interesting positions, by superposition of the mean of their time variations of monthly-average $f^{o}F2$ on those for a nearby, long-established station, the difference between the two being

applied to the zero-sunspot-number value for the latter. Such low-precision estimates are indicated on Figs. 83 through 88 by symbols which are different from those for the far more precisely known values for older stations. In the case of Tykhi Bay, U.S.S.R., two values are given, - one, the estimated value of zero-sunspot-number yearly-average f^0F2 for a considerable amount of rather old data; the other, the estimate for recent data only. Both values have rather low precision. Values for the hour 0400 at Christmas I. are omitted because of scanty data.

In order to afford comparison between northern- and southern-hemisphere values, as well as effectively to amplify the data available for the delineation of latitude variation, all values are also plotted at opposite-hemisphere latitudes, these reversed values being designated differently in the figures.

Inspection of the series of latitude-variation curves presented in Figs. 83 through 88 reveals the following general characteristics:

1. Equatorial values of f^0F2 are generally greater than those at high latitudes.

This variation is more regularly apparent in the E and F1 layers, and is most probably indicative of the major role of ultraviolet solar radiation in causing F2-layer ionization.

2. Afternoon values of f^0F2 are far greater than morning values for equal solar altitudes.

This follows from the slow recombination rate at F2-layer heights, and is far more apparent for this layer than for the E and F1 layers.

3. Southern-hemisphere values of f^0F2 are generally slightly lower than those for equal geographic and geomagnetic latitudes in the northern hemisphere.

The cause for this difference is obscure. Hemisphere differences in ionospheric behavior, however, are noted not only in this respect, but also in relative seasonal behavior ("Non-seasonal Change of F2-Region Ion-Density", L.V.Berkner, H.W.Wells, Terr. Mag. March 1938, p.15) and in solar-activity variations of sporadic-E ionization, (IRPL-F12, "Sporadic-E Variation with Intensity and Latitude of Solar Activity," p.10, August 1945). In the last case, as noted in the reference cited, there is some indication that the cause may lie in inequality of corpuscular radiation from northern and southern solar hemispheres.

4. Equal geomagnetic latitudes possess similar, although not identical, F2-layer characteristics.

This may be noted in comparing the three curves drawn, for each hour, through values for stations lying in the east, intermediate, and west zones of the IRPL-D series prediction charts. In fact, recognition of this "longitude effect" (High-Frequency Radio Transmission Conditions,

10 Sept. 1943, p.3; IRPL Radio Propagation Handbook, Part 1, p.30) was the basis of this zoning of IRPL prediction charts, which first put this knowledge into operational use (Radio Propagation Conditions, 15 November 1943), with predictions for January 1944.

5. Near the geomagnetic equator, night values of $f^{o}F2$ are particularly high, noon values being particularly low.

This suggests bombardment by charged particles emitted by the sun as a partial cause for F2-layer ionization. That the variation of the noon $f^{o}F2$ with geomagnetic latitude in the proximity of the geomagnetic equator may be very great is shown by comparison of corresponding values for Patos, Brazil ("Radio Observations of the Ionosphere," T.R.Gilliland, National Geographic Society-National Bureau of Standards Solar Eclipse Expedition of 1940 to Brazil, Contributed Technical Papers, Solar Eclipse Series, No. 2, Washington, 1942, p.93) and for Huancayo, Peru.

6. Pronounced lowering of $f^{o}F2$ occurs in the auroral zones.

This effect, again, may be ascribed to the presence of moving charged particles. The auroral drop in $f^{o}F2$, sometimes following a pronounced "shelf" of high values of $f^{o}F2$ at slightly lower latitudes, as, for example, at 0400, indicates that charged particles, traveling in spirals along the lines of magnetic force, may concentrate in number as the magnetic poles are approached, thus causing increased values of $f^{o}F2$, then, at still greater concentrations, appear at lower ionospheric levels, possibly in the Es region of the ionosphere, with consequent lowering of $f^{o}F2$ values. The appearance of greater concentrations of particle radiation at lower atmospheric levels has also been noted in cases where increased fEs preceded increased D-layer absorption (Summary Report on College (Alaska) Observatory, July 1942 through June 1943, p.5, issued by the Department of Terrestrial Magnetism, Carnegie Institution of Washington). The possibility of such transfer between F2- and Es-layer ionization has been previously suggested ("Radio Propagation Conditions," issued August 1944, pp.4, 5). There are strong indications of this possibility in the abnormally high values of $f^{o}F2$ preceding abnormally high values of fEs at the daytime beginnings of ionosphere storms.

It may thus be concluded that, although solar ultraviolet-light radiation seems chiefly responsible for F2-layer ionization, where relatively slow recombination rates maintain lag effects to a far greater extent than in lower ionospheric layers, ionization caused by charged particles emitted from the sun forms a not inconsiderable part of the total number of ions present.

ERRATA

1. In the report IRPL-F11, issued July 1945, item 1 of the "Errata" section, concerning the reporting time of the Australian stations, was not correctly stated. The provisional data tabulations of Australian data for which the reports on local time began after the stated dates were

those provisional tabulations covering only $f^{o}F2$ and F2-M-3000, such as Table 25, Mt. Stromlo, April 1945, in IRPL-F10. These were made from brief summaries sent each month from Australia by radio. Those provisional tabulations containing more characteristics, such as Table 33, Brisbane, April 1945, in IRPL-F10, constituting the majority of the Australian provisional tabulations, were reported on the stated meridian times, having been made from air-mail summaries from Australia.

Since final data tabulations always supersede provisional data tabulations, the only data to which the correction of reporting time need be applied are 1945 data, all 1944 final data having already been reported in various issues of this series appearing before this present issue.

2. In the table of paragraph 1 of "Errata" in the report IRPL-F11 the meridian local time for Watheroo was erroneously given as 119.9°E. The correct meridian local time is 115.9°E.

3. In report IRPL-F10, on page 2 in the "Contents," reference was made to median values of final data for March and April 1945 from Brisbane. These values were average values; they should have been so designated also in Table 33 of the same issue.

4. In the report IRPL-F12, Table 42, and in IRPL-F14, Tables 49 and 59, the time on which the Watheroo final data for May, June, and July were reported should have been given as 120.0°E meridian time instead of local time.

5. Paragraph 2 of "Errata" in the report IRPL-F14 stated that the height data for Rarotonga, April and May 1945, should be disregarded. It is furthermore true that the corresponding F2-M-3000 should be regarded as unreliable.

6. Paragraph 1 of "Errata", page 11, in the report IRPL-F14, erroneously referred to IRPL-F10. The reference should have been made to IRPL-F12.

Table 1 (Provisional Data)

Fairbanks, Alaska (64.9°N, 147.8°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	320	2.0					3.3	2.8
01	350	2.1					5.5	2.8
02	340	2.0					4.8	2.8
03	340	2.3					5.0	2.8
04	320	2.4				1.4	3.9	2.8
05	310	2.4				1.1	4.2	2.8
06	300	3.2				1.2	3.1	3.0
07	260	4.1	240	2.8		1.8	3.0	3.1
08	260	4.9	230	3.1		2.2	2.9	3.1
09	250	5.8	220	3.4		2.4	2.8	3.2
10	250	6.2	220	3.7		2.5	2.9	3.1
11	250	6.4	220	3.6		2.6	2.9	3.1
12	250	6.6	230	3.6		2.5	1.8	3.1
13	250	6.9	230	3.5		2.4	2.3	3.1
14	240	7.1	230	3.3		2.3	2.9	3.2
15	240	6.8				2.1	2.9	3.2
16	230	6.8				1.7	2.1	3.2
17	240	6.0				1.2	2.4	3.2
18	240	5.2				1.2	3.0	3.1
19	250	4.0				1.2	3.0	3.1
20	260	3.0				1.0	3.0	3.1
21	260	2.6					3.3	3.1
22	280	2.2					3.1	3.0
23	300	2.0				1.0	3.1	2.9

Time: 150°W.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 2 (Provisional Data)

Churchill, Canada (58.8°N, 94.2°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.7						2.9
01		3.4						3.0
02		3.8						2.9
03		3.6						2.9
04		3.4						2.8
05		3.6						2.9
06		3.7						2.9
07		4.6						3.0
08		5.3						3.1
09		6.0						3.0
10		6.3						3.0
11		6.9						2.9
12		7.0						2.9
13		7.7						2.9
14		8.1						3.0
15		8.2						3.0
16		7.4						3.0
17		6.1						2.9
18		5.8						2.8
19		5.0						2.8
20		4.4						2.8
21		4.3						2.9
22		4.0						2.9
23		3.7						2.9

Time: 90.0°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 3 (Provisional Data)

Prince Rupert, Canada (54.3°N, 130.3°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		2.1						3.1
01		2.7						3.0
02		2.2						3.0
03		2.3						3.0
04		2.2						3.0
05		2.5						2.9
06		2.7						3.0
07		3.9						3.2
08		5.2						3.5
09		6.1						3.3
10		6.5						3.4
11		7.0						3.4
12		7.6						3.3
13		8.1						3.4
14		8.0						3.4
15		7.7						3.5
16		7.7						3.6
17		7.0						3.6
18		6.4						3.6
19		5.5						3.6
20		4.6						3.5
21		3.7						3.4
22		2.8						3.4
23		2.4						3.2

Time: 120.0°W.
Length of time sweep: Manual operation.
Median values.

Table 4 (Provisional Data)

Adak, Alaska (51.9°N, 178.8°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	3.2					2.8	2.9
01								
02								
03								
04								
05								
06								
07	220	6.5					3.4	3.3
08	220	7.4	240	4.0		2.6	3.4	3.5
09	220	8.4	220	3.8		2.8	4.0	3.3
10	230	8.8	220	4.0		3.0	4.1	3.4
11	240	9.0	210	4.6		3.0	4.3	3.3
12	230	9.2	210	4.4		2.9	3.6	3.2
13	230	9.4	230	4.3		3.0	4.0	3.4
14	220	8.7	220	4.4		2.8		3.4
15	230	8.3	230	4.2		2.6	3.2	3.5
16	220	7.8				2.3	3.0	3.6
17	220	6.5					2.9	3.4
18	220	5.4					3.2	3.3
19	230	4.2					3.4	3.4
20	250	3.4					3.0	3.2
21	270	3.2					2.7	3.1
22	280	3.0						3.0
23	320	3.1						3.0

Time: 180.0°W.
Length of time sweep: Manual operation.
Median values.

Table 5 (Provisional Data)

St. John's, Newfoundland (47.7°N, 52.7°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.7						3.3
01		3.1						3.1
02		3.0						3.3
03		2.6						3.2
04		2.4						3.3
05		2.2						3.2
06		2.8						3.3
07		5.5						3.4
08		6.3						3.4
09		7.2						3.4
10		7.8						3.4
11		8.5						3.3
12		8.8						3.4
13		8.8						3.3
14		8.5						3.3
15		8.5						3.3
16		8.4						3.3
17		8.3						3.4
18		7.3						3.4
19		6.3						3.3
20		5.2						3.2
21		4.6						3.2
22		4.6						3.1
23		3.6						3.2

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

Table 6 (Provisional Data)

Ottawa, Canada (45.5°N, 75.8°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.6						2.9
01		3.5						2.9
02		3.2						2.9
03		3.2						2.8
04		3.1						2.9
05		2.9						2.8
06		3.5						3.0
07		5.7						3.2
08		7.0						3.1
09		7.6						3.1
10		8.1						3.1
11		8.6						3.0
12		8.8						3.0
13		9.2						3.0
14		9.3						3.0
15		8.9						3.1
16		8.5						3.1
17		8.3						3.1
18		7.6						3.0
19		6.1						3.0
20		5.5						2.9
21		4.8						3.0
22		4.2						2.9
23		3.9						2.9

Time: 75.0°W.
Length of time sweep: 1.93 Mc to 13.5 Mc. Manual operation.
Median values.

Table 7 (Provisional Data)

Boston, Massachusetts (42.4°N, 71.2°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.8						2.8
01		3.5						2.8
02		3.0						2.8
03		3.0						2.9
04		2.8						2.9
05		2.7						3.0
06		4.2						3.1
07		6.4						3.3
08		7.0						3.3
09		7.7						3.2
10		8.4						3.2
11		8.6						3.2
12		8.3						3.2
13		8.4						3.1
14		7.6						3.2
15		8.2						3.2
16		8.2						3.2
17		7.8						3.2
18		6.9						3.0
19		6.0						2.9
20		5.1						2.9
21		4.8						2.8
22		4.3						2.8
23		4.0						2.8

Time: 75.0°W.
Median values.

Table 8 (Provisional Data)

San Francisco, California (37.4°N, 122.2°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.4						2.9
01		3.5						2.9
02		3.6						2.9
03		3.6						2.9
04		3.6						2.9
05		3.7						3.0
06		4.3						3.1
07		6.4						3.5
08		7.4						3.4
09		7.7						3.3
10		8.4						3.2
11		8.6						3.1
12		9.5						3.2
13		9.8						3.1
14		9.9						3.2
15		9.5						3.2
16		8.6						3.3
17		7.6						3.4
18		5.6						3.3
19		4.6						3.2
20		3.8						3.2
21		3.5						3.1
22		3.5						3.1
23		3.4						3.0

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

Table 9 (Provisional Data)

Baton Rouge, Louisiana (30.5°N, 91.2°W) October 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		3.9						2.8
01		4.0						2.9
02		4.1						2.9
03		4.2						2.9
04		4.1						2.9
05		4.0						3.0
06		4.3						3.1
07		6.5						3.4
08		7.5						3.3
09		8.4						3.2
10		9.5						3.1
11		9.7						3.3
12		9.8						3.3
13		9.8						3.4
14		9.8						3.3
15		9.3						3.3
16		9.7						3.2
17		9.3						3.3
18		7.1						3.2
19		5.1						3.1
20		4.2						3.0
21		3.3						2.8
22		4.0						2.9
23		3.9						2.8

Time: 90.0°W.
Length of time sweep: 1.9 Mc to 9.8 Mc in three minutes, thirty seconds.
Median values.

Table 10 (Provisional Data)

Trinidad, British West Indies (10.6°N, 61.2°W) October 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	270	5.5						3.1
01	260	5.2						3.3
02	240	4.4						3.3
03	240	3.4						3.4
04	240	2.9						3.0
05	260	3.0						2.9
06	260	4.8						3.1
07	240	7.4					2.6	3.3
08	250	8.6	240	4.6			3.2	3.2
09	280	9.9	240	4.7			3.6	3.1
10	300	10.7	230	4.9			3.9	3.0
11	300	11.5	220	5.0			4.0	3.0
12	300	12.2	220	4.9			3.9	3.0
13	290	12.3	220	4.9			4.0	3.1
14	280	11.5	230	4.8			4.2	3.0
15	280	10.9	240	4.5			3.8	2.9
16	250	10.9	240	4.2			3.3	3.0
17	250	10.5						3.0
18	250	9.5						3.0
19	250	9.2						3.1
20	240	7.4						3.1
21	270	6.2						2.8
22	300	6.2						2.8
23	280	6.1						2.9

Time: 60.0°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 11 (Provisional Data)

Huancayo, Peru (12.0°S, 75.3°W) October 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		8.8						3.2
01		7.5						3.2
02		5.8						3.2
03		5.1						3.2
04		4.3						3.2
05		3.6						3.2
06		6.7						3.3
07		9.0						3.2
08		10.1						3.0
09		10.8						2.7
10		11.0						2.4
11		9.4						2.4
12		9.0						2.5
13		9.1						2.4
14		9.2						2.4
15		9.6						2.4
16		9.8						2.5
17		10.3						2.6
18		10.0						2.6
19		9.3						2.5
20		8.8						2.6
21		9.1						2.6
22		9.6						2.9
23		9.2						3.0

Time: 75.0°W.
Length of time sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 12 (Provisional Data)

Baffin I., Canada (70.5°N, 68.6°W) September 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		3.4						3.2
01		3.0						3.2
02		3.2						3.1
03		3.2						3.1
04		3.5						2.9
05		3.8						3.2
06		3.9						3.2
07		4.0						3.1
08		4.8						3.1
09		4.4						3.1
10		5.2						3.1
11		5.0						3.0
12		5.1						2.8
13		5.0						3.0
14		5.5						3.0
15		5.0						3.0
16		5.0						3.1
17		4.4						3.1
18		4.7						3.1
19		4.6						3.2
20		4.4						3.2
21		4.1						3.2
22		4.2						3.2
23		3.6						3.2

Time: 75.0°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 13 (Provisional Data)

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

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.7						
01		3.2						
02		3.0						
03		3.0						
04		3.0						
05		3.1						
06		3.7						
07		4.3						
08		5.0						
09		5.3						
10		5.3						
11		5.5						
12		5.5						
13		5.5						
14		5.8						
15		5.7						
16		5.7						
17		5.6						
18		5.7						
19		5.9						
20		5.7						
21		5.2						
22		4.4						
23		4.0						

Time: 0.0°.
Length of time sweep: 1.0 Mc to 13 Mc. Manual operation.
Average values.

Table 14 (Provisional Data)

Chungking, China (29.4°N, 106.8°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05		5.3						
06		6.2						
07	242	6.6						
08	254	7.2						
09	265	7.6						
10	295	7.7						
11	303	8.6						
12	301	11.8D						
13	277	12.6D						
14	250	12.7D						
15	246	12.6D						
16	244	11.6D						
17	231	10.7						
18	238	9.8						
19	237	8.6						
20	264	7.3						
21	302	6.5						
22	331	6.1						
23	330	6.0						

Time: 105.0°E.
Length of time sweep: 3.3 Mc to 12.3 Mc in fifteen minutes.
Median values.

Table 15 (Provisional Data)

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

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.6						3.4
01		4.5						3.3
02		3.8						3.4
03		3.5						3.3
04		3.4						3.3
05								
06		4.2						3.3
07		7.2						3.3
08		8.5						2.9
09		8.5						2.9
10		8.2						2.6
11		7.6						2.6
12		6.1						2.6
13		8.3						2.6
14		8.7						2.6
15		9.3						2.7
16		9.7						2.8
17		9.9						2.8
18		10.0						2.8
19		9.2						2.7
20		9.5						2.9
21		9.0						3.1
22		8.2						3.5
23		7.2						3.4

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

Table 16 (Provisional Data)

Cape York, Q., Australia (11.0°S, 142.4°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.5						3.4
01		3.4						3.3
02		2.4						3.0
03		2.4						3.0
04		2.5						2.9
05		2.7						3.0
06		3.7						3.1
07		6.9						3.3
08		8.5						3.2
09		9.3						3.2
10		9.5						3.1
11		9.6						3.0
12		9.5						3.0
13		9.5						3.0
14		9.1						3.0
15		8.5						3.1
16		8.0						3.1
17		7.7						3.0
18		7.3						3.0
19		7.4						3.0
20		7.6						3.1
21		7.0						3.0
22		6.8						3.1
23		6.6						3.3

Time: 142.4°E.
Length of time sweep: 1.0 Mc to 13.0 Mc in one minute, 55 seconds.
Median values.

Table 17 (Provisional Data)

Rarotonga I. (21.4°S, 159.6°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01		6.1						3.1
02								
03		4.0						3.0
04								
05		3.3						3.0
06		3.8						
07	240	6.8						3.3
08		8.2						
09	270	8.1	220	4.5		3.1		3.3
10		8.6						
11	280	8.5	220	4.8		3.2		3.2
12	300	8.3	210	4.8		3.3		3.1
13	290	7.5	210	4.8		3.3		3.2
14		7.8						
16	290	7.3	210	4.5		3.2		3.1
16		7.5						
17	230	7.3						3.0
18		7.9						
19	250	7.5						2.9
20		7.6						
21		7.4						2.9
22		7.6						
23		6.9						3.0

Time: 157.5°W.
Length of time sweep: 2.0 Mc to 16.0 Mc. Manual operation.
Median values.

Table 18 (Provisional Data)

Pitcairn I. (25.0°S, 130.0°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02	229	4.3						
03								
04								
05	309	2.5						
06								
07	239	6.7	215	3.6				
08								
09	265	8.9	215	4.5				
10								
11	270	9.2	206	4.6				
12								
13	264	8.2	207	4.5				
14								
15	261	7.3	209	4.2				
16								
17								
18								
19	251	5.4						
20								
21								
22	296	5.0						
23								

Time: 127.5°W.
Length of time sweep: 1.0 Mc to 13 Mc. Manual operation.
Median values.

Table 19 (Provisional Data)

Brisbane, Q., Australia (27.5°S, 153.0°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	265	4.6						3.1
01	250	4.4						3.2
02	240	3.9						3.2
03	260	3.4						3.0
04	280	3.4						2.9
05	290	3.4						3.0
06	250	4.3						3.1
07	240	6.2						3.3
08	265	7.3	230	4.3	115	2.7		3.3
09	280	7.7	215	4.5	110	3.1		3.3
10	280	7.5	210	4.6	110	3.2		3.2
11	285	7.6	210	4.7	110	3.3		3.2
12	285	7.4	205	4.7	110	3.3	3.8	3.2
13	290	7.3	200	4.6	110	3.3		3.2
14	285	7.0	205	4.6	115	3.3		3.2
15	275	6.8	210	4.4	120	3.0		3.2
16	230	6.4	210	3.6		2.5		3.2
17	250	6.2						3.2
18	240	5.7						3.1
19	260	5.4						3.0
20	290	5.0					1.7	2.9
21	290	5.0						2.9
22	285	4.9						3.0
23	270	4.8						3.0

Time: 150.0°E.
Length of time sweep: 2.2 Mc to 12.5 Mc in two minutes, thirty seconds.
Median values.

Table 20 (Provisional Data)

Kermadec Is. (Raoul I.) (29.2°S, 177.9°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	275	4.4						2.9
01	265	4.2						3.0
02	250	3.8						3.1
03	265	3.4						3.0
04	280	3.0						2.8
05	300	2.9						2.8
06	270	3.9						3.1
07	260	5.8			125	2.2		3.2
08	275	6.5	250	4.0	125	2.6		3.3
09	295	6.6	245	4.3	120	3.0		3.2
10	310	6.7	235	4.5	120	3.2		3.2
11	310	6.9	235	4.6	120	3.3		3.1
12	320	7.2	225	4.5	120	3.3		3.1
13	310	7.5	220	4.4	120	3.2		3.1
14	300	7.0	240	4.4	120	3.2		3.2
15	290	6.6	250	4.2	120	3.0		3.1
16	275	6.2	250	3.7	120	2.6		3.2
17	265	5.9			120	2.0		3.1
18	260	5.6						3.0
19	270	5.2						2.9
20	275	5.1						2.8
21	280	4.9						2.8
22	280	4.9						2.9
23	280	4.8						3.2

Time: 180.0°E.
Length of time sweep: 1.8 Mc to 12.0 Mc. Manual operation.
Median values.

Table 21 (Provisional Data)

Watheroo, W. Australia (30.3°S, 115.9°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.9						3.1
01		3.9						3.1
02		3.8						3.1
03		3.5						3.1
04		3.4						3.0
05		3.5						3.0
06		4.2						3.2
07		5.6						3.4
08		6.1						3.4
09		6.5						3.2
10		6.9						3.2
11		7.2						3.2
12		7.5						3.2
13		7.6						3.2
14		7.3						3.2
15		7.0						3.3
16		6.6						3.3
17		6.2						3.3
18		5.7						3.3
19		5.1						3.1
20		4.5						3.1
21		4.2						3.0
22		4.1						3.0
23		4.0						3.1

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

Table 22 (Provisional Data)

Simonstown (Durbanville), Union of S. Africa (33.9°S, 18.7°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.0						3.0
01		3.1						3.0
02		3.2						3.1
03		3.1						3.1
04		3.1						3.0
05		3.1						3.0
06		4.7						3.2
07		5.9						3.3
08		6.3						3.2
09		6.6						3.0
10		7.1						3.0
11		7.6						2.9
12		8.2						2.9
13		8.5						2.9
14		8.3						3.0
15		7.6						3.0
16		7.3						3.1
17		6.9						3.1
18		5.9						3.1
19		4.3						3.1
20		3.4						3.1
21		3.2						3.1
22		3.1						3.1
23		3.1						3.1

Time: 15.0°E.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Average values.

Table 23 (Provisional Data)

Canberra, A.C.T., (Mt. Stromlo), Australia (35.3 S? 149.0°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.1						2.8
01		4.0						2.9
02		3.8						3.0
03		3.5						3.0
04		3.3						2.9
05		3.0						2.9
06		3.6						3.0
07		4.7						3.1
08		5.7						3.1
09		6.3						3.1
10		6.6						3.1
11		7.0						3.0
12		7.1						3.1
13		7.1						3.1
14		6.9						3.1
15		6.7						3.1
16		6.1						3.2
17		5.8						3.1
18		5.5						3.1
19		5.0						3.0
20		4.6						3.0
21		4.6						3.0
22		4.3						3.0
23		4.3						3.0

Time: 149.0°E.
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 24 (Provisional Data)

Christchurch, New Zealand (43.5°S, 172.6°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	3.5					3.2	
01	250	3.5					2.4	
02	250	3.1					2.8	
03	250	3.0					2.8	
04	250	2.6					2.7	
05	250	2.3					2.9	
06	250	3.4				1.3	3.0	
07	250	4.6	230	3.2		2.0	3.3	
08	275	5.3	230	3.8		2.5	3.6	
09	300	5.8	225	4.2		2.8	3.8	
10	300	6.0	230	4.3		3.0	3.8	
11	300	6.3	220	4.4		3.2	3.7	
12	300	6.5	220	4.5		3.3	3.6	
13	290	6.6	210	4.4		3.2	3.2	
14	285	6.6	220	4.3		3.0	3.8	
15	280	6.4	220	4.0		2.8	3.4	
16	260	6.2	230	3.8		2.5	2.9	
17	240	5.8	230	2.8		2.0	2.5	
18	240	5.4					2.8	
19	250	5.0					2.8	
20	250	4.8					3.5	
21	260	4.4					2.9	
22	270	4.1					2.7	
23	270	3.8					2.9	

Time: 172.5°E.
Length of time sweep: 1.0 Mc to 13 Mc. Automatic.
Median values.

Table 25 (Provisional Data)

Campbell I. (52.5°S, 169.2°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05	300	2.4						2.6
06								
07	230	4.5	200	2.5	110	2.0		3.3
08	240	5.3	200	3.6	105	2.4		3.2
09	265	5.7	200	4.0	105	2.6		3.3
10	290	5.8	195	4.2	105	2.8		3.2
11	285	5.9	200	4.2	100	2.8		3.2
12	280	6.2	200	4.2	105	2.9		3.2
13	280	6.2	200	4.2	100	1.3		3.3
14	280	6.1	205	4.0	105	2.6		3.2
15	255	6.1	205	3.7	105	2.5		3.2
16	240	6.1	210	3.2	105	2.2		3.2
17	225	5.8	190	2.2		1.8		3.2
18	220	5.5						3.1
19	235	5.1						2.9
20								
21	255	4.2						2.9
22								
23	280	3.4						2.8

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15 Mc. Manual operation.
Median values.

Table 26 (Provisional Data)

Tykhi Bay, U.S.S.R. (80.3°N, 52.8°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.7						
01		5.5						
02								
03								
04								
05								
06								
07								
08								
09								
10		5.7						
11								
12		5.6						
13								
14		5.9						
15								
16								
17								
18								
19		6.3						
20								
21								
22		5.8						
23								

Time: 60.0°E.
Average values.

Table 27 (Provisional Data)

Sverdlovsk, U.S.S.R. (56.7°N, 61.1°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.5						
01		4.1						
02		3.7						
03		3.5						
04		3.6						
05		4.3						
06		5.0						
07		5.5						
08		5.7						
09		5.9						
10		6.1						
11		6.3						
12		6.3						
13		6.2						
14		6.1						
15		5.8						
16		5.8						
17		5.7						
18		5.6						
19		5.7						
20		5.7						
21		5.8						
22		5.3						
23		4.8						

Time: 60.0°E.
Average values.

Table 28 (Provisional Data)

Tomsk, U.S.S.R. (56.4°N, 35.0°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.7						
01		4.4						
02		4.0						
03		3.7						
04		3.5						
05		3.9						
06		4.6						
07		5.1						
08		5.4						
09		5.7						
10		6.0						
11		6.1						
12		6.3						
13		6.2						
14		6.1						
15		5.9						
16		5.9						
17		5.9						
18		5.9						
19		5.8						
20		5.9						
21		5.9						
22		5.6						
23		5.2						

Time: 90.0°E.
Average values.

Table 29 (Provisional Data)

Chungking, China (29.4°N, 106.3°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06		6.4						
07	279	7.2						
08	284	7.8						
09	299	8.2						
10	313	9.3						
11	330	9.7		5.6				
12	345	11.9D		5.8				
13	328	12.6D		5.6				
14	319	13.0D		5.3				
15	306	14.0D		5.1				
16	288	11.7D		4.9				
17	291	11.4D						
18	271	10.5						
19	255	10.3						
20	257	9.3						
21	263	8.8						
22	283	7.9						
23	286	7.8						

Time: 105.0°E.
Length of time sweep: 3.3 Mc to 11.3 Mc in fifteen minutes.
Median Values.

Table 30

Washington, D.C. (39.0°N, 77.5°W) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	3.8					2.7	3.0
01	270	3.7					2.4	3.0
02	260	3.5					2.4	3.0
03	250	3.5					2.4	3.0
04	240	3.3					2.8	3.1
05	250	3.0					3.6	3.1
06	240	3.5					3.9	3.2
07	230	6.0			110	1.9	4.1	3.4
08	240	7.0	220		110	2.4	4.1	3.4
09	240	7.3	210	4.1	110	2.9	3.9	3.3
10	250	8.1	210	4.4	110	3.1	3.8	3.1
11	270	9.0	210	4.7	110	3.3	3.9	3.2
12	270	9.4	210	4.8	110	3.4	3.8	3.1
13	260	9.8	210	4.6	110	3.3	3.8	3.1
14	260	10.0	220	4.4	110	3.1	3.8	3.1
15	250	9.8	230	4.2	110	2.9	3.8	3.2
16	240	9.4	230	3.8	110	2.4	3.6	3.3
17	220	8.4			110	1.8	2.8	3.3
18	220	7.2					2.8	3.2
19	230	6.0					2.3	3.1
20	240	5.1					2.4	3.1
21	260	4.6					2.3	3.0
22	260	4.4					2.3	3.0
23	260	4.0					2.3	3.0

Time: 75.0°W.
Length of time sweep: 0.75 Mc to 11.5 Mc in 3.4 minutes supplemented by 0.8 Mc to 14 Mc in two minutes.
Median values.

Table 31

(Corrections to previously published provisional data)

Fairbanks, Alaska (84.9°N, 147.8°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	298							
01	318							
02	325							
03						-		
04	325					-		
05	285						2.9	
06	258		-	-				
07	275			3.6				
08								
09	325							
10	335		215					
11	330		215					
12			215					
13			225					
14	298		225	4.0				
15			225					
16							2.2	
17	245		-	-			-	
18								
19	242					-		
20	252	3.7				-		
21								
22						-	3.0	
23	285					-		

Time: 150°W.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 32

(Corrections and additions to previously published provisional data)

Churchill, Canada (58.8°N, 94.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	290						5.4	
01	290						6.0	
02	290						5.5	3.0
03	290						4.4	
04	320						3.8	
05	330						3.7	
06	300				120	3.0	3.8	
07	290	4.5	240	3.4	120	3.2	3.8	
08	310		225	3.8	120	3.0		
09	320		230	4.0	120	3.0		
10	320		230	4.2	110	3.0		3.1
11	330		215	4.2	110	3.1		
12	330		215	4.3	110	3.1		
13	330		220	4.2	115	3.0		
14	325		230	4.2	120	3.0		
15	300		230	4.0	120	3.0		
16	290		220	3.8	130	2.8		
17	280		250	3.4	130	3.0		
18	290						3.5	
19	260	5.1					3.8	2.8
20	280						4.0	
21	310						4.7	
22	320	4.0					5.8	
23	290						5.8	

Time: 90.0°W.
Length of time sweep: 2 Mc to 18 Mc in one minute.
Median values.

Table 33

(Corrections and additions to previously published provisional data)

Prince Rupert, Canada (54.3°N, 130.3°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270							3.1
01	290							
02	320							
03	335							
04	335	2.2						
05	300	2.7						
06	275	3.0	240	2.2				
07	240		210	3.0	110	2.0		3.3
08	265		200	3.7	110	2.3		
09	260		195	3.9	100	2.5		
10	265		190	4.1	100	2.7		
11	275		180	4.2	100	2.8		
12	280	6.0	185	4.4	100	3.0		3.2
13	280	6.2	180	4.2	100	3.0		
14	260		190	4.2	100	3.0		3.4
15	260		190	4.1	100	2.9		
16	245	5.8	200	3.9	100	2.7		
17	230		200	3.6	110	2.4		
18	220		210	3.2	110	2.2		
19	215		200	3.2				
20	220		210	2.9				
21	240	4.0	220	2.7				
22	240		230	2.6				
23	250		230	2.2				

Time: 120.0°W.
Length of time sweep: Manual operation.
Median values.

Table 34

Great Baddow, England (51.7°N, 0.5°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.3					1.8	2.8
01		4.0					1.8	2.8
02		3.7					0.8	2.9
03		3.5					1.7	2.9
04		3.4					2.1	3.0
05		3.2					2.2	3.2
06		4.2				1.7	2.5	3.4
07		5.2				2.2	3.1	3.4
08		5.6		3.8		2.5	3.5	3.4
09		6.1		4.1		2.8	3.8	3.3
10		6.4		4.3		3.0	4.0	3.3
11		6.4		4.3		3.0	3.3	3.3
12		6.3		4.4		3.0	3.5	3.2
13		6.3		4.4		3.0	3.5	3.2
14		6.1		4.2		2.3	3.2	3.2
15		6.2		4.1		2.7	3.3	3.2
16		6.3		3.8		2.4	3.2	3.2
17		6.5				2.2	3.0	3.2
18		6.7					2.6	3.2
19		6.3					2.5	3.1
20		6.1					2.4	3.2
21		5.8					2.1	3.1
22		4.8					2.2	3.0
23		4.4					2.4	3.0

Time: 0.0°.
Length of time sweep: Manual operation.
Median values.

Table 35

(Corrections and additions to previously published provisional data)

St. John's, Newfoundland (47.7°N, 52.7°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	250							
01	260	3.0						
02	255							
03	260							
04	250							
05	265	2.2						
06	250		220	2.8	100	1.8		
07	240		215	3.4	110	2.1		
08	240		200	3.8	100	2.5		3.5
09	250		190	4.1	100	2.9		
10	260		190	4.3	100	3.0		
11	260		180	4.4	100	3.1		
12	270		180	4.5	100	3.2		
13	280		180	4.4	100	3.2		
14	270		190	4.4	100	3.1		
15	260		200	4.2	100	2.9		
16	260		200	3.9	100	2.8		
17	250		210	3.5	110	2.4		
18	240		220	3.0	110	1.9		
19	220	6.6	210	2.4				
20	210							
21	210							
22	220	4.4						
23	250							

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

Table 36

(Corrections and additions to previously published provisional data)

Ottawa, Canada (45.5°N, 75.8°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300							
01								
02								
03								
04								2.6
05	340							
06	251							
07	240		225	3.3		2.7	3.3	
08	260		210	3.9	120	2.8	3.6	
09	290		205	4.3	120	3.0		
10	290		200	4.4	110	3.1	4.5	
11	300		190	4.6	110	3.2	4.5	
12	310		190	4.6	110	3.2	4.5	
13	300		200	4.5	110	3.2		
14	310		210	4.5	110	3.1		
15	300		210	4.4	120	3.0		
16	280		220	4.0	120	2.6		
17	270		230	3.1		2.5		
18	245							
19	240	6.2						
20	250	5.3						
21	250							
22	280	3.6						
23	295							

Time: 75.0°W.
Length of time sweep: 1.93 Mc to 13.5 Mc. Manual operation.
Median values.

Table 37

(Corrections and additions to previously published provisional data)

Boston, Massachusetts (42.4°N, 71.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	3.2					2.0	2.8
01	280						2.0	
02	270							
03	270							
04	285							
05	270							
06	245				135	1.8		
07	255		240	3.8	125	2.2		3.2
08	280		220	4.0	120	2.7		
09	290	6.5	220	4.2	120	2.9		
10	300		218	4.4	120	2.9		
11	302		210	4.4	120	3.2		
12	302		210	4.5	115	3.2		
13	295		220	4.5	120	3.1		
14	312		238	4.3	120	3.0		
15	300		232	4.0	120	2.7		
16	278		240		125	2.4		
17	260				140	1.8		
18	240							
19	240							
20	245							
21	250							
22	262							
23	275							

Time: 75°W.
Median values.

Table 38

(Corrections and additions to previously published provisional data)

San Francisco, California (37.4°N, 122.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	260						3.0	
01	260						2.9	3.0
02	260						3.0	
03	260						3.0	
04	260						3.1	
05	280						3.2	
06	250						3.4	
07	250		230	3.6	110	2.3	3.5	
08	270		210	4.1	110	2.7	3.8	
09	280		200	4.3	110	3.1	3.9	3.2
10	300		200	4.5	110	3.3	3.8	
11	310		200	4.6	110	3.4	4.0	
12	320		200	4.6	110	3.5	3.8	
13	300	7.7	200	4.8	110	3.4	4.0	
14	290		220	4.5	110	3.3		
15	280	7.3	220	4.3	110	3.1	3.8	
16	280		230	4.0	110	2.8	3.4	
17	240		230	3.5	110	2.3	3.7	
18	230						2.9	
19	210	5.2					2.5	
20	230						3.0	
21	250						3.4	
22	250						3.1	
23	260						3.2	

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

Table 39

(Corrections and additions to previously published provisional data)

Baton Rouge, Louisiana (30.5°N, 91.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300							
01	300	3.4						
02	300							
03	290	3.4						
04	285							
05	290							
06	265							
07	275		250	3.5	130	2.3		
08	280		240	3.9	120	2.7		3.2
09	300		240	4.2	120	2.9		
10	340		240	4.5	120	3.1		3.0
11	350		240	4.8	120	3.2		
12	340		240	4.7	120	3.2		
13	330		240	4.7	120	3.2		
14	315		240	4.6	120	3.2		
15	300		240	4.3	120	3.0		
16	300		250	3.9	120	2.7		
17	270		250	3.3	130	2.2		
18	250	6.7						
19	240							
20	250							
21	290							
22	300							
23	300	3.2						

Time: 90.0°W.
Length of time sweep: 1.0 Mc to 9.8 Mc in three minutes, thirty seconds.
Median values.

Table 40

San Juan, Puerto Rico (18.4°N, 86.1°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.9						2.9
01		4.1						2.9
02		4.2						3.1
03		3.8						3.2
04		3.4						3.1
05		3.2						3.0
06		3.3						3.0
07	225	5.8						3.4
08	260	6.0	210	3.2				3.2
09	290	8.4	200	4.2		3.0		3.1
10	320	6.9	210	4.4		3.2		2.9
11	350	7.8	210	4.6		3.3		2.8
12	330	8.9	220	4.7		3.4		2.8
13	320	9.7	220	4.6		3.4		2.9
14	310	10.0	220	4.5		3.4		3.0
15	300	10.3	230	4.3		3.2		3.0
16	280	10.3	220	4.0		3.0		3.1
17	260	9.5	225	3.7			3.8	3.2
18	235	8.8						3.3
19	240	8.8						3.2
20		5.2						3.2
21		4.4						3.0
22		4.0						2.9
23		3.9						2.9

Time: 60.0°W.
Length of time sweep: Record centered on the hour.
Median values.

Table 41

(Corrections to previously published provisional data)

Trinidad, British West Indies (10.6°N, 61.2°W) September 11, and 21 through 30, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00							-	3.0
01							-	
02	-	-						-
03	-	-						-
04		-						-
06		-						-
06	-	-					-	-
07							2.7	
08	275							
09							3.3	
10							-	
11							-	
12							-	
13			-				-	
14							-	
15	275		-	4.6			4.2	
16			-	-			4.4	
17							3.6	
18							2.7	
19							3.0	
20							-	
21							-	3.1
22							-	
23							-	

Time; 60.0°W.
Length of time sweep; 2 Mc to 16 Mc in one minute.
Median values.

Table 42

Huancayo, Peru (12.0°S, 75.3°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	230	7.5						3.3
01	236	6.4						3.2
02	230	5.5						3.3
03	240	4.1						3.2
04	260	3.5						3.2
05	270	2.9						3.1
06	260	5.0				1.7	2.6	3.2
07	240	7.4				2.5	3.2	3.2
08	300	8.1	230	4.6		3.0	5.6	3.0
09	330	8.6	230	4.6		3.4	11.2	2.6
10	370	7.8	220	4.7		3.6	11.4	2.6
11	380	7.6	210	4.7		3.7	11.3	2.5
12	370	7.5	210	4.7			11.5	2.5
13	380	7.6	210	4.7			11.5	2.5
14	370	7.7	210	4.6		3.5	11.1	2.5
15	300	8.1	210	4.4		3.3	8.4	2.5
16	220	8.4				2.9	5.6	2.6
17	250	8.5				2.3	4.1	2.6
18	280	8.4				1.1		2.7
19	340	8.0						2.5
20	330	7.8						2.7
21	280	7.6						2.9
22	240	7.8						3.1
23	230	7.8						3.2

Time; 75.0°W.
Length of time sweep; 16.0 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 43

(Corrections to previously published provisional data)

Baffin Island, Canada (70.6°N, 68.6°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05			245			2.4		3.1
06					140			3.0
07								
08					140			
09		4.9			110	2.6		
10					140			3.0
11	395							
12						2.7		
13					120			2.9
14					140			
15								
16			240					
17					140			
18					170			
19								
20								
21								
22								
23								

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

Table 44

(Corrections to previously published provisional data)

Fairbanks, Alaska (64.9°N, 147.8°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	298							
01						-	4.8	
02						-		
03								
04	285		-					
06	342		250					
06		4.5	232					
07	408	4.6		3.7				
08	415		215					
09			215			2.8		
10	408							
11	390							
12								
13	405		216					
14			220					
15			228					
16								
17	310		235					
18	255		238					
19	255		-	-				
20	255							
21	255							
22	265					-		
23						-		

Time; 160°W.
Length of time sweep; 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 45

Oslo, Norway (59.9°N, 11.0°E) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		4.9					3.1	
01		4.6					3.5	
02		4.2					3.2	
03		4.1					3.4	
04		3.6					3.4	
05		3.9				1.6	3.5	
06		4.3				2.0	3.8	
07		4.9		3.6		2.3	4.1	
08		5.0		4.0		2.6	4.2	
09		5.3		4.0		3.0	4.8	
10		5.4		4.3		3.0	4.6	
11		5.5		4.3		3.1	4.5	
12		5.6		4.4		3.2	4.4	
13		5.5		4.3		3.2	4.5	
14		5.6		4.2		3.1	4.4	
15		5.5		4.1		3.0	4.6	
16		5.4		4.0		3.0	4.0	
17		5.5		3.9		2.6	4.0	
18		5.4				2.2	4.0	
19		5.6				1.9	4.1	
20		5.5				1.8	3.7	
21		5.6					3.0	
22		5.3					3.4	
23		4.9					2.4	

Time: 15°E.
Length of time sweep: 16.0 Mc to 1.63 Mc in ten minutes.
Median values.

Table 46

(Corrections and additions to previously published provisional data)

Great Baddow, England (51.7°N, 0.5°E) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00							2.0	3.0
01		3.8					2.4	
02		3.6					2.4	
03		3.4					2.4	
04							2.2	
05		4.1				1.6	3.1	
06				3.5		2.1	3.9	3.2
07		5.0		3.5		2.4	3.9	
08		5.3		4.2		2.6	4.2	
09				4.4		2.9	4.6	
10				4.4		3.1	4.5	
11		5.9		4.5		3.2	4.2	3.2
12		5.6		4.6		3.1	5.0	
13		5.8		4.5		3.2	4.5	3.2
14				4.5		3.1	4.2	
15				4.3		2.9	4.2	3.0
16		5.5		4.1		2.7	3.7	
17		5.7		4.0		2.5	4.0	
18		5.9		3.6		2.0	3.4	
19		6.6					3.2	3.2
20							3.0	
21							2.6	
22		5.5					2.2	3.0
23							2.6	3.0

Time: 0°.
Length of time sweep: Manual operation.
Median values.

Table 47

Kochel, Bavaria (47.7°N, 11.4°E) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		4.6						
01		4.2						
02		4.0						
03		3.9						
04		3.8						
05		3.8						
06		4.7						
07		5.2		3.7				
08		5.8		4.2			4.5	
09		6.0		4.3			4.9	
10		6.4		4.4			4.8	
11		6.2		4.5			4.8	
12		6.1		4.5			4.2	
13		5.8		4.5			4.6	
14		6.0		4.5			4.6	
15		6.1		4.3			4.0	
16		5.9		4.2				
17		5.9		4.0				
18		6.0						
19		6.8						
20		7.0						
21		6.7						
22		5.6						
23		4.8						

Time: 15.0°E.
Length of time sweep: 1.2 Mc to 10.4 Mc.
Median values.

Table 48

(Corrections and additions to previously published provisional data)

Maui, Hawaii (20.8°N, 156.5°W) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00							-	
01							-	
02							-	
03							-	
04							-	
05	260						-	
06							-	
07	245		225		130		-	
08	265		215		105		-	
09	318				100		3.4	
10					100			
11					100			
12	395				102		-	
13			205		100		-	
14	350	10.2			105		-	2.9
15	335				100		4.3	
16			225		105			
17	280				100			
18			228					
19	225							
20	225							
21	242						2.5	
22								
23							2.3	

Time: 150.0°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 49

(Corrections to previously published provisional data)

Leyte, Philippine Is. (11.0°N, 125.0°E) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fMs	F2-M3000
00		5.6						
01		5.2						
02		5.1						3.0
03								
04								
05								
06		3.4						
07								
08								
09		7.6						
10						3.4		
11								
12								
13		7.7						
14							6.0	
15		8.4						
16		8.8						
17								
18						2.4		
19				2.2				
20								
21								
22								
23								

Time: 135°E.
Length of time sweep: Manual operation.
Median values.

Table 50

(Corrections and additions to previously published provisional data)

Christmas I. (1.9°N, 157.3°W) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fMs	F2-M3000
00	245	6.4						3.0
01		6.0					2.4	3.1
02	235	5.0						3.1
03		5.4						3.3
04	215						2.0	3.4
05								3.6
06								3.4
07						-		3.2
08			-		100			
09					100			2.7
10					100			
11					100		7.5	2.6
12	335				100			
13					100			2.5
14					100			
15					100			
16					100			
17		8.7			100			2.7
18					100			
19								
20								2.6
21	275	8.3						2.8
22		5.9						2.8
23		6.7						2.9

Time: 150°W.
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 51

(Corrections and additions to previously published provisional data)

Cape York, Q., Australia (11.0°S, 142.4°E) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fMs	F2-M3000
00	235						2.7	3.4
01	220	3.7					2.3	3.6
02	225	3.2					2.4	3.6
03	230						2.8	-
04	290	2.2					2.8	
05	280	2.3					2.7	
06	275	2.7					3.0	3.0
07	262	5.2				1.8	3.0	
08	260	7.0	240	4.3		2.5	3.8	3.3
09	290	7.9	228	4.5		3.0	3.8	3.2
10	270		212	4.6		3.4	4.4	
11	285	8.5	200	4.8		3.5	4.5	
12	290	9.5	200	4.9		3.6	3.9	
13	290	9.4	195	4.8		3.5	4.4	
14	290	8.3	196	4.7		3.4	4.0	3.2
15	295	8.5	196	4.6		3.4	3.7	
16	262	8.0	200	4.4		3.1	3.7	
17	250	7.0	225	3.8		2.6	3.5	
18	240	6.6				1.9	3.2	3.2
19	240	6.1					3.1	
20	240	5.7					3.1	3.3
21	230	4.6					3.0	3.2
22	250						2.8	3.0
23	250	4.0					2.7	3.2

Time: 150.0°E.
Length of time sweep: 1.0 Mc to 13.0 Mc in one minute, 55 seconds.
Median values.

Table 52

(Corrections and additions to previously published provisional data)

Brisbane, Q., Australia (27.5°S, 153.0°E) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fMs	F2-M3000
00	270							
01	270							
02	275							
03	250	4.0						
04	250							
05	255	3.3						
06	260	3.5						
07	230	5.5						3.5
08	230	6.4				2.4		
09	250	6.8	222	4.3	110	2.9		
10	270		210	4.5	110	3.1		
11	260		210	4.5	110	3.2		
12	280	6.5	200	4.5	110	3.2		
13	260		200	4.5	110	3.2	2.7	
14	270		200	4.4	115	3.0		
15	250		210	4.2	110	2.8		
16	230	6.1		3.8		2.4		
17	230	5.7						
18	230	5.1						
19	235	4.6						
20	260	4.3						
21	265							
22	260							
23	270							

Time: 150.0°E.
Length of time sweep: 2.2 Mc to 12.5 Mc in two minutes thirty seconds.
Median values.

Table 53

(Corrections and additions to previously published provisional data)

Watheroo, W. Australia (30.3°S, 115.9°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	250	3.2					3.0	3.0
01	250						3.0	3.0
02	242	3.4					3.0	3.0
03	245	3.7					2.9	3.0
04	230	3.5					3.0	3.0
05	230	3.4					3.0	3.1
06	230	3.1					3.1	3.2
07	230	4.6				1.5	3.1	3.5
08	240	5.6				2.3	3.2	3.5
09	260		225	4.1		2.8	3.6	
10	280	6.2	230	4.3		3.0	3.6	3.4
11	282		230	4.4		3.1	3.8	3.4
12	280		220	4.5		3.1	3.8	3.4
13	300	6.6	215	4.4		3.1	3.6	3.2
14	285	6.7	210	4.3		3.0	3.6	
15	265		220	4.1		2.9	3.2	
16	250	6.2	200	3.7		2.5	3.2	
17	238	5.6				1.9	3.1	
18	220	5.2					3.0	
19	220	4.2					3.0	3.4
20	230	3.1					3.0	
21	240	3.2					3.0	3.2
22	240						2.9	
23	245	3.1					2.9	

Time: 120°E.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 54

Simonstown (Durbanville), Union of S. Africa (33.9°S, 18.7°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		2.7						3.0
01		2.7						3.0
02		2.7						3.1
03		2.9						3.1
04		2.8						3.2
05		2.5						3.2
06		2.6						3.0
07		2.9						3.2
08		4.7						3.4
09		5.5		2.9				3.3
10		5.6		3.8				3.2
11		6.0		4.2				3.1
12		6.4		4.3				3.1
13		6.5		4.3				3.0
14		7.3		4.2				3.0
15		7.3		4.0				3.2
16		6.9		3.5				3.2
17		6.2						3.2
18		5.4						3.2
19		4.1						3.2
20		3.0						3.1
21		3.1						3.2
22		2.8						3.2
23		2.6						3.1

Time: 30.0°E.
Length of time sweep: 2.0 Mc to 16.0 Mc in one minute.
Median values.

Table 55

(Corrections and additions to previously published provisional data)

Canberra, A.C.T., (Mt. Stromlo), Australia (35.3°S, 149°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	250							
01	260							
02	265							
03	260							
04	250							
05	250	3.4						
06	255							
07	250					2.0		
08	250				110	2.3		
09	260		230	4.0	110	2.7		
10	270		220	4.2	110	3.1		
11	280		220	4.3	110	3.2		
12	280		210	4.4	110	3.3	3.6	
13	280		210	4.4	110	3.3		
14	270		200	4.2	100	3.1	3.3	
15	260		200	4.0	110	3.0		3.2
16	250	6.0	210	3.5	110	2.5		
17	240	5.6				2.0		
18	240	5.0						
19	245							
20	250							
21	250							
22	250							
23	260							

Time: 150.0°E.
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 56

(Corrections and additions to previously published provisional data)

Christchurch, New Zealand (43.5°S, 172.6°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.0					2.2	
01		2.9					2.5	
02							2.8	
03							2.8	
04							2.5	
05							2.4	
06		2.0					-	
07						1.4	1.8	
08							1.9	
09		5.2					2.6	
10							3.2	
11							3.0	
12							3.4	
13							3.3	
14		6.2			108		3.0	
15							2.7	
16							2.5	
17							1.8	
18							-	
19							-	
20							1.6	
21		3.2					-	
22							-	
23							-	

Time: 172.5°E.
Length of time sweep: 1.0 Mc to 13 Mc. Automatic.
Median values.

Table 57

Tykhi Bay, U.S.S.R. (80.3°N, 52.8°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	260	4.8	230	3.4				
01	250	4.5	220	3.0				
02								
03								
04								
05								
06								
07								
08								
09								
10	330	4.9	210	4.0				
11								
12	340	4.9	210	3.9				
13								
14	290	5.1	200	3.7				
15								
16								
17								
18								
19	240	5.2	210	3.8				
20								
21								
22	280	4.8	260	3.9				
23								

Time: 60°E.
Average values.

Table 58

(Corrections to previously published provisional data)

Baffin I., Canada (70.5°N, 68.6°W) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04	295				200			
05					160			
06	435				150			2.8
07	475				150	2.7		2.8
08					140	2.8		
09					125			
10	415				120	3.0		
11					115	2.8		
12	420				130			2.9
13					130	3.0		2.9
14		4.8			130			2.8
15	455				140			2.7
16					150			
17					150			
18					155			2.9
19					195			
20								
21								
22								
23								

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

Table 59

(Corrections and additions to previously published provisional data)

Reykjavik, Iceland (64.1°N, 21.7°W) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	-	-					4.6	
01	-	-					4.4	
02	-	-					3.8	
03							4.0	3.0
04					-	-		2.9
05		4.2	-	-	-	-		3.0
06		4.2						3.1
07		4.6						2.9
08								3.0
09				4.3				3.0
10								2.9
11					90	3.1		3.0
12	345				90			2.9
13								3.0
14	355				-	-		2.9
15		5.4						2.9
16					90			2.9
17					90			2.9
18							4.0	3.0
19			205		-	-	4.0	3.0
20			-	-			3.8	3.1
21	-	-					3.6	
22	-	-					3.8	
23	-	-					3.5	

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

Table 60

Oslo, Norway (59.9°N, 11.0°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.0					3.1	
01		4.9					3.0	
02		4.7					3.8	
03		4.5					3.1	
04		4.3				1.7	3.5	
05		4.7		3.4		1.9	3.6	
06		5.1		3.7		2.4	4.0	
07		5.1		4.0		2.6	4.2	
08		5.2		4.2		3.0	4.4	
09		5.5		4.4		3.1	4.6	
10		5.6		4.5		3.1	4.5	
11		5.5		4.5		3.2	5.0	
12		5.6		4.5		3.2	4.5	
13		5.5		4.5		3.2	4.5	
14		5.6		4.4		3.1	4.3	
15		5.6		4.4		3.1	4.1	
16		5.5		4.3		3.0	4.1	
17		5.5		4.2		2.9	4.2	
18		5.5		4.0		2.5	4.6	
19		5.5		3.8		2.2	4.6	
20		5.5				1.9	3.9	
21		5.6					3.3	
22		5.4					3.4	
23		5.4					3.5	

Time: 15.0°E.
Length of time sweep: 16.0 Mc to 1.83 Mc in ten minutes.
Median values.

Table 61

(Corrections and additions to previously published provisional data)

Leningrad, U.S.S.R. (59.7°N, 30.5°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	4.7						
01	290	4.6						
02	300	4.5						
03	300	4.7						
04	300	4.9						
05	280	5.0						
06	240	4.9						
07	240	4.9						
08	250	5.4						
09	310	5.9						
10	350	8.0						
11	340	5.8						
12	340	5.6						
13	350	5.7						
14	340	5.7						
15	320	5.5						
16	310	5.5						
17	300	5.2						
18	320	5.2						
19	270	5.2						
20	290	5.3						
21	290	5.2						
22	280	5.2						
23	280	5.0						

Time: 30°E.
Average values.

Table 62

(Corrections and additions to previously published provisional data)

Sverdlovsk, U.S.S.R. (56.7°N, 61.1°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	230	5.1						
01	240	4.5						
02	240	4.3						
03	240	3.7						
04	230		210	2.9	110	.1.8		
05	250		210	3.4	110	2.2		
06	300	5.3	200	3.8	105	2.5		
07	310	5.4	190	4.0	100	2.7		
08	310	5.4	190	4.2	100	2.9		
09	300		185	4.4	100	3.1		
10	305		185	4.5	100	3.2		
11	290	6.2	180	4.5	100	3.2		
12	300	6.2	180	4.5	100	3.2		
13	290	6.3	180	4.5	100	3.2		
14	290	8.0	180	4.4	100	3.2		
15	280	5.9	180	4.4	100	3.2		
16	280		190	4.2	100	3.0		
17	270		195	4.1	100	2.7		
18	230		200	3.8	105	2.4		
19	210	5.5			115	2.1		
20	210	5.3			115	1.8		
21	210	5.5						
22	220	5.8						
23	220	5.4						

Time: 60°E.
Median values, f°F2; average values, others.

Table 63

Tomsk, U.S.S.R. (56.4°N, 85.0°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	240	4.4						
01	250	4.0						
02	250	3.7						
03	250	3.6						
04	250	3.8				1.5		
05	290	4.2	220	2.5	100	2.1		
06	320	4.4	220	2.9	100	2.4		
07	330	4.5	230	3.2	100	2.7		
08	350	4.7	220	3.4		2.9		
09		5.2						
10		5.2						
11		5.4						
12	340	5.4		3.7	100	3.4		
13	330	5.2	220	3.8	100			
14	350	5.0	220	3.6	100			
15	320	5.1	230	3.5	100	3.1		
16	310	4.8	220	3.2	100			
17	310	5.0	220	3.1	100	2.9		
18	300	4.8	220	2.9	100	2.7		
19	290	4.9	230		100	2.4		
20	240	4.9			110	2.0		
21	240	5.0						
22	230	5.0						
23	230	4.7						

Time: 90.0°E.
Average values.

Table 64

(Corrections and additions to previously published provisional data)

Cape York, Q., Australia (11.0°S, 142.4°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	250						2.7	3.2
01	230	3.5					2.8	
02	225	3.0					3.0	3.3
03	210	2.1					2.8	3.5
04	300	1.9					2.9	
05	295	2.1					2.8	
06	265	2.4					2.9	3.0
07	250	4.7				1.8	3.0	
08	250	6.6	240	4.2		2.5	3.1	
09	268		225	4.3		2.9	3.5	
10	275	7.4	215	4.6		3.2	3.8	3.4
11	290	7.9	200	4.7		3.4	4.0	
12	275	7.4	200	4.7		3.5	4.0	
13	290	7.6	200	4.7		3.5	4.0	3.3
14	282		200	4.7		3.4	3.9	
15	290	7.4	200	4.4		3.3	3.9	
16	290	7.2	200	4.2		3.0	3.8	
17	250	7.0	230	3.6		2.6	3.5	3.2
18	240	6.8					3.5	
19	228	5.6					3.5	3.3
20	238	5.0					3.1	3.2
21	230	3.8					2.9	
22	260	3.1					2.8	
23	280	3.4					2.8	3.1

Time: 150°E.
Length of time sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.
Median values.

Table 65

(Corrections and additions to previously published provisional data)

Brisbane, Q., Australia (27.5°S, 153.0°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280							
01	280	3.3						
02	260							
03	250							
04	230							
05	240	3.4						3.3
06	250							
07	230	5.0						
08	220	6.0						
09	250	6.5	220	4.3		2.7		
10	250		210	4.4	110	3.0		
11	250	6.6	210	4.5	110	3.1		
12	250		200	4.5	110	3.1		
13	260		200	4.4	110	3.1	3.5	
14	260	6.7	200	4.3	115	2.9	3.4	
15	240		208	4.0		2.7		
16	230	6.3					3.5	
17	220	5.7					3.3	
18	220	4.6						
19	230	3.6						
20	260							
21	270							
22	260							
23	260							

Time: 150.0°E.
Length of time sweep: 2.2 Mc to 12.5 Mc in two minutes thirty seconds.
Median values.

Table 66

(Corrections and additions to previously published provisional data)

Canberra, A.C.T., (Mt. Stromlo), Australia (35.3°S, 149.0°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280							
01	280						2.5	
02	290						2.9	
03	280						2.6	
04	260						3.1	
05	250	3.8					3.0	
06	250						2.9	
07	250	3.6					2.4	
08	245				120	2.0		
09	250	5.6	210	3.5	110	2.5		
10	260	6.2	220	4.0	110	2.9	3.6	
11	260	6.6	210	4.1	100	3.0	3.6	
12	265	6.6	210	4.1	100	3.0	3.9	
13	270		200	4.1	100	3.0	3.8	
14	260		210	4.0	100	2.9	3.9	
15	260		210	3.8	110	2.7	3.8	
16	250	6.0	210	3.2	110	2.3	3.6	
17	240	5.5					3.5	
18	225	4.5					2.9	
19	250						2.5	
20	250						2.4	
21	265							
22	260							
23	270	3.2						

Time: 150.0°E.
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 67

Campbell I. (52.5°S, 169.0°E) January 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05	245	4.5	220	3.2	110	2.1		
06								
07	240	5.0	210	4.0	110	2.8		
08								
09	325	5.4	200	4.3	100	3.2		
10								
11	300	5.6	200	4.5	100	3.2		
12	300	5.8	200	4.5	100	3.4		
13	345	5.6	200	4.5	100	3.4		
14								
15	320	5.9	200	4.4	100	3.2		
16								
17	300	5.9	210	4.0	110	2.8		
18								
19	250	6.0	235	3.0				
20								
21	245	5.6						
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 68

Campbell I. (52.5°S, 169.0°E) December 1944

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05	250	4.1					3.0	
06								
07	325		235	4.1	100	2.8	3.4	
08								
09			210	4.3	100	3.1		
10								
11			200	4.4	100	3.2		
12			200	4.5	100	3.3		
13	360	5.3	200	[illegible]	[illegible]			
14								
15	330	5.9	200	4.3	[illegible]			
16								
17	300	6.1	220	3.8	110	2.6		
18								
19	250	5.6	230	3.8			3.2	
20								
21	245	5.7						
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15 Mc. Manual operation.
Median values.

Table 69

Campbell I. (52.5°S, 169.0°E) November 1944

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05	220	4.4					2.2	
06								
07	280	4.8	225	3.9	120	2.[illegible]		
08								
09	300	5.7	220	4.4	110	3.[illegible]	3.6	
10								
11	300	5.9	200	4.4	110	3.0		
12	300	5.9	200	4.4	110	3.1		
13	300	5.8	200	4.4	110	3.[illegible]		
14								
15	300	6.0	220	4.1	110	3.0		
16								
17	280	6.2	230	3.5	120	2.5		
18								
19	240	6.4					3.0	
20								
21	260	5.7					3.5	
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15 Mc. Manual operation.
Median values.

Table 70

Campbell I. (52.5°S, 169.0°E) October 194[illegible]

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05	280	3.6						
06								
07	275	4.6	200	3.8	110	2.5		
08								
09	320	4.9	200	4.2	100	2.9		
10								
11	300	5.8	200	4.3	100	3.0		
12	305	6.0	200	4.3	100	3.1		
13	300	5.9	200	4.2	100	3.0		
14								
15	300	5.5	200	4.0	100	2.8		
16								
17	250	5.6	220	3.3	130	2.2		
18								
19	240	5.9						
20								
21	280	4.5						
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15 Mc. Manual operation.
Median values.

Table 71

Campbell I. (52.5°S, 169.0°E) September 1944

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	250	3.8				2.1		
08								
09	300	4.5	210	3.8	120	2.6		
10								
11	300	4.8	200	4.0	120	2.8		
12	300	4.9	200	4.1	120	2.8		
13	300	5.2	210	4.0	120	2.7		
14								
15	285	5.1	220	3.6	125	2.6		
16								
17	240	4.9						
18								
19	270	4.2						
20	285	3.4						
21								
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 72

Campbell I. (52.5°S, 169.0°E) August 1944

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	280	3.2						
08								
09	290	4.3	245	3.3				
10								
11	300	4.5	230	3.6				
12	300	4.7	245	3.7				
13	300	4.8	250	3.6				
14								
15	290	4.7	235	3.1				
16								
17	280	4.3						
18								
19	320	3.2						
20	350	2.8						
21								
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 73

Campbell I. (52.5°S, 169.0°E) July 1944

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	270	3.1						
09	250	3.7		2.5				
10								
11	290	4.2	220	3.2				
12	300	4.5	230	3.3				
13	290	4.4	240	3.3				
14								
15	265	4.5	230	2.6				
16								
17	300	3.2						
18								
19	400	2.3						
20								
21								
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 74

Campbell I. (52.5°S, 169.0°E) June 1944

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	300	2.6						
09	250	3.7	220	2.7				
10								
11	280	4.1	230	3.0				
12	285	4.2	230	3.2				
13	285	4.4	250	3.2				
14								
15	260	4.4						
16								
17	280	3.3						
18								
19		2.4						
20								
21								
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 75

Campbell I. (52.5°S, 169.0°E) May 1944

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	300	2.8						
08								
09	250	3.9		2.4				
10								
11	300	4.4	230	3.3				
12	300	4.6	215	3.2				
13	300	4.6	230	3.2				
14								
15	250	4.6						
16								
17	260	3.8						
18								
19	310	2.9						
20	380	2.5						
21								
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

Table 76

Campbell I. (52.5°S, 169.0°E) April 1944

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	220	3.4						
08								
09	248	4.2	200	3.4				
10								
11	285	4.1	200	3.5				
12								
13	250	4.5	210	3.5				
14								
15	250	4.6	220	3.4				
16								
17	230	4.4						
18								
19	280	4.0						
20	255	3.5						
21								
22								
23								

Time: 165.0°E.
Length of time sweep: 1.0 Mc to 15.0 Mc. Manual operation.
Median values.

TABLE 77
IONOSPHERE DATA- I

Washington, D.C. (Location) — Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $h'F_2$ in km for October (Month) 1945

Records measured by: J.M.C. K.W.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	(270)	260	260	240	240	270	280	250	(300)K	310K	360K	370K	360K	350K	320K	310K	280K	250	230	230	230	250	(280)	[290]A
2	[300]A	290	290	280	240	(280)	240	260	250	250	300	300	290	280	290	290	260	240	220	(220)	260	260	240	250
3	260	260	260	230	260	260	240	240	250	260	270	280	300	280	290	270	250	230	220	220	220	270	250	240
4	280	270	260	270	260	230	240	240	230	250	260	290	270	270	270	260	240	(260)	220	220	240	260	250	260
5	260	260	(240)	250	250	260	240	240	240	240	240	280	290	280	290	270	250	230	230	230	230	250	270	270
6	270	270	250	240	270	250	250	230	260	260	280	300	280	280	280	260	250	240	210	220	230	260	250	260
7	260	260	250	230	230	240	250	220	260	240	280	270	280	280	270	260	250	240	230	220	210	220	220	240
8	270	280	270	260	260	240	250	220	230	(240)	(250)	270	290	260	260	250	240	230	220	210	260	260	250	260
9	270	300	280	280	280	270	250	230	250	280	310	300	280	280	270	260	250	230	220	240	240	260	260	260
10	260	260	250	250	240	240	240	230	(250)	240	260	280	280	260	280	260	250	230	210	210	240	260	250	250
11	250	270	250	250	230	230	230	220	250	230	250	280	280	280	270	(260)	250	230	210	220	230	250	260	260
12	270	270	280	280	260	240	240	230	260	270	300	320	(270)	260	270	250	260	240	220	240	260	230	260	270
13	260	270	260	250	250	240	240	210	230	(250)	250	260	250	260	260	250	240	220	210	230	240	260	260	250
14	260	270	260	280	280	250	240	220	240	240	240	280	260	260	260	250	(260)	220	210	250	220	240	260	260
15	270	280	260	230	240	230	240	220	(250)	230	240	250	260	280	250	250	230	220	220	220	240	260	260	250
16	260	280	270	260	250	250	260	230	250	240	270	320	(280)	250	260	260	230	230	210	250	240	250	260	(290)
17	260	[280]A	280	270	240	260	250	230	240	(260)	[270]A	260	250	[260]C	250	240	240	220	230	250	240	250	250	250
18	270	270	270	250	(260)	(230)	(260)	230	230	260	250	270	260	250	250	250	240	220	210	230	230	230	250	240
19	270	260	260	240	230	240	230	230	(250)	240	240	280	270	250	250	250	230	220	220	230	250	250	260	250
20	240	240	220	250	220	260	250	220	230	240	240	250	240	250	250	240	230	220	210	220	220	230	250	240
21	260	250	250	240	230	220	230	220	220	230	240	250	(250)	240	250	250	(240)	220	210	220	220	240	250	250
22	260	250	240	240	230	230	240	220	210	230	(240)	(250)	260	260	260	230	220	220	220	220	240	260	250	260
23	260	280	270	260	240	240	240	220	240	230	250	250	270	270	260	240	230	210	220	240	260	290	280	300
24	300	260	250	240	230	260	280	240	260	290	240	290	260	280	270	260	250	220	240	230	260	300	320	350
25	300	250	220	210	250	(260)	320	240	240	250	240	260	270	270	(260)	250	230	230	230	240	260	(280)	(280)	280
26	(300)	(280)	260	260	260	270	260	250	240	260	250	280	270	270	260	240	230	230	230	230	250	(280)	(280)	(280)
27	(280)	(300)	(310)	(300)	270	250	(250)	220	230	250	240	250	270	270	260	250	260	230	260	280	300	350	310	(310)
28	300	260	(270)	(260)	240	250	210	240	230	230	240	250	250	(260)	260	260	240	210	220	240	230	(260)	(270)	290
29	(290)	(270)	240	240	240	(240)	(260)	230	230	230	240	260	260	260	250	250	240	220	210	220	230	240	240	270
30	270	280	280	(280)	250	(250)	(230)	230	210	240	250	270	260	260	250	240	240	220	200	220	220	240	270	260
31	270	260	(260)	250	230	230	230	230	220	230	240	250	260	240	240	240	230	220	210	220	250	260	280	270
Sum																								
Median	270	270	260	250	240	250	240	230	240	240	250	270	270	260	260	250	240	220	220	230	240	260	260	260

TABLE 78
IONOSPHERE DATA- 2

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $f^{\circ}F_2$ in Mc for October (Month) 1945

Records measured by: J.M.C. K.W.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	3.1	(2.9)	3.0	2.9	2.2^{F}	2.2^{F}	3.2	4.5	5.2^{K}	5.1^{K}	5.2^{K}	5.4^{K}	5.4^{K}	5.6^{K}	5.7^{K}	5.7^{K}	5.9^{K}	5.9	5.5	5.3	4.7	3.6	3.3	[3.2]^{A}
2	(3.1)	3.2	3.2	2.9	2.8	2.7	(3.4)	5.2	5.7	(6.2)	6.4	6.9	(7.0)	(7.4)	(7.0)	6.9	(7.7)	(6.8)	6.2	5.5	4.4	4.3	4.1	(3.5)
3	2.7	(3.4)	(3.6)	(3.5)	3.5	(3.4)	3.9	6.0	6.6	6.6	7.2	7.5	7.8	(7.8)	(7.9)	7.9	7.8	7.0	6.7	(6.0)	4.8	4.3	(4.2)	3.7
4	3.2	3.3	3.2	3.0	3.0	2.9	3.9	6.1	6.6	6.6	7.3	8.0	8.4	8.2	8.0	8.2	7.6	7.7	(7.0)	(5.5)	(5.3)	(4.9)	(4.7)	4.3
5	4.2	4.1	3.8	3.3	3.2	(2.8)	3.9	6.9	7.7	(7.0)	7.8	9.0	9.0	9.8	9.4	9.8	(9.5)	8.7	(7.1)	5.5	4.5	(4.0)	(3.2)	(3.6)
6	(3.3)	(3.1)	2.9	2.8	2.6	2.5	3.6	5.7	6.9	7.2	7.2	7.7	7.9	8.3	8.5	8.3	7.9	7.9	(7.4)	5.8	5.0	4.6	(4.4)	4.0
7	4.3	3.8	3.9^{F}	(3.6)	3.1	(2.9)	3.8	5.8	6.9	7.0	8.1	8.5	9.0	9.4	9.0	8.8	8.4	7.4	(7.5)	7.1	6.5	(6.2)	4.8	3.9
8	3.8	4.0	3.8	3.8	3.7	4.1	3.9	6.2	7.8	7.2	8.6	9.9	10.4	11.0	10.3	9.7	8.6	8.2	7.4	5.5	4.8	4.6	4.3	4.0
9	3.7	(3.5)	3.4	(3.1)	(3.4)	3.1	3.5^{F}	5.4	(6.0)	6.2	7.0	7.7	8.0	8.0	7.5	7.7	7.1	6.7	(5.8)	5.2	4.5	4.2	3.9	3.8^{F}
10	3.8	3.6^{F}	3.5^{F}	3.4^{F}	3.4^{F}	3.6	4.0	(5.7)	6.2	6.3	7.6	7.8	7.8	7.5	8.0	8.0	8.0	7.8	6.8	(5.6)	4.8	(4.5)	4.4	4.0
11	3.9	3.8	3.7^{F}	3.7	3.5^{F}	3.4	4.0	6.2	7.0	7.0	8.0	8.4	9.1	8.8	8.8	8.8	9.3	8.6	(7.4)	5.7	(4.6)	(4.5)	4.3	4.4
12	3.9	3.9^{F}	3.3^{F}	3.5^{F}	3.9^{F}	3.7^{F}	3.6^{F}	6.0^{F}	5.8	7.2	7.1	9.9	[10.3]^{C}	9.6	9.4	9.2	8.8	8.6	8.1	6.8	6.2	5.4	4.9	5.0
13	4.6	4.3	4.2	3.9	1.8^{F}	(2.9)^{F}	(3.4)^{F}	5.5^{F}	6.9	7.7	8.8	9.2	9.6	10.2	10.2	10.1	9.4	8.4	7.1	(6.7)	5.6	5.1	4.8	(4.7)
14	(3.8)^{F}	3.6^{F}	3.5^{F}	3.2^{F}	3.0^{F}	2.7^{F}	3.2^{F}	5.8	7.0	7.3	7.9	9.0	9.3	10.0	10.1	10.0	9.8	8.8	7.5	6.2	5.5	4.4	4.4	4.1
15	3.7^{F}	3.7^{F}	(3.7)^{F}	3.5^{F}	(3.4)^{F}	3.2	(3.3)^{F}	6.0	(7.2)	7.6	8.5	9.0	9.4	9.7	10.7	10.2	(9.4)	8.4	7.8	6.2	5.2	4.8	4.6	4.2
16	4.0	3.6^{F}	3.6^{F}	3.7^{F}	3.5^{F}	3.1^{F}	(3.5)^{F}	5.5	6.6	7.2	8.2	10.1	(10.4)	10.0	9.4	9.5	8.2	7.6	5.9	5.7	5.1	(4.3)^{F}	(3.7)^{F}	(3.5)^{F}
17	3.4^{F}	[2.8]^{A}	(2.3)^{F}	(2.1)^{F}	1.8^{F}	1.7^{F}	(2.5)^{F}	(5.5)	7.1	(8.0)	7.8	8.8	9.4	[10.3]^{C}	10.5	9.6	(9.3)	8.5	7.0	5.9	5.6	(4.7)	(4.6)^{F}	4.0
18	3.7^{F}	3.7	3.5^{F}	3.5^{F}	3.3^{F}	3.0^{F}	3.4^{F}	(6.2)	7.1	8.4	9.0	9.5	10.5	9.8	9.2	9.7	9.1	8.6	7.3	6.2	5.2	4.8	(4.5)	(4.0)
19	(3.8)^{F}	(3.9)^{F}	(4.0)^{F}	(3.8)^{F}	3.7^{F}	3.8^{F}	3.5^{F}	6.4	(7.5)	8.0	8.4	9.8	9.8	10.0	10.2	10.2	10.0	8.9	8.0	(6.5)	6.7	(6.0)	5.8	5.9
20	5.6	5.0	4.6	4.0	3.5^{F}	3.3	3.5	(7.0)	9.2	8.7	9.4	10.4	10.0	9.4	10.0	10.2	9.7	8.5	7.6	6.8	5.8	4.7	4.5	4.2
21	4.1	3.8	3.8	3.8	3.7	3.1	3.5	6.2	7.4	8.2	9.2	10.0	10.2	10.2	10.2	10.7	9.6	8.4	7.2	6.8	(5.4)	4.9	4.7	4.6
22	4.3	3.9	3.7	3.6	3.5	3.2	3.5^{F}	6.8	7.8	8.0	9.0	9.6	11.4	(12.2)	(12.6)	11.4	(9.6)	8.2	(6.8)	6.4	6.0	6.0	5.6	4.8
23	4.6	4.5	4.2	3.7^{F}	3.6^{F}	3.9	3.4	6.0	6.8	7.4	8.0^{H}	8.3	9.8	10.2	10.7	(10.4)	9.4	8.2	6.4	5.5	4.7	4.7	4.5	4.5
24	4.5	4.6	4.2	4.3	3.1	(3.0)^{F}	(2.6)^{F}	4.8^{F}	5.4^{F}	6.4^{F}	7.3	8.4	9.4	9.6	9.2	10.0	(10.2)	(9.4)	8.7	7.8	5.0	(4.8)	3.8^{F}	(3.0)^{F}
25	(3.0)^{F}	(4.5)^{F}	3.5^{F}	(2.2)^{F}	2.0^{F}	(1.5)^{F}	(2.1)^{F}	5.6	7.2	8.0	8.4	8.6	9.8	9.5	10.0	10.0	[9.8]^{C}	(9.2)	7.2	5.6	4.5	4.0	4.0	3.8
26	3.8	3.5	3.3	(2.8)	2.9	2.4	(2.2)	4.9	5.7	6.8	7.2	8.6	8.8	[8.9]^{C}	9.0	8.8	8.7	8.0	6.6	5.8	4.3^{F}	3.8^{F}	3.5^{F}	3.5^{F}
27	3.3^{F}	3.2^{F}	(3.1)^{F}	2.9	(2.8)^{F}	2.7^{F}	(2.6)	5.9	7.2	7.6	8.1	8.4	9.2	10.2	10.2	10.0	10.2	9.2	8.2	6.8	6.2	(4.2)^{F}	(4.1)^{F}	(3.5)^{F}
28	(3.6)^{F}	(3.2)^{F}	3.3^{F}	(3.4)^{F}	(3.4)^{F}	3.4^{F}	3.6^{F}	6.4	8.0	9.0	9.8	9.6	10.8	10.2	11.4	10.4	10.8	10.0	8.4	7.2	6.0	4.7^{F}	4.8^{F}	4.2^{F}
29	(4.0)^{F}	4.4^{F}	4.1^{F}	3.5^{F}	3.3^{F}	(2.9)^{F}	3.2^{F}	6.5	8.2	(9.1)	9.2	10.0	10.6	10.5	11.0	(10.4)	(10.4)	9.0	(8.3)	6.8	(5.4)^{F}	(4.2)	(4.0)	3.8
30	(3.4)^{F}	3.3^{F}	3.4^{F}	(3.2)	(3.1)	(3.0)^{F}	2.5^{F}	5.5	7.2	8.6	9.0	(10.4)	(11.0)	10.4	10.6	(10.4)	(10.2)	(9.2)	7.0	6.0	(4.9)	3.8^{F}	(3.6)	3.3^{F}
31	(3.5)^{F}	3.5^{F}	3.5^{F}	(3.3)	3.2	2.9	2.9	6.4	7.5	8.6	9.4	9.5	10.0	10.4	(10.2)	(10.2)	10.2	8.4	7.0	5.7	4.7	4.1^{F}	4.2	4.0^{F}
Sum																								
Median	3.8	3.7	3.5	3.5	3.3	3.0	3.5	6.0	7.0	7.3	8.1	9.0	9.4	9.8	10.0	9.8	9.4	8.4	7.2	6.0	5.1	4.6	4.4	4.0

TABLE 79
IONOSPHERE DATA - 3

Washington, D.C. Ionosphere Station
(Location)

National Bureau Of Standards
(Institution)

Half hourly values of $f^{\circ}F_2$ in $\left\{\begin{matrix} Mc \\ Mkc \end{matrix}\right.$ for October (Month) 1945

Records measured by J.M.C. K.W.S.

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	3.1	2.9	2.9	2.5	2.2	2.2	4.0	4.9	(3.2)^{K}	5.1^{K}	5.3^{K}	5.6^{K}	5.6^{K}	5.8^{K}	5.1^{K}	5.9^{K}	5.7^{K}	5.7	5.3	5.1	4.2	3.4	3.3	3.2
2	3.3	(3.3)	3.4	2.9	2.7	2.7	4.4	6.0	6.2	(7.3)	6.6	[7.2]^{C}	(7.4)	7.0	7.2	(7.5)	6.6	6.1	5.6	4.8	4.3	4.1	3.8	(3.5)
3	3.4	(3.5)	3.5	3.4	3.4	(3.4)	5.0	6.2	6.3	6.6	7.4	(7.6)	8.0	(8.0)	(7.6)	(7.6)	(7.6)	6.8	(6.1)	5.3	(4.5)	(4.2)	4.0	3.4
4	3.3	3.2	3.1	3.0	3.0	3.0	5.1	6.4	6.7	7.2	7.4	8.2	8.2	8.0	8.0	8.0	7.7	7.4	7.0	5.5	(5.1)	(5.2)	(4.5)	4.2
5	4.1	3.8	(3.6)	3.3	3.0	(2.8)	5.1	7.5	7.8	[7.4]^{C}	8.2	9.4	9.4	[9.7]^{C}	9.2	9.8	7.0	7.6	6.5	4.7	(4.2)	3.9	(3.5)	(3.4)
6	3.2	3.1	2.9	(2.7)^{J}	2.6	2.4	5.1	6.6	7.4	6.9	7.4	7.9	8.1	8.5	8.6	8.1	7.9	(7.8)	6.5	(5.7)	4.6	4.7	4.3	4.2
7	4.0	3.8	3.6	3.5	(2.9)	2.9	5.1	6.4^{H}	6.7	7.6	8.4	8.5	(9.0)	9.2	9.2	8.9	8.1	7.7	8.2	(6.6)	(6.0)	5.3	(4.4)	3.8
8	3.8	3.8	3.8	3.6	3.6	3.5	5.0	(7.0)^{J}	(7.2)	7.6	9.6	10.0	11.0	10.6	10.2	9.0	8.4	8.0	6.5	4.8	4.8	4.6	4.1	3.8
9	3.5	3.4	3.4	(3.1)	3.4	3.2	(4.6)	5.7	(5.8)	6.5	7.4	8.1	8.0	7.6	7.6	7.4	7.0	6.6	5.5	4.8	4.4	4.1	3.8^{F}	3.8
10	3.7^{F}	3.5^{F}	3.4^{F}	3.4^{F}	3.5^{F}	3.5	5.4	6.0	(6.4)	6.8	7.5	7.7	7.6	7.8	8.2	(8.0)	7.8	7.4	6.0	5.1	4.2	4.5	4.2	3.9
11	3.8	3.7^{F}	3.7^{F}	3.6^{F}	3.5^{F}	3.5	5.1	6.7	7.0	8.5	7.6	8.6	9.0	8.4	8.7	(9.0)	9.2	6.1	6.1	5.3	(4.6)	(4.2)	(4.2)	4.2
12	3.9^{F}	3.5^{F}	3.5^{F}	3.6^{F}	3.8^{F}	3.3^{F}	4.2	5.2	6.0	7.4	(8.4)	10.5	10.4	9.2	9.5	8.8	8.9	8.5	7.4	(6.6)	5.8	(4.9)	5.0	4.8
13	4.7	4.2	4.1	3.8	1.8^{F}	1.9^{F}	(4.5)^{F}	6.4	7.2	8.6	9.1	9.5	10.0	10.1	10.2	10.0	8.8	8.0	7.0	6.0	5.6	(4.8)^{F}	(4.8)^{F}	3.9^{F}
14	3.8^{F}	3.5^{F}	3.3^{F}	3.2	2.9^{F}	(2.5)^{F}	4.9	6.0	7.5	8.1	7.9	9.6	9.8	9.8	10.2	9.8	9.2	8.4	6.9	(6.1)	4.9	4.5	4.3	3.6^{F}
15	3.5^{F}	3.9^{F}	3.6^{F}	3.5^{F}	3.2^{F}	(2.7)^{F}	5.2	6.6	8.4	8.4	(9.2)^{J}	9.0	9.7	10.4	10.5	10.1	9.0	(8.2)	7.1	(5.7)	5.0	4.7	4.2	4.0
16	3.8^{F}	3.5^{F}	3.6^{F}	3.6^{F}	3.2^{F}	2.8^{F}	(4.4)^{F}	5.8	7.2	7.4	8.8	10.9	11.0	9.5	9.0	8.6	8.0	7.1	5.8	5.9	(4.8)	3.6^{F}	(3.5)^{F}	3.5^{F}
17	(3.2)^{F}	2.3^{F}	(2.1)^{F}	2.0^{F}	1.8^{F}	1.7^{F}	(4.5)	6.2	8.2	7.8	(9.0)	9.6	10.0	[10.5]^{C}	10.0	9.2	9.2	7.7	6.2	(5.6)	(4.6)	(3.7)^{F}	(4.0)	3.8^{F}
18	3.8	3.6^{F}	3.5^{F}	3.2^{F}	3.1^{F}	2.7^{F}	4.6^{F}	6.4	7.6	8.8	9.0	10.0	10.2	9.8	9.2	9.6	9.1	8.0	6.8	5.5	(4.8)	4.6	(4.3)	3.9
19	(3.9)^{F}	(3.8)^{F}	4.0^{F}	3.8^{F}	(3.7)^{F}	3.4^{F}	5.0	6.8	7.5	8.4	8.7	9.5	10.0	10.1	10.1	10.2	(9.3)	8.8	7.6	(6.2)	6.6	5.4	5.7	5.8
20	5.4	5.0	4.2	3.7	(3.4)	3.2	5.2	7.5	(8.5)	8.1^{H}	10.0	10.8	9.6	9.8	10.2	(10.3)	8.6	8.6	7.6^{J}	6.0	5.1	4.7	4.4	4.1
21	3.9	3.8	3.7	3.6	3.3	3.0	5.0	7.2	8.0	8.8	9.8	10.0	10.5	(10.2)	10.2	10.5	9.2	7.5	6.6	(6.0)	5.1	4.7	4.6	4.4
22	4.0	3.8	3.5	3.5	3.4	3.2	5.2	8.2	8.0	7.9	9.5	10.8	(12.1)	(12.0)	(12.3)	(11.0)	8.8	7.9	6.8	6.0	6.1	6.0	5.3	4.8
23	4.4	4.4	3.9	3.7^{F}	3.4^{F}	2.9	4.9	6.4	7.6	8.1	8.4	9.2	9.8	10.2	10.8	9.9	(9.0)	7.6	5.8	4.8	4.8	4.7	(4.3)	4.3
24	4.7	4.5	4.2	4.1	2.9	2.2^{F}	3.5^{F}	4.7	5.8	7.3	7.7	8.8	9.3	9.3	10.0	10.0	(10.0)	(8.7)	8.4	6.5	(5.2)	(4.7)	3.2^{F}	(3.0)^{F}
25	3.5^{F}	3.4^{F}	(3.2)^{F}	(2.1)^{F}	(1.8)^{F}	1.4^{F}	3.8^{F}	6.7	7.2	8.4	8.4	9.4	9.8	9.9	9.8	10.2	(9.2)	8.4	(6.2)	5.2	4.2	3.8	3.8^{F}	3.8
26	3.6	3.4	3.0	(2.6)^{J}	(2.1)^{J}	(2.2)	3.5	5.4	6.2	6.8	8.0	9.0	8.8	(9.0)	9.2	8.8	8.4	7.0	6.1	4.7^{F}	4.0^{F}	(3.7)^{F}	3.3^{F}	3.2^{F}
27	3.3^{F}	3.0^{F}	3.0^{F}	(2.9)	2.6	(2.5)	(4.3)	6.6	7.5	7.8	8.4	8.6	9.6	10.5	10.2	10.2	10.0	8.9	7.4	6.2	(6.0)	(4.1)^{F}	(3.7)^{F}	4.1^{F}
28	3.3^{F}	3.3^{F}	3.4^{F}	(3.4)^{F}	(3.4)^{F}	(3.7)^{F}	4.8^{F}	(7.1)	9.4	9.0	(9.8)	10.0	10.4	11.0	10.8	10.1	11.2	9.0	7.5	6.5	5.5	4.5	4.6^{F}	4.2
29	(4.1)^{F}	4.4^{F}	4.1^{F}	3.4^{F}	3.5^{F}	(2.4)^{F}	4.6^{F}	7.4	9.5	9.0	9.2	10.5	10.4	10.8	10.6	10.4	9.5	8.8	6.6	5.8	(4.7)^{F}	(4.4)^{F}	3.8^{F}	3.4^{F}
30	3.4^{F}	3.2^{F}	(3.4)	(3.2)^{J}	(3.1)	2.9^{F}	3.8^{F}	6.6^{F}	8.0	9.0	(9.4)	10.4	(10.5)	10.5	10.6	10.5	(9.8)	(6.6)	6.0	5.5	4.5	3.8^{F}	3.5^{F}	3.5^{F}
31	3.5^{F}	3.3^{F}	3.5^{F}	3.2	3.1	2.9	4.2	7.2	7.2	8.8	9.6	9.6	(9.7)	10.2	10.0	10.4	(9.4)	7.3	5.8	(5.0)	4.2	4.2^{F}	4.1^{F}	4.0^{F}
Sum																								
Median	3.8	3.5	3.5	3.4	3.1	2.9	4.8	6.4	7.2	7.8	8.4	9.4	9.7	9.8	10.0	9.8	9.0	7.8	6.5	5.6	4.8	4.5	4.2	3.9

TABLE 80
IONOSPHERE DATA - 4

Washington, D.C. (Location) — Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $h'F_1$ in {mm / km} for October (Month) 1945

Records measured by: J.M.C., K.W.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								200	220K	220K	190K	200K	190K	230K	220K	220K	220K	240						
2								(240)	220	220	240	220	200	210H	220	220	220	A						
3									A	220	210	220	(200)	240	230	220	230							
4									210	200	200	200	200	210	220	220	230	240						
5									230	200	210	200	210	240	220	230	240							
6									230	210	210	200	220	220	220	230	220							
7									220	210	220	200	210	210	220	230	(220)							
8									A	(230)	(200)	210	220	210	220	230	230							
9									240	[220]A	200	(220)	220	210	220	220	220							
10									220	200	210	200	210	210	210	230	230							
11									230	210	210	200	200	210	210	240	C							
12									210	210	210	[220]C	230	210	220	230	230							
13									210	220	230	210	200	210	220	230	230							
14									210H	200	200	210	210	210	220	220	230							
15									(220)	210	210	210	210	210	240	240	(220)							
16									220	[210]A	200	220	(220)	210	230	240	220							
17									A	A	A	(220)	190H	[210]C	230	230	220							
18									(210)	200	210	210	220	(220)	220	230	230							
19									A	220	210	220	220	210	210	230	220							
20									200H	200H	190	190H	230	200	220	230								
21									A	210	210	200	220	220	220	230	230							
22									L	200	200	190H	240	220	[220]C	220	A							
23									230	220	200	220	220	220	220	230								
24									230	210	210	200	210H	210	230	(240)	230							
25									230	220	210	220	220	230	220	(220)	C							
26									230	210	210	(220)	210	210	220	200								
27									220	230	220	210	210	200	230	230								
28										220	190H	190	220	220	230	220								
29										220	200	200	210	220	240	230	230							
30										220	210	210	220	[220]C	210	230								
31										200	200	220	220	220	210	230								
Sum																								
Median									220	210	210	210	210	210	220	230	230							

TABLE 81
IONOSPHERE DATA - 5

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of f^0F_1 in Mc for October (Month) 1945

Records measured by: J.M.C. K.W.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								(3.1)	3.9 K	4.2 K	4.3 K	4.5 K	4.5 K	4.5 K	4.4 K	4.2 K	3.9 K	L						
2								L	L	4.1	(4.6)	4.6	[4.6]	4.6 H	4.5	4.3	(3.9)	A						
3									A	(4.2)	4.7	4.6	4.8	4.6	[4.4] L	L	L							
4									L	4.2	4.7	4.8	4.7	(4.7)	(4.7)	4.2	L	C						
5									(3.9)	L	L	(4.8)	4.9	[4.8] L	(4.8)	4.2	(3.8)							
6									L	(4.0)	(4.6)	4.7	4.9	4.7	(4.3)	(4.4)	[3.8] L							
7									L	L	L	(4.6)	4.9	4.8	(4.7)	[3.9] L	[3.4] L							
8								L	A	L	L	(4.8)	(4.9)	4.7	(4.4)	(4.1)	(3.6)							
9									L	(4.1)	4.6	(4.7)	4.8	4.6	(4.5)	(4.2)	L							
10									C	(4.0)	4.4	(4.9)	4.7	4.7	L	L	L							
11									L	L	(4.1)	(5.0)	4.4	L	(4.6)	L	L							
12									L	L	(4.3)	[4.7] C	4.7	[4.5] L	[4.4] L	L	L							
13									L	L	[4.5] L	4.6	[4.9] L	[4.8] L	L	L	L							
14									(3.7) H	3.7	L	4.7	4.7	[4.6] L	4.4	L	C							
15									C	[3.9] L	(4.4)	L	L	L	L	L	L							
16									L	(4.3)	[4.5] L	4.8	(4.7)	(4.6)	(4.4)	L	L							
17									A	A	A	L	LH	C	L	L	L							
18									L	L	L	L	L	L	4.5	L	L							
19									A	L	(4.4)	[4.7] C	(4.8)	L	L	L	L							
20									LH	LH	L	LH	L	L	L	L								
21									AL	L	L	L	L	L	L	L								
22									L	L	L	LH	L	(4.6)	C	L	L							
23									L	L	4.2	L	L	L	L	L								
24									L	4.3	[4.7] L	(4.9)	(4.7) H	4.6	L	L	L							
25									L	L	L	(4.5)	L	L	L	(3.5)	L							
26									L	L	L	(4.7)	[4.8] L	L	L	L								
27									L	L	L	L	L	L	L	L								
28										L	L	(4.4)	L	L	L	L								
29										L	L	L	L	L	L	L	L							
30										L	(4.4)	L	(4.9)	[4.7] C	(4.3)	L								
31										(3.7)	(3.8)	L	L	L	L	L								
Sum																								
Median										4.1	4.4	4.7	4.8	4.6	4.4	4.2	3.8							

TABLE 82
IONOSPHERE DATA-6

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of h'_E in km for October (Month) 1945

Records measured by: J.M.C. K.W.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								110	110^K	110^K	110^K	110^K	110^K	110^K	110^K	110^K	110^K	120						
2								120	120	120	120	110	110	120	110	110	110	120						
3								110	120	110	110	110	110	110	110	110	110	110						
4									110	100	110	100	(100)	110	110	110	110	120						
5								110	110	110	110	110	110	110	[110]^C	110	100	120						
6								110	110	110	110	110	110	110	110	100	100	120						
7								110^H	110	110	110	110	110	110	110	100	110	120						
8								110	110	110	(100)	100	100	100	100	90	100	100						
9								120	(110)	110	110	110	100	100	100	100	100	100						
10								120	110	110	110	110	110	110	110	100	100	100						
11								120	110	110	110	110	110	100	110	110	110	120						
12								120	110	110	110	110	110	110	110	110	110	120^H						
13								(100)	110	110	110	100	100	100	100	100	100^H	(100)						
14								110	110	110	110	110	110	110	110	100	100	110						
15								110	110	110	110	110	110	110	110	110	110	110						
16								120	110	110	110	120	110	110	120	120	100	110						
17								110	110	110	110	100	100	[100]^C	100	110	110	100						
18								110	110	110	110	110	110	110	110	110	110	(120)						
19								110	100	120	110	(110)	110	(120)	110	100	110	110						
20								100	110	110	110	110	110	100	110	(100)	100	100						
21								110^H	110	110	110	110	110	110	100	100	100	100						
22								110	110	110	110	110	110	110	110	110	120	130						
23								110	120	120	110	110	110	120	120	(110)	110	140						
24								120	(110)	110	110	110	120	120	110	(110)	(110)	(140)						
25								120	100	120	(110)	(130)	(120)	[110]^C	120	100	C							
26								(130)	110	110	110	110	110	110	110	110	110	110						
27								(120)	(110)	120	110	110	110	110	120	100	120	120						
28								110	110	120	110	120	120	110	120	110	100	(100)						
29								110	110	110	100	110	110	110	(120)	110	120	100						
30								120	110	110	110	110	100	110	100	100	100	100						
31								110	100	100	100	110	100	110	110	100	100	100						
Sum																								
Median								110	110	110	110	110	110	110	110	110	110	110						

TABLE 83

IONOSPHERE DATA - 7

Washington, D.C (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of f°E for October (Month) 19[illegible]

Records measured by: J.M.C. K.W.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								(2.1)	[2.8]K	C K	A K	A K	A [illegible]	B K	[3.1]A	[illegible]	[illegible]	[illegible]						
2								A	A	A	[3.4]A	A	A	B	E	[illegible]	[illegible]	A						
3								A	A	A	A	B	[3.6]A	[3.5]A	[3.4]A	[illegible]	[illegible]	(2.[illegible]						
4								(2.2)	2.7	(2.9)	(3.1)	B	B	B	[illegible]	[illegible]	2.7	2.0						
5								2.1	A	B	A	A	A	B	B	A	[illegible]	[illegible]						
6								(2.1)	(2.7)	B	B	B	A	A	[illegible]	A	(2.5)	1.9						
7								1.9H	A	(3.1)	A	B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
8								A	A	[illegible]	B	B	B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
9								2.0	A	[illegible]	A	A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	A						
10								(2.0)	(2.3)	(3.0)	B	A	B	[illegible]	A	(3.0)	(2.5)	1.9						
11								(2.0)	[2.6]B	(3.0)	B	(3.4)	B	A	E	(2.8)	(2.9)	1.8						
12								(2.0)	2.5	[illegible]	[illegible]	[illegible]	B	B	B	[2.9]B	[illegible]	1.7H						
13								(1.9)	2.4	A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[3.0]A	2.9	2.3H						
14								(1.9)	(2.4)	[illegible]	[illegible]	[illegible]	E	B	(3.1)	(2.9)	2.4	A						
15								1.9	(2.5)	[illegible]	[illegible]	[illegible]	B	A	A	A	A	[illegible]						
16								2.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	B	(3.4)	2.4	(2.3	A						
17								[1.8]F	[illegible]	A	[illegible]	A	B	C	A	2.8	2.8	[illegible]						
18								(1.9)	[illegible]	[illegible]	[illegible]	A	B	[3.6]A	[2.9]A	(2.7)	2.4	(1.6)						
19								A	[illegible]	2.7	3.1	(3.4)	(3.4)	(3.2)	[3.1]B	(2.9)	(2.4)	(1.7)						
20								(1.8)F	[illegible]	(2.8)	(2.9)	(3.1)	[3.5]A	3.4	(3.1)	2.9	(2.4)	A						
21								1.8H	(2.5)	(2.9)	[3.1]B	(3.3)	[3.4]B	[3.3]A	(3.2)	2.9	2.4	A						
22								(1.9)F	(2.4)	(2.9)	[3.1]A	(3.3)	A	B	C	2.8	2.4	B						
23								A	A	A	A	[3.3]A	(3.5)	[3.3]A	(3.1)	2.9	(2.4)	A						
24								(1.8)	2.4	(2.7)	3.0	3.3	(3.3)	3.3	3.1	2.8	B	1.8						
25								2.0	(2.5)	2.8	(3.0)	B	B	C	A	C	C							
26								B	(1.9)	2.9	A	A	A	A	(3.0)	(2.9)	B	A						
27								[1.8]A	(2.4)	(2.9)	B	(3.4)	[3.5]A	[3.4]A	3.2	(2.9)	(2.5)	(1.6)						
28								C	C	A	(3.0)	[3.2]B	[3.4]C	3.3	A	C	C	C						
29								C	A	A	A	A	A	B	B	(2.9)	(2.4)	A						
30								(1.8)	A	C	A	C	A	C	(3.1)	2.6	2.3	A						
31								(1.9)	[2.4]B	(2.8)	(3.1)	(3.2)	3.3	(2.9)	A	A	A	A						
Sum																								
Median								1.9	2.4	2.9	3.1	3.3	3.4	3.3	3.1	2.9	[illegible]	1.8						

TABLE 84
IONOSPHERE DATA - 8

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of E_s in {Mc / km} for October (Month) 1945

Records measured by: J.M.C. K.W.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	2.7 120	2.4 110	2.4 120	2.4 100	2.4 100	2.5 100	4.8 110	6.5 110	3.5 120	3.7 120	5.1 110	4.4 110	3.7 100		4.9 110	4.0 110	3.6 120	3.4 120	2.7 120	3.6 110	2.6 110	2.7 110	4.0 110	4.2 110
2	(4.0)M 100M	3.3 110	3.9 110	3.9 110	3.4 120	3.5 110	3.4 110	4.0 110	4.2 120	4.2 110	4.4 120	4.3 110	4.3 110			4.0 110	3.9 110	4.0 120	3.4 110	3.5 110	3.4 110	2.4 100		
3	2.8 110	2.4 100	3.4 110	3.4 110	2.9 110	2.4 110	(2.4) 100	4.0 110	4.6 110	4.6 110	4.1 110	(3.9) 110	4.2 110	4.1 110	4.3 110	4.2 120	3.6 110	2.3 120	2.9 100	2.3 100		2.3 110	2.2 110	2.9 110
4	2.9 110	2.7 110	2.7 100	2.9 110	3.0 110	3.6 110	3.6 110	3.5 110	3.7 110			3.8 100					4.2 120	3.8 110	(2.7) (110)	2.7 120	2.7 100	3.2 110	2.2 110	2.2 100
5				2.2 110	2.3 110	3.9 110	(3.8) 110	4.0 110	3.8 110		3.8 110	3.9 110	3.6 110		(3.8) 110	7.0 110	(3.9) (120)	(2.1) 120	2.6 100	2.3 110	2.3 110	(2.3) 110	(2.9) 110	
6		(3.8) 100		0.9 120	2.4 110	2.4 110	4.2 110	3.7 100	3.7 110	4.2 110	3.4 110	3.7 110	3.7 110	3.6 110	4.3 110	4.1 100	2.7 100	3.9 120	2.2 110	2.3 120	2.2 120	2.3 110	(2.3) 110	2.4 100
7	2.3 110	2.4 110	2.4 120	2.4 100	3.7 110	4.2 100	(5.0) 110	4.1 110	48M 110M	3.8 110	3.7 110	4.2 110	3.7 110	3.9 110	3.8 110	3.7 100	2.3 110	2.3 110	2.2 100	2.4 110	2.4 110	2.8 110	2.3 100	(2.3) 110
8	3.9 110	2.3 110	2.3 110	2.8 110	2.8 100	3.7 100	4.7 110	4.9 100	>4.0 100	3.7 120			4.4 110	4.3 110	4.1 100	4.2 100	2.3 100	3.3 100	2.4 90	1.7 100	2.3 100	3.1 110	(2.3) 110	(1.9) 100
9	2.8 100	2.7 110	2.2 100	1.8 100	2.7 110	2.7 100	4.0 100	4.9 130	4.2 110	5.5 110	(5.1) 110	5.3 110	4.2 110	4.7 110	3.6 110	3.7 100	3.7 100	3.9 100	4.1 100	3.3 90	2.3 90	1.7 100	2.2 100	2.2 100
10			2.3 100	3.2 60	2.4 100	2.2 100	3.8 100	4.0 110	5.3 110			4.3 110		3.9 120	4.0 110	(3.7) 110	4.2 100	3.9 100	2.3 100	2.4 100	2.2 100	2.3 100	2.4 100	2.3 100
11	2.2 100	(2.9) 100	2.4 100	2.3 110	3.9 110	4.0 110	4.0 110	2.8 120	4.9 110	5.5 110		4.1 120	3.9 110	4.5 100	4.2 110	(3.7) 110	3.5 120	2.0 100	4.1 110	(2.2) 110	2.4 100	2.3 100	(2.2) 100	2.2 100
12	2.2 100	2.4 110	(4.0) 110	3.6 110	2.4 100	2.3 100	2.6 90	4.2 110	(3.7) 130	3.9 130	3.4 110			(3.6) 110			2.3 110	2.4 100	3.8 100	2.3 110			2.2 110	2.2 100
13	2.2 100	2.2 110	2.3 100	(2.7) 100	2.3 100	2.3 100	4.0 100	(5.0) 100	5.3 100	5.2 110	3.8 110	3.7 100	3.9 110	4.1 110	3.8 100	3.8 100	(3.7) 100	2.8 100	2.4 100	2.2 110	3.0 110	2.3 100	3.2 100	2.7 100
14	2.4 100	2.2 100	2.3 100	2.7 110	2.9 100	2.8 100	3.9 100	5.0 110	4.0 110	3.8 120	3.8 120	3.7 120		3.9 120	4.0 110	4.0 100	2.8 100	2.9 100	3.9 100	3.8 100	2.7 100	(2.3) 100	2.3 110	2.3 110
15	5.1 100	(2.2) 110	2.4 100	2.4 110	6.1 110	(4.9) 110	(4.3) 120	(4.1) 110	4.7 110	3.9 110	4.2 110	3.8 110	4.1 110	4.0 110	3.8 110	4.5 110	3.8 110	3.9 110	3.9 100	3.9 100	3.8 100	2.7 100	2.7 110	4.0 100
16	(3.8) 110	2.3 110	2.2 100	2.4 110	2.3 120	4.1 120	3.6 100	2.4 110	4.0 110	5.2 110	3.7 110	4.1 120	3.7 110	4.1 120		3.8 130	3.7 110	3.0 110	2.8 100	3.8 110	2.4 100	4.0 110	4.7 110	2.4 110
17	3.1 110	5.3 110	4.0 110	2.3 100	4.1 110	4.1 110	2.7 110	5.0 100	8.4 110	11.0 110	8.6 100	5.3 100			3.8 100	7.8 110	3.7 120	4.0 110	3.0 100	2.9 110	2.3 120	2.3 100	2.8 100	3.7 110
18	(3.4) 110	3.8 110	2.4 110	(2.4) 120	3.9 120	4.2 110	7.0 (100)	5.2 110	4.1 110	5.0 100	4.2 110	5.1 110		4.4 110	5.0 130	2.8 140	2.7 140	2.3 (120)	(2.4) 100	2.3 120	3.0 110	2.4 110	2.3 100	2.3 100
19	2.6 100	(1.1) 110	1.2 120	2.3 100	4.1 110	2.9 110	2.6 110	4.1 100	5.2 100	5.3 120							2.5 110	2.4 110		2.2 120	2.3 110	2.7 110	2.4 110	2.3 110
20	2.7 110	2.8 110	(3.7) 100	2.8 120	3.8 110	3.5 120	4.0 110	5.0 100	3.8 110	4.3 110	4.2 120	3.7 120	4.4 120			2.8 120	3.9 100	4.1 100	2.8 100	2.8 100	2.4 100	2.3 100	2.7 100	2.8 100
21	2.2 100	2.3 110	2.3 100	2.3 100	2.4 100	3.9 100	3.9 110	3.8 110	4.2 110		(5.2) 110	4.0 120		3.6 110	5.0 100	3.8 100	4.1 100	2.8 100	2.7 110	2.2 100	2.4 100			2.3 110
22	2.4 100		3.8 130	2.3 100	2.4 100	2.8 100	(3.3) 100	2.6 110	3.7 110	3.5 110	3.9 110		5.2 110	4.4 110	4.1 110	3.7 120	3.5 120	3.9 100	3.7 110	2.3 110	2.2 110	2.3 110	2.4 120	2.4 110
23	2.3 100	2.4 120	2.4 110	5.0 100	4.0 110	3.7 100	3.9 110	4.1 120	4.9 110	4.8 120	5.2 110	(5.3) 110	3.8 110	3.8 110		5.4 100	2.3 130	1.8 140		2.2 110				
24	2.2 110	2.2 110	2.3 100	43M 110	2.4 110	2.4 110	(3.7) 140	2.1 100		4.0 110	3.8 110	3.7 110	(3.8) 120	3.7 110	4.2 110	(4.2) 110	3.7 120		2.3 110					
25	2.4 120	2.3 110	1.0 110	1.1 120	3.9 120	3.7 120	2.4 110	5.0 110	5.2 100	3.7 110	7.0 120	3.7 140		(4.3) 100	(5.0) 100				2.4 110	2.3 120	(3.3) 110	4.1 110	2.4 110	3.7 110
26	3.6 110	3.8 100	2.4 110	2.3 120	3.6 110	4.2 110	4.1 110	3.9 110	3.8 110	4.9 120	3.9 110	8.2 110	6.4 110	3.8 110	3.8 110	4.0 120	3.6 110	4.7 110	3.7 110	2.9 110	2.9 110	4.0 110	4.3 110	5.0 110
27	4.0 110	3.9 100	4.0 100	>1.5 100	>1.5 100	3.9 100	(3.9) (100)	3.9 110	3.8 110	3.8 110	(8.1) 110	3.8 110	3.8 110	3.9 110	(4.0) 110	5.2 100	3.8 110	(3.7) 100	2.3 120			2.2 120	4.0 130	
28	3.6 110	3.6 110	3.6 100	3.9 110	(1.1) 130		3.8 120	3.8 110	4.2 110	3.8 110	3.8 130	5.1 110		3.8 130	(3.8) 120	3.8 110	4.0 410				4.2 110	9.0M 110M	4.6M 110M	(2.8) 110
29	3.0 110	>1.5 110	1.4 110	1.5 110	3.7 110	4.0 110	7.0 110	5.0 110	4.9 110	3.8 110	4.2 100	3.9 110	4.2 110				1.9 130	1.8 100	(2.5) 100	2.4 100		(2.3) 110	(2.5) 110	2.8 110
30	2.7 110	2.8 110	2.5 100	2.9 110	2.4 110	3.8 120	2.9 110	2.4 110	4.1 100		3.8 110	3.9 110	5.0 100	5.0 100	3.8 100	(3.8) 130	2.7 110	2.5 100	2.4 100	2.3 100	(2.2) 100	3.4 100	2.3 100	2.3 100
31	2.7 100	3.8 100	2.7 100	2.8 100	2.7 110	2.4 110	3.4 100	5.0 100	3.9 100	3.8 120	3.8 100	3.8 100	7.0 120		3.8 110	3.8 100	3.8 100	3.8 100	2.5 100	4.5 110	2.9 100	3.0 100	2.3 100	2.7 100
Sum																								
Median	2.7	2.4	2.4	2.4	2.8	3.6	3.9	4.1	4.1	3.9	3.8	3.9	3.8	3.8	3.8	3.8	3.6	2.8	2.6	2.3	2.4	2.3	2.3	2.3

TABLE 85
IONOSPHERE DATA-9

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F2-MI500 for October (Month) 1945

Records measured by: J.M.C. K.W.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	2.0	(2.0)	2.1	2.1	1.9^{F}	2.0^{F}	2.1	2.2	(2.2)^{K}	2.1^{K}	2.0^{K}	1.9^{K}	2.0^{K}	2.0^{K}	2.1^{K}	2.2^{K}	2.3^{K}	2.3	2.2	2.1	2.3	2.1	(2.0)	A
2	A	1.9	(2.0)	2.1	1.9	2.0	(2.4)	2.3	2.4	(2.2)	2.0	2.1	(2.2)	(2.2)	(2.1)	2.1	(2.2)	(2.3)	2.3	2.2	2.0	2.1	2.0	(2.1)
3	2.1	(2.1)	(2.1)	(2.3)	2.0	(2.1)	2.3	2.5	2.4	2.4	2.0	2.1	2.1	(2.2)	(2.3)	2.2	2.2	2.3	2.2	(2.3)	2.2	2.1	(2.1)	2.2
4	1.9	2.0	2.0	2.0	2.0	2.2	2.3	2.4	2.5	2.3	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.3	(2.3)	(2.0)	(2.1)	(2.0)	(2.0)	2.0
5	2.0	2.0	2.1	2.0	2.1	(2.0)	2.1	2.4	2.4	(2.4)	2.0	2.1	2.1	2.0	2.0	2.1	(2.2)	2.3	(2.2)	2.1	2.0	(2.0)	(2.1)	(1.9)
6	(1.9)	(1.9)	2.0	2.0	1.9	2.0	2.1	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	(2.1)	2.1	2.1	1.9	(2.1)	2.0
7	2.0	2.0	(2.1)^{F}	(2.1)	2.1	(2.0)	2.3	2.6	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.2	(2.0)	2.1	2.1
8	1.9	2.0	1.9	1.9	2.1	2.0	2.1	2.3	2.4	2.0	1.9	2.0	2.0	2.2	2.1	2.2	2.3	2.3	2.2	2.2	2.1	2.0	2.1	1.9
9	1.9	(1.9)	1.9	(2.0)	(1.9)	2.0	2.2	2.5	(2.4)	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	(2.2)	2.0	2.0	2.0	2.1	(2.1)^{F}
10	2.0	(2.1)^{F}	(2.1)^{F}	2.2^{F}	(2.3)^{F}	2.2	2.3	(2.4)	2.3	2.4	2.1	2.2	2.1	2.1	2.0	2.1	2.2	2.2	2.2	2.1	2.2	(1.9)	2.1	2.1
11	2.0	2.0	2.0^{F}	2.0	2.1	2.1	2.3	2.4	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.4	(2.2)	2.2	(2.2)	(2.2)	2.0	2.1
12	2.0	1.9^{F}	(2.0)^{F}	(1.9)^{F}	(2.0)^{F}	(2.1)^{F}	(2.2)^{F}	(2.4)^{F}	(2.4)	2.0	1.7	1.9	C	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9
13	1.9	2.0	2.0	1.9	(2.2)^{F}	(2.0)^{F}	(2.1)^{F}	(2.4)^{F}	2.4	2.1	2.1	2.2	2.0	2.1	2.1	2.2	2.3	2.3	2.3	(1.8)	2.2	2.1	2.1	2.1
14	(2.0)^{F}	(2.0)^{F}	(2.0)^{F}	(2.0)^{F}	2.0	(2.1)^{F}	(2.3)^{F}	2.6	2.5	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.0	2.0	2.1
15	(2.0)^{F}	(2.0)^{F}	(2.0)^{F}	(2.1)^{F}	(2.1)^{F}	2.0	(2.2)^{F}	2.6	(2.3)	2.4	2.3	2.2	2.2	2.1	2.2	2.2	(2.3)	2.3	2.2	2.3	2.2	2.2	2.0	2.1
16	2.1	(2.0)^{F}	(2.0)^{F}	(2.0)^{F}	(2.1)^{F}	(2.1)^{F}	(2.2)^{F}	2.4	2.3	2.2	2.0	1.8	(2.1)	2.1	2.1	2.1	2.3	2.2	2.3	2.1	2.1	(2.2)^{F}	(2.1)^{F}	(2.0)^{F}
17	(2.0)^{F}	A	(1.9)^{F}	(1.9)^{F}	(2.2)^{F}	(2.1)^{F}	(2.1)^{F}	(2.5)	2.3	(2.3)	(2.3)	2.1	2.0	C	2.1	2.2	(2.3)	2.3	2.2	2.2	2.1	(1.9)	(2.1)^{F}	2.1
18	(1.9)^{F}	(1.9)^{F}	(2.0)^{F}	(2.1)^{F}	(2.2)^{F}	(2.0)^{F}	(2.2)^{F}	2.3	2.4	2.4	2.3	2.1	2.2	2.1	2.1	2.2	2.3	2.4	2.2	2.3	2.2	2.2	(2.2)	2.1
19	(2.0)^{F}	(2.0)^{F}	(2.0)^{F}	(2.1)^{F}	(2.1)^{F}	(2.3)^{F}	(2.3)^{F}	2.6	(2.5)	2.2	2.4	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.2	(2.1)	2.0	(2.2)	(2.0)	2.0
20	2.2	2.1	2.1	2.1	2.1^{F}	2.1	2.1	(2.5)	2.6	2.4	2.1	2.2	2.3	2.1	2.1	(2.1)	2.3	2.3	2.3	2.2	2.3	2.1	2.1	2.0
21	2.1	2.0	2.0	2.0	2.2	2.1	2.1	2.4	2.5	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.4	2.3	2.1	2.1	(2.3)	2.2	2.1	2.1
22	2.1	2.0	2.0	2.1	2.2	2.1	2.2^{F}	2.5	2.6	2.4	2.0	2.0	2.2	(2.2)	(2.1)	2.4	(2.3)	2.2	(2.1)	2.0	1.9	2.0	2.0	1.9
23	2.0	1.8	1.9	(2.0)^{F}	(2.2)^{F}	2.0	2.2	2.4	2.4	2.1	(2.2)^{H}	2.3	2.2	2.2	2.1	(2.3)	2.4	2.3	2.3	2.1	2.0	2.0	1.9	1.8
24	1.9	1.9	2.0	2.0	2.1	(1.9)^{F}	(1.9)^{F}	(2.3)^{F}	(2.3)^{F}	2.1^{F}	2.3	2.2	2.1	2.1	2.1	2.0	(2.0)	(2.3)	2.0	2.2	1.8	(1.7)	(1.7)^{F}	(1.6)^{F}
25	(2.1)^{F}	(2.1)^{F}	(2.4)^{F}	(1.9)^{F}	(2.1)^{F}	(2.1)^{F}	(1.7)^{F}	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	C	(2.3)	2.2	2.3	2.1	1.9	1.9	1.9
26	1.9	2.0	2.1	(1.9)	2.0	2.1	(1.9)	2.4	2.4	2.3	2.1	2.1	2.3	C	2.1	2.3	2.2	2.3	2.2	2.3	(2.1)^{F}	(2.1)^{F}	2.0^{F}	(2.1)^{F}
27	(2.0)^{F}	(1.9)^{F}	(2.0)^{F}	(2.1)^{F}	(1.9)^{F}	(2.0)^{F}	(2.0)	2.6	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.2	2.0	1.9	1.7	(1.7)^{F}	(1.9)^{F}	(1.9)^{F}
28	(1.9)^{F}	(1.9)^{F}	(2.2)^{F}	(2.2)^{F}	(2.2)^{F}	(2.3)^{F}	(1.9)^{F}	2.4	2.5	2.3	2.1	2.3	(2.2)	2.0	2.2	2.1	2.2	2.2	2.2	2.0	(2.2)	(2.3)^{F}	(2.0)^{F}	(1.9)^{F}
29	(1.9)^{F}	(1.9)^{F}	(2.0)^{F}	(2.1)^{F}	(2.2)^{F}	(2.2)^{F}	(1.9)^{F}	2.3	2.4	(2.3)	2.2	2.2	2.2	2.1	2.1	(2.3)	(2.3)	2.2	(2.3)	2.1	(2.2)^{F}	(2.2)	(2.1)	(2.1)
30	(1.9)	(1.9)^{F}	(1.9)^{F}	(2.0)	(2.1)	(2.3)^{F}	(2.2)^{F}	2.4	2.3	2.2	2.3	2.3	(2.3)	2.1	2.2	2.3	(2.3)	(2.4)	2.2	2.3	(2.2)	(2.2)^{F}	(2.0)	(2.0)^{F}
31	(2.2)^{F}	(2.2)^{F}	2.0^{F}	(2.2)	2.2	2.2	2.1	2.5	2.6	2.3	2.1	2.2	2.1	2.2	2.1	2.2	2.3	2.3	2.0	2.3	2.1	(2.0)^{F}	2.0	(2.1)^{F}
Sum																								
Median	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.4	2.4	2.3	2.1	2.2	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.0

TABLE 86
IONOSPHERE DATA- 10

Washington, D. C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F2-M3000 for October (Month) 1945

Records measured by: J.M.C. K.W.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	3.0	(3.0)	3.1	3.1	2.9^{F}	3.0^{F}	3.1	3.2	(3.3)^{K}	3.1^{K}	3.0^{K}	2.9^{K}	3.0^{K}	3.0^{K}	3.1^{K}	3.2^{K}	3.4^{K}	3.4	3.2	3.1	3.3	3.1	3.0	A
2	A	2.9	(2.9)	3.1	2.9	3.0	(3.4)	3.3	3.4	(3.2)	3.0	3.1	(3.3)	(3.2)	(3.1)	3.1	(3.2)	(3.4)	3.3	3.2	3.0	3.1	3.0	(3.1)
3	3.1	(3.1)	(3.1)	(3.3)	3.0	(3.1)	3.3	3.5	3.4	3.4	3.0	3.1	3.1	(3.2)	(3.3)	3.2	3.2	3.3	3.2	(3.3)	3.2	3.1	(3.1)	3.2
4	2.9	3.0	2.9	3.0	3.0	3.2	3.3	3.5	3.5	3.3	3.4	3.2	3.2	3.2	3.1	3.2	3.2	3.3	(3.3)	(3.0)	(3.1)	(3.0)	(3.0)	3.0
5	3.0	3.0	3.1	3.0	3.1	(3.0)	3.1	3.5	3.4	(3.4)	3.0	3.1	3.1	3.0	3.0	3.1	(3.2)	3.3	(3.2)	3.1	3.0	(3.0)	(3.1)	(2.9)
6	(2.9)	(2.9)	3.0	3.0	2.9	3.0	3.1	3.3	3.3	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.2	(3.1)	3.1	3.1	2.9	(3.1)	3.0
7	3.0	3.0	(3.0)^{F}	(3.1)	3.1	(3.0)	3.3	3.6	3.4	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.1	3.1	3.2	(3.0)	3.1	3.1
8	2.9	3.0	2.9	2.9	3.1	3.0	3.1	3.3	3.4	3.	2.9	3.0	3.0	3.2	3.1	3.2	3.3	3.3	3.2	3.2	3.1	3.0	3.1	2.9
9	2.9	(2.9)	2.8	(3.0)	(2.8)	3.0	3.2	3.5	(3.4)	3.2	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.4	(3.2)	3.0	3.0	3.0	3.1	(3.0)^{F}
10	3.0	(3.1)^{F}	(3.1)^{F}	3.2^{F}	(3.3)^{F}	3.2	3.3	(3.4)	3.3	3.5	3.1	3.2	3.1	3.1	3.0	3.1	3.3	3.2	3.2	3.1	3.2	(2.9)	3.1	3.1
11	3.0	3.0	3.0^{F}	3.0	3.1	3.1	3.3	3.5	3.4	3.2	3.3	3.2	3.1	3.1	3.1	3.1	3.1	3.4	(3.2)	3.2	(3.2)	(3.2)	3.0	3.1
12	3.0	2.9^{F}	(3.0)^{F}	(2.8)^{F}	(3.0)^{F}	(3.1)^{F}	(3.2)^{F}	(3.4)^{F}	(3.4)	3.0	2.7	2.9	C	3.0	3.1	3.1	3.0	3.1	3.1	3.0	3.0	2.9	2.9	2.9
13	2.9	3.0	3.0	2.8	(3.2)^{F}	(2.9)^{F}	(3.1)^{F}	(3.4)^{F}	3.4	3.1	3.1	3.2	3.0	3.1	3.1	3.2	3.3	3.3	3.3	(2.8)	3.2	3.1	3.1	3.1
14	(3.0)^{F}	(3.0)^{F}	(3.0)^{F}	(3.0)^{F}	3.0	(3.1)^{F}	(3.3)^{F}	3.6	3.5	3.3	3.3	3.2	3.1	3.1	3.1	3.2	3.2	3.3	3.2	3.2	3.2	3.0	3.0	3.1
15	(2.9)^{F}	(3.0)^{F}	(3.0)^{F}	(3.1)^{F}	(3.1)^{F}	3.0	(3.2)^{F}	3.7	(3.3)	3.4	3.3	3.2	3.2	3.1	3.2	3.2	(3.3)	3.3	3.2	3.3	3.2	3.2	3.0	3.1
16	3.1	(3.0)^{F}	(3.0)^{F}	(3.0)^{F}	(3.1)^{F}	(3.1)^{F}	(3.2)^{F}	3.5	3.3	3.2	3.0	2.8	(3.1)	3.1	3.0	3.1	3.3	3.2	3.3	3.1	3.1	(3.2)^{F}	(3.1)^{F}	(3.0)^{F}
17	(3.0)^{F}	A	(2.9)^{F}	(2.9)^{F}	(3.2)^{F}	(3.1)^{F}	(3.1)^{F}	(3.5)	3.3	(3.4)	(3.3)	3.1	3.0	C	3.1	3.2	(3.3)	3.3	3.2	3.2	3.1	(2.9)	(3.1)^{F}	3.1
18	(2.9)^{F}	(2.9)^{F}	(3.0)^{F}	(3.1)^{F}	(3.2)^{F}	(3.0)^{F}	(3.2)^{F}	(3.3)	3.4	3.4	3.3	3.1	3.2	3.1	3.1	3.2	3.3	3.4	3.2	3.3	3.2	3.2	(3.2)	(3.1)
19	(3.0)^{F}	(3.0)^{F}	(3.0)^{F}	(3.1)^{F}	(3.1)^{F}	(3.3)^{F}	(3.3)^{F}	3.6	(3.5)	3.2	3.4	3.2	3.1	3.1	3.2	3.2	3.3	3.2	3.2	(3.1)	3.0	(3.2)	(3.0)	3.0
20	3.2	3.1	3.1	3.1	3.1^{F}	3.2	3.1	(3.5)	36	3.4	3.1	3.2	3.3	3.1	3.1	3.1	3.3	3.3	3.3	3.2	3.3	3.1	3.1	3.0
21	3.1	3.0	3.0	3.0	3.2	3.1	3.1	3.4	3.5	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.4	3.3	3.1	3.1	(3.3)	3.2	3.1	3.1
22	3.1	3.0	3.0	3.1	3.2	3.1	3.2^{F}	3.5	3.6	3.4	3.0	3.0	3.2	(3.1)	(3.2)	3.4	(3.3)	3.2	(3.1)	3.0	2.9	3.0	3.0	2.8
23	2.9	2.8	2.8	(3.0)^{F}	(3.2)^{F}	3.0	3.2	3.4	3.4	3.1	(3.2)^{H}	3.3	3.2	3.2	3.1	(3.3)	3.4	3.3	3.3	3.1	3.0	3.0	2.9	2.8
24	2.9	2.9	3.0	3.0	3.1	(2.8)^{F}	(2.9)^{F}	(3.3)^{F}	(3.3)^{F}	3.1^{F}	3.3	3.2	3.1	3.1	3.1	3.0	(3.0)	(3.3)	3.0	3.2	2.8	(2.7)	(2.6)^{F}	(2.5)^{F}
25	(3.1)^{F}	(3.1)^{F}	(3.4)^{F}	(2.9)^{F}	(3.1)^{F}	(3.1)^{F}	(2.6)^{F}	3.4	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	C	(3.3)	3.2	3.3	3.1	2.9	2.9	2.9
26	2.9	3.0	3.1	(2.9)	3.0	3.0	(2.9)	3.4	3.4	3.3	3.1	3.1	3.3	C	3.1	3.3	3.2	3.3	3.2	3.3	(3.1)^{F}	(3.1)^{F}	3.0^{F}	(3.1)^{F}
27	(3.0)^{F}	(2.9)^{F}	(3.0)^{F}	(3.1)^{F}	(2.9)^{F}	(3.0)^{F}	(3.0)	3.6	3.4	3.3	3.3	3.2	3.1	3.1	3.2	3.1	3.0	3.2	3.0	2.9	2.7	(2.6)^{F}	(2.8)^{F}	(2.9)^{F}
28	(2.9)^{F}	(2.9)^{F}	(3.2)^{F}	(3.2)^{F}	(3.2)^{F}	(3.3)^{F}	(2.9)^{F}	3.4	3.5	3.3	3.1	3.3	(3.2)	3.0	3.2	3.1	3.2	3.2	3.2	3.0	(3.2)	(3.3)^{F}	(3.0)^{F}	(2.9)^{F}
29	(2.9)^{F}	(2.9)^{F}	(3.0)^{F}	(3.1)^{F}	(3.2)^{F}	(3.2)^{F}	(2.8)^{F}	3.3	3.4	(3.3)	3.2	3.2	3.2	3.1	3.1	(3.3)	(3.3)	3.2	(3.3)	3.1	(3.3)^{F}	(3.2)	(3.1)	3.1
30	(2.9)	(2.9)^{F}	(2.9)^{F}	(3.0)	(3.1)	(3.3)^{F}	(3.2)^{F}	3.4	3.3	3.2	3.3	3.3	(3.3)	3.1	3.2	3.3	(3.3)	(3.4)	3.2	3.3	(3.2)	(3.2)^{F}	(3.0)	(3.0)^{F}
31	(3.2)^{F}	(3.2)^{F}	3.0^{F}	(3.2)	3.2	3.2	3.1	3.5	3.6	3.3	3.1	3.2	3.1	3.2	3.1	3.2	3 3	3.3	3.0	3.3	3.1	(3.0)^{F}	3.0	(3 1)^{F}
Sum																								
Median	3.0	3.0	3.0	3 0	3.1	3.1	3.2	3.4	3.4	3.3	3.1	3.2	3.1	3.1	3.1	3.2	3.3	3.3	3.2	3.1	3.1	3.0	3.0	3.0

TABLE 87
IONOSPHERE DATA- II

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of FI-M3000 for October (Month) 1945

Records measured by: J.M.C. K.W.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								(3.7)	(3.7)^K	3.6^K	3.8^K	3.7^K	3.8^K	3.4^K	3.6^K	3.5^K	(3.6)^K	L						
2								L	L	L	3.6	3.7	L	(3.5)^M	3.6	3.5	(3.7)	A						
3									A	L	(3.6)	3.6	3.5	3.6	L	L	L							
4									L	4.0	3.6	3.7	(3.6)	3.6	(3.5)	(3.7)	L	C						
5									(4.1)	L	L	(3.6)	3.5	L	(3.5)	3.7	(3.8)							
6									L	(3.9)	(3.7)	3.5	3.6	3.6	(3.6)	L	L							
7									L	L	C	(3.7)	3.6	(3.6)	(3.7)	L	L							
8								L	A	L	L	3.7	(3.6)	L	(3.8)	L	(3.9)							
9									L	L	3.9	(3.4)	(3.6)	3.6	(3.6)	(3.7)	L							
10									C	(4.0)	3.7	(3.5)^M	(3.6)	3.6	L	L	L							
11									L	L	(3.9)	(3.5)	3.9	L	(3.7)	L	L							
12									L	L	3.8	C	3.7	L	L	L	L							
13									L	L	L	(3.6)	L	L	L	L	L							
14									L	4.0	L	3.6	L	L	L	L	C							
15									C	L	(3.9)	L	L	L	L	L	L							
16									L	L	L	3.4	3.5	L	L	L	L							
17									A	A	A	L	LH	C	L	L	L							
18									L	L	L	L	L	L	L	L	L							
19									A	L	(3.9)	L	L	L	L	L	L							
20									LH	LH	L	LH	L	L	L	L								
21									AL	L	L	L	L	L	L	L								
22									L	L	L	LH	L	L	L	L	L							
23									L	L	(3.8)	L	L	L	L	L								
24									L	3.6	L	(3.5)	(3.6)^M	(3.7)	L	L	L							
25									L	L	L	(3.8)	L	L	L	(3.9)	C							
26									L	L	L	(3.7)	L	L	L	L								
27									L	L	L	L	L	L	L	L								
28										L	L	(3.8)	L	L	L	L								
29										L	L	L	L	L	L	L	L							
30										L	(3.9)	L	(3.7)	C	(3.8)	L								
31										L	(4.0)	L	L	L	L	L								
Sun										4.0	3.8	3.6	3.6	3.6	3.6	3.7								
Median																								

TABLE 88
IONOSPHERE DATA- 12

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of E-M1500 for October (Month) 1945

Records measured by: J.M.C. K.W.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								(4.1)	(4.3)K	C K	A K	A K	A K	B K	A K	4.0K	4.1K	(4.2)						
2								A	A	A	A	A	A	B	B	A	(4.0)	A						
3								A	A	A	A	A	A	A	A	4.1	A	(4.4)						
4								(3.6)F	3.8	(4.0)	(4.0)	B	B	B	(4.4)	(4.0)	4.2	(4.3)						
5								(4.2)	A	B	A	A	A	B	B	A	(4.1)	(4.1)						
6								(4.3)	(4.4)	B	B	B	A	A	(4.1)	A	A	(4.2)						
7								(4.3)M	A	(4.2)	A	B	(4.2)	B	B	(4.1)	(3.9)	(3.8)						
8								A	A	(4.4)	B	B	B	B	A	(4.2)	4.2	(3.9)						
9								(4.0)	A	(4.4)	A	A	B	B	3.9	(4.1)	A	A						
10								(4.1)	A	(4.2)	B	A	B	B	A	(4.1)	(4.3)	4.0						
11								(4.0)	B	(4.2)	B	B	B	A	B	(4.4)	4.2	(4.3)						
12								(4.0)	4.0	(4.2)	(4.1)	C	B	B	B	B	(4.2)	(4.3)M						
13								(4.1)	(4.2)	A	B	(4.4)	(4.1)	B	A	(4.1)	(4.4)M	(4.2)						
14								(4.2)	(4.2)	(4.2)	(4.2)	A	B	B	(4.1)	(4.0)	4.1	A						
15								(3.9)	(4.2)	(4.1)	(3.9)	A	B	A	A	A	A	(3.7)						
16								(3.8)	(4.3)	A	A	C	(4.2)	B	(4.1)	3.9	A	A						
17								A	A	A	A	A	B	C	A	(4.2)	4.2	4.4						
18								A	A	A	A	A	B	A	A	(4.1)	4.1	(4.2)						
19								A	A	(4.0)	(4.2)	(4.2)	(4.1)	(4.0)	B	(4.0)	(4.3)	(4.0)						
20								AF	(4.4)	4.2	4.3	(4.3)	A	4.1	(4.1)	3.9	4.0	A						
21								(3.9)M	A	(4.2)	B	(4.1)	B	A	(4.1)	(4.3)	(4.4)	A						
22								AF	(4.2)	(4.2)	A	(4.2)	A	B	C	(4.3)	(4.0)	B						
23								A	A	A	A	A	(4.3)	A	(4.2)	4.3	(3.9)	A						
24								(3.6)	(3.8)	(4.3)	(4.4)	4.2	(4.1)	4.1	4.2	(4.4)	B	(3.6)						
25								3.8	A	(4.0)	(4.1)	B	B	C	A	C	C							
26								B	(3.5)	4.2	A	A	A	A	(4.3)	(4.4)	B	A						
27								A	(4.0)	(4.3)	B	(4.2)	A	A	(4.2)	(4.2)	(3.9)	(3.9)						
28								C	C	A	(4.4)	B	C	(4.2)	A	C	C	C						
29								C	A	A	A	A	A	B	B	(4.2)	(3.8)	A						
30								(4.0)	A	C	A	C	A	C	(4.3)	4.3	(4.2)	A						
31								(3.9)	B	(4.3)	(4.2)	(4.1)	4.1	4.3	A	A	A	A						
Sum																								
Median								4.0	4.2	4.2	4.2	4.2	4.1	4.1	4.2	4.1	4.1	4.2						

Table 89

Ionospheric Storminess, October 1945

Day	Ionospheric Character* 00-12 GCT	12-24 GCT	Principal Storms Beginning GCT	End GCT	Geomagnetic Character** 00-12 GCT	12-24 GCT
October						
1	2	4	1300	2300	1	1
2	3	3			1	1
3	1	2			1	1
4	2	1			0	1
5	1	3			2	2
6	2	2			0	1
7	1	1			1	2
8	2	3			2	2
9	2	3			2	1
10	1	2			0	0
11	1	2			0	0
12	2	1			2	4
13	3	0			3	1
14	2	0			1	2
15	1	0			2	2
16	2	2			2	2
17	3	1			1	2
18	2	1			2	2
19	1	1			1	2
20	1	1			1	2
21	1	1			0	1
22	1	3			1	2
23	2	1			1	2
24	3	2			4	5
25	3	2			4	3
26	2	3			1	0
27	3	2			1	3
28	3	1			3	3
29	2	1			2	2
30	2	1			1	2
31	1	1			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.

Table 90

Sudden Ionosphere Disturbances Observed

at Washington, D.C.

Day	GCT Beginning	GCT End	Locations of transmitters	Relative intensity at minimum*	Other phenomena
October 5	1742	1805	Ohio, D.C., England, Mexico, Brazil, Hawaii	0.2	
21	1616	1740	Ohio, D.C., Chile	0.05	Terr.mag.pulse** 1615-1624
25	1942	2000	Ohio, D.C., New York, Brazil, Chile, Hawaii	0.1	Terr.mag.pulse** 1928-1940
28	1644	1730***	Ohio, D.C., Chile	0.05	(Terr.mag.pulse**
28	1738	1825	Ohio, D.C., Chile	0.1	(1719-1735 (1740-1745 (1800-1807
29	1025	1045	England	0.1	
29	1942	2010	Ohio, D.C., England, Brazil, Chile, Hawaii	0.05	Terr.mag.pulse** 1938-1950

*Ratio of received field intensity during SID to average field intensity before and after, for station W8XAL, 6080 kilocycles, 600 kilometers distant, for all SID except the first one on 29 October, which is for station GLH, 13525 kilocycles, received in New York, 5340 kilometers distant.

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

***Incomplete recovery of SID.

Table 91

Provisional Radio Propagation Quality Figures
September 1945
Compared with IRPL and ISIB Warnings and IRPL A-Zone Forecasts.

Day	North Atlantic Quality Figure		IRPL Warning		ISIB Warning		A-Zone Forecast	Geomagnetic K_A		North Pacific Quality Figure		IRPL Warning		A-Zone Forecast	Geomagnetic K_A	
	01-12 GCT	13-24 GCT	01-12 GCT	13-24 GCT	01-12 GCT	13-24 GCT		01-12 GCT	13-24 GCT	01-12 GCT	13-24 GCT	01-12 GCT	13-24 GCT		01-12 GCT	13-24 GCT
1	6	6					6	1	2	7	6			6	1	2
2	6	7					6	2	1	7	7			6	2	1
3	6	7					6	1	1	8	7			6	1	1
4	5	6					7	3	2	7	7			7	3	2
5	5	6					7	2	2	7	7			7	2	2
6	6	7					6	2	1	8	8			6	2	1
7	6	7					5	2	1	7	7			5	2	1
8	6	6					5	0	2	7	7			5	0	2
9	6	7					5	1	0	7	7			5	1	0
10	6	7					(4)	1	1	7	7			(4)	1	1
11	6	7					5	1	3	7	8			5	1	3
12	5	6					5	3	1	7	8			5	3	1
13	6	7					6	2	2	7	7			6	2	2
14	6	7					6	1	1	7	7			6	1	1
15	6	7					7	1	1	7	7			7	1	1
16	6	7					7	1	2	7	7			7	1	2
17	(4)	5	X	X		X	6	4	4	6	6	X	X	6	4	4
18	(4)	5	X	X	X	X	6	3	4	(4)	5	X	X	6	3	4
19	(3)	5	X	X	X		5	3	1	5	(4)	X	X	5	3	1
20	(3)	5			X	X	6	2	1	6	6			6	2	1
21	(4)	6					6	1	2	6	6			6	1	2
22	5	7					6	1	1	7	7			6	1	1
23	5	7					5	0	0	7	6			5	0	0
24	6	7					(4)	0	1	6	7			(4)	0	1
25	6	7					5	2	2	6	7			5	2	2
26	5	6					6	1	2	6	7			6	1	2
27	6	7					6	2	2	7	7			6	2	2
28	5	7					6	2	1	7	7			6	2	1
29	5	7					6	1	1	7	8			6	1	1
30	6	7					6	3	2	6	7			6	3	2
Score:																
H				3		3	0						2	0		
M				2		2	5						0	2		
G				25		25	23						27	26		
(S)				0		0	0						0	0		
S				0		0	2						1	2		

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 following warning.
M = Quality 4 or worse on day or half-day following no warning.
G = Quality 5 or better on day following no warning.
(S) = Quality 5 on day following warning.
S = Quality 6 or better on day following warning.
( ) = Quality or forecast 4 or worse (disturbed)

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

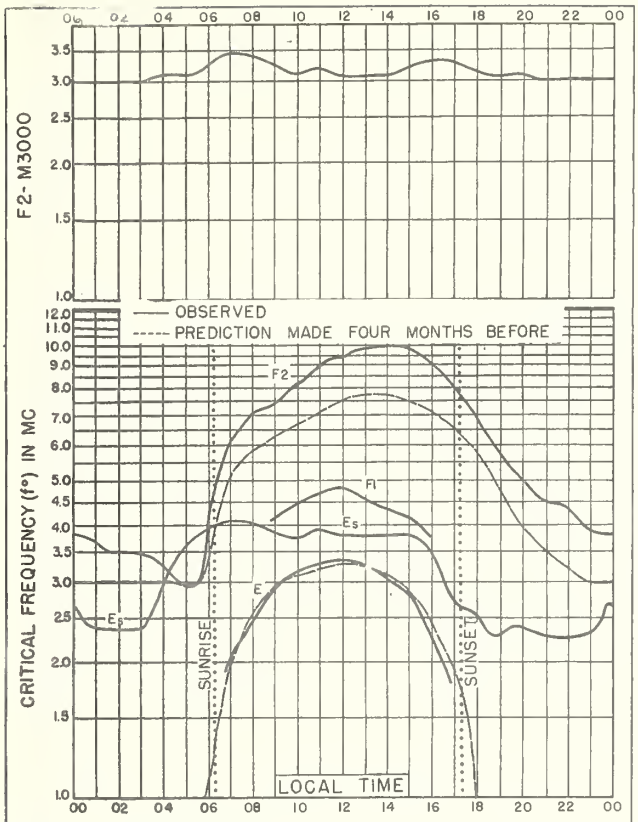

Fig. 1. WASHINGTON, D.C.
39.0° N, 77.5° W
OCTOBER, 1945

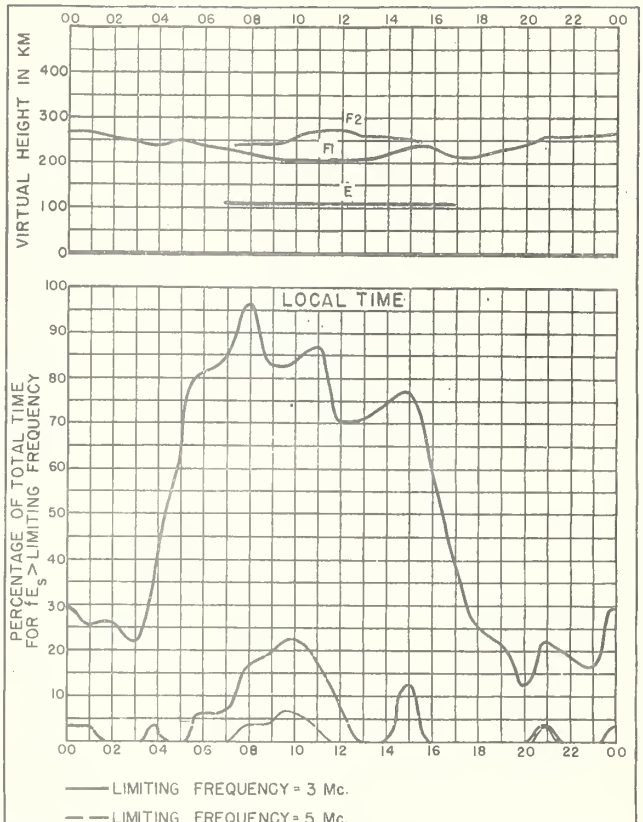

Fig. 2. WASHINGTON, D. C. OCTOBER, 1945

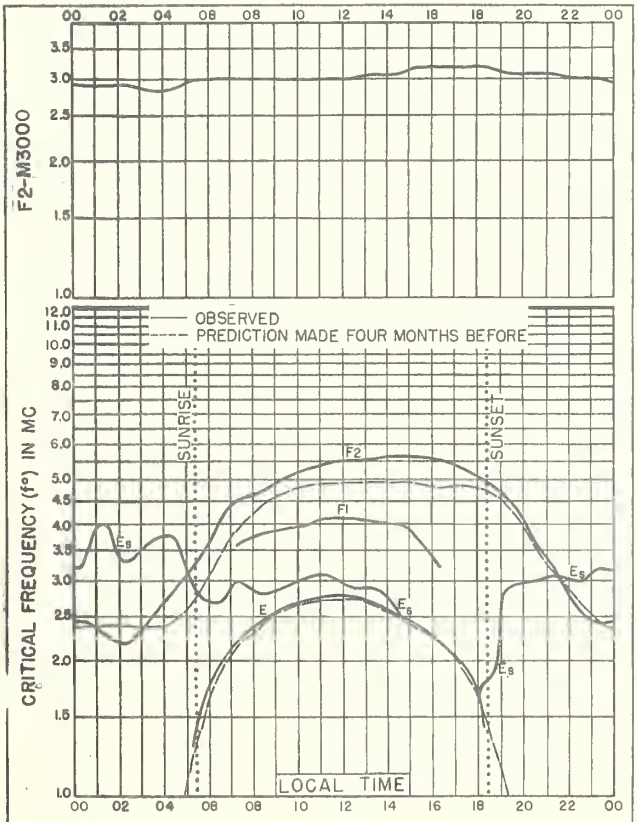

Fig. 3. FAIRBANKS, ALASKA
64.9° N, 147.8° W
SEPTEMBER, 1945

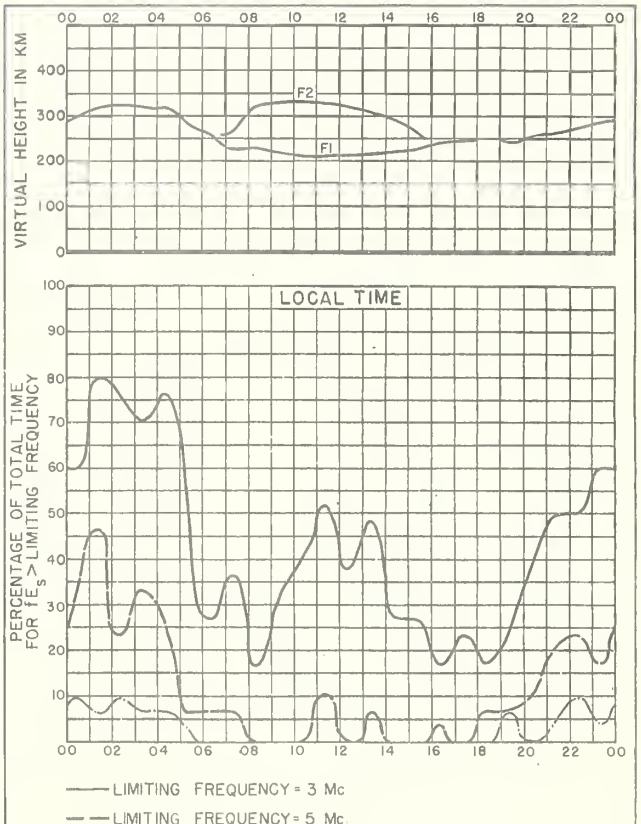

Fig. 4 FAIRBANKS, ALASKA SEPTEMBER, 1945

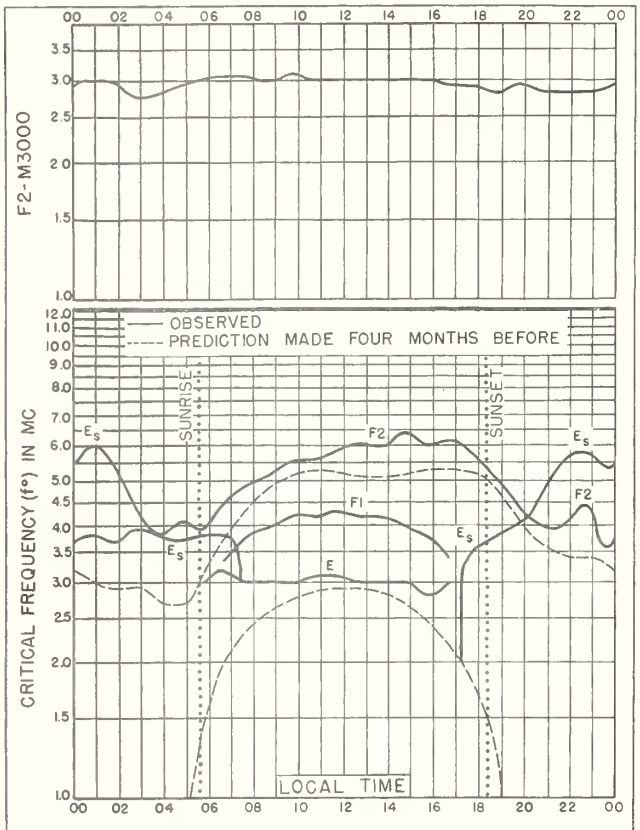

Fig. 5 CHURCHILL, CANADA
58.8°N, 94.2°W SEPTEMBER, 1945

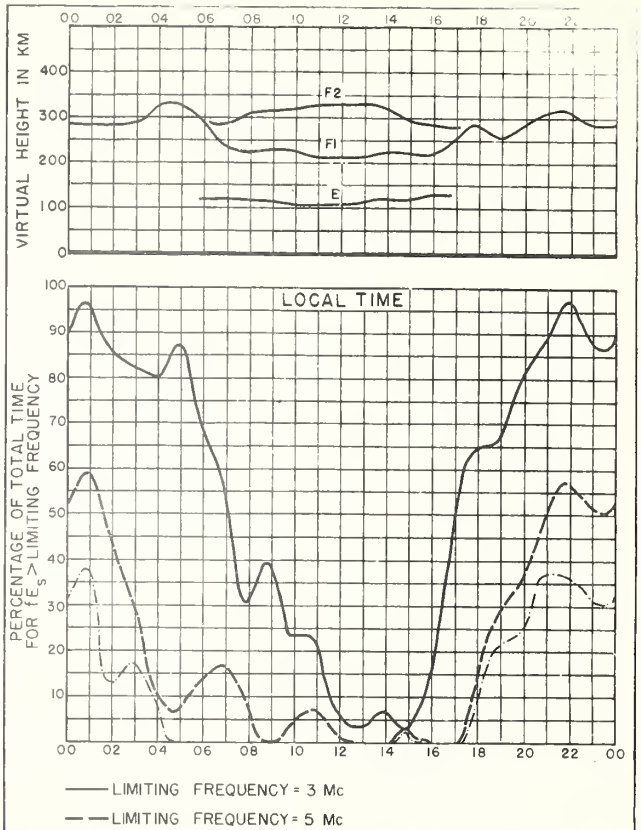

Fig. 6 CHURCHILL, CANADA SEPTEMBER, 1945

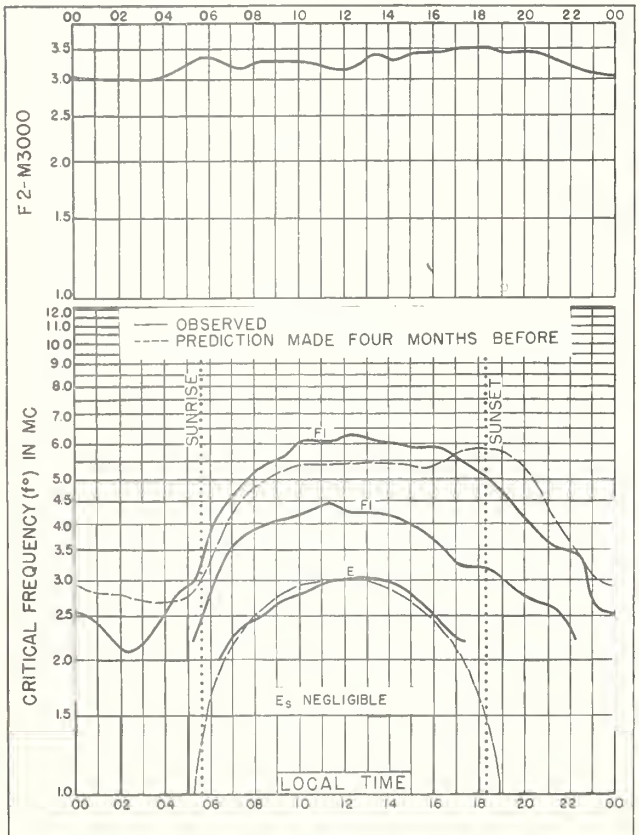

Fig. 7 PRINCE RUPERT, CANADA
54.3°N, 130.3°W SEPTEMBER, 1945

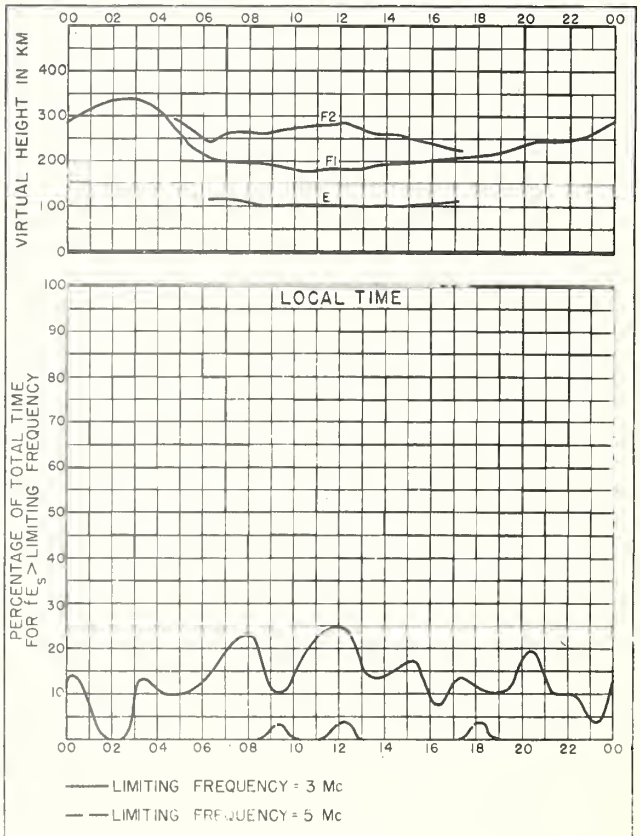

Fig. 8. PRINCE RUPERT, CANADA SEPTEMBER, 1945

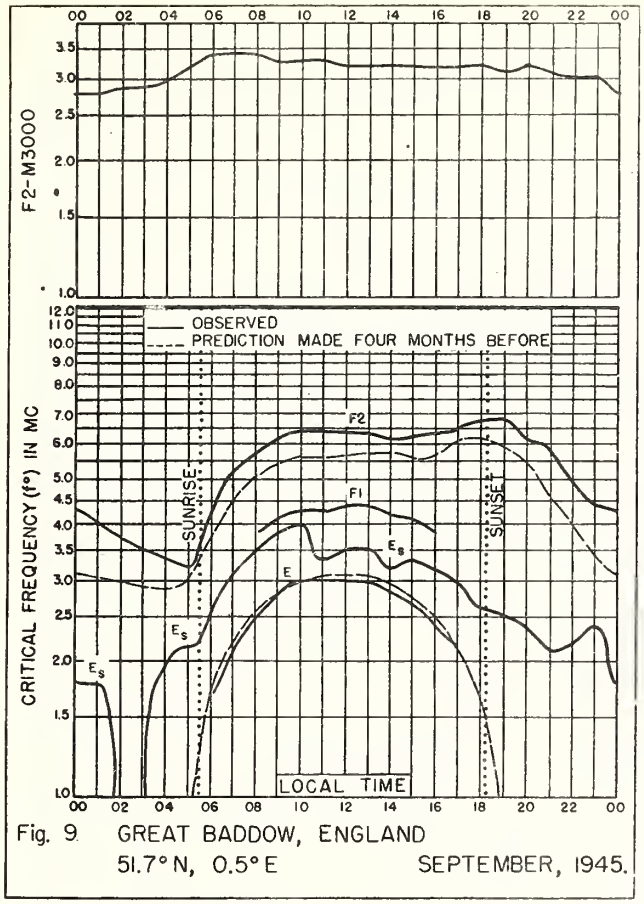

Fig. 9 GREAT BADDOW, ENGLAND
51.7° N, 0.5° E SEPTEMBER, 1945.

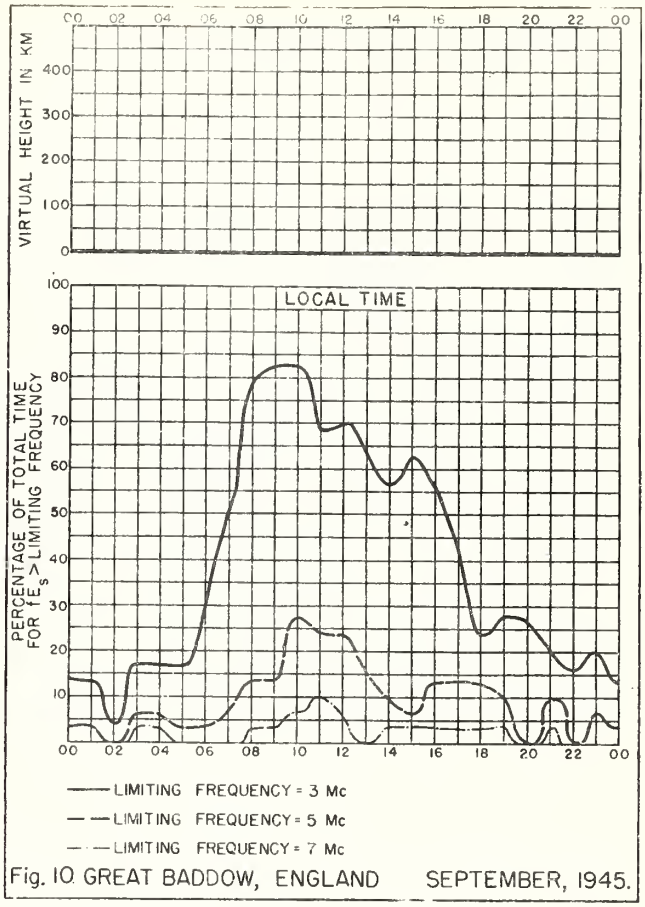

Fig. 10 GREAT BADDOW, ENGLAND SEPTEMBER, 1945.

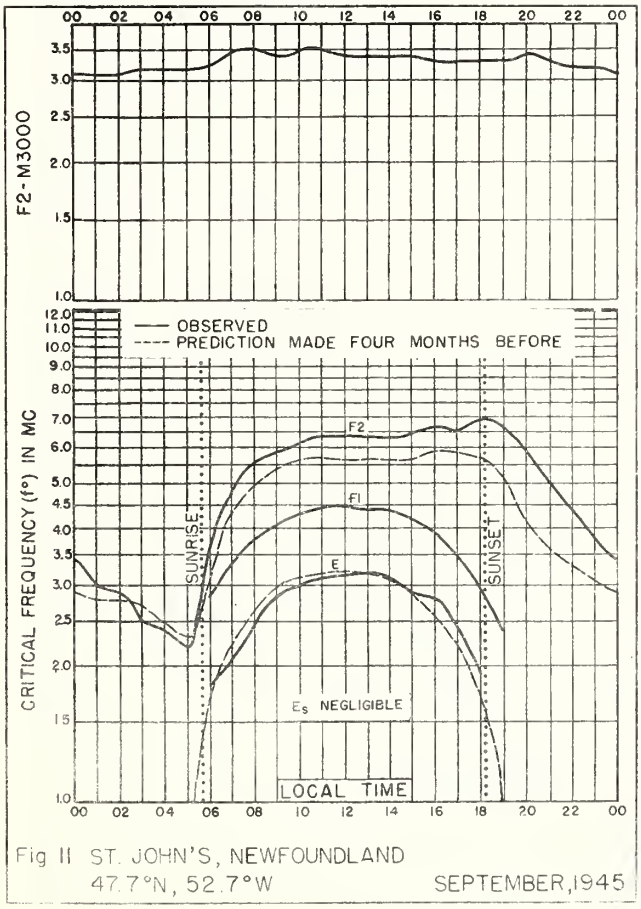

Fig 11 ST. JOHN'S, NEWFOUNDLAND
47.7°N, 52.7°W SEPTEMBER, 1945

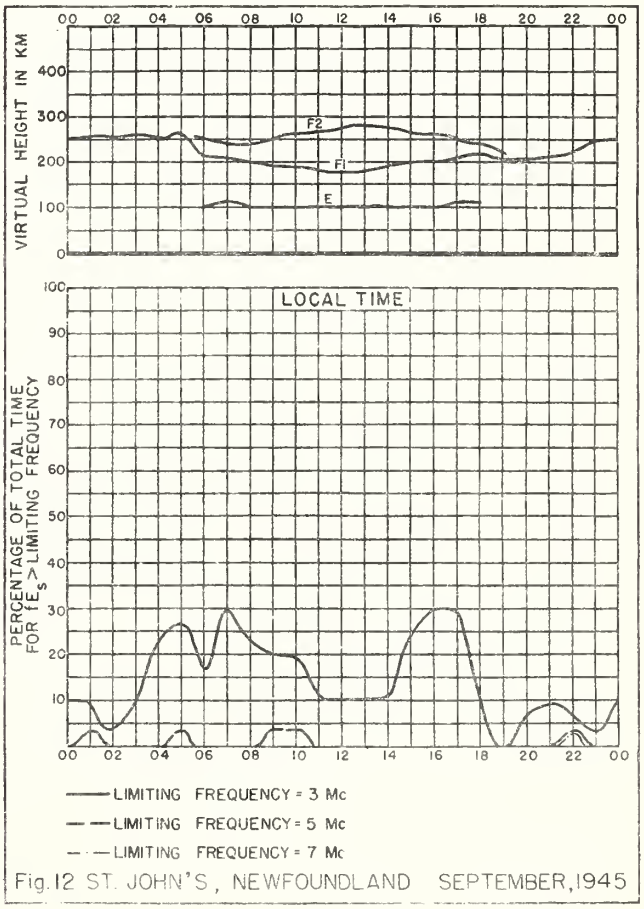

Fig. 12 ST. JOHN'S, NEWFOUNDLAND SEPTEMBER, 1945

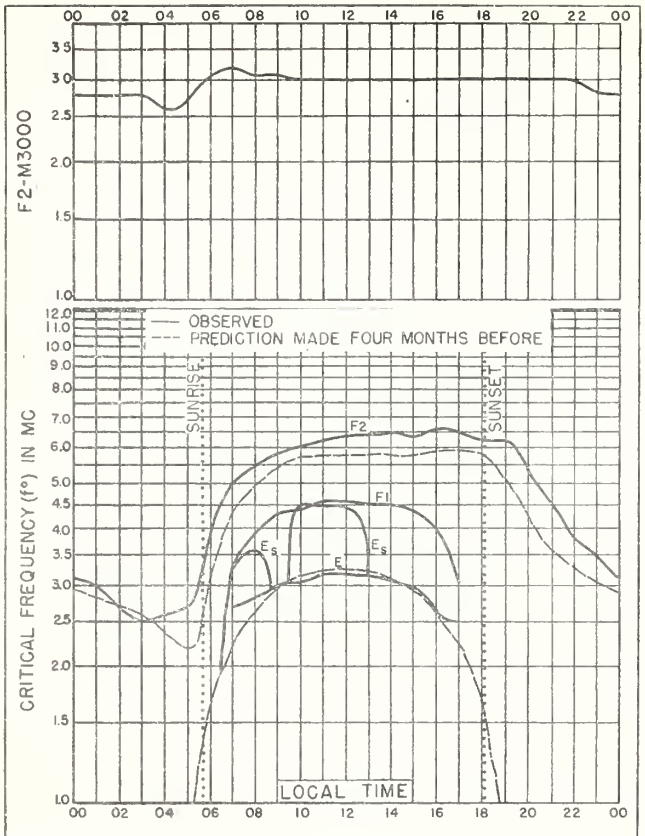

Fig.13 OTTAWA, CANADA
45.5°N, 75.8°W
SEPTEMBER, 1945

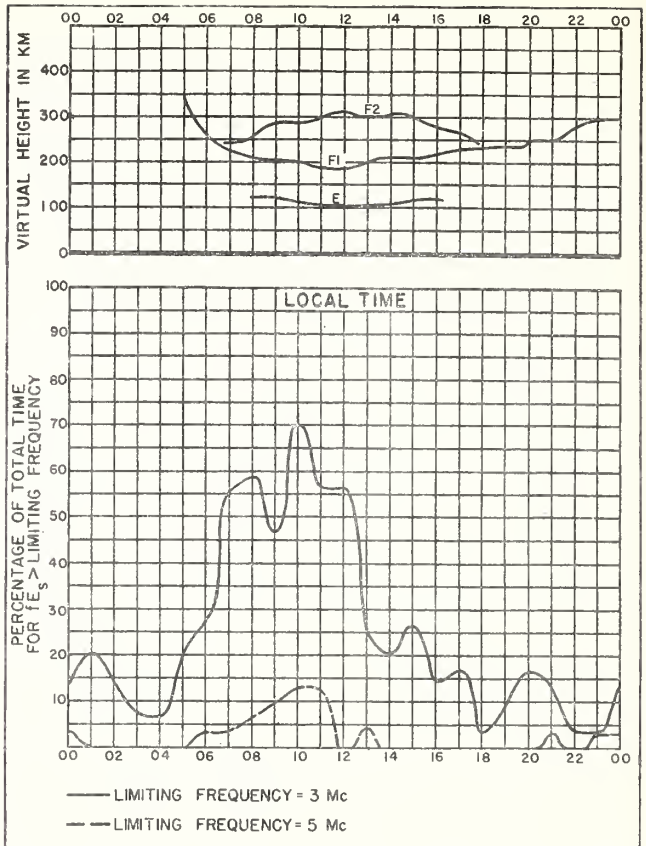

Fig.14 OTTAWA, CANADA
SEPTEMBER, 1945

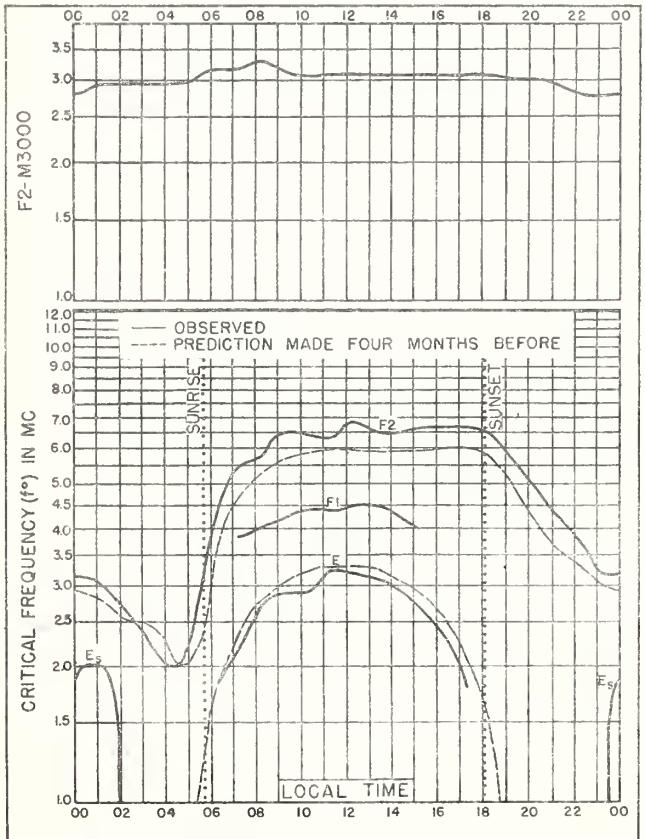

Fig.15 BOSTON, MASSACHUSETTS
42.4°N, 71.2°W
SEPTEMBER, 1945

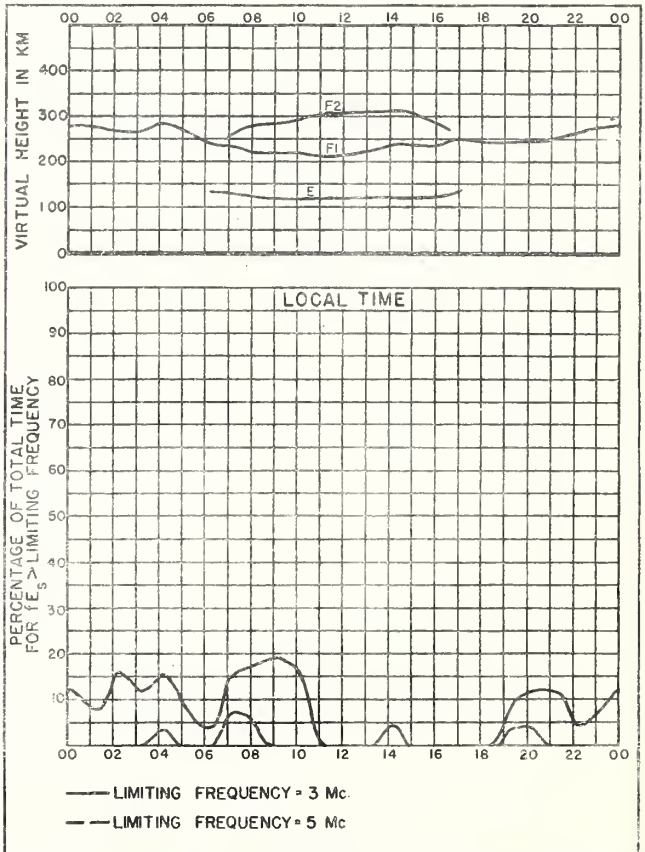

Fig.16 BOSTON, MASSACHUSETTS
SEPTEMBER, 1945

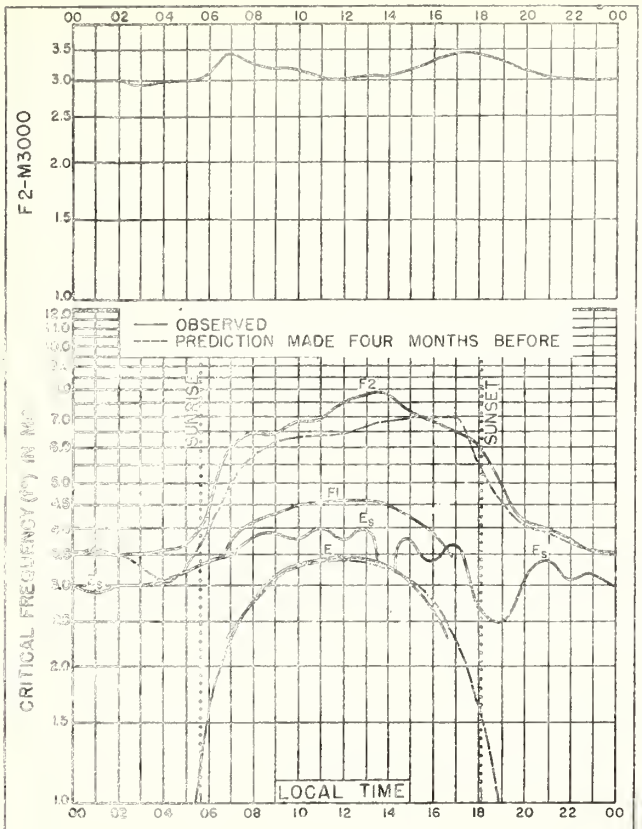

Fig. 17. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W. SEPTEMBER, 1945

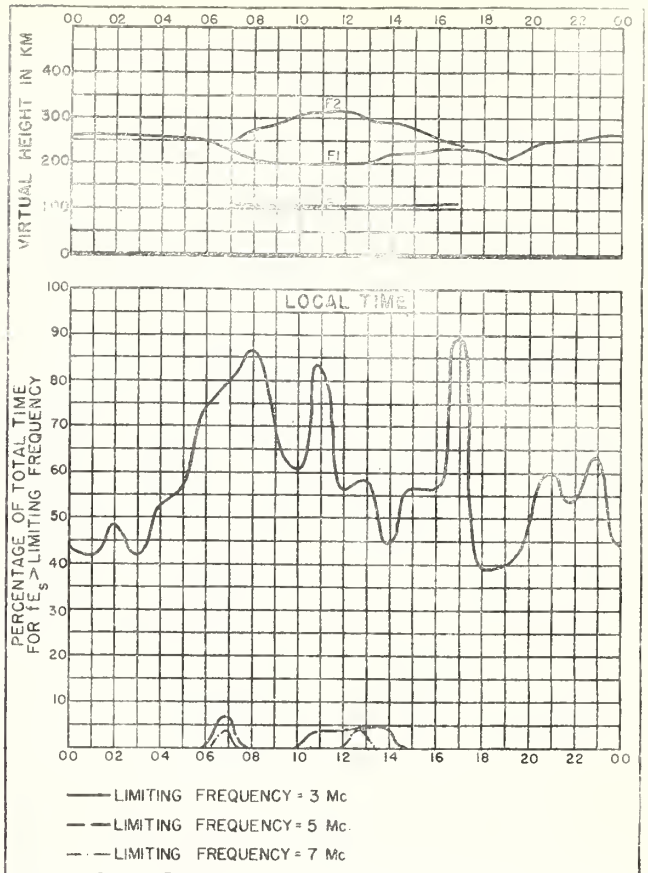

Fig. 18. SAN FRANCISCO, CALIFORNIA SEPTEMBER, 1945

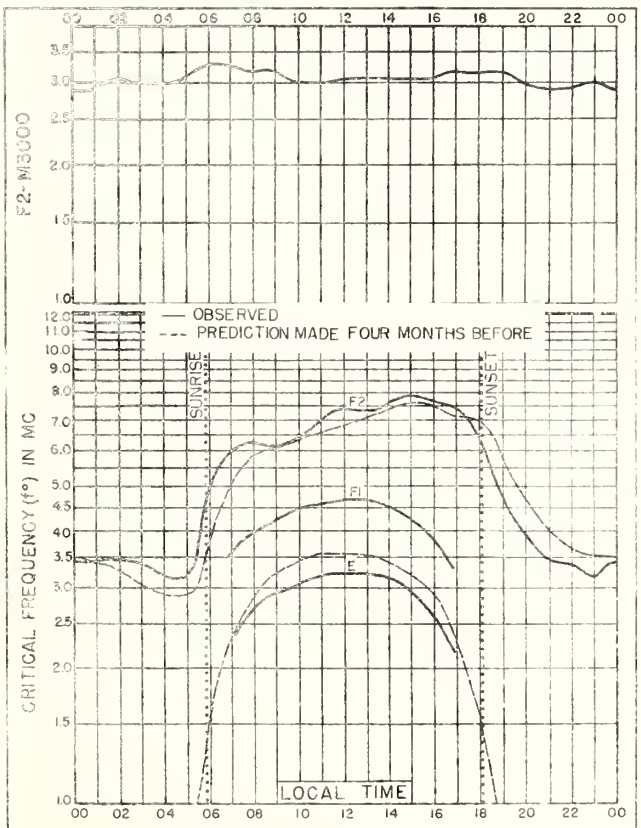

Fig. 19. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W SEPTEMBER, 1945

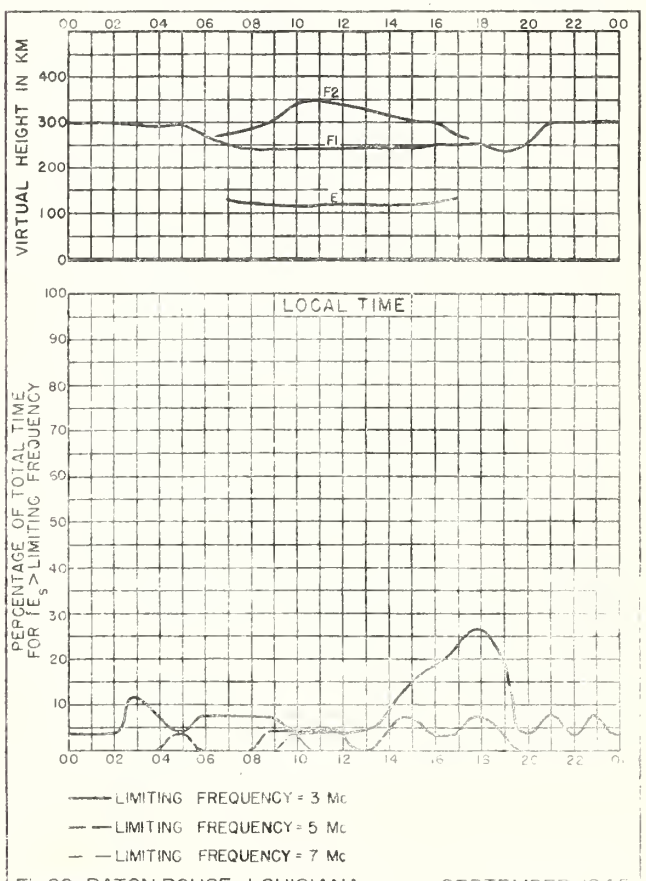

Fig. 20. BATON ROUGE, LOUISIANA SEPTEMBER, 1945

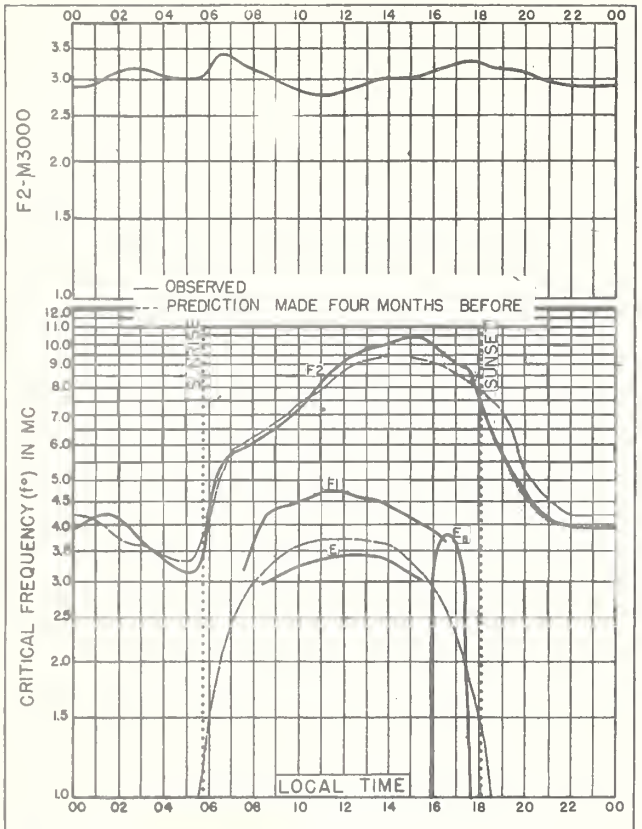

Fig. 21. SAN JUAN, PUERTO RICO
18.4° N, 66.1° W SEPTEMBER, 1945

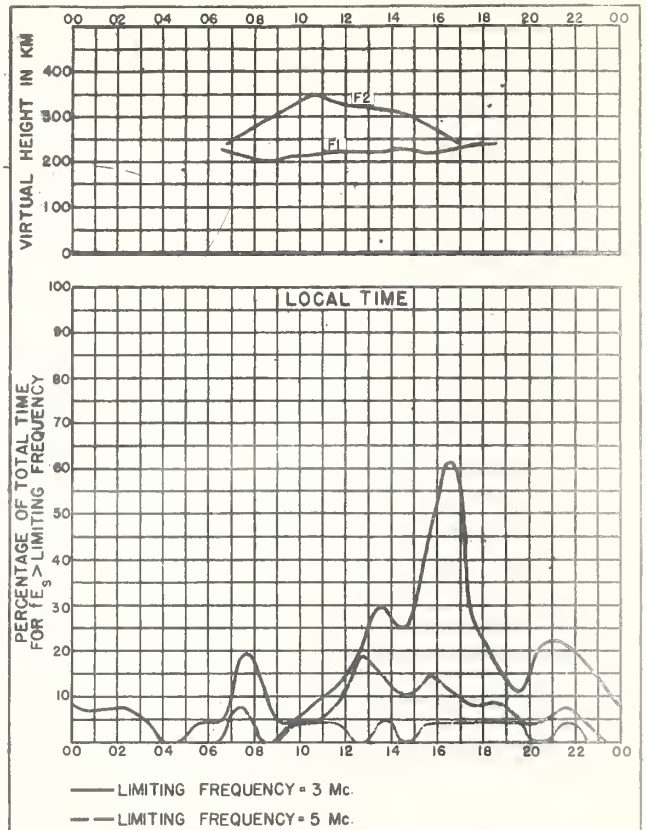

Fig. 22. SAN JUAN, PUERTO RICO SEPTEMBER, 1945

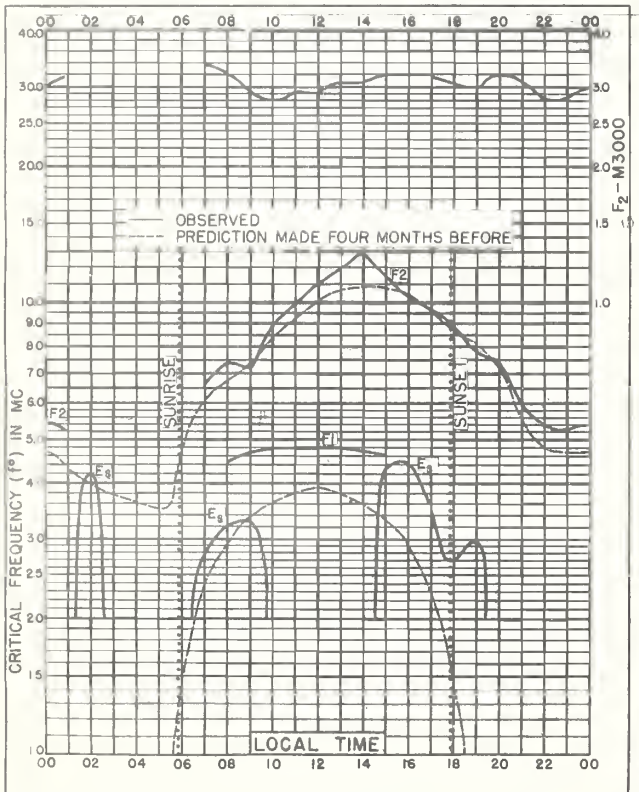

Fig. 23. TRINIDAD, BRIT. WEST INDIES
10.6° N, 61.2° W SEPTEMBER 11, AND 20 THROUGH 30, 1945

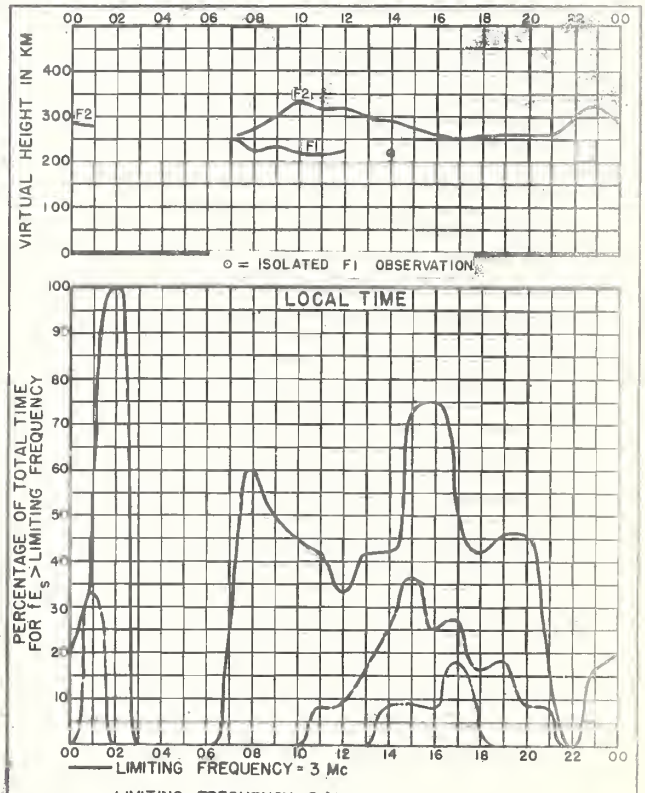

Fig. 24. TRINIDAD, BRITISH WEST INDIES
SEPTEMBER 11, AND 20 THROUGH 30, 1945

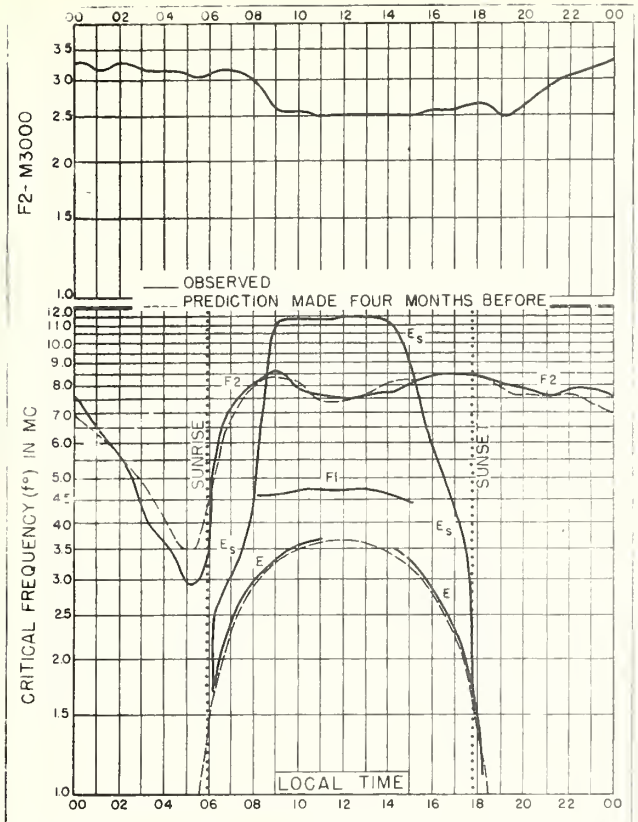

Fig. 25 HUANCAYO, PERU
12.0°S, 75.3°W SEPTEMBER, 1945

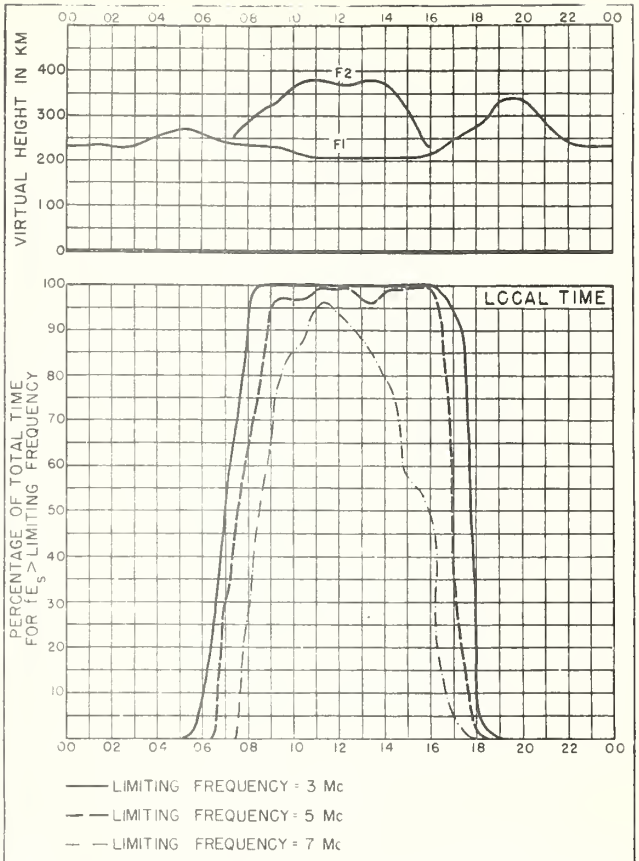

Fig. 26 HUANCAYO, PERU SEPTEMBER, 1945

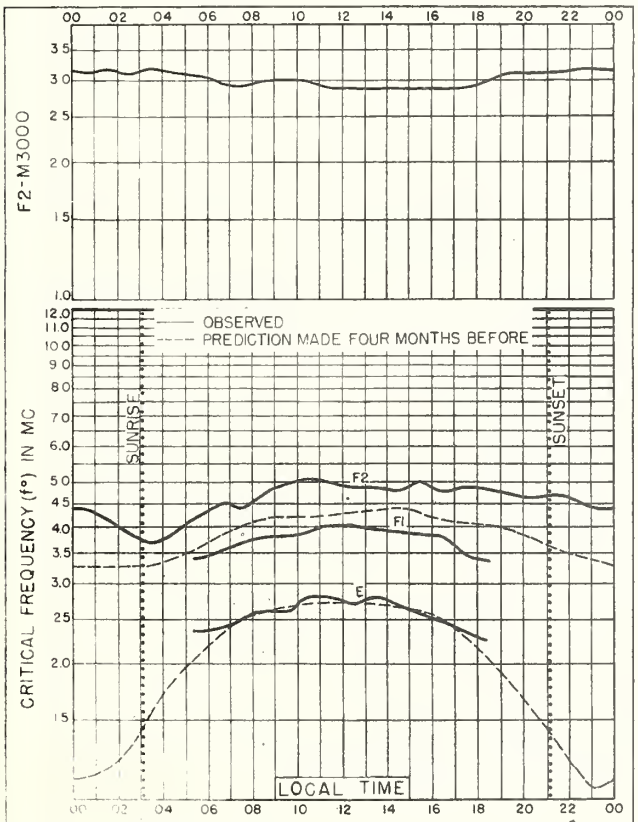

Fig. 27 BAFFIN ISLAND
70.5°N, 68.6°W AUGUST, 1945.

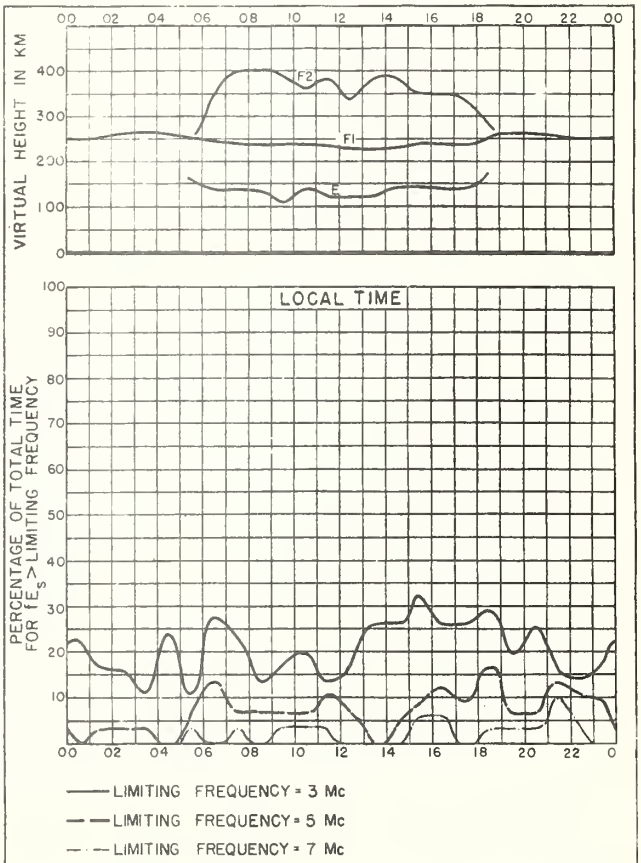

Fig. 28 BAFFIN ISLAND AUGUST, 1945.

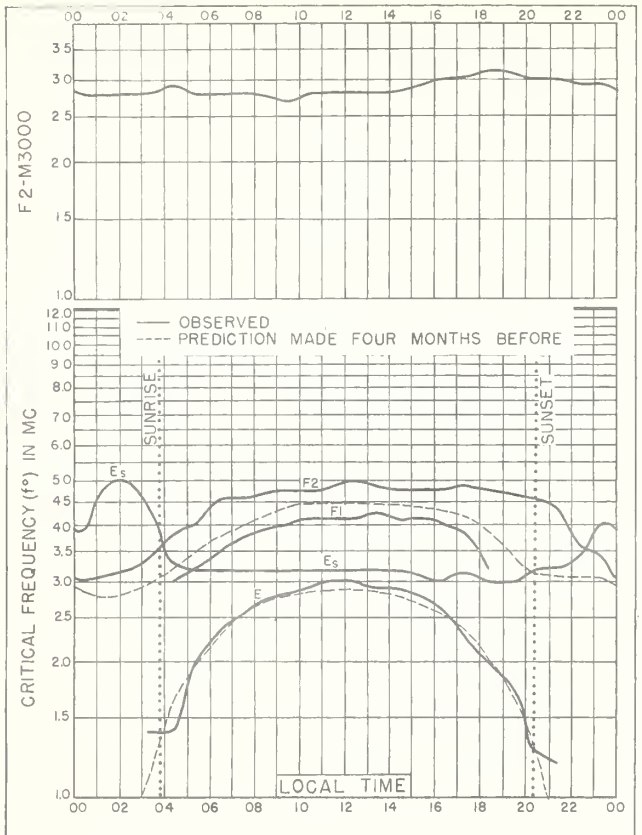

Fig. 29. FAIRBANKS, ALASKA
64.9°N, 147.8°W
AUGUST, 1945

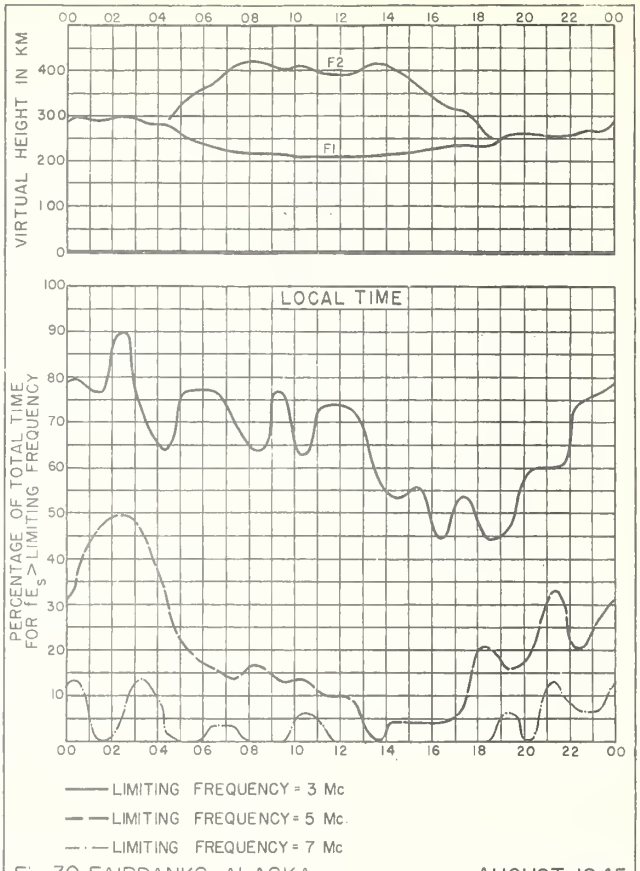

Fig. 30. FAIRBANKS, ALASKA
AUGUST, 1945

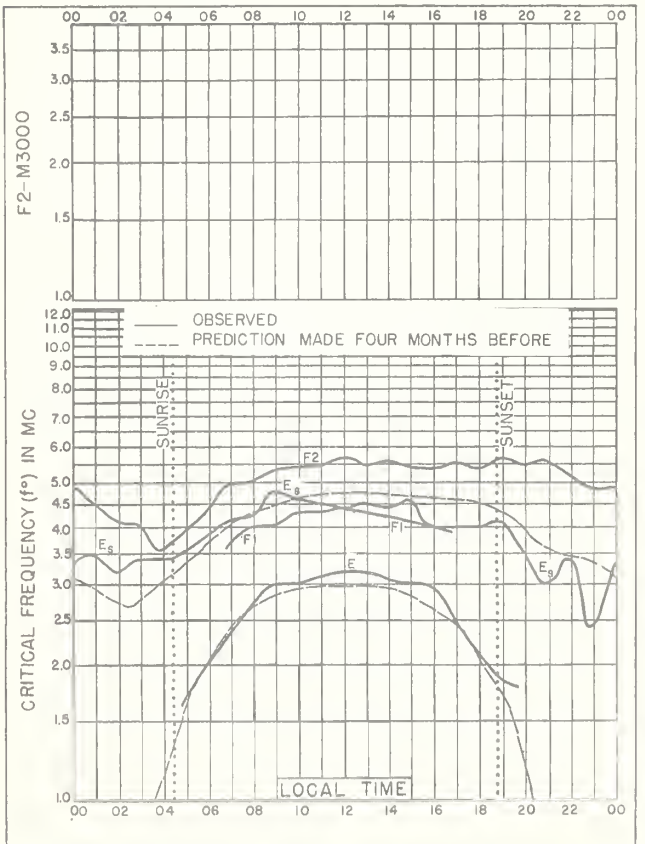

Fig. 31 OSLO, NORWAY
59.9°N, 11°E
AUGUST, 1945

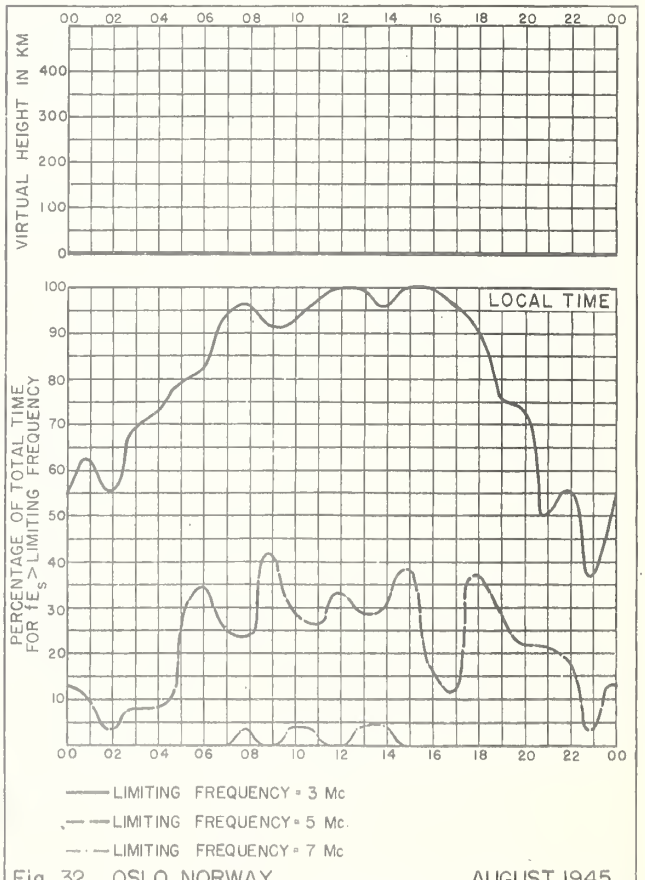

Fig. 32. OSLO, NORWAY
AUGUST, 1945

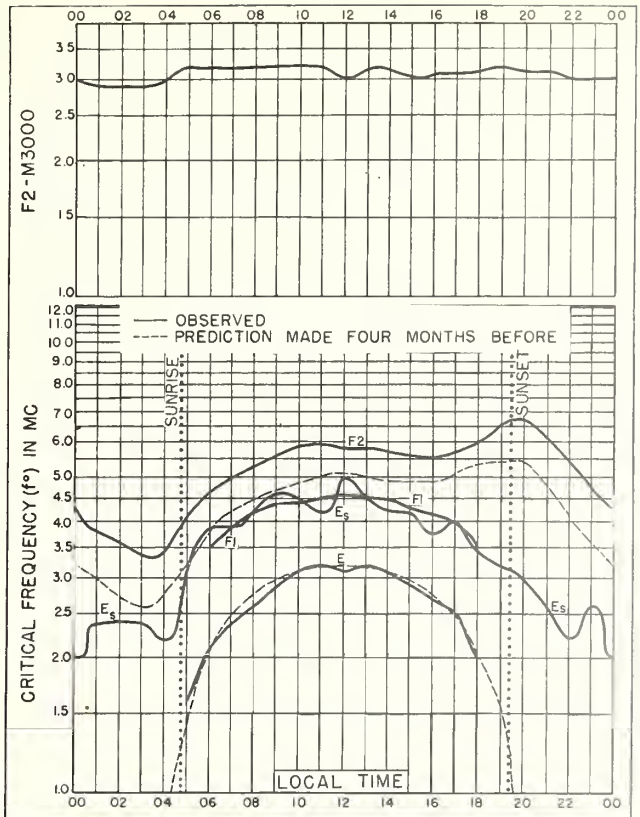

Fig. 33 GREAT BADDOW, ENGLAND
51.7°N, 0.5°E AUGUST, 1945

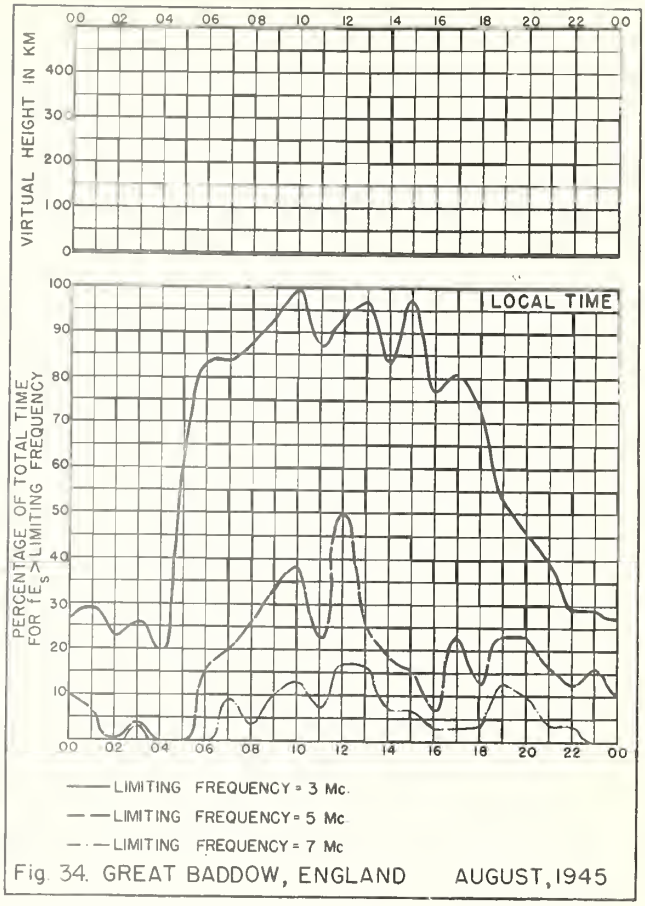

Fig. 34. GREAT BADDOW, ENGLAND AUGUST, 1945

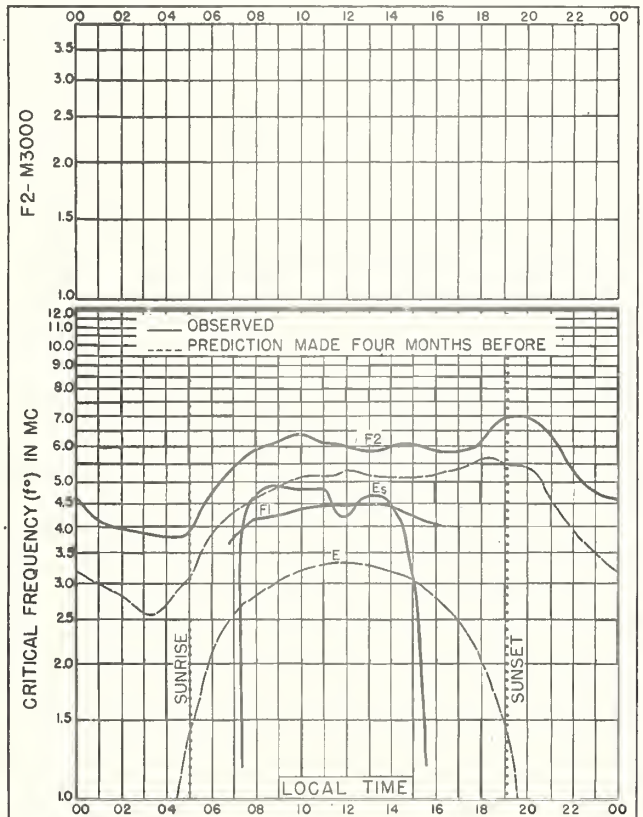

Fig. 35. KOCHEL, BAVARIA
47.7°N, 11.4°E AUGUST, 1945

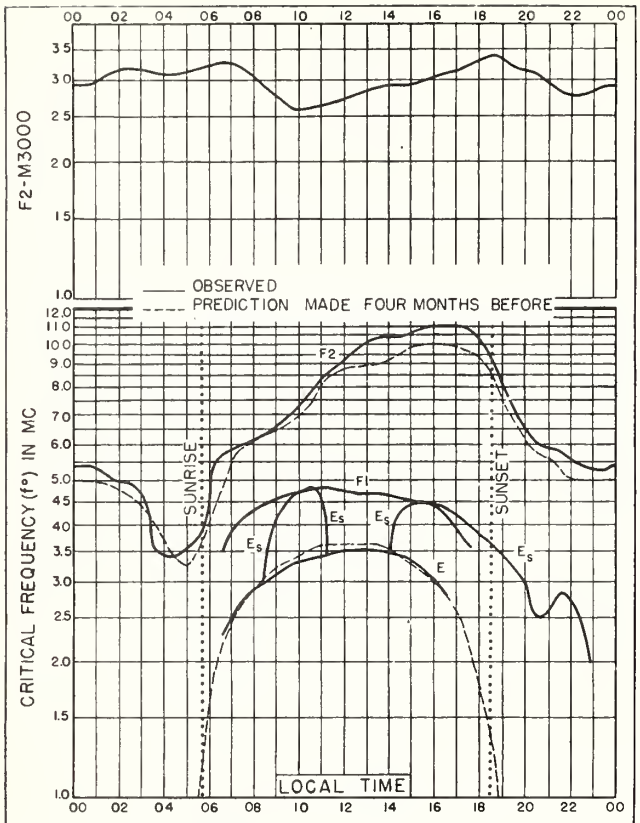

Fig. 36. MAUI, HAWAII
20.8° N, 156.5° W
AUGUST, 1945.

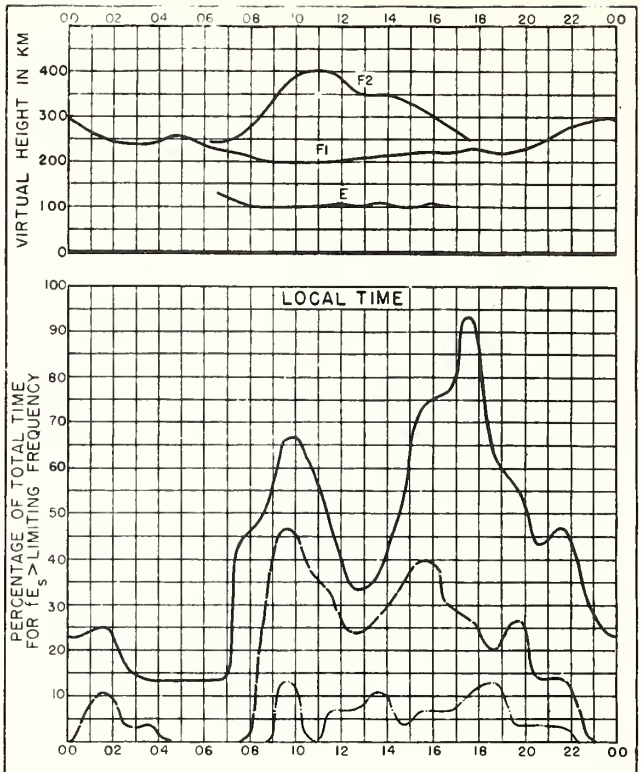

Fig. 37. MAUI, HAWAII
AUGUST, 1945.

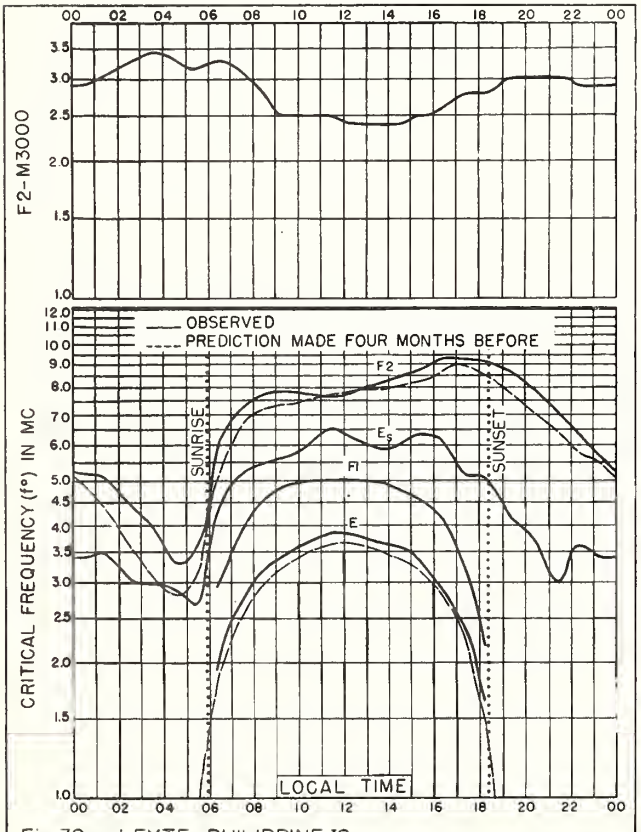

Fig. 38. LEYTE, PHILIPPINE IS.
11.0° N, 125.0° E
AUGUST, 1945.

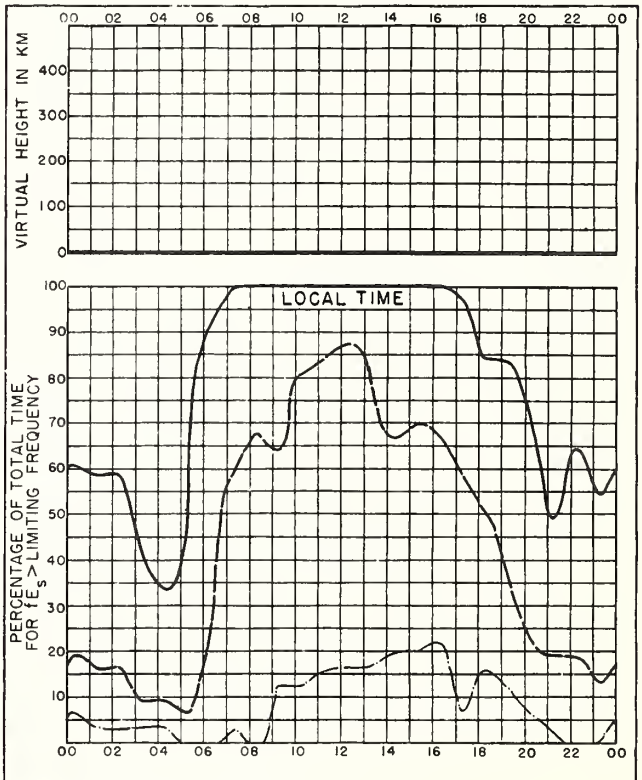

Fig. 39. LEYTE, PHILIPPINE IS.
AUGUST, 1945.

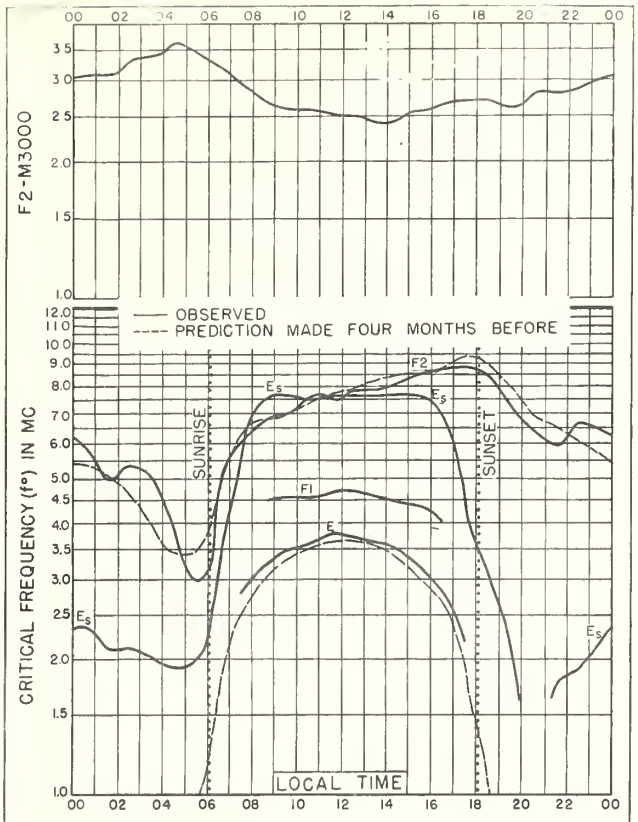

Fig. 40. CHRISTMAS ISLAND
1.9° N, 157.3° W
AUGUST, 1945

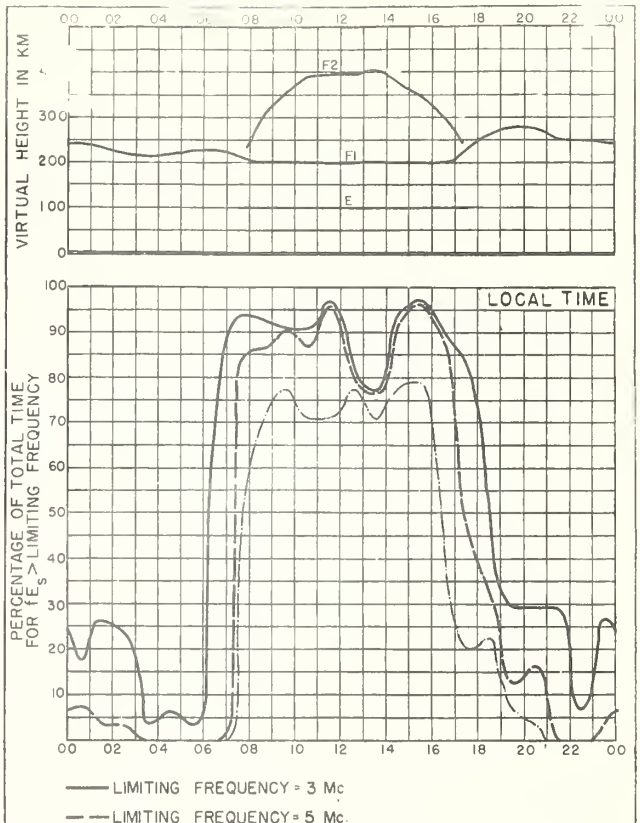

Fig. 41. CHRISTMAS ISLAND AUGUST, 1945

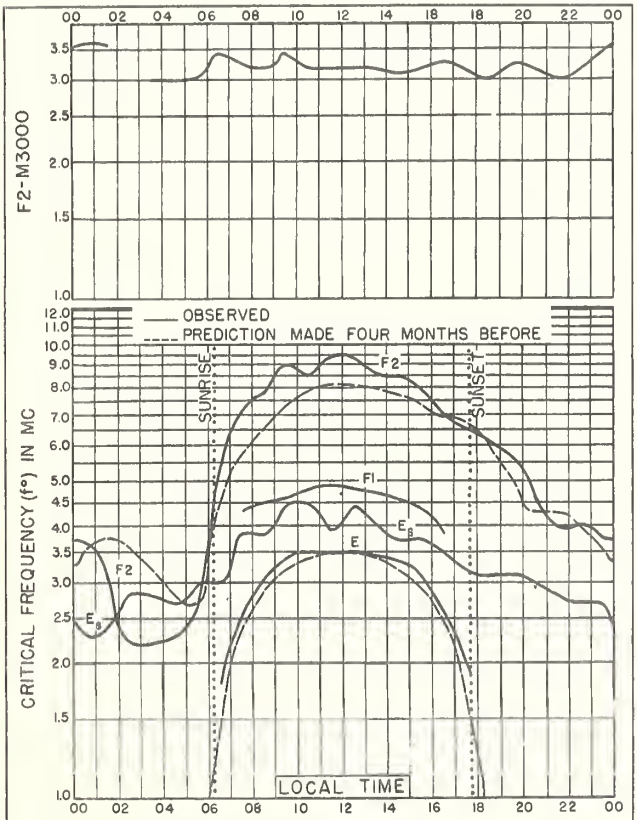

Fig. 42. CAPE YORK, Q., AUSTRALIA
11.0° S, 142.4° E
AUGUST, 1945

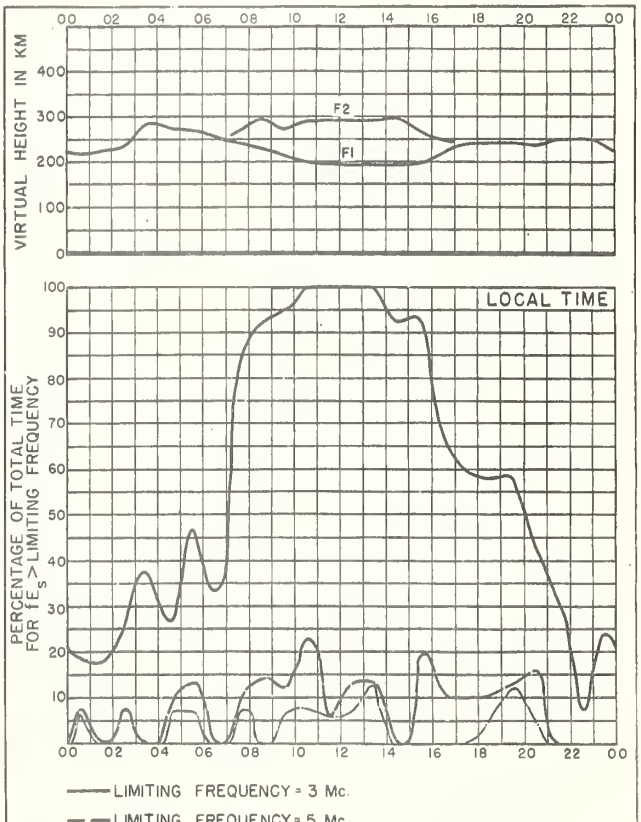

Fig. 43. CAPE YORK, Q., AUSTRALIA AUGUST, 1945.

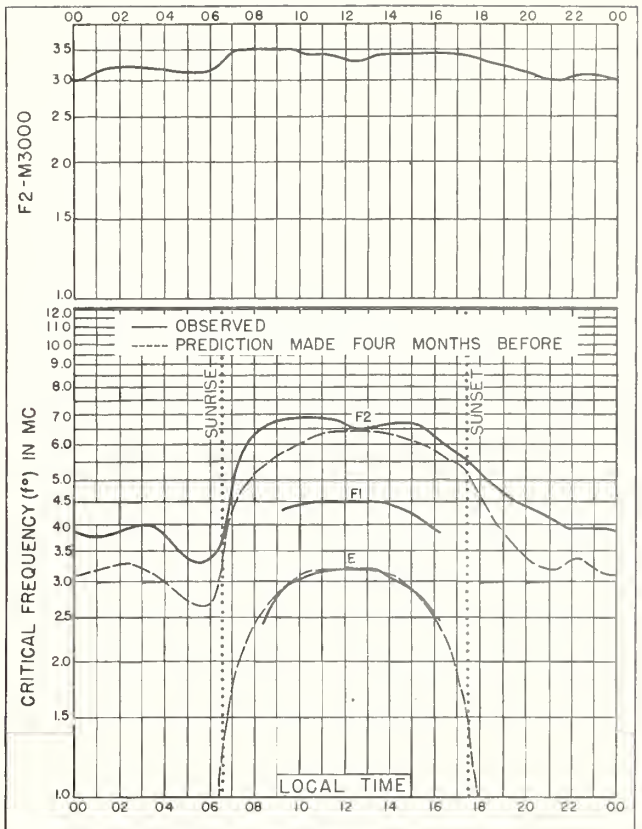

Fig. 44. BRISBANE, Q., AUSTRALIA
27.5°S, 153.0°E AUGUST, 1945

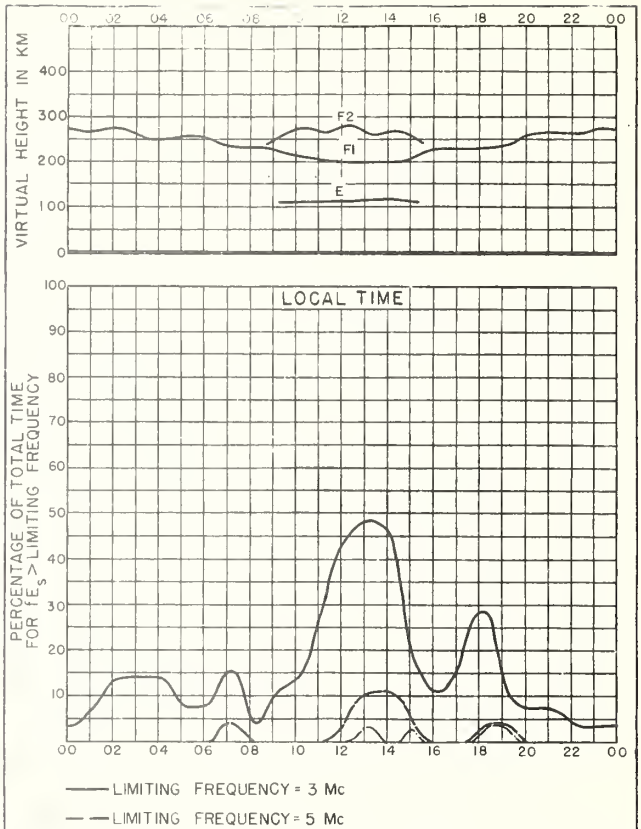

Fig. 45. BRISBANE, Q., AUSTRALIA AUGUST, 1945.

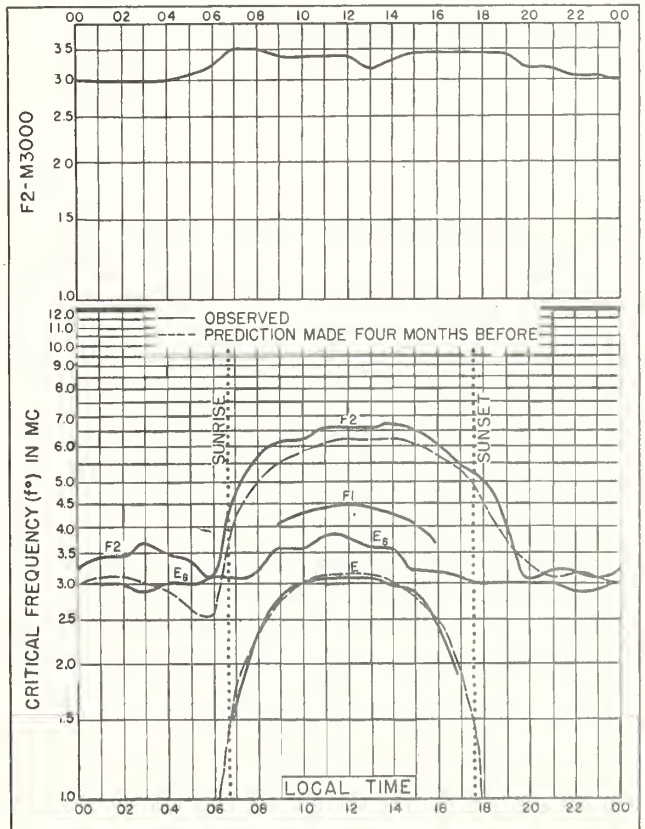

Fig. 46. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E AUGUST, 1945

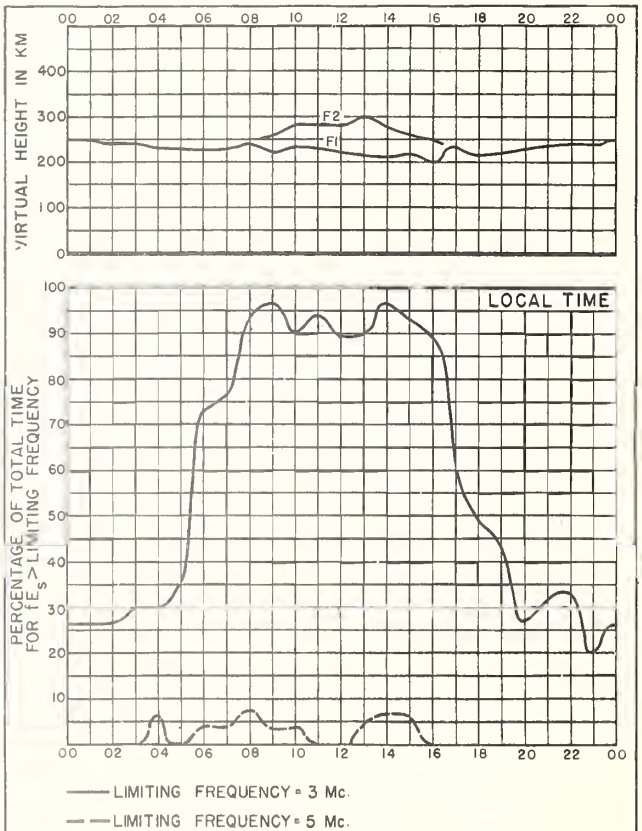

Fig. 47. WATHEROO, W. AUSTRALIA AUGUST, 1945

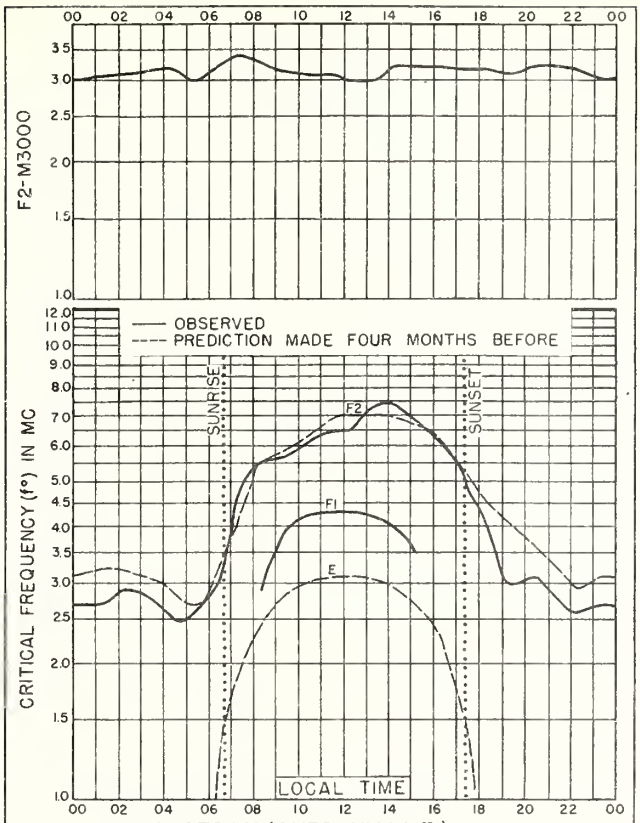

Fig. 48. SIMONSTOWN (DURBANVILLE)
UNION OF S. AFRICA
33.9° S, 18.7° E
AUGUST, 1945

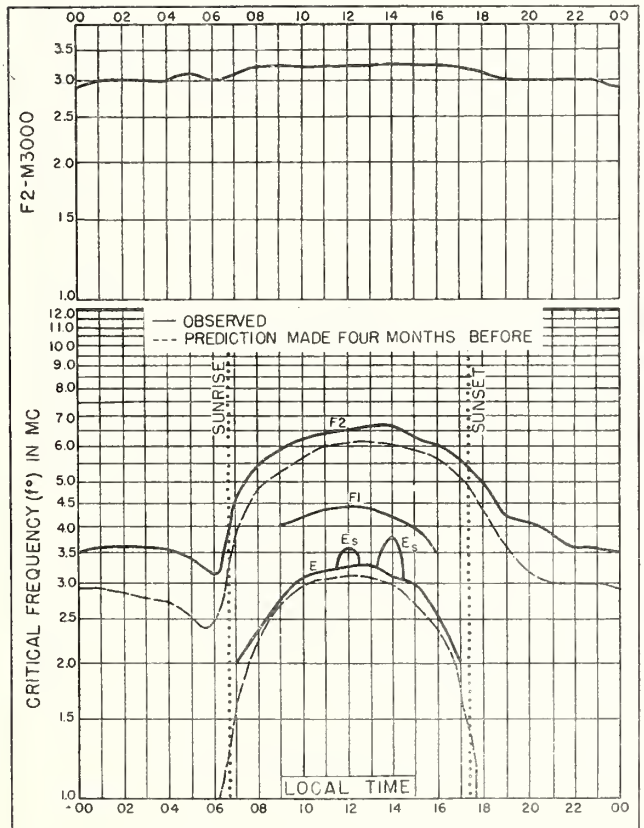

Fig. 49. CANBERRA, A.C.T., (MT. STROMLO), AUSTRALIA
35.3° S, 149.0° E
AUGUST, 1945

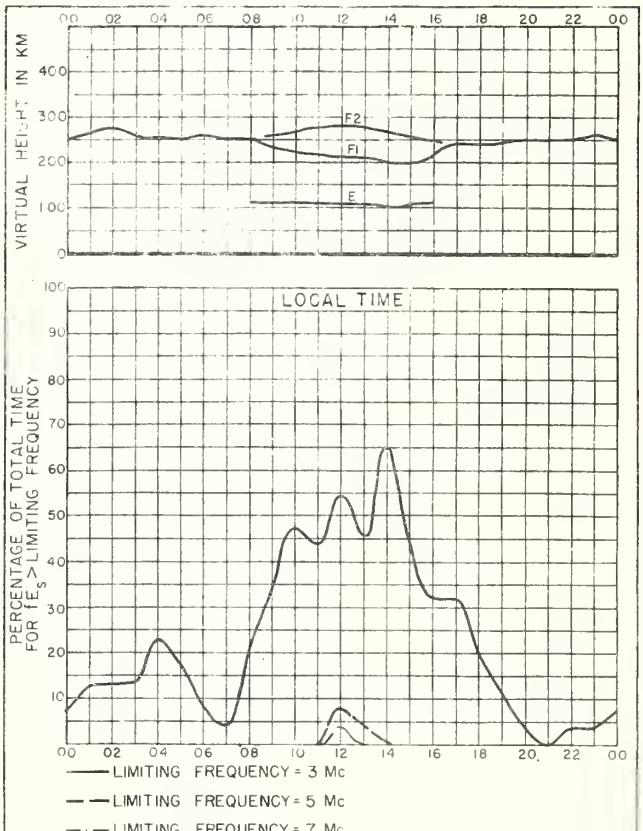

Fig. 50. CANBERRA, A.C.T., (MT. STROMLO), AUSTRALIA
AUGUST, 1945

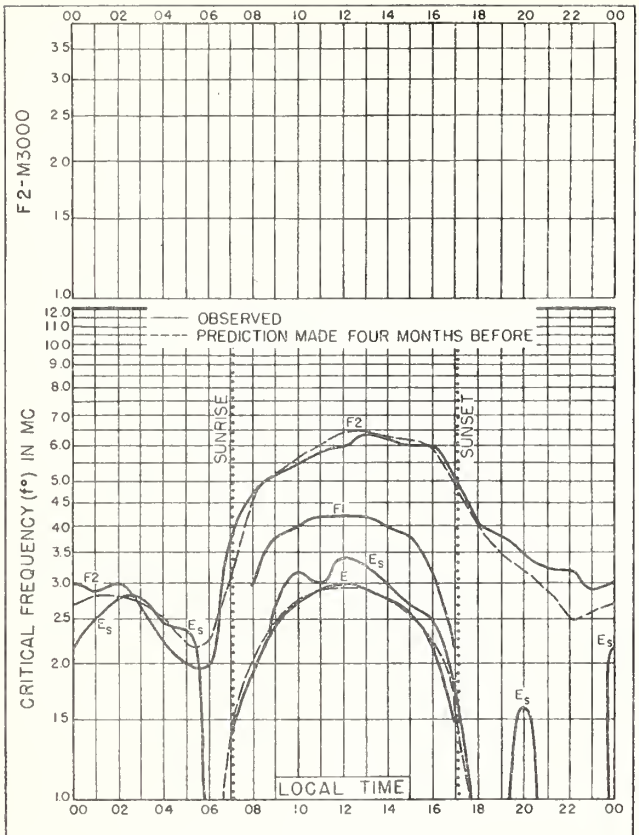

Fig 51 CHRISTCHURCH, NEW ZEALAND
43.5°S, 172.6°E AUGUST, 1945

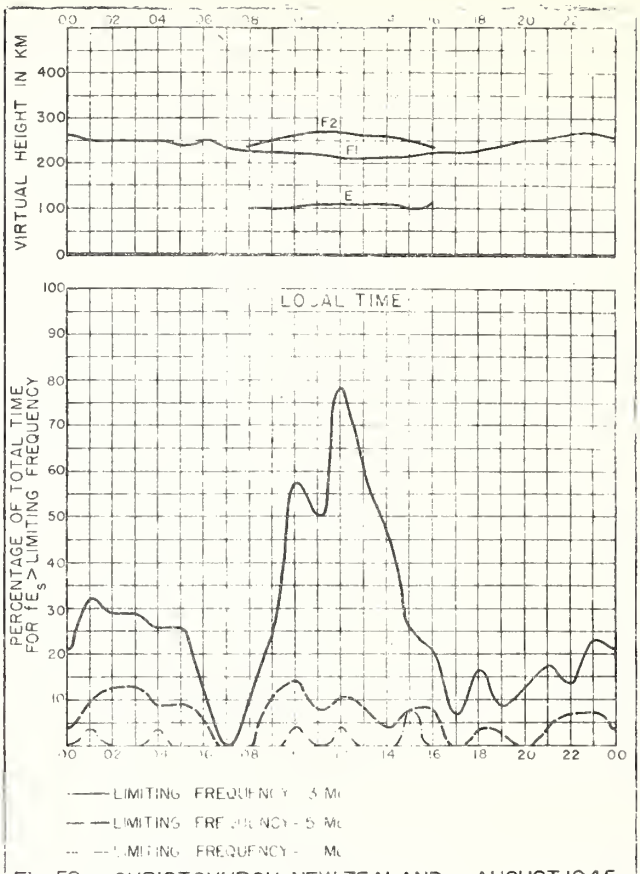

Fig. 52 CHRISTCHURCH, NEW ZEALAND AUGUST, 1945

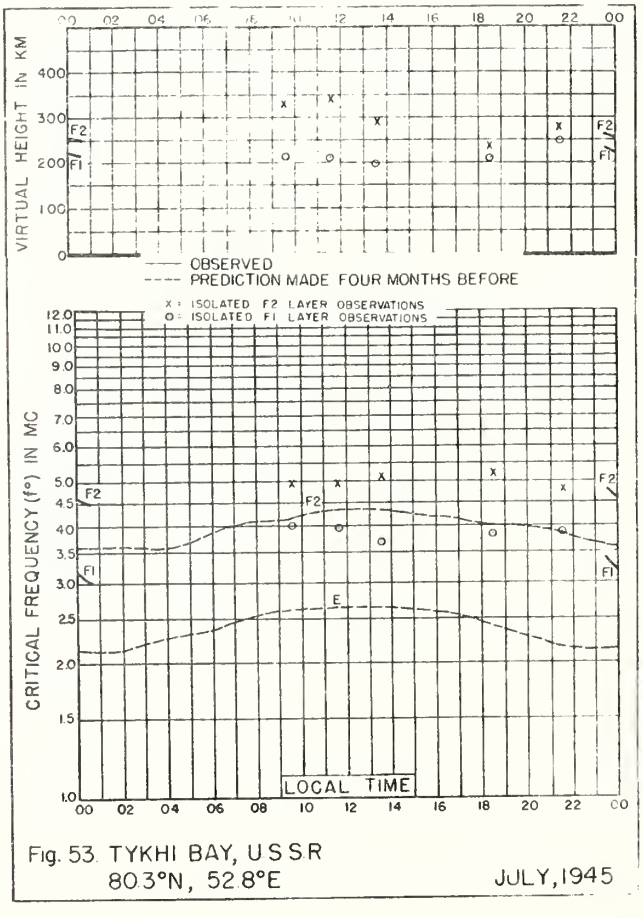

Fig. 53. TYKHI BAY, USSR
80.3°N, 52.8°E JULY, 1945

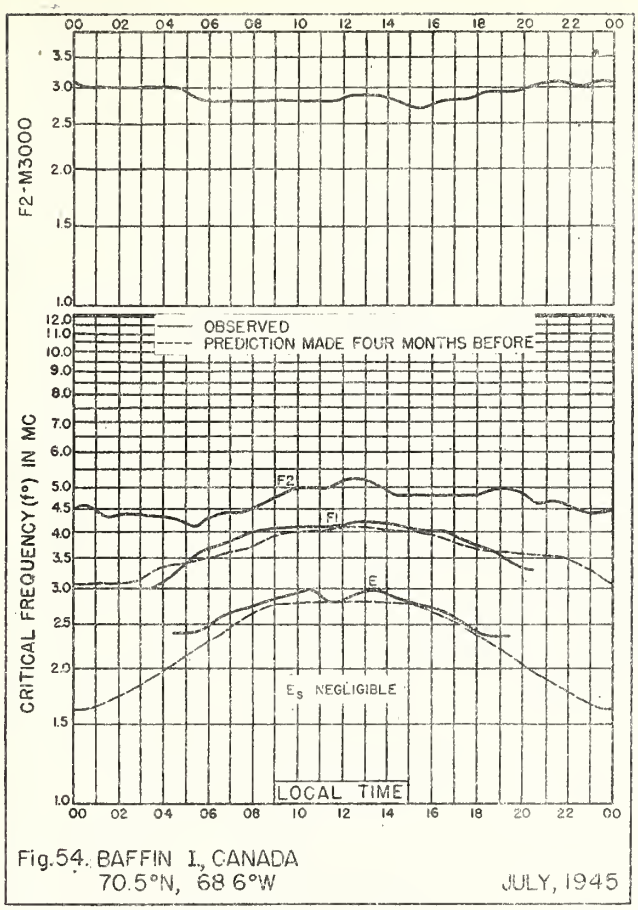

Fig.54. BAFFIN I., CANADA
70.5°N, 68.6°W
JULY, 1945

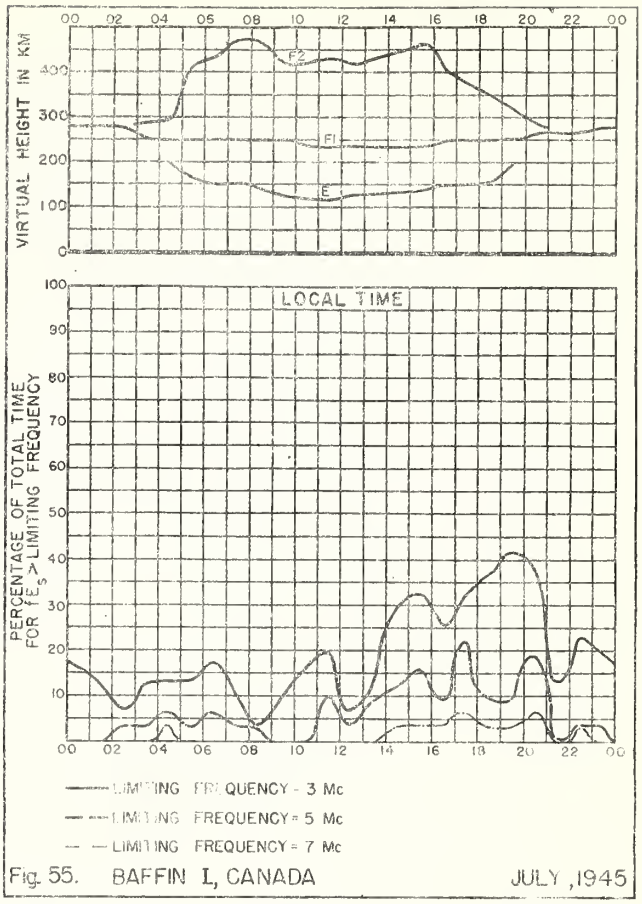

Fig. 55. BAFFIN I, CANADA
JULY, 1945

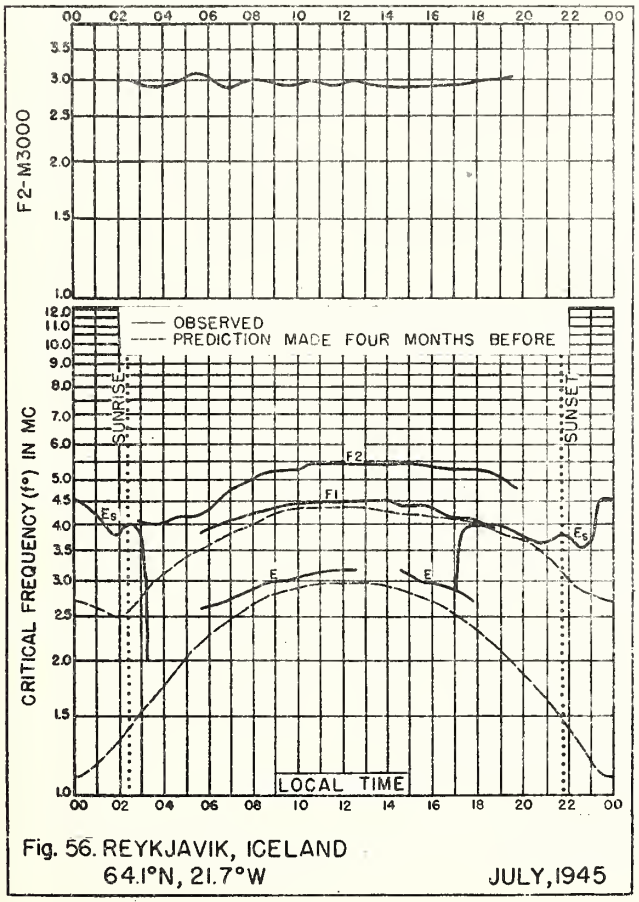

Fig. 56. REYKJAVIK, ICELAND
64.1°N, 21.7°W
JULY, 1945

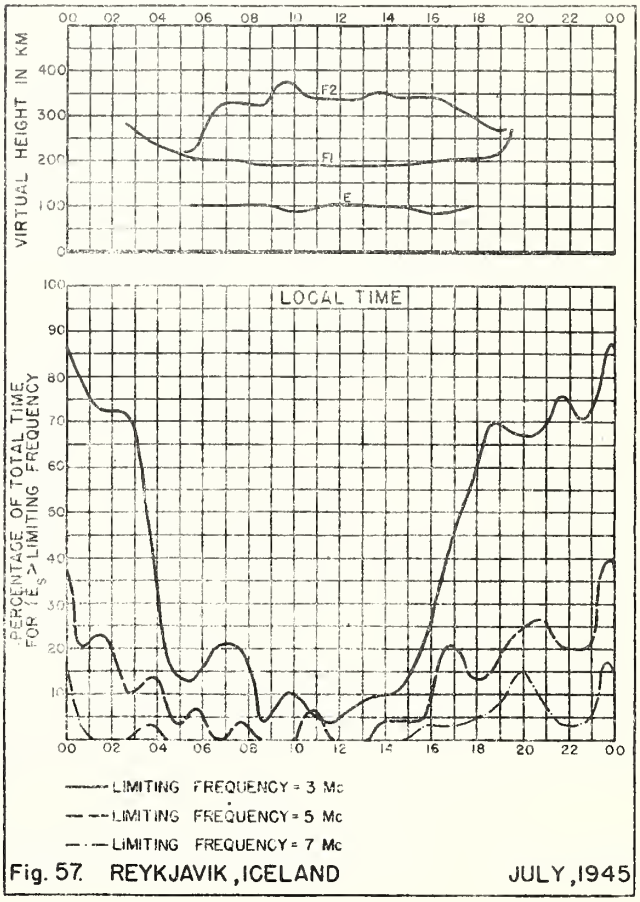

Fig. 57. REYKJAVIK, ICELAND
JULY, 1945

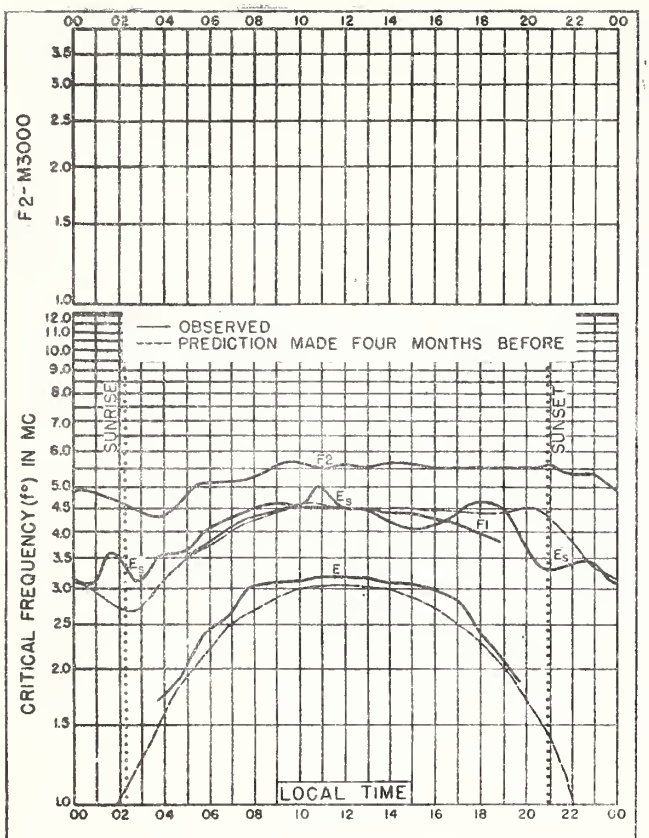

Fig. 58. OSLO, NORWAY
59.9° N, 11.0° E
JULY, 1945

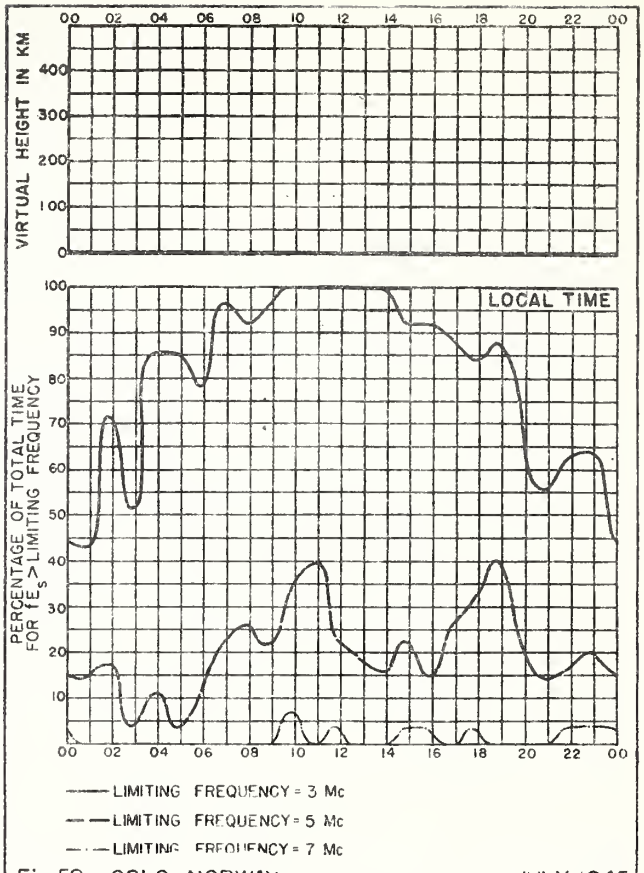

Fig. 59. OSLO, NORWAY
JULY, 1945

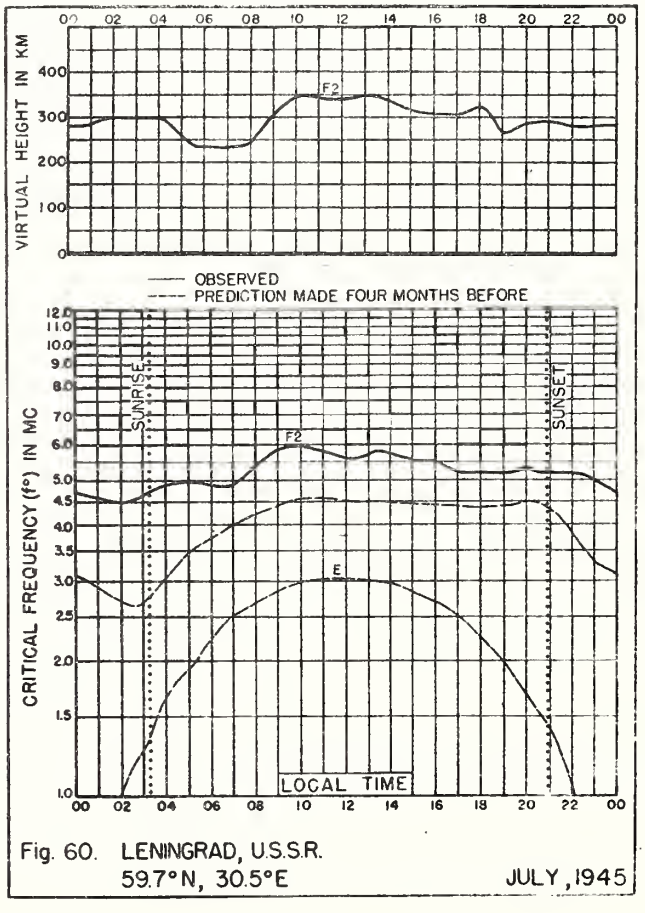

Fig. 60. LENINGRAD, U.S.S.R.
59.7° N, 30.5° E
JULY, 1945

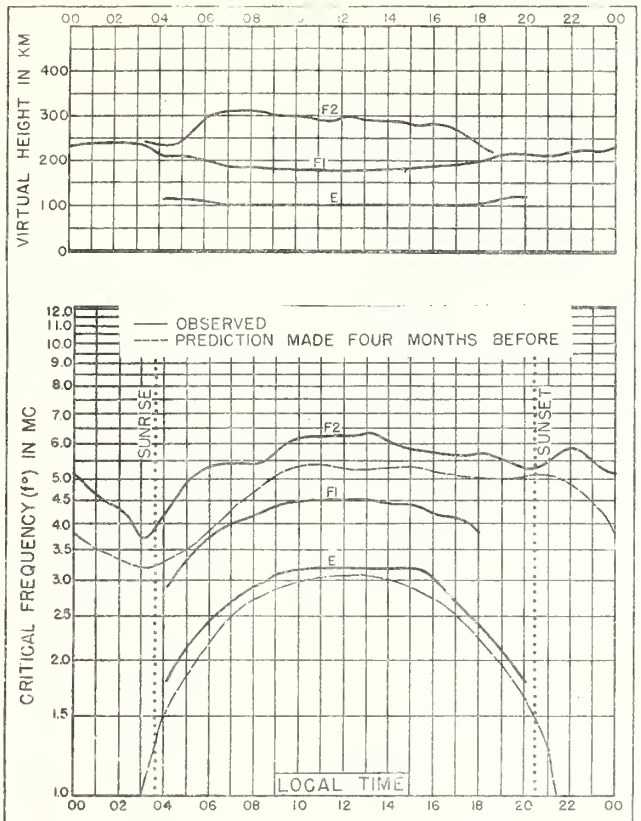

Fig. 61. SVERDLOVSK, U.S.S.R.
56.7°N, 61.1°E
JULY, 1945

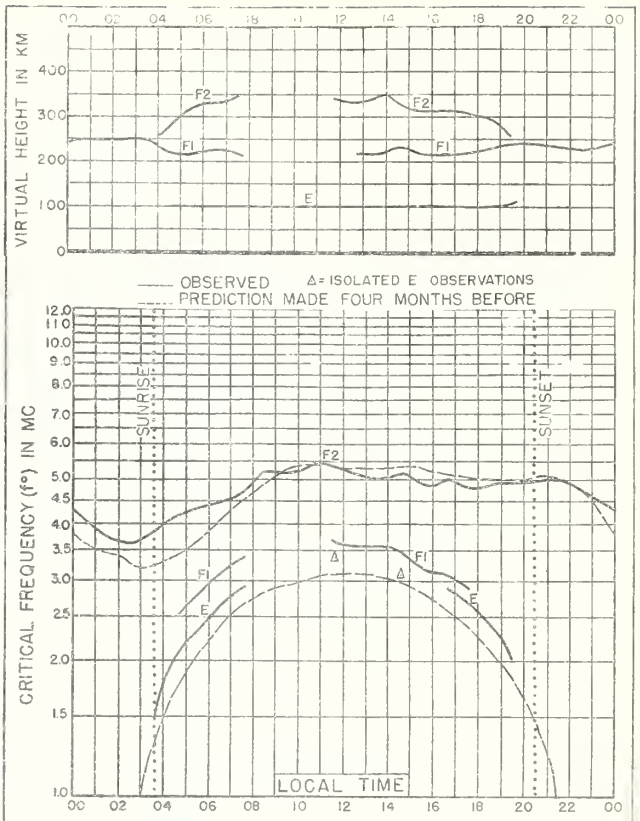

Fig. 62. TOMSK, U.S.S.R.
56.4°N, 85.0°E
JULY, 1945

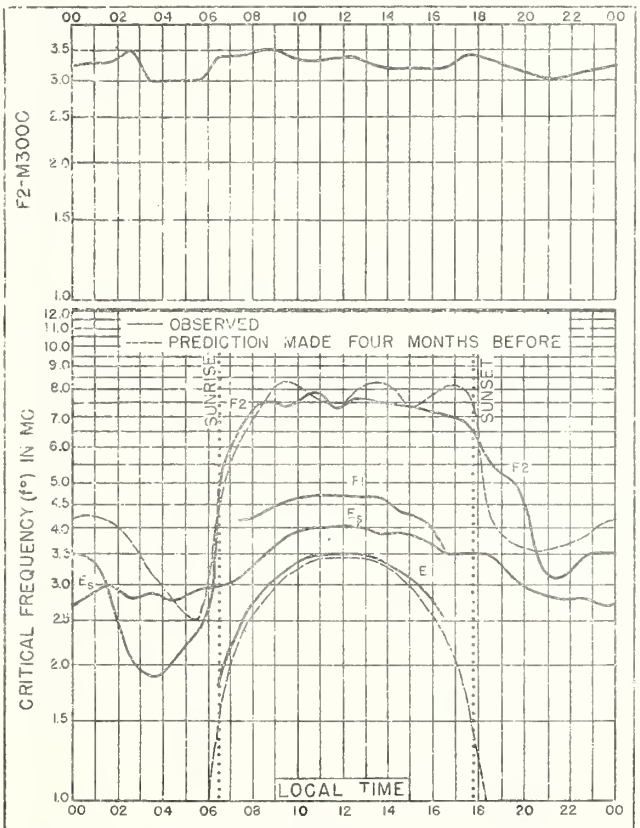

Fig. 63. CAPE YORK, Q., AUSTRALIA
11.0°S, 142.4°E
JULY, 1945

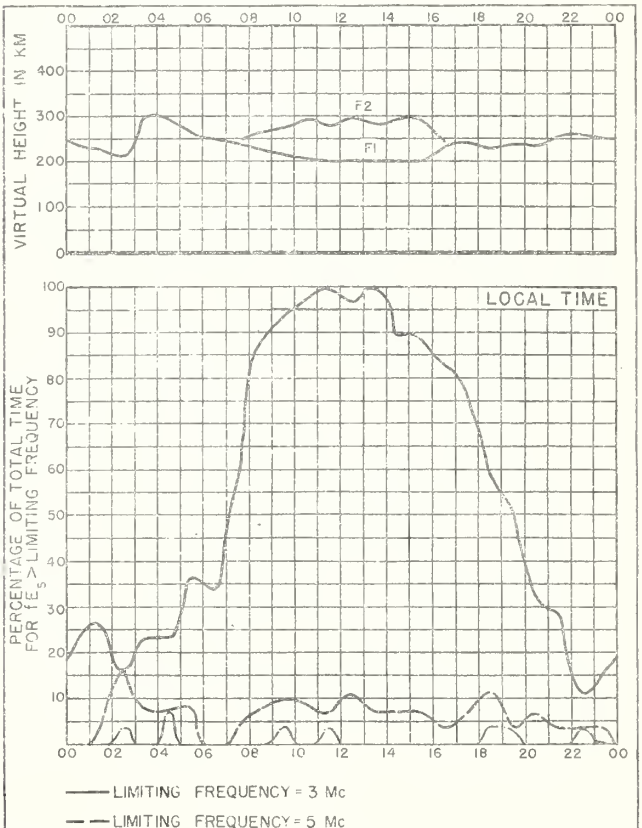

Fig. 64. CAPE YORK, Q., AUSTRALIA
JULY, 1945.

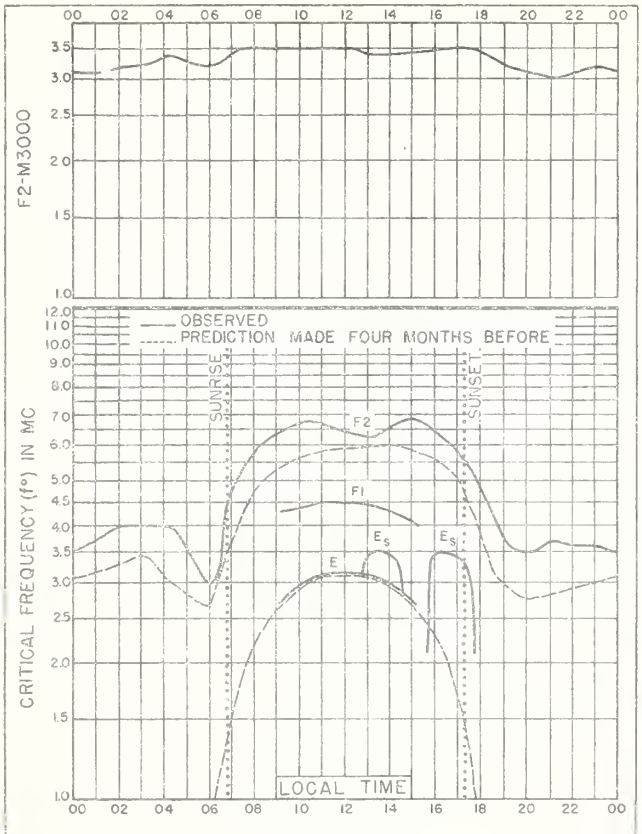

Fig. 65. BRISBANE, Q, AUSTRALIA
27.5°S, 153.0°E JULY, 1945

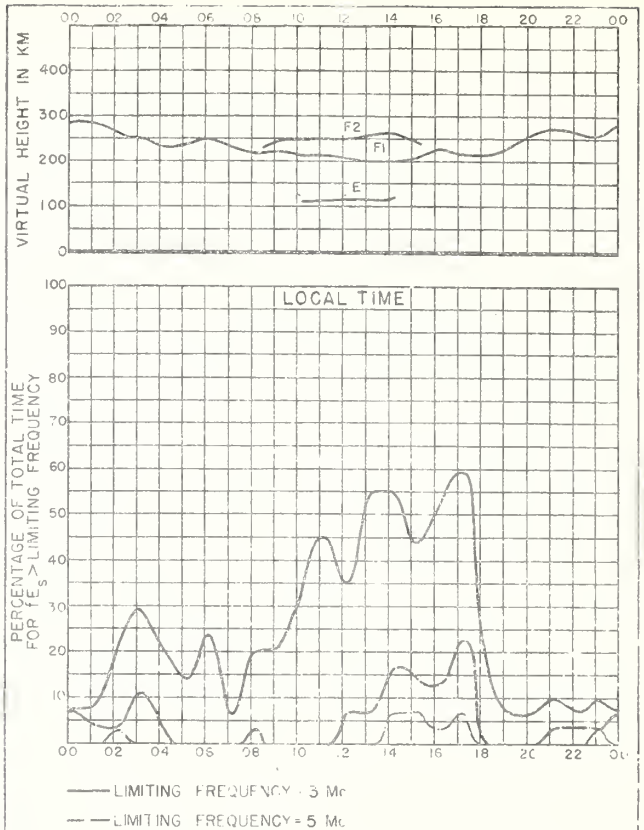

Fig. 66. BRISBANE, Q., AUSTRALIA JULY, 1945

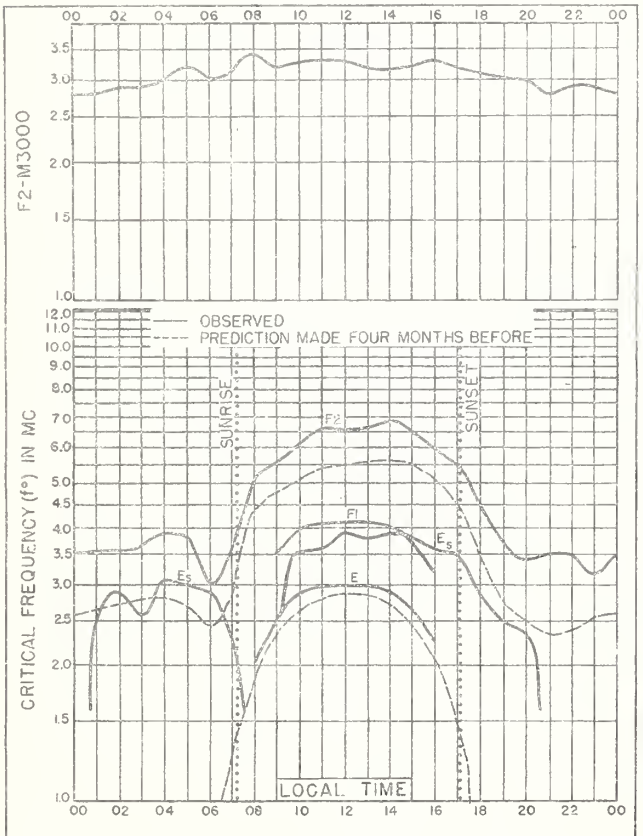

Fig. 67. CANBERRA, A.C.T., (MT. STROMLO), AUSTRALIA
35.3°S, 149.0°E JULY, 1945

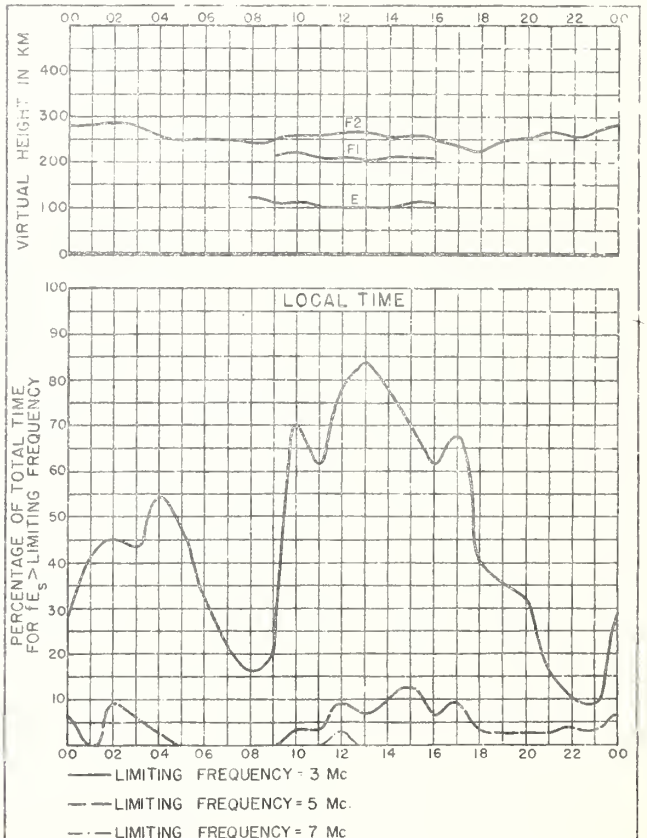

Fig. 68. CANBERRA, A.C.T., (MT. STROMLO), AUSTRALIA
JULY, 1945

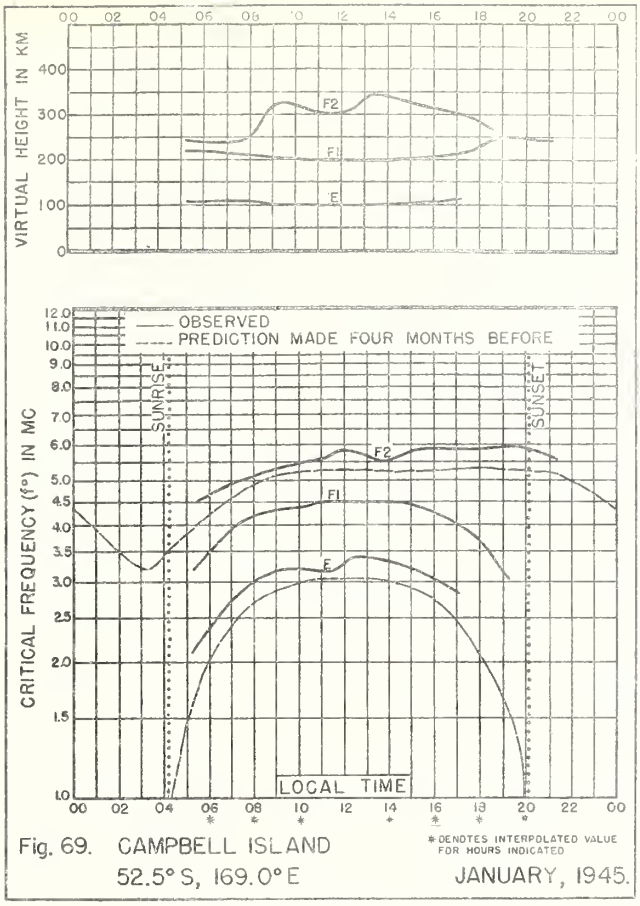

Fig. 69. CAMPBELL ISLAND 52.5° S, 169.0° E JANUARY, 1945.

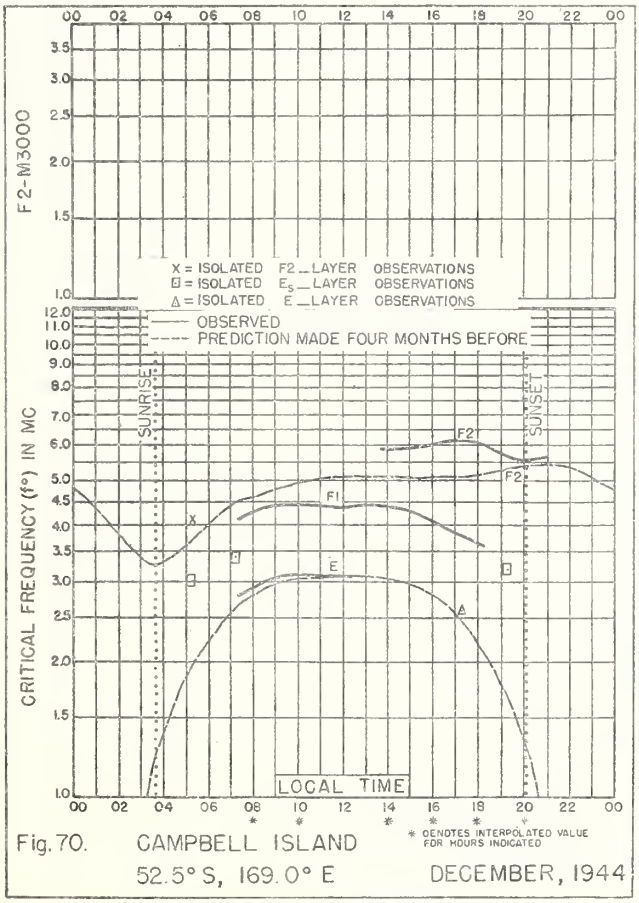

Fig. 70. CAMPBELL ISLAND 52.5° S, 169.0° E DECEMBER, 1944

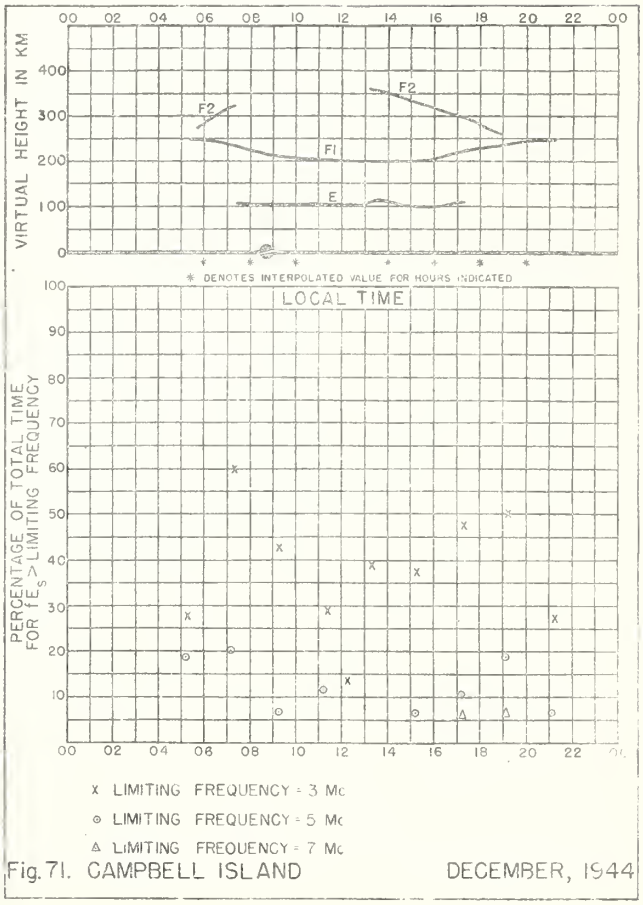

Fig. 71. CAMPBELL ISLAND DECEMBER, 1944

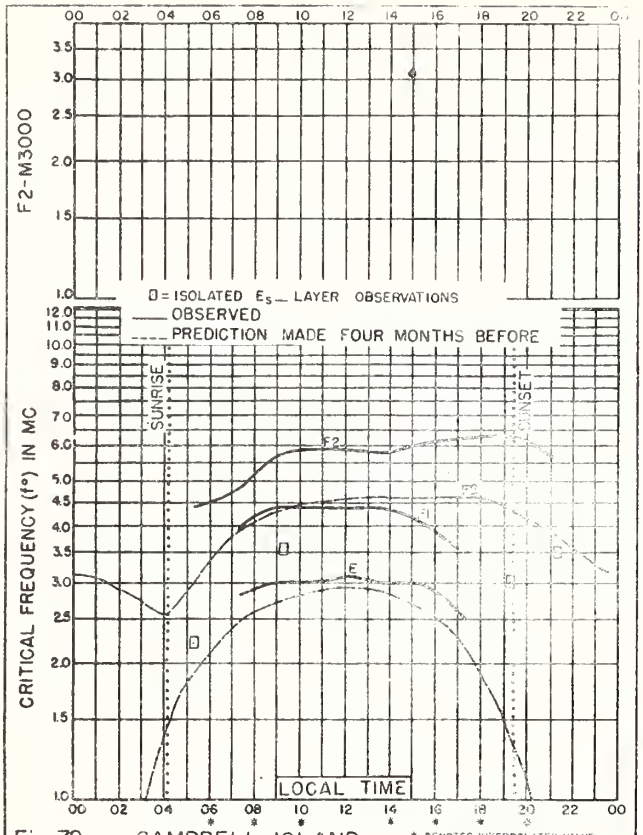

Fig. 72. CAMPBELL ISLAND
52.5° S, 169.0° E
NOVEMBER, 1944

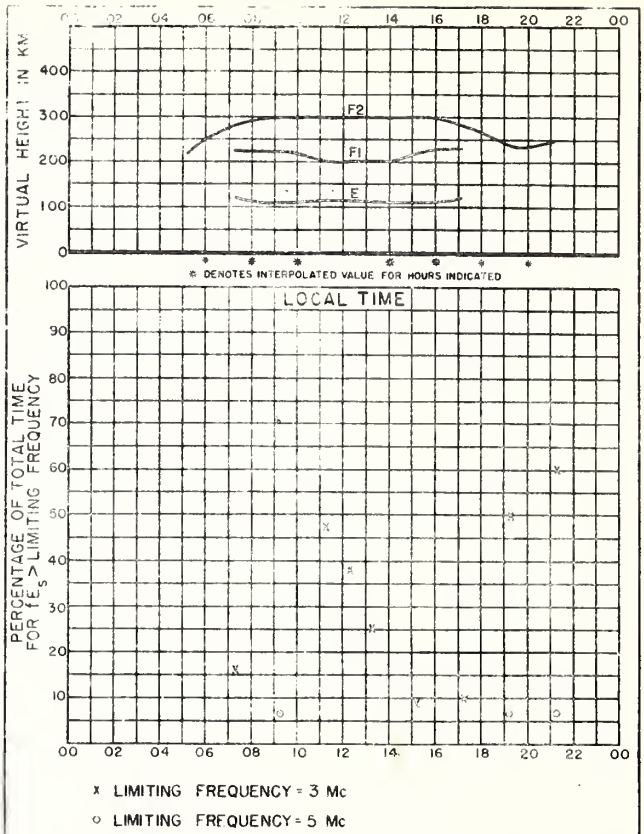

Fig. 73 CAMPBELL ISLAND
NOVEMBER, 1944

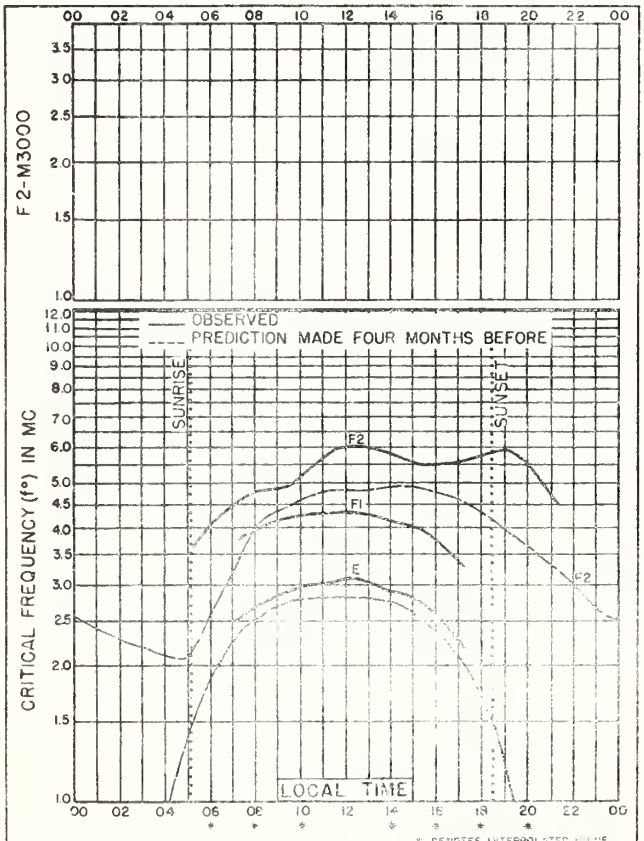

Fig. 74 CAMPBELL ISLAND
52.5° S, 169.0° E
OCTOBER, 1944

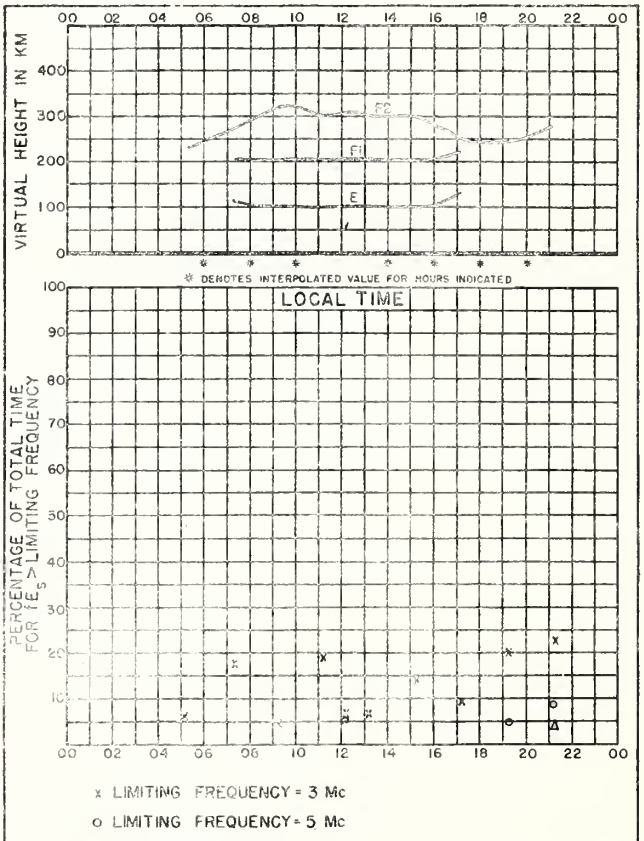

Fig. 75. CAMPBELL ISLAND
OCTOBER, 1944

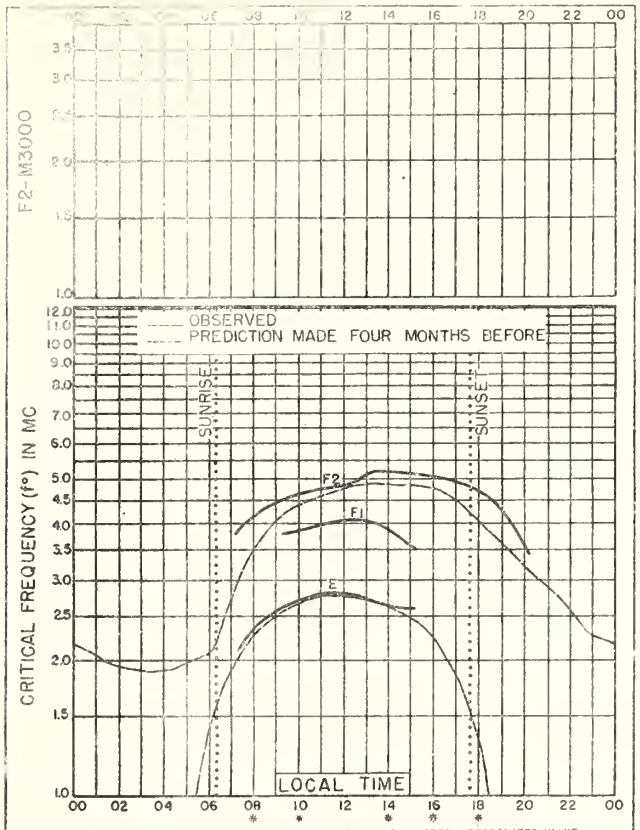

Fig. 76. CAMPBELL ISLAND 52.5° S, 169.0° E SEPTEMBER, 1944

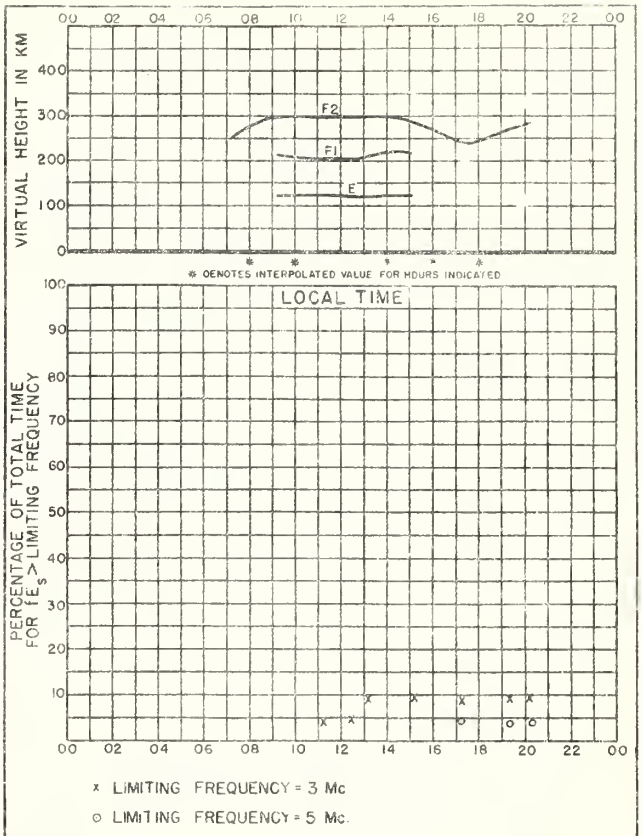

Fig. 77. CAMPBELL ISLAND SEPTEMBER, 1944

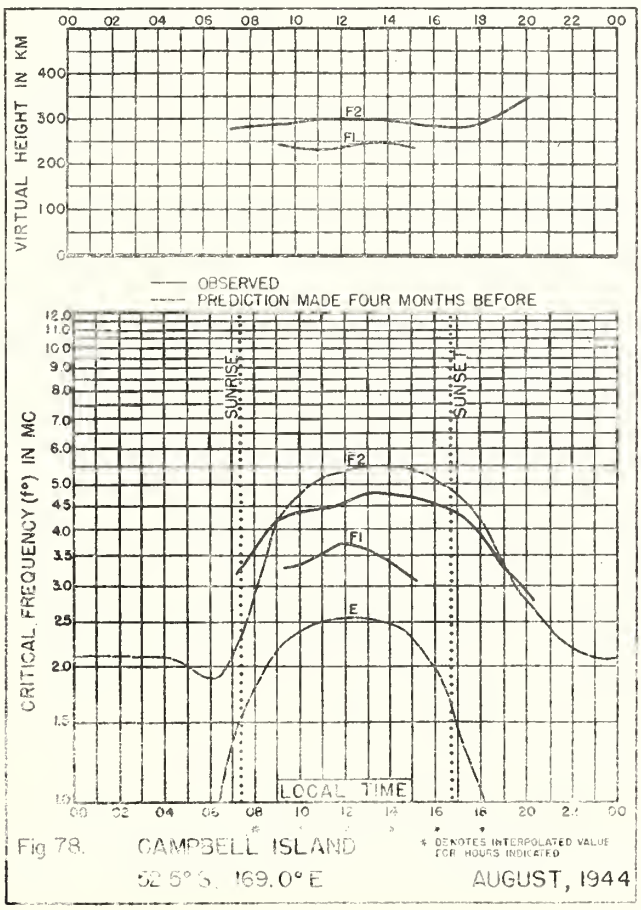

Fig 78. CAMPBELL ISLAND 52.5° S, 169.0° E AUGUST, 1944

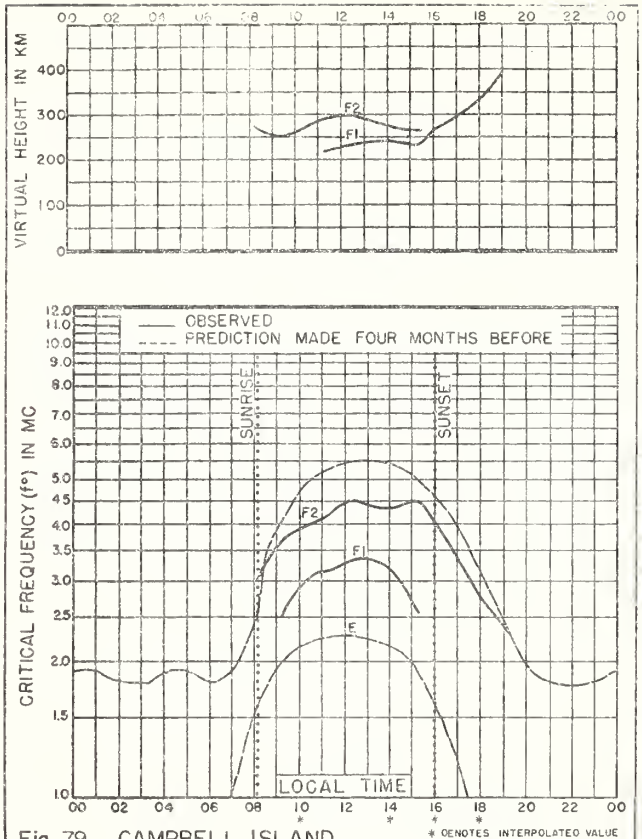

Fig. 79. CAMPBELL ISLAND
52.5°S, 169.0°E
JULY, 1944.

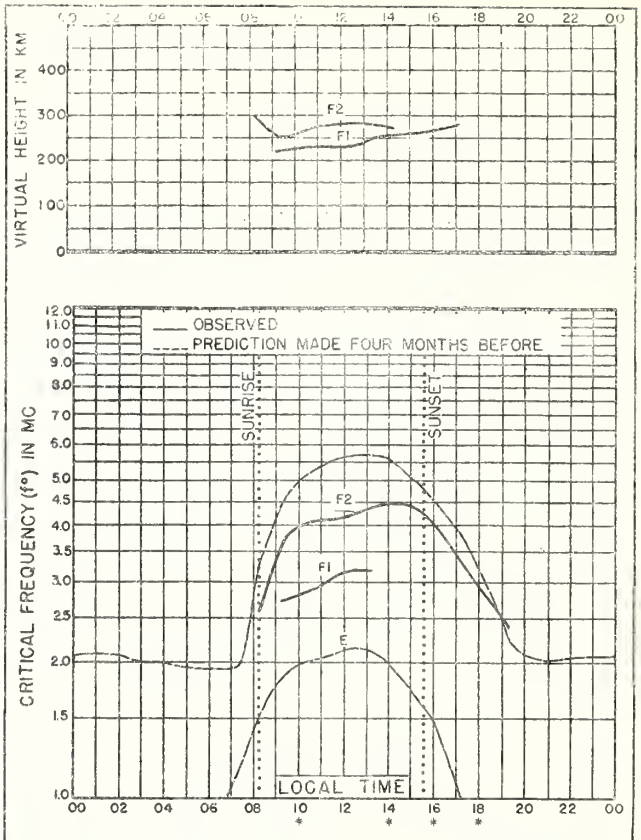

Fig. 80. CAMPBELL ISLAND
52.5° S, 169.0° E
JUNE, 1944

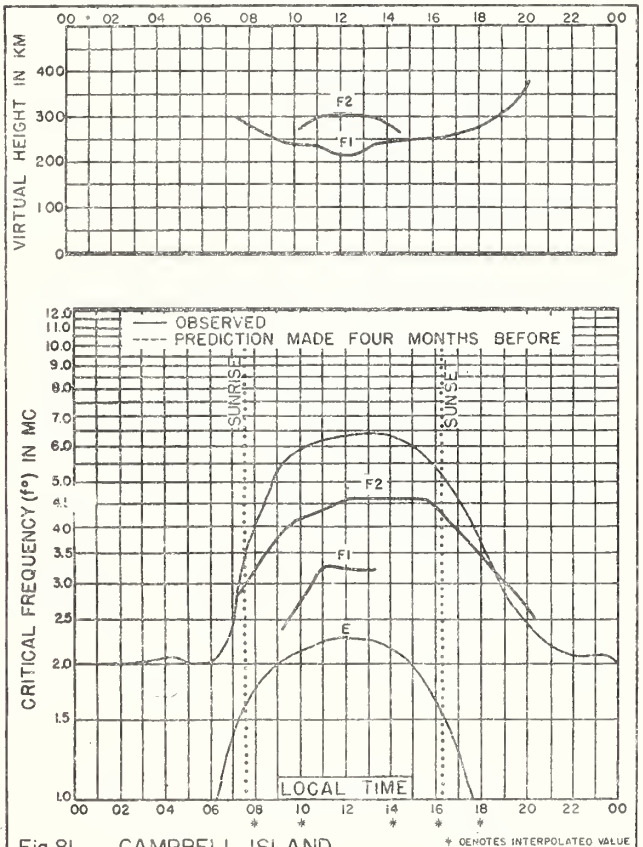

Fig. 81. CAMPBELL ISLAND
52.5° S, 169.0°E
MAY, 1944

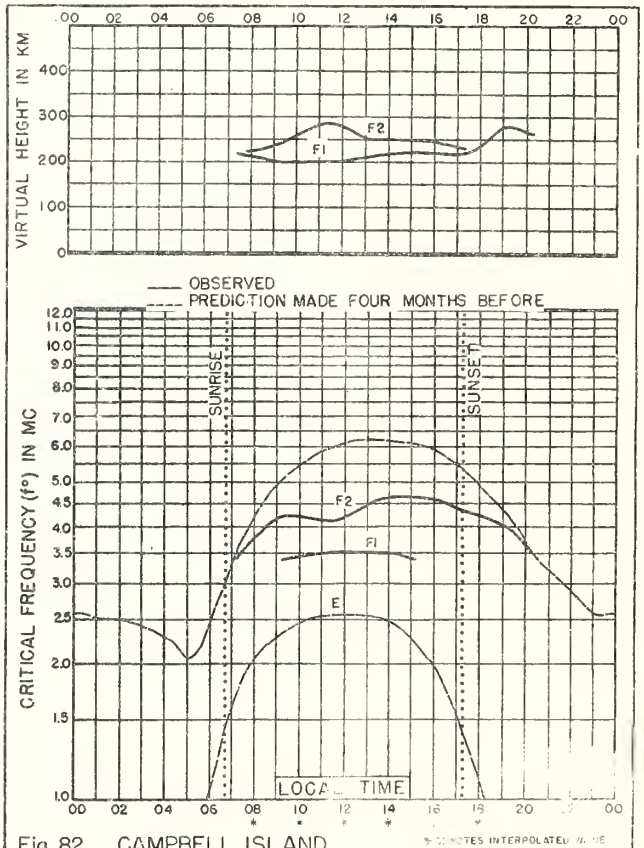

Fig. 82. CAMPBELL ISLAND
52.5° S, 169.0° E
APRIL, 1944

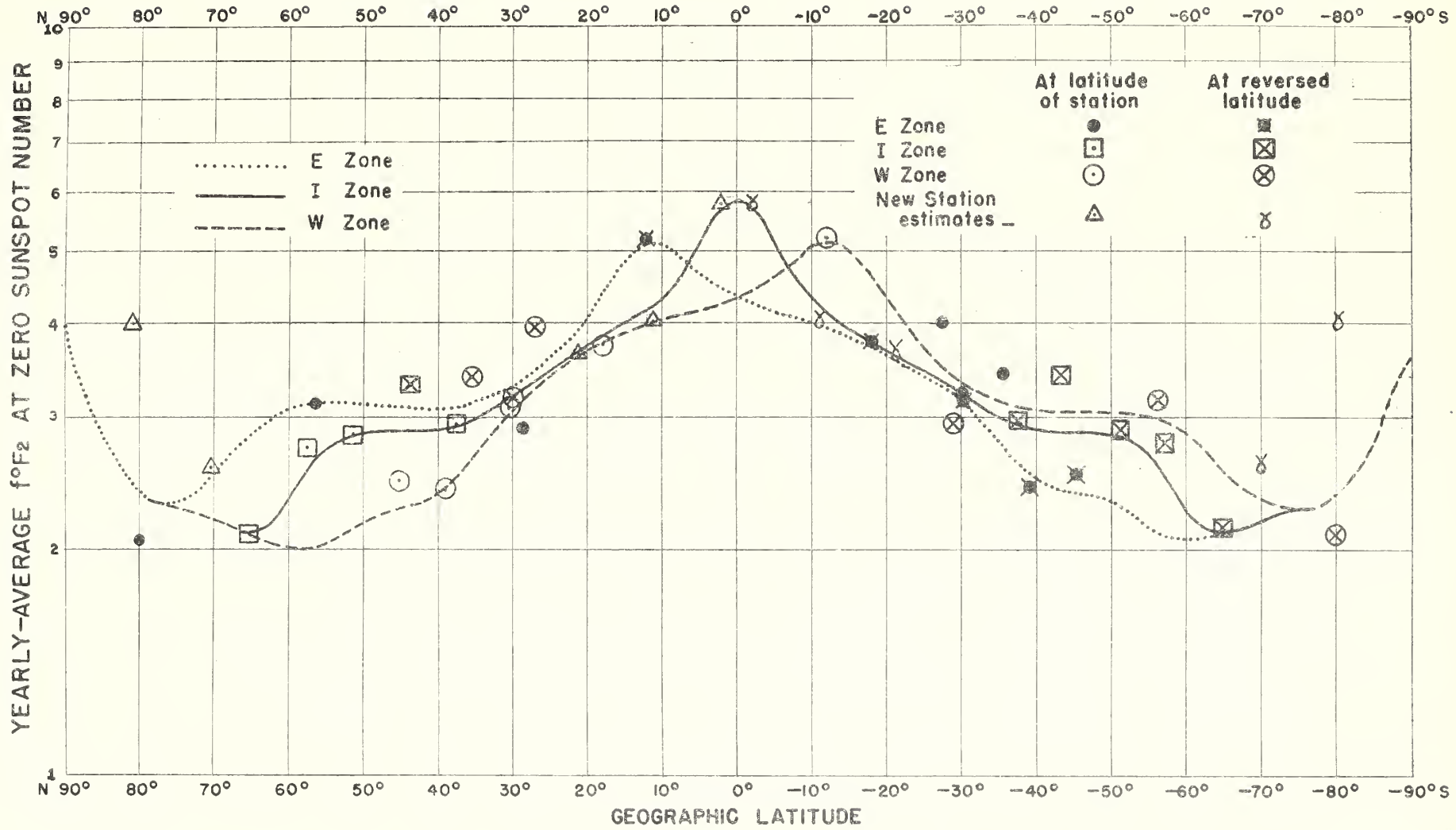

Fig. 83. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 0000 LOCAL TIME.

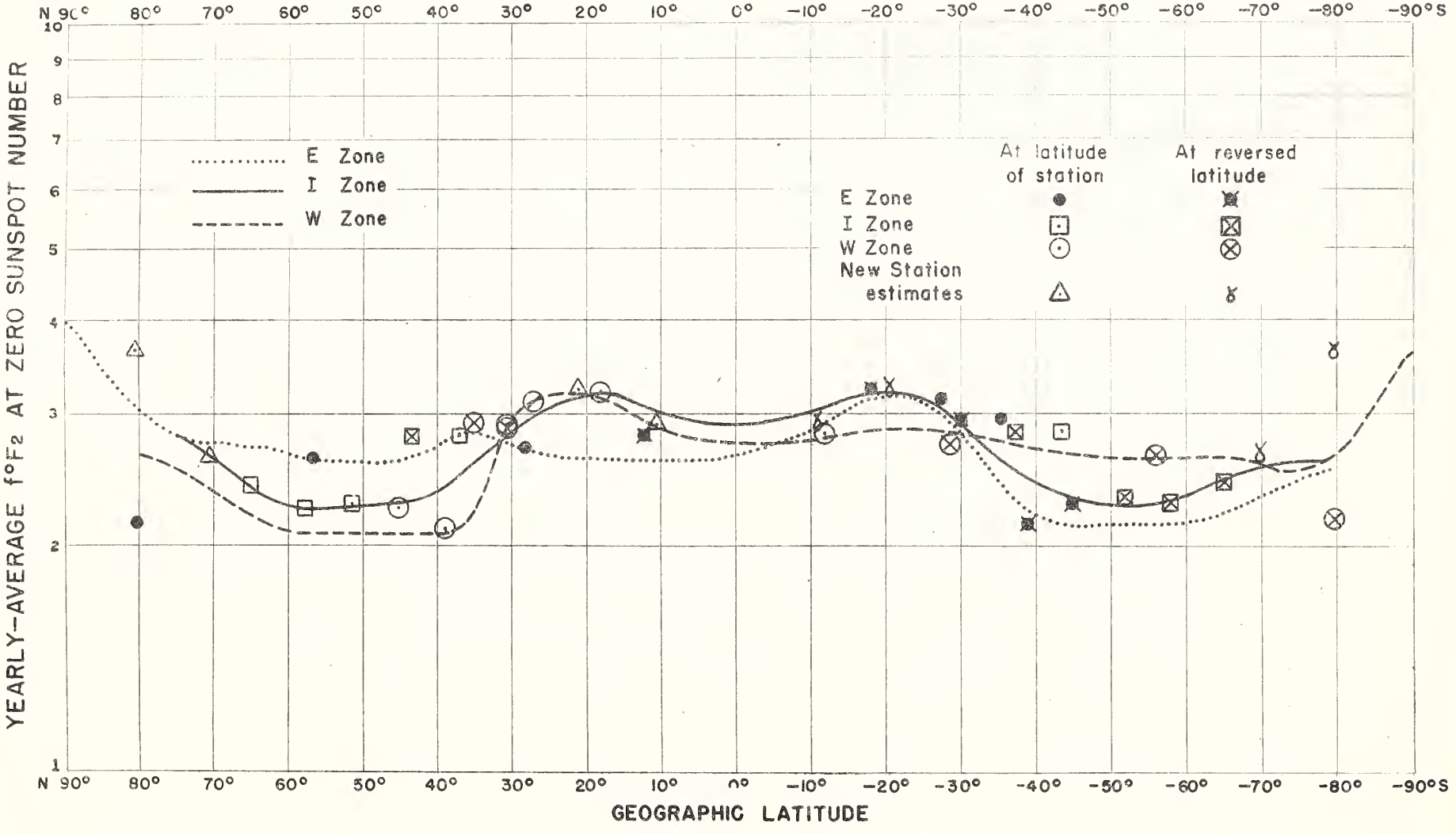

Fig. 84. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 0400 LOCAL TIME.

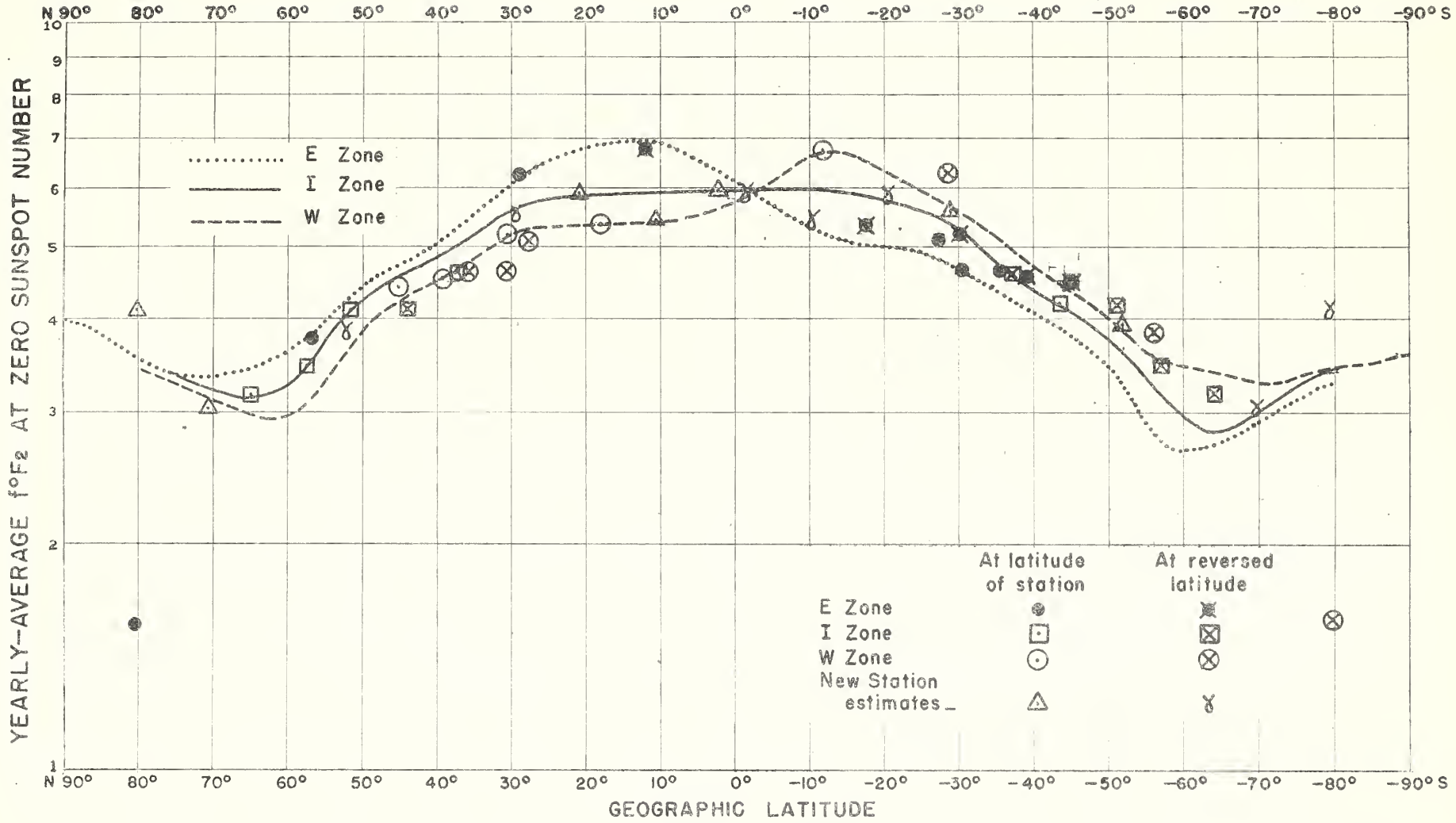

Fig. 85. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 0800 LOCAL TIME.

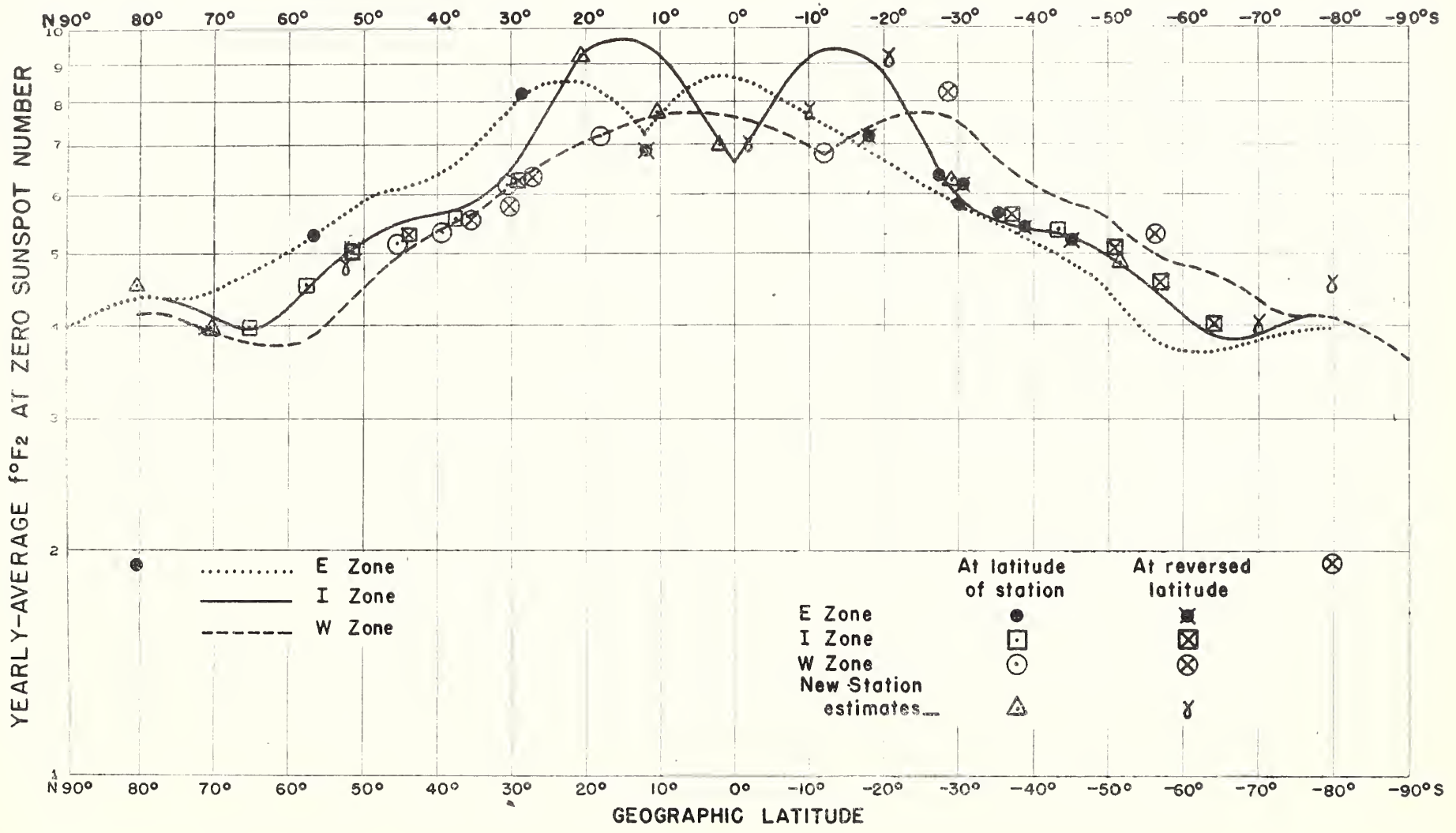

Fig. 86. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 1200 LOCAL TIME.

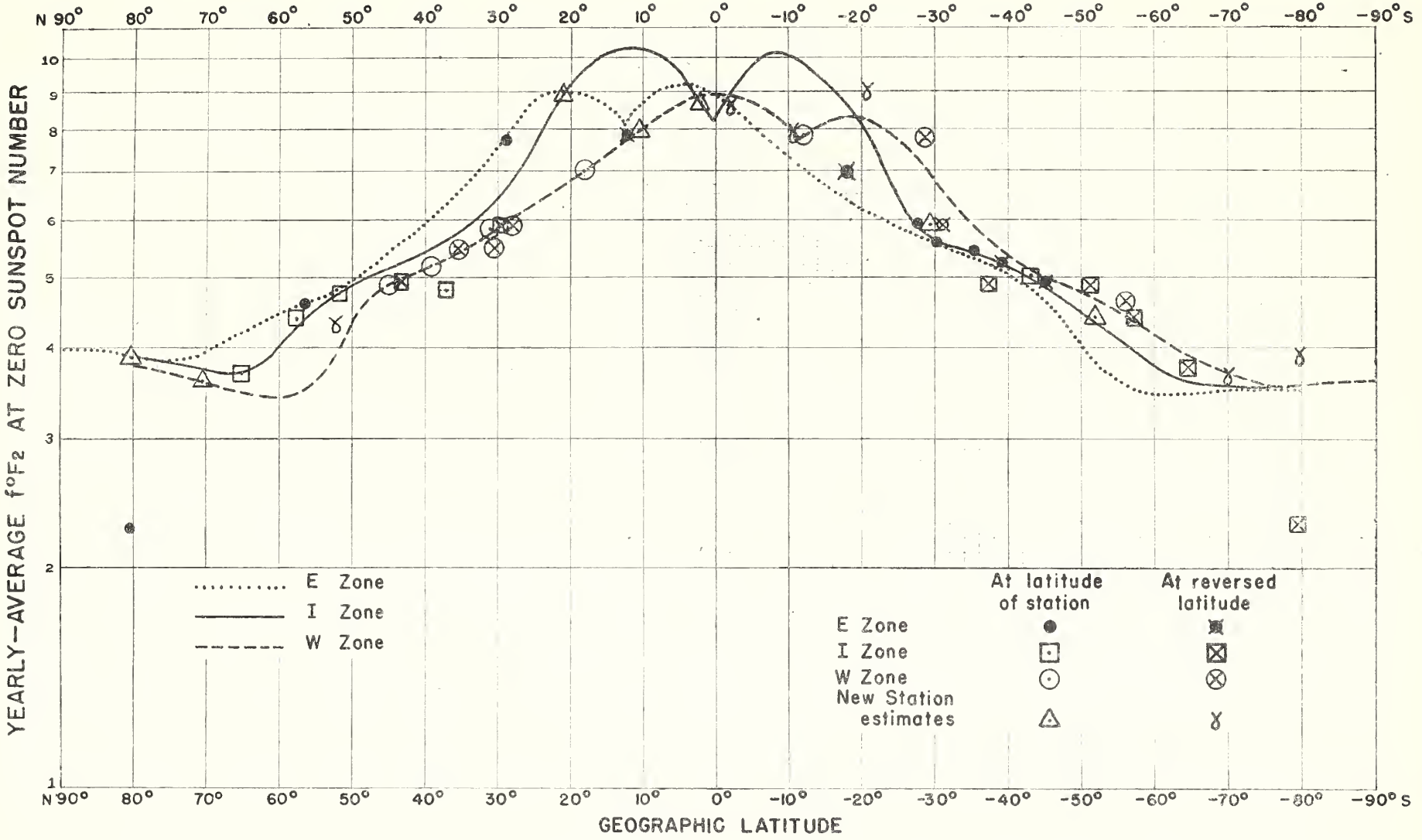

Fig. 87. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 1600 LOCAL TIME.

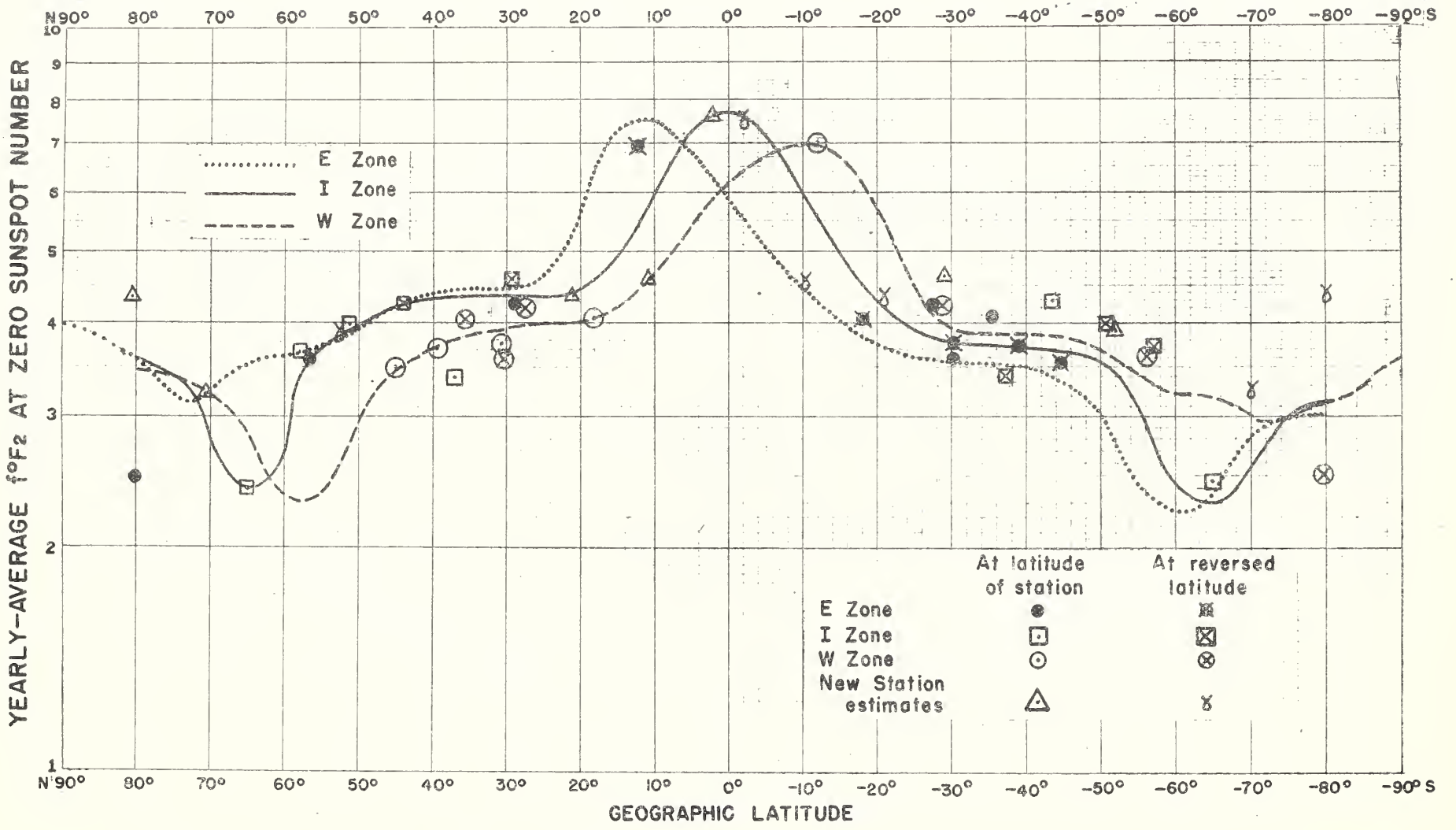

Fig. 88. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 2000 LOCAL TIME.

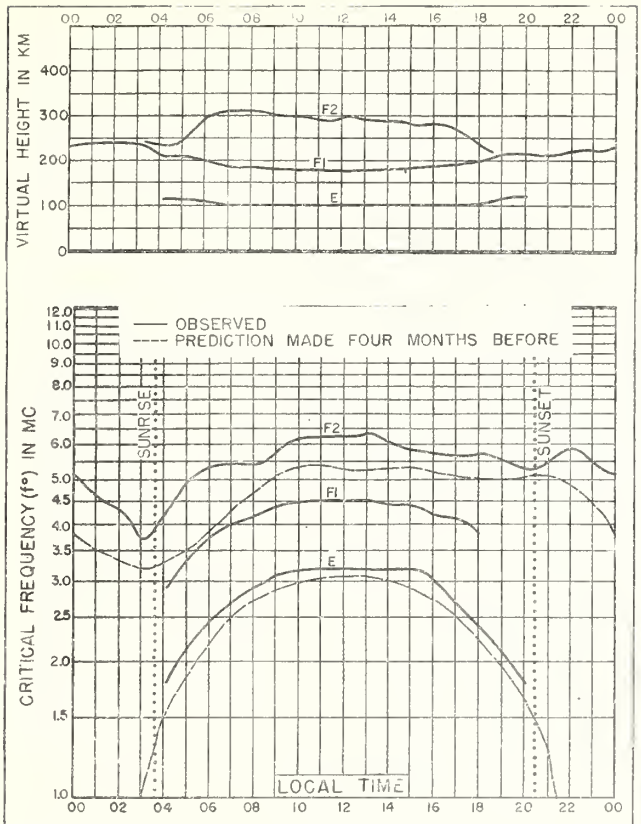

Fig. 61. SVERDLOVSK, U.S.S.R.
56.7°N, 61.1°E
JULY, 1945

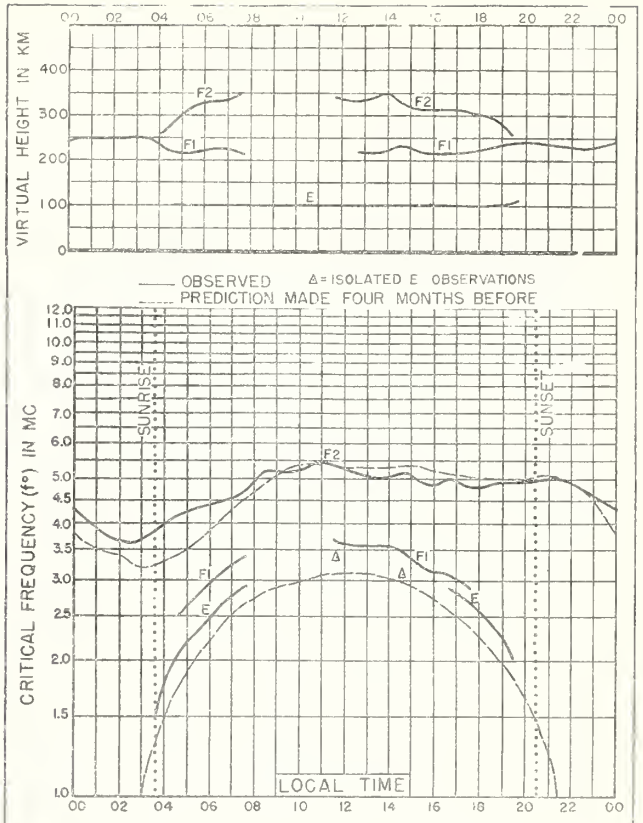

Fig. 62. TOMSK, U.S.S.R.
56.4°N, 85.0°E
JULY, 1945

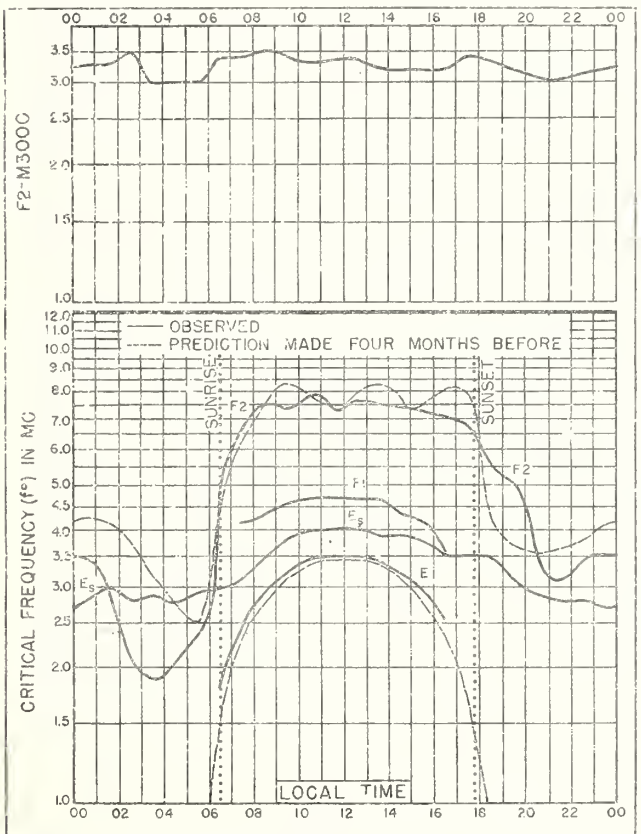

Fig. 63. CAPE YORK, Q., AUSTRALIA
11.0°S, 142.4°E
JULY, 1945

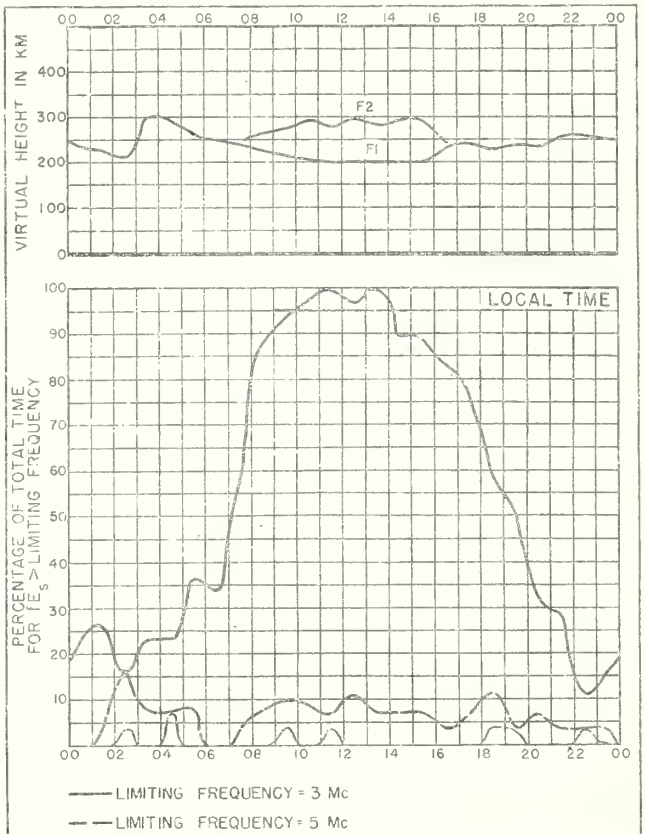

Fig. 64. CAPE YORK, Q., AUSTRALIA
JULY, 1945.

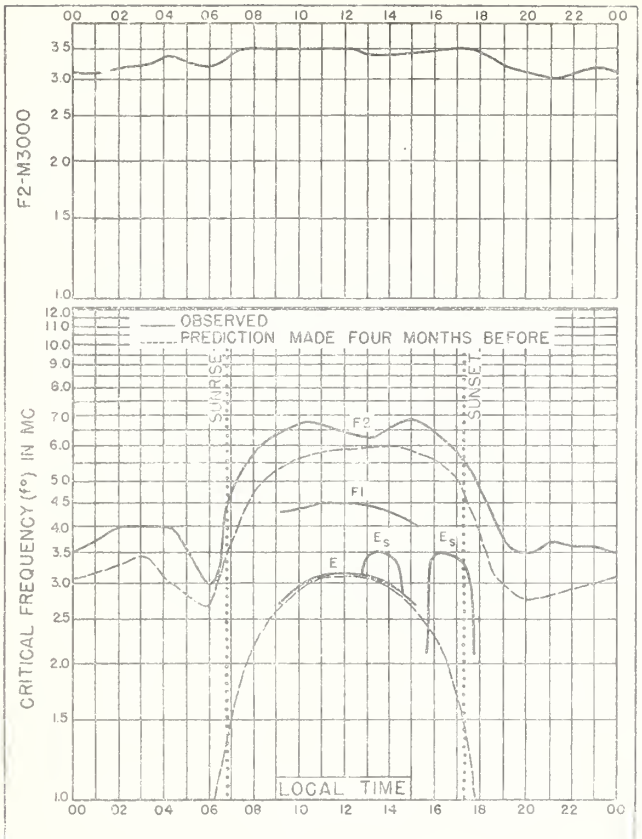

Fig. 65. BRISBANE, Q., AUSTRALIA
27.5°S, 153.0°E
JULY, 1945

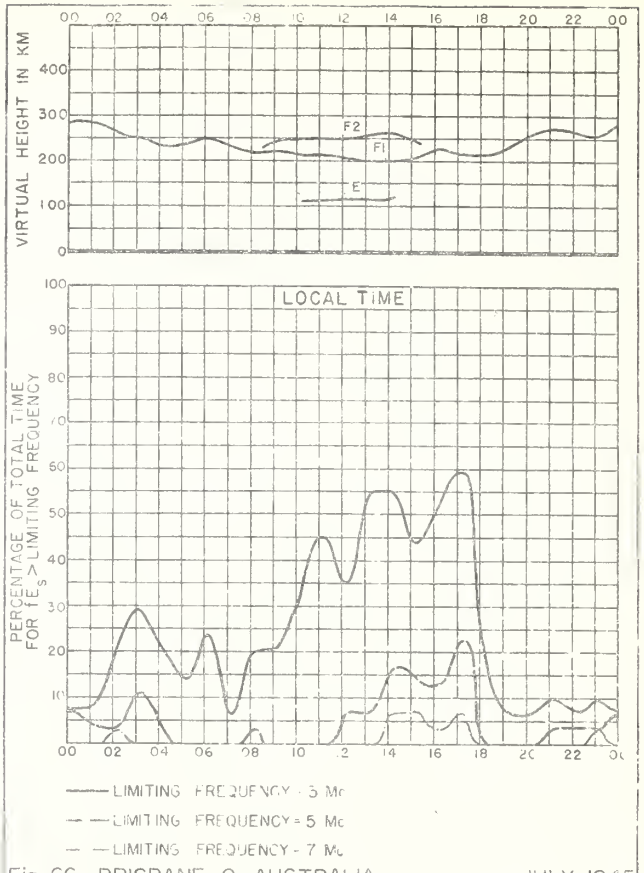

Fig. 66. BRISBANE, Q., AUSTRALIA
JULY, 1945

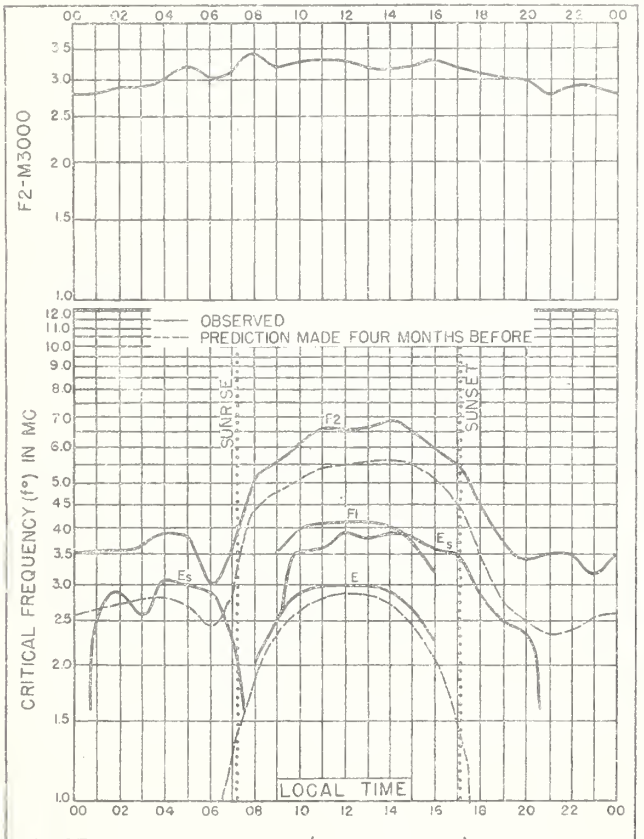

Fig 67. CANBERRA, A.C.T., (MT. STROMLO), AUSTRALIA
35.3°S, 149.0°E
JULY, 1945

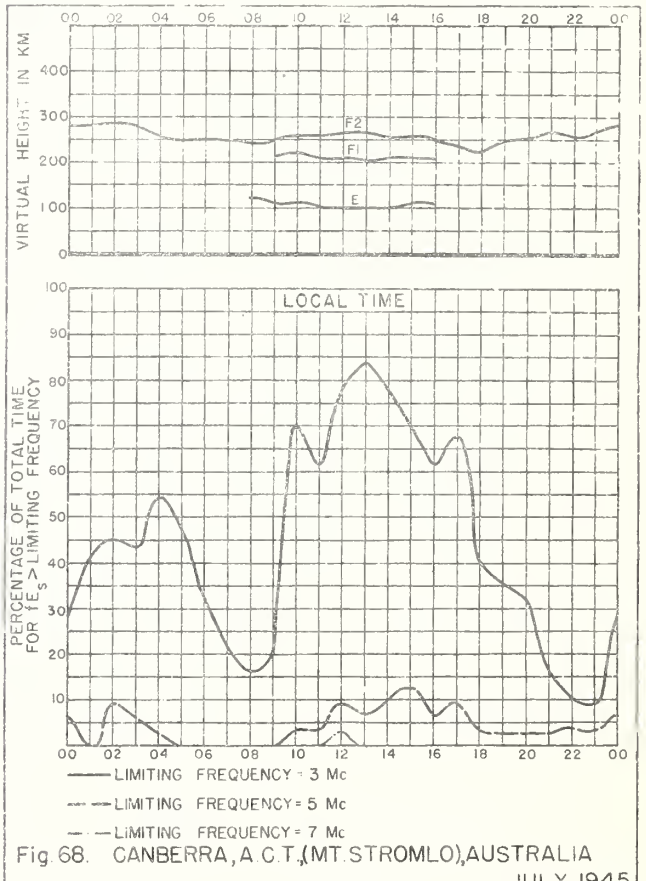

Fig. 68. CANBERRA, A.C.T., (MT. STROMLO), AUSTRALIA
JULY, 1945

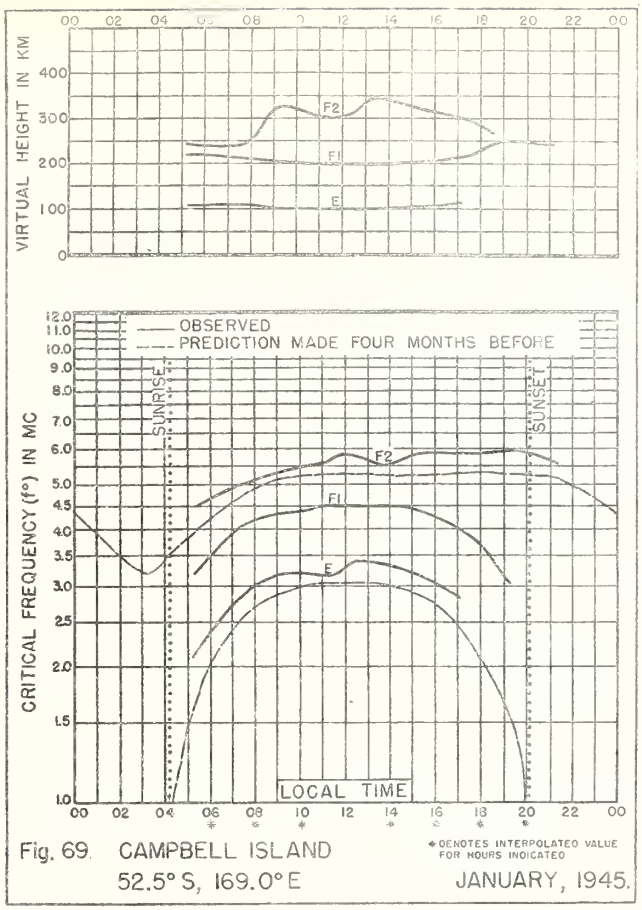

Fig. 69. CAMPBELL ISLAND
52.5° S, 169.0° E
JANUARY, 1945.

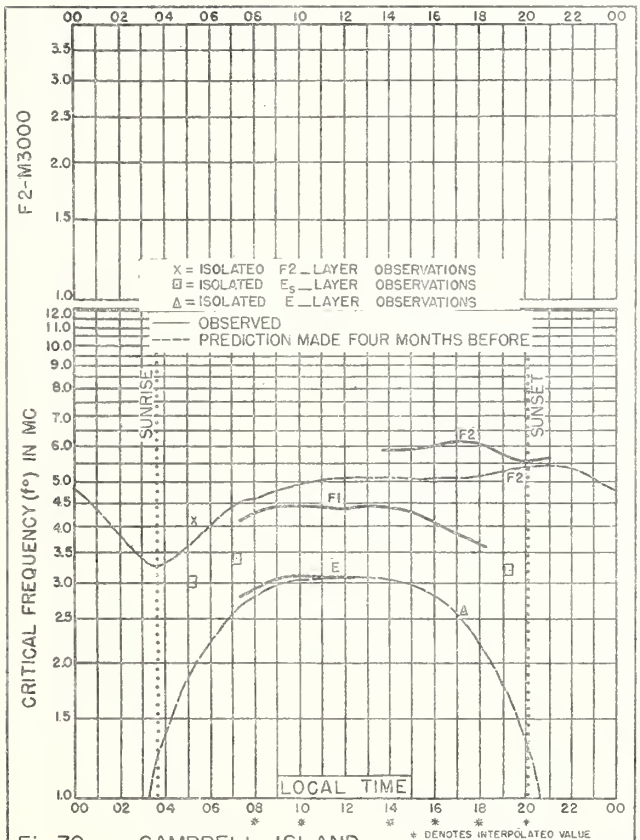

Fig. 70. CAMPBELL ISLAND
52.5° S, 169.0° E
DECEMBER, 1944

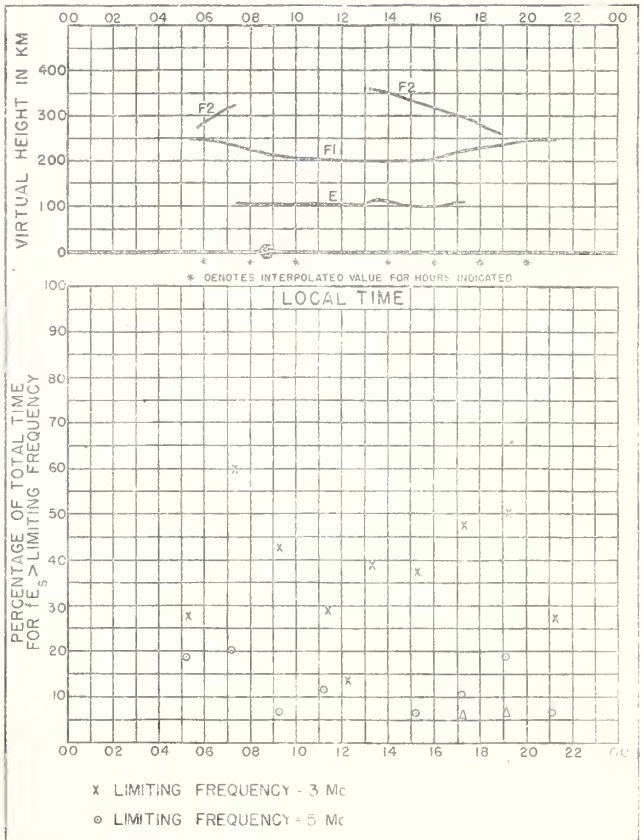

Fig. 71. CAMPBELL ISLAND
DECEMBER, 1944

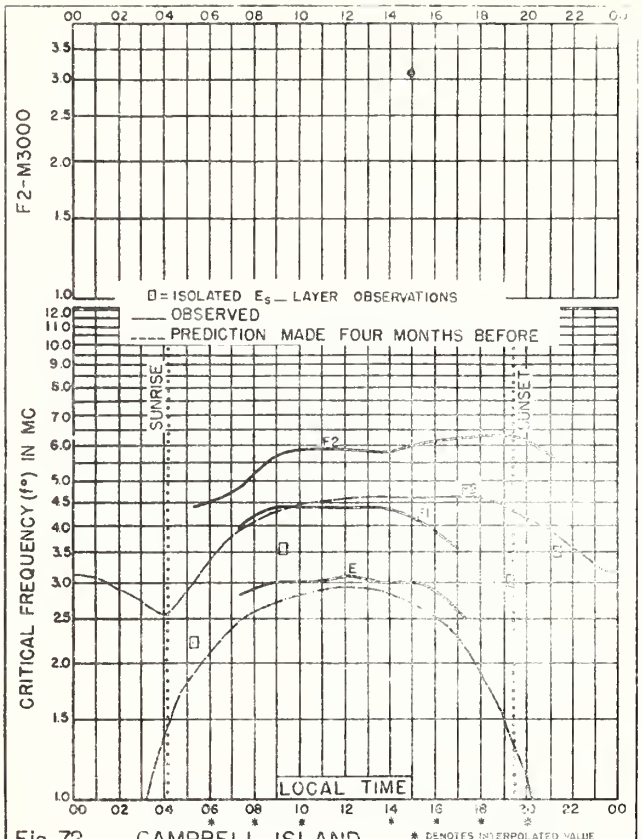

Fig 72. CAMPBELL ISLAND
52.5° S, 169.0° E
NOVEMBER, 1944

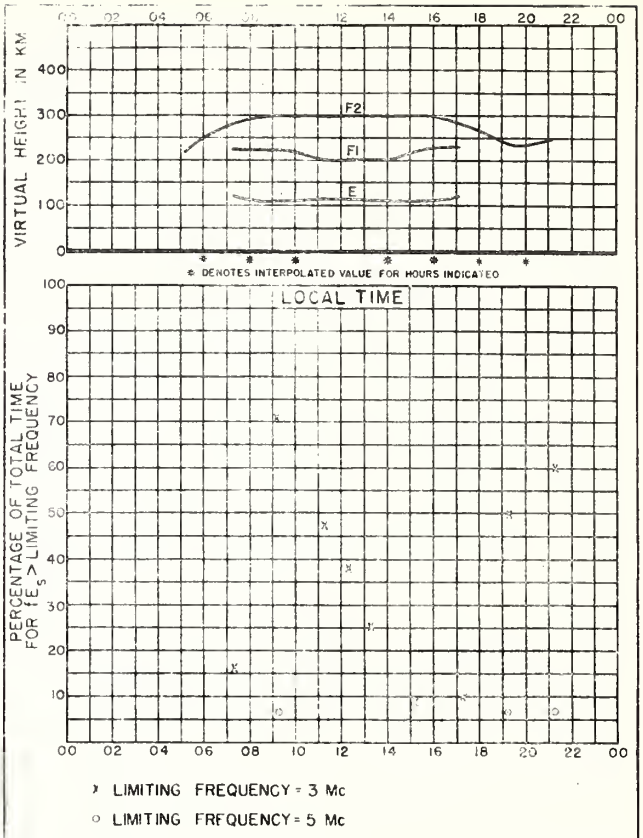

Fig. 73. CAMPBELL ISLAND
NOVEMBER, 1944

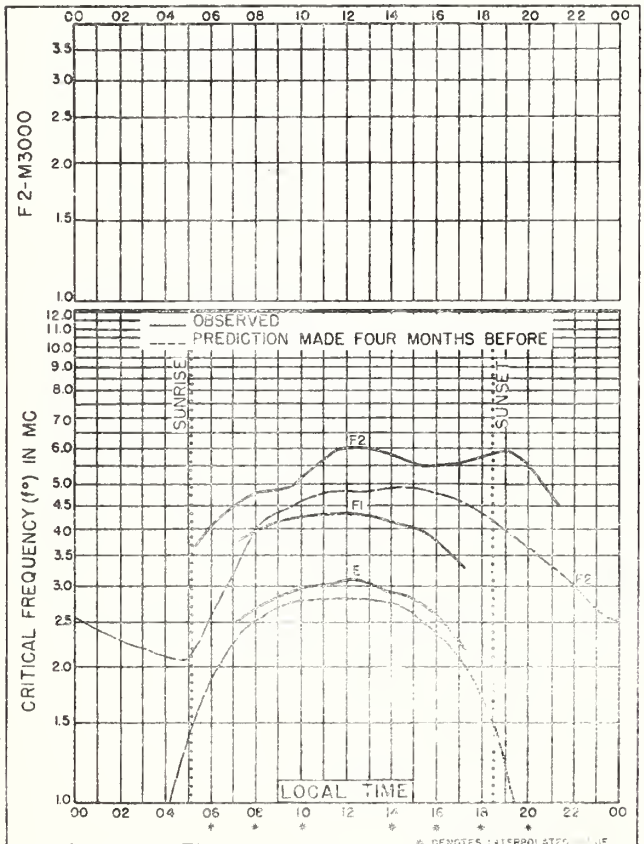

Fig 74 CAMPBELL ISLAND
52 5° S, 169.0° E
OCTOBER, 1944

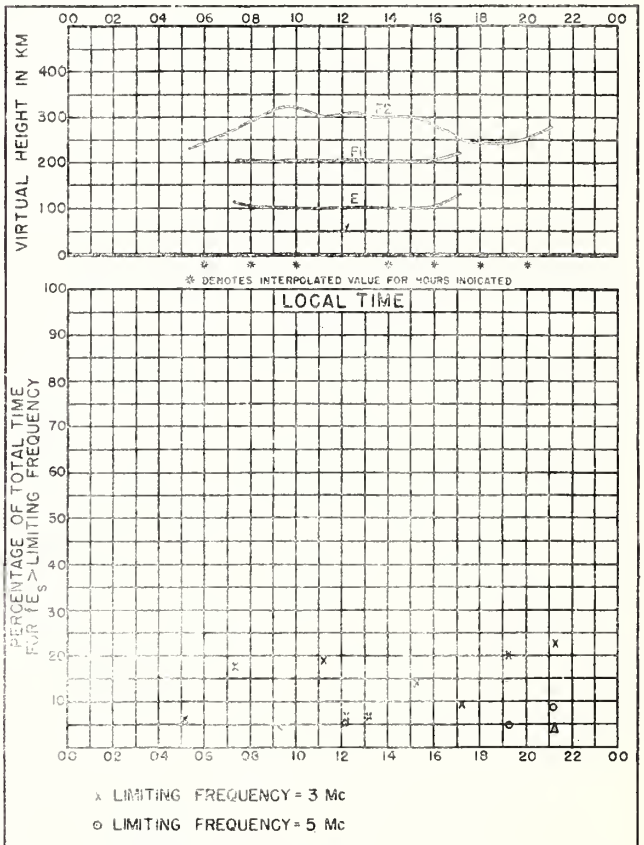

Fig.75. CAMPBELL ISLAND
OCTOBER, 1944

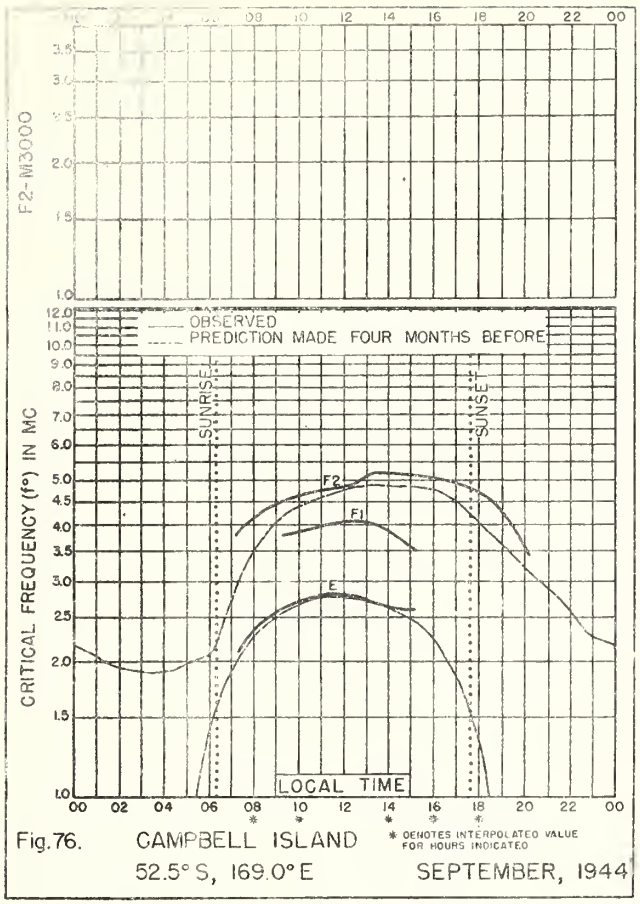

Fig. 76. CAMPBELL ISLAND SEPTEMBER, 1944
52.5° S, 169.0° E

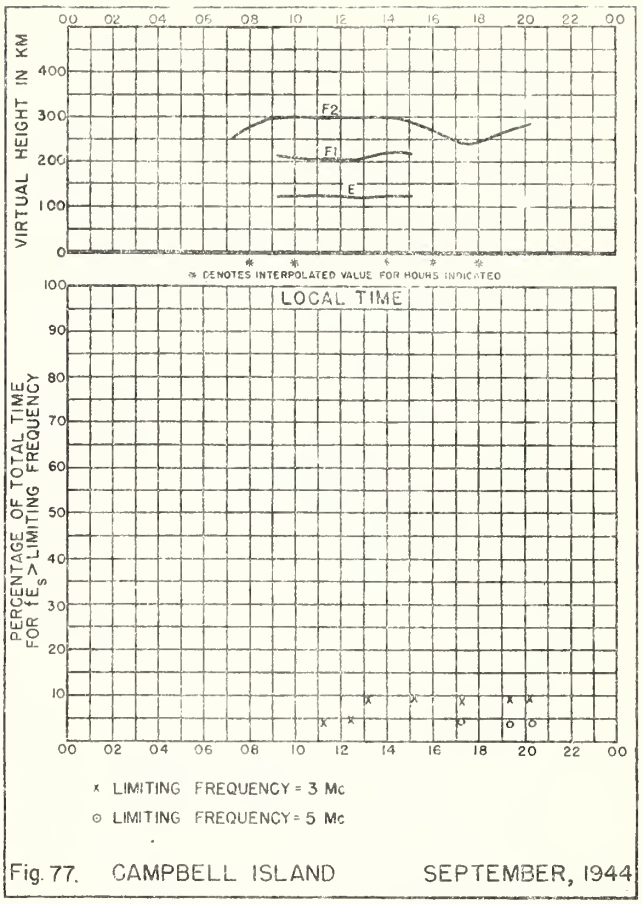

Fig. 77. CAMPBELL ISLAND SEPTEMBER, 1944

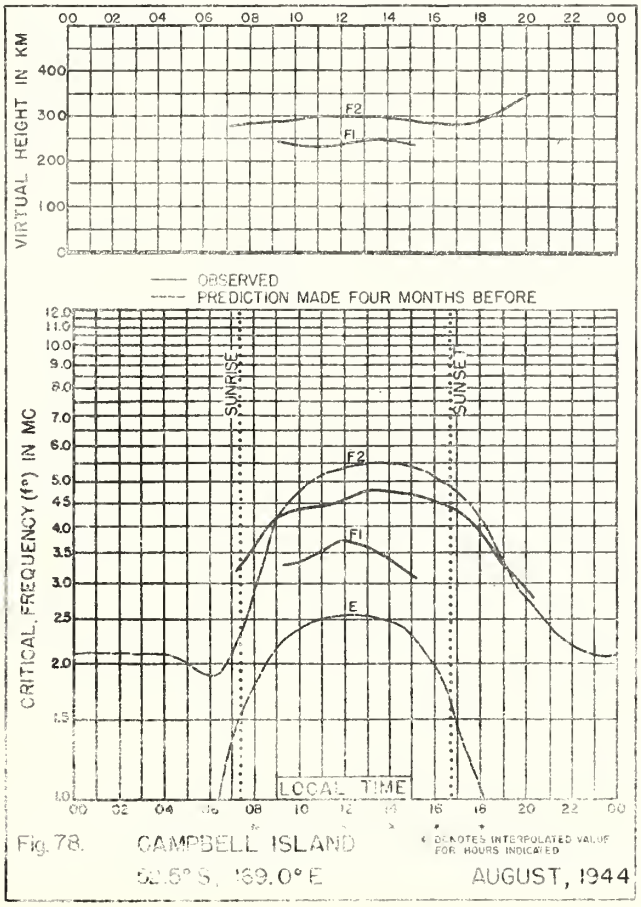

Fig. 78. CAMPBELL ISLAND AUGUST, 1944
52.5° S, 169.0° E

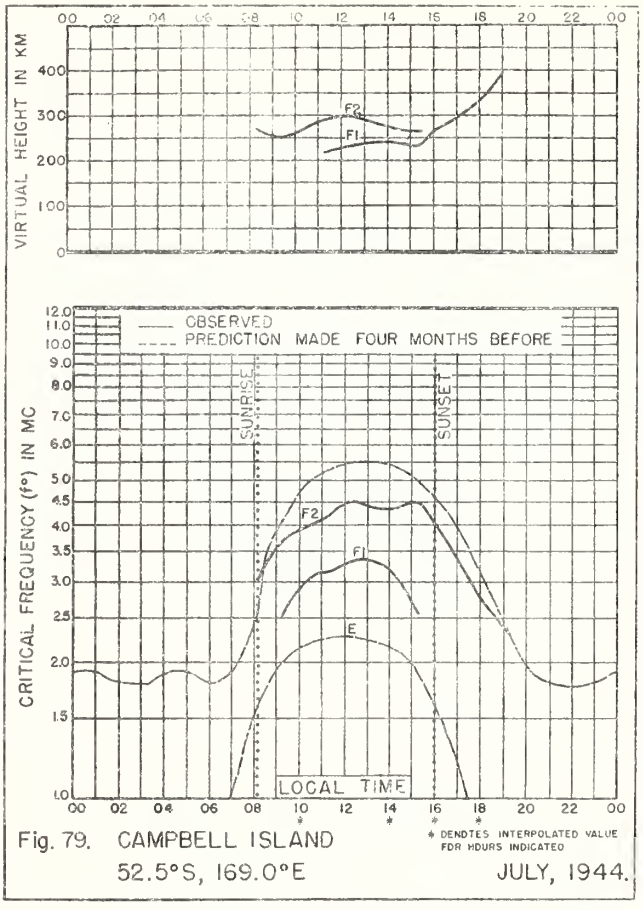

Fig. 79. CAMPBELL ISLAND
52.5°S, 169.0°E
JULY, 1944.

* DENOTES INTERPOLATED VALUE FOR HOURS INDICATED

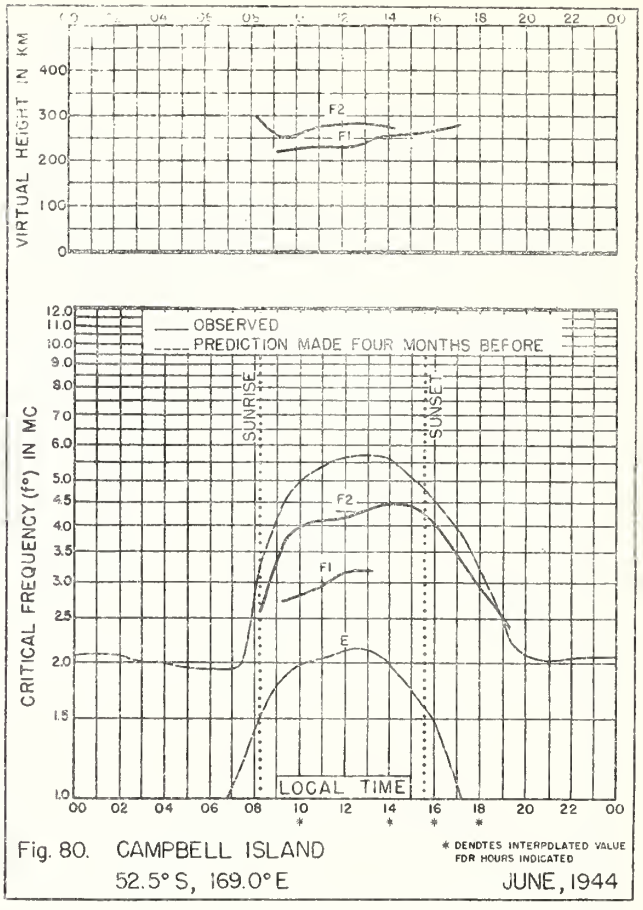

Fig. 80. CAMPBELL ISLAND
52.5° S, 169.0° E
JUNE, 1944

* DENOTES INTERPOLATED VALUE FOR HOURS INDICATED

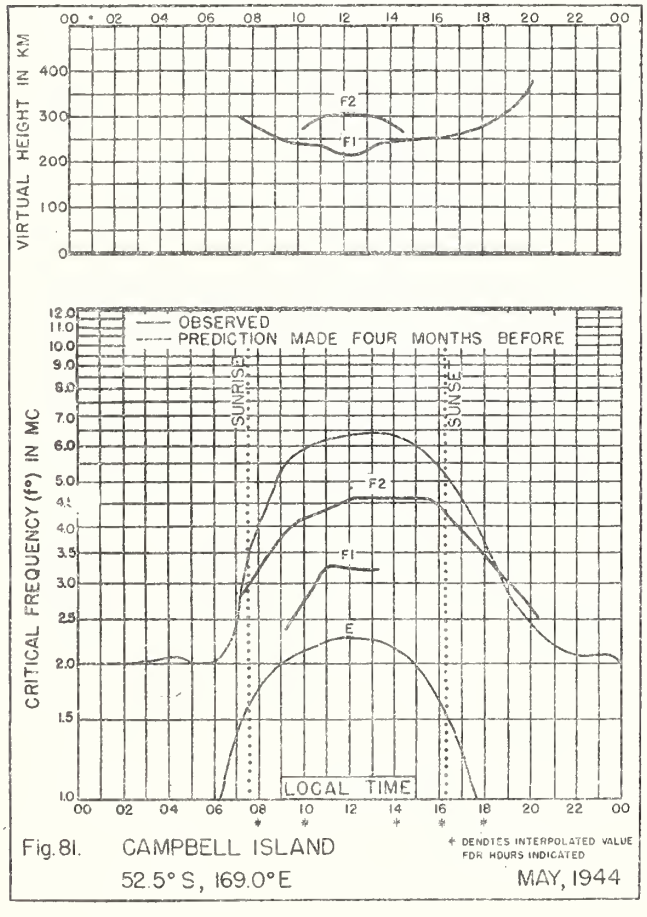

Fig. 81. CAMPBELL ISLAND
52.5° S, 169.0°E
MAY, 1944

* DENOTES INTERPOLATED VALUE FOR HOURS INDICATED

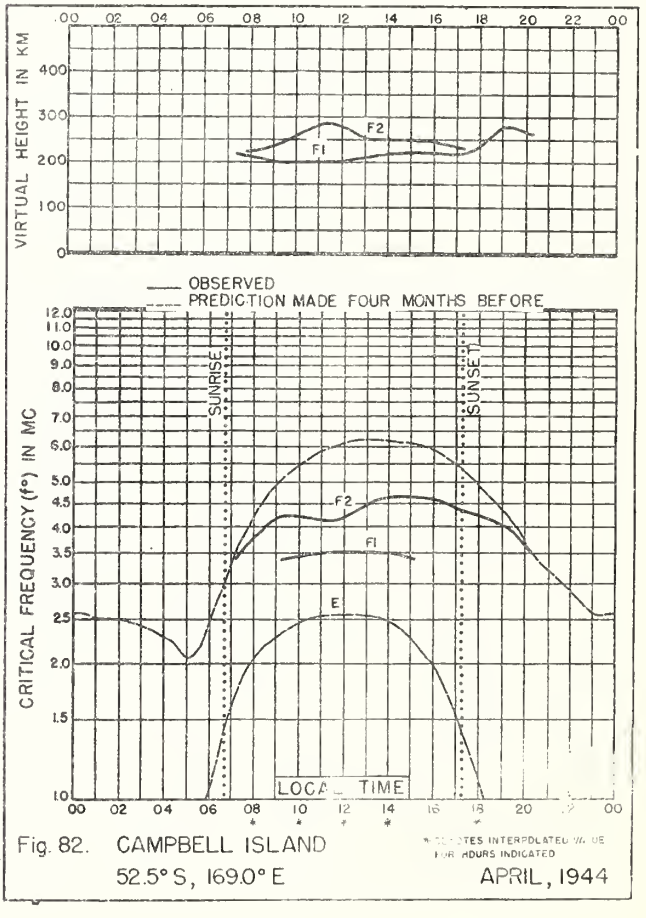

Fig. 82. CAMPBELL ISLAND
52.5° S, 169.0° E
APRIL, 1944

* DENOTES INTERPOLATED VALUE FOR HOURS INDICATED

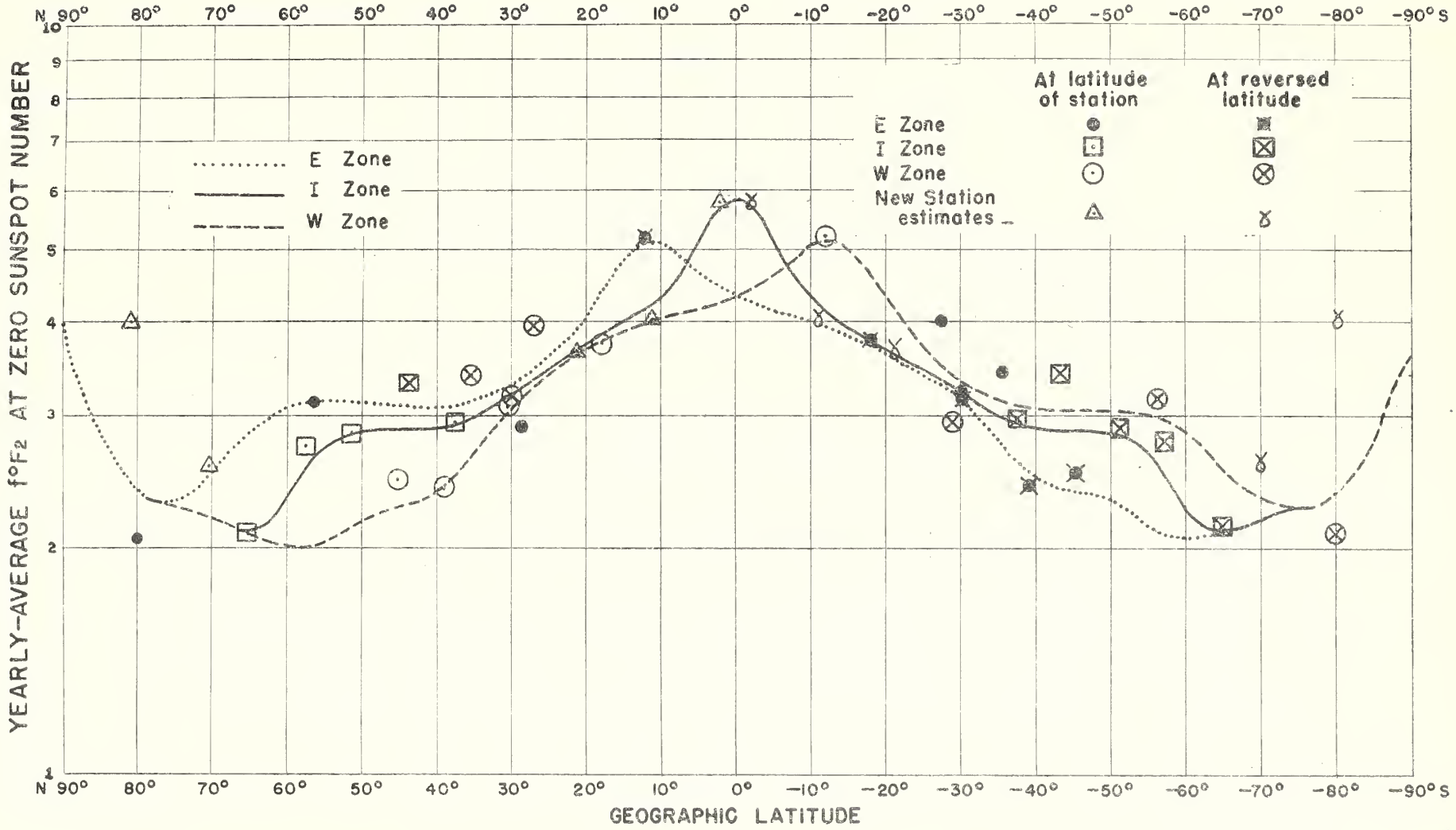

Fig. 83. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 0000 LOCAL TIME.

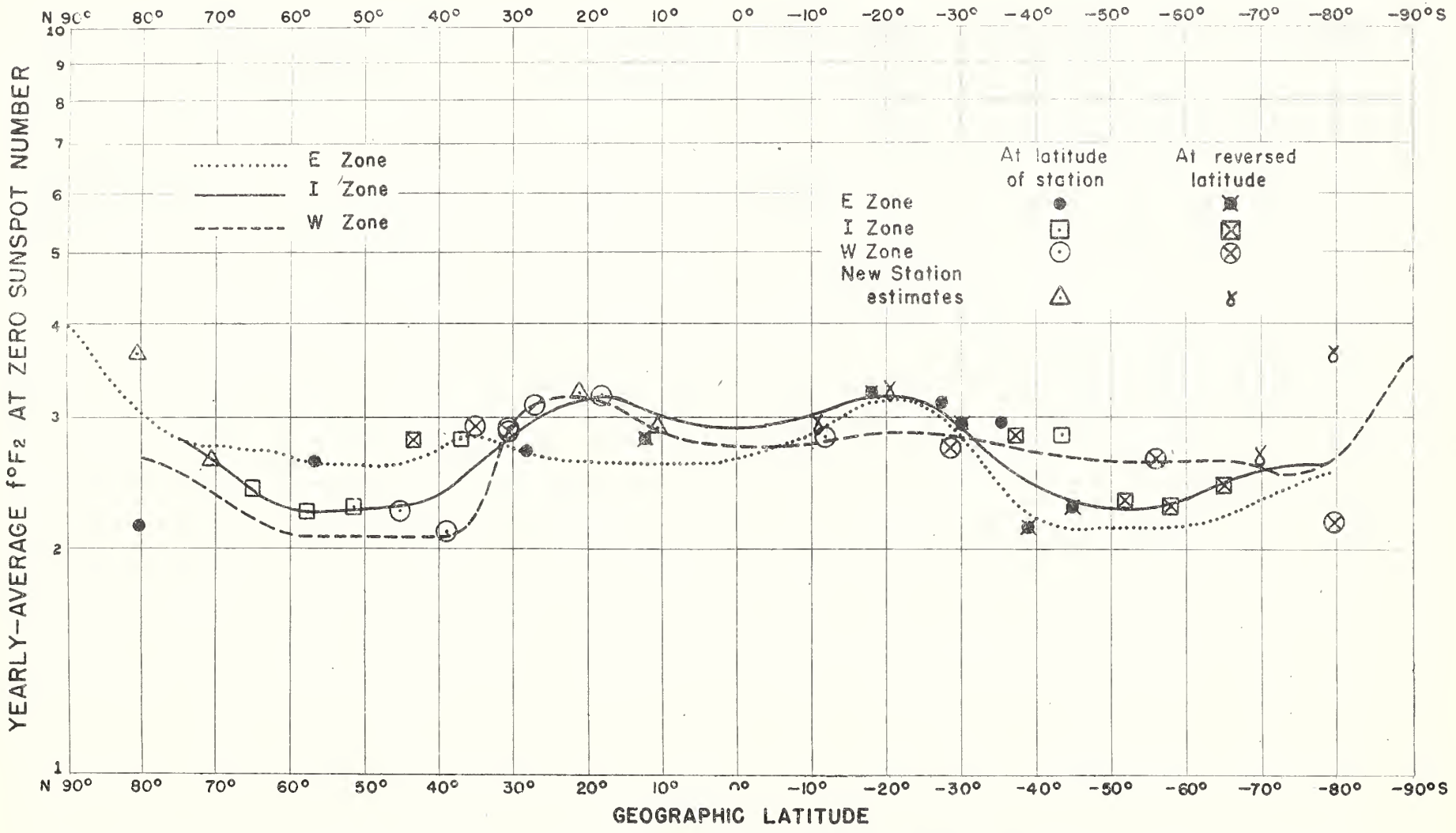

Fig. 84. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 0400 LOCAL TIME.

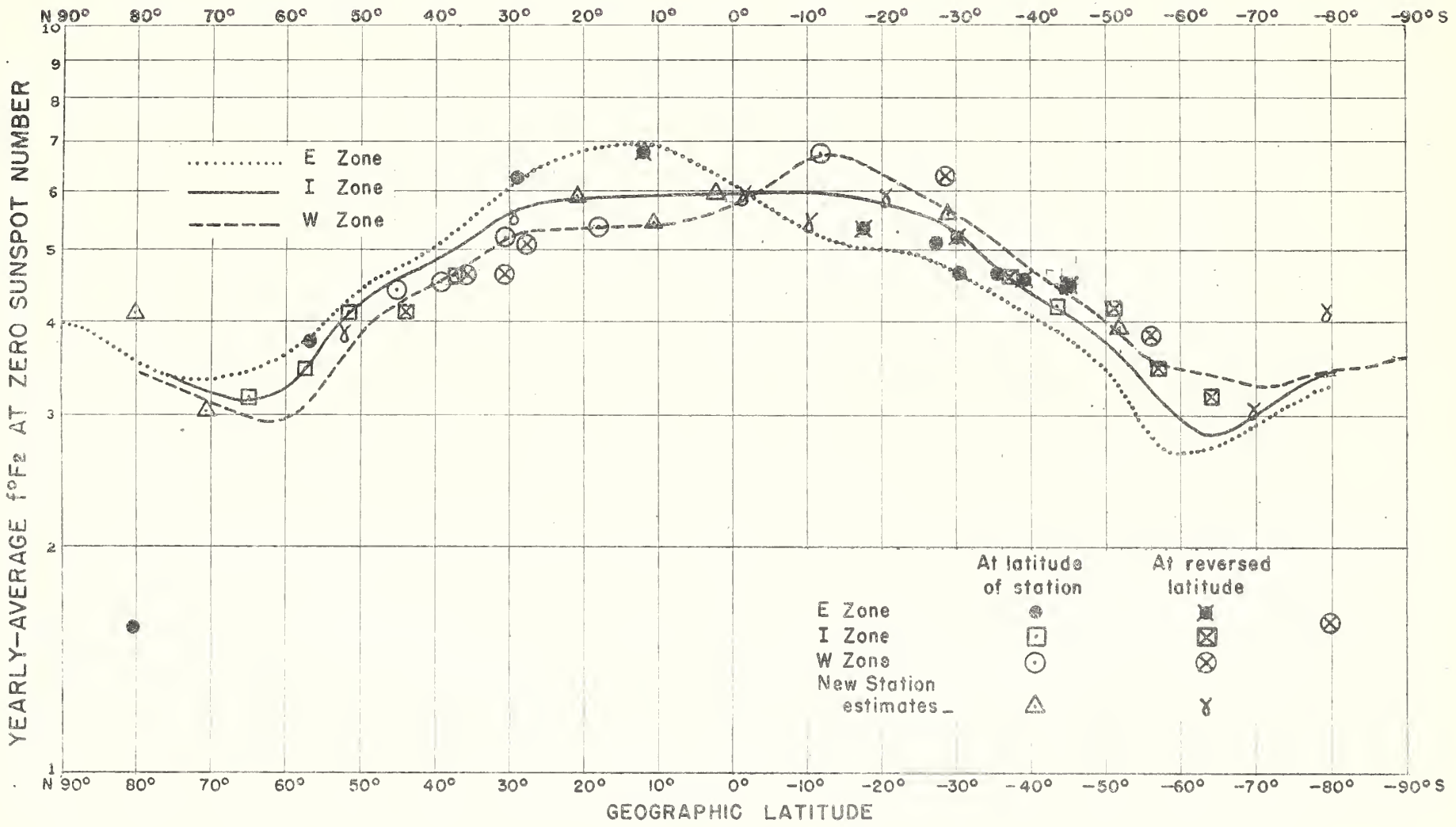

Fig. 85. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 0800 LOCAL TIME.

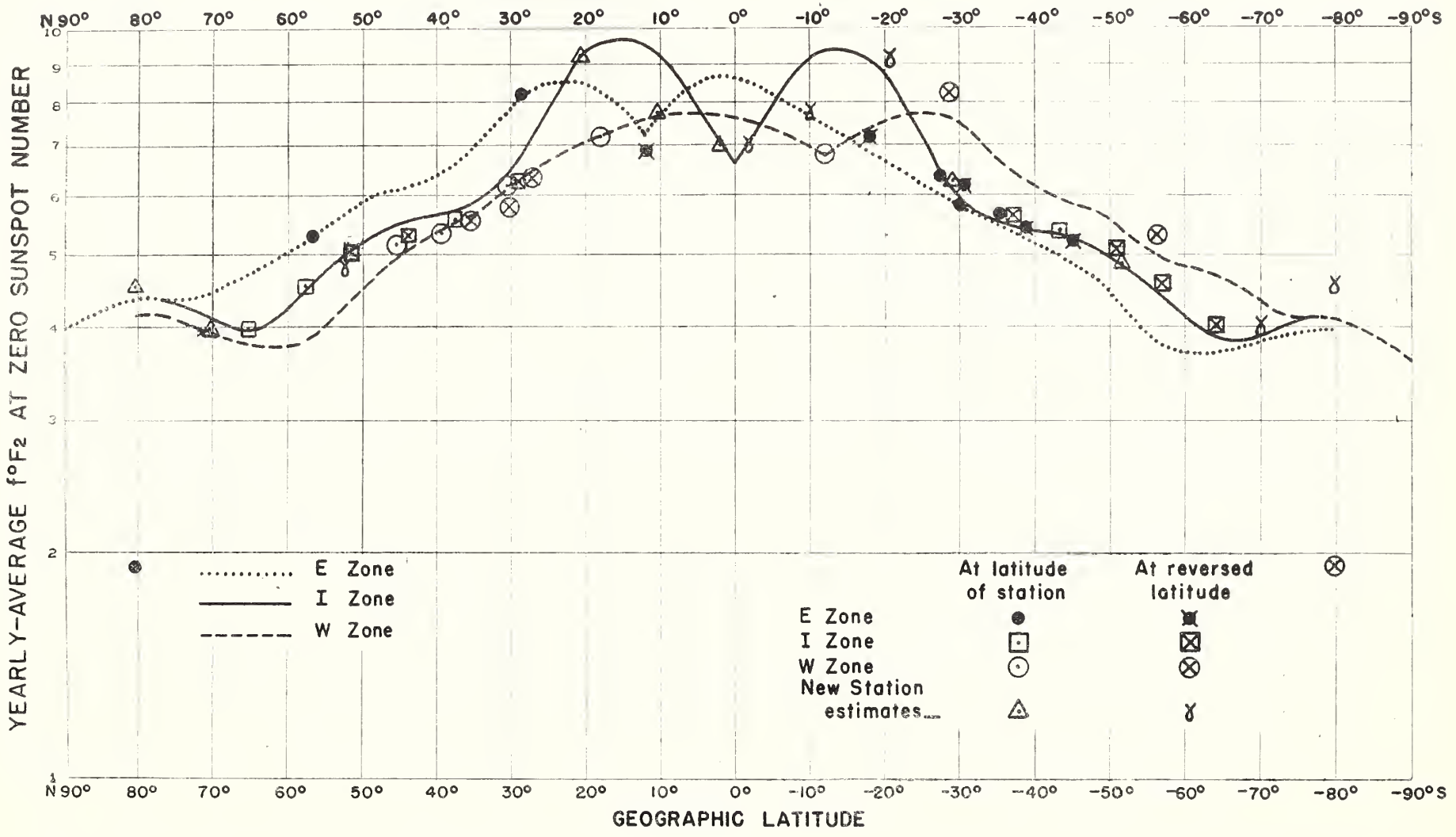

Fig. 86. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 1200 LOCAL TIME.

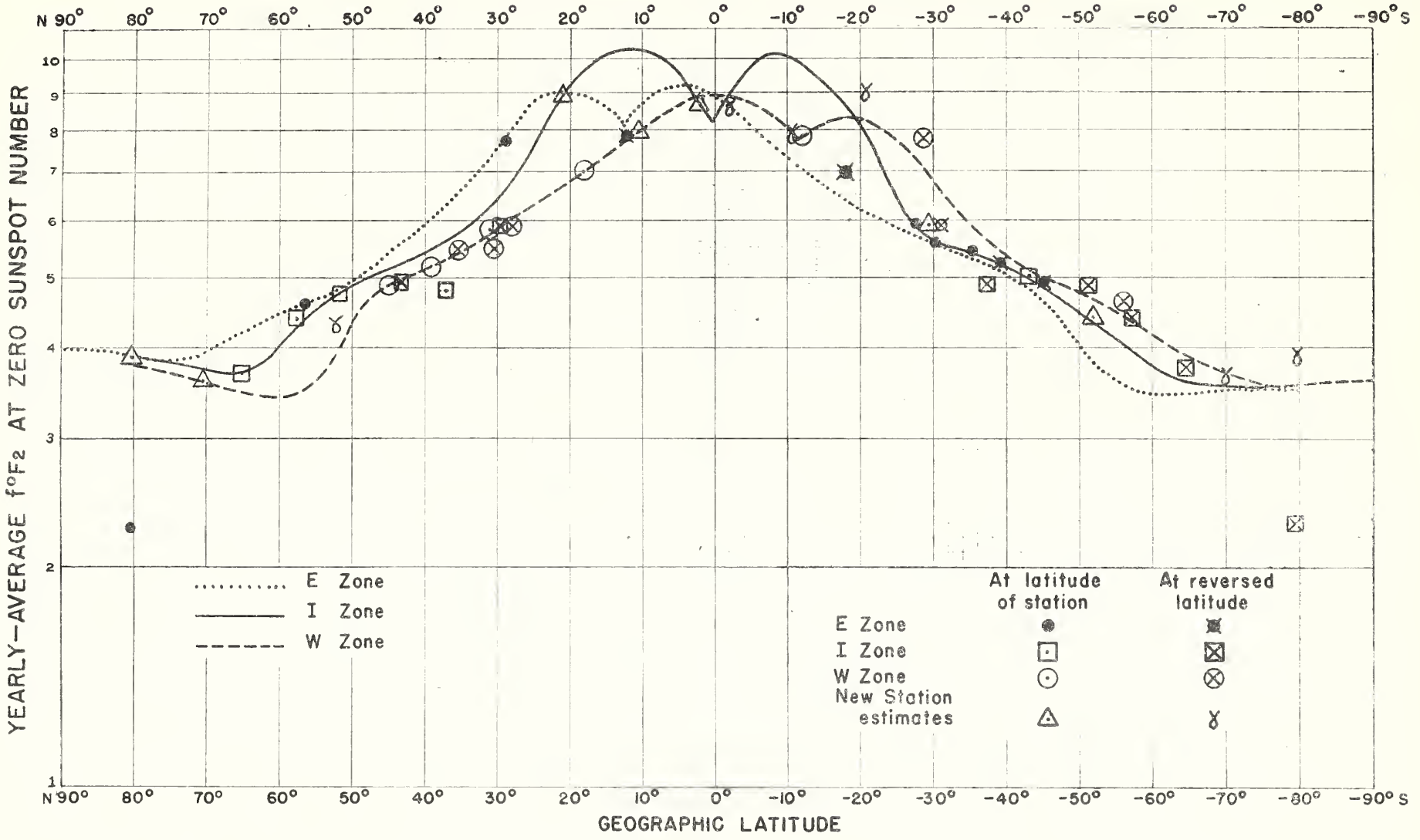

Fig. 87. VARIATION OF f°F2, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 1600 LOCAL TIME.

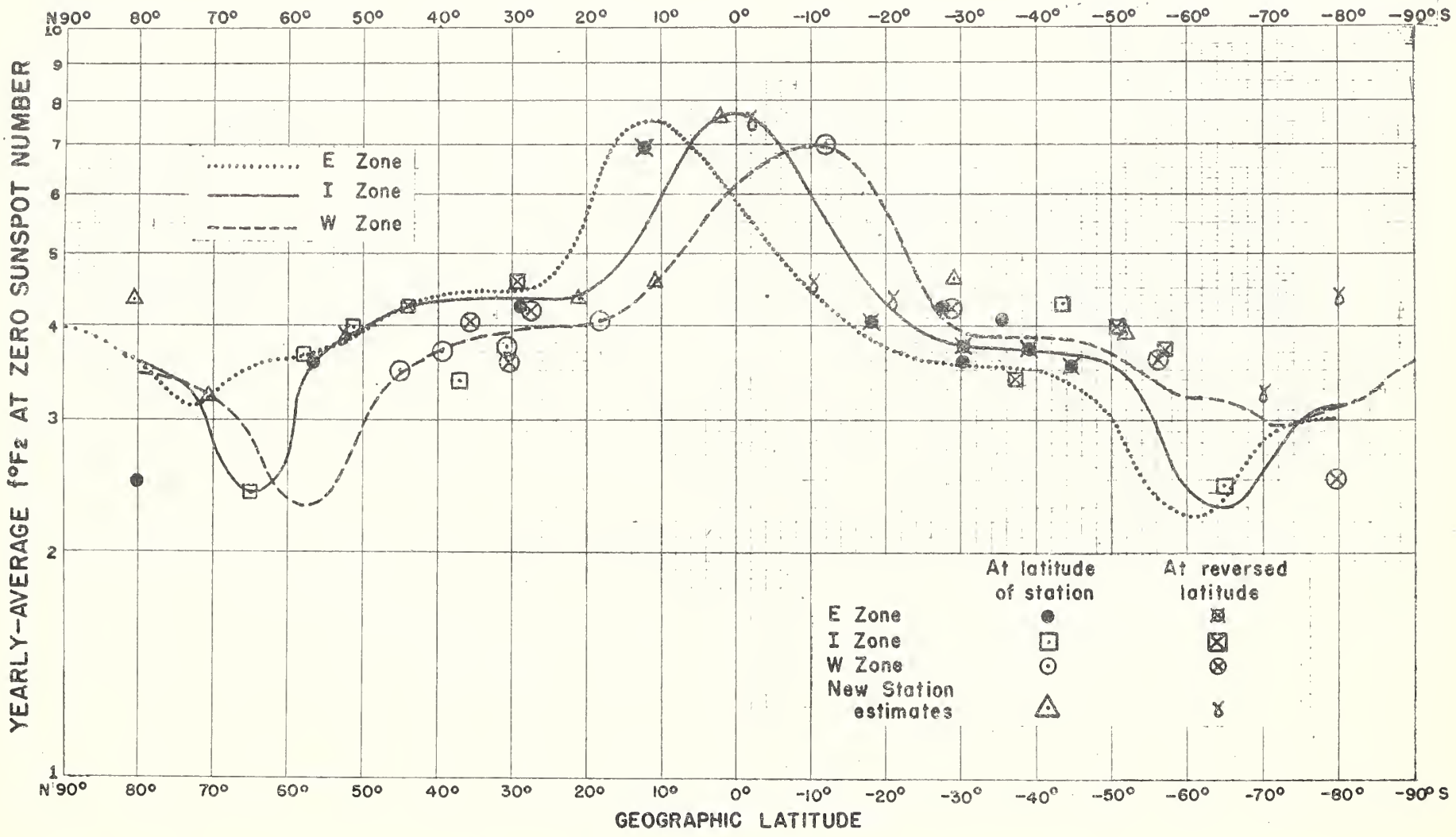

Fig. 88. VARIATION OF $f^{\circ}F_2$, AT ZERO SUNSPOT NUMBER, WITH LATITUDE, 2000 LOCAL TIME.

IRPL REPORTS

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 Effects 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.
- 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. Effect of certain equipment characteristics on the usefulness of a navigation system.

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).

**Distributed only by U.S. Navy.