CRPL-F 99

IONOSPHERIC DATA

ISSUED
NOVEMBER 1952

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
WASHINGTON, D. C.

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CONTENTS

SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist..

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 Document No. 626-E referred to above.

a. For all ionospheric characteristics:

Values missing because of A, C, F, L, M, N, Q, S, or T are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F2 (and h'E near sunrise and sunset) missing for this reason are counted as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

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 foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic. This practice represents a change from that listed in issues previous to CRPL-F78.

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

c. For MUF factor (M-factors):

Values missing because of G or W 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 of E or G (and B when applied to the daytime E region only) are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

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

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

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

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

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

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

The tables and graphs of ionospheric data are correct for the values reported to the CRPL, 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 the errors are due to:

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

b. Omission of values when foF2 is less than or equal to foFl, leading to erroneously high values of monthly averages or median values.

c. Omission of values when 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 report IRPL-F5.

Ordinarily, a blank space in the fEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'Fl, foFl, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'Fl and foFl is usually the result of seasonal effects.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. The following points are worthy of note:

a. Predictions for individual stations used to construct the charts may be more accurate than the values read from the charts since some smoothing of the contours is necessary to allow for the longitude effect within a zone. Thus, inasmuch as the predicted contours are for the center of each zone, part of the discrepancy between the predicted and observed values as given in the F series may be caused by the fact that the station is not centrally located within the zone.

b. The final presentation of the predictions is dependent upon the latest available ionospheric and radio propagation data, as well as upon predicted sunspot number.

c. There is no indication on the graphs of the relative reliability of the data; it is necessary to consult the tables for such information.

The following predicted smoothed 12-month running-average Zürich sunspot numbers were used in constructing the contour charts:

Month	Predicted Sunspot Number							
	1952	1951	1950	1949	1948	1947	1946	1945
December		53	86	108	114	126	85	38
November		52	87	112	115	124	83	36
October	43	52	90	114	116	119	81	23
September	46	54	91	115	117	121	79	22
August	49	57	96	111	123	122	77	20
July	51	60	101	108	125	116	73	
June	52	63	103	108	129	112	67	
May	52	68	102	108	130	109	67	
April	52	74	101	109	133	107	62	
March	52	78	103	111	133	105	51	
February	51	82	103	113	133	90	46	
January	53	85	105	112	130	88	42	

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 60 and figures 1 to 120 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:
- Buenos Aires, Argentina
- Decepcion I.

Commonwealth of Australia, Ionospheric Prediction Service of the Commonwealth Observatory:
- Brisbane, Australia
- Hobart, Tasmania
- Townsville, Australia

Australian Department of Supply and Shipping, Bureau of Mineral Resources, Geology and Geophysics:
- Watheroo, Western Australia

University of Graz:
- Graz, Austria

British Department of Scientific and Industrial Research, Radio Research Board:
- Falkland Is.
- Ibadan, Nigeria (University College of Nigeria)
- Inverness, Scotland
- Khartoum, Sudan (University College of Khartoum)
- Port Lockroy
- Singapore, British Malaya
- Slough, England

Danish National Committee of URSI:
- Godhavn, Greenland

National Laboratory of Radio-Electricity (French Ionospheric Bureau):
- Domont, France
- Poitiers, France
- Terre Adelie

Institute for Ionospheric Research, Lindau Uber Northeim, Hannover, Germany:
- Lindau/Harz, Germany

The Royal Netherlands Meteorological Institute:
- De Bilt, Holland

Icelandic Post and Telegraph Administration:
- Reykjavik, Iceland

Ministry of Postal Services, Radio Research Laboratories, Tokyo, Japan:
- Akita, Japan
- Tokyo (Kokubunji), Japan
- Wakkanai, Japan
- Yamagawa, Japan

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
- Oslo, Norway
- Tromso, Norway

Research Laboratory of Electronics, Chalmers University of Technology, Gothenburg, Sweden:
- Kiruna, Sweden

Research Institute of National Defence, Stockholm, Sweden:
- Upsala, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Schwarzenburg, Switzerland

United States Army Signal Corps:
Adak, Alaska
Okinawa I.
White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Baton Rouge, Louisiana (Louisiana State University)
Fairbanks, Alaska
Guam I.
Huancayo, Peru (Instituto Geofisico de Huancayo)
Maui, Hawaii
Panama Canal Zone
Point Barrow, Alaska
Puerto Rico, W. I.
San Francisco, California (Stanford University)
Washington, D. C.

HOURLY IONOSPHERIC DATA AT WASHINGTON, D. C.

The data given in tables 61 to 72 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 above under "Symbols, Terminology, Conventions." Beginning with September 1949, the data are taken at Ft. Belvoir, Virginia.

IONOSPHERIC STORMINESS AT WASHINGTON, D.C.

Table 73 presents ionosphere character figures for Washington, D. C., during October 1952, as determined by the criteria given in the report IRPL-R5, "Criteria for Ionospheric Storminess," together with Cheltenham, Maryland, geomagnetic K-figures, which are usually covariant with them.

RADIO PROPAGATION QUALITY FIGURES

Table 74a gives the radio propagation quality figures (North Atlantic area) for September 1952.

In addition to the radio propagation quality figures for 00 to 12 and 12 to 24 hours UT (Universal Time or GCT) for each day, the table in this report lists some of the CRPL forecasts for North Atlantic paths for the same periods of time: (1) short-term forecasts, issued every six hours for a 12-hour period, (2) advance forecasts (semiweekly CRPL-J reports) issued from one to twenty-five days in advance. The table also gives half-day averages of geomagnetic K-indices measured by the Cheltenham Magnetic Observatory of the U. S. Coast and Geodetic Survey. Part b of the table illustrates the comparison between the short-term forecasts and the quality figures. The forecasts are plotted approximately at the time of issue, and they are intended to represent conditions in the 12-hour period following. The figure also illustrates the overall outcome of the advance forecasts, issued one to three or four days ahead, and in comparison is shown the result if these same forecasts were issued at random during the month.

The radio propagation quality figures are prepared from radio traffic data reported to CRPL by a method similar to that described in IRPL-R31, "North Atlantic Radio Propagation Disturbances, October 1943 through October 1945," now out of print. Beginning with the recalculated figures for January 1952, only reports of radio transmission on North Atlantic paths closely approximating New York-London are included in the estimation of quality. Observations of selected ionospheric characteristics, even though strongly correlated with radio transmission quality, and traffic reports for paths such as New York-Stockholm or New York-Tangier, previously included in the quality-figure determination with low weight, have been left out of the present calculations inasmuch as a sufficient number of homogeneous reports are now available.

The original reports are submitted on various scales and for various time intervals. The observations for each Greenwich half day are averaged on the quality scale of the original reports. These half-day indices are then adjusted to the 1 to 9 quality-figure scale. The conversion table was prepared by comparing the distribution of these indices for at least four months, usually a year, with a master distribution determined from analysis of the reports made on the 1 to 9 quality-figure scale. A report whose distribution is the same as the master is thereby converted linearly to the Q-figure scale. Each report is given a statistical weight which is the reciprocal of the departure from linearity. Each half-daily radio propagation quality figure, beginning January 1948, is the weighted mean of the reports received for that period.

These quality figures are, in effect, a consensus of reported radio propagation conditions in the North Atlantic area. The reasons for low quality are not necessarily known and may not be limited to ionospheric storminess. For instance, low quality may result from improper frequency usage for the path and time of day. Although, wherever it is reported, frequency usage is included in the rating of reports, it must often be an assumption that the reports refer to optimum working frequencies. It is more difficult to eliminate from the indices conditions of low quality because of multipath, interference, etc. These considerations should be taken into account in interpreting research correlations between the Q-figures and solar, auroral, geomagnetic or similar indices.

In comparison of forecasts and quality figures the following conventions apply: Short-term forecasts -- direct comparison by half days, both forecast and quality figure being on the Q-scale. Only the forecasts for 00-12 and 12-24 hours are evaluated; the results for the intervening forecasts should be similar. Advance forecasts -- the whole-day forecast, on the Q scale, is compared with a whole-day index derived from the two half-daily quality figures, when different, as follows: if either half-day Q-figure is 4 or less, the whole-day index is the lower of the two; if both half-day Q-figures are 6 or more, the whole-day index is the higher of the two; if the 00-12 Q-figure is 5 and the other is greater than 5, the whole-day index is the higher; if the 00-12 Q-figure is greater than 5 and the other is 5, the whole-day index is 5.

Note. The North Pacific quality figures which were published through October 1951 have been temporarily discontinued. Since the establishment of the North Pacific Radio Warning Service at Anchorage, Alaska, a larger number of reports are being received than were previously available in Washington. The preparation of the quality figures will be resumed when sufficient data have been accumulated for determination of conversion tables for these new reports.

OBSERVATIONS OF THE SOLAR CORONA

Tables 75 through 77 give the observations of the solar corona during October 1952, obtained at Climax, Colorado, by the High Altitude Observatory of Harvard University and the University of Colorado. Tables 78 through 80 list the coronal observations obtained at Sacramento Peak, New Mexico, during October 1952, derived by the High Altitude Observatory from spectrograms taken by Harvard University as a part of its performance of an Air Materiel Command Research and Development Contract administered by the Air Force Cambridge Research Laboratories. The data are listed separately for east and west limbs at 5-degree intervals of position angle north and south of the Solar Equator at the limb. The time of observation is given to the nearest tenth of a day, GCT.

Table 75 gives the intensities of the green (5303A) line of the emission spectrum of the solar corona; table 76 gives similarly the intensities of the first red (6374A) coronal line; and table 77, the intensities of the second red (6702A) coronal line; all observed at Climax in October 1952.

Table 78 gives the intensities of the green (5303A) coronal line; table 79, the intensities of the first red (6374A) coronal line; and table 80, the intensities of the second red (6702A) coronal line; all observed at Sacramento Peak in October 1952.

The following symbols are used in tables 75 through 80: a, observation of low weight; -, corona not visible; and X, position angle not included in plate estimates.

RELATIVE SUNSPOT NUMBERS

Table 81 lists the daily provisional Zurich relative sunspot number, R_Z, as communicated by the Swiss Federal Observatory. Table 82 continues the new series of American relative sunspot numbers, R_A'. Beginning with 1951, the observations collected by the Solar Division, AAVSO, have been reduced according to a new procedure, such that only high quality observations of experienced observers are combined into R_A'. Observatory coefficients for each of the 28 selected observers were recomputed on data for 1948-1950, years when there was a wide range of solar activity. Otherwise, the procedure is that outlined in Publication of the Astronomical Society of the Pacific, 61, 13, 1949. The scale of the American numbers in 1951 differs from that of the reports for earlier years because of these changes, and the new series is designated R_A' rather than R_A. The American relative sunspot numbers appear monthly in these pages as communicated by the Solar Division.

OBSERVATIONS OF SOLAR FLARES

Table 83 gives the preliminary record of solar flares reported to the CRPL. These reports are communicated on a rapid schedule at the sacrifice of detailed accuracy. Definitive and complete records are published later in the Quarterly Bulletin of Solar Activity, I.A.U., in various observatory publications, and elsewhere. The present listing serves to identify and roughly describe the phenomena observed. Details should be sought from the reporting observatory.

Reporting directly to the CRPL are the following observatories: Mt. Wilson, McMath-Hulbert, U. S. Naval, Wendelstein, Kanzel and High Altitude at Sacramento Peak, New Mexico. The remainder report to Meudon (Paris), and the data are taken from the Paris-URSIgram broadcast, monitored fairly regularly by the CRPL. The data on solar flares reported from Sacramento Peak, New Mexico, communicated by the High Altitude Observatory at Boulder, Colorado, are provided by Harvard University as the result of work undertaken on an Air Materiel Command Research and Development Contract administered by the Air Force Cambridge Research Laboratories.

The table lists for each flare the reporting observatory, date, times of beginning and ending of observation, duration (when known), total area (corrected for foreshortening), and heliographic coordinates. For the maximum phase of the flare is given the time, intensity, area relative to the total area, and the importance. The column "SID observed" is to indicate when a sudden ionosphere disturbance, noted elsewhere in these reports, occurred at the time of a flare. Times are in Universal Time (GCT).

INDICES OF GEOMAGNETIC ACTIVITY

Table 84 lists various indices of geomagnetic activity based on data from magnetic observatories widely distributed throughout the world. The indices are: (1) preliminary international character-figures, C; (2) geomagnetic planetary three-hour-range indices, Kp; (3) magnetically selected quiet and disturbed days.

The C-figure is the arithmetic mean of the subjective classification by all observatories of each day's magnetic activity on a scale of 0 (quiet) to 2 (storm). The magnetically quiet and disturbed days are selected by the international scheme outlined on pages 219-227 in the December 1943 issue of Terrestrial Magnetism and Atmospheric Electricity. The details of the currently used method follow. For each day of a month, its geomagnetic activity is assigned by weighting equally the following four criteria: (1) C; (2) the sum of the eight Kp's; (3) the greatest Kp; and (4) the sums of the squares of the eight Kp's.

Kp is the mean standardized K-index from 11 observatories between geomagnetic latitudes 47 and 63 degrees. The scale is 0 (very quiet) to 9 (extremely disturbed), expressed in thirds of a unit, e.g. 5- is 4 2/3, 5o is 5 0/3, and 5+ is 5 1/3. This planetary index is designed to measure solar particle-radiation by its magnetic effects, specifically to meet the needs of research workers in the ionospheric field. A complete description of Kp has appeared in Bulletin 12b, "Geomagnetic Indices C and K, 1948," published in Washington, D. C., 1949, by the Association of Terrestrial Magnetism and Electricity, International Union of Geodesy and Geophysics. Tables of Kp for 1945-48 are in Bulletin 12b; for 1940-44 and 1949, in these CRPL-F reports, F65-67; for 1950, monthly in F68 and following issues. Current tables are also published quarterly in the Journal of Geophysical Research along with data on sudden commencements (sc) and solar flare effects (sfe).

The Committee on Characterization of Magnetic Disturbance, ATME, IUGG, has kindly supplied this table. The Meteorological Office, De Bilt, Holland, collects the data and compiles C and selected days. The Chairman of the Committee computes the planetary index. At the meeting of ATME held in Brussels in August 1951, it was decided that the computation of Kw would be discontinued after the month of December 1951 since Kp is available from January 1, 1940. Kw, therefore, no longer appears in these reports.

SUDDEN IONOSPHERE DISTURBANCES

Tables 85 and 86 list respectively the sudden ionosphere disturbances observed at Washington, D. C., October 1952; and at Lindau/Harz, Germany, September 1952.

TABLES OF IONOSPHERIC DATA

Table 1

Washington, D. C. (38.7°N, 77.1°W) — October 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.9						2.9
01	270	2.8					2.5	3.0
02	270	2.8					2.7	3.0
03	250	2.7					3.0	3.0
04	250	2.6					2.7	3.1
05	250	2.4					3.2	3.1
06	250	2.8			---	---	2.5	3.2
07	230	4.7	230	---	120	1.9		3.4
08	250	5.9	220	---	110	2.4		3.5
09	250	6.2	210	3.9	100	2.7	3.5	3.4
10	270	6.6	200	4.1	100	2.9	3.2	3.4
11	280	6.8	190	4.3	100	3.0		3.2
12	270	7.2	190	4.3	100	3.1		3.2
13	270	7.3	210	4.3	100	3.1		3.2
14	270	7.0	220	4.2	100	3.0		3.2
15	250	7.0	220	3.9	110	2.7		3.3
16	240	6.8	230	---	110	2.4		3.4
17	230	6.3	---	---	120	1.8		3.4
18	220	5.6			---	---	1.2	3.2
19	230	4.5						3.2
20	240	3.9						3.1
21	260	3.3						3.0
22	270	3.2						3.0
23	270	3.0						3.0

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 2

Tromso, Norway (69.7°N, 19.0°E) — September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	---			---	---	3.6	---
01	---	---			---	---	3.4	---
02	---	(2.6)			---	---	3.7	---
03	340	2.5			---	---	3.0	2.8
04	310	2.6	---	---	---	---	2.4	2.9
05	290	3.0	---	---	100	1.3	2.6	3.0
06	260	3.7	---	---	110	1.5	1.4	3.1
07	---	4.2	240	---	100	1.8	2.0	3.2
08	---	4.4	230	---	120	2.1	1.4	3.1
09	(310)	4.7	220	(3.6)	120	2.3	2.4	3.1
10	320	4.9	220	(3.7)	120	2.4	2.5	3.1
11	300	5.0	220	3.7	120	2.4		3.2
12	310	5.1	220	3.8	110	2.5		3.1
13	300	5.1	220	3.7	110	2.4		3.2
14	290	4.8	220	(3.6)	110	2.4		3.1
15	280	4.7	220	---	110	2.2		3.1
16	260	4.5	240	---	110	2.0	2.3	3.2
17	260	4.4	(250)	---	110	(1.7)	2.3	3.1
18	260	4.0	---	---	110	1.4	3.2	3.1
19	270	4.0	---	---	---	---	3.5	3.1
20	300	3.5	---	---	---	---	3.7	(3.0)
21	(305)	(3.5)			---	---	3.8	(3.0)
22	(340)	(3.5)			---	---	3.4	(2.9)
23	(320)	(3.2)			---	---	3.4	---

Time: 15.0°E.
Sweep: 0.6 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 3

Anchorage, Alaska (61.2°N, 149.9°W) — September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	320	2.7					3.2	2.9
01	320	2.6					2.4	2.9
02	350	2.8					3.6	2.8
03	370	2.6					3.5	2.8
04	360	2.6					2.6	2.8
05	310	2.2	---	---			1.7	3.0
06	290	3.0	240	---	---	---		3.2
07	460	3.6	230	3.2	110	2.0		3.0
08	470	3.8	230	3.5	110	2.4		2.7
09	440	4.2	210	3.6	120	2.5		2.9
10	420	4.3	210	3.8	110	2.7		2.9
11	400	4.4	210	3.9	110	2.8		3.0
12	420	4.5	210	3.9	110	2.8		3.0
13	390	4.5	210	3.9	110	2.8		3.0
14	370	4.4	220	3.9	110	2.6		3.1
15	320	4.5	220	3.8	120	2.5		3.2
16	300	4.5	230	3.7	120	2.3		3.3
17	260	4.5	230	---	120	2.1		3.4
18	250	4.2	---	---	---	---		3.4
19	250	3.8						3.3
20	250	3.3						3.2
21	270	2.8						3.1
22	280	2.6					1.6	3.1
23	310	2.3					1.6	3.0

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 4

Oslo, Norway (60.0°N, 11.1°E) — September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	2.4						2.8
01	310	2.2						2.7
02	310	2.1					2.5	2.8
03	315	2.0					1.5	2.8
04	310	2.0			---	---	1.9	2.8
05	280	2.2			120	---		2.9
06	260	3.1	250	---	120	1.7	2.4	3.2
07	275	3.8	240	---	110	1.8	2.3	3.2
08	370	4.4	225	3.6	120	2.2	2.4	3.1
09	350	4.6	220	3.8	115	2.4	3.0	3.0
10	325	4.8	210	4.0	110	2.6	2.9	3.1
11	330	5.2	210	4.0	110	2.7	3.2	3.1
12	310	5.4	210	4.1	110	2.8	3.1	3.1
13	305	5.5	210	4.0	110	2.8	3.0	3.1
14	300	5.4	210	4.0	110	2.8	2.9	3.1
15	295	5.4	220	3.8	110	2.6	2.8	3.1
16	270	5.3	225	3.7	115	2.4	2.6	3.2
17	250	5.2	225	3.4	120	2.1	2.6	3.1
18	250	5.0	250	---	125	1.7	2.4	3.1
19	250	5.1			---	---	2.0	3.1
20	250	4.6						3.1
21	250	3.9						3.1
22	265	3.2						3.0
23	290	2.6						2.8

Time: 15.0°E.
Sweep: 1.3 Mc to 14.0 Mc in 8 minutes, automatic operation.

Table 5

Upsala, Sweden (59.8°N, 17.6°E) — September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	315	2.2						2.7
01	335	2.4						2.7
02	320	2.2					1.8	2.7
03	315	2.0						2.6
04	305	2.0						2.7
05	260	2.6	---	---	---	E		2.9
06	255	3.6	245	---	---	E		3.0
07	(270)	4.2	240	3.4	120	2.0		3.1
08	295	4.4	225	3.6	115	2.3		3.1
09	315	5.0	225	3.9	110	2.5	2.9	3.1
10	300	5.2	210	4.0	110	2.6	2.5	3.0
11	300	5.3	210	4.0	110	2.7	2.9	3.0
12	300	5.4	210	4.1	110	2.8	2.7	3.1
13	290	5.6	210	4.0	110	2.8	2.8	3.1
14	300	5.3	220	4.0	110	2.6		3.1
15	275	5.2	225	3.8	110	2.4		3.1
16	(270)	5.2	245	3.6	115	2.2	2.3	3.1
17	255	5.2	245	---	115	1.9	2.2	3.0
18	250	5.2	---	---	---	E	1.8	3.0
19	250	5.2			---	E	2.3	2.9
20	245	4.4					2.2	3.0
21	250	3.8						2.9
22	255	3.1						2.9
23	(260)	2.3						2.7

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 6

Adak, Alaska (51.9°N, 176.6°W) — September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.6					2.1	2.9
01	300	2.6					2.3	2.9
02	300	2.7					2.1	2.9
03	300	2.5					2.2	2.9
04	310	2.6					2.6	2.9
05	290	2.8	---	2.7	---	E	2.6	2.9
06	300	3.7	250	3.1	120	1.8	2.8	3.0
07	380	4.3	230	3.4	110	2.1	3.0	3.0
08	340	4.7	220	3.8	110	2.5	3.5	3.1
09	360	4.8	200	4.0	110	2.7	3.2	3.1
10	340	4.8	200	4.1	110	2.8	3.7	3.1
11	360	5.0	200	4.1	110	2.8	3.8	3.0
12	340	5.0	200	4.1	110	2.8	3.6	3.1
13	320	5.0	210	4.1	110	2.8	3.6	3.1
14	290	5.2	210	4.0	110	2.7	2.5	3.3
15	280	5.0	220	3.9	110	2.6	2.8	3.3
16	260	4.8	230	3.6	110	2.3	2.1	3.3
17	250	5.0	240	---	120	1.9	2.4	3.3
18	240	4.8			---	E	2.8	3.2
19	240	4.6					2.6	3.1
20	250	4.3					2.0	3.1
21	240	4.0					2.2	3.1
22	250	3.5					2.0	3.0
23	270	2.8					2.0	3.0

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 7

Graz, Austria (47.1°N, 15.5°E) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.7						
01	300	3.6						
02	300	3.6						
03	290	3.2						
04	290	3.2						
05	280	2.9						
06	250	3.8						
07	235	4.4					3.2	
08	285	5.1	200	3.9		(2.7)	3.7	
09	280	6.0	200	4.0	---	---	3.9	
10	280	6.1	200	4.2	100	3.0	3.8	
11	280	6.1	200	4.4	100	3.2	3.8	
12	270	6.0	200	4.5	---	---	3.8	
13	285	6.2	200	4.3	105	3.1	3.4	
14	280	6.2	200	4.3	---	---	2.8	
15	280	6.0	200	4.0		---		
16	240	6.1	210	4.0				
17	240	6.2	210	3.8				
18	240	6.6						
19	250	6.4						
20	240	6.0						
21	240	5.0						
22	260	4.0						
23	290	3.7						

Time: 15.0°E.
Sweep: 2.5 Mc to 12.0 Mc in 2 minutes.

Table 8

San Francisco, California (37.4°N, 122.2°W) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.1						2.9
01	300	3.1						2.9
02	300	3.1						2.9
03	300	3.1						2.9
04	280	3.0						2.9
05	280	3.0						3.0
06	280	3.6	270	---			2.6	3.1
07	310	4.7	230	3.6	120	(2.1)	2.9	3.1
08	310	5.2	220	3.9	110	(2.7)	2.7	3.1
09	310	5.6	210	4.1	110	(2.9)	2.9	3.2
10	330	5.5	210	4.3	110	(3.1)	3.0	3.0
11	330	5.8	200	4.4	110	(3.2)		3.0
12	330	6.0	210	4.4	110	(3.2)		3.0
13	330	6.1	210	4.4	110	(3.2)		3.0
14	320	6.5	220	4.3	110	3.2		3.1
15	300	6.3	220	4.2	110	(3.0)		3.2
16	280	5.9	230	4.0	120	(2.6)		3.2
17	260	5.9	230	---	120	(2.2)		3.2
18	230	5.6	---	---				3.4
19	240	4.9					2.5	3.2
20	240	4.3						3.2
21	260	3.9						3.0
22	260	3.6						3.0
23	270	3.2						3.0

Time: 120.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 9

White Sands, New Mexico (32.3°N, 106.5°W) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	3.4					1.9	3.0
01	280	3.3						3.0
02	270	3.3						3.0
03	260	3.4						3.0
04	260	3.2						3.1
05	260	3.2					2.0	3.1
06	250	4.0	---	---	110	---	2.3	3.3
07	270	5.4	220	3.6	100	2.1	3.2	3.3
08	270	6.2	200	4.0	100	2.6	3.5	3.4
09	300	6.2	200	4.2	100	2.9	3.2	3.3
10	300	6.2	200	4.4	100	3.2	3.4	3.2
11	320	6.4	190	4.5	100	3.3	3.2	3.1
12	310	7.0	200	4.5	100	3.3	2.6	3.1
13	300	7.2	200	4.5	100	3.3	2.8	3.1
14	290	7.2	200	4.4	100	3.2	2.6	3.2
15	280	7.4	210	4.2	100	3.0		3.2
16	270	7.2	220	4.0	100	2.6	2.5	3.3
17	240	6.7	220	---	110	2.1	2.4	3.4
18	220	6.4	---	---	---	---	2.6	3.4
19	210	5.2					2.3	3.4
20	230	4.1					2.1	3.2
21	250	3.8						3.1
22	260	3.6						3.0
23	270	3.4						3.0

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 10

Okinawa I. (26.3°N, 127.8°E) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	5.0					3.1	2.9
01	280	4.6					2.3	3.0
02	260	4.3					1.8	3.1
03	240	3.6					1.5	3.2
04	250	3.2						3.1
05	270	3.0						3.2
06	240	5.2	---	---	130	---	2.3	3.5
07	240	6.8	230	---	120	2.3	3.7	3.6
08	250	7.2	230	---	120	2.7	4.3	3.4
09	260	7.0	220	---	120	3.0	5.0	3.4
10	300	7.6	210	4.8	120	3.2	4.8	3.0
11	310	9.0	200	4.8	120	3.3	5.3	3.0
12	320	10.0	$<$220	4.8	120	3.3	4.9	3.0
13	300	10.6	220	4.8	120	3.3	4.6	3.0
14	300	10.6	220	4.7	120	3.2	4.6	3.1
15	290	10.4	230	4.5	120	3.0	5.0	3.1
16	280	11.0	250	---	120	2.7	5.0	3.2
17	260	11.1	250	---	120	2.1	4.2	3.4
18	230	9.8	---	---			4.0	3.4
19	220	7.7					4.4	3.4
20	240	5.8					3.9	3.0
21	290	5.1					3.8	2.8
22	300	4.9					3.8	2.8
23	310	4.9					3.4	2.8

Time: 127.5°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 11

Maui, Hawaii (20.8°N, 156.5°W) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	4.7						2.9
01	260	4.6						3.1
02	240	4.4						3.2
03	230	3.5						3.2
04	260	3.0						3.0
05	280	2.7						3.0
06	280	3.1					1.9	3.0
07	(260)	5.4	240	---	120	2.1	2.6	3.2
08	270	6.6	220	---	110	2.6	3.7	3.2
09	310	7.1	220	4.3	110	2.9	4.0	2.8
10	340	8.2	220	4.6	110	3.2	4.6	2.7
11	360	9.4	220	4.7	110	3.4	4.2	2.8
12	340	10.2	210	4.7	110	3.4	4.6	2.8
13	330	11.0	220	4.7	110	3.5	4.2	2.9
14	320	11.8	220	4.6	110	3.4	4.3	3.0
15	290	12.2	220	4.5	110	3.2	3.8	3.1
16	270	12.4	230	4.2	110	2.8	4.3	3.2
17	250	12.1	230	(3.8)	110	2.3	3.9	3.3
18	230	10.0	---	---	---	---	4.0	3.4
19	220	7.2					3.8	3.2
20	240	5.6					3.0	2.9
21	280	5.0					2.6	2.8
22	300	4.4					2.0	2.8
23	300	4.5						2.9

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 12

Puerto Rico, W.I. (18.5°N, 67.2°W) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	4.6					2.2	3.0
01	260	4.4						3.1
02	240	4.3						3.2
03	230	4.0						3.3
04	240	3.6						3.1
05	250	3.5						3.1
06	240	3.5			110	---		3.2
07	220	5.2	220	---	110	(2.0)		3.6
08	240	5.8	210	3.4	100	2.6	3.6	3.5
09	270	6.4	210	4.4	100	3.0		3.3
10	290	7.4	200	4.5	100	3.2		3.2
11	310	7.9	200	4.7	100	3.4		3.0
12	300	8.6	210	4.7	100	3.5		3.1
13	290	9.3	210	4.7	100	3.5		3.1
14	290	9.6	210	4.6	100	3.4		3.1
15	280	10.0	210	4.5	100	3.2		3.2
16	260	9.8	210	4.2	100	3.0		3.2
17	240	9.2	220	---	100	2.5	4.1	3.4
18	220	7.9	230	---	100	---	3.6	3.5
19	210	7.0					3.1	3.3
20	230	5.2					2.8	3.1
21	250	4.8					2.4	3.0
22	270	4.4						2.9
23	290	4.4						2.9

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 13

Panama Canal Zone (9.4°N, 79.9°W) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	4.6					2.0	2.9
01	240	4.5					2.2	3.1
02	230	3.8					2.3	3.2
03	240	3.2					2.9	3.1
04	250	2.8					3.0	3.0
05	250	2.8					3.3	2.9
06	280	3.1			---	---	4.0	2.9
07	240	5.4	220	---	120	(2.1)	4.2	3.2
08	290	6.2	220	(4.5)	110	(2.7)	4.1	3.0
09	330	7.2	220	4.6	110	3.1	4.3	2.7
10	350	8.6	220	4.7	110	3.4	4.8	2.7
11	350	10.0	230	4.7	110	3.5	4.8	2.7
12	360	10.7	220	4.8	110	3.6	5.2	2.8
13	340	11.5	210	4.7	110	3.6	4.9	2.8
14	320	12.8	220	4.7	110	3.4	4.9	2.9
15	300	13.0	220	4.6	110	3.2	4.4	3.0
16	280	12.9	220	4.3	110	2.9	4.6	3.0
17	260	11.4	230	---	110	2.4	4.2	3.1
18	230	10.6	---	---	---	---	4.3	3.2
19	220	8.0					3.7	3.0
20	230	7.2					2.5	2.9
21	240	6.2					2.1	2.9
22	270	5.2						2.8
23	280	4.7					1.9	2.8

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 14

Huancayo, Peru (12.0°S, 75.3°W) September 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	7.2						3.3
01	220	6.5						3.3
02	230	5.4						3.3
03	240	4.7						3.3
04	260	4.2						3.3
05	<270	3.9						3.2
06	260	3.9			---	---	3.5	3.1
07	(270)	6.6	220	---	110	2.4	6.8	3.2
08	290	8.0	210	4.1	110	2.8	10.2	2.9
09	310	8.4	200	4.3	100	---	11.7	2.7
10	320	7.9	200	4.5	100	---	12.7	2.6
11	340	7.6	190	4.5	100	---	12.8	2.6
12	350	7.6	190	4.5	100	---	12.8	2.6
13	350	7.8	190	4.6	100	---	12.6	2.6
14	340	8.1	190	4.5	100	---	11.9	2.6
15	310	8.4	190	4.2	110	---	11.2	2.6
16	(270)	8.4	200	---	110	---	9.2	2.6
17	240	8.2			110	---	5.8	2.7
18	260	8.2			---	---		2.8
19	300	7.5						2.6
20	280	7.4						2.7
21	250	7.5						3.0
22	220	7.7						3.2
23	220	7.8						3.2

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 15

Point Barrow, Alaska (71.3°N, 156.8°W) August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	(3.5)					6.6	(3.1)
01	280	(3.4)					5.4	(3.0)
02	260	(3.6)			---	---	5.4	(3.2)
03	280	(3.5)			---	---	4.8	(3.1)
04	280	(3.6)			---	---	3.4	(3.0)
05	300	(4.0)	200	3.1	100	---	3.2	(3.0)
06	330	(4.2)	(230)	(3.2)	100	2.1	4.0	(3.0)
07	(350)	(4.2)	220	3.5	100	(2.4)	<4.0	(2.9)
08	380	4.4	220	(3.6)	100	(2.4)	4.5	2.9
09	380	4.4	210	3.8	100	(2.5)	4.2	2.9
10	380	4.6	220	3.8	100	2.5	3.6	2.9
11	430	4.3	210	3.8	100	2.8		2.8
12	430	4.4	200	3.9	100	2.8		2.8
13	390	4.4	200	3.9	100	2.8		2.9
14	400	4.5	210	3.9	100	2.8		2.9
15	400	4.5	210	3.8	100	(2.7)		2.9
16	360	4.6	220	3.8	100	2.5		3.0
17	340	4.6	210	(3.6)	100	2.3		3.1
18	320	4.4	220	(3.4)	110	(2.1)		3.1
19	(280)	4.0	230	(3.3)	100	(2.3)	2.6	3.1
20	280	4.0	---	---	100	---	3.9	3.2
21	280	(3.6)	---	---	---	---	5.0	(3.1)
22	290	(3.5)					5.4	(3.3)
23	300	(3.4)					4.6	(3.1)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 16

Kiruna, Sweden (67.8°N, 20.5°E) August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(300)	(3.2)					3.8	---
01	(300)	---					4.1	---
02	320	3.0					3.0	2.5
03	320	3.2	---	---	---	---	2.8	2.7
04	320	3.6	260	3.0	105	1.9	2.0	2.7
05	330	3.9	250	3.2	110	2.0	2.0	2.8
06	345	4.2	240	3.5	110	2.1		2.9
07	360	4.6	240	3.7	110	2.3		2.8
08	400	4.8	230	3.9	110	2.6		2.8
09	390	4.8	225	4.0	110	2.8		2.8
10	390	4.9	220	4.0	110	2.9		2.8
11	360	5.1	215	4.0	110	2.9		2.9
12	360	5.1	210	4.0	110	2.9		2.9
13	360	5.1	210	4.0	110	2.9		2.9
14	365	5.0	220	4.0	110	2.9		2.8
15	350	5.0	230	3.9	110	2.8		2.9
16	335	4.8	240	3.8	110	2.4		3.0
17	310	4.8	240	3.7	120	2.2	3.8	3.0
18	300	4.7	250	3.3	120	2.0	2.8	3.0
19	270	4.6	200	2.9	115	1.9	2.4	2.7
20	270	4.2	---	---	---	---	2.5	2.8
21	290	---					3.8	---
22	(295)	---					4.1	---
23	(300)	(3.7)					4.2	---

Time: 15.0°E.
Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.

Table 17

Fairbanks, Alaska (64.9°N, 147.8°W) August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	(3.0)					5.6	(3.0)
01	330	(3.0)					5.8	(2.8)
02	320	(3.4)					6.2	(2.8)
03	320	(3.6)					5.6	(2.9)
04	300	(3.6)	---	---	---	---	5.2	(3.0)
05	370	3.8	270	3.1	120	(1.7)	3.0	2.8
06	400	4.0	220	3.4	110	2.1	2.8	2.7
07	420	4.2	220	3.5	110	(2.3)	3.6	2.7
08	420	4.3	220	3.7	110	(2.5)	2.5	2.8
09	460	4.2	210	3.8	110	(2.7)		2.7
10	430	4.5	200	3.9	110	(2.8)		2.8
11	430	4.6	210	4.0	110	2.9		2.7
12	410	4.6	210	4.0	110	(2.9)		2.7
13	400	4.6	210	4.0	110	2.9		2.7
14	400	4.6	220	4.0	110	(2.8)		2.8
15	380	4.6	220	3.9	110	(2.7)		2.9
16	350	4.6	220	3.8	110	(2.5)		2.9
17	320	4.6	230	3.6	120	2.2		3.1
18	290	4.4	230	---	120	1.9		3.1
19	260	4.3	240	---	130	1.8		3.1
20	260	(3.9)	---	---	---	---	1.8	(3.1)
21	260	(3.4)			---	---	5.0	(3.0)
22	280	(3.4)					4.3	(2.9)
23	280	(3.2)					5.0	(3.1)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 18

De Bilt, Holland (52.1°N, 5.2°E) August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	3.6					2.5	2.9
01	275	3.3						3.0
02	270	3.2					2.6	2.9
03	280	3.0					2.7	2.9
04	<270	3.0					2.6	3.0
05	230	3.7	---	---	---	1.7	2.8	3.3
06	245	4.3	215	3.5	110	2.2	3.6	3.4
07	300	4.6	210	3.8	100	2.5	3.6	3.2
08	325	5.0	200	4.0	100	2.8	4.4	3.2
09	310	5.4	200	4.2	100	3.0	4.4	3.2
10	330	5.4	200	4.4	100	3.1	4.7	3.1
11	310	5.6	200	4.4	100	3.2	4.3	3.3
12	320	5.4	195	4.5	100	3.2	4.2	3.2
13	330	5.2	200	4.4	100	3.2	4.4	3.2
14	320	5.4	200	4.3	100	3.1	4.2	3.2
15	310	5.3	200	4.2	100	3.0	4.0	3.2
16	300	5.3	210	4.0	100	2.7	3.3	3.2
17	295	5.6	220	3.7	105	2.4	3.2	3.2
18	270	5.8	240	3.2	110	2.0	3.5	3.2
19	250	6.2			---	---	3.5	3.2
20	230	6.3					3.9	3.2
21	235	5.6					3.2	3.2
22	225	4.8					3.4	3.0
23	250	3.9						3.0

Time: 0.0°.
Sweep: 1.4 Mc to 11.2 Mc in 6 minutes, automatic operation.

Table 19

Lindau/Harz, Germany (51.6°N, 10.1°E) — August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	3.9					2.8	3.1
01	270	3.7					2.5	3.0
02	270	3.4					2.6	3.0
03	270	3.3					2.5	3.0
04	280	3.0			---	E	2.9	3.0
05	260	3.4	240	---	---	E	3.0	3.2
06	270	4.1	225	3.4	115	2.0	3.0	3.4
07	310	4.7	225	3.7	110	2.4	3.6	3.2
08	360	5.1	225	4.0	105	2.6	4.5	3.0
09	315	5.6	210	4.2	100	2.9	4.8	3.3
10	310	5.5	200	4.4	100	3.0	4.7	3.3
11	310	5.8	200	4.4	100	3.2	4.8	3.2
12	320	5.9	200	4.5	100	3.2	4.4	3.2
13	340	5.4	200	4.4	100	3.2	4.2	3.2
14	340	5.5	200	4.4	100	3.2	4.0	3.2
15	330	5.4	210	4.3	100	3.1	3.7	3.2
16	315	5.4	215	4.2	100	2.9	3.8	3.2
17	300	5.4	220	3.9	105	2.6	3.7	3.2
18	280	5.6	230	3.5	110	2.2	3.5	3.2
19	260	5.9	230	---	---	E	3.4	3.2
20	250	6.3			---	E	4.0	3.2
21	240	6.0					4.4	3.3
22	250	5.3					3.3	3.2
23	250	4.6					3.2	3.2

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 8 minutes.

Table 20

Graz, Austria (47.1°N, 15.5°E) — August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	4.0						
01	295	3.9						
02	300	3.6						
03	300	3.6						
04	290	3.4						
05	280	3.6						
06	240	4.2						
07	250	5.0	200	3.9			4.0	
08	290	5.8	200	4.0			4.1	
09	290	6.0	200	4.2	---	3.0	5.0	
10	290	6.4	200	4.5	100	3.2	5.0	
11	290	6.4	200	4.6	---	3.4	3.9	
12	290	6.2	200	4.7	110	3.4	4.0	
13	300	6.0	200	4.6	---	---	4.0	
14	300	5.9	200	4.5	---	3.3	4.0	
15	300	5.8	200	4.4	---	3.1	4.0	
16	300	5.8	200	4.0	---	---	4.0	
17	280	5.7	205	3.9	---	(2.7)	4.0	
18	250	5.9		3.5			3.6	
19	250	6.4					3.4	
20	250	6.7					3.4	
21	240	6.3					3.0	
22	250	5.6					3.7	
23	260	4.3					4.0	

Time: 15.0°E.
Sweep: 2.5 Mc to 12.0 Mc in 2 minutes.

Table 21

Schwarzenburg, Switzerland (46.8°N, 7.3°E) — August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	4.0						3.3
01	300	4.0					3.0	3.2
02	290	3.5					3.1	3.2
03	300	3.4					3.0	3.1
04	300	3.4						3.2
05	275	3.1			---	---		3.3
06	250	3.9	---	---	---	---	3.2	3.5
07	220	4.5	---	---	100	2.2	4.0	3.6
08	300	5.0	200	4.0	100	2.6	4.0	3.5
09	300	5.4	200	4.1	100	2.9	4.5	3.5
10	300	5.7	200	4.2	100	3.0	5.1	3.5
11	305	5.6	200	4.4	100	3.1	5.0	3.4
12	300	5.6	200	4.5	100	3.2	5.0	3.4
13	350	5.6	200	4.5	100	3.1	5.0	3.2
14	330	5.5	200	4.4	100	3.1	4.4	3.3
15	310	5.5	200	4.4	100	3.1		3.3
16	300	5.5	200	4.2	100	3.0		3.4
17	300	5.4	210	4.0	100	2.7		3.4
18	280	5.6	210	3.7	100	2.3		3.4
19	250	6.0	---	---	---	---		3.4
20	230	6.5					3.2	3.4
21	235	6.1					4.1	3.5
22	220	5.6						3.5
23	250	4.6					3.2	3.4

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 22

Watheroo, W. Australia (30.3°S, 115.9°E) — August 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	3.2					2.1	3.2
01	230	3.4					2.1	3.2
02	240	3.3					2.3	3.2
03	230	3.5					2.1	3.3
04	225	3.4					2.1	3.5
05	230	3.3					2.2	3.3
06	220	2.9					1.8	3.3
07	230	4.2				1.8	1.3	3.5
08	230	5.6	220	3.5		2.3		3.6
09	250	6.0	220	4.0		2.8	2.7	3.5
10	265	6.3	210	4.3		3.0	3.2	3.4
11	280	6.2	220	4.4		3.1	3.5	3.4
12	270	6.8	200	4.4		3.2	3.5	3.4
13	285	6.9	200	4.4		3.2	3.6	3.3
14	260	6.8	200	4.4		3.2	3.6	3.4
15	260	7.0	205	4.3		3.0	3.6	3.4
16	240	6.4	220	3.7		2.7	3.5	3.5
17	230	6.0	210	3.0		2.2	2.0	3.6
18	220	5.0				•	2.0	3.5
19	220	4.2					2.1	3.4
20	240	3.4						3.2
21	240	3.3						3.2
22	250	3.3						3.2
23	250	3.4					2.0	3.2

Time: 120.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 2 minutes.

Table 23

Kiruna, Sweden (67.8°N, 20.5°E) — July 1952 / June 1952*

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2 (July 1952)	(M3000)F2 (June 1952*)
00	(300)	(4.3)					4.0	(2.8)	(3.0)
01	300	4.4			---	---	3.8	2.8	2.9
02	300	4.2	(260)	(2.8)	105	(1.8)	3.1	2.8	2.8
03	350	4.1	250	3.0	105	1.9	3.2	2.8	2.9
04	395	4.1	240	3.2	100	2.0	2.9	2.7	2.8
05	400	4.2	240	3.4	105	2.2	3.1	2.8	2.8
06	395	4.4	225	3.4	105	2.4		2.7	2.8
07	410	4.6	220	3.8	110	2.6		2.7	2.7
08	400	4.9	210	3.9	110	2.8		2.8	2.8
09	390	5.0	210	4.0	105	2.9	3.6	2.8	2.9
10	400	5.0	210	4.1	105	3.0	3.9	2.8	2.8
11	400	5.0	210	4.1	105	3.0	3.2	2.9	2.8
12	400	5.0	210	4.1	110	3.0		2.8	2.8
13	400	5.0	215	4.1	110	3.0		2.8	2.8
14	400	4.9	210	4.1	110	3.0		2.8	2.8
15	390	4.8	210	4.0	105	2.9		2.8	2.8
16	380	4.8	220	3.9	110	2.7	3.1	2.8	2.9
17	355	4.6	230	3.7	110	2.5	3.1	2.9	3.0
18	320	4.6	250	3.5	110	2.3	3.8	3.0	3.0
19	300	4.6	250	3.2	110	2.0	3.8	3.0	3.0
20	300	4.4	250	3.0	110	2.0	3.0	2.9	2.9
21	295	4.2	(260)	---	---	(1.9)	3.2	2.8	3.0
22	290	4.2	---	---	---	---	3.1	2.8	3.0
23	290	(4.1)					3.8	2.8	(3.0)

Time: 15.0°E.
Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.
*Addition to table 18, CRPL-F97.

Table 24

Reykjavik, Iceland (64.1°N, 21.8°W) — July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(360)	(4.0)					4.8	(2.9)
01	(360)	(4.0)					4.0	(2.8)
02	330	3.7					3.8	2.8
03	(300)	(3.2)	---	---	---	---	3.8	(3.0)
04	(310)	(3.4)	---	---	---	---	•1	(3.0)
05	(330)	(3.8)	230	3.3	---	---	1.9	(3.0)
06	320	4.0	230	3.4	---	---		3.1
07	380	4.4	210	3.6	100	2.4	2.7	3.0
08	380	4.5	220	3.7	100	---		(3.0)
09	400	4.5	210	3.9	100	---		(3.0)
10	430	4.6	200	4.0	100	2.9		2.8
11	360	4.8	200	4.1	100	3.0		3.1
12	400	4.8	200	4.1	100	---		3.0
13	420	4.7	200	4.1	100	3.0		2.8
14	400	4.8	220	4.1	100	3.0		2.8
15	400	4.8	210	4.0	100	---		2.9
16	410	4.6	210	4.0	110	2.9		2.8
17	380	4.6	230	4.0	100	2.8	4.0	3.0
18	350	4.7	240	3.8	110	2.6	4.1	3.0
19	340	4.6	250	3.6	110	2.8	3.7	3.0
20	300	4.4	260	---	110	---	3.4	3.0
21	300	4.2	---	---	---	---	4.0	3.0
22	310	4.3			---	---	4.6	(3.0)
23	(320)	(3.7)			---	---	4.5	(2.8)

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 25

Lindau/Harz, Germany (51.6°N, 10.1°E) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	4.5					2.4	3.0
01	260	4.2					2.2	3.0
02	260	3.8					2.5	2.9
03	250	3.4					2.3	2.9
04	260	3.3			---	E	2.5	3.0
05	280	3.9	230	2.9	120	1.6	3.2	3.1
06	320	4.5	220	3.6	110	2.2	3.4	3.1
07	350	4.8	220	3.8	100	2.5	3.9	3.0
08	370	5.0	210	4.0	100	2.8	4.5	2.9
09	335	5.4	200	4.2	100	3.0	4.6	3.0
10	340	5.3	200	4.3	100	3.1	4.7	3.1
11	325	5.4	200	4.4	100	3.2	4.5	3.1
12	385	5.3	200	4.5	100	3.2	4.7	2.9
13	360	5.4	200	4.4	100	3.2	4.3	2.9
14	340	5.3	200	4.4	100	3.2	4.4	3.0
15	350	5.3	205	4.4	100	3.1	4.6	3.0
16	340	5.2	205	4.3	100	3.0	3.8	3.0
17	330	5.4	220	4.1	100	2.7	3.8	3.0
18	300	5.6	220	3.8	100	2.4	4.0	3.0
19	270	5.7	230	3.2	110	2.0	4.6	3.1
20	250	5.9	---	---	---	E	3.6	3.1
21	250	6.0					3.4	3.0
22	240	5.7					2.7	3.0
23	240	5.3					2.4	3.0

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 8 minutes.

Table 26

Graz, Austria (47.1°N, 15.5°E) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	4.8						
01	290	4.2						
02	290	3.9						
03	280	3.9						
04	280	3.5						
05	270	4.0		3.0				
06	295	5.0	210	3.6			4.2	
07	300	5.5	205	4.0			4.9	
08	300	5.6	(210)	4.2			4.6	
09	315	5.8	(200)	4.4		3.1	4.8	
10	300	6.1	(200)	4.5	110	3.4	4.9	
11	---	(6.3)	---	4.5	110	3.4	4.9	
12	(330)	5.8	---	4.5	---	3.5	5.0	
13	---	(6.0)	(200)	(4.6)	---	3.5	4.0	
14	310	5.9	200	4.5	---	---	4.0	
15	320	5.6	200	4.4	100	3.3	4.0	
16	310	5.4	210	4.0	100	3.1	3.7	
17	300	5.5	210	4.0			4.2	
18	280	5.8	205	3.6			4.0	
19	250	6.3					4.0	
20	240	6.6					4.2	
21	255	6.4					3.7	
22	250	5.9					3.2	
23	260	5.1						

Time: 15.0°E.
Sweep: 2.5 Mc to 12.0 Mc in 2 minutes.

Table 27

Wakkanai, Japan (45.4°N, 141.7°E) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	320	5.0					3.8	2.6
01	310	4.7					3.3	2.7
02	320	4.5					3.0	2.6
03	320	4.0					3.0	2.6
04	320	3.8					3.0	2.6
05	370	4.5	300	3.2	130	1.8	3.3	2.8
06	360	4.8	280	3.6	120	2.3	4.0	2.8
07	400	5.0	280	3.9	120	2.7	4.5	2.7
08	(400)	(5.5)	270	4.1	120	3.0	5.6	(2.7)
09	(400)	(5.5)	---	---	120	3.0	5.7	(2.9)
10	(420)	(5.5)	---	---	120	3.1	6.0	(2.7)
11	(430)	(5.8)	---	4.4	120	3.1	6.0	(2.7)
12	---	---	---	---	120	3.1	5.4	---
13	(450)	(5.4)	260	4.3	120	3.2	6.0	(2.6)
14	(430)	(5.4)	340	4.3	120	3.1	5.0	(2.8)
15	420	5.4	---	4.1	120	3.0	4.8	2.7
16	380	5.4	250	4.0	120	2.8	4.6	2.8
17	400	5.3	300	3.8	120	2.4	5.2	2.7
18	350	5.5	---	---	130	2.0	6.0	2.7
19	300	5.7					4.1	2.8
20	300	5.8					4.0	2.8
21	300	5.8					3.4	2.7
22	320	5.5					3.8	2.6
23	320	5.2					3.0	2.7

Time: 135.0°E.
Sweep: 1.0 Mc to 15.5 Mc in 2 minutes.

Table 28

Akita, Japan (39.7°N, 140.1°E) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	5.0					3.6	2.9
01	300	4.9					4.0	2.8
02	300	4.7					3.8	2.9
03	280	4.5					3.5	2.9
04	280	4.0					3.2	2.9
05	270	4.5	250	3.0	110	1.7	3.4	3.0
06	300	5.2	230	3.6	110	2.3	3.9	3.0
07	300	5.7	240	4.0	110	2.8	4.6	3.2
08	290	5.7	220	4.2	110	3.0	5.7	3.3
09	340	5.6	220	4.4	110	3.2	6.6	3.0
10	380	5.6	220	4.5	110	3.3	7.2	3.0
11	380	6.0	---	4.6	110	3.4	6.8	2.9
12	390	5.8	---	4.6	110	3.4	7.0	2.8
13	350	6.0	240	4.6	110	3.3	5.8	3.0
14	330	6.0	220	4.4	110	3.3	5.5	3.0
15	330	5.9	230	4.4	110	3.2	5.1	2.9
16	320	5.9	230	4.2	110	3.0	5.0	3.0
17	300	6.0	240	3.9	110	2.6	4.7	3.1
18	280	6.2	240	3.4	110	2.2	5.6	3.1
19	260	6.1	---	---			5.2	3.2
20	270	5.9					5.3	3.1
21	280	5.4					4.1	3.0
22	280	5.4					4.4	3.0
23	280	5.2					4.3	3.0

Time: 135.0°E.
Sweep: 1.0 Mc to 17.0 Mc in 15 minutes, manual operation.

Table 29

Tokyo, Japan (35.7°N, 139.5°E) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	5.0					4.0	2.8
01	300	4.6					4.4	2.7
02	290	4.6					4.0	2.7
03	280	4.2					3.8	2.8
04	280	4.2					3.7	2.8
05	270	4.3	260	---	120	1.6	3.3	3.0
06	300	5.0	250	3.6	110	2.2	4.3	3.0
07	290	5.8	240	4.0	110	2.6	5.0	3.1
08	300	6.0	230	4.2	110	3.0	5.5	3.1
09	320	5.7	210	4.4	110	3.2	6.0	3.1
10	380	5.4	210	4.5	110	3.3	7.0	2.9
11	380	5.7	220	4.5	110	3.3	6.6	2.8
12	390	5.9	230	4.4	110	3.4	6.0	2.8
13	360	6.4	220	4.4	110	3.3	5.6	2.8
14	360	6.5	230	4.4	110	3.3	6.0	2.8
15	380	6.1	220	4.3	110	3.2	5.8	2.8
16	330	6.2	240	4.1	110	2.8	5.7	2.8
17	310	6.4	250	3.8	110	2.5	5.8	3.0
18	280	6.3	250	3.3	120	2.0	5.0	3.0
19	260	6.6					4.3	3.0
20	260	6.0					4.5	2.9
21	280	5.5					4.2	2.7
22	290	5.5					3.9	2.7
23	300	5.2					4.5	2.7

Time: 135.0°E.
Sweep: 1.0 Mc to 17.2 Mc in 2 minutes.

Table 30

Yamagawa, Japan (31.2°N, 130.6°E) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	4.7					3.6	2.8
01	290	4.7					3.5	2.9
02	290	4.7					3.7	3.0
03	260	4.4					3.1	3.1
04	·270	4.0					3.0	3.1
05	260	3.8					3.0	3.1
06	250	4.5	240	---	130	1.8	3.3	3.2
07	260	5.5	240	3.8	110	2.3	4.0	3.4
08	280	5.6	200	4.0	100	2.8	4.4	3.3
09	340	5.6	230	4.3	100	3.1	4.5	3.2
10	380	(5.9)	220	4.5	100	3.3	4.8	(3.0)
11	380	(6.0)	240	4.5	100	3.3	5.0	(2.8)
12	350	6.4	220	4.5	100	3.4	5.0	3.0
13	340	6.7	210	4.5	100	3.4	5.0	3.0
14	350	6.8	240	4.4	100	3.3	4.8	2.9
15	350	6.7	240	4.4	100	3.2	5.2	2.9
16	330	7.0	230	4.3	100	3.0	4.6	3.0
17	300	7.4	220	4.0	100	2.7	4.4	3.1
18	280	7.5	220	3.6	100	2.2	4.5	3.2
19	250	6.7					3.7	3.2
20	250	5.8					3.6	3.1
21	280	5.4					3.5	3.0
22	290	5.0					3.5	2.8
23	300	4.9					3.4	2.9

Time: 135.0°E.
Sweep: 1.0 Mc to 22.0 Mc in 2 minutes.

Table 31

Watheroo, W. Australia (30.3°S, 115.9°E) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	3.4					2.3	3.1
01	240	3.5					2.2	3.0
02	240	3.5					2.1	3.2
03	240	3.4					2.1	3.3
04	230	3.3					2.1	3.4
05	220	3.0					1.5	3.5
06	230	2.6					1.3	3.3
07	230	3.4				---	1.2	3.4
08	230	5.2	210	2.8		2.1	2.0	3.7
09	240	6.0	210	3.7		2.6	3.0	3.6
10	240	6.3	215	4.1		2.9	3.2	3.6
11	250	6.4	210	4.3		3.0	3.6	3.6
12	260	6.4	190	4.3		3.1	3.6	3.5
13	250	6.4	200	4.3		3.1	3.8	3.5
14	260	6.3	190	4.2		3.0	3.4	3.3
15	250	6.6	200	4.0		2.8	3.4	3.5
16	230	6.4	210	3.5		2.5	3.2	3.5
17	220	5.7	210	2.5		2.0	2.5	3.6
18	200	4.7					2.2	3.6
19	205	3.2					2.4	3.4
20	240	2.9					2.7	3.2
21	240	3.0					2.3	3.2
22	240	3.0					2.1	3.2
23	250	3.2					2.0	3.1

Time: 120.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 2 minutes.

Table 32

Buenos Aires, Argentina (34.5°S, 58.5°W) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	2.7						3.2
01	310	2.9						3.0
02	340	2.8						3.0
03	300	2.8						3.3
04	270	3.0						3.5
05	(280)	<2.2						(3.2)
06	(260)	<2.2						(3.3)
07	250	3.6						3.4
08	220	5.1						3.5
09	240	5.6	230	---		2.9		3.5
10	260	6.0	220	4.0		3.0		3.5
11	260	6.5	210	4.0		3.1		3.5
12	270	6.8	200	4.2		3.1	3.7	3.5
13	260	7.0	200	4.1		3.2	3.7	3.5
14	270	6.8	220	3.8		3.0		3.5
15	250	7.0	230	---		3.0		3.5
16	220	6.3	---	---				3.6
17	210	6.0						3.6
18	210	4.7						3.5
19	230	4.3						3.3
20	250	4.5						3.3
21	250	3.9						3.4
22	290	3.3						3.4
23	300	3.0						3.2

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 33

Decepcion I. (63.0°S, 60.7°W) July 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.2						3.2
01								
02	280	2.4						3.3
03								
04	270	2.4						3.3
05								
06	280	2.1						3.4
07								
08	275	2.2						3.6
09	200	3.3						3.7
10	200	4.0						3.7
11								
12	200	4.7						3.8
13								
14	200	4.1						3.8
15	200	3.4						3.8
16	200	3.3						3.7
17								
18	250	2.0						3.6
19								
20	430	1.7						3.5
21								
22	260	2.2						3.4
23								

Time: 60.0°W.
Sweep: 1.5 Mc to 16.0 Mc in 15 minutes, manual operation.

Table 34*

Invernese, Scotland (57.4°N, 4.2°W) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	(4.2)					2.7	2.8
01	270	(3.9)					2.5	2.7
02	285	3.6				(0.9)	2.6	2.8
03	290	3.3	(290)	(1.9)	130	1.3	2.8	2.7
04	330	3.7	260	2.7	125	1.7	2.4	2.9
05	395	4.0	240	3.2	125	2.0	2.8	2.9
06	420	4.4	220	3.6	105	2.3	3.5	2.9
07	440	4.6	220	3.8	105	2.6	4.0	2.9
08	445	4.8	215	4.0	100	2.8	3.4	2.9
09	430	4.9	215	4.1	105	2.9	3.8	2.9
10	435	5.0	215	4.2	100	3.0	4.4	2.9
11	460	5.0	215	4.3	100	3.1	3.8	2.9
12	430	5.1	210	4.3	100	3.2	4.4	2.9
13	425	5.0	215	4.3	100	3.2	3.8	2.8
14	430	5.0	210	4.3	100	3.1	3.4	2.8
15	395	5.1	220	4.2	105	3.1		2.9
16	380	5.2	220	4.2	105	3.0	3.5	2.9
17	355	5.2	220	4.1	110	2.8	4.0	2.9
18	320	5.5	230	3.8	110	2.5	4.3	3.0
19	310	5.4	235	3.4	125	2.2	3.1	3.0
20	285	5.2	250	3.0	140	1.9	2.8	3.0
21	260	5.1	(295)	(2.6)	160	1.7	2.7	2.9
22	265	4.8						2.8
23	275	4.4						2.8

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 35

Lindau/Harz, Germany (51.6°N, 10.1°E) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	4.5					2.4	2.9
01	260	4.2					2.6	2.8
02	270	3.9					2.4	2.9
03	260	3.6			---	E	2.7	2.9
04	270	3.6	280	---	---	---	2.6	2.9
05	340	4.0	240	3.1	115	1.8	2.8	2.9
06	340	4.7	230	3.6	110	2.2	3.4	3.0
07	355	4.9	230	3.9	100	2.6	4.2	2.9
08	390	5.0	220	4.1	100	2.8	4.2	2.8
09	370	5.2	210	4.2	100	3.0	5.0	2.9
10	340	5.4	205	4.4	100	3.1	4.9	3.0
11	360	5.3	210	4.4	100	3.2	4.7	2.9
12	390	5.4	215	4.4	100	3.2	4.9	2.8
13	360	5.4	210	4.4	100	3.2	4.9	2.9
14	360	5.5	210	4.4	100	3.2	4.8	2.9
15	350	5.4	210	4.4	100	3.2	4.6	2.9
16	360	5.4	210	4.2	100	3.0	4.0	2.9
17	320	5.6	230	4.1	100	2.8	4.2	3.0
18	300	5.7	220	3.8	100	2.5	4.3	3.0
19	280	5.6	240	3.3	110	2.0	4.4	3.1
20	260	6.2	---	---	---	E	4.1	3.1
21	240	5.9					3.4	3.0
22	240	5.6					2.8	3.0
23	250	5.0					2.7	2.9

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 8 minutes.

Table 36*

Slough, England (51.5°N, 0.6°W) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	285	4.6					3.6	2.8
01	280	4.3					3.2	2.8
02	285	3.9					3.0	2.8
03	285	3.5					3.2	2.8
04	310	3.6	260	2.5	130	1.5	4.5	2.9
05	365	4.2	245	3.3	120	1.9	4.8	2.8
06	385	4.6	235	3.7	115	2.3	4.9	2.8
07	370	4.9	235	3.9	115	2.6	5.4	2.9
08	365	5.2	235	4.1	110	2.9	5.0	3.0
09	395	5.3	220	4.3	110	3.1	5.0	3.0
10	380	5.3	235	4.4	110	3.2	5.2	2.9
11	375	5.6	225	4.4	110	3.3	5.2	3.0
12	390	5.5	230	4.5	110	3.3	5.2	2.8
13	415	5.5	235	4.5	110	3.2	5.4	3.0
14	395	5.3	225	4.4	110	3.2	5.0	2.8
15	380	5.6	230	4.3	115	3.2	5.0	2.9
16	355	5.6	235	4.2	110	3.0	5.0	3.0
17	340	5.7	235	4.1	115	2.7	5.0	3.0
18	320	5.6	245	3.7	115	2.4	4.8	3.0
19	285	6.0	250	3.4	125	2.0	4.7	3.0
20	265	6.1					4.3	3.0
21	260	5.8					3.4	3.0
22	265	5.5					3.2	3.0
23	275	5.0					3.0	2.8

Time: 0.0°.
Sweep: 0.55 Mc to 16.5 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 37*

Singapore, British Malaya (1.3°N, 103.8°E) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	4.2					3.7	3.0
01	255	4.2					3.8	3.1
02	250	3.7					3.4	3.2
03	260	3.3					3.3	3.2
04	265	2.3					3.5	(3.2)
05	275	2.0					3.3	(3.2)
06	265	3.6					3.4	3.0
07	250	6.6			125	2.3	4.6	3.1
08	295	8.4	235	4.1	120	2.8	4.0	2.9
09	305	9.6	225	4.4	110	3.1	4.3	2.9
10	315	10.6	215	4.5	110	3.3	6.4	2.8
11	330	10.6	210	4.6	110	3.5	7.5	2.6
12	345	10.8	205	4.7	110	3.5	5.8	2.5
13	330	10.5	205	4.6	110	3.5	6.5	2.6
14	330	9.8	215	4.5	110	3.4	6.5	2.6
15	325	10.1	220	4.4	110	3.2	6.6	2.7
16	295	9.8	235		115	2.8	8.8	2.8
17	260	9.8	235			2.3	4.4	2.9
18	240	9.7				1.8	4.5	3.0
19	235	9.0					3.6	3.1
20	230	7.2					3.4	3.2
21	225	6.1					3.5	3.3
22	225	5.5					3.8	3.3
23	235	4.2					3.6	2.9

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 38

Townsville, Australia (19.3°S, 146.8°E) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	245	(3.1)						(3.0)
01	240	(3.2)					1.8	(3.0)
02	240	(3.2)					1.5	(3.1)
03	225	3.3						3.2
04	220	(3.0)					1.6	(3.1)
05	240	2.7					2.2	3.0
06	230	2.8					2.4	3.0
07	230	4.8			135	1.8	3.2	3.4
08	235	6.2	---	---	110	2.3	4.4	3.5
09	250	7.0	200	4.0	105	2.8	4.8	3.4
10	250	7.6	200	4.2	110	3.0	4.8	3.4
11	250	7.4	210	4.3	110	3.1	5.9	3.4
12	250	7.2	200	4.4	110	3.1	5.6	3.3
13	250	7.4	205	4.3	110	3.2	6.0	3.3
14	260	6.9	200	4.3	120	3.1	5.8	3.3
15	250	6.9	200	3.8	110	2.9	6.4	3.2
16	240	6.6	210	3.5	110	2.6	4.8	3.4
17	230	6.2			120	2.1	4.3	3.4
18	220	4.8					3.8	3.4
19	205	3.8					3.8	3.4
20	225	3.2					3.1	3.1
21	240	3.2					3.0	3.1
22	250	(3.2)						(3.0)
23	250	(3.1)						(3.0)

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 39

Brisbane, Australia (27.5°S, 153.0°E) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	3.7						3.1
01	250	4.0						3.1
02	250	4.0					1.9	3.2
03	250	4.0					2.0	3.2
04	230	4.1					3.2	3.3
05	230	3.6					2.8	3.3
06	240	3.4						3.2
07	220	5.2			---	2.0		3.5
08	230	5.8	220	3.3	110	2.4		3.5
09	250	6.3	220	4.1	100	2.7		3.4
10	255	6.8	220	4.3	100	3.0		3.4
11	250	6.2	220	4.4	100	3.0		3.4
12	250	6.5	200	4.3	100	3.1		3.4
13	260	6.2	210	4.2	100	3.0	3.3	3.3
14	250	6.7	210	4.2	100	2.9	3.5	3.3
15	250	6.6	220	3.8	110	2.6	3.5	3.4
16	230	6.6	---	---	110	2.3	3.7	3.5
17	220	5.5					3.7	3.4
18	220	4.4					3.4	3.4
19	235	3.6						3.2
20	250	3.6						3.1
21	250	3.9						3.1
22	250	4.0						3.0
23	250	3.9						3.1

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 40

Hobart, Tasmania (42.8°S, 147.4°E) June 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	2.2						2.9
01	300	2.2						2.9
02	300	2.0					3.1	2.9
03	300	2.0					2.7	2.9
04	300	2.0					3.0	2.9
05	290	2.0					3.2	3.0
06	290	2.0					2.7	3.0
07	290	2.2					2.5	3.0
08	230	4.5			125	2.0	3.0	3.1
09	230	5.2			110	2.4	3.0	3.2
10	230	5.7			100	2.7	3.2	3.2
11	210	6.5			100	3.0	3.4	3.2
12	200	6.5			100	3.0	3.0	3.1
13	210	6.5			---	3.0	3.6	3.1
14	230	7.0			100	2.6	3.5	3.2
15	220	6.7			100	2.4	3.2	3.2
16	210	6.6			110	2.0	3.2	3.1
17	210	5.5					3.0	3.1
18	220	4.5					2.2	3.0
19	240	3.3						3.0
20	250	2.6						3.0
21	250	2.5						3.0
22	270	2.3						2.9
23	290	2.3						2.9

Time: 150.0°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 41*

Inverness, Scotland (57.4°N, 4.2°W) May 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	295	3.4					2.0	2.8
01	305	(2.8)					2.0	2.7
02	315	(2.8)					2.0	2.6
03	305	(2.5)					1.5	2.6
04	320	3.0	275	(2.4)	140	1.4	1.4	2.7
05	340	3.6	240	2.9	125	1.9		3.0
06	385	3.8	235	3.3	110	2.2	2.8	3.1
07	415	4.1	225	3.6	110	2.5		3.1
08	400	4.4	215	3.9	105	2.7		3.0
09	485	4.3	210	4.0	105	2.9		2.9
10	420	4.8	215	4.1	105	3.0		2.8
11	450	5.0	210	4.2	105	3.1		2.8
12	425	5.2	215	4.3	105	3.1		2.8
13	435	4.9	215	4.3	105	3.1		2.8
14	395	5.0	220	4.3	105	3.1		2.9
15	410	4.9	220	4.2	110	3.0		2.8
16	375	5.0	225	4.1	110	2.8		2.9
17	340	5.2	230	3.9	110	2.7		3.0
18	310	5.2	240	3.6	120	2.4	2.6	3.0
19	280	5.3	245		145	2.1		3.0
20	265	5.2	260	(2.7)	150	1.9		3.0
21	270	5.0						2.9
22	270	4.8						2.9
23	280	4.1						2.8

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 42*

Slough, England (51.5°N, 0.6°W) May 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	295	3.8					2.4	2.7
01	300	3.5					2.6	2.6
02	300	3.2					2.6	2.6
03	300	2.9					2.8	2.7
04	300	3.1	300	2.1	130	1.4	3.1	2.8
05	320	3.7	250	3.1	130	1.9	4.0	3.0
06	330	4.2	235	3.5	120	2.2	4.5	3.2
07	395	4.5	230	3.8	115	2.5	4.5	3.0
08	375	4.8	230	4.1	115	2.8	4.4	3.0
09	390	5.0	220	4.2	115	3.0	4.5	3.0
10	420	5.2	225	4.3	115	3.1	4.6	2.9
11	400	5.5	220	4.4	115	3.2	4.8	2.8
12	380	5.5	215	4.4	115	3.3	4.6	2.9
13	380	5.4	225	4.4	115	3.3	4.6	2.9
14	370	5.6	225	4.4	115	3.2	4.5	3.0
15	360	5.5	230	4.3	115	3.1	4.4	3.0
16	335	5.8	235	4.2	115	2.9	4.5	3.0
17	325	5.6	235	4.0	115	2.6	3.5	3.0
18	295	6.0	240	3.6	120	2.2	3.8	3.0
19	270	6.0	255	3.1	140	1.8	2.7	3.0
20	255	6.0			135#	1.7#	2.4	3.0
21	250	5.8						3.0
22	260	4.9					2.1	2.9
23	280	4.2						2.8

Time: 0.0°.
Sweep: 0.55 Mc to 16.5 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.
#One or two observations only.

Table 43*

Khartoum, Sudan (15.6°N, 32.6°E) May 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	320	---					<1.6	
01	285	(4.3)						
02	260	---						
03	260	(3.8)					2.6	
04	245	(3.8)					3.0	
05	(230)	(3.8)					3.3	
06	(235)	5.8			---	(1.9)	5.8	
07	(250)	6.9	(230)	3.9	---	(2.6)	5.8	
08	(300)	7.7	(220)	4.3	(115)	(3.2)	5.6	
09	(335)	7.8	(220)	4.6	(110)	(3.3)	5.9	
10	(380)	8.1	---	4.7	(115)	(3.4)	5.8	
11	390	8.5	(210)	4.7	(115)	(3.6)	5.9	
12	385	9.0	(205)	4.7	115	3.6	5.9	
13	360	9.3	(200)	4.7	(115)	3.6	5.9	
14	345	9.4	(210)	4.6	(110)	(3.4)	5.9	
15	330	9.7	(210)	4.4	110	3.2	5.7	
16	(315)	10.5	(210)	4.2	(110)	(2.8)	5.9	
17	(265)	(10.8)	---	(3.8)	(110)	(2.3)	5.3	
18	250	(11.4)					4.9	
19	245	>9.7					4.1	
20	(270)	8.6					3.0	
21	(310)	(7.5)					2.7	
22	(345)	5.9					2.9	
23	345	(5.3)					2.6	

Time: 30.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 44*

Ibadan, Nigeria (7.4°N, 4.0°E) May 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	315	---					[illegible]	
01	[illegible]	(3.8)					[illegible]	
02	335	([illegible])					[illegible]	
03	[illegible]	([illegible])						
04	[illegible]	([illegible])						
05	[illegible]	(2.2)				1.0#	[illegible]	
06	[illegible]	[illegible]	235#		120	2.0	2.8	
07		7.8	230		115	2.7	3.4	
08	290	8.5	215	4.5#	110	3.1	5.5	
09	325	9.2	210	4.6	110	3.4	7.0	
10	335	9.7	205	4.7	110	3.5	8.7	
11	340	[illegible]	205	4.7	115	3.6	[illegible]	
12	[illegible]	[illegible]	200	4.6	110#	3.6	[illegible]	
13	[illegible]	[illegible]	195	4.6	110	3.5	[illegible]	
14	[illegible]	[illegible]	195	4.5	120	3.3	[illegible]	
15	[illegible]#	10.0	210	4.2#	110	3.1	5.5	
16		10.1	215		110	2.7	5.7	
17	245	10.0	240		115	2.2	4.6	
18	250	[illegible]			160	1.3	[illegible]	
19	255	>[illegible]					[illegible]	
20	270	([illegible])					1.8	
21	270	(7.7)					[illegible]	
22	280	([illegible])					[illegible]	
23	[illegible]	---					1.9	

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.
#One or two observations only.

Table 45*

Singapore, British Malaya (1.3°N, 103.8°E) May 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	255	4.9					3.6	3.0
01	250	5.3					3.9	3.2
02	250	4.5					3.0	3.1
03	255	3.7					3.1	(3.2)
04	[illegible]	3.2					3.6	(3.3)
05	240	2.2					3.4	(3.3)
06	265	3.6					3.4	3.1
07	250	6.8	(235)		125	2.2	3.7	3.1
08	295	8.4	225	(4.2)	115	2.8	3.8	2.9
09	[illegible]	[illegible]	220	4.4	110	3.1	5.6	2.7
10	330	10.2	215	4.6	110	3.4	6.2	2.5
11	330	10.5	205	4.7	110	3.5	5.4	2.4
12	335	10.4	205	4.7	110	3.6	5.4	2.5
13	325	10.2	200	4.6	110	3.5	5.2	2.6
14	315	10.0	205	4.5	110	3.4	5.4	2.6
15	315	10.4	215	4.4	110	3.2	5.4	2.6
16	290	10.4	230	(4.3)	110	2.8	3.9	2.6
17	275	10.5	245		115	2.3	4.0	2.8
18	250	10.5			120	1.7	3.2	3.0
19	245	10.4					3.0	3.0
20	235	9.6					3.6	3.2
21	220	8.4					3.8	3.3
22	215	6.2					3.7	3.2
23	230	5.3					3.8	3.0

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 46*

Falkland Is. (51.7°S, 57.8°W) May 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	2.8						2.7
01	295	2.7					1.9	2.8
02	300	2.7						2.8
03	280	2.7					2.0	2.9
04	280	2.6						2.9
05	255	2.8						3.2
06	240	2.2					0.9	3.2
07	250	2.9			175	1.4	2.2	3.1
08	225	4.9			165	1.9	3.0	3.5
09	220	5.8					2.8	3.6
10	225	[illegible]	215		(120)		4.0	3.7
11	230	6.2	215	3.4	120		4.2	3.5
12	235	6.8	220	3.6	130	(2.7)	[illegible]	3.6
13	225	6.3	220	3.4	(125)	(2.6)	3.0	3.7
14	225	6.0	220	3.1	125	2.4	2.4	3.6
15	220	6.1			135	2.1	3.0	3.7
16	210	4.8					3.0	3.7
17	215	3.6					3.1	3.4
18	240	3.0					3.0	3.2
19	240	2.7					2.9	3.1
20	275	2.4						2.9
21	305	2.5						2.8
22	305	2.6					2.3	2.8
23	310	2.7					2.6	2.8

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 47*

Port Lockroy (64.8°S, 63.5°W) May 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	355	2.4						2.6
01	350	2.3						2.6
02	335	2.3						2.6
03	340	2.3						2.7
04	320	2.3						(2.8)
05	300	2.2						(2.9)
06	(270)	2.1						(3.0)
07	(260)	1.7						
08	270	2.5						(2.9)
09	250	3.9					2.5	3.1
10	245	4.9					2.9	3.2
11	235	5.1					2.5	3.3
12	240	5.6						3.3
13	235	5.6						3.3
14	235	5.3						3.3
15	235	4.8						3.3
16	245	4.1						3.1
17	250	3.7						3.1
18	260	2.9						3.0
19	290	2.2						(2.7)
20	(350)	2.0						(2.7)
21	(365)	2.0						2.6
22	385	2.2						2.6
23	320	2.2						2.6

Time: 60.[illegible]°W.
Sweep: 1.1 Mc to 16.0 Mc, manual operation.
*Average values except foF2 and fEs, which are median values.

Table 48*

Falkland Is. (51.7°S, 57.8°W) April 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	[illegible]	3.2						2.6
01	[illegible]	3.1						2.6
02	325	3.2					1.6	2.6
03	305	3.2						2.4
04	300	3.2						2.4
05	275	3.2						2.9
06	255	2.9						3.0
07	250	4.6			165	1.7		3.2
08	245	5.8	(245)	(3.2)	130	2.0	3.1	3.4
09	255	6.6	(235)	(3.9)	120	2.4	4.7	3.4
10	255	8.0	230	4.0	(120)	(2.5)	4.6	3.3
11	245	8.8	225	4.2	(115)	(2.6)	4.5	3.4
12	250	8.2	220	4.0	120	2.7	4.6	3.5
13	230	7.6	215	3.9	120	2.7	4.2	3.6
14	225	6.7	215	3.5	120	2.6	3.1	3.6
15	230	6.2	(230)	(3.0)	120	2.4	3.2	3.6
16	230	6.0			(125)	(2.0)	3.1	3.6
17	225	6.6			(130)	(1.7)	3.1	3.5
18	230	6.1					3.3	3.4
19	240	4.8					2.0	3.2
20	240	3.8					1.9	3.1
21	285	3.2					2.4	2.7
22	310	3.3					[illegible]	2.7
23	335	3.1						2.6

Time: 60.[illegible]°W.
Sweep: 0.[illegible] Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 49*

Port Lockroy (64.8°S, 63.5°W) — April 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	340	3.0						2.6
01	340	2.8						2.6
02	340	2.8						2.6
03	340	2.6						2.6
04	320	2.6						2.6
05	300	2.8						2.8
06	280	2.5						3.0
07	260	3.1						3.1
08	240	4.3						3.2
09	230	5.4						3.3
10	240	5.9						3.4
11	240	6.4						3.3
12	230	6.2						3.3
13	230	7.0						3.5
14	230	6.0						3.5
15	230	5.8						3.5
16	230	5.4						3.4
17	240	5.5						3.3
18	240	5.1						3.1
19	250	4.9						3.1
20	260	4.2						3.1
21	290	3.4						2.8
22	330	3.2						2.6
23	340	3.0						2.6

Time: 60.0°W.
Sweep: 1.4 Mc to 16.0 Mc, manual operation.
*Average values except foF2, which are median values.

Table 50*

Khartoum, Sudan (15.6°N, 32.6°E) — March 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	8.2					2.1	
01	250	9.0						
02	220	7.9					2.8	
03	220	5.0					3.7	
04	240	3.6					3.9	
05	240	2.9					5.6	
06	260	4.6			130	1.8	4.5	
07	240	7.5			120	2.3	5.7	
08	260	8.9	230		120	2.8	5.9	
09	280	9.8	225		120	3.2	5.9	
10	300	10.2	220		115	3.4	6.4	
11	300	10.7	220	4.7	120	3.5	6.9	
12	310	11.0	220	4.7	120	3.5	6.9	
13	320	11.6	200		120	3.5	6.0	
14	310	12.3	200		120	3.4	6.0	
15	290	13.4	230		120	3.2	6.0	
16	265	13.2	230		120	2.9	5.9	
17	240	12.2	230		120	2.2	5.9	
18	250	11.7					5.6	
19	275	11.2					4.2	
20	260	11.2					4.3	
21	250	10.1					4.7	
22	260	9.4					3.3	
23	280	8.5					2.4	

Time: 30.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 51

Godhavn, Greenland (69.2°N, 53.5°W) — February 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	(2.8)						(3.1)
01	(250)	(2.8)						(3.0)
02	280	(2.5)					2.5	(3.0)
03	270	---					3.0	---
04	(2[illegible]0)	---					3.8	---
05	---	---					4.4	---
06	---	---					5.0	---
07	---	---					5.0	---
08	(320)	---					4.2	---
09	280	(3.2)						(3.1)
10	250	(4.2)						(3.2)
11	240	(4.8)	---	---	---	---		(3.3)
12	220	(4.8)	---	---	---	---		(3.1)
13	(230)	(4.7)	---	---	---	---		---
14	(250)	(4.3)	---	---	---	---		(3.1)
15	260	(4.3)	---	---	---	---		3.1
16	240	(4.2)			---	---	4.0	3.1
17	240	(4.1)			---	---	4.1	(3.2)
18	(240)	(3.9)					4.6	(3.2)
19	(250)	(3.6)						(3.1)
20	(240)	(3.4)					3.2	(3.1)
21	<260	(3.3)					4.0	(3.1)
22	250	(3.4)					3.4	(3.1)
23	260	(2.8)						(3.0)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 52

Guam I. (13.6°N, 144.9°E) — November 1951

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	7.3						3.2
01	240	6.8						3.3
02	230	6.9						3.4
03	230	5.3						3.4
04	240	4.1						3.2
05	260	3.4						3.1
06	270	3.4						2.9
07	240	7.1			---	---		3.2
08	250	9.6	230	---	120	(2.8)		3.2
09	260	11.2	220	---	110	3.0		3.1
10	280	11.2	200	4.6	110	(3.3)		2.8
11	280	10.6	200	4.8	100	(3.4)		2.6
12	290	10.9	200	4.7	100	(3.4)	4.2	2.6
13	290	11.0	200	(4.6)	100	(3.4)		2.6
14	280	11.6	210	(4.6)	110	(3.2)	4.4	2.7
15	(280)	12.0	220	---	110	3.0	4.8	2.8
16	(270)	12.4	230	---	(110)	(2.8)	4.2	2.9
17	240	12.6	---	---	---	---	3.2	3.0
18	240	12.4						3.1
19	240	11.5						3.0
20	230	10.8					2.4	3.0
21	220	9.7					2.4	3.1
22	230	9.1						3.2
23	230	7.9						3.2

Time: 150.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 53

Guam I. (13.6°N, 144.9°E) — October 1951

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	10.2						3.2
01	230	9.8						3.3
02	230	8.6						3.5
03	220	6.6						3.5
04	230	4.6						3.3
05	240	3.7						3.3
06	260	4.1						3.1
07	240	7.6			---	---		3.3
08	260	9.5	230	---	120	(2.8)	3.4	3.1
09	270	11.0	220	---	110	3.1	4.1	2.8
10	280	11.0	210	---	110	3.3	4.4	2.6
11	290	10.6	200	4.7	110	3.4	4.4	2.6
12	300	10.5	200	(4.8)	110	3.4	3.9	2.6
13	290	11.6	210	4.8	110	(3.4)		2.7
14	280	12.0	220	(4.8)	120	3.4		2.8
15	280	12.9	220	---	120	3.2	4.0	2.9
16	(280)	13.2	240	---	120	3.0	4.1	3.1
17	250	13.4	---	---	(120)	(2.3)	3.8	3.1
18	260	13.0					4.2	2.9
19	280	12.5					2.4	2.8
20	260	12.0					3.2	2.8
21	240	11.4					3.0	2.9
22	240	10.4					2.4	3.1
23	240	10.3						3.2

Time: 150.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 54

Domont, France (49.0°N, 2.3°E) — September 1951

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.2						2.8
01	300	3.0						2.9
02	300	3.2						2.9
03	300	3.1						3.0
04	280	3.0						3.2
05	265	2.7	240	---	100	---	2.8	3.2
06	240	3.8	200	---	100	1.8	2.7	3.4
07	240	4.8	205	---	100	2.3	2.8	3.3
08	280	5.5	200	---	100	2.6	3.0	3.4
09	295	5.6	190	4.0	100	2.9		3.3
10	320	5.6	190	4.2	100	3.1		3.3
11	290	6.0	190	4.2	100	3.2		3.2
12	280	6.4	200	4.2	100	3.2		3.2
13	300	6.5	200	4.4	100	3.2		3.2
14	280	6.1	200	---	100	3.0		3.3
15	270	6.3	200	---	100	2.9		3.2
16	250	6.2	200	---	100	2.5		3.2
17	240	6.4	215	---	100	2.1		3.3
18	230	6.7	220	---	100	1.8		3.2
19	230	6.3	220	---	---	---		3.2
20	220	4.8						3.2
21	230	4.0						3.1
22	270	3.8						3.0
23	290	3.5						3.0

Time: 0.0°.
Sweep: 1.5 Mc to 16.0 Mc in 1 minute 30 seconds.

Table 55

Poitiers, France (46.6°N, 0.3°E) September 1951

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	315	4.0						(2.8)
01	(305)	3.6						(2.8)
02	330	3.6						(2.8)
03	(305)	3.4						(2.8)
04	(290)	3.3						---
05	(275)	3.0						(3.2)
06	245	4.2						(3.4)
07	250	5.3	225	3.7				3.4
08	280	5.6	220	4.0				(3.3)
09	280	6.4	220	4.3				3.4
10	305	6.5	205	4.5				(3.3)
11	275	6.7	210	4.6				3.3
12	280	7.0	205	4.6				3.2
13	280	7.0	210	4.6				3.2
14	280	6.9	220	4.5				3.2
15	285	6.8	225	4.3				3.2
16	270	6.6	230	4.0				3.2
17	260	7.1	230	---				(3.2)
18	250	7.4	---	---				(3.1)
19	255	6.6						---
20	250	6.1						---
21	260	5.0						---
22	300	4.4						(2.9)
23	300	3.9						(2.7)

Time: 0.0°.
Sweep: 3.1 Mc to 11.8 Mc in 1 minute 15 seconds.

Table 56

Baton Rouge, Louisiana (30.5°N, 91.2°W) September 1951

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	4.2						2.7
01	300	4.3						2.8
02	290	4.1					2.8	2.8
03	290	4.0					3.6	2.8
04	[illegible]	3.5					3.1	2.8
05	[illegible]	3.3					3.0	2.8
06	270	4.5	---	---	---	---	4.0	3.1
07	260	6.4	250	---	120	2.2	4.4	3.2
08	280	6.7	230	4.3	120	2.8	5.6	3.2
09	[illegible]	7.1	220	4.4	120	3.2	4.5	3.0
10	340	7.4	210	4.7	120	3.3	5.8	2.9
11	350	8.4	210	5.0	120	3.5	5.2	2.8
12	340	8.8	220	5.1	120	3.5	3.8	2.9
13	320	9.0	230	5.0	120	3.5	3.8	2.9
14	[illegible]	8.9	230	4.9	120	3.4	3.6	2.9
15	[illegible]	9.0	240	4.6	110	3.2	3.9	3.0
16	280	8.6	240	4.3	120	2.8	4.1	3.1
17	270	8.3	250	---	120	2.4	3.6	3.1
18	250	7.8					2.8	3.2
19	[illegible]	6.2					2.6	3.1
20	250	5.5						2.9
21	270	5.0						2.8
22	300	4.5					2.1	2.8
23	300	4.3						2.8

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 57

Terre Adelie (66.8°S, 141.4°E) September 1951

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	365	5.0	250	3.7	135	2.6		
01	385	5.0	250	3.7	125	2.7		
02	350	5.2	240	3.7	130	2.7		
03	360	5.4	230	3.7	125	2.6		
04	425	[illegible]	240	3.6	140	2.6		
05	350	5.0	250	3.5	140	2.4		
06	350	5.0	250	3.5	140	2.3		
07	300	5.0	250		150	2.0		
08	280	4.8	250			E	2.0	
09	270	4.5						
10	280	4.4						
11	260	4.5						
12	280	4.0						
13	300	3.0						
14	305	2.7						
15	[illegible]	2.8						
16	315	2.6						
17	320	2.3						
18	340	2.4					2.3	
19	300	(2.4)					2.4	
20	320	2.6					2.8	
21	280	3.5				2.0		
22	270	4.0	255		150	2.1		
23	350	4.6	250	3.5	140	2.4		

Time: 0.0°.
Sweep: 1.5 Mc to 16.3 Mc in 1 minute.

Table 58

Baton Rouge, Louisiana (30.5°N, 91.2°W) August 1951

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	4.6					3.5	2.8
01	300	4.2					3.1	2.8
02	300	4.1					3.2	2.8
03	300	3.8					2.8	2.8
04	300	3.8						2.8
05	300	3.5			---	---	3.2	2.9
06	290	4.4	260	---	130	1.8	3.1	3.1
07	[illegible]	5.2	240	3.7	120	2.4	3.7	3.0
08	320	5.6	220	4.1	120	2.8	3.8	3.0
09	340	6.0	220	4.5	120	3.0	3.7	2.9
10	360	6.5	220	4.8	120	3.2	3.5	2.8
11	[illegible]	6.6	---	5.0	110	---	3.6	2.9
12	370	7.0	---	5.0	110	---	3.5	2.8
13	[illegible]	7.4	---	4.8	110	---		2.8
14	[illegible]	7.3	---	4.8	110	---		2.8
15	300	6.8	230	4.7	120	3.3		2.9
16	340	7.1	240	4.4	120	3.0	3.3	3.0
17	[illegible]	7.1	240	4.1	120	2.6	3.8	3.0
18	280	7.4	250	---	120	---	3.5	3.0
19	250	7.2					3.6	3.0
20	250	6.2					3.5	3.0
21	260	5.4					3.6	2.9
22	290	5.0					3.6	2.8
23	[illegible]	4.7					3.8	2.8

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 59

Buenos Aires, Argentina (34.5°S, 58.5°W) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	4.3						2.8
01	[illegible]	4.3						2.8
02	[illegible]	4.3						3.0
03	280	[illegible]						3.2
04	270	3.8						3.2
05	290	2.7						2.9
06	300	2.5						3.0
07	260	4.7	---			---		3.3
08	240	[illegible]	---			---		3.5
09	[illegible]	8.1	---			---		3.4
10	260	8.0	220			3.2		3.5
11	260	8.2	240			3.2		3.5
12	270	8.0	240			3.2		3.4
13	280	8.6	250			---		3.3
14	270	9.2	250			---		3.5
15	260	9.1	---			---		3.5
16	230	8.1	---			---		3.5
17	230	7.4						3.4
18	230	6.6						3.3
19	240	5.6						3.2
20	250	5.9						3.2
21	260	5.6						3.3
22	270	5.2						3.1
23	290	4.6						2.9

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 60

Buenos Aires, Argentina (34.5°S, 58.5°W) June 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	320	4.1						2.7
01	320	4.1						2.8
02	[illegible]	4.0						2.8
03	[illegible]	3.8						2.9
04	270	4.0						3.2
05	[illegible]	3.0						3.3
06	[illegible]	2.6						3.0
07	[illegible]	5.0						3.2
08	[illegible]	7.8						3.5
09	260	8.1	---					3.5
10	260	8.5	240					3.5
11	270	8.6	240					(3.4)
12	270	8.6	220					3.4
13	[illegible]	10.0	240					3.3
14	[illegible]	10.2	250					3.4
15	260	10.1						3.4
16	[illegible]	9.6						3.5
17	220	7.6						3.5
18	[illegible]	6.4						3.3
19	[illegible]	6.3						3.3
20	240	6.6						3.2
21	260	5.7						3.2
22	270	5.0						3.1
23	300	4.5						2.8

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Form adopted June 1946

TABLE 61

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

h'F2 (Characteristic), Km (Unit), October (Month), 1952

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: Mc C., A.C.K., E.J.W.

Calculated by: Mc C., F.O.W., E. J.W.

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	(330)SK	(330)SK	(300)SK	(350)SK	CK	CK	260K	260	260	280	280	300	310H	270	280	260	260	240	210	210	240	270	260	250
2	270	270	270	260	230	(300)S	240	220	220	(250)L	260	280	270	270	270	270	260	240	220	220	230	250	260	250
3	270	250	260	250	220	250	240	250	230	250	280	280	270	270	270	260	250	250	240	260	270	(280)S	260	220
4	250K	(250)SK	(350)SK	(290)AK	310K	(340)SK	270K	250K	250K	310K	300K	330K	300K	280K	290K	290K	270K	250K	250K	270K	280K	280K	260K	280K
5	320K	<420EK	(330)SK	320K	<360EK	(310)SK	320K	270K	GK	GK	650K	500K	470K	400K	390K	300K	290K	270K	250K	(240)AK	(270)SK	300K	320K	330K
6	(330)SK	300K	290K	300K	300K	(310)SK	270K	250	(290)L	280	300	310H	360	300	280	290	260	250	230	230	240	260	(290)S	(300)S
7	300	(290)S	290	300	270	250	250	250	(270)L	270	300	300	300	290	270	270	270	240	220	220	240	(280)S	300	290
8	280	280	270	260	250	240	240	230	250	270	270	290	270	270	270	260	260	230	220	240	260	280	240	260
9	250	260	230	240H	270	280	260	270	340H	320H	290	290	310	300	300	270	260	240	230	220	240	(250)A	(280)S	260
10	280	280	270	250	240	(250)A	(250)A	250	260	270	250H	280	290	290	280	270	270	230	240	230	220	250	260	270
11	270	(280)S	270	250	240	260	260	240	260	290	280H	290	290	290	280	280	260	240	220	260	(270)A	(250)A	(270)A	270
12	280	260	270	260	250	240	240	250	250	(240)L	270	270	280	270	260	280	240	230	210	230	240	240	270	270
13	(280)S	260	260	260	250	250	240	230	250	250	270	270	270	260	(250)L	250	250	230	210	220	240	260	270	270
14	250	(270)S	270	270	(270)A	(250)S	(240)S	230	230	240	260	280	260	260	260	250	240	220	(200)S	220	220	250	(260)S	(250)S
15	250	250	250	250	240	240	230	230	230	240	240	250	280	260	250	250	240	210	200	210	220	240	(270)S	(280)S
16	(300)A	280	250	240	230	240	240	220	230	240	250	260	270	270	270	250	230	220	220	220	230	230	(290)A	280
17	(290)A	(280)S	270	240	230	250	(270)SK	(270)LK	280K	290K	330K	300K	340K	300K	300K	280K	270K	230K	220K	240K	(230)SK	(270)SK	(300)AK	(300)A
18	(290)S	(270)S	240	220	250	(300)A	(280)S	240H	260	240	250	280	270	300	260	250	240	220	200	230	230	(280)A	(270)A	250
19	(260)A	(270)A	250	250	240	270	270	230	250	250	240	250	250H	260	270	240	230	220	210H	220	240	260	270	270
20	(280)S	270	250	240	240	240	230	230	250	250	260	260	280	270	260	250	240	220	210	220	240	270	270	260
21	250	(270)A	270	(270)A	(250)S	(250)S	(270)S	240	250	280	290	320	330	280	310	280	270	230	210	240	240	260	[270]A	(280)A
22	(290)S	280	250	260	270	250	260	220	250	260	280	270	260	(270)A	270	250	240	220	220	240	250	270	270	270
23	270	270	260	250	250	270	(270)S	240	250	250	260	250H	270	270	270	250	240	220	220	220	230	240	(260)S	(260)S
24	260	250	240	240	240	240	(240)S	220	240	250	250	250	270	260	270	250	230	210	200	210	220	240	250	210
25	250	250	250	250	230	210	250	230	240	230	260	280	270	260	250	250	230	220	210	220	240	(280)S	300	(300)S
26	(290)S	260	240	240	240	280	(280)A	230	260	290	280	310	290	290	270	250	230	230	240	240	230	260	260	250
27	250	270	260	260	260	250	(270)A	230	220	230	230	240	280	250	250	250	220	210	210	220	220	(300)S	280	(290)S
28	(290)S	(290)A	270	240	250	240	230	220	230	230	250	250	260	270	260	240	230	220	220	(230)S	240	(270)S	270	(270)S
29	(280)S	260	270	250	260	240	(240)S	230	230	230	250	250	250	M	M	M	M	210	220	240	250	(270)S	(270)S	260
30	280	230	250	230	220	270	C	C	230	240	260	290	270	260	250	230	220	210	220	230	270	(280)S	(280)S	(280)S
31	250	(290)S	(270)S	320F	250	220	(250)S	230	220	270	290	280	260	260	260	240	230	220	230	230	250	250	270	260
Median	280	270	270	250	250	250	250	230	250	250	270	280	270	270	270	250	240	230	220	230	240	260	270	270
Count	31	30	31	31	29	30	30	30	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 62

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), October (Month), 1952

Observed at Washington, D. C.

Lat 38.7°N, Long. 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: McC., A.C.K., E.J.W.

Calculated by: McC., F.O.W., E.J.W.

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	K1.6 JS	K(1.4) SF	(1.5) SK	K(1.5) JS	C K	C K	3.0	4.8	4.9	5.4	5.7	5.9	6.4 H	6.8	6.6	6.4	6.2	6.3	5.9	4.4 F	3.6 F	3.3 F	3.2 F	2.9 F
2	2.6 F	(2.5) F	(2.4) F	(2.5) F	2.4 F	(2.0) F	3.2 F	4.9	6.1	6.0 F	7.5	6.9	7.6	7.2	7.0	6.8	7.2	6.8	6.4	5.8 F	4.4	4.5	4.2	3.8 F
3	3.3 F	3.5 F	3.3 F	3.1 F	2.7 F	2.5 F	3.3 F	5.6	6.6	6.3	6.7	8.0	8.5	8.3	8.7	7.9	7.1	7.1	6.9	6.3	5.2	5.1	5.0	4.2
4	2.8 K	(2.1) FK	[2.0] FK	(2.0) FK	K(1.8) TF	(2.1) FK	2.9 K	5.6 K	6.3 K	5.8 K	6.7 K	7.0 K	8.4 K	8.4 K	6.7 K	6.2 K	6.0 K	5.4 K	5.5 K	4.8 K	4.0 K	3.5 K	3.4 K	(2.6) FK
5	1.8 FK	(1.4) SK	2.2 FK	(1.8) FK	(1.4) FK	(1.8) FK	2.4 K	3.7 K	<3.6 GK	<3.9 GK	4.1 K	4.5 K	4.9 K	5.2 K	5.3 K	6.3 K	5.3 K	5.4 K	5.0 K	4.1 K	2.8 K	2.4 K	2.4 K	2.2 FK
6	2.1 FK	2.1 FK	2.0 FK	1.9 FK	1.7 K	K(1.6) JS	2.7	4.5	5.3 H	5.8	6.1	6.0 H	6.2	6.8	6.8	6.4	6.4	6.0	5.3	4.3	3.3	2.5	2.3	2.2
7	2.6 F	(2.6) F	2.5 F	(2.0) F	(2.2) F	(2.0) F	2.7	4.6	5.5	5.8	6.2	6.0	7.0	6.8	7.0	6.4	6.4	6.5	5.8 F	4.2 F	3.6	2.9	2.9	2.9 F
8	2.9 F	(2.4) F	2.8 F	2.7 F	2.6 F	2.5 F	2.9	4.4	5.4	6.1	6.4	6.6	7.2	6.9	6.8	6.8	6.8	6.0	5.2	4.5 F	4.0 F	3.8	3.7 F	3.6 F
9	3.5	3.2	3.0	2.3 H	2.0	1.9 F	2.7	4.1	4.5 H	4.9 H	5.1	5.6	5.6	6.0	6.1	6.1	5.9	6.3	5.7	4.9	3.9	3.3	2.9 F	(2.7) F
10	(2.5) F	2.8 F	2.7 F	2.8 F	(2.8) F	2.3 F	2.8 F	4.4	5.5	6.2	6.5 H	6.0	6.4	6.5	6.8	6.9	6.9	6.9	5.8	5.9	4.6	3.6	3.3	2.9 F
11	2.7	2.6	3.1	3.0	2.9 F	2.4 F	3.1	5.2	5.6	5.9	5.7 H	5.8	6.4	6.8	6.8	6.7	6.7	6.2	5.9	4.7	4.5	4.1	3.5	3.3
12	3.2	3.2	2.9 F	2.9 F	2.7	2.6	3.2	5.0	6.0	6.2 H	6.9	6.6	6.8	6.9	6.8	7.0	6.9	6.1	5.3	4.1	3.9	2.9	2.7	2.5
13	2.6	2.7	2.6	2.6	2.6 F	2.5 F	3.0	5.0	6.2	6.2	6.2	6.6	6.6	7.0	6.7	6.6	6.7	7.0	5.6	4.4 F	(3.9) SF	3.3 F	3.3 F	3.3 F
14	(3.2) F	3.1	2.9	3.0	3.1	3.0	3.2	5.4	6.5	6.8	6.6	7.4	7.6	7.4	7.4	7.3	7.2	6.9	5.5	4.9	3.7	3.2	3.0	3.0
15	2.9	2.8	2.8	2.7	2.6	2.5 F	3.0	5.2	6.1	7.3	7.1	6.5	7.0	7.5	7.2	7.6	7.8	6.8	5.9	4.4	3.8	3.0	2.9	2.8
16	2.8	2.8	3.1	2.9 F	2.5 F	2.5	2.7	5.2	5.9	6.2	7.2	7.6	8.0	7.8	8.0	8.3	7.2	6.8	6.1	5.5	4.5	3.0	3.3	3.4
17	3.2	3.4	3.2 F	3.4 F	2.5 F	2.4 F	2.7 K	4.0 K	4.9 K	5.2 K	5.3 K	5.6 K	5.6 K	5.9 K	5.9 K	6.0 K	5.6 K	5.4 K	4.1 K	3.9 K	3.0 K	2.5 K	2.3 K	2.4
18	2.7	3.2	3.1	2.5	2.1	2.2 F	2.7	4.6 H	5.7	6.2	6.2	6.7	6.9	6.5	7.1	7.0	6.6	6.4	4.6	4.0	3.0	2.7	3.0	3.1
19	2.8	2.8	2.7 F	(2.5) F	(2.3) F	(1.8) F	(2.3) F	4.6 F	5.6	6.6	7.4	6.9	7.4 H	7.5	7.6	7.3	6.8	6.2	5.4 H	(4.0) F	(3.3) F	(3.0) F	2.8 F	(2.7) F
20	2.5 F	(2.7) F	(2.5) F	(2.5) F	(2.3) F	(2.5) F	2.8 F	4.6	5.8	6.2	7.1	7.5	7.6	8.1	7.8	7.2	6.7	6.1	5.4 F	4.0 F	2.9 F	2.7 F	(2.9) F	(3.1) F
21	(3.1) F	(2.9) F	2.7 F	2.7 F	2.7 F	2.6 F	2.4 F	4.5	4.8	5.8	6.5	7.2	7.7	8.9	8.4	8.4	8.8	10.0	7.5 V	6.7	5.0	4.2	3.8	3.4
22	3.1 F	(2.7) F	2.8 F	2.5 F	2.5 F	2.2 F	2.5	4.4	5.3	6.0	6.3	6.8	7.4	6.8	7.3	6.9	6.8	5.8	4.4	4.5	3.9	3.7	3.6	3.4
23	3.3	3.1	2.8	2.6	2.4	2.2	2.5	4.7	6.2	6.2	6.9	7.0 H	7.1	7.5	7.7	7.7	7.2	6.3	5.6	5.2	4.3	3.7	3.3	3.2
24	3.3	3.1	3.0	2.8	2.8	2.8	3.0	4.9	6.2	6.4	6.4	6.7	7.2	7.6	7.3	7.5	7.5	6.9	5.2	4.3	3.7	3.1	3.0	3.0
25	3.2	3.1	3.0	3.1	3.3	3.1	2.9	4.7	6.0	6.4	6.6	7.3	8.2	8.6	8.7	8.6	8.2	8.0	6.7	5.5	4.2	4.1	3.7	4.0
26	3.8	4.1	3.6	3.2	2.4	2.2	2.5	4.5	4.7	5.8	6.2 F	6.8 F	6.6	6.1	6.6	6.6	6.1	6.0	5.9	5.6	4.5 F	(3.5) F	(3.2) F	3.1 F
27	3.1	2.8	2.9	2.5	2.4	2.4	2.4	4.8	6.6	6.5	7.0	6.8	7.6	7.8	7.3	8.6	7.9	6.9	5.0	3.9	2.9	2.3	2.3	2.5
28	2.7	(3.0) F	3.1 F	3.3 F	2.9 F	2.9 F	2.4 F	4.9	6.2	6.4	6.7	6.9	7.7	7.8	7.9	7.4	7.6	6.2	5.0	4.1	3.4	3.0	2.9	2.8
29	2.9	3.0	2.9	2.8	2.9	2.7	2.9	5.2	6.5	6.8	7.5	7.8	8.2	M	M	M	M	8.0	5.8	5.4	4.4	4.3	4.2	3.9
30	3.6 F	3.6 SF	3.0 SF	3.0 F	(2.7) AF	2.0	C	C	6.0	8.2	8.4	8.6	9.4	10.2	10.6	9.8	9.0	7.8	6.3	5.6	4.3	3.9	3.4 F	(2.9) F
31	(2.8) S	2.4 F	(2.1) F	2.2 F	3.2	3.0	2.6	4.7	6.0	6.2	7.0	7.8	8.0	8.1	7.0	6.4	6.4	5.8 F	5.5	4.5	3.8	3.1	2.8	2.7 F
Median	2.9	2.8	2.8	2.7	2.6	2.4	2.8	4.7	5.9	6.2	6.6	6.8	7.2	7.3	7.0	7.0	6.8	6.3	5.6	4.5	3.9	3.3	3.2	3.0
Count	31	31	31	31	30	30	30	30	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 63

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

fo F2 (Characteristic), Mc (Unit), October (Month), 1952

Observed at Washington, D.C. Lat 38.7°N, Long 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: Mc C., A.C.K., E.J.W.

Calculated by: Mc C., F.O.W., E. J. W.

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	J(1.5) SK	(1.5) SK	K(1.5) JS	C K	C K	C K	(3.8) S	5.2	5.5	5.8	5.4	5.4	6.7	6.6	6.6	6.2	6.3	6.0	4.8	4.0	3.4 F	3.3	3.1 F	2.7 F		
2	2.5 F	(2.5) F	(2.5) F	(2.6) F	(2.2) F	(2.0) F	4.7	6.0	6.3	6.5 F	7.2	7.1	7.2	7.1	7.1	6.9	6.9	6.6	6.0	5.3	4.5	4.2	4.1	3.5		
3	(3.3) F	3.5 F	3.2 F	3.0 F	2.5 F	2.5 F	4.5	6.1	6.3	6.2	7.2	8.1	8.6	8.5	8.9	7.6	6.4	7.0	6.9	5.8	5.3	5.1	4.8	2.3		
4	2.4 FK	[2.0] AK	(2.0) FK	[1.9] FK	(2.2) FK	2.3 K	4.4 K	6.0 K	3.7 A	6.3 K	6.4 K	7.7 K	8.6 K	7.7 K	6.4 K	6.2 K	6.2 K	5.7 K	5.2 K	4.3 K	3.7 K	3.5 K	3.0 FK	(2.3) FK		
5	(1.8) FK	(2.0) SK	(1.9) FK	(1.7) FK	1.5 K	(1.8) FK	3.0 K	<3.4 GK	3.4 A	<3.1 GK	4.4 K	4.5 K	5.2 K	5.4 K	5.7 K	5.8 K	5.4 K	5.2 K	4.7 K	3.2 K	2.5 K	2.4 K	2.4 K	2.2 FK		
6	2.0 FK	2.1 FK	2.0 K	1.7 FK	1.6 FK	K(1.7) FJ	3.8	4.7	5.6	5.8	6.2	5.8	6.9	6.8	6.6	6.5	6.2	5.7	4.7	3.7	2.8	2.4	(2.2) H	2.2 F		
7	2.6 F	2.9 F	(2.2) F	(1.9) F	2.0 F	(1.8) F	3.4	4.5	5.3	6.0	6.4	6.6	7.1	7.0	6.7	6.4	6.8	6.5	4.9	4.1	3.0	2.9	3.0	3.0 F		
8	2.9 F	2.9 F	2.8 F	2.7 F	2.5 F	2.2 F	3.8	5.1	5.7	6.4	6.5	7.0	7.2	7.0	6.9	6.7	6.4	5.7	5.0	4.2 F	3.9 F	3.8	3.6 F	3.6		
9	3.3 F	3.1	2.5	2.0 F	1.9	2.1	3.5	4.3	4.4 H	5.0 H	5.6	5.6	5.8	6.1	6.2	6.2	6.0	6.2	5.6	4.3	3.6	2.9 F	(2.8) F	(2.6) F		
10	(2.7) F	2.8 F	2.8 F	2.9 F	(2.5) F	2.2 F	3.9	5.2	5.6	6.5	6.0	6.0	6.4	6.9	6.8	6.9	7.0	5.9	6.1	5.4	4.0	3.5	3.2	2.8		
11	2.6	2.9	3.0	2.9	2.5	2.5 F	4.4	5.4	5.5	5.5 H	5.8 H	6.2 H	6.6	6.8	6.9	6.8	6.2	6.6	5.4	4.8	4.4	3.7	3.5	3.3		
12	3.0	2.9 F	2.9 F	2.8	2.8	2.7	4.5	5.8	6.5	6.6	7.1	6.7	7.2	7.4	6.6 H	7.2	6.7	6.1	4.6	3.9	3.4	2.7	2.7	2.6		
13	2.6	2.6	2.7	2.6 F	2.6 F	2.5 F	4.1	5.8	6.3	6.1	6.3	6.6	6.9	6.9	7.0	6.6	6.7	6.4	5.1	4.0 F	3.5 F	3.3 F	3.3 F	3.2 F		
14	3.1 F	3.0	3.1	3.0	3.0	3.0	4.4 H	5.5	6.8	6.3	6.7	7.7	7.5	7.4	7.6	7.2	7.0	6.0	5.0	4.4	3.3	3.1	3.0	2.9		
15	2.8	2.8	2.7	2.7	2.6 F	2.5 F	4.3	6.3	7.0	7.0	6.6	6.6	7.0	7.5	7.4	7.7	7.4	6.4	5.1	4.2	3.3	2.9	2.9	2.8		
16	2.8	2.8 F	3.0 F	2.7 F	2.5 F	2.2 F	4.2	5.8	6.2	6.8	7.6 H	8.0	8.0	7.9	8.1	8.0	6.9	6.2	5.8	4.4	3.8	3.2	2.4	3.3		
17	3.3	3.3 F	3.4	3.1 F	2.4	2.3	3.5 K	4.4 K	5.1 K	5.1 K	5.5 K	5.5 K	5.8 K	5.8 K	5.9 K	5.6 K	5.5 K	5.0 K	3.9 K	3.6 K	2.8 K	2.4 K	2.3 K	2.5		
18	2.9	3.2	3.0	2.3 F	(2.2) F	2.2	(3.8) S	5.4	6.3	6.2	6.4	7.0	6.9 H	7.1	7.1	6.9	6.3	5.8	4.2	3.4	2.8	2.8	3.0	3.0		
19	2.8	2.8 F	2.7 F	(2.5) F	(2.1) F	(1.6) F	(3.7) F	5.4	6.0	6.9	7.2	7.6	7.2	7.6	7.2	7.3	6.6	5.6	4.5 F	(3.6) F	(3.2) F	2.9 F	(3.0) F	(2.5) AF		
20	(2.5) F	2.8 F	(2.5) F	(2.4) F	(2.5) F	(2.5) F	3.8	5.1	6.1	6.9	7.4	7.4	7.6	8.0	7.6	6.8	6.4	6.0	4.7 F	3.4 F	2.8 F	2.7 F	(3.0) F	(3.2) F		
21	(2.9) F	2.7 F	2.7 F	2.7 F	2.6 F	(2.4) F	3.4 F	5.0	5.3	6.2	6.6	7.6	8.7	8.5	9.0	8.8	9.5	9.3	7.0	5.6	4.5	4.0	3.7	3.3		
22	(2.9) F	(2.6) F	2.7 F	2.5 F	2.4 F	2.2	3.6	5.0	5.7	6.0	6.9	7.5	7.4	7.2	7.3	6.9	6.3	5.4	4.5	4.5	3.8	3.7	3.5	3.3		
23	3.2	3.0	2.7	2.5	2.3	2.2	3.7	5.4	5.9 H	6.7	7.4	6.9	7.0	7.6	7.7	7.5	7.0	5.9	5.5	4.8	4.0	3.5	3.3	3.3		
24	3.1	3.1	3.0	2.8	2.8	2.7	4.0	5.6	6.1 H	6.6	6.5	6.8	7.6	7.4	7.5	7.4	7.3	6.1	4.8	4.2	3.3	3.0	3.0	3.1		
25	3.2	3.0	3.0	3.2	3.2	2.8	4.0	5.2	6.4	6.8	7.1	7.9	8.2	8.8	8.6	8.4	7.5	7.5	6.3	4.9	4.0	4.1	3.8	4.0		
26	4.0	3.8	3.3	3.0	2.2	2.3	3.7	5.7	5.9	6.3	6.6 F	6.6	6.1	6.4	6.6	6.2	5.9	6.0	6.2	4.8 F	(3.5) F	(3.3) F	(3.0) F	3.2		
27	3.0	2.9	2.8	2.5	2.4	2.3	3.6 H	5.7	6.0	6.8	7.3	6.6	8.3	7.2	7.6	8.2	7.6	5.7	4.1	3.7	2.2	2.4	2.4	2.7		
28	2.8	3.1 F	3.2 F	3.1 F	2.9	2.8 F	3.7	5.8	6.2	6.6	6.8	7.5	7.5	7.6	8.0	7.6	7.2	5.5	4.4	3.7	3.2	2.9	3.0	2.9		
29	2.9 JS	2.9	3.0	2.8	2.9	2.8	4.0	6.2	7.0	7.0	7.5	8.0	8.2	M	M	M	8.4	6.4	5.8	4.9	4.5	4.2	4.2	3.5 F		
30	3.5 F	3.1 F	3.3 F	2.9 F	[2.0] A	2.2	[4.0] C	5.8	6.9	8.6	8.2	4.6	9.8	10.3	10.2	9.0	8.6	6.7	5.4 F	4.6	4.3	3.6	(3.3) F	(3.0) F		
31	2.3 F	(2.6) F	(1.9) F	3.0 F	3.4	2.5	3.6	5.6	6.0	6.5	7.8	8.0	7.6	7.3	6.8	6.4	6.0 FS	5.4 FS	4.7	4.0	3.3	2.9	2.5 F	2.5 F		
Median	2.9	2.9	2.8	2.7	2.5	2.3	3.8	5.4	6.0	6.4	6.6	7.0	7.2	7.2	7.1	6.9	6.7	6.0	5.0	4.2	3.5	3.2	3.0	3.0		
Count	31	31	31	30	30	30	31	31	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31		

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 64

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

h'F1 (Characteristic), Km (Unit), October (Month), 1952

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: McC., A.C.K., E.J.W.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Calculated by: McC., F.O.W., E.J.W.

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								210	210	210	190	190	200	190	220	230H	200	210								
2								Q	210	200	170	200	190H	190	200H	230	240	A								
3								240	240	220	210	200	190H	210H	210	220	230	240								
4								QK	230K	220K	230K	200HK	220HK	(230)AK	230K	220HK	230K	QK								
5								QK	270K	230K	230K	220K	200K	210HK	240K	250K	230K	250K								
6								Q	230	230	210	200H	200	210	200	200H	240	250								
7								230	210	210	210H	210H	200	200	190H	200	240	Q								
8								210	200	210	200	200	190	180	200	220	230	Q								
9								240	230	230	200	190H	180H	210	210	220	230	Q								
10								Q	220	220	190	190H	190	180H	200H	230	240	Q								
11								Q	230	230	210	200	190	190	210	230	230	Q								
12								Q	230	200	190	200	190	220	220	230	A	Q								
13								Q	210	210	210	180H	200	180	200	210	240	Q								
14								220	230	210	180	190H	180H	200	190	210	230	Q								
15								Q	220	210	180H	190	180	180	220	210	230	Q								
16								Q	200	200	180H	180H	190H	190	220	230	230	Q								
17								230K	210K	200K	200K	180K	180K	200K	220K	220K	220K	QK								
18								230	220	220	190	180	220	200	200	230	230	Q								
19								A	210	200	190	170H	160H	210	190H	230	220	A								
20								230	220	220	200	190H	180H	220	230	220	220	Q								
21								Q	230	210	190H	190H	230	220	230	240	240	Q								
22								Q	230	(220)A	210	200	A	A	(220)A	230	240	Q								
23								Q	240	210	200	200	190	200	230	230	230	Q								
24								Q	220	210	190	180	180	210	210	210	220	Q								
25								210	220	200	200	180	180H	210	230	230	220	Q								
26								Q	200	220	220	210	230	230	220	230	230	Q								
27								A	A	200	180H	190H	230	230	210	210H	Q	Q								
28								Q	220	220	(210)A	200H	200	200H	230	Q	Q									
29								Q	220	200	190	190H	230	M	M	M	M									
30								C	Q	200	210	200	220	220	220	220	Q									
31								Q	220	200	210	190	200	210	220	210	220									
Median								230	220	210	200	190	190	210	220	220	230	—								
Count								10	29	31	31	31	30	29	30	29	26	4								

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 65

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

foF1 (Characteristic), Mc (Unit), October (Month), 1952

Observed at Washington, D. C.

Lat. 38.7°N, Long. 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: Mc C., A.C.K., E.J.W.

Calculated by: Mc C., F.O.W., E.J.W.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L	L	L	4.2	4.3	4.4	4.3	4.3	4.1^{H}	L	L						
2								Q	L	L	4.0	4.4	4.4^{H}	4.4	4.2^{H}	L	L	A						
3								L	L	L	L	4.4	4.5^{H}	4.4^{H}	4.3	L	L	L						
4								Q^{K}	L^{K}	4.0^{K}	4.2^{K}	$4.4K^{H}$	$4.4K^{H}$	4.4^{K}	4.3^{K}	$4.0K^{H}$	L^{K}	Q^{K}						
5								Q^{K}	3.6^{K}	3.9^{K}	4.0^{K}	4.0^{K}	4.1^{K}	4.1^{K}	4.0^{K}	3.9^{K}	L^{K}	L^{K}						
6								Q	L	L	4.1	4.3^{H}	4.4	4.3	4.0	L	L	L						
7								L	L	3.8	4.3^{H}	4.4^{H}	4.4	4.3	4.2^{H}	L	L	Q						
8								L	L	L	4.2	4.3	4.3	4.3	L	L	L	Q						
9								L	3.7	4.0	4.1	4.2^{H}	4.3^{H}	4.3	4.2	3.8	L	Q						
10								Q	L	4.0	4.1	4.3^{H}	4.3	4.3^{H}	4.2^{H}	L	L	Q						
11								Q	L	L	4.1	4.3	4.3	4.3	4.1	L	L	Q						
12								Q	L	L	4.0	4.3	4.3	4.2	4.0	3.9	L	Q						
13								Q	L	L	4.2	4.3^{H}	4.3	4.2	L	L	L	Q						
14								L	L	L	4.1	4.4^{H}	4.4^{H}	4.3	4.1	L	L	Q						
15								Q	L	4.0	4.1^{H}	4.3	4.3	4.3	L	L	L	Q						
16								Q	L	L	4.0^{H}	$[4.2]^{L}$	4.4^{H}	4.3	L	L	L	Q						
17								L^{K}	L^{K}	3.8^{K}	4.2^{K}	4.2^{K}	4.2^{K}	4.2^{K}	4.0^{K}	3.8^{K}	L^{K}	Q^{K}						
18								L	L	L	4.1	4.2	4.3	4.2	4.1	L	L	Q						
19								L	L	L	L	4.2^{H}	4.3^{H}	4.3	4.2^{H}	L	L	A						
20								L	L	L	4.2	4.2^{H}	4.3^{H}	4.2	L	L	L	Q						
21								L	Q	3.9	4.2^{H}	4.3^{H}	4.4	4.3	4.2	L	L	Q						
22								Q	L	A	4.1	4.2	A	A	L	L	L	Q						
23								Q	L	L	L	L	4.3	4.3	L	L	L	Q						
24								Q	L	L	L	L	4.3	L	L	L	L	Q						
25								L	L	L	L	4.3	4.3^{H}	L	L	L	L	Q						
26								Q	L	L	4.2	4.2	4.2	4.1	L	L	L	Q						
27								A	A	L	L	L	L	L	L	L	Q	Q						
28								Q	L	L	L	$(4.0)^{P}$	4.3	L	L	Q	Q							
29								Q	L	L	L	L	L	M	M	M	M							
30								C	Q	L	L	L	L	L	L	L	Q							
31								Q	L	3.6	$(3.9)^{L}$	4.1	4.1	4.0	L	L	L							
Median								—	—	3.9	4.1	4.3	4.3	4.3	4.2	3.9	—	—						
Count									2	9	22	26	27	24	16	6								

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 66

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

h'E (Characteristic), Km (Unit), October (Month), 1952

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: Mc C., A.C.K., E. J. W.

Calculated by: Mc C., F.O.W., E. J. W

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								120	110	110	100	100	100	100	100	100	110	110						
2								(120)S	100	100	100	100	100	100	100	100	A	A						
3								110	110	110	110	110	100	110	110	110	110	120						
4								120K	110K	100K	110K	110K	110K	110K	110K	110K	110K	120K	140K					
5							120K	120K	110K	110K	110K	110K	100K	110K	110K	110K	(120)AK	130K						
6								110	120	110	110	110	110	110	120	110	120	A	A					
7								120H	[120]A	110	110	110	110	110	110	110	120	(140)S						
8							(140)A	[120]A	110	110	110	100	100	100	100	100	100	A						
9								(120)S	110	100	100	100	100	110	110	110	110	120						
10								(120)A	110	110	110	100	100	100	110	110	110	(130)S						
11								A	110	110	110	100	100	100	110	110	110	(130)S						
12								120	110	110	110	110	100	110	110	110	110	A						
13								A	100	100	100	100	100	100	100	110	110	(130)S						
14								(120)A	110	110	110	100	100	100	110	110	110	S						
15								110	110	100	110	100	100	100	100	100	110	(130)S						
16								A	100	100	100	100	100	110	110	110	110H	(130)S						
17								120K	100K	100K	100K	100K	100K	100K	(110)AK	100K	110K	AK						
18								110	[100]A	100	100	[100]A	100	[100]A	100	100	110	A						
19								110	100	100	100	100	100	100	100	100	110	110						
20								130	100	100	100	100	100	100	100	110	110	A						
21								(120)S	110	100	100	100	110	100	100	100	100	S						
22								120	110	100	110	110	A	A	A	100	110H	(130)A						
23								130	120	110	110	110H	110	100	110	110	110	S						
24								120	100	110	110	100	100	100	100H	100	100H	120						
25								(130)S	110	[100]A	100	100	100	100	100	(100)A	110	(120)S						
26								110	100	100	100	100	100	100	100	110	110	S						
27								A	A	A	100	(100)A	100	100	100	110	110	100						
28								S	110H	(120)A	A	A	110	100	100	100H	100H	S						
29								(110)S	110	100	100	100	110	M	M	M	M							
30								C	120	100	100	100	100	100	100	110	110H	S						
31								(110)A	100H	100	100	100	100	110	110	100	100							
Median							—	120	110	100	100	100	100	100	100	110	110	120	—					
Count							2	25	30	30	30	30	30	29	29	30	29	16	1					

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 67

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Form adopted June 1946

IONOSPHERIC DATA

foE (Characteristic), Mc (Unit), October (Month), 1952

Observed at Washington, D. C.

Lat. 38.7°N, Long. 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: McC., A.C.K., E.J.W.

Calculated by: McC., F.O.W., E.J.W.

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	2.5	2.7	2.9	3.0	3.0	3.1	3.0	2.8	2.5	A						
2								2.1	2.5	2.8	3.0	3.1	3.2	3.2	3.1	2.9	A	A						
3								2.0	2.5	[2.8]A	3.1	3.1	3.2	3.2	3.0	2.8	2.5	2.0						
4								2.2^K	2.5^K	2.8^K	3.0^K	3.1^K	3.2^K	3.1^K	3.0^K	2.8^K	2.4^K	2.0^K	(1.3)^S_K					
5							1.5^K	2.1^K	2.5^K	2.8^K	3.0^K	3.1^K	3.1^K	3.1^K	3.0^K	2.7^K	2.4^K	2.0^K						
6								2.1	2.5	2.7	2.9	3.0	3.1	3.0	2.9	2.8	2.4	A	A					
7								2.1^H	2.5	2.8	A	A	(3.2)^P	3.2	3.0	2.8	2.4	1.9						
8							S	2.0	[2.4]A	2.8	[2.9]A	3.0	3.1	3.1	3.0	2.8	2.4	A						
9								2.0	2.4	2.7	2.9	[3.0]A	3.1	3.1	3.0	2.8	2.5	1.8						
10								1.9	2.5	2.7	2.9	3.0	3.0	3.1	2.9	2.7	2.4	1.8						
11								1.9	2.4	A	A	A	3.1	3.1	3.0	2.7	2.4	1.8						
12								2.0	2.4	2.8	2.9	3.0	3.1	3.0	2.9	2.7	A	A						
13								1.9	2.4	2.7	2.9	3.0	3.1	3.1	[3.0]A	2.8	2.6	1.9						
14								1.9	2.5	2.8	2.9	3.0	3.1	3.1	3.0	2.8	[2.3]A	1.8^H						
15								1.9	A	A	A	(3.0)^P	3.1	3.1	3.0	2.8	2.4	1.8						
16								A	2.4	2.7	2.9	3.0	[3.1]A	3.1	3.0	2.8	2.4^H	1.9						
17								1.9^K	2.3^K	2.7^K	A^K	A^K	3.0^K	3.0^K	2.9^K	2.6^K	A^K	A^K						
18								1.8	A	A	A	A	3.1	3.1	3.0	2.7	2.3	S						
19								1.7	A	A	A	A	3.1	[3.0]A	3.0	2.7	2.4	A						
20								1.8	2.4	2.7	A	A	3.0	3.0	2.9	2.7	2.3	A						
21								1.8	2.3	A	A	3.0	[3.0]A	3.1	3.0	2.6	2.3	S						
22								1.8	2.2	A	A	3.0	A	A	A	2.7	2.3^H	1.6						
23								1.7	2.3	2.6	2.9	3.0^H	3.1	3.0	2.9	2.7	2.2	A						
24								1.8	2.3	2.5	[2.8]A	3.1	3.1	3.0	3.0^H	2.7	2.4^H	(1.6)^S						
25								1.8	2.3	A	A	3.0	3.1	3.0	2.9	[2.5]A	2.2	S						
26								1.8	2.3	2.5	2.8	2.9	3.0	3.0	2.8	2.6	2.2	S						
27								A	A	A	2.8	3.0	3.0	3.0	2.8	2.7	2.2	S						
28								S	2.3^H	2.7^H	[2.9]A	(3.0)A	(3.0)A	3.0	2.9	2.6^H	2.2^H	S						
29								1.6	1.8	2.7	2.9	3.0	3.0	M	M	M	M							
30								C	2.4	2.8	3.0	3.0	3.0	3.0	2.8	(2.5)^P	2.3^H	S						
31								(1.9)A	(2.3)^P	2.5	2.8	2.9	3.0	3.0	2.8	2.6	2.0							
Median							—	1.9	2.4	2.7	2.9	3.0	3.1	3.1	3.0	2.7	2.4	1.8	—					
Count							1	27	27	23	21	25	30	29	29	30	27	13	1					

Sweep 1.0 Mc to 25.0 Mc In 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 68

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

Es (Characteristic), Mc,Km (Unit), October (Month), 1952

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: McC., A.C.K., E.J.W.

Calculated by: McC., F.O.W., E.J.W.

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	E	E	E	E	C	C	G	G	G	G	G	G	10.0 110	10.0 110	G	G	G	2.2 110	2.4 110	E	2.0 100	4.0 100	E	E
2	E	2.5 100	E	3.4 100	2.7 100	2.8 100	3.0 100	G	3.0 120	G	3.2 100	G	6.0 100	3.6 110	G	3.3 110	3.5 100	4.0 100	2.7 110	2.0 110	3.2 110	2.7 100	2.4 100	E
3	2.2 110	2.3 110	E	E	E	2.7 100	3.1 110	G	G	7.0Y 110	G	G	4.0 100	G	G	G	G	G	E	E	E	3.5 100	E	E
4	E	E	3.3 110	4.7Y 110	3.0 120	4.0 110	7.0Y 110	4.1 130	G	G	G	G	3.5 110	5.3 110	3.9 120	3.0 120	G	G	E	E	E	E	E	E
5	E	3.1 100	E	E	E	E	G	G	G	G	G	G	G	G	G	G	2.5 110	G	E	3.1 120	3.7 120	E	E	3.7 110
6	E	9.0Y 110	3.0 110	3.9 110	E	E	10.0 110	G	4.0 100	G	G	G	G	4.0 100	4.7 100	G	4.3 100	5.0 100	2.3 100	4.0 100	3.8 100	[illegible] 100	2.3 100	3.5 110
7	2.7 100	2.8 100	E	E	E	E	E	G	2.5 110	G	3.3 110	3.3 110	G	G	8.0 100	5.0 100	G	G	1.3 130	1.8 130	4.5 110	E	2.3 100	2.5 120
8	E	3.3 120	3.0 100	3.8 130	E	E	2.4 110	2.1 120	3.7 110	G	3.8 110	G	15.0 100	G	G	3.0 110	2.7 100	3.4 100	3.0 100	2.2 100	E	3.0Y 120	E	E
9	2.9Y 100	2.6 100	4.2 110	4.3H 100H	E	7.5 110	E	7.0 100	3.0 110	4.7 110	3.9Y 120	3.8 100	G	G	4.2 120	G	3.3 120	G	1.2 120	E	3.8 110	6.6 110	3.3 100	E
10	E	E	2.3 100	E	4.0 100	4.7 100	3.6 120	2.4 100	G	G	8.0 110	G	G	G	G	G	G	G	E	E	E	E	E	E
11	E	E	2.3 100	3.9 120	7.5 110	3.0 110	E	7.0H 100H	G	3.5Y 110	3.1 120	3.3 110	G	G	G	G	4.0 130	G	1.7 130	3.5 120	4.3 120	3.1 110	2.4 110	E
12	E	E	5.2 100	2.8 110	E	3.3 100	E	G	G	6.0 120	4.0 130	G	G	G	G	G	4.3 110	6.0 110	2.2 110	1.4 120	E	E	E	E
13	E	E	E	E	E	E	E	3.0 100	3.4 100	10.0Y 130	G	G	G	G	4.0 120	3.2 110	G	G	E	3.0 110	E	E	E	2.8 110
14	2.4 110	2.5 110	4.0 110	3.9 110	4.2 100	4.0H 110H	2.8 110	2.1 120	G	3.5 120	G	G	7.4 100	G	2.6 100	G	7.0 110	G	E	E	E	E	E	E
15	E	E	E	E	E	3.9 120	3.7 100	G	3.2 110	3.3 110	3.0 100	G	G	G	G	3.7 130	G	G	1.3 100	E	E	E	E	2.7 110
16	3.1 100	2.4 100	3.6 100	6.6Y 100	3.3 100	4.0 100	4.5 100	2.4 120	3.3 100	G	3.1 110	G	4.0Y 100	G	4.0 140	3.0 120	7.0Y 110	G	E	2.5 100	2.4 100	E	4.0 110	E
17	3.0 110	3.3 110	3.3 110	2.3 100	E	E	E	G	G	G	4.0 100	4.0 100	3.0 100	G	3.4 100	3.3Y 100	2.4 110	2.4 120	E	2.8H 110H	2.7 110	2.1 100	5.8 100	3.4 100
18	2.5 100	2.5 100	7.2Y 100	3.8 100	4.0H 100H	4.0H 100H	3.0 100	G	4.2 100	3.8 100	4.6 100	3.9 100	G	5.0 100	G	G	2.8 110	3.0 100	2.2 100	2.0 110	3.4 100	2.8 100	4.2 100	E
19	2.7 100	4.0 100	3.1 100	3.8 100	2.8 120	E	E	3.7 110	4.7 100	3.5 100	7.0 110	3.7 100	G	3.2 100	6.6 120	G	G	4.0 110	E	2.8 110	3.1 130	E	2.2 100	2.3 100
20	3.5 100	4.0 100	3.2 100	3.6 100	2.5 100	4.0 100	2.5 100	G	3.0 110	G	4.0 110	5.3 110	G	G	G	G	G	3.4 100	2.8 100	2.8 100	E	3.3 110	E	E
21	3.0 100	3.6 100	4.0 100	4.0 100	4.0 100	4.2 100	2.7 100	G	G	3.6Y 100	7.0Y 100	8.4Y 110	3.4 110	G	3.6 100	G	G	G	E	E	E	1.7 110	3.7 100	3.1 100
22	2.9 100	2.2 140	2.7 100	E	4.0 100	10.0H 100H	E	5.4 110	3.3 110	5.0 110	6.8 110	4.0 110	7.6 100	9.0 100	6.8H 100H	G	G	3.9 110	2.8 100	2.4 100	E	E	E	E
23	2.4 110	3.0 110	4.2 100	3.0 110	2.6 100	4.6 110	3.2 110	3.6 100	G	3.6 100	G	6.6 100	G	G	G	G	G	2.2 110	1.9 100	E	E	E	E	E
24	E	E	4.0 120	3.0 110	5.0 100	2.5 100	3.5 110	4.0 100	6.4 100	3.7 120	3.7Y 110	3.6 110	G	G	7.7 120	G	G	G	E	3.2 100	E	E	E	E
25	E	E	E	3.8 120	3.3 110	E	E	G	G	3.6 100	3.7 100	G	G	G	G	3.0 100	G	G	E	E	E	E	E	2.7 120
26	E	E	E	3.0 100	E	E	3.0 110	G	G	22.0 110	G	G	G	G	G	G	3.3Y 120	G	E	E	E	E	E	E
27	E	E	E	E	7.4Y 120	3.3 100	3.3 110	4.0 100	6.6 100	5.2 100	G	4.1 100	G	3.6 110	G	G	3.4 120	1.8 120	2.6Y 100	E	2.4Y 120	E	E	E
28	E	2.8 110	2.7 110	2.6 100	2.7 100	E	2.4Y 120	3.8Y 110	G	3.1Y 110	4.8 100	4.0 110	7.0Y 160	G	3.6 130	G	G	4.9Y 110	E	E	E	E	E	2.7 100
29	2.7 100	3.0 100	2.5 100	E	3.6 120	3.7 120	2.5 120	G	G	G	G	3.0 100	7.5Y 100	M	M	M	M	2.3Y 90	1.4 120	E	E	E	E	E
30	2.1Y 120	3.0 110	2.3Y 120	3.0 120	4.4 110	3.8 140	C	C	G	4.0 100	G	G	G	G	G	G	2.4 120	G	E	E	E	E	E	E
31	E	E	2.5Y 140	6.8Y 110	E	2.4Y 110	2.1Y 100	9.8Y 100	G	G	7.2 100	G	G	2.9Y 90	G	G	G	3.4 90	2.5 90	E	E	E	E	2.4Y 100
Median	* *	2.5	2.7	3.0	2.7	3.2	2.5	* *	* *	3.5	3.2	* *	* *	* *	* *	* *	* *	* *	1.2	* *	* *	* *	* *	* *
Count	31	31	31	31	30	30	30	30	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31

** MEDIAN fEs LESS THAN foE, OR LESS THAN LOWER FREQUENCY LIMIT OF THE RECORDER.

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 69

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(M1500)F2 (Characteristic), (Unit), October (Month), 1952

Observed at Washington, D.C.

Lat. 38.7°N, Long. 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: Mc C., A.C.K., E.J.W.

Calculated by: Mc C., F.O.W., E.J.W.

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	K 1.9 JS	K (1.9) SF	(1.9) SK	K (1.8) JS	C K	C K	2.3	2.2	2.4	2.3	2.4	2.2	2.2 H	2.2	2.3	2.3	2.3	2.4	2.4	2.3 F	2.1 F	2.0 F	2.0 F	2.0 F
2	2.0 F	(1.9) F	(1.9) F	(1.9) F	2.1 F	(2.0) F	2.3 F	2.5	2.5	2.3 F	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.1 F	2.1	2.1	2.1	2.0 F
3	1.9 F	2.0 F	2.1 F	2.1 F	2.2 F	2.1 F	2.2 F	2.4	2.6	2.4	2.3	2.2	2.3	2.1	2.1	2.3	2.3	2.2	2.1	1.9	1.9	1.8	2.0	2.2
4	2.1 K	(2.3) FK	F K	(1.9) FK	K (1.9) JF	(1.8) FK	2.2 H	2.4 K	2.4 K	2.0 K	2.1 K	1.9 K	2.0 K	2.1 K	2.2 K	2.2 K	2.2 K	2.2 K	2.0 K	1.9 K	1.9 K	1.9 K	2.0 K	(1.9) FK
5	1.9 FK	(1.6) SK	1.9 FK	(1.8) FK	(1.7) FK	(1.7) FK	1.9 K	2.3 K	G K	G K	1.5 K	1.6 K	1.7 K	1.9 K	1.9 K •	2.1 K	2.0 K	2.1 K	2.2 K	2.2 K	1.9 K	1.8 K	1.8 K	1.8 FK
6	1.8 FK	1.9 FK	1.9 FK	1.8 FK	1.9 K	K (1.9) JS	2.1	2.3	2.0 H	2.3	2.2	2.1 H	1.9	2.0	2.3	2.2	2.3	2.3	2.3	2.2	2.1	1.9	1.9	2.0
7	2.0 F	(1.9) F	1.9 F	(1.9) F	(1.9) F	(2.2) F	2.3	2.5	2.3	2.3	2.2	2.2	2.2	2.1	2.3	2.2	2.2	2.3	2.3 F	2.2 F	2.2	1.9	1.9	2.0 F
8	2.0 F	(1.9) F	2.0 F	2.0 F	2.1 F	2.2 F	2.2	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.3	2.2 F	2.1 F	1.9	2.0 F	2.0 F
9	2.0	2.1	2.2	2.0 H	2.1	2.0 F	2.2	2.4	2.0 H	2.3 H	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	1.9 F	(2.0) F
10	(1.9) F	2.0 F	2.0 F	2.0 F	(2.2) F	2.2 F	2.2 F	2.2	2.4	2.3	2.5 H	2.4	2.3	2.1	2.2	2.3	2.2	2.3	2.0	2.2	2.3	2.0	2.0	2.0 F
11	1.9	1.9	2.0	2.2	2.2 F	2.0 F	2.1	2.4	2.4	2.2	2.2 H	2.2	2.1	2.2	2.1	2.2	2.3	2.2	2.3	2.0	2.0	2.1	1.9	1.9
12	1.9	2.0	1.9 F	2.0 F	2.0	2.2	2.2	2.4	2.3	2.1 H	2.3	2.3	2.2	2.1	2.3	2.2	2.3	2.3	2.3	2.1	2.2	2.0	2.0	2.0
13	1.9	2.0	2.0	2.0	2.1 F	2.1 F	2.2	2.4	2.5	2.4	2.4	2.4	2.2	2.4	2.2	2.4	2.3	2.4	2.4	2.3 F	(2.2) FS	2.1 F	2.0 F	2.0 F
14	2.0 F	2.1	2.0	2.0	2.0	2.0	2.3	2.4	2.5	2.6	2.3	2.3	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.2	2.1	2.1	2.1
15	2.1	2.0	2.1	2.2	2.3	2.1 F	2.3	2.4	2.5	2.4	2.6	2.3	2.2	2.3	2.3	2.2	2.4	2.4	2.4	2.3	2.3	2.2	2.0	2.0
16	2.0	2.0	2.2	2.2 F	2.2 F	2.4	2.3	2.6	2.6	2.4	2.4	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.2	2.3	2.3	2.1	1.9	1.9
17	1.9	2.0	2.0 F	2.1 F	2.1 F	2.1 F	2.0 K	2.2 K	2.3 K	2.3 K	2.1 K	2.2 K	2.0 K	2.1 K	2.2 K	2.2 K	2.3 K	2.4 K	2.2 K	2.1 K	2.1 K	2.0 K	1.9 K	1.9
18	1.9	2.0	2.3	2.3	2.1	1.9 F	2.0	2.4 H	2.3	2.5	2.4	2.2	2.3	2.1	2.3	2.3	2.4	2.4	2.2	2.3	2.1	1.9	1.9	2.1
19	2.0	2.0	2.0 F	(2.0) F	(2.0) F	(1.9) F	(2.0) F	2.4 F	2.4	2.4	2.5	2.3	2.4 H	2.3	2.3	2.4	2.4	2.5	2.4 H	(2.3) F	(2.1) F	(2.0) F	2.0 F	(2.0) F
20	2.0 F	(2.0) F	(2.1) F	(2.0) F	(1.9) F	(2.0) F	2.2 F	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.4	2.3 F	2.3 F	2.0 F	2.0 F	(2.0) F	(2.0) F
21	(2.0) F	(1.9) F	2.0 F	2.0 F	2.0 F	2.2 F	2.2 F	2.4	2.3	2.2	2.2	1.9	1.9	2.1	1.9	2.0	2.0	2.2	2.1 V	2.1	2.1	2.0	1.7	1.9
22	1.9 F	(1.8) F	1.9 F	2.0 F	2.0 F	2.0 F	2.1	2.4	2.3	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.4	2.0	2.0	2.0	2.0	2.0	2.0
23	2.0	2.0	2.1	2.1	2.1	1.9	2.0	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.2	2.2	2.2	2.1	2.1	2.1
24	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.5	2.4	2.5	2.4	2.3	2.2	2.3	2.2	2.3	2.3	2.4	2.4	2.2	2.3	2.1	2.0	2.0
25	1.9	2.1	2.1	2.0	2.1	2.3	2.1	2.4	2.3	2.4	2.3	2.1	2.3	2.1	2.2	2.2	2.4	2.4	2.3	2.2	2.0	1.8	1.8	1.9
26	1.8	2.1	2.1	2.1	2.2	2.0	1.9	2.3	2.4	2.1	2.0 F	2.0 F	2.0	2.1	2.2	2.3	2.4	2.2	2.0	2.1	2.1 F	(2.0) F	(1.9) F	2.0 F
27	2.1	1.9	1.9	2.0	2.0	2.1	2.0	2.5	2.6	2.5	2.5	2.5	2.2	2.5	2.2	2.3	2.5	2.5	2.4	2.2	2.5	1.9	1.8	1.9
28	2.0	(2.1) F	2.1 F	2.2 F	2.2 F	2.2 F	2.3 F	2.5	2.5	2.5	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.4	2.2	1.9	2.2	2.0	2.0	2.0
29	2.0	2.1	2.0	2.2	2.1	2.2	2.1	2.4	2.4	2.4	2.4	2.4	2.3	M	M	M	M	2.4	2.1	2.1	2.0	1.9	1.9	2.0
30	1.9 F	2.0 SF	2.0 SF	2.4 F	(2.4) AF	2.0	C	C	2.3	2.3	2.3	2.1	2.1	2.1	2.2	2.3	2.3	2.4	2.2	2.2	1.8	1.8	2.0 F	(2.0) F
31	(2.3) S	2.1 F	(2.2) F	2.0 F	2.0	2.4	2.1	2.3	2.6	2.3	2.1	2.2	2.3	2.3	2.3	2.4	2.3	2.2 F	2.2	2.2	2.0	1.9	1.9	2.1 F
Median	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.2	2.2	2.1	2.0	2.0	2.0
Count	31	31	30	31	30	30	30	30	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 70

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

(M 3000)F2, (Characteristic) (Unit) October (Month), 1952

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75° W Mean Time

Scaled by: Mc C., A.C.K., E.J.W.

Calculated by: Mc C., F.O.W., E.J.W.

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	K(2.9)SS	K(2.8)SF	(2.9)SK	K(2.7)SS	CK	CK	3.4	3.2	3.5	3.3	3.4	3.2	3.2H	3.2	3.3	3.3	3.3	3.4	3.4	3.3F	3.1F	3.0F	3.0F	3.0F
2	2.9F	(2.9)F	(2.9)F	(2.8)F	3.1F	(2.9)F	3.3F	3.6	3.6	3.3F	3.4	3.3	3.4	3.3	3.3	3.2	3.4	3.3	3.3	3.1F	3.1	3.1	3.1	3.0F
3	2.9F	3.0F	3.1F	3.1F	3.2F	3.1F	3.2F	3.5	3.7	3.4	3.3	3.3	3.3	3.1	3.1	3.3	3.3	3.2	3.1	2.8	2.8	2.8	3.0	3.2
4	3.4K	(3.3)FK	FK	(2.8)FK	K(2.8)SF	(2.7)FK	3.2K	3.4K	3.5K	3.0K	3.1K	2.8K	3.0K	3.1K	3.2K	3.2K	3.2K	3.2K	3.0K	2.8K	2.8K	2.8K	3.0K	(2.9)FK
5	2.8FK	(2.5)SK	2.9FK	(2.7)FK	(2.6)FK	(2.6)FK	2.8K	3.3K	GK	GK	2.2K	2.5K	2.6K	2.8K	2.8K	3.1K	3.0K	3.1K	3.2K	3.2K	2.9K	2.7K	2.7K	2.7FK
6	2.7FK	2.9FK	2.8FK	2.7FK	2.8K	K(2.8)SS	3.1	3.4	3.0H	3.3	3.2	3.1H	2.9	3.0	3.3	3.2	3.3	3.4	3.3	3.3	3.1	2.9	2.9	2.9
7	3.0F	(2.9)F	2.9F	(2.8)F	(2.8)F	(3.2)F	3.3	3.6	3.4	3.4	3.2	3.2	3.2	3.1	3.3	3.2	3.2	3.3	3.3F	3.2F	3.2	2.8	2.8	2.9F
8	3.0F	(2.9)F	3.0F	3.0F	3.1F	3.2F	3.2	3.4	3.3	3.4	3.4	3.2	3.2	3.4	3.2	3.3	3.4	3.4	3.3	3.2F	3.1F	2.8	3.0F	3.0F
9	3.0	3.1	3.2	3.0H	3.1	3.0F	3.2	3.5	3.0H	3.3H	3.3	3.2	3.2	3.2	3.2	3.4	3.3	3.4	3.2	3.2	3.1	3.1	2.9F	(3.0)F
10	(2.8)F	2.9F	3.0F	3.0F	(3.2)F	3.2F	3.2F	3.2	3.4	3.4	3.6H	3.4	3.3	3.1	3.2	3.3	3.2	3.3	3.0	3.2	3.3	3.0	3.0	2.9F
11	2.9	2.9	2.9	3.2	3.2F	3.0F	3.1	3.4	3.4	3.3	3.2H	3.2	3.1	3.2	3.1	3.2	3.3	3.2	3.3	3.0	3.0	3.1	2.8	2.8
12	2.8	3.0	2.9F	2.9F	3.0	3.2	3.2	3.4	3.3	3.1H	3.4	3.4	3.2	3.1	3.3	3.2	3.4	3.3	3.4	3.1	3.2	3.0	3.0	3.0
13	2.8	3.0	3.0	3.0	3.1F	3.1F	3.2	3.5	3.6	3.5	3.4	3.5	3.2	3.4	3.2	3.4	3.3	3.4	3.4	3.3F	(3.2)FS	3.1F	3.0F	3.0F
14	(3.0)F	3.1	3.0	3.0	3.0	3.0	3.3	3.4	3.6	3.7	3.4	3.3	3.4	3.3	3.3	3.3	3.5	3.5	3.3	3.3	3.2	3.1	3.1	3.1
15	3.1	3.0	3.1	3.2	3.3	3.1F	3.4	3.5	3.6	3.5	3.7	3.4	3.2	3.4	3.3	3.2	3.5	3.4	3.5	3.3	3.3	3.2	3.0	3.0
16	2.9	3.0	3.2	3.2	3.2	3.4	3.3	3.7	3.7	3.5	3.5	3.2	3.3	3.3	3.3	3.4	3.5	3.4	3.2	3.3	3.4	3.1	2.9	2.9
17	2.9	3.0	3.0F	3.1F	3.1F	3.1F	3.0K	3.2K	3.3K	3.3K	3.1K	3.2K	3.0K	3.1K	3.2K	3.2K	3.3K	3.4K	3.1K	3.0K	3.1K	3.0K	2.9K	2.8
18	2.9	3.0	3.3	3.3	3.1	2.8F	3.0	3.4H	3.4	3.6	3.4	3.2	3.3	3.1	3.3	3.4	3.5	3.4	3.2	3.3	3.0	2.9	2.9	3.1
19	3.0	3.0	3.0F	(3.0)F	(3.0)F	(2.9)F	(3.0)F	3.5F	3.5	3.5	3.6	3.3	3.4	3.4	3.4	3.4	3.4	3.6	3.4H	(3.3)F	(3.1)F	(3.0)F	3.0F	(3.0)F
20	3.0F	(3.0)F	(3.1)F	(3.0)F	(2.9)F	(3.0)F	3.1F	3.5	3.5	3.4	3.4	3.4	3.2	3.2	3.2	3.3	3.4	3.4	3.3F	3.3F	3.0F	3.0F	(3.0)F	(3.0)F
21	(3.0)F	(2.9)F	3.0F	3.0F	3.0F	3.2F	3.2F	3.5	3.3	3.2	3.2	2.9	2.8	3.1	2.9	2.9	3.0	3.2	3.1V	3.1	3.1	2.9	2.6	2.8
22	2.8F	(2.7)F	2.8F	3.0F	3.0F	3.0F	3.1	3.4	3.4	3.4	3.2	3.2	3.3	3.2	3.3	3.3	3.5	3.4	3.0	3.0	3.0	3.0	3.0	3.0
23	3.0	3.0	3.1	3.1	3.1	2.9	3.0	3.4	3.5	3.5	3.4	3.3	3.3	3.3	3.3	3.3	3.5	3.4	3.2	3.2	3.2	3.1	3.1	3.1
24	3.0	3.0	3.1	3.1	3.2	3.1	3.2	3.6	3.5	3.6	3.5	3.4	3.3	3.4	3.3	3.4	3.4	3.5	3.4	3.2	3.3	3.1	3.0	3.0
25	2.9	3.1	3.1	3.0	3.1	3.3	3.1	3.5	3.4	3.4	3.3	3.1	3.3	3.1	3.2	3.2	3.4	3.5	3.3	3.2	3.0	2.7	2.7	2.8
26	2.7	3.1	3.1	3.1	3.2	2.9	2.8	3.3	3.4	3.1	3.0F	3.0F	3.0	3.1	3.2	3.4	3.5	3.2	3.0	3.1	3.1F	(2.9)F	(2.8)F	3.0F
27	3.1	2.9	2.9	2.9	2.9	3.1	3.0	3.6	3.7	3.6	3.6	3.6	3.2	3.5	3.2	3.4	3.5	3.5	3.4	3.3	3.6	2.9	2.7	2.9
28	2.9	(3.1)F	3.1F	3.2F	3.2F	3.3F	3.4S	3.6	3.6	3.6	3.4	3.3	3.4	3.3	3.2	3.4	3.4	3.4	3.2	2.9	3.3	3.0	2.9	3.0
29	2.9	3.1	3.0	3.2	3.1	3.2	3.1	3.5	3.5	3.5	3.5	3.4	3.3	M	M	M	M	3.5	3.0	3.1	2.9	2.8	2.9	2.9
30	2.8F	3.0SF	3.0SF	3.4F	(3.5)AF	3.0	C	C	3.4	3.4	3.3	3.1	3.1	3.1	3.2	3.4	3.4	3.5	3.2	3.2	2.8	2.7	3.0F	(3.0)S
31	(3.4)S	3.1F	(3.2)F	3.0F	3.0	3.4	3.1	3.3	3.7	3.4	3.1	3.2	3.3	3.4	3.3	3.5	3.3	3.2F	3.2	3.2	3.0	2.9	2.9	3.0F
Median	2.9	3.0	3.0	3.0	3.1	3.1	3.2	3.4	3.5	3.4	3.4	3.2	3.2	3.2	3.2	3.3	3.4	3.4	3.2	3.2	3.1	3.0	3.0	3.0
Count	31	31	30	31	30	30	30	30	31	31	31	31	31	30	30	30	30	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 71

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

IONOSPHERIC DATA

(M 3000)F1 (Characteristic), ____ (Unit), October (Month), 1952

Observed at Washington, D. C.

Lat. 38.7°N, Long. 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: McC., A. C.K., E. J.W.

Calculated by: McC., F. O.W., E. J.W.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L	L	L	3.8	3.8	3.8	3.8	3.7	3.8^{H}	L	L						
2								Q	L	L	4.1	3.7	3.7^{H}	3.7	3.7^{H}	L	L	A						
3								L	L	L	L	3.7	3.5^{H}	3.7^{H}	3.7	L	L	L						
4								G^{K}	L^{K}	3.6^{K}	3.6^{K}	3.5^{HK}	3.6^{HK}	3.5^{K}	3.6^{K}	3.6^{HK}	L^{K}	G^{K}						
5								G^{K}	3.2^{K}	3.4^{K}	3.7^{K}	3.8^{K}	3.6^{K}	3.5^{HK}	3.5^{K}	3.4^{K}	L^{K}	L^{K}						
6								G	L	L	3.7	3.7^{H}	3.5	3.5	4.0	L	L	L						
7								L	L	3.7	3.6^{H}	3.7^{H}	3.7	3.8	3.7^{H}	L	L	G						
8								L	L	L	3.7	3.6	3.7	3.7	L	L	L	G						
9								L	3.6	3.7	3.8	3.8^{H}	3.9^{H}	3.6	3.5	3.7	L	G						
10								G	L	3.7	4.1	3.9^{H}	3.7	3.6^{H}	3.6^{H}	L	L	G						
11								G	L	L	3.8	3.9	3.7	3.6	3.7	L	L	G						
12								G	L	L	3.9	3.7	3.7	3.7	3.8	3.7	L	G						
13								G	L	L	3.8	3.7^{H}	3.7	3.7	L	L	L	G						
14								L	L	L	3.9	3.7^{H}	3.7^{H}	3.8	3.8	L	L	G						
15								G	L	3.9	3.9^{H}	3.9	3.9	3.7	L	L	L	G						
16								G	L	L	3.9^{H}	L	3.7^{H}	3.7	L	L	L	G						
17								L^{K}	L^{K}	3.8^{K}	3.7^{K}	3.8^{K}	3.7^{K}	3.6^{K}	3.7^{K}	3.7^{K}	L^{K}	G^{K}						
18								L	L	L	3.9	3.9	3.7	3.6	3.7	L	L	G						
19								L	L	L	L	4.0^{H}	3.9^{H}	3.8	3.8^{H}	L	L	A						
20								L	L	L	3.8	3.8^{H}	3.7^{H}	3.7	L	L	L	G						
21								Q	L	3.8	3.6^{H}	3.5^{H}	3.4	3.6	3.5	L	L	G						
22								Q	L	A	3.7	3.8	A	A	L	L	L	G						
23								Q	L	L	L	L	3.7	3.7	L	L	L	G						
24								Q	L	L	L	L	3.8	L	L	L	L	G						
25								L	L	L	L	3.7	3.7^{H}	L	L	L	L	G						
26								Q	L	L	3.6	3.5	3.6	3.7	L	L	L	G						
27								A	A	L	L	L	L	L	L	L	Q	Q						
28								G	L	L	L	(3.7)P	3.7	L	L	Q	G							
29								G	L	L	L	L	L	N	N	N	N							
30								C	Q	L	L	L	L	L	L	G	G							
31								G	L	3.8	L	3.6	3.7	3.8	L	L	L							
Median								–	–	3.7	3.8	3.7	3.7	3.7	3.7	3.7	–	–						
Count									2	9	21	25	27	24	16	6								

Sweep 1.0 Mc to 25.0 Mc In 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 72

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

IONOSPHERIC DATA

(M1500) E (Characteristic), ____ (Unit), October (Month), 1952

Observed at Washington, D. C.

Lat 38.7°N, Long 77.1° W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: McC., A. C. K., E. J. W.

Calculated by: McC., F.O.W., E. J. W.

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								4.0	4.2	4.3	4.5	4.2	4.3	4.2	4.3	4.2	4.3	A						
2								4.0	4.3	4.3	4.3	4.2	4.2	4.3	4.3	4.3	A	A						
3								4.4	4.5	A	4.4	4.4	4.4	4.2	4.4	4.2	4.3	3.9						
4								4.1 K	4.1 K	4.2 K	4.3 K	4.4 K	4.2 K	4.2 K	4.1 K	4.2 K	4.2 K	4.2 K	3.8 K					
5							3.8 K	4.0 K	4.1 K	4.2 K	4.3 K	4.4 K	4.2 K	4.2 K	4.3 K	4.0 K	4.1 K	4.1 K						
6								3.9	4.1	4.1	4.3	4.4	4.1	4.1	4.2	4.3	4.2	A						
7								4.0 H	3.9	4.2	A	A	(4.1) P	4.0	4.0	4.2	4.2	3.8						
8							S	4.1	A	4.2	A	4.2	4.1	4.1	4.2	4.3	4.3	+						
9								4.0	4.2	4.2	4.3	A	4.1	4.1	4.2	4.1	4.2	4.0						
10								4.2	4.0	4.3	4.2	4.2	4.4	4.0 H	4.2	4.1	4.1	4.1						
11								3.9	4.3	A	A	A	4.1	4.0	4.2	4.2	4.1	3.9						
12								4.2	4.1	4.3	4.4	4.4	4.3	4.4	4.2	4.1	A	A						
13								4.2	4.4	4.3	4.4	4.2	4.2	4.2	A	4.0	4.0	4.0						
14								3.9	4.4	4.1	4.3	4.3	4.0	4.1	4.1	4.3	A	3.6						
15								4.4	A	A	A	(4.3) P	4.2	4.3	4.2	4.4	4.3	4.0						
16								A	4.3	4.3	4.3	4.3	A	4.1	4.2	4.1	4.0 H	4.3						
17								4.2 K	4.2 K	4.1 K	A K	A K	4.2 K	4.3 K	4.3 K	4.5 K	A K	+ K						
18								4.3	A	A	A	A	4.4	4.2	4.3	4.3	4.5	S						
19								4.0	A	A	A	A	4.4	A	4.3	4.2	4.3	+						
20								4.3	4.2	4.3	A	A	4.2	4.3	4.2	4.3	4.4	A						
21								4.3	4.4	A	A	4.2	A	4.4	4.4	4.5	4.5	S						
22								4.1	4.3	A	A	4.3	A	A	A	4.3	4.1 H	3.8						
23								3.9	4.2	4.0	4.3	4.1 H	4.1	4.0	4.2	4.2	4.3	+						
24								3.8	4.3	4.4	A	4.4	4.5	4.3	4.2	4.3	4.0 H	(3.7) S						
25								3.8	4.0	A	A	4.3	4.3	4.3	4.3	A	4.3	S						
26								4.2	4.1	4.2	4.2	4.2	4.3	4.3	4.4	4.5	4.2	S						
27								A	A	A	4.4	4.3	4.3	4.3	4.3	4.4	4.5	S						
28								S	4.2 H	4.1 H	A	(4.0) A	(4.2) A	4.0	4.2	4.2 H	4.2 H	S						
29								3.5	3.8	3.9	4.1	4.2	4.3	M	M	M	M							
30								C	3.9	4.2	4.2	4.1	4.1	4.4	4.4	(4.3) P	4.3 H	S						
31								(4.5) A	(4.4) P	4.3	4.2	4.4	4.2	4.1	4.3	4.4	4.4							
Median							—	4.1	4.2	4.2	4.3	4.3	4.2	4.2	4.2	4.3	4.2	4.0						
Count							1	27	26	22	17	24	28	28	28	27	26	13	1					

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Table 73

Ionospheric Storminess at Washington, D. C.

October 1952

Day	Ionospheric character* 00-12 GCT	Ionospheric character* 12-24 GCT	Principal storms Beginning GCT	Principal storms End GCT	Geomagnetic character** 00-12 GCT	Geomagnetic character** 12-24 GCT
1	5	1	###	1100	3	2
2	1	1			2	3
3	1	3			3	3
4	4	4	0500	----	5	4
5	4	5	----	----	5	4
6	4	2	----	1100	5	3
7	3	1			2	2
8	2	1			2	3
9	0	3			2	2
10	1	2			2	3
11	2	2			3	3
12	2	2			4	2
13	1	2			2	2
14	1	1			3	1
15	1	1			1	2
16	2	0			2	2
17	2	4	1100	----	3	2
18	3	2	----	0400	4	3
19	1	1			3	1
20	1	1			2	2
21	1	3			1	4
22	2	2			2	0
23	1	1			1	1
24	1	2			1	1
25	0	2			2	3
26	1	3			5	4
27	1	1			3	2
28	2	1			3	2
29	1	1			2	3
30	1	3			3	4
31	2	1			5	3

*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 Cheltenham, Maryland, geomagnetic K-figures on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

----Dashes indicate continuing storm.

###Storm began at 0800 GCT on September 29, 1952.

Table 74a

Radio Propagation Quality Figures
(Including Comparisons with Short-Term and Advance Forecasts)

September 1952

Day	North Atlantic quality figure		Short-term forecasts issued about one hour in advance of 12-hour period, UT:				Advance forecasts (J-reports) for whole day; issued in advance by:			Geomagnetic K_{Ch}	
Sept.	Half Day UT (1)	(2)	00 to 12	06 to 18	12 to 24	18 to 06	1 to 3/4 days	4/5 to 7 days	8 to 25 days	Half day UT (1)	(2)
1	5	6	5	(4)	(4)	(4)	5	6		(5)	(4)
2	(3)	6	(4)	(3)	(4)	(4)	(4)	5		(5)	3
3	(4)	7	(4)	(4)	(4)	6	(3)	(4)		(4)	3
4	(4)	6	5	5	6	6	(4)	(4)		3	2
5	5	7	5	5	7	6	6	5		3	3
6	5	7	6	5	6	6	6	6		(4)	2
7	5	6	6	(4)	6	6	5	6		3	(4)
8	(3)	5	(4)	(4)	(4)	(4)	5	6		(6)	(4)
9	(3)	5	(4)	(3)	(4)	(4)	6	6		(5)	(4)
10	(3)	5	(4)	(3)	(4)	5	(3)	7		(5)	3
11	(4)	6	5	(4)	5	5	(4)	7		3	3
12	(4)	7	5	(4)	6	6	6	6		3	3
13	5	6	6	5	6	6	5	6		2	2
14	5	7	6	6	6	6	5	5	X	(4)	3
15	5	6	6	(4)	6	7	(4)	(4)	X	2	3
16	6	7	5	(4)	6	6	(4)	(4)	X	2	2
17	6	7	5	(4)	6	6	5	6		2	1
18	5	7	6	5	6	7	6	7		2	1
19	6	7	6	6	7	7	6	7		1	2
20	6	7	6	6	7	7	6	6		2	3
21	6	8	(4)	(4)	6	6	6	6		3	2
22	5	7	6	5	6	7	5	5		3	2
23	6	7	6	5	7	7	5	5		2	1
24	7	7	6	6	7	7	7	6		3	3
25	6	7	6	5	7	7	7	6		1	3
26	(4)	7	5	(2)	(4)	5	5	5		3	2
27	(4)	6	5	(4)	5	6	(4)	(4)	X	(4)	2
28	(4)	7	5	(4)	5	6	(4)	(3)	X	(4)	(4)
29	(3)	(4)	(4)	(2)	(4)	(4)	(3)	(3)	X	(5)	(5)
30	(3)	5	(3)	(2)	(3)	(4)	(4)	(4)	X	(6)	3
Score:											
P			8		11		8	9			
S			23		20		19	16			
H			7		1		9	6			
(M)			6		0		1	1			
M			0		0		3	6			
(O)			0		4		0	0			
O			1		4		2	2			
G			16		21		15	15			

Scales:

Q-scale of Radio Propagation Quality

- (1) - useless
- (2) - very poor
- (3) - poor
- (4) - poor to fair
- 5 - fair
- 6 - fair to good
- 7 - good
- 8 - very good
- 9 - excellent

K-scale of Geomagnetic Activity

0 to 9, 9 representing the greatest disturbance; $K_{Ch} > 4$ indicates significant disturbance, enclosed in ( ) for emphasis

Symbols:

W- disturbed; U- unsettled; N- normal, left blank in Table; ( ) broadcast for one quarter day. X- probable disturbed date.

Scoring:

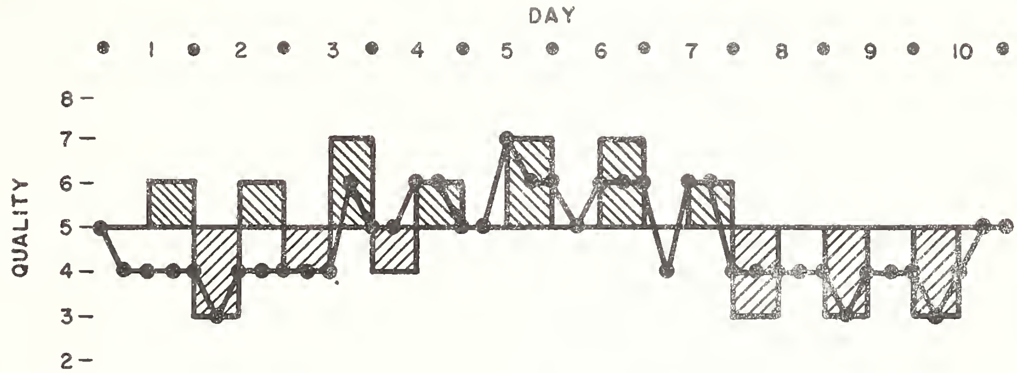
- P - Perfect forecast; observed equal to forecast
- S - Satisfactory forecast; P plus other times correctly designated as disturbed or quiet, within one grade
- H - Storm ($Q \leq 4$) hit, except (M)
- (M)- Storm hit, severity underestimated by two grades or a 5 forecast for Q=4 day
- M - Storm missed
- (O)- Overwarning on observed fair day
- O - Other overwarnings
- G - Good (quiet) day forecast

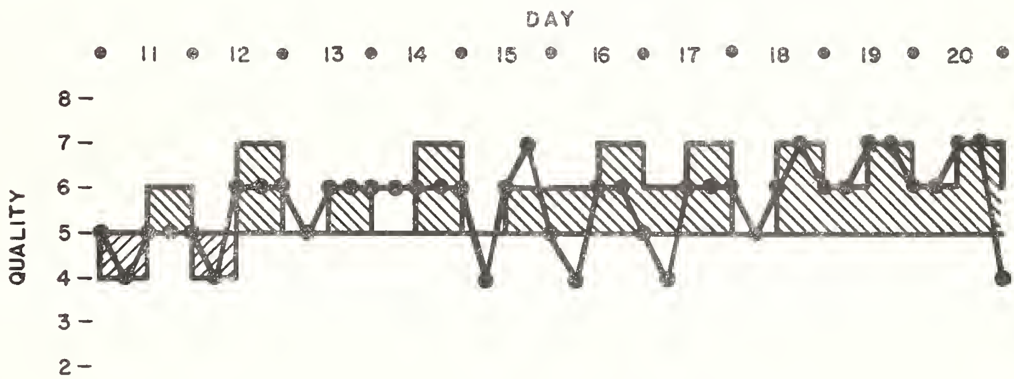
Note: See above for scoring legend, scales and symbols; see text for scoring conventions and other information.

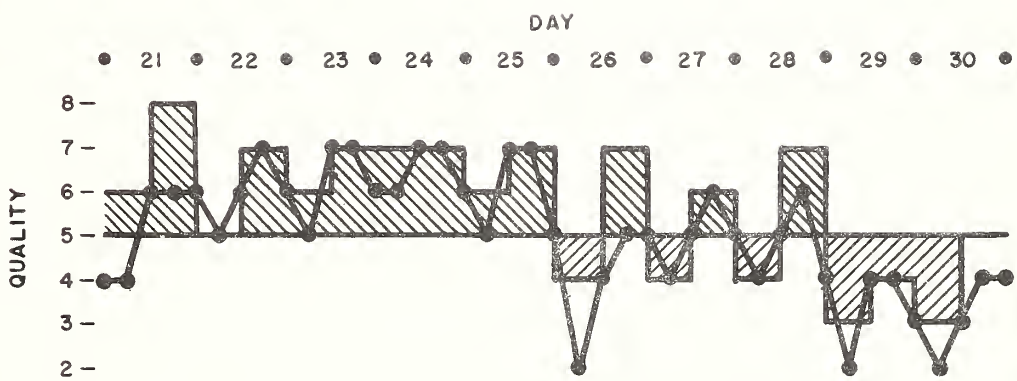
Table 74b

Short-Term Forecasts--September 1952

observed disturbance | observed quiet | forecasts







Advance Forecasts (1 to 3/4 days ahead)--September 1952

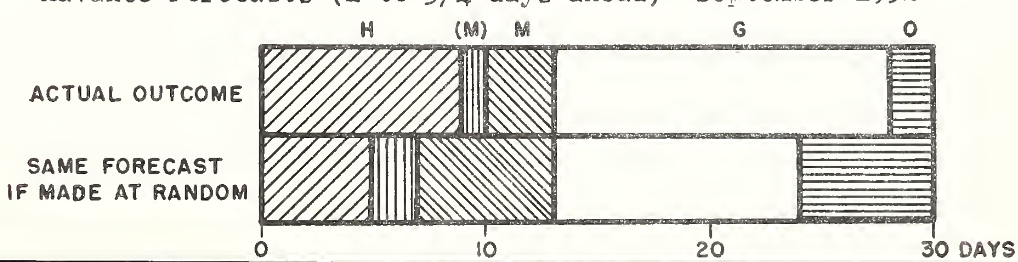


Table 75a

Coronal observations at Climax, Colorado (5303A), east limb

Date GCT	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7	-	-	-	-	-	-	7	8	8	8	8	7	8	10	11	9	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	5	5	6	7	7	6	6	6	9	11	14	13	11	9	7	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.8	-	-	-	-	-	-	3	5	5	4	5	8	9	12	19	15	15	14	11	9	7	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	3	3	3	3	3	3	6	11	12	13	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.7	-	-	-	-	-	-	3	3	3	3	4	5	6	8	9	11	9	5	4	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.0a	-	-	-	-	-	-	-	-	-	-	-	-	4	6	8	8	7	6	6	5	4	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
7.7	-	-	-	-	-	2	2	2	3	3	4	4	5	6	7	6	4	5	3	4	6	7	6	6	5	4	4	3	2	2	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	2	3	4	5	6	4	3	2	6	4	3	2	3	6	5	4	3	3	3	3	2	2	-	-	-	-	-	-	-
9.7	X	X	X	3	3	3	4	5	6	6	6	5	6	5	5	4	3	3	2	2	2	3	3	3	2	2	-	-	-	-	-	-	X	X	X	X	X
10.7	-	-	-	-	-	-	-	-	-	3	3	4	6	7	11	8	6	5	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	10	13	15	15	12	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	3	3	3	3	6	12	15	21	17	12	6	5	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
15.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	10	10	11	12	11	10	8	6	-	-	-	-	-	-	-	X	X	X	X	X	X	X
16.6	-	-	-	-	-	3	3	4	4	3	-	-	-	3	4	5	7	8	10	10	9	7	5	4	4	3	3	3	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	9	12	12	13	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	11	13	12	12	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.7a	-	-	-	-	-	-	-	-	-	-	-	-	3	3	4	4	3	4	5	6	6	5	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-
22.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	4	5	6	5	9	10	7	5	3	-	-	-	-	-	-	-	-	-	-	-	-
23.7	-	-	-	-	-	-	-	-	-	3	3	4	5	5	5	7	6	6	7	8	9	8	5	4	3	2	2	3	4	5	4	3	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	2	2	3	3	4	5	6	6	7	8	9	6	9	9	6	3	2	1	2	2	1	-	-	-	-	-	-	-	-
25.7	-	-	-	-	-	2	2	3	3	3	3	4	5	6	7	8	7	5	3	4	6	6	4	3	3	2	2	3	2	1	-	-	-	-	-	-	-
26.8	-	-	-	-	-	2	2	2	3	4	3	4	4	5	7	9	8	4	3	2	3	3	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-
27.9	-	-	-	-	-	-	-	4	5	4	3	3	3	3	6	9	8	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.7	2	-	-	2	2	3	3	4	5	6	7	8	7	8	16	18	18	12	7	5	3	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-
29.7	2	-	-	-	-	2	3	5	6	6	6	5	6	9	17	18	16	9	2	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
30.8	-	-	-	-	-	-	-	-	-	4	5	5	6	8	12	19	13	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	3	4	5	6	6	5	4	6	8	10	13	19	17	10	4	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Yellow line (5694A): Oct. 4.7, possible trace of yellow line at N00-N08 east limb.

Table 76a

Coronal observations at Climax, Colorado (6374A), east limb

Date GCT	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6	8	7	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	3	4	6	6	-	-	4	4	5	5	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	-	-
3.8	-	2	2	-	-	-	-	-	-	-	-	-	1	4	12	6	2	-	-	1	2	2	2	3	3	3	3	2	2	2	2	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	-	1	4	1	11	7	2	1	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-
5.7	1	2	1	1	1	-	-	-	-	-	-	1	1	3	6	1	2	2	2	2	2	1	1	3	1	1	2	2	2	1	1	-	-	2	2	3	3
7.0a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
7.7	1	2	2	2	1	1	-	-	-	-	-	1	1	1	2	3	4	3	4	1	1	1	1	1	1	1	2	2	1	1	2	2	2	2	2	2	1
8.6	2	3	3	2	1	-	-	-	-	1	1	2	2	3	4	5	1	3	5	2	2	1	-	-	-	-	-	-	1	2	2	3	2	2	2	2	3
9.7	X	X	X	-	-	-	-	-	-	-	-	-	1	4	7	6	4	3	3	2	2	2	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
10.7	-	-	-	-	-	-	-	-	-	-	-	1	3	10	12	10	4	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3
11.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	2	2	1	-	-	-	-	-	-	-	-	-	-	-	1	2	4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
16.6	-	-	-	-	-	-	-	-	3	3	4	4	4	3	-	-	-	3	5	4	3	3	3	5	8	8	6	3	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	4	6	10	11	4	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-
18.9a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
21.7a	-	-	-	-	-	-	-	-	-	-	-	3	4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.7	3	2	3	3	2	1	1	1	-	1	1	2	3	2	1	1	2	1	1	1	1	1	2	3	4	4	3	3	1	1	2	2	2	2	2	2	2
24.7	2	2	2	2	1	-	-	1	2	2	2	1	1	-	-	-	-	-	1	2	2	2	2	2	2	3	4	2	1	1	2	2	2	2	3	3	2
25.7	4	4	3	1	1	1	1	-	-	1	1	1	3	3	2	1	6	2	3	4	5	5	4	3	2	2	2	1	1	2	2	2	2	2	2	2	2
26.8	2	2	2	2	1	-	-	-	-	-	-	-	1	2	1	3	4	1	2	2	3	3	2	1	1	-	-	1	2	3	3	3	2	2	2	2	2
27.9	-	-	-	-	-	-	-	-	-	-	2	2	3	3	4	4	4	3	3	1	1	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
28.7	3	5	4	3	2	1	1	-	-	-	1	2	2	3	4	6	5	7	6	4	3	4	5	3	4	3	5	1	-	1	2	2	2	2	2	2	2
29.7	2	2	1	-	-	-	-	-	-	-	-	2	3	5	4	7	4	4	5	5	4	3	5	4	4	4	3	2	-	-	-	X	X	X	X	X	X
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	3	4	4	3	2	1	-	-	-	-	-	-	-	1	8	13	3	3	8	4	5	4	3	3	4	6	7	4	2	3	3	2	2	3	3	2	3

Table 75b

Coronal observations at Climax, Colorado (5303A), west limb

Date GCT	S 90	S 85	S 80	S 75	S 70	S 65	S 60	S 55	S 50	S 45	S 40	S 35	S 30	S 25	S 20	S 15	S 10	S 5	0°	N 5	N 10	N 15	N 20	N 25	N 30	N 35	N 40	N 45	N 50	N 55	N 60	N 65	N 70	N 75	N 80	N 85	N 90
1952																																					
Oct. 1.7	-	-	-	-	-	-	-	-	6	7	7	6	-	6	9	10	13	14	12	10	10	10	9	9	9	7	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	3	4	4	3	3	4	4	6	10	12	12	11	8	4	4	4	3	-	-	-	-	-	-	5	6	6	5	-	-	-
3.8	-	-	-	-	-	-	3	3	4	5	4	4	5	5	6	10	12	14	18	19	17	10	5	3	3	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	3	3	3	-	-	-	3	3	5	5	6	10	14	17	12	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-
5.7	-	-	-	-	-	-	-	2	2	3	3	3	3	4	5	6	9	10	12	16	15	13	7	3	2	-	-	2	2	-	-	-	-	-	-	-	-
7.0a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-
7.7	-	-	-	-	-	-	-	2	3	3	3	3	4	5	9	11	12	12	11	9	5	7	6	3	2	1	1	1	2	2	1	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	4	5	5	4	4	3	3	3	3	2	2	-	-	-	-	-	-	-	-	-	-	-
9.7	X	X	X	X	X	X	X	X	X	-	-	-	-	-	4	4	5	6	5	5	3	2	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
10.7	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	4	10	11	10	10	8	8	6	3	2	-	-	-	-	-	-	-	-	-	-	-	-
11.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	6	9	8	6	5	5	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	10	11	9	4	3	6	9	8	6	4	3	-	-	-	-	-	-	-	-	-	-	-
15.9a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-
16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	5	11	15	19	20	18	12	6	3	2	3	4	4	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	11	18	18	13	6	3	3	3	3	-	-	-	-	-	-	-	-
18.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	10	12	13	10	6	-	-	-	-	-	-	-	-	-	-	-
21.7a	-	-	-	-	-	-	-	-	-	-	3	3	4	7	9	8	6	5	4	4	4	3	3	4	4	5	6	8	5	4	4	5	4	4	-	-	-
22.7a	-	-	-	-	-	-	-	-	-	-	-	-	4	5	6	7	9	5	5	4	4	5	8	7	7	8	6	6	5	4	-	-	-	-	-	-	-
23.7	-	-	-	-	-	-	-	-	-	-	3	3	3	4	5	5	7	5	6	7	8	10	9	6	5	5	4	4	4	3	3	3	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	1	1	2	2	2	2	2	2	3	3	6	10	12	10	6	3	4	4	3	2	1	-	-	-	-	-	-	-
25.7	-	-	-	-	-	-	-	-	-	2	2	2	3	3	4	5	5	6	10	13	19	24	18	12	6	4	5	4	3	4	5	5	3	2	2	1	-
26.8	-	-	-	-	-	-	-	-	-	1	1	2	2	3	4	4	5	5	6	10	15	21	20	16	8	5	4	4	4	3	3	-	-	-	-	-	-
27.9	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	5	5	7	8	4	7	13	13	6	3	2	-	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	2	2	3	3	3	5	8	10	12	13	12	5	7	10	11	10	8	5	3	3	3	3	3	4	5	4	3	3	2
29.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	2	3	3	2	2	2
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	4	7	11	18	15	11	6	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	-	-	-	-	2	2	2	3	3	3	5	6	10	15	21	25	21	16	6	3	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 76b

Coronal observations at Climax, Colorado (6374A), west limb

Date GCT	S 90	S 85	S 80	S 75	S 70	S 65	S 60	S 55	S 50	S 45	S 40	S 35	S 30	S 25	S 20	S 15	S 10	S 5	0°	N 5	N 10	N 15	N 20	N 25	N 30	N 35	N 40	N 45	N 50	N 55	N 60	N 65	N 70	N 75	N 80	N 85	N 90
1952																																					
Oct. 1.7	-	-	-	-	-	-	-	-	-	5	5	6	6	5	-	-	-	5	6	5	4	4	3	3	3	4	4	5	3	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	2	2	5	5	5	2	2	4	8	10	6	3	4	5	5	6	5	4	3	-	-	-	-	-	-	-	-
3.8	-	-	-	-	-	-	-	-	2	2	2	5	9	8	6	5	4	10	18	18	12	6	4	7	5	9	7	4	3	3	-	-	2	2	2	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	-	1	4	8	2	4	1	1	2	1	1	1	-	-	-	-	-	-	-	-	-	-
5.7	3	2	2	-	-	-	-	-	-	2	2	2	2	2	2	3	4	8	9	8	6	2	1	2	2	2	1	-	-	-	-	1	1	1	2	1	1
7.0a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-
7.7	1	3	3	3	2	2	1	2	3	3	5	5	4	2	1	2	3	6	6	6	6	5	4	4	3	3	2	1	1	1	1	1	2	2	3	2	1
8.6	3	3	2	2	2	1	1	1	1	1	2	2	3	2	1	-	-	-	2	2	3	3	2	2	2	2	2	2	1	1	-	-	2	2	2	2	2
9.7	X	X	X	X	X	X	X	X	X	2	2	2	2	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	2	X	X	X	X	X	X	X
10.7	3	2	2	-	-	-	-	-	-	2	2	2	3	3	3	5	10	5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	2	2	2	2	2	3	2	3	2	2	2	4	3	2	2	2	-	-	-	-	-	-	-	-	1	1	2	2
15.9a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-
16.6	-	-	-	-	-	-	-	-	3	3	4	4	3	4	3	3	5	4	2	3	17	13	6	3	1	1	-	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	2	3	3	4	4	5	4	3	2	-	2	2	2	4	12	6	2	1	-	-	-	-	-	-	-	-	-	-	-	-
18.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	-	-	10	10	-	-	-	-	-	-	-	X	X	X	X	X	X
21.7a	-	-	-	-	-	2	3	3	3	4	4	4	4	3	4	4	3	3	3	8	8	4	3	3	2	3	2	2	2	-	-	-	-	-	-	-	-
22.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	5	5	5	4	4	-	-	-	-	-	-	-	-	-	-	-	-
23.7	2	2	3	3	2	2	3	4	4	3	2	3	3	2	1	1	2	2	4	5	3	10	6	5	3	1	1	1	1	1	1	1	2	2	2	3	3
24.7	2	1	1	1	1	1	1	1	1	2	3	4	4	3	2	3	2	1	1	2	3	7	3	5	4	1	1	-	-	-	-	-	2	2	2	2	2
25.7	2	2	2	2	2	4	2	1	2	3	3	5	7	5	4	3	3	2	1	1	2	2	2	2	2	1	1	1	-	-	1	1	2	2	2	2	4
26.8	2	2	2	2	2	2	2	1	1	2	1	6	7	6	3	1	-	-	-	1	2	7	1	2	2	1	1	1	1	-	-	-	-	-	2	2	2
27.9	-	-	-	-	-	-	-	-	-	-	-	3	4	3	-	-	-	-	-	-	-	3	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
28.7	2	2	2	2	1	1	1	2	5	7	6	8	9	5	3	2	2	3	3	2	2	3	4	9	9	6	3	2	2	1	1	1	2	2	3	4	3
29.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	1	1	2	2	2
30.8	-	-	-	-	-	-	-	-	3	5	7	8	8	4	2	2	2	2	10	1	9	1	1	2	2	3	4	3	1	1	-	-	-	-	-	-	-
31.7	3	4	3	2	2	1	1	1	1	2	2	8	6	2	-	-	1	5	17	13	5	2	2	3	3	6	8	6	3	1	-	-	-	1	2	2	3

Table 77a

Coronal observations at Climax, Colorado (6702A), east limb

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.0a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.7	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.9a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
21.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 78a

Coronal observations at Sacramento Peak, New Mexico (5303A), east limb

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7a	-	-	-	2	2	2	3	3	3	4	4	3	3	4	5	5	5	4	5	5	4	5	5	5	4	4	4	5	5	5	4	4	3	2	2	2	-
2.7	2	2	-	-	2	2	3	5	7	6	5	4	4	8	15	27	20	17	12	8	6	5	4	3	3	2	2	2	4	4	3	3	2	2	2	-	-
3.7	2	2	2	2	2	2	5	8	6	5	5	5	5	8	11	28	23	19	16	14	8	6	5	3	2	3	2	2	3	4	3	3	3	2	2	-	-
4.7	2	3	3	3	3	3	4	4	4	4	4	4	5	8	14	15	14	14	13	10	4	4	3	4	3	3	2	3	3	3	2	2	2	2	2	2	2
5.8	2	2	2	2	2	-	2	3	5	8	8	7	6	8	11	13	12	12	11	8	6	5	4	4	5	4	4	3	2	2	3	3	2	2	2	-	-
6.7a	-	-	-	-	-	-	-	2	2	3	3	4	4	6	7	8	7	10	9	7	7	8	8	8	7	7	6	5	4	4	4	3	3	-	-	-	-
7.7a	-	-	-	2	2	2	3	4	4	5	6	5	6	8	7	7	7	7	5	5	5	6	9	9	8	8	7	4	3	3	3	2	2	-	-	-	-
8.7	-	-	-	2	3	3	4	3	6	10	9	8	10	11	12	11	11	13	8	5	5	7	8	12	11	10	8	8	9	5	6	5	2	-	-	-	-
9.7a	3	3	2	2	2	3	3	4	4	5	4	5	5	5	6	7	5	4	4	4	4	4	5	5	4	4	4	3	5	5	4	4	3	2	2	2	3
10.6	-	-	-	3	3	3	4	4	5	5	4	5	5	8	11	16	11	8	5	5	5	6	5	4	4	3	2	2	4	4	4	3	2	-	-	-	-
11.7	-	-	-	-	-	-	2	3	3	3	3	4	5	5	8	14	18	22	16	8	5	5	5	4	4	3	2	2	2	3	3	2	2	-	-	-	-
12.7	-	-	-	-	2	2	3	3	5	5	4	5	5	5	6	11	23	27	16	14	11	10	8	5	4	4	3	3	3	2	2	2	2	-	-	-	-
13.7	-	-	-	-	-	-	2	4	5	4	4	3	3	5	10	16	23	28	23	14	11	9	8	6	4	3	3	3	2	3	3	2	2	-	-	-	-
14.7	-	-	-	-	2	2	3	4	5	4	4	4	5	6	7	8	11	14	12	11	15	11	8	6	5	3	3	3	3	3	2	2	2	3	3	3	-
15.8a	-	5	5	4	4	4	5	5	5	6	5	5	5	5	4	5	7	7	8	8	7	6	5	5	5	5	5	5	4	4	5	5	5	4	4	4	4
16.7	-	2	2	-	-	3	5	7	8	7	6	5	6	5	5	6	7	11	15	18	16	14	12	10	8	5	4	4	4	4	3	3	2	2	2	2	-
17.7	-	-	-	-	-	2	2	3	5	5	4	5	4	5	5	6	10	23	32	23	14	11	8	4	4	4	3	3	2	2	3	-	-	-	-	-	-
18.7	-	2	2	2	3	3	3	3	3	3	4	3	3	3	3	4	5	10	15	15	11	6	5	3	4	3	3	3	4	4	2	2	-	-	-	-	-
19.7	2	-	-	-	-	-	2	3	4	5	5	4	3	3	4	5	9	36	41	40	35	22	18	11	8	4	4	5	5	6	6	5	3	-	-	-	-
22.7	2	2	2	2	2	3	3	3	4	5	4	4	4	5	5	5	5	8	10	13	14	13	13	12	8	5	4	4	5	6	7	5	4	3	-	-	-
23.7a	-	-	-	-	-	-	3	3	3	3	3	3	5	5	5	5	4	5	5	6	7	8	6	5	4	4	3	4	4	4	5	4	4	3	3	3	3
24.7a	-	-	-	-	-	-	3	3	3	3	4	5	5	5	5	6	5	7	7	8	9	9	9	6	5	4	3	3	3	4	4	4	3	3	-	-	-
25.7	-	-	-	-	-	2	3	4	5	5	5	5	6	8	8	10	12	11	8	6	8	8	9	5	4	4	4	4	5	6	4	3	2	-	-	-	-
26.8a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5	4	3	4	3	3	3	2	2	2	X	X	X	X	X	X	X	X	X
27.9a	4	4	4	4	5	5	5	5	5	6	6	4	4	5	5	6	6	6	5	6	7	8	7	7	7	6	5	5	5	5	5	5	6	5	5	5	4
29.7	-	2	2	3	3	2	3	5	6	7	7	6	7	8	11	16	17	14	11	5	5	4	4	3	3	3	3	2	2	3	3	2	2	-	-	-	-
31.7	2	-	-	2	2	3	6	8	9	8	8	5	6	11	20	28	30	24	18	11	7	5	5	4	4	3	2	2	2	2	3	3	3	2	2	-	-

Note: Yellow line (5694A): Oct. 4.7 at N03-N08 east limb, intensity 3, Oct. 18.7 at S00-S05 east limb, intensity 4.

Table 77b

Coronal observations at Climax, Colorado (6702A), west limb

Date GCT	S 90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5	0°	N 5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.0a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-
7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.7	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.9a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-
16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X
21.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-
27.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	4	4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(S = Degrees south of the solar equator; N = Degrees north of the solar equator)

Table 78b

Coronal observations at Sacramento Peak, New Mexico (5303A), west limb

Date GCT	S 90	85	80	75	70	65	50	55	50	45	40	35	30	25	20	15	10	5	0°	N 5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct 1.7a	-	-	-	-	-	-	-	2	2	2	3	3	3	3	3	3	5	8	11	13	10	8	9	8	7	4	3	3	3	2	2	3	2	2	2	-	-
2.7	-	-	-	-	2	2	2	2	2	3	5	5	3	4	3	11	15	16	18	19	11	8	9	6	5	4	4	4	4	3	3	3	3	3	3	3	2
3.7	-	-	-	2	2	2	3	4	5	4	4	4	5	5	5	6	8	10	16	16	17	14	16	5	4	3	4	3	3	3	3	2	2	2	2	2	2
4.7	2	2	3	3	3	3	3	4	5	5	4	4	4	4	5	5	8	10	13	17	20	12	5	3	3	3	3	3	3	2	2	2	2	2	2	2	2
5.8	-	-	-	-	-	-	-	2	3	4	4	5	6	7	7	8	12	14	16	18	28	23	15	11	6	3	3	4	4	3	5	4	3	3	4	2	2
6.7	-	-	-	-	-	-	-	2	3	3	2	3	3	4	5	8	11	14	15	14	14	14	11	8	4	4	4	3	4	4	3	3	2	2	2	2	-
7.7	-	-	-	-	-	-	-	-	2	2	3	4	4	5	5	8	12	14	15	11	8	9	9	8	5	4	4	4	5	5	4	3	2	2	2	-	-
8.7	-	-	-	-	-	-	2	3	5	6	7	5	5	8	9	11	14	15	16	14	8	8	7	7	6	3	4	4	4	3	4	3	2	-	-	-	-
9.7a	3	3	3	-	-	-	-	3	3	5	4	4	4	4	5	5	8	8	10	10	11	10	10	7	5	3	4	4	4	4	3	4	4	4	3	3	3
10.6	-	-	-	-	-	-	2	2	3	3	4	4	4	5	5	5	6	11	14	12	12	11	10	6	4	5	4	3	3	3	3	3	3	2	-	-	-
11.7	-	-	-	-	-	2	2	2	3	4	3	4	3	4	5	5	8	11	13	8	9	11	12	10	10	7	3	3	3	2	2	2	-	-	-	-	-
12.7	-	-	-	2	2	3	3	3	4	5	3	3	3	3	3	3	11	14	8	5	6	9	10	5	5	4	4	4	3	3	3	2	2	2	-	-	-
13.7	-	-	-	3	3	3	4	4	4	4	3	3	3	3	4	4	5	8	7	7	7	16	17	12	10	6	6	5	4	4	4	4	3	2	2	-	-
14.7	-	-	-	3	3	3	3	3	4	4	3	4	4	5	4	4	5	5	5	6	7	8	14	11	8	5	5	5	5	5	5	4	4	3	3	-	-
15.8a	4	4	4	5	5	4	5	5	5	6	5	5	4	4	5	5	5	5	6	5	5	6	6	4	4	4	4	4	5	5	4	5	5	6	5	-	-
16.7	-	-	-	-	-	2	2	2	3	3	3	3	3	4	3	4	5	5	5	14	28	41	43	39	21	14	12	8	5	5	7	8	5	3	2	-	-
17.7	-	-	-	-	-	-	2	2	2	2	3	3	3	4	3	4	4	4	5	11	20	40	44	45	36	16	7	5	5	6	7	7	4	3	2	-	-
18.7	-	-	-	-	-	-	-	-	-	2	3	3	3	3	3	3	3	3	4	5	11	14	18	26	22	18	6	4	3	4	5	5	4	3	2	-	-
19.7	-	-	-	-	-	-	2	2	3	3	3	3	4	4	5	8	10	5	4	4	11	16	22	21	22	28	14	10	11	12	13	13	12	5	4	3	2
22.7	-	2	2	2	2	2	2	3	3	4	4	5	5	8	9	8	11	10	5	5	6	6	8	8	9	10	11	10	8	7	6	5	5	4	3	3	2
23.7a	3	3	3	3	-	3	4	4	5	5	5	5	4	4	5	5	6	5	6	5	5	6	7	7	6	5	4	3	4	4	4	4	4	4	3	3	-
24.7	-	-	-	-	-	-	-	-	-	3	3	3	5	5	5	6	5	5	5	8	8	11	13	12	10	8	7	5	5	5	5	5	4	3	3	-	-
25.7	-	-	-	-	-	-	2	2	2	2	3	3	3	4	5	8	7	7	6	11	14	34	36	20	16	10	8	6	6	7	7	7	6	3	-	-	-
26.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	4	5	5	5	7	8	14	13	11	5	4	3	3	4	X	X	X	X	X	X	X
27.9a	4	4	4	4	3	3	5	5	6	7	8	8	5	5	5	8	7	7	7	7	7	8	13	12	11	8	5	5	5	4	4	4	4	4	4	5	4
29.7	-	-	-	-	-	2	3	3	4	4	4	5	4	5	5	6	7	8	13	15	11	8	5	4	4	5	4	4	5	4	5	4	4	3	2	2	-
31.7	-	-	-	-	-	2	3	4	4	5	4	5	5	5	8	11	12	28	36	41	40	23	16	11	6	5	4	3	5	5	6	5	5	4	3	2	2

(S = Degrees south of the solar equator; N = Degrees north of the solar equator)

Table 79a

Coronal observations at Sacramento Peak, New Mexico (6374A), east limb

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7a	3	2	3	3	2	2	2	2	2	-	2	3	3	3	2	2	3	3	4	5	5	5	5	4	4	3	2	5	6	3	3	4	2	2	-	-	2
2.7	4	4	4	3	2	3	2	2	2	3	3	5	4	6	11	4	3	5	6	6	8	5	6	8	10	7	5	6	5	5	2	3	3	4	3	3	5
3.7	2	5	5	4	4	3	3	2	2	3	2	3	3	2	14	17	14	6	2	3	4	3	3	3	4	5	5	7	5	4	3	4	3	2	3	4	4
4.7	4	4	3	2	3	3	3	4	4	5	4	4	4	4	8	8	12	9	4	4	3	4	4	2	3	4	5	5	5	2	2	2	3	3	3	3	3
5.8	3	3	5	4	4	3	2	3	3	2	3	3	4	4	8	9	5	5	6	6	6	6	5	4	6	11	3	5	6	4	3	2	3	3	2	2	2
6.7a	3	3	3	4	3	2	3	3	3	2	2	3	3	3	4	4	3	4	4	3	4	5	4	4	3	4	4	3	4	4	3	2	2	2	2	3	3
7.7a	3	4	4	4	3	2	2	3	3	2	3	3	2	3	3	4	4	3	4	3	2	2	3	3	3	2	3	4	2	2	2	3	2	2	3	2	3
8.7	5	5	4	5	4	2	2	3	3	3	4	4	3	3	5	6	6	5	5	7	2	3	2	2	3	3	2	3	3	3	2	3	3	4	3	4	4
9.7a	2	3	2	3	3	2	2	2	2	2	2	2	3	3	4	5	4	4	4	3	4	3	4	4	3	3	3	2	3	3	2	2	2	2	4	3	3
10.6	3	4	4	5	4	3	2	3	3	3	4	4	3	5	13	14	13	11	5	4	4	4	3	5	4	5	4	3	3	2	2	2	3	2	3	2	2
11.7	3	2	3	4	3	3	2	2	2	2	3	3	3	3	5	8	14	13	4	3	2	3	3	3	4	4	4	3	3	3	3	3	2	2	2	2	3
12.7	3	4	3	3	3	2	3	3	2	2	3	3	2	3	3	3	5	5	5	3	3	3	3	4	5	4	4	3	3	2	2	2	2	2	3	3	2
13.7	4	3	5	4	4	4	3	2	2	3	3	4	4	4	3	3	4	8	4	4	3	2	3	6	7	4	4	3	3	2	2	2	3	3	4	3	3
14.7	4	4	5	5	4	5	4	4	3	3	5	6	5	5	4	4	4	5	5	8	2	3	2	3	3	5	4	4	4	3	2	2	3	2	2	2	3
15.8a	4	4	3	3	3	3	2	2	2	3	3	3	4	5	4	4	4	4	5	5	5	4	4	4	4	4	4	3	4	4	4	-	-	-	-	4	4
16.7	4	5	5	4	5	4	3	3	2	3	12	11	12	11	7	5	6	7	15	11	5	5	6	8	14	15	14	12	5	3	2	3	4	3	4	4	5
17.7	5	6	4	5	4	3	4	4	3	3	6	8	7	6	5	4	3	7	19	20	12	3	3	5	6	11	10	5	6	4	3	2	3	4	5	4	4
18.7	3	3	2	3	3	2	2	2	2	2	3	3	4	3	3	3	2	3	15	5	3	2	2	2	3	5	4	4	4	3	2	3	3	2	3	3	3
19.7	5	6	5	5	5	5	4	4	3	3	4	5	4	5	4	3	3	16	23	16	10	4	3	2	3	8	7	4	3	4	3	5	3	3	4	4	3
22.7	8	5	7	6	5	3	3	3	4	3	4	5	5	6	5	6	5	5	5	4	4	5	3	3	4	5	4	5	5	3	4	3	2	2	5	7	5
23.7a	5	3	4	4	5	4	3	3	4	3	4	5	4	3	3	3	2	2	3	3	3	3	3	3	4	3	3	3	3	2	3	2	2	2	3	2	3
24.7a	2	3	3	3	4	4	3	3	2	3	4	5	3	2	2	3	3	3	4	4	3	4	3	4	3	3	4	5	5	3	2	3	3	3	3	4	4
25.7	4	5	5	3	4	2	2	3	3	3	2	3	3	4	4	4	3	5	2	2	5	4	6	4	4	3	4	4	5	2	3	3	3	3	3	4	3
26.8a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	5	3	3	3	3	4	5	4	4	5	5	X	X	X	X	X	X	X	X	X	X
27.9a	3	3	4	4	3	3	3	-	-	-	3	3	3	5	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	5	4	4	3	-	-	3	3
29.7	3	4	5	4	4	3	2	2	-	2	3	3	3	2	3	4	5	4	4	3	4	3	4	4	4	4	5	5	4	3	3	4	4	2	3	3	3
31.7	5	5	7	5	4	3	2	2	2	2	2	3	3	2	3	7	10	8	3	6	5	6	4	4	3	3	4	5	5	4	4	3	4	3	2	2	3

Table 80a

Coronal observations at Sacramento Peak, New Mexico (6702A), east limb

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.7	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	5	4	4	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	4	3	3	4	2	3	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.6	-	-	-	-	-	-	-	-	-	-	-	2	3	3	2	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	3	3	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	4	3	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.8a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	3	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-
18.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	2	4	4	5	4	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	5	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X
27.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	3	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 79b

Coronal observations at Sacramento Peak, New Mexico (6374A), west limb

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7a	2	2	2	3	2	3	2	2	3	4	2	2	6	5	4	3	3	3	4	3	4	4	4	4	5	6	5	5	5	4	2	2	3	2	3	2	3
2.7	5	4	3	4	4	3	2	2	3	5	5	5	8	12	11	5	4	3	14	17	15	11	8	6	8	20	16	12	8	3	3	4	3	4	4	4	4
3.7	4	3	3	2	2	3	2	3	3	3	4	3	8	10	7	5	3	4	15	16	14	11	5	5	6	8	11	11	9	4	3	4	2	2	2	2	2
4.7	3	2	3	4	3	3	3	2	2	3	3	3	4	5	4	3	3	5	14	11	7	4	2	3	5	4	5	3	3	2	3	3	3	3	3	2	4
5.8	2	3	5	3	3	3	2	2	3	2	5	3	2	4	3	3	4	5	12	13	11	10	5	3	2	5	5	4	4	3	4	3	2	2	3	3	3
6.7	3	4	3	3	3	3	3	2	2	3	4	4	4	3	2	3	3	4	4	4	4	5	3	3	3	3	3	2	2	-	2	-	2	2	2	2	3
7.7	3	3	3	3	3	2	2	2	2	4	3	5	5	4	2	2	2	3	4	5	6	5	4	4	4	4	7	4	3	2	2	3	2	3	2	5	3
8.7	4	4	5	5	2	3	2	3	2	4	4	5	4	4	3	2	2	3	5	6	5	5	5	3	8	7	8	5	4	4	3	2	2	3	4	4	5
9.7a	3	3	4	3	3	3	2	3	2	2	3	4	3	5	4	4	4	3	3	3	3	4	4	3	4	4	4	3	3	2	3	3	3	3	3	3	2
10.6	2	3	2	3	4	3	4	2	3	3	3	3	4	4	5	5	8	11	5	3	2	3	3	3	3	4	4	4	3	3	3	3	2	3	3	2	3
11.7	3	3	3	3	3	3	2	3	4	3	3	4	4	3	3	2	3	4	3	2	2	3	2	3	2	2	3	3	3	3	2	2	2	3	3	3	3
12.7	2	2	3	3	3	4	3	4	3	3	3	3	4	4	3	5	4	5	3	5	3	5	3	2	2	2	3	2	3	2	3	2	2	2	3	3	3
13.7	3	3	3	4	4	3	5	4	4	4	5	5	4	4	4	6	8	9	9	11	3	6	5	2	3	5	6	5	3	2	2	2	2	3	3	4	4
14.7	3	3	3	3	2	2	3	3	2	3	5	6	4	5	5	5	4	6	7	6	6	6	5	2	2	6	6	5	5	3	2	2	4	3	4	4	4
15.8a	4	4	4	3	4	4	3	3	2	3	3	3	2	3	3	2	3	3	4	4	5	4	4	4	4	4	4	3	3	2	3	3	3	3	2	4	4
16.7	5	5	4	4	5	3	4	4	4	5	6	10	9	8	6	5	5	6	7	5	10	23	22	14	8	6	4	4	3	2	3	4	4	5	5	7	4
17.7	4	4	4	3	3	4	4	4	2	3	8	8	7	7	5	5	3	4	5	6	5	8	18	15	3	2	3	3	2	-	2	3	4	5	8	7	5
18.7	3	2	2	2	3	3	3	2	3	5	5	5	5	5	4	3	3	3	7	8	4	5	6	12	5	3	3	2	-	2	2	2	3	3	4	4	3
19.7	3	3	3	3	3	3	4	3	4	4	5	6	6	8	6	5	6	5	5	12	11	10	5	8	11	5	4	8	2	3	3	3	4	4	5	8	5
22.7	5	4	3	4	5	4	5	4	4	4	3	4	5	4	3	3	3	4	4	5	7	7	4	5	5	7	7	5	4	3	2	3	3	4	4	5	8
23.7a	3	2	3	3	3	3	3	4	4	6	4	4	5	3	3	2	3	3	3	3	3	6	5	3	3	3	4	-	-	-	2	2	3	3	4	4	5
24.7	4	4	3	3	4	3	3	3	2	3	4	4	3	4	3	4	3	3	3	4	3	4	4	3	4	4	2	2	3	2	3	3	3	3	2	2	2
25.7	3	3	3	2	2	3	3	4	3	3	3	4	5	5	4	4	4	3	3	2	3	4	4	3	3	5	4	3	2	2	2	3	3	4	3	3	4
26.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	3	2	3	2	2	3	7	2	3	3	4	4	4	X	X	X	X	X	X	X	X
27.9a	3	2	3	2	3	3	2	2	3	2	3	3	3	4	5	4	4	4	4	5	4	4	3	4	3	3	3	2	2	3	3	2	3	3	3	3	3
29.7	3	4	5	3	3	2	3	2	2	3	4	5	5	9	8	6	4	5	5	4	3	4	3	2	3	8	6	4	4	2	-	-	2	3	3	3	3
31.7	3	4	4	4	3	2	3	2	3	3	4	5	15	14	12	3	2	6	14	20	13	11	3	2	3	6	8	9	6	5	4	3	2	3	4	4	5

Table 80b

Coronal observations at Sacramento Peak, New Mexico (6702A), west limb

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1952																																					
Oct. 1.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	4	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	3	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.8a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	3	3	2	2	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	4	5	5	3	2	3	2	-	-	-	-	-	-	-	-	-	-
18.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	4	3	3	2	2	-	-	-	-	-	-	-	-
22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	4	3	2	-	-	-	-	-	-	-	-	-	-	-	-
26.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	2	3	2	3	4	3	3	3	3	2	-	X	X	X	X	X	X	X	X
27.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	3	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	5	4	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 81

Zürich Provisional Relative Sunspot Numbers

October 1952

Date	R_Z*	Date	R_Z*
1	20	17	0
2	23	18	0
3	22	19	8
4	42	20	15
5	33	21	25
6	37	22	27
7	37	23	35
8	23	24	33
9	26	25	37
10	24	26	40
11	16	27	34
12	15	28.	33
13	15	29	32
14	14	30	26
15	11	31	22
16	10	Mean:	23.7

*Dependent on observations at Zürich Observatory and its stations at Locarno and Arosa.

Table 82

American Relative Sunspot Numbers

September 1952

Date	$R_{A'}$*	Date	$R_{A'}$*
1	75	17	15
2	62	18	19
3	44	19	27
4	30	20	25
5	39	21	32
6	41	22	33
7	26	23	42
8	1	24	47
9	10	25	41
10	8	26	42
11	0	27	33
12	1	28	31
13	0	29	29
14	0	30	20
15	1		
16	8	Mean:	26.1

*Combination of reports from 28 observers; see page 10.

Table 83

Solar Flares, October 1952

Observatory	Date 1952	Time Observed Beginning (GCT)	Time Observed Ending (GCT)	Duration (Min)	Area (Mill) (of) (Visible) (Hemisph)	Position Latitude (Deg)	Position Longitude Diff (Deg)	Time of Maximum (GCT)	Int. of Maximum	Relative Area of Maximum (Tenths)	Importance	SID Observed
Sac.Peak	Oct. 2	1950	2120	90	115	N10	E90	2019	15	4	1	
McMath	4	1500				N15	E80	-			1	
"	4	1519				N16	E85	-			1	
Sac.Peak	4	1645	1700	15	154	N11	E77	1650	11	5	1	
"	4	1940	2015	35	77	N12	E71	1949	20	9	1	
Sac.Peak	4	2148	2154	6	46	N11	E77	2149	12	5	1 -	
"	4	2310	2319A	>9	57	N12	E71	2319Q	15	7	1 -	
"	5	1843	1905	22	81	N08	E58	1845	14	8	1 -	
"	5	1910	1925	15	33	N08	E58	1919	11	6	1 -	
"	6	1545	1610	25	79	N12	E49	1552	10	6	1 -	
Sac.Peak	6	1630	1645	15	34	N16	E49	1635	9	8	1 -	
"	6	1830	1850	20	96	N15	E41	1839	15	7	1 -	
"	6	1945	2042	57	135	N16	E49	1958	18	9	2	
"	10	1610	1620	10	67	N10	W02	1615	8	6	1 -	
"	11	2145	2155	10	22	N11	W12	2147	8	8	1 -	
Sac.Peak	19	1435	1520	45	45	N02	E76	1440	15	9	1 -	
McMath	21	1650				N01	E56	-			1 -	
Sac.Peak	25	1945	2040A	>55	226	N04	W03	1949	25	6	2	
McMath	25	1955				N02	W00	-			2	
Sac.Peak	26	1955	2025	30	101	N03	W22	2001	10	5	1	
Sac.Peak	27	1905	1943	38	113	N00	W32	1914	12	6	1	
McMath	27	1910				N02	W35	-			1	
Sac.Peak	31	1953B	2008	>15	146	N14	E07	1954	15	4	1	

Sac.Peak = Sacramento Peak

B Flare began before given time
A Flare ended after given time
Q Time reported as questionable

Table 84

Indices of Geomagnetic Activity for September 1952

Preliminary values of international character-figures, C;
Geomagnetic planetary three-hour-range indices, Kp;
Magnetically selected quiet and disturbed days

Gr. Day 1952	C	Values Kp: three-hour interval 1	2	3	4	5	6	7	8	Sum	Final Selected Days
1	1.6	6-	5+	6-	5+	4o	5-	4o	6-	40+	Five
2	1.4	4+	5-	6o	5-	5o	4-	4-	4+	36+	Quiet
3	1.1	4-	5-	4o	5-	3-	4-	3-	4o	30o	
4	0.7	3-	3-	3o	3-	3o	2+	3-	1+	20+	13
5	1.1	3-	2-	3-	3o	3+	5-	4-	4-	25+	17
											18
6	0.7	4-	4o	3+	2+	2o	3-	3-	3-	23+	19
7	1.2	1+	5-	4o	1+	2+	3o	5+	6+	28+	23
8	1.5	6o	6-	6-	5+	4+	5o	5+	6-	43o	
9	1.5	5o	6-	5+	6o	4-	5+	4o	5o	40o	
10	1.1	5-	4+	5-	4o	3+	1+	2o	3-	27o	
11	0.8	3+	3-	2+	3o	3o	3-	2o	3+	22+	Five
12	1.0	4-	4o	3+	3o	4o	3+	4o	3o	28+	Disturbed
13	0.2	1+	2-	1+	2-	1+	1o	1+	2o	12-	
14	1.2	3+	5o	3+	4-	4o	5-	3+	3+	31-	1
15	0.7	3-	2-	2o	3o	3-	3-	3o	3+	21o	8
											9
16	0.6	3-	2+	2-	3-	2+	1+	2-	3+	18o	29
17	0.2	2+	1+	2-	2o	3-	1o	1-	2-	13+	30
18	0.1	1+	1+	2-	1o	1-	1-	2-	1+	10-	
19	0.0	1-	0o	1o	1-	1o	1+	1-	2-	7o	
20	0.6	1+	1-	2-	1-	2-	2-	3+	4+	15+	
21	0.9	6-	4-	2-	2o	1+	1+	2-	2o	19+	Ten
22	0.2	2+	3+	2o	1+	2-	1o	1+	1o	14o	Quiet
23	0.0	1+	2-	1o	1o	2-	1+	1-	0+	9o	
24	0.8	1o	2o	3-	2+	2+	4-	2+	3+	20-	4
25	1.0	2o	1-	1-	1-	1o	3-	3+	5+	16+	13
											15
26	1.1	6-	6-	4o	2o	2-	1o	2o	1-	23-	16
27	1.1	2o	5o	5-	5-	4-	3+	2o	1+	27-	17
28	1.4	3-	4-	4+	5-	3+	4o	6o	5+	34o	18
29	1.7	5+	6o	6-	6o	5+	3+	6o	7o	45-	19
30	1.5	7+	5+	4-	6-	3+	4+	4-	2+	36-	20
											22
Mean	0.90										23

Table 85

Sudden Ionosphere Disturbances Observed at Washington, D. C.

October 1952

1952 Day	GCT Beginning	GCT End	Location of transmitters	Relative intensity at minimum*	Other phenomena
October 25	1948	2015	Ohio, D. C., Colombia, England, Mexico, North Dakota	0.03	Solar flare** 1945 Solar flare*** 1955

*Ratio of received field intensity during SID to average field intensity before and after, for station KQ2XAU (formerly W8XAL), 6080 kilocycles, 600 kilometers distant.

**Time of observation at Sacramento Peak, New Mexico.

***Time of observation at McMath-Hulbert Observatory, Pontiac, Michigan.

Note: Observers are invited to send to the CRPL information on times of beginning and end of sudden ionosphere disturbances for publication as above. Address letters to the Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D. C.

Table 86

Sudden Ionosphere Disturbances Reported by Institut für Ionosphärenforschung, as Observed at Lindau/Harz, Germany

1952 Day	GCT Beginning	GCT End	Location of transmitters	Relative intensity at minimum*	Other phenomena
September 1	1239	1253	München**, Lindau***	0.05	
21	1211	1221	München**	0.0	Terr.mag.pulse 1220

*Ratio of received field intensity during SID to average field intensity before and after, for station München, 6160 kilocycles, 400 kilometers distant.

**Station München, 6160 kilocycles.

***Station Lindau, 1975 kilocycles, pulse, transmitter and receiver at Lindau.

GRAPHS OF IONOSPHERIC DATA

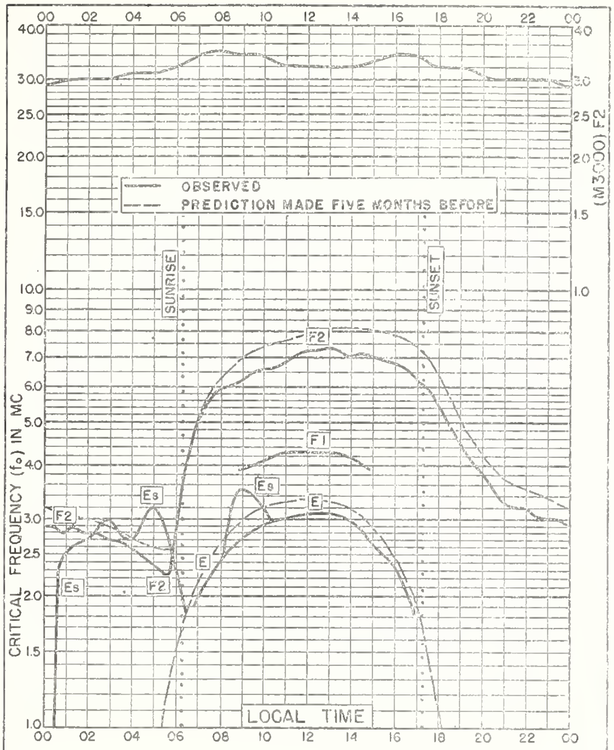


Fig. 1. WASHINGTON, D. C.
38.7°N, 77.1°W OCTOBER 1952

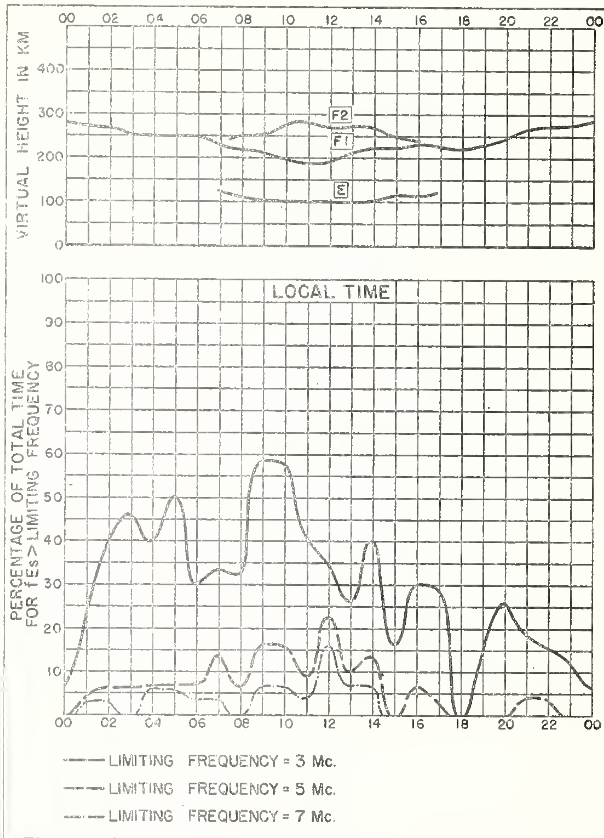


Fig. 2. WASHINGTON, D. C. OCTOBER 1952

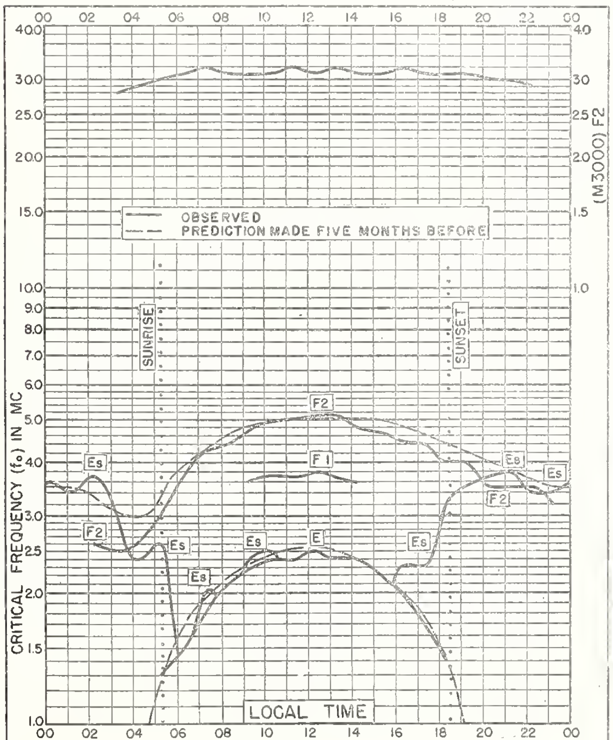


Fig. 3. TROMSO, NORWAY
69.7°N, 19.0°E SEPTEMBER 1952

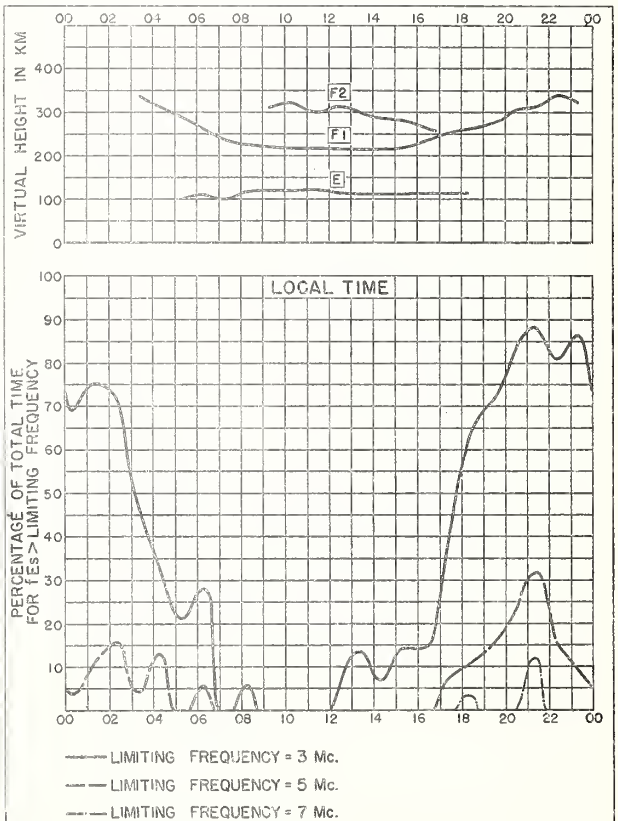


Fig. 4. TROMSO, NORWAY SEPTEMBER 1952

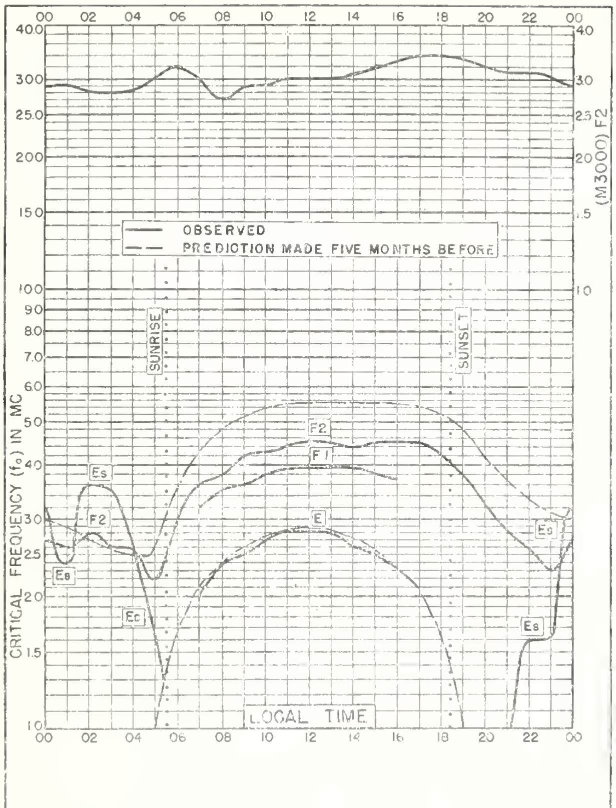


Fig. 5 ANCHORAGE, ALASKA
61.2° N, 149.9° W SEPTEMBER 1952

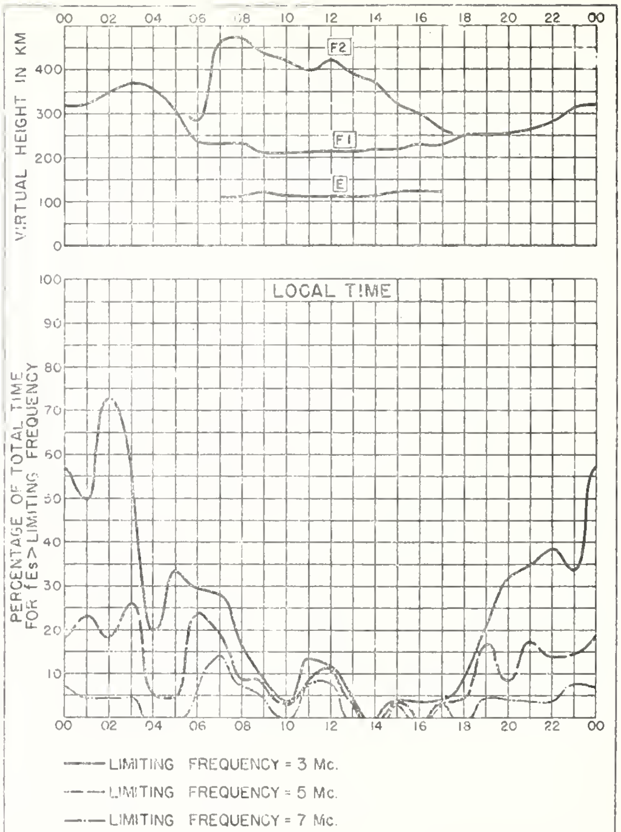


Fig. 6 ANCHORAGE, ALASKA SEPTEMBER 1952

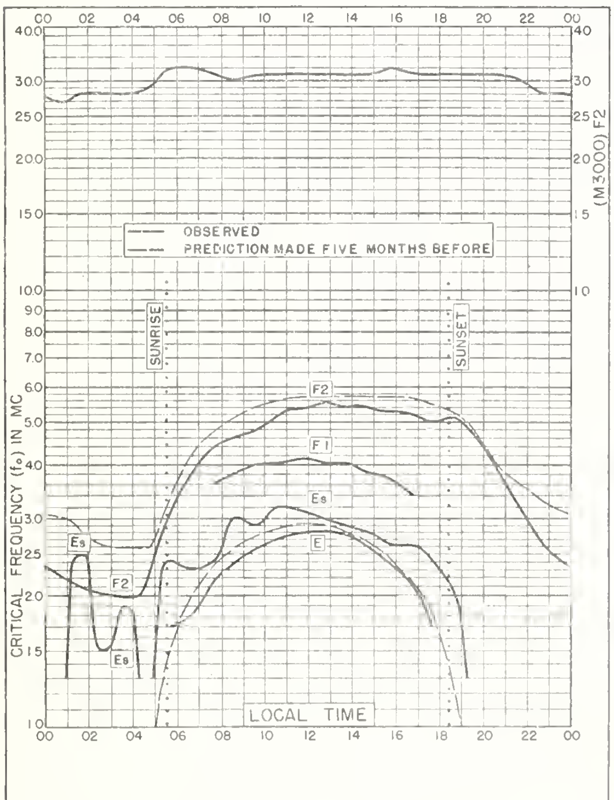


Fig 7 OSLO, NORWAY
60 0° N, 11 1° E SEPTEMBER 1952

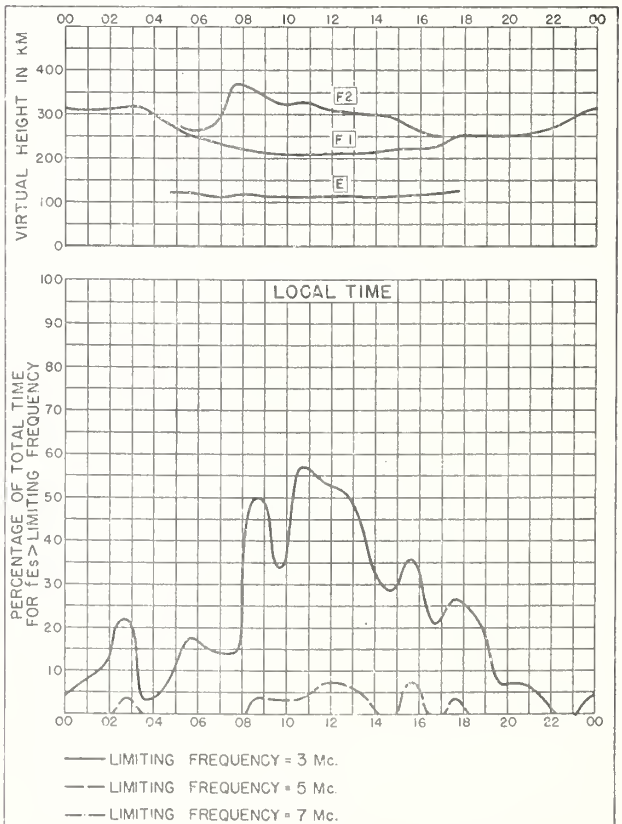


Fig. 8 OSLO, NORWAY SEPTEMBER 1952

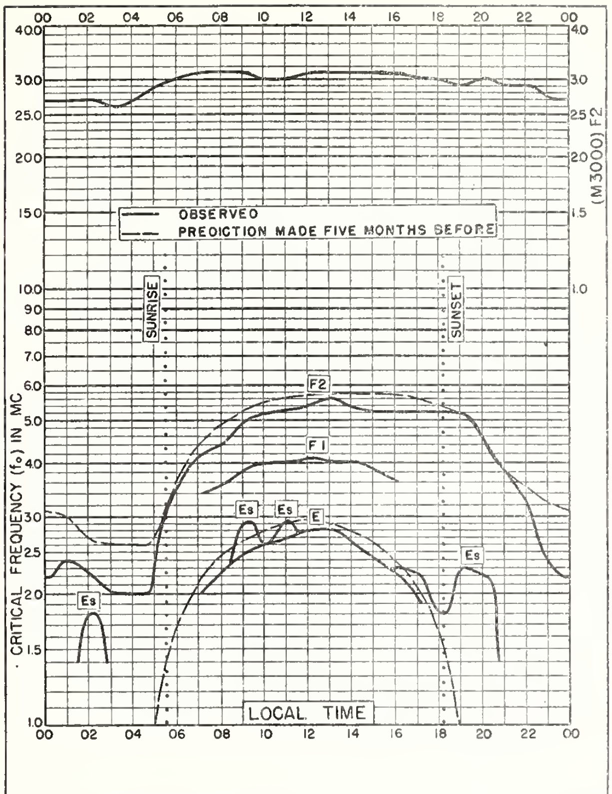


Fig. 9 UPSALA, SWEDEN
59.8°N, 17.6°E SEPTEMBER 1952

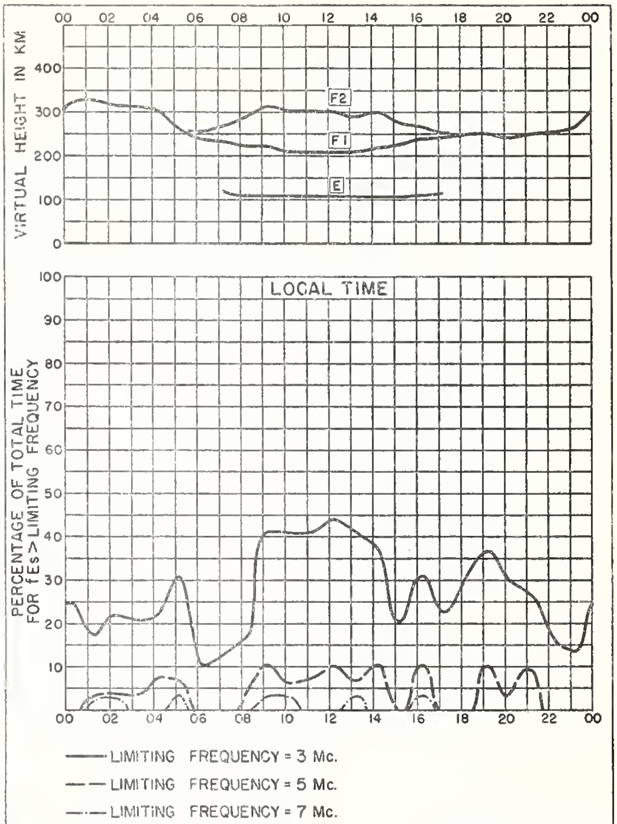


Fig. 10 UPSALA, SWEDEN SEPTEMBER 1952

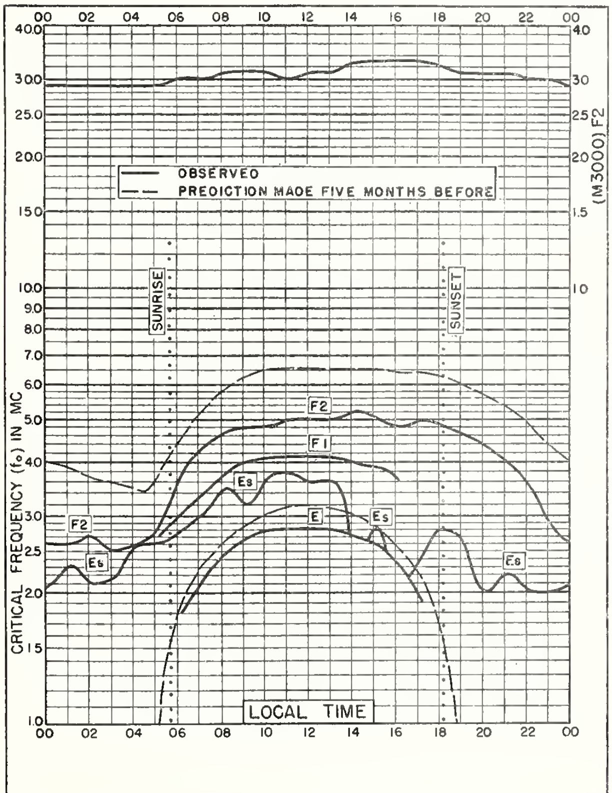


Fig. 11. ADAK, ALASKA
51.9°N, 176.6°W SEPTEMBER 1952

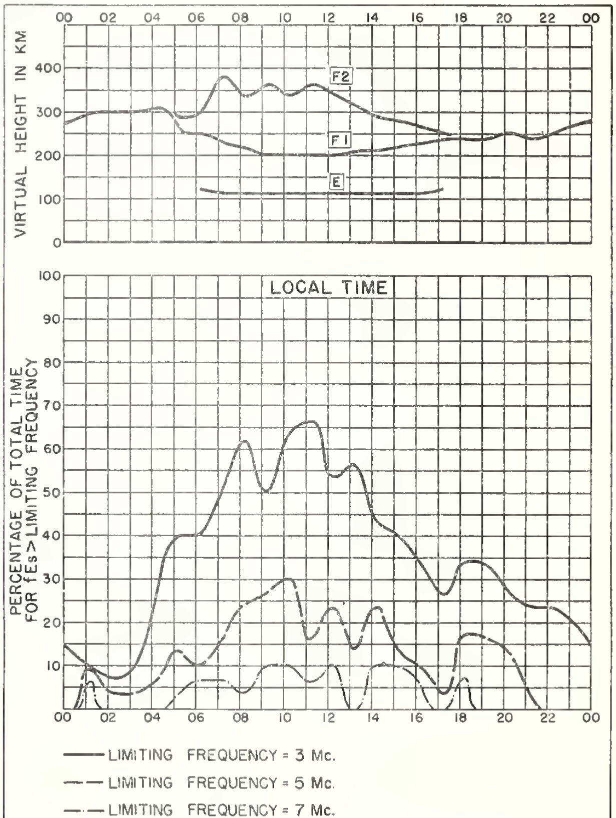


Fig. 12. ADAK, ALASKA. SEPTEMBER 1952

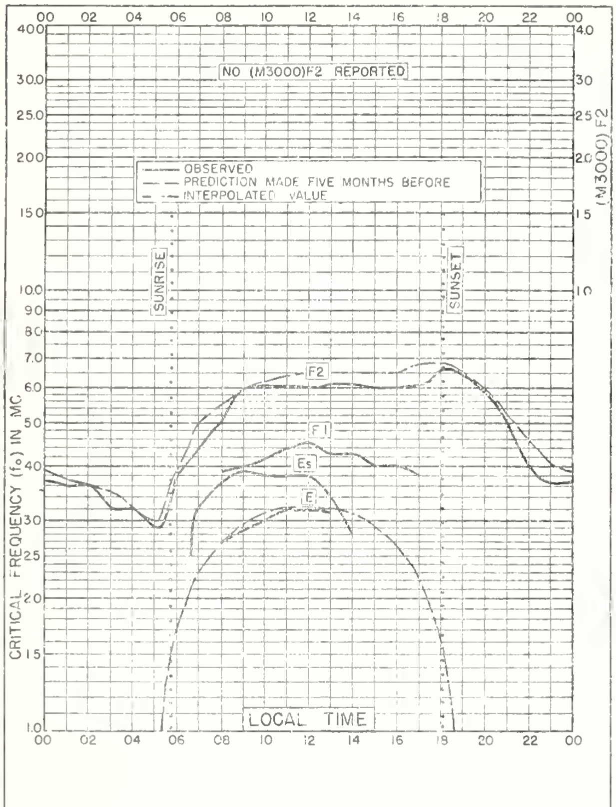


Fig. 13 GRAZ, AUSTRIA
47.1°N, 15.5°E SEPTEMBER 1952

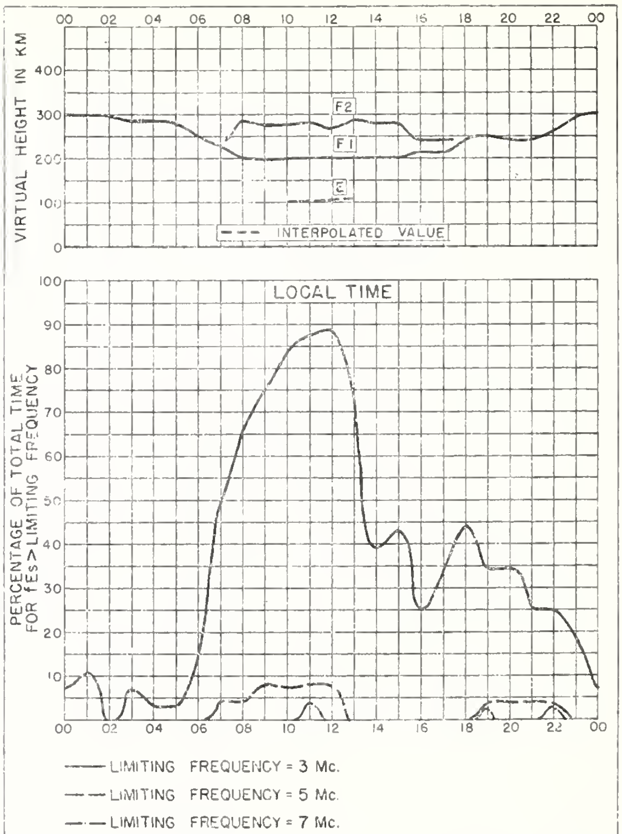


Fig. 14 GRAZ, AUSTRIA SEPTEMBER 1952

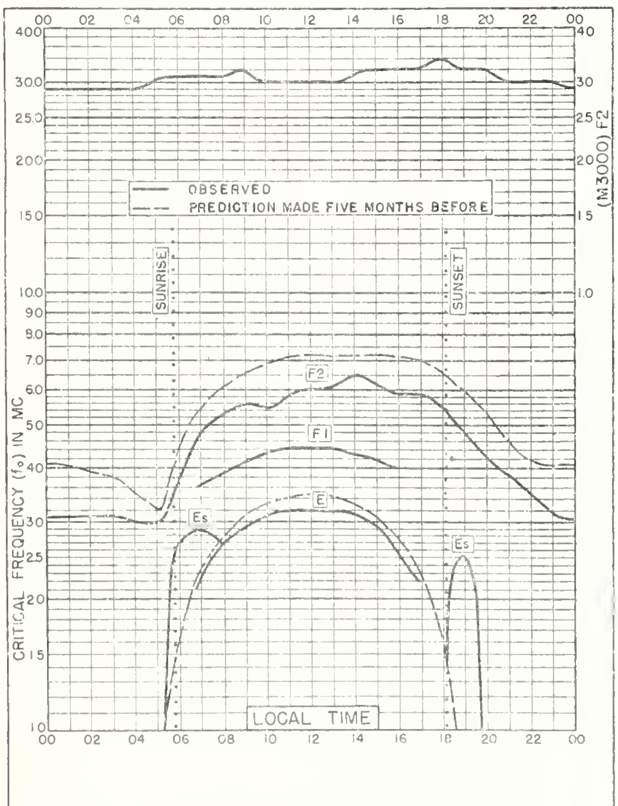


Fig. 15 SAN FRANCISCO, CALIFORNIA
37.4° N, 122.2° W SEPTEMBER 1952

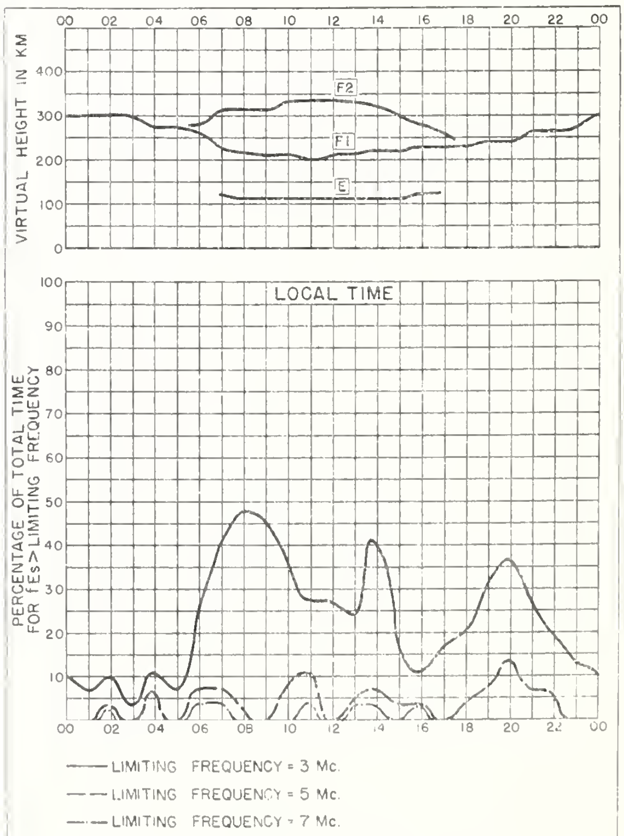


Fig. 16 SAN FRANCISCO, CALIFORNIA SEPTEMBER 1952

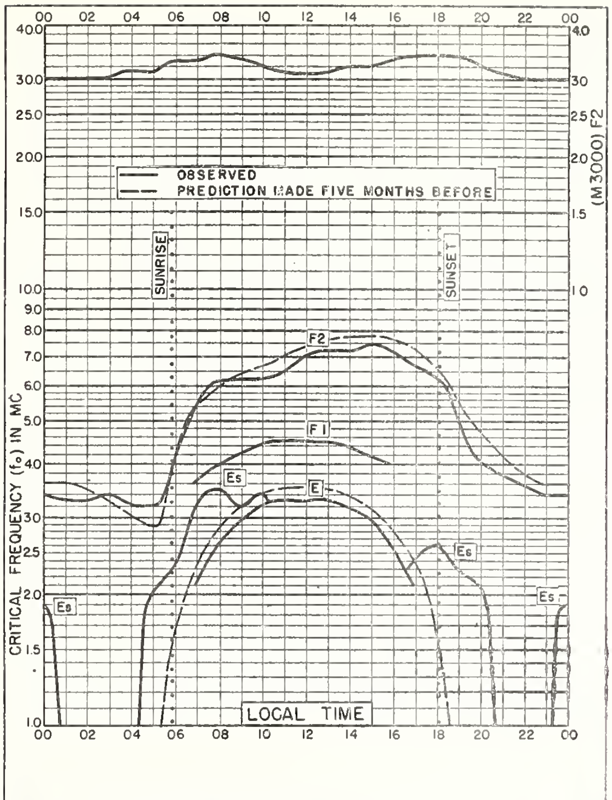


Fig. 17 WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W SEPTEMBER 1952

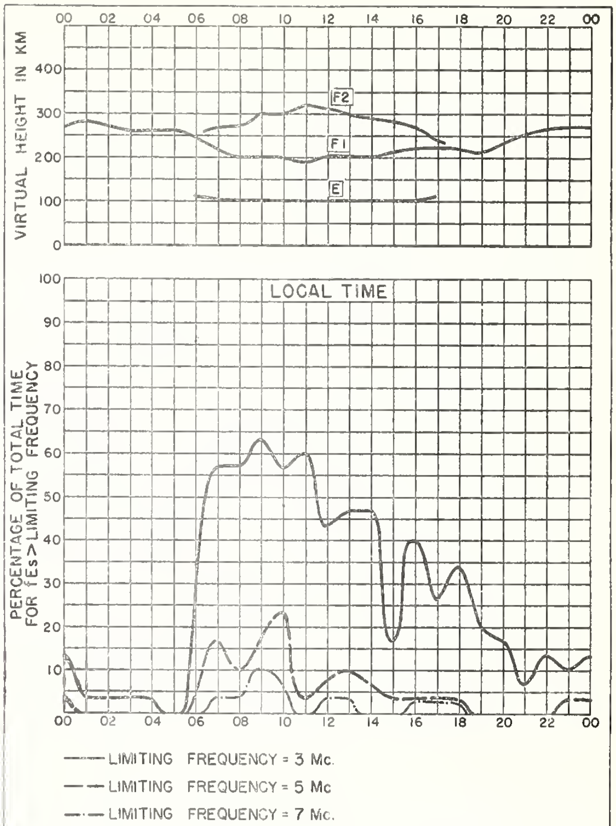


Fig. 18 WHITE SANDS, NEW MEXICO SEPTEMBER 1952

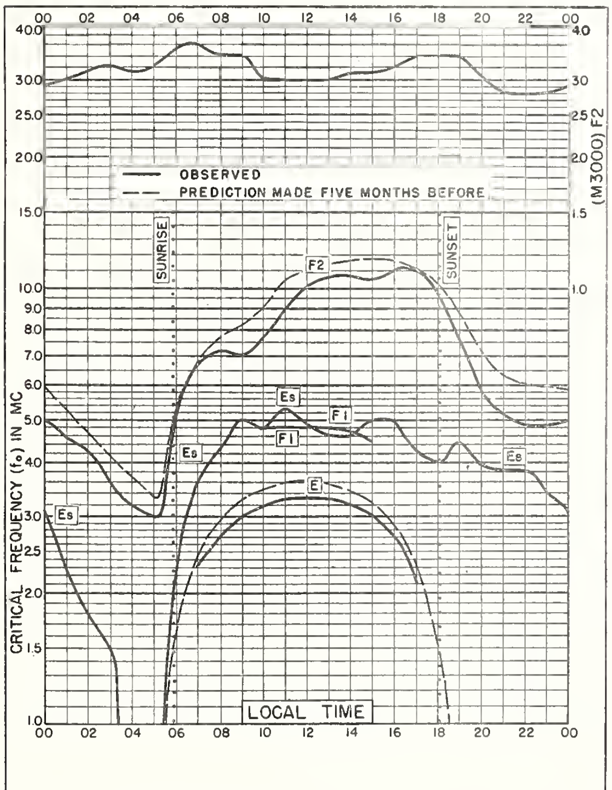


Fig 19. OKINAWA I.
26.3° N, 127.8° E SEPTEMBER 1952

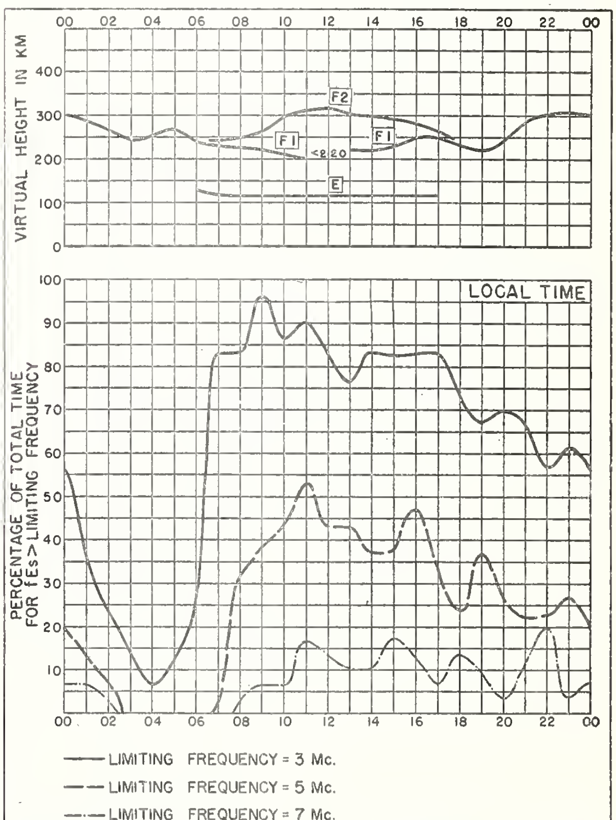


Fig. 20. OKINAWA I. SEPTEMBER 1952

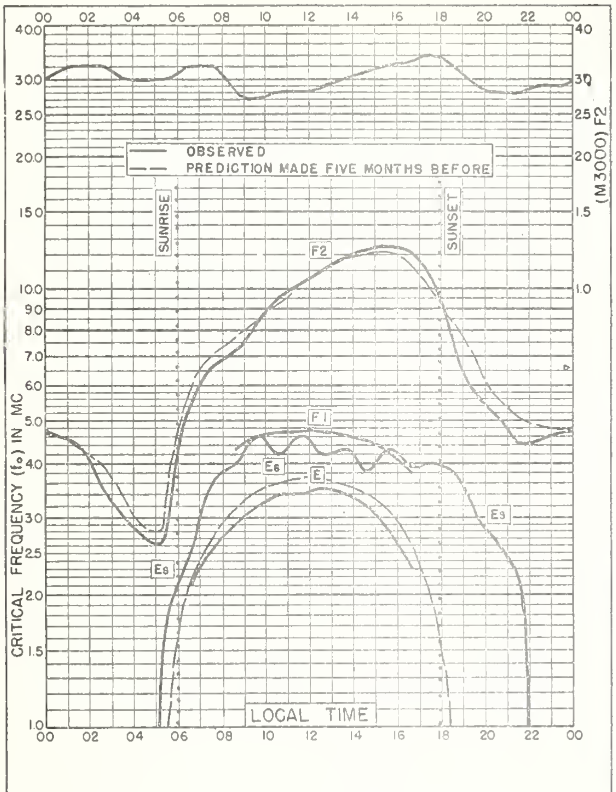


Fig. 21 MAUI, HAWAII
20.8° N, 156.5° W SEPTEMBER 1952

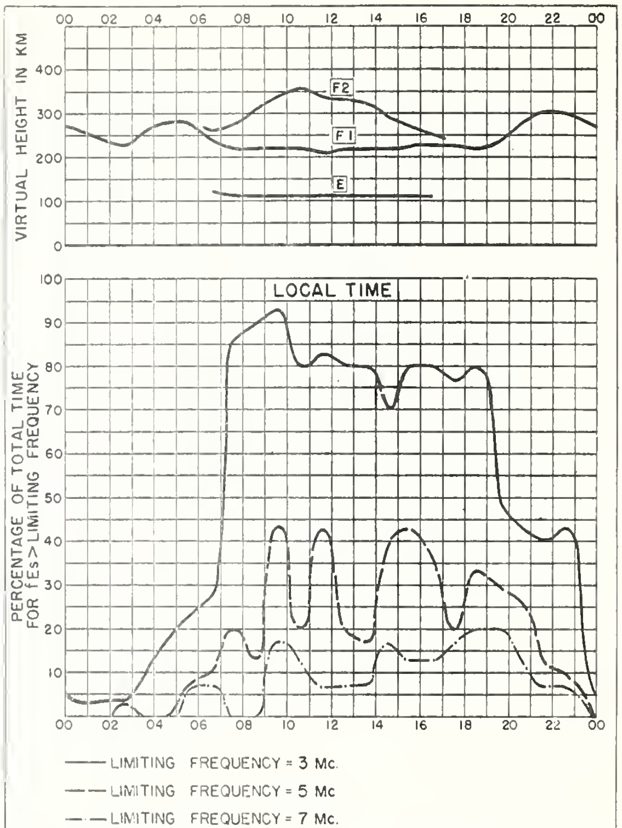


Fig. 22 MAUI, HAWAII SEPTEMBER 1952

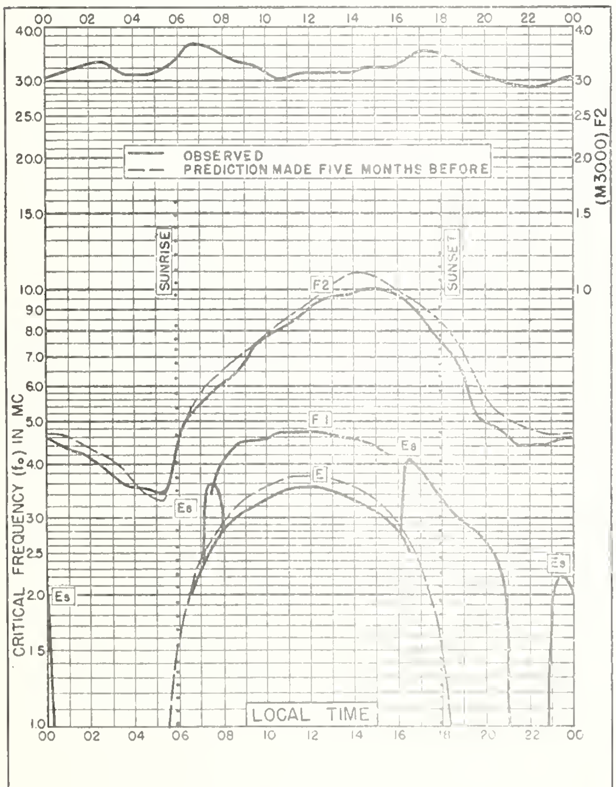


Fig. 23 PUERTO RICO, W I
18.5°N, 67.2°W SEPTEMBER 1952

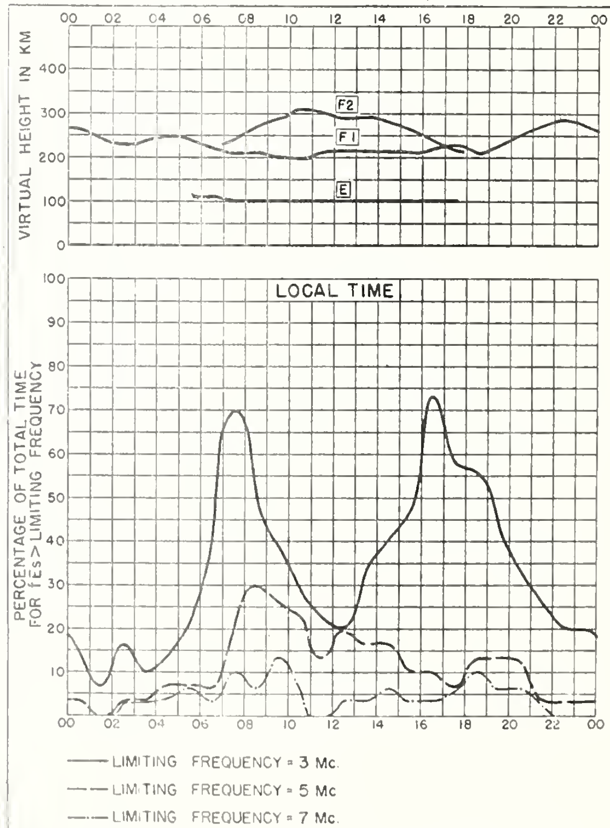


Fig. 24 PUERTO RICO, W.I. SEPTEMBER 1952

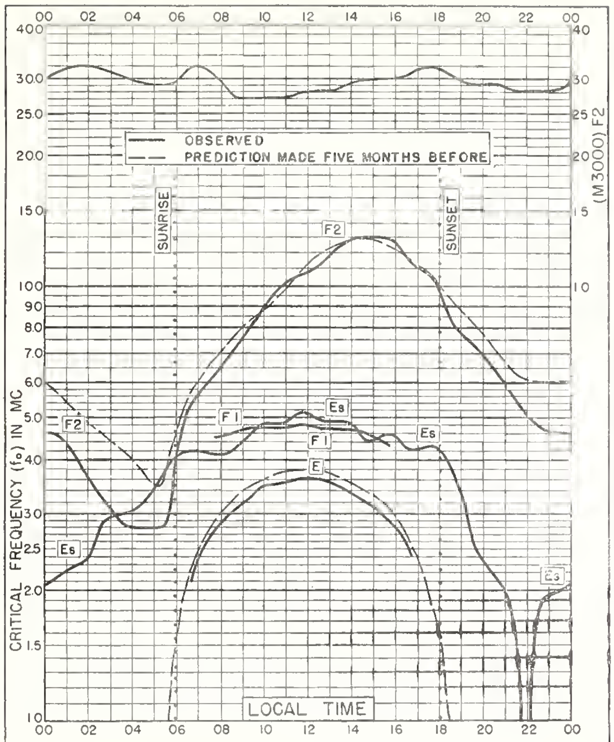


Fig. 25 PANAMA CANAL ZONE
9.4°N, 79.9°W SEPTEMBER 1952

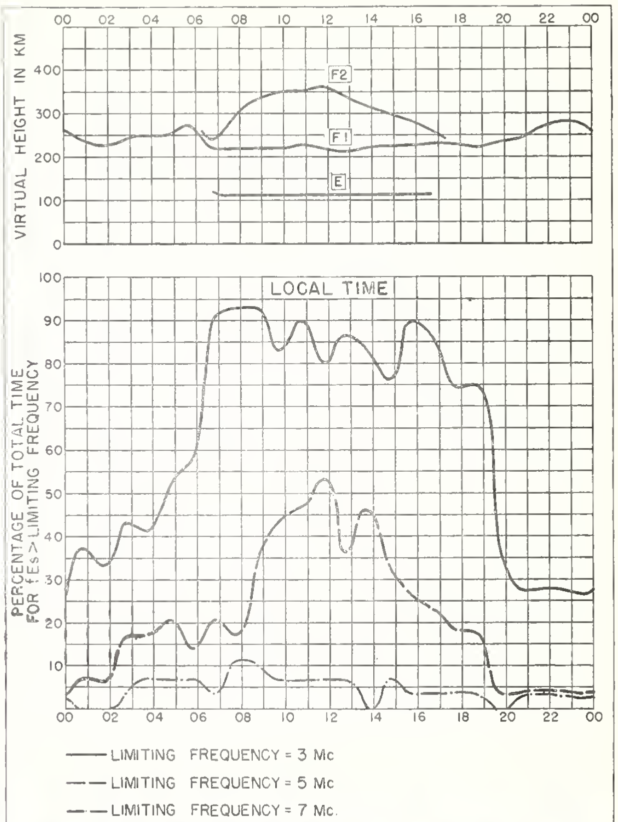


Fig 26 PANAMA CANAL ZONE SEPTEMBER 1952

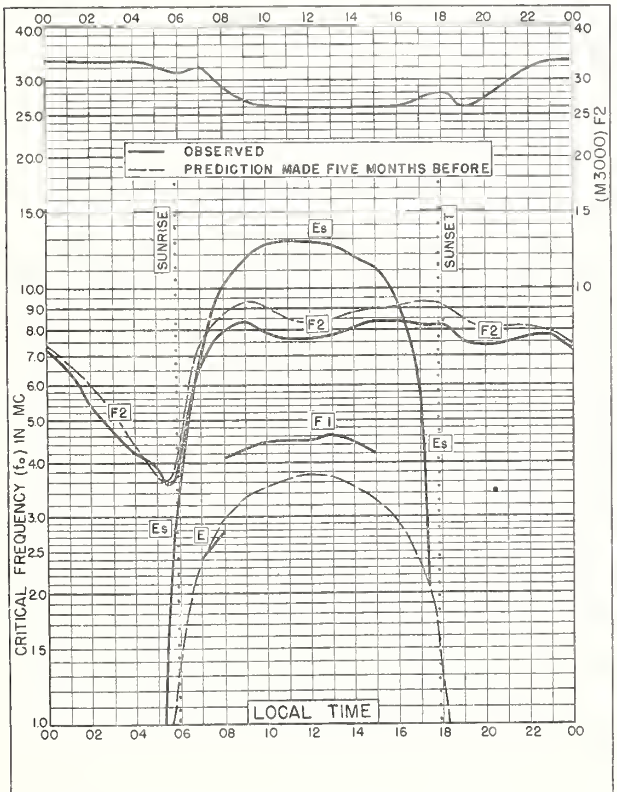


Fig. 27. HUANCAYO, PERU
12.0°S, 75.3°W SEPTEMBER 1952

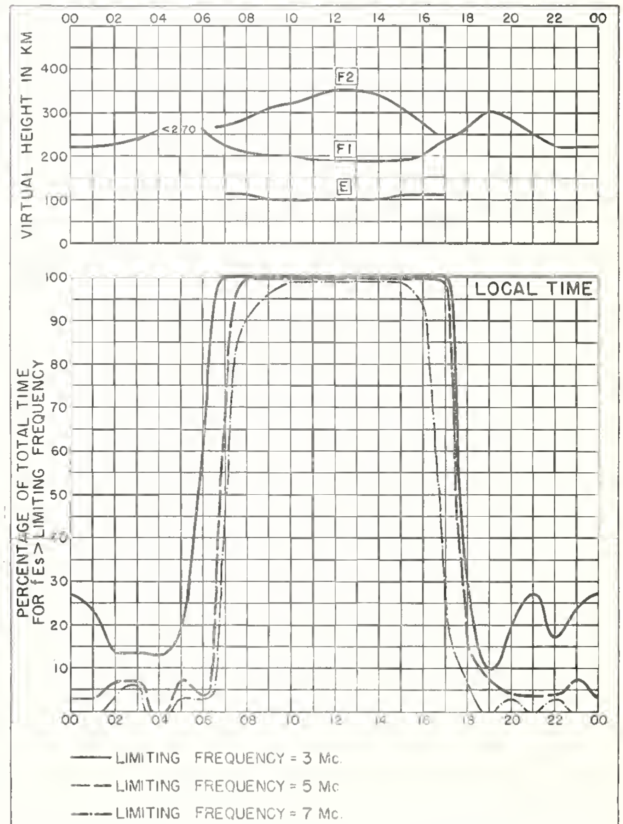


Fig. 28. HUANCAYO, PERU SEPTEMBER 1952

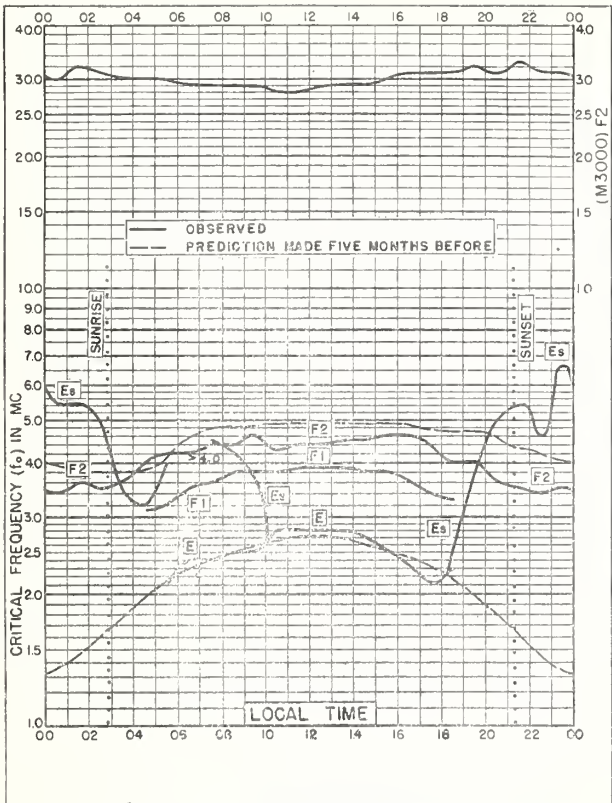


Fig. 29 POINT BARROW, ALASKA
71.3° N, 156.8° W AUGUST 1952

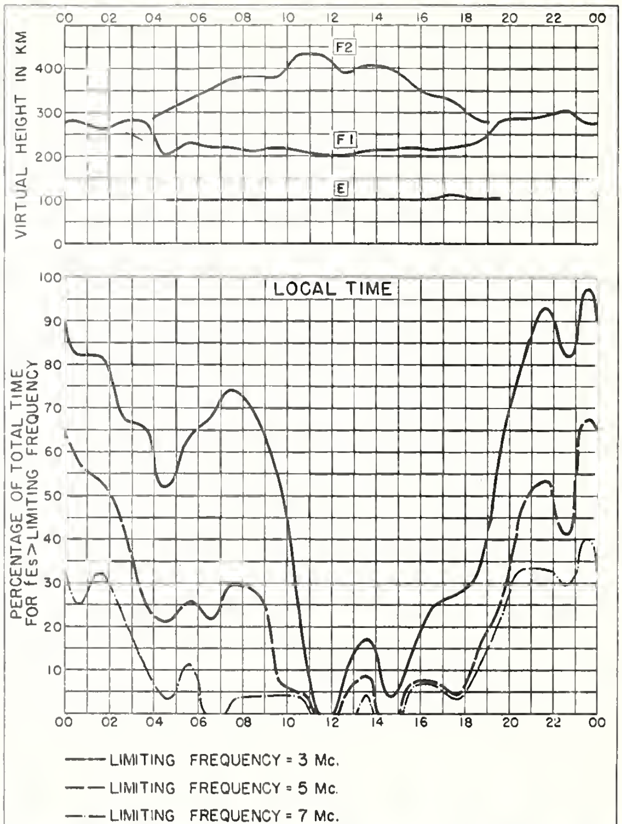


Fig. 30. POINT BARROW, ALASKA AUGUST 1952

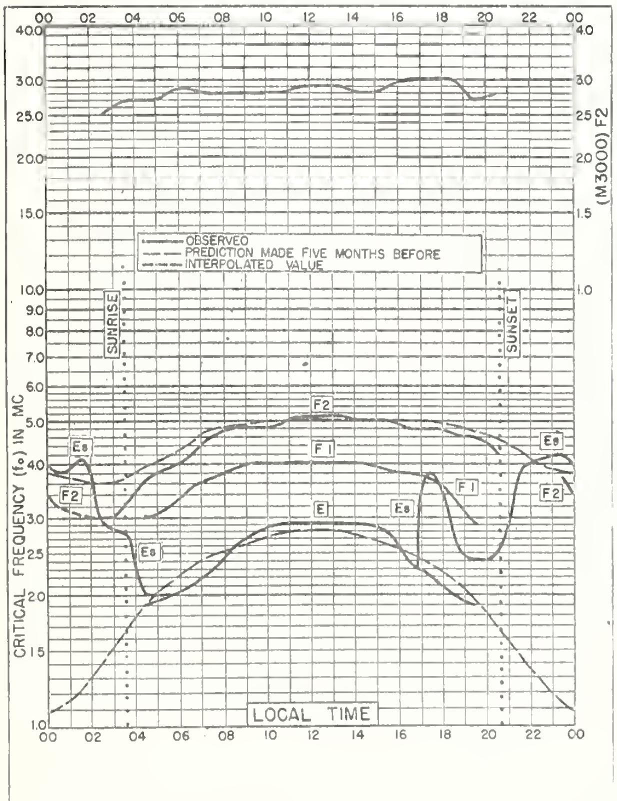


Fig. 31 KIRUNA, SWEDEN
67.8°N, 20.5°E AUGUST 1952

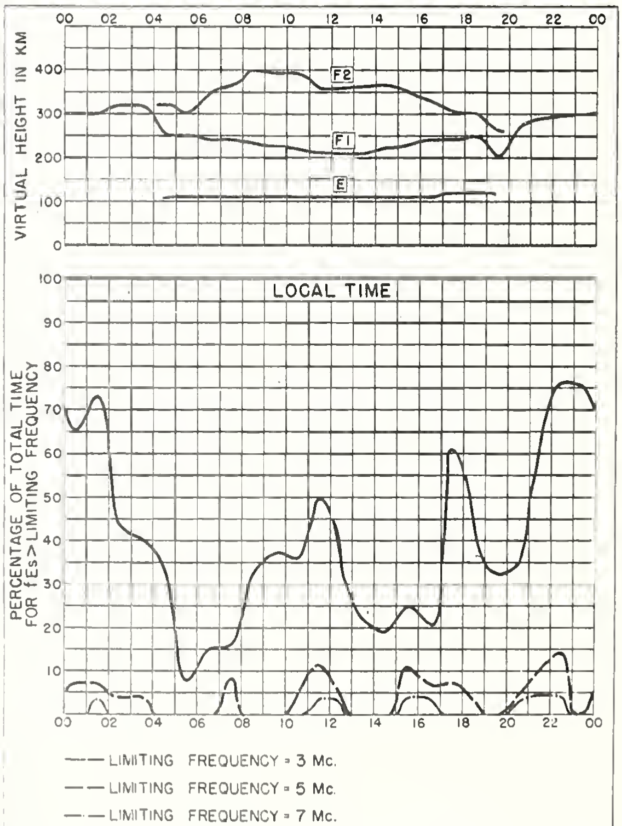


Fig 32 KIRUNA, SWEDEN AUGUST 1952

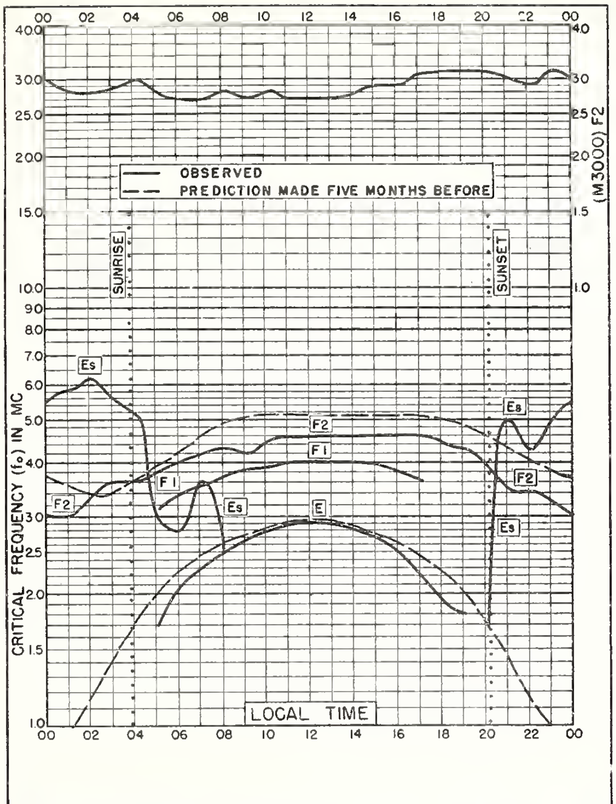


Fig. 33. FAIRBANKS, ALASKA
64.9° N, 147.8° W AUGUST 1952

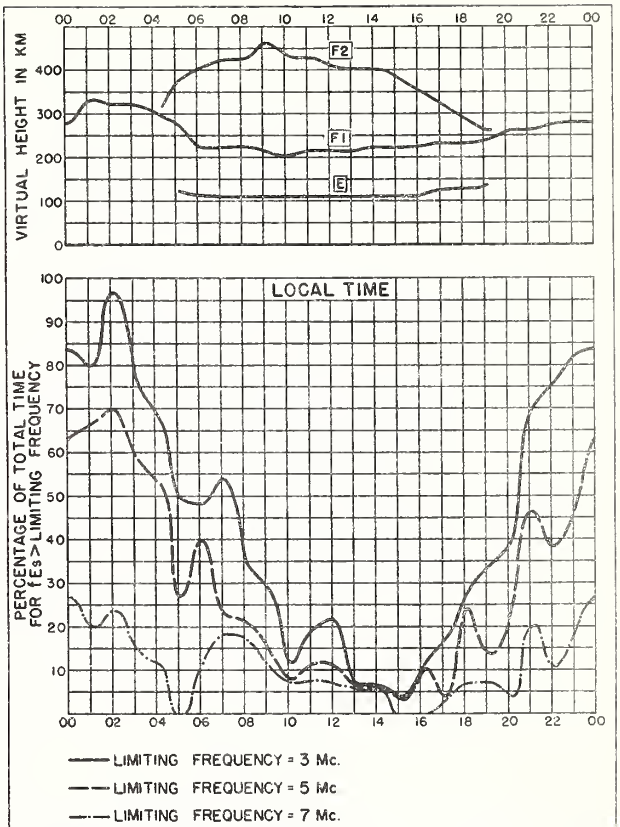


Fig. 34. FAIRBANKS, ALASKA AUGUST 1952

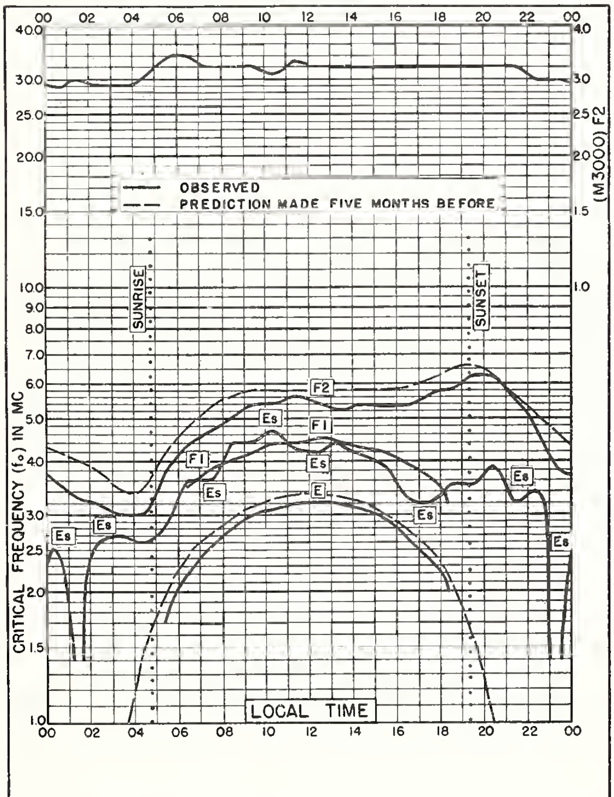


Fig. 35 De BILT, HOLLAND
52.1°N, 5.2°E AUGUST 1952

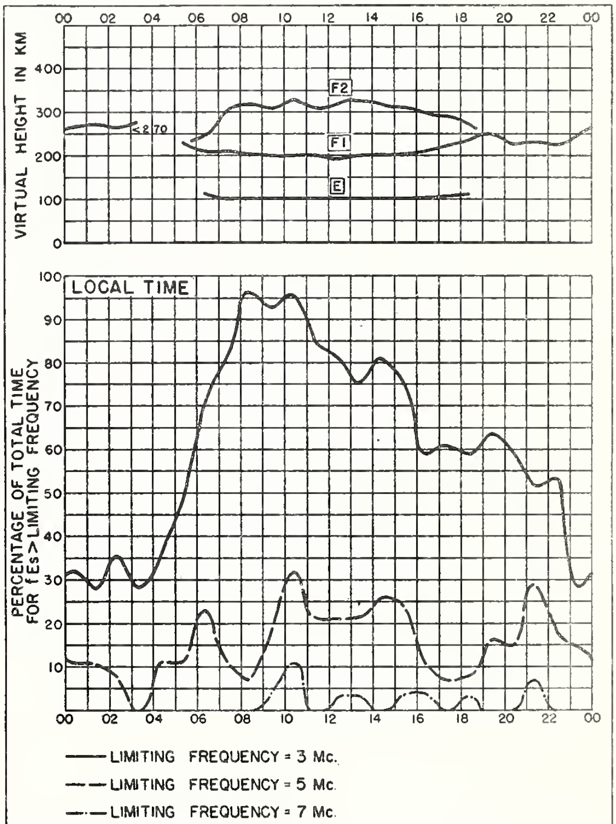


Fig. 36 De BILT, HOLLAND AUGUST 1952

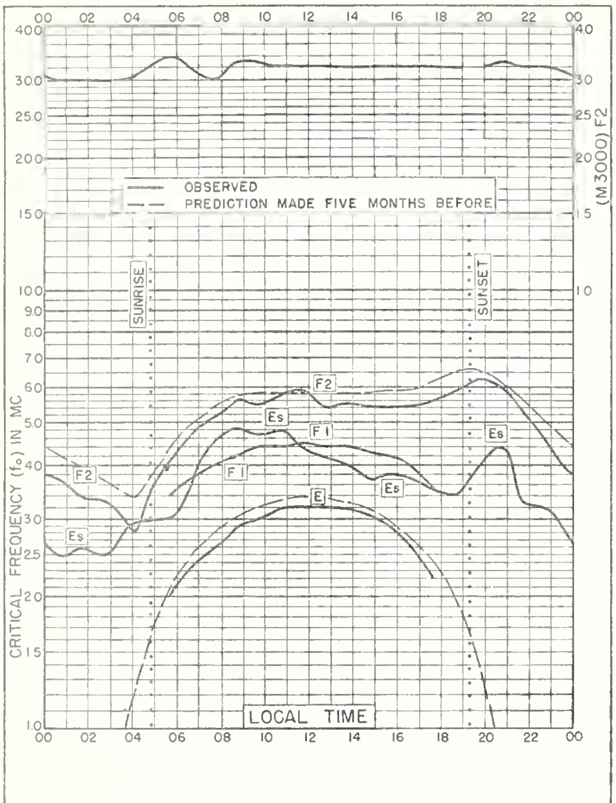


Fig. 37. LINDAU/ HARZ, GERMANY
51.6° N, 10.1° E AUGUST 1952

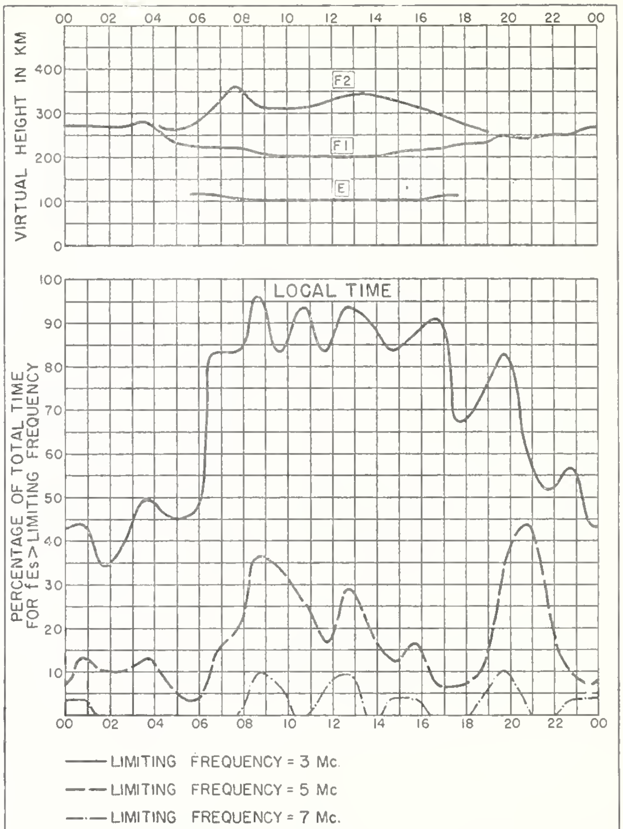


Fig. 38. LINDAU / HARZ, GERMANY AUGUST 1952

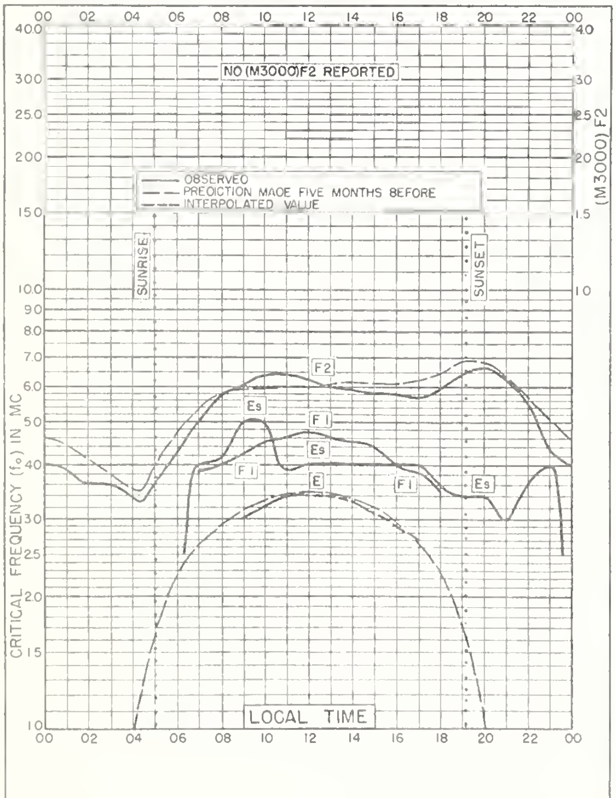


Fig. 39. GRAZ, AUSTRIA
47.1°N, 15.5°E AUGUST 1952

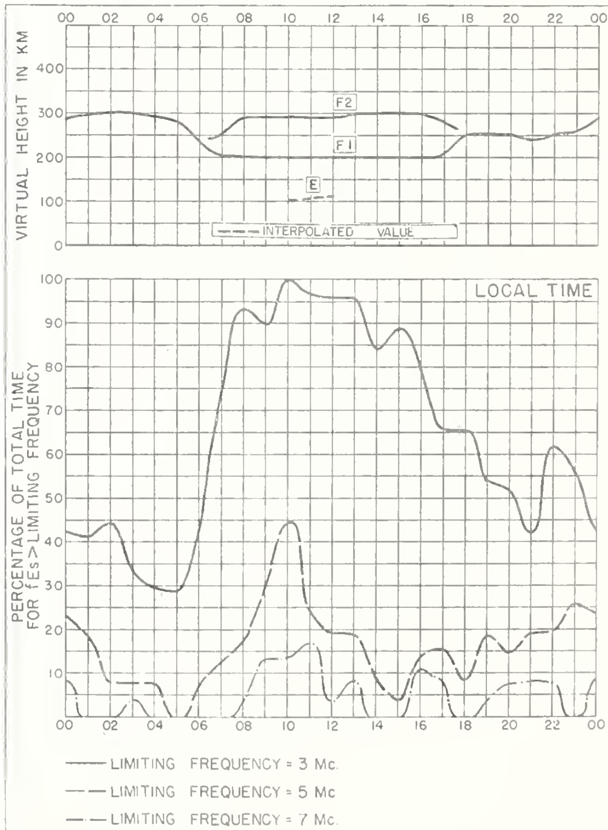


Fig. 40. GRAZ, AUSTRIA AUGUST 1952

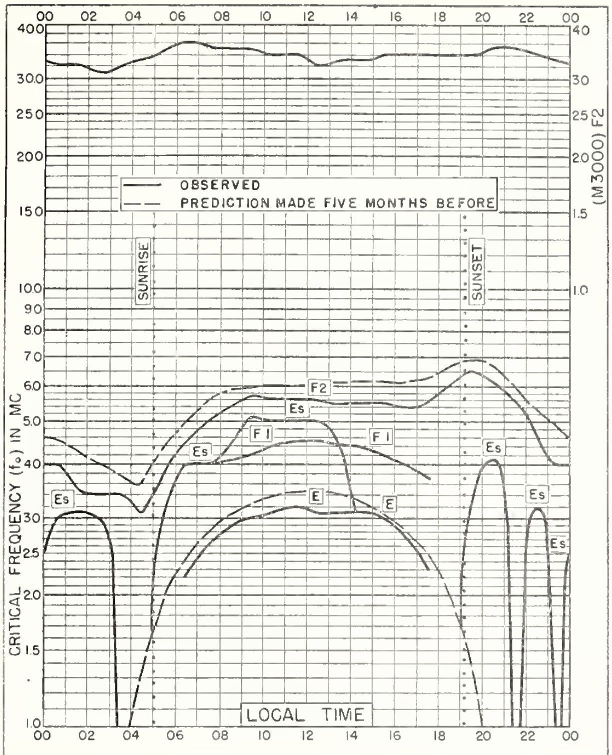


Fig. 41. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E AUGUST 1952

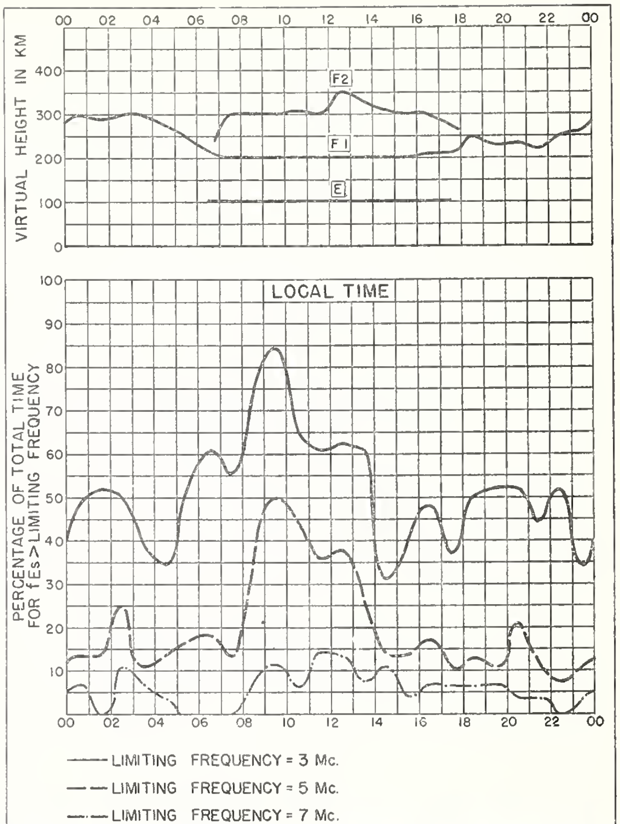


Fig. 42. SCHWARZENBURG, SWITZERLAND AUGUST 1952

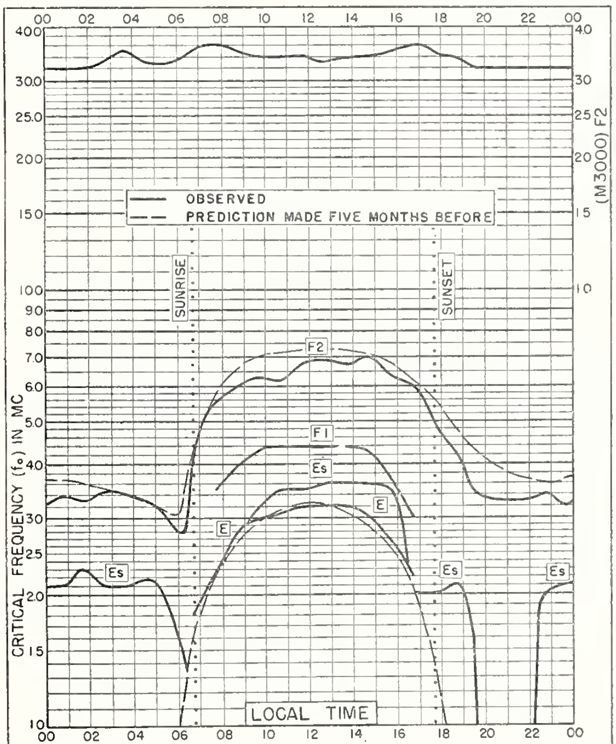


Fig. 43 WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E AUGUST 1952

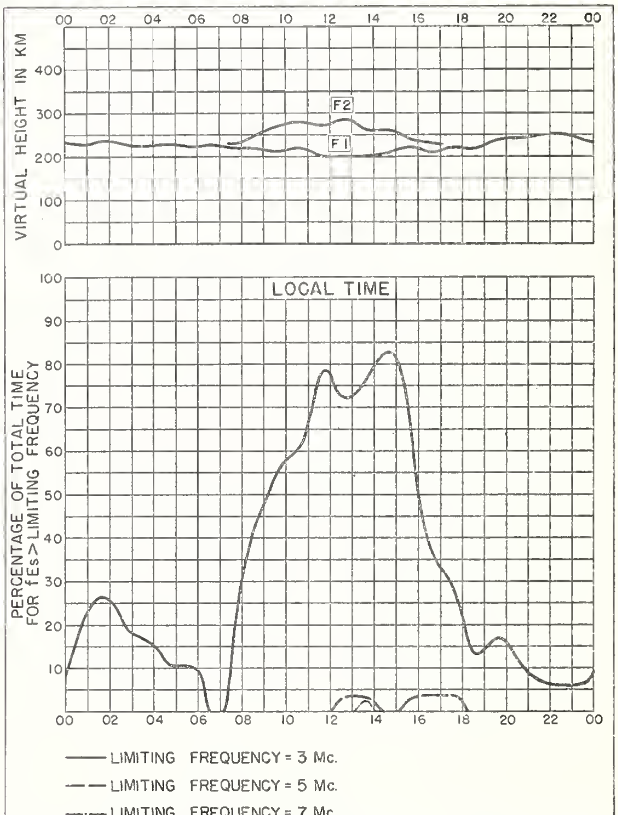


Fig. 44 WATHEROO, W. AUSTRALIA AUGUST 1952

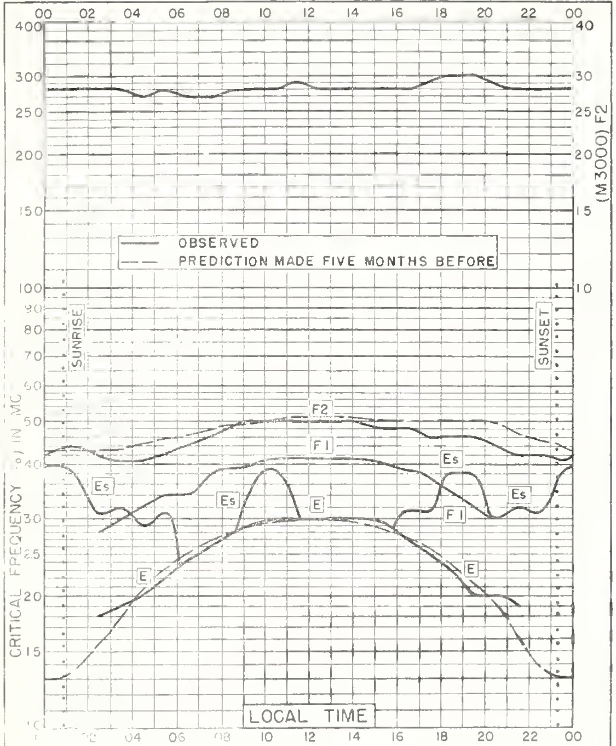


Fig. 45 KIRUNA, SWEDEN
67.8°N, 20.5°E JULY 1952

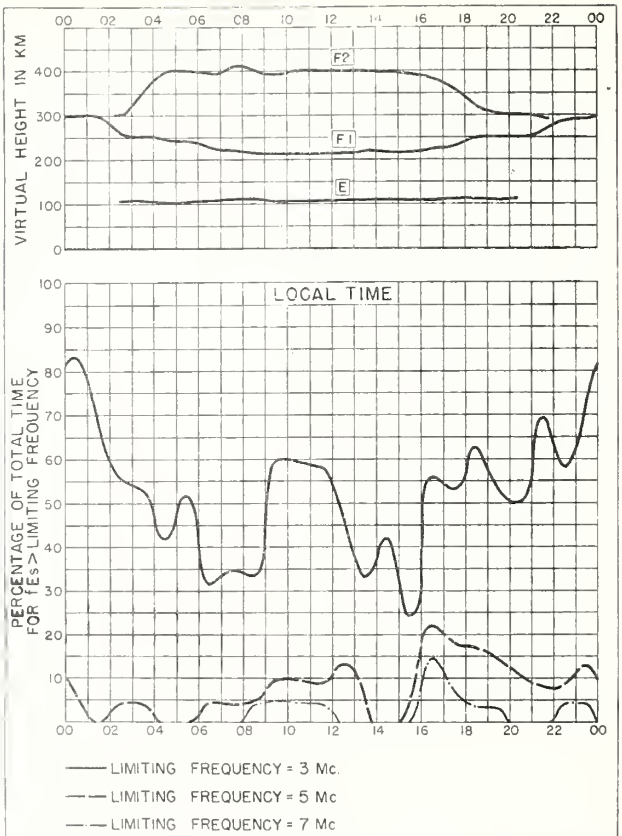


Fig. 46 KIRUNA, SWEDEN JULY 1952

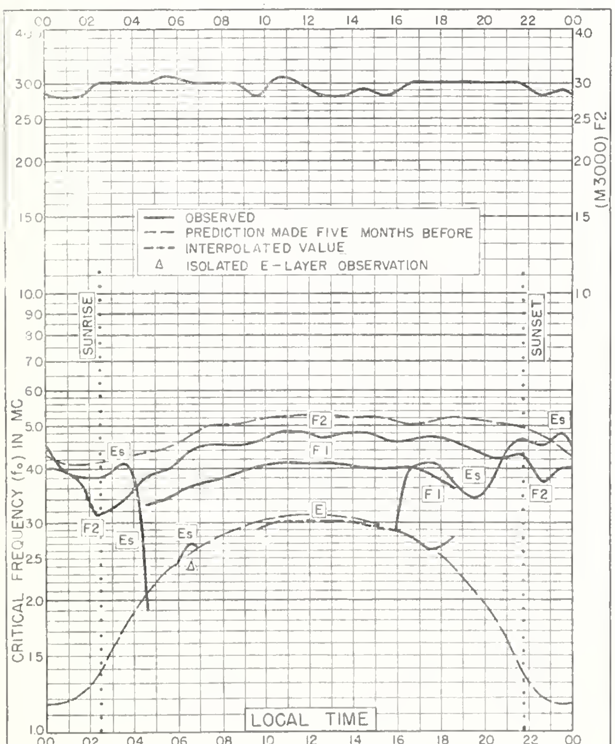


Fig. 47. REYKJAVIK, ICELAND
64.1°N, 21.8°W JULY 1952

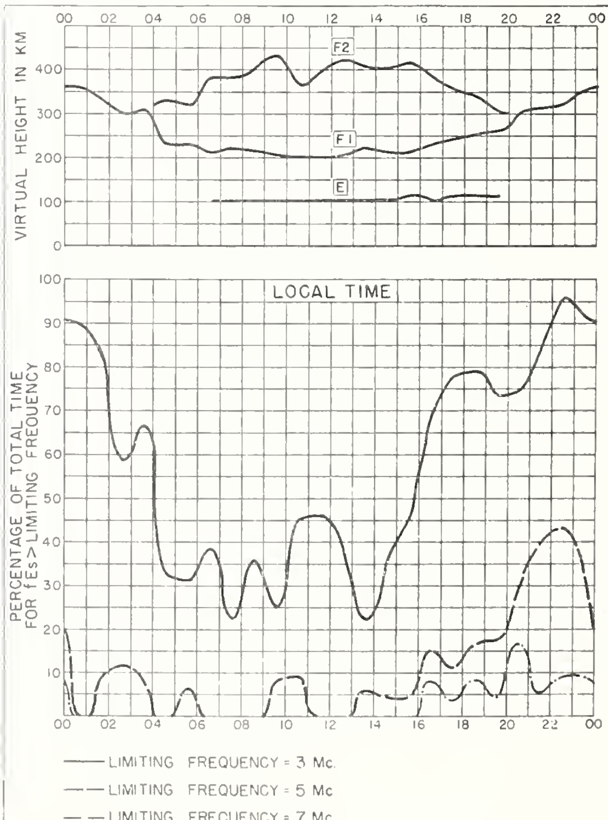


Fig. 48. REYKJAVIK, ICELAND JULY 1952

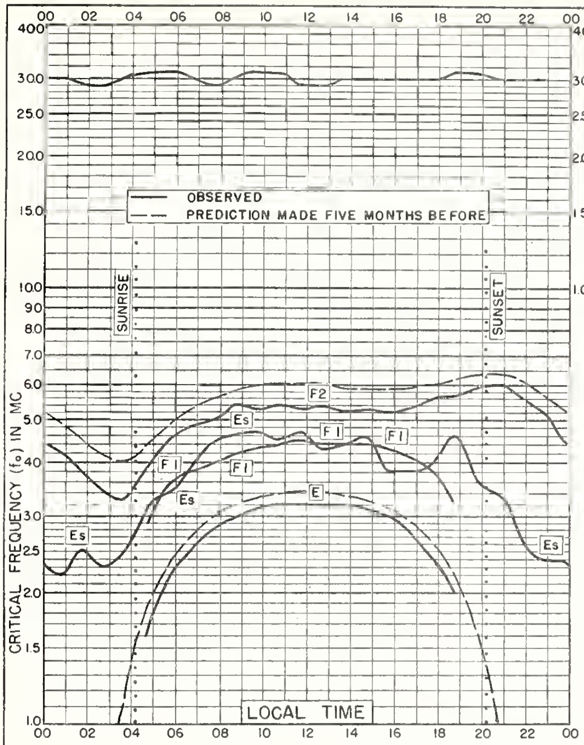


Fig. 49 LINDAU / HARZ, GERMANY
51.6°N, 10.1°E JULY 1952

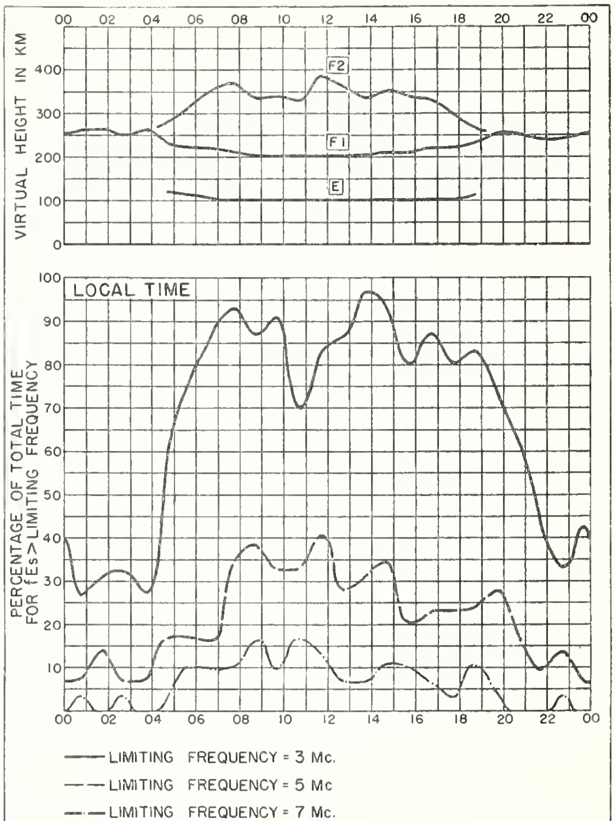


Fig. 50. LINDAU / HARZ, GERMANY JULY 1952

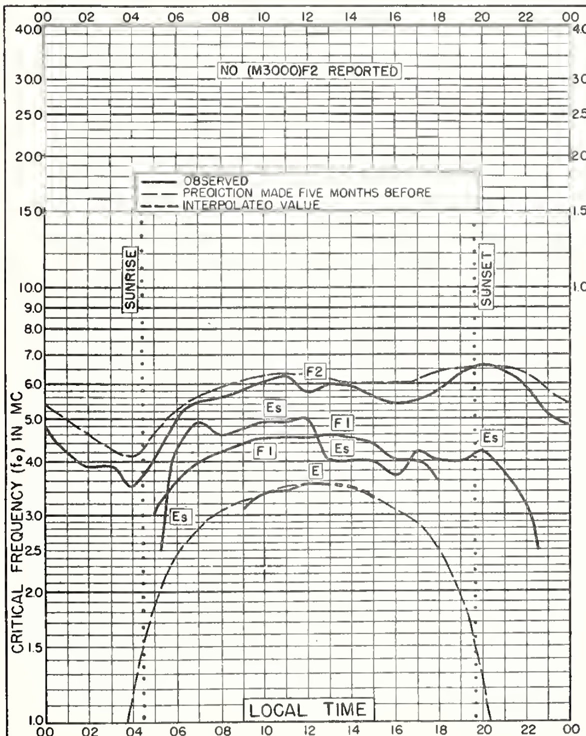


Fig. 51 GRAZ, AUSTRIA
47.1°N, 15.5°E JULY 1952

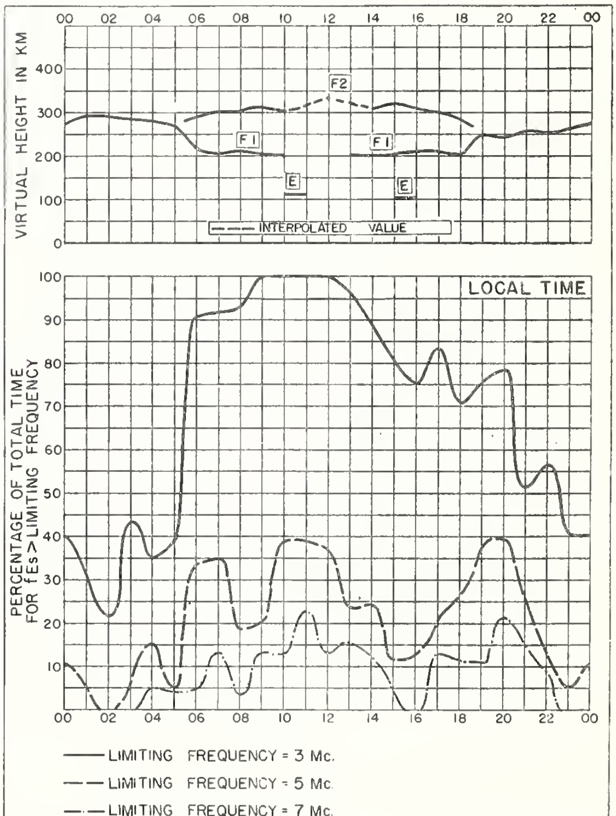


Fig. 52 GRAZ, AUSTRIA JULY 1952

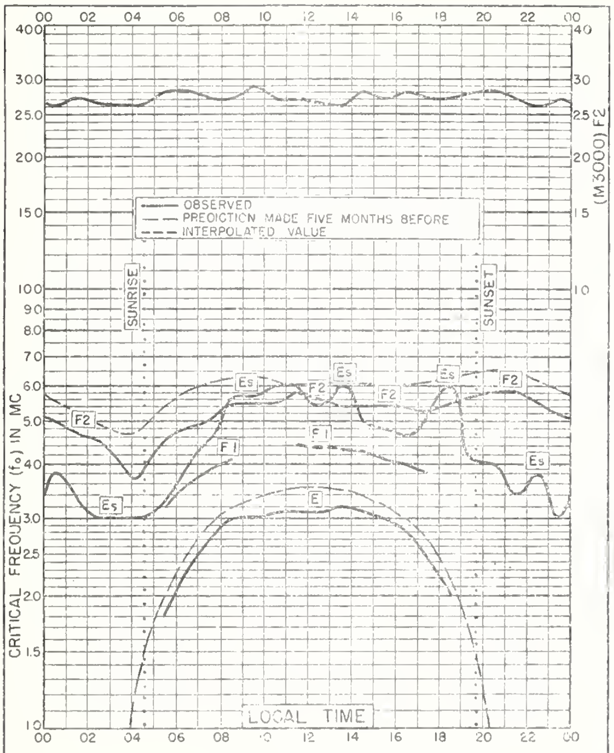


Fig. 53 WAKKANAI, JAPAN
45.4°N, 141.7°E JULY 1952

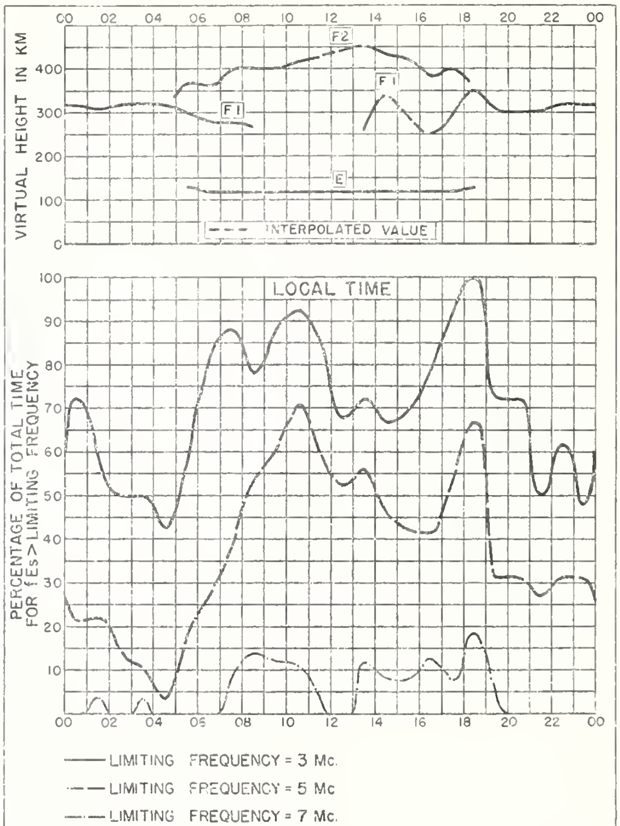


Fig. 54 WAKKANAI, JAPAN JULY 1952

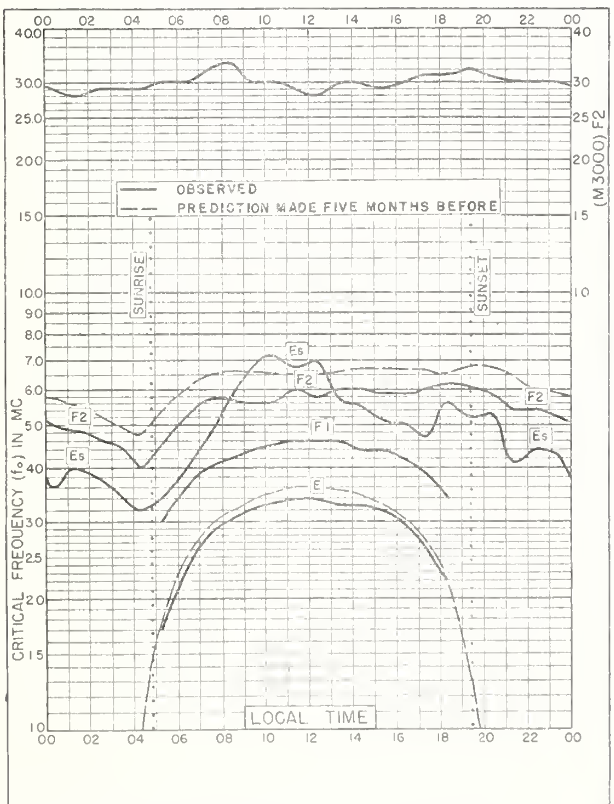


Fig. 55 AKITA, JAPAN
39.7°N, 140.1°E JULY 1952

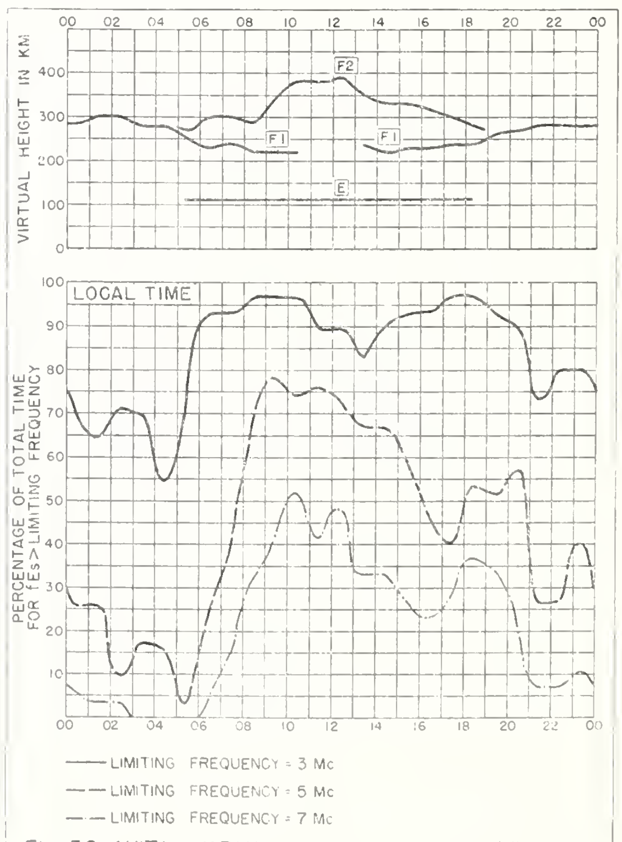


Fig. 56 AKITA, JAPAN JULY 1952

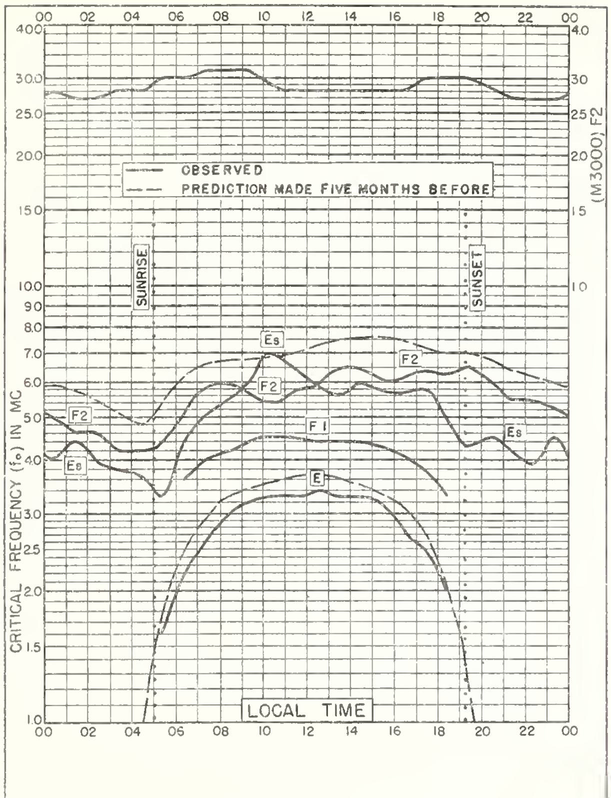


Fig. 57 TOKYO, JAPAN
35.7°N, 139.5°E
JULY 1952

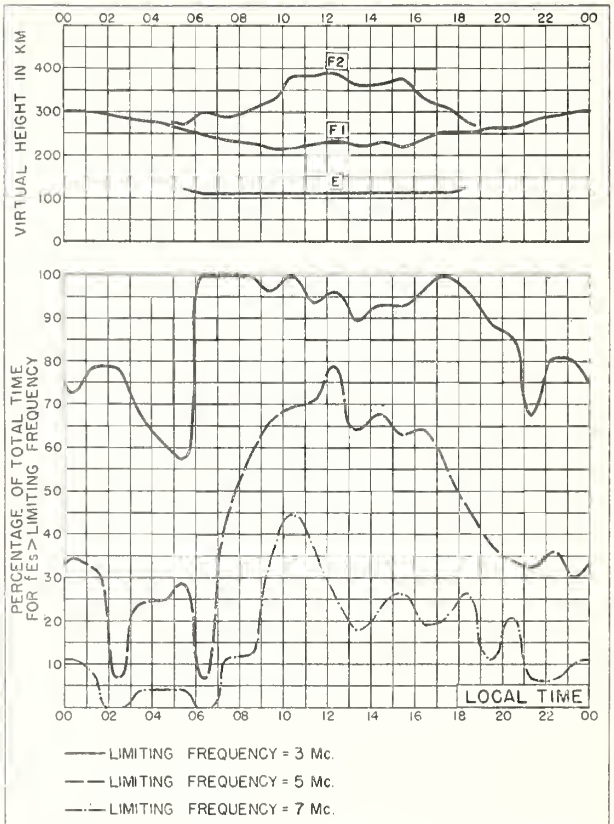


Fig. 58 TOKYO, JAPAN
JULY 1952

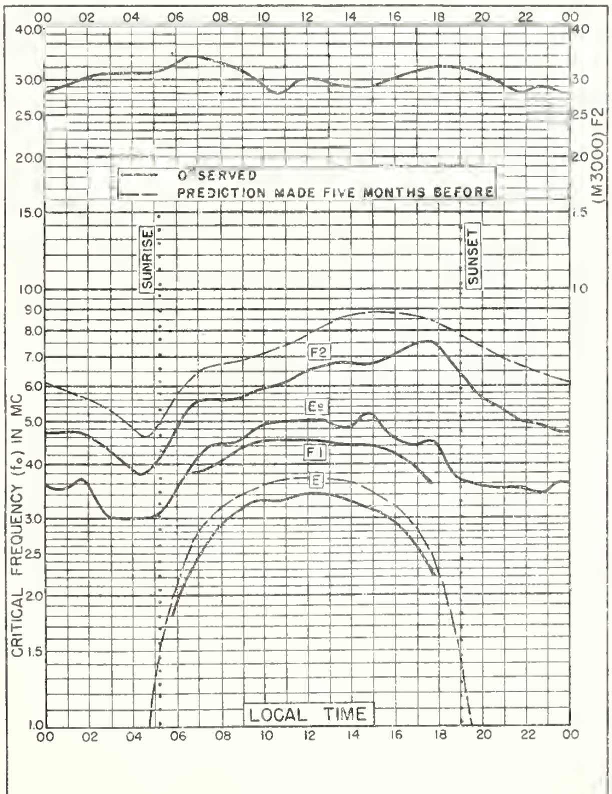


Fig. 59. YAMAGAWA, JAPAN
31.2°N, 130.6°E
JULY 1952

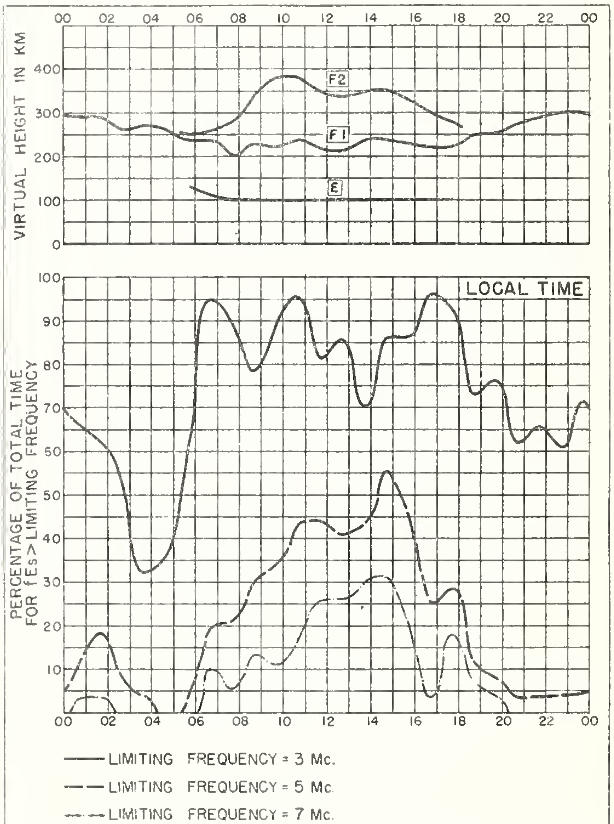


Fig. 60. YAMAGAWA, JAPAN
JULY 1952

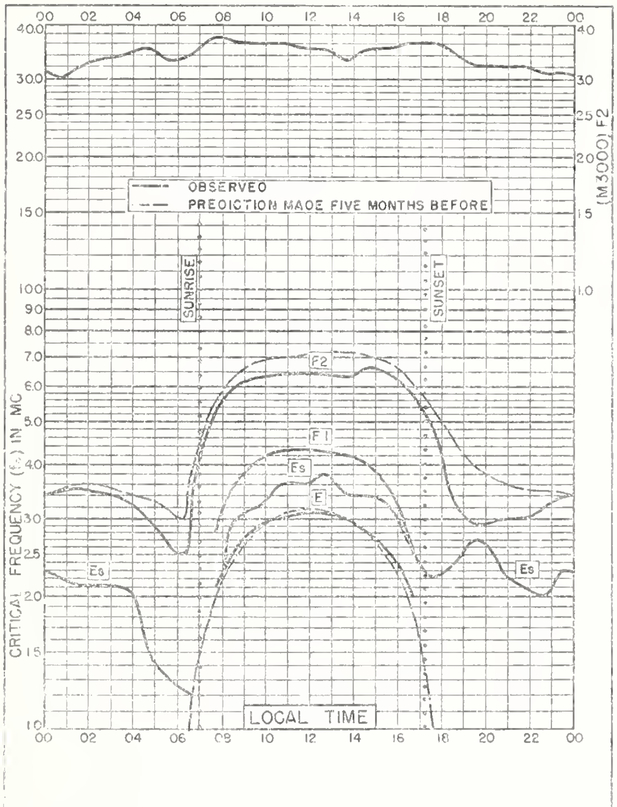


Fig. 61 WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E JULY 1952

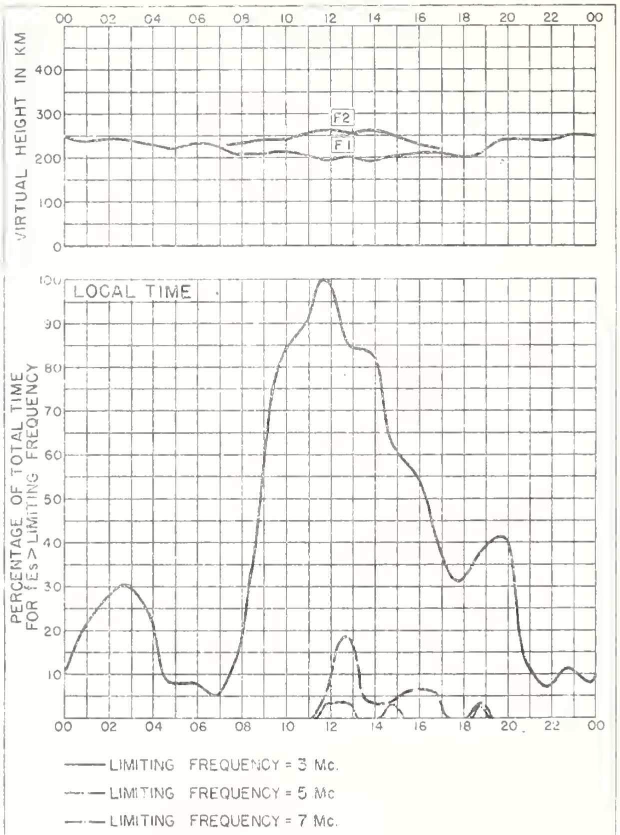


Fig. 62 WATHEROO, W. AUSTRALIA JULY 1952

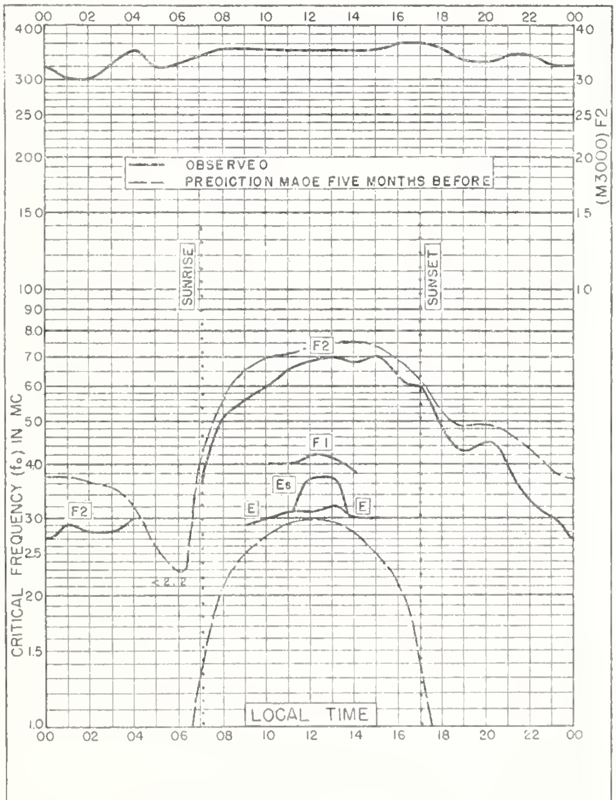


Fig. 63 BUENOS AIRES, ARGENTINA
34.5° S, 58.5° W JULY 1952

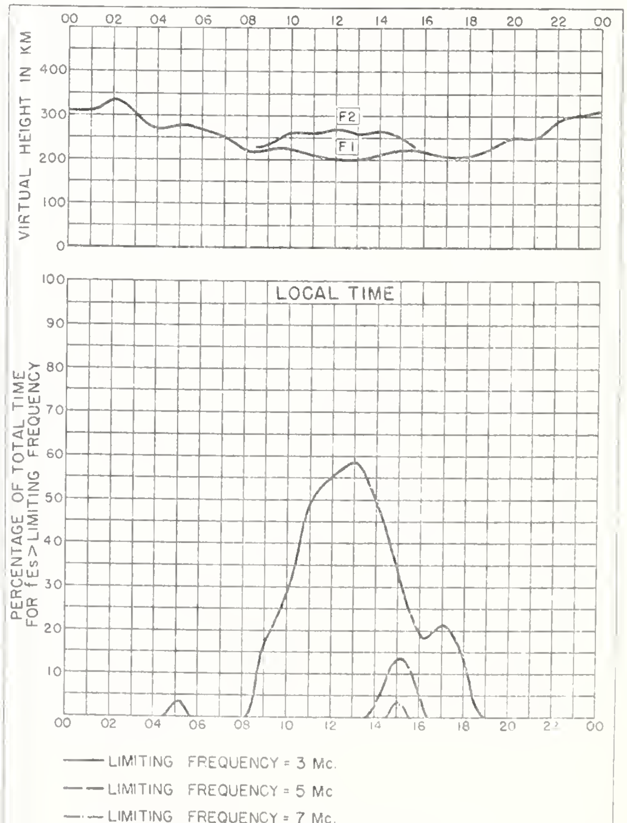


Fig. 64 BUENOS AIRES, ARGENTINA JULY 1952

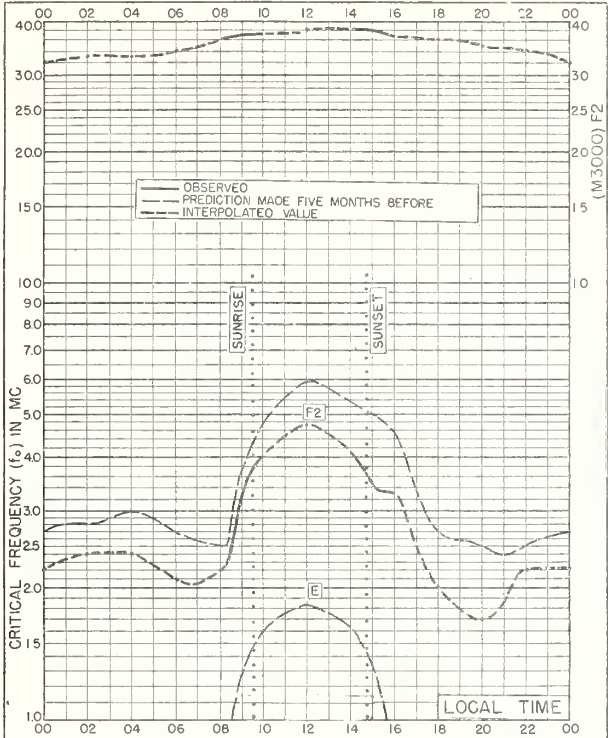


Fig. 65. DECEPCION I.
63.0°S, 60.7°W
JULY 1952

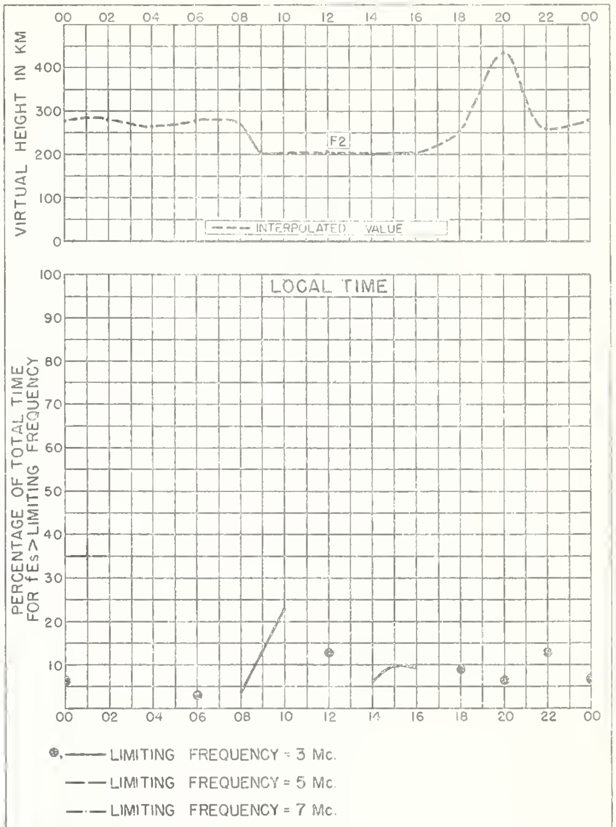


Fig. 66. DECEPCION I.
JULY 1952

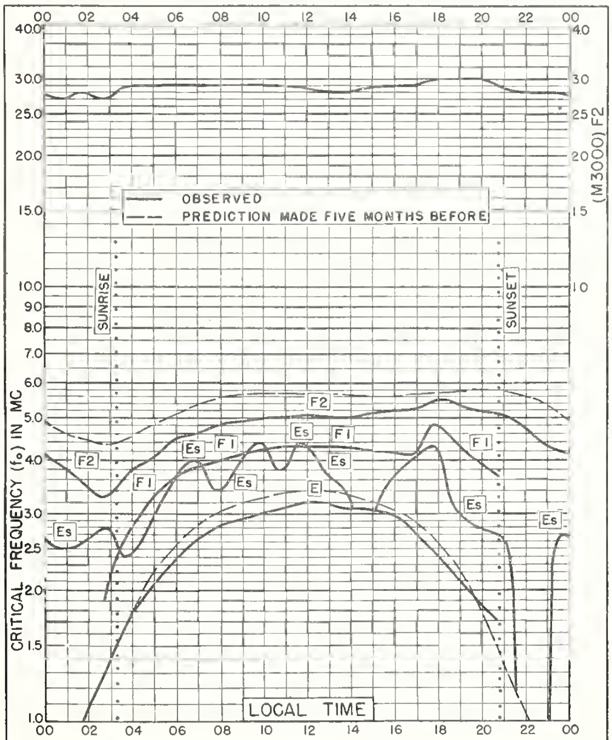


Fig. 67. INVERNESS, SCOTLAND
57.4° N, 4.2° W
JUNE 1952

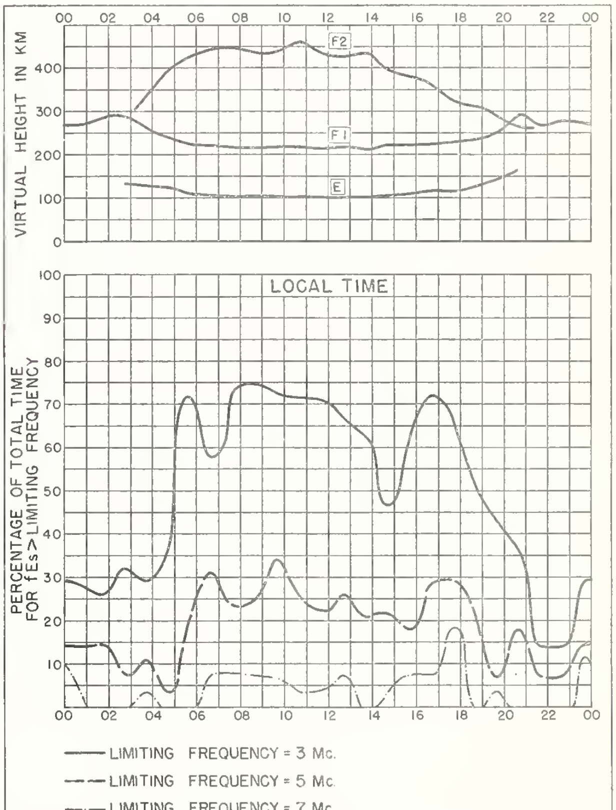


Fig. 68. INVERNESS, SCOTLAND
JUNE 1952

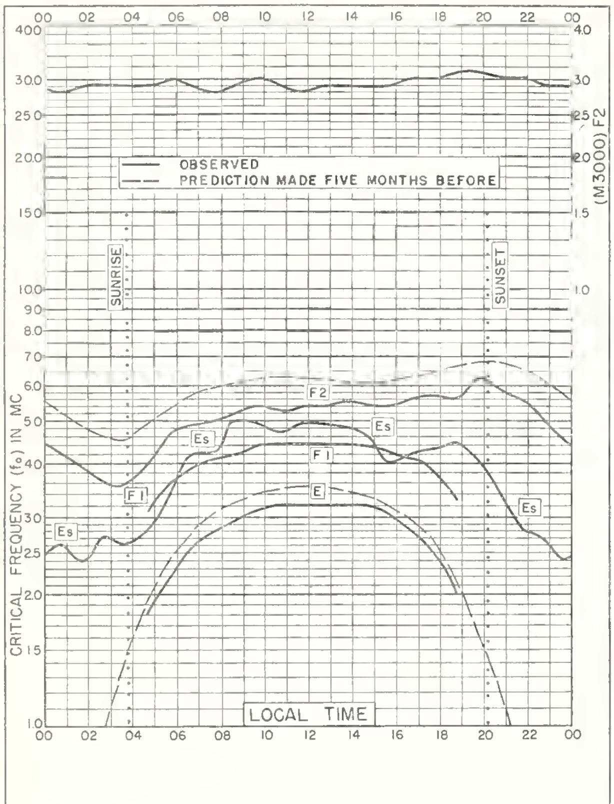


Fig. 69. LINDAU / HARZ, GERMANY
51.6°N, 10.1°E JUNE 1952

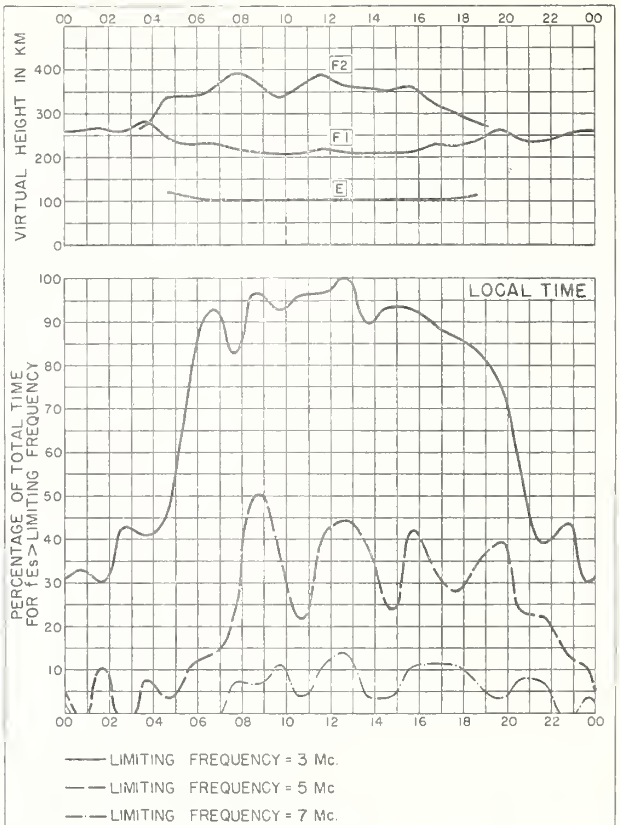


Fig. 70. LINDAU / HARZ, GERMANY JUNE 1952

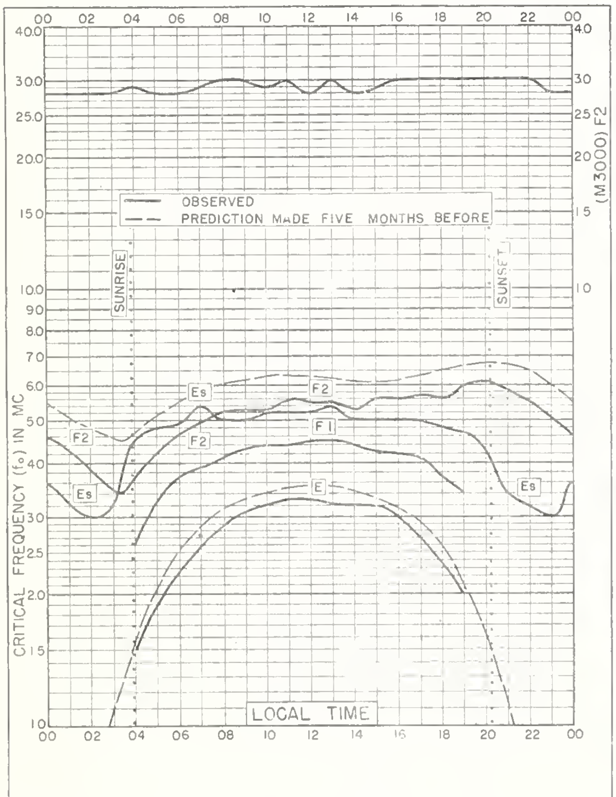


Fig. 71. SLOUGH, ENGLAND
51.5° N, 0.6° W. JUNE 1952

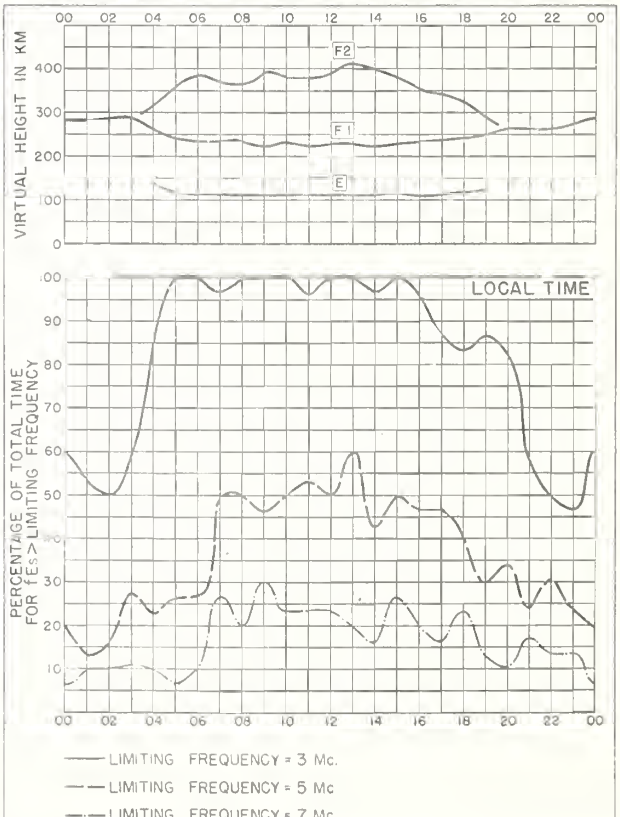


Fig. 72. SLOUGH, ENGLAND JUNE 1952

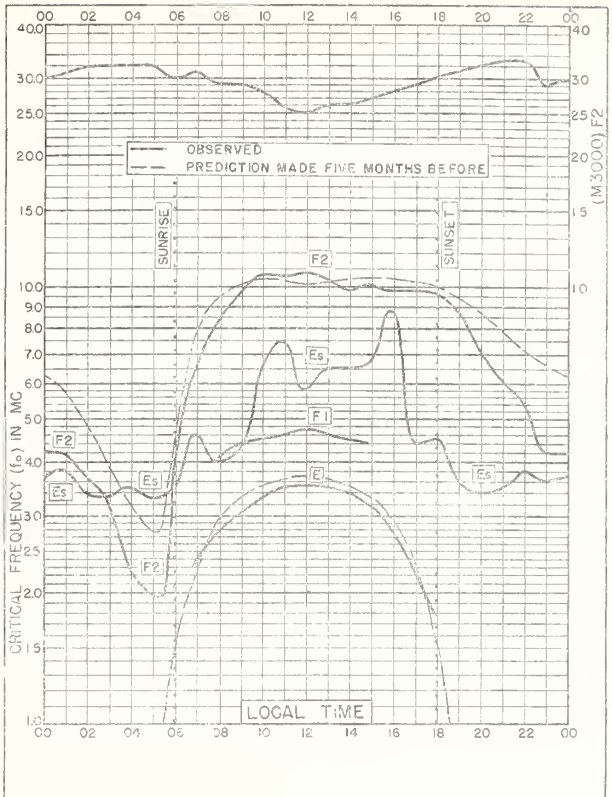


Fig. 73. SINGAPORE, BRIT. MALAYA
1.3° N, 103.8° E JUNE 1952

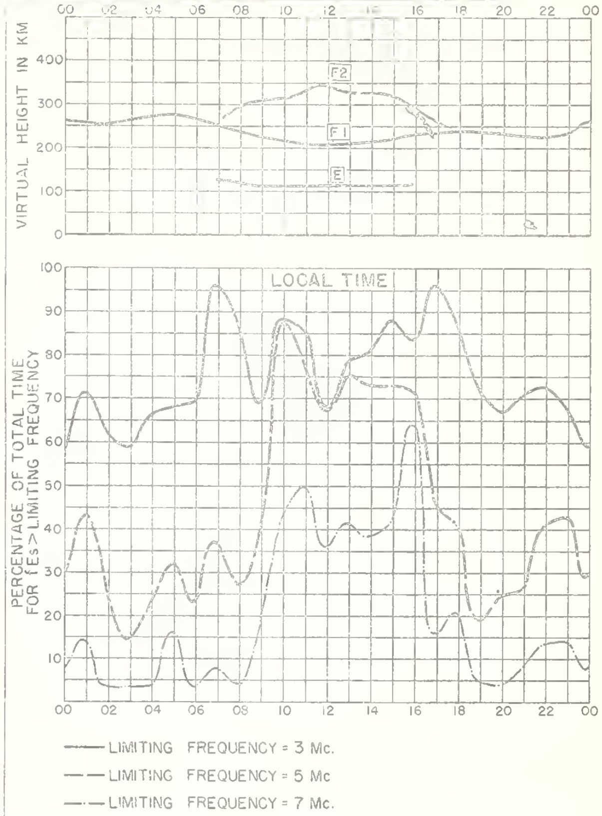


Fig. 74. SINGAPORE, BRIT. MALAYA JUNE 1952

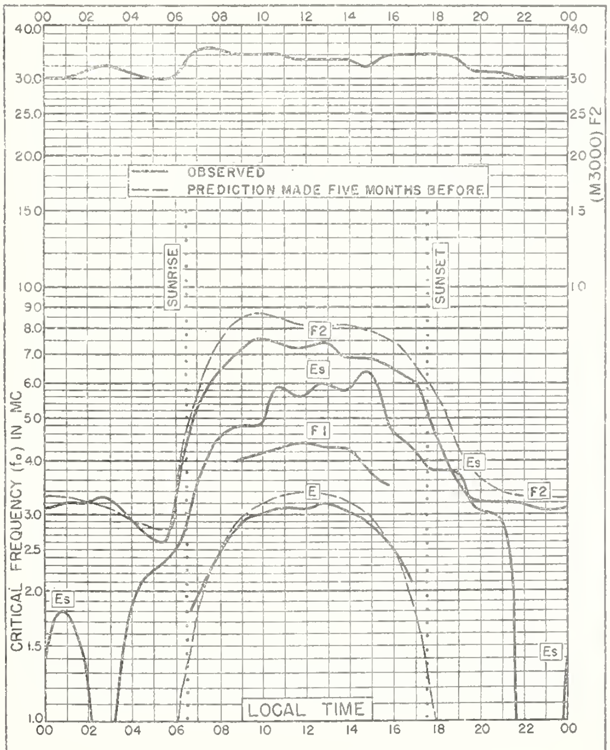


Fig. 75. TOWNSVILLE, AUSTRALIA
19.3° S, 146.8° E JUNE 1952

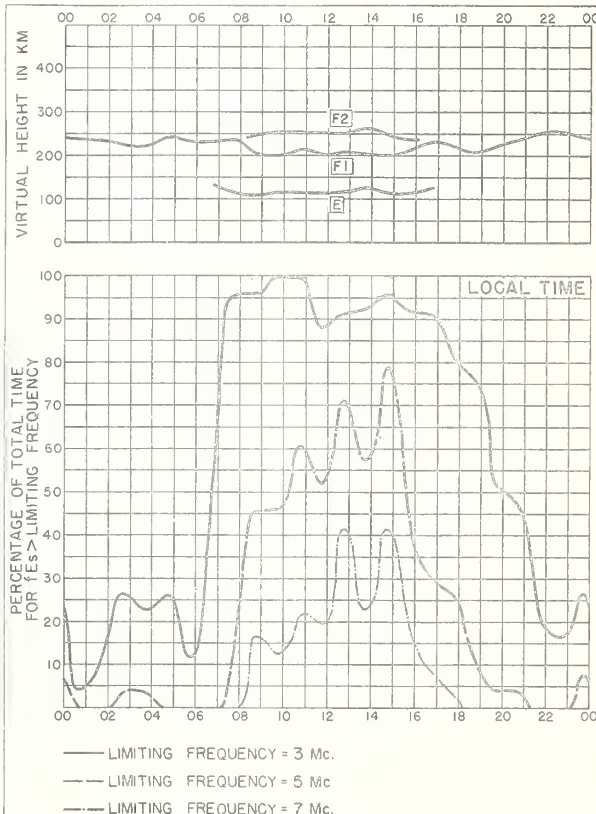


Fig. 76. TOWNSVILLE, AUSTRALIA JUNE 1952

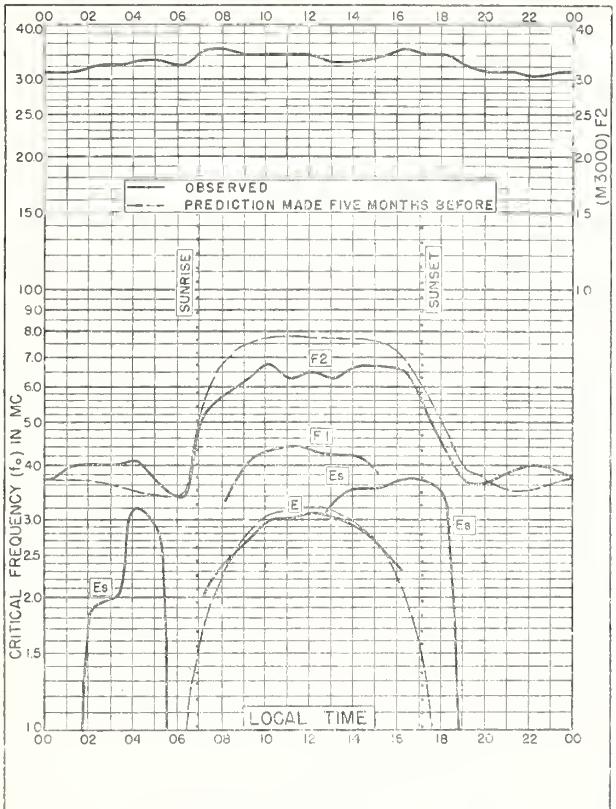


Fig 77. BRISBANE, AUSTRALIA
27.5° S, 153.0° E JUNE 1952

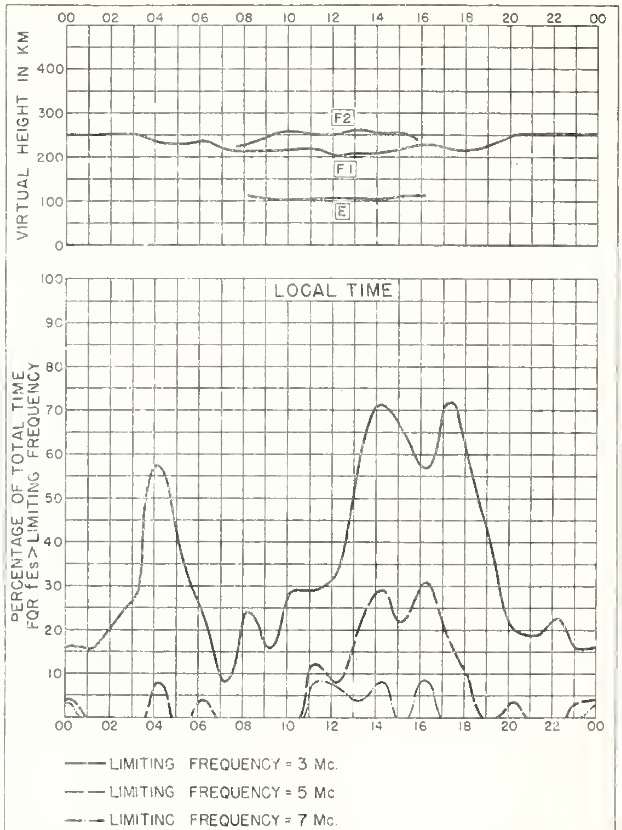


Fig.78. BRISBANE, AUSTRALIA JUNE 1952

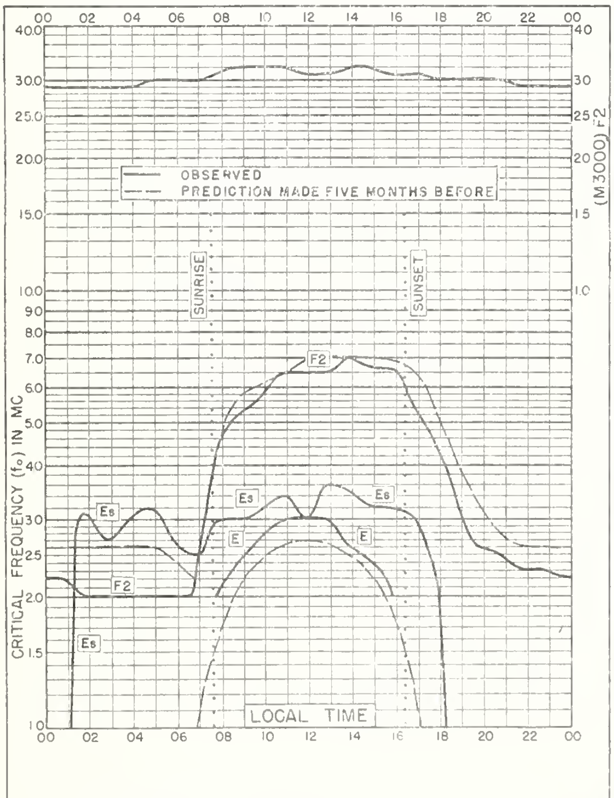


Fig 79 HOBART, TASMANIA
42.8° S, 147 4° E JUNE 1952

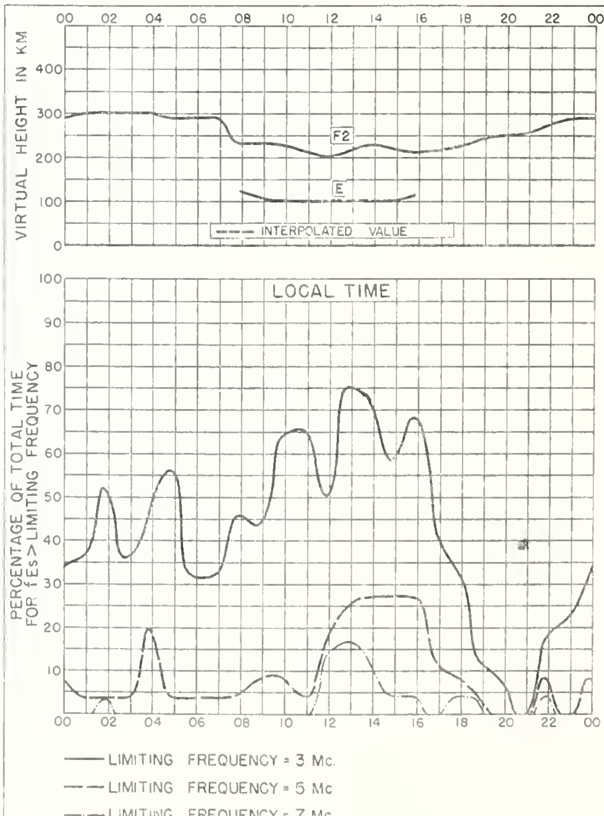


Fig. 89 HOBART, TASMANIA JUNE 1952

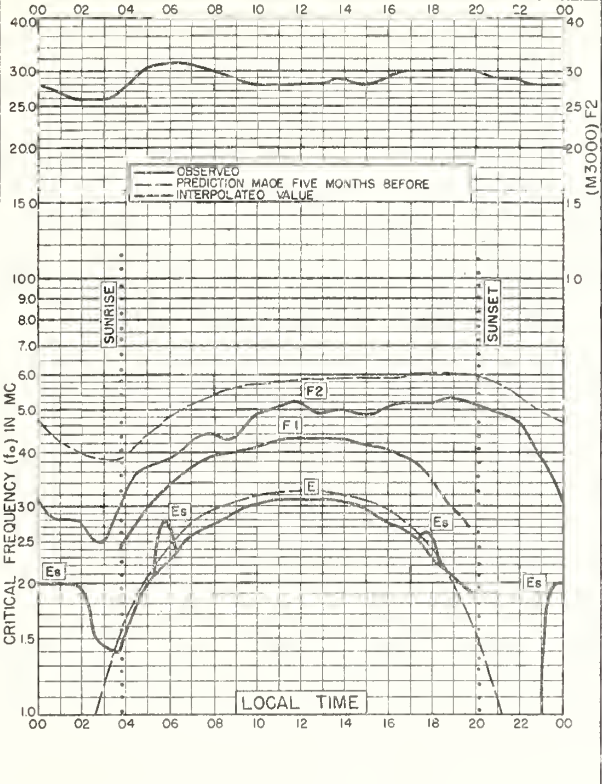


Fig. 81. INVERNESS, SCOTLAND
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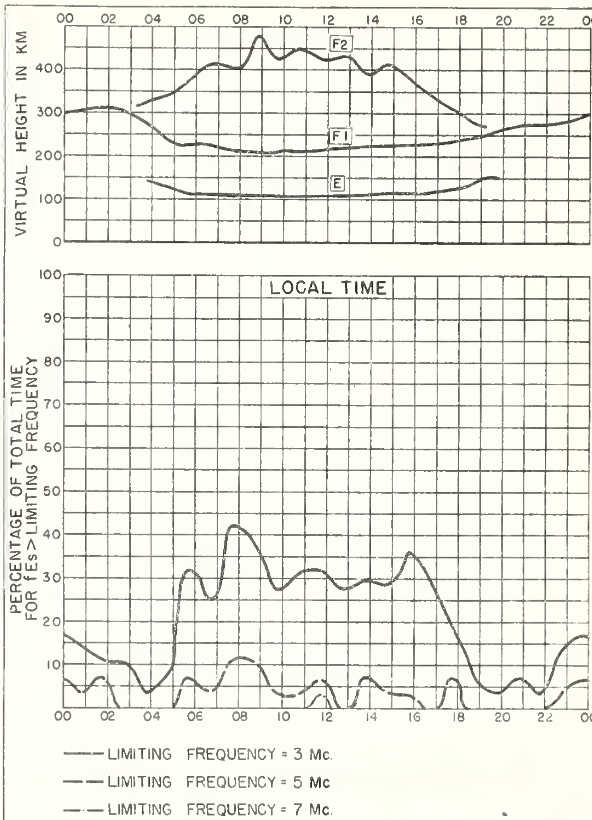

Fig. 82. INVERNESS, SCOTLAND MAY 1952

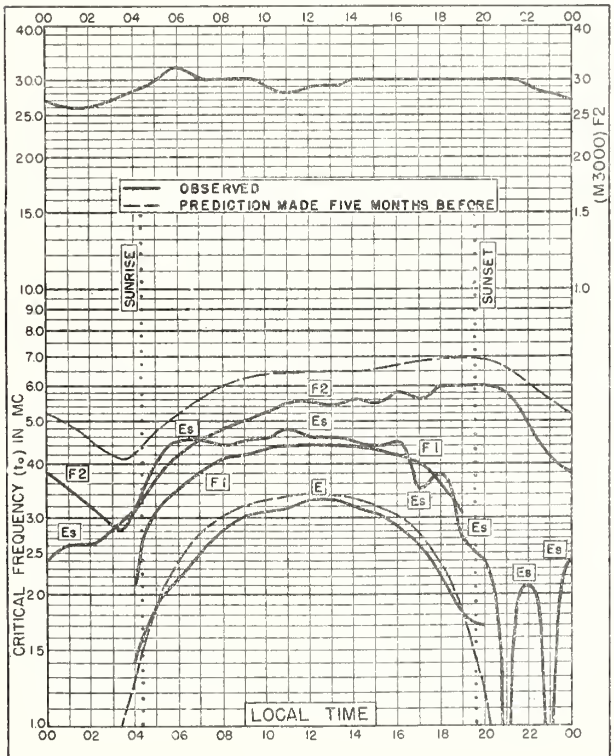

Fig. 83 SLOUGH, ENGLAND
51.5°N, 0.6°W MAY 1952

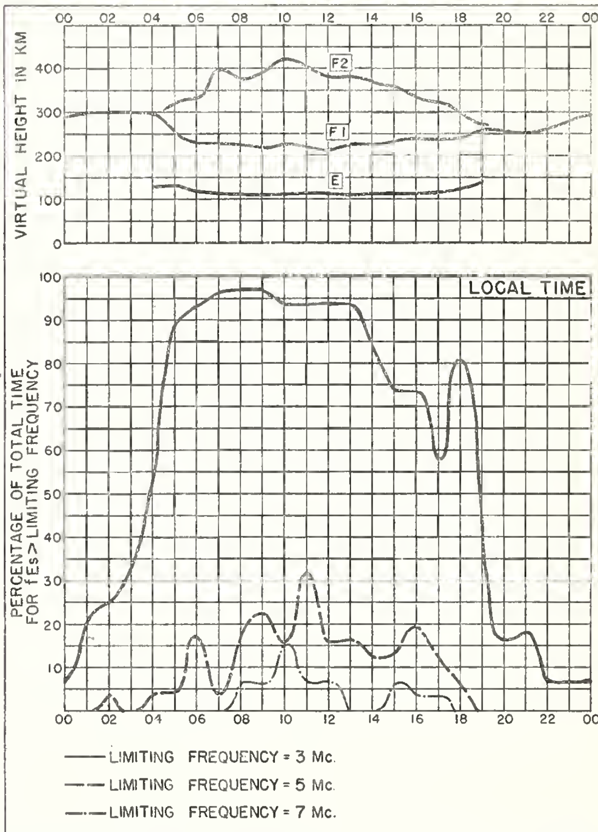

Fig. 84 SLOUGH, ENGLAND MAY 1952

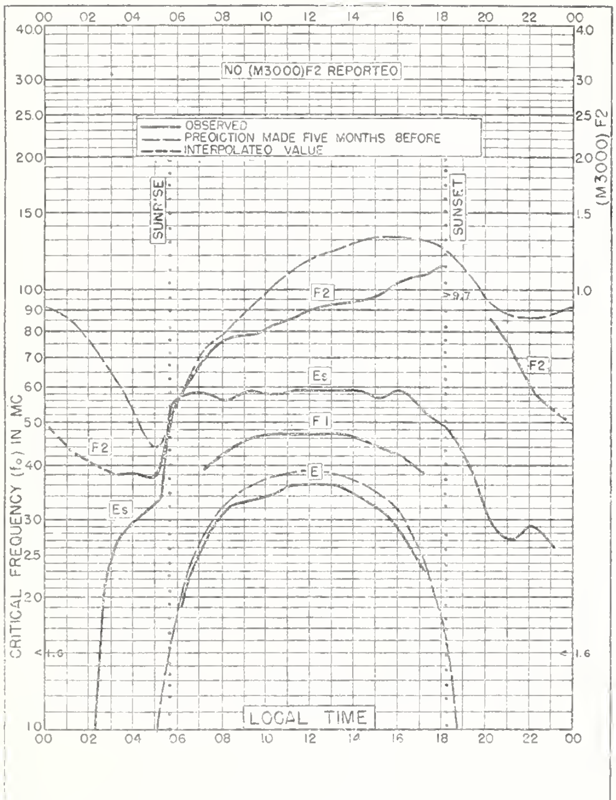

Fig. 85 KHARTOUM, SUDAN
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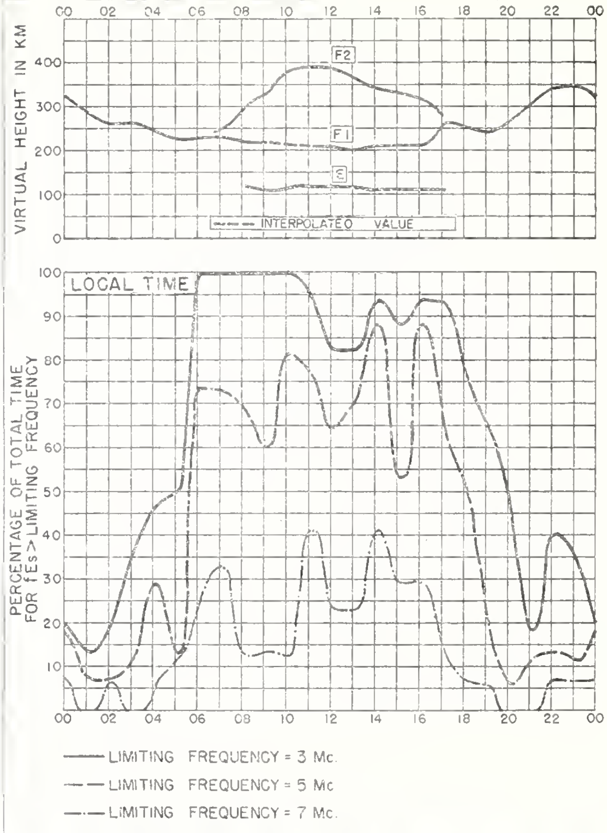

Fig. 86 KHARTOUM, SUDAN MAY 1952

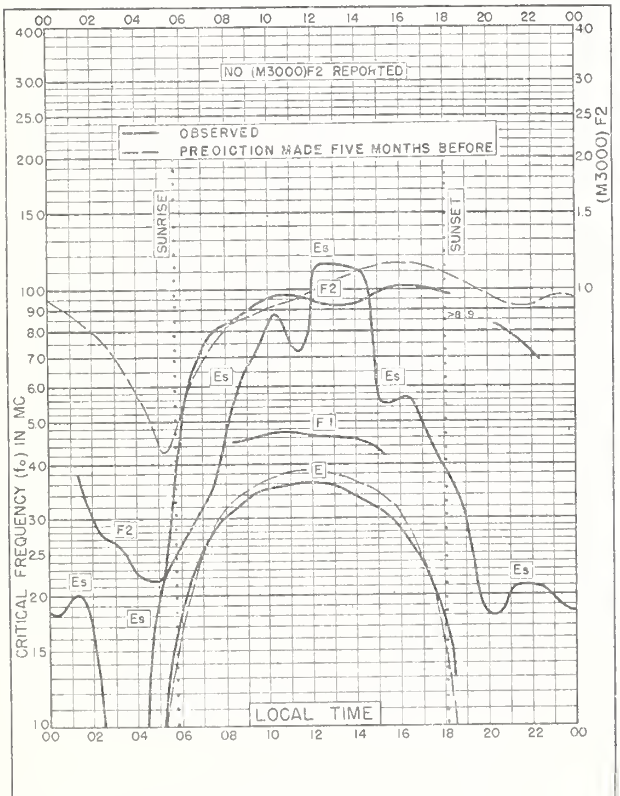

Fig. 87. IBADAN, NIGERIA
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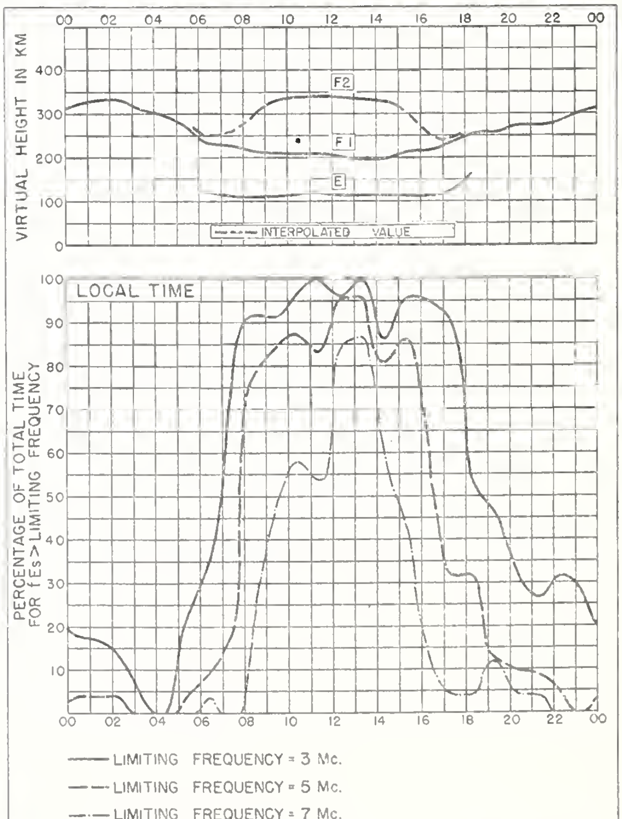

Fig. 88. IBADAN, NIGERIA MAY 1952

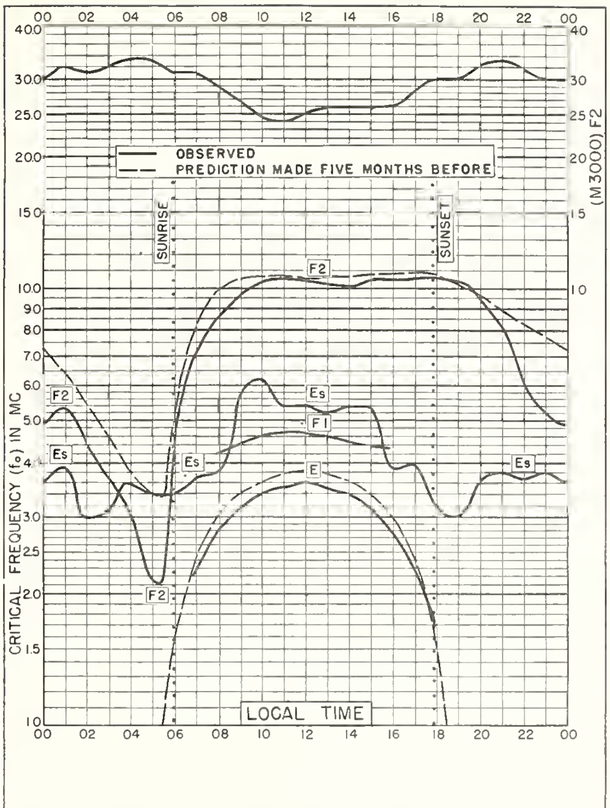

Fig. 89 SINGAPORE, BRIT. MALAYA
1.3°N, 103.8°E MAY 1952

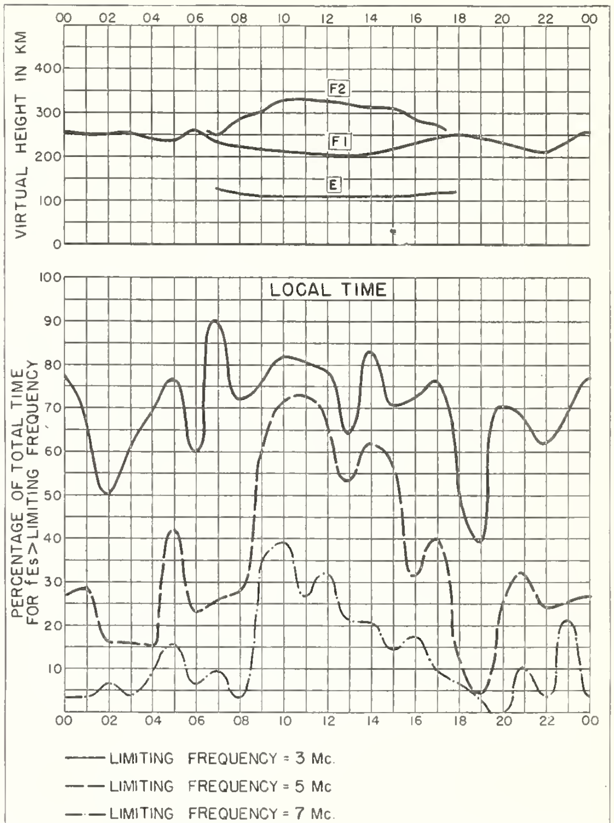

Fig. 90 SINGAPORE, BRIT. MALAYA MAY 1952

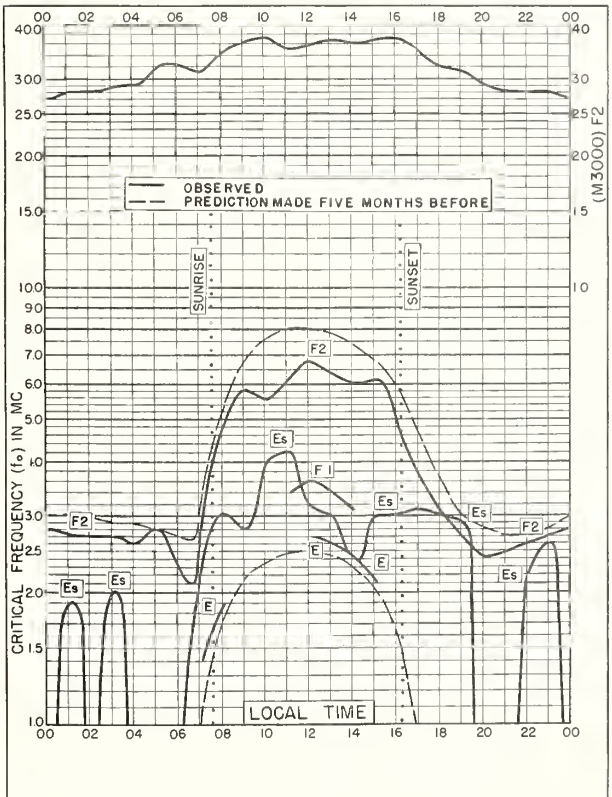

Fig. 91. FALKLAND IS.
51.7° S, 57.8° W MAY 1952

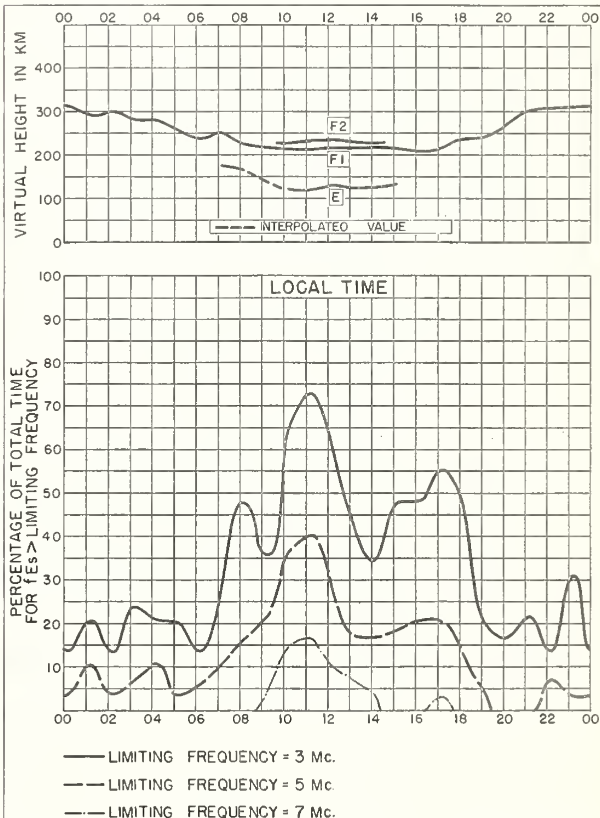

Fig. 92. FALKLAND IS. MAY 1952

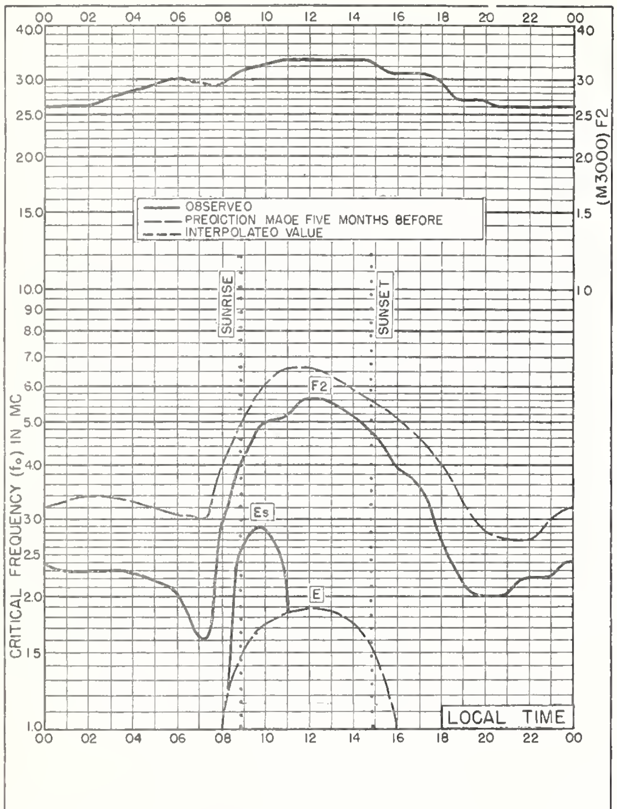

Fig. 93. PORT LOCKROY
64.8°S, 63.5°W MAY 1952

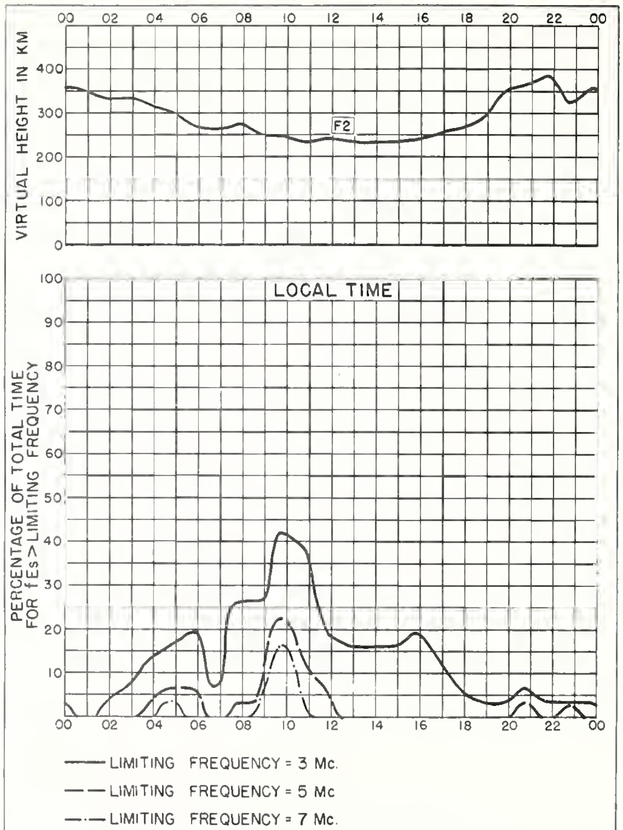

Fig. 94. PORT LOCKROY MAY 1952

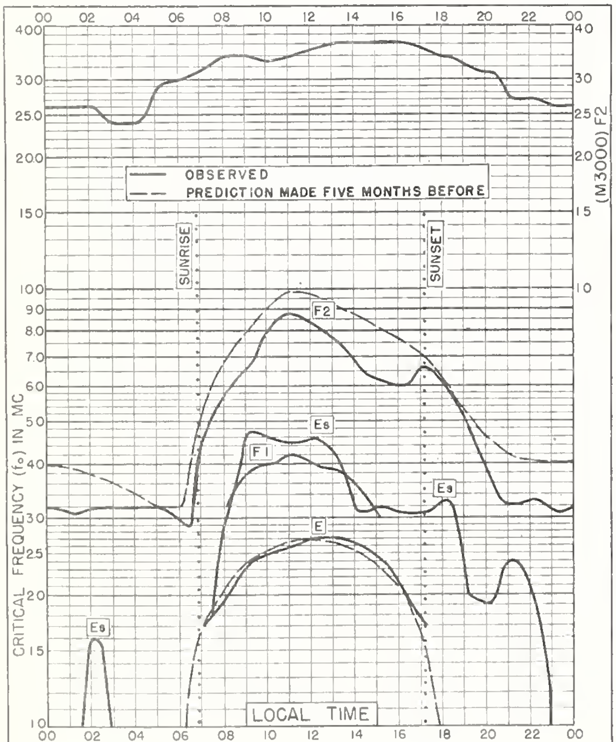

Fig. 95. FALKLAND IS.
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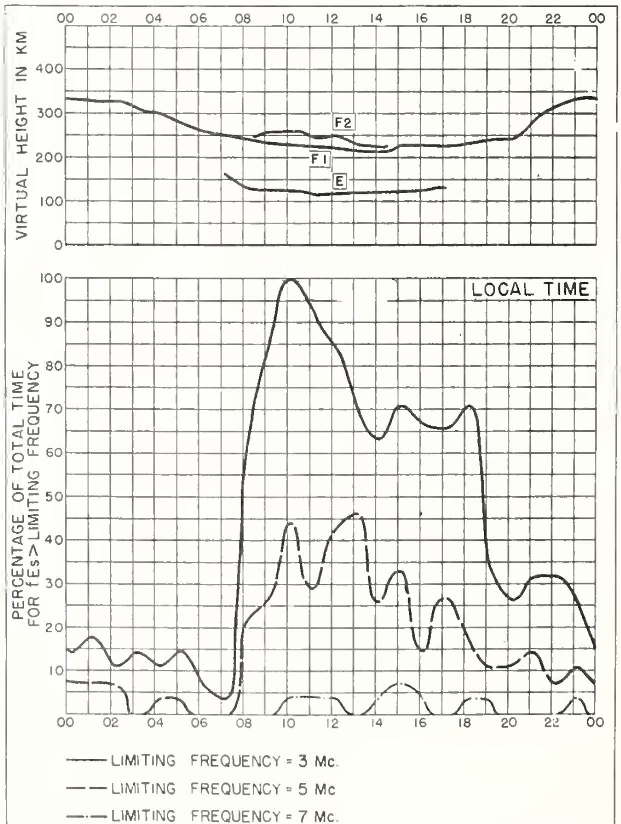

Fig. 96. FALKLAND IS. APRIL 1952

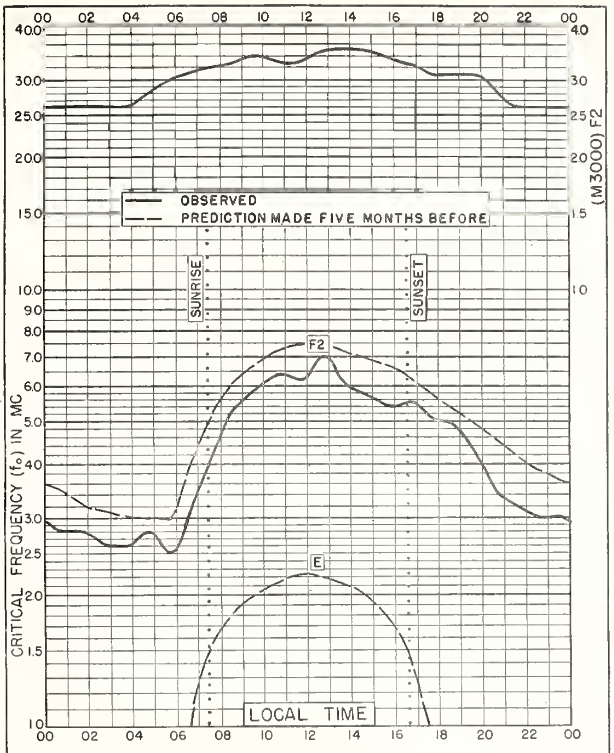

Fig. 97 PORT LOCKROY
64.8° S, 63.5° W APRIL 1952

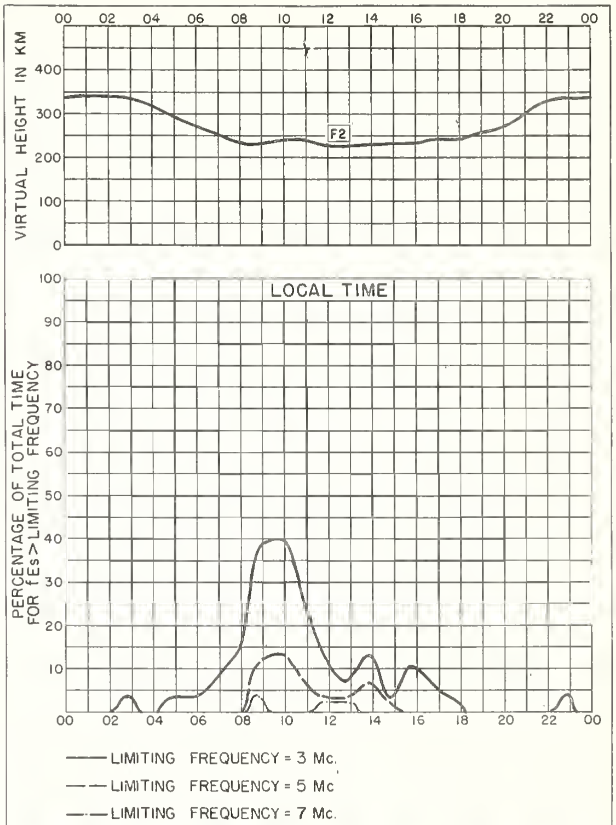

Fig. 98 PORT LOCKROY APRIL 1952

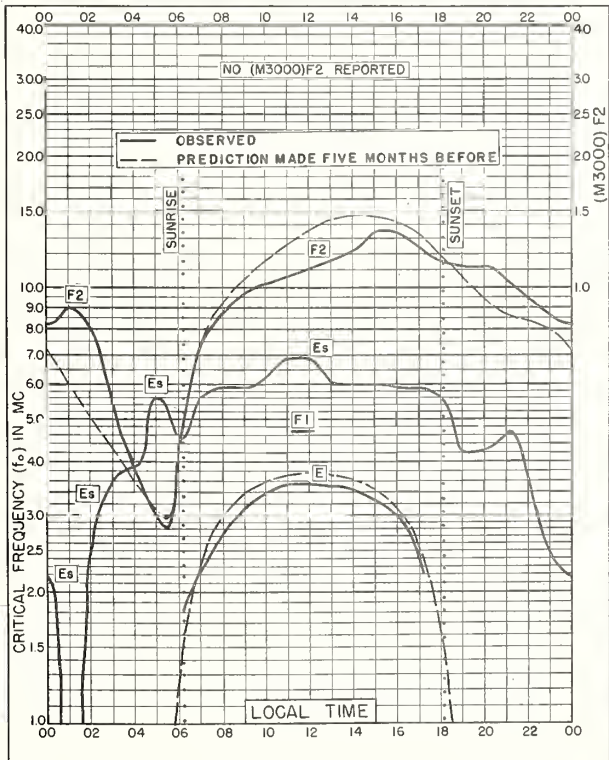

Fig. 99 KHARTOUM, SUDAN
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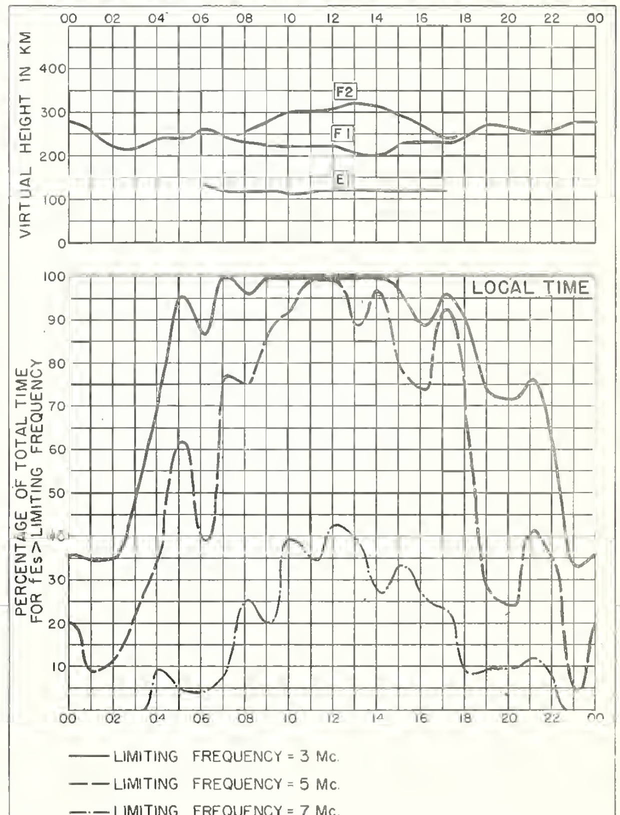

Fig. 100 KHARTOUM, SUDAN MARCH 1952

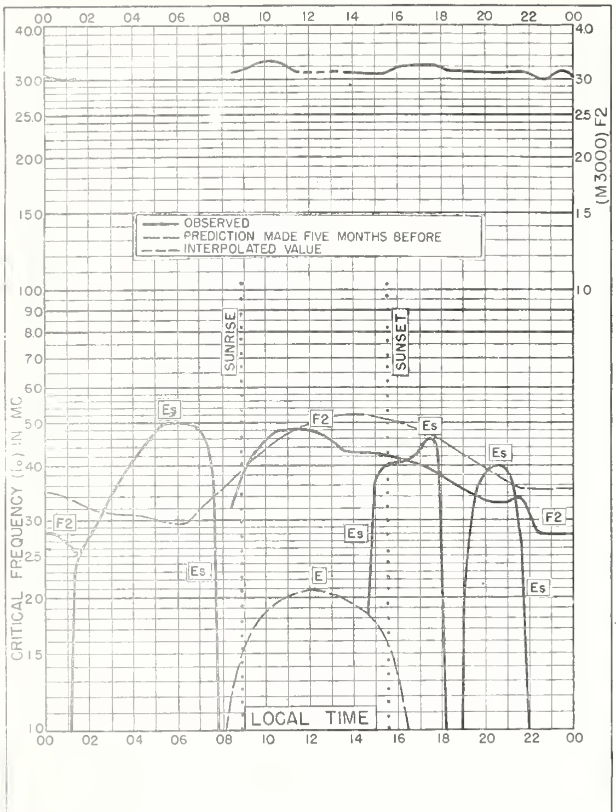

Fig. 101. GODHAVN, GREENLAND
69.2°N, 53.5°W FEBRUARY 1952

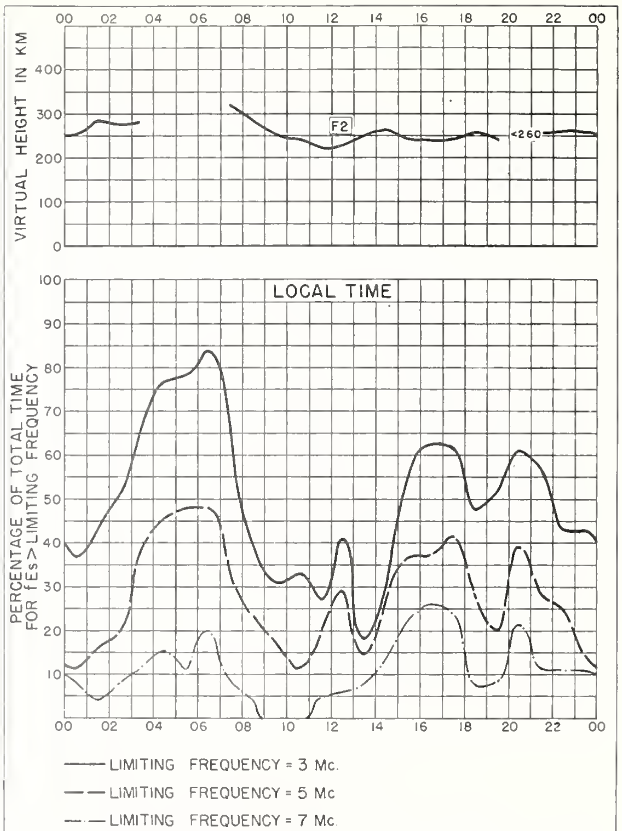

Fig. 102. GODHAVN, GREENLAND FEBRUARY 1952

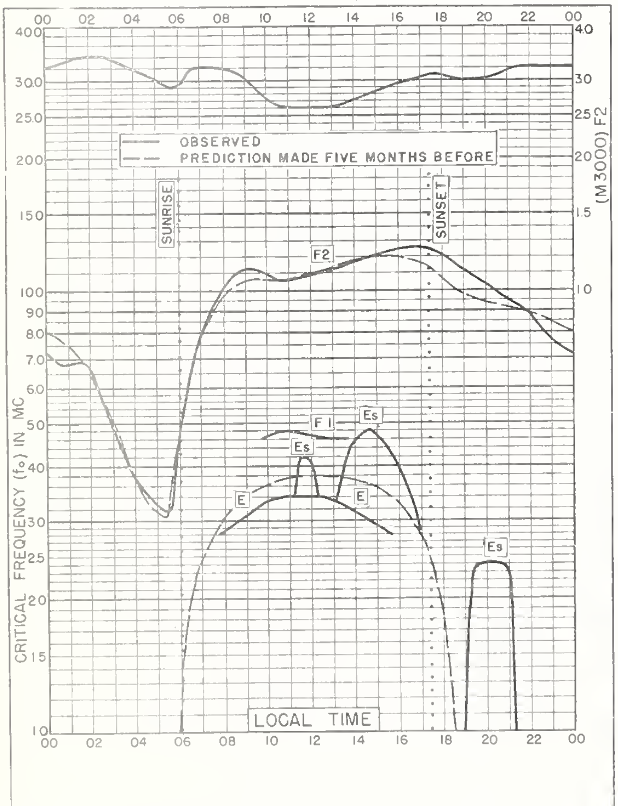

Fig. 103 GUAM I.
13.6°N, 144.9°E NOVEMBER 1951

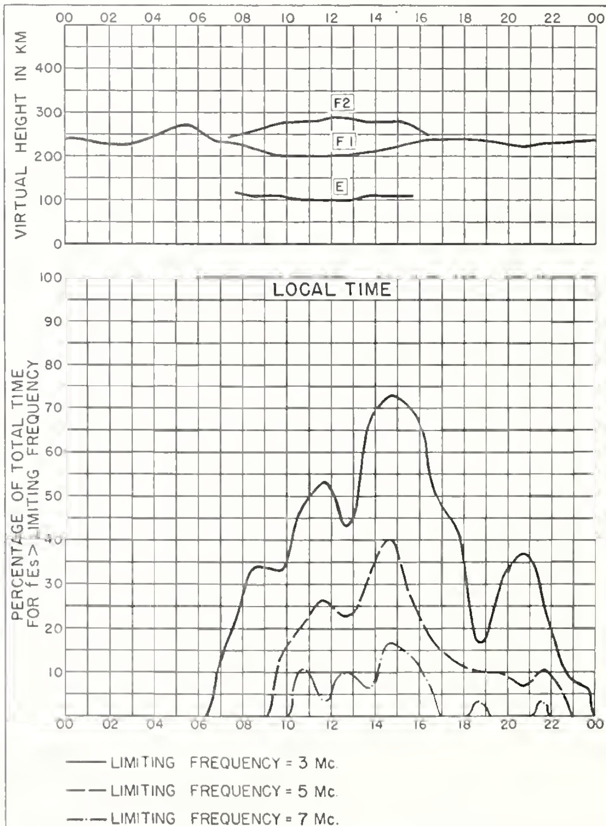

Fig 104 GUAM I. NOVEMBER 1951

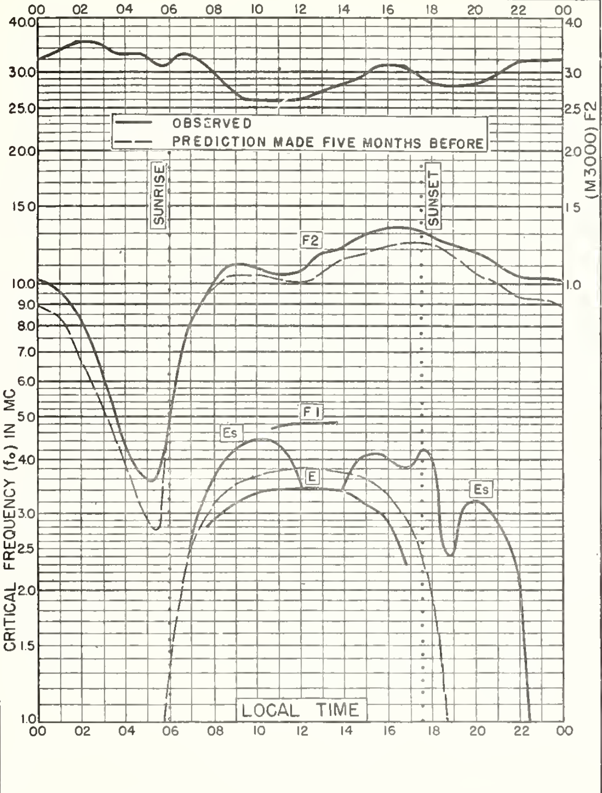

Fig. 105. GUAM I.
13.6° N, 144.9°E OCTOBER 1951

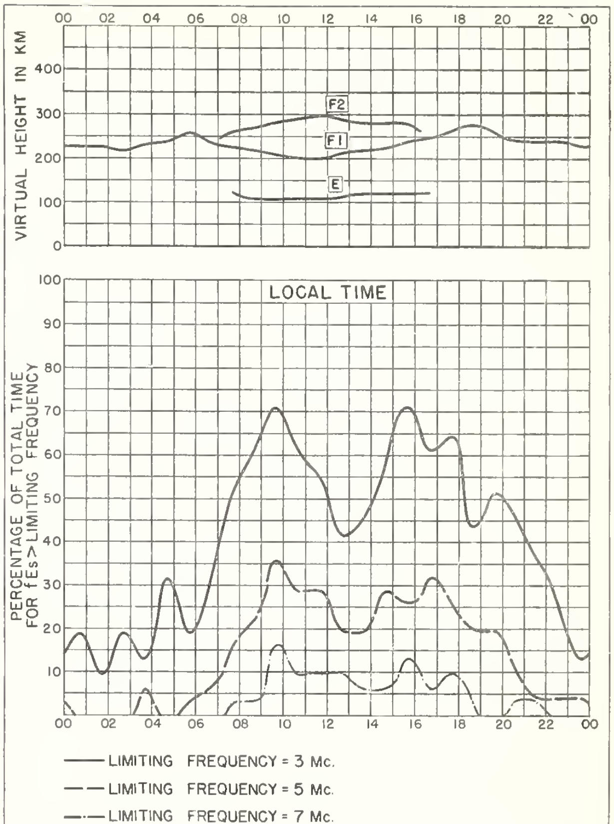

Fig. 106. GUAM I. OCTOBER 1951

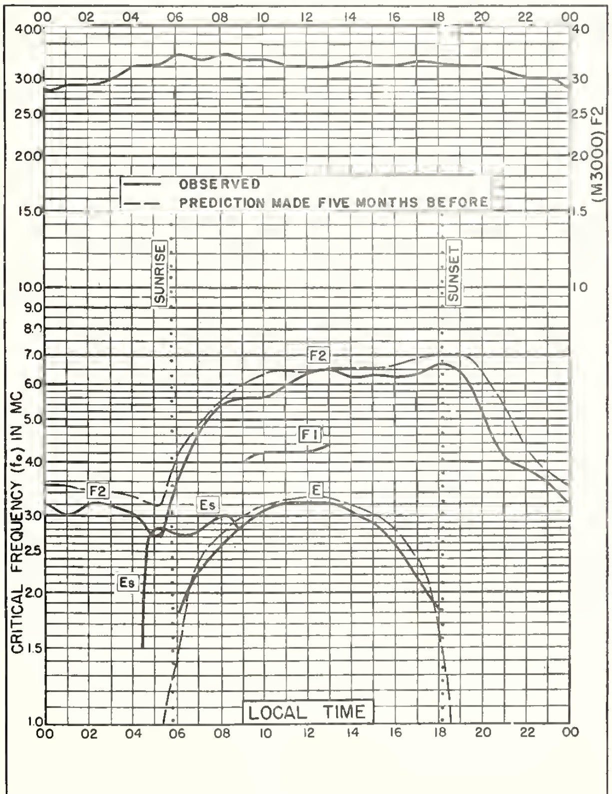

Fig. 107. DOMONT, FRANCE
49.0° N, 2.3° E SEPTEMBER 1951

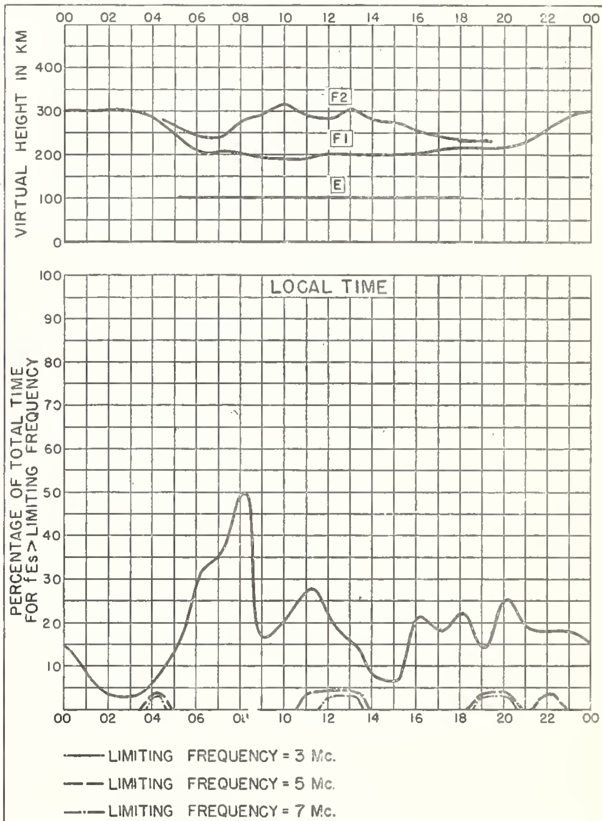

Fig. 108. DOMONT, FRANCE SEPTEMBER 1951

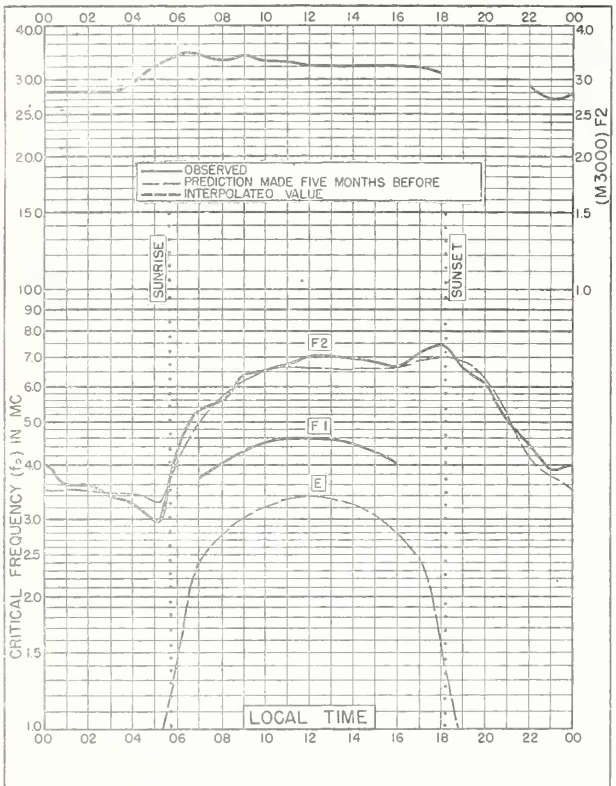

Fig.109. POITIERS, FRANCE
46.6°N, 0.3°E SEPTEMBER 1951

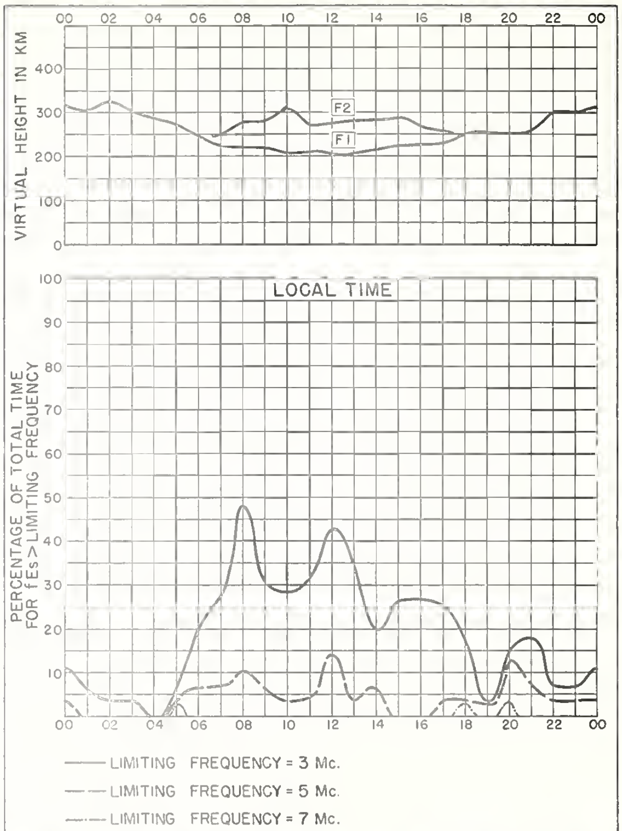

Fig.110. POITIERS, FRANCE SEPTEMBER 1951

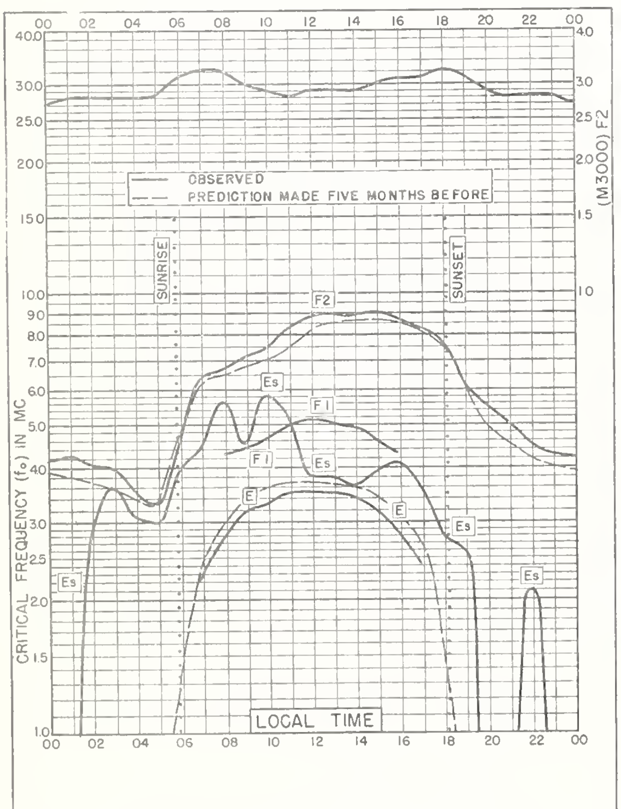

Fig.111. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W SEPTEMBER 1951

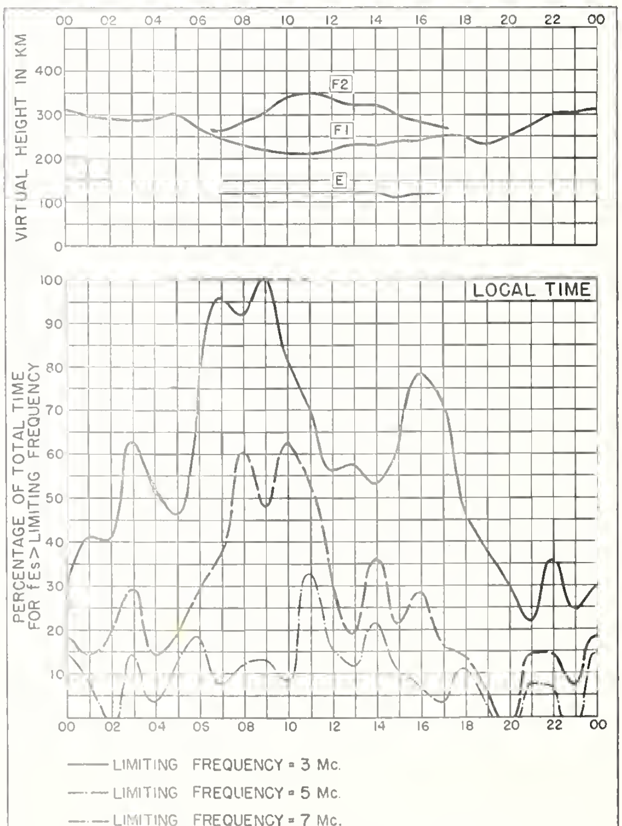

Fig.112. BATON ROUGE, LOUISIANA SEPTEMBER 1951

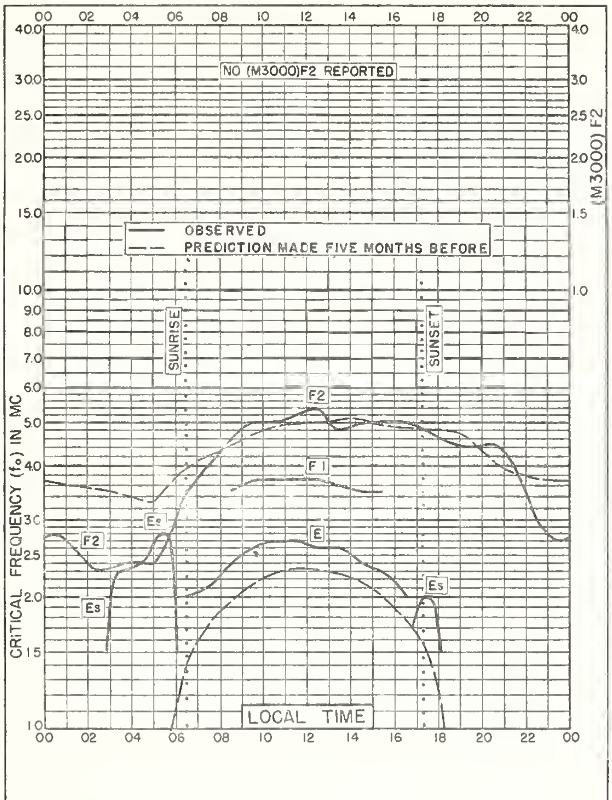

Fig.113. TERRE ADELIE
66.8° S, 141.4° E SEPTEMBER 1951

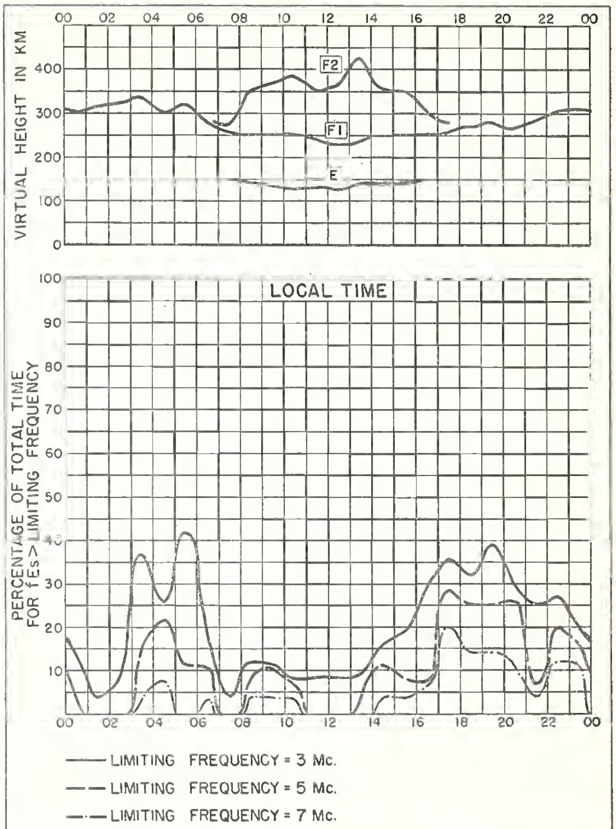

Fig.114. TERRE ADELIE SEPTEMBER 1951

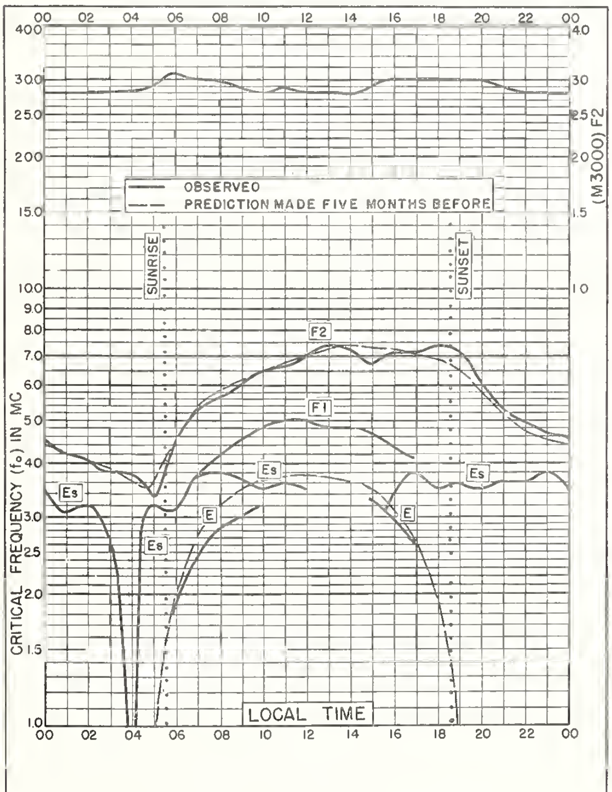

Fig.115. BATON ROUGE, LOUISIANA
30.5° N, 91.2° W AUGUST 1951

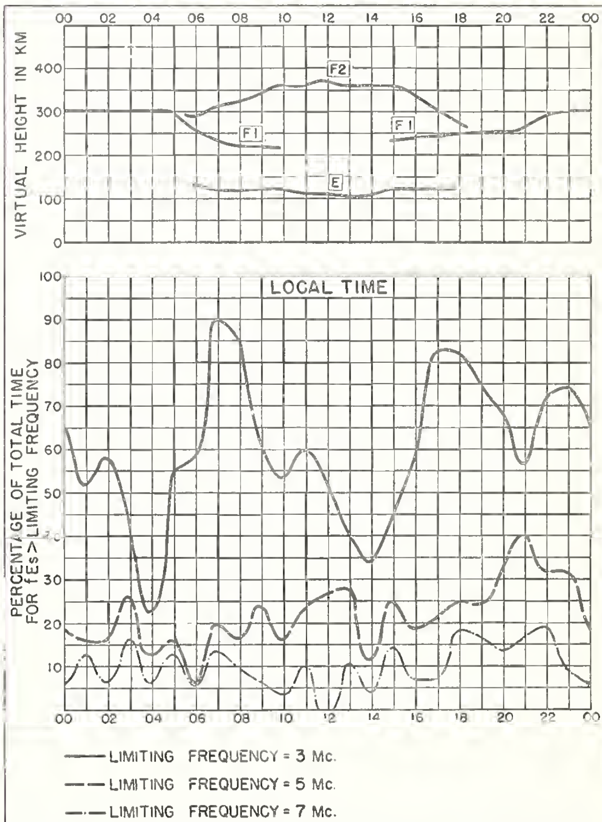

Fig.116. BATON ROUGE, LOUISIANA AUGUST 1951

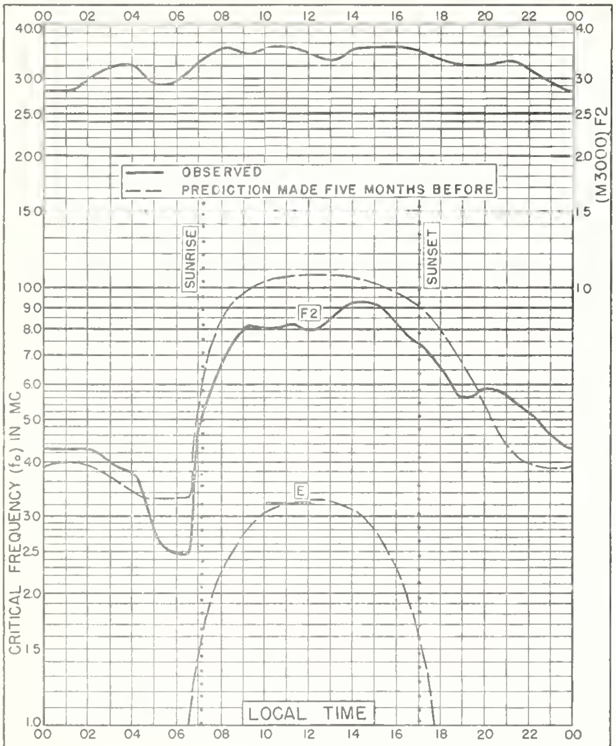

Fig. 117 BUENOS AIRES, ARGENTINA
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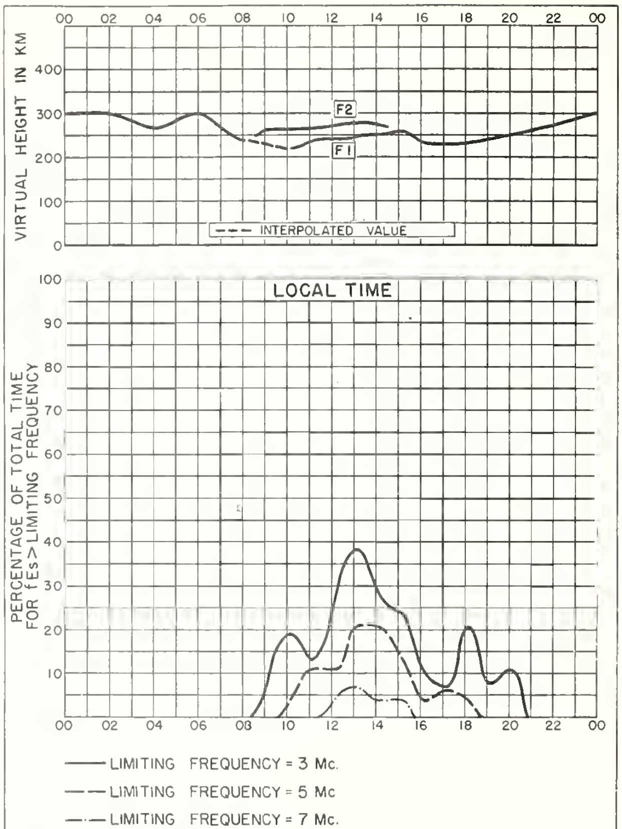


Fig.118 BUENOS AIRES, ARGENTINA JULY 1950

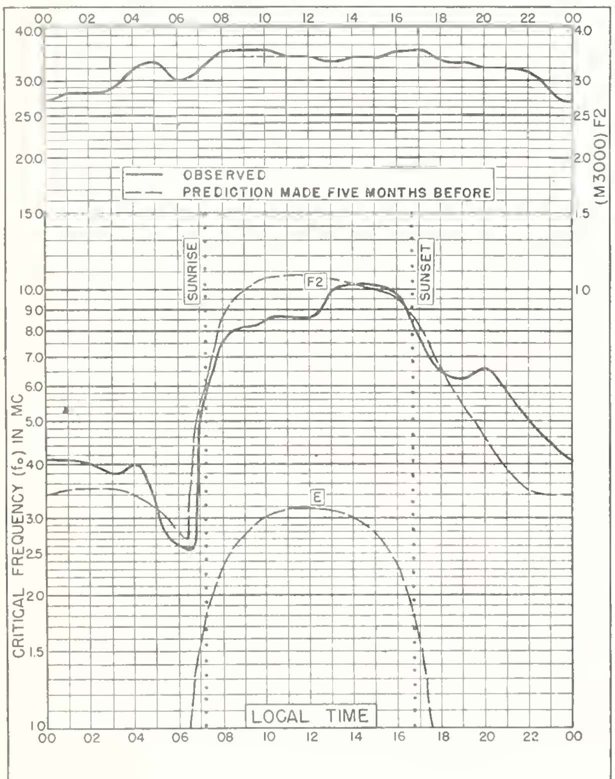
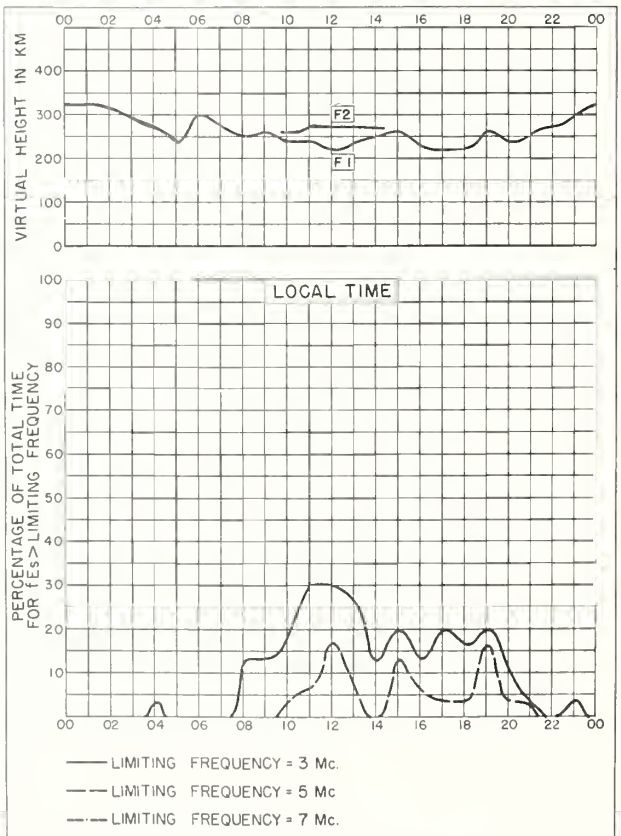


Fig.119. BUENOS AIRES, ARGENTINA
34.5° S, 58.5° W JUNE 1950



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CRPL and IRPL Reports

[A list of CRPL Section Reports is available from the Central Radio Propagation Laboratory upon request]

Daily:

Radio disturbance forecasts, every half hour from broadcast station WWV of the National Bureau of Standards.
Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

Semiweekly:

CRPL—J. North Atlantic Radio Propagation Forecast (of days most likely to be disturbed during following month).

CRPL—Jp. North Pacific Radio Propagation Forecast (of days most likely to be disturbed during following month).

Semimonthly:

CRPL—Ja. Semimonthly Frequency Revision Factors For CRPL Basic Radio Propagation Prediction Reports.

Monthly:

CRPL—D. Basic Radio Propagation Predictions—Three months in advance. (Dept. of the Army, TB 11–499–, monthly supplements to TM 11–499; Dept. of the Navy, DNC 13 ( ) series; Dept. of the Air Force, TO 16-1B-2 series.)
CRPL—F. Ionospheric Data.
*IRPL—A. Recommended Frequency Bands for Ships and Aircraft in the Atlantic and Pacific.
*IRPL—H. Frequency Guide for Operating Personnel.

Circulars of the National Bureau of Standards:

NBS Circular 462. Ionospheric Radio Propagation.
NBS Circular 465. Instructions for the Use of Basic Radio Propagation Predictions.

Reports issued in past:

IRPL—C61. Report of the International Radio Propagation Conference, 17 April to 5 May 1944.
IRPL—G1 through G12. Correlation of D. F. Errors With Ionospheric Conditions.
(G1, G3, available. Others out of print; see second footnote.)
IRPL—R. Nonscheduled reports:
R4. Methods Used by IRPL for the Prediction of Ionosphere Characteristics and Maximum Usable Frequencies.
R5. Criteria for Ionospheric Storminess.
**R6. Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
R7. Second Report on Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
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**R17. Japanese Ionospheric Data—1943.
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**R21. Notes on the Preparation of Skip-Distance and MUF Charts for Use by Direction-Finder Stations. (For distances out to 4000 km.)
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**R25. The Prediction of Solar Activity as a Basis for the Prediction of Radio Propagation Phenomena.
**R26. The Ionosphere as a Measure of Solar Activity.
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**R30. Disturbance Rating in Values of IRPL Quality-Figure Scale from A. T. & T. Co. Transmission Disturbance Reports to Replace T. D. Figures as Reported.
**R31. North Atlantic Radio Propagation Disturbances, October 1943 Through October 1945.
**R33. Ionospheric Data on File at IRPL.
**R34. The Interpretation of Recorded Values of *fEs*.
**R35. Comparison of Percentage of Total Time of Second-Multiple *Es* Reflections and That of *fEs* in Excess of 3 Mc.
IRPL—T. Reports on tropospheric propagation:
T1. Radar operation and weather. (Superseded by JANP 101.)
T2. Radar coverage and weather. (Superseded by JANP 102.)
CRPL—T3. Tropospheric Propagation and Radio-Meteorology. (Reissue of Columbia Wave Propagation Group WPG—5.)

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