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FOR OFFICIAL USE

IONOSPHERIC DATA

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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

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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 usually 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 foF1, 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'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 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										
	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945
December		11	15	33	53	86	108	114	126	85	38
November		10	16	38	52	87	112	115	124	83	36
October		10	17	43	52	90	114	116	119	81	23
September		8	18	46	54	91	115	117	121	79	22
August		8	18	49	57	96	111	123	122	77	20
July		8	20	51	60	101	108	125	116	73	
June		9	21	52	63	103	108	129	112	67	
May		10	22	52	68	102	108	130	109	67	
April		10	24	52	74	101	109	133	107	62	
March	14	11	27	52	78	103	111	133	105	51	
February	14	12	29	51	82	103	113	133	90	46	
January	12	14	30	53	85	105	112	130	88	42	

WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 78 and figures 1 to 156 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:

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

Commonwealth of Australia, Department of External Affairs:
- Macquarie I.

University of Graz:
- Graz, Austria

Meteorological Service of the Belgian Congo and Ruanda-Urundi:
- Leopoldville, Belgian Congo

University of Sao Paulo:
- Sao Paulo, Brazil

British Department of Scientific and Industrial Research, Radio Research Board:
- Falkland Is.
- Inverness, Scotland
- Port Lockroy
- Singapore, British Malaya
- Slough, England

Defence Research Board, Canada:
Baker Lake, Canada
Churchill, Canada
Ottawa, Canada
Resolute Bay, Canada
Winnipeg, Canada

Radio Wave Research Laboratories, National Taiwan University, Taipeh, Formosa, China:
Formosa, China

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

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

Indian Council of Scientific and Industrial Research, Radio Research Committee:
Calcutta, India

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

Christchurch Geophysical Observatory, New Zealand Department of Scientific and Industrial Research:
Christchurch, New Zealand
Rarotonga, Cook Is.

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

Manila Observatory:
Baguio, P. I.

South African Council for Scientific and Industrial Research:
Capetown, Union of South Africa
Johannesburg, Union of South Africa
Nairobi, Kenya (East African Meteorological Department)

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

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

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
Lulea, 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
Fairbanks, Alaska (Geophysical Institute of the University of Alaska)
Guam I.
Huancayo, Peru (Instituto Geofisico de Huancayo)
Maui, Hawaii
Narsarssuak, Greenland
Panama Canal Zone
Puerto Rico, W. I.
San Francisco, California (Stanford University)
Washington, D. C.

HOURLY IONOSPHERIC DATA AT WASHINGTON, D. C.

The data given in tables 79 through 90 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 91 presents ionosphere character figures for Washington, D. C., during March 1955, 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.

SUDDEN IONOSPHERE DISTURBANCES

Table 92 shows that no sudden ionosphere disturbances were observed at Ft. Belvoir, Virginia, during the month of March 1955.

RADIO PROPAGATION QUALITY FIGURES

Tables 93a and 93b give for February 1955 the radio propagation quality figures for the North Atlantic area, the relevant CRPL advance and short-term forecasts, a summary geomagnetic activity index and sundry comparisons, specifically as follows:

(a) radio propagation quality figures, Qa, separately for each 6-hour interval of the Greenwich day, viz., 00-06, 06-12, 12-18, 18-24 hours UT (Universal Time or GCT).
(b) whole-day radio quality indices (beginning October 1952). Each index is a weighted average of the four quarter-day Qa-figures, before rounding off, with half weight given to quality grades 5 and 6. This procedure tends to give whole-day indices suitable for comparison with whole-day advance forecasts which designate whenever possible the days when significant disturbance or unusually quiet conditions will occur.
(c) short-term forecasts, issued by CRPL every six hours (nominally one hour before 00^h, 06^h, 12^h, 18^h UT) and applicable to the period 1 to 13 (especially 1 to 7) hours ahead. Note that new scoring rules have been adopted beginning with October 1952 data.
(d) advance forecasts, issued semiweekly (CRPL-J reports) and applicable 1 to 3 or 4 days ahead, 4 or 5 to 7 days ahead, and 8 to 25 days ahead. These forecasts are scored against the whole-day quality indices.
(e) half-day averages of the geomagnetic K indices measured by the Cheltenham Magnetic Observatory of the U. S. Coast and Geodetic Survey.
(f) illustration of the comparison of short-term forecasts with Qa-figures and also with estimates of radio quality based on CRPL observations only.
(g) illustration of the outcome of advance forecasts (1 to 3 or 4 days ahead) and, for comparison, the outcome of a type of "blind" forecast. For the latter the frequency for each quality grade, as determined from the distribution of quality grades in the four most recent months of the current season, is partitioned among the grades observed in the current month in proportion to the frequencies observed in the current month.

These radio propagation quality figures, Qa, are prepared from radio traffic data reported to CRPL by American Telephone and Telegraph Company, Mackay Radio and Telegraph Company, RCA Communications, Inc., Marconi Company, British Admiralty Signal and Radar Establishment, and the following agencies of the U. S. Government:--Coast Guard, Navy, Army Signal Corps, and U. S. Information Agency. The method of calculation, summarized below, is similar to that described in a 1946 report, IRPL-R31, now out of print. Only reports of radio transmission on North Atlantic paths closely approximating New York-London are included in the estimation of quality.

The original reports are submitted on various scales and for various time intervals. The observations for each 6-hour interval are averaged on the quality scale of the original reports. These 6-hour indices are then adjusted to the 1 to 9 quality-figure scale by a conversion table 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 originally 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. The 6-hourly quality figures are (subjectively) weighted means of the reports received for that period. These 6-hourly quality figures replace, beginning January 1953, the half-daily quality figures which formerly appeared in this table. (These forecasts and quality indices are prepared by the North Atlantic Radio Warning Service, the CRPL forecasting center at Ft. Belvoir, Virginia.)

These quality figures are, in effect, a consensus of reported radio propagation conditions. 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.

Note: A tabulation of forecasts for the North Pacific area and comparisons with observed radio propagation conditions will appear in a later issue.

OBSERVATIONS OF THE SOLAR CORONA

Tables 94 through 96 give the observations of the solar corona during March 1955, obtained at Climax, Colorado, by the High Altitude Observatory of Harvard University and the University of Colorado. Tables 97 through 99 list the coronal observations obtained at

Sacramento Peak, New Mexico, during March 1955, derived by Harvard College Observatory as a part of its performance of a research contract with the Upper Air Research Observatory, Geophysical Research Directorate, Air Force Cambridge Research Center. 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.

Beginning with January 1, 1955, the Climax, Colorado, coronal measurements are reported in absolute units rather than on the arbitrary relative scale that has been used in the past. Absolute intensities are given in millionths of the intensity in one angstrom of the spectrum of the center of the solar disk at the wavelength of the coronal line. Two conversion tables from arbitrary relative to absolute units were published in CRPL-F127, March 1955. One table gave the green-line conversions to absolute units applicable for all readings made since 1943. The other table gave the red-line conversions applicable for the years 1952 to the present. For earlier years a table is available from the High Altitude Observatory, Boulder, Colorado, showing changes in red-green sensitivity. Absolute yellow-line (λ5694) intensities may be obtained approximately by multiplying the values in the λ5303 table by 0.75. Absolute far red (λ6702) may be obtained approximately by multiplying the values in the λ6374 table by 0.9.

The Sacramento Peak measurements will continue to be on an arbitrary relative scale.

Table 94 gives the intensities of the green (5303A) line of the emission spectrum of the solar corona; table 95 gives similarly the intensities of the first red (6374A) coronal line; and table 96, the intensities of the second red (6702A) coronal line; all observed at Climax in March 1955.

Table 97 gives the intensities of the green (5303A) coronal line; table 98, the intensities of the first red (6374A) coronal line; and table 99, the intensities of the second red (6702A) coronal line; all observed at Sacramento Peak in March 1955.

The following symbols are used in tables 94 through 99; a, observation of low weight for whole limb (if in date column) or for portion of limb indicated; -, coronal not visible; and X, no observation for whole limb (if in date column) or for portion of limb indicated.

RELATIVE SUNSPOT NUMBERS

Table 100 lists the daily provisional Zürich relative sunspot number, R_Z, for March 1955, as communicated by the Swiss Federal Observatory. Table 101 contains the daily American relative sunspot number, R_A', for February 1955, as compiled by the Solar Division, American Association of Variable Star Observers.

OBSERVATIONS OF SOLAR FLARES

Table 102 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 103 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) daily "equivalent amplitude" Ap; (4) magnetically selected quiet and disturbed days.

The C-figure is the arithemetic 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 three criteria: (1) the sum of the eight Kp's; (2) the greatest Kp; and (3) the sum 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.

Ap indicates magnetic activity on a linear scale rather than the quasi-logarithmic scale of the K-indices. The column headed Ap gives the daily average for the eight values ap per day, where ap is defined as one-half the average gamma range of the most disturbed of the three force components, in the three-hour interval at standard stations. Ap is computed from the 8 indices Kp per day, see IATME Bulletin No. 12h (for 1953), p. VIII f. Values of Ap (like Kp and Cp) have been published for the Polar Year 1932/33 and currently since January 1937.

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. Current tables are also published quarterly in the Journal of Geophysical Research along with data on sudden commencements (sc) and solar flare effects (sfe).

NOTE ON C-2 AND C-3 SWEEP TIMES

Both C-2 and C-3 type automatic ionosphere recorders, when operating on regulated 60 or 50 c/s central power, have actual sweep times equal to 0.9 times the commonly used nominal sweep times. In the past, we have included the retrace time which is 10 percent of the total time it takes the equipment to go from one Mc to one Mc on the next sweep.

Beginning with this issue, F-128, sweeps taken on C-2 and C-3 type recorders, hitherto reported as from 1.0 to 25.0 Mc in 30, 18, or 15 seconds, will be given as taking 27, 16.2, or 13.5 seconds respectively.

ERRATUM

CRPL-F127, p. 15, table 14: The heading of the column at the extreme right should be (M2000)F2.

p. 60, fig. 27: The caption at the upper right should be (M2000)F2.

TABLES OF IONOSPHERIC DATA

Table 1

Washington, D. C. (38.7°N, 77.1°W) March 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(280)	2.4						3.0
01	(280)	2.4						3.0
02	(280)	2.4						3.0
03	(280)	2.4						3.1
04	270	2.3						3.1
05	(270)	2.2						3.1
06	250	2.5						3.2
07	250	3.8	230	---	120	1.8		3.5
08	270	4.3	220	3.5	110	2.2	2.2	3.5
09	300	4.6	200	3.0	110	2.5	3.0	3.4
10	310	5.0	200	4.0	110	2.8	3.0	3.2
11	330	5.1	190	4.1	100	2.9	3.1	3.2
12	320	5.1	200	4.2	100	3.0		3.2
13	330	5.3	210	4.1	110	3.0		3.1
14	320	5.4	210	4.0	110	2.9		3.2
15	310	5.4	220	3.9	110	2.8		3.2
16	290	5.4	220	3.6	110	2.5		3.3
17	260	5.2	230	---	120	2.1		3.3
18	230	5.0	240	---				3.4
19	230	4.7						3.3
20	230	3.8						3.3
21	250	3.2						3.2
22	270	2.8						3.1
23	(280)	2.6						3.1

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 2

Narsarssuak, Greenland (61.2°N, 45.4°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	---					4.2	---
01	---	---					4.7	---
02	---	---					4.7	---
03	---	---					4.4	---
04	---	---					4.8	---
05	---	---					4.4	---
06	(280)	(1.6)					3.8	---
07	(300)	(1.8)					2.3	---
08	250	3.1						3.4
09	260	3.9	240	---				3.45
10	270	4.2	220	3.2	---	---		3.4
11	280	4.4	220	3.3	---	---		3.3
12	280	4.6	220	3.4	---	---		3.5
13	280	4.5	230	3.4	---	---		3.3
14	270	4.5	230	3.4	---	---		3.3
15	260	4.2	230	(3.2)	---	---		3.3
16	260	3.9	---	---	---	---	2.5	3.3
17	260	3.6	---	---	---	---	3.6	3.25
18	250	3.0					3.3	3.2
19	---	(2.3)					3.9	(3.2)
20	---	(2.2)					5.2	(3.1)
21	---	(2.2)					5.8	(3.15)
22	---	---					6.2	---
23	---	---					6.0	---

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 3

Oslo, Norway (60.0°N, 11.1°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	(1.6)						---
01	---	1.7					2.2	(3.05)
02	---	1.5						3.05
03	---	1.5						2.95
04	---	1.4						3.0
05	---	1.5					(1.9)	(3.0)
06	---	1.4					(2.8)	---
07	---	1.8						3.0
08	235	3.3	225	---	---	(1.6)	1.8	3.35
09	225	4.2	220	---	110	1.7	2.0	3.55
10	230	4.7	215	---	(110)	2.0	2.2	3.5
11	230	4.8	210	(3.4)	110	2.3	2.6	3.5
12	240	5.5	210	(3.6)	115	2.3	2.5	3.45
13	235	5.2	215	---	110	2.3	2.4	3.5
14	240	5.3	220	---	110	2.2	2.4	3.5
15	230	5.1	225	---	115	2.0	2.4	3.5
16	225	4.8	230	---	125	1.8	1.3	3.5
17	225	4.4	---	---	---	---	2.4	3.35
18	(230)	3.9					(2.8)	3.25
19	---	3.4					(3.0)	3.2
20	---	2.5					(2.7)	3.15
21	---	2.0						3.1
22	---	1.8					(3.0)	(3.05)
23	---	(1.6)						---

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 4

Upsala, Sweden (59.8°N, 17.6°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(350)	(1.8)					2.6	(2.95)
01	340	(1.8)					2.5	(3.0)
02	310	(2.0)					2.4	3.0
03	320	(1.8)					2.6	(3.0)
04	340	(1.8)					2.5	2.9
05	(350)	(1.6)					2.5	(2.9)
06	(340)	(1.5)					2.4	(3.05)
07	260	2.3			---	E	2.2	3.0
08	230	3.6	225	(2.5)	---	E	2.3	3.3
09	235	4.4	215	2.8	120	1.8	2.4	3.4
10	240	4.8	210	3.1	115	2.0	2.3	3.3
11	245	5.0	210	3.3	110	2.1	2.5	3.4
12	240	5.3	210	3.4	110	2.2	2.3	3.4
13	245	5.3	210	3.2	115	2.2	2.4	3.4
14	240	5.4	215	3.1	120	2.0		3.4
15	235	5.2	225	2.9	125	1.8	2.3	3.4
16	225	4.8	---	---	---	1.6	1.7	3.35
17	230	4.2			---	E		3.25
18	240	3.6						3.1
19	240	3.0						3.0
20	270	2.4						3.0
21	300	(2.0)						3.0
22	300	(1.8)						(3.0)
23	(370)	(1.6)						---

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

Table 5

Adak, Alaska (51.9°N, 176.6°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	2.8						3.0
01	250	2.8						3.1
02	260	2.8						3.1
03	260	2.9						3.0
04	260	2.8						3.1
05	250	2.9						3.1
06	240	2.9						3.2
07	220	4.0					2.4	3.6
08	210	5.0	200	---	110	1.9	2.1	3.7
09	220	5.6	200	---	110	2.3	2.4	3.6
10	230	6.2	210	3.6	110	2.5		3.65
11	220	6.4	200	3.8	110	2.6		3.6
12	230	6.4	210	---	110	2.6		3.5
13	230	6.2	200	3.5	110	2.6		3.6
14	220	6.2	210	---	110	2.4		3.6
15	220	6.0	220	---	110	2.2		3.6
16	210	5.7			120	2.0	2.1	3.6
17	210	5.0			---	---	1.6	3.6
18	200	3.9						3.4
19	220	2.8						3.5
20	220	2.4						3.5
21	240	2.2						3.2
22	250	2.5						3.1
23	250	2.6						3.1

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 6

Graz, Austria (47.1°N, 15.5°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	3.3						
01	290	3.4						
02	290	3.4						
03	300	3.4						
04	290	3.2						
05	280	3.0						
06	---	2.4						
07	250	3.7						
08	230	4.8	---	---				
09	230	5.3	210	3.5				
10	240	5.4	210	3.8				
11	250	6.4	220	4.0				
12	240	6.5	210	4.0				
13	245	6.0	200	3.9				
14	240	5.4	210	3.8				
15	240	5.3	205	3.3				
16	230	5.5	---	---				
17	220	5.2						
18	240	4.2						
19	250	4.0						
20	250	3.9						
21	260	3.5						
22	270	3.3						
23	275	3.2						

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

Table 7

Schwarzenburg, Switzerland (46.8°N, 7.3°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	3.1						3.3
01	260	3.2						3.3
02	260	3.3						3.3
03	280	3.2						3.3
04	280	3.0						3.3
05	260	3.0						3.3
06	250	2.4						3.5
07	220	2.6						3.6
08	200	4.3			---	---		3.8
09	200	5.0			100	2.0		4.0
10	200	5.6			100	2.5		3.8
11	200	5.8			100	2.7		3.8
12	200	6.0			100	2.8		3.8
13	200	6.1			100	2.8		3.8
14	200	5.8			100	2.7		3.8
15	200	5.6			100	2.6		3.7
16	200	6.0			100	2.3		3.8
17	200	5.7			100	1.9		3.8
18	200	4.8						3.8
19	210	4.4						3.5
20	200	4.2						3.6
21	210	3.6						3.6
22	230	3.3						3.4
23	250	3.3						3.35

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

Table 8

San Francisco, California (37.4°N, 122.2°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	(3.0)					(3.2)	(3.0)
01	250	(3.0)					(3.0)	(3.1)
02	250	(3.0)					(2.7)	(3.1)
03	260	(3.0)					(2.0)	(3.1)
04	250	(3.0)					(2.5)	(3.1)
05	270	(2.9)					2.2	(3.0)
06	260	(2.9)					(2.9)	(3.0)
07	250	(4.2)					(2.8)	(3.2)
08	250	5.7	240	---	(120)	(2.1)	(3.0)	3.4
09	250	6.3	230	(3.8)	120	(2.5)	3.4	3.4
10	270	6.4	220	(4.2)	(120)	(2.8)	3.6	3.3
11	280	6.6	220	(4.2)	(120)	(3.0)	3.6	3.2
12	280	7.4	220	(4.3)	(120)	(3.0)	3.8	3.2
13	280	7.0	220	(4.2)	(110)	(3.0)	3.8	3.2
14	280	6.8	230	(4.2)	110	(3.0)	3.8	3.2
15	270	6.6	240	(4.0)	120	(2.8)	3.6	3.3
16	250	6.2	240	(3.6)	120	(2.5)	(3.5)	3.3
17	240	5.5	---	---	120	(1.9)	(3.4)	3.4
18	230	(4.4)					(3.2)	3.3
19	230	(3.0)					(3.0)	(3.2)
20	260	(2.6)					(2.6)	(3.2)
21	250	(2.6)					(3.0)	3.15
22	270	(2.7)					(2.6)	(3.0)
23	280	(3.0)					(3.1)	(3.05)

Time: 120.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 9

White Sands, New Mexico (32.3°N, 106.5°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	3.1					2.5	3.0
01	270	3.1						3.0
02	250	3.2						3.1
03	250	3.1					2.2	3.2
04	240	3.1					(2.3)	3.3
05	250	3.0					2.5	3.2
06	250	(2.9)					2.9	3.05
07	230	4.3					3.3	3.4
08	230	5.7	220	---	110	2.3	3.6	3.5
09	250	6.0	220	(3.9)	110	(2.7)	3.9	3.4
10	260	6.5	220	4.3	110	2.9	4.0	3.4
11	280	6.8	210	4.3	110	(3.0)	5.0	3.3
12	280	7.2	210	4.4	110	3.1	4.6	3.3
13	270	7.2	210	4.4	110	3.1	4.2	3.2
14	270	7.6	220	4.3	110	3.0	4.0	3.3
15	250	7.2	220	4.0	110	2.8	3.9	3.4
16	240	6.4	230	(3.5)	110	2.5	4.3	3.4
17	230	6.0	---	---	120	2.0	3.8	3.5
18	220	4.9					3.6	3.5
19	220	3.4					3.3	3.5
20	240	2.8					2.6	3.35
21	(250)	2.8					3.2	3.1
22	260	3.0					2.5	3.1
23	270	3.0					2.4	3.0

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 10

Okinawa I. (26.3°N, 127.8°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.1						(2.9)
01	280	3.1					1.8	(3.0)
02	280	3.1						3.15
03	260	3.1						3.2
04	250	2.5						3.3
05	290	2.2						3.0
06	280	2.3					2.8	2.9
07	250	4.9	220	---			2.8	3.4
08	260	6.2	240	---	130	2.5		3.5
09	280	7.2	240	---	120	2.9		3.3
10	280	7.6	240	4.4	130	3.1		3.3
11	300	8.4	230	4.4	120	3.2		3.15
12	300	8.5	220	4.6	120	3.3		3.1
13	310	10.0	230	4.5	120	3.3		3.1
14	300	10.8	240	4.4	120	3.1	3.3	3.2
15	280	10.5	240	4.2	130	3.0		3.3
16	260	8.4	240	---	130	2.6	3.6	3.4
17	240	6.9	250	---	130	2.0	3.6	3.5
18	230	5.9					1.8	(3.4)
19	230	5.2					1.8	3.3
20	250	4.6					2.1	3.0
21	260	4.2						(3.0)
22	290	(3.7)						2.95
23	300	3.3						2.9

Time: 127.5°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 11

Formosa, China (25.0°N, 121.5°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	3.4					2.2	2.8
01	280	3.2					2.4	3.0
02	260	3.2					2.4	2.9
03	250	3.0					2.2	3.05
04	240	2.6					2.0	3.2
05	280	2.2					2.0	3.2
06	<320	2.2					2.0	2.8
07	240	4.9			---	---		3.4
08	250	6.5	230	3.7	120	2.4	2.7	3.3
09	280	6.7	240	4.2	120	2.9	3.2	3.3
10	300	7.8	240	4.4	120	3.1	3.0	3.15
11	300	8.8	240	4.4	120	3.3		3.1
12	320	9.8	230	4.5	120	3.3		2.9
13	300	10.9	230	4.6	120	3.2		3.0
14	300	11.6	240	4.4	120	3.2	4.0	3.1
15	280	11.8	240	4.3	120	3.0	4.0	3.3
16	260	9.7	240	3.9	120	2.7	3.4	3.25
17	240	7.6	240	3.3	120	2.0	3.0	3.4
18	220	7.2					3.0	3.5
19	230	5.8					2.4	3.4
20	240	5.6					2.2	3.0
21	240	4.8					2.1	3.1
22	260	4.4					2.5	3.05
23	280	3.9					2.1	3.1

Time: 120.0°E.
Sweep: 1.1 Mc to 19.5 Mc in 15 minutes, manual operation.

Table 12

Maui, Hawaii (20.8°N, 156.5°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.0						2.9
01	300	3.0						2.9
02	280	3.0						3.0
03	260	2.8						3.3
04	240	2.5						3.3
05	280	2.2						3.1
06	300	1.8						2.9
07	280	3.6						3.1
08	270	5.7	240	---	130	2.3	2.7	3.2
09	310	6.6	220	(4.2)	120	2.7	3.0	3.0
10	330	7.9	220	4.5	120	3.0	4.2	2.85
11	350	9.0	220	4.6	120	3.2	4.0	2.8
12	340	10.0	230	4.6	120	3.3	4.0	2.9
13	320	10.4	230	4.6	120	3.3	4.0	2.9
14	320	10.8	230	4.5	120	3.2	3.8	2.9
15	300	10.5	240	4.4	120	3.1	3.8	3.0
16	280	9.8	250	4.1	120	2.8	3.6	3.1
17	260	7.8	250	---	130	2.3	3.5	3.3
18	240	6.0			---	---	2.9	3.5
19	240	3.8					2.9	3.35
20	260	3.2					2.5	3.0
21	310	3.3					2.0	2.75
22	290	3.4					2.6	3.0
23	290	3.3						2.9

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 13

Puerto Rico, W. I. (18.5°N, 67.2°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	(3.5)						(3.0)
01	270	(3.6)						(3.0)
02	260	3.9						3.1
03	240	4.0						3.3
04	230	(4.0)						3.4
05	240	3.7						3.2
06	230	3.2						3.4
07	220	3.8						3.5
08	230	5.2	210	---	110	(2.1)		3.6
09	260	5.8	240	---	110	(2.7)	3.1	3.4
10	280	6.6	240	4.4	110	3.0		3.25
11	280	7.4	230	4.5	110	3.2		3.3
12	280	7.6	230	4.5	110	3.3		3.3
13	280	8.0	230	4.5	110	3.4		3.2
14	280	8.0	240	4.5	110	3.3	3.4	3.25
15	280	8.0	220	4.3	110	3.1	2.6	3.2
16	270	7.5	230	4.1	110	2.8	4.4	3.2
17	250	7.6	230	---	110	2.4	4.0	3.4
18	220	7.6	230	---			3.0	3.5
19	200	5.3					2.4	3.6
20	220	3.6					2.4	3.4
21	(270)	3.0						3.0
22	290	3.3						2.9
23	280	3.5						3.0

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 14

Guam I. (13.6°N, 144.9°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	5.6					2.2	3.3
01	230	5.1						3.4
02	230	4.8					1.4	3.5
03	220	4.4						3.6
04	220	3.0					1.6	3.5
05	240	2.5					1.6	3.4
06	240	1.8					1.8	3.4
07	240	4.6			130	1.6	2.3	3.5
08	260	6.6	220	---	110	2.4	3.0	3.4
09	290	7.8	210	4.2	110	2.9	3.4	3.1
10	320	8.4	200	4.4	110	3.1	3.2	2.8
11	340	8.2	190	4.5	110	3.3	3.6	2.6
12	350	7.9	190	4.5	110	3.3	2.7	2.6
13	340	8.1	190	4.5	110	3.3		2.6
14	330	8.6	200	4.5	110	3.3		2.8
15	320	9.0	200	4.4	110	3.1		2.9
16	300	9.5	210	4.3	110	2.9		3.1
17	270	9.9	230	---	110	2.4	3.5	3.3
18	250	9.4	240	---	---	---	3.0	3.3
19	240	8.9					2.2	3.3
20	240	8.5						3.2
21	230	7.6					3.1	3.3
22	230	6.8					2.0	3.3
23	230	5.9					2.4	3.3

Time: 150.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 15

Panama Canal Zone (9.4°N, 79.9°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	3.2					2.2	3.1
01	240	3.3					1.9	3.4
02	230	3.4					1.8	3.5
03	220	3.1					1.9	3.55
04	220	2.4					2.6	3.5
05	270	2.2					2.2	3.0
06	280	2.2					2.0	3.0
07	240	4.6			---	---	3.2	3.5
08	260	5.8	240	---	110	2.5	3.6	3.4
09	300	6.5	230	4.4	110	2.9	4.3	3.2
10	310	7.6	220	4.5	110	3.2	4.5	3.1
11	320	8.6	220	4.6	110	3.3	4.8	3.1
12	320	8.8	230	4.6	110	3.4	4.7	3.0
13	320	9.6	220	4.6	110	3.4	4.7	3.0
14	310	10.4	220	4.6	110	3.4	4.6	3.0
15	300	10.7	220	4.5	110	(3.2)	4.6	3.1
16	270	11.2	220	4.2	110	3.0	4.7	3.3
17	240	10.6	230	(3.9)	120	2.5	4.4	3.5
18	220	8.0	---	---	---	---	3.9	3.7
19	210	4.4					3.1	3.5
20	230	3.4					2.8	3.3
21	260	2.8					3.0	3.0
22	300	2.8					2.5	3.0
23	300	3.0					1.9	2.95

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 16

Leopoldville, Belgian Congo (4.3°S, 15.3°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M2000)F2
00	220	3.6						2.35
01	270	3.0						2.3
02	260	3.0					1.6	2.35
03	270	2.6					2.2	2.4
04	280	2.6					2.4	2.5
05	250	3.4					2.8	2.6
06	260	6.0	235	---	115	2.0	3.0	2.7
07	275	6.7	220	(4.1)	110	2.7	3.0	2.6
08	310	7.1	220	(4.3)	110	3.1		2.35
09	325	7.9	210	4.5	105	3.4		2.2
10	340	8.6	200	4.5	110	3.5		2.2
11	340	9.3	200	4.6	105	3.6		2.2
12	345	10.2	200	4.5	110	3.6		2.2
13	345	10.6	200	4.4	110	3.4		2.15
14	340	10.6	200	4.4	110	3.2		2.15
15	330	10.2	220	4.2	110	3.0	3.0	2.1
16	315	10.0	235	---	115	2.4	3.0	2.2
17	300	10.0	250	---	---	---	2.6	2.2
18	250	9.8					2.3	2.3
19	260	9.0						2.3
20	240	9.4						2.4
21	225	9.4						2.6
22	210	8.3						2.8
23	200	5.6						2.7

Time: 0.0°.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 17

Resolute Bay, Canada (74.7°N, 94.9°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	2.3						3.2
01	260	2.2						3.2
02	260	2.2						3.2
03	260	2.2					3.0	3.2
04	260	2.1					3.2	3.3
05	270	2.2					4.6	3.3
06	270	2.4					4.2	3.25
07	270	2.8					4.0	3.2
08	250	2.8					3.4	3.2
09	250	2.8					2.5	3.2
10	240	3.2					2.6	3.2
11	240	3.3					2.5	3.3
12	240	3.6						3.25
13	240	3.8						3.3
14	240	3.6						3.3
15	240	3.3						3.3
16	240	3.4						3.2
17	250	3.4						3.2
18	250	3.1						3.2
19	250	3.0						3.2
20	250	2.9						3.2
21	260	2.8						3.2
22	250	2.5					3.6	3.3
23	250	2.3						3.2

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 18

Kiruna, Sweden (67.8°N, 20.3°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(310)	2.1					2.8	(3.3)
01	(310)	2.2					2.2	(3.35)
02	300	2.4					2.0	3.1
03	300	2.3						3.15
04	300	2.3						3.3
05	260	2.7						3.2
06	290	2.2						3.3
07	(295)	2.0						(3.3)
08	270	2.1						3.2
09	230	3.0						3.4
10	220	3.9			---	---		3.5
11	220	4.6			---	---		3.6
12	220	4.8			---	---		3.6
13	220	4.8			---	---		3.6
14	210	4.1			---	---		3.6
15	210	3.4						3.6
16	230	2.8						3.7
17	240	2.3						3.6
18	260	2.2						(3.3)
19	---	(2.4)					2.0	---
20	---	(2.9)					2.4	---
21	260	3.0					2.8	3.3
22	300	2.9					2.6	3.1
23	(300)	2.6					3.2	(3.2)

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

Table 19

Lulea, Sweden (65.6°N, 22.1°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(270)	---						
01								
02	(300)	---					1.8	
03								
04	300	(2.2)						
05								
06	(310)	---						
07								
08	265	2.2						
09								
10	210	4.1			---	1.7	2.0	
11								
12	210	5.2			---	1.7	1.8	
13								
14	200	4.1			---	1.6		
15								
16	225	3.1						
17								
18	(275)	(2.4)						
19								
20	---	---						
21								
22	(270)	---						
23								

Time: 15.0°E.
Sweep: 1.5 Mc to 10.0 Mc in 6 minutes, automatic operation.

Table 20

Fairbanks, Alaska (64.9°N, 147.0°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	(2.4)					4.5	(3.1)
01	300	(2.3)					4.9	(3.1)
02	330	(2.3)					5.2	(3.05)
03	320	(2.1)					4.9	(2.9)
04	(310)	(2.3)					5.4	(2.95)
05	(350)	(2.1)					5.2	(2.9)
06	310	(1.8)					5.5	(2.9)
07	290	(2.0)					4.9	(3.0)
08	290	(2.0)					4.7	(3.0)
09	250	3.0					2.2	3.4
10	240	4.0	---	---	---	---	(1.6)	3.5
11	230	4.6	---	---	---	E		3.45
12	230	5.0	---	---	(130)	---		3.5
13	220	5.0	---	---	---	---		3.5
14	220	4.7			---	---		3.5
15	220	4.4						3.5
16	230	3.6						3.45
17	240	2.8						3.4
18	240	(2.0)					4.4	(3.5)
19	---	E					4.1	---
20	---	E					6.0	---
21	(370)	---					4.4	---
22	(370)	(2.1)					4.0	---
23	300	(2.4)					4.4	(3.1)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 21

Baker Lake, Canada (64.3°N, 96.0°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.0			130	1.2	6.0	3.1
01	270	2.2			130	1.0	5.0	3.0
02	270	2.3			130	1.0	5.5	3.0
03	270	2.2			130	1.0	5.0	3.1
04	260	2.3			140	1.4	5.0	(3.15)
05	270	2.5			130	1.6	6.0	3.05
06	270	2.6			130	1.8	5.2	(3.1)
07	280	2.8			120	1.9	5.0	(3.4)
08	270	3.2			120	2.0	5.0	---
09	270	3.6			120	2.5	5.0	3.2
10	200	4.2			110	2.6	4.6	3.2
11	260	4.3			120	2.7	5.6	3.3
12	260	4.8	---	---	120	2.6	5.0	3.3
13	250	5.5	---	---	120	2.4	5.0	3.2
14	250	5.6	---	---	120	2.2	3.8	3.25
15	240	5.0	---	---	120	2.1	5.0	3.3
16	260	4.0			120	2.0	5.4	3.2
17	260	4.0			130	2.0	5.0	3.2
18	270	3.3			120	2.0	4.5	3.1
19	250	3.6			130	1.8	5.0	(3.15)
20	260	3.0			130	1.6	6.2	(3.2)
21	260	2.0			120	1.0	6.2	3.2
22	250	2.7			130	1.4	7.0	3.05
23	260	2.4			---	1.3	7.0	3.1

Time: 90.0°W.
Sweep: 0.6 Mc to 10.0 Mc in 16 seconds.

Table 22

Reykjavik, Iceland (64.1°N, 21.0°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00							4.5	
01							4.5	
02	---	---					4.3	---
03	(300)	(2.6)					3.5	(3.0)
04	(300)	(2.6)					2.0	(3.1)
05	200	(2.5)					(2.6)	(3.1)
06	(280)	(2.2)						(3.2)
07	(260)	---						---
08	---	E						---
09	240	2.5			---	---		3.3
10	230	3.8			---	---		3.4
11	220	4.6			---	---		3.5
12	230	5.2	---	---	---	---		3.5
13	230	5.2	---	---	---	---		3.5
14	220	4.9			---	---		3.5
15	220	4.7			---	---		3.5
16	230	4.0						3.4
17	240	(3.2)					2.8	3.25
18	(240)	(2.8)					2.0	3.2
19	---	---					3.6	---
20	---	---					3.7	---
21	---	---					3.7	---
22	---	(2.0)					3.8	---
23							3.7	

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 23

Anchorage, Alaska (61.2°N, 149.9°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	E						(3.1)
01	---	E						---
02	---	E						---
03	---	E						---
04	---	E					1.2	---
05	---	E						---
06	---	E						(3.0)
07	---	1.1						(3.0)
08	270	1.9			---	---		3.1
09	240	3.5			---	---		3.4
10	230	4.5	---	---	---	---		3.5
11	230	5.0	---	---	---	---		3.5
12	240	5.2	---	---	---	---		3.5
13	230	5.4	---	---				3.55
14	230	5.1	---	---				3.5
15	230	4.8						3.5
16	220	4.0						3.4
17	230	3.0						3.4
18	240	2.0						3.4
19	---	E						(3.45)
20	---	E						---
21	---	E						---
22	---	E						---
23	(310)	(1.2)						(3.0)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 24

Churchill, Canada (58.8°N, 94.2°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(260)	(2.8)					6.0	
01	(200)	(2.0)					7.5	
02	---	---			---	---	5.6	
03	(300)	(3.0)			---	---	5.0	
04	---	(2.0)			---	---	5.0	---
05	(360)	(3.0)			---	---	4.7	---
06	---	(3.3)			---	---	4.8	---
07	(300)	(2.5)			---	---	4.9	
08	290	2.8			---	---	4.6	(3.3)
09	250	3.7			120	1.8	4.8	3.4
10	240	4.4	---	---	120	1.8	4.9	3.4
11	250	5.0	230	---	120	2.0	5.0	3.35
12	250	5.5	230	3.2	120	2.3	5.0	3.4
13	250	5.8	230	3.2	120	2.3	5.0	3.3
14	250	5.8	---	---	130	2.2	5.0	3.3
15	240	5.6	---	---	130	1.9	4.9	3.4
16	240	5.5			130	1.9	4.5	3.4
17	250	4.4			120	(1.8)	4.2	3.3
18	200	3.5			130	(1.6)	4.5	(3.3)
19	280	3.1			---	---	4.6	---
20	320	2.9			---	---	4.7	---
21	(290)	3.2			---	---	5.0	
22	(310)	(3.0)			---	---	5.0	
23	(330)	(2.8)					6.0	---

Time: 90.0°W.
Sweep: 0.6 Mc to 10.0 Mc in 16 seconds.

Table 25

De Bilt, Holland (52.1°N, 5.2°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	2.8						3.0
01	250	2.8						3.0
02	260	(2.9)						3.0
03	260	(2.6)						3.0
04	250	(2.4)						3.0
05	240	(2.0)						3.1
06	230	(2.0)						3.2
07	230	2.5						3.2
08	200	4.6			---	E	1.8	3.5
09	205	5.4	---	---	120	2.0		3.6
10	210	5.8	210	3.2	120	2.3		3.6
11	220	6.1	210	3.4	115	2.4		3.6
12	220	5.8	210	3.4	115	2.5		3.6
13	220	5.8	220	3.4	115	2.4		3.6
14	220	5.4	205	3.2	115	2.2		3.6
15	210	5.3			120	1.9		3.6
16	210	4.8			---	E		3.5
17	220	3.9						3.4
18	230	3.1						3.3
19	230	2.6						3.1
20	240	2.8						3.0
21	240	2.6						3.0
22	240	2.8						3.0
23	240	(2.8)						3.0

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

Table 26

Lindau/Harz, Germany (51.6°N, 10.1°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	255	3.0					2.6	3.1
01	250	3.0					2.4	3.1
02	250	3.0					2.6	3.1
03	255	3.0					2.5	3.1
04	250	2.7					3.0	3.1
05	250	2.4					2.4	3.2
06	260	2.0					2.5	3.4
07	260	2.0					2.5	3.3
00	215	3.5					2.6	3.5
09	205	5.0			---	E	3.1	3.7
10	210	5.5			115	2.1	3.3	3.6
11	215	5.8			110	2.4	3.4	3.6
12	220	6.2			115	2.4	3.5	3.6
13	220	6.0			115	2.4	3.6	3.6
14	215	5.6			110	2.3	3.4	3.6
15	215	5.1			120	2.0	3.4	3.6
16	210	5.0			---	E	3.3	3.5
17	210	4.4					3.2	3.4
18	220	3.4					2.5	3.4
19	230	2.9					2.6	3.3
20	260	2.7					2.4	3.2
21	260	2.6					2.4	3.1
22	250	2.7					2.4	3.15
23	260	3.0					2.4	3.1

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

Table 27

Winnipeg, Canada (49.9°N, 97.4°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	2.0						---
01	340	(2.0)						(3.1)
02	320	2.0						---
03	(360)	2.0					3.0	---
04	(330)	(2.0)					4.4	---
05	(320)	2.1					3.8	---
06	(320)	(2.0)					3.2	---
07	---	1.8					3.0	---
08	260	2.6						3.2
09	240	4.2	230	---	130	1.9		3.4
10	240	5.1	230	3.2	120	2.2		3.5
11	250	5.5	220	3.5	120	2.4		3.4
12	260	6.0	220	3.6	120	2.6		3.4
13	260	6.0	220	3.7	120	2.6		3.4
14	250	6.0	230	3.5	120	2.5		3.4
15	240	5.8	230	3.1	120	2.3		3.4
16	230	5.7	230	---	130	2.0		3.45
17	220	5.0			---	---		3.4
18	230	4.0						3.3
19	240	3.0						3.25
20	270	2.1						3.1
21	290	2.0						(3.1)
22	(310)	1.8						---
23	(300)	1.8						---

Time: 90.0°W.
Sweep: 1.0 Mc to 10.0 Mc in 16 seconds.

Table 28

Schwarzenburg, Switzerland (46.8°N, 7.3°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	3.2						3.4
01	260	3.2						3.4
02	270	3.1						3.3
03	200	3.0						3.3
04	260	2.9						3.4
05	240	2.5						3.5
06	230	2.4						3.6
07	225	2.4			---	---		3.7
00	200	3.7			---	---		3.9
09	200	5.4			100	2.0		3.9
10	200	5.8			100	2.3		4.0
11	200	6.0			100	2.5		4.0
12	200	6.1			100	2.6		4.0
13	200	5.8			100	2.6		3.9
14	200	5.6			100	2.5		3.9
15	200	5.3			100	2.3		3.9
16	200	5.2			100	2.0		4.0
17	200	4.4			---	---		3.9
10	200	3.4						3.7
19	210	3.4						3.7
20	225	3.2						3.65
21	240	3.0						3.6
22	260	3.0						3.3
23	250	3.0						3.4

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

Table 29

Ottawa, Canada (45.4°N, 75.9°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	2.0						3.05
01	330	1.9						(3.0)
02	320	1.0						---
03	320	1.8						(3.0)
04	330	1.8						(3.0)
05	320	1.8						(3.2)
06	300	2.0						3.2
07	270	2.2						3.1
08	230	4.0			140	1.8		3.6
09	230	5.0	230	---	120	2.2		3.5
10	240	5.7	220	3.5	120	2.5		3.6
11	250	5.9	210	3.8	110	2.8		3.5
12	260	6.0	210	3.9	110	2.9		3.5
13	250	6.2	220	3.9	110	2.8		3.4
14	250	6.0	220	3.7	110	2.6		3.5
15	240	5.8	220	3.2	110	2.2		3.5
16	230	5.6	230	---	130	2.0		3.5
17	230	5.0						3.4
18	230	4.1						3.3
19	240	3.0						3.2
20	270	2.4						3.1
21	300	2.2						3.0
22	300	2.1						3.0
23	300	2.0						3.0

Time: 75.0°W.
Sweep: 1.0 Mc to 10.0 Mc in 15 seconds.

Table 30

Okinawa I. (26.3°N, 127.8°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.9						3.0
01	280	2.9						3.1
02	260	3.0						3.2
03	250	(2.8)					1.8	(3.3)
04	260	(2.3)					2.0	3.1
05	320	(2.3)					2.0	(2.9)
06	290	(2.1)						3.0
07	250	4.2					2.4	3.4
08	260	5.9	240	---	120	2.3	3.0	3.5
09	270	7.2	230	4.0	120	2.7	3.8	3.35
10	260	8.3	230	4.2	120	3.0	4.0	3.4
11	270	8.4	220	4.3	120	3.1	4.1	3.3
12	280	8.7	220	4.4	120	3.1	4.2	3.2
13	200	0.8	220	4.3	120	3.0	4.4	3.2
14	270	8.2	240	4.3	120	2.9	4.5	3.3
15	260	7.6	240	4.1	120	2.0	4.0	3.3
16	250	7.0	250	---	120	2.4	4.0	3.5
17	230	6.0					3.5	3.5
18	230	4.3					3.2	3.5
19	260	4.1					3.2	3.2
20	250	4.0					3.1	3.15
21	250	3.4					1.8	3.2
22	280	3.0						3.0
23	280	2.9						3.0

Time: 127.5°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 31

Huancayo, Peru (12.0°S, 75.3°W) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	(4.3)						(3.1)
01	270	(3.3)						(3.2)
02	270	(3.1)						(3.25)
03	270	(2.2)						(3.3)
04	270	(1.5)						---
05	260	1.4						(3.25)
06	250	4.3			120	1.5	2.6	3.3
07	270	6.2	220	---	110	2.3	8.2	3.2
08	310	7.1	200	4.0	100	---	11.0	2.9
09	370	7.1	200	4.2	100	---	11.8	2.5
10	410	6.6	200	4.3	100	---	12.1	2.4
11	410	6.7	190	4.4	100	---	12.1	2.5
12	410	6.8	190	4.4	100	---	11.5	2.5
13	400	7.2	190	4.4	100	---	11.5	2.6
14	370	7.8	200	4.3	100	3.3	10.1	2.6
15	340	8.0	200	4.2	110	3.2	9.3	2.7
16	310	8.4	200	4.0	100	2.9	9.0	2.8
17	290	8.0	220	---	110	2.5	5.3	2.85
18	240	8.3			120	1.8	4.5	2.9
19	250	7.6						3.1
20	280	7.0						3.0
21	300	6.7						2.9
22	300	(5.9)						(3.4)
23	290	(5.6)						(3.25)

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 32

Reykjavik, Iceland (64.1°N, 21.8°W) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	---					4.3	---
01	---	---					4.4	---
02	300	(2.3)					3.7	(3.1)
03	300	(2.1)					3.1	(3.2)
04	300	(2.2)					(3.7)	(3.1)
05	300	(2.2)					(2.4)	(3.2)
06	(300)	(1.8)					(2.9)	(3.2)
07	---	---						---
08	---	E						---
09	240	2.0						3.3
10	230	3.3			---	---		3.5
11	230	4.0			---	---		3.6
12	230	4.5	---	---	---	---		3.6
13	230	4.7			---	---		3.6
14	230	4.3			---	---		3.6
15	220	(3.8)						(3.5)
16	230	(3.3)						(3.3)
17	260	(2.5)					(3.1)	(3.2)
18	(280)	(2.0)					4.0	(3.2)
19	---	---					3.8	
20	---	---					4.0	
21	---	---					3.8	---
22	---	---					3.8	---
23	---	---					(3.8)	

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 33

Wakkanai, Japan (45.4°N, 141.7°E) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.8					2.3	
01	280	2.9					2.3	
02	280	2.9					2.3	
03	260	3.0					2.3	
04	250	2.8					2.3	
05	250	2.7					2.3	
06	260	2.6						
07	240	3.3					2.3	
08	230	4.8					2.8	
09	240	5.6					3.5	
10	250	6.5						
11	240	6.5						
12	240	5.7						
13	240	5.5						
14	240	5.5						
15	230	4.8						
16	220	3.8					2.8	
17	250	3.1					2.7	
18	260	2.7					2.3	
19	260	2.8					3.0	
20	260	2.8					2.6	
21	280	2.8					2.6	
22	290	3.0					2.5	
23	280	3.0					2.4	

Time: 135.0°E.
Sweep: 1.0 Mc to 22.0 Mc in 1 minute.

Table 34

Akita, Japan (39.7°N, 140.1°E) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.9					2.3	
01	270	2.9					2.4	
02	270	2.8					2.4	
03	240	2.9					2.3	
04	250	2.8					2.3	
05	250	2.6					2.2	
06	250	2.5					2.3	
07	230	3.9					2.4	
08	230	5.0					3.0	
09	240	5.4					3.4	
10	240	5.8					3.5	
11	250	6.6					3.5	
12	240	6.1					3.5	
13	250	5.7					3.5	
14	240	5.6					3.4	
15	230	5.0					3.5	
16	210	4.5					3.4	
17	220	3.2					3.0	
18	240	3.0					3.0	
19	240	2.8					2.6	
20	250	3.0					2.6	
21	250	2.8					2.5	
22	280	2.9					2.8	
23	290	2.9					2.5	

Time: 135.0°E.
Sweep: 0.85 Mc to 22.0 Mc in 2 minutes.

Table 35

Tokyo, Japan (35.7°N, 139.5°E) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	2.8						3.0
01	270	2.8					2.5	3.0
02	260	2.9					2.5	3.1
03	240	2.8					2.5	3.1
04	240	2.7					2.5	3.2
05	250	2.5					2.5	3.1
06	260	2.5			---	---	2.4	3.1
07	230	4.4	220	---	150	1.6	2.5	3.45
08	230	5.2	230	3.0	120	2.1	2.7	3.55
09	240	5.6	230	3.7	110	2.5	3.2	3.5
10	240	6.0	220	4.0	110	2.7	3.2	3.5
11	240	6.5	230	4.0	110	2.9	3.3	3.5
12	240	6.0	230	4.0	110	2.9	3.5	3.5
13	240	6.0	230	4.0	120	2.8	3.2	3.5
14	240	5.8	230	3.6	120	2.6	3.4	3.5
15	230	5.5	230	3.2	120	2.2	3.2	3.6
16	220	4.8	220	---	120	1.6	2.6	3.6
17	220	3.5	---	---			2.6	3.5
18	240	3.0					3.0	3.2
19	230	3.0					2.5	3.3
20	240	3.0					2.4	3.25
21	250	2.6					2.5	3.2
22	270	2.6					2.5	3.0
23	280	2.6					2.5	3.0

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

Table 36

Yamagawa, Japan (31.2°N, 130.6°E) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	2.6					2.3	
01	290	2.7					2.3	
02	270	2.8					2.3	
03	260	2.8					2.3	
04	250	2.7					2.3	
05	250	2.4					2.3	
06	280	2.4					2.3	
07	240	3.3					2.3	
08	240	5.2					2.6	
09	250	5.6						
10	260	6.4						
11	260	6.6						
12	260	6.6					3.6	
13	260	6.8						
14	260	6.0					3.8	
15	250	6.0					3.5	
16	240	5.6					3.2	
17	220	4.8					3.0	
18	240	3.4					3.0	
19	250	3.1					2.4	
20	250	3.0					2.4	
21	250	2.8					2.3	
22	290	2.5					2.3	
23	300	2.6					2.3	

Time: 135.0°E.
Sweep: 1.0 Mc to 22.0 Mc in 1 minute.

Table 37

Baguio, P. I. (16.4°N, 120.6°E) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	3.2						3.35
01	220	3.0						3.4
02	220	2.6					1.6	3.4
03	220	2.2					1.6	3.5
04	240	1.8					1.6	3.4
05	270	1.8					1.7	3.25
06	260	2.4					1.6	3.1
07	230	5.0			110	1.9	2.3	3.4
08	280	6.6	220	---	110	2.5	3.5	3.2
09	290	7.8	210	4.0	110	2.8	4.2	3.1
10	300	8.5	200	(4.2)	110	3.0	6.0	3.0
11	320	8.8	200	4.2	100	3.1	6.6	2.8
12	310	8.8	190	4.2	100	3.2	6.8	2.7
13	310	8.8	200	4.2	100	(3.1)	6.4	2.9
14	290	9.0	200	(4.1)	100	3.0	5.2	3.05
15	270	8.9	210	---	100	2.8	5.8	3.2
16	250	8.9	210	---	110	2.3	4.3	3.4
17	210	8.3	---	---	120	1.7	3.0	3.5
18	200	7.1					3.5	3.5
19	210	5.6					3.5	3.4
20	220	5.1					3.0	3.3
21	230	4.6					2.2	3.3
22	230	4.3						3.4
23	220	3.8						3.4

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 38

Johannesburg, Union of S. Africa (26.2°S, 20.1°E) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	4.1					2.5	3.1
01	240	4.0					2.4	3.1
02	240	3.6					1.4	3.2
03	240	3.1					2.4	3.1
04	250	3.0					2.0	3.1
05	250	3.3						3.2
06	250	4.6	230	3.2	120	2.0	2.9	3.2
07	300	5.4	230	3.8	110	2.6	3.3	3.1
08	330	5.9	220	4.1	110	2.9	3.8	3.0
09	330	6.7	210	4.3	110	3.1	4.1	2.9
10	340	7.0	200	4.4	110	3.3	4.3	2.9
11	330	7.6	200	4.5	110	3.4	4.3	2.9
12	330	8.0	200	4.5	110	3.5	4.2	2.9
13	310	8.0	200	4.4	110	3.4	4.5	2.9
14	310	8.0	200	4.4	110	3.4	4.2	3.0
15	300	7.6	200	4.2	110	3.2	4.0	3.0
16	300	7.1	210	4.1	110	3.0	3.7	3.0
17	280	7.0	210	3.8	110	2.6	3.5	3.1
18	250	6.7	220	3.1	110	2.0	3.0	3.2
19	240	6.3					2.4	3.2
20	240	6.0					2.4	3.1
21	240	5.3					2.3	3.1
22	250	4.7					2.6	3.0
23	260	4.4					2.5	3.0

Time: 30.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 39

Capetown, Union of S. Africa (34.2°S, 18.3°E) December 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	3.8					2.3	3.0
01	270	3.7					2.1	3.0
02	270	3.6					2.0	3.0
03	250	3.4					1.8	3.1
04	250	3.0					1.7	3.1
05	250	3.1						3.0
06	250	4.1	250	---	130	1.8		3.2
07	310	5.0	240	3.7	120	2.3		3.1
08	320	5.7	230	4.0	120	2.7	3.4	3.0
09	350	6.0	220	4.2	110	3.0	3.8	2.9
10	350	6.4	210	4.3	110	3.2	3.7	2.9
11	340	6.8	200	4.4	110	3.4	4.2	2.9
12	340	7.2	200	4.5	110	3.4	4.1	2.9
13	340	7.2	210	4.5	110	3.4	3.7	2.9
14	330	7.3	210	4.4	110	3.3	3.9	2.9
15	320	7.1	220	4.3	110	3.2	4.1	3.0
16	310	6.8	210	4.2	110	3.1	3.6	3.1
17	300	6.4	210	4.0	110	2.8	3.4	3.1
18	280	6.2	220	3.7	120	2.4	3.1	3.2
19	250	5.8	230	3.0	120	1.9	2.6	3.3
20	240	5.4					2.0	3.2
21	230	5.0					1.9	3.2
22	240	4.2					2.0	3.1
23	260	3.6					2.4	3.0

Time: 30.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 40

Tromso, Norway (69.7°N, 19.0°E) November 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	(2.4)					4.1	---
01	---	(2.2)					4.0	(2.9)
02	---	(2.2)					3.7	(2.95)
03	---	2.3					2.9	(2.95)
04	(270)	2.2					2.4	2.9
05	(270)	1.9					2.8	3.0
06	---	1.7					2.6	3.15
07	(260)	1.7					1.8	3.1
08	245	2.8			---	---	1.9	3.3
09	235	3.7			---	---	1.0	3.35
10	225	4.1	---	---	---	---	1.7	3.35
11	220	4.4	225	---	---	---	2.5	3.45
12	220	4.6	230	---	---	---	1.9	3.4
13	230	4.6	---	---	---	---	1.9	3.35
14	230	4.0			---	---	1.6	3.35
15	220	3.6			---	---	1.9	3.2
16	225	2.9					2.8	3.1
17	(245)	(2.8)					3.6	(3.2)
18	---	(2.6)					3.6	---
19	---	---					4.0	---
20	---	---					4.1	---
21	---	---					3.9	---
22	---	---					4.0	---
23	---	---					3.7	---

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 41*

Inverness, Scotland (57.4°N, 4.2°W) November 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	335	1.9						2.7
01	325	1.8						2.7
02	320	1.7						2.8
03	305	1.6					2.4	2.8
04	305	1.4					2.5	2.8
05	305	1.4					2.4	2.8
06	330	1.5					2.6	2.8
07	290	1.9					2.2	2.0
08	230	3.4			(130)	(1.7)	2.2	3.4
09	220	4.3			125	1.8	2.4	3.5
10	230	4.8	210	(2.9)	120	2.0	2.4	3.6
11	235	5.4	215	3.1	120	2.1	2.4	3.6
12	245	5.3	215	3.1	120	2.2	2.4	3.6
13	235	5.5	210	3.0	125	2.1	2.4	3.6
14	235	5.4	215	2.8	130	1.9	2.4	3.5
15	225	4.9			130	1.8	2.4	3.5
16	215	4.4					2.5	3.5
17	230	3.7					2.4	3.2
18	240	3.1						3.3
19	260	2.4						3.2
20	300	2.0						3.0
21	325	1.7						2.8
22	340	1.6					2.2	2.8
23	350	1.6						(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) November 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	200	2.9					2.6	2.85
01	280	3.0					3.0	2.9
02	270	3.0					3.0	2.9
03	265	2.7					3.0	2.9
04	260	2.3					2.7	3.0
05	255	2.2					3.2	3.0
06	255	2.2					3.2	3.15
07	240	3.0					3.1	3.2
08	225	4.3	(215)	(2.7)	130	1.7	3.1	3.55
09	235	5.2	220	3.2	125	2.0	3.6	3.55
10	235	5.5	220	3.4	120	2.3	3.8	3.55
11	245	5.8	220	3.5	125	2.4	4.0	3.5
12	240	6.0	225	3.6	125	2.5	3.9	3.55
13	240	5.8	220	3.4	125	2.4	4.2	3.45
14	245	5.7	220	3.1	125	2.2	3.6	3.45
15	235	5.5			130	1.9	3.2	3.5
16	220	4.9					3.2	3.5
17	225	4.0					3.2	3.35
18	235	3.4					2.9	3.25
19	255	2.9					2.6	3.15
20	260	2.6					2.5	3.05
21	280	2.5					2.5	2.9
22	285	2.8					2.4	2.9
23	290	2.9					2.6	2.85

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 43*

Singapore, British Malaya (1.3°N, 103.8°E) November 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	3.7						2.9
01	275	3.6						2.0
02	275	3.5						2.9
03	275	3.2						2.9
04	270	3.0						3.0
05	250	2.7						3.2
06	250	4.3			145	1.6		3.2
07	255	6.6	240	4.0	125	2.3	2.9	3.2
08	(290)	7.1	220		120	2.8	3.5	2.9
09	340	7.5	215	4.3	110	3.1	3.7	2.5
10	390	8.2	205	4.4	110	3.3	4.6	2.3
11	410	8.6	200	4.5	110	3.4	4.6	2.1
12	405	8.6	200	4.5	110	3.4	4.6	2.1
13	385	8.6	205	4.4	110	3.3	4.6	2.1
14	370	8.8	205	4.3	110	3.2	4.8	2.2
15	350	9.0	215	4.2	110	3.0	3.4	2.4
16	310	9.4	225	(4.1)	120	2.6	3.8	2.5
17	255	9.2	240		135	2.1	3.9	2.6
18	265	9.1					3.0	2.6
19	290	8.2						2.7
20	300	7.2						2.7
21	275	7.6						3.0
22	230	8.6						3.5
23	215	5.4						3.3

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 44

Nairobi, Kenya (1.3°S, 36.8°E) November 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	200	>5.4						3.4
01	<240	4.3						3.0
02	260	4.9						3.0
03	250	>4.6						3.1
04	<240	>4.0						3.2
05	220	3.6						3.3
06	240	3.6						3.3
07	250	5.9	230	---	120	2.2	3.0	3.3
08	280	6.9	220	4.2	110	2.0	3.6	3.2
09	320	7.8	210	4.4	110	3.1	3.5	3.0
10	330	8.6	210	4.5	110	3.3		2.0
11	340	9.1	200	4.6	110	3.4	3.7	2.0
12	350	9.7	200	---	100	3.5		2.0
13	350	9.9	---	---	110	---	(3.8)	2.0
14	340	10.6	---	---	110	3.5	3.5	2.8
15	350	10.1	200	4.4	110	3.2		2.0
16	330	10.3	220	4.2	110	3.0		2.0
17	(300)	>10.0	230	4.0	110	2.4	3.1	2.85
18	(280)	>10.0	250	---	---	---	3.0	2.9
19	280	(10.0)					2.7	(3.0)
20	300	---						---
21	290	---						---
22	260	---						---
23	220	>10.0						(3.5)

Time: 45.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 45

Rarotonga I. (21.3°S, 159.8°W) November 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	6.7					3.6	(3.1)
01	250	6.4					3.4	3.4
02	260	5.4					3.0	3.1
03	280	4.7					2.6	3.0
04	290	4.7					2.5	3.0
05	270	4.6					2.4	3.1
06	250	5.7	---	---	---	1.8	2.9	3.25
07	250	6.6	240	3.8	110	2.4	3.7	3.4
08	280	7.2	220	4.2	110	2.8	4.6	3.25
09	310	7.8	210	4.4	105	3.1	5.4	3.1
10	300	8.7	210	4.5	105	3.2	5.6	3.0
11	320	9.6	200	4.6	105	3.4	4.8	3.0
12	300	10.7	200	4.5	105	3.4	4.8	3.1
13	300	10.7	200	4.6	105	3.4	4.6	3.0
14	300	10.4	200	4.5	105	3.3	4.4	3.0
15	300	10.0	220	4.4	105	3.1	5.0	3.2
16	290	9.0	230	4.3	110	2.9	4.7	3.1
17	280	8.8	240	4.0	110	2.5	4.6	3.1
18	260	8.1	---	---	---	E	4.2	3.1
19	250	8.0					4.0	3.0
20	200	7.7					4.2	2.9
21	290	7.2					3.6	2.9
22	290	7.1					3.2	2.9
23	290	7.1					3.5	2.95

Time: 157.5°W.
Sweep: 1.5 Mc to 20.0 Mc in 5 minutes, manual operation.

Table 46

Christchurch, New Zealand (43.6°S, 172.8°E) November 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	4.7					3.3	3.0
01	260	4.4					2.5	3.1
02	260	4.0					2.9	3.1
03	270	3.4					2.7	3.1
04	270	3.4				---		3.1
05	250	3.8	260	---		1.4		3.25
06	290	4.5	250	3.4		2.2		3.3
07	320	4.7	240	4.0		2.6		3.1
08	320	5.1	240	4.2		2.8	4.6	3.15
09	320	5.5	230	4.3		3.0	4.7	3.2
10	320	6.0	220	4.3		3.1	4.0	3.2
11	300	6.1	220	4.4		3.2	4.8	3.2
12	300	6.2	210	4.4		3.2	4.8	3.2
13	320	6.0	220	4.4		3.2		3.2
14	310	6.0	220	4.3		3.1		3.2
15	320	5.8	230	4.2		3.0		3.1
16	300	5.9	250	4.0		2.8		3.15
17	280	5.8	250	3.7		2.4		3.2
18	(270)	5.8	---	3.2		2.0	4.1	3.2
19	250	5.8				---	4.2	3.1
20	250	6.2					4.0	3.0
21	260	5.6					3.8	3.0
22	260	5.3					4.2	3.0
23	270	4.8					4.2	2.95

Time: 172.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 47

Tromso, Norway (69.7°N, 19.0°E) October 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	---					4.4	---
01	---	---					4.2	---
02	---	(1.8)					4.5	(2.9)
03	---	2.1					3.4	(2.95)
04	(290)	1.7					2.8	2.9
05	(270)	2.1				---	2.0	2.9
06	(255)	2.4				---	3.0	(2.95)
07	255	3.2				---	2.4	3.15
08	250	3.8	240	---	---	---	1.4	3.3
09	250	4.0	240	---	---	---		3.35
10	255	4.4	230	---	---	---	2.3	3.35
11	260	4.6	230	3.3	---	---		3.35
12	255	4.7	235	---	---	---		3.35
13	240	4.6	230	---	---	2.0		3.35
14	240	4.1	235	---	---	---	2.2	3.35
15	245	4.0	250	---	---	---	2.4	3.3
16	245	3.0	---	---	---	---	3.0	3.3
17	250	3.6					3.8	3.1
18	(245)	(3.6)					4.0	(3.15)
19	(255)	(3.2)					3.9	(3.1)
20	---	(2.4)					3.0	(3.0)
21	---	(2.4)					4.2	---
22	---	---					3.7	---
23	---	---					3.8	---

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 48

Nairobi, Kenya (1.3°S, 36.8°E) October 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	200	---						---
01	220	3.4						2.9
02	<270	>3.2						3.0
03	(200)	3.1						3.0
04	250	3.1						3.1
05	250	2.9						3.2
06	250	3.0						3.2
07	250	6.6	240	3.6	---	2.2	3.0	3.5
08	260	7.8	230	4.1	110	2.7	3.7	3.5
09	290	7.8	220	4.4	110	3.1	3.5	3.3
10	310	8.4	200	4.6	110	3.3	3.8	3.0
11	310	9.4	---	4.6	110	---	(3.7)	3.0
12	300	9.0	---	---	110	---		3.0
13	(340)	(9.7)	---	---	---	---		(2.8)
14	340	(10.4)	---	---	110	---		(2.75)
15	340	10.7	---	---	110	---	(3.6)	2.8
16	320	>10.6	---	4.4	110	---		2.9
17	300	---	240	3.9	110	2.5	3.4	---
18	270	---	250	---			3.8	---
19	280	---					2.9	---
20	270	---					2.7	
21	260	---						---
22	230	---						---
23	210	---						---

Time: 45.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 7 seconds.

Table 49*

Falkland Is. (51.7°S, 57.8°W) October 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	295	4.9						2.8
01	290	4.8						2.8
02	285	4.6						2.8
03	265	4.5						2.9
04	255	4.4						3.1
05	240	4.7			160	1.6		3.3
06	225	5.0			120	1.8	3.0	3.5
07	230	5.2	225		115	2.3	3.4	3.5
08	290	5.7	230	4.1	110	2.7	3.7	3.3
09	300	6.1	220	4.3	110	2.9	4.4	3.3
10	290	6.4	220	4.4	110	3.0	4.2	3.2
11	280	6.9	220	4.4	110	3.1	4.3	3.2
12	280	7.7	220	4.4	110	3.1	4.2	3.2
13	270	7.9	225	4.4	110	3.1	3.7	3.3
14	265	7.1	225	4.3	105	3.0		3.4
15	255	6.3	230	4.0	110	2.8	3.3	3.4
16	255	6.0	230	3.8	105	2.5	2.5	3.4
17	250	5.8	230		125	2.1	2.9	3.4
18	245	5.8			140	1.7	2.5	3.3
19	250	5.8					2.6	3.1
20	265	5.9					1.8	2.9
21	265	5.6						2.9
22	275	5.3						2.8
23	290	5.2						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 50*

Port Lockroy (64.8°S, 63.5°W) October 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	5.0						2.7
01	290	4.5						2.7
02	280	4.2						2.8
03	275	4.0						2.8
04	260	3.9						2.9
05	245	4.2			(140)	(1.8)		3.0
06	235	4.3			130	1.9		3.2
07	245	4.6			120	2.1		3.3
08	250	5.1			110	2.3		3.2
09	290	5.2	220	(3.8)	100	2.6	3.8	3.3
10	290	5.5	220	3.9	100	2.7	4.0	3.2
11	300	5.6	215	4.0	100	2.8	4.0	3.3
12	280	6.1	215	3.9	100	2.8	4.0	3.2
13	200	5.8	220	3.9	100	2.8		3.2
14	265	5.8	215	3.9	100	2.7	3.3	3.2
15	(280)	5.8	210	(3.7)	100	2.6		3.3
16	(250)	5.5	220		110	2.4		3.3
17	240	5.5			120	2.1		3.2
18	240	5.4			130	1.8		3.2
19	250	5.4			140	(1.7)	2.0	3.0
20	260	6.1						2.9
21	260	6.4						2.8
22	260	6.1						2.9
23	270	5.7						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 51

Tromso, Norway (69.7°N, 19.0°E) September 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00							5.0	
01	---	---					4.0	---
02	---	---					4.4	---
03	---	---					3.8	---
04	---	(2.2)					3.2	(3.0)
05	---	(2.3)	---	---	---	---	3.0	---
06	---	3.0	260	---	---	---	2.8	(3.1)
07	---	3.4	245	---	---	1.9	2.8	---
08	---	3.6	245	---	---	2.1		---
09	(380)	3.7	240	3.5	105	2.2		(3.15)
10	(365)	4.1	230	3.6	---	2.3		3.05
11	330	4.4	230	3.6	---	---		3.1
12	325	4.3	220	3.6	110	---		3.2
13	(305)	4.2	215	3.6	120	2.4		(3.1)
14	(310)	4.0	225	---	---	(2.3)		3.3
15	(270)	3.8	225	---	120	2.2		3.3
16	(270)	3.7	245	---	120	2.0	2.7	3.3
17	(275)	3.6	250	---	110	1.8	3.6	3.3
18	(260)	3.5	---	---	---	---	4.0	3.2
19	---	(3.1)					4.2	(3.1)
20	---	---					4.0	---
21	---	---					4.4	---
22							4.4	
23							4.6	

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 52

Townsville, Australia (19.3°S, 146.7°E) September 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	3.0					1.7	3.2
01	240	(3.5)					2.0	(3.2)
02	220	3.2					1.8	3.35
03	250	2.4					2.0	3.2
04	270	2.4					2.1	3.0
05	290	(2.4)						(3.0)
06	270	2.7					1.8	(3.0)
07	250	4.8	250	---	120	1.8	2.3	3.3
08	280	5.6	240	3.8	100	2.3	3.3	3.3
09	300	6.4	230	4.0	100	2.9	3.5	3.2
10	270	7.5	220	4.1	110	3.2	3.6	3.4
11	280	6.0	200	4.3	100	3.2	3.8	3.3
12	(300)	6.3	210	4.3	100	3.2	3.7	3.2
13	300	5.9	200	4.2	110	3.2	3.7	3.2
14	300	6.0	200	4.1	110	3.1	3.8	3.2
15	300	5.5	200	4.0	100	3.0	3.8	3.2
16	200	5.5	220	3.8	110	2.7	3.7	3.25
17	250	>5.2	220	---	120	2.2	3.6	3.3
18	250	(5.0)					2.6	3.3
19	250	(4.5)					2.0	(3.2)
20	250	>4.0					2.4	(3.2)
21	<270	>3.0					1.8	(3.0)
22	200	(3.7)					(1.8)	(3.0)
23	260	(4.0)					1.0	(3.1)

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

Table 53

Brisbane, Australia (27.5°S, 153.0°E) September 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	3.9						3.15
01	250	3.8						3.3
02	240	3.5						3.2
03	250	3.3						3.2
04	250	3.0						3.0
05	260	2.8						3.0
06	250	3.6			---	<1.8		3.3
07	270	4.9	250	3.7	110	(2.1)		3.4
08	300	5.4	250	4.0	110	(2.7)		3.25
09	300	5.5	240	4.2	110	(3.1)	(3.5)	3.3
10	300	5.7	230	4.2	100	3.2	(3.4)	3.4
11	310	5.6	210	>4.2	110	3.3		3.3
12	300	5.9	220	4.3	110	3.3		3.3
13	300	5.9	200	4.2	100	3.2		3.3
14	300	5.6	200	4.2	100	3.2		3.4
15	290	5.4	210	4.0	100	2.8	4.0	3.4
16	270	5.1	220	3.6	120	---	3.4	3.4
17	250	4.8	---	---	---	1.9		3.4
18	240	4.6						3.2
19	250	4.3						3.1
20	260	4.0						3.0
21	270	4.1						3.0
22	270	4.0						3.0
23	260	4.0						3.05

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

Table 54

Canberra, Australia (35.3°S, 149.0°E) September 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	3.0						3.0
01	---	3.0						3.0
02	---	2.9						3.05
03	(240)	(2.9)						3.1
04	---	(2.4)						3.0
05	---	2.4						3.0
06	(270)	2.8						3.1
07	250	3.8	250	---	---	2.0		3.3
08	320	4.3	240	3.8	110	2.3		3.2
09	350	4.6	230	4.0	110	2.7		3.1
10	370	4.9	220	4.0	110	2.9		3.1
11	340	5.0	210	4.1	110	3.0		3.1
12	350	5.2	220	4.1	110	3.1		3.0
13	310	5.5	210	4.1	110	3.1		3.2
14	300	5.4	220	4.0	110	3.0		3.2
15	290	5.0	220	4.0	110	2.8		3.3
16	290	4.9	220	3.5	(110)	(2.4)		3.3
17	260	4.6	240	(3.0)	---	1.9		3.3
18	240	4.2						3.2
19	---	4.0						3.0
20	---	3.6						3.0
21	---	3.5						3.0
22	---	3.4						3.0
23	---	(3.1)						2.9

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

Table 55

Hobart, Tasmania (42.9°S, 147.3°E) September 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	1.9						3.0
01	280	1.7						3.0
02	300	1.8						2.9
03	280	1.8						3.0
04	280	1.7						3.0
05	300	1.7						3.0
06	260	2.1						3.1
07	230	3.5			100	1.9		3.1
08	200	3.8			100	2.2		3.1
09	G	4.0	200	3.9	100	2.5		G
10	400	4.5	200	4.0	100	2.8		2.7
11	350	4.7	200	4.0	100	2.9		2.8
12	360	5.0	200	4.1	100	3.0		2.8
13	350	4.8	200	4.0	100	3.0		2.9
14	340	5.0	200	4.0	100	2.8		2.9
15	300	5.0	200	3.9	100	2.6		3.0
16	200	4.6	---	---	100	2.2		3.1
17	220	4.5			100	1.8		3.1
18	230	4.2						3.0
19	250	3.7						2.9
20	250	3.2						2.9
21	260	2.5						3.0
22	270	2.1						3.0
23	270	2.0						3.0

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

Table 56

Townsville, Australia (19.3°S, 146.7°E) August 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	(3.2)					1.8	(3.2)
01	250	(3.1)					1.8	(3.2)
02	240	(3.2)					1.9	(3.3)
03	220	(2.8)					2.7	(3.4)
04	240	(2.4)					2.5	(3.05)
05	260	(2.3)					2.7	(3.0)
06	270	(2.3)					2.9	(3.0)
07	250	4.3			140	<1.4	3.1	3.4
08	280	5.3	240	3.7	110	2.2	3.1	3.4
09	280	6.0	230	4.0	110	2.7	3.6	3.4
10	280	6.2	220	4.0	110	3.0	3.7	3.4
11	280	6.2	210	4.2	110	3.1	3.6	3.4
12	280	5.6	210	4.2	110	3.1	3.6	3.4
13	300	5.5	200	4.2	110	3.1	3.7	3.3
14	290	5.6	200	4.1	110	3.0	4.0	3.3
15	280	5.4	200	4.0	110	2.9	3.7	3.4
16	280	5.2	210	3.7	120	2.6	3.7	3.3
17	240	5.2	220	3.0	130	2.0	3.6	3.4
18	240	4.8					3.0	3.4
19	240	4.2					3.2	3.2
20	240	3.6					3.0	3.25
21	280	3.1					2.3	3.0
22	280	(3.2)					(2.4)	(3.05)
23	260	3.2					2.2	3.2

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

Table 57

Brisbane, Australia (27.5°S, 153.0°E) August 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	3.5						3.1
01	---	3.5						3.1
02	---	3.6					2.0	3.2
03	---	3.5						3.25
04	---	3.3					2.2	3.2
05	---	3.0					2.0	3.2
06	---	3.0						3.2
07	240	>4.2	---	---	160	2.0		3.5
08	250	4.8	240	3.9	110	2.4		3.4
09	280	5.4	250	4.1	110	(3.0)		3.35
10	280	5.6	240	4.2	110	3.1		3.4
11	280	5.6	230	4.2	110	3.2		3.4
12	290	5.1	220	4.2	110	3.2	4.1	3.35
13	300	5.2	210	4.2	110	3.1	4.2	3.3
14	300	5.4	200	4.1	110	3.0	4.1	3.3
15	270	5.4	220	3.9	110	2.8	3.8	3.4
16	250	4.8	220	3.5	120	2.5	3.0	3.4
17	240	4.7			150	1.8	3.3	3.5
18	---	4.3					2.2	3.4
19	---	4.0						3.2
20	---	3.5						3.0
21	---	3.6						3.1
22	---	3.5						3.0
23	---	3.5						(3.0)

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

Table 58

Canberra, Australia (35.3°S, 149.0°E) August 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	3.0						3.1
01	---	3.1						3.1
02	(250)	3.2						3.0
03	(250)	(3.4)					(2.5)	(3.1)
04	(230)	(3.2)						(3.1)
05	(230)	3.1						3.1
06	---	(2.6)						(3.1)
07	250	3.6						3.4
08	240	4.2	240	---	(120)	2.0		3.6
09	270	4.6	250	3.8	110	2.5		3.4
10	300	4.7	240	4.0	110	2.7		3.4
11	300	5.0	220	4.0	110	2.9		3.3
12	300	5.2	220	4.0	110	3.0	(3.3)	3.2
13	300	5.2	220	4.0	110	3.0	3.3	3.3
14	290	5.3	210	4.0	110	2.9		3.3
15	270	5.3	220	3.8	110	2.7		3.4
16	250	5.0	220	(3.5)	110	2.3		3.4
17	240	4.6	---	---			(2.0)	3.4
18	---	4.1						3.2
19	---	3.8						3.1
20	---	3.6						3.1
21	---	3.3						3.1
22	---	(3.0)						3.1
23	---	(3.0)						3.0

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

Table 59

Hobart, Tasmania (42.9°S, 147.3°E) August 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	2.0					3.0	3.0
01	270	2.0					3.5	2.9
02	270	2.0					3.0	3.0
03	260	2.0					3.4	3.0
04	250	2.0					3.2	3.0
05	250	1.9						3.1
06	250	1.8						3.0
07	230	3.0			---	1.5		3.1
08	220	3.7			100	2.0		3.2
09	200	4.2			100	2.4		3.2
10	200	4.4	---	---	100	2.5	3.2	3.1
11	300	4.7	200	3.9	100	2.7	3.0	3.1
12	300	5.0	200	4.0	100	2.8	3.3	3.1
13	280	5.2	200	3.9	100	2.8	3.3	3.1
14	200	5.0	200	3.8	100	2.6		3.1
15	200	5.0			100	2.4		3.2
16	200	5.0			100	2.0		3.2
17	210	4.5			120	1.6		3.2
18	220	3.7						3.0
19	250	3.3						3.0
20	250	2.7						3.0
21	260	2.1						3.0
22	260	2.6						3.0
23	260	2.0					2.5	3.1

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

Table 60*

Inverness, Scotland (57.4°N, 4.2°W) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	(3.1)					2.5	3.0
01	260	(2.6)					2.4	3.1
02	265	(2.3)					2.4	(3.0)
03	270	(2.4)					2.5	(3.0)
04	285	2.8	(250)	(2.5)			2.6	2.9
05	355	3.4	230	2.9	125	1.7	2.8	3.0
06	410	3.7	215	3.3	115	2.0	3.2	3.0
07	430	3.9	210	3.6	110	2.3	3.3	(3.2)
08	435	3.9	205	3.7	110	2.5	3.1	(3.1)
09	405	4.4	210	3.9	105	2.7	3.6	3.1
10	395	4.4	205	4.0	105	2.8	4.4	3.2
11	395	4.5	210	4.1	100	2.9	3.7	(3.2)
12	420	4.5	205	4.1	105	2.9	3.6	(3.1)
13	440	4.5	210	4.1	105	3.0	3.7	(3.1)
14	410	4.4	210	4.0	105	3.0	4.2	(3.0)
15	435	4.4	210	4.0	105	2.9	3.3	3.0
16	405	4.3	215	3.9	105	2.7	3.3	3.0
17	375	4.4	215	3.8	110	2.5	4.4	2.9
18	325	4.5	215	3.6	110	2.2	3.5	3.1
19	305	4.6	235	3.3	125	2.0	3.3	3.1
20	260	4.6	(230)	(2.9)	140	1.7	3.4	3.2
21	235	4.5					2.5	3.3
22	235	(4.2)					2.4	3.2
23	250	(3.6)					2.3	(3.1)

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 61

Delhi, India (28.6°N, 77.1°E) July 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	(310)	4.8						(3.05)
01	---	4.6						(3.25)
02	---	4.6						(3.1)
03								
04	---	4.2						(3.25)
05	280	4.5						3.35
06	260	4.6						3.4
07	280	5.2						3.35
08	280	5.9						3.15
09	310	6.8						3.1
10	320	7.0						3.0
11	320	>7.0						2.95
12	320	7.2						3.05
13	320	7.6						3.05
14	320	7.2						3.05
15	320	7.3						3.05
16	300	7.4						3.1
17	280	7.0						3.3
18	280	>6.2						3.3
19	260	6.3						3.4
20	240	6.0						3.45
21	240	5.4						3.45
22	280	4.8						3.4
23	(280)	4.8						(3.1)

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 62

Calcutta, India (22.6°N, 88.4°E) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	(300)	(4.4)						(2.7)
01	---	(4.2)						
02	---	(4.4)					(5.4)	
03	---	---					(5.2)	---
04	---	(3.7)						
05	(240)	(3.0)						
06	(240)	(4.8)					3.2	(2.95)
07	---	---					(6.5)	
08	---	(6.4)					(5.3)	
09	---	(6.5)					(4.4)	---
10	---	(8.2)					(7.1)	
11	(300)	(9.0)					(5.2)	
12	(240)	8.7					5.9	(2.6)
13	(240)	8.9					5.2	
14	(240)	9.0					4.6	
15	240	9.0					4.8	2.6
16	(260)	9.0				---	4.6	
17	(240)	9.2				---	4.0	
18	(270)	8.9					(4.5)	(2.8)
19	(260)	8.6					5.0	
20	(240)	8.3					(4.3)	
21	(270)	5.3						(2.85)
22	(285)	4.8						
23	(300)	4.6						

Time: 90.0°E.
Sweep: 0.5 Mc to 18.0 Mc in 10 minutes, semi-automatic operation.

Table 63

Bombay, India (19.0°N, 73.0°E) July 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06:30	270	4.6						3.15
07	300	4.9						3.1
08:30	330	6.3						3.0
09	330	6.3						2.9
10	360	6.9						2.8
11	420	7.3						2.5
12	420	8.2						2.45
13	420	8.4						2.5
14	420	8.7						2.6
15	400	8.7						2.6
16	390	8.6						2.65
17	360	7.9						2.75
18	360	7.4						2.9
19	330	6.8						3.0
20	320	6.2						3.1
21	270	4.8						3.35
22	240	4.2						3.45
23								

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 64

Madras, India (13.0°N, 80.2°E) July 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	300	5.0						3.1
07	360	6.2						2.85
08	390	6.6						2.7
09	420	>6.4						2.55
10	420	>6.5						2.5
11	420	6.5						2.5
12	420	6.8						2.5
13	420	6.7						2.55
14	420	>6.8						2.55
15	420	7.3						2.6
16	390	7.6						2.65
17	400	7.6						2.6
18	390	7.5						2.7
19	360	>6.6						2.8
20	(360)	>5.9						(2.85)
21	---	---						(2.9)
22	---	---						(2.8)
23								

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 65

Tiruchy, India (10.8°N, 78.8°E) July 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	360	4.6						(2.85)
07	420	6.0						2.5
08	460	6.4						2.35
09	510	6.1						2.2
10	510	>6.0						2.15
11	510	6.0						2.1
12	540	6.0						2.15
13	540	6.2						2.1
14	540	>6.2						2.1
15	510	6.8						2.2
16	480	7.0						2.25
17	450	7.5						2.35
18	420	7.1						2.45
19	420	7.0						2.5
20	(390)	(6.2)						(2.55)
21								
22								
23								

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 66*

Singapore, British Malaya (1.3°N, 103.8°E) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	275	2.8					4.0	---
01	255	(2.4)					4.4	---
02	315	(2.3)					4.0	---
03	265	2.0					3.1	---
04	320	1.5					3.1	---
05	---	(1.8)					3.1	---
06	250	2.6					3.5	(3.2)
07	245	5.0	230		125	2.1	4.3	3.1
08	320	6.4	220	4.0	120	2.7	5.8	2.9
09	355	7.2	210	4.1	115	3.0	6.0	2.7
10	350	8.0	205	4.2	115	3.1	11.0	2.5
11	365	8.0	205	4.3	110	3.3	10.4	2.6
12	365	7.9	200	4.3	110	3.4	8.8	2.5
13	370	7.6	200	4.3	110	3.3	7.2	2.6
14	370	7.7	200	4.2	115	3.2	6.4	2.6
15	345	7.7	205	4.1	115	3.0	5.0	2.6
16	310	7.8	225	3.9	120	2.7	5.2	2.9
17	260	7.4	230	(3.7)	120	2.2	5.5	3.0
18	240	7.0			150	1.9	4.2	3.2
19	240	6.3					4.3	3.1
20	245	6.0					4.4	3.3
21	230	4.8					4.6	3.4
22	215	3.0					4.0	(3.5)
23	245	2.7					4.2	(3.2)

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 67

Townsville, Australia (19.3°S, 146.7°E) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	(3.0)					2.0	(3.3)
01	240	(3.0)					2.1	(3.2)
02	250	(2.8)					3.0	(3.4)
03	230	(2.7)					3.1	(3.5)
04	240	(2.2)					3.0	(3.55)
05	250	2.0					3.0	3.2
06	250	2.3					2.8	3.2
07	240	3.9			---	E	3.1	3.55
08	240	5.0	250	---	120	2.1	3.3	3.5
09	260	5.1	230	3.8	110	2.5	3.5	3.6
10	280	5.3	230	4.0	100	2.9	3.7	3.5
11	300	5.3	200	4.0	110	3.0	3.8	3.5
12	270	5.4	210	4.0	100	3.0	3.8	3.5
13	280	5.2	200	4.0	120	3.0	3.8	3.4
14	290	5.3	200	4.0	120	3.0	3.8	3.4
15	290	5.0	200	3.9	110	2.9	3.8	3.4
16	260	5.0	230	3.5	110	2.5	4.0	3.4
17	240	5.0	---	---	120	2.0	4.0	3.6
18	230	4.2					4.0	3.5
19	230	3.5					3.6	3.4
20	240	3.0					3.4	3.2
21	260	2.9					3.2	3.0
22	260	3.0					2.6	3.0
23	260	3.0					2.3	(3.2)

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

Table 68

Sao Paulo, Brazil (23.5°S, 46.5°W) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	2.8						3.5
01	240	2.7						3.4
02	220	3.1						3.7
03	210	2.5						3.7
04	300	1.9						(3.5)
05	---	E						(3.4)
06	---	E						---
07	200	3.8						3.9
08	210	4.5	200	---	105	2.2		3.9
09	280	5.0	200	3.9	100	2.6		3.6
10	280	5.8	200	4.0	100	2.8		3.5
11	270	6.5	180	4.1	100	3.0		3.6
12	270	6.7	180	4.1	100	3.0		3.5
13	270	7.4	180	4.1	100	3.1		3.4
14	260	7.8	190	4.0	100	2.9		3.6
15	250	7.3	200	3.8	100	2.7		3.5
16	230	7.6	200	---	100	2.4		3.6
17	200	7.5			---	---	3.2	3.8
18	180	6.5					3.2	3.9
19	180	4.0					2.9	3.8
20	200	3.1						3.4
21	220	3.0						3.55
22	220	3.2						3.5
23	220	2.8						3.6

Time: Local.
Sweep: 1.75 Mc to 20.0 Mc in 7 minutes 18 seconds.

Table 69

Brisbane, Australia (27.5°S, 153.0°E) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	3.3						3.3
01	250	3.3						3.3
02	250	3.5					1.9	3.2
03	250	3.5					2.1	3.3
04	230	3.3					2.0	3.5
05	230	3.2					2.2	3.4
06	240	2.6					2.0	3.3
07	230	4.1			150	1.9		3.7
08	240	4.5	240	---	120	2.1		3.6
09	270	5.0	240	3.9	110	2.7		3.5
10	270	5.2	230	4.0	110	2.9		3.5
11	290	5.1	220	4.0	100	3.0	4.0	3.5
12	290	5.2	200	4.0	100	3.0	4.1	3.5
13	290	5.0	210	4.0	100	3.0	4.2	3.5
14	300	4.8	200	3.9	100	2.9	4.2	3.4
15	260	5.4	210	3.7	120	2.6	4.2	3.5
16	240	4.9	220	---	120	2.2	3.6	3.6
17	230	4.4			---	<1.8	4.2	3.5
18	230	3.8					3.2	3.5
19	230	3.2						3.4
20	250	3.2						3.2
21	250	3.4						3.2
22	250	3.4						3.2
23	240	3.3						3.35

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

Table 70

Canberra, Australia (35.3°S, 149.0°E) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	3.1						3.1
01	<250	(3.1)						3.2
02	(250)	3.3						3.1
03	<250	(3.3)						3.1
04	(240)	(3.3)					2.8	3.2
05	<220	(3.0)					3.1	(3.4)
06	---	(2.4)					3.2	3.4
07	---	2.9						3.3
08	230	4.0			---	1.9		3.6
09	260	4.5	240	3.5	110	2.2		3.5
10	270	4.6	240	3.8	110	2.7		3.5
11	290	4.7	220	3.9	110	2.8	3.4	3.4
12	290	4.7	220	4.0	110	2.8	3.6	3.5
13	290	4.9	210	3.9	110	2.7	4.1	3.45
14	270	5.2	220	3.8	110	2.6	4.4	3.4
15	260	5.0	220	3.6	120	2.4	3.8	3.5
16	240	4.8	225	(3.0)	---	2.1	3.3	3.5
17	230	4.3					3.0	3.4
18	---	3.5					3.1	3.3
19	---	3.0					(2.8)	3.2
20	---	(2.9)					(2.0)	3.15
21	---	(3.2)						3.2
22	---	(3.0)						(3.1)
23	---	(3.0)						(3.2)

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

Table 71

Hobart, Tasmania (42.9°S, 147.3°E) July 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	2.0						3.1
01	250	2.0						3.0
02	250	2.1					3.3	3.05
03	250	2.0					3.0	3.0
04	250	2.0						3.0
05	250	2.0						3.1
06	250	2.0						3.1
07	250	2.0						3.1
08	220	3.3			120	1.6		3.2
09	210	3.8			100	2.0		3.2
10	200	4.3			100	2.4		3.2
11	200	4.5	---	---	100	2.5	3.3	3.2
12	210	4.8	200	3.8	100	2.6	3.6	3.1
13	200	5.0	---	---	100	2.5	3.8	3.2
14	200	5.0	---	---	100	2.4	3.5	3.2
15	200	4.7			100	2.1	2.8	3.3
16	200	4.5			100	1.9	2.5	3.3
17	220	3.8					2.5	3.1
18	230	3.0						3.1
19	250	2.3						3.1
20	250	2.2						3.2
21	250	2.0						3.2
22	250	2.0						3.1
23	250	2.0						3.1

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

Table 72*

Falkland Is. (51.7°S, 57.8°W) June 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	285	2.4						2.9
01	280	2.3					2.0	3.0
02	275	2.3					2.4	3.0
03	265	2.3						3.2
04	260	2.2						3.1
05	240	2.2						3.2
06	230	2.1						3.4
07	235	1.9						3.3
08	215	3.3			160	1.6	2.6	3.7
09	210	3.8			135	1.8	3.1	3.8
10	215	4.2			120	2.1	3.4	3.8
11	220	4.4			115	2.3	4.0	3.7
12	230	4.5	215		115	2.4	3.6	3.7
13	220	4.8			120	2.3	3.4	3.8
14	225	4.4	225		125	2.0	3.0	3.7
15	220	4.6			155	1.9	2.3	3.8
16	215	3.5					2.0	3.9
17	235	2.4					2.8	3.5
18	250	2.3					2.5	3.3
19	245	2.3						3.3
20	245	2.4						3.3
21	250	2.2					2.5	3.3
22	260	2.4					2.2	3.2
23	280	2.4					1.8	3.0

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 73

Macquarie I. (54.5°S, 159.0°E) January 1953

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(270)	(4.1)					4.5	2.95
01	---	(4.0)					4.4	(2.9)
02	(300)	3.5					4.2	(3.1)
03	300	3.1					3.5	2.9
04	270	3.4			---	---	3.1	3.2
05	280	3.7	250	3.6	100	2.2		3.2
06	350	4.0	230	3.8	100	2.5	3.3	3.1
07	350	4.4	220	4.0	100	2.8		2.9
08	450	4.5	200	4.1	100	3.0	3.3	2.6
09	390	4.6	200	4.2	100	3.1	3.5	2.9
10	360	5.2	200	4.3	100	3.1	4.0	2.9
11	350	5.2	200	4.3	100	3.2	4.0	3.0
12	360	5.0	200	4.3	100	3.2	3.6	3.0
13	370	5.1	200	4.3	100	3.2	3.6	2.9
14	370	5.1	200	4.3	100	3.2		3.0
15	360	5.2	200	4.2	100	3.0		2.9
16	340	5.4	200	4.1	100	3.0	3.4	3.0
17	320	5.4	210	4.0	100	2.6	4.0	3.0
18	300	5.4	220	3.6	100	2.5	4.3	3.1
19	280	5.0	240	3.4	100	2.0	4.0	3.1
20	280	4.5					4.1	3.1
21	290	5.0					4.4	3.1
22	250	4.2					4.5	3.05
23	(260)	(4.2)					4.5	3.05

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 74

Macquarie I. (54.5°S, 159.0°E) December 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	3.8					4.3	2.8
01	300	3.5					4.1	3.0
02	270	3.4					3.5	3.0
03	300	3.2					3.0	3.0
04	260	3.5			180	1.7	2.8	3.1
05	300	3.9	250	3.5	100	2.1	2.4	3.0
06	480	4.1	240	3.8	100	2.6		2.7
07	430	4.6	220	4.0	100	2.8		2.8
08	400	4.9	220	4.2	100	3.0	3.6	2.7
09	380	5.0	200	4.3	100	3.1		2.9
10	390	5.2	200	4.4	100	3.3		2.8
11	360	5.7	200	4.5	100	3.3	3.6	2.9
12	360	5.8	200	4.5	100	3.3	3.7	3.0
13	340	5.8	200	4.4	100	3.3		2.95
14	340	5.8	200	4.4	100	3.2		2.95
15	340	5.8	200	4.3	100	3.0	3.6	2.9
16	300	5.8	200	4.1	100	3.0		3.0
17	300	5.8	220	4.0	100	2.8	3.6	3.0
18	290	5.8	240	3.6	100	2.4	4.1	3.05
19	300	5.0	260	3.2	110	2.0	3.8	2.9
20	250	4.7			---	---	4.4	3.0
21	260	4.6					4.0	3.0
22	(260)	4.4					4.4	(3.0)
23	280	4.2					3.5	2.95

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 75

Macquarie I. (54.5°S, 159.0°E) November 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.1					4.0	2.9
01	300	2.8					3.2	2.9
02	280	2.7					3.3	3.0
03	300	2.7					3.2	3.0
04	260	3.3			---	---		3.2
05	250	3.8	---	---	100	2.3		3.2
06	330	4.2	240	3.8	100	2.6		3.05
07	350	4.5	220	4.0	100	2.7		3.0
08	350	4.9	210	4.2	100	3.0		3.0
09	360	5.2	200	4.3	100	3.1		3.0
10	360	5.4	200	4.3	100	3.2	3.5	2.95
11	350	5.5	200	4.4	100	3.2	3.5	3.0
12	320	5.7	200	4.4	100	3.2	3.6	3.0
13	340	5.6	200	4.4	100	3.2		3.0
14	340	5.6	200	4.3	100	3.1		3.05
15	300	5.6	200	4.2	100	3.0		3.1
16	300	5.6	220	4.0	100	2.8		3.1
17	300	5.6	230	3.7	100	2.6	3.2	3.1
18	270	5.5	240	3.5	---	2.3	3.1	3.2
19	260	4.9					3.5	3.2
20	280	4.7					4.2	3.05
21	300	4.5					3.9	3.0
22	280	4.2					4.2	3.0
23	300	3.5					4.0	2.9

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minuts 55 seconds.

Table 76

Macquarie I. (54.5°S, 159.0°E) October 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	2.6					4.3	(2.8)
01	---	(2.6)					4.1	---
02	---	2.3					3.8	---
03	(300)	2.0					2.8	(2.85)
04	(280)	2.3					2.0	2.9
05	250	3.2			120	1.7		3.2
06	250	<3.6	---	---	100	2.0		3.2
07	0	<3.8	230	3.8	100	2.5		2.8
08	500	4.2	220	3.8	100	2.8		2.7
09	440	4.5	200	4.0	100	3.0		2.8
10	450	4.5	200	4.0	100	3.0		2.75
11	400	4.7	200	4.2	100	3.0		2.8
12	390	4.8	200	4.2	100	3.0		2.9
13	380	4.8	200	4.2	100	3.0		2.9
14	370	5.0	200	4.0	100	3.0		2.9
15	350	4.8	220	4.0	100	2.8		2.95
16	330	5.0	230	3.7	110	2.6		3.0
17	300	4.7	230	3.5	---	2.4		3.1
18	250	4.6						3.1
19	250	4.2					2.4	3.0
20	270	3.7					3.8	2.9
21	(270)	3.6					4.0	2.9
22	---	3.2					4.3	---
23	---	2.6					4.5	(2.9)

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minuts 55 seconds.

Table 77

Macquarie I. (54.5°S, 159.0°E) Septembsr 1952*

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	(2.9)					4.2	---
01	(290)	(2.4)					2.2	(2.9)
02	(320)	(2.0)					2.8	(3.0)
03	---	(1.8)					3.4	---
04	(300)	(2.3)					2.2	(3.0)
05	290	2.0						2.9
06	250	3.2			---	1.6		3.2
07	250	3.9			100	2.2		3.3
08	310	4.5	230	3.7	100	2.5		3.2
09	330	4.6	200	4.0	100	2.6		2.9
10	360	5.2	220	4.0	100	2.9		2.9
11	350	5.3	200	4.0	100	3.0		3.0
12	350	5.2	220	4.0	100	3.0		2.9
13	320	5.4	210	4.0	100	3.0		3.1
14	300	(5.5)	200	4.0	100	2.8		3.2
15	270	(5.3)	200	3.7	100	2.5		3.2
16	260	(5.5)	220	3.6	100	2.3		3.25
17	240	5.2			110	1.8		3.25
18	---	---						---
19	(240)	(3.2)						(3.0)
20	(240)	(3.0)					3.5	(2.9)
21	---	(2.7)					(4.0)	---
22	---	(2.8)					4.0	---
23	(300)	(3.0)					4.0	(2.9)

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.
*No record, 9th through 15th, inclusive, except foE, which had no record, 8th through 15th, inclusive.

Table 78

Macquarie I. (54.5°S, 159.0°E) August 1952*

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(320)	(2.6)					3.5	(2.9)
01	---	(2.0)					3.1	(3.0)
02	---	(2.0)					2.8	(2.9)
03	---	(2.2)					2.6	---
04	---	(2.0)					(2.4)	---
05	---	(1.8)					(1.8)	---
06	---	(1.6)					(1.8)	(3.0)
07	(240)	(3.0)			---	---		(3.2)
08	(240)	(3.7)	---	---	110	2.0		(3.5)
09	(240)	(4.2)	---	---	100	2.1		(3.5)
10	(280)	(4.4)	200	3.7	100	2.4		(3.4)
11	280	4.8	210	3.8	100	2.6		3.35
12	270	5.1	230	4.0	100	2.7		3.4
13	270	5.2	220	3.9	100	2.7		3.35
14	(270)	(5.3)	220	3.7	100	2.5		(3.4)
15	(270)	(5.1)	220	3.5	100	2.4		(3.3)
16	(240)	(5.1)	---	---	110	2.0		(3.3)
17	(240)	(4.7)			---	---		(3.3)
18	---	---						
19	---	---					(3.0)	---
20	(250)	(3.0)					3.0	(3.0)
21	(270)	(2.6)					2.8	(3.0)
22	(280)	(2.1)					3.5	(2.9)
23	---	---					3.5	---

Time: 157.5°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.
*foF2, fEs, h'F2, and (M3000)F2, no record 1st through 10th, inclusive; foF1, foE, h'F, and h'E, no record 1st through 11th, inclusive.

NBS-D-3
Form adopted June 1946

TABLE 79

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

IONOSPHERIC DATA

h'F2 (Characteristic), Km (Unit), March (Month), 1955

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	S	S	S	S	S	(260)S	230	230	230	240	280	260	320	280	270	270	260	230H	220	210	220	240	270	(270)S
2	280	(280)S	290	280	270	250	220	230	230	250	280	300H	280	260	280	260	260	240	230	220	230	240	250	260
3	270	(280)S	270	270	250	240	240	220	220	240	250	270	250	290	260	250	250	(240)L	220	210	(230)S	(250)S	(270)S	(270)S
4	(250)S	(270)S	(280)S	270	260	260	260	230	220	240	240	270	300	290H	270	310	(280)L	(250)L	220	220	230	240	250	240
5	240	270	280	250	260	270	(270)S	(250)L	280	300	310	440	380	350	(360)L	300	280	240	250	230	250	250F	240	250
6	(240)S	(270)S	(280)S	(260)S	250	(270)S	(310)S	250	(290)L	M	G	390	420H	330	300	330H	280	250	230	240	240	260	250	280
7	280	290	280	250	250	260	250	240	260	270	300	270	320	330	330	290	350	250	(240)H	230	250	(270)S	(270)S	(260)S
8	(260)S	(290)S	(270)S	(260)S	260	260	(260)S	260	260	270	300	330	300	330	310	300	280	250	230	230	240	250	280	(270)S
9	280	290	(290)S	290	270	260	270	250	(300)L	330	380	340	350	330	340	320	300	280	250	240	250	250	(290)S	(320)S
10	(310)A	(310)S	H	H	(320)S	300	(290)S	250	(290)L	300	310	310	300	300	300	310	290	250	250	230	230	220	C	C
11	280	[290]S	(300)S	[280]S	(270)S	[280]S	240	330	330	L	G	G	G K	460K	360K	320K	300K	260K	240K	240K	240K	250K	(300)SK	(300)SK
12	(320)SK	[300]SK	(290)S	(300)S	280	(270)S	(290)S	240	(300)L	300	320	320	320	340	320	310H	270	270	230	230	230	(260)S	290	(320)A
13	[320]A	(320)S	(280)S	(280)S	280	260	280	250	270	320	320	330	320	310	280	300	280	250	230	220	230	250	(260)S	(270)S
14	(280)S	(270)S	250	(240)S	240	(270)S	(230)S	230	270	260H	300	250	290	310	310	310	300	280	230	220	230	250	(250)S	(280)S
15	(270)S	(280)S	(270)S	(270)S	(270)S	(320)S	280	240	(240)L	330	420	G	G K	380K	400K	380K	330K	(270)LK	250K	230K	230K	(260)SK	(280)SK	(280)SK
16	(350)SK	S K	S K	S K	S K	S K	(280)FK	220K	G K	G K	G K	370K	(400)SK	420K	(460)SK	340K	350K	290K	230K	(240)SK	240K	250K	(250)SK	(280)SK
17	(280)SK	S K	S	S	S	S	(280)S	(270)L	L	L	G	G	460K	450K	380K	360K	320K	(270)LK	230K	230K	(240)SK	(270)SK	S K	S K
18	S	S	(320)S	(300)S	(290)S	(280)S	260	230	[260]L	(300)L	370	330	340	400	330	350	300	250	230	230	220	240	(270)S	(280)S
19	S	S	S	270	S	S	(250)S	240	[260]L	270	290H	(300)L	320F	300H	300	280	270	250	220	220	220F	230F	(280)S	(280)S
20	(280)S	(290)S	(280)S	250	240	260	240	230	240	250	270	270	300	300	280	280	250	(240)L	230	230	230	220	(250)S	(250)S
21	(270)S	(280)S	(270)S	(290)S	270	(250)S	(230)S	250	250	290	250	300	290	300	280	280	260	250	230	210	220	(240)S	240	240
22	(270)S	(270)S	(280)S	(280)S	(270)S	(280)S	(240)S	(430)L	360	(570)S	G	G	G	G K	G K	G K	G K	(330)LK	270K	270K	(260)AK	(250)SK	280K	(280)AK
23	S K	S K	300	(300)S	(300)S	300	260	250	(350)H	330	300	350	340	390	310	360	320	260	240	230	230	(230)A	(290)A	(270)S
24	(300)S	(280)S	(300)S	250	[300]S	(340)S	280	240	380	430	460	(680)S	560K	390K	350K	390K	320K	(270)LK	220K	230K	240K	240K	250K	(280)SK
25	S K	S	S	S	S	S	240	220	220	340	300	300	300	340	290	280	280	(250)L	230	230	240	250	270	(270)S
26	(280)S	(290)S	(290)S	(280)S	(280)S	(310)S	250	(320)L	280	(390)S	520H	G	440H	380K	410K	350K	310K	280K	230K	240K	260K	270K	(270)SK	(280)SK
27	(290)SK	(290)S	(290)S	(280)S	(270)S	(290)S	220	(250)L	(380)S	330	360	440	360	310	400	330	300	290	240	230	240	260	280	290
28	(290)S	(280)S	(280)S	(270)S	(280)S	(280)S	230	270	270	(410)L	320	320	290	340	320	300	290	260	240	230	230	230	250	(290)S
29	(290)S	(290)S	300	280	280	(290)S	240	270	(300)L	280	300	330	320	320	330	280H	290	260	230	220	210	250	250	(270)S
30	(270)S	280	(280)S	(280)S	280	270	240	(250)L	260	280	300	330	320	310	300	320	280	270	240	230	230	230	240K	280K
31	(290)SK	270K	(280)SK	(340)SK	S K	S K	300K	240K	G K	(370)SK	G K	G K	G K	G K	G K	(510)SK	(370)SK	(380)SK	(290)LK	250K	280K	(270)SK	(300)SK	(290)SK
Median	(280)	(280)	(280)	(280)	270	(270)	250	250	270	300	310	330	320	330	320	310	290	260	230	230	230	250	270	(280)
Count	26	24	25	26	25	26	31	31	30	28	31	31	31	31	31	31	31	31	31	31	31	31	29	29

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS-D-3
Form adopted June 1946

TABLE 80

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

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), March (Month), 1955

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F S	F S	F S	F S	F S	(2.5) P F	(2.5) F S	4.1 F	5.3	5.3	5.5 H	5.3	5.7	6.4	5.9	5.7	6.0	5.8 H	6.1	4.8	3.4	3.1	2.6	(2.5) S
2	2.4 F	2.4 F	2.5 F	2.9	3.1	3.0	3.0	4.2	4.9	5.0	5.5	5.6 H	6.4	6.0	6.3	6.0	5.6	5.4	5.6	4.5	3.8	3.3	2.9	(2.7) S
3	2.7	2.6	2.8	3.1	3.2	3.0	3.2	4.8	5.2	6.2	6.3	6.4	6.6	6.0	6.4	5.8	5.8	5.7	5.8	4.7	3.3	3.0 F	3.0 F	3.0 F
4	(2.8) F S	(2.5) P S	(2.6) F S	2.9 F	3.0 F	3.0 F	(3.1) F S	5.0	6.2	6.4	5.8	5.9 F	5.7	6.3 H	5.8	5.8	5.7	5.7	6.4	(5.2) P S	4.8	4.7 F	4.3 F	4.2 F
5	3.5 F	3.2 F	3.1 F	3.3	2.7 F	2.4 F	2.2	3.7	4.4 F	4.5	4.8	5.1	4.8	5.1	4.7) H	5.2	5.1	(4.4) P S	4.8	4.8	3.7	3.7 F	(3.4) F S	(3.1) F S
6	(2.7) F S	2.6 F	(2.6) F S	2.6 F	2.3 F	(2.0) P F	2.1	3.3	4.0	M	< 4.1 G	4.8	4.8 H	5.2	5.2	5.2 H	5.4	5.2	4.5	4.2	3.7	3.5	3.3	2.9
7	3.1	2.9	2.9	2.9	2.6	2.7	2.9 F	3.9	(5.8) S P	4.9 F	5.5	5.4	5.4	5.5	5.6	5.8 F	5.0	5.6	4.9	4.9	3.5	3.4	3.2	3.0
8	2.7 F	(2.8) F	3.0 F	(2.9) F	2.9 F	2.3 F	2.4 F	3.8 F	4.9	5.6	5.2 F	5.3	5.6	5.4	5.6	5.4	5.2	5.0	5.0	4.5	3.8	3.0	2.6	2.6
9	2.4	2.4	(2.5) F S	2.7 F	2.7 F	2.5	2.6	3.5	4.0 F	4.3 F	4.6 F	4.9	5.0	5.3	5.1	5.6	5.4	4.6	4.9	4.0 F	(3.5) F	3.0 F	2.5 F	2.4 F
10	(2.4) F	2.1 F	A	A	2.0 F	(2.2) F	(2.1) F	3.3	4.0	4.8	5.0	5.5	5.7	5.8	5.4	5.2	5.7	5.2	5.5	5.5	4.9	3.8	C	C
11	(2.8) F S	(2.5) J S	(2.2) F S	(2.3) J S	(2.4) S F	(2.2) J S	(2.3) F S	3.3	3.7	(3.8) P S	< 3.8 G	< 3.9 G	< 3.9 G K	4.2 K	4.5 K	4.5 K	4.5 K	4.4 K	4.0 K	3.5 K	3.0 K	2.6 F K	2.2 K	2.2 K
12	2.1 K K	2.0 S J	2.2	2.2	2.3	2.1	2.2	3.5	4.2	4.6	4.9	5.2	5.3	5.5	5.4	5.4 H	5.6	5.3	5.2	4.3	3.6	2.7	2.3	2.1
13	2.1 J A	2.4 F	2.4	2.4 F	2.3	2.3	2.3	3.7	4.2	4.5	5.0	4.9	5.3	5.6	5.8	5.6	5.2	5.5	5.6	4.9	3.8	3.1	2.7 F	2.6
14	2.6 F	2.8 F	2.9	2.6	2.4	2.3	2.4 F	4.1	4.9	5.6 H	5.1	5.8	5.1	5.3	5.2	5.3	5.2 F	5.2 F	5.6	4.7 F	3.7 F	(3.4) F S	(2.8) F S	2.7 F
15	2.7 F	2.6 F	2.4 F	2.3 F	(2.2) F S	(2.0) F S	2.6 F	3.7	3.8	4.4	4.3	< 3.9 G	< 3.9 G K	4.6 K	4.5 K	4.4 K	4.6 K	4.4 K	3.9 K	4.1 K	3.2 K	2.6 K	2.3 F K	(2.3) F S
16	(2.2) P F	F S K	F S K	S K	S K	S K	(2.0) F S	3.2 K	< 3.5 G K	< 3.7 G K	< 3.8 G K	4.5 K	(4.5) P S	4.5 K	(4.4) P F	4.7 K	4.5 K	4.5 K	(4.4) S K	3.8 K	3.5 K	2.9 K	2.4 K	2.1 K
17	(1.9) P S	(1.7) F K	(2.0) P F	F S	F S	(1.9) J F	(2.1) M F	3.7	3.8	(3.9) P S	< 3.8 G	< 3.9 G	4.3 K	4.3 K	(4.4) P K	4.3 K	4.5 K	4.4 K	4.3 K	(3.2) F K	(2.7) F K	(2.3) F K	F S K	F S L
18	F S	F S	(2.1) P S	(2.2) F S	(2.3) P F	(2.4) P F	(2.8) P S	(3.9) P S	4.3	4.2	4.7	4.9	5.0	4.9	5.6	5.2	6.0	5.8	4.9	4.8	4.2	(3.0) P F	2.6 F	(2.6) P F
19	F	F	F	(2.6) P F	F S	F	(2.5) F	4.4	4.5	4.7 F	5.0 H	(4.8) P S	(5.0) H F	5.1 H	5.7	6.0	5.8	6.2	5.4	4.7	3.9	(3.2) P S	(2.6) P F	(2.6) P F
20	2.3 F	(2.2) P F	2.3 F	2.4 F	2.4	2.3	3.0	4.5	5.2	5.4	5.5	5.5	5.6	5.8	6.0	6.0	5.7	5.2	5.6	5.0	4.8	3.7	3.0	2.8
21	2.4	2.3	2.4	(2.3) P F	2.2	2.2 F	2.7	4.1	4.7	5.0	5.4	5.6	5.8	5.8	6.1	5.7	5.6	5.8	6.2	5.8	4.3	3.7	3.4	3.0
22	2.6	2.4	2.2	2.0	(1.9) P S	2.1	(2.7) S	3.3	4.3	(3.9) J S	< 3.7 G	< 3.8 G	< 3.8 G	< 3.8 G K	< 3.8 G K	< 3.7 G K	< 3.5 G K	3.7 K	3.6 K	3.6 K	K (3.5) P F	K (3.2) P F	K 2.5	K (2.2) B
23	F B K	F B K	(1.8) P F	(1.8) F S	(2.0) P F	(2.0) F B	2.5	3.6	(3.8) H	4.5	4.7	4.9	4.9	5.2	5.8	5.5	6.2	6.6	6.2	(5.3) P S	5.1	3.7	3.3	(2.8) F
24	(2.1) F	[2.1] F	(2.1) F	(1.9) F S	(1.6) J S	(1.8) F S	2.5	3.6	3.8	4.1	4.2	4.3	4.2 K	4.5 K	4.6 K	4.4 K	4.6 K	4.5 K	4.3 K	4.2 K	K (3.9) P S	K (3.4) J S	K (2.8) F S	K (2.4) F S
25	K (1.7) J F	F	F S	F S	F	F S	(2.5) F S	(3.9) F S	(4.2) P S	(4.6) F S	5.1	5.9	5.3	5.5	6.0	5.9	5.2	5.2	(4.8) F S	4.4	(3.9) P S	(3.4) S	(3.0) S	(2.5) F S
26	(2.3) F S	(2.4) J F	(2.5) F S	2.3	(2.2) P S	2.1 J S	2.8	3.8	4.3	(4.2) S	4.2 H	< 4.0 G	(4.4) H S	4.6 K	4.5 K	4.5 K	4.5 K	4.5 K	4.3 K	3.7 K	3.3 K	3.1 K	K (2.8) J S	(2.5) S K
27	K (2.3) P S	(2.3) F S	2.3 F	2.4 F	2.4 F	(2.4) P F	(2.6) S	3.9	(3.7) S F	4.7	4.7	4.7	5.1	5.4	5.0	5.0	4.9	4.8	4.7	4.2	3.9	3.1	2.8	2.6
28	2.4	2.3 F	(2.3) F S	(2.3) F S	2.0 F	(2.1) F S	3.2 F	(4.4) J S	4.8	4.4	5.3	5.6	5.8	5.0	5.5	5.5	5.5	5.6	5.1	5.2	4.9	3.5	2.7 F	2.4 F
29	2.3 F	2.2 F	1.9 F	(2.1) F S	2.2 F	2.2 F	3.0	4.2	4.3	4.8 J S	5.0	5.1	5.5	5.4	5.3	5.4 H	5.5	5.4	5.4	(5.4) S	4.1	(3.3) S	3.2	(2.7) F
30	2.5	2.4	2.5	2.3	2.3	2.2	3.1	4.2	4.5	4.9	5.0	5.5	5.8	6.0	6.1	5.8	6.4	6.2	6.8	7.0	5.7	4.9	4.2 K	4.0 K
31	3.7 K	3.5 K	2.8 K	1.9 F K	K [1.8] F S	K (1.6) J S	K 2.4 F	3.1 F K	< 3.5 G K	(3.9) S K	< 3.8 G K	< 3.8 G K	< 3.8 G K	< 3.8 G K	< 3.8 G K	4.0 K	(4.1) F K	(3.8) F K	K (3.8) F S	3.6 K	K (3.1) J F	K (2.8) J F	K (2.3) P F	K (2.1) J F
Median	2.4	2.4	2.4	2.4	2.3	2.2	2.5	3.8	4.3	4.6	5.0	5.1	5.1	5.3	5.4	5.4	5.4	5.2	5.0	4.7	3.8	3.2	2.8	2.6
Count	27	25	26	26	26	28	31	31	31	30	31	31	31	31	31	31	31	31	31	31	31	31	29	29

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS - D - 3
Form adopted June 1946

TABLE 81

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

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), March (Month), 1955

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

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	F S	F S	F S	F S	(2.7) F F	(2.4) J F	(2.9) F S	5.1	[5.4] C	5.4 H	5.6	5.4	5.7	5.7	5.7	5.8	5.6	6.3	5.8	3.9	3.3	2.8	2.5	2.5 F
2	(2.6) F S	2.5 F	2.7	3.0	3.0	3.1	3.3	4.9	[4.9] C	5.3	5.7 J S	6.0	6.0 H	6.3 H	6.5	5.8 J S	5.5	5.4	5.0	3.9	3.6	(3.2) S	2.9	(2.5) J S
3	2.7	2.6	2.9	3.1	3.1 F	3.0	3.7 F	5.3	6.1	5.9	5.8	6.3	5.8	5.8	5.8	5.8	5.8 S	5.6	5.5	3.8 S	3.2 F S	3.0 F S	3.0 F S	(2.9) F S
4	(2.5) F S	(2.4) F S	(2.7) F S	2.9 F S	3.0	3.0	3.7 F S	5.6	6.0	5.7	5.8	5.6	5.8	6.6	5.7	5.8	5.8 S	5.9 S	5.7	5.5 S	4.6 S	4.4 S	4.2 F	3.8 F S
5	3.2 S	3.2 F S	3.1	3.1 F S	2.6 J S	2.3	2.9	4.3 F S	4.7	(4.6) H S	(4.7) H	4.9	5.1	4.9	5.0	5.0	4.7	4.4	4.7 S	(4.1) P S	(3.7) F S	(3.7) F S	(3.3) F S	(2.6) F S
6	2.7 F S	2.6	2.6 F S	2.5 F S	2.2 J S	(1.9) F S	2.8	3.8	[4.1] M	4.4	5.0	5.0	4.9	5.1	5.3	5.2	5.4	5.0	4.4	3.8	3.3	3.5	3.0	2.9
7	2.9	3.0 F	2.8 F	2.7	2.5 F	(2.6) F S	3.5	4.8	5.6	5.2	5.6	5.1 H	5.6	5.8	6.0	5.2	5.7	4.9	4.7	4.8	3.3	3.3	3.2	2.9
8	2.6 F S	(2.8) F	(2.9) F	2.9 F	(2.4) F	2.3 F	3.1 F S	4.7	4.9	5.2	5.4	5.2	5.4	5.6	5.6	5.4	5.1	5.0	4.7	4.1	3.3	2.7	2.6	2.5
9	2.4	2.5 F	2.7 F	2.7 F	2.6 F	2.5	2.9	3.7 F	4.2 F	4.2	5.0	5.0	5.4	5.2	5.0	5.4	5.1	4.4	4.4 F	3.6 F	(3.4) F S	2.6 F	2.5 F	2.4 F
10	(2.2) F S	2.0 F	[2.0] A	[1.9] J A	2.1 F	(2.1) F	2.8 F	3.9	4.4	5.0	5.5	5.6	5.5	5.4	5.2	5.3	5.6	5.4	5.7	5.0	4.8	C	C	C
11	(2.5) F S	(2.2) F S	2.1 F	(2.3) J S	(2.2) J S	(2.2) J S	[2.8] F S	3.5 H	3.6 J S	< 3.8 G	< 3.8 G	< 3.9 G	< 3.9 G K	4.3 H K	4.4 K	4.5 H K	4.5 K	4.2 K	3.8 K	3.4 K	2.7 F K	2.5 K	2.2 K	2.1 K
12	2.2 S K	2.1 J S	2.2	2.1	2.2	1.9	3.1	3.8	4.3	4.8	5.0	5.4	5.7	5.7	5.6	5.5	5.4	5.6	4.7	3.9	3.0 J S	2.5	[2.2] A	2.2
13	(2.3) J A	(2.4) F S	2.3 F	2.4	2.2	2.2 J S	3.1	4.4	4.3 H	4.9	5.1	4.9	5.3	5.7	5.3	5.6	5.6	5.4	5.4 J S	4.2	3.3 S	3.0 F S	2.7 S	2.7
14	2.7	2.8	2.8	2.6 J S	2.3 J S	2.3 J S	3.2 S	4.4	5.2	5.4	5.4	5.2	5.5	5.2	5.2	5.4	5.2 F	5.4	5.2 F S	3.8 F S	(3.4) F S	3.3 F S	2.6 F S	2.5 F S
15	2.5 F S	2.6 F S	2.4 F S	2.3 J S	(2.1) F S	(2.1) F S	3.4	(4.1) H	4.1 H	4.4	(4.5) P	4.4	< 4.0 G K	4.5 K	4.6 K	4.5 K	4.3 K	4.3 K	4.2 K	3.6 K	2.8 K	K (2.6) F S	K 2.4 F S	(2.1) F K
16	K (2.0) F S	F S K	F S K	K (1.7) P S	S K	K 1.8 J S	K 2.8 F S	K (3.4) F S	(3.8) S K	< 3.8 G K	K (4.3) P S	(4.3) S K	4.5 K	4.5 K	4.5 K	4.4 K	4.7 K	4.7 K	3.8 K	3.8 K	3.2 K	2.7 K	2.2 K	2.0 K
17	1.9 K	(1.8) P F	F S	F S	F S	F S	3.0	3.7	(3.8) P S	< 3.9 G	< 3.8 G	< 3.8 G	4.3 K	4.3 K	4.4 K	4.3 K	4.4 K	4.5 K	3.7 S K	K (3.0) F S	(2.6) F K	K (2.3) P F	F S K	F S
18	F S	F S	(2.2) P S	(2.2) P F	2.6 J F	(2.4) P F	3.5 F S	4.2	4.3	4.4	4.9	4.7	5.0	5.2	5.8	5.7	6.2	5.2	4.7	4.8	3.4 F S	(2.8) J S	(2.6) J S	F
19	F	F	F	F	2.4	F	3.5	4.5	(4.6) J F	4.8	5.0	5.6	5.2	5.8	5.8	5.8	5.8	5.9	5.2	4.4 J S	(3.5) P S	(2.7) P S	(2.5) F	2.4 F S
20	2.2 F	(2.3) P F	2.5 F S	(2.3) P S	2.3 F S	(2.3) P S	3.9	5.0	5.4	5.2	5.5 J S	5.6	5.7	5.8	5.8 S	6.2	5.3	5.4 S	5.2	4.8 S	4.4	3.2	3.0	2.7
21	2.4 J S	2.4	2.4	2.3 F S	2.3	2.4 F S	3.5	4.4 H	4.7 H	5.2	5.4	(5.7) H	5.6	5.8	5.9	5.6	5.7	6.4	6.0 J S	4.9	3.8	3.6	3.1	2.8
22	2.4	2.4	2.2	(2.0) F S	(2.0) F S	(2.1) J S	3.2	< 3.7 G	(4.3) F S	(4.0) J S	< 3.7 G	< 3.8 G	< 3.8 G K	< 3.8 G K	< 3.7 G K	< 3.6 G K	< 3.5 G K	3.5 K	3.7 K	K (3.7) F S	K (3.4) P	(2.7) F K	2.4 K	K (2.3) F F
23	F B K	F B	(2.0) F S	(1.8) P F	2.4 F	(2.2) F B	3.2	3.9	4.1 H	4.5 J S	< 4.1 G	5.0	4.9	5.8	5.4	5.7	6.6	6.2	5.8	5.4 J S	4.5	(3.4) A	(3.0) F	(2.4) J F
24	(2.2) F	(2.1) F	(2.3) F	(1.9) F	(1.7) F	(2.4) F S	3.2	3.7	4.0	4.1	4.2	4.3	4.3 K	4.5 K	4.6 K	K 4.4 J S	4.6 K	4.2 K	4.2 K	K (4.0) P S	K (3.6) J S	K (3.0) F S	K (2.5) F S	K (2.0) F F
25	F K	F	F S	F S	F S	F S	3.3	(4.0) P S	(4.5) F S	4.8 H	5.0 H	5.2	5.3	6.0	5.8	(5.5) P S	5.4	4.9	4.5	(4.2) S	3.7	2.9	2.7 F	(2.4) F S
26	(2.2) F S	(2.6) J S	2.5	2.2	2.2	2.2 J S	3.4	4.4	4.1 H	3.9 J S	< 4.0 G	< 4.0 G	4.5	4.4 K	4.5 K	4.5 K	4.6 K	4.4 K	4.0 K	3.4 K	3.2 K	2.9 K	K (2.7) P S	K (2.5) J S
27	2.2 J F	(2.3) F S	2.4 F	(2.3) F S	(2.0) P F	(2.0) P F	3.3	3.8	< 3.8 G	4.8	4.9	4.8	5.1	5.1	5.0	[5.0] M	4.7	4.8	4.4	4.1	3.5	3.0	2.7 F	2.4
28	2.3 F	(2.4) F S	2.3 F	(2.1) F S	(2.0) F S	(2.1) F S	4.0	4.8	4.5	4.9 H	5.2	5.7	5.5	5.2	5.4	5.5	5.6	5.3	5.5	5.1	4.3	3.2 F	2.5 F	2.3
29	2.3 F	2.2 F	2.0 F	2.2 F	2.2 F	2.4	3.6	4.3	4.9	4.9	5.0	5.4	5.5	5.6	5.5	5.6	5.6	5.4	5.4	4.9	3.6	3.3	(2.9) F S	(2.6) F S
30	2.5	2.5	2.3	2.3	2.3	2.3	3.9	4.7	5.2	5.0	5.5	5.2	6.0	6.2	5.9	6.4	6.0	6.6	6.8	6.3	5.5	4.8	4.0 K	3.6 K
31	3.7 K	3.2 K	K [2.4] F S	K (1.9) F S	S K (1.7) J F	K (1.7) J S	2.8 F K	< 3.5 G K	< 3.6 G K	< 3.7 G K	< 3.8 G K	< 3.8 G K	< 3.8 G K	< 3.8 G K	< 3.7 G K	4.2 K	K (3.8) F S	3.7 F K	(3.7) S K	K (3.3) J F	K (3.2) P S	K (2.4) J F	K (2.1) P F	K (2.0) F S
Median	2.4	2.4	2.4	2.3	2.3	2.3	3.2	4.3	4.4	4.8	5.0	5.1	5.3	5.4	5.4	5.4	5.4	5.2	4.7	4.1	3.4	3.0	2.7	2.5
Count	26	25	26	27	28	28	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	29	28

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460.49

NBS-D-3
Form adopted June 1946

TABLE 82

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

IONOSPHERIC DATA

h'F1 (Characteristic), Km (Unit), March (Month), 1955

Observed at Washington, D.C.

Lat. 38.7°N, Long. 77.1°W

75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	220	200^{H}	200^{H}	190	170^{H}	200^{H}	190^{H}	200^{H}	210	Q						
2								Q	210	200^{H}	190^{H}	200	190^{H}	220	200	210	220	230						
3								Q	220	210	190^{H}	180^{H}	220	210	220	210	220	220						
4								230	220	200	190	190	170	180	200	200^{H}	230	230						
5								240	230	220	200^{H}	190	170^{H}	230	220	210^{H}	220	Q						
6								240	230	[220]^{M}	200^{H}	190^{H}	230	210	230	220	230	240						
7								Q	230	210	200	220	210^{H}	240	230	230	230	230						
8								Q	230	[230]^{A}	(220)^{A}	210	190^{H}	200	220	220	220	230						
9								Q	230	220^{H}	210	200	200	210	210	230	230	240^{M}						
10								Q	230	210	200	180^{H}	190^{H}	210^{H}	210	230	230	230						
11								Q	230	220	200^{H}	190^{H}	(210)$^{H}_{K}$	200^{K}	220$^{H}_{K}$	(220)$^{H}_{K}$	220^{K}	230^{K}						
12								Q	220	200	200^{H}	210^{H}	190^{H}	200^{H}	220	220	220	(230)^{S}						
13								Q	220	200	210^{H}	200^{H}	190^{H}	200^{H}	200	210	210	220						
14								220	210	220	190	170^{H}	180	180^{H}	200	210	210	220						
15								230	220	220	210	190	240^{K}	180$^{H}_{K}$	230^{K}	230^{K}	220^{K}	230^{K}						
16								Q^{K}	220^{K}	200$^{H}_{K}$	180^{K}	170^{K}	170$^{H}_{K}$	(170)$^{H}_{K}$	200^{K}	210^{K}	220^{K}	240^{K}						
17								240	220	200	200^{H}	220	200^{K}	240^{K}	210^{K}	220^{K}	210$^{H}_{K}$	230^{K}						
18								Q	210	200	190	190^{H}	210	210	210	230	220	230						
19								Q	210	210	230	190^{H}	190^{H}	230	180	200^{H}	230	220						
20								230	220	200	190	180	190^{H}	230	210	210	230	220						
21								240	220	210	220^{H}	180^{H}	210	180	230	220	230	230						
22								230	230	210	200^{F}	(200)^{F}	(200)^{H}	200$^{H}_{K}$	240^{K}	240^{K}	250^{K}	240^{K}						
23								Q	210^{H}	190	250	180^{H}	220	230	220^{H}	220	220	230						
24								Q	210	200^{H}	200^{H}	190	170$^{H}_{K}$	190$^{H}_{K}$	230^{K}	220^{K}	230^{K}	230$^{S}_{K}$						
25								Q	Q	190^{H}	200	180	230	190	170^{H}	220	220	220						
26								240)^{S}	210^{H}	200^{H}	200^{H}	190^{H}	250^{K}	240^{K}	230^{K}	230$^{H}_{K}$	220^{K}	240^{K}						
27								230	220	210	200	180^{H}	180	210^{H}	210	210	200^{H}	230	240					
28								230	220	190^{H}	180^{H}	180^{H}	220^{H}	210	190^{H}	210	200^{H}	240	240					
29							Q	230	210	190^{H}	200	190	180^{H}	180)^{H}	210)^{H}	210^{H}	220	220	240					
30							Q	230	210	190	180^{H}	180^{H}	210^{H}	210	200^{H}	200^{H}	210	220	240					
31							Q^{K}	Q^{K}	210^{K}	190^{K}	190$^{H}_{K}$	180$^{H}_{K}$	200$^{H}_{K}$	200^{K}	210$^{H}_{K}$	210^{K}	220^{K}	230^{K}	250^{K}					
Median								230	220	200	200	190	200	210	210	220	220	230	240					
Count								14	30	31	31	31	31	31	31	31	31	29	5					

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS - D - 3
Form adopted June 1946

TABLE 83

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

IONOSPHERIC DATA

foF1 (Characteristic), Mc (Unit), March (Month), 1955

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	L	L	L	4.0	4.3 H	4.3 H	4.1 H	[3.8] L	(3.5) L	Q						
2								Q	L	L	4.1 H	4.2	4.3 H	4.2	4.2	L	L	L						
3								Q	L	L	L	L	4.3	4.2	(4.0) L	L	L	L						
4								L	L	L	L	4.2	4.2	L	L	4.2 H	L	L						
5								L	L	3.8	3.9 H	3.9	4.1 H	4.1	4.0	3.9 H	3.6	Q						
6								L	(3.3) L	[3.8] M	4.1 H	4.0 H	4.3	4.1	4.1	4.0	3.4	L						
7								Q	L	3.7	3.9	4.1	4.2 H	4.1	4.0	3.9	3.7	L						
8								Q	3.4	[3.6] A	3.9	4.1	4.1 H	4.1	4.0	3.9	(3.6) L	L						
9								Q	L	3.8 H	3.8	4.0	4.0	4.1	4.0	3.9	3.6	L						
10								Q	L	3.8	4.0	4.1 H	4.2 H	4.1 H	4.0	3.9	3.7	L						
11								Q	3.4	3.5	3.8 H	3.9 H	(3.9) H K	3.9 H	3.9 H K	3.7 H K	3.4 K	L K	K					
12								Q	L	3.7 H	3.9 H	4.1 H	4.1 H	4.1 H	4.0	3.9	(3.5) L	L						
13								Q	L	3.5	3.9 H	4.1 H	4.1 H	4.2 H	4.1	4.0	L	L						
14								L	L	3.9	4.0	(4.1) H	4.2	4.1 H	4.1	4.0	L	L						
15								L	L	3.7	3.8	3.9	3.9 K	(3.9) S K	3.9 K	3.8 K	3.6 K	L K	K					
16							K	Q K	3.5 K K	3.7 H	3.8 K	(3.8) S K	(3.9) H K	4.0 H K	3.9 K	3.8 K	3.6 F K	L K	K					
17								L	(3.1) L	(3.5) L	3.7 H	3.9	3.8 K	3.8 K	3.8 K	3.8 K	3.5 H K	L K	K					
18								Q	L	3.8	4.0	4.1 H	4.1	4.1	4.0	4.0	3.7	L						
19								Q	L	L	4.1	4.1 H	4.2 H	(4.2) L	3.8	L	L	L						
20								L	L	(4.0) L	4.2	4.2	4.3 H	4.3	(4.2) L	(4.1) L	L	L						
21								L	L	(3.8) P	(4.1) H	(4.1) H	4.3	4.2	4.1	L	L	L						
22								3.0	3.5	3.6	(3.7) F	(3.8) F	3.8 H	3.8 H K	3.8 K	3.7 K	3.5 K	(3.0) L K	K					
23								Q	3.5 H	3.7	4.1	4.1 H	4.2	4.1	4.1 H	4.0	3.8	L						
24								Q	3.5	3.7 H	3.9 H	4.0	4.0 H K	4.0 H K	4.0 K	3.8 K	(3.7) L K	L K	K					
25								Q	Q	3.8 H	4.0	4.1	4.2	4.2	4.1 H	4.0	(3.6) L	L						
26								L	3.5	3.8 H	3.8 H	3.9 H	4.0 K	4.0 K	3.9 K	3.8 H K	3.5 K	L K	K					
27								L	3.5	3.7	4.0	4.2 H	4.0	4.1 H	4.1	4.0	3.7 H	L	L					
28								L	L	4.3 H	4.0 H	4.2 H	4.3 H	4.3	4.2 H	4.1	(3.8) L	L	L					
29							Q	L	3.9	3.9 H	4.1	4.2	4.2 H	4.2 H	4.2 H	3.9 H	3.8	L	L					
30							Q	L	3.5	3.8	4.2 H	4.3 H	4.2 H	4.3	4.2 H	4.1 H	3.8	(3.3) L	L					
31							Q K	Q K	3.5 F K	3.6 F K	3.8 H K	3.8 H K	3.8 H K	3.8 K	3.8 H K	3.7 H K	3.6 F K	3.2 F K	L K					
Median								—	3.5	3.8	4.0	4.1	4.2	4.1	4.0	3.9	3.6	—	—					
Count								1	13	26	28	30	31	30	30	27	23	3	—					

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS-D-3
Form adopted June 1946

TABLE 84

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

IONOSPHERIC DATA

h'E (Characteristic), Km (Unit) March (Month), 1955

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W 75° W Mean Time

National Bureau of Standards (Institution)

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								S	110 H	100	100	115 H	100	110	100	100	110	120						
2								S	120	110	110 H	100 H	110 H	110	110 H	110	110	120						
3								S	120 H	110 H	110	110	110	110	110	110	110	(120) A						
4								S	110	110	110	110	110	110	110	110	110	120						
5								S	110	110	110	110	[120] A	(120) A	100 H	110	110	110						
6								(130) S	120	[110] M	100 H	100 H	[100] A	100	100 H	110	110	120 H						
7								S	110 H	110	110 H	110	100	100 H	100 H	110	110	120						
8								120	110 A	(110) A	A	A	110	110	110	110	110	120 H						
9								120 S	120 H	110	110 H	110 H	100	100	100	100	110 H	120						
10								140	110	110	100	100	100	90	100	110	110	120						
11								130	110	110	110	[110] A	100 K	100 H K	100 K	100 K	110 H K	110 K						
12								120 S	110	(110) A	110 A	110	100	100	100	110	110	120 S						
13								120	110 S	110	110 H	100 H	100 A	110 A	110	110	110	110						
14								S	100	100	100	100	100	100	110 S	110	110	120						
15								120	100 H	A	A	100	100 K	110 K	110 K	110 K	110 K	120 L						
16								130 K	100 K	110 A K	100 A K	120 A K	100 K	110 K	110 K	110 H K	110 K	110 S K						
17								S	110	110 H	110	110 A	110 S K	110 H K	110 H K	110 K	110 H K	120 K						
18								120	110	110	110	100	110	100	110	110	110	120						
19								S	110	110	100	[100] A	100	100	100	100	110	120						
20								120	110	110	110	100	110	110	110	110	110	110						
21								120	110	110	110 A	100	100	110	110	110	110	110						
22								120	110	110 H	110 H	100 H	110 B	110 K	110 H K	110 K	110 K	120 S K						
23								120 S	110 A	100 H	100	100	100 H	100	110	110	110	110						
24								110	110	110	110	100	130 A K	120 A K	100 A K	100 K	110 K	110 K						
25								A	100	110	100	100 H	110	110	110 A	110 A	110	110 S						
26								120 S	110	110	110 A	110 H	110 H	110 H K	100 H K	110 S K	110 K	110 S K						
27								110 S	[110] A	110 H	100 H	100	110 H	100	100	100 H	110	120	S					
28								120	110	100 H	100 H	100 H	100 H	100	100	110	110	110	S					
29							S	20 H	110 H	110	110 H	100	110	110 H	110	110	110	110	S					
30							S	120 S	110	10	100	100 H	100 H	100	100	100	110	110	S					
31							S K	120 K	110 K	100 K	100 K	100 H K	100 S K	(110) B K	110 B K	110 H K	110 K	110 K	S K					
Median								120	110	110	110	100	100	110	110	110	110	120						
Count								21	31	30	29	30	31	31	31	31	31	31						

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS-D-3
Form adopted June 1946

TABLE 85

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

IONOSPHERIC DATA

foE (Characteristic), Mc (Unit), March (Month), 1955

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Scaled by: E.J.W. J.W.P., L.F.M. J.J.S.

Calculated by: E.J.W. J.W.P., L.F.M. J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								S	2.2 H	(2.2) P	2.8 H	(2.9) P	3.0	2.9	2.9	2.7 H	2.5	1.8						
2								S	2.0	2.4 F	2.8 H	2.7 H	3.0 H	3.0	3.0 H	2.8	2.5	2.0						
3								S	2.3 H	2.6 H	(2.7) P	(2.8) P	(2.8) P	(2.8) P	(2.8) P	(2.7) P	(2.4) P	2.2						
4								S	2.0	(2.7) A	2.9	3.1	3.1	(3.1) A	(2.9) A	(2.8) A	2.6	S						
5								S	2.1	2.4	A	A	(2.9) A	3.0	3.0 H	2.8	2.5	(2.0) H						
6								1.7	2.0	M	2.8 H	2.7 H	[2.9] A	2.9	2.9 H	2.8	2.5	2.0 H						
7								S	2.2 H	2.5	2.7 H	2.8 H	2.9	2.9 H	2.8 H	2.6	2.3	1.9						
8								1.9	A	A	A	A	3.0	3.0	2.9	2.7	2.4	(2.2) S						
9								(1.9) S	2.3 H	2.4	2.7 F	2.7 H	3.0	3.0	2.9	2.7	2.4 H	1.9						
10								1.7	(2.0) P	2.2	(2.5) S	2.8	(3.0) A	3.0	3.0	2.8	2.4	2.0						
11								1.7	2.0	2.4	2.4	[2.7] A	(3.0) A K	3.0 H K	2.9 H K	2.7 K	2.4 H K	1.9 K	K					
12								1.7	(2.1) H	A	A	(2.9) A	(2.9) P	3.0	3.0	2.8 H	2.5	1.9						
13								S	1.9	(2.5) A	2.7 H	(2.9) A	3.0	(3.0) A	2.9	2.8	2.5	(2.1) P						
14								S	2.2	(2.6) P	(2.7) P	2.9	3.0	3.0	2.9	2.7	2.4	A						
15								(1.8) S	2.2 H	A	A	2.8	2.9 K	2.9 K	2.9 K	2.7 K	(2.3) P K	(1.9) H K	K					
16							K	(1.8) F K	(2.0) A K	[2.4] A K	(2.7) H K	2.9 K	3.0 K	3.0 K	2.9 K	2.6 H K	2.4 K	2.0 K	K					
17								(1.8) S	2.1 H	2.6 H	2.8	(2.9) A	3.0 K	3.0 H K	2.9 H K	2.7 K	2.4 H K	S K	K					
18								1.8	2.2	2.6	2.7	2.9	3.0	3.0	2.9	2.8	2.5	2.1						
19								S	2.2	[2.5] S	(2.8) A	3.0	3.0	(3.1) A	3.0	2.9	2.6	2.2						
20								1.7	2.4 F	[2.6] A	2.9	3.1	3.1	(3.2) A	(3.0) A	2.9	A	A						
21								(1.7) S	(2.3) A	2.5	2.8	3.0	3.1	3.1	3.1	2.9	2.5	2.2						
22								1.9	(2.2) S	(2.5) S	(2.6) H	2.8 H	2.9 H	3.0 K	2.9 H K	2.8 K	2.5 K	2.2 H K	K					
23								S	A	2.7 H	2.9	3.0	3.1 H	2.9	2.7	2.7	(2.4) S	2.2						
24								(1.9) S	(2.4) A	2.7	(2.8) P	[2.9] A	3.0 K	3.0 K	3.0 K	2.8 K	2.5 K	2.3 K	K					
25								A	2.3	2.5 H	2.9 H	3.1 H	(3.1) P	3.0	3.0 H	(2.8) A	(2.4) A	2.1 H						
26								2.0 H	2.3 H	2.5 H	[2.8] A	3.0 H	3.0 H K	3.0 H K	2.9 H K	2.8 H K	2.6 K	2.3 K	K					
27								(1.9) H	[2.2] A	2.5 H	2.8 H	2.9	3.1 H	3.0	2.9	2.7 H	2.5	2.2	S					
28								1.8	2.4	2.7 H	2.8 H	3.1 F	3.1 F	3.2 F	3.1	2.9	2.6	2.2	S					
29							S	1.9 H	2.4 H	(2.6) A	2.7 H	(3.0) S	3.1 H	(3.1) P	(3.0) A	2.9 H	(2.7) A	2.3 H	S					
30							S	2.0	2.4	2.6	2.8	3.1 H	3.1 H	3.2	3.0	2.9	2.6	2.2	S					
31							S K	2.0 K	2.4 K	2.7 K	[2.8] A K	(3.0) H K	(3.0) H K	3.0 K	(3.0) P K	(2.8) H K	2.5 K	2.1 K	S K					
Median								1.8	2.2	2.5	2.8	2.9	3.0	3.0	2.9	2.8	2.5	2.1						
Count								2.0	2.9	2.7	2.7	2.9	3.1	3.1	3.1	3.1	3.0	2.7						

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS-D-3
Form adopted June 1946

TABLE 86

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

IONOSPHERIC DATA

Es (Characteristic), Mc, Km (Unit) March (Month), 1955

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Scaled by: E.J.W. J.W.P., L.F.M. J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	E	E	E	E	E	E	G	G	2.4 100	2.8 100	3.2 110 H	G	G	G	G	G	3.0 130	E	E	E	2.3 100	E	E
2	E	E	E	E	E	E	(3.3)S 110	G	G	3.2 110	3.3 110	3.4 100	4.4 100	G	G	G	G	G	E	E	E	1.8 100	E	E
3	E	E	E	2.2 100	E	E	E	G	3.2 100	G	G	2.9 110	2.9 110	3.2 110	3.1 110	2.9 120	2.6 120	3.0H 120Y	E	E	E	E	E	E
4	2.1 100	2.8 100	2.7 100	2.3 100	E	E	E	G	G	3.0 110	4.6 120	2.9 110	G	3.4 110	3.0 120	3.6 110	3.4Y 120	(3.0)S 120	E	E	E	E	E	E
5	E	E	E	E	E	E	E	G	3.0Y 120	4.0 120	3.5 110	5.0Y 110	3.7 100	2.8 100	G	G	G	G	E	E	E	E	E	E
6	E	E	E	E	E	2.8Y 130	E	G	3.1Y 120	M	3.3 120	3.7 100	4.7 100	G	G	G	G	3.0 120	3.6 110	E	E	E	E	E
7	E	E	E	E	E	2.3 110	E	G	3.4 110 H	3.3Y 110	G	G	G	G	G	G	G	2.9Y 120	2.9Y 110	2.9Y 110	3.1 110	2.1 110	E	E
8	E	E	E	E	E	E	E	G	3.2 110	4.2 110	5.2 100	7.0Y 100 H	G	G	G	G	G	G	E	E	E	E	E	E
9	2.3Y 110	E	E	E	E	E	E	2.6Y 130	3.0Y 130	G	G	G	G	G	G	G	G	2.1 130	E	1.1 120	3.1 110	3.0 120	2.9 110	2.4 110
10	E	E	3.0 100	3.0 100	E	E	E	G	G	2.6 110	3.0 110	G	3.0 100	G	3.1 120	7.8Y 100	G	2.3 140	E	E	2.3 120	E	C	C
11	E	E	E	E	E	E	E	G	2.2 120	G	2.6 110	3.2Y 110	3.1Y 110 H	G	G	G	G	G	E	E	E	E	E	E
12	E	E	2.3Y 110	E	E	E	E	G	G	3.1Y 110	3.5Y 110	2.9Y 110	2.9 120	G	G	G	G	2.1 120	E	E	E	E	E	4.2Y 110
13	5.7 110	3.0 110	E	E	E	2.1 110	E	G	2.1 120	3.2Y 110	G	3.5 100	100Y 100	4.9Y 100 H	3.1 120	4.6 110	(3.6)S 110	3.0Y 110	2.9Y 110	E	E	E	E	E
14	E	E	E	E	E	E	E	3.9 120	G	G	G	3.6Y 100	G	G	G	G	2.7 120	(4.3)S 110	E	E	E	E	E	E
15	E	E	E	E	E	E	E	G	G	3.8 110	4.7 110	G	G	G	G	G	G	2.0 140	E	E	E	E	E	E
16	2.4 110	2.4 110	3.9Y 110	2.5Y 110	E	2.7Y 110	E	G	2.2 110	3.0 110 H	3.5 120	3.1Y 110	8.4Y 120	G	G	5.0Y 100 H	G	G	4.6Y 110	E	E	E	E	E
17	E	E	3.8Y 110	E	3.8Y 110	E	(2.4)S 110	G	2.3 120	G	G	3.3 110	4.1Y 90 H	G	G	G	G	G	E	E	E	E	E	E
18	2.5 110	E	2.1 110	E	E	2.1 110	E	8.4Y 110	3.1Y 110	3.4Y 130	2.8 120	3.0 130	G	G	G	2.9 110	G	G	E	E	E	E	E	E
19	E	E	E	E	2.6 100	E	E	G	G	2.4 100	3.4Y 100	2.8 100	G	3.5F 120	G	5.0 100	G	2.4 130	E	E	E	E	E	E
20	E	E	E	E	E	E	E	1.9 130	3.0 110 F	4.5 110	(3.5)S 110	3.1 100	3.2 110	(3.7)S 110	6.7Y 110	3.0 110	(3.5)S 110	3.3 110 H	3.0Y 120	2.7Y 110	E	2.7 110	E	2.2 100
21	E	E	E	E	E	E	E	4.5Y 120	3.1Y 110	2.8 110	3.4Y 110	(3.3)S 100 F	G	G	(4.9)S 110	(3.7)S 110	G	3.3 110	2.9Y 120	2.3 120	2.4 110	E	E	E
22	E	E	E	E	E	E	E	G	G	G	G	G	4.9Y 90	3.0 120	G	G	G	G	2.8Y 110	E	3.7 110	E	90 110	E
23	E	E	E	E	E	E	E	G	4.9Y 110 H	G	G	G	G	G	G	G	G	2.3 120	2.8Y 120	E	E	3.6 110	3.7 110	E
24	E	E	E	E	E	3.0 120	2.3 130	2.8 120	3.2 110	6.8Y 110	2.7 110	4.3 100	6.6Y 110	4.8Y 100	2.7 100	G	2.7 130	G	2.7Y 110	2.2 120	2.5 110	2.4 110	E	E
25	E	E	E	E	E	E	E	2.0 120	4.7Y 100	3.5Y 110	G	G	G	3.1Y 100	2.8 110	3.6Y (120)S	4.9Y 110	G	E	E	E	E	2.4Y 110	E
26	E	E	E	E	E	E	E	G	G	3.5Y 120	3.0 110	G	G	3.3 120	4.8Y 100	G	G	G	(1.7)S 130	E	E	E	E	E
27	E	E	E	E	E	E	2.1Y 110	G	2.4 120	3.5Y 110	3.2 120	3.3 130	3.9 110	G	G	G	G	G	G	E	E	E	E	E
28	2.0 110	2.4 110	2.0 110	2.4 110	2.4 100	3.0 120	2.2 100	4.3 120	3.0 120	G	G	5.0 90	3.4 110	4.5 110	11.2 110	G	G	G	G	E	E	E	E	E
29	E	E	E	E	E	6.4Y 130	G	G	G	3.5Y 110 H	3.0 110	G	4.3Y 100	3.1 110	3.0 110	G	2.7 120	G	G	E	E	E	E	E
30	E	E	2.0 110	E	E	E	G	G	G	3.3 110	3.8Y 110	3.8 100	G	4.8 100	3.0 100	G	3.9 100	G	G	E	E	E	E	E
31	E	E	E	E	E	E	G	3.9 100	G	G	3.6Y 120 H	G	G	G	G	G	(3.1) S (120)	G	G	E	E	E	E	E
Median	**	*	**	**	**	**	**	**	2.2	3.0	3.0	3.1	**	**	**	**	**	**	**	**	**	**	**	**
Count	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	31	31	30	30

04.60

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

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 63-460 49

TABLE 87

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

NBS - D-3
Form adopted June 1946

IONOSPHERIC DATA

(M1500)F2, ____ March, 1955
(Characteristic) (Unit) (Month)

National Bureau of Standards
(Institution)

Observed at Washington, D.C.

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F S	F S	F S	F S	F S	2.2 P F	(2.4) F S	2.4 F	2.6	2.4	2.3 H	2.5	2.2	2.3	2.3	2.3	2.3	2.3 H	2.4	2.7	2.2	2.3	2.1	(2.1) S
2	2.1 F	2.1 F	2.0 F	2.0	2.1	2.2	2.3	2.5	2.5	2.5	2.3	2.1 H	2.3	2.4	2.2	2.4	2.3	2.3	2.4	2.3	2.2	2.3	2.2	(2.2) S
3	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.5	2.5	2.5	2.4	2.4	2.5	2.3	2.5	2.4	2.4	2.3	2.5	2.5	2.3	2.1 F	2.1 F	2.2 F
4	(2.1) F S	(2.1) P S	(2.1) F S	2.0 F	2.1 F	2.1 F	(2.1) F S	2.5	2.6	2.5	2.7	(2.3 F	2.2	2.0 H	2.3	2.2	2.2	2.3	2.4	(2.2) P S	2.3	2.1 F	2.1 F	2.2 F
5	2.2 F	2.1 F	2.0 F	2.1	2.1 F	2.2 F	2.2	2.3	2.3 F	2.3	2.2	1.9	2.0	2.1	(1.9) H	2.3	2.3	(2.3) P S	2.2	2.3	2.0	2.2 F	2.1) F S	(2.2) F S
6	(2.0) F S	2.0 F	2.0) F S	2.1 F	2.2 F	(2.1) P F	2.0	2.4	2.2	M	G	2.0	1.7 H	2.2	2.2	2.0 H	2.3	2.3	2.3	2.1	2.2	2.1	2.1	2.0
7	2.0	1.9	2.0	2.1	2.0	2.1	2.2 F	2.2	2.5 S P	2.3 F	2.2	2.4	2.1	2.0	2.0	2.2 F	2.0	2.4	2.3	2.3	2.1	2.0	2.0	2.0
8	2.0 F	(1.9) F	2.0 F	(2.0) F	2.2 F	2.2 F	2.1 F	2.3 F	2.5	2.4	2.2 F	2.2	2.3	2.1	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.0	2.0
9	2.1	2.0	(2.0) F S	2.1 F	2.1 F	2.1	2.1	2.4	2.2 F	2.2 F	2.0 F	2.1	2.1	2.2	2.0	2.0	2.1	2.1	2.2	2.2 F	(2.2) F	2.2 F	2.0 F	1.9 F
10	2.0 F	2.0 F	A	A	2.0 F	(2.0) F	(2.1) F	2.3	2.3	2.2	2.2	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.3	2.2	C	C
11	2.0) F S	J S	2.0) F S	J S	(2.1) F S	J S	(2.1) F S	2.4	2.2	P S	G	G	G K	1.5 K	2.1 K	2.2 K	2.2 K	2.3 K	2.3 K	2.2 K	2.2 K	2.2 F K	2.0 K	1.9 K
12	2.0 K	J S K	2.0	2.0	2.1	2.2	2.0	2.3	2.2	2.3	2.2	2.2	2.1	2.0	2.1	2.1 H	2.3	2.3	2.3	2.2	2.3	2.1	2.0	1.9
13	J A	1.9 F	2.1	2.1 F	2.0	2.2	2.0	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.4	2.4	2.4	2.2	2.1	2.1 F	2.1
14	2.0 F	2.1 F	2.1	2.2	2.2	2.1	2.5 F	2.5	2.4	2.3 H	2.3	2.5	2.3	2.2	2.2	2.2	2.2 F	2.2 F	2.4	2.3 F	2.2 F	(2.1) F S	2.1) F S	2.1 F
15	2.0 F	1.9 F	2.1 F	2.2 F	2.1) F S	(1.9) F S	2.1 F	2.5	2.4	2.2	1.9	G	G K	2.0 K	2.0 K	2.0 K	2.2 K	2.3 K	2.2 K	2.2 K	2.2 K	2.1 K	2.0 F K	(2.0) F S
16	K (1.8) P F	F S K	F S K	S K	S K	S K	(2.0) F S	2.4 K	G K	G K	G K	2.1	K (2.0) P S	1.9 K	K (1.8) P F	2.1 K	2.1 K	2.3 K	(2.4) S K	2.0 K	2.2 K	2.1 K	2.2 K	2.1 K
17	K (2.2) P S	(2.2) F K	(2.2) P F	F S	F S	J F	(2.2) P F	2.4	2.3	(2.2) P S	G	G	1.8 K	1.8 K	(2.0) P K	2.1 K	2.2 K	2.3 K	2.4 K	(2.2) F K	(2.2) F K	(2.0) F K	F S K	F S K
18	F S	F S	(1.9) P S	(2.0) F S	(2.0) P F	(2.0) P F	(2.1) P S	(2.5) P S	2.5	2.3	2.0	2.1	2.1	2.0	2.1	2.0	2.1	2.4	2.4	2.3	2.3	(2.3) P F	2.1 F	(2.0) P F
19	F	F	F	2.0) P F	F S	F	(2.3) F	2.6	2.4	2.4 F	2.3 H	(2.2) P S	(2.2) H F	2.2 H	2.2	2.3	2.3	2.4	2.4	2.4	2.4	(2.3) P S	(2.0) P F	(2.0) P F
20	2.0 F	(2.0) P F	2.1 F	2.2 F	2.2	2.1	2.2	2.6	2.5	2.5	2.4	2.4	2.3	2.2	2.3	2.2	2.3	2.3	2.4	2.2	2.3	2.3	2.1	2.1
21	2.1	2.0	2.1	(2.0) P F	2.1	2.1 F	2.2	2.5	2.6	2.4	2.5	2.2	2.4	2.3	2.3	2.2	2.4	2.4	2.4	2.3	2.3	2.1	2.2	2.2
22	2.1	2.1	2.0	1.9	(2.1) P S	2.0	(2.2) S	1.9	2.1	(1.6) J S	G	G	G	G K	G K	G K	G K	2.0 K	2.0 K	2.0 K K	(2.2) P F K	(2.3) P F	2.0 K	(2.2) B K
23	F B K	F B K	(2.1) P F	(2.0) F S	(2.1) F	(2.1) F B	2.2	2.2	2.1) H	2.2	2.3	2.1	2.2	1.9	2.2	1.9	2.0	2.2	2.3	(2.2) P S	2.2	2.2	2.1	(2.0) F
24	(2.0) F	F	(1.9) F	(2.1) F S	J S	(2.0) F S	2.1	2.2	2.0	1.9	1.8	1.6	1.6 K	2.0 K	2.1 K	2.0 K	2.2 K	2.3 K	2.3 K	2.1 K	K (2.1) P S	J S K	K (2.0) F S	(2.0) F S
25	J F K	F	F S	F S	F	F S	(2.0) F S	(2.4) F S	2.4) P S	(2.1) F S	2.3	2.3	2.2	2.1	2.2	2.2	2.2	2.3	2.3) F S	2.2	(2.3) P S	(2.2) S	(2.1) S	(2.1) F S
26	(2.2) F S	J F	(2.0) F S	2.1	(2.1) P S	2.0) J S	2.1	2.2	2.4	(2.0) S	1.7 H	G	(1.8) H S	2.0 K	1.9 K	2.1 K	2.2 K	2.3 K	2.3 K	2.2 K	2.1 K	2.1 K	J S K	(2.2) S K
27	K 2.0) P S	(2.0) F S	2.0 F	2.0 F	2.0 F	(2.1) P F	(2.4) S	2.4	(2.1) S F	2.2	2.1	1.8	2.0	2.2	1.9	2.2	2.3	2.2	2.3	2.2	2.2	2.1	2.1	2.0
28	2.0	2.1 F	(2.1) F S	(2.0) F S	2.1 F	(2.1) F S	2.4 F	J S	2.4	1.9	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.2	2.2 F	2.1 F
29	2.2 F	2.1 F	2.0 F	(2.2) F S	2.2 F	2.1 F	2.4	2.3	2.3	2.5) J S	2.3	2.1	2.2	2.2	2.1	2.4 H	2.3	2.2	2.3	(2.3) S	2.3	(2.2) S	2.2	(2.2) F
30	2.1	2.1	2.0	2.1	2.1	2.2	2.3	2.5	2.4	2.4	2.3	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.0 K	1.9 K
31	1.8 K	2.0 K	1.9 K	1.9 F K	F S K	J S K	2.2 F K	2.5 F K	G K	2.0) S K	G K	G K	G K	G K	G K	1.7 K	(2.1) F K	(2.0) F K	K (2.2) P S	2.1 K	J F K	J F K	K (2.1) P F	K (2.1) J F
Median	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.4	2.4	2.3	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.1
Count	25	21	26	25	24	25	31	30	31	29	31	31	31	31	31	31	31	31	31	31	30	29	28	29

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS - D - 3
Form adopted June 1946

TABLE 88

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

IONOSPHERIC DATA

(M3000)F2, (Characteristic) ____ (Unit) March (Month), 1955

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F S	F S	F S	F S	F S	(3.3) P F	(3.5) F S	3.5 F	3.7	3.5	3.3 H	3.6	3.3	3.3	3.3	3.3	3.4	3.3 H	3.4	3.5	3.2	3.3	3.1	(3.1) S
2	3.1 F	3.1 F	3.0 F	3.0	3.1	3.3	3.4	3.6	3.6	3.5	3.4	3.1 H	3.4	3.5	3.2	3.4	3.3	3.4	3.4	3.3	3.3	3.3	3.2	(3.2) S
3	3.0	3.0	3.1	3.1	3.3	3.2	3.4	3.6	3.6	3.6	3.5	3.5	3.6	3.4	3.6	3.5	3.4	3.4	3.6	3.5	3.3	3.2 F	3.2 F	3.2 F
4	(3.1) F S	(3.1) P S	(3.1) F S	3.0 F	3.1 F	3.1 F	(3.1) F S	3.6	3.7	3.6	3.8	3.3 F	3.3	3.0 H	3.4	3.2	3.3	3.4	3.5	(3.3) P S	3.3	3.1 F	3.2 F	3.2 F
5	3.3 F	3.1 F	3.2	3.1 F	3.2 F	3.2 F	3.2	3.3	3.4 F	3.4	3.3	2.8	3.0	3.1	(2.9) H	3.3	3.4	(3.3) P S	3.2	3.4	3.1	3.2 F	(3.1) F S	(3.2) F S
6	(3.0) F S	3.0 F	(3.0) F S	3.2 F	3.3 F	(3.2) P F	3.0	3.5	3.2	M	G	3.0	2.8 H	3.2	3.2	3.0 H	3.4	3.4	3.3	3.1	3.2	3.1	3.1	3.0
7	3.0	2.9	3.0	3.1	3.0	3.1	3.2 F	3.2	(3.5) S P	3.4 F	3.2	3.5	3.2	3.0	3.0	3.3 F	3.0	3.5	3.3	3.3	3.1	3.0	3.0	3.0
8	3.0 F	(2.9) F	3.0 F	(3.0) F	3.2 F	3.2 F	3.2 F	3.3 F	3.6	3.5	3.3 F	3.2	3.3	3.2	3.2	3.3	3.4	3.3	3.4	3.3	3.2	3.2	3.0	3.0
9	3.1	3.0	(3.0) F S	3.1 F	3.2 F	3.1	3.1	3.5	3.2 F	3.3 F	3.0 F	3.1	3.1	3.2	3.0	3.0	3.1	3.1	3.2	3.2 F	(3.2) F	3.2 F	3.0 F	2.9 F
10	(3.0) F	3.0 F	A	A	3.0 F	(3.0) F	(3.1) F	3.3	3.3	3.3	3.3	3.2	3.3	3.4	3.3	3.2	3.3	3.3	3.1	3.2	3.3	3.3	C	C
11	(3.0) F S	J S	(3.0) F S	J S	(3.1) F S	J S	(3.1) F S	3.5	3.2	P S	G	G	G K	2.8 K	3.1 K	3.3 K	3.3 K	3.4 K	3.4 K	3.2 K	3.3 K	3.2 F K	3.0 K	2.9 K
12	3.0 K	J S K	3.0	3.0	3.1	3.2	3.0	3.4	3.2	3.4	3.2	3.2	3.2	3.0	3.2	3.1 H	3.4	3.3	3.4	3.2	3.3	3.1	3.0	2.9
13	J A	2.9 F	3.1	3.1 F	3.0	3.2	3.0	3.4	3.5	3.3	3.2	3.2	3.2	3.3	3.4	3.3	3.3	3.5	3.5	3.5	3.3	3.2	3.2 F	3.1
14	3.0 F	3.1 F	3.2	3.2	3.3	3.2	3.6 F	3.6	3.5	3.4 H	3.4	3.6	3.4	3.3	3.3	3.3	3.3 F	3.2 F	3.5	3.4 F	3.2 F	(3.1) F S	(3.1) F S	3.1 F
15	3.0 F	2.9 F	3.2 F	3.2 F	(3.1) F S	(2.9) F S	3.2 F	3.6	3.5	3.2	2.9	G	G K	3.0 K	3.0 K	3.0 K	3.2 K	3.3 K	3.3 K	3.3 K	3.3 K	3.1 K	3.0 F K	(3.0) F S
16	K (2.7) P F	F S K	F S K	S K	S K	S K	K (3.0) F S	3.5 K	G K	G K	G K	3.1 K	K (3.0) P S	2.9 K	K (2.7) P F	3.2 K	3.2 K	3.3 K	(3.5) S K	3.0 K	3.2 K	3.2 K	3.2 K	3.1 K
17	K (3.2) P S	(3.2) F K	(3.2) P F	F S	F S	J F	(3.3) P F	3.5	3.3	(3.3) P S	G	G	2.7 K	2.8 K	(3.0) P K	3.2 K	3.3 K	3.4 K	3.5 K	(3.2) F K	(3.2) F K	(3.0) F K	F S K	F S K
18	F S	F S	(2.9) P S	(3.0) F S	(3.0) P F	(3.0) P F	(3.1) P S	(3.6) P S	3.6	3.4	3.0	3.2	3.2	2.9	3.1	3.0	3.2	3.4	3.5	3.3	3.4	(3.3) P F	3.1 F	(3.0) P F
19	F	F	F	(3.0) P F	F S	F	(3.3) F	3.7	3.5	3.5 F	3.4 H	(3.2) P S	(3.2) H F	3.2 H	3.2	3.4	3.4	3.5	3.5	3.4	3.4	(3.3) P S	(3.0) P F	(3.0) P F
20	3.0 F	(3.0) P F	3.1 F	3.2 F	3.3	3.2	3.3	3.7	3.6	3.6	3.5	3.5	3.3	3.3	3.3	3.3	3.4	3.3	3.5	3.3	3.3	3.4	3.2	3.2
21	3.1	3.0	3.1	(3.0) P F	3.1	3.1 F	3.3	3.6	3.7	3.5	3.5	3.2	3.5	3.3	3.4	3.3	3.4	3.4	3.5	3.4	3.3	3.2	3.3	3.3
22	3.1	3.1	3.0	2.9	(3.2) P S	3.0	(3.3) S	2.9	3.1	(2.9) J S	G	G	G	G K	G K	G K	G K	3.0 K	3.0 K	3.0 K	K (3.3) P F	K (3.3) P F	3.0 K	(3.2) B K
23	F B K	F B K	(3.1) P F	(3.0) F S	(3.1) P F	(3.1) F B	3.3	3.2	(3.1) H	3.2	3.4	3.1	3.2	2.9	3.2	2.9	3.0	3.2	3.3	(3.2) P S	3.3	3.2	3.1	(3.0) F
24	(3.0) F	F	(2.9) F	(3.1) F S	J S	(3.0) F S	3.2	3.3	3.0	2.9	2.7	2.4	2.5 K	3.0 K	3.2 K	3.0 K	3.2 K	3.4 K	3.4 K	3.2 K	K (3.1) P S	J S K	K (3.0) F S	K (3.0) F S
25	J F K	F	F S	F S	F	F S	(3.0) F S	(3.4) F S	(3.5) P S	(3.1) F S	3.3	3.3	3.3	3.1	3.3	3.3	3.3	3.4	(3.4) F S	3.2	(3.4) P S	(3.2) S	(3.1) S	(3.2) F S
26	(3.3) F S	J F	(3.0) F S	3.1	(3.1) P S	(3.0) J S	3.1	3.3	3.5	(3.0) S	2.6 H	G	(2.7) H S	3.0 K	2.9 K	3.2 K	3.2 K	3.3 K	3.4 K	3.2 K	3.1 K	3.1 K	J S K	(3.2) S K
27	K (3.0) P S	(3.0) F S	3.0 F	3.0 F	3.0 F	(3.1) P F	(3.5) S	3.5	(3.1) S F	3.2	3.1	2.8	3.0	3.2	2.9	3.2	3.3	3.2	3.3	3.2	3.2	3.1	3.1	3.0
28	3.0	3.1 F	(3.1) F S	(3.0) F S	3.1 F	(3.1) F S	3.4 F	J S	3.5	2.9	3.1	3.2	3.4	3.2	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.3	3.3 F	3.1 F
29	3.2 F	3.1 F	3.0 F	(3.2) F	3.2 F	3.1 F	3.5	3.4	3.3	(3.6) J S	3.4	3.1	3.3	3.2	3.2	3.4 H	3.3	3.2	3.4	(3.3) S	3.4	(3.3) S	3.2	(3.2) F
30	3.2	3.2	3.0	3.1	3.1	3.3	3.4	3.5	3.5	3.5	3.3	3.2	3.2	3.1	3.2	3.1	3.2	3.1	3.2	3.3	3.2	3.2	3.0 K	2.9 K
31	2.8 K	3.0 K	2.9 K	2.9 F K	F S K	J S K	3.2 F K	3.6 F K	G K	(3.0) S K	G K	G K	G K	G K	G K	2.6 K	(3.1) F K	(3.0) F K	K (3.2) F S	3.2 K	J F K	J F K	K (3.1) P F	K (3.1) J F
Median	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.5	3.5	3.4	3.2	3.2	3.2	3.1	3.2	3.2	3.3	3.3	3.4	3.3	3.3	3.2	3.1	3.1
Count	25	21	26	25	24	25	31	30	31	29	31	31	31	31	31	31	31	31	31	31	30	29	28	29

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

Manual ☐ Automatic ☒

GPO 83-460 49

NBS-D-3
Form adopted June 1946

TABLE 89

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

IONOSPHERIC DATA

(M3000)F1, ____ March, 1955
(Characteristic) (Unit) (Month)

National Bureau of Standards
(Institution)

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

75°W Mean Time

Scaled by E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1								Q	L	L	L	40	37 H	36 H	37 H	L	(38) L	Q								
2								Q	L	L	37 H	38	37 H	37	37	L	L	L								
3								Q	L	L	L	L	36	38	(38) L	L	L	L								
4								L	L	L	L	37	39	L	L	36 H	L	L								
5								L	L	37	38 H	42	40 H	36	37	36 H	37	Q								
6								L	(38) L	M	36 H	37 H	36	38	36	36	36	L								
7								Q	L	38	37	37	36 H	36	36	36	35	L								
8								Q	37	H	37	37	37 H	38	37	36	(38) L	L								
9								Q	L	37 H	37	37	37	37	35	34	36	L								
10								Q	L	36	37	36 H	36 H	36 H	38	36	35	L								
11								Q	36	37	37 H	38 H	(39) H K	38 K	37 H K	37 H K	39 K	L K	K							
12								Q	L	38 H	38 H	38 H	38 H	38 H	37	36	(38) L	L								
13								Q	L	37	38 H	37 H	37 H	37 H	37	36	L	L								
14								L	L	37	40	(41) H	40	37 H	38	36	L	L								
15								L	L	37	37	40	38 K	(38) S K	37 K	38 K	36 K	L K	K							
16							K	Q K	37 K	38 H K	41 K	(41) S K	(37) H K	38 H K	38 K	38 K	38 F K	L K	K							
17								L	(37) L	(38) L	37 H	38	40 K	38 K	40 K	37 K	38 H K	L K	K							
18								Q	L	37	38	37 H	38	37	36	36	36	L								
19								Q	L	L	40	37 H	37 H	(38) L	40	L	L	L								
20								L	L	(38) L	38	37	37 H	38	(37) L	(36) L	L	L								
21								L	L	(37) P	(37) H	(37) H	38	37	37	L	L	L								
22								36	35	38	(37) F	(38) F	37 H	37 H K	37 K	37 K	36 K	(37) L K	K							
23								Q	37 H	40	38	37 H	38	37	35 H	35	34	L								
24								Q	37	38 H	38 H	40	40 H K	37 H K	38 K	38 K	(36) L K	L K	K							
25								Q	Q	38 H	37	41	37	38	36 H	37	(40) L	L								
26								L	38	37 H	37 H	41 H	37	37 K	38 K	37 H K	38 K	L K	K							
27								L	38	38	37	37 H	37	38 H	37	35	36 H	L	L							
28								L	L	36 H	37 H	38 H	37 H	37	37 H	36	(36) L	L	L							
29							Q	L	36	38 H	37	40	37 H	38 H	38 H	37 H	38	L	L							
30							Q	L	40	37	37 H	37 H	38 H	37	37 H	36 H	35	(37) L	L							
31							Q K	Q K	38 F K	40 F K	37 H K	40 H K	37 H K	37 K	37 H K	36 H K	36 F K	37 F K	L K							
Median								—	38	38	39	39	38	38	37	36	36	—	—							
Count								1	13	24	28	30	31	30	30	26	23	3	—							

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

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GPO 83-460 49

NBS-D-3
Form adopted June 1946

TABLE 90

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

IONOSPHERIC DATA

(M1500)E , ____ March , 1955
(Characteristic) (Unit) (Month)

Observed at Washington, D.C.

Lat 38.7°N , Long 77.1°W

75°W Mean Time

National Bureau of Standards
(Institution)

Scaled by: E.J.W., J.W.P., L.F.M., J.J.S.

Calculated by: E.J.W., J.W.P., L.F.M., J.J.S.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								S	4.4 H	(4.5) P	4.3 H	(4.4) P	4.3	4.4	4.4	4.4 H	4.3	4.4						
2								S	4.3	4.4 F	4.3 H	4.3 H	4.3 H	4.3	4.3 H	4.3	4.4	4.4						
3								S	4.4 H	4.4 H	(4.4) P	(4.4) P	(4.4) P	(4.5) P	(4.4) P	(4.4) P	(4.4) P	4.4						
4								S	4.4	(4.2) R	4.2	4.2	4.4	(4.4) R	(4.4) R	(4.4) R	4.3	S						
5								S	4.4	4.4	R	R	(4.3) R	4.2	4.4 H	4.4	4.4	(4.3) H						
6								4.4	4.4	M	4.4 H	4.3 H	R	4.3	4.3 H	4.3	4.4	4.4 H						
7								S	4.3 H	4.4	4.4 H	4.4 H	4.4	4.4 H	4.4 H	4.4	4.4	4.4						
8								4.4	R	R	R	R	4.3	4.2	4.3	4.2	4.3	(4.3) S						
9								(4.2) S	4.3 H	4.4	4.3 F	4.3 H	4.3	4.3	4.3	4.3	4.3 H	4.3						
10								4.1	(4.3) P	4.4	(4.4) S	4.4	(4.4) R	4.4	4.2	4.3	4.4	4.3						
11								4.3	4.3	4.3	4.5	R	(4.3) R K	4.3 H K	4.3 H K	4.3 K	4.5 H K	4.5 K	K					
12								4.5	(4.3) H	R	R	(4.2) R	(4.2) P	4.3	4.3	4.3 H	4.4	4.4						
13								S	4.5	(4.4) R	4.3 H	(4.4) R	4.2	(4.3) R	4.3	4.3	4.4	(4.4) P						
14								S	4.4	(4.4) P	(4.4) P	4.2	4.2	4.2	4.2	4.3	4.3	R						
15								(4.4) S	4.4 H	R	R	4.4	4.3 K	4.3 K	4.3 K	4.4 K	(4.5) P K	(4.2) H K	K					
16							K	(4.4) P K	(4.5) R K	R K	(4.4) R K	4.2 K	4.3 K	4.3 K	4.4 K	4.5 H K	4.4 K	4.4 K	K					
17								(4.3) S	4.5 H	4.3 H	4.4	(4.3) R	4.3 K	4.3 H K	4.3 H K	4.3 K	4.4 H K	S K	K					
18								4.4	4.4	4.4	4.3	4.4	4.4	4.4	4.4	4.4	4.3	4.3						
19								S	4.4	S	(4.4) R	4.1	4.4	(4.4) R	4.3	4.4	4.4	4.4						
20								4.4	4.4 F	R	4.4	4.4	4.4	(4.4) R	(4.4) R	4.4	R	R						
21								(4.4) S	(4.4) R	4.4	4.4	4.4	4.4	4.3	4.3	4.4	4.4	4.4						
22								4.2	(4.4) S	(4.4) S	(4.4) H	4.5 H	4.3 H	4.2 K	4.2 H K	4.2 K	4.3 K	4.4 H K	K					
23								S	R	4.4 H	4.4	4.4	4.4 H	4.4	4.4	4.5	(4.4) S	4.4						
24								(4.4) S	(4.4) R	4.4	(4.4) P	R	4.1 K	4.1 K	4.2 K	4.3 K	4.3 K	4.4 K	K					
25								R	4.4	4.5 H	4.3 H	4.3 H	(4.3) P	4.4	4.2 H	(4.4) R	(4.4) R	4.4 H						
26								4.3 H	4.2 H	4.3 H	R	4.3 H	4.3 H	4.3 H K	4.2 H K	4.3 H K	4.3 K	4.3 K	K					
27								(4.3) H	R	4.5 H	4.4 H	4.5	4.3 H	4.2	4.3	4.3 H	4.3	4.2	S					
28								4.4	4.3	4.3 H	4.4 H	4.4 F	4.3 F	4.3 F	4.4	4.3	4.4	4.5	S					
29							S	4.3 H	4.3 H	(4.5) R	4.5 H	(4.5) S	4.3 H	(4.4) P	(4.3) R	4.3 H	(4.3) R	4.4 H	S					
30							S	4.2	4.4	4.4	4.5	4.2 H	4.3 H	4.3	4.3	4.3	4.3	4.4	S					
31							S K	4.5 H	4.4 K	4.2 K	R K	(4.4) H K	(4.4) H K	4.5 K	(4.4) P K	(4.5) H K	4.4 K	4.2 K	S K					
Median								4.4	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.4	4.4						
Count								20	28	24	25	27	30	31	31	31	30	27						

04.60

Sweep 1.0 Mc to 25.0 Mc in 0.225 min

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Table 91

Ionospheric Storminess at Washington, D. C.

March 1955

Day	Ionospheric character* 00-12 GCT	12-24 GCT	Principal storms Beginning GCT	End GCT	Geomagnetic character** 00-12 GCT	12-24 GCT
1	2	2			1	1
2	2	1			1	0
3	1	1			1	1
4	1	1			1	1
5	0	3			3	2
6	1	3			3	2
7	1	1			3	3
8	1	2			3	3
9	2	3			3	3
10	3	2			4	4
11	1	4	1200	----	3	3
12	3	1	----	0100	4	3
13	3	1			2	3
14	0	2			2	3
15	1	5	1200	----	4	2
16	4	4	----	----	3	2
17	3	5	----	0100	4	2
			1200	2300		
18	3	2			2	3
19	2	2			1	1
20	1	2			2	2
21	1	2			2	2
22	1	6	1300	----	3	4
23	3	1	----	0100	2	3
24	3	5	1200	----	3	2
25	3	2	----	0000	2	2
26	1	4	1300	----	3	2
27	2	2	----	0000	2	2
28	1	2			2	1
29	2	2			1	1
30	1	3	2200	----	1	3
31	4	6	----	***	6	4

*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.

***Storm ending at 0100 GCT on April 1, 1955.

----Dashes indicate continuing storm.

Table 92

Sudden Ionosphere Disturbances Observed at Washington, D. C.

March 1955

No sudden ionosphere disturbances were observed during the month of March.

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, Boulder, Colorado; Attention: Mr. Vaughn Agy.

Table 93a

Radio Propagation Quality Figures

(Including Comparisons with Short-Term and Advance Forecasts)

North Atlantic Path - February 1955

Day	North Atlantic 6-hourly quality figures				Short-term forecasts issued about one hour in advance of:				Whole day quality index	Advance forecasts (J-reports) for whole day; issued in advance by:			Geomagnetic K_{Ch}	
	00 to 06	06 to 12	12 to 18	18 to 24	00	06	12	18		1-4 days	4-7 days	8-25 days	Half (1)	Day (2)
1	6	6	7	7	6	6	7	7	7	6	6		0	1
2	6	6	7	7	6	6	7	7	7	6	6		1	2
3	7	6	7	7	6	5	6	6	7	6	6		3	1
4	6	6	7	6	6	6	6	6	6	6	6		3	(4)
5	6	5	7	7	5	5	7	7	6	6	6		3	3
6	6	6	7	6	6	5	6	6	6	6	6		3	3
7	5	5	7	7	6	5	7	6	6	6	6		3	2
8	6	6	7	7	5	5	7	7	7	6	6		2	3
9	6	6	7	6	5	6	7	7	6	6	6		3	2
10	6	5	7	6	6	6	7	7	6	6	6		2	1
11	6	6	7	6	6	6	7	7	6	6	6		1	3
12	5	5	7	6	6	5	6	6	6	6	6		3	2
13	5	5	7	7	5	5	7	6	6	6	6		3	2
14	6	5	7	7	6	6	6	6	6	6	6		2	2
15	5	5	7	7	6	6	7	7	6	6	6		3	1
16	5	5	7	7	6	5	7	7	6	6	6		1	2
17	6	6	7	6	6	6	7	7	6	6	6		2	1
18	5	5	7	6	6	6	7	7	6	7	6		2	1
19	6	6	7	7	6	6	7	7	7	7	6		2	2
20	5	5	7	7	6	6	7	7	6	7	7		2	2
21	6	6	7	7	6	6	7	7	7	7	7		3	2
22	6	5	7	7	6	5	7	7	6	7	6		3	2
23	5	6	6	6	6	5	7	7	6	7	6		(4)	3
24	5	5	7	6	5	5	7	6	6	7	6		2	2
25	5	5	7	6	6	5	6	6	6	6	6		3	1
26	5	5	7	7	6	5	7	6	6	6	6		3	2
27	6	5	7	7	6	5	6	6	6	6	6		1	2
28	5	5	6	6	6	(4)	6	5	5	6	6		(4)	3
Score:														
Quiet Periods					P	14	18	20	15		18	21		
					S	14	10	8	13		10	7		
					U	0	0	0	0		0	0		
					F	0	0	0	0		0	0		
Disturbed Periods					P	0	0	0	0		0	0		
					S	0	0	0	0		0	0		
					U	0	0	0	0		0	0		
					F	0	0	0	0		0	0		

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; $K_{Ch} \geq 4$ indicates significant disturbance, enclosed in ( ) for emphasis

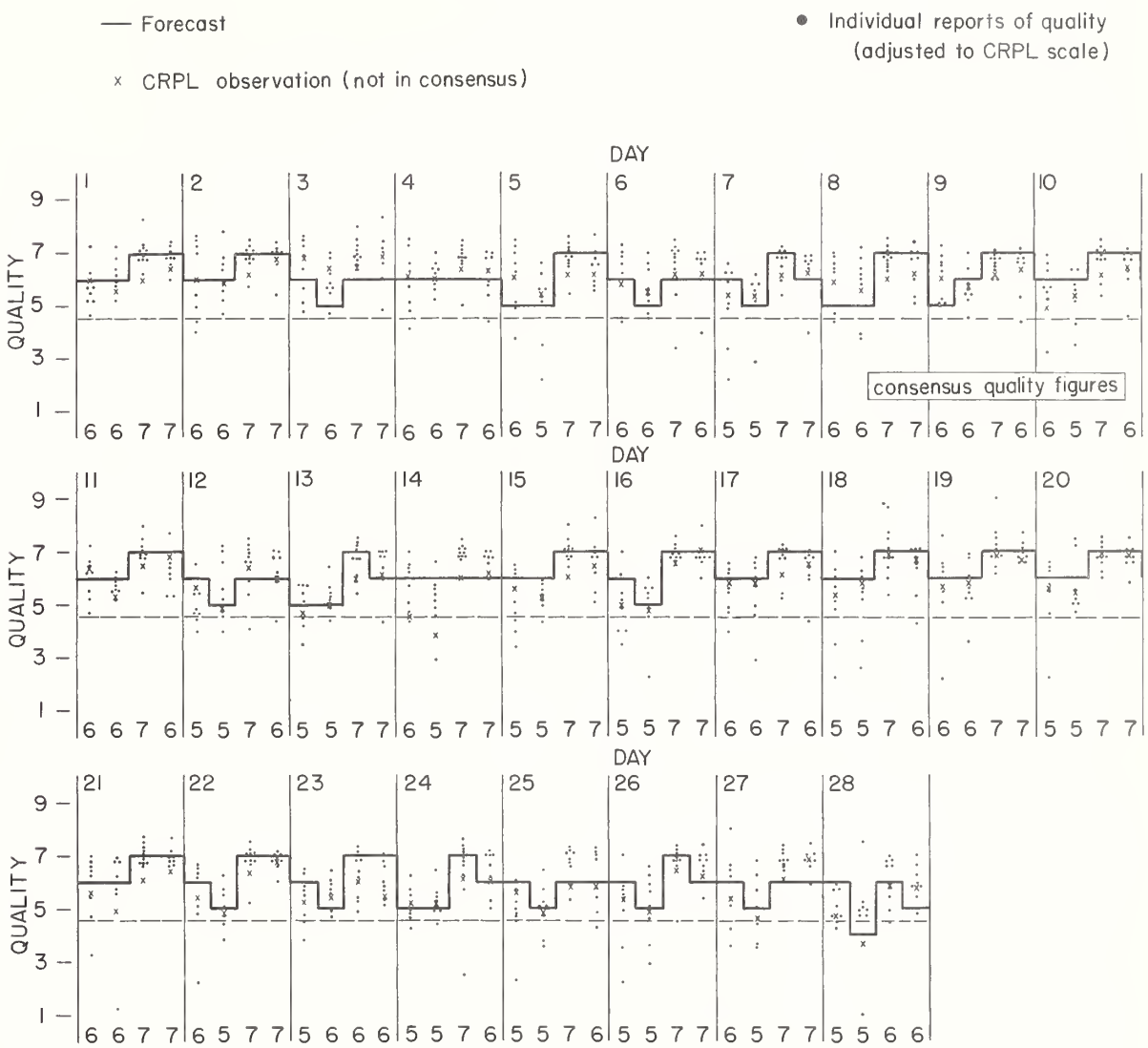
Scoring: (beginning October 1952)
- P - Perfect: forecast quality equal to observed
- S - Satisfactory: (beginning October 1952) forecast quality one grade different from observed
- U - Unsatisfactory: forecast quality two or more grades different from observed when both forecast and observed were ≥ 5, or both ≤ 5
- F - Failure: other times when forecast quality two or more grades different from observed

Symbols:
- X - probable disturbed date

Note: All times are UT (Universal Time or GCT)

Table 93b

Short-Term Forecasts — February 1955



Outcome of Advance Forecasts (1 to 4 Days Ahead) - February 1955

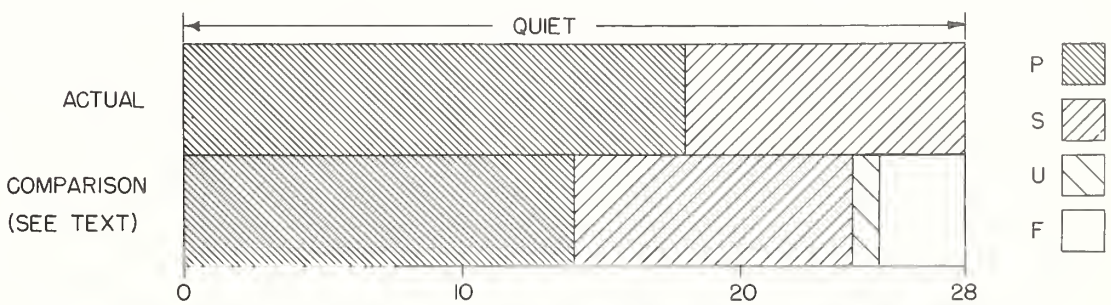


Table 94a

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

(Absolute values in millionths of the brightness of one angstrom at the center of the solar disk)

Date UT	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
1955																																						
Mar 1.7	-	-	-	-	-	-	1	2	1	2	2	5	2	1	-	-	-	-		-	-	-	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	2	1	1	2	3	3	2	-	-	-	-	-		-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-
3.6	-	-	-	-	-	-	-	1	1	2	3	2	1	-	-	-	-	-		-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-
4.6	-	-	-	-	-	-	1	-	1	3	4	3	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.x																																						
6.6	-	-	-	-	-	-	1	1	1	3	2	1	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	1	1	3	3	1	1	1	-	-	-	-	-		-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-
8.7	-	-	-	-	-	2	3	9	6	6	5	2	1	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.x																																						
10.x																																						
11.x																																						
12.x																																						
13.x																																						
14.6	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-		-	-	-	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-
15.x																																						
16.x																																						
17.x																																						
18.6	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	4	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.6	-	-	-	-	-	-	-	-	-	-	-	1	2	4	18	18	2	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6a	X	X	X	X	-	-	-	-	-	-	-	3	9	15	9	5	2	-		-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X
21.x																																						
22.x																																						
23.x																																						
24.x																																						
25.x																																						
26.6a	-	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.6	-	-	-	-	-	-	1	-	-	1	1	2	1	-	-	-	-	-		-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
28.x																																						
29.9	-	-	-	-	-	-	-	1	1	1	-	-	1	1	-	-	-	-		-	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.x																																						

Table 95a

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

(Absolute values in millionths of the brightness of one angstrom at the center of the solar disk)

Date UT	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
1955																																						
Mar 1.7	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	4	4		4	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
2.6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3		2	3	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1
3.6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2		3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
4.6	1	1	1	1	1	1	1	1	1	2	2	2	1	2	2	3	3	3		2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
5.x																																						
6.6	1	1	1	1	-	-	-	-	-	2	-	1	1	-	1	1	2	2		2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7.6	1	1	1	-	-	-	-	-	1	1	-	1	1	1	1	1	1	2		2	1	2	2	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1
8.7	1	1	1	1	1	1	1	1	2	1	1	1	1	2	3	2	3	3		3	3	3	3	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1
9.x																																						
10.x																																						
11.x																																						
12.x																																						
13.x																																						
14.6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2		4	4	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15.x																																						
16.x																																						
17.x																																						
18.6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	2	1		1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19.6	2	2	2	2	2	1	1	1	1	1	1	1	1	2	4	6	2	1		1	1	2	1	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1
20.6a	X	X	X	X	-	-	-	-	-	-	-	-	-	2	7	4	3	2		2	2	2	2	2	1	1	X	X	X	X	X	X	X	X	X	X	X	X	X
21.x																																						
22.x																																						
23.x																																						
24.x																																						
25.x																																						
26.6a	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		2	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1
27.6	-	-	-	-	1	-	-	-	-	-	-	-	-	1	1	1	1	2		2	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1
28.x																																						
29.9	1	1	1	1	1	1	-	-	-	-	-	1	1	1	1	1	2	2		2	2	2	2	2	2	1	-	-	-	-	-	1	1	1	-	1	1	
30.8	1	1	1	1	1	-	-	-	-	1	1	1	-	-	2	2	2	2		2	2	2	1	2	2	1	1	-	-	-	-	-	-	-	-	-	1	1
31.x																																						

Table 94b

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

(Absolute values in millionths of the brightness of one angstrom at the center of the solar disk)

Date UT	Degrees south of the solar equator																		0°	Degrees north 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
1955																																				
Mar 1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	1	1	2	2	2	2	1	1	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-
3.6	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	-	-	-	-	-	1	2	2	2	2	2	1	1	1	1	-	-	-	-	-
4.6	-	-	-	-	-	-	-	-	-	-	-	1	2	2	-	-	-	-	-	1	2	3	19	19	5	2	2	2	2	2	2	1	1	1	-	-	-
5.x																																				
6.6	-	-	-	-	-	-	-	-	-	-	-	2	3	3	1	-	-	-	-	-	1	3	26	18	4	2	-	1	1	2	1	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	1	2	9	9	2	1	1	1	2	2	2	9	9	9	5	2	2	3	3	3	3	-	-	-	-	-
8.7	-	-	-	-	-	-	-	1	2	2	1	6	27	5	2	1	-	-	-	1	2	2	2	3	2	2	3	3	3	3	3	1	-	-	-	-
9.x																																				
10.x																																				
11.x																																				
12.x																																				
13.x																																				
14.6	-	-	-	-	-	-	-	1	2	3	3	2	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
15.x																																				
16.x																																				
17.x																																				
18.6	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	-	-	-	-	-	-
19.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	3	4	-	-	-	-	-	-	-
20.6a	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X
21.x																																				
22.x																																				
23.x																																				
24.x																																				
25.x																																				
26.6 a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-
27.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	1	1	-	-	-	-	-	-
28.x																																				
29.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	1	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	1	1	1	-	-	-	-	-	-	-	-	-
31.x																																				

Table 95b

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

(Absolute values in millionths of the brightness of one angstrom at the center of the solar disk)

Date UT	Degrees south of the solar equator																		0°	Degrees north 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
1955																																				
Mar 1.7	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	3	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1
2.6	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2	2	2	3	3	2	2	2	2	2	1	1	1	1	-	-	-	1	1	1
3.6	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2	2	2	1	2	4	3	3	1	1	1	1	1	1	1	1	1	1
4.6	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	2	2	2	2	2	11	16	11	5	2	2	1	1	1	1	1	1	1	1	1
5.x																																				
6.6	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2	2	2	1	2	9	15	1	1	1	1	1	1	1	1	1	1	1	1	1
7.6	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	2	8	8	4	2	1	1	1	1	1	1	1	1	1	1	1	1
8.7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	2	2	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
9.x																																				
10.x																																				
11.x																																				
12.x																																				
13.x																																				
14.6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1
15.x																																				
16.x																																				
17.x																																				
18.6	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19.6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	1	1	1	2	2
20.6a	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	2	3	3	3	3	-	-	-	-	-	-	-	-	X	X
21.x																																				
22.x																																				
23.x																																				
24.x																																				
25.x																																				
26.6a	1	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
27.6	1	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	2	2	2	2	2	1	1	-	-	-	-	-	-	-	-	1	1	1	-
28.x																																				
29.9	1	1	1	1	1	-	1	1	1	1	2	2	1	1	2	2	2	2	2	2	2	1	1	1	2	1	1	1	1	1	1	-	-	-	1	1
30.8	1	1	1	1	1	1	1	1	1	2	2	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	1	1	1
31.x																																				

Table 96a

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

(Absolute values in millionths of the brightness of one angstrom at the center of the solar disk)

Date UT	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
1955																																						
Mar 1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.x																																						
6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.x																																						
10.x																																						
11.x																																						
12.x																																						
13.x																																						
14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.x																																						
16.x																																						
17.x																																						
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.6	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6a	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X
21.x																																						
22.x																																						
23.x																																						
24.x																																						
25.x																																						
26.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.x																																						
29.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.x																																						

Table 97a

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

(Arbitrary Scale)

Date UT	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
1955																																						
Mar 1.7	2	3	3	2	3	2	2	4	7	8	9	14	13	13	8	4	3	2	-	-	-	2	3	3	2	2	3	3	5	6	7	6	2	2	-	-	-
2.x																																						
3.7	-	-	-	-	-	2	3	5	8	11	14	18	14	13	8	2	3	2	-	-	-	-	-	-	2	3	4	5	8	7	3	2	2	-	-	-
4.7	-	-	-	-	2	3	3	5	8	11	14	16	15	8	3	2	-	-	-	-	-	-	-	-	2	2	3	4	5	8	7	4	2	-	-	-	-
5.x																																						
6.x																																						
7.x																																						
8.7	-	-	-	-	-	2	4	8	8	14	11	8	5	4	3	2	2	2	-	-	-	-	-	-	2	2	3	2	3	4	3	2	2	-	-	-	-
9.x																																						
10.7a	-	-	-	-	-	-	4	6	7	6	7	8	7	5	3	4	3	2	3	-	-	-	-	-	2	3	3	2	3	3	-	-	-	-	-	-	-	-
11.x																																						
12.9	-	-	-	-	-	2	3	4	4	4	8	11	5	4	3	2	2	-	-	-	-	-	-	-	2	2	3	3	2	2	3	2	-	-	-	-	-	-
13.6	-	-	-	-	2	3	4	5	4	5	16	14	11	5	4	3	2	-	-	2	3	2	3	2	3	4	4	5	3	2	2	2	-	-	-	-	-	-
14.6	-	-	-	2	3	3	4	5	4	8	11	10	8	7	5	4	3	2	-	-	-	2	3	4	5	4	3	2	2	2	2	-	-	-	-	-	-	-
15.7	-	-	-	-	-	2	3	2	3	5	4	4	4	3	3	4	2	-	-	-	-	-	2	3	4	3	2	2	2	2	-	-	-	-	-	-	-	-
16.x																																						
17.x																																						
18.x																																						
19.x																																						
20.x																																						
21.x																																						
22.7	-	-	-	-	-	-	2	5	5	6	5	6	7	8	7	5	4	3	-	-	-	2	3	4	5	8	11	7	5	5	3	2	-	-	-	-	-	-
23.7	-	-	-	-	-	2	3	5	9	8	7	6	5	5	4	4	3	3	-	-	-	-	2	3	5	14	16	11	8	7	5	3	2	-	-	-	-	-
24.7	-	-	-	-	-	3	4	6	8	11	7	5	5	8	6	3	3	2	-	-	-	-	3	3	4	6	8	5	4	4	3	2	-	-	-	-	-	-
25.7	-	-	-	2	3	3	4	6	11	10	8	7	7	10	7	5	3	2	-	-	-	-	-	2	3	4	5	6	5	4	3	2	2	-	-	-	-	-
26.x																																						
27.x																																						
28.x																																						
29.7a	-	-	-	-	-	-	-	2	2	3	3	3	4	4	3	2	-	-	-	-	-	-	-	-	-	2	2	3	3	2	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	2	3	3	3	2	2	3	2	-	-	-	-	-	-	-	-	2	2	3	2	4	4	3	2	2	-	-	-	-	-
31.7a	-	-	-	-	-	-	-	-	3	3	3	3	4	4	3	-	-	-	-	-	-	-	-	-	2	3	3	2	3	4	4	4	3	-	-	-	-	-

Table 96b

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

(Absolute values in millionths of the brightness of one angstrom at the center of the solar disk)

Date UT	Degrees south of the solar equator																			0°	Degrees north 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
1955																																						
Mar 1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.x																																						
6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	1	1	2	2	1	1	1	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.7	-	-	-	-	-	-	-	-	-	1	1	2	2	2	1	1	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.x																																						
10.x																																						
11.x																																						
12.x																																						
13.x																																						
14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.x																																						
16.x																																						
17.x																																						
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6a	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X
21.x																																						
22.x																																						
23.x																																						
24.x																																						
25.x																																						
26.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.x																																						
29.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.x																																						

Table 97b

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

(Arbitrary Scale)

Date UT	Degrees south of the solar equator																			0°	Degrees north 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
1955																																						
Mar 1.7	-	-	-	-	-	-	-	-	2	2	3	4	5	4	4	5	4	3		3	2	2	-	-	3	5	11	10	8	5	3	2	2	2	2	2	2	2
2.x																																						
3.7	-	-	-	-	-	-	-	-	2	2	3	5	4	5	7	5	4	3		2	2	3	5	5	8	13	11	9	8	5	4	3	3	3	2	2	-	-
4.7	-	-	-	-	-	-	-	-	-	2	3	4	4	5	5	4	3	2		2	3	5	8	18	23	28	23	16	11	10	11	8	7	5	4	3	-	-
5.x																																						
6.x																																						
7.x																																						
8.7	-	-	-	-	-	-	-	-	-	2	3	5	16	22	15	10	4	2		-	2	3	5	7	8	10	9	7	5	8	9	8	7	6	3	2	-	-
9.x																																						
10.7a	-	-	-	-	-	-	-	3	4	4	4	5	8	7	3	4	3	-		-	-	-	-	-	3	3	5	6	11	8	5	5	4	-	-	-	-	-
11.x																																						
12.9	-	-	-	-	-	-	-	2	2	3	5	6	6	4	3	3	2	-		-	-	-	2	3	4	5	11	10	8	7	6	5	3	2	2	2	-	-
13.6	-	-	-	-	-	-	-	-	2	5	5	4	4	3	2	-	-	-		-	-	-	2	3	4	12	14	7	6	7	6	5	4	3	2	2	-	-
14.6	-	-	-	-	-	-	-	2	3	6	5	4	4	3	2	-	-	-		-	-	-	2	3	4	6	8	5	4	5	6	7	6	5	3	2	-	-
15.7a	-	-	-	-	-	-	-	-	2	3	2	3	3	2	2	-	-	-		-	-	-	-	-	-	-	-	2	2	3	4	4	3	2	-	-	-	-
16.x																																						
17.x																																						
18.x																																						
19.x																																						
20.x																																						
21.x																																						
22.7	-	-	-	-	-	-	-	3	4	5	3	3	2	-	-	-	-	-		-	-	-	-	-	-	2	3	4	5	11	12	8	6	5	3	2	-	-
23.7	-	-	-	-	-	-	-	3	4	3	4	5	4	3	2	-	-	-		-	-	-	-	-	2	2	3	6	14	20	15	11	8	5	3	-	-	-
24.7	-	-	-	-	-	-	-	2	3	3	4	2	-	-	-	-	-	-		-	-	-	-	-	2	3	4	8	11	14	13	10	7	5	3	2	-	-
25.7	-	-	-	-	-	-	-	-	2	3	3	4	3	2	2	-	-	-		-	-	-	2	3	3	4	6	16	18	14	10	7	5	3	2	-	-	-
26.x																																						
27.x																																						
28.x																																						
29.7	-	-	-	-	-	-	-	-	2	2	2	3	3	3	2	-	-	-		-	-	-	-	-	2	3	4	4	3	3	3	3	2	2	-	-	-	-
30.7	-	-	-	-	-	-	2	2	2	2	3	3	3	3	3	2	-	-		-	2	3	3	4	5	7	4	3	3	4	4	3	3	2	-	-	-	-
31.7a	-	-	-	-	-	-	-	-	-	2	3	3	3	3	2	-	-	-		4	4	4	5	5	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 98a

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

Date	Degrees north of the solar equator																			0°	Degrees south of the solar equator																		
UT	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
1955																																							
Mar 1.7	3	3	4	4	4	2	3	3	4	2	4	4	5	14	11	8	11	16		17	16	14	12	11	11	12	13	14	11	5	2	3	3	3	3	4	4	4
2.x																																							
3.7	4	3	3	3	3	2	3	3	4	5	6	8	7	5	10	16	15	15		17	16	15	14	14	13	12	12	11	8	2	3	3	3	2	2	2	3	4
4.7	3	3	3	2	3	2	3	3	3	3	5	11	10	11	8	9	14	16		17	18	16	14	13	12	14	13	10	7	5	3	2	4	2	2	2	3	3
5.x																																							
6.x																																							
7.x																																							
8.7	3	2	3	3	3	2	2	2	2	4	3	4	3	4	5	6	7	9		8	7	6	5	7	7	8	9	8	6	4	3	3	2	3	4	2	2	3
9.x																																							
10.7a	3	3	3	3	3	2	4	2	4	3	2	3	5	4	4	5	5	8		11	9	8	8	9	8	9	8	7	5	5	5	4	3	3	2	2	2	3
11.x																																							
12.9	3	4	4	3	3	3	4	2	3	4	3	3	5	4	6	8	13	14		15	14	12	11	8	7	7	5	4	4	5	4	3	2	3	2	2	3	4
13.6	4	4	5	4	3	2	2	3	4	5	3	4	6	5	6	7	11	13		14	13	11	8	8	7	6	5	4	5	4	4	3	2	3	3	4	4	4
14.6	4	4	3	3	4	3	3	4	5	6	4	5	7	8	5	6	11	14		15	13	11	10	8	7	6	5	4	5	6	4	3	2	4	3	2	3	4
15.7	3	3	2	2	2	3	3	3	4	3	4	5	4	5	5	7	8	11		14	13	11	8	7	5	4	5	4	5	5	5	3	2	3	2	3	3	3
16.x																																							
17.x																																							
18.x																																							
19.x																																							
20.x																																							
21.x																																							
22.7	3	3	2	-	-	2	2	3	3	3	3	3	2	3	4	3	3	5		7	9	8	6	5	3	4	3	3	3	3	3	3	2	2	2	3	3	4
23.7	3	2	3	2	3	3	3	3	4	5	5	4	5	8	6	5	5	7		11	14	13	11	10	8	7	5	4	2	3	3	3	2	2	3	3	4	4
24.7	2	3	2	2	-	2	3	2	-	-	3	2	3	4	4	3	3	4		6	13	11	8	6	5	5	3	2	-	3	2	2	-	2	3	3	4	2
25.7	3	4	4	3	2	2	3	3	4	5	5	5	6	8	7	6	6	5		9	12	14	13	13	11	8	5	4	3	2	2	2	3	2	3	3	4	3
26.x																																							
27.x																																							
28.x																																							
29.7a	3	2	3	3	3	3	2	2	2	2	3	5	4	5	4	5	8	11		8	9	8	7	6	5	7	8	4	4	3	3	2	2	2	2	2	2	2
30.7	2	2	2	2	2	3	2	2	2	3	3	4	5	8	7	7	8	8		9	11	10	9	8	10	11	10	5	4	3	-	2	2	3	3	3	4	4
31.7a	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	4	3	4		4	5	6	7	6	5	4	3	4	3	-	-	-	-	-	-	-	-	-

Table 99a

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

Date	Degrees north of the solar equator																			0°	Degrees south of the solar equator																		
UT	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
1955																																							
Mar 1.7	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.x																																							
3.7	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.x																																							
6.x																																							
7.x																																							
8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.x																																							
10.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.x																																							
12.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.x																																							
17.x																																							
18.x																																							
19.x																																							
20.x																																							
21.x																																							
22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.x																																							
27.x																																							
28.x																																							
29.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 98b

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

Date UT	Degrees south of the solar equator																		0°	Degrees north 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
1955																																					
Mar 1.7	4	3	4	3	3	4	3	4	5	8	7	6	6	5	4	4	5	6	12	16	15	14	15	13	10	5	5	6	5	4	4	2	2	2	2	3	3
2.x																																					
3.7	4	3	4	3	3	3	2	3	4	5	4	4	5	3	2	2	4	5	11	10	8	7	8	8	16	18	17	14	4	3	3	3	2	3	4	4	4
4.7	3	3	4	3	3	2	3	3	4	4	5	6	6	5	5	4	6	7	8	7	5	6	20	28	27	18	11	5	3	2	3	2	3	3	3	4	3
5.x																																					
6.x																																					
7.x																																					
8.7	3	3	3	3	2	2	2	2	3	3	4	3	3	5	8	11	6	5	6	8	7	4	5	5	4	3	4	4	3	2	3	3	2	3	3	2	3
9.x																																					
10.7a	3	3	3	-	-	-	-	-	-	2	3	2	3	4	2	5	6	7	6	7	6	3	3	2	3	3	5	14	12	-	-	-	-	-	-	3	3
11.x																																					
12.9	4	3	3	3	2	2	3	3	4	3	2	2	2	3	4	5	6	8	11	10	9	8	6	5	4	3	5	5	3	4	3	3	2	2	2	3	3
13.6	4	3	3	4	3	3	3	2	4	5	3	3	4	5	5	8	9	11	12	13	14	13	11	7	5	4	3	3	4	3	2	2	2	3	4	4	4
14.6	4	5	4	3	3	2	2	3	4	4	4	5	5	6	7	8	10	11	14	16	15	13	11	10	8	5	5	7	5	3	2	2	2	3	3	3	4
15.7a	3	4	3	2	3	2	2	3	2	2	3	3	2	5	5	6	7	6	8	9	8	7	6	5	4	5	6	5	4	3	2	2	3	-	-	3	3
16.x																																					
17.x																																					
18.x																																					
19.x																																					
20.x																																					
21.x																																					
22.7	4	3	3	3	-	-	-	-	-	-	2	3	5	6	6	7	8	8	7	6	7	8	7	6	5	4	5	3	2	2	-	-	-	2	3	2	3
23.7	4	3	3	3	3	3	3	2	3	3	4	5	7	7	6	8	7	8	11	10	8	9	11	10	7	5	4	4	3	2	-	-	2	2	3	3	3
24.7	2	3	3	3	3	3	3	2	3	3	3	3	4	4	5	8	11	10	11	10	7	8	8	7	6	3	4	4	3	3	-	-	-	2	2	2	2
25.7	3	4	3	2	3	2	3	2	3	4	4	7	8	6	8	10	11	12	11	11	10	9	11	13	5	5	4	3	3	3	2	3	3	2	3	3	3
26.x																																					
27.x																																					
28.x																																					
29.7	2	3	3	3	3	3	3	2	3	3	4	5	6	5	2	5	8	9	8	8	9	8	7	8	5	4	3	4	4	3	4	4	3	2	2	2	3
30.7	4	3	2	2	2	3	2	2	3	3	5	5	4	3	4	4	4	5	5	6	7	6	5	5	4	5	6	7	3	4	2	2	3	3	3	3	2
31.7a	-	-	-	-	-	-	-	-	-	2	3	3	2	3	3	4	3	4	5	3	3	3	2	2	3	4	3	3	-	-	-	-	-	-	-	-	-

Table 99b

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

Date UT	Degrees south of the solar equator																		0°	Degrees north 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
1955																																					
Mar 1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.x																																					
3.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	2	-	-	-	-	-	-	-	-	-	-
5.x																																					
6.x																																					
7.x																																					
8.7	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.x																																					
10.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.x																																					
12.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-
13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.x																																					
17.x																																					
18.x																																					
19.x																																					
20.x																																					
21.x																																					
22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.x																																					
27.x																																					
28.x																																					
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 100

Zürich Provisional Relative Sunspot Numbers

March 1955

Date	R_Z*	Date	R_Z*
1	23	17	0
2	20	18	0
3	16	19	0
4	15	20	0
5	8	21	0
6	8	22	0
7	8	23	0
8	8	24	0
9	7	25	0
10	0	26	0
11	0	27	7
12	0	28	0
13	0	29	0
14	0	30	17
15	0	31	10
16	0	Mean:	4.7

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

Table 101

American Relative Sunspot Numbers

February 1955

Date	R_A'	Date	R_A'
1	25	16	11
2	33	17	1
3	40	18	0
4	35	19	0
5	28	20	0
6	31	21	12
7	36	22	19
8	27	23	27
9	26	24	27
10	30	25	29
11	29	26	31
12	28	27	33
13	15	28	36
14	13	Mean:	22.6
15	11		

Table 102

Solar Flares, March 1955

No solar flares were reported for the month of March.

Table 103

Indices of Geomagnetic Activity for February 1955

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

Feb. 1955	C*	Values Kp, Three-hour Gr. interval 1	2	3	4	5	6	7	8	Sum	A_p	Final* Selected Days
1		0o	0o	0+	1-	1+	1o	1o	1+	6-	3	
2		1o	0+	1+	1o	1+	2-	2-	2-	10o	5	
3		4-	3+	2+	1+	1o	2-	1o	2+	17-	10	
4		1o	2+	3-	5-	3o	3o	4o	4o	25-	18	
5		4-	2+	3-	3-	3o	2+	3+	4o	24o	16	
6		2-	3+	3-	2+	3o	3+	3-	4-	23-	14	
7		4-	4o	3-	2o	4o	3o	2o	1o	22+	15	
8		2o	2-	2-	2o	2-	4-	4-	4-	20o	12	
9		2+	3-	4-	3+	2o	2+	3-	1o	20o	12	
10		1+	1+	3-	2-	1+	1o	2-	2-	13-	6	
11		1-	1o	1o	1+	2o	4-	5-	5-	19o	15	
12		3+	3+	2+	2o	2+	2o	3-	4-	22-	13	
13		4o	3o	2-	3+	2-	3o	2+	0o	19o	12	
14		1+	3-	3-	2o	2+	3o	2+	4-	20o	11	
15		3+	3o	3+	2o	1-	0o	0o	0o	12+	8	
16		0o	0+	1o	2+	3-	2-	2+	2o	12+	6	
17		3o	2o	1o	2o	2o	0+	0+	2-	12+	6	
18		1+	3+	2o	1+	0+	0o	3-	3+	14+	8	
19		2o	2+	2+	1-	2-	1o	1o	1+	12+	6	
20		1o	3-	2o	2o	3-	2o	3-	1o	16o	8	
21		3o	5-	3o	2o	3-	2+	2o	2-	21+	14	
22		3o	4+	3-	4-	3o	2o	3-	3-	24o	16	
23		3+	3o	3o	4+	4+	4o	4o	2+	28+	22	
24		3-	3o	3-	2o	3+	1+	3-	2-	19+	11	
25		4-	4-	2-	3+	2+	3-	1+	3-	21+	13	
26		3+	4o	1+	2o	1+	1-	2-	1o	15+	9	
27		0o	0+	2-	1o	1+	1+	2o	2+	10o	5	
28		5+	6o	4o	4-	5o	3+	1-	2-	30-	32	
										Mean:	12	

*Not received; data will appear next month.

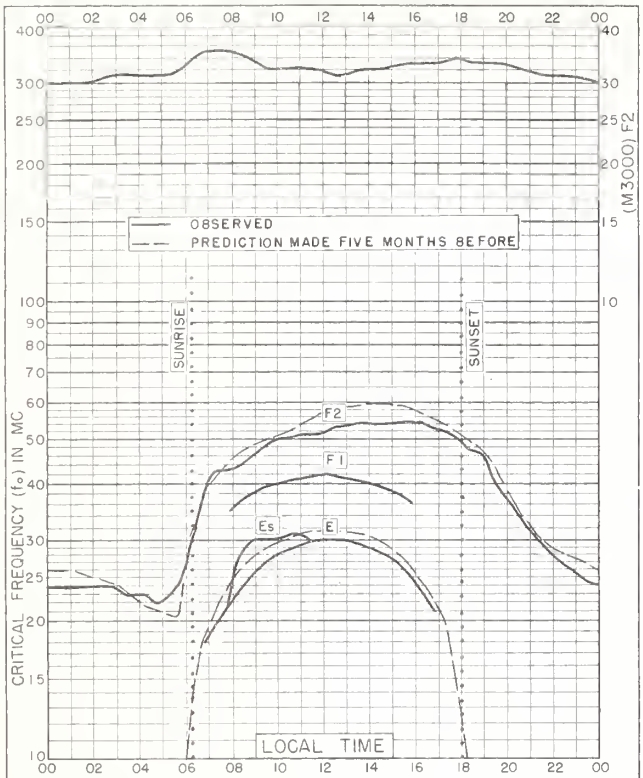


Fig. 1. WASHINGTON, D. C.
38.7°N, 77.1°W MARCH 1955

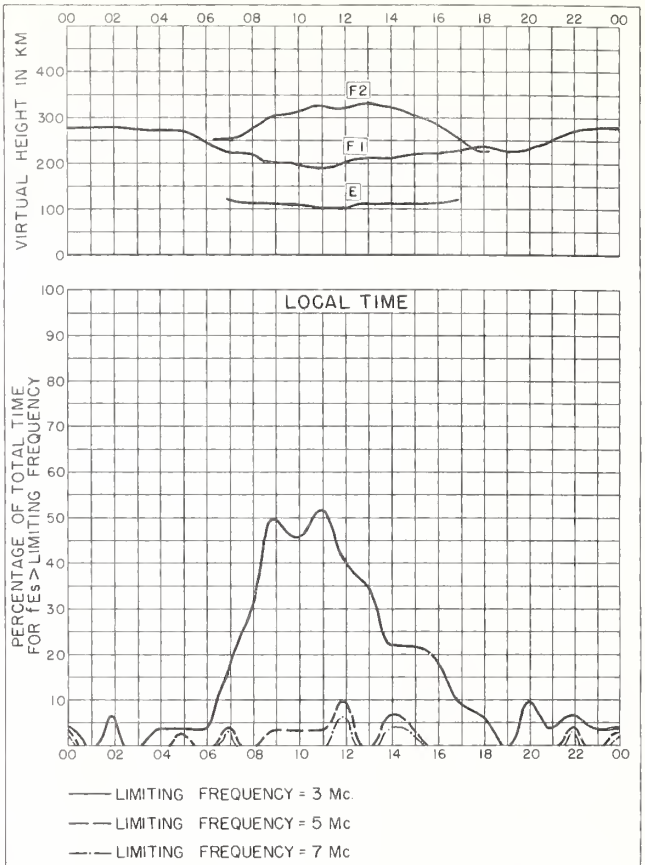


Fig. 2. WASHINGTON, D. C. MARCH 1955

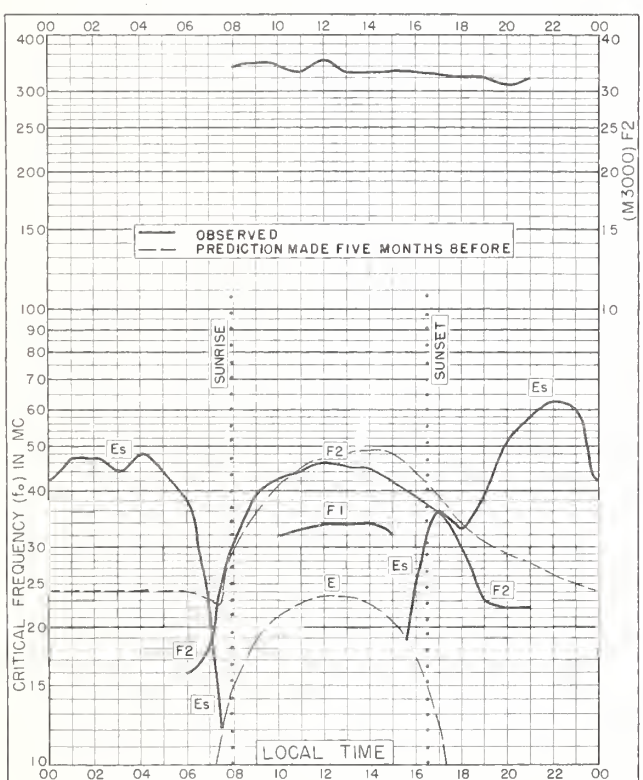


Fig. 3. NARSARSSUAK, GREENLAND
61.2°N, 45.4°W FEBRUARY 1955

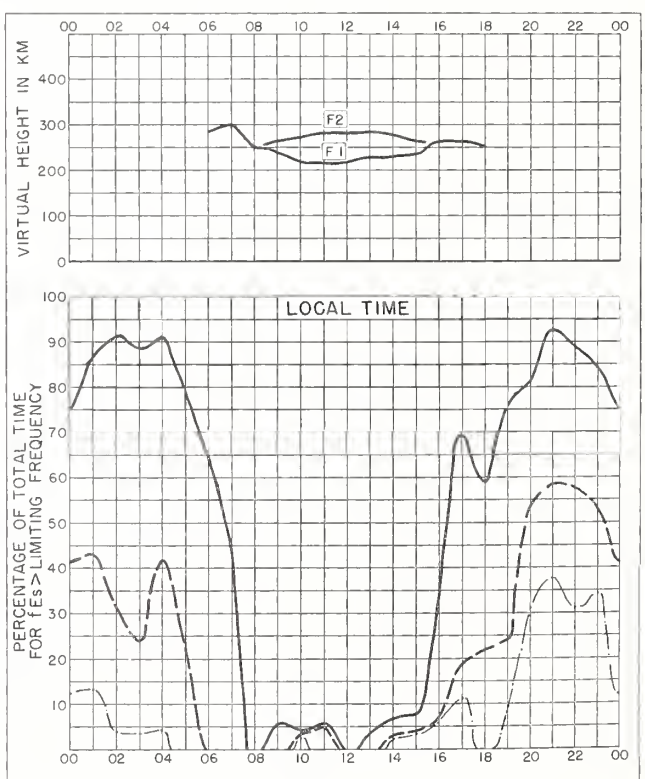


Fig 4. NARSARSSUAK, GREENLAND FEBRUARY 1955

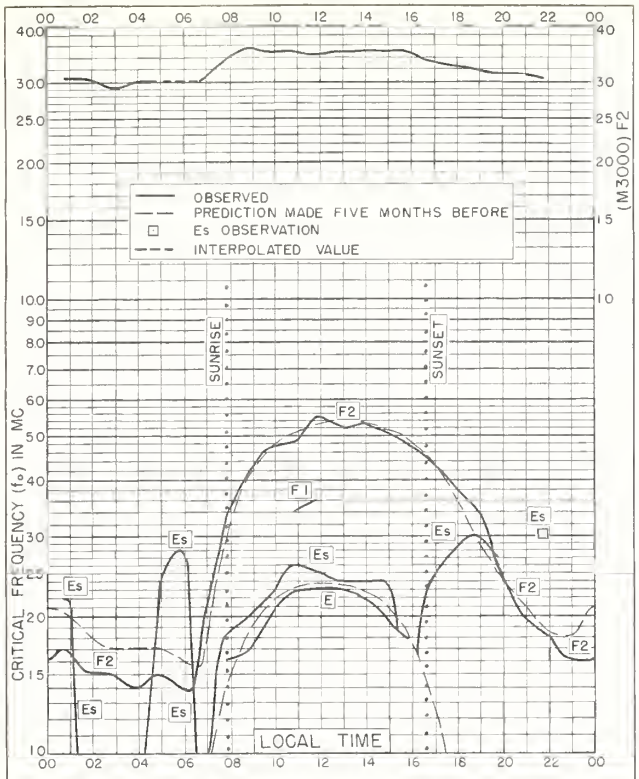


Fig. 5. OSLO, NORWAY
60.0°N, 11.1°E FEBRUARY 1955

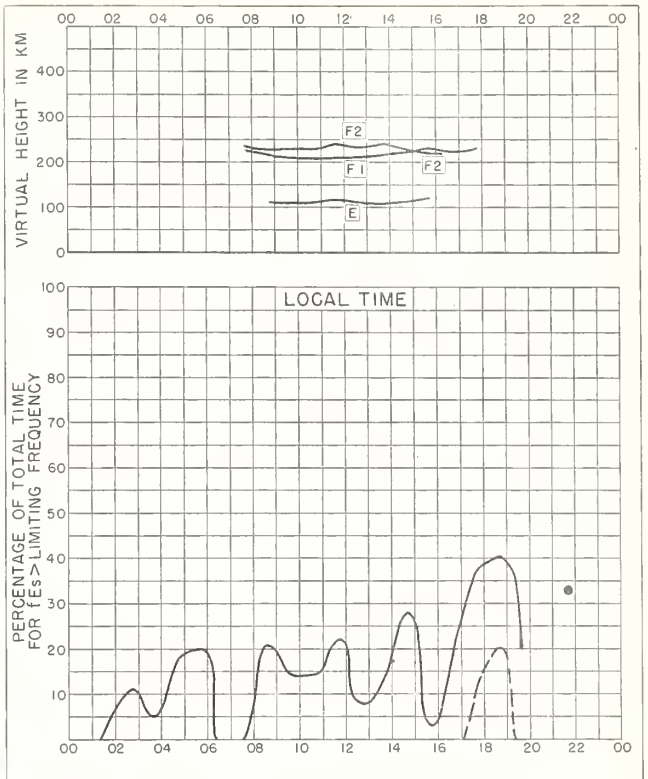


Fig. 6. OSLO, NORWAY FEBRUARY 1955

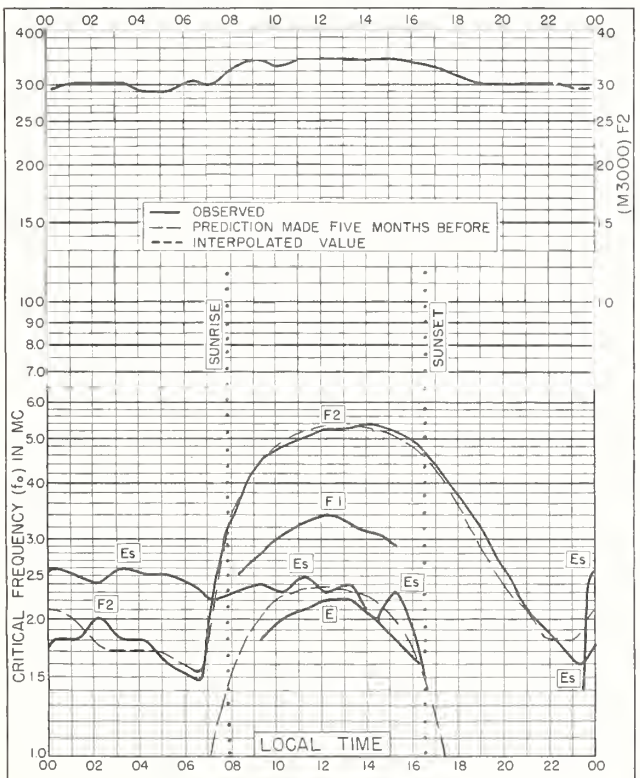


Fig. 7. UPSALA, SWEDEN
59.8°N, 17.6°E FEBRUARY 1955

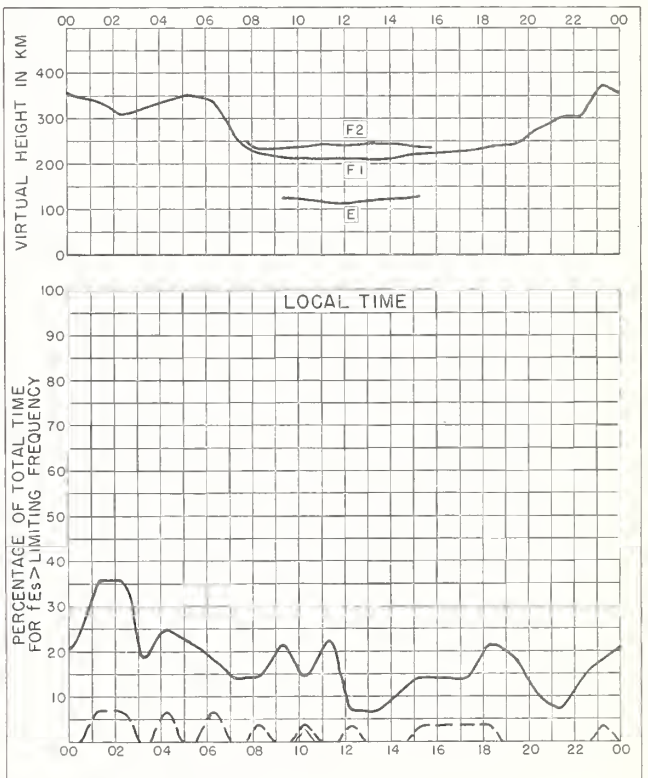


Fig. 8. UPSALA, SWEDEN FEBRUARY 1955

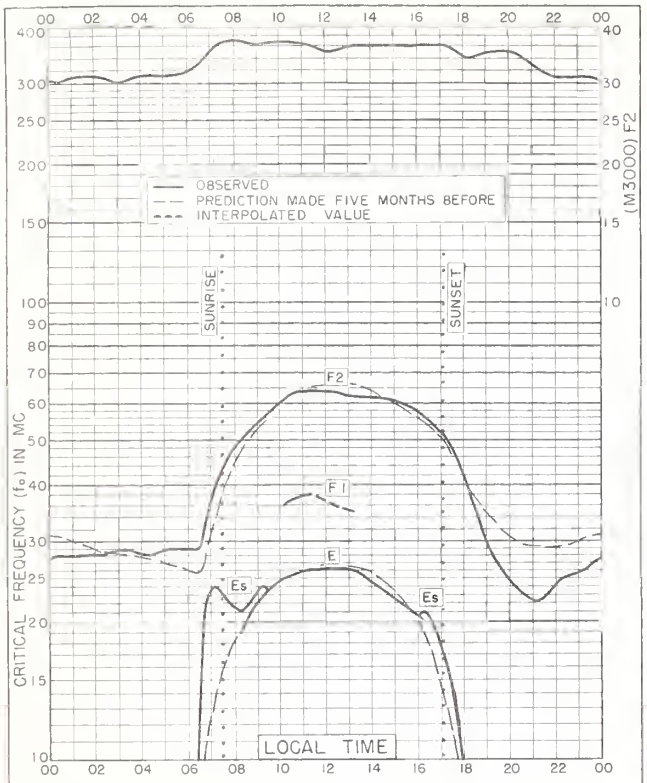


Fig. 9. ADAK, ALASKA
51.9°N, 176.6°W FEBRUARY 1955

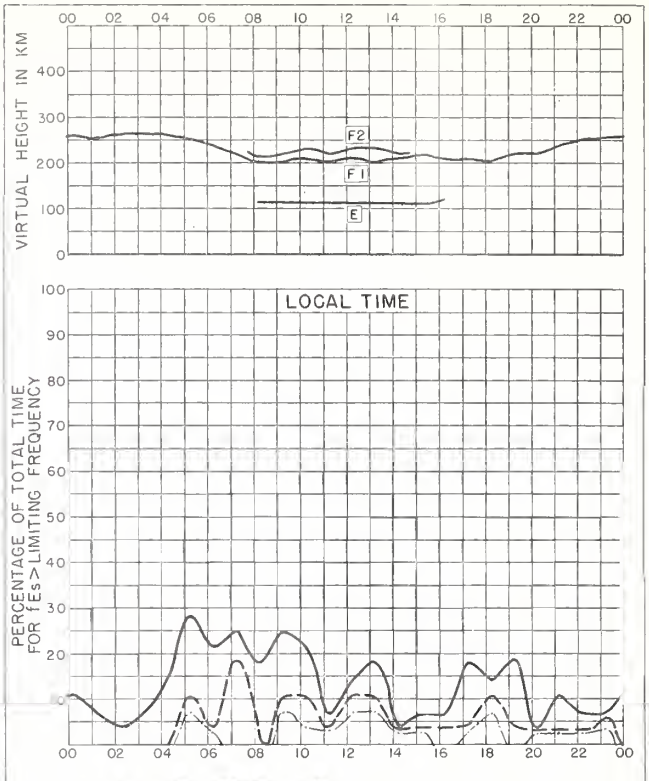


Fig. 10. ADAK, ALASKA FEBRUARY 1955

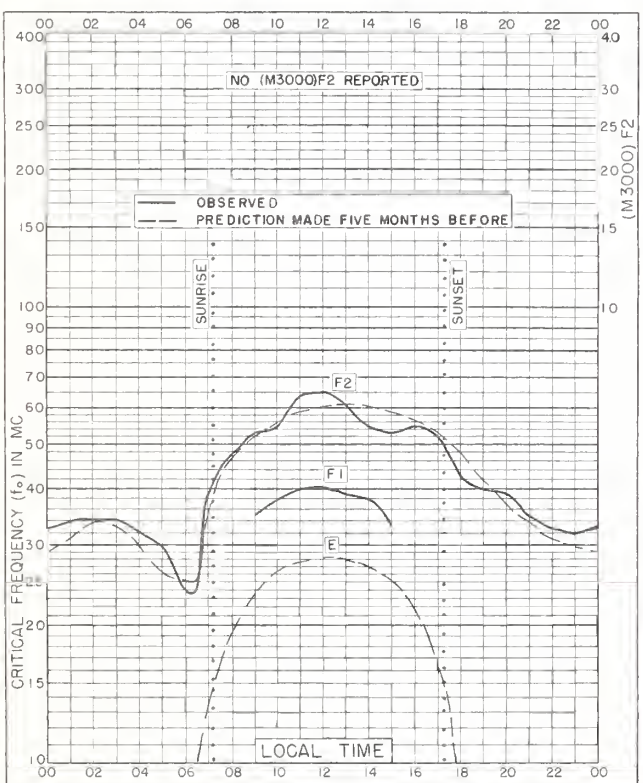


Fig. 11. GRAZ, AUSTRIA
47.1°N, 15.5°E FEBRUARY 1955

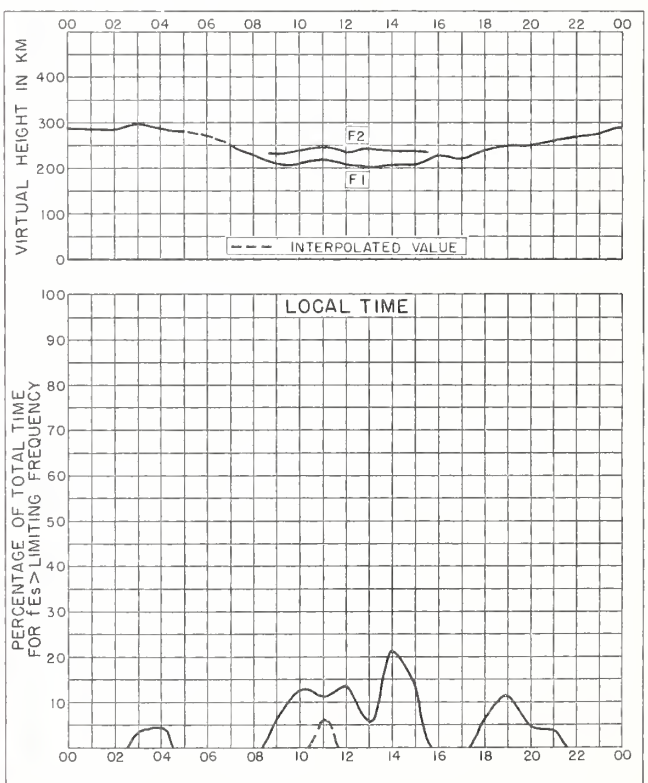


Fig. 12. GRAZ, AUSTRIA FEBRUARY 1955

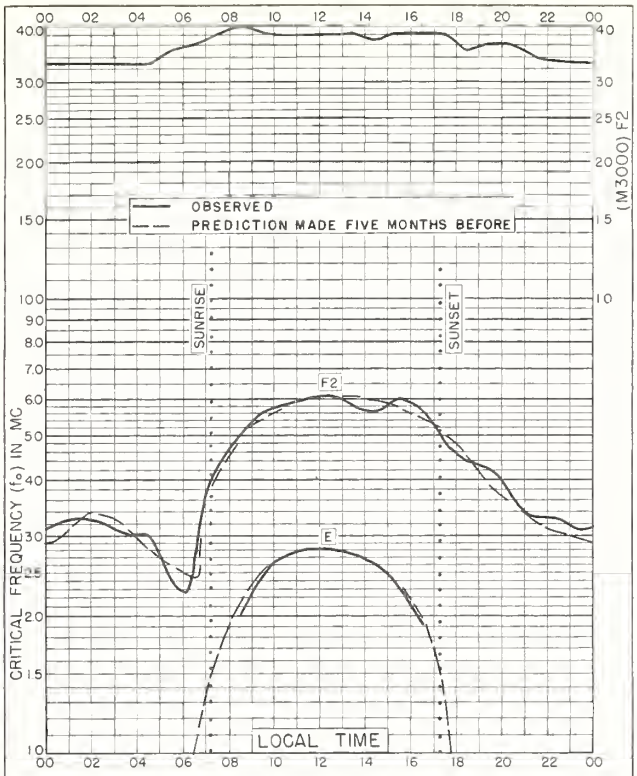


Fig. 13. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E FEBRUARY 1955

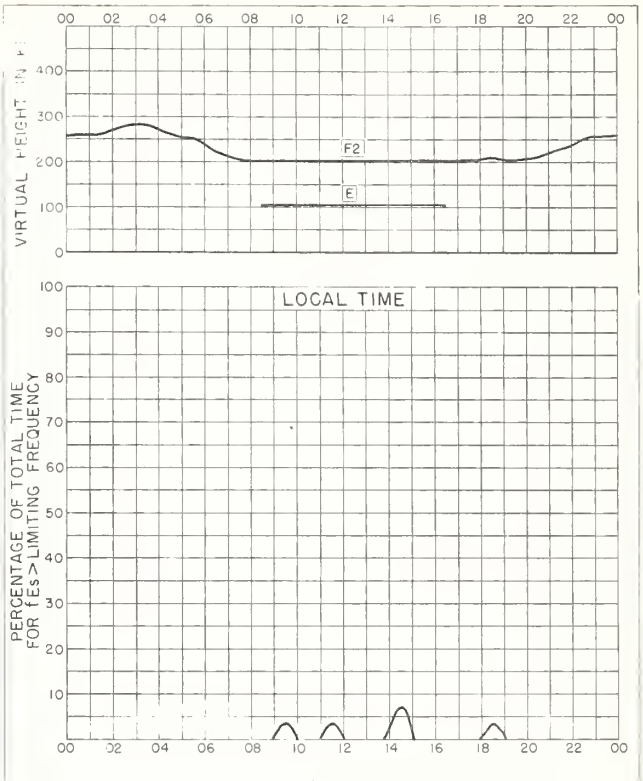


Fig. 14. SCHWARZENBURG, SWITZERLAND

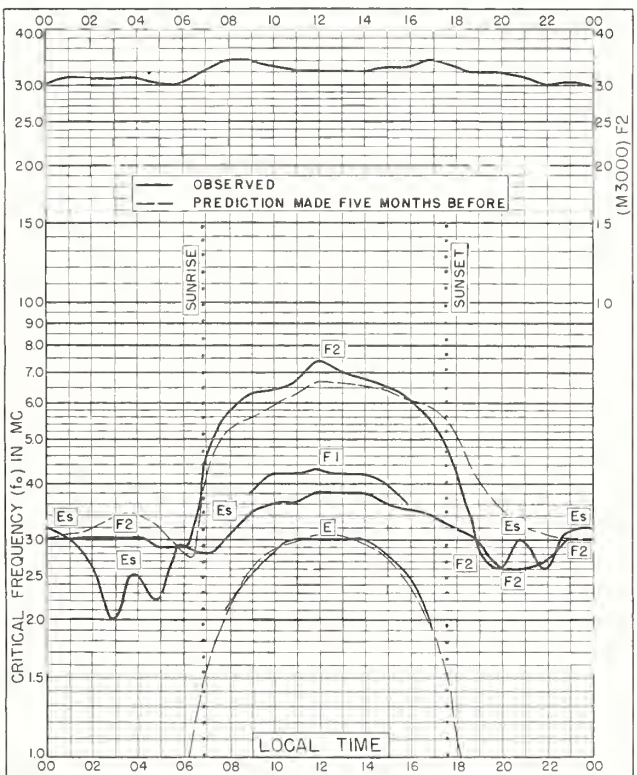


Fig. 15. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W FEBRUARY 1955

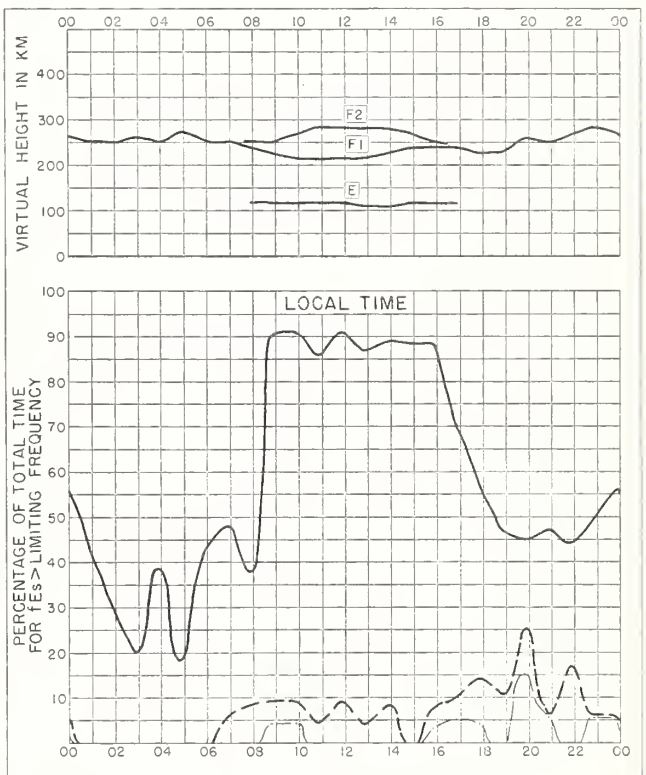


Fig. 16. SAN FRANCISCO, CALIFORNIA

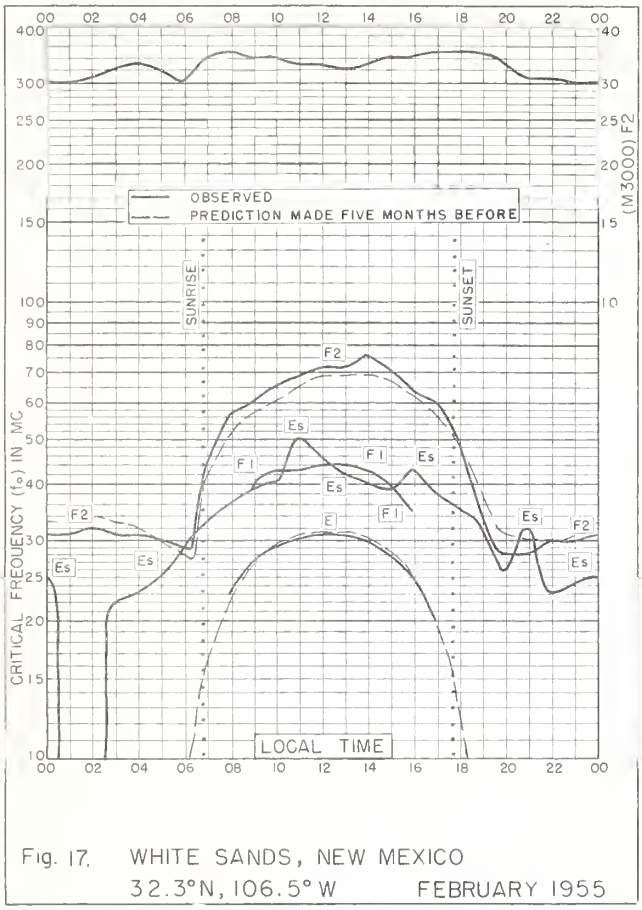


Fig. 17. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W FEBRUARY 1955

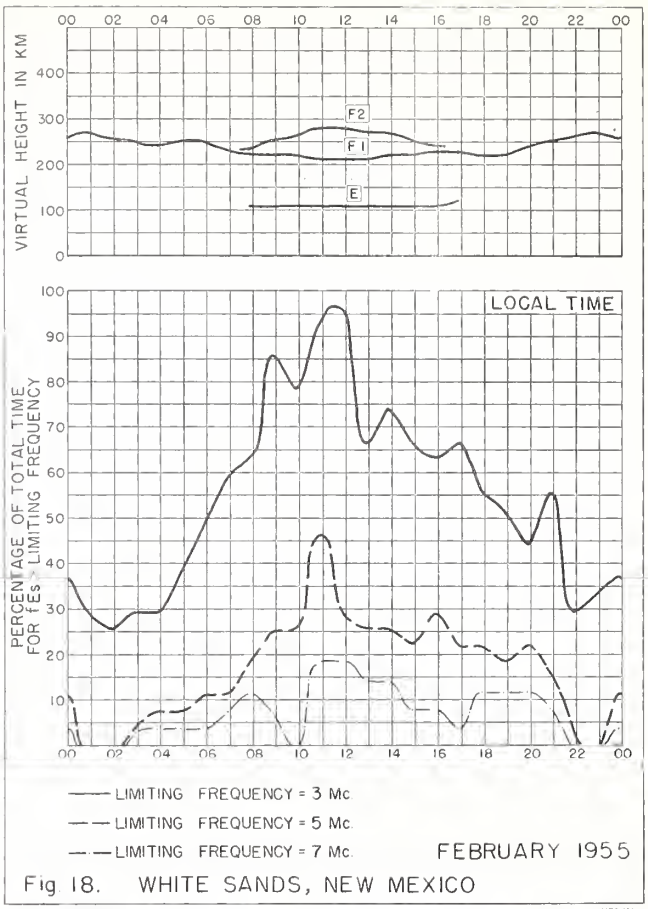


Fig. 18. WHITE SANDS, NEW MEXICO FEBRUARY 1955

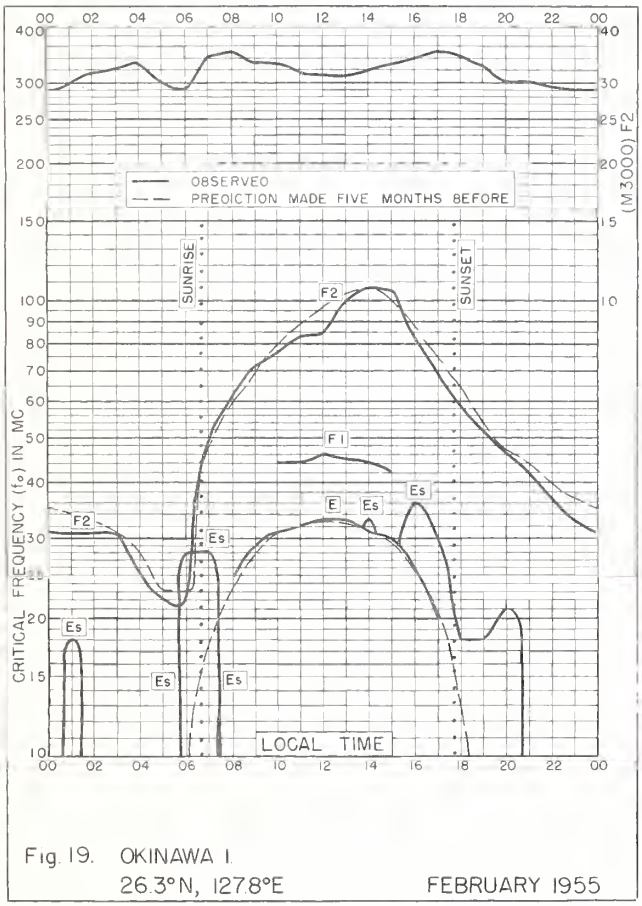


Fig. 19. OKINAWA I.
26.3°N, 127.8°E FEBRUARY 1955

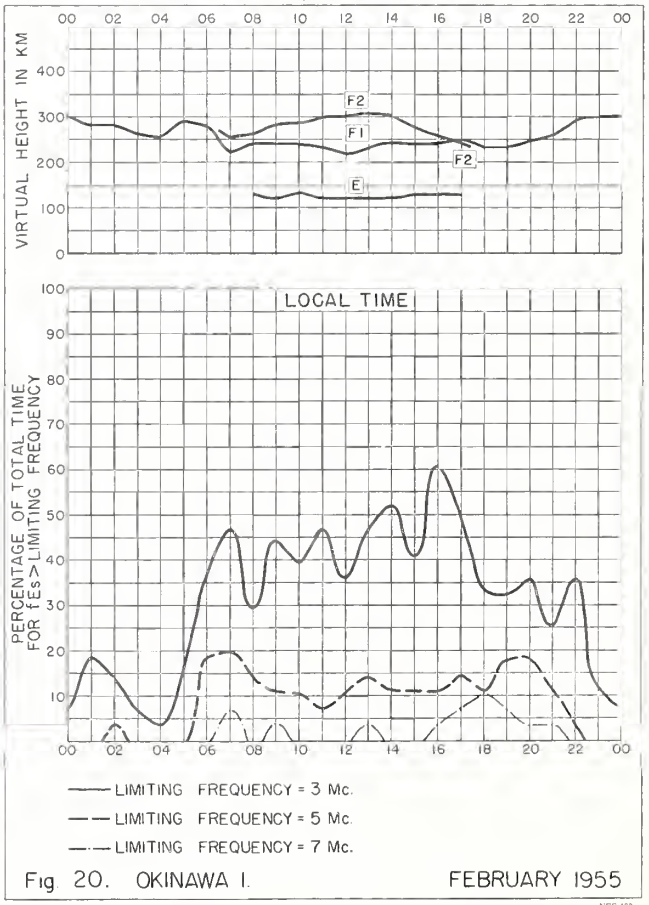


Fig. 20. OKINAWA I. FEBRUARY 1955

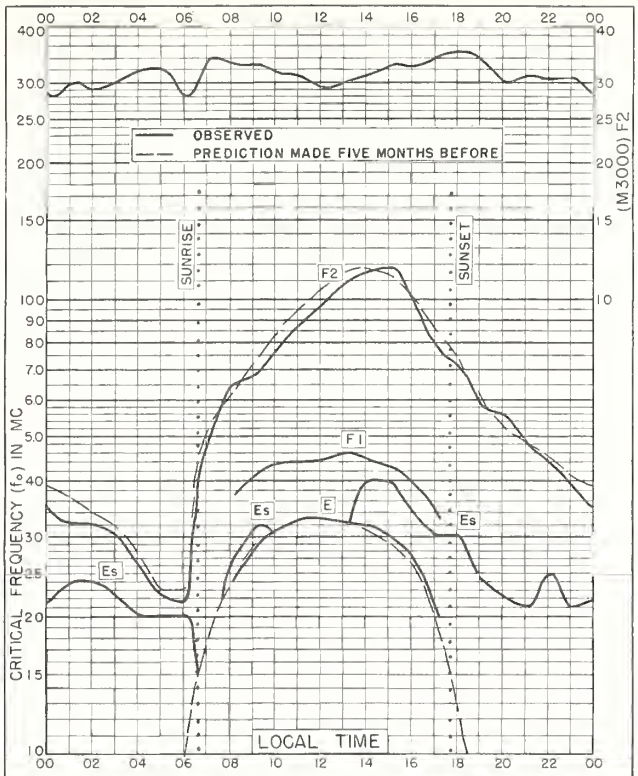


Fig. 21. FORMOSA, CHINA
25.0°N, 121.5°E FEBRUARY 1955

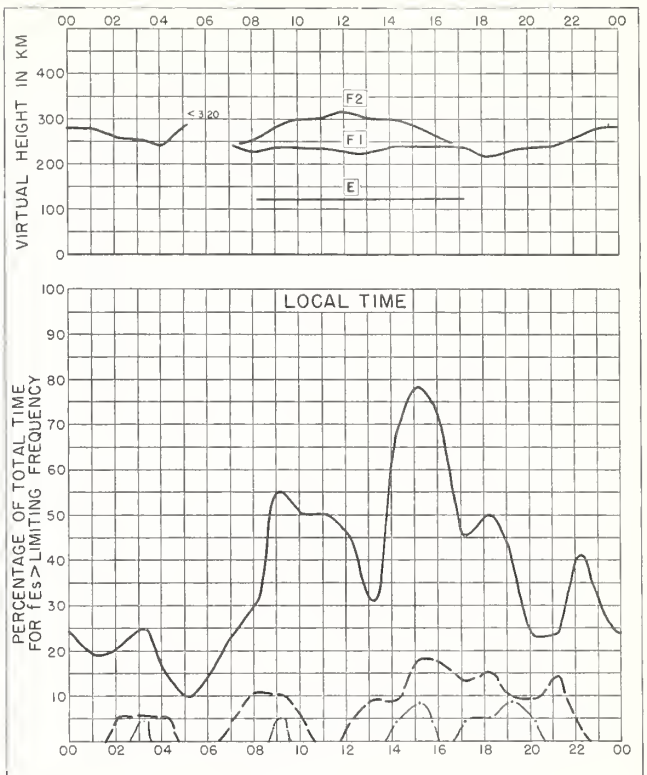


Fig. 22. FORMOSA, CHINA FEBRUARY 1955

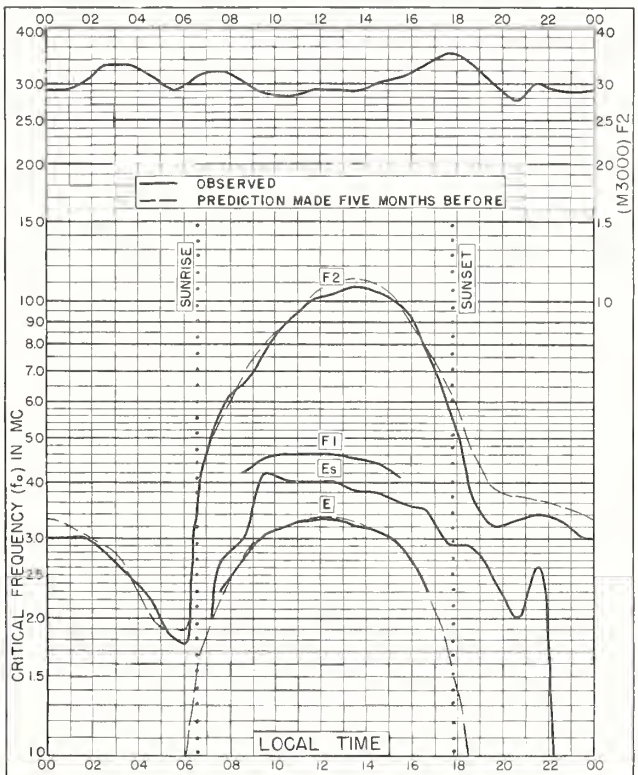


Fig. 23. MAUI, HAWAII
20.8°N, 156.5°W. FEBRUARY 1955

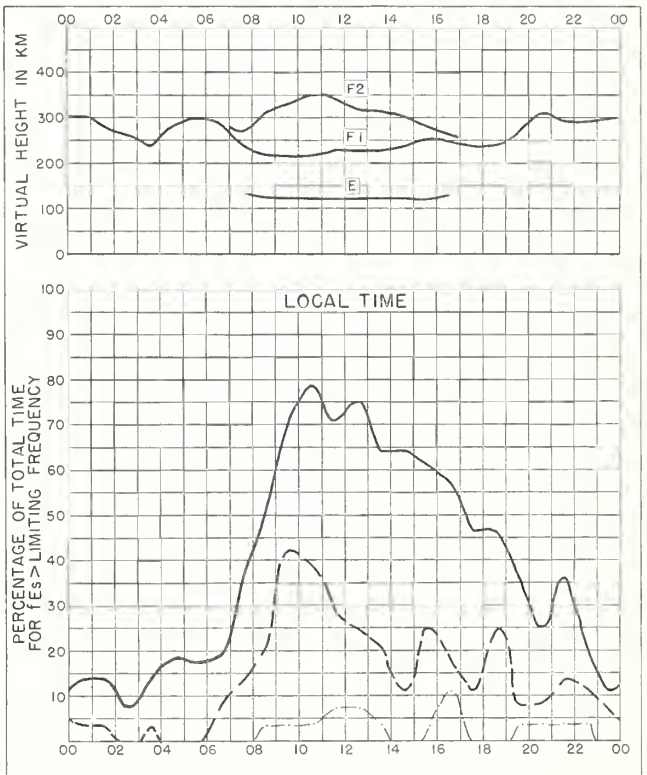


Fig. 24. MAUI, HAWAII FEBRUARY 1955

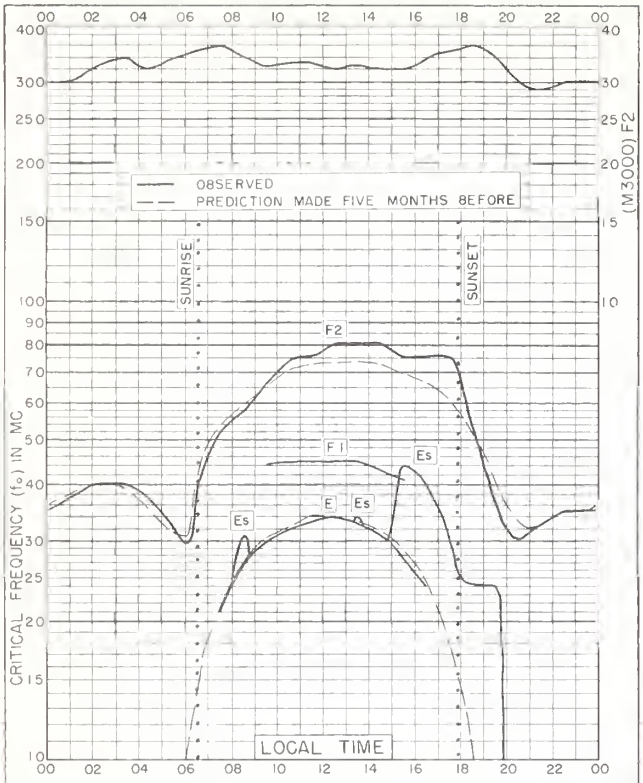


Fig. 25. PUERTO RICO, W. I.
18.5°N, 67.2°W. FEBRUARY 1955

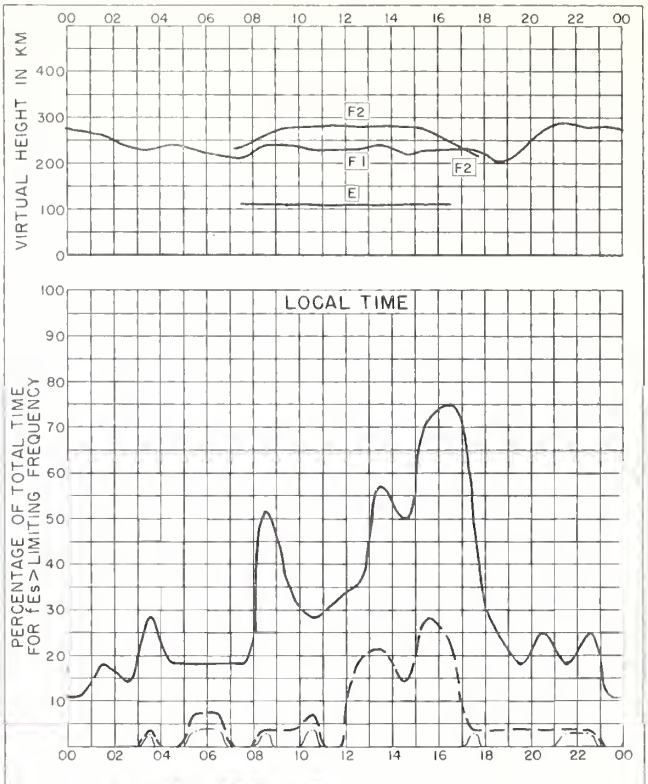


Fig. 26. PUERTO RICO, W. I. FEBRUARY 1955

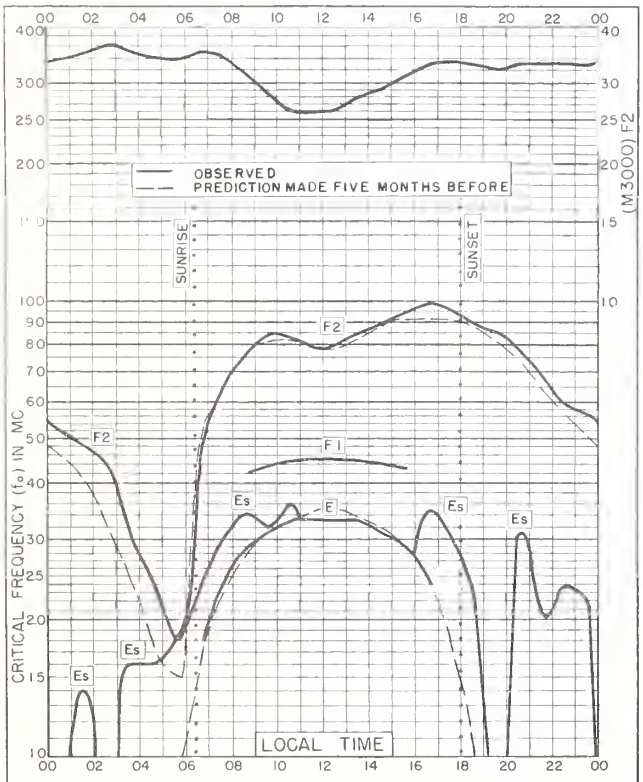


Fig. 27. GUAM I.
13.6°N, 144.9°E FEBRUARY 1955

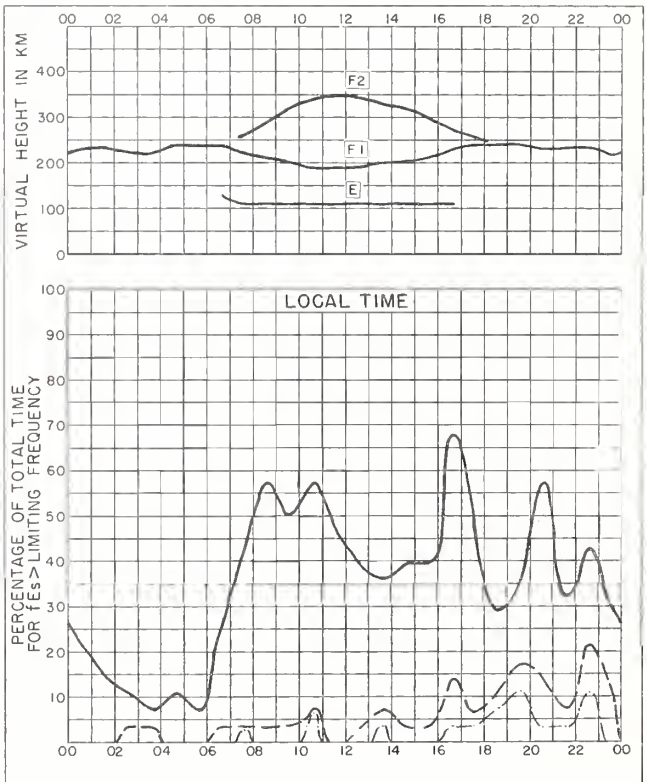


Fig. 28. GUAM I. FEBRUARY 1955

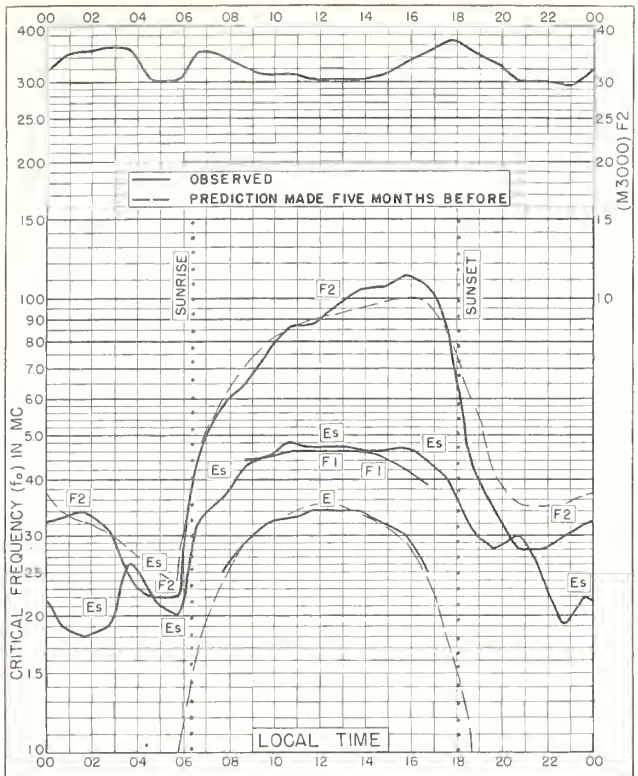


Fig. 29. PANAMA CANAL ZONE
9.4°N, 79.9°W FEBRUARY 1955

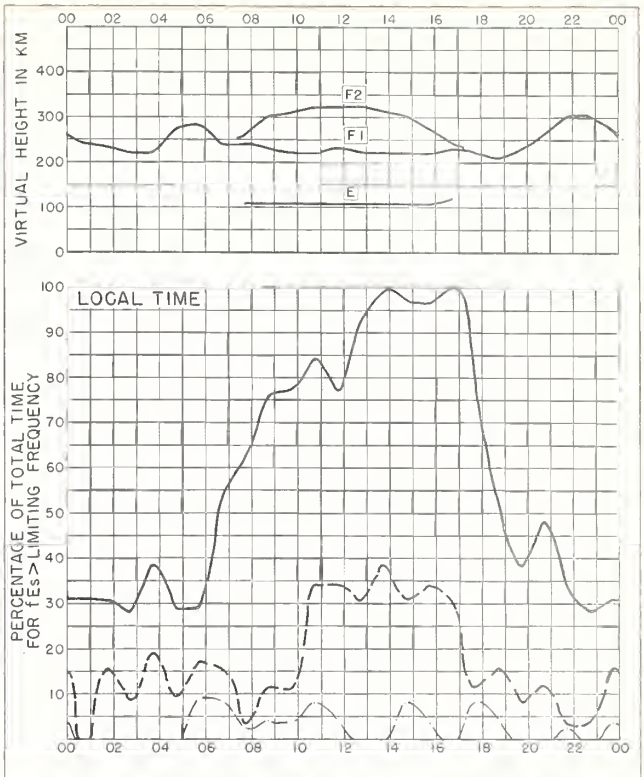


Fig. 30. PANAMA CANAL ZONE FEBRUARY 1955

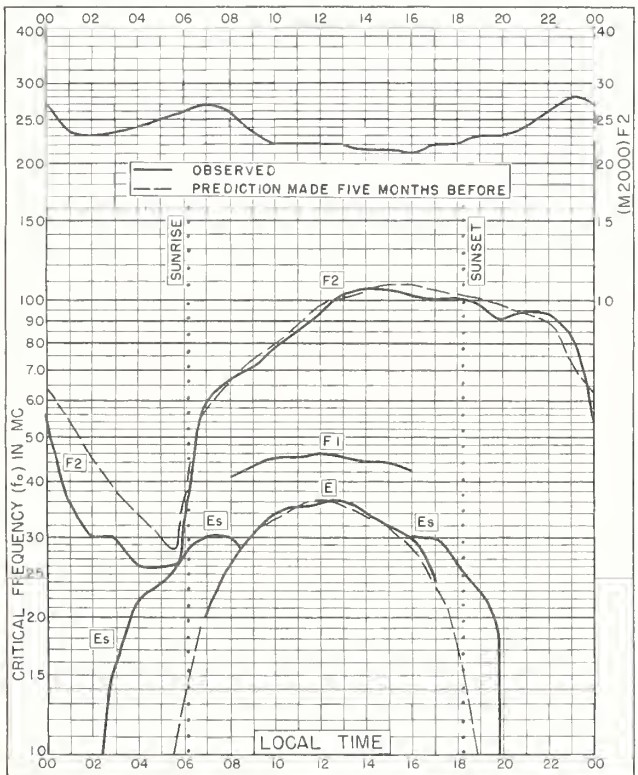
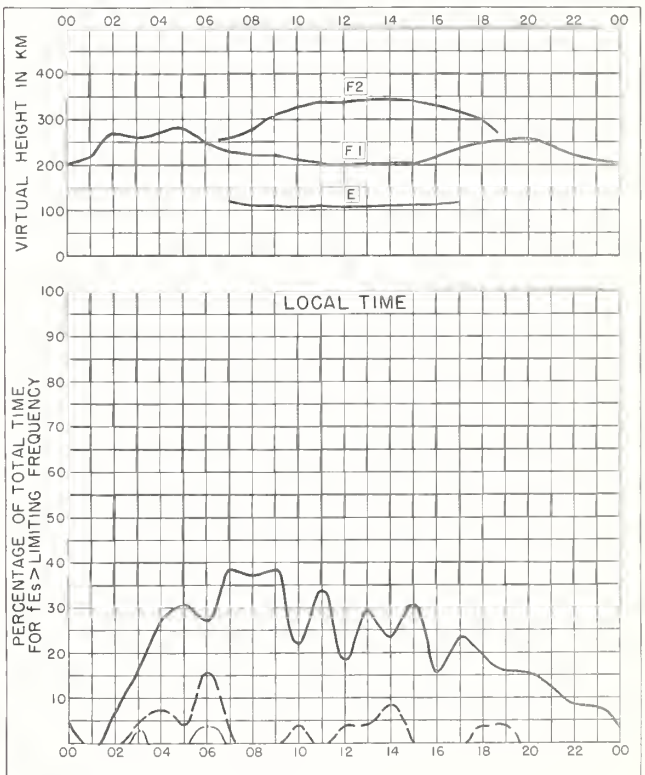


Fig. 31. LEOPOLDVILLE, BELGIAN CONGO
4.3°S, 15.3°E FEBRUARY 1955



FEBRUARY 1955

Fig. 32. LEOPOLDVILLE, BELGIAN CONGO

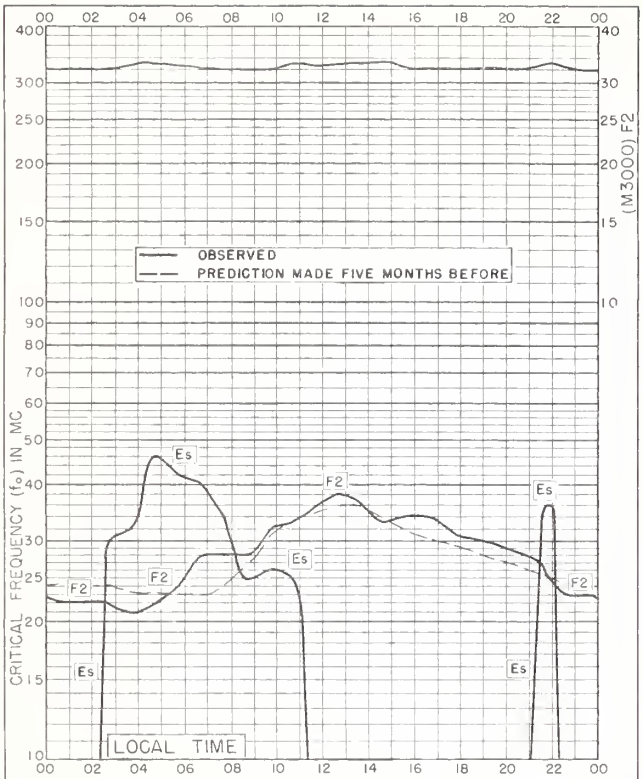


Fig. 33. RESOLUTE BAY, CANADA
74.7°N, 94.9°W. JANUARY 1955

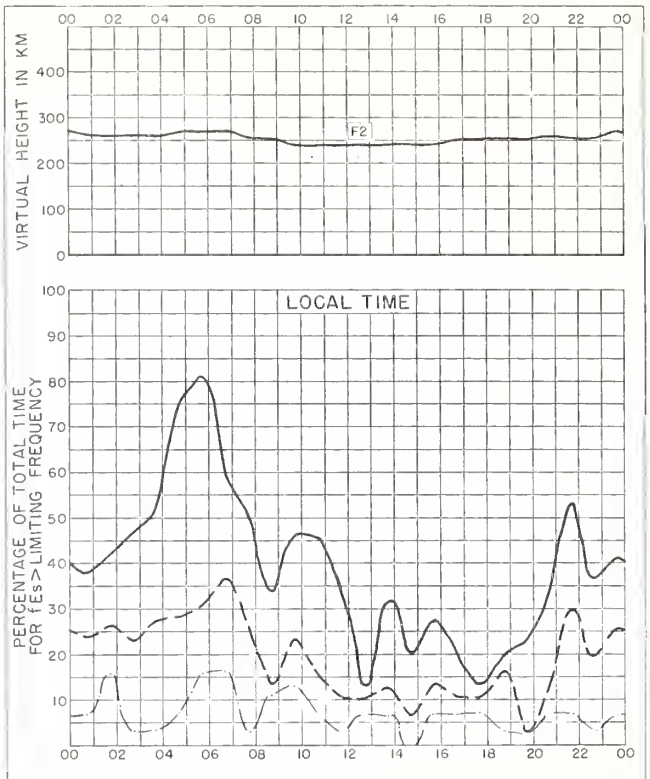


Fig. 34. RESOLUTE BAY, CANADA JANUARY 1955

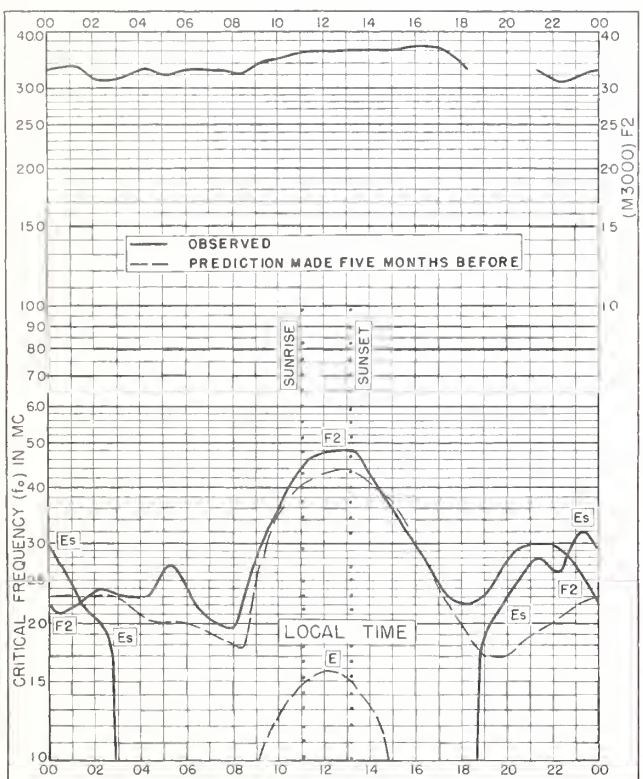


Fig. 35. KIRUNA, SWEDEN
67.8°N, 20.3°E JANUARY 1955

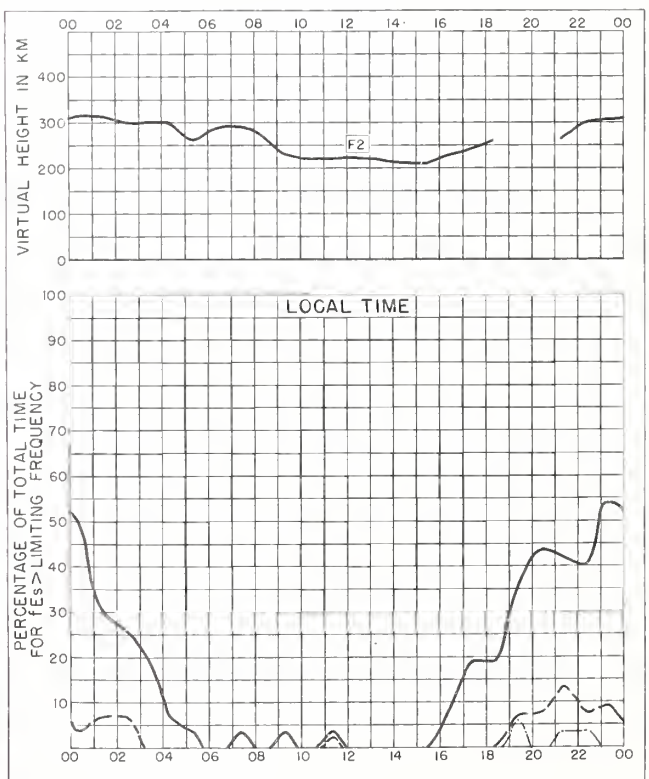


Fig. 36. KIRUNA, SWEDEN JANUARY 1955

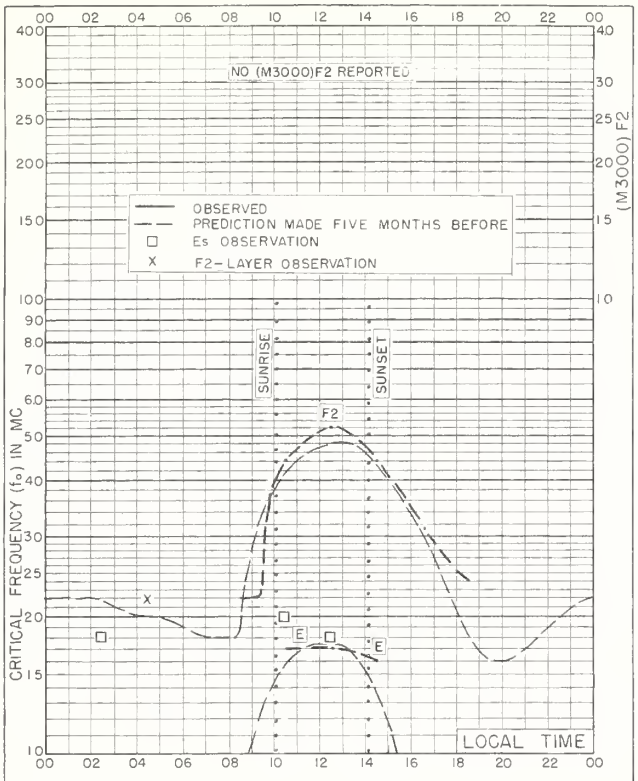


Fig. 37. LULEA, SWEDEN
65.6°N, 22.1°E JANUARY 1955

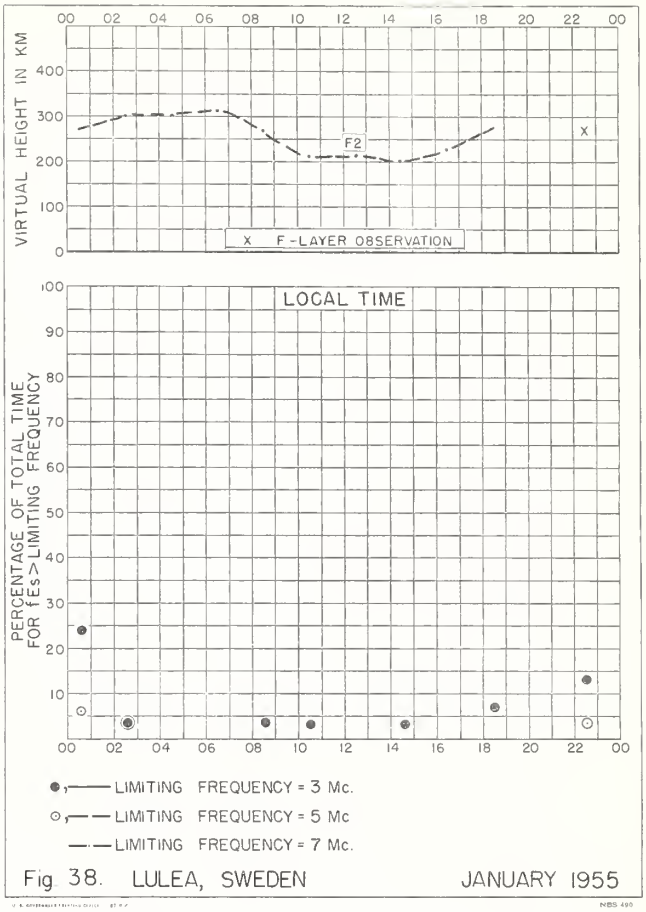


Fig. 38. LULEA, SWEDEN JANUARY 1955

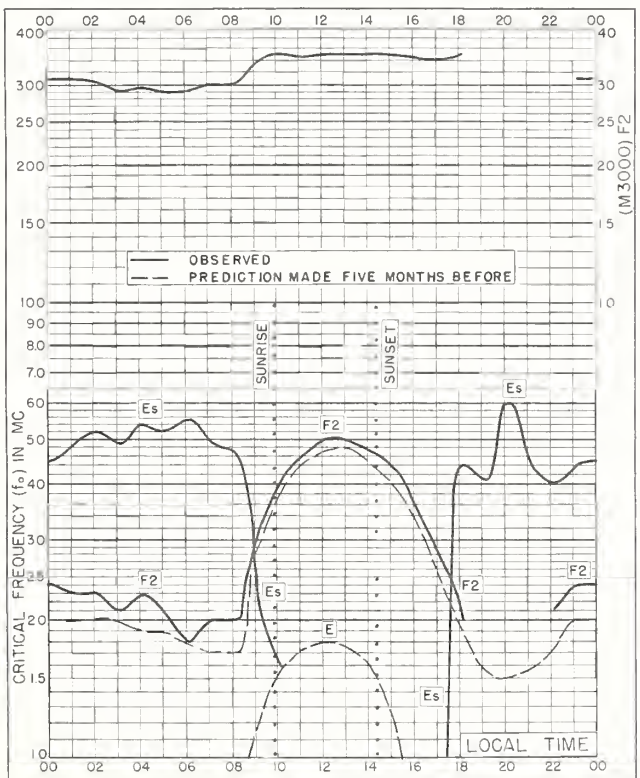


Fig. 39. FAIRBANKS, ALASKA
64.9°N, 147.8°W JANUARY 1955

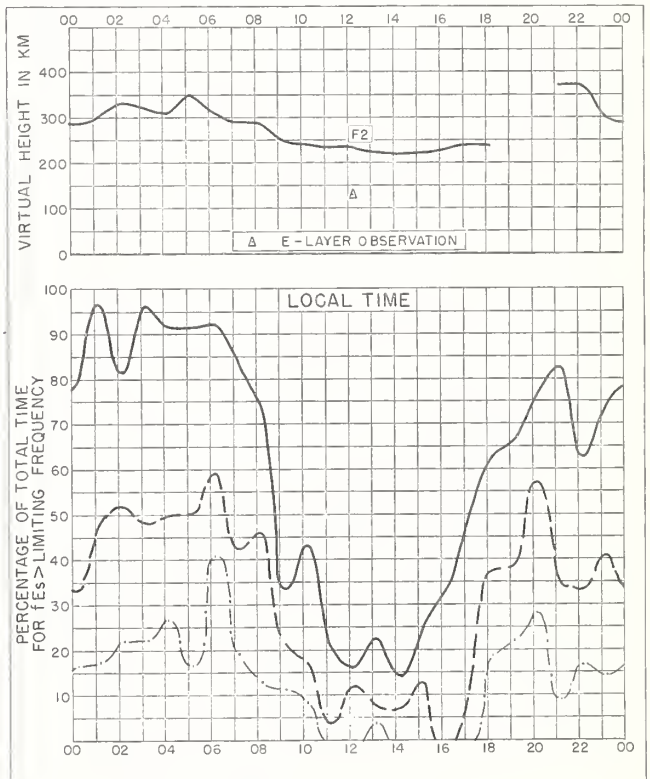


Fig. 40. FAIRBANKS, ALASKA JANUARY 1955

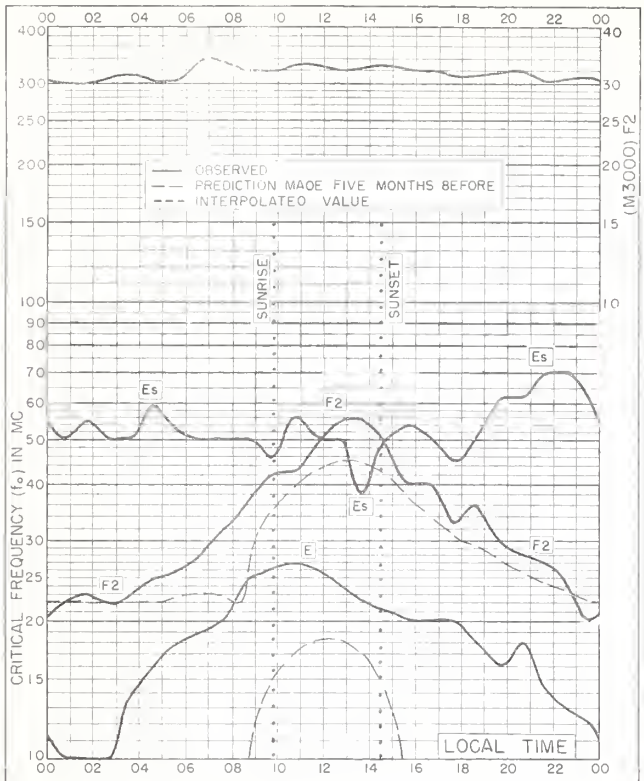


Fig 41. BAKER LAKE, CANADA
64.3°N, 96.0°W JANUARY 1955

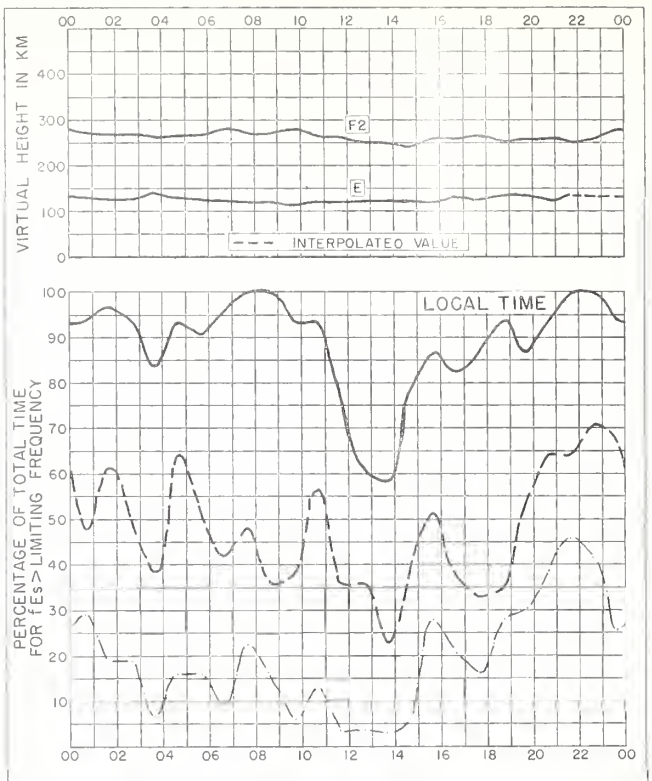


Fig. 42. BAKER LAKE, CANADA JANUARY 1955

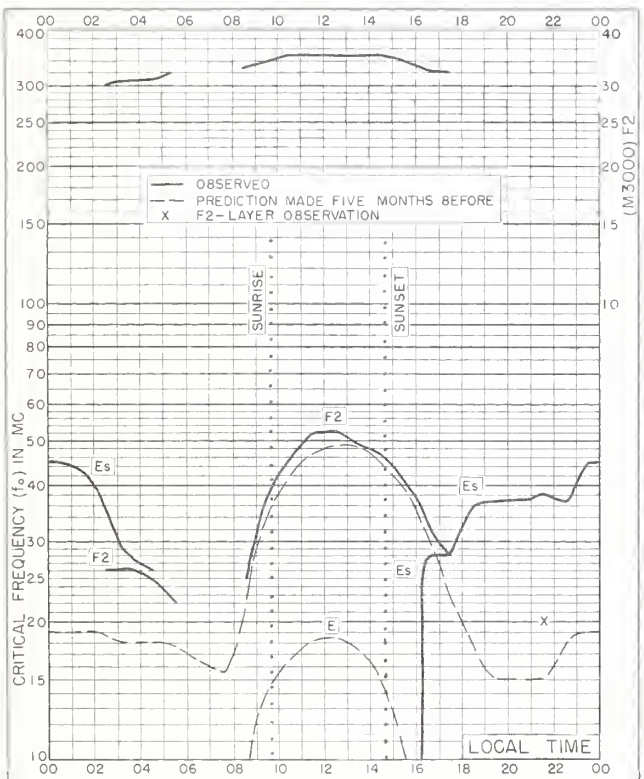


Fig. 43. REYKJAVIK, ICELAND
64.1°N, 21.8°W JANUARY 1955

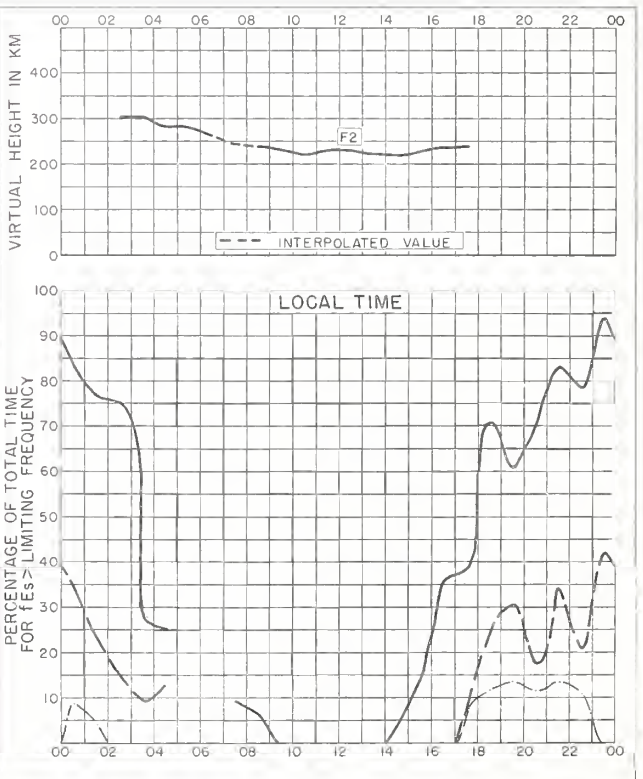


Fig. 44. REYKJAVIK, ICELAND JANUARY 1955

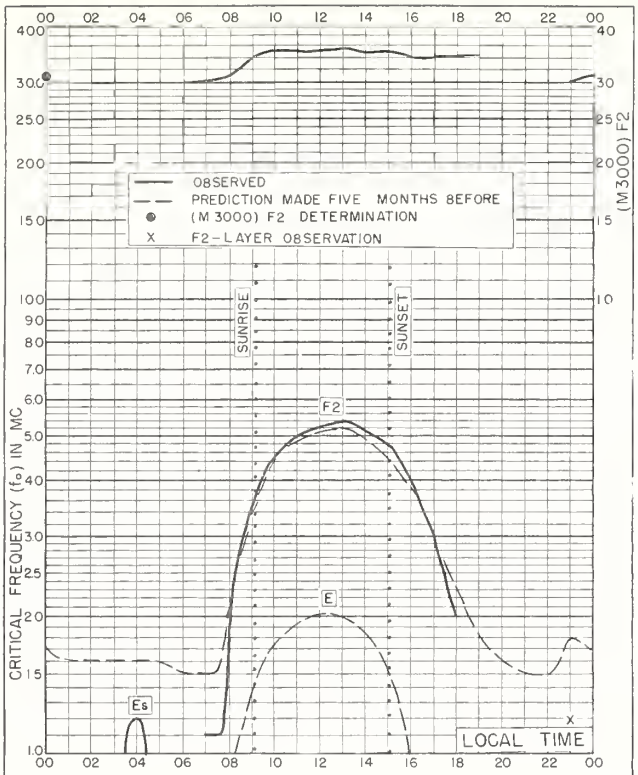


Fig. 45. ANCHORAGE, ALASKA
61.2°N, 149.9°W. JANUARY 1955

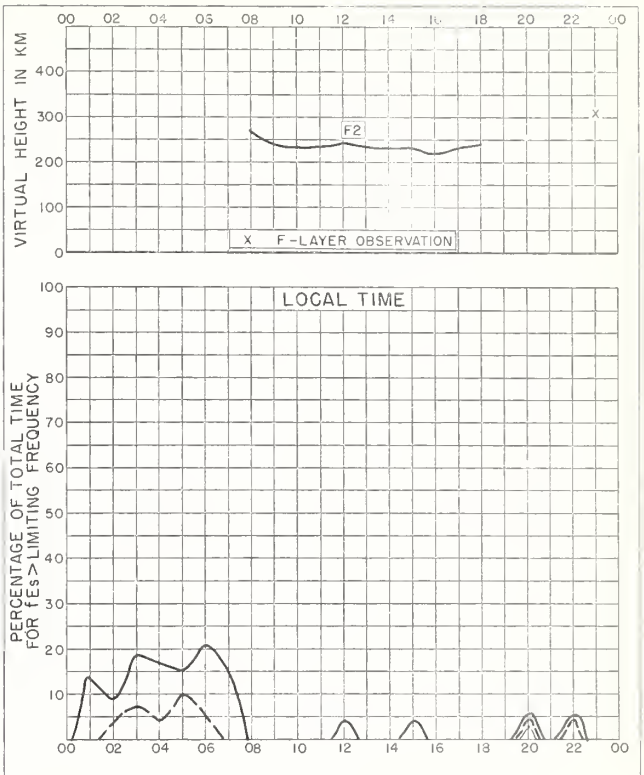


Fig. 46. ANCHORAGE, ALASKA JANUARY 1955

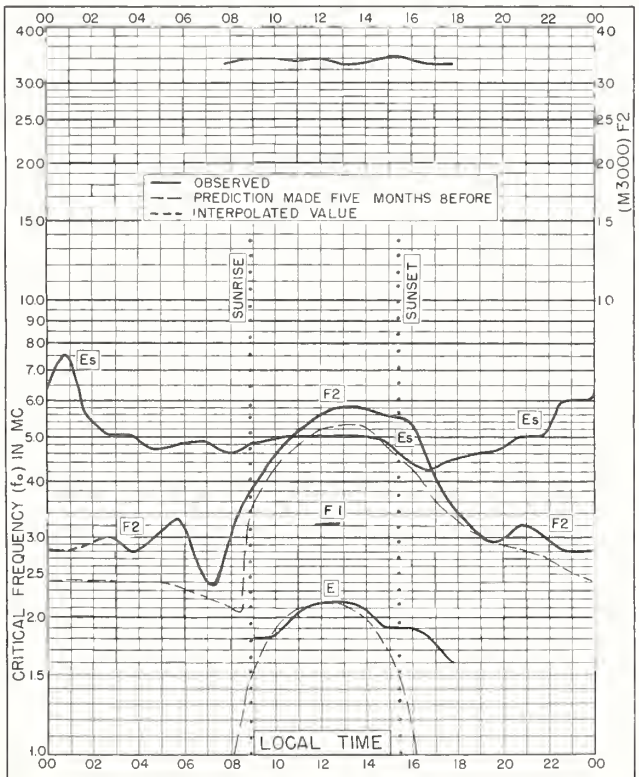


Fig. 47. CHURCHILL, CANADA
58.8°N, 94.2°W. JANUARY 1955

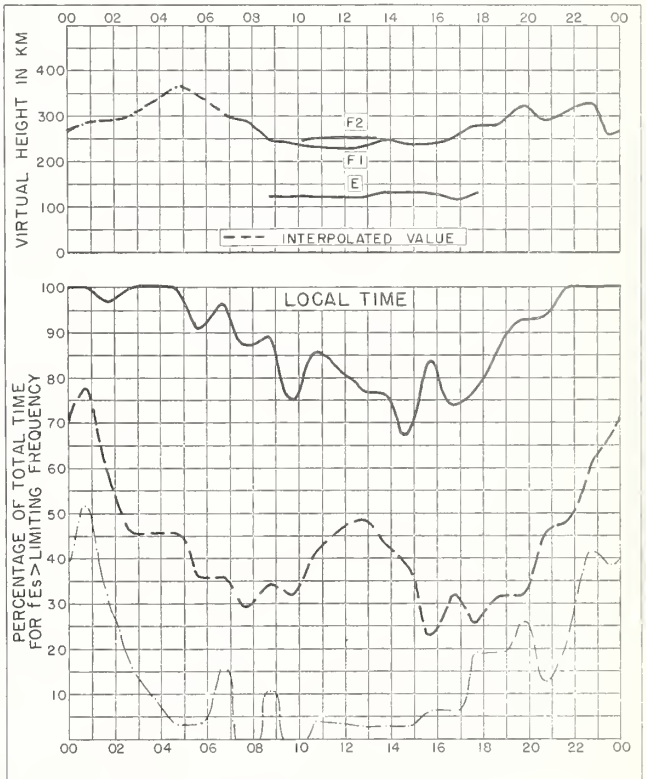


Fig. 48. CHURCHILL, CANADA JANUARY 1955

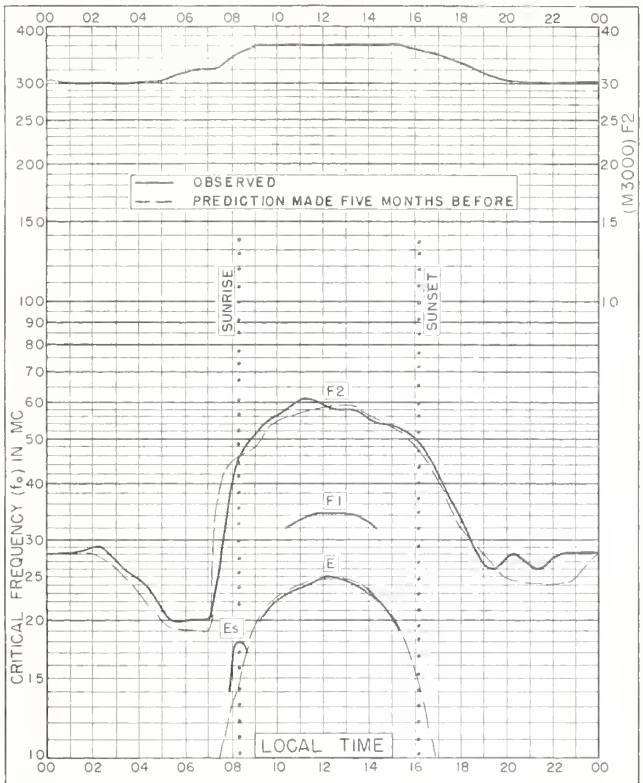


Fig. 49. De BILT, HOLLAND
52.1°N, 5.2°E JANUARY 1955

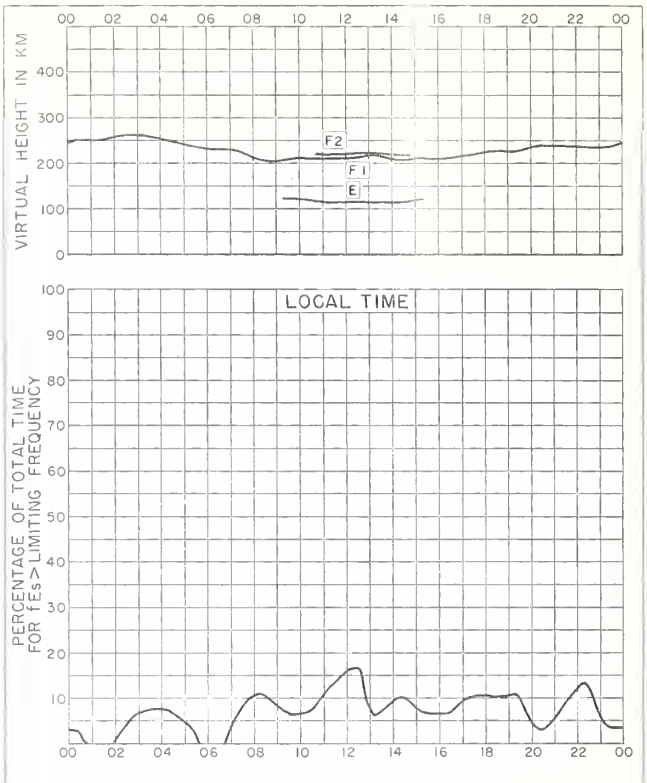


Fig. 50. De BILT, HOLLAND JANUARY 1955

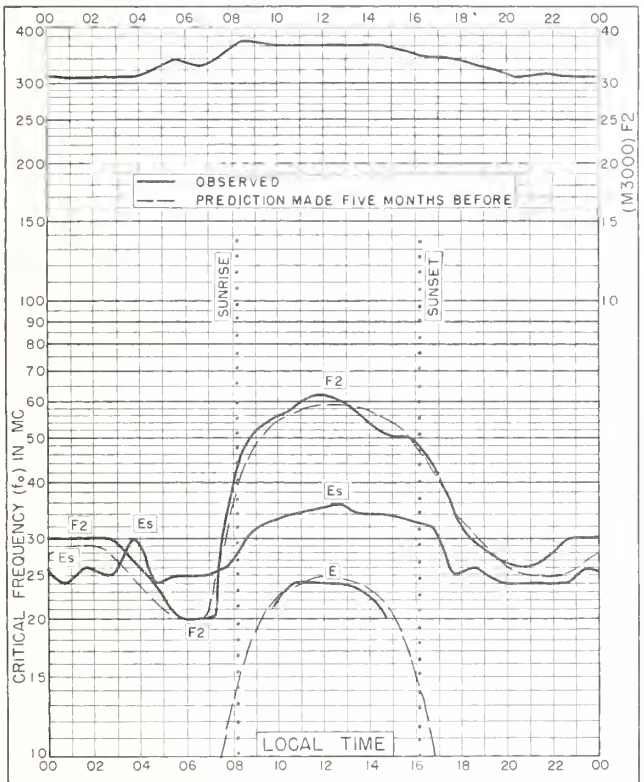


Fig. 51. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E JANUARY 1955

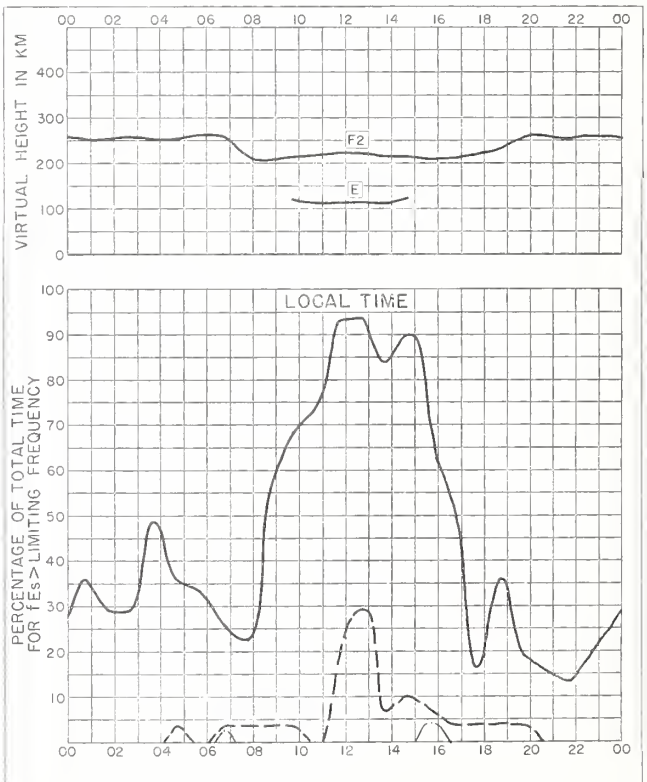


Fig. 52. LINDAU/HARZ, GERMANY JANUARY 1955

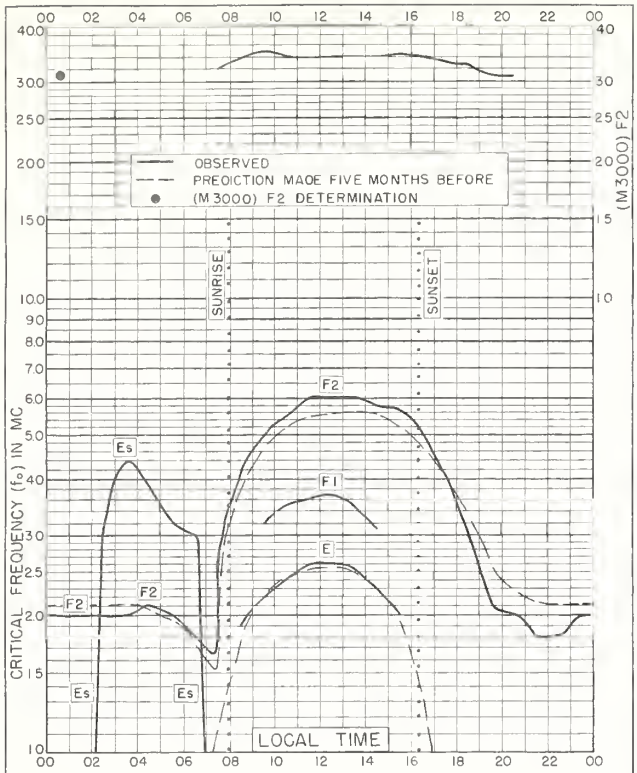


Fig. 53. WINNIPEG, CANADA
49.9°N, 97.4°W. JANUARY 1955

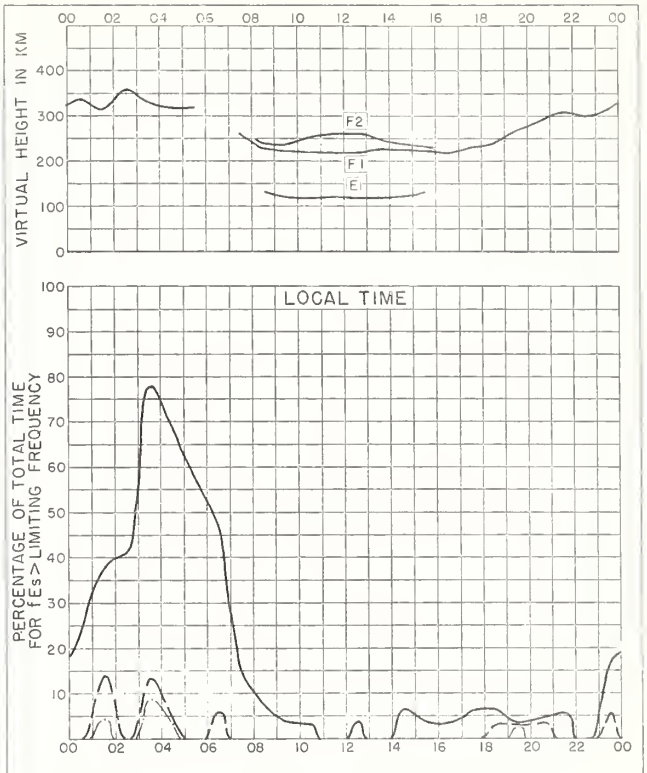


Fig. 54. WINNIPEG, CANADA JANUARY 1955

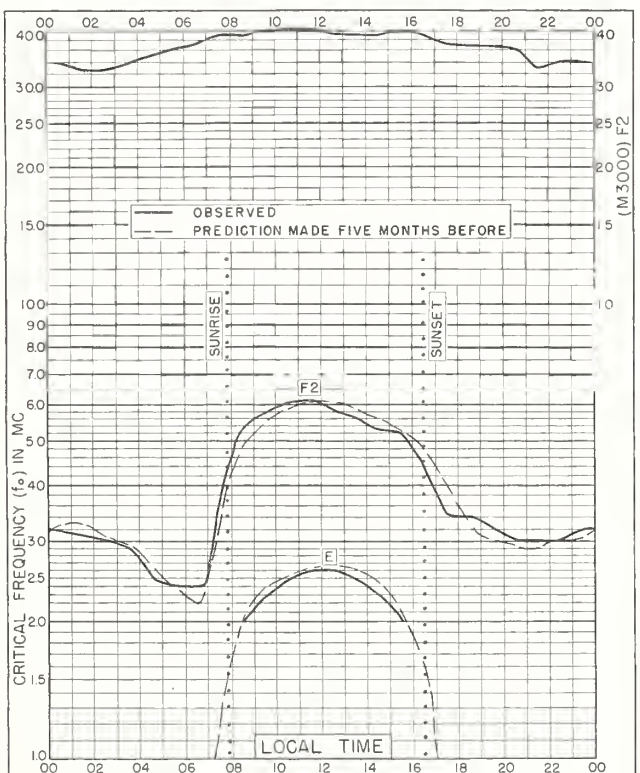


Fig. 55. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E JANUARY 1955

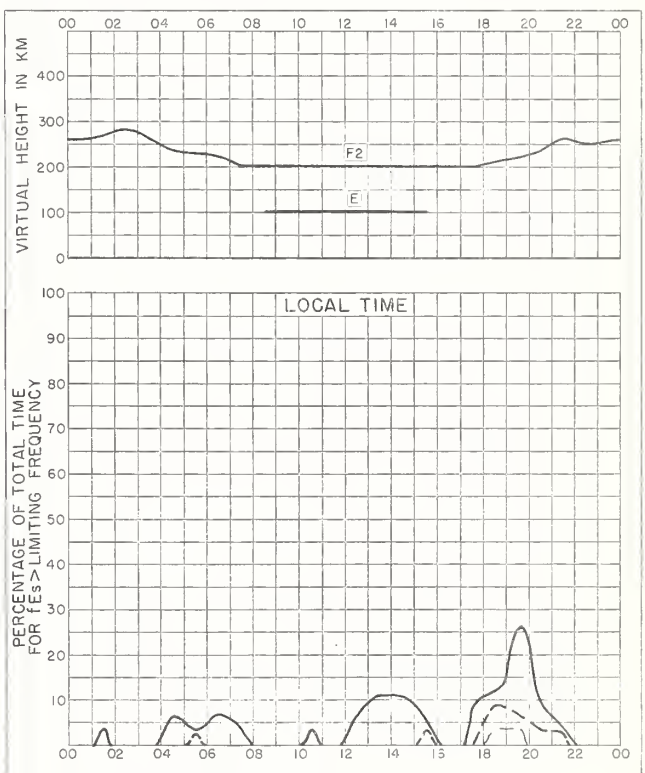


Fig. 56. SCHWARZENBURG, SWITZERLAND JANUARY 1955

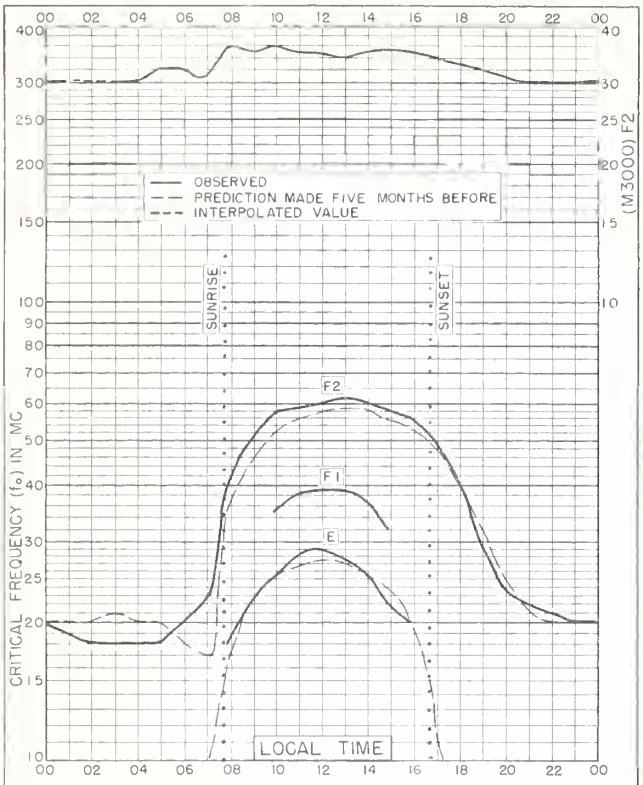


Fig. 57. OTTAWA, CANADA
45.4°N, 75.9°W. JANUARY 1955

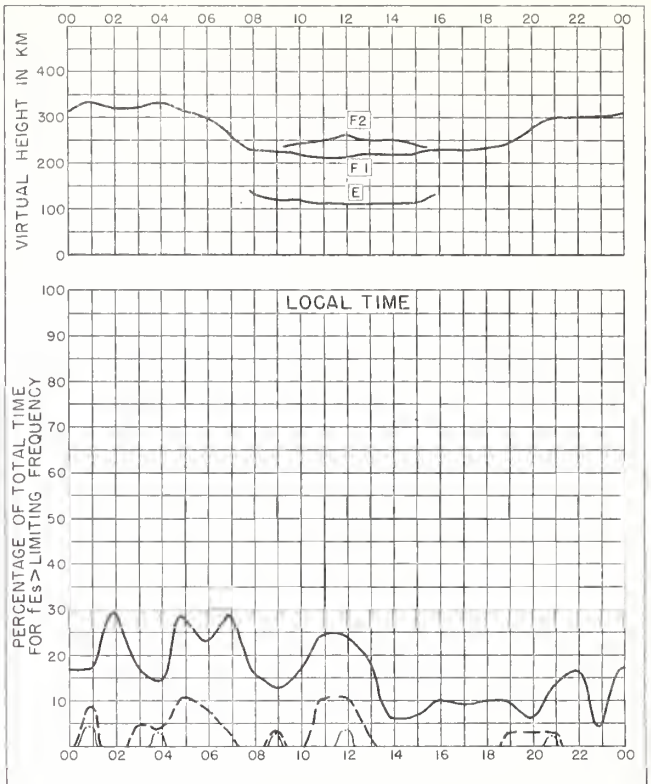


Fig. 58. OTTAWA, CANADA JANUARY 1955

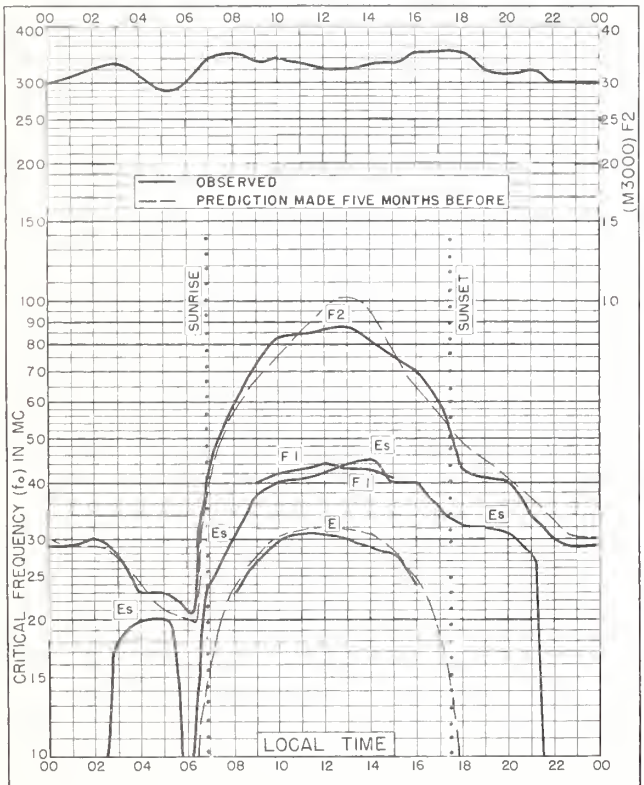


Fig. 59. OKINAWA I.
26.3°N, 127.8°E JANUARY 1955

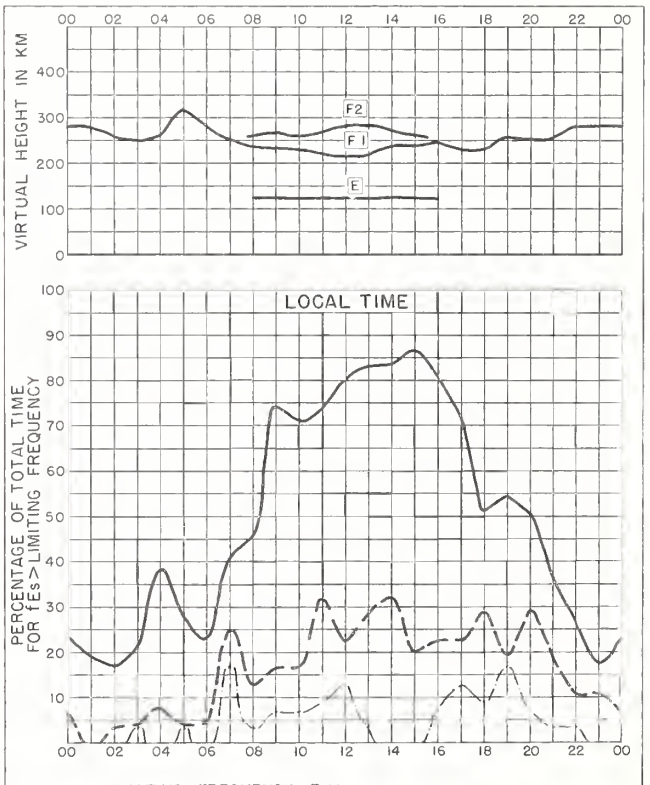


Fig. 60. OKINAWA I. JANUARY 1955

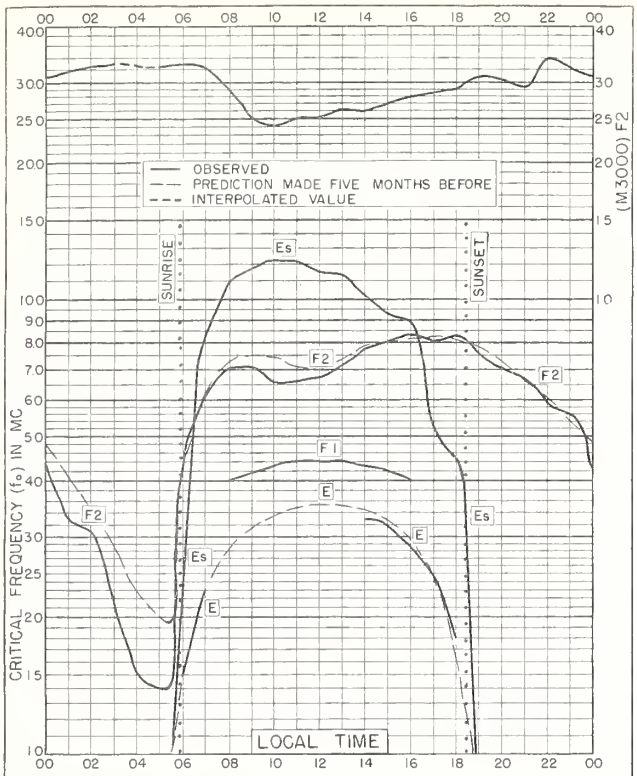


Fig. 61. HUANCAYO, PERU
12.0°S, 75.3°W JANUARY 1955

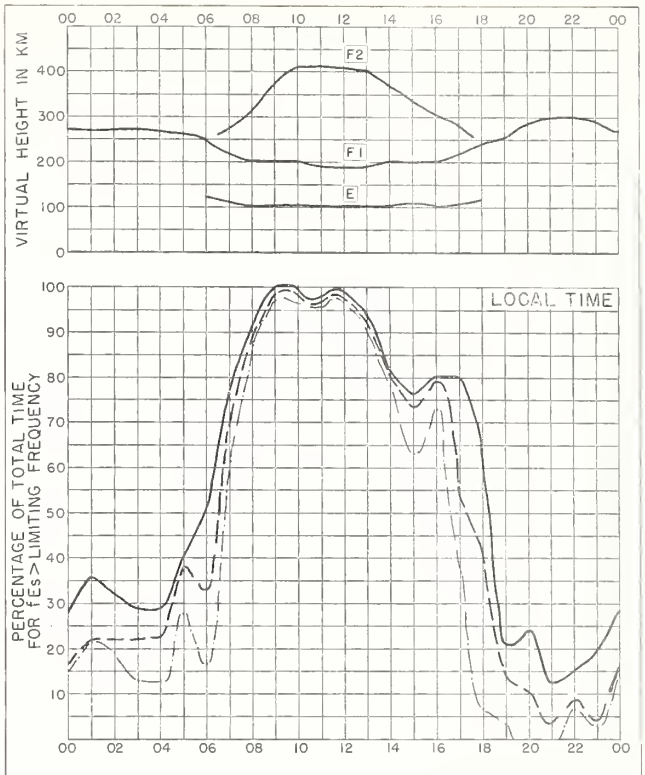


Fig. 62. HUANCAYO, PERU JANUARY 1955

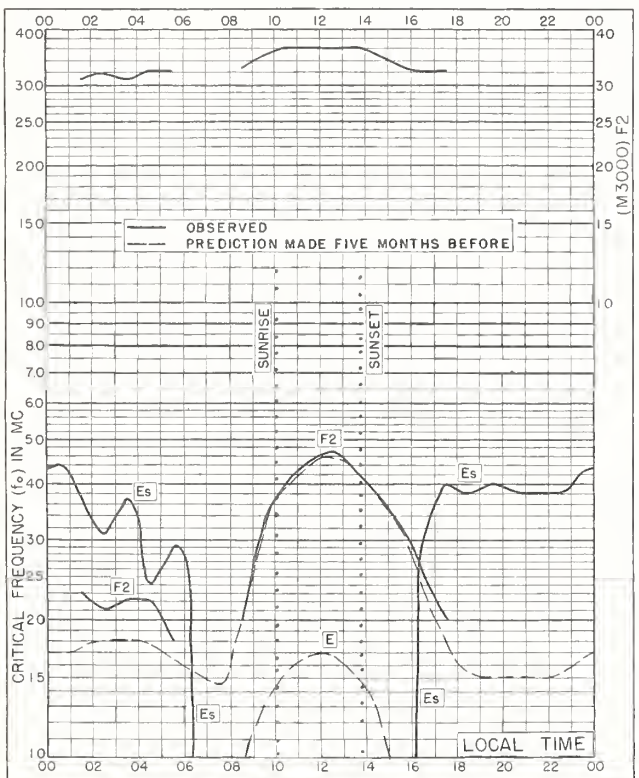


Fig. 63. REYKJAVIK, ICELAND
64.1°N, 21.8°W DECEMBER 1954

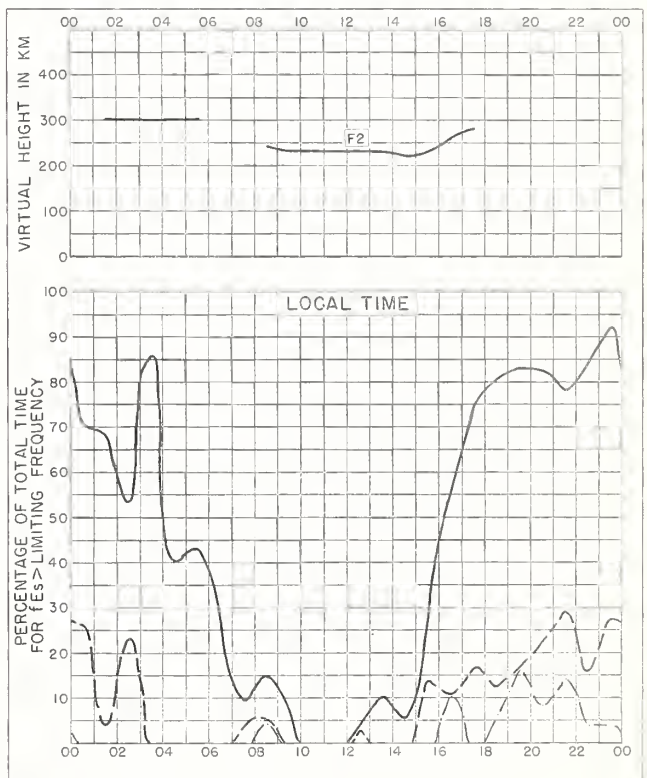


Fig. 64. REYKJAVIK, ICELAND DECEMBER 1954

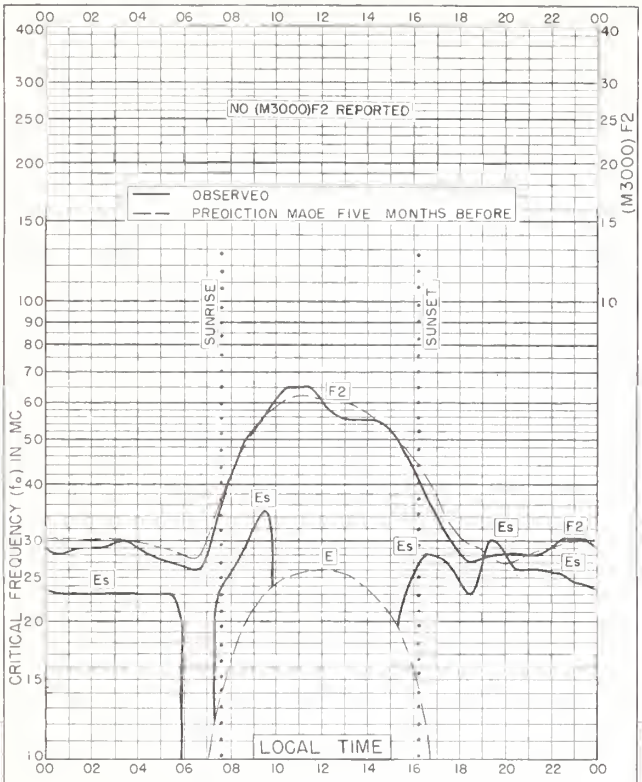


Fig. 65. WAKKANAI, JAPAN
45.4°N, 141.7°E. DECEMBER 1954

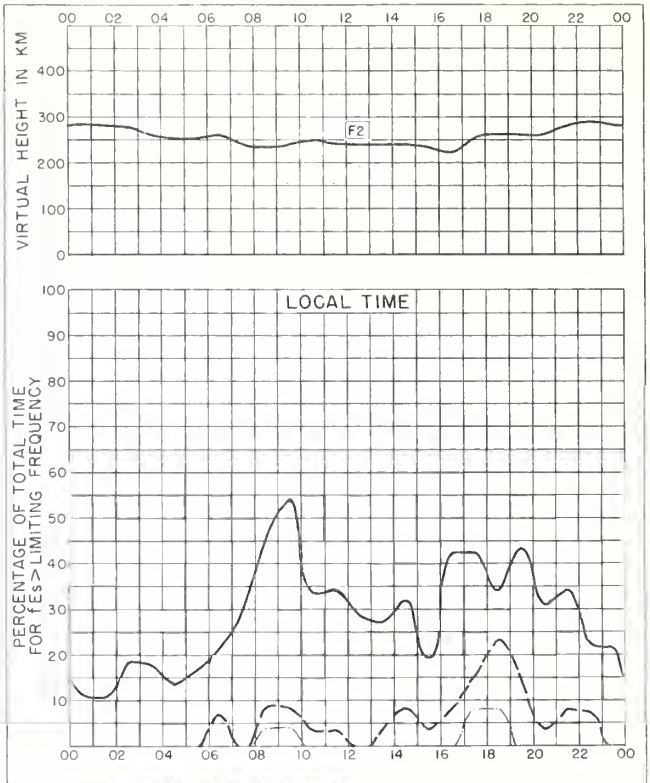


Fig. 66. WAKKANAI, JAPAN DECEMBER 1954

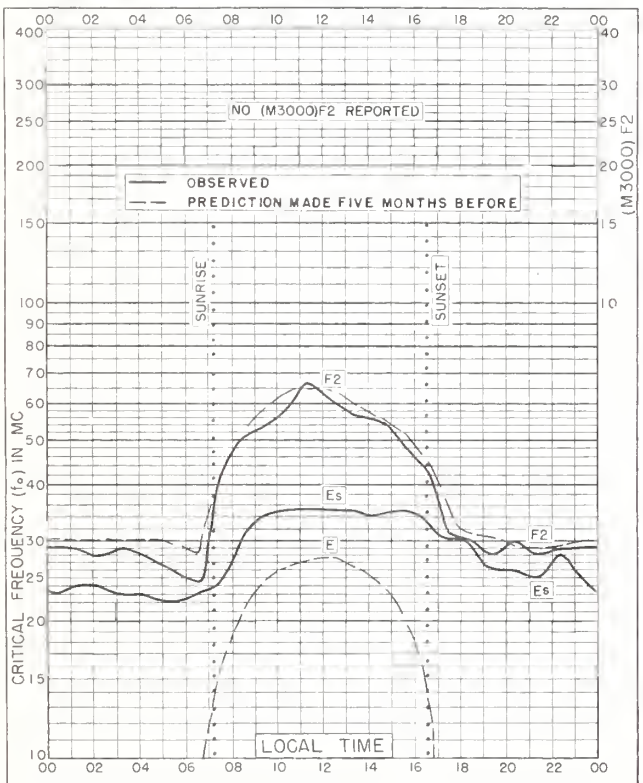


Fig. 67. AKITA, JAPAN
39.7°N, 140.1°E DECEMBER 1954

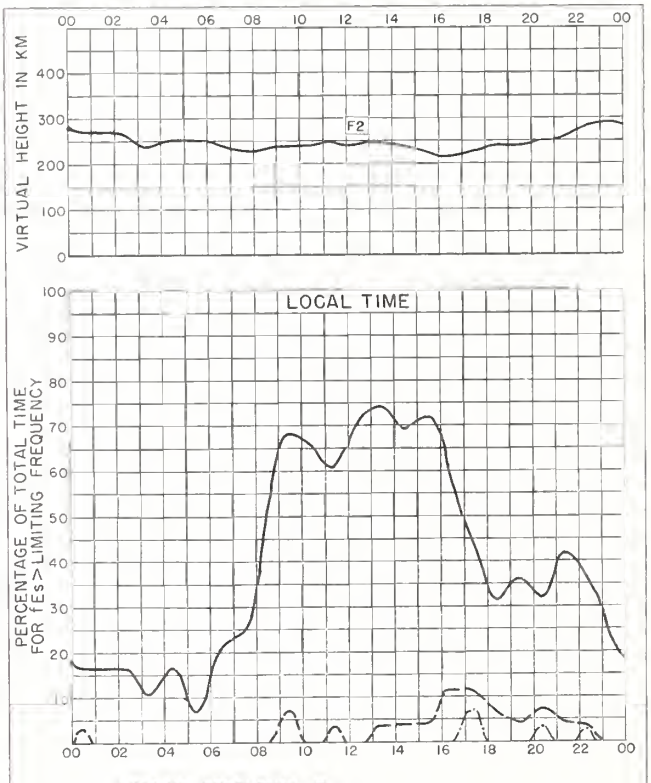


Fig. 68. AKITA, JAPAN DECEMBER 1954

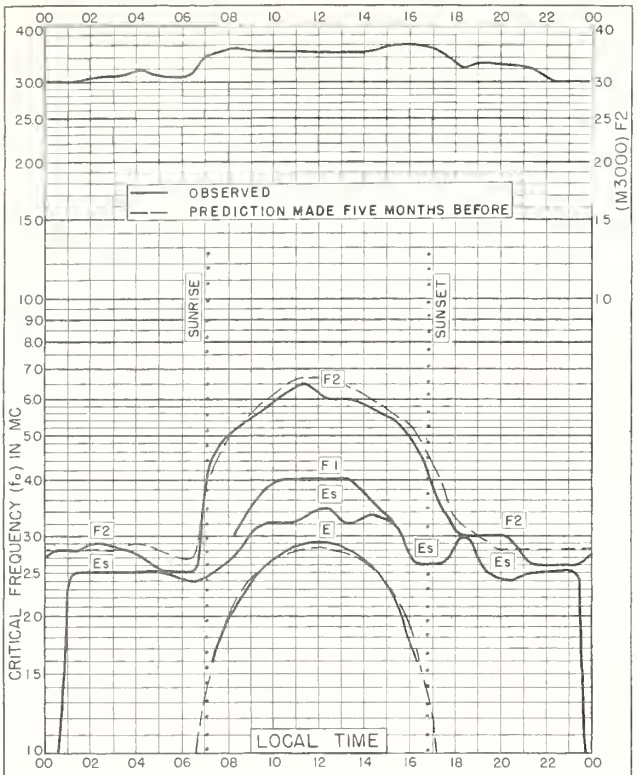


Fig. 69. TOKYO, JAPAN
35.7°N, 139.5°E DECEMBER 1954

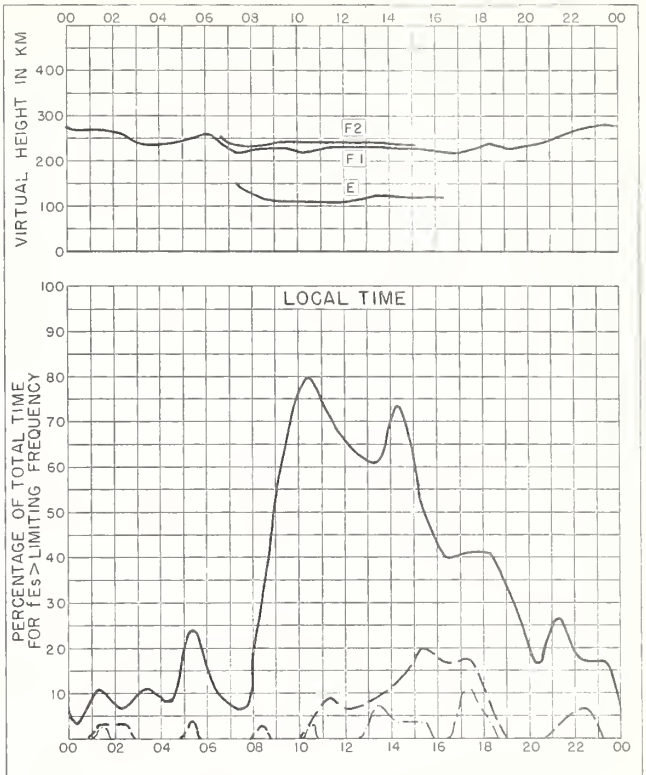


Fig. 70. TOKYO, JAPAN DECEMBER 1954

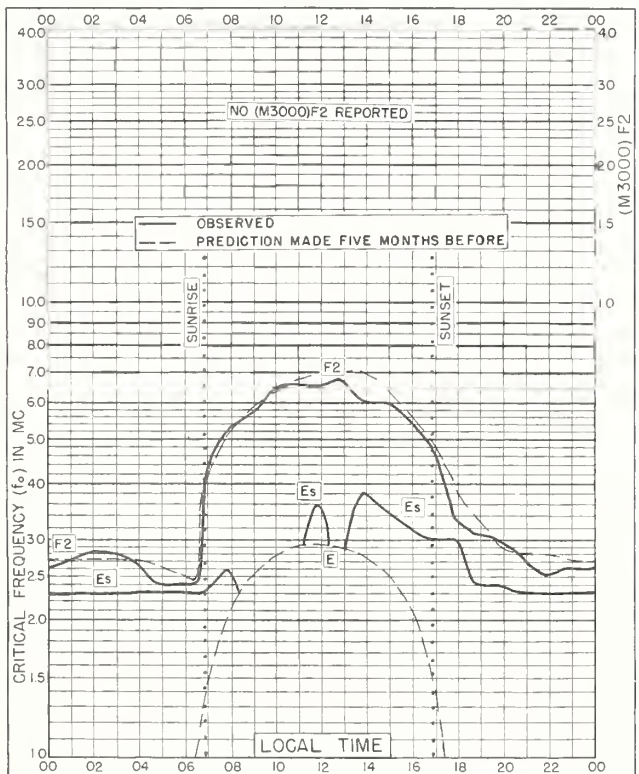


Fig. 71. YAMAGAWA, JAPAN
31.2°N, 130.6°E. DECEMBER 1954

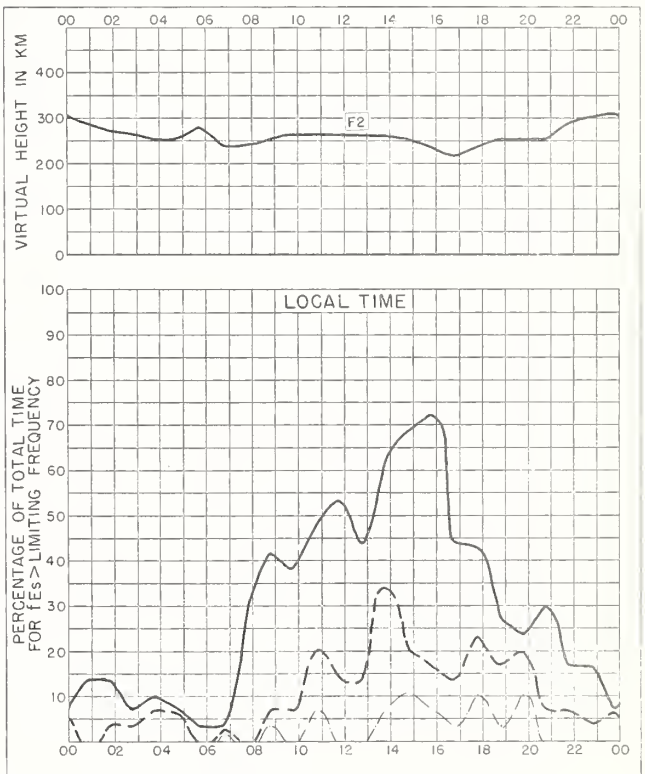


Fig. 72. YAMAGAWA, JAPAN DECEMBER 1954

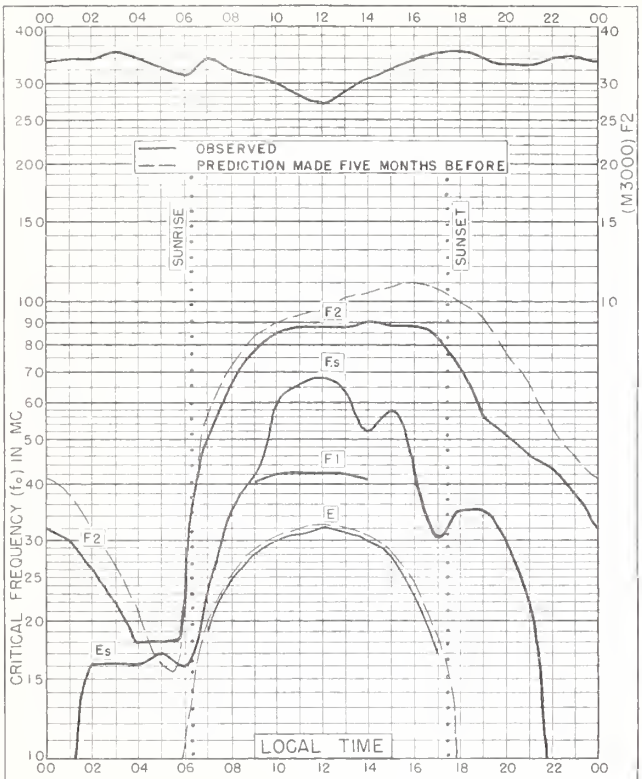


Fig 73. BAGUIO, P. I.
16.4°N, 120.6°E. DECEMBER 1954

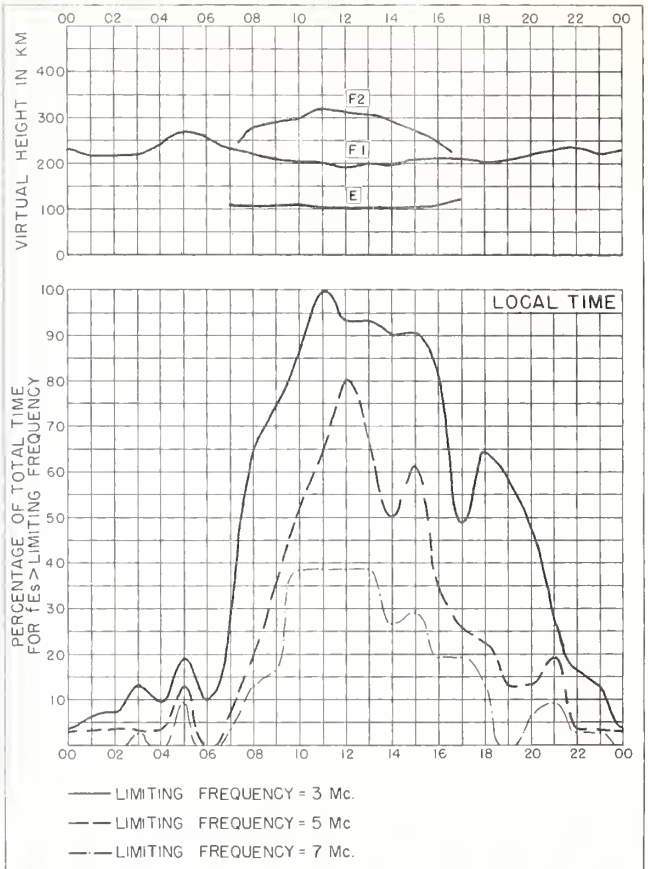


Fig. 74. BAGUIO, P. I. DECEMBER 1954

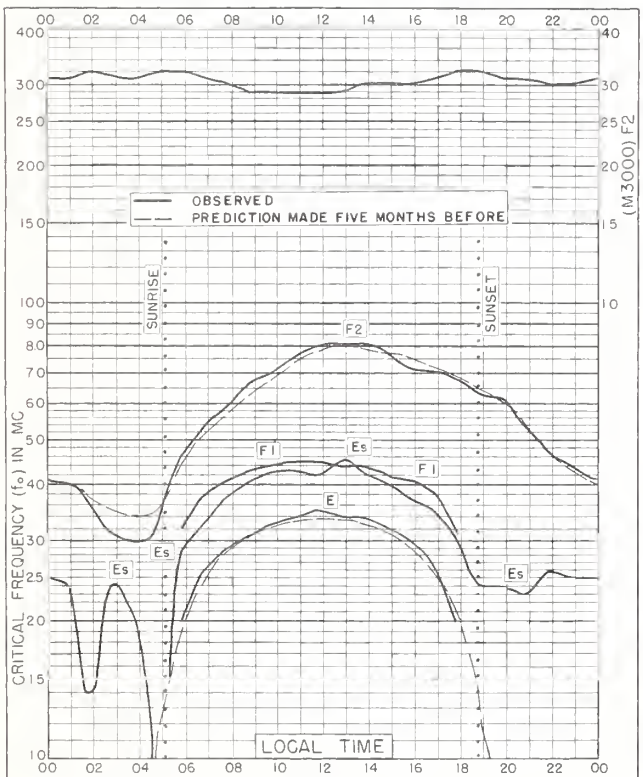


Fig 75. JOHANNESBURG, UNION OF S. AFRICA
26.2°S, 28.1°E. DECEMBER 1954

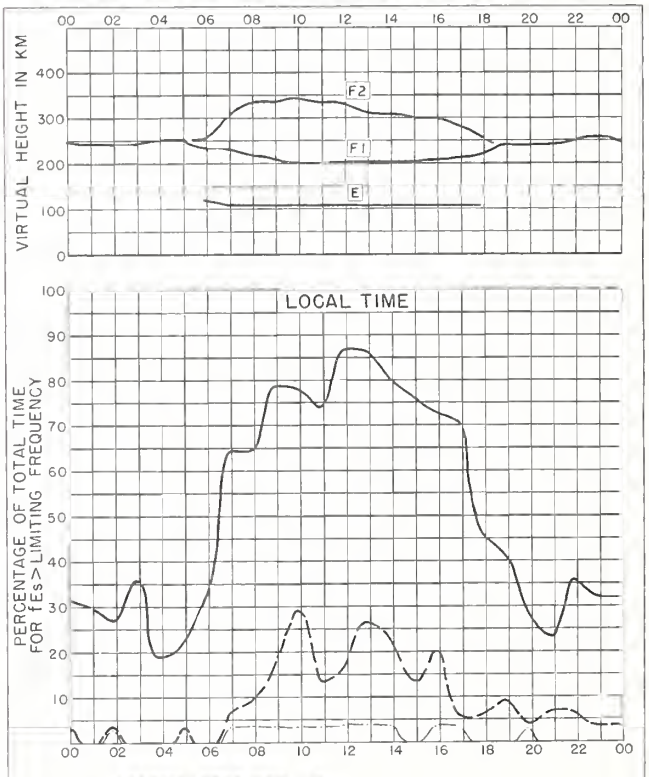


Fig. 76. JOHANNESBURG, UNION OF S. AFRICA DECEMBER 1954

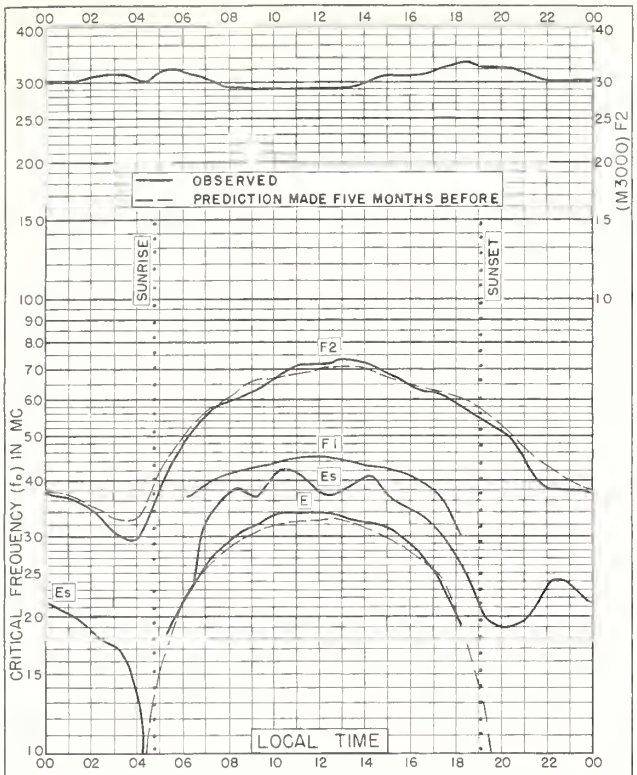
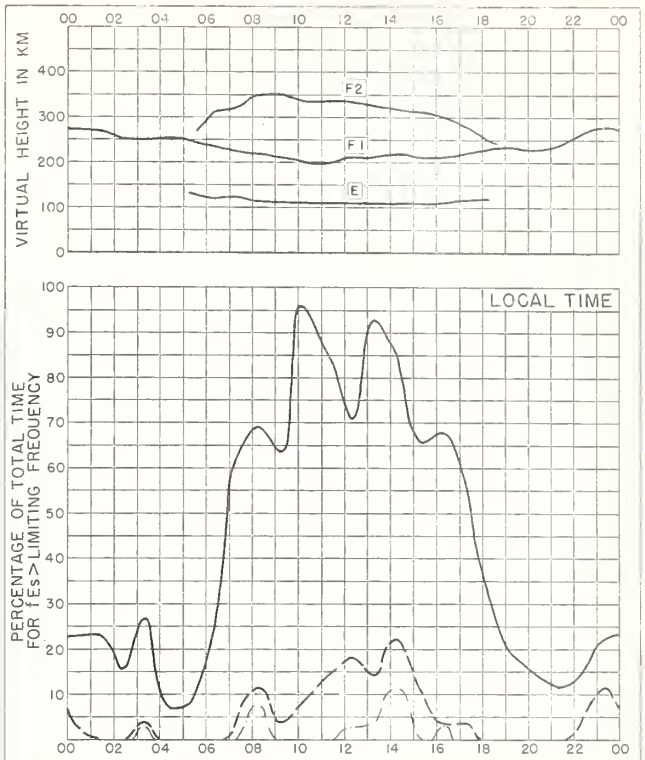


Fig. 77. CAPETOWN, UNION OF S. AFRICA
34.2°S, 18.3°E. DECEMBER 1954



DECEMBER 1954

Fig. 78. CAPETOWN, UNION OF S. AFRICA

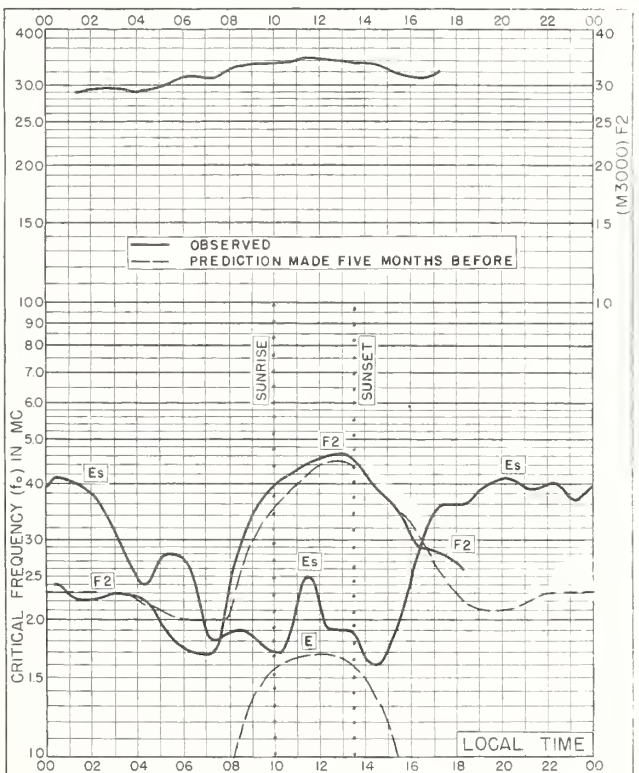


Fig. 79. TROMSO, NORWAY
69.7°N, 19.0°E NOVEMBER 1954

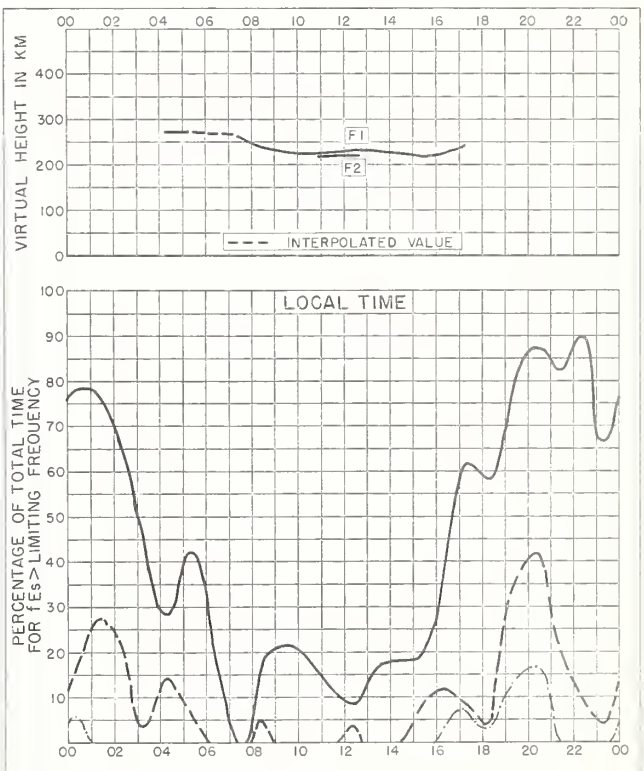


Fig. 80. TROMSO, NORWAY NOVEMBER 1954

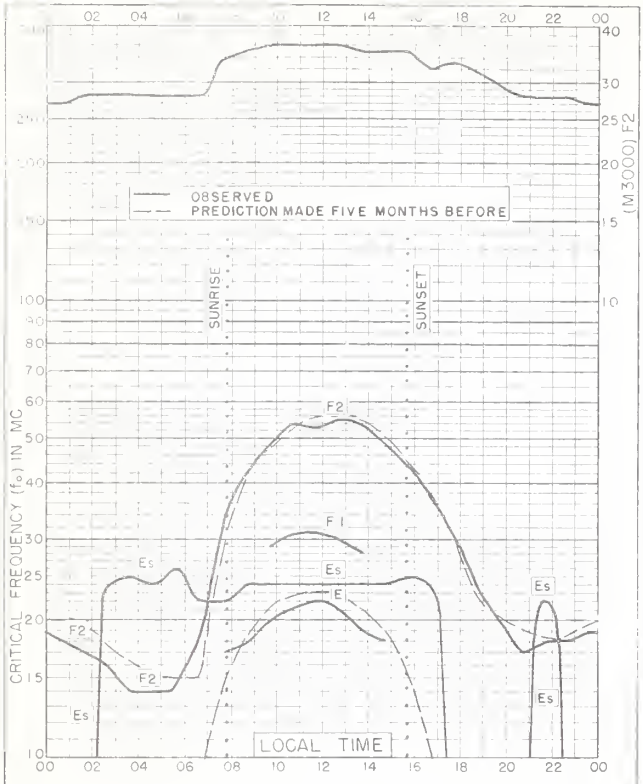


Fig. 81. INVERNESS, SCOTLAND
57.4°N, 4.2°W NOVEMBER 1954

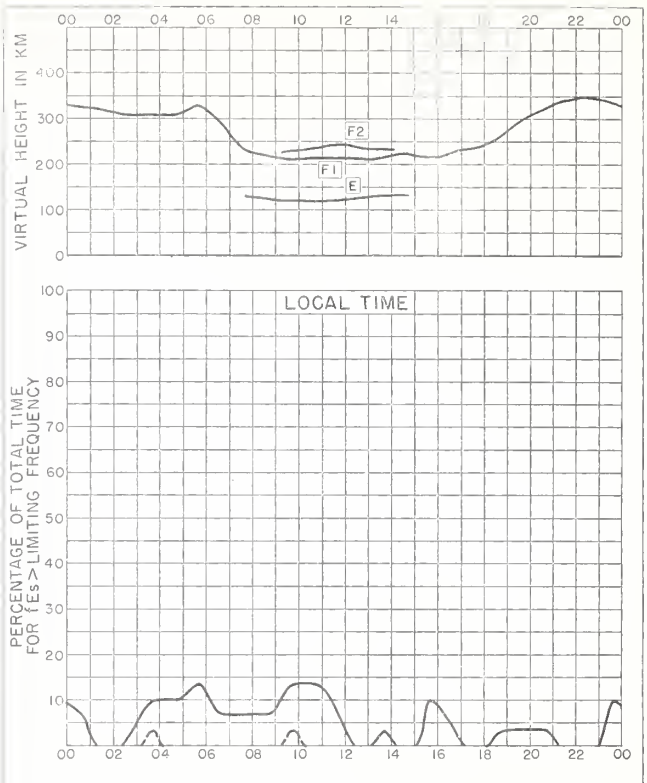


Fig. 82. INVERNESS, SCOTLAND NOVEMBER 1954

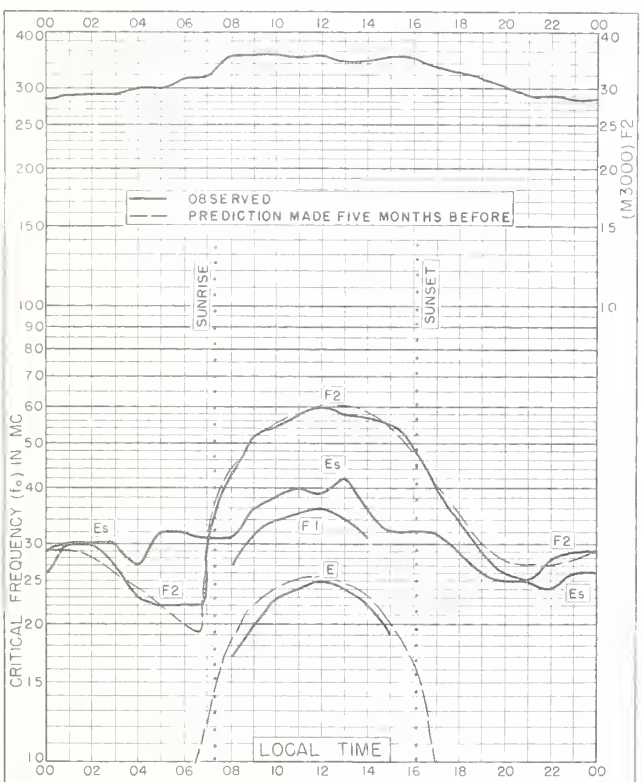


Fig. 83. SLOUGH, ENGLAND
51.5°N, 0.6°W NOVEMBER 1954

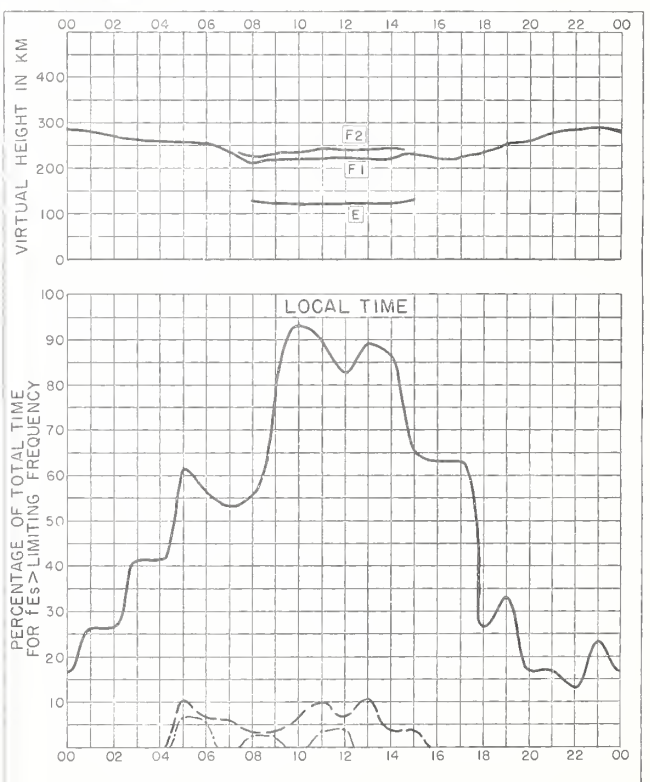


Fig. 84. SLOUGH, ENGLAND NOVEMBER 1954

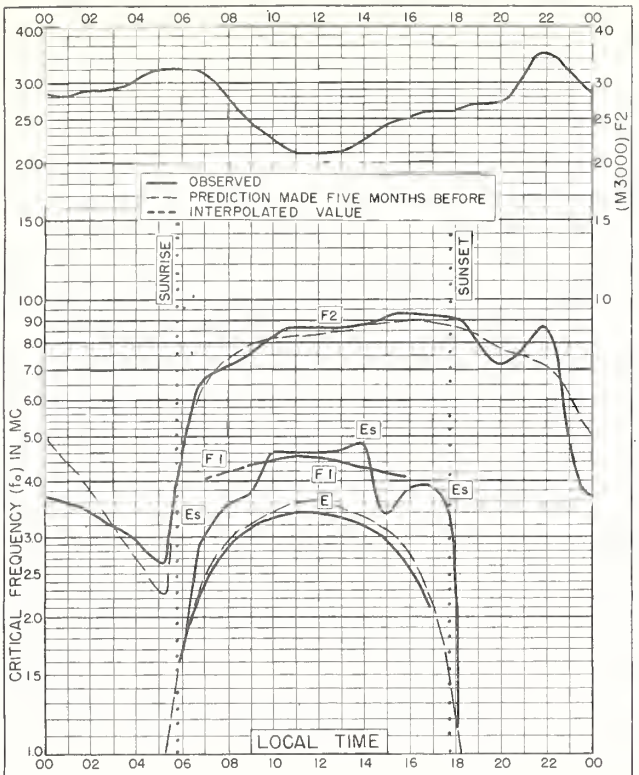


Fig. 85. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E NOVEMBER 1954

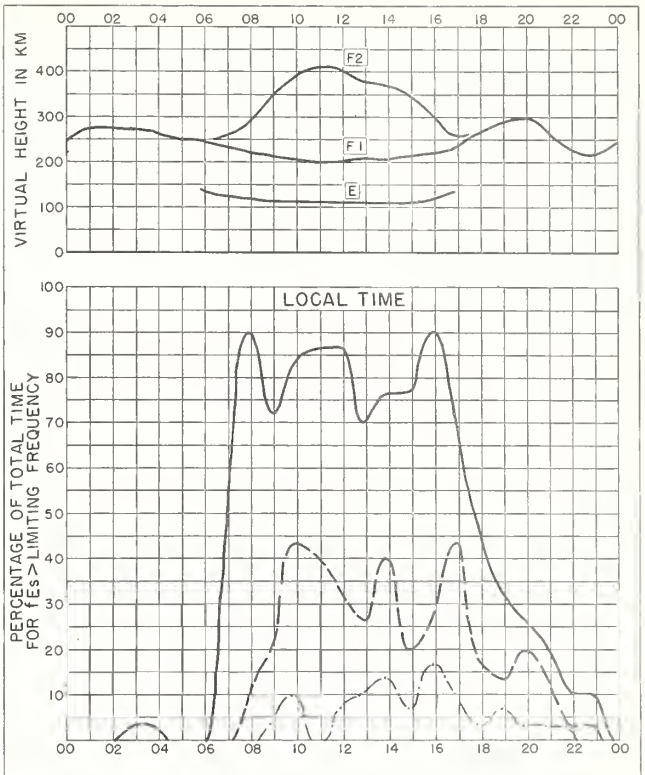


Fig. 86. SINGAPORE, BRITISH MALAYA NOVEMBER 1954

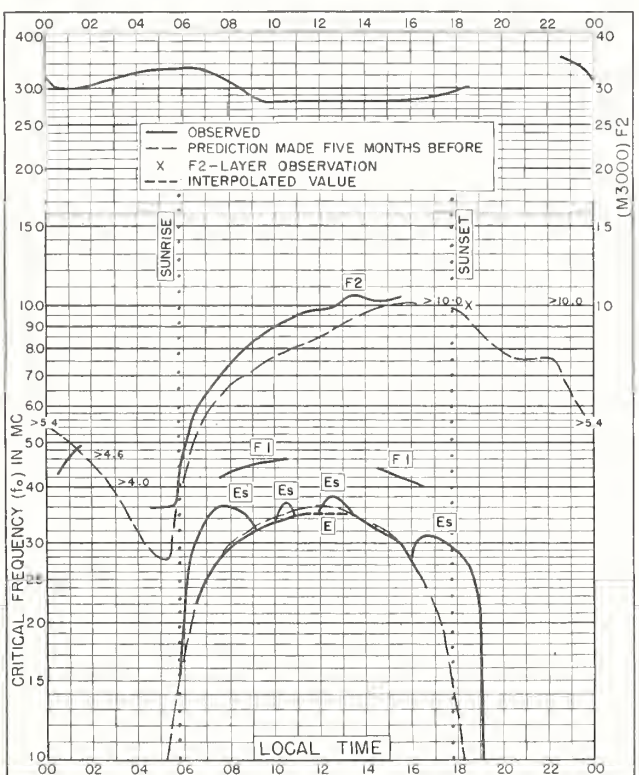


Fig. 87. NAIROBI, KENYA
1.3°S, 36.8°E NOVEMBER 1954

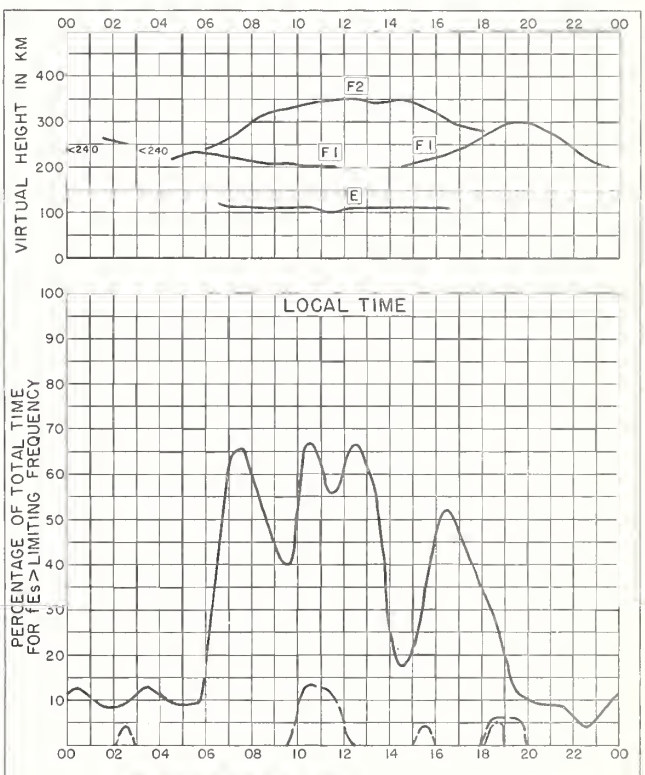


Fig. 88. NAIROBI, KENYA NOVEMBER 1954

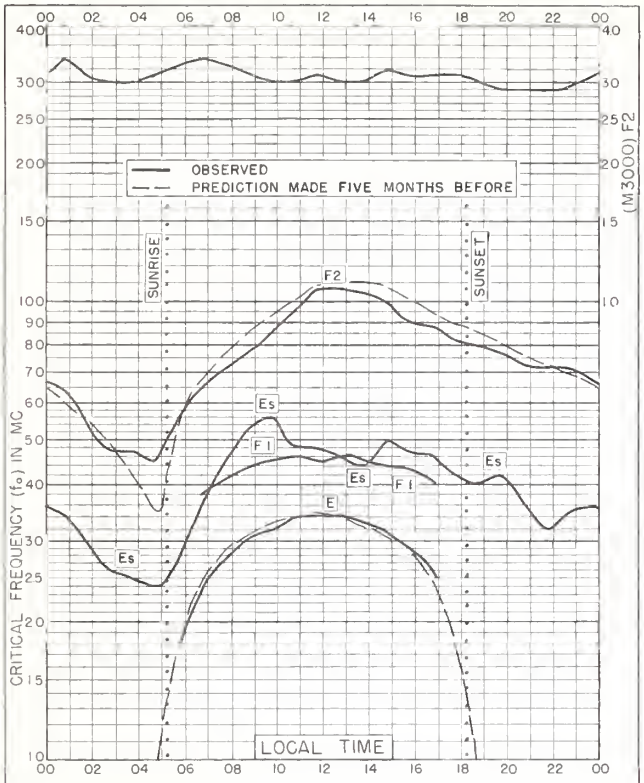


Fig. 89. RAROTONGA I.
21.3°S, 159.8°W NOVEMBER 1954

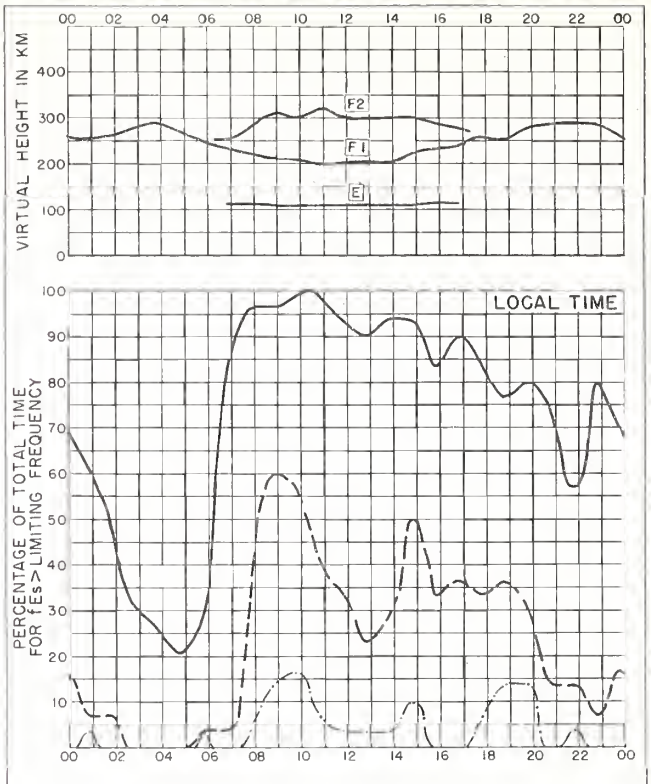


Fig. 90. RAROTONGA I. NOVEMBER 1954

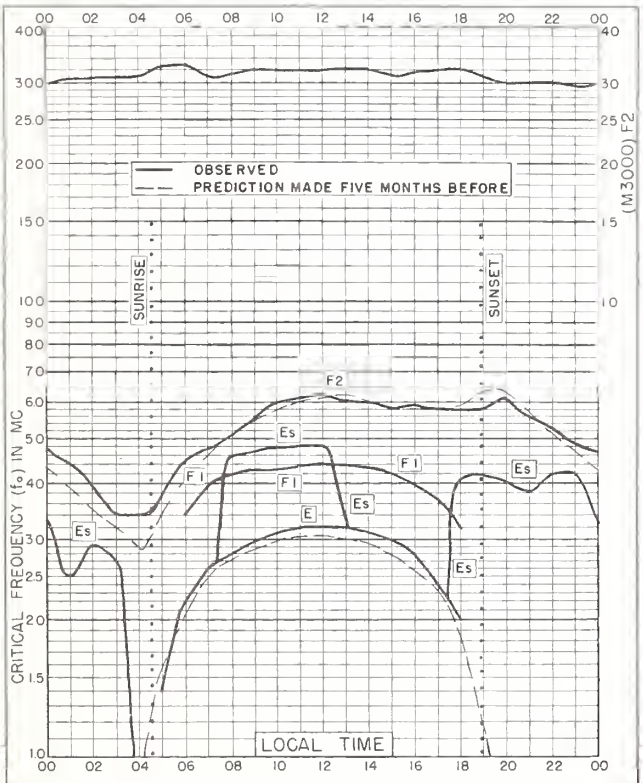


Fig. 91. CHRISTCHURCH, NEW ZEALAND
43.6°S, 172.8°E NOVEMBER 1954

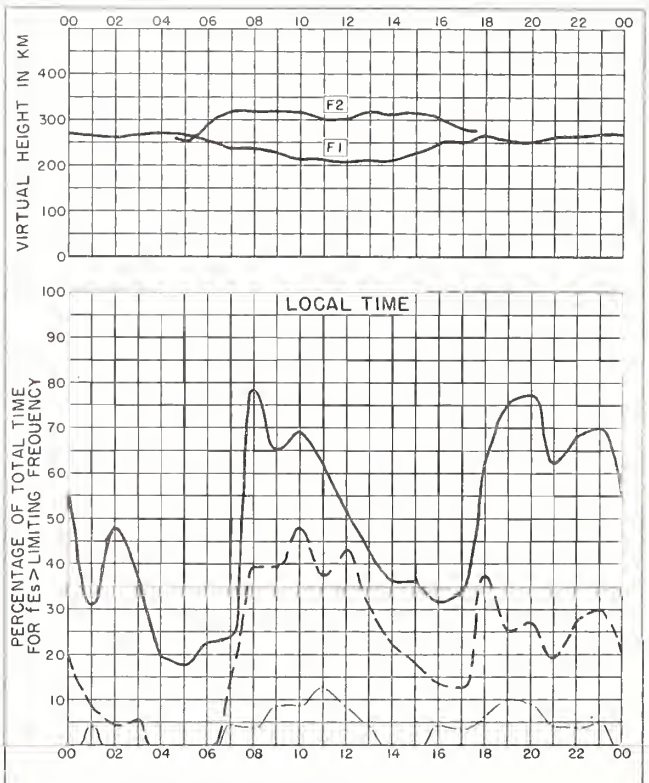


Fig 92. CHRISTCHURCH, NEW ZEALAND NOVEMBER 1954

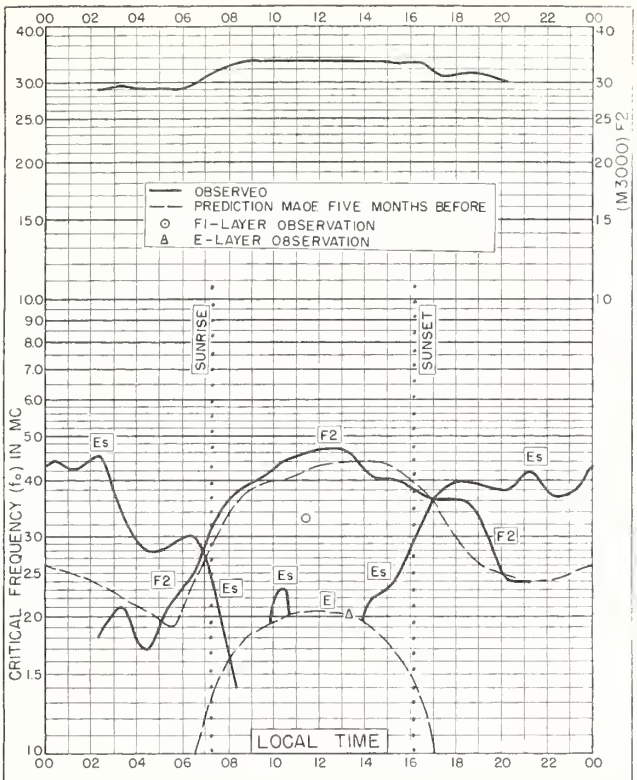


Fig. 93. TROMSO, NORWAY
69.7°N, 19.0°E OCTOBER 1954

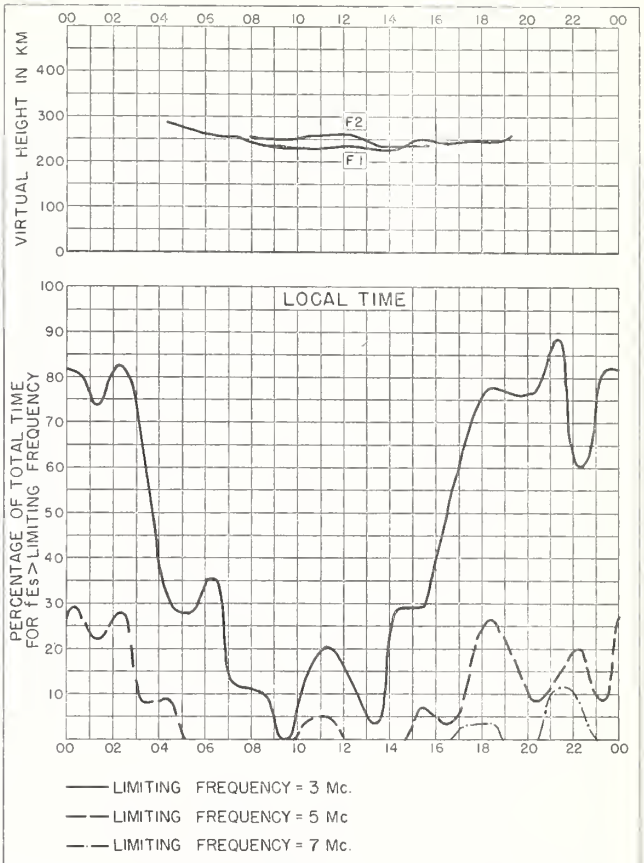


Fig. 94. TROMSO, NORWAY OCTOBER 1954

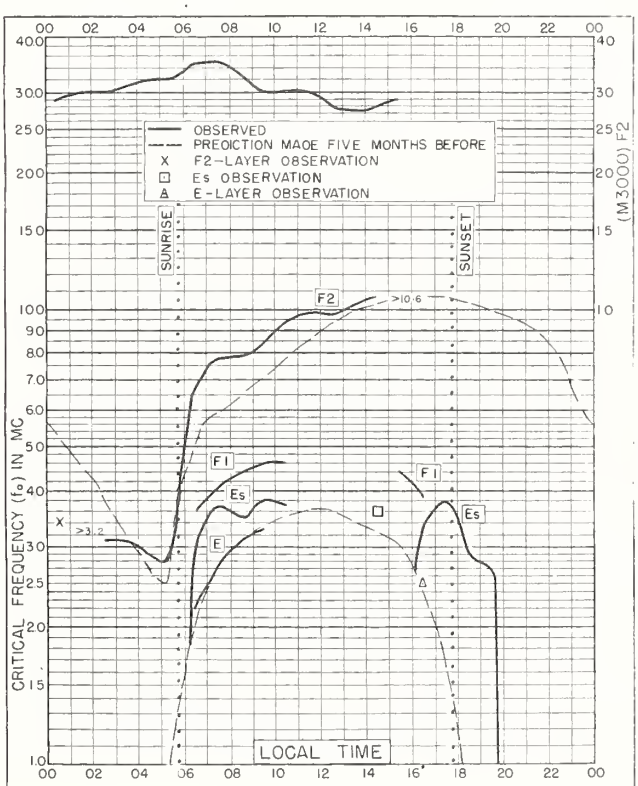


Fig. 95. NAIROBI, KENYA
1.3°S, 36.8°E. OCTOBER 1954

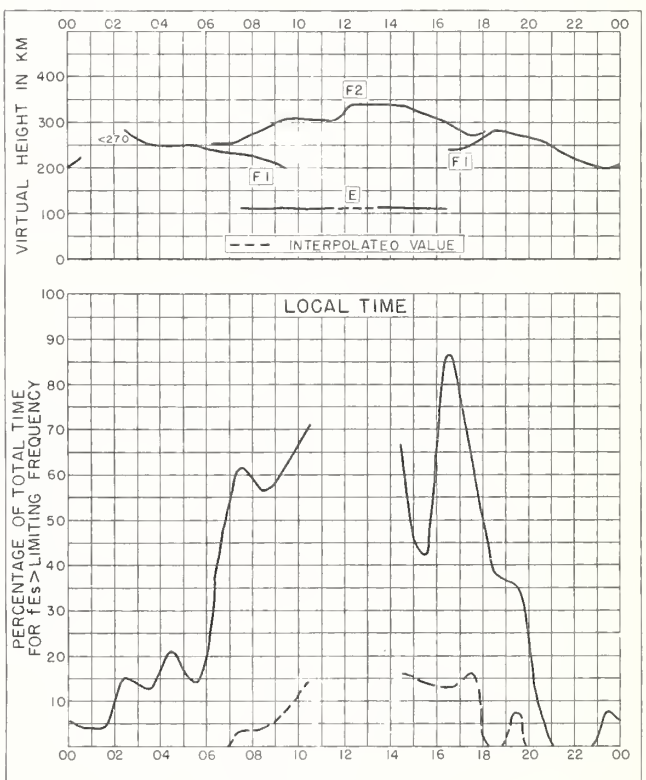


Fig 96. NAIROBI, KENYA OCTOBER 1954

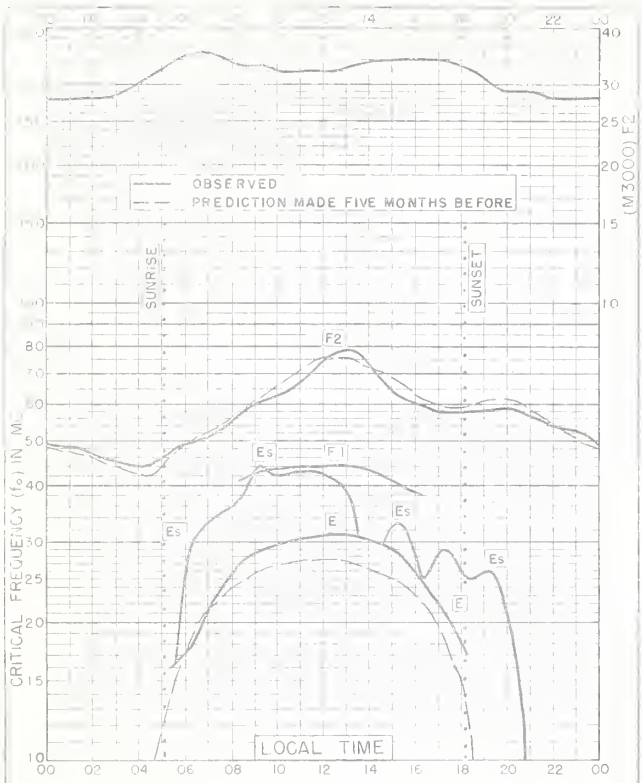


Fig. 97. FALKLAND IS.
51.7°S, 57.8°W OCTOBER 1954

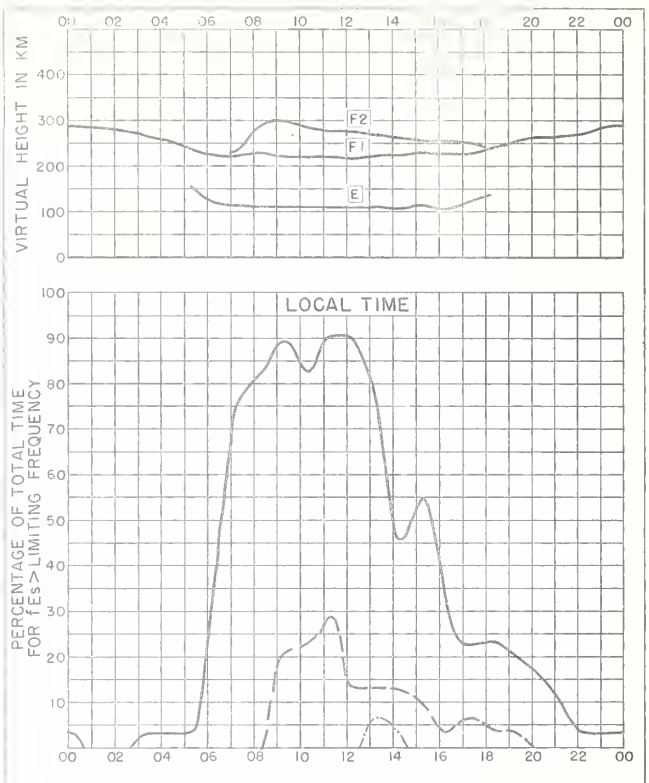


Fig. 98. FALKLAND IS. OCTOBER 1954

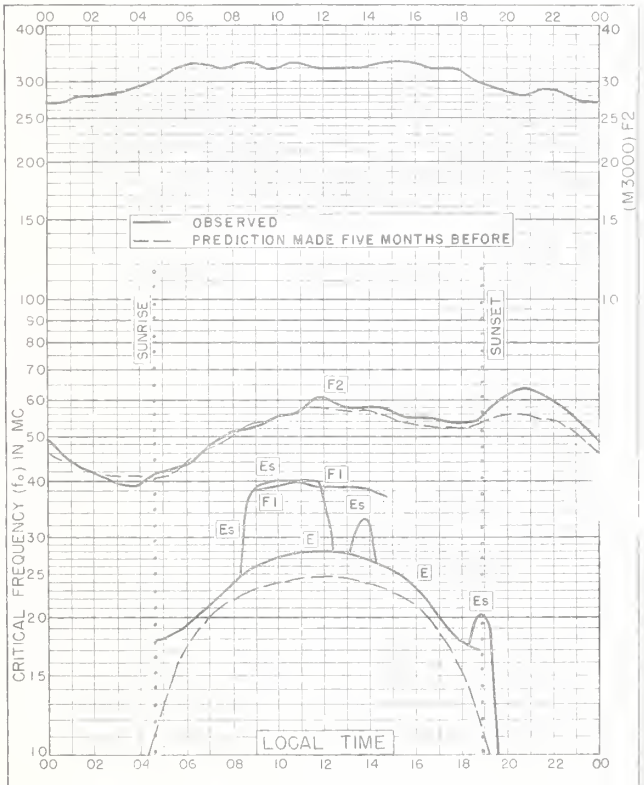


Fig. 99. PORT LOCKROY
64.8°S, 63.5°W OCTOBER 1954

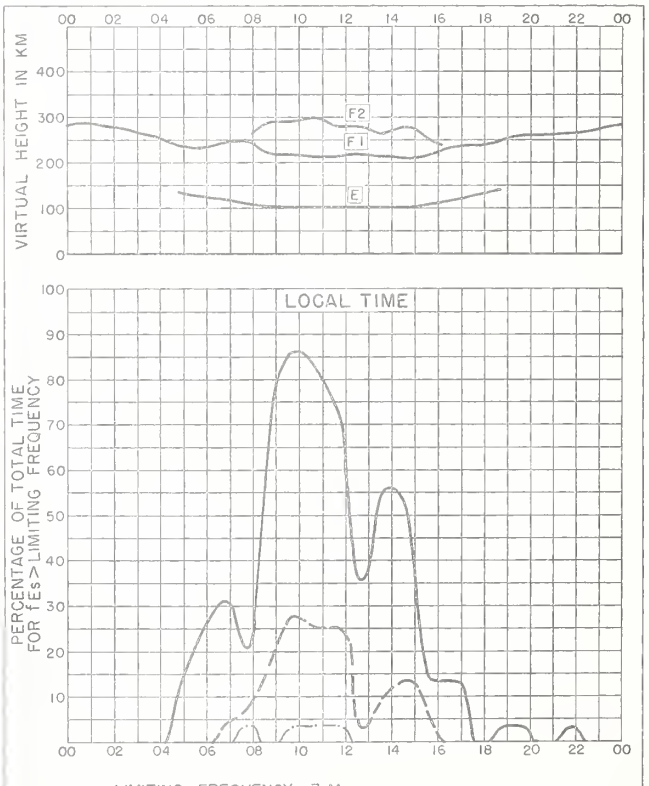


Fig. 100. PORT LOCKROY OCTOBER 1954

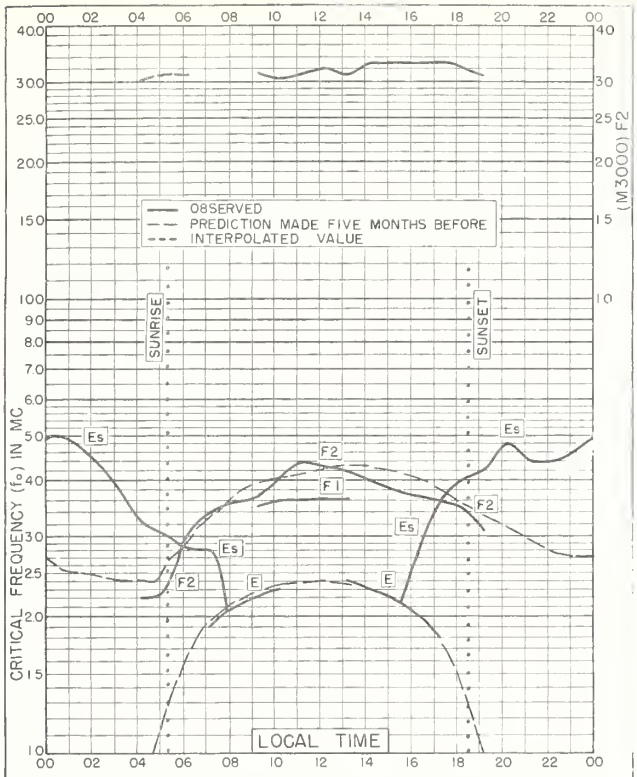


Fig. 101. TROMSO, NORWAY
69.7°N, 19.0°E SEPTEMBER 1954

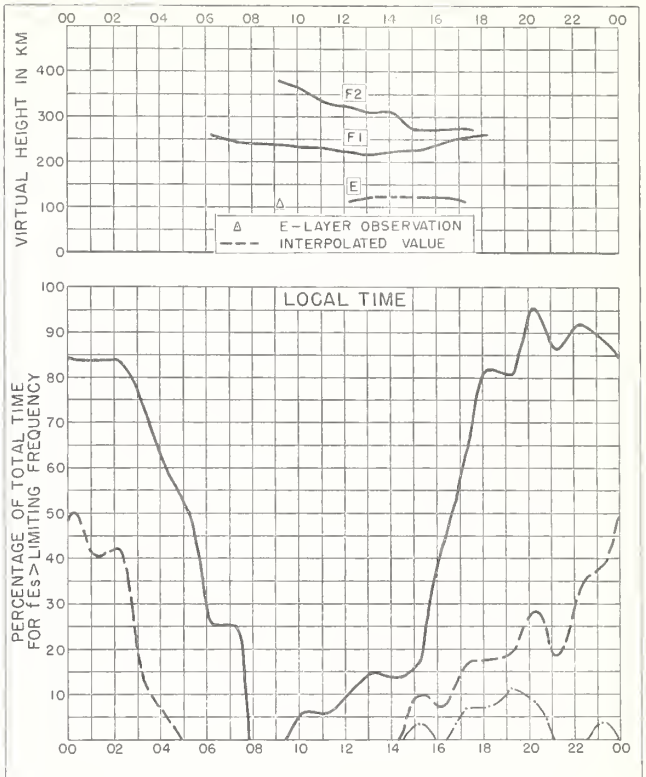


Fig. 102. TROMSO, NORWAY SEPTEMBER 1954

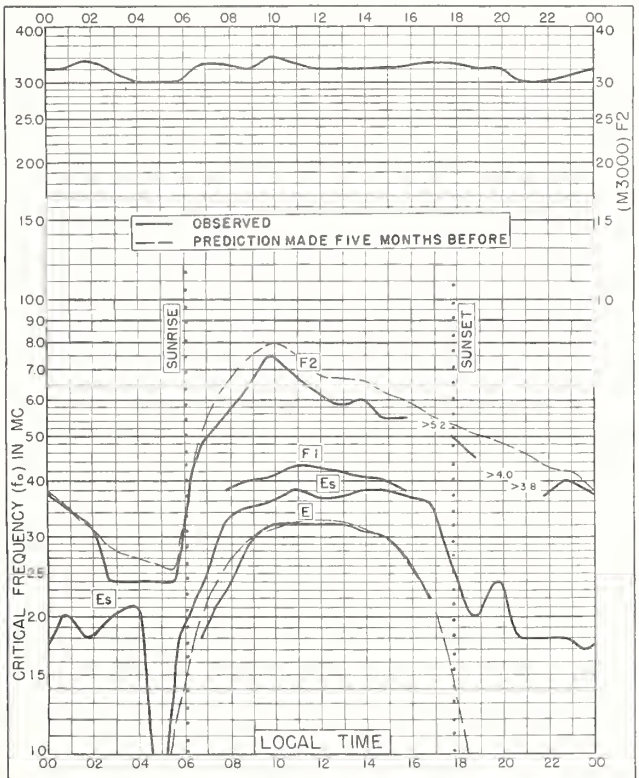


Fig. 103. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E. SEPTEMBER 1954

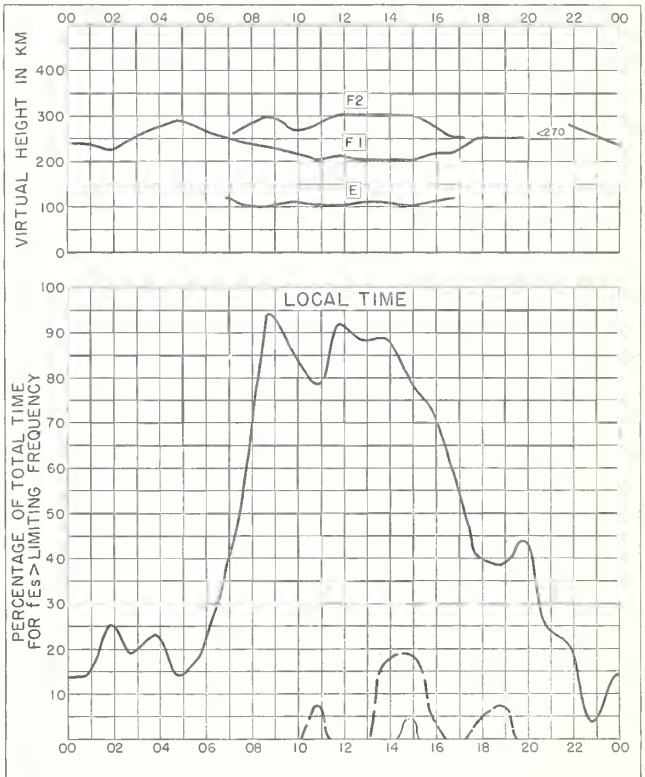


Fig 104. TOWNSVILLE, AUSTRALIA SEPTEMBER 1954

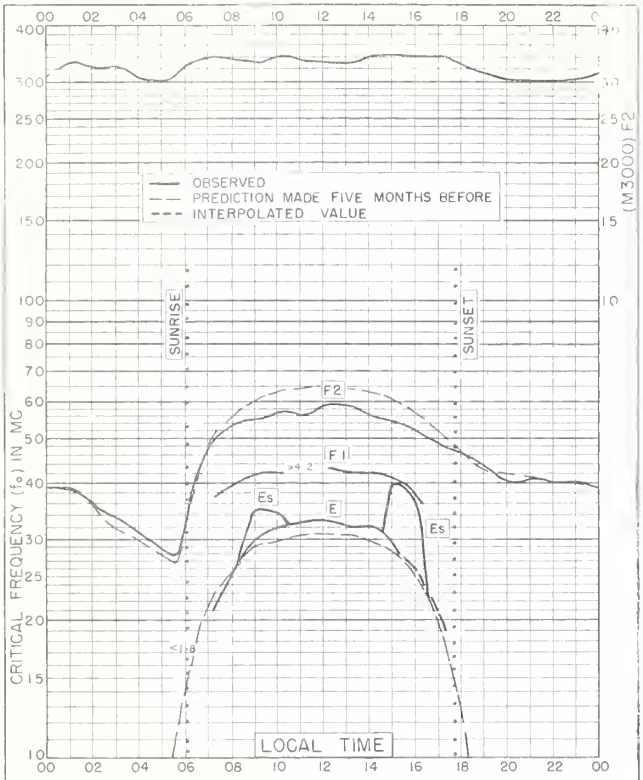
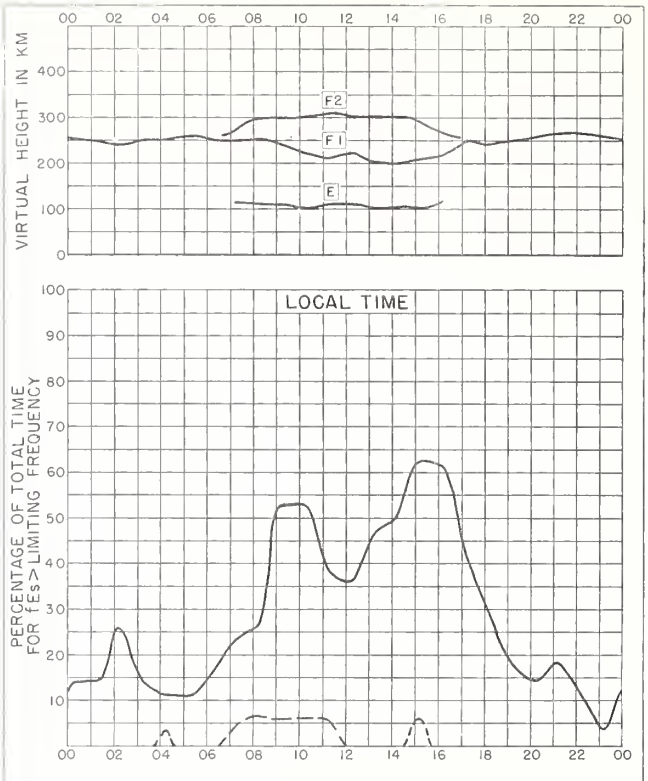


Fig. 105. BRISBANE, AUSTRALIA
27.5°S, 153.0°E SEPTEMBER 1954



SEPTEMBER 1954

Fig. 106. BRISBANE, AUSTRALIA

NBS 490

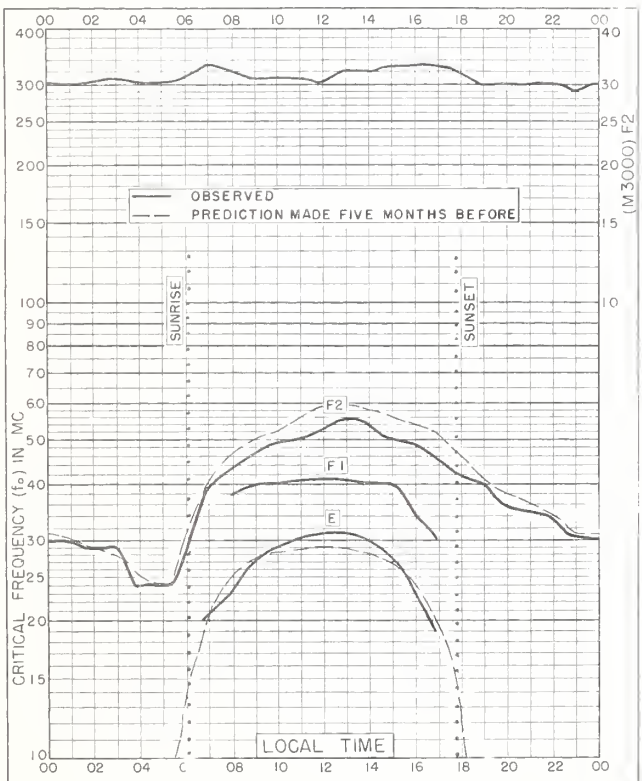
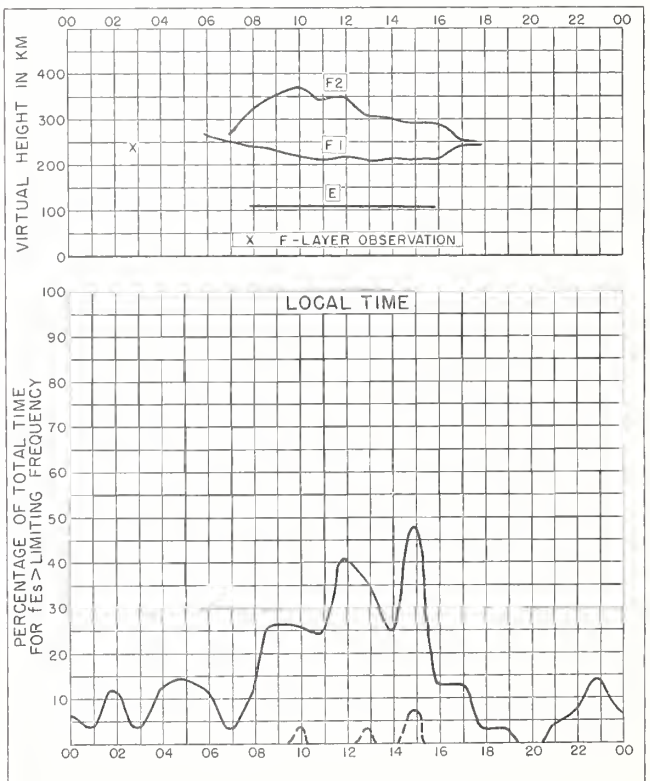


Fig. 107. CANBERRA, AUSTRALIA
35.3°S, 149.0°E SEPTEMBER 1954



SEPTEMBER 1954

Fig. 108. CANBERRA, AUSTRALIA

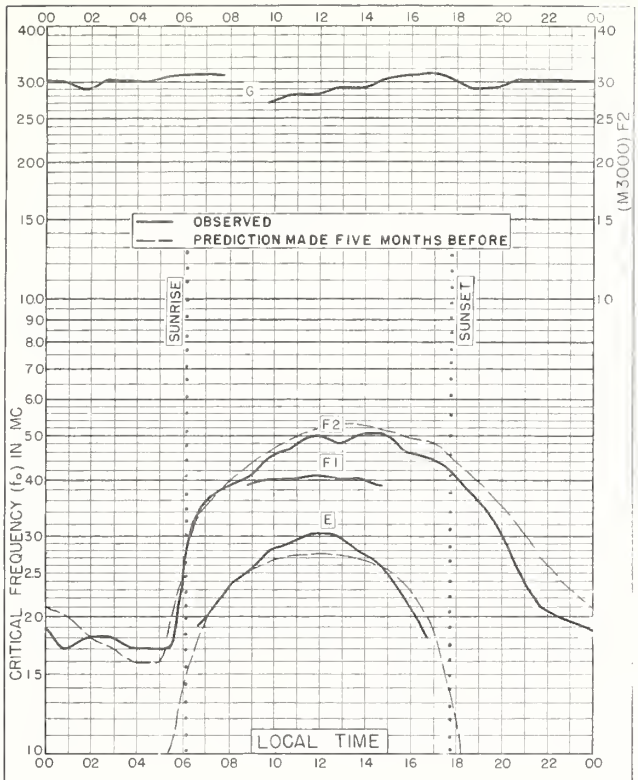


Fig. 109. HOBART, TASMANIA
42.9°S, 147.3°E SEPTEMBER 1954

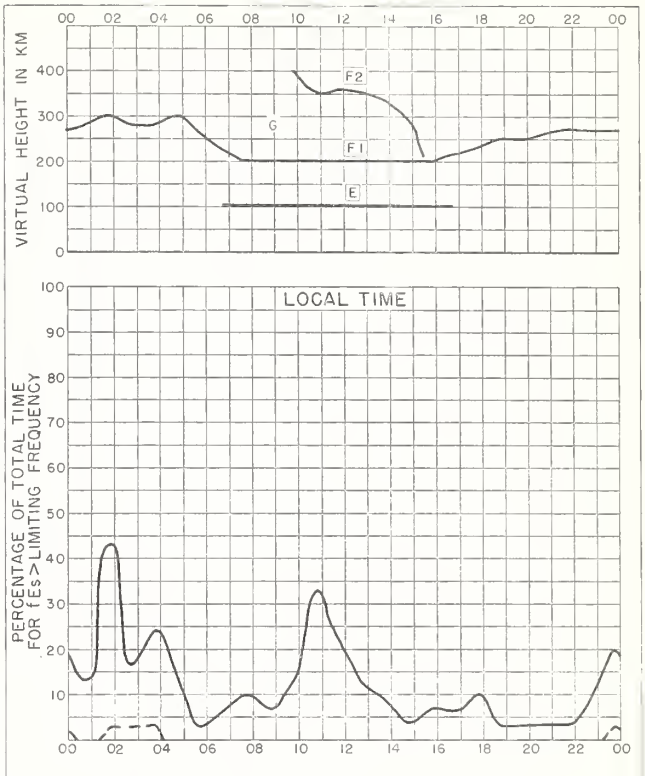


Fig. 110. HOBART, TASMANIA SEPTEMBER 1954

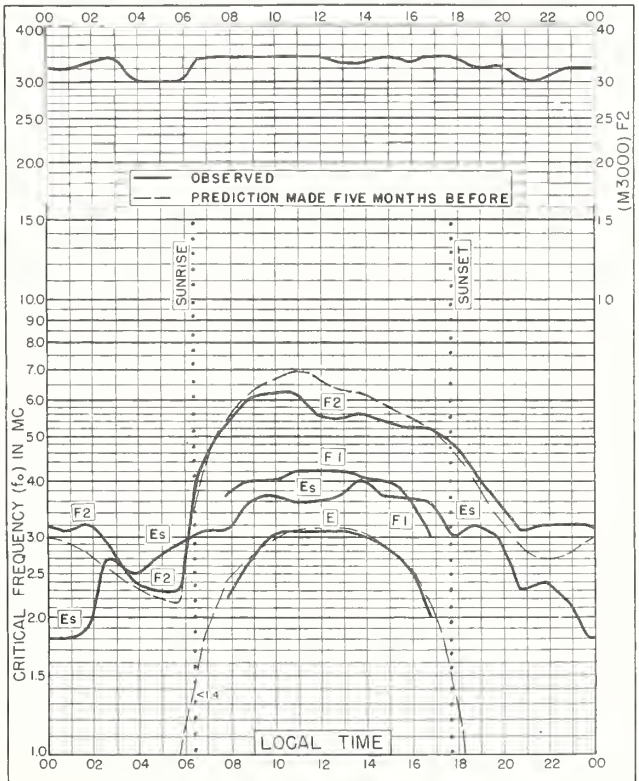


Fig. 111. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E AUGUST 1954

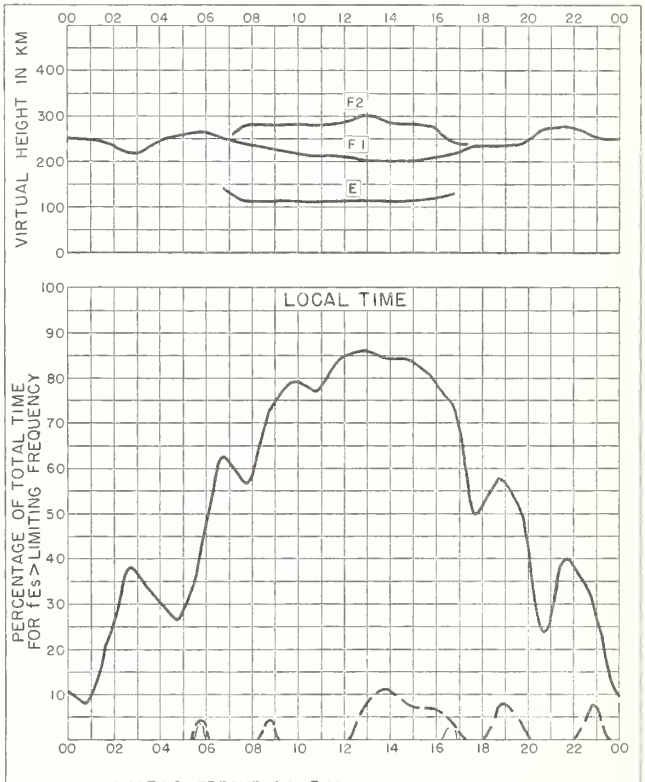


Fig. 112. TOWNSVILLE, AUSTRALIA AUGUST 1954

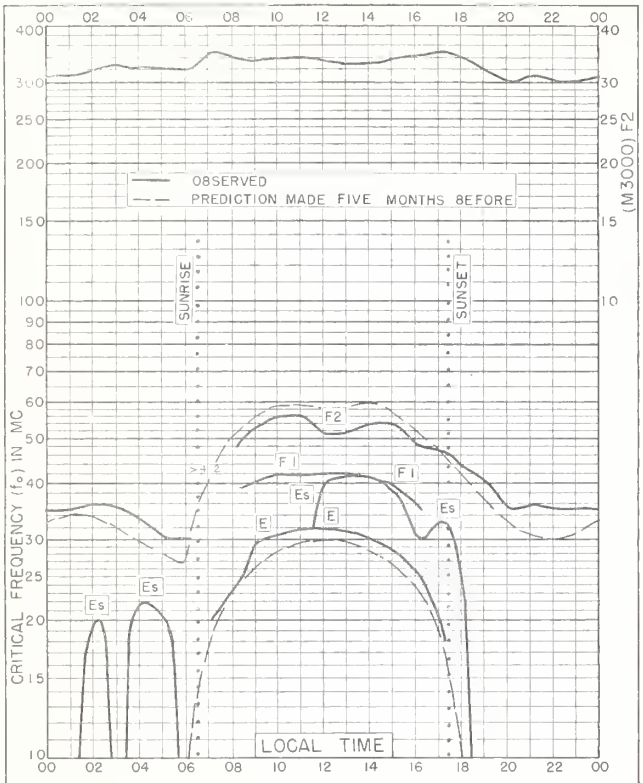


Fig. 113. BRISBANE, AUSTRALIA
27.5°S, 153.0°E AUGUST 1954

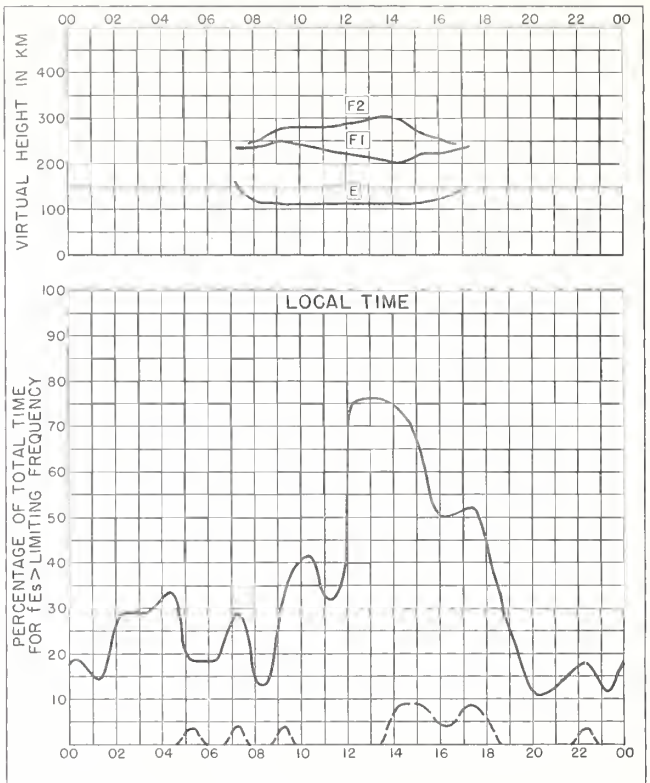


Fig. 114. BRISBANE, AUSTRALIA AUGUST 1954

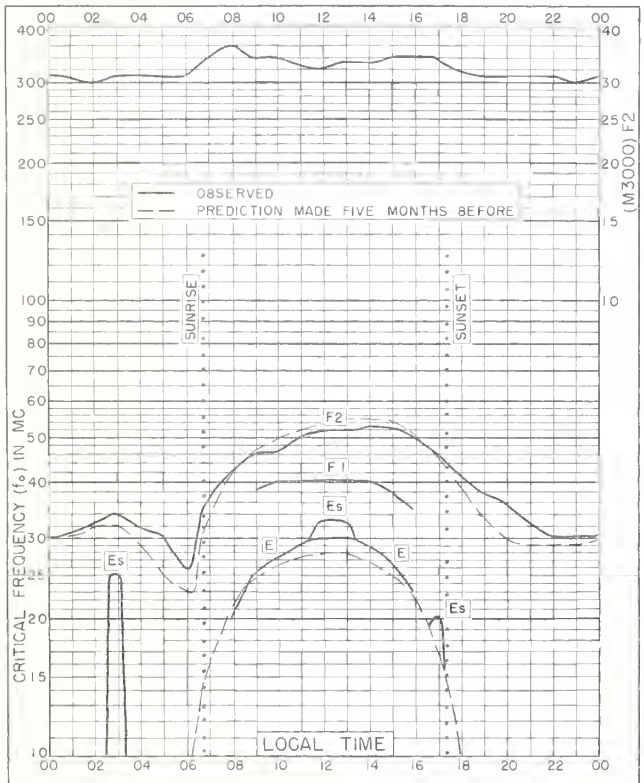


Fig. 115. CANBERRA, AUSTRALIA
35.3°S, 149.0°E. AUGUST 1954

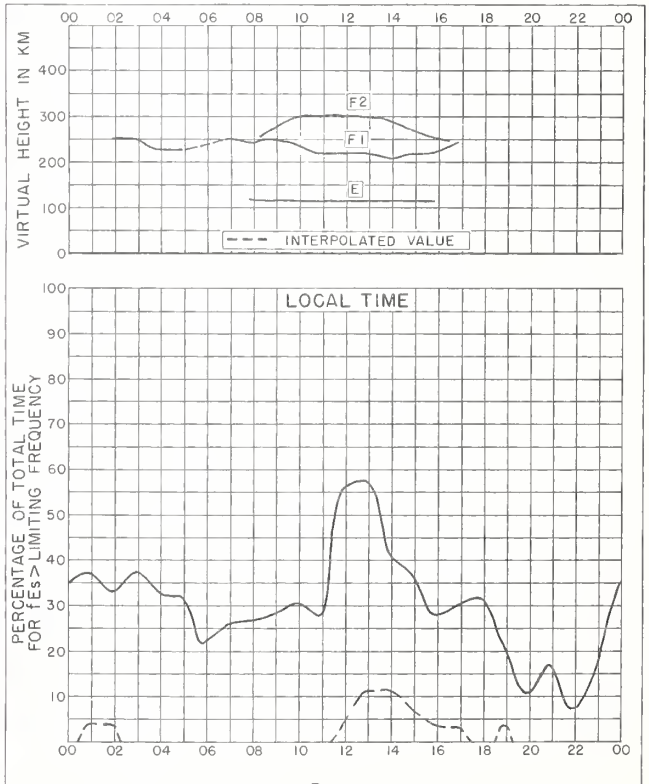


Fig. 116. CANBERRA, AUSTRALIA AUGUST 1954

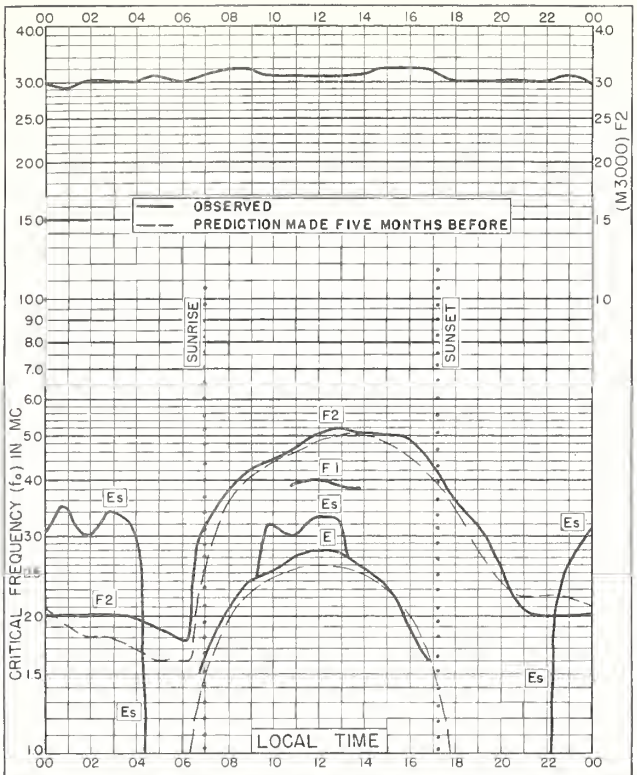


Fig. 117. HOBART, TASMANIA
42.9°S, 147.3°E AUGUST 1954

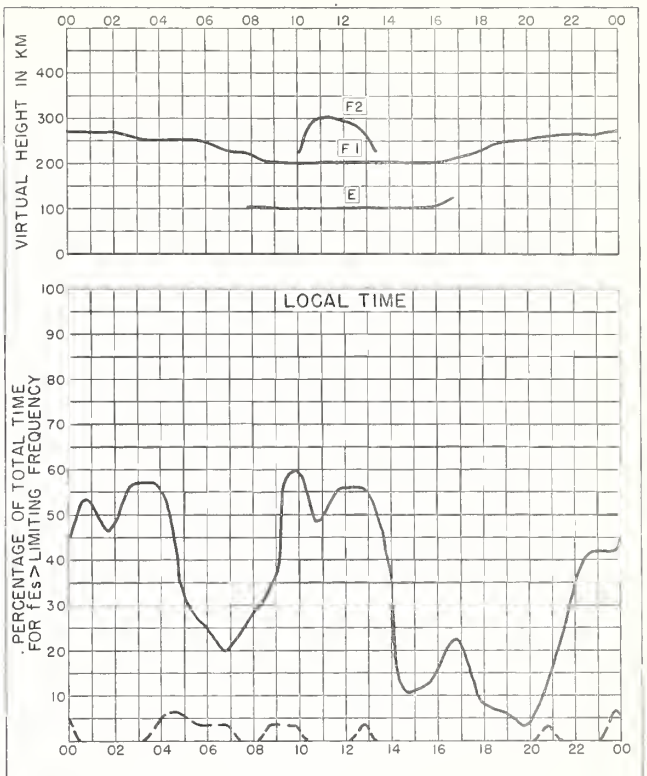


Fig. 118. HOBART, TASMANIA AUGUST 1954

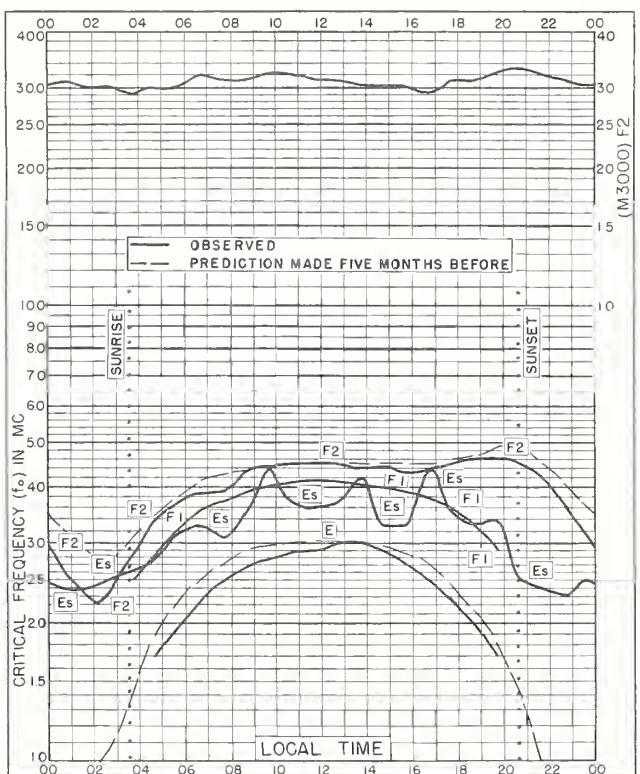


Fig. 119. INVERNESS, SCOTLAND
57.4°N, 4.2°W JULY 1954

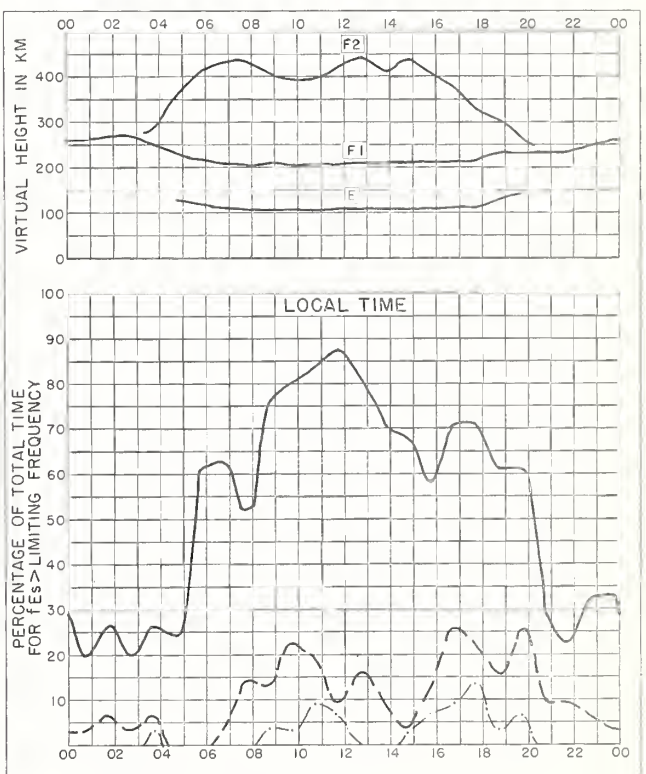


Fig 120. INVERNESS, SCOTLAND JULY 1954

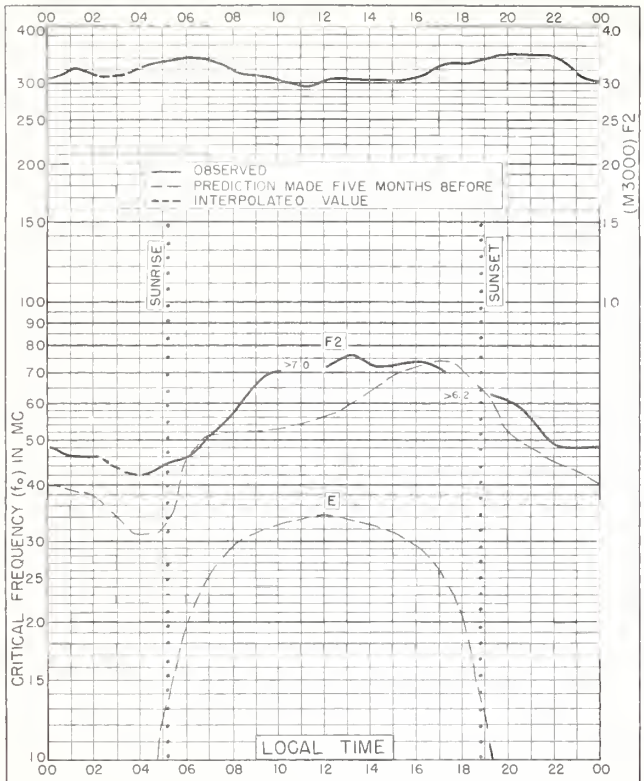


Fig. 121. DELHI, INDIA
28.6°N, 77.1°E JULY 1954

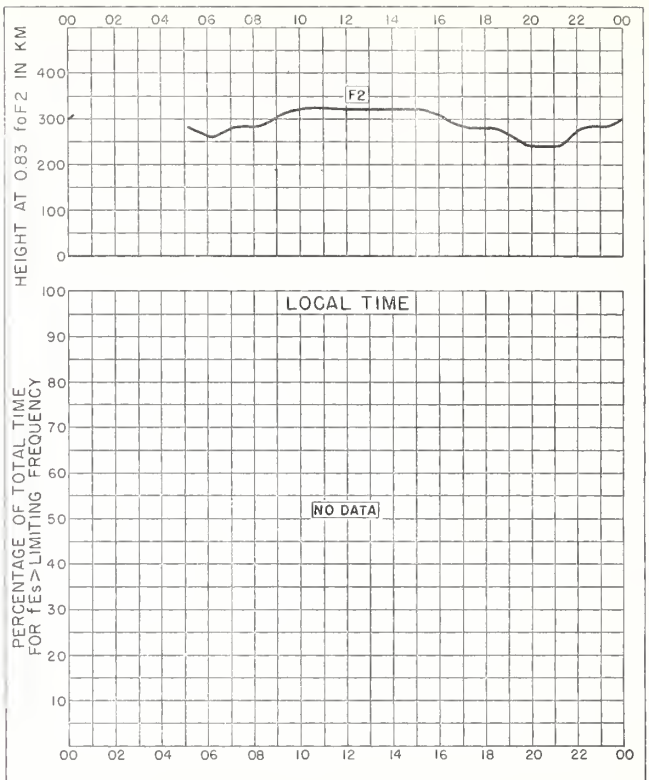


Fig. 122. DELHI, INDIA JULY 1954

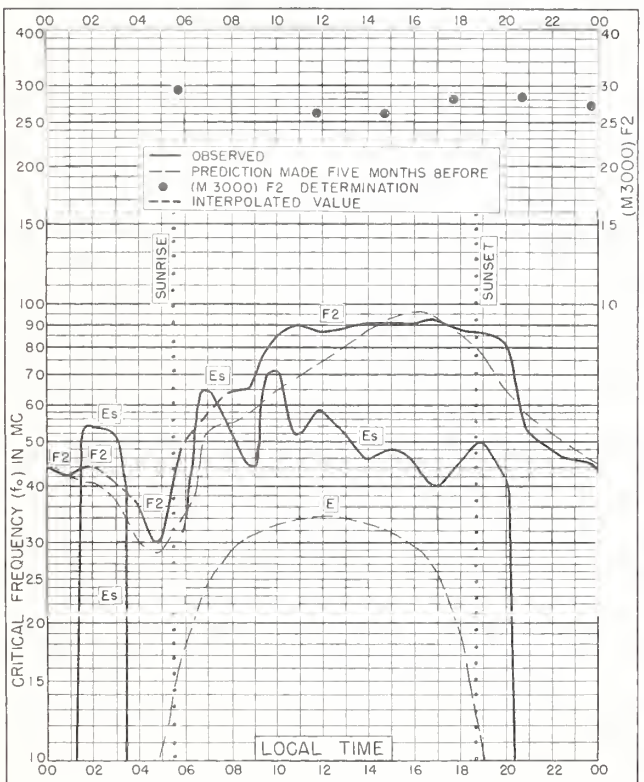


Fig. 123. CALCUTTA, INDIA
22.6°N, 88.4°E JULY 1954

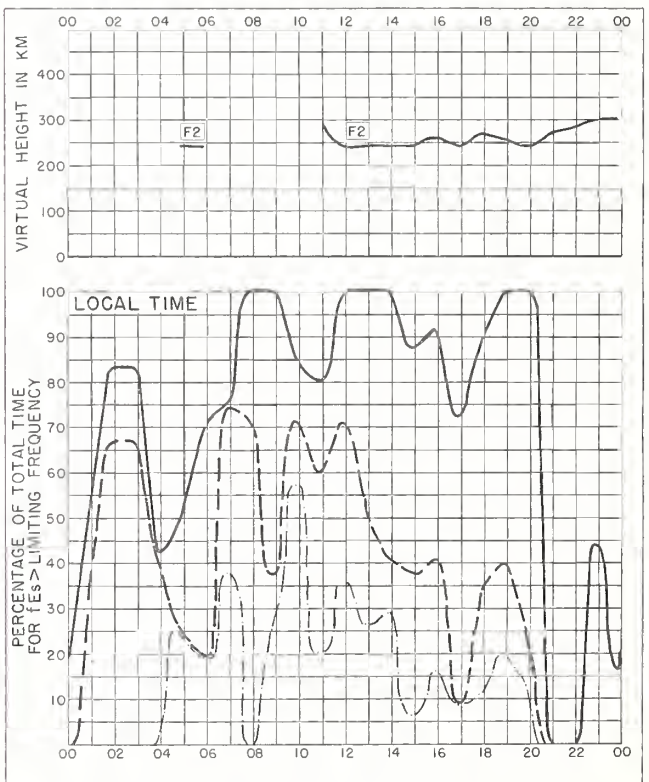


Fig. 124. CALCUTTA, INDIA JULY 1954

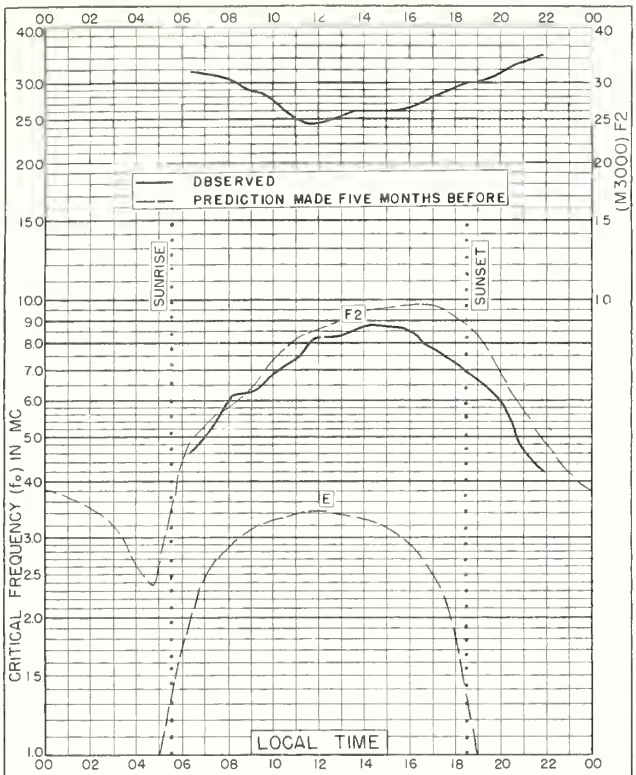


Fig. 125. BOMBAY, INDIA
19.0°N, 73.0°E JULY 1954

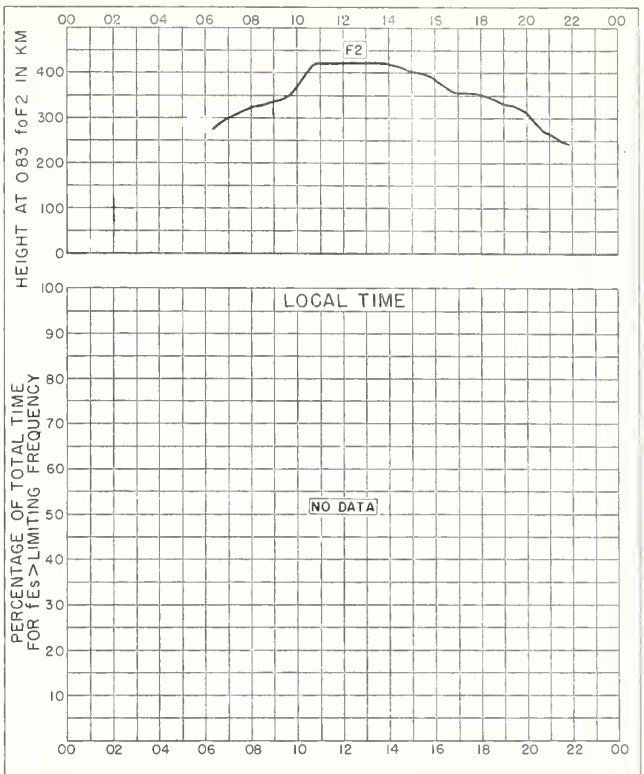


Fig. 126. BOMBAY, INDIA JULY 1954

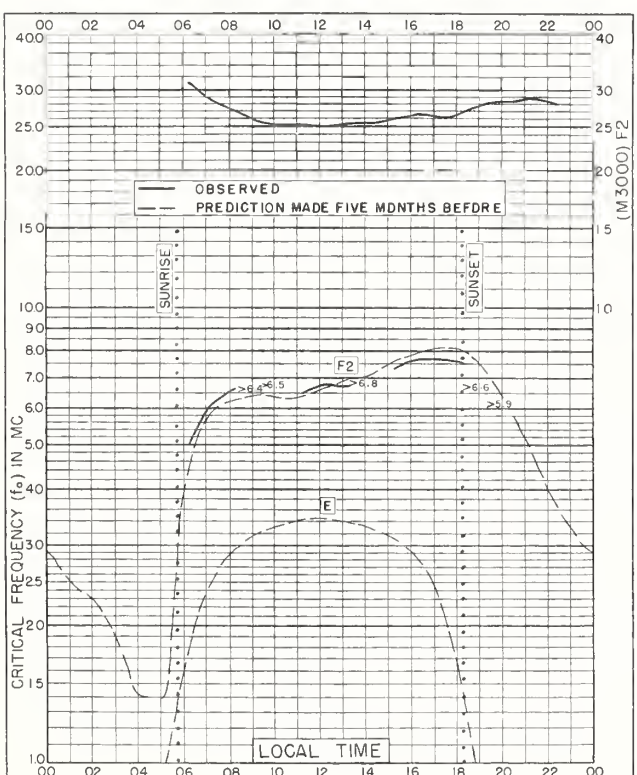


Fig. 127. MADRAS, INDIA
13.0°N, 80.2°E JULY 1954

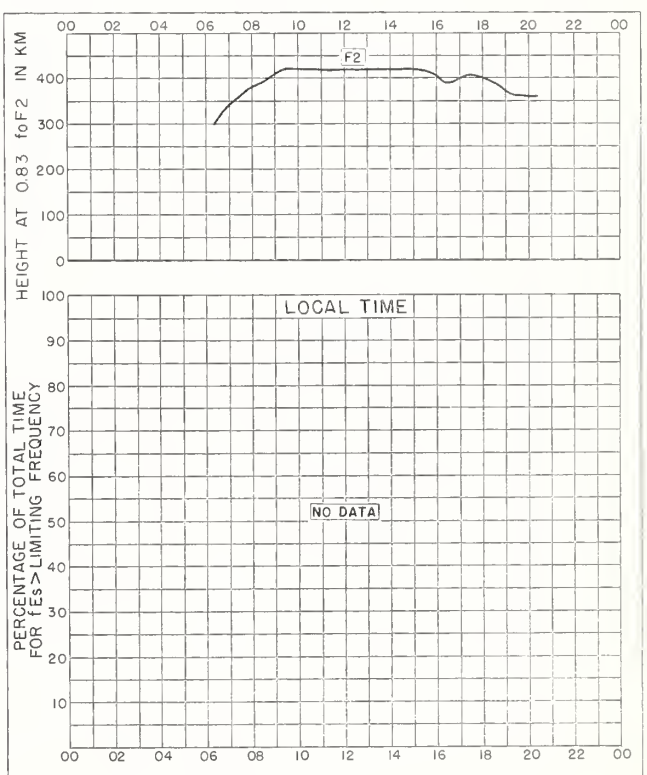


Fig. 128. MADRAS, INDIA JULY 1954

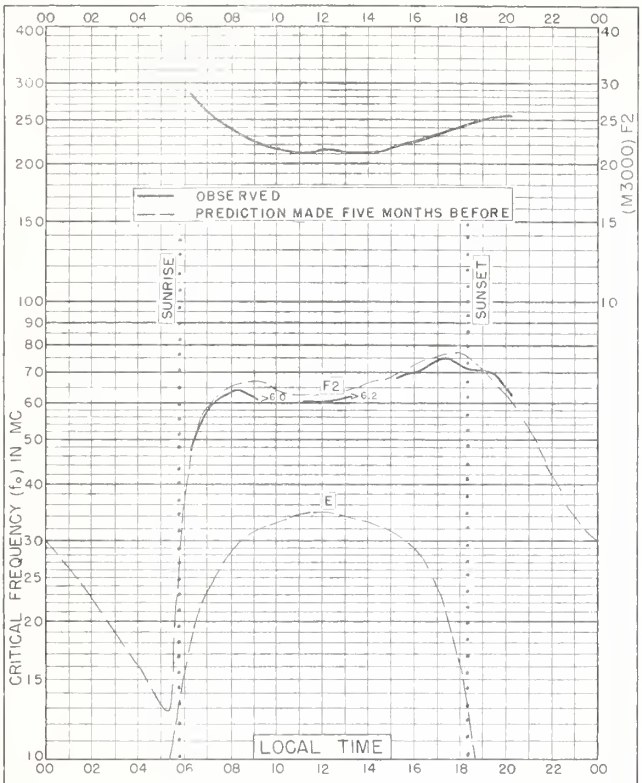


Fig. 129. TIRUCHY, INDIA
10.8°N, 78.8°E JULY 1954

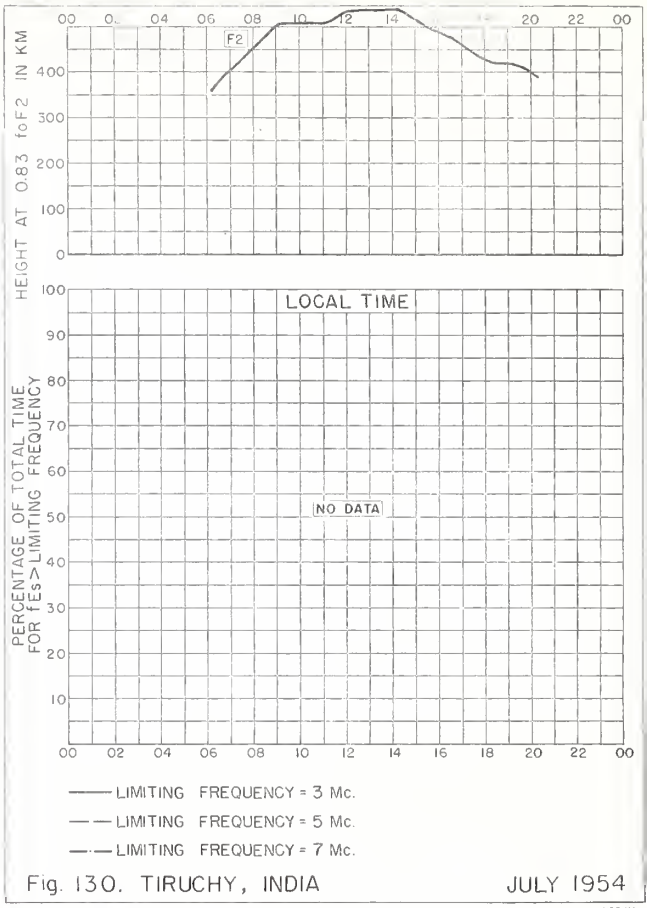


Fig. 130. TIRUCHY, INDIA JULY 1954

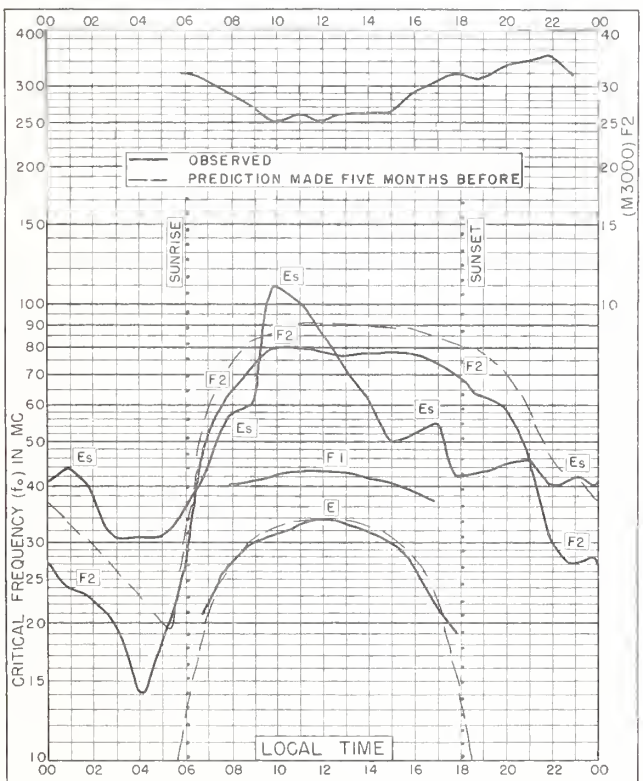


Fig 131. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8° E JULY 1954

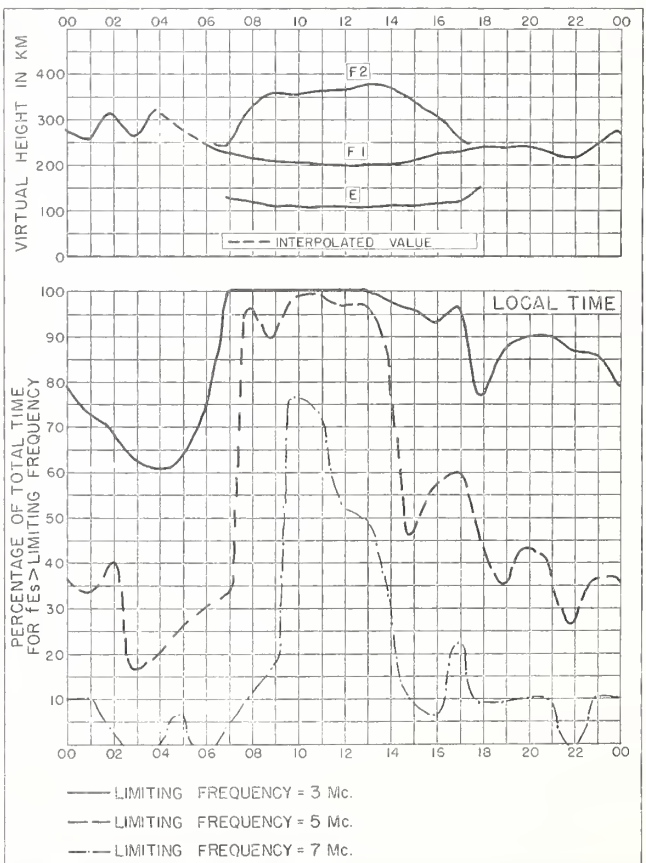


Fig. 132. SINGAPORE, BRITISH MALAYA JULY 1954

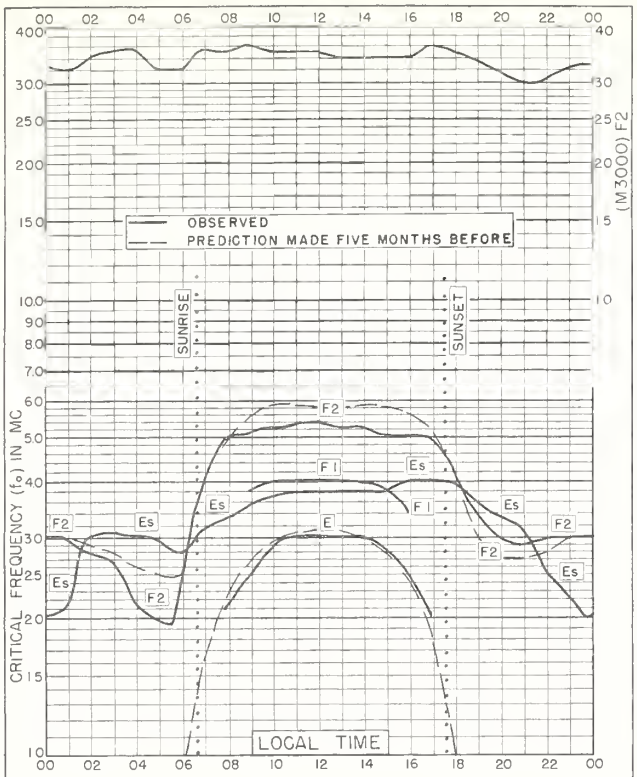


Fig. 133. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E JULY 1954

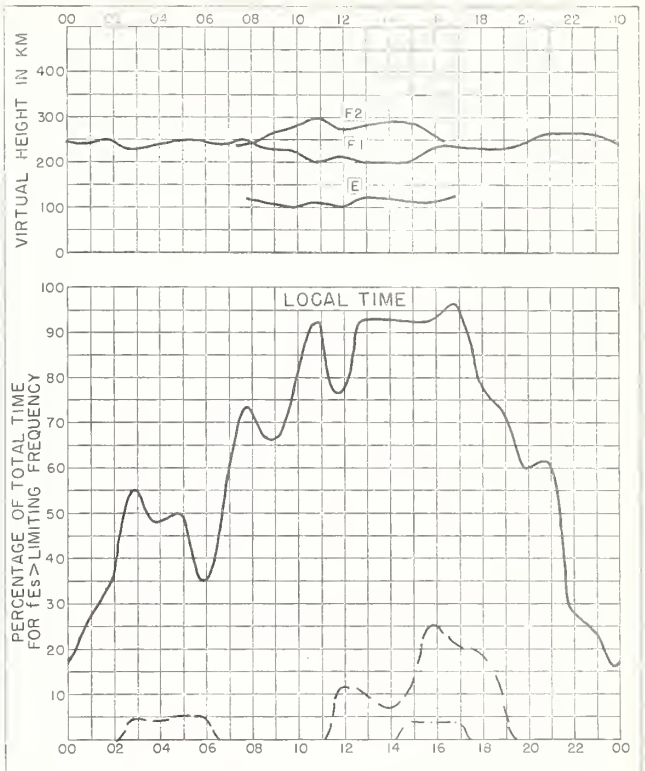


Fig. 134. TOWNSVILLE, AUSTRALIA JULY 1954

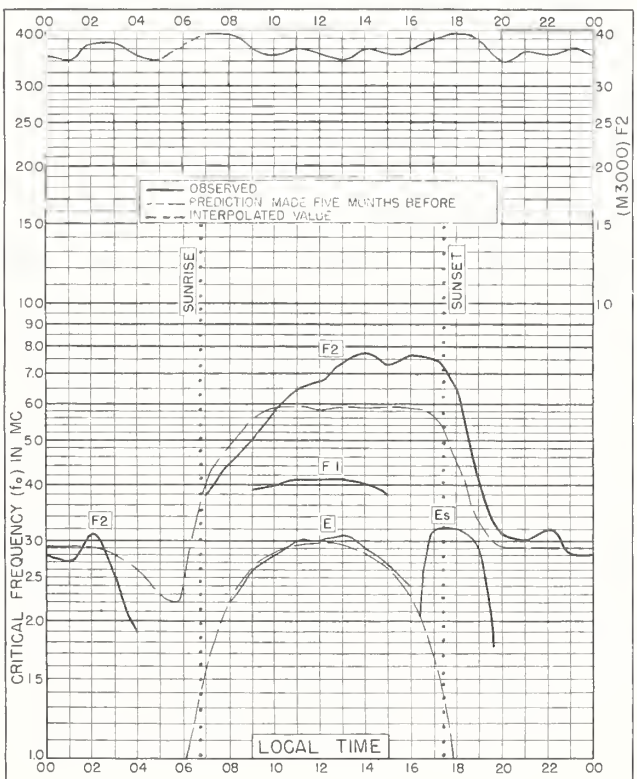


Fig. 135. SAO PAULO, BRAZIL
23.5°S, 46.5°W JULY 1954

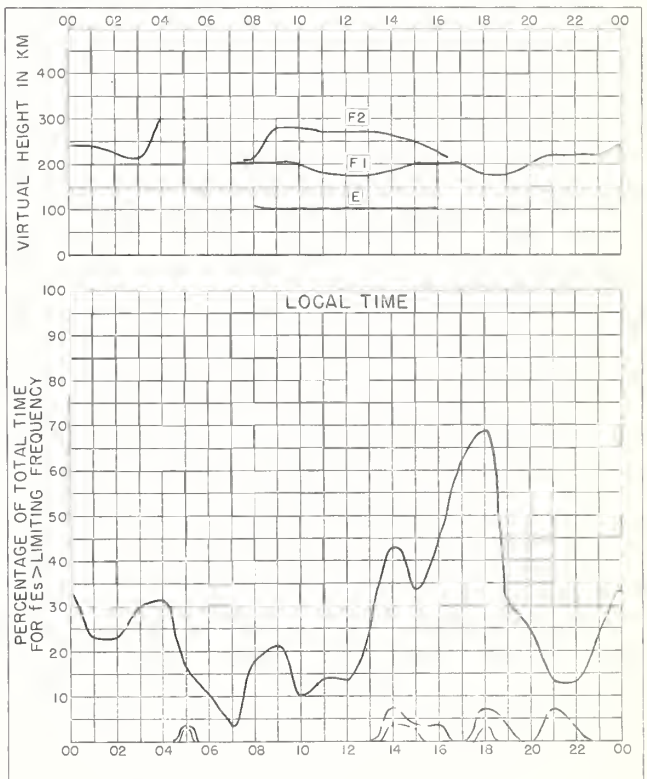


Fig. 136. SAO PAULO, BRAZIL JULY 1954

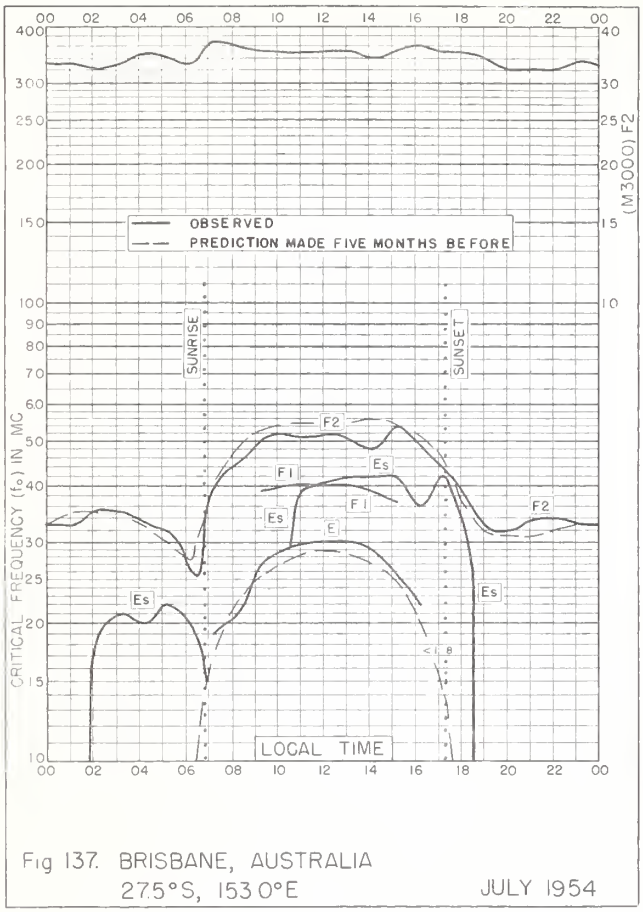


Fig 137. BRISBANE, AUSTRALIA
27.5°S, 153.0°E JULY 1954

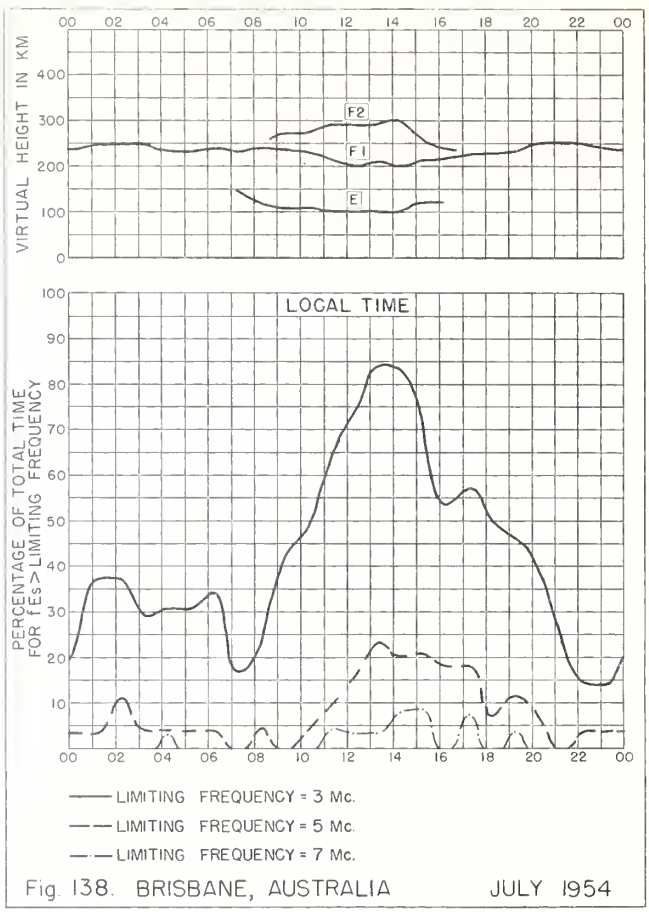


Fig. 138. BRISBANE, AUSTRALIA JULY 1954

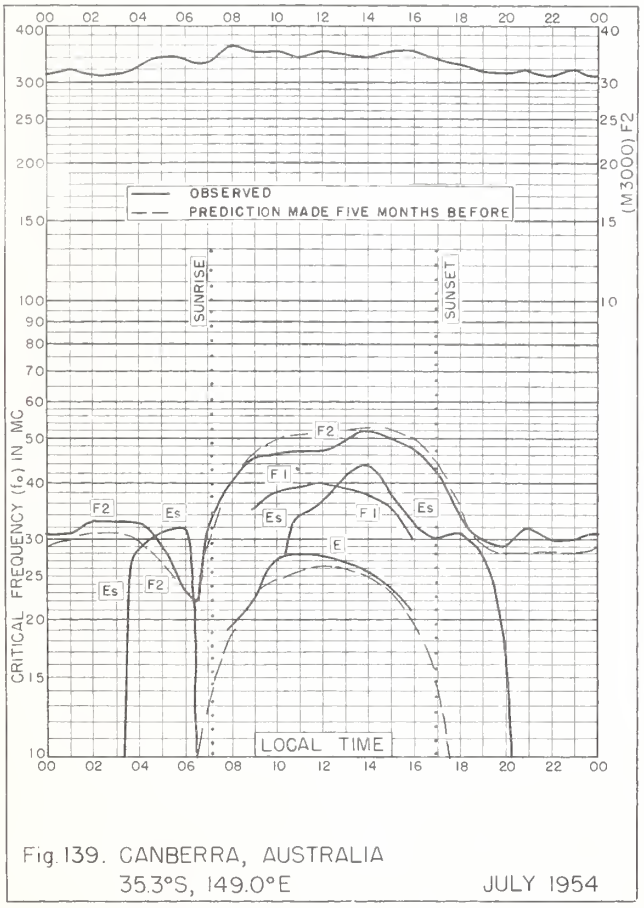


Fig.139. CANBERRA, AUSTRALIA
35.3°S, 149.0°E JULY 1954

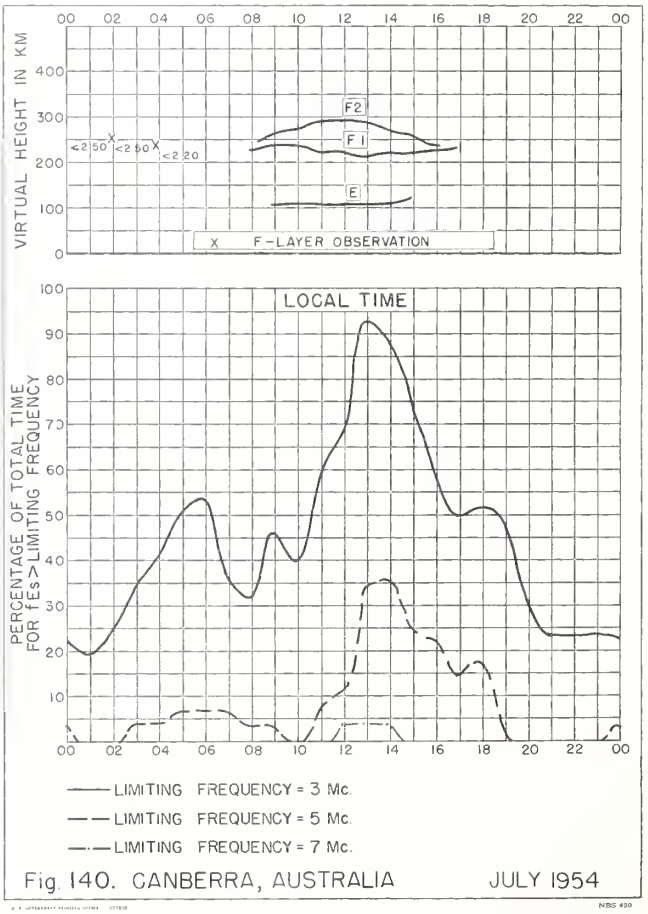


Fig. 140. CANBERRA, AUSTRALIA JULY 1954

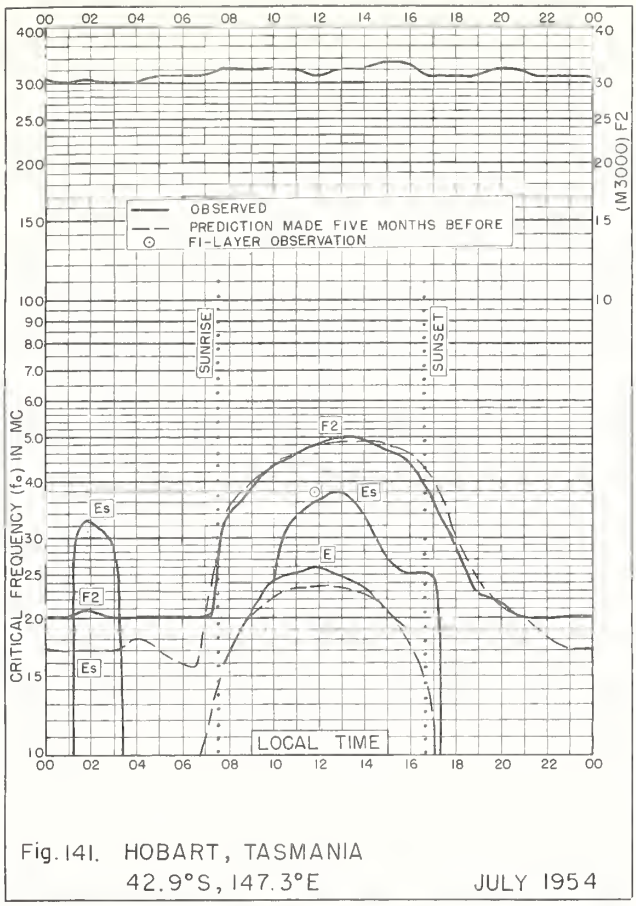


Fig. 141. HOBART, TASMANIA
42.9°S, 147.3°E JULY 1954

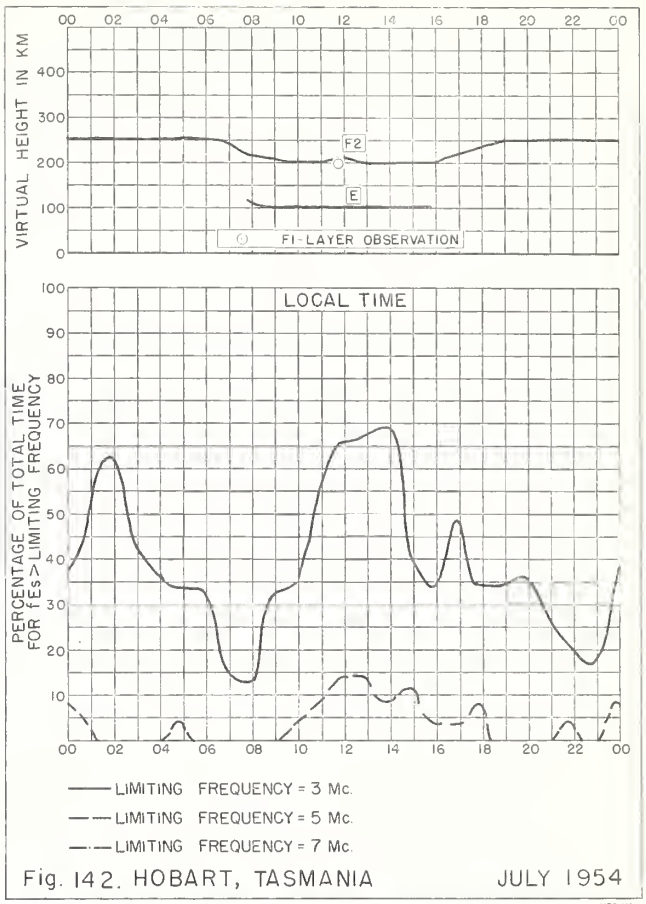


Fig. 142. HOBART, TASMANIA JULY 1954

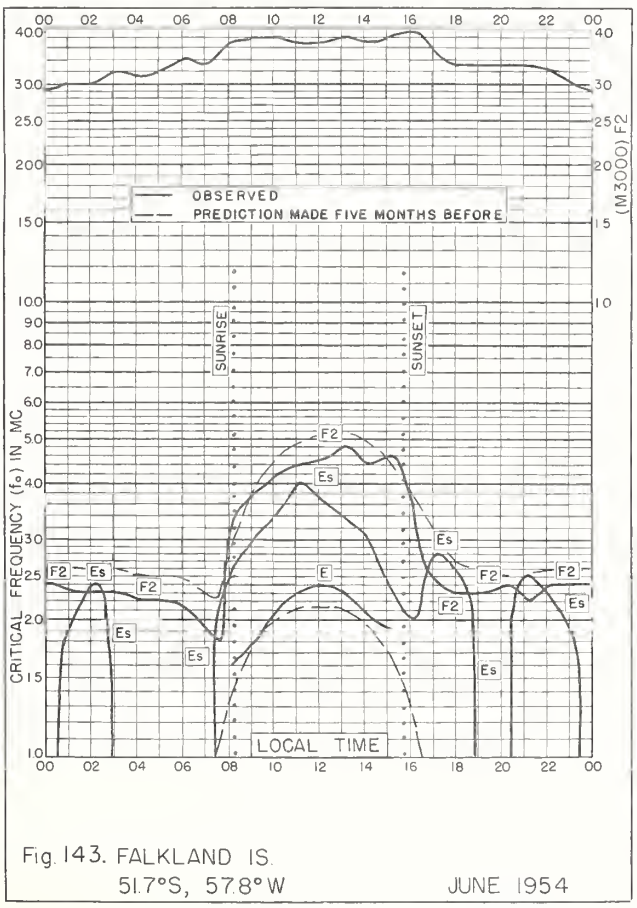


Fig. 143. FALKLAND IS.
51.7°S, 57.8°W JUNE 1954

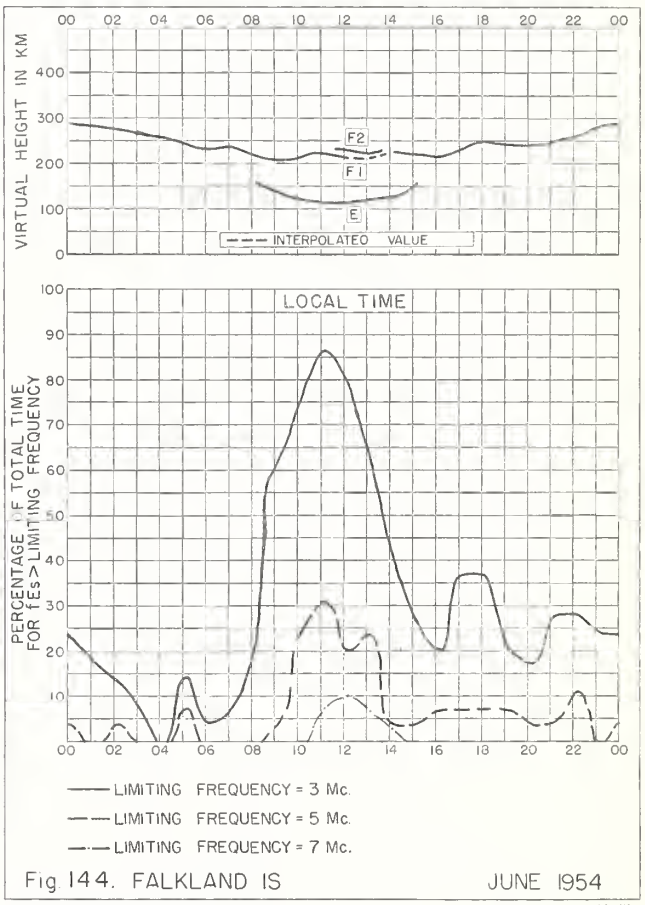


Fig. 144. FALKLAND IS JUNE 1954

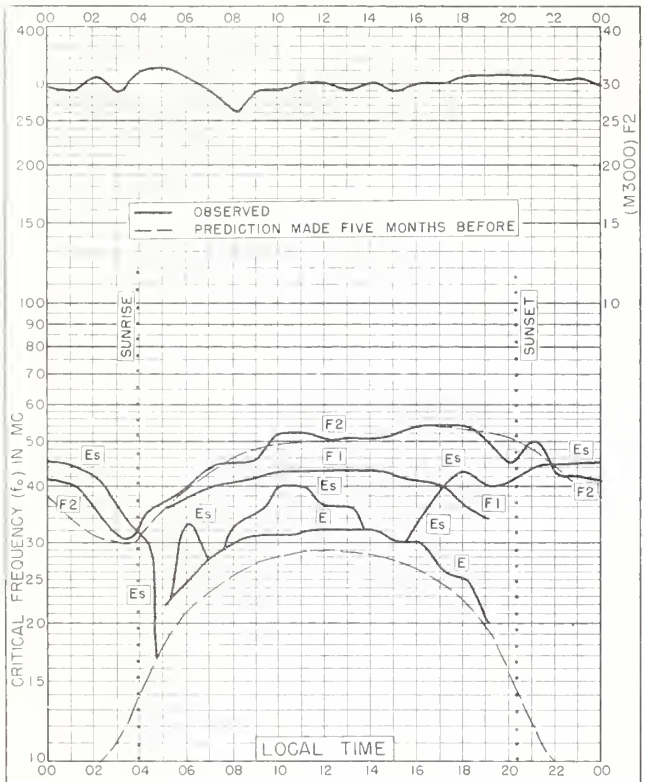


Fig. 145. MACQUARIE I.
54 5°S, 159.0°E JANUARY 1953

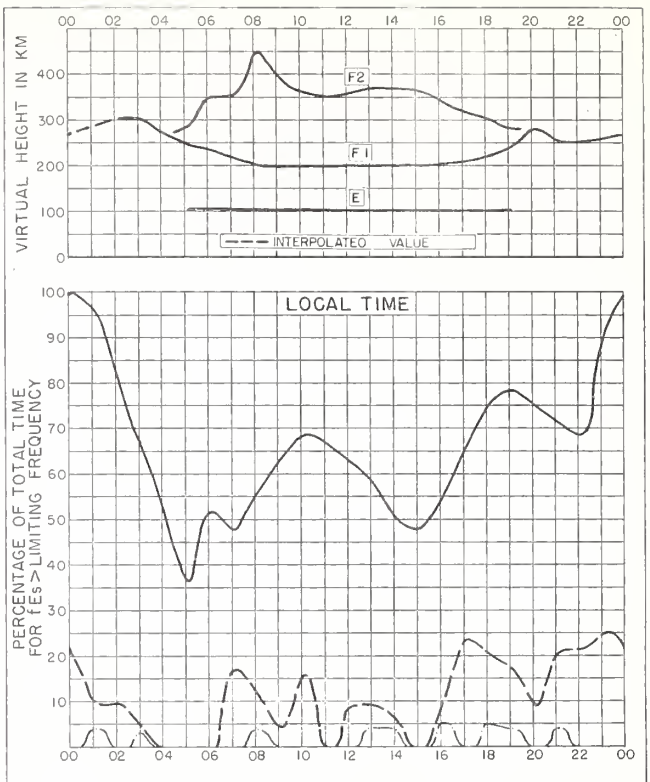


Fig 146. MACQUARIE I. JANUARY 1953

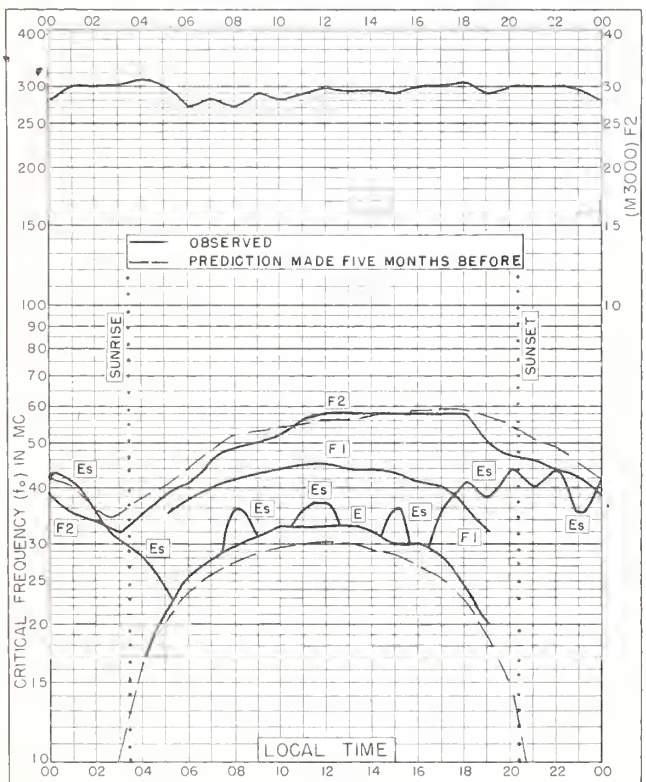


Fig. 147. MACQUARIE I.
54.5°S, 159.0°E DECEMBER 1952

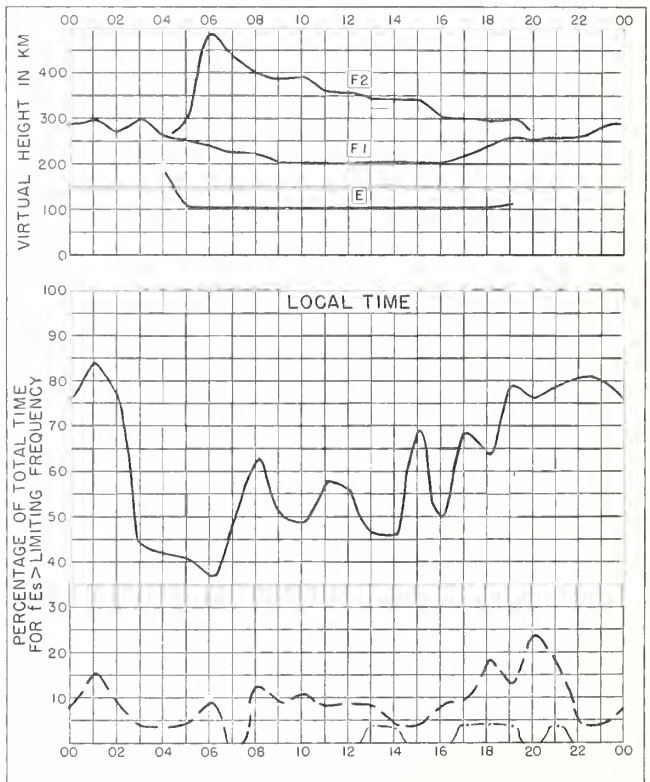


Fig. 148. MACQUARIE I. DECEMBER 1952

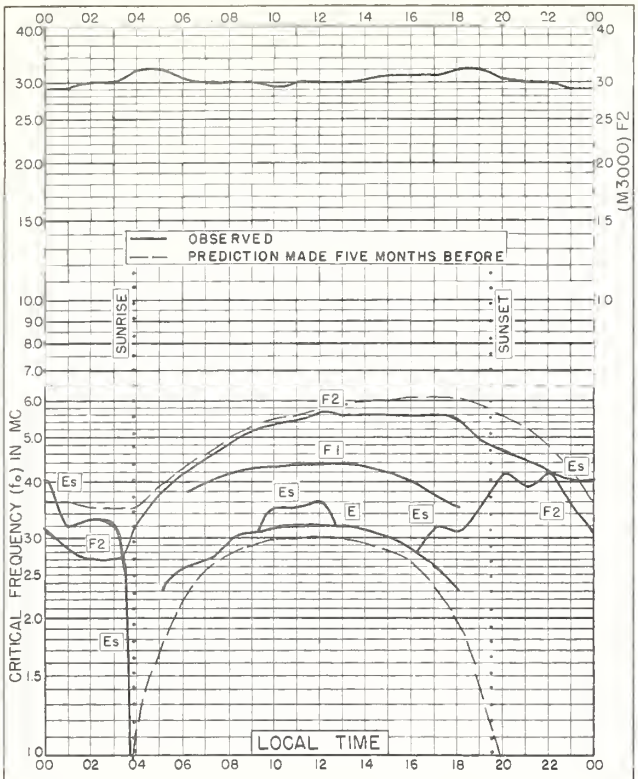


Fig. 149. MACQUARIE I.
54.5°S, 159.0°E NOVEMBER 1952

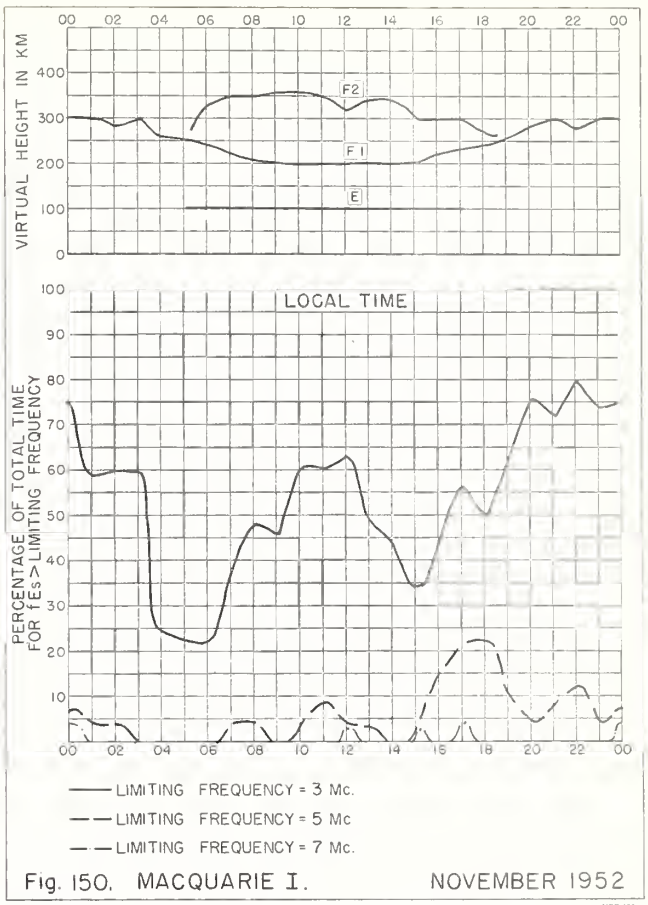


Fig. 150. MACQUARIE I. NOVEMBER 1952

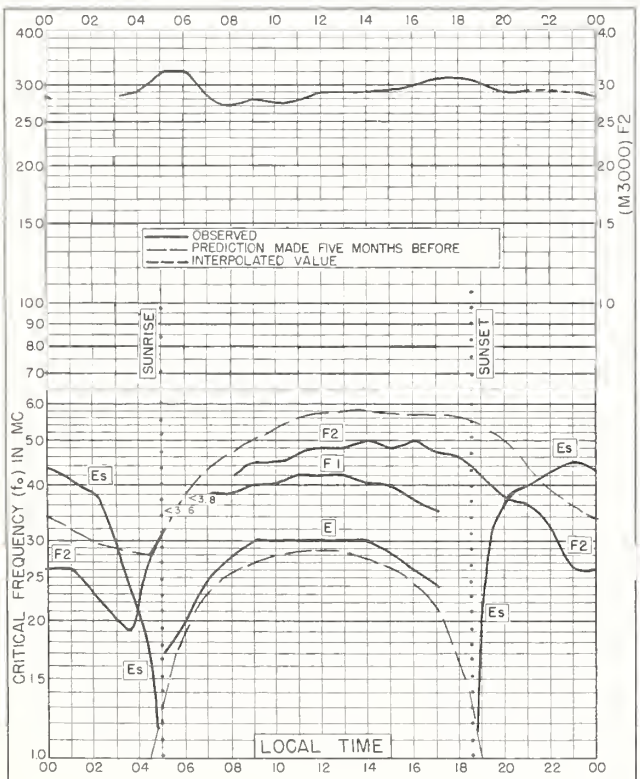


Fig. 151. MACQUARIE I.
54.5°S, 159.0°E OCTOBER 1952

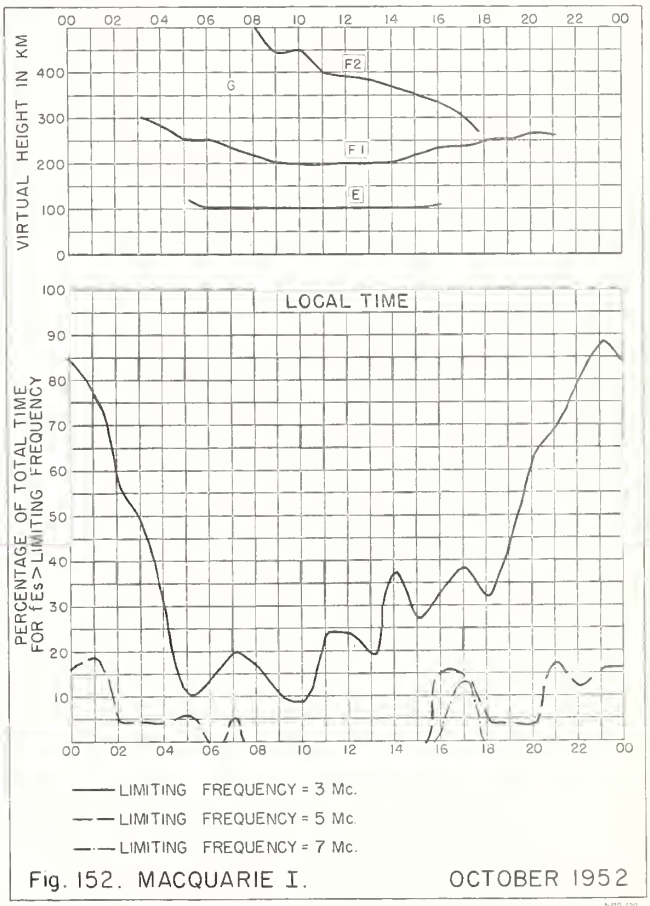


Fig. 152. MACQUARIE I. OCTOBER 1952

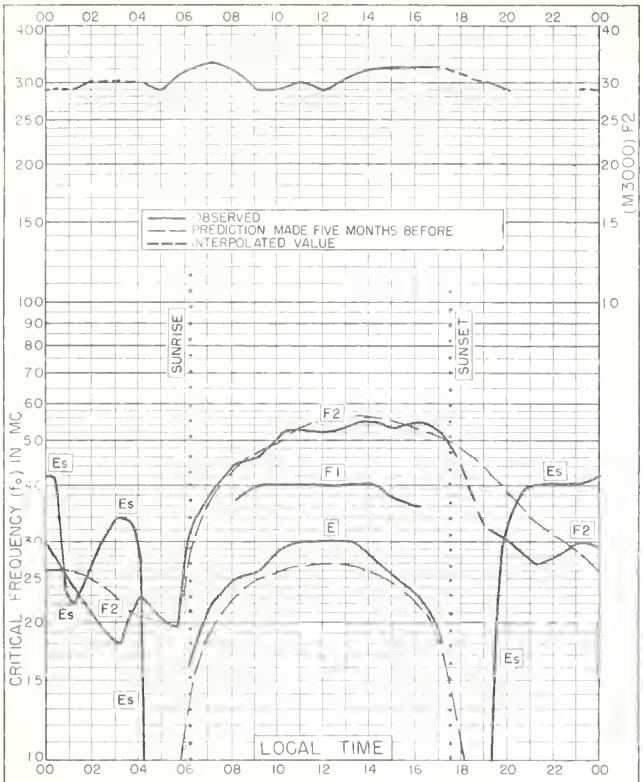


Fig. 153. MACQUARIE I.
54.5°S, 159.0°E SEPTEMBER 1952

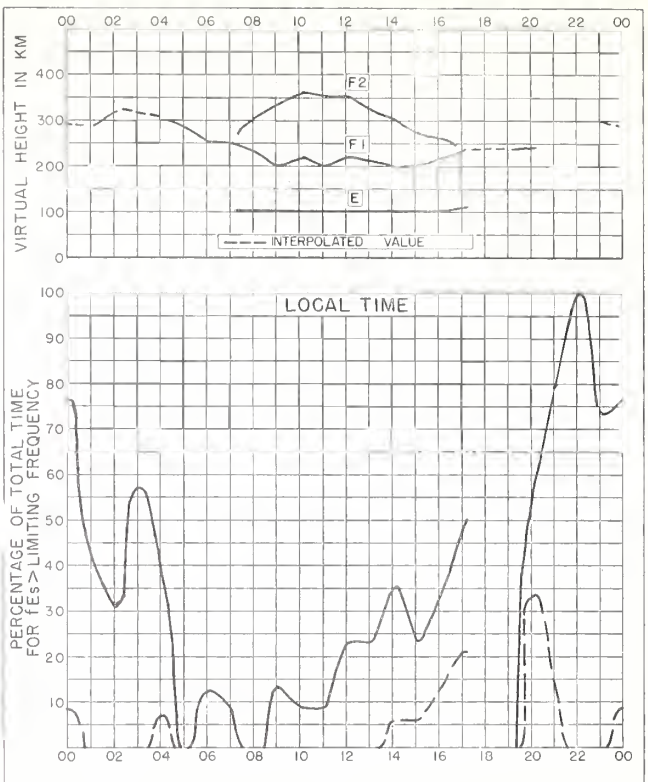


Fig. 154. MACQUARIE I. SEPTEMBER 1952

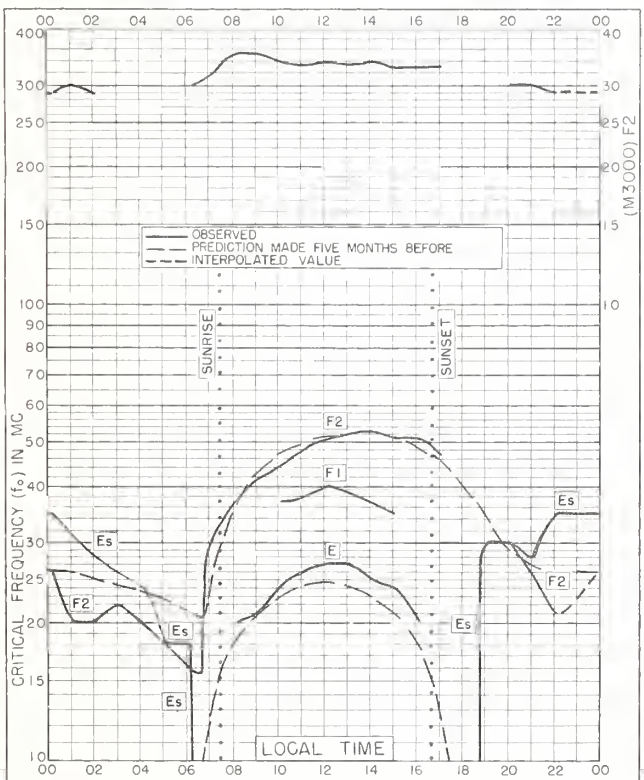


Fig. 155. MACQUARIE I.
54.5°S, 159.0°E AUGUST 1952

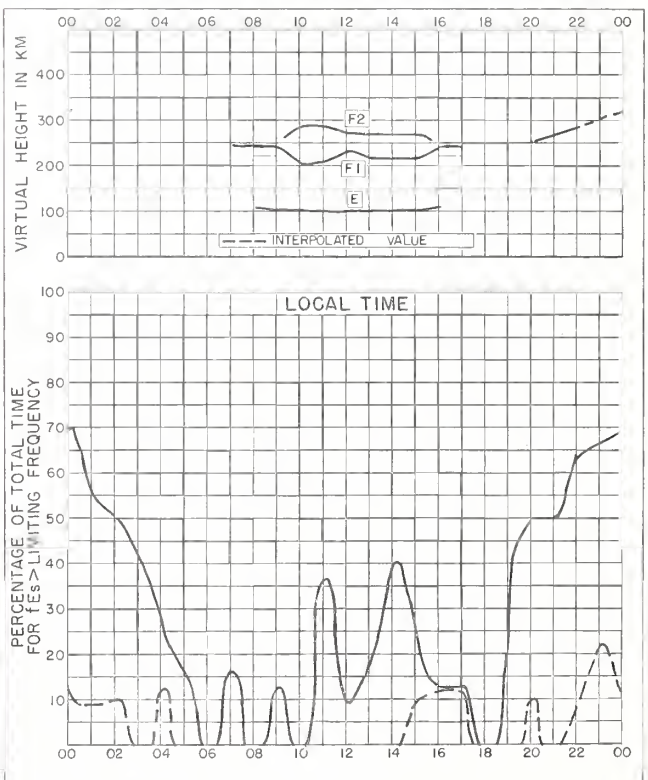


Fig. 156. MACQUARIE I. AUGUST 1952

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