CRPL-F133

FOR OFFICIAL USE

IONOSPHERIC DATA

ISSUED
SEPTEMBER 1955

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

CRPL-F133

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
26 Sept. 1955

IONOSPHERIC DATA

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, plus an additional symbol, R: "Scaling of characteristic is influenced or prevented by absorption in the neighborhood of the critical frequency," (May 1955).

a. For all ionospheric characteristics:

Values missing because of A, C, F, L, M, N, Q, R, 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 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; the symbol D, only when it replaces a frequency characteristic.

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	27	8	18	49	57	96	111	123	122	77	20
July	22	8	20	51	60	101	108	125	116	73	
June	18	9	21	52	63	103	108	129	112	67	
May	16	10	22	52	68	102	108	130	109	67	
April	13	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 72 and figures 1 to 144 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

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

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

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

University of Graz:
Graz, Austria

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

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

Danish National Committee of URSI:
Godhavn, Greenland

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

Indian Council of Scientific and Industrial Research, Radio Research Committee, New Delhi, India:
Ahmedabad, India (Physical Research Laboratory)
Bombay, India (All India Radio)
Calcutta, India (Institute of Radio Physics and Electronics)
Delhi, India (All India Radio)
Madras, India (All India Radio)
Tiruchy (Tiruchirapalli), India (All India Radio)

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:
Tromso, Norway

Manila Observatory:
Baguio, P. I.

United States Army Signal Corps:
Adak, Alaska
Ft. Monmouth, New Jersey

United States Army Signal Corps (continued):
- 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.
- 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 73 through 84 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 85 presents ionosphere character figures for Washington, D. C., during August 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.

RADIO PROPAGATION QUALITY FIGURES

Tables 86a and 86b give for July 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 87 through 89 give the observations of the solar corona during August 1955, obtained at Climax, Colorado, by the High Altitude Observatory of Harvard University and the University of Colorado. Tables 90 through 92 list the coronal observations obtained at

Sacramento Peak, New Mexico, during August 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 87 gives the intensities of the green (5303A) line of the emission spectrum of the solar corona; table 88 gives similarly the intensities of the first red (6374A) coronal line; and table 89, the intensities of the second red (6702A) coronal line; all observed at Climax in August 1955.

Table 90 gives the intensities of the green (5303A) coronal line; table 91, the intensities of the first red (6374A) coronal line; and table 92, the intensities of the second red (6702A) coronal line; all observed at Sacramento Peak in August 1955.

The following symbols are used in tables 87 through 92; a, observation of low weight for whole limb (if in date column) or for portion of limb indicated; -, corona not visible; and X, no observation for whole limb (if in date column) or for portion of limb indicated.

RELATIVE SUNSPOT NUMBERS

Table 93 lists the daily provisional Zürich relative sunspot number, R_Z, for August 1955, as communicated by the Swiss Federal Observatory. Table 94 contains the daily American relative sunspot number, R_A', for July 1955, as compiled by the Solar Division, American Association of Variable Star Observers.

OBSERVATIONS OF SOLAR FLARES

Table 95 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 96 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 arithmetic mean of the subjective classification by all observatories of each day's magnetic activity on a scale of 0 (quiet) to 2 (storm). The magnetically quiet and disturbed days are selected by the international scheme outlined on pages 219-227 in the December 1943 issue of <u>Terrestrial Magnetism and Atmospheric Electricity</u>. 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 12 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).

SUDDEN IONOSPHERE DISTURBANCES

Tables 97 and 98 list, respectively, the sudden ionosphere disturbances observed at Washington, D. C., for August 1955 and at Riverhead, New York, for July and August 1955.

Table 1

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	3.7					3.2	3.1
01	270	3.2					3.0	3.05
02	270	3.0					2.4	3.1
03	280	2.6					2.7	3.1
04	280	2.4					2.3	3.1
05	270	2.5					2.9	3.2
06	250	3.0	230	3.1	120	1.7	3.5	3.3
07	290	4.5	220	3.7	110	2.4	3.8	3.2
08	300	5.1	210	4.0	110	2.7	4.0	3.2
09	300	5.5	200	4.2	100	2.9	4.4	3.25
10	320	5.6	200	4.4	100	3.1	4.3	3.2
11	340	5.5	200	4.5	100	3.3	4.3	3.1
12	350	5.5	200	4.5	100	3.4	4.2	3.0
13	360	5.5	200	4.4	100	3.4	4.1	3.0
14	350	5.4	200	4.4	100	3.3	3.8	3.05
15	330	5.4	200	4.2	100	3.2	3.9	3.1
16	330	5.4	210	4.1	110	2.9	3.9	3.1
17	300	5.5	220	3.8	110	2.5	4.2	3.1
18	270	5.6	230	3.4	120	2.0	3.3	3.1
19	250	6.0			---	---	3.1	3.1
20	240	6.2					3.2	3.15
21	240	5.4					3.1	3.1
22	240	4.7					3.1	3.1
23	250	4.2					3.1	3.1

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

Table 2

Fairbanks, Alaska (64.9°N, 147.8°W) July 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	(4.0)					4.2	(3.1)
01	270	(3.9)					4.0	(3.1)
02	200	4.0	---	---	---	---	4.6	3.1
03	310	4.2	240	(2.9)	---	---	5.1	3.0
04	350	4.2	220	(3.2)	110	(2.0)	4.5	3.0
05	360	4.4	210	3.4	110	(2.1)	4.4	3.0
06	380	4.6	200	3.6	100	2.4	4.6	2.9
07	390	4.7	200	3.0	100	2.5	4.7	3.0
08	400	4.0	200	4.0	100	2.7	4.0	2.9
09	400	4.6	200	4.0	100	2.8	4.9	2.8
10	420	4.0	200	4.1	100	2.9	4.2	2.8
11	420	4.8	200	4.2	100	2.9	4.3	2.9
12	410	4.8	200	4.2	100	(3.0)	4.2	2.9
13	430	4.7	200	4.2	100	(3.0)	4.0	2.8
14	400	4.0	200	4.2	100	(2.8)	3.4	2.95
15	380	4.8	200	4.2	100	2.8	3.4	3.0
16	350	4.8	200	4.0	100	2.7	2.0	3.0
17	340	4.7	210	3.9	100	2.5	<2.7	3.2
18	300	4.7	210	(3.6)	110	2.3	2.9	3.2
19	270	4.6	220	(3.5)	110	2.1	3.7	3.2
20	250	4.5	230	---	120	(1.8)	2.8	3.2
21	240	4.4	---	---	---	---	3.5	3.2
22	250	4.2			---	---	2.2	3.2
23	250	(4.2)					3.8	(3.1)

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

Table 3

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	(3.4)					4.6	3.1
01	310	3.1					4.8	3.05
02	320	3.2					4.4	3.1
03	(320)	(3.1)					4.9	(3.2)
04	(320)	3.5	---	---	---	---	4.8	3.2
05	290	3.7	250	---	110	2.1	4.0	3.2
06	340	4.1	220	3.6	110	2.4	4.6	3.2
07	370	4.2	210	3.8	110	2.5	3.4	3.0
08	380	4.5	200	4.0	110	2.7	3.3	3.0
09	380	4.6	210	4.1	100	2.9	3.1	2.05
10	380	4.8	200	4.1	100	3.0	3.2	3.0
11	380	4.8	200	4.2	100	3.0		2.9
12	400	4.8	210	4.2	100	3.1		2.9
13	390	4.8	210	4.2	100	3.1		2.9
14	380	4.0	200	4.1	110	3.0		2.95
15	380	4.9	210	4.1	110	2.9		3.0
16	360	4.9	220	4.0	110	2.8	3.2	3.0
17	360	4.9	220	4.0	110	2.7	4.2	3.0
18	350	4.7	240	3.8	110	2.4	4.1	3.0
19	310	4.5	250	3.4	110	2.1	4.1	3.1
20	300	4.4	---	---	---	---	4.3	3.2
21	290	(4.0)			---	---	4.6	(3.15)
22	280	3.7					5.7	3.2
23	270	3.5					4.3	3.2

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

Table 4

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	4.5					3.1	3.1
01	260	3.9					2.6	3.0
02	270	3.6					2.5	3.0
03	280	3.6					2.5	3.0
04	310	3.7	270	2.7	140	1.3	2.5	2.9
05	300	4.4	240	3.3	120	1.9	3.0	2.9
06	370	4.0	230	3.6	110	2.4	3.6	2.8
07	360	5.2	220	3.0	110	2.7	4.0	2.9
08	380	5.3	220	4.0	100	2.9	4.9	2.9
09	360	5.3	210	4.2	100	3.0	6.0	2.9
10	360	5.4	200	4.2	100	3.1	6.0	2.9
11	380	5.3	200	4.3	100	3.1	5.4	3.0
12	370	5.3	200	4.3	110	3.1	4.7	3.0
13	400	5.0	200	4.4	110	3.1	4.4	3.0
14	400	4.9	200	4.3	110	3.0	4.0	2.95
15	380	4.9	200	4.2	100	3.0	4.0	3.0
16	370	4.8	210	4.0	110	2.8	3.6	3.0
17	340	4.7	220	4.0	110	2.6	3.8	3.0
18	320	4.8	240	3.7	110	2.2	4.0	3.0
19	290	5.0	250	---	120	1.7	4.0	3.05
20	270	5.5			---	---	4.4	3.1
21	250	6.1					4.5	3.1
22	250	5.0					3.6	3.1
23	250	5.2					3.8	3.1

Time: 100.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 5

Ft. Monmouth, New Jersey (40.0°N, 74.0°W) July 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	3.9					2.4	3.1
01	260	3.5					2.5	3.0
02	<270	3.2					2.5	3.0
03	<260	2.8					<2.0	3.1
04	260	2.5					<2.6	3.1
05	250	3.2	220	---	---	---	<2.0	3.3
06	320	4.0	220	3.5	120	(2.2)	3.6	3.2
07	350	4.5	220	3.9	110	(2.7)	4.4	3.1
08	370	4.9	210	4.1	110	(2.9)	4.6	3.1
09	350	5.0	200	4.3	110	(3.2)	4.5	3.1
10	370	5.2	200	4.4	110	(3.3)	4.1	3.0
11	380	5.3	200	4.4	110	---	3.8	3.0
12	390	5.2	190	4.4	110	---	4.2	3.0
13	400	5.2	<200	4.4	110	(3.4)	4.4	3.0
14	380	5.2	200	4.3	110	(3.3)	3.9	3.0
15	400	5.2	210	4.3	110	3.2	3.7	2.9
16	350	5.3	<220	4.2	110	(3.0)	3.5	3.0
17	330	5.5	220	3.9	110	2.7	3.9	3.0
18	300	5.7	230	3.5	120	(2.3)	4.6	3.1
19	250	5.8	---	---			3.6	3.1
20	240	6.0					3.4	3.1
21	240	5.6					4.0	3.1
22	250	4.8					3.6	3.0
23	260	4.4					3.0	3.0

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

Table 6

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	3.6					5.0	3.0
01	270	3.5					4.0	3.0
02	260	3.6					3.7	3.1
03	250	3.4					3.0	3.1
04	250	3.3					2.0	3.1
05	240	3.2	---	---			3.5	3.25
06	300	4.1	220	3.4	110	2.0	3.8	3.3
07	320	4.8	200	3.0	100	(2.5)	4.6	3.1
08	310	5.5	200	4.2	100	(2.0)	5.3	3.15
09	350	5.2	190	4.4	100	3.2	7.0	3.05
10	380	5.2	100	4.5	100	3.3	6.4	2.95
11	380	5.6	190	4.5	100	3.5	7.8	2.9
12	380	5.6	190	4.5	100	3.4	5.0	2.9
13	360	5.9	190	4.5	100	(3.5)	6.2	2.9
14	350	5.9	200	4.5	100	(3.3)	5.3	3.0
15	350	5.0	200	4.3	100	3.2	4.8	3.0
16	320	5.9	200	4.2	100	3.0	4.9	3.1
17	300	5.9	210	4.0	100	2.7	5.0	3.2
18	290	5.8	220	(3.6)	110	(2.2)	4.0	3.1
19	240	6.2	240	---			4.4	3.2
20	220	6.3					3.8	3.3
21	220	5.4					4.8	3.3
22	230	4.4					5.0	3.2
23	250	3.8					4.9	3.1

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

Table 7

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	(5.0)					3.9	(2.9)
01	300	(4.6)					3.8	3.0
02	270	5.1					3.8	3.15
03	250	4.6					3.8	3.1
04	250	(4.3)					3.6	(3.2)
05	240	(3.9)					3.6	3.35
06	240	4.3	240	---	---	---	3.3	3.4
07	260	5.5	220	(3.6)	110	(2.4)	4.3	3.5
08	270	5.8	210	(4.2)	110	2.7	4.9	3.4
09	320	5.8	210	4.5	100	(3.1)	5.8	3.2
10	350	5.8	200	4.6	100	(3.4)	6.2	3.1
11	380	5.9	200	4.7	100	(3.5)	7.9	2.9
12	400	6.6	(220)	(4.6)	100	(3.6)	7.8	2.8
13	370	6.9	220	4.6	110	(3.6)	7.6	2.9
14	350	7.4	210	4.6	100	(3.5)	7.0	2.9
15	350	7.8	220	(4.5)	100	(3.3)	7.4	2.85
16	340	7.9	220	4.4	100	>3.0	6.0	2.95
17	320	8.2	220	4.2	100	(2.8)	5.7	3.0
18	290	8.2	230	3.9	100	(2.3)	5.8	3.1
19	250	(8.0)	230	---	---	---	4.8	(3.2)
20	240	>6.8					4.5	(3.0)
21	260	(5.7)					>4.5	(3.1)
22	300	(5.2)					4.8	(2.9)
23	300	(5.2)					4.5	(2.8)

Time: 135.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 8

Maui, Hawaii (20.8°N, 156.5°W) — July 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	330	5.9					3.0	2.7
01	310	5.6					2.6	2.7
02	310	5.6					3.4	2.85
03	290	5.0					2.4	2.95
04	300	4.5					2.4	2.9
05	300	3.4					2.0	2.8
06	300	4.0	300	---	---	---	2.6	2.9
07	320	5.2	260	3.8	130	2.3	4.0	2.9
08	360	5.7	240	4.3	120	2.7	6.0	2.8
09	490	5.6	230	4.5	120	3.1	5.5	2.4
10	500	6.2	230	4.5	120	3.3	7.8	2.3
11	510	7.3	230	4.6	120	3.4	7.2	2.4
12	480	7.9	220	4.6	120	3.5	6.9	2.4
13	460	8.6	230	4.6	120	3.5	5.5	2.4
14	440	9.2	230	4.5	120	3.5	5.6	2.5
15	410	9.8	250	4.4	120	3.3	5.3	2.6
16	380	10.0	260	4.3	120	3.1	5.0	2.6
17	350	10.5	260	4.2	130	2.8	5.1	2.8
18	310	10.5	270	3.7	130	2.2	5.0	2.9
19	280	10.1	300	---			5.0	3.0
20	270	8.6					4.8	2.9
21	300	7.0					4.6	2.8
22	300	6.4					4.1	2.7
23	310	6.1					3.6	2.7

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

Table 9

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	5.1					2.1	3.0
01	270	5.2					2.5	3.0
02	250	5.0					<1.8	3.1
03	250	4.3					<1.7	3.1
04	260	3.9					<1.8	3.1
05	260	3.4					<2.0	3.1
06	260	3.6	---	---	---	---	<2.1	3.2
07	280	4.8	220	3.6	120	2.2	4.2	3.3
08	300	5.4	210	4.1	110	2.7	3.5	3.2
09	340	5.8	210	4.3	110	3.1	4.4	3.1
10	370	6.0	200	4.5	110	3.2	5.2	2.9
11	380	6.5	190	4.5	110	3.4	4.4	2.8
12	360	7.5	200	4.5	110	3.5	4.4	2.8
13	340	8.5	210	4.6	110	3.5	4.4	2.9
14	330	8.5	210	4.5	110	3.4	4.3	2.9
15	320	8.4	210	4.5	110	3.3	4.6	2.95
16	310	8.5	210	4.2	110	3.1	4.4	3.0
17	290	8.4	220	4.0	110	2.8	4.4	3.0
18	270	8.7	220	3.5	110	2.3	3.8	3.15
19	230	8.0	---	---			3.2	3.2
20	230	6.8					3.7	3.2
21	240	6.2					2.7	3.0
22	260	5.8					2.5	3.0
23	280	5.1					2.3	2.9

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

Table 10

Guam I. (13.6°N, 144.9°E) — July 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	340	3.8					2.5	2.8
01	340	3.3					2.4	2.9
02	350	3.0					2.0	2.9
03	340	(2.9)					<1.8	(3.05)
04	300	2.7					<1.9	3.15
05	250	2.7					1.8	3.35
06	240	3.6					<1.9	3.4
07	240	5.9	210	---	110	2.2	2.6	3.5
08	260	6.5	200	---	100	2.8	3.3	3.4
09	300	6.3	200	4.3	100	3.1	3.7	3.1
10	360	6.8	200	4.6	100	3.3	4.1	2.8
11	390	7.0	200	4.6	100	3.6	4.5	2.6
12	430	7.2	200	4.7	100	3.7	5.3	2.5
13	430	7.5	200	4.5	100	3.7	4.9	2.5
14	410	8.0	200	4.5	100	3.5	5.0	2.5
15	380	8.1	200	4.4	100	3.3	5.2	2.7
16	360	8.7	200	4.3	100	3.1	4.6	2.8
17	330	8.9	210	4.0	100	2.7	4.2	2.9
18	300	9.0	220	---	110	2.0	4.1	3.0
19	250	8.8					4.0	3.1
20	240	8.0					3.6	3.2
21	240	6.0					3.3	3.15
22	280	4.8					2.5	3.0
23	330	4.0					2.5	2.8

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

Table 11

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	5.6					1.9	3.2
01	250	5.0					<1.6	3.1
02	240	4.3					2.1	3.1
03	260	3.9					<1.6	3.0
04	260	3.7					<1.6	3.1
05	250	3.4					<1.6	3.2
06	250	3.5					3.1	3.3
07	270	4.8	220	---	120	2.2	3.0	3.2
08	330	5.5	200	4.2	110	2.8	3.7	3.1
09	400	5.7	200	4.4	110	3.1	3.7	2.8
10	430	6.5	200	4.4	110	3.3	4.3	2.6
11	430	7.3	200	4.5	110	3.5	4.4	2.6
12	400	8.5	<200	4.5	110	3.6	4.6	2.7
13	380	9.4	200	4.5	110	3.6	4.5	2.8
14	360	9.8	200	4.5	110	3.5	4.4	2.8
15	330	10.3	200	4.4	110	3.3	4.4	2.9
16	310	10.5	210	4.2	110	3.0	4.4	3.0
17	300	10.4	<220	4.0	110	2.6	3.9	3.1
18	270	9.6	230	(3.5)	120	(2.0)	3.5	3.2
19	230	9.2					3.5	3.2
20	230	7.9					2.7	3.0
21	240	7.0					2.3	3.1
22	250	6.5					2.2	3.0
23	260	5.7					1.8	3.1

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

Table 12

Tromso, Norway (69.7°N, 19.0°E) — June 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	315	4.5	---	---	---	---	3.5	2.95
01	320	4.5	280	---	---	---	4.0	2.9
02	340	4.3	250	---	---	---	3.9	2.9
03	350	4.3	240	3.2	---	---	3.7	2.9
04	360	4.4	225	3.4	100	2.0	3.0	2.9
05	355	4.6	210	3.6	100	2.3	3.1	2.9
06	375	4.6	210	3.8	100	2.4	2.9	2.85
07	385	4.8	210	3.9	100	2.6	2.9	2.9
08	375	4.8	205	4.0	100	2.8	3.0	2.9
09	400	4.8	205	4.1	100	2.8	3.1	2.9
10	380	5.2	210	4.1	100	2.9	3.4	2.95
11	385	5.0	200	4.2	100	2.9	3.1	2.95
12	390	5.0	205	4.2	100	3.0	3.2	2.9
13	395	4.9	210	4.2	100	2.9	3.2	2.9
14	375	4.9	200	4.2	100	2.8	3.2	3.05
15	370	4.7	205	4.1	100	2.8	3.1	3.05
16	365	4.7	210	4.0	100	2.7	3.2	3.0
17	345	4.8	220	4.0	100	2.6	3.4	3.1
18	340	4.6	225	3.8	105	2.4	3.4	3.1
19	320	4.7	235	---	105	2.2	3.8	3.1
20	300	4.6	240	---	105	2.0	4.1	3.1
21	295	4.5	245	---	---	---	4.2	3.1
22	(290)	4.2	---	---	---	---	4.2	(3.1)
23	---	(4.4)	---	---	---	---	3.8	(3.05)

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

Table 13

Reykjavik, Iceland (64.1°N, 21.8°W) June 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(340)	(3.8)					4.3	---
01	(300)	(3.6)					4.2	---
02	(300)	3.7			---	---	3.9	3.0
03	300	3.8			110	---	3.6	2.95
04	310	3.9	240	---	110	---	3.5	3.0
05	370	3.9	230	3.3	110	2.1	<2.5	3.0
06	380	4.0	220	3.5	100	(2.3)		2.9
07	400	4.3	210	3.7	100	2.5		2.9
08	370	4.5	220	3.9	100	2.7		3.0
09	400	4.6	200	4.0	100	(2.7)		2.9
10	400	4.7	210	4.0	100	(2.8)		2.9
11	400	4.9	200	4.1	100	---		2.9
12	400	4.8	200	4.1	100	---	2.6	2.8
13	410	4.8	200	4.1	100	---		2.85
14	420	4.8	210	4.1	100	---	<3.1	2.8
15	370	5.0	210	4.0	100	---		3.0
16	390	4.8	210	4.0	100	2.8	<3.1	2.9
17	370	4.8	220	4.0	100	2.7		2.9
18	340	4.8	230	3.8	100	2.6	3.3	3.0
19	330	4.7	240	3.6	110	2.3	3.6	3.0
20	310	4.6	240	3.2	110	(2.1)	3.7	3.0
21	300	(4.4)	---	---	110	---	3.9	(3.0)
22	300	(4.4)			---	---	4.0	(3.0)
23	300	(3.9)					4.2	---

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

Table 14

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	3.6					2.3	2.85
01	280	3.2					2.0	2.9
02	300	3.4					1.7	2.9
03	350	3.6	270	2.5	120	1.4	2.4	2.8
04	380	4.0	240	2.9	120	1.7	2.3	2.8
05	380	4.4	230	3.3	110	2.0	2.6	2.9
06	400	4.4	220	3.5	110	2.3	2.4	2.75
07	410	4.6	210	3.7	110	2.4	2.4	2.7
08	440	4.6	210	3.8	110	2.7	3.0	2.65
09	450	4.7	200	3.9	110	2.8	3.2	2.7
10	420	4.7	210	4.0	110	2.9	3.0	2.8
11	430	4.8	210	4.0	110	(2.9)	3.2	2.7
12	460	4.7	210	4.1	110	(3.0)	3.4	2.65
13	450	4.7	210	4.1	110	3.0	3.4	2.7
14	460	4.6	210	4.1	110	2.9	3.2	2.7
15	450	4.6	210	4.0	110	2.8	3.1	2.7
16	400	4.5	220	4.0	110	(2.6)		2.8
17	370	4.6	220	3.8	110	2.5	2.7	2.8
18	340	4.6	230	3.6	110	2.3	2.7	3.0
19	300	4.7	240	3.4	120	2.0	3.1	3.0
20	280	4.6	240	---	120	1.7	2.9	3.1
21	250	4.6	---	---	---	---	2.2	3.1
22	260	4.5					2.0	3.1
23	270	3.8					1.7	3.0

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

Table 15

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	4.9						
01	300	4.5						
02	300	4.3						
03	300	4.2						
04	300	3.8						
05	300	4.4		(3.2)				
06	300	5.0	240	3.8				
07	305	5.2	220	4.0			4.5	
08	340	5.3	200	4.2			5.0	
09	340	5.5	200	4.3			4.8	
10	330	6.0	200	4.5			5.0	
11	330	5.9	200	4.5			5.0	
12	335	6.0	200	4.6			5.0	
13	340	5.8	200	4.6			4.8	
14	345	5.4	200	4.5			4.0	
15	340	5.3	200	4.4			4.2	
16	305	5.3	200	4.2			4.7	
17	300	5.3	215	4.0			4.0	
18	290	6.0		3.7			5.0	
19	260	6.2					4.6	
20	250	6.4					3.8	
21	250	(6.1)					4.8	
22	250	6.2						
23	280	5.2						

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

Table 16

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(250)	(4.0)					(3.7)	(3.0)
01	(270)	(3.9)					(3.3)	(3.0)
02	260	(3.8)					(3.1)	(2.9)
03	(260)	(3.7)					(3.2)	(3.0)
04	260	(3.4)					(3.3)	(3.0)
05	280	(3.5)	250	---	---	---	(3.1)	(3.1)
06	340	4.3	220	(3.4)	(100)	(2.1)	(3.6)	3.1
07	330	4.8	200	(3.8)	(100)	(2.6)	4.1	3.1
08	390	5.0	(200)	(4.0)	(100)	(3.0)	4.3	2.8
09	360	5.3	(200)	(4.2)	(100)	(3.1)	4.4	2.9
10	350	5.5	(200)	(4.3)	(100)	---	4.8	2.9
11	370	5.5	(220)	(4.4)	(100)	(3.4)	4.5	2.8
12	380	5.6	(210)	(4.4)	(100)	(3.4)	5.0	2.8
13	370	5.6	200	(4.4)	---	---	5.0	2.85
14	360	5.8	(210)	(4.4)	(100)	---	5.2	2.9
15	340	5.8	(220)	(4.3)	(110)	(3.2)	(4.5)	2.9
16	340	5.8	210	(4.2)	(100)	(3.0)	4.7	3.0
17	310	5.6	220	(3.9)	(100)	(2.8)	4.3	3.0
18	280	5.6	220	(3.6)	(100)	---	4.2	3.1
19	250	5.8	(240)	---	---	---	(4.2)	3.2
20	220	5.9					(3.5)	3.2
21	220	(5.6)					(3.6)	3.25
22	(230)	(5.0)					(3.3)	(3.05)
23	(250)	(4.2)					(4.0)	(3.0)

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

Table 17

Elisabethville, Belgian Congo (11.6°S, 27.5°E) June 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	fEs*	(M2000)F2
00	260	2.3					2.2	1.8	2.5
01	270	2.1					2.3	2.2	2.5
02	285	2.0					2.4	3.2	2.4
03	270	2.0					2.9	2.8	2.5
04	240	2.5					1.8	2.6	2.4
05	240	5.3	230	---	130	1.7	2.2	2.9	2.7
06	250	6.3	230	---	115	2.6	2.8	3.3	2.8
07	255	7.1	220	4.0	110	3.0	2.2	3.8	2.7
08	270	6.8	215	4.2	110	3.1	2.1	4.0	2.6
09	280	6.9	220	4.4	110	3.2	3.6	3.0	2.6
10	285	6.5	225	4.5	110	3.3	3.8	2.4	2.5
11	300	6.9	220	4.3	110	3.3	3.7	4.1	2.5
12	290	7.0	225	4.2	110	3.2	3.6		2.45
13	280	6.8	230	4.0	110	3.0	3.8		2.5
14	255	6.2	230	---	110	2.8	3.6		2.6
15	240	6.0	230	---	120	2.1	3.6		2.6
16	230	5.8	---	---			3.1		2.6
17	220	5.4					2.9		2.7
18	210	3.8					2.8		2.8
19	220	2.6					3.1		2.7
20	270	2.6					2.5		2.4
21	270	2.5					2.2		2.5
22	270	2.4					2.2		2.5
23	250	2.4					2.1		2.5

Time: 0.0°.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.
*These April 1955 data complete the fEs column of table 25, CRPL-F131. Figure 49, CRPL-F131, should be modified accordingly.

Table 18

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	285	4.2						
01	285	4.1						
02	285	3.8						
03	290	3.5						
04	280	3.6						
05	260	4.0						
06	260	4.9	245	3.6				
07	280	5.2	230	4.0			4.0	
08	290	5.8	220	4.1			4.0	
09	300	6.0	200	4.2			4.0	
10	290	6.1	200	4.5			4.3	
11	300	(6.0)	200	4.5			4.0	
12	310	(5.9)	200	4.5			4.0	
13	320	5.8	200	4.6			4.0	
14	300	5.8	200	4.1			4.0	
15	320	5.8	200	4.3			4.0	
16	300	5.8	220	4.1			4.0	
17	290	6.0	230	3.9			4.0	
18	270	6.6		(3.6)			4.0	
19	250	7.0					4.0	
20	245	7.2					3.8	
21	250	(5.8)					3.7	
22	250	(5.3)					2.8	
23	260	(4.9)						

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

Table 19

Wakkanai, Japan (45.4°N, 141.7°E) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	4.6					3.5	
01	290	4.6					3.5	
02	290	4.4					3.5	
03	270	4.2					3.0	
04	260	4.2					2.5	
05	260	4.6					1.7	
06	320	5.1					4.0	
07	310	5.5					4.8	
08	310	5.6					5.6	
09	320	5.6					5.1	
10	350	5.6					5.0	
11	360	5.5					5.3	
12	380	5.5					5.8	
13	360	5.7					5.0	
14	360	5.6					4.5	
15	350	5.6					4.7	
16	320	5.9					4.6	
17	300	6.1					4.7	
18	290	6.0					4.6	
19	270	6.5					4.1	
20	270	6.5					3.0	
21	270	6.2					3.7	
22	260	5.5					4.3	
23	280	5.2					4.0	

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

Table 20

Akita, Japan (39.7°N, 140.1°E) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	4.7					4.0	
01	300	4.4					3.5	
02	290	4.5					3.2	
03	290	4.1					3.1	
04	290	4.0					2.9	
05	270	4.6					2.9	
06	300	5.4					3.0	
07	300	5.9					4.5	
08	310	5.9					5.0	
09	350	5.7					5.6	
10	350	5.0					5.6	
11	380	5.0					6.4	
12	390	6.0					5.3	
13	400	6.1					5.0	
14	370	6.1					4.0	
15	340	6.6					5.2	
16	340	6.9					5.2	
17	300	7.0					5.4	
18	290	6.7					5.8	
19	270	6.5					5.9	
20	280	6.5					4.5	
21	290	6.0					4.5	
22	290	5.5					4.5	
23	300	5.2					3.7	

Time: 135.0°E.
Sweep: 0.05 Mc to 22.0 Mc in 2 minutes.

Table 21

Tokyo, Japan (35.7°N, 139.5°E) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	200	4.4					4.5	3.0
01	280	4.4					3.8	3.0
02	260	4.4					3.6	3.0
03	250	3.9					3.3	3.1
04	260	3.8					3.0	3.0
05	240	4.5	---	---	130	1.6	3.0	3.3
06	260	5.5	240	3.6	120	2.2	3.7	3.3
07	260	5.8	230	4.0	110	2.6	5.0	3.4
08	280	6.2	230	4.2	110	3.0	6.0	3.3
09	290	5.8	---	---	110	3.0	5.7	3.2
10	320	5.9	---	---	110	3.1	5.9	3.1
11	350	6.0	210	4.5	110	3.2	5.6	3.0
12	360	6.0	230	4.4	110	3.2	5.4	3.0
13	340	6.6	240	4.4	110	3.1	5.0	3.0
14	320	7.0	260	4.4	110	3.1	4.5	3.0
15	300	7.4	230	4.2	110	3.0	4.5	3.1
16	280	7.3	240	4.1	110	2.8	5.6	3.1
17	280	7.2	240	3.6	110	2.5	5.1	3.15
18	270	7.0	240	3.0	120	1.0	4.4	3.2
19	240	7.1					5.0	3.2
20	240	6.2					5.4	3.1
21	260	5.5					5.0	3.0
22	290	5.2					5.0	3.0
23	200	4.0					5.0	3.0

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

Table 22

Yamagawa, Japan (31.2°N, 130.6°E) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	320	5.3					6.5	
01	300	5.3					5.9	
02	290	5.3					5.9	
03	200	4.4					5.9	
04	290	4.1					3.8	
05	280	3.9					3.7	
06	250	5.3					4.2	
07	250	6.1					5.6	
08	270	6.0					6.1	
09	310	5.9					6.8	
10	350	5.0					6.5	
11	300	6.4					6.7	
12	300	6.0					6.4	
13	350	7.8					6.2	
14	340	8.7					5.8	
15	310	9.5					6.1	
16	300	0.0					5.8	
17	290	0.9					5.9	
10	280	8.5					5.8	
19	250	0.4					4.7	
20	250	7.0					5.8	
21	280	6.0					6.5	
22	300	5.5					5.8	
23	320	5.4					5.9	

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

Table 23

Baguio, P. I. (16.4°N, 120.6°E) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	5.0					3.2	3.0
01	250	5.0					2.6	3.2
02	240	4.0					2.5	3.3
03	220	4.3					2.4	3.4
04	220	3.2					2.4	3.4
05	230	2.6					3.0	3.4
06	230	4.8					3.4	3.5
07	220	6.2	---	---	110	2.5	6.4	3.4
08	300	6.7	210	---	---	---	6.6	3.0
09	340	7.5	200	---	---	---	6.9	2.8
10	370	0.1	200	4.4	---	---	6.6	2.6
11	390	8.6	200	4.4	100	---	6.6	2.5
12	390	9.0	200	4.4	100	3.4	6.0	2.4
13	380	9.3	200	4.4	110	3.4	4.6	2.4
14	350	9.5	200	4.3	110	3.3	5.0	2.6
15	330	9.6	200	4.1	110	3.1	4.5	2.7
16	300	9.8	210	---	110	2.8	5.6	2.8
17	290	10.2	220	---	110	2.2	5.6	3.0
18	240	10.2					4.1	3.1
19	230	9.5					4.0	3.1
20	250	7.0					3.1	3.0
21	280	6.9					2.6	3.0
22	300	6.0					3.8	2.9
23	310	5.3					3.0	2.0

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

Table 24

Watheroo, W. Australia (30.3°S, 115.9°E) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	3.4						3.1
01	240	3.6						3.2
02	240	3.6						3.2
03	240	3.8						3.3
04	230	3.0						3.3
05	200	3.4						3.4
06	210	2.9						3.2
07	210	4.3				1.6		3.5
00	220	5.6	200	2.7		2.3		3.6
09	240	5.8	210	3.9		2.6	3.3	3.6
10	250	6.4	200	4.1		2.9	3.6	3.5
11	250	6.6	200	4.3		3.0	3.8	3.5
12	250	6.6	200	4.3		3.1	3.0	3.5
13	270	6.3	200	4.3		3.1	3.7	3.4
14	270	6.0	200	4.2		3.0	4.1	3.4
15	250	6.9	210	3.9		2.8	3.2	3.5
16	240	6.0	220	3.4		2.5	3.6	3.6
17	210	5.9	---	---		2.0	3.0	3.6
18	200	4.3					2.6	3.5
19	210	3.1					2.7	3.3
20	240	2.0						3.3
21	240	3.1						3.1
22	240	3.2						3.15
23	240	3.1						3.1

Time: 120.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 45 seconds.

Table 25

Buenos Aires, Argentina (34.5°S, 58.5°W) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	2.8						3.05
01	300	2.9						3.0
02	300	2.8						3.0
03	290	2.8						3.1
04	240	3.0						3.5
05	230	2.7						3.5
06	280	2.4						3.4
07	220	4.4						3.5
08	220	5.4	---					3.6
09	250	5.8	220		---	---		3.5
10	250	6.0	210		100	3.1	3.7	3.5
11	260	6.9	200		---	---	3.5	3.5
12	250	6.5	200		---	---	4.0	3.5
13	260	6.8	210		---	---	3.9	3.4
14	250	7.6	220				3.6	3.5
15	230	7.0	210					3.6
16	220	6.5	---					3.5
17	210	5.7						3.5
18	220	4.3						3.5
19	250	3.9						3.3
20	240	4.3						3.4
21	250	3.7						(3.45)
22	280	(3.2)						(3.3)
23	300	3.0						3.1

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 26

Godhavn, Greenland (69.2°N, 53.5°W) April 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	(2.6)					2.4	(2.9)
01	260	(2.7)					3.1	(2.9)
02	280	(2.7)					1.3	(2.95)
03	280	(2.5)					2.4	(2.9)
04	(290)	(2.8)	---	---			3.2	(3.0)
05	(280)	(3.0)	230	---	(130)	(1.7)	3.1	(3.2)
06	(280)	(3.3)	220	---	120	(1.9)	3.3	(3.2)
07	(320)	(3.6)	220	(3.1)	120	(2.0)	2.8	(3.2)
08	(410)	(3.9)	(240)	3.3	120	(2.4)	2.5	(3.0)
09	(370)	(4.0)	(240)	(3.5)	110	(2.5)	4.0	(3.0)
10	(390)	(4.2)	230	(3.6)	120	2.6		2.9
11	370	(4.3)	230	3.6	110	2.6		3.0
12	(390)	(4.4)	(230)	(3.7)	110	2.8		(2.8)
13	(400)	(4.4)	220	3.7	110	2.6		(2.9)
14	(400)	(4.5)	230	3.7	110	2.6		(2.9)
15	(370)	(4.5)	220	(3.6)	110	(2.4)	3.2	(2.9)
16	(360)	(4.5)	230	(3.5)	110	2.4		(2.95)
17	(340)	(4.2)	230	(3.4)	120	2.2	2.6	(2.9)
18	330	(4.1)	240	(3.2)	120	(2.0)	(3.0)	(3.0)
19	280	(4.0)	240	---	120	1.8	2.4	(3.1)
20	260	(3.7)	250	---	120	(1.6)	1.8	(3.1)
21	260	(3.4)	---	---	---	---	3.0	(3.1)
22	250	(3.3)					2.8	(3.0)
23	260	(2.8)						(2.9)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 27

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

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		3.1						
01		3.2						
02		3.2						
03		3.1						
04		3.1						
05	290	3.2						
06	255	3.8						
07	250	4.6	220	3.7				
08	280	5.1	210	4.0			3.3	
09	280	5.2	200	4.0			3.5	
10	280	5.5	200	4.1			3.7	
11	300	5.5	200	4.2			3.6	
12	285	5.5	200	4.3			3.7	
13	300	5.4	200	4.3			3.4	
14	290	5.5	200	4.2			3.3	
15	300	5.4	210	4.0				
16	270	5.6	230	4.0				
17	260	5.8	250	3.6				
18	250	5.7						
19	250	(6.0)						
20	250	(5.2)						
21	250	(4.2)						
22	250	3.6						
23		3.6						

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

Table 28

Buenos Aires, Argentina (34.5°S, 58.5°W) April 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.6					2.8	3.0
01	300	3.2					2.5	3.0
02	300	3.1					2.8	3.0
03	280	3.5					3.4	3.15
04	220	3.4						3.6
05	260	3.0					2.6	3.4
06	260	3.0						3.4
07	220	5.2						3.5
08	220	6.1	210					3.5
09	260	6.7	210				3.5	3.5
10	260	7.9	210				4.0	3.5
11	260	8.4	200				4.3	3.4
12	260	8.8	200				5.2	3.4
13	270	9.3	200				4.9	3.3
14	260	9.4	210				4.1	3.3
15	260	10.7	(230)				5.0	3.4
16	220	9.5	230				4.0	3.5
17	210	8.0					4.8	3.5
18	210	6.4					3.9	3.6
19	220	4.4						3.2
20	250	4.3						3.2
21	270	3.7						3.0
22	280	3.7						3.1
23	290	3.8						3.0

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 29

Christchurch, New Zealand (43.6°S, 172.8°E) April 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	3.2						3.0
01	280	3.2						2.9
02	280	3.0						3.0
03	280	3.1						2.9
04	270	3.1						3.0
05	240	2.8						3.2
06	270	2.4				E		3.1
07	250	4.0	260	2.4		1.4		3.4
08	260	4.8	250	3.2		2.1		3.4
09	280	5.2	240	3.7		2.4		3.4
10	280	5.7	230	3.9		2.6		3.3
11	280	6.0	230	4.1		2.8		3.3
12	280	6.3	230	4.1		2.8		3.3
13	280	6.3	230	4.0		2.8		3.3
14	280	6.2	240	3.9		2.7		3.3
15	270	5.9	250	3.7		2.5		3.4
16	260	5.7	250	3.2		2.1		3.4
17	250	5.4	260	2.2		1.6		3.3
18	250	5.1					2.5	3.2
19	260	4.9					2.8	3.1
20	260	4.3					2.8	3.0
21	270	3.9					2.4	3.0
22	270	3.6					2.7	3.0
23	(280)	3.4					2.3	2.9

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

Table 30

Decepcion I. (63.0°S, 60.7°W) April 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	3.2						3.1
01	300	3.2						3.1
02	300	3.2						3.1
03	300	3.1						3.1
04	300	3.2						3.2
05	280	3.1						3.3
06	250	3.1					1.8	3.5
07	220	3.6						3.6
08	220	5.1						3.7
09	220	5.8					2.7	3.6
10	220	6.6					2.7	3.7
11	220	6.7					3.4	3.7
12	220	6.7					3.3	3.8
13	220	6.4					2.8	3.8
14	220	5.6					2.6	3.8
15	220	5.4					2.4	3.8
16	220	4.9					1.8	3.8
17	220	5.0						3.6
18	220	4.8						3.5
19	230	4.5						3.5
20	240	4.4						3.4
21	260	3.9						3.4
22	280	3.4						3.2
23	300	3.4						3.1

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

Table 31

Godhavn, Greenland (69.2°N, 53.5°W) — March 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	(2.3)					2.5	(3.0)
01	280	(2.4)						(2.9)
02	(300)	(2.0)					2.7	(3.0)
03	(280)	(2.2)					2.7	(2.95)
04	(290)	(2.2)					3.2	(2.9)
05	(280)	(2.3)					2.8	(2.9)
06	(280)	(2.6)					3.5	(3.2)
07	(270)	(2.9)	---	---	---	---	4.3	(3.2)
08	(260)	(3.3)	240	---	---	---	3.2	(3.25)
09	(270)	(3.6)	(230)	2.9	120	(2.1)		(3.2)
10	(320)	(4.0)	(250)	(3.2)	120	(2.4)		(3.1)
11	(360)	(4.2)	(240)	(3.4)	120	(2.4)		(3.0)
12	(340)	(4.4)	(240)	(3.4)	120	(2.5)		(3.1)
13	(370)	(4.2)	(230)	(3.5)	120	2.4	2.6	(3.0)
14	(320)	(4.3)	(230)	(3.4)	120	(2.3)	2.6	(3.1)
15	(350)	(4.0)	(240)	(3.2)	120	(2.2)	2.6	(2.9)
16	300	(4.0)	240	(3.1)	120	(2.1)	3.4	(3.1)
17	270	(4.0)	240	2.9	120	(1.9)	2.1	(3.2)
18	250	(3.7)	240	---	120	(1.7)	2.3	(3.1)
19	250	(3.5)			---	---	3.4	(3.1)
20	240	(3.3)					3.2	(3.1)
21	250	(3.0)					2.4	(3.1)
22	250	(2.6)					2.3	(3.0)
23	260	(2.7)					1.2	(3.1)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 32*

Inverness, Scotland (57.4°N, 4.2°W) — March 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	315	2.0						2.8
01	320	(1.7)					1.3	2.7
02	315	(1.6)						2.7
03	310	1.7						2.7
04	310	1.6						2.8
05	315	1.7						2.8
06	285	2.3						3.1
07	240	3.2			130	1.7		3.3
08	245	4.0	210	(3.1)	120	1.9		3.3
09	265	4.3	210	3.6	110	2.2	2.8	3.3
10	305	4.6	205	3.7	110	2.4	2.4	3.3
11	325	4.8	205	3.8	110	2.6	2.7	3.1
12	315	4.9	205	3.9	110	2.6	2.6	3.2
13	300	5.0	210	3.9	105	2.7		3.2
14	295	5.2	210	3.7	110	2.6		3.3
15	280	5.0	210	3.7	110	2.5	2.4	3.3
16	270	4.9	220	3.4	115	2.2		3.2
17	240	4.7	220		125	1.8		3.2
18	245	4.5			130	1.7		3.1
19	250	4.4						3.1
20	265	4.2						3.1
21	270	3.4						3.0
22	315	2.5						2.9
23	330	2.2						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 33*

Slough, England (51.5°N, 0.6°W) — March 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.8					2.4	2.85
01	280	2.8					2.6	2.0
02	280	2.6					2.5	2.8
03	275	2.6					2.5	2.85
04	270	2.4					2.6	2.9
05	265	2.1					2.6	2.95
06	255	2.6			(150)	1.5	2.6	3.1
07	240	3.8	225	2.7	130	1.8	2.7	3.4
08	270	4.4	220	3.3	120	2.2	3.0	3.3
09	300	4.8	215	3.8	115	2.5	3.6	3.25
10	290	5.2	215	3.9	115	2.7	3.7	3.3
11	295	5.4	210	4.1	115	2.8	3.6	3.25
12	300	5.6	215	4.1	115	2.9	4.0	3.25
13	280	5.5	220	4.1	115	2.9	3.7	3.3
14	280	5.6	215	4.0	115	2.8		3.3
15	275	5.4	220	3.8	115	2.6	2.6	3.3
16	275	5.3	230	3.5	115	2.3	2.8	3.25
17	255	5.1	225	3.1	125	2.0	2.6	3.3
18	240	5.0			140	1.6	2.5	3.2
19	240	5.0					2.0	3.1
20	245	4.4						3.15
21	255	3.6						3.05
22	270	3.1					2.2	2.9
23	285	2.8					2.0	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 34*

Singapore, British Malaya (1.3°N, 103.8°E) — March 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	210	6.8						3.3
01	220	4.7						3.0
02	255	4.2						2.9
03	260	3.6						2.9
04	250	3.2					1.7	3.0
05	250	2.8					1.9	3.3
06	255	3.1					1.9	(3.2)
07	240	6.4			125	2.1	3.1	3.3
08	280	7.6	220	(4.1)	120	2.7	4.1	3.1
09	310	8.2	210	4.4	115	3.1	4.3	2.7
10	340	9.0	205	4.5	110	3.3	4.8	2.4
11	365	9.2	200	4.5	110	3.5	4.2	2.2
12	385	8.9	200	4.6	110	3.5	4.3	2.0
13	365	9.0	200	4.5	110	3.5	4.8	2.3
14	330	9.5	200	4.4	110	3.4	3.8	2.5
15	310	9.6	205	4.3	110	3.2	3.6	2.6
16		9.5	210	(4.0)	110	2.8	3.7	2.5
17	(230)	9.7	225		115	2.3	3.2	2.5
18	255	9.6			165	1.8	3.0	2.6
19	280	9.6					2.9	2.6
20	280	9.3					2.5	2.8
21	255	9.0					2.3	2.9
22	240	9.1					2.4	3.1
23	220	8.7						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 35

Rarotonga I. (21.3°S, 159.0°W) — March 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	4.4					1.6	3.0
01	270	4.7					3.0	3.1
02	250	4.4					2.4	3.2
03	250	3.6						3.2
04	290	2.8					2.5	2.05
05	300	2.8					2.0	2.9
06	270	3.0			---	---	2.2	3.1
07	250	5.9	240	---	---	2.0	3.0	3.3
08	270	7.5	230	4.1	105	2.6	3.6	3.3
09	270	8.0	220	4.4	105	3.0	4.1	3.4
10	280	8.3	210	4.5	105	3.2	4.7	3.3
11	290	7.9	210	4.6	105	3.3	4.4	3.25
12	290	8.4	200	4.6	105	3.4	4.2	3.2
13	280	8.7	200	4.6	100	3.4	4.8	3.25
14	290	7.5	210	4.5	105	3.3	4.4	3.2
15	300	7.9	220	4.4	110	3.2	4.1	3.2
16	280	7.5	250	4.3	105	3.0	4.1	3.1
17	270	7.4	240	---	110	2.6	3.9	3.2
18	260	7.8	---	---	---	2.0	3.8	3.2
19	250	7.4					3.2	3.2
20	240	6.2					3.1	3.1
21	260	5.8					3.0	2.85
22	280	5.2					2.7	2.8
23	290	5.0					2.1	2.8

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

Table 36

Christchurch, New Zealand (43.6°S, 172.8°E) — March 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	3.2					2.5	2.9
01	280	3.0						3.0
02	280	2.7						3.0
03	280	2.6						3.0
04	270	2.5					2.0	3.1
05	260	2.1				---	2.9	3.1
06	260	2.8	---	---		1.3		3.3
07	250	4.2	250	2.8		1.8		3.4
08	300	4.7	240	2.7		2.3		3.2
09	290	5.3	230	3.9		2.6		3.3
10	300	6.0	220	4.1		2.8		3.2
11	290	6.1	220	4.2		2.9	4.2	3.3
12	300	5.9	220	4.3		3.0		3.2
13	310	6.0	220	4.2		3.0		3.2
14	300	6.0	230	4.1		2.8		3.3
15	290	5.8	240	4.0		2.7		3.3
16	280	5.5	240	3.7		2.4		3.3
17	270	5.2	250	3.2		2.1		3.2
18	250	5.5	260	2.7		1.6		3.1
19	260	5.8				---		3.05
20	250	5.1					2.3	3.1
21	260	4.6					2.7	3.1
22	270	4.1					2.6	3.0
23	280	3.6					2.4	2.9

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

Table 37

Godhavn, Greenland (69.2°N, 53.5°W) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	(2.2)					2.7	(3.0)
01	(270)	(2.2)					3.3	(3.0)
02	(280)	(2.2)					3.1	(2.9)
03	(290)	(2.3)					3.5	(3.0)
04	(280)	(2.3)					3.9	(3.0)
05	(270)	(2.3)					3.2	---
06	(250)	(2.6)					4.0	(3.25)
07	(260)	---					3.6	---
08	260	(2.5)					3.7	(3.15)
09	260	(3.4)	---	---			2.5	(3.15)
10	250	(4.0)	---	---	---	---	2.7	(3.3)
11	(270)	(4.2)	250	(3.0)	120	(2.1)	2.5	(3.3)
12	(270)	(4.2)	(240)	(3.2)	(120)	(2.2)	(2.6)	(3.2)
13	(260)	(4.2)	(240)	(3.1)	(130)	(2.3)		(3.3)
14	(260)	(4.2)	250	(3.0)	140	(2.3)		(3.2)
15	(260)	(4.0)	(240)	---	140	---	4.0	(3.3)
16	250	(4.0)	230	---	130	(1.9)	(4.4)	(3.2)
17	240	(3.7)					4.4	(3.1)
18	240	(3.6)					(4.5)	(3.1)
19	240	(3.5)					4.1	(3.1)
20	240	(3.5)					3.4	(3.1)
21	240	(3.0)					3.7	(3.1)
22	250	(2.5)					3.3	(3.1)
23	(260)	(2.2)					2.8	(3.05)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 38

Delhi, India (28.6°N, 77.1°E) February 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	260	2.9						3.35
01	280	3.0						3.25
02	---	---						(3.25)
03								
04	260	2.8						3.45
05	260	2.8						3.4
06	260	2.8						3.45
07	220	5.3						3.75
08	240	6.2						3.6
09	240	6.8						3.55
10	240	7.4						3.5
11	240	7.7						3.5
12	260	8.0						3.4
13	240	8.4						3.45
14	240	7.5						3.45
15	240	6.7						3.6
16	240	6.1						3.6
17	240	6.2						3.65
18	230	5.8						3.75
19	240	4.4						3.6
20	240	4.1						3.55
21	240	3.6						3.6
22	240	3.2						3.5
23	240	3.0						3.45

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 39

Bombay, India (19.0°N, 73.0°E) February 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06:30	270	4.3						3.35
07	300	4.8						3.15
08:30	300	6.2						3.05
09	330	6.8						2.95
10	360	7.4						2.85
11	360	8.4						2.75
12	390	9.4						2.7
13	390	9.8						2.65
14	390	10.4						2.65
15	390	10.8						2.6
16	390	10.4						2.6
17	360	9.2						2.75
18	360	8.2						2.75
19	330	7.2						2.9
20	330	6.5						3.0
21	300	5.3						3.1
22	300	4.8						3.2
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 40

Madras, India (13.0°N, 80.2°E) February 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	300	5.4						3.05
07	330	6.7						2.9
08	360	7.3						2.75
09	390	7.4						2.65
10	420	7.5						2.6
11	420	7.6						2.6
12	420	7.9						2.6
13	390	8.2						2.6
14	390	8.8						2.65
15	390	9.2						2.7
16	390	9.8						2.75
17	360	9.9						2.75
18	360	9.2						2.85
19	330	8.2						2.95
20	330	7.3						3.0
21	300	>6.8						3.05
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 41

Tiruchy, India (10.8°N, 78.8°E) February 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	360	4.1						2.7
07	420	6.1						2.5
08	460	7.0						2.4
09	480	7.0						2.3
10	480	7.0						2.25
11	510	7.0						2.3
12	510	7.2						2.2
13	510	7.4						2.2
14	510	7.6						2.2
15	480	7.6						2.25
16	480	7.8						2.3
17	450	7.4						2.35
18	450	7.5						2.4
19	440	7.2						2.4
20	450	7.0						2.4
21	(440)	(7.0)						(2.5)
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 42*

Ibadan, Nigeria (7.4°N, 4.0°E) February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	5.8					3.6	3.4
01	240	5.8					3.2	3.1
02	240	5.3					3.6	3.1
03	250	4.5					3.5	3.0
04	240	3.9					3.4	3.2
05	220	3.2					3.1	3.5
06	240	3.5			125	1.2	3.5	3.2
07	250	6.5	230		120	2.2	4.0	3.4
08	290	7.7	215		110	2.8	6.6	3.0
09	320	8.2	200		105	3.1	12.4	2.6
10	355	7.5	200	4.5	105	3.3	13.1	2.4
11	370	7.0	200	4.6	105	3.4	13.2	2.5
12	370	7.4	200	4.6	100	3.5	12.3	2.5
13	360	7.7	200	4.6	105	3.5	11.0	2.5
14	345	7.9	200	4.4	105	3.3	9.4	2.5
15	330	8.3	200	(4.1)	110	3.1	10.5	2.5
16	300	8.3	200		110	2.8	7.5	2.5
17		8.3	230		115	2.2	6.4	2.6
18	265	8.1			120	(1.4)	4.0	2.5
19	300	7.5					3.8	2.5
20	300	7.6					3.6	2.6
21	270	7.4					3.6	3.0
22	245	7.5					3.4	3.0
23	240	6.5					3.5	3.2

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 43

Townsville, Australia (19.3°S, 146.7°E) — February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	>5.2					2.5	(3.0)
01	250	>4.6					3.0	3.0
02	230	4.1					3.0	3.2
03	250	3.5					2.8	3.1
04	260	3.2					2.6	3.0
05	280	3.0					2.5	3.0
06	260	3.4			---	1.3	2.6	3.2
07	240	4.7	240	---	120	2.2	3.2	3.4
08	320	5.4	230	4.0	110	2.6	3.8	3.2
09	300	6.2	220	4.2	100	3.0	4.4	3.2
10	300	6.8	210	4.3	100	3.2	5.2	3.2
11	320	7.0	200	4.4	100	3.4	5.0	3.0
12	340	7.0	200	4.5	100	3.4	4.8	2.95
13	340	7.3	190	4.4	---	3.4	4.4	2.9
14	330	7.6	190	4.4	100	3.4	4.3	2.9
15	320	7.5	200	4.3	---	3.2	4.0	3.0
16	300	7.2	230	4.1	100	3.0	4.0	3.1
17	290	6.9	220	3.8	100	2.6	3.6	(3.2)
18	(250)	(6.5)	240	---	120	2.0	2.9	(3.2)
19	240	>6.4			---	---	3.0	(3.1)
20	250	5.6					2.1	(2.95)
21	280	5.4					2.2	(2.8)
22	280	5.4					2.1	(2.8)
23	280	5.0					2.1	(2.9)

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

Table 44

Brisbane, Australia (27.5°S, 153.0°E) — February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	4.6					2.6	3.0
01	270	4.4						3.1
02	260	4.0						3.2
03	(260)	3.4					2.6	3.1
04	(290)	3.1					2.6	(3.0)
05	(260)	3.2						3.0
06	250	4.3			---	<2.1		3.5
07	(280)	5.0	240	3.8	120	2.5	3.4	3.4
08	300	5.5	220	4.2	120	3.0	4.0	3.2
09	340	5.6	220	4.3	110	3.2	4.5	3.1
10	320	6.1	200	4.4	110	3.4	4.0	3.1
11	320	6.5	200	4.6	110	3.5	5.0	3.1
12	320	6.4	200	4.6	110	---	4.5	3.1
13	340	6.3	200	4.6	110	3.5	5.8	3.0
14	340	6.3	200	4.5	110	3.3	4.4	3.0
15	330	6.2	200	4.3	110	3.2	4.0	3.1
16	300	6.4	210	4.1	---	---	4.0	3.15
17	280	6.0	240	3.7	---	2.4		3.3
18	250	5.7			---	<2.1		3.2
19	250	5.6						3.1
20	260	5.4						3.0
21	300	5.0						2.9
22	300	4.8						2.9
23	300	4.8						2.9

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

Table 45

Canberra, Australia (35.3°S, 149.0°E) — February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	4.0					3.6	3.0
01	---	4.0					3.6	3.1
02	---	3.8					3.6	3.1
03	---	3.3					3.6	3.2
04	---	3.0					3.2	3.1
05	---	2.7					3.1	3.0
06	250	3.8			---	1.8	2.0	3.4
07	240	4.4	240	3.6	110	2.4		3.4
08	350	4.7	220	4.0	110	2.8	3.6	3.1
09	380	5.0	220	4.2	110	3.0	3.8	3.0
10	340	5.2	200	4.2	110	3.2	4.0	3.05
11	320	6.0	200	4.2	110	3.3	4.1	3.1
12	320	6.0	200	4.2	110	3.4	4.0	3.2
13	330	5.8	200	4.2	110	3.4	4.1	3.1
14	340	5.6	200	4.2	110	3.2	3.8	3.1
15	330	5.6	210	4.2	100	3.1	3.8	3.1
16	320	5.5	210	4.1	100	3.0	3.6	3.2
17	290	5.4	220	3.9	110	2.6	3.1	3.2
18	250	5.1	240	(3.4)	120	2.1		3.3
19	240	4.9			---	---		3.2
20	---	5.0						3.1
21	---	4.8						3.0
22	---	4.4					3.0	3.0
23	---	4.2					3.6	3.0

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

Table 46

Hobart, Tasmania (42.9°S, 147.3°E) — February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	2.9						2.9
01	260	2.6						3.0
02	260	2.5						3.0
03	280	2.0					3.5	2.9
04	270	2.1						3.0
05	250	2.8			---	E		3.0
06	220	3.7			100	2.0		3.1
07	220	4.0	---	---	100	2.4		3.1
08	340	4.5	200	4.0	100	2.6		2.9
09	370	5.0	200	4.1	100	3.0		2.8
10	380	5.1	200	4.3	100	3.1		2.85
11	350	5.5	200	4.4	100	3.2		2.85
12	360	5.4	200	4.4	100	3.2		2.9
13	350	5.5	200	4.4	100	3.2	3.5	2.9
14	340	5.5	200	4.3	100	3.1	3.8	2.8
15	340	5.5	200	4.2	100	3.0	3.9	2.9
16	300	5.2	200	4.0	100	2.7		2.9
17	210	5.1			100	2.4		3.0
18	230	5.0			100	1.9		3.0
19	240	5.0						3.0
20	250	4.8						2.95
21	250	4.5						2.9
22	250	4.0						2.9
23	260	3.2						2.9

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

Table 47*

Falkland Is. (51.7°S, 57.8°W) — February 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	305	5.0					4.6	(2.8)
01	300	4.9					3.3	(2.9)
02	300	4.7					3.0	(2.8)
03	280	4.5					3.1	(2.9)
04	280	4.3					1.2	2.9
05	260	4.3			170	1.4		3.0
06	250	4.8	245		120	1.8	3.0	3.4
07	280	4.7	245		115	2.4	3.8	3.3
08	315	5.0		4.0	110	2.7	4.4	3.2
09	325	5.4	240	4.2	105	2.9	5.7	(3.1)
10	310	5.8		4.4	105	3.1	5.8	3.1
11	295	6.1		4.4	105	3.2	6.2	3.2
12	315	6.1	210	4.4	105	3.2	6.4	3.2
13	300	6.2	220	4.4	105	3.2	6.1	3.2
14	300	6.0	220	4.4	105	3.1	5.7	3.1
15	295	5.8	240	4.3	105		5.8	3.2
16	295	5.6	230	4.2	110	2.8	4.4	3.2
17	290	5.8	240	3.9	115	2.5	3.7	3.2
18	265	5.9	245	3.3	125	2.1	3.4	3.2
19	255	5.6					3.1	3.2
20	270	5.5					3.5	3.0
21	285	5.6					5.4	3.0
22	290	5.2					5.0	(2.9)
23	300	5.1					5.2	(2.9)

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 48

Godhavn, Greenland (69.2°N, 53.5°W) — January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	(2.1)					3.8	3.2
01	280	(2.4)					4.1	3.0
02	(280)	(2.5)					3.4	(3.1)
03	(270)	(2.6)					4.6	(3.0)
04	(280)	(2.7)					3.9	(3.1)
05	280	(3.0)					4.0	(3.1)
06	(260)	(3.2)					4.3	(3.2)
07	240	(3.2)					3.4	(3.2)
08	(230)	(3.0)					4.1	(3.3)
09	(240)	(3.4)					4.1	(3.3)
10	260	(3.7)					3.4	(3.3)
11	250	(4.1)					3.2	(3.3)
12	240	(4.5)					4.0	(3.25)
13	220	(4.3)					3.4	(3.4)
14	230	(4.4)					6.4	(3.3)
15	230	(4.1)					5.0	(3.2)
16	230	(4.0)					4.7	(3.3)
17	230	(3.9)					6.2	(3.1)
18	230	(3.8)					3.8	(3.2)
19	230	(3.5)					3.7	(3.2)
20	240	(3.3)					3.1	(3.2)
21	240	(3.0)					4.7	(3.2)
22	240	(2.8)					4.3	(3.2)
23	250	(2.3)					3.2	(3.1)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 49

Delhi, India (28.6°N, 77.1°E) January 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	2.8						3.25
01	280	2.9						3.25
02	---	---						---
03								
04	240	2.7						3.6
05	250	2.7						3.5
06	240	2.8						3.6
07	220	4.5						3.8
08	220	5.7						3.8
09	240	6.2						3.6
10	240	6.8						3.6
11	240	7.5						3.6
12	240	6.9						3.6
13	240	6.8						3.6
14	240	6.7						3.6
15	240	5.9						3.6
16	240	5.8						3.6
17	220	5.3						3.8
18	240	4.1						3.6
19	240	4.0						3.6
20	240	3.4						3.6
21	(240)	3.5						(3.6)
22	260	3.2						3.4
23	260	3.0						3.25

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.

Table 50

Ahmedabad, India (23.0°N, 72.6°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	3.0						3.15
01	260	2.8						3.2
02	250	2.6						3.4
03	230	2.6					1.7	3.55
04	230	2.0					2.2	3.4
05	300	1.8					2.3	3.1
06	265	1.7					1.6	3.2
07	230	4.2	---	---	---	---	2.7	3.55
08	245	5.8	225	3.6	110	2.1	3.9	3.55
09	260	6.7	215	4.0	110	2.7	3.8	3.45
10	260	7.2	210	4.2	105	2.9	4.0	3.4
11	275	8.4	210	4.4	105	3.1	3.8	3.3
12	280	9.9	220	4.5	105	3.2	3.5	3.2
13	275	8.8	210	4.4	105	3.2	3.6	3.2
14	270	9.4	210	4.3	107	3.1	3.7	3.3
15	255	9.0	220	4.2	107	2.9	4.2	3.4
16	240	7.8	220	3.7	110	2.5	3.9	3.6
17	225	>7.0	230	3.0	115	2.0	3.9	3.7
18	200	6.1					3.8	3.75
19	205	4.8					3.5	3.2
20	240	4.6					3.8	3.3
21	240	4.2					3.4	3.4
22	250	3.4					3.1	3.3
23	260	3.2					2.2	3.15

Time: 75.0°E.
Sweep: 0.6 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 51

Calcutta, India (22.6°N, 88.4°E) January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(240)	(3.9)						(3.1)
01	(240)	(3.4)						(3.1)
02	(225)	(3.4)						(3.3)
03	(210)	(2.8)						(3.4)
04	(210)	(2.5)						(3.4)
05	(220)	(2.2)					(2.2)	(3.4)
06	(210)	---					(2.9)	(3.4)
07	(210)	(4.5)				2.0	(2.3)	(3.3)
08	(230)	(5.5)				2.3	(3.0)	(3.1)
09	(260)	(7.6)				2.8	(3.4)	(3.05)
10	(250)	(9.2)				3.1		(3.05)
11	(255)	(9.8)				3.4		(2.9)
12	270	10.8				3.3		2.9
13	260	11.0				3.3		2.9
14	240	10.6				3.1		3.05
15	240	9.6				2.9	3.8	3.1
16	230	9.0				2.4	3.7	3.1
17	210	7.9				---	4.6	3.3
18	(195)	(5.2)					(3.6)	(3.55)
19	(220)	(4.4)					(2.9)	(3.2)
20	(220)	(4.5)						(3.2)
21	(225)	(4.6)						(3.15)
22	(240)	(4.2)						(3.1)
23	(240)	(4.1)						(3.05)

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

Table 52

Bombay, India (19.0°N, 73.0°E) January 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06:30	270	4.5						3.35
07	300	5.2						3.15
08:30	300	6.1						3.15
09	330	6.8						2.95
10	360	7.6						2.8
11	360	8.8						2.8
12	390	9.4						2.65
13	390	10.1						2.65
14	390	10.7						2.65
15	420	11.2						2.55
16	420	11.2						2.55
17	390	10.4						2.65
18	380	9.5						2.7
19	360	8.4						2.8
20	330	7.4						2.95
21	300	6.3						3.15
22	300	5.6						3.15
23								

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.

Table 53

Madras, India (13.0°N, 80.2°E) January 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06	270	5.2						3.35
07	300	6.1						3.15
08	360	7.2						2.8
09	390	7.6						2.65
10	390	7.4						2.65
11	390	7.3						2.65
12	420	7.4						2.6
13	400	7.8						2.65
14	390	8.1						2.65
15	390	8.4						2.65
16	360	8.4						2.8
17	360	8.3						2.8
18	330	7.5						2.95
19	300	6.9						3.15
20	300	6.2						3.15
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.

Table 54

Tiruchy, India (10.8°N, 78.8°E) January 1955

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06	360	3.5						2.8
07	420	5.8						2.55
08	450	6.5						2.45
09	480	6.6						2.3
10	510	6.5						2.25
11	510	6.5						2.25
12	540	6.7						2.25
13	510	7.2						2.25
14	510	7.4						2.25
15	510	7.7						2.25
16	480	7.5						2.3
17	480	7.2						2.3
18	450	7.0						2.45
19	440	6.8						2.5
20	(420)	6.5						(2.55)
21	(420)	(6.0)						(2.55)
22								
23								

Time: 75.0°E.
Sweep: 1.5 Mc to 18.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.

Table 55

Townsville, Australia (19.3°S, 146.7°E) — January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	---					3.7	---
01	240	---					4.0	---
02	250	(4.0)					3.7	(3.2)
03	260	(3.6)					3.6	(3.1)
04	270	(3.0)					3.0	(3.0)
05	260	(3.0)					2.6	(3.0)
06	250	3.6			140	1.6	>3.0	3.3
07	250	4.5	230	3.6	120	2.2	4.0	3.2
08	360	5.2	240	4.0	110	2.8	5.0	3.0
09	360	6.0	220	4.2	110	3.1	5.4	3.0
10	340	6.8	210	4.4	110	3.3	5.7	3.0
11	350	7.4	200	4.4	110	3.4	6.2	2.9
12	340	7.7	200	4.5	110	3.4	6.5	2.95
13	330	7.9	200	(4.4)	---	3.5	5.6	(3.0)
14	310	7.9	190	(4.4)	110	3.4	>5.3	3.05
15	300	7.9	210	4.3	---	3.2	4.7	3.1
16	300	(7.0)	200	4.1	120	3.0	4.3	(3.2)
17	300	>6.0	230	3.9	110	2.7	4.3	3.1
18	250	5.6	240	2.7	120	2.1	4.0	3.2
19	260	5.4			---	---	3.4	(3.1)
20	300	>5.5					3.8	(3.0)
21	300	>5.5					4.0	(3.0)
22	270	---					>4.0	---
23	270	---					>4.1	---

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

Table 56

Brisbane, Australia (27.5°S, 153.0°E) — January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	5.1					5.2	---
01	---	5.1					(5.8)	---
02	---	(4.7)					(5.2)	---
03	---	---						
04	---	---						
05	---	---						
06	---	4.7						---
07	---	5.0					(5.6)	(3.4)
08	(300)	5.5					(6.3)	(3.3)
09	(320)	5.9	---	---			5.9	3.2
10	310	6.6	---	---			6.2	3.1
11	330	6.6	---	---			6.5	3.1
12	340	6.2	---	---			7.3	3.0
13	(330)	6.6	---	---			(6.6)	3.1
14	310	6.3	---	---			(5.8)	3.1
15	300	6.6	---	---	---	---	6.0	3.2
16	300	6.0	---	---	---	---	5.6	3.2
17	(280)	5.4	---	---	---	---	5.8	3.2
18	(290)	5.4					5.6	3.2
19	---	5.5					(5.3)	3.1
20	---	5.8						2.95
21	---	5.7					(5.7)	3.1
22	---	(5.2)					(6.2)	---
23	---	(5.4)					(5.4)	---

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

Table 57

Canberra, Australia (35.3°S, 149.0°E) — January 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	4.1					3.2	3.1
01	---	3.8					3.7	3.1
02	---	(3.6)					4.0	3.1
03	---	3.0					3.6	3.05
04	(260)	2.8					3.2	(3.1)
05	250	3.0			---	E	3.1	3.1
06	240	3.8	---	---	(110)	2.0	3.2	3.35
07	320	4.3	240	3.7	110	2.5	3.5	3.2
08	330	4.9	220	4.0	110	3.0	4.2	3.2
09	370	5.3	210	4.2	110	3.1	4.2	3.1
10	340	5.6	220	4.2	110	3.3	5.5	3.1
11	320	6.0	200	4.2	110	3.4	5.0	3.1
12	340	5.9	200	4.3	100	3.4	4.2	3.1
13	340	6.0	200	4.3	100	3.4	4.1	3.1
14	330	5.9	200	4.2	110	3.3	4.1	3.1
15	325	5.6	200	4.2	110	3.2	3.8	3.1
16	330	5.5	210	4.1	110	3.0	3.4	3.1
17	300	5.2	220	3.9	110	2.7	3.8	3.2
18	270	5.1	240	(3.5)	120	2.2	3.6	3.2
19	240	5.0	---	---	---	---	3.1	3.2
20	---	5.0						3.0
21	---	(4.8)					3.1	(3.0)
22	---	(4.7)					3.2	(3.0)
23	---	(4.6)					3.5	(3.05)

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

Table 58

Delhi, India (28.6°N, 77.1°E) — December 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	280	2.6						3.35
01	280	2.7						3.3
02	(240)	(2.7)						(3.5)
03								
04	240	2.9						3.6
05	240	2.7						3.6
06	260	2.7						3.4
07	240	4.5						3.75
08	230	5.8						3.7
09	240	6.2						3.6
10	240	6.2						3.6
11	240	6.1						3.55
12	240	>6.4						3.5
13	240	6.8						3.5
14	240	6.4						3.55
15	240	6.0						3.6
16	220	5.6						3.75
17	220	>5.0						3.8
18	220	3.8						3.75
19	240	3.3						3.55
20	240	3.2						3.55
21	240	2.8						3.6
22	240	2.4						3.45
23	280	2.5						3.25

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 59

Bombay, India (19.0°N, 73.0°E) — December 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06:30	270	4.3						3.3
07	300	5.1						3.1
08:30	330	6.5						3.0
09	330	6.9						2.95
10	360	7.6						2.8
11	360	8.8						2.75
12	390	9.7						2.65
13	390	10.5						2.65
14	390	11.1						2.6
15	420	11.7						2.55
16	420	11.5						2.55
17	390	10.8						2.65
18	360	9.6						2.75
19	330	8.1						2.85
20	330	7.2						2.95
21	300	6.5						3.1
22	300	5.4						3.2
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 60

Madras, India (13.0°N, 80.2°E) — December 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	300	5.4						3.0
07	330	6.3						2.9
08	360	7.3						2.85
09	360	7.5						2.75
10	360	7.4						2.75
11	390	>7.5						2.7
12	390	>7.7						2.65
13	390	8.2						2.7
14	390	8.2						2.75
15	360	8.4						2.8
16	360	8.8						2.85
17	340	>8.0						2.85
18	330	>7.5						2.9
19	330	7.0						2.95
20	330	6.2						2.95
21	300	5.7						3.05
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 61

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	390	4.3						2.65
07	420	6.1						2.45
08	480	6.9						2.35
09	510	6.9						2.25
10	510	6.7						2.2
11	510	6.8						2.2
12	540	7.0						2.15
13	540	7.0						2.15
14	540	7.7						2.2
15	510	7.6						2.25
16	480	7.5						2.3
17	480	7.1						2.35
18	450	7.0						2.5
19	420	6.5						2.45
20	(420)	(6.6)						(2.55)
21	(420)	(6.1)						(2.55)
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 62

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	280	2.6						3.35
01	280	2.8						3.35
02	280	2.7						(3.35)
03								
04	240	3.1						3.6
05	260	3.0						3.45
06	260	3.4						3.45
07	240	5.8						3.65
08	240	6.8						3.6
09	240	7.0						3.6
10	240	7.4						3.6
11	240	7.3						3.6
12	240	6.9						3.5
13	240	7.3						3.5
14	240	7.2						3.6
15	220	7.4						3.7
16	220	6.4						3.8
17	200	5.6						3.85
18	200	3.9						3.8
19	240	3.4						3.45
20	240	3.5						3.6
21	240	3.2						3.65
22	240	2.8						3.5
23	280	2.6						3.3

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 63

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06:30	270	4.7						3.25
07	300	5.6						3.1
08:30	330	6.9						3.0
09	330	7.6						2.9
10	360	8.4						2.8
11	390	9.4						2.7
12	390	10.4						2.65
13	390	10.8						2.6
14	420	11.4						2.55
15	420	11.8						2.5
16	420	11.8						2.5
17	390	10.7						2.65
18	360	9.6						2.75
19	340	8.4						2.9
20	330	7.3						3.0
21	300	6.2						3.15
22	300	5.2						3.15
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) November 1954

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	300	5.4						2.95
07	360	7.0						2.85
08	360	7.7						2.75
09	390	8.2						2.7
10	390	8.6						2.65
11	390	8.6						2.6
12	420	9.0						2.55
13	420	9.4						2.55
14	420	9.8						2.55
15	420	>10.0						2.55
16	440	>10.0						2.5
17	400	9.5						2.6
18	390	8.7						2.75
19	390	>8.0						2.75
20	360	>7.0						2.8
21	360	>6.5						2.85
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 65

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	390	5.0						2.65
07	420	6.8						2.4
08	480	7.6						2.3
09	510	7.9						2.25
10	510	7.9						2.2
11	510	8.2						2.2
12	510	8.4						2.2
13	510	8.5						2.2
14	540	8.8						2.15
15	510	9.0						2.2
16	510	9.0						2.2
17	480	9.0						2.3
18	480	8.4						2.35
19	450	8.0						2.4
20	440	7.5						2.45
21	420	7.0						(2.55)
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

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	280	3.0						3.35
01	280	2.9						3.35
02	260	2.8						3.4
03								
04	240	2.8						3.45
05	240	3.0						3.5
06	240	4.2						3.6
07	220	6.7						3.75
08	240	7.5						3.7
09	240	7.8						3.65
10	240	8.1						3.55
11	240	8.1						3.5
12	250	8.8						3.4
13	280	9.7						3.35
14	260	9.7						3.45
15	240	9.4						3.55
16	240	8.4						3.65
17	220	7.9						3.8
18	200	6.1						3.85
19	220	4.0						3.75
20	260	3.2						3.4
21	260	3.3						3.4
22	280	3.0						3.25
23	280	3.1						3.2

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 67

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06:30	270	5.6						3.25
07	300	6.8						3.1
08:30	330	7.5						2.9
09	360	7.9						2.8
10	360	9.0						2.7
11	390	10.1						2.6
12	390	10.9						2.55
13	420	>12.0						2.5
14	420	13.0						2.5
15	420	>12.9						2.5
16	420	12.6						2.5
17	390	11.9						2.65
18	360	10.6						2.7
19	360	8.9						2.75
20	360	8.3						2.8
21	320	7.0						2.95
22	300	6.4						3.0
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 68

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	330	>6.2						2.95
07	360	>7.6						2.8
08	390	>8.4						2.65
09	420	8.4						2.55
10	420	8.1						2.5
11	420	8.4						2.5
12	450	8.6						2.5
13	420	9.0						2.5
14	420	9.6						2.5
15	420	>10.0						2.5
16	420	10.2						2.5
17	420	10.5						2.55
18	390	10.1						2.65
19	390	9.2						2.65
20	360	8.4						2.8
21	(300)	>7.0						(2.95)
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 69

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	390	>5.6						2.7
07	420	7.2						2.5
08	450	7.6						2.4
09	460	>7.5						2.35
10	480	7.3						2.3
11	480	7.0						2.3
12	480	7.4						2.25
13	480	7.8						2.25
14	480	>8.4						2.25
15	480	>8.5						2.3
16	480	8.8						2.3
17	480	8.6						2.35
18	450	8.5						2.35
19	440	8.3						2.45
20	(450)	(7.5)						(2.45)
21	(450)	(7.0)						(2.4)
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 70

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	260	3.8						3.4
01	260	3.6						3.3
02	280	3.4						(3.35)
03								
04	280	3.2						3.3
05	240	3.5						3.45
06	240	4.4						3.6
07	240	5.7						3.6
08	240	6.6						3.6
09	240	6.6						3.3
10	280	6.6						3.3
11	280	7.8						3.25
12	280	8.6						3.25
13	260	8.6						3.3
14	280	8.3						3.25
15	240	8.2						3.4
16	240	8.0						3.45
17	240	7.3						3.55
18	240	6.9						3.6
19	220	6.1						3.75
20	240	4.3						3.45
21	280	3.8						3.25
22	280	3.8						3.25
23	280	3.5						3.25

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 71

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	330	5.6						2.9
07	360	7.1						2.75
08	390	7.5						2.6
09	420	7.2						2.5
10	450	>7.0						2.45
11	450	7.2						2.45
12	420	7.4						2.45
13	420	>7.5						2.45
14	420	8.3						2.45
15	420	9.2						2.45
16	420	9.5						2.5
17	420	9.4						2.55
18	390	8.6						2.6
19	390	7.7						2.65
20	360	6.8						2.8
21	330	>6.0						2.95
22	---	---						(2.65)
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 72

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

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06	360	5.0						(2.85)
07	420	6.8						2.5
08	450	7.2						2.35
09	480	6.6						2.25
10	510	6.5						2.2
11	540	6.5						2.2
12	540	6.8						2.15
13	510	7.2						2.2
14	480	8.0						2.25
15	510	8.4						2.25
16	480	8.6						2.3
17	450	8.1						2.35
18	450	8.4						2.35
19	420	7.6						2.45
20	420	7.0						(2.55)
21	(420)	(7.0)						(2.5)
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.

Form adopted June 1946

TABLE 73

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

IONOSPHERIC DATA

h'F2 (Characteristic), Km (Unit), August (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: J.J.S., J.W.P.
Calculated by: J.W.P., N.B., 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	240	250	280	280	300	270	(300)L	320	270	240	310	360	420	360	370	300	340	310	260	(300)A	270	270	280	270
2	290	240	260	260	270	250	G	350	300	360	380	350	370	330	310	380	380	350	(290)A	260	230	240	250	240
3	250	260	260	(290)S	(290)F	(300)A	(270)A	420	430	330	350	430	480	4,0	470	400	350	350	300	270	240	240	230	260
4	280	300	290	250	(290)S	280	240	F	M	M	M	M	M	390	550	400	420	360	300	250	230	240	280	300
5	310	250	300	270	<400S	(350)S	(300)A	L	G	490	400	510	400	400	[400]A	400	500	360	300	260	230	250K	200K	250K
6	(310)SK	(340)AK	(300)SK	(380)SK	(330)SK	(300)SK	GK	GK	GK	GK	GK	GK	GK	610K	470K	420K	390K	350K	290K	280K	270K	280K	270K	280K
7	280K	270K	(290)SK	(310)SK	SK	300K	280K	260K	GK	AK	AK	AK	AK	500K	GK	480K	360K	340K	270K	230K	230K	230K	260	280
8	(290)S	270F	290	330	290	260	250	L	340	L	300	380	410	400	360	300	340	280	280	250	240	240	250	270
9	250	260	260	270	280	270	300	330	360	420	L	370	350	G	440	380	340	330	290	250	270	280	270	280
10	270	280	250	270	(320)S	(310)S	L	360	320	400	400	460	640	420	470	400	370	330	270	230	250	280	260	300
11	270	270	260	(290)S	300	270	L	L	340	550	420	390	330	380	460	470	400	L	310	270	240	230	250	270
12	310	260	260	260	280	250	(280)L	290	(310)L	290	320	340	350	370	330	320	(330)L	300	(280)L	250	230	(260)A	260	(270)A
13	(280)A	(250)A	(310)A	(300)A	(270)S	250	230	L	300	310	(290)A	330	330	320	330	330	300	300	290	250	230	260	250	250
14	230	260	250	270	(280)S	250	L	310	270	380	340	410	380	380	420	380	340	330	310	260	230	240	240	(280)S
15	290	300	300	290	290	280	L	L	350	320	350	380	380	370	370	330	340	280	300	250	240	(280)A	230	260
16	280	(320)S	350	310	(330)S	(300)A	250	(300)L	300	300	320	310	340	370	350	320	330	300	280	250	230	240	240	250
17	310	300	260	270	260	260	(250)L	280	280	280	290	330H	330	340	330	300	290	310	250	230	230	230	240	240
18	260	270	300	270	270	250	L	G	350	290	320	470	420	350	340	330	320	300	270	250	250	240	230	230
19	270	290	250	290	280	(270)S	240	L	300	320	300	300	340	360	340	300	300	320	270	(240)A	240	230	[240]A	250
20	260	300	270	280	240	270	L	280	300	300	320	300	310	350	310	310	310	300	(250)L	250	260	240	230	(250)A
21	260	260	260	260	240	260	230	250	310	270	270	310	360	300	320	330	300	300	270	240	260	[260]A	270	230
22	240	270	230	250	260	240	220	250	330	280	260	310	290	320	300	330	[300]A	290	260	240	230	(220)S	240	240
23	260	250	270	270	270	280	240	280	280	300	320	300H	300	310	330	350	310	280	270	250	260	230	230	240
24	250	240	260	280	(280)S	270	250	290	260H	300	300	330	300	330	320	320	320	280	(260)L	240	240	270	240	230
25	290	280	280	290	270	270	(260)L	250	280	280	300	320	360	360	350	350	320	300	250	230	220	240	240	250
26	270	(310)A	260	260	250	250	(230)L	250	(300)L	280	300	320	320	280	280	310	320	300	260	240	230	230	230	(280)A
27	240	270	(280)S	(280)S	270	240	210	L	280	270	300	270	300	350	330	330	310	280	250	240	230	230	240	240
28	(260)S	290	(430)S	300F	300F	270F	270F	300H	350	350H	370H	480	430	360FK	430K	380K	380K	340K	(310)LK	270K	270K	270K	280K	270K
29	280K	350K	[320]AK	300K	[300]SK	300FK	250K	LHK	300K	320K	360K	350K	360	370	350	330	350	310	250	240	260	270	240	[270]A
30	270	(290)A	[310]S	(330)S	(330)S	S	240	290	300	300	300	290	310	310	330	310	300	280	260	240	230	240	250	250
31	250	250	260	280	280	270	230	L	280	300	300	340	330	330	330	330	310	290	270	240	240	250	250	250
Median	270	270	270	280	280	270	250	290	300	300	320	340	350	360	350	330	330	300	270	250	240	240	240	250
Count	31	31	31	31	29	30	25	21	30	28	28	29	29	31	31	31	31	30	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

GPO 816048

TABLE 74

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

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), August (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: J.J.S., J.W.P.

Calculated by: J.W.P., N.B., 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	43 F	32	27	23 F	21 F	24	3.9 F	48	60	6.7	5.2 F	5.4	5.0	5.4	53	58	54	57	5.5	56	60 JS	57	48	48
2	39	35	33	29 F	27 F	26 F	<36 G	44	52	50	50	53	5.4	5.5	54	50	5.0	52	56	6.2	58	5.7	4.9	44
3	42	3.8	30	26	(23) F	25	33	40	45	5.3	5.0	50	48	50	5.0	49	50	49	53	57	63	5.7	49	42
4	39	34	34	31	22 F	22	33	(38) JF	M	M	M	M	M	5.2	47	5.0	48	50	54	52 F	47 F	(4.0) JS	(31) JS	29 F
5	31 F	31 F	28 F	26 F	17 F	21 F	[30] A	40	<40 G	(45) JS	52	50	52	5.0	[50] A	4.9	48	54	57	60	62	50 K	K(38) FS	29 FK
6	27 K	25 K	24 K	K(20) FS	K(19) JF	K(21) FS	<30 GK	<35 GK	<37 GK	<40 GK	<41 GK	<41 GK	<42 GK	4.6 K	49 K	52 K	53 K	56 K	K(60) FS	62 K	62 K	6.0 K	53 K	46 K
7	40 K	37 FK	32 K	22 FK	K(1.7) JS	23 FK	3.3 FK	38 K	<39 GK	A K	A K	A K	A K	44 K	<43 GK	50 K	54 K	5.5 K	56 K	52 K	52 K	(46) SK	3.1	29 F
8	27 F	(24) JF	(24) JF	(22) JF	24	27 F	40	42 F	5.1	53 F	58	55	5.5	57	6.0	6.2	5.8	6.0	59	63	67	57	47	42
9	43	4.2	3.3	31	2.9 F	29 F	38	45	4.8	51	49 H	5.1	5.2	<46 G	5.1	54	5.3	5.3	52	5.3	5.1	49	46	44
10	42	40	34	30 F	23	25	3.6	42	46	50	50	49	49	50	50	53	53	5.8	58	57	50 JS	5.2	43	38
11	35	31	30	24	24	24	38	44	46	45	50	53	55	53	5.0	52	52	5.0	5.2	57	6.2	5.5	45	42
12	40	40	34	31	28	2.8	42	50	53	58	6.0	6.0	58	5.9	6.0	60	57	56	56	64	63	56	51	47
13	42	44 F	(36) F	3.1 F	28	29	4.1	49	57	62	6.3	6.3	67	6.3	62	62	61	61	66	7.6	6.6	6.8	63	58
14	54	48	42	38	33	31	42	50	52	54	5.6	48	55	57	5.5	5.8	6.0	6.2	62	68	68	5.4	4.4	39
15	37	3.1	29	25 F	24	24	37	45	52	57	5.5	5.5	55	55	5.7	58	55	5.5	58	67	6.5	5.0	(47) S	37
16	29	23 F	23 F	22	1.9 F	22 F	40	48	56	61	5.8	5.6	55	55	5.6	6.0	57	5.6	58	65	67	57	48	42
17	40 F	38 F	3.5 F	30 F	28 F	28 F	42 F	56	6.6	6.4	63	61 H	5.6	6.0	6.6	69	6.8	6.5	69	68	67	5.7	5.4	43
18	40	3.6	33	32	28 F	24 F	37	<38 G	4.6	55	5.2	48	5.1	57	5.8	5.6	5.6	58	56	57	54	5.0	46 F	37
19	34	3.3	3.2	28	28	26	39	44	49	5.0	5.8	5.4	52	52	5.2	55	52	5.3	53	5.0	5.3	(47) AS	[34] A	3.6
20	(31) AS	25	25	24	(23) FS	(24) FS	3.8	49	5.3	58	5.8	60	5.4	55	5.6	5.6	5.4	5.4	50	54	6.1	54	47	39
21	36	32	32	30	28	25	43	5.4	5.3	6.2	6.0	5.8	54	5.8	5.7 V	56	54	5.4	52 F	57	5.6	[4.9] A	44	44 F
22	3.5 F	29	29 F	24 F	25	27	3.8 F	45	4.8	58	6.3	5.6	6.2	5.5	5.7	54	[5.3] A	5.2	5.3	63	62	5.0	43	38
23	38 F	3.2 F	30	26 F	24 F	23 F	35	46	5.1	(52) S	5.0	5.8 H	5.5 F	5.4	54	52	55	55	57	6.0	62	(5.5) PS	48	43
24	39 F	36 F	31 F	28 F	27 F	28 F	40	47	58 H	5.6	5.3	(5.2) SP	5.8	53	5.4	51	5.4	54	51	5.7	62	5.3	48	43 JS
25	3.0	26	(25) S	2.4 F	2.5 F	26	38	50	52	54	5.6	5.6	52	5.4	52	54	5.7	5.6	62	66	62	52	44	40
26	37	33	3.2	29	28	25	39	51	5.0	56	5.8	5.7	62	7.0	5.8	5.3	5.2	5.2	54	(5.5) JS	6.2	5.4	42	35
27	3.3	28	26	25	2.5 F	26 F	36	4.5	52	62	6.0	6.5	60	6.3	5.6	5.6	5.7	58	60	60	6.4	5.8	4.6	39
28	35 F	(26) FS	(21) F	F	F	F	3.4 F	42 H	4.6 JS	49 H	50 H	49	5.0	5.0 FK	4.8 K	4.8 FK	46 FK	47 FK	47 K	47 K	5.0 K	45 K	39 FK	36 FK
29	27 FK	22 FK	[20] AK	1.7 FK	1.8 FK	K(20) FS	35 K	44 HK	5.1 K	5.1 K	5.3 K	5.5 K	5.6	5.4	54	5.4	52	58	5.9	6.3	66	5.8	4.8	3.6
30	3.1	24	1.8	1.9	20	(1.7) JS	3.7	4.6	50	58	5.7	6.7	60	59	6.0	6.0	6.0	62	6.3	6.8	67	5.8	4.9	47 F
31	40 F	3.7 F	33 F	3.0 F	26 F	22 F	4.1	47	5.8	61	6.4	63	62	6.5	6.1	62	6.3	63	6.6	7.0	67	6.3	5.8	5.0
Median	37	3.2	3.0	26	24	25	3.8	45	5.1	5.5	5.6	55	5.5	5.5	5.4	54	.54	55	56	6.0	6.2	5.4	4.7	42
Count	31	31	31	30	30	30	31	31	30	29	29	29	29	31	31	31	31	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

GPO 836048

Form adopted June 1946

TABLE 75

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

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), August (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: J.J.S., J.W.P.

Calculated by: J.W.P., N.B., L.F.M.

Day	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
1	3.7F	2.8	2.4F	[2.2]A	2.1	3.2	4.3	5.4	5.8V	5.7	5.0	5.1	5.3	5.1	[5.6]A	5.5	5.5	5.8	5.5	[5.8]A	5.8	5.8	[4.8]A	4.2
2	3.8F	3.5F	3.1F	2.7F	2.6F	3.2	4.1	5.3	5.0	5.2	5.0	4.8	5.8	5.5	5.0	5.0	5.0	5.4	5.8	6.7	5.8	5.3	4.4	4.0
3	3.8	3.5	2.7	2.5	2.1	3.0	<3.5G	4.2	4.9	5.2	4.9	4.7	4.7	5.0	5.0	5.0	5.0	5.0	5.3	5.9	5.9	5.3	4.4	4.1
4	3.3F	3.6	3.4	2.7	2.1	2.8	3.6F	4.5	M	M	M	M	M	4.9	4.9	4.8	4.9	5.2	5.4	4.8	4.5F	3.5F	3.0F	2.9F
5	3.6F	2.9F	2.7F	2.0F	1.7	[2.6]A	3.7	<3.9G	4.5	<4.3G	(5.2)S	5.0	5.2	(4.7)AS	[4.8]A	(4.9)S	5.0	5.4	5.8	6.2	5.8	5.0K	3.3K	2.7K
6	2.7K	2.6K	2.3K	K(2.0)FS	1.9K	2.5FK	<3.2GK	<3.6GK	<3.9GK	<4.0GK	<4.1GK	<4.2GK	4.6K	4.8K	4.9K	5.0K	5.4K	6.3K	5.8K	6.4K	K(6.2)JS	5.5K	5.0K	4.6K
7	4.2K	3.5K	2.9K	1.7K	1.7K	2.9K	3.5FK	4.1MK	4.5K	AK	AK	AK	AK	4.7K	ASK	5.1K	5.4K	5.6K	5.7K	5.3K	4.8K	3.6F	(3.1)JS	2.9F
8	2.7	2.6F	1.9F	2.4	2.3F	3.6	4.4	4.8	5.8	5.7	5.2	5.8	5.7	5.5	6.0	5.8	5.8	5.7	6.2	6.6	6.1	5.2	4.4	4.4
9	4.1F	3.9	3.2F	3.1JS	2.7F	3.2F	4.5	4.8	4.8	5.0	5.2H	5.2	5.0	<4.5G	5.3	5.6	5.3	5.3	5.0	5.3	5.0	4.6	4.5	4.2
10	4.0	3.9	3.1	(2.6)S	2.4	3.1	3.9	4.2	5.0	5.1	(4.9)S	4.8	5.0	4.9	5.2	5.2	5.5	5.8	[5.8]A	5.5	4.9	4.5	4.1	3.8
11	3.1	3.0	2.7	2.3	2.3	3.2	4.2	4.6	4.4	5.0	[5.0]B	5.6	(5.2)S	5.0	5.0	5.0	(5.2)S	4.9	5.3	6.0	6.0	4.9	4.4	4.0
12	4.0	3.8	3.3	2.8	2.7	3.5	4.8	5.3	5.4	5.9	5.8	6.1	5.9	6.2	5.8	5.8	5.6	5.4	5.9	6.5	5.8	5.5	4.8	4.3
13	(4.7)FS	(3.8)A	(3.0)FA	(3.1)FA	2.7FS	3.5	4.5	5.2	5.7	6.3	6.4	6.6	6.4	6.0	6.0	6.2	6.2	6.2	6.8	7.6JS	6.7	6.5	6.2	5.6JS
14	5.0	4.4JS	4.1	3.5FS	3.3	3.5	4.6	5.2	4.8	5.9H	5.5	5.4	5.5	5.3	5.6	5.8	5.8	6.2	6.8	7.0	5.8	4.9	4.2	3.8
15	3.3	3.2	2.9	2.4	2.3	3.3	4.3	5.1	5.6H	5.8	5.7	(5.2)SP	(5.3)A	5.4	5.6	5.6	5.6	5.3	6.0	7.0	5.5	4.9	4.2	3.5
16	2.3F	2.3	2.2	2.3F	1.9	3.2F	4.2	5.2	5.7	6.0	6.0	5.2	5.5	5.5	5.8	5.8	5.5	5.9	6.1	6.7	6.3	5.3	4.6F	4.2F
17	3.9F	3.6F	3.0F	3.0	2.7F	3.7F	4.9	5.8	6.6	6.5	6.2	6.2	5.6	6.0	6.6	7.0	6.4	6.7	7.4	6.6	6.2	5.4	4.7	4.2
18	3.8	3.2	3.2	3.0	2.7	3.1	3.8	4.3	5.0	5.4	5.0	5.3	5.3	5.7	5.6	5.5	5.8	5.7	5.6	5.9	5.5	5.0	4.3	3.5
19	3.1	3.2	2.8F	2.7F	2.5	3.3	4.1	4.9	4.9	5.4	5.4	5.4	5.2	5.2	5.6	5.4	5.2	5.2	5.2	5.2	5.0	(3.8)JA	(3.6)S	3.4
20	2.7	2.5	(2.3)FS	2.3	2.4	3.2	4.1	5.0	5.0	6.1	6.0	5.8	5.4	5.6	5.5	5.4	5.4	5.3	5.0	6.0	5.8	5.0	[4.3]A	3.7
21	3.3	3.2	3.0	3.0	2.4	3.4	4.8	5.1	6.0	6.4	5.6	6.0	5.5	5.8	5.5	5.3	5.4	5.4	5.4	5.6	5.2	(4.4)PS	4.6	4.2
22	3.2F	3.0F	2.6F	2.4F	2.4F	3.1F	4.3	5.0	5.4	6.4	6.2	5.7	5.6	5.6	5.6	5.4	5.2	5.2	5.7	6.4	5.8	(4.4)PS	4.0	3.8F
23	3.6F	3.2	(2.7)JF	2.4F	2.2FS	3.2F	4.0	4.9	5.0	5.5	5.7	5.6H	5.3	5.2	5.0	5.3	5.6	5.7	5.4	6.3	6.2	5.4	4.7	4.0
24	3.8F	3.3F	3.0F	(2.7)JF	(2.7)S	3.2	4.4	5.4	5.9	5.8	5.3	5.4	5.5	5.3	5.2	5.3	5.4	5.4	5.3	6.2	5.8F	5.1	4.4	3.6F
25	2.6	[2.6]A	2.4F	2.4F	2.4	3.1	4.7	5.2	5.2	5.4	5.3	5.4	5.3	5.4	5.2	5.6	5.8	5.8	6.3	6.3	(5.4)PS	4.8	4.2	3.8
26	3.5	3.3	3.1	2.9	2.5	3.1	4.5	5.2	5.7	5.8	5.4	5.7	6.8	6.7	5.4	5.0	5.3	5.3	5.4	6.2	5.8	4.8	3.8	3.3
27	3.0	2.8	2.6	2.5	2.4	2.9	4.1	4.8	6.1	5.8	6.3	6.3	5.8	6.3	5.7	5.6	5.8	5.8	5.8	6.6	6.3	5.0	4.4	3.5
28	3.0F	1.9F	(2.0)F	(2.5)FS	(2.6)F	2.8F	3.8V	4.5	5.0	5.1H	4.7	5.0	5.1	4.9K	4.9K	4.7K	4.5K	4.7K	4.7K	5.0K	4.8K	4.2FK	3.8K	3.5FK
29	2.3FK	AK	AK	2.3FK	1.9FK	2.6FK	4.1K	4.9K	5.2K	5.2K	5.5K	5.5	5.7	5.4	5.4	5.4	5.5	6.0	6.2	(6.8)S	6.0JS	5.3	4.1	3.3
30	2.7F	2.0	1.8F	1.9JS	(1.8)JS	2.8	4.3	4.9	5.5	5.8	6.1	6.5	6.0	5.7	6.0	6.1	6.0	6.3	6.5	6.8	6.1	5.3	4.8	4.6F
31	3.7F	3.5F	3.1F	2.7F	2.2F	2.9	4.6	5.4	6.0	6.3	6.3	6.2	6.3	6.3	6.2	6.2	6.2	6.5	6.8	7.2	6.5	6.0	5.6	4.8
Median	3.5	3.2	2.8	2.5	2.4	3.2	4.2	4.9	5.2	5.7	5.4	5.4	5.5	5.4	5.5	5.4	5.5	5.6	5.8	6.3	5.8	5.0	4.4	3.8
Count	31	30	30	31	31	31	31	31	30	29	29	29	29	31	30	31	31	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

TABLE 76

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

Form adopted June 1946

IONOSPHERIC DATA

h'F1 (Characteristic), Km (Unit), August (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: J.J.S., J.W.P.

Calculated by: J.W.P., N.B., 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							210H	230H	(210)A	170H	200	170H	180	180H	(220)A	200	200H	(220)A	A	A				
2							230	220	220	190H	[200]A	210	[210]A	(210)A	180	180	220H	210H	A					
3							Q	240	210	190	180H	210	180	200	180H	180H	200	220H	220H	Q				
4							Q	190F	M	M	M	M	M	190	210H	200	200H	220	230					
5							Q	220	200H	190H	200	220	(230)A	A	A	230	200	220	210					
6							240K	220K	210K	220K	220HK	180HK	220K	190HK	200HK	240K	220HK	220HK	240K	K				
7							AK	AK	230K	[220]AK	(220)AK	(220)AK	[200]AK	180K	210K	200K	210FA	210K	230K	K				
8							230	200	200	210	180H	180	180H	220	210	220H	210	(240)A	230					
9							230	210H	200H	210	170H	180H	190	220	200H	200	200H	220	220					
10							240	(230)A	220	[220]AH	220H	200	200H	190	160H	A	A	A	240					
11							A	A	200H	200	200H	200	A	A	180	200H	220	230	240					
12							240	220	210	200H	180H	240	220	[220]A	210	200	210	220	A					
13							Q	220	(220)A	(240)A	A	A	200H	190H	200	200	220	230	230					
14							230	220	220	230	200H	170	170H	200	210	200H	210H	220H	230					
15							240	220	220	190H	210H	[220]A	(220)A	(220)A	200H	210	220	220	A					
16							230	220	(220)A	210	200H	190H	170H	190	190H	210H	220	A	240					
17							230	230	220	(210)AH	200H	[210]A	[200]A	180H	200H	200H	200H	220	240					
18							250	220H	220	200	200H	190H	[200]A	220	210	220	220	210	220					
19							Q	220	210	200	210	200	190H	200	200	200	200H	A	A					
20							A	(240)A	200	200	200H	200H	180H	180H	200	180H	220	210	220					
21							Q	220	210	200H	200	200	(210)A	190	200	(230)A	(250)A	A	A					
22							Q	220	210H	210H	200H	200H	180H	220H	190	200	[210]A	220	240					
23							Q	230	210	190	190H	180H	180H	180H	220	210	A	A	A					
24							240	(230)A	210	200H	190H	180H	190H	200	(220)A	(220)A	(220)A	210	220					
25							230	230	210	200H	200	190	180	180H	220	220	220	220	230					
26							210	220	210	200	210	180H	200	190	200	210	200	220	230					
27							Q	200	200H	200	210	200	200	200	180H	200H	220	220	230					
28							210	220	210	190H	180	200H	210	200K	210K	210K	200HK	200K	220K	K				
29							QK	220K	220K	220AK	(200)AK	200HK	200	200H	210	210	220	230	240					
30							Q	220	220	210	200	200	200	200	200H	200	210H	230	230					
31							Q	220	220	200H	200	190	200	200H	210	220H	220	230	250					
Median							230	220	210	200	200	200	200	200	200	200	210	220	230					
Count							16	29	30	30	29	29	29	29	30	30	29	26	24					

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 77

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

IONOSPHERIC DATA

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

National Bureau of Standards (Institution)

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

Scaled by: J.J.S., J.W.P.

75°W Mean Time

Calculated by: J.W.P., N.B., 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							31 H	38 H	40	43 H	43	46 H	44	44 H	43	43	42 H	(39) A	A	A				
2							36	38	41	42 H	43 A	45	[45] A	45	45	43	43 H	40 H	A					
3							Q	37	39	41	43 H	43	44	44	44 H	43 H	41	40 H	34 H	Q				
4							Q	36 F	M	M	M	M	M	43	42 H	41	41 H	38	35					
5								37	40 H	42 H	43	44	45	A	A	42	(39) S	(39) S	(34) L					
6							30 F K	35 F K	37 F K	40 K	41 H K	41 H K	42 K	42 H K	42 H K	(41) S K	K (40) S H	38 H K	L K	K				
7							A A	A K	39 K	[41] A K	43 K	(44) A K	[43] A K	42 A	43 K	42 K	41 F K	40 K	L K	K				
8							L	L	42	45	45 H	45	47 H	47	45	45 H	45	L	L					
9							31	38 H	43 H	43	44 H	46 H	45	46	45 H	44	43 H	39	34					
10							31	37	41	44 H	44 H	46	46 H	46	44 H	44	42	A	L					
11							L	(38) S	40 H	43	45 H	45	A	A	(45) S	45 H	43	(41) L	L					
12							L	L	(42) L	44 H	45 H	47	47	47	46	44	(43) L	L	L					
13							Q	L	42	(44) A	A	A	47 H	47 H	46	45	42	40	L					
14							L	(37) L	42	43	46 H	45	45 H	45	44	44 H	42 H	40 H	33					
15							L	37	41	43 H	44 H	[45] A	46	45	44 H	44	43	39	A					
16							L	L	41	43	44 H	45 H	45 H	45	45 H	44 H	41	38	L					
17							L	L	42	43 H	45 H	[45] A	45	44 H	43 H	43 H	41 H	40	L					
18							L	38 H	39	41	44 H	44 H	45	44	44	42	41	38	L					
19							Q	L	40	41	43	44	44 H	44	43	41	40 H	(37) L	L					
20							L	37	39	41	43 H	44 H	44 H	45 H	43	42 H	41	L	L					
21							Q	L	L	42 H	42	43	44	44	43	42	40	A	L					
22							Q	L	42 H	42 H	44 H	44 H	43 H	44 H	43	42	[40] A	(35) L	L					
23							Q	L	39	42	43 H	44 H	43 H	44 H	- 43	42	40	A	A					
24							L	L	39	41 H	43 H	43 H	43 H	43	42 F	(40) A	(39) S	35	L	Q				
25							L	L	39	42 H	42	44	44	43 H	43	41	40	37	L					
26							L	(33) L	L	41	43	45 H	44	43	43	42	(41) L	L	L					
27							Q	L	L H	42	44	45	45	45	44 H	42 H	41	L	L					
28							L	35	38	41 F H	42	44 H	43	43 K	42 K	41 K	K 39 F H	36 K	L K	K				
29							Q A	36 K	40 K	42 K	44 K	44 H K	45	45 H	44	42	41	37	L					
30							Q	L	40	43	44	45	46	46	45 H	43	42 H	37	L					
31							Q	L	L	43 H	46	46	47	47 H	46	45 H	42	(37) L	L					
Median							31	37	40	42	44	45	45	44	44	42	41	38	34					
Count							5	16	26	30	29	29	29	29	30	31	31	23	5					

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

GPO 836048

Form adopted June 1946

TABLE 78

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

IONOSPHERIC DATA

h'E (Characteristic), Km (Unit), August (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: J.J.S., J.W.P.

Calculated by J.W.P., N.B., 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							(120)S	110	100	100	100	100	100	100	100	100	110	110H	120	A						
2							(120)S	100	100	100	110	100	100	100	100	100	100	100	100							
3							120	110	110	100	100	100	100	100	100	100	100	110	110							
4							(110)S	100	M	M	M	M	M	100H	100	100	100	110	(120)A							
5							(110)A	110	100	100	100	100	100	100	(110)S	100	100	100	110							
6							110K	110K	100K	100K	100K	100K	100HK	100K	100K	110K	110K	(110)BK	(120)SK	K						
7							110K	110K	100K	100K	100K	100K	100K	100K	100K	100K	100K	110HK	110K	K						
8							100	(100)A	100	100B	100	100	100	110	100	100	110B	110	120							
9							110	110	100	100	100	100	100H	100	100	(100)AH	100	110	120H							
10							110	110	100	100	100	100	100	100	100H	100	110	110	110							
11							(120)S	110	110	110	100	100	100	100	100	110	110	110	110							
12							A	100	110	100	100	100	100	100	100	(100)AH	100	100	(120)S							
13							S	110	100	100	100	100	100	100	100	100	110	110H	120							
14							S	110	110	100	100	100	100	100	100H	110H	100	100	110							
15							(120)S	110	100	100	100	100	100	100	100H	100H	100H	100	120							
16							S	110	110	(100)A	(100)AH	(100)A	(100)A	(100)AH	100H	100	110	110	120							
17							A	A	110	100	100	(100)A	(100)A	(100)AH	(100)A	100H	(100)A	100H	(120)S							
18							(130)A	110	110	100	(100)S	110	110	100	100	(100)A	100H	100	120							
19							S	110	110	100	100	100	100	100	100	100	110	110	110							
20							S	110	100	100	100	100	100	100	110	110	110	110	120							
21							S	110	100	100	100	100	100H	110	100	110	110H	110	120							
22							S	120	110H	110	110	100	110	110	110H	110	110H	110	(120)S							
23							S	110	110	100	100	100	100	100	110	(110)A	(110)A	110	110							
24							S	110	100	100	100	100	100	100	100	100	110	(110)A	A	S						
25							130	110	110	110	100	100	100	100	100	100	100	110	110							
26							S	110	110	110	110	100	100	100H	100	100	110	100H	SH							
27							S	110	110	110	110	110	100	100	100	100	110	110	(110)S							
28							S	120	120	110	110	100H	100	100K	100K	110K	110K	110K	AK	K						
29							SK	120K	110K	110K	110K	110HK	110	100H	100	100	100	(100)A	(130)S							
30							S	120	120	110	110	100	100	100	100	(100)A	(100)A	(100)A	(100)A							
31							S	120	110	110	110	100	100	100	100	110	110H	110	130							
Median							120	110	110	100	100	100	100	100	100	100	110	110	120	—						
Count							14	30	30	30	30	30	30	31	31	31	31	31	28							

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

GPO 848048

TABLE 79

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

Form adopted June 1946

IONOSPHERIC DATA

foE (Characteristic), Mc (Unit), August (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: J.W.P., J.J.S., L.F.M.

Calculated by: J.W.P., L.F.M., N.B.

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							A	A	A	A	A	A	A	3.4	3.3	3.1	2.9	2.6 H	A	A				
2							1.8	2.4	A	A	A	A	A	A	A	A	A	A	A					
3							A	A	(2.7) A	(3.0) A	(3.1) A	A	A	A	A	A	2.9	2.6	S					
4							1.7	2.2	M	M	M	M	M	3.3 H	3.3	3.1	2.9	2.5	A					
5							A	A	A	A	A	A	A	A	(3.3) A	(3.2) A	(3.0) A	A	2.1					
6							A K	A K	A K	A K	A K	A K	3.4 HK	3.4 K	3.3 K	3.2 K	3.1 K	(2.5) BK	S K	K				
7							2.0 K	A K	(2.9) AK	A K	A K	A K	A K	A K	A K	A K	A K	2.7 HK	(2.2) AK	K				
8							A	A	A	A	A	(3.3) P	3.4	(3.5) P	3.3	3.2	3.2	2.7	A					
9							A	A	A	A	A	A	3.4 H	[3.4] A	(3.3) A	3.2 H	2.9	2.7	2.3 H					
10							A	2.4	A	A	A	A	3.4	3.4	3.4 H	3.3	3.1	2.8	2.2					
11							A	2.5	2.7	[2.8] A	2.9 A	(3.4) A	(3.3) A	3.2	3.2	3.2	(2.9) A	[2.5] A	2.1					
12							A	A	A	A	A	A	A	(3.4) P	(3.4) P	3.2 H	3.0	(2.5) A	A					
13							A	(2.4) A	A	A	A	A	A	A	A	A	A	2.7 H	A					
14							S	A	A	A	A	A	A	A	3.3 H	3.2 H	3.0 F	2.7	2.2					
15							A	A	A	(2.9) A	3.1	A	A	A	3.3 H	3.2 H	2.9 H	[2.5] A	2.0					
16							S	A	A	A	3.2 H	A	A	3.4 H	3.3 H	3.2	3.0	2.6	A					
17							A	A	A	A	A	A	A	3.3 H	3.2	3.2 H	2.9	2.7 H	A					
18							A	(2.3) P	[2.6] A	2.9	A	A	A	A	A	A	2.9 H	2.5	1.9					
19							S	2.2	(2.5) A	A	A	A	3.4	A	A	A	(2.9) P	(2.5) A	1.9					
20							S	A	A	A	A	A	A	A	A	3.1	(2.8) A	2.5 A	A					
21							S	2.2	2.6	2.9	3.0	[3.1] A	3.2 H	[3.2] A	(3.1) A	2.9	2.8 H	2.4	A					
22							S	A	A H	A	A	3.1	3.1	[3.2] A	3.2 H	3.0	2.8 H	A	A					
23							S	A	A	A	A	A	A	A	A	A	A	A	A					
24							S	A	A	(2.8) A	A	A	A	A	A	A	A	A	A	<1.6 S				
25							1.8	(2.5) A	2.7	A	A	A	A	(3.3) A	(3.2) A	(3.0) A	2.8	(2.4) A	A					
26							<1.6 S	A	A	3.0	[3.2] A	3.3	3.3	3.3 H	A	A	2.8	2.4 H	1.8 H					
27							1.7	(2.4) A	A	A	A	3.4	3.4	[3.4] A	3.2	3.0	2.8	2.5	1.8					
28							S	2.3	A	A	3.2	3.3 H	[3.3] A	3.2 K	3.3 K	3.1 K	(2.7) AK	2.4 K	A K	K				
29							S K	(2.3) AK	2.7 K	3.0 K	3.0 K	K (3.3) FH	[3.3] A	3.3 H	3.0	3.0	[2.8] A	2.5	A					
30							S	A	A	A	A	A	A	A	A	3.1	A	A	A					
31							<1.6 S	A	A	A	3.2	3.2	3.4	3.4	3.3	3.2	2.9 H	2.6	1.8					
Median							1.7	2.4	2.7	2.9	3.1	3.3	3.4	3.4	3.3	3.2	2.9	2.5	2.0	—				
Count							7	12	8	8	9	9	13	18	20	22	25	25	12	1				

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 80

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

IONOSPHERIC DATA

Es (Characteristic), Mc, Km (Unit), August (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: J. J.S., J.W.P.

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

Day	00	01	02	03	04	05	06	07	08	09	10	11
1	3.8 100	3.0F 100	3.8 100	4.3Y 100	3.0 120	5.0 100	7.6 110	4.3 110	4.4 100	4.8 100	4.9 100	4.3 110
2	8.2 100	4.7 120	<1.4S S	6.0 110	2.6 110	2.5 110	4.9 130	4.0 110	(3.7)S 110	4.5 100	5.4 100	4.5 100
3	<1.6S S	<1.6S S	<1.6S S	<1.7S S	<1.6S S	3.7 120	6.8 H 110	3.2 110	3.9 110	4.4 110	4.4 110	4.5 100
4	<1.6S S	<1.6S S	<1.6S S	2.2 120	2.1 120	3.8 H 100	3.0 H 110	3.6 120	M	M	M	M
5	3.8 110	3.7 100	3.3 110	3.1 110	4.9 150	4.9 140	5.3 110	4.5 H 110	4.3 110	4.0 110	11.5 H 110	4.2 110
6	<1.6S S	6.4Y 100H	<1.3S S	7.6 100	2.3 100	4.0 H 100	3.5 120	4.8 110	6.6 110	(4.0)S 110	(4.0)S 110	3.4 110
7	4.3 110	6.4 H 100	<1.6S S	2.9 110	4.0 120	8.2Y 100	4.8H 120	(5.0)S 100H	4.0H 120	5.7 110	5.5 100	7.4 100
8	4.1 100	4.4 110	3.0 110	3.8 120	2.4 120	4.0 H 110	3.2 H 100	3.8 110	4.7 110	4.6 110	4.6 110	G
9	2.5 110	2.3 110	<1.6S S	<1.6S S	<1.6S S	11.3 110	3.0 H 110	3.7 110	4.1 110	4.1 110	3.4 100	4.1 110
10	3.7Y 110	2.9 110	2.4 110	2.9 110	2.4 110	4.5 110	3.7 H 110	4.8 110	5.6 110	5.0 110	4.3 110	4.7 110
11	2.9 110	3.6 100	3.5 100	2.9 100	2.3 100	5.2 H 120	5.4 110	6.6H 110	3.8 110	(5.0)S 110	12.0 H 100	7.2 100
12	(3.5)S 110	<1.6S S	<1.6S S	(6.9)S 120	9.0 100	4.2 100	(3.1)S 110	(4.0)S 100	4.5 H 100	4.8 100	4.3 100	4.6 100
13	4.8 100	4.3 100	5.0 100	7.2 H 100	3.1 100	4.9 H 100	12.0 110	3.8 120	7.4 110	5.4 110	7.4 100	6.2 100
14	<1.6S S	<1.6S S	<1.3S S	2.2 110	6.4 H 110	(4.5)S 100	4.6 H 110	4.9 H 120	3.7 H 110	3.8 110	4.0 110	4.2 110
15	3.0 100	<1.6S S	<1.3S S	E	2.3 100	2.3 120	2.9 110	4.4 110	4.2 110	8.8Y 110H	4.4 110	7.2 H 100
16	<1.6S S	4.2 100	3.0 110	2.3 120	2.7 100	3.9 100	3.5 110	3.6 110	4.8 110	7.2 H 100	3.8 100	4.1 100
17	4.8 100	4.9 100	3.3 100	2.9 100	2.3 100	1.8 110	4.6 110	3.5 110	3.8 110	4.7 110	4.9 100	7.0 100
18	2.2 100	2.1 100	<1.6S S	<1.6S S	<1.6S S	2.4 110	2.9 130	5.0 100	3.7 110	3.9 130	3.3 110	4.3 120
19	<1.6S S	2.1 100	(2.0)S 100	2.1 100	<1.7S S	<1.6S S	2.8 130	7.2 120	3.8 110	4.7 110	4.7 110	4.9 100
20	3.6 100	3.3 100	2.9 110	(2.8)S 110	<1.6S S	<1.6S S	3.6 110	3.3 110	3.4 110	3.8 110	4.1 110	5.0 100
21	3.2 100	<1.6S S	2.1 110	<1.6S S	(2.9)S 100	2.9 120	3.1 120	3.7 120	4.6 100	3.1 120	3.5 120	4.3 110
22	<1.6S S	2.3 100	<1.2S S	<1.2S S	2.9 110	<1.6S S	1.9 H 120	3.8 120	3.6 H 110	3.7 120	4.1 110	3.3 120
23	3.2 100	2.9 100	3.1 100	(2.7)(100) S	<1.6S S	<1.6S S	3.6 120	3.5 110	4.2 110	4.0 100	4.7 100	4.9 100
24	<1.7S S	3.1 100	2.4 100	2.3 100	<1.6S S	<1.6S S	2.9 H 140	3.9 110	4.7 120	3.9 110	3.9 110	4.7 110
25	5.5 100	4.4 100	2.7 100	2.7 100	2.3 110	3.7 120	G	3.2 110	4.3 110	7.0 110	3.9 110	3.6 110
26	4.2 100	4.3 100	(2.5)S 100	<1.6S S	<1.6S S	<1.6S S	G	7.4 110	3.9 110	(3.7)S 110	3.8Y 120	3.4 120
27	2.4 100	2.7 100	3.0 100	2.2 100	2.3 100	<1.6S S	G	2.5 120	3.7 110	4.2 110	4.0 110	G
28	2.9 100	2.4 110	<1.6S S	<1.6S S	<1.6S S	<1.6S S	1.7 110	3.3 130	3.7 120	3.0 120	G	G
29	3.7 110	3.7 100	4.6 100	3.3 100	3.0 100	<1.6S S	8.2 110	3.2 120	4.0 120	4.8 120	4.9 110	G
30	4.0 110	4.9 100	3.1 110	2.8 110	2.7 110	2.4 110	1.8 120	3.8 120	4.0 110	3.9 110	4.7 H 110	4.4 100
31	<1.6S S	<1.6S S	2.3 110	2.1 100	2.9 100	2.3 130	4.7 H 110	3.2Y 110	3.5 110	4.7 110	G	G
Median	3.2	3.0	2.4	2.7	2.3	2.9	3.5	3.8	4.0	4.4	4.3	4.3
Count	31	31	31	31	31	31	31	31	30	30	30	30

Day	12	13	14	15	16	17	18	19	20	21	22	23
1	3.9 110	G	7.8 120	3.9 120	4.3 120	4.9 110	8.5 110	11.0 100	4.6 100	7.6 110	9.0 110	9.0 100
2	(11.5)S 100	(6.8)S 100	(6.9)S 110	4.5 100	(5.2)S 110	4.8 110	5.7 110	4.8 110	4.7 110	(2.5)S 110	2.3 110	(3.2)S 100
3	4.2 110	3.2 110	3.4 120	4.0 100	3.5 110	G	G	3.1 130	2.4 110	4.4 110	2.4 100	3.1 120
4	M	G	G	3.2 110	3.3 120	7.4 120	3.3 120	<1.6S S	2.8 110	<1.6S S	3.9 110	4.0 110
5	7.4 100	5.6 110	6.8 110	(6.8)S 120	(6.6)S 110H	4.8 H 120	2.6 130	<1.6S S	2.4 110	<1.6S S	<1.6S S	<1.6S S
6	G	G	G	G	G	G	2.3 130	2.2 120	<1.6S S	<1.6S S	<1.6S S	<1.6S S
7	7.2 100	4.5 110	4.7 110	4.0 100	3.1 110	G	2.9 110	2.7 120	4.3 110	2.7 110	3.0 110	3.1 110
8	3.7 120	G	3.9 130	3.9 120	4.4 120	6.6 110	4.7Y 110	6.6 110	3.4 100	<1.6S S	2.8 110	2.9 100
9	G	4.5 110	3.9 110	3.9 100	3.8 130	3.1 120	2.4 140	3.2 110	5.0 110	4.8 110	3.1 110	2.5 110
10	3.8 100	G	G	5.1 130	4.8 130	5.4 120	4.7 110	4.6 110	3.6 110	4.7 110	3.6 110	4.4 110
11	5.4 100	2.6 100	3.5 100	3.4 110	4.5 110	7.0 H 110	4.1Y 110	4.2 120	2.8 120	3.2 H 120	4.2 110	(3.6)S 110
12	4.3 100	5.1 130	4.8 130	3.8 100	3.7 100	3.0 130	4.3 120	<1.6S S	(2.8)S 120	4.7 110	3.8 110	5.4 110
13	4.6 110	4.1 100	3.3 100	3.9 100	3.7 110	G	2.2 H 130	<1.6S S	3.1 110	2.9 110	4.2 110	2.4 110
14	3.3 100	3.5 H 110	3.9 100	G	3.7 H 110	4.2 120	3.5 120	4.4 110	3.6 110	<1.6S S	<1.6S S	<1.6S S
15	6.7 H 100	8.4 H 100	G	G	G	3.8 H 110	4.2 120	3.7 110	5.8 110	5.4 110	3.0 110	<1.6S S
16	4.2 100	2.9 100	G	4.4 120	4.8 120	4.7 110	3.4 110	3.3 110	3.7 110	4.7 110	3.5 100	3.2 110
17	5.2 100	3.8 100	3.8 100	3.2 130	3.0 100	4.8 100	4.0 120	<1.6S S	2.9 110	2.6 100	2.3 100	2.4 100
18	4.8 110	4.5 110	4.5 110	3.9 110	4.2 H 110	4.0 120	3.2 130	3.9 110	4.7 110	2.9 110	2.1 110	<1.6S S
19	(4.0)S 110	(3.6)S 100	3.4 120	4.6 110	3.9 120	4.3 120	3.7 110	3.7 110	3.2 110	4.9 110	5.6 110	2.9 H 100
20	5.6 110	4.2 110	5.0 H 110	G	5.0 H 120	3.9 120	3.1 120	2.9 120	5.6 110	5.2 110	5.2 110	4.2 110
21	4.9 110	4.3 110	3.6 H 110	4.7 120	4.3 140	7.2 120	5.0 120	3.3 120	4.7 120	4.8 110	4.8 110	3.5 110
22	4.2 110	3.7 120	5.0 120	5.4 120	9.0 110	9.0 110	6.8 H 110	5.6 110	2.9 110	2.8 110	2.9 110	6.6 100
23	4.4 100	4.9 100	4.2 110	4.1 110	4.8H 110	7.4 110	9.2 110	5.4 110	7.3 110	2.7 110	2.8 110	<1.6S S
24	4.6 100	6.2 H 110	4.6 110	4.8 100	4.3 110	3.9 110	2.9 H 110	3.1 100	2.9 100	4.3 110	4.3 100	5.7 120
25	6.2 100	4.6 100	4.5 100	4.7 100	G	4.9 H 110	2.9 110	<1.6S S	2.8 110	<1.6S S	(2.4)S 100	2.2 100
26	3.9 110	3.9 110	3.8 110	3.7 110	G	G	2.8 120	<1.6S S	<1.6S S	2.4 100	4.7 H 100	4.4 110
27	G	4.7 100	G	G	G	3.2 120	2.9 130	<1.6S S	2.5 100	2.4 100	<1.6S S	3.6 110
28	3.9 100	G	G	4.8 120	4.4 120	3.5 120	3.3 H 120	4.6 120	4.2 110	4.4 110	4.4 110	4.3 110
29	4.9 100	4.5 120	G	6.6 110	4.9 100	4.5 H 100	3.1 H 100	2.4 100	4.8 100	4.2 110	3.5 110	4.1 110
30	4.1 H 100	3.9 100	4.2 100	3.4 100	3.5 100	3.3 100	3.0 H 100	2.9 100	2.3 120	3.1 120	<1.6S S	<1.6S S
31	G	G	G	G	3.3 130	3.7 110	3.3 120	<1.7S S	<1.6S S	4.5 110	3.7 110	2.5 120
Median	4.2	4.1	3.8	3.9	3.9	4.2	3.3	3.1	3.2	3.1	3.1	3.1
Count	30	31	31	31	31	31	31	31	31	31	31	31

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

TABLE 81

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

Form adopted June 1946

IONOSPHERIC DATA

(M1500)F2 (Characteristic), ____ (Unit), August (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: J.J.S., J.W.P.

Calculated by: J.W.P., N.B., 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	22 F	21	21	21 F	21 F	22	22 F	22	24	26	23 F	21	19	21	21	23	20	22	23	20	S J	22	22	22
2	21	22	21	22 F	21 F	23 F	G	21	24	21	21	21	20	21	22	21	20	20	22	22	21	21	20	22
3	21	22	20	20	(20) F	21	22	19	19	22	21	19	17	19	17	19	21	20	21	20	20	20	23	20
4	20	19	19	22	21 F	22	22	F J	M	M	M	M	M	19	16	19	19	20	20	22 F	22 F	S J	S J	20 F
5	19 F	23 F	20 F	20 F	19 F	18 F	A	21	G	S J	19	17	19	20	A	20	17	19	21	22	22	22 K	K (22) F S	19 F K
6	19 K	19 K	19 K	K (17) F S	K (20) J F	K (20) F S	G K	G K	G K	G K	G K	G K	G K	15 K	17 K	18 K	19 K	19 K	K (19) F S	18 K	18 K	19 K	19 K	19 K
7	21 K	19 F K	20 K	20 F A	J K	22 F K	23 F K	23 K	G K	A K	A K	A K	A K	17 K	G K	18 K	20 K	20 K	20 K	21 K	21 K	(22) S K	20	19 F
8	19 F	F J	F J	(19) J F	20	24 F	22	23 F	21	20 F	23	19	19	19	20	22	21	22	20	21	22	21	20	21
9	21	20	21	20	20 F	22 F	22	22	21	19	19 H	21	21	G	18	19	20	21	21	22	21	19	20	19
10	19	20	21	20 F	19	19	22	21	19	20	19	18	15	19	18	19	19	21	22	22	(21) J S	20	20	19
11	20	20	21	21	21	22	21	19	22	16	20	20	23	20	18	18	19	20	21	20	21	21	19	20
12	20	21	21	21	20	22	23	24	22	23	22	21	20	19	21	21	20	21	21	22	21	20	21	21
13	20	22 F	(20) F	20 F	20	22	22	22	23	22	22	21	21	22	20	21	22	21	20	21	21	19	20	20
14	21	20	21	20	20	22	22	22	24	19	21	19	20	19	18	19	20	19	19	21	21	19	19	19
15	19	18	18	21 F	19	21	21	20	20	22	20	19	20	20	20	21	21	22	20	21	23	22	(22) S	20
16	19	20 F	19 F	19	20 F	22 F	24	22	22	22	21	23	21	20	20	21	21	22	21	20	22	22	20	20
17	20 F	21 F	21 F	22 F	22 F	22 F	23 F	22	23	23	22	19 H	21	20	20	21	21	21	20	22	22	22	21	21
18	20	20	20	21	21 F	23 F	23	G	21	23	23	17	19	21	21	21	21	21	22	21	21	21	22 F	21
19	21	20	22	19	20	21	23	22	24	23	23	23	21	20	21	22	23	21	22	21	21	(24) A S	A	22
20	(21) A S	20	21	22	(21) F S	(20) F S	22	24	22	22	22	23	22	21	22	22	21	22	22	21	21	22	22	22
21	21	20	21	22	23	22	25	25	22	23	23	22	20	23	21 V	21	22	22	22 F	22	21	A	20	22 F
22	23 F	22	23 F	22 F	21	23	25 F	25	21	23	23	21	23	22	22	22	A	22	22	22	22	23	22	22
23	23 F	22 F	22	22 F	23 F	22 F	23	23	24	(23) S	22	22 H	23 F	22	22	21	22	23	22	21	20	(22) P S	22	22
24	22 F	22 F	22 F	22 F	20 F	21 F	23	22	21 H	23	23	(22) S P	22	22	22	23	21	23	21	21	22	20	23	(24) J S
25	19	21	(22) S	21 F	22 F	22	23	24	23	24	23	22	20	20	20	20	21	21	22	21	22	22	21	22
26	21	20	21	21	22	22	25	25	22	22	23	22	21	23	23	22	21	22	22	S J	22	21	21	21
27	22	21	21	20	21 F	22 F	25	23	22	24	22	24	23	21	21	21	22	22	22	22	22	22	22	21
28	20 F	(21) F S	(16) F	F	F	F	23 F	21 H	(21) S J	21 H	21 H	17	18	21 F K	19 K	20 F K	19 F K	20 F K	20 K	21 K	20 K	21 K	21 F K	21 F K
29	21 F K	19 F K	A K	20 F K	21 F K	K (21) F S	24 K	22 H K	23 K	22 K	20 K	21 K	20	20	21	21	19	21	21	21	21	21	22	21
30	21	22	19	20	20	J S	23	23	23	22	23	23	22	22	21	22	22	22	22	21	22	21	21	21 F
31	22 F	21 F	22 F	22 F	21 F	21 F	24	22	23	22	22	21	21	21	21	21	21	22	21	20	20	20	20	20
Median	21	20	21	21	21	22	23	22	22	22	22	21	20	20	20	21	21	21	21	21	21	21	21	21
Count	31	30	29	30	29	29	30	30	30	28	29	29	29	31	30	31	30	31	31	30	30	29	29	31

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

GPO 836048

TABLE 82

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

Form adopted June 1946

IONOSPHERIC DATA

(M3000)F2 (Characteristic), ____ (Unit), August (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: J. J. S., J. W. P.

Calculated by: J.W.P., NB, 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	32 F	31	31	31 F	31 F	33	32 F	32	34	3.7	3.4 F	31	29	31	31	33	30	32	34	30	J S	32	32	32
2	31	32	31	3.2 F	31 F	34 F	G	31	34	32	31	32	30	31	32	31	30	3.0	32	32	31	31	30	32
3	31	32	30	30	(30) F	31	33	29	28	32	31	28	27	29	27	29	31	30	31	30	30	30	33	30
4	30	29	29	32	31 F	32	33	F J	M	M	M	M	M	29	24	24	28	30	30	32 F	33 F	J S	J S	30 F
5	29 F	34 F	30 F	30 F	29 F	27 F	A	31	G	S J	29	26	29	30	A	30	26	29	32	32	32	32 K	K (33) F S	29 F K
6	29 K	29 K	29 K	K (26) F S	K (30) J F	K (30) F S	G K	G K	G A	G K	G K	G A	G K	23 A	26 A	27 A	28 K	29 K	K (29) F S	28 K	27 K	29 K	29 K	28 K
7	31 A	29 F K	30 A	30 F K	J S A	32 F K	33 F K	3.3 A	G K	A K	A K	A K	A K	26 K	G K	27 K	30 K	3.0 K	30 K	31 K	31 K	(32) S K	30	29 F
8	24 F	F J	F J	(29) J F	30	34 F	33	34 F	31	30 F	33	29	28	29	30	32	31	32	30	31	32	31	30	31
9	31	30	31	30	30 F	33 F	32	32	31	29	29 H	31	32	G	28	29	30	31	31	32	31	29	30	29
10	29	30	31	30 F	29	29	32	31	28	30	29	27	22	29	27	29	29	31	32	32	(31) J S	30	30	29
11	30	30	31	3.1	31	32	31	29	32	25	30	30	33	30	27	28	29	30	31	30	32	31	29	30
12	30	31	31	31	30	32	34	35	32	34	32	31	30	29	31	31	30	31	31	32	31	30	31	31
13	30	32 F	(30) F	30 F	30	32	33	33	34	32	33	31	31	32	30	31	32	32	30	31	31	29	30	30
14	31	30	31	30	3.0	32	33	33	35	2.9	31	29	30	29	27	28	30	29	29	31	31	29	29	28
15	28	27	28	32 F	29	31	31	30	30	32	30	29	30	30	30	31	31	32	30	31	33	32	(32) S	30
16	29	30 F	28 F	2.9	30 F	32 F	34	32	32	33	31	33	31	30	30	31	31	3.2	31	30	32	32	30	30
17	3.0 F	31 F	31 F	32 F	32 F	33 F	33 F	33	33	33	32	29 H	31	30	30	31	31	31	30	32	32	33	31	31
18	30	30	30	31	31 F	34 F	34	G	31	34	33	26	28	31	31	31	31	31	32	31	31	31	(33) F	31
19	31	30	32	2.9	30	31	33	32	35	34	34	34	32	30	31	33	33	31	33	32	32	(35) A S	A	32
20	(31) A S	30	31	32	(31) F S	(30) F S	33	35	32	32	32	33	32	31	33	33	32	32	33	31	32	32	32	32
21	31	30	32	32	33	32	36	36	33	33	34	32	30	33	31 V	31	32	32	32 F	32	31	A	30	33 F
22	3.3 F	32	33 F	32 F	31	33	35 F	36	3.1	33	34	31	34	33	33	32	A	32	33	32	33	34	33	33
23	33 F	32 F	33	33 F	33 F	32 F	34	34	34	(34) S	33	32 H	34 F	33	32	31	32	33	32	31	30	(32) P S	33	32
24	32 F	32 F	33 F	32 F	30 F	31 F	34	32	31 H	34	34	(32) S P	33	32	32	33	31	33	31	31	32	30	3.3	(34) J S
25	28	31	(32) S	31 F	32 F	32	33	35	34	35	33	32	30	30	30	30	31	31	33	32	33	32	31	32
26	31	30	32	32	32	32	36	36	33	33	33	32	31	33	33	33	31	32	33	J S	32	31	32	32
27	33	31	31	3.0	31 F	33 F	36	34	33	3.5	33	3.4	34	3.1	3.1	31	32	33	3.3	32	32	33	32	32
28	30 F	(31) F S	(25) F	F	F	F	33 F	31 H	(31) J S	31 H	31 H	26	28	31 F K	28 A	30 F K	29 F K	3.0 F K	30 K	31 K	30 K	31 K	3.1 F K	31 F K
29	31 F K	29 F K	A K	30 F K	31 F K	K (31) F S	34 K	32 H K	34 K	32 K	30 K	31 K	3.0	30	31	31	29	31	31	32	31	31	33	31
30	31	32	29	30	30	J S	34	33	33	33	33	33	32	32	3.1	32	32	32	32	31	32	31	31	31 F
31	32 F	31 F	32 F	32 F	31 F	31 F	35	3.2	33	32	32	31	31	31	31	31	31	32	31	30	30	30	30	30
Median	31	305	3.1	31	31	32	33	32	32	325	32	31	30	30	305	3.1	31	31	31	31	315	31	31	31
Count	31	30	29	30	29	29	30	30	30	28	29	29	29	31	30	31	30	31	31	30	30	29	29	31

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

GPO 836048

Form adopted June 1946

TABLE 83

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

IONOSPHERIC DATA

(M3000)F1, ______ (Unit) August (Month), 1955 (Characteristic)

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

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: J.J.S., J.W.P.

Calculated by: J.W.P., N.B., 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							37^{H}	35^{H}	38	40^{H}	41	40^{H}	42	40^{H}	39	40	39^{H}	$(37)^{A}$	A	A				
2							33	39	39	40^{H}	39^{A}	39	A	39	39	41	35^{H}	37^{H}	A					
3							Q	36	39	40	39^{H}	40	40	40	40^{H}	39^{H}	37	36^{H}	35^{H}	Q				
4							Q	38^{F}	M	M	M	M	M	39	39^{H}	41	39^{H}	37	36					
5								36	37^{H}	40^{H}	41	38	40	A	A	38	$(41)^{S}$	$(38)^{S}$	$(36)^{L}$					
6							40^{F}_{K}	39^{F}_{K}	38^{F}_{K}	39^{K}	39^{H}_{K}	40^{H}_{K}	39^{K}	39^{H}_{K}	38^{H}_{K}	$(36)^{S}_{K}$	$^{K}(37)^{S}_{H}$	35^{H}_{K}	L^{K}	K				
7							A^{K}	A^{K}	38^{K}	A^{K}	40^{K}	$(39)^{A}_{K}$	A^{K}	42^{K}	39^{K}	39^{K}	36^{F}_{K}	35^{K}	L^{K}	K				
8							L	L	38	38	39^{H}	40	37^{H}	37	38	36^{H}	37	L	L					
9							36	37^{H}	38^{H}	39	40^{H}	39^{H}	42	38	38^{H}	39	36^{H}	36	37					
10							37	37	38	37^{H}	39^{H}	40	39^{H}	39	38^{H}	37	37	A	L					
11							L	$(37)^{S}$	38^{H}	39	37^{H}	40	A	A	$(38)^{S}$	36^{H}	36	$(35)^{L}$	L					
12							L	L	$(38)^{L}$	37^{H}	43^{H}	37	38	37	39	38	$(36)^{L}$	L	L					
13							Q	L	37	$(37)^{A}$	A	A	38^{H}	39^{H}	38	38	38	36	L					
14							L	$(36)^{L}$	37	39	38^{H}	41	40^{H}	40	38	35^{H}	36^{H}	35^{H}	35					
15							L	36	35	37^{H}	38^{H}	A	37	37	37^{H}	35	35	36	A					
16							L	L	37	38	39^{H}	39^{H}	40^{H}	39	38^{H}	37^{H}	39	36	L					
17							L	L	36	37^{H}	39^{H}	A	A	40^{H}	40^{H}	37^{H}	37^{H}	35	L					
18							L	35^{H}	37	38	37^{H}	40^{H}	37	39	38	37	35	36	L					
19							Q	L	37	38	39	41	38^{H}	41	39	39	36^{H}	$(36)^{L}$	L					
20							L	36	38	40	40^{H}	39^{H}	39^{H}	37^{H}	40	37^{H}	37	L	L					
21							Q	L	L	38^{H}	40	42	40	40	39	36	36	A	L					
22							Q	L	35^{H}	37^{H}	36^{H}	39^{H}	41^{H}	38^{H}	38	37	A	$(38)^{L}$	L					
23							Q	L	38	38	40^{H}	39^{H}	40^{H}	40^{H}	38	37	A	A	A					
24							L	L	38	38^{H}	39^{H}	41^{H}	40^{H}	39	40^{F}	$(40)^{A}$	$(39)^{S}$	39	L	Q				
25							L	L	38	37^{H}	39	38	39	38^{H}	36	37	36	36	L					
26							L	$(39)^{L}$	L	37	37	37^{H}	39	38	39	37	$(35)^{L}$	L	L					
27							Q	L	L^{H}	39	38	39	40	40	38^{H}	37^{H}	35	L	L					
28							L	35	37	38^{F}_{H}	39	39^{H}	38	39^{K}	38^{K}	38^{K}	$^{K}37^{F}_{H}$	35^{K}	L^{K}	K				
29							Q^{A}	38^{A}	36^{K}	36^{H}	38^{K}	38^{H}_{K}	37	37^{H}	37	37	35	35	L					
30							Q	L	37	37	38	37	38	38	37^{H}	37	36^{H}	37	L					
31							Q	L	L	38^{H}	38	39	37	38^{H}	36	35^{H}	37	$(37)^{L}$	L					
Median							37	36	38	38	39	39	39	39	38	37	36	36	36					
Count							5	16	26	29	29	27	26	29	30	31	29	23	5					

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

TABLE 84

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

Form adopted June 1946

IONOSPHERIC DATA

(M1500)E (Characteristic), ______ (Unit), August (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: J.J.S., J.W.P.

Calculated by: J.W.P., N.B., 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							A	A	A	A	A	A	A	4.4	4.3	4.4	4.4	4.4 H	A	A				
2							4.3	4.5	A	A	A	A	A	A	A	A	A	A	A					
3							A	A	(4.5) A	(4.5) A	(4.5) A	A	A	A	A	A	4.4	4.4	S					
4							4.5	4.4	M	M	M	M	M	4.4 H	4.4	4.5	4.4	4.4	A					
5							A	A	A	A	A	A	A	A	(4.4) A	(4.4) A	(4.4) A	A	4.4					
6							A K	A K	A K	A K	A K	A K	4.4 A K	4.4 K	4.4 K	4.4 K	4.3 K	(4.4) B K	S K	K				
7							4.3 K	A K	(4.5) A K	A K	A K	A K	A K	A K	A K	A K	A K	4.3 H K	(4.5) A K	K				
8							A	A	A	A	A	(4.4) P	4.4	(4.4) P	4.5	4.3	4.4	4.4	A					
9							A	A	A	A	A	A	4.4 H	A	(4.3) A	4.4 H	4.4	4.3	4.2 H					
10							A	4.4	A	A	A	A	4.4	4.5	4.2 H	4.4	4.3	4.3	4.5					
11							A	4.3	4.5	A	4.5 A	(4.4) A	(4.3) A	4.4	4.4	4.5	(4.5) A	A	4.4					
12							A	A	A	A	A	A	A	(4.5) P	(4.5) P	4.3 H	4.4	(4.3) A	A					
13							A	(4.4) A	A	A	A	A	A	A	A	A	A	4.4 H	A					
14							S	A	A	A	A	A	A	A	4.3 H	4.4 H	4.3 F	4.4	4.3					
15							A	A	A	(4.4) A	4.4	A	A	A	4.4 H	4.2 H	4.4 H	A	4.3					
16							S	A	A	A	4.3 H	A	A	4.3 H	4.3 H	4.3	4.3	4.4	A					
17							A	A	A	A	A	A	A	4.3 H	4.4	4.3 H	4.3	4.3 H	A					
18							A	(4.4) P	A	4.4	A	A	A	A	A	A	4.3 H	4.3	4.4					
19							S	4.5	(4.4) A	A	A	A	4.4	A	A	A	(4.4) P	(4.4) A	4.4					
20							S	A	A	A	A	A	A	A	A	4.4	(4.4) A	4.3 A	A					
21							S	4.4	4.4	4.4	4.3	A	4.3 H	A	(4.4) A	4.4	4.3 H	4.4	A					
22							S	A	A H	A	A	4.4	4.5	A	4.3 H	4.4	4.3 H	A	A					
23							S	A	A	A	A	A	A	A	A	A	A	A	A					
24							S	A	A	(4.5) A	A	A	A	A	A	A	A	A	A	S				
25							4.4	(4.4) A	4.4	A	A	A	A	(4.4) A	(4.3) A	(4.3) A	4.3	(4.4) A	A					
26							S	A	A	4.4	A	4.4	4.4	4.4 H	A	A	4.4	4.3 H	4.3 H					
27							4.4	(4.3) A	A	A	A	4.4	4.4	A	4.4	4.3	4.3	4.4	4.4					
28							S	4.4	A	A	4.3	4.4 H	A	4.5 K	4.4 K	4.4 K	(4.3) A K	4.4 K	A K	K				
29							S K	(4.3) A K	4.3 K	4.3 K	4.4 K	K (4.5) P H	A	4.4 H	4.4	4.4	A	4.3	A					
30							S	A	A	A	A	A	A	A	A	4.4	A	A	A					
31							S	A	A	A	4.4	4.4	4.3	4.3	4.3	4.3	4.3 H	4.3	4.3					
Median							4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	—				
Count							5	12	7	7	8	8	11	14	20	22	24	23	12					

Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

GPO 836048

Table 85

Ionospheric Storminess at Washington, D. C.

August 1955

Day	Ionospheric character* 00-12 GCT	Ionospheric character* 12-24 GCT	Principal storms Beginning GCT	Principal storms End GCT	Geomagnetic character** 00-12 GCT	Geomagnetic character** 12-24 GCT
1	1	1			1	1
2	1	2			1	1
3	1	3			3	2
4	2	3			4	3
5	2	3	2100	----	3	3
6	4	5	----	----	5	3
7	4	5	----	2100	4	3
8	3	2			2	2
9	1	3			2	2
10	1	3			2	1
11	2	3			1	2
12	2	0			2	1
13	1	3			2	2
14	2	2			3	3
15	3	1			3	1
16	3	1			2	2
17	2	1			1	2
18	1	2			3	2
19	1	2			2	1
20	2	2			1	1
21	1	2			2	2
22	1	2			0	1
23	1	2			1	1
24	1	3			2	2
25	2	2			2	2
26	1	2			1	2
27	2	2			1	2
28	3	4	1300	----	4	2
29	4	3	----	1100	2	3
30	3	1			1	2
31	1	1			2	2

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

**Average for 12 hours of Cheltenham, Maryland, geomagnetic K-figures on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

----Dashes indicate continuing storm.

Table 86a

Radio Propagation Quality Figures

(Including Comparisons with Short-Term and Advance Forecasts)

North Atlantic Path - July 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 Day (1)	Half Day (2)
1	7	7	7	7	7	7	7	7	7	7	7		2	1
2	7	6	7	6	7	7	7	7	7	7	7		2	(4)
3	6	5	7	7	6	5	6	6	7	7	7		3	2
4	6	6	7	7	6	6	7	7	7	7	7		2	1
5	7	7	7	7	7	7	7	7	7	7	7		1	1
6	7	6	7	7	7	7	7	7	7	7	7		1	2
7	7	6	7	7	7	6	7	7	7	7	7		3	2
8	7	6	7	7	6	7	7	7	7	7	7		3	3
9	7	6	6	7	7	6	7	7	7	7	7		2	2
10	7	7	7	7	7	7	7	7	7	7	7		2	3
11	7	6	7	7	7	7	7	7	7	7	7		3	3
12	7	6	7	7	7	6	7	7	7	7	7		3	3
13	7	6	7	7	7	6	7	7	7	7	7		2	2
14	7	6	7	7	7	6	7	7	7	7	7		2	2
15	6	6	7	7	7	7	7	7	7	7	7		1	(4)
16	7	7	7	7	7	7	7	7	7	7	7		3	2
17	7	6	7	7	7	6	7	7	7	7	7		3	2
18	7	7	7	7	7	7	7	7	7	7	7		3	1
19	7	6	7	7	7	7	7	7	7	7	7		1	1
20	7	6	7	7	7	7	7	7	7	7	7		1	1
21	7	6	7	7	7	7	7	7	7	7	7		1	1
22	7	7	7	7	7	6	7	7	7	7	7		1	1
23	7	6	7	7	7	7	7	7	7	7	7		2	3
24	7	6	7	7	7	7	6	7	7	7	7		3	2
25	7	6	7	7	7	6	7	7	7	7	7		2	2
26	7	6	7	7	7	7	7	7	7	7	7		3	3
27	7	6	7	7	7	6	7	7	7	7	7		2	1
28	7	6	7	7	7	7	7	7	7	7	7		1	1
29	7	6	7	7	7	6	7	7	7	7	7		2	2
30	7	5	7	7	7	7	7	7	7	7	7		2	2
31	6	6	7	7	7	7	7	7	7	7	7		2	2

Score:

		00	06	12	18	1-4 days	4-7 days
Quiet Periods	P	28	16	28	29	31	31
	S	3	14	3	2	0	0
	U	0	1	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; $K_{Ch} \geqslant 4$ 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 $\geqslant 5$, or both $\leqslant 5$
- 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)

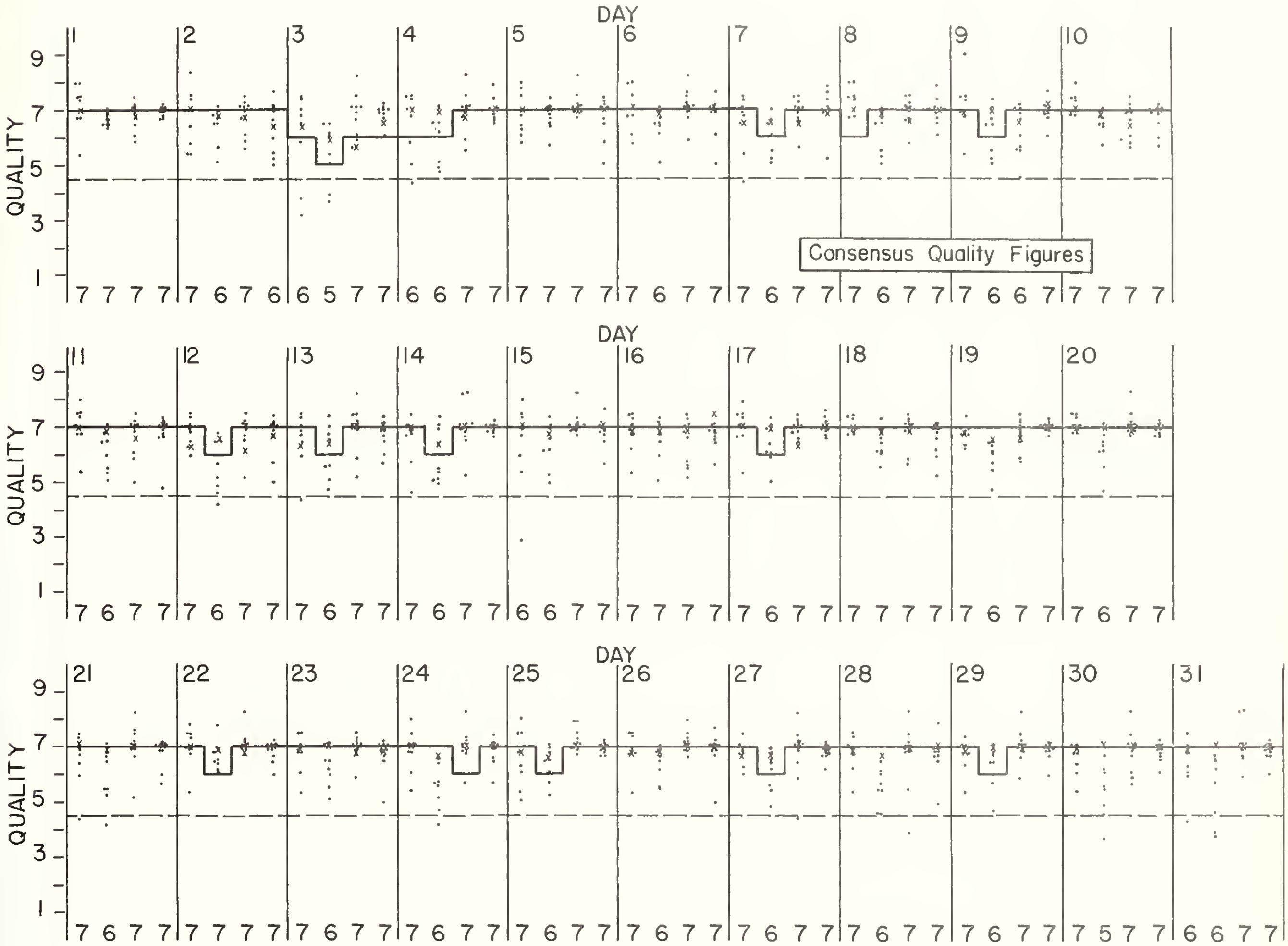
Table 86 b

Short-Term Forecasts — July 1955

— Forecast

× CRPL observation (not in consensus)

● Individual reports of quality (adjusted to CRPL scale)



Outcome of Advance Forecasts (1 to 4 Days Ahead) — July 1955

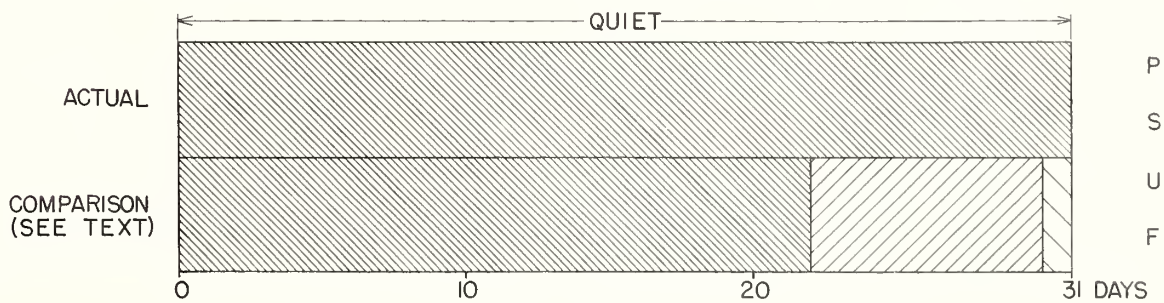


Table 87a

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	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																																					
Aug 1.x																																					
2.x																																					
3.x																																					
4.x																																					
5.x																																					
6.x																																					
7.x																																					
8.x																																					
9.x																																					
10.x																																					
11.x																																					
12.x																																					
13.x																																					
14.x																																					
15.8a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.6a	-	-	-	-	-	-	-	-	-	-	3	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.x																																					
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.x																																					
22.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	3	4	3	-	-	-	-	-	-	-	-	-	5	5	6	5	-	-	-	-	-	-	-	-	-
25.7a	-	-	5	5	5	3	-	-	-	5	20	35	50	16	5	-	-	-	-	-	-	-	-	-	3	10	5	-	-	-	-	-	-	-	-	-	-
26.7	-	-	-	-	-	-	-	-	3	6	12	25	40	34	20	5	-	-	-	-	-	10	23	17	8	5	5	2	-	-	-	-	-	-	-	-	-
27.6	-	-	-	-	-	-	-	-	-	-	5	15	26	60	90	30	10	-	-	-	-	-	12	25	43	23	5	5	5	3	-	-	-	-	-	-	-
28.6	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	5	19	20	16	8	-	-	-	-	-	-	-	-	-	-	-
29.6a	-	-	-	-	-	-	-	-	-	-	20	90	75	50	80	15	10	10	10	-	-	-	-	10	32	63	33	-	-	-	-	-	-	-	-	-	-
30.6	-	-	-	-	-	-	-	-	-	-	-	18	53	20	43	46	8	-	-	-	-	-	6	7	36	22	11	-	-	-	-	-	-	-	-	-	-
31.6a	-	-	-	-	-	-	-	-	-	-	-	-	40	50	40	66	77	5	-	-	-	-	10	40	95	105	27	5	-	-	-	-	-	-	-	-	-

Table 88a

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	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																																					
Aug 1.x																																					
2.x																																					
3.x																																					
4.x																																					
5.x																																					
6.x																																					
7.x																																					
8.x																																					
9.x																																					
10.x																																					
11.x																																					
12.x																																					
13.x																																					
14.x																																					
15.8a	-	-	-	-	-	-	-	-	-	-	-	-	1	8	3	3	3	5	5	8	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.6a	-	-	-	-	-	-	-	1	1	1	2	2	4	5	5	10	15	8	8	12	12	12	10	8	6	4	2	2	2	2	1	1	1	1	1	1	-
17.x																																					
18.x																																					
19.7	1	1	1	1	1	1	1	1	1	1	3	4	4	1	2	2	2	3	3	3	3	-	-	-	-	-	2	2	2	2	2	2	2	2	1	1	1
20.6	-	-	-	-	-	-	-	-	-	-	5	10	5	5	5	X	X	X	X	2	2	2	3	4	4	5	5	-	-	-	-	-	-	-	-	-	-
21.7a	2	2	3	3	5	10	10	3	3	5	3	3	3	3	3	5	4	3	2	2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
22.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	4	4	5	3	-	-	-	-	-	-	-	2	2	-	-	-	-	-
23.x																																					
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	3	3	2	1	1	1	-	-	-	-	-	-	-	-	-	-	3	3
25.7a	3	3	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
26.7	3	3	-	-	-	-	-	-	5	10	20	12	20	15	10	12	14	6	10	10	15	6	20	25	36	6	5	5	4	-	-	-	-	-	-	2	3
27.6	-	-	-	-	-	-	-	-	-	-	5	12	41	45	25	10	-	-	-	15	10	5	10	5	5	-	-	-	-	-	-	-	-	-	-	-	-
28.6	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	7	10	5	12	5	2	2	2	2	-	-	-	-	-	-	-	-	2	2
29.6	-	-	-	-	-	-	-	-	-	-	15	20	14	12	19	19	3	3	3	3	2	2	3	8	6	-	-	-	-	-	-	-	-	-	-	-	-
30.6	2	-	-	-	-	-	-	-	-	-	-	-	30	30	10	33	15	5	10	10	15	15	10	10	24	32	2	4	2	2	-	-	-	-	-	-	-
31.6	-	-	-	-	-	-	2	2	3	3	3	3	3	9	12	20	6	28	1	2	4	4	1	5	6	4	1	1	4	4	1	-	-	-	-	-	-

Table 87b

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	Degrees south of the solar equator																		0°	Degrees north 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																																					
Aug 1.x																																					
2.x																																					
3.x																																					
4.x																																					
5.x																																					
6.x																																					
7.x																																					
8.x																																					
9.x																																					
10.x																																					
11.x																																					
12.x																																					
13.x																																					
14.x																																					
15.8a	-	-	-	-	-	-	-	-	-	15	10	20	40	45	10	-	-	-	-	-	-	-	-	-	10	25	38	10	-	-	-	-	-	-	-	-	-
16.6a	-	-	-	-	-	-	-	-	-	4	4	12	25	30	2	2	1	-	-	-	-	-	3	6	8	15	15	30	10	4	4	3	-	-	-	-	-
17.x																																					
18.6	-	-	-	-	-	-	-	-	-	3	6	23	48	33	15	5	-	-	-	-	-	-	2	4	6	17	14	2	1	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	8	18	24	70	75	55	15	-	-	-	-	-	-	-	-	-	17	54	44	30	10	-	-	-	-	-	-	-
20.6	-	-	-	-	-	-	-	6	6	3	3	6	21	27	24	33	10	3	-	-	-	-	-	10	40	40	24	6	-	-	-	-	-	-	-	-	-
21.x																																					
22.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	4	-	-	-	-	-	-	-	-	-
23.6a	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	-	5	5	-	-	-	-	-	X	X	X	X	X	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	12	20	7	-	-	-	-	-	-	-	-	-	-	-
25.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	10	20	15	10	5	-	-	-	-	-	-	-	-	-	-	-	-	-
26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5	3	-	-	-	-	-	-	-	-	-	-	-
27.6	-	-	-	-	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	5	10	5	5	8	5	-	-	-	-	-	-
28.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	12	12	12	6	-	-	-	-
29.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 88b

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	Degrees south of the solar equator																		0°	Degrees north 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																																					
Aug 1.x																																					
2.x																																					
3.x																																					
4.x																																					
5.x																																					
6.x																																					
7.x																																					
8.x																																					
9.x																																					
10.x																																					
11.x																																					
12.x																																					
13.x																																					
14.x																																					
15.8a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5	12	5	1	-	-	-	-	-	-	-	-	-
16.6a	-	-	-	-	-	-	-	-	-	-	4	4	6	8	16	8	4	4	4	5	10	12	14	14	20	5	5	20	3	-	-	-	-	-	-	-	-
17.x																																					
18.x																																					
19.7	1	1	-	-	-	-	-	-	-	-	2	2	2	2	4	8	5	5	5	7	4	4	3	12	3	3	4	5	2	2	2	1	1	1	1	1	1
20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	25	20	10	20	25	20	30	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.7a	-	-	-	-	-	-	-	-	-	-	-	3	5	5	3	3	3	15	15	15	10	10	12	12	20	15	-	-	-	-	-	-	-	-	-	-	2
22.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.x																																					
24.7	3	3	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	2	2	5	2	2	2	1	-	-	-	-	-	-	-	-	-	3	3
26.7	3	2	-	-	-	-	-	-	-	-	1	2	3	6	8	10	15	25	20	30	20	30	20	12	-	-	-	-	-	-	-	-	-	-	-	-	3
27.6	-	-	-	-	-	-	-	-	-	-	-	-	-	5	10	5	5	5	15	30	25	10	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.6	2	2	-	-	-	-	-	-	-	-	-	2	5	13	4	5	7	10	10	10	18	18	15	10	5	5	4	4	4	-	-	-	-	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6	6	8	8	6	4	2	2	2	2	2	-	-	-	-	-	-	-	-	-
30.6	-	-	-	-	-	-	-	5	5	10	10	5	5	5	10	10	10	5	20	15	5	5	3	3	2	2	3	3	2	2	2	2	2	2	2	2	2
31.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	5	9	7	4	3	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-

Table 89a

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	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																																					
Aug 1.x																																					
2.x																																					
3.x																																					
4.x																																					
5.x																																					
6.x																																					
7.x																																					
8.x																																					
9.x																																					
10.x																																					
11.x																																					
12.x																																					
13.x																																					
14.x																																					
15.8a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.x																																					
17.x																																					
18.x																																					
19.x																																					
20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-
22.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.x																																					
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7a	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
26.x																																					
27.x																																					
28.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	5	5	5	6	3	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-
30.6	X	X	X	X	X	X	X	X	-	-	-	-	3	4	4	3	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-
31.x																																					

Table 90a

Coronal observations at Sacramento Peak, New Mexico, (5303A), 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																																					
Aug 1.7a	-	-	-	-	-	2	5	6	7	8	11	14	16	20	23	16	8	4	2	-	3	4	8	25	26	15	8	5	5	4	3	5	4	2	-	-	-
2.x																																					
3.x																																					
4.6	-	-	2	2	3	3	4	4	5	8	10	12	16	16	13	13	14	3	2	-	2	2	11	20	28	34	20	11	8	5	6	5	3	2	-	-	-
5.x																																					
6.x																																					
7.7a	-	-	-	3	3	4	5	7	8	10	12	16	18	8	5	4	3	2	-	-	-	2	3	16	32	28	23	18	13	11	8	9	5	X	X	X	X
8.6	-	-	-	3	4	4	5	13	14	16	17	18	16	13	11	8	4	3	2	-	-	-	3	6	9	11	16	13	10	6	4	5	3	2	-	-	-
9.6	-	-	-	-	2	3	5	8	12	13	16	15	14	12	8	5	3	2	-	-	-	-	3	5	11	11	12	11	8	5	8	8	7	5	3	-	-
10.7a	-	-	-	-	2	3	4	5	8	8	9	8	6	5	6	8	4	3	-	-	-	-	-	2	5	8	6	5	3	4	5	4	5	5	3	-	-
11.x																																					
12.x																																					
13.6	-	-	-	-	2	2	5	4	5	8	8	8	6	5	4	3	2	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	3	-	2	3	4
14.x																																					
15.x																																					
16.7	-	-	-	-	-	-	2	3	3	4	4	4	5	5	4	3	2	2	-	-	-	-	-	2	3	3	3	4	3	3	2	-	-	-	-	-	-
17.6	-	-	-	-	-	2	3	3	4	5	4	4	3	2	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-	-	-	-
18.x																																					
19.x																																					
20.x																																					
21.6	-	-	-	-	-	2	3	4	4	5	5	4	3	5	8	6	3	2	-	-	-	-	-	-	2	3	4	3	2	2	-	-	-	-	-	-	-
22.x																																					
23.7	2	2	2	-	2	3	4	5	6	8	10	12	13	14	11	10	4	3	-	-	-	2	3	5	10	14	15	12	4	3	2	2	2	-	-	-	-
24.x																																					
25.6	-	-	-	3	4	4	4	5	5	8	12	16	14	15	11	8	3	2	2	-	3	5	6	9	11	10	6	2	2	-	-	-	-	-	-	-	-
26.7a	-	-	-	-	2	3	4	5	6	8	12	16	23	22	17	12	10	4	3	-	-	2	5	18	13	11	12	11	5	5	4	3	2	-	-	-	-
27.9a	-	-	-	-	3	4	5	5	6	7	8	16	16	25	12	8	5	3	2	-	2	3	5	8	7	5	3	2	-	-	-	-	-	-	-	-	-
28.x																																					
29.7a	-	-	-	-	-	2	3	3	5	6	12	13	28	27	26	20	12	6	3	2	-	3	5	10	13	12	8	6	5	2	3	2	-	-	-	-	-
30.7a	-	-	-	-	-	-	-	2	3	4	5	7	13	20	16	18	20	1[illegible]	2	-	-	3	4	7	13	12	7	4	3	2	2	-	-	-	-	-	-
31.7	-	-	-	-	-	-	6	7	7	6	6	12	25	23	27	28	24	12	5	3	2	5	16	21	40	29	14	9	6	4	3	2	-	-	-	-	-

Table 89b

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	Degrees south of the solar equator																		0°	Degrees north 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																																					
Aug 1.x																																					
2.x																																					
3.x																																					
4.x																																					
5.x																																					
6.x																																					
7.x																																					
8.x																																					
9.x																																					
10.x																																					
11.x																																					
12.x																																					
13.x																																					
14.x																																					
15.8a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.x																																					
17.x																																					
18.x																																					
19.x																																					
20.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-	-	-	-	-	-
21.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.x																																					
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.7a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.x																																					
27.x																																					
28.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.6	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X
31.x																																					

Table 90b

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

Date	Degrees south of the solar equator																		0°	Degrees north 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																																					
Aug 1.7a	-	-	-	-	-	-	-	-	-	2	3	2	2	2	-	2	3	2	-	2	2	2	-	-	3	5	7	5	4	5	4	4	2	3	2	2	-
2.x																																					
3.x																																					
4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	2	3	4	3	2	-	-	-	-
5.x																																					
6.x																																					
7.7a	X	-	-	-	-	2	3	4	5	8	5	9	14	16	8	2	-	-	-	-	-	-	4	5	4	3	3	4	3	2	4	3	3	2	-	-	-
8.6	-	-	-	-	2	3	4	4	5	5	8	11	23	22	5	3	2	-	-	-	2	3	5	18	16	11	8	6	8	7	6	5	3	2	-	-	-
9.6	-	-	-	-	2	3	5	7	8	8	12	20	24	23	8	4	3	-	-	-	-	2	3	16	23	20	16	12	8	5	5	4	3	2	2	2	-
10.7a	-	-	-	-	-	-	2	4	5	6	7	8	14	13	11	7	5	3	-	-	-	-	4	5	14	20	16	14	10	6	5	4	3	2	-	-	-
11.x																																					
12.x																																					
13.6	4	4	3	4	3	2	4	5	6	8	10	11	12	14	20	18	15	8	3	-	3	4	8	20	28	32	36	39	32	11	6	4	3	2	-	-	-
14.x																																					
15.x																																					
16.7	-	-	-	2	3	5	6	5	4	8	14	23	32	36	34	14	11	8	5	3	8	15	16	20	23	28	32	16	11	9	8	6	5	4	-	-	-
17.6	-	-	-	2	3	5	6	8	7	8	11	16	32	36	39	20	18	12	5	3	4	14	20	28	27	23	18	16	11	7	8	6	5	3	2	-	-
18.x																																					
19.x																																					
20.x																																					
21.6a	-	-	-	-	-	2	6	5	4	3	6	11	16	14	12	10	3	2	-	-	-	2	11	32	36	28	18	16	12	6	3	3	2	-	-	-	-
22.x																																					
23.7	-	-	-	-	-	2	5	8	6	5	5	6	7	8	7	6	4	3	-	2	3	5	15	28	27	28	23	21	16	14	13	5	3	-	-	-	2
24.x																																					
25.6	-	-	-	-	-	2	2	2	3	3	3	3	2	4	3	3	-	-	-	-	2	2	5	20	23	15	11	12	10	9	6	5	3	-	-	-	-
26.7a	-	-	-	-	-	-	-	2	2	3	3	4	2	2	-	-	-	-	-	-	-	2	3	5	8	9	7	5	4	4	5	5	4	3	-	-	-
27.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	3	4	4	5	6	7	6	5	5	3	-	-
28.x																																					
29.7a	-	-	-	-	-	-	-	-	2	3	3	4	4	3	2	-	-	-	-	-	-	-	-	3	4	3	4	3	5	4	5	5	4	3	3	-	-
30.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	2	2	2	-	-	-	-
31.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	5	3	3	3	4	3	2	-	-	-

Table 91a

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																																					
Aug 1.7a	2	3	3	3	2	-	2	-	-	2	-	-	2	3	8	7	7	8	11	14	11	13	14	20	14	5	3	2	2	3	3	2	-	-	-	-	-
2.x																																					
3.x																																					
4.6	2	2	2	2	2	3	2	2	2	3	2	3	6	5	7	2	11	10	9	8	5	6	8	15	26	10	8	5	3	4	2	2	3	2	3	2	2
5.x																																					
6.x																																					
7.7a	3	3	2	2	2	2	2	3	-	3	3	2	3	5	6	7	7	8	11	12	14	12	11	11	13	12	2	3	2	2	3	3	X	X	X	X	X
8.6	3	4	5	4	3	3	2	2	2	-	3	4	5	4	6	9	12	13	14	15	14	15	14	13	10	8	9	5	-	-	-	-	2	2	2	3	2
9.6	3	4	3	3	2	3	2	-	-	-	3	5	5	4	6	11	13	14	14	16	14	14	12	11	11	11	10	8	4	5	4	5	4	4	4	3	3
10.7a	2	2	2	3	2	2	3	-	2	2	3	3	4	5	14	11	8	11	13	13	14	11	10	8	6	5	5	8	4	3	2	2	-	2	3	3	3
11.x																																					
12.x																																					
13.6	3	4	2	3	4	3	2	2	3	3	4	4	5	4	3	5	8	8	9	8	9	7	6	5	4	2	3	5	5	4	5	3	2	3	3	3	4
14.x																																					
15.x																																					
16.7	3	3	3	2	-	2	3	3	3	3	3	5	6	7	8	8	13	14	15	16	10	9	8	7	5	4	3	4	3	2	2	3	3	3	3	3	2
17.6	3	2	3	3	2	3	2	3	3	3	-	3	5	8	9	11	11	12	11	13	12	11	10	9	8	5	6	5	6	4	2	2	3	2	3	3	4
18.x																																					
19.x																																					
20.x																																					
21.6	2	3	3	2	2	2	2	3	4	5	5	4	5	8	9	14	10	11	12	13	12	11	13	14	13	12	11	7	5	6	3	2	2	2	3	3	3
22.x																																					
23.7	3	4	5	3	4	5	3	4	6	7	7	12	13	14	11	10	14	17	16	15	16	13	13	14	15	4	5	6	6	5	4	3	4	4	5	5	6
24.x																																					
25.6	2	3	3	2	2	2	2	2	3	3	2	3	3	3	3	5	4	5	6	8	5	4	6	5	4	2	3	-	3	3	3	3	2	3	3	3	3
26.7a	2	2	2	2	-	2	-	2	2	2	3	3	4	5	4	4	5	3	5	6	8	9	8	13	8	3	2	2	-	-	2	2	3	3	3	4	3
27.9a	3	3	3	4	4	2	3	2	2	3	12	14	5	2	3	3	3	4	3	3	4	4	4	4	2	3	4	2	4	2	3	2	-	-	-	-	-
28.x																																					
29.7a	2	3	-	2	2	3	2	3	2	3	2	14	15	16	15	14	11	5	6	5	4	3	4	5	2	2	-	2	3	2	3	2	2	-	-	-	-
30.7a	-	-	-	-	-	-	-	-	-	-	-	-	7	7	12	5	8	-	2	2	-	-	2	3	6	-	2	2	-	-	-	-	-	-	-	-	-
31.7	-	1	1	-	-	-	-	1	2	2	3	4	6	14	15	11	30	3	3	4	4	4	15	16	37	2	11	3	3	3	1	-	2	-	-	2	2

Table 92a

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																																					
Aug 1.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-
2.x																																					
3.x																																					
4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	4	4	3	2	-	-	-	-	-	-	-	-	-
5.x																																					
6.x																																					
7.7a	-	-	-	-	-	-	-	-	-	-	2	2	2	2	-	-	-	-	-	-	-	-	-	2	3	4	4	3	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.x																																					
12.x																																					
13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.x																																					
15.x																																					
16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.x																																					
19.x																																					
20.x																																					
21.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.x																																					
23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.x																																					
25.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.7a	-	-	-	-	-	-	-	-	-	-	2	3	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.9a	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.x																																					
29.7a	-	-	-	-	-	-	-	-	-	-	2	3	3	4	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	-	-	-	-	-	-	-	-	2	4	4	2	-	-	-	-	-	-	-	-	5	4	-	-	-	-	-	-	-	-	-	-	-

Table 91b

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

Date	Degrees south of the solar equator																		0°	Degrees north 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																																					
Aug 1.7a	-	2	2	2	2	2	-	2	-	3	6	5	4	5	5	6	5	7	6	7	8	4	4	3	3	2	-	-	2	3	-	2	2	2	2	2	2
2.x																																					
3.x																																					
4.6	2	2	3	3	-	-	-	3	3	2	2	3	4	5	6	7	8	8	7	8	8	3	4	5	4	4	3	2	-	-	-	2	2	2	2	2	2
5.x																																					
6.x																																					
7.7a	X	3	3	3	2	2	3	2	2	2	2	3	8	7	8	11	13	12	12	12	11	7	6	5	6	4	2	3	3	2	2	-	-	2	2	2	3
8.6	2	3	3	2	-	2	2	-	3	2	3	4	11	12	11	11	14	15	15	14	12	11	8	9	12	10	7	4	3	3	3	2	2	3	3	2	3
9.6	3	4	4	3	3	3	4	5	4	4	5	8	8	7	8	10	14	15	16	14	13	12	11	13	14	20	14	6	4	3	4	2	2	2	3	3	3
10.7a	3	3	4	3	2	3	2	3	3	2	3	4	10	11	10	7	8	9	11	11	12	11	10	8	6	14	11	5	3	3	-	-	2	3	3	2	2
11.x																																					
12.x																																					
13.6	4	5	4	3	3	-	2	3	5	7	5	4	8	11	12	11	10	8	8	9	8	6	5	8	14	20	11	5	3	3	4	3	2	3	2	3	3
14.x																																					
15.x																																					
16.7	2	2	3	3	3	3	3	2	3	4	5	8	12	16	15	14	10	8	9	11	12	14	18	20	11	16	36	12	3	2	-	2	3	2	3	2	3
17.6	4	3	2	2	2	2	3	3	4	5	5	6	8	11	16	20	15	10	8	9	11	18	17	20	10	16	20	22	14	2	-	-	3	2	3	3	2
18.x																																					
19.x																																					
20.x																																					
21.6a	3	2	2	3	2	3	3	3	2	3	3	4	2	4	7	10	11	13	14	12	11	11	12	14	6	5	2	2	3	2	2	3	3	2	2	3	2
22.x																																					
23.7	6	4	3	3	2	3	3	4	2	2	4	5	4	5	8	12	13	15	16	15	16	17	20	19	13	12	14	2	3	2	2	2	3	4	4	3	3
24.x																																					
25.6	3	2	2	2	-	2	2	2	3	3	4	5	3	4	5	8	9	11	12	14	12	13	14	16	14	10	7	3	3	2	3	2	2	2	2	3	2
26.7a	3	2	3	3	3	2	-	-	3	4	4	4	5	8	8	7	8	11	13	11	13	11	8	4	5	4	5	3	2	2	-	-	2	-	2	2	2
27.9a	-	-	-	-	-	-	-	-	-	2	3	3	4	3	5	4	4	5	7	6	5	5	4	4	3	3	4	4	-	2	2	3	2	3	-	2	3
28.x																																					
29.7a	-	2	2	2	2	2	3	2	2	3	3	4	3	4	3	5	6	7	8	8	9	7	6	5	3	4	4	3	2	2	-	2	3	2	2	2	2
30.7a	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	4	5	6	5	4	4	3	4	3	3	2	2	-	2	2	-	-	-	-	-	-	-
31.7	2	2	-	2	-	-	-	-	2	3	4	4	5	6	6	12	12	11	12	8	8	7	10	9	5	4	6	5	5	2	-	-	-	-	-	-	-

Table 92b

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

Date	Degrees south of the solar equator																		0°	Degrees north 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																																					
Aug 1.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.x																																					
3.x																																					
4.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.x																																					
6.x																																					
7.7a	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-
10.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-
11.x																																					
12.x																																					
13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	3	3	2	-	-	-	-	-	-	-
14.x																																					
15.x																																					
16.7	-	-	-	-	-	-	-	-	-	2	2	3	4	5	4	3	2	-	-	-	-	3	3	3	4	3	2	2	-	-	-	-	-	-	-	-	-
17.6	-	-	-	-	-	-	-	-	-	-	2	3	4	5	6	3	4	-	-	-	2	3	3	5	4	3	2	-	-	-	-	-	-	-	-	-	-
18.x																																					
19.x																																					
20.x																																					
21.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	2	2	-	-	-	-	-	-	-	-	-
22.x																																					
23.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	2	-	-	-	-	-	-	-	-	-	-	-
24.x																																					
25.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-
26.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.9a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.x																																					
29.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 93

Zürich Provisional Relative Sunspot Numbers

August 1955

Date	R_Z*	Date	R_Z*
1	25	17	16
2	20	18	10
3	16	19	13
4	0	20	17
5	26	21	22
6	46	22	23
7	61	23	23
8	77	24	14
9	83	25	11
10	87	26	26
11	85	27	40
12	77	28	54
13	77	29	55
14	60	30	49
15	44	31	62
16	28	Mean:	40.2

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

Table 94

American Relative Sunspot Numbers

July 1955

Date	R_A:	Date	R_A:
1	35	17	7
2	42	18	1
3	42	19	25
4	46	20	27
5	45	21	14
6	51	22	11
7	55	23	0
8	42	24	0
9	32	25	1
10	35	26	2
11	18	27	10
12	21	28	12
13	27	29	17
14	28	30	22
15	20	31	21
16	10	Mean:	23.2

Table 95

Solar Flares August 1955

Observatory	Date 1955	Time Observed: Beginning (GCT)	Time Observed: Ending (GCT)	Duration (Min)	Area (Mill.) (of) (Visible) (Hemisph)	Position: Latitude (Deg)	Position: Longitude Diff (Deg)	Time of Maximum (GCT)	Int. of Maximum	Relative Area of Maximum (Tenths)	Importance	SID Observed
S. Peak	Aug 2	1340	1400	20	91	N21	W13	1346	18	4	2^-	
McMath	Aug 3	1215B	1305A	-	-	N22	W24	-	-	-	1^-	
McMath	Aug 4	1420B	1420A	-	-	S24	E15	-	-	-	1^-	
S. Peak	Aug 5	1251B	1258	-	45	S27	E02	1252	15	3	1^-	
McMath	Aug 5	1251	1301	10	-	S23	E00	-	-	-	1^-	
McMath	Aug 5	1348B	1348A	-	-	S23	E75	-	-	-	1^-	
McMath	Aug 6	2030B	2030A	-	-	N16	E54	-	-	-	1	
McMath	Aug 8	1320	1345	25	-	N17	E33	-	-	-	1^+	Yes
S. Peak	Aug 8	1325	1340	15	98	N15	E29	1328	15	5	1^-	Yes
S. Peak	Aug 8	1327	1415	48	91	S23	E32	1350	11	4	1^-	
McMath	Aug 8	1350B	1401A	-	-	S25	E33	-	-	-	1	
McMath	Aug 8	1752	1830	38	-	N17	E33	-	-	-	1	
McMath	Aug 9	1358	1403	5	-	N16	E25	-	-	-	1^-	
S. Peak	Aug 9	1400	1415	15	48	S23	E23	1405	14	8	1^-	
McMath	Aug 9	1404	1415	11	-	S24	E20	-	-	-	1^-	
McMath	Aug 9	2009B	2045	-	-	S24	E20	-	-	-	1	
S. Peak	Aug 10	1330B	1410	-	72	N33	W18	1332	14	4	1^-	
S. Peak	Aug 10	1555	1625	30	45	N33	W19	1559	12	6	1^-	
McMath	Aug 10	1959B	1959B	-	-	N33	W22	-	-	-	1	
S. Peak	Aug 11	1440	1510	30	49	S22	W06	1447	12	4	1^-	
McMath	Aug 11	1443	1510	27	-	S25	W07	-	-	-	1^-	
S. Peak	Aug 27	1319B	1410	-	65	N42	E07	1319B	14	4	1^-	
S. Peak	Aug 29	1440	1454	14	32	N25	E80	1442	13	6	1^-	
S. Peak	Aug 30	1406A	1425	-	23	N24	E65	1413	12	8	1^-	
S. Peak	Aug 30	1705	1745	40	16	N24	E64	1715	13	6	1^-	
McMath	Aug 30	1715B	1725A	-	-	N25	E65	-	-	-	1^-	
S. Peak	Aug 31	1710	1740	30	39	S19	E07	1714	14	7	1^-	

S. Peak = Sacramento Peak. B = Before given time. A = After given time.

Table 96

Indices of Geomagnetic Activity for July 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

July 1955	C	Values Kp — Three-hour Gr. interval 1	2	3	4	5	6	7	8	Sum	Ap	Final Selected Days
1	0.1	1+	1+	2+	1+	1o	1-	0+	1-	9o	4	Five
2	1.0	1+	2o	1+	2-	3-	4+	5+	4+	23o	19	Quiet
3	0.7	3o	4-	2+	3-	1+	2-	1+	1+	17+	10	
4	0.0	1o	1o	2-	0+	1-	0+	1-	0+	6o	3	4
5	0.0	1o	1-	1-	0+	1-	1o	1o	1+	7-	4	5
												19
6	0.4	1-	1o	1-	0+	1-	2o	2o	3+	11-	6	21
7	0.7	3+	3+	2+	2-	2+	2o	1+	2-	18o	10	28
8	0.8	1o	2-	2o	3+	2+	4-	3-	2-	18+	10	
9	0.2	2-	1+	1o	2+	2o	0+	1-	2o	11+	5	
10	0.7	1+	2-	2o	3o	4o	3o	2+	2+	20-	12	
11	0.9	3o	2o	3+	5-	4-	3+	3-	3o	26-	18	Five
12	1.2	5+	2-	3o	4-	3o	2+	3-	4o	26-	20	Disturbed
13	0.5	3+	2o	1-	1-	3-	3-	1o	1+	14+	8	
14	0.3	1+	1+	2o	2o	2o	1+	1+	0+	12-	5	2
15	0.8	1o	1-	1-	2-	4+	5-	3o	3-	19-	14	11
												12
16	0.6	3+	2o	1+	2o	2+	1+	2+	2+	17o	9	15
17	0.3	1+	3o	3-	1+	1-	0+	1+	2o	13-	7	26
18	0.3	1+	3+	3o	2-	2-	1-	1o	0+	13o	7	
19	0.1	1o	1-	1-	1+	1o	1-	0o	1-	6o	3	
20	0.1	1+	1-	0+	1o	1+	1o	2-	1-	8o	4	
21	0.3	1+	1-	0o	1-	0+	1-	1o	2+	7o	4	Ten
22	0.2	1o	1o	1-	1o	1-	1o	0+	2+	8o	4	Quiet
23	0.4	3-	1+	2-	1o	1o	1o	2o	3-	13+	7	
24	0.6	3-	3o	2+	2+	1+	1o	1+	1+	15+	8	1
25	0.2	2o	2-	2o	1+	1+	1o	1o	1+	12-	5	4
												5
26	0.9	2o	2o	2+	3+	4-	3-	3-	4-	22+	14	14
27	0.2	3o	1+	1+	1+	1o	1o	1+	1o	11+	6	19
28	0.0	1+	1-	1-	1-	1+	1o	0+	1o	7o	4	20
29	0.4	2-	1+	2o	1-	1-	1-	3o	2o	12o	6	21
30	0.2	0+	1o	1+	2-	2-	1+	2-	3-	12-	6	22
31	0.3	3-	1+	2+	1-	2-	2-	0+	1o	12-	6	25
Mean:	0.43									Mean:	8	28

Table 97

Sudden Ionosphere Disturbances Observed at Washington, D. C.

1955 Day	GCT Beginning	GCT End	Location of transmitters	Relative intensity at minimum*	Other phenomena
Aug. 8	1321	1348	Ohio, England, Mexico, North Dakota	0.1	Solar flare** before 1324 Solar flare*** 1325
8	2047	2113	Ohio, England, Mexico, North Dakota	0.2	

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

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

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

Table 98

Sudden Ionosphere Disturbances Reported by RCA Laboratories Division as Observed at Riverhead, New York

1955 Day	GCT Beginning	GCT End	Location of transmitters	Other phenomena
July 4	0933	0956	England, Brussels, Tangier	
4	1544	1602	England, Brussels, Tangier	Solar flare* 1547
Aug. 8	1322	1344	England, Brussels	Solar flare* before 1324 Solar flare** 1325-1340

*Time of observation at McMath-Hulbert Observatory, Pontiac, Michigan.
**Time of observation at Sacramento Peak, New Mexico.

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.

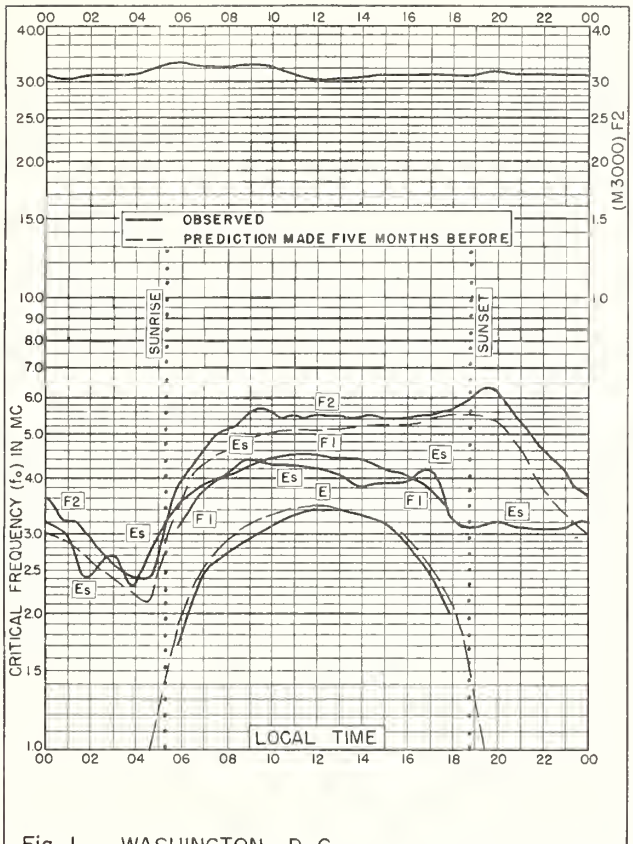


Fig. 1. WASHINGTON, D. C.
38.7°N, 77.1°W AUGUST 1955

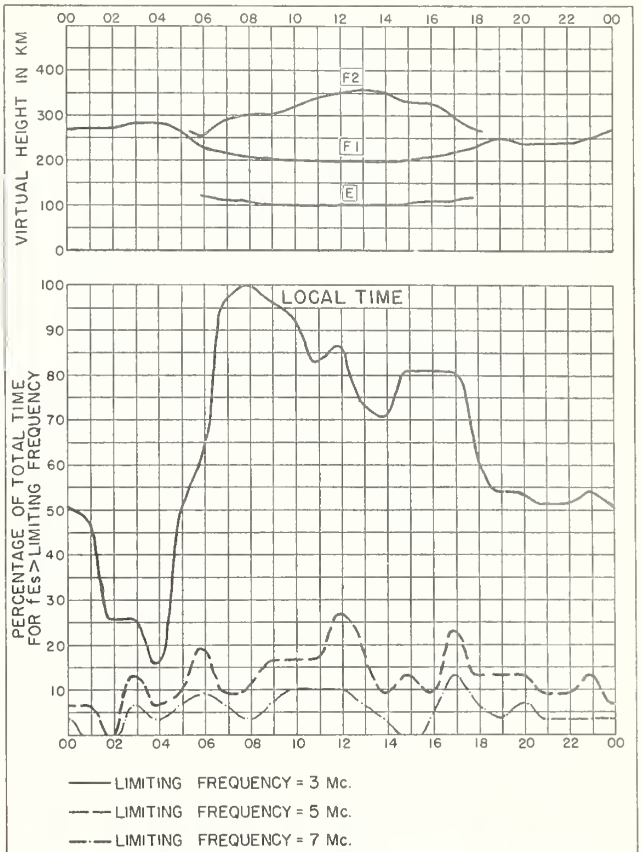


Fig. 2. WASHINGTON, D. C. AUGUST 1955

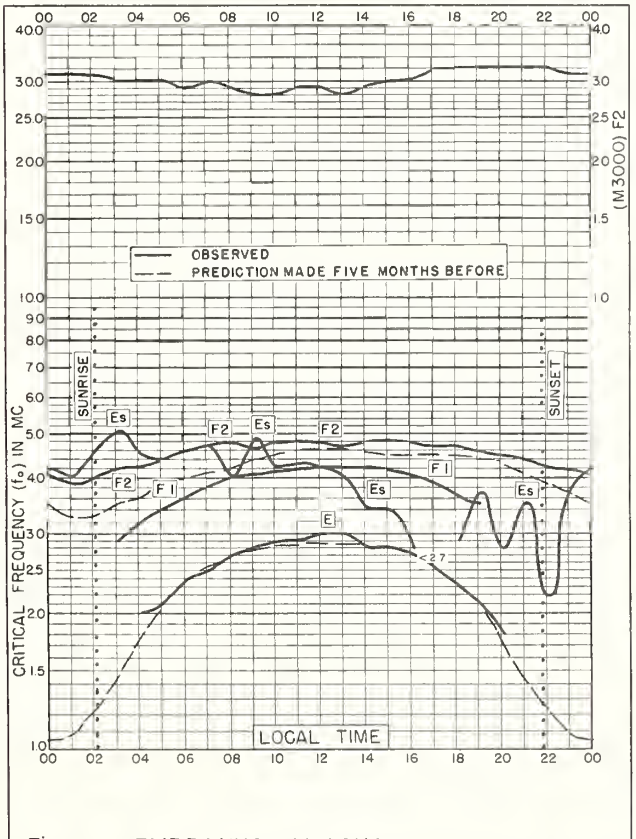


Fig. 3. FAIRBANKS, ALASKA
64.9°N, 147.8°W JULY 1955

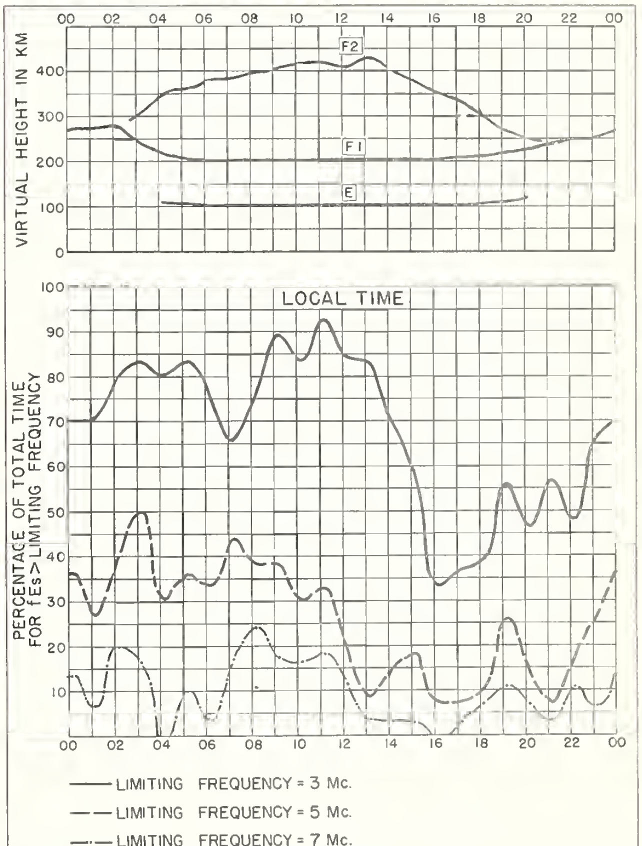


Fig. 4. FAIRBANKS, ALASKA JULY 1955

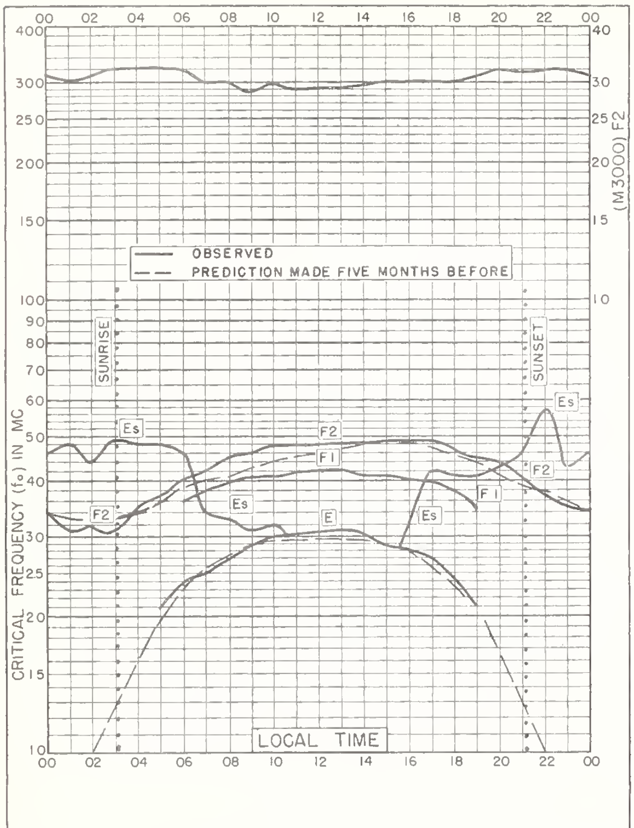
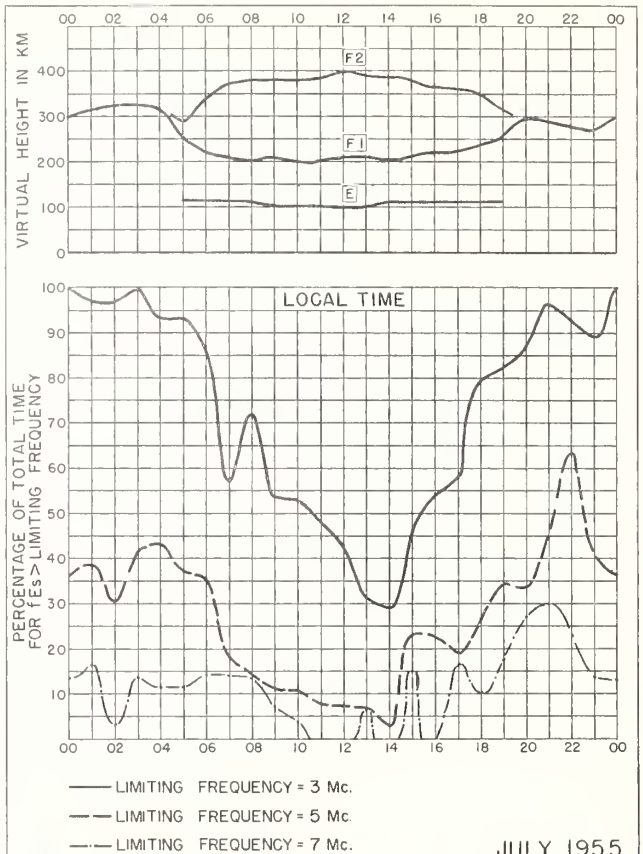


Fig. 5. NARSARSSUAK, GREENLAND
61.2°N, 45.4° W JULY 1955



JULY 1955
Fig. 6. NARSARSSUAK, GREENLAND

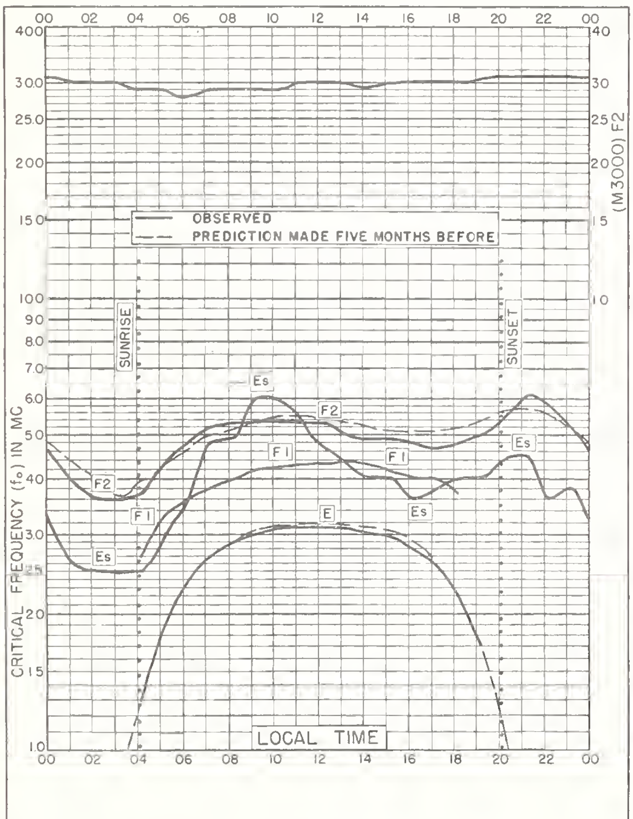


Fig. 7. ADAK, ALASKA
51.9°N, 176.6° W JULY 1955

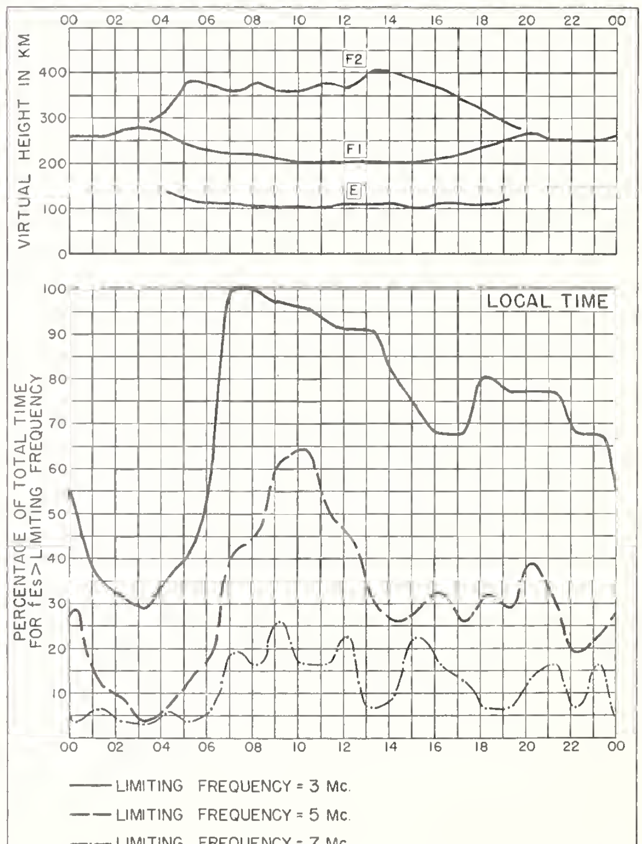


Fig. 8. ADAK, ALASKA JULY 1955

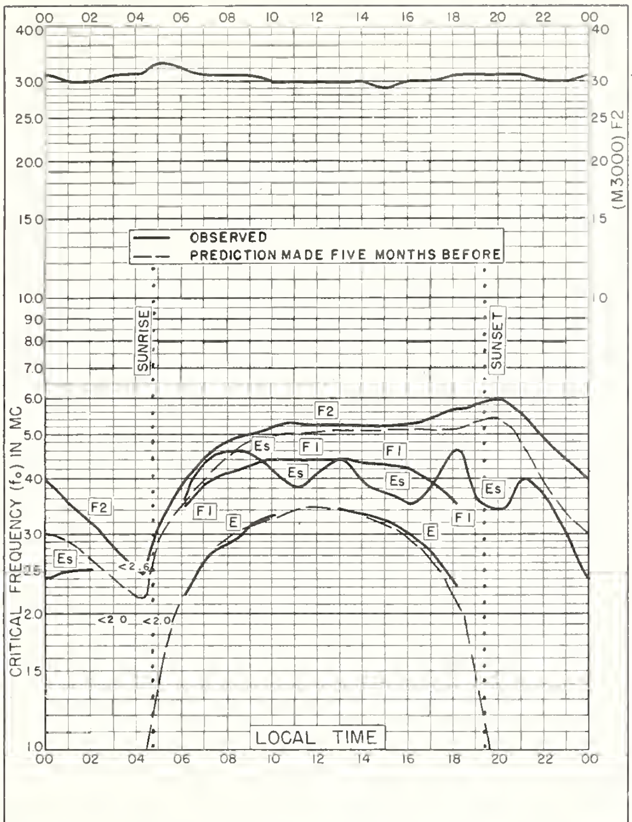
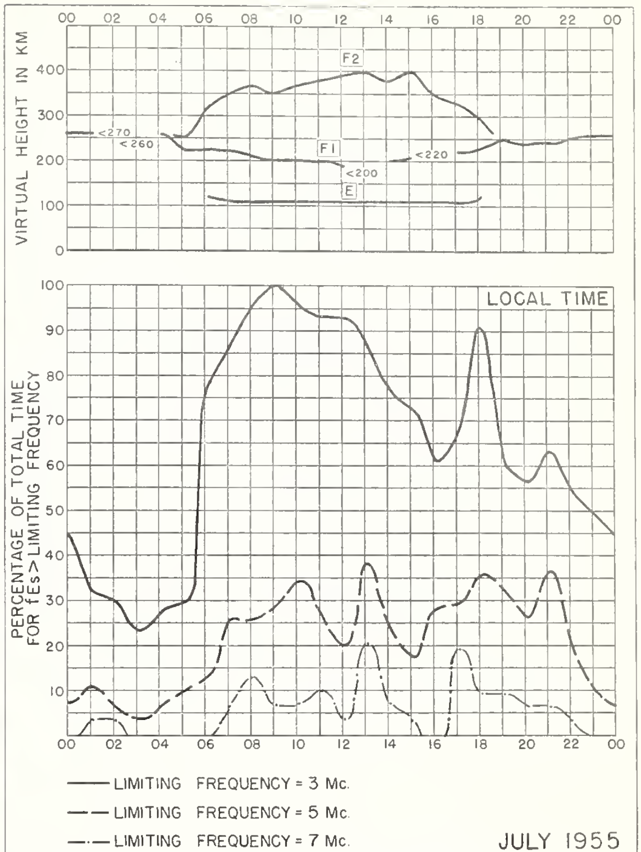


Fig. 9. FT. MONMOUTH, NEW JERSEY
40.0°N, 74.0°W JULY 1955



JULY 1955
Fig. 10. FT. MONMOUTH, NEW JERSEY

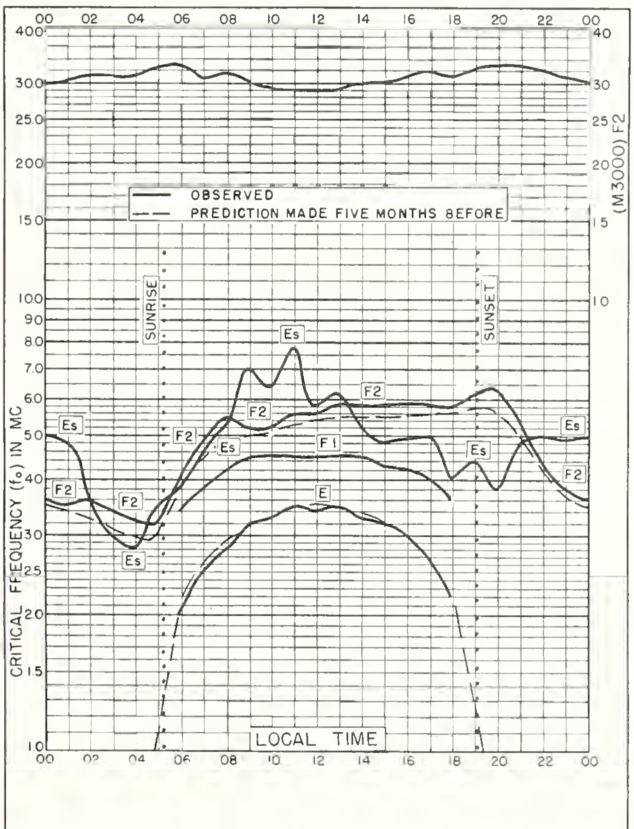


Fig. 11. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W JULY 1955

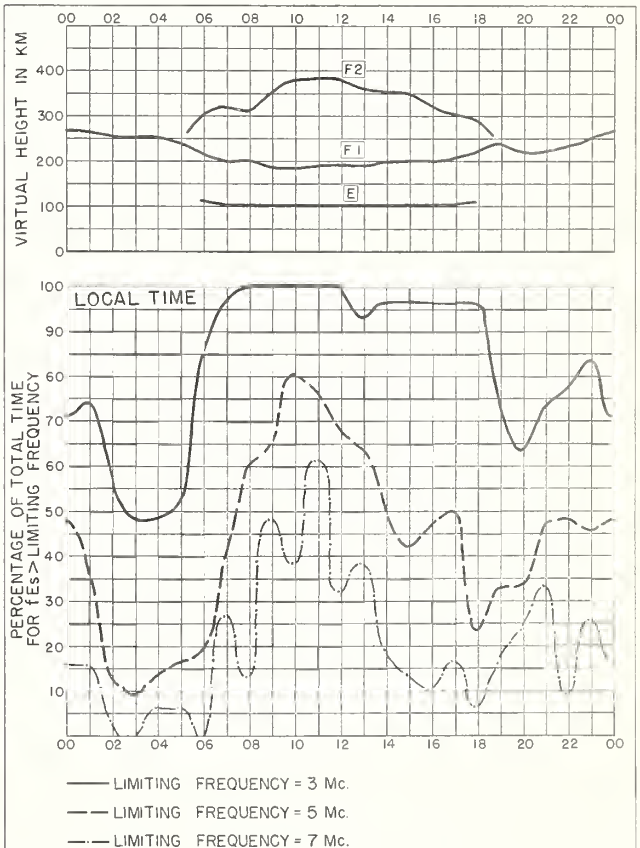


Fig. 12. WHITE SANDS, NEW MEXICO JULY 1955

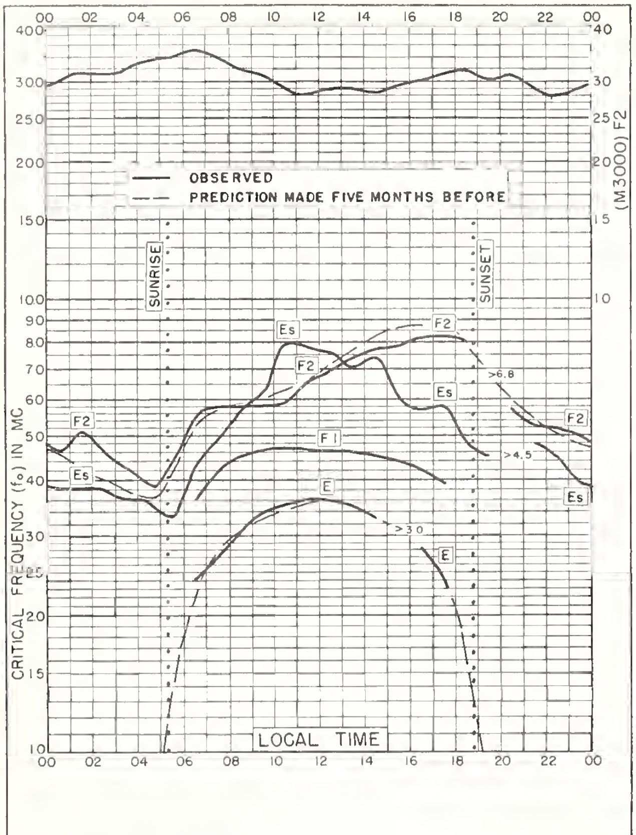


Fig. 13. OKINAWA I. 26.3°N, 127.8°E JULY 1955

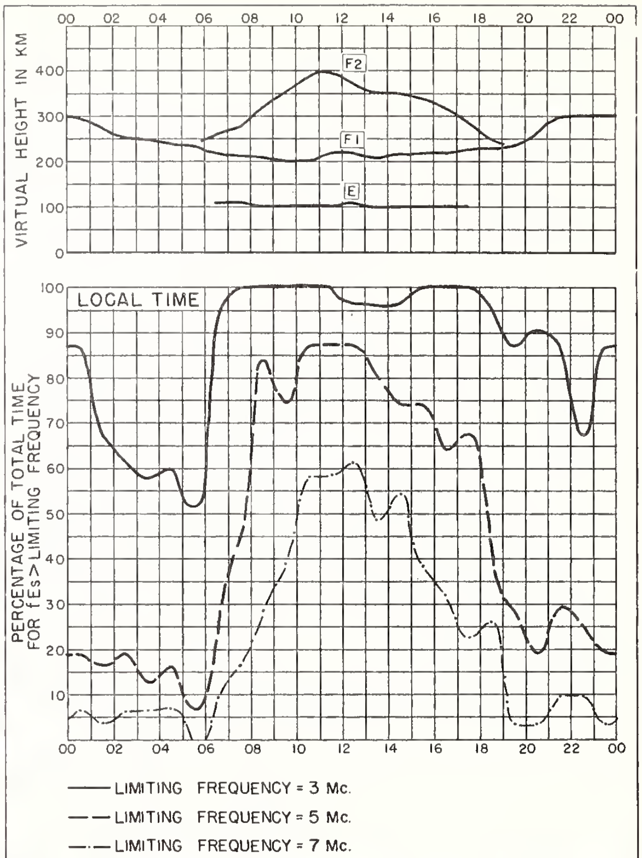


Fig. 14. OKINAWA I. JULY 1955

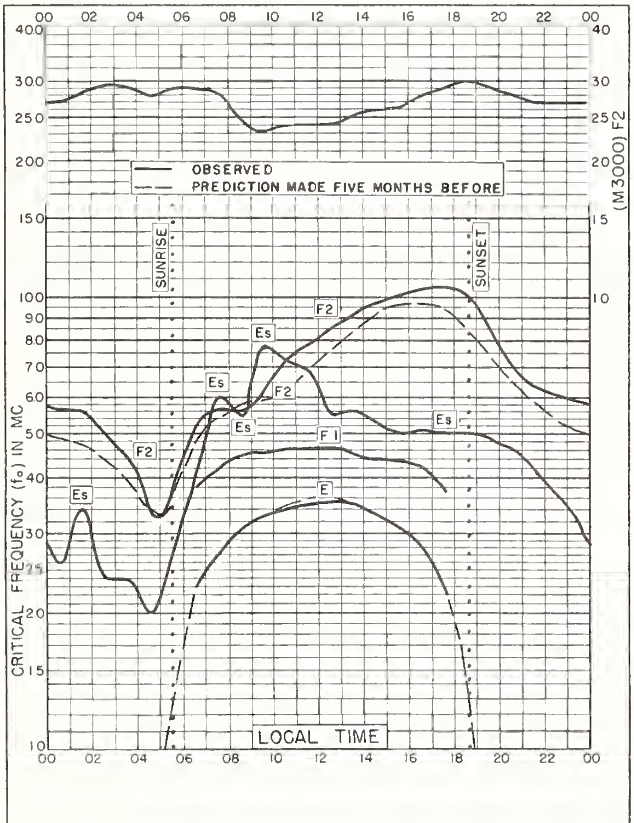


Fig. 15. MAUI, HAWAII 20.8°N, 156.5°W JULY 1955

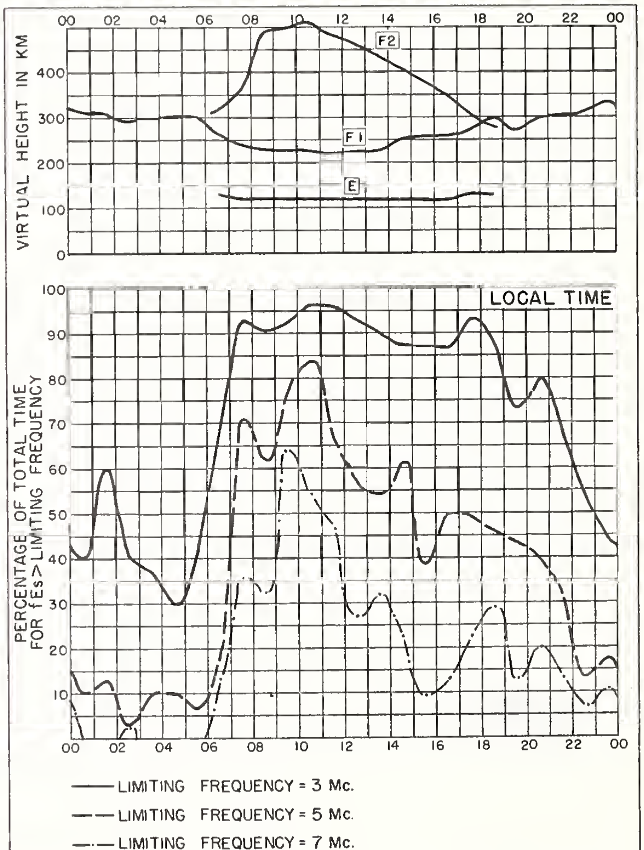


Fig. 16. MAUI, HAWAII JULY 1955

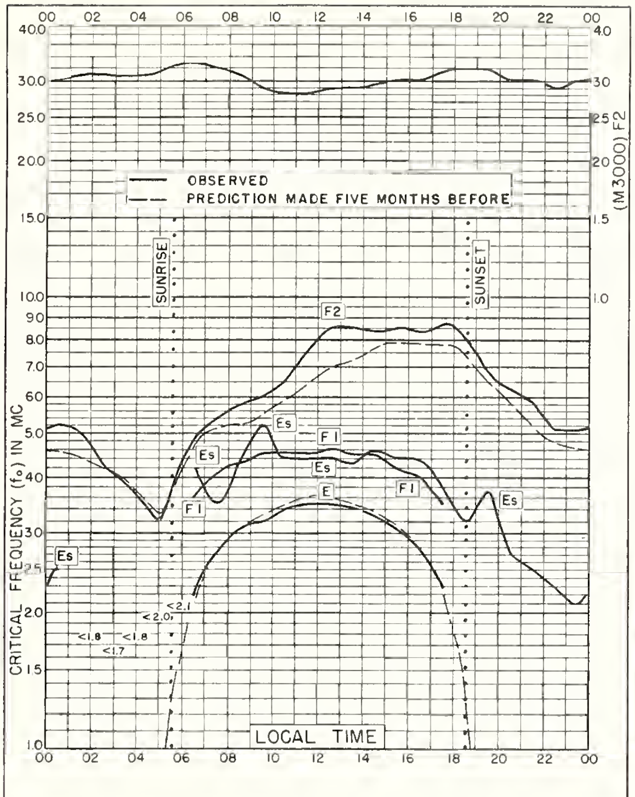


Fig. 17. PUERTO RICO, W. I.
18. 5°N, 67. 2° W JULY 1955

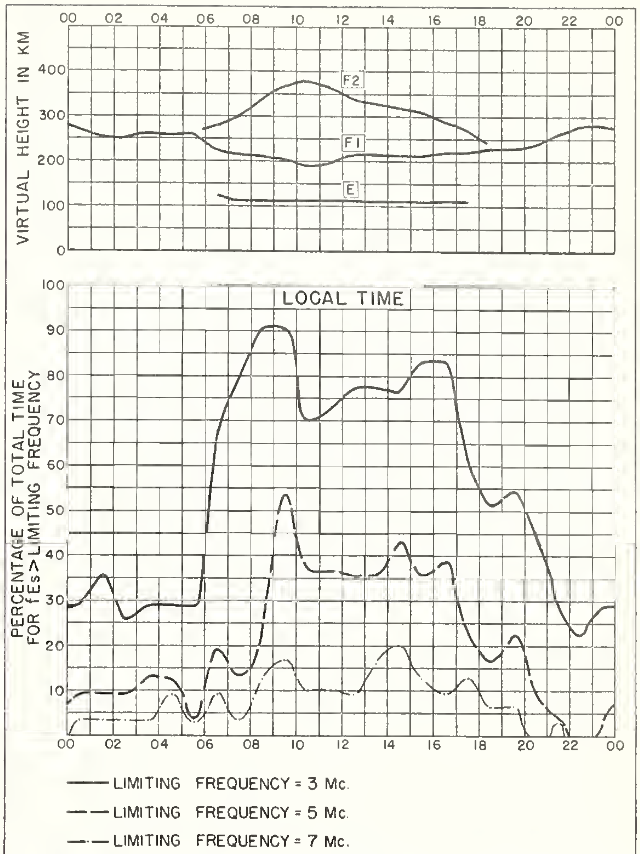


Fig. 18. PUERTO RICO, W. I. JULY 1955

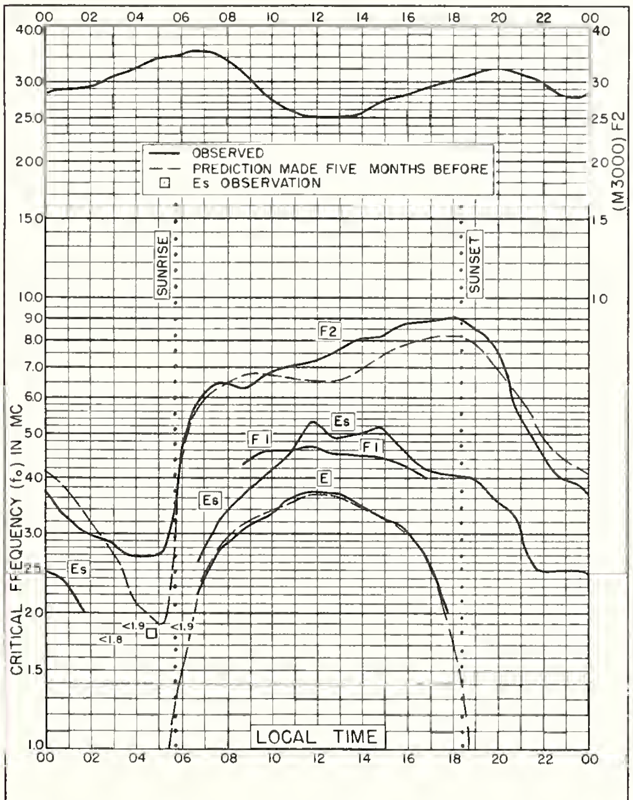


Fig. 19. GUAM I.
13. 6°N, 144. 9°E JULY 1955

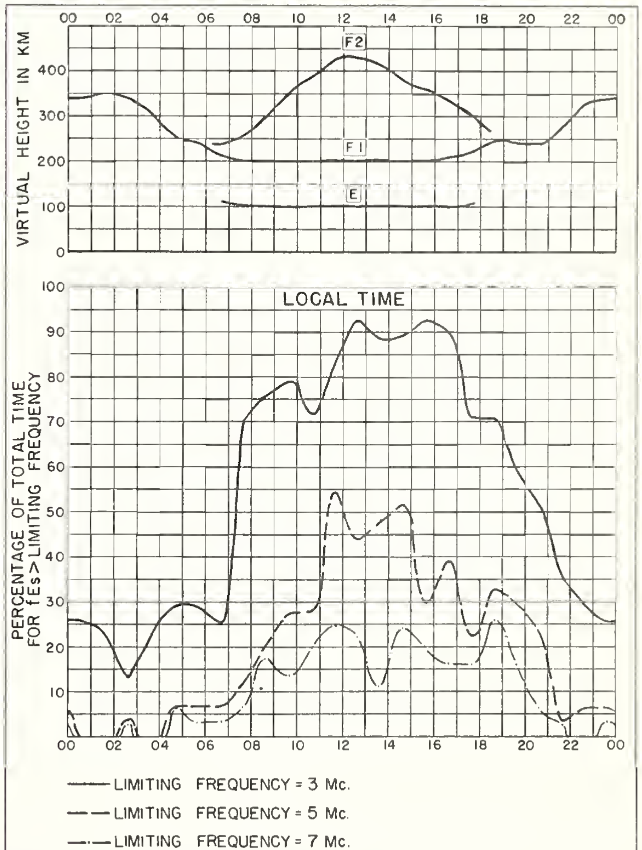


Fig. 20. GUAM I. JULY 1955

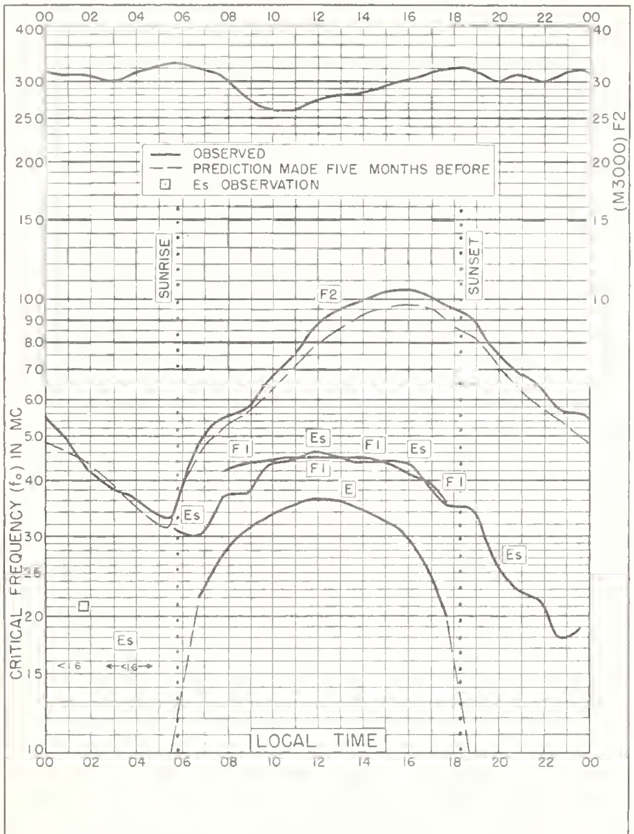


Fig. 21. PANAMA CANAL ZONE
9.4°N, 79.9°W JULY 1955

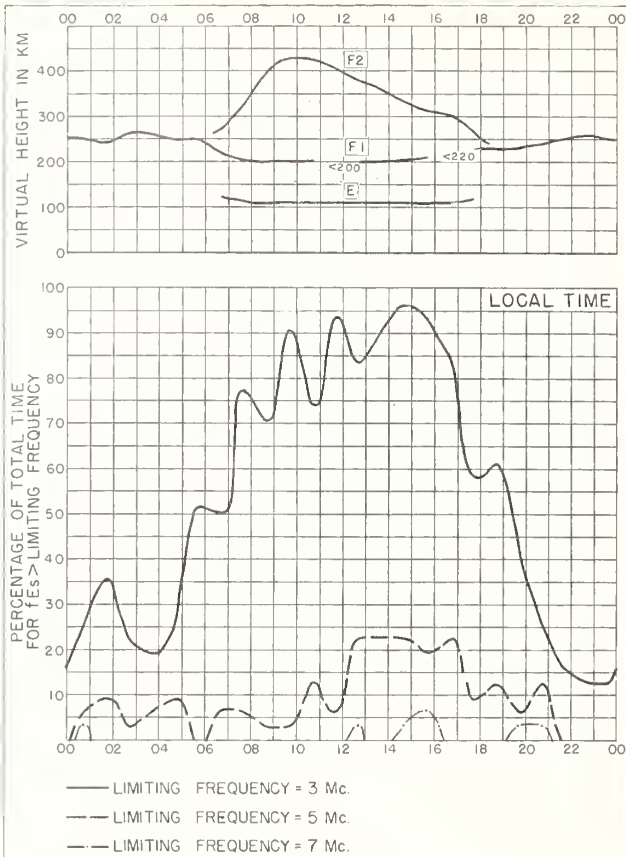


Fig. 22. PANAMA CANAL ZONE JULY 1955

NBS 490

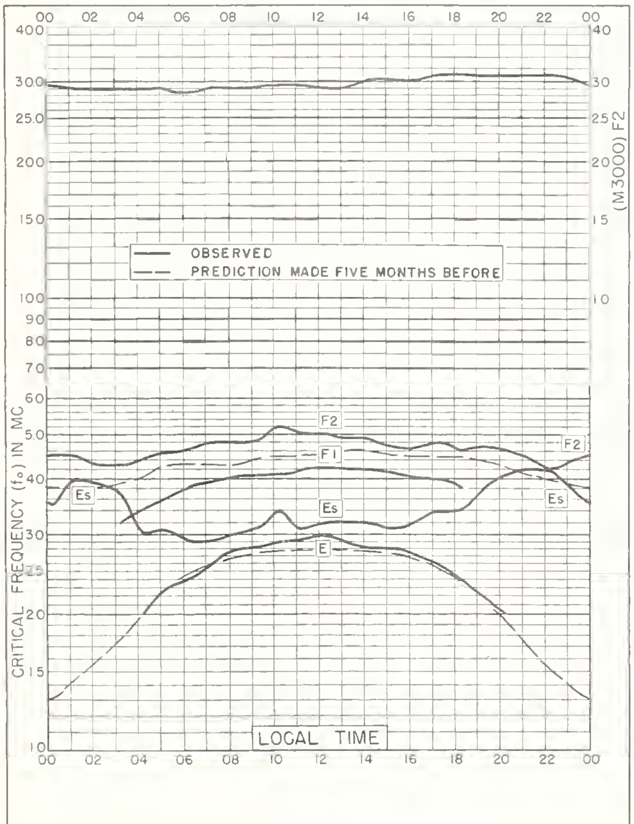


Fig. 23. TROMSO, NORWAY
69.7°N, 19.0°E JUNE 1955

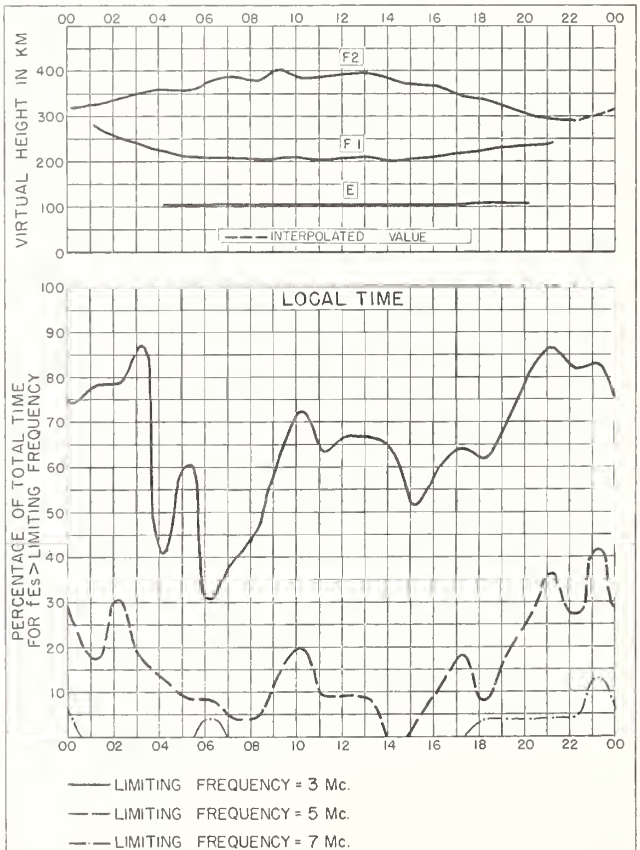


Fig. 24. TROMSO, NORWAY JUNE 1955

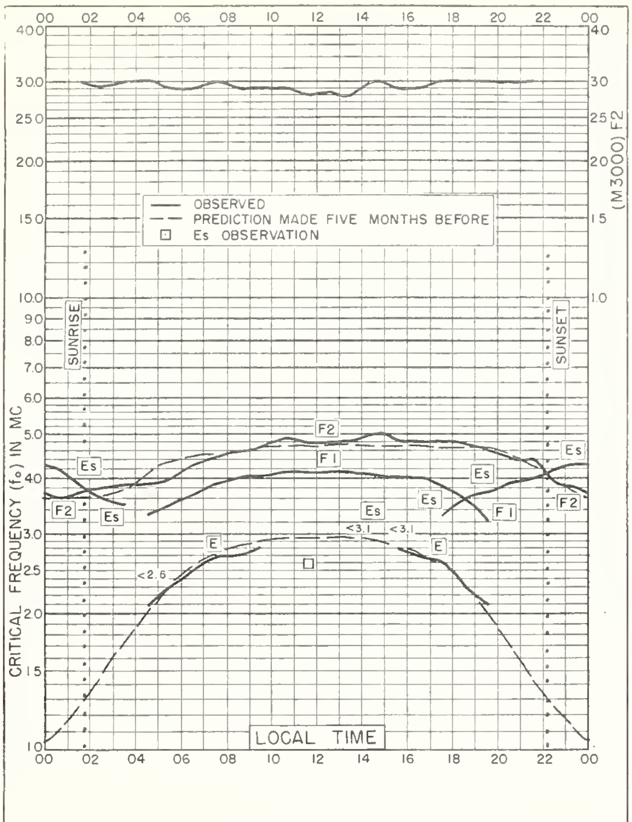


Fig. 25. REYKJAVIK, ICELAND
64.1°N, 21.8°W JUNE 1955

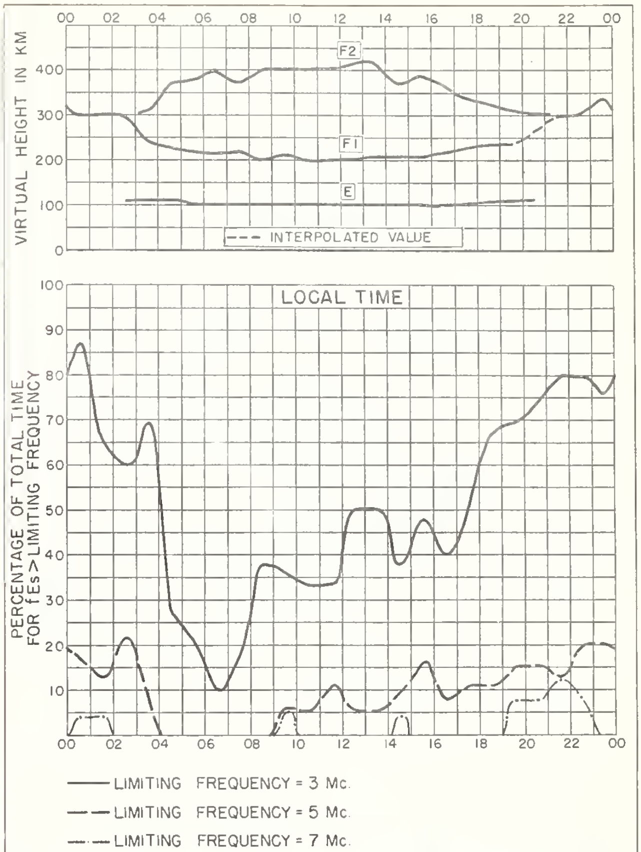


Fig. 26. REYKJAVIK, ICELAND JUNE 1955

NBS 490

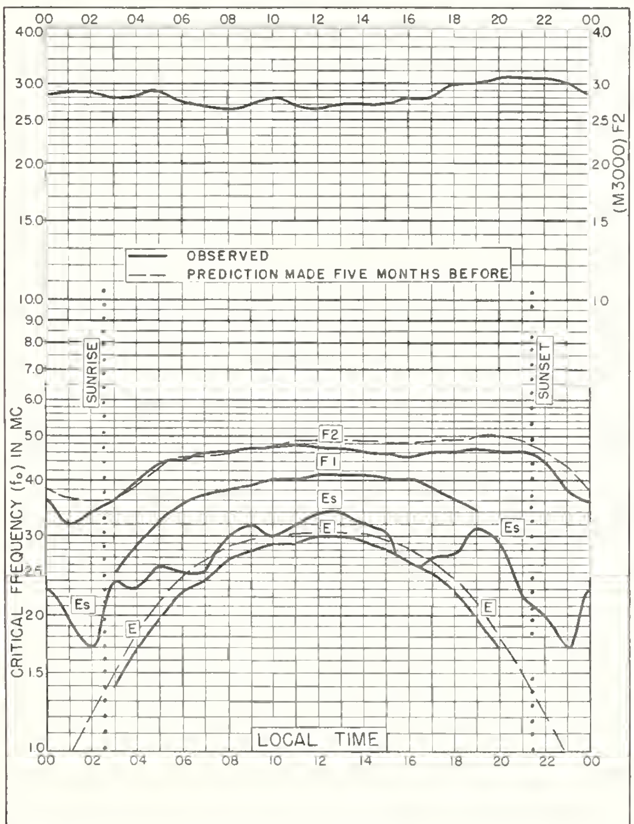


Fig. 27. ANCHORAGE, ALASKA
61.2°N, 149.9°W JUNE 1955

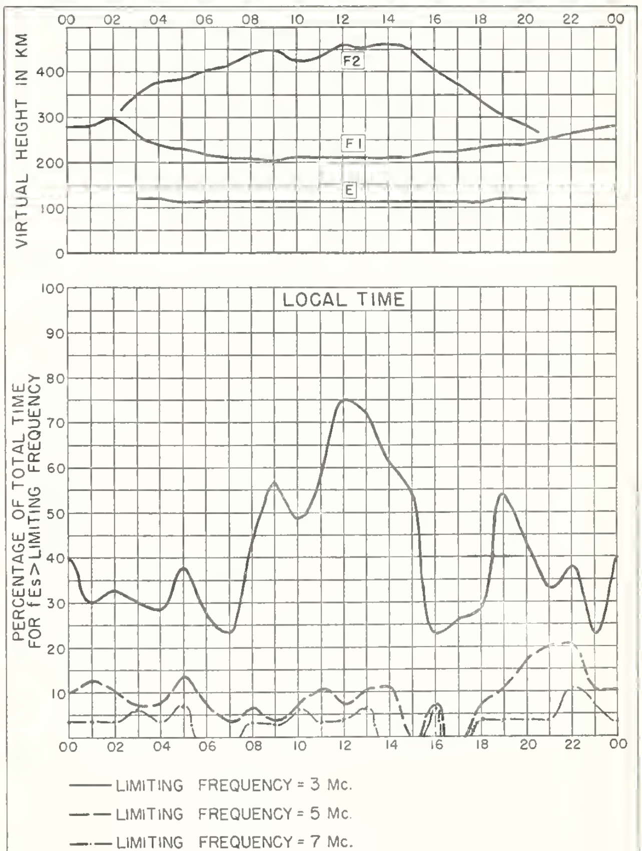


Fig. 28. ANCHORAGE, ALASKA JUNE 1955

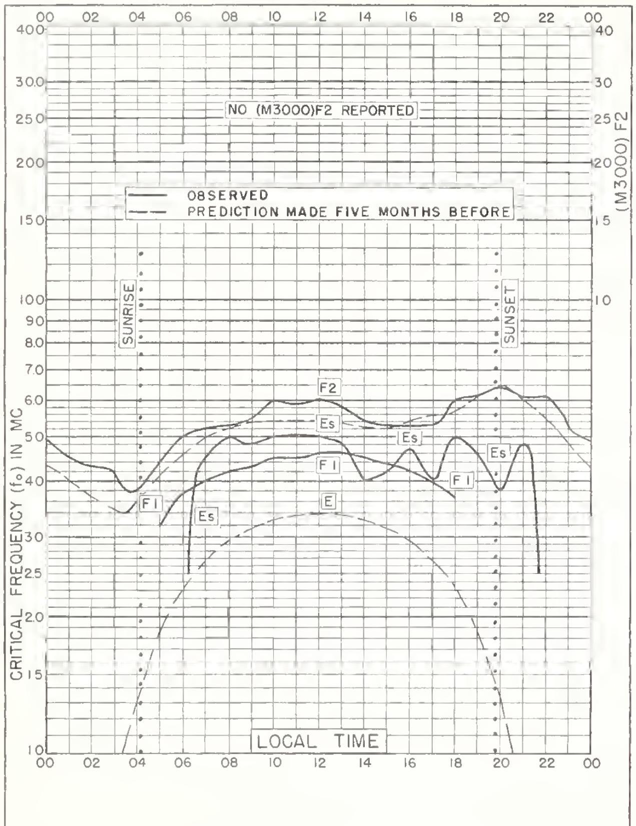


Fig. 29. GRAZ, AUSTRIA
47.1°N, 15.5°E
JUNE 1955

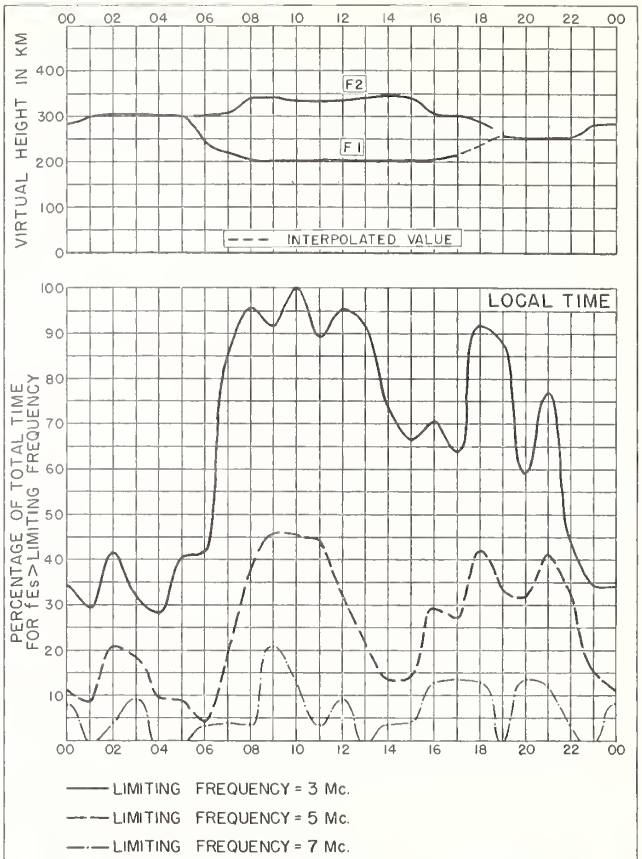


Fig. 30. GRAZ, AUSTRIA
JUNE 1955

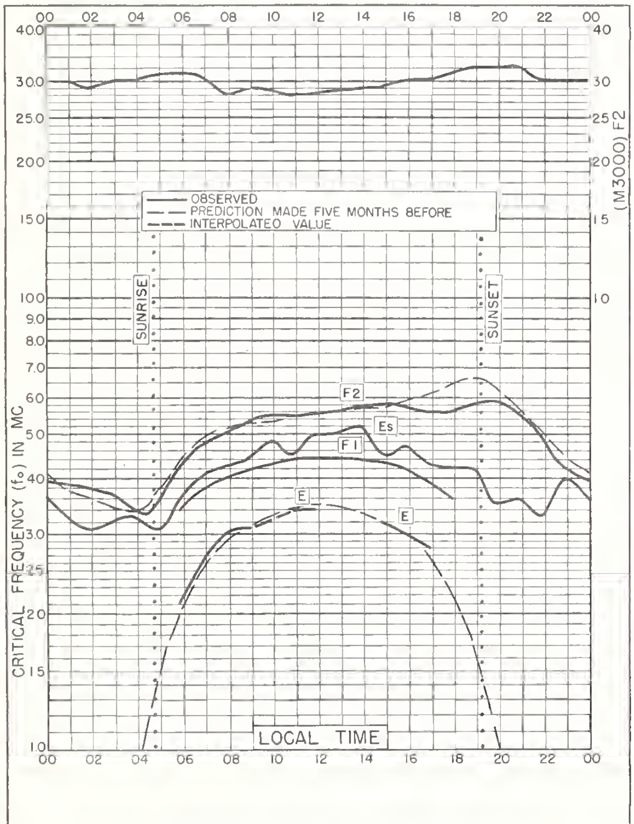
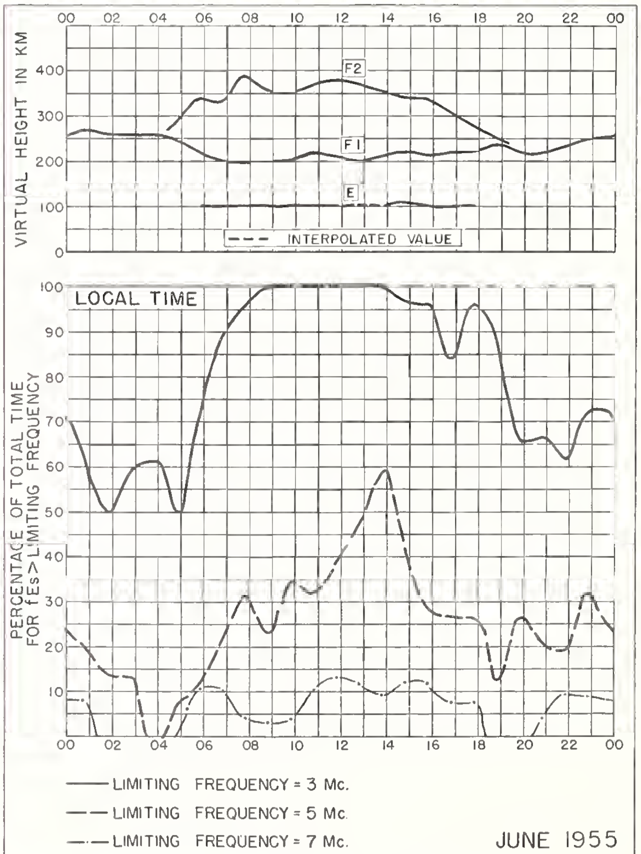


Fig. 31. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W
JUNE 1955



JUNE 1955
Fig. 32. SAN FRANCISCO, CALIFORNIA

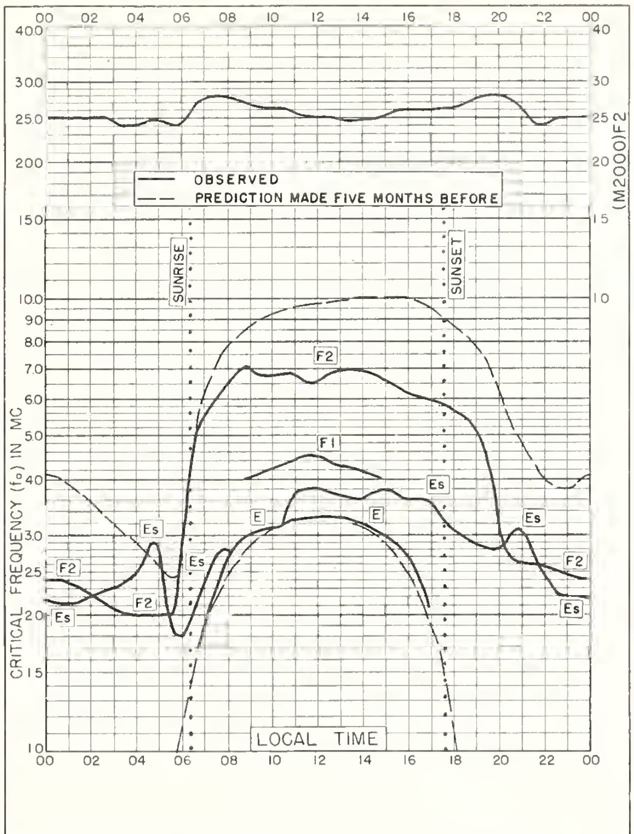
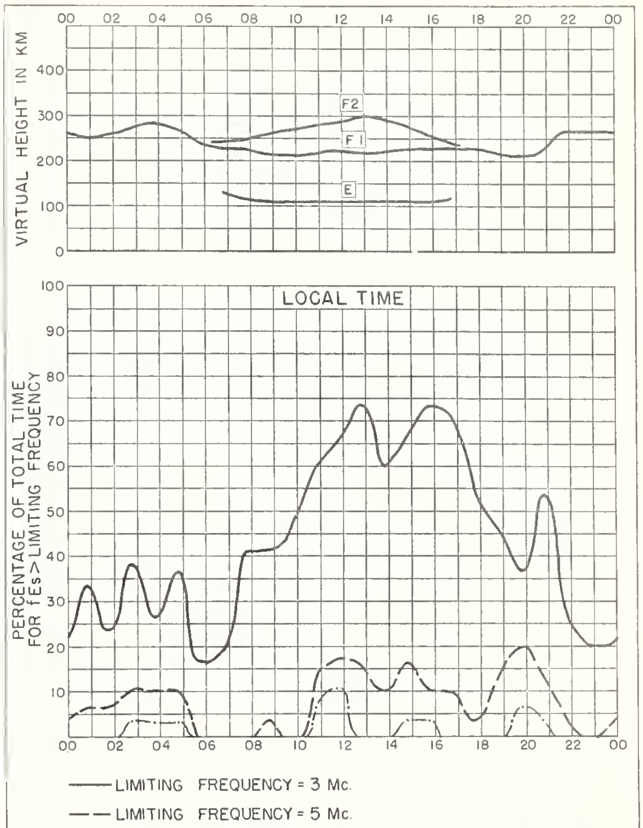


Fig. 33. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E JUNE 1955



JUNE 1955
Fig. 34. ELISABETHVILLE, BELGIAN CONGO

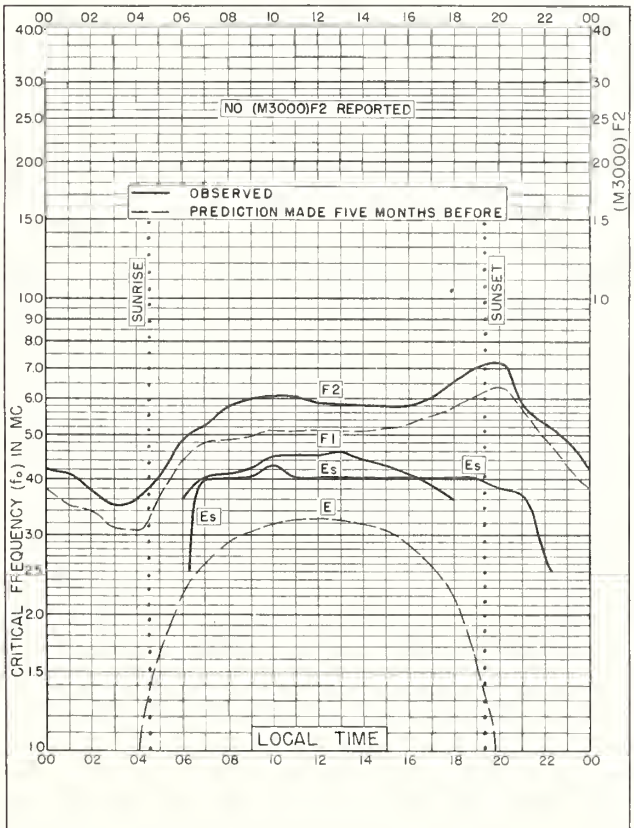


Fig. 35. GRAZ, AUSTRIA
47.1°N, 15.5°E MAY 1955

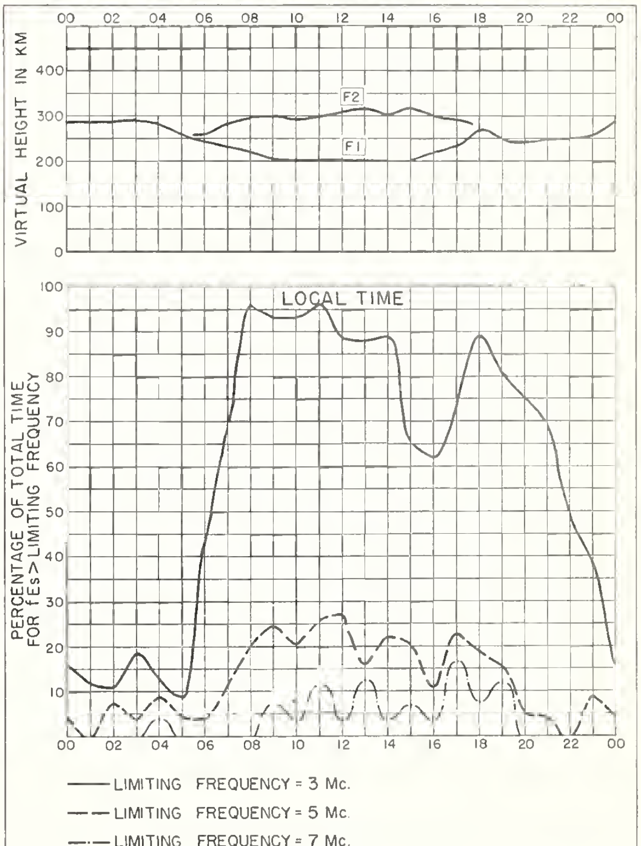


Fig. 36. GRAZ, AUSTRIA MAY 1955

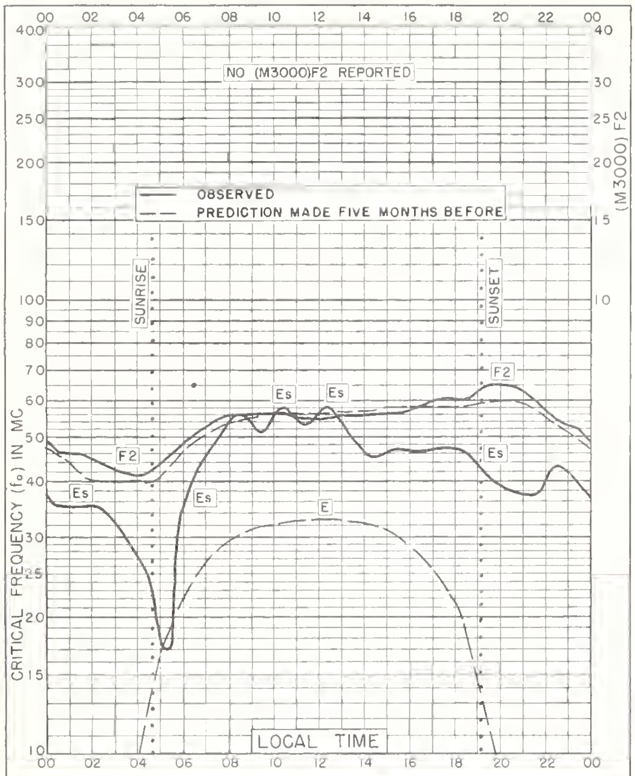


Fig. 37. WAKKANAI, JAPAN
45.4°N, 141.7°E MAY 1955

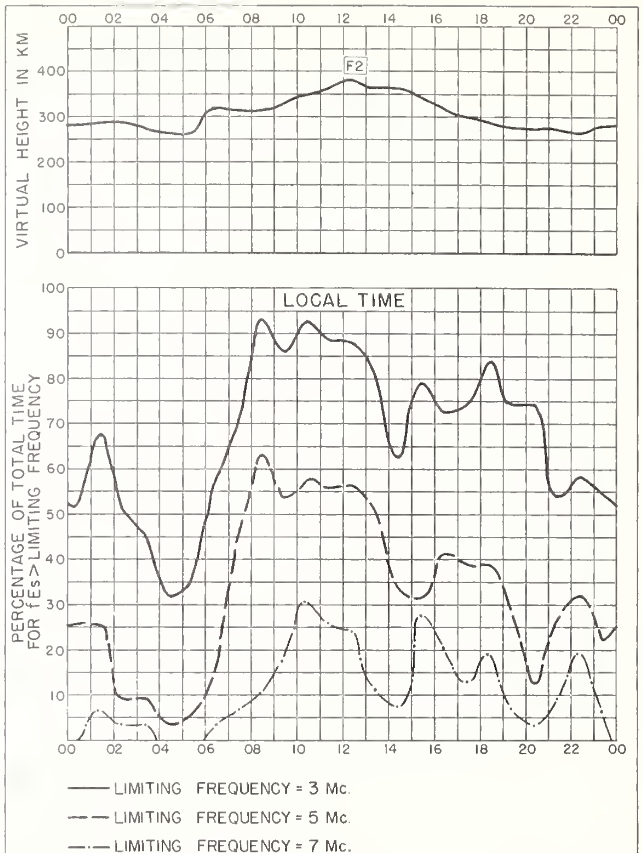


Fig. 38. WAKKANAI, JAPAN MAY 1955

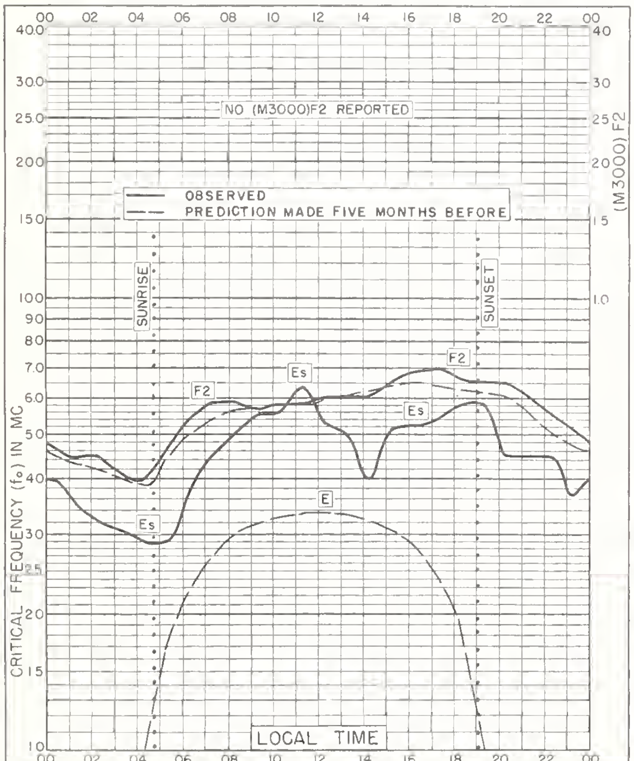


Fig. 39. AKITA, JAPAN
39.7°N, 140.1°E MAY 1955

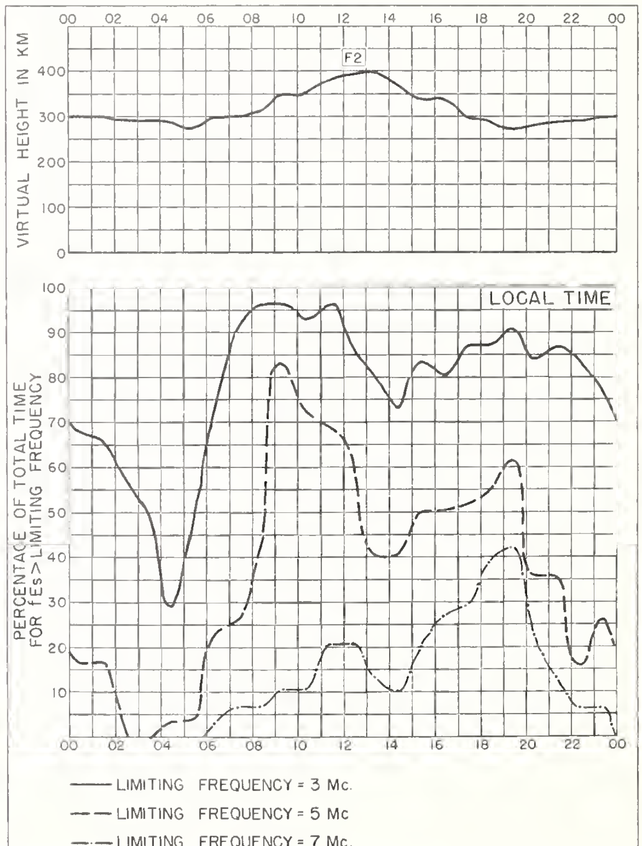


Fig. 40. AKITA, JAPAN MAY 1955

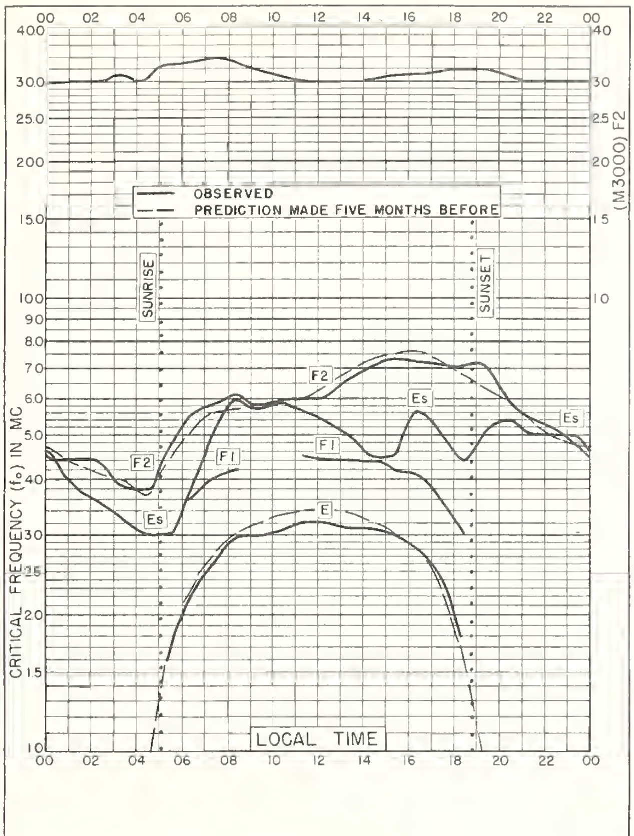


Fig. 41. TOKYO, JAPAN
35.7°N, 139.5°E MAY 1955

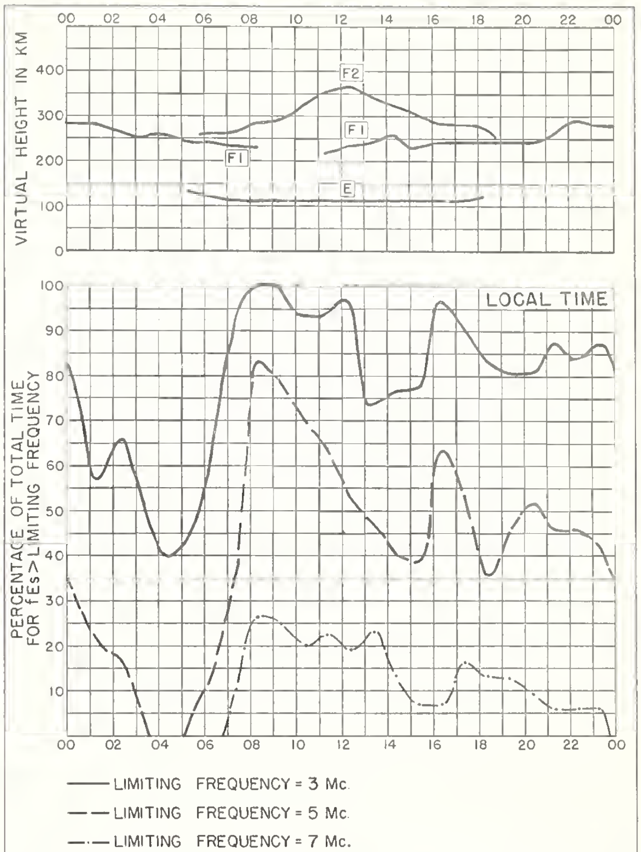


Fig. 42. TOKYO, JAPAN MAY 1955

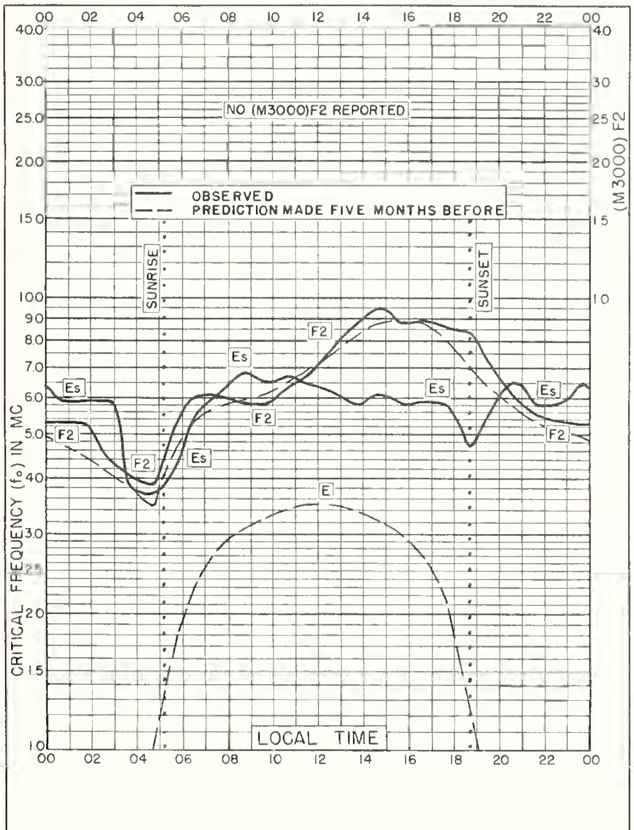


Fig. 43. YAMAGAWA, JAPAN
31.2°N, 130.6°E MAY 1955

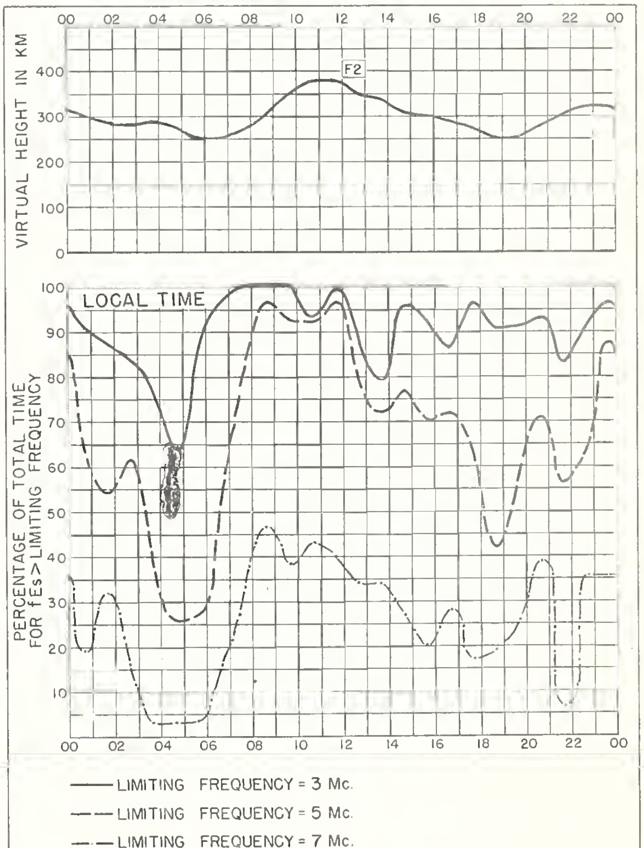


Fig. 44. YAMAGAWA, JAPAN MAY 1955

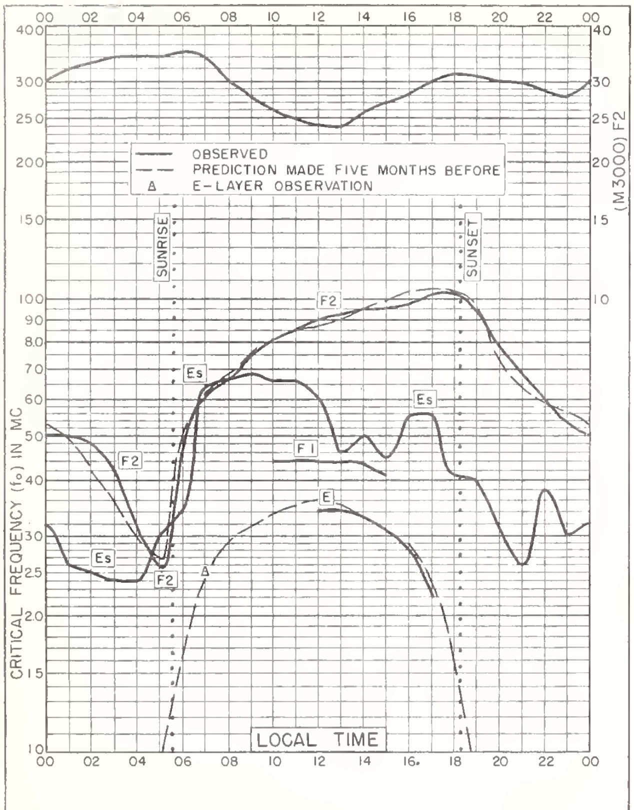


Fig. 45. BAGUIO, P. I.
16.4°N, 120.6°E MAY 1955

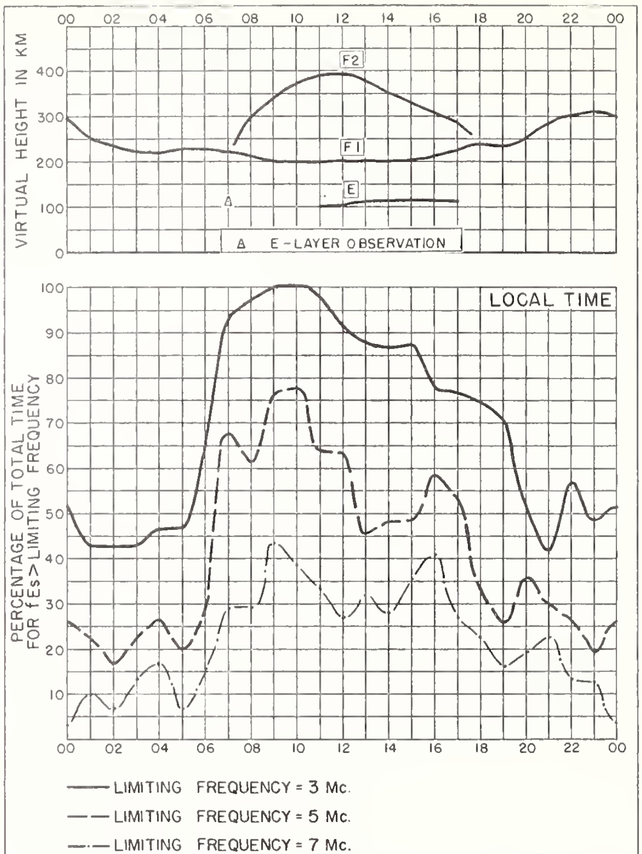


Fig. 46. BAGUIO, P. I. MAY 1955

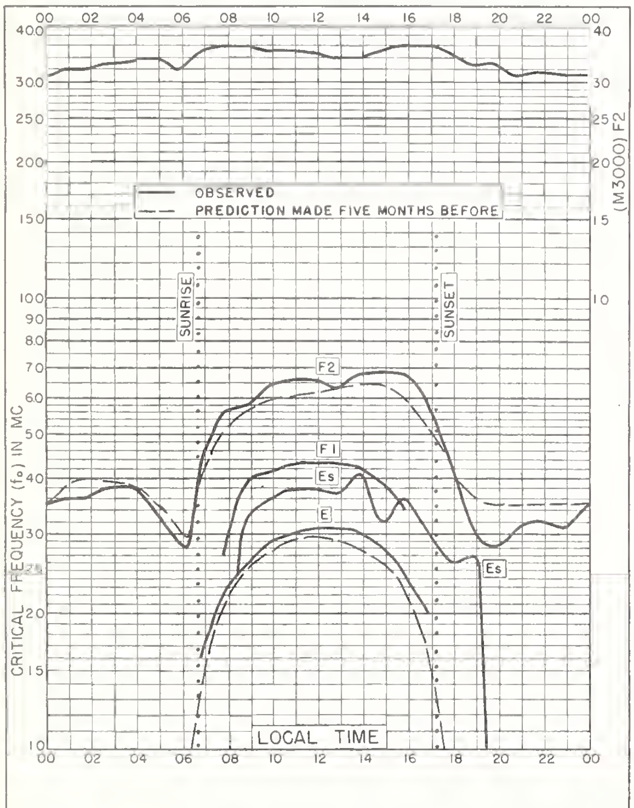


Fig. 47. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E MAY 1955

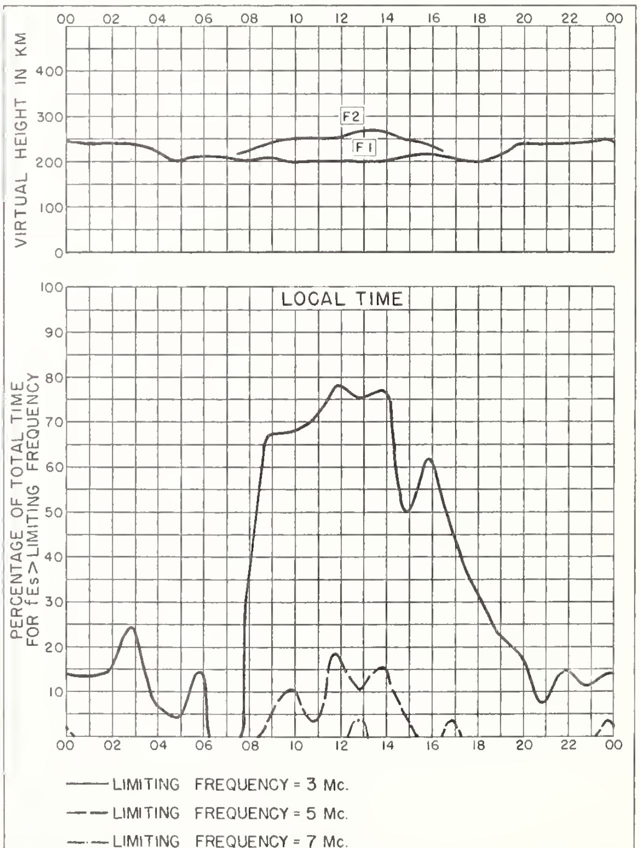


Fig. 48. WATHEROO, W. AUSTRALIA MAY 1955

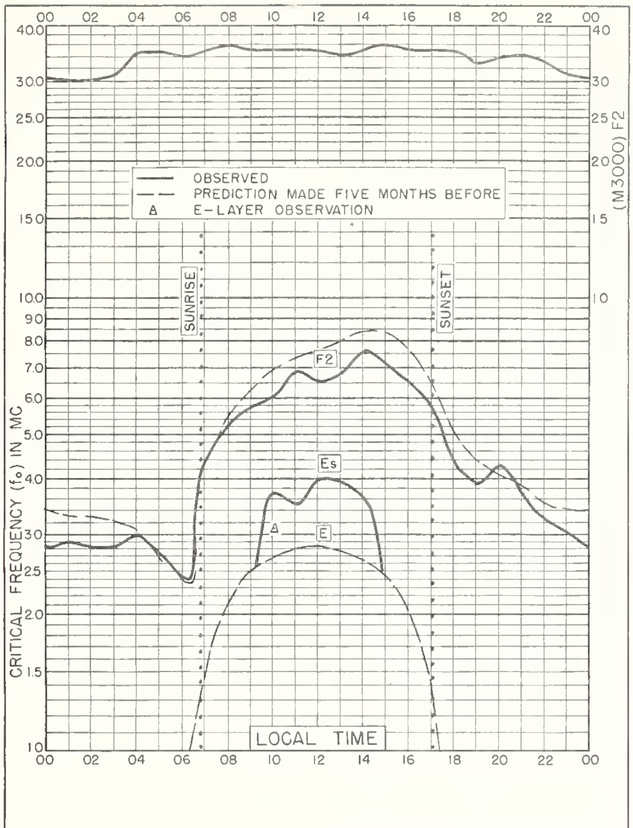


Fig. 49. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W MAY 1955

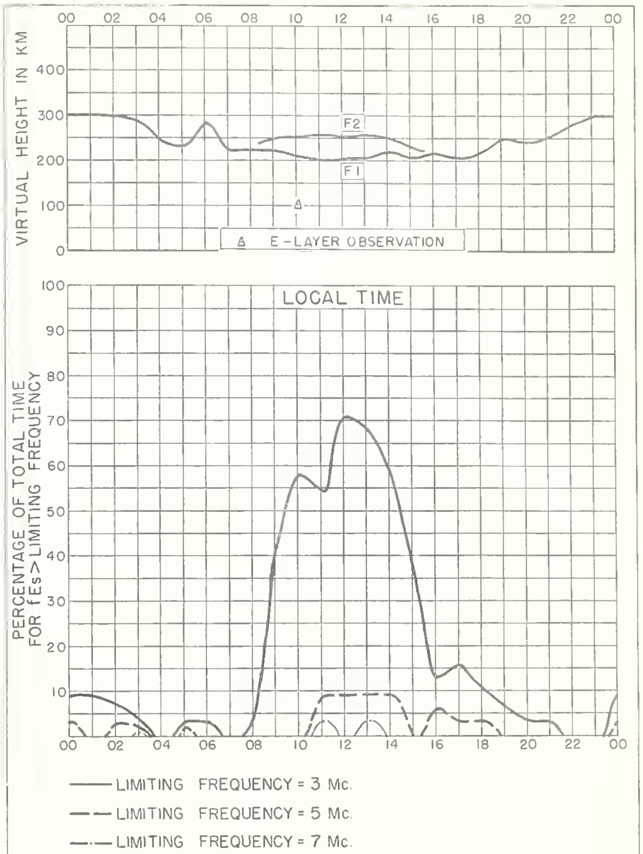


Fig. 50. BUENOS AIRES, ARGENTINA MAY 1955

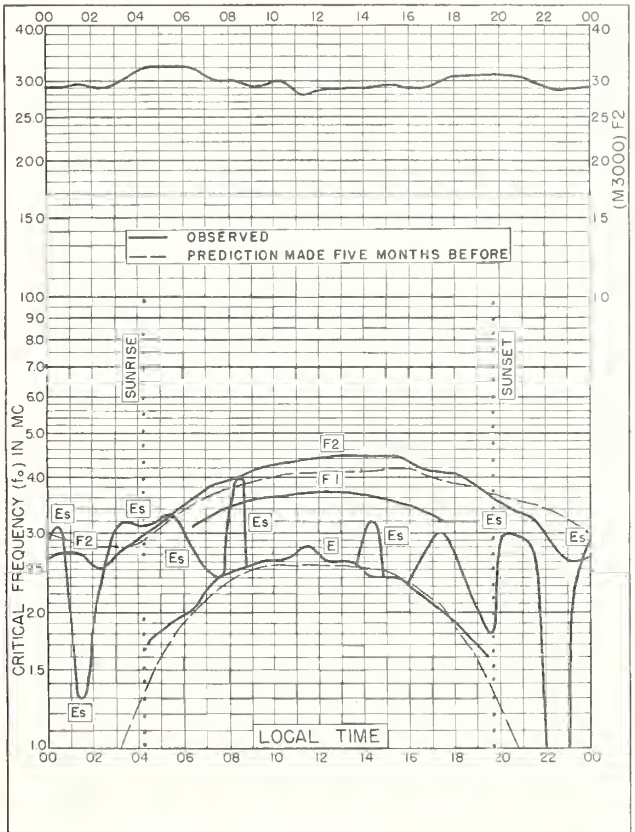


Fig. 51. GODHAVN, GREENLAND
69.2°N, 53.5°W APRIL 1955

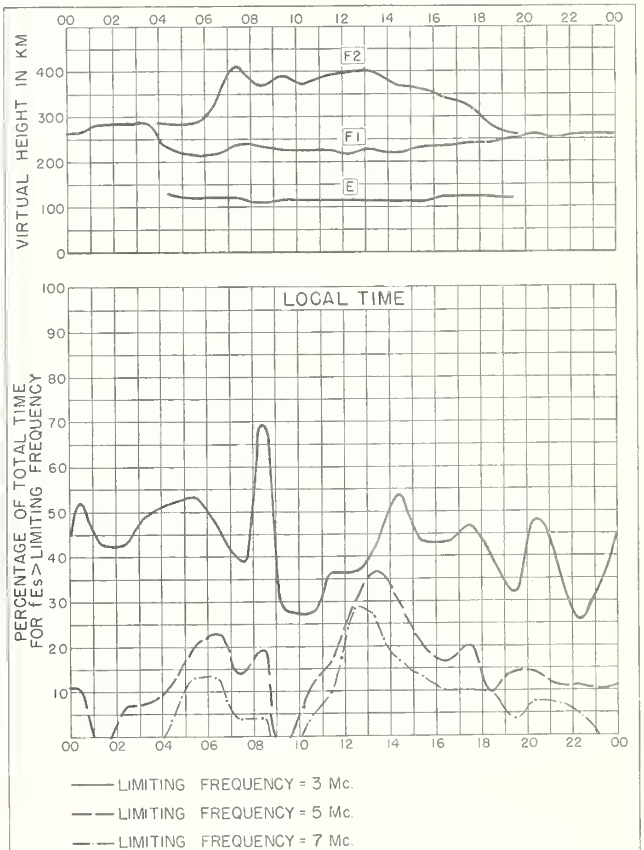


Fig. 52. GODHAVN, GREENLAND APRIL 1955

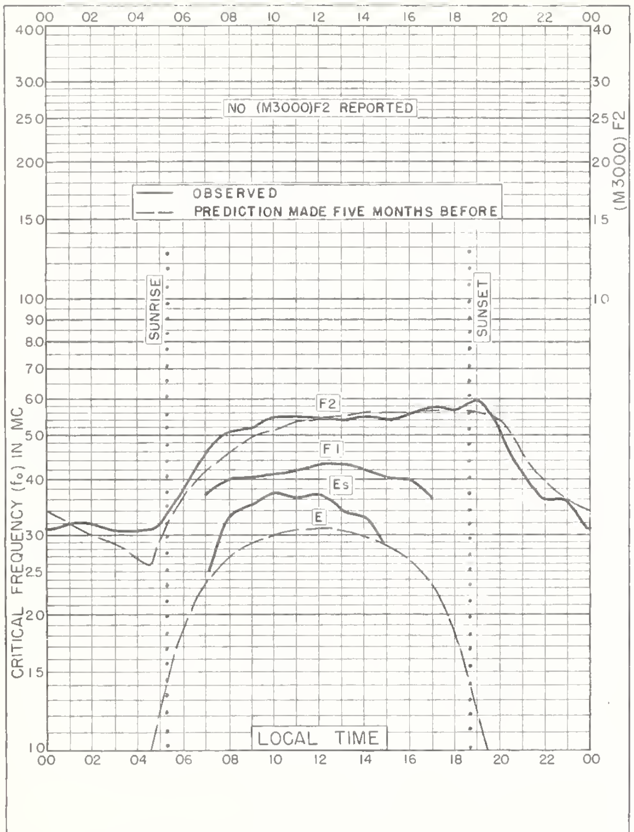


Fig. 53. GRAZ, AUSTRIA
47.1°N, 15.5°E APRIL 1955

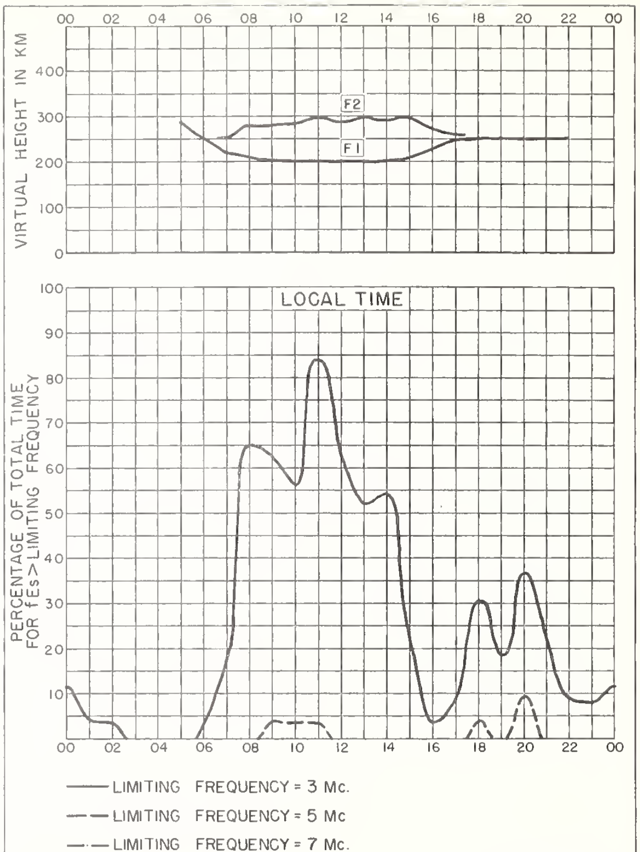


Fig. 54. GRAZ, AUSTRIA APRIL 1955

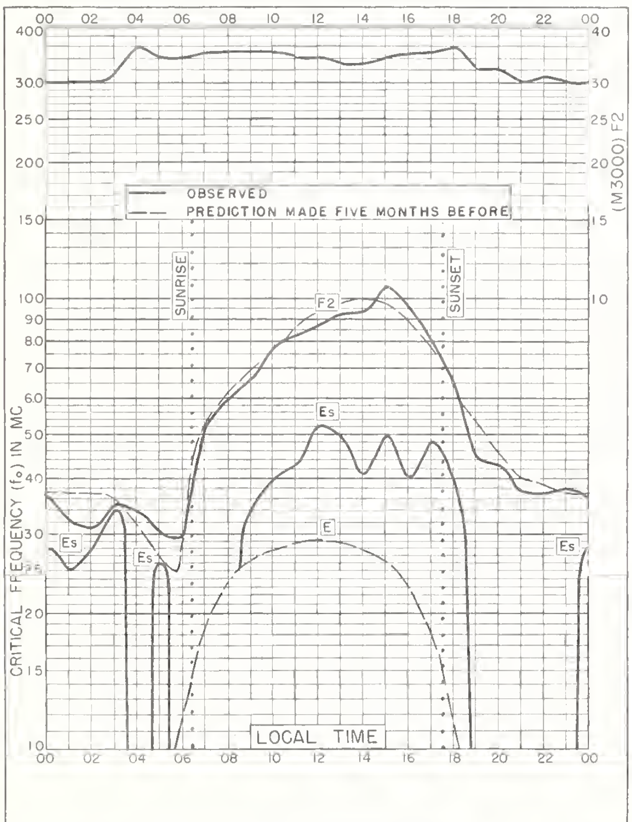


Fig. 55. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W APRIL 1955

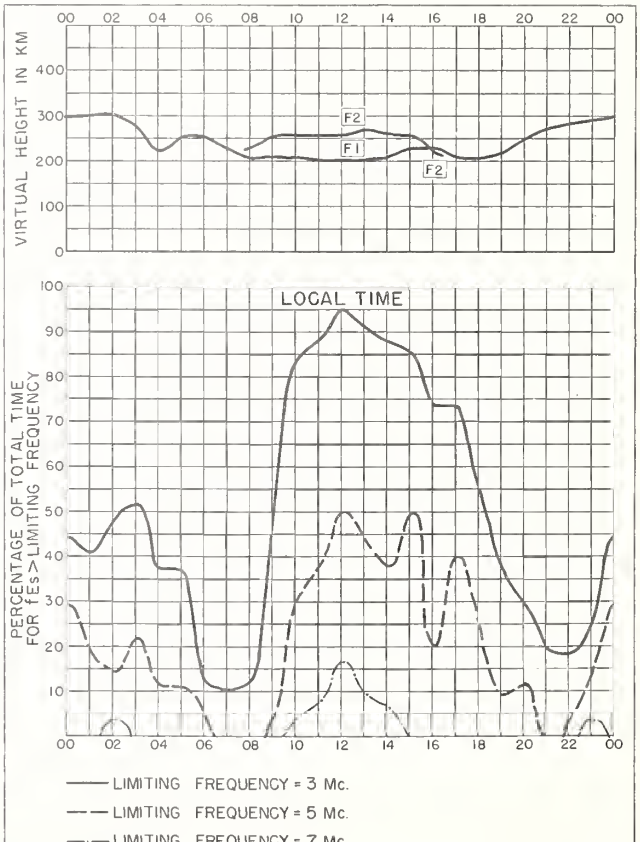


Fig. 56. BUENOS AIRES, ARGENTINA APRIL 1955

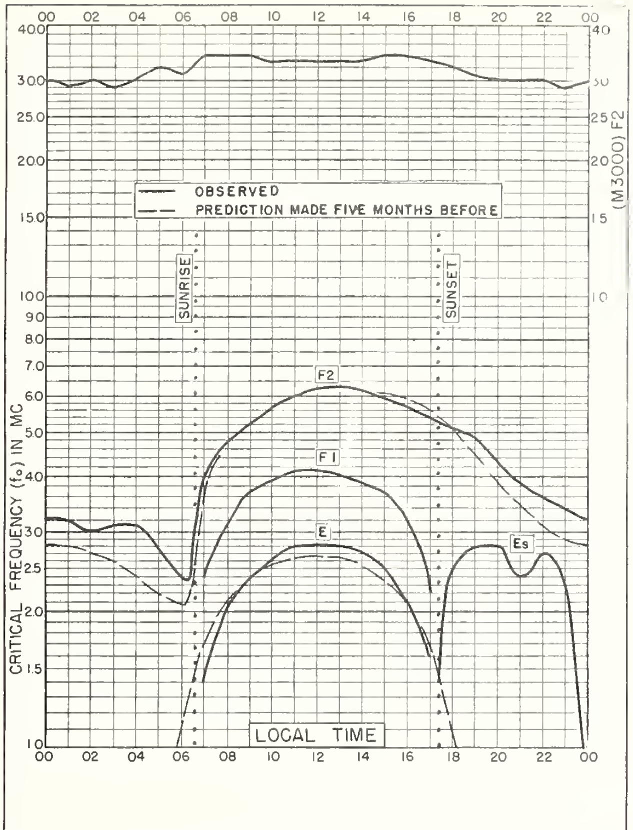
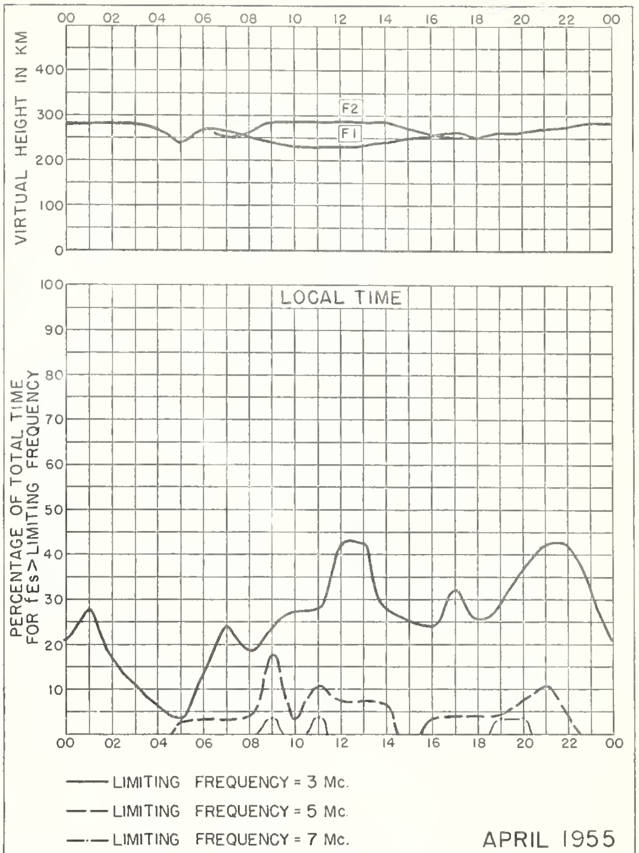


Fig. 57. CHRISTCHURCH, NEW ZEALAND
43.6°S, 172.8°E APRIL 1955



APRIL 1955
Fig. 58. CHRISTCHURCH, NEW ZEALAND

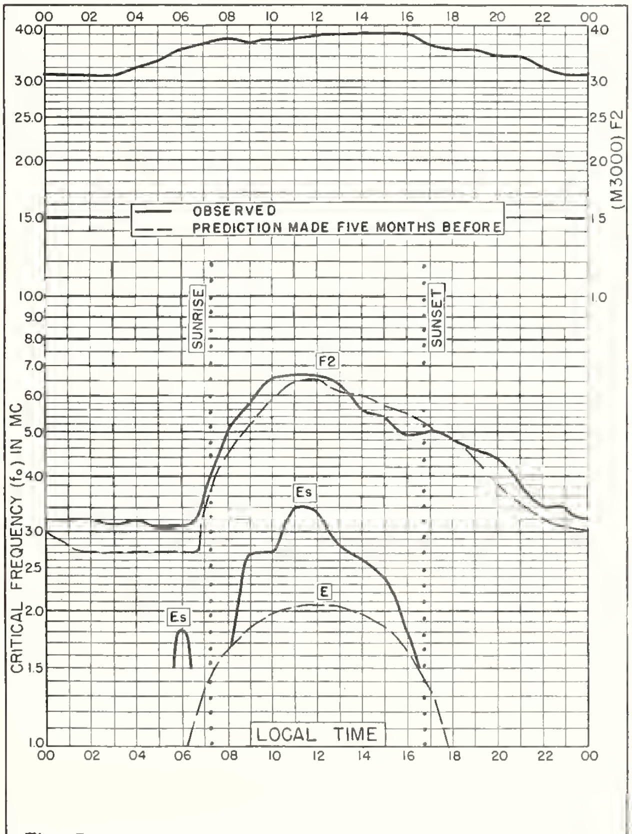


Fig. 59. DECEPCION I.
63.0°S, 60.7°W APRIL 1955

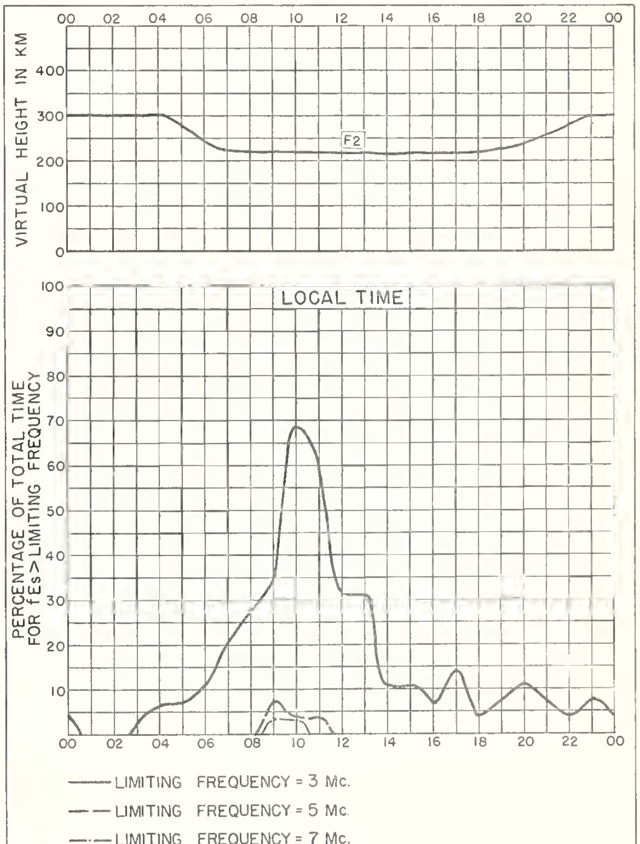


Fig. 60. DECEPCION I. APRIL 1955

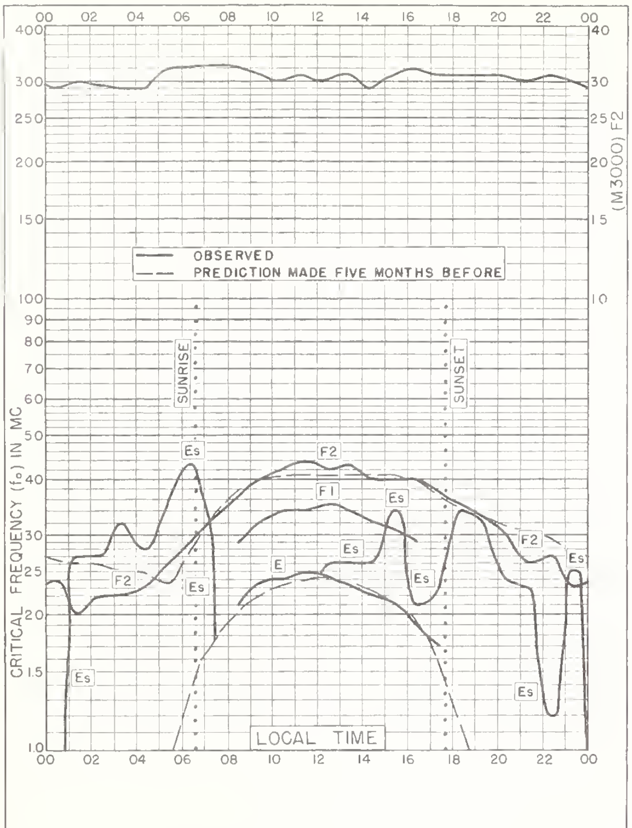


Fig. 61. GODHAVN, GREENLAND
69.2°N, 53.5°W MARCH 1955

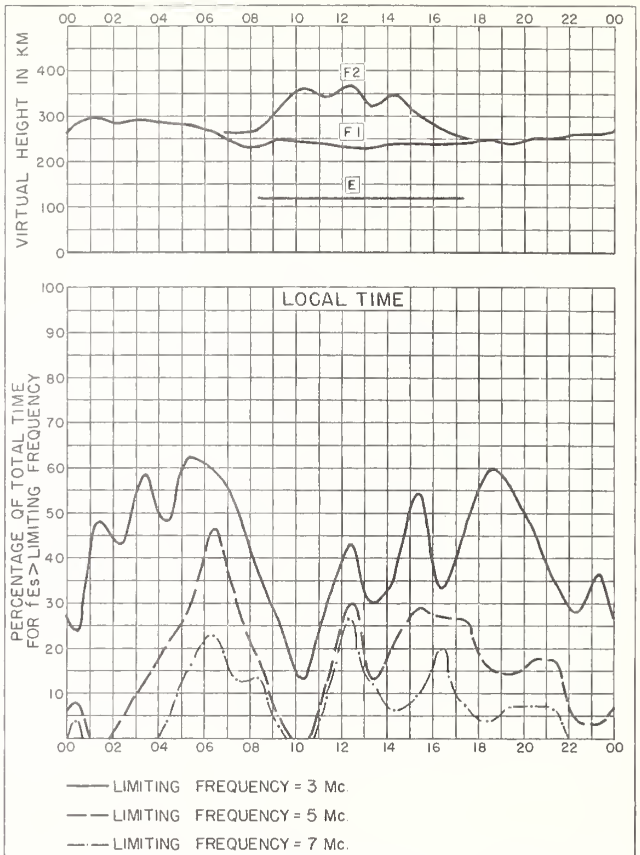


Fig. 62. GODHAVN, GREENLAND MARCH 1955

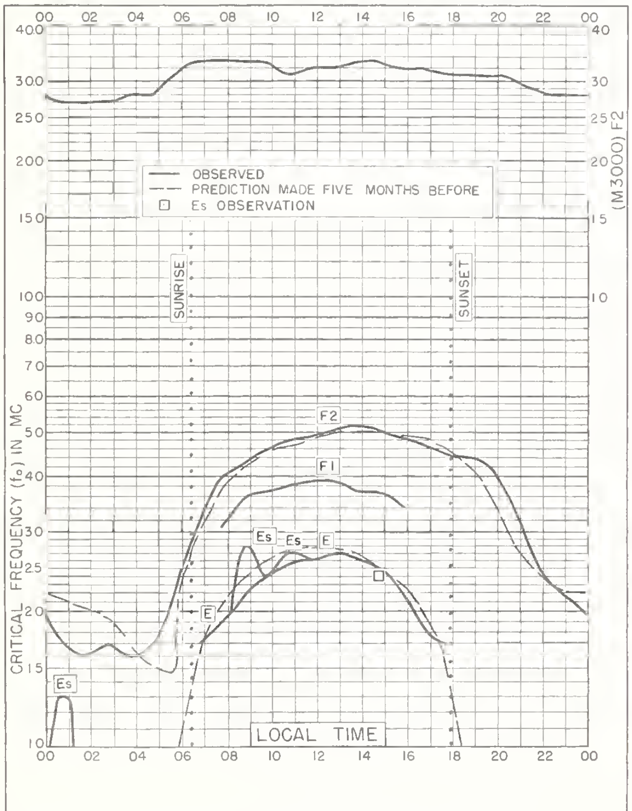


Fig. 63. INVERNESS, SCOTLAND
57.4°N, 4.2°W MARCH 1955

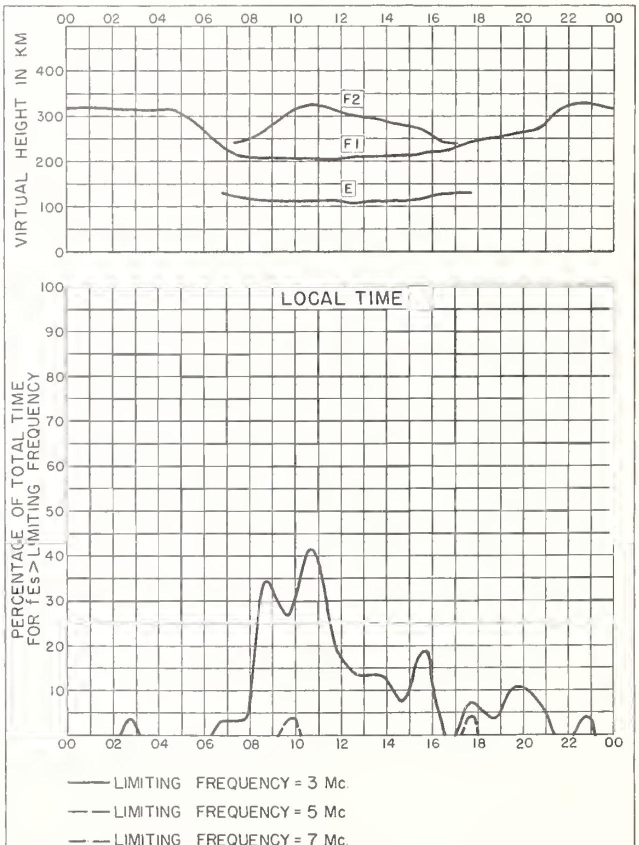


Fig. 64. INVERNESS, SCOTLAND MARCH 1955

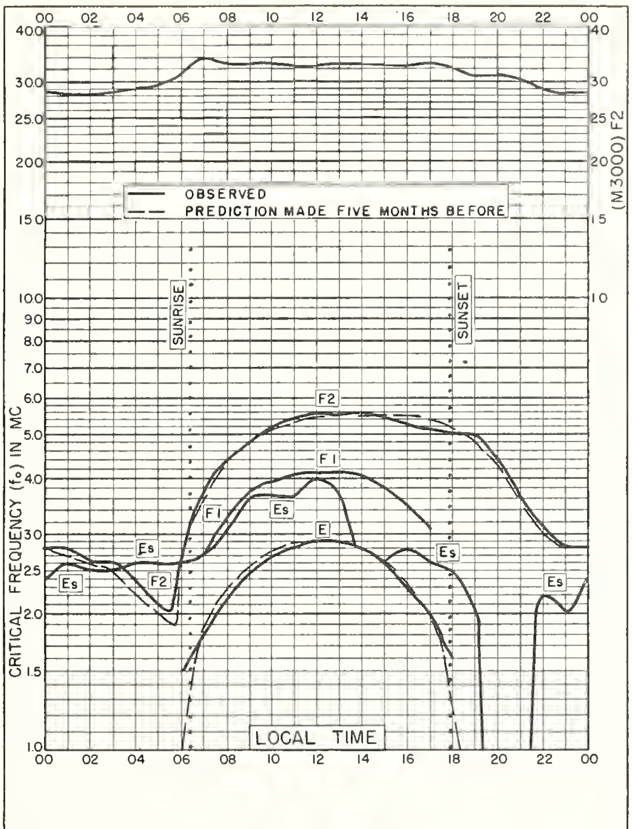


Fig. 65. SLOUGH, ENGLAND
51.5°N, 0.6° W
MARCH 1955

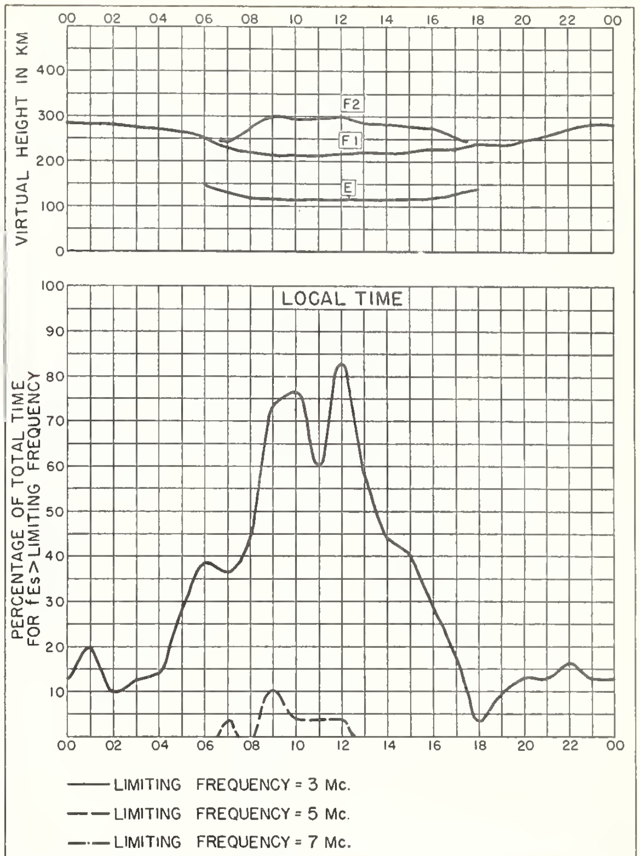


Fig. 66. SLOUGH, ENGLAND MARCH 1955

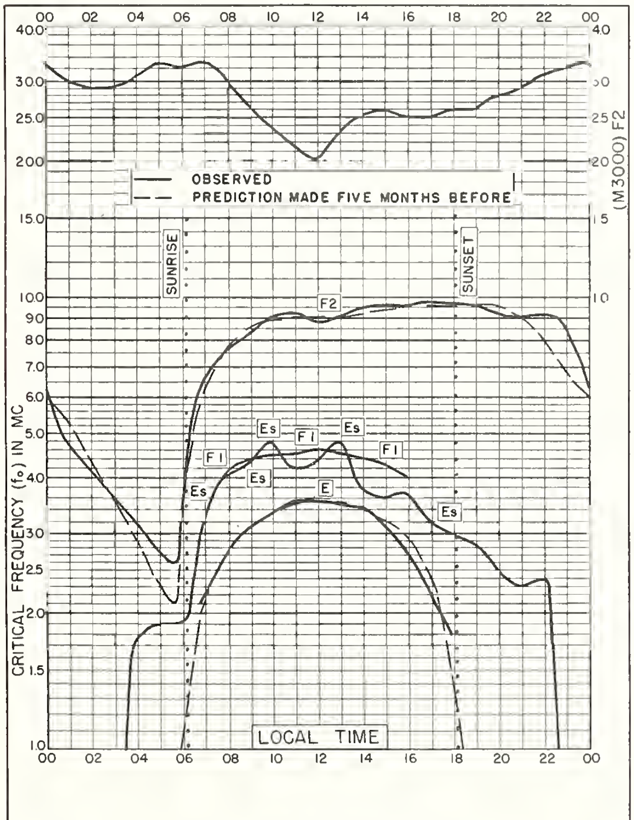
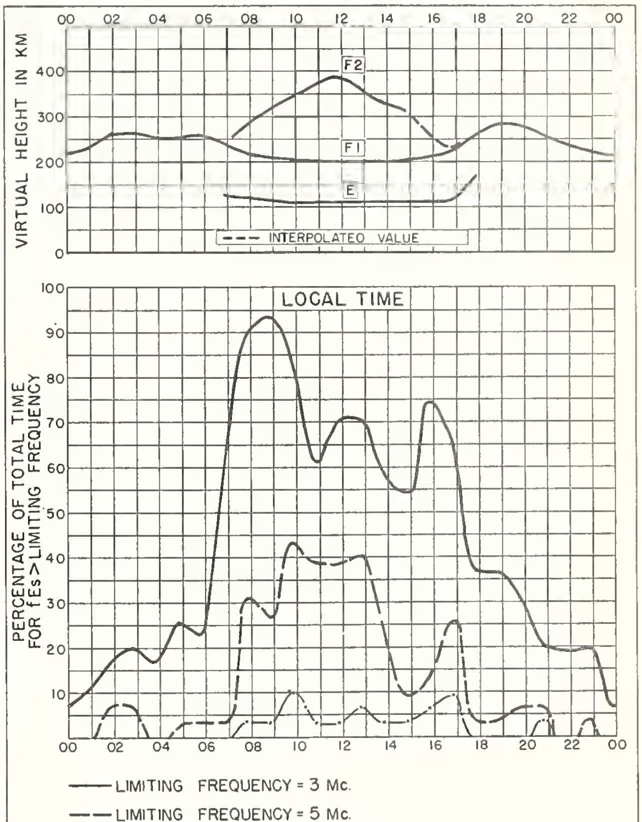


Fig. 67. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E
MARCH 1955



MARCH 1955
Fig. 68. SINGAPORE, BRITISH MALAYA

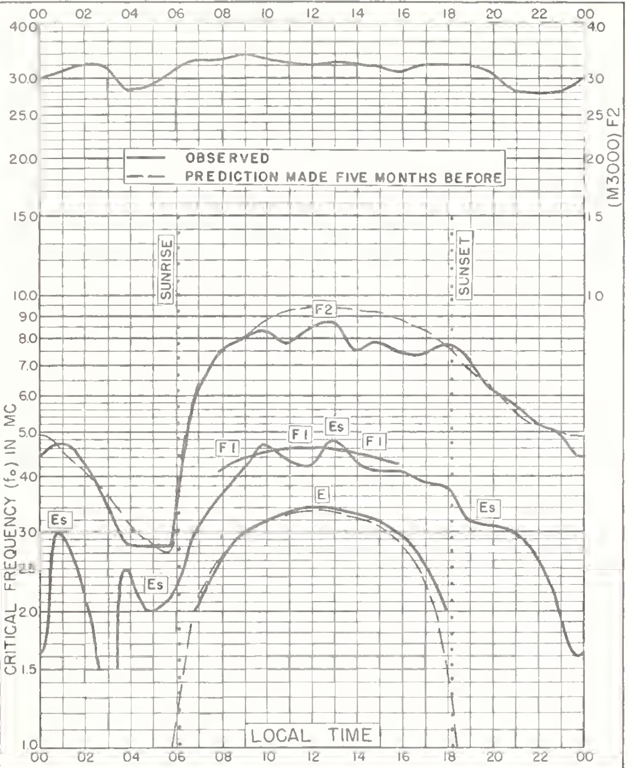


Fig. 69. RAROTONGA I.
21.3°S, 159.8°W MARCH 1955

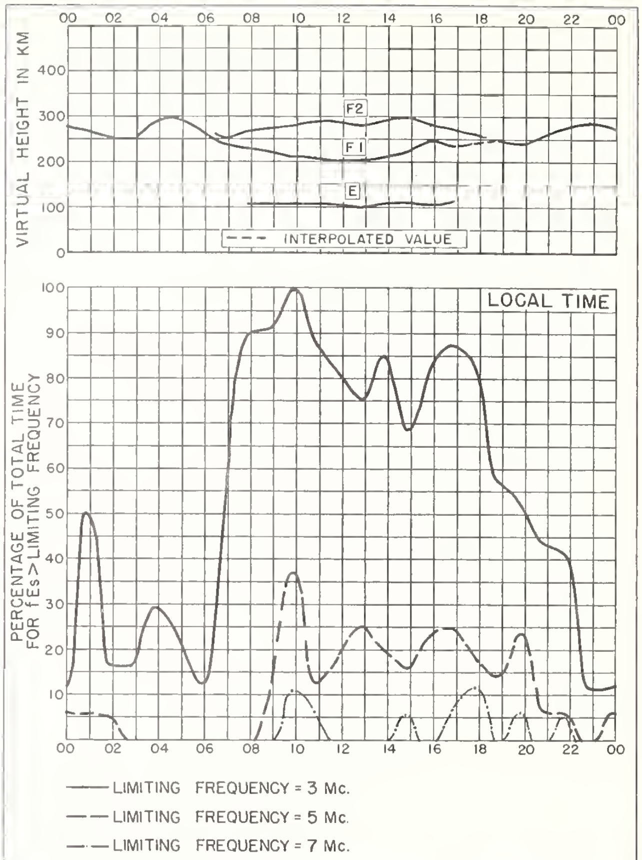


Fig. 70. RAROTONGA I. MARCH 1955

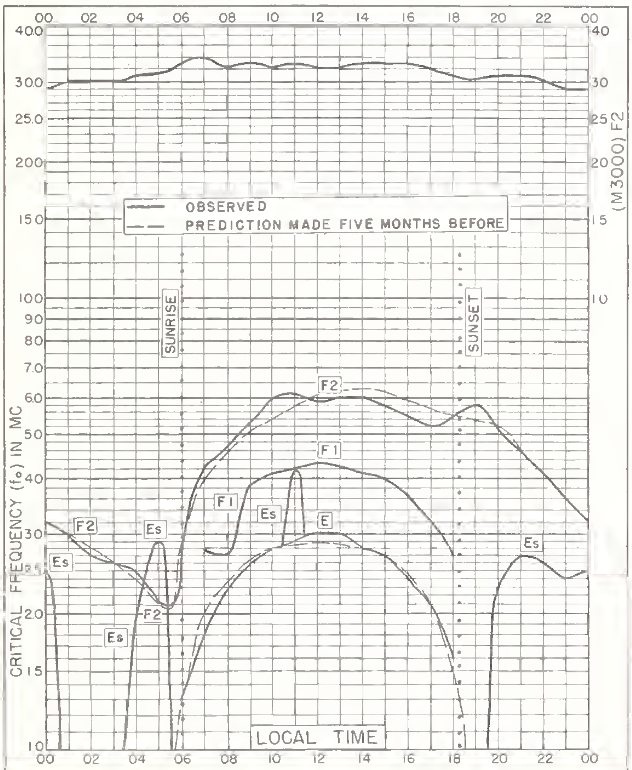
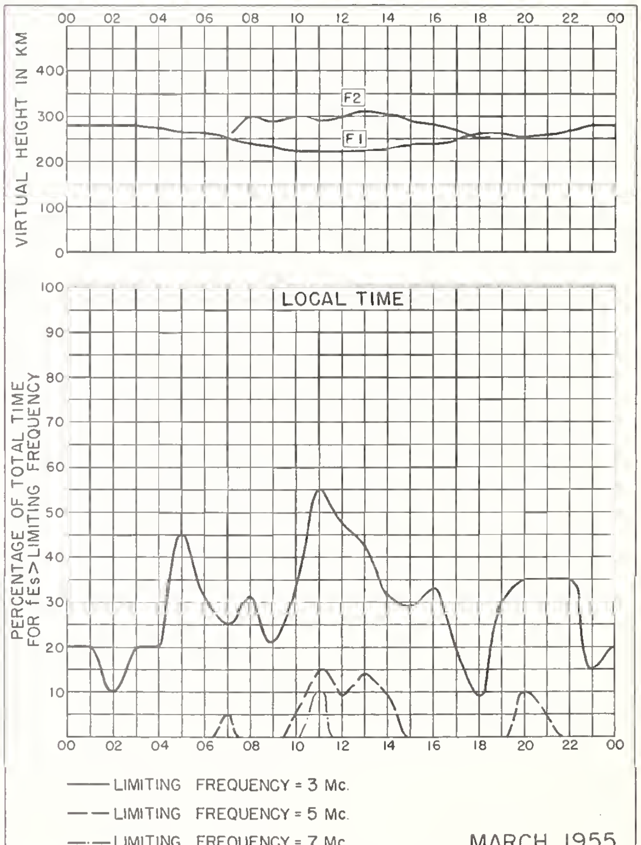


Fig. 71. CHRISTCHURCH, NEW ZEALAND
43.6°S, 172.8°E MARCH 1955



MARCH 1955
Fig. 72. CHRISTCHURCH, NEW ZEALAND

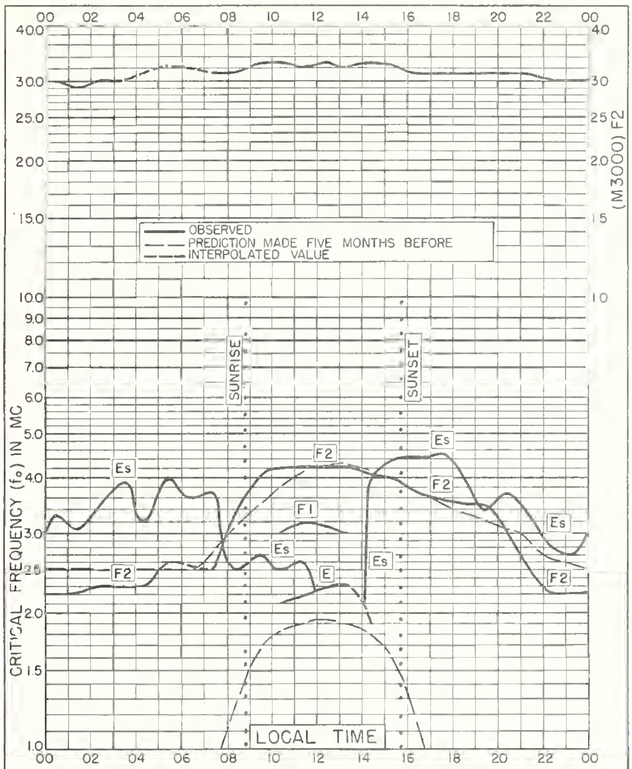
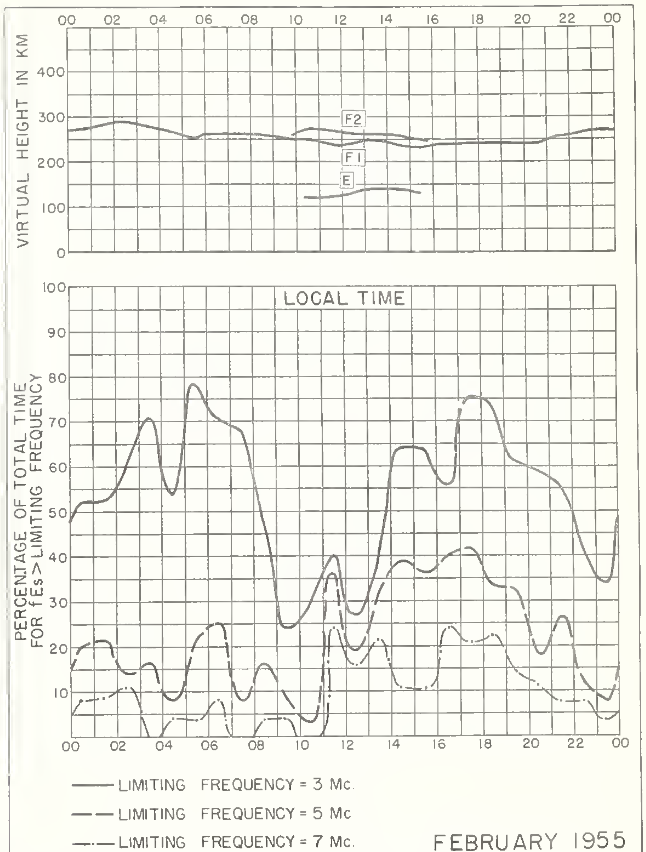


Fig. 73. GODHAVN, GREENLAND
69.2°N, 53.5° W FEBRUARY 1955



FEBRUARY 1955
Fig. 74. GODHAVN, GREENLAND

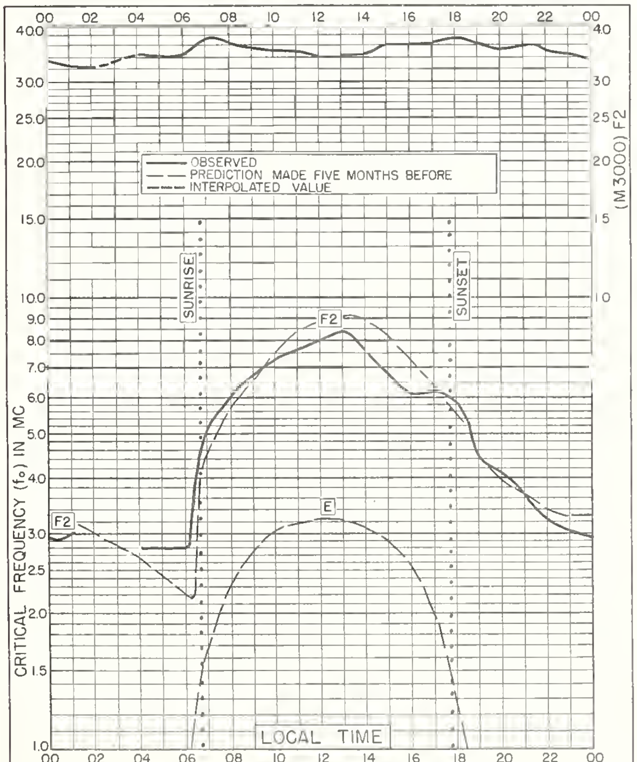


Fig. 75. DELHI, INDIA
28.6°N, 77.1°E FEBRUARY 1955

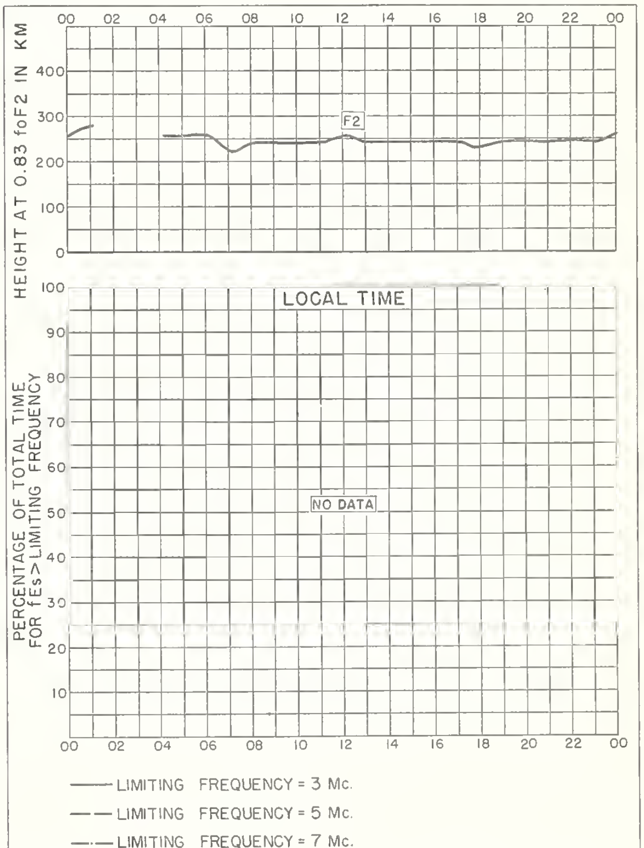


Fig. 76. DELHI, INDIA FEBRUARY 1955

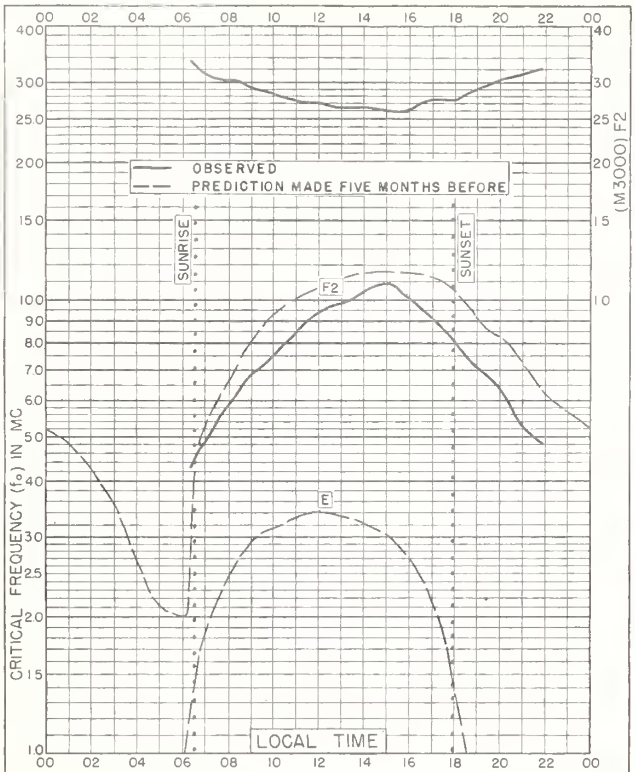


Fig. 77. BOMBAY, INDIA
19.0°N, 73.0°E FEBRUARY 1955

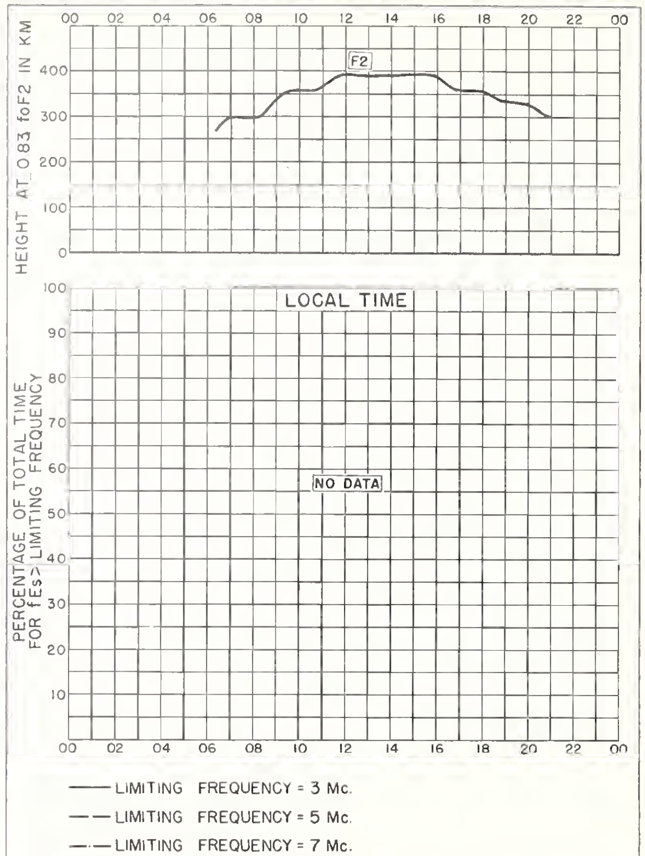


Fig. 78. BOMBAY, INDIA FEBRUARY 1955

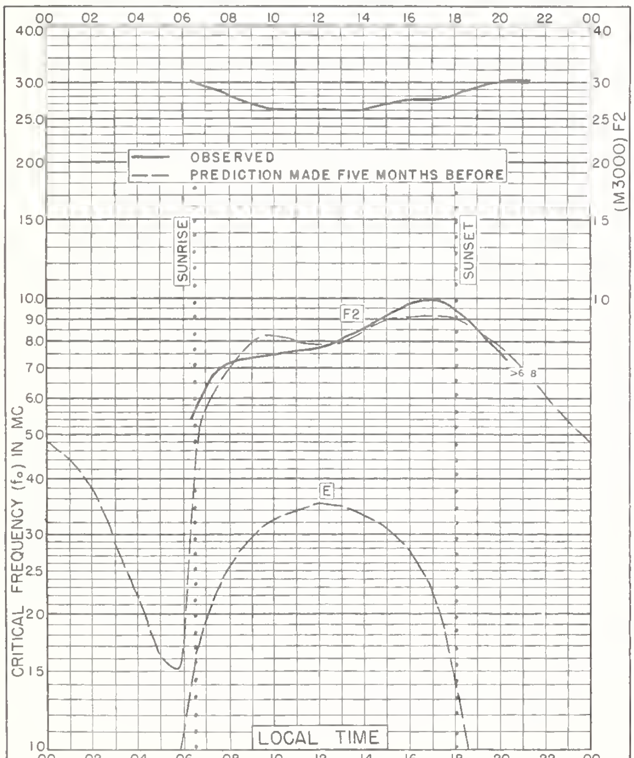


Fig. 79. MADRAS, INDIA
13.0°N, 80.2°E FEBRUARY 1955

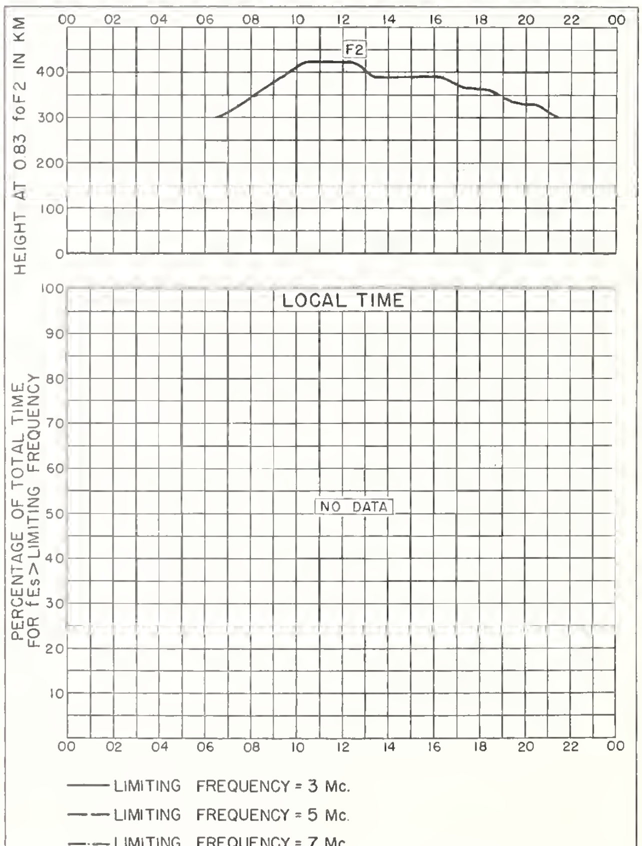


Fig. 80. MADRAS, INDIA FEBRUARY 1955

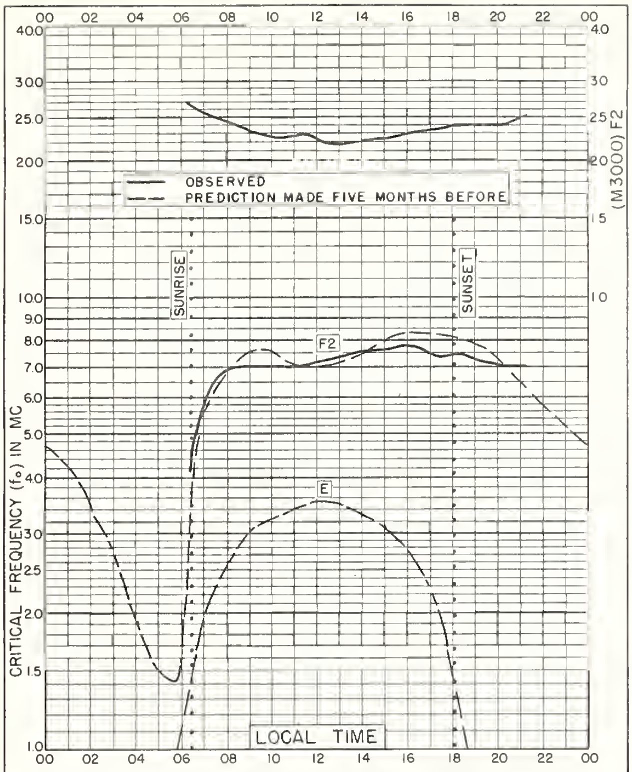


Fig. 81. TIRUCHY, INDIA
10.8°N, 78.8°E FEBRUARY 1955

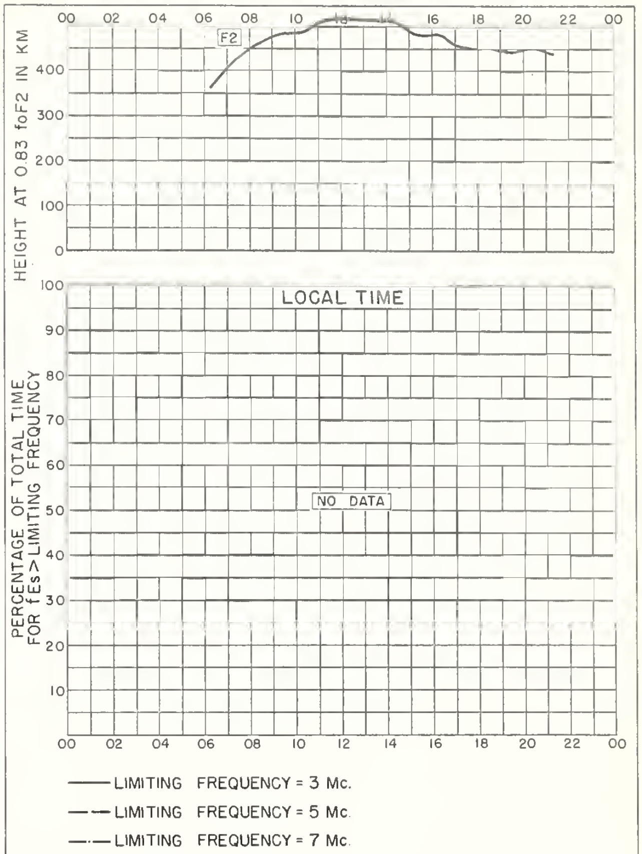


Fig. 82. TIRUCHY, INDIA FEBRUARY 1955

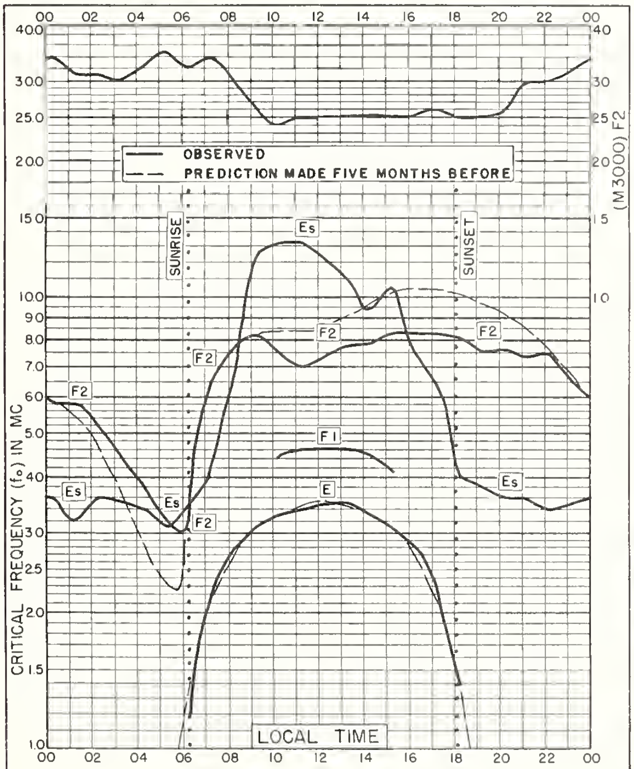


Fig. 83. IBADAN, NIGERIA
7.4°N, 4.0°E FEBRUARY 1955

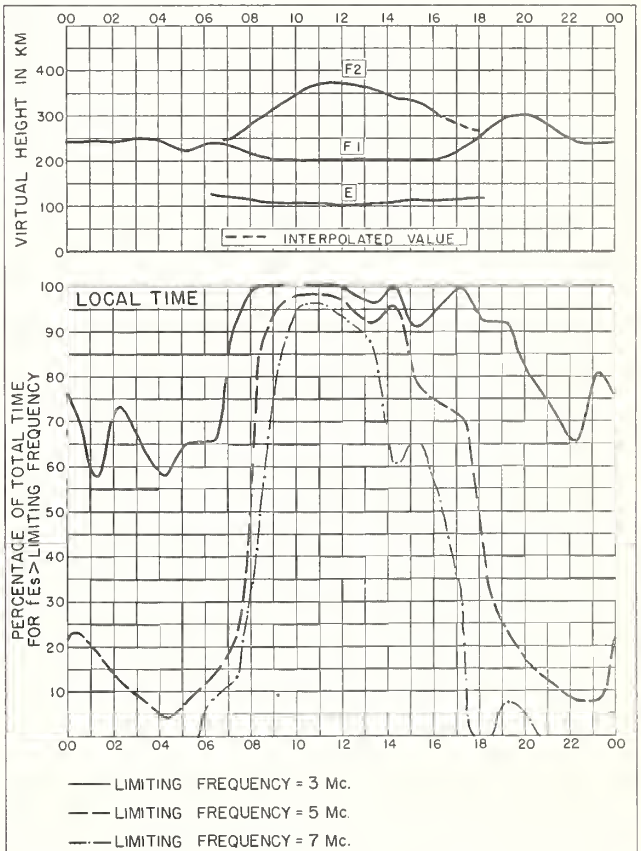


Fig. 84. IBADAN, NIGERIA FEBRUARY 1955

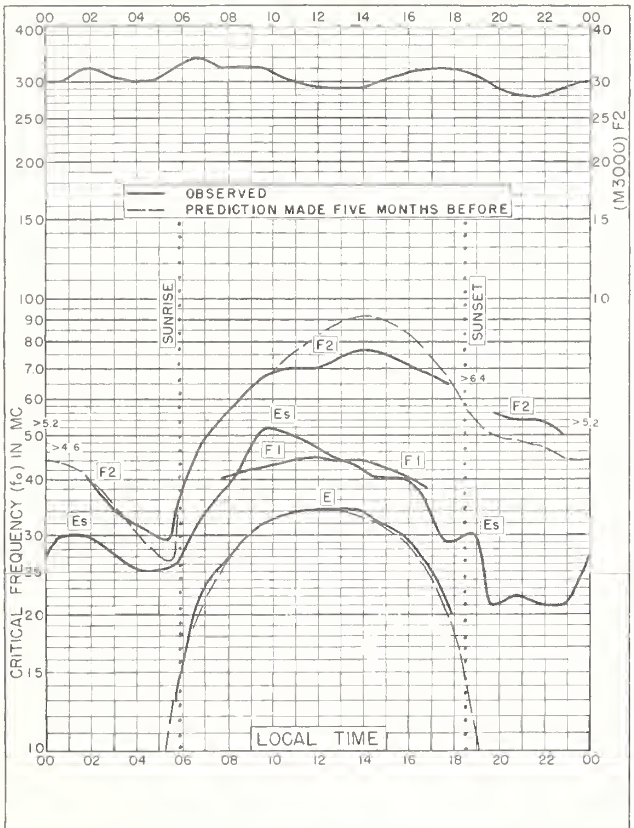
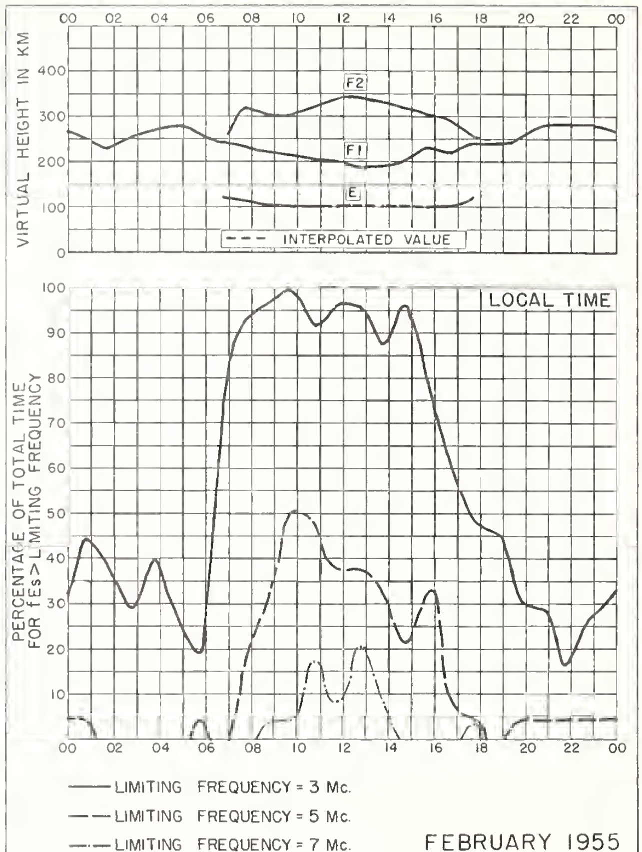


Fig. 85. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E FEBRUARY 1955



FEBRUARY 1955
Fig. 86. TOWNSVILLE, AUSTRALIA

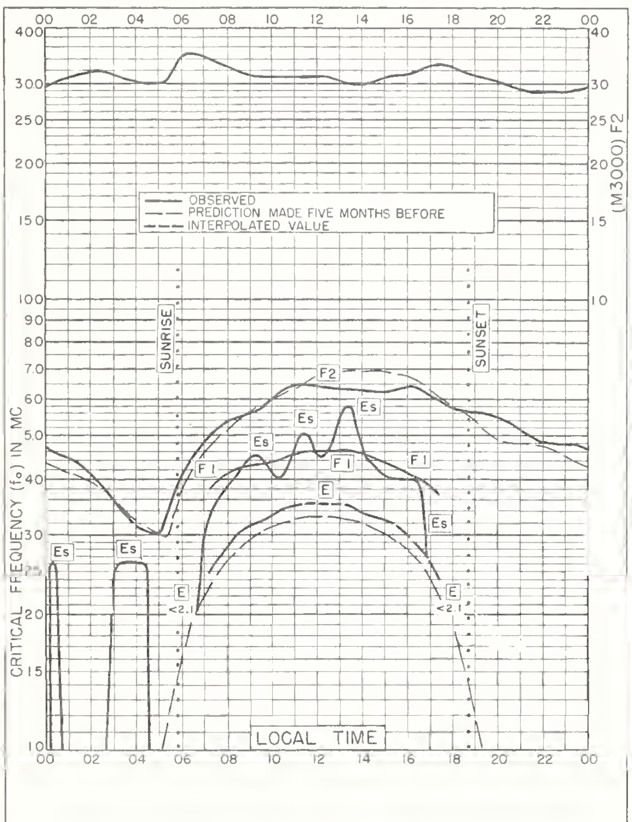


Fig. 87. BRISBANE, AUSTRALIA
27.5°S, 153.0°E FEBRUARY 1955

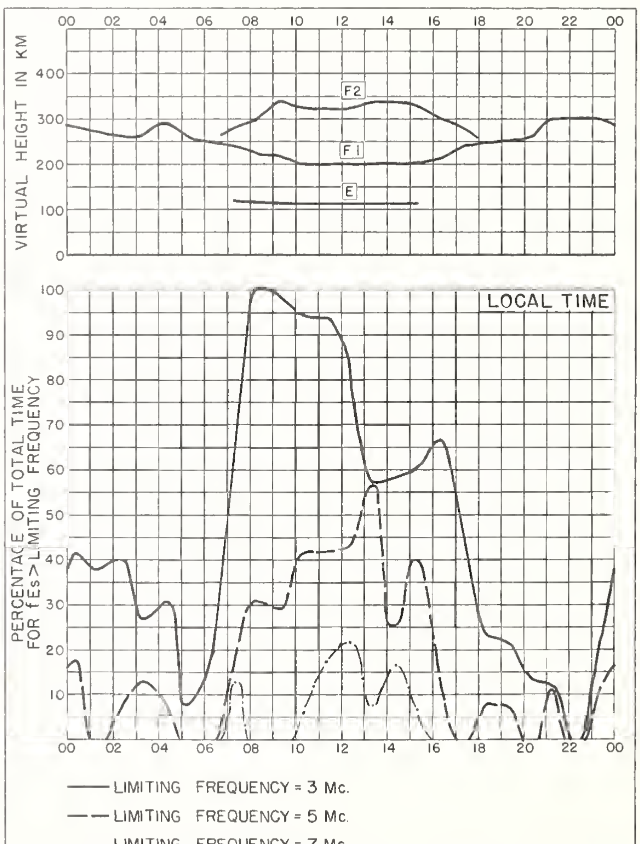


Fig. 88. BRISBANE, AUSTRALIA FEBRUARY 1955

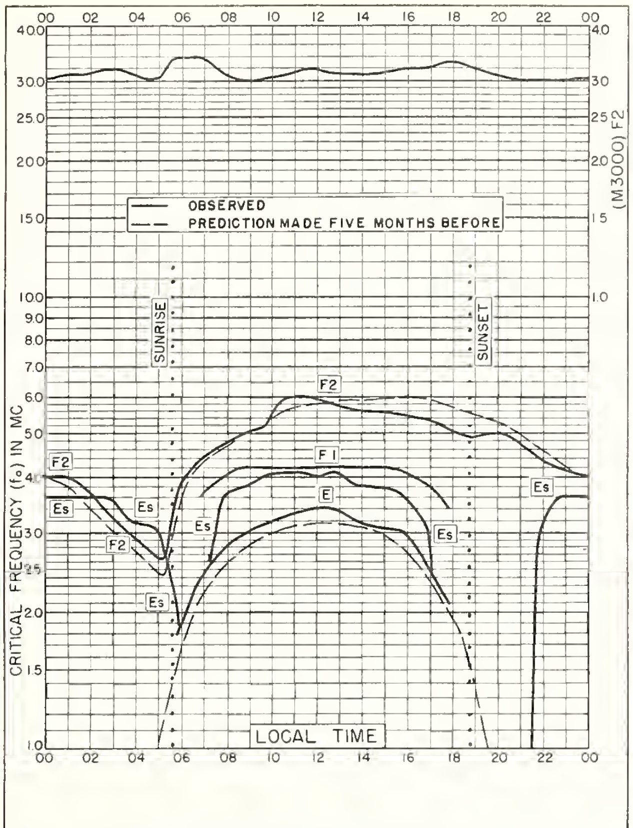
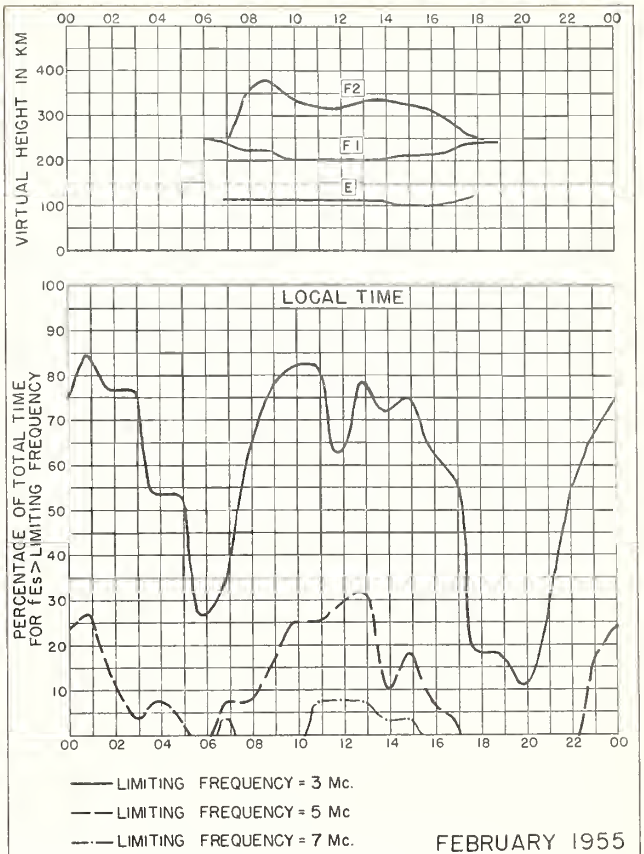


Fig. 89. CANBERRA, AUSTRALIA
35.3°S, 149.0°E FEBRUARY 1955



FEBRUARY 1955
Fig. 90. CANBERRA, AUSTRALIA

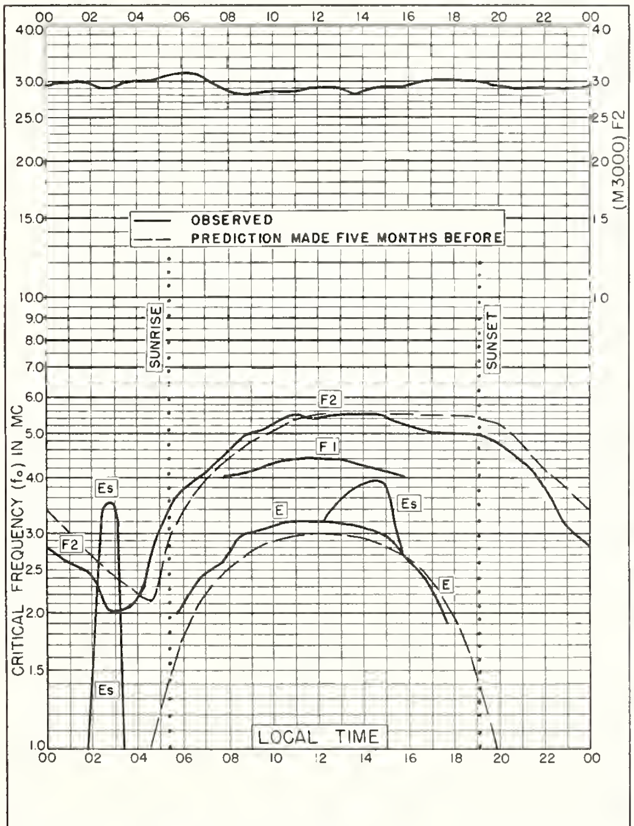


Fig. 91. HOBART, TASMANIA
42.9°S, 147.3°E FEBRUARY 1955

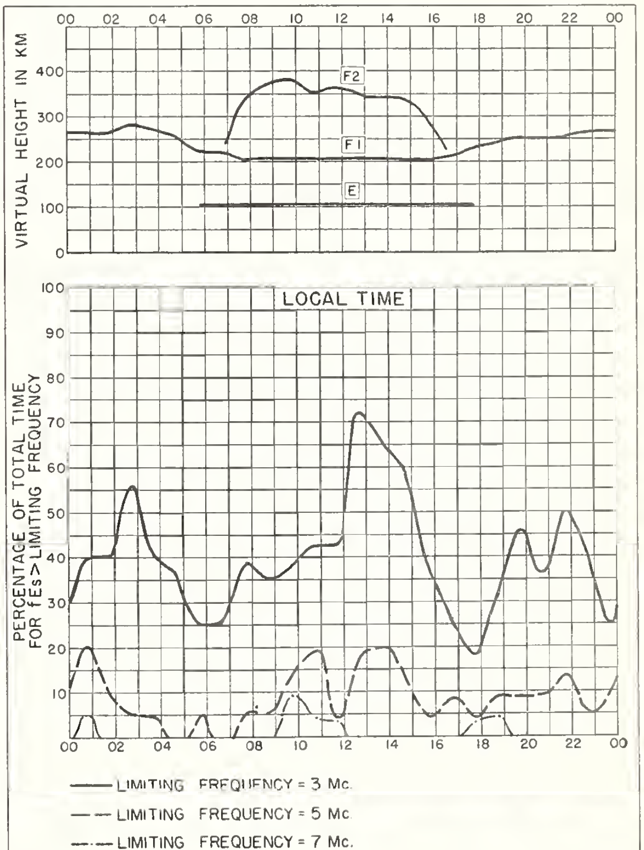


Fig. 92. HOBART, TASMANIA FEBRUARY 1955

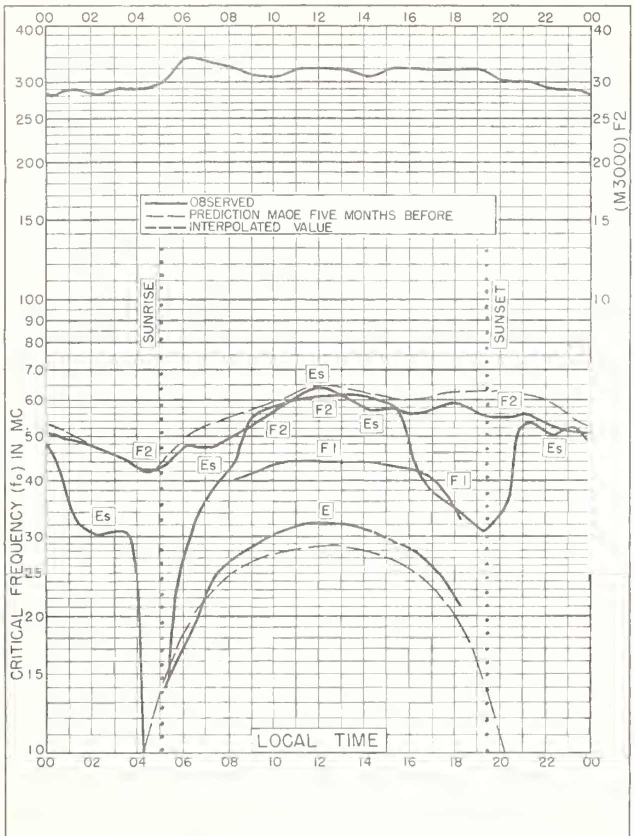


Fig. 93. FALKLAND IS.
51.7°S, 57.8°W FEBRUARY 1955

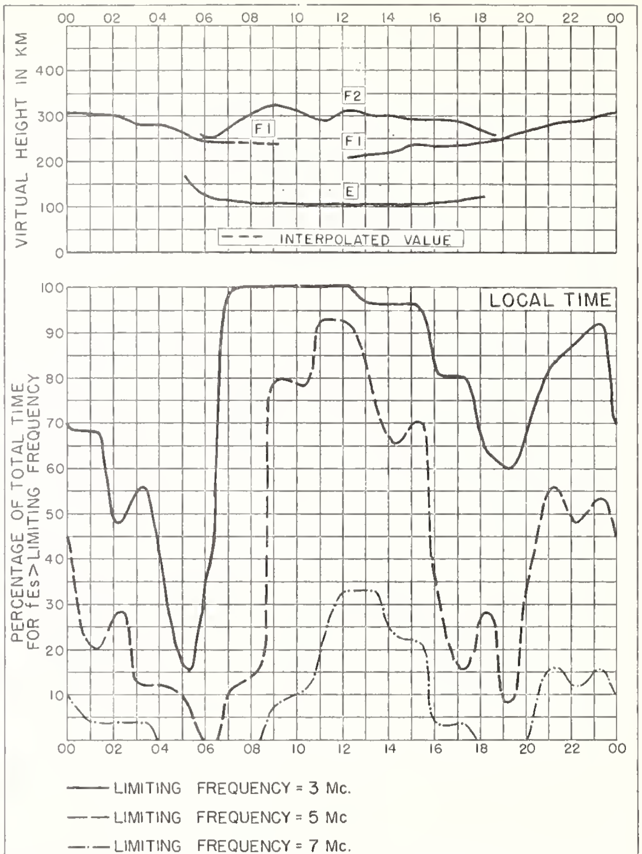


Fig. 94. FALKLAND IS. FEBRUARY 1955

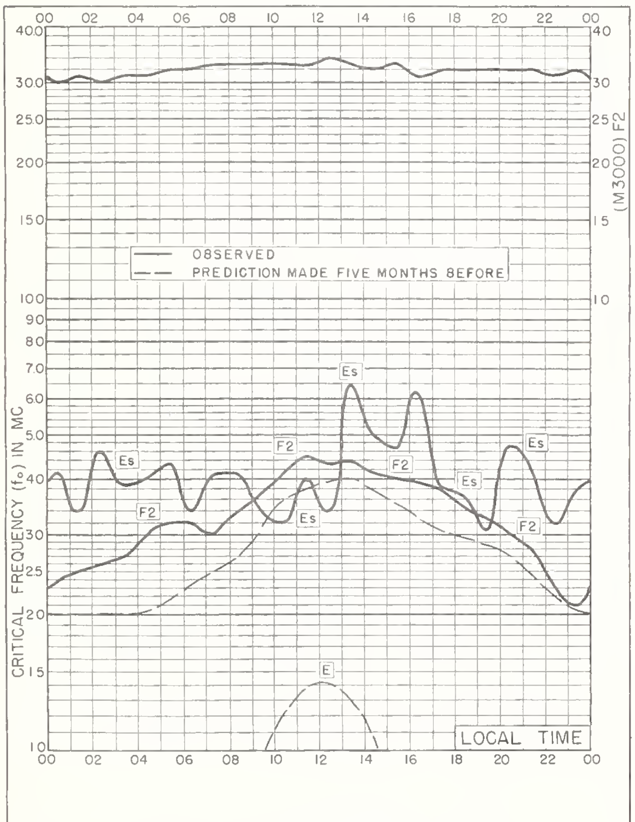


Fig. 95. GODHAVN, GREENLAND
69.2°N, 53.5°W JANUARY 1955

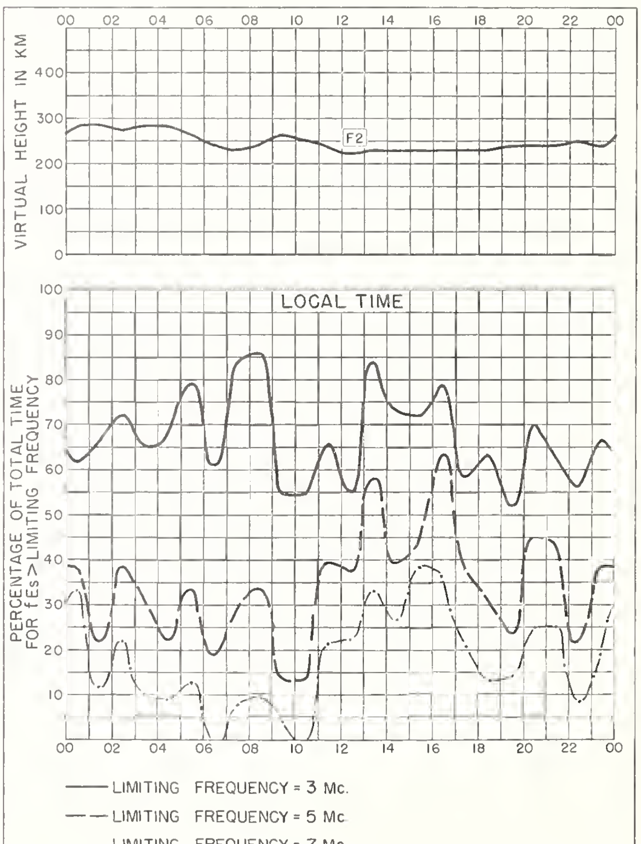


Fig. 96. GODHAVN, GREENLAND JANUARY 1955

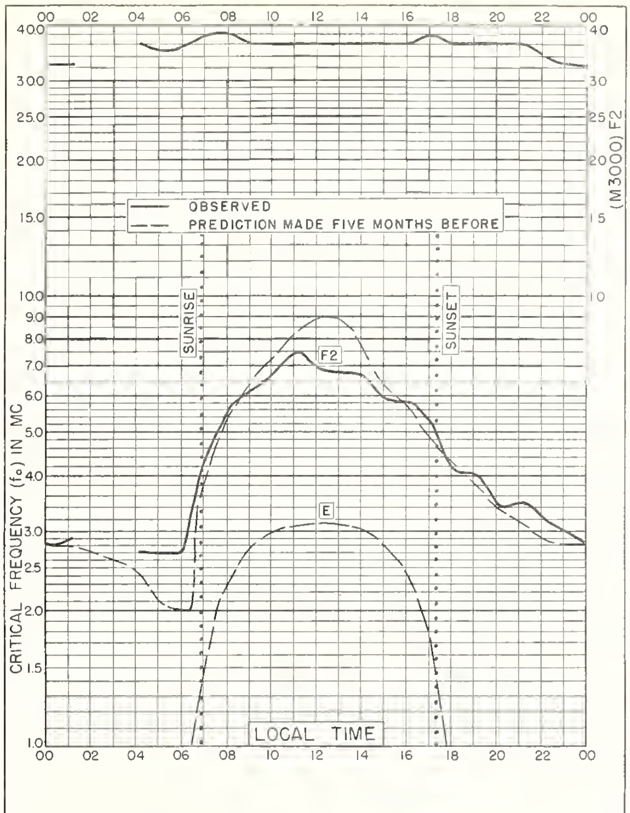


Fig. 97. DELHI, INDIA
28.6°N, 77.1°E JANUARY 1955

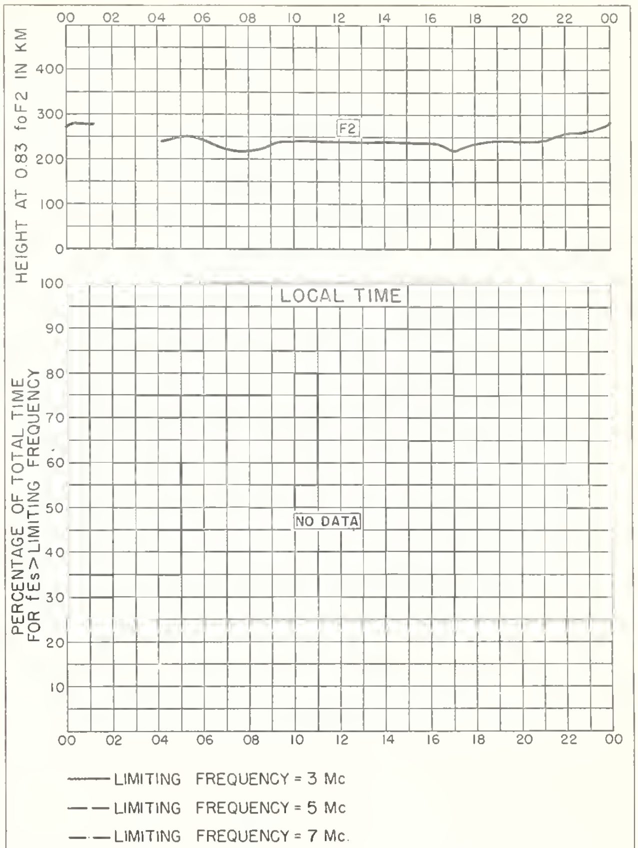


Fig. 98. DELHI, INDIA JANUARY 1955

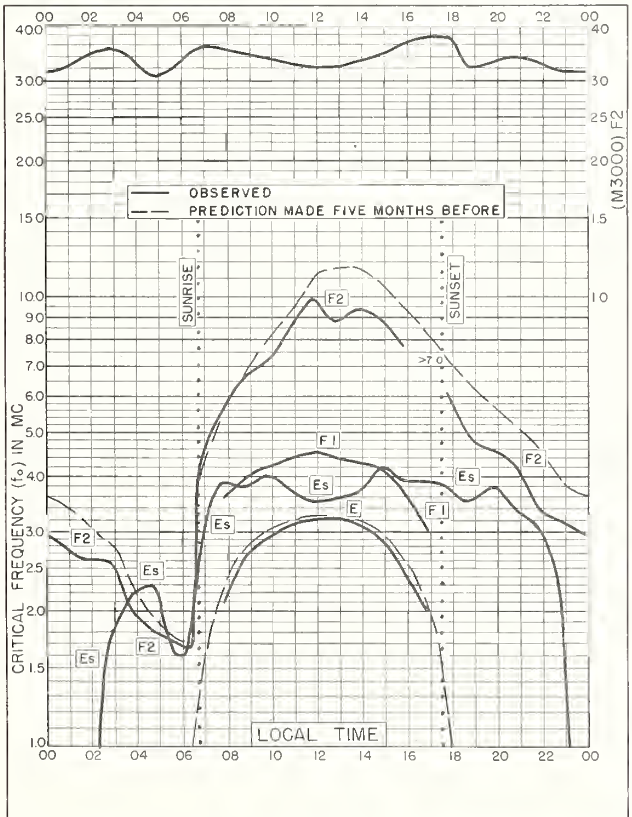


Fig. 99. AHMEDABAD, INDIA
23.0°N, 72.6°E JANUARY 1955

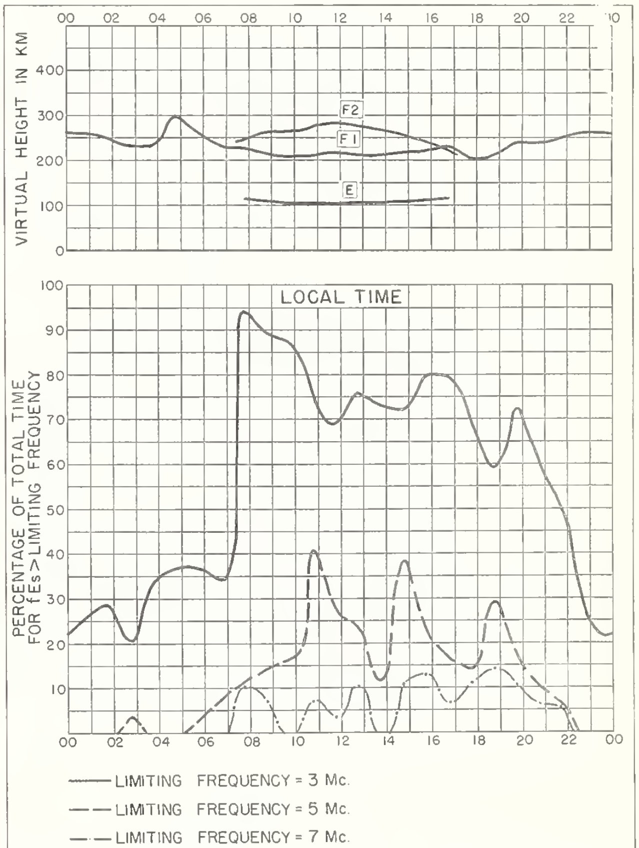


Fig. 100. AHMEDABAD, INDIA JANUARY 1955

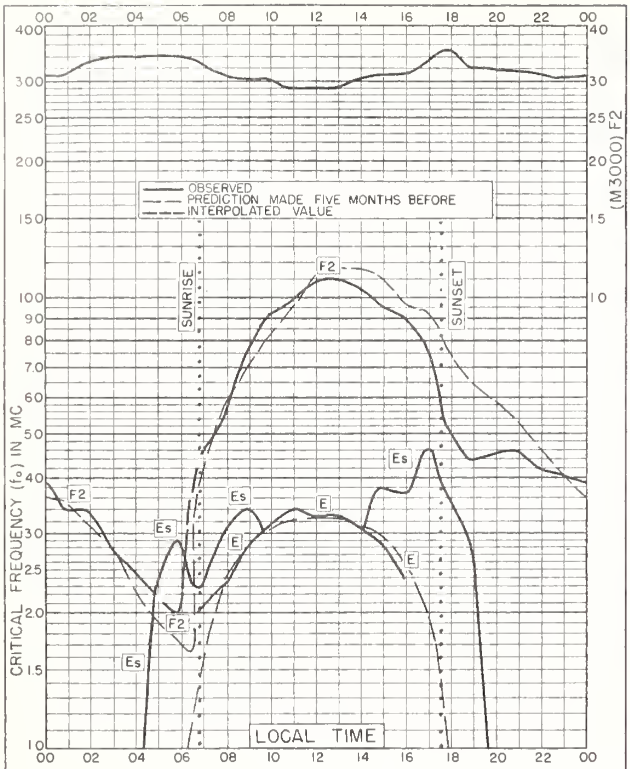


Fig. 101. CALCUTTA, INDIA
22.6°N, 88.4°E JANUARY 1955

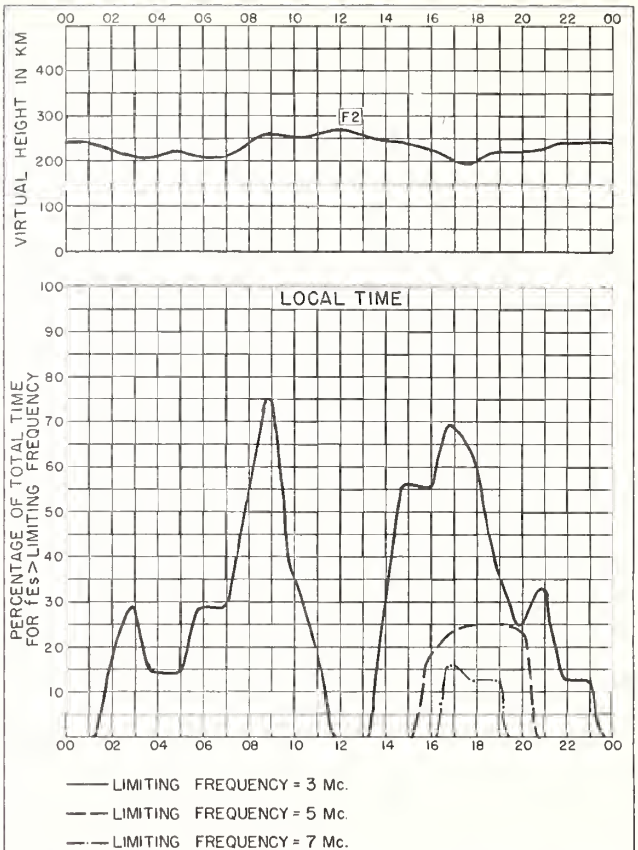


Fig. 102. CALCUTTA, INDIA JANUARY 1955

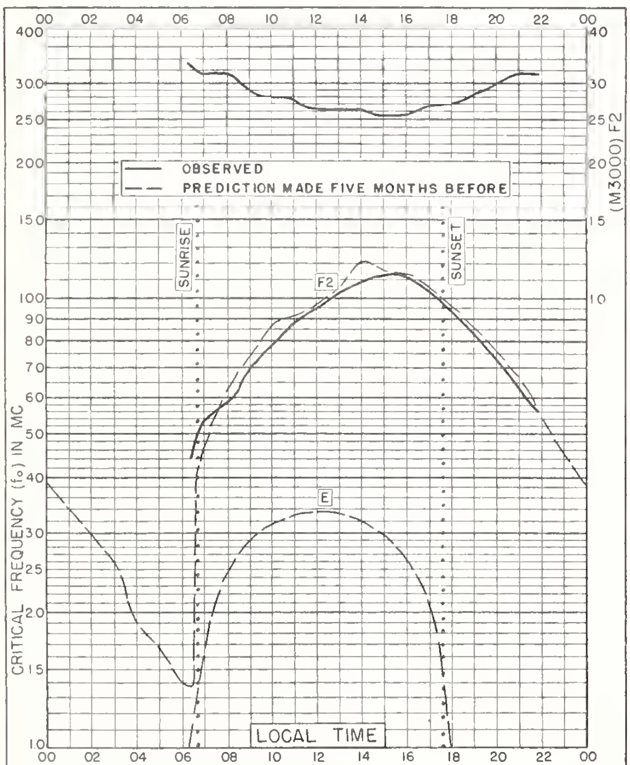


Fig. 103. BOMBAY, INDIA
19.0°N, 73.0°E JANUARY 1955

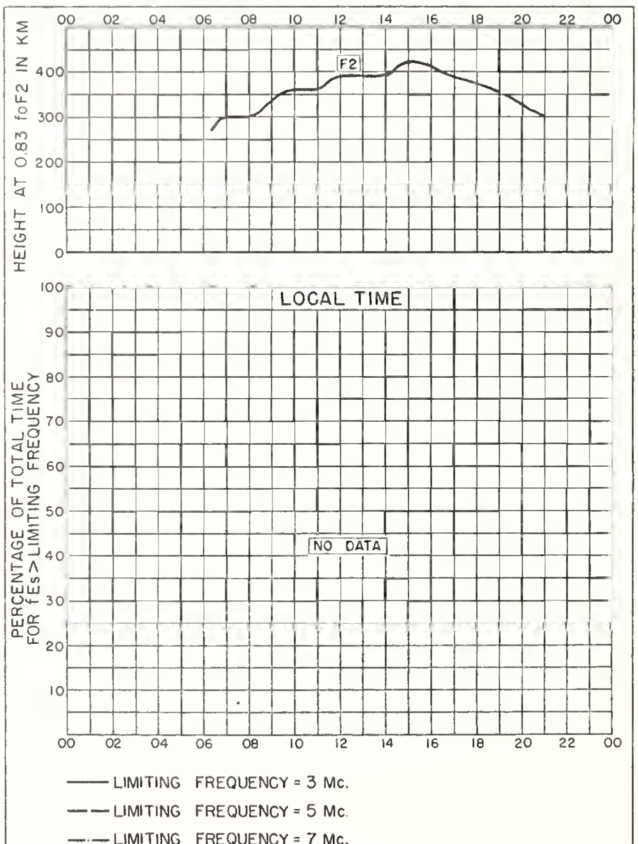


Fig. 104. BOMBAY, INDIA JANUARY 1955

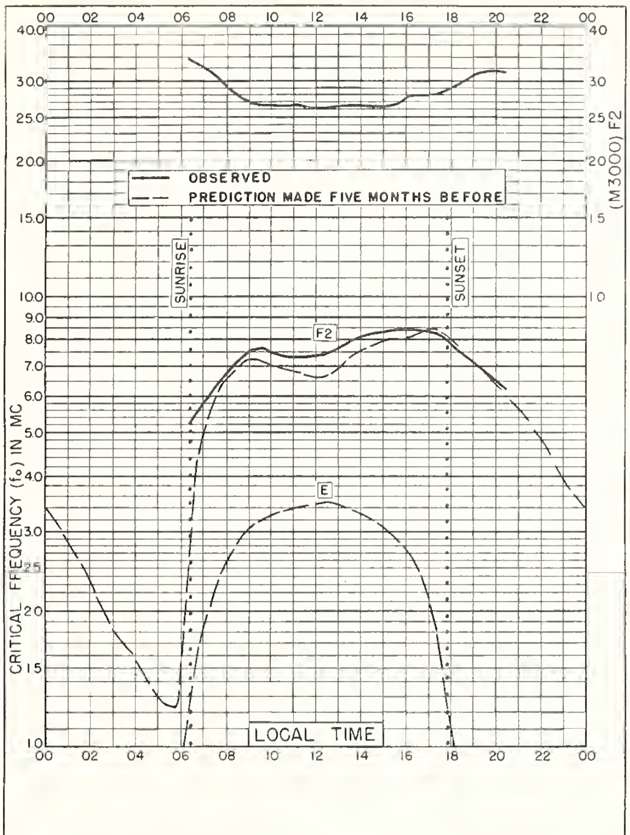


Fig. 105. MADRAS, INDIA
13.0°N, 80.2°E JANUARY 1955

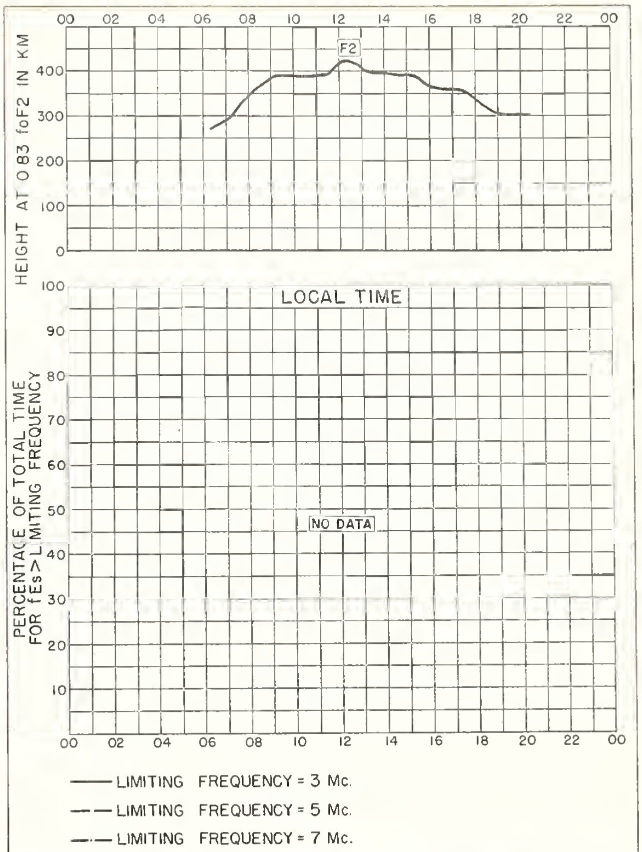


Fig. 106. MADRAS, INDIA JANUARY 1955

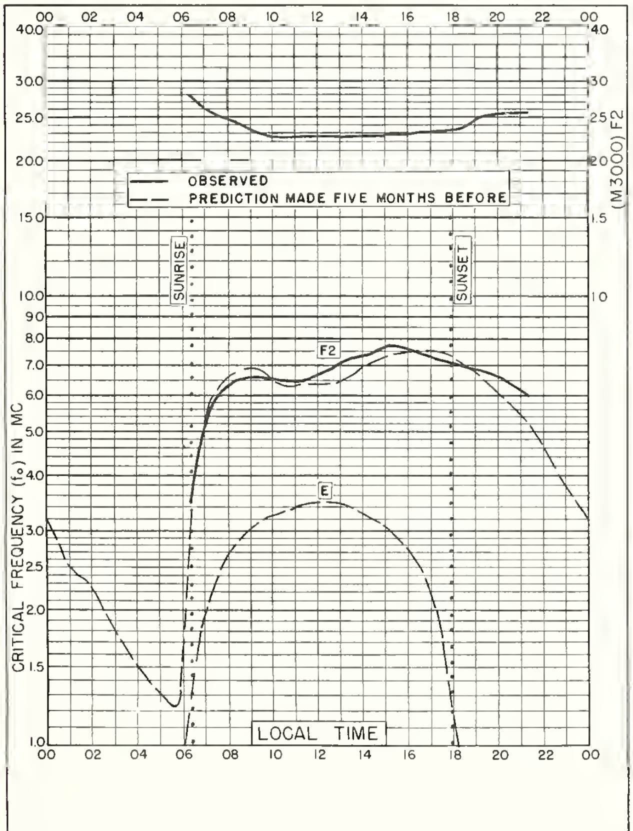


Fig. 107. TIRUCHY, INDIA
10.8°N, 78.8°E JANUARY 1955

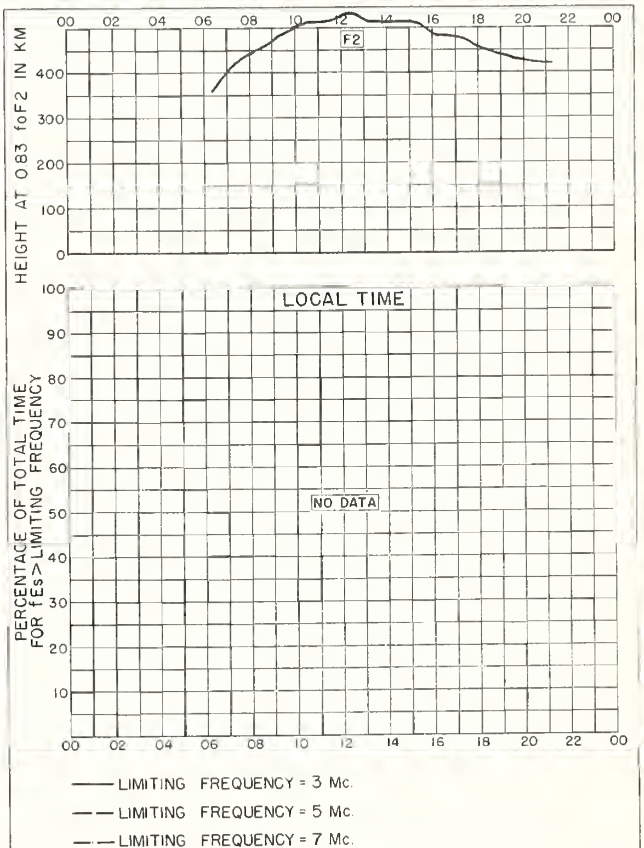


Fig. 108. TIRUCHY, INDIA JANUARY 1955

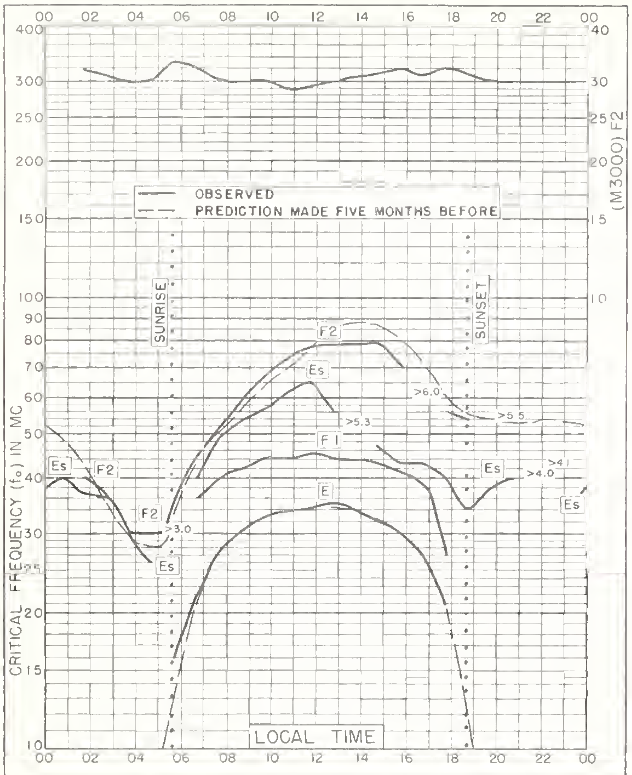
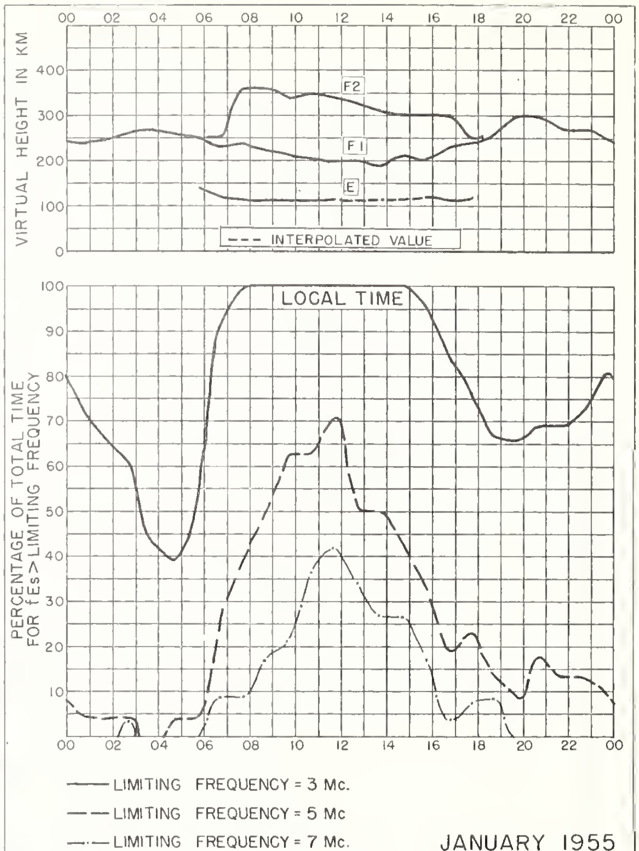


Fig. 109. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E JANUARY 1955



JANUARY 1955

Fig. 110. TOWNSVILLE, AUSTRALIA

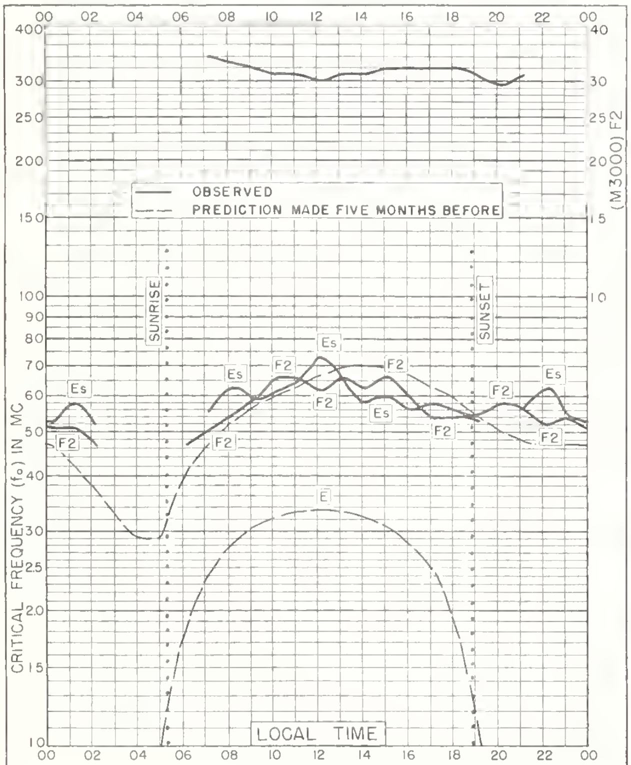


Fig. 111. BRISBANE, AUSTRALIA
27.5°S, 153.0°E JANUARY 1955

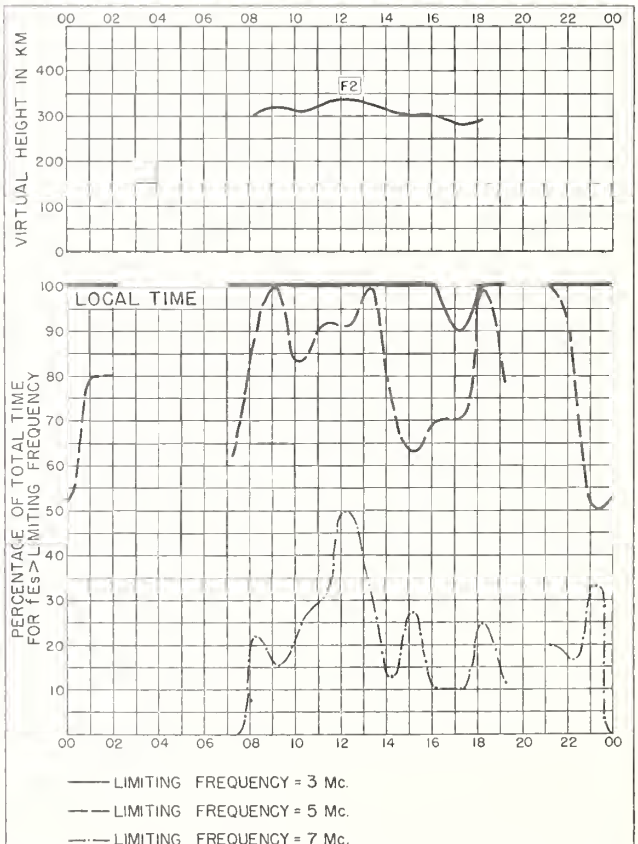


Fig. 112. BRISBANE, AUSTRALIA JANUARY 1955

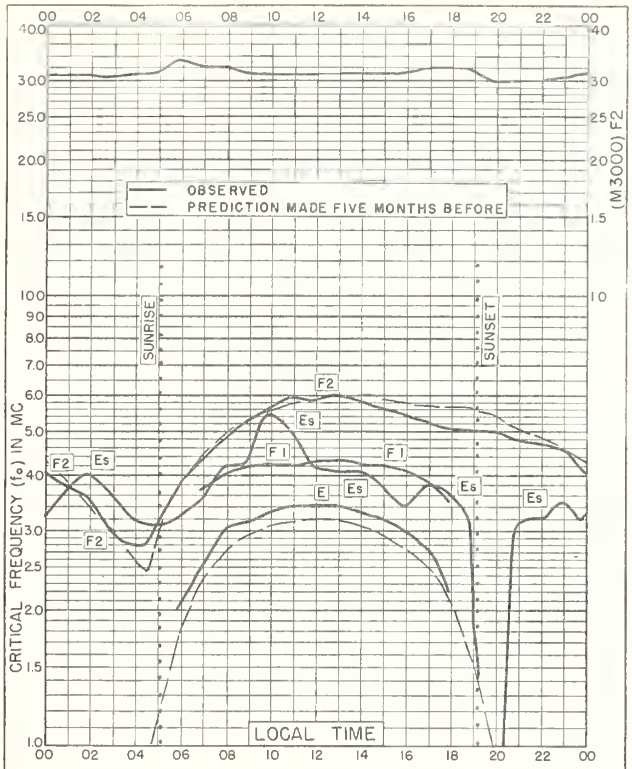


Fig. 113. CANBERRA, AUSTRALIA
35.3°S, 149.0°E JANUARY 1955

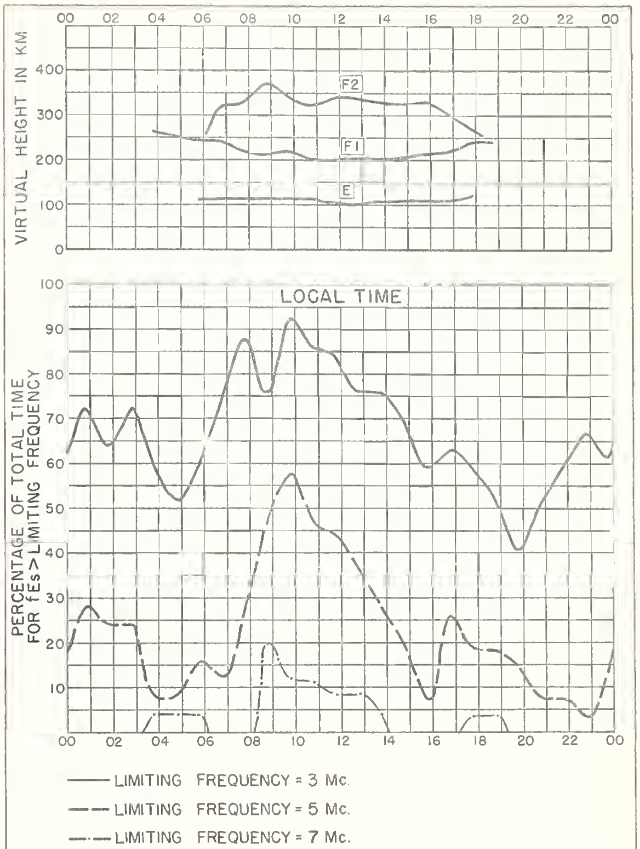


Fig. 114. CANBERRA, AUSTRALIA JANUARY 1955

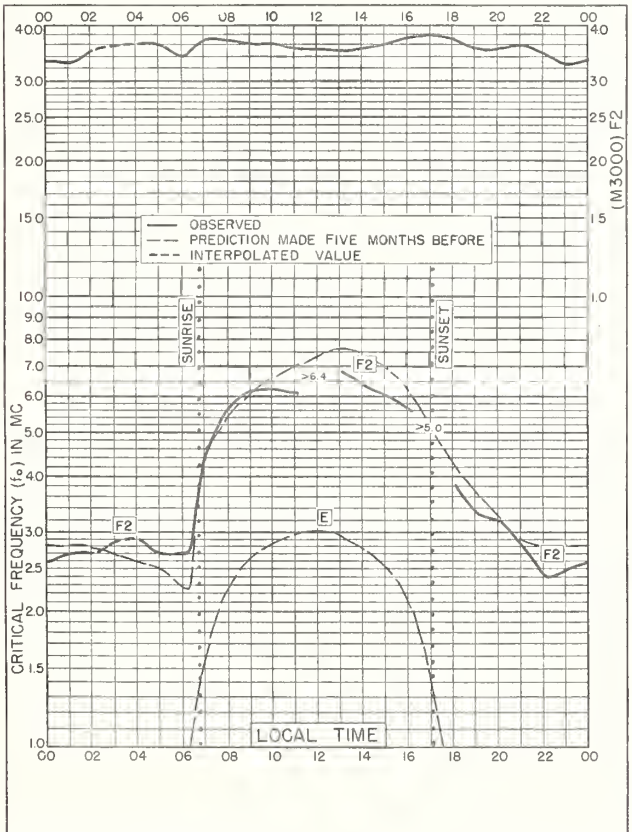


Fig. 115. DELHI, INDIA
28.6°N, 77.1°E DECEMBER 1954

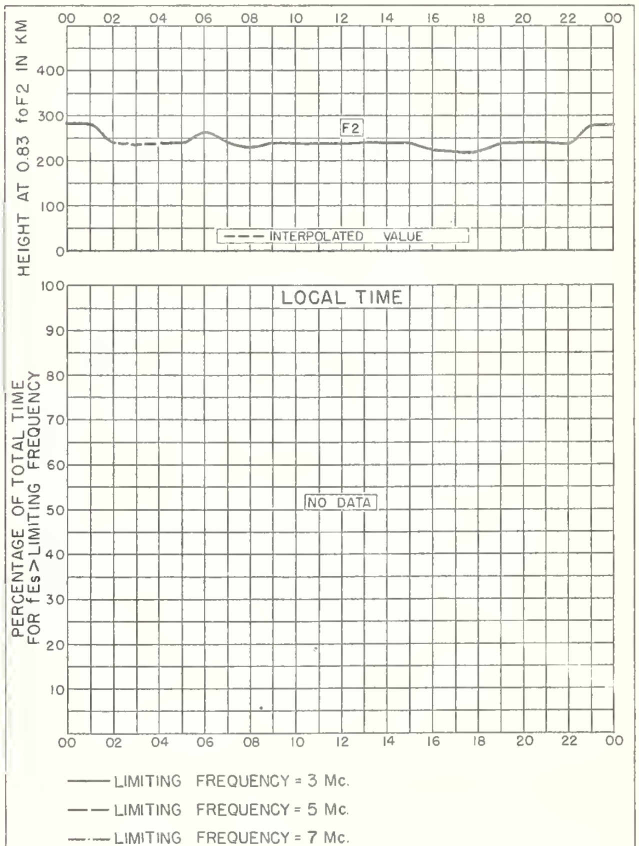


Fig. 116. DELHI, INDIA DECEMBER 1954

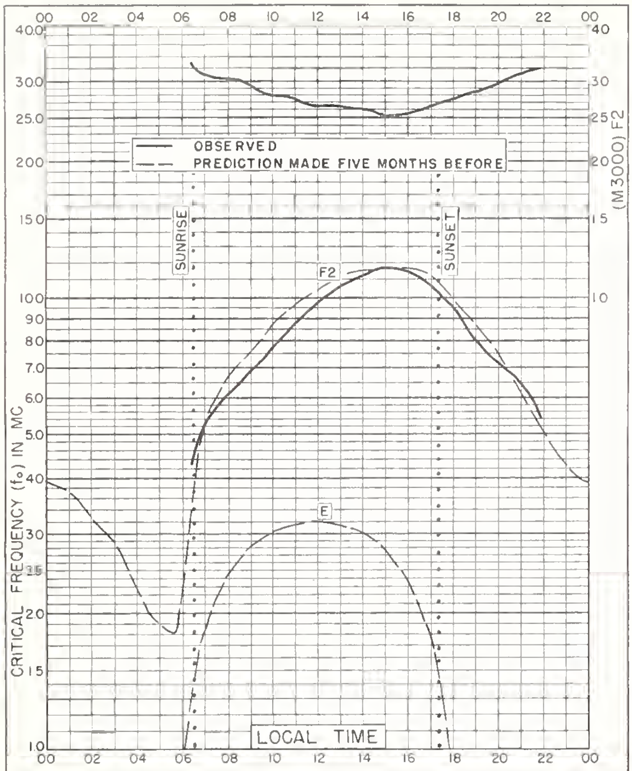


Fig. 117. BOMBAY, INDIA
19.0°N, 73.0°E DECEMBER 1954

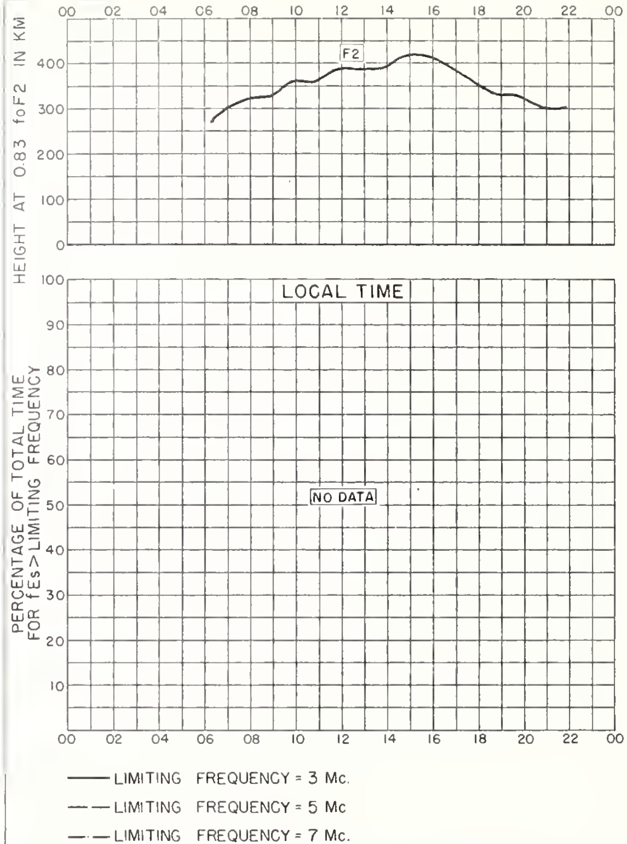


Fig. 118. BOMBAY, INDIA DECEMBER 1954

NBS 490

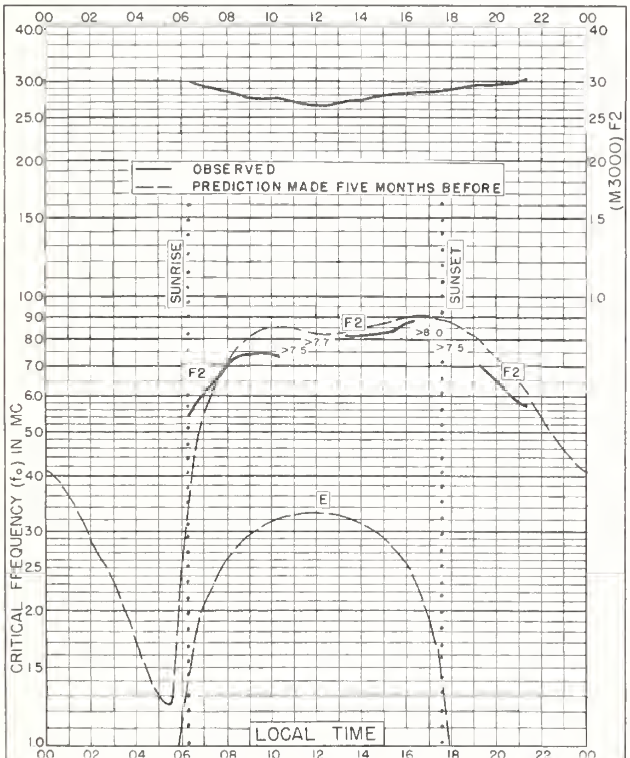


Fig. 119. MADRAS, INDIA
13.0°N, 80.2°E DECEMBER 1954

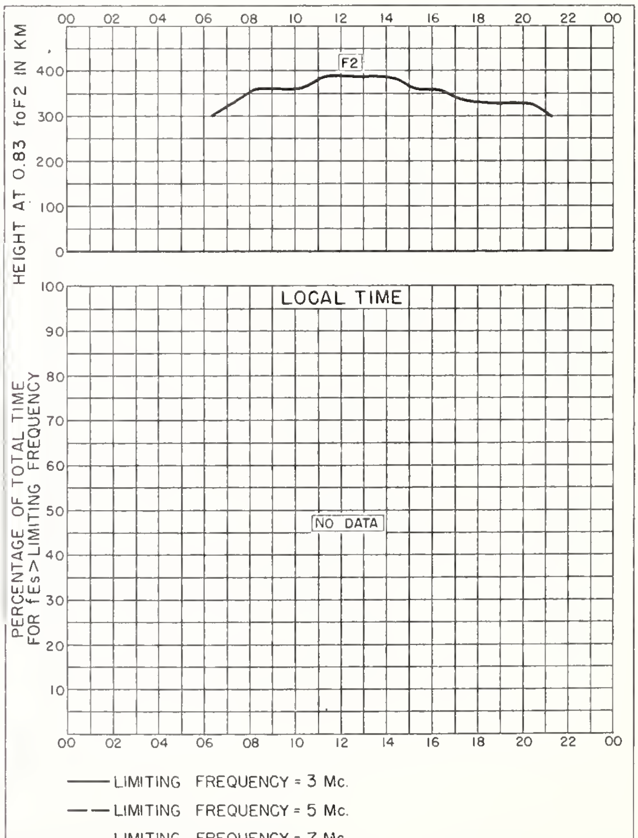


Fig. 120. MADRAS, INDIA DECEMBER 1954

NBS 490

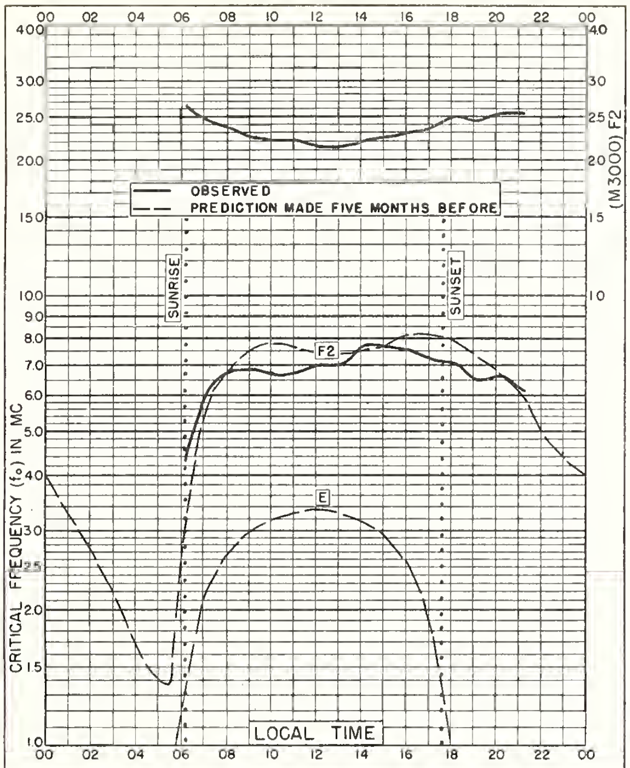


Fig. 121. TIRUCHY, INDIA
10.8°N, 78.8°E DECEMBER 1954

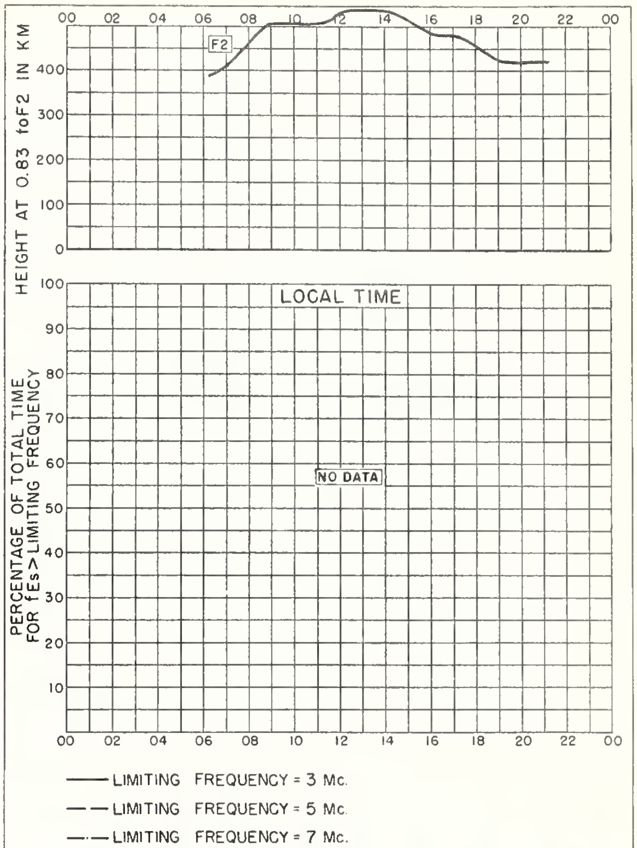


Fig. 122. TIRUCHY, INDIA DECEMBER 1954

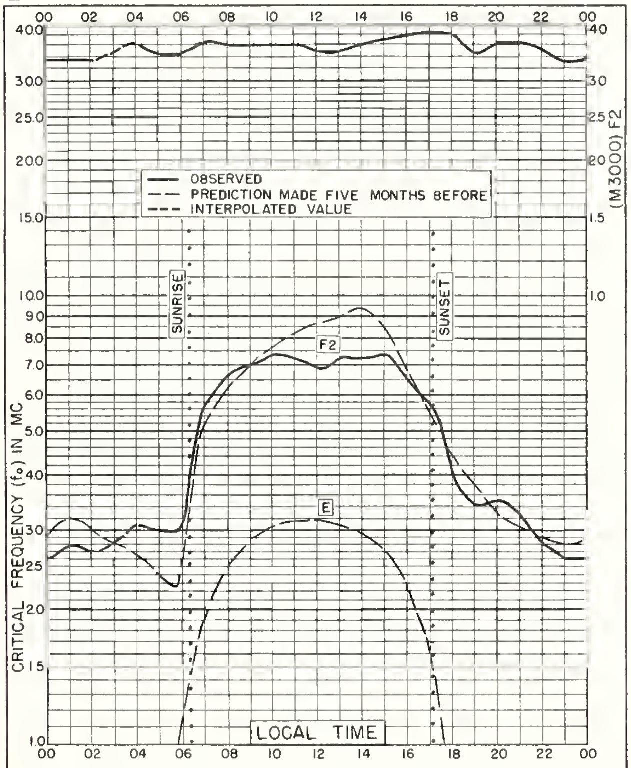


Fig. 123. DELHI, INDIA
28.6°N, 77.1°E NOVEMBER 1954

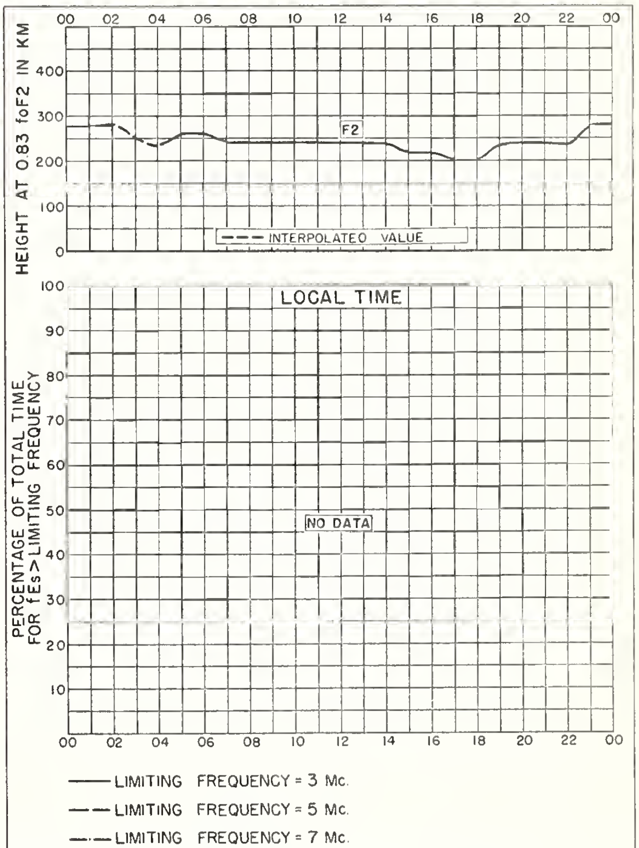


Fig. 124. DELHI, INDIA NOVEMBER 1954

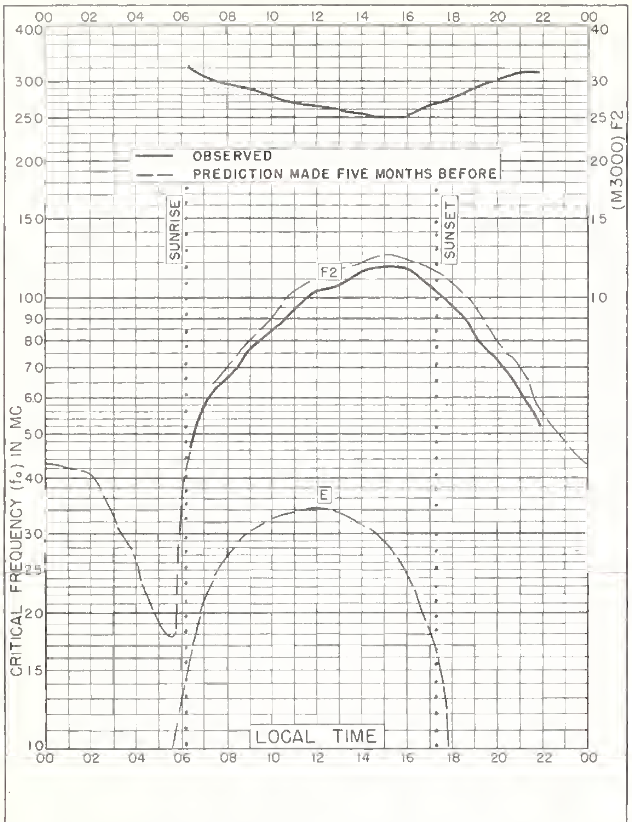


Fig. 125. BOMBAY, INDIA
19.0°N, 73.0°E NOVEMBER 1954

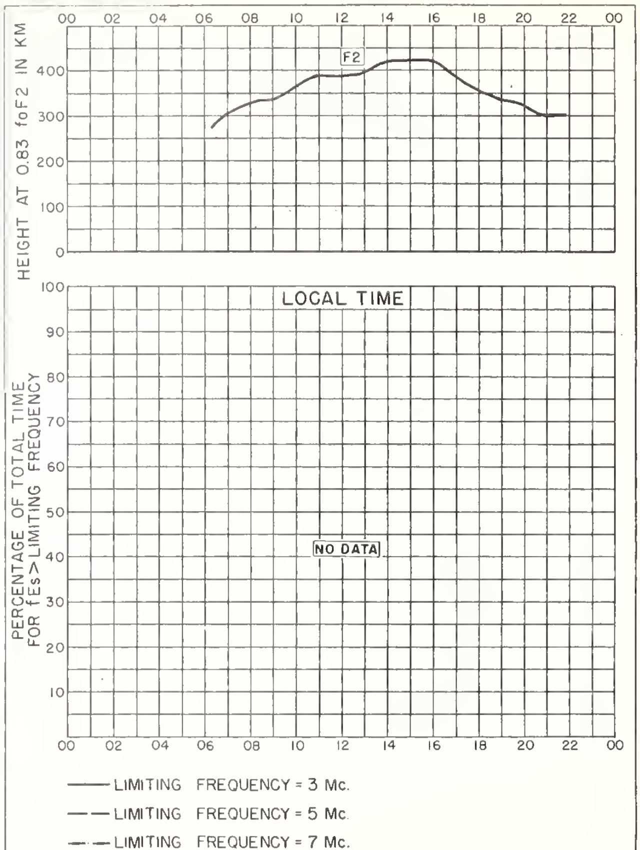


Fig. 126. BOMBAY, INDIA NOVEMBER 1954

NBS 490

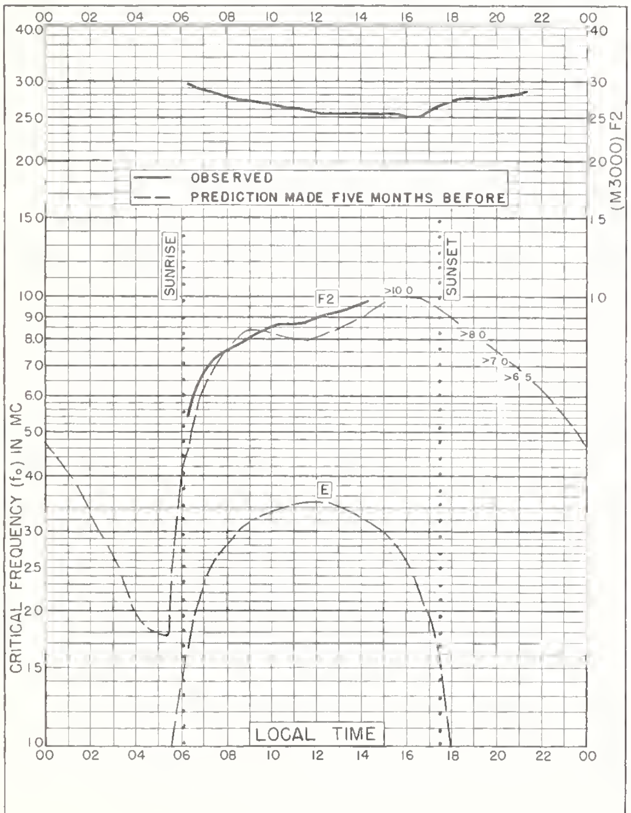


Fig. 127. MADRAS, INDIA
13.0°N, 80.2°E NOVEMBER 1954

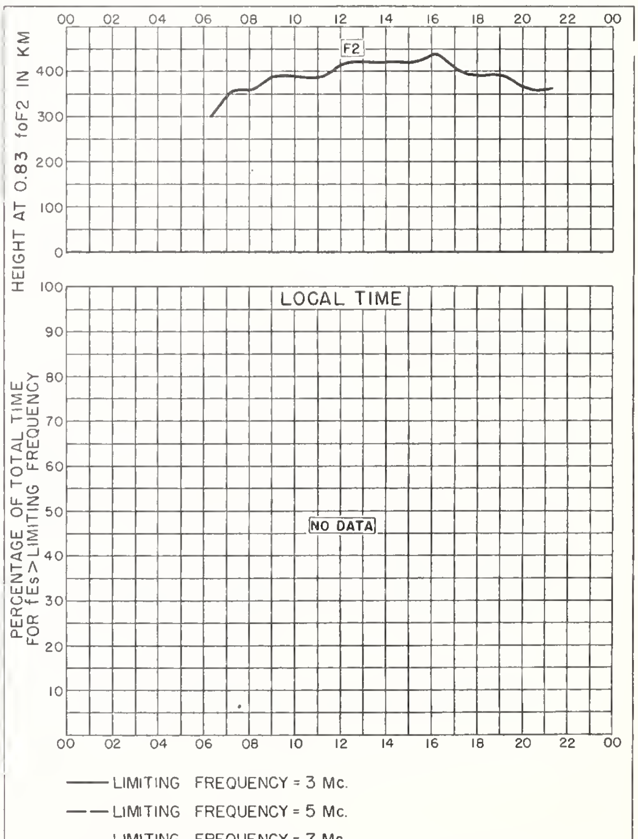


Fig. 128. MADRAS, INDIA NOVEMBER 1954

NBS 490

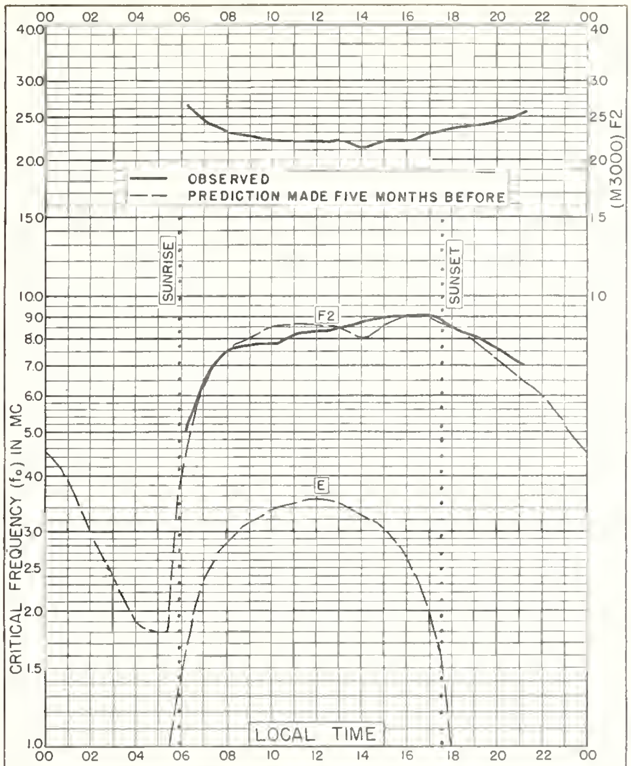


Fig. 129. TIRUCHY, INDIA
10. 8°N, 78. 8°E NOVEMBER 1954

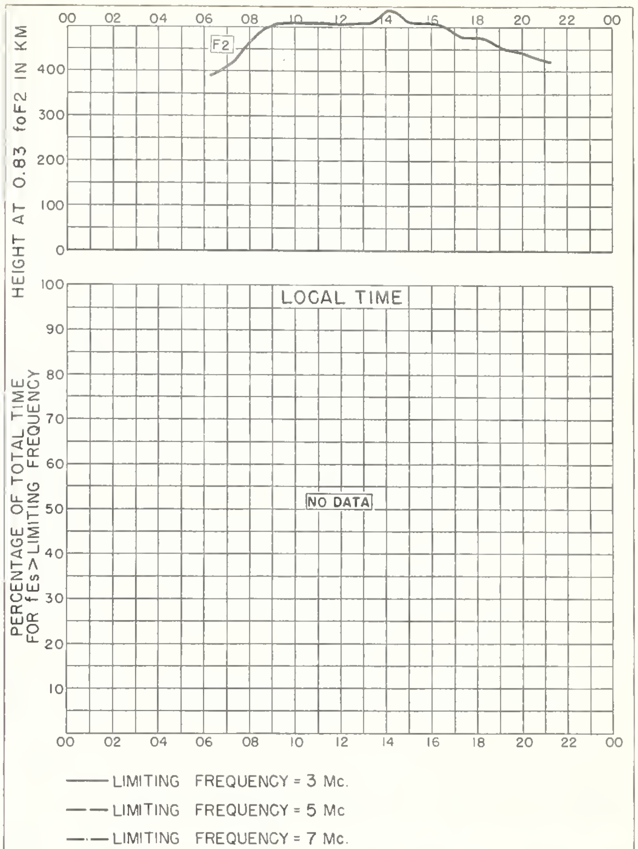


Fig. 130. TIRUCHY, INDIA NOVEMBER 1954

NBS 490

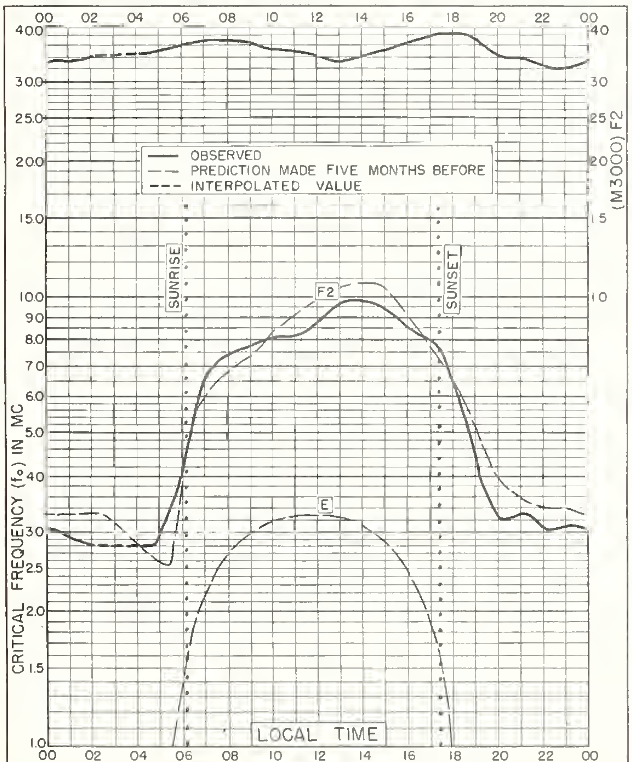


Fig. 131. DELHI, INDIA
28. 6°N, 77.1°E OCTOBER 1954

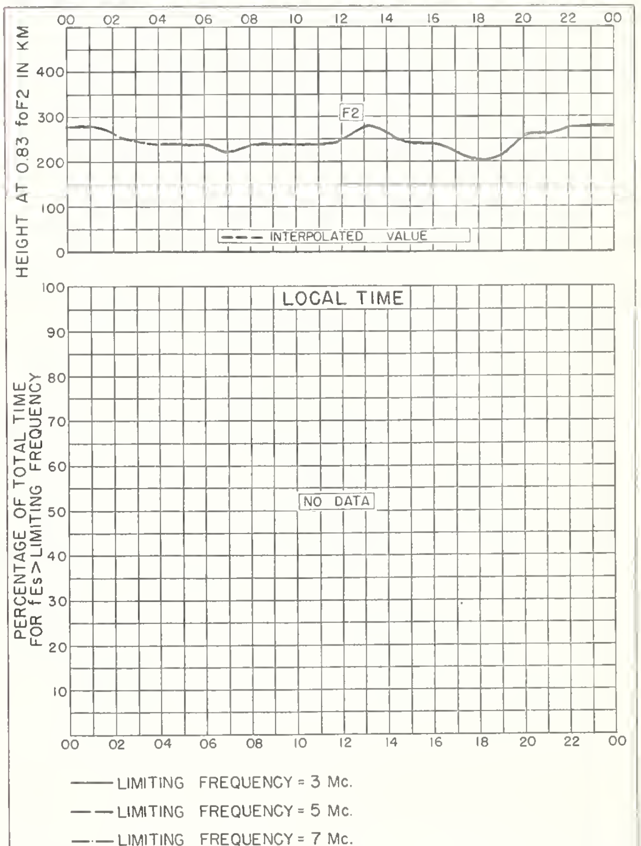


Fig. 132. DELHI, INDIA OCTOBER 1954

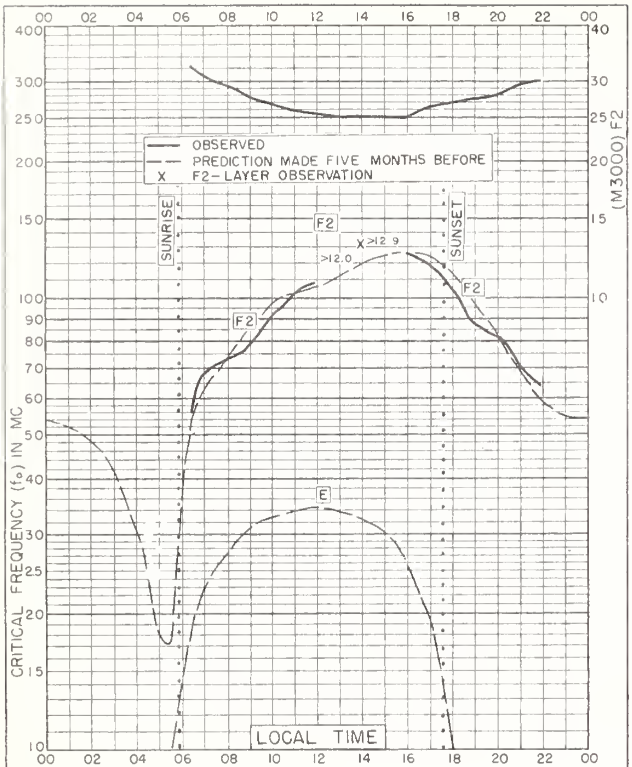


Fig. 133. BOMBAY, INDIA
19.0°N, 73.0°E OCTOBER 1954

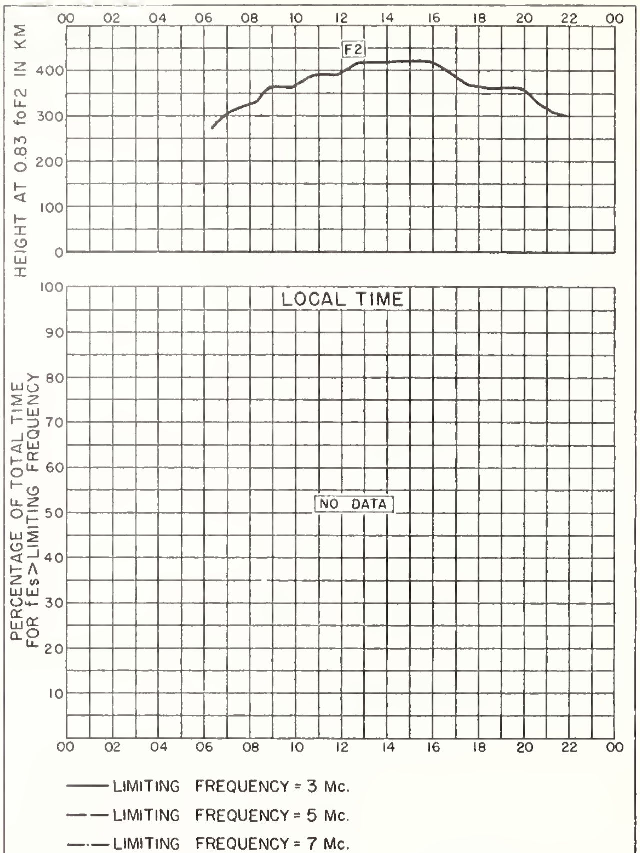


Fig. 134. BOMBAY, INDIA OCTOBER 1954

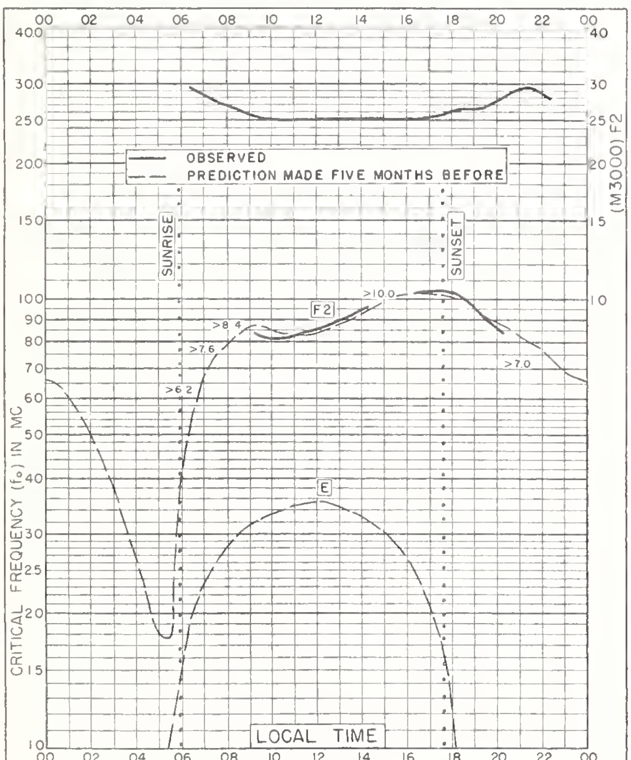


Fig. 135. MADRAS, INDIA
13.0°N, 80.2°E OCTOBER 1954

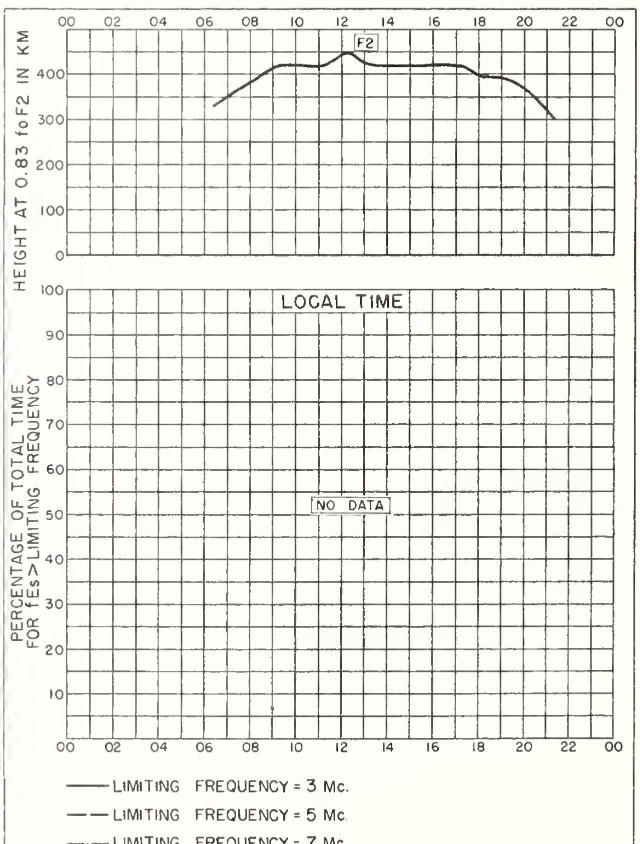


Fig. 136. MADRAS, INDIA OCTOBER 1954

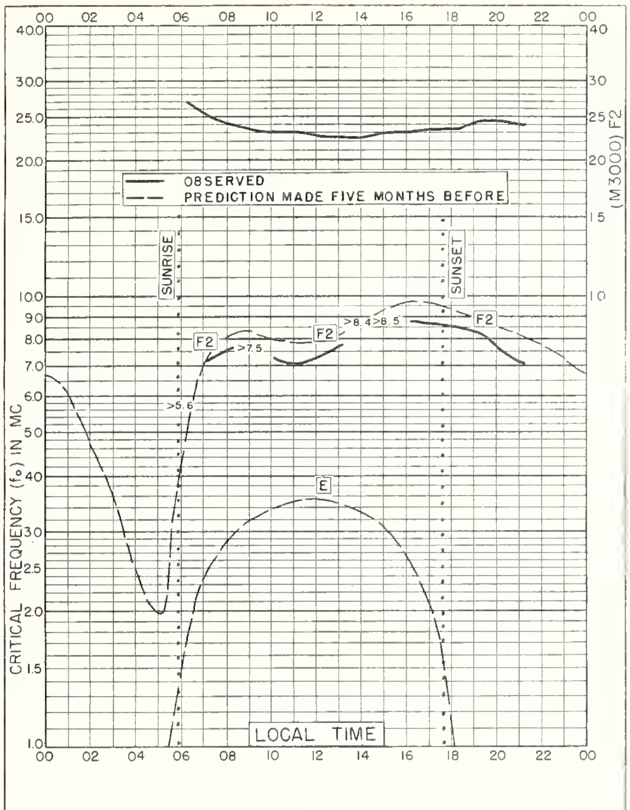


Fig. 137. TIRUCHY, INDIA
10.8°N, 78.8°E OCTOBER 1954

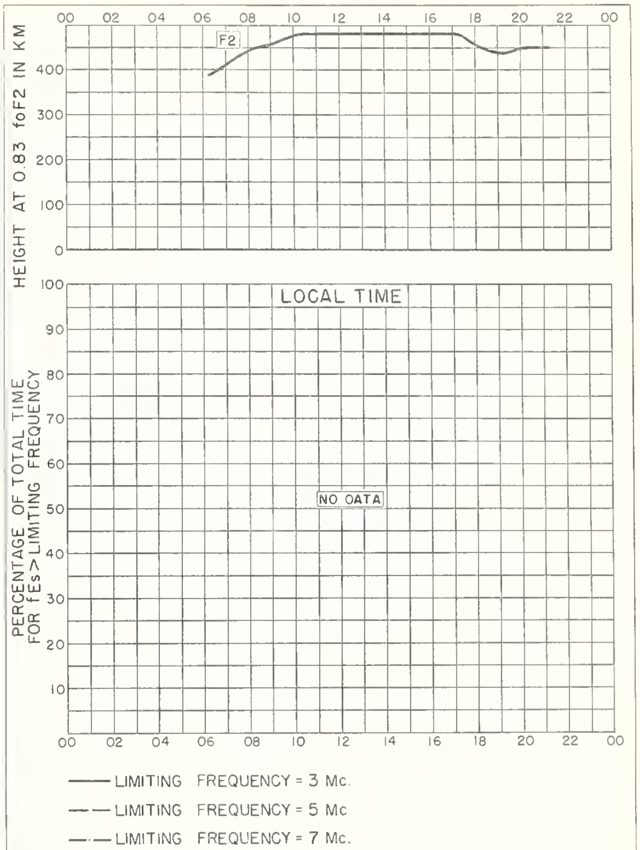


Fig. 138. TIRUCHY, INDIA OCTOBER 1954

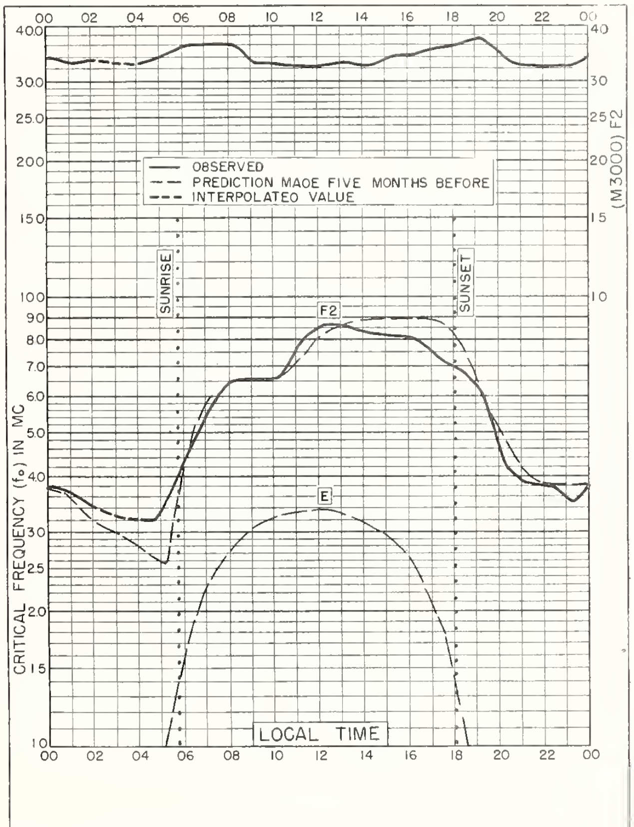


Fig. 139. DELHI, INDIA
28.6°N, 77.1°E SEPTEMBER 1954

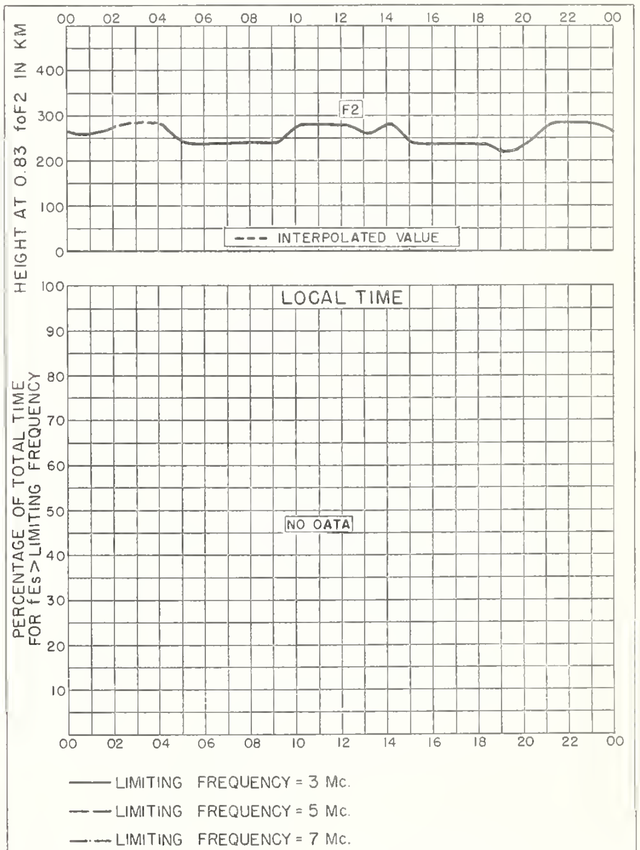


Fig. 140. DELHI, INDIA SEPTEMBER 1954

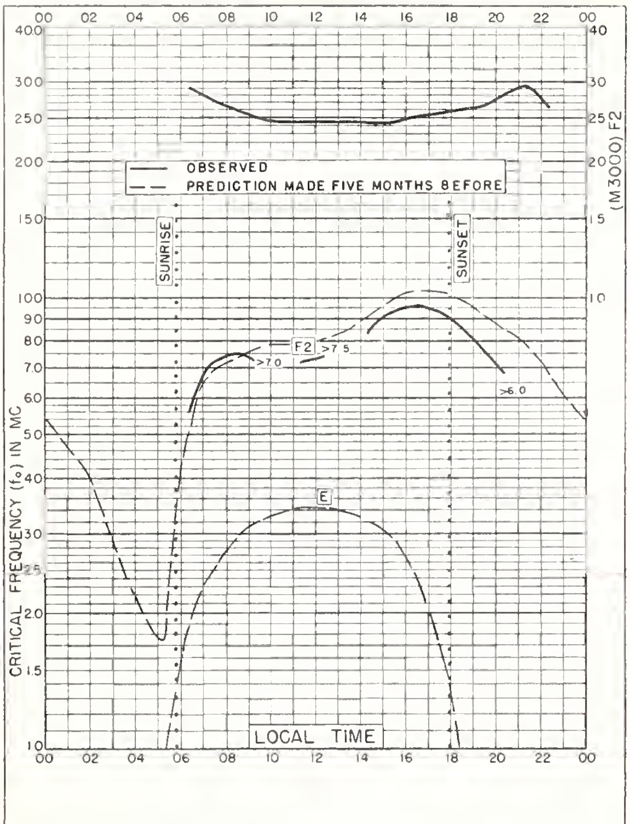


Fig. 141. MADRAS, INDIA 13.0°N, 80.2°E SEPTEMBER 1954

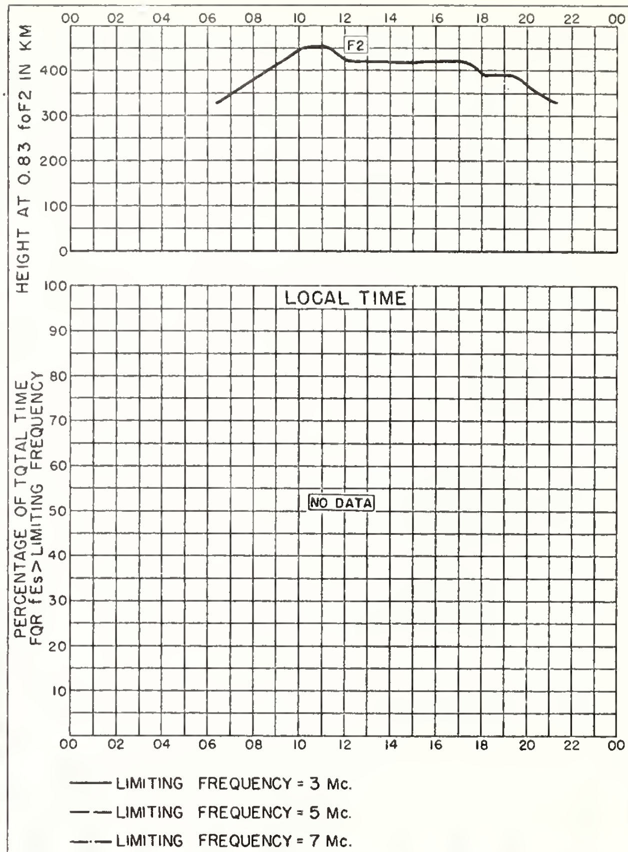


Fig. 142. MADRAS, INDIA SEPTEMBER 1954

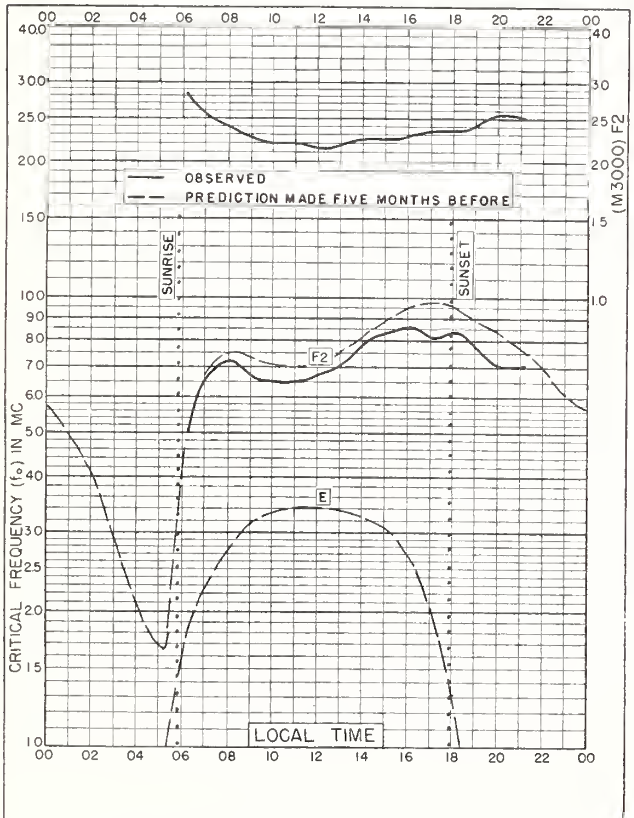


Fig. 143. TIRUCHY, INDIA 10.8°N, 78.8°E SEPTEMBER 1954

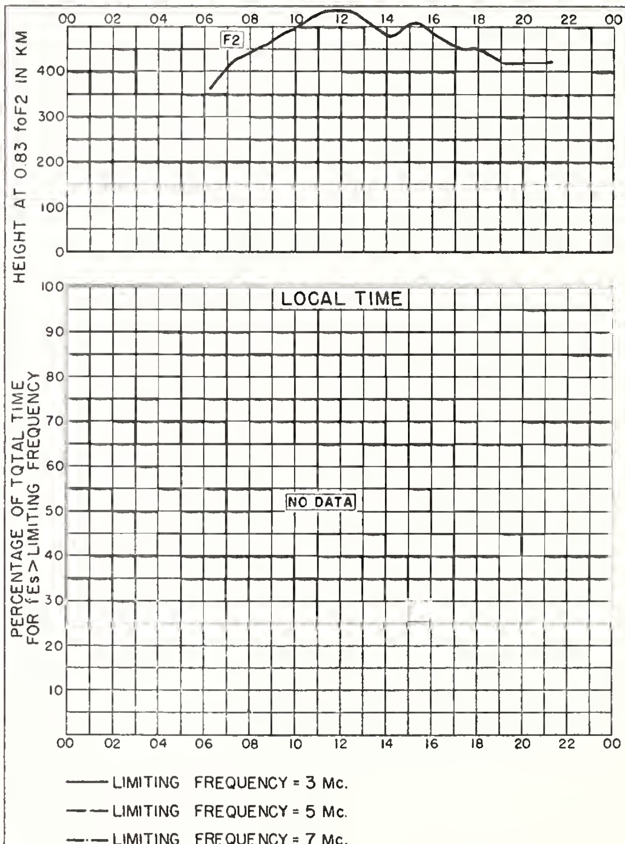


Fig. 144. TIRUCHY, INDIA SEPTEMBER 1954

Index of Tables and Graphs of Ionospheric Data

in CRPL-F133

Index (CRPL-F133, continued)

Index (CRPL-F133, concluded)

CRPL Reports

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

Daily:

Radio disturbance forecasts, every half hour from broadcast stations WWV and WWVH of the National Bureau of Standards.

Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

Semiweekly:

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

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

Semimonthly:

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

Monthly:

CRPL—D. Basic Radio Propagation Predictions—Three months in advance. (Dept. of the Army, TB 11–499–, monthly supplements to TM 11–499; Dept. of the Navy, DNC 13 ( ) series; Dept. of the Air Force, TO 16-1B-2 series.) On sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Members of the Armed Forces should address cognizant military office.

CRPL—F. Ionospheric Data. Limited distribution. This publication is in general disseminated only to those individuals or scientific organizations which collaborate in the exchange of ionospheric, solar, geomagnetic or other radio propagation data or in exchange for copies of publications on radio, physics and geophysics for the CRPL library.

Circulars of the National Bureau of Standards pertaining to Radio Sky Wave Transmission:

NBS Circular 462. Ionospheric Radio Propagation.

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

These circulars are on sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Members of the Armed Forces should address the respective military office having cognizance of radio wave propagation.

The publications listed above may be obtained without charge from the Central Radio Propagation Laboratory, unless otherwise indicated.