CRPL-F74

IONOSPHERIC DATA

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

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SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1949, 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 Fifth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Stockholm, 1948, and given in detail on pages 2 to 10 of the report CRPL-F53, "Ionospheric Data," issued January 1949.

For symbols and terminology used with data prior to January 1949, see report IRPL-C61, "Report of International Radio Propagation Conference, Washington, 17 April to 5 May, 1944," previous issues of the F series, in particular, IRPL-F5, CRPL-F24, F33, F50, and report CRPL-7-1, "Preliminary Instructions for Obtaining and Reducing Manual Ionospheric Records."

Following the recommendations of the Washington (1944) and Stockholm (1948) conferences, 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.

In addition to the conventions for the determination of medians given in Appendix 5 of Document No. 293 E of the Stockholm conference, which are listed on pages 9 and 10 of CRPL-F53, 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 on pages 2-9 of CRPL-F53 (Appendixes 1-4 of Document No. 293 E referred to above).

a. For all ionospheric characteristics:

Values missing because of A, B, C, F, L, M, N, Q, R, S, or T (see terminology referred to above) are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F2 (and h'E near sunrise and sunset) missing for this reason are counted as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count. See CRPL-F38, page 9.

Values missing because of D are counted as equal to or greater than the upper limit of the recorder.

Values missing because of G are counted:
1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

Values missing because of W are counted:
1. For foF2, as equal to or less than the median when it is apparent that h'F2 is unusually high; otherwise, values missing because of W are omitted from the median count.
2. For h'F2, as equal to or greater than the median.

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

c. For MUF 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 G (no Es reflections observed, the equipment functioning normally otherwise) are counted as equal to or less than the median foE, or equal to or less than the lower frequency count 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					
	1950	1949	1948	1947	1946	1945
December		108	114	126	85	38
November		112	115	124	83	36
October		114	116	119	81	23
September	91	115	117	121	79	22
August	96	111	123	122	77	20
July	101	108	125	116	73	
June	103	108	129	112	67	
May	102	108	130	109	67	
April	101	109	133	107	62	
March	103	111	133	105	51	
February	103	113	133	90	46	
January	105	112	130	88	42	

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 34 and figures 1 to 65 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:

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

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

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

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

New Zealand Department of Scientific and Industrial Research:
- Campbell I.

Radio Regulatory Agency, Tokyo, Japan:
- Akita, Japan
- Tokyo, Japan
- Wakkanai, Japan
- Yamagawa, Japan

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

Norwegian Defense Research Establishment, Kjeller per Lillestrom, Norway:
- Oslo, Norway

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

United States Army Signal Corps:
- Okinawa I.

National Bureau of Standards (Central Radio Propagation Laboratory):
- Baton Rouge, Louisiana (Louisiana State University)
- Boston, Massachusetts (Harvard University)
- Guam I.
- Maui, Hawaii
- San Francisco, California (Stanford University)
- San Juan, Puerto Rico (University of Puerto Rico)
- Trinidad, British West Indies
- Washington, D. C.
- White Sands, New Mexico

HOURLY IONOSPHERIC DATA AT WASHINGTON, D. C.

The data given in tables 35 to 46 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 a new location, Ft. Belvoir, Virginia.

IONOSPHERIC STORMINESS AT WASHINGTON, D. C.

Table 47 presents ionosphere character figures for Washington, D. C., during September 1950, as determined by the criteria given in the report IRPL-R5, "Criteria for Ionospheric Storminess," together with Cheltenham, Maryland, geomagnetic K-figures, which are usually covariant with them.

RADIO PROPAGATION QUALITY FIGURES

Table 48 gives provisional radio propagation quality figures for the North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, August 1950, compared with the CRPL daily radio disturbance warnings, which are primarily for the North Atlantic paths, the CRPL weekly radio propagation forecasts of probable disturbed periods, and the half-day Cheltenham, Maryland, geomagnetic K-figures.

The radio propagation quality figures are prepared from radio traffic and ionospheric data reported to the CRPL, in a manner basically the same as that described in IRPL-R31, "North Atlantic Radio Propagation Disturbances, October 1943 through October 1945," issued February 1, 1946. The scale conversions for each report are revised for use with the data beginning January 1948, and statistical weighting replaces what was, in effect, subjective weighting. Separate master distribution curves of the type described in IRPL-R31 were derived for the part of 1946 covered by each report; data received only since 1946 are compared with the master curve for the period of the available data. A report whose distribution is the same as the master is thereby converted linearly to the Q-figure scale. Each report is given a statistical weight which is the reciprocal of the departure from linearity. The half-daily radio propagation quality figure, beginning January 1948, is the weighted mean of the reports received for that period.

These radio propagation quality figures give a consensus of opinion of actual radio propagation conditions as reported by the half day over the two general areas. It should be borne in mind, however, that though the quality may be disturbed according to the CRPL scale, the cause of the disturbance is not necessarily known. There are many variables that must be considered. In addition to ionospheric storminess itself as the cause, conditions may be reported as disturbed because of seasonal characteristics such as are particularly evident in the pronounced day and night contrast over North Pacific paths during the winter months, or because of improper frequency usage for the path and time of day in question. Insofar as possible, frequency usage is included in rating the reports. Where the actual frequency is not shown in the report to the CRPL, it has been assumed that the report is made on the use of optimum working frequencies for the path and time of day in question. Since there is a possibility that all disturbance shown by the quality figures is not due to ionospheric storminess alone, care should be taken in using the quality figures in research correlations with solar, auroral, geomagnetic, or other data. Nevertheless, these quality figures do reflect a consensus of opinion of actual radio propagation conditions as found on any one half day in either of the two general areas.

OBSERVATIONS OF THE SOLAR CORONA

Tables 49 through 51 give the observations of the solar corona during September 1950 obtained at Climax, Colorado, by the High Altitude Observatory of Harvard University and the University of Colorado. Tables 52 through 57 list the coronal observations obtained at Sacramento Peak, New Mexico, during August and September 1950, derived by the High Altitude Observatory from spectrograms taken by Harvard University as a part of its performance of an Air Materiel Command research and development contract administered by the Air Force Cambridge Research Laboratories. The data are listed separately for east and west limbs at 5-degree intervals of position angle north and south of the Solar Equator at the limb. The time of observation is given to the nearest tenth of a day, GCT.

Table 49 gives the intensities of the green (5303A) line of the emission spectrum of the solar corona; table 50 gives similarly the intensities of the first red (6374A) coronal line; and table 51, the intensities of the second red (6702A) coronal line; all observed at Climax in September 1950.

Table 52 gives the intensities of the green (5303A) coronal line; table 53, the intensities of the first red (6374A) coronal line; and table 54, the intensities of the second red (6702A) coronal line; all observed at Sacramento Peak in August 1950.

Table 55 gives the intensities of the green (5303A) coronal line; table 56, the intensities of the first red (6374A) coronal line; and table 57, the intensities of the second red (6702A) coronal line; all observed at Sacramento Peak in September 1950.

The following symbols are used in tables 49 through 57: a, observation of low weight; -, corona not visible; and X, position angle not included in plate estimates.

Coronal tables in this series through F69, May 1950, designated the nominal wave length of the far red coronal line as 6704A; however, 6702A appears to be a more reliable value and is used in later issues. The two are found almost interchangeably in the literature.

RELATIVE SUNSPOT NUMBERS

Table 58 presents the daily American relative sunspot number, R_A, computed from observations communicated to CRPL by observers in America and abroad. Beginning with the observations for January 1948, a new method of reduction of observations is employed such that each observer is assigned a scale-determining "observatory coefficient," ultimately referred to Zürich observations in a standard period, December 1944 to September 1945, and a statistical weight, the reciprocal of the variance of the observatory coefficient. The daily numbers listed in the table are the weighted means of <u>all</u> observations received for each day. Details of the procedure are given in the Publication of the Astronomical Society of the Pacific, issued February 1949, in an article entitled "Reduction of Sunspot-Number Observations." The American relative sunspot number computed in this way is designated R_A. It is noted that a number of observatories abroad, including the Zürich observatory, are included in R_A. The scale of R_A was referred specifically to that of the Zürich relative sunspot numbers in the standard comparison period; since that time, R_A is influenced by the Zürich observations only in that Zürich proves to be a consistent observer and receives a high statistical weight. In addition this table lists the daily provisional Zürich sunspot numbers, R_Z.

OBSERVATIONS OF SOLAR FLARES

Table 59 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 Boulder, Colorado. 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 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 projected area, 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 60 lists various indices of geomagnetic activity based on data from magnetic observatories widely distributed throughout the world. The indices are: (1) preliminary mean 3-hourly K-indices, Kw; (2) preliminary international character-figures, C; (3) geomagnetic planetary three-hour-range indices, Kp; (4) magnetically selected quiet and disturbed days.

Kw is the arithmetic mean of the K-indices from all reporting observatories for each three hours of the Greenwich day, on a scale 0 (very quiet) to 9 (extremely disturbed). The C-figure is the arithmetic mean of the subjective classification by all observatories of each day's magnetic activity on a scale of 0 (quiet) to 2 (storm). The magnetically quiet and disturbed days are selected by the international scheme outlined on pages 219-227 in the December 1943 issue of Terrestrial Magnetism and Atmospheric Electricity.

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

The Committee on Characterization of Magnetic Disturbance, ATME, IUGG, has kindly supplied this table. The Meteorological Office, De Bilt, Holland, collects the data and compiles Kw, C and selected days. The Chairman of the Committee computes the planetary index.

SUDDEN IONOSPHERE DISTURBANCES

Tables 61 through 66 list the sudden ionosphere disturbances observed at Fort Belvoir, Virginia, September 1950; Lindau/Harz, Germany, August 1950; Platanos, Argentina, July and August 1950; Barbados, B.W.I., August 1950; England, September 1950; and Point Reyes, California, September 1950, respectively.

Table 1

Washington, D. C. (38.7°N, 77.1°W) September 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	3.6						2.9
01	300	(3.3)						(2.8)
02	280	3.0						2.9
03	280	2.9						2.8
04	280	(2.6)						(2.9)
05	(280)	(2.4)						(2.9)
06	260	3.6			(110)	(1.8)		3.2
07	250	5.3	240	——	110	2.3		3.3
08	280	5.8	220	4.0	110	2.6		3.3
09	290	6.2	210	4.3	110	3.0		3.3
10	300	6.6	200	4.5	100	3.2		3.2
11	300	6.8	200	4.6	100	3.2		3.1
12	310	7.0	200	4.7	100	3.3		3.0
13	310	7.0	210	4.7	100	3.2		3.0
14	300	7.2	210	4.5	100	3.1		3.0
15	300	7.2	220	(4.5)	100	3.0		3.0
16	290	7.4	230	4.2	110	2.7		3.1
17	270	7.2	240	——	110	2.3		3.1
18	250	7.4	——	——	120	1.8		3.1
19	230	(6.9)						(3.1)
20	240	(6.0)						(3.0)
21	260	(5.1)						(3.0)
22	270	(4.3)						(2.9)
23	290	(4.0)						(2.9)

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

Table 2

Kiruna, Sweden (67.8°N, 20.5°E) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	---					3.8	
01	(300)	(4.2)					3.0	
02	290	(3.8)					3.4	
03	300	3.7					2.5	
04	(270)	(>3.9)	---	---	---	---	1.8	
05	(270)	4.4	240	---	115	2.1		
06	(275)	4.9	230	---	110	2.5		
07	(330)	5.5	220	4.1	110	2.8		
08	(320)	5.8	220	4.2	105	3.0		
09	(300)	5.8	210	4.3	100	3.0		
10	330	6.0	205	4.4	100	3.0		
11	320	6.1	210	4.5	100	3.0		
12	320	5.9	210	4.5	100	3.0		
13	(300)	6.0	205	(>4.2)	100	3.0		
14	310	6.0	210	---	100	3.0		
15	290	5.9	220	---	105	3.0		
16	---	5.6	220	---	105	3.0		
17	(255)	5.5	235	---	110	2.7		
18	250	5.6	240	---	115	2.2	2.8	
19	260	5.3	---	---	120	2.0	3.0	
20	255	(5.6)					2.6	
21	260	(>5.0)					3.9	
22	(270)	---					4.0	
23	(280)	---					4.0	

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 30 seconds.

Table 3

Oslo, Norway (60.0°N, 11.0°E) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	(4.2)					2.1	(2.7)
01	280	(3.6)					2.0	(2.8)
02	285	(3.4)					2.5	(2.8)
03	280	3.2					2.4	2.8
04	290	3.1	---	---	---	---	2.3	2.9
05	265	3.9	250	2.8	130	1.7	2.8	3.0
06	295	4.6	235	3.4	120	2.2	2.7	3.0
07	340	5.2	230	3.9	110	2.5	3.1	2.9
08	350	5.4	220	4.2	110	2.8	3.2	3.0
09	360	5.9	215	4.4	105	2.9	3.4	3.0
10	330	6.0	210	4.5	105	3.0	3.5	3.0
11	340	6.0	205	4.6	105	3.2	3.5	3.0
12	345	5.7	205	4.7	105	3.2	3.5	3.0
13	350	5.8	210	4.7	105	3.2	3.4	3.0
14	350	5.9	210	4.6	105	3.2	3.3	3.0
15	325	6.0	215	4.5	105	3.1	3.2	3.0
16	315	6.0	215	4.3	110	3.0	3.2	3.0
17	310	6.0	230	4.2	110	2.7	3.2	3.0
18	285	6.2	245	3.7	115	2.4	3.3	3.0
19	260	6.4	255	(3.2)	120	2.0	3.5	3.1
20	255	(6.3)			130	1.8	2.4	(3.1)
21	250	(5.9)			---	---		(3.0)
22	260	(5.4)						(2.9)
23	275	(4.5)						(2.8)

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

Table 4

Boston, Massachusetts (42.4°N, 71.2°W) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	4.4						2.8
01	290	4.0						2.8
02	290	3.9						2.8
03	280	3.4						2.9
04	280	3.2						2.9
05	260	3.4			120	1.9		3.2
06	240	4.5	230	3.5	120	2.3		3.2
07	290	5.6	220	3.9	120	2.7		3.2
08	300	6.0	210	4.1	120	3.0	2.9	3.2
09	300	6.3	210	4.4	120	3.2	3.2	3.0
10	330	6.2	210	4.5	120	3.3	2.7	3.1
11	330	6.3	200	4.7	120	3.4		3.0
12	330	6.7	210	4.7	120	3.4		3.0
13	330	6.8	220	4.6	120	3.4		3.0
14	320	6.6	220	4.5	120	3.3		3.0
15	340	6.7	220	4.4	120	3.1		3.0
16	310	6.7	220	4.0	120	2.9		3.0
17	290	6.8	230	3.8	120	2.7		3.0
18	250	7.0	---	---	120	2.2		3.0
19	240	6.8						3.0
20	240	6.3						3.0
21	250	5.6						2.9
22	270	4.7						2.9
23	280	4.4						2.9

Time: 75.0°W.
Sweep: 0.5 Mc to 18.0 Mc in 1 minute.

Table 5

San Francisco, California (37.4°N, 122.2°W) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	4.4					2.7	2.8
01	300	4.4					2.8	2.8
02	300	4.2					2.4	2.8
03	300	4.1					2.2	2.8
04	300	3.9					2.8	2.7
05	300	3.8					3.0	2.7
06	260	4.7	——	——	——	——	3.1	2.9
07	340	5.4	240	4.1	120	2.5	3.8	2.8
08	340	6.0	220	4.4	120	2.9	4.8	2.8
09	360	6.5	220	4.6	120	——	4.4	2.7
10	360	6.2	210	4.7	120	——	4.6	2.8
11	360	6.8	200	4.8	120	——	4.7	2.8
12	360	6.4	200	4.9	120	——	4.4	2.8
13	360	6.6	220	4.9	120	——	3.8	2.8
14	340	6.8	220	4.8	120	——	4.2	2.9
15	350	7.0	220	4.7	120	——	3.9	2.8
16	320	6.8	240	4.5	110	3.0	4.0	2.9
17	300	6.8	240	4.2	120	2.8	3.1	3.0
18	270	6.8	240	3.6	120	2.3	2.8	3.1
19	260	6.6					2.6	3.1
20	240	6.3					2.3	3.1
21	260	5.6					3.1	3.0
22	270	5.0					2.9	2.9
23	290	4.6					3.2	2.8

Time: 120.0°W.
Sweep: 1.3 Mc to 18.0 Mc in 4.0 minutes.

Table 6

White Sands, New Mexico (32.3°N, 106.5°W) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	4.6					2.7	2.7
01	300	4.6					2.7	2.7
02	280	4.6					2.8	2.8
03	280	4.2					2.6	2.8
04	280	3.9					2.5	2.8
05	300	3.8					4.1	2.8
06	260	4.8	——	---	120	(2.0)	4.5	3.0
07	320	5.6	230	4.0	110	(2.6)	5.2	3.0
08	320	6.6	220	4.5	110	(2.9)	5.2	2.9
09	340	6.5	220	4.7	110	(3.3)	5.7	2.8
10	390	6.8	200	4.9	110	(3.5)	5.5	2.6
11	380	7.4	210	5.0	(110)	(3.7)	5.4	2.7
12	370	7.6	220	5.0	110	3.8	5.2	2.7
13	340	8.1	220	5.0	110	(3.8)	5.2	2.7
14	340	7.7	220	4.9	110	(3.6)	4.7	2.7
15	340	7.5	220	4.7	110	(3.4)	4.3	2.8
16	330	7.5	230	4.6	110	(3.2)	4.2	2.8
17	300	7.1	240	4.2	110	2.8	4.0	2.9
18	260	7.5	250	——	110	(2.3)	3.4	3.0
19	250	7.1					3.0	3.0
20	240	6.7					2.7	3.0
21	250	5.7					2.5	2.8
22	280	4.9					3.3	2.7
23	280	4.6					3.2	2.7

Time: 105.0°W.
Sweep: 0.8 Mc to 14.0 Mc in 2 minutes.

Table 7

Baton Rouge, Louisiana (30.5°N, 91.2°W) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	330	4.8						2.8
01	330	4.8						2.8
02	310	4.6						2.9
03	310	4.1						2.9
04	310	4.0						2.9
05	320	3.7						2.9
06	290	5.0	---	---				3.1
07	310	6.0	260	---	120	(2.7)		3.0
08	320	6.8	240	4.5	120	3.0		2.9
09	330	6.6	230	4.7	120	3.4		2.9
10	380	7.2	230	5.0	120	(3.6)		2.8
11	390	7.5	220	5.0	120	(3.6)		2.6
12	400	7.5	240	5.0	120	(3.6)		2.7
13	390	7.9	250	6.0	120	(3.6)		2.7
14	380	8.2	260	4.8	120	(3.6)		2.7
15	360	8.2	260	4.7	120	3.5		2.8
16	340	7.6	260	4.5	120	(3.2)		2.8
17	320	7.8	260	---	120	(2.7)		2.9
18	290	7.6	280	---				3.0
19	270	7.6						3.0
20	270	6.8						2.9
21	290	6.6						2.9
22	320	5.0						2.8
23	340	4.8						2.7

Time: 90.0°W.
Sweep: 2.12 Mc to 14.1 Mc in 5 minutes, automatic operation.

Table 8

Formosa, China (25.0°N, 121.0°E) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06								
07								
08	260	7.7	220	4.8	100	3.2	4.7	3.7
09	280	8.0	220	4.9	100	3.4	6.2	3.6
10	300	8.6	200	6.0	100	3.4	6.3	3.2
11	340	9.4	200	5.8	100	3.9	5.6	3.0
12	340	10.8	200	5.8	100	4.0	6.4	2.9
13	320	11.2	210	6.0	100	3.8	5.8	3.1
14	320	11.4	200	5.4	100	3.9	5.1	3.0
16	290	11.4	200	5.1	100	3.7	4.8	3.3
18	300	11.7	220	5.5	100	3.6	4.8	3.3
17	270	11.7	200	6.6	100	3.7	4.8	3.4
18	240	11.7	---	---	100	---	4.6	3.6
19	240	11.7	---	---	---	---	4.0	3.4
20								
21								
22								
23								

Time: 120.0°E.
Sweep: 2.5 Mc to 14.5 Mc in 15 minutes, manual operation.

Table 9

Maui, Hawaii (20.8°N, 156.5°W) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	6.6						2.7
01	280	6.6					2.0	2.9
02	270	6.2						3.0
03	260	5.5						2.9
04	260	4.8					1.5	3.0
05	270	4.3					1.7	3.0
06	280	4.4			---	---	2.0	3.0
07	250	5.9	240	3.5	120	2.3	4.8	3.2
08	270	6.4	220	4.3	110	2.9	5.8	3.2
09	360	6.7	210	4.6	110	3.2	5.4	2.8
10	400	7.6	200	5.0	110	(3.5)	5.2	2.5
11	400	8.4	210	5.0	110	(3.6)	5.2	2.5
12	400	9.2	210	5.0	110	(3.7)	5.0	2.6
13	380	9.8	210	5.0	110	3.7	4.9	2.7
14	360	10.9	220	4.9	110	3.6	4.8	2.8
15	330	11.0	230	4.8	110	3.5	4.7	2.9
16	310	11.4	230	4.6	110	3.2	4.3	3.0
17	280	11.8	230	4.3	110	2.8	4.6	3.1
18	260	11.3	240		120	(2.2)	4.0	3.2
19	240	9.7					3.9	3.2
20	250	7.7					3.2	3.0
21	260	7.2					3.4	2.8
22	280	7.0					2.3	2.7
23	300	6.6					2.4	2.7

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

Table 10

San Juan, Puerto Rico (18.4°N, 66.1°W) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(240)	(7.0)						(2.8)
01	(230)	(8.6)						(2.9)
02	(220)	(6.0)						(3.0)
03	---	(6.5)						(3.0)
04	---	(5.0)						(3.0)
05	---	(4.6)						(3.0)
06	---	5.0						(3.1)
07	210	(6.0)		---				(3.2)
08	240	7.0		4.5		E	4.2	3.3
09	270	7.3		4.7		(3.5)		3.1
10	300	7.8		6.0		---		3.0
11	320	8.5		(5.0)		---	4.9	2.8
12	320	9.2		5.1		---	4.7	2.9
13	300	(10.0)		(5.0)		---	5.0	(2.8)
14	300	10.7		5.0		(3.8)	4.5	3.0
15	300	10.7		4.9		3.6	4.9	3.0
16	280	10.4		4.6		3.4	4.8	3.0
17	250	(10.0)		4.1		---	3.8	(3.0)
18	230	(9.4)		---				(3.0)
19	210	(9.0)						(3.0)
20	220	(7.6)						(2.9)
21	---	(6.8)						(2.8)
22	---	(6.0)						(2.8)
23	---	(6.3)						(2.9)

Time: 60.0°W.
Sweep: 2.8 Mc to 13.0 Mc in 9 minutes automatic operation, supplemented by manual operation.

Table 11

Guam I. (13.6°N, 144.9°E) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	6.8					3.4	2.7
01	300	6.8					2.3	2.7
02	300	6.6					1.4	2.8
03	280	6.0					1.7	2.8
04	240	(5.5)						3.0
05	240	4.8					3.5	3.1
06	260	5.0			---	---	3.6	3.1
07	240	6.8	---	---	120	2.3	4.2	3.1
08	(270)	8.2	220	---	110	2.8	4.5	2.9
09	300	8.8	210	---	110	(3.3)	8.6	2.8
10	320	9.1	200	4.9	110	(3.5)	7.0	2.6
11	350	9.5	200	5.0	110	3.7	9.0	2.5
12	360	10.2	210	5.1	110	3.8	5.5	2.5
13	380	10.6	210	5.0	110	(3.8)	5.7	2.5
14	370	10.7	210	(5.0)	(110)	(3.7)	4.7	2.5
15	350	11.0	220	(4.9)	110	3.5	4.7	2.5
16	340	11.8	230	(4.8)	110	3.2	4.7	2.6
17	320	11.9	240	---	110	2.8	6.7	2.8
18	(260)	12.6	---	---	(120)	---	5.0	2.8
19	280	12.0					4.5	2.7
20	280	10.4					4.0	2.7
21	290	9.8					4.0	2.7
22	280	9.2					3.2	2.7
23	290	8.0					4.0	2.6

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

Table 12

Trinidad, Brit. West Indies (10.6°N, 61.2°W) August 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	8.2						3.0
01	240	7.6						3.2
02	230	7.2						3.2
03	230	7.0						3.2
04	220	6.6						3.4
05	220	5.8						3.3
06	240	6.0			120	1.5	2.2	3.3
07	220	6.5			100	2.5	3.2	3.5
08	250	7.0	220	4.4	100	3.1	3.8	3.4
09	280	7.8	200	4.9	100	3.5	4.3	3.1
10	320	8.8	200	5.1	100	3.7	4.8	2.8
11	330	9.9	210	5.2	100	3.8	5.0	2.9
12	320	11.0	200	5.1	100	3.9	5.2	2.9
13	320	11.5	200	5.1	100	3.8	5.2	3.0
14	310	12.0	200	5.0	100	3.8	5.3	3.0
15	290	12.3	220	4.9	100	3.6	5.2	3.1
16	280	11.6	220	4.6	100	3.2	4.6	3.2
17	260	11.5	220	4.2	100	2.8	4.4	3.1
18	240	11.0			100	2.1	4.2	3.2
19	230	10.2					3.2	3.1
20	250	9.4					2.8	3.0
21	260	9.2					2.6	3.0
22	270	9.0						3.0
23	260	8.5						3.0

Time: 60.0°W.
Sweep: 1.2 Mc to 19.5 Mc, manual operation.

Table 13

Kiruna, Sweden (67.8°N, 20.5°E) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs*	(M3000)F2
00	330	(5.2)					4.0	
01	310	(5.2)					3.9	
02	350	5.0	---	---	---	---	2.7	
03	355	5.2	275	3.2	110	---		
04	355	5.3	250	3.6	110	2.1		
05	380	5.5	250	3.8	110	2.5		
06	400	5.5	240	4.0	110	2.8		
07	395	5.8	230	4.1	110	2.8		
08	400	5.9	230	4.2	110	3.0		
09	430	5.9	230	4.3	105	3.0		
10	395	(>5.9)	220	4.6	105	3.1		
11	390	5.9	220	4.6	105	3.1		
12	390	5.9	220	4.7	105	3.3		
13	380	5.9	225	4.6	105	3.3		
14	(390)	5.9	220	4.6	105	3.1		
15	(380)	5.6	230	4.4	105	3.0		
16	(365)	5.6	230	(4.2)	110	2.9		
17	(340)	5.5	250	4.2	110	2.9		
18	350	5.5	260	---	115	2.5		
19	305	5.6	260	---	120	2.4		
20	300	5.4	260	---	125	2.0	3.0	
21	315	(5.4)			---	---		
22	300	(5.6)			---	---	3.9	
23	310	---					4.1	

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 30 seconds.
*Combined Es and N1 (auroral) reflections.

Table 14

Lindau/Harz, Germany (51.6°N, 10.1°E) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	5.9					2.7	2.8
01	280	5.6					2.7	2.8
02	270	5.3					2.6	2.8
03	260	5.0					2.8	2.8
04	280	4.8	280	---	---	E	2.8	2.8
05	280	6.1	240	3.2	100	1.8	3.4	3.0
06	300	5.8	220	3.8	100	2.4	4.4	3.0
07	310	6.0	220	4.2	100	2.8	4.8	3.0
08	310	6.4	210	4.5	100	3.0	5.2	3.0
09	350	6.4	210	4.7	100	3.2	5.1	3.0
10	320	6.7	200	4.8	100	3.4	5.8	2.9
11	340	6.7	200	4.8	100	3.4	6.5	3.0
12	340	6.7	200	4.9	100	3.5	5.6	3.0
13	340	6.6	210	4.9	100	3.5	5.6	2.9
14	330	6.4	200	4.9	100	3.5	5.3	2.9
16	320	6.6	200	4.8	100	3.4	5.3	3.0
16	310	6.4	215	4.6	100	3.2	4.7	3.0
17	300	6.4	215	4.4	100	3.0	4.8	3.0
18	290	6.7	230	4.1	100	2.7	4.7	3.0
19	270	7.1	220	---	100	2.2	4.9	3.0
20	260	7.4			100	1.4	5.2	3.0
21	250	7.4					3.6	3.0
22	245	7.1					3.4	3.0
23	260	6.5					3.4	2.9

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

Table 15

Wakkanai, Japan (45.4°N, 141.7°E) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	6.9					5.0	2.7
01	300	6.6					4.4	2.6
02	310	6.4					4.5	2.7
03	300	6.2					3.8	2.7
04	300	6.0	---	---	100	1.4	3.8	2.8
05	300	6.1	260	4.0	100	2.2	3.8	2.9
06	300	6.7	240	4.5	100	2.8	4.8	2.8
07	320	7.0	---	4.4	100	3.0	6.2	2.9
08	310	6.7	240	4.8	100	3.2	6.7	3.0
09	370	6.8	250	4.8	100	3.4	7.7	2.8
10	360	6.2	250	5.1	100	3.4	7.4	2.8
11	400	6.4	240	5.0	100	3.4	7.3	2.7
12	400	6.8	240	5.0	100	3.5	7.2	2.7
13	380	6.6	250	5.0	100	3.4	5.5	2.8
14	390	6.6	230	5.0	100	3.6	6.4	2.8
15	380	6.6	250	4.8	100	3.4	5.3	2.8
16	360	6.5	260	4.6	100	3.2	5.6	2.8
17	320	6.7	260	4.2	100	3.0	6.5	2.8
18	310	7.0	---	---	100	2.4	6.0	2.9
19	300	7.2	---	---	---	---	6.2	3.0
20	290	7.2					6.2	2.9
21	300	7.2					5.2	2.8
22	300	7.2					5.0	2.8
23	300	7.0					5.0	2.7

Time: 135.0°E.
Sweep: 1.0 Mc to 14.0 Mc in 15 minutes, manual operation.

Table 16

Akita, Japan (39.7°N, 140.1°E) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	7.2					5.0	2.7
01	300	6.9					5.5	2.7
02	300	6.8					4.2	2.7
03	300	6.7					4.5	2.8
04	290	6.3					4.0	2.8
05	280	6.6	---	---	120	2.0	3.6	2.9
06	300	6.8	240	4.0	110	2.5	4.1	3.0
07	300	8.1	240	4.4	110	3.0	5.8	3.0
08	300	7.6	240	---	110	3.3	7.7	3.0
09	320	7.3	---	---	110	3.5	7.4	3.0
10	360	7.0	---	5.2	110	3.6	7.8	2.9
11	370	7.1	---	5.3	110	3.6	7.6	2.8
12	360	7.3	---	5.4	110	3.6	7.4	2.8
13	360	7.4	---	5.2	110	3.6	7.0	2.8
14	380	7.4	---	5.1	110	3.7	6.8	2.8
15	340	7.4	230	4.9	110	3.6	5.7	2.9
16	330	7.7	250	4.6	110	3.3	6.2	2.9
17	300	7.8	230	4.3	110	3.0	6.5	2.9
18	300	7.8	250	---	110	2.3	6.1	2.9
19	270	8.2					5.0	2.9
20	280	7.7					5.7	2.8
21	280	7.6					5.7	2.7
22	300	7.5					4.8	2.7
23	300	7.2					5.4	2.7

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

Table 17

Tokyo, Japan (35.7°N, 139.5°E) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	6.8					4.8	2.8
01	290	6.6					4.8	2.8
02	290	7.0					4.8	2.8
03	280	6.8					3.6	2.9
04	260	(6.4)					3.3	(2.8)
05	260	6.6	250	---	100	1.9	3.2	3.0
06	270	7.2	250	4.1	100	2.6	3.8	3.1
07	270	7.5	240	4.5	100	3.0	4.8	3.2
08	280	7.4	240	4.7	100	3.3	6.2	3.0
09	310	7.3	240	4.7	100	3.5	7.5	3.0
10	330	7.2	220	5.0	100	3.6	6.6	3.0
11	340	7.4	230	5.1	100	3.6	6.7	2.8
12	340	7.9	220	6.2	100	3.9	7.0	2.9
13	350	7.9	230	5.0	100	3.9	6.4	2.9
14	340	8.4	270	4.9	100	3.7	5.9	2.9
15	320	8.2	250	4.8	100	3.6	5.4	2.9
16	310	8.4	240	4.6	100	3.2	5.6	3.0
17	300	8.2	240	---	100	2.8	5.6	3.0
18	280	8.3	230	---	100	2.0	7.1	3.1
19	260	7.8					5.4	3.0
20	250	7.4					5.0	2.9
21	270	7.2					4.8	2.8
22	300	7.3					4.6	2.8
23	300	7.4					5.2	2.7

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

Table 18

Yamagawa, Japan (31.2°N, 130.6°E) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	7.4					4.2	2.7
01	300	7.3					3.8	2.6
02	290	7.2					4.0	2.9
03	290	6.8					3.6	2.8
04	290	6.4					3.6	2.8
06	270	6.5					3.0	2.8
06	280	6.8	260	---	110	2.0	3.4	3.0
07	270	7.7	250	---	110	2.6	4.1	3.1
08	280	7.6	240	4.5	110	3.0	5.2	3.0
09	300	8.0	240	4.7	110	3.4	6.5	3.0
10	330	8.1	230	5.0	110	3.6	6.6	2.8
11	360	7.9	230	5.2	110	3.6	5.8	2.8
12	360	8.4	230	5.3	110	3.8	6.8	2.7
13	370	8.8	220	5.2	110	3.8	6.6	2.7
14	350	9.2	240	5.2	110	3.8	6.8	2.8
15	360	9.3	260	5.0	110	3.7	6.4	2.8
16	340	9.6	260	4.8	110	3.4	5.2	2.8
17	310	9.3	240	4.6	110	3.2	6.1	2.9
18	300	9.7	240	---	110	2.6	4.3	3.0
19	280	9.0	250	---	---	(1.8)	4.4	3.0
20	280	8.0					4.8	2.9
21	290	7.6					4.8	2.7
22	300	7.6					4.2	2.7
23	310	7.6					4.4	2.7

Time: 135.0°E.
Sweep: 1.2 Mc to 18.5 Mc in 15 minutes, manual operation.

Table 19

Formosa, China (25.0°N, 121.0°E) July 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	---						---
01	---	---						---
02	---	---						---
03	---	---						---
04	---	---						---
05	---	---						---
06	---	---						---
07	---	---			---	---		---
08	290	8.2	220	4.8	100	3.0	5.6	3.3
09	320	8.5	220	5.5	100	3.1	5.8	3.0
10	350	8.5	210	5.7	100	3.8	5.4	3.0
11	390	9.4	200	5.4	100	3.5	5.1	2.7
12	380	10.8	200	5.8	100	3.7	5.4	2.5
13	360	11.7	210	6.0	100	3.8	5.6	2.7
14	340	12.3	200	5.8	100	3.8	5.5	2.9
15	320	12.5	230	5.5	100	4.0	5.4	2.8
16	300	13.3	220	6.0	100	3.8	5.6	3.0
17	300	13.3	240	5.7	100	---	5.4	3.2
18	280	13.7	---	---	100	---	5.4	3.1
19	240	14.3			---	---	4.4	3.1
20								
21								
22								
23								

Time: 120.0°E.
Sweep: 2.5 Mc to 14.5 Mc in 15 minutes, manual operation.

Table 20

Kiruna, Sweden (67.8°N, 20.5°E) June 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs*	(M3000)F2
00	310	(5.8)					3.9	
01	320	5.8	---	---			3.4	
02	310	5.8	270	---	---	---	2.5	
03	350	5.6	270	---	110	2.0	3.1	
04	355	5.6	255	3.4	115	2.3		
05	350	5.7	245	3.9	110	2.4		
06	350	5.8	240	4.1	110	2.7		
07	350	6.0	230	4.2	105	2.8		
08	350	6.2	230	4.4	105	3.1		
09	350	5.1	225	4.5	100	3.2		
10	350	6.2	220	4.5	100	3.2		
11	350	6.4	220	4.7	100	3.2		
12	350	>6.0	215	4.6	100	3.2		
13	(360)	6.0	215	4.5	105	3.1		
14	(355)	5.9	220	4.5	100	3.1		
15	(350)	5.8	225	4.4	105	3.1		
16	350	5.8	230	4.3	105	3.0		
17	345	5.8	245	---	105	2.8		
18	310	5.8	255	4.0	110	2.7		
19	305	5.8	255	---	115	2.6		
20	295	5.8	260	---	115	2.4		
21	290	5.7	---	---	135	2.1	2.2	
22	300	(6.0)	---	---	---	---	3.4	
23	325	(6.1)	---	---	---	----	4.0	

Time: Local
Sweep: 1.0 Mc to 16.0 Mc in 30 seconds.
*Combined Es and N1 (auroral) reflections.

Table 21

Watheroo, W. Australia (30.3°S, 115.9°E) June 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	3.3					2.8	2.9
01	270	3.4					3.0	2.9
02	270	3.5					3.0	2.8
03	270	3.8					3.0	2.9
04	250	4.0					3.0	3.1
05	230	3.8					3.0	3.1
06	230	3.4					3.0	3.3
07	230	4.9				1.6	2.4	3.3
08	230	7.0				2.2	3.2	3.5
09	240	8.2	230	3.9		2.8	3.3	3.4
10	250	8.7	230	4.3		3.1	3.3	3.4
11	260	9.4	230	4.5		3.3	3.4	3.3
12	260	9.5	230	4.6		3.3	3.4	3.2
13	260	9.2	230	4.7		3.3	4.0	3.2
14	260	9.6	240	4.4		3.1	3.5	3.2
15	250	9.8	240	4.1		2.9	3.5	3.2
16	240	9.1				2.4	3.3	3.2
17	220	8.3					3.3	3.4
18	210	5.4					3.1	3.3
19	220	4.5					3.2	3.3
20	230	3.8					2.9	3.2
21	240	3.4					2.9	3.1
22	250	3.3					2.9	3.0
23	250	3.3					2.8	2.9

Time: 120.0°E.
Sweep: 16.0 Mc to 0.5 Mc in 15 minutes, automatic operation.

Table 22

Delhi, India (28.6°N, 77.1°E) March 1950

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00	320	6.2						2.9
01	320	6.1						
02	---	---						
03	---	---						
04	---	---						2.9
05	320	5.4						
06	300	6.2						
07	280	8.2						
08	270	9.8						3.3
09	290	11.0						
10	320	12.1						
11	320	13.2						
12	320	13.8						3.0
13	340	13.8						
14	320	14.1						
15	320	13.9						
16	320	(13.4)						2.9
17	(300)	(13.2)						
18	280	(12.5)						
19	290	12.4						
20	(300)	10.7						2.9
21	320	9.0						
22	320	7.8						
23	310	7.0						

Time: Local.
Sweep: 1.8 Mc to 16.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 23

Bombay, India (19.0°N, 73.0°E) March 1950

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06								
07	300	8.4						
08	360	11.1						2.3
09	390	12.1						
10	450	13.0						
11	480	14.2						
12	510	14.6						2.4
13	(540)	14.8						
14	500	(14.9)						
15	(480)	(15.0)						
16	---	(15.1)						2.4
17	(520)	(15.3)						
18	510	(15.0)						
19	480	14.5						
20	480	14.1						2.5
21	450	13.5						
22	420	12.8						
23	(420)	(11.8)						

Time: Local.
Sweep: 1.8 Mc to 15.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 24

Madras, India (13.0°N, 80.2°E) March 1950

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2**
00								
01								
02								
03								
04								
05								
06								
07	360	9.5						
08	420	10.7						2.7
09	480	11.8						
10	480	11.5						
11	510	11.1						
12	540	10.9						2.4
13	540	11.3						
14	540	11.7						
15	540	12.3						
16	540	12.5						2.4
17	540	12.9						
18	540	12.5						
19	(540)	(12.0)						
20	(480)	(11.8)						2.5
21	(480)	(11.2)						
22	(480)	(10.8)						
23								

Time: Local.
Sweep: 1.8 Mc to 15.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.
**Average values; other columns, median values.

Table 25

Tiruchy, India (10.6°N, 78.6°E) March 1950

Time	*	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05								
06								
07	360	8.4						
08	420	10.2						
09	480	11.0						
10	540	11.0						
11	540	10.4						
12	600	10.8						
13	600	10.6						
14	570	11.3						
15	(560)	(11.9)						
16	600	11.6						
17	600	12.0						
18	600	11.8						
19	600	10.6						
20	600	10.1						
21	600	(10.4)						
22	---	(10.5)						
23	---	---						

Time: Local.
Sweep: 1.8 Mc to 16.0 Mc in 5 minutes, manual operation.
*Height at 0.83 foF2.

Table 26

Poitiers, France (46.6°N, 0.3°E) February 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	4.6						2.7
01	---	4.5						2.8
02	---	4.5						2.7
03	---	4.3						2.7
04	---	4.2						(2.6)
05	---	3.8						(3.0)
06	---	(3.7)			---	E		(2.9)
07	245	5.0			---	E		3.0
08	230	7.7			---	---		3.4
09	230	9.1	---	---	---	---		(3.4)
10	230	9.4	220	---	---	3.3		(3.4)
11	230	9.8	210	---	---	3.3		---
12	230	10.5	220	---	---	3.3		---
13	230	10.0	230	---	---	3.3		---
14	230	9.4	225	---	---	---		(3.1)
15	230	9.4	---	---	---	---		(3.2)
16	230	9.6	---	---	---	---		3.2
17	230	8.8			---	E		3.2
18	230	7.3			---	E		3.1
19	250	6.7						3.0
20	255	5.8						3.0
21	(260)	5.0						2.9
22	(275)	4.8						(2.9)
23	---	4.6						2.7

Time: 0.0°.
Sweep: 2.1 Mc to 11.8 Mc in 1 minute 15 seconds.

Table 27

Campbell I. (52.5°S, 169.2°E) February 1949

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	260	5.3			140	(1.9)	2.0	3.0
06								
07	250	6.6	230	---	110	2.9	2.6	2.9
08	250	7.3	230	5.1	100	3.2		2.9
09	260	7.8	210	5.4	100	3.4	3.5	2.8
10	350	7.8	220	5.4	100	3.5	3.6	2.7
11	360	8.0	210	5.8	100	3.6	3.8	2.7
12	380	8.2	220	5.6	100	3.6		2.7
13	400	8.2	230	5.7	100	3.7		2.8
14	380	8.2	230	5.6	100	3.6		2.6
15	360	8.2	230	5.4	100	3.5		2.8
16	330	8.4	240	5.2	100	3.3		2.7
17	260	8.4	250	4.8	110	3.0	3.0	2.7
18	280	8.6	---	---	120	2.4	2.8	2.7
19	260	8.6			---	1.9	2.4	2.7
20								
21	260	7.1					2.4	(2.8)
22								
23	300	6.4					3.0	

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc, manual operation.

Table 28

Campbell I. (52.5°S, 169.2°E) January 1949

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	260	5.4	---	---	110	2.3	2.6	2.9
06								
07	260	6.2	240	4.7	100	3.1	3.6	2.9
08	260	6.5	220	4.8	100	3.3	3.6	2.9
09	300	6.8	220	5.0	100	3.5	4.2	2.9
10	410	7.2	220	5.2	100	3.5	4.0	2.8
11	430	7.4	210	5.4	100	3.6	4.0	2.7
12	440	7.3	220	5.4	100	3.7	3.9	2.7
13	440	7.3	220	5.4	100	3.7	2.5	2.7
14	410	7.5	220	5.2	100	3.6	3.8	2.7
15	420	7.4	220	5.2	100	3.5		2.8
16	360	7.8	230	5.0	100	3.3	3.3	2.7
17	350	7.7	240	4.6	110	3.1	3.6	2.7
18	250	7.9	250	4.3	110	2.8	3.1	2.7
19	250	7.7	---	---	120	2.2	2.8	2.7
20								
21	260	8.1					3.2	(2.8)
22								
23	300	7.0					2.8	(2.5)

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc, manual operation.

Table 29

Campbell I. (52.5°S, 169.2°E) February 1948

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	260	5.1			---	1.9	2.8	2.9
06								
07	240	6.8	250	4.2	110	2.8	3.8	3.0
08	270	6.8	220	4.7	110	3.1	3.7	3.0
09	280	7.4	210	5.0	110	3.3	4.2	2.9
10	300	7.5	220	5.1	110	3.5	4.2	2.9
11	310	7.7	210	5.2	100	3.8	4.2	2.9
12	320	7.6	210	5.3	100	3.6	4.1	2.8
13	340	7.9	220	5.3	100	3.6	4.2	2.8
14	330	8.0	210	5.3	100	3.5	3.8	2.8
15	340	8.1	230	5.1	110	3.4	2.3	2.8
16	250	8.1	230	4.8	110	3.2	2.9	2.8
17	250	8.2	---	---	110	2.9	3.1	2.8
18	250	8.4			110	2.4	3.1	2.8
19	260	8.5			---	1.8	2.5	2.7
20								
21	260	8.0					3.9	(2.7)
22								
23	290	7.1					3.9	---

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc, manual operation.

Table 30

Campbell I. (52.5°S, 169.2°E) January 1948

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	250	5.8			120	2.3	3.0	2.8
06								
07	250	6.4	220	4.8	110	3.2	3.8	2.8
08	340	7.0	220	5.2	100	3.4	3.9	2.8
09	340	7.3	220	5.2	100	3.6	4.0	2.8
10	360	7.3	220	5.4	100	3.7	4.1	2.8
11	400	7.4	210	5.5	100	3.8	4.0	2.7
12	430	7.4	210	5.8	100	3.8	4.2	2.7
13	400	7.5	220	5.8	100	3.8	4.0	2.7
14	410	7.6	210	5.8	100	3.7	4.0	2.7
15	400	7.7	220	5.4	100	3.6	3.9	2.6
16	390	7.8	220	5.2	110	3.4	3.7	2.6
17	340	7.8	220	4.9	110	3.1		2.7
18	250	8.0			110	2.8	3.3	2.7
19	250	7.9			120	2.3	2.7	2.7
20								
21	290	8.1					3.5	(2.6)
22								
23	300	7.1					2.2	(2.5)

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc, manual operation.

Table 31 (Supersedes Table 43 in F34)

Campbell I. (52.5°S, 169.2°E) February 1947

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
06		6.0						(2.8)
06								
07		7.4						2.8
08		7.7						2.8
09		7.9						2.8
10		8.2						2.7
11		8.2						2.6
12		8.4						2.6
13		8.4						2.6
14		8.4						2.6
15		8.5						2.6
16		8.5						2.6
17		8.8						2.6
18		8.6						2.6
19		8.9						2.7
20								
21		8.2						2.6
22								
23		(7.1)						

Time: 165.0°W.
Sweep: 1.0 Mc to 15.0 Mc, manual operation.

Table 32 (Supersedes Table 20 in F21)

Campbell I. (52.5°S, 169.2°E) February 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	260	4.3			---	2.1	2.4	2.9
06								
07	250	5.5	---	---	120	2.8	3.0	2.8
08	320	6.0	220	4.5	125	3.0	3.2	2.9
09	350	6.4	230	4.6	125	3.1	3.2	2.8
10	350	6.9	230	4.6	130	3.2	3.4	2.8
11	330	6.6	230	4.7	130	3.2	3.6	2.9
12	340	6.8	225	4.7	125	3.3	3.3	2.8
13	340	6.8	235	4.8	130	3.3	3.2	2.9
14	350	6.9	240	4.7	125	3.3	2.9	2.8
15	340	7.0	230	4.6	130	3.2		2.8
16	320	7.2	240	4.4	130	3.0		2.8
17	300	7.5	240	4.0	130	2.7	2.8	2.8
18	280	7.4	250	3.7	130	2.4	2.6	2.8
19	260	7.4	---	---	---	2.0	2.8	2.8
20								
21	270	7.0					2.7	2.7
22								
23	300	6.2					3.2	2.5

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc manual operation.

Table 33 (Supersedes Table 21 in F21)

Campbell I. (52.5°S, 169.2°E) January 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	250	4.5	---	---	125	2.1	3.0	3.0
06								
07	315	5.2	240	4.1	120	2.8	3.0	3.0
08	330	5.4	225	4.3	120	3.0	3.5	3.0
09	350	5.9	230	4.5	120	3.1	3.8	2.9
10	370	5.8	215	4.6	120	3.1	3.6	2.9
11	360	5.8	220	4.6	120	3.3	3.7	2.9
12	350	5.8	220	4.6	120	3.2	4.0	3.0
13	370	5.8	220	4.6	120	3.2	3.5	2.8
14	350	5.8	220	4.6	120	3.2	3.5	2.9
15	340	5.9	220	4.4	120	3.1	3.3	2.9
16	330	6.1	220	4.3	120	2.9	3.3	2.9
17	310	6.3	240	4.0	120	2.7	3.2	3.0
18	300	6.2	245	3.6	120	2.4	3.1	2.9
19	255	6.4	255	3.1	120	2.0	3.1	2.9
20								
21	260	6.2					3.8	2.8
22								
23	280	5.2					3.1	2.7

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc, manual operation.

Table 34*

Hourly Monthly Averages of foF2

Okinawa. I. (26.3°N, 127.7°E) 1949—1950

Time	December 1949	January 1950	February 1950	March 1950
00	5.7	5.6	7.0	(9.8)
01	5.1	(5.0)	6.6	(9.5)
02	4.5	4.3	6.0	(8.4)
03	3.4	3.8	5.8	7.4
04	3.2	3.4	4.5	5.8
05	2.9	3.0	3.0	4.4
06	3.0	2.8	2.8	3.8
07	5.0	4.3	5.0	6.5
08	9.5	8.6	8.1	(8.6)
09	13.0	(11.0)	10.0	(10.3)
10	(13.8)	(13.2)	12.0	(11.8)
11	(14.4)	(14.0)	(14.0)	(12.6)
12	(14.9)	(14.9)	(13.4)	(13.5)
13	(15.0)	(15.4)	(13.6)	(14.0)
14	(15.0)	(15.5)	(14.2)	(14.5)
15	(15.0)	(15.3)	(14.0)	(14.5)
16	(14.2)	(15.2)	(>14.0)	(14.5)
17	(13.5)	(14.0)	(14.4)	(14.0)
18	(12.0)	(12.6)	(13.6)	(14.0)
19	(10.2)	(9.0)	(13.0)	(13.5)
20	9.5	(8.9)	(10.5)	(13.5)
21	(7.8)	(8.4)	(10.0)	(13.2)
22	6.5	(7.1)	(9.5)	(12.5)
23	6.4	(6.2)	(8.0)	(11.4)

Time: 135.0 E.
*Corrections to previously published values in CRPL-F66 through 69. Corresponding changes should be made in the appropriate graphs in these issues.

Form adopted June 1946

TABLE 35

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

IONOSPHERIC DATA

h'F2 (Characteristic), Km (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

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	280	(270)S	[280]A	290	280	270	240	250	270	280	280	320	330	320	300	300	290	270	250	240	230	240	250	240
2	300	300	290	300	280	(270)S	250	220H	270	310	300	300	300	300	310	330	310	280	250	220	220	240	270	300
3	300	290K	300K	330K	330K	(320)SK	270K	230K	320K	GK	650K	490K	520K	390K	440K	370K	370K	300K	330K	290K	240K	280K	230K	(330)S
4	(330)SK	310K	330K	BK	BK	330K	290K	GK	GK	GK	GK	GK	GK	500K	600K	420K	390K	360K	290K	250K	280K	310K	300K	290K
5	300K	(330)SK	270K	BK	BK	(270)BK	(280)BK	GK	GK	GK	GK	GK	GK	GK	490K	450K	400K	390K	300K	230K	250K	300K	(320)SK	310K
6	310K	300K	350K	(330)SK	(340)SK	[320]SK	300K	GK	GK	550K	GK	GK	400K	410K	380K	380K	350K	300K	260K	260K	250K	270K	290K	300
7	300	280	250	320	B	A	260	270	300	300	360	330	330	320	300	320	310	290	250	220	240	240	270	300
8	300	300	300	300	260	[260]S	250	300	320	300	320	320	320	300	330	300	310	290	260	230	250	(270)S	270	300
9	290	240	260	270	290	[270]S	250	280	280	300	310	310	340	330	300	300	290	280	250	230	250	250	300	(290)S
10	290	290	270	270	280	300	[280]A	250	[280]C	300	290	290	340	310	320	[300]C	290	290	250	250	260	(270)A	(300)A	300
11	310	310	270	300	300	(300)S	290	290	290	310	300	300	310	300	300	300	290	240	260	240	260	260	(270)S	(280)S
12	240	270	300	(300)S	(310)S	[290]S	270	250	310	[310]C	(320)H	320	300	280	280	280	290	[270]A	260	230	240	270	260	270
13	280	300	(280)S	(290)S	280	(290)S	250	230	270	280	300	300H	290	350	330	330	310	270	260	250	230	250	280	280
14	300	290	280	260	230	[230]S	230	240	270	270	280	300	300	300	300	280	280	270	240	230	240	230	260	270
15	(280)S	270	270	260	270	(280)S	260	280	310	300	340	330	310	320	320	300	280	280	[260]M	230	230	240	260	250
16	270	270	250	230	260	240	230	260	260	300	290	310	310	320	300	280	280	260	250	230	240	250	250	260
17	280	280	280	280	270	[260]S	250	230	250	270	300	300	310	300	300	300	270	270	M	M	M	M	M	M
18	M	M	300	300	300	(370)S	[340]M	310	300	290	310	290	310	300	310	290	290	250	250	250	250	(280)B	300	300
19	290	290	270	270	B	S	250	250	280	290	300	290	310	290	300	310	300	280	250	220	270	280	260	260
20	310	300	280	300	[290]S	(280)S	260	250	220	270	260H	220	300	310	300	300	290	250	230	220	220	280	300	300
21	300	310	300	280	270	[260]S	250	250	220H	280	270	270H	310	320	300	300	280	250	240	230	220	250	270	280
22	300	300	300	290	270	290	260	280	290	290	270	300	300	320	300	300	280	270	240	230	220	(270)S	280	280
23	290	300	300	(310)S	300	(270)S	240	230	280	270	300	300	310	310	300	290	280	240	240	230	250	290	(270)S	240
24	270	300	270	280	[290]A	300	260	230	240	270	280	290	300	310	300	290	290	270	230	250	240	240	300	260
25	[280]A	(310)A	300	300	300	310	270	230	230	250	280	290	310	290	280	280	260	240H	220	240	230	250	270	280
26	270	300	280	280	300	(300)A	240	230	230	230	270	300	290	270	300	270H	260	230	230	210	210	230	300	290
27	270	280	270	270	280	[280]S	280	220	300	280	290	280	280	300	270	280	270	240	220	220	230	270	280	290
28	290	300	300	270	[290]B	(310)S	230	230	270	240	260	260	280	280	270	270	280	250	220	220	230	230	270	(300)B
29	(300)B	290	290	280	(250)B	(280)S	250	250	230	250	260	280	290	300	300	280	270	240	210	210	230	(240)S	270	290
30	300	300	280	260	230	240	270	240	230	270	240	270	280	280	290H	300K	290K	260K	220K	220K	240K	280K	290K	320K
31																								
Median	290	300	280	280	280	(280)	260	250	280	290	300	300	310	310	300	300	290	270	250	230	240	260	270	290
Count	29	29	30	28	26	28	30	30	30	30	30	30	30	30	30	30	30	30	29	29	29	29	29	29

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 36

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

Form adopted June 1946

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B. E. B., McC., A. H. M.

Calculated by: B. E. B., McC.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(3.9)S	3.4	3.3	3.2	3.0	(2.8)JS	4.5	6.0	6.6	6.8	6.9	6.9	6.7	7.0	7.3	7.4	7.1	7.1	7.0	7.0	6.7	6.3	5.2	(4.5)J
2	3.5F	(3.3)F	3.2F	(3.1)F	3.1F	3.0F	4.1F	(5.0)SF	5.6F	(6.0)Z	6.5	6.8	6.9	6.8	6.5	6.5	6.9	7.6	(7.9)SF	7.5	(6.2)S	(5.1)SF	(3.9)JF	3.6F
3	3.3F	3.2FK	2.5FK	[2.2]FK	K(2.4)SF	(2.5)SK	3.4K	4.1K	(4.6)PK	<4.2GK	4.6K	5.3K	5.4K	6.0K	5.8K	6.0K	6.0K	5.5K	5.6K	6.6FK	6.3K	5.2K	(4.4)JK	3.5K
4	K(3.0)JF	(2.5)FK	(1.5)SK	[2.2]BK	K(3.0)FB	2.6FK	3.2FK	<3.5GK	K<(3.8)GS	K<(4.1)GP	<4.4GK	<4.3GK	<4.4GK	4.9K	4.7K	4.9K	4.9K	4.8K	5.0K	(4.9)SK	4.4K	3.6FK	(3.3)SK	K(3.0)JS
5	2.6K	(2.2)FK	2.5FK	BK	BK	BFK	3.0K	K<3.4FG	<3.7GK	<4.0GK	<4.1GK	<4.2GK	<4.3GK	<4.2GK	4.7FK	5.0FK	5.2FK	5.0K	(5.2)SK	(5.3)SK	4.0FK	K(3.3)SF	(3.2)SK	(3.1)SK
6	3.1FK	K(3.2)SF	2.8FK	2.4FK	K(1.9)SF	K[2.4]SF	2.9K	<3.4GK	<3.8GK	4.3FK	<4.5GK	<4.5GK	5.3K	5.2K	5.4FK	5.2K	5.5K	6.2K	6.0K	(5.8)SK	5.4K	(4.8)SK	4.2FK	(4.2)VF
7	3.3F	(3.0)F	2.6F	2.5F	B	A	3.4F	(4.5)F	5.3	5.7F	5.7	6.2F	6.4	6.4	6.2	6.0F	6.4	(7.0)S	7.4	7.2	6.0F	(5.0)SF	(4.1)SF	(4.0)SF
8	(3.8)GF	(3.3)F	2.8F	2.9F	(2.8)PF	2.2F	3.4F	4.1F	5.4	5.7	6.2	6.6	6.8	7.0	6.8	6.7	6.5	6.8	(7.0)S	7.2	(6.0)SF	(5.7)SF	4.3F	(4.1)JF
9	(4.2)SF	(4.0)SF	(3.3)F	(2.5)F	(2.0)JF	(1.8)JF	(3.9)SF	(5.6)SF	5.8	6.0	(5.7)Z	5.7	6.1	6.3	6.6	6.8	6.5	6.9	6.8	6.6	(6.4)S	(5.9)SF	4.3F	(4.0)S
10	(3.7)S	3.5F	2.8F	2.4F	(1.9)F	(1.8)SF	[3.2]A	5.3	[5.7]C	6.2	6.6	7.0	6.7	7.4	6.9	[7.0]C	7.3	6.7	(6.6)S	(6.6)S	6.4	5.7F	4.3	(3.9)JS
11	(3.7)JS	3.7	(3.4)S	(2.8)J	(2.4)S	(2.3)J	3.7	5.0	5.0	5.9	6.2	6.2	6.4	6.7	6.4	6.5	6.7	6.4F	6.7F	(6.8)SF	(6.8)SF	(5.8)SF	(4.8)SF	(4.8)SF
12	4.3F	(3.3)SF	2.8F	(2.3)JS	(1.9)JF	[2.7]SF	3.5	(5.6)J	5.8	[6.0]C	(6.1)H	6.7	7.1	6.8Z	6.6	(6.5)S	6.6	6.6	7.2	6.9	6.5F	5.8F	5.2F	4.1F
13	(3.5)F	(2.9)JF	[2.7]SF	(2.5)JF	(2.5)JF	[2.4]F	3.6F	5.0F	6.3V	6.6	6.5	6.9	7.1	7.0	7.4	7.9	8.8	8.9	8.8F	8.3F	6.8	5.2F	4.5F	(3.8)SF
14	3.4F	3.8F	3.8F	3.5	2.7	2.1	4.3	(6.2)JH	7.8	7.6	7.3	7.4	7.8	8.0	8.1	8.0	8.0	8.0	(7.8)S	(7.3)S	(7.0)S	(6.2)S	(4.9)JS	4.6F
15	(4.1)S	3.8F	3.5F	3.2F	2.8F	(2.5)SF	3.9	5.4	5.8	5.6	6.2	6.6	7.1	7.0	7.2	6.9	6.7	6.5	[6.2]M	(6.0)S	(5.6)S	5.3	(4.8)S	(4.5)S
16	4.2	(4.0)JS	(3.8)JS	3.6F	3.2F	2.9	3.7	5.2	5.6F	6.3	7.0	7.1	7.6	8.4	8.8	8.7	7.5	7.6	(7.5)S	(7.5)S	(6.4)S	(6.0)S	(5.5)S	(4.9)JS
17	4.7	4.7	(4.5)S	(3.9)S	3.4	3.3	(4.8)S	6.5	8.0	8.2	8.0	7.8	8.8	9.7	9.7	9.2	8.6	(8.5)P	M	M	M	M	M	M
18	M	M	(2.8)JF	(2.9)JS	(2.6)JF	SF	M	4.6F	5.5	5.9	(6.4)R	(6.2)H	6.9	7.2	7.3	7.2	7.4	(7.0)S	(7.4)SP	(6.1)SP	5.4	4.6	(4.0)JF	(4.0)FS
19	3.7F	3.4F	3.0F	(2.4)JS	(2.1)JB	(2.0)JS	3.7F	(5.6)H	6.4	6.6	7.4	7.4	7.4	7.8	7.1	7.0	7.5	7.9	8.5	(7.2)S	5.4F	(5.4)S	(5.0)S	4.5
20	(4.2)J	(4.1)JS	3.8	3.4	3.4	(2.6)JS	(4.0)PS	5.4	5.8F	6.2	6.8F	6.8F	8.4	7.6	7.8	7.2	8.0	8.6	7.3	7.0	(5.2)SF	4.6F	(4.2)SF	(3.7)SF
21	(3.7)SF	(3.2)F	3.1F	(2.9)F	2.5F	[2.7]SF	(3.4)R	5.3FH	(5.8)S	7.0	7.0F	6.8	6.6F	7.0	7.2	7.2	7.2	7.3	7.6	7.2	(5.9)S	(5.0)S	(4.1)JS	(4.0)JS
22	3.6F	(3.5)F	3.2F	3.0F	3.0F	(2.4)SF	3.5F	5.0F	5.6	6.4	6.8	6.5	6.4	6.6	6.8	6.7	6.7	6.5	6.7	6.4	(4.9)SF	(4.5)SF	(4.0)SF	(3.9)SF
23	3.5F	(2.8)JF	(2.5)SF	(2.4)SF	(2.5)SF	(2.4)SF	3.2F	(5.3)F	(6.3)SF	6.5F	(6.5)S	6.6	6.9	7.6	7.7	8.0	8.1	7.4F	(8.6)SF	(7.2)S	6.0F	(5.4)SF	(5.2)S	4.3F
24	(3.8)SF	3.4F	3.2F	2.9F	(2.6)JA	2.3F	4.4	(6.2)S	7.2	7.6	8.0V	8.2	8.2	9.2	9.3	9.7	9.6	8.6	(8.8)S	(6.5)S	(5.8)S	4.6	4.4	4.4
25	3.6	(3.3)JA	(2.9)J	(2.4)J	(2.0)J	2.4	3.5	5.7	6.7	6.5	7.2	7.0	8.0	9.1	8.4	8.1	8.2	7.2	(7.4)S	(6.9)S	5.4	4.7	(4.3)S	(3.9)JS
26	(3.8)P	3.4	3.3	3.0	(2.8)J	2.5F	4.1	(6.7)SV	7.7	7.6	7.8	9.0	9.6	9.1	8.9	8.4	9.3	8.2	(8.9)S	8.1	(6.0)S	4.7	(3.9)S	(3.6)P
27	(3.5)J	(3.2)P	(3.0)J	(2.7)J	(2.2)J	(2.0)S	3.1	(4.7)SZ	5.2	5.9	6.6	6.8	7.4Z	7.0	7.7	8.0	8.2	8.0	6.6	(6.1)S	(4.3)S	4.0	3.7F	3.5F
28	(3.2)J	(3.0)JS	M	M	M	M	M	6.0	(7.1)S	7.1	8.0	7.8	7.9	8.2	8.2	8.0	8.0	8.6	8.0	6.4	5.4	4.2	(3.2)J	(3.1)JB
29	3.0	2.9	2.9	2.9	2.7	2.5	3.7	6.4	7.6	7.4	7.6	7.8	7.6	8.1	8.3	8.1	8.7	8.7	(7.6)S	(5.8)S	(4.8)S	(4.4)SF	(4.0)SF	(3.7)SF
30	3.5F	3.5F	3.5F	3.4F	3.1F	(2.4)SF	(3.8)SF	(6.2)S	(6.9)S	7.2V	(8.1)S	7.7	7.5	7.8	8.5	8.6K	9.4K	(10.0)SK	(9.4)SK	(7.5)SK	(6.0)SK	K(5.2)SF	4.6FK	4.3K
31																								
Median	3.6	(3.3)	3.0	2.9	(2.6)	(2.4)	3.6	5.3	5.8	6.2	6.6	6.8	7.0	7.0	7.2	7.2	7.4	7.2	7.4	(6.9)	(6.0)	(5.1)	(4.3)	(4.0)
Count	29	29	29	28	27	26	28	30	30	30	30	30	30	30	30	30	30	30	29	29	29	29	29	29

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 37

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

IONOSPHERIC DATA

foF2 (Characteristic), Mc (Unit), September (Month), 1950

Observed at Washington, D. C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B. E. B., McC., A. H. M.

Calculated by: B. E. B., McC.

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	38	(33)P	(3.1)JB	(3.0)JS	2.9	(3.4)S	(5.2)S	59Z	65	(6.9)S	(6.9)S	68V	[7.0]M	72	75	7.3	7.1	(7.1)S	68	(7.1)S	64	5.7	47	F(4.0)JS
2	3.4F	3.2F	3.1F	(3.1)F	(3.0)SF	33F	(5.1)SF	(5.9)S	58	62	66	69	7.0	6.6	6.4	6.7	7.4	8.0	(8.0)S	(6.9)S	54F	4.7F	(39)SF	35F
3	32F	(3.1)FK	2.5FK	(20)FK	K(2.5)SF	(2.8)JK	3.7K	43K	<4.1GK	4.7K	52K	5.0K	6.0K	60K	58K	58K	59K	54K	(6.0)SK	59FK	5.2FK	(5.2)SK	(41)SK	[32]RK
4	(25)FK	[20]FK	15K	[1.9]BK	2.8FK	(29)FK	(3.5)ZK	<3.7GK	<39GK	45K	<43GK	<4.2GK	4.6K	4.8K	49K	5.0K	48K	49K	4.7K	K(46)PS	(3.8)SK	3.4K	(32)SK	(28)SK
5	23FK	23FK	BK	BK	(2.3)BK	(2.6)BK	3.2K	<35GK	<39GK	<40GK	<4.1GK	45K	<4.3GK	46FK	47FK	50FK	51FK	52K	(58)SK	(49)SK	(38)SK	(3.1)SK	(3.0)SK	K(30)SF
6	31FK	K(33)JF	K(3.3)JF	K(23)SF	SFK	SFK	3.3FK	<3.6GK	<3.9GK	4.6K	<44GK	5.0K	5.3FK	56K	5.4K	54K	6.0K	63K	(6.0)SK	5.6K	49K	4.5FK	K(4.2)SF	(4.0)S
7	3.1F	2.8F	(2.2)F	(2.5)BF	[24]F	24F	4.3	4.8F	5.2F	57	6.0	6.2F	62	6.4	61	62	6.7	72	7.4F	(6.8)S	56	45F	(3.8)SF	35F
8	33F	3.0F	30F	2.5F	[2.5]F	2.5F	(3.8)SF	4.5	54	56	6.3	6.7	6.9	65	69	6.6	6.6	(70)S	(73)S	6.4	5.6F	(5.0)SF	43F	4.2F
9	F(4.1)JS	(3.6)SF	(2.7)F	(2.3)F	[19]A	(2.5)SF	49F	5.4F	(59)S	6.1	5.8	5.7	6.2	6.6	6.7	66	6.4	(6.7)JS	6.6	6.6	(58)SF	(50)SF	4.2	(38)JS
10	3.7F	32F	2.6F	(2.3)F	(1.8)JF	[3.2]A	4.7F	[5.6]C	6.6	6.5	6.5	6.5	71	7.3	68	7.2	7.0	63	6.8	(6.6)S	60	(52)S	4.1	3.8
11	(3.7)J	3.6	(3.0)JS	(2.6)J	(2.4)JS	(2.8)J	(4.4)P	(5.4)P	5.3	6.2	64	6.2	6.7	6.6H	66	6.7	63	(6.5)SF	69F	(6.7)SF	(6.5)SF	F(49)JS	(4.8)SF	4.7F
12	38F	(2.8)JF	2.6F	(2.0)JF	[2.2]SF	2.4F	45	(5.3)R	[5.8]C	6.4	65Z	7.0	6.8	6.5V	(6.6)S	(66)S	6.7	(6.8)S	(7.3)S	(6.8)F	58F	57F	(4.8)SF	(3.8)SF
13	(32)F	(29)BF	(25)JF	F(2.4)JS	(22)JF	(3.5)SF	4.6F	5.6F	[6.4]C	6.6	6.8	73	68	7.3	7.6	8.4	9.0	89	(8.6)S	80	58F	4.7F	4.4F	(3.8)SF
14	3.6F	40F	3.6F	32	23	(2.7)J	51H	7.0	77	7.7	7.4	7.7	7.9	8.1	(82)S	7.9	7.9	(8.0)S	(7.5)S	(7.0)S	(6.7)S	52F	(4.8)GF	(42)S
15	(39)SF	36F	3.4F	30F	(2.7)SF	(2.8)S	4.7	(55)S	5.6	5.8	64	7.0	6.9	69	M	M	M	M	(6.0)S	(5.8)S	(5.6)SP	(4.8)JF	(4.7)S	(4.3)JS
16	(4.1)S	(3.9)JS	3.7	3.3F	(3.0)JS	3.0	(4.6)S	5.5F	6.0	(6.6)S	7.2	7.6	77	86	(8.6)S	7.9	(7.5)S	(7.4)S	(76)S	(6.9)S	(6.0)S	(5.8)JS	(52)S	(4.6)S
17	4.7	4.7	4.0	(3.6)JS	(33)JS	3.6	(58)S	7.1	(8.2)S	80	80	86	91	97	(9.4)S	(9.4)S	82	M	M	(6.9)S	M	M	M	M
18	M	(3.2)S	(3.0)JF	S(29)JF	(2.4)JS	[32]M	(3.9)SF	5.0F	(58)S	6.6	65	66H	71	7.2	7.1	7.4	7.4	6.8	(6.8)SP	(6.1)S	(48)S	(46)S	(3.9)SF	39F
19	3.5F	3.3F	(28)JS	(22)JS	[2.0]S	(22)FS	(4.5)VF	5.4F	6.8F	6.5F	7.2F	70	7.6	7.5	(70)JS	(72)S	8.0	8.1	(8.4)S	5.8F	54F	(53)S	4.7	4.3
20	(4.0)S	(4.0)JS	(3.6)J	(35)JS	(33)SF	H(2.5)JS	5.0	5.8	6.2F	6.8F	7.2	7.4F	7.6F	78	7.4	73	8.1	8.4	7.3	(6.3)S	(4.9)SF	(4.2)FS	(4.2)FS	3.8F
21	(3.2)FS	3.1F	3.0F	(2.7)JF	F(2.9)JS	(2.5)SF	4.3F	6.0F	6.7	7.0F	7.2	6.7V	6.6	70	(7.2)S	72	7.2	7.4	7.6	7.1	53	4.3	(3.0)S	(3.8)SF
22	3.6F	3.2F	3.2F	3.1F	(2.6)SF	(26)SF	(4.3)S	5.4	5.8	(68)S	65	6.6	(65)S	(6.6)S	(66)S	6.6	6.3	6.6	(66)S	(5.8)S	45F	(4.1)SF	(3.8)SF	(3.8)SF
23	(3.1)F	(2.7)F	(2.5)JF	2.5F	2.6F	2.5F	(3.7)SF	5.2F	(6.2)SF	(6.4)SF	6.5	(7.3)S	7.2	7.6	78	(7.5)S	7.7	(8.0)SF	(8.1)S	(6.5)S	(56)SF	(5.4)S	(4.4)SF	3.6F
24	3.5F	(3.3)FS	30F	28F	(2.4)S	(2.7)S	(57)S	(7.3)SF	6.9	7.9F	7.9F	7.8	8.3	96	9.7	(92)S	8.9	(84)S	73	(60)S	(5.3)S	(4.4)S	46	4.2
25	(3.4)JA	(3.0)A	(25)J	[22]B	2.3V	(2.6)J	5.0	6.4	(6.7)S	6.8	7.5	73	84	90	8.0	8.2	7.4	(77)S	(73)S	(6.0)S	(5.0)S	4.6	(4.2)JS	(3.9)JS
26	(3.5)J	(3.4)P	(3.2)J	(29)J	2.7	26	5.5	84	(8.0)S	7.8	8.3	9.3	96	93	9.0	(9.1)S	90	(88)S	(8.8)S	(7.3)S	50	(43)S	(3.8)S	(3.6)P
27	(3.4)P	(3.2)P	(29)JP	(24)BJ	(2.1)J	2.2	40	5.1	5.3	(5.9)S	(6.9)H	7.2	7.1	75	7.8	8.0	80	(76)S	63	5.2	4.2	(3.9)JS	(3.5)S	(3.2)J
28	(3.0)JF	(3.0)JF	M	M	M	M	M	(6.1)S	(7.3)S	7.4	84	7.7	7.8	8.2	[81]C	7.8	84	8.4	7.2	5.8	4.7	(3.3)B	3.2	3.1
29	(29)J	2.9	2.8	(3.0)JB	2.6	2.8	4.4	7.3	7.6	7.3	7.2V	74	8.0	8.0	8.4	8.3	89	8.4	(6.4)S	(5.1)S	(4.5)SF	(4.0)SF	(3.7)S	3.6F
30	3.5	3.5F	3.4F	3.3F	(2.9)SF	28F	51	(6.6)S	7.3	7.7	7.8	(7.4)S	78	8.2	8.5	8.9K	(9.8)SK	(10.0)SK	(82)SK	(6.0)SK	(5.7)SK	K(5.1)SF	4.5FK	K(3.9)JS
31																								
Median	3.5	(3.2)	3.0	(26)	(25)	(2.7)	4.5	5.5	6.1	66	67	7.0	7.0	72	72	7.3	7.4	7.4	(7.3)	(6.4)	5.4	(4.7)	(4.2)	(3.8)
Count	29	30	28	28	28	28	29	30	30	30	30	30	30	30	29	29	29	28	29	30	29	29	29	29

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 38

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

Form adopted June 1946

IONOSPHERIC DATA

h'F1 (Characteristic), Km (Unit), September (Month), 1950

Observed at Washington, D. C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

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								230	220	210	200	200	210	200	200	210^{H}	240	210								
2								Q	220	210	200	190^{H}	200^{H}	200^{H}	200^{H}	210	220	240								
3								Q^{K}	220^{K}	200^{K}	200K^{H}	(250)K^{B}	220^{K}	220^{K}	230^{K}	220^{K}	220^{K}	250^{K}	B^{K}							
4								260^{K}	250^{K}	240^{K}	200K^{H}	190K^{H}	190K^{H}	240^{K}	230^{K}	220^{K}	210K^{H}	240^{K}	270^{K}							
5								260^{K}	240^{K}	210^{K}	210^{K}	210^{K}	200^{K}	210^{K}	200K^{H}	210^{K}	250^{K}	240^{K}	270^{K}							
6								240^{K}	210^{K}	200^{K}	200K^{H}	190^{K}	200^{K}	210^{K}	220^{K}	220^{K}	220^{K}	250^{K}								
7								220	230	200	200	200^{H}	200	200	200	220	220	240								
8								220	260	200	200	210	200	210^{H}	200^{H}	210	230	(250)^{B}								
9								240	230	220	210	200	190	200	220	210	230	240								
10								A	C	200	200	(200)^{A}	[200]^{B}	210^{H}	220	[230]^{C}	[220]^{S}	230								
11								250	230	200	200^{H}	190^{H}	220	210	210	210	220	Q								
12								240	200	[220]^{C}	230^{H}	210	200	210	200	210	240	Q								
13								Q	230	210	200	200^{H}	200	[200]^{A}	200	250	230	250								
14								Q	230	210	210^{H}	200	200	210^{H}	220	230	230	240								
15								230	220	230	200^{H}	200	220^{H}	210	210	M	M	M								
16								200	200	200	200	180^{H}	190^{H}	210^{H}	210	A	A	A								
17								Q	240	230	210	200	200	210^{H}	210	220	230	250								
18								240	210	220	200	190^{H}	200	210	210	220	240	230								
19								230	230	220	200	200	190^{H}	240	220	210	250	260								
20								Q	Q	230	200	190^{H}	210	210	210	200	240	Q								
21								Q	Q	200^{H}	(230)^{A}	200^{H}	180^{H}	180^{H}	250	230	240	230								
22								230	220	200	200^{H}	200	200^{H}	200	210	210	230	230								
23								Q	220	200	200	200	200	210	220	220	230	Q								
24								Q	210	230	210	200	200	210	230	220	230	240								
25								Q	210	200	200	220	200	220	220	220	230	Q								
26								Q	Q	220	200	200	200	230	200^{H}	230	230	Q								
27								Q	210	220	200	200	(200)^{B}	210	200	220	230	Q								
28								Q	210	210	200	200	200	180^{H}	240	220	230^{H}	Q								
29								Q	Q	220	190^{H}	190	190^{H}	190^{H}	200^{H}	200	(250)^{S}	Q								
30								Q	Q	200	200^{H}	200	200	200^{H}	200	220K^{H}	260^{K}	Q^{K}								
31																										
Median								240	220	210	200	200	200	210	210	220	230	240	—							
Count								14	24	30	30	30	30	30	30	28	28	18	2							

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 39

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

IONOSPHERIC DATA

Form adopted June 1946

foFl (Characteristic), Mc (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long. 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1								L	(4.2)P	4.4	(4.4)P	4.8	4.8	4.7	4.6	4.5P	L	L							
2								Q	L	4.5P	4.5	4.7	4.7	4.7	4.6	4.7	4.4	L							
3								QK	LK	4.2K	4.3K	4.4K	(4.6)PK	4.4K	4.4K	4.2K	4.1K	LK	LK						
4								3.5K	(3.8)SK	(4.1)PK	4.4K	4.3K	4.4K	4.4K	4.2K	4.1K	4.0K	3.7PK	LK						
5								3.4FK	3.7K	4.0K	4.1K	4.2K	4.3K	4.2K	4.2K	4.1FK	4.0K	3.7K	LK						
6								3.4K	3.8K	4.0K	4.5K	4.5K	4.4K	4.5K	4.5K	4.5PK	4.1K	(3.5)PK							
7								L	4.1	4.3	4.4	4.6	4.7	4.7	4.5	4.5P	4.2P	L							
8								L	4.0	4.2	4.5	4.6	4.7	4.6	4.5	(4.5)P	L	L							
9								L	L	4.3	4.5	4.3	4.7	4.7	4.6	(4.5)P	(4.3)P	L							
10								A	C	(4.3)P	4.5	4.7H	4.7	4.8	4.6	[4.5]C	[4.2]S	L							
11								L	4.2	4.2	4.5	4.7	4.7	4.6	4.5P	L	L	Q							
12								L	4.3	[4.9]C	(5.5)H	(5.1)P	(4.7)P	4.8P	(4.7)P	(4.4)P	L	Q							
13								Q	L	4.3	4.5	4.5	4.7	[4.8]L	(4.8)P	L	L	L							
14								Q	(4.0)P	4.4P	4.6	4.6	4.9	(4.6)P	(4.5)P	L	L	L							
15								L	4.2	(4.4)F	4.7	4.7	4.8	4.7	4.6	M	M	M							
16								L	L	(4.5)H	4.5H	(4.8)P	5.0	5.0	4.7	(4.5)P	L	L							
17								Q	L	L	(4.8)F	(4.7)P	(4.7)P	4.8	4.7	(4.5)P	L	L							
18								L	4.1	4.4	[4.8]L	5.2H	4.7	4.7	4.7V	4.2P	L	L							
19								L	L	4.4	4.6	4.7	4.9	4.7	4.5	L	L	L							
20								Q	Q	4.4	(4.3)H	4.7	4.7	4.7	4.7P	L	L	Q							
21								Q	Q	4.3	4.7	(4.7)H	4.7	4.8	4.5	L	L	L							
22								L	L	4.2	4.4	4.4	4.5	4.7H	4.4	(4.4)P	L	L							
23								Q	L	L	L	4.5	4.7P	4.6	(4.6)P	(4.4)P	L	Q							
24								Q	L	L	(4.4)P	[4.3]L	4.9P	4.7	(4.7)P	(4.3)P	L	L							
25								Q	L	4.2	[4.3]L	(4.4)P	4.7	4.6	4.5	L	L	Q							
26								Q	Q	L	4.3P	4.6	4.3P	L	L	L	L	Q							
27								Q	4.0	4.3	4.3	4.6P	[4.6]B	(4.7)P	4.5	L	L	Q							
28								Q	L	L	L	(4.6)P	4.4	4.6P	4.3P	L	L	Q							
29								Q	Q	L	(4.4)H	(4.6)P	4.6P	(4.9)P	(4.6)P	L	L	Q							
30								Q	Q	L	L	4.5	4.7F	[4.4]L	4.2P	LK	LK	QK							
31																									
Median								—	4.0	4.3	4.5	4.6	4.7	4.7	4.5	(4.5)	4.2	—	—						
Count								3	12	23	27	30	30	29	29	17	8	3							

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 40

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

Form adopted June 1946

IONOSPHERIC DATA

h'E (Characteristic), Km (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A. H. M.

Calculated by: B.E.B., McC.

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

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 41

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

Form adopted June 1946

IONOSPHERIC DATA

foE (Characteristic), Mc (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat. 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

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

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 42

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

Form adopted June 1946

IONOSPHERIC DATA

Es (Characteristic), Mc,Km (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

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	G	G	4.5/100	2.7/100	27/100	G	28/130	G	40/120	G	G	G	G	G	G	G	G	G	30/130	G	G	G	3.0/110	G
2	26/100	25/100	G	20/100	G	G	26Y/110	32/120	3.6/120	2.8/110	3.8Y/100	36F/100	36/100	24/100	.G	G	G	G	G	G	G	G	G	G
3	2.3/110	G	72Y/120	13/120	G	G	G	50Y/120	G	G	41Y/100	26/100	25/100	30/100	G	G	G	G	G	·G	G	G	G	G
4	G	G	G	B	G	G	18/110	G	G	G	30/110	27/110	G	18/100	21/100	G	G	G	G	G	G	G	G	G
5	G	G	G	B	B	G	G	G	G	G	8.2Y/120	80/150	62/110	G	50/100	78/120	G	G	G	G	G	G	G	G
6	G	60/100	G	9.7/100	G	G	G	18.1/170	17.5/120	G	6.0/100	G	60Y/100	G	56/100	G	G	G	20/130	45/150	G	G	G	G
7	G	G	G	G	B	(47)S/120	132/100	G	G	G	8.2Y/110	110Y/100	G	G	G	G	G	G	21/110	27Y/110	G	G	G	G
8	G	G	G	G	G	G	1.7/120	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
9	G	G	G	G	G	26/110	17/110	2.2/110	G	G	G	53Y/110	26/100	24/100	5.9Y/120	75Y/110	2.4/100	16/100	G	G	G	G	G	G
10	G	G	G	G	G	40/110	65/110	4.1/110	C	G	G	55/100	31/100	26/100	G	C	G	G	G	G	G	55/110	4.1/100	27Y/110
11	3.4/110	2.5Y/110	G	G	G	2.3/120	G	G	G	G	G	G	G	G	G	G	G	G	30F/120	G	G	G	G	G
12	G	G	G	G	2.3/120	G	18/110	2.3/120	G	C	G	G	G	G	G	G	G	38/120	19/120	G	G	G	G	G
13	G	G	G	G	G	G	G	G	G	G	2.2/100	2.1/100	G	52/120	G	G	G	G	16/120	G	G	G	G	G
14	G	G	G	G	G	G	G	G	G	G	G	G	107/100	94Y/110	G	G	G	G	G	G	G	G	G	G
15	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	M	M	G	M	G	G	G	G	G
16	G	G	G	G	G	G	G	70Y/100	29/100	G	G	G	G	G	38/110	7.2/100	56/110	36/120	3.8Y/110	3.5Y/110	G	G	26Y/100	(58)S/100
17	G	G	G	G	G	G	165/130	G	G	3.8Y/100	G	G	103Y/120	G	54/110	G	G	G	M	M	M	M	M	M
18	M	M	G	G	G·	G	M	G	38F/110	31/110	3.7F/100	3.3/100	G	5.4/110	3.5F/100	18/100	G	G	G	G	G	G	G	G
19	G	G	G	3.0/120	2.2/110	G	G	G	G	G	70/120	66Y/100	5.2Y/110	G	G	G	G	G	G	G	G	G	G	G
20	G	G	G	G	G	G	G	G	G	56/120	G	G	G	G	G	G	G	G	G	G	G	32/100	G	G
21	G	G	G	G	G	28/120	54/110	G	35/110	38Y/110	6.0/100	G	G	104Y/110	G	G	G	42/110	G	G	G	28/110	G	G
22	G	G	G	G	G	G	(54)-S/110	G	G	G	5.6Y/140	4.8Y/100	62Y/120	G	G	G	G	G	G	G	G	G	G	G
23	G	G	G	G.	G	20/100	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
24	G	G	G	G	30/120	74Y/110	G	G	G	G	G	G	G	G	G	G	3.0/110	22/120	G	G	G	G	G	2.5/130
25	28Y/130	28/120	G	G	G	G	G	G	G	G	G	G	98/110	G	G	G	G	G	G	G	G	G	G	G
26	G	G	2.3/120	23Y/120	G	27Y/110	G	G	34Y/110	G	78Y/120	G	G	7.0Y/110	G	G	G	G	G	G	30/110	G	G	G
27	G	G	G	G	G	23/120	G	G	G	G	57/100	G	G	G	G	G	G	G	G	G	G	G	G	G
28	G	G	G	G	G	G	G	G	G	28/100	2.3/100	21/100	24/100	2.2/100	19/100	70Y/110	G	G	G	G	29Y/110	G	G	G
29	G	G	G	G	G	G	G	G	G	G	G	G	G	24/100	G	85Y/100	18/100	2.9Y/100	G	2.3/100	G	28Y/100	G	G
30	2.2/100	G	G	G	G	G	G	60/110	G	2.7/100	G	5.4Y/110	G	G	G	G	G	G	G	G	G	G	G	G
31																								
Median	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Count	29	29	30	28	28	30	29	30	29	29	30	30	30	30	30	28	29	30	28	29	29	29	29	29

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

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Form adopted June 1946

TABLE 43

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

IONOSPHERIC DATA

(M1500)F2 (Characteristic), ______ (Unit), September (Month), 1950

Observed at Washington, D. C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

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	(1.9)S	2.0	1.8	2.0	2.0	(2.1)JS	2.3	2.4	2.4	2.1	2.3	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	(2.1)J
2	2.0F	(1.8)F	2.0F	(2.0)F	2.1F	2.1F	2.3F	(2.5)SF	2.4F	(2.3)Z	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	(2.2)SF	2.2	(2.2)S	(2.1)SF	(2.0)JF	1.9F
3	2.0F	2.0FK	1.9FK	FK	K(1.7)SF	(1.8)SK	2.2K	2.1K	(2.2)FK	GK	1.5K	1.6K	1.6K	1.9K	1.7K	1.9K	1.9K	2.1K	1.8K	1.9FK	2.1K	1.9K	(2.0)JK	1.7K
4	K(1.8)JF	(1.9)FK	(1.8)SK	BK	K(1.8)FB	1.8FK	2.0FK	GK	GK	GK	GK	GK	GK	1.6K	1.5K	1.8K	1.9K	1.9K	2.1K	(2.1)SK	1.9K	(1.8)FK	(1.8)SK	K(1.9)JS
5	2.0K	(1.8)FK	2.0FK	BK	BK	BFK	2.1K	GK	GK	GK	GK	GK	GK	GK	1.7FK	1.8FK	1.9FK	1.9K	(1.9)SK	(2.1)SK	1.9FK	K(1.9)SF	(1.8)SK	(1.9)SK
6	2.0FK	K(2.0)SF	2.0FK	1.7FK	K(1.8)SF	SFK	2.1K	GK	GK	1.6FK	GK	GK	1.9K	1.9K	2.0FK	2.0K	2.0K	2.2K	2.1K	(2.0)SK	2.0K	(1.9)SK	1.8FK	(1.8)VF
7	2.0F	(2.1)F	1.9F	1.8F	B	A	2.4F	(2.3)F	2.3	2.2F	2.1	2.1F	2.1	2.0	2.1	2.1F	2.1	(2.0)S	2.2	2.2	2.1F	(2.1)SF	(2.0)SF	(1.8)SF
8	(1.8)SF	(2.0)F	1.9F	1.8F	(1.9)PF	1.8F	1.7F	2.1F	2.0	2.3	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	(2.1)S	2.2	(2.0)SF	(2.0)SF	2.0F	(1.9)JF
9	(1.9)SF	(2.1)SF	(2.1)F	(2.0)F	(1.8)JF	S	(2.3)SF	(2.3)SF	2.3	2.1	(2.1)Z	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	(2.1)S	(2.0)SF	1.8F	(1.8)S
10	(1.9)S	2.0F	2.1F	2.1F	(2.0)F	(2.0)SF	A	2.4	C	2.2	2.2	2.2	2.0	2.0	2.0	C	2.1	2.2	(2.0)S	(2.0)S	2.0	2.0F	1.9	(1.8)JS
11	(1.9)JS	1.8	(1.9)S	(1.8)J	(1.9)S	(2.0)J	2.2	2.3	2.4	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.2	2.1F	2.1F	(2.0)SF	(2.0)SF	(2.0)SF	(1.9)SF	(2.0)SF
12	2.1F	(2.1)SF	2.0F	(2.1)JS	(2.0)JF	SF	2.1	(2.3)J	2.1	C	(2.2)H	2.0	2.2	2.1Z	2.2	(2.2)S	2.1	2.1	2.1	2.1	2.1F	2.0F	2.0F	2.0F
13	(2.0)F	(2.0)JF	SF	(2.1)JF	(2.0)JF	F	2.2F	2.3F	2.3V	2.3	2.1	2.1	2.2	2.0	2.0	1.9	1.9	2.0	2.0F	2.1F	2.2	2.0F	2.1F	(2.0)SF
14	1.9F	1.9F	1.9F	1.8	2.3	2.0	2.3	(2.1)JH	2.3	2.3	2.2	2.0	2.1	2.1	2.0	2.1	2.1	2.1	(2.2)S	(2.1)S	(2.2)S	(2.2)S	(2.0)JS	2.0F
15	(1.9)S	1.9F	2.0F	2.1F	2.0F	(2.0)SF	2.2	2.2	2.2	2.2	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.1	M	(2.1)S	(2.1)S	2.0	(1.9)S	(2.0)S
16	2.0	(2.1)JS	(2.0)JS	2.0F	2.0F	2.1	2.3	2.3	2.2F	2.2	2.2	2.0	2.0	1.9	2.0	2.1	2.0	2.0	(2.1)S	(2.1)S	(2.0)S	(2.0)S	(2.0)S	(1.9)JS
17	1.8	1.9	(1.9)S	(1.9)S	2.0	1.8	(2.2)S	2.1	2.3	2.3	2.1	1.9	1.9	1.9	2.0	2.0	2.1	(2.0)P	M	M	M	M	M	M
18	M	M	(1.7)JF	(1.8)JS	(1.8)JF	SF	M	2.0F	2.2	2.3	(2.1)R	(2.2)H	2.0	2.1	2.0	2.1	2.1	(2.2)S	(2.2)SP	(2.1)SP	2.0	1.8	(1.9)JF	(1.9)FS
19	1.9F	1.9F	2.1F	(2.2)JS	(1.8)JB	(1.7)JS	2.3F	(2.3)H	2.3	2.1	2.0	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.1	(2.1)S	1.9F	(1.9)S	(1.9)S	1.9
20	(1.9)JS	(1.9)JS	1.8	1.8	1.9	(2.1)JS	(2.0)PS	2.2	1.9F	2.3	2.0F	2.0F	2.1	2.0	2.1	2.0	2.1	2.1	2.2	2.1	(2.1)SF	1.9F	(1.9)SF	(1.9)SF
21	(1.7)SF	(1.8)F	1.9F	(1.9)F	2.0F	SF	(2.4)R	2.4FH	(2.2)S	2.3	2.2F	2.3	2.1F	2.0	2.0	2.1	2.1	2.1	2.2	2.2	(2.1)S	(2.0)S	(2.0)JS	(1.9)JS
22	1.9F	(1.9)F	2.0F	2.1F	1.9F	(1.9)SF	2.2F	2.4F	2.2	2.2	2.3	2.1	2.1	2.0	2.2	2.1	2.2	2.1	2.1	2.2	(2.2)SF	(1.9)SF	(1.9)SF	(1.9)SF
23	2.0F	(1.9)JF	(1.8)SF	(1.8)SF	(1.9)SF	(2.1)SF	2.1F	(2.3)F	(2.4)SF	2.3F	(2.2)S	2.0	2.0	2.0	2.0	2.1	2.1	2.0F	(2.1)SF	(2.0)S	2.0F	(1.8)SF	(1.9)S	2.0F
24	(1.9)SF	1.8F	1.9F	1.9F	(2.0)JA	2.0F	2.1	(2.1)S	2.2	2.2	2.0V	2.1	1.9	1.8	1.9	2.0	2.0	2.0	(2.1)S	(1.8)S	(1.9)S	1.9	1.8	1.9
25	1.8	(1.8)JA	(1.8)J	(1.6)J	(1.6)J	1.7	2.1	2.3	2.5	2.2	2.2	2.0	2.0	2.0	2.1	2.1	2.2	2.0	(2.2)S	(2.0)S	1.9	2.0	(1.9)S	(1.9)JS
26	(1.9)P	1.8	2.0	1.9	(1.9)J	2.0F	2.0	(2.2)SV	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	(2.1)S	2.3	(2.2)S	2.0	(1.9)S	(1.9)P
27	(2.0)J	(1.9)P	(2.0)J	(1.8)J	(1.9)J	(1.7)S	2.0	(2.0)SZ	2.2	2.3	2.3	2.1	2.1Z	2.1	2.2	2.0	2.2	2.2	2.2	(2.2)S	(2.0)S	1.9	1.9F	1.9F
28	(2.0)J	(1.9)JS	M	M	M	M	M	2.3	(2.4)S	2.4	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.0	(2.0)J	(2.0)JB
29	2.0	1.9	1.9	1.9	2.0	1.9	2.1	2.3	2.4	2.3	2.3	2.1	2.0	2.1	2.1	2.1	2.1	2.3	(2.3)S	(2.2)S	(2.1)S	(2.1)SF	(2.0)SF	(1.9)SF
30	1.9F	1.9F	2.0F	2.1F	2.2F	(2.0)SF	(2.1)SF	(2.3)S	(2.2)S	2.2V	(2.2)S	2.2	2.1	2.0	2.0	1.9K	1.9K	(2.0)SK	(2.2)SK	(2.2)SK	(2.0)SK	K(1.8)SF	1.9FK	1.7K
31																								
Median	1.9	(1.9)	1.9	1.9	(1.9)	(2.0)	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	(2.1)	(2.1)	(2.0)	(1.9)	(1.9)
Count	29	29	28	26	27	21	27	30	29	29	30	30	30	30	30	29	30	30	28	29	29	29	29	29

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 44

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

Form adopted June 1946

IONOSPHERIC DATA

(M3000)F2 (Characteristic), ____ (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

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	(29)S	30	27	29	30	(31)JS	33	34	34	31	33	31	30	30	31	31	31	31	32	31	31	31	31	(31)J
2	30F	(27)F	30F	(30)F	31	31F	34F	(35)SF	35F	(33)Z	32	32	30	31	31	30	30	30	(32)SF	32	(32)S	(31)SF	(29)JF	29F
3	30F	29FK	29FK	FK	K(27)SF	(27)SK	32K	31K	(32)PK	GK	22K	25K	24K	28K	26K	28K	28K	31K	27K	28FK	31K	28K	(30)JK	26K
4	K(27)JF	(28)FK	(28)SK	BK	K(27)FB	27FK	30FK	GK	GK	GK	GK	GK	GK	25K	22K	27K	29K	29K	31K	(30)SK	28K	27FK	(28)SK	K(29)JS
5	30K	(28)FK	30FK	BK	BK	BFK	31K	GK	GK	GK	GK	GK	GK	GK	26FK	28FK	28FK	28K	(29)SK	(31)SK	29FK	K(28)SF	(28)SK	(29)SK
6	29FK	K(29)SF	30FK	27FK	K(27)SF	SFK	31K	GK	GK	24FK	GK	GK	29K	28K	30FK	30K	30K	31K	31K	(30)SK	30K	(29)SK	28FK	(28)YF
7	30F	(31)F	29F	27F	B	A	34F	(33)F	33	31F	30	31F	31	30	31	30F	30	(30)S	31	32	31F	(30)SF	(30)SF	(28)SF
8	(27)SF	(30)F	29F	27F	(29)PF	27F	27F	31F	30	33	32	31	30	32	30	31	30	31	(31)S	32	(30)SF	(30)SF	29F	(28)JF
9	(29)SF	(30)SF	(31)F	(30)F	(26)JF	S	(33)SF	(34)SF	33	32	(31)Z	31	30	30	31	31	31	31	32	31	(31)S	(30)SF	27F	(28)S
10	(29)S	30F	31F	31F	30F	(30)SF	A	34	C	32	33	33	30	30	30	C	31	32	(29)S	(30)S	30	31F	28	(27)JS
11	(29)JS	27	(29)S	(27)J	(29)S	(30)J	32	33	34	32	32	33	32	32	31	31	32	31F	31F	(30)SF	(30)SF	(30)SF	(29)SF	(30)SF
12	31F	(31)SF	30F	(31)JS	(30)JF	SF	30	(33)J	32	C	(32)H	29	31	31Z	33	(32)S	31	31	31	32	31F	30F	30F	29F
13	(29)F	(30)JF	SF	(31)JF	(30)JF	F	32F	34F	33	33	31	31	31	30	29	28	28	30	30F	31F	32	30F	30F	(30)SF
14	29F	28F	29F	28	33	29	33	(30)JH	33	33	33	30	31	30	30	31	31	31	(32)S	(30)S	(32)S	(32)S	(29)JS	30F
15	(29)S	28F	29F	31F	30F	(30)SF	32	32	32	32	30	30	31	30	30	31	32	32	M	(32)S	(31)S	30	(28)S	(30)S
16	29	(30)JS	(30)JS	30F	30F	31	33	34	33F	33	32	29	30	29	29	31	30	30	(31)S	(31)S	(30)S	(30)S	(29)S	(29)JS
17	28	28	(28)S	(28)S	29	27	(33)S	32	34	33	31	28	29	29	29	29	31	(30)P	M	M	M	M	M	M
18	M	M	(27)JF	(27)JS	(28)JF	SF	M	29F	32	33	(31)R	(33)H	30	31	30	30	31	(32)S	(32)SP	(31)SF	30	28	(29)JF	(29)FS
19	29F	28F	30F	(33)JS	(27)JB	(26)JS	33F	(33)H	33	31	30	32	30	31	30	30	30	30	30	(31)S	28F	(29)S	(29)S	29
20	(28)JS	(29)JS	27	28	29	(31)JS	(29)SP	32	29F	33	30F	30F	31	30	31	30	30	31	32	31	(30)SF	29F	(29)SF	(28)SF
21	(26)SF	(27)F	29F	(28)F	29F	SF	(34)R	34FH	(32)S	33	32F	33	31F	30	30	31	31	31	32	32	(31)S	(30)S	(30)JS	(29)JS
22	28F	(28)F	29F	30F	29F	(28)SF	32F	34F	33	33	33	32	31	30	32	31	32	31	31	32	(32)SF	(29)SF	(29)SF	(29)SF
23	29F	(29)JF	(28)SF	(28)SF	(29)SF	(32)SF	32F	(33)F	(34)SF	34F	(32)S	30	30	30	30	31	32	29F	(31)SF	(30)S	30F	(27)SF	(29)S	30F
24	(29)SF	27F	28F	29F	(29)JA	29F	31	(30)S	33	32	29V	30	29	29	29	30	30	30	(31)S	(27)S	(29)S	28	27	28
25	27	(27)JA	(27)J	(25)J	(25)J	26	31	33	35	32	32	30	30	30	30	31	32	30	(32)S	(29)S	28	28	(29)S	(28)JS
26	(29)P	27	29	28	(28)J	30F	30	(32)SV	33	32	31	31	31	30	31	29	31	30	(32)S	33	(32)S	29	(28)S	(28)P
27	(30)J	(29)P	(30)J	(27)J	(28)J	(27)S	29	(30)SZ	32	33	33	31	31Z	31	33	30	31	32	32	(33)S	(29)S	29	29F	29F
28	(30)J	(28)JS	M	M	M	M	M	33	(35)S	34	32	33	33	32	31	31	31	31	34	32	32	31	(30)J	(29)JB
29	30	28	29	29	30	29	30	34	34	33	33	32	30	31	31	31	31	33	(33)S	(32)S	(31)S	(30)SF	(30)SF	(28)SF
30	28F	29F	30F	31F	32F	(30)SF	(31)SF	(34)S	(32)S	33V	(33)S	32	31	30	30	28K	28K	(30)SK	(32)SK	(32)SK	(29)SK	K(28)SF	(29)FK	26K
31																								
Median	29	(28)	29	28	(29)	(29)	32	33	33	33	32	31	30	30	30	30	31	31	31	(31)	(30)	(30)	(29)	(29)
Count	29	29	28	26	27	21	27	30	29	29	30	30	30	30	30	29	30	30	28	29	29	29	29	29

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 45

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

Form adopted June 1946

IONOSPHERIC DATA

(M3000)F1 (Characteristic), ____ (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

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

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

TABLE 46

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

Form adopted June 1946

IONOSPHERIC DATA

(M1500)E (Characteristic), ____ (Unit), September (Month), 1950

Observed at Washington, D.C.

Lat 38.7°N, Long 77.1°W

75°W Mean Time

National Bureau of Standards (Institution)

Scaled by: B.E.B., McC., A.H.M.

Calculated by: B.E.B., McC.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							4.2	4.1F	4.3	4.5	(4.5)P	B	(4.2)B	4.2	4.2	4.3F	4.3	4.0	4.0					
2								4.4	4.4	(4.3)B	(4.2)AB	A	(4.3)A	(4.3)F	4.4	4.4	B	4.1	4.3					
3							(4.2)BK	4.2K	4.4K	4.5K	AK	(4.4)BA	BK	4.3K	BK	BK	4.2K	BK	BK					
4							AK	(4.4)BK	4.4K	4.5K	AK	BK	BK	(4.3)PK	(4.4)BK	4.3K	4.1K	4.1K	4.2K					
5							(4.4)BK	4.3K	4.6K	4.5FK	4.4K	4.2K	4.2K	4.4K	4.4K	4.4K	4.5K	4.0K	(4.1)PK					
6							(4.2)SK	4.4K	4.3K	4.5K	(4.7)AK	4.4K	4.2K	4.4FK	4.4K	4.2K	4.4K	4.3K	SK					
7							A	4.1	4.4	4.4	4.1	4.3	4.4	(4.4)P	4.4	4.3	4.3	4.3	4.7					
8							S	4.2	4.3	4.5	4.3	B	(4.6)B	(4.2)F	(4.2)F	4.2	(4.3)B	(4.0)B	4.0					
9								A	(4.3)F	4.3	4.2	4.3	(4.3)F	4.4	4.4	4.3	4.2	4.0						
10							A	(4.4)A	C	4.4	4.2	A	B	4.3	4.3	C	(4.2)P	B						
11								4.1	B	B	4.4	4.0	(4.3)B	4.2	4.2	4.3	4.2	4.2						
12								(4.0)A	3.8	C	4.2	(4.2)P	4.3	4.2	4.3	4.2	4.2	4.1	A					
13							S	4.2	4.0	4.3	4.2	4.3	4.2	4.4	4.2	4.2	4.4	4.3						
14								4.2	4.4	4.5	4.4	4.5	(4.3)SB	4.4	4.2	4.2	(4.2)S	(4.1)S	S					
15								4.0	4.3	4.3	4.4	4.3	(4.4)F	4.1	4.2	M	M	M	M					
16								4.1	A	4.4	4.5	4.3	4.3	4.3	(4.3)A	4.2	4.3	4.4						
17							S	4.1	4.2	A	4.2	4.4	4.4	4.4	4.3	4.4	4.0	4.1						
18								3.8	A	A	A	4.3	4.3	4.3F	A	4.2F	4.2	4.2						
19								4.2	(4.0)B	(4.5)B	4.5	4.2	4.2	(4.4)F	4.0	4.3	4.3	S						
20								4.2	4.5	4.1	4.4	4.2	4.1	4.2F	4.3	4.4	(4.4)B	4.2F						
21								4.0	4.3	A	A	4.1	4.3	4.1	3.9	4.3	4.4	4.4						
22								4.0	4.2	4.2	4.2	A	4.3	4.3	4.2	4.3	4.3	4.2						
23								4.1	4.1	4.1	4.3	F	4.3	4.3	4.3	4.2	4.2	3.7						
24							B	4.2	4.3	4.3	4.3	4.2	4.2	4.2	4.3	4.2	A	A						
25								4.0	4.3	4.4P	4.4	4.3	4.5	4.4	4.4	4.3	4.4	4.0F						
26								4.3	4.3	4.2	4.4	4.4	4.3	4.3	4.2	4.2	4.1F	4.1						
27								4.1	4.4	4.4	4.5	B	B	4.3	4.4F	4.1	4.2P	(4.0)B						
28								3.8	(4.3)B	A	4.4	4.4	4.4	4.3	4.3	4.2	(4.2)B	4.2						
29								3.7P	(4.0)B	4.3	4.3	4.3	4.4	4.2	4.1	4.1	4.1	4.2						
30								4.4	4.2	4.1	4.3	4.3	4.0	4.2	4.1	4.2K	4.2K	4.0K						
31																								
Median							—	4.1	4.3	4.4	4.4	4.3	4.3	4.3	4.3	4.2	4.2	4.1	4.2					
Count							4	29	27	24	26	22	26	30	28	27	27	25	6					

Sweep 1.0 Mc to 25.0 Mc in 0.25 min

Manual ☐ Automatic ☒

Table 47

Ionospheric Storminess at Washington, D. C.

September 1950

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			2	1
2	2	2			1	1
3	4	5	0600	----	3	5
4	4	6	----	----	5	4
5	4	6	----	----	5	4
6	4	5	----	----	5	4
7	4	2	----	0400	4	3
8	2	2			5	4
9	1	2			4	2
10	1	1			3	3
11	2	2			5	2
12	1	2			3	2
13	1	1			2	2
14	1	1			1	1
15	1	2			1	1
16	1	2			2	4
17	1	3			3	4
18	2	2			5	3
19	1	1			3	3
20	1	1			5	3
21	2	3			3	1
22	2	3			1	1
23	2	2			3	4
24	1	3			3	4
25	2	0			4	4
26	1	1			3	3
27	1	2			3	2
28	2	2			2	2
29	2	2			1	1
30	2	3	2000	----	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 48

Provisional Radio Propagation Quality Figures
(Including Comparisons with CRPL Warnings and Forecasts)
August 1950

Day	North Atlantic quality figure Half day GCT (1)	(2)	CRPL* Warning Half day GCT (1)	(2)	CRPL** Forecasts (J-reports)	North Pacific quality figure Half day GCT (1)	(2)	Geo-magnetic K_{Ch} Half day GCT (1)	(2)
1	5	6				6	5	3	3
2	5	6				7	6	2	3
3	(4)	6	U			6	5	(4)	3
4	5	6				6	6	3	2
5	7	6			X	6	5	1	2
6	7	6			X	7	6	2	3
7	6	5	W	W		5	5	(4)	(5)
8	(3)	(2)	W	W		(3)	(4)	(6)	3
9	(3)	(3)	W	W	X	(3)	(4)	(5)	(4)
10	(3)	(4)	U	W		(4)	(3)	(4)	(4)
11	(3)	(4)	W	W		(3)	(4)	(4)	(4)
12	(3)	(4)	U	U		(3)	(4)	(5)	3
13	5	5				(4)	5	3	3
14	5	(4)				(4)	(4)	3	(4)
15	5	5				(4)	5	(4)	2
16	7	6				5	6	3	2
17	7	7				7	5	2	1
18	7	5				5	5	2	3
19	(3)	(2)	U	W		(2)	(3)	(5)	(7)
20	(3)	(2)	W	W		(2)	(4)	(9)	3
21	(4)	5	W	(U)	X	(4)	(4)	3	2
22	5	5		U	X	6	5	1	2
23	5	5	U			6	5	2	2
24	6	6				6	6	1	1
25	6	6				6	6	2	1
26	7	6				7	6	1	1
27	8	6				8	7	1	2
28	6	6				6	5	2	3
29	5	6				6	6	3	3
30	(4)	6				6	5	3	3
31	6	6				7	5	2	2

Score:	Warning N.A.	Warning N.P.	Forecast N.A.	Forecast N.P.
H	16	15	3	4
(M)	3	2	0	0
M	2	4	15	16
G	39	37	37	36
O	2	4	7	6

*Broadcast on WWV, Washington, D.C. Times of warnings recorded to nearest half day as broadcast. ( ) broadcast for one-quarter day. Blanks signify N.

**In addition to dates marked X, the following were designated as probable disturbed days on forecast more than eight days in advance of said dates: August 8 and 20.

Scales:

Quality Figures
- (1)- Useless
- (2)- Very poor
- (3)- Poor
- (4)- Poor to fair
- 5 - Fair
- 6 - Fair to good
- 7 - Good
- 8 - Very good
- 9 - Excellent

Geomagnetic K_{Ch} - 0 to 9, 9 representing the greatest disturbance; $K_{Ch} \geq 4$ indicates significant disturbance, enclosed in ( ) for emphasis.

Symbols:
- W Disturbed conditions expected
- U Unstable conditions expected
- N No disturbance expected
- X Probable disturbed date

Scoring:
- H Storm ($Q \leq 4$) hit
- (M) Storm severer than predicted
- M Storm missed
- G Good day forecast
- O Overwarning

Scoring by half day according to following table:

	Quality Figure ≤ 3	4	5	≥ 6
W	H	H	O	O
U	(M)	H	H	O
N	M	M	G	G
X	H	H	O	O

Table 49a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept.1.6	-	-	-	-	-	-	-	-	4	4	3	3	-	4	7	5	8	6	-	-	8	8	7	5	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	3	8	6	4	9	11	14	13	12	9	9	3	3	8	13	11	9	7	8	7	3	3	2	2	2	1	-	-	-	-
3.6	-	-	-	-	-	-	1	8	7	7	7	8	12	16	16	15	14	8	4	2	2	5	9	9	7	6	7	4	2	1	2	2	2	-	-	-	-
5.6	-	-	-	-	-	-	-	2	3	5	5	4	7	10	12	11	23	17	15	16	8	3	2	-	-	-	2	3	1	-	2	2	-	-	-	-	-
6.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	12	10	10	7	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	9	11	12	11	9	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	3	9	12	11	13	13	12	10	9	9	9	3	-	-	-	-	-	-	-	-	-	-	-	-	-
9.8	-	-	-	2	5	12	14	15	14	14	14	14	16	15	11	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.6	-	-	-	-	-	-	-	-	-	-	-	2	3	5	11	19	18	13	11	10	13	20	16	8	4	2	-	-	-	-	-	-	-	-	-	-	X
11.7	-	-	-	-	-	-	-	-	-	-	-	2	3	8	13	19	20	16	15	12	12	22	21	11	4	-	-	-	-	-	-	-	-	-	-	-	-
12.8	-	-	-	-	-	-	-	-	-	-	-	-	3	7	10	14	13	14	9	8	8	10	11	12	3	2	-	-	-	-	-	-	-	-	-	-	-
13.8	-	-	-	-	-	1	2	2	3	3	3	2	-	2	11	12	11	9	10	10	10	10	13	12	11	9	-	-	-	-	-	-	X	X	X	X	X
14.9	X	X	-	-	-	-	2	3	3	3	4	3	4	2	10	15	14	3	5	8	10	11	11	9	8	5	4	X	X	X	X	X	X	X	X	X	X
15.6	X	X	-	-	-	-	-	-	-	-	2	4	4	3	7	10	10	8	3	4	4	5	7	7	3	2	-	-	-	-	-	-	-	-	-	X	X
16.6	-	-	-	-	-	3	3	-	4	4	3	3	5	9	9	11	10	4	-	-	-	-	-	3	4	3	3	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	4	4	3	4	7	8	9	10	11	16	22	18	9	8	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.6	-	-	-	-	-	-	-	2	2	4	3	4	5	10	12	17	15	9	6	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	2	2	4	7	8	8	7	12	20	27	22	13	10	12	13	10	9	3	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6	-	-	-	-	-	-	-	-	4	4	3	3	3	13	15	20	16	12	12	13	14	14	10	4	-	-	-	-	-	-	-	-	-	-	X	X	X
21.6	-	-	-	-	-	-	-	-	-	-	-	-	2	10	13	16	15	7	8	12	13	16	12	3	-	-	-	-	-	-	-	-	-	X	X	X	X
23.0	X	X	X	X	-	-	-	-	-	-	-	-	-	2	6	12	10	3	-	-	3	3	9	7	4	5	X	X	X	X	X	X	X	X	X	X	X
23.8	X	X	X	X	-	-	-	-	-	-	-	-	-	-	5	15	11	8	3	3	2	4	4	5	5	4	X	X	X	X	X	X	X	X	X	X	X
24.6	-	-	-	-	-	-	-	-	-	2	2	3	3	4	12	15	9	5	4	3	-	7	8	8	7	5	4	3	4	5	5	3	2	-	-	-	-
25.8	-	-	-	-	-	-	-	-	-	2	2	2	3	3	5	10	9	3	2	2	1	1	2	6	5	4	5	4	3	4	4	2	1	-	-	-	-
26.7	X	X	-	-	-	-	-	-	-	-	3	4	5	5	7	9	9	3	-	-	-	2	3	3	2	-	-	-	2	2	2	2	-	-	X	X	X
27.7	-	-	-	-	-	-	-	-3	3	4	5	7	8	10	12	11	9	8	6	7	6	8	8	8	9	9	5	3	3	4	5	3	2	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	-	-	3	10	10	10	9	-	-	-	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	-	-	-	-	3	4	7	8	9	7	-	7	9	9	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Observation low weight: Sept. 1.6 at N05 - N50; Sept. 7.6 at S70 - S90; Sept. 10.6 at N45 - N90; Sept. 18.6 at S10 - S70; Sept. 19.7 at S05 - S70; Sept. 21.6 at N35 - N90.

Table 50a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept.1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	-	-	1	1	1	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	1	2	2	2	2	1	1	1	1	-	1	2	2	1	1	1	1	1	1	1	1
3.6	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	9	8	1	2	2	2	2	1	1	1	1	1	3	3	2	1	1	1	2	2	1	1
5.6	1	1	-	1	1	2	2	1	1	1	1	1	1	-	-	-	2	4	-	5	3	-	1	1	2	1	1	1	2	2	1	1	1	1	1	1	1
6.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	4	4	2	-	-	1	-	-	-	-	-	-	-	2	2	1	1	1	1
8.6	1	-	-	-	-	-	-	1	1	1	1	1	-	-	1	-	-	-	-	-	3	4	4	3	2	1	1	1	1	1	1	2	2	2	1	1	1
9.8	-	-	-	-	-	-	1	2	3	3	1	-	1	1	4	9	14	-	3	2	4	5	9	-	-	-	2	2	2	1	-	1	1	2	2	1	1
10.6	1	1	1	-	-	-	1	1	3	3	3	2	-	-	8	-	11	1	1	3	3	4	5	-	-	-	2	1	2	1	1	1	1	1	1	2	X
11.7	2	2	1	-	-	1	1	1	2	3	3	3	2	4	5	1	10	2	-	-	1	4	6	13	1	1	1	2	2	2	2	2	2	2	2	1	1
12.8	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	-	-	-	-	1	2	3	3	3	3	1	-	-	-	-	-	-	-	-	-	-	-
13.8	1	1	1	1	1	1	1	2	2	2	1	-	1	2	14	6	14	1	2	2	2	2	-	5	4	1	1	2	4	4	1	1	X	X	X	X	X
14.9	X	X	1	1	1	-	-	-	1	2	-	-	-	4	9	6	5	1	1	3	2	-	3	3	-	-	-	X	X	X	X	X	X	X	X	X	X
15.6	X	X	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	2	2	1	1	1	1	-	-	-	1	1	2	2	1	1	1	1	X	X
16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	2	1	1	2	2	2	7	7	6	1	1	-	-	2	1	-	-	1	1	1
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	1	1	1	1	1	1	2	2	3	5	2	2	1	1	1	1	1	1	1	1
19.7	1	1	1	1	1	1	1	1	-	-	-	-	-	1	2	12	9	-	-	10	1	1	-	7	7	8	9	8	8	3	4	4	1	1	1	1	1
20.6	1	1	1	1	1	1	1	-	-	-	-	-	2	2	6	12	16	3	4	-	-	7	-	-	-	1	1	1	3	3	2	2	1	1	X	X	X
21.6	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	17	15	1	-	12	1	8	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X
23.0	X	X	X	X	-	-	-	-	-	-	-	-	1	1	1	4	3	1	-	-	1	1	1	1	-	-	X	X	X	X	X	X	X	X	X	X	X
23.8	X	X	X	X	-	-	-	-	-	-	-	-	-	-	1	2	5	1	1	1	1	1	1	-	-	-	X	X	X	X	X	X	X	X	X	X	X
24.6	1	1	1	1	1	1	1	1	1	1	-	-	-	-	1	3	2	4	4	3	3	3	2	1	-	-	-	-	1	5	3	3	2	2	1	-	1
25.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
26.7	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	X	X	X
27.7	-	-	-	1	1	1	1	1	-	-	-	-	-	-	1	4	5	2	3	4	5	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	14	2	10	2	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1
30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	10	8	4	5	10	5	1	-	-	1	1	1	1	1	-	-	-	-	-	-	-

Note: Observation low weight: Sept. 7.6 at S70 - S90; Sept. 10.6 at N45 - N90; Sept 21.6 at N35 - N90.

Table 49b

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

Date GCT	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept.1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	6	10	11	11	10	9	8	-	-	-	5	5	6	5	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	6	8	13	13	10	9	9	10	10	9	11	12	9	9	4	4	3	4	-	-	-	-
3.6	-	-	-	-	-	-	-	-	2	2	2	1	1	3	4	3	3	6	9	8	10	17	16	12	12	13	13	11	9	4	2	4	4	-	-	-	-
5.6a	-	-	-	-	-	-	-	-	2	4	4	3	3	4	5	7	11	10	9	10	17	22	18	14	13	12	10	9	9	7	4	2	2	1	-	-	-
6.6	-	-	-	-	-	-	-	-	3	3	3	4	3	4	8	10	11	13	7	4	9	11	11	12	10	7	4	3	3	3	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	9	17	16	15	8	6	9	10	9	10	7	8	4	5	5	4	3	-	-	-	-	-
8.6	-	-	-	-	-	-	2	3	4	5	5	4	3	3	10	14	16	15	9	9	8	9	11	9	8	4	3	3	3	2	2	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-	2	2	3	3	4	5	6	7	9	9	8	7	11	12	8	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
10.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-
11.7	-	-	-	-	-	2	2	3	4	5	6	7	9	10	11	9	4	4	4	8	9	10	10	8	6	3	4	3	2	-	-	-	-	-	-	-	-
12.8	-	-	-	-	-	-	1	2	3	6	5	8	9	11	12	10	9	8	7	8	10	13	11	5	-	-	-	-	-	-	-	-	-	-	-	-	-
13.8	X	X	X	X	-	-	-	-	-	2	3	4	7	9	10	10	9	8	8	7	8	9	10	7	4	X	X	X	X	X	X	-	-	-	-	-	-
14.9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16.6	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	4	4	3	4	3	10	11	14	13	9	8	6	4	3	8	5	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5	9	11	13	12	7	7	14	14	14	13	10	9	8	6	7	7	4	-	-	-	-	-
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	4	14	15	10	5	10	10	10	9	5	4	3	6	5	3	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	8	17	23	14	13	14	9	9	8	4	4	3	3	2	3	2	-	-	-	-	-
20.6	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	2	8	11	13	14	13	10	9	6	2	-	X	X	X	X	-	-	-	-	-	-	-
21.6	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	3	4	7	8	10	9	10	9	7	4	3	-	-	-	-	-	-	-	-	-	-	-
23.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
23.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
24.6	-	-	-	-	-	-	-	-	-	-	-	-	3	6	14	24	23	13	13	13	15	18	14	10	7	7	8	2	-	-	-	-	-	-	-	-	-
25.8	-	-	-	-	-	-	-	-	-	-	-	2	3	5	9	11	11	10	9	9	9	10	10	9	3	-	-	-	-	-	-	-	-	-	-	-	-
26.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
27.7	-	-	-	-	-	-	-	-	-	-	-	3	6	10	13	13	13	12	9	8	7	9	9	8	5	3	2	-	-	-	-	-	-	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	5	7	8	3	-	10	18	15	9	5	2	-	-	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	4	3	-	3	5	6	3	-	-	-	-	-	-	-	-	-	-	-	-

Note: Observation low weight: Sept 7.6 at S60 - S90 and N05 - N45; Sept. 21.6 at S0N - S70 and N60 - N90.

Table 50b

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

Date GCT	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept.1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
2.6	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	4	5	4	3	-	-	-	-	1	1	1	12	9	-	-	-	-	-	-	-	-	-
3.6	1	4	1	1	-	1	1	2	2	3	1	3	4	2	1	3	4	3	5	2	4	1	1	1	1	1	-	10	5	-	-	1	1	1	1	1	-
5.6a	1	1	-	-	-	-	1	2	4	4	2	3	4	5	1	-	4	10	1	1	2	14	8	-	-	-	-	-	-	-	-	1	1	1	1	1	1
6.6	-	-	-	-	-	-	-	1	1	2	2	1	1	-	-	-	1	4	2	-	5	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	1	1	1	1	1	1	-	-	-	2	3	3	2	1	1	1	1	2	2	1	1	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-	-
8.6	1	1	1	1	1	1	2	2	2	2	2	2	3	1	1	2	1	3	3	2	2	2	3	3	2	1	1	1	1	1	-	1	1	1	1	1	1
9.8	1	1	1	1	1	1	1	1	1	1	-	-	1	1	2	4	2	1	1	1	2	4	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-
10.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	1	1	1
11.7	1	1	1	1	1	2	2	2	-	-	-	-	-	1	2	2	1	1	1	-	-	-	3	4	-	-	-	-	1	1	1	1	1	-	-	-	2
12.8	-	-	2	2	2	1	1	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.8	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	1	1	1	1	1	1
14.9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16.6	-	-	-	-	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
17.7	1	1	1	1	1	1	1	1	2	2	2	3	-	1	1	1	-	4	13	1	5	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
18.6	1	1	1	1	1	1	1	1	1	1	2	2	1	1	-	-	1	11	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	1	1	1	1	1	1	1	2	2	2	2	1	1	1	-	-	1	13	5	9	5	4	2	1	-	-	-	-	-	-	1	1	1	1	1	1	1
20.6	X	X	X	X	1	1	1	1	-	-	-	-	-	-	-	1	1	4	5	1	2	2	2	-	-	-	X	X	X	X	1	1	1	1	1	1	1
21.6	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
23.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
24.6	1	1	2	1	1	2	3	1	1	1	1	1	1	1	1	4	4	8	1	1	1	20	2	1	-	-	-	1	1	1	1	1	1	1	1	1	1
25.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	-	-	-	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
27.7	-	-	-	-	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
29.6	1	1	-	-	-	-	-	1	1	1	1	1	1	1	1	1	2	3	9	-	-	2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-

Note: Observation low weight: Sept. 7.6 at S60 - S90 and N05 - N65; Sept. 21.6 at S0N- S70 and N60 - N90.

Table 51a

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

Date GCT	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept. 1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	1	2	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	X
11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	1	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
12.8	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-
13.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X
14.9	X	X	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X
15.6	X	X	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X
16.6	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X
21.6	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X
23.0	X	X	X	X	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X
23.8	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X
24.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.7	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X
27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Observation low weight: Sept. 7.6 at S70 - S90; Sept. 10.6 at N45 - N90; Sept. 21.6 at N35 - N90.

Table 51b

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

Date GCT	Degrees south of the solar equator 90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5	0°	Degrees north of the solar equator 5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept. 1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.6a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.8	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	-	-
14.9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.6	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-
21.6	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
23.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
24.6	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	4	4	1	2	1	1	1	2	2	1	1	1	-	-	-	-	-	-	-	-	-	-
25.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Observation low weight: Sept 7.6 at S60 - S90 and N05 - N65; Sept. 21.6 at S05 - S70 and N60 - N90.

Table 52a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Aug. 2.0	-	-	-	-	-	-	-	-	-	-	-	6	7	9	9	7	5	5	5	7	7	7	12	20	25	13	9	6	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-	10	12	16	22	16	12	11	-	-	X	X	X	X	X	X	X	X
3.9	-	-	-	-	-	-	5	6	10	12	12	14	15	16	24	27	19	15	13	13	14	16	20	27	30	25	17	12	10	7	5	6	8	10	7	5	-
4.9	-	-	-	-	-	-	5	6	11	12	15	16	21	23	31	34	20	13	13	14	18	24	25	23	20	20	14	9	7	6	6	6	7	6	5	4	-
5.6	-	-	-	-	4	5	7	10	12	10	11	13	18	27	26	26	20	12	11	12	15	18	21	19	15	15	13	10	6	5	5	4	4	4	3	3	-
6.6	-	-	-	-	3	7	11	12	11	10	10	12	19	28	28	25	21	15	13	14	12	25	24	14	14	14	11	13	10	7	7	6	6	5	-	-	-
7.6	-	-	-	-	3	6	10	13	11	11	10	13	24	30	33	29	25	20	14	12	11	17	17	10	9	13	11	11	7	6	5	5	-	-	-	-	-
8.8	-	-	-	-	-	-	-	-	-	-	-	11	12	13	19	22	20	17	12	11	10	10	10	-	-	-	-	10	11	10	-	-	-	-	-	-	-
9.7	-	-	-	-	-	-	-	-	4	6	7	9	13	15	22	32	30	25	15	10	8	8	9	7	4	-	4	5	4	-	-	-	-	-	-	-	-
10.7	-	-	-	-	-	-	-	-	5	6	8	6	8	10	13	22	28	21	15	12	10	9	8	6	4	-	-	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	6	6	7	11	14	19	19	20	20	19	18	12	10	6	5	5	-	-	-	5	5	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	6	10	12	13	15	20	20	21	19	20	22	16	13	12	10	7	5	4	-	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	3	5	6	10	12	15	20	22	22	25	27	25	24	25	25	24	15	8	5	-	-	-	-	-	-	-	-	-	-
14.7	-	-	-	-	-	-	-	-	-	-	4	5	7	11	14	17	18	17	16	17	25	28	31	33	7	4	3	-	-	X	X	X	X	X	X	X	X
16.7	-	-	-	-	-	-	-	-	3	6	15	13	11	7	7	15	18	15	15	14	12	21	26	26	14	7	4	3	-	-	-	-	-	-	-	-	-
17.6	-	-	-	-	-	-	-	4	5	11	19	21	20	17	11	9	13	14	13	12	14	20	19	20	11	4	3	-	-	-	-	-	-	-	-	-	-
18.6	-	-	-	-	-	-	3	6	9	11	19	24	24	23	25	11	10	13	15	18	24	30	24	22	10	4	3	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	5	8	10	12	18	22	25	25	15	12	11	12	14	20	25	21	17	15	9	5	3	-	-	-	-	-	-	-	-	-
20.8	-	-	-	-	-	-	-	-	6	8	9	10	10	11	13	15	18	10	10	15	9	8	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-
21.8	-	-	-	-	-	-	-	-	-	9	10	10	10	12	15	14	12	11	9	9	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.9	-	-	-	-	-	-	-	-	-	-	9	9	10	11	14	12	13	11	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	-	7	7	6	9	12	14	14	15	16	12	18	21	10	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.8	-	-	-	-	-	-	-	-	-	-	-	4	5	15	19	18	18	19	16	20	40	28	15	12	8	5	-	-	-	-	-	-	-	-	-	-	-
26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	11	12	15	18	13	11	10	-	-	-	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	-	4	5	6	5	5	4	4	6	8	11	13	15	10	6	4	5	7	6	5	5	4	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	6	5	5	-	-	4	11	19	15	10	6	5	5	6	5	5	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	6	7	8	8	6	-	-	-	-	6	10	18	19	15	8	7	6	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	7	7	8	9	11	10	9	8	7	8	8	9	9	10	11	13	9	7	-	-	-	-	-	-	-	-	-
31.8	-	-	-	-	-	-	-	5	5	5	6	8	9	11	12	10	7	6	6	9	11	12	11	10	12	13	8	6	-	-	-	-	-	-	-	-	-

Table 53a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Aug. 2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	6	3	8	1	1	1	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	6	4	-	-	-	X	X	X	X	X	X	X	X
3.9	2	4	3	3	3	1	2	3	2	1	-	-	-	1	3	8	7	2	1	3	8	6	3	2	1	2	2	2	3	5	3	2	3	3	3	2	1
4.9	2	2	3	2	2	2	2	2	1	1	1	1	1	1	2	12	4	10	1	3	15	12	5	2	1	1	1	1	2	3	1	1	-	-	-	-	1
5.6	2	3	2	2	3	2	2	2	1	1	2	2	2	3	2	10	8	8	1	2	15	8	3	1	1	1	1	2	5	3	2	1	1	2	1	1	-
6.6	1	1	2	2	3	2	2	1	1	1	1	-	1	5	3	7	4	4	2	2	4	13	6	3	2	1	1	2	2	3	2	1	1	1	1	1	1
7.6	2	2	2	1	1	1	-	-	-	1	2	2	2	2	2	2	3	2	3	3	3	8	4	3	1	1	2	2	2	2	1	1	1	2	2	1	1
8.8	-	-	-	-	-	-	-	-	-	-	-	5	5	-	-	-	8	-	4	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.7	1	2	1	-	-	-	-	-	-	-	2	-	3	-	-	1	10	2	9	3	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
10.7	-	-	-	-	-	-	-	-	-	1	2	1	1	-	-	1	6	2	4	3	2	2	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-
11.7	1	2	1	-	-	-	-	1	3	4	4	2	2	1	1	-	1	5	2	1	2	2	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	1	2	3	3	2	2	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	1	3	9	12	12	2	10	13	6	3	2	1	1	1	2	2	1	1	-	-	-	1
14.7	2	1	-	-	-	-	-	-	1	2	1	-	-	1	1	3	4	10	4	3	4	11	5	15	4	2	1	-	-	X	X	X	X	X	X	X	X
16.7	1	1	1	-	-	-	-	-	1	2	3	1	1	2	3	3	3	1	1	1	1	3	9	12	3	1	-	-	-	-	-	-	-	-	-	-	-
17.6	-	-	-	-	-	-	-	-	-	1	1	12	1	1	4	2	1	1	1	1	4	8	9	9	1	-	-	-	-	1	1	1	1	-	-	-	-
18.6	-	-	-	-	-	1	-	-	-	-	1	13	5	1	3	4	3	2	1	1	3	14	15	8	1	-	-	-	-	-	-	-	-	-	-	-	-
19.7	2	1	-	-	-	-	-	-	-	-	-	1	8	2	1	1	3	1	1	1	2	8	15	15	10	1	1	1	-	-	-	-	-	-	-	-	-
20.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	11	2	3	4	4	2	1	1	3	1	-	-	-	-	-	-	-	-
21.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	8	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	1	3	8	5	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.8	-	-	-	-	-	-	-	-	-	-	-	1	2	3	2	1	2	9	5	2	15	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	8	7	2	2	-	-	-	-	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	4	6	3	2	1	-	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	4	4	1	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 52b

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

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Aug. 2.0	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
2.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-
3.9	-	-	-	-	-	-	-	-	-	-	5	6	7	11	13	15	17	16	17	17	19	25	24	22	21	18	15	14	13	12	8	5	-	-	-	-	-
4.9	-	-	-	-	-	-	-	-	-	6	6	7	7	11	13	20	27	20	16	16	16	14	14	16	17	12	12	12	12	9	6	-	-	-	-	-	-
5.6	-	-	-	-	-	-	-	-	-	3	3	3	4	7	14	17	25	20	13	14	13	15	16	20	15	9	11	12	11	10	7	4	-	-	-	-	-
6.6	-	-	-	-	-	-	-	-	-	-	4	4	5	7	12	18	26	23	20	20	14	20	20	15	20	9	13	14	12	10	8	6	3	-	-	-	-
7.6	-	-	-	-	-	-	-	-	5	7	7	8	8	11	13	13	14	17	20	20	25	30	20	28	13	12	14	14	10	5	3	3	3	-	-	-	-
8.8	-	-	-	-	-	-	-	-	-	8	9	9	9	10	10	10	10	10	12	14	21	24	26	21	16	14	11	10	14	9	-	-	-	-	-	-	-
9.7	-	-	-	-	-	-	-	-	-	6	7	8	9	10	14	14	15	18	16	16	22	28	27	24	18	15	12	13	15	7	4	-	-	-	-	-	-
10.7	-	-	-	-	-	-	-	-	-	5	5	5	5	6	12	19	15	17	23	22	19	22	21	18	12	10	7	7	9	6	4	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	5	6	8	8	9	9	10	13	25	28	25	31	28	12	20	20	16	12	8	6	6	6	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	4	5	5	6	7	11	20	28	22	26	19	12	6	14	11	8	8	6	5	4	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	3	5	6	10	13	14	15	17	18	20	23	20	17	12	10	7	11	12	10	8	5	4	-	-	-	-	-	-	-	-	-
14.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	3	-	-	-	-	-	-	-	-
16.7	-	-	-	-	-	-	-	-	-	-	12	12	13	15	17	15	12	11	10	10	10	9	10	11	13	13	11	10	10	8	3	-	-	-	-	-	-
17.6	-	-	-	-	-	-	5	5	5	7	10	12	15	19	20	22	19	14	10	11	13	13	14	16	12	12	10	10	14	6	3	-	-	-	-	-	-
18.6	-	-	-	-	5	5	5	5	7	9	12	14	18	20	21	23	25	16	12	12	16	28	20	20	16	14	12	13	12	14	7	3	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	5	7	8	9	9	10	10	11	15	6	11	13	21	20	20	17	13	12	12	6	5	11	3	-	-	-	-	-
20.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6	8	8	7	10	12	12	15	21	25	19	14	12	10	8	10	7	-	-	-	-	-
21.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	10	15	21	16	13	10	10	9	9	9	-	-	-	-	-	-	-	-
22.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	12	21	20	18	13	12	10	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	6	11	14	20	26	18	12	9	8	7	7	6	5	-	-	-	-	-	-	-
24.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	7	10	15	20	23	25	23	20	12	6	4	-	-	-	-	-	-	-	-	-	-
26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	8	9	10	12	14	13	13	14	14	13	12	11	9	11	8	-	-	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	-	4	11	24	25	28	16	14	15	18	20	19	16	11	8	5	4	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12	25	28	27	17	20	27	32	28	20	15	11	7	5	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	6	9	14	18	16	13	15	20	23	24	18	11	8	6	6	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	9	10	11	13	12	13	13	14	15	13	15	12	9	8	7	-	-	-	-	-	-	-	-	-
31.8	-	-	-	-	-	-	-	-	-	-	-	-	6	9	13	15	18	16	13	12	12	12	12	12	12	12	7	6	-	-	-	-	-	-	-	-	-

Table 53b

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

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Aug. 2.0	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
2.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-
3.9	1	-	1	1	2	2	1	2	1	2	2	2	-	1	3	4	12	2	1	1	3	8	6	4	3	3	2	2	2	3	3	2	1	1	1	2	2
4.9	1	1	-	-	-	-	-	2	2	3	3	2	1	1	2	3	13	2	1	1	3	10	5	2	1	-	-	-	-	-	-	-	-	-	-	-	-
5.6	-	-	-	-	-	-	-	-	-	1	3	2	1	1	1	5	10	2	1	2	3	8	4	1	-	-	-	-	2	2	2	2	2	-	-	-	2
6.6	1	1	1	1	1	1	1	1	-	2	3	2	2	2	1	3	15	4	2	4	3	5	6	2	1	-	-	-	-	-	-	-	-	-	-	-	1
7.6	2	2	1	1	1	1	1	1	1	2	1	2	2	3	8	11	8	2	7	4	7	3	1	-	-	-	-	-	-	-	-	-	1	1	2	2	2
8.8	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	4	5	9	6	7	5	4	3	3	-	-	-	-	-	-	-	-	-	2	2	-	-
9.7	-	-	-	-	-	-	-	-	-	2	2	2	2	3	4	2	3	3	5	3	11	4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
10.7	-	-	-	-	-	-	-	-	-	1	1	1	2	1	1	2	2	6	9	4	13	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7	1	2	1	-	-	-	-	-	-	-	-	1	2	2	1	8	2	9	12	7	12	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	3	10	11	6	5	1	-	-	-	1	2	1	-	-	-	-	-	-	-	-
13.7	1	2	1	-	-	-	-	-	-	-	-	-	-	1	4	9	6	2	1	-	1	2	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-
14.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	1	2
16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
17.6	-	-	-	-	-	-	-	-	-	2	2	1	-	-	2	2	2	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.6	-	-	-	-	-	-	-	1	2	4	2	1	1	1	1	5	2	10	5	1	1	3	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	1	4	1	1	-	-	1	5	8	11	7	2	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1	2
20.8	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	1	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2	7	7	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
22.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	7	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	12	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
24.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	8	2	1	-	-	-	-	-	-	-	-	-	-	-	-
26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	3	2	1	2	6	8	9	2	1	-	-	-	-	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	1	1	3	4	7	8	8	3	1	4	8	15	2	1	2	1	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	10	10	3	1	1	1	2	10	6	1	-	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6	3	2	-	-	2	2	5	4	2	-	-	-	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-	-	2	4	2	-	-	-	-	-	-	-	-	-

Table 54a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Aug. 2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X
3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-
4.9	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.6	-	-	-	-	-	-	-	-	-	-	-	2	2	2	4	3	2	-	-	-	2	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
6.6	-	-	-	-	-	-	-	-	-	-	-	1	2	3	2	1	1	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	1	1	2	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.7	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	3	1	1	-	-	-	-	X	X	X	X	X	X	X	X
16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
17.6	-	-	-	-	-	-	-	-	-	1	2	1	1	1	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
18.6	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	1	1	2	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	-	-	1	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 55a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept.1.8	-	-	-	-	-	-	-	-	10	11	8	9	9	13	14	13	13	11	9	3	6	14	13	12	10	9	9	7	3	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	10	11	8	6	12	13	16	15	13	11	10	3	-	8	14	12	11	9	10	7
6.0	-	-	-	-	-	-	-	2	3	3	5	9	9	10	14	14	19	23	25	20	17	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	9	14	15	18	24	22	16	10	9	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	3	4	13	13	13	13	15	14	10	9	10	9	4	-	-	-	-	-	-	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-	-	-	-	-	2	3	4	9	17	19	15	12	10	11	12	13	17	12	9	5	3	-	-	-	-	-	-	-	-	-
10.8	-	-	-	-	-	-	2	2	1	-	-	2	7	11	14	22	33	29	14	15	14	25	34	30	10	8	8	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	-	2	2	3	9	17	22	26	23	14	14	13	18	28	27	12	7	3	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	3	4	2	2	3	4	5	11	16	21	22	27	14	13	13	15	18	19	17	8	3	3	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	6	9	8	6	7	9	10	11	14	25	25	22	20	13	13	14	15	16	13	8	4	3	-	-	-	-	-	-	-	-	-
14.7	-	-	-	-	-	-	7	8	10	10	11	12	13	12	33	31	28	13	15	15	16	17	27	18	15	13	11	9	-	-	-	-	-	-	-	-	-
15.7	-	-	-	-	-	3	9	11	10	10	13	13	15	14	12	33	32	15	9	17	15	16	17	17	15	9	6	5	-	-	-	-	-	-	-	-	-
16.7	-	-	-	-	-	3	10	9	9	10	8	10	16	15	15	17	20	12	6	5	10	8	7	9	11	10	8	8	-	-	-	-	-	-	-	-	-
17.9a	-	-	-	-	-	3	8	9	9	10	11	11	11	12	13	14	28	20	14	10	7	8	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	5	9	8	10	12	12	12	14	22	35	35	33	20	18	17	17	14	12	8	3	2	-	-	-	-	-	-	-	-	-	-
22.7	-	-	-	-	-	-	-	-	3	4	2	-	-	3	15	25	24	12	-	3	8	9	13	13	8	4	3	3	5	6	7	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	2	3	3	3	-	-	-	12	30	11	4	-	-	5	9	11	10	7	5	2	3	8	5	2	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	3	4	6	7	8	17	25	18	10	9	4	8	13	14	11	11	10	5	3	8	9	8	7	2	-	-	-
25.8	-	-	-	-	-	-	-	-	-	-	2	7	10	10	10	14	15	14	8	5	2	6	10	12	12	10	6	3	3	4	8	4	-	-	-	-	-
26.7	-	-	-	-	-	-	-	-	-	-	4	10	11	10	10	13	13	12	7	3	-	5	10	11	10	7	6	6	6	7	9	8	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	4	5	10	11	11	9	14	20	10	13	3	11	8	9	10	8	9	9	6	3	-	-	5	4	3	-	-	-	-
28.7	-	-	-	-	-	-	-	3	4	9	9	11	10	17	15	27	16	13	9	15	18	11	10	9	9	8	6	6	4	3	6	8	4	-	-	-	-
29.7	-	-	-	-	-	-	-	-	7	8	9	6	10	14	14	14	27	10	4	3	12	18	10	7	4	4	4	3	-	-	3	4	3	-	-	-	-

Table 54b

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

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Aug. 2.0	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
2.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-
3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-
4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
10.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-
16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
20.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
24.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	1	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 55b

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

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept. 1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	13	23	17	15	13	10	9	9	9	8	13	12	18	10	8	5	3	-	-	-	-	-
2.7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	8	10	10	14	15	10	3	11	10	10	10	13	16	10	9	7	3	-	-	-	-	-	-
6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	10	11	16	9	9	17	19	18	16	15	14	13	11	10	10	8	6	3	4	-	-
7.8	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5	10	17	19	14	8	4	6	11	10	9	10	7	8	6	7	6	5	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	3	4	3	3	3	2	2	8	11	15	16	6	6	8	10	9	8	7	3	5	4	4	5	3	-	-	-	-	-
9.8	-	-	-	-	-	-	-	-	3	3	4	4	5	4	5	5	7	10	9	6	5	12	17	13	3	3	-	-	-	-	-	-	-	-	-	-	-
10.8	-	-	-	-	-	-	-	-	3	4	4	6	9	11	14	10	5	7	-	3	8	11	17	12	6	-	-	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	2	5	9	8	10	11	15	18	15	10	10	10	10	12	15	17	13	12	9	4	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	2	5	6	6	7	11	14	16	13	11	9	8	10	14	16	15	15	5	12	9	4	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	4	8	10	12	14	17	20	21	19	13	12	10	13	14	17	23	16	12	15	10	9	3	-	-	-	-	-	-	-
14.7	-	-	-	-	-	-	-	3	4	4	3	8	10	15	18	19	19	17	14	12	12	13	15	19	19	10	10	12	13	14	7	-	-	-	-	-	-
15.7	-	-	-	-	-	-	3	3	3	3	4	6	9	11	14	16	17	17	11	12	13	15	34	23	31	14	9	11	13	16	12	-	-	-	-	-	-
16.7	-	-	-	-	-	-	-	2	3	5	-	-	-	-	3	13	13	12	12	11	13	19	24	28	30	17	14	9	9	10	13	12	-	-	-	-	-
17.9	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10	10	8	8	10	8	3	-	-	-	-
18.8	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	4	12	17	32	25	22	28	25	23	21	19	13	12	X	X	X	X	X	X	X	X	X
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	10	14	35	28	25	33	20	16	15	12	10	10	9	8	4	4	-	-	-	-	-
22.7	-	-	-	-	-	-	2	2	3	-	-	2	10	15	22	30	25	17	15	20	24	26	22	16	14	8	2	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	2	2	-	-	2	13	22	32	40	25	20	22	27	29	30	20	16	12	10	3	-	-	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	5	9	13	28	38	20	17	17	18	29	25	20	14	5	9	4	2	-	-	-	-	-	-	-	-
25.8	-	-	-	-	-	-	-	-	-	-	-	2	4	10	12	24	25	23	17	13	16	22	40	30	20	12	7	5	3	-	-	-	-	-	-	-	-
26.7	-	-	-	-	-	-	-	-	-	-	-	2	4	5	14	18	18	17	14	14	15	15	17	19	16	11	7	5	2	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	-	10	8	12	14	14	15	11	9	9	10	13	16	12	10	5	4	2	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	10	9	11	14	13	12	5	3	-	15	27	13	12	10	9	4	5	5	2	2	2	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	2	3	4	7	10	10	9	12	12	4	3	20	28	11	10	8	5	3	2	-	-	-	-	-	-	-

Table 56a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept.1.8	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	1	1	1	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	1	1	1	1	1	1	1	-	-	1	1	1	1	1	1	1	1	1	1
6.0	1	1	1	1	2	2	2	2	2	1	1	1	1	1	-	-	1	5	-	13	12	1	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-
7.8	1	1	1	1	1	1	1	1	2	2	1	1	-	-	1	1	1	1	1	1	2	1	1	1	3	1	1	1	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.8	1	1	1	1	1	-	-	-	2	2	2	1	1	-	-	9	4	12	2	-	2	2	5	10	-	-	-	-	-	-	-	-	-	-	-	-	-
11.7	2	2	1	1	1	1	1	1	4	4	2	3	3	4	5	6	5	8	1	-	2	1	5	10	2	2	2	2	3	3	2	2	2	2	2	2	1
12.7	3	2	2	1	1	1	1	1	2	3	3	2	2	3	5	5	2	2	2	2	1	3	6	7	4	3	2	2	3	3	1	1	1	1	1	1	1
13.7	1	2	2	1	1	1	1	3	1	4	2	1	1	1	13	9	13	4	2	1	1	2	3	3	1	1	1	3	2	2	1	1	1	1	1	1	2
14.7	2	2	2	2	1	2	1	1	-	3	1	1	1	-	11	12	14	12	6	5	5	4	5	10	-	1	2	3	2	2	1	1	-	1	1	1	1
15.7	2	2	1	1	1	-	-	1	1	1	3	1	-	-	-	8	10	9	1	2	7	7	7	5	2	1	1	3	5	2	2	1	1	1	1	1	1
16.7	2	3	2	2	1	1	1	1	1	1	2	1	1	1	1	9	9	8	6	7	8	9	3	8	4	4	1	2	2	3	3	3	2	2	2	2	2
17.9a	2	2	1	-	1	1	1	1	1	1	1	-	-	-	-	-	1	5	X	2	1	1	1	1	9	10	3	1	-	1	2	2	2	2	2	1	1
18.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	9	9	8	8	6	3	1	2	2	-	-	-	1	1
19.7	1	1	2	2	1	1	1	1	-	-	-	-	-	1	1	12	14	1	-	3	-	-	-	1	1	3	3	1	1	2	1	1	1	1	-	1	1
22.7	1	1	-	-	-	-	1	1	1	1	1	1	1	1	8	8	8	6	3	3	2	1	2	1	1	2	1	1	2	2	2	2	1	-	1	1	1
23.8	2	1	1	2	1	-	-	-	1	1	1	1	1	-	-	1	3	-	4	4	3	2	2	1	-	2	2	2	2	2	2	2	2	1	-	1	1
24.7	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	7	3	4	4	4	2	4	1	1	-	-	-	-	2	2	2	1	1	1	1	1	1
25.8	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	1	2	4	1	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	-	1	3	2	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1
27.7	1	1	1	1	1	1	1	1	1	1	-	-	-	1	2	9	5	2	8	10	11	7	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1
28.7	1	1	1	1	1	1	2	2	3	4	1	-	-	-	2	11	12	13	11	17	10	4	1	-	-	2	1	-	-	-	1	1	1	1	1	1	1
29.7	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	8	14	16	9	13	14	11	4	2	1	2	2	1	-	-	-	1	1	1	1	1	-

Table 57a

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

Date	Degrees north of the solar equator																		0°	Degrees south of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept.1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	3	1	1	1	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-
11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-
12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.9	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-
18.8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 56b

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

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept. 1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	4	1	1	–	–	1	1	1	2	12	8	1	–	1	1	1	1	1	2	2
2.7	1	1	1	1	1	1	1	1	4	1	1	1	–	–	–	2	4	4	3	1	–	–	–	–	1	1	11	7	–	–	–	–	–	–	–	–	–
6.0	–	–	–	–	–	–	–	–	1	1	1	1	1	1	–	–	1	7	11	1	–	5	10	1	–	–	–	–	–	–	1	1	1	1	1	1	1
7.8	–	–	–	–	–	–	–	–	1	1	1	–	–	–	–	–	1	3	2	1	1	–	–	–	–	–	–	1	1	1	1	1	1	1	1	1	1
8.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	5	–	–	1	1	2	–	–	1	1	1	–	–	–	–	–	–	–	–	–
9.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	3	1	1	–	–	3	9	2	1	1	1	1	–	–	–	–	–	–	–	–	–
10.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	1	–	–	3	10	1	1	1	1	–	1	1	1	1	1	1	1	1
11.7	1	1	2	2	2	2	3	4	2	–	–	–	1	2	3	2	2	2	3	2	1	–	4	4	–	1	2	2	1	1	1	1	1	–	1	1	2
12.7	1	1	1	1	1	1	1	1	1	–	–	1	1	1	1	1	1	2	2	2	2	1	1	1	1	2	2	1	1	1	1	1	2	2	2	3	3
13.7	2	1	2	2	1	1	1	2	2	1	1	–	–	–	1	1	2	4	–	2	2	1	2	–	–	–	–	2	1	–	–	–	1	2	2	1	1
14.7	1	1	1	2	2	1	1	1	1	1	–	1	1	1	1	1	2	8	1	–	–	–	13	–	–	–	–	–	–	–	1	1	1	1	2	2	2
15.7	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	2	3	2	3	3	3	7	5	1	1	–	–	1	1	2	1	1	1	2	2	2
16.7	2	2	1	1	1	1	2	2	2	2	3	7	6	3	3	2	2	11	5	7	9	8	13	14	10	1	1	1	1	1	1	1	–	–	3	3	2
17.9	1	1	1	1	1	1	1	2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	9	–	–	1	1	1	1	1	1	1	1	2
18.8	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	19	10	1	1	2	1	1	1	1	1	X	X	X	X	X	X	X	X	X
19.7	1	–	–	–	–	1	1	1	1	1	1	2	2	1	2	2	2	1	20	12	11	12	9	4	2	1	3	–	1	1	1	–	–	1	1	1	1
22.7	1	1	1	1	1	1	1	1	1	1	1	2	2	–	–	11	5	3	2	3	9	12	8	–	1	–	–	–	3	1	1	–	–	–	–	1	1
23.8	1	1	1	1	1	2	2	2	1	1	1	2	2	–	–	5	13	4	3	1	11	20	10	1	–	–	1	1	1	2	2	1	1	1	2	2	2
24.7	1	1	1	1	1	1	1	1	1	–	–	1	1	1	–	8	8	13	1	–	–	18	1	–	–	–	2	3	2	1	1	1	–	–	–	–	1
25.8	–	–	–	–	–	2	2	2	2	1	1	–	–	1	3	7	7	4	3	1	–	17	15	2	3	1	1	1	1	1	1	1	1	1	1	1	1
26.7	1	1	1	1	–	–	–	1	1	1	1	1	1	1	2	3	3	5	2	–	2	2	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–
27.7	1	1	–	–	–	–	1	2	2	3	2	1	–	–	–	1	2	2	1	1	1	3	4	–	–	1	1	1	1	2	2	1	1	1	1	1	1
28.7	1	–	–	–	1	1	1	1	2	4	5	3	3	–	–	1	4	5	4	–	–	10	14	2	–	–	–	–	–	1	1	1	1	1	1	1	1
29.7	–	–	–	–	1	1	1	1	1	1	2	1	2	3	2	2	1	4	13	1	–	3	8	8	1	1	1	1	1	1	1	1	1	1	1	1	2

Table 57b

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

Date	Degrees south of the solar equator																		0°	Degrees north of the solar equator																	
GCT	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
1950																																					
Sept. 1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
9.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
10.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
11.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	–	–	–	–	–	–	–	–	–	–	–
13.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
14.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	2	1	1	1	–	–	–	–	–	–	–	–	–
15.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	2	2	2	2	–	–	–	–	–	–	–	–	–	–
16.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	2	2	2	2	2	–	–	–	–	–	–	–	–	–
17.9	–	–	–	–	–	–	–	–	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	–	–	–	–	–	–	–	–
18.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	2	2	1	1	–	–	–	–	–	–	–	X	X	X	X	X	X	X	X	X
19.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
22.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
23.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	1	1	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
24.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
25.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	2	1	–	–	–	–	–	–	–	–	–	–	–	–
26.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
27.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
28.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	–	–	–	–	–	–	–	–	–	–
29.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	2	2	1	–	–	–	–	–	–	–	–	–	–	–

Table 58

American and Zürich Provisional Relative Sunspot Numbers

September 1950

Date	R_A*	R_Z**	Date	R_A*	R_Z**
1	81	49	17	97	80
2	63	59	18	123	73
3	77	49	19	108	65
4	46	51	20	87	58
5	22	31	21	77	48
6	28	27	22	74	51
7	36	23	23	57	44
8	37	24	24	56	56
9	42	38	25	63	41
10	27	31	26	59	45
11	44	28	27	53	49
12	58	37	28	45	38
13	93	65	29	62	49
14	97	94	30	54	32
15	93	75			
16	102	70	Mean:	65.4	49.3

*Combination of reports from 46 observers; see page 9.
**Dependent on observations at Zürich Observatory and its stations at Locarno and Arosa.

Table 59

Outstanding Solar Flares, June 1950

Observatory	Date 1950	Time Observed Beginning (GCT)	Time Observed Ending (GCT)	Duration (Min)	Area (Mill of Sun's Disk)	Position Longitude (Deg)	Position Latitude (Deg)	Time of Maximum (GCT)	Int. of Maximum	Relative Area of Maximum (Tenths)	Importance	SID Observed
Boulder	June 1	1615	1720	--	880	E00	N04	1653	10	5	2	Yes
"	" 1	1720	1930	130	530	E00	N04	1750	20	2		Yes
McMath	" 1	1818				E03	N05				2	Yes
Meudon	" 3	0710				W25	N05				1	
"	" 5	0713				W55	N05				1	
Wendelstein	" 5	0954	1006	--	242*	W53	N04	0958			1	
Boulder	" 5	1400	1440	40	199	W67	N06	1410	10	1		
Wendelstein	" 5	1704	1724	20	339*	W57	N04	1710			1	
McMath	" 6	1230				W70	N05				1	
Meudon	" 6	1549				W65	N05				1	
Wendelstein	" 8	0635	0653	18	194*	W34	N18	0638			1	
McMath	" 8	1413				W35	N18				1	Yes
"	" 8	1545				E75	S15				1+	Yes
"	" 8	1942				E75	S15				1	
Boulder	" 8	1945	2005	20	46	E78	S13	1950	10	9		
"	" 8	2330	2349	19	134	E74	S15	2340	8	8		
"	" 9	1520	1655	95	154	E60	S15	1600	8	5		
"	" 9	2000	2050	50	508	E65	S15	2010	10	3		Yes
"	" 9	2150	2250	60	728	E62	S13	2207	15	3	1	Yes
"	" 10	1500	1510	10	154	E54	S15	1505	10	1		
McMath	" 12	1412				W63	N20				1	
Boulder	" 12	1640	1705	25	249	E23	S20	1650	10	2		
"	" 13	1855	1911	16	356	E04	S16	1905	10	7		
"	" 13	1910	1945	35	735	E08	S14	1914	20	3	2	Yes
McMath	" 20	1255				E23**	N10**				1-	Yes
Boulder	" 20	1419	1620	121	562	E18	N09	1424	15	1		
"	" 20	1850	1902	12	225	E18	N07	1855	10	9		
"	" 20	1859	2103	124	1730	W15	N23	1950	20	3		
"	" 20	2024	2145	81	516	E20	N11	2025	20	2		
"	" 23	1445	1605	80	354	E20	N11	1512	10	6		
"	" 23	1720	1800	40	177	E20	N11	1730	8	7		
"	" 24	1750	1820	30	353	E01	N08	1800	10	7		
"	" 24	1820	1850	30	154	E01	N08	1840	10	6		
"	" 25	1610	1645	35	293	W12	N10	1620	8	7		
"	" 25	1910	2000	50	495	W03	N12	1919	15	4		
"	" 25	1914	1945	31	428	W12	N10	1922	20	5		
"	" 25	2230	2300	30	405	W03	N12	2238	15	5		
Meudon	" 26	1010				W15	N05				1	
"	" 26	1107				W15	N05				1	
Boulder	" 26	1920	2005	45	466	W19	N11	1935	15	3		
Wendelstein	" 28	0742	0752	--	194*	W41	N09	0747			1	
Boulder	" 28	2037	2105	--	249	W22	N17	2039	6	3		
"	" 29	1425	1500	--	180	W18	S15	1445	6	9		

*Area corrected for foreshortening.

**Longitude and latitude of calcium area in which solar flare was observed.

Table 60

Indices of Geomagnetic Activity for August 1950

Preliminary values of mean K-indices, Kw, from 33 observatories;
Preliminary values of international character-figures, C;
Geomagnetic planetary three-hour-range indices, Kp;
Magnetically selected quiet and disturbed days

Gr. Day 1950	Values Kw	Sum	C	Values Kp	Sum	Final Sel. Days
1	3.1 2.7 2.2 2.3 2.9 3.1 3.5 2.6	22.4	0.8	4-3-3o3- 4-4-4-3o	26o	Five
2	3.1 3.0 2.8 2.5 3.5 2.6 4.5 3.2	25.2	1.0	3+3o3o3- 4-3-5o4-	27o	Quiet
3	3.8 3.0 2.3 3.5 3.3 3.2 2.5 2.6	24.2	0.9	5-3+3+4o 4-4-3-3-	28o	
4	2.7 2.5 1.9 2.1 2.3 2.2 2.0 1.8	17.5	0.4	3-3-2o2+ 2+2+2o2o	18+	16
5	1.2 1.5 1.1 0.6 1.7 1.7 2.6 2.6	13.0	0.4	1o1+1o1- 2-2-2+3-	12+	17
						24
6	3.2 2.0 0.8 1.7 2.0 2.6 3.0 3.1	18.4	0.6	4-2o1-1+ 2o2+3+3+	19-	25
7	3.2 3.6 1.7 3.9 3.3 4.0 4.1 6.1	29.9	1.6	3+3+2o4- 3+4o5o8-	32+	26
8	6.1 5.4 6.3 4.3 3.2 2.6 2.4 3.4	33.7	1.8	8-6+8-5o 3+3-3-4o	39+	
9	3.5 3.7 3.8 3.8 4.0 4.0 3.6 4.2	30.6	1.3	4o5-5-4+ 5-5-4+5+	37-	
10	3.6 3.7 2.8 3.0 4.2 4.4 5.1 4.2	31.0	1.4	4o4+3o3+ 5o5+6+5o	36+	
11	3.8 3.7 2.9 4.0 3.4 3.7 2.8 3.9	28.2	1.1	4+4o4o5- 4o4o4-4+	33o	Five
12	3.7 4.4 3.8 3.7 3.0 3.4 3.0 2.5	27.5	1.0	4+5o5o4+ 3+4o3o3-	32-	Dist.
13	1.9 2.9 2.5 3.3 2.0 2.3 2.4 2.4	19.7	0.6	2o3+3o4- 2+2+3-3-	22o	
14	2.5 2.8 2.9 3.5 4.3 2.9 2.7 3.6	25.2	1.0	3-3+3o4o 5+3o3-4o	28o	7
15	3.5 3.5 2.9 2.2 2.4 2.1 2.5 1.4	20.5	0.6	4-4-4-2o 2o2o2+1o	20+	8
						10
16	2.5 1.8 1.9 0.8 1.0 0.9 0.6 1.6	11.1	0.1	3-2o2-1- 1o0+1-2-	11-	19
17	1.9 1.1 0.7 0.5 1.0 0.5 1.0 1.1	7.8	0.0	2o1-0+0+ 1o0+1-1o	6+	20
18	1.7 2.1 1.6 1.7 2.1 3.3 3.6 4.2	20.3	0.9	2o2o1+1+ 2o3+4o5-	21-	
19	4.5 3.5 4.6 5.7 6.2 6.5 6.4 6.4	43.8	2.0	6-4+6-6+ 8o8+8-8o	54o	
20	6.6 6.1 6.2 5.5 3.6 3.2 2.3 2.1	35.6	1.9	8+8o8-8- 4o3+2+2o	43+	
						Ten
21	2.6 1.5 4.0 3.1 2.6 3.1 3.2 1.3	21.4	0.8	3-1+5+4o 3o3+3o1+	24o	Quiet
22	1.7 1.5 1.4 2.3 1.8 2.1 2.1 1.0	13.9	0.4	2-1+2o2o 2-2+2+1-	14o	
23	2.0 0.6 1.2 3.0 2.0 1.8 1.5 2.6	14.7	0.4	2o1-1+3+ 2-2-1+3-	15-	5
24	0.9 0.3 0.5 2.0 0.9 1.0 0.6 2.5	8.7	0.2	1o0o1-2+ 1o1-1-3-	9o	16
25	2.3 1.6 0.9 1.5 1.5 1.2 0.7 0.7	10.4	0.1	3-2-1-1+ 1+1-0+1-	9+	17
						22
26	0.4 0.4 0.6 0.9 0.5 0.8 0.8 0.8	5.2	0.0	0+0+1-1- 0+0+0+1o	4o	23
27	2.2 1.0 0.7 1.2 1.5 1.8 1.7 2.3	12.4	0.2	2+1-1-1o 1+2-2-2+	12-	24
28	2.2 1.9 1.8 3.4 2.8 3.3 3.4 4.0	22.8	0.8	3-2+2o4- 3o4+4-4+	26o	25
29	3.2 3.8 3.2 2.5 3.8 3.1 2.7 3.2	25.5	0.9	3+5-3+3- 4+3+3o3+	28o	26
30	3.7 3.2 2.8 1.4 1.8 2.7 3.0 1.2	19.8	0.7	4+4-3+1+ 2-3o3+1+	22o	27
31	1.1 1.5 2.4 1.7 2.4 3.0 1.1 1.2	14.4	0.5	1o2-3o2- 2+3o1o1+	15o	31
Mean	2.85 2.43 2.61 2.63 2.59 2.63 2.68 2.70	2.64	0.79			

Table 61

Sudden Ionosphere Disturbances Observed at Washington, D. C.

September 1950

1950 Day	GCT Beginning	GCT End	Location of transmitters	Relative intensity at minimum*	Other phenomena
September 19	1710	1750	Ohio, D. C., England, New Brunswick	0.0	Terr.mag.pulse** 1710-1720 Solar flare*** 1705 Solar flare**** 1710

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

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

***Time of observation at the High Altitude Observatory, Boulder, Colorado.

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

Table 62

Sudden Ionosphere Disturbances Reported by Institut fur Ionospharenforschung,

as Observed at Lindau, Harz, Germany

Day	GCT Beginning	GCT End	Location of transmitters	Relative intensity at minimum*	Other phenomena
August 2	1545	1600	Munchen**, Frankfurt***, Norddeich#, Lindau ##	0.2	
3	1108	1120	Frankfurt***, Norddeich#, Lindau##	0.05###	
3	1322	1348	Munchen**, Frankfurt***, Norddeich#, Lindau##	0.1	
25	1035	1055	Munchen**, Norddeich#, Lindau##	0.2	

*Ratio of received field intensity during SID to average field intensity before and after, for station Munchen, 6161 kilocycles, 400 kilometers distant.

**Station Bayr. Rundfunk, 6161 kilocycles, 400 kilometers distant.

***Station Hess. Rundfunk, 6190 kilocycles, 190 kilometers distant.

#Station DAN, 4760 kilocycles, 275 kilometers distant.

##Station Lindau, 1780 kilocycles, pulse, transmitter and receiver at Lindau.

###For Station Frankfurt, 6190 kilocycles.

Table 63

Sudden Ionosphere Disturbances Reported by International Telephone and Telegraph Corporation, as Observed at Platanos, Argentina

1950 Day	GCT Beginning	GCT End	Location of transmitters	Other phenomena
July 12	1122	1235	Netherlands, New York	
12	1615	1650	Bolivia, Brazil, Chile, Colombia, Cuba, Denmark, Germany, Netherlands, New York, Peru, Spain, Venezuela	Terr.mag.pulse* 1608-1620 Solar flare** 1620
25	1100	1520	New York	
August 2	1555	1600	Bolivia, Brazil, Chile, Cuba, Denmark, Germany, Netherlands, New York, Venezuela	Solar flare** 1520 Solar flare*** 1545 Solar flare**** 1548

*As observed on Cheltenham magnetogram of the United States Coast and Geodetic Survey.
**Time of observation at McMath-Hulbert Observatory, Pontiac, Michigan.
***Time of observation at the High Altitude Observatory, Boulder, Colorado.
****Time of observation at Meudon Observatory, France.

Table 64

Sudden Ionosphere Disturbances Reported by Engineer-in-Chief, Cable and Wireless, Ltd., as Observed in Barbados, B.W.I.

1950 Day	GCT Beginning	GCT End	Location of transmitters	Other phenomena
August 2	1553	1605	Canada, Dominica, Florida, Jamaica, Leeward Is., Trinidad	Solar flare* 1545 Solar flare** 1548 Solar flare*** 1520
2	2115	2205	Australia	

Time of observation:
*High Altitude Observatory, Boulder, Colorado.
**Meudon Observatory, France.
***McMath-Hulbert Observatory, Pontiac, Michigan.

Table 65

Sudden Ionosphere Disturbances Reported by Engineer-in-Chief,

Cable and Wireless, Ltd., as Observed in England

1950 Day	GCT		Receiving station	Location of transmitters	Other phenomena
	Beginning	End			
September					
19	1715	1725	Brentwood	Barbados	Terr.mag.pulse* 1710-1720 Solar flare** 1705 Solar flare*** 1710
19	1715	1730	Somerton	Argentina, Brazil, Canada, New York	

*As observed on Cheltenham magnetogram of the United States Coast and Geodetic Survey.
**Time of observation at the High Altitude Observatory, Boulder, Colorado.
***Time of observation at McMath-Hulbert Observatory, Pontiac, Michigan.

Table 66

Sudden Ionosphere Disturbances Reported by RCA Communications, Inc.,

as Observed at Point Reyes, California

1950 Day	GCT		Location of transmitters
	Beginning	End	
September 20	0308	0415	China, Japan, Java, Philippine Is.

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

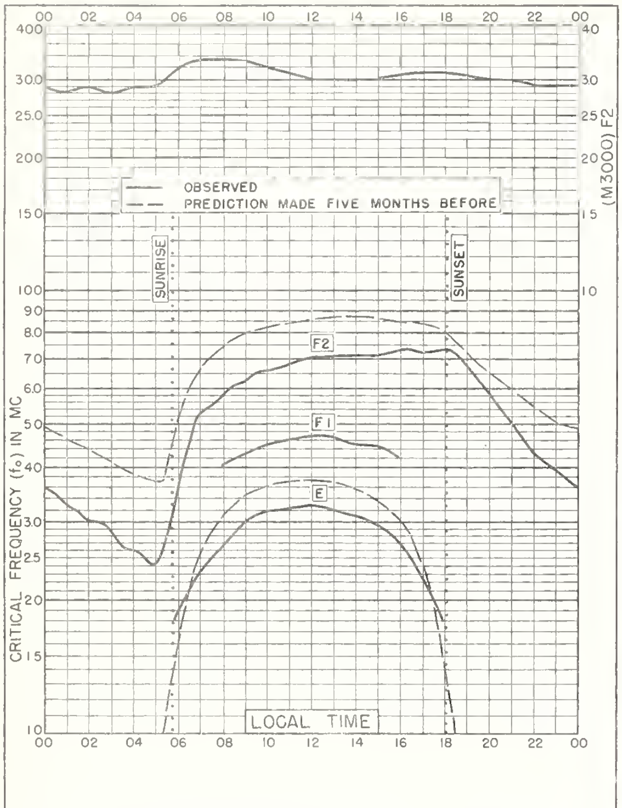


Fig. 1. WASHINGTON, D. C.
38.7°N, 77.1°W SEPTEMBER 1950

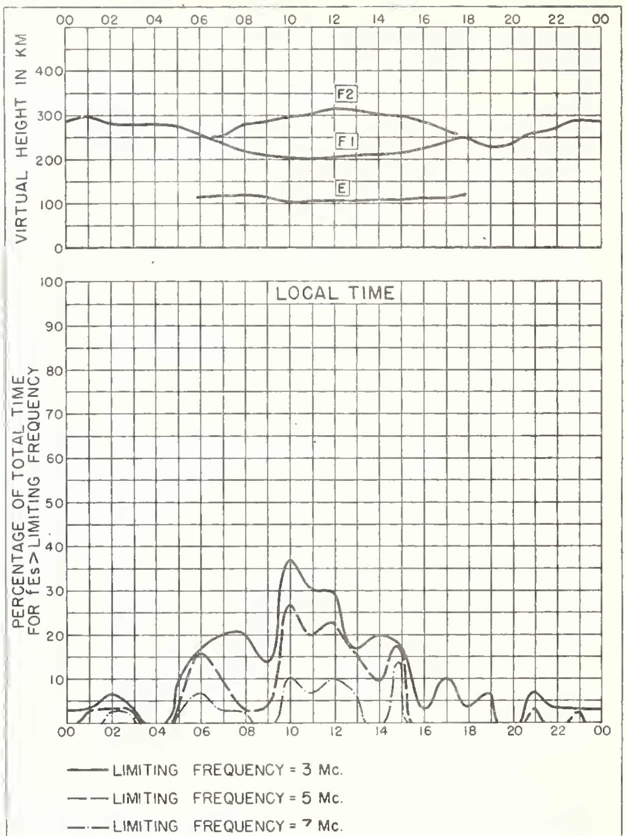


Fig. 2. WASHINGTON, D. C. SEPTEMBER 1950

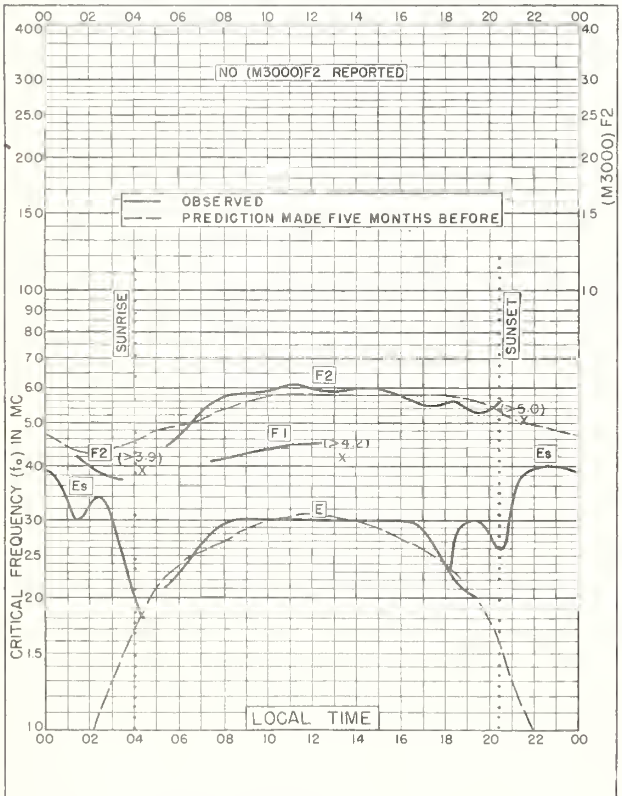


Fig. 3. KIRUNA, SWEDEN
67.8°N, 20.5°E AUGUST 1950

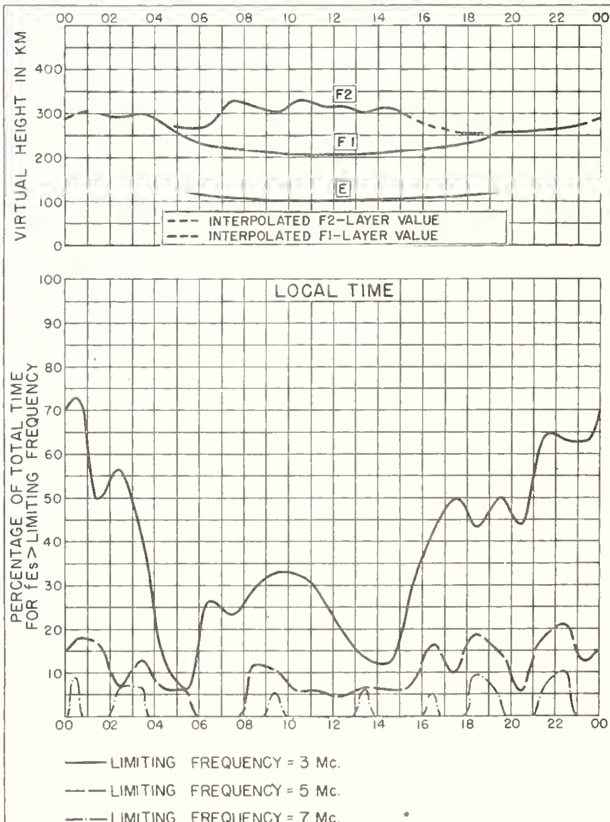


Fig. 4. KIRUNA, SWEDEN AUGUST 1950

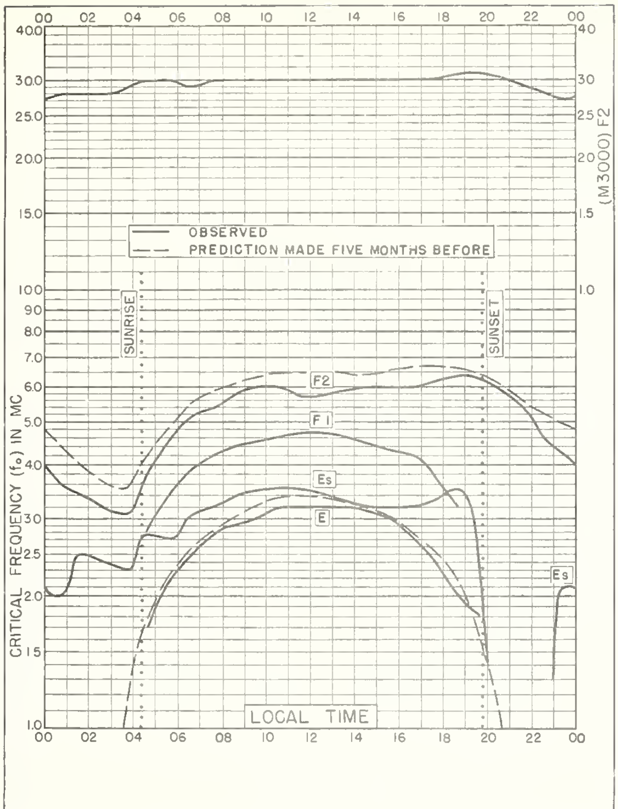


Fig. 5. OSLO, NORWAY
60.0°N, 11.0°E AUGUST 1950

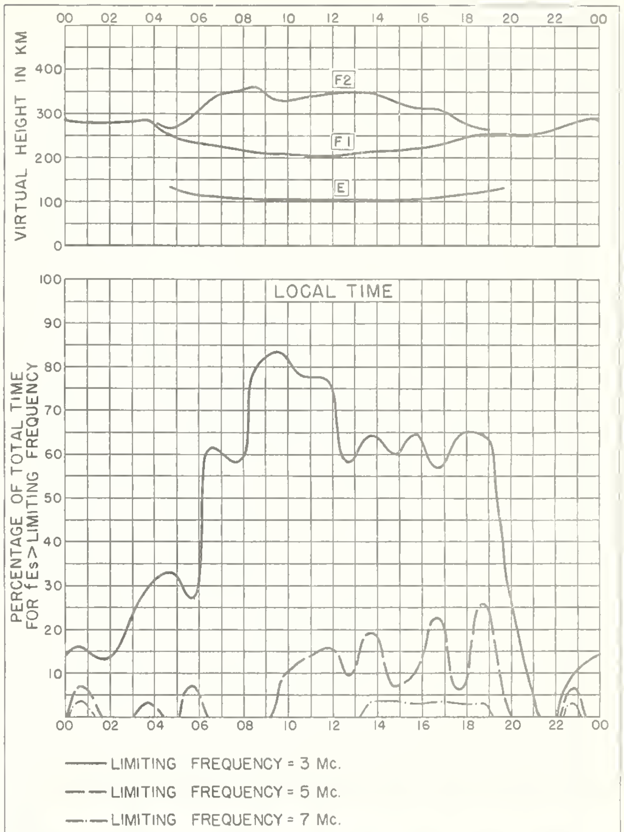


Fig. 6. OSLO, NORWAY AUGUST 1950

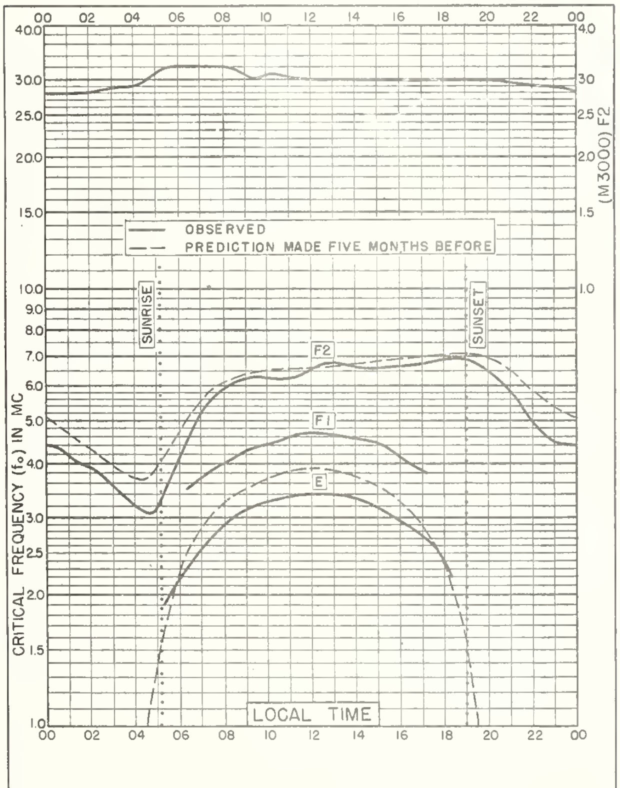


Fig. 7. BOSTON, MASSACHUSETTS
42.4°N, 71.2°W AUGUST 1950

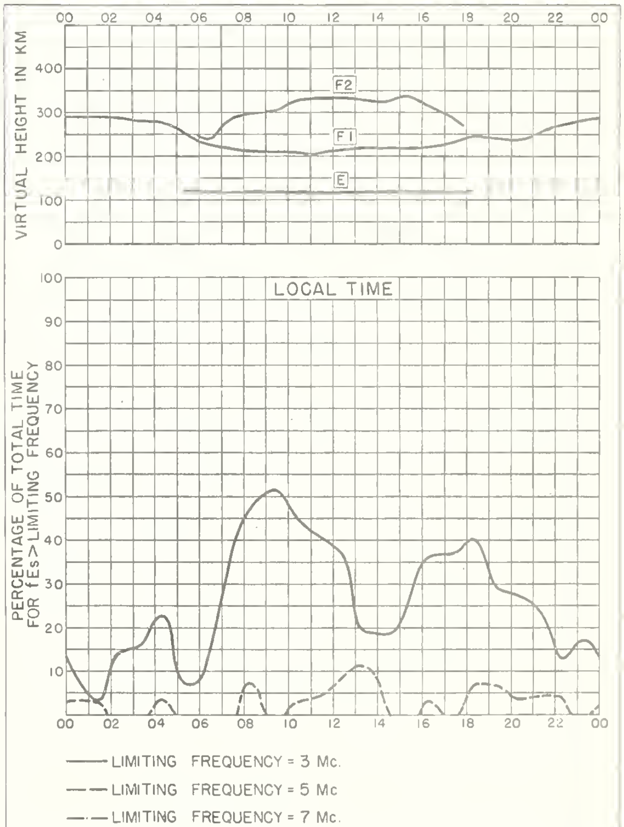


Fig. 8. BOSTON, MASSACHUSETTS AUGUST 1950

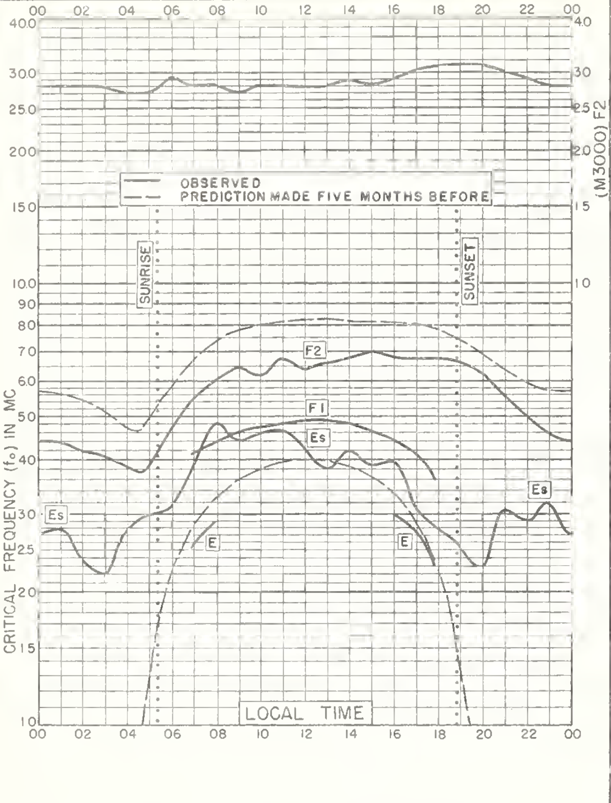


Fig. 9. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W AUGUST 1950

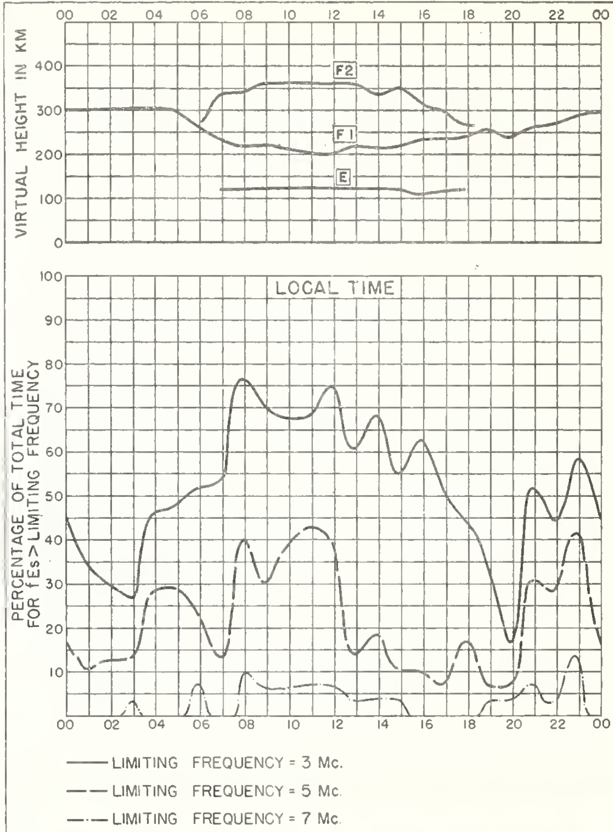


Fig. 10. SAN FRANCISCO, CALIFORNIA AUGUST 1950

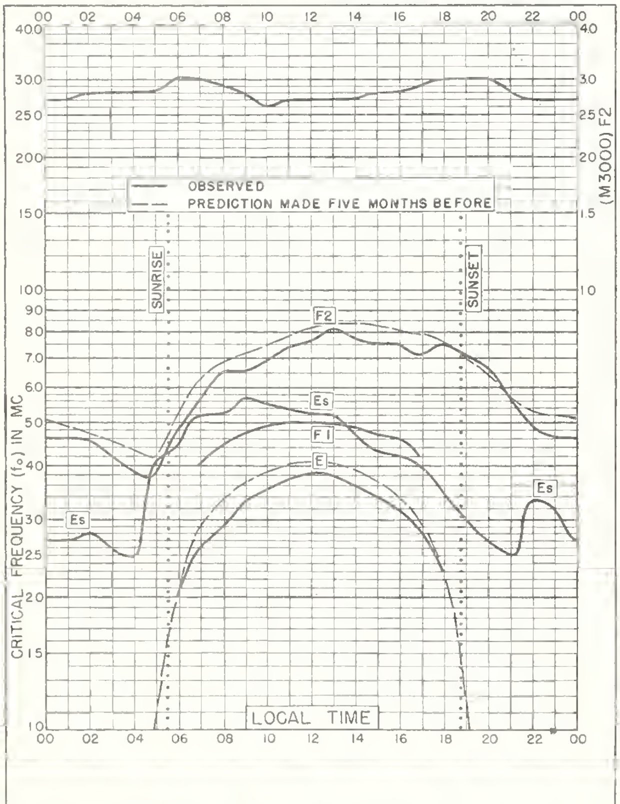


Fig. 11. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W AUGUST 1950

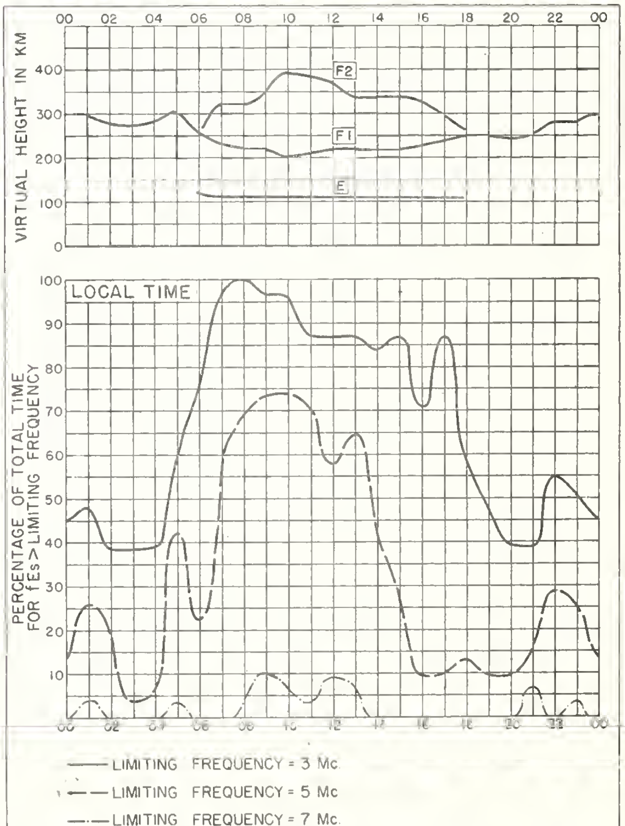


Fig. 12. WHITE SANDS, NEW MEXICO AUGUST 1950

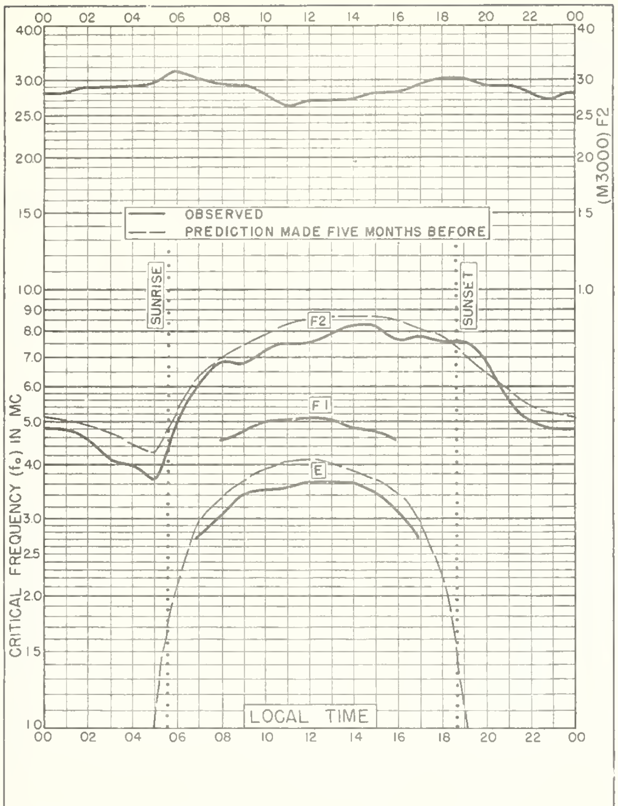
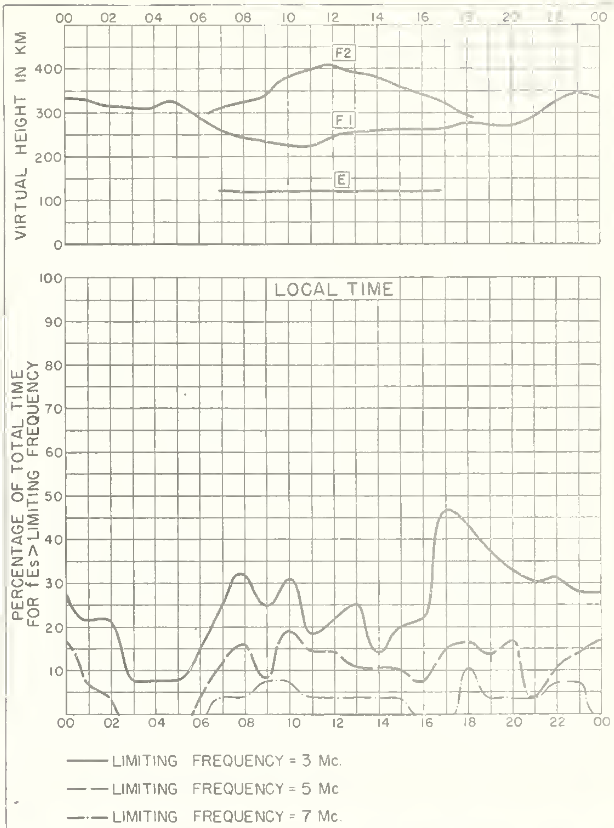


Fig. 13. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W AUGUST 1950



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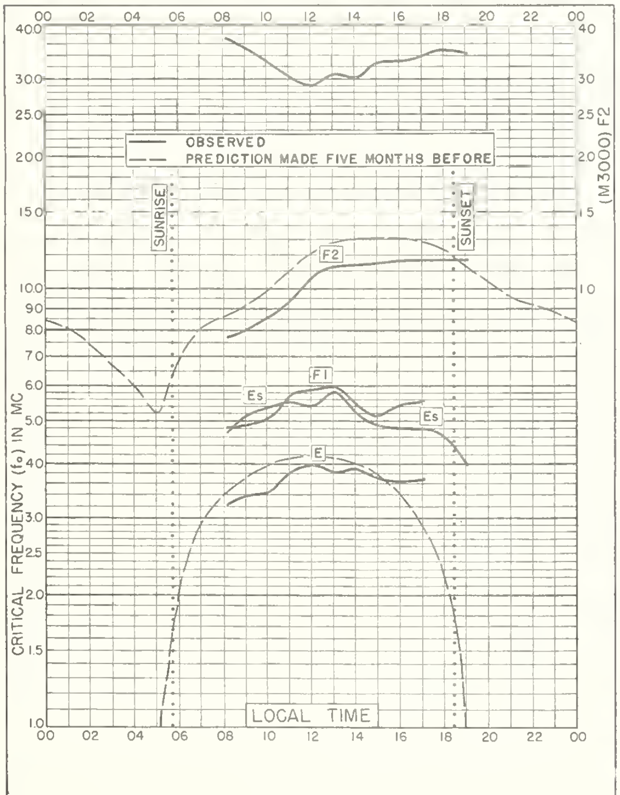
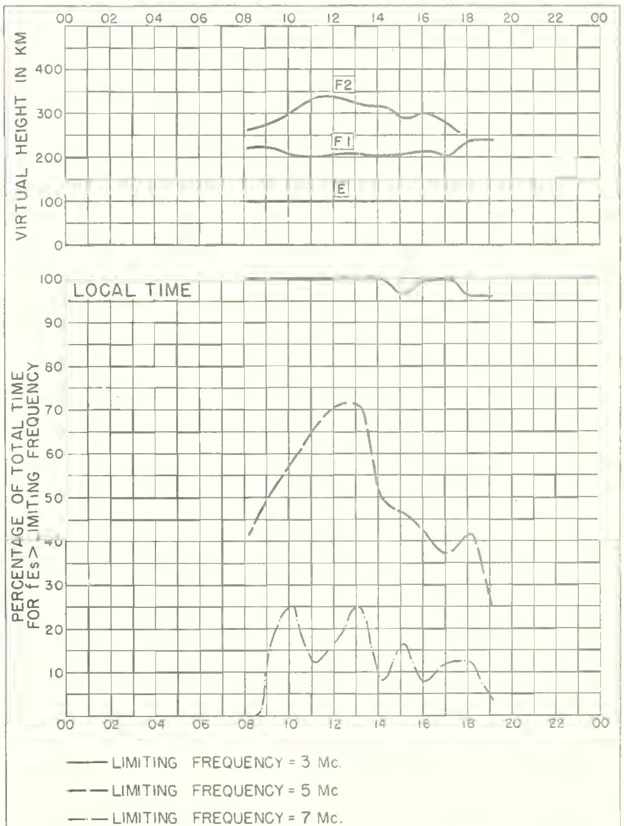


Fig. 15. FORMOSA, CHINA
25.0°N, 121.0°E AUGUST 1950



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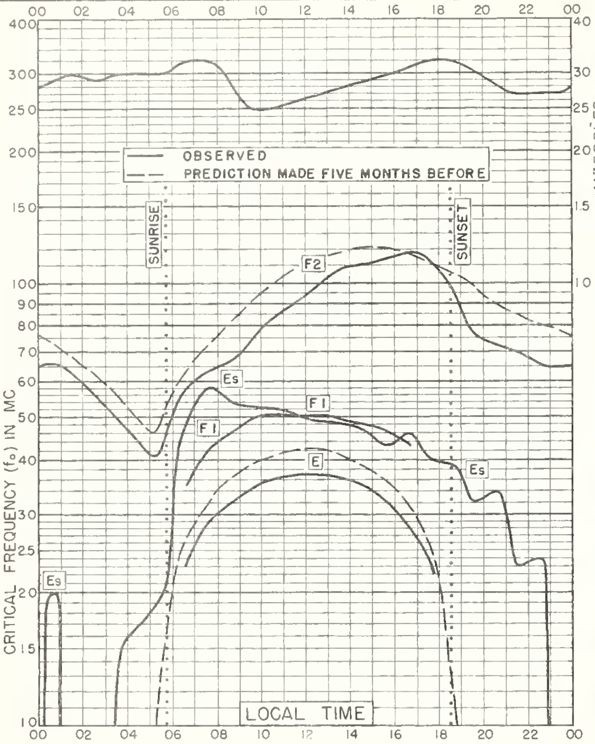
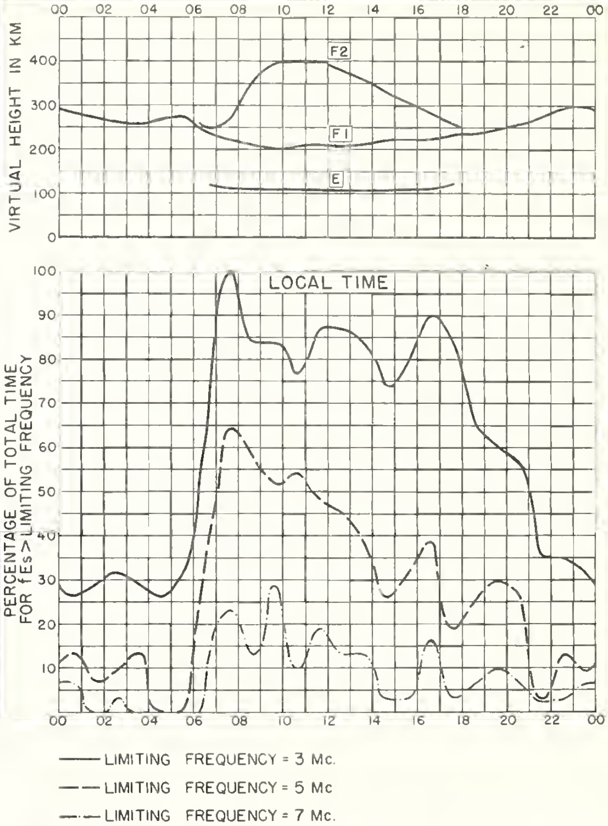


Fig. 17. MAUI, HAWAII
20.8°N, 156.5°W AUGUST 1950



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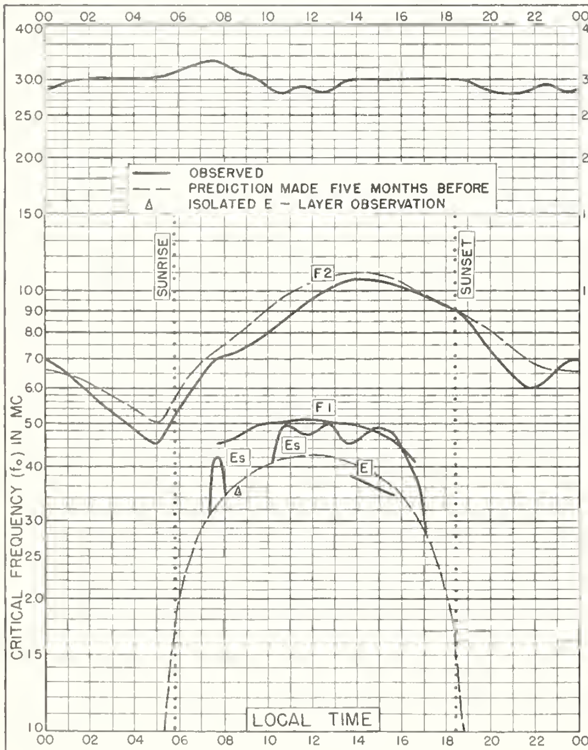

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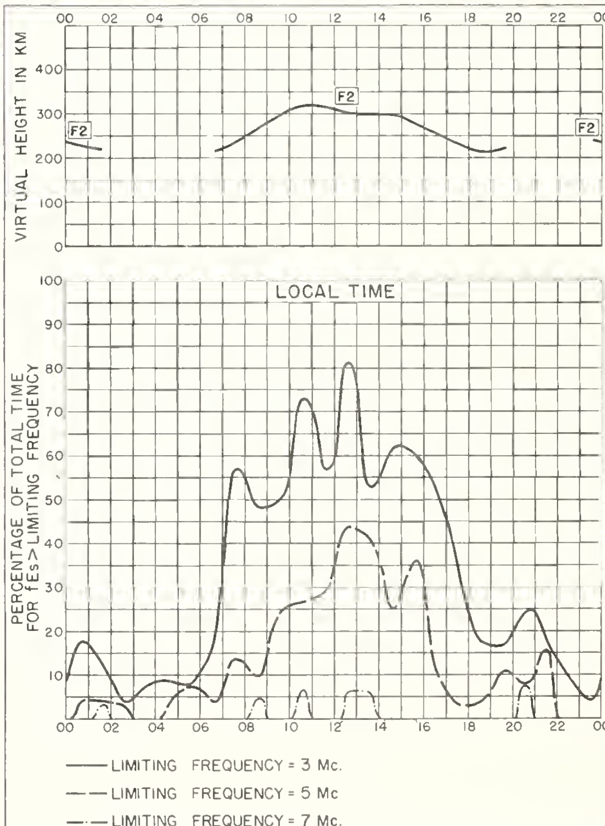

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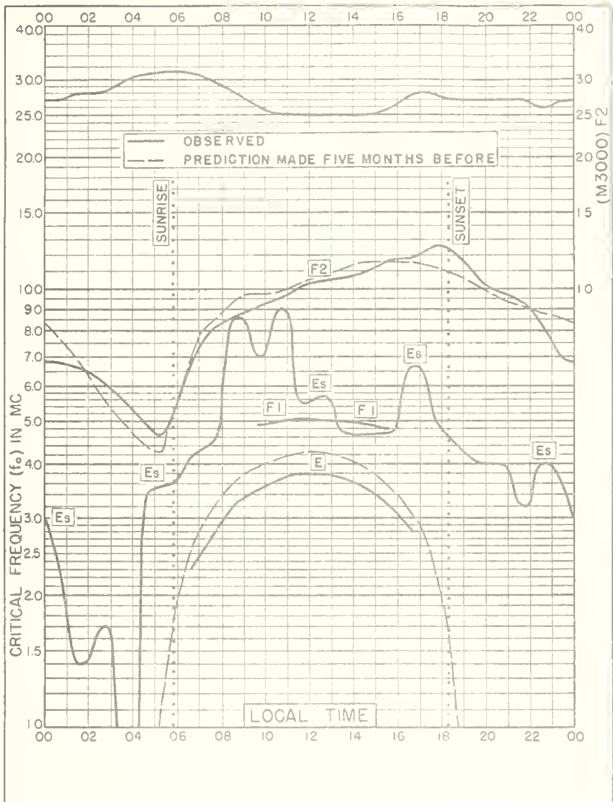

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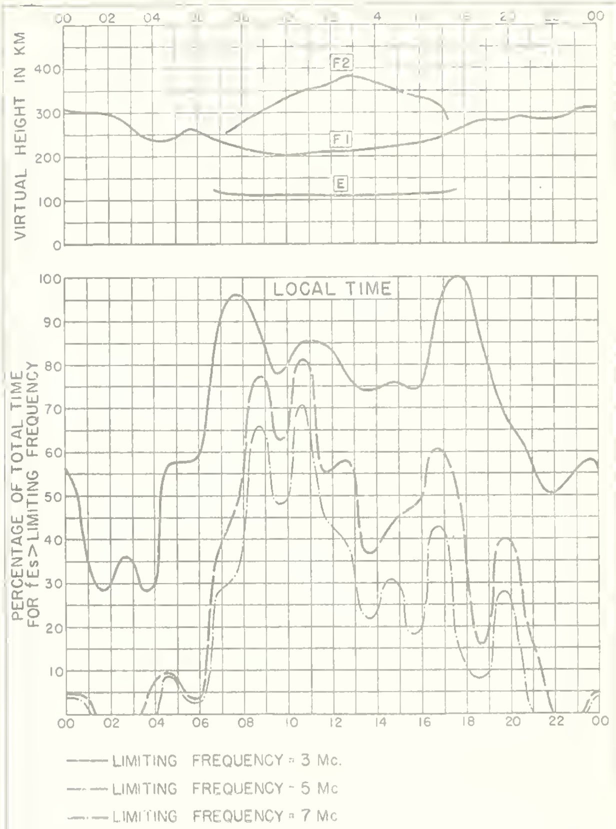
13. 6°N, 144. 9°E AUGUST 1950



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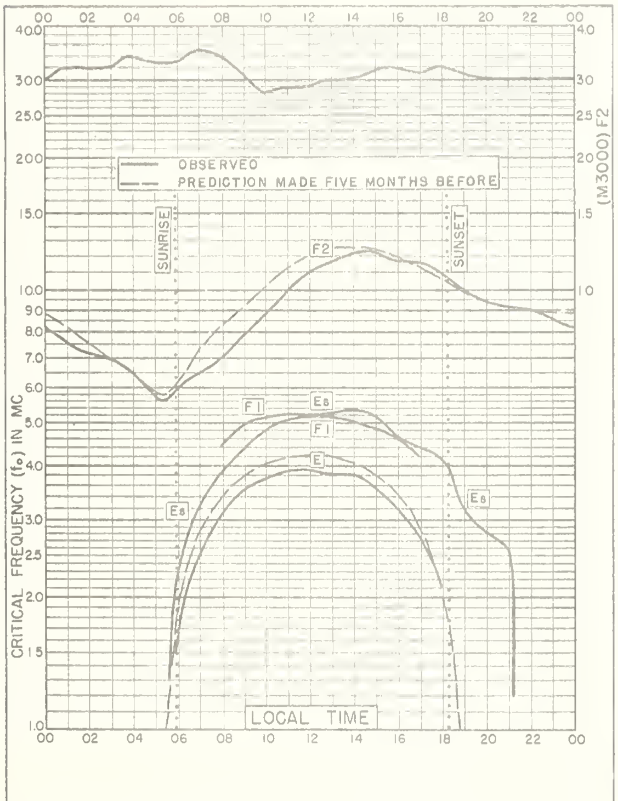

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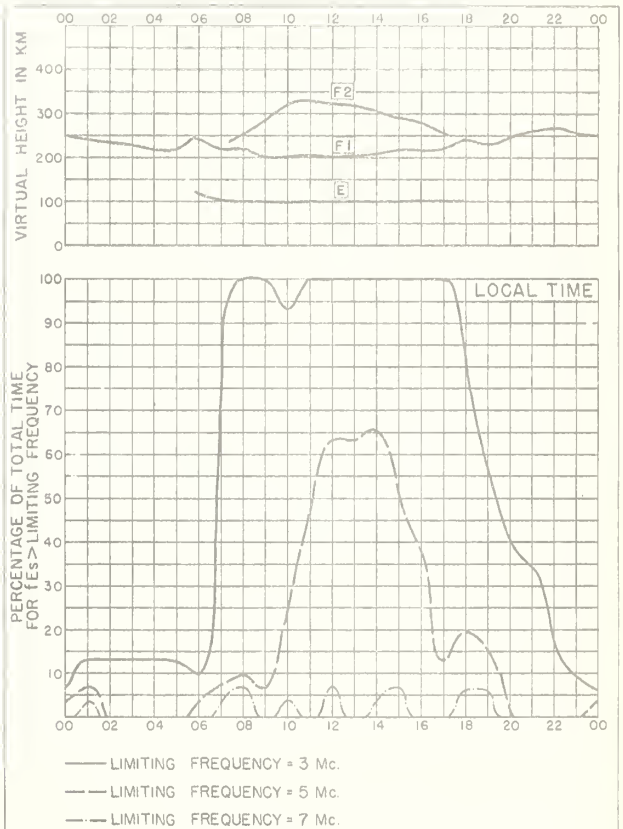

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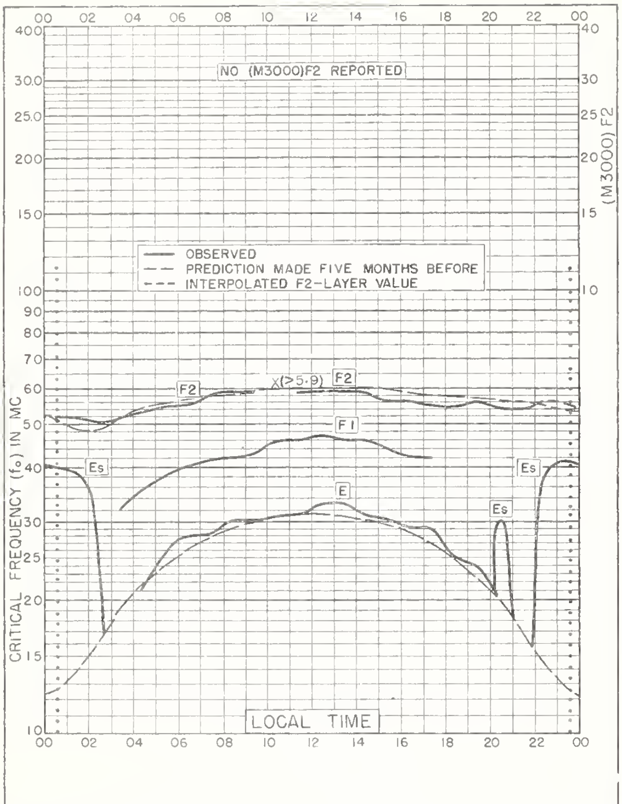

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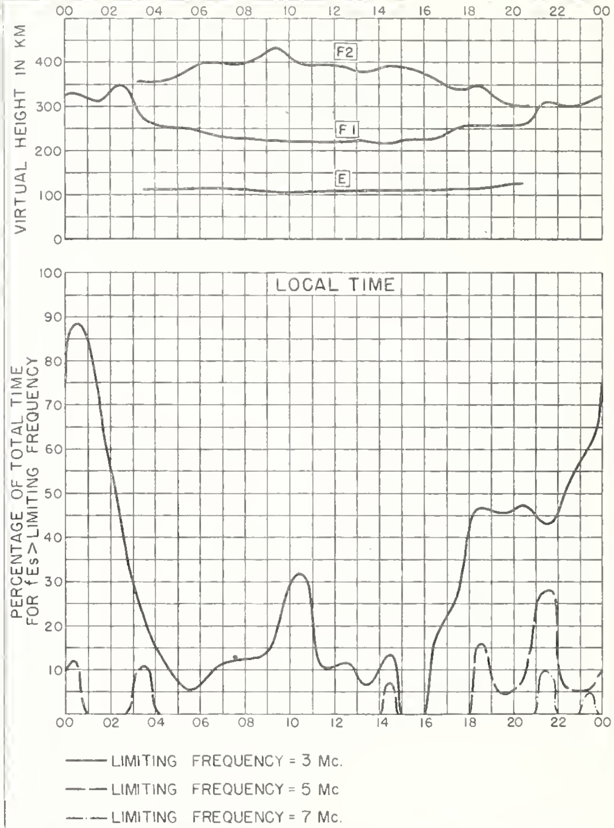

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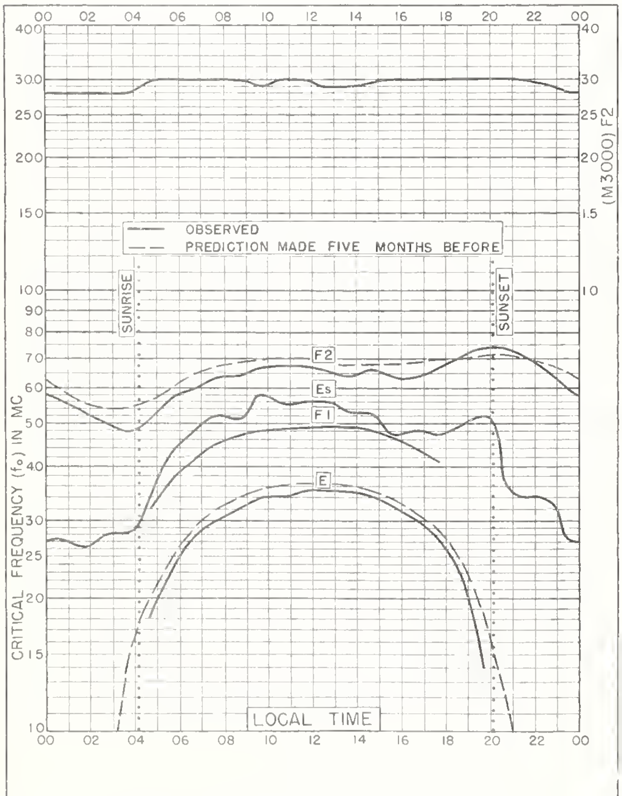

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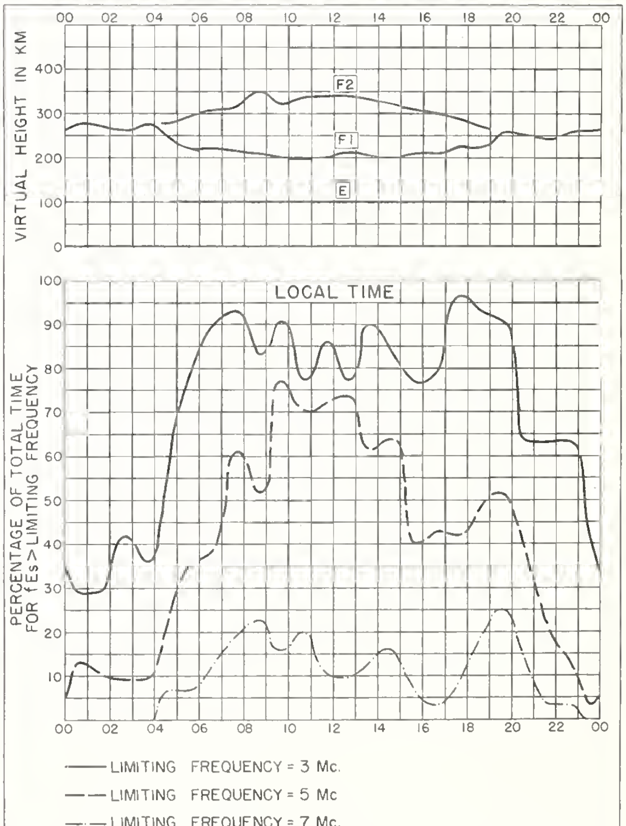

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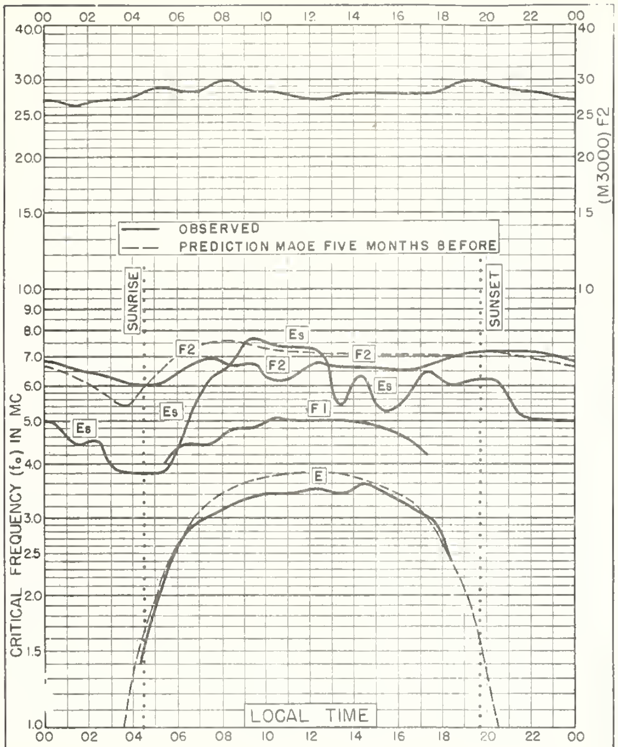

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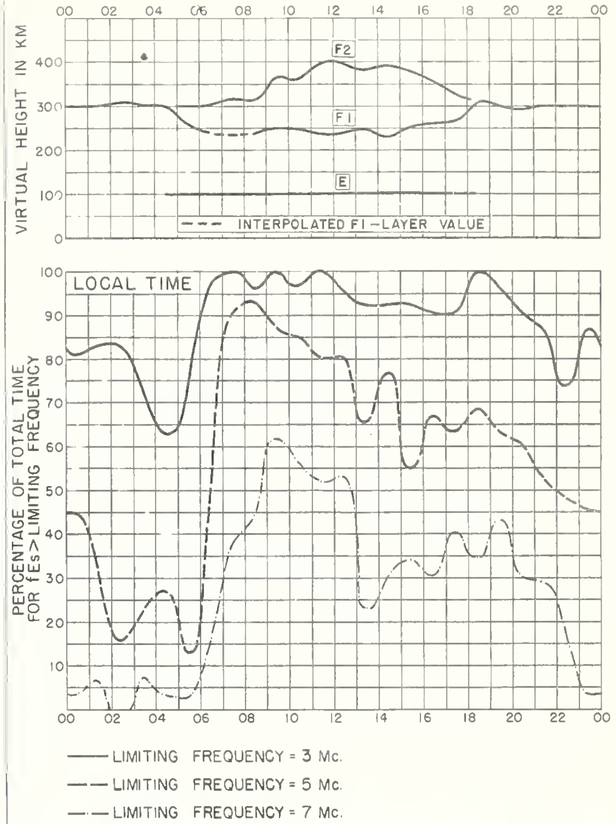

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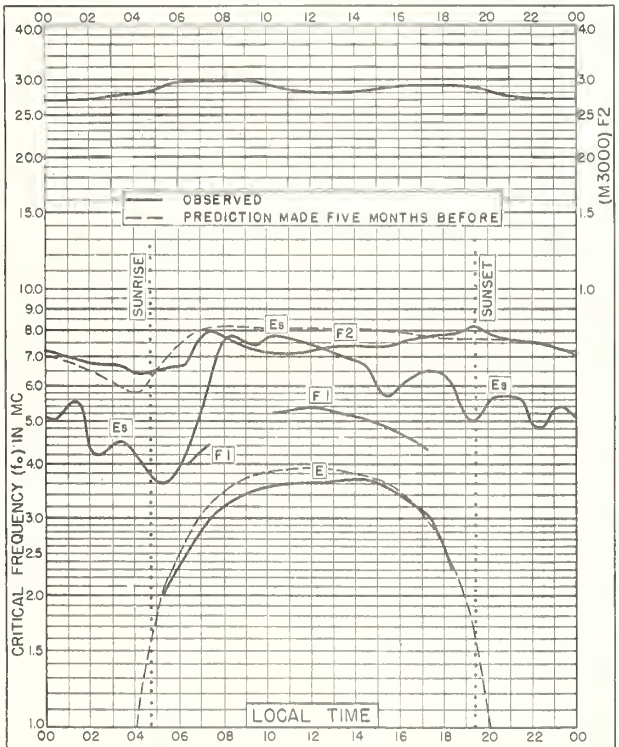

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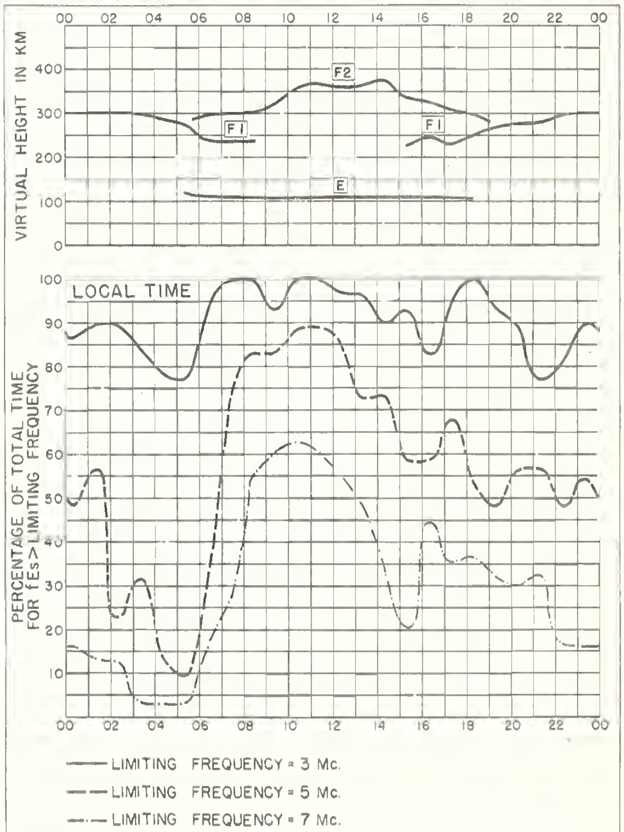

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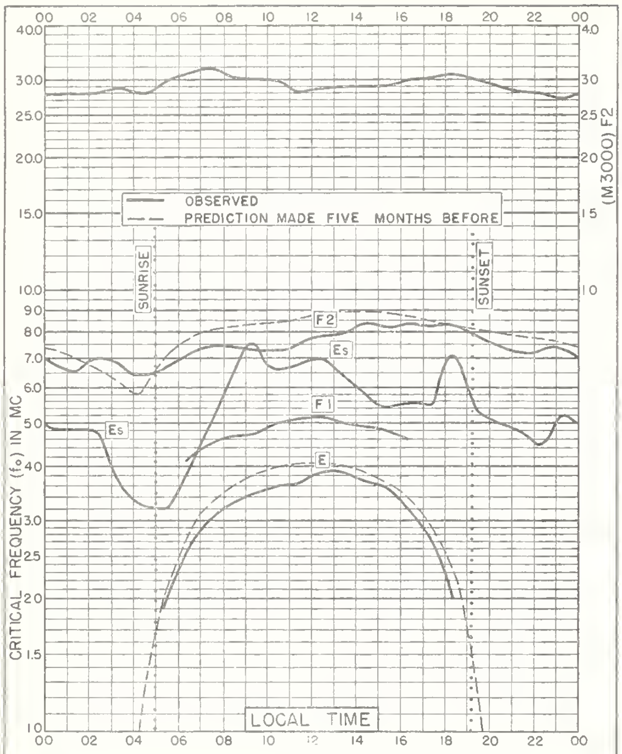

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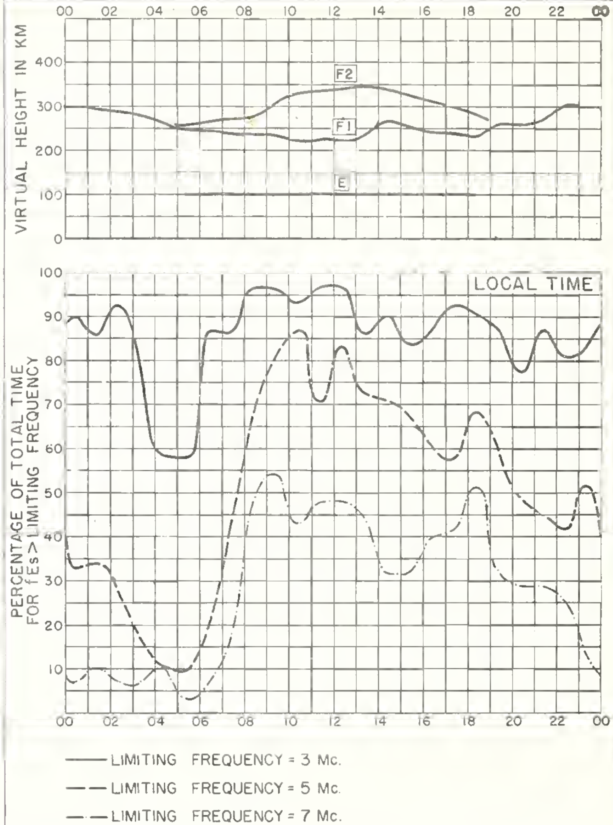

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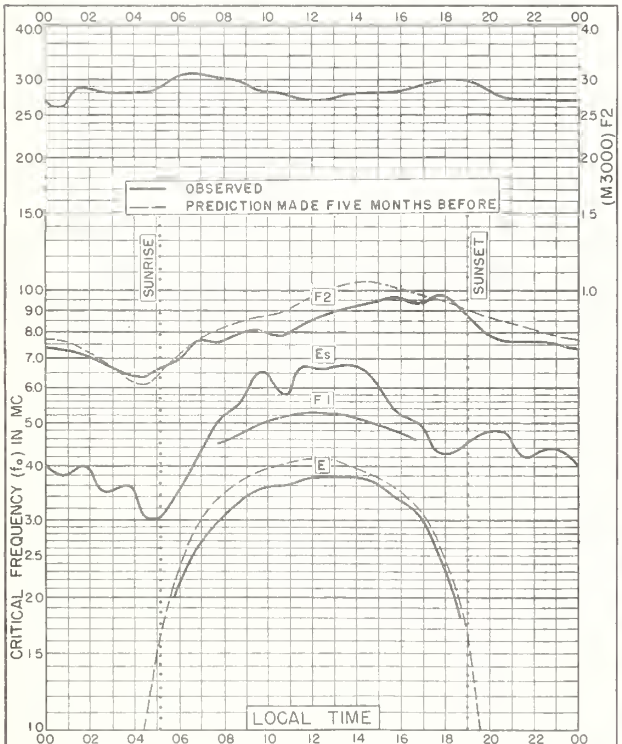

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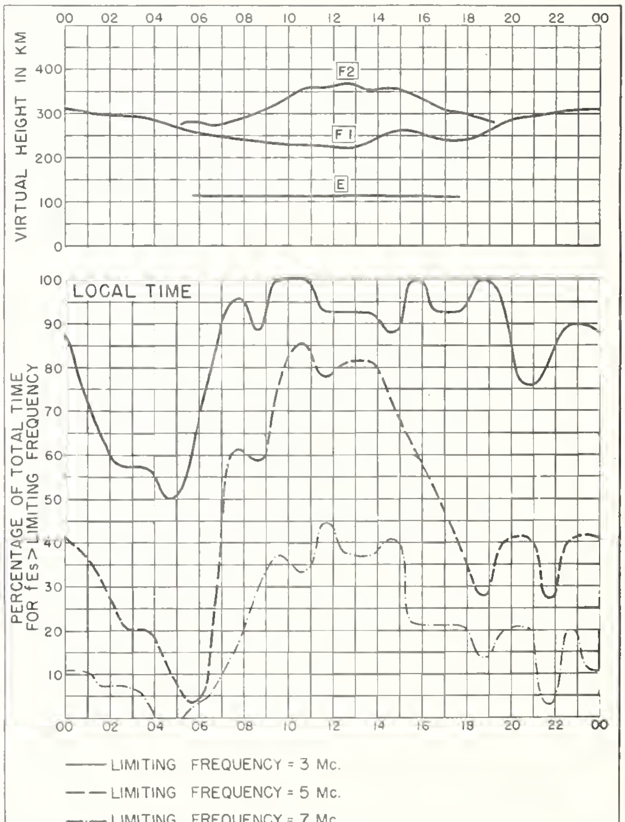

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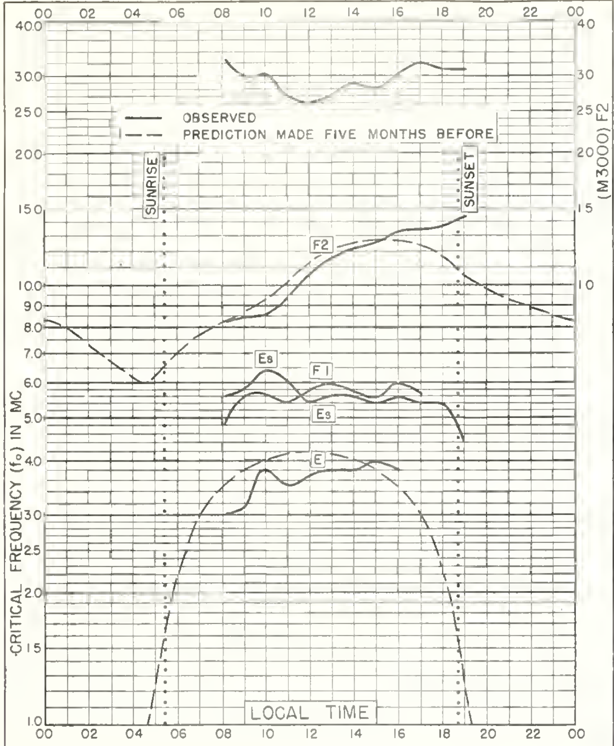

Fig. 37. FORMOSA, CHINA
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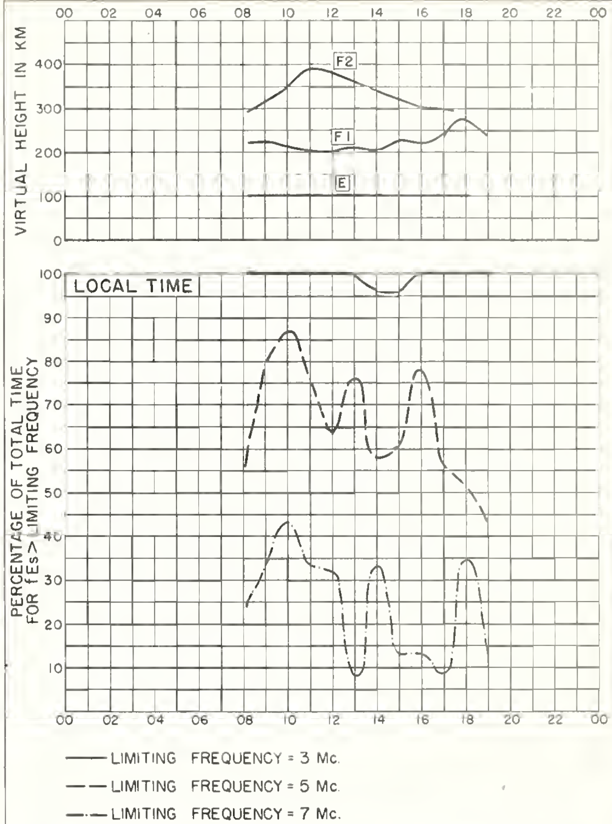

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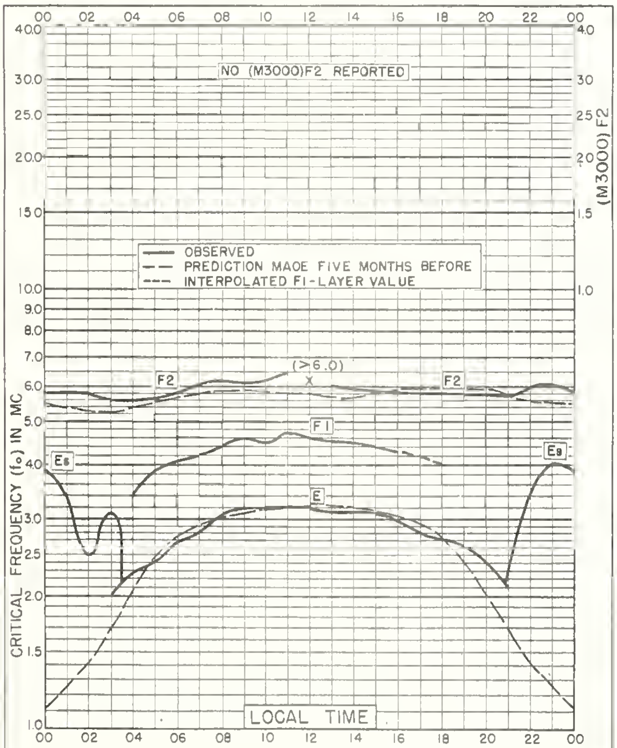

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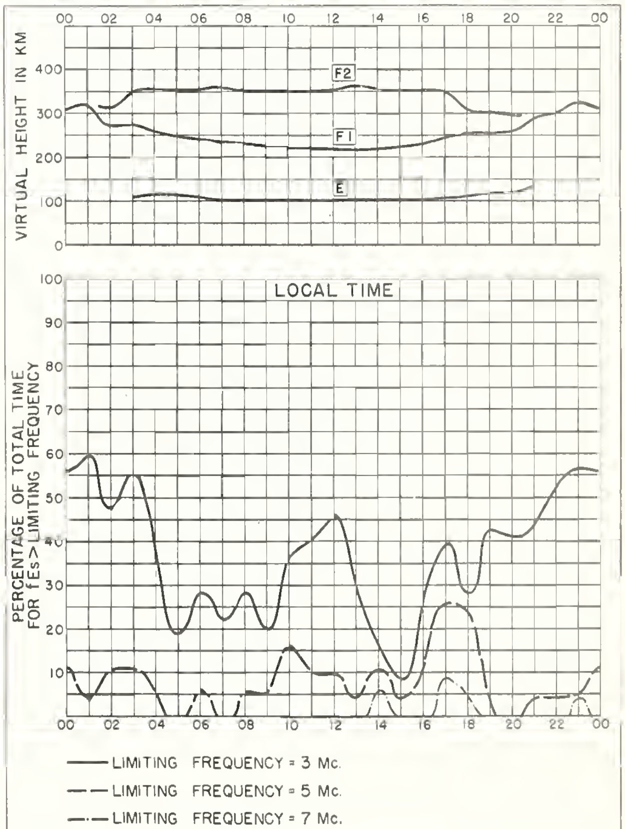

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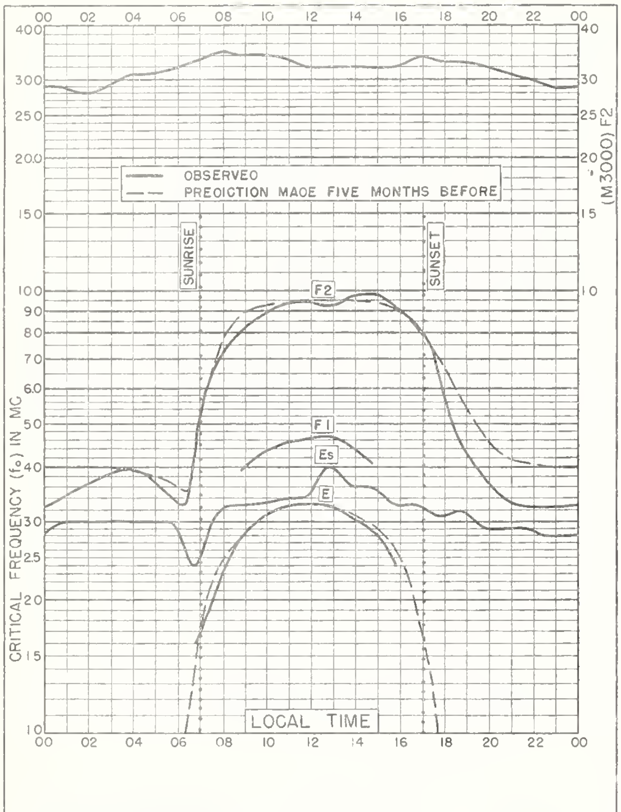

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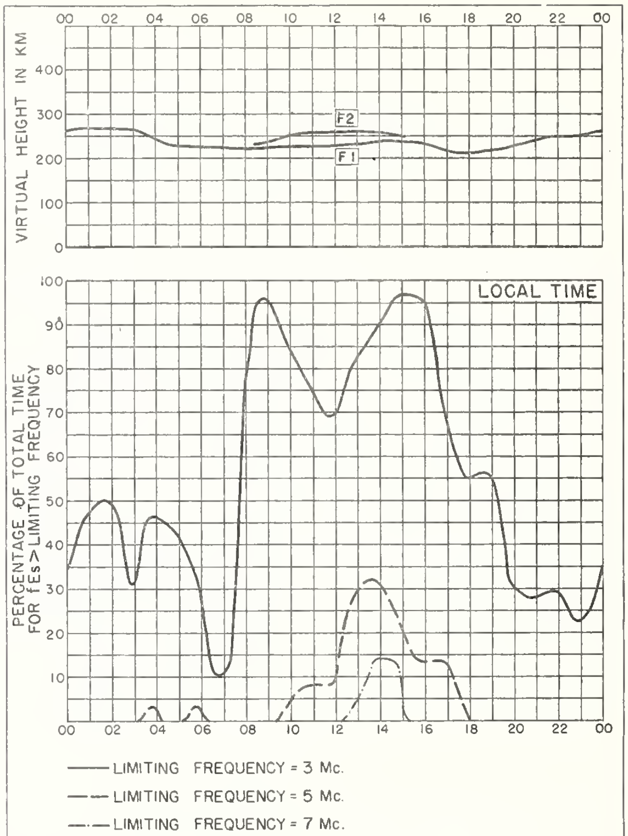

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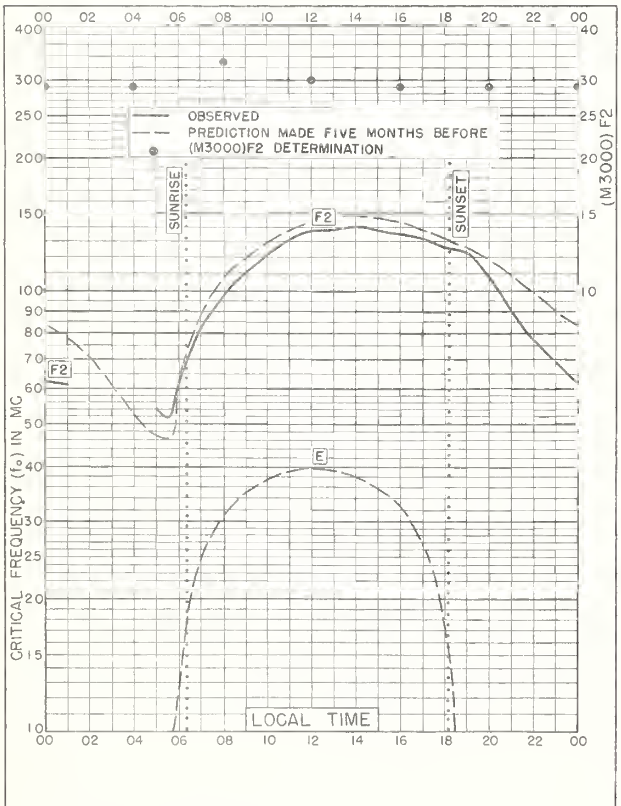

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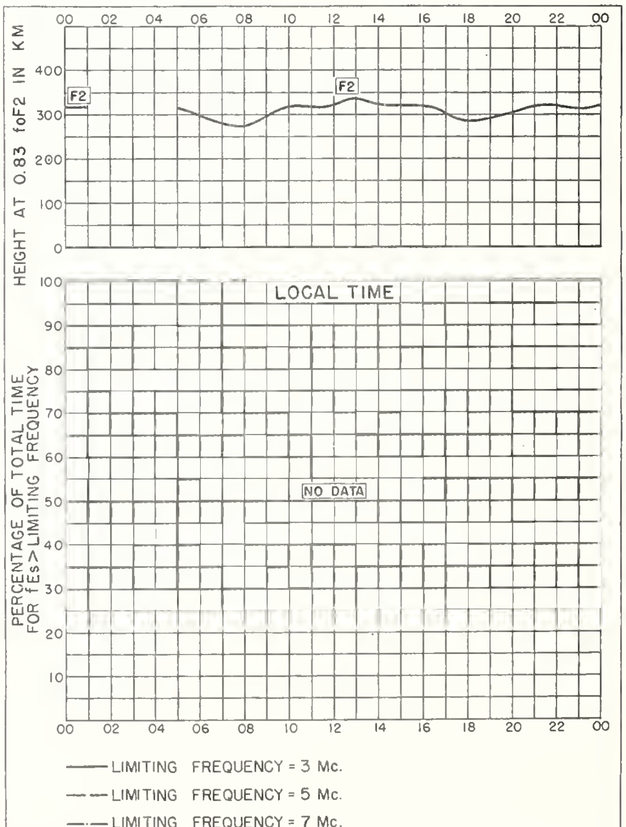

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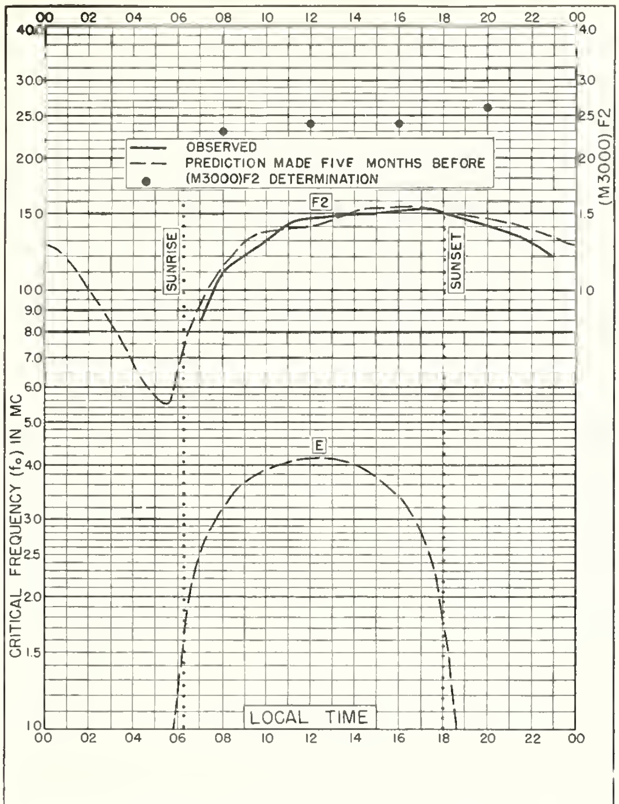

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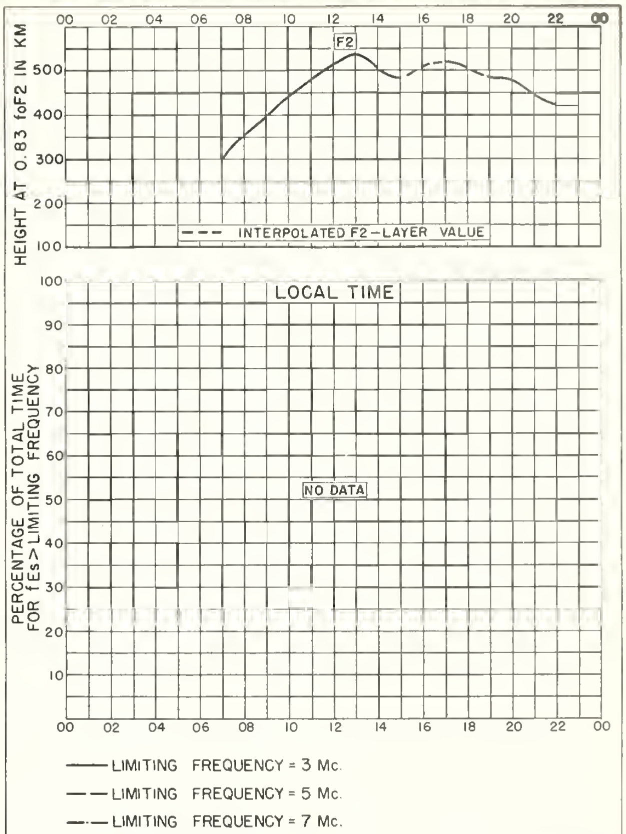

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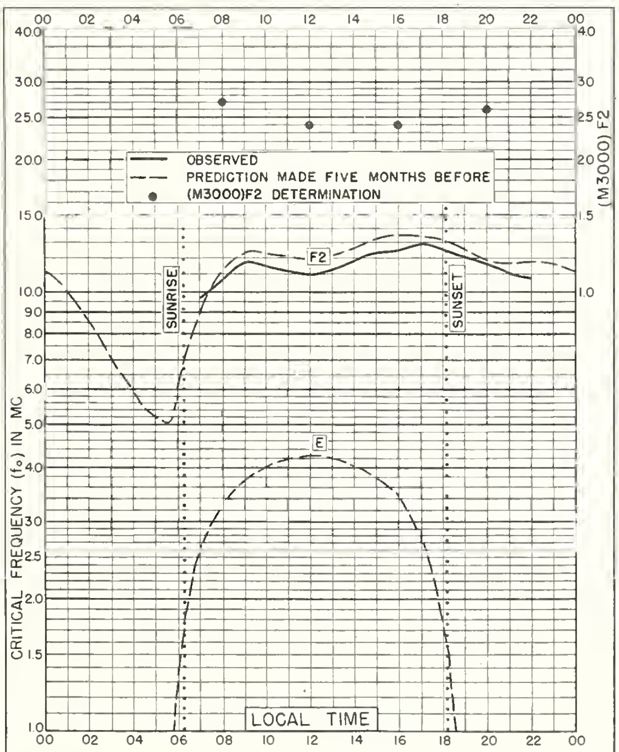

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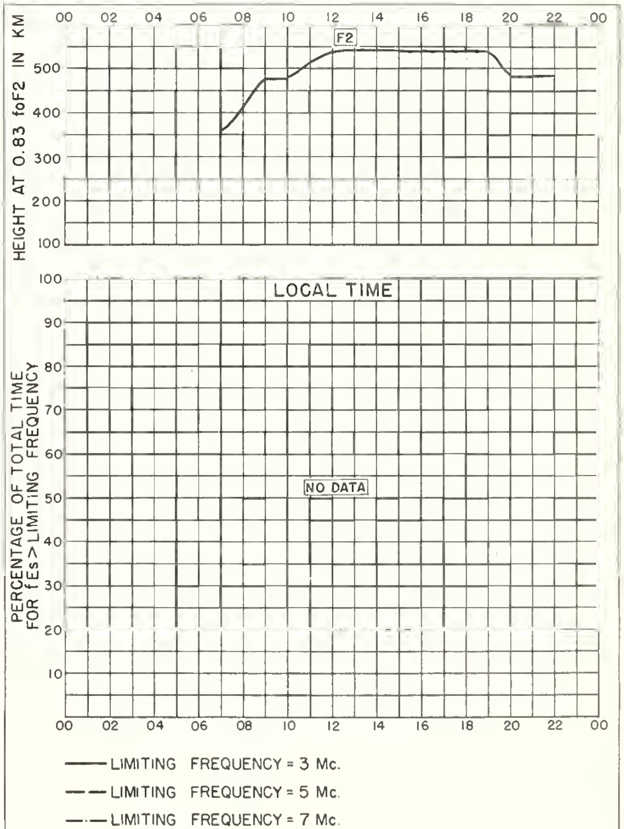

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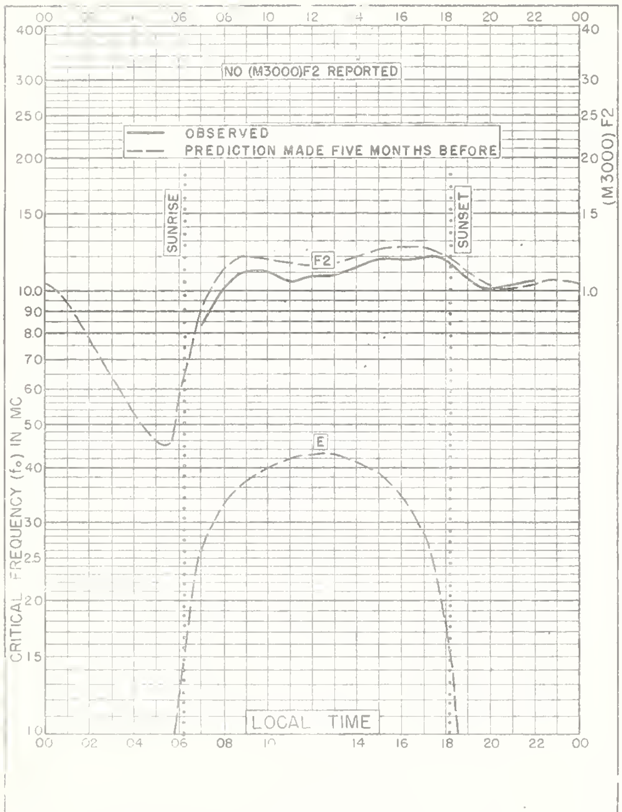

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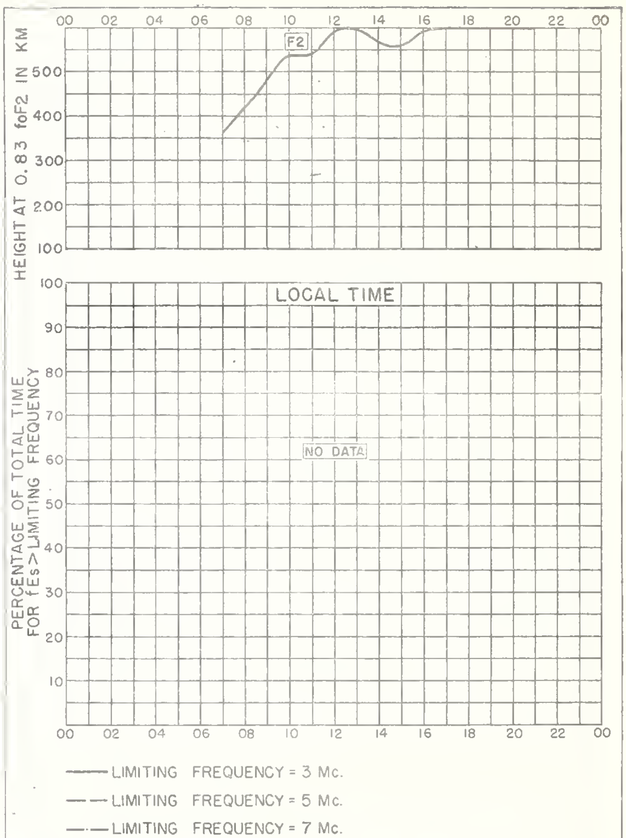

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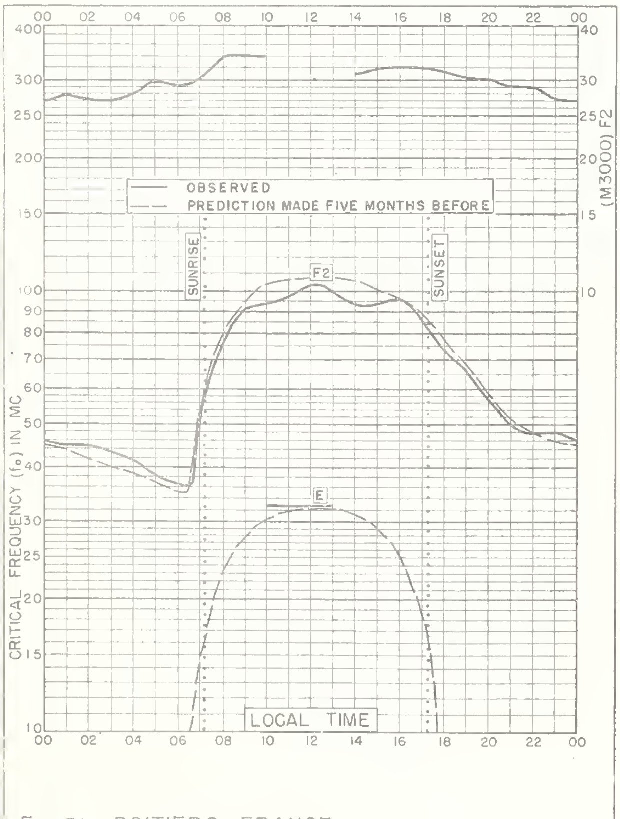

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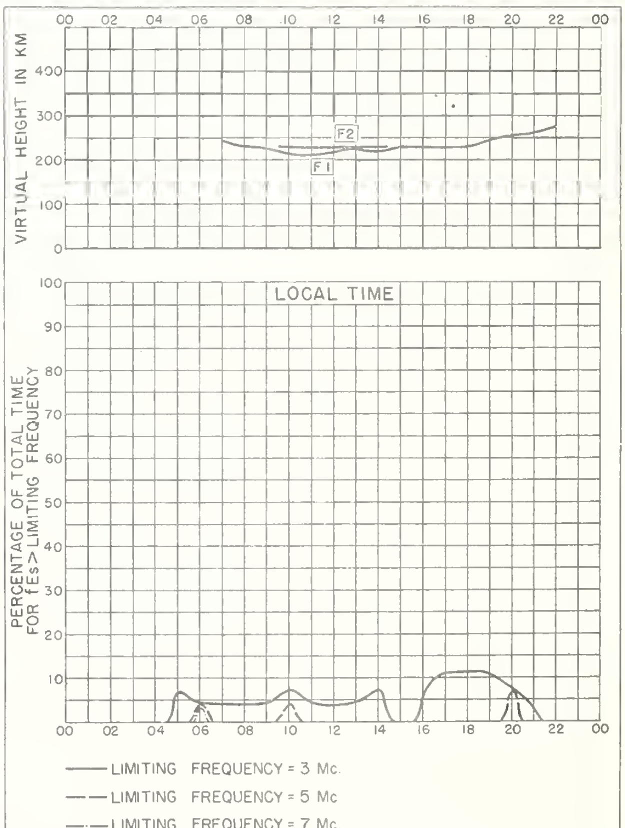

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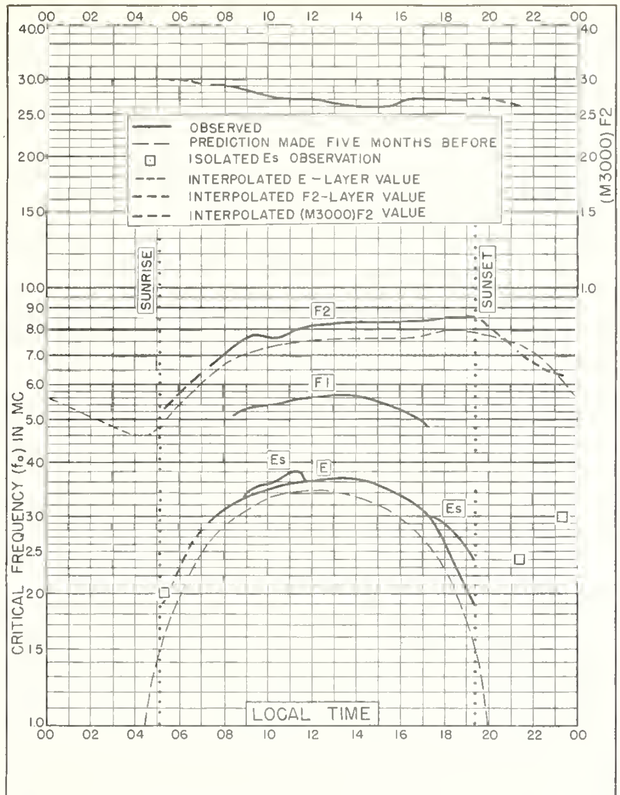

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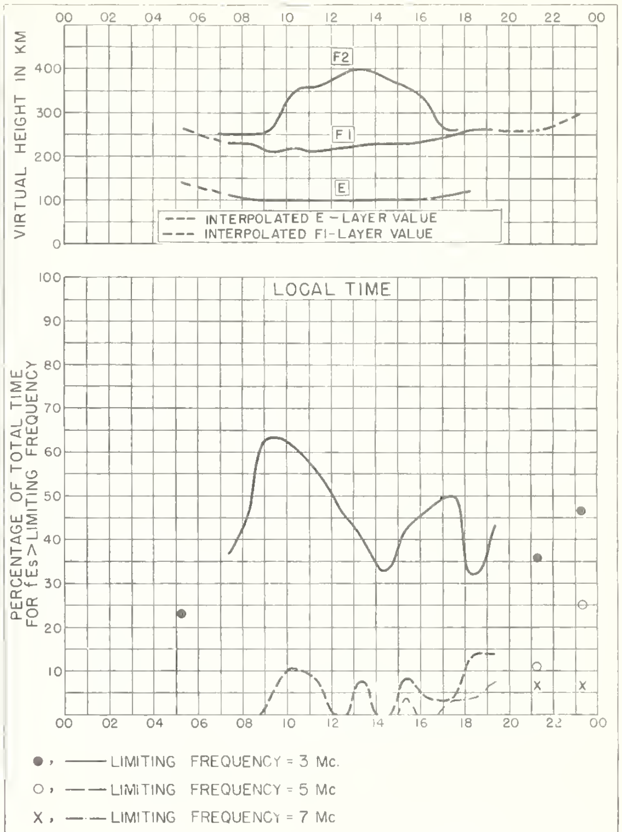

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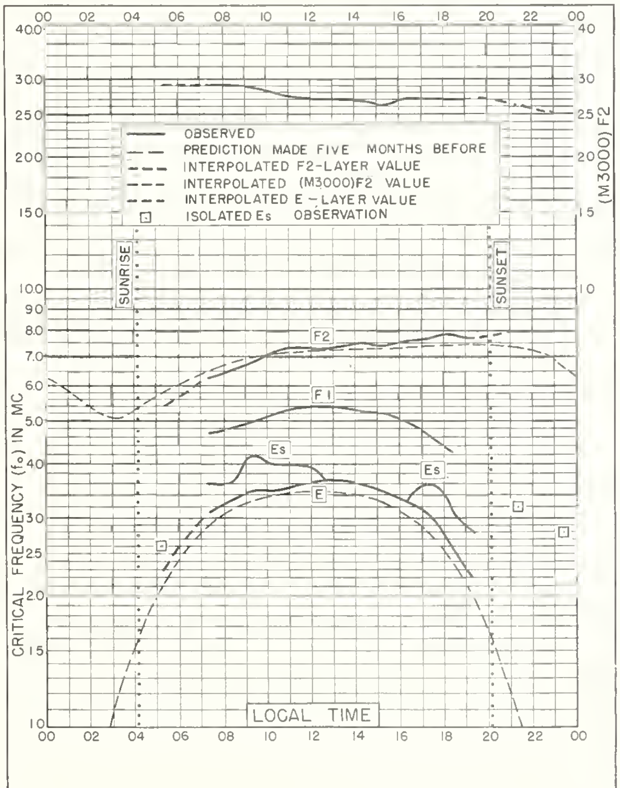

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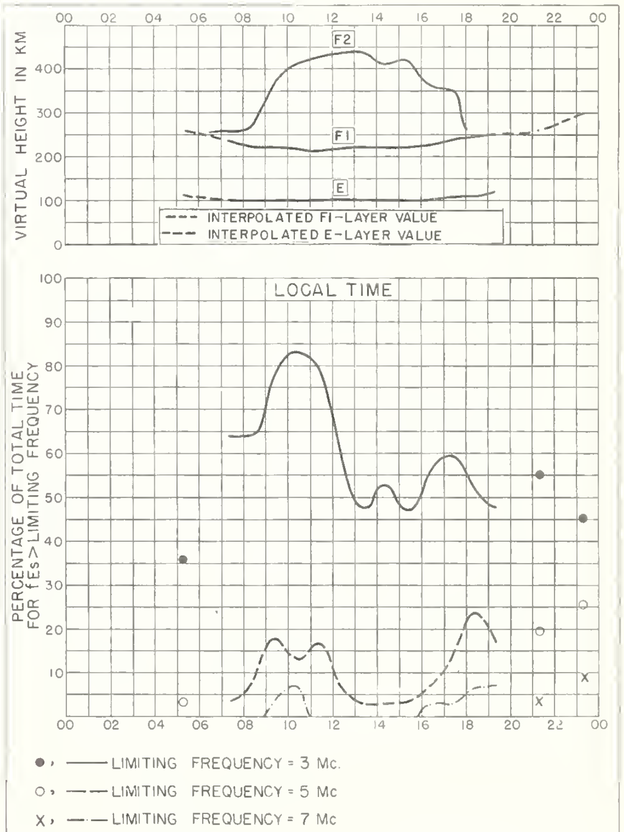

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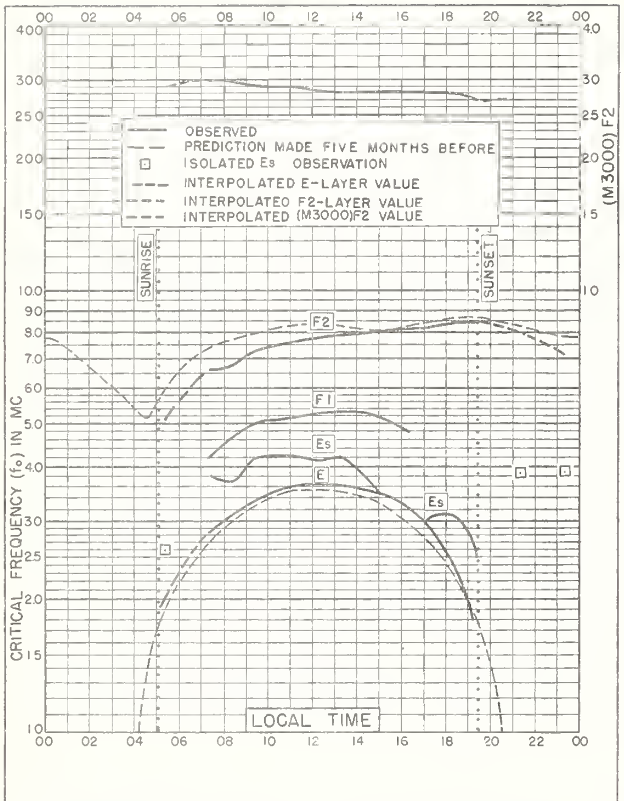

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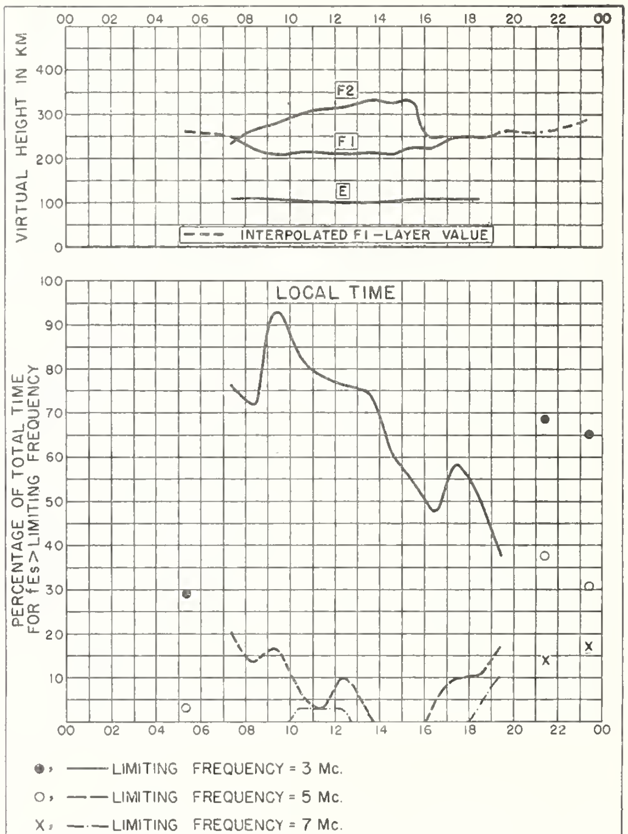

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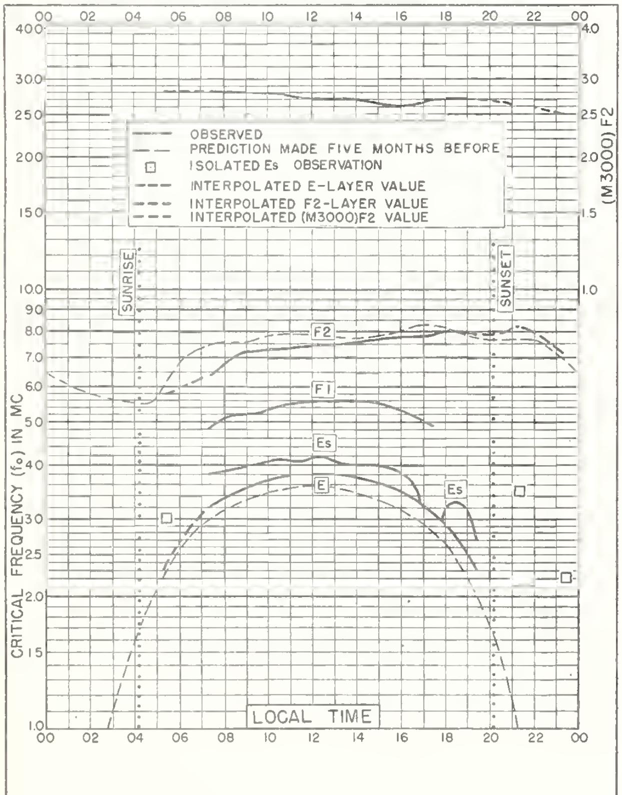

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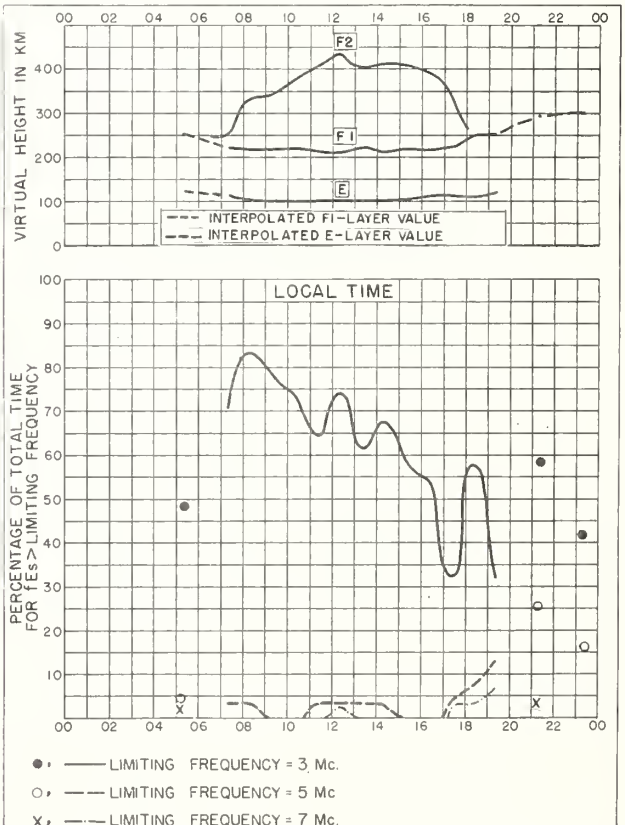

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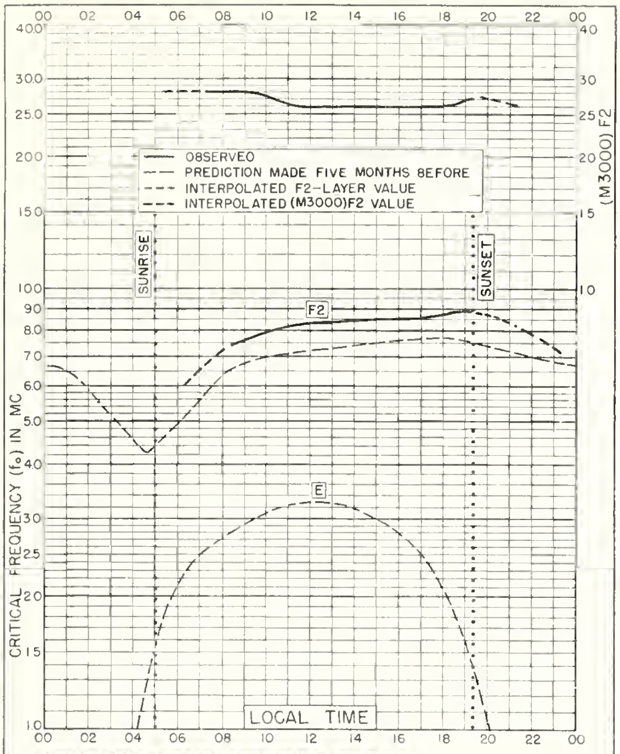

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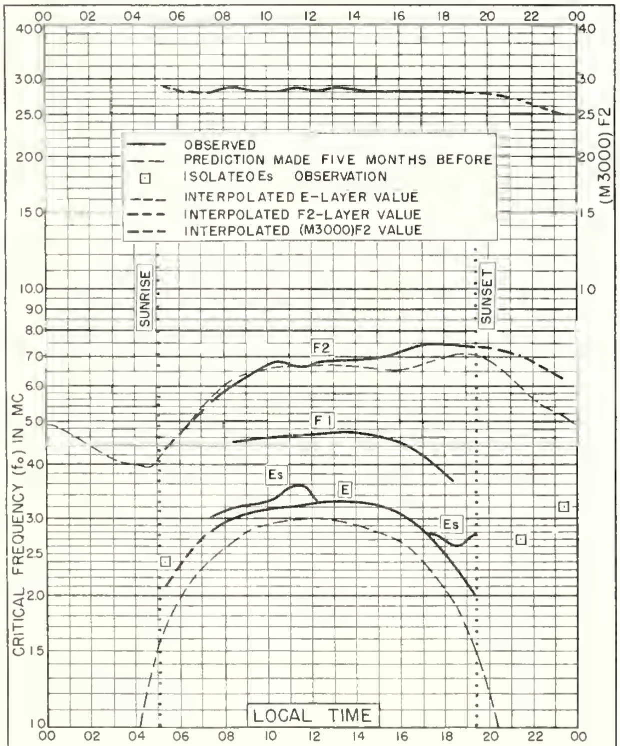

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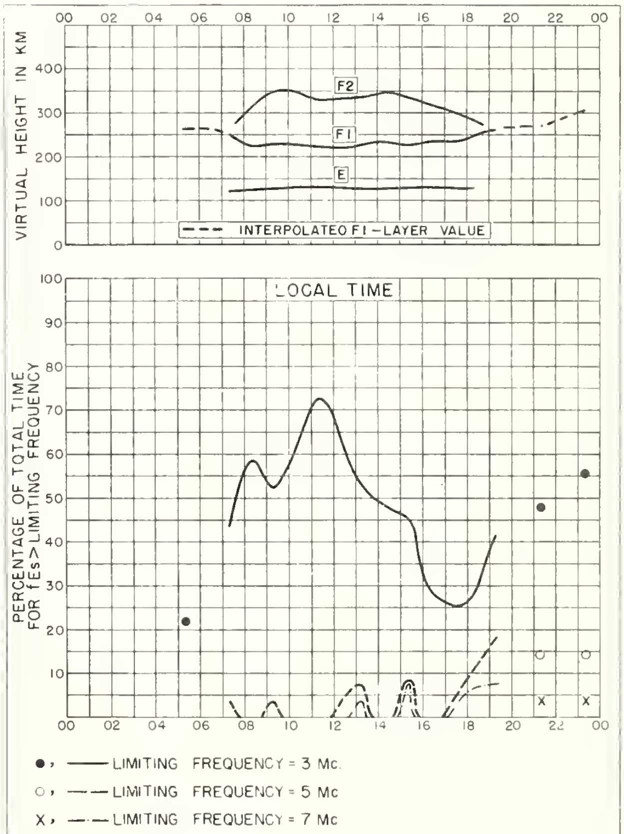

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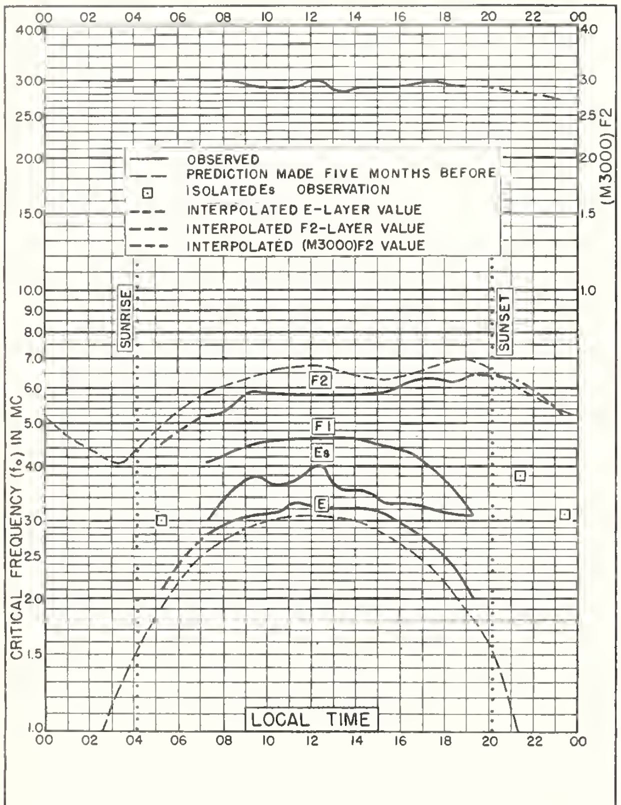

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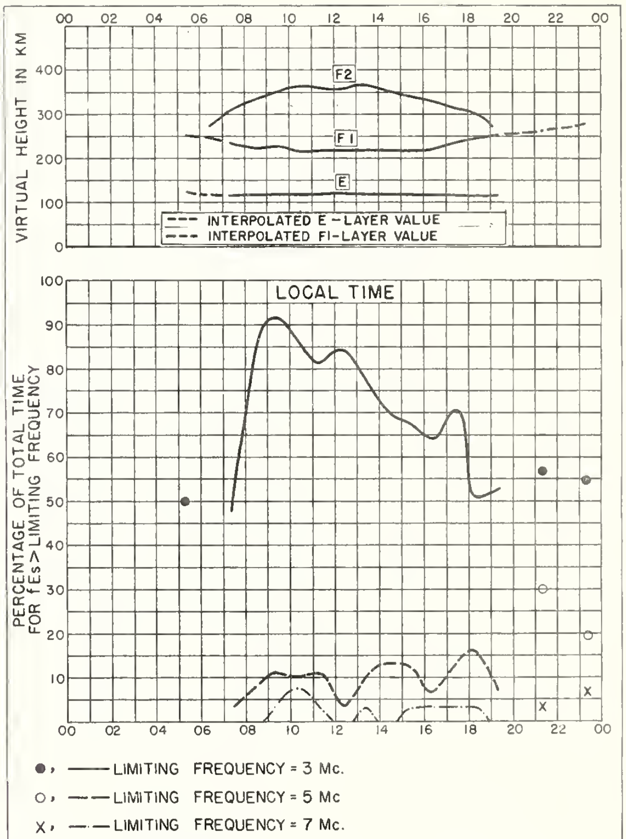

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CRPL and IRPL Reports

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

Daily:

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

Weekly:

CRPL–J. 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–13–1 ( ), monthly supplements to DNC–13–1.)
CRPL–F. Ionospheric Data.

Quarterly:

*IRPL–A. Recommended Frequency Bands for Ships and Aircraft in the Atlantic and Pacific.
*IRPL–H. Frequency Guide for Operating Personnel.

Circulars of the National Bureau of Standards:

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

Reports issued in past:

IRPL–C61. Report of the International Radio Propagation Conference, 17 April to 5 May 1944.
IRPL–G1 through G12. Correlation of D. F. Errors With Ionospheric Conditions.
IRPL–R. Nonscheduled reports:
- R4. Methods Used by IRPL for the Prediction of Ionosphere Characteristics and Maximum Usable Frequencies
- R5. Criteria for Ionospheric Storminess.
- R6. Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R7. Second Report on Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R9. An Automatic Instantaneous Indicator of Skip Distance and MUF.
- R10. A Proposal for the Use of Rockets for the Study of the Ionosphere.
- §R11. A Nomographic Method for Both Prediction and Observation Correlation of Ionosphere Characteristics.
- §R12. Short Time Variations in Ionospheric Characteristics.
- R14. A Graphical Method for Calculating Ground Reflection Coefficients.
- §R15. Predicted Limits for *F*2-Layer Radio Transmission Throughout the Solar Cycle.
- §R17. Japanese Ionospheric Data—1943.
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- §R33. Ionospheric Data on File at IRPL.
- §R34. The Interpretation of Recorded Values of *fEs*.
- R35. Comparison of Percentage of Total Time of Second-Multiple *Es* Reflections and That of *fEs* in Excess of 3 Mc.

IRPL–T. Reports on tropospheric propagation:
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