IONOSPHERIC DATA

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IONOSPHERIC DATA

CONTENTS

TERMINOLOGY AND SCALING PRACTICES	Page 4
MONTHLY AVERAGE AND MEDIAN VALUES OF IONOSPHERIC DATA	Page 6

Provisional data (received by telephone or telegraph)

September 1945

Fairbanks, Alaska (Median values)	Table 1
Churchill, Canada (Median values)	Table 2
Prince Rupert, Canada (Median values)	Table 3
St. John's, Newfoundland (Median values)	Table 4
Ottawa, Canada (Median values)	Table 5
Boston, Massachusetts (Median values)	Table 6
San Francisco, California (Median values)	Table 7
Baton Rouge, Louisiana (Median values)	Table 8
Maui, Hawaii (Median values)	Table 9
Trinidad, British West Indies (Median values)	Table 10
Christmas I. (Median values)	Table 11

August 1945

Fairbanks, Alaska (Median values)	Table 12
Burghead, Scotland (Average values)	Table 13
Great Baddow, England (Average values)	Table 14
Delhi, India (Average values)	Table 15
Maui, Hawaii (Median values)	Table 16
Leyte (Median values)	Table 17
Colombo, Ceylon (Average values)	Table 18
Christmas I. (Median values)	Table 19
Cape York, Q., Australia (Average values)	Table 20
Rarotonga I. (Median values)	Table 21
Pitcairn I. (Median values)	Table 22
Brisbane, Q., Australia (Average values)	Table 23
Kermadec Is. (Median values)	Table 24
Watheroo, W. Australia (Average values)	Table 25
Mt. Stromlo, N.S.W., Australia (Median values)	Table 26
Christchurch, N.Z. (Median values)	Table 27
Campbell I. (Median values)	Table 28

July 1945

Leningrad, U.S.S.R. (Average values)	Table 29
Burghead, Scotland (Average values)	Table 30
Sverdlovsk, U.S.S.R. (Average values)	Table 31
Moscow, U.S.S.R. (Average values)	Table 32
Delhi, India (Average values)	Table 33

Provisional dataJune 1945

Moscow, U.S.S.R. (Average values) Table 34

Final dataSeptember 1945

Washington, D.C. (Median values) Table 35
Figs. 1 and 2

August 1945

Churchill, Canada (Median values) Table 36
Figs. 3 and 4
Prince Rupert, Canada (Median values) Table 37
Figs. 5 and 6
St. John's, Newfoundland (Median values) Table 38
Figs. 7 and 8
Ottawa, Canada (Median values) Table 39
Figs. 9 and 10
Boston, Massachusetts (Median values) Table 40
Figs. 11 and 12
San Francisco, California (Median values) Table 41
Figs. 13 and 14
Baton Rouge, Louisiana (Median values) Table 42
Figs. 15 and 16
San Juan, Puerto Rico (Median values) Table 43
Figs. 17 and 18
Huancayo, Peru (Median values) Table 44
Figs. 19 and 20

July 1945

Great Baddow, England (Median values) Table 45
Figs. 21 and 22
Maui, Hawaii (Median values) Table 46
Figs. 23 and 24
Leyte (Median values) Table 47
Figs. 25 and 26
Colombo, Ceylon (Median values) Table 48
Figs. 27 and 28
Watherco, W. Australia (Median values) Table 49
Figs. 29 and 30
Simonstown, Union of S. Africa (Median values) Table 50
Fig. 31
Christchurch, N.Z. (Median values) Table 51
Figs. 32 and 33

Final DataJune 1945

Tykhii Bay, U.S.S.R. (Average values)	Table 52 Fig. 34
Leningrad, U.S.S.R. (Average values)	Table 53 Fig. 35
Sverdlovsk, U.S.S.R. ($f^{\circ}F_2$, median values; others, average values)	Table 54 Fig. 36
Tomsk, U.S.S.R. (Average values)	Table 55 Fig. 37
Great Baddow, England (Median values)	Table 56 Figs. 38 and 39
Alma Ata, U.S.S.R. (Average values)	Table 57 Fig. 40
Leyte (Median values)	Table 58 Figs. 41 and 42
Watheroo, W. Australia (Median values)	Table 59 Figs. 43 and 44
Simonstown, Union of S. Africa (Median values)	Table 60 Fig. 45

May 1945

Tykhii Bay, U.S.S.R. (Average values)	Table 61 Fig. 46
Oslo-Kjeller (Average values)	Table 62 Fig. 47
Leningrad, U.S.S.R. (Average values)	Table 63 Fig. 48
Sverdlovsk, U.S.S.R. ($f^{\circ}F_2$, median values; others, average values)	Table 64 Fig. 49
Tomsk, U.S.S.R. (Average values)	Table 65 Fig. 50
Moscow, U.S.S.R. (Average values)	Table 66 Fig. 51
Alma Ata, U.S.S.R. (Average values)	Table 67 Fig. 52

April 1945

Leningrad, U.S.S.R. (Average values)	Table 68 Fig. 53
--	---------------------

March 1945

Leningrad, U.S.S.R. (Average values)	Table 69 Fig. 54
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IONOSPHERIC DATA FOR EVERY DAY AND HOUR Page 8

September 1945

Washington, D.C.

h'F2	Table 70
f ^o F2	Tables 71 and 72
h'F1	Table 73
f ^o F1	Table 74
h'E	Table 75
f ^o E	Table 76
Es	Table 77
F2-M1500	Table 78
F2-M3000	Table 79
F1-M3000	Table 80
E-M1500	Table 81

IONOSPHERE DISTURBANCES Page 8

Ionospheric Storminess Table 82

Ionospheric character and principal storms observed
at Washington, D.C., September 1945.

Sudden Ionosphere Disturbances Table 83

Observed at Washington, D.C., during September 1945.

Radio Propagation Quality Figures, Compared with IRPL and ISIB

Warnings, and IRPL A-Zone Forecasts.

North Atlantic and North Pacific quality figures,
August 1945, provisional Table 84

ADDITIONAL IONOSPHERIC DATA FOR SOLAR ECLIPSE, 9 JULY 1945 . . . Page 8

Ionospheric data for solar eclipse, 9 July, and for control days, 6 July through 12 July, Boston, Massachusetts . . .	Fig. 55
Ionospheric data for solar eclipse, 9 July, and for control days, 2 July through 17 July, San Francisco, Calif. . . .	Fig. 56
Ionospheric data for solar eclipse, 9 July, and for control days, 4 July through 15 July, Baton Rouge, Louisiana . . .	Fig. 57
Ionospheric data for solar eclipse, 9 July, and for control days, 6 July through 16 July, San Juan, Puerto Rico . . .	Fig. 58

ERRATA Page 11

TERMINOLOGY AND SCALING PRACTICES

The symbols and terminology used in this report are those adopted by the International Radio Propagation Conference, and given in detail on pages 24 to 26 of the report IRPL-C61, "Report of International Radio Propagation Conference," and in the Section on "Terminology", in reports IRPL-F1, 2, 3, 4, 5.

Beginning with data reported for September, a new symbol, L, defined as follows, is adopted for use in detailed tabulations of hourly values of ionosphere characteristics observed at Washington:

L or l = critical frequency, muf , or muf factor for F1 layer omitted because no definite and abrupt change in slope of the $h'f$ curve occurs either for the first reflection or for any of the multiples. (See "Report of International Radio Propagation Conference," IRPL-C61, June 1944, VI 3c, p.37).

In the past, ionospheric conditions were summarized on a monthly basis by using average or mean values, for each hour of the day, for each month. However, following the recommendations of the International Radio Propagation Conference, held in Washington 17 April to 5 May 1944, beginning with data for 1 Jan. 1945, median values were used by IRPL wherever possible. Thus, median values are given for Washington, for all stations reporting directly to the IRPL, for the Canadian stations, and for all others sending in detailed tabulations to the IRPL, from which medians can be computed.

Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data existed.

The monthly median values used here are the values equalled or exceeded on half the days of the month at the given hour. The following conventions are used in determining the medians for hours when no measured values are given, because of equipment limitations and ionospheric irregularities. Symbols used are those given in the report referred to above, IRPL-C61.

a. For all ionospheric characteristics:

Values missing because of A, B, C or F (see terminology referred to above) are omitted from the median count.

b. For critical frequencies and virtual heights:

Values missing because of E are counted as equal to or less than the lower limit of the recorder.

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

Values missing because of G are counted:

1. For f^oF_2 , as equal to or less than f^oF_1 .

2. For $h'F_2$, as equal to or greater than the median.

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

c. For muf factors (M-factors):

Values missing because of G are counted as equal to or less than the median.

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

d. For sporadic E (Es):

Values of fEs missing because no Es reflections appeared, the equipment functioning normally otherwise, are counted as equal to or less than the lower limit of the recorder.

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

MONTHLY AVERAGES AND MEDIAN VALUES OF IONOSPHERIC DATA

The ionospheric data given here in graphical and tabular form were assembled by the Interservice Radio Propagation Laboratory for analysis and correlation, incidental to IRPL predictions of radio propagation conditions. The following are the sources of the data:

Australian Council for Scientific and Industrial Research,
Radio Research Board, Australia;
Brisbane, Q., Australia
Mt. Stromlo, Canberra, NSW, Australia
Cape York, Q., Australia

British National Physical Laboratory, and Inter-Services Ionosphere Bureau;
Slough, England
Great Baddow, England
Burghead, Scotland
Delhi, India
Madras, India
Simonstown, Union of S. Africa
Colombo, Ceylon

Canadian Radio Wave Propagation Committee;
Churchill, Canada
Ottawa, Canada
St. John's, Newfoundland
Prince Rupert, Canada

New Zealand Radio Research Committee;
Kermadec Is.
Christchurch (Canterbury University College Observatory)
Campbell I.
Pitcairn I.
Rarotonga I.

Interdepartment Ionosphere Bureau, U.S.S.R. Scientific Experimental
Institute of Terrestrial Magnetism, Moscow, U.S.S.R.:
Tykhi Bay, U.S.S.R.
Tomsk, U.S.S.R.
Sverdlovsk, U.S.S.R.
Moscow, U.S.S.R.
Leningrad, U.S.S.R.
Alma Ata, U.S.S.R.

Carnegie Institution of Washington (Department of Terrestrial Magnetism):

Baffin I., Canada

Christmas I.

Fairbanks, Alaska (University of Alaska, College, Alaska)

Reykjavik, Iceland

Maui, Hawaii

Trinidad, Brit. West Indies

Huancayo, Peru

Watheroo, W. Australia.

United States Army Signal Corps:

Leyte, Philippine Is.

National Bureau of Standards:

Washington, D.C.

Stanford University:

San Francisco, California

Louisiana State University:

Baton Rouge, Louisiana

University of Puerto Rico:

San Juan, P.R.

Harvard University:

Boston, Mass.

The tables of "provisional data" give values as reported to the IRPL by telephone or telegraph. Any errors in these values will be corrected in later issues of the F-series reports. In final data tabulations, any omission of values previously given in provisional tabulations is indicated by a dash.

The tables and graphs of "final data" are correct for the values reported to the IRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of these errors are due to:

- a. Differences in scaling records where spread echoes are present.
- b. Omission of values where f^oF_2 is less than or equal to f^oF_1 , leading to erroneously high values of monthly average or median values.
- c. Omission of values where critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series reports, IRPL-F1, 2, 3, 4, and 5. Discrepancies between predicted and observed values are often ascribable to these effects.

IONOSPHERIC DATA FOR EVERY DAY AND HOUR

These data, observed at Washington, D.C., follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given under "Terminology and Scaling Practices" above. Note that the table of values of F2-M3500 is no longer included, since these values can be readily derived from the values of F2-M3000.

IONOSPHERE DISTURBANCES

Table 82 presents ionosphere character figures for Washington, D.C., during September 1945, as determined by the criteria presented in the report IRPL-R5, "Criteria for Ionospheric Storminess", together with American magnetic K-figures which are usually covariant with them.

Table 83 presents sudden ionosphere disturbances as observed at Washington, D.C., during September 1945.

Table 84 gives provisional radio propagation quality figures for North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, August 1945, compared with the IRPL daily radio disturbance warnings, and ISIB daily warnings, the IRPL semiweekly radio propagation forecasts for the A-zone, and the half-day American geomagnetic K-figures.

The radio propagation quality figures were prepared from radio traffic data, reported to IRPL, in the manner described in detail in report IRPL-R13, "Ionospheric and Radio Propagation Disturbances, October 1943 through February 1945," issued 24 May 1945.

ADDITIONAL IONOSPHERIC DATA FOR SOLAR ECLIPSE, 9 JULY, 1945

In the previous issue of this report, IRPL-F13, issued September 1945, a preliminary account of eclipse data received by IRPL was presented. The major part of the data, particularly from locations where the eclipse effects were most pronounced, are still being analyzed, and have not yet been received at this laboratory. Some additional information concerning the effects of the eclipse has been received, however, and is presented herewith.

Possibly the most interesting effect investigated is that of the corpuscular eclipse. E. A. Milne (M.N. Roy. Ast. Soc. 86, 459, 578, 1926) has shown that neutral particles may be emitted by the sun because of radiation pressure acting upon atoms in the chromosphere. There seems very good reason to believe (Cf. IRPL-F12, p.8, "Sporadic-E Variation with Intensity and Latitude of Solar Activity") that sporadic-E ionization is caused by solar corpuscular radiation, not necessarily neutral, however. The eclipse of 9 July 1945 presented an excellent opportunity to determine the effect of lunar shielding from such emitted corpuscles, inasmuch as such corpuscular emission arriving at the earth should be near maximum in the earth's northern hemisphere in midsummer, near the minimum period of the solar-activity cycle.

Calculations by E. A. Milne (loc. cit.), S.R. Pike (M.N. Roy. Ast. Soc. 88, 3, 1927), and S. Chapman (M.N. Roy. Ast. Soc. 89, 458, 1929; 92, 413, 1931-2) predict the solar emission of a stream of neutral particles, with a limiting velocity of about 1600 km/s attained after they had traveled about ten solar radii distant from the sun, nearly 90% of which have velocities inclined less than 10° to a radial direction. The earth thus intercepts a very nearly parallel beam of these particles, emitted by an area subtending an angle of about 15° near the center of the solar disc, or having about one quarter the apparent diameter of the disc.

As shown by S. Chapman (M.N. Roy. Ast. Soc. 92, 413, 1931-2), the cone of lunar shielding for such particles, at the earth, during a solar eclipse, has, therefore, a normal sectional diameter of about 1600 miles, with a penumbra of about 500 miles width, the latter about a fourth as much as the optical penumbra.

Since the particles are emitted approximately radially from the sun, the ratio of this radial velocity to the transverse velocity with respect to the moon (the moon's velocity) gives a backward slope of about 1° for the shadow cone, or about a 4300-mile lag at the distance of the earth's orbit. The moon's velocity being nearly parallel to that of the earth, but about 35 mi/min slower, the corpuscular eclipse thus occurs about two hours before the optical eclipse. If one assumes a 2600-mile normal sectional diameter, as above, for the corpuscular shadow cone, the duration of eclipse is about $1\frac{1}{4}$ hours for a transverse plane through the center of the earth. Because of the earth's rotation, the actual time of passage and occurrence before the optical eclipse will vary, as shown in the tables below, computed by the U.S. Naval Observatory, for three assumed corpuscular velocities of 1000, 2000, and 3000 km/s at a height of 100 km (approximately Es-layer height) above the earth's surface.

Total Solar Eclipse 9 July 1945

Middle of Tracks of Corpuscular Eclipses
for Earth's Surface and Height of 100 km.
(Corpuscular Velocities 1000, 2000, 3000 km/s).
Also Central Line of Visual Eclipse at Surface and 100 km.

(Data prepared by U.S. Naval Observatory)

Visual Eclipse					Corpuscular Eclipse				
					1000 km/s				
Surface					Surface				
OCT	Latitude	Longitude	Latitude	Longitude	OCT	Latitude	Longitude	Latitude	Longitude
h m					h m				
Aug. 12 13.8	+44°23'	+115°57'	+50°17'	+100°21'	Aug. 8 56.5	+32°52'	+60°17'	+37°0'	+49°4'
12 15	+48 13	+107 44			9 0	+39 1	+46 47	+40 2	+42 37
12 30	+58 57	+84 38	+58 59	+81 5	9 30	+51 43	+16 59	+51 27	+15 21
13 0	+68 3	+51 45	+67 18	+49 42	10 0	+56 49	-5 8	+56 16	-5 53
13 30	+69 51	+13 50	+68 54	+14 16	10 24.5	+57 54	-23 8	+57 17	-23 8
14 0	+64 52	-19 58	+64 17	-17 40	11 0	+54 55	-48 55	+54 26	-47 52
14 30	+53 23	-48 49	+53 43	-45 7	11 30	+47 50	-70 28	+47 44	-68 34
14 40	+44 52	-65 46	+47 7	-58 10	11 45	+41 33	-84 7	+41 58	-81 17
Corpuscular Eclipse					Corpuscular Eclipse				
2000 km/s					3000 km/s				
Aug. 10 33.7	+38 24	+87 15	+42 36	+75 9	Aug. 11 6.6	+40 12	+96 26	+44 37	+84 9
10 45	+49 47	+62 17	+50 3	+59 8	11 15	+50 16	+74 53	+50 20	+72 6
11 0	+55 46	+47 33	+55 33	+45 16	11 30	+57 3	+58 48	+56 52	+56 12
11 30	+62 9	+21 1	+61 30	+19 53	12 0	+64 4	+30 23	+63 23	+29 3
12 0	+63 19	-6 41	+62 34	-6 26	12 30	+65 21	+0 2	+64 33	+0 21
12 30	+59 39	-32 49	+59 6	-31 21	13 0	+61 18	-28 9	+60 44	-26 28
13 0	+50 55	-57 28	+50 56	-54 56	13 30	+51 46	-54 11	+51 51	-51 20
					13 40	+49 25	-57 31	+49 43	-54 20

From these considerations, one might expect lower sporadic-E ionization for a period of time about two hours or so before lowered ionization occurs in the regular ionospheric layers, if sporadic-E ionization were principally caused by neutral corpuscles.

Figs. 55 through 58 present values of fEs for 9 July, in comparison with those for control days before and after the day of eclipse, at Boston, Massachusetts; San Francisco, California; Baton Rouge, Louisiana; and San Juan, Puerto Rico. It may be seen that the large daily variability of fEs is sufficient to obscure any but very pronounced corpuscular eclipse effects, which, since these stations were not in the path of totality, might not be expected to be great. However, not only at these stations, but also at all other stations for which eclipse observations were made, there was no conclusive evidence of neutral corpuscular eclipse effects. Since other considerations (Cf. IRPL-F12, p.8, "Sporadic-E Variation with Intensity and Latitude of Solar Activity") present good argument for the solar corpuscular origin of sporadic-E ionization, it seems most probable that the preponderance of these corpuscles is electrically charged.

Additional information received from the Canadian stations from which a preliminary report was given in the previous issue of this report, IRIL-F13, shows maximum eclipse effects in the E and F1 layers close to the maximum phase of the optical eclipse, thus confirming the hypothesis of light radiation as their origin. F2-layer effects were more complex, and the determination of the significance of pre-eclipse or lag effects is in process. At St. John's, Newfoundland, and Churchill, Canada, maximum F2-layer effects occurred near the maximum phase of the optical eclipse.

At Churchill, Canada, separation of F1 and F2 layers was observed during the eclipse, with particularly great reduction (46%) of F1-layer ionization density at 1220, near maximum phase of the optical eclipse.

Normal separation of the F1 and F2 layers occurred between 1245 and 1250 on 9 July, and about 1300 on the control days, 8 and 10 July. At Prince Rupert, Canada, where the maximum of the optical eclipse occurred near sunrise, and much longer before normal separation of the F1 and F2 layers, no separation was observed during the eclipse, but a reduction of about 34% occurred in night F2-layer ionization density, - the greatest observed for F2 layer at any station. While evaluation of the significance of these results is still in process, they suggest the possibility of night separation of F1- and F2-layer ionization.

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1. Provisional data for June 1945 for all the New Zealand stations, reported in IRPL-F10 as "average values" were actually median values. These stations were: Rarotonga I. (Table 20), Pitcairn I. (Table 21), Kermadec Is. (Table 23), Christchurch, N.Z. (Table 26), Campbell I. (Table 27).

2. A report from New Zealand dated 27 August 1945 stated that, because of equipment difficulties, all values of heights reported for Rarotonga I. for April, May, and June 1945 were erroneous and not amenable to correction. No heights were reported for June, but the height data for May appearing as final data in IRPL-F11, Table 34 and Fig. 26, and the height data for April appearing as final data in IRPL-F10, Table 31 and Fig. 26, should be disregarded.

Table 1 (Provisional Data)

Fairbanks, Alaska (64.50°N, 147.50°W)

September 1945

Time	h'F2	f'F2	h'F1	f'F1	h'F	f'F	F2-M3000
00	300	2.4				3.2	2.5
01	320	2.2				4.0	2.9
02	320	2.2				3.8	2.5
03	330	2.4				3.6	2.6
04	320	2.5				2.0	2.6
05	280	3.2				2.1	3.0
06	260	3.5				2.2	2.8
07	230	4.5				1.9	3.0
08	320	4.7				2.2	3.0
09	320	5.0				2.4	3.0
10	330	5.2				2.7	3.0
11	340	5.4				2.8	3.0
12	320	5.5	240	4.1		2.8	3.0
13	310	5.5	220	4.0		2.7	3.1
14	300	5.6	220	3.9		2.6	3.1
15	270	5.6	220	3.8		2.4	3.2
16	240	5.5	230	3.2		2.2	3.2
17	240	5.3	240	3.2		2.1	3.2
18	250	5.0				2.0	3.2
19	240	4.0				1.4	3.2
20	250	3.0				1.2	3.1
21	260	3.2				1.3	3.1
22	270	2.7				1.1	3.1
23	280	2.4				1.1	3.0

Time: 1500°.

Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

Median values.

Table 3 (Provisional Data)

Prince Rupert, Canada (54.30°N, 130.30°W)

September 1945

Time	h'F2	f'F2	h'F1	f'F1	h'F	f'F	F2-M3000
00		2.6					3.2
01		2.5					3.0
02		2.3					3.0
03		2.1					3.0
04		2.3					3.1
05		2.8					3.1
06		2.9					3.3
07		4.1					3.2
08		4.7					3.2
09		5.3					3.3
10		5.6					3.3
11		6.1					3.3
12		6.1					3.2
13		6.1					3.3
14		6.1					3.3
15		6.0					3.3
16		5.9					3.4
17		5.8					3.4
18		5.4					3.5
19		5.1					3.5
20		4.6					3.4
21		4.1					3.4
22		3.6					3.3
23		3.4					3.2

Time: 120.00°.

Length of time sweep: Manual operation.

Median values.

Table 2 (Provisional Data)

Churchill, Canada (53.30°N, 94.00°W)

September 1945

Time	h'F2	f'F2	h'F1	f'F1	h'F	f'F	F2-M3000
00		3.6					2.5
01		3.0					3.0
02		3.7					2.9
03		3.9					2.9
04		3.8					2.9
05		4.1					2.9
06		3.9					3.0
07		4.6					3.1
08		4.9					3.1
09		5.2					3.0
10		5.6					3.0
11		5.6					3.0
12		5.8					3.0
13		6.1					3.0
14		6.0					3.0
15		5.4					3.0
16		6.0					3.0
17		6.2					2.9
18		5.8					2.9
19		4.8					2.9
20		4.4					2.9
21		4.0					2.8
22		3.9					2.8
23		4.4					2.8

Time: 90.00°.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 4 (Provisional Data)

St. John's, Newfoundland (47.70°N, 52.70°W)

September 1945

Time	h'F2	f'F2	h'F1	f'F1	h'F	f'F	F2-M3000
00		3.4					3.1
01		3.1					3.1
02		2.9					3.1
03		2.5					3.2
04		2.1					3.2
05		2.3					3.2
06		3.6					3.3
07		4.3					3.3
08		5.5					3.6
09		6.1					3.4
10		6.1					3.5
11		6.2					3.5
12		6.3					3.4
13		6.3					3.4
14		6.4					3.4
15		6.4					3.4
16		6.6					3.2
17		6.6					3.3
18		6.9					3.3
19		6.7					3.3
20		5.9					3.4
21		5.0					3.3
22		4.3					3.2
23		3.6					3.2

Time: 52.50°.

Length of time sweep: Manual operation.

Median values.

Table 5 (Provisional Data)

Ottawa, Canada (45.6°N, 75.8°W)									
September 1945									
Time	h'F2	f'F2	h'F1	f'F1	h'F1	f'F1	f2s	F2-M3000	
00		3.1						2.8	
01		3.0						2.8	
02		2.7						2.8	
03		2.6						2.8	
04		2.6						2.7	
05		2.7						2.7	
06		3.9						3.1	
07		5.0						3.2	
08		5.5						3.1	
09		5.8						3.1	
10		6.0						3.0	
11		6.2						3.0	
12		6.4						3.0	
13		6.4						3.0	
14		6.5						3.0	
15		6.4						3.0	
16		6.6						3.0	
17		6.5						3.0	
18		6.2						3.0	
19		6.4						3.0	
20		5.5						3.0	
21		4.6						3.0	
22		3.9						3.0	
23		3.5						2.8	

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

Table 7 (Provisional Data)

San Francisco, Calif. (37.4°N, 122.2°W)									
September 1945									
Time	h'F2	f'F2	h'F1	f'F1	h'F1	f'F1	f2s	F2-M3000	
00		3.5						3.0	
01		3.6						2.9	
02		3.5						3.0	
03		3.5						2.9	
04		3.6						3.0	
05		3.7						3.0	
06		4.2						3.1	
07		5.8						3.4	
08		6.5						3.3	
09		6.4						3.3	
10		6.8						3.2	
11		6.8						3.1	
12		7.4						3.0	
13		7.8						3.1	
14		7.8						3.1	
15		7.4						3.2	
16		7.0						3.3	
17		6.6						3.4	
18		6.2						3.3	
19		5.4						3.2	
20		4.2						3.1	
21		4.0						3.0	
22		3.8						3.0	
23		3.6						3.0	

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

Table 6 (Provisional Data)

Boston, Massachusetts (42.4°N, 71.2°W)									
September 1945									
Time	h'F2	f'F2	h'F1	f'F1	h'F1	f'F1	f2s	F2-M3000	
00		3.0						2.9	
01		3.0						2.9	
02		2.7						2.9	
03		2.3						2.9	
04		2.0						2.9	
05		2.4						3.0	
06		4.2						3.2	
07		5.4						3.3	
08		5.7						3.3	
09		6.3						3.2	
10		6.4						3.1	
11		6.3						3.1	
12		6.8						3.1	
13		6.6						3.1	
14		6.5						3.1	
15		6.6						3.1	
16		6.7						3.1	
17		6.7						3.1	
18		6.6						3.1	
19		5.8						3.0	
20		5.0						3.0	
21		4.3						2.9	
22		3.8						2.8	
23		3.2						2.8	

Time: 75°W.
Median values.

Table 8 (Provisional Data)

Baton Rouge, Louisiana (30.5°N, 91.2°W)									
September 1945									
Time	h'F2	f'F2	h'F1	f'F1	h'F1	f'F1	f2s	F2-M3000	
00		3.4						2.9	
01		3.5						2.9	
02		3.4						3.1	
03		3.3						3.0	
04		3.2						3.0	
05		3.2						3.1	
06		4.8						3.3	
07		6.0						3.3	
08		6.3						3.3	
09		6.2						3.2	
10		6.4						3.1	
11		7.0						3.0	
12		7.4						3.1	
13		7.3						3.1	
14		7.5						3.1	
15		7.9						3.1	
16		7.7						3.2	
17		7.5						3.2	
18		7.5						3.2	
19		5.0						3.0	
20		4.0						2.9	
21		3.5						2.9	
22		3.4						2.9	
23		3.3						3.0	

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

Table 9 (Provisional Data)

Maui, Hawaii (20.9°N, 156.5°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	P2-M3000
00	250	4.6					3.1
01	220	4.0					3.3
02	220	2.9					3.2
03	250	2.6					3.3
04	220	2.3					3.2
05	250	2.6					3.0
06	260	3.3					3.0
07	240	6.0					3.3
08	230	6.8					3.2
09	260	7.1					3.0
10	320	8.1					2.8
11	340	9.1					2.8
12	350	10.1					2.9
13	340	10.8					3.0
14	320	11.8					3.1
15	300	12.2					3.2
16	270	12.5					3.3
17	250	11.8					3.4
18	220	10.0					3.2
19	220	7.6					3.3
20	210	5.7					3.2
21	240	5.0					2.9
22	230	4.4					2.8
23	260	4.4					2.9

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

Table 11 (Provisional Data)

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

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	P2-M3000
00	230	8.0					2.0
01	230	8.0					2.0
02	220	5.6					1.9
03	220	5.6					2.0
04	220	4.6					2.2
05	230	3.4					2.3
06	240	2.9					3.0
07	240	5.6					2.8
08	220	6.9					2.7
09	320	7.4					2.7
10	340	7.8					2.6
11	350	8.0					2.5
12	380	8.1					2.5
13	360	8.4					2.5
14	360	8.6					2.6
15	310	10.0					2.6
16	310	10.3					2.8
17	220	10.3					2.8
18	240	10.4					2.7
19	270	9.8					2.7
20	290	8.6					2.6
21	260	8.5					2.9
22	250	8.0					2.9
23	230	8.8					3.0

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

Table 10 (Provisional Data)

Trinidad, Brit. West Indies (10.6°N, 61.2°W) September 20 through 30, 1945

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	P2-M3000
00	290	5.4					3.3
01	280	5.2					5.6
02	260	4.4					4.2
03	260	4.0					3.5
04		3.0					3.4
05		2.6					3.0
06	260	4.1					2.9
07	250	6.4					2.9
08	280	7.3					3.2
09	300	7.2					3.3
10	330	8.7					3.0
11	320	9.8					2.8
12	320	11.0					2.9
13	300	11.8					2.9
14	290	12.8					3.1
15	280	11.7					5.8
16	260	10.4					4.8
17	280	9.8					4.7
18	260	9.0					4.5
19	260	7.8					5.3
20	260	7.5					4.5
21	260	6.0					4.1
22	300	5.4					5.0
23	320	5.3					2.8

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

Table 12 (Provisional Data)

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

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	P2-M3000
00	300	3.0					3.5
01	290	3.1					5.2
02	300	3.2					2.1
03	290	3.4					1.4
04	280	3.8					1.4
05	340	4.0					3.0
06	370	4.6					3.2
07	410	4.5					2.5
08	420	4.7					2.7
09	400	4.8					2.7
10	420	4.8					2.9
11	380	4.9					3.0
12	390	5.0					3.0
13	410	4.9					2.9
14	400	4.8					2.9
15	370	4.6					2.8
16	330	4.6					2.6
17	320	4.9					2.3
18	260	4.7					2.0
19	260	4.6					1.8
20	260	4.6					1.3
21	260	4.4					1.2
22	260	3.6					1.0
23	270	3.4					0.9

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

Table 13 (Provisional Data)

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

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00		4.4					
01		4.0					
02		3.7					
03		3.6					
04		3.4					
05		4.0					
06		4.3					
07		4.6					
08		4.9					
09		5.3					
10		5.4					
11		5.5					
12		5.5					
13		5.5					
14		5.5					
15		5.5					
16		5.5					
17		5.7					
18		5.5					
19		5.8					
20		5.8					
21		5.6					
22		5.2					
23		4.8					

Time: 0°
Average values.

Table 14 (Provisional Data)

Great Baddow, England (51.7°N, 0.6°E) August 1945

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00		4.3					2.9
01		4.0					2.9
02		3.8					2.9
03		3.5					2.9
04		3.4					3.0
05		3.9					3.2
06		4.7					3.3
07		5.1					3.2
08		5.4					3.2
09		5.6					3.2
10		5.9					3.1
11		5.8					3.0
12		5.7					3.1
13		6.0					3.1
14		5.7					3.1
15		5.6					3.1
16		5.6					3.1
17		5.8					3.1
18		6.1					3.1
19		6.4					3.1
20		6.7					3.1
21		6.1					3.1
22		5.4					3.1
23		4.8					3.1

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

Table 15 (Provisional Data)

Delhi, India (28.6°N, 77.2°E) August 1945

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00		4.8					2.8
01		4.5					
02		4.5					
03		4.3					
04		3.8					3.0
05		3.5					
06		4.8					
07		6.0					
08		6.6					3.0
09		7.0					
10		7.7					
11		8.7					
12		9.1					2.6
13		9.9					
14		10.5					
15		10.4					
16		10.4					2.7
17		10.0					
18		9.7					
19		8.8					
20		7.6					3.0
21		6.3					
22		6.2					
23		5.7					

Time: 75°E.
Length of time sweep: Manual operation.
Average values.

Table 16 (Provisional Data)

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

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00	300	5.3					2.9
01	280	5.4					2.9
02	250	5.1					3.1
03	240	4.9					3.2
04	240	3.6					3.1
05	250	3.4					3.1
06	250	3.8					3.2
07	240	5.7					3.3
08	260	6.0					2.9
09	320	6.3					2.6
10	370	7.0					2.6
11	400	8.0					2.7
12	400	8.9					2.8
13	350	9.8					2.8
14	450	10.3					2.8
15	340	10.4					2.9
16	310	10.8					3.0
17	230	10.9					3.1
18	250	11.0					3.2
19	220	9.4					3.4
20	220	7.0					3.2
21	240	6.0					3.1
22	270	5.8					2.8
23	290	5.4					2.8

Time: 150.00°E.
Length of time sweep: 2 Ms to 16 Ms in one minute.
Median values.

Table 17. (Provisional Data)

Time	h'P2	f'P2	h'P1	f'P1	h'M	f'M	P2-H3000
00		5.7				3.4	2.9
01		5.3				3.4	3.1
02		5.2				3.5	3.1
03		4.5				3.1	3.2
04		4.1				3.0	3.4
05		3.4				2.9	3.4
06		3.3				2.7	3.2
07		6.0			1.9	4.2	3.3
08		7.1			2.7	5.2	3.2
09		7.3			3.2	5.5	2.9
10		7.3			3.5	5.7	2.5
11		7.7			3.7	6.0	2.5
12		7.6			3.8	6.5	2.5
13		7.8			3.8	6.3	2.4
14		8.1			3.7	6.1	2.4
15		8.3			3.6	5.9	2.4
16		8.8			3.4	6.3	2.5
17		9.3			2.9	6.2	2.6
18		9.3			2.6	5.2	2.8
19		9.1			1.7	5.1	2.8
20		8.6			4.2	3.0	3.0
21		8.0			3.8	3.0	3.0
22		7.1			3.0	3.0	2.9
23		6.4			3.6		

Time: 1350P.
Length of time sweep: Manual operation.
Median values.

Table 19. (Provisional Data)

Time	h'P2	f'P2	h'P1	f'P1	h'M	f'M	P2-H3000
00	240					2.2	
01	240					2.2	
02	240					2.1	
03	220					2.1	
04	220	5.1				2.1	3.2
05	220	3.7				1.9	3.5
06	230	3.0				2.0	3.6
07	230	4.9				3.3	3.0
08	210	6.2				6.2	2.9
09	310	9.8				7.5	2.6
10	360	7.0				3.5	2.6
11	390	7.6				3.6	2.5
12	400	7.5				3.8	2.5
13	390	7.8				3.7	2.4
14	400	7.8				3.6	2.4
15	370	8.1				3.5	2.5
16	350	8.5				3.2	2.6
17	300	8.8				2.8	2.6
18	230	8.8				2.2	2.7
19	260	8.3				4.6	2.7
20	280	7.2				2.1	2.7
21	280						
22	250					1.8	
23	250					1.9	

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

Table 18. (Provisional Data)

Time	h'P2	f'P2	h'P1	f'P1	h'M	f'M	P2-H3000
00		5.6					3.5
01		5.0					3.5
02		4.5					3.5
03		3.9					3.6
04		3.2					3.7
05							
06		3.6					3.3
07		6.6					3.3
08		8.0					3.1
09		8.3					3.8
10		7.9					3.7
11		7.7					2.7
12		7.6					2.7
13		7.8					2.7
14		8.1					2.7
15		8.1					2.8
16		8.4					3.0
17		8.7					2.8
18		9.0					3.2
19		8.8					3.2
20		8.4					3.4
21		7.3					3.6
22		6.6					3.5
23		5.9					

Time: 80°E.
Length of time sweep: 2 Mo to 16 Mo in one minute.
Average values.

Table 20. (Provisional Data)

Time	h'P2	f'P2	h'P1	f'P1	h'M	f'M	P2-H3000
00		3.7					3.5
01		3.5					3.8
02		2.8					3.1
03		2.2					3.0
04		2.4					3.2
05		2.5					3.4
06		3.8					3.2
07		6.2					3.2
08		7.6					3.5
09		8.5					3.4
10		9.0					3.2
11		8.8					3.2
12		8.4					3.1
13		8.2					3.1
14		8.5					3.1
15		8.1					3.2
16		7.5					3.3
17		6.8					3.1
18		6.3					3.0
19		5.9					3.2
20		5.2					3.1
21		4.2					3.1
22		3.9					3.3
23		3.8					

Time: Local.
Average values.

Table 21 (Provisional Data)

Rarotonga I. (21.4°S, 159.6°E)

August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	fEs	F2-M3000
00								
01		3.4						3.0
02								
03		3.2						3.3
04								
05		2.6						3.0
06								
07	240	4.6						3.3
08								
09	270	7.8	210	4.3		3.0		3.2
10								
11	265	7.9	212	4.5		3.3		3.4
12	280	7.0	210	4.6		3.3		3.3
13	280	6.9	206	4.6		3.2		3.2
14								
15	290	6.4	200	4.4		3.2		3.2
16								
17	250	6.8						3.2
18								
19	227	5.9						3.1
20								
21		4.5						3.0
22								
23		4.1						3.0

Time: 157.5°W.

Length of time sweep: 2.0 Mc to 16 Mc. Manual operation.

Median values.

Table 23 (Provisional Data)

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

August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	fEs	F2-M3000
00		3.6						3.0
01		3.8						3.2
02		3.9						3.2
03		3.9						3.2
04		3.6						3.2
05		3.4						3.1
06		3.4						3.2
07		5.1						3.4
08		6.3						3.5
09		6.7						3.4
10		6.8						3.4
11		6.6						3.3
12		6.7						3.4
13		6.5						3.4
14		6.6						3.4
15		6.6						3.4
16		6.2						3.4
17		5.6						3.3
18		5.2						3.2
19		4.7						3.1
20		4.2						3.0
21		4.1						3.0
22		3.9						3.1
23		3.9						3.1

Time: Local.

Length of time sweep: 2.2 Mc to 12.5 Mc in two minutes thirty seconds.

Average values.

Table 22 (Provisional Data)

Pitcairn I. (25.0°S, 130.0°E)

August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	fEs	F2-M3000
0000								
0100								
0230	250	3.4						
0300								
0400								
0530	290	2.5						
0600								
0730	235	5.9	190	2.7				
0800								
0930	250	7.4	210	4.3				
1000								
1130	260	7.2	200	4.5				
1200								
1330	260	7.4	190	4.4				
1400								
1530	230	6.5	200	4.0				
1600								
1700								
1800								
1930	230	4.1						
2000								
2100								
2230	270	3.4						
2300								

Time: 127.5°W.

Length of time sweep: 1.0 Mc to 13 Mc. Manual operation.

Median values.

Table 24 (Provisional Data)

Kermadec Is. (29.2°S, 177.9°W)

August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'F	f°F	fEs	F2-M3000
00	235	3.9						3.0
01	275	3.8						3.0
02	270	3.7						3.0
03	265	3.6						3.1
04	260	3.2						3.0
05	280	3.0						3.0
06	280	3.1						3.0
07	250	5.2						3.4
08	265	6.0	250	3.6	126	2.5		3.3
09	275	6.4	250	4.0	125	2.8		3.3
10	290	6.3	235	4.4	120	3.1		3.3
11	285	6.4	225	4.4	120	3.2		3.3
12	285	6.2	225	4.4	120	3.2		3.4
13	295	6.6	225	4.4	120	3.2		3.3
14	290	6.6	240	4.2	120	3.1		3.3
15	285	6.4	235	4.0	120	2.9		3.3
16	270	5.8	240	3.4	120	2.5		3.3
17	250	5.5				2.0		3.2
18	240	4.8						3.1
19	250	4.2						2.9
20	280	3.6						2.9
21	285	3.6						2.8
22	290	3.7						2.9
23	295	3.7						2.9

Time: 180°E.

Length of time sweep: 1.8 Mc to 12.0 Mc. Manual operation.

Median values.

Table 25 (Provisional Data)

Matheroo, N. Australia (30.3°S, 115.9°E) August 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	F2-M3000
00		3.3					3.1
01		3.4					3.1
02		3.5					3.1
03		3.6					3.1
04		3.4					3.1
05		3.3					3.2
06		3.4					3.3
07		5.0					3.5
08		5.7					3.5
09		6.1					3.4
10		6.4					3.3
11		6.6					3.3
12		6.6					3.3
13		6.7					3.3
14		6.8					3.3
15		6.6					3.4
16		6.1					3.4
17		5.7					3.4
18		4.9					3.4
19		3.9					3.3
20		3.3					3.2
21		3.3					3.1
22		3.2					3.1
23		3.2					3.1

Time: Local.

Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

Average values.

Table 27 (Provisional Data)

Christchurch, N.Z. (43.5°S, 172.6°E) August 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	F2-M3000
00	260	3.1				2.8	
01	250	3.0				3.1	
02	250	3.0				3.0	
03	250	2.7				3.0	
04	250	2.3				3.0	
05	240	2.0				2.9	
06	250	2.1				2.9	
07	230	3.7				2.6	
08	240	4.8				2.7	
09	250	5.3				2.5	
10	260	5.5				3.6	
11	270	5.8				3.7	
12	270	6.0				3.8	
13	260	6.4				3.5	
14	260	6.3				3.4	
15	250	6.0				3.2	
16	240	6.0				3.0	
17	220	5.2				2.8	
18	220	4.1				2.5	
19	240	3.8				2.7	
20	250	3.5				2.8	
21	250	3.3				3.1	
22	260	3.2				3.0	
23	265	2.9				3.2	

Time: 172.5°E.

Length of time sweep: 1.0 Mc to 13 Mc. Automatic.

Median values.

Table 26 (Provisional data)

Mt. Stromlo, N.S.W., Australia (35.0°S, 149°E) August 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	F2-M3000
00		3.5					2.9
01		3.6					3.0
02		3.6					3.0
03		3.6					3.0
04		3.6					3.0
05		3.2					3.1
06		3.1					3.0
07		4.6					3.1
08		5.4					3.2
09		5.3					3.2
10		6.2					3.2
11		6.4					3.2
12		6.5					3.2
13		6.6					3.2
14		6.6					3.2
15		6.3					3.3
16		5.8					3.2
17		5.5					3.2
18		4.9					3.1
19		4.2					3.0
20		4.1					3.0
21		3.8					3.0
22		3.6					3.0
23		3.6					3.0

Time: Local.

Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.

Median values.

Table 28 (Provisional Data)

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

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	F2-M3000
00							
01							
02							
03							
04							
05							
06		2.5					2.5
07	236	3.6					3.2
08	225	4.4	180	2.4	105	2.1	3.5
09	235	4.9	196	3.0	105	2.4	3.5
10	250	5.4	200	3.8	105	2.6	3.4
11	255	5.6	200	3.9	105	2.8	3.5
12	260	5.8	200	4.0	105	2.8	3.4
13	250	5.9	205	3.8	110	2.6	3.4
14	240	5.8	200	3.6	105	2.5	3.4
15	235	5.6	200	3.2	105	2.3	3.4
16	230	5.5	185	2.2	110	2.0	3.4
17	213	5.0					3.2
18	230	4.3					3.1
19	245	4.0					2.9
20							
21	260	2.9					2.5
22							
23	295	2.6					2.7

Time: 165°E.

Length of time sweep: 1.0 Mc to 15 Mc. Manual operation.

Median values.

Table 29 (Provisional Data)

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

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00		5.6					
01							
02							
03		5.6					
04		6.1					
05		6.2					
06		6.2					
07		6.2					
08		6.1					
09		6.2					
10		6.1					
11		6.1					
12		6.0					
13		6.0					
14		6.0					
15		6.0					
16		6.0					
17		6.1					
18		6.0					
19		5.7					
20		5.6					
21		5.5					
22		5.4					
23		5.5					

Time, 30°E.

Average values.

Table 31 (Provisional Data)

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

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00		5.0					
01		4.4					
02		4.1					
03		4.0					
04		4.2					
05		4.9					
06		5.2					
07		5.7					
08		5.8					
09		5.8					
10		6.2					
11		6.1					
12		6.0					
13		6.0					
14		5.9					
15		5.8					
16		5.7					
17		5.6					
18		5.7					
19		5.4					
20		5.6					
21		5.6					
22		5.6					
23		5.2					

Time, 60°E.

Average values.

Table 30 (Provisional Data)

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

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00		5.1					
01		4.8					
02		4.4					
03		4.3					
04		4.3					
05		4.4					
06		4.8					
07		4.8					
08		5.0					
09		5.3					
10		5.3					
11		5.5					
12		5.4					
13		5.3					
14		5.2					
15		5.3					
16		5.2					
17		5.5					
18		5.5					
19		5.9					
20		5.7					
21		5.9					
22		5.8					
23		5.6					

Time, 0°.

Average values.

Table 32 (Provisional Data)

Moscow, U.S.S.R. (55.8°N, 37.6°E) July 1945

Time	h'P2	f'P2	h'P1	f'P1	h'E	f'E	P2-M3000
00		5.7					
01		5.3					
02		4.7					
03		4.9					
04		5.1					
05		5.5					
06		5.9					
07		6.2					
08		6.2					
09		6.4					
10		6.5					
11		6.7					
12		6.6					
13		6.5					
14		6.2					
15		6.0					
16		6.1					
17		6.1					
18		6.1					
19		6.4					
20		6.5					
21		6.7					
22		6.6					
23		6.4					

Time, 30°E.

Average values.

Table 33 (Provisional Data)

Delhi, India (23.6°N, 77.2°E) July 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	F2-M3000
00		5.3					
01		5.1					
02		5.3					
03		5.0					
04		4.6					
05		4.5					
06		5.3					
07		6.2					
08		6.5					
09		6.0					
10		7.5					
11		8.2					
12		8.9					
13		9.5					
14		9.6					
15		10.0					
16		9.9					
17		9.7					
18		9.0					
19		8.3					
20		7.6					
21		6.7					
22		6.2					
23		5.7					

Time: 750E.

Length of time sweep: Manual operation.

Average values.

Table 35

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

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	F2-M3000
00	260	3.5				2.5	3.0
01	260	3.4				2.6	3.0
02	260	3.4				1.1	3.0
03	240	3.2				2.6	3.1
04	260	2.7				2.6	3.0
05	260	2.9				2.7	3.0
06	240	3.7				3.4	3.4
07	260	5.2				3.6	3.4
08	260	5.8				4.0	3.3
09	290	6.0				4.0	3.2
10	290	6.5				4.5	3.2
11	300	6.2				4.5	3.1
12	320	6.6				4.6	3.9
13	315	6.8				4.6	3.1
14	300	6.7				4.4	3.1
15	300	6.6				4.3	3.1
16	290	6.5				4.0	3.1
17	260	6.6				3.6	3.2
18	235	6.4				1.8	3.3
19	230	5.9				2.5	3.2
20	240	5.4				3.1	3.1
21	240	4.6				2.1	3.0
22	260	3.9				2.5	3.0
23	260	3.5				2.5	3.0

Time: 750W.

Length of time sweep: 0.8 Mo to 14 Mo in two minutes.

Median values.

Table 34 (Provisional Data)

Moscow, U.S.S.R. (55.8°N, 37.6°E) June 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	F2-M3000
00		5.4					
01		5.5					
02		5.0					
03		5.2					
04		5.7					
05		6.1					
06		6.2					
07		6.4					
08		6.2					
09		6.0					
10		6.3					
11		6.2					
12		6.0					
13		5.7					
14		5.5					
15		5.5					
16		5.9					
17		6.0					
18		6.7					
19		6.4					
20		6.9					
21		6.6					
22		6.0					
23		5.7					

Time: 300E.

Average values.

Table 36

(Corrections and additions to previously published provisional data)

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

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	F2-M3000
00						5.8	
01						4.8	
02						4.2	
03						4.1	
04						3.8	
05						3.9	
06						3.6	
07		4.2					
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

Time: 900W.

Length of time sweep: 2 Mo to 16 Mo in one minute.

Median values.

Table 37

(Corrections and additions to previously published provisional data)

Prime Rupert, Canada (64.3°N, 130.3°W) August 1945

Time	h ¹ 2	f ² 2	h ¹ 21	f ² 21	h ¹ 2	f ² 2	h ¹ 2	f ² 2
00	280							2.7
01	286							2.7
02	290	3.2						2.7
03	335	2.8						2.7
04	340	2.8						3.2
05	290	2.8						2.7
06	276	3.7	215	2.9				3.1
07	320		200	3.6	120	2.4		3.0
08	345	4.6	196	3.9	110	2.6		3.0
09	330	4.8	190	4.0	100	2.7		2.8
10	340		180	4.2	100	2.8		3.1
11	340		180	4.2	100	2.9		3.6
12	330		180	4.3	100	2.9		3.9
13	335		180	4.3	100	3.0		3.1
14	335		180	4.3	100	3.0		3.1
15	320		190	4.3	100	2.9		
16	330		190	4.2	100	2.9		
17	300		200	4.0	100	2.7		
18	280		200	3.7	110	2.4		2.7
19	240		200	3.3				3.5
20	240		210	3.0				3.6
21	240		220	2.9				2.4
22	240	4.5						3.1
23	240							2.4
25								3.3

Time: 120°W.

Length of time sweep: Manual operation.

Median values.

Table 39

(Corrections and additions to previously published provisional data)

Ottawa, Canada (45.6°N, 75.8°W) August 1945

Time	h ¹ 2	f ² 2	h ¹ 21	f ² 21	h ¹ 2	f ² 2	h ¹ 2	f ² 2
00								
01								2.4
02								2.6
03								2.6
04								
05								
06								
07	250		3.1					
08	315		3.9		130	2.4		3.5
09	330	5.2	210	4.2	120	2.8		4.2
10	330	5.3	200	4.4	120	3.0		4.8
11	350	5.5	200	4.5	120	3.3		4.8
12	360		200	4.6	120	3.2		4.9
13	355		195	4.6	110	3.4		4.8
14	350		200	4.6	110	3.4		4.5
15	350		210	4.5	110	3.3		4.5
16	330		210	4.4	120	3.1		4.3
17	310		210	4.2	120	3.0		4.3
18	280		220	4.0	120	2.8		4.0
19	250		230	3.4				3.5
20	250							2.6
21	250							2.7
22	260							
23	270							2.8

Time: 75°W.

Length of time sweep: 1.93 hr to 13.5 Mo. Manual operation.

Median values.

Table 38

(Corrections and additions to previously published provisional data)

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

Time	h ¹ 2	f ² 2	h ¹ 21	f ² 21	h ¹ 2	f ² 2	h ¹ 2	f ² 2
00	240							
01	280	3.2						2.0
02	286							2.0
03	280							1.9
04	280							
05	280		2.5		100	1.6		2.7
06	285	4.2	220	3.1	100	1.9		3.4
07	230	4.8	200	4.0	100	2.4		3.6
08	256		190	4.0	100	2.8		3.6
09	270	6.4	196	4.3	100	3.0		3.6
10	280	6.8	180	4.4	100	3.1		
11	290		190	4.8	100	3.2		
12	300		190	4.6	100	3.3		
13	300	5.6	190	4.6	100	3.2		
14	310		200	4.6	100	3.3		
15	300		196	4.4	100	3.0		
16	280	6.8	200	4.2	100	3.0		
17	260		200	4.0	100	2.7		
18	245		210	3.5	100	2.3		3.8
19	230		220	3.0	110	1.6		3.0
20	220							2.4
21	215							2.6
22	220	4.8						1.8
23	230							2.0

Time: 52.5°W.

Length of time sweep: Manual operation.

Median values.

Table 40

(Corrections and additions to previously published provisional data)

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

Time	h ¹ 2	f ² 2	h ¹ 21	f ² 21	h ¹ 2	f ² 2	h ¹ 2	f ² 2
00	270							
01	270	3.0						
02	270							
03	270							
04	285							
05	250	3.2	235	3.4	125	1.7		3.2
06	280		230	3.9	120	2.1		3.2
07	340		225	4.2	120	2.5		3.1
08	330		215	4.4	120	2.8		
09	315		210	4.5	120	2.9		
10	332		206	4.5	115	3.1		
11	358		215	4.5	120	3.6		
12	370		225	4.5	115	3.4		
13	365	5.8	222	4.5	115	2.8		
14	368		230	4.3	115	2.8		
15	360		230	4.1	120	2.6		
16	340		230	3.8	125	2.4		3.0
17	305		230		130	1.9		
18	265							2.4
19	245							2.6
20	240							2.9
21	250	5.2						2.1
22	250	4.4						2.0
23	280							

Time: 76°W.

Length of time sweep: Manual operation.

Median values.

Table 41

(Corrections and additions to previously published provisional data)

San Francisco, Calif. (37.4°N, 122.2°W)

August 1945

Time	h ₁ F ₂	f _o F ₂	h'F ₁	f _o F ₁	h'E	f _o E	f _{Es}	F ₂ -M3000
00	270						3.4	
01	270						3.3	
02	270						3.8	
03	270						3.7	
04	260	3.4					3.6	
05	260						3.4	3.0
06	240						3.5	3.2
07	300						3.8	3.1
08	345	5.6	220	3.3	110	2.0	4.2	
09	370	6.0	210	4.1	110	2.8	4.2	
10	340		200	4.3	110	3.1	4.2	
11	375	6.1	200	4.5	110	3.3	4.3	3.0
12	370		200	4.6	110	3.4	4.3	2.8
13	350	6.5	200	4.6	110	3.5	4.2	
14	340	6.5	215	4.5	110	3.4	4.2	
15	330		220	4.4	110	3.3	4.0	
16	320	6.2	230	4.3	110	3.1	3.9	3.1
17	300		230	3.9	110	2.7	3.8	
18	260	6.1	230	3.4	110	2.3	3.8	
19	230						3.3	
20	230	5.9					3.6	
21	235						3.6	
22	250	4.4					3.1	
23	260	3.8					3.4	3.0

Time, 1200h.

Length of time sweep: 0.8 Mc to 12 Mc in six minutes. Record centered on the hour.

Median values.

Table 43

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

August 1945

Time	h ₁ F ₂	f _o F ₂	h'F ₁	f _o F ₁	h'E	f _o E	f _{Es}	F ₂ -M3000
00		4.6						2.9
01		4.5						2.9
02		4.4						3.0
03		4.2						3.0
04		3.8						3.0
05		3.4						3.0
06		3.6						3.2
07	240	5.4						3.3
08	280	5.8	200	3.7		2.9		3.2
09	320	5.9	200	4.2		3.0		3.0
10	385	6.2	205	4.4		3.3		2.8
11	385	6.7	220	4.6		3.4		2.8
12	360	7.7	220	4.6		3.4		2.7
13	340	8.9	220	4.5		3.4		2.8
14	330	9.2	210	4.5		3.4		2.8
15	330	9.3	230	4.4		3.3		2.9
16	310	8.9	220	4.2		3.0		2.9
17	300	9.2	220	3.8		3.0	4.1	2.9
18	260	9.2	240	3.2			4.1	3.1
19	230	8.0					3.6	3.2
20		6.3						3.0
21		5.8						3.0
22		4.8						2.9
23		4.8						2.9

Time, 600h.

Length of time sweep: 2.7 Mc to 14 Mc in six minutes. Record centered on the hour.

Median values.

Table 42

(Corrections and additions to previously published provisional data)

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

August 1945

Time	h ₁ F ₂	f _o F ₂	h'F ₁	f _o F ₁	h'E	f _o E	f _{Es}	F ₂ -M3000
00	295	3.9						
01	300	3.8						
02	300							
03	290							
04	290	3.2						
05	280							
06	280							
07	300							
08	300							
09	330	6.1						
10	340	6.4						
11	360	6.4						
12	370							
13	350	7.3						
14	340							
15	330							
16	320							
17	300							
18	285							
19	250							
20	240							
21	250							
22	260	4.4						
23	280							

Time, 900h.

Length of time sweep: 1.9 Mc to 9.6 Mc in three minutes, thirty seconds. Median values.

Table 44

(Corrections and additions to previously published provisional data)

Huanayo, Peru (12.0°S, 75.3°W)

August 1945

Time	h ₁ F ₂	f _o F ₂	h'F ₁	f _o F ₁	h'E	f _o E	f _{Es}	F ₂ -M3000
00	230							
01	230							
02	230							
03	240							
04	250							
05	275							
06	270							
07	240							
08	300							
09	350							
10	370							
11	400							
12	420	6.8						
13	410							
14	390							
15	350	7.3						
16	220							
17	240							
18	280							
19	320							
20	300							
21	280							
22	240							
23	230							

Time, 750h.

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

Table 45

(Corrections and additions to previously published provisional data)

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

Time	h ¹ F2	f ^o F2	h ¹ F1	f ^o F1	h ¹ F	f ^o F	F2-M3000
00	4.9					2.3	
01	4.6					2.2	3.0
02	4.3					2.0	
03	3.8					1.6	
04	3.3						
05			2.8		1.8		
06			3.6		2.2	3.3	
07			4.0		2.5	4.6	3.2
08	5.4		4.2		2.8	4.8	
09	5.9		4.4		3.0	5.1	
10	5.6		4.4		3.1	5.0	3.1
11			4.5		3.0	5.0	3.1
12	5.5		4.5		3.3	5.0	3.0
13	5.7		4.5		3.1	5.0	3.0
14	5.6		4.4			4.8	
15	5.6		4.4		3.0	4.3	3.0
16	5.6		4.3		2.8	4.3	
17	5.6				2.7	4.3	
18			3.6		2.3	4.3	
19	6.4				1.9	4.0	
20	6.7					3.8	
21						2.8	
22						3.1	
23	5.3					2.6	3.0

Time: 0°

Length of time sweep: Manual operation.

Median values.

Table 47

(Corrections and additions to previously published provisional data)

Leyte (11.0°N, 125.0°E) July 1945

Time	h ¹ F2	f ^o F2	h ¹ F1	f ^o F1	h ¹ F	f ^o F	F2-M3000
00							
01	4.9					2.2	
02							
03							
04							
05							
06							
07			2.6		1.9		
08					2.7		
09			4.5				
10	7.6					5.0	
11							
12					5.0		
13	7.9						
14			4.9			6.4	
15	8.0						
16						5.8	
17	9.0				4.2		
18						5.3	
19						4.6	
20							
21							
22							
23							2.8

Time: 135°E.

Length of time sweep: Manual operation.

Median values.

Table 46

(Corrections and additions to previously published provisional data)

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

Time	h ¹ F2	f ^o F2	h ¹ F1	f ^o F1	h ¹ F	f ^o F	F2-M3000
00		6.4					
01	250	6.2					
02							
03							
04							
05							
06							
07			228	3.6	118	2.6	2.9
08							3.8
09		6.0			108		4.6
10							4.4
11							4.8
12			200				4.7
13	408				108		4.0
14		9.2		4.7			4.4
15			220				4.6
16							4.3
17							3.9
18			215				4.2
19	242						3.0
20	283						2.8
21							
22							
23							2.9

Time: 150°W.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 48

Colombo, Ceylon (6.6°N, 80.0°E) July 1945

Time	h ¹ F2	f ^o F2	h ¹ F1	f ^o F1	h ¹ F	f ^o F	F2-M3000
00		5.7					3.6
01		4.6					3.7
02		4.2					3.5
03		3.0					3.6
04		2.3					3.7
05							3.5
06		3.6					3.4
07		6.4					3.4
08		7.8					3.1
09		8.3		4.4		2.8	4.0
10		7.9		4.5		5.0	2.8
11		7.6		4.7		6.4	2.7
12		7.6		4.8		6.6	2.7
13		7.7		4.8		6.4	2.8
14		8.0		4.7		6.0	2.8
15		8.3		4.7		5.9	2.7
16		8.7		4.6		5.0	2.8
17		8.8		4.4		4.8	2.8
18		9.0				2.7	2.9
19		8.7					3.2
20		8.4					3.8
21		7.4					3.3
22		6.6					3.4
23		6.2					3.5

Time: 80.0°E.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 49

(Corrections and additions to previously published provisional data)

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

Time	h'F2	f'F2	h'F1	f'F1	h'F3	f'F3	F2-M3000
00	250						3.0
01	250						3.0
02	240	3.6					3.0
03	235	3.9					3.0
04	222						3.0
05	220	3.3					2.9
06	230	2.7					3.0
07	230	3.3			1.5		3.0
08	230	5.4			2.1		3.4
09	230	6.0			2.5		3.2
10	260		220	3.3	2.6		3.5
11	265		225	4.1	3.0		
12	270	6.3	220	4.2	3.0		3.6
13	280	6.5	220	4.4	3.0		3.6
14	270	6.7	222	4.3	3.0		4.2
15	260	6.8	222	4.2	2.9		3.2
16	245	6.5	220	3.9	2.7		3.6
17	230	5.8			2.4		3.8
18	220	4.3			1.8		3.2
19	213	3.4			3.1		3.1
20	230	2.9			3.0		3.0
21	240				2.9		2.9
22	240				3.0		3.0
23	246	3.5			3.0		3.0

Time: Local.

Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

Median values.

Table 51

(Additions to previously published provisional data)

Christchurch, N.Z. (43.5°S, 172.6°E) July 1945

Time	h'F2	f'F2	h'F1	f'F1	h'F3	f'F3	F2-M3000
00							3.0
01							3.5
02		2.6					3.0
03							3.0
04							3.0
05							2.8
06							2.6
07		2.3			2.1		2.0
08		4.8			2.8		2.0
09					3.2		2.8
10					3.5		3.2
11					4.4		3.5
12					3.9		4.4
13					4.0		3.9
14					3.4		4.0
15					3.3		3.4
16					2.5		3.3
17					2.2		2.5
18					2.2		2.7
19					2.3		2.2
20					1.7		1.8
21					2.3		2.3
22		2.6			1.7		2.3
23					3.0		3.0

Time: 172.5°E.

Length of time sweep: 1.0 Mc to 13 Mc. Automatic.

Median values.

Table 50

(Corrections and additions to previously published provisional data)

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

Time	h'F2	f'F2	h'F1	f'F1	h'F3	f'F3	F2-M3000
00		2.3					
01		2.6					
02		2.7					
03							2.8
04		3.0					3.1
05							
06		2.4					3.0
07		2.3					
08							3.3
09							
10							
11							3.2
12		6.4					
13		6.4					3.0
14		6.2					3.0
15		6.8					
16		6.4					
17		4.7					
18							
19							
20							
21		2.6					
22							
23							3.0

Time: 30°E.

Length of time sweep: 2 Mc to 16 Mc in one minute.

Median values.

Table 52

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

Time	h'F2	f'F2	h'F1	f'F1	h'F3	f'F3	F2-M3000
00	250	5.0					
01	260	5.0					
02							
03							
04							
05							
06							
07							
08							
09	310	5.2	210	4.1			
10							
11							
12	310	5.2	200	4.3			
13							
14	310	5.1	200	4.0			
15							
16							
17							
18							
19	260	5.5	200	3.6			
20							
21							
22	240	5.1					
23							

Time: 60°E.

Average values.

Table 53

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

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f2-M3000
00	310	5.0					
01	310	4.8					
02	330	4.8					
03	320	4.8					
04	300	4.9					
05	300	5.2					
06	310	5.3					
07	320	5.4					
08	350	5.5					
09	360	5.6	280	4.5			
10	370	5.6	280	4.6			
11	380	5.5	270	4.7			
12	380	5.4	280	4.6			
13	360	5.5	280	4.5			
14	360	5.5	270	4.5			
15	360	5.5	270	4.6			
16	360	5.4	280	4.6			
17	360	5.3	280	4.6			
18	350	5.3					
19	310	5.3					
20	310	5.4					
21	310	5.6					
22	320	5.2					
23	310	5.0					

Time: 30°E.

Average values.

Table 55

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

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f2-M3000
00	240	5.8					
01	240	5.4					
02	240	5.1					
03	250	4.8					
04	250	4.9					
05	280	5.3	230	3.6	100	2.0	
06	320	5.6	230	3.9	100	2.4	
07	310	5.9	220	4.1	100	2.7	
08	320	6.1	220	4.3	100	2.9	
09	320	6.1	220	4.3	100	3.3	
10	300	6.4	210	4.5	100	3.5	
11	300	6.6	220	4.7	100	3.5	
12	310	6.4	210	4.6	100	3.5	
13	330	6.4	200	4.6	100	3.4	
14	320	6.3	220	4.5	100	3.4	
15		6.2					
16	300	6.2					
17	280	6.0	220	4.3	100	2.8	
18	290	5.9	220	3.7	100	2.6	
19	280	5.9	230		100	2.4	
20	230	6.0			110	2.1	
21	230	6.2				1.5	
22	230	6.4					
23	230	6.2					

Time: 90°E.

Average values.

Table 54

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

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f2-M3000
00	220	5.8					
01	225	5.3					
02	230	5.0					
03	240	4.9					
04	230	5.1	200	3.0	120	1.8	
05	250	5.5	210	3.6	110	2.2	
06	270	5.8	200	3.9	100	2.6	
07	290	6.0	195	4.2	100	2.8	
08	290	6.2	190	4.3	100	3.0	
09	285	6.2	185	4.3	100	3.1	
10	285	6.4	180	4.5	100	3.2	
11	280	6.4	180	4.5	100	3.2	
12	275	6.4	180	4.5	100	3.3	
13	280	6.2	180	4.5	100	3.3	
14	280	6.2	190	4.5	100	3.2	
15	280	6.0	180	4.4	100	3.2	
16	270	5.3	190	4.2	100	3.0	
17	250	5.7	200	4.0	100	2.8	
18	230	5.8	200	3.9	105	2.5	
19	210	5.8			105	2.1	
20	210	6.1			110	1.9	
21	220	6.4					
22	210	6.4					
23	220	6.3					

Time: 60°E.

f°P2, median values; others, average values.

Table 56

(Corrections and additions to previously published provisional data)

Great Baddov, England (51.7°N, 0.5°E) June 1945

Time	h'P2	f°P2	h'P1	f°P1	h'E	f°E	f2-M3000
00		5.4				1.4	
01		5.1				1.2	2.8
02		4.8				1.6	
03		4.6				2.4	
04		4.6				1.4	
05				2.6		2.0	
06				3.4		3.0	
07		5.8		3.8		2.4	3.5
08		5.8		4.1		2.8	4.0
09				4.3		3.0	4.2
10		6.1		4.5		3.1	4.6
11		6.0		4.6		3.2	4.8
12		5.8		4.6		3.2	4.7
13				4.6		3.2	4.2
14		5.9		4.6		3.2	4.2
15		5.8		4.5		3.1	4.1
16				4.3		2.9	4.0
17				4.2		2.7	4.3
18				3.8		2.3	4.1
19		6.5		3.2		1.9	3.3
20						2.4	3.0
21						2.8	3.0
22						2.8	2.9
23		5.8				1.2	

Time: 0°

Length of time sweep; Manual operation.

Median values.

Table 57

Alma Ata, U.S.S.R. (43.5°N, 76.5°E) June 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M1000
00		5.9					
01		5.8					
02		5.4					
03		5.4					
04		5.2					
05		5.3					
06		6.1					
07		7.1					
08		7.5					
09		7.2					
10		7.2					
11		7.5					
12		7.4					
13		7.5					
14		7.2					
15		6.8					
16		6.9					
17		6.7					
18		6.7					
19		6.9					
20		7.3					
21		6.8					
22		6.5					
23		6.1					

Time: 750E
Average values.

Table 59

(Corrections and additions to previously published provisional data)

Watheroo, W. Australia (30.3°S, 116.9°E) June 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M1000
00	250					3.0	
01	250	3.4				3.0	2.9
02	245	3.5				3.0	
03	240					3.0	
04	235					3.0	3.1
05	225	3.3				3.0	
06	225	2.8				3.1	3.2
07	230	4.0			1.6	3.0	
08	230	5.4			2.1	3.1	
09	242	6.0		3.9	2.8	3.2	
10	260		235	4.1	2.5	3.6	
11	265		225	4.3	3.0	3.5	
12	270		215	4.3	3.0	4.0	3.4
13	270		223	4.2	3.0	3.6	
14	265	7.0	225	4.1	2.9	4.1	
15	260	6.9	230	3.9	2.7	4.1	3.3
16	238	6.7			2.2	3.6	
17	220	5.6			1.6	3.9	
18	215	4.0				3.1	3.4
19	225					3.1	
20	230	2.7				3.0	3.1
21	240	2.9				3.1	
22	250	3.1				3.1	
23	250	3.0				3.0	

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

Table 58

(Corrections of previously published provisional data)

Leyte (11.0°N, 125.0°E) June 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M1000
00							
01		5.3					3.2
02							
03							
04							
05		3.6					2.5
06							
07							
08		7.3					
09							
10							
11							
12							
13							
14		8.0			5.0		
15							
16		8.6					
17		9.0					
18							
19							4.6
20							
21							
22		6.3					3.6
23							

Time: 1350E.
Length of time sweep: Manual operation.
Median values.

Table 60

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

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M1000
00		2.3					2.9
01		2.3					2.3
02		2.6					2.8
03		2.8					2.8
04		2.8					2.9
05		2.7					3.0
06		2.5					2.9
07		2.4					2.9
08		4.4					3.2
09		5.5					3.3
10		5.9					3.2
11		6.0					3.2
12		6.2					3.2
13		6.5					3.1
14		6.5					3.1
15		6.7					3.1
16		6.4					3.1
17		6.2					3.2
18		4.4					3.2
19		2.8					3.0
20		2.6					3.0
21		2.7					3.1
22		2.5					3.1
23		2.3					2.3

Time: 300E.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 61

Tydhi Bay, U.S.S.R. (80.3°N, 52.8°E)

May 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M3000
00							
01	250	4.4					
02	260	4.2					
03							
04							
05							
06							
07							
08							
09							
10	280	4.6					
11							
12	260	5.0					
13							
14	260	4.9					
15							
16							
17							
18							
19							
20	230	5.1					
21							
22	230	4.9					
23							

Time: 60°E.

Average values.

Table 63

Leningrad, U.S.S.R. (59.7°N, 30.5°E)

May 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M3000
00							
01	340	3.8					
02	350	3.5					
03	360	3.4					
04	330	3.6					
05	310	4.1					
06	300	4.3					
07	300	4.5					
08	300	4.7					
09	300	5.0					
10	300	5.3					
11	310	5.7					
12	320	5.8					
13	320	5.7					
14	320	5.3					
15	320	5.4					
16	320	5.3					
17	310	5.2					
18	300	5.3					
19	300	5.1					
20	300	5.1					
21	310	5.0					
22	320	4.4					
23	320	4.1					

Time: 30°E.

Average values.

Table 62

Oslo-Kjeller (59.9°N, 11.0°E)

3 to 7, 21 to 31 May 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M3000
00							
01		4.6					
02		4.2					
03		4.0					
04		3.9					
05		3.8					
06		4.1					
07		4.5					
08		4.9					
09		4.9					
10		5.1					
11		4.9					
12		4.9					
13		4.9					
14		5.0					
15		5.0					
16		5.1					
17		5.1					
18		5.4					
19		5.0					
20		4.9					
21		5.0					
22		5.0					
23		4.9					

Time: 150°E.

Length of time sweep: 16 Mc to 1.63 Mc in ten minutes.

Average values.

Table 64

Sverdlovsk, U.S.S.R. (56.7°N, 61.1°E)

May 1945

Time	h'f2	f'f2	h'f1	f'f1	h'f	f'f	f2-M3000
00							
01	220	4.8					
02	230	4.3					
03	230	3.9					
04	220	4.2					
05	240	4.7					
06	260	5.2					
07	280	5.3					
08	280	5.4					
09	290	5.6					
10	290	6.0					
11	280	6.3					
12	270	6.4					
13	270	6.1					
14	260	5.9					
15	260	5.9					
16	250	5.6					
17	230	5.6					
18	210	5.6					
19	210	5.4					
20	210	5.6					
21	220	6.0					
22	210	5.7					
23	220	5.4					

Time: 60°E.

f'f2, median values; others, average values.

Table 65

Tomsk, U.S.S.R. (56.4°N, 85.0°E)

May 1945

Moscow, U.S.S.R. (55.8°N, 37.6°E)

May 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	fEs	F2-M3000
00	260	4.8						
01	260	4.4						
02	260	4.0						
03	260	3.8						
04	260	3.9						
05	240	4.5						
06	260	4.8			110	1.7		
07	300	5.2	230	3.6	100	2.2		
08	320	5.6	220	3.8	100	2.5		
09	340	6.0	220	4.0	100	2.8		
10	340	6.3	220	4.2	100	3.1		
11	310	6.4	210	4.5	100	3.2		
12	310	6.4	210	4.6	100	3.9		
13	320	6.6	220	4.5	110	3.4		
14	300	6.4	230	4.2	100	3.3		
15	300	6.2	240	4.1	100	3.0		
16	300	6.0	230	3.9	100	2.8		
17	320	6.0	220	3.7	100	2.7		
18	280	5.8	220	3.6	100	2.3		
19	260	5.7	230		100	2.2		
20	240	5.8			110	1.8		
21	240	6.1						
22	240	5.9						
23	250	5.4						

Time: 900E.

Average values.

Table 66

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	fEs	F2-M3000
00	320	5.2						
01	320	4.4						
02	330	4.4						
03	330	4.0						
04	320	4.4						
05	300	4.9	210	2.5	100	1.7		
06	300	5.2	200	3.1	100	2.2		
07	320	5.6	210	3.4	100	2.6		
08	340	5.8	210	3.9	110	2.7		
09	340	6.0	210	4.0	110	2.9		
10	330	6.4	220	4.0	100	3.1		
11	360	6.2	210	4.0	100	3.0		
12	340	6.2	220	4.1	100	2.9		
13	350	6.0	210	4.0	110	2.8		
14	340	5.9	210	3.9	110	2.7		
15	350	5.6	210	3.8	110	2.5		
16	340	5.6	200	3.6	120	2.3		
17	330	5.7	210	3.2	120	1.9		
18	300	5.9						
19	300	6.2						
20	290	6.6						
21	300	6.5						
22	300	6.1						
23	300	5.7						

Time: 300E.

Average values.

Table 67

Alma Ata, U.S.S.R. (43.5°N, 76.5°E)

May 1945

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	fEs	F2-M3000
00	230	5.4						
01	240	5.3						
02	230	5.1						
03	240	5.1						
04	240	5.2						
05	230	5.6						
06	210	5.9						
07	230	6.3						
08	220	6.9						
09	210	7.0						
10	210	7.1						
11	220	7.3						
12	210	7.6						
13	200	7.5						
14	210	7.8						
15	210	7.4						
16	210	7.2						
17	220	6.7						
18	240	6.6						
19	230	6.5						
20	240	6.2						
21	230	5.8						
22	230	5.8						
23	230	5.1						

Time: 750E.

Average values.

Table 68

Leningrad, U.S.S.R. (59.7°N, 30.5°E)

April 1945

Time	h'P2	f'P2	h'P1	f'P1	h'B	f'B	fLs	P2-M3000
00	360	3.2						
01	380	3.0						
02	390	2.9						
03	390	3.1						
04	350	3.6						
05	320	4.1						
06	300	4.8						
07	280	5.2						
08	270	5.4						
09	290	5.6						
10	280	5.9						
11	280	6.2						
12	280	6.2						
13	290	6.0						
14	290	5.8						
15	290	5.8						
16	290	5.7						
17	290	5.5						
18	300	5.8						
19	300	5.2						
20	300	5.0						
21	310	4.6						
22	320	4.0						
23	340	3.6						

Time: 30°E.

Average values.

Table 69

Leningrad, U.S.S.R. (59.7°N, 30.5°E)

March 1945

Time	h'P2	f'P2	h'P1	f'P1	h'B	f'B	fLs	P2-M3000
00	380	1.9						
01	400	1.7						
02	400	1.6						
03	380	1.8						
04	370	2.0						
05	360	2.2						
06	340	2.8						
07	300	3.5						
08	290	4.1						
09	270	4.6						
10	270	5.0						
11	260	5.2						
12	260	5.2						
13	280	5.2						
14	280	5.2						
15	290	5.2						
16	290	4.9						
17	280	4.6						
18	280	4.3						
19	310	3.7						
20	320	3.3						
21	330	2.9						
22	350	2.5						
23	370	2.1						

Time: 30°E.

Average values.

TABLE 70

IONOSPHERE DATA - I

Washington, D.C.

Ionosphere Station

National Bureau Of Standards

(Institution)

Hourly values of f^oF_2 in km

for September 1945

(Month)

Records measured by: J. M. G.

K. W. S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	240	260	(250)	240	260	260	250	260	(260)	320	330	330	320	340	340	340	300	290	230	240	240	240	240	240
2	250	240	290	280	280	210	240	420	(520)	360	360	350	340	400	360	350	310	[270] ^c	[260] ^c	240	240	240	240	260
3	250	260	260	280	280	270	240	250	280	280	310	300	320	340	330	320	310	260	240	240	240	240	280	270
4	260	250	260	270	300	300	240	300	250	360	300	300	320	340	320	310	290	260	240	240	240	230	280	280
5	260	260	260	240	260	280	250	(300)	260	340	[310] ^c	320	310	290	300	300	280	290	250	230	240	240	260	260
6	280	270	280	260	270	260	240	260	280	260	280	280	320	300	320	310	320	280	260	230	230	220	[260] ^c	280
7	270	260	[250] ^c	240	C	C	230	270	260	260	280	300	320	320	310	280	280	260	250	230	240	(260)	240	240
8	250	240	240	240	250	260	240	250	260	270	280	300	320	320	290	(290)	300	260	240	230	220	220	240	260
9	240	240	240	270	260	240	230	250	260	280	280	300	310	290	290	280	280	270	260	240	(230)	240	240	230
10	260	(260)	260	240	240	260	220	240	260	320	300	300	320	300	300	300	320	280	240	240	240	240	240	260
11	260	240	240	240	270	(220)	240	260	260	280	280	310	330	320	320	310	280	280	220	220	230	240	240	280
12	280	300	260	240	250	(280)	230	280	(290)	300	320	360	360	340	310	320	310	260	260	230	240	240	240	260
13	280	260	260	240	280	260	260	270	(280)	360	340	380	360	360	350	340	310	280	240	240	230	240	260	260
14	C	C	C	C	C	C	C	C	C	C	290	300	[300] ^c	[310] ^c	300	280	280	250	240	220	220	250	240	270
15	260	260	260	260	280	270	240	260	(290)	270	320	300	340	370	340	300	280	260	240	220	240	260	(260)	260
16	260	260	240	240	260	260	240	250	280	300	[300] ^c	[310] ^c	[310] ^c	[330] ^c	[320] ^c	[300] ^c	300	[240] ^c	[220] ^c	[220] ^c	[250] ^c	[250] ^c	[260] ^c	[280] ^c
17	300	[290] ^c	[250] ^c	[260] ^c	300	(340)	280	G ^K	360 ^K	410 ^K	G ^K	490 ^K	G ^K	G ^K	G ^K	440 ^K	380 ^K	(280) ^K	280 ^K	(250) ^K	230 ^K	250 ^K	300 ^K	[300] ^K
18	300	280	280	280	270	(290)	(280)	280	320	360	360	520 ^K	(480) ^K	400 ^K	360 ^K	310 ^K	300 ^K	320 ^K	240	240	260	280	260	260
19	280	280	270	270	240	240	210	240	260	250	270	320	310	340	300	300	280	260	220	220	220	220	230	240
20	270	270	250	250	260	260	260	240	240	260	270	300	280	280	280	260	260	260	220	230	240	(250)	250	260
21	270	270	240	240	240	260	260	240	240	270	270	290	310	300	260	260	260	240	220	220	230	240	(260)	(260)
22	[260] ^K	260	240	240	240	260	220	230	240	250	260	300	270	280	280	280	260	260	240	220	230	[240] ^K	(280)	(260)
23	260	250	240	220	240	260	220	240	260	270	260	300	280	280	280	280	260	250	230	(220)	200	260	240	260
24	260	250	260	260	240	240	240	240	240	260	280	270	310	280	280	270	260	230	(230)	220	220	230	260	260
25	280	270	260	240	240	240	230	250	250	260	260	270	300	280	280	270	270	250	220	220	220	240	240	260
26	270	240	240	220	240	(260)	260	240	(260)	290	280	300	300	290	[290] ^c	280	260	240	220	220	240	240	230	280
27	260	260	240	240	250	240	250	260	260	320	360	320	330	340	320	320	300	250	220	230	240	240	250	280
28	270	280	260	240	230	250	240	260	240	260	290	300	300	300	300	280	260	240	220	220	240	250	260	280
29	270	260	250	240	240	230	220	240	250	240	260	280	300	280	280	280	260	220	220	220	240	250	260	270
30	280	260	260	270	280	270	240	230	260	260	290	280	320	280	280	290	260	240	220	220	240	240	260	280
31																								
Sum																								
Median	260	260	260	240	260	260	240	250	260	280	290	300	320	315	300	300	280	260	235	230	240	240	260	260

TABLE 71

IONOSPHERE DATA-2

Washington, D.C. Ionosphere station.

National Bureau Of Standards
(Institution)Hourly values of f^oF_2 in $^{\circ}$ for September 1945
(Month)Records measured by: J. M. C.
K. W. S.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.3	(3.0) ^F	(3.0) ^F	(2.6) ^F	(2.3) ^F	(2.4) ^F	3.8	5.0	5.1	5.5	5.7	6.0	5.8	5.7	5.7	6.0	6.5	(6.3)	(6.0)	6.5	6.4	5.2	4.5	3.6
2	(3.2)	(2.6) ^F	(2.2) ^F	(2.2) ^F	(2.2) ^F	(3.5) ^F	4.0	(4.2)	4.7	5.2	5.6	5.6	5.4	5.2	5.3	5.3	5.5	(5.4) ^F	(5.7) ^F	5.8	5.4	4.8	3.7 ^F	3.4
3	3.4	3.0 ^F	2.7 ^F	2.9 ^F	2.8 ^F	3.1 ^F	4.1	5.5	6.0	5.9	6.2	(6.2)	5.9	5.8	6.2	6.1	6.0	6.0	(6.2)	(6.0)	(6.1)	4.8	4.5	4.2
4	4.0	3.6	3.4	2.4 ^F	1.9 ^F	2.8	3.8	5.2	5.3	5.5	6.4	5.8	(6.2)	6.2	6.3	6.3	6.4	6.5	6.6	6.4	5.5 ^F	(4.6) ^F	3.7 ^F	3.5 ^F
5	3.4 ^F	(3.5) ^F	(3.0) ^F	2.9 ^F	(2.5) ^F	3.4 ^F	3.5 ^F	4.5	4.9	5.9	(6.5) ^F	6.8	7.4	(7.3)	7.1	6.6	6.0	(6.4)	6.4	(6.2)	6.3	5.4	4.5 ^F	4.0 ^F
6	3.4 ^F	3.4 ^F	3.4 ^F	(3.2) ^F	2.7 ^F	2.2 ^F	3.8 ^F	5.7	5.7	6.5	6.3	6.3	6.4	6.4	6.2	6.4	6.1	6.5	(6.4)	(7.0)	(6.6)	5.2	(3.7) ^F	3.5 ^F
7	3.4 ^F	(3.4)	(3.4) ^F	3.3	C	C	4.0	5.2	6.2	5.9	6.3	6.6	6.5	7.1	(7.4)	(6.9)	6.5	6.5	6.4	6.4	6.1	(5.5) ^F	4.8	4.4
8	4.0	3.8	3.6	3.4	(3.3)	3.3 ^F	4.5	6.0	6.2	6.8	6.6	6.3	(6.6)	(7.0)	(7.2)	(6.6) ^F	6.4	6.6	(6.7)	(6.5)	(7.0)	5.7	5.1	4.7
9	4.3	3.8	3.4	(3.4)	(3.5)	(3.4)	4.6	5.7	6.5	7.0	(7.2)	(7.2)	7.9	(7.0)	(7.4)	(7.0)	(7.5)	7.5	(6.9)	(6.5)	(6.4)	6.1	5.3	4.6
10	3.9	3.4	3.4	(3.4)	(3.3)	3.1	4.4	5.2	5.8	6.3	6.6	(6.5) ^F	(6.7)	(6.6)	(6.5)	6.5	7.0	7.2	(7.0)	(6.6)	6.7	5.9	4.7	4.5
11	3.9	3.8	(3.7)	(3.4)	3.3	(3.3)	4.2	5.5	6.4	(6.4)	(6.2)	6.6	6.8	6.8	(6.6)	(7.4)	(7.0)	(7.4)	(8.4)	(6.8)	5.9	5.2	4.0	4.3
12	(3.9)	3.4	3.4	3.3	(3.4)	(4.8) ^F	3.4	5.0	5.3	5.5	5.6	6.0	5.9	6.1	6.2	6.0	6.2	5.7	5.7	5.8	5.5	4.7	3.9	3.4
13	3.5 ^F	(2.7) ^F	(2.4) ^F	2.2 ^F	(2.3) ^F	2.2 ^F	3.5	4.6	4.7	4.9	5.5	5.6	5.9	6.1	6.0	6.4	6.4	6.2	6.2	6.0	5.0	4.1 ^F	(3.3)	(3.4)
14	C	C	C	C	C	C	C	C	C	C	6.3	6.5	(6.6) ^F	(5.5) ^F	6.3	(6.3)	6.5	6.5	6.4	(6.2)	5.5	5.0	4.1	3.7
15	3.6 ^F	3.3 ^F	2.9 ^F	2.6 ^F	2.4 ^F	(2.2)	3.7	5.0	5.2	5.5	5.8	5.9	5.5	5.7	5.8	(6.2)	5.8	5.7	5.7	5.3	(6.2)	4.0	(3.4)	3.3
16	(3.5) ^F	3.4	3.4	(3.2) ^F	2.8	3.1 ^F	3.7	4.8	5.8	5.8	(6.2) ^F	(6.2) ^F	(6.2) ^F	(6.2) ^F	(6.4) ^F	(6.7) ^F	7.3	(6.8) ^F	(6.7) ^F	(5.6) ^F	(5.4) ^F	(4.9) ^F	(4.7) ^F	(3.8) ^F
17	4.1	(3.3) ^F	(3.4) ^F	(3.2) ^F	(2.4) ^F	1.8 ^F	(3.4) ^F	4.1 ^F	4.6 ^F	4.4 ^F	(4.4) ^F	(4.4) ^F	(4.2) ^F	(4.2) ^F	(4.1) ^F	4.6 ^F	4.7 ^F	(4.6) ^F	5.0 ^F	5.0 ^F	3.9 ^F	3.4 ^F	(2.7) ^F	(2.3) ^F
18	2.7 ^F	2.7 ^F	3.3 ^F	2.7 ^F	(2.5) ^F	(2.6) ^F	(3.5) ^F	4.1 ^F	5.0 ^F	(5.2) ^F	4.9 ^F	4.8 ^F	5.1 ^F	5.5 ^F	5.9 ^F	5.7 ^F	5.3 ^F	5.4 ^F	5.6	5.2	4.2	3.9	3.9	(3.5)
19	(3.0) ^F	2.8	3.1	2.4	2.3 ^F	2.1 ^F	3.9	4.9	(6.2)	(6.2)	(6.0)	6.1	6.4	6.4	6.8	6.7	(7.2)	7.2	(6.4)	(6.4)	5.6	4.5	3.9	3.3
20	3.0	2.9	2.8	2.7	2.6	(2.6)	(2.8)	5.8	5.7	6.4	6.2	6.8	(7.2)	(7.0)	6.7	6.6	6.6	6.6	6.2	6.1	4.4	3.9	3.8	(3.6)
21	3.3	3.2	2.8	2.6	2.4 ^F	2.0 ^F	3.5	5.5	5.5	6.3	6.7	(6.9)	(7.0)	(7.8)	7.5	7.4	6.5	(6.6)	6.5	5.7	4.4	4.1	3.7	3.4
22	(3.4)	3.3	2.9 ^F	2.7	2.3 ^F	2.0 ^F	3.7	5.3	6.0	6.3	6.6	6.6	(7.2)	(7.2)	6.9	6.8	(7.2)	6.8	6.5	5.7	4.7	3.8	3.6	(3.5)
23	3.3	3.3	3.1	2.8	2.2	2.8 ^F	3.6	5.2	5.9	6.8	(7.4)	7.6	(7.5)	7.4	7.2	(6.8)	(6.8)	(6.8)	(6.6)	5.7	(4.5)	(4.0) ^F	3.5	3.4
24	3.3	(3.3)	3.2	3.2	3.1	3.0	4.0	5.7	5.9	6.2	6.3	6.7	7.6	7.5	(7.4)	7.5	7.6	(6.6)	6.6	5.6	5.5	4.1	3.5	3.5
25	3.5	3.4	3.4	3.3	3.3	3.3	3.8	(5.7)	6.1	6.6	7.1	(7.3)	(7.6)	(8.0)	(7.6)	(7.8)	(7.8)	(7.6)	(6.9)	5.8	5.2	4.5	4.2	3.9
26	3.6	3.7	3.5	3.4	3.4	3.4	3.5	4.9	5.1	5.6	6.1	6.2	7.0	(7.2)	(7.5) ^F	(7.5) ^F	7.4	(7.1)	6.5	5.9	5.0	4.7	3.9	3.2
27	3.6	3.8	(3.5)	(3.3)	3.4	3.3	3.4	5.0 ^F	5.3 ^F	5.6 ^F	5.7 ^F	5.8 ^F	6.0 ^F	5.9 ^F	5.8 ^F	5.8 ^F	6.3	6.5	(5.9)	5.1	4.2	3.8	3.5	3.4
28	3.4	3.5	3.4	3.5	3.3	(3.1)	(3.5)	5.3	6.3	5.9	6.6	6.2	6.3	7.1	6.8	(6.6)	(6.8)	(7.3)	(7.0)	5.5	4.8	3.8	3.7	(3.7) ^F
29	3.6 ^F	3.8	3.5	3.5	(3.3)	3.5	4.0	5.7	6.4	6.5	(6.7)	(7.1)	(7.3)	(7.5)	(7.5)	(7.5)	(7.6)	(6.9)	(6.5)	5.9	(5.3) ^F	(4.5)	4.0	4.2
30	4.1	3.9	3.5	3.3	3.2	3.5	3.8	5.6	6.2	6.6	6.8	6.9	(7.8)	(7.6)	(7.7)	(7.8)	7.8	(7.8)	7.4	(5.0) ^F	4.8	4.0	3.8	3.6
31																								
Sum																								
Median	3.5	3.4	3.4	3.2	2.7	2.9	3.8	5.2	5.8	6.0	6.3	6.2	6.6	6.8	6.7	6.6	6.5	6.6	6.4	5.9	5.4	4.6	3.9	3.5

TABLE 72

IONOSPHERE DATA - 3

Washington, D.C. Ionosphere Station

(Location)

National Bureau of Standards

(Institution)

Half hourly values of f^oF_2 in $^{\circ}$ for September 1945
(Month)Records measured by: J. M. G.
K. W. S.

TIME: 75°W MERIDIAN

Day	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
1	(3.4) ^F	3.1 ^F	3.2 ^F	2.6	2.4 ^F	(3.3) ^F	4.5	4.9	5.5	5.6	5.5	5.6	6.0	5.5	5.8	(6.2)	5.9	6.6	(6.4)	(6.2)	5.8	4.6	3.9	3.4	
2	2.8 ^F	2.3 ^F	2.2 ^F	2.2 ^F	3.3 ^F	3.9	4.3	4.8	5.0	5.3	5.4	5.5	5.2	5.2	5.3	5.1	5.2	(5.5) ^F	5.7	5.5	5.1	4.0	3.5 ^F	3.4 ^F	
3	(3.1) ^F	2.8 ^F	2.8 ^F	2.7 ^F	2.8 ^F	(3.4)	5.6	5.6	5.9	6.0	6.0	6.0	5.9	(6.1)	6.4	6.1	6.0	6.0	(6.2)	5.9	5.6	4.5	4.2	4.2	
4	4.0	3.5	3.1 ^F	1.9 ^F	2.2 ^F	(3.4)	4.2	5.9	5.1	6.0	6.2	5.8	5.9	5.9	6.4	6.2	6.6	6.5	6.2	(6.2)	5.0 ^F	3.8 ^F	3.7 ^F	3.4 ^F	
5	3.3 ^F	(3.1) ^F	(3.1) ^F	2.7 ^F	2.6 ^F	3.1 ^F	4.4	5.1	5.7	6.1	6.7	7.0	(7.6)	(7.6)	6.7	6.6	6.2	6.4	6.6	(6.4)	5.9	5.0	(4.1) ^F	3.8 ^F	
6	3.4 ^F	(3.4) ^F	3.2 ^F	2.9 ^F	(2.3) ^F	3.2 ^F	4.7	5.6	6.0	6.2	6.4	6.4	6.2	6.2	6.3	6.3	6.4	6.4	6.6	6.2	(6.4)	5.8	5.2	4.6	
7	3.4 ^F	3.4 ^F	(3.3) ^F	C	C	C	4.7	5.4	6.3	6.0	(6.6)	(6.6)	6.8	(7.4)	(7.2)	6.8	6.4	6.6	6.2	(6.4)	5.8	5.2	4.6	4.1	
8	3.8	(3.5)	3.4	(3.3)	3.2	(3.4)	5.2	6.2	6.5	6.6	6.4	6.6	6.6	(7.1) ^F	6.6	(6.6)	6.7	(6.7) ^F	6.5	(6.7)	(6.6)	5.3	4.9	4.4	
9	4.1	3.6	3.4	3.5	3.4	3.5 ^F	5.6	6.4	6.7	6.8	6.9	(7.0)	7.4	(7.8)	(7.1)	(7.5)	(8.0)	(7.0)	(6.3)	6.9	6.8	5.6	4.9	4.1	
10	3.7	(3.4)	3.4 ^F	3.4	3.0	(3.5)	4.6	5.7	5.9	6.4	6.6	6.4	6.6	(6.8)	6.4	6.6	(7.0)	(7.1) ^F	(7.0)	(6.6)	6.3	5.4	4.4	4.3	
11	4.0	3.6	(3.5)	3.3	3.3	3.4	4.9	5.8	6.3	6.4	(6.3) ^F	6.3	(7.1)	6.9	(7.0)	(7.8)	7.2	(7.8) ^F	(7.0)	6.5	5.8	4.7	4.2	4.2	
12	(3.4)	3.3	3.2	2.6	2.2 ^F	2.8	4.5	5.1	6.2	5.5	5.5	6.0	6.1	6.1	6.2	5.9	6.0	5.8	5.9	5.7	(5.0)	4.3	(3.5)	3.4	
13	3.4 ^F	(2.2) ^F	(2.7)	2.2 ^F	1.9 ^F	2.7	4.0	4.5	4.9	(5.2)	5.3	5.6	6.2	5.9	6.0	6.4	(6.4)	6.1	6.1	5.8	5.5	4.5	3.6 ^F	3.4	
14	C	C	C	C	C	C	C	C	C	C	6.3	(6.6) ^F	(6.5) ^F	(6.4) ^F	6.3	6.3	6.4	6.5	6.5	5.9	5.2	4.7	3.8	3.5 ^F	
15	3.3 ^F	3.1 ^F	(2.8) ^F	2.5 ^F	2.2 ^F	2.9 ^F	4.7	5.2	5.8	5.4	(6.2)	5.6	5.7	5.6	(5.7) ^F	6.0	5.8	5.6	(5.4) ^F	4.7	4.1	3.7	(3.4)	3.5	
16	3.4	3.4	3.3	(2.8) ^F	2.9	3.3	4.4	5.2	5.8	5.7	(6.1) ^F	(6.3) ^F	(6.3) ^F	(6.3) ^F	(6.7) ^F	(6.9) ^F	(7.7) ^F	(6.6) ^F	(5.8) ^F	(5.4) ^F	(5.5) ^F	(4.5) ^F	(3.9) ^F	(3.8) ^F	
17	(3.5) ^F	(3.3) ^F	(3.3) ^F	2.9 ^F	1.8 ^F	(2.8) ^F	3.6 ^F	(4.0) ^F	(4.4) ^F	4.0 ^F	4.2 ^F	(4.6) ^F	4.5 ^F	4.2 ^F	4.6 ^F	4.7 ^F	4.8 ^F	4.9 ^F	4.8 ^F	4.6 ^F	(3.5) ^F	(3.3) ^F	2.6 ^F	2.6 ^F	
18	2.8 ^F	3.3 ^F	3.3 ^F	2.4 ^F	2.6 ^F	2.5 ^F	3.8 ^F	(4.5) ^F	(5.0) ^F	5.1 ^F	4.8 ^F	(4.7) ^F	5.2 ^F	5.7 ^F	6.1 ^F	5.6 ^F	5.0 ^F	5.7 ^F	5.7 ^F	5.6	5.0	4.0	3.9	3.5	
19	2.9	2.6	2.6	(4.5)	2.3	2.7	5.0	5.8	5.8	5.8	5.6	6.1	6.2	6.4	6.4	6.8	6.9	(7.0)	6.5	5.9	5.2	3.9	(3.3)	3.0	
20	2.8	2.8	2.8	2.8	2.6 ^F	2.7	4.2	5.6	6.4	6.4	6.4	(6.9)	(7.3)	(7.0)	6.6	6.5	6.4	(6.1) ^F	5.3	4.8	4.1	3.7	3.5	(3.4)	
21	3.3	2.9	2.8	2.5	2.5	2.5	4.4	5.3	6.0	6.4	6.8	6.7	(8.0)	(8.0)	(7.8)	7.2	(6.8)	(7.1)	6.6	5.0	4.4	4.0	3.7	(3.3)	
22	3.4	3.1	2.8 ^F	2.4 ^F	2.3 ^F	2.6 ^F	4.6	5.5	6.4	6.8	6.6	7.4	7.3	7.1	(6.8)	(7.0)	6.8	6.6	6.4	5.1	4.2	3.5	3.5	(3.4)	
23	3.3	3.3	3.0	2.5 ^F	2.3 ^F	2.7 ^F	4.8	5.6	6.2	(7.4)	6.8	(7.7)	7.4	7.6	(7.0)	(7.0)	6.8	(6.8)	(6.3)	5.0	4.3	(3.6)	3.4	3.4	
24	(3.4)	3.3	3.1	3.2	3.2	3.3	4.8	5.7	(5.9)	6.6	6.6	(6.9)	7.6	(7.5)	(7.2)	(7.6)	(7.2)	6.6	(6.0)	5.6	4.5	3.8	(3.7)	3.4 ^F	
25	3.5	3.5	(3.4) ^F	3.4	(3.0) ^F	3.3	4.7	(6.1)	6.5	(7.1)	7.6	(7.8)	(7.6)	(7.8)	(7.5)	(8.0)	(8.1)	(7.3) ^F	6.5	5.7	4.7	4.5	3.7	3.8	
26	3.7	3.5	3.5	3.5	3.3	3.4	4.6	5.0	5.4	5.9	(6.2)	6.2	(7.0)	(7.4)	(7.2)	(7.5)	6.5	(7.0)	(6.0)	5.3	4.9	4.3	3.8	3.1	
27	3.4	3.5	3.4	3.4	3.4	2.9	4.3	5.0 ^F	5.1 ^F	5.8 ^F	5.7 ^F	5.7 ^F	(6.3) ^F	5.7 ^F	5.9 ^F	6.0 ^F	6.4	6.4	5.4	4.8	4.0	3.7	3.5	3.4	
28	(3.2)	(3.4)	3.5	(3.5)	3.3 ^F	2.9	4.4	5.6	(5.6)	5.9	6.5	5.7	6.5	7.0	6.7	6.8	(7.0)	7.1	6.4	4.5	4.1	4.0	3.8	3.6	
29	3.7 ^F	3.5	3.5	3.5	3.7	3.4	4.9	6.0	6.4	6.5	7.0	(7.0)	(7.2)	(7.4)	(7.1)	(7.6) ^F	(7.3)	6.8	(6.7) ^F	5.6	4.8	4.2	4.1	4.1	
30	3.9	3.8	3.6	3.2	3.4	3.4	5.0	5.8	6.6	6.5	6.7	(7.0)	(7.5)	(7.5)	(7.4)	7.7	(7.5)	(7.5)	6.4	5.1	4.3	3.8	(3.4)	3.4	
31																									
Sum																									
Median	3.4	3.3	3.2	2.8	2.7	3.2	4.6	5.6	5.9	6.0	6.4	6.4	6.6	6.8	6.6	6.6	6.6	6.6	6.6	6.2	5.6	5.0	4.2	3.7	3.4

IONOSPHERE DATA- 4

Ionosphere Station

Washington, D.C.

(Location) _____
National Bureau Of Standards

Hourly values of $\frac{h'F_1}{\sum F_n}$ in $\left\{ \frac{F_n}{F_n} \right\}$

h' F₁ in { } for September 1945 (Month)

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

TIME: 75° W MERIDIAN

[illegible]

TABLE 75

IONOSPHERE DATA-6

Washington, D.C.

Ionosphere Station

National Bureau of Standards

(Institution)

Hourly values of $h' E$ in km for September 1945

(Month)

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

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							120	120	110	120	120	120	110	110	120	120	120	120	120					
2							120	120	120	120	120	120	120	120	120	120	120	120	120					
3							120	110	110	120	120	110	110	110	110	110	110	110	110					
4							120	120	120	120	110	100	110	110	120	110	110	120	120					
5							120	120	120	120	120	110	110	110	110	110	120	120	120					
6							110	110	110	110	110	110	110	110	110	120	120	120	120					
7							120	120	120	120	120	120	120	120	110	110	120	110	120					
8							120	120	120	120	110	110	120	120	120	110	120	120	120					
9							120	120	110	110	110	110	110	110	120	120	120	120	140					
10							120	120	120	110	110	110	120	120	120	120	110	120	120					
11							120	120	120	120	110	120	120	120	110	120	110	120	120					
12							120	120	120	120	110	110	110	110	110	120	120	110	120					
13							120	120	120	120	110	110	110	110	110	120	120	110	140					
14							140	120	110	110	120	120	110	110	110	100	100	100	110					
15							160	120	120	110	110	110	110	110	110	110	110	110	110					
16							120	120	120	110	110	110	110	110	110	110	110	110	110					
17							110	120	120	110	110	110	110	110	110	110	110	110	110					
18							120	120	120	110	110	110	110	110	110	110	110	110	110					
19							120	110	110	110	110	110	110	110	110	110	110	110	110					
20							120	110	110	110	110	110	110	110	110	110	110	120	120					
21							120	110	110	120	110	110	110	110	110	110	110	120	120					
22							120	120	120	110	110	110	110	110	110	110	110	120	120					
23							110	110	110	110	110	110	110	110	110	110	110	120	110					
24							150	120	110	110	110	110	110	110	110	110	110	120	100					
25							120	110	110	110	110	110	110	110	110	110	110	120	120					
26							110	110	110	120	110	110	110	110	110	110	110	120	120					
27							120	120	110	120	110	110	110	110	110	110	110	110	110					
28							120	110	110	110	110	110	110	110	110	110	110	110	110					
29							110	110	110	110	110	110	110	110	110	110	110	120	120					
30							110	120	120	120	120	110	110	110	110	110	110	120	120					
31																								
Sum							120	120	110	110	110	110	110	110	110	110	110	120	120					
Median							120	120	110	110	110	110	110	110	110	110	110	120	120					

TABLE 76

IONOSPHERE DATA - 7

Washington, D.C. Ionosphere Station

National Bureau Of Standards

(Institution)

Hourly values of f^oE in MHz for September 1945
(Month)Records measured by: J.M.C.
K.W.S.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	A	A	A	A	A	3.5	3.4	(3.4)	[3.4] ^A	[3.2] ^C	2.8	A					
2							C	A	A	A	A	3.4	[3.5] ^A	B	A	(3.4)	(3.3)	(2.7)	(2.0)					
3							A	A	A	A	[3.4] ^A	A	B	(3.5)	(3.4)	3.4	3.3	(2.8)	A ^F					
4							(1.8) ^F	(2.6)	(3.1)	(3.5)	A	A	B	(3.5)	(3.4)	3.4	3.3	(2.7)	B					
5							A	A	A	A	C	A	B	(3.5)	(3.4)	3.4	3.3	(2.7)	B					
6							A	(2.7)	3.3	3.4	3.4	(3.5)	(3.6)	3.5	3.5	(3.4) ^A	3.3	(2.8)	(2.0)					
7							A	2.7	A	A	(3.5)	[3.5] ^A	(3.5)	3.5	[3.5] ^B	(3.5)	A	A	(1.8)					
8							(1.8)	(2.8)	A	A	A	(3.5)	(3.5)	B	B	3.4	A	A	A					
9							1.8	2.6	A	A	A	3.4	B	B	C	B	3.4	(2.8)	A					
10							1.4 ^H	(2.6)	[3.7] ^A	[3.4] ^A	(3.4)	3.4	[3.5] ^B	(3.4)	(3.4)	(3.4)	[3.2] ^A	2.6	A					
11							A	2.7	[3.2] ^A	(3.3)	[3.4] ^A	3.4	B	B	(3.4)	3.4	3.3	[2.9] ^B	A					
12								A	A	[3.3] ^A	[3.4] ^A	(3.5)	A	A	A	3.3	(3.2)	(2.6)	(1.7)					
13								(2.4)	(3.1)	3.3	3.4	[3.4] ^A	B	A	B	A	3.1	(2.6)	(1.4)					
14							C	C	C	C	A	A	C	(3.4)	[3.4] ^B	[3.3] ^C	[3.1] ^E	(2.8)	(1.8)					
15							(1.5)	(2.6)	A	A	A	A	(3.4)	[3.4] ^B	(3.4)	3.3	(3.1)	(2.7)	A					
16							1.6	(2.6)	[3.2] ^A	3.3	[3.4] ^C	[3.4] ^C	C	C	C	[3.4] ^C	[3.2] ^A	[2.6] ^C	[5] ^C					
17							(2.6) ^K	[3.0] ^K	(3.3) ^K	3.4 ^K	(3.4) ^K	[3.4] ^K	[3.4] ^K	(3.4) ^K	[3.3] ^K	[3.3] ^K	3.2 ^K	[2.5] ^K	(1.8) ^A					
18							A ^K	A ^K	A ^K	A ^K	A ^K	[3.4] ^K	[3.5] ^K	3.3 ^K	(3.3) ^K	3.3 ^K	3.1 ^K	[2.4] ^K	(1.6)					
19							A	(2.4)	(2.9)	[3.3] ^B	3.4	3.4	3.4	3.5	(3.4)	3.4	3.0	2.6	A					
20								B	A	A	[3.4] ^B	3.4	(3.4)	[3.4] ^B	3.3	3.3	(3.1)	2.4	B					
21							A	A	A	A	(3.4)	(3.5)	[3.5] ^B	3.5	3.4	(3.4)	(3.1)	[2.3] ^A	B					
22							(2.6)	(3.1)	3.3	(3.5)	(3.5)	(3.5)	3.4	(3.5)	(3.3)	3.4	3.1	(2.9)	B					
23							(2.6)	3.0	[3.3] ^A	3.4	(3.4)	(3.4)	B	B	B	B	(3.3)	A	A					
24							B	(2.6)	(3.1)	3.4	(3.4)	(3.4)	(3.4)	3.4	(3.5)	3.4	[3.3] ^B	(2.5)	A					
25								(2.5) ^F	(2.9)	3.4	A	B	B	(3.5)	(3.4)	(3.3)	(3.2)	(2.4)						
26							(2.4)	C	A	A	B	A	(3.5)	[3.4] ^B	[3.4] ^K	(3.4)	(3.1)	A						
27							(2.4) ^K	(3.2) ^K	3.4 ^K	3.4 ^K	B ^K	B ^K	(3.4) ^K	(3.4) ^K	A ^K	A ^K	A	B						
28							2.5	(2.9)	B	A	A	A	(3.4)	(3.4)	B	3.4	(3.2)	(2.5)						
29							2.5	A	A	A	A	(3.4)	A	3.5	C	B	(3.3)	2.3						
30							(1.5)	A	A	A	A	(3.4)	B	A	(3.4)	(3.3)	[3.0] ^A	(2.3)						
31																								
Sum																								
Median							1.6	2.6	3.1	3.3	3.4	3.4	3.5	3.4	3.4	3.4	3.2	2.6	1.8					

TABLE 77

IONOSPHERE DATA - 8

Washington, D.C. Ionosphere Station

National Bureau of Standards

(Institution)

Hourly values of E_s in μ for September 1945
(Month)Records measured by: J. M. G.
K. W. S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	28 110	28 110	26 120	27 120	34 110	32 110	43 110	46 120	57 110	43 120	43 110	46 110		41 120	37 140	59 120	43 120	34 120	26 120					27 120
2		38 120	45 110	46 110	30 110	28 110	47 120	36 120	41 120	42 120	47 120	42 120	36 120	38 120	41 140	38 130	36 120	C	32 120	27 120	33 110	23 120		26 120
3	14 110	27 120	27 120	33 110	34 110	30 120	40 110	44 110	43 110	44 120	36 110	37 110	39 110		42 110		40 130	33 110	33 110	32 110	27 110	32 100	26 110	26 110
4		25 120		10 140			27 120	36 110	41 110		59 110	45 120				37 120		26 120	27 110	28 120	28 110	28 100	26 120	26 110
5	25 120	26 100			8 120	26 120	32 110	36 120	54 120	64 110	55 120	46 110			47 110	40 110		27 120	26 110	28 110	28 110	27 110	26 110	27 120
6						27 130	40 110	40 120	40 110	36 140	42 110	43 110	41 120	40 120	43 120	39 120	36 140	35 130	28 120	30 110	34 110	34 110	29 110	
7	27 110	10 110	C	10 110	C	C	34 120	46 120	48 100	45 110	41 120	41 110	40 110			42 110	40 120	34 110	32 140	10 120	33 120	37 110	26 120	27 110
8	27 100						27 120	28 120	48 120	47 110	46 110					42 120	43 120	36 120	23 120					
9						27 120	41 120	40 110	40 110	41 110	41 110				C			34 120	34 120	33 120	28 120	26 120		25 120
10	33 120	33 110	11 120	27 120	26 110	26 110	27 110	40 120	35 120	39 110		41 120		39 180		42 140	41 110	35 120	34 120	33 120	28 120	26 120		
11	27 110					35 110	35 120	41 120	40 120	43 110	44 120	41 110						28 140	28 120					
12	33 110	30 110	33 110	33 110	26 110	27 100	29 120	34 120	43 120	40 110	42 110	43 110	40 110	41 110	39 110		42 120	28 110	27 110				28 110	34 120
13		26 120		26 120	26 110	28 100	57 110	35 120	36 140	38 160		41 110	36 110	37 110	38 110	36 120		50 110	19 160			33 120	34 120	
14	C	C	C	C	C	C	C	C	C	C	53 110	C	84 110	C	43 100									
15	25 100	25 120	37 110	36 110	49 110	33 100	34 110	34 120	35 110	41 110	43 110	39 110						34 110	36 100	33 100				
16	25 100	38 100	26 100	27 100	28 110	27 100	26 140	37 120	39 120	40 110		C	38 110	C	41 110	38 120	36 120	34 120	C	C	C	C	C	C
17	C	C	C	C	26 100	28 120	30 120	33 120	36 110		55 110	36 120				38 110		27 110	27 110	33 120				
18	26 150	29 120	40 120	38 120	52 120	33 110	57 110	59 110	57 110	64 110	40 110						39 110	26 120	27 120	26 100	27 110			42 110
19	48 110	34 110	42 110	39 110	39 110	39 110	41 110	31 110				39 150						39 110	26 110	31 110				
20				10 120				30 140	33 110	34 110				41 120					34 120	33 120			33 110	26 100
21	26 110	27 120	38 110	27 100	27 100	41 100	35 120	38 110	48 110	53 110					43 120			28 120				28 110	36 110	34 110
22	35 110	29 110	27 110	27 120	27 120	26 120	34 110	40 120	38 110	38 110	40 110	42 120		40 110				27 120				57 110	35 110	33 110
23	33 110			11 110	27 110	29 110	33 110	(33) 120	34 120	35 110				37 110				36 110	46 110	53 110				
24							41 140	39 130	37 140	43 110	41 120							33 100	34 100	32 110				
25				09 120		(13) 130	27 150	27 120			42 110			37 110		50 120			26 110	24 100	26 100	25 100		
26						27 100	25 100	41 110	36 110	38 120		43 120			C	42 120	36 120	34 120	27 120			32 110	(25) 110	
27			27 110	27 110	09 110	38 120	35 120	29 120	36 110		41 110				41 110	39 120	36 110	28 110	21 120	(35) 120				
28	25 110	28 110	26 110	40 110	26 110	27 120	27 110	28 110		39 110	40 110	47 110	36 110					27 160	33 100	32 100	26 110			
29		15 110	11 110	10 110	10 110	25 110	25 130	40 110	42 110	40 110	41 110		39 110											
30	34 110	27 110	28 110	27 140	27 110	39 120	37 110	35 110	40 120	42 120	41 110			47 110		39 120	32 120	41 110		25 110			27 120	28 110
31																								
Sum																								
Median	2.5	2.6	1.1	2.6	2.6	2.7	3.4	3.6	4.0	4.0	4.1	3.9				3.5		2.8	2.7	2.5				2.5

TABLE 78

IONOSPHERE DATA - 9

(Location)
Washington, D.C.

Ionosphere Station

(Institution)
National Bureau Of StandardsHourly values of F2-M3000 for September 1945
(Month)Records measured by J.M.C.
K.W.S.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(2.3)	(2.4)	(2.0) ^F	(2.0) ^F	(1.9) ^F	(2.1) ^F	2.3	2.2	2.3	2.1	2.2	2.0	(2.2)	2.0	2.0	2.0	2.1	(2.1)	2.4	2.1	2.1	2.2	2.0	2.4
2	(2.4)	(2.0) ^F	(1.9) ^F	(2.0) ^F	(2.2) ^F	C	(2.2)	(1.9)	(1.6)	2.0	2.0	2.0	2.1	1.9	2.0	2.0	2.0	C	C	2.1	2.1	2.1	2.1 ^F	2.2
3	2.1	(2.1) ^F	(2.1) ^F	(1.9) ^F	(2.0) ^F	(2.1) ^F	2.5	2.4	2.3	2.3	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.2	(2.1)	(2.2)	(2.1)	(2.0) ^F	1.9	2.0
4	2.0	2.1	2.3	(2.0) ^F	(2.0) ^F	1.8	2.3	2.2	2.4	2.0	2.2	2.2	(2.1)	2.1	2.1	2.1	2.1	2.2	2.3	2.1	(2.2) ^F	(2.0) ^F	(2.2) ^F	(2.2) ^F
5	(2.3) ^F	(1.9) ^F	(2.0) ^F	(2.1) ^F	(2.2) ^F	(1.9) ^F	(2.4) ^F	2.1	2.3	2.0	C	2.0	2.1	(2.2)	2.1	2.2	2.1	(2.1)	2.3	(2.3)	2.1	2.1	(2.1) ^F	(2.0) ^F
6	(2.2) ^F	(2.1) ^F	(1.9) ^F	(1.9) ^F	(2.0) ^F	(2.3) ^F	2.4	2.4	2.4	2.4	2.4	2.4	2.0	2.2	2.1	2.1	2.0	2.1	(2.1)	(2.1)	(2.2)	2.2	C	(2.0) ^F
7	(1.9) ^F	(2.2)	C	2.0	C	C	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.1	(2.1)	(2.2)	2.1	2.1	2.2	2.0	2.1	C	C	2.0
8	2.0	2.0	2.1	2.1	(2.2)	(2.0) ^F	2.3	2.4	2.4	2.3	(2.3)	2.3	(2.1)	(2.1)	(2.0)	C	2.2	2.3	(2.2)	(2.3)	(2.1)	2.2	2.0	2.0
9	2.0	2.0	2.2	2.2	(2.1)	(2.3)	2.3	2.3	2.2	2.2	(2.2)	(2.1)	2.0	(2.3)	(2.1)	(2.2)	(2.2)	2.0	(2.2)	(2.1)	2.2	2.2	2.1	2.3
10	2.0	2.3	(2.2)	(2.3)	(2.2)	2.1	2.4	2.4	2.2	2.2	2.2	C	(2.0)	(2.2)	(2.1)	2.1	2.0	(2.1)	(2.4)	(2.3)	2.0	2.0	2.1	2.0
11	1.9	2.0	(2.0)	(2.3)	2.0	2.6	2.3	2.4	2.3	(2.3)	(2.2)	(2.2)	2.0	2.1	(2.0)	(2.1)	(2.2)	(2.2)	(2.6)	(2.2)	2.1	2.1	2.1	2.0
12	(1.9)	1.9	2.1	2.0	(2.0)	(2.0) ^F	2.4	2.3	2.0	2.3	2.0	1.9	1.9	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.2
13	1.9 ^F	(2.0) ^F	(1.9) ^F	(1.9) ^F	(1.9) ^F	(2.0) ^F	2.5	2.4	(2.3)	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.1 ^F	(2.0)	(2.0)
14	C	C	C	C	C	C	C	C	C	C	2.3	2.2	C	C	2.1	(2.2)	2.2	2.2	2.3	(2.3)	2.2	2.1	2.1	2.0
15	2.1 ^F	2.1 ^F	1.9 ^F	(2.0) ^F	(1.8) ^F	(1.9)	2.5	2.3	(2.3)	2.3	2.1	2.2	2.1	2.0	2.0	(2.1)	2.1	2.2	2.3	2.2	(2.1)	2.2	(2.2)	2.2
16	C	2.2	2.0 ^F	(2.0) ^F	1.9	(2.0) ^F	2.4	2.4	2.3	2.1	C	C	C	C	C	C	2.0	C	C	C	C	C	C	C
17	1.8	C	C ^K	C ^K	(1.8) ^K	(1.9) ^K	(2.2) ^K	G ^K	(1.9) ^K	2.0 ^K	G ^K	(1.7) ^K	G ^K	G ^K	G ^K	1.8 ^K	1.9 ^K	(2.0) ^K	2.1 ^K	2.1 ^K	2.2 ^K	2.0 ^K	(1.9) ^K	C ^K
18	1.9 ^K	1.8 ^K	2.0 ^K	(2.2) ^K	A ^K	(1.9) ^K	(2.0) ^K	(2.3) ^K	2.2 ^K	(1.9) ^K	(2.0) ^K	1.6 ^K	(1.7) ^K	1.8 ^K	1.9 ^K	2.1 ^K	2.0 ^K	1.9 ^K	2.2	2.1	1.4	1.5	1.9	(2.2)
19	A	1.8	(1.9)	1.9	(1.9) ^F	(2.1) ^F	2.3	2.2	(2.3)	(2.4)	(2.3)	2.1	2.1	2.0	2.1	2.1	(2.2)	2.1	(2.3)	(2.3)	2.3	2.3	2.3	2.1
20	1.9	1.9	1.8	1.9	2.0	2.1	(2.3)	2.5	2.4	2.3	2.1	2.2	(2.2)	(2.2)	2.3	2.3	2.3	2.3	2.4	2.2	2.1	2.1	(2.2)	(2.1)
21	2.1	2.0	2.0	2.1	(2.0) ^F	2.2 ^F	2.5	2.4	2.4	2.2	2.3	(2.3)	(2.1)	(2.2)	2.4	2.3	2.3	(2.5)	2.4	2.3	2.0	2.1	2.1	(2.2)
22	A	2.1	(2.0) ^F	2.3	2.2 ^F	(2.3) ^F	2.5	2.4	2.4	2.3	2.3	2.2	(2.2)	(2.2)	2.2	2.2	(2.3)	2.4	2.3	2.3	2.1	A	(1.9)	(2.1)
23	2.1	2.0	2.1	2.1	2.1	2.0 ^F	(2.6)	2.4	2.3	2.3	(2.3)	2.1	(2.3)	2.2	2.2	(2.3)	(2.4)	(2.4)	(2.6)	2.5	(2.5)	C	2.2	2.2
24	2.2	(2.2)	2.1	2.1	2.2	2.2	2.5	2.5	2.6	2.4	2.2	2.2	2.0	2.1	(2.2)	2.1	(2.1)	(2.4)	2.2	2.2	2.2	2.1	(2.2)	2.2
25	2.1	2.1	2.2	2.2	2.1	2.1	2.5	(2.4)	2.3	2.3	(2.2)	(2.3)	(2.2)	(2.1)	(2.2)	(2.2)	(2.3)	(2.3)	(2.4)	2.3	2.3	2.1	2.0	2.0
26	2.0	2.1	2.0	2.3	2.0	2.0	(2.3)	2.3	2.2	2.3	2.2	2.2	2.1	(2.2)	C	(2.1)	2.1	(2.3)	2.3	2.2	2.1	2.0	2.0	1.9
27	2.1	2.0	(2.0)	(2.3)	2.1	2.1	2.3	2.4 ^K	2.3 ^K	2.1 ^K	2.0 ^K	2.1 ^K	2.1 ^K	2.0 ^K	2.0 ^K	2.0 ^K	2.1	2.3	(2.4)	2.2	2.0	2.1	2.2	2.1
28	2.0	2.0	(2.2)	(2.2)	2.2	(2.0)	(2.4)	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	(2.1)	(2.3)	(2.3)	2.2	2.2	1.9	2.2	2.2	(2.0) ^F
29	2.2 ^F	2.0	2.0	2.3	(2.4)	(2.4)	2.4	2.4	2.4	2.2	2.3	(2.2)	(2.1)	(2.1)	(2.1)	(2.3)	(2.3)	(2.4)	(2.4)	2.2	C	(2.0)	1.9	1.9
30	1.9	2.0	2.0	2.0	(1.7)	2.2	2.5	2.2	2.5	2.4	2.2	2.1	(2.0)	(2.2)	(2.2)	(2.2)	2.2	(2.4)	(2.4)	C	2.0	2.0	1.9	2.0
31																								
Sum																								
Median	2.0	2.0	2.0	2.1	2.0	2.1	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.0

TABLE 79

IONOSPHERE DATA- 10

Washington, D. C. Ionosphere Station

National Bureau Of Standards

Hourly values of F2-M3000 for September 1945

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

TIME: 75° W MERIDIAN

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

IONOSPHERE DATA-II

Washington, D.C.

National Bureau Of Standards
(Institution)

Hourly values of F1-M3000 for September 1945
(Month)

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

TIME: 75° W MERIDIAN

[illegible]

Washington, D.C.

IONOSPHERE DATA-12

National Bureau Of Standards

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

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

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	A	A	A	A	A	4.3	4.3	(4.3)	A	C	3.7	A					
2							C	A	A	A	A	4.3	A	A	(4.1)	4.0	A	C	C					
3							A	A	A	A	A	(4.6)	A	B	A	4.3	(4.3)	A	A ^F					
4							(4.0) ^F	(4.0)	(4.2)	4.3	A	A	B	(4.4)	(4.4)	4.1	4.1	(4.0)	A ^F					
5							A	A	A	A	C	A	B	B	B	A	(4.0)	3.9	B					
6							A	(3.8)	4.1	4.2	4.1	(4.3)	(4.2)	4.2	(4.2)	A	4.1	(3.8)	(4.0)					
7							A	A	A	A	(4.3)	A	4.2	4.3	B	(4.1)	A	A	A					
8							3.6	(3.8)	A	A	A	4.1	4.1	B	B	4.2	A	A	A					
9							A	A	A	A	A	4.3	B	B	C	B	4.1	(3.8)	A					
10							4.0 ^H	(3.9)	A	A	(4.3)	4.2	B	4.3	(4.3)	(4.1)	A	A	A					
11							A	(4.1)	A	(4.3)	A	4.5	B	B	(4.2)	4.3	4.1	B	A					
12								A	A	A	(4.2)	A	A	A	A	4.1	A	(4.0)	(3.7)					
13								A	(3.9)	4.0	4.1	A	B	A	B	A	4.0	(4.0)	(4.3)					
14							C	C	C	C	A	C	4.3	B	B	C	C	(3.6)	(3.4)					
15							(3.7)	A	A	A	A	(4.4)	B	B	(4.2)	4.2	(3.9)	(3.8)	A					
16							3.2	(3.4)	A	(4.2)	C	C	C	C	C	C	A	C	C					
17								(3.8) ^H	A ^K	(4.3) ^H	4.2 ^K	(4.1) ^K	B ^K	(4.2) ^K	B ^K	A ^K	4.1 ^K	B ^K	(4.0) ^K					
18							A ^K	A ^K	A ^K	A ^K	A ^K	B ^K	B ^K	4.2 ^K	(4.3) ^K	4.1 ^K	3.9 ^K	C ^K	(3.5)					
19							A	(4.0)	(4.0)	B	4.1	4.3	4.3	4.0	(4.1)	4.2	4.0	(4.3)	A					
20								B	A	A	B	4.4	(4.3)	B	4.2	4.1	(3.9)	3.9	B					
21							A	A	A	A	(4.2)	(4.2)	B	(4.5)	4.2	(4.2)	(3.9)	A	B					
22							(3.7)	(3.7)	(3.9)	4.2	(4.1)	(4.1)	4.2	(4.2)	(4.2)	4.1	4.1	(4.0)	B					
23								(3.9)	(4.1)	A	4.2	(4.3)	B	B	B	B	(4.1)	A	A					
24							B	(3.8)	(4.1)	4.2	(4.2)	(4.3)	(4.2)	4.3	(4.2)	4.1	B	(4.1)	A					
25								(3.4) ^F	(3.9)	4.3	A	B	B	(4.2)	(4.2)	(4.1)	(4.0)	(3.9)						
26								(4.0)	C	A	B	A	(4.2)	B	C	(4.2)	(4.2)	A						
27							(3.8) ^H	(4.0) ^K	4.2 ^K	B ^K	B ^K	(4.5) ^K	(4.4) ^K	A ^K	A ^K	4.2	A	A	B					
28							(3.7)	(3.9)	B	A	A	(4.5)	(4.5)	(4.5)	(4.1)	4.2	(4.1)	(4.0)						
29							(4.1)	A	A	A	(4.5)	A	4.2	C	B	(3.9)	(3.9)							
30							(3.8)	A	A	A	(4.3)	B	A	A	(4.4)	(4.2)	A	(3.9)						
31																								
Median							3.8	3.8	4.0	4.2	4.2	4.3	4.2	4.3	4.2	4.1	4.1	3.9	3.8					

Table 82

Ionospheric Storminess, September 1945

Day	Ionospheric Character*		Principal Storms		Geomagnetic Character**	
	00-12 GCT	12-24 GCT	Beginning GCT	End GCT	00-12 GCT	12-24 GCT
September						
1	1	2			1	2
2	2	3			2	1
3	2	1			1	1
4	2	1			3	2
5	1	3			2	2
6	2	1			2	1
7	1	1			2	1
8	0	0			0	2
9	1	3			1	0
10	1	1			1	1
11	2	1			1	3
12	2	3			3	1
13	2	3			2	2
14	***	1			1	1
15	2	3			1	1
16	1	2			1	2
17	2	6	0700	2300	4	4
18	4	5			3	4
19	3	2			3	1
20	2	1			2	1
21	2	1			1	2
22	1	1			1	1
23	1	1			0	0
24	1	1			0	1
25	2	1			2	2
26	1	2			1	2
27	1	4	1200	2100	2	2
28	2	3			2	1
29	1	1			1	1
30	1	1			3	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 American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

***No readable record.

†Dashes indicate continuing storm.

Table 83

Sudden Ionosphere Disturbances Observed

at Washington, D.C.

Day	GCT		Locations of transmitters	Relative intensity at minimum*
	Beginning	End		
September				
3	1959	2045	Ohio, D.C., England, Mexico, Brazil.	0.1
26	1917	2000	Ohio, D.C., England, Mexico, Brazil.	0.1

*Ratio of received field intensity during SID to average field intensity before, and after, for station W3XAL, 6080 kilocycles, 600 kilometers distant.

Table 34

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

Day	North Atlantic				North Pacific				Geo- mag- netic K _A
	Quality Figure	IRPL Warning	ISB Warning	A-Zone Forecast	Quality Figure	IRPL Warning	A-Zone Forecast	Geo- mag- netic K _A	
	01-12 GCF	13-24 GCF	01-12 GCF	13-24 GCF	01-12 GCF	13-24 GCF	01-12 GCF	13-24 GCF	
1	6			5	7		5	1	2
2	(4) 6			(4)	6	X	(4)	3	2
3	5	X		5	7	X	5	2	2
4	6	X		6	7	X	5	2	1
5	5			6	7		6	2	1
6	7			6	7		6	2	1
7	6			7	8		7	1	1
8	7			7	7		6	1	1
9	6			6	7		7	1	1
10	6			7	8		7	1	1
11	6			7	7		6	2	1
12	7			6	6		5	3	2
13	5			5	6		5	2	2
14	(4) 5			6	6		6	2	1
15	6	X		6	6	X	6	2	1
16	7			6	7		6	2	1
17	6			6	7		6	2	1
18	6			6	7		6	1	1
19	6			5	8		5	1	1
20	5			5	7		5	2	2
21	6			6	6		6	1	3
22	6			6	7		6	3	1
23	(4) 5			6	7		6	1	0
24	5	X		5	7	X	5	1	0
25	6			5	7		5	1	1
26	6			5	7		5	1	1
27	6			5	6		5	1	2
28	(4) 6			(4)	5	X	(4)	4	2
29	6	X		(4)	6	X	(4)	2	1
30	6	X		5	5	X	5	0	1
31	5			6	7		6	1	1
Score:									
II		2	0	2		0	0	0	
X		2	4	2		0	0	0	
G		22	27	26		23	28		
(S)		2	0	0		1	0		
S		3	0	1		7	3		

Quality Figure and
Forecast Scale:

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

Symbols

- X = Warning Given.
H = Quality 4 or worse
on day or half-day
following warning.
M = Quality 4 or worse
on day or half-day
following no
warning.
G = Quality 5 or better
on day following
no warning.
(3) = Quality 5 on day
following warning.
S = Quality 6 or
better on day
following warning.
() = Quality or forecast
4 or worse (dis-
turbed).

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

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

SEPTEMBER, 1945

Fig 2. WASHINGTON, D.C.

SEPTEMBER, 1945

Fig. 3. CHURCHILL, CANADA
58.8°N, 94.2°W

AUGUST, 1945.

Fig. 4. CHURCHILL, CANADA

AUGUST, 1945.

Fig. 5. PRINCE RUPERT, CANADA.
54.3°N, 130.3°W.

AUGUST, 1945

Fig. 6. PRINCE RUPERT, CANADA.

AUGUST, 1945.

Fig. 7. ST. JOHN'S, NEWFOUNDLAND
47.7°N, 52.7°W.

AUGUST, 1945

Fig. 8. ST. JOHN'S, NEWFOUNDLAND

AUGUST, 1945

Fig. 9. OTTAWA, CANADA
45.5°N, 75.8°W
AUGUST, 1945.

Fig. 10. OTTAWA, CANADA
AUGUST, 1945.

Fig. 11. BOSTON, MASSACHUSETTS
42.4°N, 71.2°W
AUGUST, 1945.

Fig. 12. BOSTON, MASSACHUSETTS
AUGUST, 1945.

Fig. 13. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W
AUGUST, 1945.

Fig. 14. SAN FRANCISCO, CALIFORNIA
AUGUST, 1945.

Fig. 15. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W
AUGUST, 1945

Fig. 16. BATON ROUGE, LOUISIANA
AUGUST, 1945.

Fig. 17. SAN JUAN, PUERTO RICO
18.4° N, 66.1° W

AUGUST, 1945.

Fig. 18. SAN JUAN, PUERTO RICO AUGUST, 1945.

Fig. 19. HUANCAYO, PERU
12.0° S, 75.3° W

AUGUST, 1945.

Fig. 20. HUANCAYO, PERU

AUGUST, 1945.

Fig 21. GREAT BADDOW, ENGLAND
51.7°N, 0.5°E

JULY, 1945

Fig 22. GREAT BADDOW, ENGLAND

JULY, 1945

Fig 23. MAUI, HAWAII
20.8°N, 156.5°W

JULY, 1945

Fig 24. MAUI, HAWAII

JULY, 1945

Fig 29. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E

JULY, 1945

Fig 30. WATHEROO, W. AUSTRALIA

JULY, 1945

Fig 31. SIMONSTOWN, UNION OF S. AFRICA
33.9°S, 18.7°E

JULY, 1945

Fig 32. CHRISTCHURCH, NEW ZEALAND
43.5°S, 172.6°E

JULY, 1945

Fig 33 CHRISTCHURCH, NEW ZEALAND

JULY, 1945.

Fig. 34. TYKHI BAY, U.S.S.R.
80.3°N, 52.8°E

JUNE, 1945

FIG. 35. LENINGRAD, U. S. S. R.
59.7°N, 30.5°E
JUNE, 1945

Fig 36. SVERDLOVSK U.S.S.R.
56.7°N, 61.1°E
JUNE, 1945

Fig. 37. TOMSK, U.S.S.R.
56.4°N, 85.0°E
JUNE, 1945

Fig. 38. GREAT BADDOW, ENGLAND
51.7°N, 0.5°E

JUNE, 1945

Fig. 39. GREAT BADDOW, ENGLAND

JUNE, 1945

Fig 40. ALMA ATA, U.S.S.R
43.5°N, 76.5°E

JUNE, 1945

Fig. 41. LEYTE
11.0°N, 125.0°E

JUNE, 1945.

Fig. 42. LEYTE

JUNE, 1945.

Fig. 43. WATHEROO, W. AUSTRALIA
30 3°S, 115.9°E

JUNE, 1945

Fig. 44. WATHEROO, W. AUSTRALIA

JUNE, 1945

Fig. 49. SVERDLOVSK, U.S.S.R.
56.7°N, 61.1°E

MAY, 1945

Fig. 50. TOMSK, U.S.S.R.
56.4°N, 85.0°E

MAY, 1945

Fig. 51. MOSCOW, U.S.S.R.
55.8°N, 37.6°E

MAY, 1945

Fig. 52. ALMA ATA, U.S.S.R.
43.5°N, 76.5°E

MAY, 1945.

Fig. 53. Leningrad, U. S. S. R.
59.7°N, 30.5°E
APRIL, 1945.

Fig. 54. Leningrad, U. S. S. R.
59.7°N, 30.5°E
MARCH, 1945

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