

RESTRICED
1945

IONOSPHERIC DATA

ISSUED
MAY, 1945

PREPARED BY INTERSERVICE RADIO PROPAGATION LABORATORY
National Bureau of Standards
Washington, D.C.

Top Secret

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IONOSPHERIC DATA

TERMINOLOGY	Page 3
MONTHLY AVERAGES AND MEDIAN VALUES OF IONOSPHERIC DATA	Page 3

Provisional data (received by telephone or telegraph)

April, 1945

Baffin I. (Median values)	Table 1
Fairbanks, Alaska (Median values)	Table 2
Reykjavik, Iceland (Median values)	Table 3
Churchill, Canada (Median values)	Table 4
Ottawa, Canada (Median values)	Table 5
San Francisco, Calif. (Median values)	Table 6
Baton Rouge, Louisiana (Median values)	Table 7
Maui, Hawaii (Median values)	Table 8
Huancayo, Peru (Median values)	Table 9

March, 1945

Cape York, Q., Australia (Mean values)	Table 10
Rarotonga I. (Mean values)	Table 11
Pitcairn I. (Mean values)	Table 12
Brisbane, Q., Australia (Mean values)	Table 13
Kermadec Is. (Mean values)	Table 14
Watheroo, W. Australia (Mean values)	Table 15
Mt. Stromlo, N.S.W., Australia (Mean values)	Table 16
Campbell I. (Mean values)	Table 17

Final data

April, 1945

Washington, D.C. (Median values)	Table 18
	Figs. 1 and 2

March, 1945

Fairbanks, Alaska (Median values)	Table 19
	Figs. 3 and 4
Churchill, Canada (Median values)	Table 20
	Figs. 5 and 6
Maui, Hawaii (Median values)	Table 21
	Figs. 7 and 8
Huancayo, Peru (Median values)	Table 22
	Figs. 9 and 10

Final data (continued)February, 1945

Burghead, Scotland (Median values)	Table 23
	Fig. 11
Slough, England (Median values)	Table 24
	Fig. 12
Watheroo, W. Australia (Median values)	Table 25
	Figs. 13 and 14
Simonstown, Union of S. Africa (Median values)	Table 26
	Fig. 15
Christchurch, N.Z. (Median values)	Table 27
	Figs. 16 and 17

January, 1945

Slough, England (Median values)	Table 28
	Fig. 18
Watheroo, W. Australia (Median values)	Table 29
	Figs. 19 and 20

December, 1944

Baffin I. (Median values)	Table 30
	Figs. 21 and 22

November, 1944

Baffin I. (Median values)	Table 31
	Figs. 23 and 24

October, 1944

Baffin I. (Median values)	Table 32
	Figs. 25 and 26
Slough, England (Median values)	Table 33
	Fig. 27

September, 1944

Baffin I. (Median values)	Table 34
	Figs. 28 and 29

IONOSPHERIC DATA FOR EVERY DAY AND HOUR Page 5April, 1945

Washington, D.C.	
h'F2	Table 35
f°F2	Tables 36 and 37
h'F1	Table 38
f°F1	Table 39
h'E	Table 40
f°E	Table 41
E8	Table 42
F2-M1500	Table 43
F2-M3000	Table 44
F2-M3500	Table 45
F1-M3000	Table 46
E-M1500	Table 47

IONOSPHERE DISTURBANCES	Page 5
<u>Ionospheric storminess</u>	Table 48
<u>Ionospheric character and principal storms observed at Washington, D.C., April, 1945.</u>	
<u>Sudden Ionosphere Disturbances</u>	Table 49
<u>Note on April Sudden Ionosphere Disturbances</u>	Page 6
ERRATA	Page 7

TERMINOLOGY

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 on pages 4 and 5 of the previous F-series reports IRPL-F1, 2, 3, 4, 5.

MONTHLY AVERAGES AND MEDIAN VALUES OF IONOSPHERIC DATA

The tables and graphs of ionospheric data presented here are assembled by the Interservice Radio Propagation Laboratory for analysis and correlation principally incidental to IRPL predictions of radio propagation conditions. These data are furnished by the following:

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

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

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

Canadian Department of National Defence, Naval Service
Churchill, Canada
Ottawa, Canada

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

Ionospheric Interdepartmental 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.

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.
United States Army Air Forces, Pacific Ocean Area
Guam I.
Kwajalein Atoll
Harvard University, Boston, Mass.

It is to be noted that following the recommendations of the International Radio Propagation Conference, held in Washington 17 April to 5 May 1944, median values of all ionospheric characteristics are reported, beginning with data for January, 1945, for Washington, for all stations reporting to the IRPL, and for the Canadian stations at Churchill and Ottawa, Canada. Conventions used in determining median values are given on page 5.

The "provisional data" tables 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.

The "final data" tables and graphs 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^0F2 is less than or equal to f^0F1 , 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.

In determining the median values presented in this report, the following Conventions have been adopted:

- a. For all characteristics where the value is missing because of A, B, or C (see IRPL-C61, loc. cit.), that hour is omitted from the median count.
- b. In addition,
 - (1) For critical frequencies:
For all layers, where a value is missing because of E (see IRPL-C61, loc. cit.), it is counted as less than the lower limit of the recorder.
Where a value is missing because of G (see IRPL-C61, loc. cit.), it is counted as less than the median count.
 - (2) For virtual heights:
Values missing for any reason are omitted from the median count.
 - (3) For muf factors:
Values missing for any reason are omitted from the median count.

IONOSPHERE DISTURBANCES

Table 48 presents ionospheric character figures for Washington, D.C., during April, 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.

Note on April Sudden Ionosphere Disturbances

The sudden ionosphere disturbances (SID) listed in Table 49 began coincidentally with the appearance of a large group of sunspots near the east limb of the sun on 25 April. Occurring over a period of five days, they were not followed by geomagnetic or ionosphere disturbances, as were those observed in December 1944.

The SID at 1303 on 25 April was observed on the British stations GLH (13525 kc) and GSP (15310 kc) only, as it occurred too early to be noted on paths not going eastward from Washington. On the other hand, the SID at 2224 on 25 April and at 2044 and 2143 on 28 April occurred too late to be observed on these paths, but were noted on the paths going westward and southward from Washington.

The SID occurring at 2224 on 25 April and at 1227 on 26 April and at 1200, 2044, and 2143 on 28 April were the only ones which were observed to affect WQXR, New York, (1560 kc). At these times propagation was normally by E layer, before the beginning and after the ending of normal daytime D-layer propagation.

During the SID some of the propagated energy of the emitted waves must have been absorbed in penetrating the D layer. However, these SID were not very intense, so it seems reasonable to assume that the increased ionization of the D layer during the SID caused a good deal of the energy of the incident waves to be reflected obliquely in the D layer below the height of maximum absorption. The received wave then is assumed to have been composed of waves propagated by D layer and slightly attenuated, combined with waves propagated by E layer but attenuated by the SID, the net result being a received intensity somewhat weaker than what would normally have resulted at that time of day when propagation would have been wholly by E layer with absorption in the D region much less than at times of SID.

On the vertical-incidence field-intensity records of WWI (2060.69 kc), some of the SID were not nearly as intense as on the higher frequency WWI records; this is evidence of reflection of these waves, like medium-frequency broadcast waves, at or below the level of maximum ionospheric absorption in the D layer.

The lowest frequency regularly recorded at Washington is WIW (700 kc), Mason, O., which was not affected by the SID, either as to strengthening of the sky wave because of increase in D-layer conductivity, or decrease of intensity because of D-layer absorption.

The SID on 28 April at 1227 GCT was more intense on the record of WVKF (12935 kc), Recife, Brazil, than on W8XAL (6080 kc), Mason, O., but less intense than on GLH (13525 kc) at Dorchester, England. This last condition possibly arose because the path to England was more in the daylight region, outweighing the fact that the path from Brazil passed closer to the subsolar point. The effect of passing closer to the subsolar point was probably illustrated in the SID of 25 Dec. 1944 at 1720 GCT

when the SID on WVKF was more intense than that on W8XAL and XEWV (9500 kc) Mexico City, although midday conditions prevailed over all the paths at that time.

ERRATA

In the section entitled "NEW STATIONS", in IRPL-F8, p.6, the last sentence under B reading "see Table 21 and Figs. 9 and 10" should read "see Table 18 and Figs. 3 and 4.

In the section entitled "IONOSPHERE DATA FOR EVERY DAY AND HOUR" the first sentence under b(3), for muf factors, "Where a value is missing etc." in IRPL-F6 through F8 should appear as a second sentence under b(1), for critical frequencies, as it does in this issue.

Table 1 (Provisional Data)
McMurtry I. (70.5°N, 68.5°E)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	h°F	f°F	F2-M3000
00	270	3.9			3.0		2.3		0.9
01	290	3.5			3.0		2.3		.8
02	290	3.3			3.0		2.3		.9
03	270	3.6			3.1		2.7		1.1
04	270	3.4			3.2		3.1		2.8
05	250	3.7	250	3.5	116	2.5	3.1	300	2.8
06	250	4.0	250	3.5	116	2.5	3.1	310	2.8
07	430	4.1	260	3.3	114	2.5	2.3	410	2.8
08	400	4.3	250	3.6	112	2.4	2.9	428	2.7
09	420	4.4	240	3.7	111	2.5	2.8	440	2.7
10	400	4.2	250	3.8	110	2.6	2.8	462	2.7
11	440	4.5	250	3.8	110	2.6	2.8	450	2.7
12	410	4.5	240	3.7	110	2.6	2.9	435	2.7
13	420	4.4	240	3.7	110	2.6	2.9	420	2.7
14	410	4.6	230	3.6	111	2.5	2.8	392	2.7
15	390	4.6	240	3.5	112	2.4	2.8	375	2.8
16	360	4.5	240	3.4	115	2.3	2.9	330	2.8
17	350	4.6	250	3.3	240	2.3	2.9	250	2.8
18	260	4.4	240	3.0	240	2.3	2.9	240	2.8
19	260	4.3			260	2.3	3.0	260	2.8
20	260	4.1			260	2.3	3.0	260	2.8
21	260	4.1			260	2.3	3.0	260	2.8
22	280	3.9			3.0		2.8	3.0	3.0
23	270	3.7			3.0		2.6	2.9	2.9

Time: 750°
Length of time sweep: 2 Mc to 16 Mc on one minute.
Median values.

Table 3 (Provisional Data)
Reykjavik, Iceland (61.10°N, 21.70°W)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	h°F	f°F	F2-M3000
00	310	3.1			2.9		3.4		3.0
01	320	2.8			3.0		3.4		3.0
02	280	2.9			2.8		3.2		3.0
03	280	2.8			3.1		3.2		2.9
04	280	2.8			3.0		3.6		2.9
05	230	5.2			3.0		3.6		2.9
06	210	3.8			3.0		3.9		2.9
07	210	1.2	220	3.1	111	2.5	3.2	07	2.9
08	200	4.5	180	3.6	119	2.7	3.1	08	2.9
09	260	4.5	200	4.0	100	2.7	3.1	09	2.8
10	320	1.7	200	4.0	119	2.7	3.1	10	2.8
11	330	4.9	200	4.0	100	2.9	3.0	11	2.8
12	330	5.1	190	4.2	100	2.8	3.0	12	2.8
13	330	5.2	210	4.2	119	3.2	2.9	13	2.8
14	340	5.2	210	4.1	100	2.9	3.0	14	2.8
15	330	5.2	220	4.1	119	2.9	2.9	15	2.8
16	320	5.0	210	4.0	100	2.8	2.9	16	2.8
17	260	4.9	220	3.8	119	2.7	3.1	17	2.8
18	230	4.9	210	3.8	119	2.4	3.1	18	2.8
19	230	4.8			3.0		19		3.0
20	220	5.2			3.1		20		2.9
21					3.1		21		2.9
22					2.9		22		3.0
23	300	4.0			2.8		23		2.9

Time: 750°
Length of time sweep: 2 Mc to 16 Mc on one minute.
Median values.

Table 3 (Provisional Data)
Reykjavik, Iceland (61.10°N, 21.70°W)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	h°F	f°F	F2-M3000
00					3.1		3.4		3.0
01					3.0		3.4		3.0
02					3.0		4.2		3.0
03					2.8		3.2		3.0
04					3.1		3.2		2.9
05					3.0		5.6		2.9
06					3.0		6		2.9
07					3.0		6		2.9
08					3.2		4.2		2.9
09					3.1		4.4		2.8
10					3.1		4.6		2.8
11					3.1		4.8		2.8
12					3.1		5.0		2.8
13					3.1		5.1		2.8
14					3.1		5.4		2.8
15					3.1		5.4		2.8
16					3.1		5.3		2.9
17					3.1		5.2		2.9
18					3.1		5.2		3.0
19					3.1		5.0		3.0
20					3.1		4.6		2.9
21					3.1		4.3		2.9
22					3.1		4.1		3.0
23					2.9		3.9		2.9

Time: 150°
Length of time sweep: 16 Mc to .5 Mc in fifteen minutes.
Median values.

Table 4 (Provisional Data)
Churchill, Canada (58.5°N, 94.20°W)

Time	h°F2	f°F2	h°F1	f°F1	h°F	f°F	h°F	f°F	F2-M3000
00					3.1		3.4		3.0
01					3.0		3.4		3.0
02					3.0		4.2		3.0
03					2.8		3.2		3.0
04					3.1		3.2		2.9
05					3.1		5.6		2.9
06					3.0		6		2.9
07					3.0		6		2.9
08					3.2		4.2		2.9
09					3.1		4.4		2.8
10					3.1		4.6		2.8
11					3.1		4.8		2.8
12					3.1		5.0		2.8
13					3.1		5.1		2.8
14					3.1		5.4		2.8
15					3.1		5.3		2.9
16					3.1		5.2		2.9
17					3.1		5.2		3.0
18					3.1		5.0		3.0
19					3.1		4.6		2.9
20					3.1		4.3		2.9
21					3.1		4.1		3.0
22					2.9		3.9		2.9
23					2.8		3.8		2.9

Time: 150°
Length of time sweep: 16 Mc to .5 Mc in fifteen minutes.
Median values.

Time: 150°
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 5 (Provisional Data)

Ottawa, Canada (115.5°N, 75.8°W)

Time	$b^{\circ}F2$	$f^{\circ}F2$	$h^{\circ}F1$	$f^{\circ}F1$	$h^{\circ}E$	$f^{\circ}E$	$h^{\circ}S$	$f^{\circ}S$	$F2-M3000$
00	3.4				2.7		00	3.8	2.8
01	2.2				2.8	01	2.7	3.9	2.8
02	3.0				2.7	02	3.8	3.8	2.8
03	2.9				2.6	03	3.7	3.7	2.9
04	2.8				2.8	04	3.6	3.6	2.9
05	3.2				2.8	05	4.3	4.3	2.9
06	4.2				3.1	06	5.0	5.0	3.1
07	4.7				3.2	07	5.6	5.6	3.1
08	5.2				3.1	08	5.6	5.6	3.1
09	5.5				3.1	09	5.8	5.8	3.0
10	5.6				3.0	10	6.4	6.4	3.0
11	5.8				3.0	11	6.8	6.8	3.0
12	5.9				3.0	12	6.8	6.8	3.0
13	5.9				3.0	13	6.9	6.9	3.0
14	6.2				3.0	14	7.0	7.0	3.0
15	6.1				3.0	15	6.9	6.9	3.1
16	6.3				3.0	16	6.5	6.5	3.2
17	6.3				3.0	17	6.2	6.2	3.2
18	6.4				3.1	18	6.1	6.1	3.3
19	6.3				3.1	19	5.9	5.9	3.3
20	5.7				3.0	20	5.0	5.0	3.0
21	4.9				3.0	21	4.4	4.4	3.0
22	4.0				2.9	22	4.1	4.1	2.9
23	3.7				2.8	23	3.9	3.9	2.9

Time: 75° W
Length of Time Sweep: 1.93 Mc to 13.5 Mc Manual operation.
Median values.

Table 7 (Provisional Data)

Time	$b^{\circ}F2$	$f^{\circ}F2$	$h^{\circ}F1$	$f^{\circ}F1$	$h^{\circ}E$	$f^{\circ}E$	$h^{\circ}S$	$f^{\circ}S$	$F2-M3000$
00	3.9				2.8		00	5.1	3.1
01	4.0				2.9	01	5.1	5.1	3.1
02	3.9				2.9	02	4.9	4.9	3.3
03	3.7				3.0	03	4.9	4.9	3.2
04	3.6				3.0	04	5.4	5.4	2.9
05	3.2				3.0	05	5.4	5.4	3.0
06	4.6				3.2	06	5.9	5.9	3.1
07	5.7				3.2	07	5.0	5.0	3.4
08	6.1				3.1	08	4.0	4.0	3.2
09	6.6				3.0	09	2.9	2.9	3.0
10	6.7				2.9	10	3.0	3.0	2.9
11	7.6				7.6	11	3.0	3.0	2.8
12	8.3				2.9	12	3.2	3.2	2.9
13	8.5				2.9	13	3.0	3.0	3.0
14	8.8				2.9	14	2.8	2.8	3.0
15	8.3				3.0	15	2.5	2.5	3.2
16	6.2				3.1	16	2.6	2.6	3.2
17	8.1				3.1	17	2.5	2.5	3.3
18	7.6				3.1	18	2.5	2.5	3.2
19	7.0				3.1	19	2.0	2.0	3.3
20	5.6				3.1	20	1.8	1.8	3.1
21	4.6				3.0	21	1.7	1.7	3.1
22	4.0				2.8	22	2.0	2.0	2.8
23	3.9				2.8	23	2.0	2.0	2.9

Time: 90° W
Length of time sweep: 1.9 Mc to 9.8 Mc in three minutes thirty seconds
Median values.

Table 8 (Provisional Data)

Time	$b^{\circ}F2$	$f^{\circ}F2$	$h^{\circ}F1$	$f^{\circ}F1$	$h^{\circ}E$	$f^{\circ}E$	$h^{\circ}S$	$f^{\circ}S$	$F2-M3000$
00	2.8				00	270	5.1	3.1	3.1
01	2.9				01	260	5.1	5.1	3.1
02	2.9				02	240	4.9	4.9	3.3
03	2.9				03	240	3.8	3.8	3.2
04	3.0				04	290	3.4	3.4	2.9
05	3.0				05	290	3.4	3.4	3.0
06	3.2				06	260	3.9	3.9	3.1
07	3.2				07	230	6.0	6.0	3.4
08	3.1				08	240	6.8	6.8	3.2
09	3.0				09	260	7.9	7.9	3.0
10	2.9				10	320	8.7	8.7	3.2
11	7.6				11	340	10.0	10.0	3.2
12	8.3				12	320	11.2	11.2	3.5
13	8.5				13	300	12.2	12.2	3.5
14	8.8				14	290	12.8	12.8	3.5
15	8.3				15	280	12.5	12.5	3.3
16	6.2				16	260	12.6	12.6	3.2
17	8.1				17	250	12.0	12.0	3.1
18	7.6				18	250	10.5	10.5	2.7
19	7.0				19	220	8.4	8.4	3.3
20	5.6				20	230	7.2	7.2	3.1
21	4.6				21	250	6.2	6.2	3.1
22	4.0				22	280	5.6	5.6	2.8
23	3.9				23	290	5.2	5.2	2.9

Time: 90° W
Length of time sweep: 1.9 Mc to 9.8 Mc in three minutes thirty seconds
Median values.

Time: 120° W
Length of Time Sweep: 8 Mc to 12 Mc in six minutes Record centered on the hour.
Median values.

Table 6 (Provisional Data)

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

April 1945

April 1945

April 1945

Table 9

Table 10 (Provisional Data)

Huancayo, Peru (12°S, 75.5°W)							Barrotonga I. (21°N, 159.6°W)								
April 1945							March 1945								
Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	$F2-N3000$	Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	$F2-N3000$
00	7.4		3.2		3.3			00	7.2		6.5				
01	6.3		3.2		3.2			01	6.5		5.2				
02	4.7		3.2		3.2			02	5.2		4.0				
03	4.2		3.3		3.2			03	5.2		3.2				
04	3.3		3.0		3.2			04	5.2		3.0				
05	3.0		3.2		3.2			05	2.7		2.7				
06	4.2		3.2		3.2			06	3.4		3.4				
07	7.2		3.2		3.2			07	5.8		5.5				
08	8.6		3.0		3.0			08	6.8		6.8				
09	9.3		2.6		2.6			09	7.7		7.7				
10	8.4		2.6		2.6			10	8.8		8.8				
11	7.7		2.6		2.6			11	9.9		9.9				
12	7.8		1.2		2.5			12	10.6		10.6				
13	8.0		2.5		2.5			13	11.0		11.0				
14	8.3		2.6		2.6			14	11.3		11.3				
15	8.8		1.5		2.6			15	11.0		11.0				
16	9.3		2.6		2.6			16	9.7		9.7				
17	9.5		2.6		2.6			17	8.0		8.0				
18	9.2		1.8		2.6			18	7.1		7.1				
19	8.5		2.6		2.6			19	6.9		6.9				
20	8.4		2.7		2.7			20	6.7		6.7				
21	9.0		3.0		3.0			21	6.5		6.5				
22	8.6		3.2		3.2			22	6.0		6.0				
23	8.0		3.2		3.2			23	6.5		6.5				

Time: 750 W.
Length of time sweep: 16 Mc to .5 Mc in fifteen minutes.
Median values.

Table 11 (Provisional Data)

Barrotonga I. (21°N, 159.6°W)							Pitcairn I. (25.0°S, 130.0°W)								
March 1945							March 1945								
Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	$F2-N3000$	Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	$F2-N3000$
00	4.8		00		00			00	0.1		0.1				
01	4.0		03		03			01	0.2		0.2				
04	3.7		04		04			04	0.3		0.3				
06	2.7		07		07			05	0.5		0.5				
07	7.0		2.3		2.3			07	0.7		0.7				
08	9.0		2.33		3.0			08	0.8		0.8				
09	27.4		4.4		3.0			09	0.9		0.9				
10	29.6		225		2.7			10	1.0		1.0				
11	10.1		225		3.2			11	1.1		1.1				
12	28.1		2.7		3.4			12	1.2		1.2				
13	10.5		2.7		3.4			13	1.3		1.3				
14	28.1		4.4		3.2			14	1.4		1.4				
15	9.6		2.7		3.8			15	1.5		1.5				
16	26.0		2.7		2.6			16	1.6		1.6				
17	8.9		2.7		2.6			17	1.7		1.7				
18	7.4		2.5		2.6			18	1.8		1.8				
19								19	1.9		1.9				
20								20	2.0		2.0				
21								21	2.1		2.1				
22								22	2.2		2.2				
23								23	2.3		2.3				

Time: 150° N.
Length of time sweep: Manual operation.
Mean values.

Table 12 (Provisional Data)

Type York, Q., Australia (11.0°S, 142.1°E)							March 1945								
							March 1945								
Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	$F2-N3000$	Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	$F2-N3000$
00	0.0		0.0		0.0			00	0.1		0.1				
01	4.7		0.2		0.2			01	0.2		0.2				
04	4.0		0.3		0.3			04	0.3		0.3				
06	3.7		0.4		0.4			06	0.5		0.5				
07	2.7		2.3		2.3			07	0.7		0.7				
08	2.7		4.4		3.0			08	0.8		0.8				
09	29.6		2.7		2.7			09	0.9		0.9				
10	29.6		2.7		2.7			10	1.0		1.0				
11	10.1		2.7		2.7			11	1.1		1.1				
12	28.1		2.7		2.7			12	1.2		1.2				
13	10.5		2.7		2.7			13	1.3		1.3				
14	28.1		4.4		3.0			14	1.4		1.4				
15	9.6		2.7		2.7			15	1.5		1.5				
16	26.0		2.7		2.6			16	1.6		1.6				
17	8.9		2.7		2.6			17	1.7		1.7				
18	7.4		2.5		2.6			18	1.8		1.8				
19								19	1.9		1.9				
20								20	2.0		2.0				
21								21	2.1		2.1				
22								22	2.2		2.2				
23								23	2.3		2.3				

Time: 157.5° W.
Length of Time sweep: Manual operation.
Mean values.

Table 13 (Provisional Data)

Brisbane, Q., Australia (27.5°S, 130°E)

March 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	F2-M5000
00	4.7	3.0	3.0	2.9	4.91	4.91	
01	4.6	3.0	3.1	3.0	4.73	4.73	
02	4.4	3.0	3.1	2.95	4.58	4.58	
03	4.0	3.2	3.0	2.86	4.19	4.19	
04	3.6	3.2	03	2.94	3.28	3.28	
05	3.1	3.2	04	2.94	3.05	3.05	
06	3.9	3.2	05	2.87	3.66	3.66	
07	5.2	3.4	06	2.66	4.05	4.05	
08	6.0	3.5	07	2.61	6.58	248	3.43
09	7.0	3.4	08	2.72	7.15	242	3.96
10	7.4	3.3	09	2.73	7.99	237	4.51
11	7.8	3.3	10	2.87	7.36	227	4.46
12	8.2	3.2	11	2.95	7.83	222	4.55
13	8.0	3.2	12	2.97	8.32	240	118
14	7.7	3.2	13	2.95	8.35	234	4.55
15	7.5	3.2	14	2.89	7.32	244	4.56
16	7.4	3.2	15	2.95	7.55	251	4.34
17	7.0	3.2	16	2.84	7.53	264	4.09
18	6.4	3.4	17	2.73	7.39	258	3.61
19	5.8	3.4	18	2.68	7.01	255	2.87
20	5.2	3.2	19	2.56	6.59		1.83
21	5.0	3.0	20	2.78	5.71		
22	4.9	3.0	21	2.90	5.52		
23	4.8	3.0	22	2.92	5.42		
			23	2.93	5.23		

Time: Local
Length of time sweep: 2.2 Mc to 12.5 Mc in two minutes thirty seconds.
Mean values.

Table 15 (Provisional Data)

Watheroo, W. Australia (30.1°S, 115.9°E)

March 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	F2-M5000
00	3.8	2.9	00	4.3			
01	3.7	2.9	01	4.2			
02	3.6	3.0	02	4.0			
03	3.4	3.0	03	3.7			
04	3.2	3.0	04	3.4			
05	3.1	3.0	05	3.2			
06	3.7	3.3	06	3.8			
07	5.0	3.4	07	4.6			
08	5.5	3.4	08	5.3			
09	5.9	3.2	09	5.7			
10	6.4	3.1	10	6.3			
11	7.0	3.2	11	6.7			
12	7.5	3.0	12	6.8			
13	7.7	3.1	13	7.1			
14	7.5	3.1	14	6.9			
15	7.2	3.1	15	6.6			
16	7.0	3.2	16	6.4			
17	6.7	3.3	17	6.4			
18	6.2	3.3	18	6.4			
19	5.4	3.2	19	6.0			
20	5.0	3.0	20	5.5			
21	4.4	3.0	21	4.9			
22	4.1	2.9	22	4.7			
23	3.9	2.9	23	4.6			

Time: Local
Length of time sweep: 2.2 Mc to 12.5 Mc in two minutes thirty seconds.
Mean values.

Table 16 (Provisional Data)

Mt. Stromlo, NSW, Australia (35.3°S, 149.0°E)

March 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	F2-M5000
00	2.9	2.9	00	4.3			
01	2.9	3.0	01	4.2			
02	3.6	3.0	02	4.0			
03	3.4	3.0	03	3.7			
04	3.2	3.0	04	3.4			
05	3.1	3.0	05	3.2			
06	3.7	3.3	06	3.8			
07	5.0	3.4	07	4.6			
08	5.5	3.4	08	5.3			
09	5.9	3.2	09	5.7			
10	6.4	3.1	10	6.3			
11	7.0	3.2	11	6.7			
12	7.5	3.0	12	6.8			
13	7.7	3.1	13	7.1			
14	7.5	3.1	14	6.9			
15	7.2	3.1	15	6.6			
16	7.0	3.2	16	6.4			
17	6.7	3.3	17	6.4			
18	6.2	3.3	18	6.4			
19	5.4	3.2	19	6.0			
20	5.0	3.0	20	5.5			
21	4.4	3.0	21	4.9			
22	4.1	2.9	22	4.7			
23	3.9	2.9	23	4.6			

Time: 120°E
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Mean values.Time: 150°E
Length of time sweep: 16 Mc to 12.5 Mc in two minutes.
Mean values.

Table 17 (Provisional Data)

Table 1g

Campbell I (52°50'S, 169°00'E)

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'g	f'g	f'R6	F2-N3000
00									
01									
02									
03									
04									
05									
06									
07	292	2.73							
08	254		4.31	219	3.14				
09	293			220	3.86	103	2.81		
10									
11	295			212	3.98	106	2.96		
12				212	3.87	104	3.05		
13				220		108	2.92		
14									
15	277			220	3.78	106	2.73		
16									
17	249			5.43					
18									
19	263			5.24					
20									
21	284			3.82					
22									
23	324			3.31					

Time: 1650 H.

Table 19

(Comments and additions to next section will be added whenever [date])

תְּמִימָנָה וְעַמְּדָה

Time: 1500W.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

Mashington (39°0'N., 77°40'W.)

April 1945

Time	$h^{\circ}F_2$	$F^{\circ}B_2$	$h^{\circ}F_1$	$F^{\circ}B_1$	$h^{\circ}E$	$F^{\circ}E$	$f^{\circ}B$	$f^{\circ}E$	$P2-M3000$
00	280	3.7							
01	280	3.4							
02	280	2.7							
03	260	2.6							
04	260	2.2							
05	280	2.4							
06	240	3.9							
07	260	5.0							
08	300	5.3							
09	320	5.5							
10	320	5.8							
11	320	6.2							
12	330	6.4							
13	320	6.6							
14	320	6.4							
15	310	6.5							
16	300	6.4							
17	280	6.4							
18	260	6.6							
19	240	6.6							
20	240	5.8							
21	240	5.0							
22	270	4.4							
23	280	4.0							

Time: 750^W. Length of time sweep: 8 Mc to 14 Mc in 2 minutes.
Median values.

Table 20

(Corrections and additions to previous monthly published product data)

ପ୍ରତିକାଳ

Time: 90°W.
Length of time every: 2 Mo to 16 Mc in one minute.

Table 21

(Corrections and additions to previously published provisional data)

Honolulu, Hawaii (20°N, 156.5°W) March 1945

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	ffEs	F2-M3000
00								
01								
02								
03								
04								
05	225							
06	295							
07								
08	225							
09	265							
10								
11								
12								
13								
14								
15	195		105		4°2			
16								
17	245		105		4°4			
18								
19	215		105		3°1			
20	225		115					
21								
22								
23								

Time: 150°W.
Length of time sweep: 2 Mo to 16 Mo in one minute.
Median values.

Table 23

(Corrections and additions to previously published provisional data)

Burghhead, Scotland (57.7°N, 3.5°W) February 1945

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	ffEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	1.8							
07	1.8							
08	2.2							
09	3.7							
10								
11	5.7							
12	6.1							
13	6.4							
14								
15	5.7							
16								
17	5.4							
18	4.7							
19	4.2							
20	3.0							
21	2.8							
22								
23	2.3							

Time: 0°
Median values.

Table 22

(Corrections and additions to previously published provisional data)

Huancayo, Peru (12°S, 75.3°W) March 1945

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	ffEs	F2-M3000
00								
01								
02								
03								
04								
05	225							
06	295							
07								
08	225							
09	265		205					
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

Time: 0°
Median values.

(Additions to previously published provisional data)

Slough, England (51.5°N, 0.5°W) February 1945

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	ffEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

Time: 0°
Median values.

Table 25

(Corrections and additions to previously published provisional data)

Wetheroo, W. Australia (30°3'S, 115.9°E)

February 1945							
Time	h ¹ F2	f ⁰ F2	h ¹ F1	f ⁰ F1	h ¹ E	f ⁰ E	F2-M5000
00	265	3.9			2.8		
01	250	3.9			2.9		
02	245	3.7			3.1		
03	252	3.5			3.2		
04	242	3.1			3.2		
05	250	2.9			3.0		
06	242	3.8			1.5		
07	252	4.8			2.7		
08	305	5.3	220	4.0	2.7	3.2	07
09	320	5.4	210	4.3	3.0	3.1	01
10	322	5.8	205	4.4	3.2	3.8	02
11	330	6.2	200	4.4	3.3	3.1	03
12	339	6.8	218	4.5	3.3	4.1	04
13	315	7.1	215	4.5	3.3	4.1	05
14	320	7.1	220	4.1	3.3	4.0	06
15	300	7.6	220	4.3	3.2	3.1	07
16	280	5.9	222	4.1	2.9	3.8	11
17	270	6.5	220	3.8	2.6	3.8	12
18	250	6.2			2.0	3.8	13
19	230	6.0			2.1	3.1	14
20	230	5.5			2.6	2.6	15
21	240	4.6			2.6	2.6	16
22	258	4.1			2.3	2.3	17
23	262	4.0			2.6	2.6	18

Time: 120°E.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 27

(Corrections and additions to previously published provisional data)

Christchurch, N.Z. (43.5°S, 172.6°E)

February 1945							
Time	h ¹ F2	f ⁰ F2	h ¹ F1	f ⁰ F1	h ¹ E	f ⁰ E	F2-M5000
00	260	4.8			3.0		
01	260	4.3			3.0		
02	260				3.1		
03	250	2.9			3.2		
04	260				1.5		
05	240				2.0		
06	280				2.8		
07	280	240			3.3		
08	300	5.6	210		3.0		
09	300	6.0	210		3.0		
10	300	6.0	200		3.2		
11	310	6.1	210		3.1		
12	313	6.1	210		4.0		
13	6.4		210		3.3		
14	310	6.0			3.3		
15	310	6.0			3.5		
16	300	6.1			3.0		
17	250	6.5	250		3.5		
18	250	6.8			3.5		
19	250	6.6			4.0		
20	250	6.6			4.0		
21	250	6.6			4.4		
22	255	5.5			3.5		
23	255	4.8			3.5		

Time: 150°E.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 28

(Corrections to previously published provisional data)

Slough, England (51.5°N, 0.5°W)

January 1945							
Time	h ¹ F2	f ⁰ F2	h ¹ F1	f ⁰ F1	h ¹ E	f ⁰ E	F2-M5000
00	260	4.8			3.0		
01	260	4.3			3.0		
02	260				3.1		
03	260				3.2		
04	260				2.8		
05	260				2.8		
06	280				3.3		
07	280				3.3		
08	300	100			3.8		
09	300	5.6			3.9		
10	300	6.0			3.9		
11	310	6.1			3.9		
12	313	6.1			4.0		
13	6.4		210		3.3		
14	310	6.0			3.3		
15	310	6.0			3.5		
16	300	6.1			3.0		
17	250	6.5	250		3.5		
18	250	6.8			3.5		
19	250	6.6			4.0		
20	250	6.6			4.0		
21	250	6.6			4.4		
22	255	5.5			3.5		
23	255	4.8			3.5		

Time: 172.5°E.
Length of time sweep: 2.5 Mc to 12 Mc in two minutes.
Median values.Time: 0°
Median values.

Table 26

February 1945

Simonstown U. South Africa

February 1945							
Time	h ¹ F2	f ⁰ F2	h ¹ F1	f ⁰ F1	h ¹ E	f ⁰ E	F2-M5000
00	260	3.9			3.0		
01	250	3.9			2.9		
02	245	3.7			3.1		
03	252	3.5			3.2		
04	242	3.1			3.2		
05	250	2.9			3.0		
06	242	3.8			1.5		
07	252	4.8			2.2		
08	305	5.3	220	4.0	2.7	3.2	07
09	320	5.4	210	4.3	3.0	3.1	01
10	322	5.8	205	4.4	3.2	3.8	09
11	330	6.2	200	4.4	3.3	4.1	10
12	339	6.8	218	4.5	3.3	4.1	11
13	315	7.1	215	4.5	3.3	4.1	12
14	320	7.1	220	4.1	3.3	4.0	13
15	300	7.6	220	4.3	3.2	3.8	14
16	280	5.9	222	4.1	2.9	3.8	15
17	270	6.5	220	3.8	2.6	3.8	16
18	250	6.2			2.0	3.8	17
19	230	6.0			2.1	3.1	18
20	230	5.5			2.6	2.6	19
21	240	4.6			2.6	2.6	20
22	258	4.1			2.3	2.3	21
23	262	4.0			2.6	2.6	22

Time: 150°E.

Table 29

(Corrections and additions to previously published provisional data)

Watheroo, W. Australia (30°S, 115.9°E)

January, 1945

Time	$h^{\circ}F2$	$f^{\circ}F2$	$h^{\circ}F1$	$f^{\circ}F1$	$h^{\circ}E$	$f^{\circ}E$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00	270	4.6			4.0				
01	265	4.1			4.2				
02	260	3.7			3.9				
03	260	3.3			3.1				
04	250	3.0			2.8				
05	265	2.0			2.8				
06	245	1.0			2.5				
07	315	4.7	230	3.8	2.5	1.8	1.0	0.7	2.30
08	350	5.2	220	4.1	2.5	1.4	0.8	0.6	
09	350	5.5	210	4.3	3.0	1.3	0.9	0.7	
10	370	5.8	220	4.4	3.2	1.1	1.0	0.9	
11	360	6.3	220	4.5	3.3	1.1	1.1	1.0	
12	355	6.6	212	4.5	3.4	1.4	1.2	1.1	
13	340	7.2	212	4.5	3.2	1.4	1.3	1.2	
14	320	7.2	215	4.4	3.3	1.8	1.4	1.3	
15	300	6.6	220	4.3	3.2	1.7	1.5	1.4	
16	300	6.6	220	4.2	3.0	1.7	1.6	1.5	
17	280	6.2	215	3.9	2.7	1.0	1.7	1.6	
18	265	5.4			2.7				
19	250	5.1			3.2				
20	250	5.3			2.9				
21	260				2.7				
22	280				3.0				
23	272	4.6			3.9				

Time: 120°E.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 31

(Corrections and additions to previously published provisional data)

Baffin Is., Canada (70.5°N, 68.6°W)

November 1944

Time	$h^{\circ}F2$	$f^{\circ}F2$	$h^{\circ}F1$	$f^{\circ}F1$	$h^{\circ}E$	$f^{\circ}E$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00					0.0				
01					0.1				
02					3.2				
03					3.3				
04					3.2				
05					3.2				
06					3.3				
07					3.4				
08					0.7				
09					3.3				
10					3.4				
11					3.4				
12					3.4				
13					3.4				
14					3.4				
15					3.3				
16					3.3				
17					3.3				
18					3.3				
19					3.3				
20					3.4				
21					3.3				
22					3.3				
23					3.4				

Time: 75°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Mean values.

Table 30

(Corrections and additions to previously published provisional data)

Baffin I., Canada (70.5°N, 68.6°W)

December 1944

Time	$h^{\circ}F2$	$f^{\circ}F2$	$h^{\circ}F1$	$f^{\circ}F1$	$h^{\circ}E$	$f^{\circ}E$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00					0.0				
01					0.1				
02					3.2				
03					3.3				
04					3.2				
05					3.2				
06					3.3				
07					3.4				
08					0.7				
09					3.3				
10					3.4				
11					3.4				
12					3.4				
13					3.4				
14					3.4				
15					3.3				
16					3.3				
17					3.3				
18					3.3				
19					3.3				
20					3.4				
21					3.3				
22					3.3				
23					3.4				

Time: 75°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Mean values.

(Corrections and additions to previously published provisional data)

Table 32

(Corrections and additions to previously published provisional data)

Baffin Island, Canada (70.5°N, 68.6°W)

October 1944

Time	$h^{\circ}F2$	$f^{\circ}F2$	$h^{\circ}F1$	$f^{\circ}F1$	$h^{\circ}E$	$f^{\circ}E$	$h^{\circ}S$	$f^{\circ}S$	$F2-45000$
00					0.0				
01					0.1				
02					3.2				
03					3.3				
04					3.2				
05					3.2				
06					3.3				
07					3.4				
08					0.7				
09					3.3				
10					3.4				
11					3.4				
12					3.4				
13					3.4				
14					3.4				
15					3.3				
16					3.3				
17					3.3				
18					3.3				
19					3.3				
20					3.4				
21					3.3				
22					3.3				
23					3.4				

Time: 75°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Mean values.

Table 33
(Additions to previously published final data)

Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	F_2 -M3000
00	339				2.8		
01	341				2.8	01	
02	348				2.8	02	
03	330				2.9	03	
04	313				3.0	04	
05	290				3.1	05	
06	267				3.1	06	
07	248				3.4	07	
08	241				3.5	08	
09	245				3.5	09	
10	245				3.5	10	
11	252				3.4	11	
12	252				3.4	12	
13	246				3.4	13	
14	255				3.4	14	
15	255				3.5	15	
16	244				3.4	16	
17	254				3.3	17	
18	268				3.3	18	
19	260				3.3	19	
20	263				3.2	20	
21	319				2.9	21	
22	329				2.8	22	
23	343				2.8	23	

Time: 0°
Mean Values.

Time: $75^{\circ}W$.
Length of time sweep: 2 Mo to 16 Mo in one minute. Supplemented by
normal apparatus with low frequency limit 1.6 Mc.
Mean values.

Table 34
(Corrections and additions to previously published provisional data)

Time	$h^{\circ}F_2$	$f^{\circ}F_2$	$h^{\circ}F_1$	$f^{\circ}F_1$	$h^{\circ}E$	$f^{\circ}E$	F_2 -M3000
00					00		
01					01		
02					02		
03					03		
04					04		
05					05		
06					06		
07					07		
08					08		
09					09		
10					10		
11					11		
12					12		
13					13		
14					14		
15					15		
16					16		
17					17		
18					18		
19					19		
20					20		
21					21		
22					22		
23					23		

TABLE 36
IONOSPHERE DATA - 2

Washington, D.C.
Inocosphere Station

talon

National

Hourly values of $f^{\circ}F_2$ in [] for April 1945
(Month)

Washington, D.C. Ionosphere Station

TABLE 37
IONOSPHERE DATA—3

(Location) National Bureau Of Standards

(Institution)

TIME: 75°W MERIDIAN

Half Hourly values of $f^{\circ} F_{2,1}$ for April 1945

(Month)

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	4.0	[3.3] ^C	[1.6]7 ^C	[2.3]7 ^C	3.1 ^F	[3.8]7 ^C	[4.3]7 ^C	[5.8]7 ^C	[3.9]7 ^C	<4.1 ^C	<4.2 ^C	4.5 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C	4.7 ^C									
2	[2.3]7 ^C	[1.8]6 ^C	[1.5]7 ^C	[0.9]5 ^C	[1.0]6 ^C	[1.0]7 ^C	[1.3]7 ^C	[1.3]7 ^C	[1.3]7 ^C	5.6	5.7	6.0	6.1	6.3	6.7	6.0	5.8	5.3	4.4	3.6	3.6	3.6	3.6	3.4									
3	3.2 ^F	[2.9] ^C	[2.0] ^C	[1.7] ^C	[2.3]	[2.6] ^C	[2.6] ^C	[2.6] ^C	[2.6] ^C	5.6	6.4	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0									
4	3.6 ^F	3.5 ^F	3.3 ^F	2.9 ^F	2.7 ^F	3.0 ^F	4.7	5.6	5.5	5.7	6.8 ^F	6.8 ^F	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2								
5	3.6	3.4	3.2	3.1	2.8 ^F	3.0	3.9	4.8	5.5	5.5	5.8	5.8	6.2	6.4	6.5	(2.4)	(2.0)	(2.0)	(2.0)	(2.0)	6.0	5.6	5.0	4.8	4.3								
6	[2.5] ^F	[2.5] ^C	2.1 ^F	2.2 ^F	1.6 ^F	3.2 ^F	[4.9] ^F	[5.3] ^F	[5.8] ^F	6.2	6.5	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0									
7	3.5 ^F	(2.8) ^F	2.0 ^F	2.2 ^F	2.3 ^F	2.9 ^F	4.5	5.7	5.6	6.0	6.0	6.0	6.7	(6.5) ^F	7.4	6.8	6.6	6.8	(8.0) ^A	(6.4) ^K	5.5 ^A	4.4 ^A	4.3 ^A	4.1 ^A									
8	3.6 ^A	2.9 ^F	2.1 ^F	1.6 ^F	1.4 ^F	2.2 ^F	3.7	4.1 ^A	4.5 ^A	4.5 ^A	<4.6 ^A	4.7	5.0	5.0	5.0	4.9 ^F	5.0	5.0	4.2	3.7 ^F	3.2 ^F	3.0 ^F	2.8 ^F										
9	2.5 ^F	2.3 ^F	2.1 ^F	2.0 ^F	1.9 ^F	2.3 ^F	4.3	5.0	5.5	5.9 ^C	5.7	6.0	6.2	6.2	6.3	6.3	5.9	5.7	5.7	4.8	4.0 ^F	3.6 ^F	3.2 ^F										
10	2.9 ^F	2.8 ^F	2.7 ^F	2.4 ^F	1.9 ^F	2.8 ^F	4.6	5.0	5.9	5.6	5.9	6.4	6.6	6.6	6.6	6.4	6.4	6.6	6.7	6.2	5.9	3.7 ^F	(3.2) ^F	2.9 ^F									
11	2.8 ^F	2.6 ^F	2.3 ^F	2.0 ^F	1.6 ^F	2.4 ^F	3.6	4.5	5.1	5.2	5.2	5.2	5.2	5.1 ^F	4.7 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F	5.1 ^F						
12	3.7 ^A	3.6 ^A	3.4 ^F	3.4 ^F	(2.2) ^F	(2.2) ^F	(2.2) ^F	4.0	4.4	4.5	5.0	5.8	5.8	6.4	6.4	6.4	6.4	6.6	6.3	2.8	(2.4)	(6.8)	5.4	(5.0)	(4.8)	4.0 ^F							
13	3.4 ^F	3.5 ^F	3.1 ^F	2.1 ^F	1.2 ^F	2.2 ^F	4.1	4.5	4.6	5.0	5.6	5.6	5.8	5.9	5.8	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7							
14	3.0 ^F	2.7 ^F	2.2 ^F	1.7 ^F	(1.5) ^F	2.5 ^F	3.6	4.0 ^G	4.5	4.5	4.5	4.5	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1							
15	3.3	2.8 ^F	2.6	2.3 ^F	2.3 ^F	2.8 ^F	2.9	4.0 ^A	4.0 ^G	4.2 ^A	4.3 ^A	4.6	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A	4.8 ^A							
16	2.0 ^F	1.8 ^F	1.5 ^F	1.3 ^F	1.3 ^F	1.7 ^C	2.9	4.3	4.6	(4.8)	5.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5							
17	2.8 ^F	2.7 ^F	2.6 ^F	2.3 ^F	1.9 ^F	3.2 ^F	4.6	5.0	5.5	(5.1) ^H	5.7	5.7	5.8	5.8	6.1	6.0	5.8	5.7	6.2	6.5	6.5	6.5	6.5	6.5	6.5	6.5							
18	3.2 ^F	3.1	2.9 ^F	2.7 ^F	2.3	3.3	4.6	5.2	5.1	6.3	6.2	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6						
19	3.5	3.4	3.3	3.0	2.8	3.1	4.1	4.8	5.5	5.5	6.3	6.6	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8						
20	3.8	2.8	2.5	2.5	2.1	3.1	4.1	5.8	(5.2)	(6.2)	6.6	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2						
21	3.1 ^F	3.0	2.7	(2.3)	2.3	3.6	4.7	5.5	5.6	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6						
22	3.9	3.5	(3.1) ^F	(2.9) ^F	(2.6) ^F	3.8	5.0	5.9	(6.0)	(6.6)	(2.0)	6.6	6.6	6.6	6.6	6.6	6.6	6.6	(2.2) ^H	6.6	5.8	5.8	4.5	4.3									
23	4.0	3.9	3.5	3.1	2.5	3.5	4.7	5.4	5.4	5.8	(6.4)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4						
24	3.8	3.6	3.2	3.0	2.6	3.9	4.9	(5.4)	6.5	5.8	(2.0)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	(2.4)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8					
25	4.0	(3.5)	3.2	2.3	2.0	3.3	4.5	4.9	5.2	5.5	6.2	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6					
26	3.6	3.3	3.2	3.1	3.0	3.8	4.9	5.7	6.4	6.4	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1					
27	4.5	4.2	3.8	3.4	2.9 ^F	3.9	5.1	5.3	6.0	6.4	6.5	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6				
28	4.2	4.0	3.7	3.7	3.5	4.8	6.0	6.2	6.0	6.5	6.6	6.8	(7.0)	6.7	(8.2)	8.0	(7.4)	(7.6)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8				
29	4.6	4.4	4.0	3.6	3.2	3.2	4.8	5.5	5.9	6.5	20	6.6	6.9	6.9	7.2	(2.4)	(2.6)	(2.6)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8				
30	4.1	4.0	3.7	3.5	2.9	4.3	5.4	5.5	6.2	6.4	6.6	7.0	(2.1)	(8.8)	9.0	(8.6)	(8.6)	(8.6)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8				
31																																	
Median	3.6	3.2	2.8	2.3	2.2	3.2	4.6	5.0	5.5	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	3.9			

Records measured by: M.R.R.
A.F.

RESTRICTED

Washington, D.C. Ionosphere Station

TABLE 38
IONOSPHERE DATA - 4

Massachusetts, U.S.A.

National Bureau Of Standards

stitution)

TABLE 38
IONOSPHERE DATA-4

- 14/CT

Hourly values of 1 in km for ADM 1943
(Month) Records measured by MRR

TIME: 15° W MERIDIAN

TABLE 40
IONOSPHERE DATA—6

Washington, D.C. Ionosphere Station

National Bureau Of Standards

Gesamtverzeichnis

TIME: 75° W MERIDIAN

National Bureau Of Standards		TIME: 75°W MERIDIAN		April 1945		Records measured by: M.R.R.	
(Institution)	(Location)	Hourly values of hE in cm for A.F.	(Month)	for A.F.	(Month)	for A.F.	(Month)
1	00	0.0	0.3	0.6	0.9	1.2	1.5
2	01	0.0	0.3	0.6	0.9	1.2	1.5
3	02	0.0	0.3	0.6	0.9	1.2	1.5
4	03	0.0	0.3	0.6	0.9	1.2	1.5
5	04	0.0	0.3	0.6	0.9	1.2	1.5
6	05	0.0	0.3	0.6	0.9	1.2	1.5
7	06	0.0	0.3	0.6	0.9	1.2	1.5
8	07	0.0	0.3	0.6	0.9	1.2	1.5
9	08	0.0	0.3	0.6	0.9	1.2	1.5
10	09	0.0	0.3	0.6	0.9	1.2	1.5
11	10	0.0	0.3	0.6	0.9	1.2	1.5
12	11	0.0	0.3	0.6	0.9	1.2	1.5
13	12	0.0	0.3	0.6	0.9	1.2	1.5
14	13	0.0	0.3	0.6	0.9	1.2	1.5
15	14	0.0	0.3	0.6	0.9	1.2	1.5
16	15	0.0	0.3	0.6	0.9	1.2	1.5
17	16	0.0	0.3	0.6	0.9	1.2	1.5
18	17	0.0	0.3	0.6	0.9	1.2	1.5
19	18	0.0	0.3	0.6	0.9	1.2	1.5
20	19	0.0	0.3	0.6	0.9	1.2	1.5
21	20	0.0	0.3	0.6	0.9	1.2	1.5
22	21	0.0	0.3	0.6	0.9	1.2	1.5
23	22	0.0	0.3	0.6	0.9	1.2	1.5
24	23	0.0	0.3	0.6	0.9	1.2	1.5
25	24	0.0	0.3	0.6	0.9	1.2	1.5
26	25	0.0	0.3	0.6	0.9	1.2	1.5
27	26	0.0	0.3	0.6	0.9	1.2	1.5
28	27	0.0	0.3	0.6	0.9	1.2	1.5
29	28	0.0	0.3	0.6	0.9	1.2	1.5
30	29	0.0	0.3	0.6	0.9	1.2	1.5
31	30	0.0	0.3	0.6	0.9	1.2	1.5
	Sum	120	120	120	120	120	120
	Median						

Washington, D.C.
 (Location) Ionosphere Station
National Bureau Of Standards
 (Institution)

TABLE 41
 IONOSPHERE DATA—7

RESTRICTED

Hourly values of $f_0 E_{in\text{Mo}}$ for April 1945
 (Month)

TIME: 75°W MERIDIAN

Records measured by: M.R.R.
 A.F.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
1							K	[2.7]E	[2.7]E	(3.0)K	(3.0)K	(3.2)K	(3.2)K	3.0	3.0	[2.7]E	[2.7]E	C	K										
2								[2.7]C	[2.7]C	C	B	A	A	B	(3.2)	(3.2)	3.0	2.4	A										
3								[2.7]C	2.5	C	B	B	B	(3.3)	[3.4]B	(3.4)	3.2	2.9	2.5	A									
4								[2.7]E	(2.7)	A	B	B	B	(3.4)	[3.5]B	(3.4)	(3.2)	(3.0)	[2.7]B	(1.9)									
5								[2.7]B	2.7	3.1	(3.3)	B	B	(3.4)	(3.3)	3.1	2.9	2.4	1.7										
6								1.7	[2.7]C	[2.7]C	3.1	(3.3)	(3.3)	(3.3)	(3.3)	(3.2)	(3.1)	(2.9)	2.4	(1.8)f									
7								(1.6)	2.3	2.6	3.1	(3.2)	(3.3)	(3.4)	(3.4)	3.4	3.4	(3.2)	2.9	2.5	1.9	K							
8								1.7	K	2.3	K	2.7	K	3.0	K	A	K	A	K	(3.2)K	3.2	K	2.3	K	1.8				
9								(1.7)	2.2	(2.7)	[2.7]A	3.2	3.2	[3.2]A	(3.3)	3.2	[3.2]A	(3.3)	3.3	2.9	2.5	1.7							
10								1.4	"	2.3	2.9	[3.2]A	3.2	3.4	3.4	[3.4]A	3.3	3.3	3.1	2.8	(2.4)	(1.8)							
11								K	2.3	K	2.7	K	3.0	K	(3.3)K	[3.3]K	[3.3]K	3.2	K	3.1	K	2.9	K	2.4	K	1.9	K		
12								A	A	[2.7]A	2.9	3.2	3.2	(3.3)	[3.3]C	[3.3]C	3.3	3.3	3.1	2.8	2.5	1.8							
13								1.8	(2.4)	2.7	3.0	(3.2)	[3.2]A	3.3	(3.3)	3.2	[3.2]A	(3.3)	3.2	3.1	2.8	2.4	1.9						
14								A	2.3	2.7	3.0	3.2	3.2	3.3	3.3	3.3	[3.4]A	3.3	3.2	3.0	2.8	2.4	(1.9)						
15								1.8	K	2.3	K	(2.6)H	2.9	K	3.0	K	C	K	[3.3]E	3.3	K	3.1	K	2.8	K	2.3	K		
16								(1.8)	[2.2]A	2.7	3.0	3.2	3.3	3.4	3.4	3.4	[3.4]B	(3.3)	3.2	3.2	2.9	2.4	A						
17								[1.8]A	2.3	(2.8)	3.1	(3.3)	[3.3]A	[3.3]A	[3.4]B	(3.3)	(3.3)	(3.3)	3.2	2.9	2.5	A							
18								1.7	H	2.3	2.7	3.1	3.3	3.3	[3.4]B	(3.3)	(3.3)	3.2	3.2	3.0	2.6	(1.8)							
19								A	2.4	2.8	(3.2)	(3.3)	B	B	B	B	B	B	3.3	3.2	2.8	2.5	A						
20								1.9	A	2.5	2.9	3.1	3.3	[3.4]B	B	B	B	(3.3)	3.2	3.2	3.0	2.5	[1.9]A						
21								1.7	[2.3]A	2.8	A	B	B	B	B	[3.3]B	(3.3)	(3.3)	3.3	3.1	3.1	(2.6)	1.9						
22								1.7	H	2.5	(2.9)	3.2	A	A	(3.4)	A	A	(3.3)	[3.3]B	(2.6)	1.9								
23								A	2.4	2.8	(3.2)	(3.4)	(3.4)	(3.5)	[3.4]A	3.4	[3.4]A	3.4	3.0	2.6	A								
24								1.9	2.5	(2.9)	3.3	B	B	[3.3]A	(3.5)	(3.5)	(3.5)	(3.3)	3.2	2.7	2.0								
25								A	2.6	2.9	3.3	B	B	B	B	B	B	B	3.1	2.6	1.9	H							
26								-	2.0	[2.5]A	[2.5]A	A	A	(3.4)	B	B	B	B	(3.1)	2.6	2.0								
27								1.7	H	[2.5]A	3.2	A	A	B	3.5	[3.5]B	3.4	[3.5]B	3.4	2.9	(2.0)								
28								[2.5]A	[2.5]C	3.2	3.4	A	[3.5]B	[3.5]B	(3.4)	(3.4)	3.3	3.3	[2.8]B	2.1									
29								1.9	2.6	(3.3)	3.1	A	A	B	3.3	3.4	3.4	3.2	2.7	2.1									
30								2.0	2.7	H	3.1	(3.5)	3.5	[3.5]B	(3.5)	[3.5]B	[3.5]B	3.2	2.8	2.1									
31																													
								1.8	2.3	2.8	3.1	3.2	3.3	3.4	3.4	3.4	3.3	3.2	2.9	2.5	1.9								

Mention

Sum

Washington, D.C.

Ionosphere Station

TABLE 42
IONOSPHERE DATA - 8

National Bureau Of Standards

(Institution)

TIME: 75° W MERIDIAN

Hourly values of E_S in μ for April 1945
(Month)

RESTRICTED

A. F. R.

DECORUS INSTRUMENT: M.R. R.

C

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	C	C	11	140	17	140	23	120	22	120	36	120	47	30	C	C	45	120	34	20	30	17	150	C		
2	27	140	44	120	41	120	34	120	29	120	27	120	25	120	35	110	49	110	58	110	44	110	36	110	C	
3	40	110	36	120	29	120	35	120	29	120	27	120	25	120	32	110	32	120	36	140	43	120	32	110	C	
4	20	120	35	120	24	120	25	120	21	120	27	120	43	120	32	110	34	140	34	140	34	140	34	140	C	
5			29	120	24	120	19	140	29	120	27	120	21	120	34	120	34	140	34	140	34	140	34	140	C	
6	10	120	45	120					C	C															C	
7	22	160	19	160	24	160	28	120	32	120	34	120	35	120	36	110	36	140	34	140	34	140	34	140	C	
8																										
9																										
10	24	120	11	120	24	160	10	140	34	120	31	120	33	120	31	120	34	140	34	140	34	140	34	140	C	
11	120	24	11	120	29	120	30	130	32	120	34	120	35	120	36	110	36	140	34	140	34	140	34	140	C	
12			31	120	28	120	42	120	47	120	39	120	40	110	34	120	34	120	31	120	31	120	31	120	C	
13			18	140	26	140	21	120	29	120	29	120	31	120	30	110	36	140	34	140	34	140	34	140	C	
14			37	120	39	140	28	120	34	120	31	120	33	120	31	120	34	140	34	140	34	140	34	140	C	
15			36	120	30	120	29	120	23	120	30	120	35	120	38	120	30	140	30	140	30	140	30	140	C	
16				120	31	120	28	120	32	120	30	120	34	120	38	120	30	140	30	140	30	140	30	140	C	
17																										
18																										
19																										
20																										
21																										
22																										
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24																										
25																										
26																										
27																										
28																										
29																										
30																										
31																										

* Less than median f_E^o , or less than lower frequency limit of apparatus.

Washington, D.C.

(Location)

TABLE 43
IONOSPHERE DATA—9

RESTRICTED

National Bureau Of Standards
(Institution)

TIME: 75°W MERIDIAN

Hourly values of F2—M1500₂, or
April 1945
(Month)

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

Records measured by M.R.R.

A.F.

Washington, D.C. _____ Ionosphere Station

TABLE 44
IONOSPHERE DATA-10

Washington, D.C. Ionosphere Station

National Bureau Of Standards

Hourly values of F2-M3000 for April 195
(month) Records measured by M.R.R.
A.F.

TABLE 45
IONOSPHERE DATA — II

Washington, D.C.
Transactions Staff

TABLE 45
IONOSPHERE DATA—II
Washington, D.C.
(Location)
National Bureau Of Standards
(Institution)

Washington, D.C. Ionosphere Station
(Location)

TABLE 46
IONOSPHERE DATA—12

National Bureau Of Standards
(Institution)

RESTRICTED
TABLE 46
IONOSPHERE DATA—12
Hourly values of F1-M3000 for April 1945
(Month)
TIME: 75°W MERIDIAN
National Bureau Of Standards
Ionosphere Station

	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		C	C	C	K	C	C	K	C	C	K	(3.3)	(3.5)	K	(3.5)	K	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5	
2		C	C	C	(3.4)	F	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
3		C	3.5	(3.6)	(3.8)	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
4		(3.7)	3.8	3.7	3.5	H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
5		3.5	(3.5)	(3.6)	(3.6)	3.6	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	
6		C	(3.6)	(3.5)	(3.5)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
7		K	3.7	3.6	3.5	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
8		K	3.5	3.6	3.7	K	3.7	K	3.7	K	3.7	K	3.6	K	3.6	K	3.4	K	3.5	K	3.5	K	3.5	K	3.5
9		3.6	(3.7)	3.9	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
10		K	3.5	3.6	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
11		K	3.5	3.6	3.6	3.7	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
12		3.4	3.5	3.6	3.5	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
13		(3.4)	3.4	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
14		K	3.5	3.6	3.6	3.8	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
15		K	3.5	3.4	3.2	3.2	4.0	A	3.9	K	3.7	K	3.5	K	3.5										
16		3.5	3.6	3.6	3.6	3.6	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	
17		(3.4)	3.5	3.5	3.8	(3.7)	H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	
18		(3.8)	(3.7)	3.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
19		3.5	3.6	3.6	3.6	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
20		3.5	3.5	3.6	3.6	3.5	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	(3.6)	
21		3.6	3.5	3.6	3.8	5.6	H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
22		(3.7)	3.8	(3.8)	3.8	3.7	H	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
23		3.3	3.5	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
24		C	3.6	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
25		3.6	3.5	3.6	(3.8)	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	
26		3.7	3.5	3.6	3.6	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
27		(3.7)	3.6	3.7	(3.5)	3.7	(3.5)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
28		C	3.6	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
29		(3.6)	3.7	3.6	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
30		3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
31																									
		Sum																							
		Median																							

RECORDS MEASURED BY: M.R.R.

A.F.

Washington, D.C.
 (Location)

TABLE 47
 IONOSPHERE DATA--13

RESTRICTED
 TABLE 47
 IONOSPHERE DATA FOR
 TIME: 75° W MERIDIAN
 (Month)
 Hourly values of E—M 1500 for April 1945
 (Institution) National Bureau Of Standards
 (Institution) Ionosphere Station

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								C	K	C	K	(A.1.) ^K	(3.8) ^K	(4.1) ^K	(4.0) ^K	(4.0) ^K	3.8 ^K	C	K	C	K	C	A											
2								C	C	C	A	A	B	(A.1.) ^K	(4.2) ^K	(4.2) ^K	3.8	A	A															
3								C	(3.8) ^H	C	B	(4.0)	B	(3.9)	(4.0)	(4.0)	4.1	A	A															
4								A	(4.2)	A	B	(3.9)	B	(4.1)	(4.0)	(4.0)	(4.1)	B	B															
5								B	4.1	A	B	3	(4.0)	(4.0)	(4.0)	(4.1)	3.8	4.0	4.0															
6								(4.0) ^H	C	(4.1)	(4.0)	(4.2)	4.1	(3.9)	(4.0)	(4.0)	(3.9)	4.0	(4.0)	(3.9) ^F														
7								4.0	(3.8)	(4.1)	(3.9)	4.0	(4.0)	4.1	4.0	3.8	4.0	4.0	3.9	3.9														
8								(4.0) ^K	(3.8) ^K	4.0 ^K	4.1 ^K	4.1 ^K	A	K	A	(4.0) ^K	(4.0) ^K	3.7 ^K	4.0 ^K	(3.8)														
9								(3.6)	3.9	(3.8)	A	4.0	4.0	4.0	A	3.9	4.0	4.0	3.9	3.9														
10								(3.9) ^H	3.6	3.8	A	4.1	4.0	4.0	A	4.1	4.1	4.1	A	(4.0)														
11								K	3.9 ^K	3.9 ^K	3.9 ^K	3.9 ^K	3.9 ^K	3.9 ^K	(4.0) ^K	(4.0) ^K	3.9 ^K	4.0 ^K	4.0 ^K	3.9 ^K														
12								A	A	A	4.0	3.9	4.0	(4.0)	C	(4.0)	4.0	4.0	3.7	3.8														
13								3.7	(3.8)	3.9	3.8	(4.0)	A	4.0	(3.9)	4.0	3.8	4.0	3.9	4.0														
14								A	4.0	4.0	4.0	3.9	4.1	3.9	3.8	4.0	4.1	4.0	4.0	4.0	(3.9)													
15								3.9 ^K	3.9 ^K	(4.0) ^H	3.9 ^K	4.1 ^H	C	K	C	K	C	K	C	K	4.0 ^K	4.0 ^K	4.0 ^K											
16								(4.1)	A	4.1	4.0	4.2	4.1	4.1	3.9	C	3.9	3.9	(3.0)	A														
17								A	4.0	(4.0)	4.0	(4.1)	A	B	4.1	(4.0)	4.0	3.9	3.9	A														
18								(3.9) ^H	(3.0)	(3.9)	3.8	4.1	4.0	B	(3.9)	(3.9)	3.9	3.9	(3.9)															
19								(4.1)	(3.8)	(4.0)	(4.0)	3	B	B	(4.1)	4.0	4.0	4.1	3.8	A														
20								A	4.0	(4.0)	4.0	4.0	B	B	(4.0)	3.9	3.9	4.0	4.0	H														
21								4.0	B	4.2	A	B	B	(4.1)	(3.9)	4.0	(3.9)	(4.0)	(4.0)	(4.0)														
22								4.1 ^H	B	(4.2)	(4.1)	A	B	(4.1)	A	(4.0)	A	(4.2)	4.2															
23								A	3.9	4.1	(4.1)	(4.0)	(4.0)	(4.2)	A	4.2	A	4.1	4.0	A														
24								4.0	4.0	(4.1)	4.0	3	B	R	(4.0)	S	(4.0)	4.1	4.1	3.9														
25								A	4.0	4.1	4.0	3	5	B	(3)	B	B	4.0	4.1	(4.1) ^H														
26								3.8	4	A	A	A	(4.1)	B	B	B	B	(4.0)	4.1	4.1														
27								4.1 ^H	A	3.9	A	A	B	(3.2)	B	(3.2)	B	4.1	4.0	F														
28								A	C	C	4.1	4.1	4.1	A	B	(4.0)	S	(4.0)	4.0	3	4.0													
29								(3.9)	4.1	4.1	(4.1)	A	A	7	B	7	B	3.8	4.0	4.0	4.0	4.0	A											
30								3.7	4.2	4.0	4.1	(3.9)	(4.1)	3	(3.0)	A	A	4.0	4.0	4.1														
31																																		
	Sum																																	
	Median																																	
		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Records measured by: M.R.R.

A.F.

Table 48

Ionospheric Storminess, April, 1945

Day	Ionospheric Character*		Principal Storms Beginning GCT	End GCT	Magnetic Characters**	
	00-12 GCT	12-24 GCT			00-12 GCT	12-24 GCT
April						
1	4	6	0600	4	4	4
2	4	1	—	1100	3	2
3	2	3			2	1
4	1	3			1	2
5	1	0			1	3
6	3	3			3	3
7	2	2	2300	2300	3	2
8	4	4	—	2300	3	2
9	3	2			1	0
10	2	1			1	1
11	3	4	1100	—	3	4
12	4	1	—	1000	4	3
13	1	2			3	2
14	2	3			3	3
15	2	5	1100	—	3	2
16	5	2	—	1000	2	1
17	2	2			1	1
18	2	2			1	1
19	2	1			2	2
20	2	1			3	2
21	2	2			1	1
22	0	1			1	2
23	1	1			2	3
24	1	2			3	2
25	1	1			2	1
26	1	0			0	1
27	0	1			1	1
28	1	3			0	1
29	1	3			1	2
30	1	3			2	2

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

**Average for 12 hours of American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

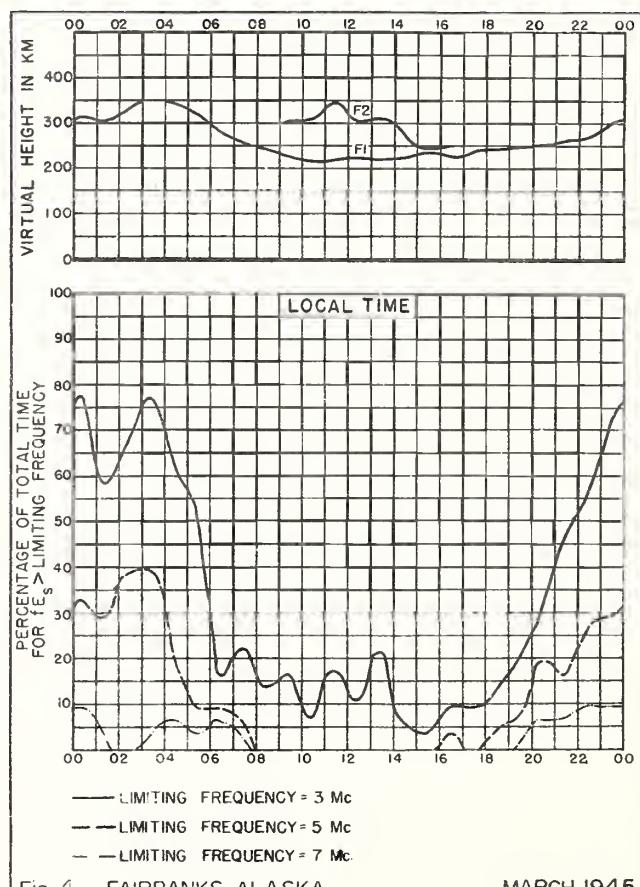
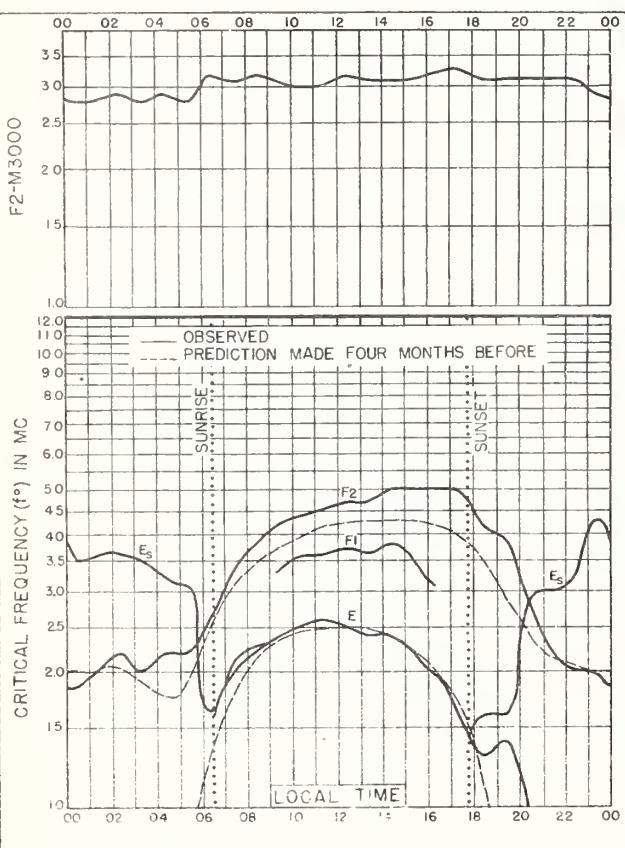
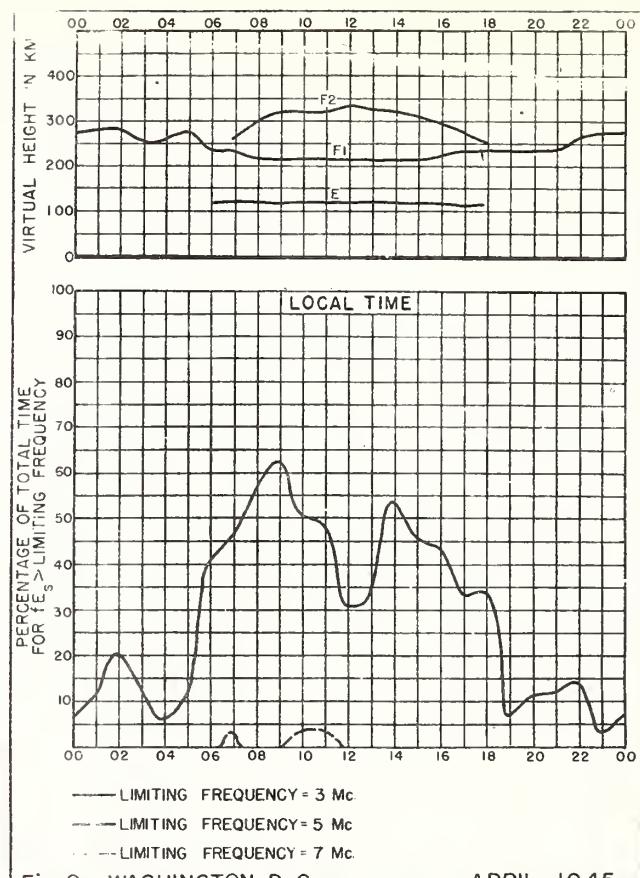
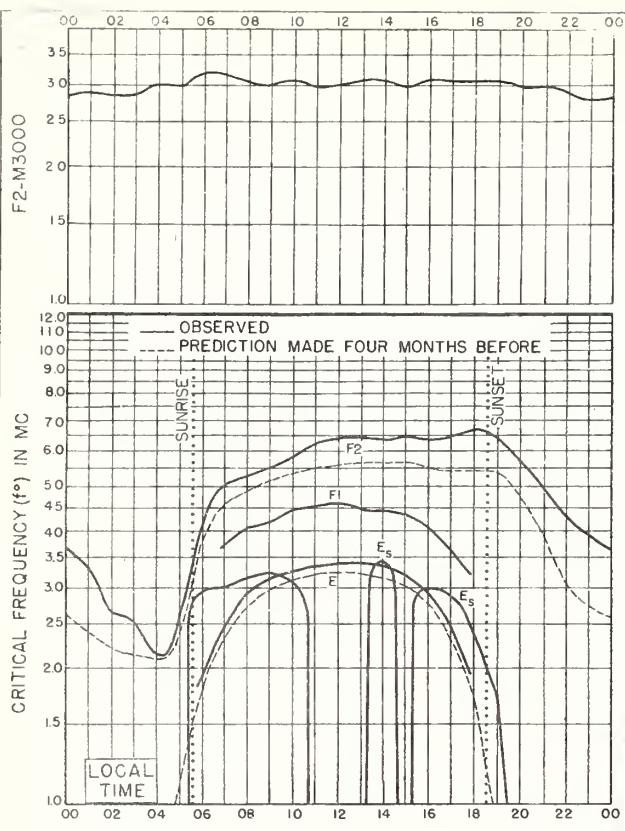
†Dashes indicate continuance of disturbance.

Table 49. Sudden Ionosphere Disturbances Observed
at Washington, D.C.

Day	GCT		Locations of transmitters	Relative intensity at mini- mum*	Other phenomena	
	Beginning	End				
April	25	1303	1315	England	0.1	
	25	1948	2015	Ohio, D.C., England, Mexico, Brazil, Chile	0.0	Terr.mag.pulse** 1949-1954
	25	2224	2250	Ohio, D.C., New York, Mexico, Hawaii	0.05	Terr.mag.pulse** 2225-2228
	26	1227	1245	Ohio, D.C., New York, England, Brazil	0.2	Terr.mag.pulse** 1225-1231
	26	1909	1935	Ohio, D.C., England, Mexico, Brazil, Chile, Hawaii	0.05	Terr.mag.pulse** 1908-1919
	27	1823	1845	Ohio, D.C., England, Mexico, Chile, Hawaii	0.05	Terr.mag.pulse** 1823-1833
	27	2051	2140	Ohio, D.C., England, Mexico, Chile, Hawaii	0.0	Terr.mag.pulse** 2049-2054
	28	1200	1240	Ohio, D.C., New York, England, Brazil	0.05	
	28	2044	2110	Ohio, D.C., New York, Mexico, Brazil, Chile, Hawaii	0.1	Terr.mag.pulse** 2041-2100
	28	2143	2225	Ohio, D.C., New York, Mexico, Chile, Hawaii	0.02	Terr.mag.pulse** 2142-2209
	29	1427	1450	Ohio, D.C., England, Mexico	0.1	

*Ratio of received field intensity during SID to average field intensity before and after, for station W8XAL, 6080 kilocycles, 500 kilometers distant, for all SID except first, which is for station GLH, 13525 kilocycles, 5340 kilometers distant.

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



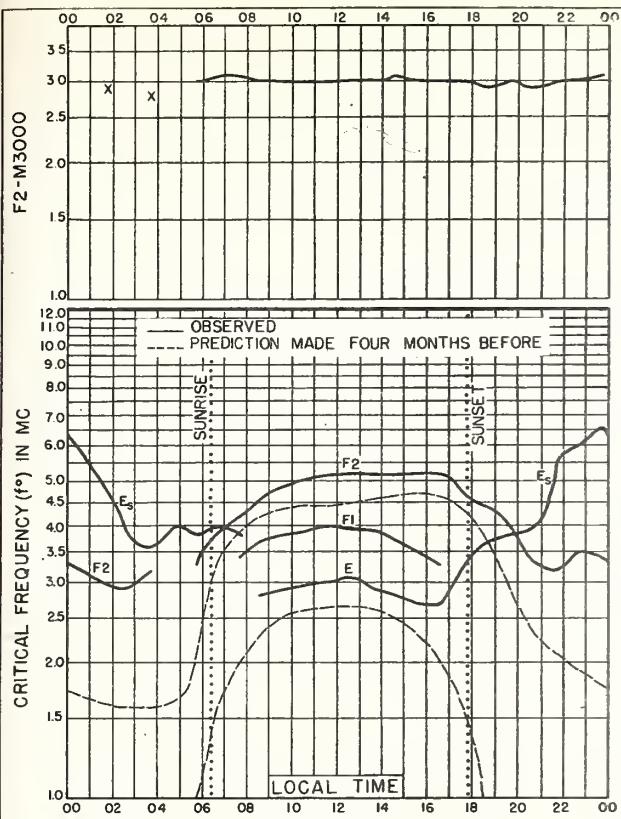


Fig. 5. CHURCHILL, CANADA
58.8°N, 94.2°W

MARCH, 1945

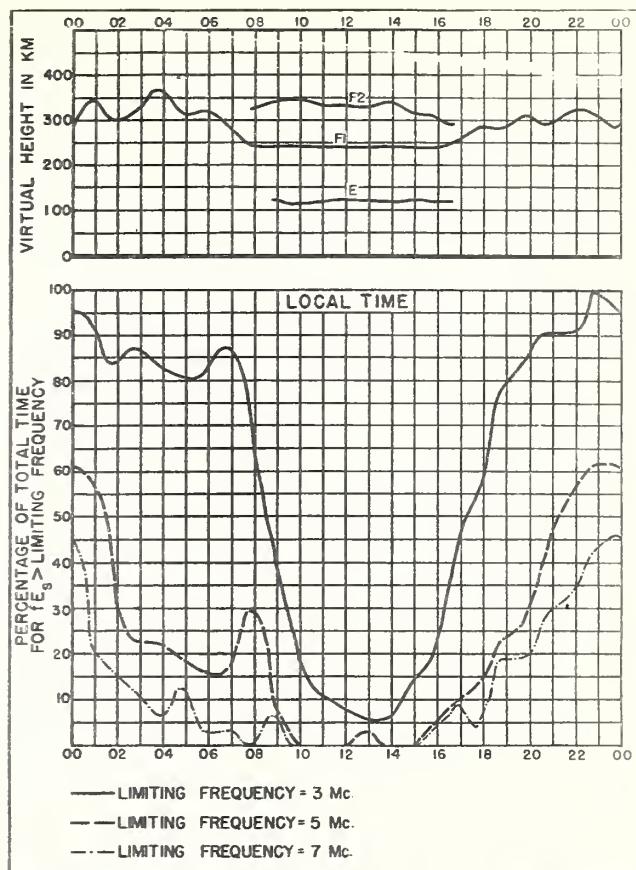


Fig. 6. CHURCHILL, CANADA

MARCH, 1945

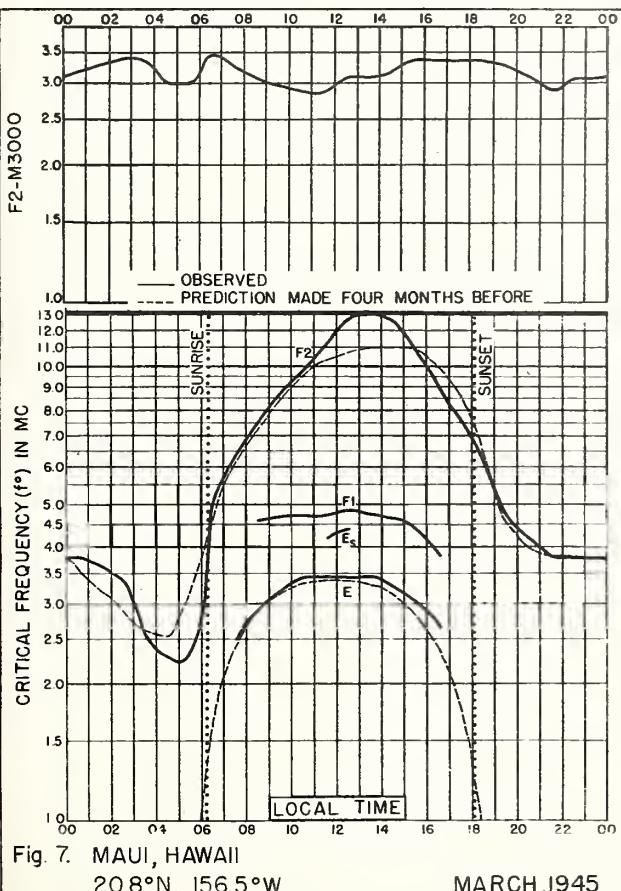


Fig. 7. MAUI, HAWAII
20.8°N, 156.5°W

MARCH, 1945

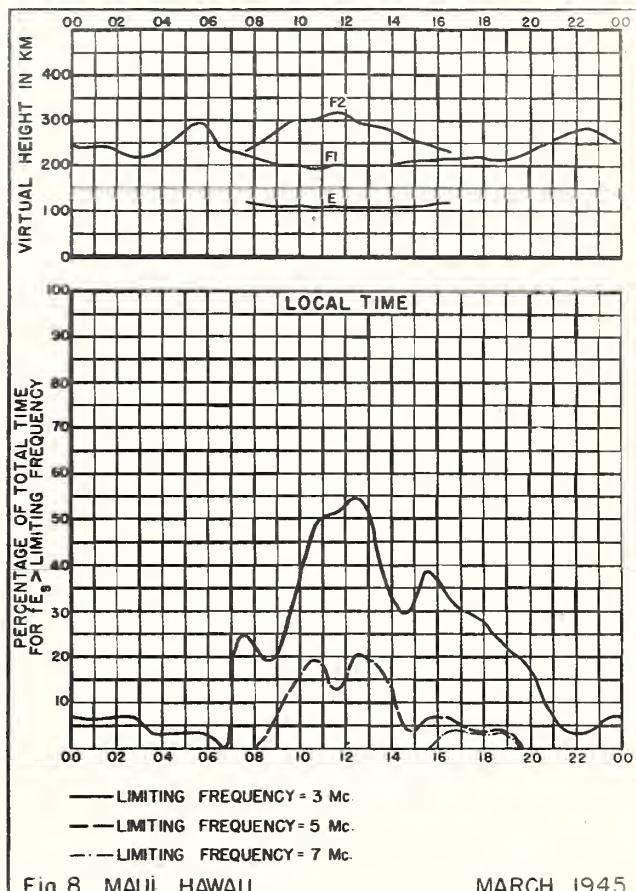


Fig. 8. MAUI, HAWAII

MARCH, 1945

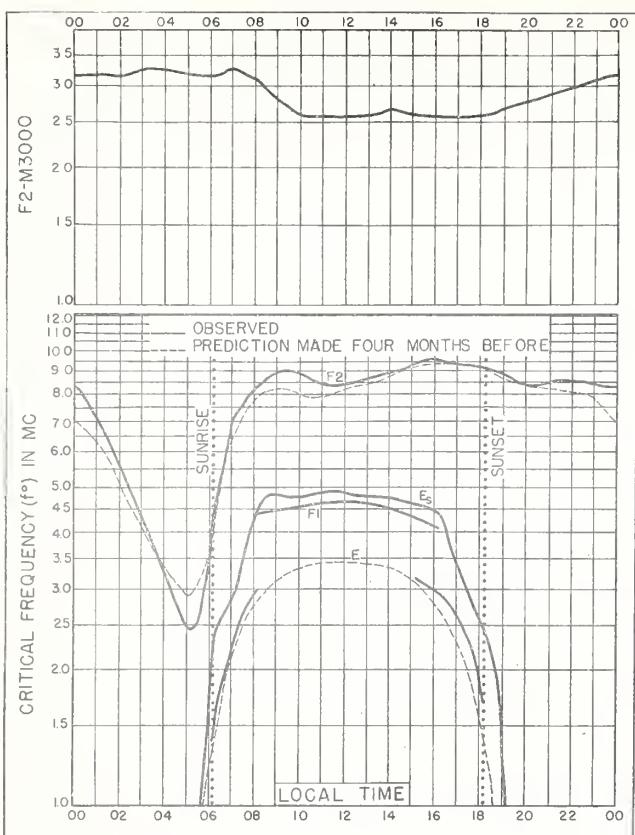


Fig. 9. HUANCAYO, PERU
12°S, 75.3°W MARCH, 1945

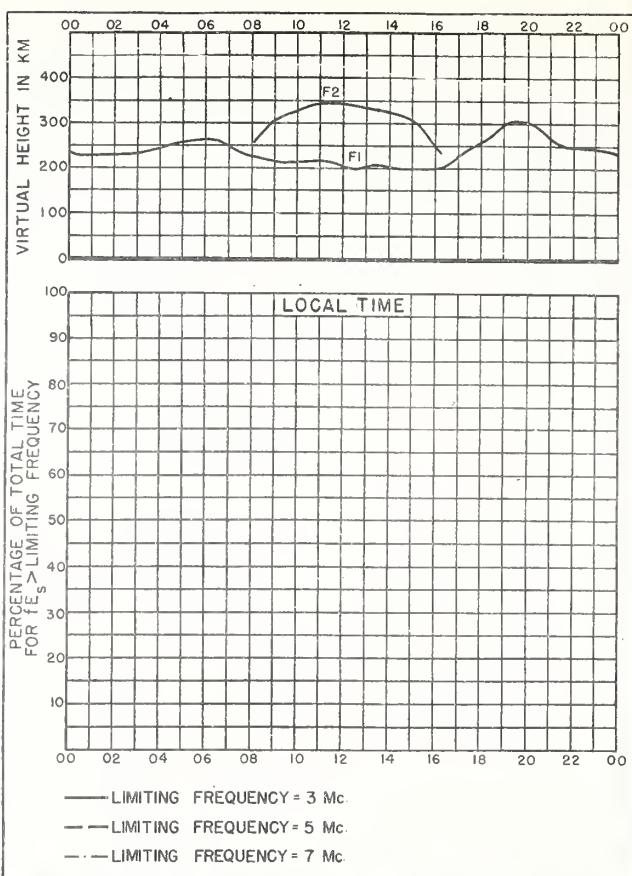


Fig. 10. HUANCAYO, PERU MARCH, 1945

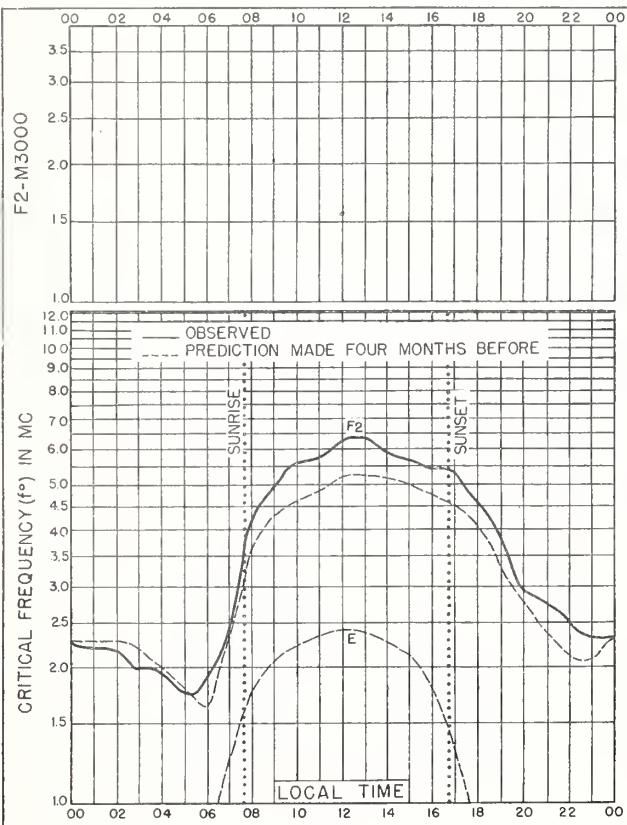


Fig. 11. BURGHEAD, SCOTLAND
57.7°N, 3.5°W FEBRUARY, 1945

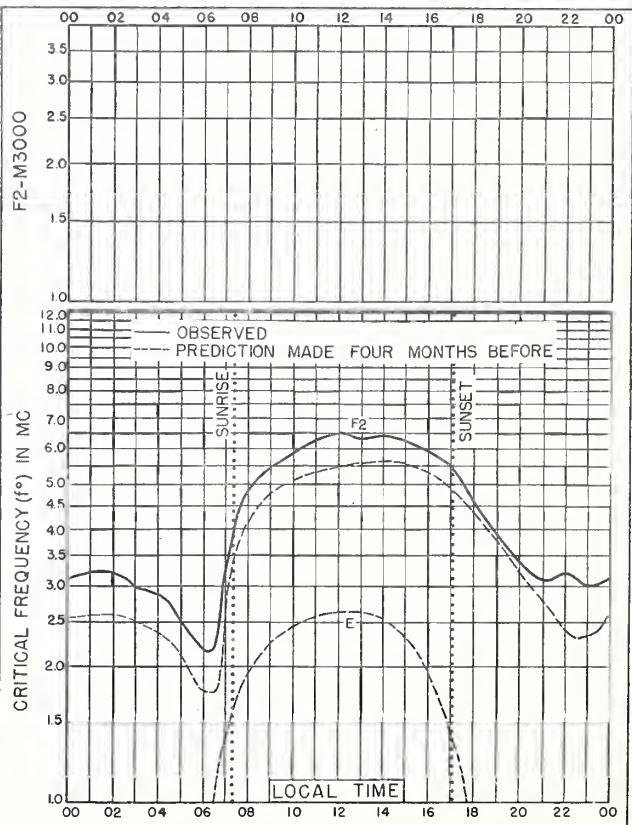


Fig. 12. SLOUGH, ENGLAND
51.5°N, 0.6°W FEBRUARY, 1945

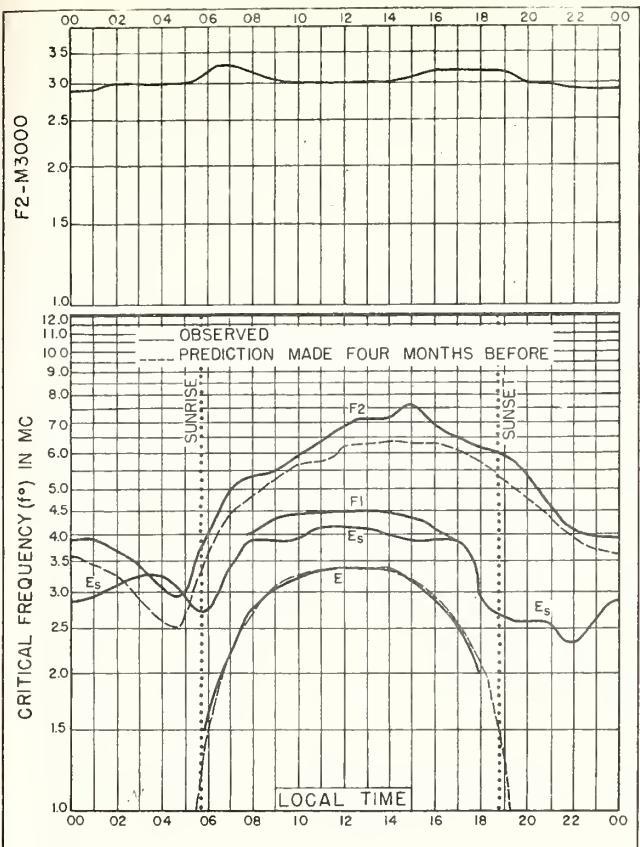


Fig. 13. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E FEBRUARY, 1945

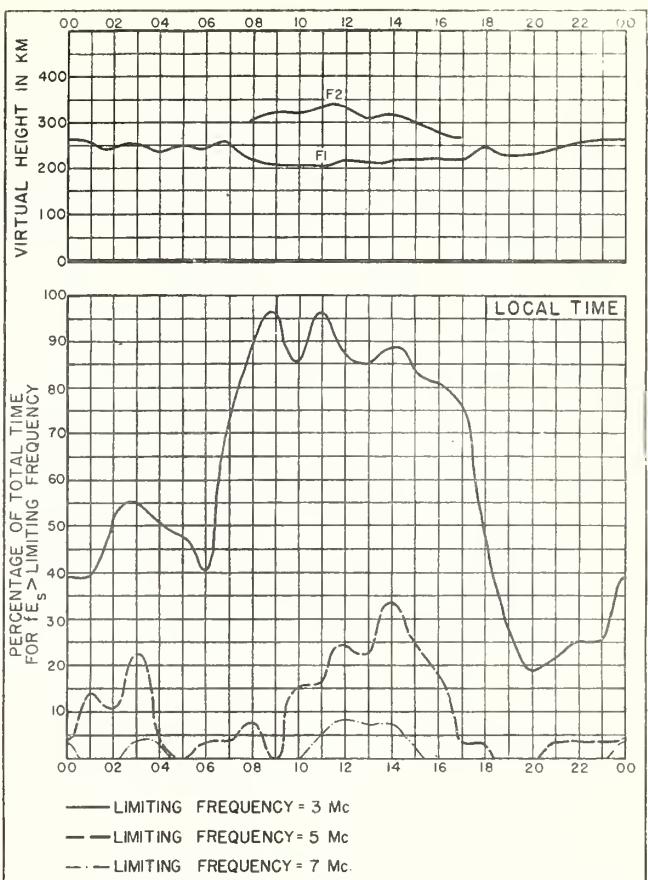


Fig. 14. WATHEROO, W. AUSTRALIA FEBRUARY, 1945

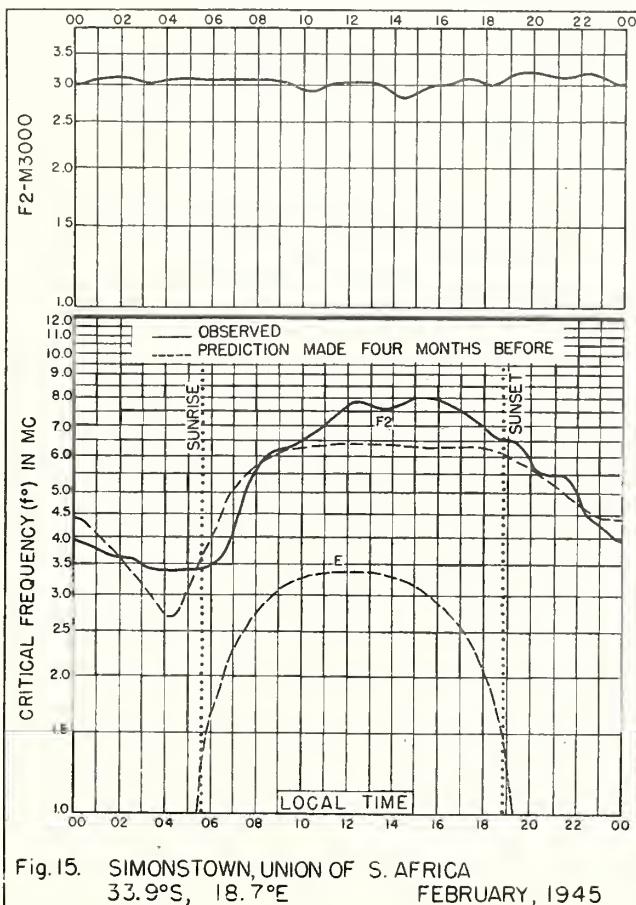
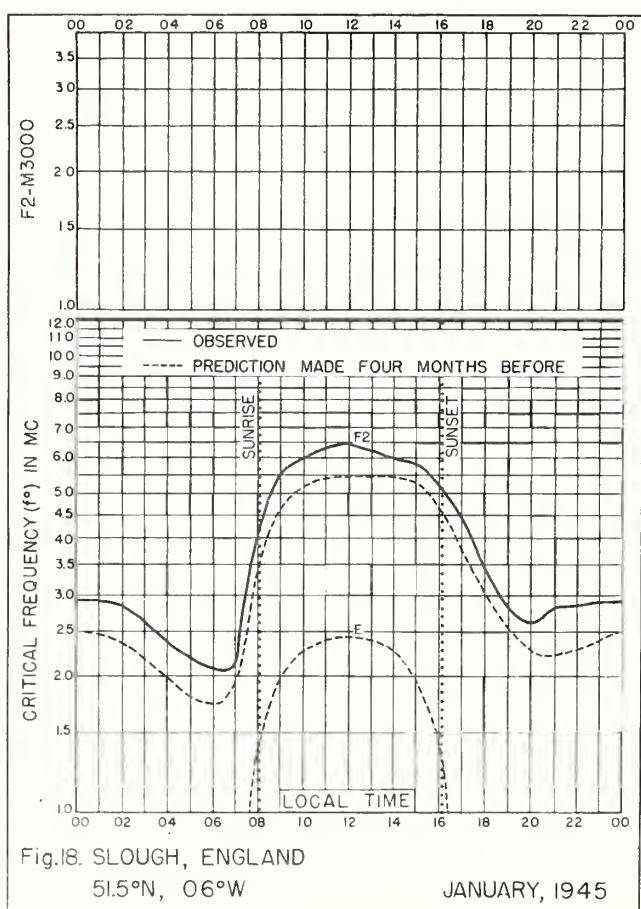
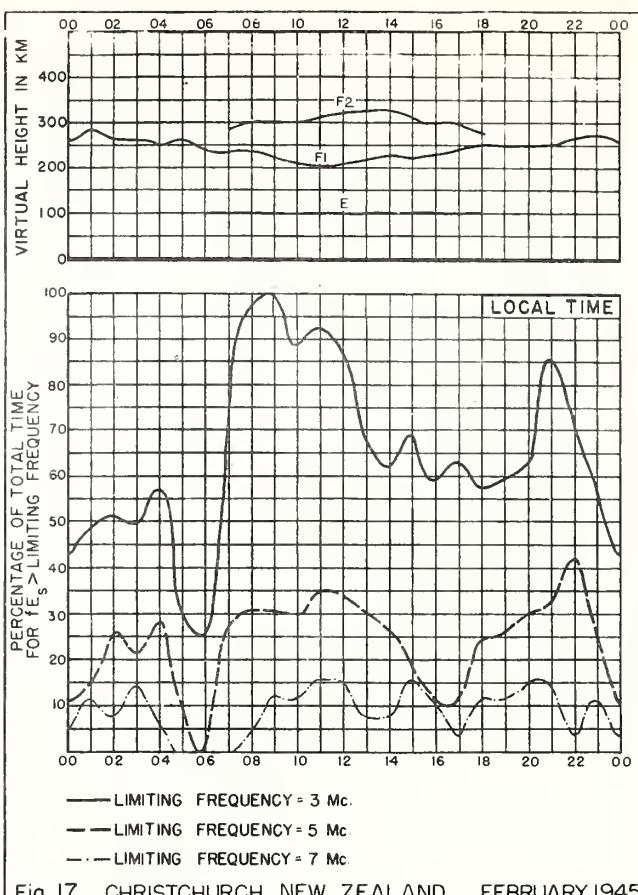
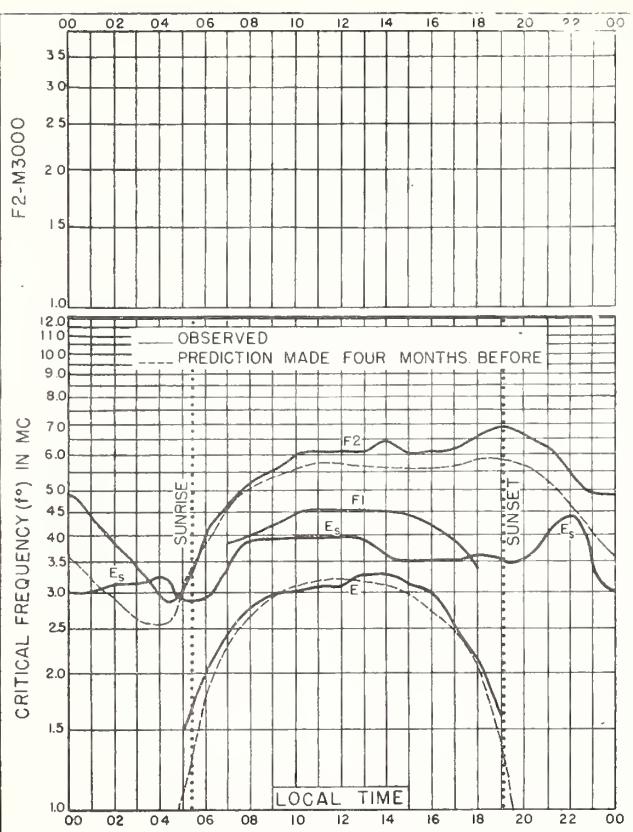
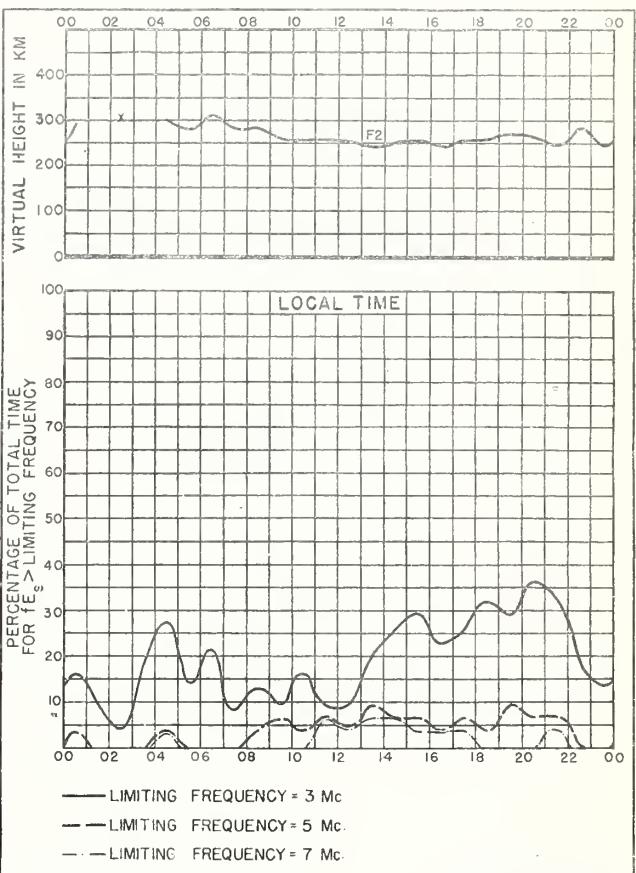
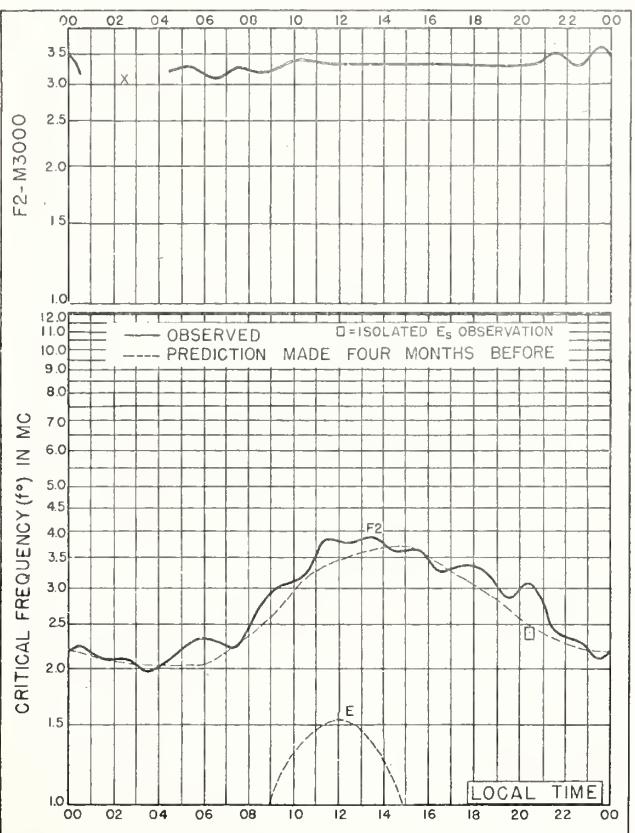
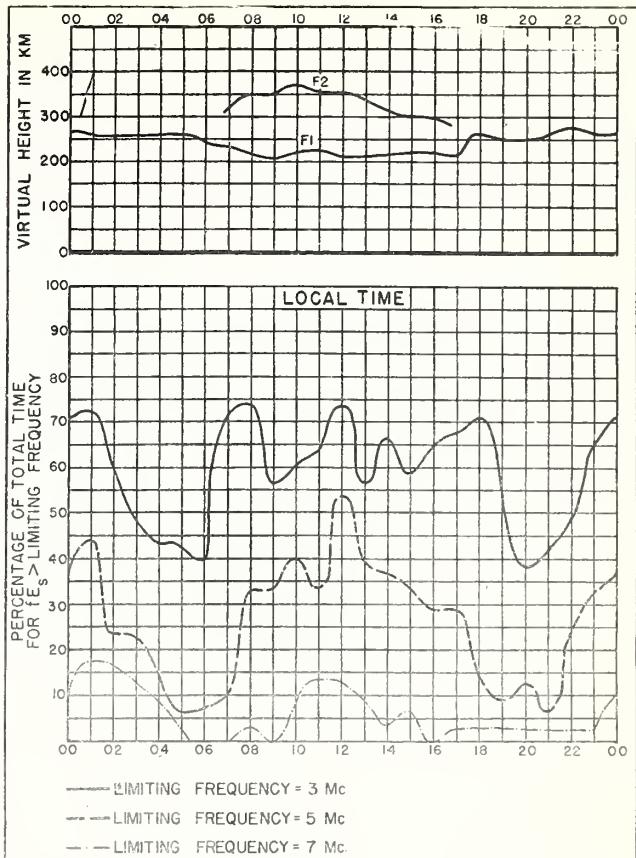
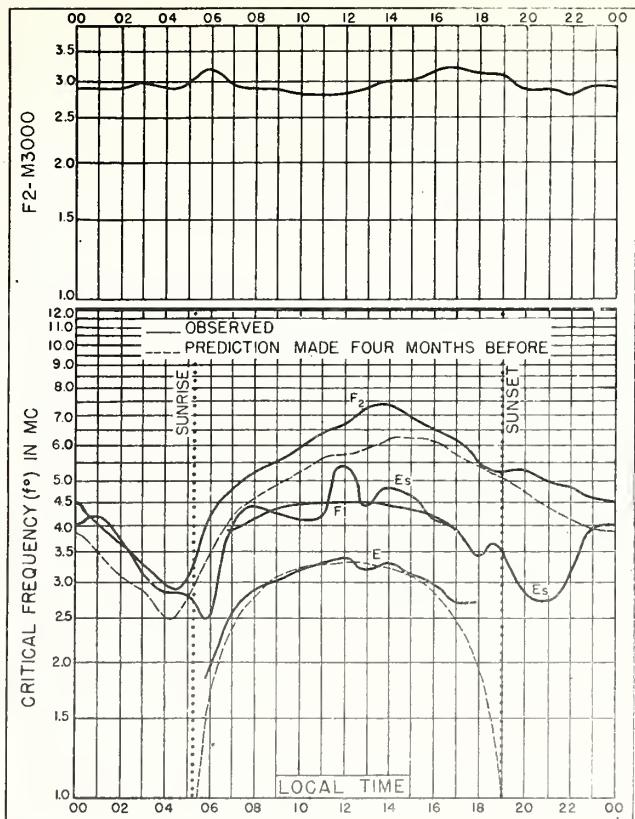
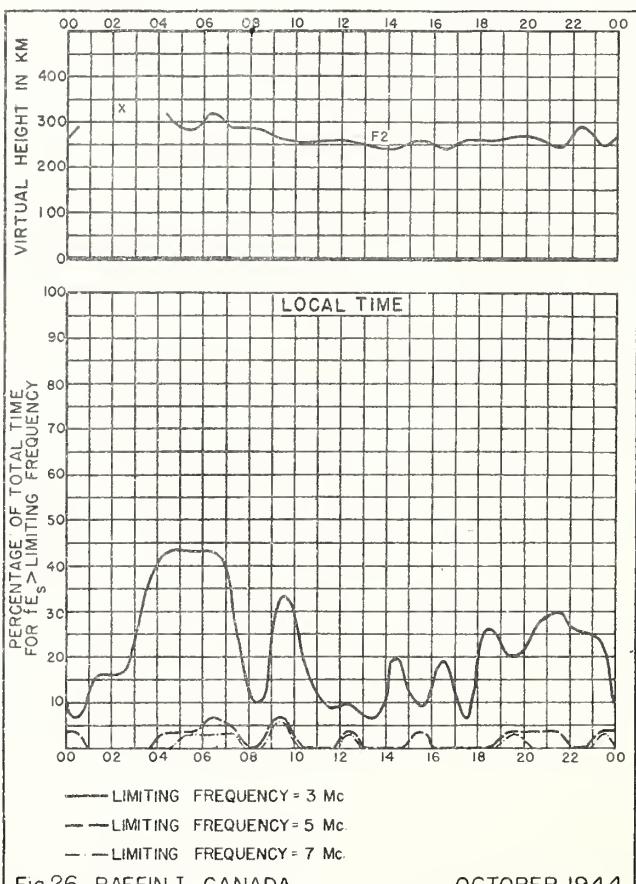
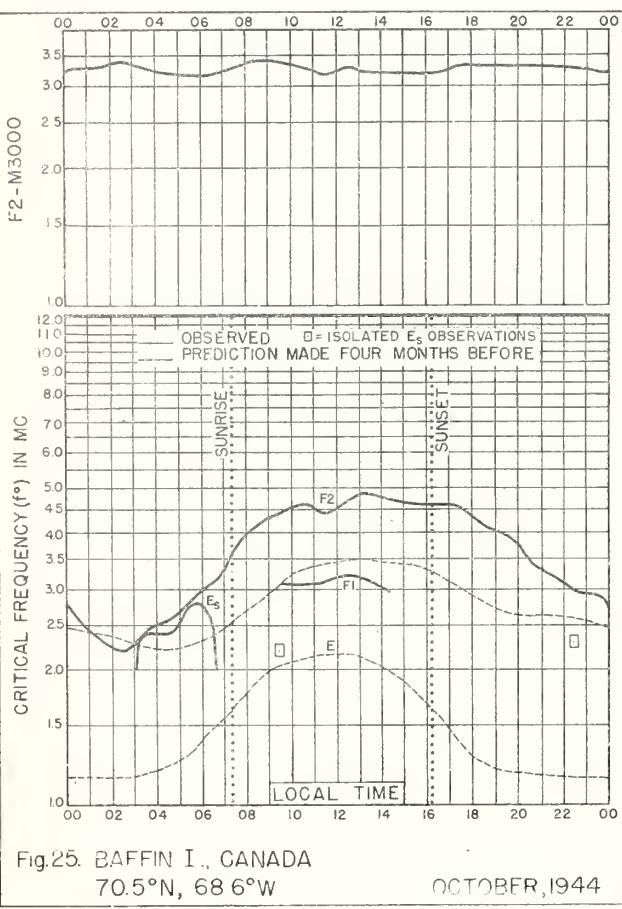
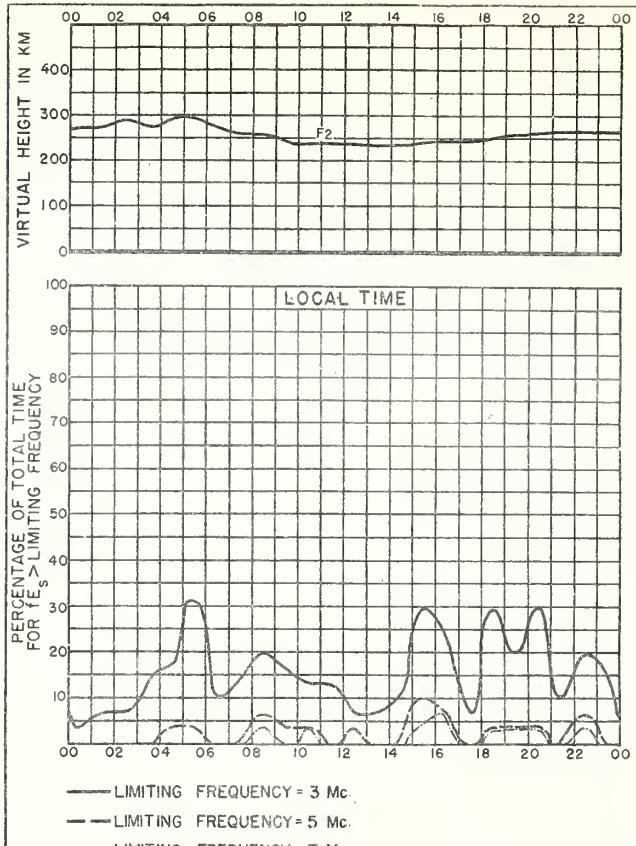
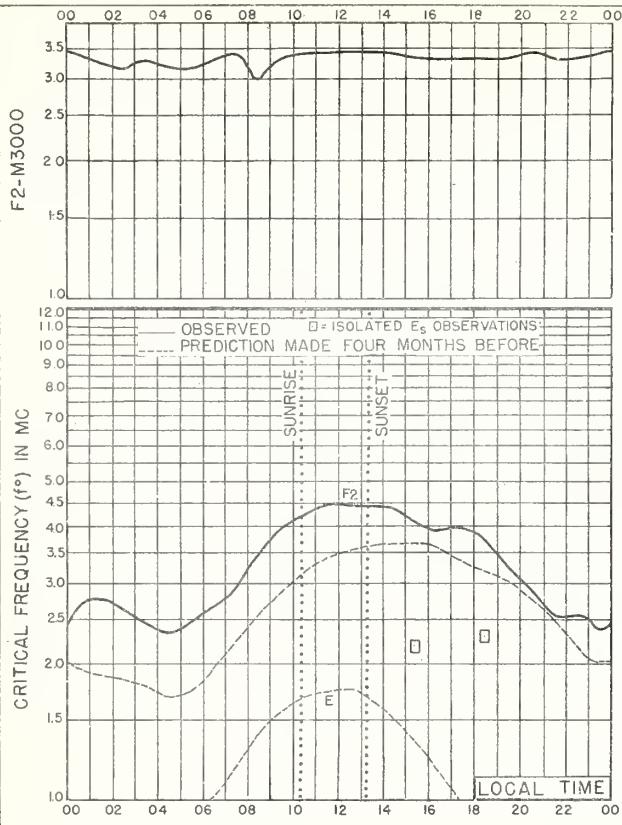
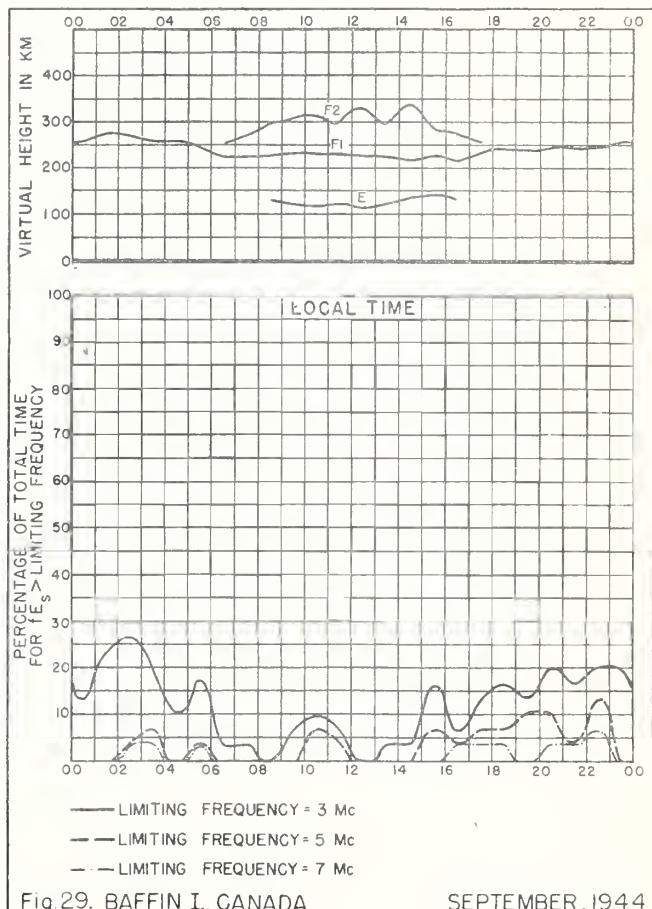
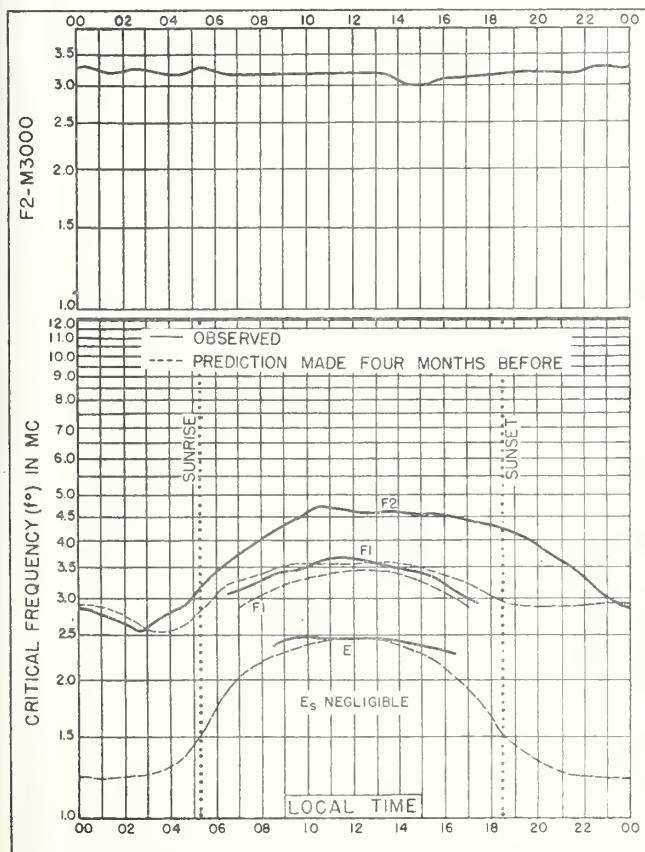
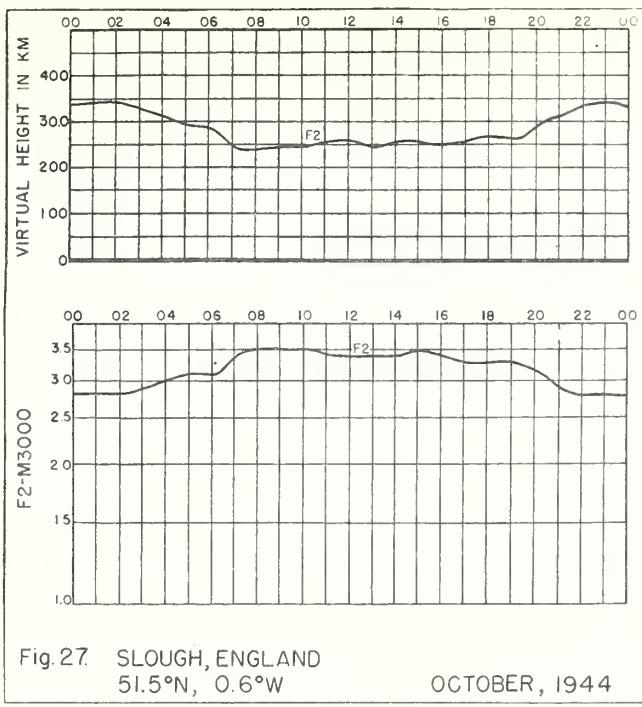


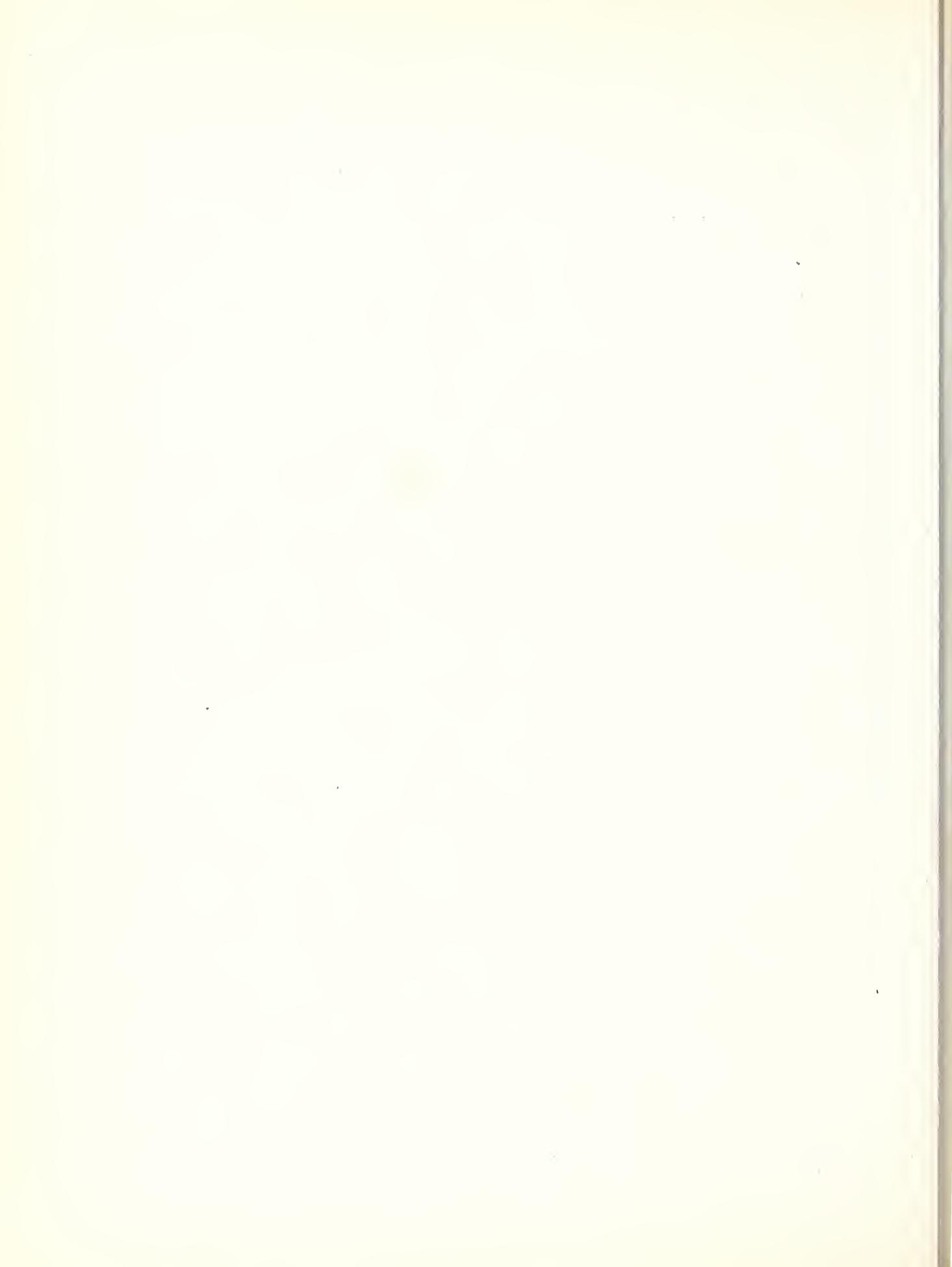
Fig. 15. SIMONSTOWN, UNION OF S. AFRICA
33.9°S, 18.7°E FEBRUARY, 1945











Daily:

Telephoned and telegraphed reports of ionospheric, solar, geomagnetic and radio propagation data from various places.
Radio disturbance warnings.

Semiweekly:

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IRPL-F. Ionospheric Data.

Bimonthly:

IRPL-G. Correlation of D.F. Errors with Ionospheric Conditions.

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IRPL Radio Propagation Handbook, Part 1. (War Dept. TM 11-499; Navy Dept. DNC-13-1).

IRPL-C1 through C61. Reports and Papers of the International Radio Propagation Conference, 17 April to 5 May 1944.

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R1. Maximum Usable Frequency Graph Paper

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R5. Criteria for Ionospheric Storminess.

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