

IRPL-F5

~~RESTRICTED~~

IONOSPHERIC DATA

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IONOSPHERIC DATA

Note.- This IRPL-F series report, issued monthly, serves as one of two current supplements to IRPL Radio Propagation Handbook, Part 1, (War Dept. TM11-499, Navy Dept. DNC-13-1). The supplements of the IRPL-D series, "Basic Radio Propagation Predictions Three Months in Advance," issued earlier in the month, include basic prediction charts, auxiliary charts and nomograms, as well as examples illustrative of their use.

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TERMINOLOGY

Note.-- The following symbols are used, conforming to the recommendations of the International Radio Propagation Conference held in Washington, D.C., 17 April to 5 May 1944.

f^oF2 - ordinary-wave critical frequency for the F2 layer. The term night F layer will no longer be used. The term F2 layer is now used for the night F layer as well as the daytime F2 layer.

f^oF1 - ordinary-wave critical frequency of the F1 layer.

f^oE - ordinary-wave critical frequency of the E layer.

h^*F2 - minimum virtual height of the F2 layer.

h^*F1 - minimum virtual height of the F1 layer.

h^*E - minimum virtual height of the E layer.

f_{Es} - highest frequency of Es reflections.

M - maximum usable frequency factor, to be followed by the distance in km.
Example: M3500 represents 3500-km maximum usable frequency factor.

muf - maximum usable frequency.

[] - interpolated value.

() - doubtful value.

A - characteristic not measurable because of blanketing by sporadic E.

B - characteristic not measurable because of loss of trace due to absorption.

C - characteristic not measurable because of equipment failure or interference.

D - characteristic higher than upper limit of recorder.

- E - characteristic less than lower limit of recorder.
- F - spread echoes.
- G - $f^o F_2 \leq f^o F_1$.
- H - stratification observed within region.
- J - ordinary-wave critical frequency deduced from measured extraordinary-wave critical frequency.
- K - ionosphere storm in progress.

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

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

New Zealand Radio Research Committee

Karmadec Is.

Christchurch (Canterbury University College Observatory)

Campbell Is.

Pitcairn I.

Peoples' Commissar for Postal and Electric Communications, Moscow, U.S.S.R.
Tomsk, U.S.S.R.
Sverdlovsk, 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.

For their timely value, some of the tables presented are provisional data received by telephone or telegraph in which there may be small or infrequent errors. When final values are available such errors will be corrected in later issues of this report.

The final values presented, both in tabular and graphical form, although correct for the quantities stated, as reported to this laboratory, may sometimes lead to an erroneous conception of typical values for the quantity under consideration. Standard scaling practice, following recommendations of the International Radio Propagation Conference held in Washington, D.C., 17 April to 5 May, 1944, is not yet universal, deviation from standard practice being most common in the cases of records where spread echoes are present. Even when standard scaling practice is used, intrinsically misleading results may arise from the monthly average being determined from only a few observations during the month. Two frequent types of such error, both particularly typical of stations in far northern or far southern latitudes are:

(a) Erroneously high values of monthly average critical frequencies caused by the frequent absence of record for cases where the critical frequency is below the lower frequency limit of the recorder. A median, rather than a mean, value of the critical frequency is more significant in such cases, the median being that for all times at which observations were made, the cases of such inability to read the records being counted as less than the lower frequency limit of the apparatus.

(b) Erroneously high values of monthly average F2-layer critical frequencies caused by the frequent occurrence of cases where the F1-layer critical frequency exceeds that of the F2-layer. This is characteristic of summer months during sunspot-cycle minimum, particularly in northern latitudes. In this case, also, median values are more significant than mean values, the median being that for all cases where observations are made, those cases where missing values result because of higher f^oF1 being counted as less than the f^oF1 . When, as is often the case, no great discrepancy is likely to exist between f^oF1 and f^oF2 , a typical value of f^oF2 may be obtained by taking the monthly average of observed f^oF2 together with observed f^oF1 for the cases where no f^oF2 could be measured.

The discrepancy between predicted and observed values of monthly average critical frequencies, particularly for far northern stations, is frequently because of the above reasons, the predictions being intended to represent typical values for the location under consideration.

It may be noted by inspection of the figures presenting comparison of data received for the months of August, September, October, November, and December with IRPL predictions made four months in advance, that, generally, the predictions have been in error by being too low, especially in temperate latitudes. (Revised predictions, one month in advance, for November and December, as presented in the reports IRPL-E2 and IRPL-E3 give fairly good agreement with observation).

These predictions are based on average trends of solar activity as measured by sunspot number. In the past few months this activity has been somewhat abnormally high. Occurrence of both sunspots and calcium flocculi during the past few months has been slightly more frequent at high than at low solar latitudes, indicating that perhaps the sunspot minimum has just been passed.

IONOSPHERIC DATA FOR EVERY DAY AND HOUR

These data, observed at Washington, D.C., follow the scaling practices recommended by the International Radio Propagation Conference held in Washington, D.C., 17 April to 5 May 1944. (Cf. IRPL-C61, pp.36-39).

Because of the high variability of observed fEs, mean values are of little practical significance and are not given here.

Mean values of other quantities are given for all days of the month as well as for quiet days only. The criteria for selecting periods of ionospheric storminess, whose data are deleted in obtaining the mean values for quiet days only, are presented in IRPL-R5, "Criteria for Ionospheric Storminess", available to authorized persons upon request to the Chief of IRPL, National Bureau of Standards, Washington 25, D.C.

In determining the median values included in Tables 46 through 58, the following procedure has been adopted:

For all characteristics: Where the value is missing because of A, B, or C (see Terminology, above), that hour is omitted from the median count.

In addition,

For critical frequencies:

For all layers, where a value is missing because of E (see Terminology, above), it is counted as less than the lower limit of the recorder.

For virtual heights:

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

For muf factors:

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

IONOSPHERE DISTURBANCES

Table 59 presents ionospheric character figures observed at Washington, D.C., during December 1944, as determined by the criteria presented in IRPL-R5, cited above, together with American magnetic K-figures which are usually covariant with them.

Unusually high solar activity prevailed during the month of December, with consequent prevalence of ionospherically disturbed conditions. Most notable was the appearance of the greatest sunspot group observed within the last three years, whose meridian passage was associated with the great ionosphere storm which began on 16 December, the severest since 18 September 1941.

Table 60 presents sudden ionospheric disturbances, as observed at Washington, D.C., during December, 1944. These also were associated with the increased solar activity noted above, and have been the only pronounced occurrences of sudden ionosphere disturbance since February, 1942.

ERRATA

1. In the previous issue of the report, IRPL-F4, the labeling "h'F2" at the bottom of Table 27 is incorrect; this quantity should be "f°F2."
2. Because of errors in computing, previously reported final data from the Kermadec Is. for July, August, September, and October, 1944 (previously reported, respectively, in IRPL-F1, Table 23, IRPL-F2, Table 30, IRPL-F3, p.2, and IRPL-F3, Table 21) are, in some cases incorrect. Revisions to previously reported values are given in Tables 44, 41, 37, and 33 of this report.

Table 2

Fairbanks, Alaska (64.9°N , 147.9°W)

December, 1944

Baffin I., Canada (70.6°N , 68.6°W)

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	h'S	f'S	F2-15000
00	292	2.25			3.9				
01		2.11				4.0			
02	303	2.10							
03		1.98							
04	302	2.09							
05	280	2.33							
06	313	2.37							
07	284	2.25							
08	282	2.72							
09	260	3.04							
10	252	3.18							
11	256	3.87							
12	251	3.78							
13	244	3.90							
14	249	3.63							
15	253	3.65							
16	246	3.28							
17	257	3.58							
18	255	3.29							
19	268	2.88							
20	261	3.04							
21	245	2.41							
22	287	2.31							
23	248	2.10							

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

Table 3

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	h'S	f'S	F2-15000
00	350	3.30							
01		2.90							
02	330	(3.70)	(350)	(3.50)					
03	(333)	2.85							
04	285	2.78							
05	300	2.79							
06	260	2.33							
07		1.78							
08									
09	281	2.47	(280)	(3.40)					
10	208	3.67							
11	206	4.51							
12	209	5.34							
13	211	5.02							
14	211	4.35							
15	224	4.07							
16	213	3.94							
17	225	3.67							
18	270	2.90							
19									
20									
21									
22									
23	290	3.10							

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

Table 3

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	h'S	f'S	F2-15000
00	350	3.30							
01		2.90							
02	330	(3.70)	(350)	(3.50)					
03	(333)	2.85							
04	285	2.78							
05	300	2.79							
06	260	2.33							
07		1.78							
08									
09	281	2.47	(280)	(3.40)					
10	208	3.67							
11	206	4.51							
12	209	5.34							
13	211	5.02							
14	211	4.35							
15	224	4.07							
16	213	3.94							
17	225	3.67							
18	270	2.90							
19									
20									
21									
22									
23	290	3.10							

Time: 15°W . Length of time sweep: 2 Mc to 16 Mc in one minute.

Table 3

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	h'S	f'S	F2-15000
00	350	3.30							
01		2.90							
02	330	(3.70)	(350)	(3.50)					
03	(333)	2.85							
04	285	2.78							
05	300	2.79							
06	260	2.33							
07		1.78							
08									
09	281	2.47	(280)	(3.40)					
10	208	3.67							
11	206	4.51							
12	209	5.34							
13	211	5.02							
14	211	4.35							
15	224	4.07							
16	213	3.94							
17	225	3.67							
18	270	2.90							
19									
20									
21									
22									
23	290	3.10							

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

Table 4

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	h'S	f'S	F2-15000
00	350	3.30							
01		2.90							
02	330	(3.70)	(350)	(3.50)					
03	(333)	2.85							
04	285	2.78							
05	300	2.79							
06	260	2.33							
07		1.78							
08									
09	281	2.47	(280)	(3.40)					
10	208	3.67							
11	206	4.51							
12	209	5.34							
13	211	5.02							
14	211	4.35							
15	224	4.07							
16	213	3.94							
17	225	3.67							
18	270	2.90							
19									
20									
21									
22									
23	290	3.10							

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

Table 4

Time	h'F2	f'F2	h'F1	f'F1	h'E	f'E	h'S	f'S	F2-15000
00	350	3.30							
01		2.90							
02	330	(3.70)	(350)	(3.50)					
03	(333)	2.85							
04	285	2.78							
05	300	2.79							
06	260	2.33							
07		1.78							
08									
09	281	2.47	(280)	(3.40)					
10	208	3.67							
11	206	4.51							
12	209	5.34							
13	211	5.02							
14	211	4.35							
15	224	4.07							
16	213	3.94							
17	225	3.67							
18	270	2.90							
19									
20									
21									
22									
23	290	3.10							

Time: 90°W . Length of time sweep: 2 Mc to 16 Mc in one minute.Time: 15°W . Length of time sweep: 2 Mc to 16 Mc in one minute.

Table 5

Great Britain, England (51.7°N, 0.3°E)

Ottawa, Canada (45.5°N, 75.8°W)

December, 1944

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FES	F2-M3000
00	2.8		2.9		2.9			
01	2.7		2.9		2.9			
02	2.7		2.9		2.9			
03	2.4		2.9		2.9			
04	2.3		2.9		2.9			
05	2.1		3.0		3.0			
06	2.0		3.0		3.1			
07	2.0		3.0		3.0			
08	3.9		3.5		3.5			
09	5.2		5.6		5.6			
10	5.7		5.5		5.5			
11	6.0		5.6		5.6			
12	6.4		6.6		6.6			
13	6.3		6.6		6.6			
14	5.9		5.5		5.5			
15	5.7		5.6		5.6			
16	5.0		5.5		5.5			
17	4.0		3.2		3.2			
18	3.2		3.2		3.2			
19	2.5		3.0		3.0			
20	2.6		2.9		2.9			
21	2.6		2.9		2.9			
22	2.6		2.8		2.8			
23	2.3		2.9		2.9			

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

Table 7

Maui, Hawaii (20.8°N, 156.5°W)

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FES	F2-M3000
00	280	3.75						
01	252	4.05						
02	232	3.51						
03	236	3.81						
04	235	4.27						
05	266	3.77						
06	272	3.02						
07	244	4.19						
08	237	6.39	222	2.48	3.4			
09	267	6.07	219	4.35	1.14			
10	265	9.36	211	4.50	1.11			
11	261	9.04	202	4.59	1.12			
12	275	9.25	203	4.63	1.12			
13	270	10.20	206	4.59	1.12			
14	259	10.09	212	4.67	1.09			
15	244	9.71	208	4.29	1.09			
16	234	7.98	214	5.70	1.11			
17	216	6.93	120	2.60	3.6			
18	204	5.17						
19	223	3.80						
20	248	3.70						
21	241	3.85						
22	241	3.55						
23	268	3.35						

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

Table 7

Maui, Hawaii (20.8°N, 156.5°W)

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FES	F2-M3000
00	0.0	2.9						
01	0.1	2.9						
02	0.2	2.9						
03	0.3	2.9						
04	0.4	2.9						
05	0.5	2.9						
06	0.6	2.9						
07	0.7	2.9						
08	0.8	2.9						
09	0.9	2.9						
10	1.0	2.9						
11	1.1	2.9						
12	1.2	2.9						
13	1.3	2.9						
14	1.4	2.9						
15	1.5	2.9						
16	1.6	2.9						
17	1.7	2.9						
18	1.8	2.9						
19	1.9	2.9						
20	2.0	2.9						
21	2.1	2.9						
22	2.2	2.9						
23	2.3	2.9						

Time: 0° Length of time sweep: 1.93 Mc to 13.5 Mc. Manual operation.

Table 8

Trinidad, Brit. West Indies (10.8°N, 61.3°W)

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FES	F2-M3000
00	0.0	246	4.06					
01	0.1	238	3.57					
02	0.2	257	3.28					
03	0.3	293	2.98					
04	0.4	317	2.94					
05	0.5	290	3.39					
06	0.6	257	3.64					
07	0.7	246	5.50					
08	0.8	270	6.98	245	4.05			
09	0.9	269	8.19	231	4.32			
10	1.0	271	8.04	225	4.49			
11	1.1	278	7.73	218	4.57			
12	1.2	290	7.37	223	4.59			
13	1.3	307	7.63	224	4.64			
14	1.4	289	7.95	244	4.50			
15	1.5	282	7.39	235	4.34			
16	1.6	260	7.07	237	3.91			
17	1.7	253	6.95	101	2.75			
18	1.8	242	5.71					
19	1.9	244	4.66					
20	2.0	258	3.97					
21	2.1	299	3.69					
22	2.2	276	3.45					
23	2.3	256	4.19					

Time: 75°W. Length of time sweep: 1.93 Mc to 13.5 Mc. Manual operation.

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FES	F2-M3000
00	0.0	2.9						
01	0.1	2.9						
02	0.2	2.9						
03	0.3	2.9						
04	0.4	2.9						
05	0.5	2.9						
06	0.6	2.9						
07	0.7	2.9						
08	0.8	2.9						
09	0.9	2.9						
10	1.0	2.9						
11	1.1	2.9						
12	1.2	2.9						
13	1.3	2.9						
14	1.4	2.9						
15	1.5	2.9						
16	1.6	2.9						
17	1.7	2.9						
18	1.8	2.9						
19	1.9	2.9						
20	2.0	2.9						
21	2.1	2.9						
22	2.2	2.9						
23	2.3	2.9						

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

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FES	F2-M3000
00	0.0	2.9						
01	0.1	2.9						
02	0.2	2.9						
03	0.3	2.9						
04	0.4	2.9						
05	0.5	2.9						
06	0.6	2.9						
07	0.7	2.9						
08	0.8	2.9						
09	0.9	2.9						
10	1.0	2.9						
11	1.1	2.9						
12	1.2	2.9						
13	1.3	2.9						
14	1.4	2.9						
15	1.5	2.9						
16	1.6	2.9						
17	1.7	2.9						
18	1.8	2.9						
19	1.9	2.9						
20	2.0	2.9						
21	2.1	2.9						
22	2.2	2.9						
23	2.3	2.9						

Time: 60°W. Length of time sweep: 2 Mc to 16 Mc in one minute.

Table 9

Christmas I. (2°S^oN, 157°W)

December, 1944

Huancayo, Peru (12.0°S, 75.3°W)

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FEs	F2-M3000
00	244	5.18						
01	243	3.90						
02	300	3.35						
03	280	2.60						
04								
05	299	4.67						
06	239	6.12	220	4.40	115	2.50		
07	232	7.31	214	4.63	115	3.45		
08	311	7.71	214	4.63	110	3.45		
09	337	7.79	212	4.63	110	2.9		
10	353	7.74	210	4.77	110	2.6		
11	346	7.95	206	4.91	115	3.60		
12	336	8.44	200	4.75	117	3.65		
13	331	9.00	201	4.67	119	3.40		
14	316	9.44	197	4.70	118	3.34		
15	298	9.67	212	4.41	118	2.97		
16	243	9.54			110	2.56		
17	245	9.48			105	2.40		
18								
19	243	8.97						
20	244	7.97						
21	248	7.21						
22	252	6.88						
23	245	5.85						

Time: 1500^h. Length of time sweep: 150 minutes.

Length of time sweep: Manual operation.

Time: 75°W. Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

Table 11

December, 1944

Kermadeo Is. (29.2°S, 177.9°W)

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FEs	F2-M3000
00	6.4				3.4			
01	5.9				3.2			
02	5.4				3.2			
03	4.7				3.2			
04	4.2				3.2			
05	4.4				3.4			
06	5.2				3.5			
07	5.6				3.4			
08	6.0				3.3			
09	6.5				3.2			
10	6.9				3.1			
11	7.3				3.0			
12	7.9				3.0			
13	8.2				3.0			
14	8.2				3.1			
15	8.2				3.2			
16	8.0				3.2			
17	7.4				3.2			
18	7.0				3.2			
19	6.6				3.0			
20	6.6				3.0			
21	6.6				3.0			
22	6.5				3.0			
23	6.5				3.0			

Time: 150°E. Length of time sweep: 2.0 Mc to 12.5 Mc in two minutes, thirty seconds.

Time: Local. Length of time sweep: 1.0 Mc to 12.8 Mc. Normal operation.

Table 12

December, 1944

Huancayo, Peru (12.0°S, 75.3°W)

December, 1944

Time	h°F2	f°F2	h°FL	f°FL	h°E	f°E	FEs	F2-M3000
00	0.0	3.4			0.0	3.4		
01	0.1	3.2			0.1	2.96	6.31	
02	0.2	3.2			0.2	3.08	5.73	
03	0.4				0.3	3.14	5.12	
04	0.7				0.4	3.17	4.71	
05	1.0				0.5	3.00	4.67	
06	1.2				0.6	3.23	5.42	
07	1.4				0.7	3.36	6.19	
08	1.6				0.8	3.42	6.34	
09	1.9				0.9	3.31	7.29	
10	2.1				1.0	3.44	7.55	
11	2.3				1.1	3.68	7.75	
12	2.4				1.2	3.74	7.71	
13	2.5				1.3	3.59	7.43	
14	2.6				1.4	3.27	7.52	
15	2.7				1.5	3.59	7.39	
16	2.8				1.6	3.50	8.02	
17	2.9				1.7	3.35	7.97	
18	3.0				1.8	3.17	7.15	
19	3.1				1.9	2.93	7.31	
20	3.2				2.0	3.10	7.19	
21	3.0				2.1	3.24	7.05	
22	3.0				2.2	3.38	6.99	
23	3.0				2.3	3.18	7.14	

Time: Local. Length of time sweep: 1.0 Mc to 12.8 Mc. Normal operation.

Table 15

Mc. Stromlo, N.S.W., Australia (35°3'S., 149°0'E)						December, 1944					
Time	h°F2	f°F1	h°F1	f°F1	h'E	f'E	f°F1	h'E	f'E	f°F1	F2-M3000
00	5.4				2.9						
01	4.9				3.0						
02	4.5				2.9						
03	3.8				3.0						
04	3.4				3.0						
05	3.7				3.1						
06	4.4				3.1						
07	5.1				3.0						
08	5.4				2.9						
09	5.7				2.8						
10	6.1				2.9						
11	6.3				3.0						
12	6.5				2.9						
13	6.4				2.9						
14	6.5				2.9						
15	6.6				3.0						
16	6.6				3.0						
17	6.3				3.0						
18	6.2				3.0						
19	6.1				3.0						
20	6.0				3.0						
21	5.8				2.9						
22	5.7				2.9						
23	5.6				2.9						

Time: 150°E
Length of time sweep: 1.6 Mc to 12.6 Mc in two minutes.

Table 15
Great Barrier, England (51°7'N., 0°5'E)

Great Barrier, England (51°7'N., 0°5'E)						November, 1944					
Time	h°F2	f°F1	h°F1	f°F1	h'E	f'E	f°F1	h'E	f'E	f°F1	F2-M3000
00	2.9				2.9						
01	3.1				2.9						
02	3.1				2.9						
03	2.7				3.0						
04	2.4				3.0						
05	2.2				3.1						
06	2.2				3.2						
07	3.2				3.4						
08	4.9				3.7						
09	5.7				3.7						
10	6.1				3.6						
11	6.5				3.6						
12	6.5				3.7						
13	6.0				3.7						
14	6.0				3.6						
15	5.8				3.6						
16	5.5				3.6						
17	4.3				3.4						
18	3.7				3.4						
19	3.1				3.2						
20	2.7				3.1						
21	2.6				2.9						
22	2.9				2.5						
23	2.9				2.5						

Time: 150°E
Length of time sweep: 1.6 Mc to 12.6 Mc in two minutes.

Table 14

Christchurch, N.Z. (43°5'S., 172.6°E)

Christchurch, N.Z. (43°5'S., 172.6°E)						December, 1944					
Time	h°F2	f°F1	h°F1	f°F1	h'E	f'E	f°F1	h'E	f'E	f°F1	F2-M3000
00	5.4				2.9						
01	4.9				3.0						
02	4.5				2.9						
03	3.8				3.0						
04	3.4				3.0						
05	3.7				3.1						
06	4.4				3.1						
07	5.1				3.0						
08	5.4				2.9						
09	5.7				2.9						
10	6.1				2.9						
11	6.3				2.9						
12	6.5				2.9						
13	6.4				2.9						
14	6.5				2.9						
15	6.6				3.0						
16	6.6				3.0						
17	6.3				3.0						
18	6.2				3.0						
19	6.1				3.0						
20	6.0				3.0						
21	5.8				2.9						
22	5.7				2.9						
23	5.6				2.9						

Time: 150°E
Length of time sweep: 1.6 Mc to 12.6 Mc in two minutes.

Table 16
Watheroo, Western Australia (30°5'S., 115.9°E)

Watheroo, Western Australia (30°5'S., 115.9°E)						November, 1944					
Time	h°F2	f°F1	h°F1	f°F1	h'E	f'E	f°F1	h'E	f'E	f°F1	F2-M3000
00	2.9				2.9						
01	3.1				2.9						
02	3.1				2.9						
03	2.7				3.0						
04	2.4				3.0						
05	2.2				3.1						
06	2.2				3.2						
07	3.2				3.4						
08	4.9				3.7						
09	5.7				3.7						
10	6.1				3.6						
11	6.5				3.6						
12	6.5				3.7						
13	6.0				3.7						
14	6.0				3.6						
15	5.8				3.6						
16	5.5				3.6						
17	4.3				3.4						
18	3.7				3.4						
19	3.1				3.2						
20	2.7				3.1						
21	2.6				2.9						
22	2.9				2.5						
23	2.9				2.5						

Time: 150°E
Length of time sweep: 1.6 Mc to 0.5 Mc in fifteen minutes.

Table 16
Time: 1200°E.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.

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

Table 17

Washington, D.C. (39.0°N, 77.5°W)							December, 1944									
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES	F2-M3000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES
00	280	2.20							00	257	3.13					
01	274	2.21							01	260	2.96					
02	268	2.45							02	258	3.10					
03	251	2.75							03	258	3.15					
04	245	2.83							04	254	3.16					
05	244	2.81							05	261	3.00					
06	254	2.57							06	264	2.89					
07	251	2.90							07	242	3.53					
08	226	4.98							08	244	2.52					
09	236	5.79	2.32						09	245	6.15	2.24				
10	247	6.42	2.25	3.65					10	252	6.57	2.29	3.57			
11	256	6.95	2.26	3.87	1.16	2.83	4.0		11	263	7.71	2.30	4.02			
12	255	7.12	2.21	3.92	1.07	2.91	4.2		12	260	7.97	226	4.35			
13	252	7.03	2.26	3.87	1.16	2.82	4.0		13	254	7.36	229	3.97			
14	249	6.69	2.27	3.68	1.16	2.65	4.0		14	251	7.06	230	3.79			
15	242	6.67	2.24	3.65	1.18	2.42	3.8		15	248	6.55	230	3.48			
16	228	6.16			118	1.97	3.6		16	239	6.18		6.18			
17	221	5.50			118	1.97	3.6		17	223	4.33		5.52			
18	234	4.25			116	1.97	3.6		18	235	4.33		2.8			
19	237	3.47			116	1.97	3.1		19	240	2.98		3.0			
20	247	2.75			116	1.97	3.3		20	246	2.50		2.7			
21	272	2.34			116	1.97	3.7		21	249	2.51		2.7			
22	277	2.20			116	1.97	3.0		22	260	2.82		2.8			
23	289	2.07			116	1.97	3.0		23	274	2.97		3.1			

Time: 75°W
Length of time sweep: 0.8 Mc to 14.0 Mc in two minutes.

Table 19

Baton Rouge, Louisiana (30.5°N, 91.2°W)							December, 1944									
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES	F2-M3000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES
00	282	3.58							00	268	4.16					
01	292	3.70							01	260	4.24					
02	274	3.80							02	264	4.15					
03	265	3.71							03	262	3.99					
04	276	3.50							04	261	3.99					
05	285	3.25							05	260	3.26					
06	286	3.26							06	260	3.20					
07	252	4.92							07	270	3.22					
08	252	6.17							08	270	4.77					
09	273	6.53	2.48	3.90	1.27	2.60	3.4		09	268	6.47					
10	295	6.94	2.46	4.24	1.20	2.39	3.2		10	270	7.43					
11	280	7.62	2.41	4.39	1.20	3.01	3.2		11	281	7.46	223	4.35			
12	292	7.71	2.44	4.38	1.20	3.10	3.1		12	289	7.42		4.45			
13	238	7.55	2.42	4.36	1.20	3.10	3.1		13	285	7.29		224			
14	273	7.50	2.43	4.23	1.19	2.96	3.2		14	284	7.11		223			
15	269	7.37	2.40	3.75	1.26	2.64	3.2		15	289	6.98		244			
16	247	6.81			1.24	2.19	3.1		16	272	7.06		246			
17	234	5.45			1.24	2.19	3.5		17	258	6.58		2.87			
18	237	4.25			1.20	2.10	3.4		18	247	5.73					
19	264	3.56			1.19	2.06	3.6		19	262	4.63					
20	282	3.14			1.19	2.06	3.2		20	4.01						
21	295	3.03			1.19	2.06	3.3		21	4.00						
22	290	3.21			1.19	2.06	3.0		22	4.05						
23	284	3.49			1.19	2.06	3.0		23	4.06						

Time: 90°W
Length of time sweep: 1.9 Mc to 9.9 Mc in three minutes, thirty seconds.
Record centered on the hour.

Table 19

San Francisco, Calif. (37.4°N, 122.2°W)							December, 1944									
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES	F2-M3000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES
00	00	00	00	00	00	00	00	00	00	257	3.13	00	00	00	00	00
01	01	01	01	01	01	01	01	01	01	260	2.96	01	01	01	01	01
02	02	02	02	02	02	02	02	02	02	258	3.10	02	02	02	02	02
03	03	03	03	03	03	03	03	03	03	258	3.15	03	03	03	03	03
04	04	04	04	04	04	04	04	04	04	254	3.16	04	04	04	04	04
05	05	05	05	05	05	05	05	05	05	261	3.00	05	05	05	05	05
06	06	06	06	06	06	06	06	06	06	264	2.89	06	06	06	06	06
07	07	07	07	07	07	07	07	07	07	242	3.53	07	07	07	07	07
08	08	08	08	08	08	08	08	08	08	244	6.15	08	08	08	08	08
09	09	09	09	09	09	09	09	09	09	245	6.15	09	09	09	09	09
10	10	10	10	10	10	10	10	10	10	252	6.57	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	263	7.71	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	260	7.97	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13	254	2.24	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14	248	6.55	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	263	7.43	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16	272	7.46	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17	281	7.46	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18	284	7.11	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19	289	6.98	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20	272	7.06	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21	281	6.98	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22	272	7.06	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23	281	7.46	23	23	23	23	23

Time: 90°W
Length of time sweep: 1.9 Mc to 9.9 Mc in three minutes, thirty seconds.
Record centered on the hour.

Table 19

San Juan, Puerto Rico (18.4°N, 66.1°W)							December, 1944									
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES	F2-M3000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FES
00	00	00	00	00	00	00	00	00	00	268	4.16	00	00	00	00	00
01	01	01	01	01	01	01	01	01	01	260	4.24	01	01	01	01	01
02	02	02	02	02	02	02	02	02	02	264	4.15	02	02	02	02	02
03	03	03	03	03	03	03	03	03	03	262	3.99	03	03	03	03	03
04	04	04	04	04	04	04	04	04	04	261	3.99	04	04	04	04	04
05	05	05	05	05	05	05	05	05	05	260	3.26	05	05	05	05	05

Table 21

(Corrections and additions to previously issued provisional data)

Fairbanks, Alaska (64.9°N , 147.8°W)

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	fES	F2-M3000
00					3.0	3.0			
01			3.2	3.0					
02			3.2	3.0	01		278		
03			3.2	3.0	02		277		
04			3.3	2.9	03		322		
05			3.1	3.0	04		288	3.7	
06			3.0	3.0	05		331	3.6	
07			2.9	3.1	06		308	3.6	
08			2.7	3.1	07		336	3.0	
09			2.4	3.4	08		273		
10			2.7	3.4	09		245		
11			2.8	3.6	10		260		
12	222		-	-	11		280	3.2	
13			2.7	3.4	12		234	3.3	
14			2.6	3.5	13		258	3.2	
15			2.7	3.5	14		251	3.2	2.6
16			2.4	3.4	15		245	3.0	1.34
17			2.4	3.4	16		230		2.6
18			2.7	3.4	17		253		2.8
19			2.8	3.5	18		115		2.8
20			2.5	3.4	19		119		2.8
21			2.9	3.2	20		122		2.8
22			2.8	3.2	21		126		3.0
23			3.0	3.2	22		123		3.3

Time: 1600W.
Length of time sweep: 16 Mo to 0.6 Mo in fifteen minutes.

Table 23

(Corrections and additions to previously issued provisional data)

Maui, Hawaii (20.8°N , 156.5°W)

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	fES	F2-M3000
00					3.1				
01					3.3	01			
02					3.5	02			
03					-	03			
04					-	04			
05					-	05			
06					3.1	06			
07			125	2.32	3.4	07			
08			114	2.45	3.4	08			
09			110	2.77	3.4	09			
10			110	2.99	3.4	10			
11			110	3.16	3.4	11			
12			109	3.48	3.4	12			
13			108	3.24	3.4	13			
14			109	3.11	3.4	14			
15			106	2.96	3.4	15			
16			108	2.63	3.4	16			
17			-	-	3.5	17			
18			-	-	3.5	18			
19			-	-	3.2	19			
20			-	-	3.0	20			
21			-	-	3.1	21			
22			-	-	3.1	22			
23			-	-	3.0	23			

Time: 1600W.
Length of time sweep: 16 Mo to 0.6 Mo in one minute.

Table 24

(Corrections and additions to previously issued provisional data)

November, 1944

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	fES	F2-M3000
00					3.1	00			
01					3.3	01			
02					3.5	02			
03					-	03			
04					-	04			
05					-	05			
06					3.1	06			
07			125	2.32	3.4	07			
08			114	2.45	3.4	08			
09			110	2.77	3.4	09			
10			110	2.99	3.4	10			
11			110	3.16	3.4	11			
12			109	3.48	3.4	12			
13			108	3.24	3.4	13			
14			109	3.11	3.4	14			
15			106	2.96	3.4	15			
16			108	2.63	3.4	16			
17			-	-	3.5	17			
18			-	-	3.5	18			
19			-	-	3.2	19			
20			-	-	3.0	20			
21			-	-	3.1	21			
22			-	-	3.2	22			
23			-	-	3.0	23			

Time: 1600W.
Length of time sweep: 2 Mo to 16 Mo in one minute.

Table 24

(Corrections and additions to previously issued provisional data)

November, 1944

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	fES	F2-M3000
00					3.1	00			
01					3.3	01			
02					3.5	02			
03					-	03			
04					-	04			
05					-	05			
06					3.1	06			
07			125	2.32	3.4	07			
08			114	2.45	3.4	08			
09			110	2.77	3.4	09			
10			110	2.99	3.4	10			
11			110	3.16	3.4	11			
12			109	3.48	3.4	12			
13			108	3.24	3.4	13			
14			109	3.11	3.4	14			
15			106	2.96	3.4	15			
16			108	2.63	3.4	16			
17			-	-	3.5	17			
18			-	-	3.5	18			
19			-	-	3.2	19			
20			-	-	3.0	20			
21			-	-	3.1	21			
22			-	-	2.2	22			
23			-	-	3.0	23			

Time: 1600W.
Length of time sweep: 2 Mo to 16 Mo in one minute.

Table 24

(Corrections and additions to previously issued provisional data)

November, 1944

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	fES	F2-M3000
00					3.1	00			
01					3.3	01			
02					3.5	02			
03					-	03			
04					-	04			
05					-	05			
06					3.1	06			
07			125	2.32	3.4	07			
08			114	2.45	3.4	08			
09			110	2.77	3.4	09			
10			110	2.99	3.4	10			
11			110	3.16	3.4	11			
12			109	3.48	3.4	12			
13			108	3.24	3.4	13			
14			109	3.11	3.4	14			
15			106	2.96	3.4	15			
16			108	2.63	3.4	16			
17			-	-	3.5	17			
18			-	-	3.5	18			
19			-	-	3.2	19			
20			-	-	3.0	20			
21			-	-	3.1	21			
22			-	-	2.2	22			
23			-	-	3.0	23			

Time: 1600W.
Length of time sweep: 2 Mo to 16 Mo in one minute.

Table 24

(Corrections and additions to previously issued provisional data)

November, 1944

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	fES	F2-M3000
00					3.1	00			
01					3.3	01			
02					3.5	02			
03					-	03			
04					-	04			
05					-	05			
06					3.1	06			
07			125	2.32	3.4	07			
08			114	2.45	3.4	08			
09			110	2.77	3.4	09			
10			110	2.99	3.4	10			
11			110	3.16	3.4	11			
12			109	3.48	3.4	12			
13			108	3.24	3.4	13			
14			109	3.11	3.4	14			
15			106	2.96	3.4	15			
16			108	2.63	3.4	16			
17			-	-	3.5	17			
18			-	-	3.5	18			
19			-	-	3.2	19			
20			-	-	3.0	20			
21			-	-	3.1	21			
22			-	-	2.2	22			
23			-	-	3.0	23			

Time: 1600W.
Length of time sweep: 2 Mo to 16 Mo in one minute.

Table 24

(Corrections and additions to previously issued provisional data)

November, 1944

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	fES	F2-M3000

<tbl_r cells="10" ix="1" maxcspan="

Table 25

(Corrections and additions to previously issued provisional data).

November, 1944

Pitcairn I. (25.0°S., 130.0°W.)

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	F2-M3000
00	326	5.01				2.8		
01	325	4.09				3.0		
02	290	4.16				3.1		
03	272	3.27				0.1	0.1	
04	265	2.78				0.2	0.2	
05	265	2.79				0.3	0.3	
06	243	5.79				0.4	0.4	
07	239	7.50				0.5	0.5	
08	307	8.46	214	4.42	2.78	3.0	0.6	
09	325	8.85	212	4.56	3.02	4.2	0.7	
10	342	8.70	211	4.59	5.5	5.5	0.8	
11	349	8.69	206	4.65	5.2	5.2	0.9	
12	348	8.63	204	4.66	4.8	4.8	1.0	
13	346	9.07	202	4.61	4.6	4.6	1.1	
14	327	9.19	201	4.62	4.8	4.8	1.2	
15	312	9.20	202	4.35	3.11	5.0	1.3	
16	232	9.00			2.80	4.4	1.4	
17	246	8.90			2.90	3.2	1.5	
18	254	8.77			1.27		1.6	
19	271	8.67					1.7	
20	203	8.32					1.8	
21	300	7.72					1.9	
22	325	6.82					2.0	
23	331	5.98					2.1	

Time, 75°W.
Length of time sweep: 16 Mo to 0.5 Mo in fifteen minutes.

Table 27

Kermadec Is. (29.2°S., 177.9°W.)

November, 1944

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	F2-M3000
0000	286	6.70			4.8			
0100	271	6.61			3.8			
0200	256	5.72			3.0			
0310	267	4.42			3.2			
0400	282	4.10			2.8			
0500	273	4.21						
0600	270	5.53	250	3.37	129	2.14		
0700	294	6.23	247	3.99	121	2.55		
0800	304	6.84	252	4.27	117	2.92		
0900	297	7.49	235	4.45	116	3.10		
1000	320	7.82	247	4.64	115	3.23		
1100	321	8.11	246	4.64	114	3.30		
1200	319	8.21	244	4.59	115	3.30		
1300	318	8.16	246	4.63	115	3.31		
1400	306	8.05	240	4.48	118	3.26		
1500	301	7.68	256	4.32	116	3.13		
1600	302	7.54	264	4.19	118	2.81		
1700	290	7.48	259	3.70	124	2.47		
1800	273	7.62	263	2.86	133	1.95		
1850	268	7.59				4.8		
2000	272	7.11				5.0		
2100	287	6.81				5.0		
2200	296	6.62				3.8		
2300	307	6.65				4.5		

Time: Local.
Length of time sweep: 1.8 Mo to 12.8 Mo. Manual operation.

Table 28

November, 1944

Riobamba, Peru (12.0°S., 75.3°W.)

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	F2-M3000
00	326	5.01			2.8			
01	325	4.09			3.0			
02	290	4.16			3.1			
03	272	3.27			0.1			
04	265	2.78			0.2			
05	265	2.79			0.3			
06	243	5.79			0.4			
07	239	7.50			0.5			
08	307	8.46	214	4.42	3.02	4.2	0.6	
09	325	8.85	212	4.56	5.5	5.5	0.7	
10	342	8.70	211	4.59	5.2	5.2	0.8	
11	349	8.69	206	4.65	4.8	4.8	0.9	
12	348	8.63	204	4.66	4.8	4.8	1.0	
13	346	9.07	202	4.61	4.6	4.6	1.1	
14	327	9.19	201	4.62	4.8	4.8	1.2	
15	312	9.20	202	4.35	3.11	5.0	1.3	
16	232	9.00			2.80	4.4	1.4	
17	246	8.90			2.90	3.2	1.5	
18	254	8.77			1.27		1.6	
19	271	8.67					1.7	
20	203	8.32					1.8	
21	300	7.72					2.0	
22	325	6.82					2.1	
23	331	5.98					2.2	

Time: 150°W.
(Corrections to previously issued provisional data)

Table 28

Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	fES	F2-M3000
00	266	6.70			4.8			
01	271	6.61			3.8			
02	256	5.72			3.0			
0310	267	4.42			3.2			
0400	282	4.10			2.8			
0500	273	4.21						
0600	270	5.53	250	3.37	129	2.14		
0700	294	6.23	247	3.99	121	2.55		
0800	304	6.84	252	4.27	117	2.92		
0900	297	7.49	235	4.45	116	3.10		
1000	320	7.82	247	4.64	115	3.23		
1100	321	8.11	246	4.64	114	3.30		
1200	319	8.21	244	4.59	115	3.30		
1300	318	8.16	246	4.63	115	3.31		
1400	306	8.05	240	4.48	118	3.26		
1500	301	7.68	256	4.32	116	3.13		
1600	302	7.54	264	4.19	118	2.81		
1700	290	7.48	259	3.70	124	2.47		
1800	273	7.62	263	2.86	133	1.95		
1850	268	7.59				4.8		
2000	272	7.11				5.0		
2100	287	6.81				5.0		
2200	296	6.62				3.8		
2300	307	6.65				4.5		

Time: Local.
Length of time sweep: 2.5 Mo to 12 Mo in two minutes.

Table 28

Campbell I. (52°09' S, 169°09' E)						November, 1944											
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000
00	265	5.18							00								
01	263	4.73							01								
02	265	4.28							02								
03	246	3.83							03								
04	248	3.52							04								
05	244	4.10							05								
06	249	4.71	2.34	2.91	1.03	2.74			06								
07	312	5.31	2.35	4.00	1.01	2.74			07								
08	306	5.78	2.38	4.22	0.90	2.95			08								
09	331	6.12	226	4.37	0.99	3.09			09								
10	308	6.20	228	4.42	1.00	3.20			10								
11	304	6.28	202	4.49	1.00	3.20			11								
12	300	6.41	206	4.45	0.98	3.18			12								
13	322	6.20	211	4.50	1.01	3.20			13								
14	334	8.07	215	4.44					14								
15	322	6.24	214	4.32	1.00	3.07			15								
16	303	6.25	232	4.08	1.00	2.89			16								
17	288	6.48	240	3.76	1.02	2.61			17								
18	280	8.81	244	3.21	1.04	2.07			18								
19	260	7.04							19								
20	244	8.83							20								
21	246	6.20							21								
22	252	6.88							22								
23	246	5.54							23								

Time, 1600G.
Length of time sweep: 1 Mo to 12 Mo. Manual operation.

Table 31

Corrections and additions to previously issued provisional data.

Hawaii (20°8' N, 156°59' W)

October, 1944

Hawaii (20°8' N, 156°59' W)						October, 1944											
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000
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								

Time, 1600G.
Length of time sweep: 1 Mo to 16 Mo in one minute.

Table 32

Length of time sweep: 0.5 Mo to 16 Mo in four minutes.

October, 1944

Pitcairn I. (26°09'S, 130.00W)						October, 1944											
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000
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								

October, 1944

Pitcairn I. (26°09'S, 130.00W)						October, 1944											
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000
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								

October, 1944

Pitcairn I. (26°09'S, 130.00W)						October, 1944										
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs</th

Table 33

(Corrections and additions to previously issued final data.)

Kermadee Is. (29°20'S, 177°9'W)							October, 1944										
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M3000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M3000
0010					3°1				00	3°37							2°9
0100					2°8				01	3°39							2°9
0200					2°5				02	3°42							2°9
0310					2°1				03	3°45							2°9
0400					1°9				04	3°28							3°0
0500									05	3°39							3°0
0600									06	3°87							3°1
0700									07	5°21							3°2
0800									08	6°06							3°2
0900									09	6°66							3°1
1000									10	7°08							3°0
1100									11	7°20							2°9
1200									12	7°83							2°9
1300									13	8°20							2°9
1400									14	8°58							2°9
1500									15	8°60							3°0
1600									16	8°44							3°0
1700									17	7°96							3°1
1800					2°7				18	7°73							3°1
1850									19	6°74							3°2
2000									20	4°92							3°1
2100									21	3°84							3°0
2200									22	3°62							3°0
2300									23	3°45							3°0
2800																	

Time: Local.
Length of time sweep: 1.8 Mo to 12.8 Mo. Manual operation.Time: 15°G.
Length of time sweep: 2 Mo to 16 Mo in one minute.
Table 36

Table 35

Slough, England (51°5'N, 0°6'W)							September, 1944										
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M3000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	FEs	F2-M3000
00		3°31							00	3°38							
01		3°23							01	3°10							
02		3°12							02	3°08							
03		3°01							03	2°99							
04		2°91							04	2°82							
05		2°63							05	2°68							
06		3°66							06	4°15							
07		4°47							07	6°15							
08		4°33							08	6°67							
09		5°08							09	6°85							
10		5°37							10	7°28							
11		5°45							11	8°69							
12		5°35							12	9°51							
13		5°23							13	10°05							
14		5°15							14	10°35							
15		5°01							15	10°26							
16		5°46							16	9°61							
17		5°59							17	8°41							
18		5°98							18	7°56							
19		6°98							19	6°09							
20		5°55							20	5°21							
21		4°70							21	4°00							
22		3°87							22	3°79							
23		3°44							23	3°62							

Time: 0°
Length of time sweep: 0.5 Mo to 16 Mo in four minutes.Simons town, Union of S. Africa (33°8'S, 18°7'E)
Table 34
(Corrections and additions to previously issued provisional data)Delhi, India (28°6'N, 77°2'E)
Table 35
(Corrections and additions to previously issued provisional data)

September, 1944

September, 1944

Time: 75°E.

Table 37

(Corrections and additions to previously issued final data)

Kermadec Is. (29°2'S, 177°9'W)								September, 1944							
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000
0015								00							
0100								01							
0200								02							
0300								03							
0400								04							
0500								240							
0600								06							
0700								07							
0800								08							
0900								09							
1000								10							
1100								11							
1200								12							
1300								13							
1400								14							
1500								15							
1600								16							
1700								17							
1800								18							
1850								19							
2000								20							
2100								21							
2200								22							
2300								23							

Time: Local.
Length of time sweep: 1.8 Mc to 12.8 Mc. Manual operation.

Table 39

Simonstown, Union of S. Africa (33°8'S, 18°7'E)								September, 1944							
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000
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							

Time: Local.
Length of time sweep: 1.8 Mc to 12.8 Mc in one minute.

Table 40

Watheroo, Western Australia (30°30'S, 116°9'E)								September, 1944							
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000
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							

Time: 0°

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

August, 1944

Slough, England (51°50'N, 0°67'W)								August, 1944							
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000
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							

Time: 0°

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

Watheroo, Western Australia (30°30'S, 116°9'E)								August, 1944							
Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000	Time	h°F2	f°F2	h°F1	f°F1	h°E	f°E	F2-M5000
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															

Table 42

(Corrections and additions to previously issued final data)

Kernadee Is. (29°20'S, 177°9'W)

August, 1944

Time	h F2	f°F2	h°F1	f°F1	h'E	f'E	fES	F2-M3000
00	3.49				5.5			
01								
02								
03					2.5			
04	2.62							
05					2.1			
06								
07			2.68			1.66		
08								
09								
10								
11	292							
12								
13			231					
14		5.82						
15					4.8			
16						15		
17	249		245	3.00	116	5.8		
18						3.5		
19						3.2		
20						3.2		
21						2.8		
22						2.8		
23						2.4		

Time: Local.
Length of time sweep: 1.8 Mc to 12.8 Mc. Manual operation.

Table 43

Slough, England (51°50'N, 0°30'W)

July, 1944

Time	h F2	f°F2	h°F1	f°F1	h'E	f'E	fES	F2-M3000
00	313	3.86				3.0		
01	312	3.61				5.0		
02	312	3.18				3.0		
03	310	5.01				3.0		
04	306	3.21				2.0		
05	306	3.73				3.0		
06	258	4.19				3.0		
07	230	4.60				3.2		
08	288	4.72				3.1		
09	272	1.83				3.2		
10	289	4.81				3.1		
11	297	4.35				3.1		
12	276	4.34				3.2		
13	285	4.70				3.1		
14	307	4.67				3.0		
15	297	4.70				3.1		
16	314	4.36				2.9		
17	308	4.75				3.0		
18	296	4.36				3.1		
19	296	5.32				3.1		
20	282	5.35				3.2		
21	287	5.70				3.1		
22	298	5.33				3.0		
23	302	4.33				3.0		

Time: 0°.
Length of time sweep: 0.5 Mc to 16 Mc in four minutes.

(Corrections and additions to previously issued final data).

Watheroo, Western Australia (30°3'S, 115°9'E)

August, 1944

Time	h F2	f°F2	h°F1	f°F1	h'E	f'E	fES	F2-M3000
00	0.1				0.5			
01					0.4			
02					0.6			
03					0.7			
04	2.62					2.22		
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

Time: 1200E.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Table 44

(Corrections and additions to previously issued final data).

Time	h F2	f°F2	h°F1	f°F1	h'E	f'E	fES	F2-M3000
00	0.1				0.5			
01					0.2			
02					0.3			
03					0.4			
04					0.5			
05					0.6			
06					0.7			
07					0.8			
08					0.9			
09					1.0			
10					1.1			
11					1.2			
12					1.3			
13					1.4			
14					1.5			
15					1.6			
16					1.7			
17					1.8			
18					1.9			
19					2.0			
20					2.1			
21					2.2			
22					2.3			
23					2.4			

July, 1944

Kermadec Is. (29°2'S, 177°9'W)

Time	h F2	f°F2	h°F1	f°F1	h'E	f'E	fES	F2-M3000
00	0.1				0.5			
01					0.2			
02					0.3			
03					0.4			
04					0.5			
05					0.6			
06					0.7			
07					0.8			
08					0.9			
09					1.0			
10					1.1			
11					1.2			
12					1.3			
13					1.4			
14					1.5			
15					1.6			
16					1.7			
17					1.8			
18					1.9			
19					2.0			
20					2.1			
21					2.2			
22					2.3			
23					2.4			

Time	h F2	f°F2	h°F1	f°F1	h'E	f'E	fES	F2-M3000
00	0.1				0.5			
01					0.2			
02					0.3			
03					0.4			
04					0.5			
05					0.6			
06					0.7			
07					0.8			
08					0.9			
09					1.0			
10					1.1			
11					1.2			
12					1.3			
13					1.4			
14					1.5			
15					1.6			
16					1.7			
17					1.8			
18					1.9			
19					2.0			
20					2.1			
21					2.2			
22					2.3			
23					2.4			

Time: Local.
Length of time sweep: 1.8 Mc to 12.8 Mc. Manual operation.

Table 45

Kermadec Is. (29°20'S, 177°40'W)

June, 1944

Time	h°F2	f°F2	h°Fl	f°Fl	h°E	f°E	fEs	F2-M3000
00	264	3.38						
01								
02								
03	264	3.72						
04	265	3.40						
05	241	3.09						2.0
06	246	3.12						
07	230	3.96						
08	236	4.92	216	3.03	118	2.00		
09	257	5.10	226	3.62	117	2.41		
10	266	5.27	239	3.94	116	2.70		
11	274	5.13	235	4.02	113	2.89		
12	294	5.03	240	4.05	112	2.90		
13	277	5.31	236	3.98	112	2.92		
14	271	5.31	229	3.93	114	2.73	3.0	
15	267	5.42	228	3.65	113	2.58	4.0	
16	251	5.20	232	3.18	112	2.26	3.5	
17	230	4.61			106	1.98	3.3	
18	235	3.96						3.2
19	239	3.56						3.0
20	246	3.58						2.2
21	252	3.49						
22								
23								

Time: Local.

Length of time sweep: 1.8 Mc to 12.8 Mc. Manual operation.

TABLE 46

Washington, D.C.

IONOSPHERE DATA - I

Ionosphere Station

National Bureau Of Standards

RESTRICTED

TIME: 75° W MERIDIAN

Hourly values of h_{F_2} in $\frac{1}{10} \text{ m}$ for December 1944
(Month)

(Institution)

S.M.O.
U.T.D.

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	24	Mean
1	260	280	(260)	240	240	230	230	220	220	240	260	250	250	260	260	(250)	220	220	240	240	240	240	240	240	240	5870
2	(240)	(260)	260	240	240	240	(280)	250	240	240	260	260	260	260	260	260	220	220	240	240	240	240	240	240	240	6070
3	260	240	260	260	220	240	220	210	220	240	240	240	240	250	240	240	230	230	220	220	240	240	250	260	(260)	5770
4	260	250	260	240	(240)	220	220	220	220	240	240	240	240	250	(250)	240	240	230	230	220	220	240	240	250	(280)	5790
5	280	260	260	240	240	220	220	240	240	220	280	280	280	260	C	C	240	220	210	220	240	(270)	(300)	300	280	5550
6	290	260	260	220	220	230	230	240	240	220	220	220	220	260	260	240	240	240	240	240	240	240	240	240	(280)	5830
7	270	240	260	230	240	240	(200)	220	220	230	240	230	230	240	240	240	230	230	240	240	240	240	250	250	300	5720
8	270	280	260	240	240	220	250	230	230	260	240	260	250	240	260	260	260	260	260	260	260	260	260	260	280	5910
9	260	250	250	260	240	240	240	220	220	220	260	(270)	260	260	260	260	260	260	260	260	260	260	260	260	260	5830
10	280	250	260	260	240	240	230	260	220	220	260	240	240	250	260	260	260	260	260	260	260	260	260	260	260	5910
11	(280)	280	300	240	240	230	240	240	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	(280)	280
12	280	260	260	240	240	220	220	240	240	220	220	220	220	230	230	230	230	230	230	230	240	240	240	240	240	280
13	280	280	260	250	240	220	220	240	260	220	230	250	260	260	270	270	240	240	240	240	240	240	240	240	240	270
14	280	280	260	240	240	240	(230)	(300)	260	240	240	C	C	C	C	260	240	230	230	230	230	230	230	230	230	230
15	(280)	270	280	250	250	260	240	(270)	240	240	240	260	250	250	250	(240)	240	240	240	240	240	240	240	240	240	260
16	260	240	280	300	300	280	280	300	300	280	280	280	280	280	280	"	(300)	240	240	240	240	240	240	240	240	240
17	260	300	300	280	(260)	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
18	(300)	320	320	320	320	260	260	280	280	260	240	(240)	250	C	C	260	230	230	230	230	230	230	230	230	230	230
19	280	(280)	280	300	300	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
20	(300)	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
21	320	280	280	250	260	260	240	260	260	240	220	220	220	240	240	240	240	240	240	240	240	240	240	240	240	240
22	280	270	270	260	260	240	240	220	220	240	220	220	240	240	240	240	240	240	240	240	240	240	240	240	240	240
23	300	(290)	260	250	240	240	240	240	230	230	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
24	(280)	280	280	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
25	300	320	260	240	240	260	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
26	(280)	270	270	260	260	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
27	280	270	270	260	260	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
28	(320)	(300)	(280)	280	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
29	320	280	280	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
30	260	250	240	240	220	220	220	220	220	220	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
31	270	270	270	230	230	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
Sum	9680	8480	8320	7790	7350	7310	7860	7780	7080	6920	6910	7440	7320	7470	7510	6950	6640	7010	7350	7660	8150	8030	8680	18350		
Mean ¹	280	274	268	251	245	244	254	251	228	236	247	256	255	252	249	242	228	221	234	237	247	272	277	289		
Mean ²	278	270	265	250	242	239	251	246	227	234	245	252	250	247	240	240	228	219	231	235	240	271	277	289		
Median	280	280	260	240	240	240	240	240	220	220	240	260	260	260	260	260	260	260	260	260	260	260	260	260	260	

¹ For all days of the month² For quiet days h_{F_2}

December, 1944

TABLE 47

IONOSPHERE DATA-2

Washington, D. C.

Ionosphere Station

(Institution) National Bureau Of Standards

TIME: 75° W MERIDIAN

RESTRICTED

Hourly values of $f_0 F_2$ in Mc for December 1944
(Month)Records measured by S.M.O.
J.T.D.

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	Mean	
1	2.3 F	2.0 F	2.3 F	3.2 F	3.3 F	3.5 F	3.2 F	4.0 F	5.3	6.2	5.6	4.2	3.7	2.7	1	0.6 F	0.5	0.3	0.2	0.2 F	0.2 F	0.2 F	0.2 F	2.5 F		
2	3.3 F	2.9 F	3.1 F	3.9 F	3.9 F	3.2 F	2.8 F	2.5 F	2.3 F	3.0 F	5.0	6.1	6.0	6.7	6.7	7.0	7.2	6.2	5.0	4.0 F	3.0 F	2.0 F	2.0 F	1.0 F		
3	1.9 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.0 F		
4	1.28 F	1.38 F	1.43 F	1.45 F	1.43 F	1.45 F	1.46 F	1.46 F	1.46 F	1.46 F	1.46 F	1.46 F	1.46 F	1.46 F	1.46 F											
5	1.71 F	1.7 F	2.5 F	2.7 F	2.7 F	2.2 F	2.2 F	2.2 F	1.7 F	2.7 F	3.4 F	4.9	6.1	5.2	5.9	6.8	7.2	6.2	7.1	6.7	6.7	6.7	6.7	6.7	1.6 F	
6	1.49 F	1.91 F	2.6 F	3.2 F	3.2 F	3.3 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	2.2 F										
7	1.9 F	1.7 F	2.1 F	2.7 F	2.8 F	2.9 F	2.9 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F									
8	1.7 F	1.7 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F	1.81 F		
9	(3.3) F	3.5 F	3.4 F	3.5 F	3.5 F	3.6 F	3.6 F	3.4 F	3.4 F	3.4 F	(3.3)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	(3.2)	2.2 F	
10	2.1 F	2.2 F	2.6 F	2.7 F	3.2 F	3.2 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	2.2 F										
11	2.1 F	2.1 F	3.2 F	3.4 F	3.4 F	3.7 F	3.3 F	3.4 F	3.4 F	3.4 F	3.4 F	3.4 F	3.4 F	3.4 F	3.4 F	3.4 F	2.3 F									
12	(2.6) F	2.9 F	3.4 F	3.6 F	3.7 F	3.7 F	3.7 F	3.7 F	3.7 F	3.7 F	3.7 F	3.7 F	3.7 F	2.3 F												
13	2.0 F	2.2 F	2.8 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	2.3 F													
14	2.3 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	2.2 F	
15	(2.3) F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	
16	2.5 F	2.2 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	2.6 F	
17	(2.3) F	2.3 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	1.9 F	
18	1.57 A	1.41 A	1.31 F	1.31 F	1.31 F	1.31 F	1.31 F	1.31 F	1.31 F	1.31 F	1.31 F	1.31 F														
19	1.8 F	1.8 F	1.7 F	1.8 F	1.8 F	2.1 F	2.2 F	2.2 F	2.8 F	1.49 F	5.3	6.6	8.0	9.1	7.4	[2.6] C	1.76	7.0	5.9	4.7	3.0 F	3.0 F	1.8 F	1.8 F	1.8 F	
20	1.9 F	1.7 F	1.7 F	1.8 F	1.8 F	2.0 F	2.6 F	2.6 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F	2.5 F								
21	2.5 F	2.7 F	2.9 F	2.9 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F	3.0 F												
22	2.1 F	2.3 F	2.5 F	2.5 F	2.7 F	2.7 F	2.8 F	2.8 F	2.9 F	2.7 F	6.0	6.6	(9.0)	7.0	6.4	1.70	7.0	6.1	5.5	4.0 F	3.3 F	2.6 F	2.3 F	2.3 F	1.7 F	
23	2.3 F	2.2 F	2.2 F	2.2 F	2.6 F	2.6 F	3.1 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F	3.2 F									
24	1.9 F	2.0 F	2.1 F	2.1 F	2.8 F	3.0 F	3.2 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F									
25	1.9 F	1.6 F	1.9 F	2.1 F	2.7 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F	3.3 F											
26	(2.6) F	(2.5) F	2.7 F	2.7 F	3.4 F	3.8 F	3.6 F	3.1 F	3.1 F	3.1 F	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	
27	(3.2) F	3.4 F	3.7 F	3.6 F	3.3 F	3.2 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F	3.1 F										
28	1.6 F	1.6 F	1.8 F	1.8 F	1.8 F	1.3 F	1.3 F	1.5 F	1.5 F	1.5 F	4.3	(5.3)	7.0	2.6 F	4.8	6.8	6.2	6.4	4.9	3.0 F	2.6	3.2 F	2.3	3.5 F	3.5 F	1.6 F
29	1.7 F	1.7 F	1.8 F	1.8 F	2.3 F	2.6 F	2.2 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F									
30	2.1 F	2.3 F	2.5 F	2.6 F	3.0 F	3.0 F	2.8 F	2.8 F	2.8 F	2.8 F	2.8 F	2.8 F	2.8 F	2.8 F	2.8 F	2.8 F										
31	1.8 F	2.2 F	2.6 F	3.2 F	3.2 F	2.9 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F	1.8 F										
Sum	68.1	68.4	76.0	85.3	87.8	87.0	79.7	89.9	154.4	173.7	179.9	187.6	198.4	20.38	20.68	18.48	60.51	127.4	107.6	85.2	72.5	68.2	64.3	50.2	33.7	
Mean ¹	2.20	2.21	2.45	2.75	2.83	2.81	2.57	2.90	4.98	5.79	6.42	6.95	7.12	7.03	6.69	6.67	6.16	5.55	4.25	3.47	2.75	2.34	2.20	2.07	1.46	
Mean ²	2.23	2.26	2.54	2.88	2.98	2.96	2.70	2.99	5.26	5.79	6.39	6.92	7.06	6.97	6.67	6.67	6.10	5.50	4.22	3.30	2.59	2.28	2.21	2.12	1.46	
Median	2.1	2.2	2.2	2.5	2.7	2.8	2.9	2.5	2.9	2.5	2.9	5.1	5.7	6.55	6.7	6.05	5.35	4.15	3.4	2.6	2.3	2.1	2.0	2.0	1.46	

¹ For all days of the month² For quiet daysf₀ F₂

December, 1944

TABLE 48

Washington, D. C. Ionosphere Station

(Institution) National Bureau Of Standards

TIME: 75° N MERIDIAN

IONOSPHERE DATA-3

Half Hourly values of $\text{f}^{\circ}\text{F}_2$ for December 1944

(Month)

RESTRICTED

Records measured by: S.M.O.

J.T.D.

Day	0030	0110	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Sum	Mean				
1	2.3 F	2.2 F	(2.6) F	(3.2) F	3.5 F	3.5 F	4.5 F	6.0	6.3	6.6	7.0	7.2	6.6	[6.9] F	6.5	5.8	(4.6)	3.7 F	3.6 F	2.6 F	2.7 F	3.0 F	3.1 F	107.5	107.5					
2	3.2 F	(2.8) F	(3.5) F	3.3 F	2.7 F	(2.8) F	(2.3) F	3.7 F	4.6	5.2	6.0	6.6	6.2	7.1	7.0	6.8	6.1	4.4	4.0 F	(3.3) F	(2.0) F	(1.9) F	(2.0) F	99.6	99.6					
3	(1.9) F	(1.8) F	F	(2.7) F	(2.8) F	4.4 F	4.3 F	(4.7) F	6.3	6.4	6.0	(7.7)	5.8 F	(6.8) F	6.7	(6.5)	5.1	4.4	3.3 F	3.2	(3.1) F	(3.1) F	(2.7) F	(2.4) F	103.7	103.7				
4	(3.5) F	(4.3) F	(4.5) F	(4.4) F	(4.3) F	3.7 F	(2.7) F	4.4 F	5.3	5.4	5.8	6.0	[6.9] F	6.6	5.4 F	5.3	5.4 F	4.1 F	3.3 F	3.1 F	2.0 F	1.8 F	A	(1.8) F	100.0	100.0				
5	1.7 F	2.0 F	2.5 F	(2.4) F	2.3 F	1.8 F	1.9 F	3.9 F	5.5	5.5	(6.5) F	6.6	6.2	C	C	6.4 F	(6.2)	5.1 F	4.5 F	3.1 F	2.6 F	(2.2) F	2.1 F	2.0 F	1.8 F	79.3	79.3			
6	(1.9) F	2.1 F	3.1 F	3.6 F	3.2 F	3.1 F	2.8 F	4.1 F	5.8	5.5	(5.4) F	(6.9)	6.9	6.2	(5.8) F	(5.4)	4.5 F	(2.9) F	2.1 F	(1.6) F	(1.9) F	(1.6) F	(1.6) F	95.6	95.6					
7	(1.7) F	(1.7) F	(2.5) F	2.8 F	2.7 F	(2.8) F	(2.6) F	4.2 F	(5.4) F	6.3	5.9	5.8	5.4 F	(5.1)	6.2	4.9	2.9	(2.3) F	2.2 F	2.0 F	2.0 F	2.0 F	(1.8) F	90.3	90.3					
8	1.6 F	1.6 F	1.8 F	(2.2) F	2.8 F	2.3 F	2.6 F	4.1	5.4	5.5	5.8	6.6	6.6	6.2	5.4 F	6.2	5.2	3.7 F	3.5 F	3.0 F	2.8 F	2.2 F	2.1 F	2.6 F	2.6 F	91.8	91.8			
9	(3.2) F	3.5 F	3.5 F	3.7 F	3.7 F	3.7 F	3.5 F	3.2 F	4.6	5.9	6.6	6.4	(5.4)	6.3	6.7	6.8	5.9	5.5	4.4	3.8	3.4	3.2 F	2.8 F	2.3 F	(2.2) F	106.5	106.5			
10	2.1 F	2.3 F	2.6 F	3.0 F	3.2 F	3.0 F	2.7 F	4.6 F	5.4	6.0	6.8	6.2 F	7.2	7.4	(7.2)	(5.7)	5.9	5.2	3.6 F	3.0 F	2.9 F	2.1 F	(1.9)	(2.0) F	101.3	101.3				
11	2.3 F	(2.8) F	3.5 F	3.5 F	3.5 F	3.6 F	3.1 F	3.1 F	3.1 F	3.1 F	(4.4) F	5.7	6.4 F	(6.0)	(6.2)	(6.6)	(6.5) F	(6.5) F	6.5	5.7	3.7 F	3.5 F	2.6 F	(2.4) F	2.3 F	2.3 F	102.8	102.8		
12	2.7 F	(3.1) F	3.5 F	3.5 F	3.8 F	3.8 F	3.1 F	2.8 F	3.8 F	3.1 F	5.2	(5.1)	6.3	6.8	7.2	(7.4)	(6.7)	(6.2)	5.3	(4.2) F	3.7	(2.8)	2.3 F	2.3 F	2.0 F	2.0 F	101.6	101.6		
13	2.0 F	2.3 F	3.5 F	3.8 F	3.7 F	3.7 F	3.0 F	2.7 F	4.0 F	4.5 F	5.4 F	6.0	5.6	(7.4)	7.6	8.8	8.2 F	7.6	6.4	4.8	4.3	3.6 F	3.4	3.1 F	2.7 F	2.8 F	113.3	113.3		
14	(2.2) F	(2.5) F	(3.4) F	(3.4) F	(3.4) F	(3.4) F	(2.7) F	(2.7) F	(1.8) F	(2.1) F	(1.8) F	(2.1) F	(1.8) F	(2.1) F	92.3	92.3														
15	(1.8) F	94.0	94.0																											
16	(2.8) F	2.4 F	2.1 F	2.5 F	2.4 F	2.2 F	2.3 F	2.9 F	2.9 F	2.9 F	(3.0) F	C	C	C	C	G	G	G	4.3 F	4.3 F	4.6 F	3.9 F	3.8 F	3.7 F	3.6 F	2.5 F	1.8 F	(1.7) F	56.9	56.9
17	2.1 F	4.5 F	1.8 F	1.7 F	(1.3) F	(1.3) F	(1.2) F	(1.2) F	4.0 F	5.2 F	6.4 F	6.6 F	8.7	(9.7) F	9.1 F	8.8 F	8.9 F	(9.7) F	9.0 F	6.2 F	5.3 F	4.9 F	2.9 F	(1.7) F	(1.7) F	(1.7) F	(1.7) F	112.9	112.9	
18	(1.6) F	(1.3) F	(1.7) F	(1.4) F	1.6 F	1.6 F	1.8 F	(1.5) F	3.4 F	4.4 F	C	C	(7.5) F	7.6	7.0	6.6	6.7	5.5	(3.5)	(2.8) F	(1.8) F	(1.7) F	1.6 F	(1.8) F	(1.8) F	(1.8) F	81.0	81.0		
19	(1.5) F	(1.8) F	(1.6) F	1.6 F	1.9 F	2.2 F	2.2 F	2.2 F	4.0 F	6.7	5.4	(6.7)	9.0	8.6	7.2	(7.8) F	7.2	6.0	4.6 F	3.9	2.3 F	(2.1)	(2.0)	A	(1.9)	94.5	94.5			
20	1.5 F	(1.8) F	1.7 F	1.9 F	2.3 F	2.7 F	1.7 F	3.8 F	6.4 F	(5.6)	(7.8) F	7.6	(7.8) F	7.1	6.6	7.2	6.7	6.7	4.6 F	3.8	3.2 F	2.7 F	(2.5) F	2.6 F	2.6 F	2.6 F	102.5	102.5		
21	2.3 F	2.8 F	2.8 F	2.8 F	(2.9) F	(3.0) F	(2.7) F	(1.9) F	3.6 F	5.4 F	C	C	8.4	(8.0)	6.5	(7.1)	6.7	6.0	(4.9) F	(4.4) F	2.9	(2.9) F	(1.8) F	(1.8) F	2.0	2.0	89.9	89.9		
22	2.2 F	2.3 F	2.3 F	2.3 F	2.6 F	2.6 F	2.6 F	2.8 F	2.8 F	2.8 F	3.9	5.0	6.8	7.4	8 F	7.2	6.6	(6.6) F	(6.6) F	5.1	4.5 F	2.8 F	3.0 F	2.5 F	(2.3) F	(2.3) F	106.0	106.0		
23	(2.2) F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	2.1 F	97.9	97.9		
24	1.9 F	(2.0) F	2.1 F	2.4 F	2.4 F	3.2 F	3.2 F	2.9 F	2.9 F	2.9 F	(1.1)	5.4 F	(6.8)	5.9	7.2	6 F	6.3	6.4 F	5.8	5.5	5.1	3.6 F	3.3 F	2.7 F	2.3 F	2.0 F	2.0 F	97.6	97.6	
25	1.7 F	1.8 F	(2.2) F	3.1 F	3.4 F	3.2 F	3.2 F	3.1 F	4.1	5.4 F	5.8	6.9	6.4 F	6.8	6.3	(6.8)	6 F	5.9	5.0	4.3	(3.9) F	2.3 F	2.3 F	2.2 F	2.2 F	(2.5) F	100.3	100.3		
26	2.5 F	(2.6) F	(2.5) F	2.1 F	2.0 F	111.1	111.1																							
27	3.4 F	3.4 F	3.7 F	3.6 F	3.3 F	3.3 F	3.0 F	2.6 F	3.7 F	5.2	5.2	(5.6) F	6.2 F	6.2 F	6.0 F	7.0 F	C	C	C	C	C	C	C	C	C	C	C	C	94.0	94.0
28	(1.7) F	(1.5) F	(1.6) F	(1.4) F	(1.4) F	(1.3) F	(1.3) F	(1.2) F	93.2	93.2																				
29	1.8 F	1.8 F	2 F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	(1.4) F	101.3	101.3		
30	2.0 F	2.5 F	2.7 F	3.0 F	(2.5) F	(2.1) F	(2.1) F	2 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	4 F	100.4	100.4
31	2.8 F	(2.6) F	(3.2) F	(3.3) F	(2.4) F	(2.4) F	(2.4) F	1.7 F	(1.5) F	(1.5) F	(1.5) F	5.6	7 F	7 F	6.4 F	6.4 F	6 F	6.1	7 F	7 F	6.8 F	6.8 F	6.8 F	6.8 F	6.8 F	6.8 F	6.8 F	6.8 F	96.0	96.0
Sum	68.5	71.5	80.7	87.8	87.2	87.2	87.2	76.5	76.5	76.5	10.8 F	17.0 F	64.1	64.1																
Mean	2.21	2.31	2.60	2.83	2.81	2.68	2.68	2.47	3.97	3.97	6.0 F	2.1	2.1																	
Median	2.1	2.2	2.38	2.70	2.78	2.90	2.81	2.58	4.01	5.51	6.08	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	2.1	2.1		

¹For all days of the month²For quiet days

December, 1944

F^o

TABLE 49
IONOSPHERE DATA-4
Washington, D. C.
Ionosphere Station
(Institution) National Bureau Of Standards

Location)

TIME: 75° W MERIDIAN

Hourly values of h_{F_1} in m for December 1944
(Month)

Records measured by S.M.O.
J.T.O.

RESTRICTED

Records measured by S.M.O.
J.T.O.

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	Sum	Mean	
1											240	220	220	220	220	220	220	220	220	C					4340	144.67	
2											220	220	180	180	180	220	220	220	220	210					1450	58.75	
3											220	220	220	220	220	220	220	220	220	220					1100	41.67	
4											220	220	190	190	190	220	220	220	220	220					1280	49.33	
5											220	220	220	220	220	220	220	220	220	C	200				860	32.00	
6											(210)	200	200	220	180	240	230								1040	38.00	
7											230	240	230	240	240	240	240	240	240	220					1160	42.00	
8											220	240	220	240	240	240	240	240	240	230					1150	41.67	
9											230	230	230	240	240	240	240	240	240	(250)					940	36.67	
10											210	A	A	240	240	240	240	240	240	220					870	32.33	
11											220	220	200	230	230	230	230	230	230	220					1090	36.33	
12											C	220	220	220	220	220	220	220	220	220					890	30.00	
13											220	260	240	240	240	240	240	240	240	240					200	66.67	
14											C	C	C	C	C	C	C	C	240	230				470	15.67		
15											(220)	220	220	220	220	220	220	220	220	220					1320	44.00	
16											260	C	K	C	K	C	K	C	230	260	K			750	25.00		
17											K	230	K	230	K	230	K	230	K	240	K	240	K		1410	47.00	
18											(230)	200	C	C	C	C	C	C	240	220				890	30.00		
19											(210)	220	220	220	220	220	220	220	220	220	[200]				1280	42.67	
20											200	240	220	220	220	220	220	220	220	220					1320	44.00	
21											C	C	C	C	C	C	C	C	200	240	240			900	30.00		
22											240	240	230	230	230	230	230	230	230	220	[220]				1390	46.33	
23											240	240	220	220	220	220	220	220	220	220	220				1340	44.67	
24											230	220	220	220	220	220	220	220	220	220	220				1390	46.33	
25											230	230	230	230	230	230	230	230	230	220	220				1150	38.33	
26											A	A	230	230	230	230	230	230	230	230	230	230				1160	38.67
27											220	260	K	260	K	260	K	260	K	260	K	260	K		1720	57.33	
28											230	240	220	220	220	220	220	220	220	220	[230]				1380	46.00	
29											240	240	220	220	220	220	220	220	220	200	200				1100	36.67	
30											220	(220)	220	220	220	220	220	220	220	A	A				1100	36.67	
31											260	240	220	220	220	220	220	220	220	220	220				1160	38.67	
											1860	5630	5890	5970	6780	6580	2680								35400	1180	
Sum											232	225	226	221	226	227	224										
Mean ¹											228	223	225	218	225	225	223										
Mean ²											230	220	220	220	220	220	220										
Median																											

¹ Far all days of the month ² For quiet days

h_{F_1}

December, 1944

TABLE 50
IONOSPHERE DATA-5
Washington, D.C.
(Institution)
Ionosphere Station
National Bureau Of Standards

Day	TIME: 75° W MERIDIAN																								Records measured by: S. M. Q. J. T. D.	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean	
1																										3.6
2																										2.59
3																										
4																										7.6
5																										
6																										4.8
7																										3.7
8																										
9																										
10																										
11																										
12																										
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24																										
25																										
26																										
27																										
28																										
29																										
30																										
31																										
Sum																										
Mean ¹																										
Mean ²																										
Median																										

1 For all days of the month

2 For quiet days

December, 1944

f° F₁

TABLE 51
IONOSPHERE DATA - 6
Washington, D.C.
(Location)
National Bureau Of Standards
(Institution)

RESTRICTED

TIME: 75° W MERIDIAN
Hourly values of h_E^1 for December 19th 4th
(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	24	25	26	27	28	29	30	31	Mean ¹	Mean ²	Median
1																																			
2																																			
3																																			
4																																			
5																																			
6																																			
7																																			
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28																																			
29																																			
30																																			
31																																			
Jan																																			
Mean ¹																																			
Mean ²																																			
Median																																			

For all days of the month

2 For quiet days

Records measured by S.M.O.
J.T.D.

December, 1944

h_E^1

TABLE 52

IONOSPHERE DATA - 7

Washington, D.C. Ionosphere Station

(Institution) National Bureau Of Standards

TIME: 75° W MERIDIAN

Hourly values of $f^{\circ} E_{in}$ for December 1944 (Month)

RESTRICTED

Records measured by S.M.Q.

J.T.D.

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	24	25	26			
1											A	(2.5)	[2.6] ^A	2.8	[3.0] ^A	[2.8] ^A	2.6	[2.4] ^F	(1.9)									2.0	6	
2											[1.9] ^F	2.3	(2.6)	(2.8)	(2.9)	(2.7)	2.6	[2.3] ^A	(1.8)									2.1	9	
3											A	[2.7] ^A	(3.0) ^F	(3.0)	(2.8)	(2.6)	A	A									1.4	1		
4											(1.9) ^F	2.5	(2.8)	2.8	2.8	[2.8] ^C	[2.7] ^A	2.4	(1.9)									2.2	6	
5											A	(2.4)	2.6	(2.7) ^F	(3.0) ^F	C	C	A	A									1.0	7	
6											1.9	2.4	(2.7)	[2.8] ^A	(2.8)	(2.7)	2.4 ^H	(2.4) ^F	A									2.0	1	
7											[2.0] ^A	2.3	(2.7) ^F	(3.8)	(3.0)	2.8	[2.6] ^A	[1.9] ^A										2.2	4	
8											2.2	2.6	(2.7) ^Y	(2.9) ^F	2.9	(2.8)	(2.5)	2.4	A									2.1	0	
9											A	(2.6)	[2.8] ^A	2.9	(3.0)	3.0	2.7	2.5	A									1.9	5	
10											(2.0)	A	A	[2.9] ^A	2.9	2.6	A	A										1.0	4	
11											2.0 ³	[2.4] ^A	2.8	3.0	(3.0)	(2.8)	2.8	A	A									1.8	8	
12											2.1	2.4	[2.7] ^C	(2.9)	3.0	2.8	(2.8)	(2.0) ^F	(2.6)									2.3	3	
13											2.1	2.4	2.7	[2.9] ^B	3.0	(2.9)	2.7	[2.5] ^A	[2.1] ^A									2.3	3	
14											A	A	C	C	C	C	2.8	[2.6] ^A	A	A								5	4	
15											(2.0) ^F	2.4	[2.7] ^A	[2.8] ^A	(2.9)	2.9	[2.8] ^C	[2.5] ^A	A									2	0	
16											(1.8) ^K	2.3 ^K	C	C	C	C	(2.7) ^X	(2.6) ^X	(2.6)	(2.0)									1.3	8
17											A	A	2.6 ^K	(2.8) ^X	(2.8) ^X	2.8 ^X	2.6 ^X	[2.3] ^A	[2.3] ^A	1.8 ^K								1.7	7	
18											[1.7] ^A	[2.4] ^A	2.5	C	C	C	2.9	(2.6)	A	A								1.2	1	
19											A	A	A	(3.0)	[3.1] ^A	(2.9)	[2.7] ^C	(2.7) ^C	(2.5)									1.6	2	
20											(2.0)	[2.5] ^A	2.7	(2.9)	(3.0)	[2.9] ^C	2.9	2.5	2.5	1.9								2.3	2	
21											1.9	A	C	C	C	(3.0)	3.0	2.7	(2.6)	A								1.3	2	
22											[2.0] ^A	2.7 ^H	A	A	A	A	A	A	A	A								7	1	
23											(1.9) ^F	(2.2)	(2.8)	A	A	A	A	A	2.5	2.0								1.1	4	
24											1.9	(2.3)	(2.8)	2.9	2.9	[2.8] ^C	2.6	2.3 ^H	2.0								2.2	5		
25											2.0	2.4	(2.7)	[2.8] ^A	(2.9)	(2.9)	2.8	(2.4)	A								2.0	9		
26											(1.9)	A	A	A	(2.9)	A	A	A	A								4	8		
27											1.6	[2.1] ^A	[2.6] ^B	(2.7) ^X	[2.8] ^B	[2.6] ^A	2.5 ^X	(2.3) ^X	C	C								1.9	2	
28											(1.7)	[2.1] ^A	[2.6] ^A	(2.7)	(2.7)	2.7	2.6	A	A								1.7	1		
29											A	2.2 ^H	2.8	2.7	(2.8)	2.8	2.7	A	A								1.6	0		
30											(1.8) ^H	2.4	(2.6)	A	A	A	A	A	2.0								8	8		
31											(1.9)	2.5	(2.6)	2.7	(2.8)	(2.9)	(2.6)	[2.4] ^A	(2.3)								2.2	7		
Sum											44.2	57.0	67.1	62.3	72.8	73.4	68.9	48.5	27.6								5	217		
Mean ¹											1.92	2.38	2.68	2.83	2.91	2.82	2.65	2.42	1.97											
Mean ²											1.93	2.39	2.69	2.84	2.92	2.84	2.66	2.44	1.98											
Median											1.9	2.4	2.7	2.8	2.9	2.8	2.6	2.4	2.0											

¹ For all days of the month² For quiet days

f° E

December, 1944

TABLE 53
IONOSPHERE DATA-B

Washington, D.C. Ionosphere Station

RESTRICTED

National Bureau Of Standards (Institution)
Hourly values of E_S in Feet for December 1944 (month)

Day	TIME: 75° W MERIDIAN																								Sum	Mean	
	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	38 1/10	34 1/10	3 1/10	38 1/10	54 1/10	38 1/10	3 1/10	27 1/20	40 1/20	38 1/20	47 1/20	50 1/20	3 1/20	2 1/20	3 1/20	2 1/20	3 1/20	2 1/20	3 1/20	2 1/20	3 1/20	2 1/20	3 1/20	2 1/20	3 1/20	2 1/20	3 1/20
2	40 1/10	39 1/10	32 1/10	42 1/20	40 1/10	45 1/10	68 1/100	47 1/20	63 1/20	58 1/20	63 1/20	58 1/20	63 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20
3	36 1/20	40 1/100	40 1/100	48 1/10	56 1/20	48 1/20	47 1/20	40 1/100	40 1/100	37 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20	42 1/20		
4	36 1/100	41 1/100	41 1/100	47 1/100	45 1/100	45 1/100	45 1/100	45 1/100	45 1/100	30 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20		
5	47 1/100	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200	55 1/200		
6	39 1/100	39 1/100	48 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100	50 1/100		
7	35 1/100	35 1/20	24 1/10	31 1/20	47 1/20	36 1/100	45 1/10	57 1/10	57 1/10	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20	39 1/20		
8	39 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100		
9	29 1/100	30 1/100	28 1/100	66 1/20	40 1/100	32 1/100	46 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100	30 1/100		
10	43 1/100	36 1/20	43 1/100	37 1/100	37 1/100	35 1/20	54 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10	41 1/10		
11	66 1/100	64 1/100	64 1/100	37 1/20	45 1/20	39 1/10	31 1/20	30 1/20	36 1/100	38 1/20	42 1/20	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100	36 1/100		
12	56 1/100	36 1/100	30 1/100	30 1/100	29 1/100	39 1/100	39 1/100	41 1/100	41 1/100	39 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100	41 1/100			
13	45 1/100	44 1/100	33 1/100	29 1/100	29 1/100	34 1/100	45 1/100	45 1/100	56 1/100	46 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100	40 1/100			
14	28 1/100	29 1/100	30 1/20	27 1/20	27 1/20	40 1/20	48 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20		
15	70 1/20	48 1/20	40 1/20	20 1/20	34 1/20	48 1/100	57 1/20	57 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20		
16	29 1/20	29 1/100	39 1/100	39 1/100	39 1/100	36 1/100	40 1/100	35 1/100	39 1/100	39 1/100	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20	37 1/20		
17	29 1/20	30 1/20	28 1/100	55 1/100	61 1/100	53 1/100	53 1/100	53 1/100	53 1/100	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20	52 1/20		
18	65 1/20	44 1/100	34 1/100	29 1/20	29 1/20	39 1/20	45 1/20	47 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20		
19	44 1/20	56 1/100	39 1/100	39 1/100	27 1/20	31 1/100	44 1/20	44 1/20	40 1/20	40 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20	35 1/20		
20	47 1/20	49 1/20	39 1/20	39 1/20	41 1/20	57 1/100	54 1/20	57 1/20	41 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20	36 1/20			
21	62 1/20	52 1/20	42 1/20	54 1/20	58 1/20	57 1/20	54 1/20	45 1/10	36 1/20	40 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20	41 1/20			
22	37 1/20	39 1/20	39 1/20	43 1/20	43 1/20	40 1/100	30 1/20	29 1/20	30 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20	33 1/20			
23	35 1/20	35 1/20	30 1/20	29 1/20	36 1/20	34 1/20	28 1/20	27 1/20	27 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20	47 1/20			
24	35 1/100	41 1/100	34 1/20	39 1/20	40 1/20	33 1/20	44 1/10	37 1/20	37 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20			
25	11 1/100	24 1/20	24 1/20	29 1/20	38 1/20	57 1/20	39 1/20	29 1/20	39 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20	31 1/20			
26	44 1/20	44 1/20	39 1/20	39 1/20	31 1/20	32 1/20	41 1/20	41 1/20	41 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20	54 1/20			
27	10 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20	12 1/20			
28	3 1/20	3 1/20	3 1/20	3 1/20	6 1/20	6 1/20	6 1/20	7 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20	4 2 1/20			
29	30 1/20	34 1/20	32 1/20	37 1/20	37 1/20	37 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20			
30	30 1/20	34 1/20	32 1/20	37 1/20	37 1/20	37 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20			
31	33 1/20	48 1/100	24 1/100	29 1/20	29 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20	40 1/20		

December, 1944

For all days of the month
For quiet days

Sun
Mean 1
Mean 2
Median

Sum
Mean
Mean
Median

TABLE 54
IONOSPHERE DATA-9

Washington, D.C. Ionosphere Station

National Bureau Of Standards

RESTRICTED

TIME: 75° W MERIDIAN

Hourly values of F2-M1500 for December 1944

(Month)

Records measured by S.M.O.

J.T.D.

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	Sum	Mean					
1	(1.90) ^F	(2.10) ^F	(2.11) ^F	(2.12) ^F	(2.10) ^F	(2.10) ^F	(2.33)	2.31	2.34	(2.22)	2.22	2.09	2.18	2.3	2.37	2.25	(2.20) ^F	(2.22) ^F	(1.92) ^F	(1.94) ^F	(2.10) ^F	+9.83									
2	(2.11) ^F	(2.14) ^F	(2.03) ^F	(2.14) ^F	(2.10) ^F	(2.00) ^F	AF	(2.11) ^F	2.30	2.32	2.32	2.15	2.21	2.02	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18	(2.10) ^F	+7.77					
3	(2.09) ^F	(2.30) ^F	(2.01) ^F	(2.05) ^F	(2.03) ^F	(2.03) ^F	F	(2.03) ^F	2.15	2.37	2.43	(2.20)	2.4	2.27	2.12	2.16	(2.29)	2.29	2.44	(2.10) ^F	(2.06) ^F	(2.06) ^F	(2.06) ^F	(2.06) ^F	50.72						
4	F	(2.17) ^F	(2.06) ^F	(2.00) ^F	(2.12) ^F	(2.12) ^F	(2.14) ^F	(2.14) ^F	(2.15) ^F	(2.15) ^F	(2.50) ^F	(2.50) ^F	(2.55)	2.38	2.45	2.45	2.46	2.46	2.34	2.34	(2.34) ^F	45.93									
5	(2.20) ^F	(2.15) ^F	(2.00) ^F	(2.50) ^F	48.57																										
6	(1.90) ^F	(2.06) ^F	(1.97) ^F	(2.21) ^F	(2.32)	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	(2.10) ^F	53.59											
7	(2.02) ^F	(2.30) ^F	(2.03) ^F	(2.21) ^F	(2.23) ^F	(2.20)	2.49	2.46	2.44	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	(2.46) ^F	54.04										
8	(2.18) ^F	(2.10) ^F	(1.96) ^F	(2.12) ^F	(2.10) ^F	(2.06) ^F	(2.20)	2.38	2.44	2.44	2.30	2.30	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	(2.17) ^F	53.12									
9	(2.11) ^F	(2.10) ^F	(2.10) ^F	(2.11) ^F	2.17	2.20	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30)	(2.30) ^F	52.78											
10	(1.96) ^F	2.03 ^F	(2.00) ^F	(2.00) ^F	(2.00) ^F	(2.00) ^F	(2.00) ^F	(2.00) ^F	(2.00) ^F	(2.00) ^F	(2.05) ^F	52.41																			
11	(1.99) ^F	(2.00) ^F	(1.90) ^F	(2.01) ^F	(2.05)	2.49	2.46	2.44	2.46	2.46	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	(2.34) ^F	53.59											
12	(1.93) ^F	(2.00) ^F	(2.10) ^F	(2.08) ^F	(2.17) ^F	(2.33) ^F	(2.42)	2.43	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40)	(2.40) ^F	53.52									
13	1.96 ^F	1.98 ^F	(1.92) ^F	2.14 ^F	2.30 ^F	(2.11) ^F	(2.11) ^F	(2.11) ^F	(2.11) ^F	(2.11) ^F	2.17	2.20	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20)	(2.20) ^F	51.34					
14	(1.92) ^F	(2.03) ^F	F	(2.00) ^F	(2.22)	2.10	2.30	2.30	2.30	2.30	C	C	C	C	C	C	C	C	(2.22) ^F	51.40											
15	A	(1.89) ^F	(2.13) ^F	(2.29)	2.51	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50)	(2.50) ^F	52.41												
16	(2.06) ^F	(1.90) ^F	(1.95) ^F	(1.90) ^F	(1.94)	2.45	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42) ^F	52.52											
17	(1.92) ^F	(1.85) ^F	(1.80) ^F	(1.99)	2.14	2.30	2.30	2.30	2.30	2.07	(2.07)	(2.07)	(2.07)	(2.07)	(2.07)	(2.07)	(2.07)	(2.07) ^F	47.46												
18	A	X	(1.95) ^F	(1.93) ^F	F	(1.93) ^F	(2.10)	2.10	(2.10)	(2.10)	(2.10)	(2.10)	A	2.29	C	C	C	C	C	C	C	(2.29) ^F	32.82								
19	(1.94) ^F	A	(2.00) ^F	(2.13) ^F	(2.44)	2.33	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33) ^F	45.23											
20	(1.87) ^F	(2.00) ^F	(1.98)	2.45	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42)	(2.42) ^F	45.23													
21	(1.85) ^F	(2.00) ^F	(2.10) ^F	A	A	A	A	A	A	(2.01)	(2.01)	(2.01)	(2.01)	(2.01)	(2.01)	(2.01)	(2.01) ^F	37.13													
22	1.94 ^F	1.99 ^F	(2.10) ^F	(2.10) ^F	(2.10) ^F	(2.10) ^F	(2.10) ^F	(2.10) ^F	(2.10) ^F	(2.10) ^F	(1.95)	2.14	2.40	2.40	2.40	2.40	C	C	C	C	C	C	C	C	(1.95) ^F	47.46					
23	(2.00) ^F	(2.07) ^F	(1.97) ^F	(2.10)	2.09	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10)	(2.10) ^F	42.11												
24	(2.01) ^F	(1.99) ^F	(2.00) ^F	(2.05)	2.17	2.40	2.40	2.40	2.40	C	C	C	C	C	C	C	C	(2.05) ^F	48.93												
25	(1.81) ^F	(2.00) ^F	(2.02) ^F	(2.05)	2.03	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03)	(2.03) ^F	39.53												
26	(1.90) ^F	(2.04) ^F	(2.02) ^F	(2.33)	2.03	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33)	(2.33) ^F	49.32												
27	(1.95) ^F	(1.88) ^F	(2.07) ^F	(1.92)	1.90	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90)	(1.90) ^F	39.76												
28	A	X	(2.06) ^F	A	X	(2.03) ^F	(1.92)	2.04	(1.80)	(1.80)	(1.80)	(1.80)	(2.02)	(2.02)	(2.02)	(2.02)	(2.02)	(2.02)	(2.02)	(2.02)	(2.02) ^F	47.37									
29	(1.95) ^F	1.98 ^F	(2.07) ^F	(2.05) ^F	(2.10)	2.45	2.40	2.40	2.40	2.40	(2.39)	(2.39)	(2.39)	(2.39)	(2.39)	(2.39)	(2.39)	(2.39)	(2.39) ^F	50.46											
30	1.98 ^F	1.92 ^F	(2.08) ^F	(2.08) ^F	(2.08) ^F	(2.08) ^F	(2.08) ^F	(2.08) ^F	(2.08) ^F	(2.08) ^F	(1.99)	2.42	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36)	(2.36) ^F	50.43					
31	(2.06) ^F	(1.95) ^F	(2.04) ^F	(2.03)	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	(2.47) ^F	52.36												
32	53.51	61.11	58.57	62.52	57.42	64.91	55.56	66.13	72.85	67.73	61.06	60.45	62.94	60.11	60.57	69.13	68.99	69.13	68.99	68.99	68.99	68.99	68.99	68.99	68.99	68.99	68.99	68.99	68.99	68.99	68.99
Mean 1	1.98	2.04	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13			
Mean 2	1.98	2.05	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13			
Median	1.96	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12			

For quiet days of the month

For quiet days

December, 1944

F-2-M1500

TABLE 55
IONOSPHERE DATA-10

Washington, D. C. Ionosphere Station

(Location) National Bureau Of Standards

(Institution) TIME: 75° W MERIDIAN

Hourly values of F2-M3000 for December 1944
(month)

Records measured by: S. M. O.

RESTRICTED

For quiet days

For all days of the month

J. T. D.

RECORDS

F2-M3000

December 1944

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	Sum	Mean				
1	2.87F	3.16F	3.09F	3.06F	3.05F	3.29F	3.23F	3.10F	3.05F	3.04F	3.46F	3.34F	3.22F	3.11	3.22	C	3.42	3.31	3.19F	3.30F	3.29F	2.90F	3.29F	3.14	7.51	7.51				
2	3.01F	3.13F	3.06F	3.18F	3.17F	2.95F	3.01F	3.15F	3.40F	3.32	3.35	3.22	3.22	3.15	3.20	3.40	3.30	3.55	3.05F	3.36F	3.28F	3.28F	3.28F	3.16	7.62	7.62				
3	3.00F	3.21F	3.00F	3.08F	3.01F	3.10F	3.10F	3.20F	3.44F	3.52	3.33F	3.54	3.30	3.30	3.22	3.22	3.45	3.45	3.24F	3.08F	3.11F	3.22F	3.28F	3.15	7.47	7.47				
4	F	3.20F	3.12F	3.12F	3.10F	3.12F	3.12F	3.23F	3.60F	3.65F	3.44F	3.55	3.30	C	3.53	3.40	3.40	3.40	3.46F	3.24F	3.24F	3.24F	3.24F	F	7.3	7.3				
5	3.25F	3.21F	3.50F	3.59	3.60F	3.29F	3.44F	C	3.41	3.43	3.54	3.54	3.54	3.54	3.54	3.54	7	7												
6	2.79F	2.91F	2.97F	3.21F	3.45F	3.45	3.72	3.34	3.20	3.47F	3.39	3.38	3.20F	3.20F	3.20F	3.20F	3.20F	3.20F	7	7										
7	3.21F	3.32F	2.98F	3.17F	3.22F	3.22F	3.22F	3.22F	3.22F	3.22F	3.61	3.50	3.50	3.34	3.50	3.60	3.60	3.41	3.41	3.41	3.41	3.41	3.41	3.41	7.47	7.47				
8	3.20F	3.10F	2.94F	3.14F	3.11F	3.10F	3.10F	3.29F	3.43	3.52	3.44	3.35	3.20	3.20	3.29	3.43	3.50	3.50	3.25F	3.20F	3.20F	3.20F	3.20F	3.20F	7.7	7				
9	3.11F	3.71F	3.20F	3.11F	3.11F	3.11F	3.11F	3.11F	3.21	3.25	3.39	3.45	3.45	3.39	3.23	3.29	3.28	3.35	3.28	3.28	3.28	3.28	3.28	3.28	7.4	7				
10	2.96F	3.16F	3.10F	3.50F	3.66	3.66	3.45	3.29	3.29	3.30	3.30	3.29	3.29	3.29	3.29	3.29	3.29	7.7	7											
11	3.05F	3.25F	2.89F	3.30F	3.20F	3.20F	3.20F	3.20F	3.27F	3.27F	3.63	3.63	3.70	3.68	3.40	3.40	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49	7.8	7.8				
12	2.90F	3.10F	2.92F	3.10F	3.10F	3.10F	3.10F	3.10F	3.46F	3.46F	3.55	3.48	3.48	3.62	3.62	3.52	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49	7.5	7.5				
13	2.85F	2.85F	2.91F	3.11F	3.65	3.65	3.21	3.25	3.25	3.01	3.25	3.25	3.26	3.26	3.26	3.26	3.26	3.26	7.6	7.6										
14	2.93F	3.10F	3.40	3.40	C	C	C	C	3.20	3.20	3.29	3.29	3.29	3.29	3.29	3.29	7.7	7.7												
15	A	2.95F	3.13F	3.28F	3.45	3.45	3.48	3.28	3.28	3.10	3.32	3.32	3.45	3.23	3.23	3.23	3.23	3.23	3.23	7.8	7.8									
16	3.12F	2.80F	2.80F	2.95F	2.85F	2.85F	2.85F	2.85F	2.87F	2.87F	3.07F	5.5	5.5																	
17	2.91F	2.79F	2.95F	2.95F	3.05F	3.05F	3.27F	7.0	7.0																					
18	A	2.98F	3.17F	4.8	4.8																									
19	2.95F	A	3.02F	3.25F	3.55	3.55	3.33	3.33	3.33	3.33	3.38	3.45	C	3.20	3.20	3.20	3.20	3.20	3.20	6.7	6.7									
20	2.97F	3.10F	3.02F	3.46	3.46	3.47	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	7.2	7.2										
21	2.80F	3.01F	3.14F	3.08F	A	A	A	A	A	A	3.19	3.50	3.46	C	C	C	C	3.31	3.30	3.40	3.26	3.26	3.26	3.26	3.26	3.26	7.2	7.2		
22	2.94F	2.99F	3.07F	3.04F	3.01F	3.01F	3.01F	3.01F	3.01F	3.01F	3.60	3.60	3.20	3.12	3.12	3.30	3.25	3.30	3.30	3.30	3.30	3.30	3.30	3.30	7.5	7.5				
23	3.00F	3.14F	2.99F	3.09F	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	7.8	7.8										
24	3.05F	3.20F	3.55	3.55	3.60	3.42	3.42	3.28	3.40	3.40	3.34	3.34	3.34	3.34	3.34	3.34	7.7	7.7												
25	2.81F	3.10F	3.09F	3.28F	3.17F	3.10	3.10	3.10	3.15	3.15	3.45	3.45	3.45	3.30	3.30	3.30	3.30	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	7.3	7.3			
26	2.84F	3.10F	3.08F	3.14F	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	7.3	7.3										
27	2.90F	2.87F	2.87F	3.10F	3.50	3.50	2.87F	7.2	7.2																					
28	A	3.01F	3.05F	3.00F	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	6.9	6.9										
29	3.00F	3.01F	3.50	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	7.4	7.4												
30	2.97F	3.11F	3.04F	3.53	3.53	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	3.48	7.0	7.0											
31	3.07F	2.90F	3.01F	3.14F	3.56	3.56	3.44F	7.8	7.8																					
Sum	80.47	71.29	88.13	93.23	84.94	95.62	72.02	98.00	10.61	11.97	89.52	88.92	92.30	88.47	88.74	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73	10.73
Mean ¹	2.98	3.04	3.04	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16				
Mean ²	2.98	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16	3.16				
Median	2.97	3.03	3.06	3.10	3.18	3.17	3.16	3.16	3.17	3.16	3.45	3.45	3.47	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31	3.31		

¹ For all days of the month

² For quiet days

TABLE 57
IONOSPHERE DATA -12

Washington, D. C. Ionosphere Station
(Location)

National Bureau Of Standards
(Institution)

TIME: 75° W MERIDIAN

Hourly values of FI-M3000 for December 1944
(Month)

RESTRICTED

Recorded by: S.M.O.
J.T.D.

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	Sub	Year	
1																										3.37	
2																										21.50	
3																											
4																											
5																											3.75
6																											7.90
7																											3.50
8																											
9																											
10																											
11																											
12																											
13																											
14																											
15																											7.57
16																											3.70
17																											
18																											
19																											
20																											
21																											
22																											
23																											
24																											
25																											
26																											
27																											
28																											
29																											
30																											
31																											
Sum																											
Mean ¹																											
Mean ²																											
Median																											

1 For all days of the month 2 For quiet days

December, 1944

FI-M3000

TABLE 58
IONOSPHERE DATA-13

Washington, D.C. Ionosphere Station

National Bureau Of Standards
(Institution)

TIME: 75° W MERIDIAN

Hourly values of E-M1500 for December 1944

(Month)

Records measured by S.M.O.
J.T.D.

RESTRICTED

Rev	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Mean
1									A	(3.26)	A	(3.68)	A	A	(3.90)	C	(3.70)										15.78	
2									AF	(3.80)	(3.68)	F	A	3.71	(3.70)	A	3.89										18.79	
3									AF	A	A	AF	(3.50)	(3.70)	(3.59)	A	A										10.79	
4									F	(3.46)	(3.50)	3.78	(3.83)	A	3.75	(3.80)											12.12	
5									AF	4	(3.70)	(3.70)	AF	C	C	A	A											7.44
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
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26																												
27																												
28																												
29																												
30																												
31																												
Mean ¹																												
Mean ²																												
Total																												

1 For all days of the month

2 For quiet days

December, 1944

E-M1500

Table 59

Ionospheric Storminess, December, 1944

Day	Ionospheric Character*		Principal Storms/ Beginning GCT		Magnetic Characters**	
	00-12 GCT	12-24 GCT	End GCT		00-12 GCT	12-24 GCT
December						
1	2	2			1	2
2	0	2			3	3
3	3	2			3	2
4	2	2			2	1
5	3	2			2	1
6	2	3			2	1
7	2	3			1	0
8	3	3			1	1
9	1	3			2	2
10	1	1			1	1
11	1	1			1	1
12	1	2			1	1
13	1	2			2	3
14	1	2			3	1
15	3	2			1	2
16	2	7	1200		4	6
17	4	4			4	5
18	4	1	1200		4	2
19	3	2			2	1
20	3	1			2	2
21	2	1			2	2
22	2	1			1	1
23	2	2			1	1
24	2	3			0	0
25	3	2			0	0
26	1	2			1	2
27	3	4	1500		4	4
28	4	1	1200		3	2
29	3	0			2	1
30	1	1			3	2
31	2	1			1	1

*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 ionospheric storminess.

Table 60. Sudden Ionosphere Disturbances

Observed at Washington, D.C.

Day	GCT Beginning		Locations of transmitters	Relative intensity at minimum	Other phenomena
	End				
Dec. 9	1924	2010	Ohio, D.C., New York, England, Mexico, Gold Coast, Hawaii	0.01	Terr. mag. pulse** 1927-3000
10	1914	2020	Ohio, D.C., New York, England, Mexico, Gold Coast, Hawaii, U.P.	0.0	Terr. mag. pulse** 1913-1950
13	1538	1740	Ohio, D.C., New York, England, Mexico, Chile	0.0	Terr. mag. pulse** 1533-1550
25	1720	1752	Ohio, D.C., Mexico, Brazil	0.2	Terr. mag. pulse** 1720-1755

*Ratio of received field intensity during fadeout to average field intensity before and after, for station W8XAL, 6080 kilocycles, 800 kilometers distant.

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

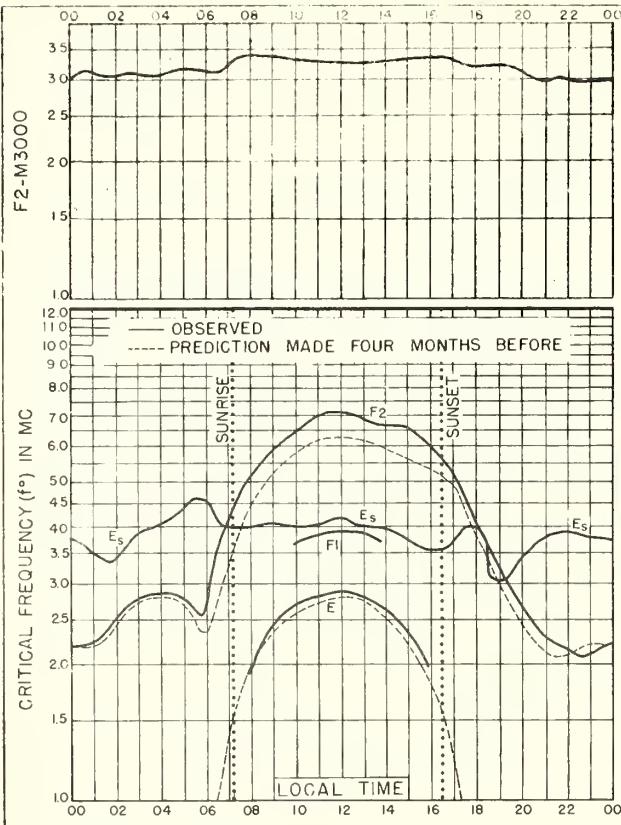


Fig 1. WASHINGTON, D.C.
39.0°N, 77.5°W

DECEMBER, 1944

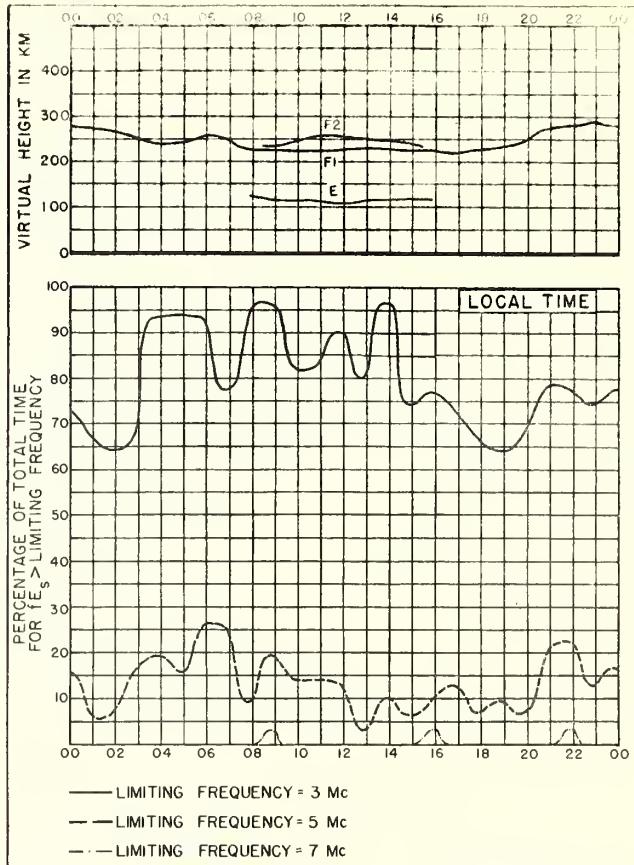


Fig 2. WASHINGTON, D.C.

DECEMBER, 1944

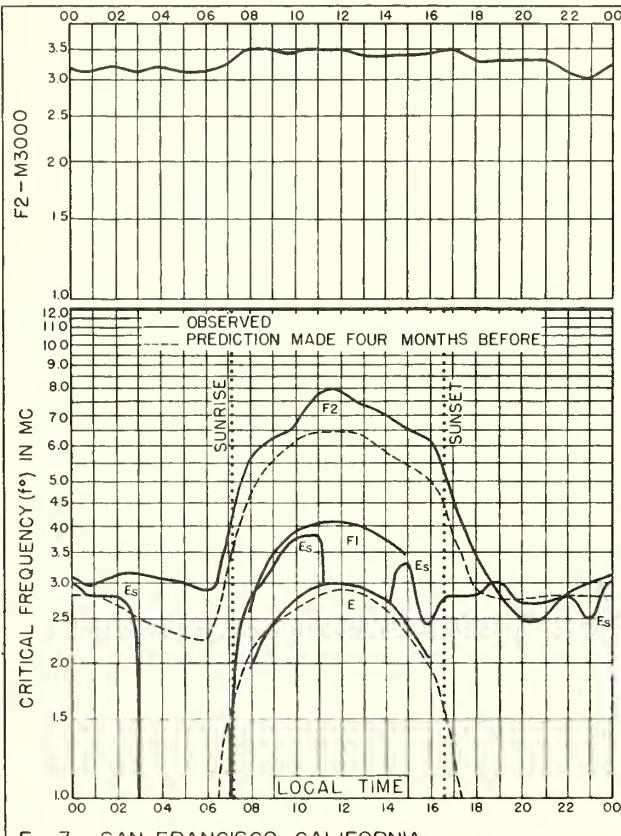


Fig 3. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W

DECEMBER, 1944

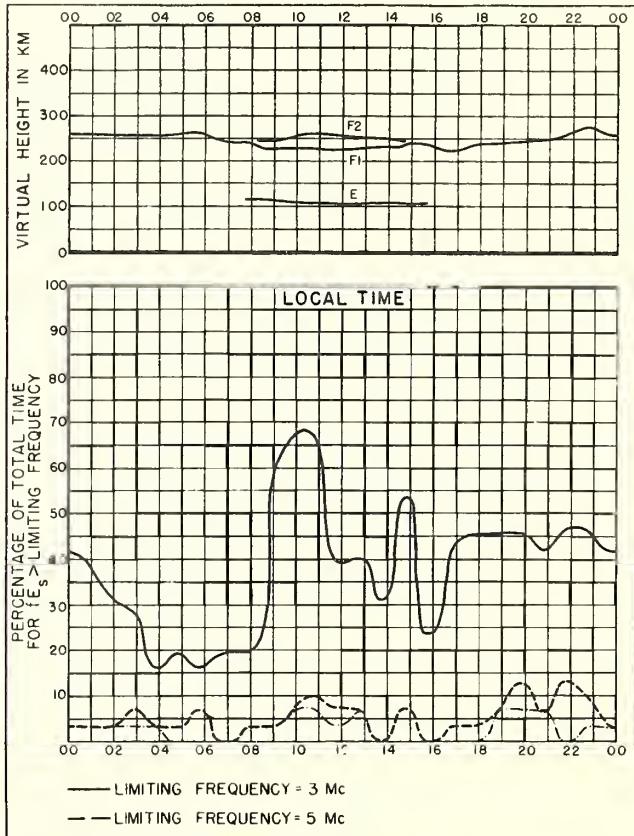


Fig 4. SAN FRANCISCO, CALIFORNIA DECEMBER, 1944

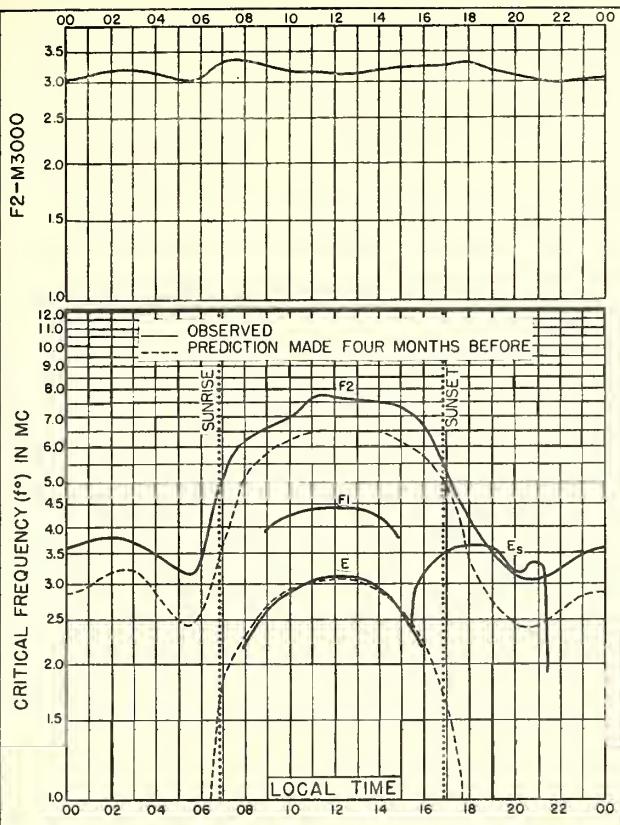


Fig. 5. BATON ROUGE, LOUISIANA
30.5°N, 91.2°W DECEMBER, 1944

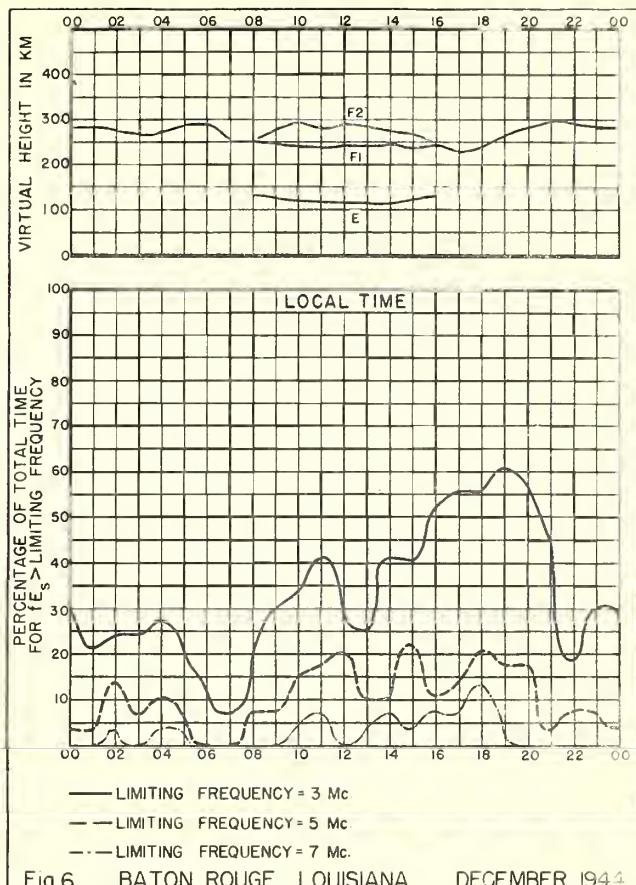


Fig. 6. BATON ROUGE, LOUISIANA DECEMBER, 1944

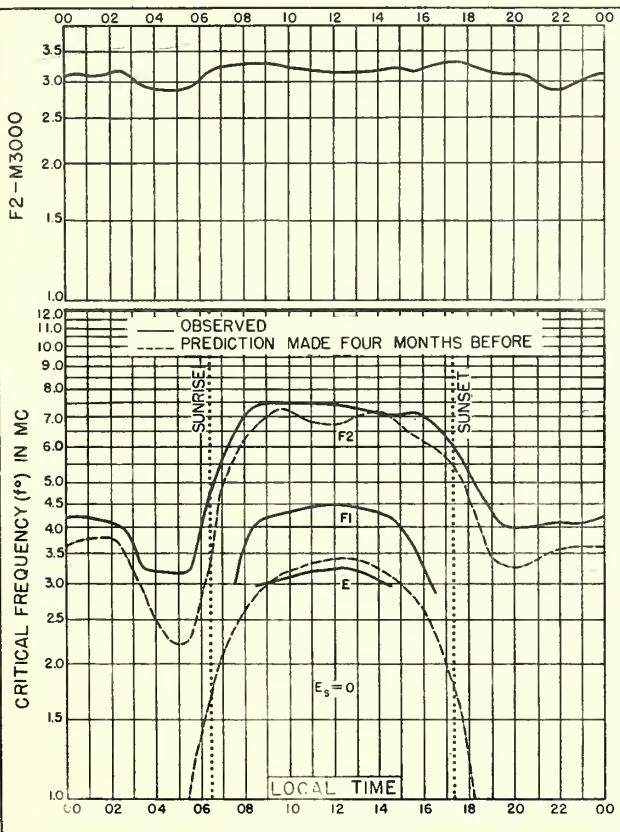


Fig. 7. SAN JUAN, PUERTO RICO
18.4°N, 66.1°W DECEMBER, 1944

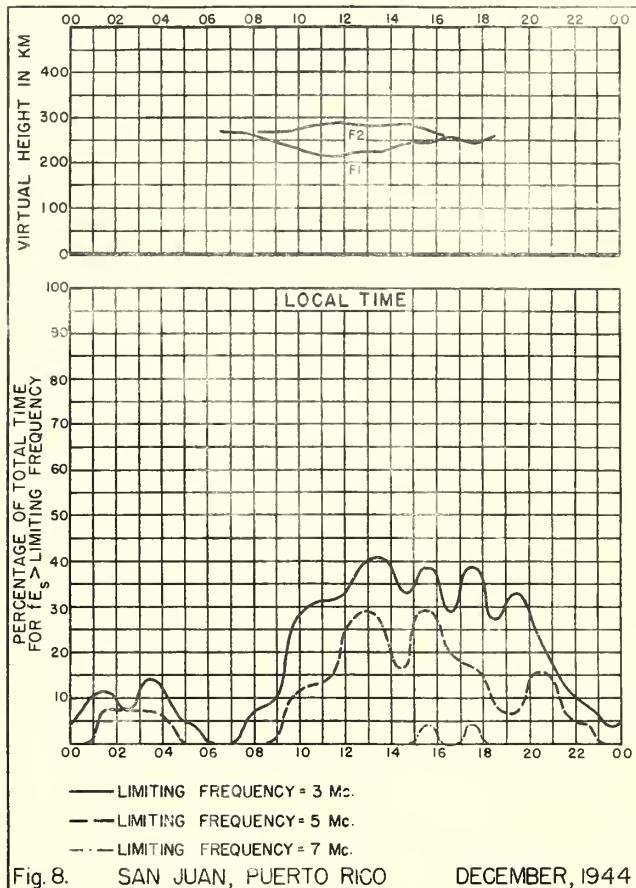
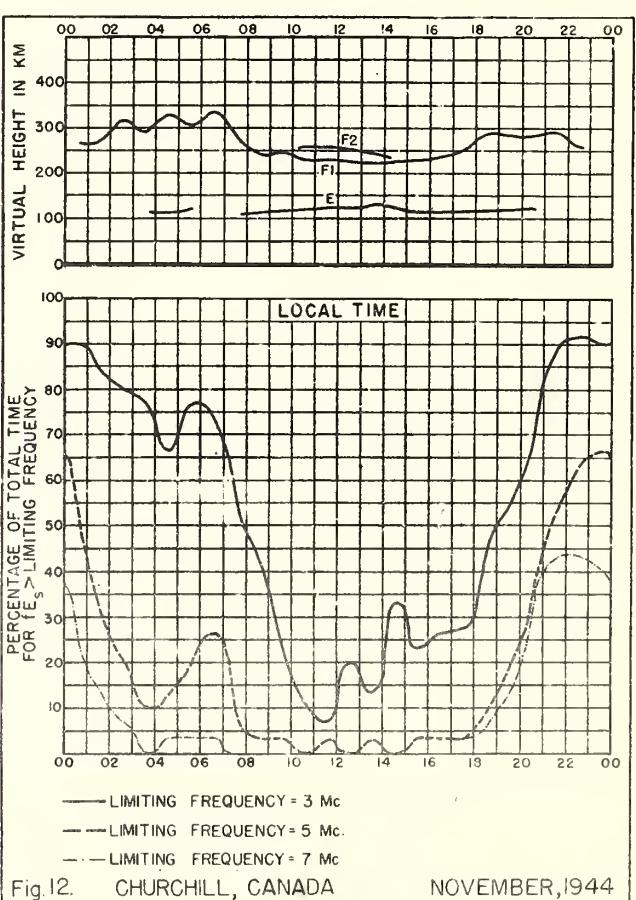
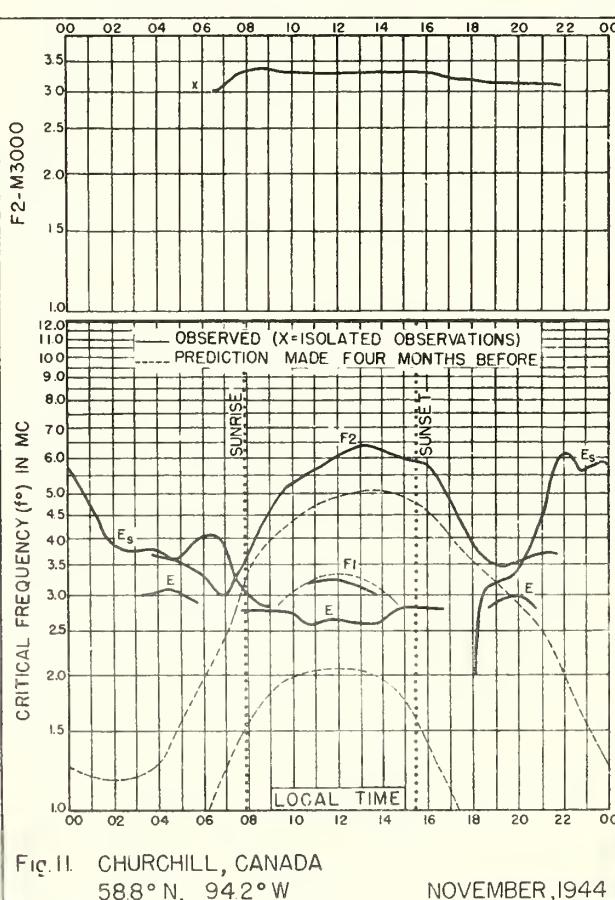
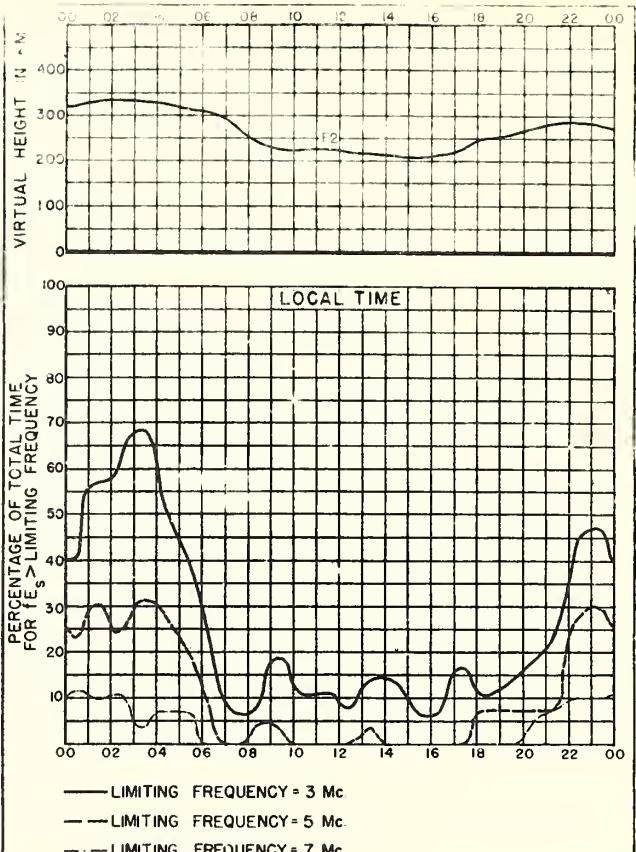
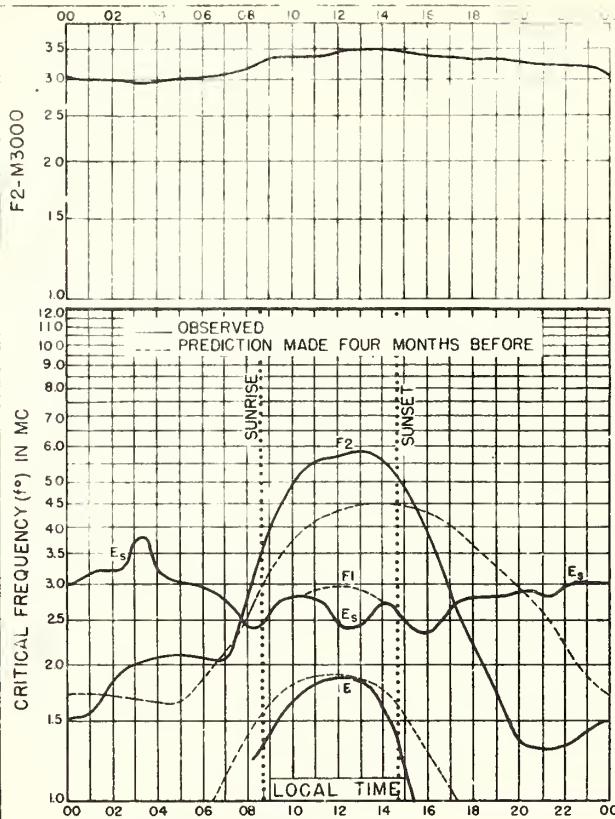


Fig. 8. SAN JUAN, PUERTO RICO DECEMBER, 1944



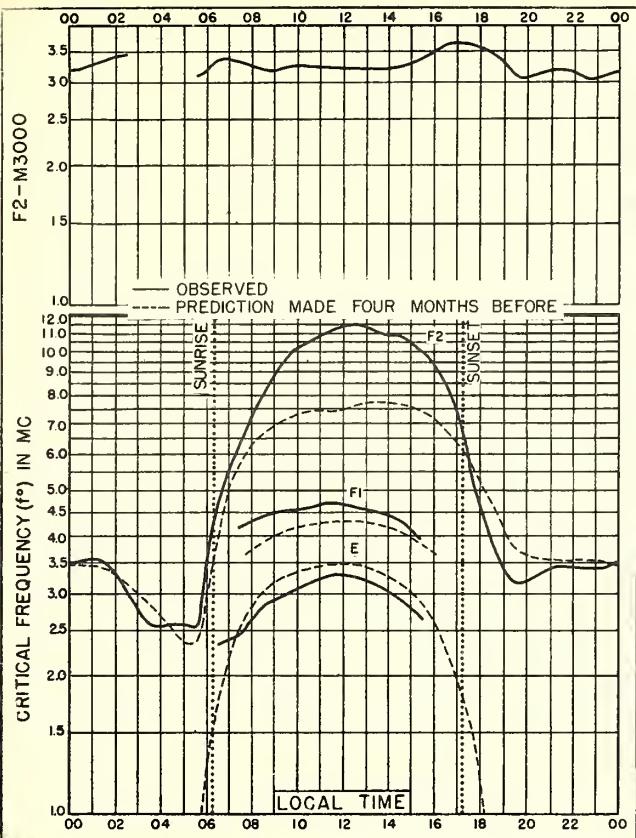


Fig.13. MAUI, HAWAII
20.8°N, 156.5°W

NOVEMBER, 1944

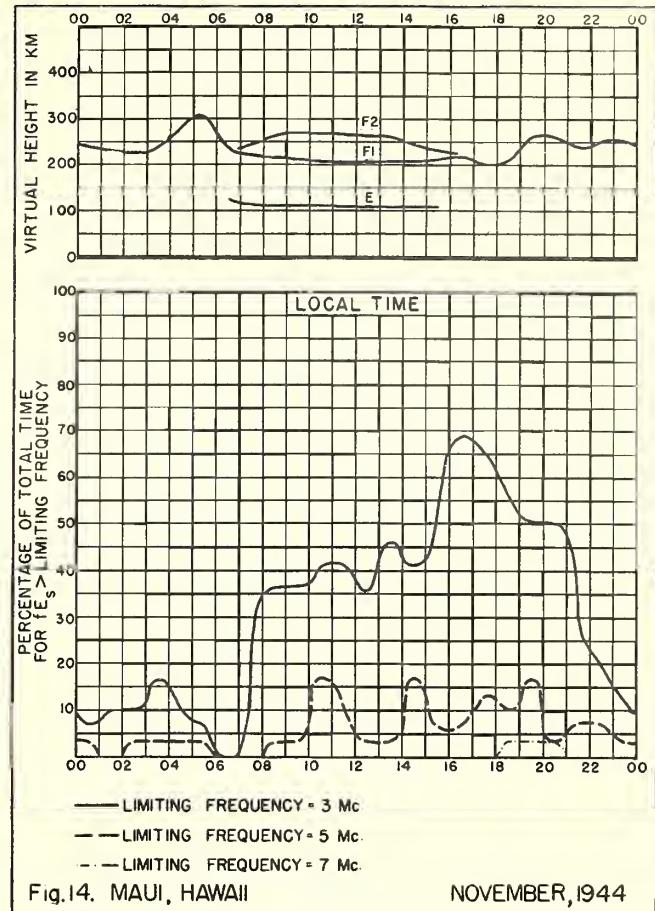


Fig.14. MAUI, HAWAII

NOVEMBER, 1944

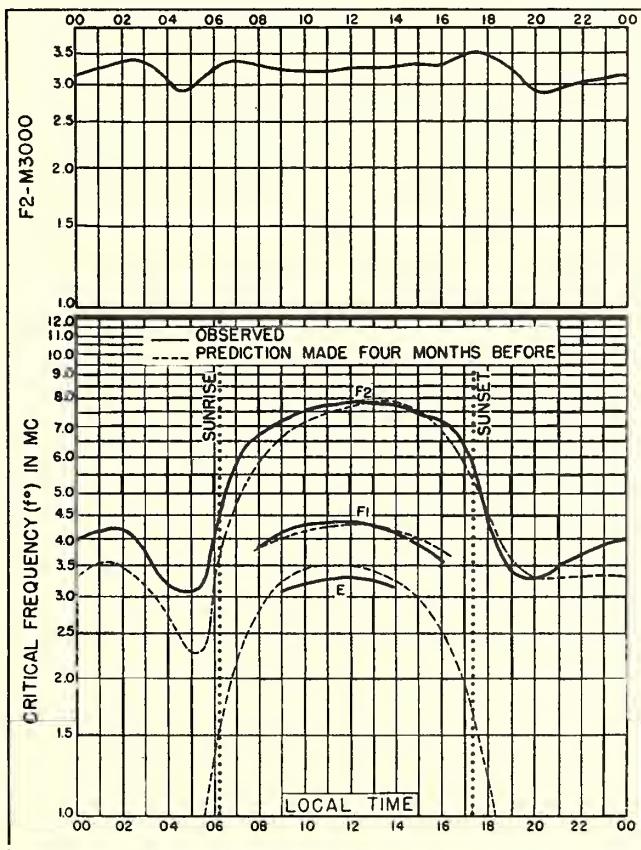


Fig.15. SAN JUAN, PUERTO RICO
18.4°N, 66.1°W

NOVEMBER, 1944

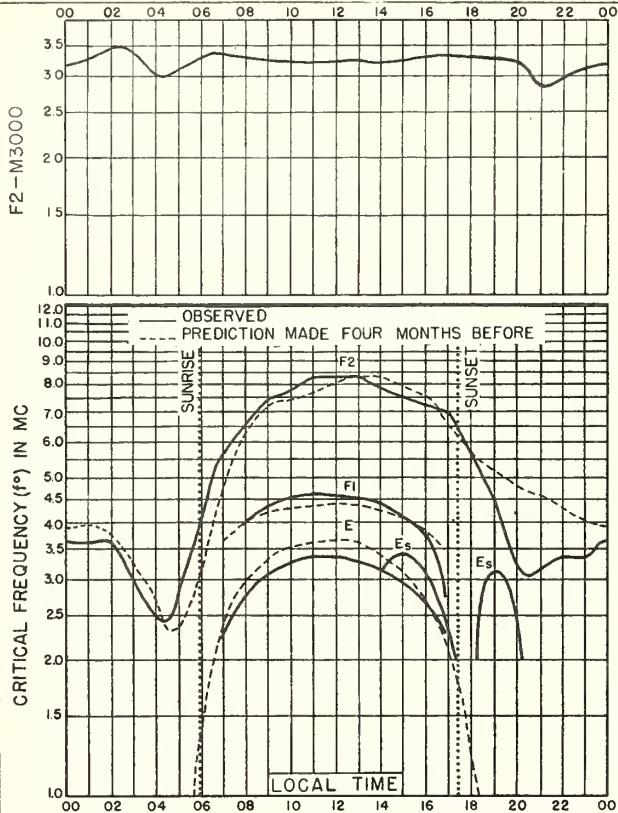


Fig.16. TRINIDAD, BRIT. WEST INDIES
10.6°N, 61.3°W NOVEMBER, 1944

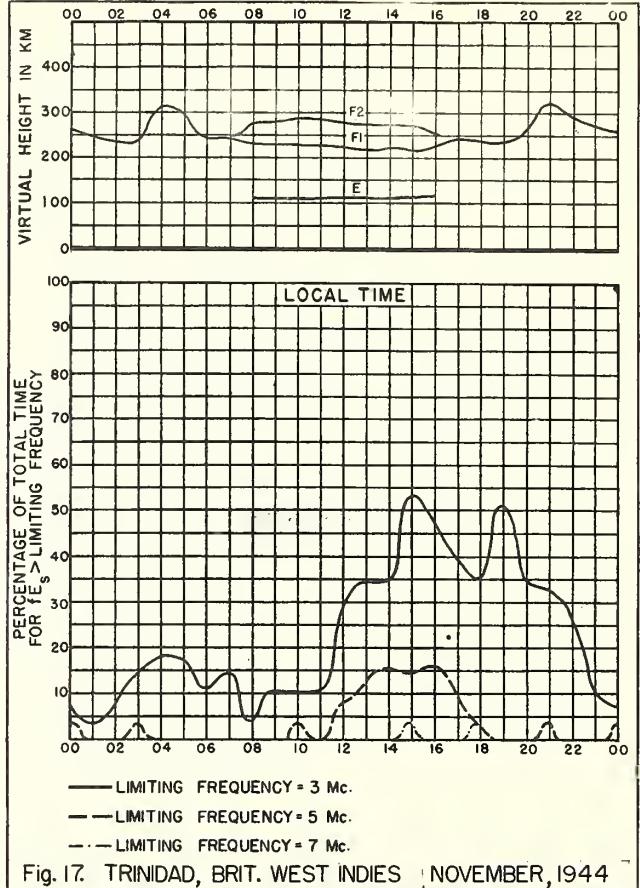


Fig.17. TRINIDAD, BRIT. WEST INDIES NOVEMBER, 1944

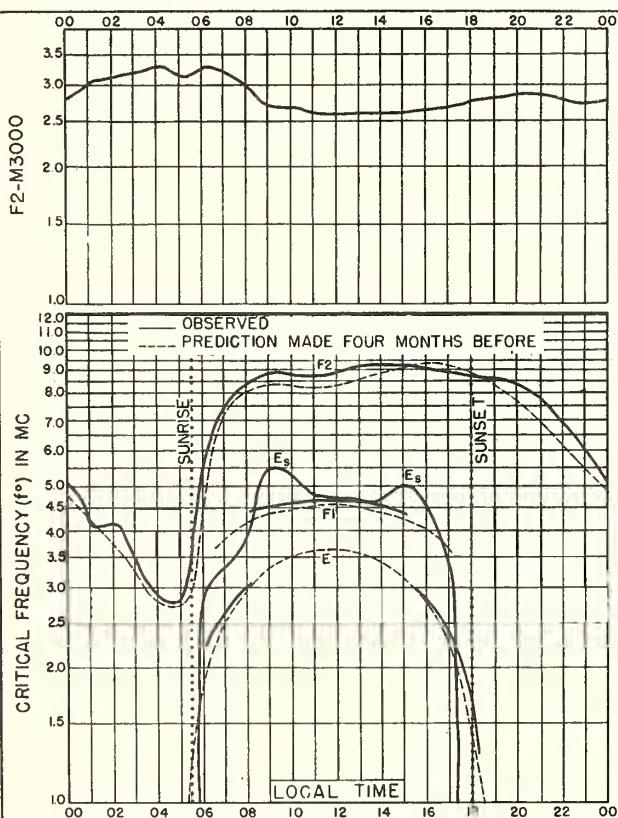


Fig.18. HUANCAYO, PERU
12.0°S, 75.3°W NOVEMBER, 1944

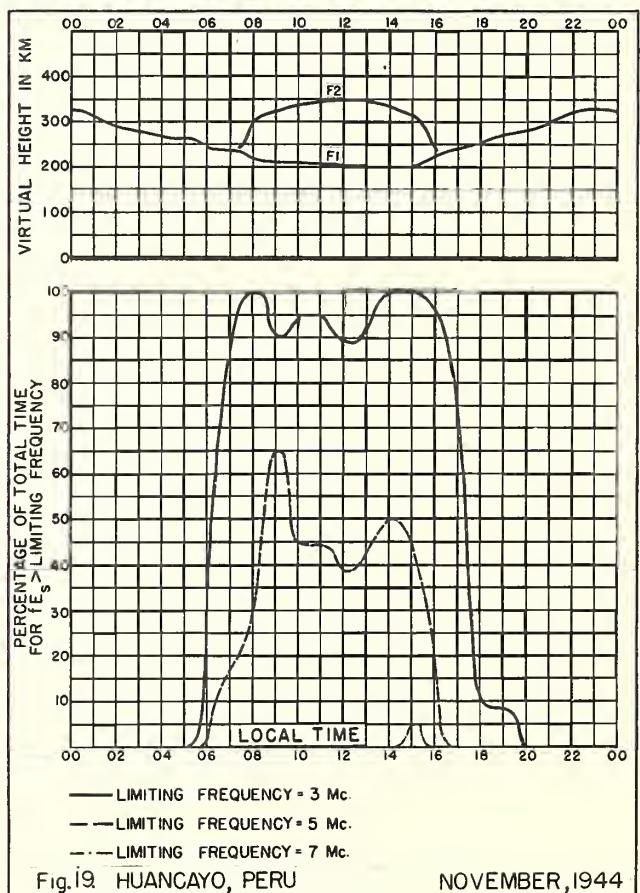


Fig.19. HUANCAYO, PERU NOVEMBER, 1944

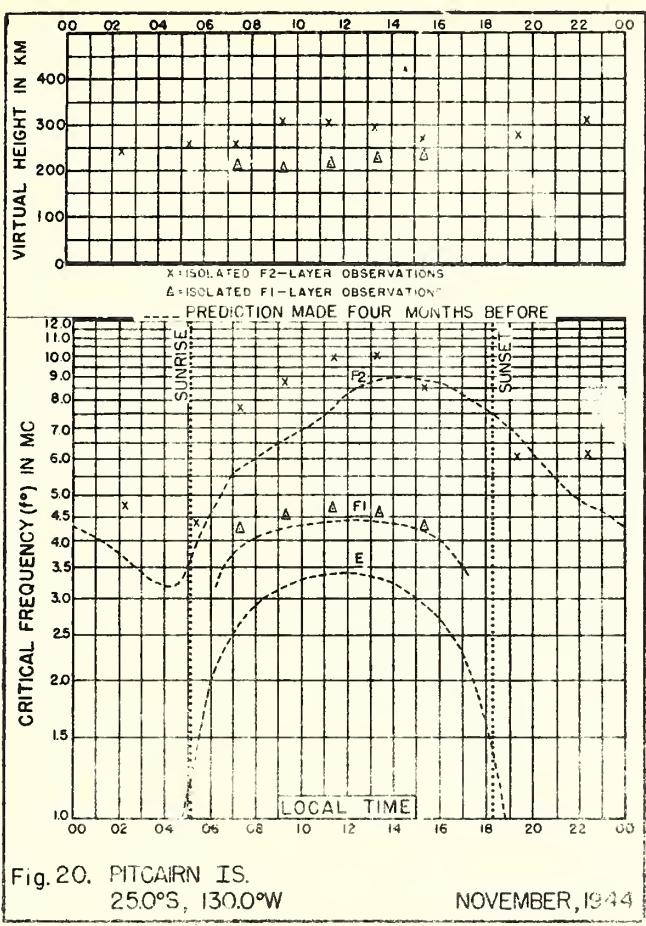


Fig. 20. PITCAIRN IS.
25°S, 130.0°W

NOVEMBER, 1944

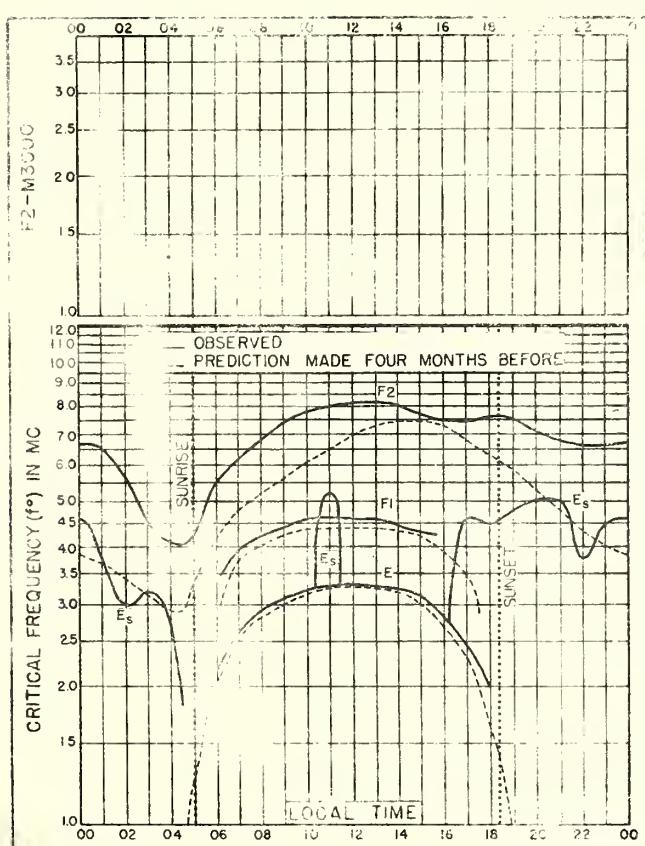


Fig. 21. KERMADEC IS.
29.2°S, 177.9°W

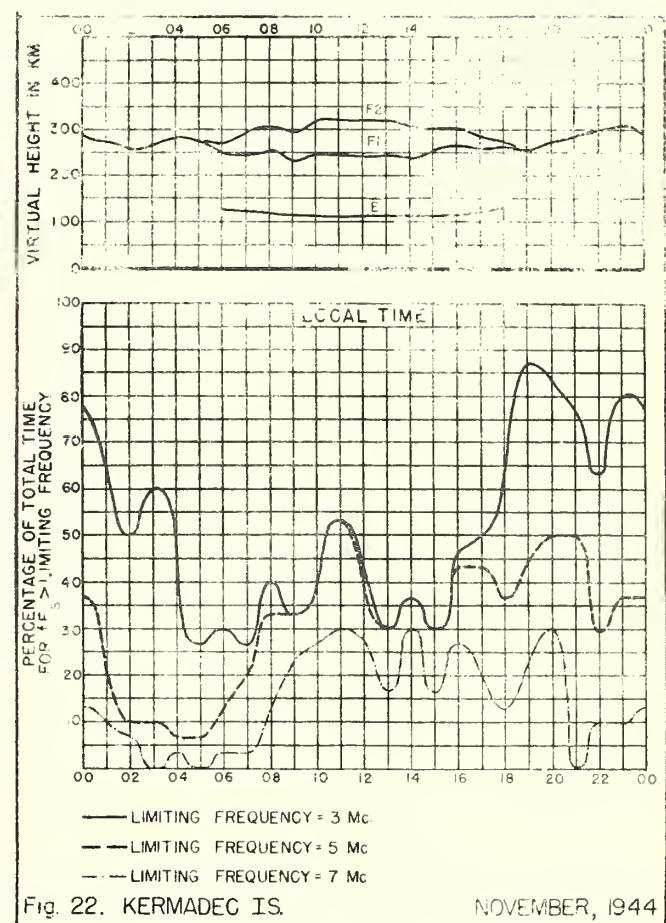


Fig. 22. KERMADEC IS.

NOVEMBER, 1944

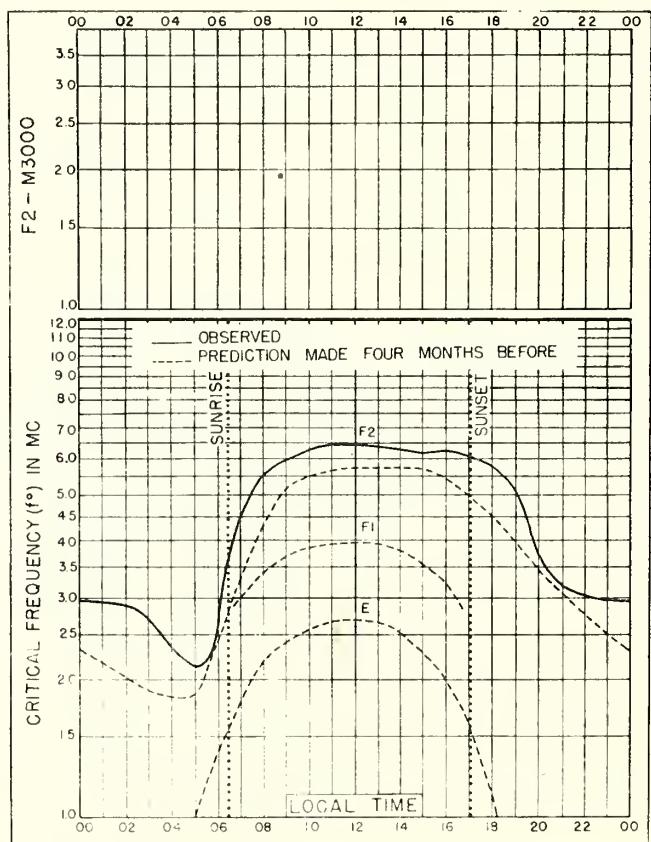
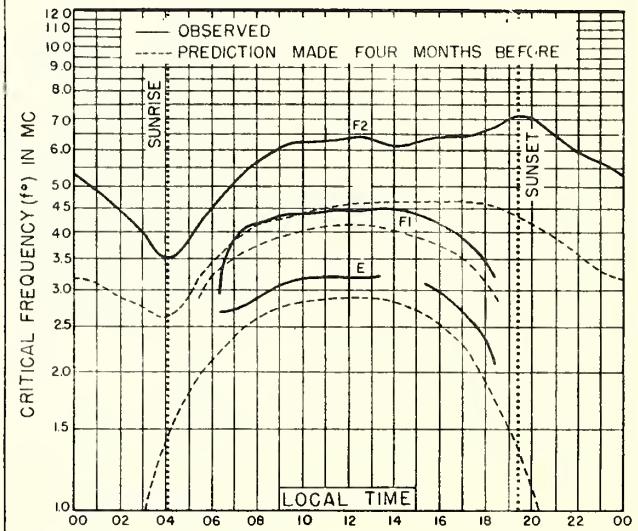
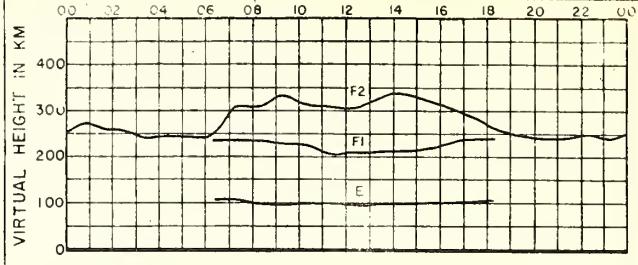
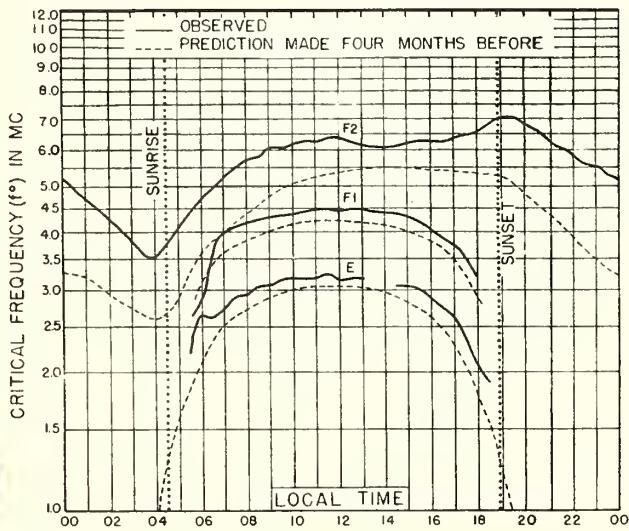
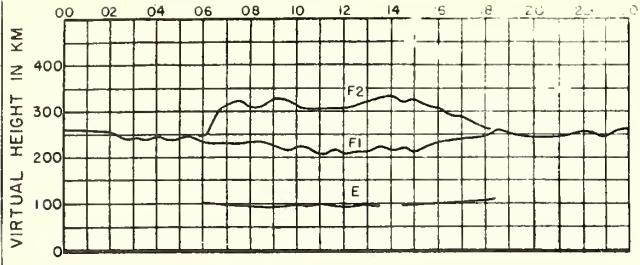
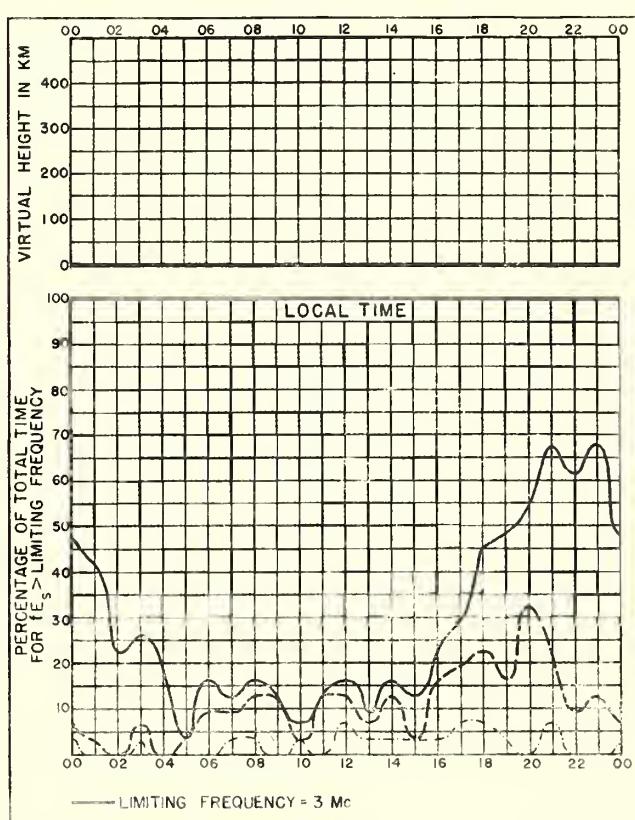
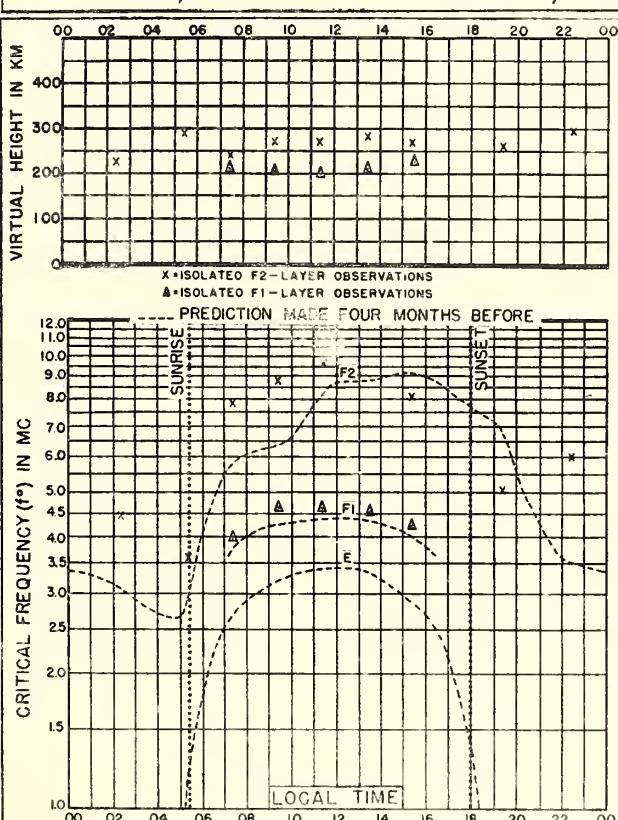
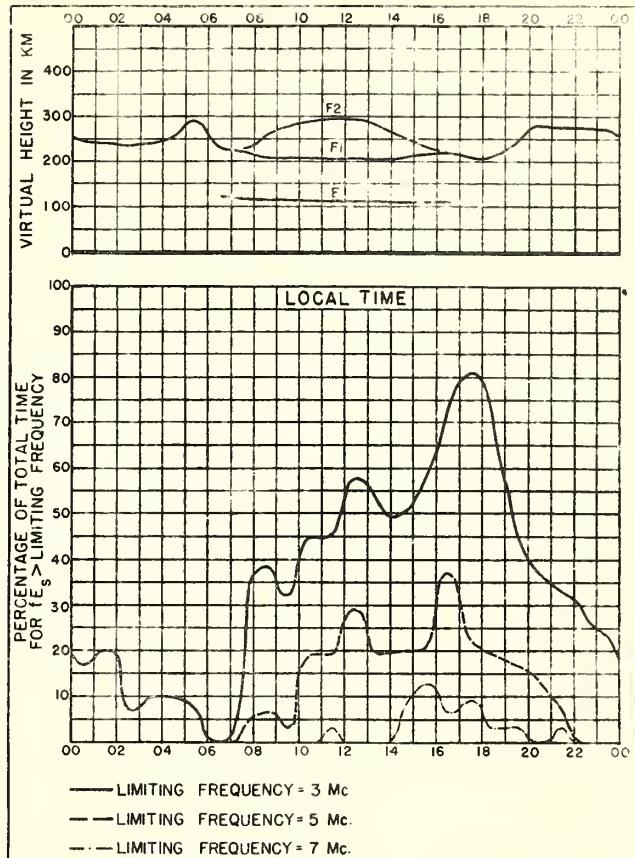
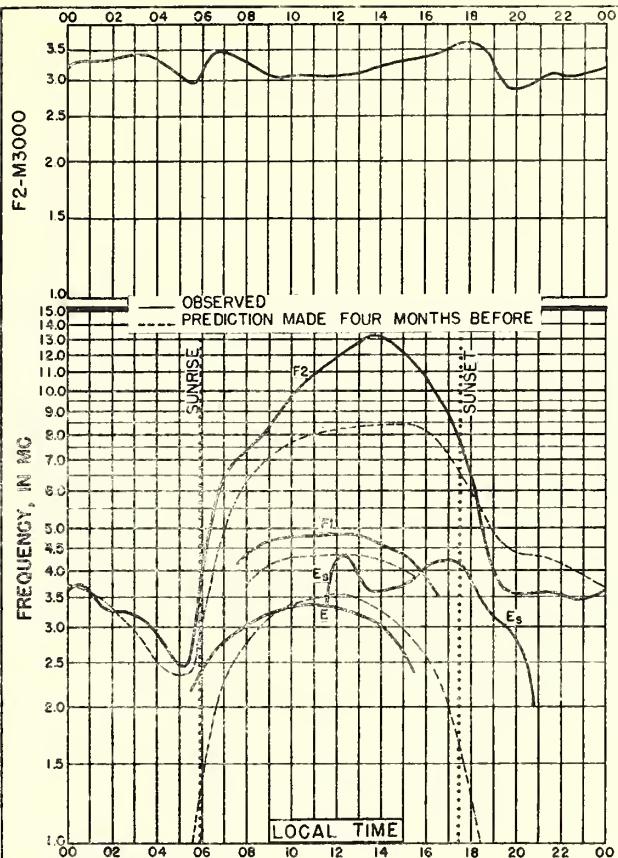


Fig.25. SLOUGH, ENGLAND
51°N, 06°W
OCTOBER, 1944



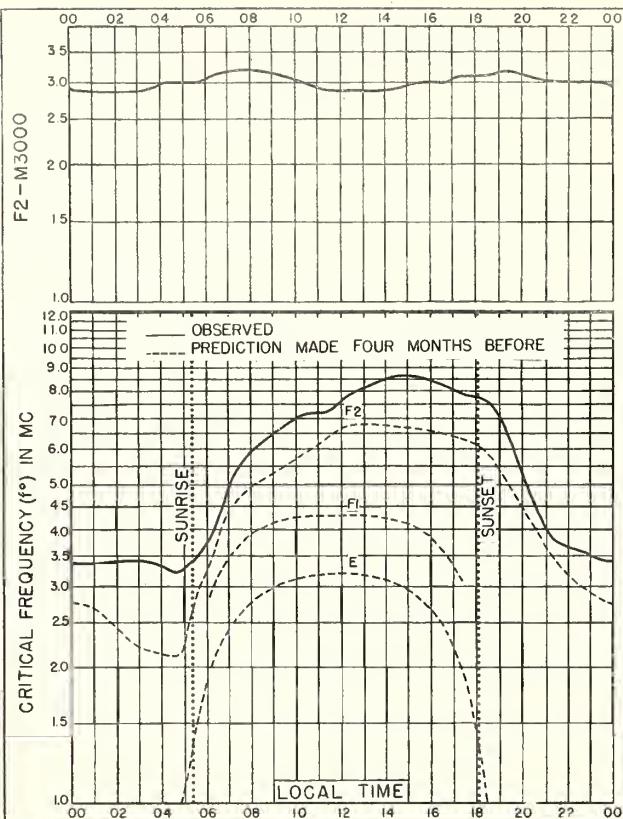


Fig. 30. SIMONSTOWN, UNION OF S. AFRICA
33.9°S, 18.7°E OCTOBER, 1944

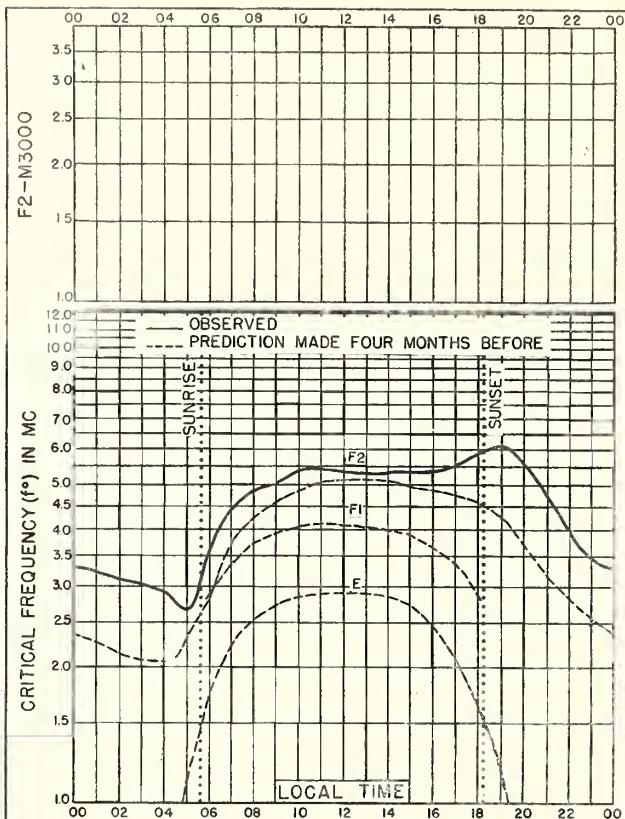


Fig. 31. SLOUGH, ENGLAND
51.5°N, 0.6°W SEPTEMBER, 1944

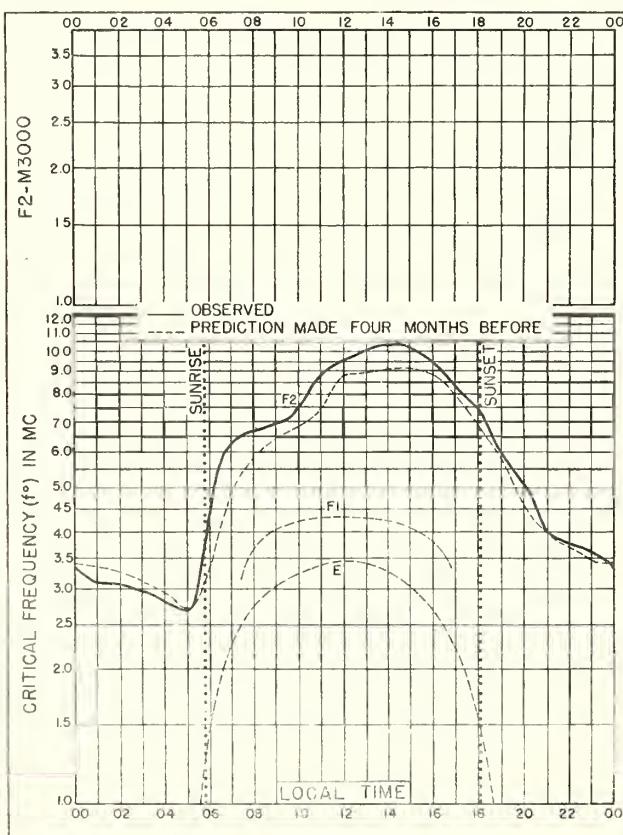


Fig. 32. DELHI, INDIA
28.6°N, 77.2°E SEPTEMBER, 1944

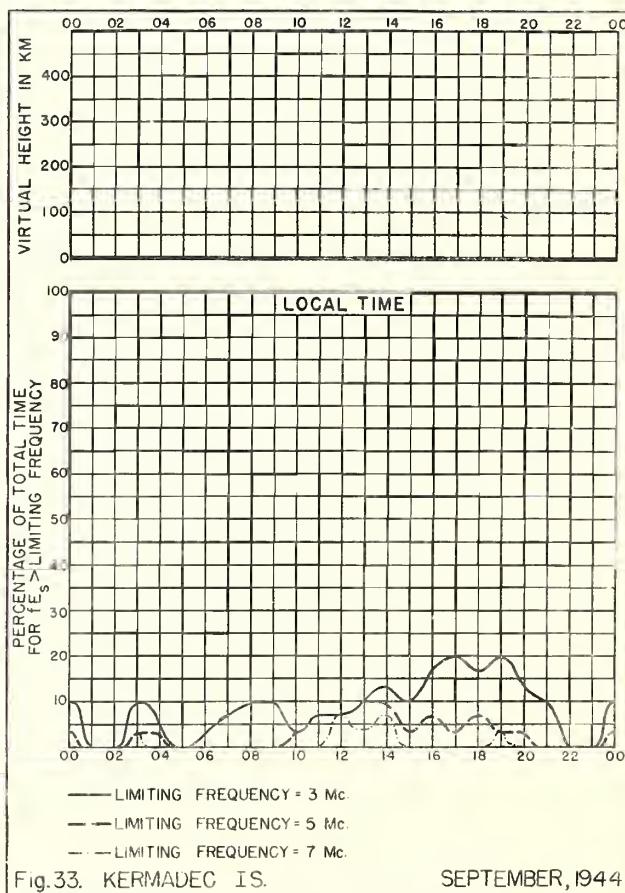


Fig. 33. KERMADEC IS. SEPTEMBER, 1944

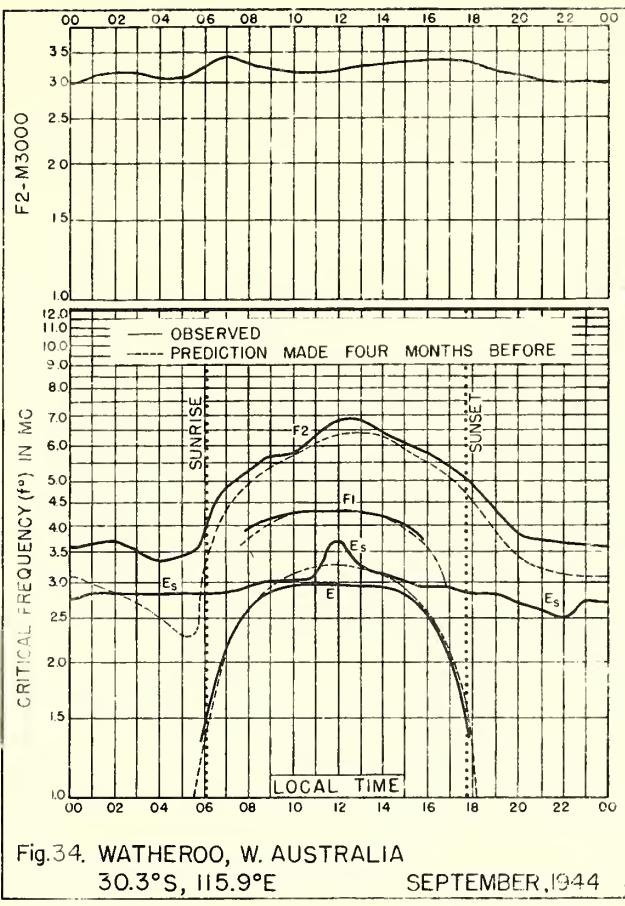


Fig.34. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E SEPTEMBER, 1944

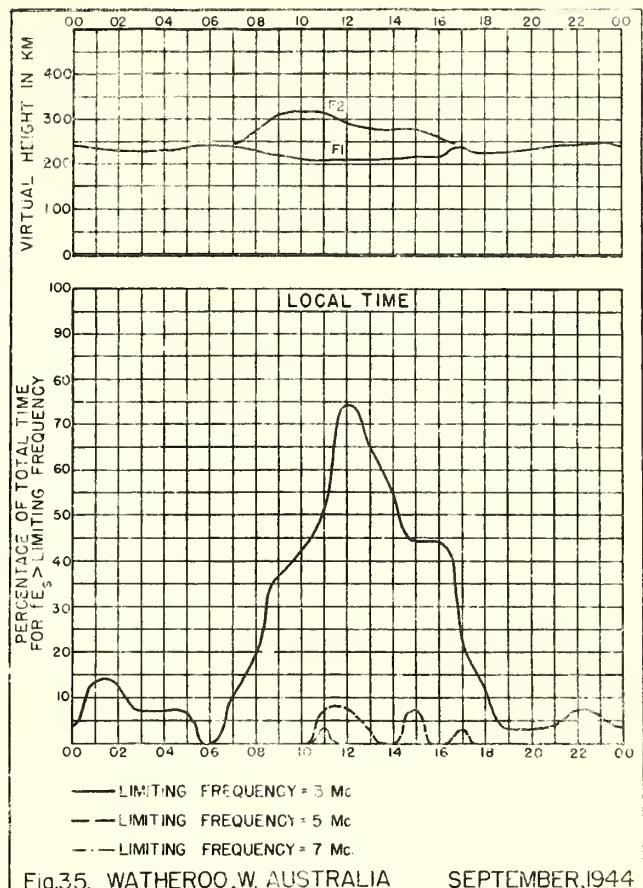


Fig.35. WATHEROO, W. AUSTRALIA SEPTEMBER, 1944

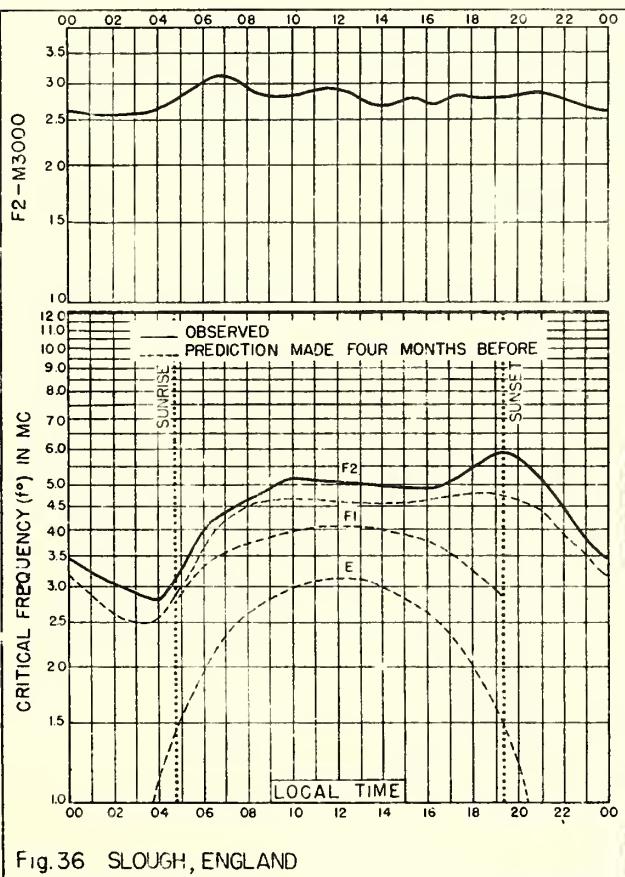


Fig.36 SLOUGH, ENGLAND
51.5°N, 06°W AUGUST, 1944

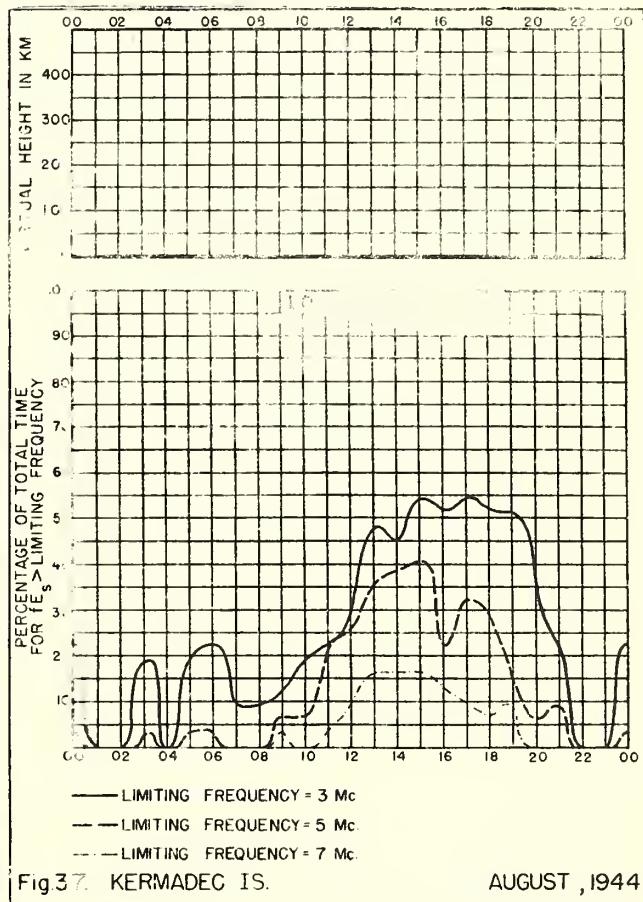
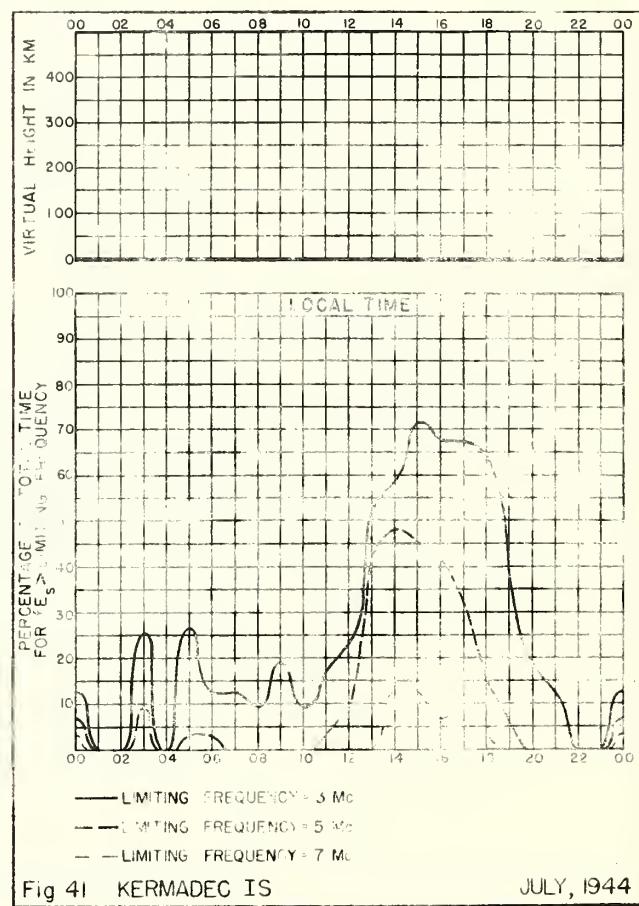
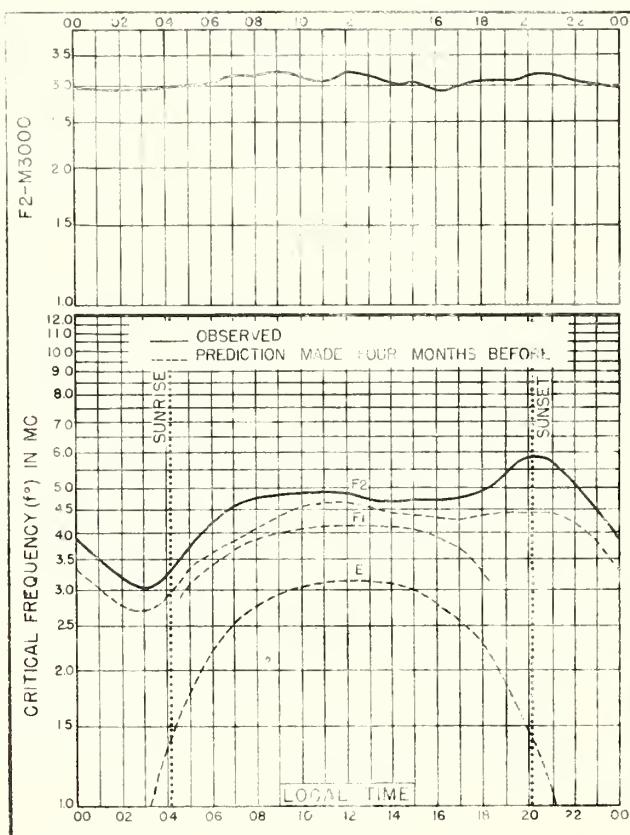
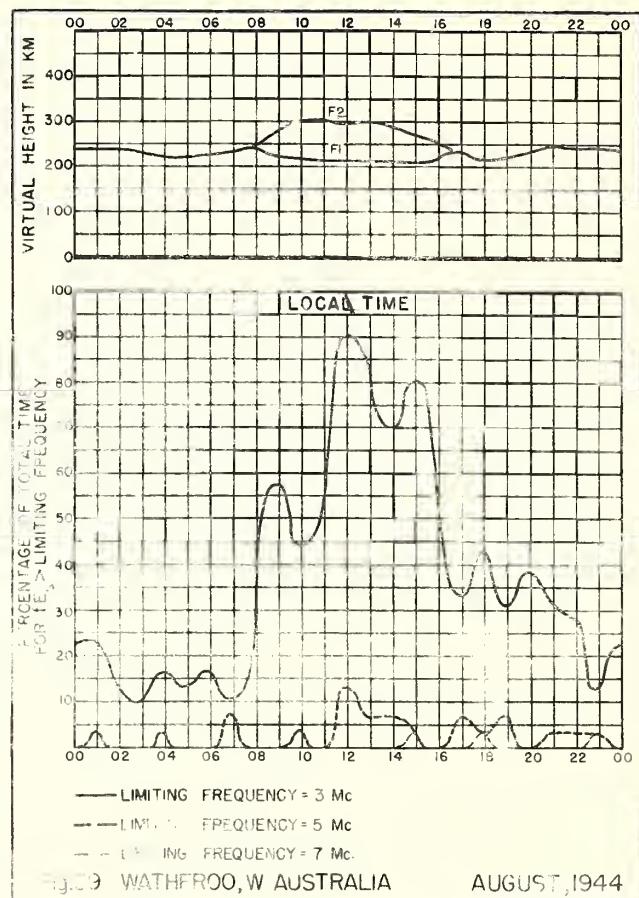
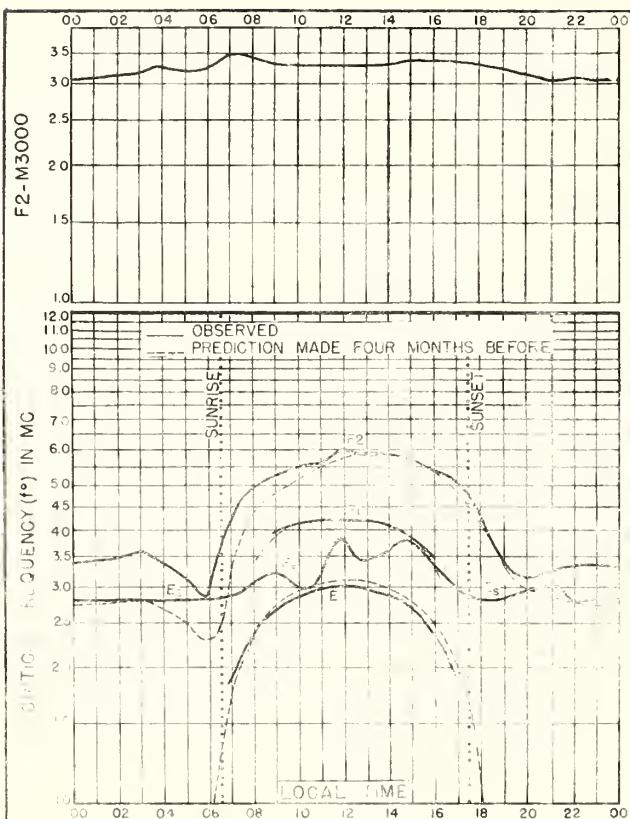
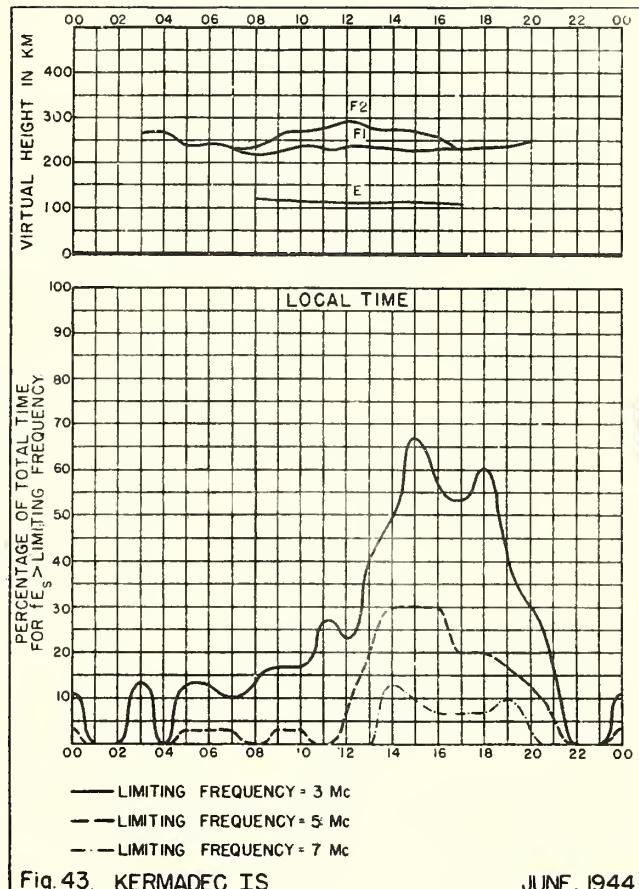
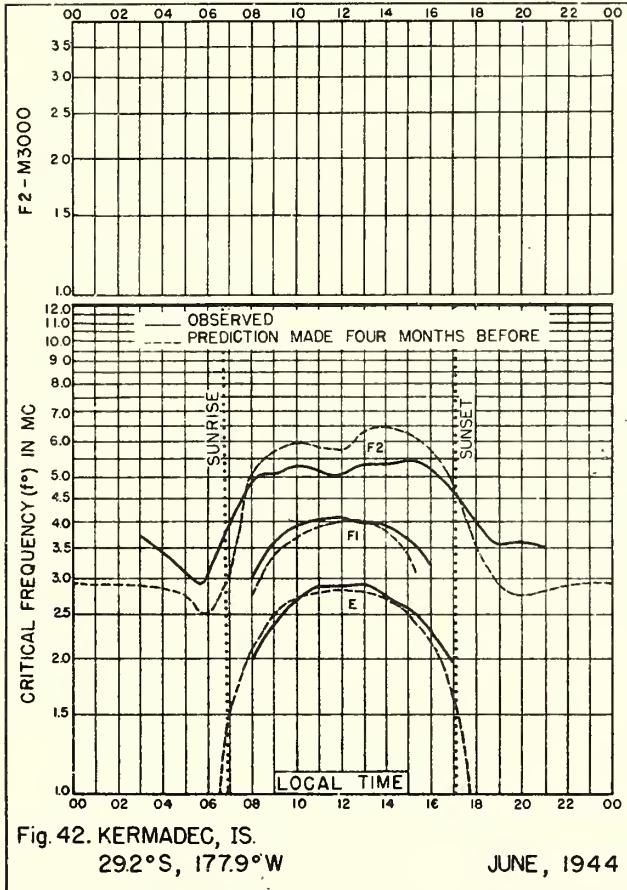


Fig.37. KERMADEC IS. AUGUST, 1944







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