PART A

IONOSPHERIC DATA

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

CRPL-F172
PART A

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
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CONTENTS

SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, and continuing through December 1956, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1957, the symbols used are given in NBS Report 5033, "Summary of Changes in Ionospheric Vertical Soundings, Observing and Scaling Procedures - Effective 1 January 1957," which draws upon the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, Sept. 2, 1956. A list of these symbols is available upon request.

In the Second Report of the Special Committee on World-Wide Ionospheric Soundings of the URSI/AGI Committee, May 1957, a new descriptive letter was introduced:

M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

There was an expansion in meaning of the following:

Z (1) (qualifying letter) Measurement deduced from the third magnetoionic component.
(2) (descriptive letter) Third magnetoionic component present.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given above.

a. For all ionospheric characteristics:

Values missing because of A, C, F, H, L, N or R are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the descriptive symbol D, only when it replaces a frequency characteristic.

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

c. For MUF factor (M-factors):

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

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

d. For sporadic E (Es):

Values of fEs missing because of E or G are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

B for fEs is counted on the low side when there is a numberical value of a higher layer characteristic; otherwise it is omitted from the median count.

S for fEs is counted on the low side at night; during the day it is omitted from the median count (beginning with data for November 1957).

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

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D.C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If the count is four or less, the data are considered insufficient and no median value is computed.

2. For the F2 layer, h'F or foEs, if the count is from five to nine, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as the count is at least five, the median is not considered doubtful. A count of at least 5 is considered sufficient for an h'Es median.

3. For all layers, if more than half of the data used to compute the medians are doubtful (either doubtful or interpolated), the median is considered doubtful.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

Ordinarily, a blank space in the fEs or foEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'F2 or h'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 is usually the result of seasonal effects.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. The following points are worthy of note:

a. Predictions for individual stations used to construct the charts may be more accurate than the values read from the charts since some smoothing of the contours is necessary to allow for the longitude effect within a zone. Thus, inasmuch as the predicted contours are for the center of each zone, part of the discrepancy between the predicted and observed values as given in the F series may be caused by the fact that the station is not centrally located within the zone.

b. The final presentation of the predictions is dependent upon the latest available ionospheric and radio propagation data, as well as upon predicted sunspot number.

c. There is no indication on the graphs of the relative reliability of the data; it is necessary to consult the tables for such information.

d. The tables may contain median values of either foEs or fEs. The graph of median Es corresponds to the table. Percentage curves of fEs are estimated from values of foEs when necessary.

PREDICTED AND OBSERVED SUNSPOT NUMBERS

The following predicted smoothed 12-month running-average Zürich sunspot numbers were used in constructing the contour charts:

Month	Predicted Sunspot Number										
	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949
December		150*	150*	150	42	11	15	33	53	86	108
November		150*	150*	147	35	10	16	38	52	87	112
October		150*	150*	135	31	10	17	43	52	90	114
September		150*	150*	119	30	8	18	46	54	91	115
August		150*	150*	105	27	8	18	49	57	96	111
July		150*	150*	95	22	8	20	51	60	101	108
June		150*	150*	89	18	9	21	52	63	103	108
May	146	150*	150*	77	16	10	22	52	68	102	108
April	150*	150*	150*	68	13	10	24	52	74	101	109
March	150*	150*	150*	60	14	11	27	52	78	103	111
February	150*	150*	150*	53	14	12	29	51	82	103	113
January	150*	150*	150*	48	12	14	30	53	85	105	112

*This number is believed representative of solar activity at a maximum portion of the current sunspot cycle.

The latest available information follows concerning the corresponding observed Zürich numbers beginning with the minimum of April 1954. Final numbers are listed through June 1957.

Observed Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	73	81
1956	89	98	109	119	127	137	146	150	151	156	160	164
1957	170	172	174	181	186	188	191	194	196	198	200	199
1958	198	200	200	196	189							

WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 72 and figures 1 to 144 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

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

Commonwealth of Australia, Department of the Interior:
- Macquarie I.

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

Electronics Directorate of the Brazilian Navy:
- Natal, Brazil

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

Defence Research Board, Canada:
- Churchill, Canada
- Ottawa, Canada
- Resolute Bay, Canada
- Winnipeg, Canada

Danish National Committee of URSI:
- Godhavn, Greenland
- Narsarssuak, Greenland

General Direction of Posts and Telegraphs, Helsinki, Finland:
- Nurmijarvi, Finland

The Finnish Academy of Sciences and Letters:
- Sodankyla, Finland

French National Center for Telecommunications Studies:
- Dakar, French West Africa
- Tananarive, Madagascar

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

The Royal Netherlands Meteorological Institute:
De Bilt, Holland

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

National Institute of Geophysics, City University, Rome, Italy:
Rome, Italy

Ministry of Postal Services, Radio Research Laboratories, Tokyo, Japan:
Akita, Japan
Tokyo (Kokubunji), Japan
Wakkanai, Japan
Yamagawa, Japan

Christchurch Geophysical Observatory, New Zealand Department of Scientific and Industrial Research:
Campbell I.
Cape Hallett (Adare), Antarctica
Scott Base, Antarctica

Manila Observatory:
Baguio, P. I.

Institute of Terrestrial Magnetism, Ionosphere and Radio Propagation, Moscow, U.S.S.R.:
Moscow

South African Council for Scientific and Industrial Research:
Capetown, Union of South Africa
Johannesburg, Union of South Africa

Research Institute of National Defence, Stockholm, Sweden:
Kiruna, Sweden
Lycksele, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Schwarzenburg, Switzerland

United States Army Signal Corps:
Adak, Alaska
Fletchers Ice I.
Okinawa I.
St. John's, Newfoundland
White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Laboratory):
- Anchorage, Alaska
- Byrd Station, Antarctica
- Ellsworth, Antarctica
- Fairbanks (College), Alaska (Geophysical Institute of the University of Alaska)
- Maui, Hawaii
- Panama Canal Zone
- Point Barrow, Alaska
- Pole Station, Antarctica
- Puerto Rico, W. I.
- San Francisco, California (Stanford University)
- Washington, D. C.

INDEX OF IONOSPHERIC DATA PUBLISHED IN 1958
(CRPL-F 161 (A) THROUGH F 172(A))

The following index of tables and graphs of ionospheric data published in the CRPL-F(A) series in 1958 is divided into two parts. Part I is an index of data observed in 1957 and 1958. Part II is an index of data observed prior to 1957.

In general, both table and graphs for a given station for a given month appear in the same issue.

Indexes of ionospheric data published prior to 1958 are in IRPL-F17, CRPL-F28, -F40, -F52, -F64, -F76, -F88, -F100, -F112, -F124, -F136(A), -F148(A), and -F160(A).

PART I

Index of Tables and Graphs of Ionospheric Data Observed in 1957 and 1958

and Published in 1958 (CRPL-F161(A) through -F172(A)

Station	1957												1958											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	
Adak, Alaska									162	163	164	165	166	166	168	168	169	170		171		172		
Ahmedabad, India						170																		
Akita, Japan						161	163	162	163	164	165	166	168	168	170		172							
Alma-Ata, U.S.S.R.				161	168	164	170																	
Anchorage, Alaska									162	163	163	165	165	165	167	167	169	170		171	171	172	172	
Ashkabad, U.S.S.R.				167	168		170																	
Baguio, P.I.							161	162	162	163	164	166	167	167	168	168	169	170		171	171	172		
Baker Lake, Canada								162	163	163	165	165	166	167			171							
Bogota, Colombia								161	167															
Bombay, India						169																		
Brisbane, Australia		166						162	163	164	165	169	169	169			172							
Budapest, Hungary							161	162	167	166	169	169	170											
Bunia, Belgian Congo										162	165	166	169	171										
Byrd Station							172																	
Calcutta, India						170																		
Campbell I.							161	162	163	167	165	166	168	172										
Canberra, Australia								161	162	164	165	166	169	169	169		172							
Cape Hallett						161	162		167	167	169		170	171			172							
Capetown, Union of S.Africa							161	162[a]	163	164	165	166	166	169		172	172							
Chiclayo, Peru							164	165	164	164	165	167	169	169	169	170	170							
Chimbote, Peru							164	165	166	167	169	169	170	170	170	170	170	170	170					
Chita, U.S.S.R.				167	168																			
Christchurch, New Zealand						166	161	162	163	167	170	167	168	168			171							
Churchill, Canada								161	164	166	165	166	166	167	169		172	172						
Concepcion, Chile											171													
De Bilt, Holland									163	163	166	165	166	169	168[b]		171	172						
Oecepcion I.							170																	
Oelhi, India						169																		
Oourbes, Belgium							162				166													
Elisabethville, Belgian Congo						161	161	162	161	162	165	168	169	169	170									
Ellsworth						171	172	171	165	171	171	171												
Fairbanks, Alaska									162	163	164	165	165	165	168	168	169	171		171	172	172		
Falkland Is.				164	164	164	163	163	164	164	166	166	169	169	171	172	172							
Fletchers Ice I.							161	162	161[c]	162[d]	164	164	167	167	168	169	170	172						
Formosa, China											162	165	167	169	169	171	171							
Ft. Monmouth, New Jersey								161	162	162	164	165	165	167	168	169	169	171						
Godhavn, Greenland					163	161	161	161	162	164	172	172	171	171	171	171	171	171	172					
Grand Bahama I.								161	162	163	165	165	165	167	169	170	170	171	171					
Graz, Austria							161	161		161	165	165		165			168							
Hobart Tasmania		168	171	171			162	162	163	163	166	168	171	169	169									
Huancayo, Peru								163	164	164	165	165	167	167	168	169	169	170	170					
Ibadan, Nigeria	161						164		170	168	170	169	170				172							
Inverness, Scotland							161	163	163	164	165	166	167	168	170		171							
Irkutsk, U.S.S.R.				162	164																			
Johannesburg, Union of S.Africa								162	163	164	166	166	166	169		172	172							
Juliusruh/Rugen, Germany					167		163	163	163															
Kiruna, Sweden										164	165	166	166	165	169	172	168							
Kodaikanal, India						171																		
La Paz, Bolivia										165														
Leningrad, U.S.S.R.				162	168	164																		

PART I (CONCLUDED)

Station	1957												1958									
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N
Leopoldville, Belgian Congo						161	161	162	161	162	165	166	167	169	170								
Lindau/Harz, Germany							163	167	167	167	172	167	168	171									
Lulea, Sweden							162	162	164														
Lycksele, Sweden											162	166	167	165	171		172						
Macquarie I.	171				172		171		166	168	170												
Madras, India						171																	
Maui, Hawaii									161	162	164	164	166	166	167	167	168	169	170	171	172		
Meanook, Canada							166	164	166	165	165												
Moscow, U.S.S.R.		169		161	163	163	170	171	169	169	170	171	172	169	171								
Murmansk, U.S.S.R.	167	167	167	167			170																
Narsarssuak, Greenland				167				168	169	164	164	164	166	167	168	168	169	170	171	172	172		
Natal, Brazil															172	171		172					
Nurmijarvi, Finland								161		164	166	165	166	168	171		172	172					
Okinawa I.									162	163	164	165	167	167	168	168	169	171	171		172		
Oslo, Norway									161	164	165	164	167	168									
Ottawa, Canada									163	164	165	166	166	167			171	172					
Panama Canal Zone								161	161	162	164	165	166	167	167	168	169	170	170	171	172		
Paramaribo, Surinam							162	166	169														
Point Barrow, Alaska								161	162	163	164	165	165	167	167	167	169	170	171	172	172		
Pole Station							172				171	164											
Providenie Bay, U.S.S.R.				161	168																		
Puerto Rico, W.I.									162	162	164	165	167	167	168	169	169	170	170	171	172		
Rarotonga I.		169		e	e	161[ef]	161[g]	162[g]	163[g]	168[f]	170	168[f]	167	168									
Resolute Bay, Canada							161	161	163	163	165	165	166	167	168	170	172	172					
Reykjavik, Iceland								162	162	163	164	165	167	167	168	170	170	170	171	172			
Rome, Italy												169	166		171		172	172					
Rostov-on-Don, U.S.S.R.				167	168		170																
St. John's, Newfoundland									161	162	164	165	166	167	167	168	169	170			172		
Salehard, U.S.S.R.							170																
San Francisco, California								161		169	170	170	169	170	170	170	171	172					
Sao Paulo, Brazil							161	162	163	166	170	166	171	171									
Schwarzenburg, Switzerland										166	166	165	167	168	169		172	172					
Scott Base			h	h	h	161[h]	i	162[i]	163[i]	167[h]	169[h]	167[h]	166	171			172	172					
Simferopol, U.S.S.R.				161		164																	
Singapore, British Malaya		161			164	164	164	164	163	164						172	172						
Slough, England							161	162	167	164	166	169	168[j]	171	169	170	172						
Sodankyla, Finland								162	163	168	168	168	167	168	171	171	172						
Svalbard, Norway							166	166															
Sverdlovsk, U.S.S.R.				161	168	164	170																
Talara, Peru							163	163	163	165	165	165	166	168	168	170	170	170	171				
Thule, Greenland								161	162	162	164	165	165	167	168	168	170						
Tiruchy, India						169																	
Tokyo, Japan						161	163	162	163	164	165	166	168	169	170		172						
Tomsk, U.S.S.R.				161		164	170																
Tortosa, Spain								164				166											
Townsville, Australia								162	164	164	166	168	169										
Trivandrum, India						171																	
Tromso, Norway									161	163	163	165	166	168									
Tsumeb, South W.Africa							171																
Tucuman, Argentina							170																
Upsala, Sweden										161	164	165	168	165	169	170	168						
Victoria, Canada								163	163	164	169	167											
Wakkanai, Japan						161	163	162	163	164	165	166	168	168	170		172						
Washington, D.C.									161	162	163	163	166	166	166	167	169	169	170	171	172		
Watheroo, W. Australia							161		163	164	166	166	168	169			172						
White Sands, New Mexico									162	163	164	165	167	167	168	168	170	170	172	172			
Winnipeg, Canada								162	163	163	165	165	166	166			172						
Yakutsk, U.S.S.R.				167	168	164																	
Yamagawa, Japan						161	163	162	163	164	165	166	168	168	170		172						
Yuzhno-Sakhalinsk, U.S.S.R.				167	168																		

[a]See erratum 2 in CRPL-F163(A), p. viii.
[b]See erratum 1 in CRPL-F169(A), p. viii.
[c]See erratum 2 in CRPL-F164(A), p. viii.
[d]See erratum 1 in CRPL-F164(A), p. viii.
[e]See erratum in CRPL-F162(A), p. 8.
[f]See erratum 1 in CRPL-F170(A), p. viii.
[g]See erratum 4 in CRPL-F163(A), p. viii.
[h]See erratum 2 in CRPL-F170(A), p. viii.
[i]See erratum 4 in CRPL-F163(A), p. viii.
[j]See erratum 2 in CRPL-F169(A), p. viii.

PART II

Index of Tables and Graphs of Ionospheric Data Observed Prior to 1957 and

Published in 1958 (CRPL-F161(A) through -F172(A)

Station	1956												1953											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	D
Ahmedabad, India			163	163																				
Akita, Japan											166													
Bombay, India			165	163																				
Brisbane, Australia										162	162	162												
Budapest, Hungary							163																	
Calcutta, India			164	163																				
Campbell I.	172																168							
Casablanca, Morocco						162	162	165	163															
Christchurch, New Zealand											167													
Dakar, French W.Africa	172	171																						
Delhi, India			163	163																				
Djibouti, Fr.Somaliland	171	171																						
Hobart, Tasmania										162	162	162												
Kodaikanal, India			164	164																				
Macquarie I.												171												
Madras, India			165	163																				
Poitiers, France						162	162	167	163															
Quetta, Pakistan							161																	
Sao Paulo, Brazil											161													
Tananarive,Madagascar	172	171																						
Tiruchy, India			165	163																				
Tokyo, Japan											166													
Townsville, Australia										162	162	162[a]												
Wakkanai, Japan											166													
Yamagawa, Japan											166													

[a]See errata 1 and 3 in CRPL-F163(A), p. viii.

TABLES OF IONOSPHERIC DATA

October 1958 - January 1956

Table 1

Anchorage, Alaska (61.2°N, 149.9°W) October 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.1						2.50
01		4.0						2.40
02		3.9						2.40
03		3.9						2.35
04		(3.85)						(2.35)
05		3.8						2.40
06		4.5						2.50
07		(6.05)			127	(1.95)		(2.85)
08		7.5			119	2.40		3.00
09		9.0			114	2.78		3.00
10		9.7			111	3.00		2.90
11		10.6		---	111	3.10		2.80
12		11.15		---	110	3.15		2.80
13		11.5		---	113	3.05		2.80
14		11.7		---	115	2.90		2.80
15		11.7			117	2.60		2.85
16		12.0			123	2.28		2.85
17		11.2			---	-----		2.90
18		10.0						2.90
19		8.4						2.85
20		7.1						2.88
21		5.4						2.80
22		4.8						2.70
23		4.4						2.50

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

Table 2

Point Barrow, Alaska (71.3°N, 156.8°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.4)	315				4.8	(2.60)
01		(5.9)	320				4.0	(2.55)
02		(5.6)	300				3.2	(2.52)
03		>5.25	335				3.0	(2.50)
04	---	(5.6)	325	---			3.2	(2.50)
05	---	(5.6)	320	---	---	----	2.8	(2.55)
06	---	(5.6)	320	---	<125	(2.28)		(2.60)
07	<500	(6.3)	(310)	---	121	(2.60)		(2.62)
08	(630)	(6.15)	260	(3.8)	116	2.92		(2.65)
09	---	6.85	260	---	113	2.90		2.70
10	(525)	7.1	240	---	(111)	3.00		2.62
11	(460)	7.35	240	4.5	109	(3.05)		2.65
12	(495)	7.4	240	4.4	(113)	3.10		2.62
13	<560	7.5	240	---	(113)	3.10		2.60
14	(520)	7.6	240	4.5	(113)	3.00		2.60
15	(410)	8.6	240	4.4	(113)	2.85		2.60
16	---	7.8	240	---	(117)	2.65		2.62
17	---	7.5	250	---	<123	2.50		2.70
18	---	7.3	260	---	<132	2.35		2.75
19	---	6.9	270		(133)	(2.20)		2.70
20	---	(6.3)	310		131	----	2.6	2.70
21		(4.7)	335				2.8	(2.65)
22		(5.0)	320				3.2	(2.55)
23		(5.85)	325				4.0	(2.50)

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

Table 3

Fairbanks, Alaska (64.9°N, 147.8°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.95)					3.0	(2.55)
01		(5.25)					3.4	(2.45)
02		(5.45)					2.7	(2.40)
03		(5.65)					3.6	(2.40)
04		(5.7)					3.8	(2.50)
05		(5.6)			---	----		(2.55)
06		6.3			---	----		2.70
07		7.0		---	119	2.65		2.80
08		7.0		4.2	109	2.90		2.70
09		7.65		---	107	3.10		2.68
10		7.4		4.9	109	3.30		2.60
11		8.1		4.6	105	3.40		2.60
12		8.3		5.0	104	3.50		2.60
13		8.15		5.0	109	3.40		2.60
14		8.65		4.9	110	3.20		2.65
15		9.0		(4.6)	111	3.00		2.70
16		9.0		---	111	2.80		2.75
17		8.5		---	111	2.55		2.80
18		8.5		---	---	----		2.85
19		8.1			---	----		2.80
20		7.0			---	----		2.80
21		6.25						2.75
22		(4.9)						(2.70)
23		(5.1)					2.6	(2.55)

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

Table 4

Anchorage, Alaska (61.2°N, 149.9°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.45						2.45
01		4.6						2.42
02		4.8						2.35
03		(4.5)						(2.35)
04		(4.5)						(2.35)
05		(4.95)			---	----		(2.45)
06		(5.6)		---	(122)	2.10		2.55
07		6.4		3.6	117	2.55		2.75
08		7.1		4.3	113	2.98		2.68
09		7.4		4.5	111	3.20		2.58
10		7.75		4.6	111	3.40		2.55
11		8.25		4.7	111	3.45		2.55
12		8.55		4.8	111	3.58		2.58
13		8.85		(5.0)	111	3.52		2.55
14		9.35		4.9	111	3.40		2.60
15		9.5		4.9	113	3.15		2.65
16		9.65		---	115	2.80		2.75
17		9.3		---	(120)	2.45		2.80
18		8.8			<133	(2.00)		2.80
19		8.1						2.80
20		6.8						2.75
21		6.1						2.70
22		5.85						2.70
23		4.8						2.55

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

Table 5

Narsarssuak, Greenland (61.2°N, 45.4°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.25)					2.9	(2.50)
01		(5.4)			---	----	2.8	(2.45)
02		(5.4)			---	----	3.2	(2.42)
03		(5.3)			---	----	3.0	(2.50)
04		5.1			---	----	3.1	2.55
05		5.3			---	----	3.3	2.65
06		6.4			<128	2.50		2.90
07		6.95		---	113	2.80		2.90
08		7.55		4.2	112	3.05		2.80
09		7.95		4.8	108	3.25		2.80
10		8.1		5.0	105	3.45		2.70
11		8.6		5.3	107	3.55		2.60
12		9.0		5.1	105	3.50		2.58
13		9.3		5.0	105	3.50		2.55
14		8.9		5.0	105	3.40		2.62
15		9.2		(4.8)	107	3.20		2.60
16		8.9		4.3	109	2.95		2.60
17		7.8		---	115	2.70		2.68
18		7.4		---	131	(2.45)		2.65
19		7.2			129	(2.25)	2.4	2.65
20		6.6			---	----	3.2	2.45
21		(5.85)					3.2	(2.40)
22		(6.05)					3.9	(2.45)
23		(5.2)					4.0	(2.50)

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

Table 6

Adak, Alaska (51.9°N, 176.6°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.35	<340					2.40
01		5.0	<355					2.35
02		4.85	(355)					2.30
03		4.7	350					2.28
04		4.5	(365)		---	----	1.4	2.30
05	---	4.85	325	---	(121)	----	1.6	2.40
06	(610)	6.7	270	3.5	<121	(2.30)	2.4	2.65
07	(640)	8.15	250	3.8	115	2.72	3.2	2.75
08	(725)	9.05	240	4.5	109	3.15	3.6	2.80
09	500	9.7	230	4.8	109	3.45	3.6	2.70
10	(550)	10.2	230	4.9	109	3.55	3.7	2.65
11	(640)	10.45	225	5.0	109	3.70		2.65
12	(510)	10.8	225	5.1	109	3.75		2.65
13	(510)	10.75	230	---	109	3.70		2.60
14	---	10.6	230	---	109	3.55		2.65
15	---	10.25	235	---	109	3.25		2.70
16	---	10.0	245	---	111	3.00		2.75
17		9.7	250	---	119	2.60	2.7	2.80
18		9.2	250		<129	2.20		2.80
19		8.6	250				1.8	2.80
20		7.7	<260				1.9	2.80
21		6.9	260				1.6	2.75
22		6.0	(275)				2.0	2.60
23		5.5	<310					2.50

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 7

St. John's, Newfoundland (47.6°N, 52.7°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.05	300					2.52
01		6.8	280					2.50
02		(6.4)	275					2.55
03		6.0	280					2.55
04		5.4	270					2.58
05		5.8	270		116	1.80		2.80
06	---	7.5	250	---	116	2.50		3.00
07	---	8.65	240	---	111	3.02		3.00
08	---	9.0	230	---	109	3.40		2.90
09	---	9.5	220	---	109	3.70		2.85
10	(470)	9.6	220	5.5	109	3.80		2.70
11	(530)	9.65	220	5.4	105	3.90		2.62
12	(570)	9.95	220	---	105	3.90		2.60
13	(490)	9.95	230	5.6	109	3.80		2.60
14	---	10.2	230	---	109	3.60		2.60
15	---	10.4	235	---	109	3.30		2.55
16	---	10.5	245	---	111	3.00		2.65
17	---	10.35	260		119	2.40		2.70
18	---	10.2	260					2.70
19		9.6	250					2.65
20		8.7	260					2.60
21		8.0	285					2.50
22		7.8	300					2.55
23		7.2	295					2.55

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

Table 8

Washington, D. C. (38.7°N, 77.1°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.25	290					2.60
01		7.1	285					2.60
02		6.8	285					2.55
03		6.5	280					2.55
04		6.0	285					2.55
05		5.6	280					2.55
06		6.65	260		115	1.85		2.90
07	---	8.8	240		109	2.75		3.00
08	---	10.1	230	---	107	3.20		2.98
09	(280)	10.4	220	---	105	3.55		2.80
10	(640)	10.7	220	5.4	105	3.85		2.70
11	(490)	11.05	210	5.8	105	3.95		2.65
12	(480)	11.0	210	5.8	105	4.00		2.60
13	(510)	11.0	225	5.7	105	4.00		2.55
14	(445)	10.9	225	6.1	105	3.90		2.55
15	(420)	10.7	230	6.0	105	3.60		2.55
16	---	10.6	235	---	105	3.25		2.60
17	---	10.35	245		110	2.68		2.65
18		10.2	260		(119)	2.00	2.0	2.70
19		9.6	245					2.70
20		8.6	250					2.60
21		8.2	270					2.65
22		7.8	270					2.60
23		7.6	280					2.62

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

Table 9

Okinawa I. (26.3°N, 127.8°E) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>15.0	260					(2.85)
01		>14.35	250					(2.80)
02		>13.0	250					(2.85)
03		11.45	230					2.85
04		>9.1	225					2.90
05		8.0	245					2.85
06		8.4	260					2.90
07		10.9	240		---	----		3.20
08	---	11.4	230	---	---	----	3.7	3.10
09	---	11.9	220	---	109	(3.55)	4.2	2.75
10	---	12.6	215	---	109	(4.00)	4.5	2.60
11	(385)	14.1	220	---	(109)	4.25	4.6	2.60
12	385	(15.05)	215	(7.2)	(111)	(4.25)	>4.5	(2.60)
13	390	(15.65)	225	(7.0)	111	(4.30)	4.5	(2.60)
14	390	(16.0)	<230	(7.0)	111	(4.20)	4.4	2.58
15	380	(16.55)	230	(6.8)	111	4.00	4.3	2.60
16	360	(16.45)	240	(6.6)	111	3.75	4.4	(2.65)
17	(340)	15.35	250		---	----	5.4	2.70
18	---	>14.0	260		---	----	4.8	(2.75)
19		(13.5)	275				4.0	(2.68)
20		>14.2	(300)				3.8	(2.60)
21		(18.0)	(290)					(2.70)
22		(17.15)	275					(2.80)
23		(14.5)	260					(2.90)

Time: 135.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.
Note: Height scale expanded morning of 11th.

Table 10

Maui, Hawaii (20.8°N, 156.5°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		12.7	240				2.3	2.95
01		11.0	245					2.90
02		9.5	240					2.90
03		7.9	235				1.8	2.95
04		6.5	245					2.80
05		5.8	265				2.4	2.70
06		5.9	280		<125	----	3.2	2.70
07	---	9.05	250	---	111	2.60	4.6	3.08
08	---	10.7	230	---	107	3.20	4.0	2.95
09	---	11.8	225	---	105	3.70	4.3	2.65
10	---	13.0	220	---	107	3.95	4.5	2.60
11	(405)	14.0	220	7.4	107	4.10	4.7	2.60
12	385	14.4	(225)	(7.3)	(107)	4.20	4.8	2.60
13	400	14.35	230	(7.5)	(109)	4.28	4.9	2.55
14	385	14.6	230	7.1	107	4.20	4.8	2.55
15	385	14.4	230	7.0	<111	4.00	4.6	2.60
16	350	14.2	(240)	---	107	3.60	4.9	2.65
17	<340	13.6	245		(109)	3.10	4.9	2.65
18	---	13.5	260		115	2.12	5.0	2.70
19		13.9	(270)		111	----	5.5	2.70
20		14.7	285				4.8	2.70
21		14.3	270				4.8	2.70
22		14.4	260				3.8	2.80
23		(13.6)	250				3.3	(2.95)

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

Table 11

Puerto Rico, W.I. (18.5°N, 67.2°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.4	275					2.80
01		9.25	265					2.88
02		8.5	250					2.95
03		7.1	230					2.80
04		6.7	255					2.70
05		6.3	265					2.75
06		6.6	270					2.80
07		9.3	235		<118	2.50	>2.5	3.15
08		10.8	230		109	3.15	3.5	3.05
09	---	11.9	220		109	3.60	4.2	2.90
10	---	12.7	220		109	4.00	4.0	2.75
11	---	13.2	215		109	4.15	4.3	2.68
12	(380)	13.3	215	---	109	4.25	>4.4	2.62
13	(385)	13.4	215	---	111	4.20		2.60
14	385	13.2	220	---	109	4.15	4.3	2.60
15	380	12.9	230		111	4.00	>4.1	2.60
16	---	12.5	230		109	3.65	4.0	2.60
17	---	11.8	240		111	3.00	3.8	2.65
18	---	11.3	255		116	2.35	3.0	2.65
19		10.55	265				>1.9	2.65
20		10.0	280					2.60
21		9.8	285					2.60
22		9.7	290					2.65
23		9.8	280					2.75

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

Table 12

Baguio, P.I. (16.4°N, 120.6°E) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		13.5	260					(2.85)
01		(13.0)	245					(3.00)
02		(11.0)	230					(2.95)
03		9.2	240					2.85
04		(8.2)	250					(2.88)
05		7.7	250					2.90
06		7.85	290					2.80
07		10.3	260		125	(3.00)	3.9	2.85
08		12.0	250		<121	(3.45)	5.4	2.45
09		13.2	(245)		121	(3.88)	5.4	2.30
10		13.9	(240)		(121)	(4.10)	4.6	2.20
11		13.55	(245)		(121)	(4.20)	4.7	2.15
12		13.6	<240		<125	(4.30)		2.08
13		13.75	<240		<121	(4.20)		2.10
14		14.0	245		(119)	(4.10)		2.20
15	---	14.55	250		(121)	3.90		2.15
16	---	(14.35)	260		119	3.42	4.6	(2.20)
17		(12.95)	280		(125)	(2.55)	3.5	(2.20)
18		>12.0	325		---	----	2.6	(2.10)
19		(11.4)	460					(2.05)
20		----	(400)					----
21		(11.5)	(350)					----
22		(12.0)	(300)					(2.55)
23		(12.8)	280					(2.75)

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 13

Panama Canal Zone (9.4°N, 79.9°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.3	250					2.90
01		9.05	230					3.02
02		8.0	220					2.95
03		6.75	230					2.75
04		6.0	250					2.70
05		5.05	255					2.70
06		5.85	300		117	----		2.65
07		9.0	245		115	2.60		2.92
00		10.95	235		107	3.30		2.85
09		12.35	230		106	3.75	3.8	2.65
10	---	13.7	225		107	4.00	4.4	2.60
11	(390)	14.1	220	---	107	4.25	4.4	2.55
12	395	14.5	220	---	107	4.30	4.7	2.55
13	395	14.95	225	7.0	107	4.30	5.0	2.50
14	400	14.95	(230)	7.0	107	4.20	4.6	2.50
15	390	14.7	<240	---	106	3.90	5.0	2.48
16	390	14.0	(240)	---	107	3.60	4.8	2.48
17	(355)	13.5	250		109	3.00	4.0	2.50
18		13.0	<270		---	----	3.4	2.55
19		13.0	280				2.6	2.55
20		>13.0	200					2.60
21		12.0	265					2.65
22		11.6	260					2.70
23		11.7	260					2.80

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

Table 14

Point Barrow, Alaska (71.3°N, 156.0°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.15)	300		117	(2.10)	2.1	(2.60)
01		(5.2)	310		---	----	3.0	(2.52)
02		(5.45)	310		109	----	3.2	(2.65)
03	---	(5.6)	305		119	----	3.8	(2.50)
04	<430	(5.2)	300	---	(120)	----	3.0	(2.60)
05	490	(5.3)	300	3.6	(119)	(2.70)		(2.45)
06	435	(5.5)	(280)	3.9	108	(2.85)		(2.48)
07	510	5.6	260	4.0	104	3.25		2.35
08	580	5.6	250	4.4	105	3.30		2.30
09	550	5.85	250	4.6	101	3.40		2.30
10	555	5.7	240	4.6	(101)	3.50		2.30
11	530	5.8	240	4.8	101	3.40		2.30
12	510	6.0	250	4.9	101	(3.52)		2.38
13	550	6.0	230	4.9	(102)	(3.50)		2.32
14	495	6.15	230	5.0	101	3.45		2.45
15	480	6.3	230	4.9	<109	3.35		2.45
16	475	6.4	230	4.8	102	3.20		2.45
17	(470)	6.3	230	4.5	(106)	3.05		2.50
18	(460)	6.5	240	---	(109)	2.85		2.55
19	---	6.35	255	---	<111	(2.65)		2.55
20	---	5.8	275		(122)	(2.50)		2.65
21	---	5.6	300		(132)	2.48		2.60
22		(5.35)	310		129	(2.30)	2.9	(2.70)
23		(5.55)	330		---	----	3.3	(2.60)

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

Table 15

Fairbanks, Alaska (64.9°N, 147.8°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.0)					3.6	2.55
01		(5.4)					4.5	(2.60)
02		(5.2)					4.4	(2.55)
03		(5.4)					4.2	(2.60)
04		5.45			---	----	4.4	2.45
05		5.6		(3.8)	---	----	3.3	2.50
06		6.1		(4.2)	111	2.70	3.2	2.50
07		6.15		4.4	105	3.00		2.38
00		6.2		4.6	103	3.20		2.35
09		6.4		4.8	101	(3.32)		2.45
10		6.6		4.9	101	3.50		2.45
11		6.4		5.0	101	>3.55		2.40
12		6.2		5.2	101	3.60		2.40
13		6.3		5.1	101	3.50		2.45
14		6.4		5.1	101	3.50		2.42
15		6.4		5.0	103	3.40		2.45
16		6.45		4.9	103	3.20		2.50
17		6.5		4.6	107	3.00		2.65
18		6.45		---	108	>2.60		2.65
19		6.4			118	>2.30		2.00
20		6.3			---	----		2.70
21		5.9					2.0	2.70
22		5.2						2.65
23		5.0					3.5	2.55

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

Table 16

Reykjavik, Iceland (64.1°N, 21.8°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.7	(425)				3.5	2.38
01		4.9	440				3.9	2.32
02		4.7	(440)				3.7	2.35
03	---	4.6	(410)				3.7	2.48
04	---	4.95	(370)		---			2.58
05	---	5.0	(295)		115	(2.40)		2.60
06	---	5.4	260	---	115	2.65		2.70
07	---	5.9	260	---	117	3.00		2.65
08	(500)	6.1	240	4.7	(114)	3.25		2.70
09	450	6.4	235	5.0	110	3.38		2.60
10	485	6.8	<240	5.2	111	3.50		2.58
11	460	6.8	220	5.5	115	3.60		2.55
12	490	6.95	230	5.5	113	3.70		2.45
13	500	7.1	220	5.5	115	3.70		2.48
14	455	7.1	230	5.5	112	3.70		2.45
15	455	7.1	230	5.5	112	3.55		2.50
16	430	7.05	240	5.2	115	>3.40		2.55
17	415	6.9	245	5.1	117	3.30		2.60
18	(340)	6.85	260	4.8	115	3.00		2.65
19	---	6.7	285		119	2.90		2.65
20	---	6.5	300		127	2.70		2.60
21		6.0	340		---	----	2.5	2.55
22		5.5	<380				3.3	2.50
23		5.0	415				4.4	2.40

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

Table 17

Narsarssuak, Greenland (61.2°N, 45.4°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.8)	390				4.1	(2.45)
01		(4.7)	(380)				4.0	(2.40)
02		(4.7)	<405				(3.2)	(2.40)
03		(4.4)	(435)		---	----	3.7	(2.45)
04	---	(4.65)	(350)	---	---	----	3.6	(2.75)
05	---	4.9	(320)	---	109	(2.42)	3.8	2.75
06	---	5.25	(285)	---	109	2.88	3.4	2.80
07	(410)	5.8	265	4.6	107	(3.30)	3.3	2.80
08	(460)	6.0	240	4.8	105	3.40		2.70
09	(460)	6.3	240	5.0	105	(3.50)	3.8	2.68
10	470	6.5	225	5.4	105	3.65		2.60
11	470	6.7	225	5.3	105	(3.70)		2.55
12	475	7.0	220	5.4	103	3.75		2.50
13	490	7.1	225	5.4	104	(3.80)		2.50
14	450	6.95	220	5.2	105	3.70		2.60
15	460	6.95	225	5.0	103	3.52		2.50
16	470	6.8	230	4.9	104	3.30		2.62
17	(450)	6.6	250	4.6	107	3.10		2.60
18	(390)	6.7	260	---	111	2.80		2.65
19	---	6.0	300	---	121	2.68		2.60
20		(6.0)	325		125	(2.45)	2.8	(2.60)
21		(5.3)	350				3.3	(2.50)
22		(5.2)	350				4.6	(2.50)
23		(5.2)	345				4.3	(2.50)

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

Table 18

White Sands, New Mexico (32.3°N, 106.5°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.25	<330					2.45
01		6.35	310					2.52
02		6.1	300					2.55
03		6.0	300					2.55
04		5.9	310					2.50
05		5.7	300					2.55
06	---	6.8	260	---	119	2.35	2.4	2.80
07	---	8.35	240	---	111	3.00	3.5	2.85
08	(400)	9.2	235	---	109	(3.42)	3.8	2.78
09	420	9.7	225	5.8	110	(3.80)	4.2	2.60
10	410	10.1	210	6.0	109	4.02	4.9	2.55
11	405	10.3	<220	6.2	105	4.20	5.0	2.50
12	400	10.5	230	6.1	109	4.25	>4.5	2.50
13	405	10.3	230	6.1	110	4.20	4.5	2.50
14	410	10.3	230	6.0	108	4.10		2.50
15	395	10.2	230	5.8	110	4.00		2.55
16	400	9.65	<235	(5.4)	110	3.65		2.60
17	---	9.0	250		111	3.20	3.8	2.65
18		8.7	260		113	2.55	3.1	2.70
19		8.5	270		---	----	3.2	2.70
20		>7.7	265					2.65
21		7.25	275					2.60
22		6.9	300					2.55
23		6.5	315				3.0	2.52

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

Table 19

Godhavn, Greenland (69.3°N, 53.5°W) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.9)			---	----		(2.60)
01		(4.75)			---	----		2.65
02		(4.8)		---	---	----		(2.55)
03		(4.8)		---	119	----		(2.60)
04		(4.85)		---	(123)	2.30		(2.72)
05		(4.6)		4.0	<121	2.40		(2.62)
06		(5.0)		4.1	(116)	2.62		(2.40)
07		4.6		4.2	115	3.00		G
00		(4.95)		4.4	111	(3.20)		G
09		(5.5)		(4.5)	109	(3.30)		G
10		5.9		4.7	109	(3.42)		(2.50)
11		(6.1)		(4.9)	109	(3.35)		(2.40)
12		(6.2)		(4.9)	109	(3.40)		(2.30)
13		(5.7)		4.8	109	(3.40)		(2.35)
14		(5.9)		4.8	109	3.40		2.35
15		(5.05)		4.8	109	(3.30)		(2.40)
16		(5.4)		4.8	109	>3.20	3.5	(2.18)
17		(5.4)		4.7	110	3.18		2.42
18		(5.4)		4.6	113	----		(2.40)
19		5.4		(4.2)	116	----		2.52
20		5.6		(4.0)	121	2.50		2.60
21		(5.4)		---	(129)	(2.35)		2.55
22		(5.45)		---	135	----		(2.65)
23		(5.1)		---	---	----		2.62

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

Table 20

White Sands, New Mexico (32.3°N, 106.5°W) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.0	300				2.5	2.60
01		6.0	300					2.60
02		5.9	310				2.5	2.50
03		5.8	310				2.3	2.55
04		5.5	310				2.1	2.55
05		5.3	300		115	----	2.4	2.60
06	---	6.1	250	---	111	(2.45)	3.0	2.80
07	420	7.0	235	4.6	105	3.08	3.8	2.70
00	400	8.1	220	5.0	102	(3.50)	4.2	2.55
09	400	8.5	220	5.3	103	(3.75)	4.6	2.50
10	440	9.0	210	5.5	103	(3.95)	4.0	2.45
11	410	9.4	(210)	5.6	103	(4.10)	4.6	2.45
12	425	9.5	215	5.7	103	(4.20)	4.7	2.45
13	430	9.5	220	5.8	103	(4.20)	4.9	2.45
14	400	9.6	220	5.6	104	(4.02)	4.7	2.50
15	390	9.35	<225	5.4	101	3.80	4.1	2.55
16	410	8.95	(225)	5.2	101	(3.60)	4.4	2.55
17	360	8.75	230	4.9	103	3.25	4.0	2.70
18	(320)	8.5	245	---	109	2.70	3.5	2.75
19		8.3	265		(119)	(1.90)	3.1	2.75
20		7.7	250				3.0	2.70
21		6.95	260				3.0	2.65
22		6.6	300				3.6	2.60
23		6.4	300				3.0	2.60

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

Table 21

Fletchers Ice I. (79.9°N, 116.1°W)* June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	470	5.7	<250	4.3	109	(2.70)		2.40
01	460	5.6	250	4.0	109	(2.70)		2.50
02	440	5.8	250	4.0	109	(2.70)		2.50
03	450	5.85	250	4.0	109	2.70		2.50
04	410	5.85	240	4.0	109	(2.70)		2.55
05	430	5.6	240	4.1	109	(2.70)		2.50
06	430	5.5	240	4.2	109	2.80		2.50
07	470	5.5	(240)	4.4	109	2.90		2.50
00	505	5.6	240	4.5	107	3.00		2.40
09	510	5.4	230	4.6	105	(3.10)		2.40
10	520	5.5	<235	4.6	104	(3.20)		2.40
11	540	5.5	(225)	4.7	101	(3.30)		2.30
12	535	5.6	220	4.7	101	(3.40)		2.32
13	530	5.5	215	4.8	101	(3.50)		2.40
14	550	5.7	215	4.7	101	(3.50)		2.30
15	550	5.55	210	4.7	101	(3.50)		2.30
16	530	5.55	220	4.7	101	(3.40)		2.30
17	535	5.4	220	4.7	101	(3.42)		2.30
18	540	5.7	<225	4.6	103	(3.30)		2.35
19	520	5.65	(235)	4.6	105	(3.25)		2.30
20	550	5.4	(240)	4.4	105	(3.18)		2.30
21	515	5.7	<245	4.4	105	3.02		2.30
22	520	5.6	250	4.4	109	3.00		2.35
23	480	5.5	250	4.3	109	2.80		2.30

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.
*Preliminary estimated average position.

Table 22

Resolute Bay, Canada (74.7°N, 94.9°W) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00	(450)	5.6	260	3.6	110	2.3		2.55
01	400	5.4	250	3.6	105	2.4		2.5
02	450	5.6	250	3.0	105	2.5		2.5
03	560	5.2	240	3.8	100	2.6		2.5
04	500	5.2	230	4.0	100	2.8		2.6
05	450	5.4	230	4.2	100	2.9		2.5
06	480	5.4	230	4.4	100	3.0		2.5
07	540	5.2	220	4.5	100	3.1		2.3
08	540	5.4	220	4.6	100	3.3		2.35
09	530	5.5	210	4.8	100	3.4		2.4
10	540	5.8	210	4.8	100	3.5		2.3
11	550	5.4	210	4.8	100	3.5		G
12	560	5.6	210	4.9	100	3.5		2.3
13	560	5.8	210	4.8	100	3.5		G
14	600	5.4	210	4.8	100	3.5		G
15	550	5.6	210	4.8	100	3.4		2.3
16	510	5.9	210	4.7	100	3.3		2.3
17	500	6.0	210	4.6	100	3.2		2.4
18	400	6.0	220	4.5	100	3.1		2.4
19	470	5.8	220	4.4	100	2.9		2.4
20	460	6.0	230	4.3	100	2.8		2.4
21	410	6.0	240	4.0	100	2.6		2.5
22	460	6.0	260	4.0	105	2.5		2.5
23	(470)	5.8	260	3.8	105	2.4		2.5

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 23

Nurmijarvi, Finland (60.5°N, 24.6°E) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.0					<1.0	2.50
01		6.9					<1.8	2.50
02		6.8					<1.8	2.50
03		7.0					<1.9	2.55
04		6.8		---		----	<2.4	2.60
05		6.9		4.0		2.40	(2.7)	2.60
06		6.8		4.5		2.80		2.55
07		6.6		4.9		3.20		2.50
08		6.8		5.0		3.40	3.4	2.45
09		6.9		5.2		----		2.50
10		7.1		5.3		----	3.9	2.50
11		7.2		5.4		----		2.50
12		7.0		5.6		----		2.50
13		7.0		5.4		----		2.50
14		6.8		5.6		----		2.50
15		6.8		5.4		----		2.55
16		6.8		5.3		----		2.55
17		6.8		5.2		----	3.3	2.55
18		7.0		---		----	3.0	2.65
19		7.0		---		2.60	3.5	2.70
20		7.0		---		----	<3.2	2.75
21		7.0					<2.3	2.70
22		7.0					(2.0)	2.70
23		7.0					<1.8	2.55

Time: 30.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 1 minute.

Table 24

Churchill, Canada (58.8°N, 94.2°W) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.6	300		---	1.4	5.0	---
01		5.2	300		---	1.3	4.6	
02		5.0	310		---	1.5	4.5	
03		5.0	320	---	110	1.9	4.5	
04	430	5.0	300	3.5	110	2.2	4.5	---
05	540	4.9	250	3.9	110	2.6	4.5	---
06	550	5.0	250	4.2	105	3.1	4.5	G
07	570	5.3	240	4.6	100	3.6	4.4	G
08	620	5.7	240	5.0	100	3.8	4.5	G
09	540	6.0	230	5.0	100	3.7	5.0	(2.4)
10	530	6.2	220	5.2	100	3.9	4.8	2.5
11	590	6.3	220	5.3	100	3.9	4.6	(2.5)
12	520	6.5	220	5.3	100	3.9	4.5	2.4
13	500	6.9	220	5.4	100	3.9	4.5	2.4
14	500	7.2	210	5.3	100	3.8	4.5	2.4
15	480	7.0	220	5.2	100	3.8	4.4	2.4
16	460	6.9	230	5.1	105	3.6	4.5	2.5
17	480	6.7	230	5.0	105	3.4	4.3	2.5
18	460	6.4	250	4.7	110	3.2	4.4	2.5
19	440	6.1	280	4.2	110	3.0	4.4	(2.5)
20	---	6.0	300	---	120	2.7	4.3	---
21		5.8	320	---	125	2.5	4.3	---
22		5.7	340		120	2.0	6.2	
23		5.6	300		---	1.3	5.9	

Time: 90.0°W.
Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 25

De Bilt, Holland (52.1°N, 5.2°E) June 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	7.0						2.55
01	315	6.9						2.55
02	315	6.8						2.60
03	310	6.4	---	---	---	E		2.55
04	275	6.8	280	---	---	2.3		2.65
05	300	7.0	245	4.0	120	2.8	3.0	2.65
06	365	7.2	240	4.8	115	3.2	3.4	2.70
07	370	7.3	230	5.2	110	3.6	4.0	2.70
08	430	7.7	225	5.4	110	4.0	4.3	2.65
09	450	7.2	220	5.0	110	---	4.3	2.60
10	400	7.8	220	6.0	---	---	4.4	2.65
11	430	7.2	---	6.0	---	---	4.2	2.60
12	455	>7.4	220	6.0	---	---	4.2	2.60
13	410	7.4	220	6.0	---	---	4.2	2.65
14	430	7.4	215	6.0	---	---		2.65
15	405	7.3	230	5.7	115	---	4.1	2.70
16	400	7.3	230	5.7	115	3.0	3.9	2.70
17	350	7.6	240	5.2	115	3.3	4.4	2.75
18	300	7.5	250	---	115	3.1	5.0	2.80
19	270	7.8	---	---	130	2.6	4.2	2.90
20	270	7.7					3.0	2.85
21	295	7.6						2.70
22	300	7.6						2.60
23	300	7.4						2.60

Time: 0.0°.
Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 26

Schwarzenburg, Switzerland (46.0°N, 7.3°E) June 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	7.9						2.0
01	300	7.2						2.7
02	300	7.0						2.7
03	300	6.7						2.8
04	310	6.5					2.5	2.8
05	200	6.7	---	---	120	1.8	3.1	3.0
06	200	7.4	250	4.0	100	2.5	3.7	3.0
07	320	7.9	230	5.0	100	3.0	5.0	3.0
00	340	8.1	230	5.4	100	3.4	5.3	3.0
09	360	8.5	220	5.8	100	3.6	6.0	2.9
10	400	8.2	210	5.9	100	3.8	6.2	2.9
11	400	8.5	210	6.2	100	3.9	5.3	2.9
12	410	8.3	200	6.0	100	4.0	5.9	2.0
13	410	8.5	220	6.0	100	4.0	5.2	2.9
14	410	8.2	210	6.0	100	4.0	4.5	2.9
15	400	8.2	220	6.0	100	3.9	5.2	2.9
16	390	8.0	220	5.6	100	3.7	5.0	2.9
17	360	7.9	230	5.6	100	3.5	5.6	3.0
18	330	8.0	230	5.2	100	3.0	5.3	3.0
19	290	8.2	---	---	100	2.5	4.8	3.1
20	270	8.0			---	---	4.2	3.1
21	280	8.0					4.8	3.0
22	300	7.9					3.6	2.9
23	300	7.0					2.0	2.85

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 27

Ottawa, Canada (45.4°N, 75.0°W) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.4	320				2.6	---
01		5.6	300				2.3	---
02		5.0	300				3.0	---
03		4.9	300				2.3	
04		4.6	320		---	1.7		---
05	---	5.1	270	---	120	2.2		---
06	(560)	5.5	250	4.2	110	2.9		---
07	500	5.7	240	4.9	110	3.3		G
08	540	6.0	230	5.0	105	3.6		G
09	580	6.2	220	5.2	105	3.9		G
10	550	6.6	220	5.4	100	4.0		G
11	620	6.0	220	5.6	100	4.0		G
12	550	6.8	220	5.5	100	4.0		G
13	530	6.9	220	5.6	105	4.0		(2.4)
14	520	7.0	220	5.6	105	4.0		(2.5)
15	490	7.1	220	5.4	105	4.0		(2.6)
16	460	7.2	230	5.3	110	3.7		(2.5)
17	410	7.2	240	5.0	110	3.4		2.55
18	400	7.5	260	4.5	110	3.0		2.6
19	---	8.0	280	---	120	2.3		2.6
20		0.0	200		---	1.7	2.8	(2.6)
21		0.0	200				2.1	---
22		7.3	280					---
23		6.6	290					---

Time: 75.0°W.
Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 28

Rome, Italy (41.0°N, 12.5°E) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		0.5	310				3.4	2.40
01		0.0	330				3.4	2.35
02		8.2	<330				3.6	2.40
03		7.7	310				2.6	2.40
04		7.0	320				2.5	2.45
05	---	7.4	290	---	140	2.0	3.4	2.55
06	---	8.6	260	---	110	2.7	4.0	2.65
07	---	0.6	250	---	110	3.2	5.8	2.70
00	(450)	0.8	250	5.6	110	3.5	5.6	2.50
09	(440)	0.6	(240)	5.6	110	3.8	6.4	2.55
10	420	9.7	<250	6.2	110	3.9	6.7	2.45
11	440	9.0	240	6.0	110	4.0	6.4	2.40
12	410	10.0	220	6.1	110	4.0	6.0	2.40
13	420	9.4	240	6.1	110	4.1	5.0	2.45
14	410	9.7	<240	6.0	110	4.0	4.0	2.45
15	400	9.3	240	6.0	110	3.9		2.50
16	390	9.0	250	5.7	110	3.7	5.6	2.50
17	---	8.8	250	---	110	3.4	5.0	2.60
18	---	8.0	(270)		110	2.9	5.3	2.65
19		9.0	300		120	2.1	5.8	2.70
20		8.0	280		---	---	5.0	2.60
21		(8.0)	290				5.0	(2.50)
22		(8.0)	310				4.7	(2.40)
23		0.0	310				5.2	2.35

Time: 15.0°E.
Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 29

San Francisco, California (37.4°N, 122.2°W) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.3	(320)				3.5	2.45
01		6.0	(320)				2.5	2.42
02		5.9	(320)				2.7	2.45
03		5.7	(320)				2.5	2.45
04		5.5	335				2.5	2.40
05	(530)	5.5	290	---	125	1.90	2.0	2.50
06	500	6.4	250	4.0	109	2.55	2.9	2.45
07	455	6.0	230	4.0	101	3.10	3.6	2.50
00	500	7.1	220	5.0	101	3.45	4.1	2.40
09	520	7.0	210	5.2	101	3.65	4.5	2.35
10	510	7.05	210	5.3	101	3.85	4.5	2.40
11	480	7.5	200	5.3	101	3.90	4.6	2.40
12	490	7.0	210	5.5	101	4.00	4.6	2.45
13	460	7.0	220	5.5	101	4.00	>4.0	2.50
14	450	7.9	220	5.5	101	3.90	4.2	2.48
15	435	7.7	220	5.4	101	3.80		2.50
16	420	7.5	230	5.2	101	3.65		2.50
17	410	7.5	240	5.0	103	3.30	3.6	2.60
10	---	7.2	250		109	2.75	3.2	2.65
19		7.0	275		(120)	2.00	2.9	2.70
20		6.0	270				3.5	2.70
21		6.7	<300				3.7	2.55
22		6.5	300				3.1	2.50
23		6.2	<320				3.5	2.50

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

Table 30

Natal, Brazil (5.3°S, 35.1°W) June 1958*

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		---	---					----
01		---	---					----
02		---	---					----
03		---	---					----
04		---	(260)					----
05		---	---					----
06		(4.6)	(260)					(2.90)
07		(8.45)	(260)					----
00		(11.2)	(240)		---	---		(2.90)
09		(12.55)	(220)		---	---		(2.80)
10		(13.2)	(210)		---	---	(5.0)	(2.60)
11		(13.1)	<210		---	---		(2.25)
12		(13.0)	(210)		---	---		(2.25)
13		(12.5)	(210)		103	---		(2.22)
14		(12.0)	<230		---	---		(2.22)
15		>12.0	(225)		---	---		(2.30)
16		(11.9)	(230)		---	---	(4.4)	(2.30)
17		(12.1)	(250)		---	---		(2.35)
18		>9.75	(275)					----
19		>7.8	(340)					----
20		(6.7)	(440)					----
21		(6.0)	(410)					----
22		---	---					
23		---	---					

Time: 30.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 32.4 seconds.
*Data observed from June 13 through 30 only.

Table 31

Scott Base (77.8°S, 166.8°E) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.9)	300				<1.6	(2.50)
01		4.6	300				<1.9	2.45
02		4.4	320				<1.3	(2.40)
03		(4.7)	300				<1.7	(2.50)
04		(4.2)	280				(2.1)	(2.70)
05		4.5	260				<1.8	(2.55)
06		(4.1)	270				<1.8	2.50
07		4.4	250				<1.9	2.75
08		4.4	260				<2.5	2.65
09		4.8	250				<3.0	2.60
10		(5.6)	<260				<2.3	(2.60)
11		5.5	280				<2.7	2.60
12		5.2	270				<2.5	2.70
13		6.3	260				<3.0	2.60
14		6.8	270				<2.5	2.55
15		7.1	270				<2.3	2.70
16		8.1	260				<2.0	2.50
17		>8.0	260				<2.0	2.70
18		7.6	260				<1.7	2.50
19		7.6	260				<1.8	2.60
20		6.4	280				(2.0)	2.50
21		(6.0)	290				<2.0	(2.45)
22		5.4	290				<1.6	2.50
23		(5.4)	290				<1.6	(2.50)

Time: 165.0°E.

Table 32

Resolute Bay, Canada (74.7°N, 94.9°W) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00	---	6.2	270	---	105	2.0		2.5
01	---	6.4	270	---	105	2.0		2.6
02	---	6.2	270	---	100	2.1		2.5
03	---	6.4	270	---	100	2.3		2.55
04	480	6.2	250	4.0	100	2.5		2.5
05	460	6.0	240	4.1	100	2.7		2.5
06	430	6.0	230	4.4	100	2.8		2.5
07	480	6.0	230	4.5	100	3.0	3.8	2.4
08	520	5.7	220	4.8	100	3.1	3.7	2.4
09	520	6.0	220	4.8	100	3.2		2.4
10	500	6.1	220	4.8	100	3.4		2.4
11	500	6.2	210	4.9	100	3.5		2.3
12	530	6.0	220	4.9	100	3.5		2.3
13	510	6.2	210	4.8	100	3.5		2.4
14	500	6.1	210	4.8	100	3.4		2.3
15	500	6.2	220	4.8	100	3.3		2.3
16	500	6.0	220	4.8	100	3.2		2.35
17	420	6.8	220	4.7	100	3.0		2.4
18	470	6.6	220	4.5	100	2.9		2.45
19	420	6.2	230	4.4	100	2.8		2.5
20	(460)	6.3	250	4.0	100	2.5		2.5
21	---	6.4	260	---	100	2.4		2.6
22	---	6.5	270	---	100	2.2		2.6
23	---	6.2	280	3.5	105	2.1		2.5

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 33

Sodankyla, Finland (67.4°N, 26.6°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		---	405		---	----	4.1	----
01		---	390		---	----	4.0	----
02		(6.9)	400		---	----	3.5	(2.45)
03		6.8	345		---	----	3.6	2.45
04		6.6	300		---	E	3.8	2.50
05		6.8	270		120	2.55	3.9	2.55
06		6.9	250	---	120	2.75	3.9	2.50
07		6.8	245	---	115	3.10		2.45
08		7.1	240	---	110	3.30		2.40
09		7.2	230	5.0	110	3.40		2.40
10		7.4	230	5.1	105	3.50	4.9	2.40
11		7.4	225	5.1	110	3.60	4.4	2.40
12		7.4	220	5.2	105	3.70		2.40
13		7.4	220	5.3	110	3.65		2.45
14		7.6	230	---	110	3.50		2.45
15		7.7	225	---	110	3.45		2.45
16		7.4	240	---	110	3.30		2.50
17		7.3	250		110	3.15		2.55
18		7.5	250		110	2.90	3.4	2.65
19		7.6	260		115	2.65	3.9	2.65
20		7.4	290		120	2.40	3.8	2.70
21		7.4	310		---	E	3.5	2.60
22		7.1	355		---	E	3.6	2.50
23		(7.1)	390		---	----	3.5	(2.50)

Time: 30.0°E.
Sweep: 1.4 Mc to 22.0 Mc in 8 minutes, automatic operation.

Table 34

Lycksele, Sweden (64.6°N, 18.8°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.3	370		---	E	3.6	2.3
01	---	6.2	340	----	---	E	2.7	2.3
02	(335)	6.3	340	(2.50)	---	E	2.6	2.3
03	375	6.2	305	3.30	105	1.70	2.9	2.3
04	370	6.1	270	3.75	105	2.15	3.4	2.4
05	375	6.1	250	4.05	105	2.50	3.3	2.4
06	415	6.4	240	4.55	105	2.90	3.7	2.4
07	445	6.9	235	5.00	105	3.15	4.0	2.4
08	450	7.2	235	5.20	105	3.30	4.1	2.4
09	470	7.3	225	5.50	105	3.50	4.2	2.4
10	490	7.2	225	5.50	105	3.55	4.2	2.4
11	480	7.3	225	5.50	105	3.60	4.4	2.4
12	460	7.5	220	5.70	105	3.70	4.3	2.4
13	470	7.4	220	5.55	105	3.60	4.1	2.4
14	455	7.3	220	5.50	105	3.50	4.2	2.4
15	410	7.3	230	5.35	105	3.40	4.0	2.4
16	420	7.3	235	5.20	105	3.25	4.0	2.5
17	365	7.4	240	4.80	105	3.00	3.8	2.5
18	340	7.3	250	4.60	105	2.65	3.5	2.5
19	(355)	7.2	260	4.00	105	2.20	3.4	2.6
20	---	7.0	285	----	110	1.80	3.0	2.5
21	---	6.8	305		115	1.40	3.2	2.5
22	---	6.3	330		---	E	2.7	2.3
23		6.5	350		130	0.75	3.6	2.3

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 35

Nurmijarvi, Finland (60.5°N, 24.6°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.0					<1.7	2.40
01		7.2					<1.7	2.40
02		6.4					<1.7	2.35
03		6.8					<1.8	2.45
04		6.6					<2.0	2.40
05		6.8		---		2.1	<2.4	2.50
06		6.8		4.3		2.6		2.50
07		6.7		4.8		3.0		2.40
08		7.1		5.1		3.2		2.40
09		7.6		5.3		3.4		2.40
10		7.7		5.4		3.5		2.40
11		7.9		5.6		---		2.30
12		7.8		5.6		---		2.40
13		8.0		5.7		---		2.40
14		7.8		5.6		---		2.40
15		7.9		5.6		---		2.45
16		8.1		5.2		---		2.50
17		7.8		---		---		2.50
18		7.9		---		---		2.55
19		7.8				---		2.65
20		7.6				---	<2.6	2.65
21		8.0					<2.2	2.55
22		7.7					<2.0	2.40
23		7.2					<1.7	2.40

Time: 30.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 1 minute.

Table 36

Churchill, Canada (58.8°N, 94.2°W) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.0	300				5.7	
01		5.5	300		---	---	5.2	
02		5.2	320		---	---	4.5	
03		5.1	330		---	1.6	4.5	
04		5.2	320	---	120	2.0	4.6	
05	(540)	5.2	280	3.5	110	2.4	4.8	---
06	480	5.8	260	4.2	110	3.0	5.0	G
07	500	6.0	260	4.7	110	3.3	4.9	(2.4)
08	520	6.4	240	5.0	105	3.5	4.8	(2.4)
09	540	6.8	230	5.1	105	3.6	4.6	2.35
10	520	6.8	220	5.2	105	3.8	4.6	2.3
11	538	7.0	220	5.3	100	3.8	4.8	2.4
12	530	7.1	220	5.4	105	3.8	4.6	2.4
13	500	7.4	220	5.4	100	3.8	4.8	2.4
14	480	7.6	220	5.4	100	3.7	4.5	2.4
15	460	7.4	220	5.2	105	3.6	4.6	2.4
16	460	7.4	230	5.0	105	3.4	4.5	2.45
17	440	7.2	240	4.8	110	3.2	4.5	(2.5)
18	460	6.9	270	4.3	110	3.1	4.5	(2.55)
19	(460)	6.4	290	4.0	110	3.0	4.5	(2.5)
20	---	6.1	320	---	120	2.6	4.3	---
21		6.2	330		120	2.4	4.5	---
22		6.0	310		150	1.5	6.0	
23		5.8	320		---	---	6.0	

Time: 90.0°W.
Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 37

Slough, England (51.5°N, 0.6°W) May 1950

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>7.1	320				<1.8	2.35
01		7.1	320				>1.0	2.30
02		6.9	320			----	1.0	2.30
03		6.5	320		---	<1.10	<1.1	2.30
04		6.4	310		115	1.60		2.40
05		6.7	270		110	2.20	2.4	2.50
06	---	7.2	250	---	100	2.80	3.0	2.60
07	410	7.4	240	5.1	100	3.15	3.4	2.55
08	410	7.9	235	5.6	100	3.50	4.0	2.55
09	470	8.0	225	5.7	100	3.80	4.2	2.50
10	460	8.4	225	5.7	100	3.90	4.4	2.45
11	450	8.8	215	5.9	100	4.00	4.3	2.45
12	450	8.5	225	6.0	100	4.00	4.3	2.50
13	455	8.8	225	6.0	100	4.00	4.2	2.45
14	435	8.7	235	5.8	100	3.95	4.4	2.50
15	435	8.6	235	5.7	100	3.80	4.0	2.50
16	400	8.5	235	5.6	100	3.60	3.8	2.55
17	370	8.6	245		100	3.20	3.2	2.60
18		8.4	250		105	2.70	3.1	2.65
19		8.5	265		125	2.20	2.6	2.65
20		8.4	270			1.70	<1.8	2.60
21		8.0	270			----	<1.6	2.50
22		(7.6)	290				<1.6	2.40
23		(7.2)	310				<1.6	2.35

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 38

Winnipeg, Canada (49.9°N, 97.4°W) May 1950

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.3	310				2.0	---
01		5.0	330				3.0	---
02		5.0	340				3.0	---
03		4.8	380				3.0	---
04		4.8	320		---	---	2.9	---
05	---	5.2	300	---	---	2.0	2.0	(2.65)
06	---	6.0	260	---	110	2.5		(2.7)
07	490	6.2	230	4.7	105	3.8		2.7
08	500	6.6	220	4.9	100	3.4		2.5
09	550	6.8	220	5.0	100	3.6		2.5
10	540	6.8	210	5.2	100	3.9		2.4
11	500	6.9	210	5.4	100	4.0		2.5
12	510	6.9	220	5.5	100	4.0		2.4
13	520	6.9	210	5.5	100	4.0		2.4
14	500	7.0	220	5.5	100	4.0		2.4
15	500	7.0	220	5.4	100	3.9		2.4
16	490	7.0	220	5.1	100	3.7		2.4
17	450	7.3	230	5.0	100	3.3		2.5
18	(390)	7.6	240	4.6	105	3.0		2.7
19	---	7.8	270	---	110	2.5		2.7
20		7.2	290		---	2.0	2.4	2.7
21		7.0	280				3.0	(2.7)
22		6.6	290				3.2	---
23		6.0	300				3.0	---

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 39

Schwarzenburg, Switzerland (46.8°N, 7.3°E) May 1950

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	320	0.0						2.7
01	320	7.7						2.7
02	310	7.2						2.7
03	310	7.0						2.7
04	300	6.8						2.7
05	300	6.9	---	---	---	----		2.9
06	260	7.4	250	4.1	100	2.40	3.1	3.0
07	300	8.0	230	5.0	100	2.90	4.2	3.1
08	350	0.1	220	5.6	100	3.30	4.6	3.0
09	400	0.5	210	5.0	100	3.60	4.9	2.9
10	420	0.5	210	6.1	100	3.75	4.6	2.8
11	400	9.0	210	6.2	100	3.80	4.2	2.8
12	400	9.1	210	6.4	100	4.00	4.6	2.0
13	400	9.4	210	6.0	100	4.00		2.8
14	400	9.6	220	6.2	100	3.90		2.8
15	380	9.5	220	6.0	100	3.80	4.4	2.8
16	370	9.3	220	6.0	100	3.65		2.9
17	340	8.8	230	5.0	100	3.30	4.7	2.9
18	240	8.0	240	4.0	100	2.90	3.6	3.0
19	270	8.6	---	---	100	2.30	3.8	3.0
20	270	8.5			---	----	2.2	3.0
21	280	8.3						2.9
22	290	8.0						2.8
23	300	0.1						2.7

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 40

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

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.6	320					2.45
01		0.3	310					2.45
02		7.9	310					2.45
03		7.7	305					2.45
04		7.0	310			1.50	2.6	2.45
05	---	0.5	260	---		2.35	2.6	2.55
06	(480)	9.6	255	4.6		3.00	3.5	2.55
07	(490)	9.7	250	5.1		3.40	4.0	2.60
08	(495)	9.5	245	5.3		3.60	4.6	2.55
09	550	9.9	240	5.6		3.00	5.0	2.50
10	455	10.2	235	6.1		3.95	4.8	2.45
11	440	10.0	235	6.1		4.00	4.6	2.45
12	440	10.0	235	6.2		3.95	4.5	2.45
13	435	9.9	240	6.0		3.00	4.5	2.45
14	420	9.0	245	6.0		3.70	4.4	2.45
15	420	9.5	245	5.7		3.60		2.50
16	(410)	9.3	255	5.6		3.40	3.9	2.50
17		0.9	260			2.95	4.3	2.60
18		8.9	275			2.25	3.5	2.60
19		9.0	290				3.5	2.60
20		9.0	300				3.5	2.50
21		9.0	310				2.6	2.45
22		8.0	310					2.45
23		0.8	315					2.45

Time: 135.0°E.
Sweep: 1.0 Mc to 20.7 Mc in 1 minute.

Table 41

Rome, Italy (41.8°N, 12.5°E) May 1950

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.8	330					2.30
01		0.8	330					2.30
02		(8.3)	330				2.2	2.30
03		7.6	300					2.40
04		7.5	310					2.35
05		7.8	300		150	1.9	2.2	2.50
06	---	8.5	260	---	110	2.6		2.60
07	---	9.0	250	---	110	3.1	4.7	2.70
08	---	9.2	<240	---	110	3.5	5.1	2.50
09	(440)	9.8	240	5.8	110	3.8	5.0	2.40
10	410	10.1	220	6.2	110	3.9	5.2	2.40
11	420	10.6	220	6.4	110	4.0		2.40
12	410	10.8	230	6.3	110	4.0		2.40
13	410	11.2	230	6.0	110	4.1		2.35
14	410	11.2	240	6.2	110	4.0		2.40
15	(380)	11.0	250	5.9	110	3.9	5.4	2.45
16	(450)	10.6	250	5.4	110	3.7	5.4	2.45
17	---	10.4	250	---	110	3.3	5.8	2.50
18		(10.3)	260		110	2.7	5.1	(2.50)
19		(10.2)	280		120	2.0	4.0	(2.60)
20		9.6	270				3.5	2.55
21		9.0	290				2.7	2.40
22		9.0	310				2.2	2.35
23		(9.1)	320				2.4	(2.35)

Time: 15.0°E.
Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 42

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

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.2	320					2.50
01		9.0	310					2.55
02		8.5	300					2.50
03		8.1	300					2.55
04		8.0	335					2.45
05	---	9.0	270	---		2.00		2.60
06	(365)	10.2	250	---		2.95	3.5	2.70
07	345	10.8	250	5.2		3.45	4.4	2.65
08	350	10.6	250	5.7		3.70	4.8	2.55
09	390	10.9	245	6.0		3.95	5.0	2.50
10	405	11.2	240	6.4		4.00	4.8	2.45
11	410	11.6	240	6.6		4.05	4.8	2.45
12	410	11.8	240	6.3		4.05	4.9	2.45
13	400	11.6	245	6.4		4.05	4.5	2.50
14	400	11.5	245	6.2		4.00	5.0	2.50
15	370	11.2	250	6.0		3.80	4.6	2.55
16	355	10.6	250	---		3.50	4.3	2.60
17	(350)	10.0	260			2.95	5.2	2.60
18	---	9.7	290			2.00	5.2	2.65
19		9.6	295				4.3	2.60
20		9.2	305				3.9	2.50
21		9.3	330				3.1	2.45
22		9.3	330				2.7	2.50
23		9.3	330				2.4	2.50

Time: 135.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 43

Tokyo, Japan (35.7°N, 139.5°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.7	310				2.4	2.55
01		9.5	300				2.5	2.60
02		8.9	300				2.2	2.60
03		8.4	300					2.55
04		7.9	315					2.45
05		8.7	265			2.30		2.65
06	---	10.1	250			2.90	3.2	2.70
07	(360)	10.8	250	---		3.30	4.7	2.70
08	<375	11.0	245	---		3.65	5.5	2.55
09	390	11.0	235	6.2		3.90	5.4	2.45
10	390	11.8	230	6.3		4.00	4.8	2.50
11	400	12.3	(230)	6.6		4.05	5.0	2.45
12	390	12.4	<250	6.5		(4.05)	5.3	2.45
13	400	12.3	240	6.4		(4.10)	4.8	2.50
14	390	12.1	250	6.2		4.05	5.0	2.50
15	360	12.0	250	6.4		3.80	4.9	2.55
16	345	11.4	250	---		3.50	5.0	2.55
17	330	11.0	260			3.00	4.9	2.60
18	---	10.7	295			----	5.5	2.60
19		10.0	305				5.9	2.60
20		9.4	315				7.2	2.50
21		9.6	330				5.0	2.40
22		(9.9)	340				3.7	(2.45)
23		9.9	320				3.9	2.50

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 44

Yamagawa, Japan (31.2°N, 130.6°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(10.8)	300				3.0	(2.65)
01		10.8	290				3.0	2.70
02		9.8	270				3.3	2.80
03		8.9	250				2.5	2.70
04		8.5	280				2.9	2.65
05		8.4	295				2.8	2.60
06		9.2	250			2.20	2.8	2.90
07		10.1	240			3.00	3.7	2.90
08		10.3	240			3.50	5.6	2.75
09		10.8	240			3.80	5.7	2.65
10		11.5	230			4.00	6.3	2.50
11		12.5	230			4.05	5.9	2.55
12	---	12.5	230	---		4.10	5.7	2.55
13	(390)	13.0	225	6.7		4.15	5.1	2.60
14	375	13.2	245	6.5		4.10	5.7	2.60
15	380	12.7	240	6.6		4.00	5.7	2.60
16	(355)	12.5	250	6.5		3.75	5.8	2.60
17	(340)	12.5	250	---		3.30	5.9	2.60
18	---	11.8	255			2.60	5.8	2.65
19		11.2	280				5.8	2.70
20		(10.4)	300				5.8	(2.60)
21		(10.2)	320				5.7	(2.50)
22		(10.6)	320				4.3	(2.55)
23		10.9	310				4.5	2.60

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 1 minute.

Table 45

Ibadan, Nigeria (7.4°N, 3.9°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.9)	415					----
01		(6.8)	390					----
02		<6.7	335					----
03		(6.7)	280					(3.00)
04		(6.3)	250					(3.30)
05		(5.4)	245					3.20
06		9.2	260		115	2.40	3.2	3.05
07		(12.5)	245		110	3.20		3.00
08		14.0	235		110	3.65		(2.85)
09		14.6	225		110	4.00	8.5	2.60
10		14.6	215		105	(4.20)	8.8	2.30
11		14.3	210		105	(4.30)	8.8	(2.20)
12		13.4	205		105	(4.30)	8.7	2.10
13		12.6	200		105	(4.25)	8.8	2.10
14		12.4	205		105	(4.10)	8.8	<2.10
15		11.9	220		110	(3.80)	8.7	2.05
16		11.7	240		110	3.40	7.0	2.10
17		>11.6	260		115	2.75	3.2	(2.10)
18		11.1	305		---	1.70		(2.15)
19		>9.5	400					(2.00)
20		>8.8	450					----
21		(8.3)	490					----
22		>7.9	440					(2.15)
23		<7.9	450				0.8	----

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 46

Singapore, British Malaya (1.3°N, 103.8°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		13.2	245		---	----	3.1	2.80
01		>11.6	225		---	----	<1.6	2.90
02		9.8	235		---	----	<1.6	2.90
03		8.4	240		---	----	<1.8	3.00
04		7.3	240		110	----	<1.5	3.05
05		6.3	230		---	----	<1.7	3.00
06	---	7.8	290	---	---	1.70	2.7	2.85
07	---	11.9	255	---	120	>2.80	3.2	2.85
08	---	14.6	245	---	115	3.50	3.8	2.80
09	---	15.6	235	---	110	3.90	4.8	2.65
10	---	(15.4)	225	---	105	4.10	4.7	2.45
11	---	(15.0)	215	---	105	4.25		2.20
12	---	>14.5	210	---	105	4.30		2.10
13	---	>13.8	210	---	105	4.20		2.05
14	---	13.4	210	---	110	<4.15		2.05
15	500	13.5	230	---	110	3.85		2.10
16	---	>13.0	245	---	115	(3.40)		2.10
17	---	>13.3	255	---	115	2.80	3.0	2.20
18	---	13.8	295	---	120	<1.70	3.0	2.25
19		>13.5	350		---	----	3.0	2.30
20		>13.2	350		---	----	<1.7	----
21		(13.1)	285		135	----	2.2	----
22		>13.4	245		---	----	3.3	----
23		(13.8)	245		---	----	3.5	(2.80)

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 47

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.4	<280				<1.7	2.70
01		4.4	<285				<1.8	2.70
02		4.1	<285				<1.7	2.75
03		4.1	(275)				<1.7	2.85
04		3.9	<260				<1.7	2.85
05		3.7	<280				<1.7	2.80
06		3.9	<260				<1.7	2.80
07		8.3	235			2.2		3.20
08		11.6	225			3.0		3.20
09		13.2	225			3.4		3.00
10		14.1	220			3.6		2.95
11		14.2	215			3.8		2.85
12		14.0	215			4.0		2.75
13	---	13.8	220			3.9		2.70
14		13.9	230			3.8		2.70
15		13.7	230			3.6		2.70
16		13.3	235			3.0	3.2	2.70
17		13.3	240			<2.4	2.6	2.80
18		12.4	225			<1.9	<2.0	2.85
19		10.9	230				<2.0	2.90
20		9.7	230				<1.8	3.00
21		7.6	230				<1.9	3.10
22		5.7	235				<1.9	3.00
23		4.5	<250				<1.8	2.85

Time: 30.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 48

Brisbane, Australia (27.5°S, 152.9°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	260					2.70
01		6.6	260					2.70
02		6.2	260					2.70
03		5.8	260					2.70
04		5.5	250					2.60
05		5.3	260					2.70
06		6.0	260		---	<2.10		2.80
07		10.0	240		140	2.40		3.15
08		>11.5	230		120	3.00		(3.15)
09		>11.8	230		120	>3.40		----
10		>12.0	230		120	>3.50		----
11		>12.0	230		120	>3.50		----
12		>11.8	230		120	>3.50		(2.80)
13		>11.8	240		120	>3.45		(2.85)
14		>11.6	240		120	>3.40		(2.75)
15		>11.5	240		130	3.30		(2.85)
16		(11.2)	240		120	2.80		2.85
17		11.0	250		---	<2.30		2.80
18		10.2	240		---	<2.18		2.80
19		9.1	250					2.75
20		8.9	260					2.75
21		8.2	250					2.75
22		7.3	250					2.80
23		6.7	260					2.70

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

Table 49

Watheroo, W. Australia (30.3°S, 115.9°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.0	250					3.10
01		5.3	250					3.20
02		5.0	250					3.10
03		4.8	250					3.15
04		4.4	250					3.15
05		4.3	260					3.20
06		4.2	<250					3.20
07		6.6	245		145	1.85		3.40
08		>8.4	225		105	2.75		----
09		>8.4	230		100	3.15	>3.4	
10		>8.4	225		100	3.50		
11		>8.4	225		100	3.75		
12		>8.4	220		100	3.80		----
13		>8.4	220		100	3.00		----
14		>8.4	225		100	3.65		
15		>8.4	230		100	3.35	3.4	
16		>8.4	230		100	3.00		
17		>8.4	235		100	(2.30)		
18		>8.4	220		---	<1.25	2.0	
19		>7.0	220				1.6	----
20		>7.0	230					(3.30)
21		7.0	240					3.30
22		6.6	245					3.10
23		5.9	250					3.15

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

Table 50

Capetown, Union of S. Africa (34.1°S, 18.3°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.6	<290				<1.7	2.70
01		3.6	<310				<1.8	2.60
02		3.6	<310				<1.8	2.55
03		3.6	<330				2.0	2.65
04		3.8	<290				<1.7	2.80
05		3.6	<270				<1.6	2.85
06		3.4	<290				<1.6	2.80
07		4.1	<250			<1.5	<1.5	2.60
08		8.4	235			2.2		3.10
09		11.0	235			2.9		3.05
10		12.9	230			3.2		3.00
11		13.9	230			3.6		2.90
12		14.2	230			3.8	4.0	2.80
13	---	14.2	225			3.8		2.75
14	---	14.3	235			3.8		2.70
15	---	14.3	240			3.5		2.70
16		14.0	240			3.1		2.70
17		13.8	240			2.6	2.8	2.80
18		13.2	235			---	2.2	2.80
19		11.6	230			<1.6	<1.9	2.80
20		10.3	230				1.8	2.95
21		8.7	225				<1.8	3.05
22		5.7	(230)				<1.7	3.05
23		3.7	<250				<1.9	2.80

Time: 30.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 51

Canberra, Australia (35.3°S, 149.0°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	<240				2.2	2.80
01		>6.5	240				2.0	2.85
02		6.3	240				2.1	2.85
03		6.3	250				2.0	2.90
04		6.0	230				2.1	2.95
05		>5.3	220				2.0	2.85
06		(4.9)	235					3.00
07		>7.3	215		145	1.90		3.25
08		10.8	200		100	2.65	3.0	3.35
09		12.7	200		100	3.15	3.4	3.35
10		>13.2	200		100	3.50	3.7	3.30
11		>13.2	200		100	3.65	3.0	3.15
12		13.2	200		95	3.70	3.8	3.05
13		13.2	200		95	3.70	3.8	3.00
14		13.2	200		95	3.50	3.8	3.00
15		13.0	205		95	3.25	3.3	3.00
16		12.8	200		95	2.70	2.8	3.00
17		12.0	210		95	2.05	2.2	3.05
18		10.6	200				2.2	3.00
19		>9.2	220				1.8	3.00
20		(0.1)	215					2.95
21		7.6	220					2.95
22		>7.0	220					2.90
23		6.9	240					2.05

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

Table 52

Falkland Is. (51.7°S, 57.8°W) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.4	315					2.3
01		4.3	340				1.3	2.35
02		4.2	340					2.35
03		4.2	305					2.45
04		4.1	300					2.5
05		4.3	290					2.45
06		4.0	250					2.4
07		5.8	265		180	1.7		---
08		9.6	230		140	2.25		3.15
09		12.2	225		120	2.6		3.2
10		13.0	225		115	2.9	3.4	3.2
11		>14.4	235		110	3.0	3.6	3.2
12		13.8	225		---	3.1	3.5	3.15
13		13.1	230		---	3.0		2.95
14		12.6	240		---	2.0		3.1
15		11.7	235		---	2.55	2.6	3.15
16		9.6	225		---	2.0	3.8	3.15
17		8.7	230			---	3.1	3.0
18		6.6	220				3.1	3.15
19		5.4	235				2.0	3.05
20		4.6	250				<1.5	2.95
21		4.0	<295				<1.4	2.65
22		4.1	<315				<1.4	2.4
23		4.3	<340				<1.4	2.4

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 53

Cape Hallett (72.3°S, 170.3°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.5)	295		---	1.2		(2.55)
01		(4.4)	325		---	1.3		(2.45)
02		(4.3)	315		257	1.4		(2.50)
03		(4.2)	285		186	1.6		(2.40)
04		(4.2)	305		---	1.4		(2.45)
05		(4.6)	320		---	1.4		(2.50)
06		(4.7)	310		---	(1.3)		(2.40)
07		(6.3)	300		---	(1.4)	1.9	(2.60)
08		(6.6)	275		---	1.6	1.0	(2.75)
09		(7.8)	255		125	1.5		(2.90)
10		(7.7)	250		115	1.8		(2.85)
11		(8.2)	250		111	1.8	2.4	(3.00)
12		(8.3)	250		110	1.9	1.8	(2.90)
13		(0.6)	250		111	1.0	2.4	(2.80)
14		(9.1)	250		121	1.6	3.3	(2.75)
15		(10.0)	250		---	1.4	3.9	(2.75)
16		(9.4)	250		---	1.0	2.8	(2.70)
17		(9.2)	250		---	E	1.6	(2.65)
18		(9.0)	245		---	E		(2.65)
19		(9.5)	245		---	E		(2.65)
20		(0.9)	250		---	E		(2.65)
21		(8.2)	265		---	E		(2.60)
22		(5.3)	270		---	E		(2.70)
23		(5.5)	275		---	E		(2.50)

Time: 165.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 54

Scott Base (77.8°S, 166.8°E) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.5)	<300				<2.3	(2.35)
01		5.5	280				<2.7	2.55
02		(5.9)	290				<2.6	(2.40)
03		(5.6)	290				<2.5	2.60
04		5.6	290				<2.2	2.70
05		5.0	280				<2.5	(2.50)
06		5.1	280				<2.3	2.50
07		5.0	(290)				<2.3	2.50
08		5.4	<260				<2.3	2.60
09		6.6	260				<2.3	2.70
10		6.9	250				<2.3	2.05
11		7.0	250				<2.3	2.80
12		7.9	<260				<2.5	2.65
13		>8.0	<260				<2.9	2.75
14		9.0	250				<2.7	(2.70)
15		8.6	270				<2.3	2.60
16		9.0	270				<2.5	2.60
17		9.0	270				<2.3	2.70
18		8.1	260				<2.2	2.55
19		9.0	270				<2.2	(2.65)
20		>8.0	280				<2.5	(2.55)
21		7.2	290				<2.4	2.70
22		6.6	<300				<2.5	2.70
23		(6.2)	300				<2.5	2.50

Time: 165.0°E.

Table 55

Kiruna, Sweden (67.8°N, 20.3°E) April 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.0	425				5.0	2.3
01		(6.0)	450				4.0	2.3
02		6.0	435				4.6	2.3
03		5.6	365		---	---	4.0	2.4
04		5.6	310		---	1.8	2.0	2.4
05	---	5.8	295	---	120	2.1	3.4	2.4
06	---	6.1	265	---	110	2.5		2.4
07	---	7.0	255	4.5	115	2.8		2.5
08	(525)	7.0	250	5.0	110	3.0		2.45
09	(460)	7.5	240	5.2	110	3.1		2.4
10	460	8.0	245	5.4	110	3.2		2.4
11	455	8.5	245	5.5	110	3.3		2.4
12	480	8.8	240	5.8	110	3.3		2.4
13	460	8.5	240	5.4	110	3.2		2.4
14	470	8.6	245	5.2	110	3.2		2.45
15	(430)	8.2	250	5.0	110	3.0		2.5
16		7.8	255		110	2.9		2.6
17		7.3	280		115	2.7	3.6	2.6
18		7.0	300		120	2.2	3.6	2.6
19		6.7	330		---	1.8	3.8	2.55
20		6.0	360		---	---	4.4	2.4
21		6.0	395				5.4	2.4
22		6.0	410				5.0	2.3
23		5.8	420				5.0	2.3

Time: 15.0°E.
Sweep: 0.8 Mc to 14.0 Mc in 30 seconds.

Table 56

Singapore, British Malaya (1.3°N, 103.8°E) April 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		13.8	250				2.5	2.80
01		11.5	240				<1.6	2.75
02		10.7	245		(135)	----	<1.4	2.70
03		10.2	245				2.3	2.80
04		9.4	245				2.9	3.00
05		8.2	235		(110)	----	2.9	3.10
06		8.4	265		120	1.70	3.0	2.85
07		12.2	255		120	2.80	3.0	2.95
08		14.7	250		115	3.50	3.8	2.80
09		15.2	240		110	3.90	4.2	2.55
10	(650)	15.1	225		110	4.20		2.20
11		>15.1	215		110	4.35		(2.20)
12		14.7	210	5.7	110	4.40		2.00
13	(490)	14.3	215	(5.7)	110	(4.40)		2.05
14	(550)	14.3	230	(5.5)	110	(4.30)		2.00
15		14.4	230		110	3.95		2.00
16		14.4	245		110	3.50		2.10
17		14.5	260		115	2.80		2.10
18		>14.5	300		(100)	1.70	2.0	2.10
19		>13.9	390				3.0	(2.10)
20		----	390		145	----	<1.5	
21		----	305		135	----	<1.7	
22		----	255		120	----	2.8	----
23		14.4	245				2.3	(2.55)

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 57

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) April 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.4	260				2.3	2.75
01		5.6	<270				2.6	2.60
02		5.5	<280				2.2	2.65
03		5.2	<265				<1.8	2.70
04		4.8	<260				<1.7	2.75
05		4.2	<270				<1.8	2.75
06		4.8	<290			<1.7	<1.8	2.60
07		9.4	235			2.5		3.10
08		12.4	230			3.1		3.05
09		14.0	230			3.5		2.90
10		>14.0	230			3.9		2.80
11		>14.0	225			---		2.75
12		(13.9)	220			---	4.0	2.60
13	---	>14.0	225	---		---		2.55
14	---	14.0	240			---		2.55
15		13.7	245			3.7	4.0	2.50
16		13.4	245			3.3	4.0	2.55
17		13.2	250			2.6	3.2	2.60
18		12.9	245			<2.0	2.5	2.70
19		11.6	245				2.3	2.70
20		10.8	250				<2.4	2.80
21		9.9	250				<2.3	2.90
22		8.2	240				2.6	2.90
23		6.7	250				<2.5	2.80

Time: 30.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 58

Capetown, Union of S. Africa (34.1°S, 18.3°E) April 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.6	<260				<2.0	2.70
01		5.2	<295				<1.8	2.50
02		5.0	<305				2.2	2.45
03		5.0	<295				<1.9	2.60
04		4.9	<265				<1.8	2.70
05		4.2	<275				<1.8	2.65
06		4.0	<290				<1.6	2.50
07		5.7	270			<1.7		2.65
08		10.0	235			2.5		3.00
09		12.7	235			3.1		2.95
10		14.4	230			3.5		2.90
11		(14.6)	230			3.8	4.0	(2.80)
12		14.7	230			3.9	4.1	2.70
13		14.8	230			3.9	4.0	2.60
14		14.8	245			3.9		2.55
15		14.4	245			3.8		2.55
16		14.1	245			3.4		2.60
17		14.0	245			2.9		2.60
18		13.8	245			2.1	2.6	2.70
19		12.8	230			<1.7	<1.9	2.70
20		11.3	240				2.0	2.75
21		9.8	<240				1.9	2.85
22		8.2	<245				2.5	2.90
23		6.6	<245				2.1	2.90

Time: 30.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 59

Falkland Is. (51.7°S, 57.8°W) April 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	350				<1.4	2.20
01		6.3	350				1.4	2.15
02		6.0	345					2.20
03		5.8	340					2.20
04		>5.6	350				1.3	2.20
05		5.2	360					2.05
06		5.2	345		180	1.50		2.15
07		8.2	250		140	2.10		(2.95)
08		11.7	230		120	2.60		2.95
09		>14.2	230		115	3.00	3.6	----
10		>15.0	235		110	3.20	4.4	----
11		>15.0	230		110	3.40	4.0	----
12		>15.0	235		110	3.40	4.2	----
13		14.8	230		105	3.35	3.8	(2.70)
14		>14.2	235			3.20		2.75
15		13.8	245		120	2.90	3.4	2.80
16		13.0	245			2.60	3.4	2.90
17		11.9	245			1.90	2.2	2.90
18		10.5	235				3.1	2.95
19		8.3	230				2.7	2.95
20		6.8	250				<1.7	2.70
21		6.6	270				<1.5	2.55
22		6.7	290				<1.4	2.40
23		6.6	305				<1.4	2.30

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 60

Natal, Brazil (5.3°S, 35.1°W) March 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>9.8	(230)					----
01		---	---					----
02		---	---					----
03		---	---					----
04		---	---					----
05		---	---					----
06		---	---					----
07		---	---		---	---		----
08		---	---		---	---		----
09		(15.0)	(240)		---	---		(2.80)
10		(15.6)	<230		---	---		----
11		(15.4)	<245		---	---		----
12		(15.35)	(225)		---	---		(2.20)
13		(14.5)	<230		---	---		(2.25)
14		>14.6	<250		---	---		(2.20)
15		(14.2)	(230)		---	---		----
16		(14.0)	<240		---	---		(2.20)
17		(14.0)	260		---	---		(2.25)
18		>12.85	(285)					----
19		>10.0	(360)					----
20		>7.1	(410)					----
21		(9.0)	(350)					----
22		(9.1)	(285)					
23		>9.3	(255)					

Time: 30.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 32.4 seconds.
Note: Around equinox, height scale was expanded.

Table 61

Campbell I. (52.5°S, 169.2°E) February 1950

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.2	340				3.2	(2.35)
01		5.4	340				3.0	(2.30)
02		4.3	350				2.4	2.40
03		(4.4)	---				3.4	(2.40)
04		4.2	(310)		145	1.5	2.1	2.40
05		4.8	300		110	2.1	2.2	2.80
06		5.0	260	---	110	2.7		2.05
07	---	6.5	240	---	110	3.2		2.65
08	---	(6.9)	240	5.4	110	3.4		(2.70)
09	(450)	7.6	240	5.4	105	3.6		(2.75)
10	(410)	0.0	(220)	5.7	105	3.8		2.70
11	440	8.3	(220)	6.0	110	3.9		2.55
12	420	8.4	220	5.8	105	3.9		2.65
13	420	0.2	230	5.0	105	4.0		2.50
14	410	0.1	230	5.7	110	3.9		2.50
15	440	8.5	230	5.5	105	3.0		2.50
16	(400)	0.1	250	5.0	110	3.5		2.50
17	(400)	8.5	250	---	110	3.2	3.4	(2.60)
18		8.6	270		115	2.6	3.2	(2.60)
19		6.0	300		125	2.0		(2.50)
20		(8.7)	350		---	1.5	3.2	----
21		(6.5)	320		---	---	3.5	(2.40)
22		(5.6)	310				3.0	----
23		(6.3)	340				3.4	(2.35)

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 5 minutes, manual operation.

Table 62

Moscow, U.S.S.R. (55.5°N, 37.3°E) January 1950

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.5	300				<1.4	2.35
01		4.3	320				<1.3	2.40
02		4.2	310					2.40
03		4.0	305					2.50
04		3.7	280					2.55
05		3.7	270					2.60
06		3.4	270			E	<1.3	2.60
07		5.0	265			E		2.65
08		0.0	245			2.0	2.4	2.90
09		11.5	235			2.5		2.90
10		13.6	240			2.8	2.8	2.90
11		14.5	235			3.0	3.2	2.90
12		15.0	240			3.0	3.0	2.85
13		15.0	235			2.9	3.2	<2.85
14		14.5	235			2.6	2.9	2.80
15		13.9	240			2.2		2.80
16		13.0	230			1.6		2.85
17		10.9	220			E	<1.4	2.85
18		8.6	225				<1.5	2.85
19		7.5	245				<1.3	2.75
20		6.1	260				<1.4	2.70
21		5.2	275				<1.6	2.60
22		4.0	275				<1.4	2.55
23		4.7	300				<1.3	2.45

Time: 30.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 30 seconds.

Table 63

Godhavn, Greenland (69.3°N, 53.5°W) December 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.6)						2.60
01		(5.4)						(2.55)
02		(5.65)						(2.55)
03		(4.7)						(2.60)
04		(4.8)						(2.55)
05		(4.9)						----
06		(4.75)						(2.42)
07		(4.8)						(2.40)
08		(5.4)						(2.60)
09		(5.7)			---	---		(2.65)
10		(6.9)			---	---		(2.65)
11		(7.3)			---	---		2.65
12		(7.3)			119	---		(2.75)
13		(7.3)			---	---		(2.80)
14		(6.8)						(2.48)
15		(6.8)						(2.60)
16		(6.4)						(2.60)
17		(6.1)						2.42
18		(6.3)						(2.50)
19		(6.6)						2.50
20		(6.4)						2.50
21		(6.3)						(2.50)
22		(6.4)						(2.45)
23		(5.8)						(2.55)

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

Table 64

Godhavn, Greenland (69.3°N, 53.5°W) November 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.1)						(2.65)
01		(6.0)						(2.55)
02		(5.85)						----
03		(5.6)						----
04		(4.8)						----
05		(5.1)						----
06		(4.95)						----
07		(5.65)						----
00		(6.0)						----
09		(7.55)			---	----		(2.78)
10		(8.6)			---	(2.00)		(2.85)
11		(9.2)			129	(2.15)		(2.90)
12		(8.95)			<131	(2.15)		(2.82)
13		(8.05)			<140	(2.15)		(2.70)
14		(7.5)			<152	1.95		(2.80)
15		(8.3)			---	----		2.75
16		(7.8)						(2.60)
17		(7.7)						(2.45)
18		(7.2)						(2.45)
19		(6.3)						(2.50)
20		(7.0)						(2.35)
21		(6.5)						(2.45)
22		(6.4)						(2.55)
23		(5.5)						(2.50)

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

Table 65

Lindau/Harz, Germany (51.6°N, 10.1°E) November 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.30	300					2.37
01		5.87	300					2.34
02		5.79	304					2.35
03		5.65	293					2.46
04		5.47	282					2.42
05		4.77	265					2.55
06		4.38	248					2.56
07		5.85	242		---	----		2.45
08		9.58	232		127	2.15	2.8	2.82
09		13.15	227		110	2.64	3.3	2.88
10		14.80	225		108	2.93	3.5	2.87
11		15.65	229		108	3.20	3.5	2.84
12		15.50	227		108	3.22		2.75
13		15.35	227		108	3.18	3.4	2.70
14		15.10	231		111	3.02	3.6	2.70
15		14.57	230		114	2.66	3.5	2.72
16		13.80	230		---	2.07	3.0	2.74
17		12.90	227		---	----	3.4	2.74
18		11.19	228					2.72
19		9.62	232					2.70
20		8.06	234					2.62
21		6.97	259					2.47
22		6.75	280					2.48
23		6.50	301					2.44

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 66

Ellsworth (77.7°S, 41.1°W) July 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.0	360				3.7	2.50
01		(2.2)	365				3.5	(2.50)
02		(2.9)	370				2.0	(2.50)
03		(3.7)	360				2.0	2.50
04		(3.8)	360				1.6	(2.40)
05		(3.4)	325				1.4	(2.50)
06		3.3	310				1.5	2.55
07		2.85	260				1.2	2.70
08		2.9	245					2.85
09		3.1	245					3.00
10		3.95	250					3.00
11		5.1	<225				1.5	3.10
12		4.8	215					3.12
13		5.0	220					3.15
14		4.4	220					3.18
15		4.3	220					3.35
16		3.4	230					3.25
17		2.5	270					3.05
18		2.2	305					2.88
19		(1.75)	330				1.2	2.70
20		1.9	350				2.4	2.68
21		1.95	370				3.1	2.48
22		2.0	380				1.2	(2.55)
23		(2.35)	370				2.3	(2.60)

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

Table 67

Byrd Station (00.0°S, 120.0°W) July 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.4)	390				3.3	(2.45)
01		(4.3)	405				4.0	(2.35)
02		(5.45)	<385				3.5	(2.50)
03		(4.4)	360				3.3	(2.45)
04		(4.3)	320				3.3	(2.50)
05		(3.6)	320				2.0	(2.60)
06		3.4	300				2.5	2.65
07		3.0	300				1.6	2.70
08		2.7	<305				1.3	2.78
09		2.5	310				1.4	2.82
10		3.2	290					2.75
11		(3.5)	300				1.4	(2.70)
12		3.3	290				1.5	2.70
13		3.3	305				1.6	2.68
14		(3.2)	340				2.5	(2.55)
15		(3.1)	350				2.0	2.50
16		(3.3)	390				3.3	2.55
17		(3.4)	405				3.4	(2.42)
18		(4.1)	425				3.5	(2.35)
19		(3.8)	405				3.3	(2.38)
20		(4.35)	(350)				4.0	(2.35)
21		(6.2)	(335)				3.5	(2.40)
22		(6.45)	340				3.9	(2.45)
23		(5.0)	365				3.4	(2.38)

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

Table 60

Pole Station (90.0°S) July 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.5)	260					(2.55)
01		(4.45)	260					(2.75)
02		(4.85)	270					(2.55)
03		(5.0)	270					(2.75)
04		(5.7)	270					(2.45)
05		(4.05)	270					----
06		(4.95)	275					(2.55)
07		(5.0)	295					(2.55)
08		(5.1)	300					(2.45)
09		(5.3)	320		---	---		(2.50)
10		(4.75)	310		---	---	2.5	(2.70)
11		(4.4)	290		---	---	2.4	(2.68)
12		(4.4)	280		---	---	2.7	(2.90)
13		(4.0)	(280)		---	---	2.9	----
14		(4.15)	315		---	---	2.3	(3.00)
15		(3.6)	300		---	---		(2.90)
16		(4.0)	295		---	---		(2.90)
17		(3.55)	310		---	---		----
18		(3.7)	285		---	---		----
19		(3.9)	290		---	---		----
20		(4.2)	270		---	---	1.9	----
21		(3.75)	240		---	---	2.0	----
22		(3.7)	260		---	---		----
23		(3.9)	<270					(2.90)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 69

Macquarie I. (54.5°S, 159.0°E) May 1957

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.4)	300				4.5	(2.5)
01		(4.2)	300				3.8	(2.6)
02		(4.2)	290				3.4	(2.5)
03		(4.2)	280				2.6	(2.55)
04		4.4	280				2.0	2.6
05		3.8	270					2.55
06		4.4	260					2.7
07		5.8	250			<1.8	2.0	2.9
08		>7.8	240			2.3		3.0
09		>9.0	240			2.6		---
10		>11.0	240			2.9		(2.9)
11		(11.6)	240			3.0		(2.9)
12		(12.5)	240			3.0		(2.8)
13		0	240			2.8		---
14		>11.0	240			2.5		---
15		>11.0	240			2.1		---
16		>9.0	240			<1.5	2.0	---
17		(6.0)	250			<1.5	2.7	---
18		(5.5)	270				3.2	(2.5)
19		(4.2)	290				3.4	(2.6)
20		---	300				4.2	---
21		---	300				4.8	---
22		>5.0	300				4.5	---
23		(4.9)	300				4.4	(2.4)

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

Table 70

Dakar, French W. Africa (14.1°N, 17.4°W) January 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		11.4						3.28
01		9.9						3.30
02		8.6						3.30
03		6.7						3.27
04		4.6						3.02
05		4.4						3.08
06		4.3			---	1.55		3.23
07		8.0			123	2.15	2.7	3.33
08	255	10.8		4.20	111	2.70		3.42
09	260	12.7		4.70	109	3.20	3.4	3.52
10	265	12.6		4.90	107	3.45		3.36
11	280	12.5		5.15	107	3.55		3.12
12	320	12.6		5.20	107	3.60		2.94
13	320	13.2		5.20	107	3.60	4.6	2.94
14	310	13.0		5.00	107	3.50	4.2	2.93
15	310	12.8		4.85	109	3.30	4.0	2.91
16	310	13.0		4.30	111	3.00	3.5	2.88
17	---	13.1		----	113	2.40	3.6	2.92
18		13.2			115	1.80	3.5	2.89
19		13.2					2.3	2.76
20		13.6					4.2	2.96
21		13.7						3.20
22		13.3					2.4	3.23
23		11.3						3.20

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 71

Tananarive, Madagascar (18.9°S, 47.6°E) January 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		7.3					2.1	2.80
01		6.5					1.9	2.90
02		6.2					2.2	2.85
03		5.6					1.6	3.05
04		4.3					1.6	3.00
05		3.6						2.80
06	---	5.0			121	1.95		3.00
07	(305)	6.7		----	109	2.70		3.10
08	330	7.4		5.00	105	3.20		2.90
09	340	8.3		5.25	105	3.55		2.80
10	360	8.9		5.50	103	3.80		2.65
11	370	9.4		5.50	102	3.90		2.65
12	360	10.1		5.45	101	3.95		2.75
13	340	10.3		5.50	101	3.95		2.80
14	320	10.3		5.40	101	3.85		2.85
15	320	10.0		5.20	103	3.65		2.85
16	315	9.5		5.00	105	3.30		2.90
17	300	9.0		4.50	109	2.85		2.90
18	265	9.0			115	2.10	3.0	2.95
19		8.4			---	1.45	3.0	2.85
20		8.1					2.4	2.90
21		8.0					3.0	2.85
22		7.7					1.9	2.80
23		7.6					2.5	2.85

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 72*

Campbell I. (52.5°S, 169.2°E) January 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00								
01								
02								
03								
04								
05	270	5.0	240	3.9	115	2.4		2.9
06	290	5.5	240	4.4	110	2.8		3.0
07	320	6.3	230	4.5	115	3.0		3.0
08	320	6.5	210	4.8	110	3.2		2.9
09	340	6.7	210	4.8	110	3.4		2.9
10	350	6.9	220	4.9	110	3.5	3.6	2.8
11	390	6.8	220	5.0	110	3.7		2.8
12	360	6.8	220	5.0	110	3.5		2.8
13	360	6.8	210	4.9	110	3.6		2.8
14	360	7.0	230	4.9	110	3.5		2.7
15	350	7.0	220	4.9	110	3.4		2.8
16	340	7.1	220	4.6	110	3.2		2.8
17	320	7.3	230	4.4	120	3.0		2.9
18	290	7.2	250	4.0	120	2.5		2.8
19	280	7.2	250	3.0	130	2.1		2.8
20	260	7.0						2.7
21	280	6.9					2.5	2.7
22	280	6.6						2.6
23	290	6.1					2.7	2.6

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc in 5 minutes, manual operation.
*Observations taken on a 19-hour schedule.

USCOMM-NBS-BL

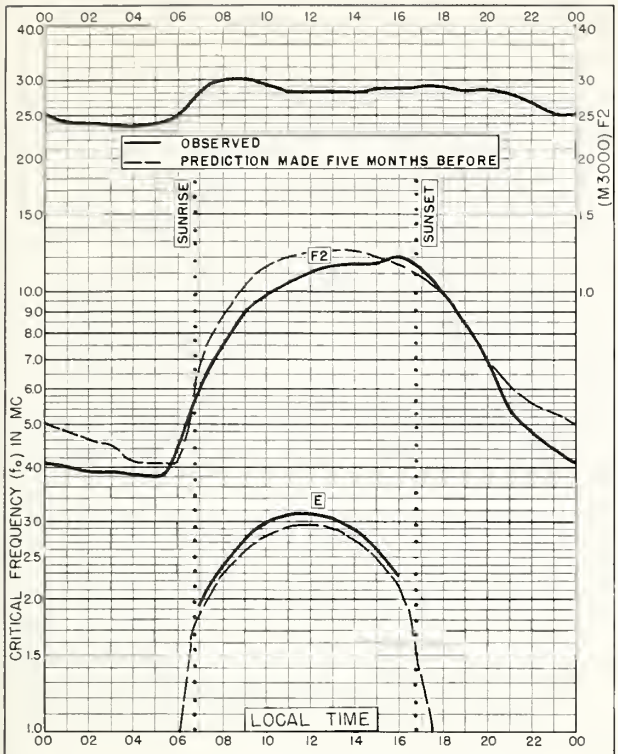


Fig. 1. ANCHORAGE, ALASKA
61.2°N, 149.9°W OCTOBER 1958

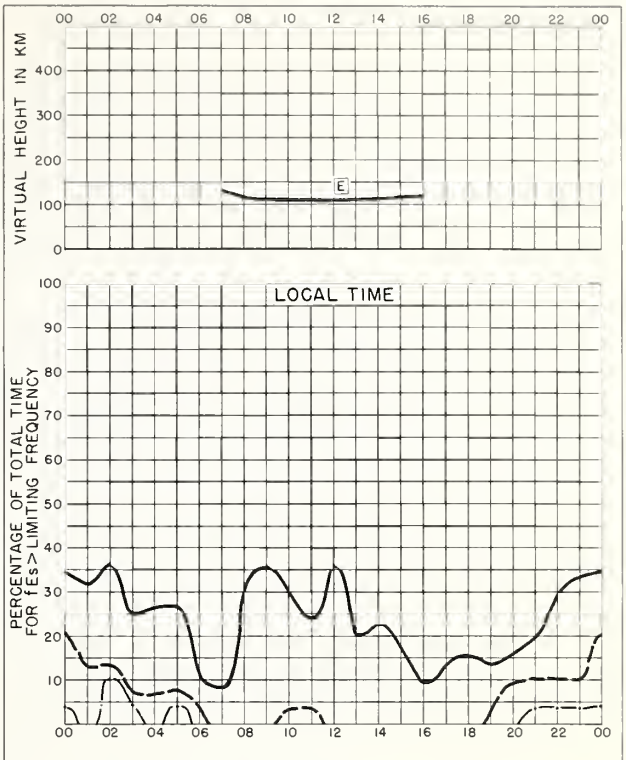


Fig. 2. ANCHORAGE, ALASKA OCTOBER 1958

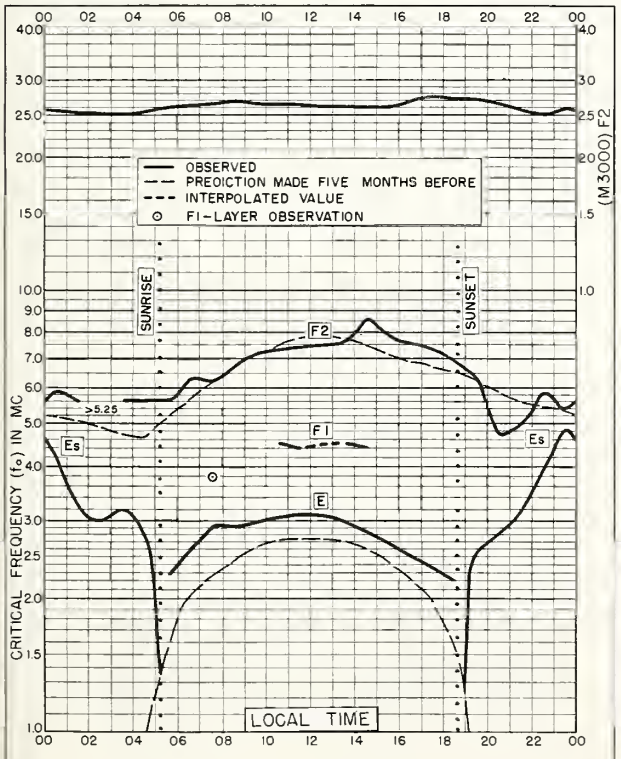


Fig. 3. POINT BARROW, ALASKA
71.3°N, 156.8°W SEPTEMBER 1958

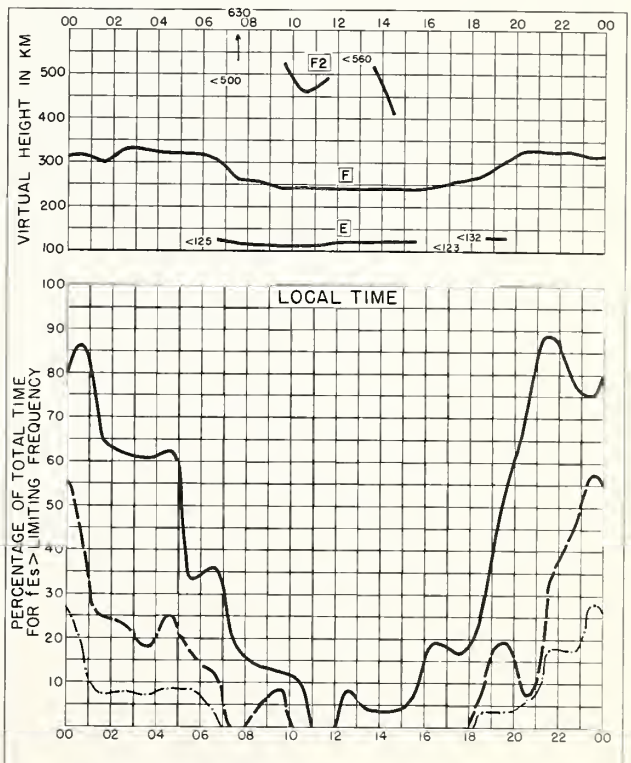


Fig. 4. POINT BARROW, ALASKA SEPTEMBER 1958

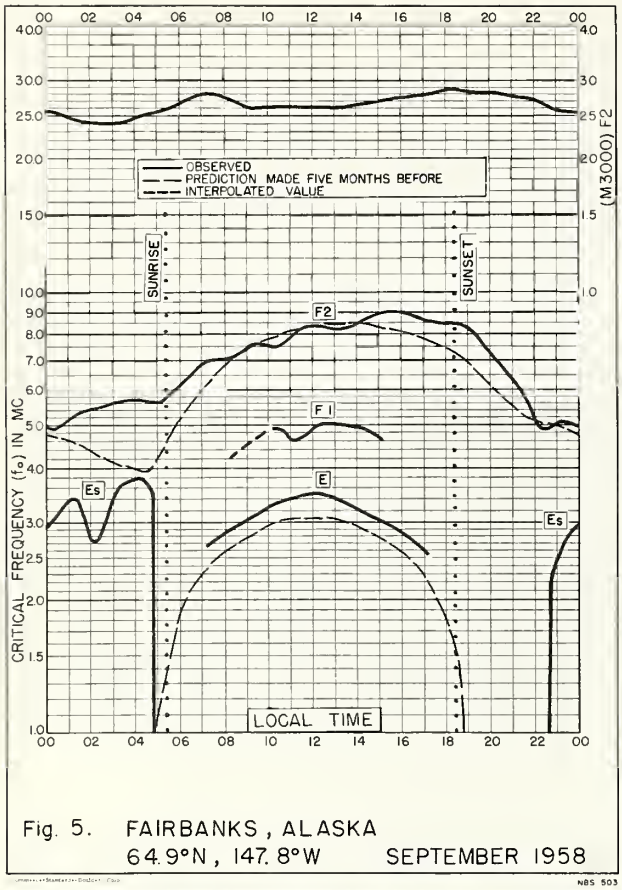


Fig. 5. FAIRBANKS, ALASKA
64.9°N, 147.8°W SEPTEMBER 1958

NBS 503

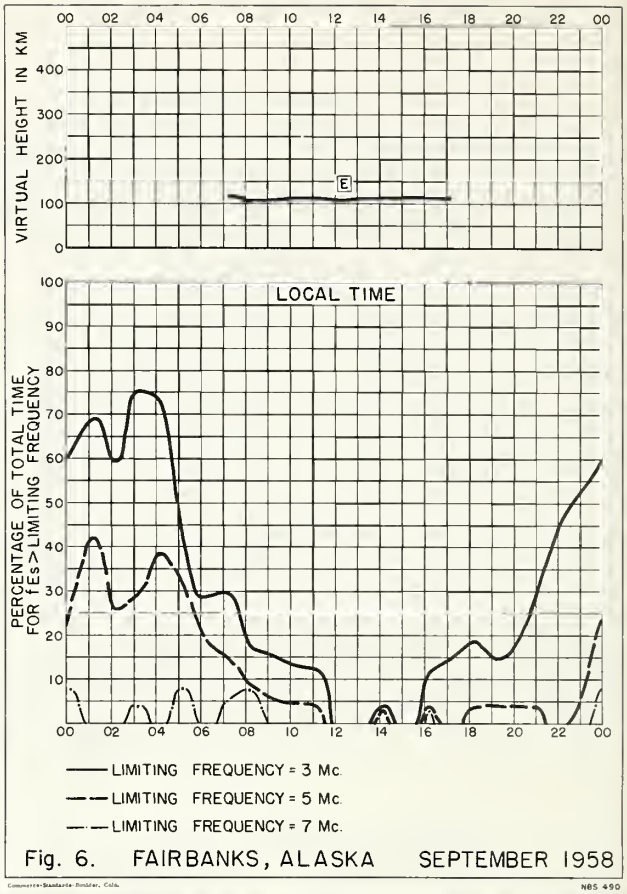


Fig. 6. FAIRBANKS, ALASKA SEPTEMBER 1958

NBS 490

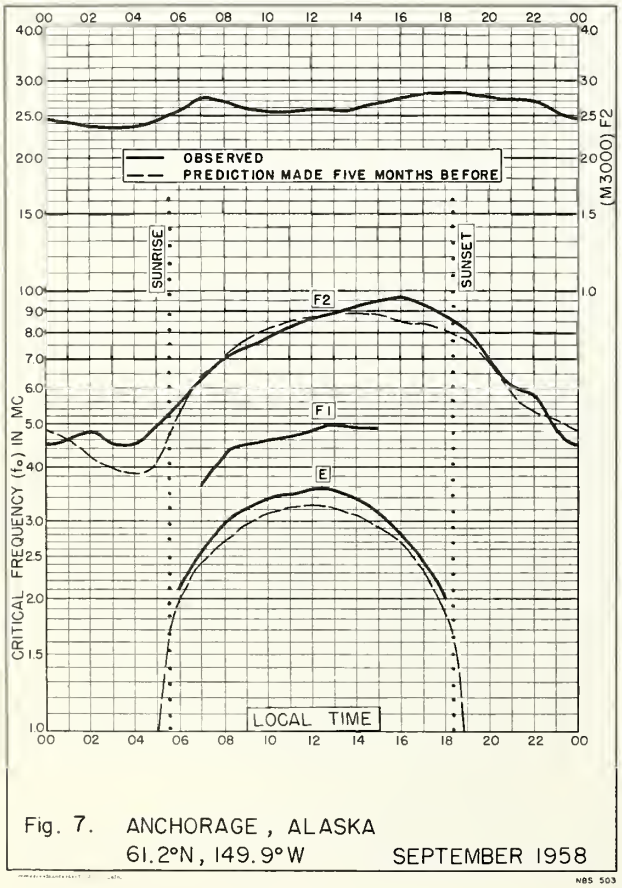


Fig. 7. ANCHORAGE, ALASKA
61.2°N, 149.9°W SEPTEMBER 1958

NBS 503

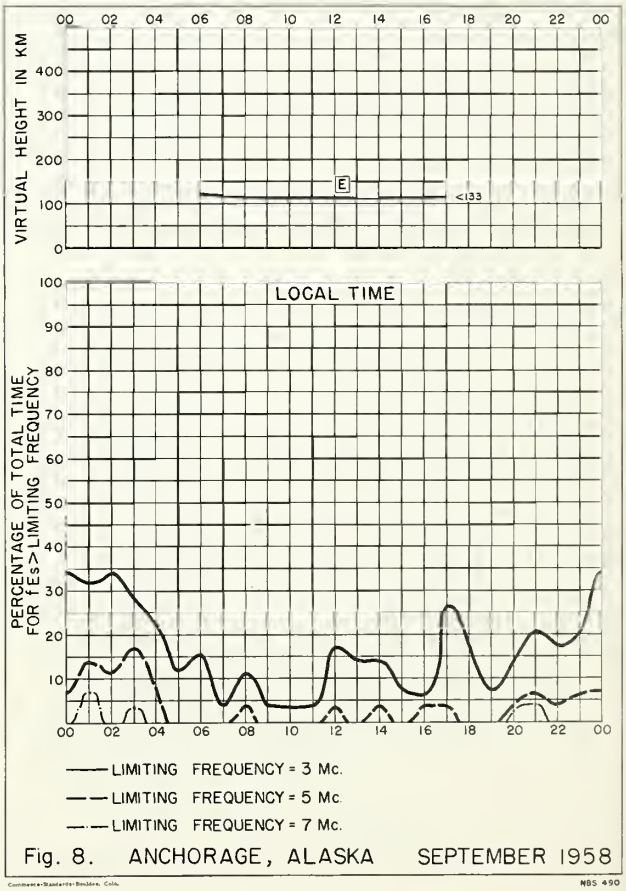


Fig. 8. ANCHORAGE, ALASKA SEPTEMBER 1958

NBS 490

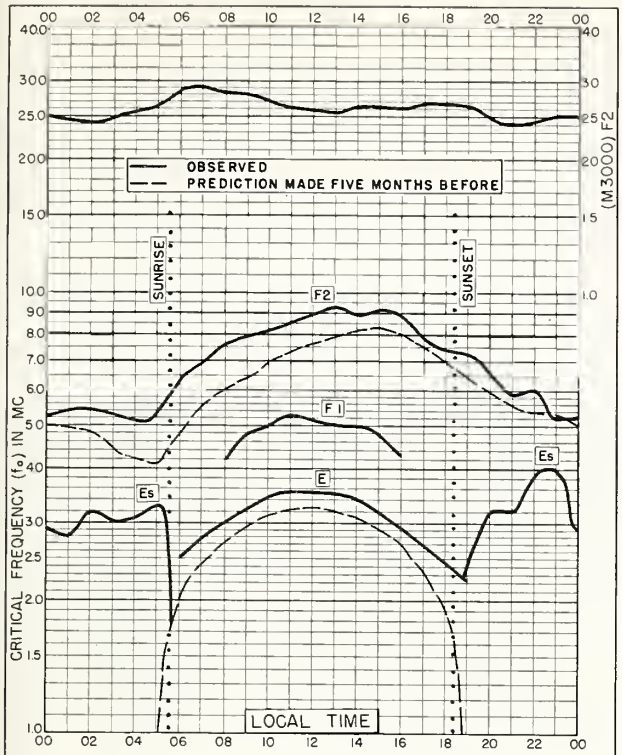


Fig. 9. NARSARSSUAK, GREENLAND
61.2°N, 45.4°W SEPTEMBER 1958

Commerce-Standards-Boulder, Colo.
NBS 503

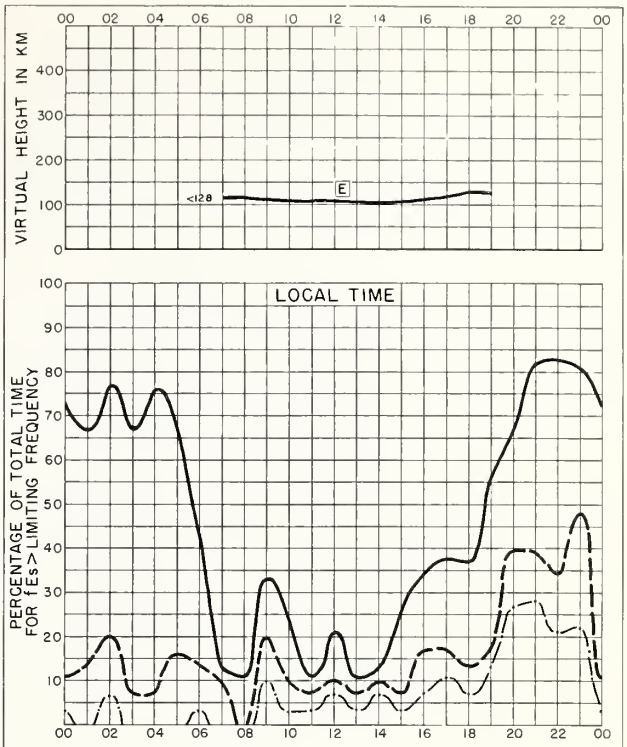


Fig. 10. NARSARSSUAK, GREENLAND SEPTEMBER 1958

Commerce-Standards-Boulder, Colo.
NBS 490

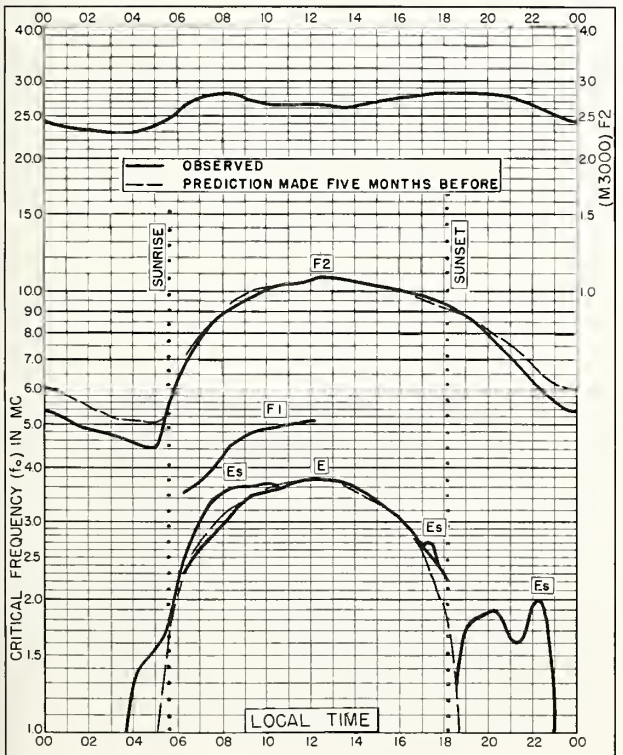


Fig. 11. ADAK, ALASKA
51.9°N, 176.6°W SEPTEMBER 1958

Commerce-Standards-Boulder, Colo.
NBS 503

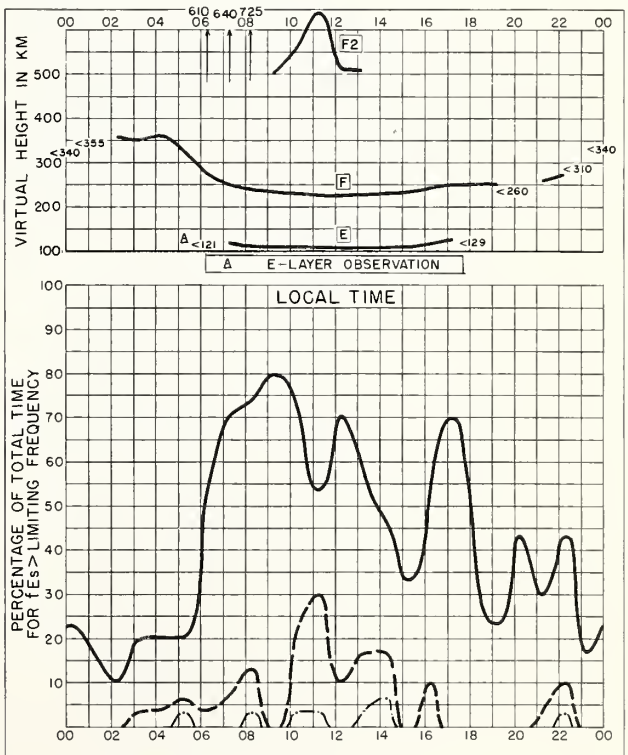


Fig. 12. ADAK, ALASKA SEPTEMBER 1958

Commerce-Standards-Boulder, Colo.
NBS 490

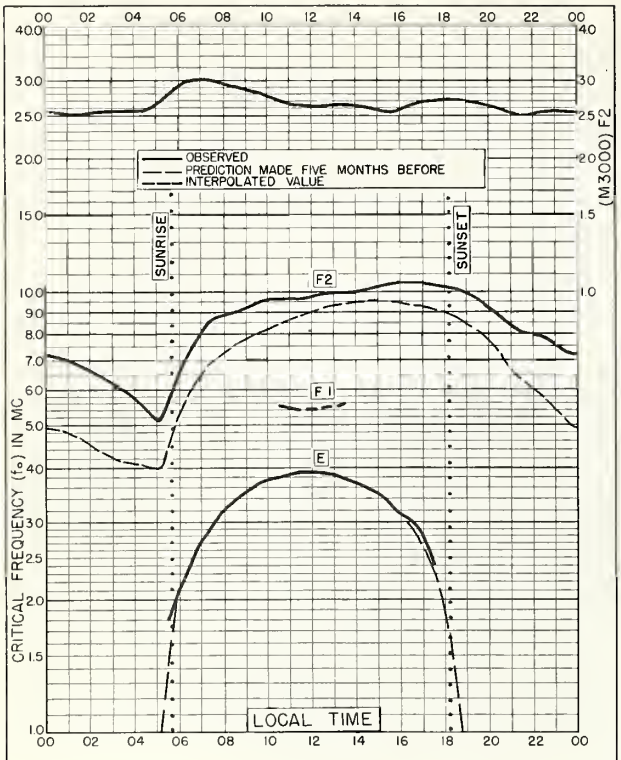


Fig. 13. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W SEPTEMBER 1958

NBS 503

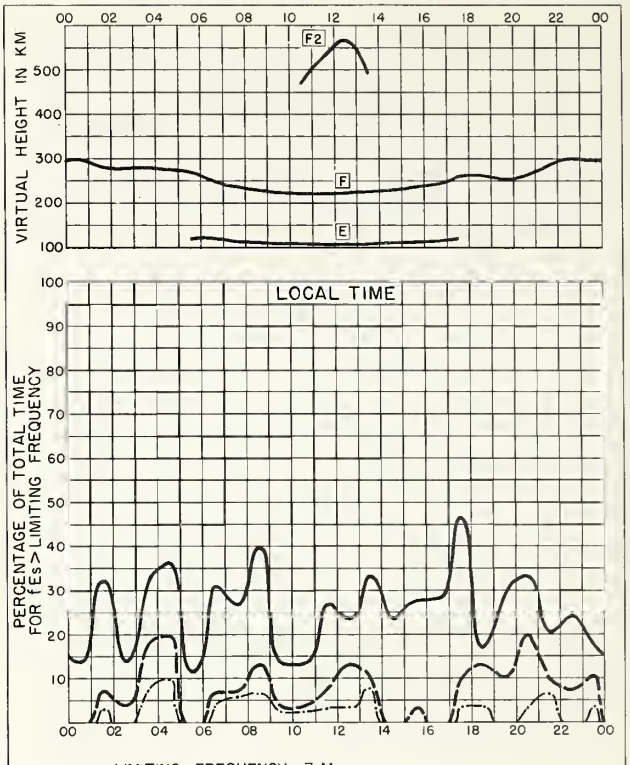


Fig. 14. ST. JOHN'S, NEWFOUNDLAND SEPTEMBER 1958

NBS 490

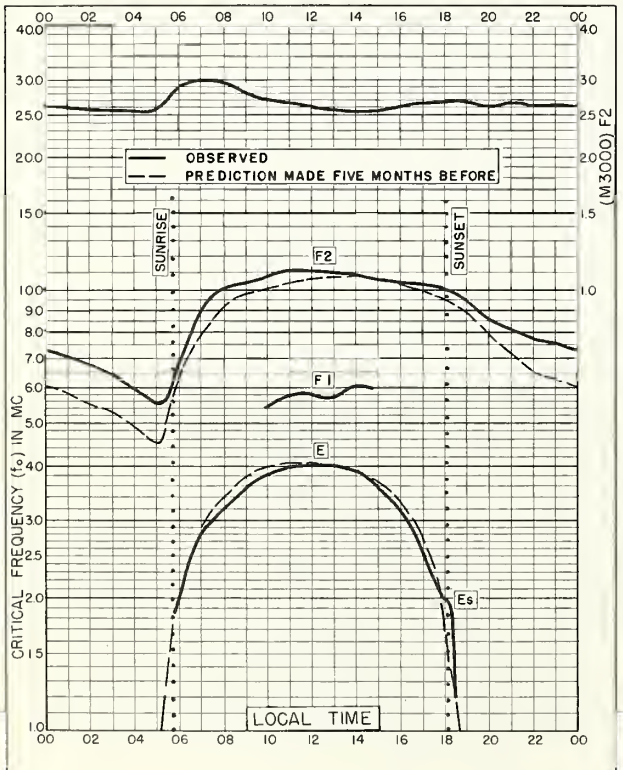


Fig. 15. WASHINGTON, D. C.
38.7°N, 77.1°W SEPTEMBER 1958

NBS 503

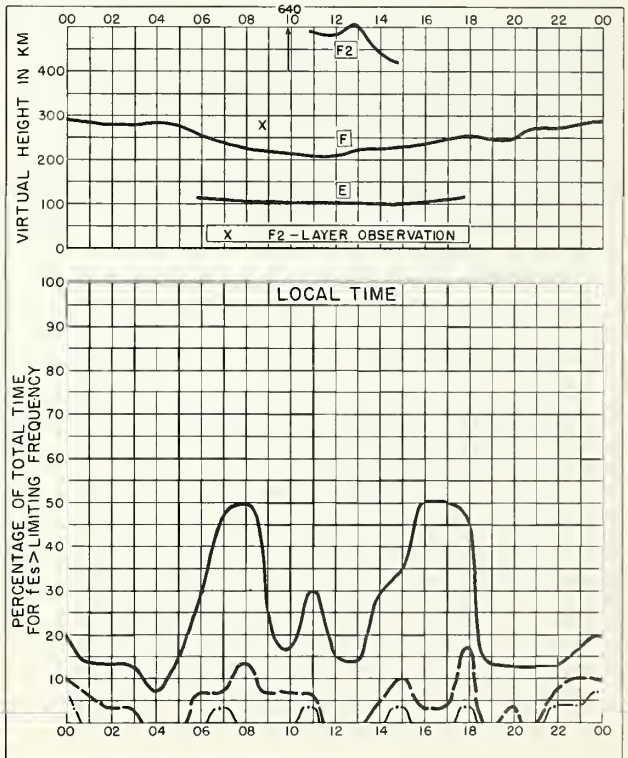


Fig. 16. WASHINGTON, D. C. SEPTEMBER 1958

NBS 490

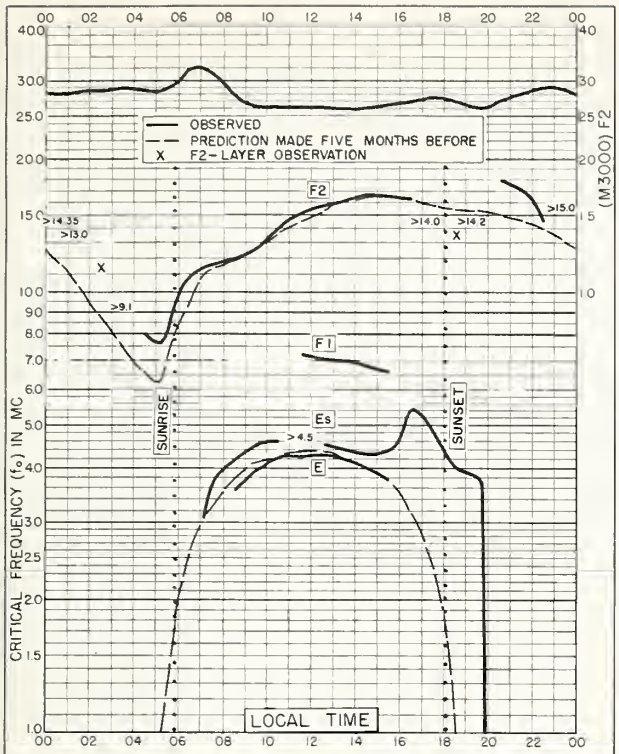


Fig. 17. OKINAWA I.
26.3°N, 127.8°E SEPTEMBER 1958

NBS 503

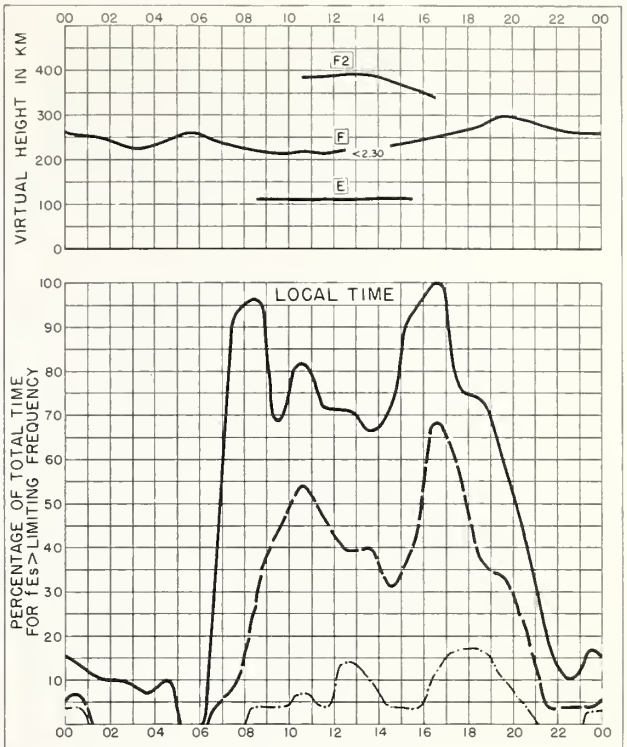


Fig. 18. OKINAWA I. SEPTEMBER 1958

NBS 490

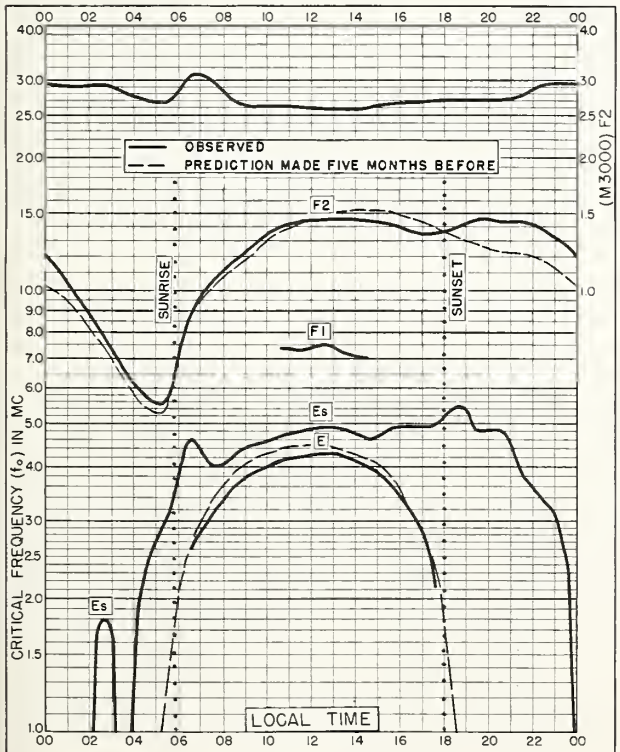


Fig. 19. MAUI, HAWAII
20.8°N, 156.5°W SEPTEMBER 1958

NBS 503

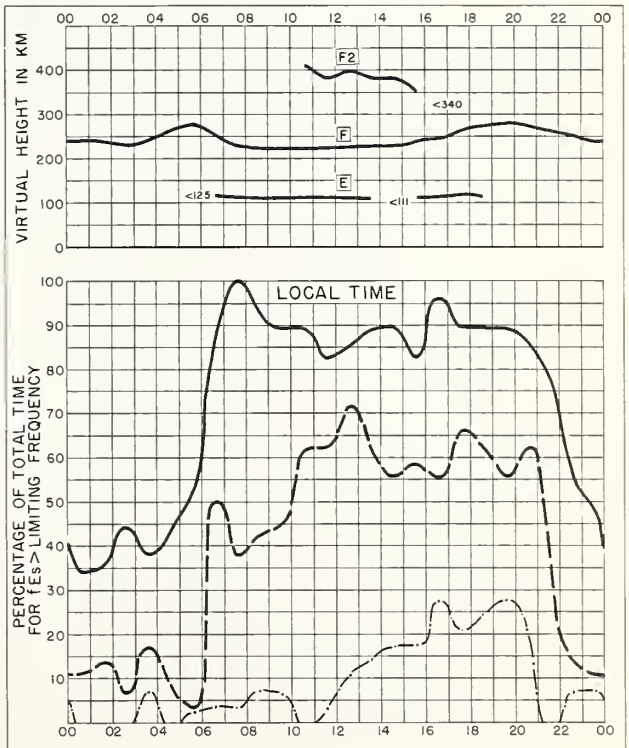


Fig. 20. MAUI, HAWAII SEPTEMBER 1958

NBS 490

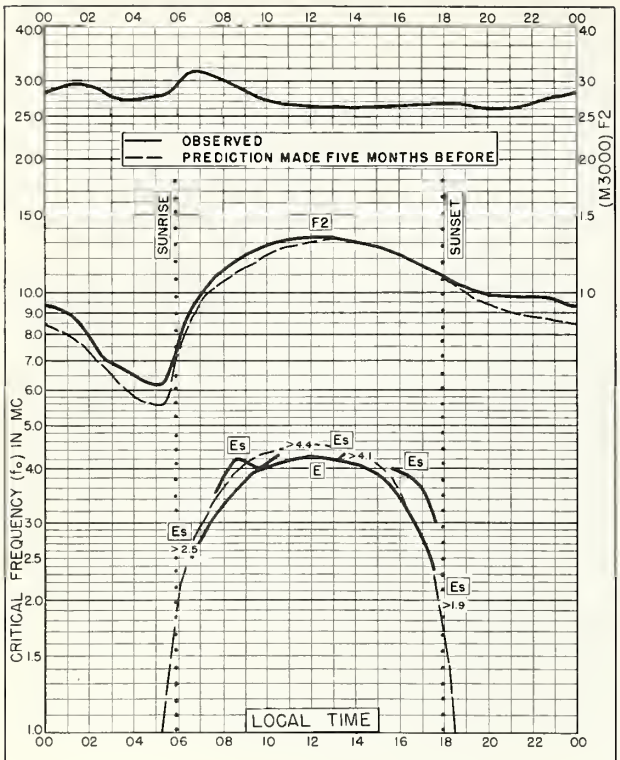


Fig. 21. PUERTO RICO, W. I.
18.5°N, 67.2°W SEPTEMBER 1958

NBS 503

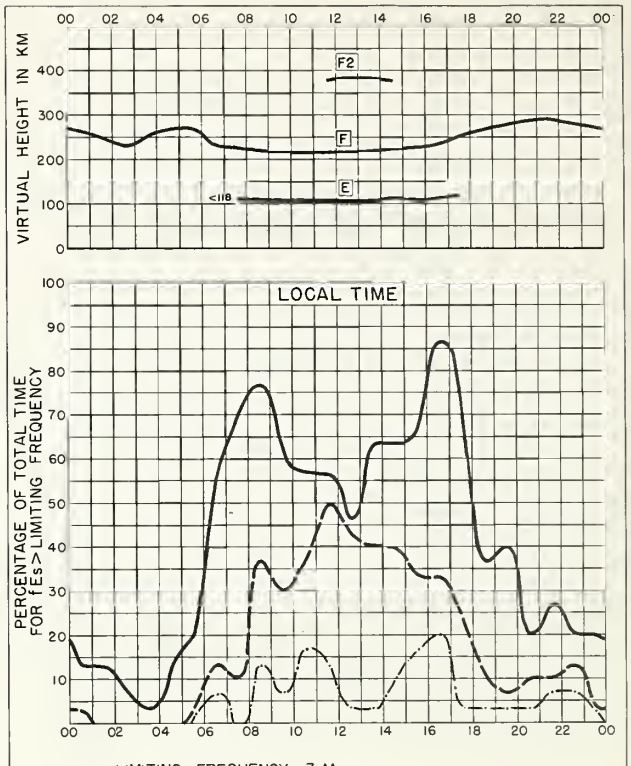


Fig. 22. PUERTO RICO, W. I. SEPTEMBER 1958

NBS 490

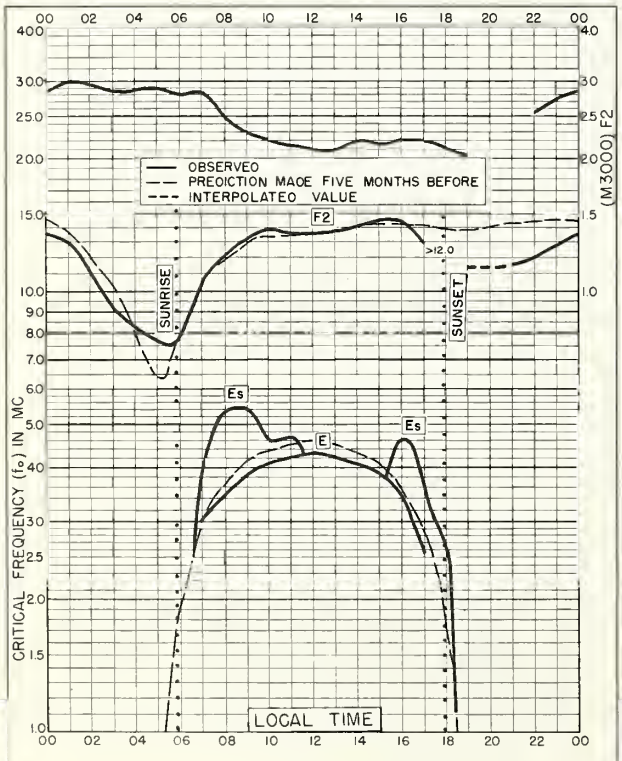


Fig. 23. BAGUIO, P. I.
16.4°N, 120.6°E SEPTEMBER 1958

NBS 503

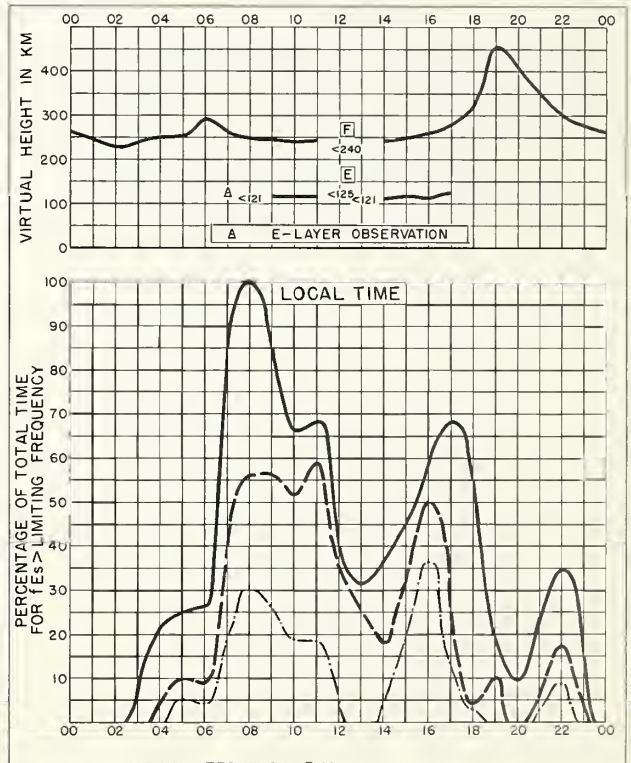


Fig. 24. BAGUIO, P. I. SEPTEMBER 1958

NBS 490

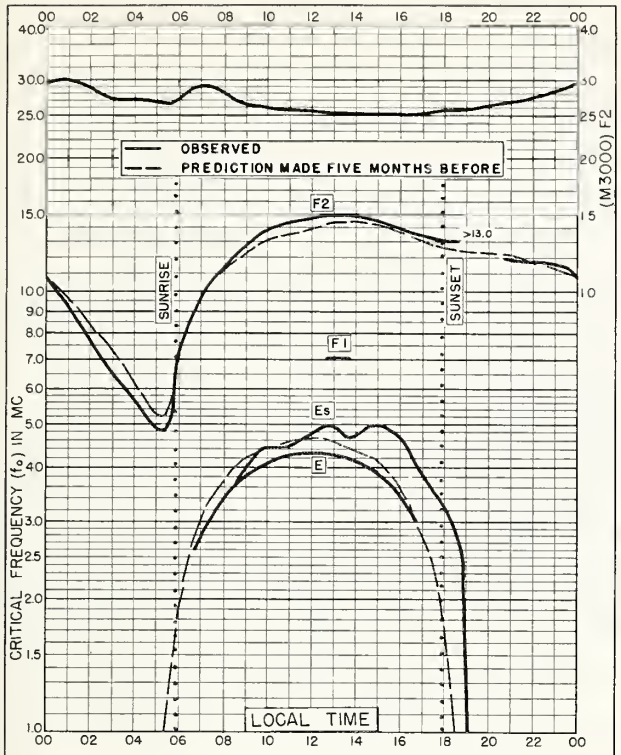


Fig. 25. PANAMA CANAL ZONE
9.4°N, 79.9°W SEPTEMBER 1958

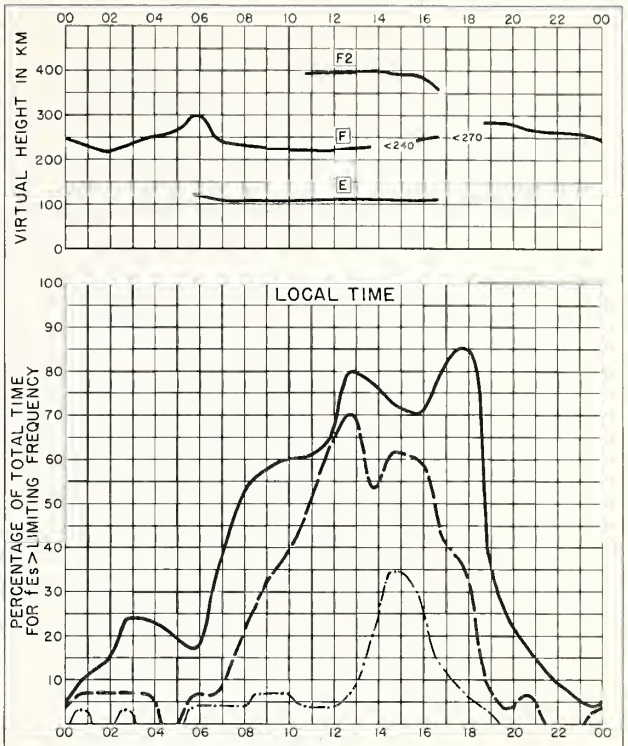


Fig. 26. PANAMA CANAL ZONE SEPTEMBER 1958

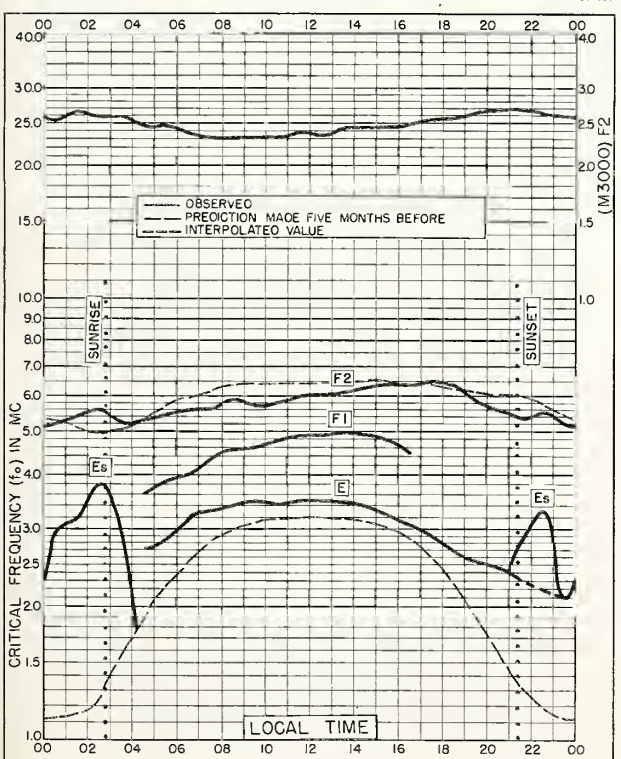


Fig. 27. POINT BARROW, ALASKA
71.3°N, 156.8°W AUGUST 1958

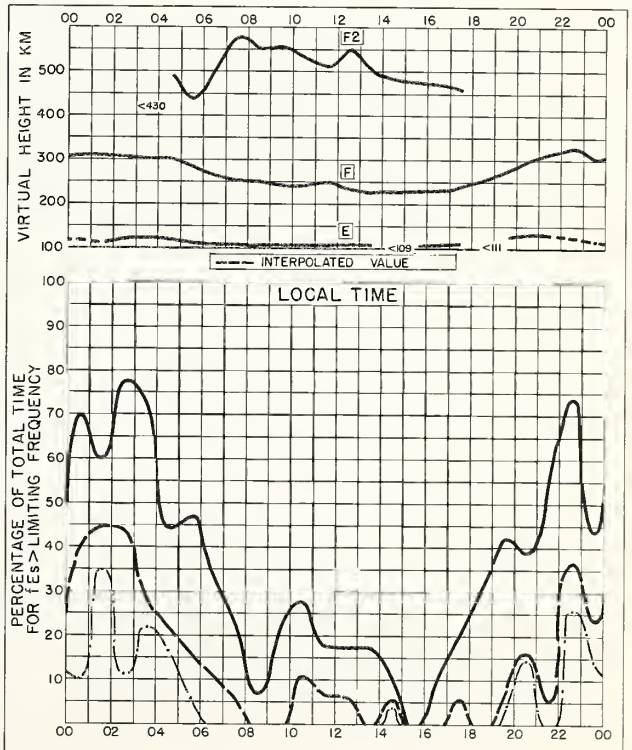


Fig. 28. POINT BARROW, ALASKA AUGUST 1958

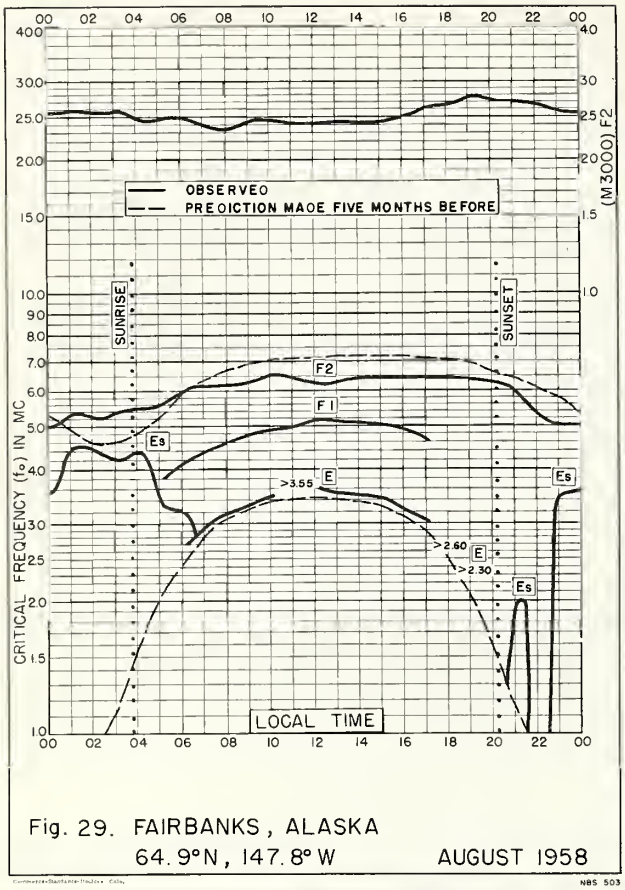


Fig. 29. FAIRBANKS, ALASKA
64.9°N, 147.8° W AUGUST 1958

NBS 503

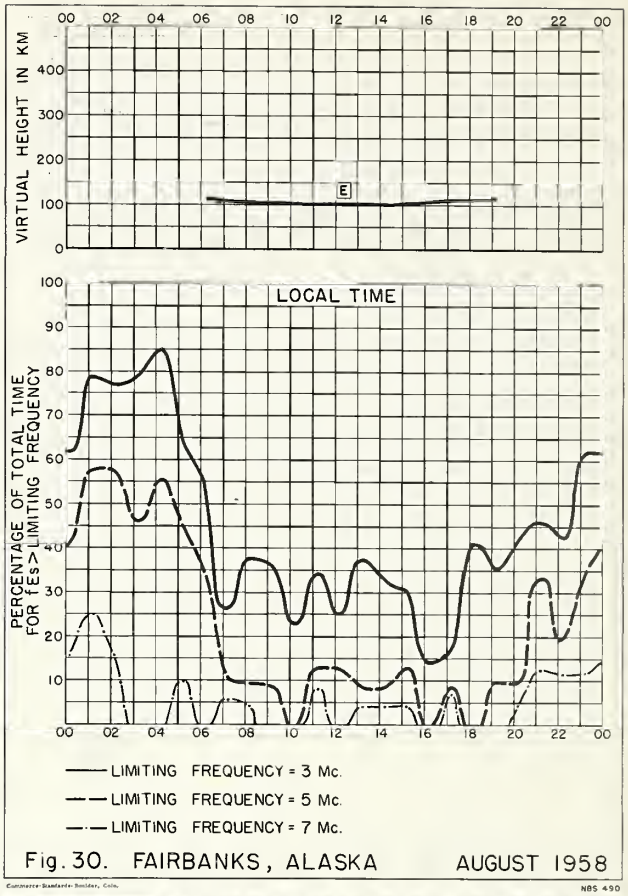


Fig. 30. FAIRBANKS, ALASKA AUGUST 1958

NBS 490

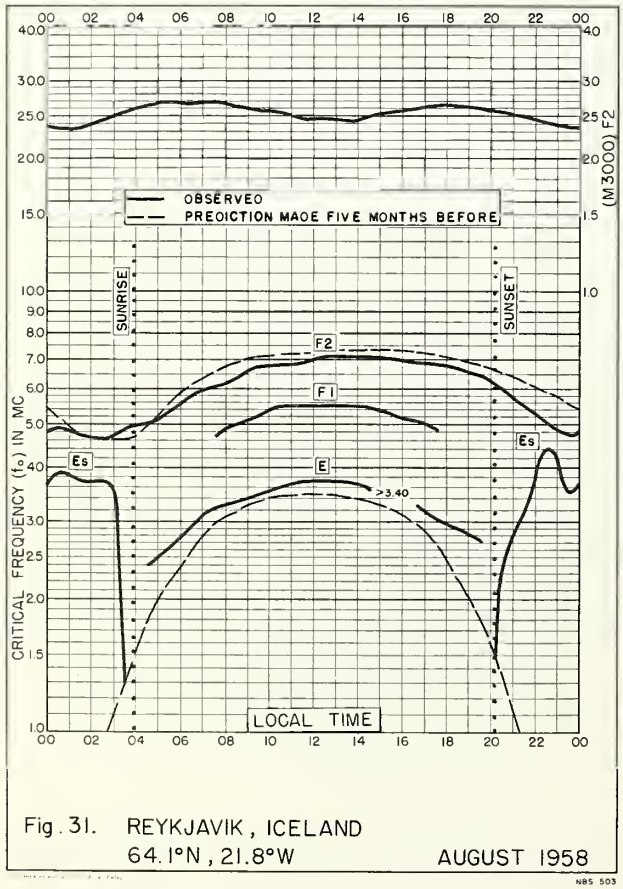


Fig. 31. REYKJAVIK, ICELAND
64.1°N, 21.8°W AUGUST 1958

NBS 503

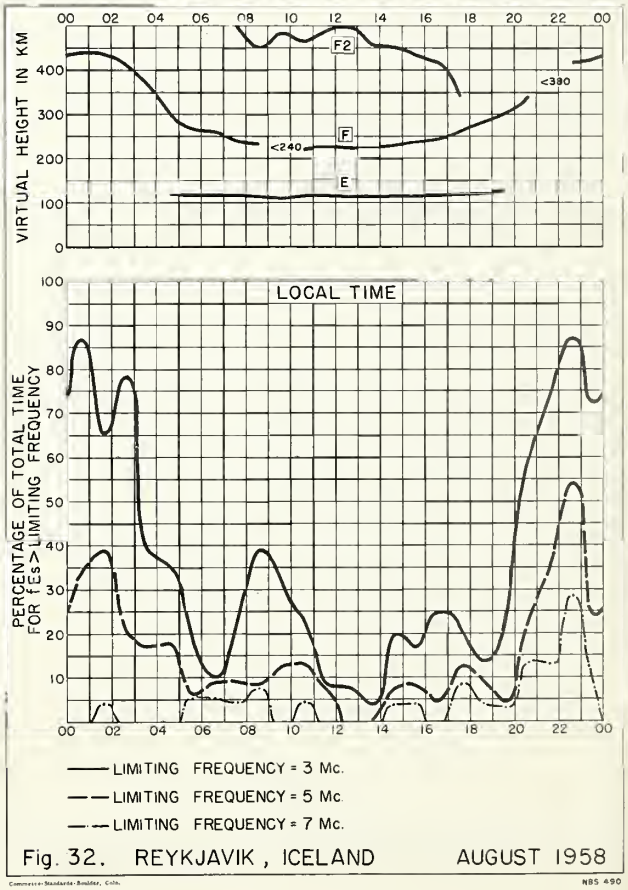


Fig. 32. REYKJAVIK, ICELAND AUGUST 1958

NBS 490

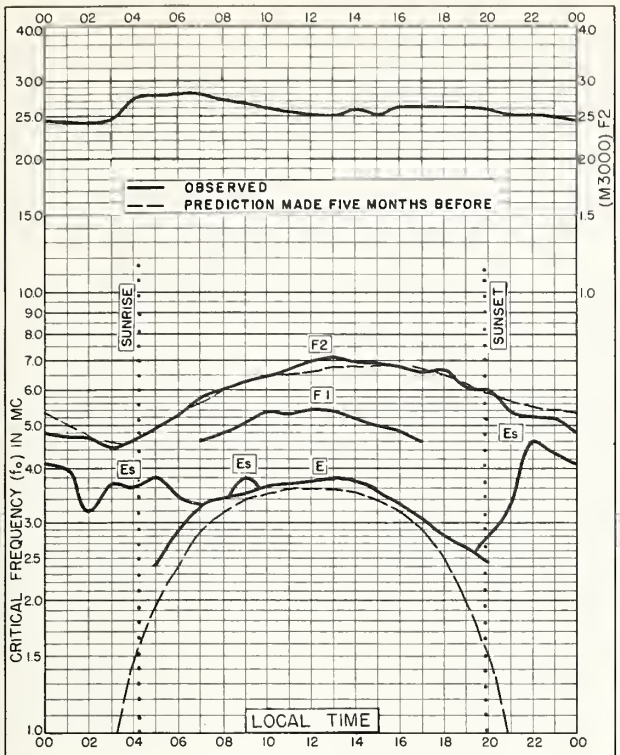
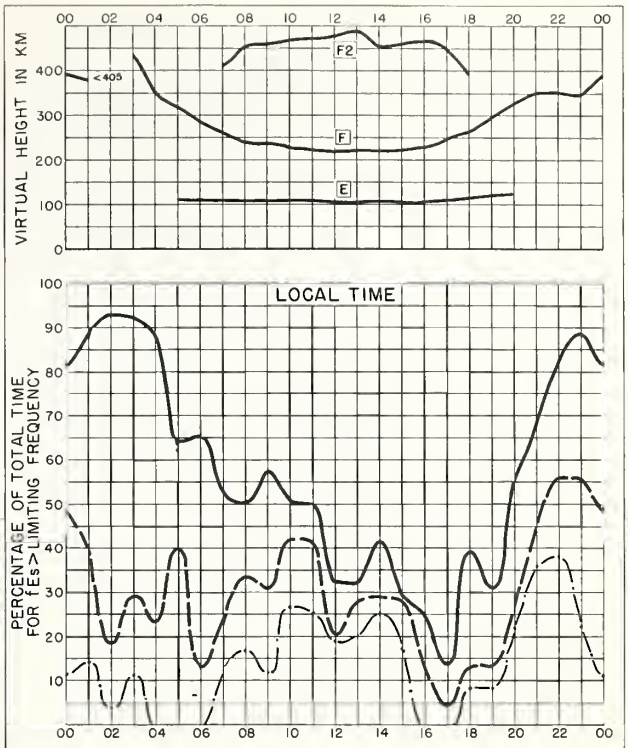


Fig. 33. NARSARSSUAK, GREENLAND
61.2°N, 45.4°W AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 503



AUGUST 1958

Fig. 34. NARSARSSUAK, GREENLAND

Commerce-Standards-Boulder, Colo. NBS 490

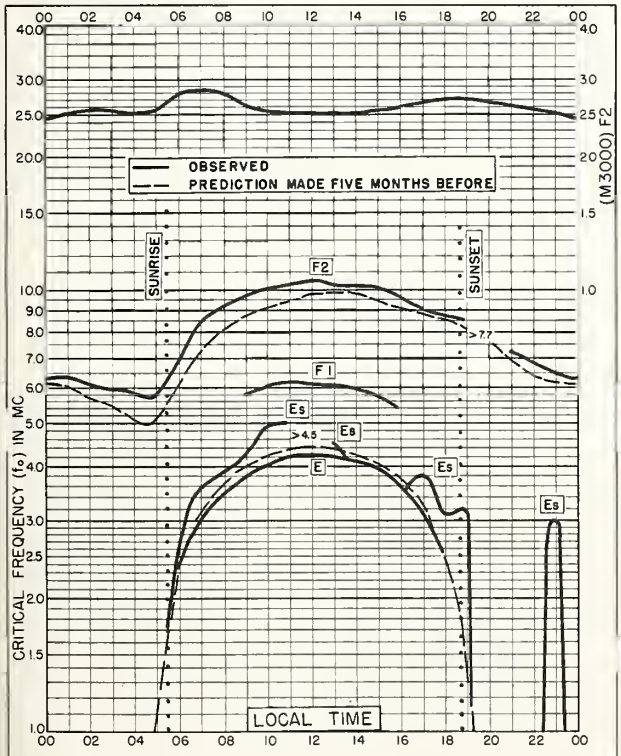
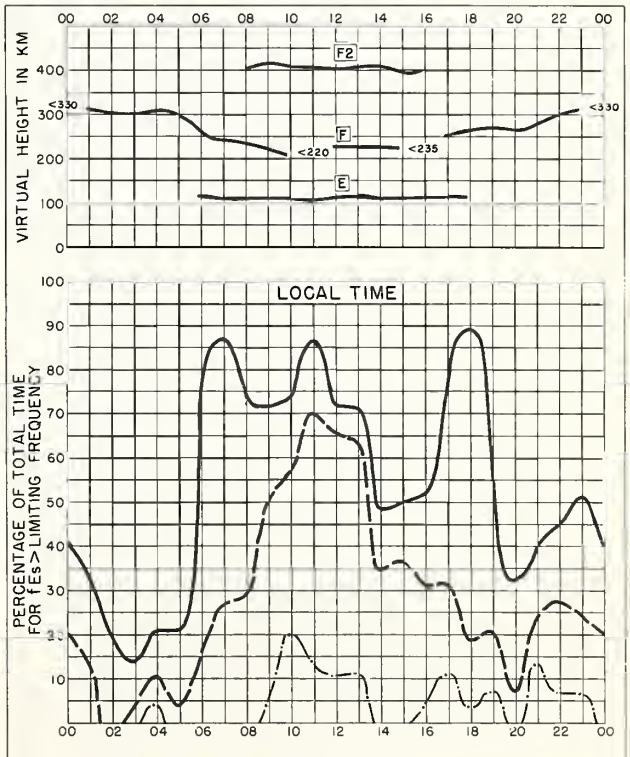


Fig. 35. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W AUGUST 1958

Commerce-Standards-Boulder, Colo. NBS 503



AUGUST 1958

Fig. 36. WHITE SANDS, NEW MEXICO

Commerce-Standards-Boulder, Colo. NBS 490

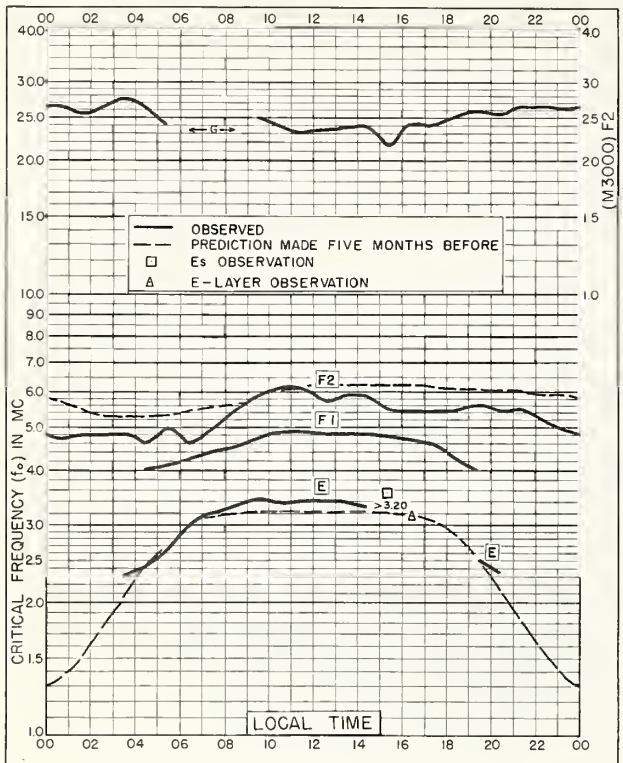


Fig. 37. GODHAVN, GREENLAND
69.3°N, 53.5°W JULY 1958

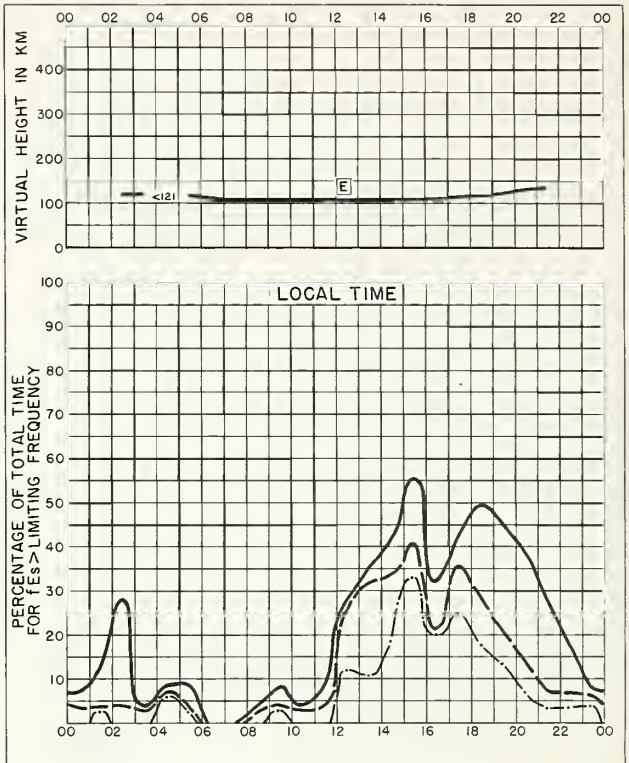


Fig. 38. GODHAVN, GREENLAND JULY 1958

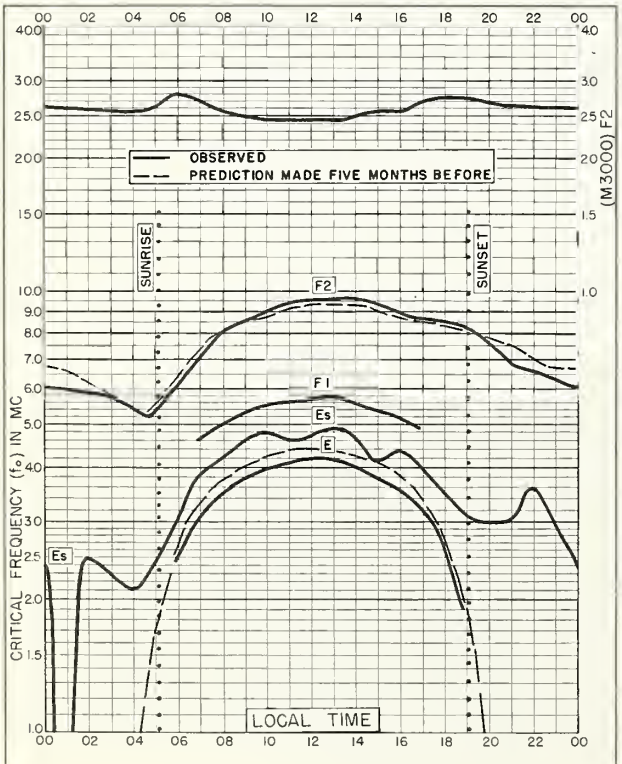


Fig. 39. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W JULY 1958

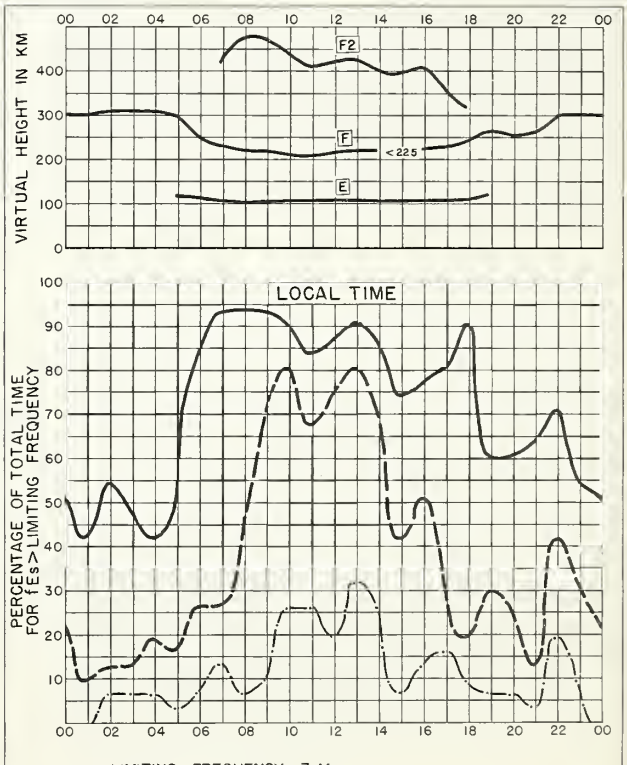


Fig. 40. WHITE SANDS, NEW MEXICO JULY 1958

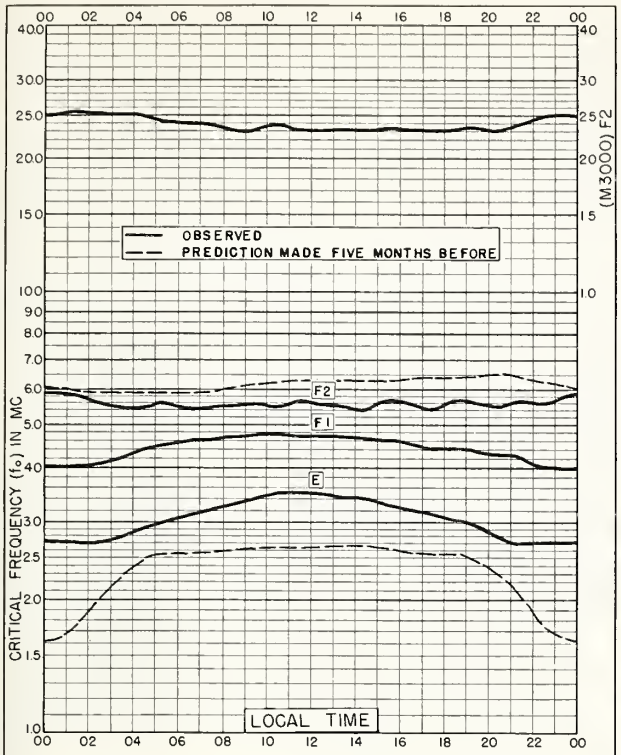


Fig. 41. FLETCHERS ICE I.
79.9°N, 116.1°W JUNE 1958

NBS 503

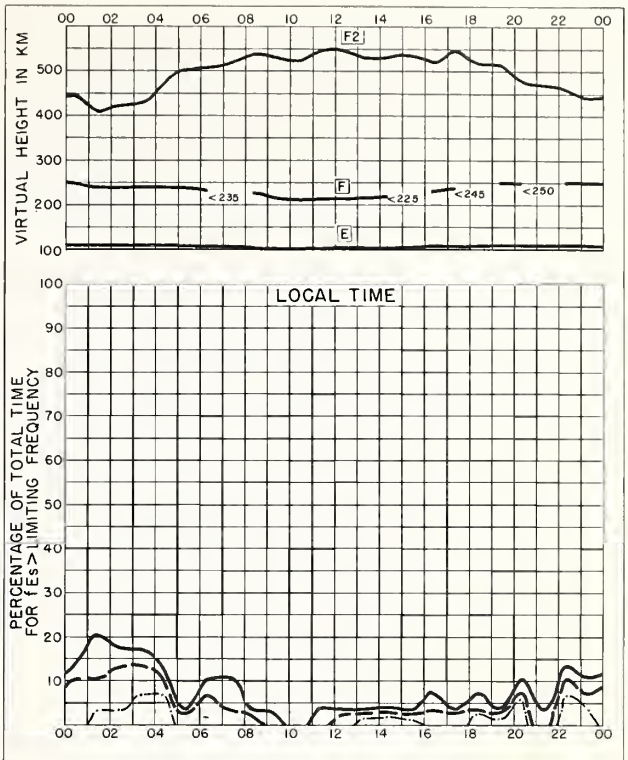


Fig. 42. FLETCHERS ICE I. JUNE 1958

NBS 490

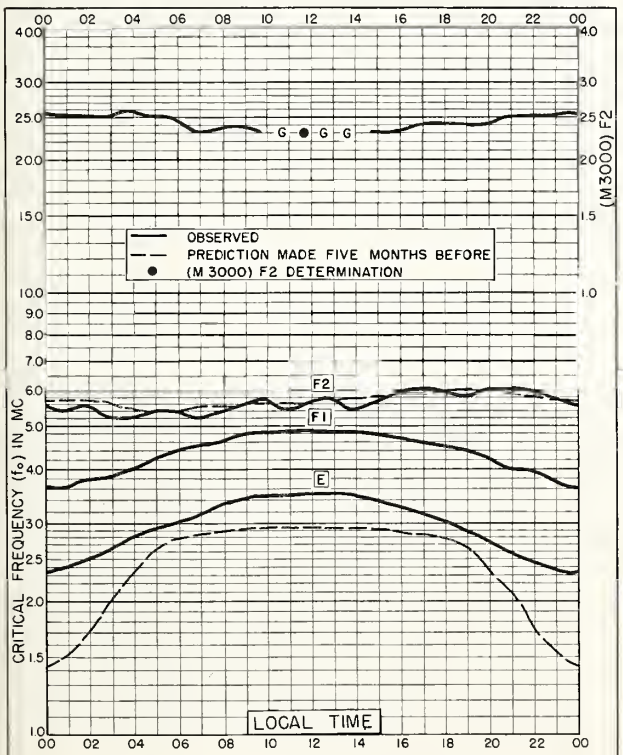


Fig. 43. RESOLUTE BAY, CANADA
74.7°N, 94.9°W JUNE 1958

NBS 503

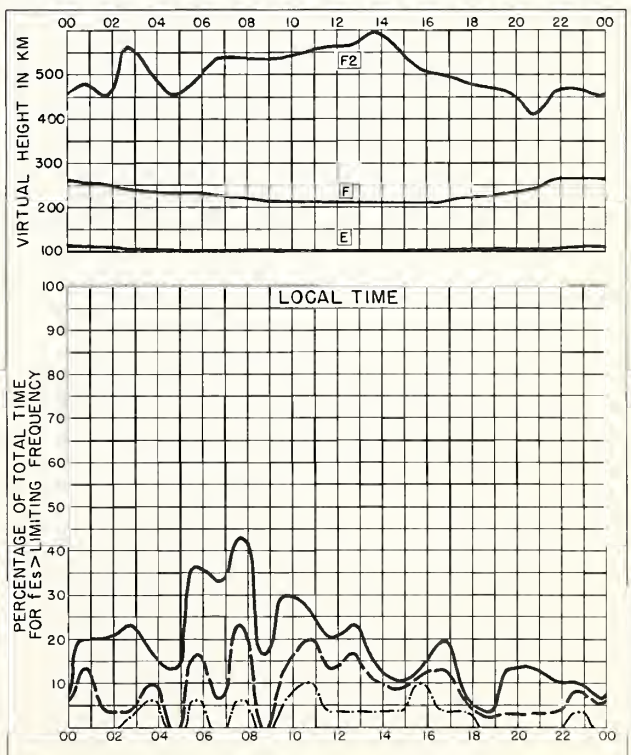


Fig. 44. RESOLUTE BAY, CANADA JUNE 1958

NBS 490

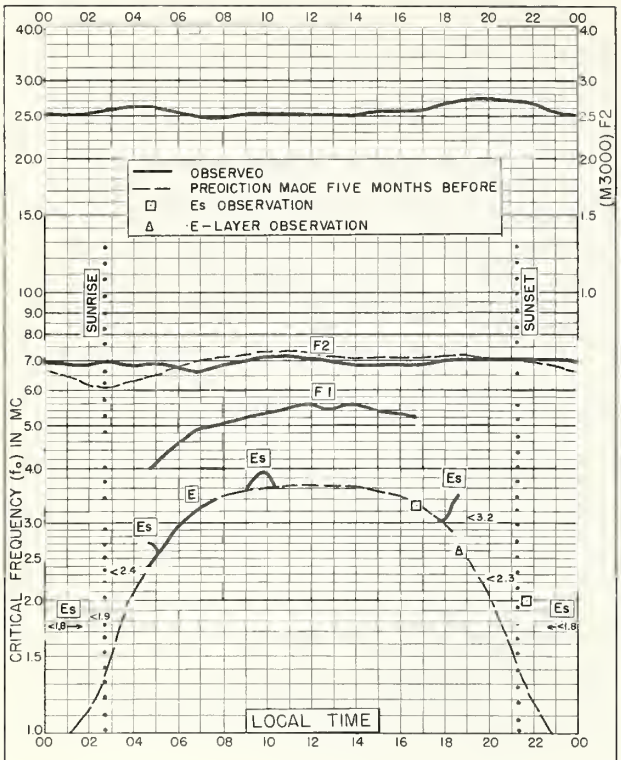


Fig. 45. NURMIJARVI, FINLAND
60.5°N, 24.6°E JUNE 1958

NBS 503

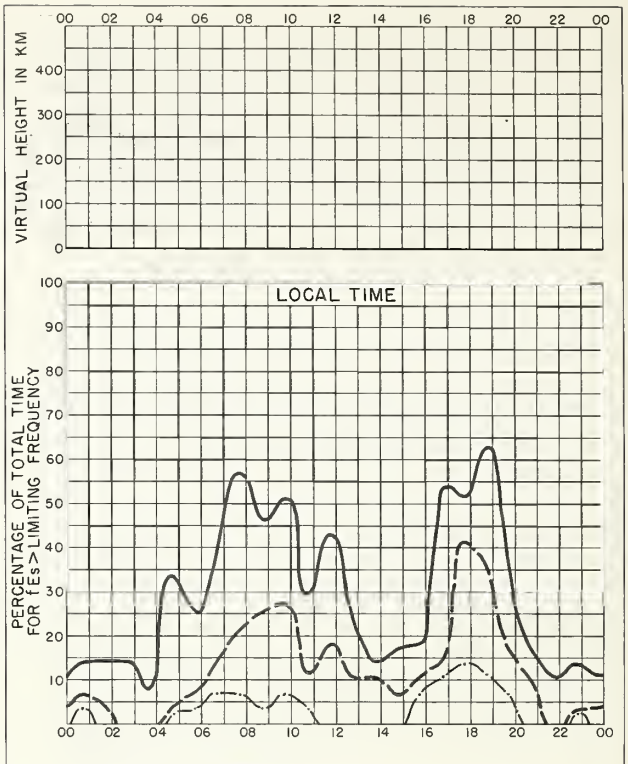


Fig. 46. NURMIJARVI, FINLAND JUNE 1958

NBS 490

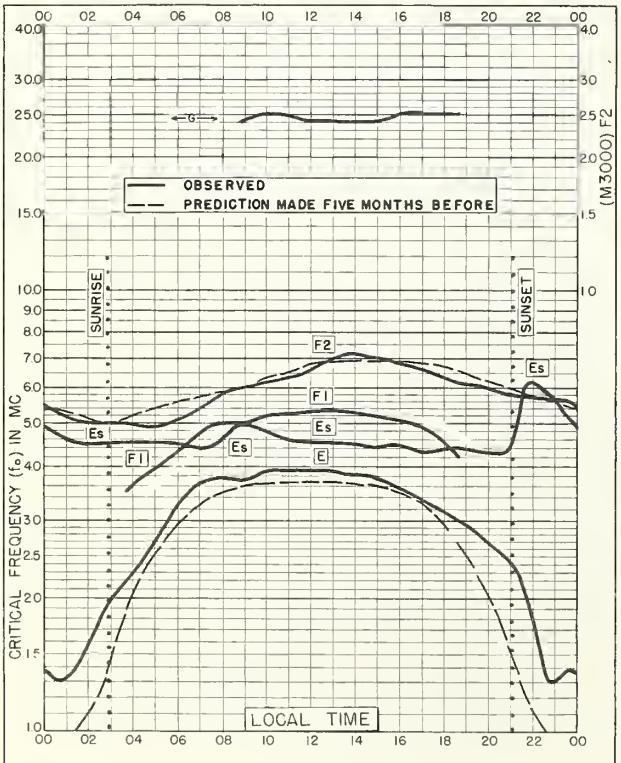


Fig. 47. CHURCHILL, CANADA
58.8°N, 94.2°W JUNE 1958

NBS 503

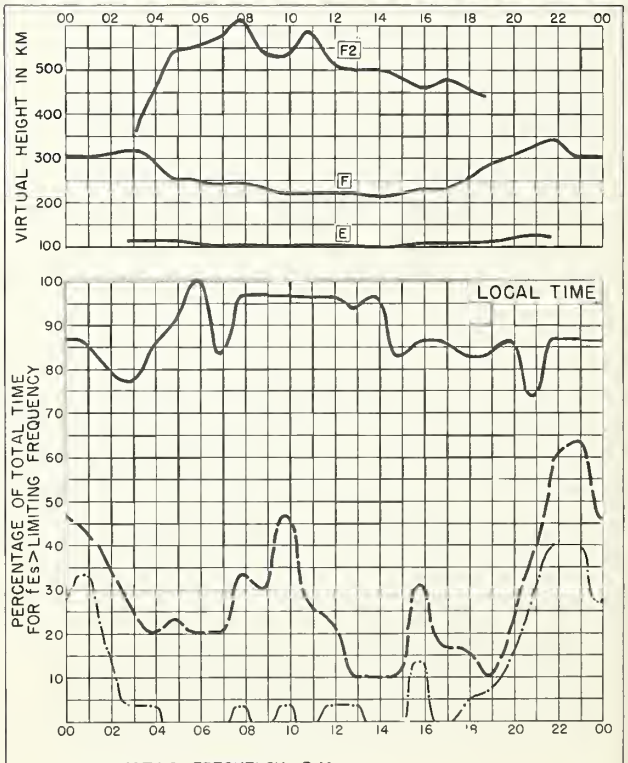


Fig. 48. CHURCHILL, CANADA JUNE 1958

NBS 490

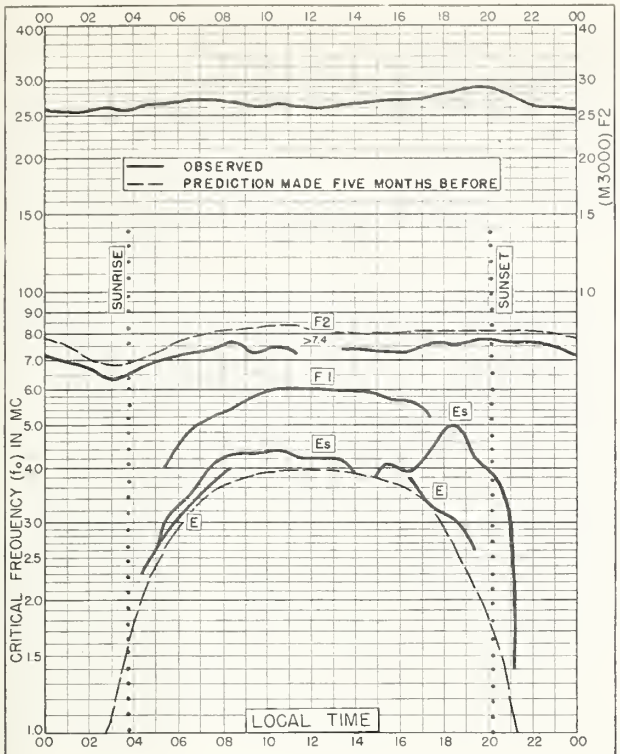


Fig. 49. De BILT, HOLLAND
52.1°N, 5.2°E JUNE 1958

NBS 503

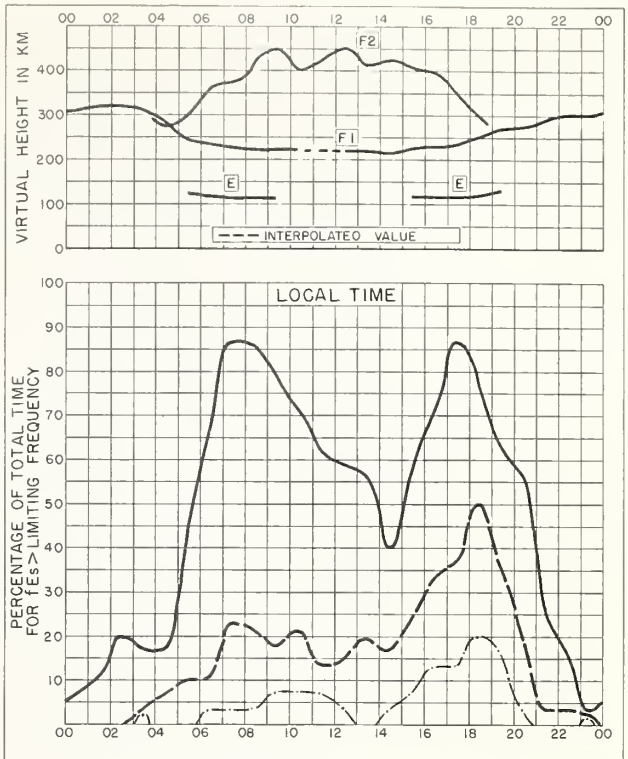


Fig. 50. De BILT, HOLLAND JUNE 1958

NBS 490

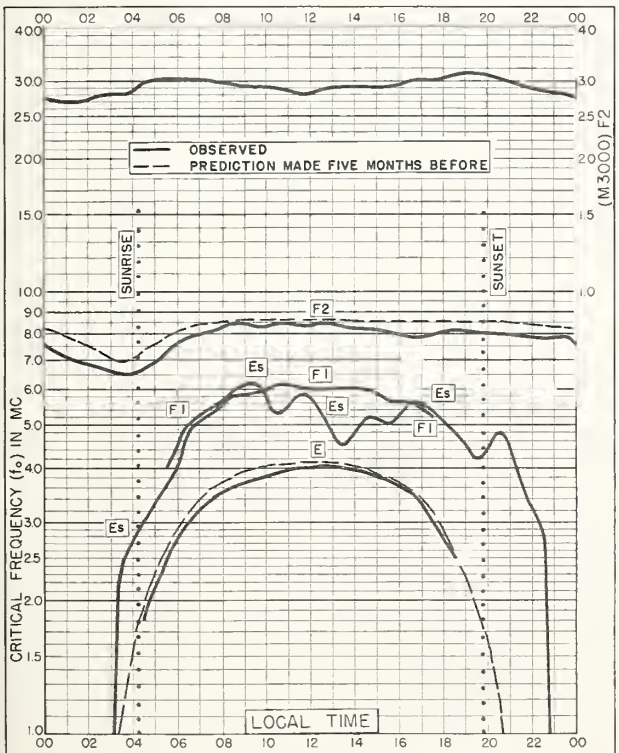


Fig. 51. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E JUNE 1958

NBS 503

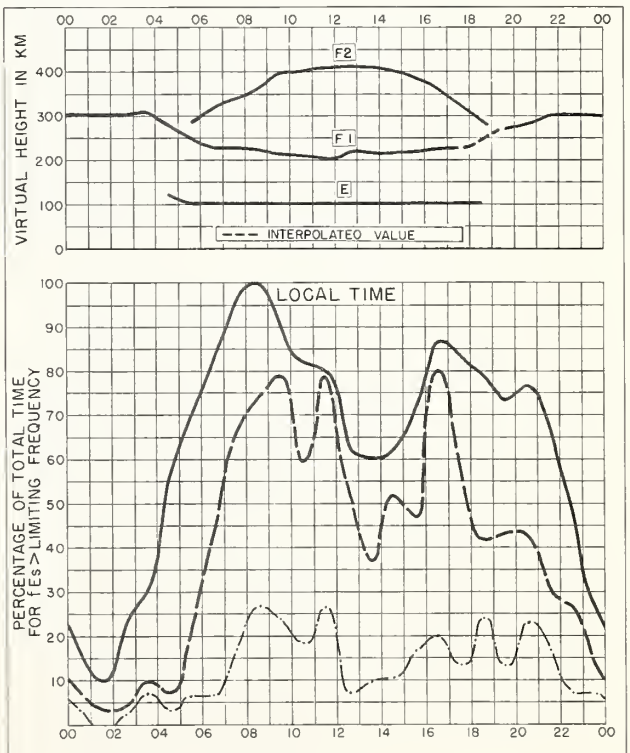


Fig. 52. SCHWARZENBURG, SWITZERLAND JUNE 1958

NBS 490

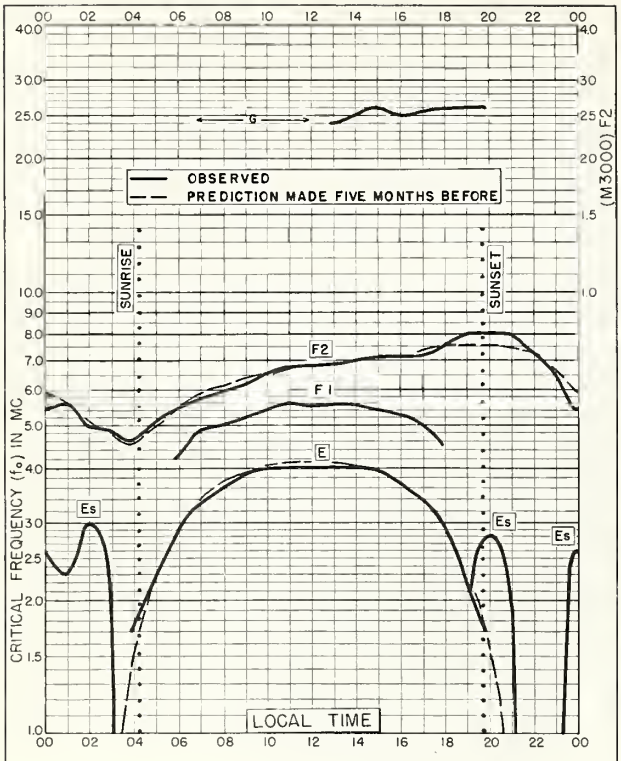


Fig. 53. OTTAWA, CANADA
45.4°N, 75.9°W JUNE 1958

NBS 503

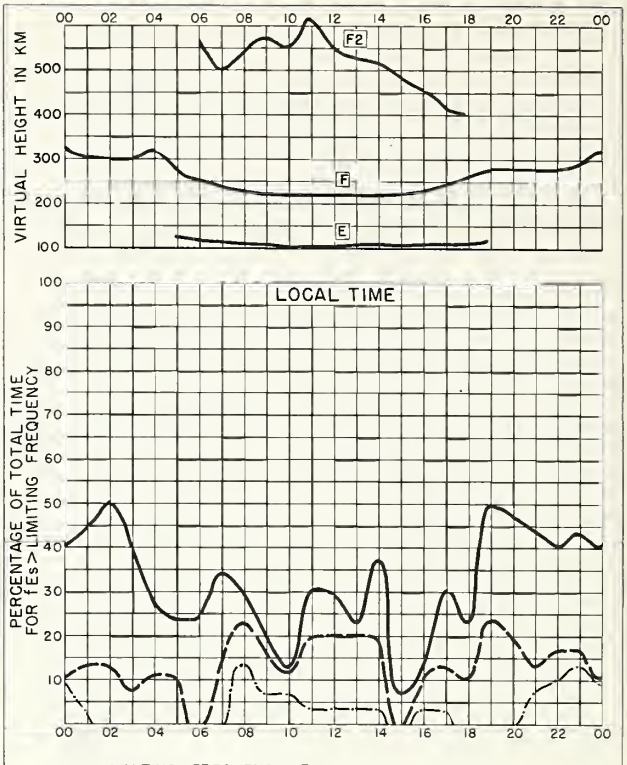


Fig. 54. OTTAWA, CANADA JUNE 1958

NBS 490

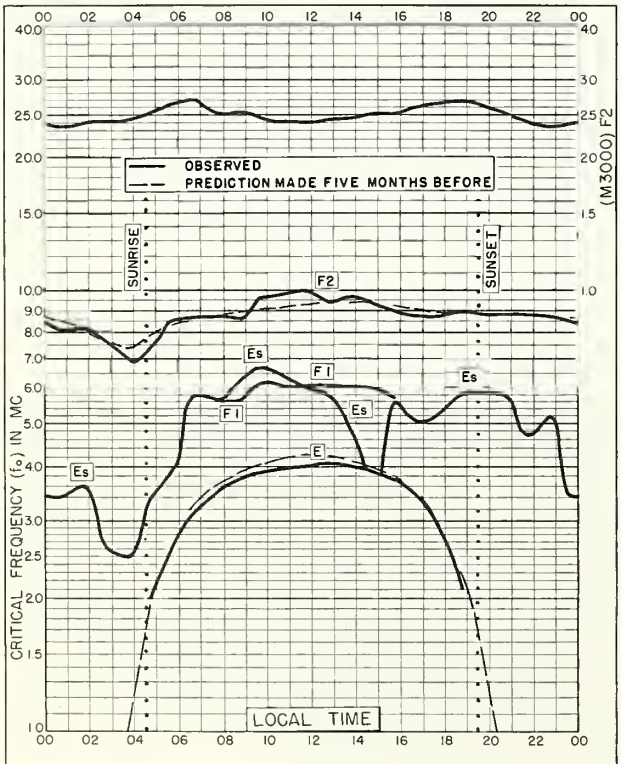


Fig. 55. ROME, ITALY
41.8°N, 12.5°E JUNE 1958

NBS 503

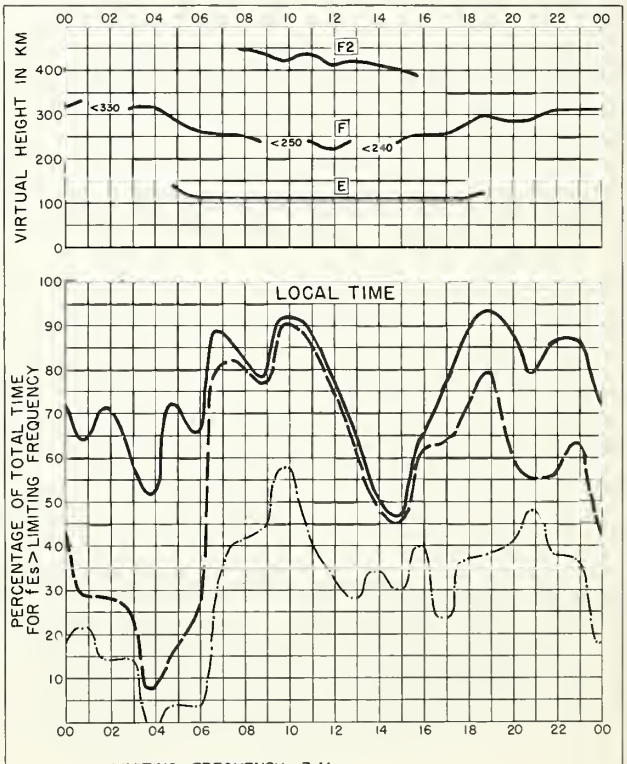


Fig. 56. ROME, ITALY JUNE 1958

NBS 490

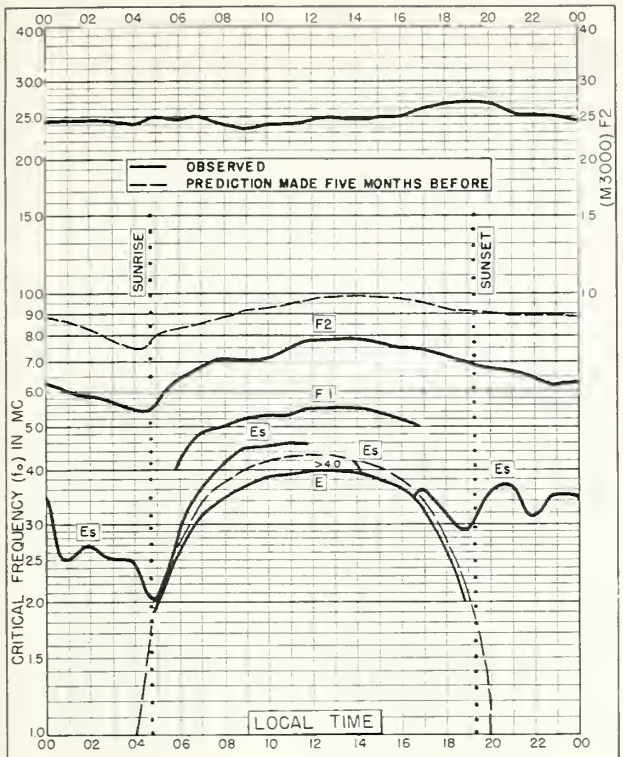


Fig. 57. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W JUNE 1958

NBS 503

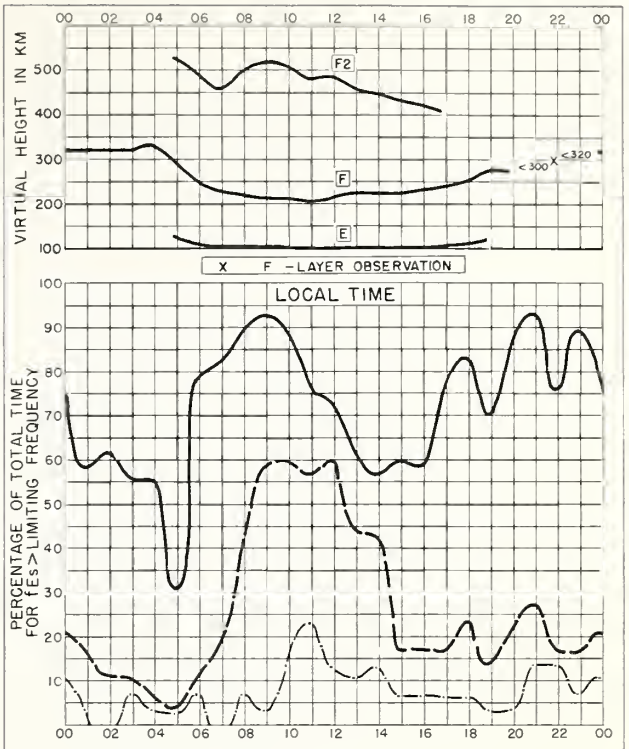


Fig. 58. SAN FRANCISCO, CALIFORNIA JUNE 1958

NBS 490

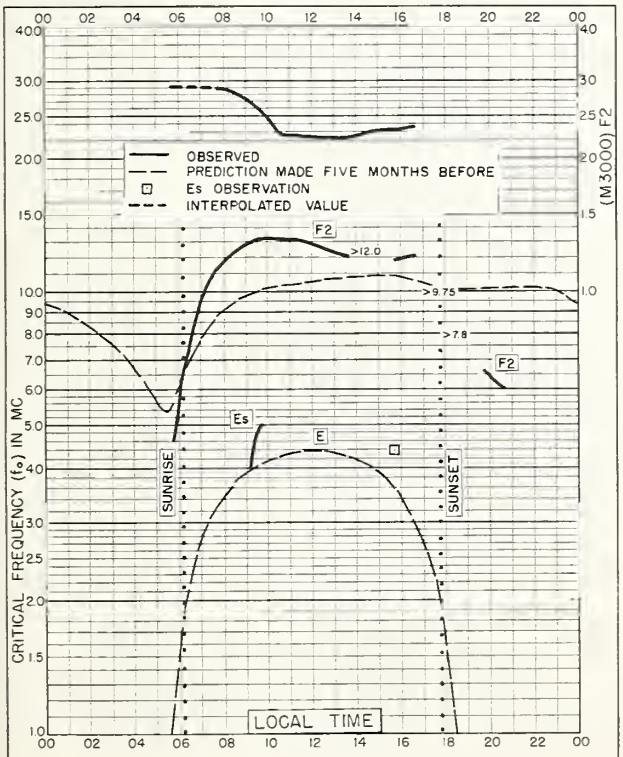


Fig. 59. NATAL, BRAZIL
5.3°S, 35.1°W JUNE 1958

NBS 503

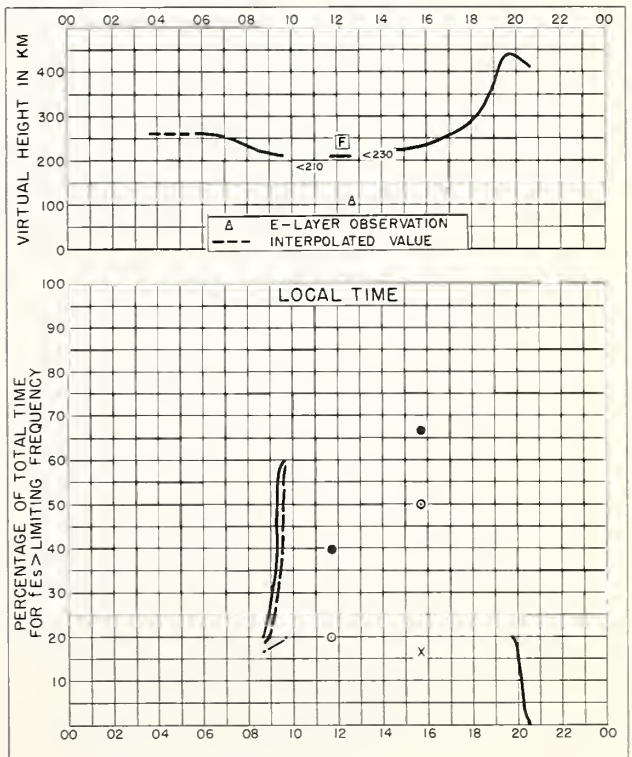


Fig. 60. NATAL, BRAZIL JUNE 1958

NBS 490

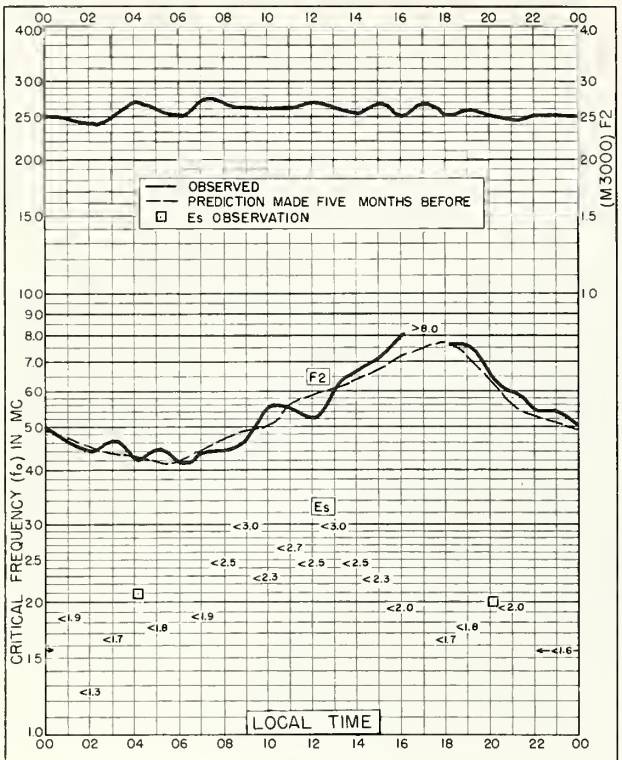


Fig. 61. SCOTT BASE
77.8°S, 166.8°E JUNE 1958

NBS 503

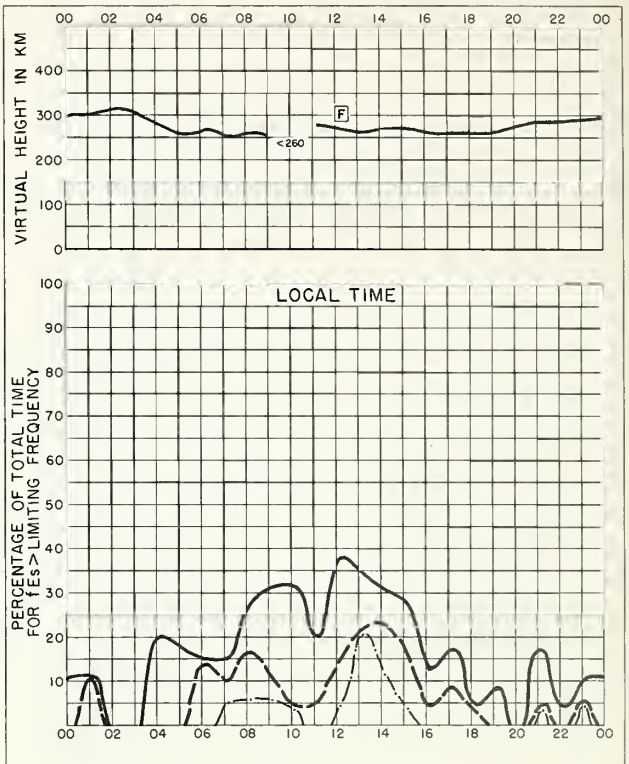


Fig. 62. SCOTT BASE JUNE 1958

NBS 490

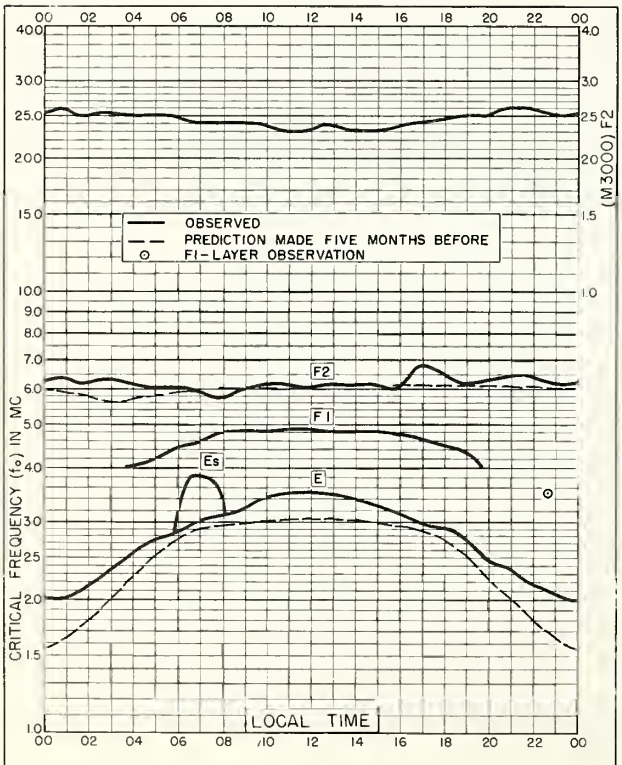


Fig. 63. RESOLUTE BAY, CANADA
74.7°N, 94.9°W MAY 1958

NBS 503

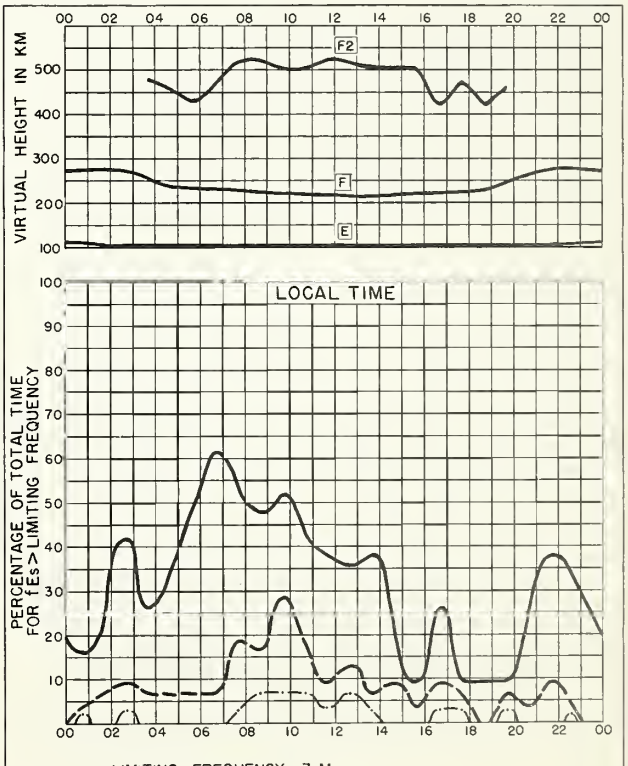


Fig. 64. RESOLUTE BAY, CANADA MAY 1958

NBS 490

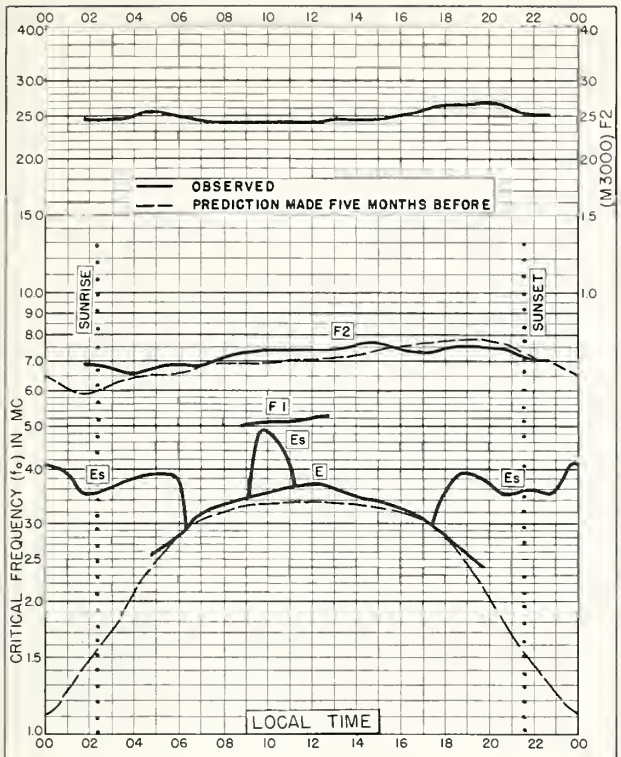


Fig. 65. SODANKYLA, FINLAND
67.4°N, 26.6°E MAY 1958

NBS 503

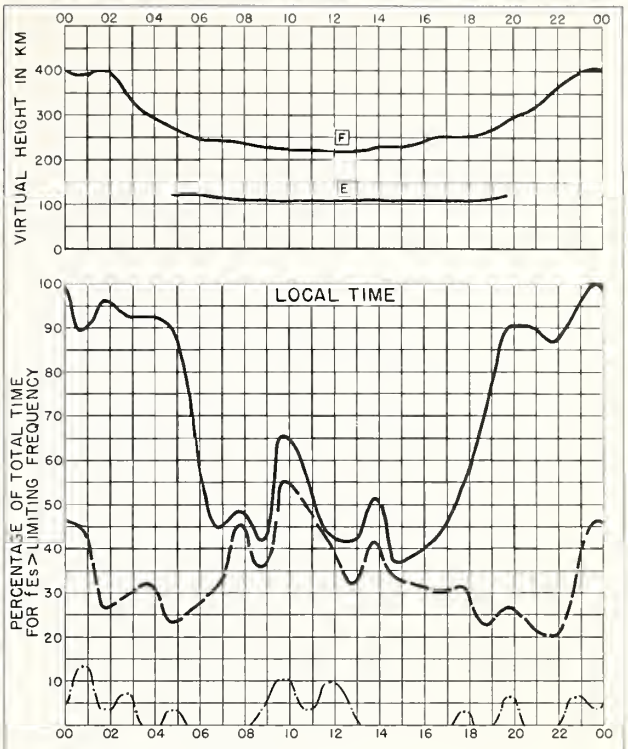


Fig. 66. SODANKYLA, FINLAND MAY 1958

NBS 490

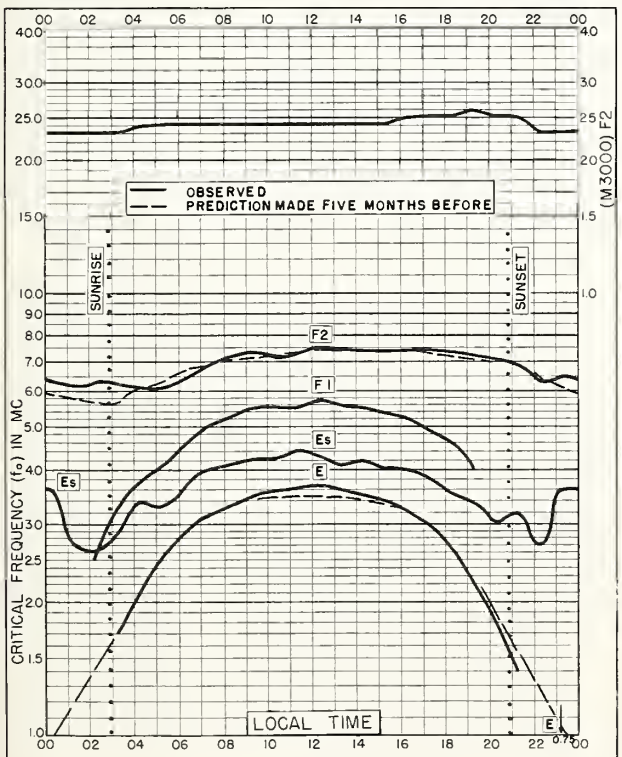


Fig. 67. LYCKSELE, SWEDEN
64.6°N, 18.8°E MAY 1958

NBS 503

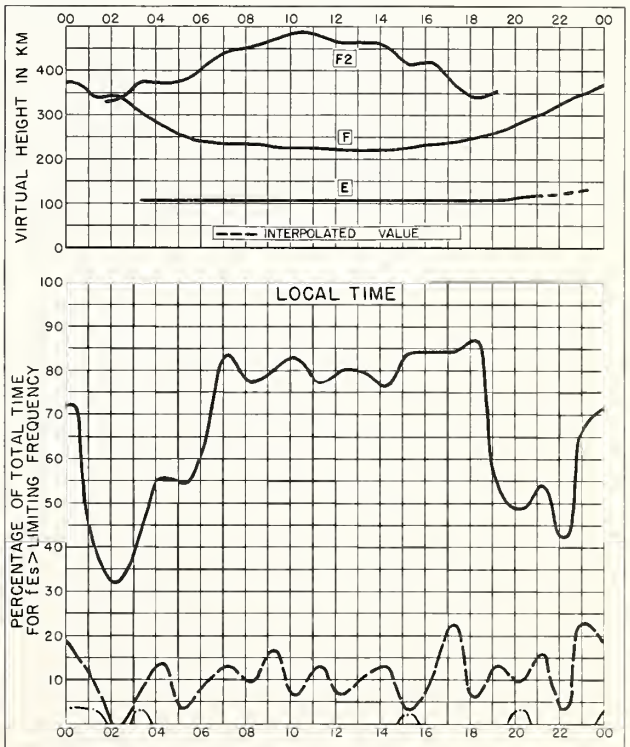


Fig. 68. LYCKSELE, SWEDEN MAY 1958

NBS 490

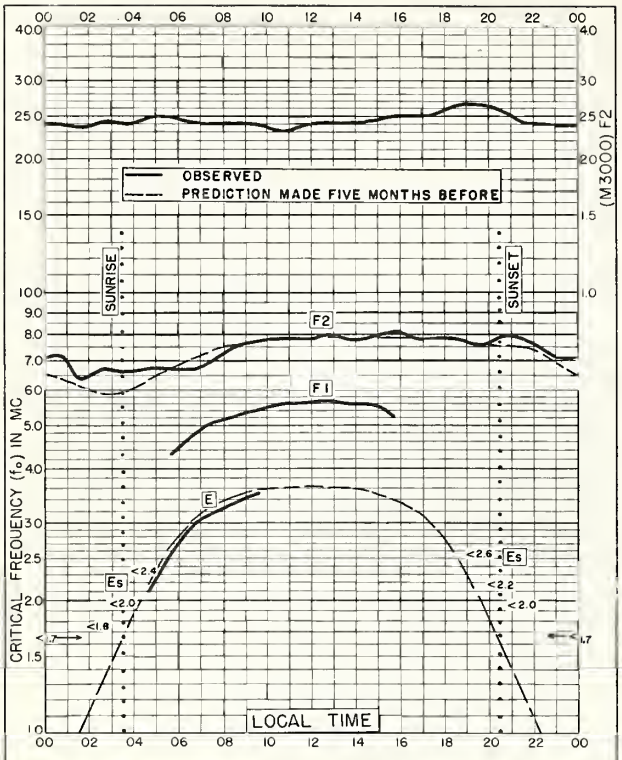


Fig. 69. NURMIJARVI, FINLAND
60.5°N, 24.6°E MAY 1958

NBS 503

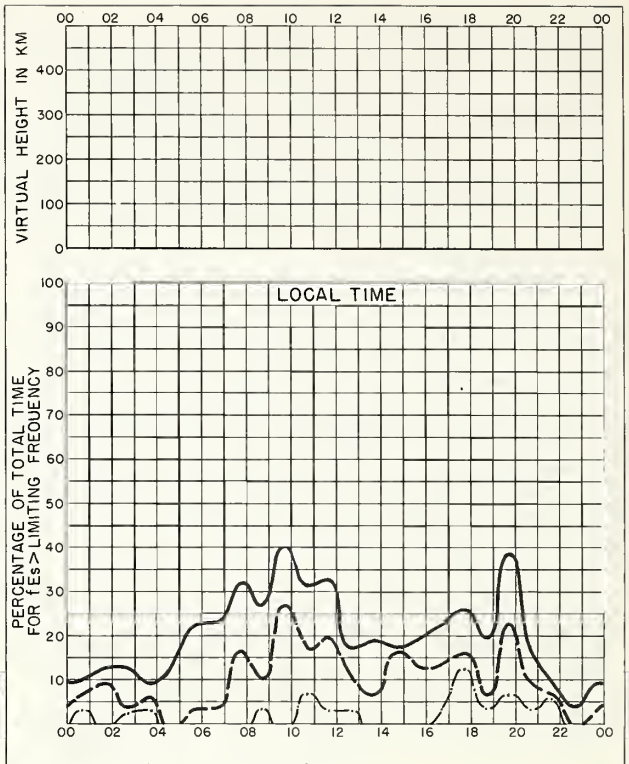


Fig. 70. NURMIJARVI, FINLAND MAY 1958

NBS 490

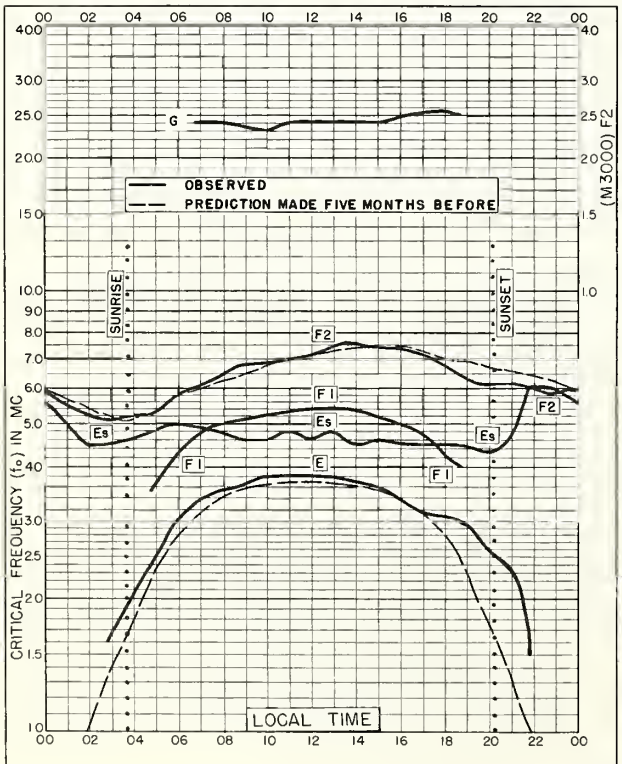


Fig. 71. CHURCHILL, CANADA
58.8°N, 94.2°W MAY 1958

NBS 503

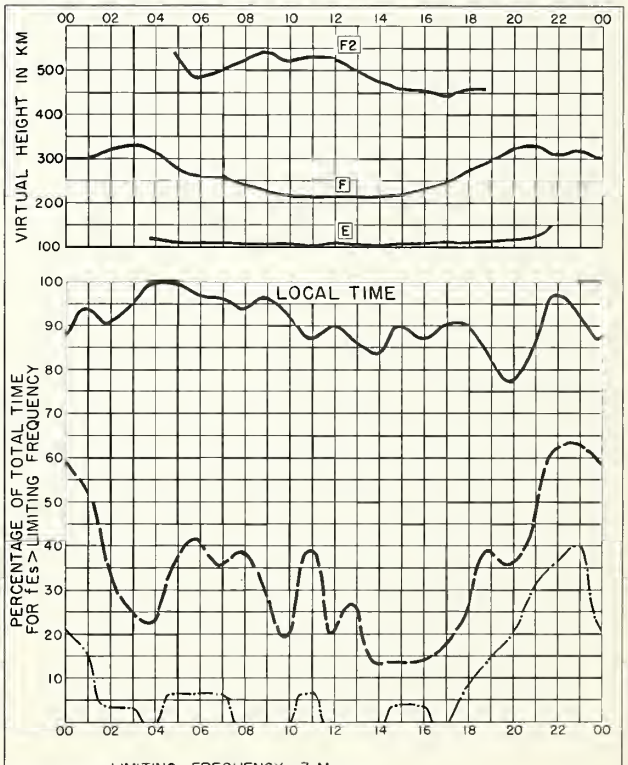


Fig. 72. CHURCHILL, CANADA MAY 1958

NBS 490

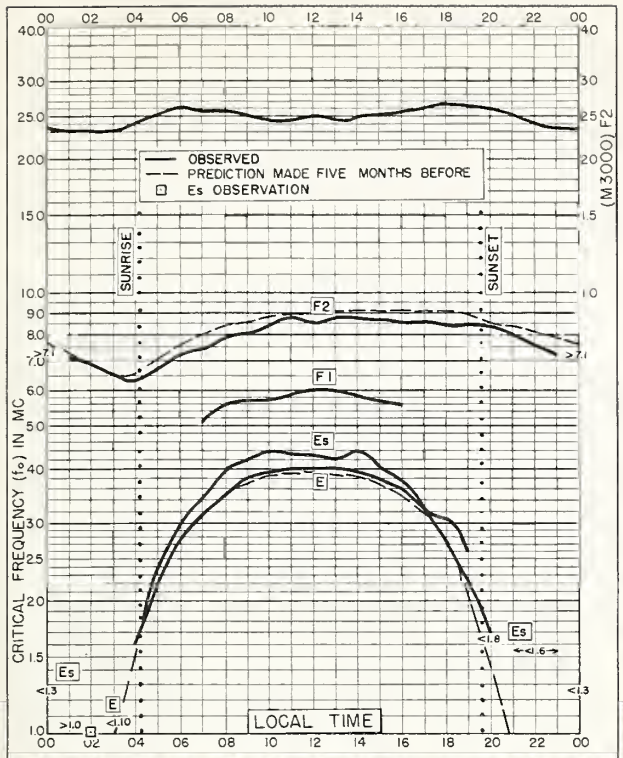


Fig. 73. SLOUGH, ENGLAND
51.5°N, 0.6°W MAY 1958

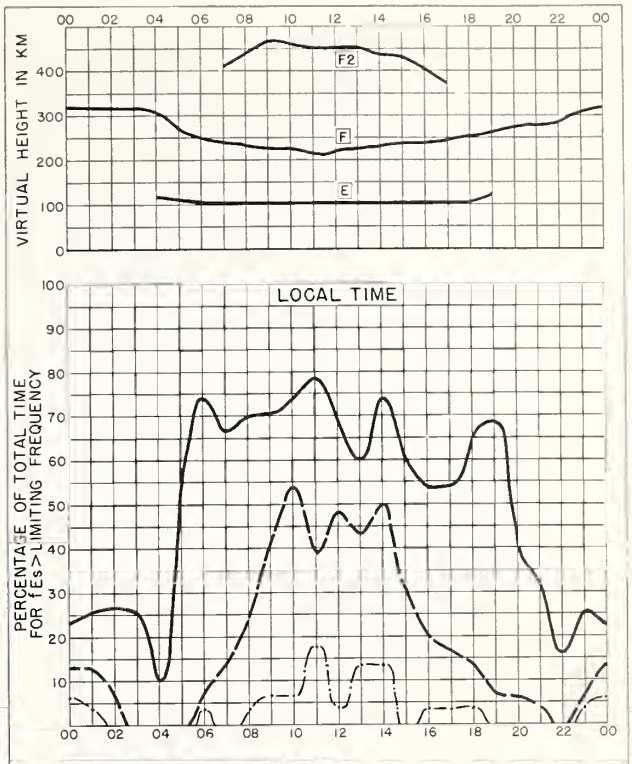


Fig. 74. SLOUGH, ENGLAND MAY 1958

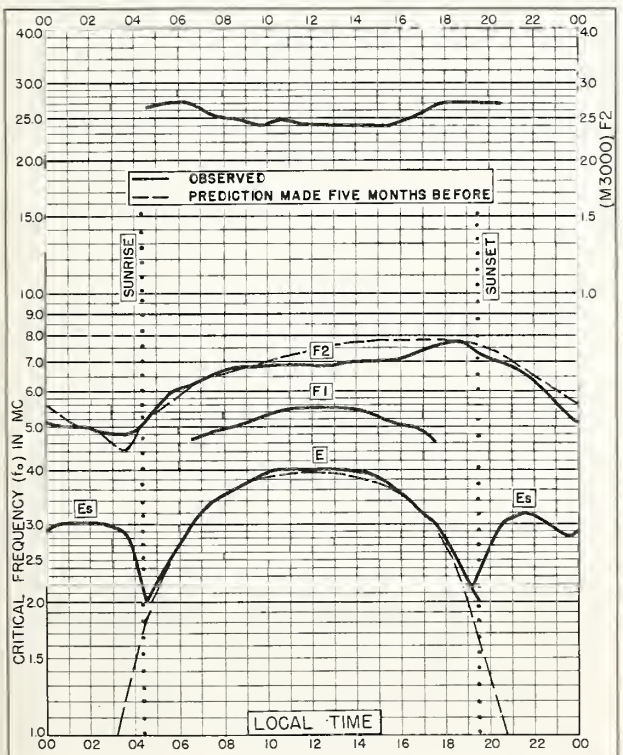


Fig. 75. WINNIPEG, CANADA
49.9°N, 97.4°W MAY 1958

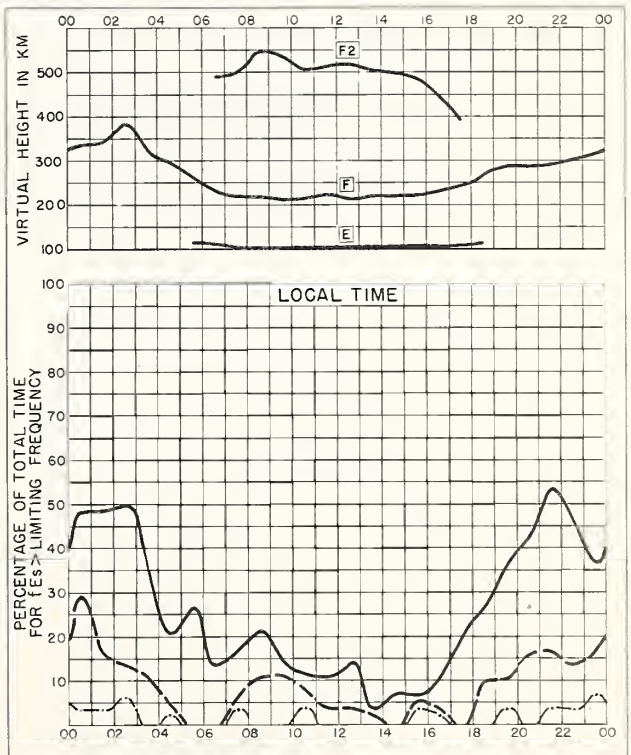


Fig. 76. WINNIPEG, CANADA MAY 1958

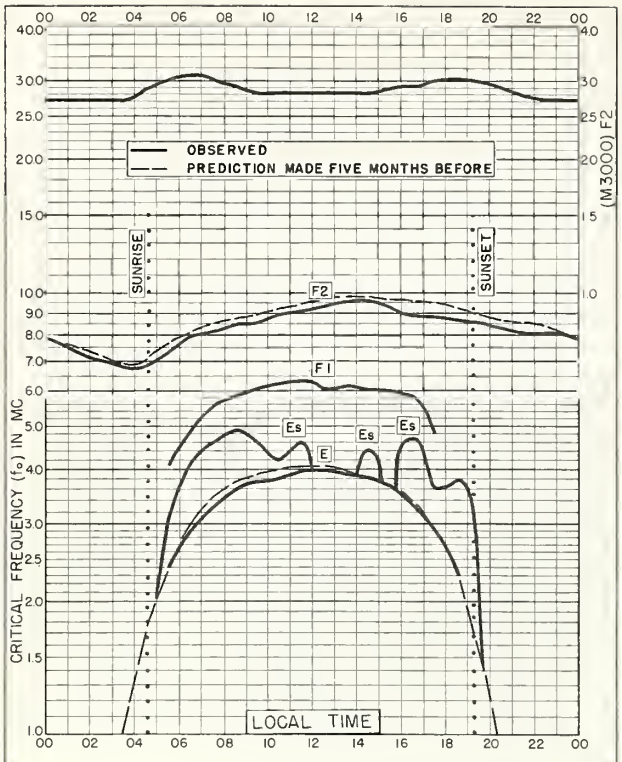


Fig. 77. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E MAY 1958

NBS 503

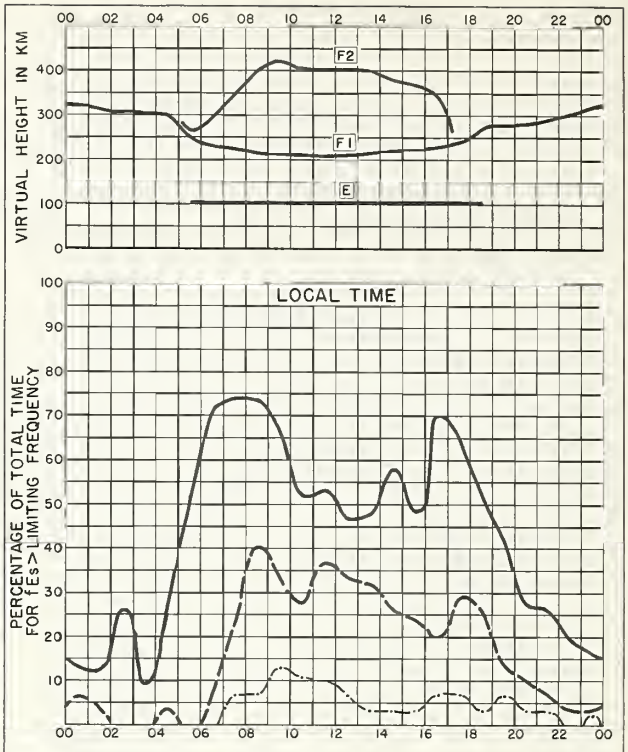


Fig. 78. SCHWARZENBURG, SWITZERLAND MAY 1958

NBS 490

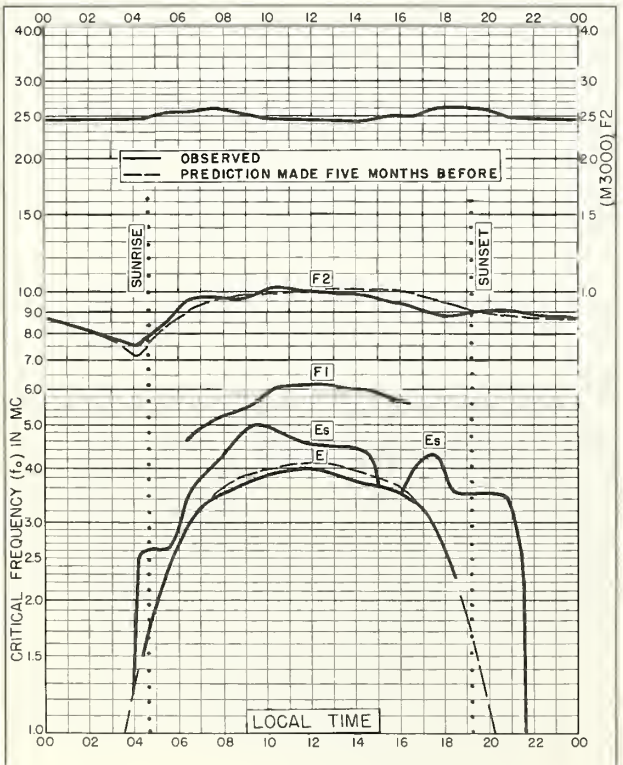


Fig. 79. WAKKANAI, JAPAN
45.4°N, 141.7°E MAY 1958

NBS 503

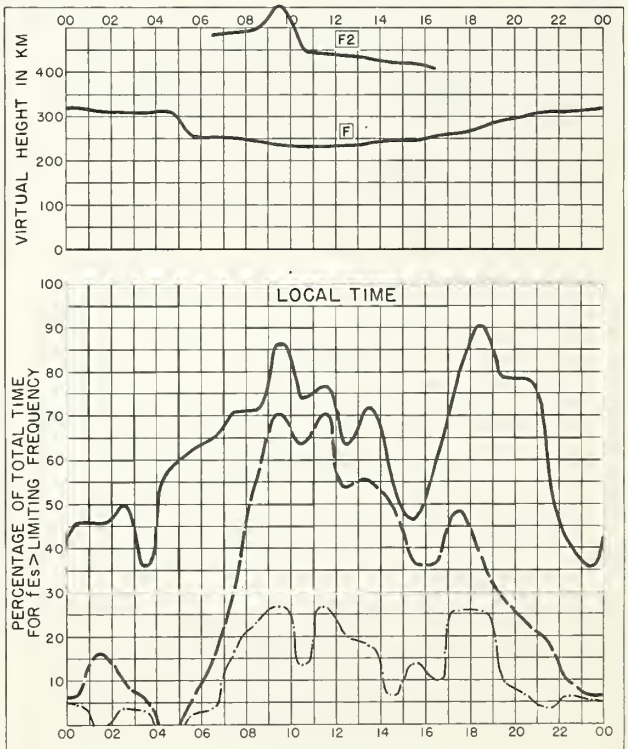


Fig. 80. WAKKANAI, JAPAN MAY 1958

NBS 490

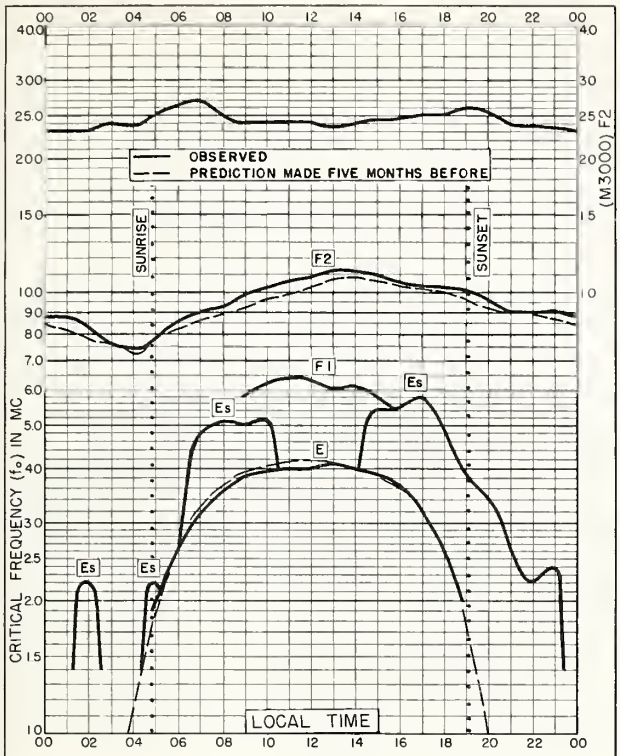


Fig. 81. ROME, ITALY
41.8°N, 12.5°E MAY 1958

NBS 503

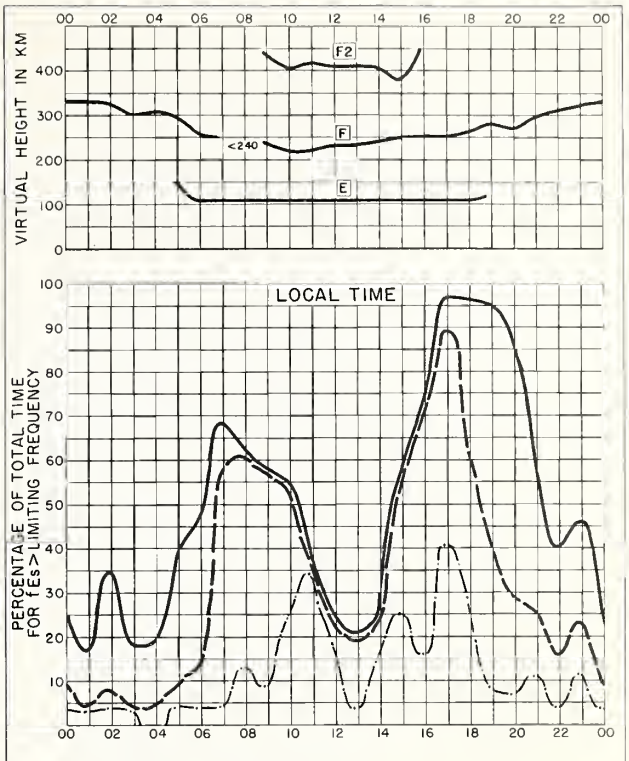


Fig. 82. ROME, ITALY MAY 1958

NBS 490

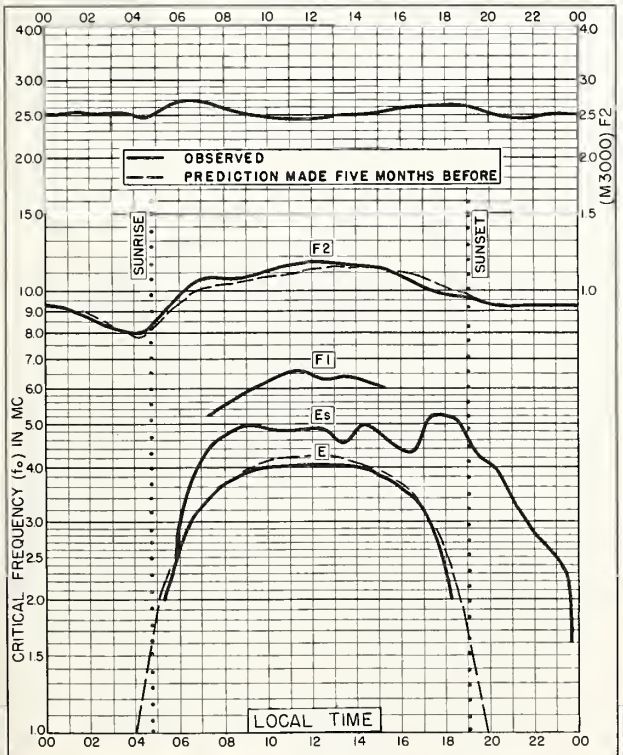


Fig. 83. AKITA, JAPAN
39.7°N, 140.1°E MAY 1958

NBS 503

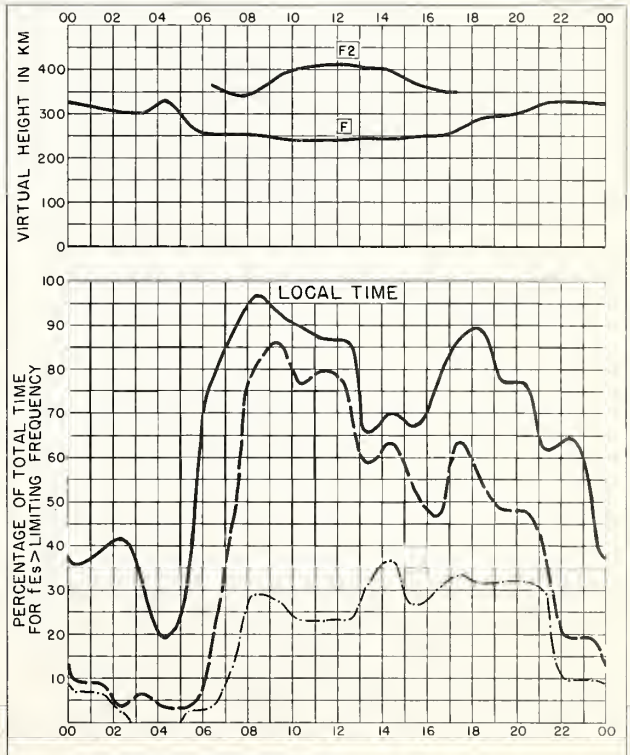


Fig. 84. AKITA, JAPAN MAY 1958

NBS 490

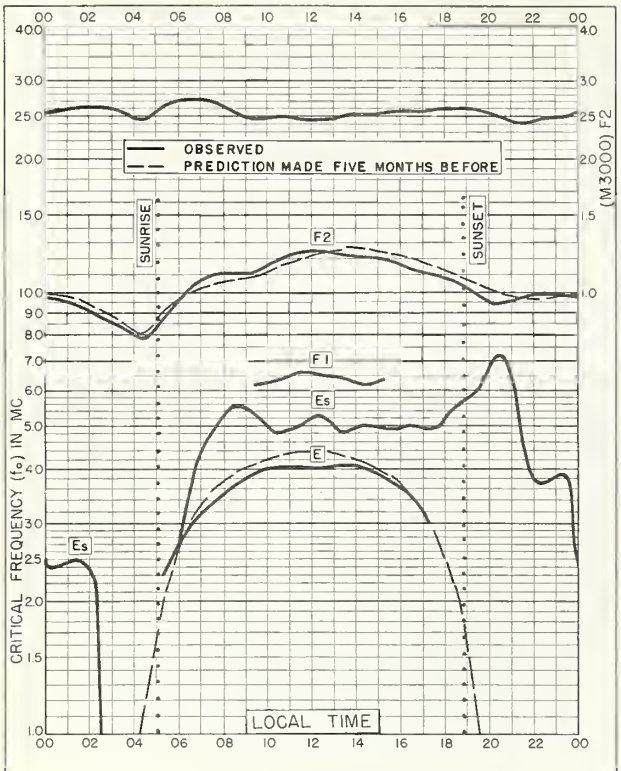


Fig. 85. TOKYO, JAPAN
35.7°N, 139.5°E MAY 1958

NBS 503

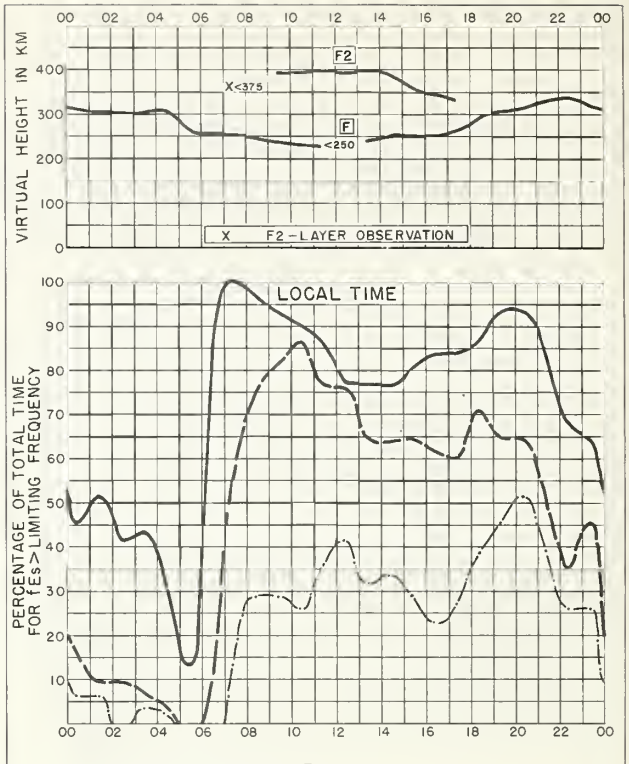


Fig. 86. TOKYO, JAPAN MAY 1958

NBS 490

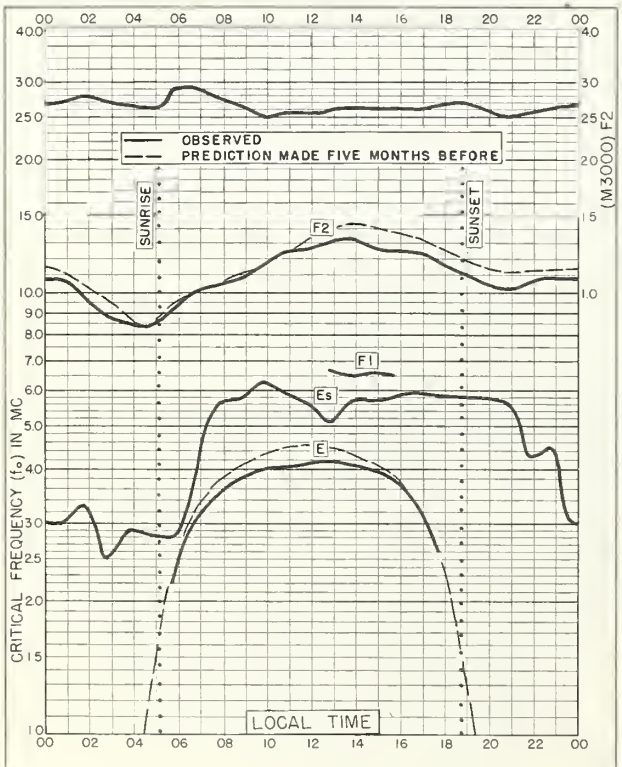


Fig. 87. YAMAGAWA, JAPAN
31.2°N, 130.6°E MAY 1958

NBS 503

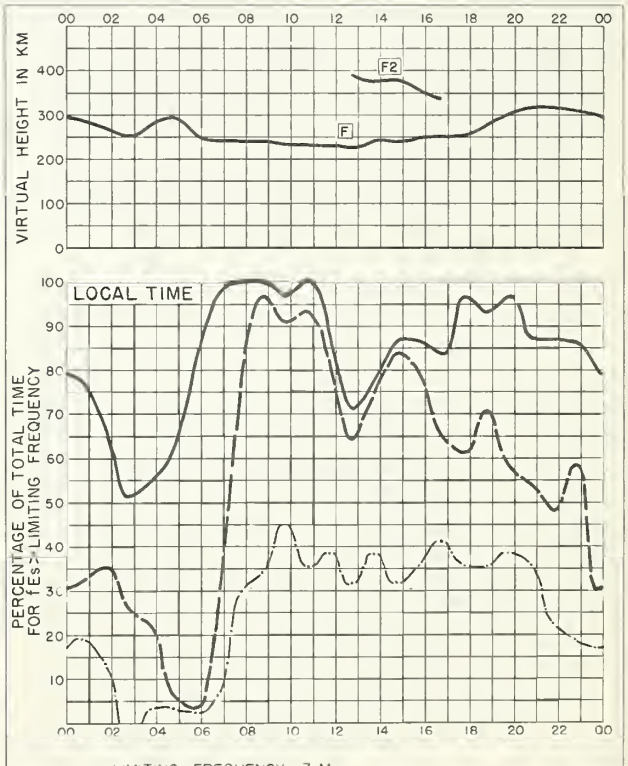


Fig. 88. YAMAGAWA, JAPAN MAY 1958

NBS 490

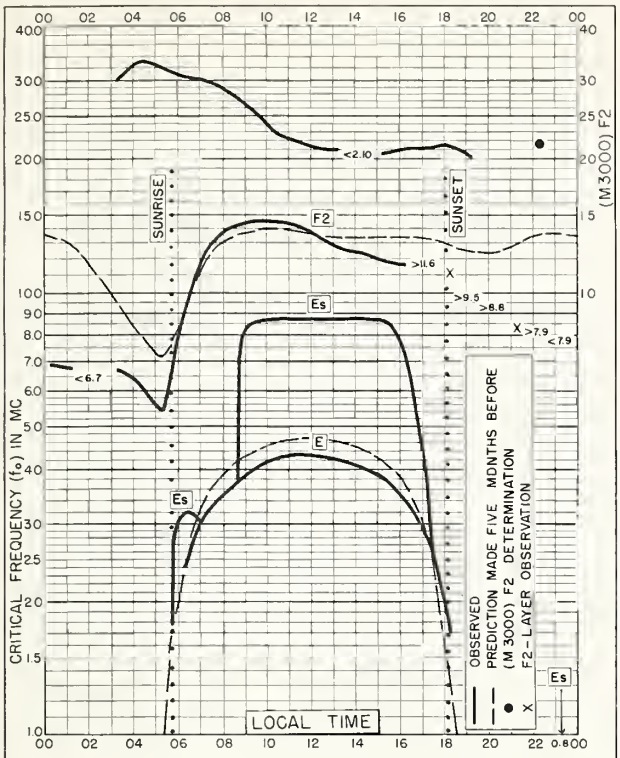


Fig. 89. IBADAN, NIGERIA
7.4°N, 3.9°E MAY 1958

NBS 503

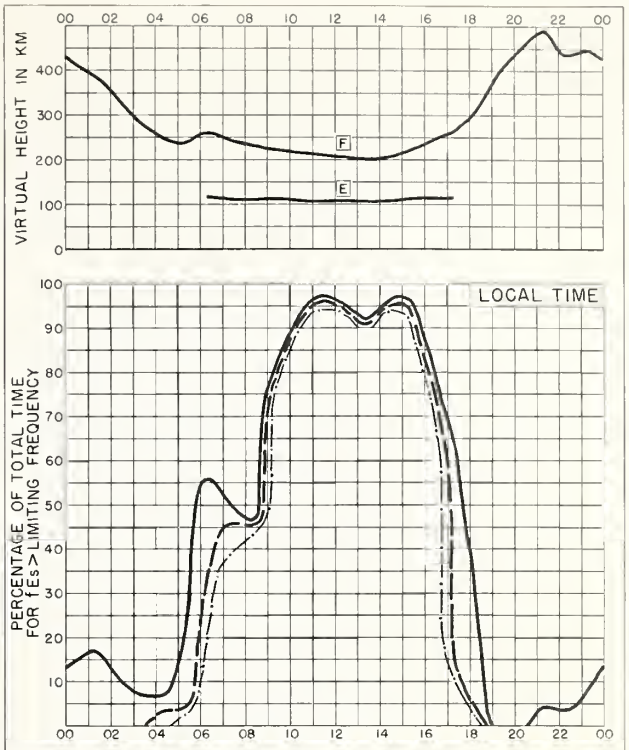


Fig. 90. IBADAN, NIGERIA MAY 1958

NBS 490

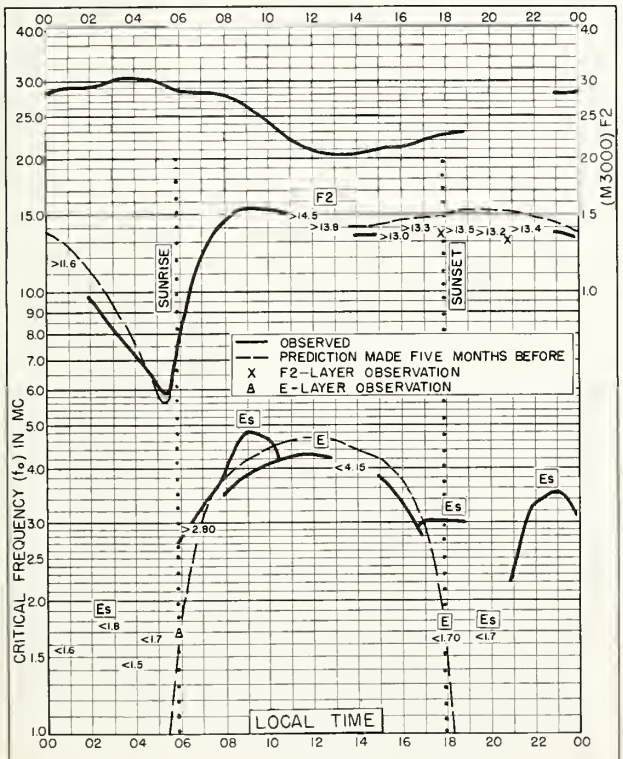


Fig. 91. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E MAY 1958

NBS 503

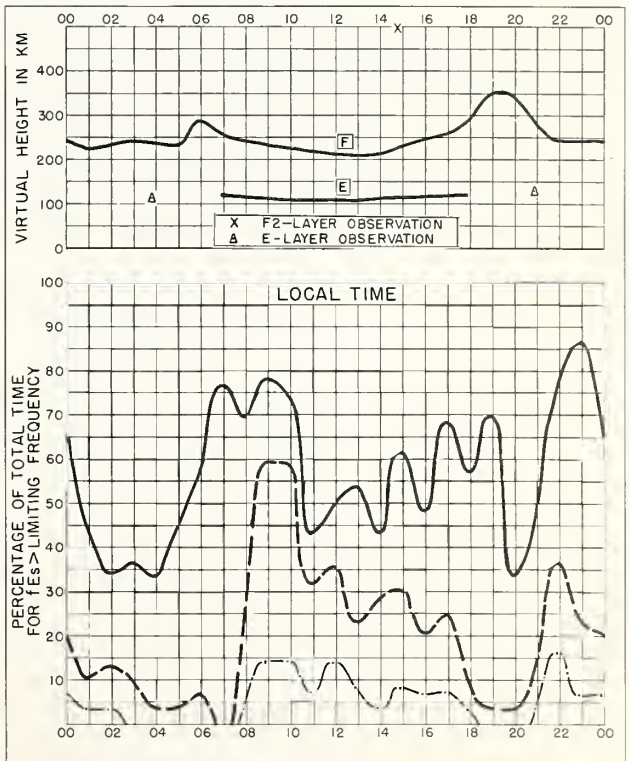


Fig. 92. SINGAPORE, BRITISH MALAYA MAY 1958

NBS 490

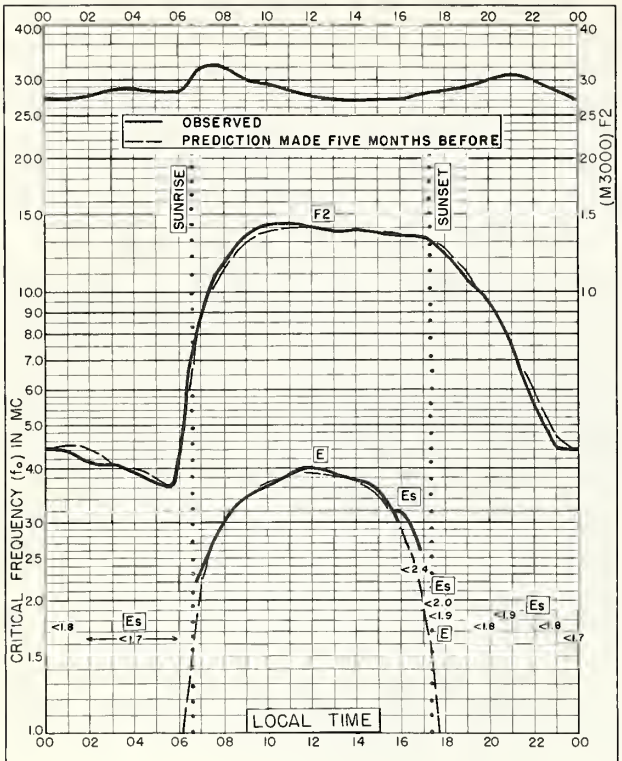


Fig. 93. JOHANNESBURG, UNION OF S. AFRICA
26.2°S, 28.0°E MAY 1958

NBS 503

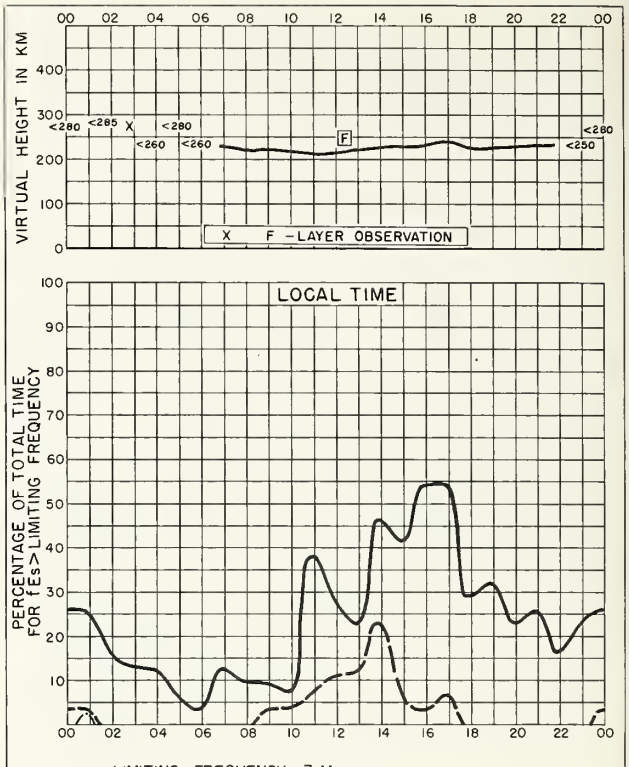


Fig. 94. JOHANNESBURG, UNION OF S. AFRICA MAY 1958

NBS 490

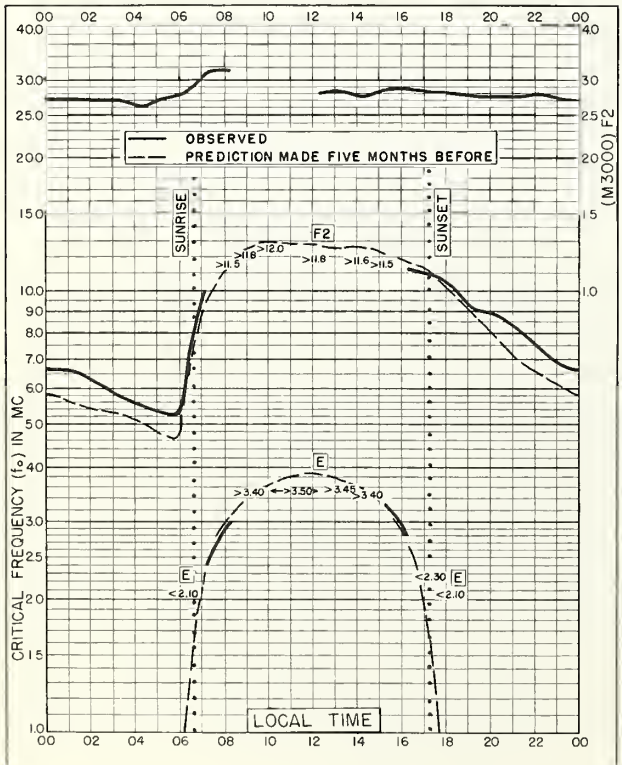


Fig. 95. BRISBANE, AUSTRALIA
27.5°S, 152.9°E MAY 1958

NBS 503

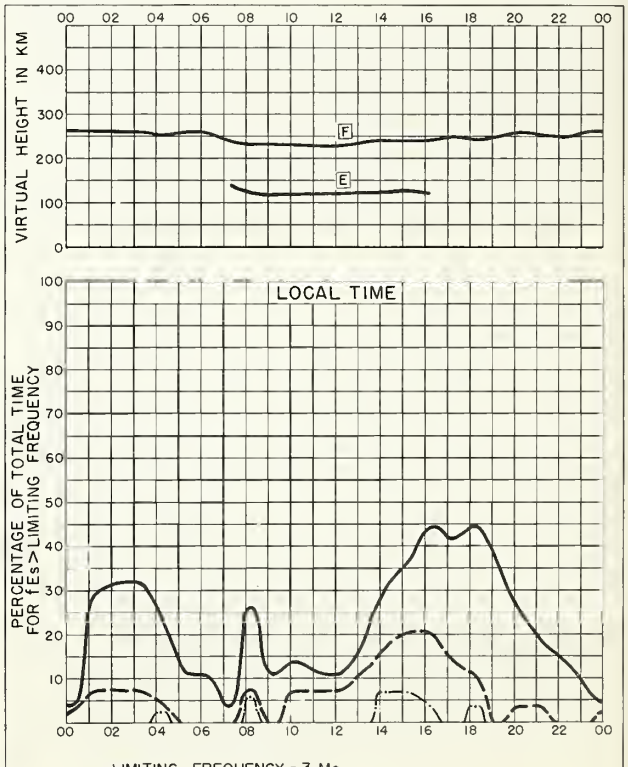


Fig. 96. BRISBANE, AUSTRALIA MAY 1958

NBS 490

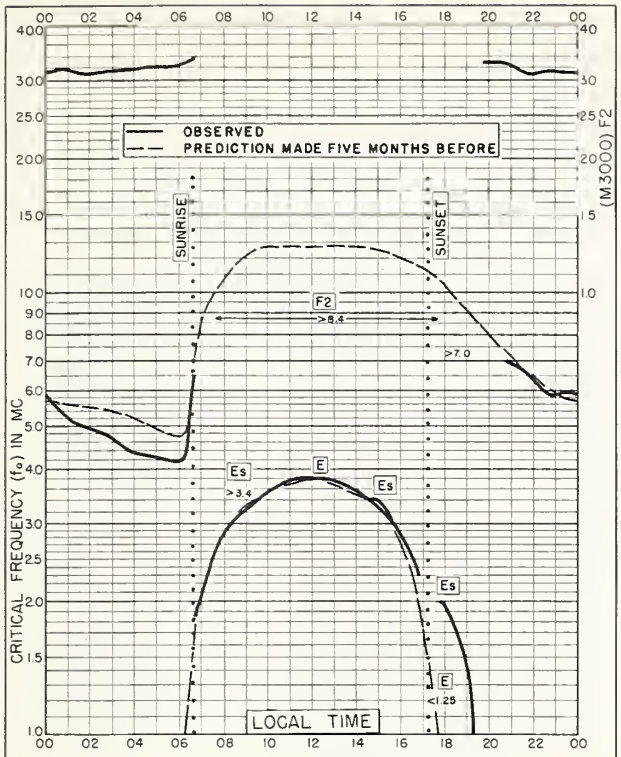


Fig. 97. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E MAY 1958

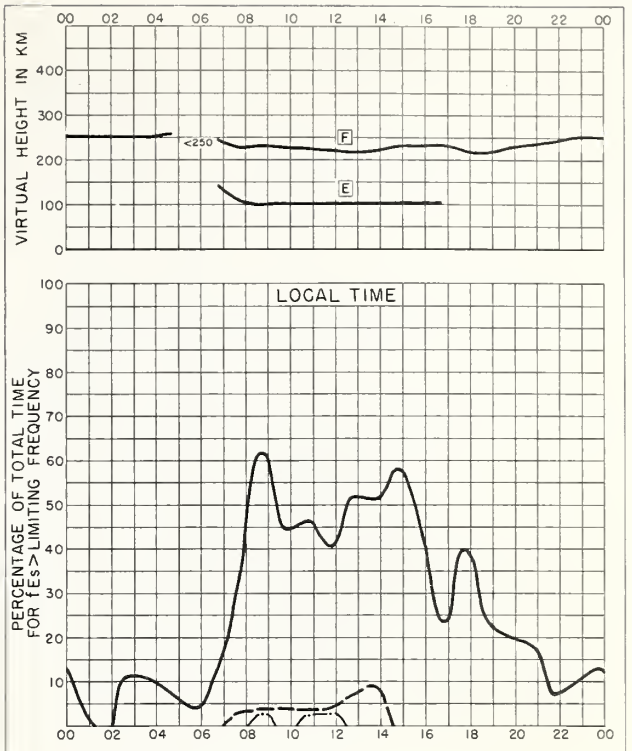


Fig. 98. WATHEROO, W. AUSTRALIA MAY 1958

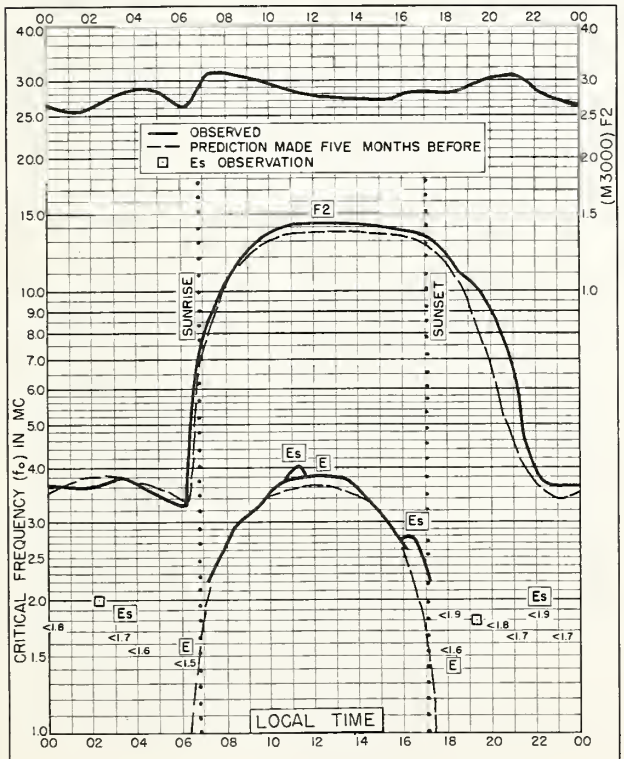
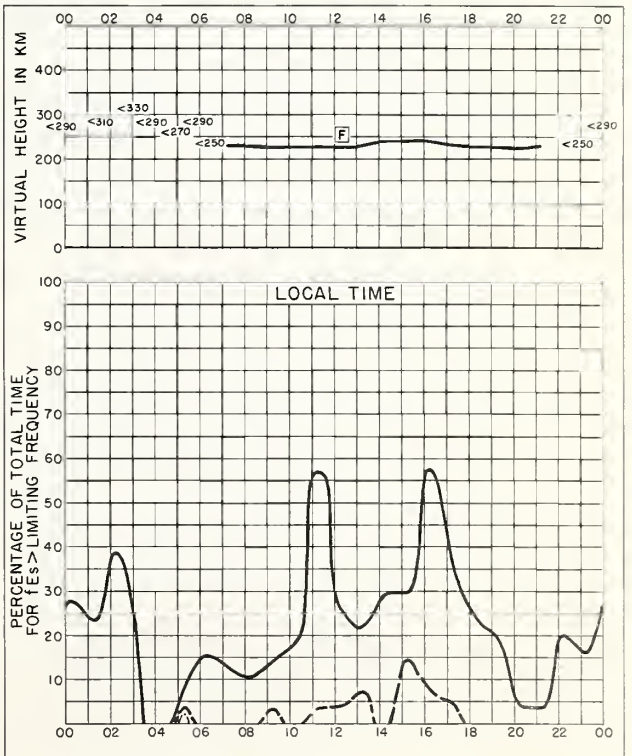


Fig. 99. CAPETOWN, UNION OF S. AFRICA
34.1°S, 18.3°E MAY 1958



MAY 1958

Fig. 100. CAPETOWN, UNION OF S. AFRICA

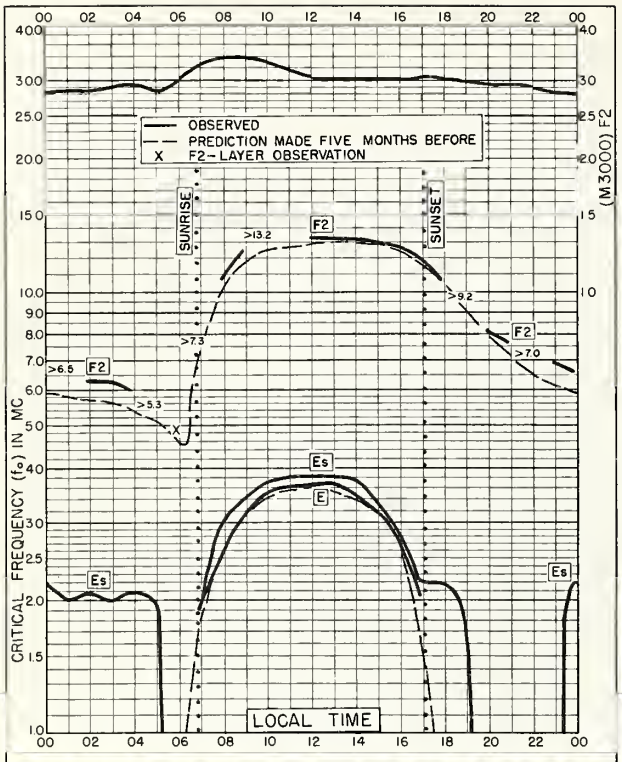


Fig. 101. CANBERRA, AUSTRALIA
35.3°S, 149.0°E MAY 1958

NBS 503

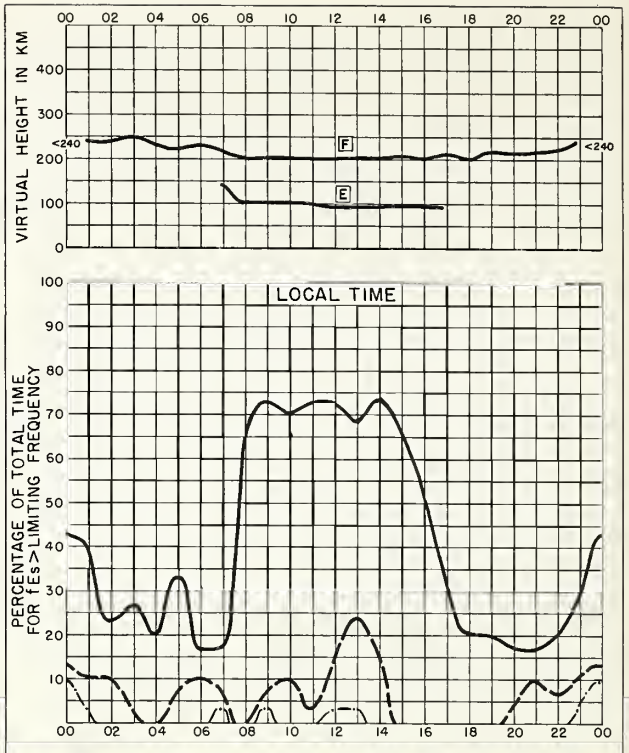


Fig. 102. CANBERRA, AUSTRALIA MAY 1958

NBS 490

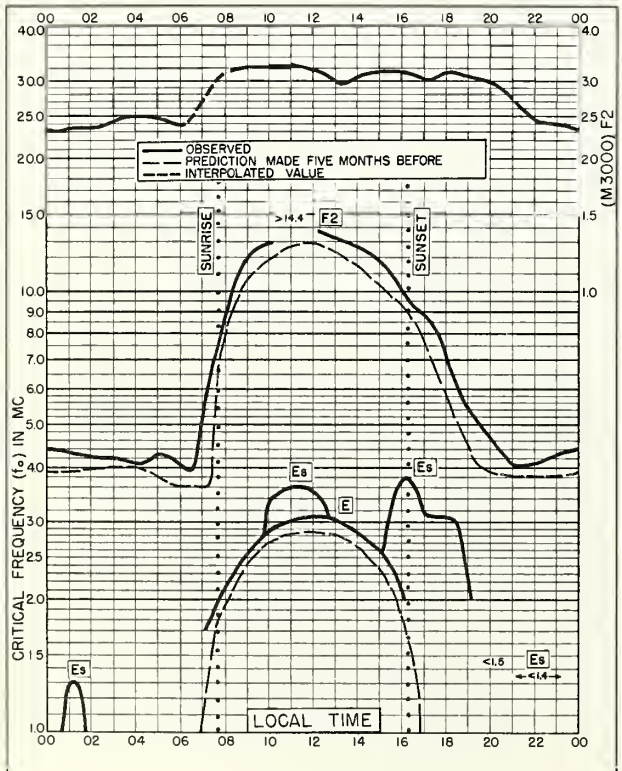


Fig. 103. FALKLAND IS.
51.7°S, 57.8° W MAY 1958

NBS 503

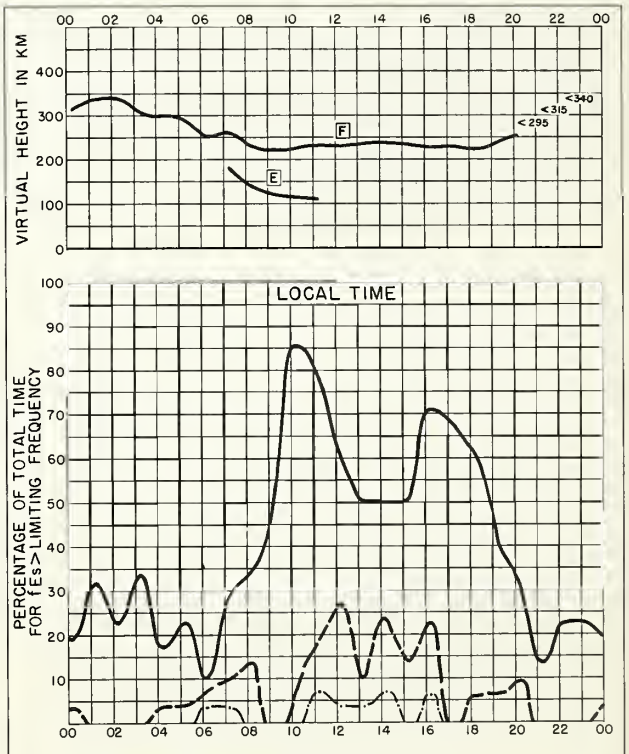


Fig. 104. FALKLAND IS. MAY 1958

NBS 490

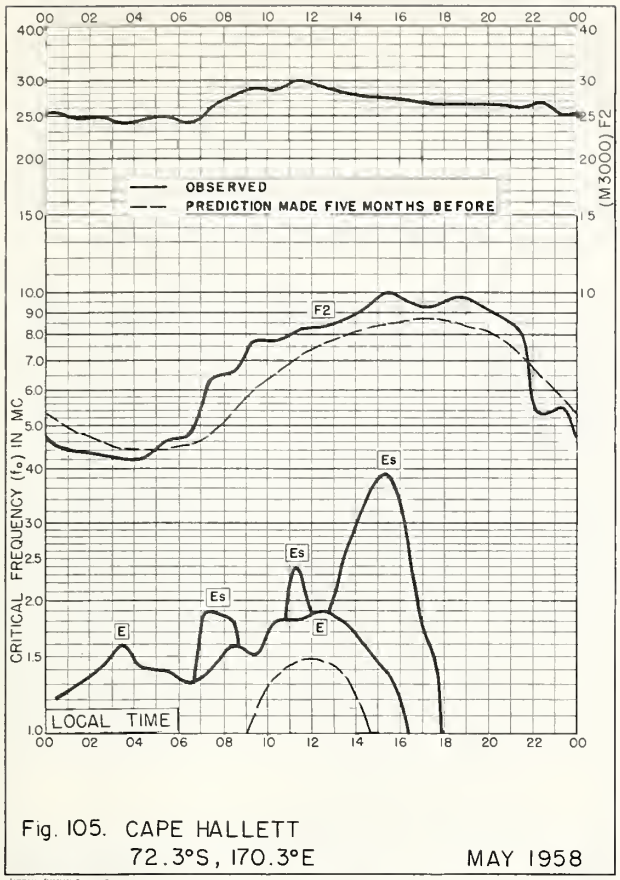


Fig. 105. CAPE HALLETT
72.3°S, 170.3°E MAY 1958

NBS 503

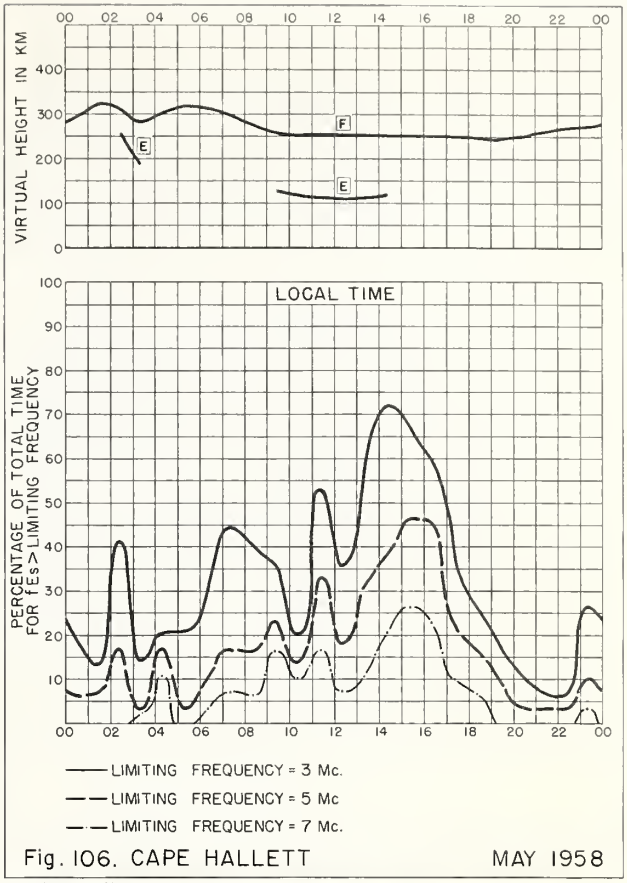


Fig. 106. CAPE HALLETT MAY 1958

NBS 490

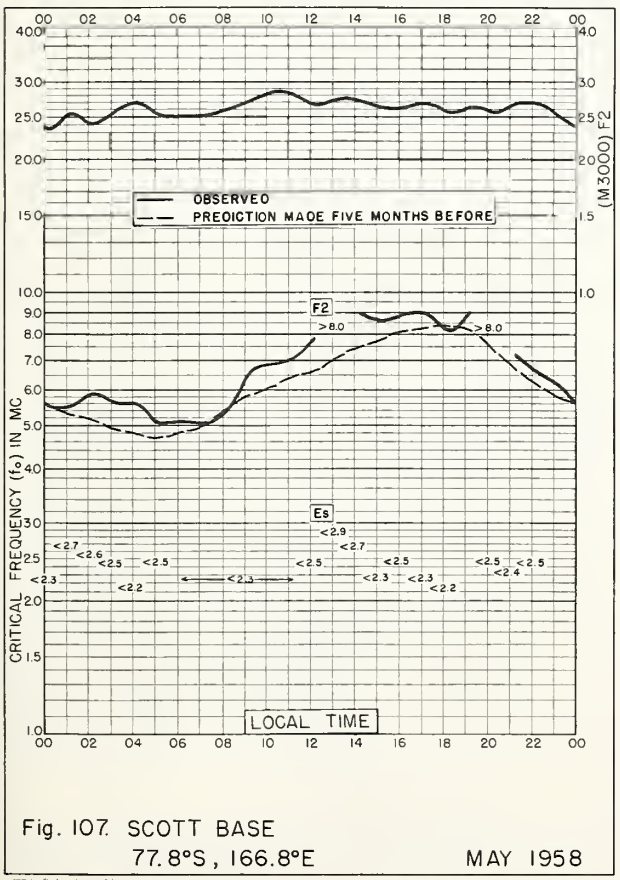


Fig. 107. SCOTT BASE
77.8°S, 166.8°E MAY 1958

NBS 503

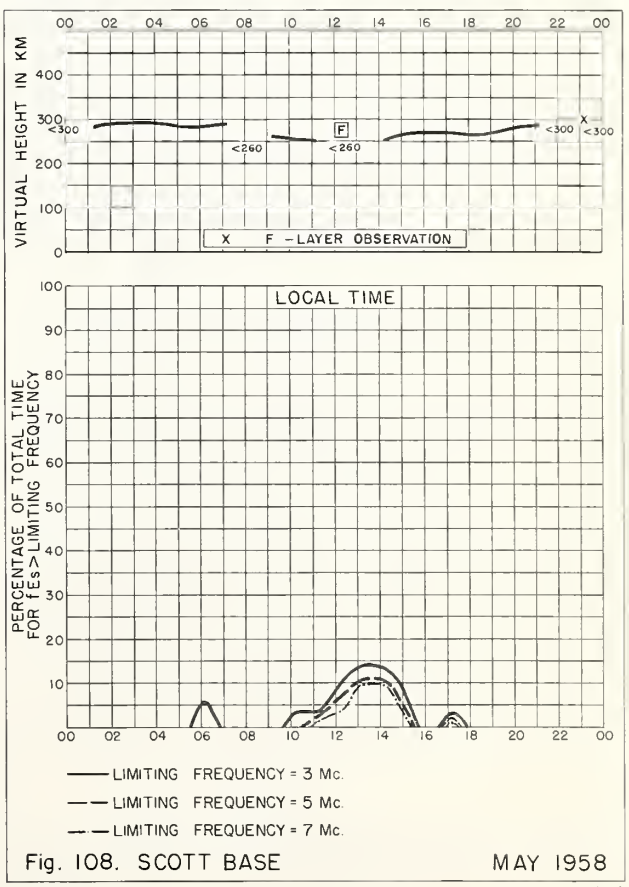


Fig. 108. SCOTT BASE MAY 1958

NBS 490

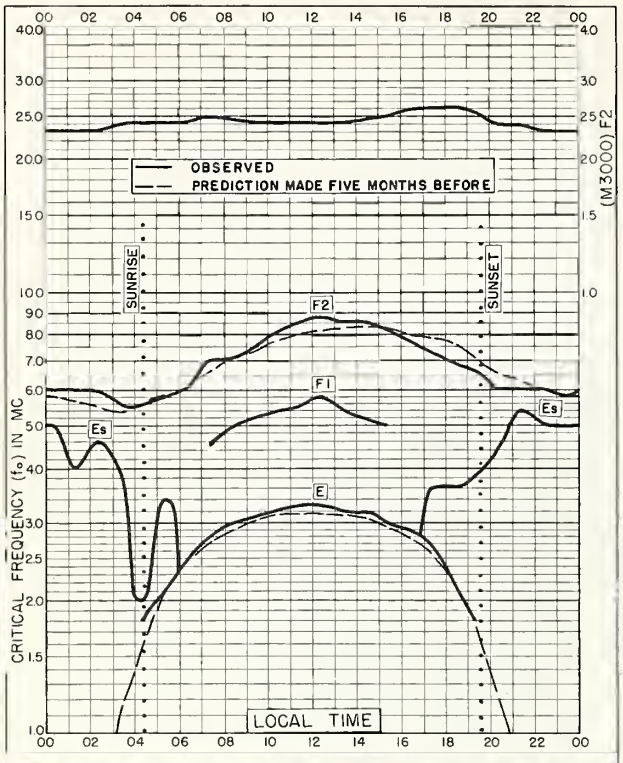


Fig. 109. KIRUNA, SWEDEN
67.8°N, 20.3°E APRIL 1958

NBS 503

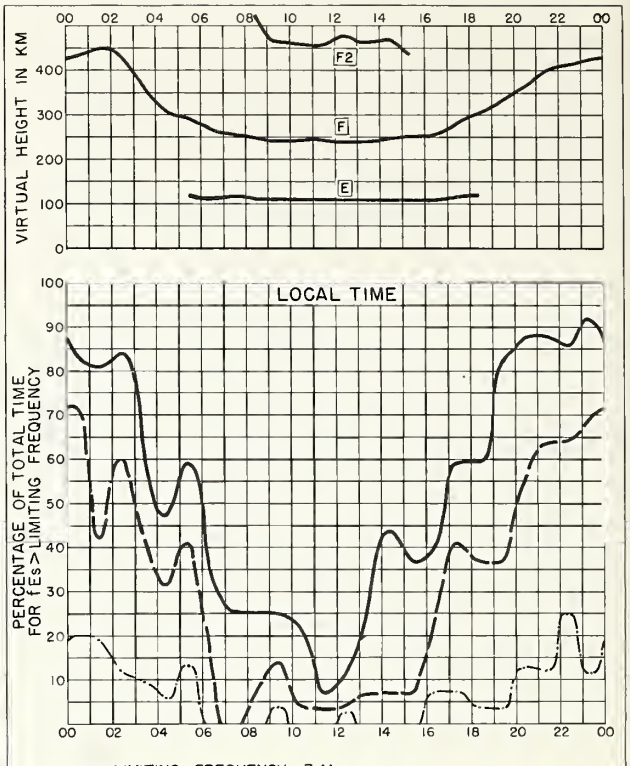


Fig. 110. KIRUNA, SWEDEN APRIL 1958

NBS 490

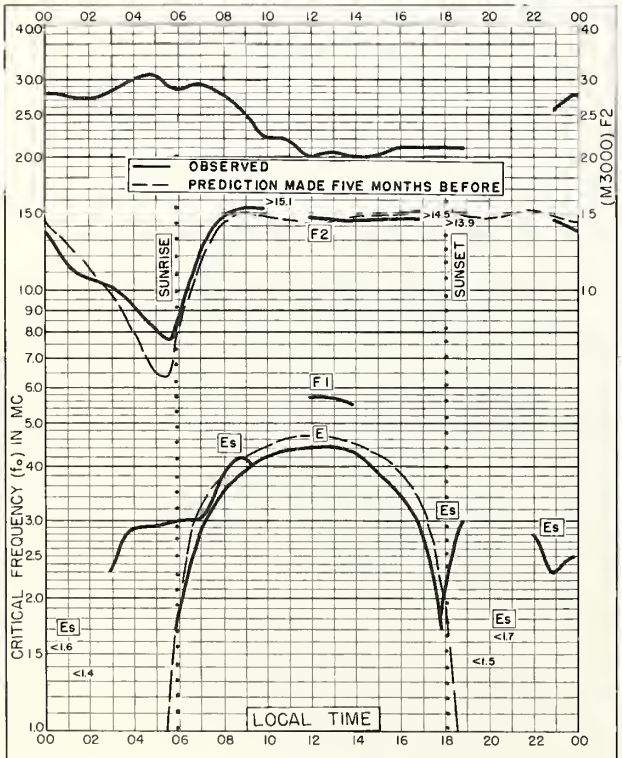


Fig. 111. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E APRIL 1958

NBS 503

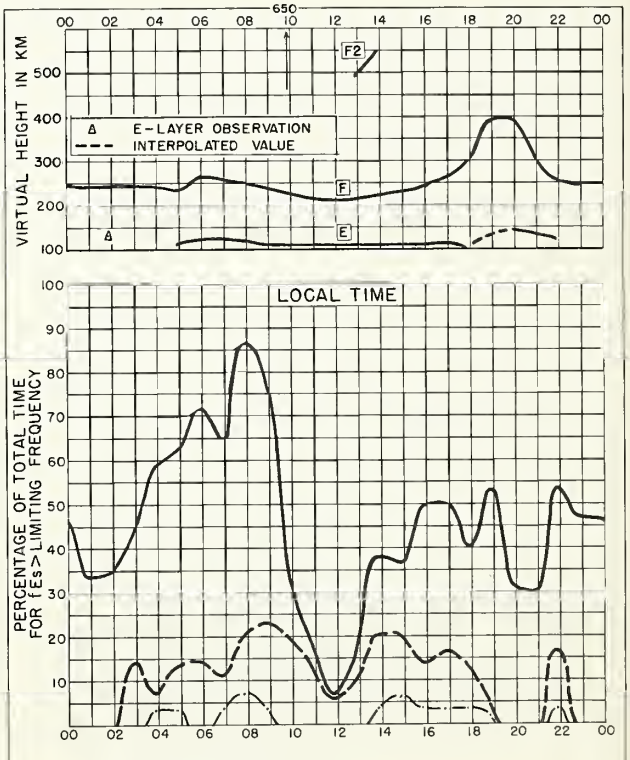


Fig. 112. SINGAPORE, BRITISH MALAYA APRIL 1958

NBS 490

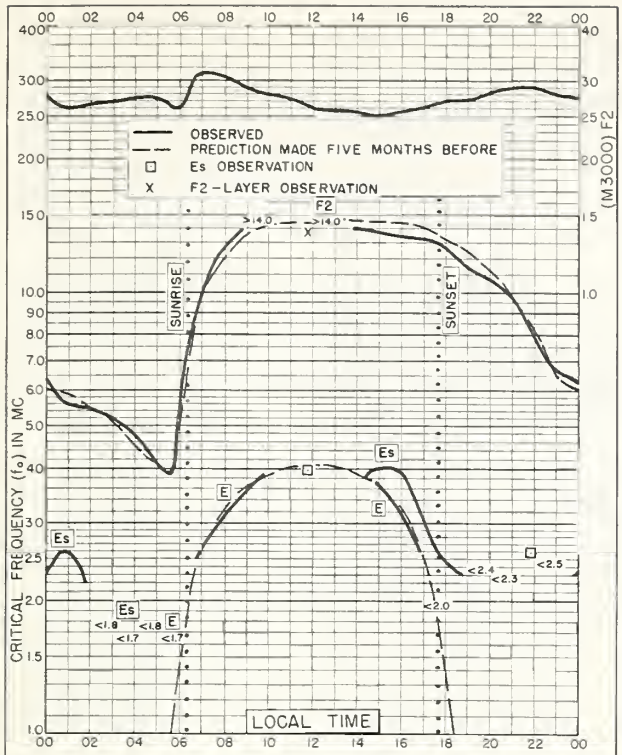
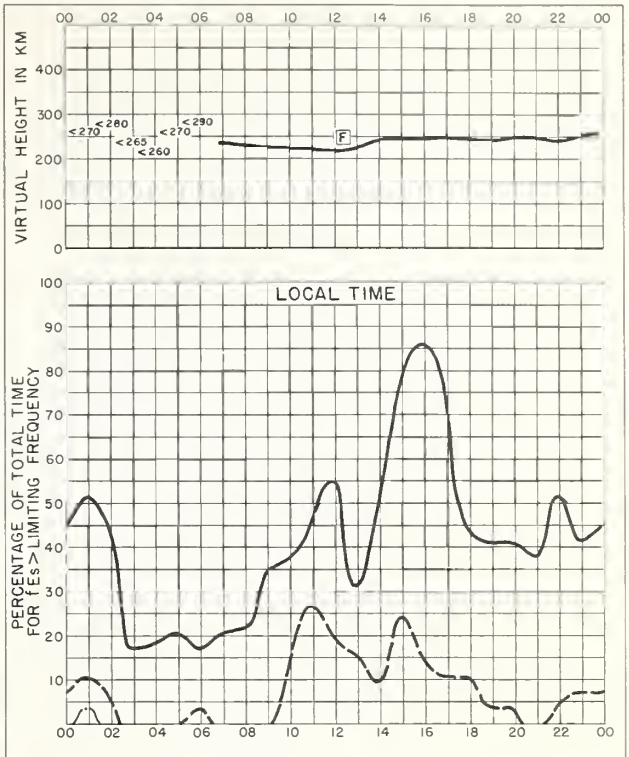


Fig. 113. JOHANNESBURG, UNION OF S. AFRICA
26.2°S, 28.0°E APRIL 1958



APRIL 1958

Fig. 114. JOHANNESBURG, UNION OF S. AFRICA

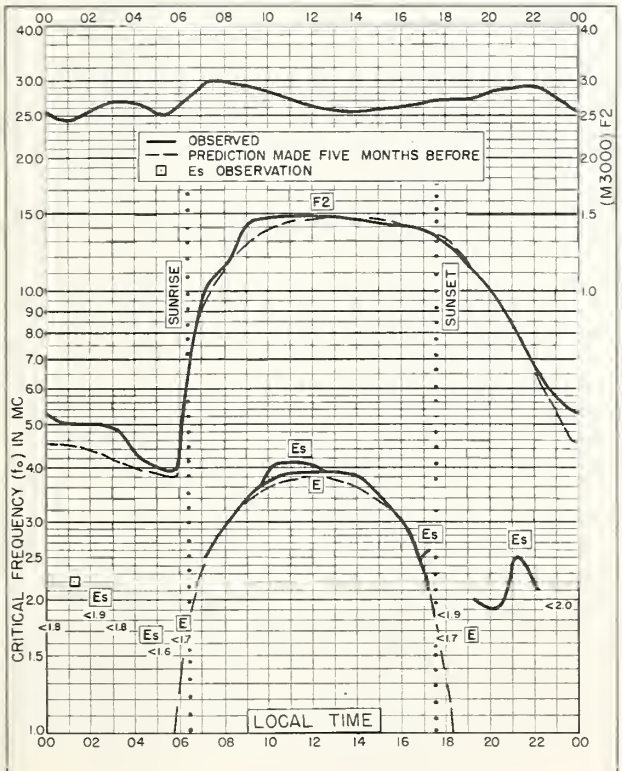
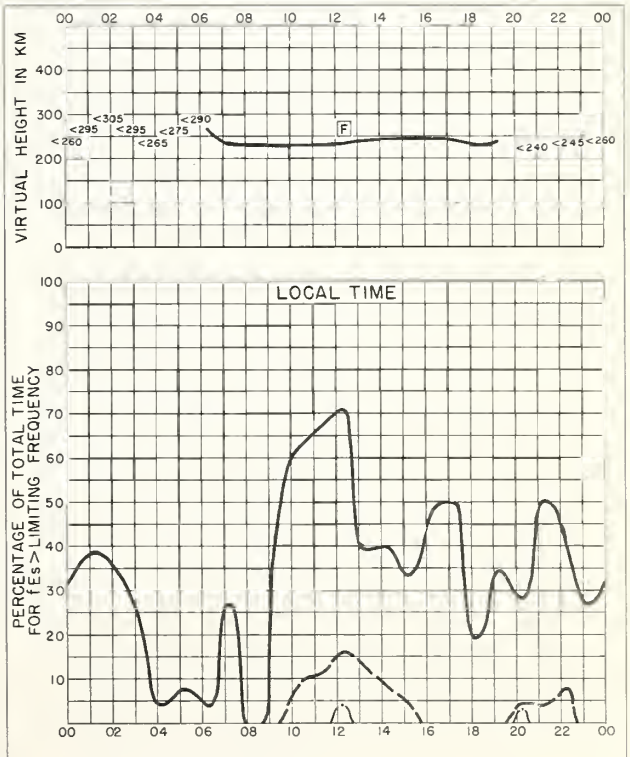


Fig. 115. CAPETOWN, UNION OF S. AFRICA
34.1°S, 18.3°E APRIL 1958



APRIL 1958

Fig. 116. CAPETOWN, UNION OF S. AFRICA

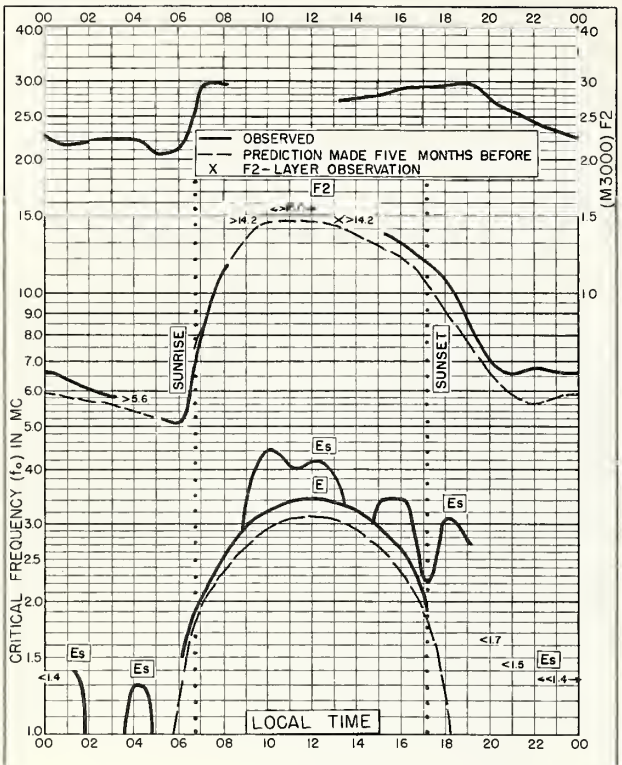


Fig. 117. FALKLAND IS.
51.7°S, 57.8°W APRIL 1958

NBS 503

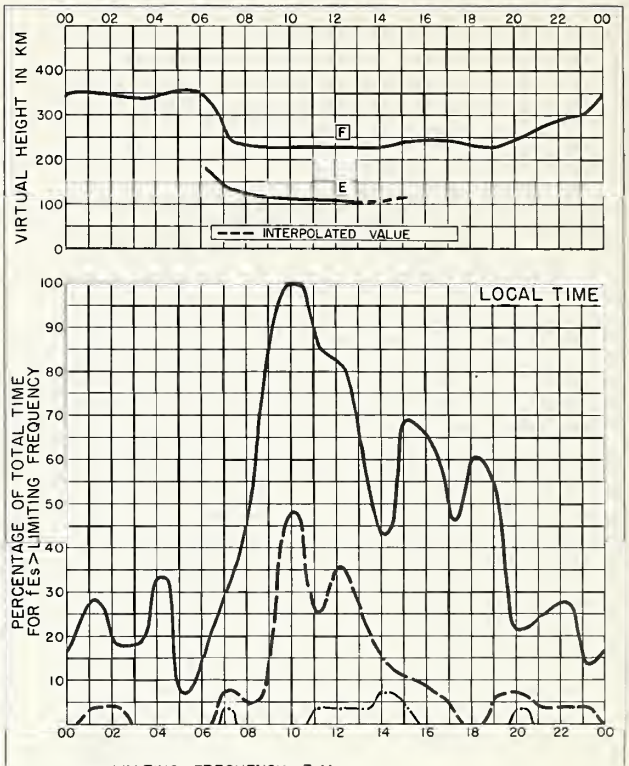


Fig. 118. FALKLAND IS. APRIL 1958

NBS 490

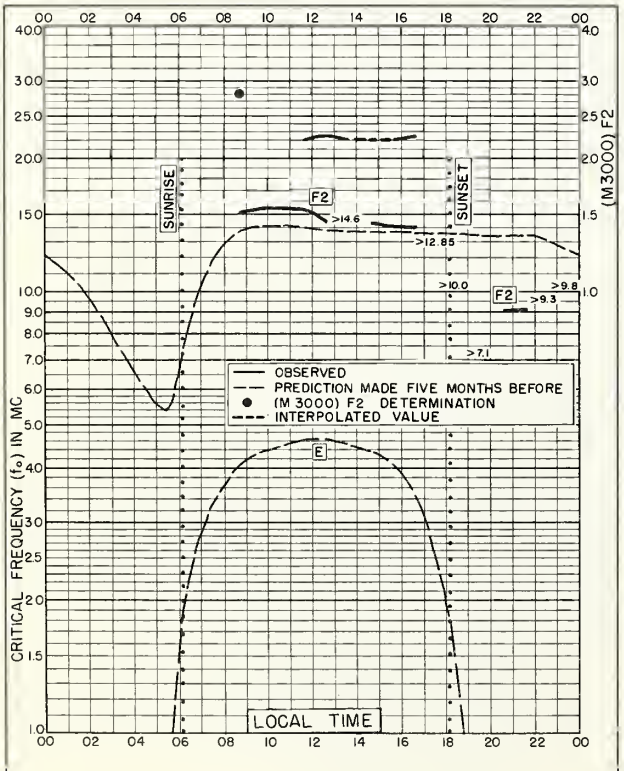


Fig. 119. NATAL, BRAZIL
5.3°S, 35.1°W MARCH 1958

NBS 503

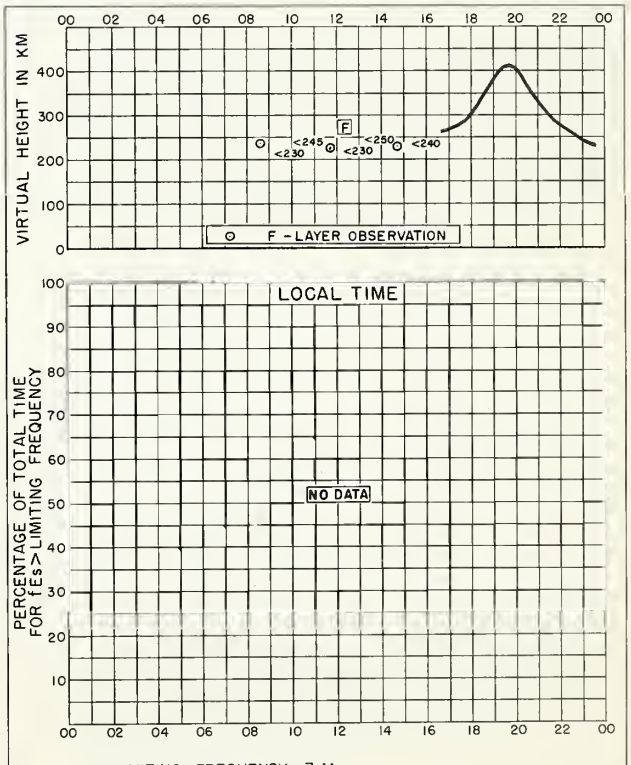


Fig. 120. NATAL, BRAZIL MARCH 1958

NBS 490

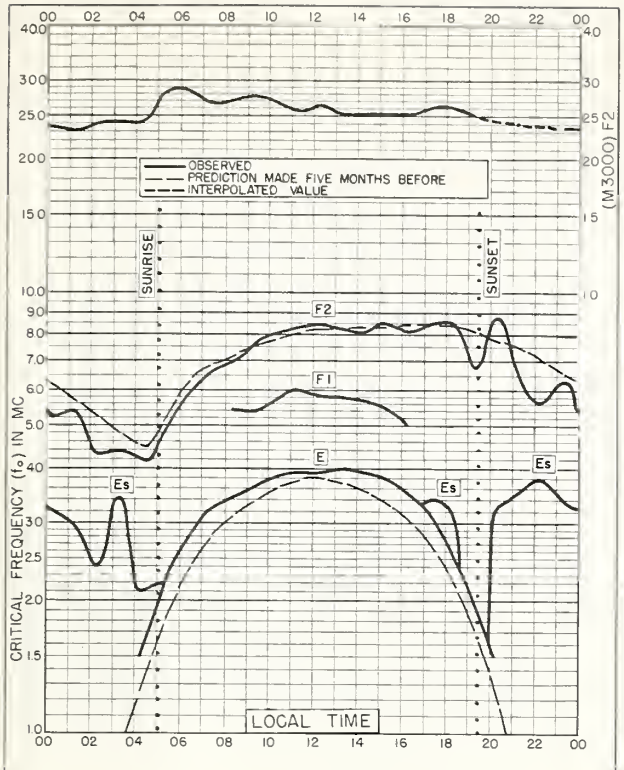


Fig. 121. CAMPBELL I.
52.5°S, 169.2°E FEBRUARY 1958

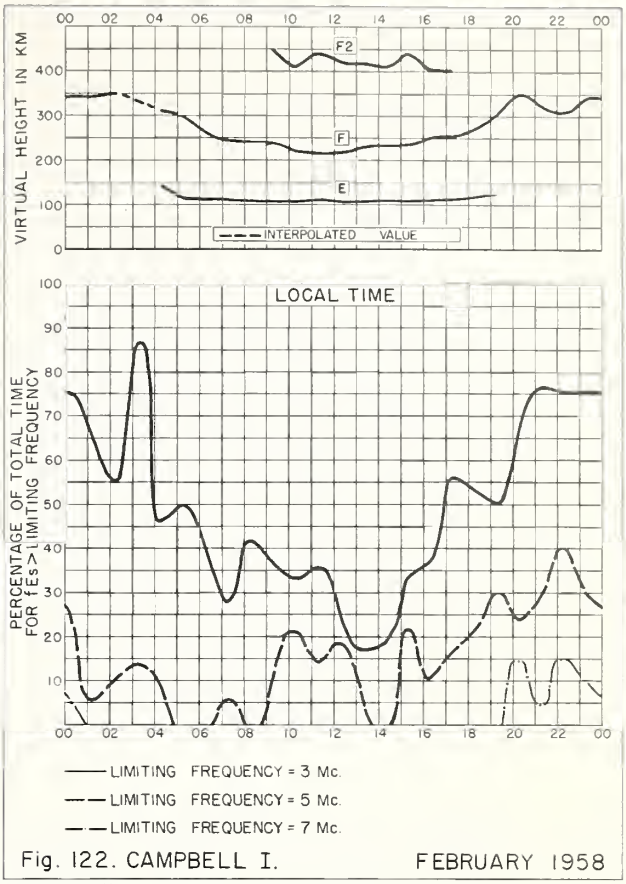


Fig. 122. CAMPBELL I. FEBRUARY 1958

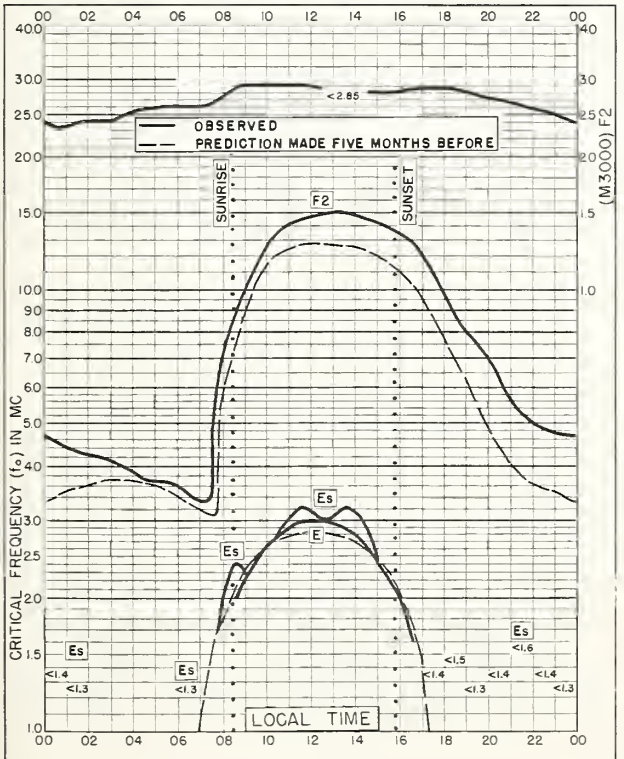


Fig. 123. MOSCOW, U.S.S.R.
55.5°N, 37.3°E JANUARY 1958

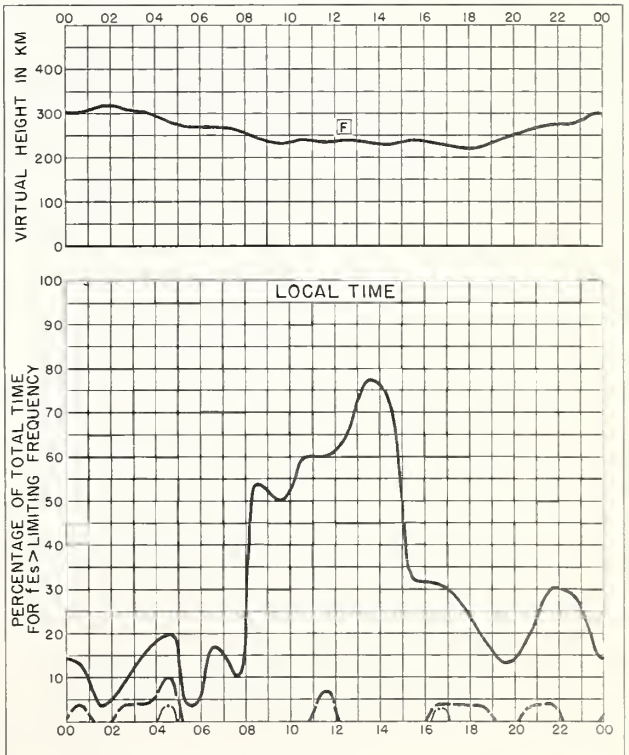


Fig. 124. MOSCOW, U.S.S.R. JANUARY 1958

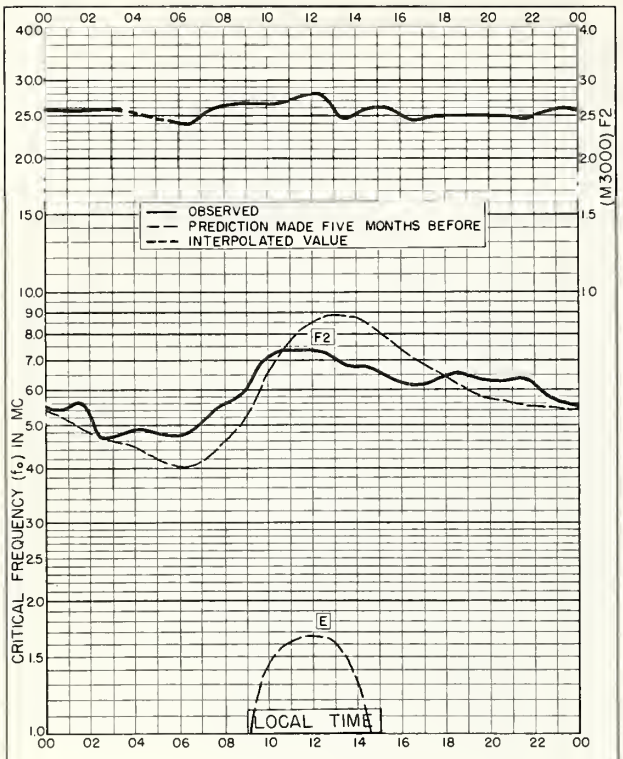


Fig. 125. GODHAVN, GREENLAND
69.3°N, 53.5°W DECEMBER 1957

NBS 503

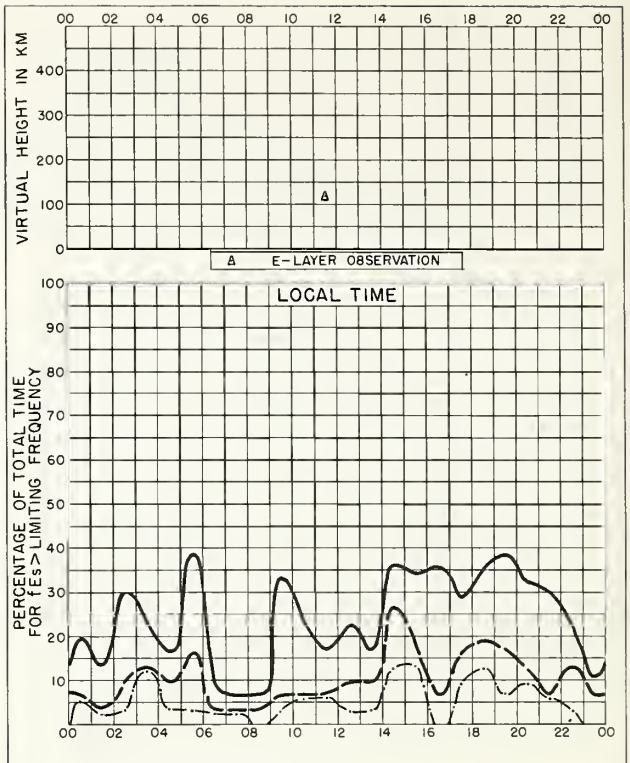


Fig. 126. GODHAVN, GREENLAN DECEMBER 1957

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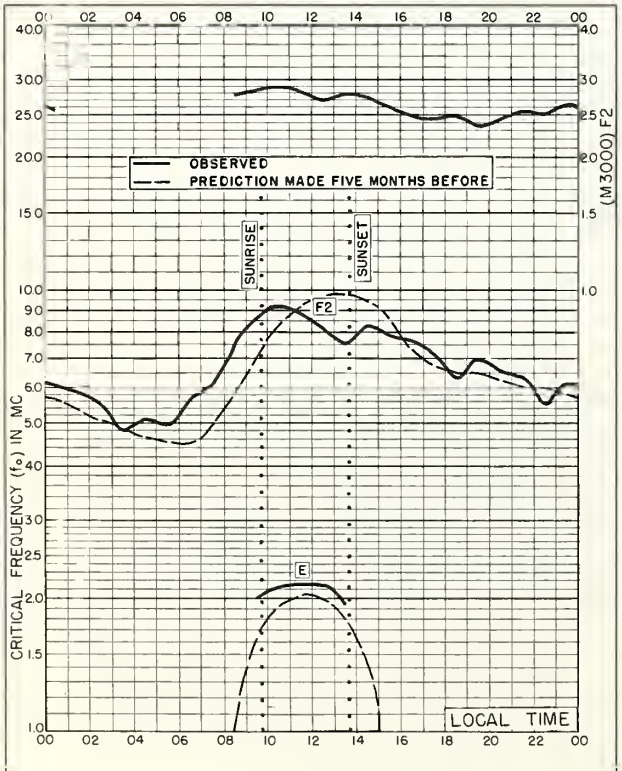


Fig. 127. GODHAVN, GREENLAND
69.3°N, 53.5°W NOVEMBER 1957

NBS 503

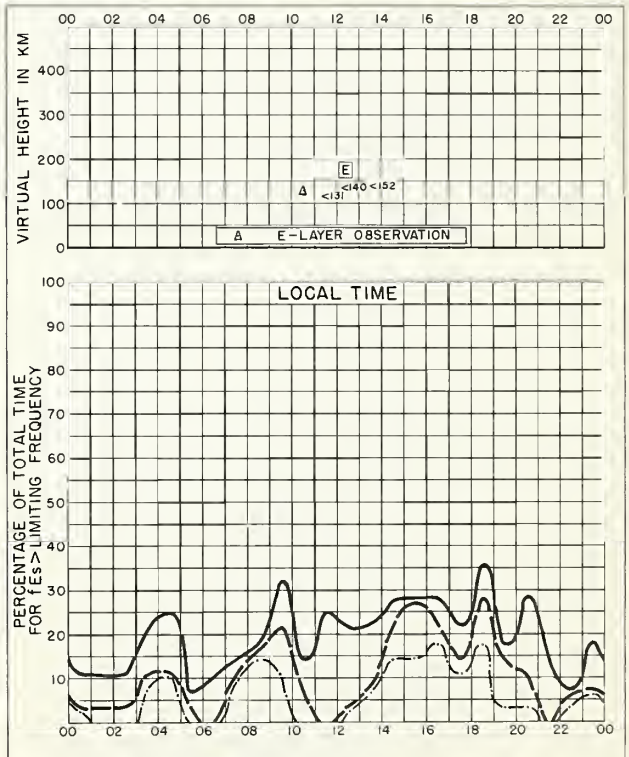


Fig. 128. GODHAVN, GREENLAND NOVEMBER 1957

Commerce-Standards-Boulder, Colo. NBS 490

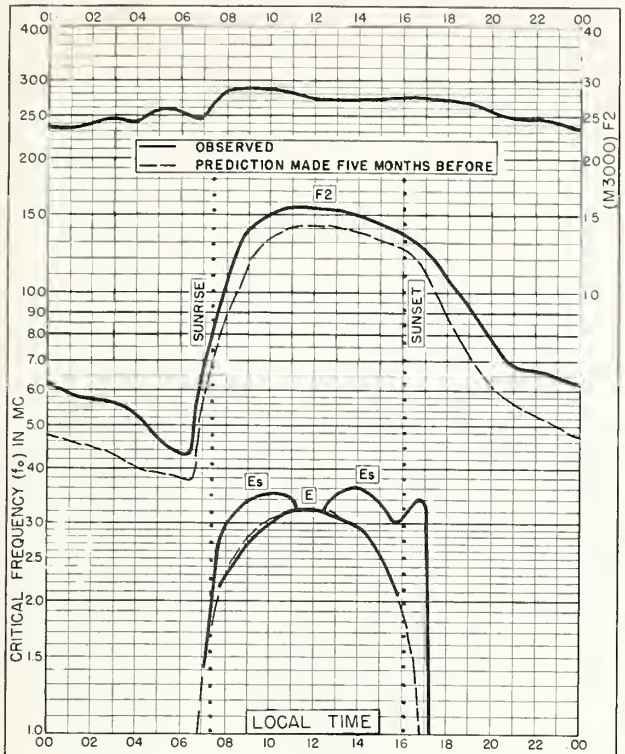


Fig. 129. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E NOVEMBER 1957

NBS 503

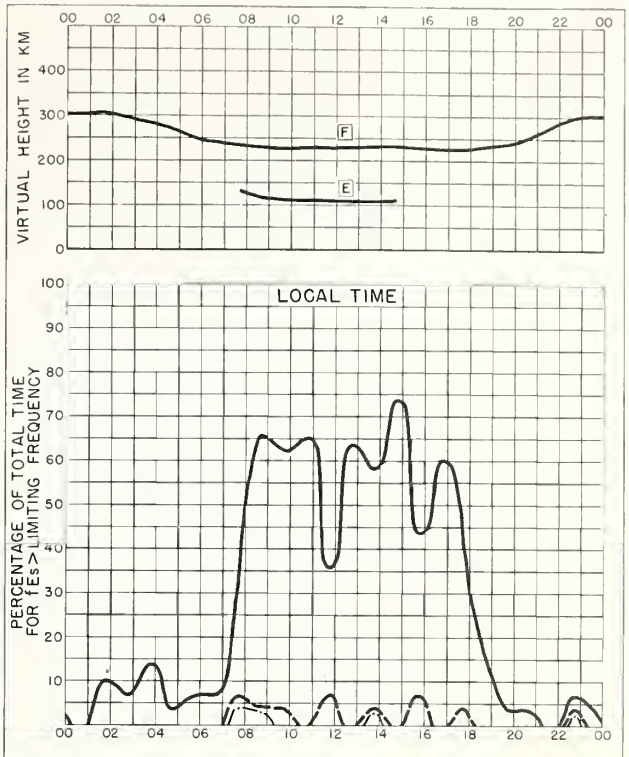


Fig. 130. LINDAU/HARZ, GERMANY NOVEMBER 1957

NBS 490

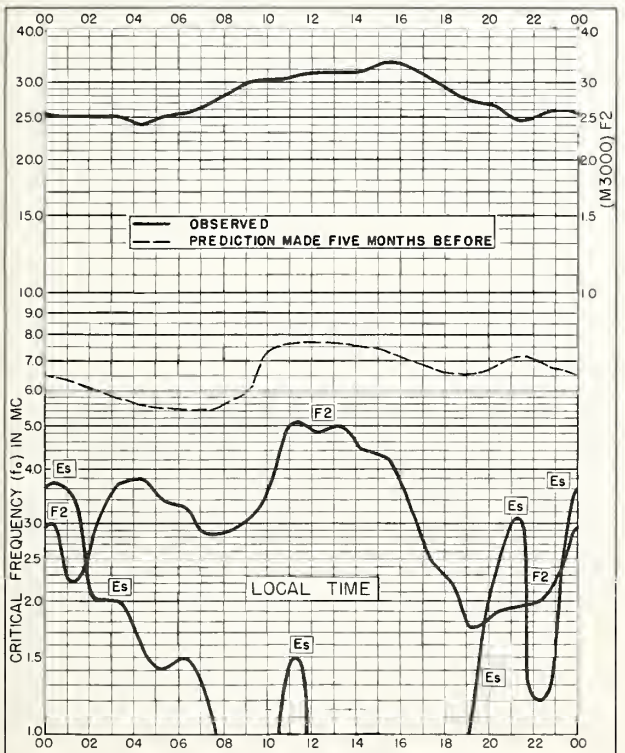


Fig. 131. ELLSWORTH
77.7°S, 41.1°W JULY 1957

NBS 503

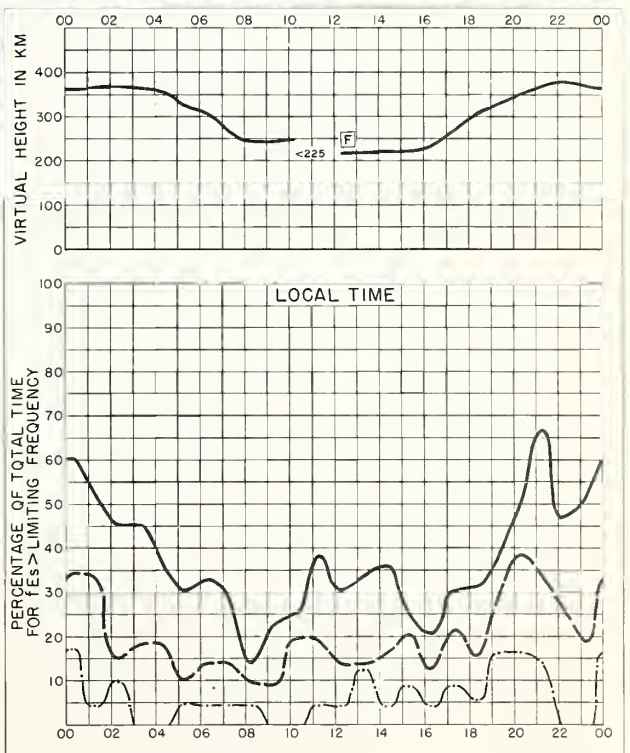


Fig. 132. ELLSWORTH JULY 1957

NBS 490

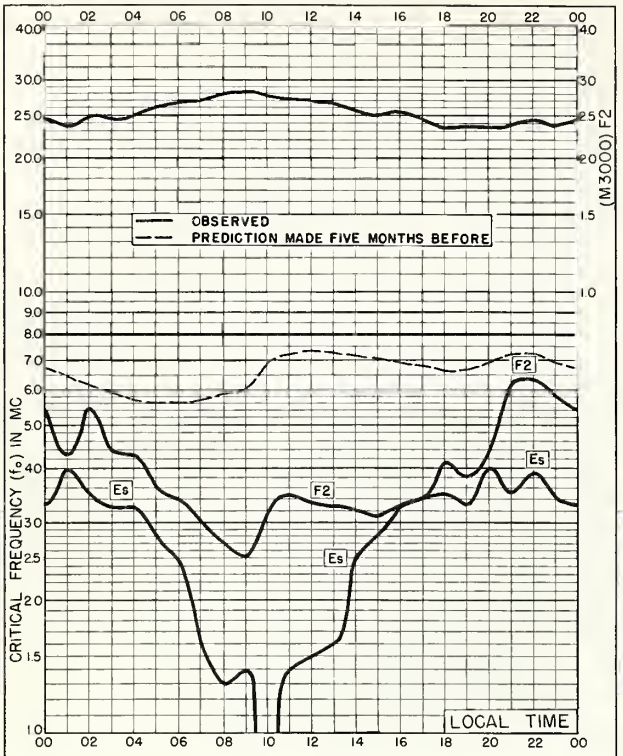


Fig. 133. BYRD STATION
80.0°S, 120.0°W JULY 1957

NBS 503

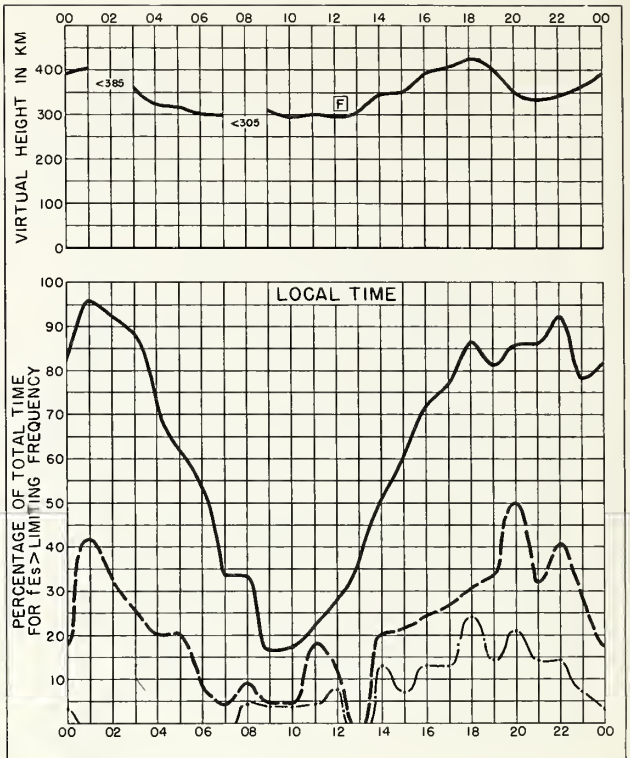


Fig. 134. BYRD STATION JULY 1957

NBS 490

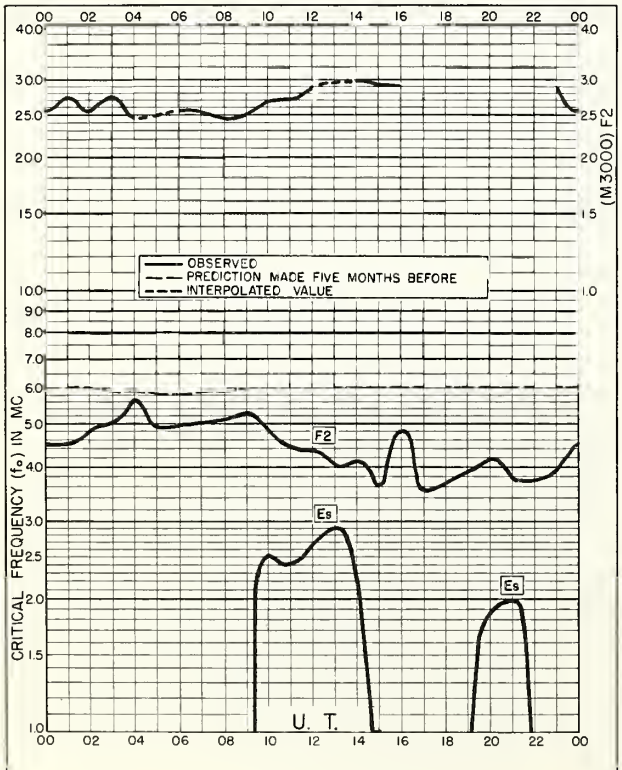


Fig. 135. POLE STATION
90.0°S JULY 1957

NBS 503

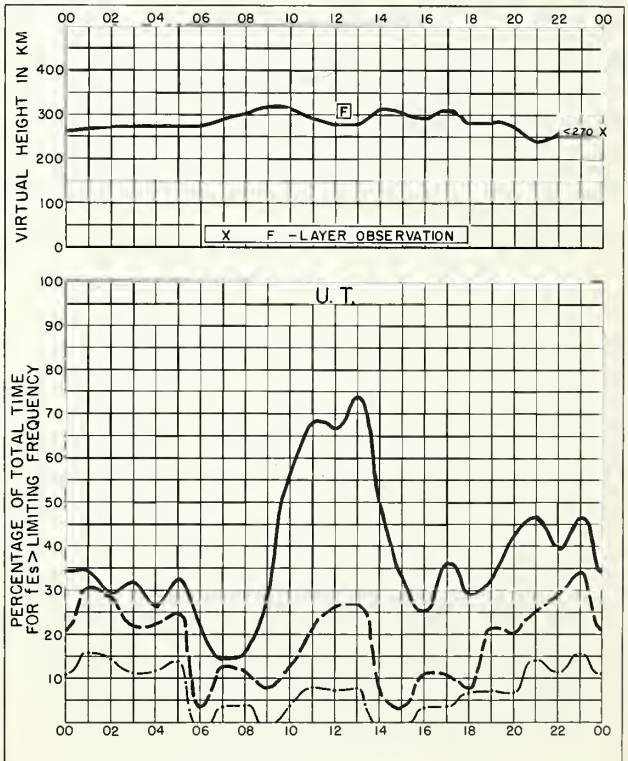


Fig. 136. POLE STATION JULY 1957

NBS 490

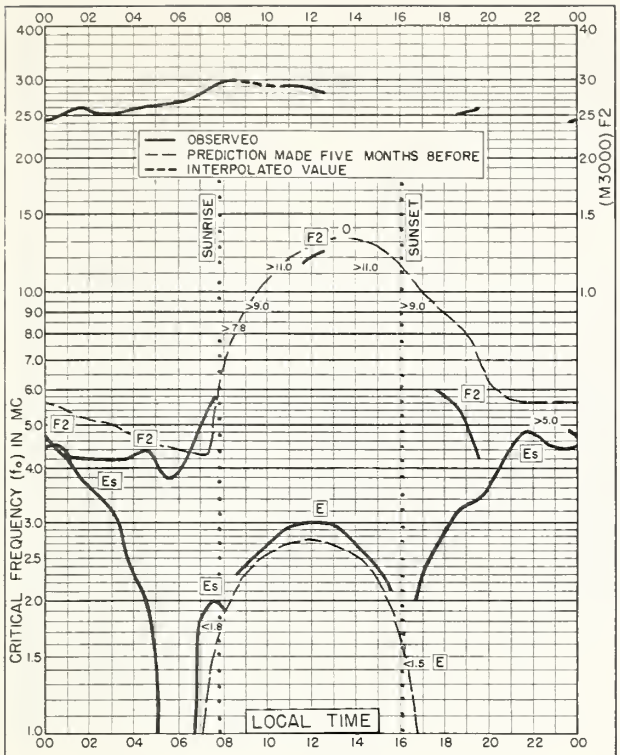


Fig. 137. MACQUARIE I.
54.5°S, 159.0°E MAY 1957

NBS 503

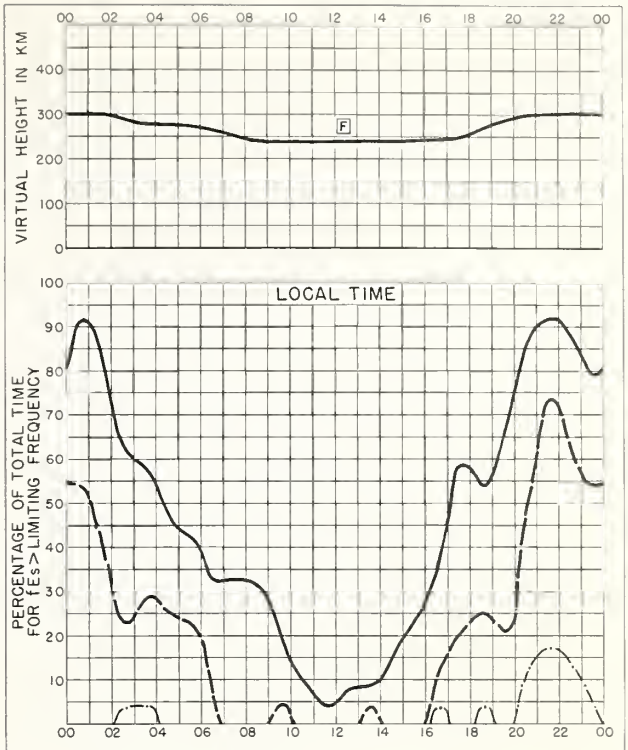


Fig. 138. MACQUARIE I. MAY 1957

NBS 490

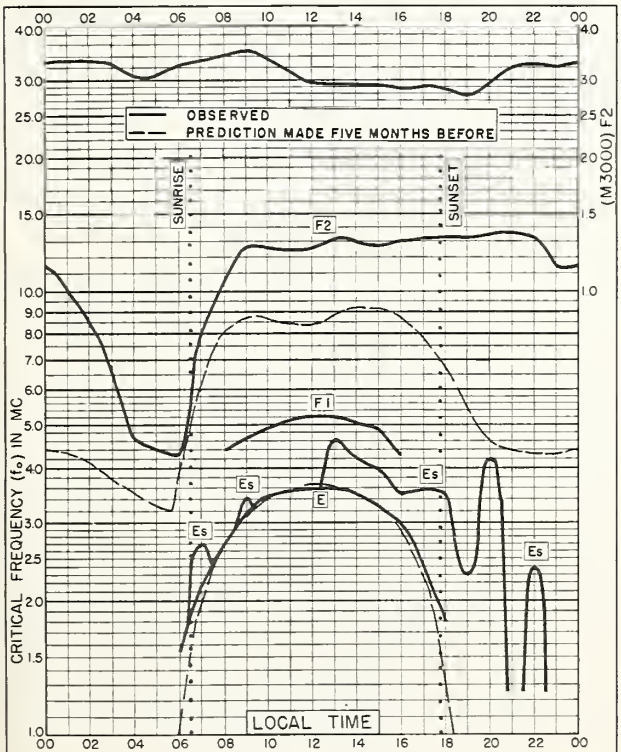


Fig. 139. DAKAR, FRENCH W. AFRICA
14.1° N, 17.4° W JANUARY 1956

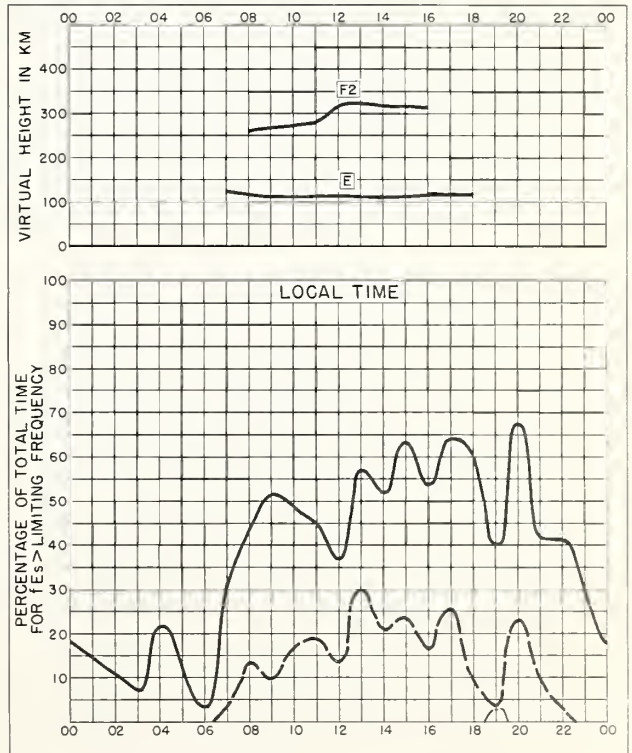


Fig. 140. DAKAR, FRENCH W. AFRICA JANUARY 1956

NBS 490

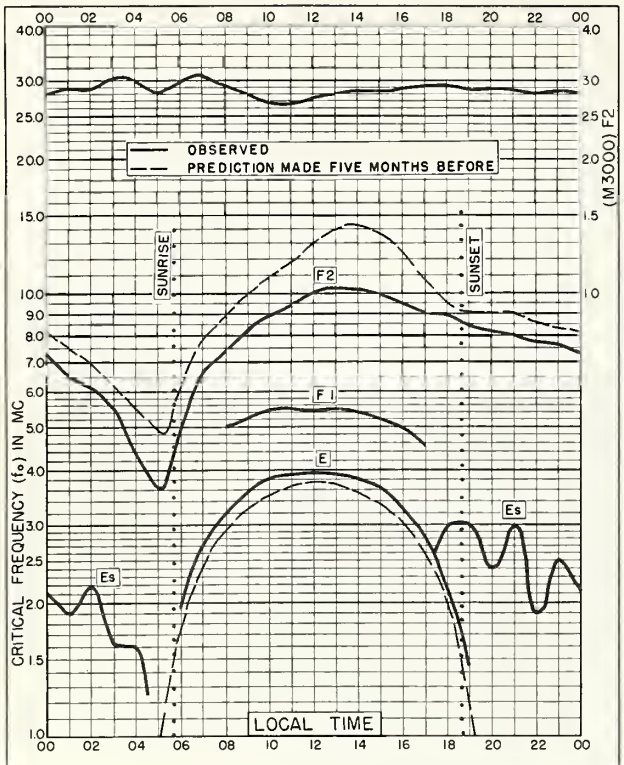
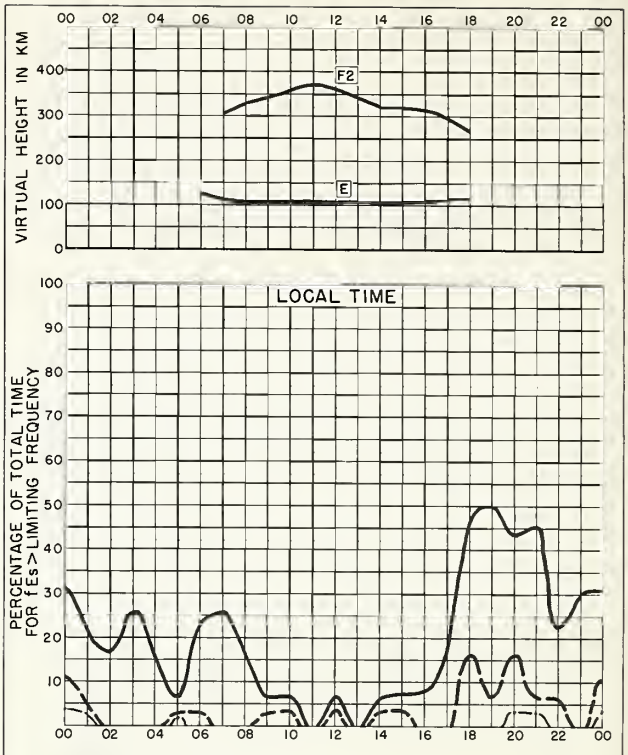


Fig. 141. TANANARIVE, MADAGASCAR
18.9°S, 47.6°E JANUARY 1956



JANUARY 1956

Fig. 142. TANANARIVE, MADAGASCAR

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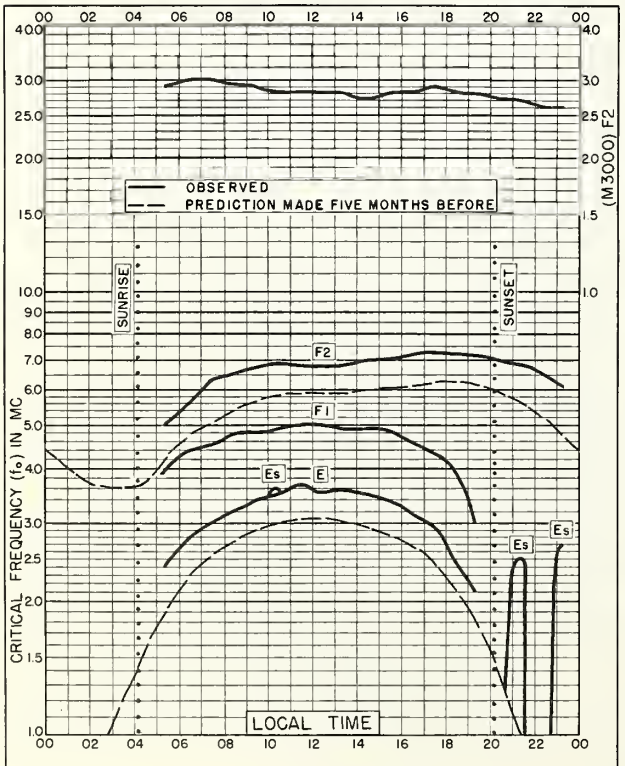

Fig. 143. CAMPBELL I.
52.5°S, 169.2°E JANUARY 1956

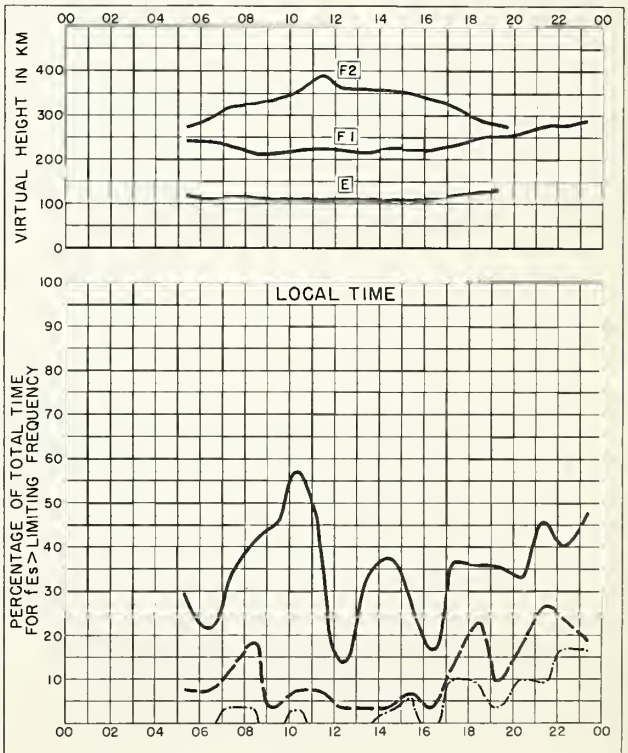

Fig. 144. CAMPBELL I. JANUARY 1956

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Index (CRPL-F172 (Part A), concluded)

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