PART A

IONOSPHERIC DATA

ISSUED
DECEMBER 1959

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

CRPL-F184
PART A

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
22 Dec. 1959

IONOSPHERIC DATA

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										
	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950
December		137	150*	150*	150	42	11	15	33	53	86
November		137	150*	150*	147	35	10	16	38	52	87
October		139	150*	150*	135	31	10	17	43	52	90
September		141	150*	150*	119	30	8	18	46	54	91
August		142	150*	150*	105	27	8	18	49	57	96
July		141	150*	150*	95	22	8	20	51	60	101
June		143	150*	150*	89	18	9	21	52	63	103
May	125	146	150*	150*	77	16	10	22	52	68	102
April	130	150*	150*	150*	68	13	10	24	52	74	101
March	133	150*	150*	150*	60	14	11	27	52	78	103
February	135	150*	150*	150*	53	14	12	29	51	82	103
January	136	150*	150*	150*	48	12	14	30	53	85	105

*This number is believed represesentative 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 1958.

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	197	200	201	200
1958	199	201	201	197	191	187	185	184	183	181	179	179
1959	177	175	173	167	162							

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:

Meteorological Service, Province of Macau, Asia:
Macau

Commonwealth of Australia, Ionospheric Prediction Service of the Commonwealth Observatory:
Brisbane, Australia
Hobart, Tasmania

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

Meteorological Service of the Belgian Congo and Ruanda-Urundi:
Elisabethville, Belgian Congo

Belgian Royal Meteorological Institute:
Lwiro (Central African Institute for Scientific Research)

British Department of Scientific and Industrial Research, Radio Research Board:
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Baker Lake, Canada
Churchill, Canada
Resolute Bay, Canada

Universidad de Concepcion:
Concepcion, Chile

Instituto Geofisico de Los Andes Colombianos:
Bogota, Colombia

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

French National Center for Telecommunications Studies:
Terre Adelie

Ionospheric Institute, Breisach, Germany:
Freiburg, Germany

General Directorate of Telecommunications, Mexico:
El Cerillo, Mexico

Christchurch Geophysical Observatory, New Zealand Department of Scientific and Industrial Research:
Christchurch, New Zealand

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
Tromso, Norway

Rhodes University, Union of South Africa:
Grahamstown, Union of South Africa

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

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

United States Army Signal Corps:
Grand Bahama I.
Thule, Greenland

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Byrd Station, Antarctica
Chiclayo, Peru
Fairbanks (College), Alaska (Geophysical Institute of the University of Alaska)
Huancayo, Peru (Instituto Geofisico de Huancayo)
Ilo, Peru
Juliaca, Peru (Instituto Geofisico de Huancayo)
Little America, Antarctica
Maui, Hawaii
Point Barrow, Alaska
Pole Station, Antarctica
Talara, Peru (Instituto Geofisico de Huancayo)
Wilkes Station, Antarctica

ERRATUM

CRPL-F183 (A), p. 5, table 29, and p. 27, fig. 57: The foF2 column should read from 00 through 23 hours (UT) as follows: 3.4, 3.0, 3.0, 3.4, 3.4, 3.4, 3.2, 3.2, 5.0, 8.2, 11.3, 13.1, 13.8, 14.2, 14.1, 13.2, 12.2, 10.2, 7.8, 6.2, 4.8, 4.4, 3.9, and 3.6. The corresponding changes should be made in the graph of the foF2 for December 1958 at Inverness.

TABULATIONS OF ELECTRON DENSITY DATA

Reduction of hourly ionospheric vertical soundings to electron density profiles has become a part of the systematic ionospheric data program of the Central Radio Propagation Laboratory, National Bureau of Standards. Scalings of ionograms for this purpose are being provided by ionosphere stations operated by CRPL and the U. S. Army Signal Corps. For the present, the hourly profile data from one CRPL station, Puerto Rico, are appearing in the monthly CRPL-F Reports, Part A. These data are in place of the standard ionogram reductions formerly provided by this Station. The very considerable task of scaling the ionograms for this purpose is being undertaken by T. R. Gilliland, Engineer in Charge, Puerto Rico Ionosphere Sounding Station; the computations are performed at the NBS Boulder Laboratories by a group headed by J. W. Wright. Basic conversion of virtual to true heights uses the well-known matrix method developed by K. G. Budden of the Cavendish Laboratory, Cambridge University, programmed for an IBM 650 computer.

The tabulations provide the following basic electron density profile data for each hour of each day of the month:

Quantity	Units	Remarks
Electron Density (N)	$x10^3$ = electrons/cm^3	Body of table; given at each 10 km of height.
NMAX	$x10^3$ = electrons/cm^3	Always the highest value of N at each hour. To maintain this rule, the electron density at the next 10 km increment above HMAX is always given as exactly equal to NMAX (unless HMAX coincides with a 10 km level).
QUALification	(Alphabetic)	A standard scaling letter qualifying the observation when necessary.
HMIN	Kilometers	The height of zero or very low electron density, obtained by linear extrapolation of the electron density vs. height curve.
HMAX	Kilometers	The height of maximum electron density, determined by fitting a parabola to the upper portion of the profile.
SHMAX	$x10^{10}$ = electrons/cm^2 column.	Obtained by integration of the profile between the limits HMIN and HMAX.

Two tabulations of arithmetic mean electron densities are also given for each hour. An average for the undisturbed ionosphere includes the soundings taken when the magnetic character figure K_p is less than 4+; the remaining data are combined to form a disturbed average. The latter may have little physical significance because the number of disturbed hours is usually small and the behavior of the ionosphere during disturbed hours is not consistent. On these tabulations the number of profiles in each average is given by CNT.

Before the averaging process, the individual profiles are extrapolated above HMAX by a Chapman distribution of 100 km scale height. This assumed model seems to agree well with the few published measurements dealing with the topside profile of the F-region. Extrapolation is necessary in order to calculate homogeneous averages near HMAX and the average profiles are, in fact, given up to 950 km. Also given are the integrated electron densities estimated to infinity, SHINF (same units as SHMAX); this is an approximation to the total electron content in a column of the ionosphere.

ELECTRON DENSITY

PUERTO RICO 60 W 1 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL					A							
HMIN	285	278	248	218	193	348	318	I12	111	116	109	109
HMAX	422	412	356	350	450	510	459	328	335	359	366	378
SHMAX	964	897	691	583	568	485	479	1072	1541	2098	2206	2425
KM												
510						477						
500						475						
490						468						
480						458						
470						444						
460						426	508					
450					439	404	506					
440					437	380	499					
430	1191				432	347	488					
420	1191	1119			424	310	471					
410	1179	1119			411	267	450					
400	1151	1108			396	219	425					
390	1107	1083			378	167	392					
380	1042	1042			357	117	353					1846
370	968	985			333	74.5	306				1727	1839
360	875	917	1004		307	47.2	257			1583	1724	1815
350	754	820	1001	679	280	7.8	203			1579	1707	1766
340	625	704	981	675	251		143		1367	1565	1674	1701
330	492	573	941	662	224		71.4	1050	1366	1541	1626	1621
320	335	446	887	640	198		21.7	1046	1354	1506	1563	1523
310	179	286	810	611	174			1032	1330	1462	1480	1415
300	79.7	143	716	573	153			1007	1294	1405	1389	1311
290	33.2	65.7	590	524	133			971	1245	1347	1278	1204
280		12.4	462	471	115			927	1182	1271	1172	1084
270			286	410	98.8			868	1111	1182	1050	971
260			112	342	83.8			800	1027	1086	939	875
250			26.3	270	71.4			716	928	982	834	787
240				192	60.0			619	814	875	735	716
230				97.2	51.3			519	698	774	661	658
220				26.3	43.3			417	585	670	596	612
210					29.8			327	477	582	545	564
200					12.4			248	396	500	497	517
190								194	329	417	451	472
180								154	274	344	395	427
170								127	229	298	341	381
160								110	195	268	294	343
150								97.2	166	219	259	306
140								89.3	143	186	219	269
130								80.1	134	170	195	236
120								56.5	115	143	184	214
110											112	60.0

ELECTRON DENSITY

PUERTO RICO 60 W 1 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL		8				A					A	
HMIN	117		110	110	109	110		198	250	278	306	310
HMAX	388		383	391	377	388		402	451	427	450	456
SHMAX	2593		2406	2299	1960	2070		1071	833	758	687	584
KM												
460									804			698
450									804		784	696
440									798		779	684
430									784	854	765	660
420									760	852	740	627
410								960	727	839	708	586
400				1697				960	687	816	665	535
390	2000		1786	1697		1528		954	638	781	613	477
380	1994		1785	1689	1583	1525		940	590	735	548	410
370	1969		1772	1665	1579	1512		917	535	684	477	342
360	1924		1743	1627	1555	1488		885	477	622	403	274
350	1857		1697	1574	1501	1455		846	417	553	318	205
340	1786		1631	1501	1446	1412		799	355	477	226	132
330	1679		1555	1418	1365	1359		744	292	380	135	80.7
320	1555		1456	1321	1270	1291		685	229	286	71.4	47.2
310	1435		1352	1212	1178	1218		622	174	198	26.3	1.3
300	1316		1250	1096	1084	1143		548	131	112		
290	1175		1131	982	971	1050		483	97.2	60.0		
280	1050		1016	875	865	949		410	71.4	12.4		
270	928		917	784	770	844		342	51.3			
260	826		824	701	686	735		274	33.2			
250	747		742	633	615	634		212				
240	673		679	586	559	553		152				
230	618		623	548	513	477		102				
220	568		578	514	469	417		68.6				
210	517		532	483	430	362		45.8				
200	472		490	450	392	314		7.8				
190	427		450	409	355	270						
180	380		413	369	318	233						
170	335		373	331	282	201						
160	286		339	293	250	179						
150	253		304	256	221	166						
140	224		274	227	202	156						
130	208		252	209	190	149						
120	179		219	186	180	132						
110			12.4	40.2	49.6	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 2 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL												
HMIN	316	285	274	260	218	250	352	117	110	110	110	111
HMAX	471	438	446	382	363	477	469	388	315	423	396	392
SHMAX	654	596	667	580	512	594	424	1258	1148	2525	2079	1897
KM												
480	716					500						
470	716					499	540					
460	711					494	537					
450	697		679			484	526					
440	672	716	678			470	508					
430	639	712	669			452	484			1406		
420	599	697	654			429	450			1406		
410	554	667	628			403	408			1403		
400	495	625	596			374	356			1395	1303	1240
390	432	578	559	794		342	298	875		1382	1302	1240
380	367	529	517	793		307	233	874		1365	1294	1234
370	304	471	467	785	540	272	152	868		1344	1281	1220
360	246	403	417	763	540	240	65.7	857		1314	1261	1197
350	186	335	362	730	536	210		843		1283	1233	1166
340	119	262	305	688	528	182		819		1252	1197	1126
330	63.8	192	248	616	514	156		790		1213	1161	1078
320	26.3	122	192	532	495	132		754	1143	1169	1119	1021
310		77.6	138	437	474	110		731	1141	1122	1063	954
300		52.2	88.3	327	449	89.6		700	1129	1063	998	883
290		21.7	57.4	198	412	71.4		656	1105	997	926	810
280			26.3	104	366	56.1		608	1066	924	854	739
270				53.1	310	44.4		559	1019	850	778	673
260					248	25.0		508	960	770	709	613
250					179			459	883	701	643	565
240					104			408	781	631	585	526
230					60.0			362	667	568	536	495
220					12.4			310	540	513	496	471
210								257	437	462	460	450
200								203	342	412	427	430
190								156	280	366	397	408
180								122	232	323	365	383
170								101	192	278	332	355
160								89.6	163	246	298	321
150								82.1	142	215	262	282
140								77.8	127	186	231	251
130								73.6	120	171	209	231
120								54.8	114	161	187	205
110									12.4	49.6	49.6	

ELECTRON DENSITY

PUERTO RICO 60 W 2 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL			S				A					
HMIN	111	111		110	110	110		249	196	259	304	289
HMAX	411	415		407	386	391		400	420	430	455	412
SHMAX	2321	2447		2222	1797	1636		945	909	604	558	476
KM												
460											643	
450											642	
440											633	
430										643	617	
420	1473	1500							774	639	590	679
410	1473	1499		1420					771	627	559	679
400	1468	1492		1418		1143		960	761	608	517	669
390	1454	1477		1408	1290	1143		956	746	576	465	646
380	1431	1455		1390	1288	1138		942	724	543	406	608
370	1400	1418		1364	1278	1126		920	695	503	342	557
360	1360	1378		1329	1257	1107		888	661	452	280	495
350	1309	1335		1289	1223	1080		847	621	400	212	417
340	1256	1276		1248	1181	1045		799	578	346	143	335
330	1191	1216		1184	1137	1004		748	526	292	92.8	240
320	1115	1155		1111	1076	955		685	477	235	57.4	161
310	1027	1080		1034	1004	899		608	422	179	26.3	90.5
300	934	997		952	926	834		524	362	123		52.2
290	844	909		865	842	767		432	310	87.2		6.8
280	762	834		778	762	694		323	258	60.0		
270	679	754		698	679	629		198	211	41.7		
260	619	679		629	608	560		90.5	168	4.5		
250	569	615		573	546	497		12.4	130			
240	530	564		529	495	446			100			
230	501	522		495	454	401			73.9			
220	477	491		467	420	362			55.6			
210	459	462		441	392	326			41.5			
200	440	433		414	364	295			12.4			
190	419	406		386	335	265						
180	392	378		358	303	237						
170	362	348		327	269	212						
160	327	318		298	240	189						
150	286	286		266	210	167						
140	252	253		235	187	150						
130	233	231		213	173	138						
120	219	198		200	163	129						
110				40.2	12.4	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 3 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	A
HMIN	267	255	240	258	273	256	271	115	110	109		
HMAX	382	369	379	390	385	390	420	321	318	360		
SHMAX	466	389	385	302	170	209	272	748	1026	1871		
KM												
420							286					
410							284					
400							280					
390	670			368	262	262	273					
380	670		439	366	255	260	262					
370	661	557	437	356	240	254	248					
360	640	553	430	342	222	243	233			1500		
350	608	538	417	325	202	227	214			1494		
340	562	515	398	302	181	207	191			1475		
330	500	481	376	272	158	184	166	716		1441		
320	424	432	348	240	134	158	138	716	960	1389		
310	335	368	314	198	110	132	109	712	957	1333		
300	233	298	272	161	88.3	104	80.7	701	944	1256		
290	135	226	227	123	65.7	79.7	56.5	683	920	1180		
280	71.4	149	179	83.8	42.5	60.0	36.2	660	885	1096		
270	19.3	77.6	135	52.2		43.3		631	843	1004		
260		33.2	88.3	12.4		12.4		590	787	900		
250			49.6					540	723	804		
240			1.3					477	650	716		
230								410	573	625		
220								335	500	540		
210								268	417	469		
200								214	351	403		
190								168	292	346		
180								136	240	302		
170								115	195	259		
160								100	158	219		
150								90.5	134	182		
140								82.6	124	160		
130								76.4	119	153		
120								60.0	114	147		
110									40.2	83.8		

ELECTRON DENSITY

PUERTO RICO 60 W 3 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		S						A	A		
HMIN	110	114	114	110	111	115	116	219	311	323	329	269
HMAX	395	415	402	409	415	379	381	405	502	490	451	407
SHMAX	2930	2850	2605	2841	2753	2339	1822	1700	1531	1427	1054	1698
KM												
510									1500			
500									1500			
490									1490	1583		
480									1466	1574		
470									1427	1545		
460									1373	1498	1555	
450									1302	1430	1555	
440									1222	1349	1534	
430									1131	1240	1478	
420		1907			2032				1016	1119	1376	
410		1905	2032	2032	2030			1393	896	975	1262	1907
400	2161	1892	2031	2025	2014			1392	767	820	1111	1902
390	2158	1866	2016	2003	1983		1697	1384	631	661	931	1877
380	2141	1826	1979	1966	1936	2000	1697	1368	497	492	735	1831
370	2108	1773	1921	1913	1869	1993	1687	1344	375	335	540	1765
360	2057	1708	1832	1839	1793	1967	1658	1313	262	209	348	1678
350	1982	1631	1727	1756	1698	1923	1612	1273	173	122	189	1576
340	1897	1536	1606	1657	1589	1857	1548	1224	107	71.4	83.8	1446
330	1796	1437	1474	1545	1460	1786	1470	1170	68.6	42.5	12.4	1291
320	1680	1341	1341	1433	1329	1679	1373	1109	43.9			1096
310	1555	1222	1182	1303	1182	1567	1253	1031				896
300	1416	1131	1038	1171	1050	1431	1153	943				679
290	1269	1016	928	1038	917	1283	1034	854				389
280	1127	917	824	917	794	1127	889	742				143
270	993	826	739	814	688	975	754	631				12.4
260	875	748	667	724	608	807	608	508				
250	786	679	613	649	546	679	477	375				
240	709	628	566	590	499	565	371	219				
230	648	582	529	544	460	484	278	97.2				
220	590	540	494	504	427	411	209	12.4				
210	535	499	462	467	397	356	154					
200	482	460	432	432	370	306	118					
190	432	424	401	393	339	262	93.9					
180	389	392	371	358	307	231	81.1					
170	350	354	335	323	272	201	74.2					
160	316	310	291	289	240	177	69.9					
150	282	267	248	256	210	158	67.4					
140	254	237	221	229	186	142	64.8					
130	234	223	209	213	173	133	62.3					
120	209	127	198	201	163	97.2	49.6					
110	12.4			40.2								

ELECTRON OENSITY

PUERTO RICO 60 W 4 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		F	F	F	F	F	F		A	A		
HMIN	199	268	264					120	112		109	106
HMAX	339	497	476					390	381		446	510
SHMAX	996	517	577					934	1338		1136	1684
KM												
510												573
500		432										573
490		431										572
480		427	477									570
470		419	476									567
460		407	472									564
450		393	465								446	560
440		374	454								446	555
430		351	440								445	549
420		324	422								443	542
410		296	401								441	533
400		268	375								437	524
390		237	347					754	939		432	514
380		210	316					752	939		427	504
370		184	286					743	935		421	494
360		158	253					728	926		412	484
350		134	222					708	911		401	473
340	1143	114	192					682	891		390	461
330	1137	93.9	163					649	865		379	449
320	1117	77.6	134					612	834		367	436
310	1082	63.8	106					569	797		357	422
300	1033	51.9	78.9					522	754		347	409
290	973	42.7	57.0					471	706		337	397
280	892	25.2	43.7					417	653		330	384
270	804	3.9	18.6					366	594		323	374
260	698							315	527		316	363
250	585							262	465		310	354
240	477							214	408		306	345
230	362							167	362		303	337
220	229							119	321		300	331
210	97.2							92.3	291		297	327
200	12.4							82.3	265		294	322
190								77.1	238		290	317
180								71.9	213		287	312
170								69.5	186		280	302
160								67.3	165		267	286
150								65.2	145		249	266
140								63.0	130		226	245
130								60.9	121		198	219
120									113		184	203
110											97.2	143

ELECTRON DENSITY

PUERTO RICO 60 W 4 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		S			A	A	A	A	A	A	
HMIN	109	108		111	110				288	248		251
HMAX	513	480		404	393				470	423		372
SHMAX	1690	1621		1438	1490				1237	1360		1147
KM												
520	590											
510	590											
500	590											
490	588											
480	585	643										
470	581	642							1240			
460	577	639							1234			
450	571	635							1215			
440	565	629							1184			
430	557	622							1140	1446		
420	549	613							1082	1446		
410	539	600		814					1012	1433		
400	527	586		813	917				934	1406		
390	515	572		809	917				850	1363		
380	502	555		800	913				754	1305		1500
370	489	538		786	905				643	1232		1500
360	475	520		768	892				540	1151		1485
350	461	502		743	875				417	1038		1450
340	446	483		713	849				286	903		1393
330	432	463		679	822				198	754		1314
320	417	445		646	794				127	608		1218
310	404	429		608	758				79.7	446		1096
300	390	413		573	716				49.6	310		939
290	378	400		537	669				12.4	209		735
280	366	387		502	618					135		477
270	356	378		472	564					83.8		219
260	348	369		446	513					52.2		71.4
250	339	361		424	465					12.4		
240	333	357		406	433							
230	330	352		390	411							
220	327	348		382	395							
210	323	344		374	379							
200	320	340		367	362							
190	316	336		356	332							
180	313	326		339	296							
170	308	315		317	258							
160	291	301		289	222							
150	269	281		256	197							
140	243	256		228	179							
130	219	235		211	170							
120	204	219		198	162							
110	112	127			12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 5 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A		A	A	
HMIN	224	235	231	229	246	305	349		110	110		115
HMAX	375	382	349	359	444	437	443		345	356		361
SHMAX	873	728	591	333	380	286	233		1441	1771		2148
KM												
450					348		335					
440					348	362	335					
430					345	360	331					
420					339	353	320					
410					329	340	304					
400					316	321	286					
390		875			300	296	259					
380	1004	875			281	266	222					
370	1003	865			257	233	179					1697
360	991	843		446	232	195	127			1341		1697
350	967	806	794	443	206	154	40.2		1215	1340		1689
340	929	754	789	431	179	112			1214	1330		1665
330	884	694	772	409	154	80.7			1204	1313		1627
320	818	622	743	380	132	52.2			1183	1287		1574
310	732	540	702	344	110	21.7			1152	1252		1501
300	643	462	653	300	89.6				1110	1206		1418
290	540	375	582	251	73.0				1055	1157		1321
280	437	294	497	203	58.7				992	1102		1218
270	335	198	389	156	46.8				924	1027		1107
260	219	119	262	112	33.2				857	943		993
250	127	67.6	127	71.4	10.1				799	858		885
240	71.4	33.2	56.5	43.9					691	774		786
230	34.6			3.1					585	688		698
220									487	599		615
210									410	516		540
200									342	439		477
190									286	368		423
180									236	304		381
170									198	249		345
160									167	203		313
150									142	169		282
140									126	149		248
130									119	138		213
120									112	130		170
110									12.4	12.4		

ELECTRON DENSITY

PUERTO RICO 60 W 5 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			S			A	A			A	A	A
HMIN	115	110	109	116	110			209	251		338	
HMAX	389	373	385	401	370			351	431		473	
SHMAX	2475	2544	2637	2702	2010			958	990		966	
KM												
480											1143	
470											1142	
460											1131	
450											1105	
440									993		1064	
430									993		1010	
420									987		943	
410				1907					971		858	
400				1907					945		764	
390	1771		1969	1899					909		643	
380	1766	2032	1967	1878					863		524	
370	1748	2031	1951	1845	1697				805		375	
360	1717	2016	1919	1799	1688			1215	742		219	
350	1674	1983	1871	1740	1660			1215	670		97.2	
340	1612	1932	1808	1669	1613			1203	582		26.3	
330	1547	1861	1723	1582	1547			1171	500			
320	1463	1786	1627	1486	1463			1119	408			
310	1370	1669	1519	1376	1362			1050	318			
300	1270	1542	1394	1253	1240			960	240			
290	1164	1401	1265	1143	1143			847	161			
280	1050	1254	1143	1027	1019			729	102			
270	939	1111	1016	907	889			608	65.7			
260	834	960	896	804	767			477	40.2			
250	739	834	794	707	670			323				
240	661	716	709	631	587			198				
230	603	629	637	573	521			104				
220	554	562	579	522	467			56.5				
210	512	513	529	481	417			5.5				
200	473	470	484	438	375							
190	435	435	442	394	335							
180	397	401	403	353	294							
170	354	368	368	314	262							
160	314	332	331	279	232							
150	274	298	290	246	193							
140	243	266	250	214	169							
130	224	236	230	192	155							
120	97.2	209	198	161	146							
110		12.4	40.2		12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 6 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A	A		A
HMIN	226	229	219	243	266	298	274	118	115	117	116	119
HMAX	369	333	354	409	393	430	375	276	296	325	351	378
SHMAX	809	587	503	410	306	307	289	573	906	1264	1774	2250
KM												
430						368						
420						366						
410				424		359						
400				423	389	347						
390				416	389	329						
380				403	384	307	432					1846
370	1004			390	374	280	431					1839
360	998		557	370	357	245	423				1393	1813
350	974		556	344	335	207	406				1393	1767
340	931	949	552	313	307	165	385				1387	1701
330	875	948	543	282	272	127	350			1143	1372	1607
320	807	931	528	240	232	87.2	305			1141	1347	1501
310	732	885	513	202	184	54.8	248			1129	1309	1381
300	643	826	488	164	138	12.4	179		939	1105	1268	1253
290	540	735	456	130	92.8		112		937	1063	1221	1111
280	437	619	411	100	57.4		49.6	906	926	1004	1156	975
270	323	492	355	73.9	23.5			901	903	960	1077	847
260	209	335	286	51.7				870	875	875	982	726
250	119	179	212	28.3				818	834	794	885	636
240	65.7	83.8	112					726	781	698	774	573
230	26.3	12.4	56.5					608	716	615	667	546
220			5.5					446	634	540	565	520
210								310	540	482	484	492
200								219	446	429	427	463
190								156	335	380	381	433
180								123	240	330	340	389
170								104	191	281	302	344
160								91.0	154	236	262	295
150								82.3	131	195	219	249
140								77.4	121	160	185	217
130								72.4	114	149	169	202
120								26.3	90.5	83.8	143	49.6

ELECTRON DENSITY

PUERTO RICO 60 W 6 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	-	A	S		A	A	A					
HMIN	109	110	113	111	110			228	199	258	293	294
HMAX	360	378	368	388	376			364	377	401	418	433
SHMAX	2343	2526	2349	2638	2388			1198	933	692	613	731
KM												
440												928
430												927
420											875	916
410										854	869	889
400										854	845	847
390				2096						845	799	794
380		2063		2090	1969				1016	814	739	724
370		2056	2161	2065	1966			1446	1013	769	665	643
360	2096	2018	2151	2022	1946			1445	998	721	573	548
350	2081	1948	2111	1961	1910			1429	971	661	477	446
340	2038	1869	2040	1879	1857			1394	927	590	371	335
330	1957	1773	1938	1786	1786			1341	875	516	255	209
320	1858	1643	1812	1669	1696			1269	814	439	152	122
310	1734	1515	1652	1528	1589			1182	739	362	79.7	71.4
300	1598	1371	1493	1386	1471			1065	652	286	42.5	40.2
290	1460	1224	1321	1240	1341			931	565	198		
280	1298	1084	1119	1111	1204			774	467	119		
270	1127	960	960	960	1065			590	353	63.8		
260	982	867	807	820	917			389	255	12.4		
250	847	787	691	716	767			209	179			
240	735	723	601	622	652			90.5	127			
230	643	664	535	553	551			26.3	87.2			
220	567	613	488	499	471				60.0			
210	508	557	453	451	411				41.7			
200	464	495	420	408	357				4.5			
190	421	442	396	365	319							
180	382	394	368	315	286							
170	350	348	335	276	249							
160	319	306	298	240	209							
150	289	273	259	214	181							
140	255	243	227	198	164							
130	217	219	209	189	154							
120	200	203	179	180	146							
110	49.6	40.2			12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 7 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A	A					A	A		A	
HMIN	279	239	228	208	223	239	249	126	117	110		115
HMAX	387	330	349	366	343	349	328	311	306	345		360
SHMAX	658	514	570	495	229	268	183	649	1008	1805		2005
KM												
390	1027											
380	1021											
370	990			508								
360	936			507								1612
350	854		754	502	389	382				1420		1603
340	754		750	492	382	379				1419		1578
330	631	960	736	477	359	370	335			1411		1530
320	508	945	709	456	329	354	332	726		1396		1466
310	375	899	674	433	294	335	320	726	1143	1373		1390
300	219	824	628	403	255	303	298	720	1140	1343		1304
290	83.8	716	565	365	214	262	269	706	1119	1306		1208
280	12.4	573	477	320	170	212	227	682	1081	1260		1105
270		403	380	272	130	152	170	649	1027	1198		1004
260		198	262	223	97.2	92.8	97.2	608	952	1135		926
250		77.6	135	174	69.1	52.2	12.4	553	854	1096		842
240		12.4	65.7	127	48.0	6.8		484	742	971		770
230			12.4	83.8	22.8			408	619	820		698
220				52.2				318	497	661		629
210				12.4				226	398	519		553
200								143	316	410		489
190								99.6	257	342		423
180								91.7	203	291		367
170								85.7	167	245		318
160								81.3	143	207		278
150								77.6	131	175		235
140								74.0	122	159		214
130								62.9	116	151		204
120									101	138		112
110										12.4		

ELECTRON DENSITY

PUERTO RICO 60 W 7 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	S			A	S					
HMIN	115		110	117	115			199	237	268	277	289
HMAX	375		398	398	368			379	403	417	393	418
SHMAX	2201		2646	2684	2239			1366	1232	1094	695	1035
KM												
420										1290		1316
410									1316	1286		1310
400			2032	2096					1315	1265	1143	1287
390			2026	2090					1303	1226	1141	1246
380	1786		2002	2065				1446	1277	1170	1114	1187
370	1783		1960	2022	2032			1440	1234	1088	1054	1111
360	1764		1899	1961	2024			1417	1177	1004	960	1016
350	1726		1818	1879	1992			1378	1111	896	834	903
340	1669		1715	1786	1936			1321	1022	781	691	754
330	1582		1601	1669	1846			1253	917	655	540	540
320	1486		1474	1528	1739			1162	814	519	398	348
310	1376		1341	1394	1612			1061	691	375	251	161
300	1253		1204	1240	1474			946	573	219	119	71.4
290	1143		1080	1111	1312			807	446	127	63.8	12.4
280	1016		939	960	1127			679	310	60.0	19.3	
270	889		824	834	975			540	198	12.4		
260	774		726	716	820			389	112			
250	679		643	625	698			270	63.8			
240	601		573	557	590			179	19.3			
230	545		519	503	516			117				
220	511		473	458	456			74.5				
210	484		441	426	409			47.7				
200	457		411	395	372			6.8				
190	424		383	365	339							
180	384		352	332	307							
170	340		319	296	277							
160	298		286	259	246							
150	260		240	228	219							
140	235		207	203	191							
130	215		192	188	173							
120	127		180	143	143							
110			12.4									

ELECTRON DENSITY

PUERTO RICO 60 W 8 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	A
HMIN	250	246	227	198	246	267	273	115	111	110	111	
HMAX	347	333	324	351	405	399	387	291	328	322	335	
SHMAX	771	633	466	407	352	288	277	622	1401	1471	1709	
KM												
410					382							
400					381	368						
390					377	366	389					
380					368	357	387					
370					353	343	379					
360				432	337	321	363					
350	1367			432	313	295	340					
340	1358	1061		429	286	262	313				1555	
330	1313	1060	794	421	253	226	274		1367	1446	1553	
320	1229	1039	792	408	219	184	227		1362	1446	1535	
310	1111	992	774	391	183	143	179		1341	1434	1500	
300	939	917	735	368	147	104	122	804	1305	1405	1446	
290	716	824	679	341	112	68.6	75.6	803	1252	1358	1371	
280	462	704	596	310	81.3	46.5	42.5	794	1184	1282	1280	
270	219	557	487	274	58.3	12.4		769	1105	1199	1175	
260	77.6	362	348	236	42.9			726	993	1115	1061	
250	3.1	97.2	219	198	12.4			667	875	1004	960	
240			90.5	157				599	754	875	844	
230			30.9	124				508	643	754	726	
220				88.3				398	540	619	619	
210				54.8				294	446	508	524	
200				12.4				219	362	417	452	
190								165	298	342	395	
180								130	249	286	341	
170								106	207	240	298	
160								91.1	170	198	253	
150								82.0	143	169	212	
140								77.4	126	156	186	
130								72.8	119	150	173	
120								46.5	112	143	163	
110										49.6		

ELECTRON DENSITY

PUERTO RICO 60 W 8 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A					A	A		A			
HMIN		110	116	112	110			228	224	243	240	282
HMAX		383	372	370	378			366	402	399	397	404
SHMAX		2663	2360	2186	2191			1049	1319	1125	865	703
KM												
410									1316			1004
400									1315	1215	1004	1003
390		2048							1306	1210	1001	987
380		2047	1907		1756				1285	1191	984	951
370		2032	1906	1846	1751			1367	1251	1160	952	896
360		1999	1893	1835	1731			1363	1204	1114	907	824
350		1947	1861	1804	1697			1337	1145	1056	847	726
340		1874	1811	1742	1643			1288	1073	987	770	608
330		1794	1732	1669	1581			1213	987	900	686	477
320		1680	1640	1574	1501			1119	892	807	596	335
310		1555	1543	1468	1404			1004	781	691	500	179
300		1433	1420	1341	1291			875	667	573	408	90.5
290		1298	1296	1228	1182			716	540	456	310	46.5
280		1157	1171	1096	1061			573	432	310	219	
270		1019	1038	960	931			417	310	179	135	
260		896	928	844	807			240	189	88.3	79.7	
250		804	824	729	698			127	112	43.3	47.2	
240		716	732	634	599			63.8	67.6		1.3	
230		649	657	553	527			12.4	34.6			
220		588	587	497	459							
210		536	521	451	408							
200		487	454	409	365							
190		437	398	372	324							
180		393	348	339	286							
170		354	316	303	248							
160		321	288	266	212							
150		292	255	233	182							
140		262	224	205	163							
130		226	206	190	153							
120		204	161	173	145							
110		40.2			12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 9 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL	A	A	A							A	A	A
HMIN			255	239	229	219	209	117	118			
HMAX			357	335	314	295	369	274	292			
SHMAX			537	505	367	242	426	523	894			
KM												
370							389					
360			865				388					
350			860				384					
340			837	854			376					
330			801	852			366					
320			735	830	735		352					
310			643	797	733		337					
300			529	732	708	532	318		1050			
290			403	643	655	529	297		1049			
280			240	519	573	504	273	875	1035			
270			112	389	456	452	246	873	999			
260			44.9	198	335	380	219	847	939			
250				83.8	189	286	189	794	867			
240				12.4	83.8	179	157	707	778			
230					12.4	77.6	119	585	688			
220						12.4	71.4	432	590			
210							12.4	298	497			
200								186	408			
190								127	327			
180								92.8	255			
170								77.6	202			
160								70.3	167			
150								67.4	140			
140								64.6	125			
130								61.7	117			
120								51.7	97.2			

ELECTRON DENSITY

PUERTO RICO 60 W 9 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL	A	S	S	C	C							
HMIN		111				114		228	241	243	277	277
HMAX		370				356		386	384	394	399	372
SHMAX		2404				2069		1492	1282	1009	877	672
KM												
400										1240	1215	
390								1640	1446	1238	1207	
380								1637	1445	1220	1177	1240
370		2112						1616	1430	1182	1123	1239
360		2098				2063		1576	1400	1119	1050	1211
350		2056				2059		1515	1353	1041	949	1143
340		1974				2029		1446	1283	943	820	1034
330		1870				1972		1351	1205	834	679	875
320		1747				1885		1228	1115	716	540	698
310		1612				1771		1096	990	596	389	492
300		1462				1626		939	861	477	219	262
290		1312				1465		781	704	362	97.2	104
280		1159				1280		625	540	229	40.2	30.9
270		1004				1119		446	375	135		
260		885				931		274	179	75.6		
250		774				767		143	71.4	42.5		
240		688				631		65.7				
230		608				519		12.4				
220		546				432						
210		487				362						
200		438				310						
190		394				259						
180		355				222						
170		321				193						
160		286				168						
150		250				146						
140		225				127						
130		210				118						
120		192				97.2						

ELECTRON OENSITY

PUERTO RICO 60 W 10 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL												
HMIN	259	253	213	205	220	258	253	115	110	110	112	109
HMAX	352	329	320	354	411	385	351	286	291	313	322	341
SHMAX	642	530	540	478	457	281	278	659	998	1372	1584	1922
KM												
420					389							
410					389							
400					387							
390					382	382						
380					375	381						
370					364	374						
360	1191			532	350	359	446					
350	1190			531	335	337	446					1669
340	1163			526	316	313	440					1668
330	1096	1191		514	293	274	424				1612	1657
320	982	1168	784	495	268	229	397			1473	1611	1628
310	847	1096	777	471	243	184	362			1472	1593	1580
300	667	960	757	443	214	138	315		1265	1455	1548	1505
290	477	774	724	405	189	97.2	251	939	1265	1416	1470	1418
280	262	540	679	362	163	65.7	179	934	1249	1356	1379	1319
270	90.5	240	619	310	138	44.9	97.2	908	1205	1268	1265	1208
260	12.4	60.0	540	257	112	7.8	47.2	857	1133	1164	1131	1096
250			437	203	88.3			784	1038	1034	1004	975
240			298	143	66.9			679	903	889	875	854
230			127	92.8	45.8			562	767	729	742	742
220			54.8	57.4	1.3			446	619	596	631	643
210				29.1				323	487	487	540	567
200								226	380	403	469	502
190								170	304	342	403	446
180								130	246	286	348	398
170								104	202	240	300	357
160								89.2	167	198	259	314
150								81.0	142	174	222	278
140								76.2	126	160	196	243
130								71.4	120	152	176	219
120								60.0	114	145	163	200
110									12.4	40.2		83.8

ELECTRON DENSITY

PUERTO RICO 60 W 10 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL							S					
HMIN	110	109	117	110	111	110	114	231	208	260	266	277
HMAX	361	366	375	367	380	359	356	373	391	402	406	387
SHMAX	2259	2266	2319	2077	2212	2011	1848	1306	1286	1026	899	745
KM												
410										1252	1143	
400									1328	1252	1139	
390									1328	1240	1118	1167
380			1815		1786			1555	1319	1211	1075	1160
370	1907	1907	1814	1756	1777			1554	1293	1166	1012	1128
360	1907	1903	1798	1751	1753	1922	1846	1537	1250	1102	934	1065
350	1895	1881	1768	1726	1713	1914	1842	1499	1188	1022	844	978
340	1863	1840	1723	1680	1653	1884	1820	1438	1119	917	729	861
330	1812	1778	1660	1599	1578	1833	1778	1350	1031	794	619	716
320	1735	1700	1580	1506	1486	1756	1716	1240	934	655	508	551
310	1648	1601	1486	1404	1383	1657	1631	1127	824	508	380	403
300	1542	1474	1383	1291	1265	1543	1534	990	716	362	262	229
290	1407	1341	1265	1175	1154	1416	1416	834	619	219	152	97.2
280	1278	1175	1131	1061	1027	1257	1269	679	519	119	77.6	40.2
270	1127	1019	1016	939	903	1096	1127	524	408	54.8	26.3	
260	975	875	896	824	784	896	960	335	310			
250	847	764	794	726	679	729	774	179	226			
240	735	665	698	643	590	585	590	71.4	143			
230	643	587	608	568	514	477	446		88.3			
220	573	531	540	513	452	382	323		52.2			
210	519	486	482	462	398	320	229		12.4			
200	467	450	432	417	357	278	174					
190	421	417	389	377	317	240	138					
180	380	381	354	342	282	210	112					
170	339	343	317	307	251	182	95.9					
160	300	303	282	272	224	161	82.8					
150	266	269	250	240	196	143	72.5					
140	232	237	219	211	171	130	66.5					
130	211	214	204	191	156	119	61.1					
120	194	198	97.2	170	145	104	46.5					
110	12.4	49.6		12.4		12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 11 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S		A	A	A
HM1N	262	280	288	241	220	209	248	114	119	109	110	
HMAX	374	423	405	375	330	339	365	279	307	316	367	
SHMAX	685	677	552	558	434	379	286	510	977	1417	2291	
KM												
430		834										
420		833										
410		823	804									
400		800	802									
390		762	786									
380	1004	716	754	707								
370	1003	658	704	705			389				1907	
360	987	587	643	694			388				1902	
350	951	508	557	672			382				1881	
340	899	417	467	639		439	369				1842	
330	824	323	362	598	707	437	348				1786	
320	716	229	240	540	697	431	323			1528	1712	
310	596	143	127	477	667	420	289		1119	1523	1617	
300	462	83.8	63.8	396	619	404	249		1114	1497	1507	
290	298	49.6	12.4	318	548	386	198		1092	1446	1381	
280	143	1.3		240	469	362	149	754	1050	1371	1240	
270	60.0			155	380	327	97.2	747	990	1274	1111	
260				88.3	274	286	54.8	720	907	1143	960	
250				46.5	170	229	12.4	679	804	1004	834	
240					92.8	167		608	691	847	707	
230					49.6	104		508	573	698	608	
220						56.5		389	462	573	534	
210						5.5		278	375	462	472	
200								192	310	389	427	
190								143	257	335	380	
180								112	211	294	335	
170								93.6	176	259	290	
160								82.1	147	222	249	
150								73.2	125	189	211	
140								67.6	119	159	179	
130								62.9	113	142	159	
120								51.7	40.2	134	150	
110										83.8	71.4	

ELECTRON DENSITY

PUERTO RICO 60 W 11 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		S						C	A		
HM1N	117	110	117	110	119	109	249	215		258	262	285
HMAX	362	362	361	368	365	352	356	390		399	403	413
SHMAX	2363	2355	2170	2258	2074	1895	1300	1475		1093	1037	780
KM												
420												1096
410											1215	1095
400										1367	1215	1078
390								1433		1359	1202	1040
380								1427		1332	1174	978
370	2096	2000	1969	1907	1907			1409		1285	1130	896
360	2095	2000	1968	1900	1903	1907	1697	1379		1216	1069	794
350	2077	1983	1952	1873	1878	1906	1693	1336		1133	996	679
340	2032	1942	1907	1825	1828	1890	1668	1279		1019	900	562
330	1942	1872	1826	1750	1747	1849	1619	1218		889	804	417
320	1826	1786	1727	1657	1646	1786	1546	1143		735	679	251
310	1717	1679	1606	1543	1524	1688	1455	1038		573	557	135
300	1621	1543	1474	1420	1371	1578	1341	917		403	417	71.4
290	1509	1416	1327	1291	1228	1446	1191	794		229	274	33.2
280	1341	1278	1175	1157	1096	1298	1027	667		127	143	
270	1143	1143	1027	1019	960	1111	794	524		63.8	60.0	
260	990	1004	889	889	824	931	477	389		12.4		
250	847	889	774	784	716	754	49.6	262				
240	729	794	679	688	616	608		143				
230	634	707	594	608	540	487		79.7				
220	560	629	527	540	469	398		33.2				
210	503	553	477	477	406	323						
200	459	489	430	427	353	267						
190	413	432	392	380	310	229						
180	373	384	357	339	276	195						
170	335	343	319	304	243	164						
160	296	307	286	274	216	134						
150	262	274	251	243	187	118						
140	231	243	219	216	165	109						
130	209	217	202	195	152	105						
120	127	198	112	181	97.2	100						
110		40.2		12.4		71.4						

ELECTRON DENSITY

PUERTO RICO 60 W 12 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A				
HM1N	291	253	235	219	220	269	299		113	110	114	110
HMAX	413	370	332	321	368	417	397		293	319	337	351
SHMAX	775	750	578	425	402	345	283		1142	1429	1704	1954
KM												
420	1096					403						
410	1095					401						
400	1077					395	461					
390	1038					380	459					
380	975					363	444					
370	896	1119			446	340	417					
360	794	1107			445	310	380					1815
350	667	1071			438	274	330					1815
340	540	1011	1004		425	236	274				1528	1801
330	417	928	1004	698	406	198	212				1524	1763
320	274	820	985	697	383	157	135			1367	1503	1700
310	143	691	936	688	355	121	71.4			1361	1466	1607
300	60.0	540	865	662	321	87.2	12.4		1341	1338	1407	1495
290		389	754	621	281	60.0			1340	1300	1341	1367
280		219	625	560	237	41.7			1325	1246	1249	1208
270		104	462	477	198	4.5			1292	1173	1143	1050
260		44.9	286	375	154				1240	1086	1038	903
250			119	251	112				1171	982	928	781
240			46.5	127	75.6				1084	865	824	679
230				60.0	47.2				946	754	726	601
220				5.5	1.3				794	643	625	535
210									608	548	532	482
200									446	469	454	437
190									335	396	395	389
180									251	335	340	344
170									202	286	291	300
160									167	245	249	249
150									139	207	207	209
140									124	174	181	186
130									118	156	170	173
120									112	145	161	164
110										12.4		12.4

ELECTRON DENSITY

PUERTO RICO 60 W 12 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		S	S		A							
HM1N	115		110	110		110	114	214	218	259	270	290
HMAX	366		361	359		359	345	373	397	414	407	419
SHMAX	2511		2051	2125		2130	1616	1487	1233	995	672	727
KM												
420										1119		1004
410										1118	960	997
400									1191	1106	955	972
390									1188	1080	926	928
380								1446	1175	1040	875	867
370	2161		1846					1446	1151	988	802	784
360	2157		1845	2032		2032		1437	1116	924	707	679
350	2132		1831	2019		2023	1846	1418	1071	842	608	557
340	2085		1791	1974		1993	1842	1387	1016	745	508	432
330	2014		1715	1896		1941	1815	1346	946	634	403	310
320	1924		1627	1786		1863	1760	1291	867	529	298	189
310	1810		1519	1652		1774	1678	1233	784	417	198	97.2
300	1669		1394	1493		1654	1567	1158	688	286	122	53.1
290	1509		1254	1327		1509	1431	1061	590	179	75.6	
280	1356		1107	1162		1356	1274	946	497	104	45.8	
270	1182		975	1004		1167	1080	807	389	56.5	1.3	
260	1004		847	865		975	896	661	274	5.5		
250	861		735	745		794	698	477	170			
240	735		643	652		643	524	298	97.2			
230	643		567	573		508	375	143	56.5			
220	568		502	502		417	270	54.8	12.4			
210	513		442	442		342	198					
200	467		397	389		286	154					
190	421		362	347		244	119					
180	377		329	310		205	97.2					
170	339		299	278		176	82.7					
160	304		269	250		146	71.4					
150	270		224	215		124	63.8					
140	229		192	189		110	58.2					
130	207		175	174		105	54.4					
120	143		164	163		99.3	50.7					
110			40.2	12.4		12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 13 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A		A	A
HMIN	264	243	227	219	239	268	268	115	110	110	111	110
HMAX	382	334	318	332	376	392	374	267	300	312	335	360
SHMAX	718	625	492	395	412	316	362	478	994	1348	1767	2134
KM												
400						410						
390	1096					410						
380	1095				469	405	492					
370	1079				468	395	492					
360	1038				462	378	485					1786
350	979				452	359	472					1776
340	892	1143		540	436	328	451				1555	1747
330	774	1140		540	415	290	427				1554	1700
320	625	1108	875	534	393	245	393			1446	1538	1628
310	462	1041	868	519	362	189	346			1446	1508	1545
300	286	946	838	495	315	132	278		1072	1431	1463	1435
290	152	807	787	465	262	83.8	198		1063	1393	1397	1319
280	83.8	643	707	422	205	52.2	104		1035	1333	1323	1204
270	40.2	446	596	367	149	12.4	26.3	844	985	1256	1230	1084
260		198	462	304	90.5			837	923	1154	1131	960
250		60.0	262	233	52.2			804	842	1019	1016	844
240			112	143	6.8			739	754	875	903	745
230			40.2	71.4				643	670	716	781	657
220				12.4				508	582	608	667	580
210								335	500	508	565	514
200								170	427	432	477	462
190								115	355	355	411	412
180								86.1	292	295	351	369
170								75.9	240	249	305	328
160								70.0	194	211	262	290
150								67.3	158	185	226	248
140								64.5	130	156	201	210
130								61.7	120	139	186	191
120								49.6	112	129	164	170
110									12.4	12.4		12.4

ELECTRON DENSITY

PUERTO RICO 60 W 13 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		S									
HMIN	114	116	118	109	117	117	229	229	243	281	294	274
HMAX	360	352	358	361	355	359	371	362	408	408	431	383
SHMAX	2135	2132	2197	2213	2183	2227	1653	1219	1176	857	836	804
KM												
440											1119	
430											1119	
420											1107	
410										1290	1215	1074
400										1285	1207	1017
390										1264	1172	943 1290
380							1786			1224	1111	844 1289
370				2048			1786	1446	1170	1027	742	1264
360	2000	2032	2032	2047	2193	2161	1775	1446	1104	917	619	1209
350	1985	2031	2023	2030	2189	2152	1746	1433	1022	794	492	1124
340	1940	2010	1987	1983	2158	2120	1699	1402	917	661	362	1004
330	1860	1960	1923	1907	2095	2067	1631	1353	807	524	240	854
320	1760	1876	1819	1797	1994	1987	1555	1283	691	362	143	661
310	1626	1771	1704	1669	1861	1895	1456	1201	585	229	75.6	477
300	1478	1626	1570	1509	1712	1771	1327	1096	467	127	40.2	262
290	1327	1478	1416	1356	1534	1612	1184	960	348	60.0		112
280	1143	1307	1257	1198	1321	1446	1034	820	229			49.6
270	1004	1127	1096	1050	1143	1257	861	667	143			
260	885	960	946	903	946	1027	643	508	79.7			
250	784	820	807	781	774	834	417	310	43.3			
240	698	698	698	661	643	667	127	112				
230	622	608	608	567	540	519	12.4	12.4				
220	547	535	534	502	462	398						
210	462	482	477	451	403	310						
200	382	438	422	409	362	258						
190	316	399	380	372	324	215						
180	270	365	342	341	289	185						
170	245	332	307	307	253	156						
160	229	296	279	272	222	135						
150	217	255	256	237	193	119						
140	210	222	225	210	169	109						
130	203	207	205	192	154	103						
120	179	143	71.4	180	127	97.8						
110				40.2								

ELECTRON DENSITY

PUERTO RICO 60 W 14 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	238	248	255	215	222	288	312	120	106	107	110	110
HMAX	320	351	342	390	390	419	426	285	295	322	338	365
SHMAX	564	550	392	575	430	401	286	624	957	1531	1761	2348
KM												
430							417					
420						477	416					
410						474	406					
400						467	386					
390				540	484	453	358					
380				538	480	435	321					
370				530	466	414	281					1786
360		896		518	448	381	235					1784
350		896	716	500	420	340	179					1770
340		883	716	479	389	286	127				1528	1742
330		848	701	449	350	233	75.6			1446	1523	1700
320	1167	794	664	417	314	170	42.5			1446	1502	1642
310	1145	716	608	381	272	102				1436	1465	1575
300	1077	619	524	343	229	56.5			1107	1411	1407	1492
290	971	497	427	302	187	12.4		896	1104	1372	1341	1394
280	794	335	310	262	154			893	1075	1312	1257	1285
270	608	161	143	222	119			871	1012	1240	1162	1167
260	335	77.6	49.6	186	89.2			834	926	1159	1059	1059
250	112	21.7		150	64.6			770	842	1061	939	949
240	26.3			108	46.9			688	770	949	824	844
230				67.6	24.7			585	694	820	726	745
220				33.2				462	616	691	634	657
210								323	540	562	548	580
200								209	469	446	483	521
190								132	380	362	423	462
180								99.6	286	298	371	412
170								81.6	198	251	323	366
160								71.1	139	213	282	324
150								67.9	118	185	246	286
140								64.8	110	161	214	253
130								61.6	105	153	194	222
120								12.4	101	146	181	202
110									97.2	71.4	49.6	49.6

ELECTRON DENSITY

PUERTO RICO 60 W 14 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	111	110	110	109	110	115	219	246	238	244	258	286
HMAX	362	357	365	366	357	366	381	369	405	383	394	413
SHMAX	2299	2417	2554	2531	2249	2181	1685	1154	1157	922	667	649
KM												
420												917
410									1265			916
400									1263		906	902
390							1669		1247	1167	905	870
380							1668		1215	1166	887	822
370	2032		2294	2260		2000	1660	1460	1167	1150	847	754
360	2031	2260	2290	2255	2193	1997	1637	1452	1107	1115	794	661
350	2012	2251	2260	2225	2186	1977	1601	1425	1022	1061	724	562
340	1964	2210	2201	2168	2148	1940	1549	1378	928	987	643	446
330	1885	2125	2107	2078	2078	1884	1485	1310	820	896	557	323
320	1773	2004	1990	1969	1969	1811	1411	1229	704	794	462	209
310	1643	1861	1846	1831	1839	1717	1319	1119	596	679	362	127
300	1509	1702	1685	1669	1685	1612	1204	975	497	551	262	67.6
290	1367	1524	1519	1501	1519	1487	1080	794	380	437	155	26.3
280	1221	1359	1341	1324	1324	1327	931	625	274	310	92.8	
270	1050	1182	1143	1159	1159	1184	767	417	173	179	56.5	
260	928	1019	990	1004	982	1019	573	198	102	90.5	12.4	
250	814	889	861	847	820	814	362	49.6	56.5	40.2		
240	716	774	745	729	691	643	179		12.4			
230	643	679	652	634	573	477	83.8					
220	585	608	580	548	495	344	12.4					
210	531	540	514	483	429	268						
200	482	487	462	429	375	214						
190	437	437	412	381	331	173						
180	393	393	369	343	290	146						
170	354	354	335	310	251	121						
160	319	317	301	278	215	107						
150	281	286	269	250	185	97.2						
140	240	248	237	221	164	93.0						
130	214	217	214	196	154	88.8						
120	200	203	179	183	145	84.7						
110		12.4	12.4	83.8	12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 15 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A	A	A	
HMIN		255	263	223	232	239	327	115		116	110	110
HMAX		363	356	319	364	423	443	290		303	344	348
SHMAX		538	449	360	330	401	250	554		1199	1650	1956
KM												
450							335					
440							335					
430						362	331					
420						361	320					
410						359	304					
400						354	283					
390						346	256					
380						335	225					
370		784			403	320	187					
360		783	764		402	304	148					
350		772	761		398	286	102				1341	1640
340		748	739		387	265	60.0				1340	1635
330		716	698		370	237	19.3				1330	1613
320		665	636	634	351	210					1308	1575
310		590	551	627	326	179				1290	1275	1515
300		487	446	602	290	149				1289	1228	1446
290		375	323	559	245	121		854		1274	1167	1359
280		240	198	500	198	92.8		842		1240	1102	1260
270		112	65.7	417	155	69.5		806		1183	1022	1162
260		44.9		310	107	51.3		739		1119	934	1050
250				198	67.6	36.7		643		1016	844	931
240				90.5	42.1	2.0		540		903	754	820
230				43.3				403		781	670	716
220								294		655	590	616
210								198		548	516	540
200								135		454	452	471
190								97.2		382	398	417
180								77.6		320	348	373
170								66.1		262	306	339
160								59.5		222	266	304
150								57.2		193	223	270
140								54.8		164	179	232
130								52.4		150	170	196
120								50.1		112	161	182
110											40.2	49.6

ELECTRON DENSITY

PUERTO RICO 60 W 15 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A						B					
HMIN	113	112	111	117	114	109		199	250	258	286	288
HMAX	353	347	379	369	355	353		380	392	386	400	393
SHMAX	1996	2128	2468	2275	2159	1957		1289	960	759	723	667
KM												
400									1215		1096	1096
390									1215	1119	1083	1094
380			1907					1290	1201	1113	1046	1071
370			1900	2128				1283	1168	1069	982	1018
360	1846		1878	2117	2063	1756		1262	1115	1004	896	939
350	1844	1969	1840	2080	2060	1755		1227	1042	917	784	834
340	1823	1962	1786	2015	2035	1742		1179	952	814	661	704
330	1769	1932	1712	1932	1983	1711		1116	847	704	519	557
320	1685	1866	1631	1812	1907	1661		1041	716	596	362	375
310	1586	1786	1531	1669	1806	1591		952	590	477	209	198
300	1460	1679	1411	1501	1682	1510		854	462	348	97.2	83.8
290	1327	1555	1291	1301	1524	1415		754	323	229	40.2	21.7
280	1191	1416	1143	1096	1371	1303		652	179	127		
270	1065	1257	1016	931	1212	1186		551	97.2	63.8		
260	917	1107	889	781	1050	1065		456	49.6	12.4		
250	794	946	781	655	854	917		353				
240	688	807	679	557	698	774		251				
230	608	679	608	489	562	631		161				
220	540	590	546	437	467	508		90.5				
210	490	516	497	393	396	408		52.2				
200	442	456	451	358	344	329		6.8				
190	394	409	409	327	303	268						
180	348	369	369	299	269	226						
170	310	335	332	271	240	196						
160	262	303	296	237	210	170						
150	219	269	262	202	182	149						
140	198	234	227	179	163	132						
130	189	211	210	169	153	121						
120	180	192	194	127	144	113						
110						40.2						

ELECTRON DENSITY

PUERTO RICO 60 W 16 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A						8	A			
HMIN	308	267	238	217	220	237	265		116	119	117	110
HMAX	407	416	374	349	352	404	376		328	298	325	354
SHMAX	614	716	723	529	415	472	351		1452	1244	1632	2488
KM												
420		896										
410	939	893				469						
400	934	877				469						
390	911	846				465						
380	869	803	896			456	500					
370	807	739	895			443	498					
360	726	661	883		540	427	488					2361
350	619	582	859	688	540	407	466					2359
340	487	492	820	684	533	380	435					2331
330	362	398	771	669	517	347	397		1528		1907	2272
320	198	298	709	643	491	310	351		1522		1863	2182
310	44.9	198	634	603	458	267	295		1496		1774	2057
300		127	540	557	412	227	233		1452	1669	1656	1907
290		79.7	446	495	362	187	161		1383	1604	1528	1727
280		52.2	335	424	310	143	97.2		1304	1516	1376	1519
270		18.0	229	344	248	108	43.3		1204	1407	1221	1321
260			119	255	186	71.4			1080	1269	1050	1127
250			60.0	170	122	47.7			917	1143	907	960
240			12.4	97.2	75.6	12.4			742	1004	796	807
230				57.4	47.2				590	834	688	691
220				18.0	1.3				467	679	608	590
210									380	524	532	514
200									310	408	454	459
190									258	330	389	412
180									215	281	329	366
170									179	236	276	328
160									152	196	232	293
150									132	167	196	255
140									121	154	176	219
130									112	145	167	195
120									49.6	49.6	143	182
110												40.2

ELECTRON DENSITY

PUERTO RICO 60 W 16 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		S	S				B					
HMIN	115	108	110	116	109	116		219	238	267	280	278
HMAX	352	372	372	386	351	343		357	381	402	412	385
SHMAX	2482	2746	2668	2884	2200	1834		1236	888	843	754	637
KM												
420											960	
410										1072	960	
400										1072	950	
390				2430					1119	1060	927	960
380		2327	2361	2426					1119	1030	888	958
370		2327	2361	2400					1107	979	839	940
360	2430	2310	2341	2351	2294			1528	1074	917	770	903
350	2430	2268	2294	2279	2293	1969		1522	1017	834	679	847
340	2403	2203	2219	2183	2271	1967		1494	943	745	585	774
330	2340	2111	2109	2057	2213	1942		1443	858	643	477	667
320	2233	2004	1976	1907	2114	1881		1368	774	524	348	540
310	2096	1861	1820	1747	1985	1794		1270	670	403	219	389
300	1924	1702	1646	1555	1820	1680		1155	562	274	119	229
290	1739	1537	1446	1376	1631	1542		1019	456	161	60.0	97.2
280	1519	1359	1274	1208	1404	1401		861	335	77.6	3.1	26.3
270	1321	1162	1096	1034	1201	1240		716	219	30.9		
260	1111	1004	931	875	990	1050		540	119			
250	960	861	794	742	807	861		375	63.8			
240	834	742	679	631	655	679		179	12.4			
230	716	643	599	547	540	540		83.8				
220	629	568	529	483	454	417		12.4				
210	553	513	477	432	395	335						
200	483	464	434	392	350	276						
190	422	424	396	354	314	232						
180	373	389	362	319	280	195						
170	332	354	332	289	251	164						
160	294	317	305	260	224	139						
150	259	278	276	232	196	118						
140	225	240	246	207	173	108						
130	207	216	217	189	156	102						
120	170	201	194	143	143	90.5						
110		149	40.2		60.0							

ELECTRON DENSITY

PUERTO RICO 60 W 17 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A			A
HMIN	261	248	239	228	244	266	218	118	117	116	118	118
HMAX	366	339	337	337	392	398	323	277	293	329	336	335
SHMAX	546	451	472	378	341	306	283	568	870	1452	1754	2052
KM												
400					396	389						
390					396	387						
380					392	379						
370	885				381	365						
360	882				367	345						
350	858				347	319						
340	814	885	784	540	319	286					1727	2032
330	747	871	779	538	286	245	446			1367	1722	2028
320	655	827	758	526	251	198	446			1361	1693	1998
310	540	745	720	505	215	156	438			1340	1631	1939
300	417	631	657	477	179	115	420		1050	1304	1555	1846
290	262	492	573	437	143	75.6	392		1049	1252	1446	1727
280	127	335	462	382	104	49.6	353	875	1034	1184	1316	1584
270	60.0	170	335	318	71.4	17.0	298	869	999	1105	1184	1429
260		71.4	179	240	49.6		240	842	948	1013	1050	1257
250		12.4	77.6	161	24.3		170	798	875	903	903	1080
240			12.4	77.6			97.2	716	784	784	767	931
230				21.7			54.8	608	679	679	652	794
220							12.4	462	562	562	548	679
210								310	446	469	477	573
200								209	344	396	427	484
190								152	274	330	381	417
180								117	219	281	343	366
170								95.7	176	240	307	329
160								83.0	143	205	270	296
150								78.7	125	179	233	262
140								74.4	118	158	201	227
130								64.6	108	147	181	202
120								21.7	40.2	97.2	127	83.8

ELECTRON DENSITY

PUERTO RICO 60 W 17 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	S				B					
HMIN	116	114	116	111	109	111		211	231	271	241	266
HMAX	356	374	371	365	359	355		394	378	397	394	402
SHMAX	2266	2340	2365	2346	2271	2155		1410	861	813	767	946
KM												
410												716
400								1341		1096	875	716
390								1340		1091	874	707
380		1907	2144					1330	1096	1068	864	685
370		1905	2144	2193				1308	1089	1024	842	650
360	1969	1887	2127	2189	2177	2032		1275	1062	960	810	602
350	1965	1850	2081	2158	2165	2029		1229	1010	883	769	546
340	1941	1792	2000	2095	2126	2010		1171	943	784	710	477
330	1892	1710	1895	1998	2058	1971		1104	865	679	643	403
320	1821	1612	1771	1876	1952	1913		1022	774	540	567	323
310	1737	1495	1626	1719	1826	1829		926	670	403	487	240
300	1631	1367	1465	1555	1683	1732		820	562	262	398	155
290	1501	1240	1280	1376	1519	1618		704	456	143	310	97.2
280	1356	1084	1096	1208	1324	1487		596	348	65.7	219	57.4
270	1208	960	946	1034	1159	1341		487	240		135	23.5
260	1050	844	807	875	990	1127		371	143		79.7	
250	907	747	688	742	834	946		255	79.7		46.5	
240	784	665	601	643	691	754		161	44.9			
230	679	602	535	560	573	573		90.5				
220	599	550	482	495	477	446		47.2				
210	534	503	443	446	406	335						
200	477	459	407	401	356	274						
190	432	417	374	362	310	227						
180	389	377	342	326	270	189						
170	352	342	313	293	237	158						
160	317	310	279	262	209	132						
150	282	270	246	238	184	113						
140	245	237	221	215	166	107						
130	211	212	207	196	154	102						
120	184	170	161	182	145	97.7						
110					40.2							

ELECTRON DENSITY

PUERTO RICO 60 W 18 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A		
HMIN	309	286	250	225	222	256	279	116	117		110	111
HMAX	424	400	345	325	373	428	410	307	343		322	358
SHMAX	534	553	456	352	449	413	332	742	1338		1967	2489
KM												
430	764					396						
420	763					395						
410	750					390	417					
400	723	814				383	414					
390	679	805				371	405					
380	625	781			432	357	389					
370	548	740			432	340	366					
360	467	685			429	319	338					2063
350	362	608	794		423	294	302		1316			2058
340	262	508	791		414	262	262		1315			2033
330	152	408	769	652	402	226	214		1301		2032	1990
320	71.4	298	726	649	387	191	170		1271		2031	1929
310	12.4	179	661	624	369	155	122	960	1221		2014	1850
300		83.8	573	573	348	121	75.6	955	1156		1973	1762
290		40.2	456	500	324	89.2	47.7	932	1077		1907	1640
280			323	408	293	62.3	6.8	889	982		1814	1501
270			179	310	255	43.9		826	875		1704	1356
260			71.4	219	212	12.4		735	774		1555	1212
250			3.1	135	155			631	670		1376	1073
240				67.6	90.5			519	573		1143	928
230				33.2	46.5			408	484		917	794
220								302	398		716	688
210								219	318		573	599
200								165	251		477	521
190								127	194		400	446
180								104	154		341	389
170								90.5	127		298	340
160								81.1	115		259	298
150								74.2	109		222	258
140								68.3	105		191	219
130								63.1	101		174	193
120								43.3	77.6		164	180
110											12.4	

ELECTRON DENSITY

PUERTO RICO 60 W 18 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												F
HMIN	113	114	114	112	111	116	221	207	232	299	311	
HMAX	369	376	386	361	382	375	361	371	424	445	463	
SHMAX	2393	2450	2976	2505	2592	2293	1598	1420	1173	1028	1258	
KM												
470											1473	
460											1472	
450										1341	1458	
440										1338	1425	
430									1072	1314	1374	
420									1072	1266	1302	
410									1063	1191	1218	
400									1044	1096	1107	
390			2500		2000				1015	971	960	
380		2128	2496		2000	2128		1583	970	834	814	
370	1938	2123	2469	2327	1989	2125	1876	1583	922	698	643	
360	1930	2091	2419	2327	1964	2102	1876	1571	869	557	462	
350	1903	2032	2344	2312	1925	2056	1861	1539	811	417	310	
340	1858	1935	2244	2271	1870	1978	1821	1487	747	274	179	
330	1793	1822	2118	2204	1801	1885	1752	1411	672	170	90.5	
320	1705	1683	1969	2107	1714	1773	1669	1319	599	97.2	49.6	
310	1601	1540	1803	1990	1617	1636	1555	1204	521	53.1		
300	1483	1376	1612	1846	1507	1478	1420	1073	439	5.5		
290	1354	1221	1425	1685	1381	1307	1274	931	362			
280	1212	1050	1240	1501	1240	1127	1096	794	286			
270	1080	917	1080	1301	1119	960	917	643	205			
260	946	804	917	1065	982	807	716	492	127			
250	834	709	767	889	847	655	477	335	74.5			
240	735	636	655	729	729	540	219	229	43.3			
230	657	573	565	599	619	454	77.6	135				
220	590	528	497	508	534	375		67.6				
210	536	486	446	441	462	310		19.3				
200	490	446	401	389	400	262						
190	446	409	365	344	346	222						
180	403	372	332	306	298	189						
170	362	339	301	262	259	159						
160	321	307	269	223	225	137						
150	286	272	237	191	196	118						
140	248	240	204	176	172	108						
130	215	214	190	168	155	102						
120	186	179	179	161	144	83.8						

ELECTRON DENSITY

PUERTO RICO 60 W 19 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL	F	F	F	F	F	F	F	F	A		A	A
HMIN			246	290	268			119	116	118	111	
HMAX			348	422	417			297	547	327	351	
SHMAX			562	589	784			780	1620	1798	2300	
KM												
430				755								
420				755	834							
410				728	852							
400				710	822							
390				682	804							
380				643	778							
370				596	743							
360				534	700						2000	
350			885	462	648				1420		2000	
340			879	580	587				1417		1989	
330			854	286	514				1404	2000	1961	
320			809	189	437				1380	1992	1914	
310			747	104	544				1345	1953	1850	
300			661	53.1	240			982	1293	1879	1766	
290			562		145			978	1240	1786	1669	
280			432		65.7			958	1175	1656	1555	
270			262		12.4			922	1096	1465	1420	
260			112					868	1004	1260	1274	
250			40.2					800	885	1073	1080	
240								716	754	875	931	
230								596	651	704	794	
220								462	497	562	661	
210								555	589	467	551	
200								226	502	589	456	
190								165	240	323	582	
180								150	191	272	325	
170								107	155	227	272	
160								92.8	134	187	225	
150								82.8	123	165	195	
140								77.6	118	154	178	
150								72.5	112	146	170	
120								40.2	44.9	60.0	162	

ELECTRON DENSITY

PUERTO RICO 60 W 19 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL		A	A			A	A					
HMIN	110	110	110	110	115	115		254	247	253	288	507
HMAX	360	565	375	367	556	554		399	407	417	426	418
SHMAX	2515	2595	2742	2619	2423	1709		1274	970	847	682	633
KM												
450											917	
420										960	914	917
410									1167	957	895	912
400								1541	1163	940	857	889
390								1537	1142	908	800	847
380			2596					1320	1104	860	732	794
370		2396	2595	2500				1295	1050	805	645	716
360	2161	2394	2372	2492	2450	1669		1254	978	735	548	619
350	2149	2368	2322	2452	2424	1667		1200	892	661	446	508
340	2115	2310	2243	2577	2387	1651		1145	781	582	544	380
350	2054	2218	2157	2264	2316	1618		1065.	661	492	240	251
320	1964	2089	2014	2112	2212	1568		960	529	408	152	119
310	1853	1924	1857	1942	2075	1493		854	405	527	88.5	40.2
500	1721	1752	1669	1739	1907	1408		691	286	240	53.1	
290	1572	1555	1483	1512	1708	1307		540	189	161	12.4	
280	1411	1559	1301	1291	1490	1175		348	127	102		
270	1254	1143	1096	1096	1265	1050		170	80.7	65.7		
260	1096	982	946	917	1073	903		54.8	52.2	40.2		
250	949	834	807	767	875	754			18.0			
240	824	716	707	655	716	608						
230	726	629	625	567	596	477						
220	650	564	557	505	500	548						
210	580	517	508	451	423	255						
200	519	480	465	409	362	194						
190	467	445	425	372	510	155						
180	417	405	389	335	276	125						
170	577	365	550	501	245	104						
160	555	328	510	275	209	91.5						
150	294	290	270	243	179	83.1						
140	253	251	257	213	160	79.5						
150	217	217	212	192	151	75.6						
120	202	203	194	179	155	71.8						
110	49.6	49.6	12.4	12.4								

ELECTRON DENSITY

PUERTO RICO 60 W 20 SEPT 1959

TIME	0000	0100	0200	0500	0400	0500	0600	0700	0800	0900	1000	1100
OUAL									A	A		
HMIN	270	266	291	247	514	515	325	115	116		116	115
HMAX	388	395	595	558	460	477	483	450	464		508	575
SHMAX	583	605	489	375	484	574	655	1457	2166		5236	3964
KM												
580												1595
570												1593
560												1391
550												1387
540												1382
550												1374
520												1365
510											1420	1553
500											1419	1340
490								726			1414	1325
480						643		725			1406	1308
470						641		718		1191	1395	1289
460					565	630		702		1191	1381	1269
450					561	610		676	875	1187	1363	1246
440					549	580		643	873	1178	1341	1221
450					527	544		598	867	1166	1517	1195
420					499	497		546	857	1149	1289	1167
410					465	446		489	842	1128	1257	1136
400			834	764		422	589	423	820	1103	1220	1102
390	885	833	762			372	335	353	794	1073	1179	1067
380	879	821	745			316	280	278	767	1039	1138	1032
370	851	794	712			262	219	212	740	1000	1091	998
360	799	749	661	573	214	170	149	711	955		1050	964
550	732	691	590	569	161	122	97.2	682	908		1009	925
340	643	622	508	551	107	77.6	60.0	649	860		968	883
330	548	529	398	519	63.8	51.7	29.1	615	805		929	842
320	437	432	286	477	34.6	21.7		577	749		884	802
310	323	323	161	417				536	695		858	759
300	198	219	65.7	348				490	638		788	712
290	104	119		270				442	585		735	665
280	53.1	67.6		198				594	535		684	623
270		26.3		127				346	482		633	585
260				71.4				302	432		579	550
250				19.3				259	381		531	520
240								228	345		488	495
230								201	513		457	473
220								177	290		432	456
210								155	269		407	437
200								138	245		381	414
190								123	216		352	583
180								109	187		321	354
170								97.2	161		289	326
160								86.9	136		259	295
150								78.4	123		228	262
140								70.4	116		201	231
150								60.0	105		183	209
120								50.5	44.9		112	161

ELECTRON DENSITY

PUERTO RICO 60 W 20 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2500
OUAL			S			A	A	A				
HMIN	110	110	111	109	109	111		218	267	248	266	263
HMAX	439	369	372	536	541	347		547	466	377	432	421
SHMAX	2250	2097	2320	1417	1456	1502		767	693	609	544	418
KM												
470									645			
460									642			
450									634			
440	1265								620		573	
450	1263								596		573	446
420	1254								567		569	446
410	1241								533		558	443
400	1221		1697						493		540	435
590	1196								451		515	422
380	1164		1697						403	716	486	402
370	1127	1669	1697						356	714	450	579
560	1085	1665	1690						510	705	408	352
350	1034	1642	1672		1252	1143		1050	270	689	356	317
340	979	1606	1644	1191	1252	1140		1045	233	664	304	281
530	922	1555	1605	1189	1245	1127		1024	198	632	251	240
520	857	1491	1555	1174	1225	1102		986	164	595	203	202
310	794	1418	1498	1146	1193	1065		929	134	546	152	161
500	724	1319	1438	1107	1148	1019		858	107	477	108	117
290	661	1204	1357	1055	1096	960		754	81.3	396	71.4	80.7
280	603	1073	1251	982	1019	896		643	57.4	286	49.6	53.8
270	554	946	1127	909	934	820		508	18.0	161	17.0	28.3
260	515	814	1004	834	850	747		335		71.4		
250	483	698	875	754	754	665		198		21.7		
240	461	608	774	679	670	587		107				
230	442	535	672	608	587	500		60.0				
220	429	486	590	546	508	410		12.4				
210	415	450	521	485	459	535						
200	399	422	459	432	378	268						
190	380	597	408	384	527	219						
180	358	570	562	345	282	182						
170	318	339	524	303	244	156						
160	276	307	292	266	210	136						
150	232	276	260	235	182	121						
140	201	240	233	209	164	111						
130	190	214	212	190	154	105						
120	181	192	186	173	146	99.0						
110	12.4	40.2		60.0	60.0							

ELECTRON OENSITY

PUERTO RICO 60 W 21 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL							F	F		A	A	A
HMIN	319	317	269	269	249	280		116	112	113	111	118
HMAX	441	459	405	372	412	410		333	311	327	366	372
SHMAX	375	409	405	355	319	344		1083	1270	1672	2443	2964
KM												
460		484										
450	524	482										
440	524	473										
430	518	457										
420	501	434			335							
410	477	407	500		335	439						
400	442	369	499		332	435						
390	394	325	492		326	425						
380	333	276	477	540	315	406						2536
370	274	229	455	540	300	383					2227	2535
360	212	174	427	532	284	350					2222	2518
350	138	127	389	513	262	310					2192	2475
340	87.2	79.7	344	483	235	267		1240			2135	2408
330	52.2	49.6	292	446	207	219		1239		1697	2052	2315
320	5.5	12.4	240	389	176	170		1224	1420	1691	1941	2187
310			179	323	146	122		1190	1420	1662	1801	2046
300			122	248	118	75.6		1136	1406	1608	1636	1886
290			75.6	161	92.8	45.8		1065	1368	1526	1465	1702
280			47.7	71.4	71.4	1.3		978	1302	1423	1260	1512
270			6.8	12.4	52.6			875	1221	1298	1111	1324
260					34.0			742	1119	1143	931	1127
250					3.1			608	1004	1016	794	975
240								477	875	896	688	834
230								362	729	781	615	707
220								270	596	670	559	622
210								203	477	562	503	553
200								148	380	467	439	497
190								104	294	380	375	446
180								81.3	235	302	316	383
170								73.1	192	224	262	330
160								69.4	163	176	219	289
150								67.0	142	154	179	255
140								64.5	127	141	162	222
130								62.0	118	134	154	202
120								53.1	97.2	127	146	49.6

ELECTRON OENSITY

PUERTO RICO 60 W 21 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							8		A			
HMIN	118	111	110	111	112	115		204		291	273	295
HMAX	350	375	395	396	373	375		391		434	413	414
SHMAX	2932	2817	3285	3046	2551	2551		1566		854	844	748
KM												
440										1038		
430										1037		
420										1023	1072	1119
410										992	1072	1117
400			2536	2396				1420		948	1058	1093
390			2533	2392				1420		887	1027	1042
380		2396	2513	2371	2260	2193		1413		818	977	968
370		2392	2473	2330	2259	2191		1395		726	917	875
360		2364	2412	2269	2237	2173		1367		634	834	754
350	2571	2308	2331	2188	2188	2136		1327		529	745	619
340	2549	2212	2227	2085	2101	2081		1277		417	643	477
330	2481	2102	2103	1969	1994	2003		1215		298	519	335
320	2362	1969	1962	1831	1866	1907		1143		179	375	189
310	2210	1816	1803	1683	1727	1806		1059		97.2	240	88.3
300	2014	1650	1612	1519	1584	1682		960		49.6	143	43.3
290	1810	1478	1429	1341	1416	1542		847			79.7	
280	1578	1312	1257	1143	1257	1401		729			43.3	
270	1362	1143	1065	990	1096	1240		619				
260	1162	1004	917	854	946	1065		508				
250	975	885	794	735	820	889		398				
240	834	784	698	636	704	716		274				
230	716	698	622	560	608	573		161				
220	625	622	562	495	527	437		83.8				
210	547	553	516	442	459	335		40.2				
200	483	489	477	397	396	268						
190	432	432	446	358	341	215						
180	389	384	409	324	294	179						
170	350	340	366	289	255	151						
160	316	300	323	251	219	129						
150	278	266	278	215	190	114						
140	240	237	240	186	170	107						
130	211	214	217	172	155	102						
120	127	192	198	163	144	90.5						
110			49.6									

ELECTRON OENSITY

PUERTO RICO 60 W 22 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S			A	
HMIN	290	285	220	254	207	309	301	116	111	119	117	112
HMAX	406	412	364	353	338	446	432	289	342	339	336	358
SHMAX	641	669	490	513	344	333	445	648	1547	1777	1997	2225
KM												
450						417						
440						416	532					
430						409	532					
420		960				394	527					
410	928	960				372	515					
400	924	946				344	495					
390	902	912				310	471					
380	860	857				272	438					
370	800	786	500			232	397					
360	724	698	500	875		184	348					1876
350	631	596	496	874		138	292		1316			1870
340	529	477	487	858	424	100	240		1315	1669	1815	1843
330	417	335	474	819	422	66.9	179		1308	1661	1812	1797
320	286	209	457	761	414	43.9	117		1291	1633	1791	1723
310	161	119	435	679	400	3.1	54.8		1265	1586	1750	1638
300	71.4	67.6	411	551	379				1225	1516	1690	1531
290	3.1	33.2	381	403	353			971	1177	1436	1603	1411
280			343	219	321			961	1125	1329	1501	1283
270			300	97.2	282			927	1057	1208	1388	1164
260			251	46.5	240			875	969	1096	1254	1038
250			198		194			781	875	960	1131	917
240			135		143			643	774	834	993	814
230			65.7		92.8			492	679	716	861	707
220			3.1		56.5			362	573	608	729	622
210					18.0			262	477	497	616	547
200								186	380	410	516	483
190								135	298	341	432	427
180								105	235	286	367	380
170								89.2	191	248	318	335
160								74.5	159	212	278	294
150								68.0	138	179	243	253
140								63.8	124	157	211	216
130								58.7	113	146	190	194
120								40.2	93.9	40.2	143	181

ELECTRON OENSITY

PUERTO RICO 60 W 22 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL										A		
HMIN	111	110	110	110	115	110	218	210	226		308	300
HMAX	358	373	385	359	369	355	362	369	376		448	390
SHMAX	2424	2471	2800	2387	2325	1812	1222	992	662		501	388
KM												
450											634	
440											631	
430											618	
420											593	
410											561	
400											517	
390			2260								462	679
380		2032	2237						814		396	669
370		2031	2236		1938		1367	1096	811		329	640
360	2161	2013	2192	2294	1931	1669	1367	1091	797		262	590
350	2151	1974	2128	2280	1908	1666	1356	1073	769		186	524
340	2114	1914	2041	2232	1868	1650	1331	1043	726		119	437
330	2048	1823	1929	2149	1813	1617	1290	999	673		77.6	335
320	1948	1715	1799	2032	1732	1567	1233	946	608		49.6	229
310	1826	1593	1652	1889	1638	1493	1164	875	532		12.4	97.2
300	1683	1460	1493	1719	1534	1408	1077	784	446			
290	1537	1312	1324	1555	1420	1311	971	688	368			
280	1371	1159	1159	1376	1283	1191	847	585	286			
270	1208	1019	1004	1191	1164	1061	704	477	212			
260	1061	889	875	1004	1019	931	557	371	143			
250	917	784	754	834	861	794	389	251	92.8			
240	804	701	665	716	735	667	219	152	54.8			
230	707	631	594	608	619	551	90.5	90.5	23.5			
220	629	578	536	532	519	437	26.3	49.6				
210	560	531	492	465	439	353		1.3				
200	503	486	454	406	368	280						
190	455	442	417	357	315	227						
180	408	394	382	314	272	187						
170	365	353	347	276	233	155						
160	328	314	310	243	201	129						
150	290	279	276	215	175	114						
140	253	244	240	188	158	107						
130	217	216	213	173	150	102						
120	192	200	189	164	132	97.2						
110		49.6	12.4	40.2		12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 23 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S			A	
HMIN	273	267	276	258	235	230	269	116	115	119	115	117
HMAX	385	399	406	368	374	379	379	285	323	329	325	376
SHMAX	415	411	418	372	349	318	284	649	1312	1652	1834	2397
KM												
410			524									
400		540	523									
390	582	536	515									
380	581	523	498		389	348	410					1756
370	571	499	479	524	389	347	407					1754
360	551	468	446	521	384	341	397					1739
350	521	425	406	510	376	330	377					1710
340	481	372	355	488	363	316	353					1669
330	424	316	298	460	345	297	321		1316	1612	1786	1606
320	355	257	235	421	324	274	276		1315	1603	1783	1539
310	286	198	173	372	298	248	219		1302	1573	1764	1455
300	205	138	117	310	268	221	161		1274	1517	1726	1360
290	119	88.3	63.8	240	232	189	97.2	939	1227	1453	1669	1260
280	54.8	52.2	26.3	152	191	157	53.1	936	1162	1360	1588	1162
270		18.0		71.4	152	124	5.5	913	1088	1251	1490	1061
260				21.7	112	90.5		868	996	1143	1376	969
250					67.6	62.3		800	896	1016	1240	889
240					33.2	41.7		691	794	885	1065	814
230								573	691	754	903	747
220								432	585	643	735	673
210								310	477	540	585	608
200								219	371	446	467	532
190								161	278	371	389	462
180								127	209	310	330	395
170								106	168	258	286	340
160								91.1	132	219	250	294
150								81.3	116	182	215	249
140								75.1	108	158	186	210
130								66.4	103	148	171	190
120								44.9	97.2	49.6	143	152

ELECTRON DENSITY

PUERTO RICO 60 W 23 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A			A	A	A	A	A	A	A		A
HMIN		110	113	115				218	227	216	258	
HMAX		395	376	379				417	410	404	409	
SHMAX		3238	2808	2653				1319	994	1024	879	
KM												
420								1215				
410								1213	1096	1131	960	
400		2500						1200	1088	1130	956	
390		2498						1177	1064	1115	940	
380		2478	2396	2193				1144	1025	1085	913	
370		2439	2391	2185				1101	967	1038	875	
360		2381	2363	2155				1043	896	975	824	
350		2302	2310	2104				979	818	900	767	
340		2201	2231	2032				909	735	814	701	
330		2083	2122	1927				824	643	716	616	
320		1948	1990	1810				726	551	616	524	
310		1786	1837	1682				634	456	508	437	
300		1612	1669	1540				532	353	408	348	
290		1425	1501	1386				437	255	310	251	
280		1240	1321	1226				335	186	226	152	
270		1050	1127	1080				251	135	170	71.4	
260		903	960	946				179	94.5	123	21.7	
250		784	834	814				117	66.9	89.2		
240		688	716	707				77.6	45.8	64.6		
230		615	634	622				49.6	12.4	46.5		
220		559	562	547				12.4		16.4		
210		513	503	477								
200		472	456	422								
190		430	417	371								
180		385	375	327								
170		341	335	292								
160		298	298	262								
150		270	265	233								
140		234	242	207								
130		212	215	187								
120		200	179	143								
110		40.2										

ELECTRON DENSITY

PUERTO RICO 60 W 24 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A						A	A	A	A	A	
HMIN	257	267	278	264	218	230	222					
HMAX	395	419	400	394	358	331	362					
SHMAX	690	636	480	510	509	289	337					
KM												
420		698										
410		694										
400	854	683	670	670								
390	853	664	663	669								
380	842	636	644	659								
370	819	600	612	637			424					
360	786	559	568	603	625		424					
350	744	508	508	559	622		419					
340	685	446	439	503	609	477	403					
330	608	378	362	439	585	477	384					
320	508	310	278	368	551	469	362					
310	408	246	198	286	508	449	328					
300	286	173	117	198	456	420	290					
290	179	107	60.0	127	400	372	245					
280	102	60.0	12.4	75.6	341	316	202					
270	56.5	19.3		40.2	280	248	156					
260	18.0				224	179	115					
250					167	97.2	80.7					
240					97.2	49.6	55.9					
230					54.8		32.2					
220					12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 24 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			A	A	A	A	A					
HMIN	110	117						230	224	190	291	323
HMAX	369	374						393	354	375	442	458
SHMAX	2527	2689						1557	837	844	632	604
KM												
460												754
450											754	751
440											754	736
430											746	709
420											726	670
410											695	619
400								1612			652	560
390								1611			596	492
380		2260						1599		865	540	417
370	2128	2258						1572		863	469	335
360	2118	2237						1530	1240	851	396	248
350	2084	2192						1473	1238	826	318	161
340	2022	2115						1398	1210	789	248	83.8
330	1926	2019						1311	1150	745	173	43.3
320	1819	1895						1208	1065	695	117	
310	1695	1771						1080	960	637	71.4	
300	1555	1620						917	834	579	43.9	
290	1416	1474						754	679	508		
280	1269	1312						590	524	441		
270	1107	1143						417	375	375		
260	971	1004						240	229	315		
250	847	875						112	132	257		
240	745	774						60.0	71.4	198		
230	661	679						3.1	40.2	143		
220	590	599								97.2		
210	540	527								62.9		
200	495	465								42.1		
190	454	412										
180	413	366										
170	371	323										
160	331	286										
150	286	250										
140	240	221										
130	214	206										
120	200	97.2										
110	49.6											

ELECTRON DENSITY

PUERTO RICO 60 W 25 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A							A		A	
HMIN	327	308	241	208	215	246	272	206		117	114	116
HMAX	459	421	356	370	402	456	417	345		349	340	371
SHMAX	580	634	635	567	498	497	489	957		1842	2192	2750
KM												
460	774					394						
450	768					394						
440	745					391						
430	711	875				386						
420	658	875				379	565					
410	599	866			469	369	563					
400	524	843			469	355	555					
390	446	806			466	340	540					
380	368	754			458	323	519					2396
370	286	686		557	446	304	492					2396
360	198	590	875	554	430	283	455					2380
350	112	487	872	547	412	257	408	1050		1669		2340
340	60.0	371	857	533	386	229	355	1048		1661	2294	2274
330	19.3	251	826	515	355	201	292	1037		1635	2275	2182
320		135	788	495	321	174	224	1016		1591	2221	2057
310		26.3	724	471	282	146	161	980		1524	2125	1907
300			643	440	246	120	102	936		1446	2004	1747
290			540	405	211	97.2	67.6	885		1341	1846	1555
280			437	362	175	73.9	42.1	827		1229	1650	1359
270			323	310	143	55.6		761		1119	1446	1184
260			179	257	112	41.5		679		982	1240	1038
250			71.4	203	83.8	12.4		573		847	982	907
240				143	61.9			432		729	814	794
230				88.3	44.9			240		634	688	698
220				53.1	15.9			112		548	590	616
210				12.4				44.9		477	508	540
200										410	441	465
190										342	384	400
180										280	335	346
170										235	291	302
160										205	251	262
150										161	211	223
140										151	178	195
130										139	168	184
120										71.4	143	143

ELECTRON DENSITY

PUERTO RICO 60 W 25 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL								A	A			
HMIN	116	114	114	115	114	116	218	224	253	249	223	240
HMAX	371	370	381	394	364	370	388	405	414	365	371	352
SHMAX	2671	2661	2707	3285	2357	2258	1528	1327	1062	870	784	588
KM												
420									1240			
410								1393	1239			
400				2536				1391	1224			
390			2430	2534			1528	1375	1192			
380	2327		2430	2517			1523	1341	1143		1004	
370	2327	2448	2409	2482	2177	1922	1502	1285	1076	1290	1004	
360	2311	2430	2353	2428	2175	1914	1465	1224	993	1287	993	885
350	2267	2354	2257	2355	2147	1888	1409	1143	889	1260	964	885
340	2197	2269	2132	2260	2090	1845	1347	1050	767	1206	911	871
330	2090	2144	1978	2148	2005	1786	1258	928	643	1124	847	838
320	1962	1985	1803	2018	1916	1702	1162	814	519	1016	770	782
310	1816	1820	1631	1880	1721	1607	1050	691	389	889	679	716
300	1669	1636	1446	1735	1572	1501	931	573	274	716	582	625
290	1501	1446	1260	1572	1429	1381	807	456	179	540	477	529
280	1321	1274	1111	1411	1269	1262	691	362	112	362	362	408
270	1143	1096	975	1240	1143	1131	573	262	68.6	189	262	274
260	993	960	844	1034	1004	1004	446	170	40.2	71.4	179	143
250	865	834	745	889	861	875	323	107		12.4	107	63.8
240	754	735	665	754	745	742	209	67.6			67.6	3.1
230	670	652	590	634	643	619	97.2	34.6			40.2	
220	590	573	521	532	548	497	26.3					
210	521	508	465	454	469	398						
200	462	451	412	395	396	318						
190	412	403	369	341	335	246						
180	366	362	332	302	282	195						
170	324	326	294	268	240	163						
160	286	293	255	237	209	142						
150	253	256	222	207	179	126						
140	222	225	198	181	159	112						
130	200	206	188	170	151	103						
120	143	167	161	143	135	77.6						

ELECTRON DENSITY

PUERTO RICO 60 W 26 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL				A					A		A	
HMIN	250	283	251	204	209	207	272	108	112	110		106
HMAX	396	401	366	314	336	354	437	303	307	330		353
SHMAX	593	519	555	415	274	204	271	688	1183	1769		2198
KM												
440							268					
430							267					
420							264					
410		754					257					
400	716	754					249					
390	714	745					241					
380	702	720					226					
370	678	674	814				209					
360	643	619	811			246	190					1907
350	598	553	793			245	169					1906
340	540	469	759		362	241	146					1889
330	483	380	710		360	230	123			1846		1851
320	417	278	643	625	354	217	101			1832		1793
310	348	170	557	624	340	200	79.7	939	1473	1791		1710
300	278	83.8	456	613	319	183	60.0	937	1466	1723		1606
290	198	43.3	335	588	294	163	46.1	917	1428	1618		1483
280	127		226	555	262	141	24.7	869	1359	1487		1365
270	77.6		119	508	226	118		802	1268	1354		1224
260	45.8		56.5	446	184	97.2		716	1127	1182		1073
250	1.3			362	143	76.7		608	990	1019		949
240				251	102	61.4		492	834	875		834
230				143	67.6	47.5		380	679	754		735
220				77.6	43.9	32.6		294	540	643		657
210				40.2	3.1	7.4		219	432	529		582
200								165	335	427		508
190								124	240	327		432
180								99.3	179	255		362
170								85.2	125	207		304
160								76.8	111	171		259
150								70.4	107	152		219
140								66.9	104	141		186
130								63.5	100	134		173
120								60.0	92.8	128		165
110								21.7		12.4		122

ELECTRON DENSITY

PUERTO RICO 60 W 26 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			A	A	A						A	
HMIN	115	117	115	115	114	116	222	218	252	250	265	265
HMAX	360	358	361	362	359	356	367	378	381	380	394	379
SHMAX	2465	2577	2458	2246	2162	1886	1420	1176	852	949	795	708
KM												
400											1096	
390									1191		1094	
380								1341	1191	1290	1077	1050
370			2227	2177			1640	1335	1175	1279	1041	1041
360	2260	2396	2226	2176	2063	1846	1634	1311	1134	1245	982	1011
350	2244	2384	2208	2152	2052	1841	1606	1268	1066	1188	909	960
340	2196	2338	2161	2093	2014	1816	1555	1203	971	1105	807	883
330	2111	2249	2075	1994	1949	1767	1478	1127	865	1004	679	794
320	2004	2132	1969	1861	1852	1695	1383	1031	742	875	551	667
310	1861	1985	1839	1702	1734	1589	1265	928	608	729	403	540
300	1702	1820	1698	1537	1588	1479	1131	807	477	573	262	389
290	1537	1652	1540	1359	1446	1341	990	679	348	403	143	240
280	1359	1483	1386	1184	1274	1216	847	557	226	251	77.6	97.2
270	1191	1291	1221	1027	1143	1080	698	432	127	127	33.2	44.9
260	1027	1111	1050	861	975	931	557	310	56.5	60.0		
250	889	975	907	735	807	781	403	189		3.1		
240	774	854	794	643	679	643	240	104				
230	686	754	688	567	565	519	83.8	60.0				
220	615	661	599	503	477	408		12.4				
210	547	573	521	451	403	323						
200	489	502	454	403	342	257						
190	435	435	400	356	286	207						
180	383	380	353	305	240	170						
170	339	332	314	259	202	141						
160	300	298	280	225	179	117						
150	262	268	250	205	165	103						
140	226	234	219	193	156	94.6						
130	202	209	204	184	149	89.5						
120	161	143	143	152	132	84.3						

ELECTRON DENSITY

PUERTO RICO 60 W 27 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	A
HMIN	253	232	201	239	277	363	281	116	110	109		
HMAX	365	319	328	362	425	491	396	294	299	327		
SHMAX	626	507	451	243	242	215	274	669	992	1562		
KM												
500						268						
490						268						
480						266						
470						259						
460						248						
450						233						
440						214						
430					257	191						
420					256	166						
410					253	135						
400					248	107	368					
390					239	80.7	367					
380					225	55.9	361					
370	960			304	211	30.9	349					
360	958			304	195		331					
350	936			301	175		310					
340	891			293	155		282					
330	826		548	279	134		240			1669		
320	735	960	546	262	112		194			1662		
310	631	948	538	242	90.5		138			1630		
300	508	905	522	216	67.6		83.8	960	1215	1571		
290	375	834	502	189	47.7		46.5	959	1207	1483		
280	240	729	481	157	12.4			939	1177	1367		
270	104	590	442	123				898	1123	1224		
260	49.6	417	389	90.5				834	1050	1065		
250		198	327	54.8				742	949	903		
240		71.4	262	5.5				596	834	754		
230			186					462	679	631		
220			104					344	529	532		
210			53.1					240	408	454		
200								170	310	389		
190								124	240	325		
180								97.2	191	274		
170								82.9	155	227		
160								74.1	131	192		
150								68.8	115	163		
140								65.0	108	142		
130								61.2	103	133		
120								40.2	97.7	121		
110									12.4	40.2		

ELECTRON DENSITY

PUERTO RICO 60 W 27 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	S									
HMIN			118	112	118	119	219	236	244	259	272	240
HMAX			371	349	355	351	379	369	401	389	364	343
SHMAX			2408	2626	2075	1696	1236	922	957	810	611	660
KM												
410									1061			
400									1061			
390									1053	1061		
380			2177				1341		1033	1054		
370			2177				1334	1191	999	1031	1143	
360			2160		1815	1555	1310	1183	949	990	1139	
350			2114	2571	1813	1555	1268	1155	893	936	1102	1050
340			2041	2556	1795	1546	1205	1108	826	858	1022	1049
330			1929	2502	1758	1520	1133	1041	739	774	917	1030
320			1799	2403	1703	1479	1041	949	643	655	774	988
310			1652	2260	1625	1418	939	844	540	540	608	924
300			1483	2096	1534	1348	834	729	437	403	403	834
290			1324	1924	1423	1265	716	608	335	240	198	716
280			1179	1715	1303	1155	608	477	229	127	71.4	573
270			1034	1512	1186	1050	508	335	143	60.0		389
260			889	1321	1061	928	398	198	77.6	5.5		209
250			764	1096	939	807	286	97.2	40.2			77.6
240			661	931	820	688	161	40.2				
230			573	794	704	573	71.4					
220			502	688	585	467	12.4					
210			442	594	477	380						
200			394	516	396	302						
190			350	446	330	240						
180			310	389	281	195						
170			274	335	240	161						
160			237	294	210	138						
150			207	253	182	121						
140			192	224	163	109						
130			182	209	150	102						
120			112	179	97.2	49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 28 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL							S	S				
HMIN	259	266	234	206	242	277	302	116	113	114	115	112
HMAX	371	390	335	291	385	419	383	303	358	311	331	350
SHMAX	473	474	476	251	195	179	164	717	1770	1532	1941	2147
KM												
420						193						
410						193						
400						189						
390		679			219	184	286					
380	698	672			218	176	285					
370	697	652			216	165	280					
360	688	615			210	153	267		1420			
350	664	568			201	139	248		1416			1907
340	625	502	754		189	124	222		1402		2032	1896
330	573	424	752		174	107	184		1376		2031	1862
320	508	342	737		157	90.5	138		1340	1907	2012	1807
310	424	262	705		140	74.5	71.4	854	1292	1906	1961	1723
300	342	173	661	484	121	58.5		854	1233	1881	1874	1623
290	248	107	594	484	101	44.2		842	1164	1814	1756	1501
280	152	60.0	508	474	82.1	12.4		816	1086	1704	1612	1367
270	71.4	23.5	389	449	64.9			774	996	1555	1446	1228
260	12.4		251	406	48.3			722	909	1376	1260	1107
250			119	342	26.3			650	826	1143	1065	975
240			49.6	262				565	747	939	889	847
230				170				477	661	754	735	735
220				83.8				375	582	596	616	634
210				40.2				286	487	484	532	548
200								219	389	389	462	477
190								170	294	316	395	417
180								130	235	258	341	366
170								108	192	215	294	318
160								92.3	163	179	251	278
150								82.3	140	155	216	237
140								77.1	125	140	189	207
130								71.9	118	132	171	189
120								43.3	97.2	120	143	165

ELECTRON DENSITY

PUERTO RICO 60 W 28 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL						A	A	A	A	A		
HMIN	112	111	110	111	115	117		231	236	264	287	300
HMAX	360	358	365	352	349	347		366	409	408	416	404
SHMAX	2405	2320	2578	2248	2007	1842		1075	989	820	697	563
KM												
420											960	
410									1027	993	957	917
400									1022	989	937	915
390									1006	971	898	894
380									978	934	841	846
370			2396					1316	936	889	764	778
360	2128	2161	2392	2227				1312	885	834	670	688
350	2116	2150	2359	2226	2096	1846		1293	827	761	573	585
340	2079	2107	2294	2203	2083	1840		1255	754	670	467	456
330	2014	2032	2196	2143	2038	1812		1195	672	573	348	310
320	1924	1918	2060	2057	1951	1761		1124	590	462	219	161
310	1810	1786	1889	1934	1846	1686		1027	500	348	119	71.4
300	1682	1620	1719	1786	1712	1578		907	410	229	63.8	3.1
290	1524	1462	1534	1612	1570	1458		781	318	135	19.3	
280	1371	1298	1324	1425	1394	1329		643	233	75.6		
270	1208	1127	1159	1216	1191	1182		492	155	40.2		
260	1050	990	1004	1019	982	1034		323	102			
250	903	854	861	847	794	875		189	62.9			
240	774	745	735	707	631	729		77.6	26.3			
230	670	652	643	608	508	590						
220	582	567	565	527	424	467						
210	514	503	495	462	362	362						
200	456	451	435	408	315	280						
190	414	405	384	362	278	219						
180	377	365	340	321	240	179						
170	339	329	298	286	209	151						
160	298	296	262	250	176	131						
150	259	262	228	215	154	116						
140	225	231	203	188	140	107						
130	204	209	190	172	133	100						
120	179	184	180	161	112	71.4						
110			40.2									

ELECTRON DENSITY

PUERTO RICO 60 W 29 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL				A		A		A	A	A		
HMIN	273	239	204		236		278			117	117	117
HMAX	374	323	302		403		371			310	326	369
SHMAX	549	549	360		222		166			1419	1807	2488
KM												
410					214							
400					213							
390					212							
380	885				208		274					
370	884				202		274					2000
360	864				193		270					1993
350	824				183		259					1969
340	762				171		243					1928
330	679	1096			158		221			1846		1864
320	573	1094			142		187			1841		1793
310	446	1064	557		127		147		1786	1811		1698
300	310	996	556		110		101		1765	1744		1589
290	161	889	549		94.2		60.0		1704	1657		1460
280	60.0	735	530		79.2		12.4		1593	1543		1329
270		540	504		65.1				1460	1416		1208
260		286	467		52.2				1280	1257		1096
250		90.5	411		40.2				1096	1111		971
240		12.4	342		12.4				917	960		854
230			248						698	807		742
220			119						540	679		643
210			49.6						437	573		540
200									355	477		462
190									295	406		389
180									249	346		340
170									213	295		294
160									176	253		253
150									161	216		219
140									153	196		196
130									145	185		185
120									71.4	143		71.4

ELECTRON DENSITY

PUERTO RICO 60 W 29 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A			A		A			A	A	A
HMIN			116	118	117	116	229	228	252	267	281	
HMAX			377	357	354	344	358	377	394	397	380	
SHMAX			2895	2437	2202	1754	1227	987	817	748	622	
KM												
400									1004	1050		
390									1003	1045		
380			2500					1119	990	1020	1084	
370			2495					1116	961	971	1069	
360			2466	2361	2032		1473	1098	917	903	1024	
350			2415	2354	2030	1727	1467	1066	857	824	949	
340			2340	2317	2009	1725	1444	1019	786	716	844	
330			2238	2248	1966	1705	1402	960	698	596	716	
320			2118	2148	1897	1661	1341	883	596	477	540	
310			1969	2018	1804	1591	1263	794	487	323	323	
300			1786	1866	1682	1510	1164	698	389	198	152	
290			1578	1685	1555	1411	1050	596	274	117	65.7	
280			1362	1490	1401	1296	903	497	170	63.8		
270			1162	1280	1254	1159	754	389	90.5	19.3		
260			982	1073	1111	1027	557	274	46.5			
250			820	889	960	889	335	161				
240			698	742	807	754	127	77.6				
230			601	619	679	625	12.4	21.7				
220			527	532	562	497						
210			471	459	469	398						
200			417	400	396	310						
190			375	348	330	246						
180			335	306	281	195						
170			296	266	240	164						
160			262	233	209	139						
150			226	201	184	121						
140			201	178	163	109						
130			188	168	151	102						
120			143	112	112	83.8						

ELECTRON DENSITY

PUERTO RICO 60 W 30 SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A	A		C	A	S	A	A		
HMIN		251	242	236	238	302	312		115	116	111	115
HMAX		335	326	344	373	440	389		295	325	328	328
SHMAX		446	363	299	250	228	162		919	1471	2077	1969
KM												
440						251						
430						250						
420						245						
410						238						
400						227						
390						214	292					
380					286	200	288					
370					286	183	277					
360					283	161	257					
350				396	276	138	231					
340		834		395	267	114	195					
330		831	634	390	253	89.2	152			1669	2327	2161
320		809	631	377	236	60.0	97.2			1664	2313	2147
310		764	615	363	216	35.5				1628	2253	2094
300		694	584	340	193				1143	1555	2146	1990
290		585	540	313	166				1140	1446	1996	1846
280		446	467	276	137				1113	1307	1806	1685
270		240	375	235	106				1061	1157	1601	1501
260		83.8	262	179	77.6				978	1004	1383	1301
250			90.5	119	49.6				875	834	1167	1119
240				44.9	12.4				764	691	960	939
230									643	585	794	774
220									529	492	655	643
210									417	417	532	532
200									342	362	446	454
190									280	310	383	395
180									232	266	330	346
170									191	229	286	300
160									161	196	248	253
150									140	171	216	216
140									125	156	194	195
130									115	147	180	184
120									90.5	117	148	135

ELECTRON DENSITY

PUERTO RICO 60 W 30 SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		A	A		A		A				A
HMIN	116	116	111	117	114	115	210	239	265	271	254	279
HMAX	346	378	366	372	352	342	377	400	413	382	382	380
SHMAX	2120	2482	2417	2903	2288	1681	1586	1073	1004	693	734	600
KM												
420									1143			
410									1142			
400								1167	1131			
390								1159	1105	1072	960	
380		2063		2536			1528	1137	1064	1072	960	949
370		2057	2294	2535			1525	1100	1010	1054	949	938
360		2028	2287	2519	2161		1509	1043	943	1010	921	903
350	1907	1978	2247	2480	2160	1756	1481	979	854	934	875	847
340	1903	1907	2170	2418	2141	1755	1440	900	764	844	814	770
330	1880	1797	2045	2334	2096	1737	1386	814	661	729	745	670
320	1836	1680	1891	2214	2021	1693	1318	716	551	596	652	562
310	1768	1555	1727	2050	1917	1612	1240	616	427	462	562	432
300	1678	1407	1537	1929	1798	1512	1152	519	298	310	456	262
290	1567	1269	1359	1747	1654	1400	1038	408	179	161	335	112
280	1446	1096	1167	1534	1501	1269	917	310	97.2	71.4	219	12.4
270	1329	960	1004	1316	1341	1111	781	212	44.9		104	
260	1191	854	847	1096	1175	960	643	135		49.6		
250	1050	754	729	896	1019	820	497	77.6				
240	903	670	643	745	861	679	362	12.4				
230	767	594	573	634	704	551	179					
220	643	535	522	540	585	454	77.6					
210	540	482	481	471	477	368						
200	465	434	438	411	389	292						
190	406	393	397	362	330	232						
180	357	354	357	318	282	189						
170	314	317	319	278	244	159						
160	267	276	291	243	216	136						
150	231	240	262	219	190	119						
140	211	218	235	207	165	108						
130	198	206	212	192	153	102						
120	71.4	161	192	127	127	89.2						

AVERAGE ELECTRO DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
COUNT	19	21	25	24	25	22	23	17	21	22	19	17
HMIN	262	255	241	229	234	265.	276	121	113	113	113	112
NMAX	956	893	756	564	435	375	393	881	1214	1534	1758	1845
HMAX	379	364	351	355	383	403	390	295	315	331	341	358
SHMAX	650	570	508	430	375	314	291	662	1176	1594	1896	2169
SHINF	3346	3088	2639	2022	1601	1373	1400	3148	4601	5920	6855	7374
KM												
950	90.5	78.5	62.5	47.9	41.7	40.8	39.9	55.5	84.7	115	138	157
900	116	101	80.1	61.4	53.5	52.3	51.1	71.2	109	148	176	201
850	149	129	103	78.8	68.6	66.9	65.5	91.2	139	189	226	258
800	190	165	132	101	87.8	85.5	83.8	117	179	243	290	331
750	243	211	168	129	112	109	107	150	229	310	371	423
700	310	269	215	164	143	138	136	192	292	396	473	539
650	392	341	273	209	181	174	172	245	373	505	602	685
600	492	429	344	263	226	215	215	311	473	639	762	864
550	609	533	430	328	279	262	264	393	595	801	954	1078
540	634	556	448	342	290	271	274	411	622	836	997	1124
530	659	578	467	356	302	280	284	430	650	873	1040	1172
520	685	602	487	370	313	290	295	450	679	911	1085	1220
510	710	625	507	385	325	299	305	470	709	949	1130	1270
500	736	648	527	400	336	307	315	491	739	989	1176	1319
490	761	672	547	415	347	315	325	513	771	1029	1223	1369
480	786	695	567	430	358	323	334	535	802	1069	1271	1419
470	810	718	587	445	368	329	343	558	834	1110	1318	1469
460	833	740	607	459	379	335	351	581	867	1151	1365	1518
450	855	762	626	473	388	340	359	604	900	1191	1412	1565
440	875	782	645	487	396	344	366	627	932	1231	1458	1611
430	893	801	663	499	404	346	371	651	964	1270	1503	1655
420	909	818	680	511	410	346	375	675	996	1308	1546	1696
410	921	833	696	522	415	344	376	698	1027	1345	1587	1733
400	928	844	710	531	418	340	375	721	1057	1379	1624	1765
390	930	851	721	537	419	333	371	744	1085	1411	1658	1793
380	924	853	729	542	417	324	364	766	1112	1439	1687	1814
370	910	847	733	543	411	312	352	786	1136	1464	1711	1827
360	883	834	733	541	402	296	335	805	1156	1485	1729	1832
350	840	813	726	534	390	278	311	823	1174	1500	1740	1824
340	783	780	713	522	373	258	284	838	1187	1509	1741	1801
330	709	739	689	505	351	235	253	851	1195	1511	1733	1760
320	616	684	654	481	326	209	219	860	1196	1504	1706	1700
310	513	611	605	451	296	181	180	865	1189	1483	1656	1620
300	403	523	544	413	261	153	144	866	1172	1445	1584	1521
290	289	429	470	368	223	129	112	860	1144	1386	1493	1406
280	188	321	385	317	183	106	80.2	845	1101	1304	1383	1279
270	109	209	287	262	143	81.3	49.5	817	1041	1207	1260	1149
260	51.5	111	193	200	107	59.5	33.6	770	965	1093	1126	1022
250	19.1	38.3	111	144	71.4	40.9	20.2	702	874	969	985	901
240	8.6	10.2	58.4	87.2	40.3	23.6	13.5	609	771	838	850	791
230	3.2	.6	28.0	48.2	20.6	10.4	9.0	499	662	710	727	695
220			11.3	21.2	4.8	4.6	3.6	380	552	594	619	612
210			4.1	7.9	1.3	.6	.5	270	450	496	529	539
200				.5	.5			185	363	416	456	478
190								135	290	349	397	423
180								106	231	295	345	375
170								89.1	188	249	300	332
160								78.4	155	211	258	292
150								72.1	134	180	221	254
140								67.7	121	159	193	222
130								62.6	115	148	177	200
120								39.7	91.9	114	156	156
110								1.3	9.5	21.3	17.6	25.3

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
COUNT	20	19	21	22	20	15	9	19	22	21	22	18
HMIN	113	112	113	113	113	113	199	224	235	258	274	277
NMAX	2013	2077	2168	2134	1975	1816	1601	1355	1133	1094	976	1022
HMAX	368	372	374	376	367	355	365	378	400	400	407	393
SHMAX	2380	2470	2521	2508	2218	1902	1460	1220	1017	869	724	698
SHINF	8057	8330	8636	8529	7790	7026	5976	5044	4212	3957	3478	3581
KM												
950	180	190	201	199	176	153	141	128	119	115	106	104
900	231	244	257	255	226	196	181	164	153	147	135	134
850	296	312	330	327	290	251	232	211	195	189	173	171
800	379	400	423	418	371	322	297	270	250	241	222	219
750	485	511	540	534	475	412	379	344	319	308	283	279
700	618	651	688	681	605	525	484	439	406	391	359	355
650	784	826	872	863	768	668	614	556	512	494	453	449
600	987	1039	1097	1084	967	843	774	698	640	618	565	562
550	1227	1290	1361	1344	1202	1052	964	865	786	759	692	692
540	1279	1344	1418	1400	1253	1097	1005	901	817	789	718	719
530	1332	1399	1476	1457	1305	1144	1046	937	848	818	744	746
520	1386	1454	1534	1514	1358	1192	1089	974	878	848	770	774
510	1440	1510	1593	1572	1411	1240	1132	1011	908	877	796	801
500	1494	1566	1652	1629	1464	1289	1176	1048	938	906	821	828
490	1549	1622	1710	1687	1518	1338	1219	1084	967	934	845	854
480	1603	1678	1768	1743	1571	1388	1262	1120	995	961	868	880
470	1656	1732	1825	1799	1623	1437	1305	1155	1022	987	889	904
460	1708	1785	1880	1852	1674	1485	1347	1189	1046	1010	909	927
450	1758	1835	1932	1903	1723	1533	1388	1221	1068	1032	926	948
440	1806	1883	1982	1950	1770	1579	1426	1250	1087	1051	940	966
430	1850	1926	2027	1994	1813	1623	1463	1277	1103	1066	950	982
420	1890	1966	2067	2032	1853	1664	1496	1301	1114	1078	956	994
410	1925	2000	2101	2065	1888	1701	1526	1321	1121	1084	955	1001
400	1955	2027	2129	2090	1917	1735	1551	1336	1121	1084	946	1001
390	1978	2047	2148	2107	1939	1763	1572	1345	1112	1073	925	991
380	1993	2059	2157	2114	1954	1786	1586	1348	1092	1048	890	968
370	1998	2060	2153	2110	1959	1802	1593	1341	1059	1007	841	930
360	1992	2046	2131	2091	1952	1810	1590	1321	1011	950	776	873
350	1969	2012	2085	2053	1929	1807	1573	1286	948	877	696	799
340	1924	1954	2014	1992	1886	1789	1539	1235	871	789	602	706
330	1852	1872	1914	1905	1818	1751	1487	1168	783	689	501	592
320	1758	1768	1794	1794	1727	1691	1417	1084	688	577	397	469
310	1647	1646	1655	1665	1613	1606	1328	984	584	459	292	350
300	1522	1507	1503	1520	1484	1506	1223	867	480	337	200	243
290	1386	1362	1345	1369	1347	1388	1098	738	376	228	126	158
280	1239	1210	1185	1211	1194	1253	958	605	278	137	72.7	97.8
270	1091	1058	1034	1056	1050	1109	801	463	192	70.9	37.5	52.8
260	953	926	895	906	905	954	624	318	119	28.1	19.2	23.5
250	833	811	776	776	772	799	422	196	67.1	11.0	9.1	7.9
240	729	714	680	671	658	659	267	106	34.1	3.1	3.1	.2
230	646	634	601	587	563	533	149	48.0	17.1	2.2	1.8	
220	577	569	536	520	486	426	80.2	20.8	8.2	.8		
210	519	512	483	464	422	344	47.4	7.7	4.3			
200	468	463	435	416	369	279	36.4	1.1	.8			
190	422	419	394	373	324	229	28.6					
180	379	380	357	333	285	191	23.2					
170	340	342	321	296	249	162	19.8					
160	302	306	287	262	218	139	17.1					
150	266	271	252	231	190	123	15.1					
140	234	239	222	206	169	112	13.9					
130	212	216	205	190	157	105	12.8					
120	170	179	164	165	137	91.2	10.8					
110	8.7	20.7	10.0	13.4	8.6	10.7						

AVERAGE ELECTRON DENSITY — KP ABOVE 4.5

PUERTO RICO — 60 W — SEPT 1959

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
COUNT	7	7	5	4	4	5	4	7	5	3	4	6
HMIN	290	285	264	258	247	282	314	117	113	114	113	114
NMAX	844	742	584	696	466	479	554	951	1268	1737	1477	1755
HMAX	416	434	417	366	393	448	449	351	361	332	414	427
SHMAX	635	592	526	455	415	452	464	986	1501	1739	2203	2664
SHINF	3016	2687	2173	2417	1729	1803	2026	3669	5077	6640	6370	7615
KM												
950	94.7	89.9	67.9	61.9	49.4	65.6	76.8	79.7	112	130	163	204
900	121	115	87.0	79.4	63.3	84.0	98.4	102	143	167	208	262
850	156	147	111	102	81.1	107	126	131	184	214	267	334
800	199	188	142	130	104	137	160	168	235	275	340	426
750	253	240	181	167	132	174	204	214	300	352	433	539
700	321	304	230	212	168	220	257	273	382	449	547	677
650	404	381	288	270	211	274	320	346	483	572	685	839
600	501	471	357	340	263	336	392	435	605	725	844	1018
550	608	569	433	422	320	399	464	539	745	910	1013	1202
540	630	588	448	440	332	411	478	562	775	951	1046	1240
530	652	607	463	459	344	422	491	584	806	993	1079	1278
520	673	626	477	477	355	433	503	607	836	1036	1111	1315
510	693	644	491	496	367	442	513	631	866	1081	1142	1352
500	713	661	505	515	378	451	523	654	897	1126	1171	1389
490	732	676	518	534	389	458	531	677	927	1172	1199	1425
480	749	690	529	552	399	464	537	701	956	1219	1226	1460
470	765	702	539	571	408	468	540	723	985	1266	1252	1495
460	778	711	548	589	416	468	539	746	1012	1314	1276	1528
450	788	718	555	606	423	465	533	767	1039	1361	1299	1559
440	792	722	559	623	427	458	523	787	1064	1408	1319	1588
430	791	721	561	639	429	447	507	807	1087	1454	1337	1613
420	784	715	559	653	428	431	485	825	1109	1499	1353	1636
410	772	702	553	665	424	410	457	841	1129	1541	1365	1654
400	751	680	544	676	417	385	422	854	1147	1582	1374	1667
390	722	648	530	684	407	357	382	866	1162	1619	1379	1676
380	683	607	510	690	394	324	335	876	1174	1653	1380	1678
370	634	556	484	691	379	289	282	882	1181	1682	1377	1674
360	577	490	452	685	364	253	225	886	1185	1705	1369	1660
350	508	422	412	672	345	215	173	887	1184	1723	1352	1632
340	438	345	367	645	323	178	141	884	1179	1733	1327	1590
330	371	264	315	600	302	144	106	876	1168	1734	1293	1532
320	296	184	262	540	280	112	71.8	863	1152	1719	1246	1457
310	230	115	204	464	255	78.0	44.2	846	1130	1680	1187	1371
300	186	74.0	153	369	237	57.2	18.9	822	1098	1616	1115	1274
290	154	42.3	114	258	214	41.3	11.9	788	1053	1527	1035	1165
280	135	20.7	92.1	148	190	23.9	1.7	744	995	1413	944	1054
270	115	6.9	65.1	72.4	161	17.7		689	924	1287	864	949
260	99.7		50.2	29.5	131	7.5		621	835	1140	770	848
250	83.6		39.6	4.8	94.0			543	743	998	692	760
240	68.1		27.0		61.8			458	647	868	619	683
230	51.7		13.1		38.2			370	552	750	559	612
220	32.7		.6		17.2			286	464	640	505	553
210	13.9				4.5			218	389	529	456	502
200	1.8							164	321	435	408	452
190								127	257	349	362	406
180								103	210	281	323	362
170								89.6	171	226	287	323
160								80.2	147	186	256	287
150								74.0	131	162	225	251
140								69.3	120	146	200	220
130								64.4	111	138	181	200
120								40.3	88.4	98.4	146	148
110										4.1	24.3	23.8

AVERAGE ELECTRON DENSITY — KP ABOVE 4.5

PUERTO RICO — 60 W — SEPT 1959

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
COUNT	5	6	5	6	6	8	4	10	6	7	7	8
HMIN	113	111	112	112	112	114	196	219	262	265	296	292
NMAX	1783	1948	2109	1836	1768	1840	1722	1302	1115	1194	1112	986
HMAX	406	394	380	372	365	369	375	384	441	420	440	418
SHMAX	2313	2484	2648	2152	2042	2095	1650	1263	1077	1031	905	744
SHINF	7343	7980	8596	7331	7029	7286	6507	4935	4221	4398	4042	3525
KM												
950	175	190	202	168	156	166	160	128	149	147	145	112
900	225	243	260	215	200	213	205	164	191	188	186	144
850	288	312	333	276	256	273	263	210	244	241	238	184
800	369	399	426	354	328	350	336	268	311	307	303	235
750	470	510	544	452	419	447	430	343	395	391	386	300
700	597	648	693	576	534	570	548	436	498	495	487	380
650	753	820	878	730	679	723	694	552	620	620	610	479
600	939	1028	1102	918	855	910	873	692	758	764	751	595
550	1151	1268	1364	1140	1064	1131	1083	854	899	919	899	724
540	1195	1319	1420	1187	1109	1179	1128	888	925	949	927	751
530	1240	1370	1477	1236	1156	1227	1174	923	950	979	955	777
520	1284	1422	1534	1285	1203	1277	1221	958	973	1008	981	803
510	1328	1473	1592	1334	1250	1326	1267	993	994	1035	1006	828
500	1372	1524	1649	1384	1298	1376	1314	1028	1013	1060	1029	852
490	1415	1575	1706	1433	1346	1426	1361	1062	1028	1083	1049	875
480	1457	1624	1761	1482	1394	1476	1407	1095	1039	1103	1066	897
470	1498	1672	1816	1530	1441	1525	1452	1128	1045	1119	1080	916
460	1538	1717	1867	1576	1487	1572	1496	1158	1046	1129	1089	934
450	1575	1761	1916	1620	1532	1618	1537	1187	1039	1134	1091	948
440	1609	1801	1962	1662	1575	1661	1576	1213	1026	1133	1083	957
430	1641	1837	2002	1700	1615	1701	1612	1236	1006	1123	1063	961
420	1668	1868	2038	1735	1651	1738	1644	1255	977	1103	1028	959
410	1691	1893	2067	1764	1684	1769	1671	1270	939	1071	982	950
400	1709	1913	2088	1788	1712	1796	1693	1280	895	1028	921	931
390	1722	1925	2101	1806	1734	1816	1708	1282	843	973	839	900
380	1729	1927	2102	1814	1750	1829	1716	1277	785	909	750	855
370	1729	1919	2090	1814	1759	1833	1712	1262	722	836	646	796
360	1719	1895	2060	1802	1757	1824	1694	1239	660	760	534	721
350	1697	1847	2010	1772	1741	1801	1657	1203	597	679	430	633
340	1657	1781	1940	1722	1705	1760	1604	1157	528	591	341	534
330	1595	1695	1849	1653	1653	1704	1528	1095	464	504	264	434
320	1509	1592	1744	1562	1579	1627	1440	1021	401	416	203	324
310	1410	1477	1622	1452	1491	1538	1329	933	335	336	146	227
300	1296	1348	1484	1329	1391	1431	1208	834	278	261	102	148
290	1177	1211	1336	1194	1274	1309	1075	722	216	192	60.7	75.4
280	1048	1074	1181	1051	1145	1180	928	607	162	141	33.7	26.2
270	925	939	1032	921	1022	1044	776	487	111	97.7	11.0	5.1
260	816	823	898	799	895	893	603	364	66.0	64.4		
250	716	724	778	691	765	755	424	243	34.4	41.6		
240	637	646	683	606	655	627	232	145	19.1	28.3		
230	573	581	606	536	560	515	116	74.4	6.7	20.4		
220	520	528	543	481	482	417	58.8	29.2		13.9		
210	473	483	494	434	420	338	38.5	6.5		9.0		
200	433	443	450	394	367	281	29.5			6.0		
190	399	407	411	357	321	234	23.5					
180	367	370	373	324	281	198	20.3					
170	333	336	336	292	245	170	18.6					
160	299	302	300	258	212	147	17.5					
150	264	271	264	227	185	130	16.9					
140	232	239	232	201	167	118	16.2					
130	207	216	212	185	156	111	15.6					
120	169	195	186	168	146	96.6	12.4					
110	24.9	42.8	12.4	16.7	18.8	1.6						

TABLES OF IONOSPHERIC DATA

September 1959 -- July 1956

Table 1

Anchorage, Alaska (61.2°N, 149.9°W) — September 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.0					2.4	2.50
01		(4.0)					2.8	(2.45)
02		(4.1)					3.5	(2.45)
03		(4.25)					2.3	(2.42)
04		(4.0)			---	----		(2.45)
05		(4.1)			129	1.50		(2.50)
06		4.6		---	121	2.05		2.62
07		5.05		3.9	115	2.50		2.60
08		5.75		4.2	112	2.80		2.70
09		5.9		(4.4)	109	3.05		2.65
10		6.0		(4.4)	107	3.25		2.65
11		6.4		4.6	107	3.32		2.70
12		6.2		4.6	109	3.38		2.55
13		6.4		4.7	109	3.30		2.65
14		6.35		4.6	107	3.10		2.65
15		6.65		(4.5)	109	2.90		2.75
16		6.8		---	109	2.75		2.85
17		7.0		---	113	2.42		2.90
18		6.45			<130	(2.00)		2.95
19		5.95			---	----		2.85
20		5.2						2.85
21		(4.2)						(2.85)
22		(4.0)					2.0	2.75
23		(3.9)					2.4	(2.72)

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) — July 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.3					7.2	2.70
01		5.45					6.6	2.60
02		5.5					4.6	2.60
03		5.5					3.6	2.60
04		5.2						2.55
05		5.2						2.50
06		5.25						2.45
07		5.4						2.40
08		(5.0)					3.6	(2.38)
09		(6.0)						(2.40)
10		(6.8)						(2.50)
11		5.7						2.25
12		5.15						2.25
13		5.7						2.35
14		6.0						2.38
15		5.9						2.45
16		5.8						2.40
17		6.0						2.55
18		6.0						2.58
19		5.85					3.4	2.60
20		5.4						2.62
21		5.6					3.2	2.70
22		5.55					4.1	2.70
23		5.5					2.9	2.62

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

Table 3

Thule, Greenland (76.6°N, 68.7°W) — June 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	380	5.9	250	(3.6)	111	2.45		2.80
01	(430)	5.6	245	3.7	111	2.45		2.65
02	360	(5.6)	250	(3.8)	109	2.50		(2.70)
03	410	5.65	240	4.0	109	2.70		2.68
04	430	5.4	235	4.0	105	2.80		2.60
05	445	5.3	235	4.3	105	2.90		2.62
06	455	(5.5)	230	4.5	105	3.00		(2.50)
07	520	5.35	230	4.5	103	3.15		(2.30)
08	520	(5.5)	220	4.6	101	3.30		(2.25)
09	500	5.2	220	4.7	101	3.32		2.40
10	510	5.5	225	4.7	101	3.40		2.32
11	560	(5.4)	220	4.7	101	3.40		(2.22)
12	550	(5.3)	215	4.7	101	3.45	4.3	(2.40)
13	510	(5.5)	220	4.7	101	3.40	5.6	(2.50)
14	540	5.5	<220	4.5	102	3.30	4.7	2.40
15	520	5.7	220	4.5	101	3.30	4.5	2.40
16	490	5.6	220	4.4	103	3.20	4.8	2.45
17	460	5.7	230	4.2	104	3.00	3.7	2.55
18	460	(5.5)	230	4.2	105	2.95	3.4	(2.50)
19	450	5.75	230	4.2	105	2.80	3.2	2.60
20	430	5.25	235	4.0	107	2.60		(2.60)
21	415	5.6	240	4.0	109	2.60	2.6	2.68
22	(400)	5.4	250	(4.0)	110	2.45		2.65
23	(380)	(5.8)	255	3.6	111	2.50		2.70

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

Table 4

Fairbanks, Alaska (64.9°N, 147.8°W) — June 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.6					2.6	2.62
01		(4.8)			---	E	2.2	(2.60)
02		(5.0)			---	E	2.6	(2.55)
03		(4.8)		---	---	E	4.0	(2.50)
04		(4.9)		---	---	----	3.4	(2.42)
05		5.3		3.2	<124	(1.88)	2.5	2.45
06		5.35		3.4	103	2.05	2.2	2.45
07		5.75		3.6	101	2.25	2.3	2.45
08		5.7		3.7	101	2.40		2.40
09		5.2		3.8	100	2.55		2.40
10		5.3		3.8	99	2.60		2.40
11		5.1		3.9	99	2.70	2.8	2.35
12		5.2		4.0	99	(2.60)		2.35
13		5.1		4.1	99	2.60		2.40
14		5.2		4.0	99	2.60		2.38
15		5.2		4.0	101	2.45		2.45
16		5.2		3.8	101	2.30		2.50
17		5.3		(3.8)	105	2.20		2.55
18		5.1		---	109	(1.95)	2.2	2.65
19		5.0		---	125	1.65	2.2	2.68
20		5.1		---	133	E	2.3	2.75
21		5.1			---	E	1.8	2.75
22		4.7			---	E	2.5	2.78
23		(4.6)					2.5	2.70

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

Table 5

Maui, Hawaii (20.8°N, 156.5°W) — June 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.65	300				2.2	2.65
01		8.9	<300				2.0	2.75
02		8.4	290				2.4	2.75
03		7.9	280					2.70
04		7.45	280					2.70
05		7.0	290				1.7	2.65
06	---	6.8	270	---	(116)	2.00	2.1	2.65
07	---	7.6	240	---	109	(2.85)	4.6	2.60
08	(390)	8.9	230	4.9	105	3.35	4.5	2.38
09	440	9.8	220	5.6	105	3.70	4.4	2.30
10	520	10.1	(215)	5.9	105	4.00	4.5	2.30
11	465	10.7	210	6.2	107	4.10	>4.8	2.35
12	415	11.4	210	6.0	107	4.25	4.6	2.50
13	405	11.8	<215	6.0	107	4.20	4.6	2.60
14	390	11.8	(220)	5.9	107	4.18	4.6	2.60
15	380	11.95	220	5.8	107	4.00	4.3	2.70
16	355	12.0	230	5.6	107	3.70	4.2	2.75
17	340	11.95	(240)	(5.3)	109	3.30	4.0	2.75
18	300	11.0	<255		<115	(2.70)	3.8	2.85
19		10.25	275		---	----	3.6	2.80
20		9.6	280				2.8	2.65
21		9.2	305				2.9	2.60
22		8.95	<320				3.0	2.60
23		8.65	<315				3.4	2.65

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

Table 6

Talara, Peru (4.6°S, 81.3°W) — June 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.6	240					2.80
01		9.2	240					2.95
02		8.6	240					2.95
03		8.3	240					3.12
04		7.2	230					3.25
05		5.4	240					3.05
06		4.8	245					2.90
07		7.3	265		<131	2.30	2.4	2.95
08		8.8	240		115	3.10	3.2	2.85
09		9.65	230		111	3.55	3.7	2.55
10		10.2	220	---	110	3.85		2.30
11	---	10.55	210	---	109	4.00		2.20
12	---	10.8	210	---	109	4.10		2.15
13	---	10.9	205	---	109	4.10		2.15
14	(440)	11.0	(210)	(6.4)	109	4.00		2.15
15	---	11.15	210	---	109	3.70	4.0	2.15
16	---	11.1	220	---	110	3.40	3.8	2.10
17		10.95	250		113	2.95	3.8	2.15
18		10.7	230		<143	2.15	3.2	2.15
19		(10.5)	350				2.1	2.15
20		(10.05)	370				1.8	(2.25)
21		10.5	350				2.0	2.42
22		10.6	280					2.65
23		10.3	240					2.85

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

Table 7

Grand Bahama I. (26.6°N, 78.2°W) May 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.3	205				2.2	2.65
01		8.0	270				2.0	2.65
02		7.7	270				2.6	2.65
03		7.1	270				2.5	2.65
04		6.8	280				(2.4)	2.60
05		6.7	280				(3.1)	2.65
06	---	7.5	255	---	119	2.25	2.3	2.80
07	---	0.5	<240	---	107	3.00	3.2	2.00
08	---	9.05	220	5.1	105	3.38	3.6	2.65
09	360	9.0	<220	5.4	105	(3.70)	4.2	2.65
10	410	10.2	215	5.9	105	4.00	4.3	2.60
11	370	10.4	210	5.8	105	4.10	4.2	2.60
12	375	10.0	215	6.1	105	4.20	4.4	2.60
13	370	11.0	220	6.0	107	4.20	4.2	2.60
14	360	11.05	220	6.0	107	4.10	4.3	2.60
15	370	10.7	220	5.7	107	3.90	4.1	2.60
16	355	10.3	220	5.5	107	3.58	4.1	2.65
17	---	10.0	240	---	109	3.12	3.7	2.65
18		9.3	255		111	2.55	3.2	2.70
19		9.3	260				3.1	2.65
20		0.75	<260				3.1	2.60
21		8.5	280				3.0	2.60
22		8.4	295				3.0	2.60
23		0.3	295				2.9	2.60

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

Table 8

Bogota, Colombia (4.5°N, 74.2°W) May 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.0	230					2.80
01		9.0	250				2.0	2.90
02		0.4	235				1.8	2.95
03		7.4	230				2.0	3.00
04		6.65	240				2.0	2.70
05		5.9	260				2.4	2.65
06		7.1	260		120	2.10	2.5	2.95
07		0.8	235		111	2.95		3.00
08		10.0	225		105	3.50	3.8	2.80
09		11.0	220		106	3.90		2.55
10		11.7	<220		110	4.10	4.3	2.50
11		12.45	(215)		109	4.25	4.4	2.50
12	(415)	13.4	215	6.2	109	4.25	4.5	2.50
13	(300)	14.0	(220)	(6.3)	109	4.20	4.4	2.58
14	(450)	14.25	(215)	(6.9)	105	4.00	4.5	2.50
15	(425)	14.4	(225)	(6.6)	105	3.80	4.5	2.50
16	---	14.5	230	---	105	(3.32)	4.2	2.50
17		13.5	250		111	2.75	4.0	2.58
18		12.9	260		---	1.90	3.5	2.55
19		12.55	310				3.2	2.55
20		12.8	300				3.0	2.60
21		12.65	280				3.0	2.70
22		12.25	255				2.2	3.00
23		11.3	235				2.1	3.08

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

Table 9

Huancayo, Peru (12.0°S, 75.3°W) May 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.6	215					3.10
01		8.25	220					3.10
02		7.2	220					3.10
03		6.3	225					3.12
04		5.7	220					3.10
05		5.3	225					3.15
06		5.5	255		---	----		2.90
07		9.4	240		111	2.50	4.5	3.05
08		11.5	230		107	(3.20)	7.5	2.90
09		12.2	215		---	(3.60)	0.0	2.55
10	---	12.2	210		---	(3.90)	8.5	2.40
11	---	11.8	200		---	(4.00)	0.7	2.30
12	---	11.2	200		---	(4.05)	0.7	2.30
13	---	10.8	200		---	(4.00)	0.6	2.25
14	---	11.0	200		---	(3.80)	0.7	2.25
15		11.2	210		---	(3.60)	7.0	2.25
16		11.2	230		---	(3.20)	7.5	2.25
17		10.9	255		109	(2.50)	5.7	2.25
18		10.3	310		---	----		2.25
19		9.35	350					2.25
20		9.0	315					2.40
21		9.0	250					2.65
22		8.8	220					2.88
23		0.9	220					3.00

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

Table 10

Ilo, Peru (17.4°S, 71.2°W) May 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		10.0	235				1.8	3.00
01		9.0	230					3.05
02		7.5	230					3.15
03		6.0	230					3.05
04		4.05	240					3.10
05		4.25	250					3.08
06		5.6	205		---	----		2.80
07		9.9	255		(129)	2.65		3.05
08		12.7	245		123	3.20		2.90
09		13.8	235		119	3.52	4.1	2.62
10		13.0	225		119	(3.95)	4.5	2.45
11		13.2	220		119	----	6.0	2.30
12		12.25	220		115	----	7.2	2.20
13		11.0	220		119	----	7.0	2.22
14		11.8	220		119	(3.70)	4.4	2.20
15		11.9	235		121	3.45	3.0	2.25
16		11.9	260		124	3.00	3.4	2.25
17		11.85	280		<153	2.20	4.1	2.30
18		11.35	330				2.5	2.25
19		10.85	325					2.30
20		10.7	275				2.0	2.50
21		10.5	245				2.6	2.70
22		10.6	240				2.6	2.85
23		10.4	235				2.1	3.00

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

Table 11

Bogota, Colombia (4.5°N, 74.2°W) April 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.3	225					3.00
01		9.5	225				1.7	3.00
02		8.4	225				1.8	2.90
03		7.65	230				1.9	2.80
04		6.45	230				2.0	2.80
05		5.8	245				2.2	2.80
06		7.6	270		<145	2.00	2.3	2.80
07		10.55	240		111	2.90		3.00
00		11.9	230		109	3.50		2.85
09		12.95	225		107	3.90		2.70
10		13.9	220		106	4.10		2.65
11		14.6	215		105	4.25	4.3	2.55
12		15.1	210		105	4.30		2.50
13	---	16.0	(210)	---	109	4.25		2.52
14	---	16.4	(215)	---	105	4.10		2.55
15	(410)	15.95	(225)	---	100	3.80	4.3	2.55
16	---	15.65	(230)		105	3.30	4.0	2.50
17		14.9	245		(111)	2.80	3.8	2.50
10		14.7	285		---	1.90	3.8	2.55
19		16.15	310				3.2	2.60
20		16.9	280				2.8	2.70
21		16.6	245				2.3	2.90
22		16.1	225				2.0	3.00
23		13.4	220					3.00

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

Table 12

Juliaca, Peru (15.5°S, 70.2°W) April 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.6	220				3.4	3.05
01		8.6	220				3.4	3.10
02		7.1	225				3.5	3.08
03		6.4	235				3.7	3.05
04		5.5	230				3.7	3.10
05		4.8	240				3.7	3.20
06		7.3	265		<137	1.90	4.4	3.00
07		11.1	240		115	2.05	5.0	3.00
00		13.3	230		(109)	(3.40)	7.4	2.70
09		14.4	220		---	(3.00)	8.7	2.50
10		13.0	210		---	(4.00)	8.9	2.30
11		12.65	210		---	(4.10)	9.0	2.25
12		12.3	205		---	(4.10)	9.0	2.25
13		12.3	210		---	(4.00)	9.0	2.20
14		12.5	<210		---	(3.80)	0.7	2.20
15		12.6	230		---	(3.50)	8.4	2.20
16		12.5	240		---	(3.05)	7.5	2.22
17		12.2	270		<141	(2.32)	5.4	2.20
18		(11.3)	335					2.20
19		9.9	345					2.10
20		10.5	295				2.9	2.35
21		10.8	240				3.1	2.65
22		10.05	230				3.4	2.85
23		9.95	220				3.4	2.95

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 13

Tromso, Norway (69.7°N, 19.0°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		---	(320)				4.0	----
01		(5.6)	(310)				3.2	(2.50)
02		(5.5)	(340)				3.2	(2.35)
03		(5.1)	(315)		---	----	4.0	----
04		(4.8)	(325)		---	----	4.0	(2.45)
05		(3.9)	(315)				3.2	----
06		4.8	(290)				1.8	(2.50)
07		5.7	(280)		---	----	2.8	2.60
08		6.4	260		---	----	2.0	2.80
09	---	7.5	270		---	----		2.85
10	250	8.6	(260)		---	2.30		2.80
11	250	10.2	(250)		---	2.35		2.70
12	250	11.0	(250)		---	2.50		2.70
13	245	11.2	250		---	2.45		2.85
14	(245)	8.7	245		---	2.40	2.4	2.90
15	---	7.8	245		---	2.10	2.6	2.90
16		5.3	240		---	----	2.9	2.80
17		5.5	(235)		---	----	3.2	(2.90)
18		(5.7)	250				3.3	(2.60)
19		5.8	(245)				4.0	(2.70)
20		5.8	(295)		---	----	3.7	(2.65)
21		(5.6)	(275)		---	----	3.2	----
22		(5.2)	(295)				3.2	----
23		(5.0)	(330)				4.0	----

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 14

Kiruna, Sweden (67.0°N, 20.3°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.0	350				4.0	(2.6)
01		6.0	340				3.2	(2.6)
02		6.0	325				2.8	2.6
03		6.0	340				3.8	2.6
04		6.0	310				3.8	(2.6)
05		5.0	300					2.6
06		5.0	300					2.6
07		5.8	<280		---	---		2.7
08		6.4	270		---	(2.0)		2.8
09	---	7.2	250	---	---	2.0		2.8
10		8.4	250		---	2.1		2.8
11		10.0	250		---	2.4		2.8
12		11.2	250		---	2.4		2.8
13		11.3	250		---	2.4		2.8
14		9.9	245		---	2.4		2.8
15		8.7	250		---	2.2		2.85
16		5.7	260		---	1.7		2.75
17		5.3	290		---	---	2.6	2.8
18		5.0	300				3.6	2.8
19		5.0	295				3.8	2.7
20		5.6	280				4.0	2.8
21		6.0	325				3.9	2.6
22		6.0	340				3.6	(2.6)
23		5.8	345				3.9	2.6

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

Table 15

Slough, England (51.5°N, 0.6°W) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.8	295				<1.4	2.50
01		4.8	305				<1.4	2.40
02		4.5	300				<1.4	2.45
03		4.6	300				<1.4	2.50
04		3.9	290				<1.4	2.55
05		3.6	270				<1.4	2.55
06		3.6	<270				<1.6	2.50
07		5.3	260		---	1.80	2.4	2.75
08		8.7	230		115	2.20	2.6	3.10
09		11.0	230		110	2.70	2.8	(3.00)
10		12.3	225		110	3.00	3.0	3.00
11		12.8	225		105	3.30		2.90
12		13.4	230		110	3.40		2.90
13		12.9	225		110	3.30		2.90
14		13.0	230		110	3.15		2.90
15		12.7	230		115	2.95		2.90
16		12.2	225		120	2.50	2.5	2.95
17		11.4	225		---	2.00	2.2	2.95
18		9.7	215				2.2	2.90
19		(8.0)	220				<1.6	2.85
20		6.8	235				<1.6	2.70
21		6.1	250				<1.6	2.70
22		5.4	270				<1.6	2.60
23		5.0	270				<1.6	2.55

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

Table 16

Schwarzenburg, Switzerland (46.8°N, 7.3°E) February 1959

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	5.7						3.0
01	290	5.5						3.0
02	300	5.4						3.0
03	300	5.2						2.9
04	290	5.0						2.95
05	280	4.8						3.0
06	280	4.2						3.05
07	260	4.7						3.0
08	230	8.1						3.4
09	220	11.4			100	2.5		3.45
10	210	13.2			100	3.0		3.4
11	210	13.6			100	3.2		3.4
12	210	13.9			100	3.4		3.3
13	210	13.5			100	3.4		3.3
14	210	13.3			100	3.3		3.3
15	220	13.2			100	3.1		3.3
16	(220)	(12.2)			100	2.7		(3.3)
17	(220)	(12.0)			---	---		(3.3)
18	---	----						---
19	(210)	(8.6)						(3.3)
20	220	7.7						3.3
21	230	7.1						3.2
22	240	6.5						3.2
23	260	6.0						3.0

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

Table 17

Bogota, Colombia (4.5°N, 74.2°W) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		12.0	210				2.3	3.15
01		8.7	205				2.2	3.20
02		6.0	205				2.6	3.00
03		5.1	240		---	----	2.5	2.92
04		4.45	<250				3.0	2.90
05		3.85	260				2.6	2.90
06		5.5	275				2.8	2.75
07		9.5	245		115	2.60		3.05
08		12.65	230		106	3.35		3.05
09		14.3	220		105	3.80		3.00
10		14.6	210		105	4.00		2.85
11		14.4	205		105	4.20		2.70
12	---	14.7	200	---	105	4.20		2.60
13	(410)	14.95	205	---	105	4.15	4.4	2.55
14	(400)	15.0	205	---	105	4.00	4.3	2.55
15	---	15.0	230		105	3.78	4.4	2.55
16		14.3	235		109	3.45	4.2	2.58
17		13.5	245		115	2.90	3.6	2.60
18		13.5	270		131	2.00	3.7	2.68
19		14.35	275				3.4	2.70
20		17.0	270				3.2	2.75
21		17.2	230				3.0	2.80
22		(15.5)	220				2.5	(2.90)
23		14.8	225				2.2	3.05

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

Table 18

Singapore, British Malaya (1.3°N, 103.8°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		10.4	240				<1.1	2.65
01		10.5	260				<1.1	2.70
02		10.4	265				<1.1	2.80
03		10.1	250				<1.0	2.90
04		9.2	250				<1.1	2.80
05		8.2	240				<1.1	2.90
06	---	6.3	250	---				2.90
07	---	9.2	260	---	125	2.50		2.95
08	---	10.9	245	---	115	3.30		2.70
09	---	11.6	235	---	110	3.80		2.40
10	---	12.3	230	---	110	4.10		2.30
11	---	12.9	225	---	110	(4.30)		2.15
12	---	13.2	220	---	110	(4.35)		2.10
13	---	13.4	220	---	110	(4.35)		2.15
14	510	13.2	220	---	110	(4.20)		2.10
15	---	13.1	225	---	110	(3.85)		2.05
16	---	12.8	245	---	110	(3.50)		2.10
17	---	13.1	255	---	115	3.00		2.15
18	---	12.9	295	---	---	2.00	3.2	2.10
19		12.8	385				<1.5	2.05
20		12.7	400				<1.6	2.10
21		(12.3)	320				<1.6	(2.30)
22		(12.1)	250				<1.5	(2.55)
23		11.4	220				<1.2	2.70

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

Table 19

Ewiro, Belgian Congo (2.3°S, 28.0°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	fnE	foEs	(M3000)F2
00		(11.8)	210					2.75
01		>12.2	255				(1.5)	2.80
02		11.4	250				(1.5)	2.88
03		9.7	245				(1.4)	2.94
04		8.4	230				(1.4)	3.00
05		>7.0	220				(1.6)	3.02
06		6.6	230		---	E	(1.6)	2.99
07	---	9.1	250		119	2.45	2.8	3.06
08	---	10.8	240		113	3.20	3.3	2.96
09	---	12.0	235		111	3.70	3.9	2.68
10	---	12.8	230	---	111	4.00		2.58
11	---	13.4	220	---	109	4.20		2.52
12	---	13.8	220	---	109	4.25		2.46
13	(410)	14.1	220	---	109	4.20		2.50
14	445	14.6	225	---	111	4.10		2.46
15	440	14.5	230	---	111	3.90		2.44
16	445	14.7	240	---	111	3.55		2.47
17	(430)	14.4	250		113	3.00	3.0	2.47
18		14.4	275		---	1.95	(2.4)	2.47
19		>13.0	340				(1.6)	2.40
20		>13.0	345				(1.6)	(2.52)
21		>14.0	295				(1.6)	<2.86
22		>14.0	235					<3.02
23		(13.3)	210					(2.93)

Time: 30.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 20

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) February 1959*

Time	h'F2	foF2	h'F	fnF1	h'E	fnE	foEs	(M3000)F2
00		6.8	250				<1.4	2.80
01		6.1	245				<1.6	2.80
02		5.4	240					2.70
03		5.0	<250				1.6	2.60
04		4.6	<290				2.0	2.50
05		4.4	<290				1.6	2.55
06		5.8	270			1.7		2.85
07		8.4	240			2.7	3.0	3.05
08	---	10.0	230	---		3.3		2.95
09	---	10.8	220	---		3.7	4.0	2.80
10	---	11.8	210	---		4.0		2.65
11	---	12.0	210	---		4.1	4.6	2.60
12	---	12.2	210	---		4.1		2.55
13	(365)	12.3	210	---		4.1		2.55
14	370	12.4	220	---		4.1		2.50
15	(355)	12.2	225	---		3.9	4.1	2.55
16	---	11.7	230	---		3.6	3.9	2.55
17	---	11.5	235	---		3.2	3.7	2.60
18		11.4	250			2.5	3.1	2.70
19		10.0	250			1.6	2.1	2.80
20		9.6	235				2.0	2.75
21		0.7	240				<1.0	2.75
22		7.2	(250)				<1.4	2.75
23		6.0	(200)				<1.6	2.65

Time: 30.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.
*Data reported beginning 1500 on the 12th through the 20th.

Table 21

Brisbane, Australia (27.5°S, 152.9°E) February 1959

Time	h'F2	foF2	h'F	fnF1	h'E	foE	foEs	(M3000)F2
00		8.5	290				2.7	2.65
01		7.9	285				2.0	2.60
02		7.4	300				2.4	2.55
03		7.0	300					2.55
04		6.9	300					2.55
05		6.6	290			<1.60		2.60
06	---	7.3	250	---		2.20		2.80
07	(460)	0.2	250	4.8		2.90	3.5	2.85
08	(530)	>8.5	230	5.1		3.40	4.2	2.65
09	(480)	>9.3	230	5.4		3.70	4.5	2.60
10	450	10.4	225	5.9		3.95	5.0	2.60
11	420	10.6	225	6.2		4.05	4.5	2.65
12	370	10.3	230	6.4		(4.10)	4.5	2.60
13	390	10.8	230	6.1		4.20	4.5	2.60
14	380	10.8	230	6.0		4.00	4.5	2.65
15	(400)	10.0	230	5.5		3.80	>4.0	2.60
16	---	>9.3	240	---		3.50	3.6	2.65
17		8.9	250			2.95	3.6	2.70
18		9.0	260			2.20	4.1	2.70
19		0.8	270			<1.70	2.8	2.60
20		>0.5	295					2.55
21		8.6	310					2.55
22		8.5	315					2.55
23		>8.5	310				2.5	2.60

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

Table 22

Watheroo, W. Australia (30.3°S, 115.9°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.0	300				1.8	(2.80)
01		(7.0)	295				1.8	(2.90)
02		(6.5)	290					(2.95)
03		(5.8)	300				>2.1	(2.80)
04		4.4	300				1.6	----
05		(4.3)	300					(2.65)
06	---	(5.3)	<300	---		1.80	1.0	----
07	---	6.8	250	---		2.70		3.25
08	---	>7.1	235	(4.8)		3.20	3.4	3.05
09	<400	8.0	220	5.4		3.60	3.9	3.00
10	410	>0.4	(220)	5.9		3.80	4.1	2.85
11	390	>8.5	---	5.9		3.05	4.2	(2.70)
12	300	>8.5	(225)	6.2		3.95	4.2	2.70
13	380	>8.5	---	6.2		>3.05		(2.75)
14	380	>8.5	<250	6.0		3.90	3.9	(2.65)
15	395	>8.5	225	5.9		3.90		(2.00)
16	390	>0.5	230	6.0		3.75		(2.80)
17	(430)	>0.5	240	---		3.25	3.6	(2.00)
18		>7.0	250			2.65	3.1	(2.90)
19		>7.0	250			1.70	<2.1	
20		>7.0	260					
21		>7.0	270					----
22		>7.0	285					----
23		>7.0	295					(2.70)

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

Table 23

Capetown, Union of S. Africa (34.1°S, 10.3°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.8	<270				2.1	2.70
01		5.4	<280				2.0	2.60
02		5.0	<200				2.0	2.60
03		4.6	<285				1.7	2.50
04		4.6	<300				<1.3	2.45
05		4.3	<310				<1.4	2.45
06		4.6	310			<1.4		2.60
07		7.2	255			2.3		2.90
08	---	9.1	245			3.0		2.80
09	---	10.7	235			3.5		2.65
10	(360)	11.4	230	---		3.8	3.9	2.60
11	---	11.8	220	---		4.0		2.55
12	(385)	12.0	220	6.3		4.0		2.50
13	380	12.1	225	6.4		4.1		2.45
14	395	12.1	215	6.1		4.1		2.45
15	390	12.0	230	6.2		4.0		2.50
16	(400)	11.4	235	5.9		3.0		2.50
17		10.9	240			3.6		2.50
18		10.7	250			3.0		2.60
19		10.3	255			2.2	2.6	2.70
20		9.8	250			<1.5	<1.0	2.75
21		8.5	(235)				<1.3	2.75
22		7.3	<250				1.6	2.75
23		6.5	<265				2.1	2.65

Time: 30.0°E.
Sweep: 1.0 Mc to 17.0 Mc in 7 seconds.

Table 24

Hobart, Tasmania (42.9°S, 147.2°E) February 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.9)	300					----
01		>4.5	320					2.40
02		>4.4	320					(2.35)
03		>4.4	330					2.35
04		4.3	320					2.40
05		4.0	320			----		2.55
06		>4.5	280			2.25		2.70
07	---	>6.0	250	---		2.90	3.4	2.85
00	---	(6.3)	230	---		3.35	3.6	2.80
09	---	(7.2)	230	---		----	4.0	(2.75)
10	---	>7.5	220	---		3.75	4.0	2.75
11	---	(7.4)	220	---		----	4.3	2.65
12	(400)	0.2	(220)	---		----	4.2	2.70
13	(460)	(8.5)	220	---		----	4.2	2.65
14	(450)	8.3	220	---		3.90	4.0	2.60
15	480	7.9	230	---		3.75		2.60
16	(440)	7.9	230	---		3.50		2.60
17	(440)	7.9	230	---		3.20		2.65
18		(7.8)	250			2.60	2.7	2.60
19		(7.2)	280			----		2.75
20		>7.0	270					(2.60)
21		>6.5	280					----
22		>6.0	300					----
23		>5.7	300					----

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

Table 25

Resolute Bay, Canada (74.7°N, 94.9°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.8	250					(2.8)
01		5.8	250		---	---		(2.8)
02		5.6	250		---	---		(2.75)
03		4.9	260		---	---		---
04		5.0	260		---	---		---
05		(4.8)	250		---	---		(2.6)
06		(4.9)	250		---	---		---
07		(5.8)	250		---	---		(2.8)
08		(5.3)	250		---	1.0		(2.65)
09		(5.8)	240		---	E		(2.5)
10		6.2	250		---	1.2	1.2	(2.6)
11		7.2	240		---	1.2	1.2	(2.75)
12		7.2	240		---	1.4	1.5	(2.8)
13		7.0	240		---	1.4	1.4	(2.7)
14		8.0	230		---	1.4	1.4	(2.7)
15		6.4	240		---	1.3		2.7
16		7.1	230		---	---		(2.6)
17		6.8	250		---	---		(2.8)
18		(6.3)	260		---	---		---
19		6.2	260		---	---		(2.8)
20		6.1	240		---	---		(2.7)
21		5.8	250		---	---		(2.7)
22		5.2	260		---	---		---
23		5.6	260					(2.8)

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

Table 26

Godhavn, Greenland (69.3°N, 53.5°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.5)						(2.70)
01		(4.35)						(2.68)
02		(5.05)						(2.72)
03		(4.9)						----
04		(3.9)						----
05		(4.0)						----
06		(4.3)						(2.70)
07		(4.4)						----
08		(4.2)						----
09		(4.8)						----
10		(6.7)			119	----		(2.75)
11		(9.05)			113	1.65		(2.92)
12		(6.75)			107	----		----
13		(6.85)			109	----		----
14		(6.8)			(111)	----		(2.75)
15		(6.5)			<115	----		(2.75)
16		(7.7)						(2.75)
17		(5.95)						(2.75)
18		(6.15)						(2.68)
19		(6.5)						(2.68)
20		(6.0)						(2.65)
21		(6.0)						(2.60)
22		(6.6)						(2.60)
23		(5.3)						(2.70)

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

Table 27

Kiruna, Sweden (67.8°N, 20.3°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.5	340				3.4	2.4
01		5.7	340				3.4	2.6
02		5.4	340				2.6	2.55
03		5.4	310				1.7	2.6
04		5.8	285					2.6
05		5.1	<280					2.65
06		5.0	265					2.6
07		4.4	250					2.7
08		5.0	250		---	---		2.7
09		6.4	250		---	1.4		2.8
10		9.0	245		---	1.8		2.9
11		11.0	245		---	2.0		3.0
12		12.0	240		---	2.0		3.0
13		11.6	235		---	1.9		3.0
14		11.2	230		---	1.8		3.0
15		9.8	230		---	1.6		3.0
16		6.6	230		---	---		2.9
17		5.4	240					2.8
18		4.6	275				3.0	2.8
19		4.4	280				3.4	2.6
20		5.5	310				3.9	(2.8)
21		6.0	345				4.4	(2.6)
22		6.0	330				4.1	2.6
23		5.8	350				4.0	2.5

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

Table 28

Baker Lake, Canada (64.3°N, 96.0°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.0	260		---	---	5.5	
01		(5.0)	260		---	---	4.6	
02		(5.0)	260		---	---	5.0	
03		(4.8)	280		---	---	4.5	
04		(4.5)	280		---	1.5	4.8	
05		(4.5)	280		---	1.8	4.7	
06		(4.6)	290		135	2.0	4.3	
07		(4.5)	270		120	2.1	4.3	
08		(4.9)	270		120	2.1	4.1	
09		(5.1)	280		140	2.2	4.2	
10		(6.3)	270		110	2.3	4.8	
11		(7.8)	270		110	2.4	3.9	
12		8.3	260		115	2.5	3.0	---
13		11.2	250		110	2.5		(3.0)
14		12.5	250		115	2.3		(2.9)
15		(8.8)	260		120	2.1		---
16		(7.0)	260		120	2.0	4.0	
17		(6.3)	280		120	2.0	4.5	
18		(6.0)	280		120	2.1	4.5	
19		(6.1)	260		120	1.8	4.4	
20		(6.0)	260		---	1.6	6.0	
21		(6.0)	260		---	1.8	6.0	
22		(5.2)	260		---	---	6.0	
23		(5.2)	270		---	---	5.0	

Time: 90.0°W.
Sweep: 1.0 Mc to 16.0 Mc in 16 seconds.

Table 29

Narsarssuak, Greenland (61.2°N, 45.4°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.4)			---	----	3.2	(2.65)
01		(5.1)			---	----	3.3	(2.70)
02		(5.2)			---	----	3.3	(2.60)
03		(5.6)					3.5	(2.70)
04		(5.4)					3.0	(2.72)
05		(5.55)			---	----	3.5	(2.70)
06		(5.0)			---	----	>3.3	(2.80)
07		(5.1)			---	----	2.9	(2.80)
08		(5.4)			---	----		(2.85)
09		7.65			(125)	2.00		3.00
10		10.5			(129)	2.30		3.00
11		12.15		---	119	2.60		3.02
12		12.9		---	122	2.68		3.00
13		13.0			123	2.60		3.00
14		11.8			121	2.40		3.00
15		9.5			(129)	2.15		3.00
16		(7.8)			111	1.92	2.3	(2.95)
17		(5.8)					2.8	(2.75)
18		(5.8)					3.0	(2.75)
19		(5.7)					3.2	(2.72)
20		(5.4)			---	----	3.3	(2.70)
21		(5.7)			---	----	3.7	(2.65)
22		(5.8)			---	----	4.4	(2.70)
23		(5.45)			---	----	3.9	(2.52)

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

Table 30

Churchill, Canada (58.8°N, 94.2°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.2	300		140	2.0	4.6	
01		5.0	320		125	2.0	4.8	
02		5.0	300		---	1.6	5.0	
03		5.0	320		120	1.9	4.4	
04		5.0	330		120	2.0	4.4	
05		5.0	310		120	2.2	4.3	
06		4.6	330		120	2.2	4.4	
07		5.0	320		110	2.6	4.4	
08	---	5.6	300	---	120	2.3	4.4	
09		7.3	280		---	2.4	4.5	
10		9.0	260		120	2.4	4.2	(3.0)
11	---	11.0	250	---	120	2.6	3.6	(2.9)
12	---	12.1	250	---	115	2.8	3.0	(2.9)
13	---	13.0	250	---	125	2.8		(2.75)
14		14.0	250		125	2.6	4.0	(2.95)
15		13.1	240		125	2.3	3.3	----
16		10.0	250		130	2.0	3.1	----
17		6.7	250		140	1.8	4.0	
18		6.1	270		125	1.7	3.8	----
19		5.3	290		120	2.2	4.0	
20		6.0	290		120	2.4	4.1	
21		5.3	290		120	2.3	4.4	
22		5.0	280		120	2.3	4.4	
23		5.2	280		130	2.2	4.4	

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

Table 31

Slough, England (51.5°N, 0.6°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.1	280				<1.3	2.60
01		3.9	300				<1.0	2.50
02		3.4	305				<1.0	2.45
03		3.3	310				(1.0)	2.50
04		3.5	285				<1.2	2.60
05		3.4	<260				1.6	2.70
06		3.3	<250				2.2	2.70
07		3.7	230				2.2	2.60
08		0.0	230			1.85	2.8	3.00
09		(11.4)	225		120	2.55	2.8	(3.15)
10		13.1	225		120	2.90		3.05
11		13.6	225		120	3.05		3.05
12		13.6	225		120	3.20		3.00
13		13.7	225		120	3.05		2.95
14		13.9	230		120	2.90		3.00
15		12.9	225		120	2.60		2.95
16		12.0	225		120	2.10	2.2	3.00
17		10.6	215			1.65	2.1	(2.95)
18		8.0	220				2.2	2.95
19		6.9	225				<1.6	2.90
20		6.3	240				<1.6	2.80
21		5.2	240				<1.6	2.75
22		4.0	260				<1.6	2.60
23		4.5	270				<1.6	2.60

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

Table 32

Macau (22.2°N, 113.6°E) January 1959

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	14.8						2.40
01	300	14.1						2.20
02	300	11.5						2.10
03	300	8.5						2.05
04	300	6.5						2.05
05	360	5.7						2.05
06	380	5.2						2.05
07	400	9.0						2.05
08	365	12.8			150	2.8		2.40
09	350	14.0	---	---	140	3.2		2.60
10	345	14.5	335	7.8	140	3.5		2.45
11	500	14.8	340	8.5	150	4.0		2.30
12	580	14.8	<350	8.4	---	---		2.20
13	600	15.0	350	8.3	---	---		2.15
14	600	15.0	350	8.0	---	---		2.15
15	600	14.8	350	7.5	130	3.7		2.15
16	530	14.8	345	7.0	140	3.3	4.0	2.25
17	470	14.8	360	7.0	140	2.8	3.5	2.20
18	350	14.8	---	---	---	---	3.0	2.20
19	370	14.8					3.0	2.35
20	365	14.8						2.50
21	300	14.9						2.70
22	290	15.0						2.65
23	300	14.8						2.45

Time: 120.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 33

El Cerillo, Mexico (19.1°N, 99.6°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.4	240					3.00
01		6.1	240					3.15
02		5.0	230					3.30
03		3.4	230					3.05
04		2.8	290					2.75
05		2.7	330					2.60
06		3.0	310					2.70
07		4.9	285					2.80
08		9.4	230					3.25
09		12.0	230					3.10
10		13.0	220					3.10
11		12.4	215					2.95
12		12.4	210					2.75
13		13.0	220					2.70
14		(12.6)	230					(2.65)
15		11.9	230					2.60
16		11.5	230					2.60
17		11.2	235					2.70
18		10.6	250					2.80
19		9.0	240					2.90
20		0.0	245					2.05
21		8.5	250					2.95
22		8.0	235					3.05
23		7.0	235					3.00

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 34

Bogota, Colombia (4.5°N, 74.2°W) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.6	205				2.5	3.15
01		8.6	210				2.3	3.20
02		6.6	<220				2.5	3.05
03		5.5	225				3.1	3.00
04		4.5	235				3.0	3.00
05		4.3	245				3.4	2.92
06		6.9	270		---	----	2.4	2.80
07		10.85	245		111	2.70	3.1	3.00
00		13.6	230		105	3.40	3.6	3.08
09		14.0	220		105	3.80	4.0	2.95
10	---	13.5	210	---	105	4.10	4.2	2.75
11	(410)	13.35	210	(7.4)	105	4.25		2.60
12	420	13.6	200	6.8	105	4.30	4.3	2.50
13	425	13.5	(205)	(6.9)	105	4.22	4.4	2.45
14	420	13.8	<230	(6.7)	105	4.10	4.5	2.45
15	410	13.5	235	(6.6)	109	3.90	4.3	2.50
16	(400)	13.1	240	---	(111)	3.52	4.1	2.50
17		12.0	250		(115)	2.90	3.3	2.50
18		12.8	270		<141	1.90	3.6	2.65
19		13.0	260				3.6	2.75
20		13.2	260				3.0	2.75
21		(13.5)	235				2.5	2.70
22		>15.0	230				2.2	2.90
23		14.2	220				2.4	3.05

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

Table 35

Singapore, British Malaya (1.3°N, 103.8°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		10.8	265		---		<1.1	2.70
01		10.0	265		---		<1.0	2.70
02		9.2	265		---		<1.0	2.70
03		0.5	265		---		<1.0	2.65
04		8.1	260		---		<1.1	2.75
05		7.1	250		---		<1.1	2.80
06	---	6.7	270	---	---	----		2.70
07	---	9.4	260	---	120	2.60		2.75
08	---	10.4	250	---	110	3.40		2.65
09	---	10.0	240	---	110	3.85	3.8	2.30
10	---	11.3	230	---	110	4.15		2.05
11	---	12.2	230	---	110	4.35		2.00
12	---	12.1	225	---	110	4.45		2.00
13	500	11.0	220	5.0	110	4.40	4.5	1.90
14	420	11.6	220	---	110	4.20	4.4	1.95
15	515	11.6	235	---	110	3.95	4.4	1.95
16	---	11.7	250	---	110	3.55	3.7	2.10
17	---	11.9	265	---	115	3.00		2.15
18	---	11.9	300	---	---	1.90	3.0	2.10
19		11.6	380		---	----	2.3	2.10
20		11.3	400		---	----	3.0	2.15
21		>11.5	350		---		2.9	2.35
22		11.3	300		---		2.5	2.40
23		11.1	260		---		<1.6	2.55

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

Table 36

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.0	(270)				1.9	2.55
01		6.5	<275				2.0	2.60
02		6.1	<270				2.1	2.55
03		5.7	<270				1.9	2.55
04		5.1	<260				2.0	2.50
05		5.1	300			E	1.8	2.50
06		6.9	260			2.3		2.00
07	---	0.6	245	---		3.1	3.5	2.75
00	---	9.6	230	---		3.6		2.60
09	390	10.6	230	6.0		4.0	4.3	2.50
10	400	11.0	225	6.1		4.3		2.40
11	405	11.2	220	6.4		4.4		2.40
12	420	11.2	220	6.4		4.4	4.8	2.35
13	425	11.1	215	6.2		4.4		2.35
14	430	10.8	215	6.2		4.3		2.35
15	420	10.6	220	5.9		4.1		2.40
16	410	9.8	230	5.0		3.9	4.2	2.40
17	395	9.4	235	5.5		3.4	3.8	2.45
18		9.0	255			2.8	3.2	2.50
19		9.2	285			2.0	2.0	2.55
20		9.2	<270				<1.9	2.60
21		8.8	<265				1.0	2.60
22		7.9	(270)				<1.4	2.60
23		7.4	(270)				1.9	2.60

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

Table 37

Brisbane, Australia (27.5°S, 152.9°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.6	300				4.2	2.65
01		8.4	300				3.6	2.50
02		8.0	300				2.5	2.50
03		7.6	300					2.50
04		7.3	300					2.55
05		7.0	300			1.70		2.60
06	---	7.2	250	---		2.50	3.2	2.70
07	---	8.3	250	---		3.30	4.3	2.70
08	480	>8.5	230	5.6		3.80	4.3	2.60
09	395	>9.1	240	6.0		4.00	4.6	2.60
10	420	9.4	250	6.3		4.30	5.4	2.50
11	420	(8.8)	<250	6.4		4.40	5.1	2.50
12	410	10.7	250	6.4		4.35	4.9	2.50
13	405	10.7	230	6.4		4.30	5.2	2.50
14	400	>9.5	240	6.2		4.30		2.55
15	400	9.2	240	6.1		4.00	4.5	2.55
16	395	>8.5	230	5.8		3.70	4.4	2.55
17	---	8.5	250	---		3.25	3.8	2.55
18		8.4	270			<2.40	3.6	2.55
19		8.5	300			<1.70	4.0	2.50
20		8.8	330				3.3	2.50
21		8.9	335				4.0	2.60
22		9.0	320				3.5	2.65
23		8.8	305				4.1	2.60

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

Table 38

Capetown, Union of S. Africa (34.1°S, 18.3°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.1	<290				2.1	2.55
01		6.0	<305				2.2	2.50
02		5.7	<300				2.2	2.55
03		5.4	<295				2.5	2.60
04		4.8	<310				1.9	2.45
05		>4.6	(310)			<1.2	2.1	2.40
06		5.9	295			2.0	2.5	2.60
07		7.6	255			2.8		2.80
08	---	(8.8)	245	---		3.4		2.60
09	---	10.0	240	---		3.8		2.45
10	400	>10.6	230	5.9		4.1		2.40
11	415	>10.8	225	6.4		4.2		2.35
12	420	10.9	225	6.4		---	4.5	2.35
13	435	>10.7	220	6.1		---	4.8	2.35
14	440	10.6	220	6.2		---	4.6	2.30
15	435	10.4	225	6.1		---	4.5	2.35
16	425	9.9	230	6.0		4.0	4.6	2.40
17	420	>9.5	240	5.6		3.8	4.0	2.40
18	---	8.9	250	---		3.2	3.7	2.50
19		>8.7	260			2.6	3.0	2.55
20		>8.3	275			1.8	2.4	2.65
21		>7.9	<260				2.0	2.60
22		>7.2	<270				2.0	2.60
23		6.6	<275				1.8	2.55

Time: 30.0°E.
Sweep: 1.0 Mc to 17.0 Mc in 7 seconds.

Table 39

Hobart, Tasmania (42.9°S, 147.2°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>6.0	320				4.0	(2.50)
01		>6.0	320				4.0	(2.50)
02		(4.6)	320				3.5	(2.30)
03		>4.5	320				3.0	(2.25)
04		>4.5	300			E		2.30
05		>4.5	290			1.90	2.5	(2.50)
06	---	(5.5)	260	---		2.70	2.8	(2.75)
07	---	>6.0	250	---		3.25	3.5	2.70
08	440	(6.6)	240	---		----	4.2	2.65
09	470	(7.3)	(250)	(5.3)		----	5.0	2.55
10	480	7.4	(230)	5.5		----	5.0	2.50
11	460	>7.5	(250)	(5.6)		----	5.0	2.50
12	540	7.4	(250)	5.8		----	5.0	2.40
13	500	7.6	(240)	5.8		----	5.0	2.40
14	480	7.5	(240)	5.8		----	4.5	2.45
15	500	>7.5	230	5.5		4.10		2.40
16	490	7.5	240	5.4		3.80	4.2	2.45
17	450	7.4	240	---		3.50		2.50
18	---	7.4	250	---		3.05	4.0	2.55
19		7.4	280			2.45	3.3	2.60
20		>7.3	300				3.5	2.55
21		>7.5	310				3.6	2.50
22		>7.5	320				4.3	(2.45)
23		>7.0	300				3.8	(2.45)

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

Table 40

Wilkes Station (66.2°S, 110.5°E) January 1959

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.3	290		109	----	2.8	2.60
01		5.7	285		103	----	3.7	2.65
02	---	5.4	280		105	1.70	3.7	2.70
03	---	5.7	260		(115)	1.95	2.4	2.62
04	---	5.6	<260	---	111	2.50	2.7	2.60
05	450	5.7	245	4.2	105	2.80	3.8	2.50
06	495	6.3	235	4.5	103	3.00	3.6	2.38
07	530	6.1	225	4.7	101	3.32	3.6	2.35
08	540	6.0	225	4.8	101	3.55		2.30
09	575	6.2	230	5.0	101	3.75		2.30
10	550	6.15	220	5.0	101	>3.70		2.25
11	540	6.3	215	5.0	101	>3.80		2.30
12	530	6.25	(215)	5.0	101	3.80		2.25
13	490	6.7	(225)	5.0	101	3.65		2.30
14	515	6.3	<215	4.9	101	(3.58)		2.30
15	555	6.0	215	4.8	101	3.50		2.25
16	535	6.0	215	4.8	103	3.42		2.30
17	520	6.0	225	4.6	103	3.15		2.30
18	505	5.8	235	4.3	105	2.80		2.30
19	470	6.15	250	4.0	105	2.55	2.7	2.40
20	---	6.05	260		111	2.22	2.4	2.52
21	---	5.85	280		105	1.75	2.1	2.60
22		5.8	285		105	1.60	3.5	2.65
23		5.85	280		---	----	3.2	2.65

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

Table 41

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

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.1)						(2.65)
01		(4.9)						----
02		(4.4)						
03		(4.7)						(2.60)
04		(4.55)						----
05		(3.4)						----
06		(4.55)						----
07		(4.4)						----
08		---						----
09		(4.9)						----
10		(6.15)						(2.70)
11		(8.3)			---	----		(2.90)
12		(6.8)			119	----		(2.95)
13		(7.15)			116	(1.80)		(2.90)
14		(6.4)			---	----		(2.75)
15		(5.2)						(2.65)
16		(5.3)					1.7	(2.58)
17		(5.25)					2.4	(2.60)
18		(5.7)						(2.80)
19		(4.9)						(2.55)
20		(5.3)						(2.52)
21		(5.3)						(2.75)
22		(4.95)						(2.70)
23		(4.4)						(2.70)

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

Table 42

Freiburg, Germany (48.1°N, 7.6°E) December 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.1	310					2.50
01		4.1	315					2.50
02		3.9	310					2.50
03		3.5	285					2.60
04		3.5	280					2.70
05		3.4	255					2.70
06		3.5	250					2.75
07		6.5	225		---	(1.10)		2.90
08		10.0	220		119	2.05	2.3	3.10
09	---	13.0	225		115	2.70	3.0	3.00
10	---	13.4	230		113	3.00	3.3	3.05
11	---	(13.1)	225		111	3.10	3.2	(2.95)
12	---	13.2	220		112	3.10	3.2	2.90
13		12.8	230		118	3.00	3.1	2.85
14		13.0	230		119	2.65	2.9	2.90
15		12.2	225		122	2.05	2.3	2.90
16		11.0	220		---	<1.50	1.8	2.95
17		9.2	220				2.0	2.90
18		7.4	230				1.8	3.00
19		5.9	230				1.7	2.90
20		4.9	<250					2.70
21		4.7	<280					2.60
22		4.5	285					2.60
23		4.3	300					2.55

Time: 0.0°.
Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 43

Elisabethville, Belgian Congo (11.6°S, 27.5°E) December 1958

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	8.5						2.47
01	275	8.0						2.51
02	270	7.6						2.52
03	270	6.7						2.48
04	270	7.1			135	2.0	2.6	2.60
05	(270)	9.0	250	---	115	3.0		2.60
06	305	10.0	245	---	110	3.6		2.50
07	340	10.1	240	---	110	3.9		2.35
08	405	10.7	230	6.2	110	4.0		2.23
09	430	11.0	230	6.4	110	4.0		2.17
10	450	11.4	240	6.2	110	4.2		2.16
11	450	11.7	250	6.1	110	4.1		2.16
12	445	11.5	250	6.0	110	4.0		2.19
13	430	11.4	240	5.6	110	4.0		2.18
14	430	11.2	250	5.4	110	3.6	4.0	2.18
15	400	11.0	260	---	115	3.0	3.9	2.19
16	335	11.0	290	---	125	2.2	3.0	2.25
17	320	11.0					2.1	2.32
18	320	>11.0					2.5	2.32
19	300	11.3						2.41
20	275	11.1						2.49
21	270	10.4						2.47
22	270	9.7						2.45
23	270	9.0						2.45

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 44

Grahamstown, Union of S. Africa (33.3°S, 26.5°E) December 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.10)					2.1	(2.8)
01		(5.75)					1.9	(2.75)
02		(5.32)					1.8	2.7
03		(5.25)					1.8	2.7
04		4.98					1.9	2.6
05		(5.75)	---		---	(1.8)		(2.75)
06		(7.60)	(295)		125	(2.6)		(3.0)
07		(7.55)	255		<130	(3.2)	3.4	---
08		(9.35)	(255)		<130	(3.6)	(4.0)	(2.7)
09		(11.00)	---		<130	---		(2.8)
10		(10.75)	---		---	---		(2.7)
11		(11.05)	---		---	---		(2.65)
12		(11.10)	---		---	---		(2.7)
13		(10.95)	---		---	---		(2.6)
14		(10.30)	---		---	---		(2.6)
15		(10.05)	---		---	---		(2.6)
16		-----	(260)		<130	(3.7)	3.8	---
17		(8.00)	260		<130	(3.3)	3.7	(2.8)
18		(7.55)	280		120	(2.7)	3.0	(2.9)
19		(7.00)			---	---	<2.0	---
20		(7.00)						(3.0)
21		(7.00)					2.1	(2.9)
22		(6.50)					<2.0	(2.9)
23		(6.20)					2.0	(2.9)

Time: 30.0°E.
Sweep: 1.5 Mc to 15.0 Mc.

Table 45

Christchurch, New Zealand (43.6°S, 172.8°E) December 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(7.3)	300				3.1	(2.40)
01		7.3	320				3.0	(2.35)
02		7.0	310				2.4	2.30
03		6.6	310				2.5	2.35
04		6.3	300				<1.7	2.40
05		6.1	300		155	2.0		2.55
06	---	6.5	250	---	110	2.7	2.9	2.60
07	(500)	7.1	250	5.3	105	3.2	3.6	2.65
08	(490)	0.1	250	5.6	105	3.6	4.4	2.60
09	460	0.5	(250)	5.8	100	---	5.0	2.60
10	400	9.0	(230)	6.0	100	---	5.0	2.55
11	420	9.2	---	6.0	100	---	5.0	2.55
12	440	9.1	(230)	6.3	100	---	5.2	2.50
13	440	9.2	(230)	6.4	100	---	4.7	2.50
14	450	0.8	220	6.3	100	---	4.3	2.45
15	450	0.6	200	6.0	100	4.0	4.1	2.50
16	440	8.5	240	5.8	100	3.9		2.50
17	400	8.3	250	5.5	105	3.5		2.50
18	(370)	0.4	250	---	110	3.1	<3.5	2.55
19		0.4	270		115	2.6	3.1	2.55
20		(7.7)	300		---	---	2.5	(2.50)
21		---	300				3.2	----
22		---	310				4.1	----
23		(7.7)	320				3.1	(2.40)

Time: 180.0°E.
Sweep: 1.0 Mc to 13.0 Mc in 1 minute 55 seconds.

Table 46

Wilkes Station (66.2°S, 110.5°E) December 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.2	290		115	----	2.1	2.60
01	---	5.35	295		111	1.70	2.1	2.55
02	---	5.4	280	---	110	2.05	2.5	2.65
03	---	5.5	260	---	105	2.40		2.70
04	(530)	5.7	255	3.8	104	2.65	2.7	2.50
05	485	5.75	240	4.2	103	2.88	2.9	2.45
06	520	5.7	240	4.6	101	3.15		2.38
07	530	6.0	225	4.0	101	3.40		2.30
08	585	5.75	(230)	4.8	101	3.55		2.25
09	580	5.0	230	4.9	101	3.60		2.20
10	580	5.05	(230)	5.0	101	3.70		2.20
11	590	6.0	<225	5.0	101	3.65		2.20
12	570	6.0	(230)	5.0	101	3.62		2.15
13	605	6.0	<225	4.9	101	3.62		2.22
14	550	5.8	(220)	5.0	101	3.65		2.18
15	520	6.0	215	4.0	101	3.50		2.32
16	520	6.2	(215)	4.6	101	3.30		2.30
17	490	6.2	230	4.6	103	3.05		2.40
18	510	6.0	245	4.1	105	2.75	2.0	2.35
19	500	6.15	255	3.0	107	2.55	2.7	2.45
20	---	6.0	(265)	---	110	2.28		2.50
21		5.0	205		110	1.90	1.9	2.55
22		5.7	290		107	----	2.0	2.52
23	---	5.55	300		109	1.50	2.4	2.50

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

Table 47

Little America (70.2°S, 162.2°W) December 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	(525)	5.35	250	(3.8)	103	2.50		2.30
01	(610)	5.05	245	(3.8)	101	(2.60)		2.38
02	685	4.9	250	3.9	101	2.80		2.35
03	(685)	(4.9)	255	(4.0)	101	2.90		(2.25)
04	(600)	5.3	260	4.3	101	3.00		2.45
05	(575)	5.4	255	4.5	101	3.10		2.40
06	500	5.6	250	(4.7)	100	3.20		2.60
07	480	6.2	240	4.9	99	3.25		2.45
08	480	6.6	235	4.9	100	3.40		2.45
09	505	6.7	230	4.9	99	3.40		2.40
10	(575)	6.5	230	4.8	99	3.50		2.32
11	520	6.3	230	5.0	99	3.50		2.32
12	520	6.3	230	5.0	99	3.45		2.35
13	550	6.45	230	5.1	99	3.40		2.35
14	515	(6.2)	225	5.0	99	3.40		2.30
15	510	(6.5)	230	4.8	99	(3.35)	3.6	(2.35)
16	505	6.2	235	4.7	99	3.20		2.35
17	500	(6.2)	240	4.6	101	3.10		(2.38)
18	490	6.1	240	(4.5)	101	3.00		2.32
19	460	6.4	250	4.3	101	2.90		2.35
20	440	6.6	250	(4.1)	101	2.80		2.35
21	450	6.2	250	4.0	101	2.70		2.35
22	480	(5.8)	<265	3.8	101	(2.50)		(2.32)
23	470	(5.65)	250	3.8	103	2.50		(2.40)

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

Table 48

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

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.75)						(2.50)
01		(5.2)						(2.65)
02		(5.3)						(2.75)
03		(5.5)						----
04		(4.7)						(2.65)
05		(5.05)						----
06		(4.9)						----
07		(4.8)						----
08		---						----
09		(7.2)			---	----		(2.92)
10		(9.1)			115	----		(3.00)
11		(8.5)			(113)	(2.15)		(3.00)
12		(9.0)			(121)	(2.08)		(2.98)
13		(8.5)			<125	----		(2.88)
14		(7.55)			(125)	(2.00)	2.6	(2.90)
15		(6.65)			---	----	3.4	(2.88)
16		(7.4)					3.2	(2.90)
17		(8.3)					2.8	(2.80)
18		(6.85)					2.8	2.70
19		(7.4)					3.0	(2.90)
20		(7.45)						(2.70)
21		(6.4)						(2.80)
22		(5.85)						(2.65)
23		(6.2)						(2.70)

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

Table 49

Freiburg, Germany (48.1°N, 7.6°E) November 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.4	290					2.55
01		5.2	280					2.60
02		4.9	285					2.60
03		4.8	265					2.75
04		4.3	250					2.85
05		4.0	240					2.75
06		4.8	245		---	E		2.75
07		8.8	225		137	1.90	1.9	3.05
08		12.4	220		115	2.50	2.7	3.00
09		(14.0)	220		111	2.90	3.0	(2.90)
10		(14.5)	225		109	3.15		(2.95)
11		(14.4)	225		109	3.20	3.3	(2.85)
12		(14.1)	225		---	3.20	3.3	(2.75)
13		(13.9)	230		109	3.10		(2.75)
14		(14.0)	230		---	2.75	3.0	(2.80)
15		13.4	230		---	2.30	2.7	(2.85)
16		12.3	225		---	----	2.2	2.85
17		10.7	220				1.9	2.85
18		8.5	230					2.90
19		7.4	230				1.4	2.90
20		6.4	245					2.75
21		5.8	260					2.70
22		5.4	275					2.60
23		5.4	<290					2.55

Time: 0.0°.
Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 50

Chiclayo, Peru (6.8°S, 79.8°W) November 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(11.25)	290				4.0	(2.45)
01		10.0	275				4.5	2.60
02		9.9	245				4.1	2.75
03		8.8	235				3.8	3.00
04		7.7	230				3.8	3.05
05		6.3	230				3.4	3.18
06		7.4	280		<175	1.95		2.85
07		11.4	260		121	2.90	4.0	2.85
08		13.75	240		119	3.50		2.70
09		15.0	230		119	4.00		2.50
10		15.0	230		119	(4.25)		2.30
11	---	15.05	230		119	----		2.25
12	---	15.1	220		119	----		2.15
13	---	15.0	220	---	119	(4.30)		2.10
14	---	15.0	<225	(7.0)	117	----		2.10
15	---	15.0	230	---	119	----		2.10
16	---	>14.1	250		115	3.45	4.5	2.12
17		(13.3)	270		117	3.00	4.0	(2.10)
18		(12.8)	300		<169	2.10	3.6	(2.15)
19		12.0	<350				2.5	(2.22)
20		>11.85	400					(2.10)
21		11.9	(380)					(2.20)
22		>11.5	350				2.0	(2.25)
23		12.2	310				2.6	(2.40)

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

Table 51

Grahamstown, Union of S. Africa (33.3°S, 26.5°E) November 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.70)					<2.0	---
01		(6.40)					1.8	---
02		(6.00)					<2.0	(2.7)
03		(5.65)					1.9	(2.75)
04		5.30						2.7
05		(6.20)			---	<2.0		---
06		(8.10)	---		120	(2.6)		(3.05)
07		(10.48)	---		(125)	(3.2)		(3.2)
08		(11.30)	---		(125)	(3.6)		(2.9)
09		(11.50)	240		<125	---		(2.8)
10		(11.90)	(240)		---	---		(2.8)
11		(11.95)	---		---	---		(2.8)
12		(12.00)	---		---	---		(2.7)
13		-----	---		---	---		---
14		(11.95)	(240)		---	---		(2.75)
15		(11.75)	(250)		<130	---	3.8	(2.7)
16		(11.50)	245		(125)	(3.4)	3.5	(2.8)
17		(11.50)	---		<120	(3.2)		(2.8)
18		(11.50)	---		125	---	<2.0	(2.9)
19		(11.40)					1.8	(3.0)
20		-----					<1.9	
21		-----					1.8	---
22		(7.00)					1.9	---
23		(6.80)					<2.0	---

Time: 30.0°E.
Sweep: 1.5 Mc to 15.0 Mc.

Table 52

Wilkes Station (66.2°S, 110.5°E) November 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.3)	275		119	----	1.8	2.55
01		5.6	<265		116	(1.40)	1.6	2.85
02		5.9	270		113	(1.70)	1.9	2.65
03		6.0	275		109	2.12		2.78
04	---	6.1	(250)	---	108	2.50		2.80
05	(450)	6.2	(245)	4.3	101	(2.72)		2.60
06	455	6.55	235	4.7	101	(3.00)	3.2	2.50
07	460	6.25	225	4.8	101	3.25		2.45
08	505	6.2	225	5.0	101	3.45		2.35
09	500	(6.25)	(225)	5.0	101	3.50		2.38
10	505	(6.2)	(225)	5.0	101	(3.50)		2.35
11	(520)	(6.05)	<220	4.9	101	(3.50)		2.18
12	515	(6.7)	<235	(5.0)	101	(3.52)		(2.25)
13	480	(7.3)	<225	(4.9)	101	(3.50)		(2.28)
14	480	(7.0)	215	4.8	101	3.45		2.35
15	480	(6.7)	220	4.7	101	(3.40)		2.30
16	460	(7.0)	235	4.7	101	(3.15)		2.30
17	460	7.0	240	(4.4)	103	(2.88)		2.42
18	445	7.1	255	4.1	107	2.58		2.45
19	(425)	6.6	260	---	111	2.35		2.60
20	---	6.3	280		<116	2.05		2.62
21	---	6.3	275		111	1.50	1.6	2.65
22	---	6.0	270		118	(1.40)	2.0	2.75
23	---	(5.9)	270		<121	----		(2.65)

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

Table 53

Little America (78.2°S, 162.2°W) November 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	(520)	(5.85)	<265	(3.6)	105	----	1.6	2.50
01	---	5.75	270	---	106	2.50		2.50
02	---	5.7	<280	---	101	(2.65)		2.52
03	---	5.4	280	---	101	(2.85)		2.65
04	---	5.7	280	---	101	3.00		2.62
05	---	6.0	270	---	101	3.05		2.65
06	(505)	6.5	260	4.8	101	3.10		2.60
07	(460)	6.9	245	4.9	101	3.10		2.55
08	440	7.6	240	5.0	101	3.18		2.55
09	460	7.8	235	5.0	101	3.25		2.50
10	465	7.65	235	4.8	101	3.30		2.50
11	445	7.35	230	5.0	101	3.25		2.50
12	445	7.3	230	5.1	101	3.30		2.50
13	460	7.45	230	5.2	101	(3.25)		2.50
14	445	7.0	230	5.2	101	3.30		2.50
15	(460)	(7.2)	230	5.0	101	3.10		(2.50)
16	440	7.05	245	4.8	101	3.00	3.4	2.50
17	435	7.05	250	4.7	101	3.05	3.3	2.50
18	430	7.4	260	4.4	101	2.90		2.50
19	410	(7.3)	260	4.2	101	(2.50)	2.7	(2.45)
20	430	(7.25)	270	3.8	101	(2.50)		2.50
21	(410)	7.0	270	3.8	104	2.40		2.50
22	(420)	(6.6)	270	(3.8)	105	(2.35)		2.50
23	(450)	(6.35)	270	(3.7)	103	(2.50)		(2.50)

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

Table 54

Chiclayo, Peru (6.8°S, 79.8°W) October 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>11.1	240				4.0	2.65
01		10.15	250				3.7	2.75
02		9.6	245				3.2	2.85
03		8.6	240				3.0	2.92
04		7.7	240				2.8	3.10
05		6.4	240				1.8	3.10
06		7.4	280		<165	(1.65)	2.2	2.85
07		11.4	260		125	2.85		2.95
08		14.0	240		121	3.50		2.80
09		15.2	235		119	4.00		2.60
10	---	15.4	230	---	119	(4.20)		2.35
11	---	15.45	220	---	119	(4.40)		2.10
12	---	15.0	(220)	---	119	(4.40)		2.00
13	---	14.0	215	(7.6)	119	(4.35)		2.00
14	---	13.6	<220	(7.6)	119	(4.20)		1.95
15		13.2	230	---	119	(3.85)		2.00
16		13.1	245		119	3.45		2.00
17		13.0	270		119	3.00	3.2	(2.05)
18		(12.9)	300		<162	2.10	2.6	(2.05)
19		>12.0	390					(2.05)
20		>12.0	440					
21		(11.9)	350					(2.08)
22		11.8	275				2.0	(2.30)
23		(11.6)	<250				3.9	(2.50)

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

Table 55

Little America (78.2°S, 162.2°W) October 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	(5.5)	340	---	111	----	2.5	(2.48)
01	---	(5.5)	330	---	<116	(2.00)	2.3	2.50
02	---	(5.0)	315	---	111	----	2.3	(2.58)
03	---	(5.3)	320	---	109	(2.30)	2.5	(2.60)
04	---	(5.6)	280	---	106	(2.42)		2.75
05	---	(6.0)	(270)	(3.7)	107	2.48		2.70
06	---	7.2	255	---	105	2.70		2.80
07	---	8.2	250	---	107	2.80		2.70
08	(405)	9.5	250	---	108	2.90		2.70
09	(450)	(8.6)	250	4.2	107	3.00		2.70
10	(520)	(8.45)	245	4.4	105	3.05		2.75
11	---	8.45	250	4.3	105	3.10		(2.70)
12	(595)	(8.5)	250	4.7	105	(3.10)		2.65
13	(670)	8.5	250	4.5	105	(3.10)		2.68
14	(415)	(8.5)	240	(4.6)	105	(3.00)		(2.55)
15	(500)	(8.5)	240	4.4	107	2.90		(2.60)
16	(510)	(8.3)	255	4.4	107	2.75	3.2	2.50
17	(470)	(8.5)	260	(4.1)	107	(2.55)	3.0	(2.50)
18	---	(8.5)	280	---	109	(2.38)		(2.50)
19	---	(8.15)	290	---	111	(2.12)		(2.40)
20	---	(7.8)	300	---	115	(2.10)		(2.45)
21	---	(7.35)	305	---	115	(1.85)		(2.48)
22	---	(6.3)	300	---	118	(1.90)	2.1	(2.35)
23	---	(6.0)	310	---	111	(1.85)	2.4	(2.48)

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

Table 56

Pole Station (90.0°S) October 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	(7.35)	260	---	109	2.55		(2.55)
01	---	7.65	265	---	111	(2.50)	2.9	2.55
02	(510)	7.6	270	---	110	(2.45)		2.50
03	(470)	7.6	270	(3.9)	111	2.60		2.45
04	(460)	7.65	275	(3.9)	111	(2.38)		2.35
05	460	(7.6)	275	4.0	109	(2.48)		(2.35)
06	(470)	(6.95)	270	3.8	109	2.50		(2.25)
07	440	(6.8)	270	(3.8)	110	(2.50)		(2.25)
08	(455)	6.8	270	(3.8)	109	(2.55)		2.30
09	540	(5.5)	275	3.8	109	2.80		2.25
10	(525)	5.3	<300	(3.7)	109	(2.80)		2.25
11	(550)	5.6	320	3.9	107	(2.80)		2.35
12	---	6.05	290	---	109	2.85		2.60
13	(720)	6.3	285	---	109	2.70		2.55
14	---	6.6	275	---	109	2.60		2.60
15	(450)	7.2	275	---	109	2.50		2.55
16	(475)	7.8	265	---	111	2.50		2.55
17	---	7.65	265	---	109	(2.40)		2.65
18	---	6.5	270	---	109	2.50		2.65
19	---	(6.8)	275	---	109	(2.50)		2.70
20	---	(6.75)	270	---	110	(2.70)		(2.70)
21	---	6.85	265	---	109	(2.60)		2.75
22	---	7.0	260		109	(2.50)		2.70
23	---	7.0	255		109	(2.60)		2.65

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

Table 57

Chiclayo, Peru (6.8°S, 79.8°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		10.4	230				2.5	2.75
01		9.4	240					2.75
02		8.8	240					2.88
03		8.2	240					2.90
04		6.5	230					3.00
05		5.2	240					3.00
06		5.5	270					2.70
07		9.3	260		<125	(2.70)		2.85
08		12.0	240		<121	3.40		2.60
09		13.2	230		117	3.92		2.42
10		14.2	220		115	4.20		2.25
11		14.15	220		115	(4.30)		2.10
12		14.0	215		115	----		2.00
13		>13.0	(210)	---	115	----		1.98
14		>12.35	(210)	---	113	----		1.95
15		12.1	(220)	---	115	(4.00)		1.95
16		12.0	240	---	115	3.60		1.95
17		11.65	260		119	3.05		(2.00)
18		(11.45)	300		<150	2.20	2.3	(2.05)
19		(10.3)	400					(2.05)
20		(11.5)	400					(2.05)
21		(11.55)	330					(2.25)
22		(11.6)	250				2.6	(2.50)
23		10.9	230				2.5	(2.65)

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

Table 58

Wilkes Station (66.2°S, 110.5°E) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.3)	245				2.0	(2.75)
01		(5.15)	250				1.8	(2.75)
02		(5.0)	255				1.4	2.75
03		(5.75)	250				1.8	(2.70)
04		(4.9)	255				1.8	(2.62)
05	---	(6.0)	265		---	----	1.6	(2.75)
06	---	6.0	260	---	(113)	----	2.0	2.75
07	---	7.15	250	---	114	(2.32)		2.75
08	(415)	(7.9)	245	(4.1)	115	(2.68)		2.70
09	(425)	(8.25)	240	(4.1)	113	(2.92)		2.65
10	(400)	(9.2)	(230)	---	110	(3.05)		2.60
11	(405)	(9.7)	(235)	(4.5)	(109)	(3.20)		(2.50)
12	(375)	(9.8)	(240)	4.8	111	3.25		(2.50)
13	430	>9.25	(240)	(4.5)	111	3.10		(2.50)
14	<380	(10.6)	240	---	113	(2.95)		(2.60)
15	(410)	(9.0)	<250	---	<119	(2.60)		(2.60)
16	(470)	(9.2)	(265)	---	115	(2.18)		(2.60)
17	<360	(8.75)	280	---	109	(1.90)		2.55
18	---	(8.2)	290		---	----		(2.62)
19		(7.2)	<300					2.55
20		(6.6)	<290					2.60
21		(6.1)	260					2.52
22		(6.2)	255					2.75
23		(6.0)	250				2.3	(2.62)

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

Table 59

Byrd Station (80.0°S, 120.0°W) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(8.1)	340					(2.45)
01		6.8	340					2.45
02		6.85	360				2.8	2.45
03		7.05	(340)					2.50
04		6.65	<325					2.62
05		6.9	280					2.65
06		7.2	(265)					2.82
07		7.7	250					2.90
08		9.0	250		---	----		2.95
09		9.8	245		---	----		2.95
10	---	10.5	240		---	----		3.00
11	---	10.9	245		---	----		2.95
12	---	10.8	250		---	----		2.95
13	---	11.0	245	---	---	----		2.95
14		10.6	245	---	---	----		2.95
15		10.0	(260)		119	2.52		3.00
16		8.0	275		121	----		2.88
17		7.0	280		---	----		2.85
18		(7.4)	300		---	----	2.4	(2.72)
19		(8.0)	310				2.8	(2.60)
20		(8.3)	310				3.0	(2.55)
21		(8.25)	330				3.0	(2.52)
22		(8.3)	325					(2.55)
23		(8.1)	340					(2.40)

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

Table 60

Pole Station (90.0°S) September 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.8)	260		126	----		(2.70)
01		(7.3)	255		<127	1.85		(2.65)
02		7.9	<280		119	----		2.60
03		(7.8)	265		(139)	----		2.58
04		(8.2)	270		(127)	----		(2.48)
05		(7.6)	275		<131	----		(2.50)
06		(7.95)	280		<136	----		(2.45)
07	---	(8.4)	285	---	---	----		(2.45)
08		(8.15)	290		(119)	----		(2.40)
09		(7.2)	305		<125	----		(2.48)
10		6.45	275		121	----		2.52
11		6.15	305		<121	----		2.50
12		(6.2)	<290		109	----		(2.60)
13		5.65	290		115	----		2.70
14		6.7	285		119	(2.20)		2.75
15		(8.7)	270		121	----		(2.80)
16		(9.6)	270		---	----		(2.80)
17		8.5	260		117	----		2.85
18		6.8	280		(121)	----		2.70
19		(4.95)	275		(121)	(2.00)		(2.75)
20		(4.85)	290		<125	1.92		(2.70)
21		(5.2)	280		<131	(1.95)		(2.80)
22		(5.35)	<275		<141	(1.85)		(2.75)
23		5.5	275		<139	(1.90)		2.58

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

Table 61

Chiclayo, Peru (6.8°S, 79.8°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.3	235					2.65
01		9.5	245					2.80
02		9.3	240					2.90
03		0.8	230					3.05
04		6.9	235					3.12
05		5.35	235					3.00
06		4.7	260					2.70
07		7.9	270		129	2.40		2.02
08		9.9	245		119	3.20		2.70
09		10.7	230		113	3.70		2.35
10		11.45	215		118	4.05		2.25
11	---	11.55	<215	---	115	4.20		2.10
12	---	11.8	210	(7.2)	110	(4.30)		2.05
13	---	11.8	210	(6.7)	115	4.30		2.02
14	---	11.5	<210	(6.5)	115	4.20		2.00
15	---	>11.1	220	(6.5)	113	3.95		2.00
16		10.9	225	---	117	3.58		1.98
17		>10.75	250	---	119	3.05		2.00
18		(10.35)	290		(145)	2.20	2.8	(2.05)
19		>9.55	385					2.00
20		>9.4	400					2.00
21		9.75	350					(2.15)
22		9.4	270					2.50
23		9.4	240					2.65

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

Table 62

Wilkes Station (66.2°S, 110.5°E) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.4)	255				1.9	(2.80)
01		(4.2)	<245				2.4	(2.90)
02		(4.2)	240				1.5	(2.95)
03		(4.4)	260				1.6	(2.90)
04		(3.9)	250				1.8	(2.90)
05		(3.8)	250				2.2	(2.85)
06		(4.8)	260				2.4	(2.75)
07		(6.8)	<245		---	----	1.7	(2.90)
00		(7.0)	240		113	(1.80)		(3.00)
09		(7.8)	240		(121)	2.05		(2.90)
10		(7.7)	240		(117)	(2.35)		(3.00)
11	---	(8.0)	240	---	(115)	(2.40)		2.88
12	---	(9.1)	<250	---	<121	(2.50)		(2.78)
13	(320)	(9.0)	250	---	121	2.40		2.70
14	---	(10.0)	250	---	(121)	(2.18)		(2.72)
15	---	(8.5)	270	---	113	(1.80)	2.1	(2.68)
16		(8.7)	265		---	----	2.2	(2.65)
17		(7.8)	275				2.4	(2.58)
18		(6.8)	280					(2.70)
19		(5.8)	290					(2.68)
20		(6.0)	(255)					(2.75)
21		(4.9)	260				3.4	(2.80)
22		(5.2)	265				2.6	(2.70)
23		(3.9)	(250)					(2.70)

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

Table 63

Little America (78.2°S, 162.2°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.0)	285				2.2	(2.68)
01		(4.9)	305		---	----	2.3	(2.65)
02		(5.0)	300		---	----	2.5	(2.60)
03		(4.6)	305		---	----	2.7	(2.80)
04		(4.65)	(300)		---	----	2.9	(2.85)
05		(4.4)	300		---	----	3.0	(2.90)
06		(4.05)	285		---	----	2.8	(2.88)
07		(5.0)	290		---	----	2.4	(2.95)
08		(6.35)	270		---	----	2.0	3.00
09		(5.0)	300		---	----	2.3	(2.82)
10		(4.6)	290		---	----	2.3	(2.90)
11		(4.95)	295		---	----	2.2	(3.00)
12		(4.95)	310		<119	2.08		(2.85)
13		(5.8)	270		---	----	2.5	(2.85)
14		(6.5)	(260)		---	----	2.5	(2.75)
15		(7.0)	255		---	----	3.5	(2.75)
16		(7.5)	250				3.0	(2.82)
17		(7.8)	250				3.0	(2.78)
18		(8.5)	250				2.3	(2.72)
19		(8.2)	250				2.0	(2.70)
20		(7.35)	250					(2.70)
21		(7.0)	255					2.60
22		(7.0)	260					(2.50)
23		(5.5)	285				1.5	(2.60)

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

Table 64

Byrd Station (80.0°S, 120.0°W) August 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.1)	330				3.0	(2.58)
01		(6.35)	340				3.2	(2.50)
02		(6.45)	(360)				3.2	(2.50)
03		6.0	<330				3.0	2.55
04		6.2	300					2.65
05		5.0	280					2.70
06		4.2	(300)					2.70
07		4.45	<300					2.80
08		5.5	270					2.95
09		5.8	255					2.95
10		6.65	245					3.05
11		7.3	245					3.00
12		6.45	240					3.05
13		(6.5)	255					(3.00)
14		(6.2)	265					(2.95)
15		(4.5)	300					(2.70)
16		(4.0)	<355				2.6	(2.60)
17		(4.5)	345				2.8	(2.62)
18		(4.9)	(340)				3.5	(2.58)
19		(6.3)	340				4.4	(2.65)
20		(6.5)	325				5.2	(2.60)
21		(6.5)	320				4.0	(2.65)
22		(7.0)	320				3.1	(2.60)
23		(6.6)	335				3.3	(2.50)

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

Table 65

Wilkes Station (66.2°S, 110.5°E) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(3.3)	240					(3.05)
01		(3.9)	245					----
02		(3.5)	240					(3.05)
03		3.2	240				2.3	(2.85)
04		(3.1)	250				2.2	(2.80)
05		(4.3)	250					(2.92)
06		(3.65)	250				1.8	(2.80)
07		(4.0)	240				2.0	(2.90)
08		(4.25)	245		---	----	2.2	(2.90)
09		(4.8)	250		(121)	(1.65)		(2.95)
10	---	(6.8)	260		(114)	(1.95)		2.78
11	---	(6.8)	265		(127)	(2.15)		(2.80)
12	---	(7.4)	270		---	----		(2.80)
13	---	(7.7)	260		---	----		(2.70)
14	---	(6.9)	260		(119)	----		(2.80)
15	---	(6.75)	280		121	----		(2.65)
16		(5.7)	280					(2.38)
17		(6.0)	290					(2.55)
18		(5.5)	300					(2.72)
19		(5.5)	300					(2.65)
20		(4.05)	265				1.6	(2.82)
21		(4.6)	270					(2.70)
22		(3.6)	260				2.8	(2.98)
23		(4.9)	250				1.8	----

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

Table 66

Little America (78.2°S, 162.2°W) July 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(3.85)	290		---	---	2.4	(2.68)
01		(3.8)	280				2.4	(2.80)
02		(3.7)	305				2.8	(2.55)
03		(4.0)	295				2.6	(2.80)
04		(4.0)	(260)				3.5	----
05		---	(260)		---	---	4.0	----
06		(3.0)	(275)				2.4	(3.10)
07		(3.1)	290				3.0	(2.80)
08		(3.45)	300				2.8	(2.85)
09		(3.05)	310		---	---	2.3	(2.75)
10		(3.5)	330				2.4	(2.70)
11		>3.5	(300)				2.5	(2.70)
12		(4.5)	(270)		---	---	2.4	(2.75)
13		(3.9)	(260)		---	---	2.5	(2.70)
14		(4.4)	250		---	---	2.5	(2.75)
15		(4.85)	240		---	---	2.9	(2.65)
16		(5.5)	250				2.6	(2.70)
17		(6.35)	260				2.5	(2.80)
18		(5.85)	260				2.8	(2.70)
19		(6.35)	250				1.8	(2.65)
20		(6.3)	265				2.6	(2.75)
21		(5.6)	270				4.0	(2.80)
22		(5.1)	(280)				2.6	(2.70)
23		(5.0)	(285)				2.5	(2.75)

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

Table 67

Little America (78.2°S, 162.2°W) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.2)	300				2.2	(2.60)
01		(5.0)	300				2.4	(2.80)
02		(4.9)	300				3.0	(2.85)
03		(4.3)	290				2.8	(2.80)
04		(4.3)	280		---	---	2.8	(2.90)
05		(4.3)	295				2.6	(3.00)
06		(4.0)	300				2.3	(2.90)
07		(3.85)	325				2.4	(2.80)
00		(3.8)	315				2.5	(2.82)
09		(3.35)	300		---	---	2.4	(2.85)
10		(3.9)	<300				2.4	(2.80)
11		(4.0)	(330)				2.4	(2.68)
12		(4.1)	300				2.4	(2.75)
13		(4.7)	260				2.5	(2.82)
14		(4.5)	280				3.0	(2.80)
15		(5.0)	255				3.5	(2.65)
16		(5.5)	260				6.4	(2.75)
17		(6.0)	260				5.1	(2.75)
18		(6.4)	260				2.2	(2.65)
19		(6.5)	250				2.2	(2.80)
20		(5.8)	240				2.4	(2.62)
21		(5.0)	280				2.0	(2.50)
22		(5.5)	285				1.6	(2.65)
23		(5.0)	310				2.4	(2.60)

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

Table 68

Byrd Station (80.0°S, 120.0°W) June 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.2)	315				3.3	(2.62)
01		(6.2)	365				3.6	(2.45)
02		(6.0)	(350)				3.7	(2.50)
03		(5.95)	360				4.0	(2.55)
04		(5.65)	310				3.0	(2.65)
05		(5.3)	295				3.0	(2.75)
06		4.15	280				2.6	2.80
07		3.5	290					2.85
08		(3.0)	<300					2.95
09		(3.0)	(300)					(2.85)
10		3.1	300					2.90
11		3.3	310					2.80
12		3.5	300					2.80
13		3.4	300				2.6	2.75
14		(3.2)	(330)				2.9	(2.60)
15		(3.2)	350				3.2	(2.60)
16		(3.5)	<360				3.4	(2.60)
17		(4.0)	(340)				4.0	(2.55)
18		(4.1)	<330				4.6	(2.70)
19		(4.75)	325				4.6	(2.55)
20		(5.85)	300				4.4	(2.60)
21		(6.05)	305				5.7	(2.62)
22		(6.2)	310				4.0	(2.60)
23		(5.95)	320				3.6	(2.60)

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

Table 69

Little America (78.2°S, 162.2°W) May 1958

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.95)	295				2.3	(2.50)
01		(5.3)	300		---	----	2.4	(2.50)
02		(5.25)	300		---	----	2.7	(2.50)
03		(5.15)	290		---	----	3.0	(2.60)
04		(5.4)	280		---	----	3.3	(2.65)
05		(4.9)	290		---	----	3.0	(2.75)
06		(4.25)	290		---	----	2.6	(2.75)
07		(5.0)	290		---	----	2.6	(2.78)
08		(5.35)	280		---	----	2.8	2.90
09		(4.0)	290		---	----	2.5	2.70
10		(4.0)	330		---	----	2.6	(2.70)
11		(4.2)	(255)		---	----	2.6	(2.82)
12		(4.8)	240		121	----	2.6	(2.85)
13		(4.5)	<240		(118)	(2.20)	2.6	(2.80)
14		(5.9)	250		<135	----	3.6	(2.82)
15		(5.8)	270		---	----	3.3	(2.75)
16		(7.55)	250		---	----	4.7	(2.70)
17		(8.0)	250				3.9	(2.65)
18		(7.3)	245				3.1	(2.75)
19		(9.5)	250				2.3	(2.70)
20		(8.0)	250				1.6	(2.50)
21		7.6	250				1.4	(2.55)
22		(5.8)	285		---	----	1.2	(2.60)
23		(4.8)	265		---	----	2.2	----

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

Table 70

Concepcion, Chile (36.6°S, 73.0°W) October 1957*

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(12.0)	(330)				(2.6)	(2.60)
01		(11.6)	<290				(2.0)	(2.68)
02		(10.0)	(280)				(2.3)	(2.60)
03		(8.7)	(280)					(2.40)
04		(8.25)	(310)				(2.2)	(2.30)
05		>9.2	(280)		115	2.02	(2.3)	(2.40)
06		(11.1)	(240)		116	2.90	(3.4)	(2.60)
07		(12.4)	<240		115	3.50	(3.7)	(2.65)
08		12.8	235		111	3.85	4.0	2.60
09		13.2	<235		111	4.10		2.50
10		13.75	235		111	----	4.7	2.45
11	445	13.6	(235)	---	111	----	4.6	2.45
12	455	13.35	230	---	111	----	4.6	2.40
13	455	13.4	<235	6.9	111	----		2.35
14	460	13.2	240	---	111	4.20		2.40
15	450	13.3	<245		111	3.92	4.3	2.40
16	---	13.1	250		111	3.50	3.9	2.40
17		13.0	265		119	2.82	3.0	2.45
18		12.4	(305)		---	----	3.7	2.48
19		11.4	350				(5.0)	2.35
20		11.6	395				3.2	2.25
21		11.8	370				3.6	(2.35)
22		11.65	355				(3.4)	(2.45)
23		11.6	340				2.8	(2.50)

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.
*Data reported October 16 through 31 only.

Table 71*

Terre Adelie (66.8°S, 141.4°E) August 1956

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	5.8	250	----	110	(1.80)	2.3	(3.10)
01	---	(6.0)	250	----	---	(2.20)	2.6	(2.90)
02	(280)	(6.5)	<250	----	---	(2.40)	2.6	(2.70)
03	(360)	(7.2)	240	(3.70)	130	(2.40)	2.6	(2.85)
04	(320)	(7.9)	250	----	130	(2.30)	2.6	(2.60)
05	---	(7.0)	240	----	---	(2.10)	2.5	(2.85)
06	---	(7.1)	250		140	(2.00)	2.2	(2.70)
07		(7.0)	250		---	1.70	2.3	(2.80)
08		6.9	250		---	----	2.9	(2.75)
09		7.1	250		---	----	2.4	(2.65)
10		5.9	250		---	----	2.4	(2.70)
11		(6.0)	250		---	----	2.2	(2.80)
12		5.5	250				3.2	(2.90)
13								
14								
15								
16								
17								
18								
19								
20								
21								
22		(4.8)	255		---	----	2.2	(2.90)
23	---	(3.5)	250	----	---	(1.60)	2.2	----

Time: 0.0°.
Sweep: 1.3 Mc to 17.0 Mc in 1 minute.
*Observations taken on a 15-hour working schedule.

Table 72*

Terre Adelie (66.8°S, 141.4°E) July 1956

Time	h'F2	foF2	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	(3.5)	250		---	(1.60)	2.9	----
01	---	(3.8)	250		---	1.70	2.2	----
02	---	5.2	<250		105	1.85	2.4	(3.00)
03	---	(5.6)	240		<115	1.85	2.0	----
04	---	(6.0)	250		(110)	1.90	1.9	----
05	---	(5.7)	250	----	<175	(1.70)	2.2	----
06		(5.5)	245		---	1.60	3.3	----
07		4.9	250		---	----	2.5	(2.80)
08		5.0	250		---	----	3.2	(2.70)
09		(4.7)	250		---	----	2.0	(2.90)
10		(4.8)	250				2.3	(2.65)
11		(4.4)	250				2.3	(2.90)
12		(4.6)	<250				1.8	----
13								
14								
15								
16								
17								
18								
19								
20								
21								
22		---	(260)				2.9	----
23	---	(4.5)	250		---	----	3.4	----

Time: 0.0°.
Sweep: 1.3 Mc to 17.0 Mc in 1 minute.
*Observations taken on a 15-hour working schedule.

USCOMM - NBS - BL

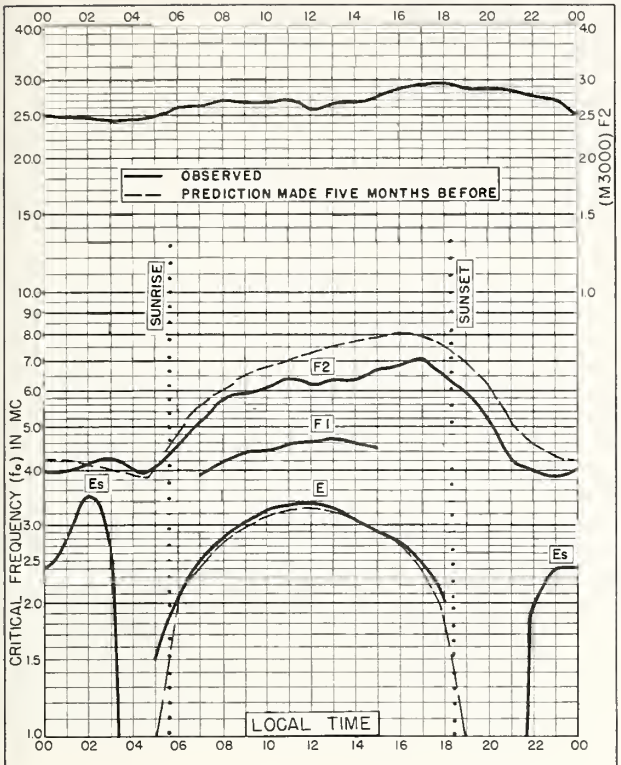


Fig. 1. ANCHORAGE, ALASKA
61.2°N, 149.9°W SEPTEMBER 1959

NBS 503

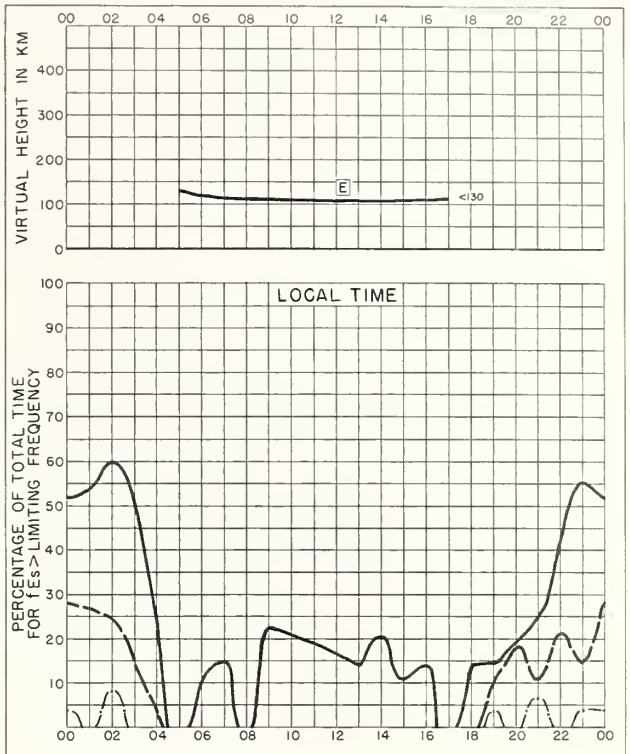


Fig. 2. ANCHORAGE, ALASKA SEPTEMBER 1959

NBS 490

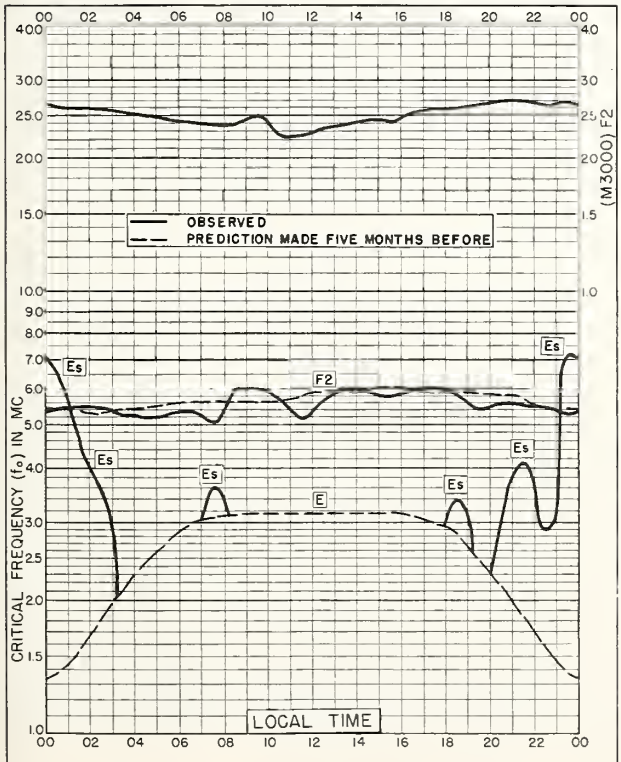


Fig. 3. POINT BARROW, ALASKA
71.3°N, 156.8°W JULY 1959

NBS 503

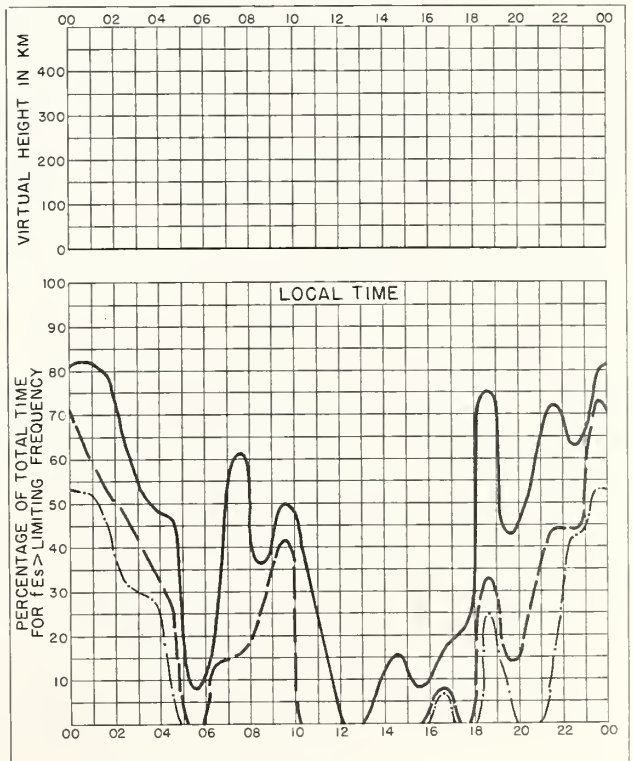


Fig. 4. POINT BARROW, ALASKA JULY 1959

NBS 490

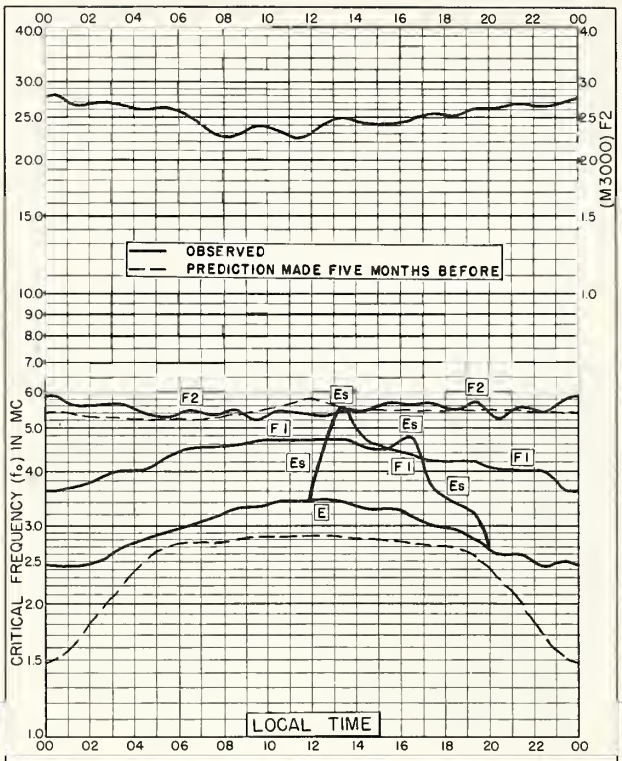


Fig. 5. THULE, GREENLAND
76.6°N , 68.7°W JUNE 1959

NBS 503

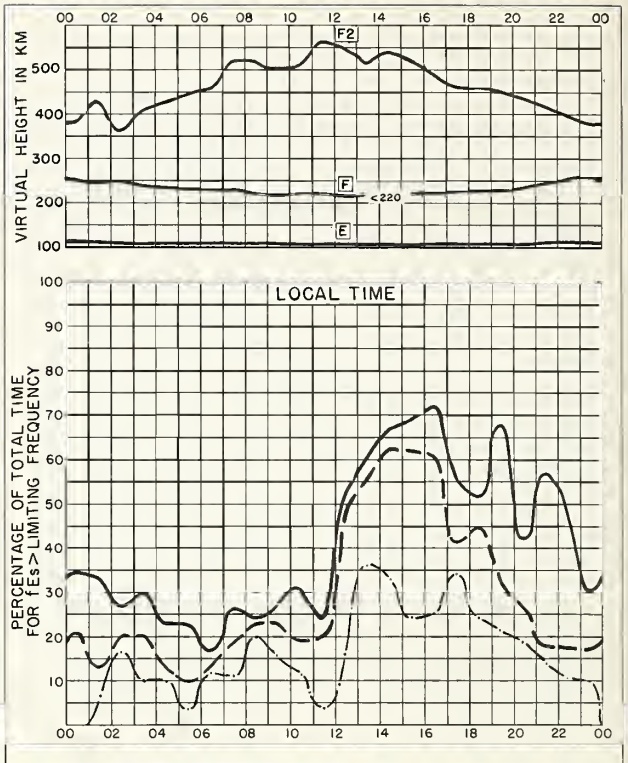


Fig. 6. THULE, GREENLAND JUNE 1959

NBS 490

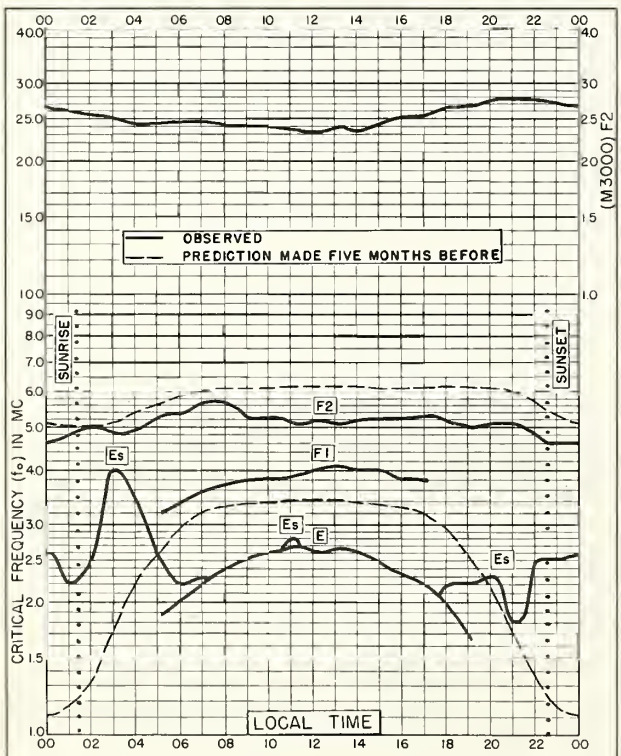


Fig. 7. FAIRBANKS, ALASKA
64.9°N, 147.8°W JUNE 1959

NBS 503

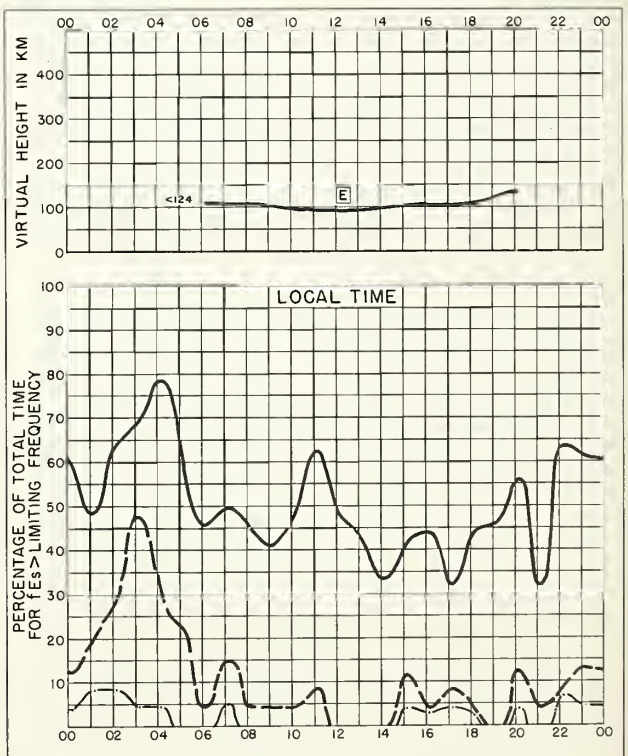


Fig. 8. FAIRBANKS, ALASKA JUNE 1959

NBS 490

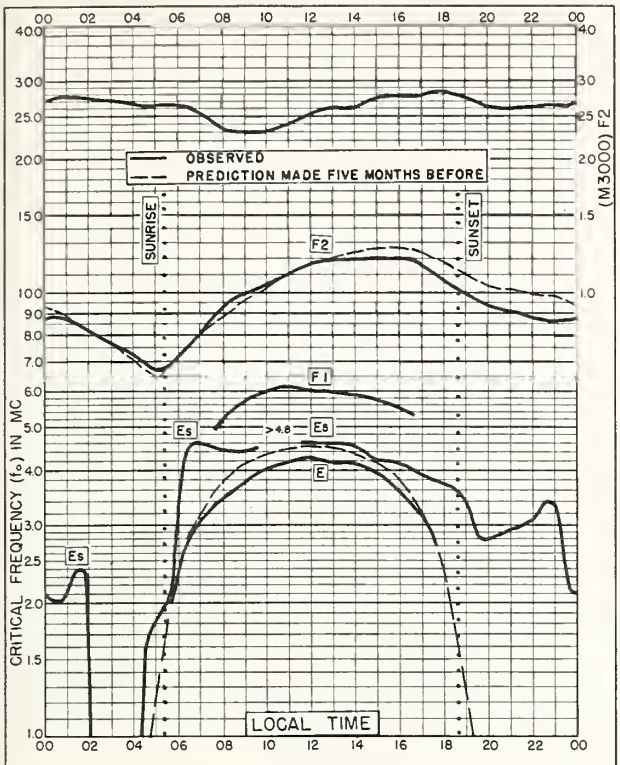


Fig. 9. MAUI, HAWAII
20.8°N, 156.5°W JUNE 1959

NBS 503

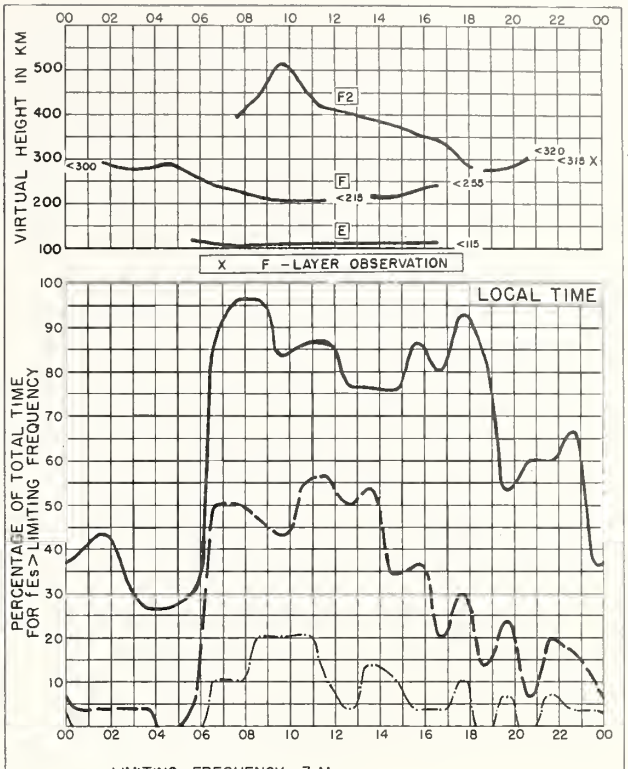


Fig. 10. MAUI, HAWAII JUNE 1959

NBS 490

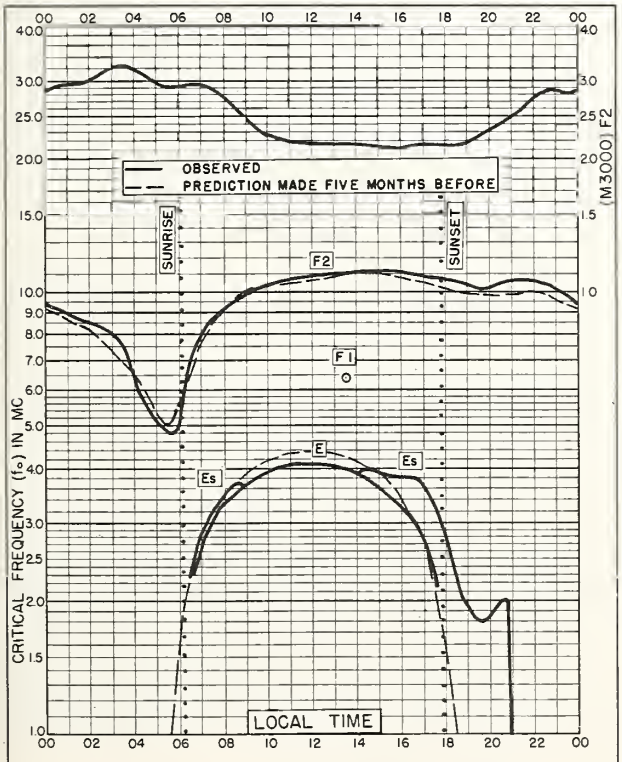


Fig. 11. TALARA, PERU
4.6°S, 81.3°W JUNE 1959

NBS 503

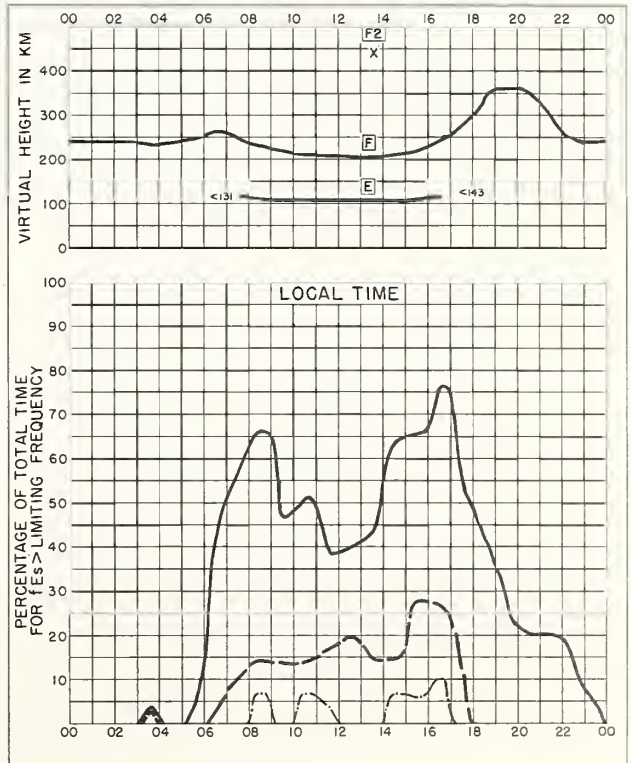


Fig. 12. TALARA, PERU JUNE 1959

NBS 490

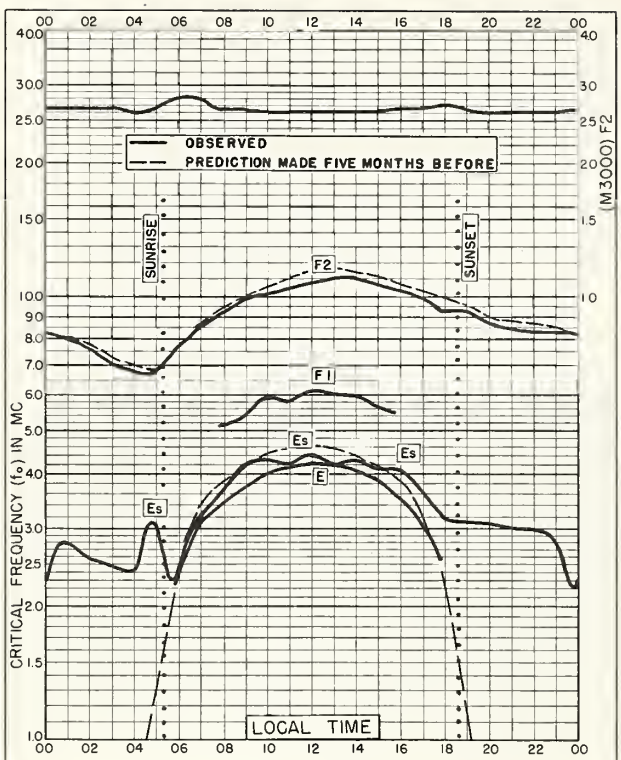


Fig. 13. GRAND BAHAMA I.
26.6°N, 78.2°W MAY 1959

NBS 503

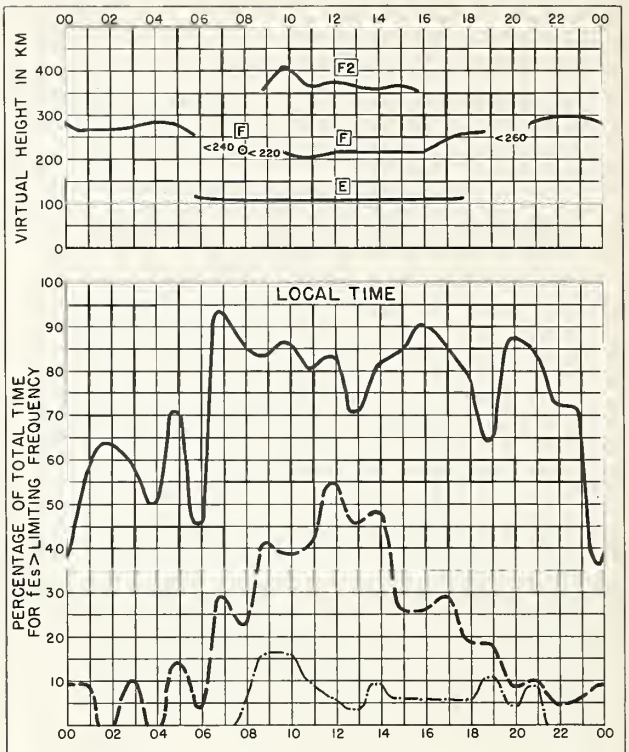


Fig. 14. GRAND BAHAMA I. MAY 1959

NBS 490

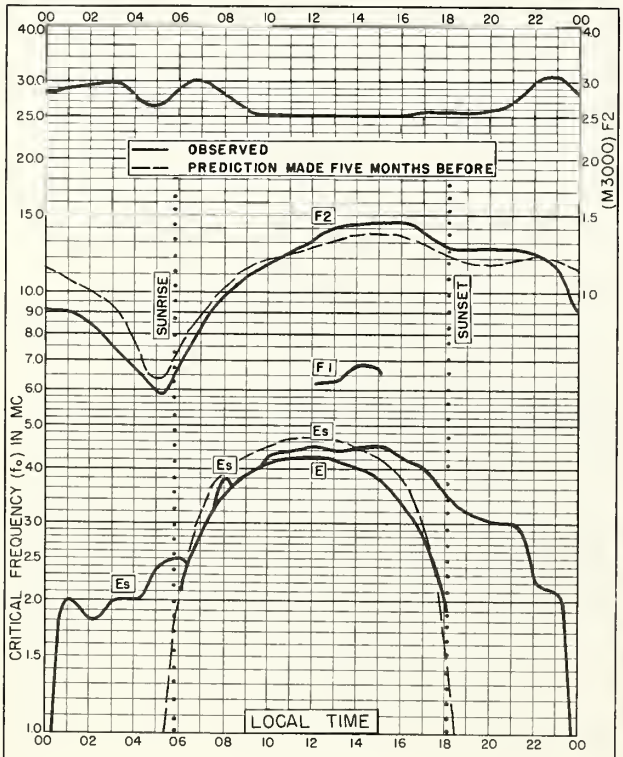


Fig. 15. BOGOTA, COLOMBIA
4.5°N, 74.2°W MAY 1959

NBS 503

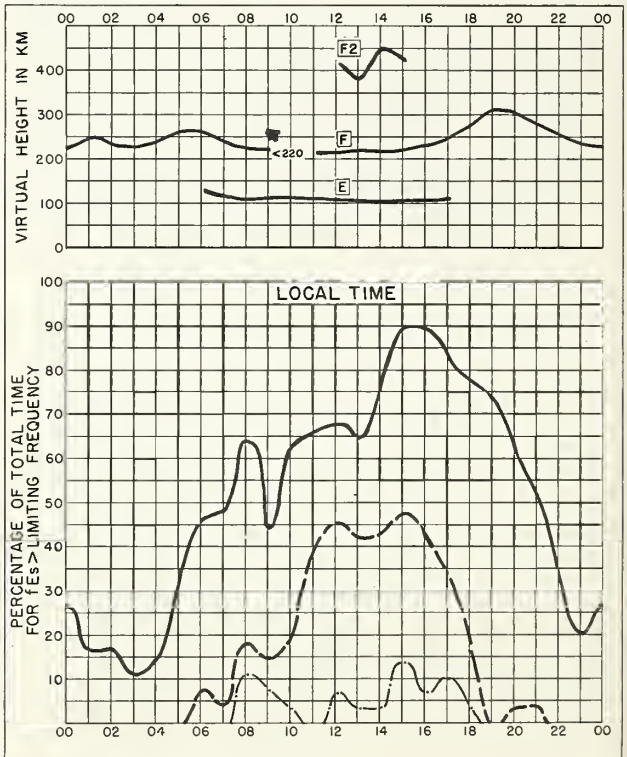


Fig. 16. BOGOTA, COLOMBIA MAY 1959

NBS 490

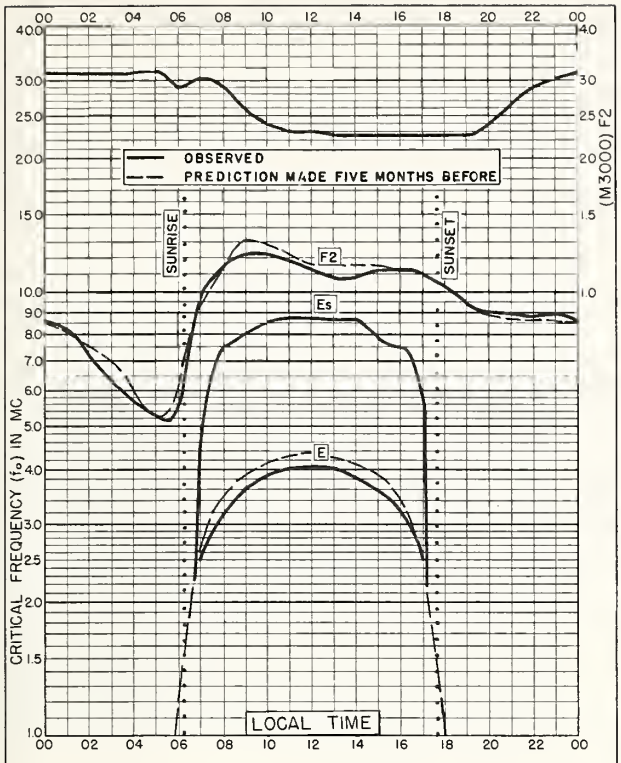


Fig. 17. HUANCAYO, PERU
12.0°S, 75.3°W MAY 1959

NBS 503

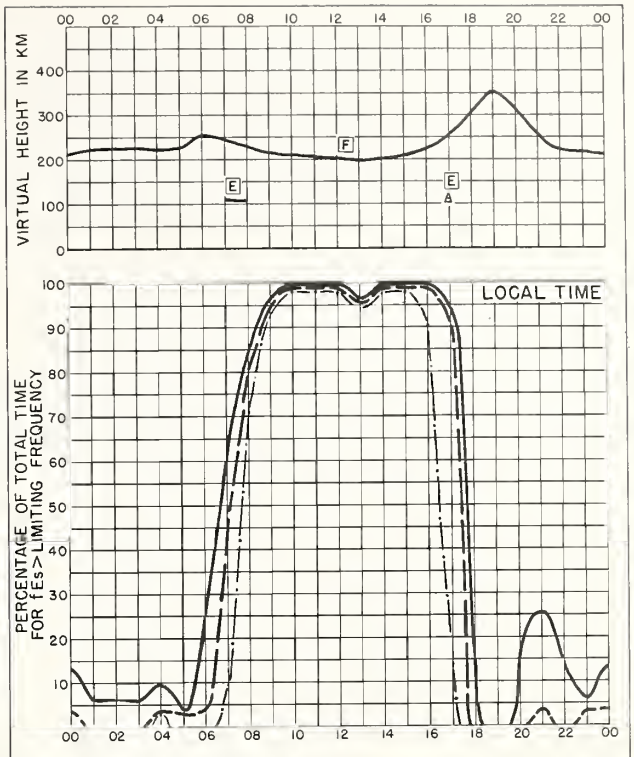


Fig. 18. HUANCAYO, PERU MAY 1959

NBS 490

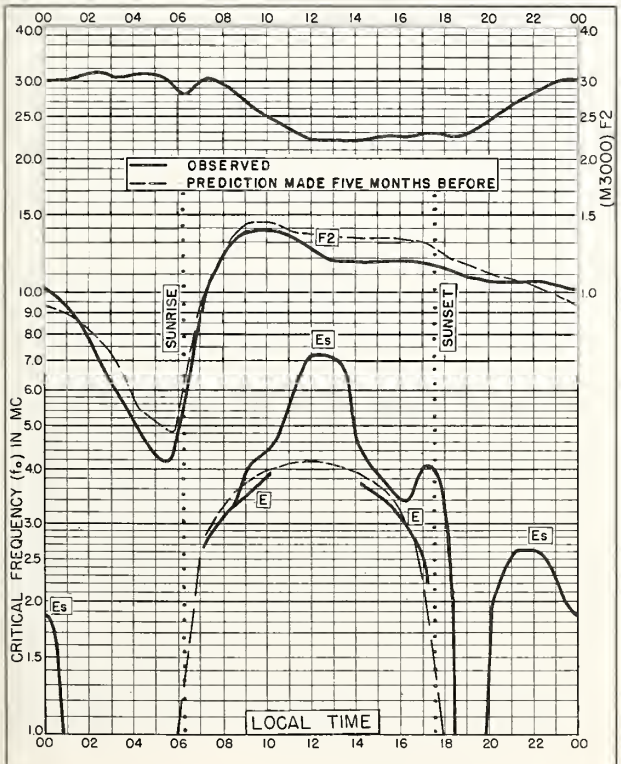


Fig. 19. ILO, PERU
17.4°S, 71.2°W MAY 1959

NBS 503

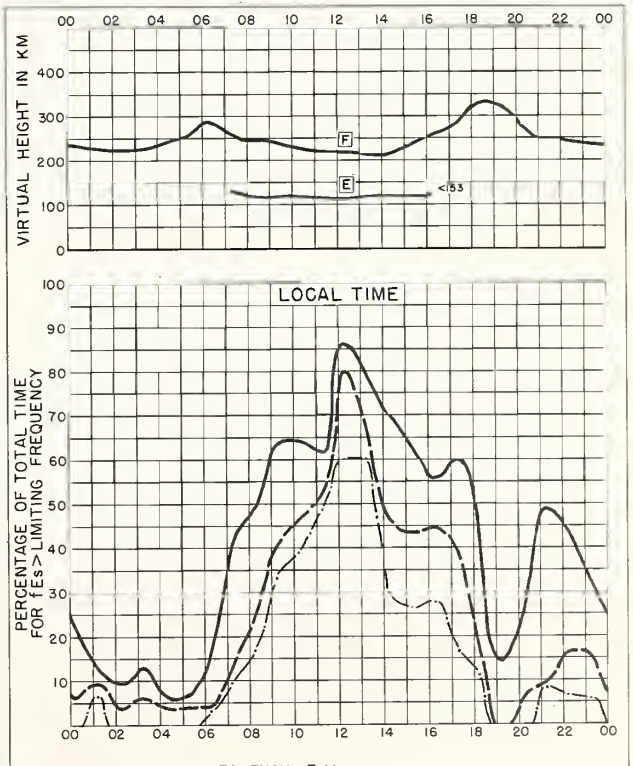


Fig. 20. ILO, PERU MAY 1959

NBS 490

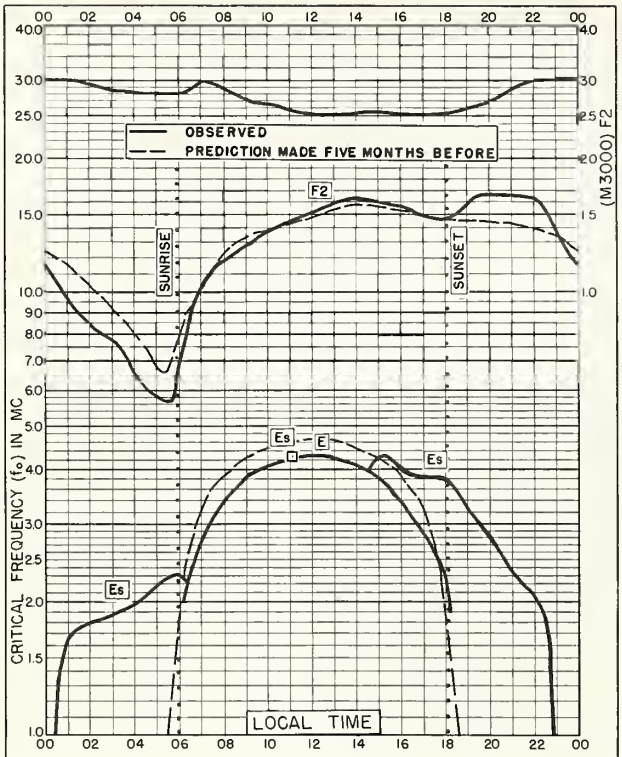


Fig. 21. BOGOTA, COLOMBIA
4.5°N, 74.2°W APRIL 1959

NBS 503

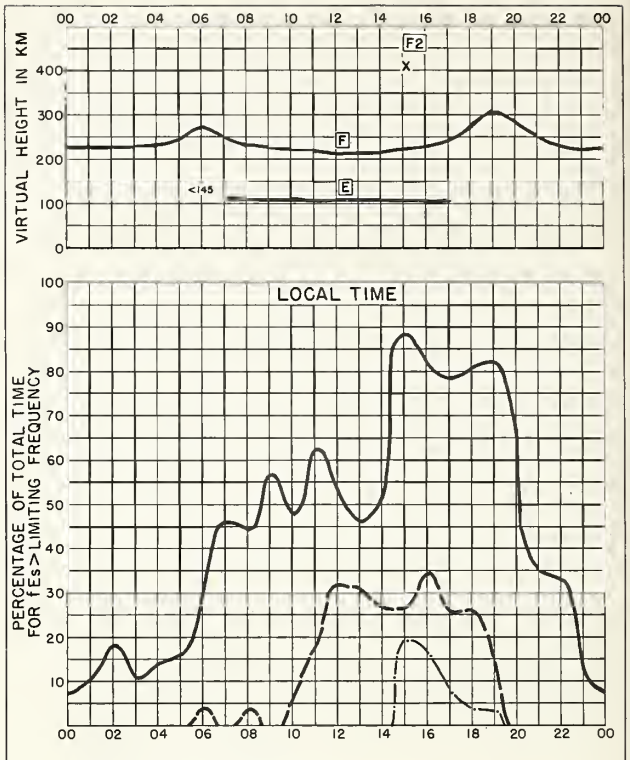


Fig. 22. BOGOTA, COLOMBIA APRIL 1959

NBS 490

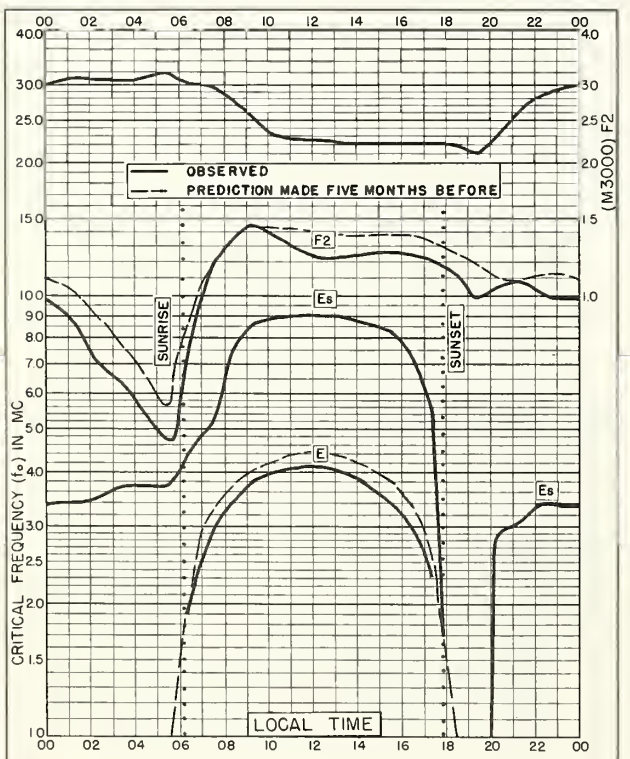


Fig. 23. JULIACA, PERU
15.5°S, 70.2°W APRIL 1959

NBS 503

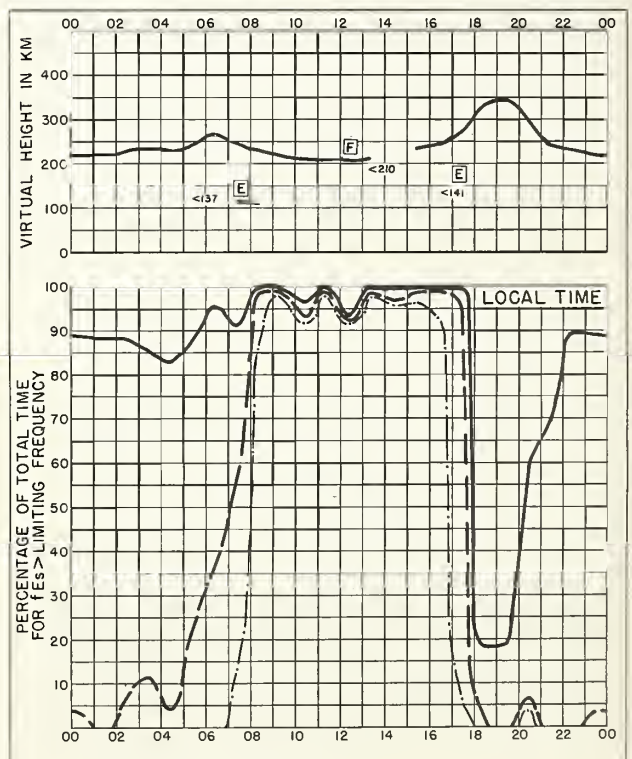


Fig. 24. JULIACA, PERU APRIL 1959

NBS 490

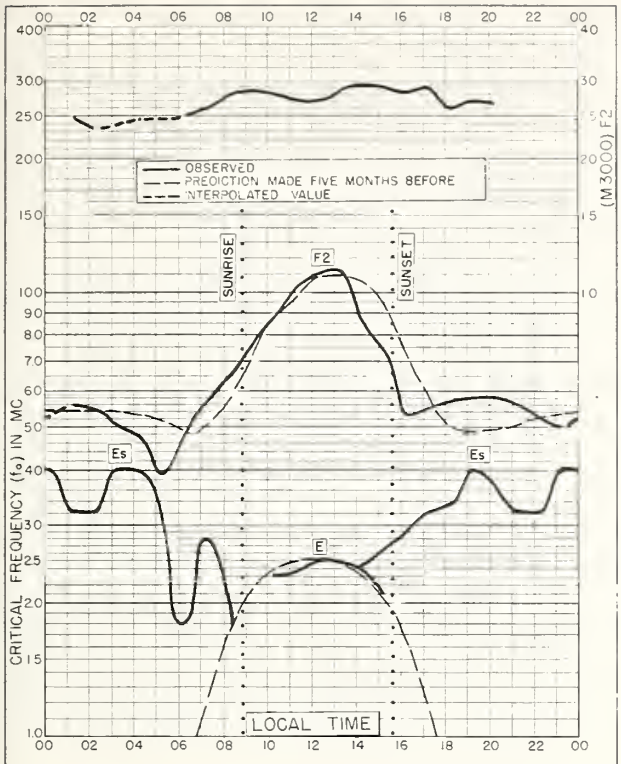


Fig. 25. TROMSO, NORWAY
69.7°N, 19.0°E FEBRUARY 1959

NBS 503

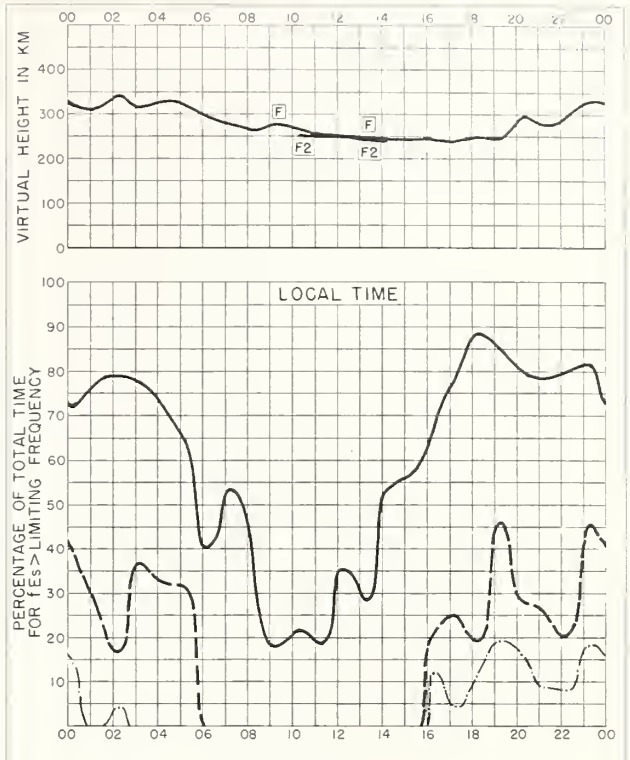


Fig. 26. TROMSO, NORWAY FEBRUARY 1959

NBS 490

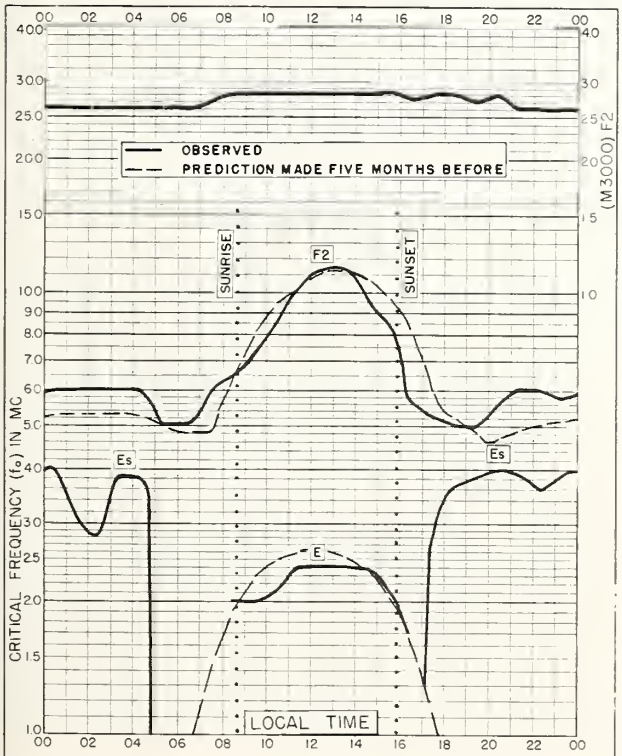


Fig. 27. KIRUNA, SWEDEN
67.8°N, 20.3°E FEBRUARY 1959

NBS 503

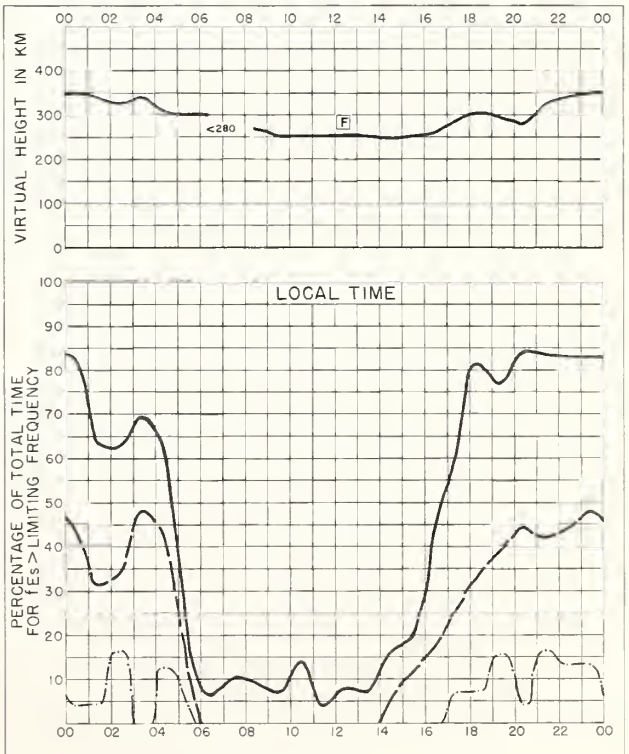


Fig. 28. KIRUNA, SWEDEN FEBRUARY 1959

NBS 490

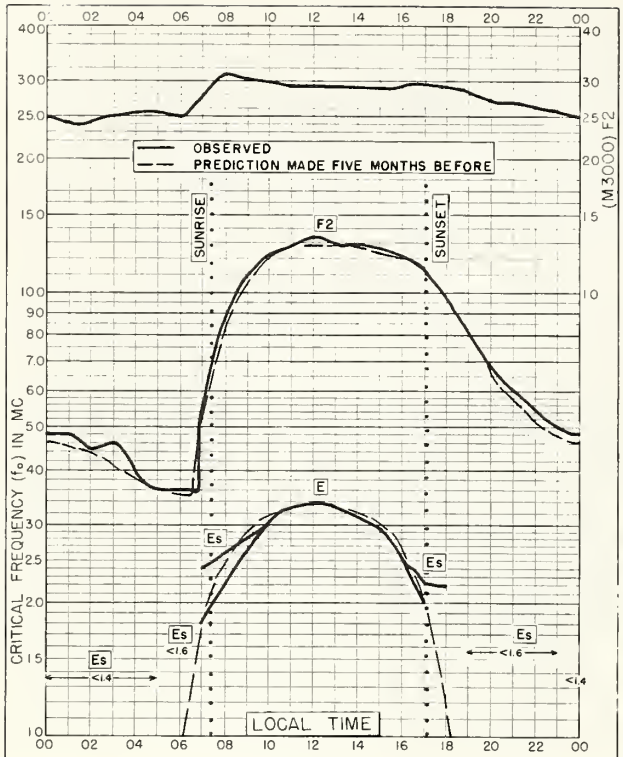


Fig. 29. SLOUGH, ENGLAND
51.5°N, 0.6°W FEBRUARY 1959

NBS 503

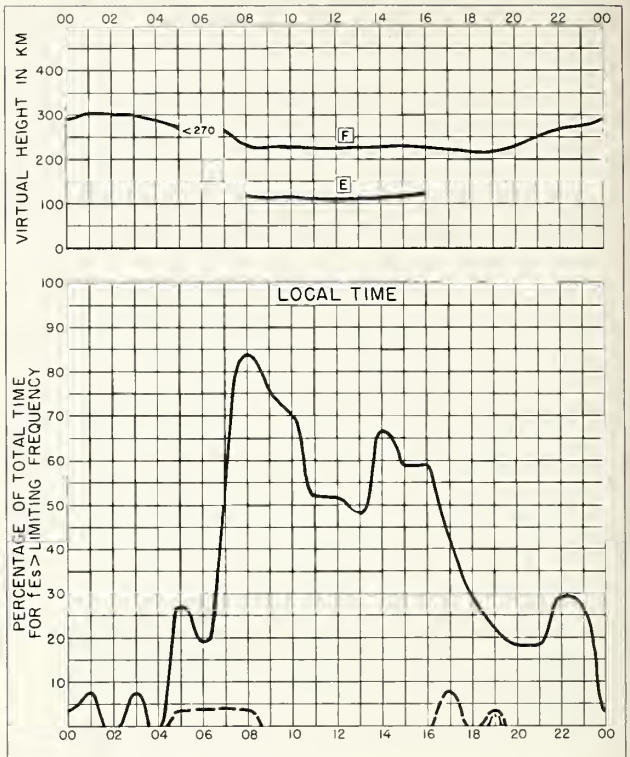


Fig. 30. SLOUGH, ENGLAND FEBRUARY 1959

NBS 490

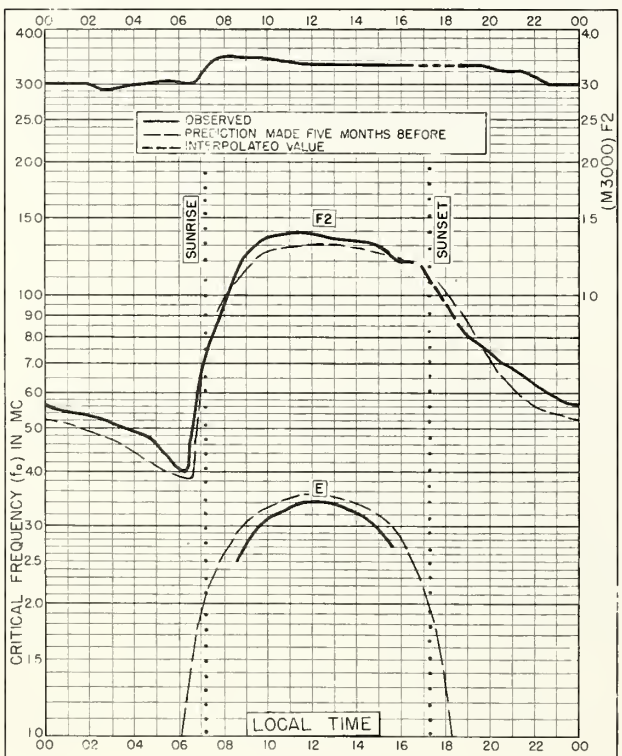
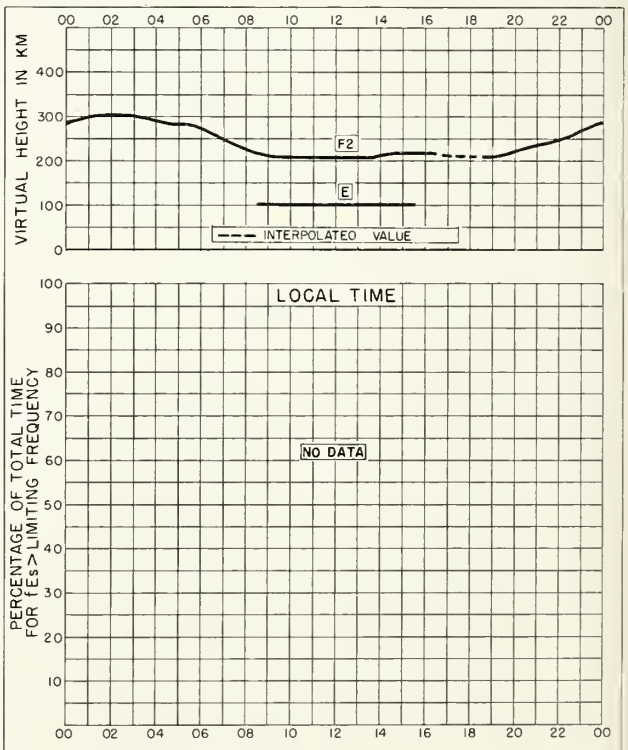


Fig. 31. SCHWARZENBURG, SWITZERLAND
46.8°N, 7.3°E FEBRUARY 1959

NBS 503



FEBRUARY 1959

Fig. 32. SCHWARZENBURG, SWITZERLAND

NBS 490

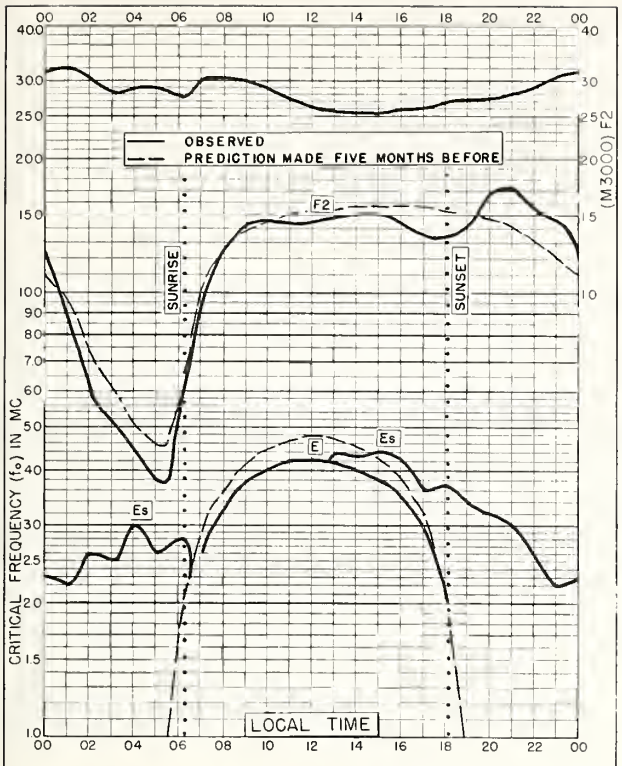


Fig. 33. BOGOTA, COLOMBIA
4.5°N, 74.2°W FEBRUARY 1959

NBS 503

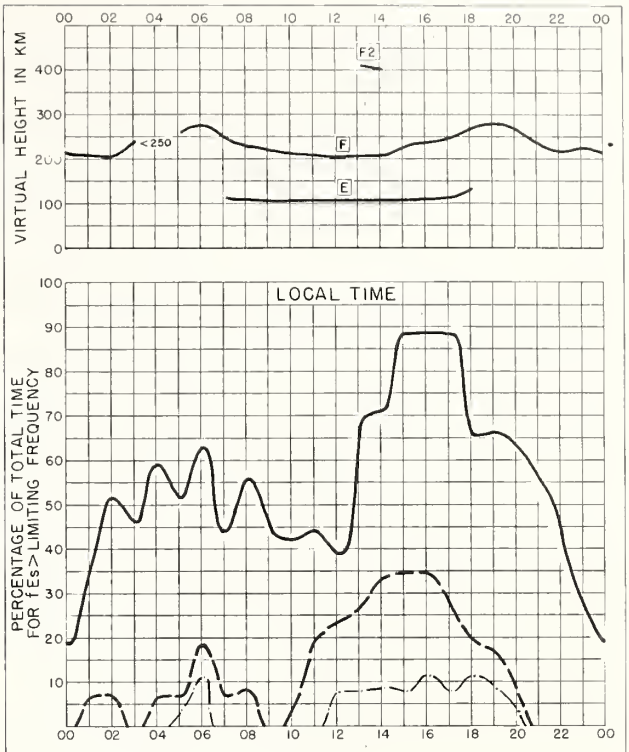


Fig. 34. BOGOTA, COLOMBIA FEBRUARY 1959

NBS 490

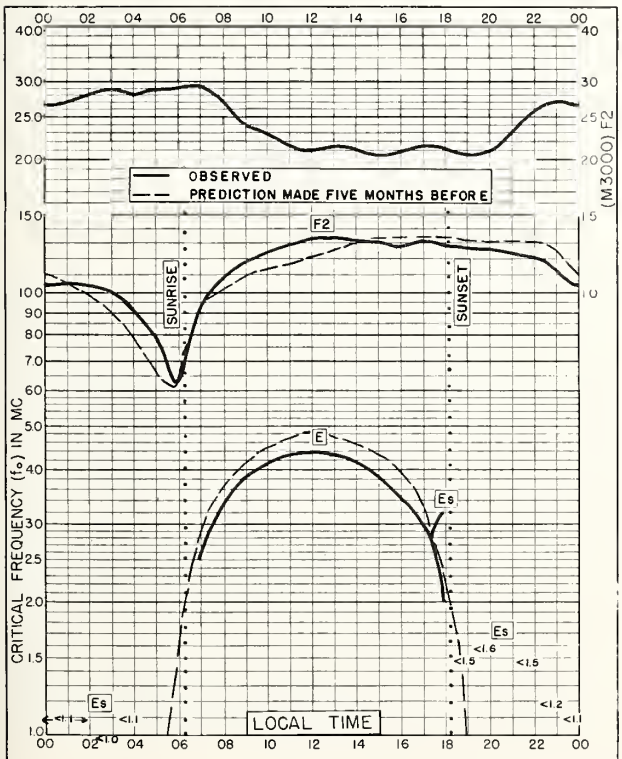
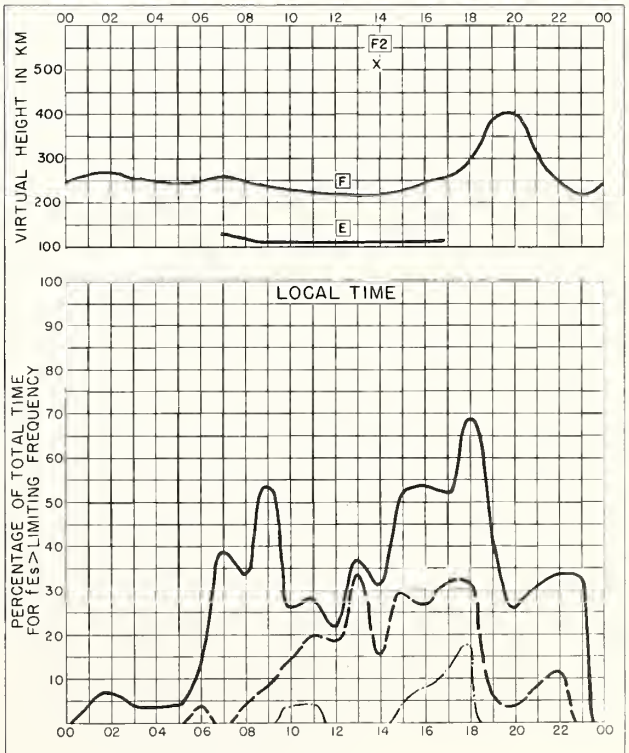


Fig. 35. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E FEBRUARY 1959

NBS 503



FEBRUARY 1959

Fig. 36. SINGAPORE, BRITISH MALAYA

NBS 490

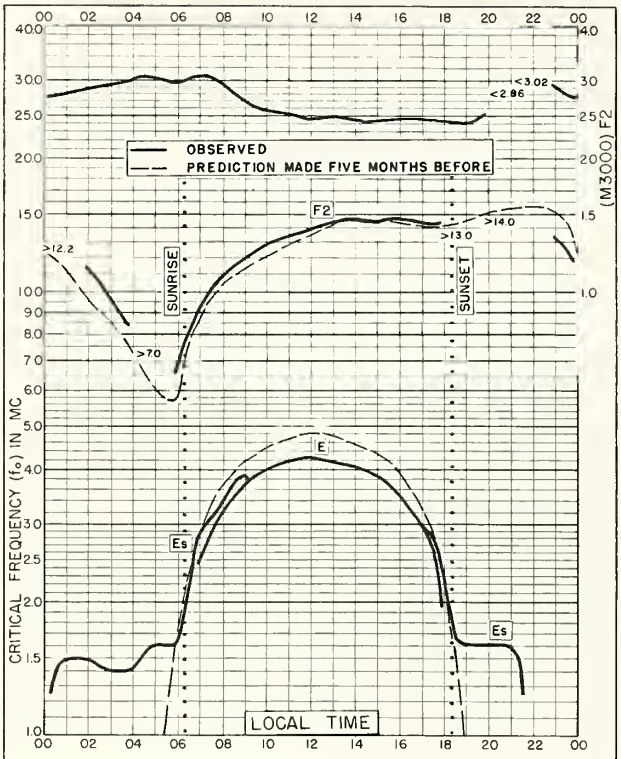
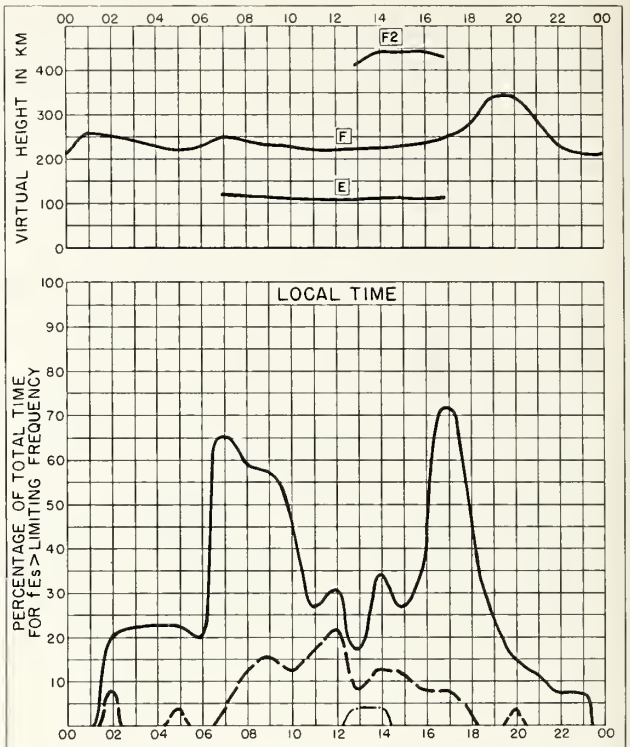


Fig. 37. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E FEBRUARY 1959

NBS 503



FEBRUARY 1959

Fig. 38. LWIRO, BELGIAN CONGO

NBS 490

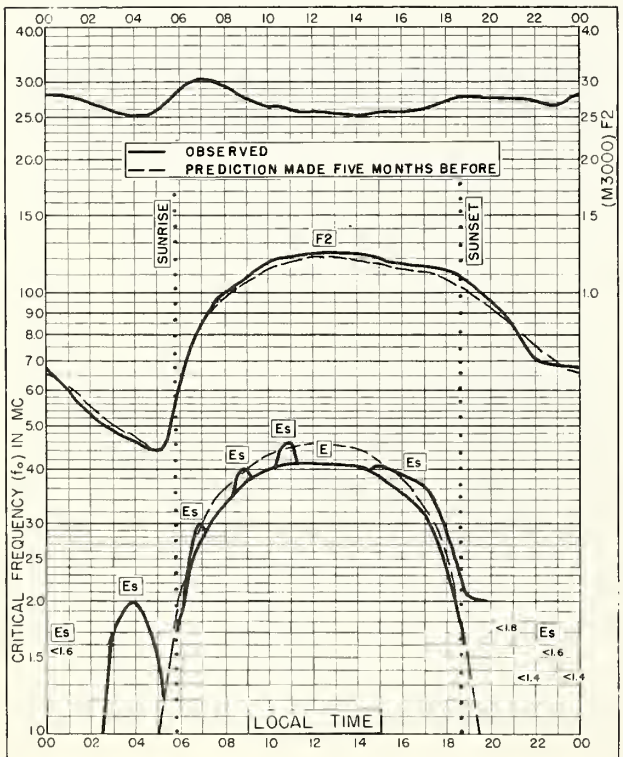
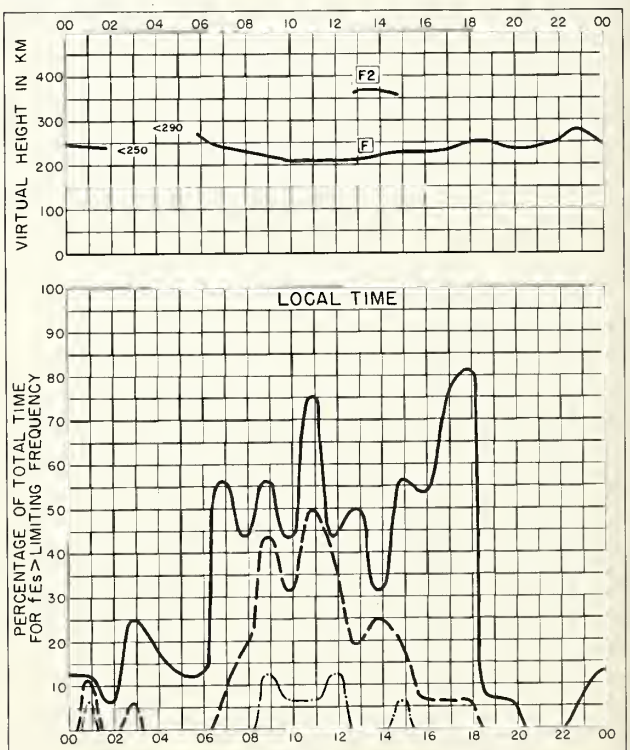


Fig. 39. JOHANNESBURG, UNION OF S. AFRICA
26.2°S, 28.0°E FEBRUARY 1959

NBS 503



FEBRUARY 1959

Fig. 40. JOHANNESBURG, UNION OF S. AFRICA

NBS 490

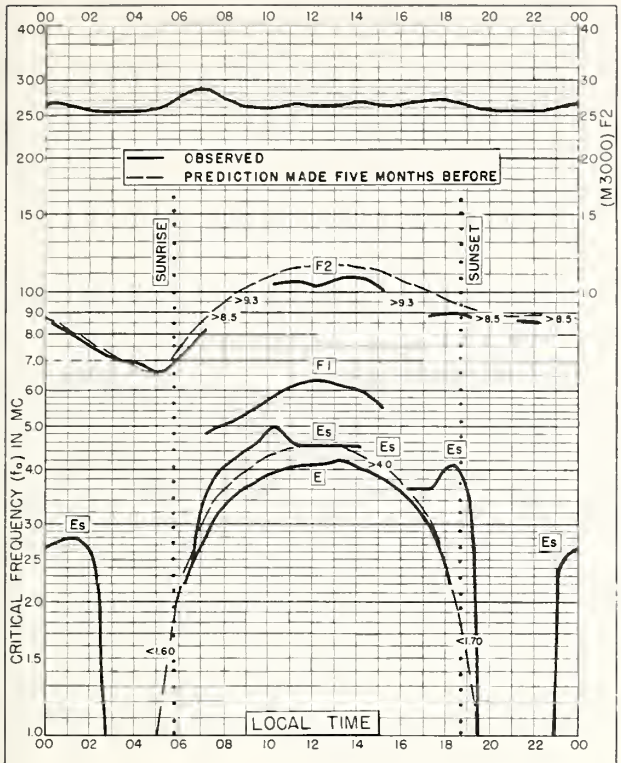


Fig. 41. BRISBANE, AUSTRALIA
27.5°S, 152.9°E FEBRUARY 1959

NBS 503

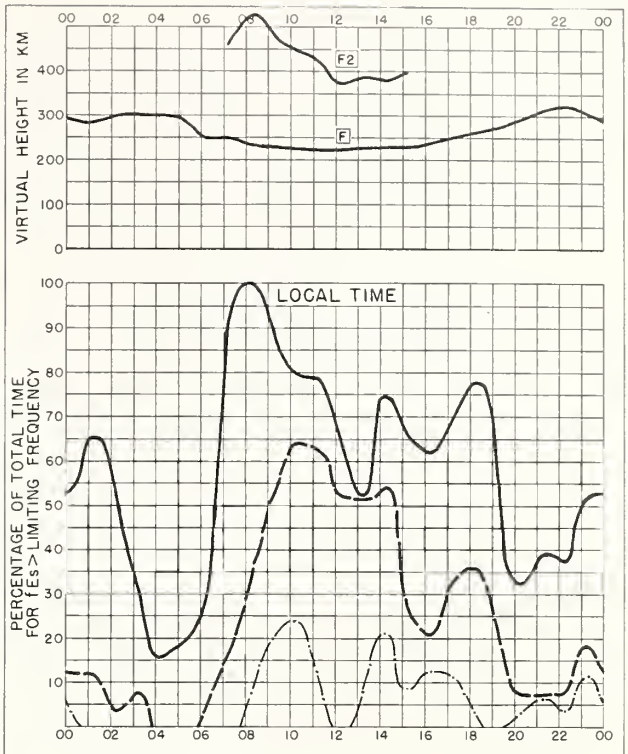


Fig. 42. BRISBANE, AUSTRALIA FEBRUARY 1959

NBS 490

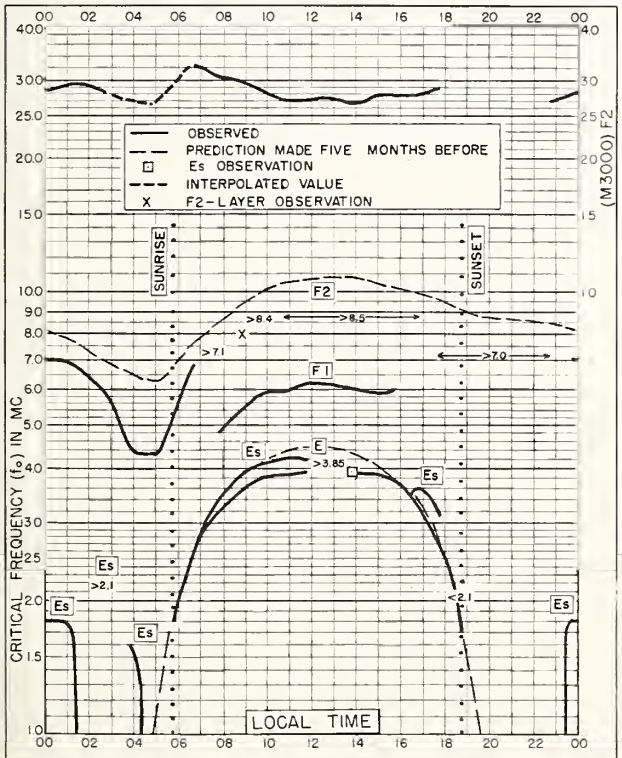


Fig. 43. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E FEBRUARY 1959

NBS 503

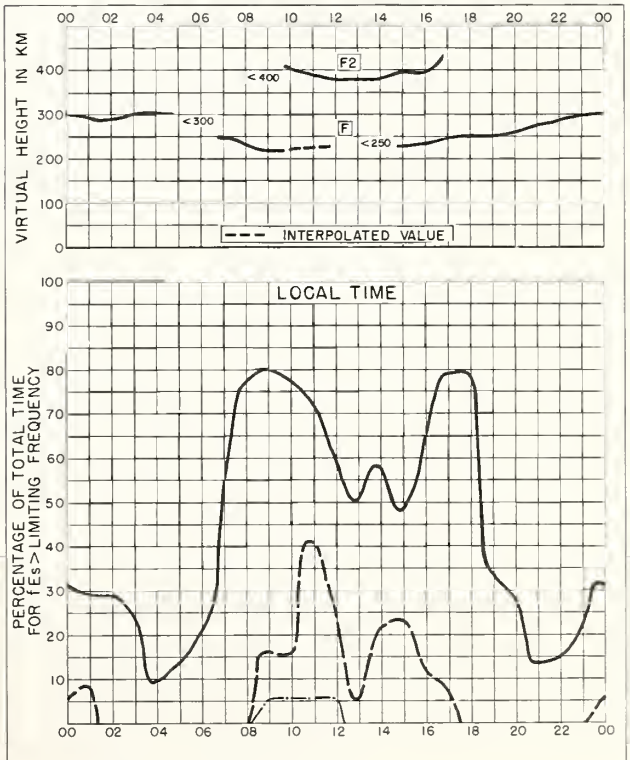


Fig. 44. WATHEROO, W. AUSTRALIA FEBRUARY 1959

NBS 490

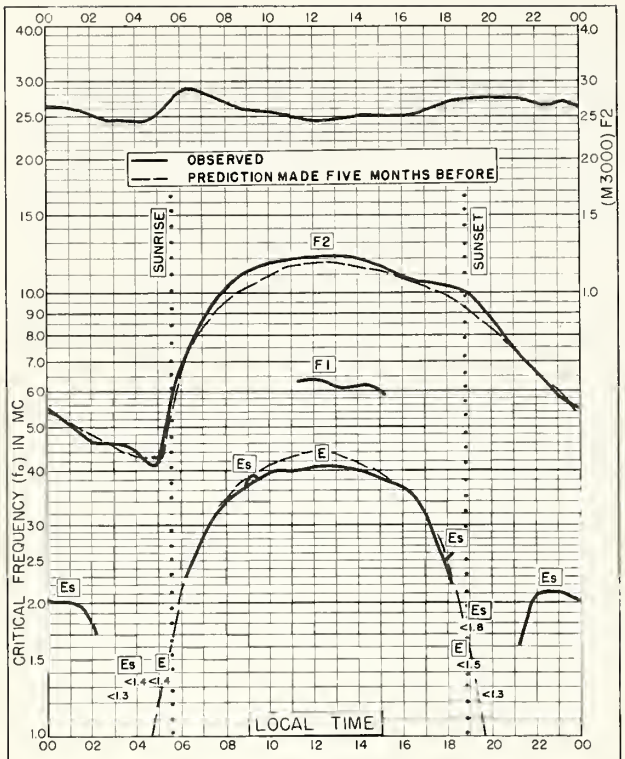


Fig. 45. CAPETOWN, UNION OF S. AFRICA
34.1°S, 18.3°E FEBRUARY 1959

NBS 503

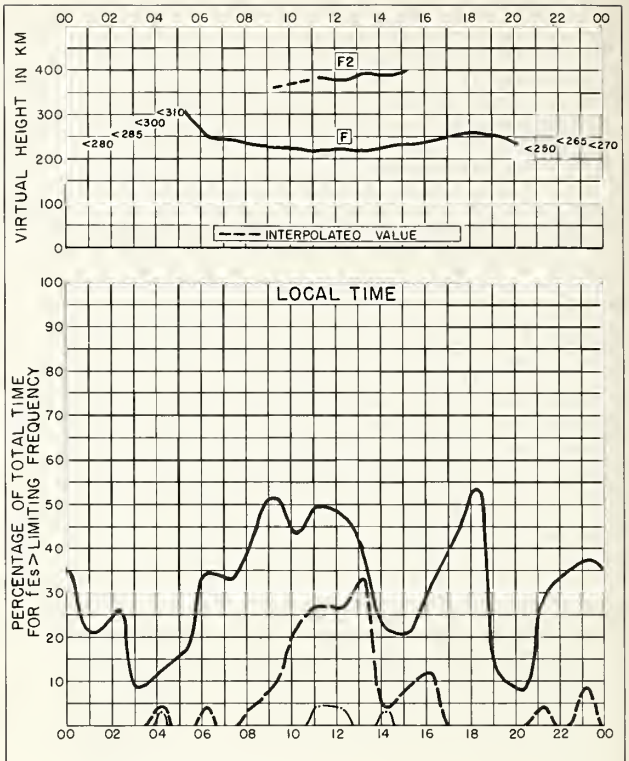


Fig. 46. CAPETOWN, UNION OF S. AFRICA FEBRUARY 1959

NBS 490

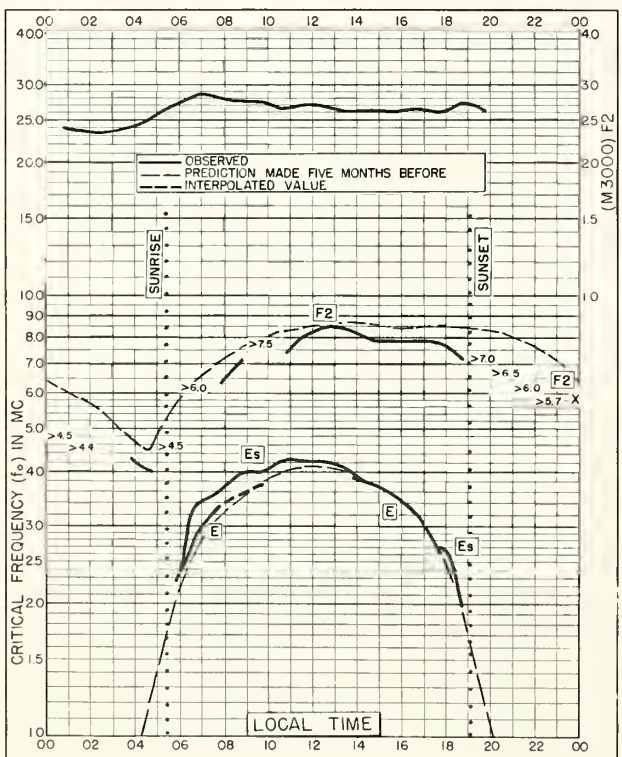


Fig. 47. HOBART, TASMANIA
42.9°S, 147.2° E FEBRUARY 1959

NBS 503

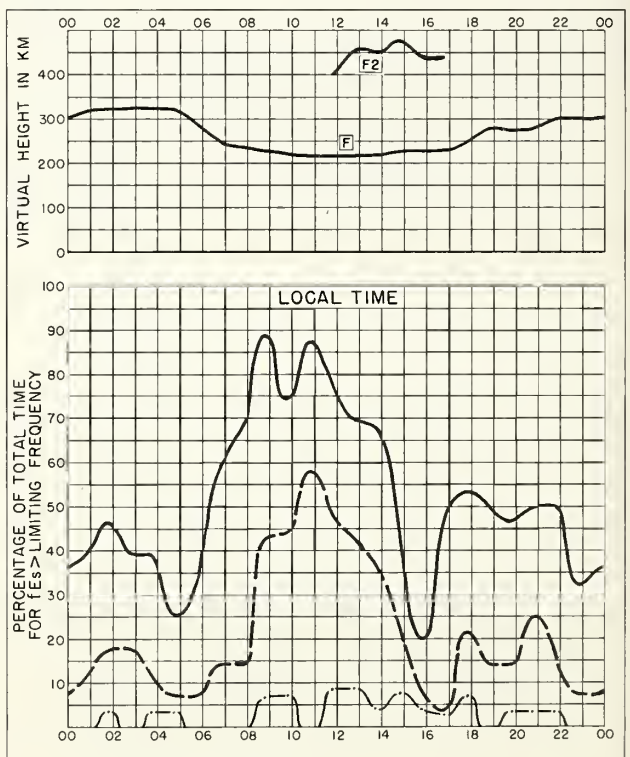


Fig. 48. HOBART, TASMANIA FEBRUARY 1959

NBS 490

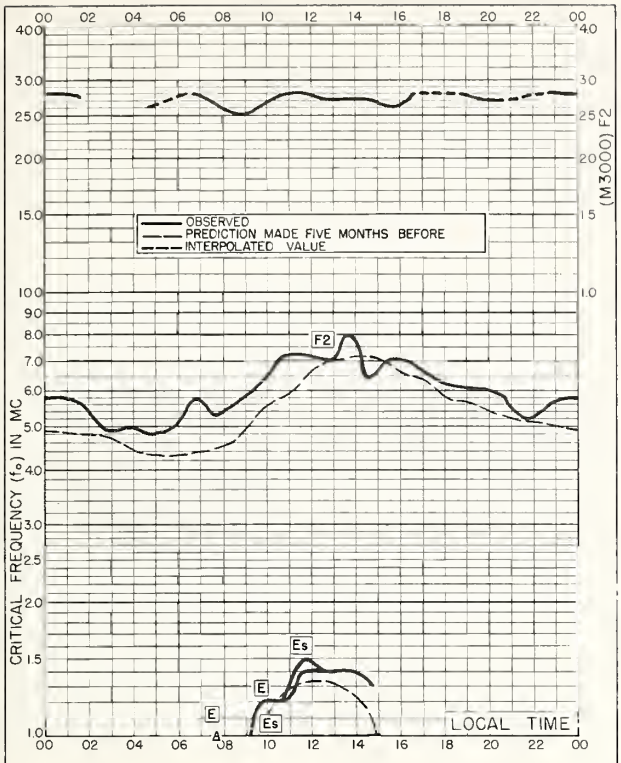
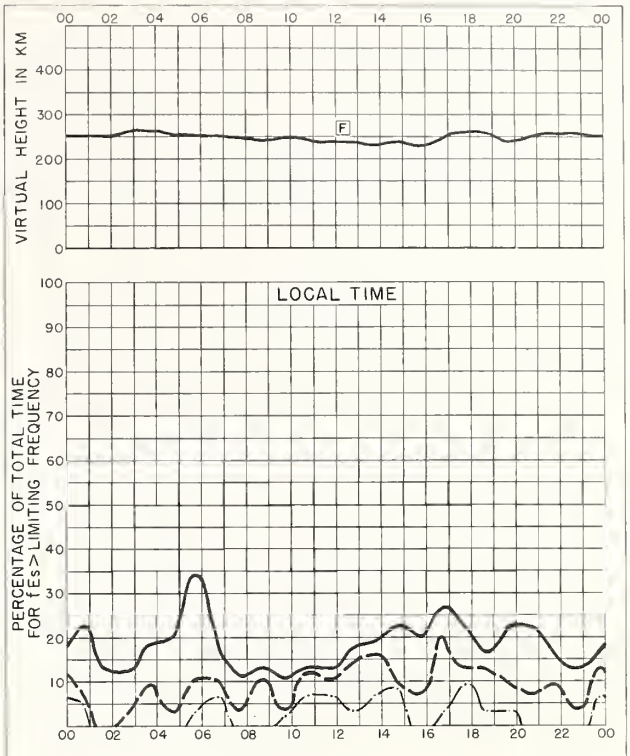


Fig. 49 RESOLUTE BAY, CANADA
74.7°N, 94.9°W JANUARY 1959

NBS 503



JANUARY 1959

Fig. 50. RESOLUTE BAY, CANADA

NBS 490

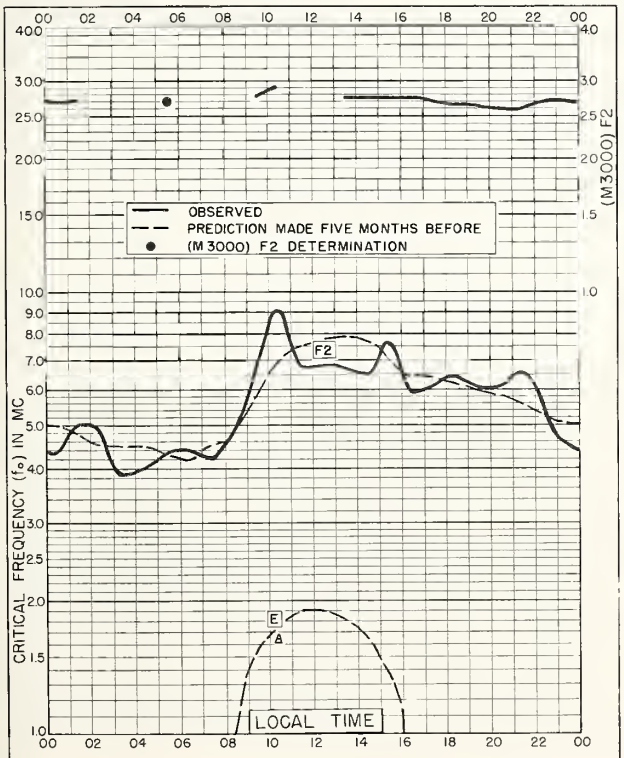


Fig. 51. GODHAVN, GREENLAND
69.3°N, 53.5°W JANUARY 1959

NBS 503

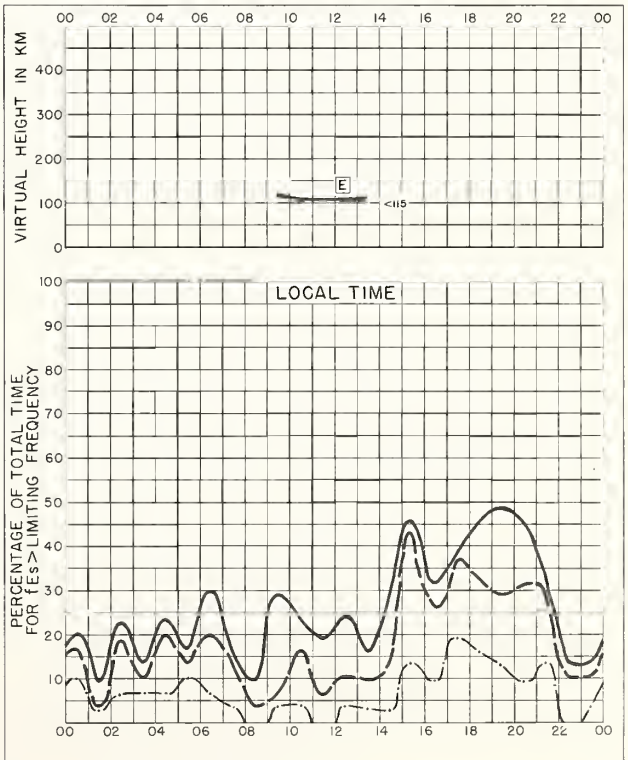


Fig. 52. GODHAVN, GREENLAND JANUARY 1959

NBS 490

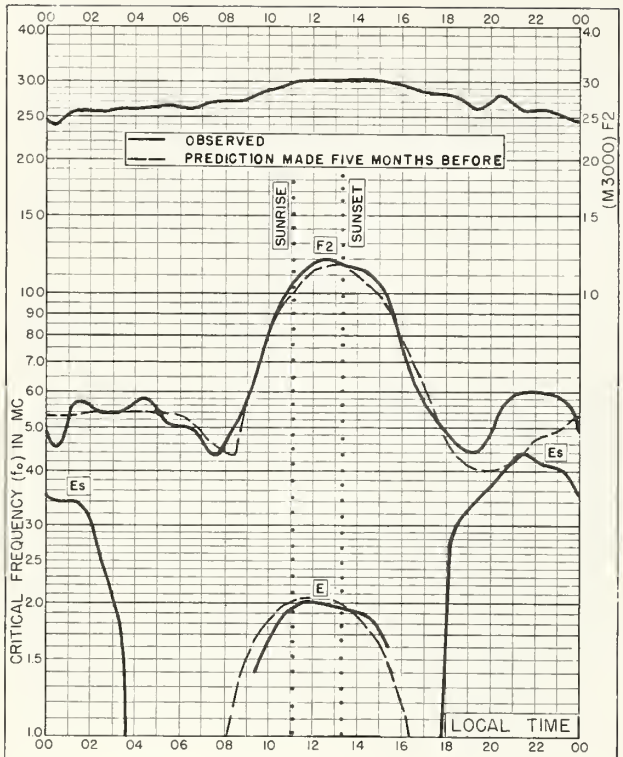


Fig. 53. KIRUNA, SWEDEN
67.8°N, 20.3°E JANUARY 1959

NBS 503

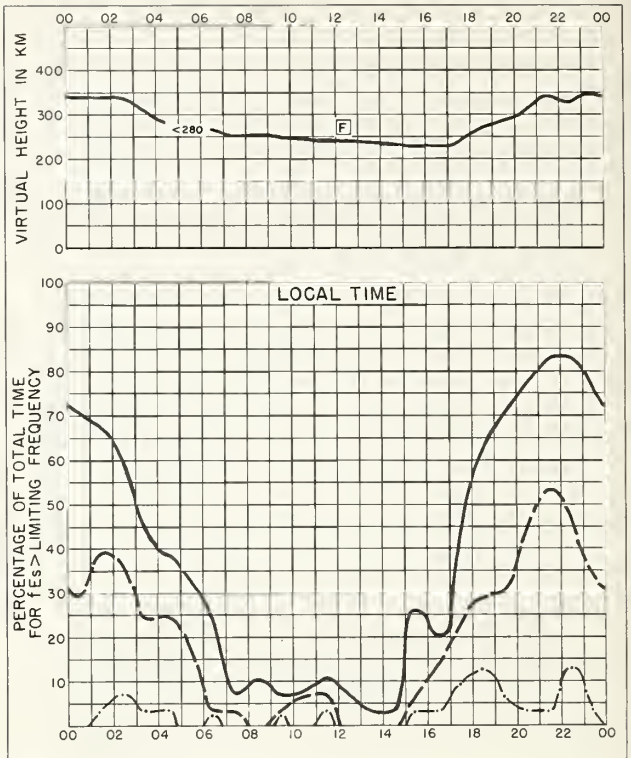


Fig. 54. KIRUNA, SWEDEN JANUARY 1959

NBS 490

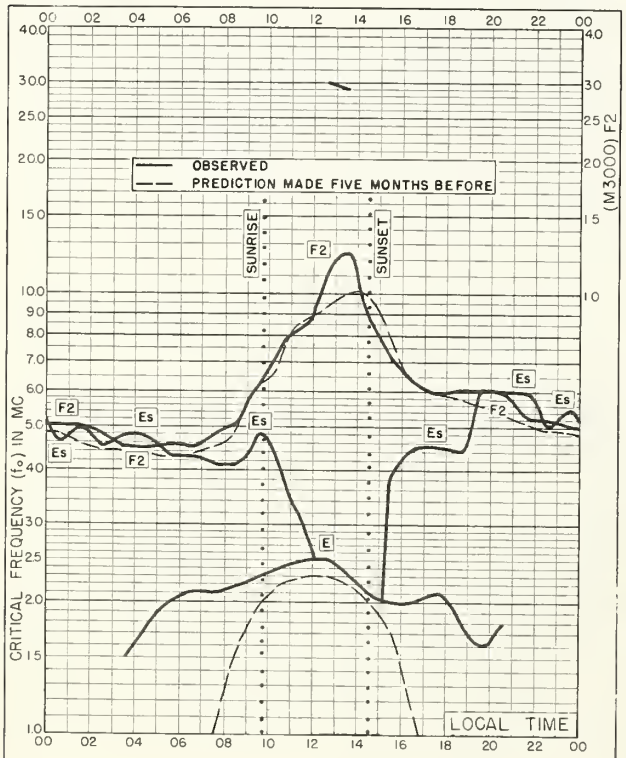


Fig. 55. BAKER LAKE, CANADA
64.3°N, 96.0°W JANUARY 1959

NBS 503

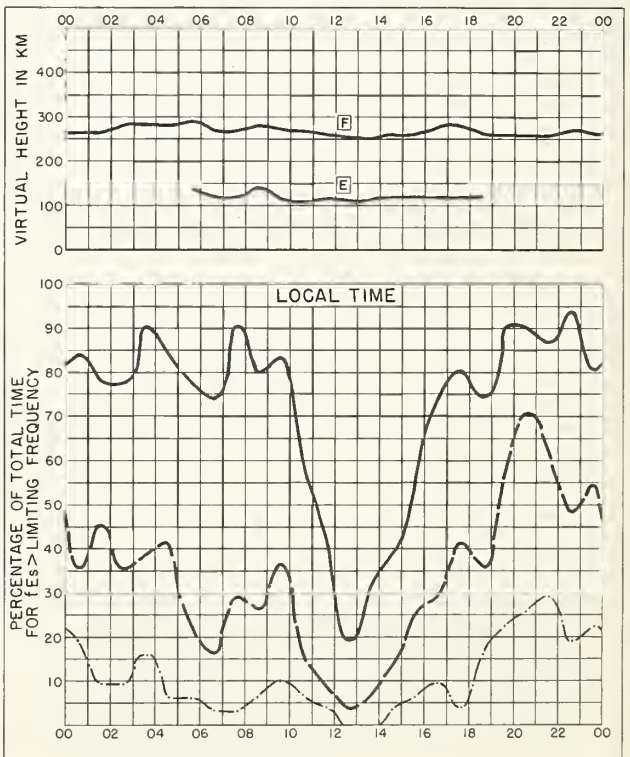


Fig. 56. BAKER LAKE, CANADA JANUARY 1959

NBS 490

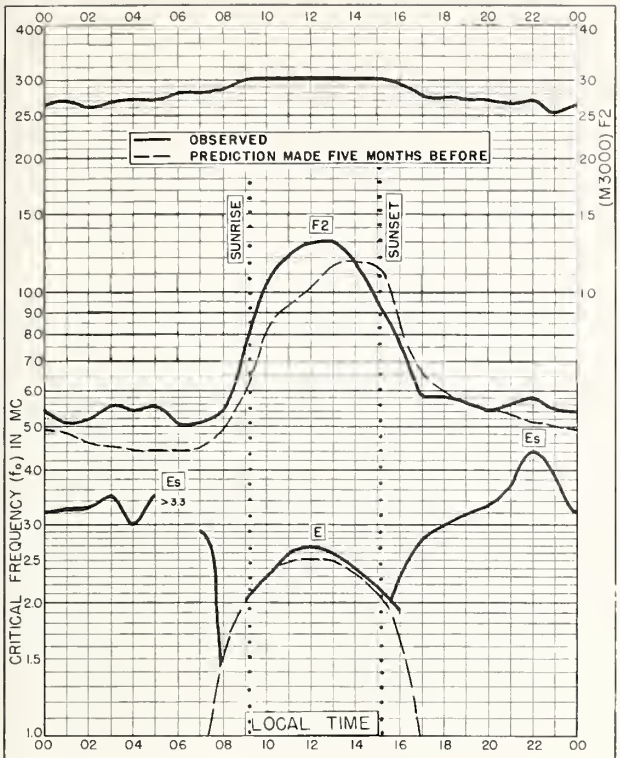


Fig. 57. NARSARSSUAK, GREENLAND
61.2°N, 45.4° W JANUARY 1959

NBS 503

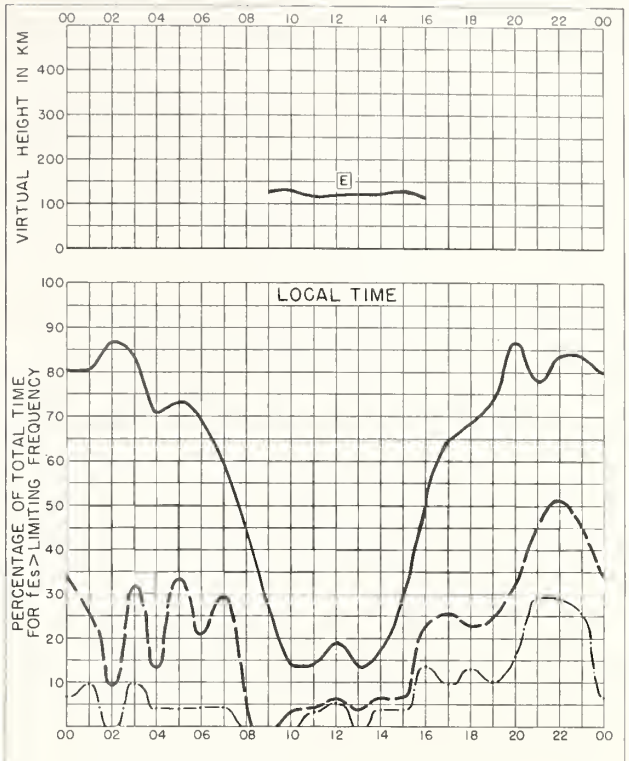


Fig. 58. NARSARSSUAK, GREENLAND JANUARY 1959

NBS 490

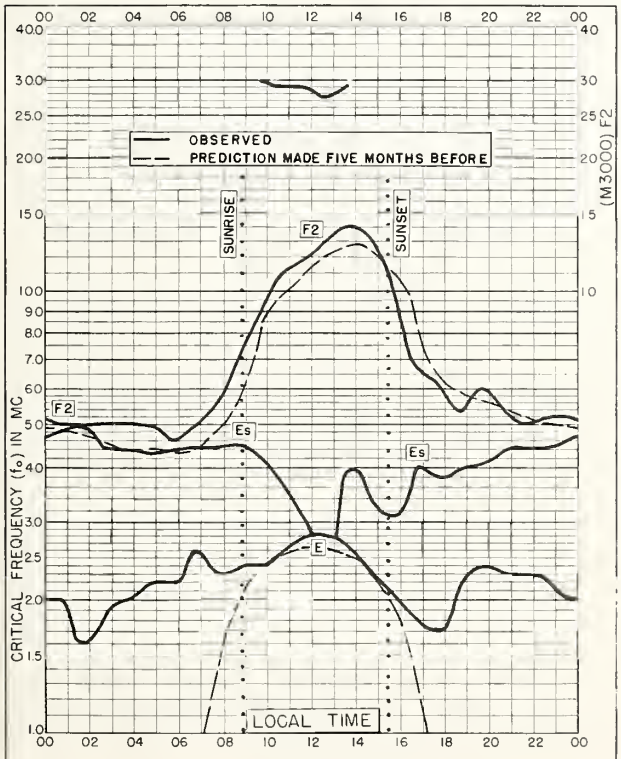


Fig. 59. CHURCHILL, CANADA
58.8°N, 94.2° W JANUARY 1959

NBS 503

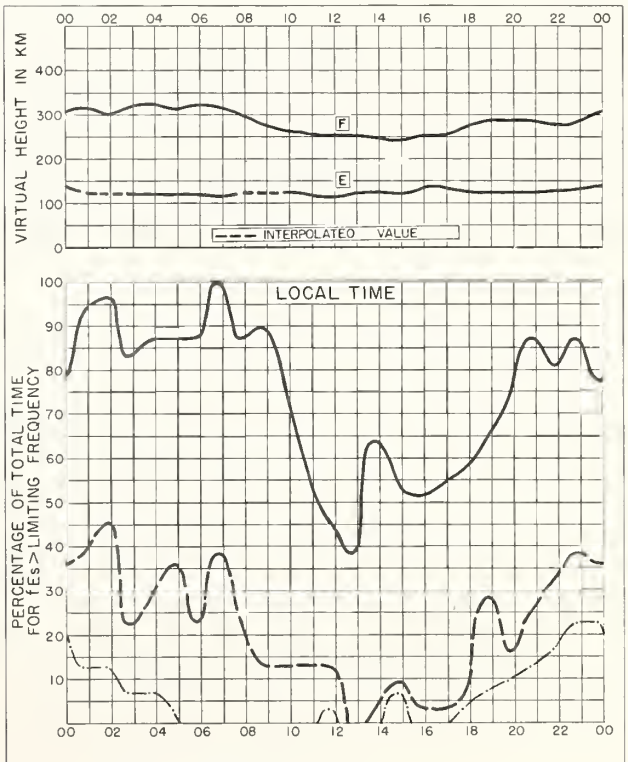


Fig. 60. CHURCHILL, CANADA JANUARY 1959

NBS 490

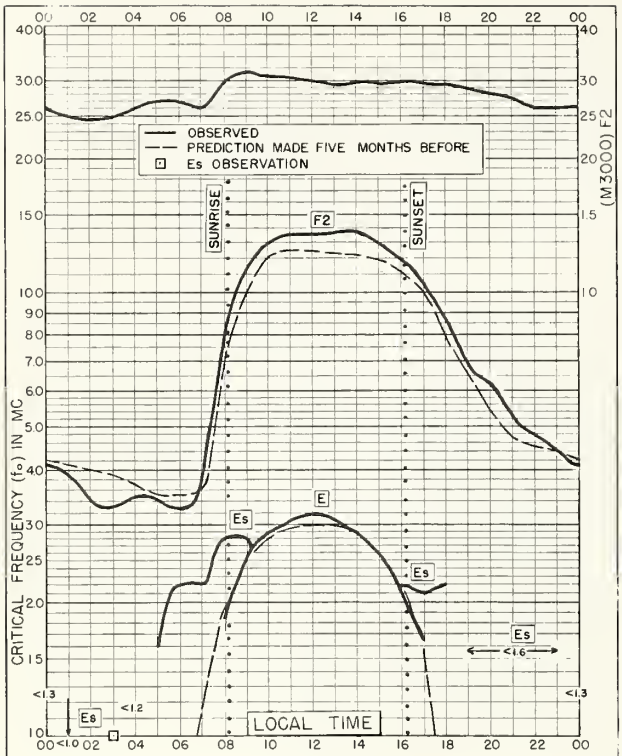


Fig. 61. SLOUGH ENGLAND
51.5°N, 0.6°W JANUARY 1959

NBS 503

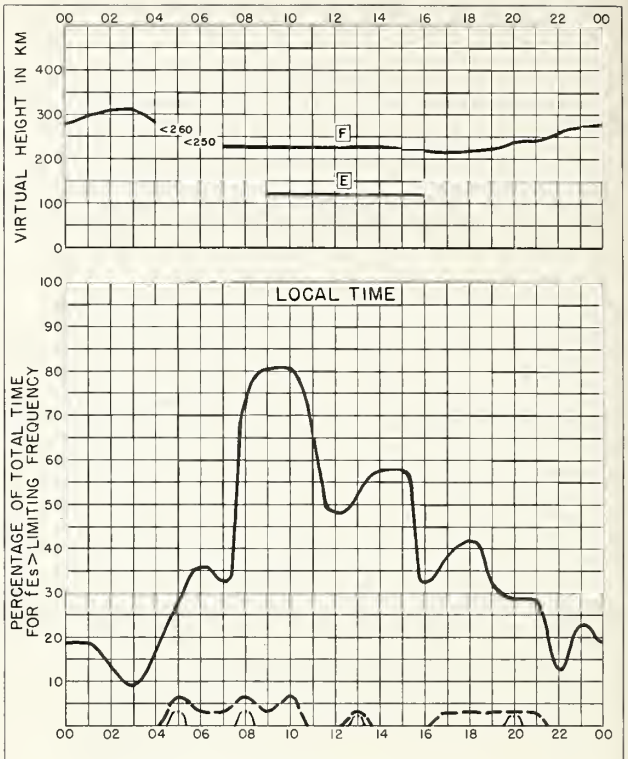


Fig. 62. SLOUGH, ENGLAND JANUARY 1959

NBS 490

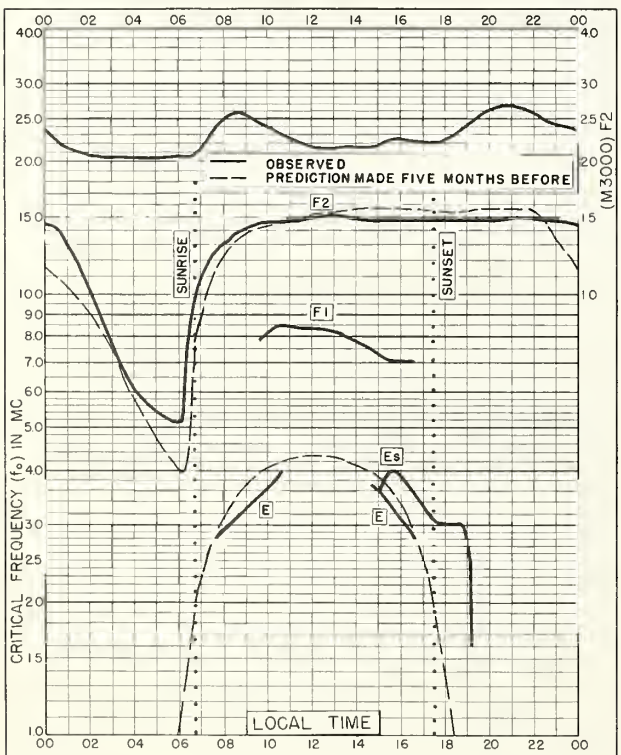


Fig. 63. MACAU
22.2°N, 113.6°E JANUARY 1959

NBS 503

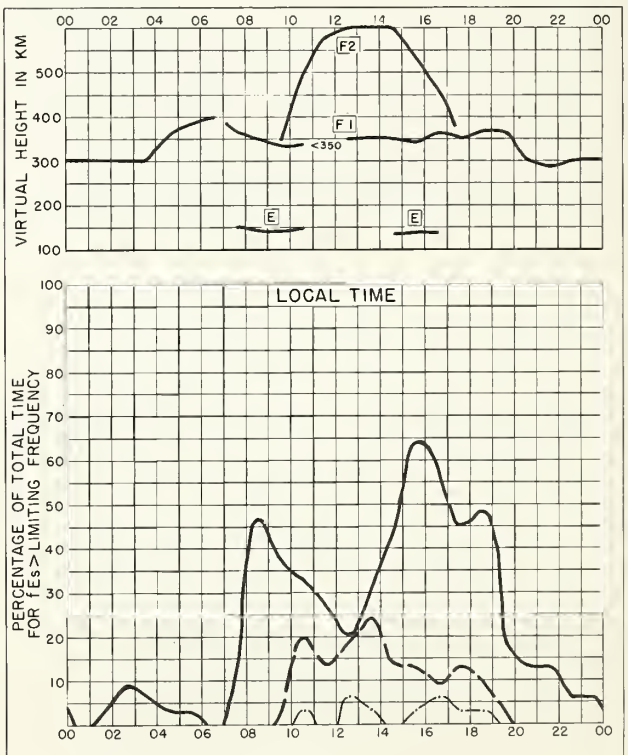


Fig. 64. MACAU JANUARY 1959

NBS 490

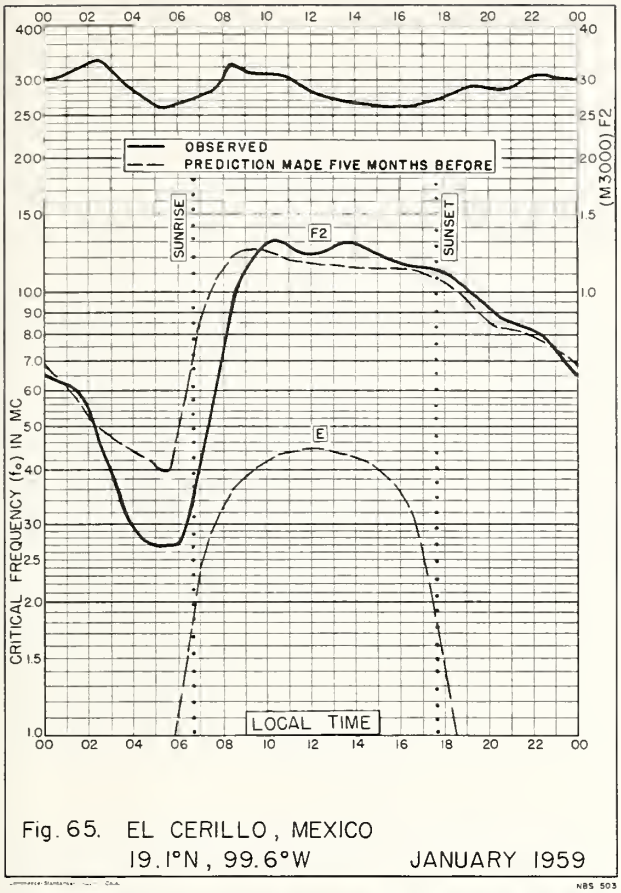


Fig. 65. EL CERILLO, MEXICO
19.1°N, 99.6°W JANUARY 1959

NBS 503

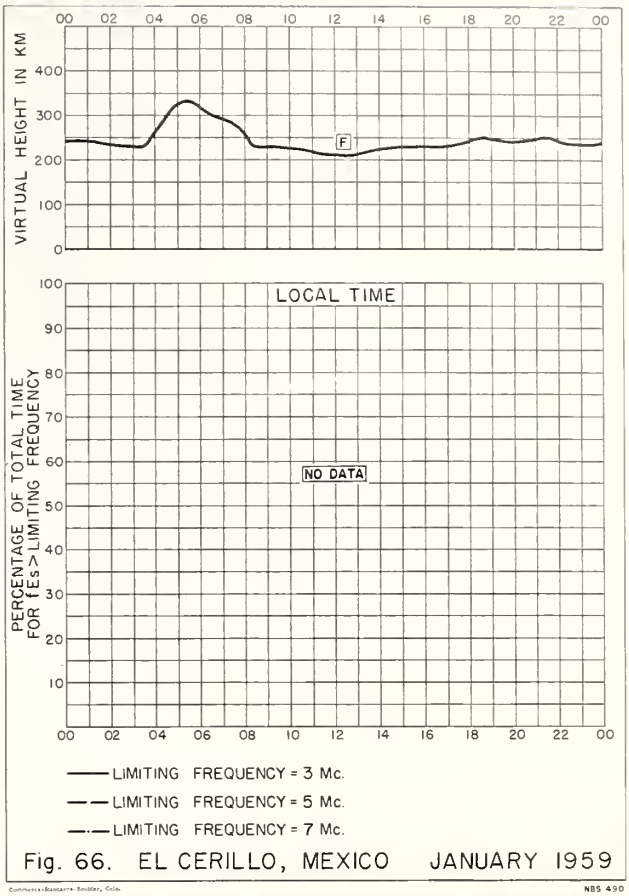


Fig. 66. EL CERILLO, MEXICO JANUARY 1959

NBS 490

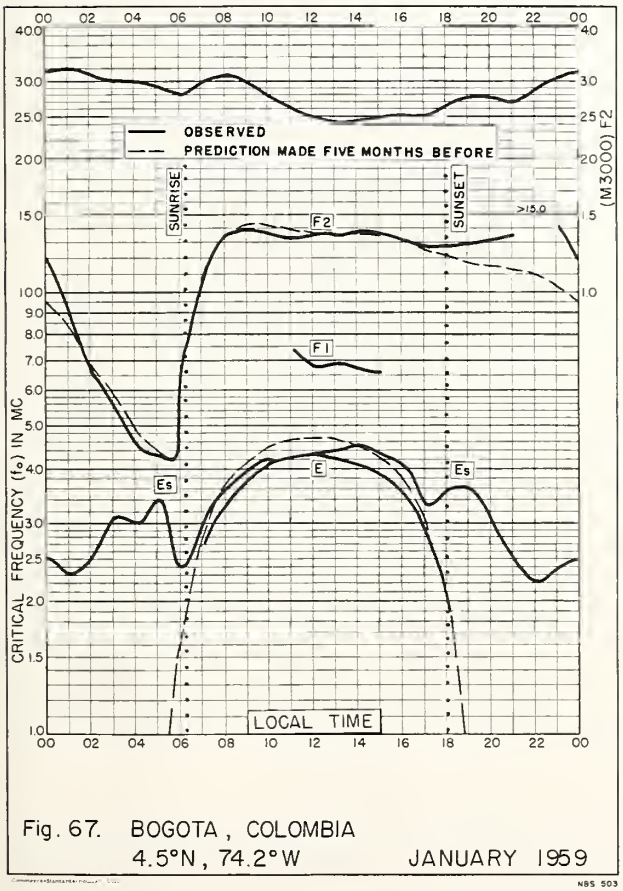


Fig. 67. BOGOTA, COLOMBIA
4.5°N, 74.2°W JANUARY 1959

NBS 503

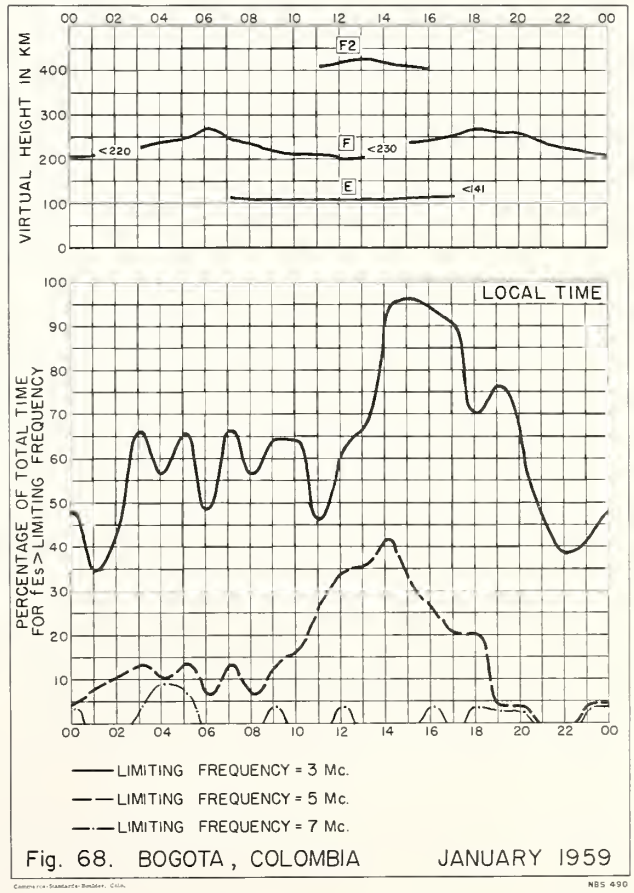


Fig. 68. BOGOTA, COLOMBIA JANUARY 1959

NBS 490

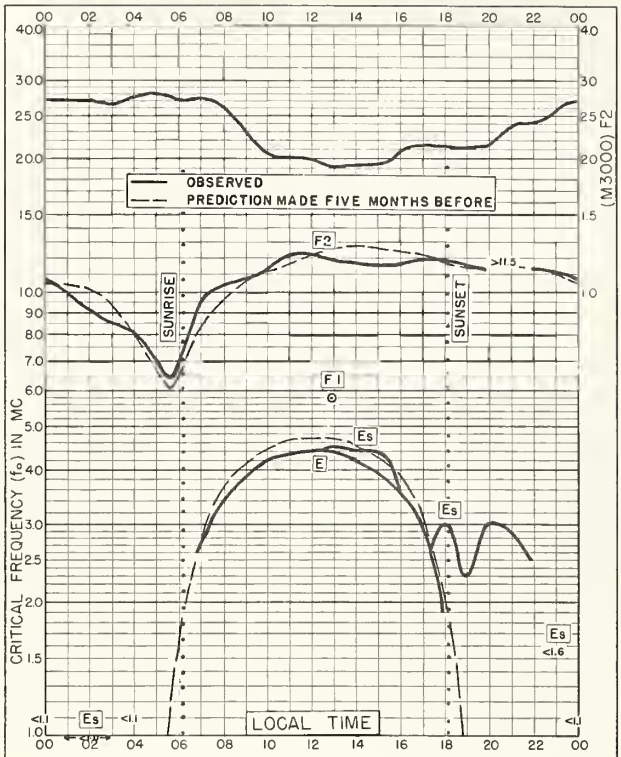
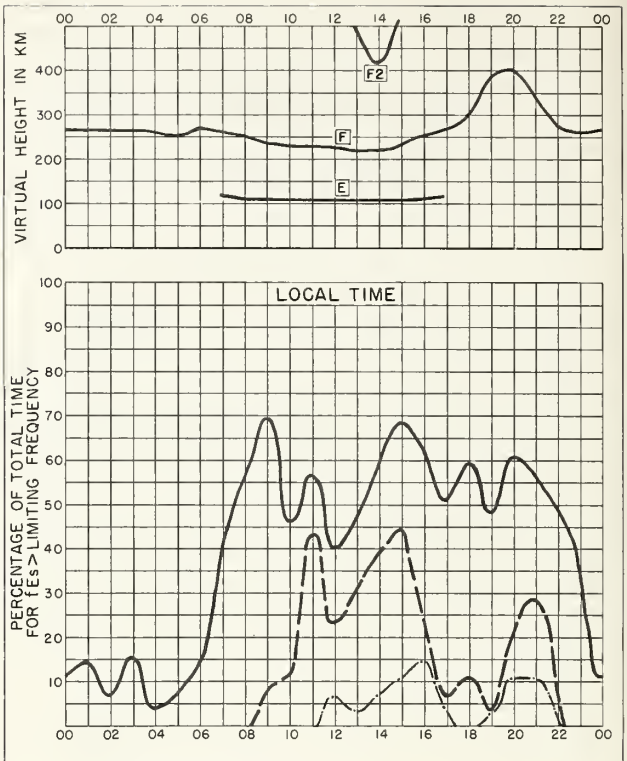


Fig. 69. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E JANUARY 1959



JANUARY 1959

Fig. 70. SINGAPORE, BRITISH MALAYA

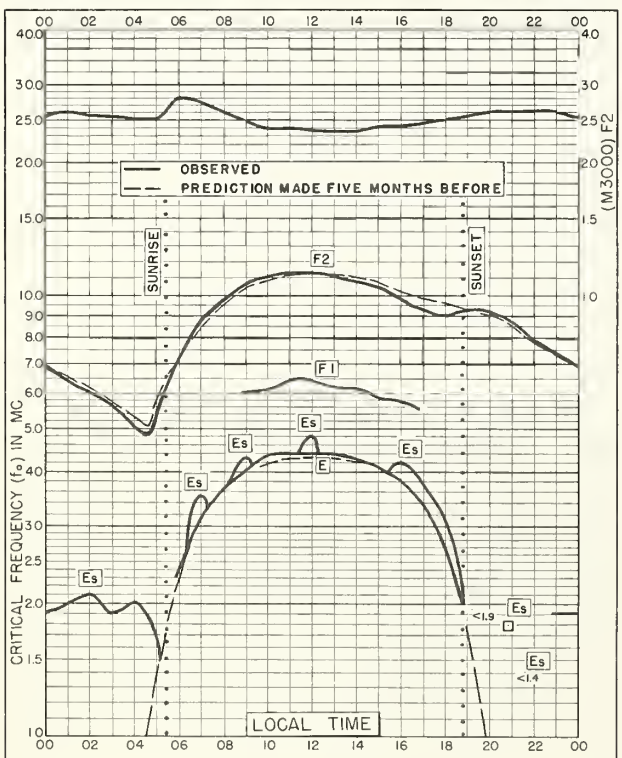
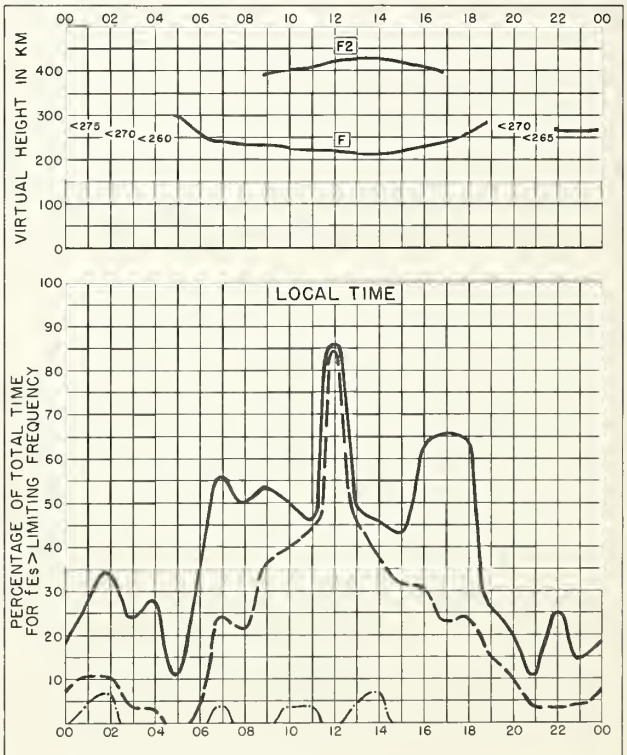


Fig. 71. JOHANNESBURG, UNION OF S. AFRICA
26.2°S, 28.0°E JANUARY 1959



JANUARY 1959

Fig. 72. JOHANNESBURG, UNION OF S. AFRICA

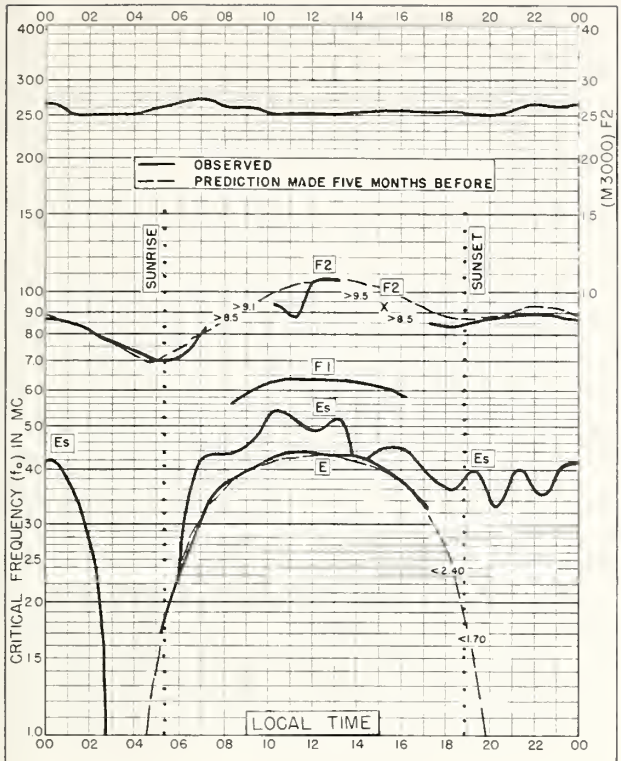


Fig. 73. BRISBANE , AUSTRALIA
27.5°S, 152.9°E JANUARY 1959

NBS 503

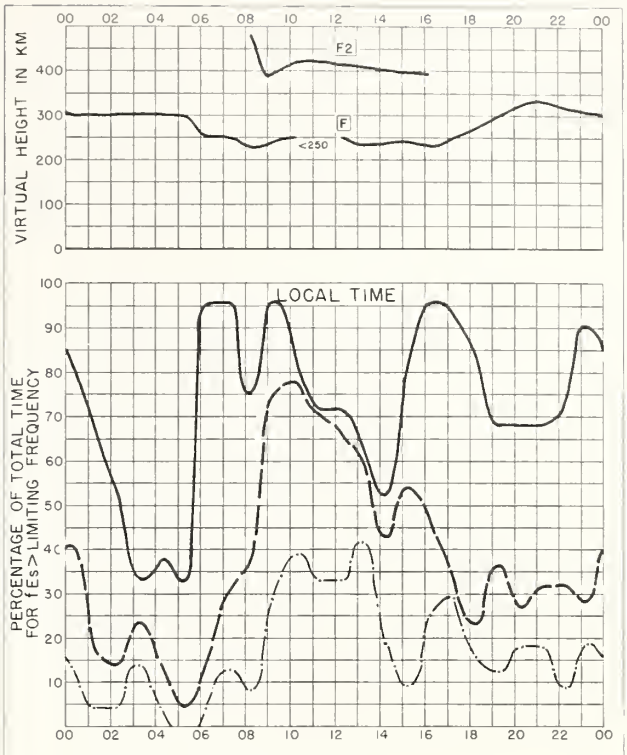


Fig. 74. BRISBANE , AUSTRALIA JANUARY 1959

NBS 490

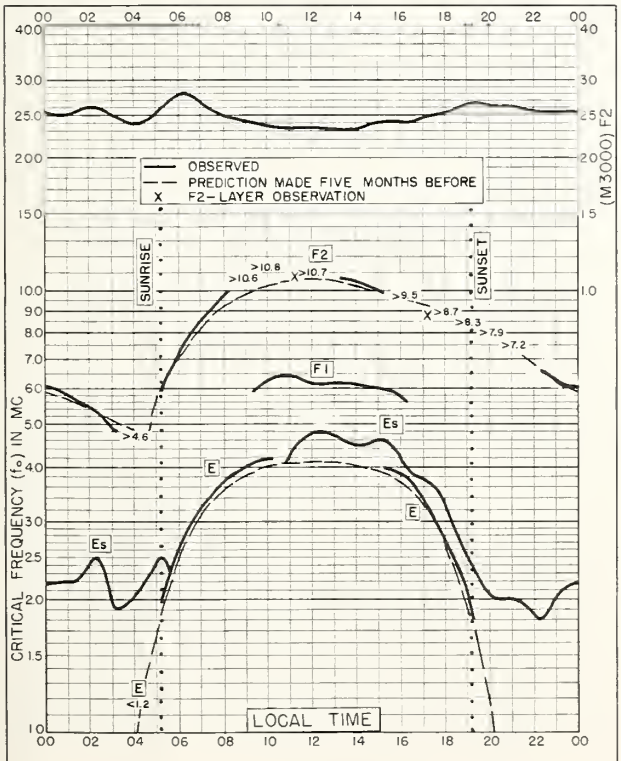
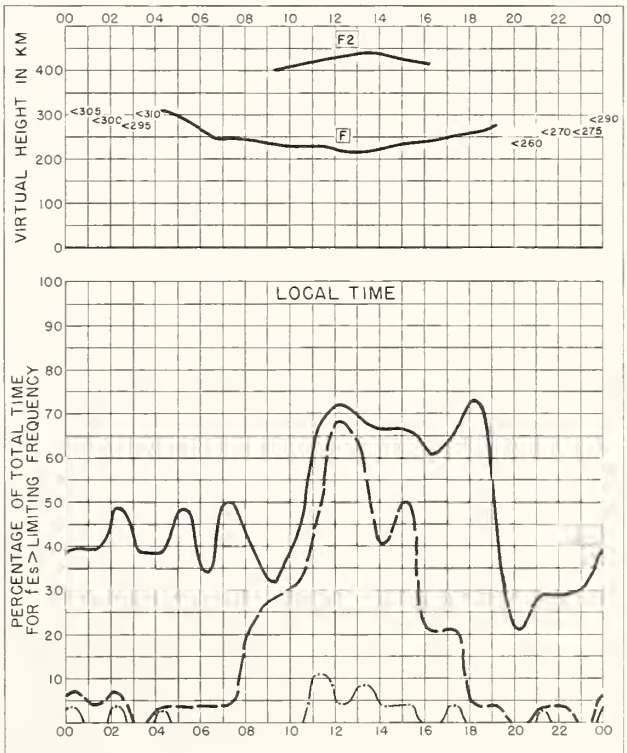


Fig. 75. CAPETOWN , UNION OF S. AFRICA
34.1°S, 18.3°E JANUARY 1959

NBS 503



JANUARY 1959

Fig. 76. CAPETOWN , UNION OF S. AFRICA

NBS 490

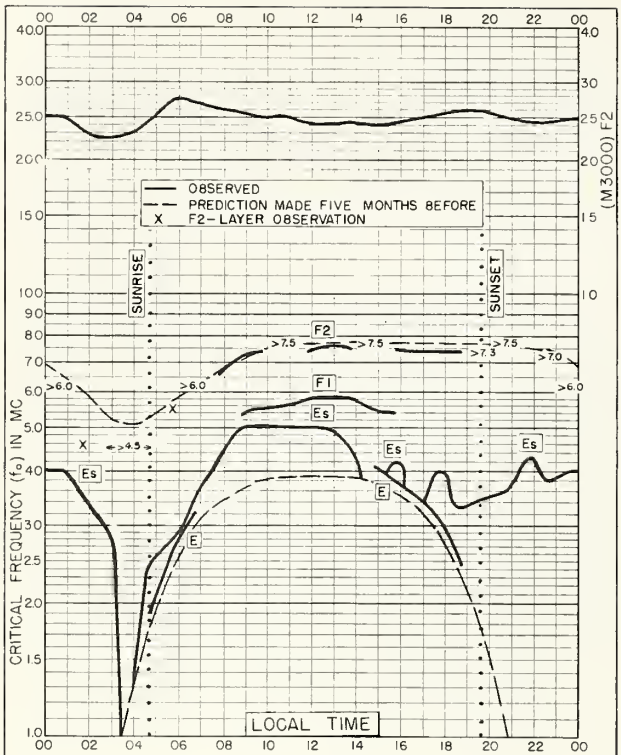


Fig. 77. HOBART, TASMANIA
42.9°S, 147.2°E JANUARY 1959

NBS 503

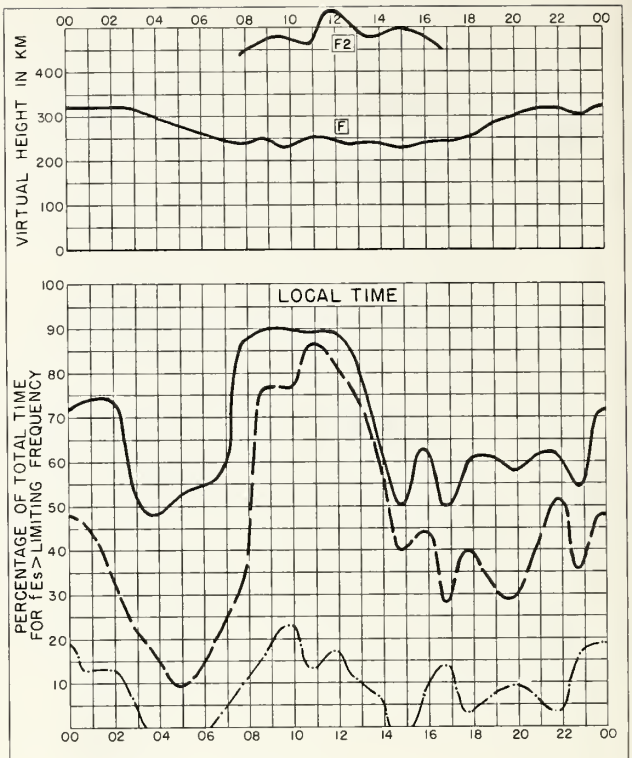


Fig. 78. HOBART, TASMANIA JANUARY 1959

NBS 490

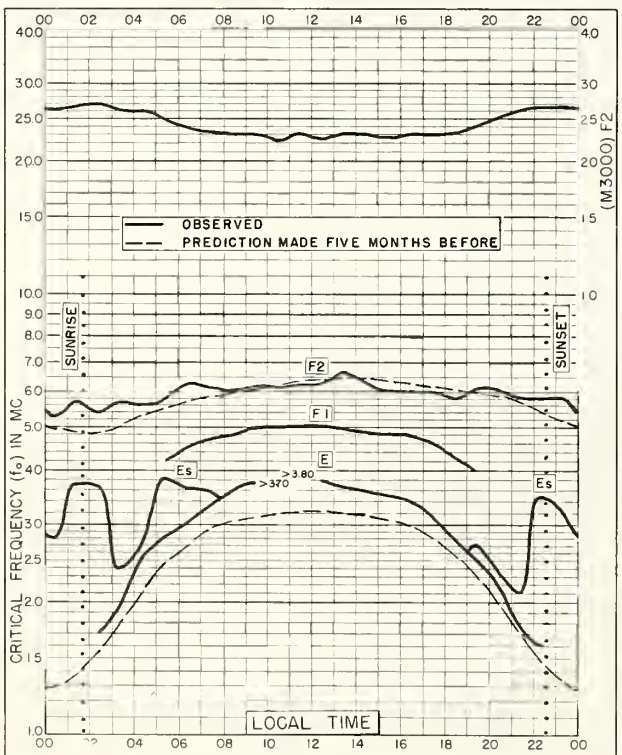


Fig. 79. WILKES STATION
66.2°S, 110.5°E JANUARY 1959

NBS 503

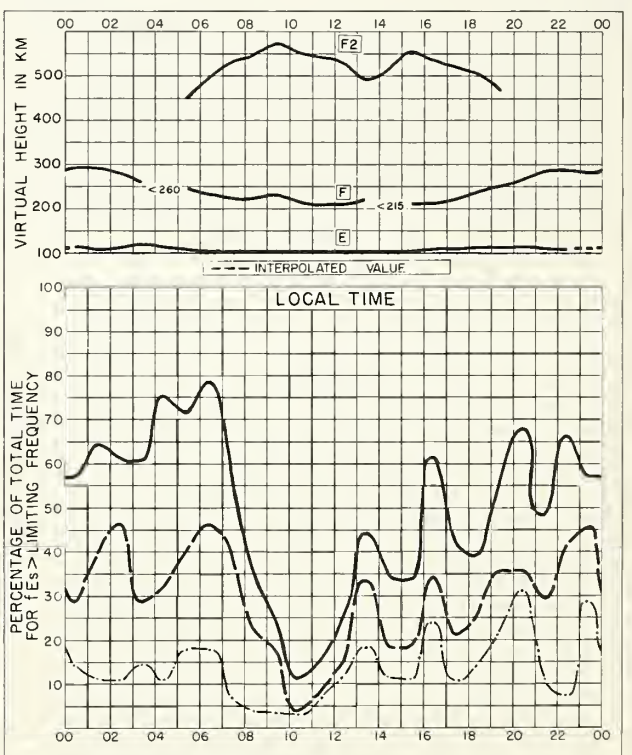


Fig. 80. WILKES STATION JANUARY 1959

NBS 490

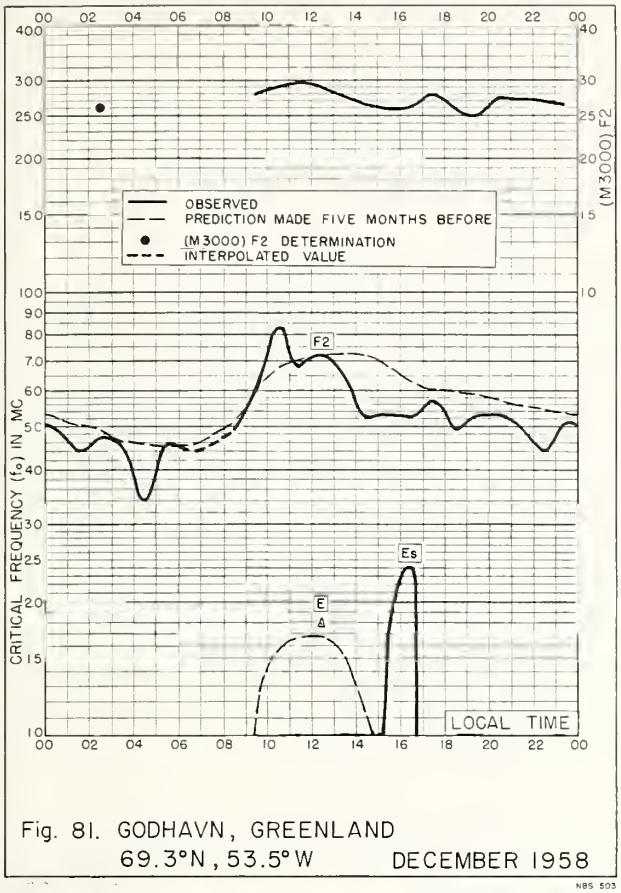


Fig. 81. GODHAVN, GREENLAND
69.3°N, 53.5°W DECEMBER 1958

NBS 503

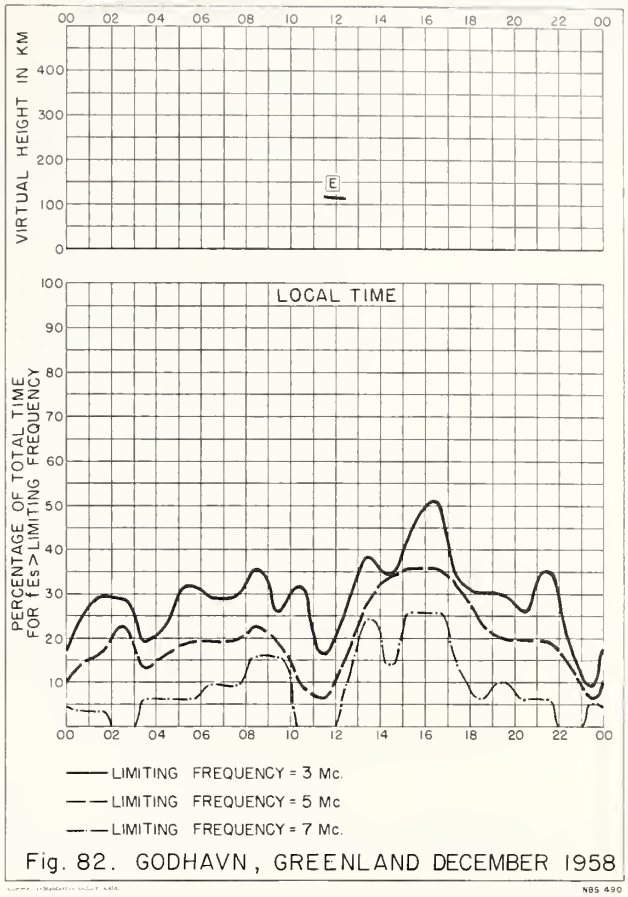


Fig. 82. GODHAVN, GREENLAND DECEMBER 1958

NBS 490

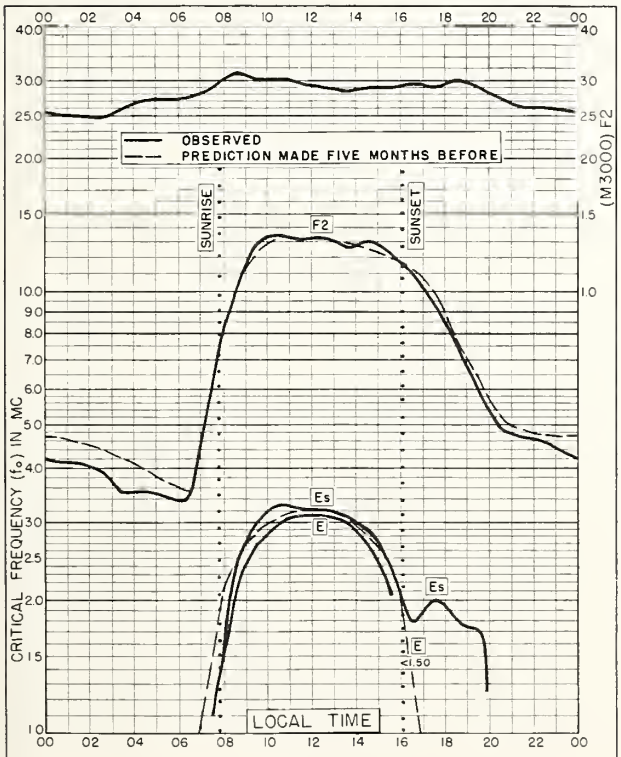


Fig. 83. FREIBURG, GERMANY
48.1°N, 7.6°E DECEMBER 1958

NBS 503

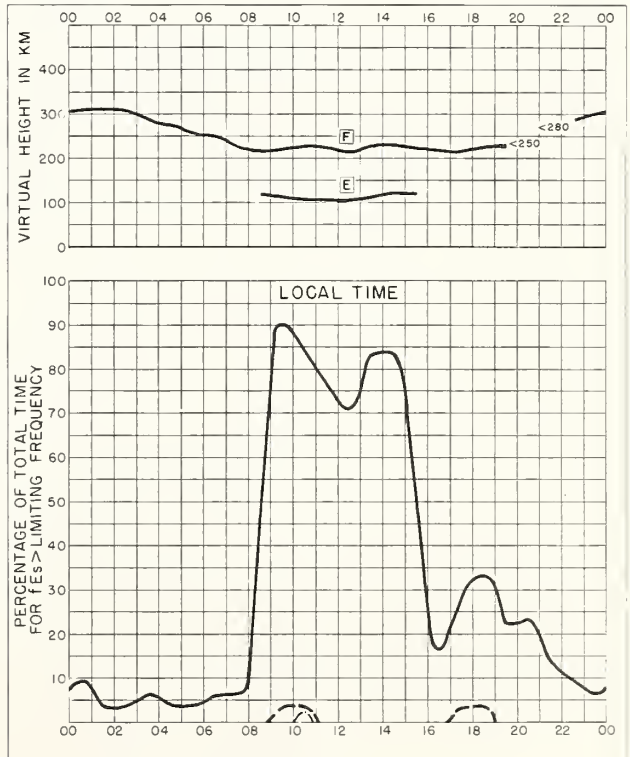


Fig. 84. FREIBURG, GERMANY DECEMBER 1958

NBS 490

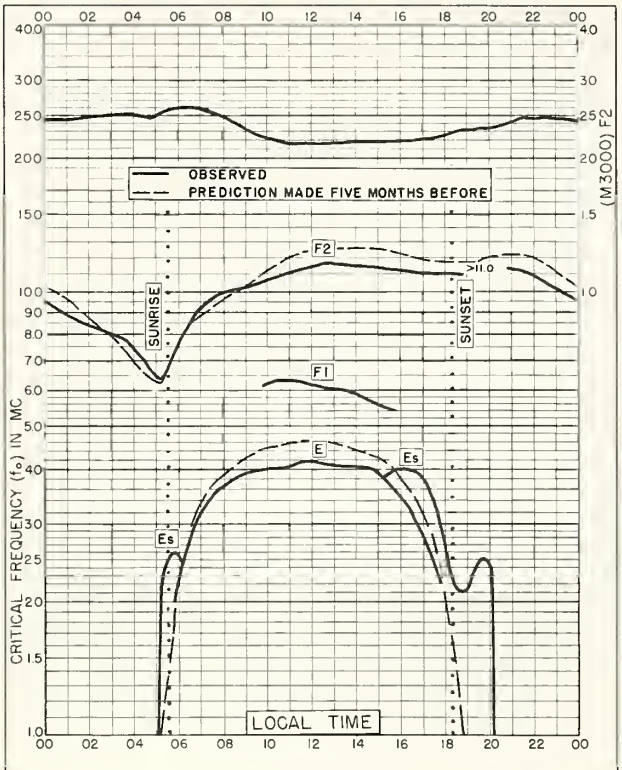


Fig. 85. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E DECEMBER 1958

NBS 503

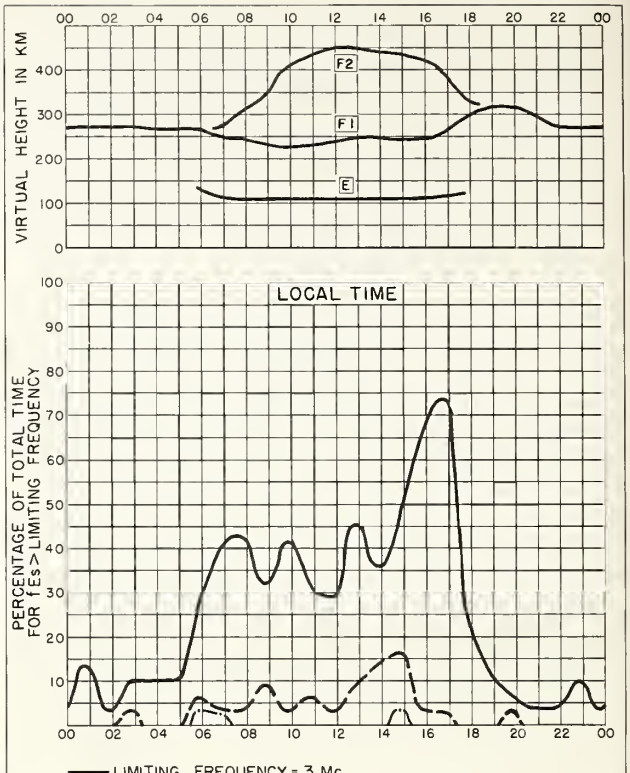


Fig. 86. ELISABETHVILLE, BELGIAN CONGO DECEMBER 1958

NBS 490

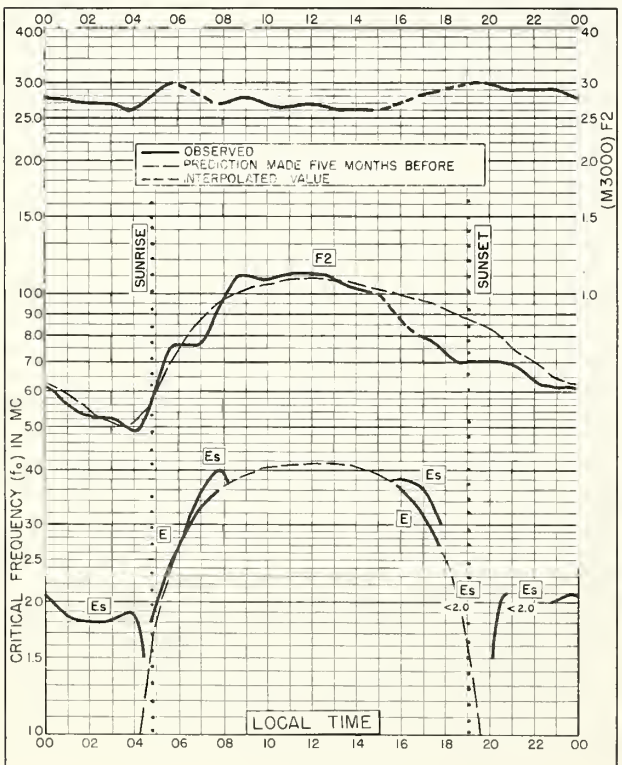


Fig. 87. GRAHAMSTOWN, UNION OF S. AFRICA
33.3°S, 26.5°E DECEMBER 1958

NBS 503

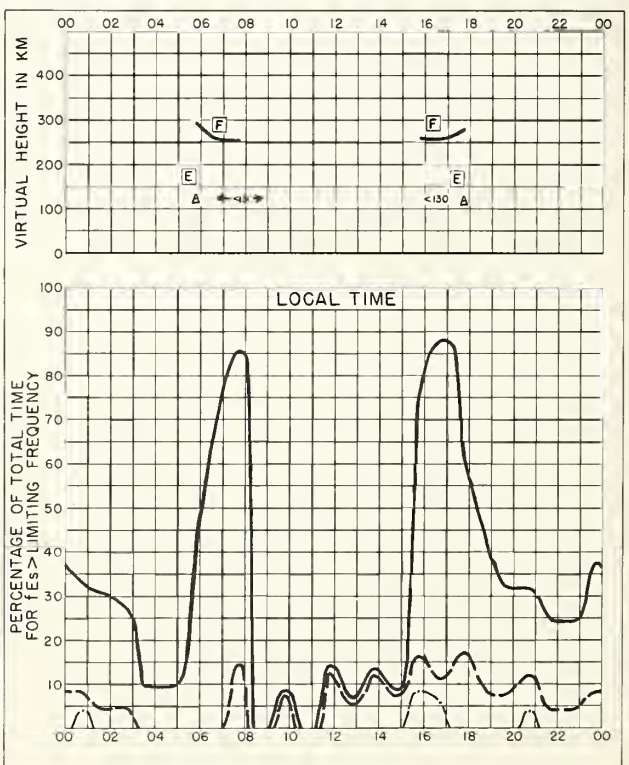


Fig. 88. GRAHAMSTOWN, UNION OF S. AFRICA DECEMBER 1958

NBS 490

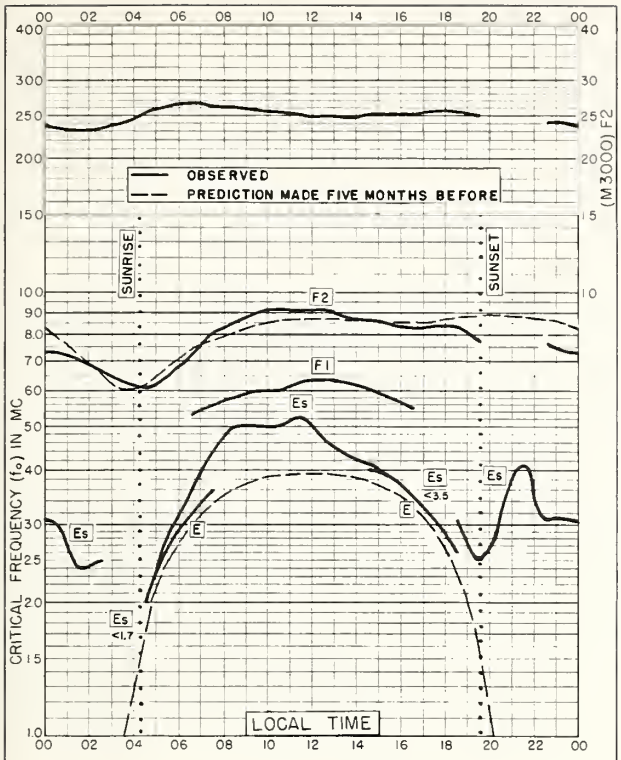
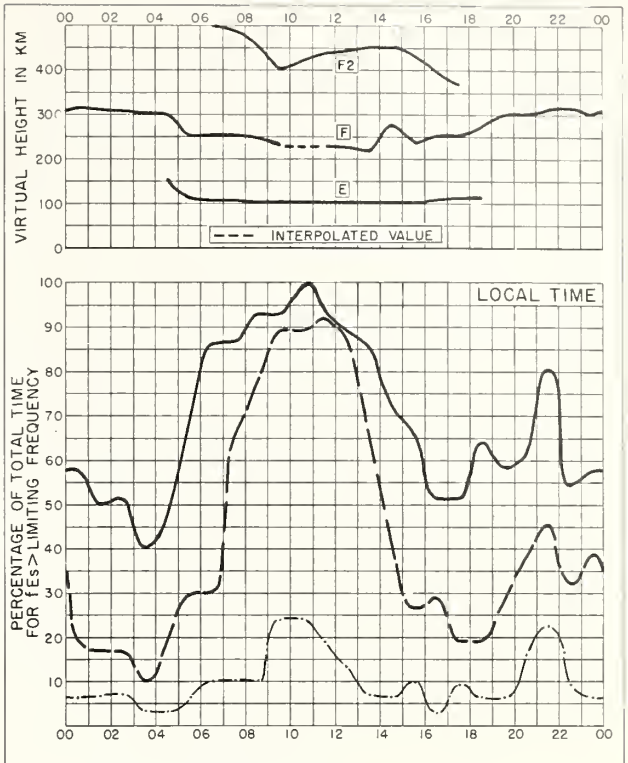


Fig. 89. CHRISTCHURCH, NEW ZEALAND
43.6°S, 172.8°E DECEMBER 1958

NBS 503



DECEMBER 1958

Fig. 90. CHRISTCHURCH, NEW ZEALAND

NBS 490

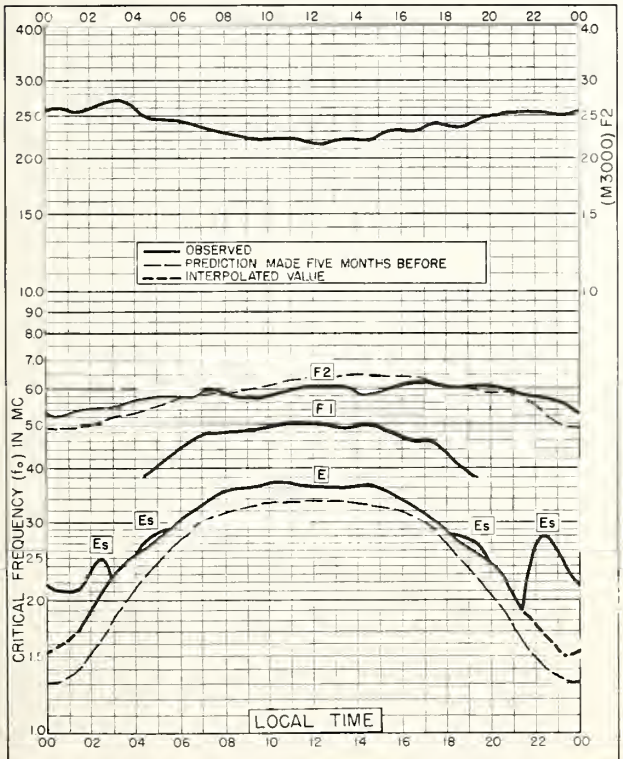


Fig. 91. WILKES STATION
66.2°S, 110.5°E DECEMBER 1958

NBS 503

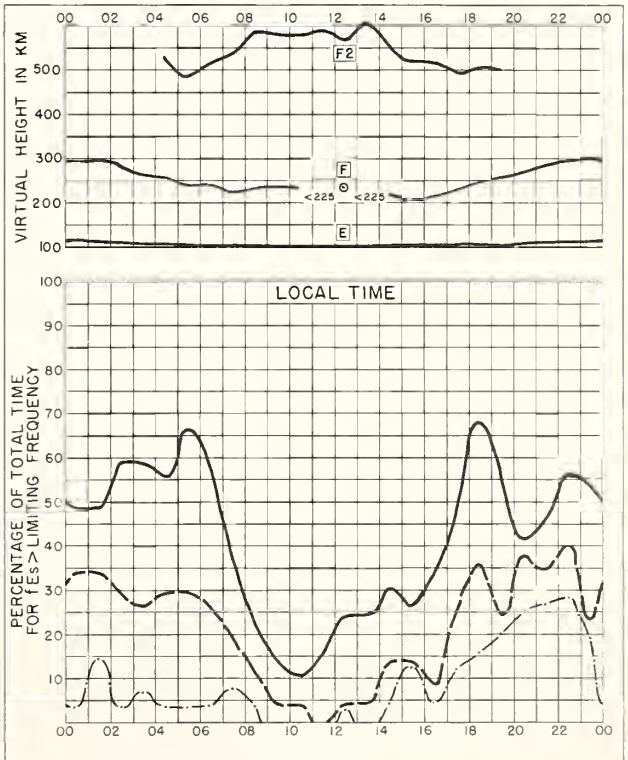


Fig. 92. WILKES STATION DECEMBER 1958

NBS 490

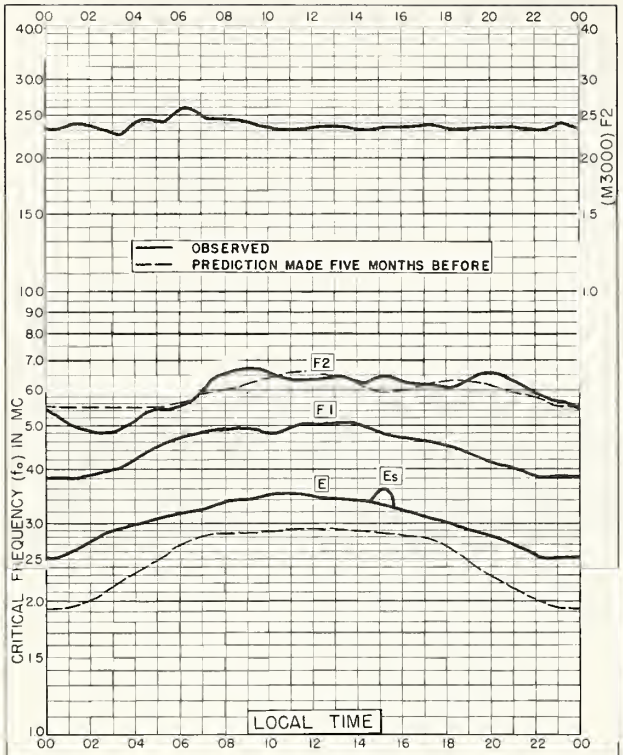


Fig. 93. LITTLE AMERICA
78.2°S, 162.2°W DECEMBER 1958

NBS 503

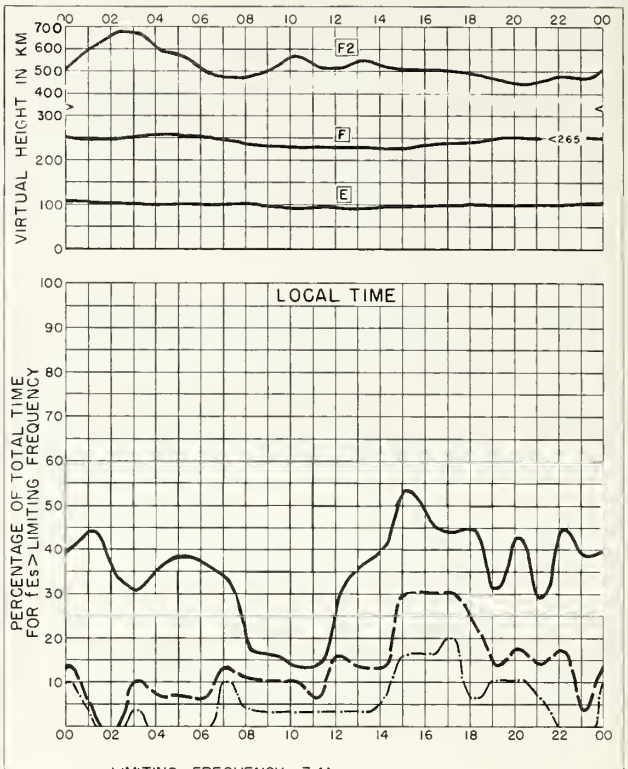


Fig. 94. LITTLE AMERICA DECEMBER 1958

NBS 490

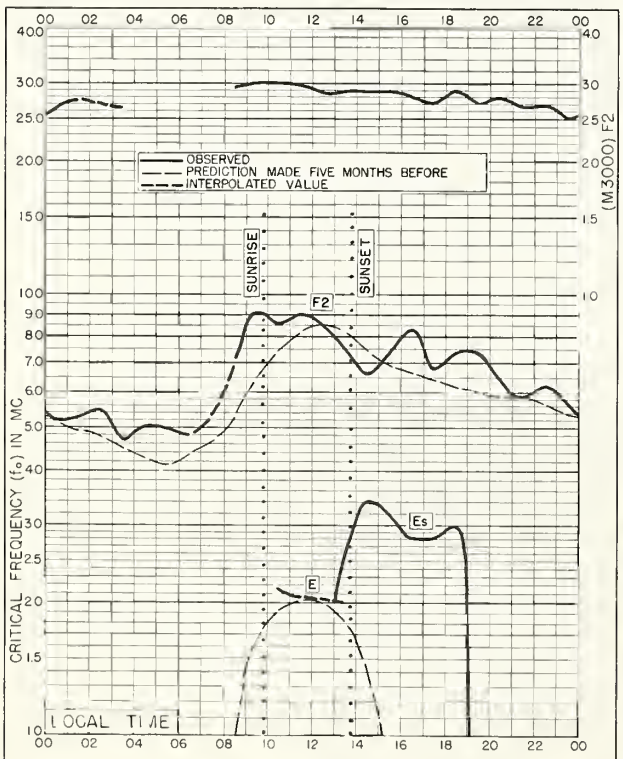


Fig. 95. GODHAVN, GREENLAND
69.3°N, 53.5°W NOVEMBER 1958

NBS 503

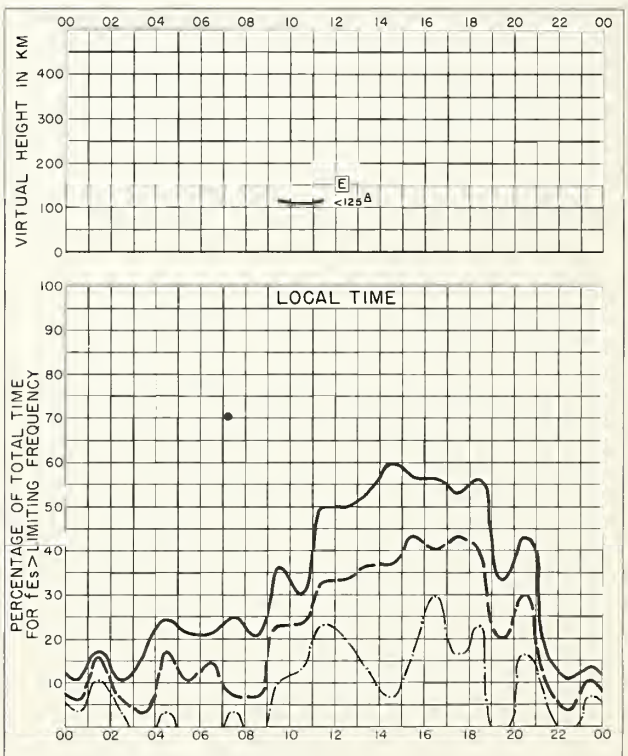


Fig. 96. GODHAVN, GREENLAND NOVEMBER 1958

NBS 490

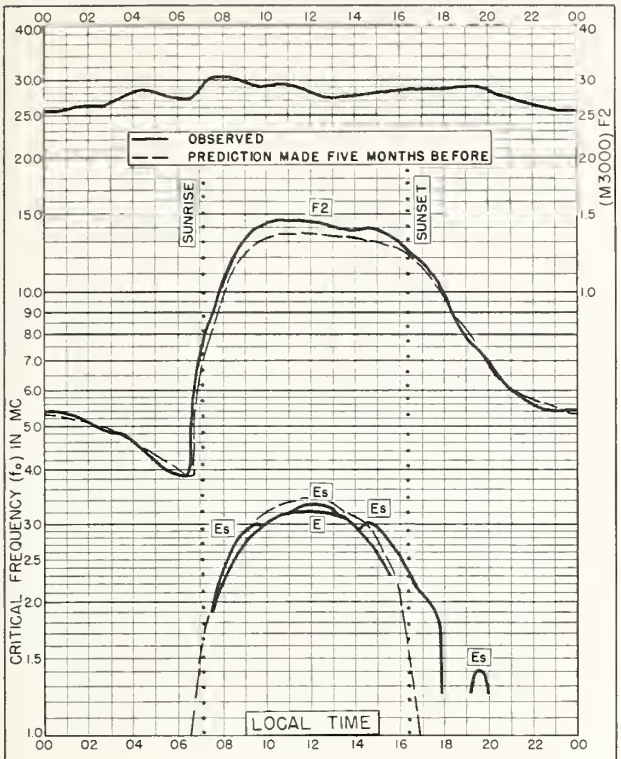


Fig. 97. FREIBURG, GERMANY
48.1°N, 7.6°E NOVEMBER 1958

NBS 503

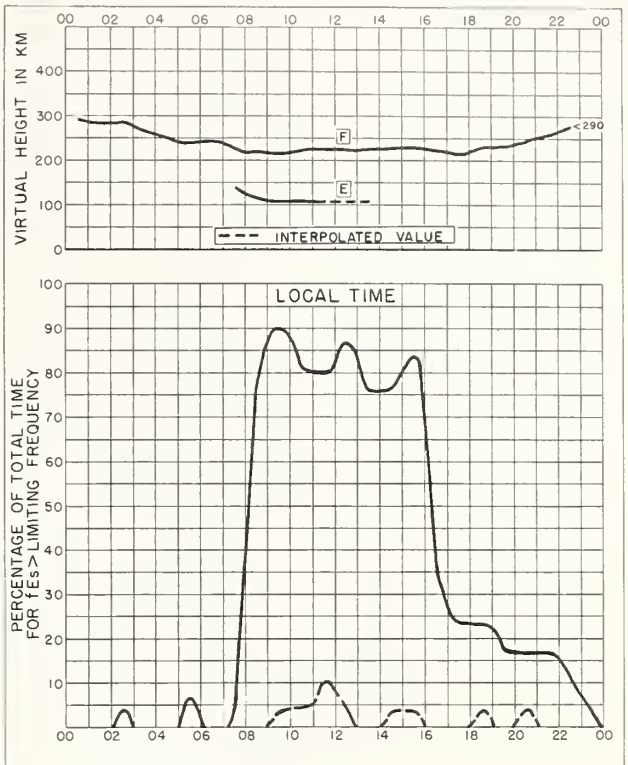


Fig. 98. FREIBURG, GERMANY NOVEMBER 1958

NBS 490

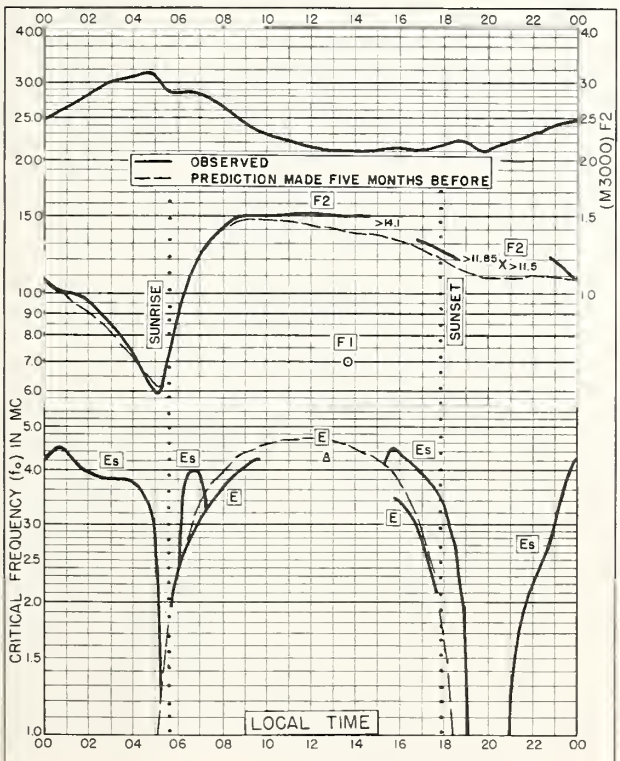


Fig. 99. CHICLAYO, PERU
6.8°S, 79.8°W NOVEMBER 1958

NBS 503

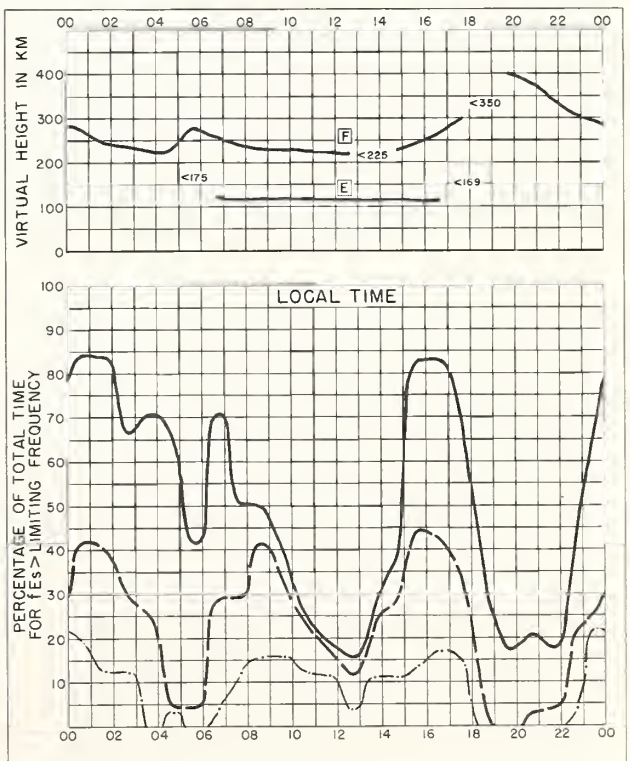


Fig. 100. CHICLAYO, PERU NOVEMBER 1958

NBS 490

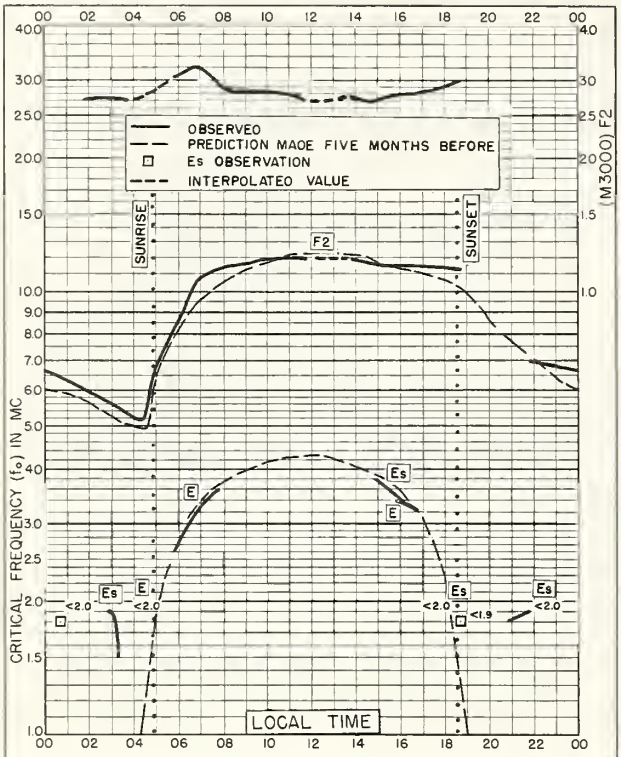


Fig. 101. GRAHAMSTOWN, UNION OF S. AFRICA
33.3°S, 26.5°E NOVEMBER 1958

NBS 503

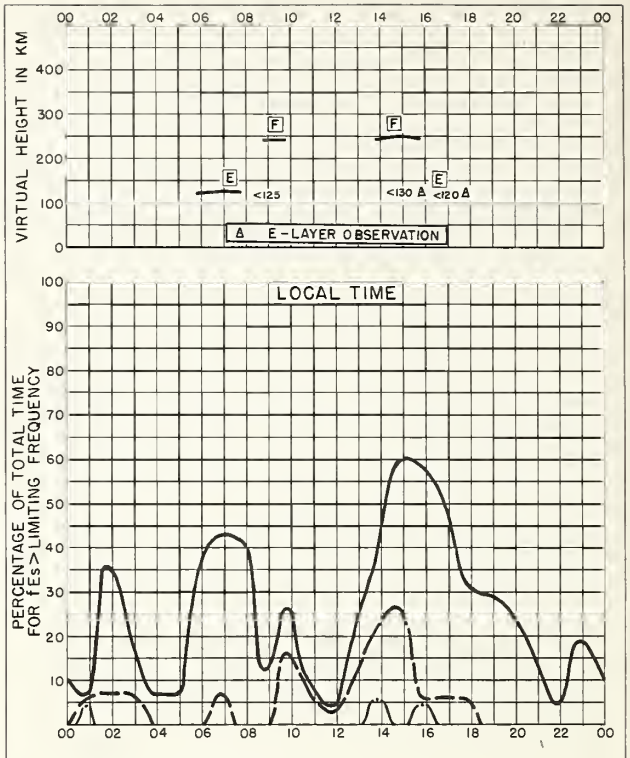


Fig. 102. GRAHAMSTOWN, UNION OF S. AFRICA
NOVEMBER 1958

NBS 490

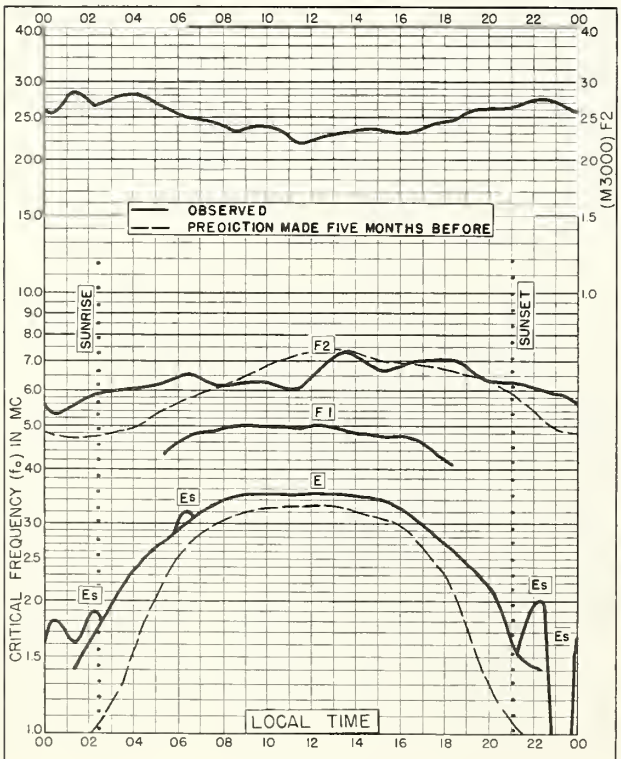


Fig. 103. WILKES STATION
66.2°S, 110.5°E NOVEMBER 1958

NBS 503

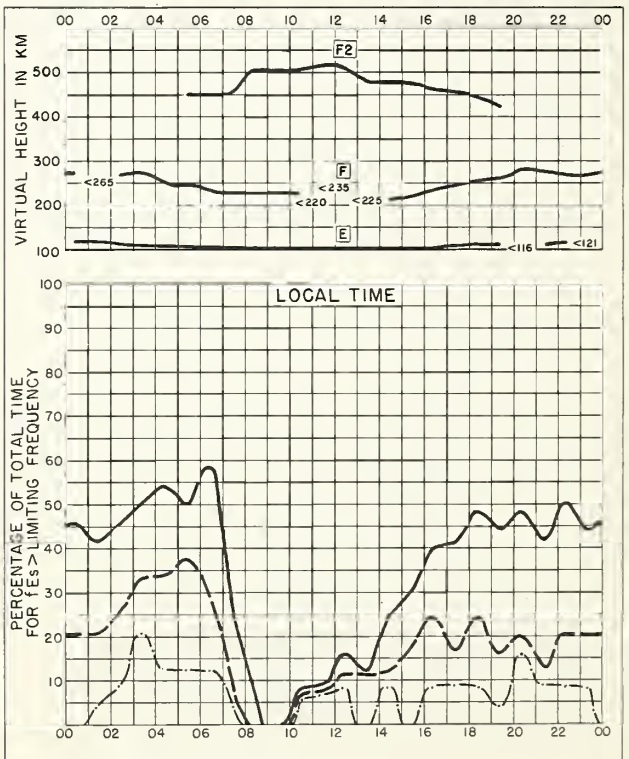


Fig. 104. WILKES STATION NOVEMBER 1958

NBS 490

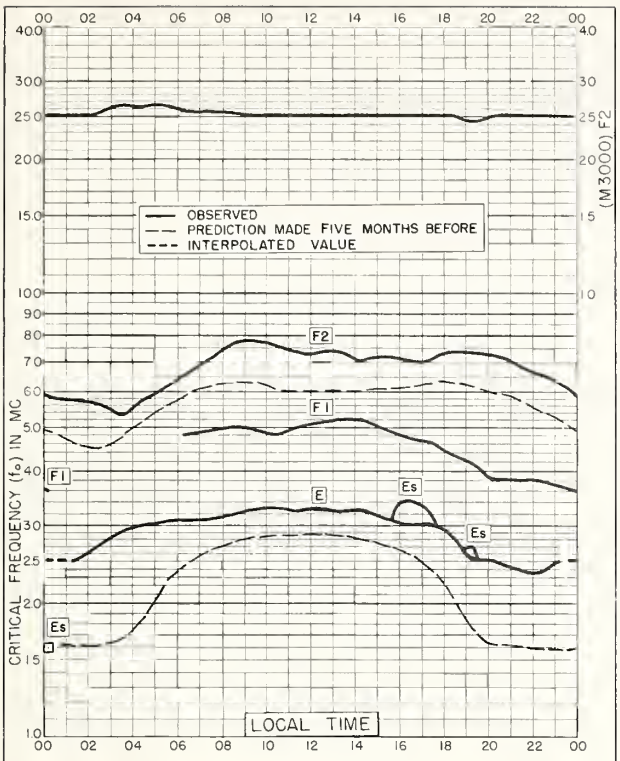


Fig. 105. LITTLE AMERICA
78.2°S, 162.2°W NOVEMBER 1958

NBS 503

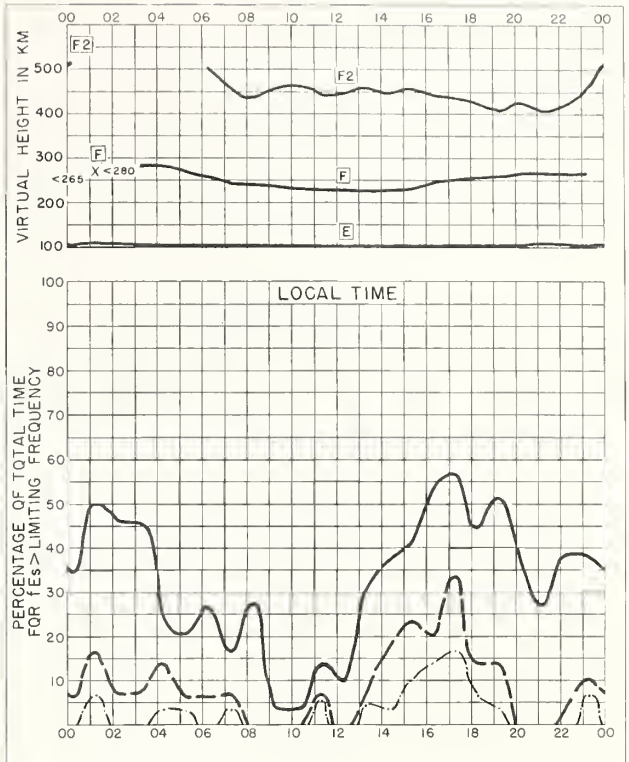


Fig. 106. LITTLE AMERICA NOVEMBER 1958

NBS 490

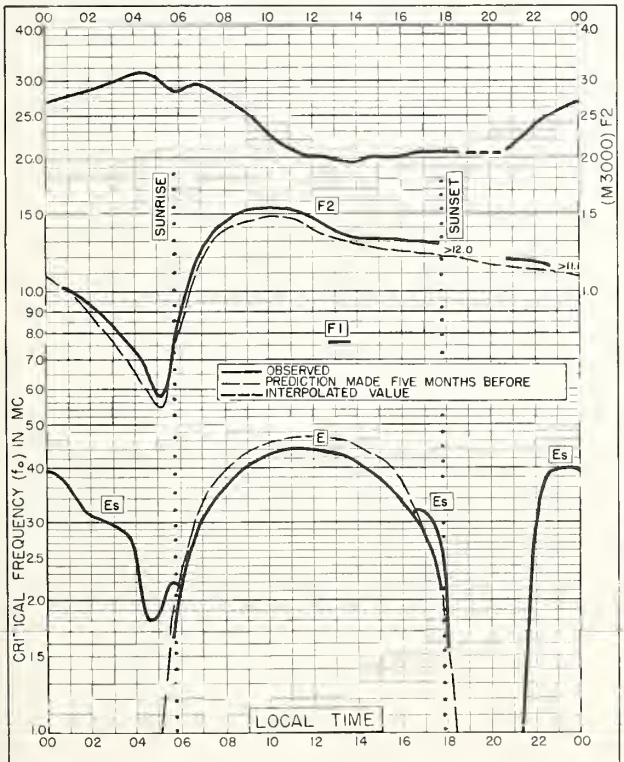


Fig. 107. CHICLAYO, PERU
6.8°S, 79.8°W OCTOBER 1958

NBS 503

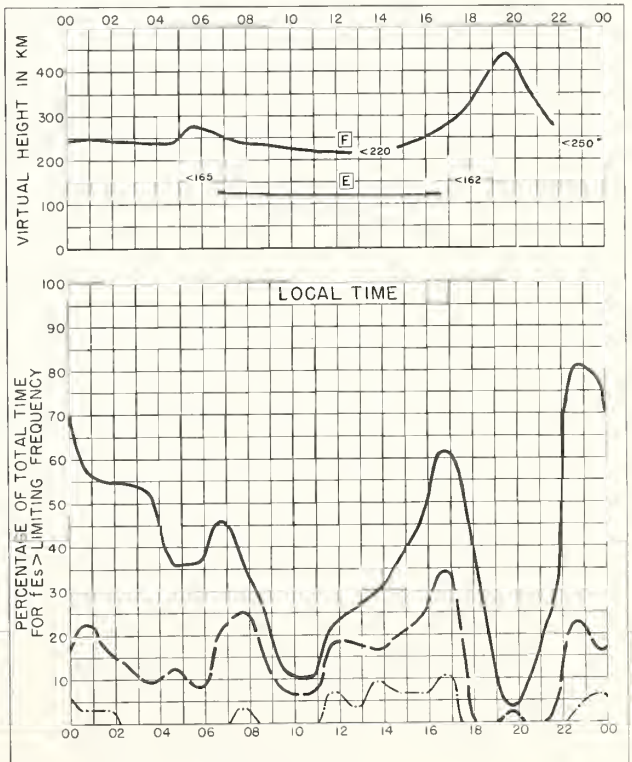


Fig. 108. CHICLAYO, PERU OCTOBER 1958

NBS 490

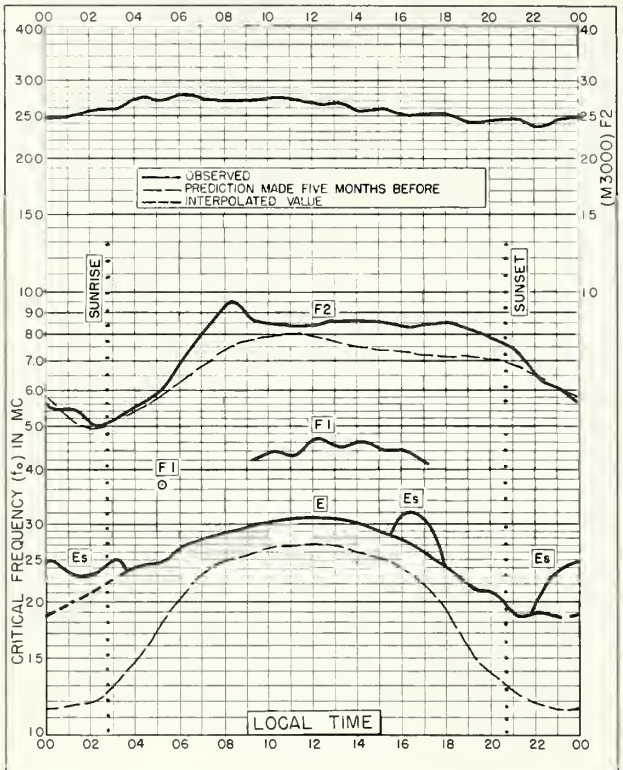


Fig. 109. LITTLE AMERICA
78.2°S, 162.2° W OCTOBER 1958

NBS 503

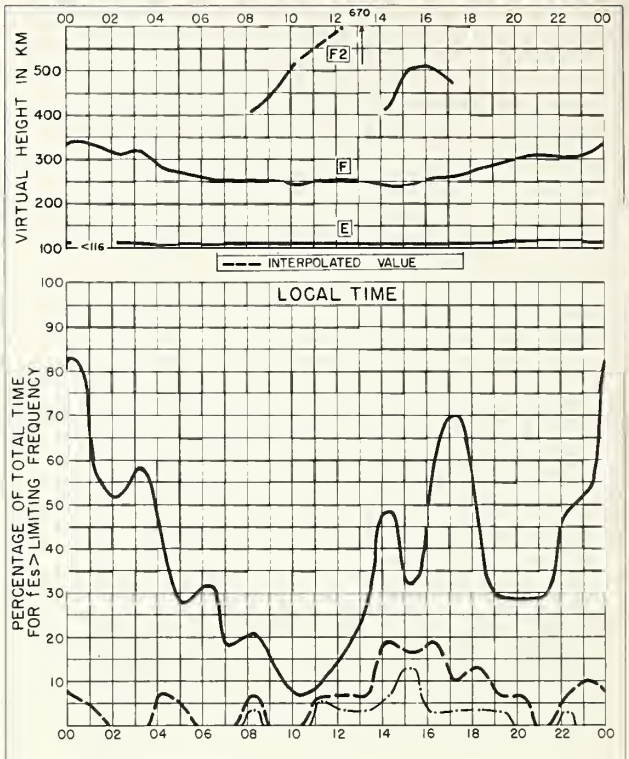


Fig. 110. LITTLE AMERICA OCTOBER 1958

NBS 490

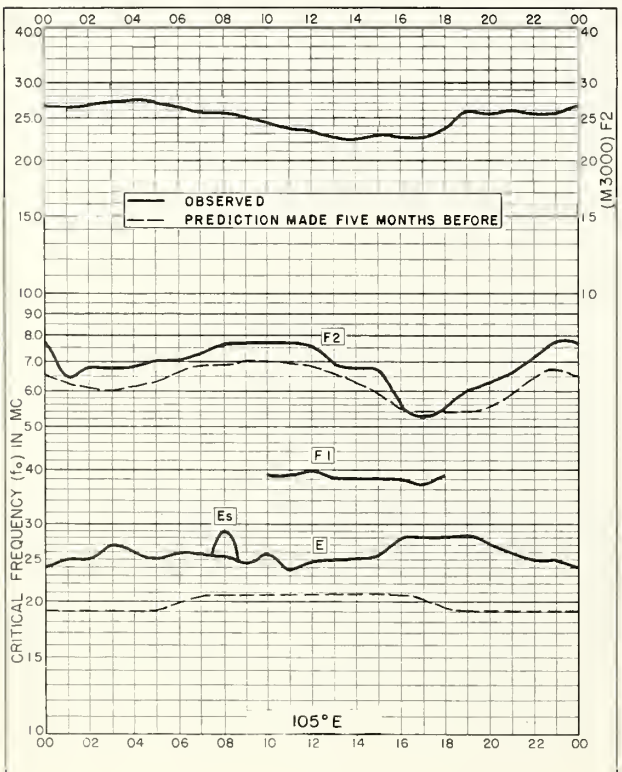


Fig. 111. POLE STATION
90.0°S OCTOBER 1958

NBS 503

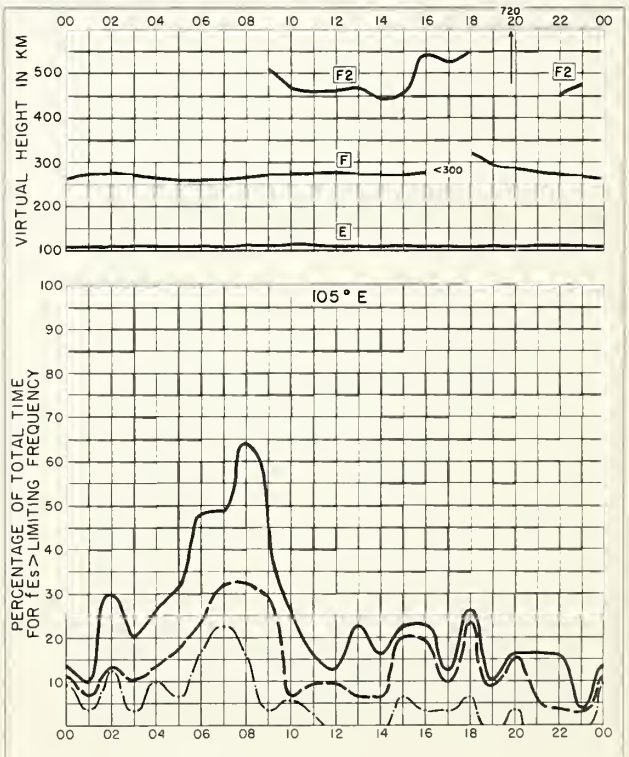


Fig. 112. POLE STATION OCTOBER 1958

NBS 490

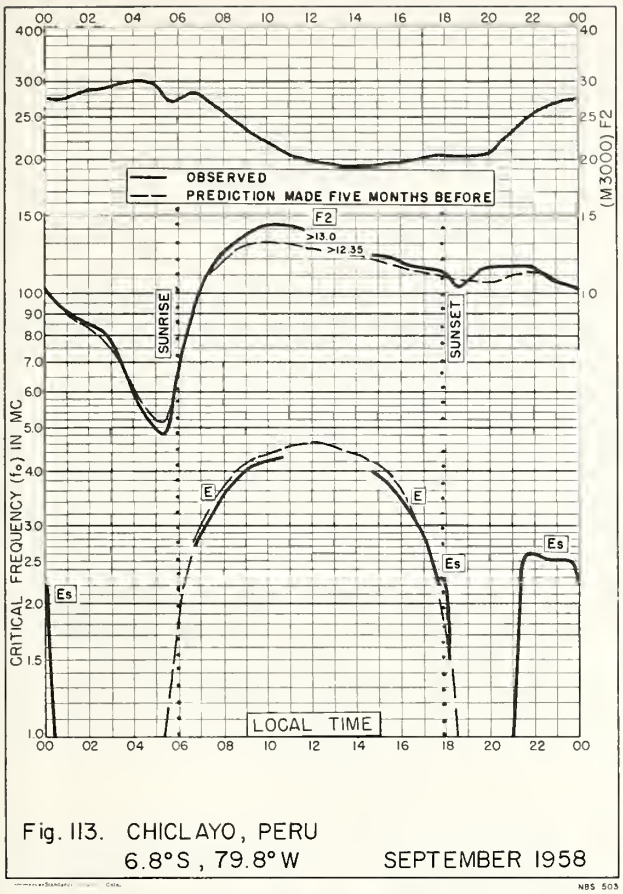


Fig. 113. CHICLAYO, PERU
6.8°S, 79.8°W SEPTEMBER 1958

NBS 503

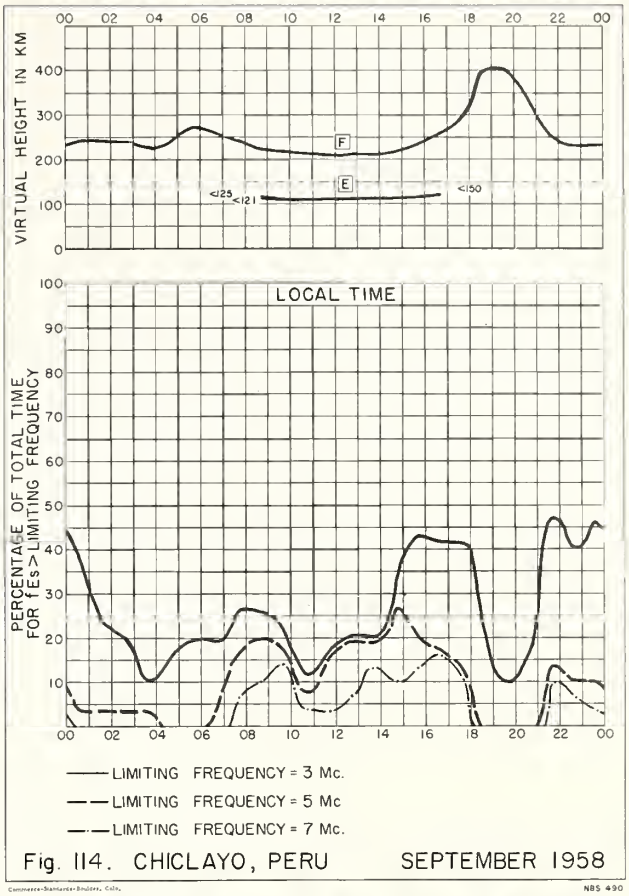


Fig. 114. CHICLAYO, PERU SEPTEMBER 1958

NBS 490

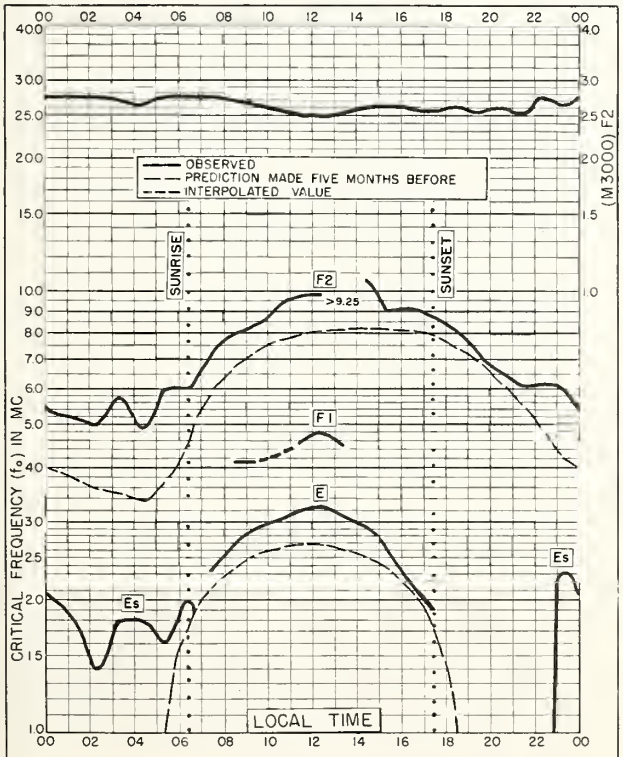


Fig. 115. WILKES STATION
66.2°S, 110.5°E SEPTEMBER 1958

NBS 503

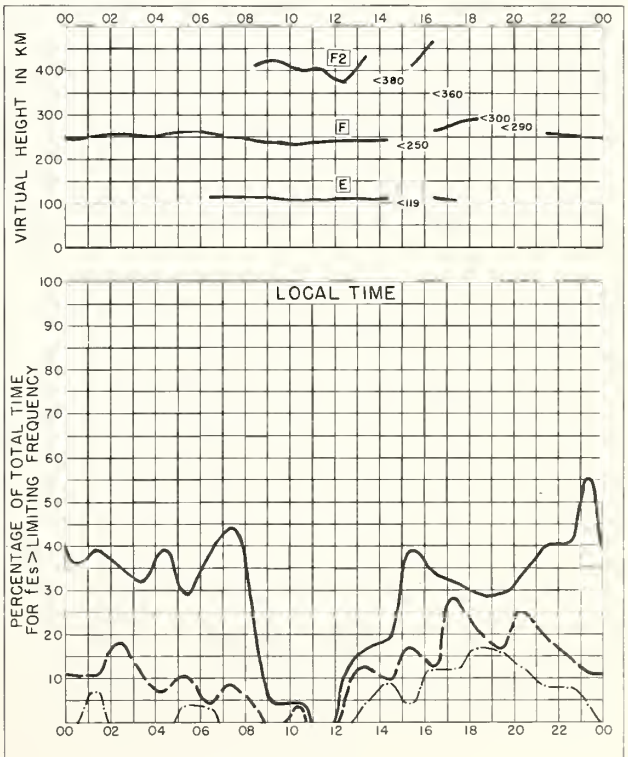


Fig. 116. WILKES STATION SEPTEMBER 1958

NBS 490

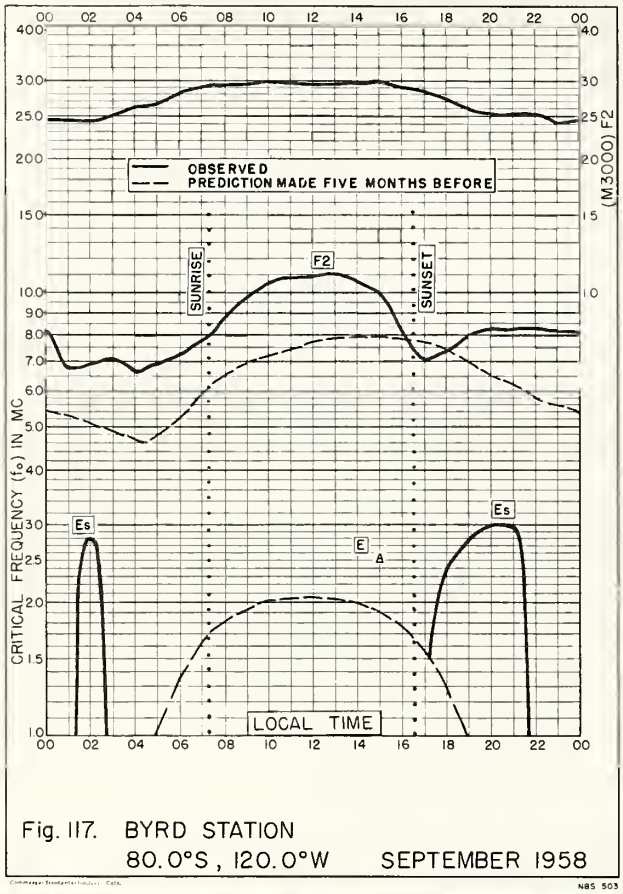


Fig. 117. BYRD STATION
80.0°S, 120.0°W SEPTEMBER 1958

NBS 503

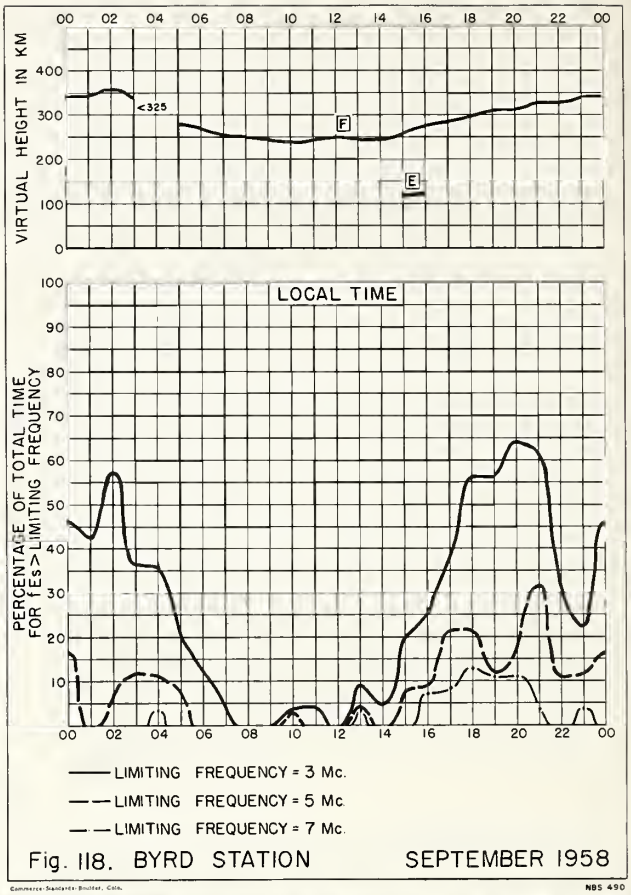


Fig. 118. BYRD STATION SEPTEMBER 1958

NBS 490

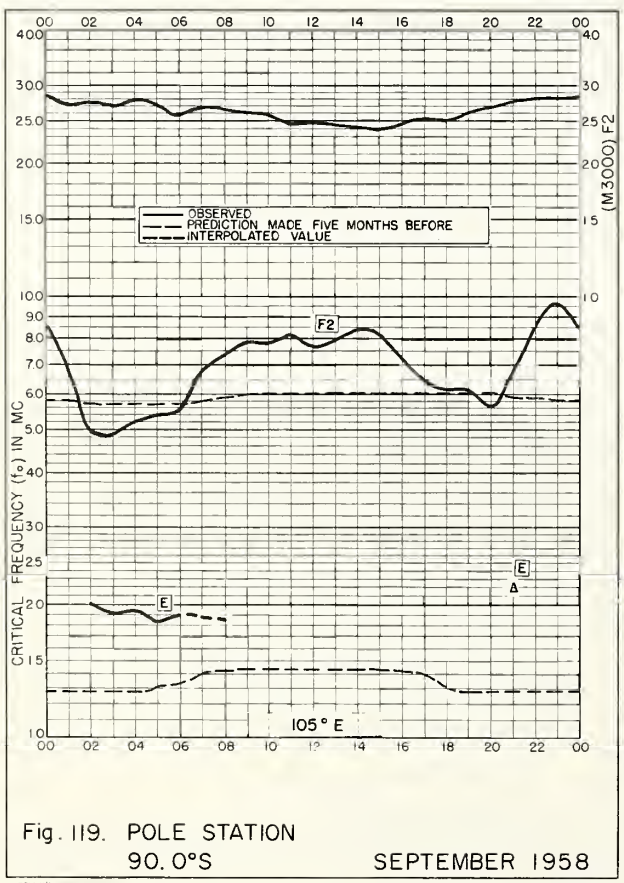


Fig. 119. POLE STATION
90.0°S SEPTEMBER 1958

NBS 503

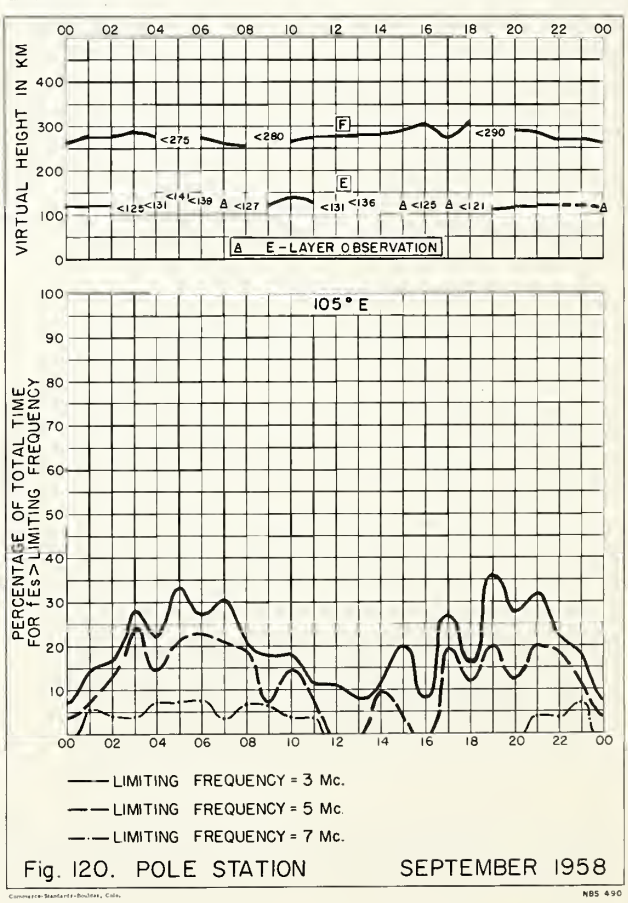


Fig. 120. POLE STATION SEPTEMBER 1958

NBS 490

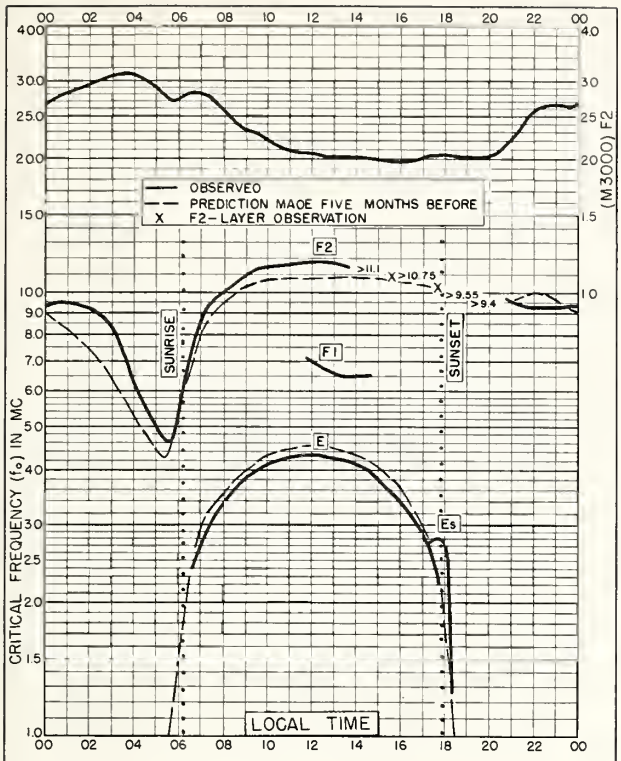


Fig. 121. CHICLAYO, PERU
6.8°S, 79.8°W AUGUST 1958

NBS 503

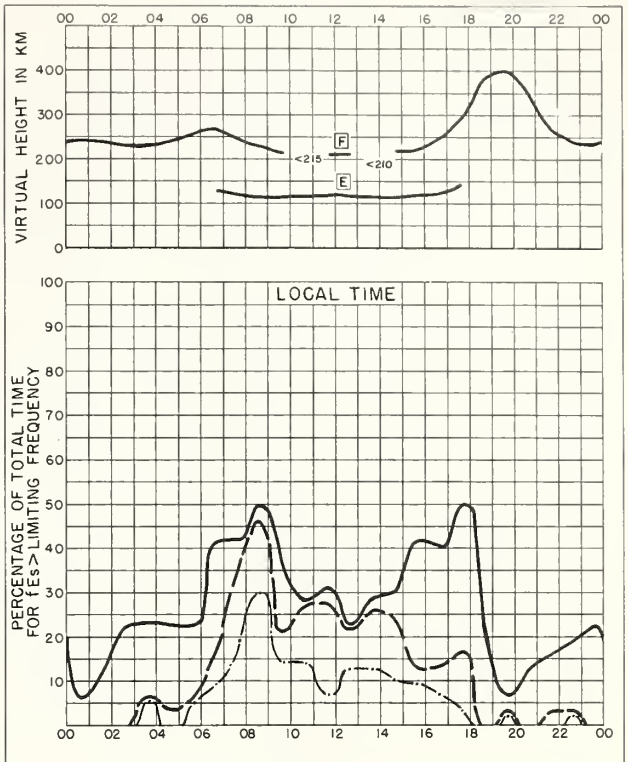


Fig. 122. CHICLAYO, PERU AUGUST 1958

NBS 490

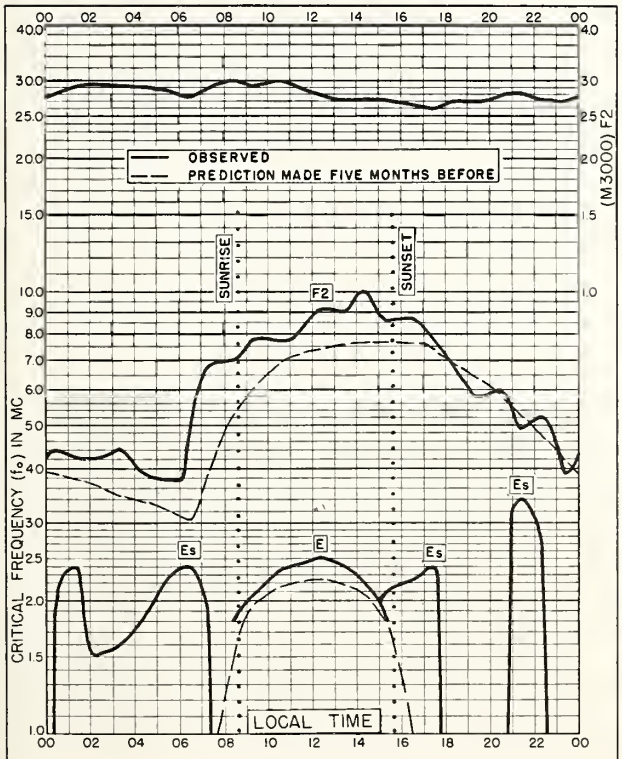


Fig. 123. WILKES STATION
66.2°S, 110.5°E AUGUST 1958

NBS 503

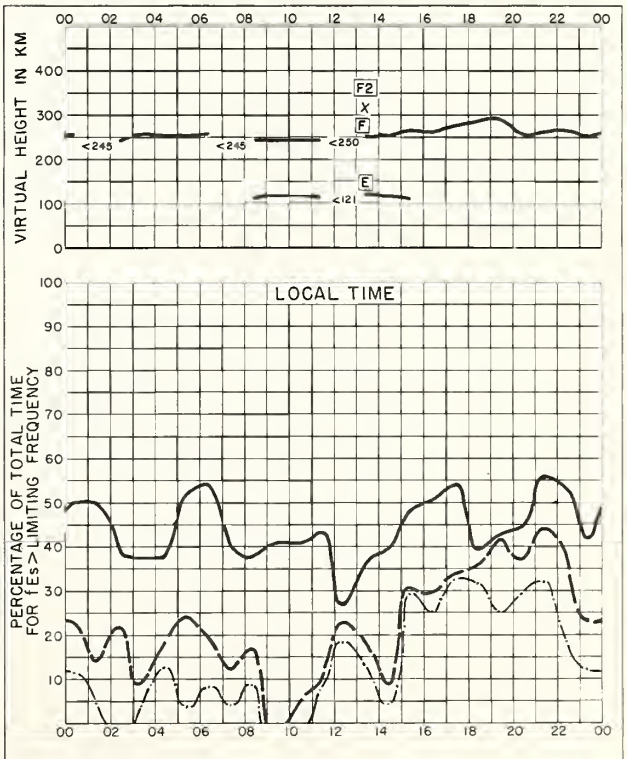


Fig. 124. WILKES STATION AUGUST 1958

NBS 490

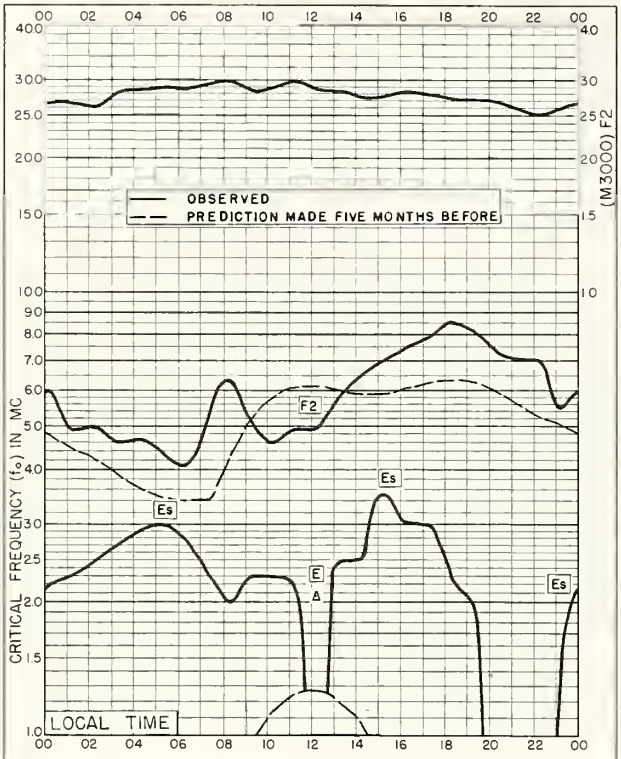


Fig. 125. LITTLE AMERICA
78.2°S, 162.2°W AUGUST 1958

NBS 503

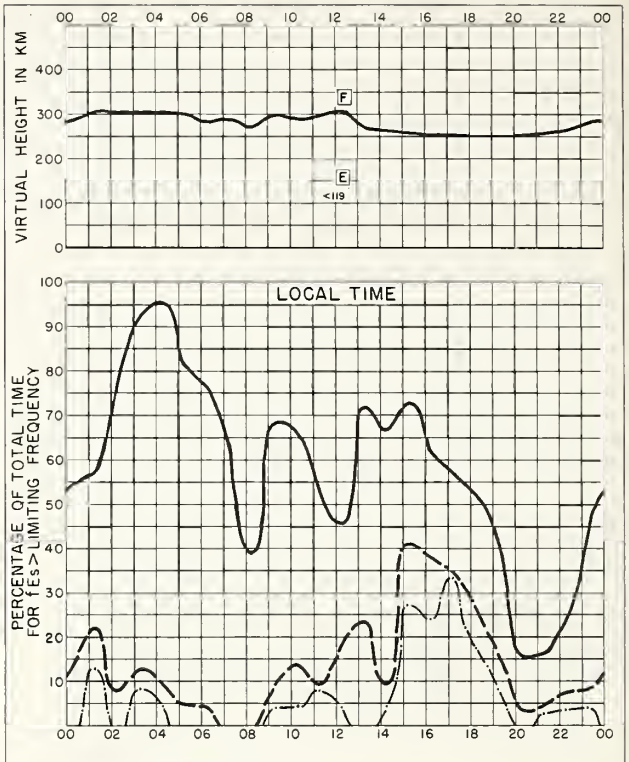


Fig. 126. LITTLE AMERICA AUGUST 1958

NBS 490

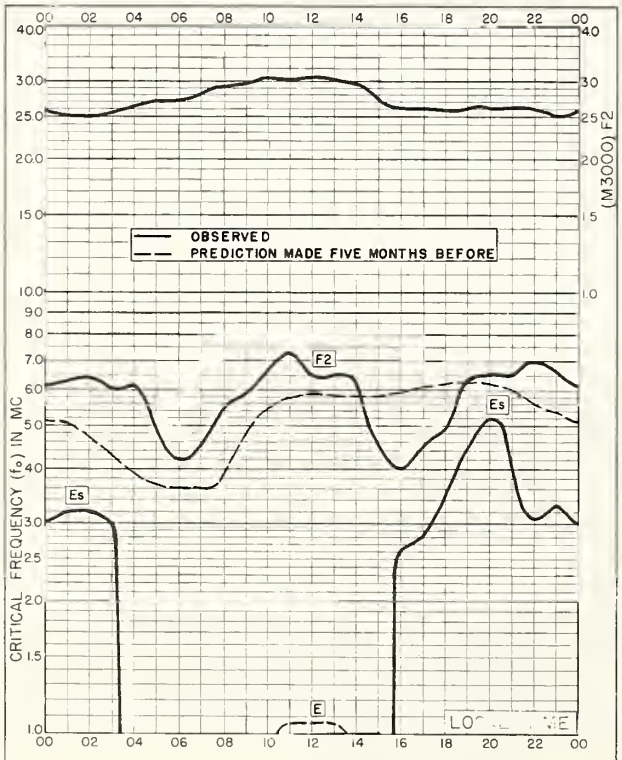


Fig. 127. BYRD STATION
80.0°S, 120.0°W AUGUST 1958

NBS 503

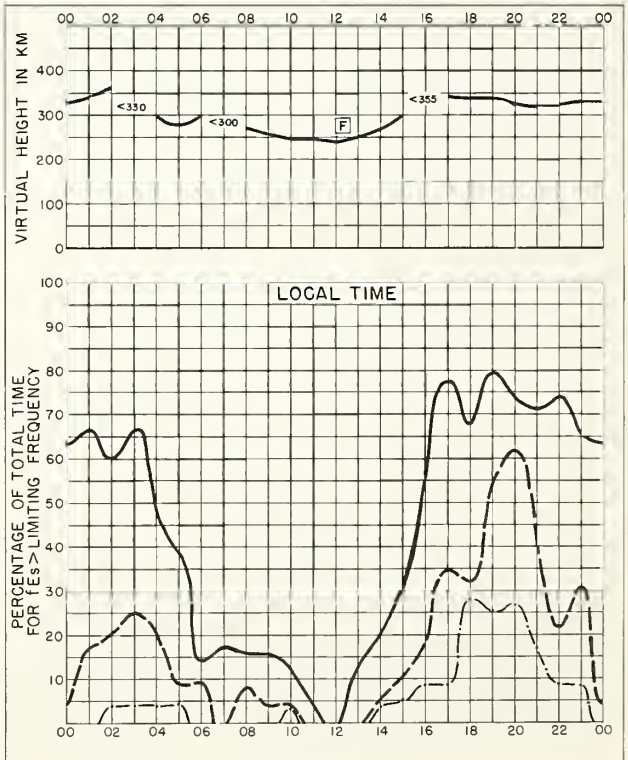


Fig. 128. BYRD STATION AUGUST 1958

NBS 490

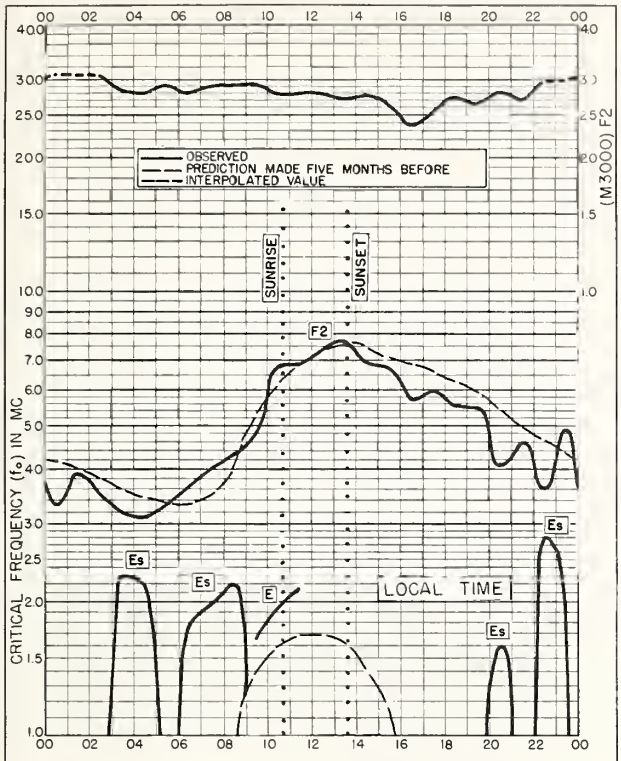


Fig. 129. WILKES STATION
66.2°S, 110.5°E JULY 1958

NBS 503

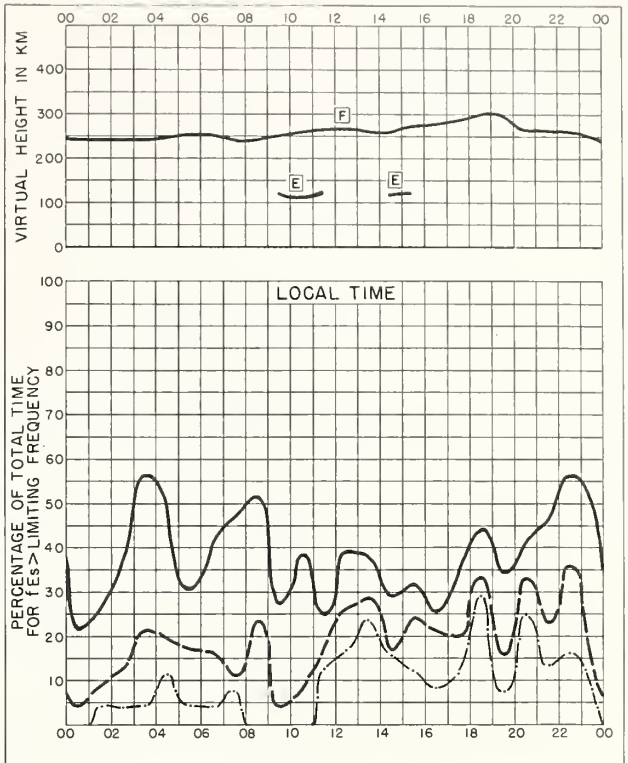


Fig. 130. WILKES STATION JULY 1958

NBS 490

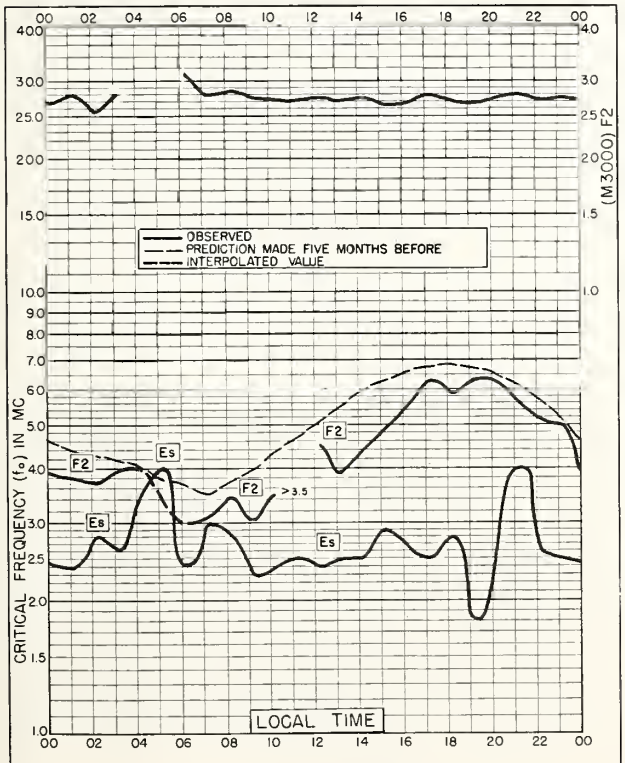


Fig. 131. LITTLE AMERICA
78.2°S, 162.2°W JULY 1958

NBS 503

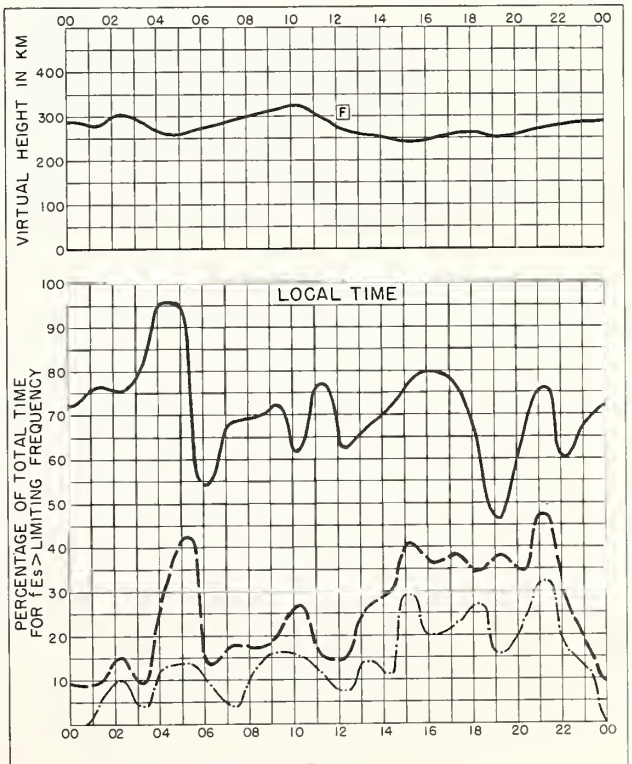


Fig. 132. LITTLE AMERICA JULY 1958

NBS 490

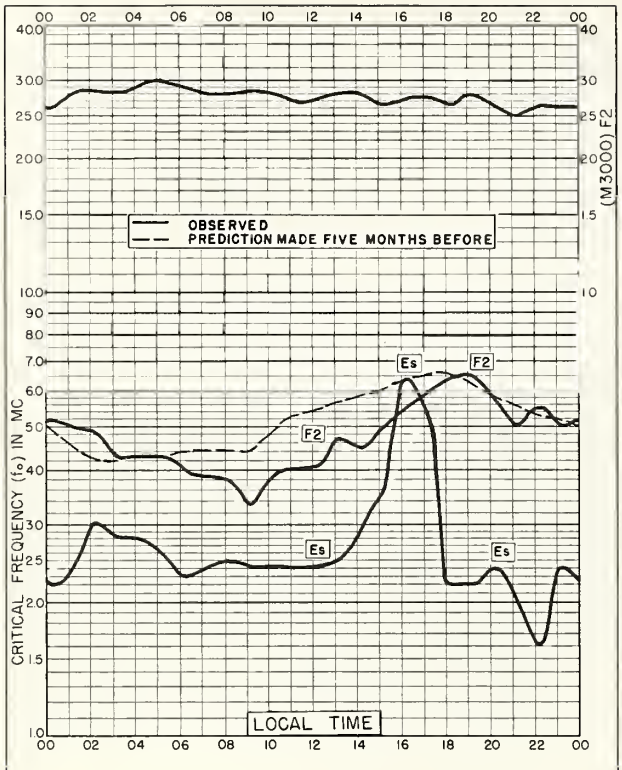


Fig. 133. LITTLE AMERICA
78.2°S, 162.2°W JUNE 1958

NBS 503

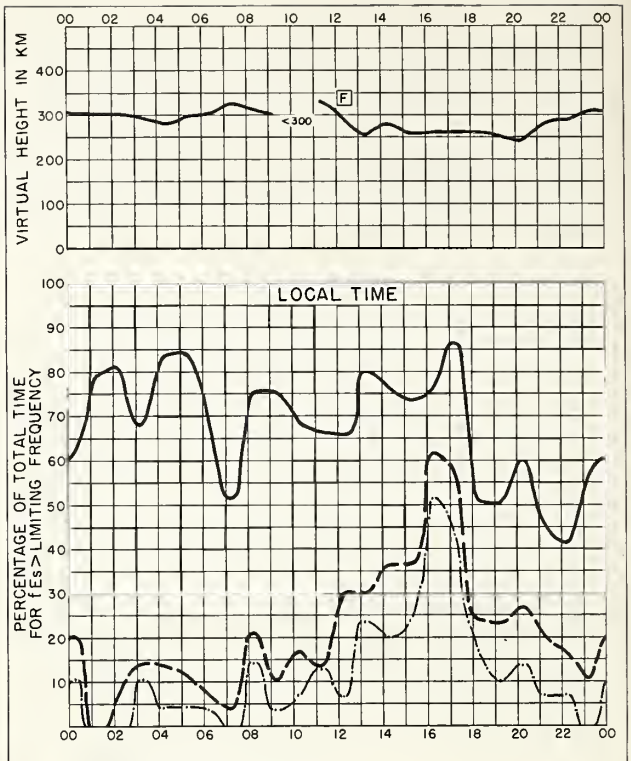


Fig. 134. LITTLE AMERICA JUNE 1958

NBS 490

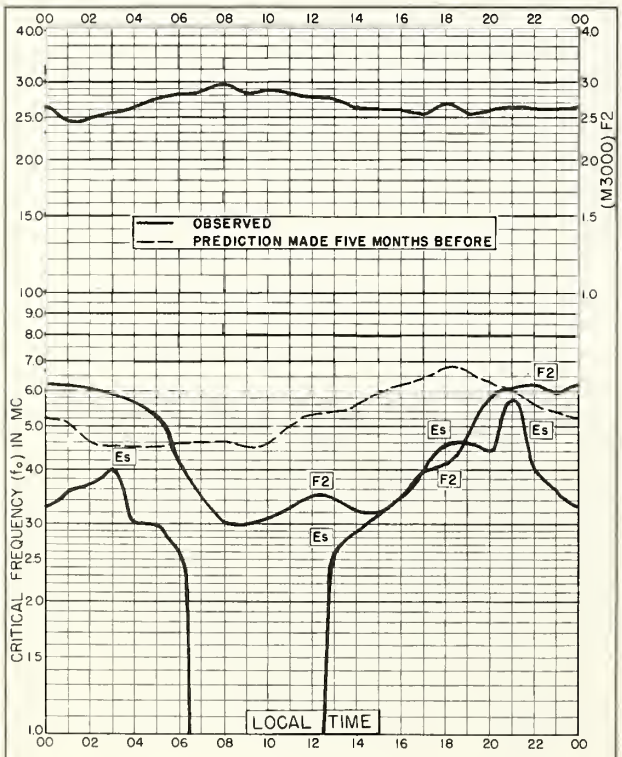


Fig. 135. BYRD STATION
80.0°S, 120.0°W JUNE 1958

NBS 503

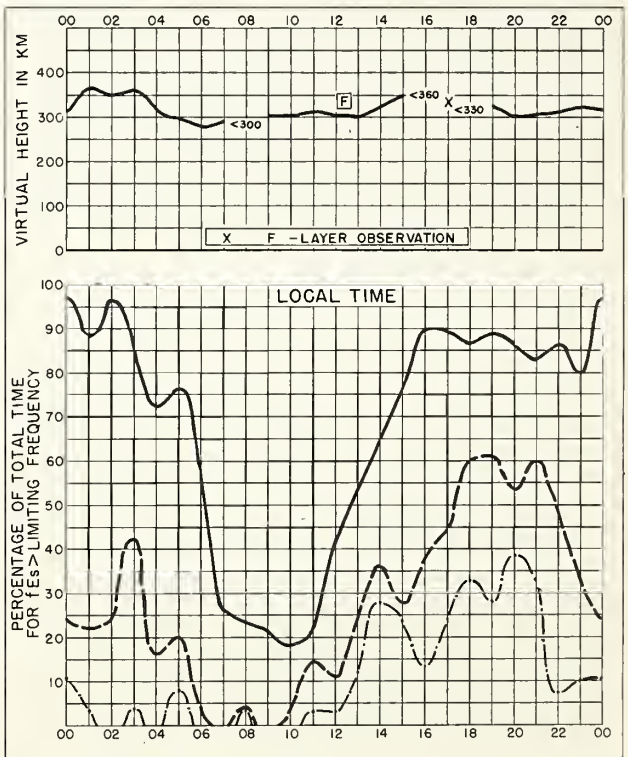


Fig. 136. BYRD STATION JUNE 1958

NBS 490

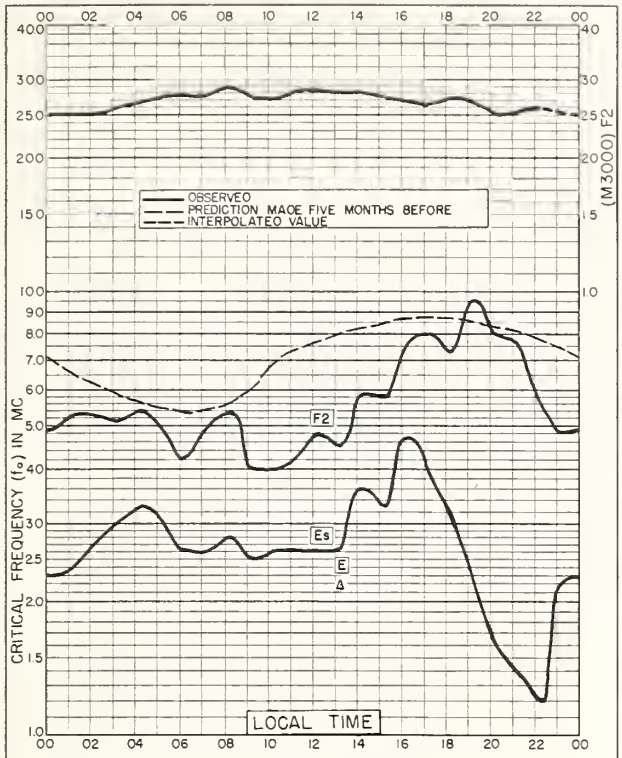


Fig. 137. LITTLE AMERICA
78.2°S, 162.2°W MAY 1958

NBS 503

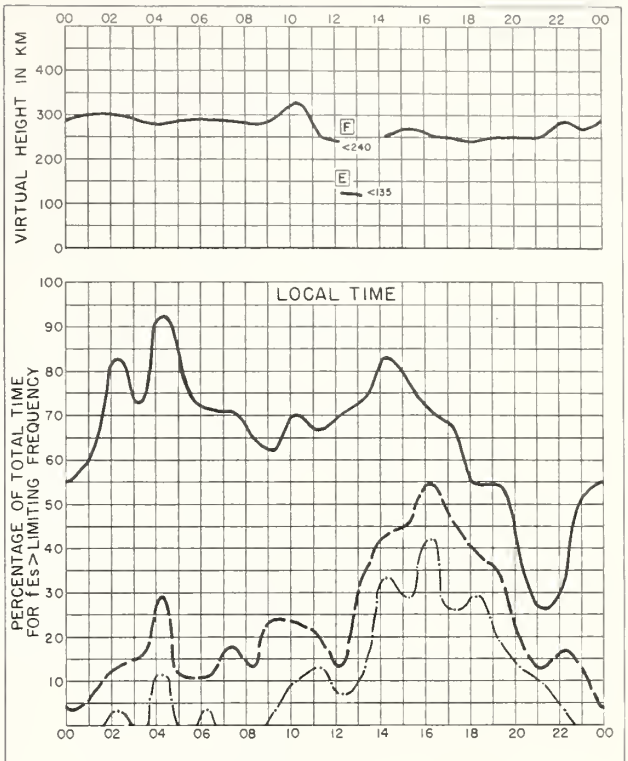


Fig. 138. LITTLE AMERICA MAY 1958

NBS 490

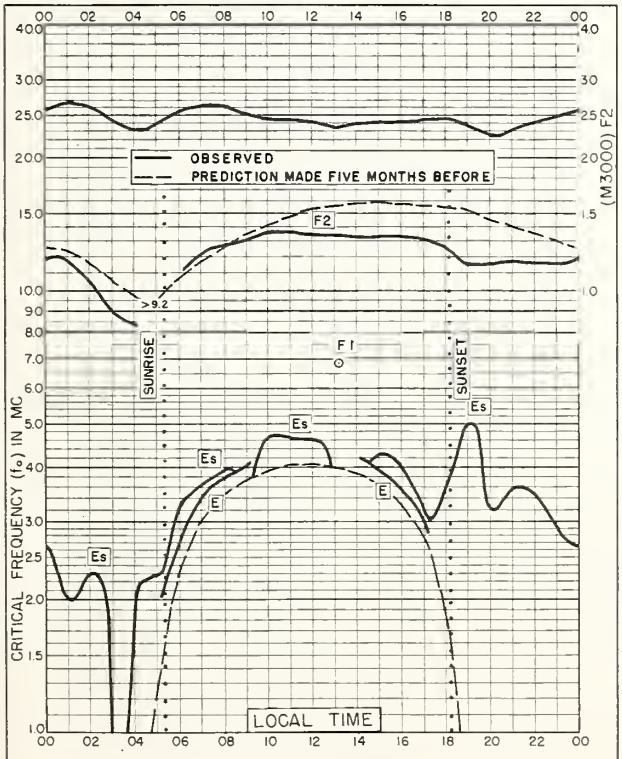


Fig. 139. CONCEPCION, CHILE
36.6°S, 73.0°W OCTOBER 1957

NBS 503

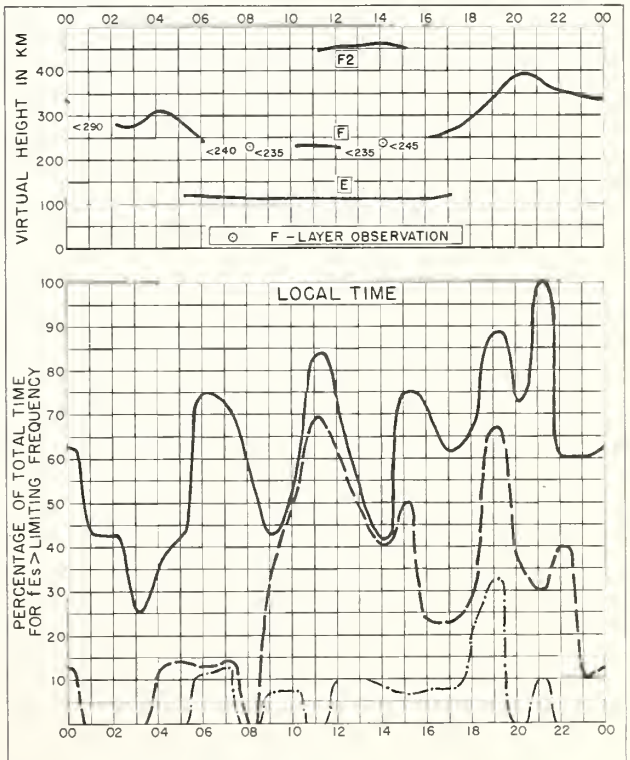


Fig. 140. CONCEPCION, CHILE OCTOBER 1957

NBS 490

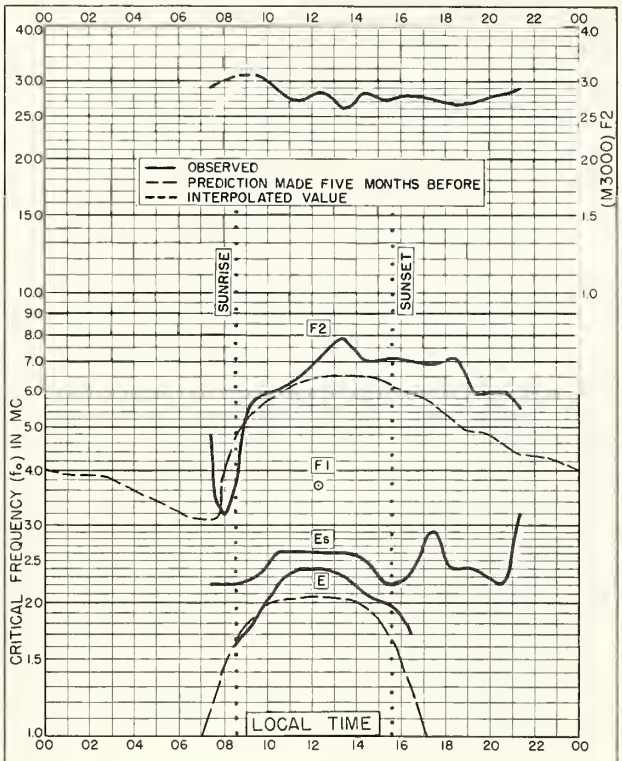


Fig. 141. TERRE ADELIE
66.8°S, 141.4°E AUGUST 1956

NBS 503

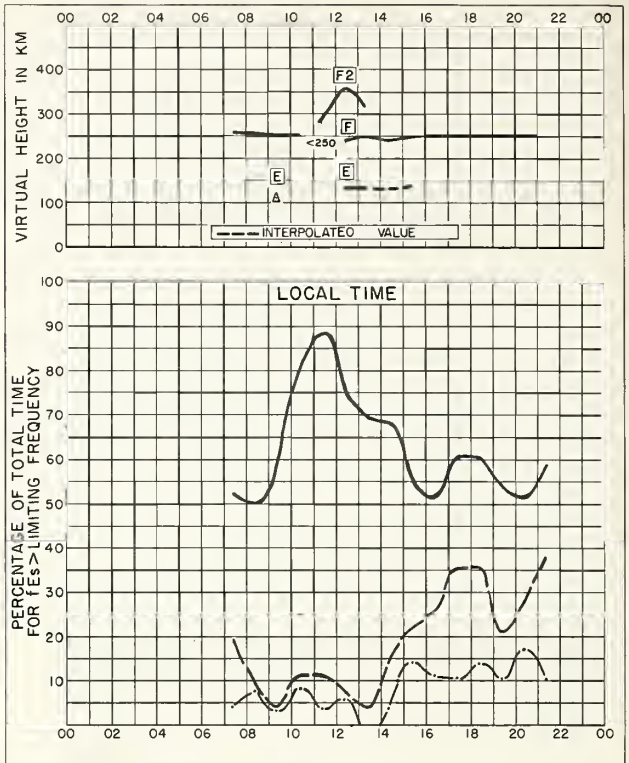


Fig. 142. TERRE ADELIE AUGUST 1956

NBS 490

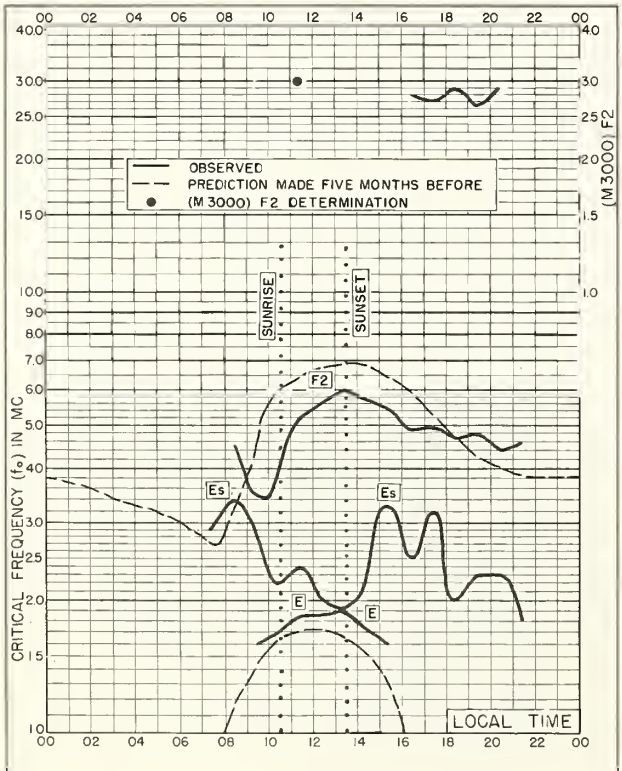


Fig. 143. TERRE ADELIE
66.8°S, 141.4°E JULY 1956

NBS 503

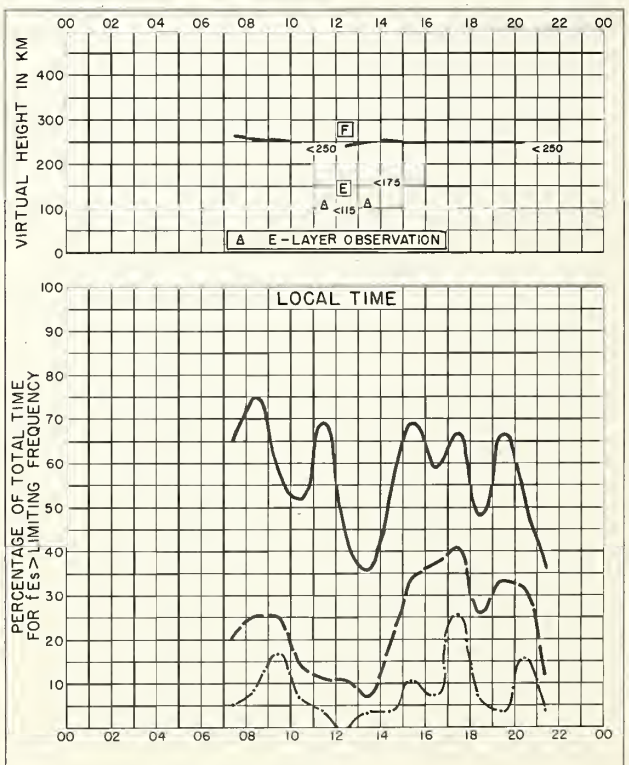


Fig. 144. TERRE ADELIE JULY 1956

NBS 490

Index of Tables and Graphs of Ionospheric Data

in CRPL-F184 (Part A)

Index (CRPL-F184 (Part A), continued)

Index (CRPL-F184 (Part A), concluded)

The annual index is on the following pages, 52-54.

INDEX OF IONOSPHERIC DATA PUBLISHED IN 1959
(CRPL-F 173(A) THROUGH F 184(A))

The following index of tables and graphs of ionospheric data published in the CRPL-F(A) series in 1959 is divided into two parts. Part I is an index of data observed in 1958 and 1959. Part II is an index of data observed prior to 1958.

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 1959 are in IRPL-F17, CRPL-F28, -F40, -F52, -F64, -F76, -F88, -F100, -F112, -F124, -F136(A), -F148(A), -F160(A), and -F172(A).

PART I

Index of Tables and Graphs of Ionospheric Data Observed in 1958 and 1959

and Published in 1959 (CRPL-F173(A) through -F184(A)

Station	1958												1959											
	J	F	M	A	M	J	Jy	A	S	O	N	O	J	F	M	A	M	J	Jy	A	S	O	N	
Adak, Alaska								173		174	175	176	179	179	181	182	183	183						
Akita, Japan				178		173	179	179	180	180	182	183												
Anchorage, Alaska											176	175	179	179	181	181	183				184			
Baguio, P. I.										173	176	177	179	179	181	182	183		183					
Baker Lake, Canada			178	177		178	179	174	179	181	181	183	184											
Bogota, Colombia	179	180	181	178	183	181	183	178	183	181	178	178	184	184		184	184							
Brisbane, Australia			176	177		177	173	174	174	181	181	183	184	184										
Budapest, Hungary		178	176	178							182													
Bunia, Belgian Congo			174	177	174	178	179	179	179	180	182	183												
Byrd Station	180	180	181	181	183	184	183	184	184															
Campbell I.					174	177	174		180	180	183													
Canberra, Australia				177		173	174	174	176	181														
Cape Canaveral, Florida							175																	
Cape Hallett			176	177		181	179	174	179	180	182	183												
Capetown, Union of S. Africa			176				178		180	180	182	183	184	184										
Chiclayo, Peru						176	178	184	184	184	184													
Chimbote, Peru								175	176	176	178	177	180	181	181	182	183							
Christchurch, New Zealand			176	177		177	179	175	179	181	183	184												
Churchill, Canada				178			174	178	180	181	183	183	184											
Concepcion, Chile	173	174	174	174	174		183																	
De Bilt, Holland				178			174	175	180	180	182	183												
El Cerillo, New Mexico											182	183	184											
Elisabethville, Belgian Congo				177	174	178	178	179	179	180	182	184												
Ellsworth	178	178	178	178	178	178	178	178	178	179	178	179												
Eureka, Canada				178																				
Fairbanks, Alaska										173	176	176	179	180	182	181	183	184						
Falkland Is.						173	174	174	176	181	181	182												
Fletchers Ice I.							174	175	173	174	177	177												
Formosa, China						178	174	179	180	181	182	182												
Ft. Monmouth, New Jersey							174	176	175	173	174	177	180	180	182	181	183							
Freiburg, Germany										181	184	184												
Godhavn, Greenland								173	175	177	184	184	184	182	182	182	183							
Grahamstown, Union of S. Africa			178	178	178	178	174				184	184												
Grand Bahama I.								175	174	174	176	177	180	182	182	182	184							
Graz, Austria						176	173	175	176			183												
Hobart, Tasmania				178		173	173	175		181	182	183	184	184										
Huancayo, Peru								176	176	176	176	176	179	182		182	184							
Ibadan, Nigeria		173	173	173		173	174	178		181														
Ilo, Peru														181	183	182	184							
Inverness, Scotland[a]							173		176	180	181	183[b]												
Johannesburg, Union of S. Africa			176			178	179	176	180	180	182	183	184	184										
Juliaca, Peru																184								
Kiruna, Sweden						173	178	179	183	180	182	182	184	184										
La Paz, Bolivia	175	175	175	175	175	175	174	175	181	180	179													
Leopoldville, Belgian Congo				177	174	178	178	179	180	180	182	183												
Lindau/Harz, Germany			177	178	178	178	178																	
Little America	180	180	182	183	184	184	184	184		184	184	184												
Lulea, Sweden								179	176	180	182	183												
Lwiro, Belgian Congo														184										
Lycksele, Sweden				178		178	178	178	180	180	182	183												

PART I (CONCLUDED)

Station	1958												1959									
	J	F	M	A	M	J	Jy	A	S	O	N	O	J	F	M	A	M	J	Jy	A	S	O	N
Macau												1B3	1B4										
Maui, Hawaii										173	174	177	179	179	1B1	1B2	1B3	1B4					
Monte Capellino, Italy										1B3[c]	183[c]	183[c]											
				175	175	175			176	180		1B2											
Moscow, U.S.S.R.				174			173					183											
Narsarssuak, Greenland										181	179	179	184	1B2	1B2	1B2	1B3						
Natal, Brazil							173	176	1B3														
Nurmijarvi, Finland				177			174		176	1B0	181	183											
Okinawa I.								175		174	176	176	179	180	181	182	183						
Oslo, Norway			176	177	178	178	179	179	1B0	1B0	1B2	182											
Ottawa, Canada			177				174	179	179	180	182	182											
Panama Canal Zone										173	174	177											
Point Barrow, Alaska										175	176	177	180	1B0	1B2	1B2	1B3	183	184				
Pole Station	180	1B0	1B2	182	1B3	1B3	1B3	1B3	184	1B4													
Puerto Rico, W. I.										173	174	177											
Rarotonga I.			176	177	177	178	179	17B	180	1B0	181	1B3											
Resolute Bay, Canada							174	179	179	180	181	182	184										
Reykjavik, Iceland									174	174	176	177	181	181	182	1B2	1B3						
Rome, Italy		173		174			174	179	180	1B1	1B1	1B3											
St. John's, Newfoundland							175	175		174	174	177	1B0	181	1B1	1B2	182						
San Francisco, California							173	173	174	174	177	177	179										
Sao Paulo, Brazil			176	177	173																		
Schwarzenburg, Switzerland				173			173	179	179	1B1	181	1B3		1B4									
Scott Base			176	177			17B	178	180	1B1	1B2												
Singapore, British Malaya						173	174	176	176	1B1	1B1	1B2	1B4	1B4									
Slough, England						173	174		179	1B0	1B3	1B3	1B4	184									
Sodankyla, Finland						178	173	179	1B0	1B0	1B2	1B2											
Talara, Peru								175	176	177	17B	176	1B0	1B0	1B1	1B2		1B4					
Thule, Greenland						173	175	175	175	174	174	177	179	1B0	1B1	182	1B3	1B4					
Tokyo, Japan				17B		173	179	179	1B0	1B0	1B2	1B3											
Tortosa, Spain					174			179	179														
Townsville, Australia		183	176	177	178	173	175			180	181	1B2											
Tromso, Norway			176	177	179	178	173	179	176	1B0	1B2	1B2	1B3	1B4									
Upsala, Sweden						178	179	179	1B0	180	1B2	183											
Wakkanai, Japan				178		173	179	179	1B0	1B0	1B2	1B3											
Washington, D. C.										173	174	175	177	177	1B1	1B2	1B3	183	1B3				
Watheroo, Western Australia			176			178	178	175	176	1B1	1B3	182		184									
White Sands, New Mexico									173	174	176	177	179	179	1B1	182	183						
Wilkes Station	180	1B2			1B3	1B3	184	1B4	1B4		1B4	1B4	1B4										
Winnipeg, Canada			177	177		178	173	179	179	181	182	1B2											
Yamagawa, Japan				17B		173	179	179	1B0	1B0	1B2	1B3											

[a]See erratum in CRPL-F173(A), p. viii, concerning data for July 1957 through January 1958.
[b]See erratum in CRPL-F184(A), p. vii, concerning December 1958 data.
[c]foEs in tabular form only.

Part II of this Index is on following page.

PART II

Index of Tables and Graphs of Ionospheric Data Observed Prior to 1958 and Published in 1959 (CRPL-F173(A) through -F184(A)

Station	1957												1956									
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	D	N	D
Ahmedabad, India							176	177														174	173	173
Alert, Canada									175															
Bogota, Colombia							174			176														
Bombay, India							176	177														174	173	173
Budapest, Hungary																								173
Byrd Station								179	179	181	179	179												
Calcutta, India							176	177														174	173	173
Campbell I.		180	174	173										173		174	174	175	175	177		178		174
Canberra, Australia				173																				
Cape Hallett								175																
Concepcion, Chile										184		173												
Dakar, French W. Africa															175	175	175	175	176	177				
Decepcion I.								177																
Delhi, India							176	177														174	173	173
Djibouti, French Somaliland*															175	175	175	175	175	177				
Freiburg, Germany							178	179	180															
Ibadan, Nigeria			173	173	173	173																		
Kerguelen I.																			183	182				
Kodaikanal, India							176	177														174	174	173
La Paz, Bolivia											178	175												
Little America							177	176	176	177	177	179												
Macquarie I.				173		173		177					175	175	175	175	175	175	175	175	175	175	174	
Madras, India							176	177														174	173	173
Marion I.							175																	
Monte Capellino, Italy				175	175	175	175	177																
Pole Station								173	173	173														
Port Lockroy								177																
San Francisco, California									173															
Sverdlovsk, U.S.S.R.								177																
Tananarive, Madagascar															175	175	175	175	176	177				
Terre Adelie																			184	184				
Tiruchy, India							176	177														174	173	173
Tortosa, Spain							174																	
Trivandrum, India							176	177																
Tucuman, Argentina								177																
Victoria, Canada							174																	
Wilkes Station							177	177	178	178	178	178												

*See erratum in CRPL-F174(A), p. viii, concerning January and February 1956 data.

Station	1955												1954									
	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										176														
Bombay, India										175														
Calcutta, India										176														
Campbell I.						176	176	177			175	173											176	
Delhi, India										176														
Kodaikanal, India										175														
Madras, India										175														
Sao Paulo, Brazil										176	174	174												
Tiruchy, India										175														

	1953												1952									
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	D
Campbell I.	180			180							176		181			181				177		181	180	180
Leopoldville, Belgian Congo	176													176		177	179		177	177		175		177

	1951																					
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	D
Campbell I.											181	181												

CRPL Reports

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

Daily:

Radio disturbance forecasts, every half hour from broadcast stations WWV and WWVH of the National Bureau of Standards.

Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

Semiweekly:

CRPL—J. North Atlantic Radio Propagation Forecast (of days most likely to be disturbed during following month).

CRPL—Jp. North Pacific Radio Propagation Forecast (of days most likely to be disturbed during following month).

Semimonthly:

CRPL—Ja. Semimonthly Frequency Revision Factors For CRPL Basic Radio Propagation Prediction Reports.

Monthly:

CRPL—D Basic Radio Propagation Predictions—Three months in advance. (Dept. of the Army, TB 11—499–, monthly supplements to TM 11–499; Dept. of the Air Force, TO 31–3–28 series). On sale by Superintendent of Documents.* Members of the Armed Forces should address cognizant military office.

CRPL—F. (Part A). Ionospheric Data.
(Part B). Solar-Geophysical Data.
Limited distribution. These publications are in general disseminated only to those individuals or scientific organizations which collaborate in the exchange of ionospheric, solar, geomagnetic, or other radio propagation data.

Catalog of Data:

A catalog of records and data on file at the U. S. IGY World Data Center A for Airglow and Ionosphere, Boulder Laboratories, National Bureau of Standards, which includes a fee schedule to cover the cost of supplying copies, is available upon request.

The publications listed above may be obtained without charge from the Central Radio Propagation Laboratory, National Bureau of Standards, Boulder Laboratories, Boulder, Colorado, unless otherwise indicated. Please note that the F series is not generally available.

Circulars of the National Bureau of Standards pertaining to Radio Sky Wave Transmission:

NBS Circular 462. Ionospheric Radio Propagation. $1.25.
NBS Circular 465. Instructions for the Use of Basic Radio Propagation Predictions. 30 cents.
NBS Circular 557. Worldwide Radio Noise Levels Expected in the Frequency Band 10 Kilocycles to 100 Megacycles. 30 cents.
NBS Circular 582. Worldwide Occurrence of Sporadic *E*. $3.25.

These Circulars are on sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Members of the Armed Forces should address the respective military office having cognizance of radio wave propagation.

* For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D. C. Price 15 cents (single copy). Subscription price: $1.50 a year; 50 cents additional for foreign mailing.