PART A

IONOSPHERIC DATA

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NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

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PART A

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
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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 numerical 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 CRPL-F188, Part A, issued April 1960, the count is given for foF2 in the tables of medians. It is regretted that space limitations prevent including detailed counts for other characteristics.

To indicate further in a general manner the relative reliability of the data, for the F2 layer, h'F or foEs, if the count is from five to nine, or, for all layers, if more than half of the data used to compute the medians are doubtful (either doubtful or interpolated), the median is enclosed in parentheses. Medians are computed for less than five values for foF2 only.

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.

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

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.

The latest available information follows concerning the smoothed observed Zürich numbers beginning with the minimum of April 1954. Final numbers are listed through June 1959.

Smoothed 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	185	184	182	181	180
1959	179	177	174	169	165	161	156	151	145	140	136	132
1960	128	124	120									

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:

Republica Argentina, Ministerio de Marina:
Buenos Aires, Argentina
Trelew, Argentina
Tucuman, Argentina

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

University of Graz:
Graz, Austria

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

Escola Politecnica, University of Sao Paulo:
Sao Paulo, Brazil

British Department of Scientific and Industrial Research, Radio Research Board:
Falkland Is.
Inverness, Scotland
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Alert, Canada
Clyde River, Canada
Eureka, Canada
Meanook, Canada
Yellowknife, Canada

Universidad de Concepcion:
Concepcion, Chile

Radio Wave Research Laboratories, National Taiwan University, Taipeh, Formosa, China:
Formosa, China

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

The Finnish Academy of Sciences and Letters:
Sodankyla, Finland

French National Center for Telecommunications Studies:
Bangui, French Equatorial Africa
Dakar, French West Africa
Djibouti, French Somaliland
Poitiers, France
Tahiti, Society Is.
Tananarive, Madagascar

Heinrich Hertz Institute, German Academy of Sciences, Berlin:
Juliusruh/Rügen, Germany

Institute for Ionospheric Research, Lindau Uber Northeim, Hannover, Germany:
Lindau/Harz, Germany
Tsumeb, South West Africa

The Royal Netherlands Meteorological Institute:
De Bilt, Holland
Hollandia, Netherlands New Guinea
Paramaribo, Surinam

Geophysical and Geodetic Institute, Genoa, Italy:
Genoa (Monte Capellino), Italy

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

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

General Directorate of Telecommunications, Mexico:
El Cerillo, Mexico

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

Telecommunication Administration, Oslo, Norway:
Svalbard, Norway

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

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

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
Lulea, Sweden

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

United States Army Signal Corps:
Thule, Greenland

National Bureau of Standards (Central Radio Propagation Laboratory):
Boulder, Colorado
Byrd Station, Antarctica
Fairbanks (College), Alaska (Geophysical Institute of the University of Alaska)
Huancayo, Peru (Instituto Geofisico de Huancayo)
Talara, Peru (Instituto Geofisico de Huancayo)
Washington, D. C.

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 704 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.
SCAT	Kilometers	One half of the half-thickness of the parabola best fitting the upper portion of the F region profile. Approximates the scale height near the level HMAX.
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.

Tabulations of the average electron densities each hour, at each 10 km level, for the quiet ionosphere, are also given. These averages include the profiles obtained when the magnetic character figure Kp is less than 4+. The number of profiles entering the average for each hour is given by CNT. The other parameters of the layer, HMIN, SCAT, HMAX, SHMAX, are averaged in a similar way.

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 average estimated integrated electron densities to infinity, SHINF (same units as SHMAX); this is an approximation to the total electron content in a column of the ionosphere.

*See Wright, J.W. "A Model of the F-Region Above HMAX F2" J.Geophys.Res. V.65 pp 185-191.

ELECTRON DENSITY

PUERTO RICO 60 W 1 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A	A	A		A	A	A	A	A	A
HMIN			256	230		237						
SCAT			65.5	75.4		62.3						
HMAXF			426	412		379						
SHMAX			862	934		518						
KM												
430			939									
420			937	928								
410			925	928								
400			902	922								
390			868	907								
380			823	885		608						
370			768	852		605						
360			703	813		594						
350			626	768		576						
340			535	716		549						
330			441	643		516						
320			342	559		473						
310			247	465		421						
300			170	362		362						
290			116	262		296						
280			77.9	184		231						
270			49.6	130		167						
260			17.4	90.4		103						
250				61.7		60.0						
240				41.1		19.0						

ELECTRON DENSITY

PUERTO RICO 60 W 1 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A		A	A	A	A	A	A	A	A
HMIN		109	109	109	109	109	186					228
SCAT		56.0	59.7	72.2	65.1	80.4	60.4					49.4
HMAXF		334	317	337	319	361	355					349
SHMAX		1628	1476	1516	1237	1351	982					897
KM												
370						1072						
360						1072	1131					
350						1068	1129					1341
340		1669		1316		1056	1114					1330
330		1667		1312		1033	1083					1291
320		1643	1514	1296	1167	1004	1036					1222
310		1593	1509	1268	1161	965	974					1132
300		1512	1483	1225	1141	930	897					1004
290		1412	1434	1173	1108	863	808					834
280		1282	1371	1113	1063	794	706					643
270		1110	1282	1025	1004	724	588					446
260		940	1166	917	922	648	467					262
250		773	1024	802	825	573	350					143
240		628	864	692	716	496	247					71.4
230		524	697	594	613	428	172					30.7
220		451	560	512	516	371	116					
210		401	458	446	440	322	77.6					
200		363	397	395	383	281	49.6					
190		336	362	353	342	244	17.2					
180		312	341	319	310	210						
170		290	310	291	278	179						
160		268	273	269	249	156						
150		248	238	235	221	139						
140		229	212	194	190	127						
130		214	195	176	165	122						
120		204	184	166	152	116						
110		71.4	71.4	83.8	83.8	71.4						

ELECTRON DENSITY

PUERTO RICO 60 W 2 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A		A			A	A	A				A
HMIN	237	221	217	224	218	208	238	109	108	110	110	110
SCAT	36.7	51.0	54.6	60.9	44.1	43.7	42.8	48.6	62.4	127	83.7	81.9
HMAXF	343	346	337	354	330	313	316	275	283	374	358	377
SHMAX	631	741	656	651	426	371	362	685	849	1626	1551	1880
KM												
380										960		1316
370										960		1313
360				814						957	1096	1302
350	1167	1072		813						952	1093	1280
340	1165	1069	906	803	679					943	1083	1249
330	1130	1045	903	783	679					932	1066	1204
320	1050	1001	885	751	670	625	688			917	1038	1158
310	930	937	852	712	643	624	684			898	1004	1096
300	783	851	802	657	598	610	663			878	960	1025
290	608	747	739	581	540	580	624		928	855	917	949
280	417	608	657	495	468	534	566	949	927	831	867	875
270	240	446	558	397	378	470	477	947	917	799	814	800
260	127	271	446	292	278	381	335	926	895	763	760	729
250	68.0	161	294	185	179	275	143	885	860	725	706	664
240	19.9	92.6	161	104	103	173	28.2	827	816	684	651	608
230		49.6	79.6	47.4	58.0	97.2		739	759	643	595	554
220			30.0		12.4	55.6		608	684	591	540	508
210						12.4		446	586	529	484	468
200								310	468	463	434	430
190								237	362	398	389	394
180								192	293	346	350	362
170								159	247	304	314	333
160								133	210	268	279	305
150								112	175	224	244	274
140								97.2	143	179	211	240
130								90.6	125	157	192	203
120								83.8	117	147	179	182
110								40.2	83.8	49.6	49.6	49.6

ELECTRON DENSITY

PUERTO RICO 60 W 2 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL					A	A	A	A	A	A	A	
HMIN	110	109	110	110						210	261	228
SCAT	68.4	71.3	64.7	65.2						95.2	52.8	62.6
HMAXF	360	360	350	349						375	385	375
SHMAX	1939	2195	2012	2054						1230	1137	1429
KM												
390											1612	
380										1569	1608	1727
370	1626	1876								1566	1580	1724
360	1626	1876	1846							1539	1523	1701
350	1616	1866	1846	1907						1487	1435	1657
340	1580	1838	1834	1898						1406	1322	1590
330	1543	1792	1800	1868						1305	1176	1497
320	1480	1727	1745	1814						1176	986	1386
310	1405	1641	1669	1733						1020	754	1257
300	1309	1541	1571	1636						834	524	1108
290	1190	1420	1446	1517						620	286	901
280	1060	1283	1300	1376						430	138	643
270	925	1150	1121	1217						310	60.0	389
260	801	987	950	1050						213		219
250	693	834	805	875						143		120
240	604	697	679	725						97.2		63.3
230	534	587	579	596						64.0		12.4
220	480	504	499	501						41.9		
210	440	446	442	435								
200	410	403	401	391								
190	386	370	371	359								
180	362	342	347	333								
170	339	317	327	308								
160	317	292	307	283								
150	291	262	280	258								
140	260	228	246	229								
130	225	197	215	202								
120	200	185	193	182								
110	49.6	112	12.4	49.6								

ELECTRON DENSITY

PUERTO RICO 60 W 3 JUNE 1960

TIME	0000	0100	[illegible]	[illegible]	0400	0500	0600	0700	[illegible]	0900	1000	1100
QUAL	A	A	A	A	A					A	A	
HMIN	222	219	206	209	224	228	240	109	10[illegible]	109		109
SCAT	46.[illegible]	53.[illegible]	47.7	67.1	54.8	54.8	38.9	40.6	53.4	59.4		78.7
HMAXF	337	334	314	350	350	342	307	269	275	302		352
SHMAX	1043	1143	787	796	595	528	399	710	742	932		1648
KM												
360				906	824							1240
350				906	824	764						1240
340	1640	1683		902	817	764						1232
330	1631	1681		887	796	756						1215
320	1588	1657	1240	862	762	734						1187
310	1507	1603	1238	827	716	700	844			949		1150
300	1393	1522	1213	782	65[illegible]	656	838			949		1101
290	1240	1428	1160	727	573	592	805			940		1044
280	1034	1273	1083	658	461	497	747		906	918		979
270	794	1050	971	573	335	389	653	1096	905	882		908
260	508	754	834	477	219	254	508	1083	889	834		834
250	262	417	658	362	122	127	362	1037	858	770		760
240	121	198	446	253	71.4	60.0	13.4	960	812	690		686
230	53.8	83.8	228	143	35.9	12.4		845	749	603		616
220		17.4	104	71.4				695	662	515		552
210			40.2	17.4				529	554	446		494
200								362	446	389		444
190								248	344	342		403
180								198	277	300		370
170								171	229	262		339
160								148	187	219		307
150								125	150	156		275
140								104	127	133		233
130								91.7	111	123		187
120								81.7	103	116		169
110								12.4	83.8	71.4		83.8

ELECTRON DENSITY

PUERTO RICO 60 W 3 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A		A	A		A	A	A	A	S	A
HMIN	110	107	108			109		216	223	194	259	251
SCAT	90.0	59.8	60.1			62.6		68.4	63.6	60.9	55.8	56.2
HMAXF	385	362	349			355		389	372	362	391	384
SHMAX	1973	1717	1882			1922		1867	1748	1580	1273	1418
KM												
400											1669	
390	1341							2000			1668	1907
380	1340							1991	2063		1651	1904
370	1332	1528						1960	2063	1876	1607	1876
360	1316	1527				1861		1908	2046	1875	1537	1818
350	1291	1511	1786			1858		1835	2003	1857	1439	1724
340	1259	1474	1775			1834		1736	1935	1814	1317	1609
330	1215	1411	1739			1786		1619	1836	1745	1163	1462
320	1166	1341	1678			1715		1485	1718	1650	989	1272
310	1111	1246	1589			1615		1329	1576	1534	794	1034
300	1044	1114	1478			1497		1129	1401	1388	573	754
290	966	988	1348			1358		917	1184	1214	335	446
280	883	862	1200			1207		679	917	1021	179	240
270	794	745	1050			1060		477	658	794	76.0	119
260	716	649	875			897		322	417	540	12.4	60.0
250	639	557	716			737		198	219	335		
240	573	496	591			608		115	107	219		
230	517	452	499			490		66.3	49.6	143		
220	473	421	442			406		26.8		94.6		
210	440	396	405			345				60.0		
200	414	372	380			301				32.8		
190	391	347	362			267						
180	367	318	341			240						
170	338	286	317			213						
160	307	233	286			187						
150	267	198	253			161						
140	225	182	221			140						
130	179	174	200			126						
120	166	167	188			117						
110	40.2	151	143			71.4						

ELECTRON DENSITY

PUERTO RICO 60 W 4 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL						S				A	A	A
HMIN	250	233	266	207	239	247	215	109	109			
SCAT	49.5	41.4	58.4	54.1	50.2	57.3	63.1	55.1	59.2			
HMAXF	364	326	389	354	338	389	374	305	301			
SHMAX	1165	977	970	827	681	680	844	847	911			
KM												
390			1290			834						
380			1283			829	960					
370	1756		1257			812	959					
360	1753		1213	1119		779	948					
350	1720		1149	1117		735	925					
340	1651		1068	1100	1061	683	888					
330	1546	1801	960	1064	1054	622	842					
320	1410	1791	809	1004	1027	546	782					
310	1230	1734	643	933	976	461	701	939	1050			
300	1016	1621	446	834	907	372	608	937	1049			
290	736	1467	262	707	819	280	519	921	1041			
280	446	1240	119	558	697	188	426	885	1017			
270	198	917	42.8	389	540	112	327	840	979			
260	78.4	540		240	336	62.6	240	782	929			
250		240		161	127	19.6	161	708	861			
240		71.4		112	12.4		97.7	625	736			
230				75.3			62.1	535	573			
220				47.1			30.7	440	417			
210				12.4				356	331			
200								294	282			
190								251	253			
180								212	226			
170								173	190			
160								127	157			
150								106	132			
140								88.4	117			
130								79.7	108			
120								74.0	102			
110								49.6	71.4			

ELECTRON DENSITY

PUERTO RICO 60 W 4 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A			A	A	A	A	A	A	A	A	
HMIN		109	107		109			228	253	283	273	282
SCAT		90.5	57.8		69.7			55.1	71.2	54.6	53.5	45.6
HMAXF		381	328		340			358	424	431	407	408
SHMAX		1916	1286		1104			820	1090	918	1049	894
KM												
440										1167		
430									1096	1167		
420									1095	1156		
410									1085	1125	1446	1367
400									1065	1074	1440	1356
390		1341							1034	1004	1410	1314
380		1341							990	917	1355	1240
370		1336							936	817	1271	1126
360		1322						1119	875	699	1168	994
350		1301			896			1113	806	573	1036	834
340		1271			896			1088	725	438	861	643
330		1232	1191		891			1045	634	302	664	446
320		1187	1185		877			981	540	192	446	286
310		1143	1161		853			905	437	118	286	156
300		1072	1116		820			801	330	71.4	151	83.8
290		986	1057		779			664	219	40.2	83.8	45.8
280		887	983		728			508	136		44.2	
270		788	899		668			344	77.9			
260		686	803		601			198	41.9			
250		597	705		532			112				
240		527	608		470			60.0				
230		472	528		422			12.4				
220		432	461		385							
210		404	411		357							
200		383	375		335							
190		365	347		315							
180		341	326		289							
170		316	307		262							
160		293	271		230							
150		267	232		198							
140		232	207		175							
130		198	193		158							
120		185	183		148							
110		127	127		83.8							

ELECTRON DENSITY

PUERTO RICO 60 W 5 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A						A	A	A	A	A
HMIN	272	248	219	203	250	284		108	104	109		
SCAT	58.6	46.4	48.	58.1	61.3	5.6		46.1	56.1	86.4		
HMAXF	415	358	336	350	368	438		461	354	390		
SHMAX	1110	1015	739	984	736	614		1363	955	1025		
KM												
470								854				
460								854				
450								852				
440							764	844				
430							760	831				
420	1420						737	813				
410	1417						705	794				
400	1395						662	766		652		
390	1353						608	734		652		
380	1285						547	697		649		
370	1203			1290	1050	477		656		643		
360	1096	1669		1290	1044	400		613	875	628		
350	960	1656		1281	1018	323		566	871	613		
340	794	1606	1050	1253	971	240		515	853	594		
330	608	1516	1046	1204	907	171		462	819	572		
320	417	1397	1023	1150	821	119		410	776	543		
310	262	1219	971	1050	717	81.6		362	716	508		
300	156	960	903	917	573	53.7		319	643	472		
290	83.8	679	823	754	430	36.0		281	560	435		
280	46.1	363	735	608	271			251	485	390		
270		179	636	446	143			227	405	364		
260		78.5	520	286	67.1			208	340	334		
250		21.7	375	161				194	280	303		
240			198	83.8				183	234	282		
230			79.1	44.7				176	237	280		
220			12.4					171	226	271		
210								165	217	262		
200								160	211	253		
190								151	205	244		
180								140	200	233		
170								124	187	219		
160								109	172	184		
150								97.3	156	154		
140								86.8	140	135		
130								79.7	126	124		
120								73.9	118	117		
110								60.0	102	97.3		

ELECTRON DENSITY

PUERTO RICO 60 W 5 JUNE 1960

TIME	1200	1300	1400	1500	160	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	113		109	103	110							
SCAT	88.3		42.7	53.5	70.2							
HMAXF	315		350	317	331							
SHMAX	688		821	697	830							
KM												
430												
420												
410												
400												
390												
380												
370												
360			508									
350			508									
340			506									
330			500									
320		46	491	565	508							
310		46	478	561	505							
300		46.	458	551	497							
290		460	437	534	484							
280		451	413	509	464							
270		43.	389	477	440							
260		417	366	438	415							
250		398	346	396	380							
240		379	329	359	347							
230		36	317	327	316							
220		346	308	305	289							
210		333	302	290	269							
200		327	297	28	253							
190		330	292	274	238							
180		313	287	267	222							
170		300	274	254	205							
160		280	256	236	186							
150		247	231	213	165							
140		214	209	188	144							
130		195	194	165	127							
120		189	183	151	118							
110			93.8	83.4	40.3							

ELECTRON DENSITY

PUERTO RICO 60 W 6 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	S					A	A	A	A	A	A	A
HMIN	211	231	254	218	205	186	186					
SCAT	51.7	63.1	57.0	48.1	59.5	64.1	65.0					
HMAXF	366	385	389	340	318	350	351					
SHMAX	594	543	534	456	455	349	389					
KM												
390		616	670									
380		615	666									
370	774	608	652									
360	771	590	626				375	424				
350	754	571	593	679			375	424				
340	721	540	547	679			373	421				
330	679	497	495	671			366	413				
320	621	446	432	649	599	353	400					
310	540	389	358	613	596	338	388					
300	454	331	286	561	586	318	364					
290	367	271	206	488	565	293	331					
280	286	210	131	402	537	264	292					
270	219	143	71.4	310	501	230	249					
260	161	97.2	40.3	219	458	196	207					
250	114	62.3		143	402	161	168					
240	81.2	40.3		87.2	330	127	130					
230	56.6			52.9	240	100	100					
220	36.8			12.4	127	76.8	75.7					
210					49.6	57.3	56.5					
200						42.4	42.0					
190						12.4	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 6 JUNE 1960

TIME	1200	1300	1400	1500	160	1700	1800	1900	2000	2100	2200	2300
QUAL			A	A	A	A	A		A	A	A	A
HMIN								238	147	246	277	279
SCAT								63.6	68.3	70.2	58.2	55.6
HMAXF								347	382	411	403	417
SHMAX								746	789	854	635	876
KM												
420										906		1191
410										906	844	1187
400										901	838	1164
390									794	887	812	1121
380									793	860	775	1061
370									787	827	726	978
360									773	787	663	863
350								982	749	736	587	716
340								979	716	671	500	557
330								964	677	592	409	375
320								935	630	508	310	240
310								898	576	408	206	148
300								846	516	310	122	85.9
290								776	451	219	66.8	52.1
280								679	380	143	19.3	6.3
270								561	310	93.0		
260								401	240	57.8		
250								179	179	23.7		
240								30.0	133			
230									94.9			
220									66.6			
210									45.9			
200									12.4			

ELECTRON DENSITY

PUERTO RICO 60 W 7 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A	A	A	A		A	A	A	A	A
HMIN	292	238	213	216	213	216	254					
SCAT	54.6	53.3	57.8	70.6	65.3	64.5	72.9					
HMAXF	404	364	361	361	347	360	379					
SHMAX	821	780	770	797	526	466	470					
KM												
410	1143											
400	1141											
390	1124											
380	1086						532					
370	1031	1094	960	875		532	530					
360	960	1092	960	875		532	523					
350	868	1071	952	862	625	529	512					
340	760	1031	930	845	623	519	493					
330	627	977	891	831	615	503	473					
320	446	880	842	797	596	482	448					
310	198	771	778	757	573	454	414					
300	71.4	643	702	703	545	417	368					
290		491	608	648	508	371	310					
280		320	491	573	459	319	240					
270		198	362	477	396	262	143					
260		112	251	375	324	206	55.3					
250		60.0	161	262	240	147						
240		12.4	103	150	150	93.0						
230			64.4	80.2	83.9	60.0						
220			40.2	40.2	43.5	24.1						

ELECTRON DENSITY

PUERTO RICO 60 W 7 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	S				A	A	A		S	S
HMIN				109	106	110		229	229	255	246	248
SCAT				48.8	65.2	69.2		71.7	51.4	57.2	69.6	68.3
HMAXF				348	361	350		364	374	404	400	399
SHMAX				1907	2148	2126		1388	981	1064	1229	1183
KM												
410										1341	1393	
400										1339	1393	1341
390										1320	1386	1335
380									1155	1281	1365	1316
370					1922			1555	1153	1218	1328	1281
360					1922	2032		1554	1127	1143	1280	1231
350				1922	1907	2032		1541	1081	1039	1227	1169
340				1909	1852	2021		1512	1023	909	1143	1096
330				1829	1797	1989		1468	960	754	1025	992
320				1734	1714	1936		1410	881	608	875	854
310				1617	1615	1857		1349	794	446	693	702
300				1480	1498	1766		1253	706	298	527	540
290				1330	1361	1657		1143	608	185	362	362
280				1183	1205	1506		993	508	112	219	219
270				1028	1050	1341		805	407	67.1	123	123
260				875	899	1115		573	310	32.2	67.6	63.5
250				735	754	917		310	219		26.8	12.4
240				624	630	737		112	117			
230				540	531	581		12.4	12.4			
220				477	458	461						
210				439	405	380						
200				409	368	325						
190				380	340	288						
180				350	318	259						
170				319	296	233						
160				289	274	208						
150				259	249	185						
140				227	219	165						
130				200	196	145						
120				185	184	132						
110				83.8	143	40.2						

ELECTRON DENSITY

PUERTO RICO 60 W 8 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S		A		A
HMIN	260	231	279	233	220	200	208	110	102	109	109	109
SCAT	59.8	47.3	53.7	51.1	49.6	39.0	58.6	88.1	72.2	62.2	71.4	83.8
HMAXF	384	352	407	373	332	285	310	327	327	315	319	372
SHMAX	997	721	745	783	762	529	378	743	1042	1227	1212	1601
KM												
410			1004									
400			1000									
390	1303		980									
380	1301		940	1050								1038
370	1284		886	1049								1038
360	1248	1096	813	1033								1033
350	1191	1096	716	996								1021
340	1128	1074	608	940	1167							1000
330	1030	1035	485	866	1166			582	917			968
320	907	971	370	779	1150		524	581	915	1215	1084	932
310	742	875	247	679	1109		524	576	905	1213	1079	893
300	553	754	136	560	1050		520	566	886	1198	1064	852
290	372	620	71.4	439	953	1084	508	554	857	1166	1038	809
280	198	477	12.4	310	834	1080	488	541	822	1118	1004	764
270	78.1	318		198	679	1044	462	521	776	1057	957	719
260		160		115	492	976	426	498	716	974	894	675
250		87.5		71.4	310	862	380	469	649	862	816	631
240		47.1		40.2	161	679	317	436	573	736	723	591
230					71.4	417	234	401	501	608	619	552
220						198	143	362	437	508	523	515
210						71.4	28.2	324	383	429	446	479
200								286	338	377	394	444
190								246	301	339	358	409
180								207	268	310	330	375
170								170	238	284	303	342
160								139	211	258	269	310
150								118	185	230	222	278
140								103	161	201	191	236
130								92.9	143	175	176	206
120								85.8	132	153	167	188
110								12.4	83.8	112	143	127

ELECTRON DENSITY

PUERTO RICO 60 W 8 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL						A	A		A	A		
HMIN	110	109	110	109	10-		110	229	198	228	262	248
SCAT	86.0	78.8	75.3	78.7	73.7		71.2	67.9	84.9	60.6	59.7	61.7
HMAXF	376	366	370	368	357		386	370	407	394	420	386
SHMAX	1834	1792	1779	1871	1571		1641	1421	1414	963	1013	1066
KM												
430											1215	
420											1215	
410									1191		1208	
400									1189	1084	1183	
390							1473		1180	1083	1143	1354
380	1290		1341				1471	1583	1162	1069	1085	1351
370	1288	1316	1341	1460			1455	1583	1135	1039	1004	1327
360	1279	1313	1335	1456	1290		1417	1574	1100	996	904	1288
350	1260	1301	1317	1437	1287		1371	1543	1058	939	794	1249
340	1231	1279	1287	1403	1273		1318	1495	1008	867	666	1177
330	1192	1245	1245	1369	1247		1251	1446	947	783	533	1076
320	1152	1196	1188	1330	1205		1159	1365	875	690	389	938
310	1101	1146	1126	1259	1160		1057	1268	800	595	271	754
300	1036	1082	1050	1185	1100		938	1155	716	493	173	585
290	960	1004	960	1096	1020		812	1022	627	389	112	389
280	875	924	857	991	923		686	875	540	286	71.4	227
270	780	838	754	875	814		554	701	452	204	42.6	127
260	689	754	664	764	707		446	508	367	134		62.8
250	608	671	583	652	608		355	276	286	83.8		12.4
240	540	597	516	557	518		293	112	214	52.1		
230	491	537	467	483	450		250	12.4	143	12.4		
220	453	489	434	430	399		220		90.5			
210	426	452	411	393	362		198		54.6			
200	407	423	395	366	334		177		12.4			
190	391	394	380	346	315		157					
180	374	366	365	328	299		136					
170	351	340	346	313	283		117					
160	315	318	321	289	262		102					
150	275	295	292	259	237		91.4					
140	240	262	262	227	211		83.1					
130	217	218	227	201	187		78.8					
120	204	205	208	188	170		74.4					
110	60.0	143	97.2	127	127		12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 9 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A										
HMIN	258	230	218	240	220	248	259	108	108	107	110	114
SCAT	61.0	53.1	44.7	71.3	63.6	57.5	45.4	53.5	76.4	88.5	83.7	72.0
HMAXF	415	366	323	374	373	381	331	275	330	349	345	336
SHMAX	893	896	682	718	701	664	484	581	794	917	919	917
KM												
420	1027											
410	1025											
400	1011											
390	981					854						
380	941			814	794	854						
370	888	1215		813	793	846						
360	820	1211		805	786	823						
350	739	1187		790	768	794				590	599	
340	648	1143		769	740	745	917		573	589	598	643
330	546	1075	1131	742	706	683	917		571	583	594	642
320	440	984	1130	698	657	608	903		565	574	585	635
310	335	864	1108	643	596	513	866		553	558	572	622
300	226	729	1058	573	527	404	811		535	542	553	602
290	140	586	981	487	446	295	725		511	521	532	573
280	87.6	432	875	389	372	198	588	745	484	498	506	540
270	53.3	286	732	286	293	118	362	743	455	472	478	508
260	12.4	170	573	167	214	60.0	49.6	790	426	446	449	477
250		97.2	362	71.4	149	12.4		703	396	421	417	446
240		49.6	179		83.4			666	367	396	392	420
230			78.3		49.6			613	340	375	370	398
220			23.0					527	316	357	352	380
210								410	298	343	337	363
200								296	282	327	328	354
190								219	268	309	320	346
180								179	251	286	313	338
170								154	229	259	300	322
160								131	204	234	283	299
150								113	179	216	259	268
140								98.6	154	188	227	224
130								91.7	138	164	190	196
120								85.5	128	152	170	180
110								60.0	104	132	49.6	

ELECTRON DENSITY

PUERTO RICO 60 W 9 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A		A	A	A	A	A		A
HMIN	110	107		110	109	109		239	132	258	282	268
SCAT	73.1	84.3		85.7	80.4	56.7		64.9	70.7	61.8	64.9	61.6
HMAXF	351	344		348	348	330		343	386	402	430	436
SHMAX	1114	1081		1021	945	814		567	644	564	578	673
KM												
440											652	745
430											652	743
420											648	732
410										652	633	710
400										652	612	679
390									650	646	586	639
380									651	628	553	591
370									643	602	513	540
360	674								626	577	461	477
350	674	707		688	643			764	608	538	399	417
340	675	706		687	641	647		764	582	490	335	341
330	665	701		680	635	637		756	549	435	262	257
320	644	690		667	623	620		737	511	376	198	187
310	624	675		652	601	595		718	468	310	127	131
300	594	654		635	583	566		683	417	240	77.1	92.5
290	560	633		610	557	508		633	365	174	44.5	64.3
280	524	601		578	526	563		563	314	112		43.9
270	488	564		540	493	513		464	262	60.0		8.3
260	455	525		498	457	461		370	219	12.4		
250	427	486		458	423	412		336	173			
240	402	450		422	391	369		12.4	133			
230	383	419		392	365	333			99.0			
220	367	394		368	344	305			71.4			
210	357	375		350	328	284			52.3			
200	351	360		335	314	268			30.8			
190	344	351		323	300	254						
180	337	345		311	286	242						
170	320	337		292	267	227						
160	294	323		268	248	210						
150	262	303		240	225	190						
140	226	276		214	201	173						
130	198	240		196	181	159						
120	186	210		185	168	148						
110	49.6	179		49.6	112	97.3						

ELECTRON DENSITY

PUERTO RICO 60 W 10 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A	A	A	A	A	A	A	A	A	A
HMIN	291	242	196	227	226	197	243					108
SCAT	53.3	52.7	49.7	60.0	63.9	67.4	54.6					89.8
HMAXF	397	356	339	351	387	368	358					385
SHMAX	558	630	498	466	586	544	448					1731
KM												
400	824											
390	820				661							1072
380	802				659							1072
370	769				649	565						1065
360	723	906		616	629	563	634					1051
350	659	903		616	604	555	630					1026
340	573	885	679	611	570	540	616					998
330	459	848	673	596	529	518	589					965
320	322	798	654	578	477	492	555					929
310	179	733	620	547	417	459	508					888
300	71.4	656	573	508	346	421	446					844
290		556	513	446	268	380	369					797
280		417	441	370	198	335	262					745
270		219	362	279	143	281	161					693
260		112	280	179	101	222	83.8					643
250		53.0	205	112	70.0	166	44.2					596
240			143	62.5	47.8	122						553
230			103	19.3	16.6	88.9						515
220			71.4			63.6						483
210			48.3			44.8						453
200			16.7			12.4						426
190												400
180												374
170												348
160												323
150												299
140												268
130												228
120												195
110												161

ELECTRON DENSITY

PUERTO RICO 60 W 10 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A	A	A	A	A	A	A	A	A
HMIN			109	109					246	228	242	218
SCAT			82.7	92.1					62.2	61.8	58.1	47.6
HMAXF			386	398					371	393	383	354
SHMAX			2192	2228					1212	1290	1268	1007
KM												
400				1528						1500		
390			1555	1525						1500	1626	
380			1553	1514					1528	1485	1624	
370			1541	1494					1528	1451	1604	
360			1516	1464					1516	1391	1559	1500
350			1481	1423					1485	1324	1488	1498
340			1433	1375					1432	1231	1401	1469
330			1375	1322					1362	1114	1282	1399
320			1309	1254					1272	960	1134	1308
310			1231	1180					1162	806	960	1180
300			1133	1096					1017	643	730	1019
290			1032	993					821	495	508	834
280			932	883					608	353	319	608
270			834	776					362	219	179	401
260			742	679					143	143	92.0	233
250			661	590					44.3	87.6	46.9	140
240			589	521						52.9		87.3
230			531	467						12.4		52.9
220			484	426								12.4
210			446	395								
200			419	370								
190			392	347								
180			366	324								
170			345	299								
160			321	270								
150			290	238								
140			254	210								
130			226	193								
120			208	183								
110			97.2	97.2								

ELECTRON DENSITY

PUERTO RICO 60 W 11 JUNE 1960

TIME	0000	0100	[illegible]	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A							A	A	A	A	
HMIN	256	248	237	211	213	226	249	109			109	109
SCAT	65.4	57.6	66.7	55.0	57.2	52.3	59.4	81.0			101	91.1
HMAXF	385	379	369	329	327	330	351	313			360	388
SHMAX	1224	1024	1097	778	682	581	539	901			1922	2229
KM												
390	1500											1500
380	1499	1341										1497
370	1482	1332	1341								1303	1485
360	1446	1303	1335				754				1303	1464
350	1389	1254	1315				754				1300	1429
340	1326	1183	1279			875	748				1290	1381
330	1240	1096	1228	1119	1016	875	731				1274	1332
320	1132	977	1169	1111	1011	867	702	824			1252	1273
310	978	834	1096	1083	990	843	665	823			1219	1212
300	794	667	960	1042	962	802	617	818			1182	1147
290	558	477	794	977	913	747	545	807			1143	1067
280	310	286	594	883	834	679	452	788			1096	984
270	127	150	378	754	701	573	336	764			1043	901
260	43.4	75.4	219	608	540	446	143	734			983	820
250		21.3	92.5	406	367	240	12.4	698			917	738
240			33.5	240	198	112		656			848	661
230				112	83.8	42.6		608			774	592
220				56.7	12.4			540			694	530
210								461			608	477
200								367			517	434
190								276			446	401
180								206			392	371
170								154			351	339
160								120			315	304
150								94.0			281	262
140								82.5			249	219
130								78.2			198	197
120								73.9			171	186
110								12.4			97.2	112

ELECTRON DENSITY

PUERTO RICO 60 W 11 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A	A		A	A	A	A		A
HMIN	110	109	109	110		110		207	238	219	248	258
SCAT	80.5	78.4	69.1	60.7		73.2		65.9	60.4	61.0	64.7	57.9
HMAXF	368	379	372	347		356		367	387	374	404	402
SHMAX	2153	2357	2319	2178		2007		1354	1238	1207	1319	1180
KM												
410											1528	1528
400											1527	1527
390									1500		1511	1512
380		1771	1937						1495	1446	1477	1474
370	1640	1765	1937					1514	1469	1445	1421	1409
360	1636	1744	1923			1756		1510	1418	1427	1355	1332
350	1620	1710	1882	2161		1753		1490	1355	1390	1265	1226
340	1591	1659	1826	2152		1735		1452	1268	1332	1158	1096
330	1548	1595	1760	2116		1700		1392	1160	1257	1025	917
320	1490	1520	1669	2050		1646		1325	1024	1163	852	716
310	1428	1425	1548	1954		1581		1233	875	1050	663	477
300	1350	1320	1410	1834		1499		1126	679	901	477	286
290	1256	1201	1260	1669		1398		995	517	742	299	172
280	1143	1078	1096	1483		1279		842	345	573	179	103
270	1038	960	960	1256		1130		679	208	375	107	57.9
260	924	844	823	1060		983		508	115	240	60.0	12.4
250	813	738	707	860		834		335	60.0	154	12.4	
240	704	650	616	702		703		198	12.4	91.9		
230	608	579	547	573		586		112		52.6		
220	527	526	495	482		489		62.4		6.3		
210	467	484	455	424		417		19.6				
200	423	451	422	383		362						
190	389	421	392	354		321						
180	362	391	362	332		286						
170	343	362	337	315		254						
160	324	329	314	295		225						
150	303	296	286	265		198						
140	268	262	256	224		171						
130	228	236	225	198		147						
120	205	209	206	184		133						
110	49.6	112	127	49.6		49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 12 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A	A	A	A	A	A	A	A	A	A
HMIN	243	207	240	219	239	211	213	108	109	110		110
SCAT	42.8	55.8	41.7	57.2	51.1	60.2	51.3	56.1	73.7	102		81.8
HMAXF	354	324	325	348	343	321	328	306	316	355		387
SHMAX	1047	1105	671	771	633	531	464	865	1204	1482		1895
KM												
390												1240
380												1238
370												1227
360	1786									971		1206
350	1782			1004	1004					971		1176
340	1737			1000	1004					966		1137
330	1640	1555	1240	980	989	697	679			957		1087
320	1500	1554	1235	943	955	697	675		1131	943		1031
310	1308	1532	1198	893	906	691	658	1004	1129	925		967
300	1064	1485	1125	829	828	675	628	1002	1118	900		903
290	754	1411	1017	742	706	650	587	985	1097	873		834
280	446	1321	863	643	540	615	529	951	1065	839		770
270	230	1197	663	519	362	573	446	909	1023	803		708
260	112	1032	417	396	179	514	362	834	971	765		652
250	49.6	834	143	262	77.4	440	262	736	906	727		602
240		508		143	12.4	344	161	621	822	688		560
230		240		68.4		240	89.7	508	716	648		526
220		106		12.4		112	44.9	402	597	608		497
210		40.2						320	477	569		474
200								262	383	516		456
190								215	315	446		438
180								175	273	367		417
170								146	240	305		386
160								128	207	262		349
150								96.5	174	224		310
140								83.8	148	186		267
130								79.5	130	162		228
120								75.0	119	150		205
110								62.3	97.2	49.6		40.2

ELECTRON DENSITY

PUERTO RICO 60 W 12 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		S				A	A				A
HMIN	108	108		109	109	110	110	224	228	234	245	251
SCAT	63.1	69.3		60.1	74.2	61.5	57.4	68.4	54.5	54.8	47.1	55.1
HMAXF	365	368		358	375	368	350	358	370	382	375	377
SHMAX	1903	2202		1971	2140	1891	1741	1424	1103	1213	1067	1126
KM												
390										1583		
380					1786				1446	1583	1612	1528
370	1612	1876			1784	1786			1446	1566	1607	1521
360	1604	1869		1786	1768	1779	1937	1626	1434	1522	1572	1491
350	1588	1843		1778	1736	1749	1937	1619	1398	1453	1492	1435
340	1545	1798		1745	1688	1696	1923	1596	1336	1357	1386	1354
330	1479	1733		1689	1617	1612	1879	1555	1245	1240	1240	1248
320	1399	1647		1598	1536	1511	1806	1490	1143	1087	1063	1117
310	1299	1544		1489	1446	1391	1697	1418	1012	917	846	939
300	1172	1418		1366	1333	1251	1571	1330	861	716	608	716
290	1050	1279		1234	1211	1115	1408	1216	690	508	417	523
280	928	1096		1113	1086	960	1221	1077	508	322	240	322
270	812	935		971	940	810	1050	917	320	191	131	179
260	707	794		834	794	669	834	716	198	116	74.5	71.4
250	616	672		716	666	554	643	477	112	69.6	34.0	
240	540	573		613	555	462	477	219	60.0	40.2		
230	487	503		529	470	398	357	60.0	12.4			
220	446	450		465	406	357	286					
210	415	412		417	359	327	240					
200	391	385		383	325	301	207					
190	372	364		354	298	274	179					
180	357	351		329	271	246	151					
170	344	339		307	240	215	125					
160	328	317		284	201	186	100					
150	302	286		253	178	158	82.0					
140	271	255		219	164	138	71.0					
130	230	227		198	155	124	67.0					
120	208	209		188	148	116	62.9					
110	161	161		143	112	49.6	12.4					

ELECTRON DENSITY

PUERTO PICO 60 W 13 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	
HMIN	249	229	227	216	236	246	250	110	108		109	109
SCAT	41.1	53.7	56.6	48.8	54.4	49.6	60.5	65.8	81.2		78.5	67.0
HMAXF	358	348	362	329	35	351	346	297	362		372	361
SHMAX	888	921	849	649	643	591	613	1006	1535		1939	1919
KM												
380											1420	
370			1096								1420	1583
360	1528		1095		917	917			1215		1412	1583
350	1512	1290	1082		916	917	960		1215		1393	1572
340	1452	1283	1052		903	905	957		1209		1362	1543
330	1348	1254	1004	1004	875	875	936		1193		1316	1497
320	1195	1203	943	997	830	826	896		1169		1262	1430
310	1004	1129	859	968	770	760	840		1135		1196	1341
300	778	1036	754	917	685	670	760	1084	1091		1123	1240
290	540	903	632	847	573	547	656	1081	1028		1045	1136
280	310	754	504	754	446	389	520	1067	977		960	1017
270	150	573	376	626	318	232	335	1039	910		882	902
260	69.1	389	240	477	185	97.2	112	999	841		804	796
250	12.4	209	127	299	90.6	40.2		947	773		728	703
240		83.8	68.4	154	40.2			882	705		657	621
230		12.4	20.3	75.0				801	638		591	553
220				27.5				706	573		530	500
210								584	512		477	457
200								446	464		427	422
190								310	399		387	392
180								234	341		352	365
170								188	280		322	339
160								152	225		295	312
150								125	186		271	284
140								106	152		240	257
130								94.5	129		194	227
120								87.2	119		169	192
110								12.4	97.2		71.4	143

ELECTRON DENSITY

PUERTO PICO 60 W 13 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A				A	A	A	A				
HMIN	111	109		109		109			239	233	249	249
SCAT	71.1	67.8		79.6		71.7			55.0	65.6	60.9	62.0
HMAXF	379	368		378		361			375	338	396	387
SHMAX	2286	2330		2357		2104			1174	1461	1332	1325
KM												
400										1626	1626	
390										1617	1622	1626
380	1876			1907					1555	1590	1599	1621
370	1875	2000		1901		1907			1555	1545	1554	1596
360	1860	1993		1880		1907			1528	1480	1487	1560
350	1826	1965		1842		1896			1477	1395	1397	1483
340	1773	1915		1787		1867			1401	1294	1289	1393
330	1702	1844		1716		1830			1297	1174	1155	1285
320	1612	1748		1628		1754			1171	1023	982	1154
310	1508	1635		1531		1669			1004	856	783	984
300	1378	1497		1405		1568			818	679	586	794
290	1240	1341		1263		1446			608	508	374	540
280	1104	1181		1118		1303			418	310	219	329
270	960	1014		960		1118			262	198	112	161
260	834	860		819		944			143	118	60.0	71.4
250	716	716		690		776			71.4	71.4	4.5	12.4
240	614	613		581		635			12.4	40.2		
230	536	537		497		523						
220	477	484		438		437						
210	438	446		396		373						
200	407	417		366		325						
190	382	391		344		286						
180	362	365		324		252						
170	338	340		305		219						
160	307	310		286		188						
150	271	296		255		161						
140	236	267		215		145						
130	208	235		193		137						
120	186	206		181		129						
110		97.2		83.8		97.2						

ELECTRON DENSITY

PUERTO PICO 60 W 14 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL			A		A		S	A		A		S
HMIN	231	226	216	210	219	289	208	109	106	108	108	108
SCAT	49.0	52.1	50.0	60.3	57.7	56.9	65.1	48.1	59.6	56.5	95.3	105
HMAXF	364	348	325	329	384	419	385	302	299	299	378	409
SHMAX	1075	899	803	610	548	529	781	949	1153	945	1505	1931
KM												
420						688						
410						684						1131
400						669						1129
390					643	643	844					1121
380					642	610	843				949	1109
370	1569				634	561	833				948	1092
360	1566				616	497	813				941	1069
350	1536	1252			586	423	781				929	1040
340	1473	1245			550	342	740				912	1007
330	1376	1214	1215	794	503	251	692				890	970
320	1251	1161	1213	790	446	161	637				862	927
310	1086	1085	1189	775	383	97.2	573	1240			831	875
300	893	984	1143	749	317	53.1	491	1239	1265	1027	794	818
290	679	865	1069	716	254	6.3	396	1219	1258	1020	748	754
280	446	724	970	667	194		302	1172	1234	997	701	695
270	262	573	848	602	146		227	1100	1192	957	651	634
260	143	389	698	520	108		165	998	1132	905	601	573
250	83.8	219	508	417	79.5		120	865	1056	826	554	518
240	47.9	103	262	299	57.1		87.8	705	960	716	511	468
230		40.2	127	185	40.2		62.5	557	834	597	474	422
220			44.3	83.8	5.2		43.6	417	701	485	441	394
210							8.3	310	540	406	412	383
200								240	417	355	383	375
190								198	335	321	355	368
180								165	278	292	328	358
170								135	240	262	304	339
160								110	207	219	282	312
150								94.3	179	177	259	286
140								83.8	155	155	224	257
130								79.1	135	142	187	219
120								74.6	122	135	171	193
110								49.6	113	128	143	170

ELECTRON DENSITY

PUERTO PICO 60 W 14 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A			S		S		A	J	A	A	A
HMIN		109		109	109	110	110	239	198			260
SCAT		64.4		82.0	83.4	81.2	78.1	57.4	60.5			63.4
HMAXF		345		355	368	375	391	361	379			416
SHMAX		1730		1306	1304	1283	1305	868	876			651
KM												
420												735
410												734
400							1027					724
390							1027					702
380						939	1021		917			674
370					917	938	1008	1191	912			638
360				949	914	930	981	1191	894			593
350		1555		949	905	916	951	1181	861			540
340		1548		942	896	894	917	1153	815			477
330		1522		928	864	864	868	1108	764			401
320		1478		907	834	827	811	1044	706			325
310		1415		878	79	787	744	960	643			247
300		1347		845	759	736	672	834	573			171
290		1252		804	716	679	599	695	498			112
280		1117		754	663	616	526	508	426			71.4
270		974		690	603	552	455	286	357			45.8
260		834		625	556	489	389	143	290			
250		690		561	503	433	335	71.4	227			
240		573		501	453	384	294	12.4	166			
230		491		446	410	344	260		116			
220		431		405	373	312	234		77.2			
210		391		375	343	287	212		49.6			
200		365		352	315	268	192		12.4			
190		351		333	292	251	171					
180		339		316	269	235	151					
170		322		298	247	218	131					
160		298		278	224	197	112					
150		267		251	197	176	94.1					
140		228		219	174	155	83.2					
130		210		195	158	139	78.8					
120		195		180	148	129	74.3					
110		83.8		49.6	97.2	49.6	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 15 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A					A				A	A	
HMIN	222	256	227	220	227	206	196	108	108	109		108
SCAT	59.4	51.3	43.0	51.1	62.4	61.0	71.4	70.4	86.0	69.4		79.7
HMAXF	402	365	320	329	355	372	384	316	355	323		365
SHMAX	615	488	387	332	319	294	356	738	1425	1344		1659
KM												
410	697											
400	697											
390	691						329					
380	674					323	329					
370	648	726				322	326					1215
360	612	724			389	320	320		1050			1214
350	566	710			388	312	311		1049			1205
340	508	682			383	301	297		1042			1186
330	440	643	688	492	373	285	283		1027	1240		1157
320	369	584	688	488	358	265	264	697	1006	1239		1117
310	298	508	679	475	339	240	241	696	978	1229		1071
300	233	417	651	452	314	211	219	689	941	1206		1014
290	174	303	608	421	284	181	196	674	899	1169		950
280	140	179	540	378	245	151	173	653	849	1123		880
270	108	83.8	446	320	198	123	151	623	794	1065		803
260	82.6	40.	318	247	143	98.	130	589	736	982		716
250	62.6		179	171	97.2	79.1	109	545	679	888		637
240	46.8		83.8	97.2	57.1	62.8	97.7	491	619	781		562
230	24.9		30.0	53.0	18.7	49.6	68.1	431	557	669		497
220						36.2	52.6	366	493	561		446
210						9.8	40.2	302	431	468		409
200							12.4	248	375	397		380
190								207	332	344		357
180								172	298	306		339
170								142	262	273		321
160								117	223	240		303
150								97.2	191	208		284
140								86.6	152	170		254
130								80.3	127	146		216
120								75.7	119	135		189
110								66.7	103	97.2		143

ELECTRON DENSITY

RUERTO RICO 60 W 15 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A			A		A	A					
HMIN		110	110		109	109	108	230	218	238	248	278
SCAT		87.4	70.4		69.8	70.8	55.7	70.3	71.5	61.8	66.1	50.9
HMAXF		364	369		367	360	323	368	374	397	414	407
SHMAX		2098	1863		1854	1826	1357	1166	1027	869	894	685
KM												
420											993	
410											992	960
400										1004	982	956
390										1002	960	935
380									1072	986	925	892
370		1583	1514		1612	1669		1328	1071	958	883	834
360		1583	1508		1608	1669		1324	1061	917	824	754
350		1574	1486		1588	1660		1307	1041	861	749	662
340		1554	1446		1550	1636		1276	1010	794	659	551
330		1525	1387		1493	1594	1597	1230	967	709	559	433
320		1485	1320		1432	1533	1596	1171	917	608	446	310
310		1433	1240		1348	1461	1574	1104	854	508	343	198
300		1374	1143		1240	1371	1521	1015	785	404	254	106
290		1308	1035		1135	1261	1457	896	706	303	175	60.0
280		1230	917		994	1143	1359	744	608	219	116	12.4
270		1130	804		849	1004	1227	573	498	132	76.9	
260		1030	699		706	834	1050	362	372	81.2	49.6	
250		917	608		582	679	865	179	240	49.6	12.4	
240		784	537		488	530	679	71.4	127	12.4		
230		643	480		417	417	530		64.0			
220		521	439		370	345	409		12.4			
210		442	408		337	304	310					
200		401	384		313	275	245					
190		372	362		291	250	201					
180		347	339		271	225	169					
170		325	312		250	198	143					
160		297	275		228	170	118					
150		254	235		196	147	97.2					
140		226	207		172	132	84.7					
130		210	192		157	122	79.0					
120		195	181		148	115	73.8					
110		40.2	12.4		97.2	60.0	40.2					

ELECTRON DENSITY

RUERTO RICO 60 W 16 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL				A	A	A		A	A			
HMIN	252	255	245	259	248	256	236		110	109	108	107
SCAT	49.9	68.1	59.6	59.6	65.8	50.0	54.7		73.6	87.5	73.9	84.3
HMAXF	376	399	368	378	386	371	375		346	355	336	373
SHMAX	707	766	723	612	576	455	552		1021	1244	1140	1536
KM												
400		876										
390		871			661							
380	1004	857		794	659	652	716					1004
370	1000	834	928	790	651	652	715					1004
360	977	801	923	775	633	644	703			865		999
350	930	761	906	748	610	623	679		814	864		986
340	867	708	875	713	578	586	643		812	858	875	967
330	794	643	830	664	540	540	597		804	847	874	938
320	695	554	774	598	493	483	540		788	829	865	904
310	585	457	707	516	435	413	464		764	805	849	864
300	460	344	619	424	369	335	383		734	778	823	820
290	310	226	508	320	300	252	296		697	744	790	772
280	164	131	389	198	223	161	212		649	704	751	722
270	88.8	71.4	240	88.4	127	83.8	143		596	661	703	670
260	46.5	32.7	112	12.4	64.8	40.2	89.9		536	616	650	621
250			45.2		12.4		56.3		477	569	593	573
240							23.0		417	521	537	528
230									365	474	483	489
220									326	428	436	454
210									297	386	397	424
200									278	350	369	398
190									262	321	349	375
180									248	297	331	356
170									229	273	314	339
160									207	250	290	323
150									184	230	262	302
140									156	208	223	259
130									130	175	190	216
120									118	155	172	192
110									71.4	127	161	168

ELECTRON DENSITY

RUERTO RICO 60 W 16 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL											A	
HMIN	108	110	108	114	108	116	109	218	214	241	217	259
SCAT	82.2	83.1	70.0	85.6	70.7	61.9	52.4	65.0	56.0	54.6	53.5	50.5
HMAXF	372	362	351	368	349	343	323	357	379	365	382	386
SHMAX	1836	1758	1543	1762	1457	1318	1125	1020	935	787	780	628
KM												
390											960	885
380	1354								1107		960	882
370	1354	1328		1341						1101	1038	948	863
360	1347	1328	1240	1338				1143	1070	1036	920	826
350	1330	1321	1240	1326	1252	1277		1140	1028	1018	875	774
340	1303	1305	1232	1305	1248	1277		1124	973	979	813	702
330	1266	1279	1212	1275	1231	1264	1316	1096	905	926	736	614
320	1218	1243	1179	1235	1201	1233	1314	1046	825	862	652	508
310	1165	1197	1133	1188	1159	1183	1294	991	732	784	562	397
300	1100	1151	1075	1143	1106	1127	1250	930	627	690	460	286
290	1011	1083	1004	1065	1039	1050	1175	858	508	573	354	179
280	907	994	922	966	953	946	1088	772	389	446	262	103
270	794	897	834	855	849	834	982	679	286	301	190	56.0
260	690	794	742	741	737	716	860	561	198	161	136	5.2
250	598	698	658	633	633	601	716	417	134	71.4	97.2	
240	524	608	582	540	540	499	573	262	88.1		66.6	
230	468	522	518	462	459	417	446	127	56.7		45.6	
220	428	461	466	410	401	354	331	26.8	27.3		12.4	
210	401	417	426	374	358	314	259					
200	383	387	394	348	327	286	214					
190	370	365	367	328	304	262	183					
180	356	345	343	311	286	236	157					
170	339	324	320	293	265	208	133					
160	319	300	296	270	243	181	114					
150	295	269	267	242	219	158	99.2					
140	262	234	230	212	190	137	87.2					
130	234	203	201	190	165	122	80.0					
120	192	185	185	165	149	112	74.7					
110	161	40.2	127		71.4		49.6					

ELECTRON DENSITY

PUERTO RICO 60 W 17 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A						A	A	A	A	
HMIN	259	217	213	208	264	278	219					108
SCAT	62.4	48.6	51.9	59.4	56.2	58.2	66.8					84.8
HMAXF	399	350	320	334	394	389	325					369
SHMAX	732	607	478	380	310	350	360					1907
KM												
400	875				403							
390	870				402	469						
380	854				397	466						
370	825				384	456						1354
360	785	865			368	439						1350
350	736	865			345	417						1336
340	679	856		492	317	389						1314
330	603	829	716	492	269	347	908					1281
320	515	784	716	485	219	291	907					1240
310	417	722	710	471	170	226	499					1179
300	303	643	690	453	123	164	483					1119
290	179	540	657	428	80.7	83.8	460					1057
280	104	437	613	391	49.6	25.0	432					991
270	55.8	330	547	339	12.4		389					923
260	5.2	225	460	278			330					856
250		143	351	214			254					788
240		91.6	230	149			154					716
230		55.7	112	89.9			71.4					637
220		18.1	52.7	53.9			12.4					545
210				12.4								459
200												402
190												365
180												341
170												320
160												295
150												262
140												237
130												191
120												171
110												143

ELECTRON DENSITY

PUERTO RICO 60 W 17 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	S	A	A	A	A	S		S	S	S	S	S
HMIN	109					109		199	268	270	245	258
SCAT	67.4					59.4		77.1	55.7	43.4	60.2	64.6
HMAXF	369					332		392	406	391	381	392
SHMAX	2008					1668		1364	969	792	1105	1151
KM												
410									1215			
400								1191	1212	1252		1367
390								1191	1191	1252	1406	1367
380								1183	1150	1234	1406	1365
370	1697							1166	1088	1182	1394	1326
360	1690							1138	1010	1096	1362	1281
350	1661							1100	917	979	1307	1218
340	1608					1741		1053	806	834	1240	1143
330	1555					1740		996	674	679	1154	1050
320	1472					1723		930	540	508	1029	917
310	1372					1679		860	400	348	860	771
300	1253					1611		785	256	198	679	608
290	1152					1517		706	154	104	508	417
280	1004					1401		625	83.8	65.6	322	262
270	854					1260		545	21.5		179	127
260	723					1113		469			91.5	28.2
250	608					928		396			43.1	
240	508					754		329				
230	446					597		240				
220	407					477		161				
210	381					381		79.4				
200	362					319		12.4				
190	348					280						
180	335					253						
170	326					229						
160	317					206						
150	301					183						
140	282					158						
130	206					136						
120	187					120						
110	97.0					83.8						

ELECTRON DENSITY

PUERTO RICO 60 W 18 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	A
HMIN	240	219	199	231	267	240	248	110	102			
SCAT	53.4	38.0	63.9	47.9	56.3	53.1	57.3	65.7	77.9			
HMAXF	361	305	347	353	407	364	360	328	340			
SHMAX	878	540	629	427	463	465	475	931	1383			
KM												
410					590							
400					588							
390					577							
380					557							
370	1240				526	643	679					
360	1240			625	488	642	679					
350	1226		697	625	439	632	674		1143			
340	1190		696	614	376	610	658		1143			
330	1132		685	588	310	578	632	906	1138			
320	1050		663	552	240	535	597	903	1124			
310	947	1072	636	500	169	477	550	890	1100			
300	812	1068	602	434	115	397	483	864	1063			
290	643	1032	559	362	75.7	315	380	831	1021			
280	477	960	508	279	49.6	234	232	786	972			
270	286	844	446	204	12.4	157	127	731	917			
260	134	679	385	132		93.4	65.9	668	854			
250	63.4	477	322	77.9		49.6	12.4	596	785			
240		262	254	45.8				514	711			
230		97.2	187					433	627			
220		12.4	127					346	540			
210			71.4					280	440			
200			12.4					233	358			
190								195	301			
180								163	259			
170								136	226			
160								113	198			
150								95.7	173			
140								83.8	152			
130								78.7	132			
120								73.6	119			
110								12.4	71.4			

ELECTRON DENSITY

PUERTO RICO 60 W 18 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	A	A			A		S		S	
HMIN	107		108	109	116	110		216	198	228	258	271
SCAT	64.5		63.7	63.6	66.0	65.3		64.8	58.3	56.1	58.3	61.8
HMAXF	350		359	353	377	341		348	360	380	400	420
SHMAX	2055		2079	1930	1999	2001		1450	1104	1003	958	1055
KM												
430												1303
420												1303
410											1215	1295
400											1215	1270
390										1265	1207	1226
380					1786					1265	1180	1169
370					1785				1290	1256	1135	1096
360	1861		1907	1786	1771				1290	1226	1074	990
350	1861		1897	1785	1737	2048		1640	1281	1177	992	850
340	1850		1864	1767	1682	2047		1635	1254	1106	886	694
330	1818		1808	1727	1601	2032		1613	1201	1017	754	529
320	1763		1729	1669	1507	1992		1574	1143	905	618	362
310	1685		1634	1578	1394	1928		1517	1057	776	477	219
300	1586		1501	1473	1259	1842		1446	960	635	321	127
290	1464		1341	1341	1124	1739		1353	852	493	186	78.3
280	1319		1171	1196	960	1596		1240	728	350	103	46.1
270	1154		1004	1026	809	1414		1117	601	226	57.1	
260	984		834	867	679	1208		960	477	136	12.4	
250	834		679	730	567	1004		794	350	83.8		
240	693		568	617	486	781		540	235	52.1		
230	589		492	531	426	590		240	152	12.4		
220	512		443	466	382	436		49.6	97.2			
210	458		413	417	350	344			57.4			
200	419		391	382	324	290			12.4			
190	394		371	351	302	258						
180	372		347	322	280	235						
170	350		319	293	258	215						
160	324		289	262	235	192						
150	296		252	237	203	167						
140	262		219	212	171	145						
130	243		197	179	153	127						
120	203		184	166	134	116						
110	179		127	60.0		40.2						

ELECTRON DENSITY

PUERTO RICO 60 W 19 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A	A	A					A	A	A	
HMIN	265	263	239	220	219	228	239				110	109
SCAT	59.3	57.4	47.8	52.1	56.0	47.3	44.3				76.3	57.3
HMAXF	383	391	359	329	354	342	367				380	338
SHMAX	1062	1112	863	837	772	561	849				1904	1802
KM												
400		1446										
390	1420	1445									1446	
380	1419	1434									1446	
370	1403	1399						1004			1440	
360	1366	1341	1316		1004			1002			1422	
350	1306	1257	1203		1004	875	988				1391	
340	1240	1160	1262		992	875	960				1348	1801
330	1143	1050	1187	1316	964	862	920				1290	1793
320	1004	906	1096	1306	917	829	871				1227	1758
310	821	716	960	1271	857	778	809				1143	1696
300	608	508	779	1211	782	706	737				1050	1605
290	362	297	573	1143	685	608	655				953	1490
280	190	143	389	1017	573	491	555				851	1341
270	60.0	60.0	219	834	453	362	431				754	1185
260			127	608	328	211	272				661	1004
250			64.5	310	205	112	97.2				579	843
240			12.4	127	123	60.0	12.4				508	691
230				12.4	65.1	12.6					454	573
220					12.4						412	486
210											381	427
200											358	389
190											342	360
180											325	337
170											306	315
160											281	292
150											247	267
140											208	240
130											177	206
120											166	184
110											60.0	60.0

ELECTRON DENSITY

PUERTO RICO 60 W 19 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				S			A					
HMIN	108	109	113	110	109	110	112	227	253	244	271	274
SCAT	61.4	59.7	62.8	55.8	64.5	52.6	92.7	65.1	62.6	53.0	57.5	46.7
HMAXF	344	337	329	312	329	316	353	390	415	388	404	387
SHMAX	1862	1760	1601	1196	1129	951	1078	856	964	863	874	753
KM												
420									1096			
410									1094		1155	
400								906	1079		1153	
390								906	1050	1143	1137	1131
380								901	1004	1136	1103	1125
370								886	948	1110	1050	1096
360							896	859	884	1061	983	1036
350	1741						896	820	802	995	893	960
340	1736	1710					891	771	700	909	774	858
330	1717	1706	1542		1004		879	716	594	801	643	739
320	1672	1677	1533	1240	999	1004	861	653	477	679	466	596
310	1603	1623	1506	1240	982	1002	836	586	362	540	310	438
300	1518	1545	1460	1225	952	982	804	508	240	405	179	286
290	1399	1446	1391	1191	913	943	766	427	156	274	97.6	150
280	1262	1319	1309	1137	858	889	723	346	97.2	169	46.6	60.0
270	1109	1169	1202	1064	794	816	672	267	64.0	108		
260	960	1004	1082	966	716	730	616	189	40.2	65.9		
250	805	847	940	848	629	632	550	112		35.9		
240	679	701	794	716	547	534	477	63.7				
230	564	573	662	608	473	446	389	19.6				
220	486	487	547	498	412	375	310					
210	437	425	451	417	366	327	248					
200	405	385	389	371	332	293	202					
190	381	359	351	339	308	266	170					
180	357	342	322	316	288	240	146					
170	329	323	298	290	267	213	126					
160	300	299	274	260	242	189	107					
150	270	272	245	228	216	164	93.0					
140	248	246	209	202	186	142	82.7					
130	219	207	190	177	160	124	77.4					
120	187	185	169	165	149	115	72.2					
110	112	143		49.6	97.0	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 20 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	A
HMIN	236	234	239	241	250	236	247	111	108			
SCAT	45.7	48.7	58.9	52.3	39.3	47.8	50.7	99.5	88.1			
HMAXF	344	334	365	368	354	332	330	395	375			
SHMAX	701	620	588	515	424	443	364	899	992			
KM												
400								557				
390								556				
380								554	679			
370				754	707			548	679			
360				753	703	726		539	674			
350	1131			741	687	724		525	666			
340	1128	1004		719	657	698	735	608	511	653		
330	1103	1003		685	614	654	735	608	494	636		
320	1050	985		643	559	589	724	602	477	614		
310	970	945		585	488	508	693	584	454	587		
300	861	887		512	406	417	652	553	431	556		
290	716	800		423	320	310	591	513	408	522		
280	558	679		328	240	212	508	454	385	484		
270	374	521		234	154	116	389	371	366	443		
260	198	310		137	83.8	56.2	219	219	350	396		
250	91.4	143		71.4	48.2		106	40.2	334	350		
240	40.2	55.3		12.4			43.4		314	314		
230									289	290		
220									259	269		
210									221	251		
200									188	235		
190									161	221		
180									139	208		
170									115	192		
160									93.2	173		
150									78.4	149		
140									70.3	123		
130									66.4	109		
120									62.5	102		
110										71.4		

ELECTRON DENSITY

PUERTO RICO 60 W 20 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	S					A			J	
HMIN			109	109	109	109	110	249	238	229	248	260
SCAT			67.4	63.0	59.4	60.9	66.2	63.3	59.2	62.6	51.9	52.8
HMAXF			347	341	336	337	337	347	370	381	387	387
SHMAX			1451	1384	1219	1094	926	647	658	731	543	588
KM												
390										834	716	814
380									834	834	713	810
370									834	828	697	792
360									828	811	667	759
350			1191	1240				865	810	784	626	716
340			1187	1240	1131	1038	875	862	777	746	570	650
330			1171	1230	1128	1034	873	850	734	698	500	567
320			1143	1204	1111	1017	861	827	684	639	424	467
310			1098	1163	1077	986	840	794	614	569	346	367
300			1041	1107	1025	940	806	754	527	489	271	262
290			975	1033	960	882	764	693	430	408	198	161
280			899	942	882	808	716	612	326	325	134	89.6
270			818	834	785	723	656	508	219	240	83.8	49.6
260			729	730	679	627	588	362	122	156	52.5	
250			637	625	580	527	516	60.0	63.3	91.3	12.4	
240			554	531	498	437	441		12.4	51.5		
230			480	451	431	366	368			6.5		
220			417	394	381	313	301					
210			379	354	344	281	244					
200			355	328	318	260	205					
190			335	310	297	246	177					
180			323	301	279	231	155					
170			310	292	261	214	136					
160			296	279	241	192	117					
150			280	258	219	169	98.7					
140			260	225	194	148	86.6					
130			234	193	172	130	79.8					
120			208	173	154	119	74.4					
110			143	97.2	112	83.8	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 21 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL							A	A	A	A	A	A
HMIN	257	257	248	271	240	240	249		107			108
SCAT	54.8	52.4	61.4	63.7	54.	52.8	49.1		60.			84.
HMAXF	388	388	381	433	368	365	367		32			344
SHMAX	591	616	689	640	509	448	319		653			1004
KM												
440				716								
430				716								
420				709								
410				693								
400				668								
390	784	834	865	638								
380	779	829	864	595								
370	762	809	857	540	688	608	432					
360	731	771	839	471	684	606	430					
350	689	722	809	401	669	596	419					679
340	633	659	768	331	643	573	397					679
330	556	585	716	262	603	543	369		573			674
320	468	502	643	198	552	499	335		572			665
310	377	401	554	140	483	446	291		564			651
300	286	286	446	94.7	402	377	245		548			630
290	179	179	325	62.1	315	306	204		522			608
280	106	97.2	198	40.2	227	235	170		492			578
270	60.0	55.	118		143	161	128		452			546
260	19.3	17.7	63.1		82.8	97.2	77.2		407			513
250			12.4		49.	52.1	.4		362			480
240									318			451
230									293			423
220									256			398
210									237			375
200									223			352
190									209			330
180									194			310
170									174			290
160									153			268
150									134			240
140									119			203
130									109			172
120									103			154
110									97.2			127

ELECTRON DENSITY

PUERTO RICO 60 W 21 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	C	C							A
HMIN		110	109	10	11	110	110	108	118	269	259	258
SCAT		52.	79.	54.7	70.	.	.0	46.6	53.	54.6	52.	47.4
HMAXF		331	358	435	3	328		332	3 0	4 6	403	374
SHMAX		1006	1219	1118	1 1	1119	10	638	76	4	841	671
KM												
410										917	1016	
400										915	1015	
390									834	898	1005	
380									834	866	981	1027
370					971				829	820	944	1025
360			834		971				813	754	896	1006
350			932		966				786	674	834	963
340		875	823	939	950		3	939	749	573	747	899
330		875	808	937	97	1131	89	938	704	471	643	8 6
320		866	784	925	890	1126	974	922	650	362	540	679
310		841	754	903	845	1104	48	979	5	246	410	552
300		799	719	868	790	1062	11	821	517	154	279	406
290		74	679	824	72	1008	864	745	440	.4	171	262
280		67	638	767	655	41	06	653	3	5.9	27.	143
270		608	596	700	573	856	736	540	4	.8	54.6	75.1
260		535	555	625	50	754	656	420	210		.	21.7
250		471	517	549	435	643	573	299	140			
240		420	482	477	381	532	486	198	80.			
230		383	450	417	341	438	401	116	53.3			
220		356	421	375	313	362	323	60.0	12.4			
210		336	394	343	94	310	262	1.4				
200		329	370	327	280	274	223					
190		323	350	306	271	250	194					
180		317	329	297	267	230	169					
170		310	300	288	248	211	146					
160		93	265	273	31	187	124					
150		75	233	252	211	161	106					
140		5	206	224	185	138	0.					
130		07	182	200	161	124	81.1					
120		183	169	186	14	116	75.					
110		40.	127	112	40.	40.	1.4					

ELECTRON DENSITY

PUERTO RICO 60 W 22 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A						A	A			A
HMIN	254	210	220	248	240	208	209	110		109	108	108
SCAT	48.7	34.	56.4	58.2	44.7	40.3	61.4	49.		59.0	82.2	66.
HMAXF	356	296	326	385	356	302	309	39		311	363	349
SHMAX	698	532	546	519	402	283	292	474		880	1393	1440
KM												
390				643								
380				642								
370				632							982	
360	1107			614	625						982	
350	1102			583	622						976	
340	1076			547	604						964	1240
330	1024		764	500	571						943	1234
320	951		762	446	522					834	917	1214
310	850		748	380	457	508	396			834	881	1180
300	705	1143	723	310	379	509	394	524		826	840	1130
290	540	1135	682	234	299	497	384	524		807	790	1067
280	362	1084	635	152	213	470	369	516		773	735	992
270	161	990	573	93.5	134	428	352	494		729	679	908
260	54.5	834	489	54.8	81.2	371	331	465		679	617	813
250		608	389	12.4	47.7	297	303	428		608	560	716
240		335	253			212	262	385		540	508	620
230		161	97.2			127	207	340		466	464	530
220		71.4				60.0	127	296		407	429	459
210						12.4	12.4	256		362	400	409
200								219		333	375	373
190								186		312	350	348
180								157		291	324	327
170								132		262	299	310
160								112		226	273	289
150								95.5		179	247	265
140								84.5		148	204	234
130								78.9		138	163	195
120								73.7		132	152	173
110								40.2		112	143	152

ELECTRON DENSITY

PUERTO RICO 60 W 22 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A				A	A	A	A	S	A	A
HMIN	108		109	109	109			238	238	233	226	238
SCAT	88.0		5.1	59.1	6.5			63.2	42.	62.5	51.9	58.0
HMAXF	367		346	327	3			382	364	388	356	363
SHMAX	193		1638	1607	15			1247	809	1385	1237	1221
KM												
390								1500		1669		
380								1500		1662		
370	1446							1488	1277	1635		1654
360	1444							1456	1275	1586	1756	1653
350	1433		1555					1406	1243	1512	1751	1635
340	1412		1551		1555			1336	1168	1425	1717	159
330	1383		1527	1669	1555			1246	1070	1312	1647	1523
320	1341		1480	1663	1544			1143	938	1170	1555	1446
310	1287		1402	1634	151			1004	794	982	1420	1326
300	1229		1303	1581	145			820	624	754	1240	1158
290	1167		1194	1502	1384			626	457	540	1050	917
280	1096		1071	1406	1291			417	295	375	794	643
270	1004		917	1280	1175			275	185	211	540	389
260	894		775	1105	1036			154	112	127	286	198
250	785		643	917	875			74.8	60.0	75.4	156	83.9
240	679		540	744	72			21.2	12.4	41.8	82.8	22.3
230	573		468	584	598						40.2	
220	491		417	467	492							
210	432		386	395	413							
200	389		365	355	35							
190	359		347	329	322							
180	333		328	310	294							
170	302		306	290	271							
160	276		281	267	245							
150	228		243	243	214							
140	176		208	222	185							
130	15		194	190	164							
120	151		185	167	150							
110	143		97.2	112	83.2							

ELECTRON DENSITY

PUERTO RICO 60 W 23 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A				F			A	A	A	A
HMIN	241	241	228	209	208	220	227	109		109	109	
SCAT	54.1	69.5	46.1	40.7	43.9	51.1	44.3	82.3		91.5	71.5	
HMAXF	360	392	335	316	301	341	308	318		310	330	
SHMAX	1027	1186	769	702	516	428	336	576		640	867	
KM												
400		1341										
390		1341										
380		1331										
370	1446	1308										
360	1446	1270										
350	1433	1217				608						
340	1395	1158	1240			608					643	
330	1331	1078	1236			600					643	
320	1246	960	1207	1240		581		477		454	639	
310	1134	814	1149	1233	928	550	616	476		454	630	
300	983	665	1064	1190	928	508	612	471		452	614	
290	794	494	943	1111	913	455	592	463		448	590	
280	596	310	794	993	875	389	558	451		442	563	
270	335	173	608	834	813	316	508	434		432	528	
260	161	94.0	389	643	716	224	428	416		420	488	
250	67.3	49.6	206	417	583	139	310	393		402	449	
240			90.0	240	402	83.8	161	369		382	411	
230			23.7	127	198	49.6	40.2	344		363	378	
220				66.2	83.8			318		342	352	
210				12.4	23.0			286		324	333	
200								251		306	320	
190								209		290	307	
180								166		273	296	
170								136		256	283	
160								107		238	262	
150								87.6		217	235	
140								75.1		194	207	
130								68.5		171	184	
120								64.1		152	170	
110								54.0		97.2	127	

ELECTRON DENSITY

PUERTO RICO 60 W 23 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A		A	A	A		A				
HMIN			110			109	109	199	223	237	282	276
SCAT			68.0			64.1	53.8	54.8	58.3	46.1	60.6	47.7
HMAXF			361			337	306	330	376	365	414	384
SHMAX			1821			1735	1226	884	903	656	790	692
KM												
420											971	
410											970	
400											959	
390											934	1072
380									1096		893	1071
370			1569						1073	971	842	1050
360			1569						1076	969	780	1004
350			1559						1042	946	703	940
340			1532			1727		1167	991	900	608	842
330			1488			1722		1167	925	834	502	716
320			1426			1697		1157	846	745	382	573
310			1353			1651	1500	1129	754	643	250	417
300			1264			1584	1495	1079	631	517	127	262
290			1143			1494	1466	1010	508	401	56.8	132
280			1022			1387	1411	930	389	286		45.1
270			892			1257	1328	834	286	175		
260			763			1096	1225	702	187	104		
250			643			917	1096	564	115	60.0		
240			540			754	938	417	71.4	19.0		
230			461			608	754	253	40.2			
220			408			491	573	133				
210			372			401	408	66.3				
200			347			335	286	12.4				
190			327			286	219					
180			310			256	181					
170			293			231	154					
160			272			209	131					
150			246			184	112					
140			209			157	93.7					
130			178			139	81.3					
120			168			129	75.2					
110			60.0			83.8	40.2					

ELECTRON DENSITY

PUERTO RICO 60 W 24 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	
HMIN	240	219	198	198	207	240	197	110	110	109	108	109
SCAT	49.2	43.9	60.7	47.2	44.6	56.5	53.5	41.5	44.3	65.3	69.1	73.9
HMAXF	344	300	324	300	311	350	329	252	278	298	332	374
SHMAX	695	503	432	273	159	185	245	415	601	792	1128	1650
KM												
380												1191
370												1190
360						251						1181
350	1096					251						1160
340	1093					249					906	1127
330	1072		524			243	316				906	1086
320	1028		523		251	233	314				900	1032
310	960	939	517	432	251	222	306				884	970
300	875	939	502	432	247	204	293			697	856	905
290	743	926	481	427	236	181	273			695	823	838
280	588	890	454	411	221	150	249		688	684	780	770
270	389	834	419	389	198	115	219		683	661	725	702
260	198	741	376	354	169	79.1	186	634	661	633	667	634
250	74.9	586	328	310	134	47.4	152	633	619	599	608	573
240		375	274	252	101		119	620	562	560	540	516
230		179	219	184	70.1		88.5	587	495	515	488	467
220		40.2	161	112	47.7		64.3	540	428	466	441	428
210			88.6	60.0	12.4		44.9	466	372	421	403	396
200			25.6	12.4			12.4	372	329	382	372	372
190								268	295	350	345	355
180								189	268	321	321	342
170								148	245	291	299	322
160								123	223	259	277	296
150								104	198	231	253	267
140								88.7	155	206	225	238
130								79.6	127	181	196	211
120								73.0	116	155	170	190
110								49.6	60.0	112	127	97.2

ELECTRON DENSITY

PUERTO RICO 60 W 24 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	S		A	A	A			A	S	
HMIN	108			112		108		225	201	227	236	258
SCAT	59.4			55.9		61.1		51.2	65.3	48.6	44.6	52.4
HMAXF	356			326		345		332	367	354	350	390
SHMAX	1731			1583		1648		1052	1365	847	758	878
KM												
400												1215
390												1215
380												1205
370									1528			1172
360	1555								1524	1265	1215	1116
350	1551					1669			1503	1263	1215	1040
340	1526					1666		1555	1464	1239	1199	936
330	1478			1669		1645		1555	1408	1188	1153	805
320	1402			1663		1601		1534	1332	1110	1076	661
310	1305			1632		1534		1484	1240	1004	960	508
300	1195			1575		1455		1397	1132	865	823	362
290	1075			1483		1341		1287	987	698	658	198
280	942			1375		1205		1153	834	508	477	112
270	813			1240		1050		984	668	335	310	60.0
260	697			1063		875		779	500	193	168	12.4
250	598			892		701		508	335	112	83.8	
240	520			741		559		219	219	63.5	40.2	
230	462			600		454		60.0	127	19.6		
220	421			494		380			79.4			
210	392			417		327			45.6			
200	373			367		289						
190	356			334		258						
180	341			310		230						
170	324			290		202						
160	303			269		176						
150	274			245		154						
140	240			215		136						
130	209			185		124						
120	190			167		117						
110	143					97.2						

ELECTRON DENSITY

PUERTO RICO 60 W 25 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A			A				A	A		S
HMIN	268	211	210	202	198	196	196	110	108	110	110	
SCAT	43.0	47.1	29.7	39.1	60.1	53.2	61.8	61.9	59.2	46.6	59.0	
HMAXF	368	311	279	287	329	333	342	305	311	287	331	
SHMAX	785	933	455	367	325	212	259	596	1006	978	1312	
KM												
370	1354											
360	1342											
350	1293						298					
340	1206					268	298				1179	
330	1096				396	268	295				1179	
320	917	1555			394	264	288		1027		1169	
310	698	1555			385	256	277	590	1027		1143	
300	477	1533			372	242	265	589	1017		1096	
290	262	1476		716	357	224	247	581	993	1215	1035	
280	102	1388	1143	711	331	201	222	564	954	1208	965	
270	25.6	1270	1119	684	299	175	194	542	901	1173	890	
260		1096	1032	635	262	147	161	512	834	1109	811	
250		834	875	557	219	120	130	472	754	1018	733	
240		477	657	446	175	96.6	100	423	664	897	658	
230		209	335	296	133	72.9	76.9	370	573	754	588	
220		71.4	97.2	161	92.7	56.1	57.9	324	485	615	523	
210				63.7	57.4	42.0	42.6	279	407	484	462	
200					12.4	12.4	12.4	240	345	396	408	
190								208	296	338	362	
180								179	254	296	321	
170								151	214	260	286	
160								126	174	222	255	
150								107	143	188	208	
140								92.6	123	167	170	
130								81.8	110	156	157	
120								75.4	104	148	149	
110								12.4	91.1	49.6	60.0	

ELECTRON DENSITY

PUERTO RICO 60 W 25 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	C		S			R	S					
HMIN	109	109	109	108	111		110	217	216	241	240	241
SCAT	64.1	59.9	67.7	63.0	58.0		56.1	51.1	60.9	64.1	58.3	48.9
HMAXF	365	358	370	360	356		351	335	347	391	395	364
SHMAX	1870	2015	2068	1953	1817		1699	1359	1418	1357	1306	1259
KM												
400										1569	1612	
390										1569	1608	
380			1683							1558	1584	
370	1567		1683	1786						1528	1536	1907
360	1567	1861	1673	1786	1786		1922			1478	1464	1904
350	1547	1853	1645	1775	1763		1922		1786	1403	1366	1869
340	1513	1821	1598	1741	1754		1905	1969	1780	1314	1246	1795
330	1456	1763	1528	1686	1696		1857	1964	1752	1212	1107	1681
320	1369	1678	1439	1602	160		1778	1925	1700	1087	935	1528
310	1266	1568	1341	1507	1490		1669	1849	1623	931	754	1327
300	1166	1426	1231	1381	136		1525	1732	1523	754	550	1050
290	1050	1274	1124	1240	1214		1364	1580	1406	560	372	754
280	936	1143	1010	1065	1064		1143	1392	1250	379	240	477
270	826	984	902	917	904		917	1172	1090	240	138	251
260	727	834	801	783	746		728	917	794	127	83.8	127
250	643	704	707	659	608		573	608	540	60.0	49.6	60.0
240	571	594	628	555	508		446	310	286			
230	513	508	565	477	430		353	112	127			
220	467	446	492	425	375		286	40.2	43.6			
210	431	404	438	387	337		240					
200	401	376	392	359	313		205					
190	381	356	358	335	294		175					
180	365	342	331	313	277		150					
170	325	322	310	293	260		127					
160	293	295	294	273	246		108					
150	264	273	274	247	203		93.9					
140	224	243	240	208	174		83.8					
130	198	205	198	178	155		78.8					
120	187	188	185	168	143		73.9					
110	112	143	112	143			12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 26 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										S		A
HMIN	229	209	189	217	186	236	225	106	110	109	108	
SCAT	47.2	54.3	57.2	34.4	50.2	69.1	113	55.6	95.6	65.0	72.8	
HMAXF	343	315	353	287	273	408	437	284	344	312	323	
SHMAX	1162	1002	950	622	336	319	419	383	599	636	735	
KM												
440							292					
430							291					
420							290					
410						316	288					
400						315	283					
390						311	277					
380						301	270					
370						291	264					
360			1167			277	256					
350	1861		1166			260	247					
340	1859		1151			240	237		396			
330	1826		1119			219	226		396		508	
320	1748	1500	1074			194	213		394	484	508	
310	1643	1497	999			168	197		390	484	504	
300	1477	1472	884			141	179		381	480	495	
290	1254	1417	746	1446		116	158	396	371	466	481	
280	979	1351	617	1429	540	92.9	135	395	362	450	461	
270	643	1251	502	1353	540	71.4	112	390	349	427	437	
260	335	1107	399	1226	531	55.3	88.2	376	335	402	409	
250	151	875	310	985	512	41.5	65.4	362	318	377	381	
240	71.4	608	240	608	482	12.4	47.1	335	302	353	357	
230	12.4	310	187	240	443		19.9	304	286	332	335	
220		112	138	45.8	389			272	273	314	323	
210		12.4	97.2		310			240	260	302	311	
200			62.7		198			210	249	292	305	
190			12.4		49.6			183	236	281	299	
180								159	217	270	294	
170								137	194	255	288	
160								119	171	233	275	
150								104	147	207	252	
140								90.6	132	182	227	
130								80.3	122	161	202	
120								73.7	112	148	187	
110								49.6	12.4	97.2	143	

ELECTRON DENSITY

PUERTO RICO 60 W 26 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A			A	A	A		A		A	A
HMIN	10		105	110				208	270	266	252	226
SCAT	64.8		71.0	64.8				60.8	45.0	55.4	55.3	51.5
HMAXF	311		331	320				387	391	396	371	350
SHMAX	827		940	879				799	675	856	832	648
KM												
400									1004	1131		
390								875	1004	1127		
380								872	988	1106	1179	
370								858	945	1063	1179	
360								831	881	1004	1167	939
350								790	794	931	1136	939
340			679					741	692	834	1096	929
330			679	735				686	581	723	1018	900
320	643		675	735				622	466	601	910	859
310	643		665	731				549	335	446	781	794
300	638		647	717				472	227	286	628	706
290	625		623	694				389	121	161	446	590
280	605		593	666				300	60.0	83.8	262	459
270	573		555	625				225		40.2	127	324
260	540		513	573				164			56.0	205
250	500		471	513				118				119
240	461		431	454				85.4				67.6
230	425		397	402				60.0				26.8
220	394		370	360				43.3				
210	370		351	331				8.4				
200	351		335	312								
190	335		328	302								
180	327		321	294								
170	319		314	285								
160	312		303	271								
150	293		287	254								
140	264		265	228								
130	231		231	187								
120	207		198	168								
110	112		181	40.2								

ELECTRON DENSITY

PUERTO RICO 60 W 27 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL	A	A	A		F			A	B			
HMIN	267	314	323	272		256	218		109	109	108	108
SCAT	58.0	62.8	63.8	67.1		52.3	47.5		130	74.6	52.0	81.8
HMAXF	433	481	474	423		357	310		390	337	302	349
SHMAX	852	709	756	1089		557	346		792	804	804	1151
KM												
490		794										
480		794	875									
470		788	874									
460		779	865									
450		744	845									
440	1004	709	813									
430	1004	663	773	1238								
420	992	603	720	1237								
410	966	532	650	1225								
400	924	453	566	1200					389			
390	869	373	477	1161					389			
380	798	301	378	1110					388			
370	716	232	286	1044					387			
360	624	172	198	960		854			384			
350	527	119	123	851		851			380			794
340	417	80.6	71.4	726		834			374	565		791
330	310	53.6	41.7	584		798			368	564		783
320	219	26.0		417		749	590		360	558		769
310	152			275		679	590		349	547	754	747
300	104			161		586	584		338	528	754	721
290	71.4			90.2		457	563		325	506	744	688
280	47.4			46.9		286	534		312	481	719	651
270	12.4					143	486		301	451	679	613
260						46.5	411		290	420	628	573
250							303		281	391	565	535
240							170		274	365	501	496
230							80.7		266	344	443	460
220							22.3		260	328	397	428
210									255	314	362	398
200									251	304	338	372
190									246	296	321	348
180									242	287	305	325
170									228	273	289	302
160									207	249	271	275
150									182	213	252	239
140									158	175	226	214
130									141	143	191	192
120									130	134	167	182
110									71.4	97.2	112	97.2

ELECTRON DENSITY

PUERTO RICO 60 W 27 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL				A						S		
HMIN	110	109	110	112	109	110	109	198	247	248	269	248
SCAT	58.6	86.9	86.8	74.9	85.8	56.6	75.8	65.5	64.2	64.2	54.6	54.5
HMAXF	326	341	345	379	373	331	369	359	417	393	393	381
SHMAX	1218	1364	1274	1240	1437	1098	1399	1032	873	851	792	730
KM												
420									960			
410									958			
400									944	1016	1061	
390									917	1015	1060	960
380				834	1050				879	1006	1042	960
370				831	1049		1119		834	978	1007	950
360				820	1043		1115	1143	771	945	957	924
350		1004	917	802	1030		1101	1137	698	903	894	880
340		1004	916	774	1010	1061	1072	1118	613	841	814	823
330	1167	1001	910	740	983	1061	1039	1084	523	759	716	750
320	1163	990	898	702	952	1051	998	1040	430	661	588	666
310	1145	973	880	657	910	1018	947	981	335	548	446	573
300	1108	948	856	608	856	974	885	907	240	429	310	460
290	1059	919	830	553	794	920	815	822	166	310	161	310
280	982	883	794	502	723	856	742	722	114	187	71.4	198
270	875	838	746	456	643	782	666	608	75.9	105	12.4	112
260	754	783	695	417	555	696	593	487	49.6	60.0		60.0
250	623	716	639	386	481	599	522	355	12.4	12.4		12.4
240	513	643	580	364	417	508	456	240				
230	446	573	525	349	367	417	393	154				
220	404	500	477	335	333	362	335	94.9				
210	378	442	429	330	310	320	292	55.3				
200	359	399	392	324	296	290	253	12.4				
190	347	371	362	319	283	265	221					
180	334	352	339	314	270	240	195					
170	316	336	313	305	254	216	174					
160	290	318	287	287	230	192	155					
150	254	296	257	257	206	171	140					
140	225	265	215	225	186	153	126					
130	210	229	194	197	161	140	118					
120	198	206	182	181	149	130	107					
110	40.2	127	40.2		83.8	12.4	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 28 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL				F	F					A		
HMIN	243	220	219	218	222	237	198	109	109	109	108	110
SCAT	52.6	45.9	61.0	57.4	64.3	64.2	61.7	71.3	71.5	89.7	76.8	67.9
HMAXF	365	329	333	349	374	373	349	316	295	341	337	348
SHMAX	716	682	465	446	498	439	560	787	867	1306	1352	1602
KM												
380					548	516						
370	993				548	516						
360	991				542	510						
350	973			573	526	495	670			982		1328
340	934		625	570	508	478	666			982	1050	1324
330	881	1096	625	558	482	454	654			978	1047	1305
320	811	1085	619	537	451	426	632	716		969	1036	1272
310	716	1050	603	508	412	392	604	715		949	1016	1221
300	608	984	582	471	368	347	566	708	814	923	985	1161
290	477	895	552	422	320	294	514	693	812	894	946	1086
280	354	775	508	362	271	231	446	671	804	863	902	998
270	227	643	446	296	219	161	368	643	786	829	849	903
260	117	477	362	228	164	101	294	608	762	789	790	802
250	52.6	262	262	148	112	60.0	219	564	730	741	723	706
240		127	152	88.4	68.6	19.0	153	513	691	679	651	614
230		60.0	71.4	52.8	42.1		103	457	643	608	583	540
220			12.4	12.4			69.1	397	583	518	518	477
210							45.6	340	517	433	464	431
200							7.9	289	446	370	421	398
190								245	378	328	389	372
180								206	317	295	359	351
170								175	262	266	329	330
160								148	223	240	298	307
150								126	190	213	266	279
140								108	164	185	234	244
130								95.3	143	163	204	211
120								86.6	131	152	184	191
110								60.0	60.0	127	127	161

ELECTRON DENSITY

PUERTO RICO 60 W 28 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL			A	B		A	A					
HMIN	109	109			109	108	110	228	237	261	257	239
SCAT	79.3	78.7			67.1	67.7	73.6	70.7	63.1	58.3	60.6	55.0
HMAXF	347	355			366	360	375	378	399	396	393	369
SHMAX	1849	1890			1808	1722	1764	1458	1347	1187	1194	1190
KM												
400									1528	1528	1487	
390									1520	1524	1486	
380							1612	1528	1493	1501	1471	
370					1542	1528	1610	1522	1446	1455	1431	1640
360		1500			1539	1528	1594	1502	1376	1385	1373	1628
350	1460	1499			1520	1519	1565	1466	1293	1300	1301	1590
340	1457	1487			1485	1493	1515	1410	1191	1182	1205	1521
330	1441	1463			1430	1450	1463	1346	1073	1029	1087	1436
320	1405	1424			1365	1388	1388	1265	937	847	932	1313
310	1369	1378			1282	1318	1296	1170	779	658	754	1159
300	1327	1328			1173	1227	1178	1060	608	446	573	960
290	1269	1254			1056	1115	1050	930	446	262	362	716
280	1200	1163			933	1004	897	794	301	136	190	446
270	1119	1059			812	875	740	655	191	60.0	90.6	252
260	1031	940			697	748	593	495	112		33.5	127
250	934	812			591	625	464	299	61.9			66.3
240	834	697			508	517	374	127	19.3			12.4
230	723	594			440	436	315	28.2				
220	620	513			395	377	269					
210	530	454			362	333	230					
200	457	411			335	303	196					
190	406	380			317	278	167					
180	369	354			299	255	141					
170	342	332			281	232	117					
160	319	312			260	207	101					
150	295	291			233	181	90.4					
140	262	260			205	159	82.7					
130	231	227			181	143	78.5					
120	208	207			169	133	74.4					
110	112	143			127	97.2	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 29 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A						A				
HMIN	233	229	236	221	236	236	280	110	110	108	109	109
SCAT	53.4	68.0	54.6	51.8	45.5	65.8	49.3	64.9	76.6	34.0	69.7	88.1
HMAXF	347	366	356	332	341	377	370	326	365	267	324	371
SHMAX	1124	1193	836	764	562	661	479	892	1251	787	989	1339
KM												
380						774	754					865
370		1316				772	754					865
360		1313	1167			761	747		982			861
350	1626	1297	1163		896	739	724		981			853
340	1618	1267	1140	1167	896	716	685		973			838
330	1583	1220	1096	1166	883	676	631	917	955		764	817
320	1517	1162	1037	1150	845	624	558	915	928		763	795
310	1435	1096	954	1110	794	561	466	903	896		756	764
300	1315	1004	845	1053	716	485	355	880	855		738	725
290	1143	908	716	968	619	399	219	845	803		718	679
280	933	794	552	848	508	303	10.4	802	741		688	630
270	679	663	375	679	376	198		744	676	1240	649	573
260	389	526	205	490	219	116		670	608	1225	602	523
250	170	372	97.3	274	97.3	64.5		581	545	1159	552	477
240	64.0	143	40.3	127	40.2	26.3		477	484	1050	505	440
230		12.4		60.0				373	431	834	466	411
220								286	389	608	437	389
210								234	352	446	415	373
200								198	320	352	400	359
190								172	290	307	382	352
180								148	258	283	357	344
170								127	226	264	321	336
160								109	194	240	288	316
150								95.5	167	215	256	290
140								84.5	143	187	219	252
130								78.8	127	165	184	211
120								73.4	118	152	170	189
110									49.6	127	143	143

ELECTRON DENSITY

PUERTO RICO 60 W 29 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			A						C			
HMIN	108	104	102	102	102	102		244	240	251	252	256
SCAT	80.8	77.4	88.5	71.7	61.1	75.4		56.6	58.6	54.3	56.7	56.4
HMAXF	362	365	388	355	330	352		465	414	388	378	373
SHMAX	1534	1659	1920	1624	1381	1320		1143	1371	1417	1567	1293
KM												
470										1155		
460										1151		
450										1124		
440										1083		
430										1030		
420										968	1756	
410										899	1754	
400										821	1730	
390			1341							734	1680	1907
380			1340							649	1601	1895
370	1050	1215	1332							560	1506	1852
360	1046	1214	1314	1354		1072				472	1379	1775
350	1035	1203	1289	1354		1072				389	1221	1669
340	1016	1183	1254	1334	1290	1066				310	1014	1529
330	987	1151	1204	1302	1285	1050				248	774	1341
320	953	1109	1160	1266	1264	1013				198	540	1143
310	908	1060	1102	1223	1214	968				161	335	900
300	860	999	1026	1157	1164	944				134	169	624
290	805	927	937	1073	1096	893				112	74.1	389
280	746	847	840	971	998	834				89.8		219
270	687	764	743	860	883	763				71.4		112
260	630	679	650	738	763	687				51.2		55.8
250	573	596	573	622	650	612				24.9		
240	521	530	508	529	548	533						
230	477	477	457	459	467	459						
220	437	440	419	409	411	393						
210	406	411	393	377	371	342						
200	381	386	377	357	343	304						
190	360	372	362	344	320	276						
180	345	367	344	329	298	251						
170	330	351	318	310	275	226						
160	318	331	281	289	251	198						
150	299	301	249	267	225	172						
140	267	268	228	240	195	148						
130	230	234	214	210	176	130						
120	207	210	203	190	166	120						
110	161	161	143	127	71.4	97.2						

ELECTRON DENSITY

PUERTO RICO 60 W 30 JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL							A	C				A
HMIN	239	217	177	266	239	199			110	110	110	108
SCAT	45.0	35.4	66.9	48.9	42.1	52.6			80.7	59.7	56.1	140
HMAXF	349	306	414	359	331	377			367	308	281	310
SHMAX	1120	946	1151	732	887	298			840	782	568	681
KM												
420			1038									
410			1037									
400			1028									
390			1006									
380			969									
370			925									
360			875	1252					652			
350	1876		810	1242					651			
340	1859		740	1195	1640				644			
330	1795		666	1146	1640				630			
320	1689		590	1050	1613				615			424
310	1532	2096	517	917	1540				596	697		424
300	1320	2083	446	704	1446				571	694		424
290	1031	1993	385	417	1259				540	682	508	422
280	679	1843	329	143	1004	516			500	659	508	419
270	362	1555	280	46.6	643	513			456	631	503	414
260	161	1004	240		310	500			407	586	490	406
250	71.4	540	203		112	483			358	527	467	398
240	12.4	219	170		12.4	455			316	464	437	390
230		90.5	140			407			286	409	400	382
220		40.3	112			318			268	362	362	375
210			85.4			161			257	330	342	368
200			62.4			12.4			249	306	330	359
190			44.8						241	289	323	346
180			12.4						225	280	315	332
170									204	273	302	310
160									179	267	276	283
150									156	246	247	259
140									138	206	213	230
130									125	179	178	204
120									116	164	164	188
110									49.6	49.6	12.4	127

ELECTRON DENSITY

PUERTO RICO 60 W 30 JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A			A	A	A	A	A		
HMIN			109	109	110			249	227	278	246	263
SCAT			172	93.0	78.3			67.0	53.0	61.8	52.5	60.6
HMAXF			353	340	351			388	380	422	377	409
SHMAX			404	844	867			575	551	666	608	690
KM												
430										784		
420										784		
410										777		824
400										759		819
390									634	679	729	804
380									631	679	691	824
370									622	673	646	820
360			208		573				605	656	587	803
350			208	524	573				578	624	516	767
340			208	524	570				548	582	436	720
330			208	522	563				513	531	348	662
320			207	518	550				471	474	262	586
310			205	510	532				421	413	185	498
300			204	498	508				366	350	118	401
290			20	483	482				304	286	63.3	300
280			199	467	453				230	226	12.4	198
270			194	447	423				152	168		115
260			188	427	393				71.4	115		64.0
250			182	404	366				12.4	76.1		26.2
240			177	386	343					49.6		
230			171	369	324					12.4		
220			166	354	308							
210			160	340	297							
200			157	331	286							
190			153	323	277							
180			150	316	269							
170			147	306	260							
160			143	281	248							
150			129	244	233							
140			108	209	212							
130			94.5	178	184							
120			87.6	168	167							
110			60.0	127	60.0							

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — JUNE 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
COUNT	24	24	25	25	24	25	24	17	19	17	16	18
HMIN	248	231	224	226	227	230	231	109	109	109	109	109
RATIO	5.1	5.1	5.0	5.0	5.0	5.0	5.0	4.1	3.4	3.4	3.2	3.0
SCAT	52.1	52.8	54.0	55.2	54.1	54.3	57.3	63.1	74.7	74.5	73.5	79.9
NMAX	1210	1139	970	859	740	640	621	778	829	859	945	1191
HMAXF	371	351	351	348	348	350	347	305	332	326	337	366
SHMAX	838	799	704	615	524	452	441	726	983	1024	1233	1649
SHINF	4250	4012	3442	3038	2612	2257	2194	2920	3322	3448	3899	5010
KM												
950	109	94.3	80.9	70.3	60.4	52.6	50.4	51.0	62.4	62.4	75.3	106
900	140	121	104	90.2	77.4	67.5	64.6	65.4	80.0	80.1	96.5	136
850	180	155	133	116	99.3	86.5	82.9	83.9	103	103	124	175
800	230	199	170	148	127	111	106	108	131	132	159	224
750	294	254	218	189	163	142	136	138	168	168	203	286
700	374	324	278	242	208	181	173	176	215	215	259	365
650	475	412	353	307	264	230	220	225	273	274	330	463
600	598	520	445	387	333	290	278	285	346	347	416	583
550	742	648	554	483	416	362	347	360	434	436	521	725
500	902	794	678	592	510	443	426	448	536	539	641	882
490	935	824	703	614	530	460	443	468	558	561	666	914
480	967	854	729	637	550	477	459	487	579	584	691	946
470	998	885	754	659	569	493	476	507	601	606	717	978
460	1029	914	779	681	589	510	492	528	623	629	742	1008
450	1059	943	803	703	608	526	508	548	645	652	766	1038
440	1087	971	826	724	626	542	523	569	667	674	791	1066
430	1112	998	849	744	644	557	538	589	688	696	814	1092
420	1136	1023	869	763	661	571	552	610	708	718	836	1115
410	1156	1047	888	780	677	584	566	630	728	738	857	1136
400	1172	1067	904	795	690	595	577	649	746	758	876	1154
390	1183	1085	916	808	702	604	588	668	763	776	893	1167
380	1188	1098	924	817	711	611	596	686	778	793	908	1176
370	1184	1105	928	823	717	615	603	703	790	807	919	1180
360	1169	1105	927	824	719	614	606	718	800	819	926	1177
350	1139	1096	918	820	715	609	604	732	807	829	929	1167
340	1091	1077	900	808	704	598	597	743	810	835	927	1148
330	1019	1044	873	789	686	580	584	752	808	838	919	1120
320	920	993	837	759	656	553	565	759	801	837	905	1083
310	792	923	787	717	614	517	536	761	788	831	883	1036
300	651	837	719	661	563	472	497	759	768	820	852	980
290	491	732	637	591	498	417	444	750	742	802	816	917
280	342	612	546	508	421	354	375	734	709	778	772	848
270	208	487	445	420	331	287	301	710	671	746	723	777
260	108	360	342	328	243	218	210	675	627	705	669	704
250	49.2	237	236	230	169	156	128	628	578	653	612	636
240	17.5	125	147	142	109	105	72.6	569	528	593	555	573
230	5.6	50.0	81.3	71.4	67.0	67.1	43.3	503	476	525	502	516
220	1.5	13.8	40.0	29.7	34.4	36.9	23.7	427	424	459	454	469
210		1.7	17.2	6.4	18.9	14.2	7.4	350	374	403	414	431
200			7.2	.5	8.8	1.5	1.6	278	328	360	381	400
190			2.3		2.1			220	290	326	354	376
180			.5					178	257	297	330	354
170								147	227	269	307	332
160								122	197	241	280	306
150								102	169	209	250	277
140								89.2	144	179	217	242
130								81.9	127	158	186	207
120								76.0	117	145	169	185
110								32.2	76.9	94.4	102	116

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — JUNE 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
COUNT	16	17	16	19	16	19	10	21	21	21	21	25
HMIN	109	109	109	110	109	110	117	225	225	240	254	255
RATIO	3.2	3.3	3.4	3.4	3.4	3.6	3.9	4.4	4.3	4.6	4.6	4.8
SCAT	73.8	73.5	67.6	69.3	68.8	65.7	64.8	64.2	61.3	57.8	57.7	56.2
NMAX	1429	1431	1450	1408	1252	1442	1288	1210	1170	1219	1241	1212
HMAXF	360	355	351	348	350	346	345	364	383	388	394	389
SHMAX	1796	1753	1694	1615	1463	1538	1256	1039	1008	977	969	919
SHINF	5829	5789	5785	5587	4996	5605	4891	4453	4310	4417	4469	4338
KM												
950	125	123	121	116	105	117	103	107	113	121	126	120
900	160	157	155	149	134	151	133	137	145	155	161	154
850	205	202	199	191	172	193	170	176	186	198	207	197
800	263	258	255	244	221	248	218	225	238	254	265	252
750	336	330	326	313	282	317	279	288	304	324	338	322
700	428	421	416	399	360	404	356	367	387	412	430	410
650	543	535	529	507	457	514	452	466	490	522	543	519
600	685	674	668	640	577	649	571	586	615	654	680	650
550	853	841	833	800	721	812	714	729	760	807	838	802
500	1042	1029	1021	981	883	997	878	889	917	972	1004	965
490	1081	1067	1061	1019	917	1036	912	922	948	1004	1037	997
480	1119	1106	1100	1057	951	1075	947	954	979	1036	1068	1028
470	1158	1145	1139	1095	985	1115	981	986	1008	1066	1098	1057
460	1195	1182	1177	1132	1018	1153	1016	1017	1037	1095	1126	1086
450	1232	1219	1215	1169	1051	1191	1049	1047	1063	1122	1152	1112
440	1266	1255	1252	1204	1082	1229	1082	1076	1088	1147	1175	1136
430	1299	1288	1286	1238	1112	1264	1114	1103	1110	1168	1195	1157
420	1330	1319	1319	1271	1140	1298	1144	1128	1129	1186	1211	1174
410	1357	1348	1349	1300	1166	1330	1172	1149	1144	1200	1222	1187
400	1380	1372	1376	1327	1189	1358	1198	1168	1154	1209	1226	1193
390	1399	1393	1399	1350	1209	1383	1220	1183	1157	1211	1221	1191
380	1413	1409	1417	1369	1225	1404	1239	1192	1154	1202	1204	1180
370	1421	1419	1430	1383	1236	1420	1253	1194	1141	1179	1172	1155
360	1421	1421	1436	1390	1241	1430	1262	1188	1114	1139	1124	1112
350	1411	1414	1433	1391	1237	1432	1264	1172	1072	1082	1058	1053
340	1388	1396	1418	1381	1222	1423	1258	1145	1013	1004	973	973
330	1352	1365	1390	1358	1197	1401	1242	1106	940	908	867	871
320	1301	1321	1347	1321	1161	1363	1214	1053	854	795	738	753
310	1238	1263	1289	1269	1113	1310	1170	986	754	667	592	623
300	1162	1189	1212	1203	1049	1241	1111	900	640	529	445	487
290	1074	1102	1120	1119	976	1156	1036	800	524	395	307	347
280	975	1000	1018	1024	889	1053	945	681	409	272	192	222
270	869	891	908	913	794	936	843	555	301	172	112	126
260	767	780	795	798	695	806	728	417	210	102	56.6	57.9
250	672	675	687	684	600	678	611	266	137	58.3	25.2	24.1
240	587	584	593	584	517	560	499	146	82.0	29.3	9.1	10.3
230	518	509	516	499	448	461	399	66.7	46.2	8.6	4.1	3.4
220	464	453	456	436	396	386	315	26.8	25.4	2.3	.6	.5
210	424	413	413	391	357	333	249	8.9	14.5			
200	395	385	382	360	328	295	202	1.2	3.8			
190	373	364	359	336	306	266	168					
180	354	344	338	317	286	241	142					
170	333	324	316	297	264	217	121					
160	311	300	290	275	241	192	102					
150	283	272	260	248	214	168	87.3					
140	247	243	229	217	188	148	76.3					
130	215	214	205	192	167	132	70.3					
120	193	196	189	177	154	123	65.7					
110	102	106	96.9	72.2	92.0	61.3	19.2					

TABLES OF IONOSPHERIC DATA

JUNE 1960 -- JANUARY 1950

Table 1

Washington, D. C. (38.7° N, 77.1° W) — June 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.2	30	290					2.60
01		5.0	30	280					2.70
02		5.25	30	290					2.70
03		4.05	30	280					2.70
04		4.2	30	300					2.75
05	---	4.3	30	280		130	1.80		2.80
06	(390)	4.9	29	250	3.7	115	2.50	2.7	2.00
07	450	5.3	30	230	4.3	109	3.00	3.5	2.70
08	460	5.5	30	225	4.6	109	3.20	3.6	2.62
09	400	5.7	30	220	4.9	106	3.45	4.0	2.60
10	460	5.9	29	210	4.9	107	3.70	4.1	2.60
11	440	6.2	27	210	5.0	105	3.80	>4.0	2.68
12	435	6.3	28	215	5.0	107	3.82	>4.1	2.60
13	440	6.2	30	215	5.1	107	(3.00)	4.0	2.65
14	435	6.3	30	220	5.0	109	3.78	4.0	2.55
15	420	6.65	30	230	5.0	109	3.65	3.8	2.65
16	415	6.7	30	230	4.8	109	3.40	>3.6	2.65
17	360	6.9	30	230	4.6	111	3.10	3.6	2.70
18	325	7.1	30	250	---	115	2.65	3.3	2.75
19	---	7.55	30	270		124	2.00	4.0	2.00
20		7.4	30	270				2.9	2.80
21		7.15	30	260				2.5	2.75
22		6.7	30	280		---	----		2.70
23		6.5	29	300					2.70

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

Table 2

Washington, D. C. (38.7° N, 77.1° W) — May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	31	205					2.70
01		5.4	31	290					2.70
02		5.1	31	300					2.65
03		4.8	31	300					2.70
04		4.3	31	290					2.75
05	---	4.35	30	285	---	<130	1.70	1.7	2.90
06	(425)	5.2	31	250	3.7	115	2.38	2.6	2.98
07	300	6.1	31	235	4.2	109	2.88	3.1	2.90
08	400	6.3	31	230	4.5	109	3.20	3.5	2.80
09	420	6.0	31	220	4.7	107	3.40	3.7	2.65
10	460	6.2	31	215	4.9	105	3.60	3.8	2.65
11	425	6.3	31	205	5.0	109	3.65	3.9	2.70
12	430	6.6	31	215	5.0	107	3.70	3.9	2.65
13	405	6.75	30	220	5.1	105	3.70	4.0	2.62
14	410	7.05	30	225	5.0	109	3.70		2.70
15	375	7.05	30	230	4.9	109	3.50	3.5	2.70
16	305	7.0	31	230	4.7	109	3.30	3.4	2.70
17	325	7.4	31	240	4.4	111	3.00	3.3	2.80
18	300	7.5	31	250	---	117	2.40	3.0	2.80
19	---	7.4	31	260		139	1.80	2.1	2.90
20		7.2	31	260				1.9	2.85
21		6.7	31	260				1.7	2.75
22		6.4	31	270					2.75
23		6.3	31	280					2.70

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

Table 3

Huancayo, Peru (12.0° S, 75.3° W) — May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.5	20	220					3.20
01		6.85	20	225					3.15
02		6.55	28	225					3.20
03		5.5	28	230					3.18
04		4.95	28	240					3.20
05		4.2	25	240					3.20
06		4.7	28	275		---	1.35		2.95
07		8.4	28	250		119	(2.40)	5.8	3.10
08		10.45	28	230		113	(3.05)	7.3	2.92
09		11.2	29	220		111	(3.45)	7.6	2.70
10	---	11.3	30	215	---	(109)	(3.70)	8.9	2.50
11	---	10.8	31	205	---	(109)	(3.85)	9.0	2.40
12	---	10.3	31	205	(5.1)	(109)	(3.85)	9.0	2.35
13		10.4	31	200	---	(108)	(3.80)	9.0	2.35
14		10.5	30	200		(109)	(3.65)	9.0	2.30
15		10.2	30	210		(109)	(3.35)	8.6	2.35
16		10.35	30	230		(111)	(3.00)	7.3	2.40
17		9.0	29	255		(115)	(2.35)	5.7	2.45
18		9.45	30	290		---	1.40	3.9	2.40
19		9.15	30	320					2.35
20		9.1	30	290					2.50
21		9.0	29	245				2.9	2.80
22		8.1	29	225					3.00
23		8.2	28	225					3.10

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) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.45	10					4.2	2.55
01		(4.45)	16					3.8	(2.55)
02		(4.3)	11					4.4	(2.60)
03		(4.7)	13					4.2	(2.55)
04		(4.7)	14					3.9	(2.65)
05		4.9	15					3.8	2.60
06		(5.0)	15					2.8	(2.50)
07		(5.35)	14						(2.42)
08		5.3	16						2.52
09		5.6	15						2.45
10		5.45	22						2.50
11		5.5	21						2.55
12		5.9	19						2.42
13		5.7	23						2.50
14		5.85	22						2.55
15		6.0	22						2.65
16		6.05	22						2.70
17		5.9	22						2.70
18		5.0	22					2.4	2.90
19		5.15	20						2.90
20		(4.75)	20					3.4	(2.72)
21		4.9	16					3.5	2.70
22		(4.8)	15					4.2	2.65
23		(4.5)	15					3.8	(2.58)

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

Table 5

Boulder, Colorado (40.0° N, 105.3° W) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.45	26						2.60
01		5.0	27						2.55
02		4.8	25						2.60
03		4.5	24						2.60
04		4.2	23						2.60
05		4.0	23					2.3	2.65
06		5.05	24					2.2	2.80
07		5.6	25					2.8	2.90
08		5.95	26					3.3	2.80
09		6.9	25					3.6	2.68
10		7.1	25					3.8	2.70
11		8.0	25					3.8	2.60
12		8.6	27						2.65
13		8.95	28						2.70
14		9.4	27					3.0	2.75
15		9.0	27						2.80
16		8.9	29						2.00
17		8.5	29					2.8	2.90
18		8.5	29					2.3	2.95
19		8.0	29					1.9	2.95
20		7.0	28						2.82
21		6.0	29						2.75
22		5.5	28						2.65
23		5.5	27						2.65

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

Table 6

Talara, Peru (4.6° S, 81.3° W) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(10.6)	22	220				1.8	(2.85)
01		10.7	22	240					2.90
02		10.7	22	245					3.08
03		9.1	25	240					3.18
04		7.1	25	235					3.00
05		5.9	25	245					3.00
06		5.3	23	255				2.1	2.95
07		>7.95	28	260		<131	2.30		3.00
08		10.2	29	240		121	3.05		2.85
09		11.3	29	230		119	3.50	3.9	2.60
10		11.95	30	220		115	3.80		2.35
11	---	12.2	30	215		115	4.00		2.25
12	---	12.2	30	210		113	4.05		2.20
13	---	12.65	30	210	---	111	4.00		2.25
14	---	13.0	30	210	---	111	3.90		2.30
15	---	13.1	30	<220		111	3.65	4.2	2.35
16		12.95	30	<225		113	3.30	4.0	2.32
17		12.7	30	(250)		(119)	2.92	4.8	2.30
18		(12.3)	29	275		---	2.10	4.6	(2.30)
19		>11.65	30	330				3.8	(2.25)
20		11.9	21	345				1.8	(2.35)
21		(11.85)	18	200				2.2	(2.50)
22		(11.7)	20	250				3.1	(2.75)
23		11.9	17	220				2.3	2.90

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

Table 7

Thule, Greenland (76.6° N, 68.7° W) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.8)	23	255					(2.75)
01		(4.4)	16	260					(2.75)
02		(4.55)	18	260		---	----		(2.80)
03		(4.6)	12	260		---	----		(2.75)
04		(4.6)	16	260		(139)	----		(2.75)
05		(4.2)	20	250		121	1.65		(2.80)
06		(5.55)	20	250		(121)	1.82	2.6	(2.90)
07		(5.25)	22	250		<119	2.00		(2.95)
08		(5.8)	23	250		(120)	2.10	2.6	(3.02)
09	---	(6.0)	20	250	---	(119)	2.15	2.6	(3.00)
10	---	(6.0)	24	245	---	119	2.30	2.7	(2.92)
11	---	(6.0)	22	240	---	118	2.30	3.0	(2.90)
12	---	(5.95)	20	240	---	119	2.30	3.0	(2.88)
13	---	(6.15)	20	245	---	(119)	2.30	2.7	(2.98)
14	---	(5.8)	23	240	---	123	2.25	2.3	(2.85)
15	---	(5.95)	24	240	---	<120	2.10	2.4	(2.90)
16	---	(6.25)	22	250		120	2.10	2.3	(2.90)
17	---	(6.05)	22	260		<128	1.85	3.6	(2.80)
18		(5.6)	24	260		<126	----	3.2	(2.88)
19		(5.3)	24	255		---	----	3.2	(2.80)
20		(5.8)	22	260					(2.75)
21		(5.3)	21	260				2.6	(2.75)
22		(5.1)	20	260					(2.80)
23		(5.4)	17	265				1.8	(2.78)

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

Table 8

Tromso, Norway (69.7° N, 19.0° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.1)	9	(345)				3.5	(2.50)
01		(4.3)	3	---				3.0	----
02		(4.6)	6	(305)		---	----	3.1	----
03		(4.3)	5	(300)		---	----	(2.4)	----
04		(4.7)	7	(305)		---	----	(1.9)	----
05	---	(4.9)	9	(290)		---	----		(2.70)
06	---	5.4	17	280		---	1.90		2.75
07	---	5.8	20	255		140	2.20		2.90
08	---	6.8	23	250		125	2.45		2.90
09	---	7.6	24	245	---	120	2.70		2.90
10	---	8.5	25	245	---	120	2.80		2.85
11	---	9.1	26	245	---	115	2.85		2.90
12	(260)	8.8	29	240	---	115	2.75		2.90
13	(255)	9.1	28	245	---	120	2.75		2.90
14	(250)	8.6	28	245		120	2.65		2.90
15	245	8.1	28	250		120	2.45		2.90
16	250	7.7	24	250		130	2.30		2.90
17	(250)	6.4	22	(250)		130	2.00	2.6	2.90
18	---	(6.0)	19	250		115	----	3.4	(2.90)
19		(5.4)	16	250		---	----	3.6	(2.70)
20		(4.8)	9	290		---	----	3.4	----
21		(5.3)	7	(295)				3.8	----
22		(4.0)	7	(310)				3.2	----
23		(4.9)	6	(345)				3.6	

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

Table 9

Kiruna, Sweden (67.8° N, 20.3° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	11	350				3.2	(2.6)
01		4.5	13	360				4.4	2.6
02		4.8	13	340				3.4	2.6
03		4.0	15	320				2.6	2.6
04		3.6	16	310					2.7
05		4.2	20	300		---	<1.45		2.0
06		5.0	20	270		---	1.60		2.8
07	---	5.6	25	250	---	<125	2.00		3.0
08	(270)	6.6	24	250	3.6	120	2.40		3.0
09	(270)	7.3	27	240	3.4	115	2.60		3.0
10	(265)	7.8	25	240	4.2	110	2.70		3.0
11	(280)	8.0	27	240	4.2	110	2.80		3.0
12	(290)	8.6	29	235	4.4	110	2.70		3.0
13	---	8.7	28	240	---	115	2.80		3.0
14	---	8.4	28	240	---	115	2.70		3.0
15	---	8.3	27	240	---	120	2.40		3.0
16		7.8	26	250		120	2.25		3.0
17		6.5	25	260		---	(1.70)		3.0
18		6.4	14	270		---	----	2.9	3.0
19		6.0	18	270		---	----	3.2	2.8
20		5.3	20	290				3.2	2.7
21		5.4	12	280				3.5	2.8
22		(5.8)	9	300				3.7	(2.6)
23		(4.7)	9	320				3.4	(2.6)

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

Table 10

Sodankyla, Finland (67.4° N, 26.6° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.4)	2	310				(3.2)	----
01		(5.5)	1	355				(2.0)	----
02		(5.1)	2	350				(3.3)	----
03		(4.6)	1	340				(3.3)	----
04		(4.6)	3	310		---	----	(2.8)	----
05		(4.3)	3	310		---	----	(2.5)	----
06		(5.2)	6	280		---	E	(2.5)	(2.85)
07		5.3	19	260		---	1.70	(3.2)	2.95
08		6.3	19	250		120	2.40	(3.3)	3.00
09		6.8	22	240		115	2.60	(3.4)	2.95
10		7.0	22	235		115	2.75	(3.4)	2.95
11		7.7	23	225		115	2.75	(3.7)	2.90
12		9.0	22	230		115	2.80	(3.5)	2.90
13		8.9	24	230		115	2.90	(3.6)	2.95
14		9.0	24	230		115	2.80	(3.3)	2.95
15		9.0	26	235		115	2.70	(3.3)	2.95
16		8.6	20	240		120	2.60	(3.5)	3.00
17		8.1	21	245		130	2.20	(3.3)	3.00
18		7.6	13	240		---	E	(3.2)	3.00
19		7.6	12	250		---	E	(3.3)	2.95
20		(7.0)	6	280		---	E	(2.8)	(2.85)
21		(6.6)	6	290		---	----	(2.8)	(2.80)
22		(6.0)	3	300				(2.5)	----
23		(5.6)	1	345				(3.4)	----

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

Table 11

Lulea, Sweden (65.6° N, 22.1° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.6	23	335					2.6
01		4.4	21	340					2.6
02		4.4	22	325					2.6
03		4.1	24	310					2.6
04		4.0	22	300					2.75
05		4.0	24	285		---	---		2.8
06		4.9	21	260		130	1.8		3.0
07		5.9	26	250		130	2.2		3.0
08		6.5	27	250		125	2.5		3.0
09		7.0	25	240		120	2.8		3.0
10	---	7.8	26	240	---	125	2.8		3.0
11	---	8.4	20	240	---	120	3.0		3.0
12	---	9.0	29	240	---	110	3.0		3.0
13	---	9.0	29	240	---	120	2.9		3.1
14	---	9.0	26	240	---	120	2.8		3.05
15		8.7	27	245		125	2.6		3.1
16		8.8	26	245		130	2.2		3.1
17		7.7	25	245		140	2.0		3.0
18		6.4	20	245		---	---		2.9
19		5.9	23	250					2.9
20		6.0	20	260					2.8
21		5.2	23	260					2.7
22		5.4	20	200				<1.5	2.7
23		4.0	19	300					2.7

Time: 15.0°E.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 12

Lycksele, Sweden (64.6° N, 18.8° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		4.4	28	310		---	----	2.4	2.4
01		4.3	27	320		---	----	3.0	2.4
02		4.4	26	315		---	----	2.3	2.4
03		4.1	27	325		---	----	2.4	2.4
04		3.8	28	305		---	----	2.3	2.4
05		3.8	30	280		130	1.10	2.2	2.5
06		4.7	29	265		120	1.60	2.2	2.7
07	---	5.4	31	250	----	115	2.05	2.7	2.8
08	(300)	6.4	30	240	3.50	115	2.35	2.7	2.8
09	260	7.4	30	240	3.95	110	2.65	2.8	2.8
10	275	7.7	31	230	4.20	110	2.80	2.7	2.8
11	280	8.2	30	230	4.30	105	2.90	2.7	2.8
12	285	9.0	31	225	4.40	105	2.95	2.7	2.8
13	255	9.2	30	230	4.05	110	2.90	2.7	2.85
14	(280)	9.0	31	235	4.00	110	2.75	2.8	2.8
15	(280)	9.0	31	240	3.90	110	2.60	2.7	2.8
16	---	8.6	31	240	----	115	2.25	2.7	2.8
17		7.9	30	245		130	2.00	2.6	2.85
18		6.7	30	245		130	1.45	2.5	2.8
19		6.3	26	245		---	1.00	2.5	2.7
20		(5.6)	26	250		---	----	2.4	(2.7)
21		4.9	26	250		---	----	2.3	2.6
22		(4.7)	26	265		---	----	2.3	2.55
23		(4.8)	26	290		---	----	2.4	2.5

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 16.0 Mc in 6 minutes, automatic operation.

Table 13

Nurmijarvi, Finland (60.5° N, 24.6° E) — March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.2)	6						(2.70)
01		(4.5)	3						----
02		(3.6)	4						----
03		(4.4)	4						----
04		(3.6)	4						----
05		(3.5)	6						(2.65)
06		(4.0)	8						(2.90)
07		5.2	15						3.00
08		5.8	24						3.10
09		6.7	21						3.10
10		8.0	24						3.00
11		8.7	26		---				3.00
12		9.2	26		---				3.00
13		9.8	29		---				3.00
14		9.8	29		---				3.00
15		9.7	29		---				3.05
16		9.3	29						3.10
17		8.8	26				----		3.10
18		8.5	24						3.00
19		8.1	13						3.00
20		7.4	10						3.00
21		(6.4)	8						(2.90)
22		(5.6)	6						(2.75)
23		(5.2)	5						(2.70)

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

Table 14

Upsala, Sweden (59.8° N, 17.6° E) — March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		4.2	27	295		105	0.00	2.2	2.5
01		3.8	27	305		110	0.85	2.3	2.5
02		3.6	20	305		110	0.85	2.2	2.5
03		3.3	20	300		105	0.80	2.3	2.5
04		3.2	24	295		105	0.85	2.3	2.6
05		3.4	23	290		110	0.85	2.3	2.7
06		4.2	28	260		115	1.30	2.9	2.9
07		5.5	31	245		110	2.00	3.0	3.0
08	---	6.6	31	235	---	110	2.45	3.2	3.0
09	---	7.6	30	230	4.4	110	2.65	4.4	3.0
10	---	8.5	29	225	4.5	105	2.90	4.3	3.0
11	(320)	8.8	31	220	4.5	105	3.05	4.5	2.9
12	---	9.3	31	220	(4.7)	105	3.10	4.5	2.9
13	---	9.4	31	230	4.5	105	3.05	4.6	2.9
14	---	9.5	31	230	---	105	3.00	4.1	2.9
15	---	9.4	31	235	---	105	2.65	2.9	3.0
16	---	9.0	31	240	---	105	2.40	3.0	3.0
17	---	8.0	30	240	---	105	2.10	2.4	3.0
18		8.4	30	240		110	1.50	1.9	2.9
19		7.6	30	240		105	0.90		2.9
20		6.8	25	245		105	0.90		2.9
21		5.9	23	250		105	----		2.8
22		5.0	23	280		105	0.70		2.8
23		4.7	21	290		105	(0.85)		2.6

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 15

Inverness, Scotland (57.4° N, 4.2° W) — March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.8	27	300				<1.1	2.50
01		4.5	27	300				<1.0	2.50
02		4.1	29	300				<0.9	2.50
03		>3.5	26	305				<0.9	2.50
04		3.2	26	300				<1.0	2.50
05		3.1	30	300				<1.1	2.60
06		3.7	31	290		120	1.75		2.70
07	300	5.1	31	255	---	120	1.90		2.95
08	505	6.3	31	250	---	120	2.40		3.00
09	475	7.0	31	230	---	110	2.75		3.00
10	400	7.8	31	230	---	110	2.95		2.95
11	390	8.2	31	230	---	110	3.10		2.90
12	420	8.8	31	220	---	110	3.20		2.90
13	395	8.8	31	230	---	105	3.10		2.90
14	360	9.0	31	225	---	105	3.10		2.90
15	---	8.8	31	240	---	110	2.95		2.95
16	400	8.9	31	240	---	110	2.70		2.95
17		8.6	30	250		120	2.40		2.90
18		8.6	30	250		125	2.00		2.95
19		8.1	29	250				<1.6	2.90
20		7.3	20	245				<1.6	2.85
21		6.2	27	250				<1.6	2.70
22		5.6	25	260				<1.6	2.65
23		5.0	26	300				<1.6	2.60

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

Table 16

De Bilt, Holland (52.1° N, 5.2° E) — March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.0	29	300					2.80
01		4.8	24	300					2.80
02		4.4	26	<310					2.75
03		4.3	25	<315					2.75
04		4.0	28	<300					2.80
05		3.8	30	(290)					2.80
06		4.8	27	260		---	2.0		3.20
07	---	6.1	30	250	---	120	2.3		3.25
08	(310)	7.6	29	230	4.0	115	2.8		3.15
09	(320)	8.7	29	225	4.5	110	3.0	3.0	3.15
10	295	8.2	27	225	4.6	110	3.3		3.10
11	300	9.5	25	225	4.9	115	3.4		3.10
12	(305)	9.5	28	240	5.0	115	3.5		3.05
13	(295)	9.5	29	225	---	115	3.5		3.10
14	---	9.5	29	230	---	115	3.3		3.10
15	---	9.5	30	230	---	115	3.0		3.15
16	---	9.2	30	240	---	120	2.6		3.20
17	---	9.0	28	240	---	<140	2.2		3.20
18		8.6	28	240		---	---		3.10
19		7.8	30	<250					3.10
20		6.6	28	245					3.00
21		5.7	25	260					3.00
22		5.3	26	(280)					2.90
23		5.0	26	<300					2.85

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

Table 17

Slough, England (51.5° N, 0.6° W) — March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.3	31	290				<1.3	2.60
01		5.2	31	295				<1.0	2.60
02		4.8	31	300				<0.9	2.55
03		4.4	31	295				<0.9	2.55
04		4.1	31	295				<1.0	2.60
05		3.8	30	265				<1.2	2.70
06		4.3	31	270		---	<1.60		2.75
07		5.7	31	250		120	2.10		3.10
08		7.1	31	240		110	2.60		3.05
09	340	8.1	29	225	4.5	105	2.90		3.00
10	385	8.7	30	220	---	105	3.10	3.2	3.00
11	370	9.1	31	210	---	105	3.35		2.95
12	350	9.9	31	210	---	105	3.40		3.00
13	355	9.6	31	220	---	105	3.30		2.95
14	---	9.8	31	225	---	105	3.25		2.95
15	---	9.5	31	230	---	105	3.10		3.00
16	---	9.5	31	240	---	110	2.80		3.00
17	---	9.5	31	245	---	120	2.35		3.00
18		9.1	31	245		---	<1.80		3.00
19		8.4	30	230			----	<1.6	2.95
20		7.1	31	235			----	<1.6	2.90
21		6.2	31	235				<1.6	2.75
22		5.8	31	<240				<1.6	2.70
23		5.6	31	<255				<1.6	2.60

Time: 0.0°.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 18

Graz, Austria (47.1° N, 15.5° E) — March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		(5.5)	29	(325)					(2.6)
01		(5.3)	28	(325)					2.7
02		(5.0)	28	(325)					(2.7)
03		5.0	26	(330)					2.7
04		>4.9	18	<350					(2.7)
05		>4.7	24	<345					2.7
06		>5.0	24	<295					3.0
07		>6.7	28	240					3.1
08		8.4	27	240					3.2
09		9.1	28	240					3.1
10	290	(9.7)	29	240	(4.6)				3.1
11	(270)	(10.8)	29	240	---				(3.1)
12	(300)	10.8	30	(235)	---				3.0
13	290	11.0	30	240	(5.4)				3.0
14		10.8	30	240					3.0
15		10.8	30	(235)					3.0
16		10.4	31	240					3.1
17		>9.3	31	240					3.1
18		>8.9	31	240					3.1
19		(8.4)	31	245					3.0
20		>6.6	31	260					(2.9)
21		>5.6	30	(275)					(2.8)
22		>5.6	24	<300					(2.8)
23		(5.6)	29	(310)					(2.7)

Time: 15.0°E.
Sweep: 2.0 Mc to 18.0 Mc in 50 seconds.

Table 19

Sottens, Switzerland (46.6° N, 6.7° E) March 1960

Time	h'F2	foF2—Count		h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	5.4	24						2.7
01	300	5.5	29						2.7
02	300	5.4	28						2.7
03	300	5.2	30						2.7
04	290	4.8	27						2.7
05	280	4.7	28						2.7
06	270	4.2	29						2.9
07	260	5.0	21		---				3.0
08	230	6.7	25	220	3.7	100	2.5		3.25
09	230	8.2	18	220	4.0	100	2.9		(3.2)
10	250	8.9	24	200	4.5	100	3.1		3.2
11	260	8.9	24	200	4.9	100	3.3		3.2
12	250	9.0	25	200	5.2	100	3.4		3.2
13	260	9.2	29	200	5.2	100	3.4		3.3
14	250	8.8	24	200	5.0	100	3.4		3.2
15	250	8.8	24	210	5.0	100	3.2		3.25
16	230	8.5	27	230	4.8	100	3.0		3.2
17	240	8.2	20	---	---	100	2.6		3.2
18	230	7.8	21	---	---	120	2.1		(3.2)
19	230	7.4	21						3.25
20	230	7.2	18						3.2
21	240	6.6	14						3.05
22	260	6.3	16						2.9
23	280	5.9	15						2.8

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

Table 20

Wakkanai, Japan (45.4° N, 141.7° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.0	31	295					2.65
01		5.9	31	290					2.70
02		5.7	31	290					2.70
03		5.5	31	280					2.70
04		5.3	31	265					2.70
05		5.3	31	295					2.70
06		6.8	31	240			2.00		3.05
07	---	9.0	31	230			2.45		3.10
08	---	10.4	30	235			2.90		3.00
09	---	11.2	30	230			3.20		3.05
10	(260)	11.8	30	230			3.40		3.05
11	(270)	12.0	30	225			3.45		3.00
12	(255)	12.2	30	225	---		3.50		3.00
13	(250)	12.0	30	220			3.45		2.95
14	---	11.6	30	235			3.30		2.95
15		11.0	30	240			3.00		2.90
16		10.3	30	240			2.65		2.95
17		10.2	30	240			2.20		3.00
18		9.0	30	230					3.00
19		7.9	31	240					2.90
20		7.3	30	250					2.85
21		6.8	30	260					2.80
22		6.5	30	275					2.75
23		6.2	30	290					2.70

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

Table 21

Genoa (Monte Capellino), Italy (44.6° N, 9.0° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.4	30	280					
01		6.2	30	300					
02		6.2	31	300					
03		6.0	31	300					
04		5.8	31	290					
05		5.4	31	285					
06		5.1	31	275					
07		6.5	31	250			1.7		
08		8.1	30	235			2.4		
09		9.2	28	225			2.8		
10		10.3	30	220			3.1	3.2	
11		11.2	30	220			3.4	3.4	
12		11.6	30	220			3.5		
13		11.6	30	220			3.5		
14		11.8	31	225			3.4		
15		11.7	31	225			3.3		
16		11.6	31	235			3.1		
17		10.8	31	240			2.6		
18		10.8	31	240			1.9	2.0	
19		10.0	31	235					
20		8.7	30	240					
21		7.4	29	245					
22		6.8	30	255					
23		6.5	30	270					

Time: 15.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 5 minutes, automatic operation.

Table 22

Rome, Italy (41.8° N, 12.5° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.2)	30	290					(2.65)
01		(6.0)	29	300					2.60
02		(5.9)	28	300					(2.65)
03		5.7	29	300					2.70
04		(5.4)	30	290					(2.65)
05		(5.2)	31	290					(2.70)
06		5.1	31	270		---	---		2.90
07		(6.5)	23	250		140	2.2		(3.10)
08	---	(8.8)	24	240	---	120	2.7		(3.20)
09	---	(9.0)	20	230	---	110	3.0		(3.05)
10	---	(11.0)	28	220	---	110	3.3		(3.10)
11	---	(11.5)	26	210	---	110	3.5		(3.00)
12	---	(11.8)	29	210	---	110	3.6		(3.00)
13	---	(11.8)	31	220	---	110	3.6		(2.95)
14		(11.9)	24	220		110	3.5		(2.95)
15		(11.4)	26	240		110	3.4		(3.00)
16		(11.2)	26	240		120	3.0		(3.00)
17		(10.9)	6	250		120	2.6		----
18		(9.4)	6	250		140	1.8		(3.00)
19		(8.9)	14	240					(3.00)
20		(8.3)	22	240					(2.85)
21		(7.0)	18	250					(2.80)
22		(6.6)	26	260					(2.75)
23		(6.2)	26	270					(2.75)

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

Table 23

Akita, Japan (39.7° N, 140.1° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.2	31	290					2.70
01		6.2	31	290					2.75
02		6.0	31	290					2.75
03		5.8	31	290					2.75
04		5.5	31	285					2.70
05		5.4	31	295					2.70
06		6.8	31	245			2.00		3.10
07		9.3	31	235			2.60		3.25
08	(250)	10.9	31	240			2.95		3.20
09	245	11.7	31	235			3.20		3.15
10	250	12.2	31	220	---		3.50		3.05
11	255	12.9	31	225	---		3.60		3.05
12	250	12.6	31	220			3.60		3.00
13	250	12.5	31	215			3.60		3.00
14	250	12.0	31	230			3.50		2.95
15	250	11.7	31	240			3.20		3.00
16		11.2	31	245			2.80		3.00
17		10.9	31	245			2.40		3.10
18		9.9	31	235					3.10
19		8.2	31	240					3.00
20		7.7	31	250					2.90
21		7.2	31	255					2.90
22		6.7	31	265					2.80
23		6.6	31	280					2.80

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

Table 24

Tokyo, Japan (35.7° N, 139.5° E) March 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.4)	31	300					(2.70)
01		6.2	31	295					2.75
02		6.0	31	290					2.75
03		5.6	31	260					2.70
04		5.3	31	300					2.65
05		5.3	31	305					2.65
06		6.5	31	250			----		3.00
07		9.2	31	240			(2.55)		(3.20)
08		11.0	31	240			3.00		3.20
09		11.4	31	230			3.30		3.15
10	265	12.3	31	225			(3.50)	3.5	3.00
11	260	13.1	31	230			(3.60)	3.9	3.00
12	260	13.1	31	230			(3.70)		3.00
13	270	12.8	31	230			3.65		2.90
14	(260)	12.5	31	230			3.50		2.90
15	---	11.9	31	235			3.30		2.95
16		11.7	31	245			(2.90)		3.00
17		11.4	31	250			(2.40)		3.00
18		(10.5)	31	245			----		(3.05)
19		(8.6)	31	245					(3.00)
20		(7.4)	31	250					(2.85)
21		(7.0)	31	260					(2.80)
22		(6.9)	31	280					(2.80)
23		6.5	31	<295					2.75

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

Table 25

Yamagawa, Japan (31.2° N, 130.6° E) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(7.2)	31	280					(2.80)
01		7.1	31	275					2.85
02		6.7	31	260					2.85
03		6.2	31	250					2.90
04		5.5	31	240					2.80
05		5.2	31	280					2.70
06		5.2	30	300					2.75
07		8.0	30	245			2.00		3.20
08		10.2	30	240			2.80		3.20
09		11.2	30	240			3.20		3.15
10		12.0	31	230		3.45		3.6	3.05
11		12.9	31	225		3.60		3.8	3.00
12		13.6	31	210		3.75			2.95
13		13.8	30	225		3.80			2.90
14		13.7	29	225		3.70			2.85
15		13.3	29	230		3.50			2.85
16		13.0	30	240		3.20			2.90
17		12.8	30	250		2.80			2.95
18		12.5	31	250		2.00			3.05
19		11.4	31	240					3.00
20		(9.7)	31	240					(2.90)
21		(8.9)	27	250					(2.80)
22		(8.1)	27	255					(2.80)
23		(7.4)	29	270					(2.75)

Time: 135.0°E.
Sweep: 1.0 Mc to 20.3 Mc in 30 seconds.

Table 26

Formosa, China (25.0° N, 121.5° E) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		12.4	28	230					3.15
01		11.7	28	220					3.20
02		10.2	27	220					3.30
03		7.6	28	200					3.40
04		5.7	30	210					2.95
05		4.7	28	230					2.90
06		5.7	29	260					3.05
07		9.4	31	225		<114	(2.50)		3.30
08		11.1	31	215		105	3.05	3.1	3.25
09	---	12.2	30	210	---	101	(3.40)	3.6	3.20
10	---	13.1	31	205	---	103	(3.65)	3.8	3.10
11	---	13.9	31	200	---	105	----	3.8	3.00
12	---	14.8	31	200	---	<109	----	4.0	3.00
13	---	15.7	31	200	---	109	----	3.8	2.95
14	(320)	16.3	31	205	---	107	----	3.0	2.95
15	(305)	>16.8	31	210	---	107	3.50	3.7	3.00
16	(270)	>17.0	29	220	---	103	3.10	3.4	3.05
17		>16.7	30	230		107	2.55	2.9	3.05
18		15.4	30	230					3.05
19		>15.5	31	230					3.10
20		>16.3	30	215					(3.10)
21		>15.6	31	210					(3.00)
22		14.9	31	220					3.05
23		>13.8	31	225					3.15

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

Table 27

El Cerillo, Mexico (19.3° N, 99.5° W) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.1	26	250					2.90
01		5.9	26	270					2.90
02		5.8	27	260					2.90
03		5.6	26	260					3.00
04		4.9	25	255					2.95
05		4.4	24	260					2.80
06		4.4	24	265					2.75
07		6.6	25	245		135	2.00		3.15
08		9.0	27	225		109	2.60		3.30
09		10.4	30	220		107	3.10		3.15
10		11.0	27	210		106	3.45		3.00
11		11.8	27	205		107	3.70		3.10
12		11.7	26	210		109	3.80		3.00
13		12.4	24	215		111	3.80		2.90
14		13.0	22	220		105	3.00	4.0	(2.80)
15		13.4	21	230		109	3.60		(2.90)
16		12.5	21	230		109	3.40	3.8	(3.00)
17		12.0	22	235		109	3.00	3.6	3.20
18		11.4	21	235		112	2.20	3.1	3.30
19		11.0	25	220				2.4	3.20
20		9.8	26	210				2.2	3.10
21		8.0	26	220					3.00
22		6.6	27	260				1.9	2.80
23		6.8	27	275				1.6	2.80

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 28

Singapore, British Malaya (1.3° N, 103.8° E) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.5	19	210		---	----		3.05
01		9.9	16	230		---	----		2.90
02		9.1	18	240		---	----		3.05
03		8.4	20	230		---	----		3.05
04		7.2	19	225		---	----		3.10
05		6.0	18	230		---	----		3.10
06	---	5.6	20	250	---	120	----		2.00
07	---	9.2	21	250	---	125	2.40		3.20
08	---	11.0	26	240	---	115	3.10		2.95
09	---	12.1	27	225	---	110	3.60	(3.0)	2.65
10	---	12.7	20	(220)	---	110	3.85		2.30
11	---	12.9	29	210	---	110	4.05		2.20
12	---	12.8	30	205	---	110	4.10		2.10
13	---	12.6	27	205	---	110	4.10		2.20
14	---	12.8	27	(200)	---	110	3.90		2.25
15	---	13.1	27	210	---	110	3.65		2.25
16	---	13.2	28	225	---	110	3.25		2.30
17	---	13.3	26	250	---	115	2.60		2.30
18	---	13.3	27	275	---	115	1.80		2.30
19		12.9	21	355					2.20
20		>12.5	13	350					(2.30)
21		>13.3	12	270					(2.60)
22		>13.5	13	225				1.6	(2.85)
23		>13.3	11	210					(3.15)

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

Table 29

Falkland Is. (51.7° S, 57.8° W) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.4	28	<330				2.2	2.5
01		6.2	25	<330				1.4	2.45
02		6.2	28	<330				1.8	2.4
03		6.1	29	<315					2.4
04		6.0	29	300		---	----		2.45
05	400	5.6	25	295		---	E		2.5
06	---	6.6	24	250		165	E		3.0
07	---	7.7	29	235		120	2.30		3.15
08	---	9.7	29	235		110	2.80	3.3	3.15
09	285	10.4	28	230		110	3.10	3.9	3.1
10	280	11.2	28	235		110	3.35	4.4	3.15
11	275	11.5	25	230		105	(3.50)	(4.3)	3.05
12	250	12.0	29	<230	---	105	(3.50)	(4.7)	2.95
13	250	12.3	29	230		105	----	(4.1)	3.0
14	270	11.9	29	240		105	----	(4.1)	3.1
15	260	11.4	30	240		105	----	3.6	3.05
16	250	10.7	29	240		110	2.80	3.0	3.15
17		9.0	27	240		115	2.40	2.8	3.2
18		9.3	27	240		---	E	(2.4)	3.2
19		8.6	29	240		---	E	(2.5)	3.1
20		7.7	27	225				(2.4)	2.9
21		7.0	26	235				(2.1)	2.85
22		6.4	24	<240				(2.1)	(2.55)
23		6.4	25	<320				(2.3)	(2.5)

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

Table 30

Moscow, U.S.S.R. (55.5° N, 37.3° E) February 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.0	28	290			----	<1.4	2.60
01		3.9	29	295			----	<1.3	2.65
02		3.8	29	300			----		2.60
03		3.5	29	300			----		2.60
04		3.3	29	280			----		2.65
05		3.1	29	275			----		2.75
06		3.4	28	270			E	<1.2	2.80
07		5.3	29	240			1.70		3.10
08	---	7.9	29	230			2.30		3.20
09	---	10.1	29	225	---		2.60		3.15
10	---	11.2	29	230			2.90		3.10
11	(255)	12.2	29	220			3.00		3.10
12	(250)	12.0	29	225			3.00		3.10
13	---	12.2	28	225			3.00		3.05
14		12.1	29	230			2.80		3.00
15		11.6	29	230			2.50		3.10
16		10.8	29	220			2.00		3.15
17		9.4	29	220			1.30		3.10
18		0.0	29	220			----	<1.3	3.15
19		6.5	29	220			----	<1.3	3.05
20		5.5	29	240			----	(1.3)	2.90
21		4.5	29	260			----	<1.4	2.80
22		4.2	29	275			----	<1.4	2.65
23		4.0	29	290			----	<1.4	2.60

Time: 30.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 31

Lulea, Sweden (65.6° N, 22.1° E) December 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.7	15	340				3.1	2.55
01		4.4	19	350		---	---	3.0	2.6
02		4.0	19	335		---	---	2.6	2.7
03		4.0	22	300		---	---	2.1	2.6
04		4.5	21	295		---	---		2.75
05		4.3	25	270		---	---		2.9
06		3.7	25	250		---	---		2.9
07		3.0	21	260		---	---		3.0
08		4.0	28	260		---	---		2.9
09		5.5	27	250		---	1.5		3.0
10		7.3	29	240		---	1.8		3.1
11		9.3	28	240		---	1.9		3.3
12		9.8	26	225		---	2.0		3.25
13		9.3	25	230		115	1.8		3.2
14		8.8	23	225		---	1.4		3.2
15		7.3	23	225					3.1
16		6.6	16	225					3.2
17		4.2	18	230					3.2
18		3.6	20	250					3.0
19		3.4	15	295				2.7	2.9
20		3.5	12	280		---	---	2.8	(3.0)
21		(3.4)	12	<310				2.9	(2.65)
22		(3.2)	16	300				3.4	2.7
23		(3.6)	16	<340				3.7	(2.6)

Time: 15.0°E.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 32

Sodankyla, Finland (67.4° N, 26.6° E) November 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(2.8)	1	360				>4.0	----
01		(3.7)	2	380				4.4	----
02		(3.5)	1	370				4.3	----
03		(2.9)	1	330				3.6	----
04		(3.2)	1	320				3.5	----
05		(5.1)	3	305				3.6	----
06		(4.2)	2	290				3.8	----
07		(4.2)	7	270		---	----	3.8	(2.65)
08		(4.6)	9	265		---	E	3.9	(2.80)
09		5.6	11	255		---	E	4.0	2.95
10		7.3	19	245		---	1.85	4.2	3.10
11		8.3	21	245		---	2.00	4.6	3.10
12		9.4	27	240		---	2.25	5.4	3.00
13		9.0	24	240		---	2.20	5.1	3.00
14		10.2	16	230		150	1.80	4.4	3.10
15		9.4	13	235		---	1.60	4.2	3.00
16		8.5	12	230		---	E	4.0	3.05
17		(7.6)	7	250		---	----	4.2	(3.00)
18		(6.2)	2	265		---	----	3.9	----
19		(5.0)	7	310		---	----	4.0	(2.90)
20		(4.9)	4	320				4.3	----
21		(4.8)	1	305				4.2	----
22		(4.0)	3	365				4.4	----
23		---	0	360				4.4	

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

Table 33

Nurmijarvi, Finland (60.5° N, 24.6° E) November 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(2.4)	3						----
01		(2.9)	6						(2.65)
02		(2.7)	5						(2.65)
03		(2.8)	5						(2.70)
04		(2.6)	7						(2.70)
05		(2.4)	7						(2.90)
06		(2.6)	8						(2.95)
07		(2.8)	8						(2.80)
08		4.8	14						3.10
09		6.6	20						3.20
10		8.7	24						3.20
11		11.0	21						3.15
12		11.2	27						3.20
13		11.7	25						3.15
14		11.6	26						3.10
15		11.3	19						3.20
16		9.7	19						3.20
17		8.8	17						3.20
18		6.8	14						3.10
19		(5.5)	9						(3.05)
20		4.4	11						2.90
21		3.6	10						2.85
22		(2.7)	7						(2.65)
23		(2.6)	6						(2.70)

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

Table 34

Lindau/Harz, Germany (51.6° N, 10.1° E) October 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.19	30	305					2.56
01		4.98	30	308					2.53
02		4.74	28	303					2.52
03		4.64	29	299					2.57
04		4.36	31	293					2.60
05		4.03	30	265					2.78
06		3.78	30	255		---	E		2.72
07		5.45	31	241		---	1.80	2.5	3.08
08	---	7.60	30	230	---	112	2.35	3.1	3.13
09	---	9.10	29	232	---	106	2.80	3.8	3.14
10	---	9.95	28	226	---	105	3.08	4.0	3.04
11	---	11.15	29	222	---	104	3.21	4.2	2.99
12	---	11.50	28	226	---	103	3.22	4.3	2.97
13		11.75	29	227		102	3.13	4.0	2.96
14		11.45	28	229		104	3.04	4.0	2.93
15		11.10	29	233		103	2.83	3.8	2.97
16		11.00	28	232		---	2.56	4.0	3.02
17		10.58	30	230		---	2.07	3.5	3.04
18		9.34	30	229		---	----	3.0	3.00
19		8.15	31	230				2.5	3.00
20		7.11	28	232					2.90
21		6.16	30	240					2.82
22		5.39	30	258					2.64
23		5.19	30	298					2.56

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

Table 35

Byrd Station (80.0° S, 120.0° W) May 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>6.35	12	<340					----
01		(5.35)	10	355		---	---		(2.50)
02		5.0	15	370					2.42
03		(5.2)	13	360				2.7	(2.42)
04		(5.5)	8	<325				3.0	(2.55)
05		(5.0)	9	<295					(2.60)
06		(4.4)	9	(290)					(2.70)
07		(4.3)	4	(255)					----
08		4.35	10	270					(2.90)
09		5.0	13	270					(2.90)
10		5.5	15	260					2.80
11		(5.8)	19	260					2.90
12		>5.35	10	275					(2.82)
13		(5.25)	10	285					(2.80)
14		(4.3)	10	305				>1.5	(2.80)
15		(4.25)	12	335				2.6	(2.75)
16		(4.5)	6	(325)				2.6	(2.50)
17		(4.5)	7	320				3.0	(2.75)
18		(5.0)	13	330				>3.0	----
19		>6.0	12	<355				3.0	----
20		6.0	11	<330					(2.55)
21		>5.8	13	305				>3.0	(2.60)
22		(6.9)	10	330					----
23		(6.7)	17	(320)					(2.65)

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

Table 36

Svalbard, Norway (78.2° N, 15.7° E) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.2)	9	290		---	E	2.0	(2.55)
01		(4.0)	9	315		---	E	1.8	(2.30)
02		4.3	13	315		---	1.40	3.1	(2.55)
03		4.3	13	340		---	1.40	2.6	2.50
04		4.2	14	345		---	1.80	2.4	2.40
05		(3.9)	9	340		---	2.05	3.0	(2.25)
06		4.2	13	320		115	2.05	2.3	2.40
07		4.4	12	295		115	2.30		(2.55)
08	---	8.2	12	270	---	110	2.45		(2.75)
09	---	8.4	16	265	---	115	2.65		2.55
10	---	9.9	16	255	---	110	2.65		2.55
11	---	10.2	19	250	---	115	2.70		2.70
12	---	8.7	12	260	---	115	2.70		2.70
13	---	7.8	15	250	---	115	2.70		2.70
14	---	8.5	17	255	---	115	2.70		2.80
15		8.0	16	260		115	2.70		2.70
16		7.2	17	255		115	2.55		2.80
17		7.8	15	250		115	2.30	3.2	2.65
18		(7.1)	8	260		---	2.05	4.1	(2.70)
19		(7.7)	5	250		---	1.40	3.2	(2.55)
20		(4.4)	7	250		---	----	3.0	(2.40)
21		(6.0)	8	250		---	E	2.1	(2.50)
22		(4.7)	7	250		---	----	2.5	(2.55)
23		(4.6)	7	265		---	E	2.3	(2.60)

Time: 15.0°E.
Sweep: 0.68 Mc to 24.6 Mc in 5 minutes, automatic operation.

Table 37

Juliusruh/Rügen, Germany (54.6° N, 13.4° E) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.2	28	(305)					2.45
01		6.1	27	(305)			E		2.40
02		6.0	26	300			E		2.40
03		5.5	27	300			E		2.40
04		5.5	25	300			E		2.40
05	---	4.6	28	300	---		E		2.45
06	---	5.2	30	<300	---		1.80		2.65
07	---	7.1	30	270	---		2.50		2.90
08	---	8.2	31	250	---		3.00		2.90
09	---	8.9	29	240	---		3.25	3.4	2.85
10	---	10.4	27	240	---		3.40	3.5	2.80
11	---	11.2	29	235	---		(3.50)		2.75
12	---	11.6	28	240	---		(3.65)		2.70
13	---	11.8	30	230	---		3.60		2.70
14	---	12.0	27	240	---		3.50		2.65
15	---	11.9	29	240	---		3.35		2.65
16	---	11.6	26	250	---		3.10		2.70
17		11.4	27	250			2.80		2.75
18		10.9	26	250			2.10	2.3	2.75
19		9.8	26	240					2.75
20		8.0	28	240					2.70
21		7.7	29	(250)					2.65
22		6.0	20	<280					2.55
23		6.3	29	(300)					2.45

Time: 15.0°E.
Sweep: 0.5 Mc to 20.0 Mc in 20 seconds.

Table 39

El Cerillo, Mexico (19.3° N, 99.5° W) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		0.6	29	250					2.95
01		8.4	30	250					3.00
02		7.6	30	240					2.90
03		7.0	30	235					2.90
04		6.3	30	240					2.80
05		5.8	30	250					2.70
06		5.4	30	280					2.60
07		7.4	31	220					3.00
08		10.6	31	230					3.20
09		12.4	30	225					3.10
10		13.2	28	220					3.00
11		13.8	27	210					2.90
12		14.0	27	210					2.75
13		14.2	28	200					2.70
14		14.4	28	220					2.65
15		14.0	28	225					2.65
16		13.6	28	230					2.70
17		12.9	28	235					2.75
18		12.4	28	240					2.80
19		12.0	28	240					2.85
20		11.0	29	240					2.85
21		10.2	29	240					2.85
22		9.5	20	255					2.80
23		9.0	29	260					2.90

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 41

Djibouti, French Somaliland (11.6° N, 43.2° E) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(11.8)	6	(270)		---	----	3.5	(2.80)
01		(12.0)	8	(250)		---	----	3.5	(2.90)
02		(11.5)	8	(240)		---	----	3.1	----
03		9.3	11	(235)		---	----	3.5	(2.85)
04		8.6	12	(235)		---	----	3.5	(2.95)
05		(7.5)	14	(225)		---	----	3.5	(3.05)
06		6.7	15	(235)		---	E	3.5	3.05
07		>9.5	22	(260)		125	2.55	3.7	(3.00)
08		(12.0)	26	245		(120)	(3.20)	(6.0)	(2.70)
09		(13.0)	25	230		---	(3.75)	(8.4)	(2.45)
10		(12.6)	24	225		---	(4.05)	(9.6)	(2.35)
11		12.6	28	220		---	(4.20)	(9.0)	2.25
12		12.7	27	220		---	(4.30)	(10.0)	2.20
13		13.0	29	220		110	(4.15)	(9.0)	(2.20)
14		>13.5	26	220		110	(4.10)	(9.0)	(2.20)
15	---	>13.5	25	230	---	115	(3.90)	(8.6)	(2.20)
16	---	(13.2)	15	240	---	115	(3.50)	(8.4)	(2.25)
17	---	(12.6)	7	(250)	---	(120)	(2.95)	6.6	----
18		>12.0	13	(290)		---	(2.10)	4.3	(2.00)
19		>10.0	15	(400)		---	E	3.4	2.00
20		(11.3)	6	(345)		---	----	1.8	----
21		>11.5	5	(355)				2.0	----
22		(11.6)	4	(280)				2.9	----
23		(11.6)	9	(300)				3.5	(2.50)

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc.

Table 30

Lindau/Harz, Germany (51.6° N, 10.1° E) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.00	29	287					2.48
01		6.68	28	299					2.50
02		6.40	29	289					2.52
03		6.05	20	296					2.48
04		5.66	27	299					2.47
05		5.30	27	294					2.51
06		5.30	29	284		---	E		2.64
07		7.15	29	255		---	2.12	2.7	2.87
08		8.90	29	242		112	2.76		2.94
09		9.71	30	237	---	109	3.14		2.86
10	---	11.05	30	235	---	108	3.36	3.4	2.83
11	---	11.96	30	229	---	108	3.51	4.0	2.78
12	---	12.45	31	229	---	107	3.60	4.1	2.74
13	---	12.41	31	230	---	107	3.61	3.8	2.73
14		12.40	31	230		108	3.50		2.70
15		12.30	31	232		107	3.33		2.70
16		12.00	31	238		108	3.11		2.73
17		11.05	31	241		113	2.71		2.78
18		11.40	31	244		---	2.19	2.7	2.81
19		10.58	30	232		---	E	2.5	2.80
20		9.12	30	233		---	----		2.74
21		8.12	30	243					2.69
22		7.11	30	254					2.59
23		7.00	30	200					2.50

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

Table 40

Dakar, French W. Africa (14.8° N, 17.4° W) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>16.4	8	280		---	E	2.6	----
01		>16.6	14	250		---	E	2.5	(3.10)
02		13.6	13	230		---	E	2.5	(3.10)
03		13.1	14	220		---	E	2.4	<3.25
04		0.8	12	210		---	E	2.5	(3.00)
05		7.6	11	225		---	E	2.6	2.75
06		7.3	20	225		---	E	2.6	3.10
07		6.6	24	230		---	E	2.6	3.05
08		10.5	22	250		115	2.45		3.20
09		13.2	28	230		105	3.20	3.3	3.15
10		14.4	30	225		100	3.60		3.00
11		15.2	30	220		105	3.95		2.80
12		15.8	29	210		100	4.15		2.60
13	---	15.8	30	205		105	4.20		2.40
14	---	16.0	27	200		110	4.20		2.30
15	---	15.2	26	210		110	4.05		2.30
16	---	15.0	27	225		110	3.80		2.30
17		15.0	28	230		105	3.50		2.35
18		14.5	24	250		110	2.95	3.1	2.30
19		14.5	23	275		130	1.95	3.0	2.30
20		14.4	17	370				2.8	----
21		(14.5)	9	385				2.6	----
22		(13.4)	5	350				2.6	----
23		(14.8)	3	320				2.5	----

Time: 0.0°.
Sweep: 1.2 Mc to 17.0 Mc.

Table 42

Tahiti, Society Is. (17.7° S, 149.3° W) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		14.8	15	245		---	E	2.8	(2.95)
01		11.4	14	240		---	E	2.8	3.00
02		9.0	13	230		---	E	2.9	2.80
03		8.9	15	260		---	E	2.6	2.55
04		7.9	11	280		---	E	2.0	2.50
05		7.8	14	280		---	E	2.5	2.70
06		9.2	15	275		---	1.30	3.1	2.90
07		12.4	14	250		110	2.75	3.0	3.20
08		13.6	21	240		105	3.35	3.6	3.10
09		14.0	21	230		105	(3.70)	4.1	2.90
10		15.0	21	230		105	(4.00)	4.7	2.75
11	---	16.5	23	230		105	----	5.5	2.65
12	(405)	D	23	225	---	105	----	5.2	----
13	400	D	25	225		105	----	4.9	----
14	400	D	24	230		105	4.00	4.4	----
15	390	D	24	240		105	3.95		----
16	---	D	21	245		110	3.50		(2.65)
17		D	22	255		115	2.85	3.1	(2.65)
18		D	23	290		---	(1.75)	3.1	(2.60)
19		D	23	310		---	E	3.1	----
20		D	20	290		---	E	2.8	(2.50)
21		D	19	270		---	E	2.8	(2.70)
22		15.0	19	260		---	E	3.0	(2.80)
23		15.0	19	260		---	E	2.8	(2.75)

Time: 150.0°W.
Sweep: 1.2 Mc to 17.0 Mc.

Table 43

Tananarive, Madagascar (18.8° S, 47.5° E) March 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.2	28	250		---	E	2.6	2.90
01		7.0	29	250		---	E	2.8	2.90
02		6.0	29	(250)		---	E	2.6	2.65
03		5.7	28	<280		---	E	2.4	2.65
04		5.4	28	<270		---	E	2.2	2.75
05		5.2	28	270		---	E	2.1	2.75
06		6.9	29	270		---	1.80	2.8	2.95
07		10.2	30	250		<115	2.80	2.9	3.10
08		11.7	29	245		110	3.30		3.00
09		12.5	31	230		110	3.75	3.8	2.85
10		12.7	31	225		110	(3.95)		2.70
11		13.1	31	(230)		110	(4.10)		2.65
12	---	13.3	31	---	---	110	----		2.60
13	---	13.4	30	<250	---	110	----		2.55
14	---	13.2	31	250	---	110	(3.95)		2.55
15		13.0	31	240		115	3.80		2.55
16		12.7	29	250		115	3.40	3.7	2.55
17		12.3	31	260		<120	2.75	3.2	2.60
18		12.2	26	270		---	(2.00)	2.9	2.70
19		11.8	28	270		---	----	2.6	2.75
20		11.6	26	265		---	----	2.8	2.75
21		11.0	30	260		---	----	2.6	2.80
22		10.3	29	250		---	----	2.4	2.80
23		9.3	27	250		---	E	2.8	2.95

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc.

Table 44

Sao Paulo, Brazil (23.5° S, 46.5° W) March 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>14.5	23	225					(3.4)
01		(14.5)	26	220					(3.4)
02		>14.0	25	220					3.15
03		11.0	25	225					3.1
04		9.0	23	230					2.95
05		7.8	23	240					2.9
06		7.4	25	255					2.8
07		10.4	26	240			---		3.0
08		11.6	24	230			(3.4)		2.95
09		>12.0	22	230			---		(2.8)
10		>13.5	19	(230)			---		(2.6)
11		(14.0)	10	<240			---		(2.5)
12		(14.2)	22	<250			---		(2.5)
13		(14.4)	24	<235			---		(2.55)
14	---	(14.5)	20	(235)			---		(2.6)
15	(390)	(14.5)	22	(235)			---		(2.7)
16	---	(14.5)	20	240			---		(2.65)
17	---	(14.5)	23	245			(3.1)		(2.7)
18		(14.5)	23	265				2.8	(2.7)
19		(14.0)	22	310					(2.6)
20		(14.0)	17	355					(2.6)
21		>14.0	9	295					(2.9)
22		(14.5)	13	255					(3.05)
23		(14.5)	21	235					(3.2)

Time: 45.0°W.
Sweep: 1.75 Mc to 20.0 Mc in 2 minutes 30 seconds.

Table 45

Tucuman, Argentina (26.9° S, 65.4° W) March 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		16.6	14	265					2.90
01		>16.5	14	270					3.00
02		17.0	15	250					3.10
03		11.8	15	220					3.10
04		8.4	16	<230					3.05
05		7.0	12	(265)					2.85
06		7.2	15	<285					2.65
07		9.6	15	<250					3.05
08		(12.4)	14	225					3.10
09		13.0	17	225					3.00
10		13.8	17	(225)					2.75
11		15.0	16	<245					2.65
12		15.6	16	<270					(2.60)
13	(410)	16.0	16	<280					2.50
14	(405)	(16.2)	16	<270					(2.60)
15	400	>16.0	16	<250					(2.55)
16	(390)	(16.4)	16	(245)					(2.55)
17	---	(16.2)	14	<250					(2.50)
18	---	>15.9	12	<260				2.0	(2.55)
19		(15.5)	13	<300				1.2	(2.50)
20		>15.5	12	(325)					(2.35)
21		>15.7	11	300					(2.65)
22		>17.0	11	280					(2.75)
23		>16.4	12	(260)					(2.85)

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 46

Buenos Aires, Argentina (34.5° S, 58.5° W) March 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.4	30	300					2.70
01		>11.4	28	280					2.70
02		11.0	28	280				3.0	2.80
03		9.5	28	250				2.8	2.80
04		8.2	29	255				2.2	2.60
05		7.6	27	265					2.50
06		8.3	27	260		---	2.00		2.75
07		10.3	28	230		---	----		2.95
08		12.0	28	225		103	----		(2.90)
09		13.0	26	230		---	----		2.85
10		(13.2)	27	230		---	----		2.70
11		(14.0)	30	230		---	----		2.65
12		15.0	30	240		---	----		2.60
13	(355)	15.2	30	240	---	---	----		2.60
14	(360)	15.5	27	240	---	---	----		2.60
15	340	15.3	29	240	---	---	----		2.65
16	---	15.3	31	240	---	---	----	3.6	2.70
17		>15.0	30	260		---	----	3.4	2.75
18		15.0	29	265					2.75
19		(14.7)	29	275					2.70
20		(14.5)	30	290					(2.65)
21		(14.0)	30	290					<2.70
22		>13.0	29	275					2.80
23		12.0	31	270					2.75

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 47

Canberra, Australia (35.3° S, 149.0° E) March 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(7.5)	29	255				2.9	2.80
01		7.5	27	250				2.2	2.80
02		>7.3	28	250				1.5	2.90
03		7.0	27	<250					2.85
04		>6.6	26	260					2.80
05		>6.3	27	250					2.80
06		6.9	27	240			1.60		2.95
07	---	8.5	27	215	---		2.60		3.15
08	---	>9.5	27	205	---		3.10	3.2	3.15
09	---	>10.0	27	205	(5.3)		3.40	3.8	3.00
10	(345)	>11.2	26	200	(5.4)		3.70		3.05
11	---	11.8	26	205	(5.5)		3.95		2.95
12	---	11.7	23	200	5.8		(4.00)		2.90
13	(395)	11.8	27	200	5.8		3.90		2.85
14	(365)	11.1	27	205	5.9		3.80		2.85
15	(375)	11.2	29	205	5.6		3.70		2.85
16	---	10.4	29	210	---		3.35		2.85
17	---	>9.7	29	220	---		2.90		(3.00)
18		>9.4	29	220			2.05		3.00
19		>9.0	29	215					(2.95)
20		8.8	28	235					(2.80)
21		>8.5	28	240					2.80
22		>7.8	28	(250)					2.80
23		(7.5)	29	(255)					2.80

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

Table 48

Concepcion, Chile (36.6° S, 73.0° W) March 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		10.65	28	310				2.1	2.70
01		10.2	28	290				2.2	2.80
02		9.7	28	270				2.0	2.88
03		8.6	27	250				2.0	2.80
04		8.05	28	<255					2.60
05		7.6	25	270				1.8	2.55
06		8.8	27	250		<149	2.00		2.70
07		11.4	27	230		109	2.80		3.05
08		12.8	26	230		109	3.30	3.5	3.00
09		13.1	27	230		107	3.65	3.8	2.90
10		13.8	27	225		109	(3.85)	4.1	2.85
11	---	14.6	29	225	---	109	4.00		2.80
12	---	15.0	29	<230		109	(4.10)	4.2	2.70
13	---	15.1	29	(230)		110	4.00	4.0	2.70
14	(350)	15.1	29	230	---	111	3.90	4.4	2.70
15	(325)	15.0	29	(235)		109	3.70	4.2	2.75
16	---	14.65	28	250		109	3.30	4.2	2.80
17		14.2	27	255		111	2.65	3.5	2.85
18		13.35	28	260		---	----	3.2	2.85
19		12.6	28	270				3.2	2.75
20		11.8	28	285				3.4	2.70
21		11.6	28	290				3.0	2.70
22		11.35	28	290				2.4	2.70
23		10.3	27	310				2.1	2.70

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

Table 49

Trelew, Argentina (43.2° S, 65.3° W) March 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.0	27	315				3.0	2.50
01		9.0	27	310				2.6	2.40
02		9.1	27	300				2.0	2.50
03		8.9	27	295		---	----	2.4	2.55
04		8.0	28	280		---	----		2.40
05		7.6	27	285		---	E		2.35
06		8.0	27	290		191	1.60		2.50
07		9.1	25	220		100	2.65	3.3	2.90
08		>9.9	22	220		97	3.40		(3.15)
09		>10.0	21	220		95	3.75	4.0	----
10		>10.0	20	220		95	----	4.7	
11		>10.0	20	220		95	----	5.4	----
12	---	>10.0	17	(220)	---	95	----	6.0	----
13	---	>12.0	19	(225)	---	95	----	5.5	----
14	---	>10.3	21	(230)	---	91	----	5.4	----
15	---	>10.0	18	220	---	96	----	4.8	----
16		>10.0	19	240		97	----	4.5	----
17		>10.0	21	250		97	3.30	4.2	----
18		>9.6	21	250		---	2.55	3.6	----
19		>9.3	20	245		---	----	4.0	(2.80)
20		(9.0)	19	260				3.5	2.80
21		>8.8	21	290				4.1	2.70
22		9.0	23	300				3.5	2.50
23		9.0	26	310				3.4	2.50

Time: 60.0°W.
Sweep: 1.3 Mc to 18.0 Mc in 30 seconds.

Table 50

Alert, Canada (82.6° N, 62.6° W) December 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.3	29	280					
01		5.5	30	290					
02		5.2	30	280					
03		5.6	31	280					
04		5.8	31	280					
05		5.8	30	280					
06		5.6	28	280					
07		6.0	28	290					
08		6.0	28	280					
09		7.0	30	280		---	---		
10		7.4	28	270					
11		7.3	30	260					
12		8.1	29	260					
13		8.3	31	260				1.8	
14		7.8	30	260					
15		7.9	28	250					
16		7.9	31	270					
17		7.1	30	280				2.1	
18		7.2	30	280					
19		7.0	31	280					
20		6.5	29	270					
21		6.8	31	270					
22		6.4	30	280					
23		6.3	31	290					

Time: 75.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 51

Lwiro, Belgian Congo (2.3° S, 28.8° E) December 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(10.9)	26	260				(1.8)	2.58
01		>11.3	26	200				(1.8)	2.59
02		(9.8)	26	270				(1.7)	2.78
03		(9.0)	26	250				(1.6)	2.70
04		>8.5	26	235				(1.7)	2.78
05		7.7	26	235				(1.6)	2.89
06		8.0	24	265		---	1.50	(2.0)	2.95
07	(270)	(9.6)	24	250		117	2.85		2.94
08	---	10.3	30	240		111	3.45	3.6	2.69
09	---	10.8	29	235	---	111	3.85		2.49
10	---	11.2	30	230	(5.1)	111	4.05		2.27
11	---	11.8	30	220	(5.2)	111	4.20		2.23
12	(490)	>12.1	28	220	---	109	4.25		2.22
13	450	13.2	22	220	(5.1)	---	4.20		2.29
14	485	13.0	24	230	---	111	4.00		2.23
15	490	12.8	26	235	---	111	3.80		2.22
16	500	12.6	27	245	---	113	3.45	3.4	2.24
17	---	(12.8)	27	265		117	2.85	(3.1)	2.28
18		(12.7)	28	300		---	1.90	(2.8)	2.29
19		(12.0)	28	380				(2.6)	2.23
20		(12.2)	28	380				(2.4)	2.25
21		>11.3	28	320				(2.0)	(2.49)
22		>12.5	27	270				(1.8)	2.70
23		>9.0	27	240				(1.9)	2.68

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

Table 52

Alert, Canada (82.6° N, 62.6° W) November 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fE#	(M3000)F2
00		7.9	24	260					
01		7.1	23	260					
02		6.4	25	200				3.0	
03		7.0	23	270					
04		(6.4)	25	270				3.0	
05		6.8	24	260				3.0	
06		7.0	22	260					
07		6.8	21	240					
08		7.0	23	260				2.0	
09		7.2	25	260				3.2	
10		8.2	25	260				3.0	
11		8.2	24	240				3.1	
12		7.9	26	250				2.1	
13		8.3	27	260				3.1	
14		8.4	26	250				3.4	
15		8.4	26	250					
16		8.8	26	250				2.1	
17		8.3	27	260				1.8	
18		8.0	27	260					
19		7.2	27	260					
20		7.5	25	260					
21		7.4	24	270					
22		7.0	25	280					
23		7.4	25	280					

Time: 75.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 53

Lwiro, Belgian Congo (2.3° S, 28.8° E) November 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>11.4	30	240				(2.0)	----
01		>11.8	30	270				(1.8)	(2.58)
02		>12.0	29	260				(1.8)	(2.69)
03		>11.2	29	235				(1.9)	(2.78)
04		>8.7	29	220				(1.6)	2.89
05		7.9	29	220				(1.6)	3.00
06		8.4	29	250		---	1.80	2.1	2.96
07	255	>10.0	29	245		121	2.95		2.93
08	(250)	11.0	29	235		113	3.50	3.6	2.72
09	---	11.6	29	230	---	111	3.85		2.46
10	---	12.4	30	225	(5.2)	111	4.05		<2.30
11	---	13.0	30	220	(5.2)	111	4.15		2.28
12	---	13.7	30	220	(5.2)	111	4.20		2.29
13	470	14.5	27	220	(5.1)	111	4.10		2.30
14	475	14.3	27	230	---	112	4.00		2.28
15	(500)	14.3	27	240		113	3.70		2.26
16	(495)	14.5	28	250		115	3.30	3.6	2.22
17		>13.2	28	265		119	2.60	(3.2)	2.28
18		>11.6	29	315		---	----	(2.9)	(2.25)
19		>11.6	29	390				(2.5)	----
20		>11.1	29	370				(2.1)	----
21		>8.8	29	290				(2.2)	----
22		>11.3	30	245				(2.2)	----
23		>11.2	30	220				(2.0)	----

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

Table 54

Lwiro, Belgian Congo (2.3° S, 28.8° E) October 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>9.7	30	215				(1.9)	----
01		>11.5	30	260				(1.6)	(2.76)
02		>11.6	30	255				(1.7)	(2.88)
03		>11.6	30	250				(1.7)	(2.86)
04		>10.2	30	230				(1.6)	(2.86)
05		>8.6	30	220				(1.8)	<3.05
06		>8.5	30	250				(2.2)	2.98
07	---	11.0	30	240		123	2.90	3.2	2.95
08	---	12.0	29	235		115	3.50	3.8	2.75
09	---	>12.7	26	230	---	111	3.90		2.47
10	---	13.7	25	225	(5.1)	111	4.05		2.46
11	---	14.2	24	220	---	111	4.20		2.40
12	(450)	14.7	26	220	---	---	4.25		2.39
13	(460)	15.1	30	220	(5.2)	---	4.15		2.40
14	465	15.2	30	230	---	---	4.00		2.36
15	465	14.8	25	240	---	113	3.75		2.36
16	(470)	(15.0)	26	250		115	3.30	3.6	2.31
17	---	>14.1	26	265		119	2.70	2.8	(2.32)
18		>13.6	30	320		---	----	(2.5)	----
19		>11.4	31	395				(1.9)	----
20		>11.2	31	340				(1.6)	----
21		>9.0	31	260				(1.7)	----
22		>11.3	31	230				(1.7)	----
23		>11.4	31	215				(1.7)	(2.73)

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

Table 55

Meanook, Canada (54.6° N, 113.3° W) September 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		4.8	24	290					
01		5.1	23	310				2.4	
02		5.0	24	340				3.4	
03		4.8	22	350			---	2.9	
04		5.0	24	340			---	4.1	
05		4.6	24	330		---	E	2.7	
06		5.0	24	300		---	1.8	1.8	
07		6.8	23	260	---	110	2.4		
08	(500)	7.6	23	240	4.7	110	2.8		
09	(520)	7.6	26	240	4.8	105	3.2		
10	440	8.3	25	230	5.1	105	3.4		
11	(480)	8.4	26	220	5.2	105	3.6		
12	480	8.6	27	220	5.4	105	3.6		
13	450	8.7	27	220	5.7	105	3.7		
14	520	8.8	28	230	5.2	105	3.6		
15	460	9.0	29	240	5.2	105	3.4		
16	---	9.8	26	240	---	105	3.1		
17		9.6	27	240	---	110	2.9		
18		9.6	27	250	---	130	2.3		
19		9.2	26	250	---	---	1.8		
20		8.4	24	250					
21		7.4	24	250					
22		6.8	22	250					
23		5.6	25	280					

Time: 105.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 56

Lwiro, Belgian Congo (2.3° S, 28.8° E) September 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>11.1	26	210				(1.9)	----
01		>10.5	26	225				(1.8)	----
02		>9.2	26	230				(1.7)	2.84
03		>8.6	26	230				(1.5)	----
04		>8.6	25	230				(1.6)	----
05		>8.2	25	220				(1.7)	3.28
06	---	8.0	25	245		---	E	1.9	3.17
07	---	11.2	25	240		120	2.80	3.1	3.23
08	---	12.4	25	230		111	3.45	3.8	2.94
09	---	13.4	24	225		111	3.85	4.2	2.79
10	---	13.9	23	220	(5.3)	111	4.05	4.3	2.61
11	---	14.5	26	210	(5.5)	109	4.20		2.52
12	445	15.0	26	210	(5.6)	109	4.30		2.47
13	450	15.1	27	210	(5.4)	109	4.20		2.39
14	465	14.8	25	215	(5.0)	111	4.05		2.32
15	460	15.0	23	220	---	111	3.85		<2.36
16	445	15.1	24	240		113	3.40	3.8	2.32
17		(14.3)	25	260		117	2.85	3.2	2.37
18		>14.0	25	300		---	----	(2.4)	(2.32)
19		>11.6	27	360				(2.4)	
20		>11.0	26	320				(2.1)	----
21		>10.7	25	245				(2.2)	
22		>11.2	25	220				(1.8)	
23		>11.4	23	210				(1.7)	

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

Table 57

Lwiro, Belgian Congo (2.3° S, 20.8° E) August 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>9.4	27	205				(1.9)	----
01		>0.5	27	200				(1.9)	----
02		>8.4	27	210				(2.2)	<2.88
03		>8.4	26	220				(2.1)	(2.81)
04		>8.2	26	220				(2.0)	3.04
05		>7.3	26	225				(1.8)	3.06
06		7.2	26	250		---	E	2.0	3.06
07	---	>11.3	26	245	---	121	2.70	3.2	3.14
08	(260)	12.8	26	235	---	111	3.45	3.8	3.10
09	260	13.2	25	230	---	110	3.85	4.5	3.02
10	(305)	12.6	20	220	(5.4)	109	4.10	4.2	2.81
11	(350)	12.6	30	220	(5.6)	109	4.25		2.70
12	410	12.8	29	210	(5.6)	107	4.35		2.57
13	440	12.8	30	210	(5.5)	---	4.30		2.42
14	440	13.2	30	210	(5.3)	---	4.20		2.42
15	465	>12.9	30	215	---	109	4.00		2.35
16	430	13.1	30	225	---	111	3.55	3.8	2.34
17		(13.2)	28	250		115	2.95	3.6	2.34
18		>14.0	20	280		---	1.70	(3.0)	2.48
19		>13.0	29	320				(2.8)	----
20		>11.6	29	330				(2.0)	----
21		>11.6	28	240				(2.4)	----
22		>11.3	28	220				(2.3)	----
23		>11.5	28	215				(1.9)	----

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

Table 58

Sao Paulo, Brazil (23.5° S, 46.5° W) August 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		11.8	27	235					3.00
01		10.8	23	230					3.10
02		9.2	25	230					3.10
03		7.4	25	230					3.05
04		5.5	24	255					2.90
05		5.0	24	280					2.70
06		4.8	24	280					2.80
07		7.9	25	260			----		3.00
08		10.4	24	250			3.20		3.00
09		11.9	26	250			3.50		2.90
10		12.8	28	240			----		2.85
11	---	13.4	27	230	---		----		2.75
12	(400)	13.4	26	230	---		----		2.60
13	415	13.4	29	230	7.0		----		2.60
14	405	13.6	28	<240	6.6		----		2.55
15	390	13.6	29	245	---		----		2.60
16	---	14.0	30	255	---		(3.30)		2.65
17		14.0	28	260			2.70		2.75
18		14.0	25	250					(2.90)
19		13.3	28	250					2.90
20		12.8	27	260					(2.80)
21		(13.2)	29	260					(2.80)
22		12.4	26	240					2.90
23		11.9	28	240					2.95

Time: 45.0°W.
Sweep: 1.75 Mc to 20.0 Mc in 2 minutes 30 seconds.

Table 59

Trelew, Argentina (43.2° S, 65.3° W) April 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>7.0	25	300					(2.45)
01		(7.8)	24	330					(2.35)
02		(7.5)	23	330					(2.45)
03		>7.0	24	310					(2.60)
04		>7.0	23	200					(2.45)
05		(6.2)	23	245		---	----		(2.70)
06		>5.9	20	425		---	----		----
07		>7.1	17	280		---	(2.40)		----
08		>0.4	14	250		---	3.00		
09		>9.5	3	---		---	----		
10		>9.2	4	---		---	----		
11		>9.5	4	(235)		---	----		
12		>9.3	2	---		---	----		
13		>9.6	1	---		---	----		
14		>9.2	1	---		---	----		
15		>9.5	3	---		---	----		
16		>9.2	4	---		---	----		
17		>9.2	19	260		---	2.90		
18		>8.0	19	250		---	----		
19		>7.6	21	260					
20		>7.6	22	265					
21		>7.1	26	290					----
22		>8.0	23	300					----
23		>7.8	24	305					(2.50)

Time: 60.0°W.
Sweep: 1.3 Mc to 10.0 Mc in 30 seconds.

Table 60

Eureka, Canada (80.0° N, 85.9° W) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.5	21	300					
01		5.3	25	290		---	---		
02		6.2	26	300		---	---		
03		6.1	24	290		---	---		
04		5.8	22	290		---	---		
05		5.2	26	290		---	---		
06		5.8	24	300		---	---		
07		5.8	20	290		---	---		
08		6.8	22	300		---	---		
09		6.1	26	290		---	2.0		
10	---	5.8	22	300	---	---	2.0		
11	---	6.3	23	280	---	150	2.0		
12	---	6.5	23	270	---	130	2.0		
13	---	6.6	23	280	---	120	2.0		
14	---	7.3	23	280	---	130	2.1		
15	---	6.8	22	290	---	140	2.0		
16	---	7.2	24	290	---	---	2.0		
17	---	7.0	21	270	---	---	1.8		
18	---	6.4	24	290	---	---	---		
19		6.1	22	290					
20		6.4	19	300					
21		6.1	20	290					
22		6.3	24	300					
23		5.4	23	290					

Time: 75.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 61

Clyde River, Canada (70.5° N, 60.6° W) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.0	26	350					
01		6.1	23	310					
02		4.8	24	340					
03		4.8	24	330					
04		4.4	18	360					
05		4.9	22	380		---	---		
06		5.2	20	350		---	---		
07		5.6	21	320		---	---		
08		6.1	10	310		---	---		
09	---	6.1	13	300	---	---	---		
10	(400)	7.0	12	(320)	4.0	---	---		
11	(570)	7.0	16	300	4.1	---	---		
12	(500)	7.2	17	300	4.1	---	---		
13	500	7.0	18	300	4.0	---	---		
14	(540)	6.4	10	300	3.8				
15	(480)	6.7	17	300	3.8				
16	---	7.2	18	300	---				
17		7.5	19	310					
18		7.4	21	310					
19		7.0	23	310					
20		6.6	25	320					
21		7.0	26	310					
22		6.5	27	310					
23		6.2	25	310					

Time: 75.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 62

Yellowknife, Canada (62.4° N, 114.4° W) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.1	21	360				5.5	
01		5.4	24	380	---			4.9	
02		6.0	27	380				4.0	
03		5.7	21	380		---	---	3.5	
04		4.9	21	400		---	---	3.1	
05		4.6	22	390		---	---	4.0	
06		4.9	20	390	---	---	---	3.0	
07		5.0	18	400	---	---	---	3.4	
08		5.4	14	(340)	---	---	---	3.6	
09	---	6.2	14	310	---	---	---		
10	---	6.4	17	300	---	130	3.0		
11	(770)	6.6	19	290	4.6	---	3.0		
12	---	6.9	25	290	4.7	---	3.2		
13	(550)	7.9	27	290	4.0	---	3.1		
14	(420)	0.9	27	280	5.0	130	3.0		
15	(440)	9.7	28	290	4.7	---	3.0		
16	(430)	9.2	23	290	4.4	140	2.9		
17	---	7.5	25	320	---	---	2.6		
18	---	6.4	22	360	---	---	---		
19	---	6.2	20	330	---	---	---	3.1	
20		5.0	19	340				4.0	
21		5.1	24	340				5.2	
22		5.0	22	390				4.1	
23		5.2	26	380				4.8	

Time: 105.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 63

Paramaribo, Surinam (5.0° N, 55.2° W) March 1950

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		>17.0	30	300				4.1	2.55
01		17.3	30	265				3.0	2.70
02		>16.8	30	250				3.1	2.80
03		15.0	29	250				2.7	2.95
04		14.5	29	240				2.6	3.00
05		11.6	30	220				2.5	2.95
06		9.2	30	220				2.9	2.95
07		7.7	27	240				3.0	2.80
08		6.9	29	260				3.7	2.70
09		7.0	29	260		---	E	3.6	2.80
10		9.6	30	250		---	2.0	4.2	3.00
11		12.6	30	245		110	3.0	4.5	3.10
12		14.2	29	240		100	3.6	4.3	2.95
13		14.5	30	230		100	4.0		2.85
14		14.5	30	225		110	4.2		2.75
15	---	15.0	30	240	---	105	4.4		2.60
16	390	15.4	29	240	(8.0)	110	4.4		2.55
17	385	15.6	30	240	(7.8)	110	4.3		2.55
18	400	15.4	31	240	(8.1)	105	4.1	4.8	2.50
19	400	14.9	31	245	(7.4)	100	3.8	4.5	2.45
20	410	14.5	31	245	(7.2)	100	3.3	4.6	2.40
21		14.7	30	260		100	2.7	4.7	2.45
22		14.9	29	300		---	E	4.5	2.45
23		16.2	30	340				4.2	2.50

Time: 0.0°.
Sweep: 1.4 Mc to 20.0 Mc in 40 seconds.

Table 64

Bangui, French Equatorial Africa (4.6° N, 18.6° E) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.2	19	250				3.2	2.65
01		11.2	21	260				3.0	2.75
02		11.6	10	250				3.0	2.95
03		11.4	19	245				2.8	3.15
04		9.6	18	235				2.6	3.20
05		7.6	19	220		---	----	3.1	3.20
06		7.8	19	250		145	<1.00	3.2	3.05
07		11.2	19	250		120	2.95	4.2	3.00
08		13.0	22	245		110	<3.60	4.2	2.80
09		13.8	21	235		105	4.00	4.4	2.45
10		13.7	22	230		105	4.25		2.35
11	---	13.2	23	220		105	4.40		2.30
12	---	13.0	25	220	---	110	4.45		2.25
13	---	13.4	26	210	---	105	4.40		2.20
14	---	13.2	22	220	(7.6)	105	4.20		2.15
15	(495)	13.2	23	240	---	105	3.00		2.20
16	---	>13.4	24	245		105	3.45	3.7	2.10
17	---	12.0	25	260		110	2.70	3.2	----
18		11.6	25	310		---	E	3.0	----
19		10.2	17	435		---	E		----
20		>11.0	11	400		---	----	1.8	----
21		12.2	12	300				2.3	(2.30)
22		11.9	14	255				2.4	2.50
23		12.2	18	245				3.0	2.55

Time: 15.0°E.
Sweep: 1.2 Mc to 17.0 Mc in 1 minute.

Table 65

Hollandia, Netherlands New Guinea (2.5° S, 140.0° E) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
0030	(340)	>13.5	27	<245	---	100	---		----
0130	400	>13.3	29	<250	---	95	---		
0230	400	>13.3	29	(250)	8.4	---	---		
0330	400	>13.2	29	(250)	7.6	95	---		
0430	400	>13.4	26	(250)	7.8	90	---		
0515	385	>13.5	29	(250)	7.7	100	---		
0615	385	>13.5	30	<260	7.8	100	3.6		----
0715	380	>13.5	28	(230)	7.6	100	3.5	3.8	----
0815	380	>13.5	30	240	---	105	2.7	3.6	----
0915	(400)	>13.5	31	295	---	---	E	3.7	
1015		>13.6	31	325				3.3	
1115		>13.6	31	275				3.6	
1215		>13.7	31	230				3.2	
1315		>13.0	31	210				2.7	----
1415		>13.6	31	205					----
1515		>12.5	31	210					3.05
1615		11.0	31	210					2.90
1715		>9.5	30	230					2.90
1815		9.5	30	240				2.4	2.90
1915		9.5	31	230				3.0	2.95
2015		9.2	31	205		---	---	3.2	3.20
2130		12.0	31	225		115	2.5	3.5	3.30
2230		>13.3	31	220		100	3.3	4.3	3.25
2330	---	>13.6	31	230	---	100	3.8		(3.00)

Time: 0.0°.
Sweep: 1.4 Mc to 20.0 Mc in 40 seconds.

Table 66

Tsumeb, South W. Africa (19.2° S, 17.7° E) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		7.65	31	255				2.7	2.72
01		6.72	31	260				2.6	2.78
02		5.85	31	240				3.0	2.75
03		5.23	31	260				2.8	2.70
04		4.62	31	275		---	----	2.6	2.69
05		4.50	31	270		---	----	1.8	2.65
06		7.15	30	250		---	1.72	2.8	2.89
07		10.00	30	235		110	2.78	3.3	3.09
08		11.72	30	230		105	3.40	3.8	2.88
09		12.80	29	230		105	3.78	4.2	2.80
10		13.50	31	228		---	4.00	4.6	2.67
11	---	13.90	31	225	---	---	4.15	4.3	2.60
12	---	14.15	31	225	---	---	4.25		2.55
13	---	14.25	31	230	---	---	4.20	4.2	2.50
14	---	14.18	29	240	---	---	4.10	4.7	2.50
15	---	13.90	29	240		---	3.88	4.5	2.50
16		13.48	27	240		110	3.50	4.4	2.50
17		13.13	29	250		115	2.85	3.9	2.56
18		12.90	30	255		---	----	2.9	2.66
19		12.31	28	245		---	E	2.7	2.72
20		11.75	31	245				2.9	2.74
21		10.62	30	250				2.4	2.75
22		9.50	31	250				2.6	<2.78
23		8.55	31	250				2.4	2.75

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

Table 67

Clyde River, Canada (70.5° N, 68.6° W) February 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.0	23	310					
01		4.8	19	320					
02		4.4	20	320					
03		4.4	19	360					
04		4.0	19	340					
05		3.6	20	370					
06		4.2	19	320					
07		4.4	20	320		---	---		
08		5.7	18	300		---	---		
09		5.4	22	300		---	---		
10		6.5	17	300		---	---		
11		7.7	21	300		---	2.0		
12		8.1	18	300		130	2.0		
13		8.4	20	290		---	2.0		
14		8.4	24	300		140	1.9		
15		7.8	22	300		---	1.8		
16		7.2	23	300		---	---		
17		6.6	24	290					
18		6.7	23	300					
19		6.6	23	300					
20		6.6	24	300					
21		5.8	22	300					
22		6.0	20	300					
23		5.2	23	300					

Time: 75.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 68

Poitiers, France (46.6° N, 0.3° E) February 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.6)	28	<290					2.50
01		(5.4)	28	<300					(2.55)
02		(5.4)	26	<315					2.55
03	---	(5.1)	27	<320					(2.55)
04	---	(4.8)	26	<300					(2.80)
05	---	(4.4)	27	<275					(2.70)
06	---	4.2	28	<270					2.60
07	---	(6.5)	28	250		---	1.60	2.1	2.80
08	---	(10.1)	28	230	---	120	2.30	2.3	----
09	(250)	(12.6)	28	225	---	110	2.95		(3.10)
10	245	(13.5)	28	225	---	105	3.25		(3.00)
11	240	14.0	28	225	---	105	3.45		(3.00)
12	(245)	(14.2)	28	225	---	105	3.60		(2.90)
13	(240)	(14.2)	28	225	---	105	3.60		(2.90)
14	(250)	(13.9)	28	230	---	105	3.30		(2.90)
15	---	(14.0)	28	230		110	3.00		----
16	---	(13.0)	28	230		115	2.60	2.9	----
17		(12.4)	28	230		---	(1.90)	2.2	----
18		(10.3)	28	220		---	E	2.0	----
19		>9.1	28	<225				2.1	----
20		(7.2)	27	(235)				1.9	----
21		(6.5)	28	<260					----
22		(6.0)	27	<270					----
23		(5.8)	28	<280					(2.60)

Time: 0.0°.
Sweep: 1.6 Mc to 17.0 Mc in 1 minute.

Table 69

Bangui, French Equatorial Africa (4.6° N, 18.6° E) February 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		11.6	13	250				2.4	2.80
01		11.6	12	250				2.8	2.85
02		12.0	17	250		---	----	2.5	3.05
03		10.9	15	235				2.6	3.35
04		8.5	15	225				2.8	3.45
05		6.1	14	220		---	E	3.2	3.50
06		6.0	17	255		140	1.50	3.2	3.22
07		9.7	16	250		125	2.70	3.3	3.22
08	---	11.6	20	240		115	3.50	3.6	2.90
09	---	12.7	17	230		110	3.75	5.0	2.65
10	(370)	12.9	19	220	---	110	4.10	4.6	2.42
11	(425)	12.9	19	210	---	105	4.20	4.8	2.40
12	---	13.0	16	210	---	110	4.30	5.1	2.40
13	(440)	13.3	19	205	---	105	4.30	4.4	2.35
14	410	13.4	18	220	---	105	4.15	4.6	2.30
15	440	13.6	22	230	---	110	(3.70)	4.0	2.38
16	(445)	14.2	22	245	---	110	3.40	4.4	2.35
17	(500)	13.7	20	260		120	2.80	4.4	2.35
18	---	>13.0	18	305		150	<1.65	3.2	2.20
19		>12.0	10	400		---	----	2.6	----
20		>11.8	10	375				1.8	----
21		>12.5	8	300				3.1	(2.35)
22		>12.0	9	260				3.2	(2.80)
23		11.8	12	250				2.8	(2.70)

Time: 15.0°E.
Sweep: 1.2 Mc to 17.0 Mc in 1 minute.

Table 70

Hollandia, Netherlands New Guinea (2.5° S, 140.8° E) February 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
0030	---	11.4	16	(250)		100	---		2.40
0130	---	11.9	17	<260		100	---		2.35
0230	---	>12.0	16	<280		---	---		2.30
0330	(400)	12.8	15	<270		---	---		(2.40)
0430	410	>13.0	17	<270	(7.1)	100	---		(2.40)
0515	395	>13.3	18	<290	7.1	100	---		(2.60)
0615	400	>13.3	17	<270	(7.0)	100	3.9		(2.60)
0715	(380)	>13.3	18	225	(7.0)	100	3.4	3.6	(2.65)
0815	---	>13.0	18	240	---	105	2.7	3.1	(2.60)
0915		(12.9)	17	300		---	---	3.2	(2.55)
1015		>12.8	16	350				3.6	(2.50)
1115		13.0	18	300				3.5	(2.55)
1215		>13.1	18	260				3.3	2.60
1315		12.2	18	250				3.0	2.70
1415		12.0	18	260				3.0	2.70
1515		10.7	17	280					2.70
1615		9.8	17	260					2.75
1715		8.7	18	250					2.80
1815		7.7	16	250					2.80
1915		7.0	17	240					3.00
2015		6.5	17	230				2.0	2.90
2130		9.2	18	230		100	2.7	3.2	3.05
2230		10.5	18	210		100	3.4	3.6	3.00
2330		11.0	16	230		100	3.9	4.0	2.65

Time: 0.0°.
Sweep: 1.4 Mc to 20.0 Mc in 40 seconds.

Table 71

Tananarive, Madagascar (18.8° S, 47.5° E) February 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.5	13	260		---	----	2.8	----
01		>6.5	16	270		---	----	3.1	(2.70)
02		(5.6)	15	255		---	----	3.0	(2.55)
03		(5.5)	13	<290		---	----	3.0	----
04		5.0	15	<300		---	E	3.0	(2.50)
05		4.8	14	300		---	E	2.0	2.50
06		(6.5)	7	270		130	1.90	2.9	----
07		8.9	11	(250)		<115	2.90	3.2	(2.80)
08		(11.0)	1	---		110	----		
09		(12.1)	4	---		100	----		----
10		(12.2)	4	---		---	----		----
11	---	(12.3)	1	---	---	---	----		----
12	---	(12.8)	1	---	---	---	----		----
13	---	(12.2)	1	---	---	---	----		----
14	---	(12.2)	1	---	---	---	----		----
15	---	(12.0)	3	---	---	---	----		----
16	---	11.6	6	(240)	---	105	(3.50)	3.8	----
17		(11.4)	5	250		110	3.00	3.4	(2.60)
18		(12.0)	6	260		---	----		----
19		(8.9)	5	(255)					(2.65)
20		(9.0)	5	---					----
21		8.8	8	---					(2.75)
22		(8.2)	10	260					(2.60)
23		9.0	11	265				2.6	(2.65)

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes.

Table 72

Hollandia, Netherlands New Guinea (2.5° S, 140.8° E) January 1958

mTime	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
0030	(495)	11.0	27	<250	7.4	100	3.9		2.25
0130	490	11.8	29	---	7.1	100	---		2.20
0230	480	>12.0	28	<300	7.0	100	---		2.30
0330	520	(12.4)	23	---	---	100	---		2.15
0430	500	>12.3	28	---	7.0	100	4.0		2.20
0515	480	12.4	28	<270	6.9	100	3.8		2.30
0615	480	>12.6	30	225	6.7	100	3.7		2.30
0715	470	12.4	31	240	7.0	100	3.4		2.30
0815	---	12.2	31	250	---	100	2.6	3.3	2.35
0915		12.2	31	340		---	---	3.2	2.30
1015		(12.0)	31	360				3.2	2.35
1115		(10.7)	30	320				3.0	2.50
1215		(10.3)	30	300				2.4	2.50
1315		10.5	31	300				3.0	2.55
1415		10.4	30	300					2.65
1515		>9.4	30	290					2.70
1615		8.8	31	280					2.70
1715		8.0	31	260					2.80
1815		7.6	31	250					2.80
1915		6.8	31	250					2.85
2015		7.0	31	245		---	2.4	2.7	2.85
2130	---	9.2	31	230		100	2.8	3.5	3.00
2230	---	9.9	31	220	---	100	3.7		2.80
2330	---	9.8	31	225	---	100	4.0		2.50

Time: 0.0°.
Sweep: 1.4 Mc to 20.0 Mc in 40 seconds.

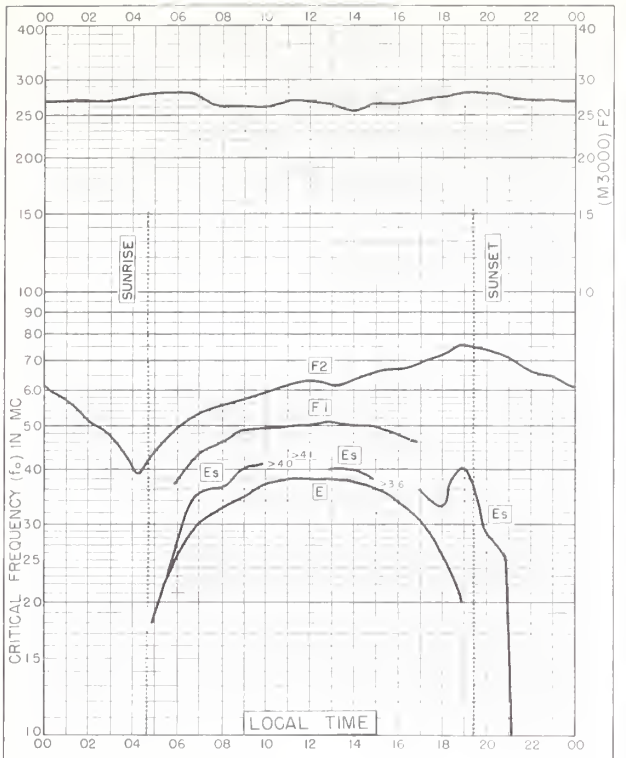


Fig. 1 WASHINGTON, D.C.
38.7°N, 77.1°W JUNE 1960

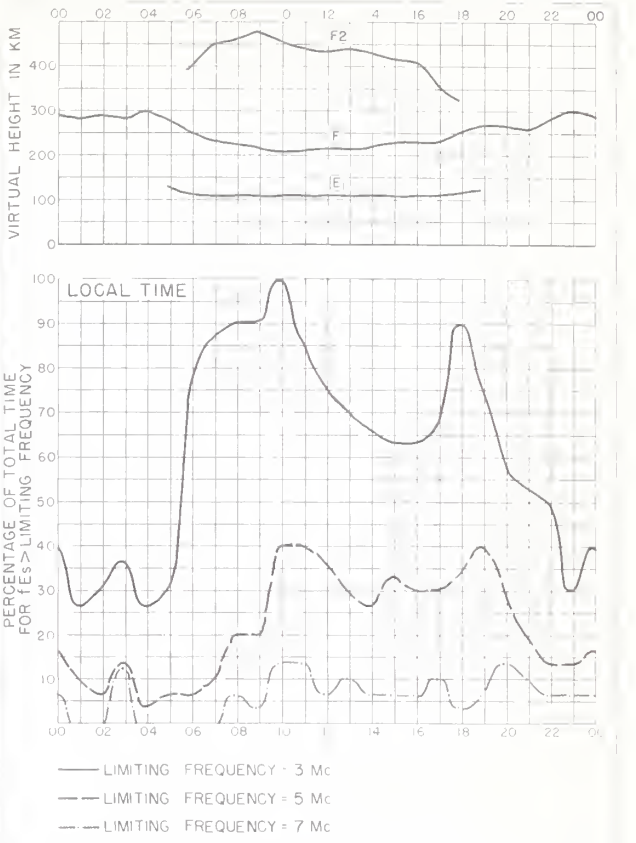


Fig. 2. WASHINGTON, D.C. JUNE 1960

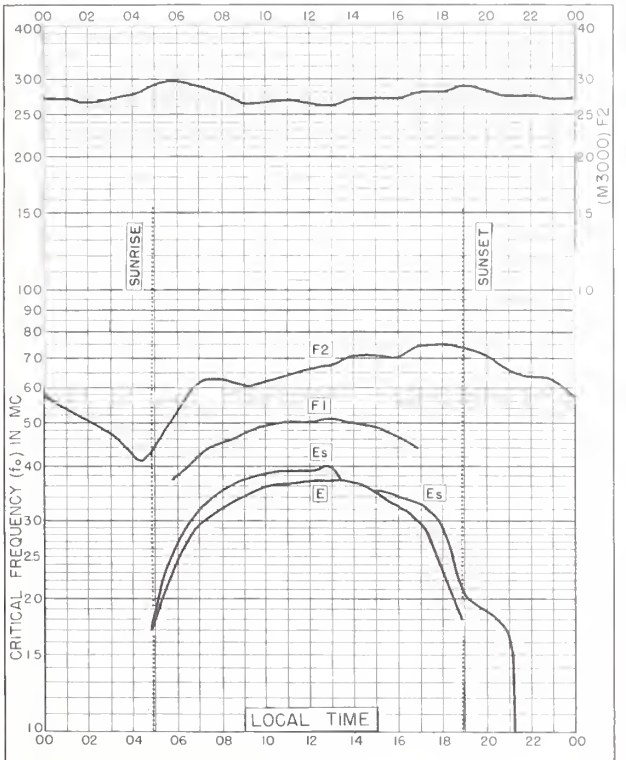


Fig. 3. WASHINGTON, D.C.
38.7°N, 77.1°W MAY 1960

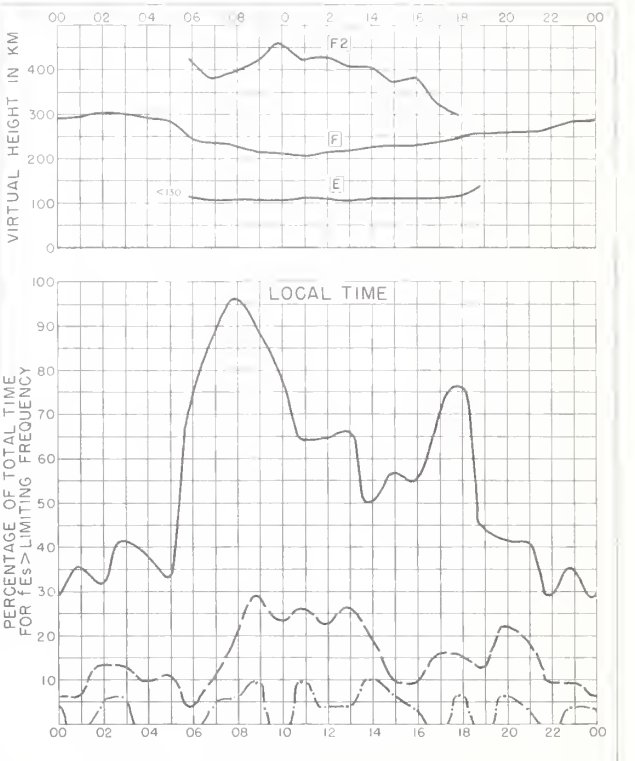


Fig. 4. WASHINGTON, D.C. MAY 1960

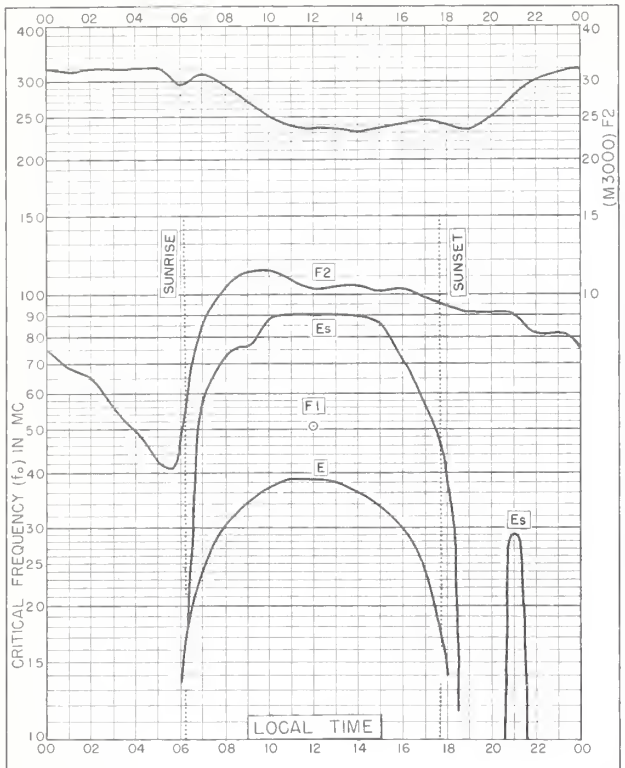


Fig. 5. HUANCAYO, PERU
12.0°S, 75.3°W MAY 1960

NBS 503

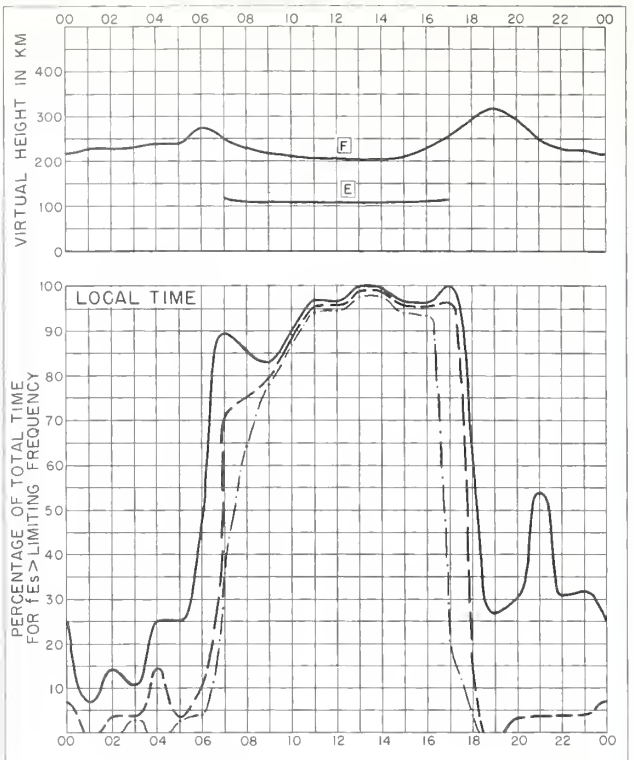


Fig. 6. HUANCAYO, PERU MAY 1960

NBS 490

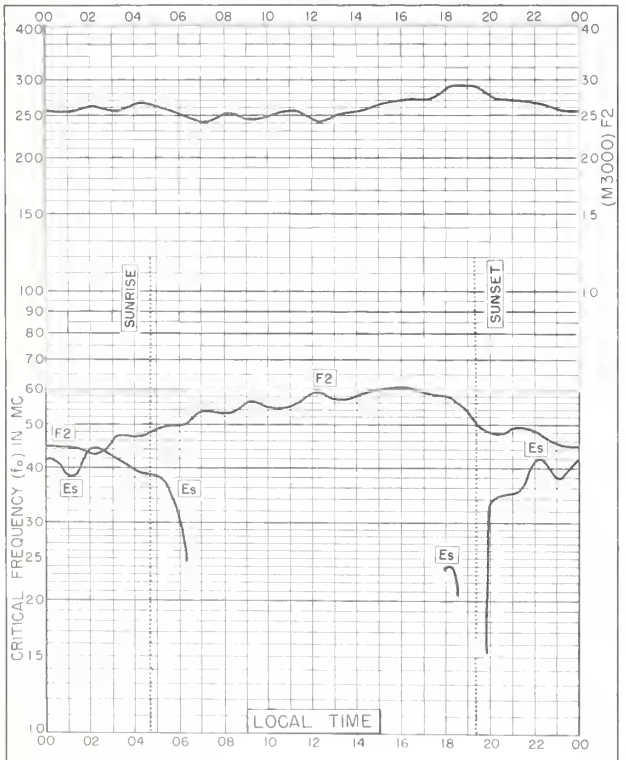


Fig. 7. FAIRBANKS, ALASKA
64.9°N, 147.8°W APRIL 1960

NBS 503

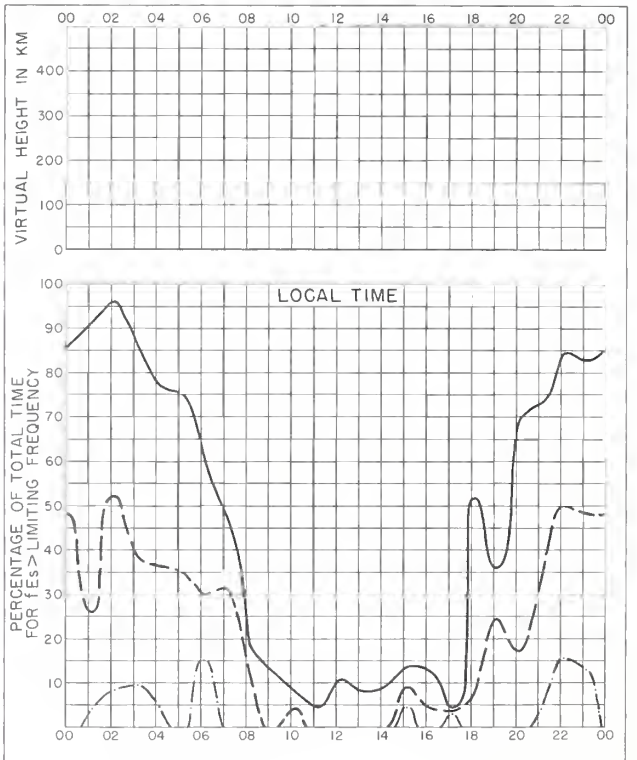


Fig. 8. FAIRBANKS, ALASKA APRIL 1960

NBS 490

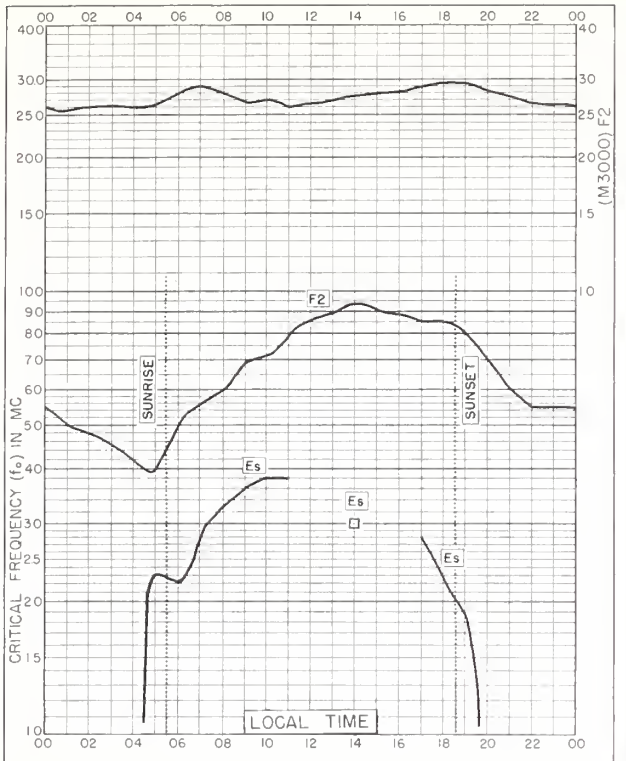


Fig. 9. BOULDER, COLORADO
40.0°N, 105.3°W APRIL 1960

NBS 503

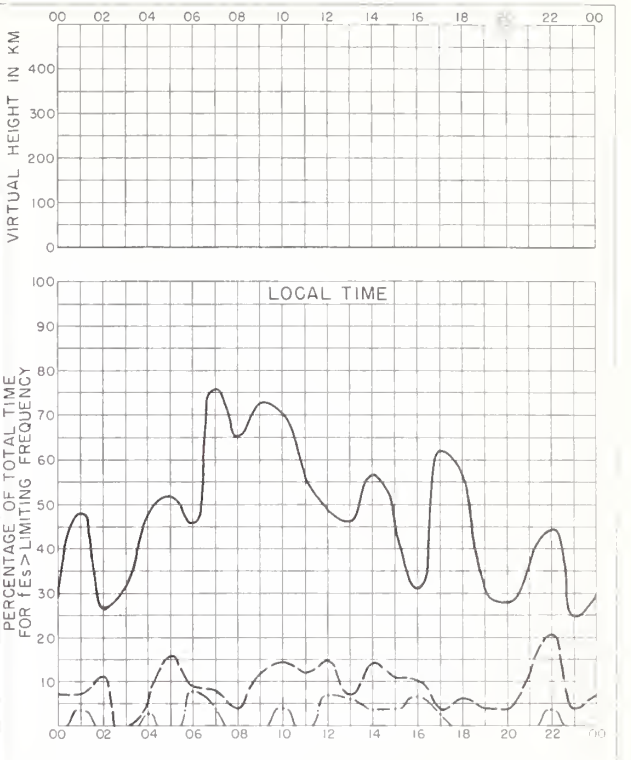


Fig. 10. BOULDER, COLORADO APRIL 1960

NBS 490

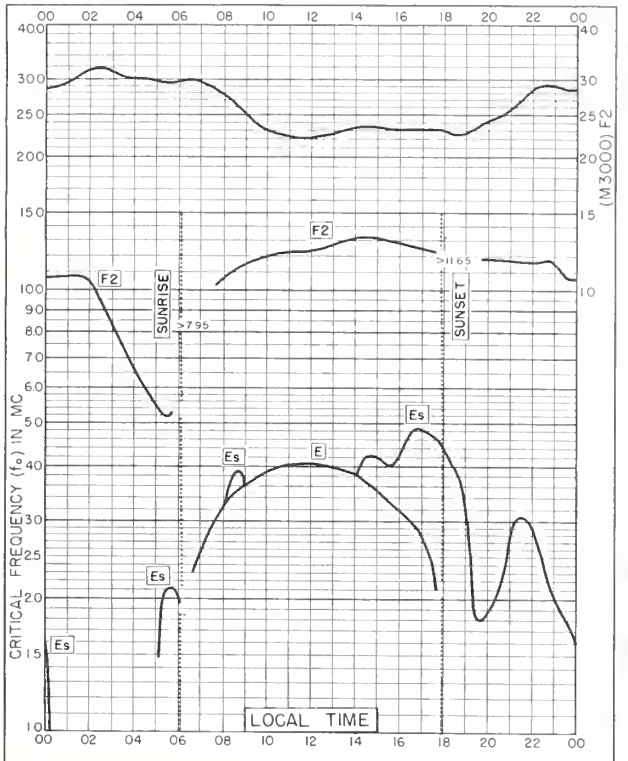


Fig. 11. TALARA, PERU
4.6°S, 81.3°W APRIL 1960

NBS 503

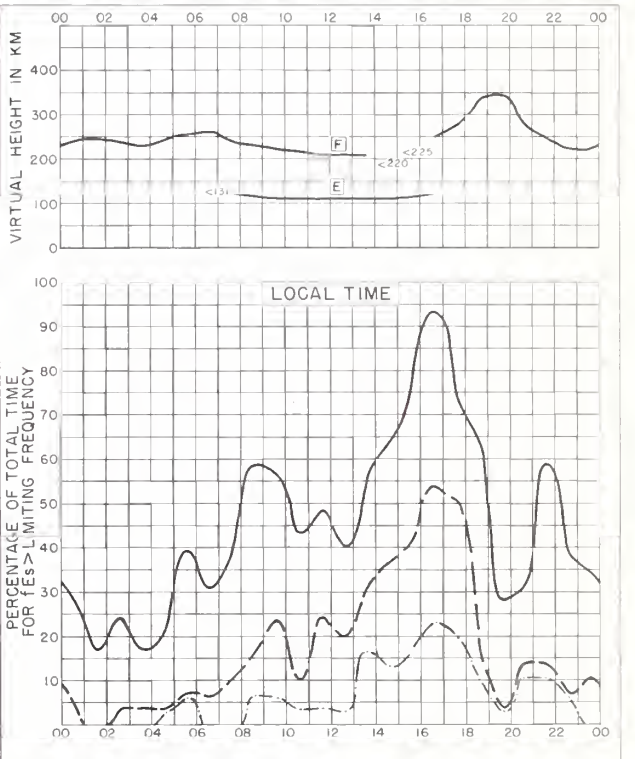


Fig. 12. TALARA, PERU APRIL 1960

NBS 490

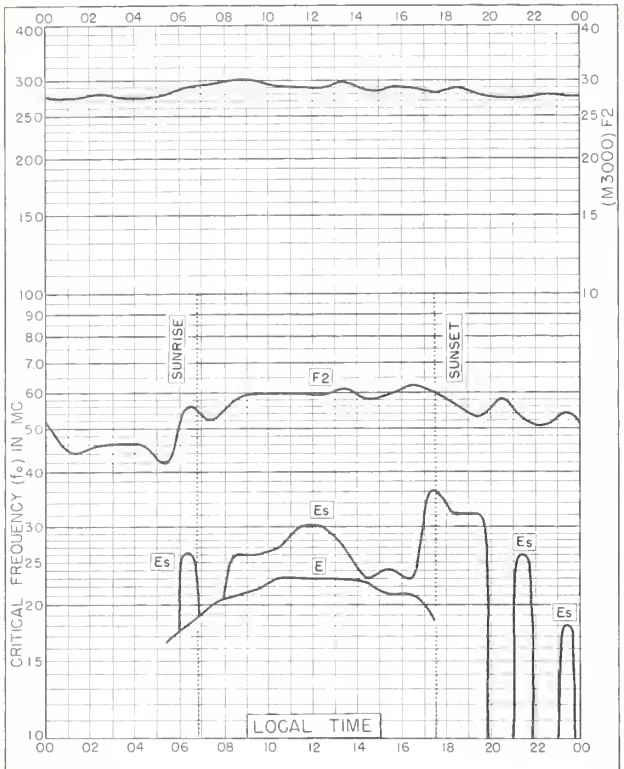


Fig. 13. THULE, GREENLAND
76.6°N, 68.7°W MARCH 1960

NBS 503

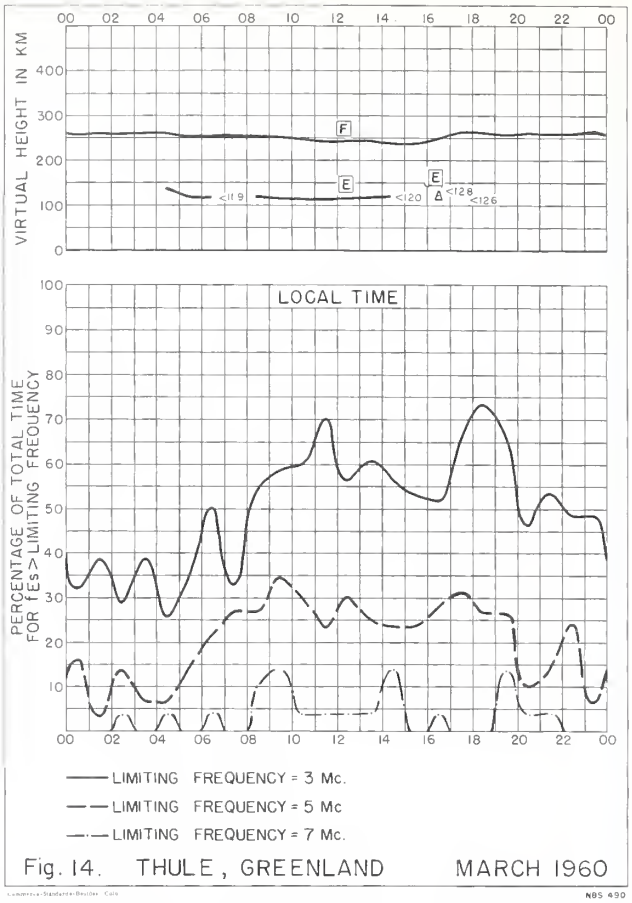


Fig. 14. THULE, GREENLAND MARCH 1960

NBS 490

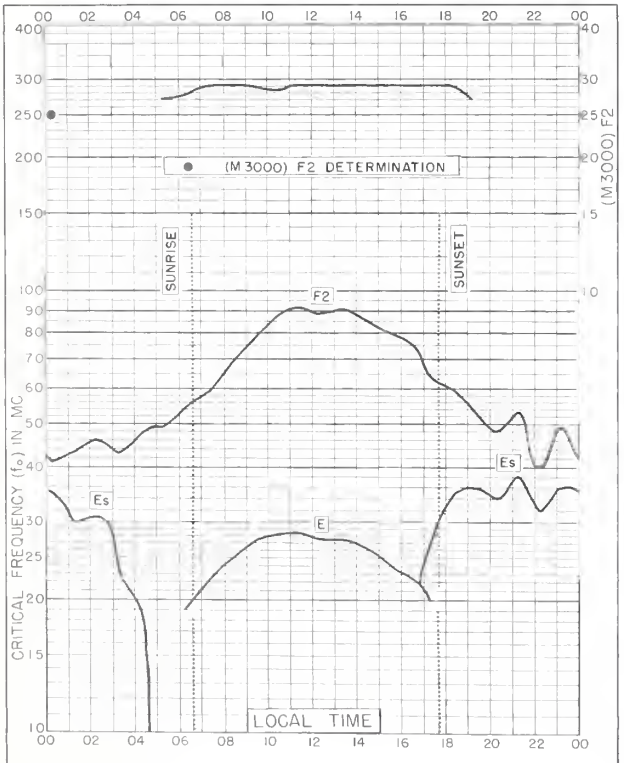


Fig. 15. TROMSO, NORWAY
69.7°N, 19.0°E MARCH 1960

NBS 503

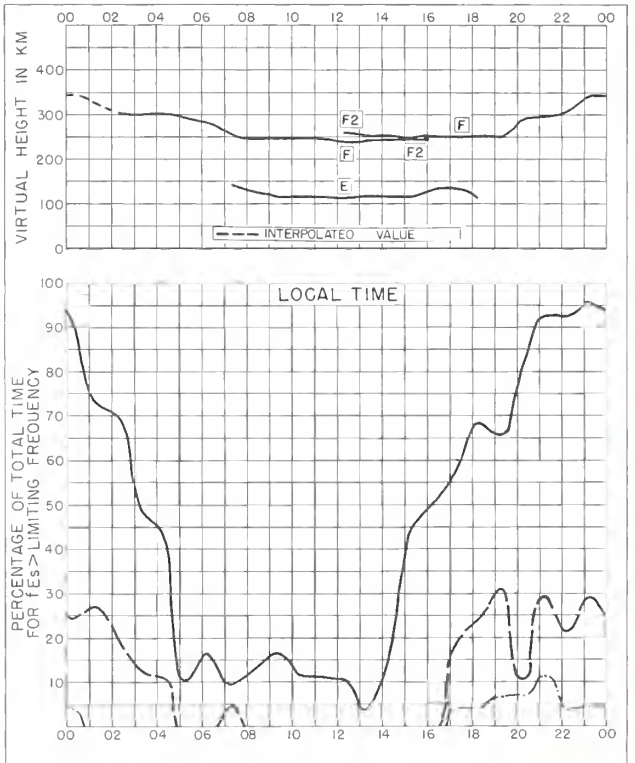


Fig. 16. TROMSO, NORWAY MARCH 1960

NBS 490

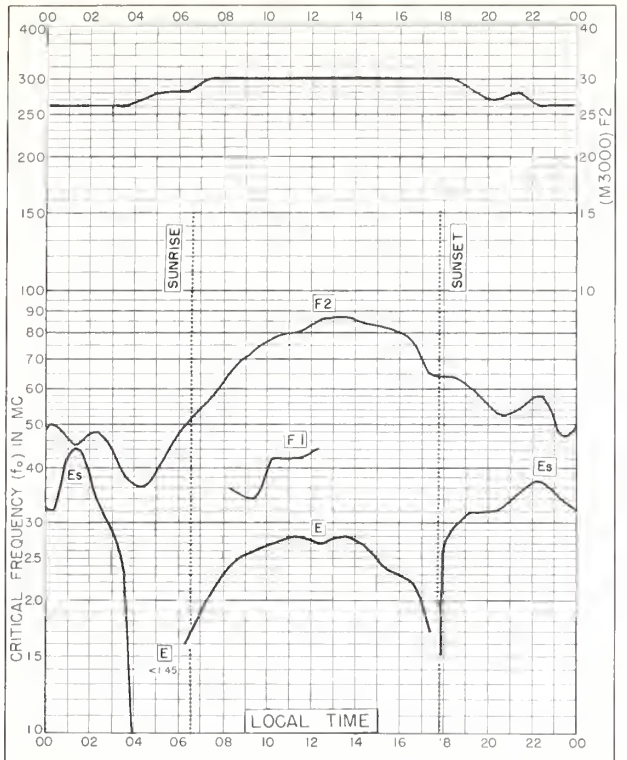


Fig. 17. KIRUNA, SWEDEN
67.8°N, 20.3°E MARCH 1960

NBS 503

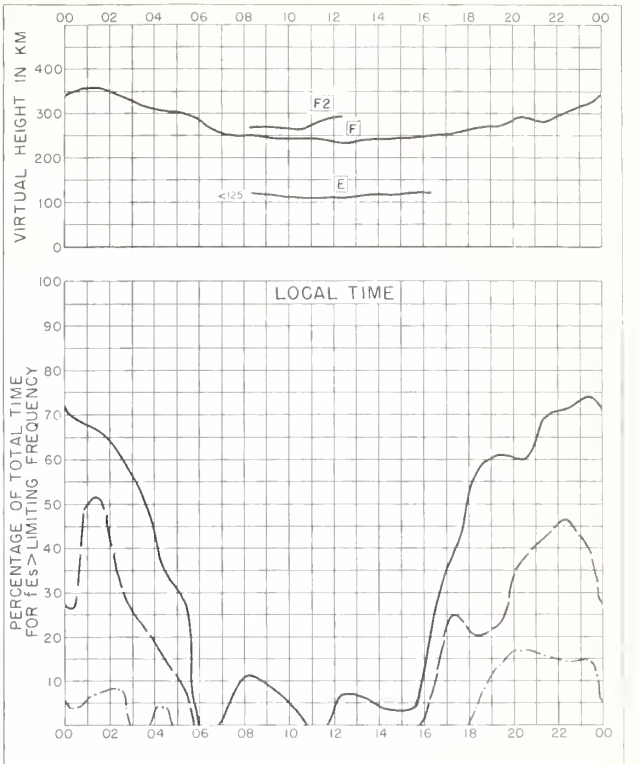


Fig. 18. KIRUNA, SWEDEN MARCH 1960

NBS 490

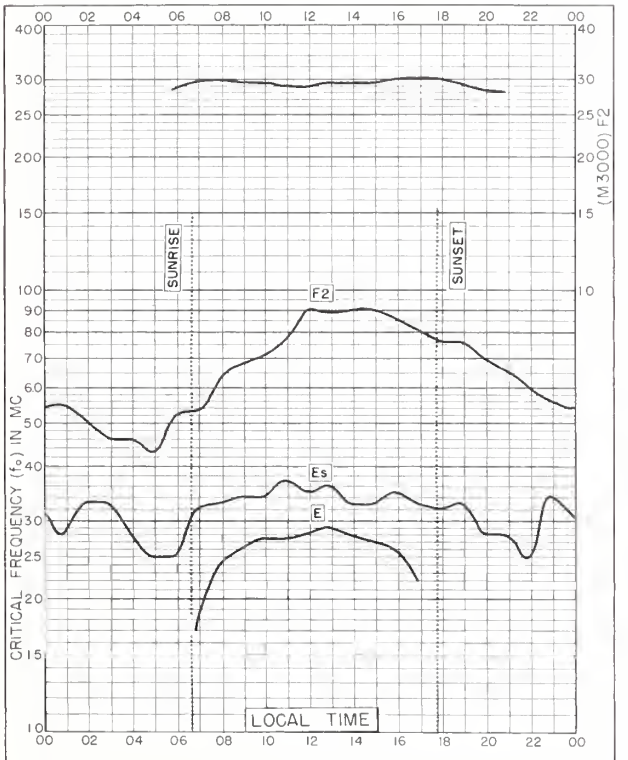


Fig. 19. SODANKYLA, FINLAND
67.4°N, 26.6°E MARCH 1960

NBS 503

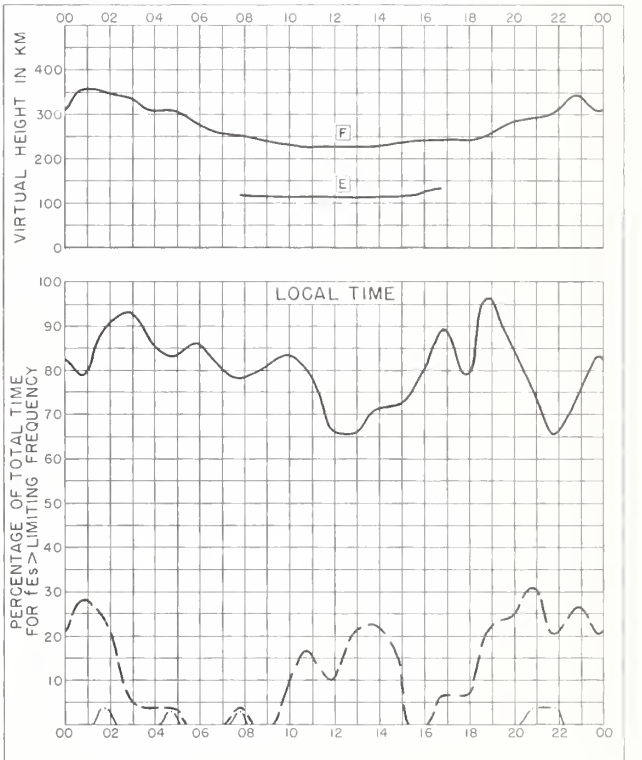


Fig. 20. SODANKYLA, FINLAND MARCH 1960

NBS 490

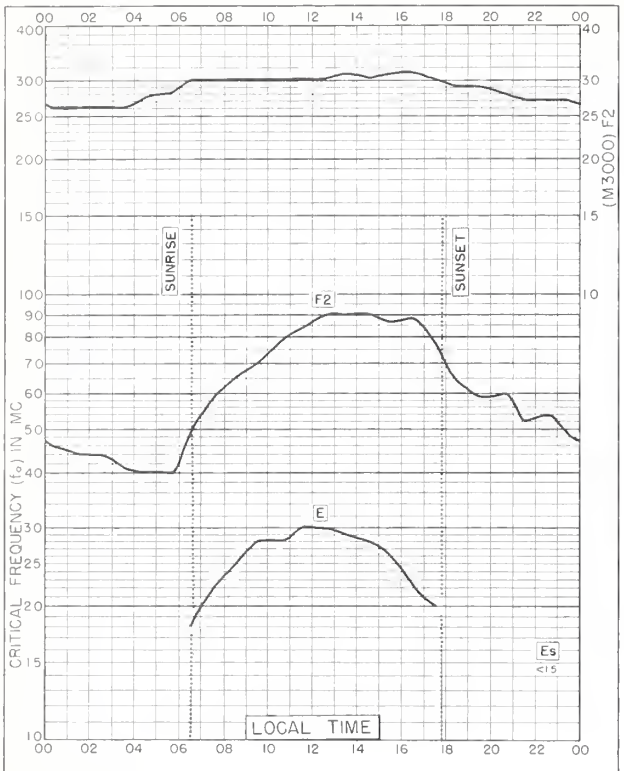


Fig. 21. LULEA, SWEDEN
65.6°N, 22.1°E MARCH 1960

NBS 503

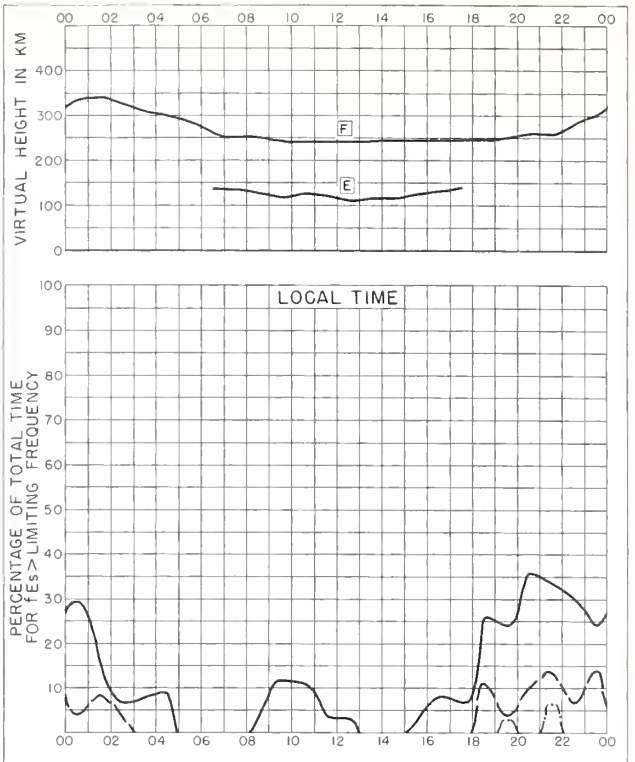


Fig. 22. LULEA, SWEDEN MARCH 1960

NBS 490

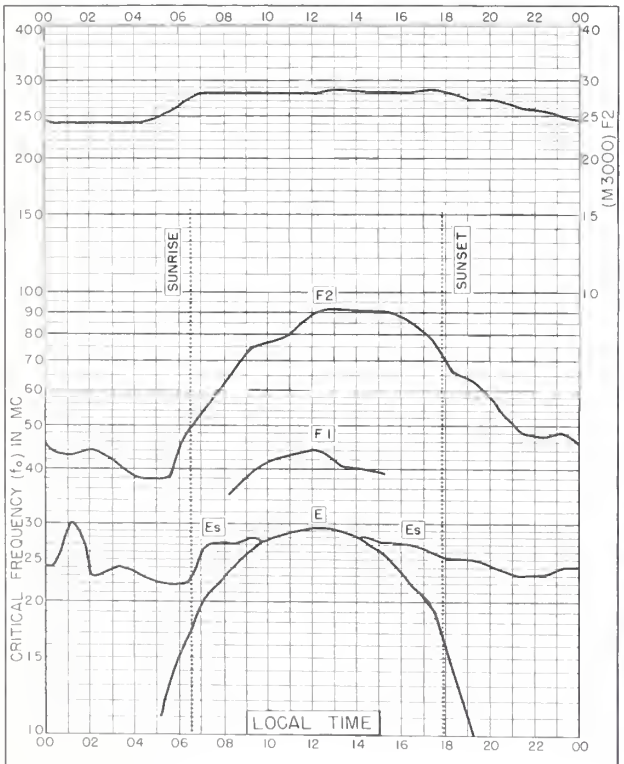


Fig. 23. LYCKSELE, SWEDEN
64.6°N, 18.8°E MARCH 1960

NBS 503

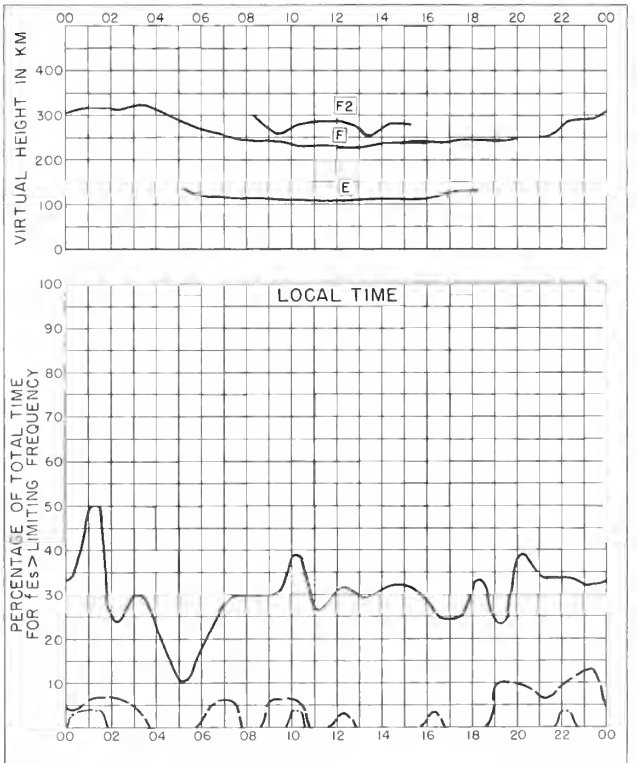


Fig. 24. LYCKSELE, SWEDEN MARCH 1960

NBS 490

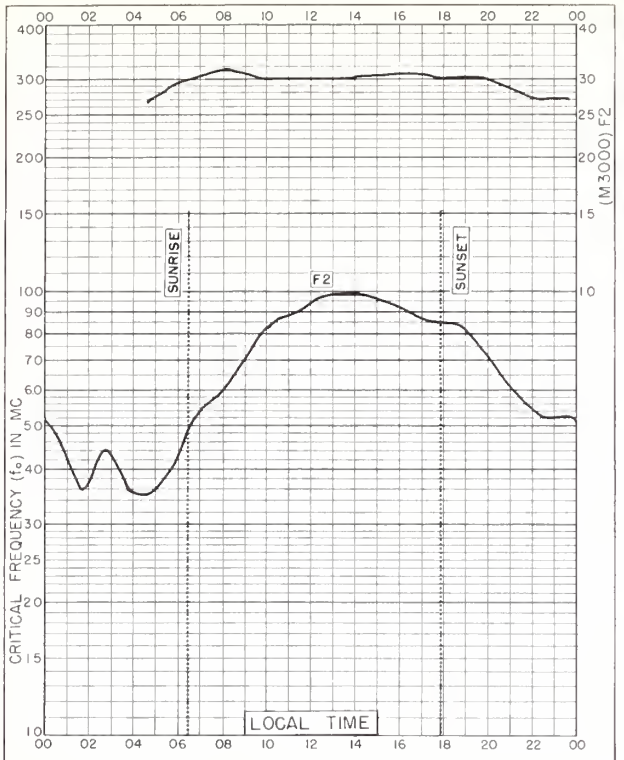


Fig. 25. NURMIJARVI, FINLAND
60.5°N, 24.6°E MARCH 1960

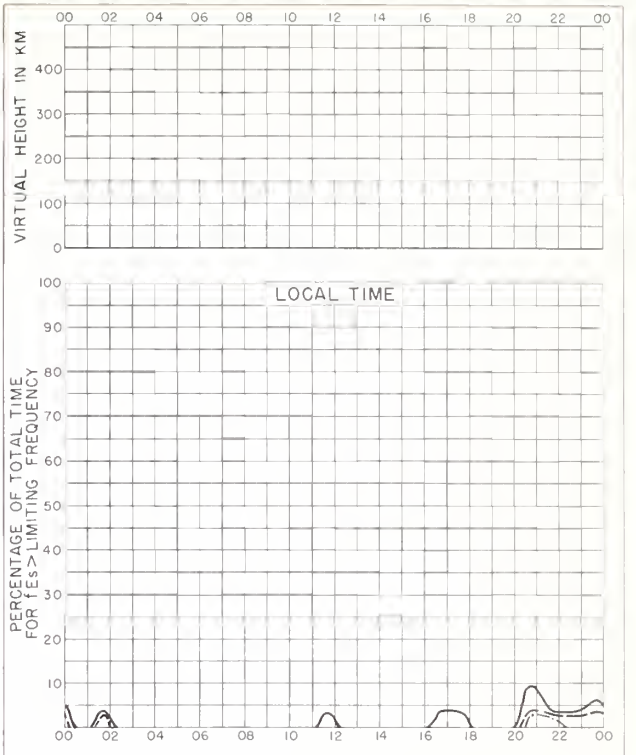


Fig. 26. NURMIJARVI, FINLAND MARCH 1960

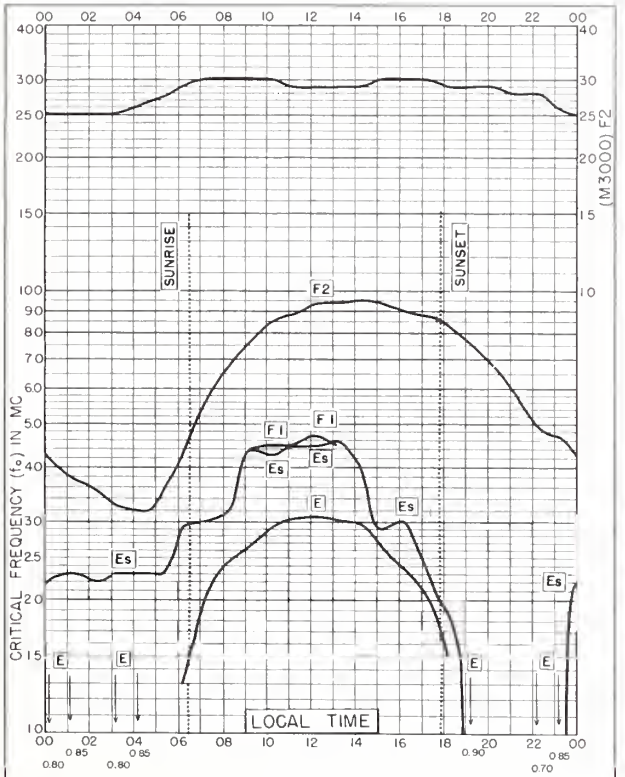


Fig. 27. UPSALA, SWEDEN
59.8°N, 17.6°E MARCH 1960

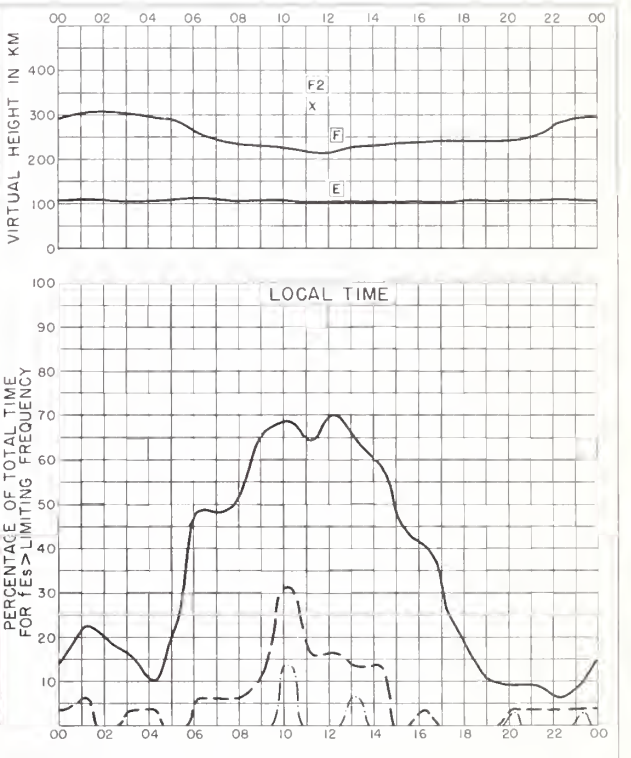


Fig. 28. UPSALA, SWEDEN MARCH 1960

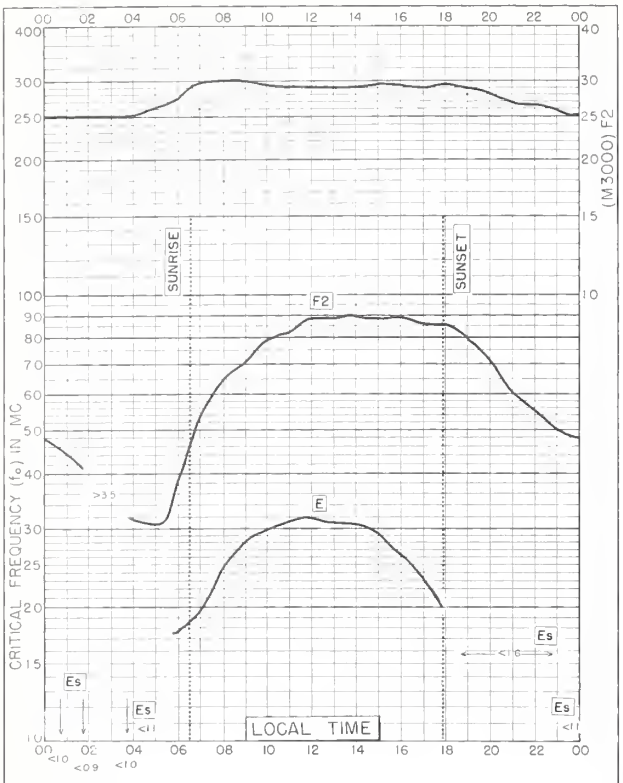


Fig. 29. INVERNESS, SCOTLAND
57.4°N, 4.2°W MARCH 1960

NBS 503

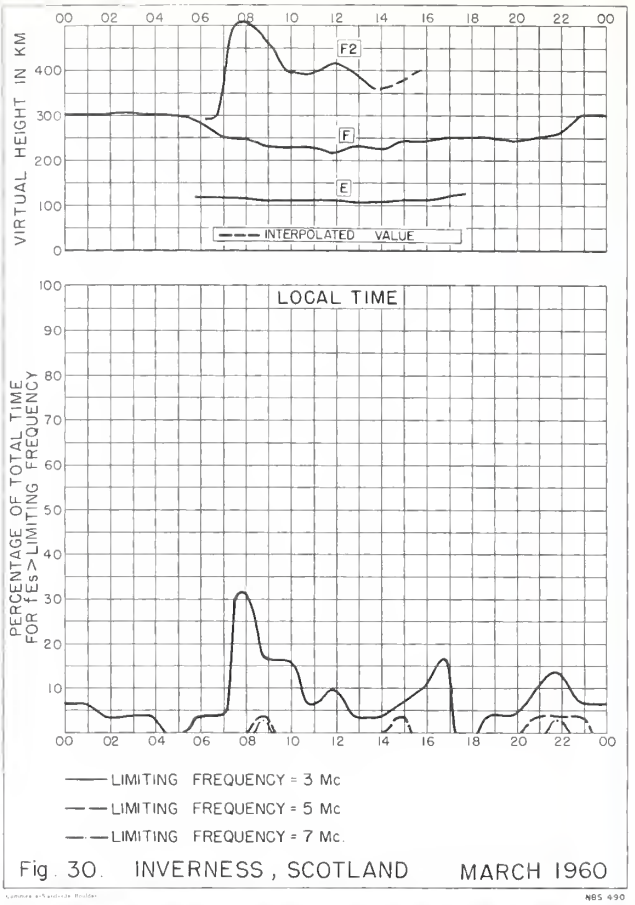


Fig. 30. INVERNESS, SCOTLAND MARCH 1960

NBS 490

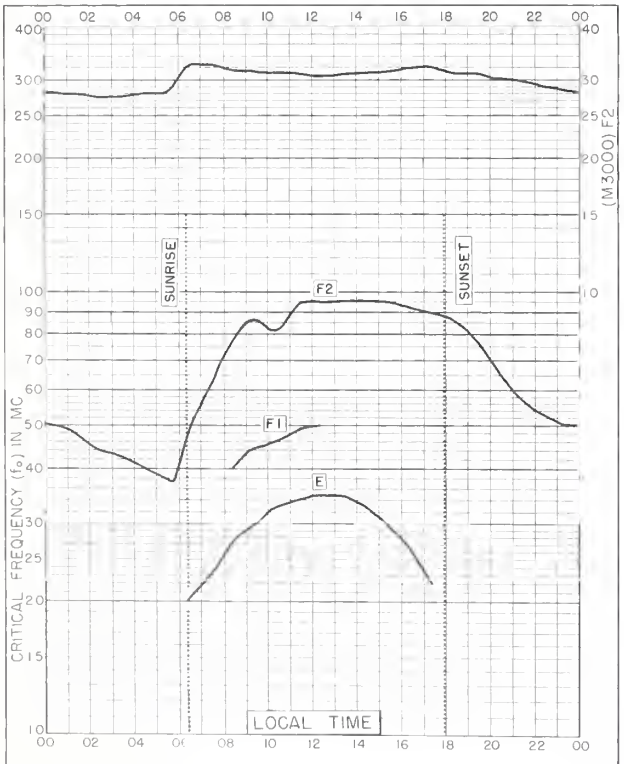


Fig. 31. De BILT, HOLLAND
52.1°N, 5.2°E MARCH 1960

NBS 503

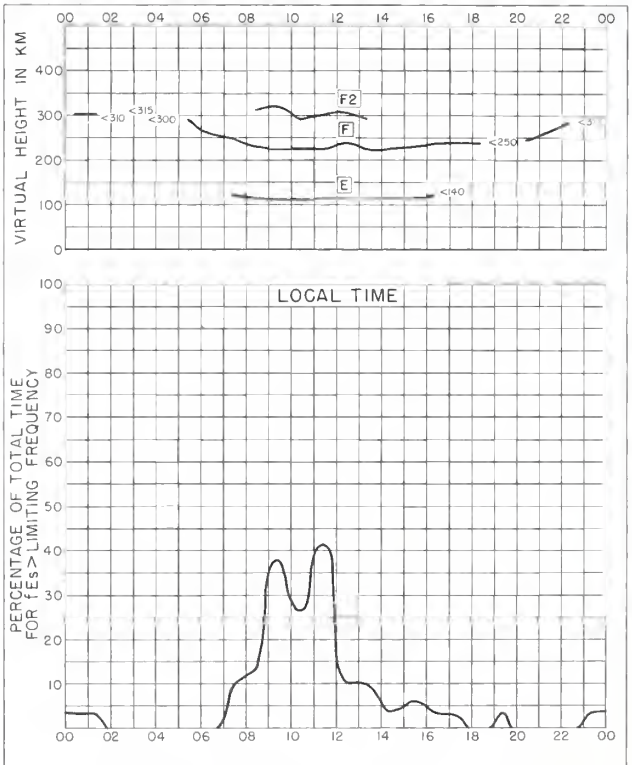


Fig. 32. De BILT, HOLLAND MARCH 1960

NBS 490

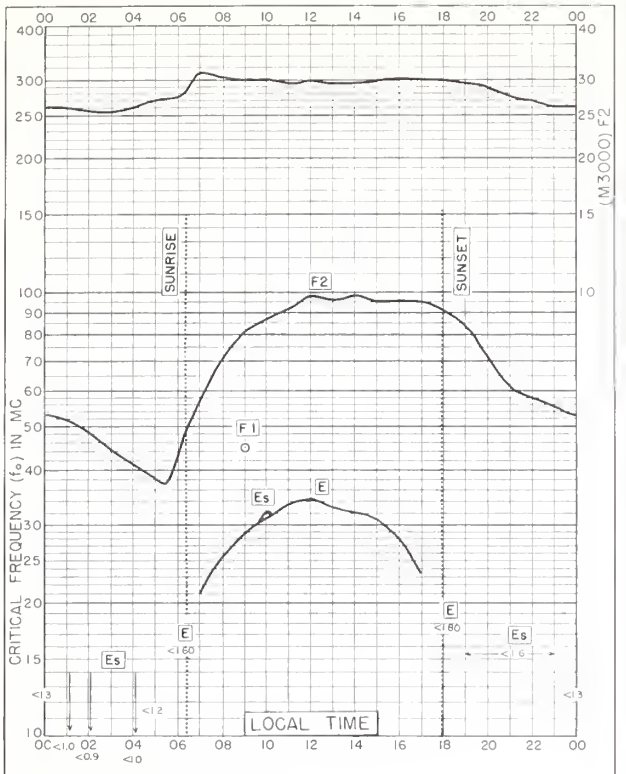


Fig. 33. SLOUGH, ENGLAND
51.5°N, 0.6°W MARCH 1960

NBS 503

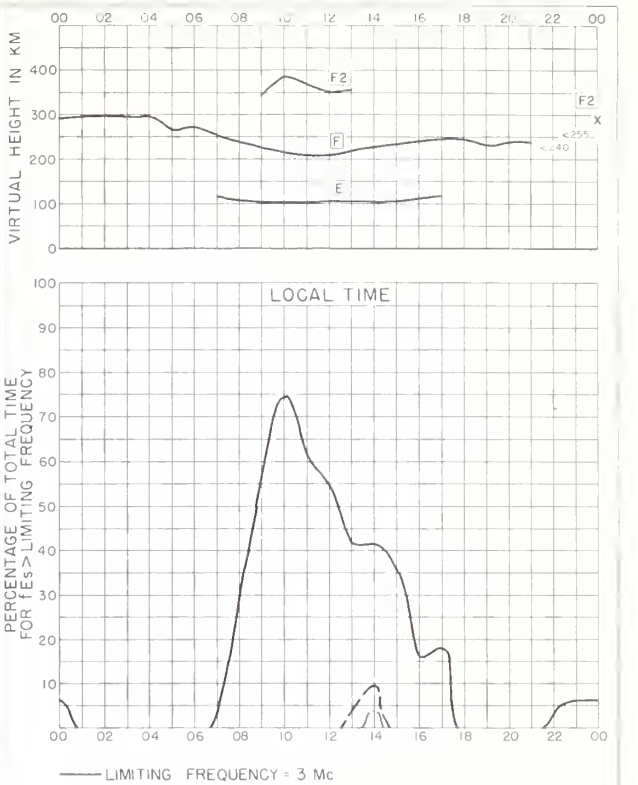


Fig. 34. SLOUGH, ENGLAND MARCH 1960

NBS 490

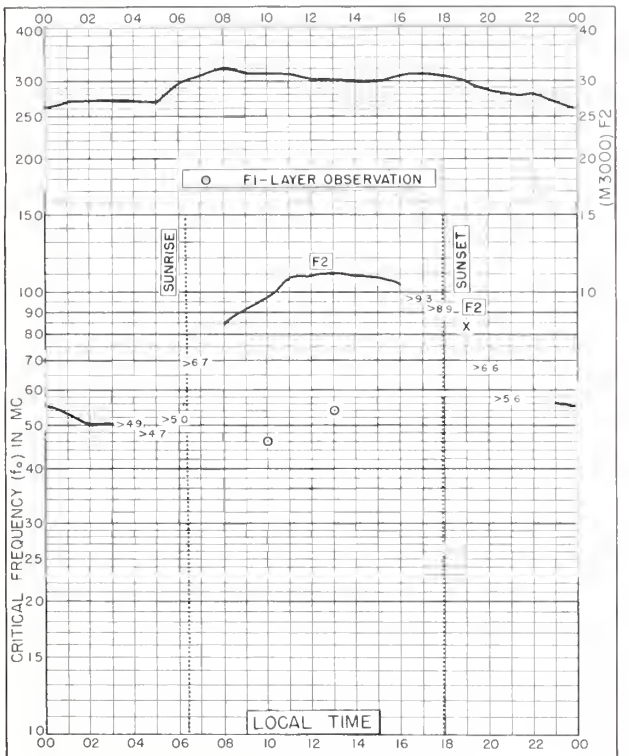


Fig. 35. GRAZ, AUSTRIA
47.1°N, 15.5°E MARCH 1960

NBS 503

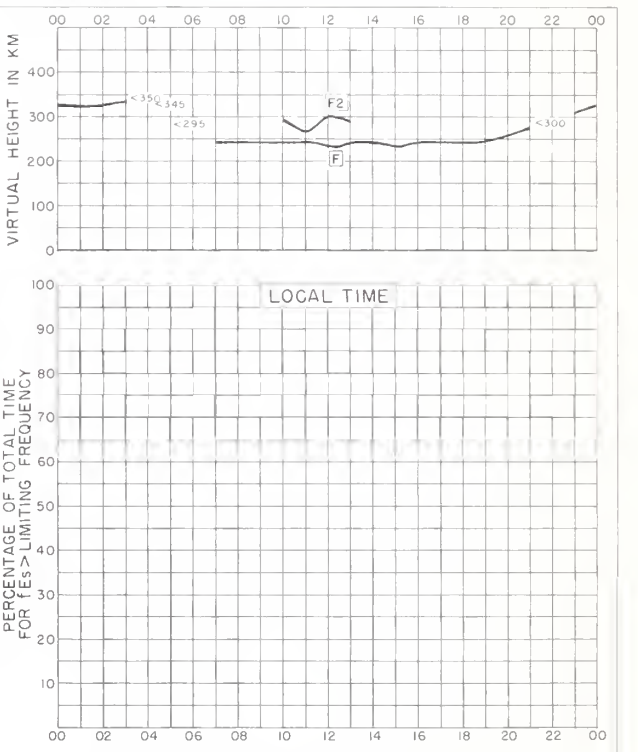


Fig. 36. GRAZ, AUSTRIA MARCH 1960

NBS 490

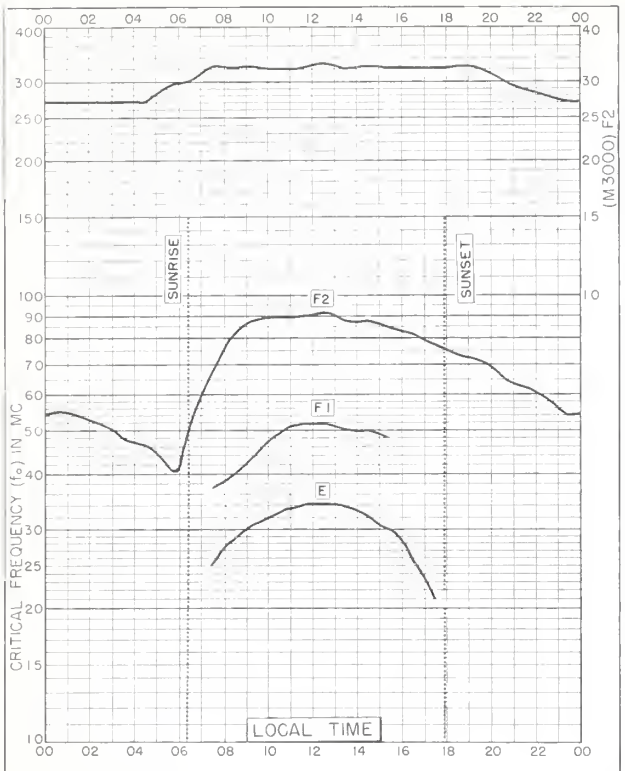


Fig. 37. SOTTENS, SWITZERLAND
46.6°N, 6.7°E MARCH 1960

NBS 503

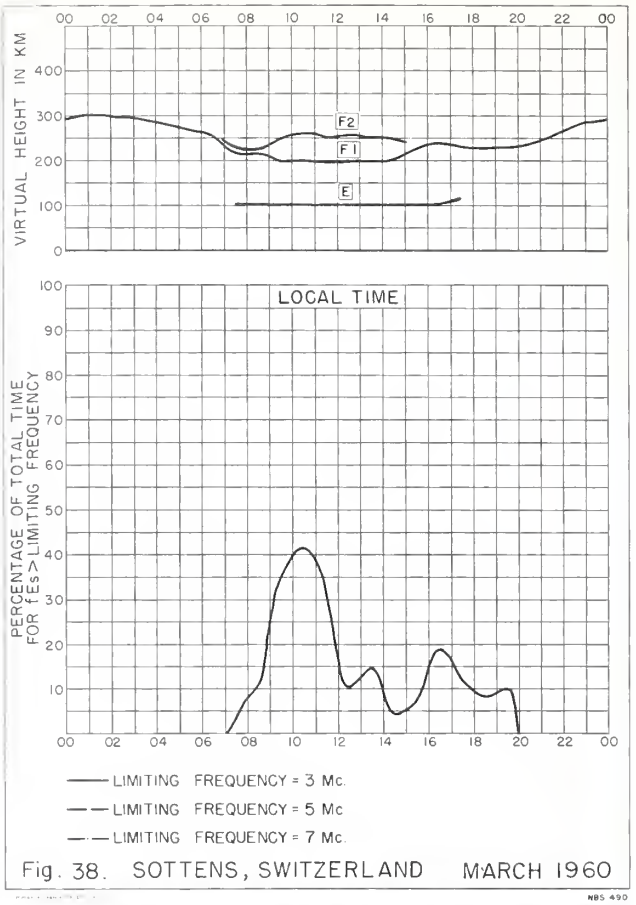


Fig. 38. SOTTENS, SWITZERLAND MARCH 1960

NBS 490

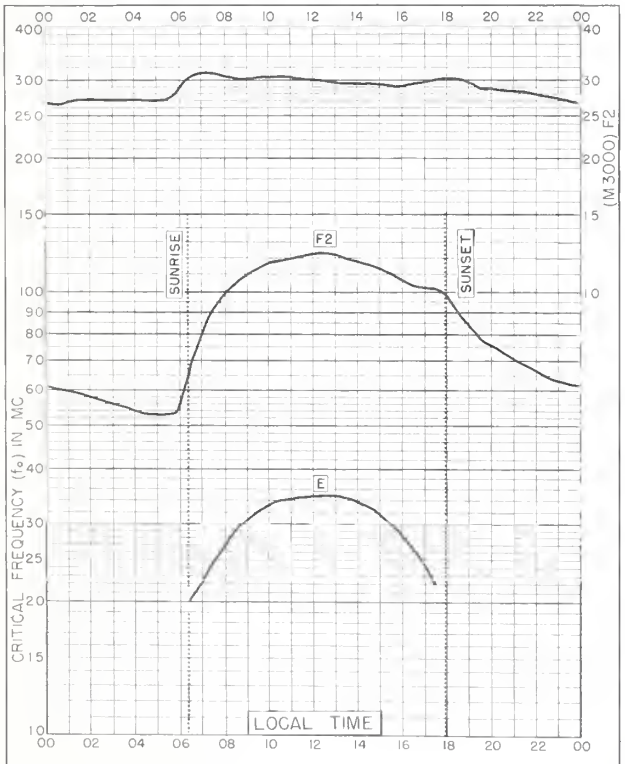


Fig. 39. WAKKANAI, JAPAN
45.4°N, 141.7°E MARCH 1960

NBS 503

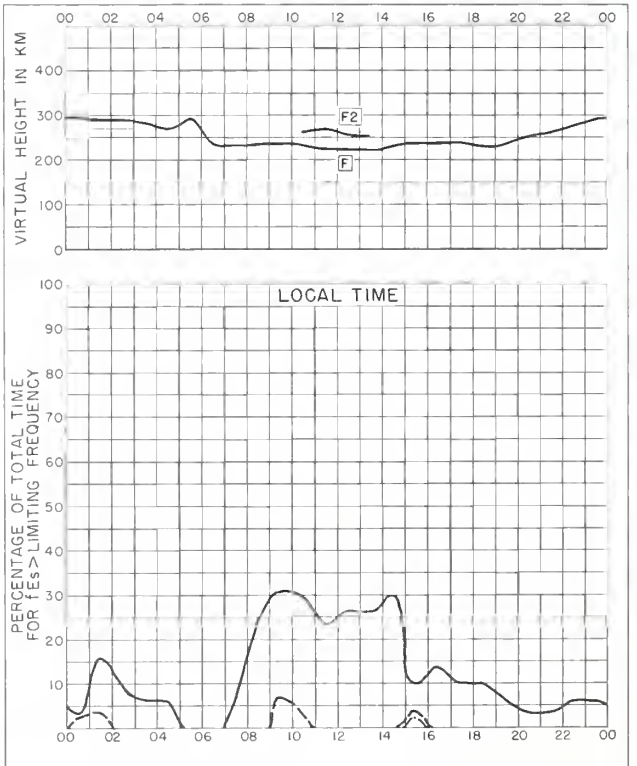


Fig. 40. WAKKANAI, JAPAN MARCH 1960

NBS 490

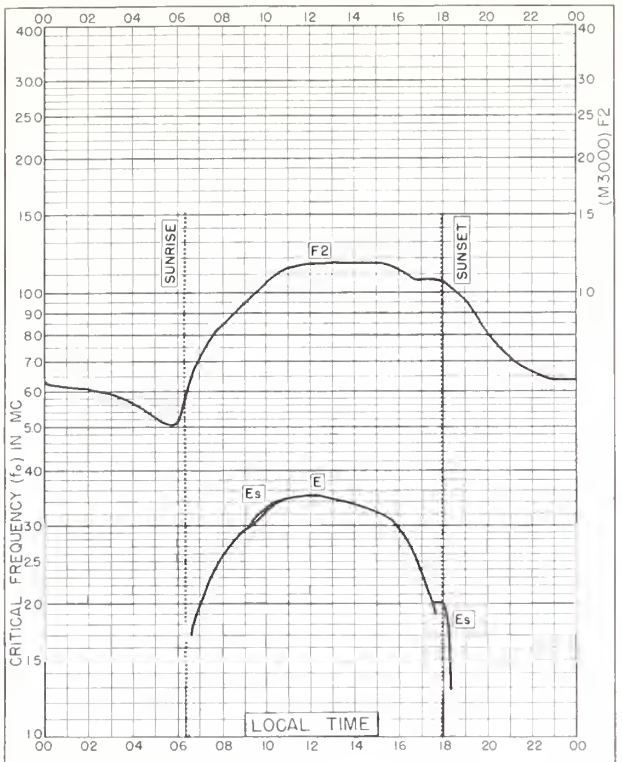
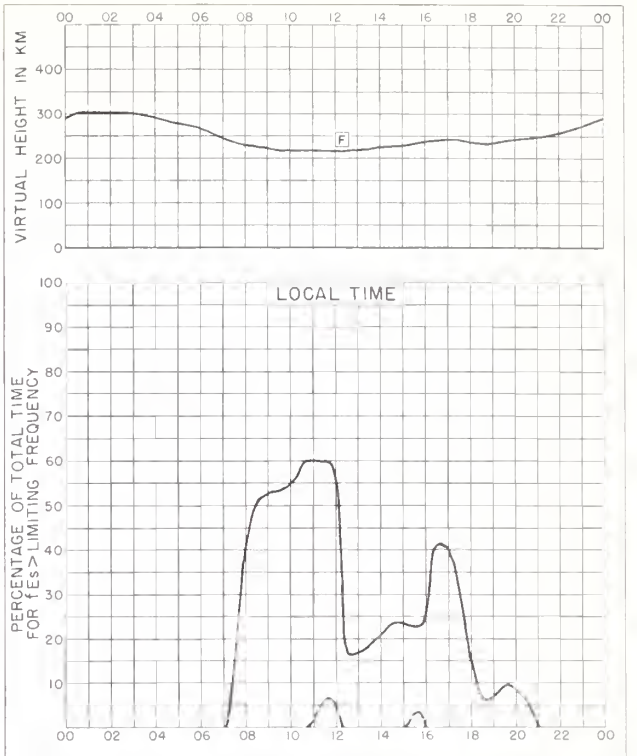


Fig. 41. GENOA(MONTE CAPELLINO), ITALY
44.6°N, 9.0°E MARCH 1960

NBS 503



MARCH 1960

Fig. 42. GENOA(MONTE CAPELLINO), ITALY

NBS 490

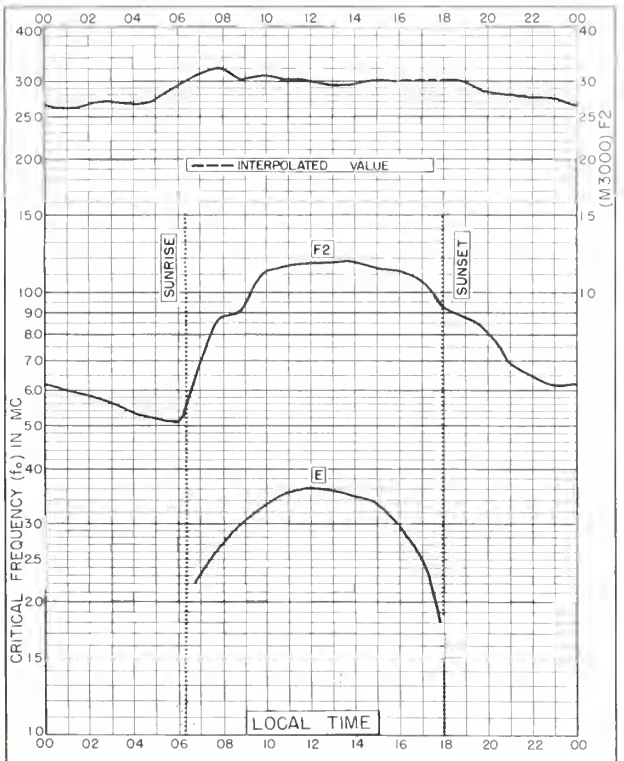


Fig. 43. ROME, ITALY
41.8°N, 12.5°E MARCH 1960

NBS 503

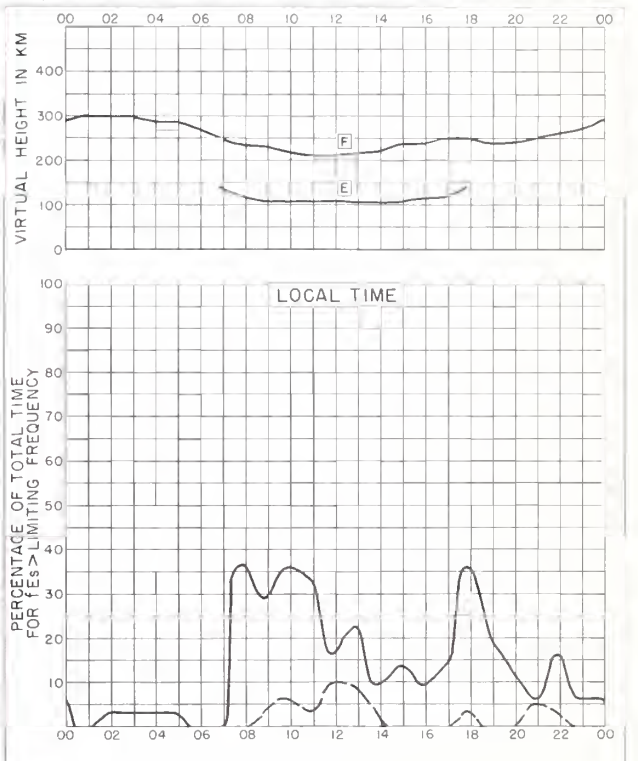


Fig. 44. ROME, ITALY MARCH 1960

NBS 490

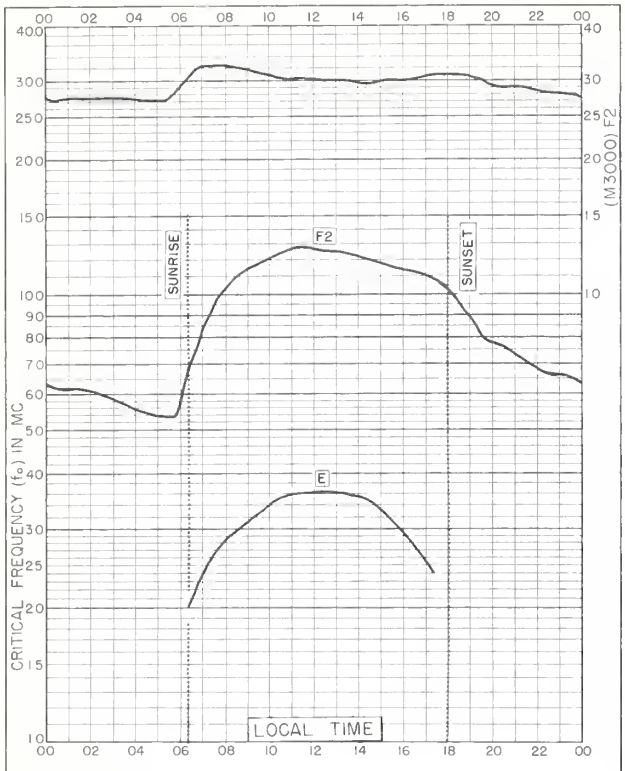


Fig. 45. AKITA, JAPAN
39.7°N, 140.1°E MARCH 1960

NBS 503

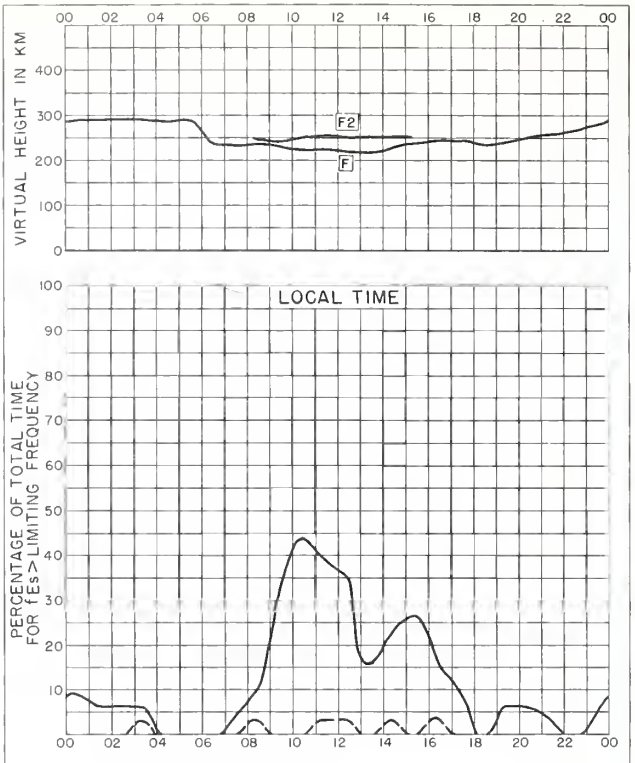


Fig. 46. AKITA, JAPAN MARCH 1960

NBS 490

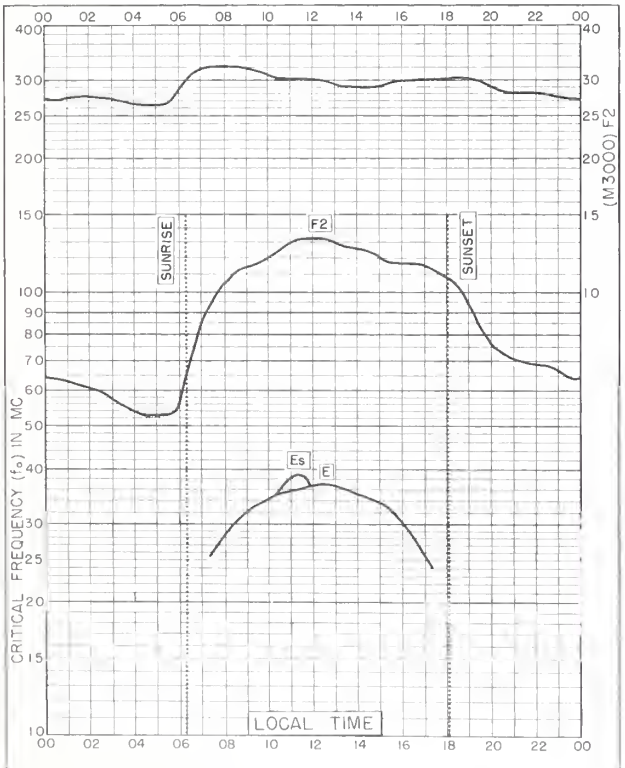


Fig. 47. TOKYO, JAPAN
35.7°N, 139.5°E MARCH 1960

NBS 503

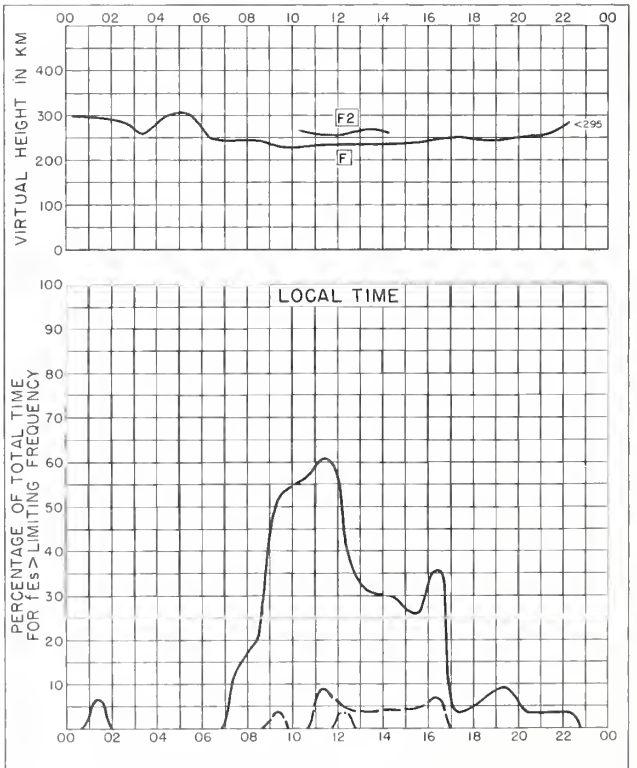


Fig. 48. TOKYO, JAPAN MARCH 1960

NBS 490

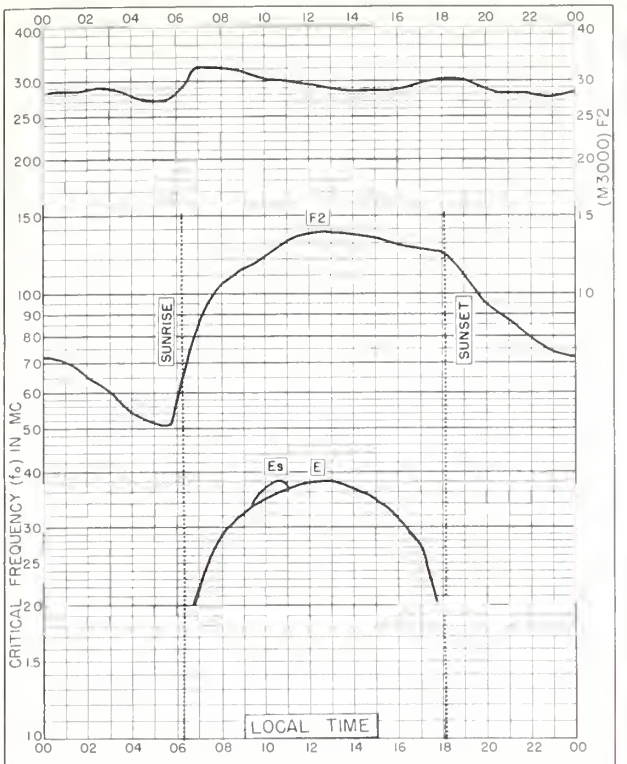


Fig. 49. YAMAGAWA, JAPAN
31.2°N, 130.6°E MARCH 1960

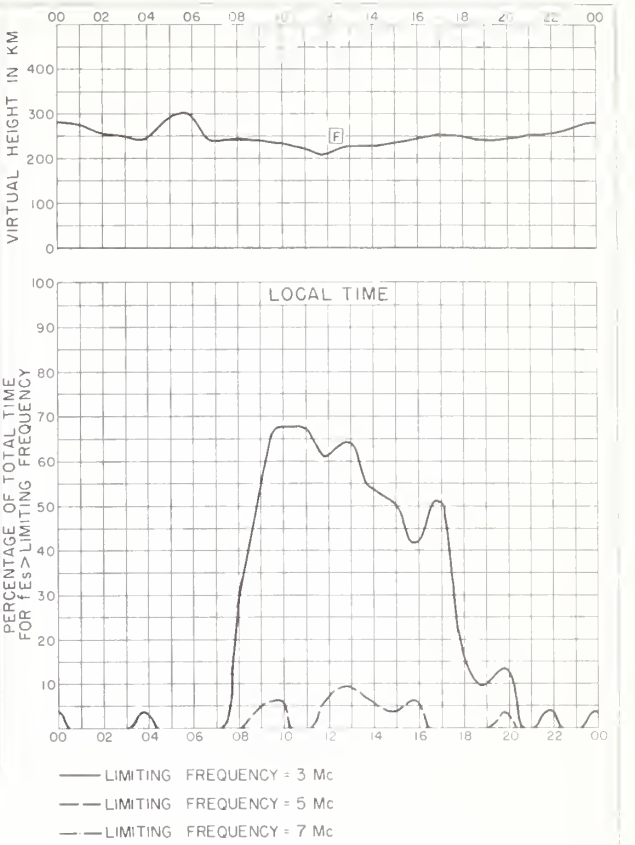


Fig. 50. YAMAGAWA, JAPAN MARCH 1960

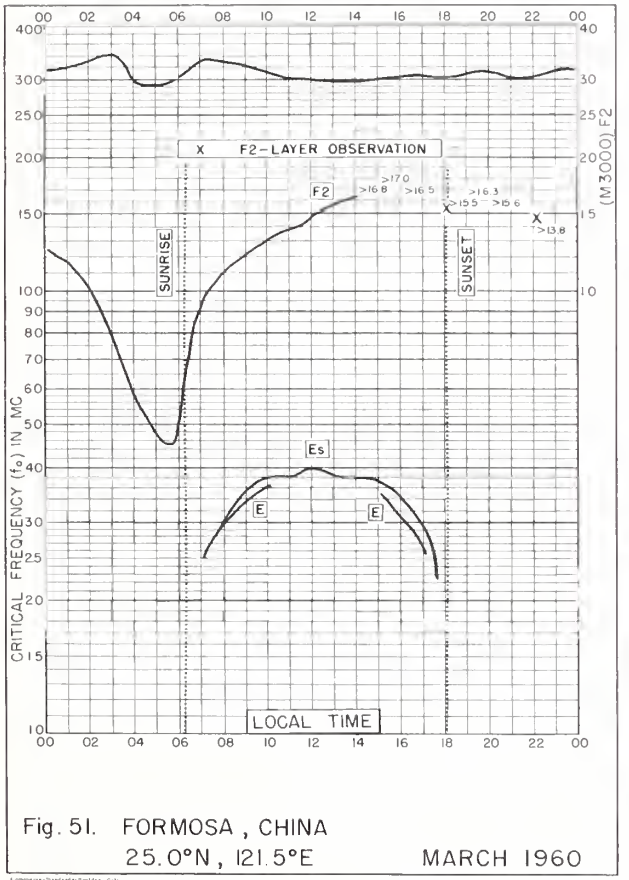


Fig. 51. FORMOSA, CHINA
25.0°N, 121.5°E MARCH 1960

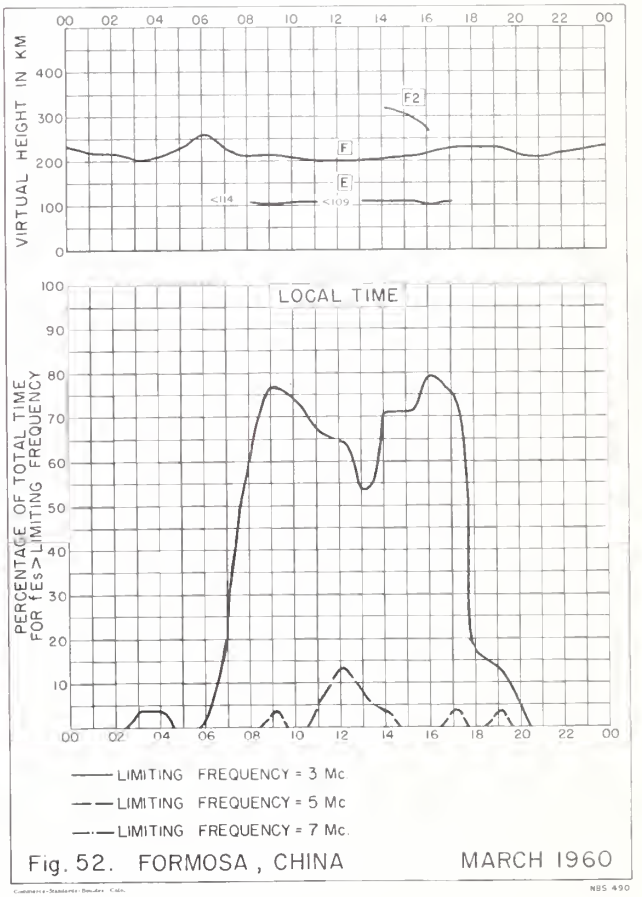


Fig. 52. FORMOSA, CHINA MARCH 1960

Fig. 53. EL CERILLO, MEXICO
19.3°N, 99.5°W MARCH 1960

NBS 503

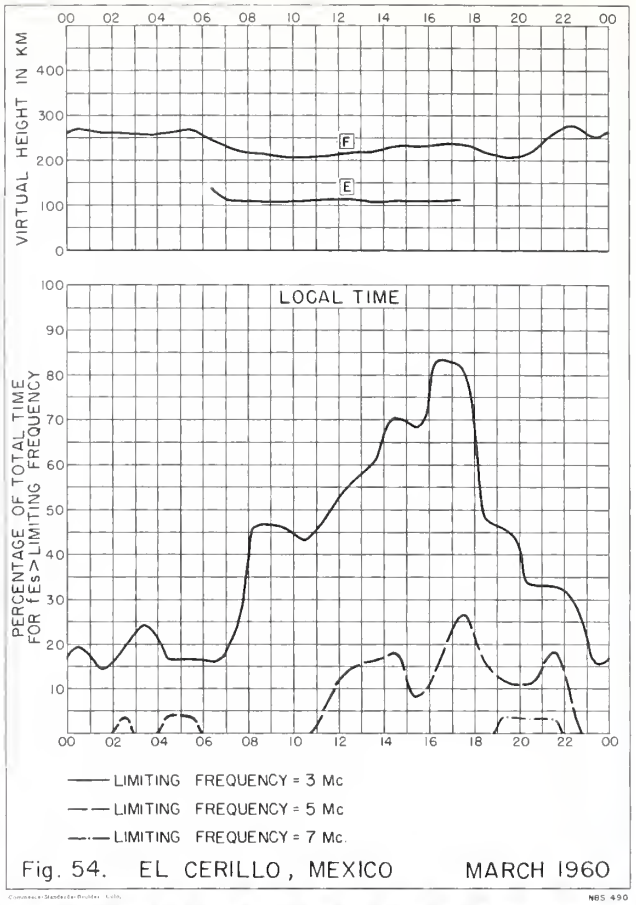


Fig. 54. EL CERILLO, MEXICO MARCH 1960

NBS 490

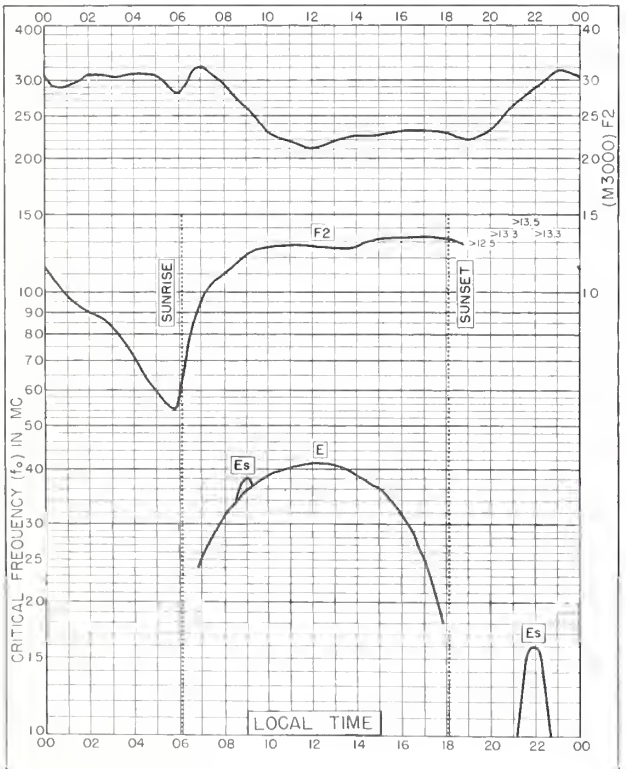


Fig. 55. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E MARCH 1960

NBS 503

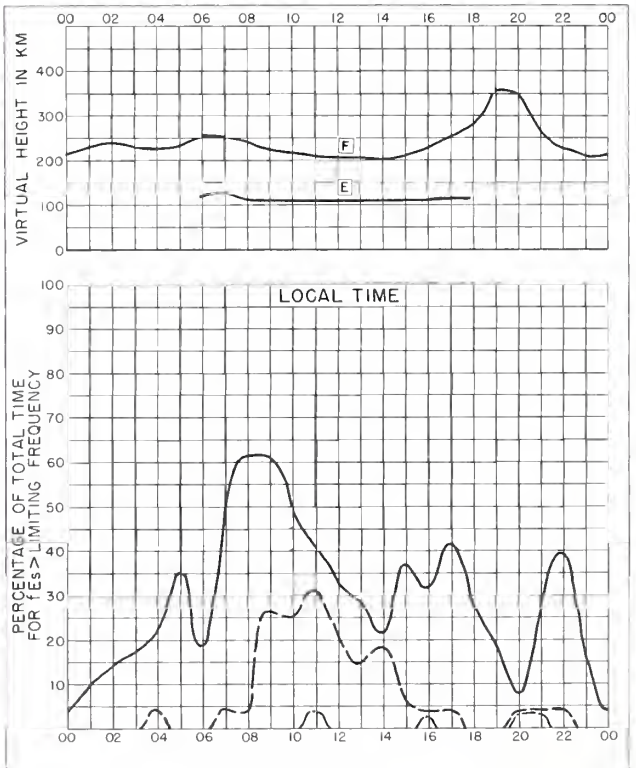


Fig. 56. SINGAPORE, BRITISH MALAYA MARCH 1960

NBS 490

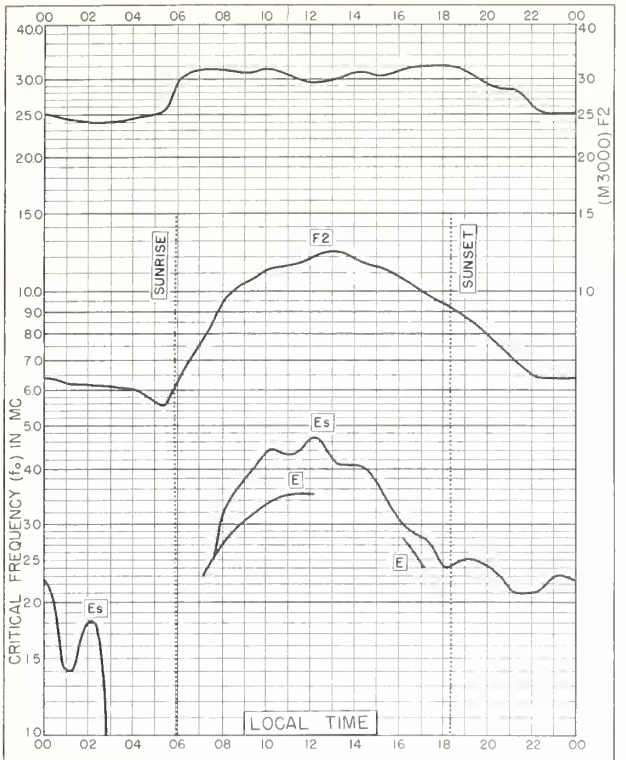


Fig. 57. FALKLAND IS.
51.7°S, 57.8°W MARCH 1960

NBS 503

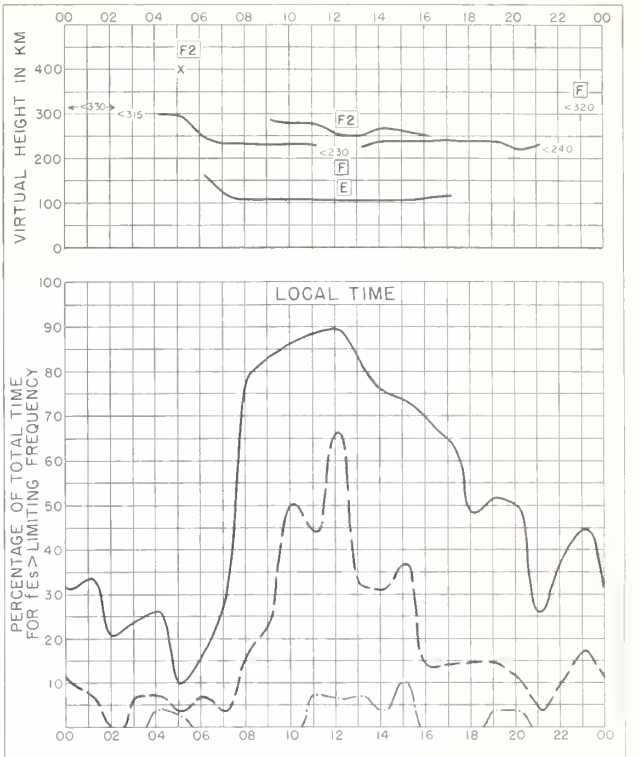


Fig. 58. FALKLAND IS. MARCH 1960

NBS 490

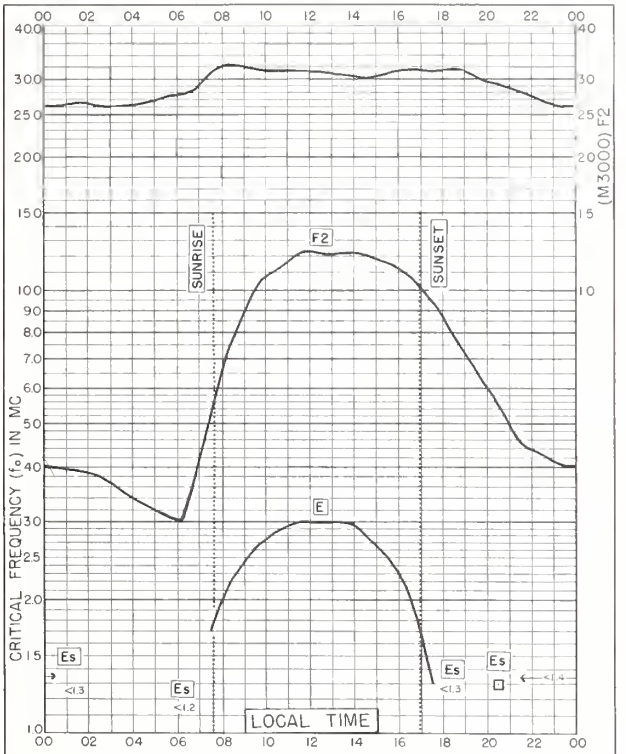


Fig. 59. MOSCOW, U.S.S.R.
55.5°N, 37.3°E FEBRUARY 1960

NBS 503

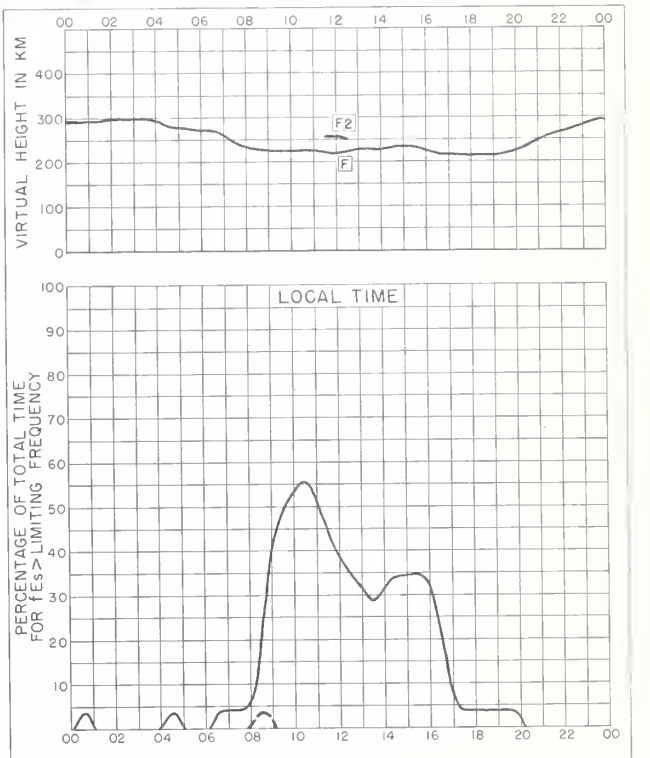


Fig. 60. MOSCOW, U.S.S.R. FEBRUARY 1960

NBS 490

Fig. 61. LULEA, SWEDEN
65.6°N, 22.1°E DECEMBER 1959

NBS 503

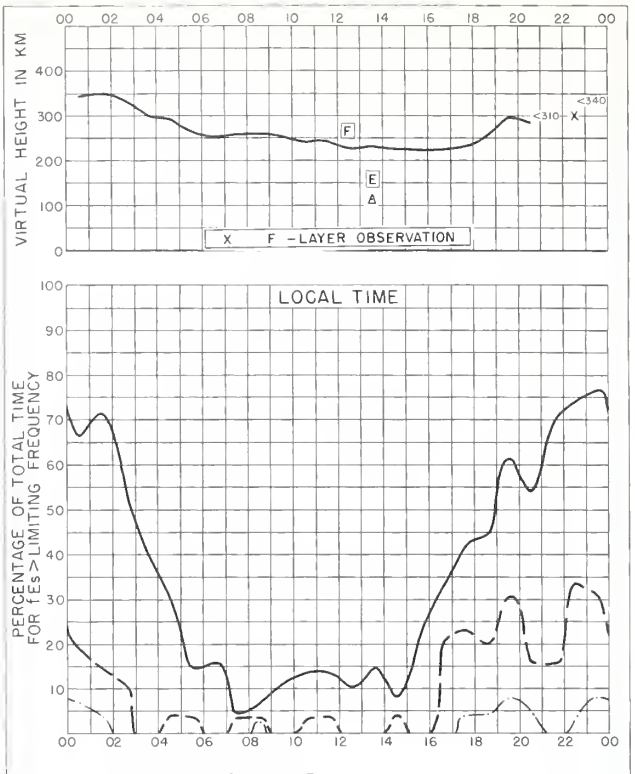


Fig. 62. LULEA, SWEDEN DECEMBER 1959

NBS 490

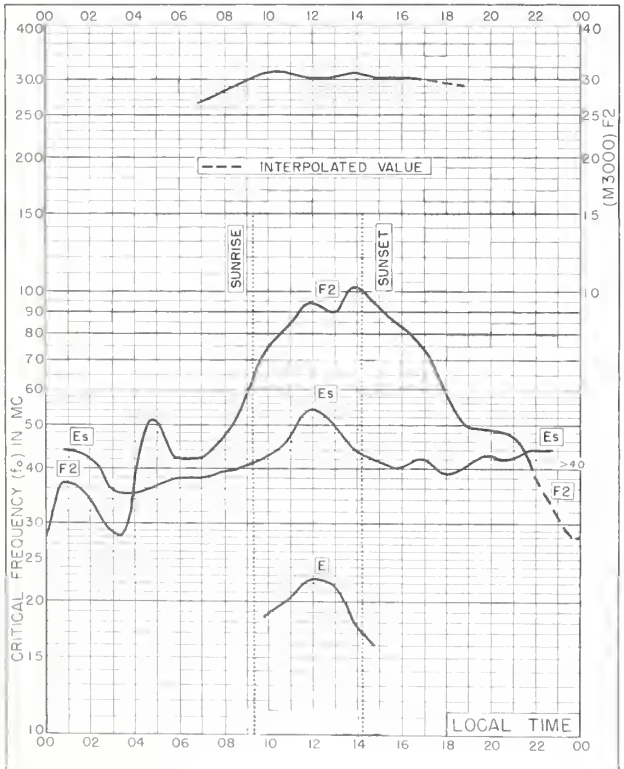


Fig. 63. SODANKYLA, FINLAND
67.4°N, 26.6°E NOVEMBER 1959

NBS 503

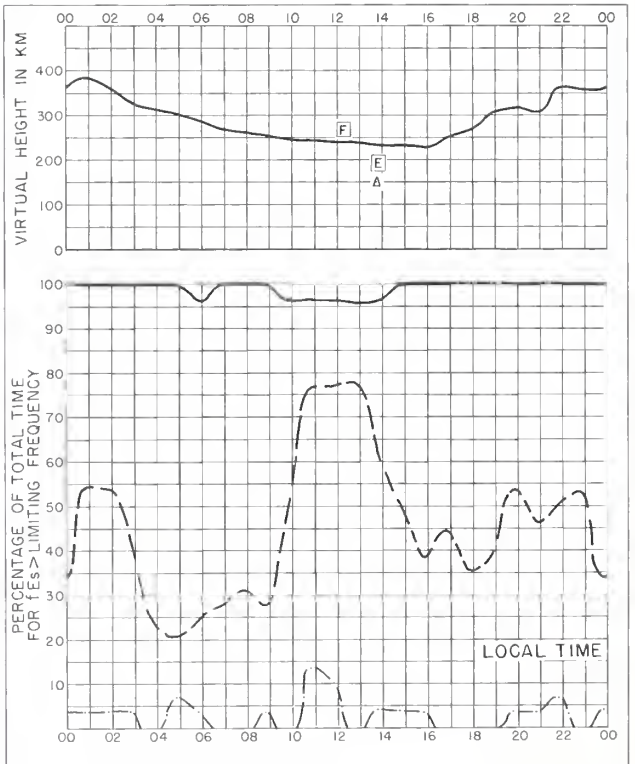


Fig. 64. SODANKYLA, FINLAND NOVEMBER 1959

NBS 490

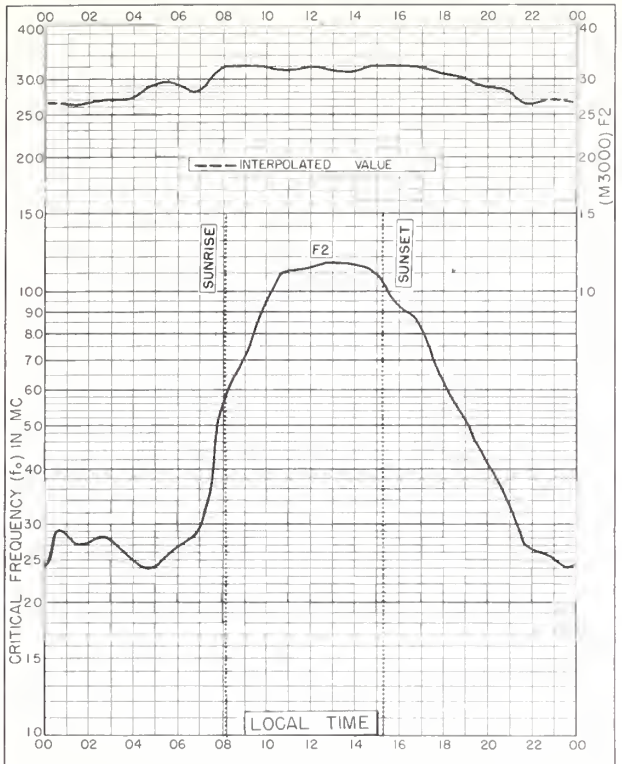
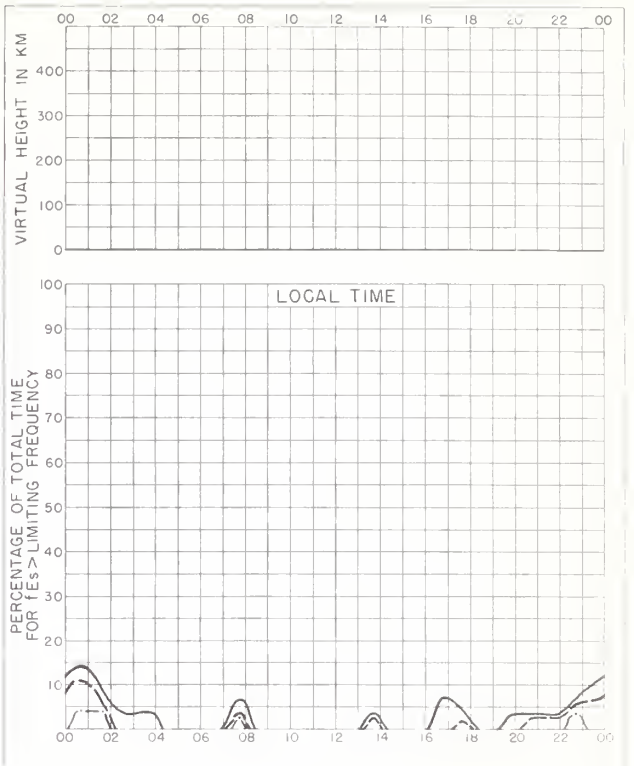


Fig. 65. NURMIJARVI, FINLAND
60.5°N, 24.6°E NOVEMBER 1959



NOVEMBER 1959

Fig. 66. NURMIJARVI, FINLAND

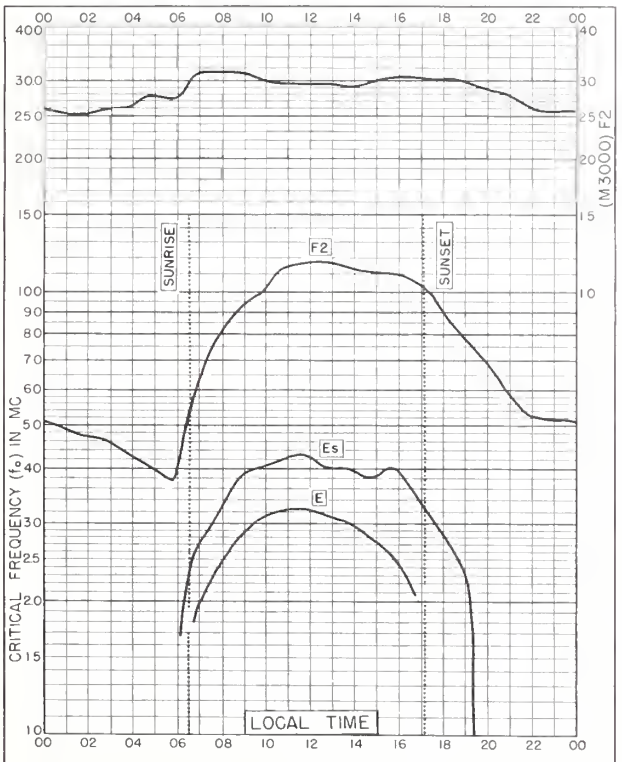


Fig. 67. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E OCTOBER 1959

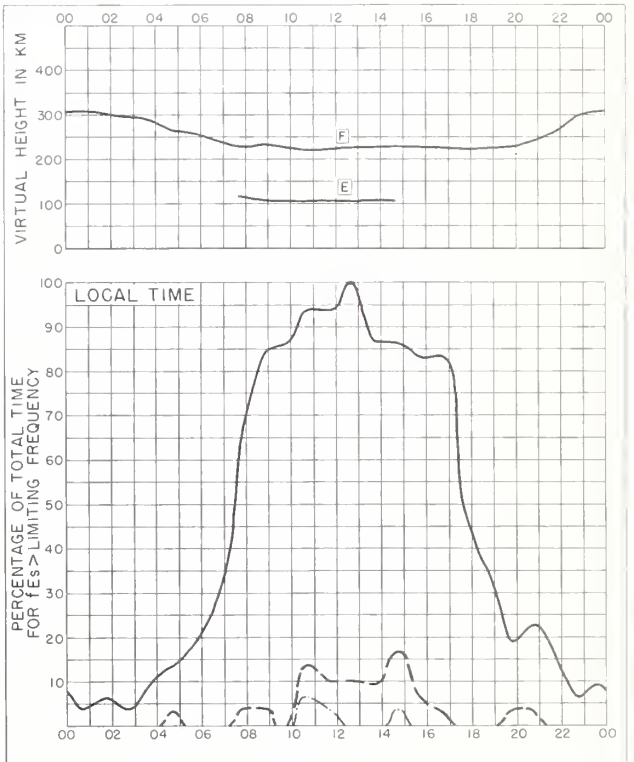


Fig. 68. LINDAU/HARZ, GERMANY OCTOBER 1959

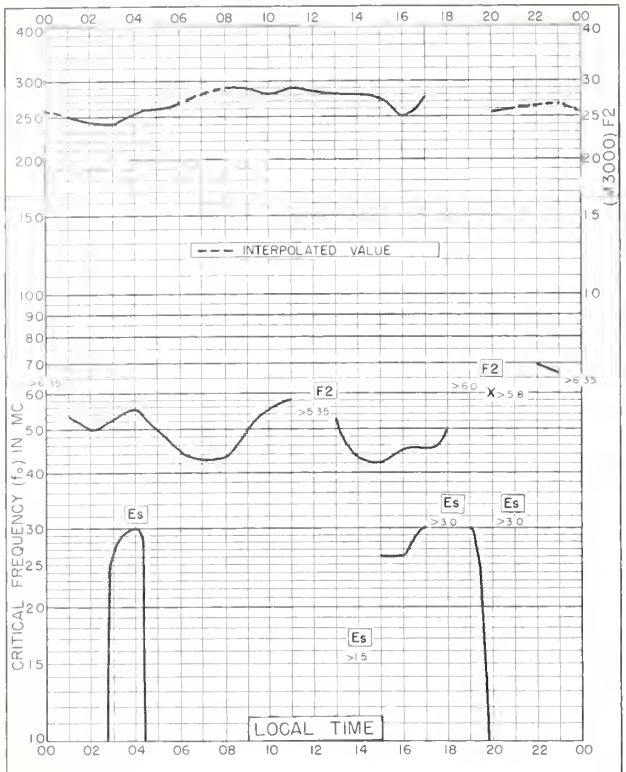


Fig. 69. BYRD STATION
80.0°S, 120.0°W MAY 1959

NBS 503

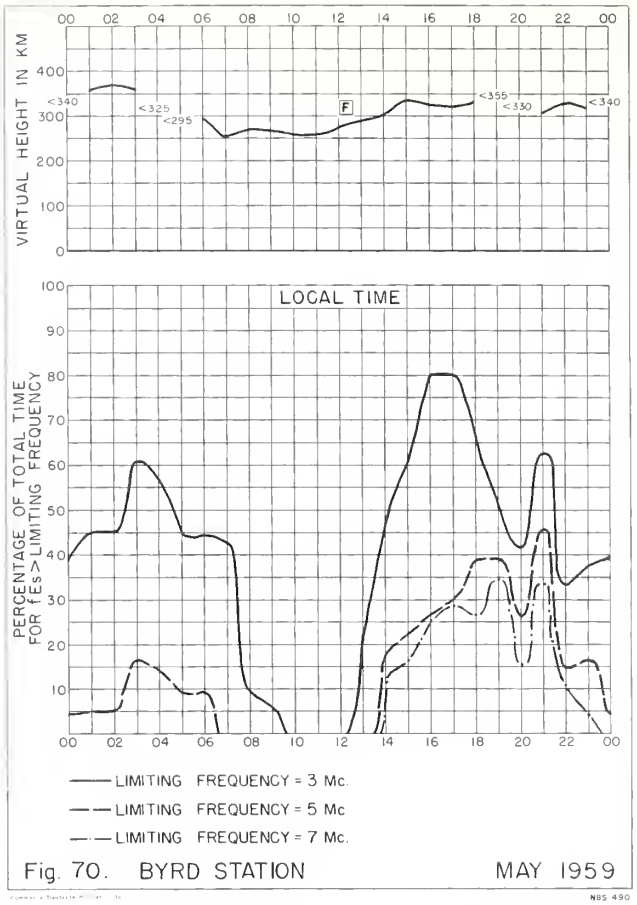


Fig. 70. BYRD STATION MAY 1959

NBS 490

Fig. 71. SVALBARD, NORWAY
78.2°N, 15.7°E MARCH 1959

NBS 503

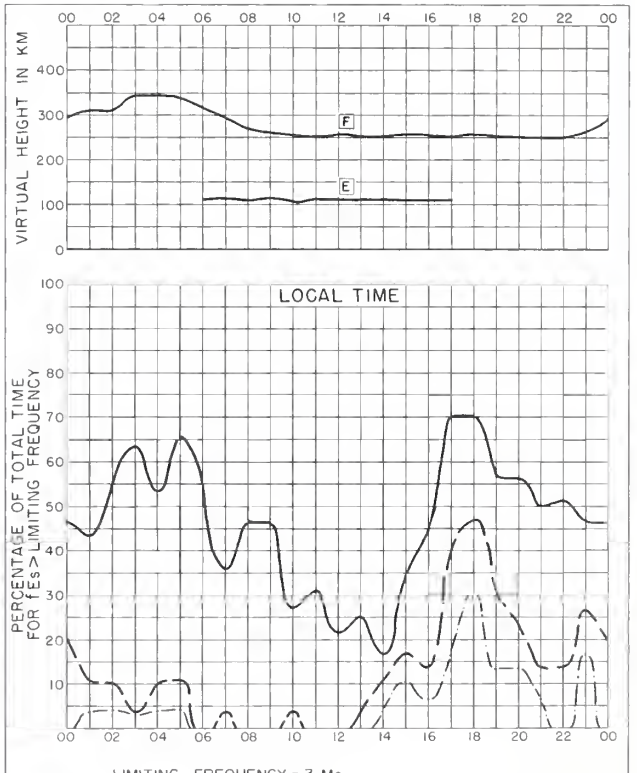


Fig. 72. SVALBARD, NORWAY MARCH 1959

NBS 490

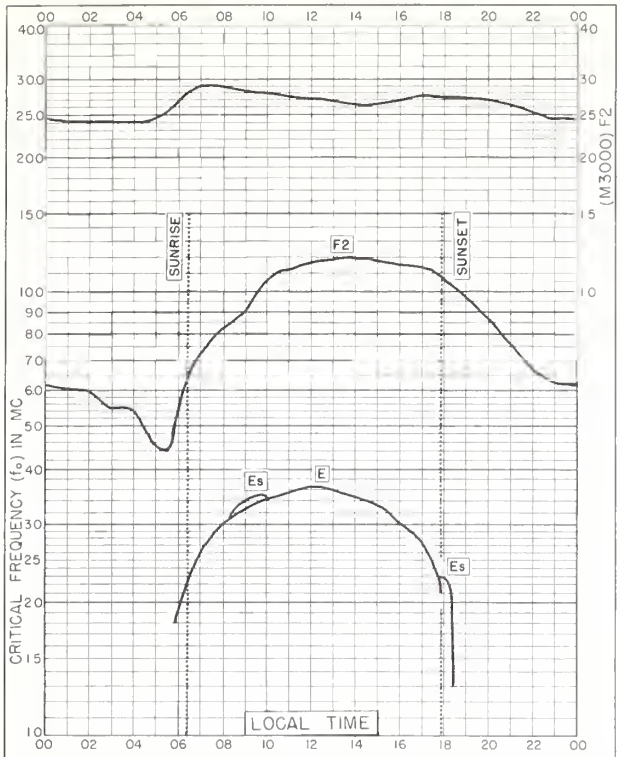


Fig. 73. JULIUSRUH/RÜGEN, GERMANY
54.6°N, 13.4°E MARCH 1959

NBS 503

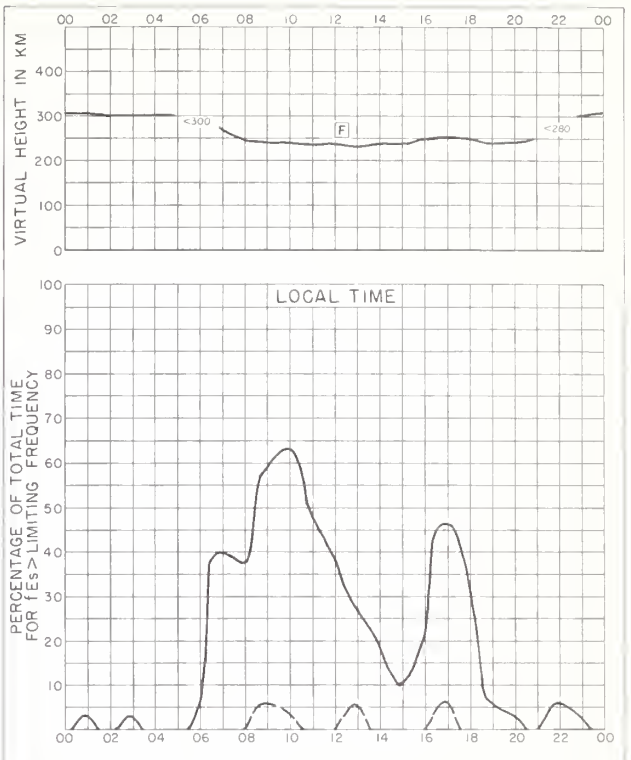


Fig. 74. JULIUSRUH/RÜGEN, GERMANY MARCH 1959

NBS 490

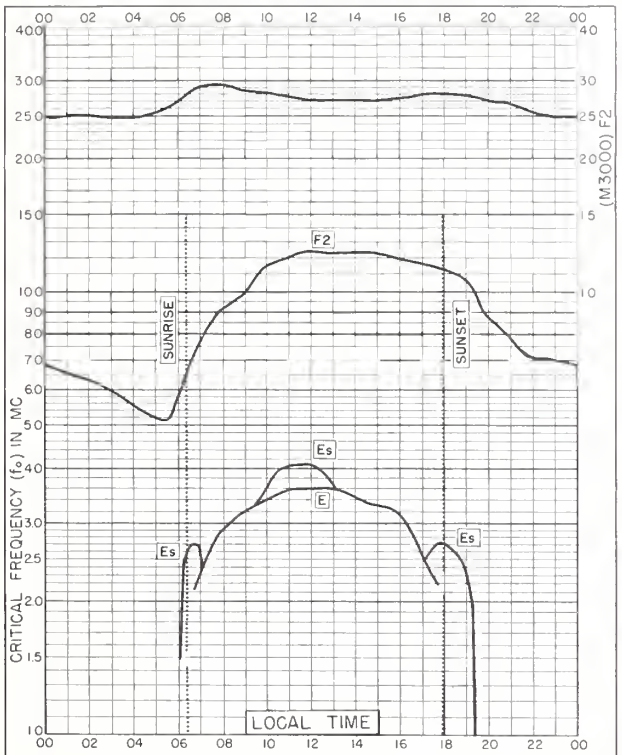


Fig. 75. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E MARCH 1959

NBS 503

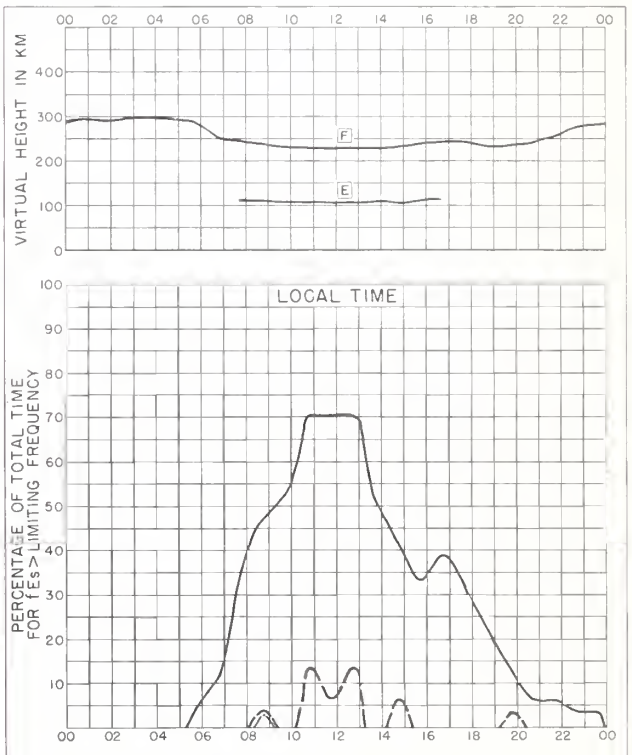


Fig. 76. LINDAU/HARZ, GERMANY MARCH 1959

NBS 490

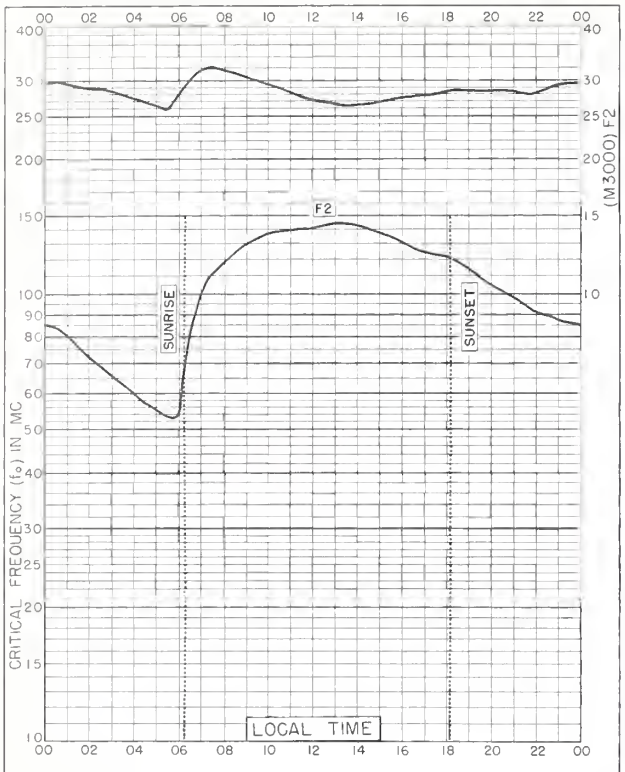


Fig. 77. EL CERILLO, MEXICO
19.3°N, 99.5°W MARCH 1959

NBS 503

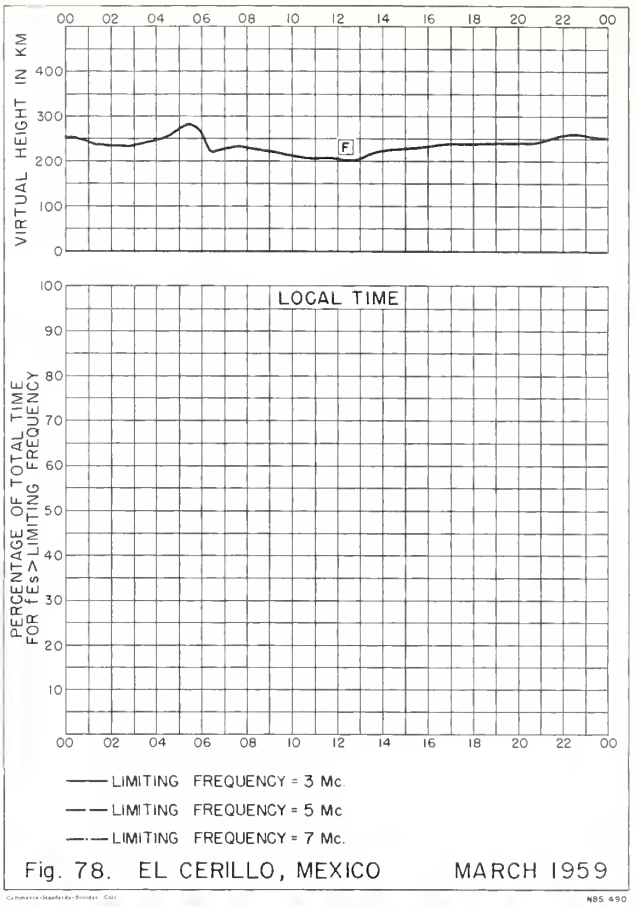


Fig. 78. EL CERILLO, MEXICO MARCH 1959

NBS 490

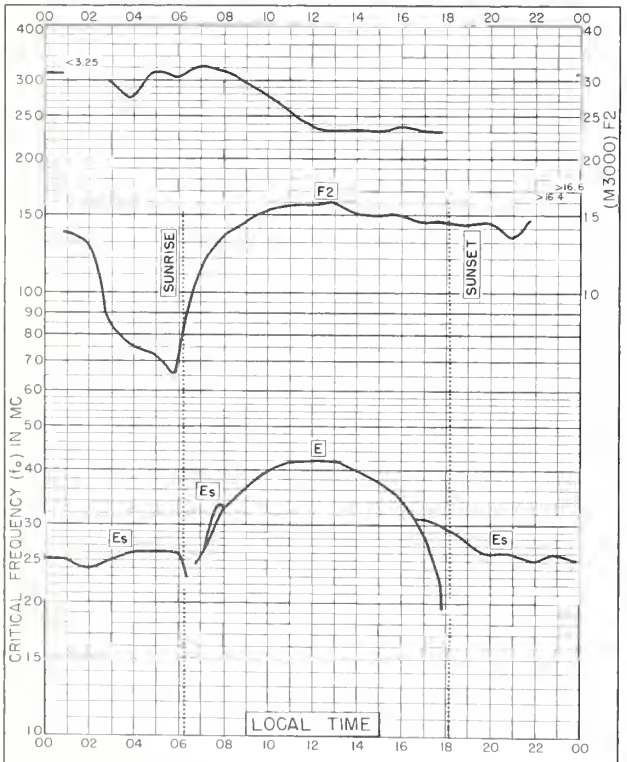


Fig. 79. DAKAR, FRENCH W. AFRICA
14.8°N, 17.4°W MARCH 1959

NBS 503

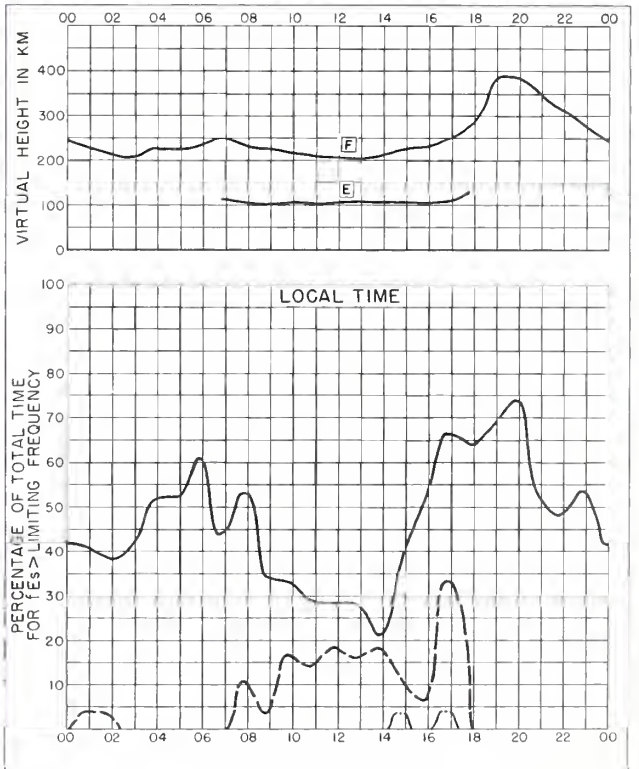


Fig. 80. DAKAR, FRENCH W. AFRICA MARCH 1959

NBS 490

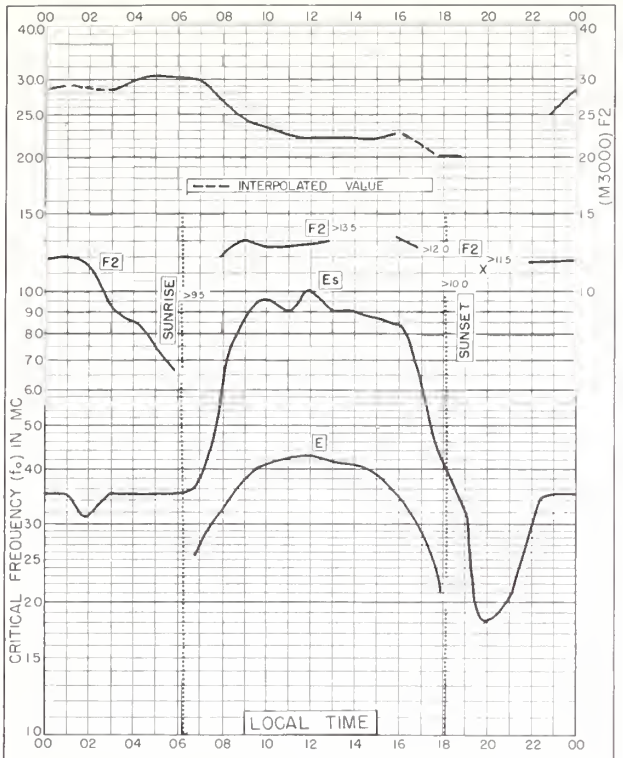
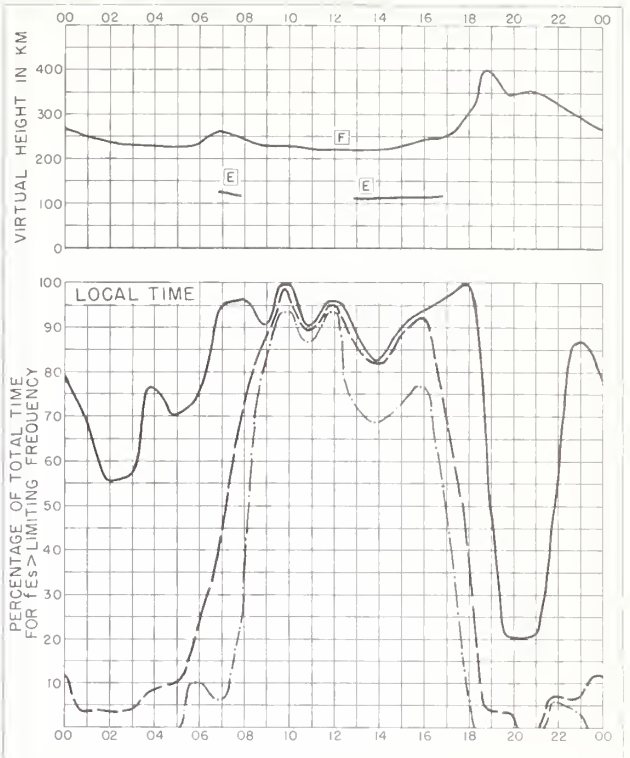


Fig. 81. DJIBOUTI, FRENCH SOMALILAND
11.6°N, 43.2° E MARCH 1959

NBS 503



MARCH 1959

Fig. 82. DJIBOUTI, FRENCH SOMALILAND

NBS 490

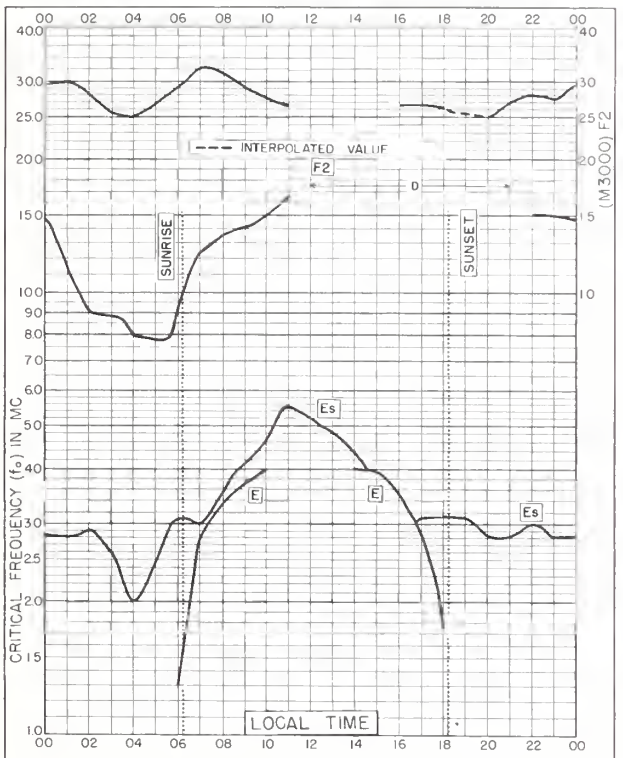


Fig. 83. TAHITI, SOCIETY IS.
17.7°S, 149.3° W MARCH 1959

NBS 503

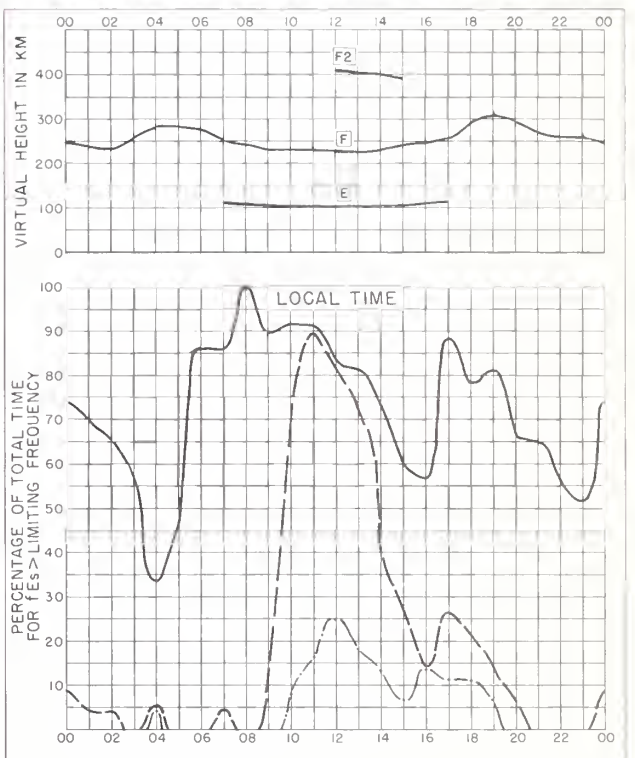


Fig. 84. TAHITI, SOCIETY IS. MARCH 1959

NBS 490

Fig. 85. TANANARIVE, MADAGASCAR
18.8°S, 47.5°E MARCH 1959

NBS 503

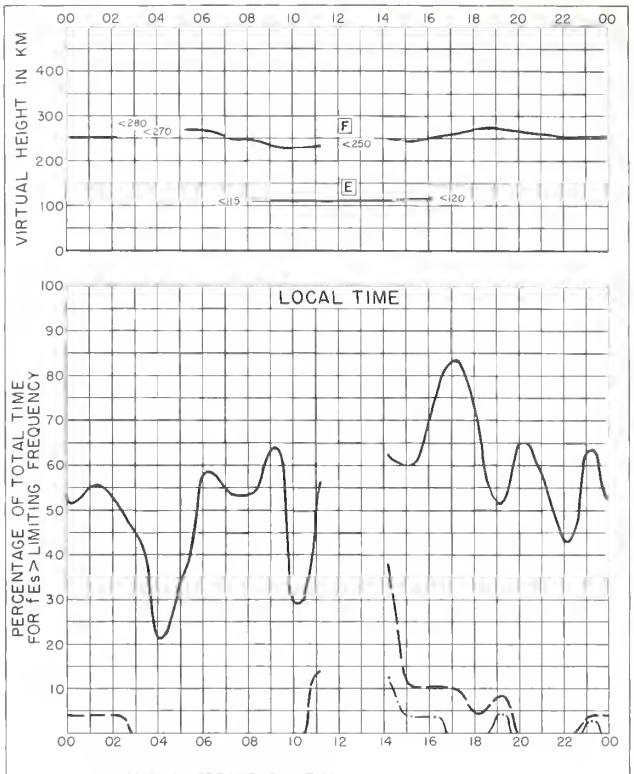


Fig. 86. TANANARIVE, MADAGASCAR MARCH 1959

NBS 490

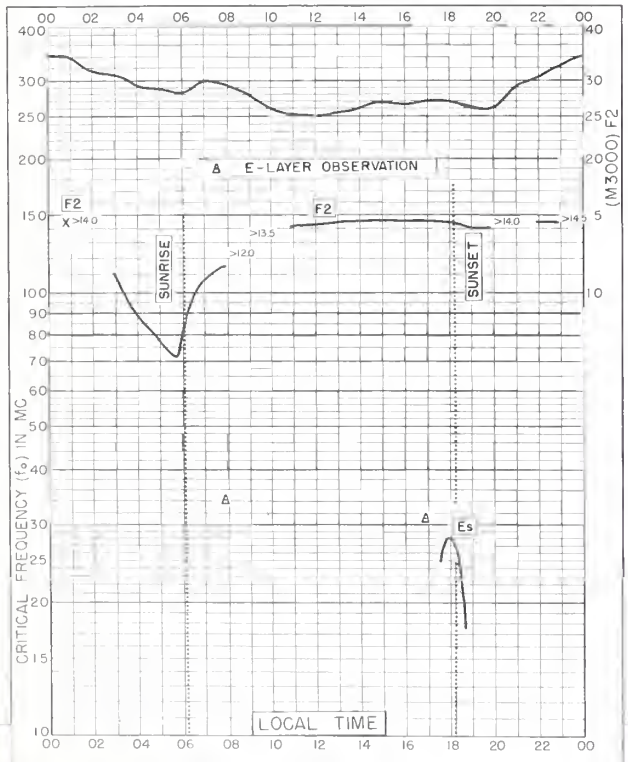


Fig. 87. SAO PAULO, BRAZIL
23.5°S, 46.5° W MARCH 1959

NBS 503

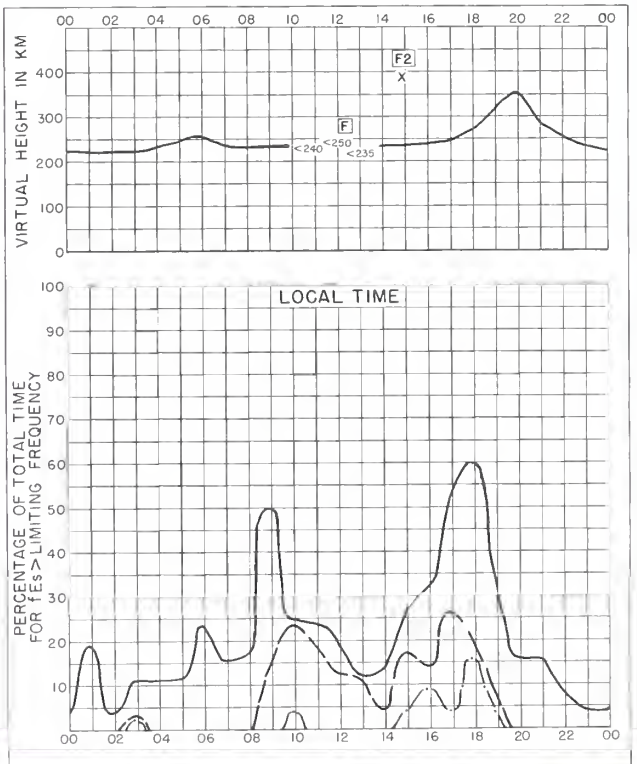


Fig. 88. SAO PAULO, BRAZIL MARCH 1959

NBS 490

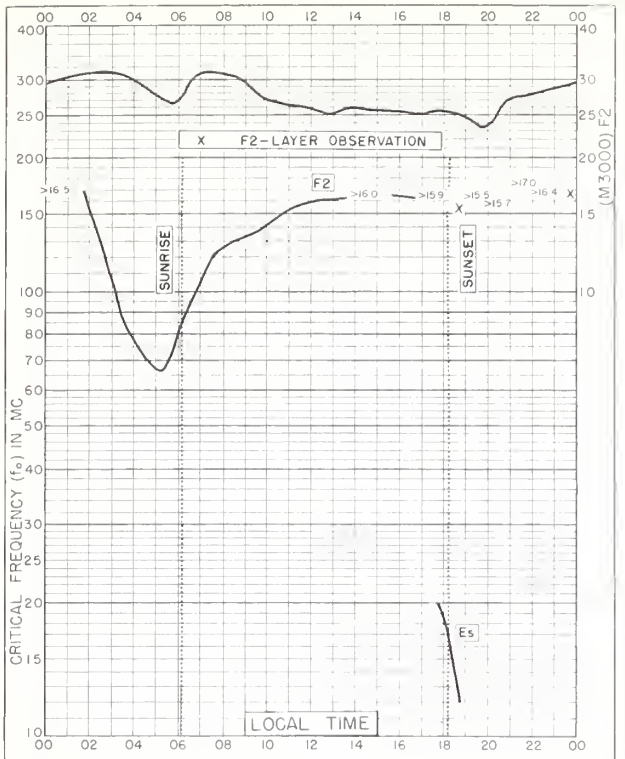


Fig. 89. TUCUMAN, ARGENTINA
26.9°S, 65.4° W MARCH 1959

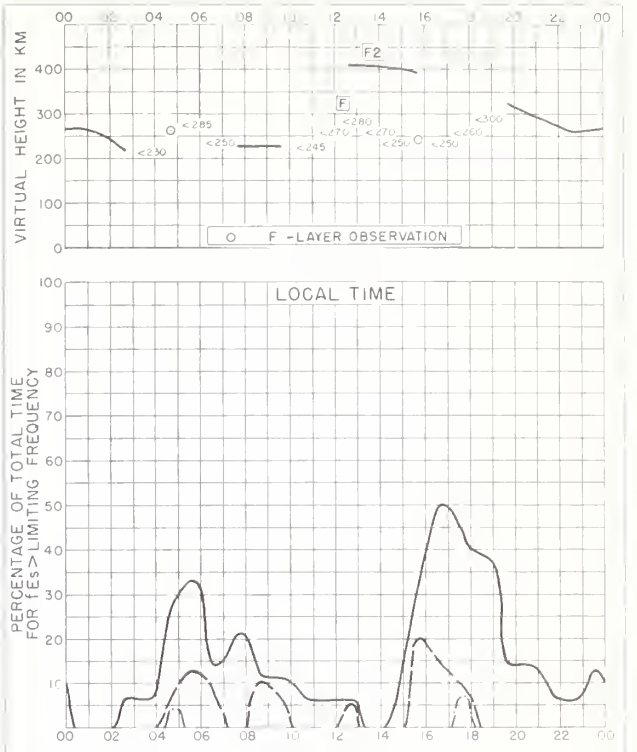


Fig. 90. TUCUMAN, ARGENTINA MARCH 1959

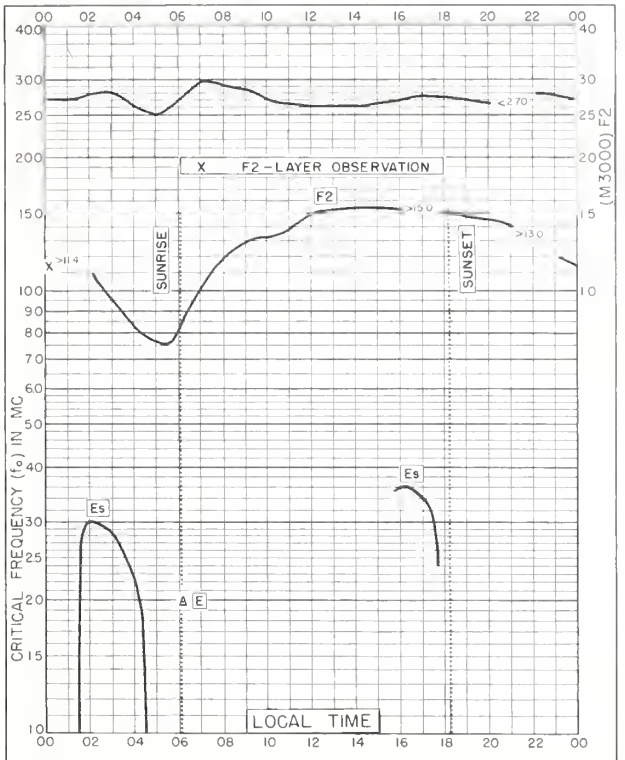


Fig. 91. BUENOS AIRES, ARGENTINA
34.5°S, 58.5° W MARCH 1959

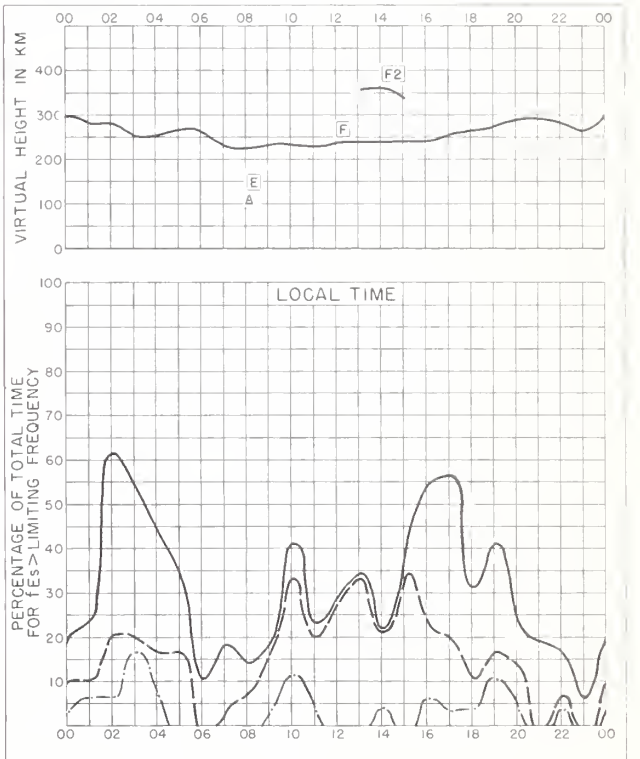


Fig. 92. BUENOS AIRES, ARGENTINA MARCH 1959

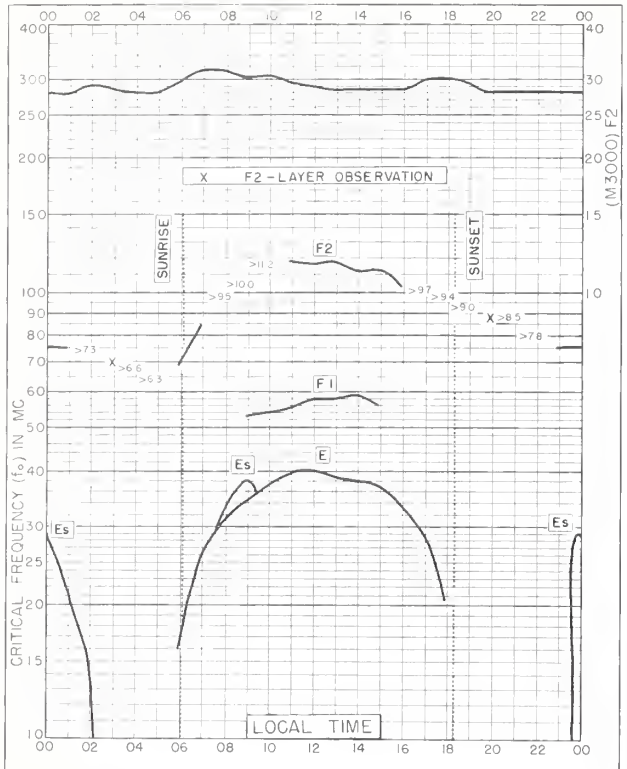


Fig. 93. CANBERRA, AUSTRALIA
35.3°S, 149.0°E MARCH 1959

NBS 503

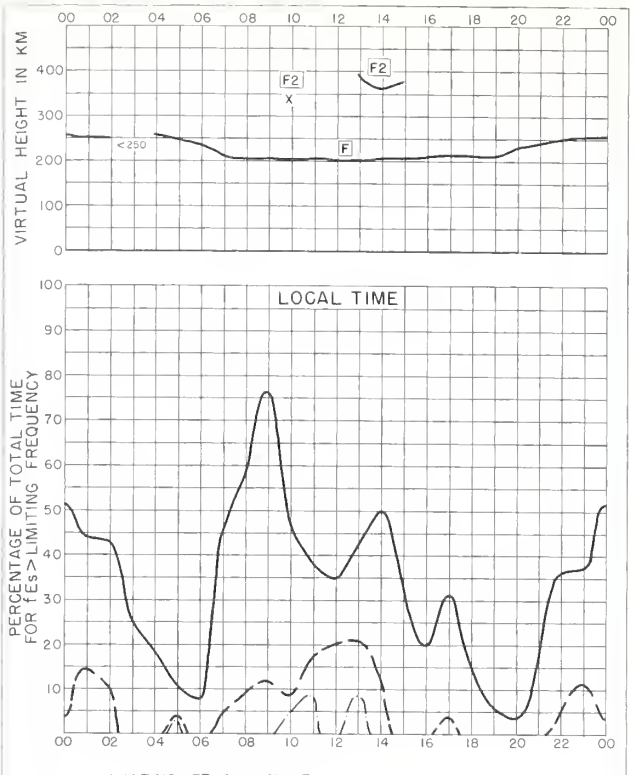


Fig. 94. CANBERRA, AUSTRALIA MARCH 1959

NBS 490

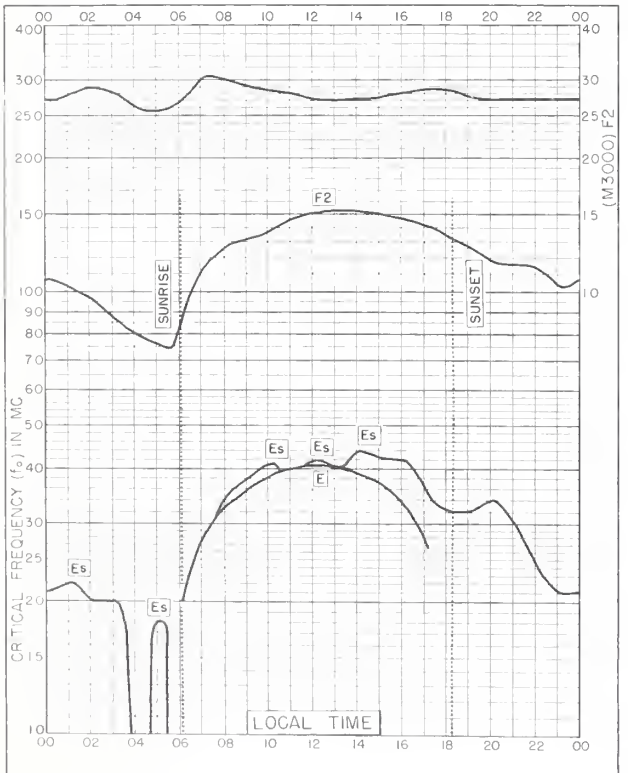


Fig. 95. CONCEPCION, CHILE
36.6°S, 73.0°W MARCH 1959

NBS 503

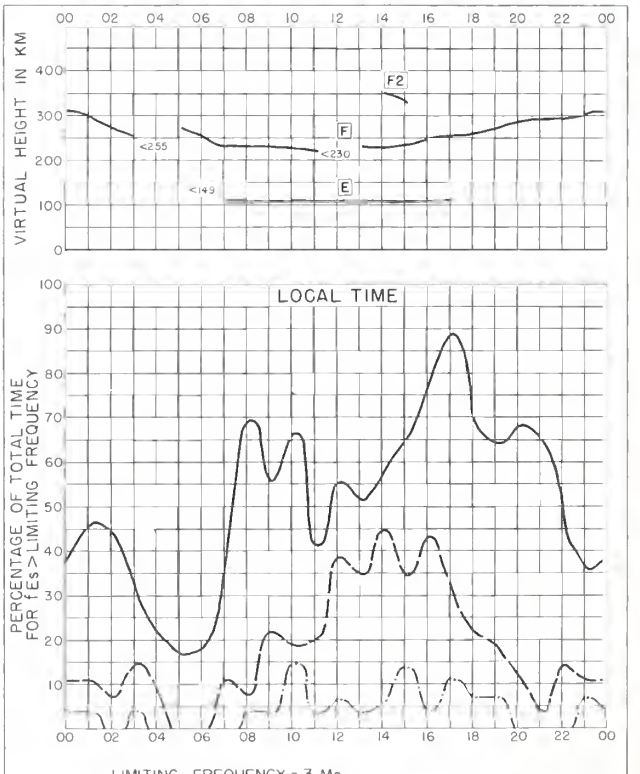


Fig. 96. CONCEPCION, CHILE MARCH 1959

NBS 490

Fig. 97. TRELEW, ARGENTINA
43.2°S, 65.3°W MARCH 1959

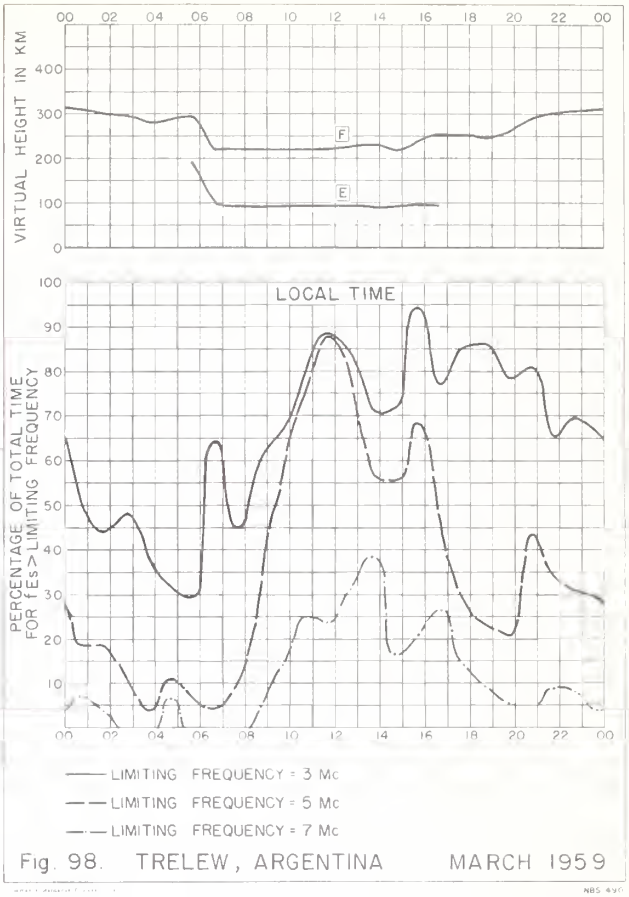


Fig. 98. TRELEW, ARGENTINA MARCH 1959

Fig. 99. ALERT, CANADA
82.6°N, 62.6°W DECEMBER 1958

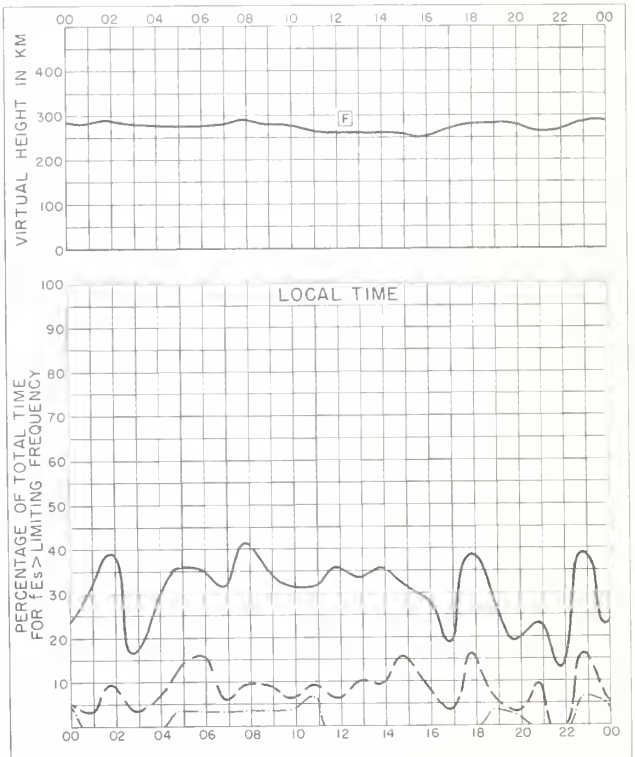


Fig. 100. ALERT, CANADA DECEMBER 1958

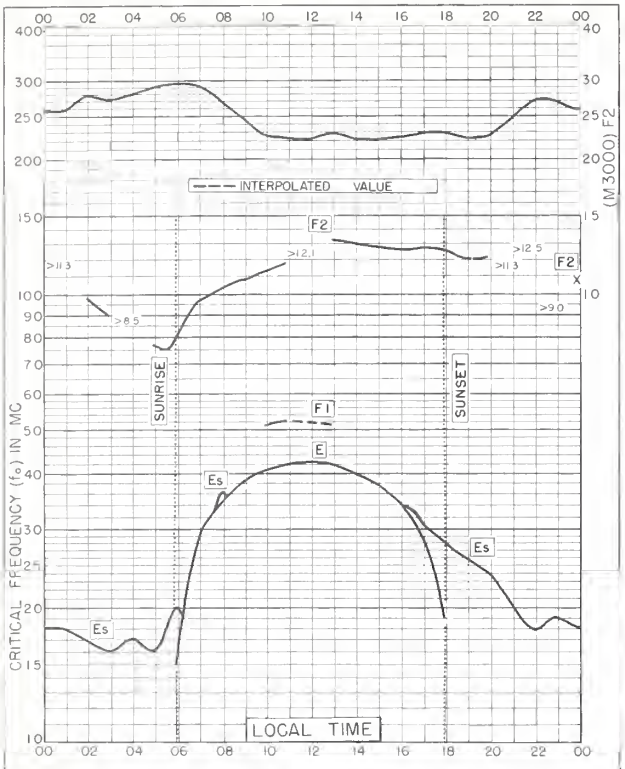


Fig. 101. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E DECEMBER 1958

NBS 503

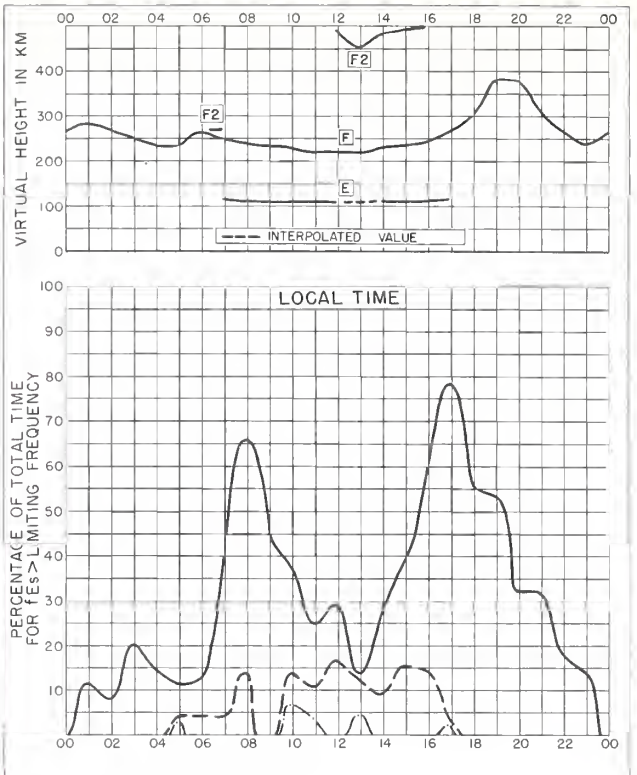


Fig. 102. LWIRO, BELGIAN CONGO DECEMBER 1958

NBS 490

Fig. 103. ALERT, CANADA
82.6°N, 62.6°W NOVEMBER 1958

NBS 503

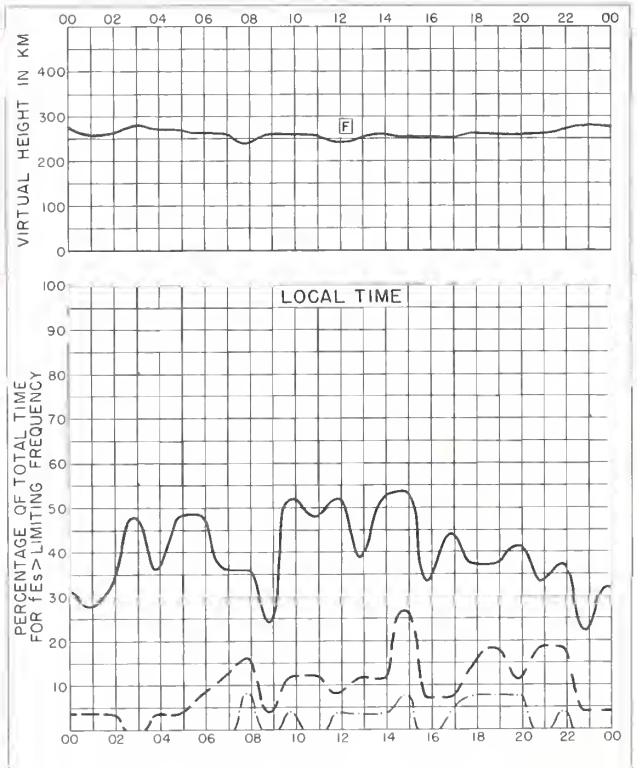


Fig. 104. ALERT, CANADA NOVEMBER 1958

NBS 490

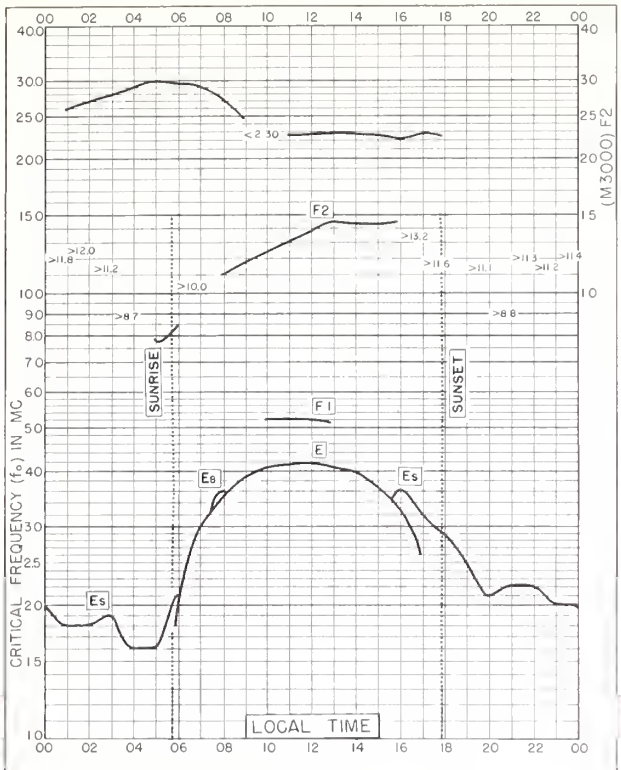


Fig. 105. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E NOVEMBER 1958

NBS 503

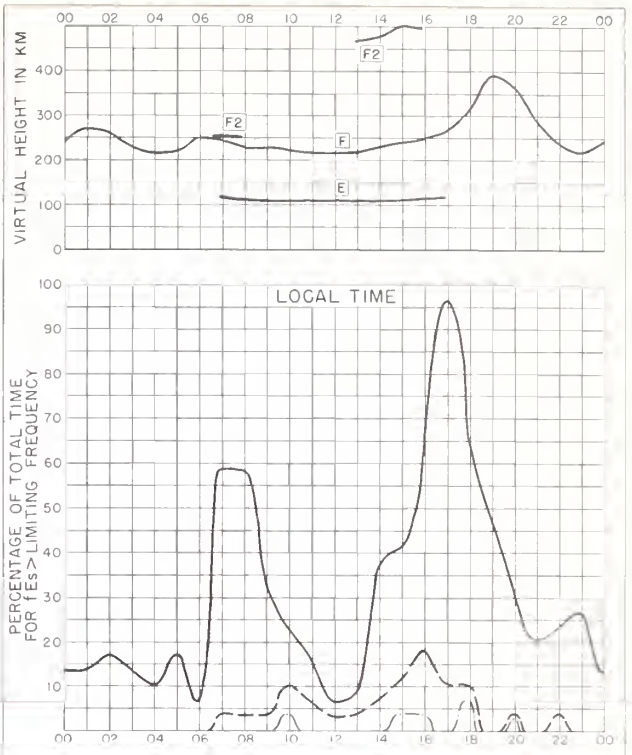


Fig. 106. LWIRO, BELGIAN CONGO NOVEMBER 1958

NBS 490

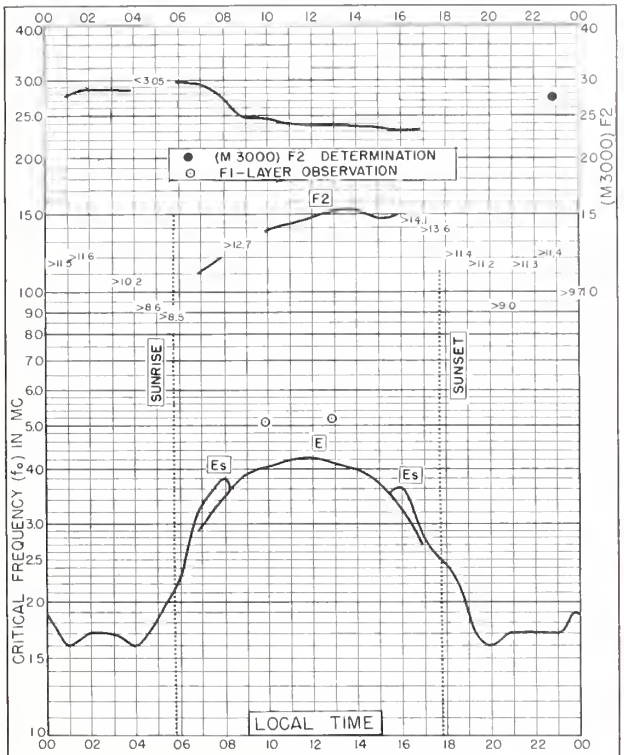


Fig. 107. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E OCTOBER 1958

NBS 503

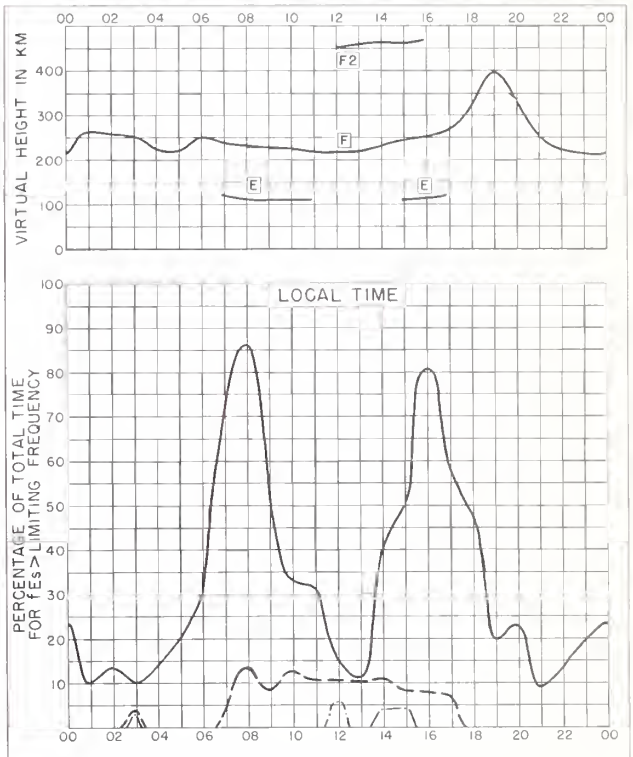


Fig. 108. LWIRO, BELGIAN CONGO OCTOBER 1958

NBS 490

Fig. 109. MEANOOK, CANADA
54.6°N, 113.3°W SEPTEMBER 1958

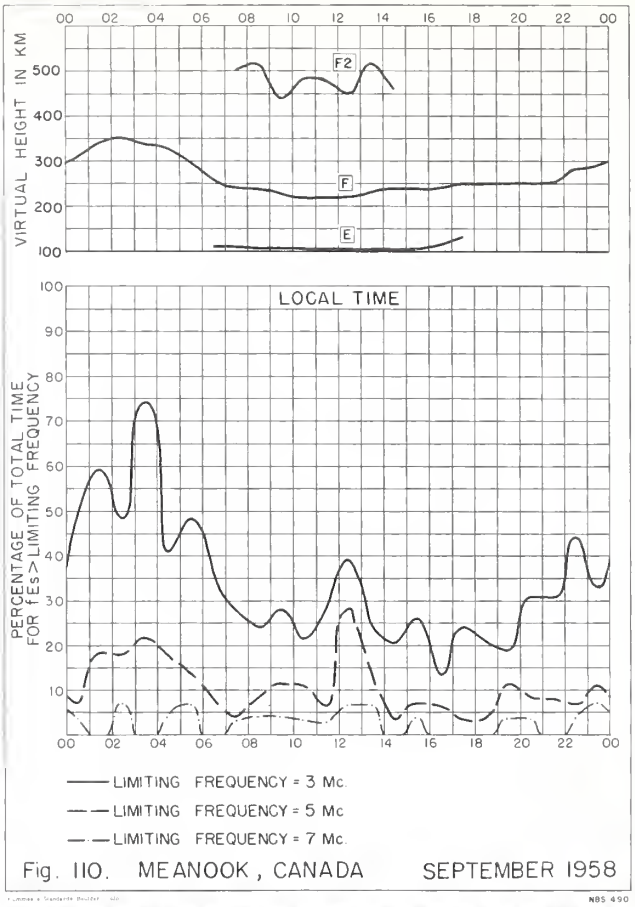


Fig. 110. MEANOOK, CANADA SEPTEMBER 1958

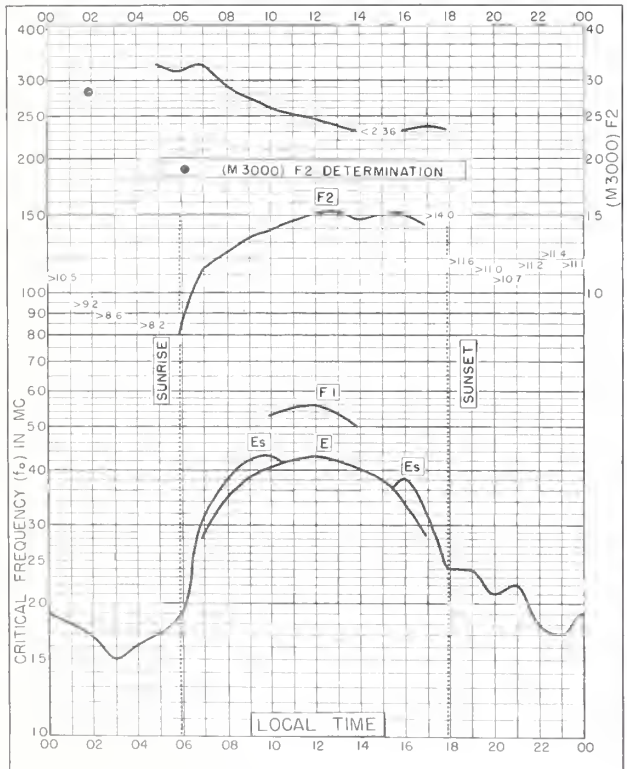
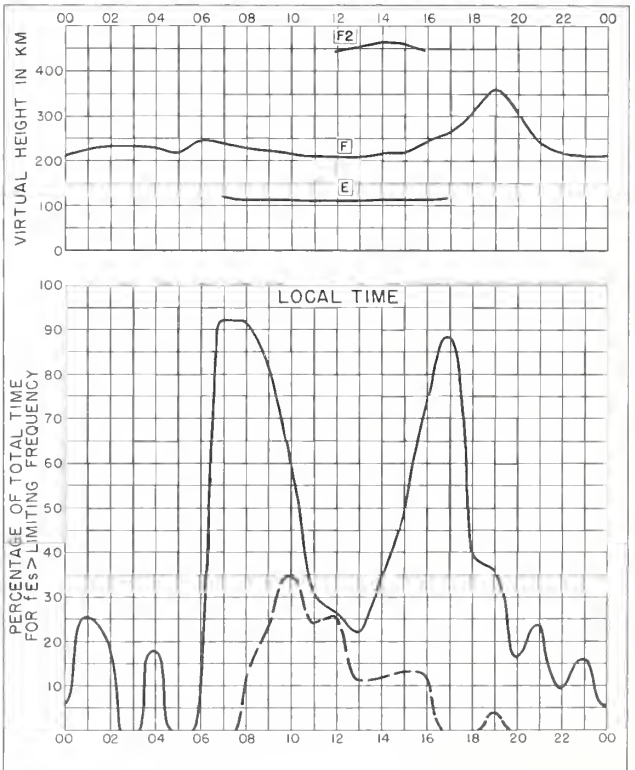


Fig. 111. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E SEPTEMBER 1958



SEPTEMBER 1958
Fig. 112. LWIRO, BELGIAN CONGO

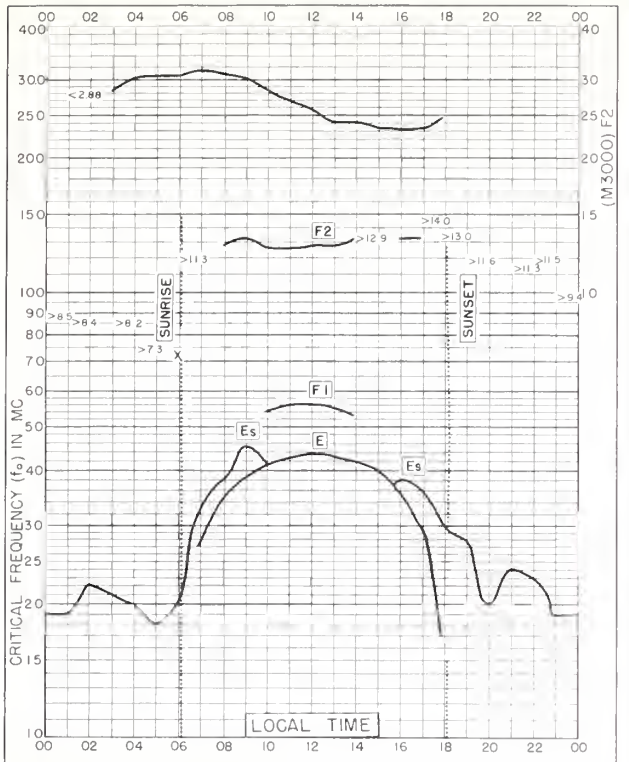


Fig. 113. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E AUGUST 1958

NBS 503

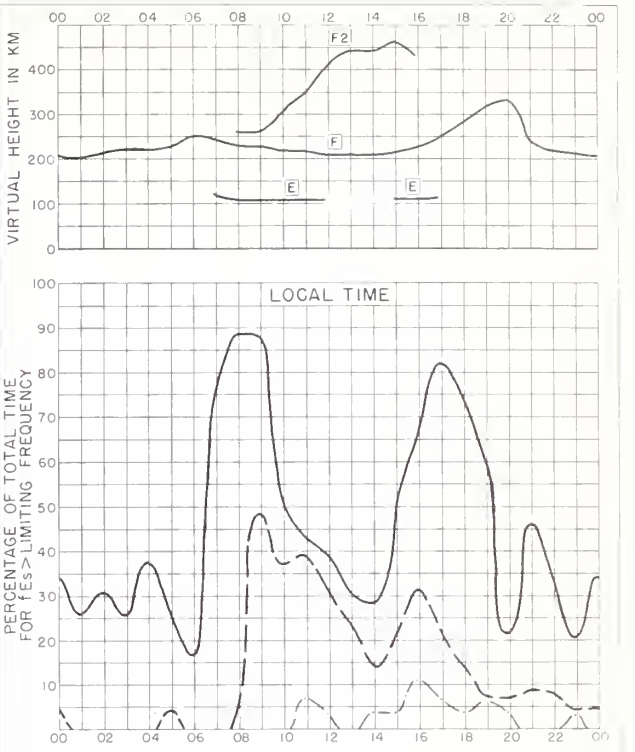


Fig. 114. LWIRO, BELGIAN CONGO AUGUST 1958

NBS 490

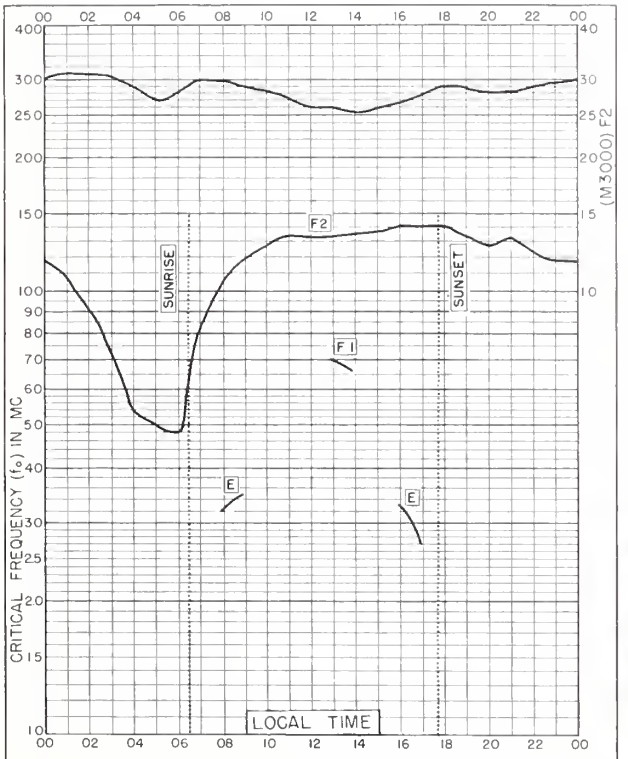


Fig. 115. SAO PAULO, BRAZIL
23.5°S, 46.5°W AUGUST 1958

NBS 503

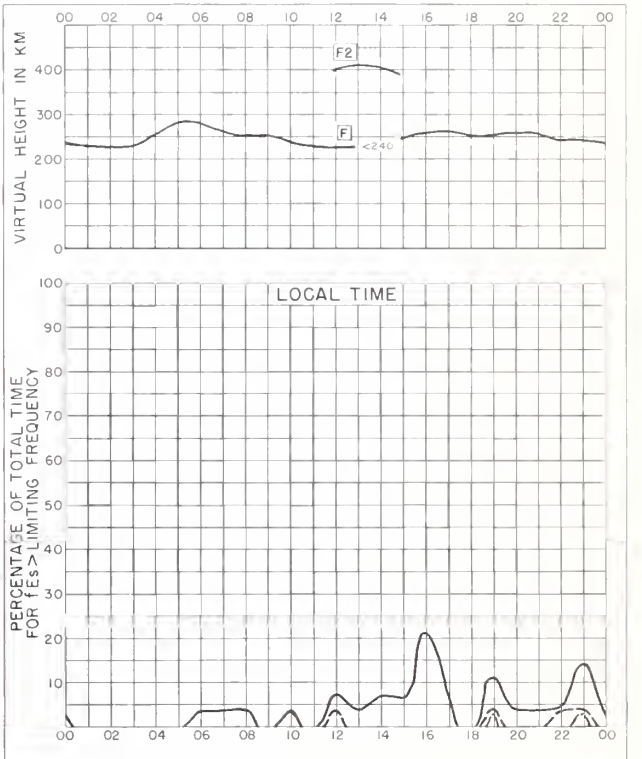


Fig. 116. SAO PAULO, BRAZIL AUGUST 1958

NBS 490

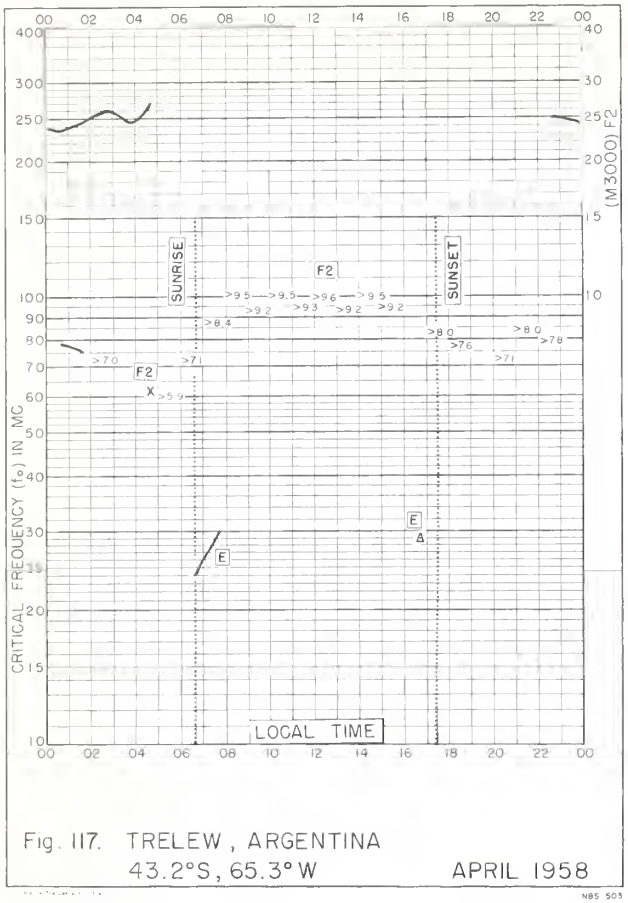


Fig. 117. TRELEW, ARGENTINA
43.2°S, 65.3° W APRIL 1958

NBS 503

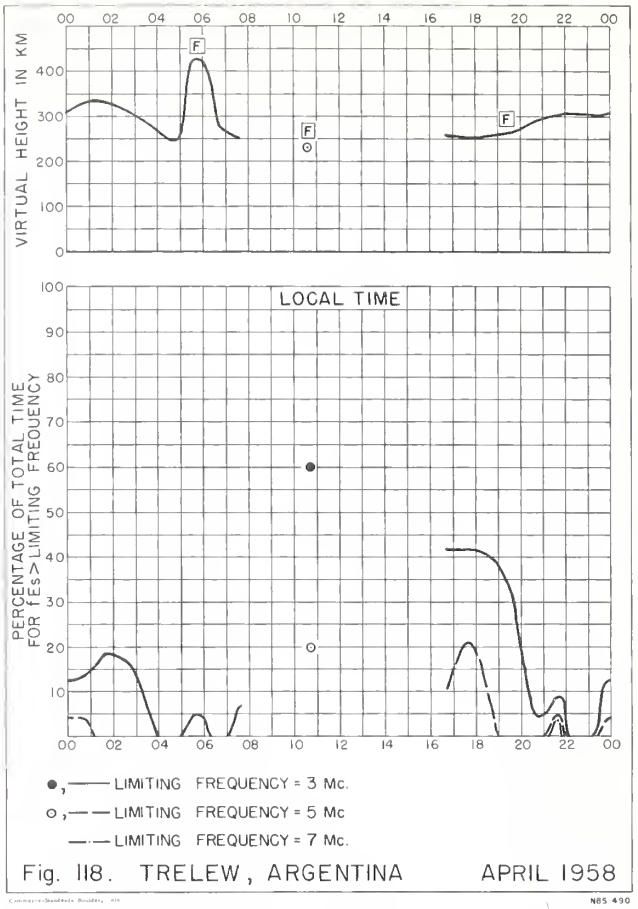


Fig. 118. TRELEW, ARGENTINA APRIL 1958

NBS 490

Fig. 119. EUREKA, CANADA
80.0°N, 85.9° W MARCH 1958

NBS 503

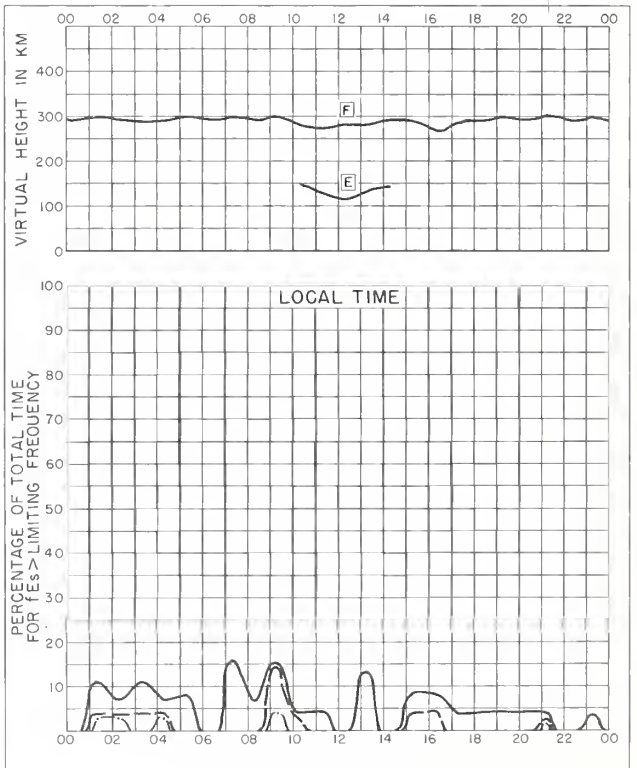


Fig. 120. EUREKA, CANADA MARCH 1958

NBS 490

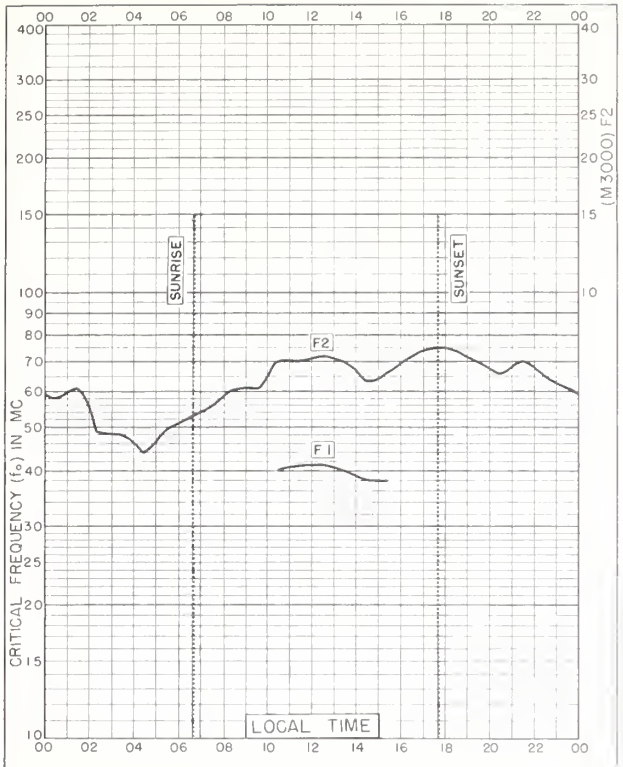


Fig. 121. CLYDE RIVER, CANADA
70.5°N, 68.6°W MARCH 1958

NBS 503

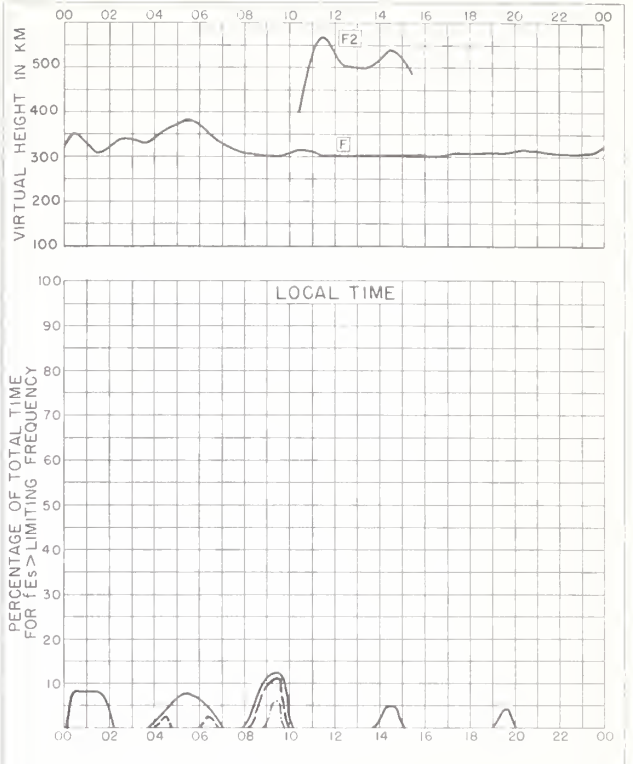


Fig. 122. CLYDE RIVER, CANADA MARCH 1958

NBS 490

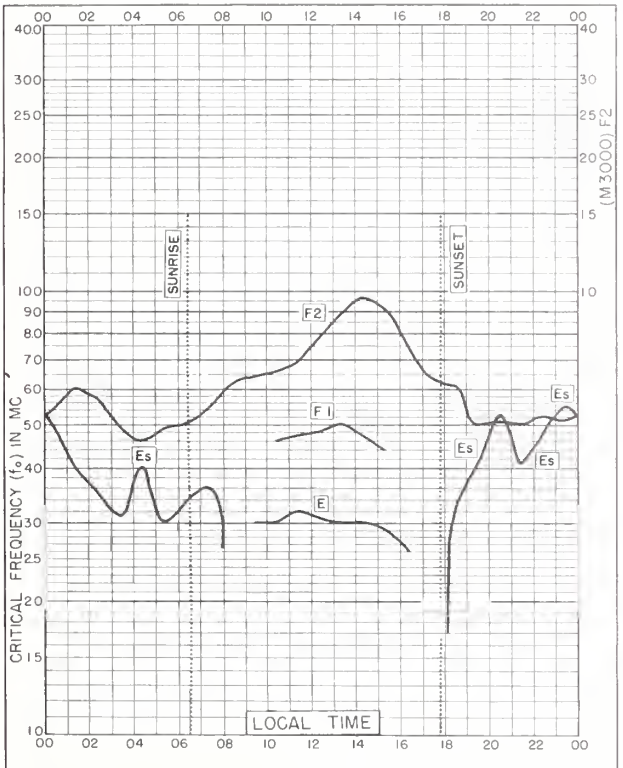


Fig. 123. YELLOWKNIFE, CANADA
62.4°N, 114.4°W MARCH 1958

NBS 503

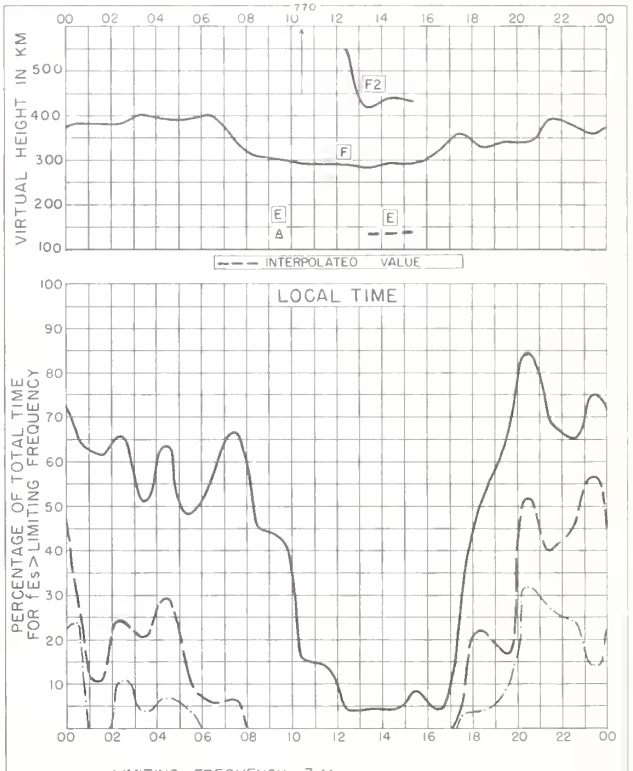


Fig. 124. YELLOWKNIFE, CANADA MARCH 1958

NBS 490

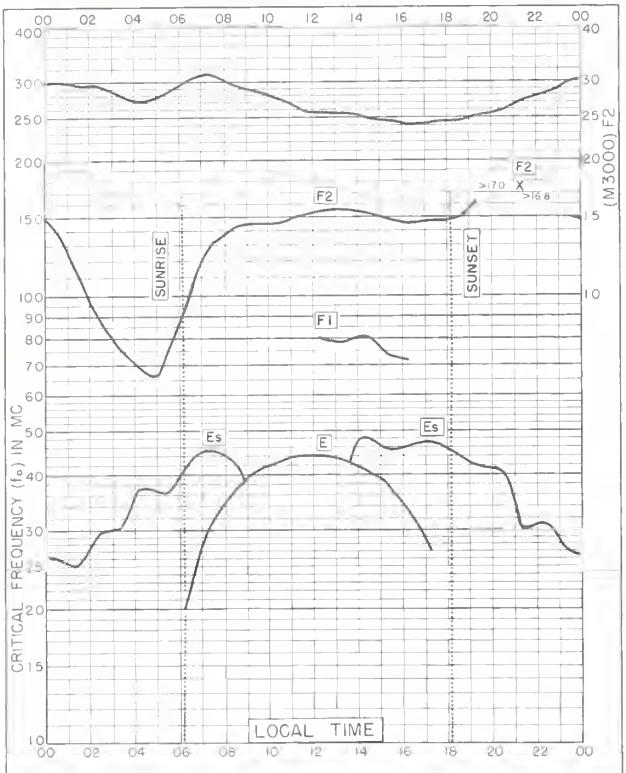


Fig. 125. PARAMARIBO, SURINAM
5.8°N, 55.2°W MARCH 1958

NBS 503

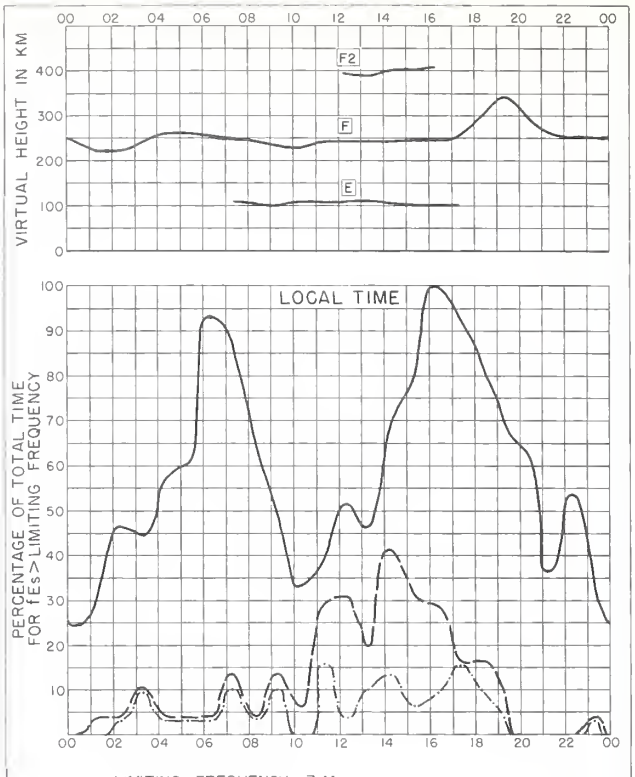


Fig. 126. PARAMARIBO, SURINAM MARCH 1958

NBS 490

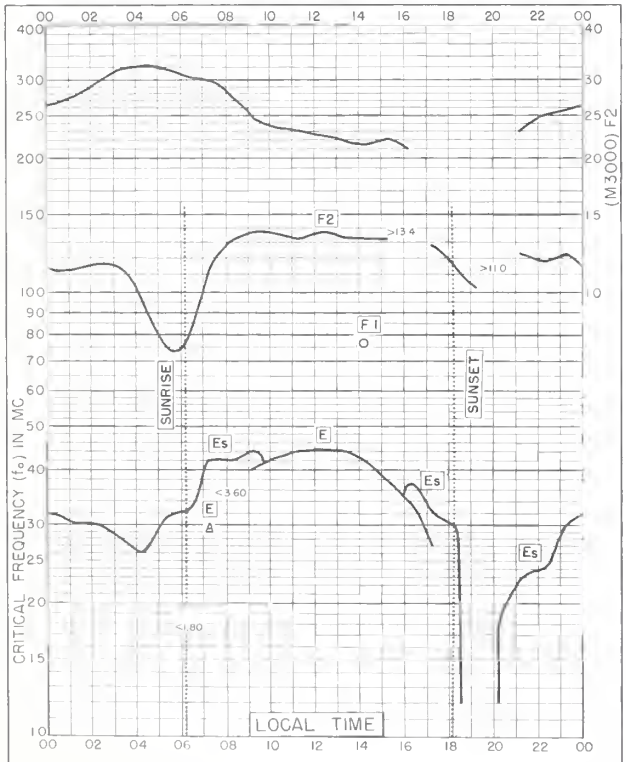


Fig. 127. BANGUI, FRENCH EQUATORIAL AFRICA
4.6°N, 18.6°E MARCH 1958

NBS 503

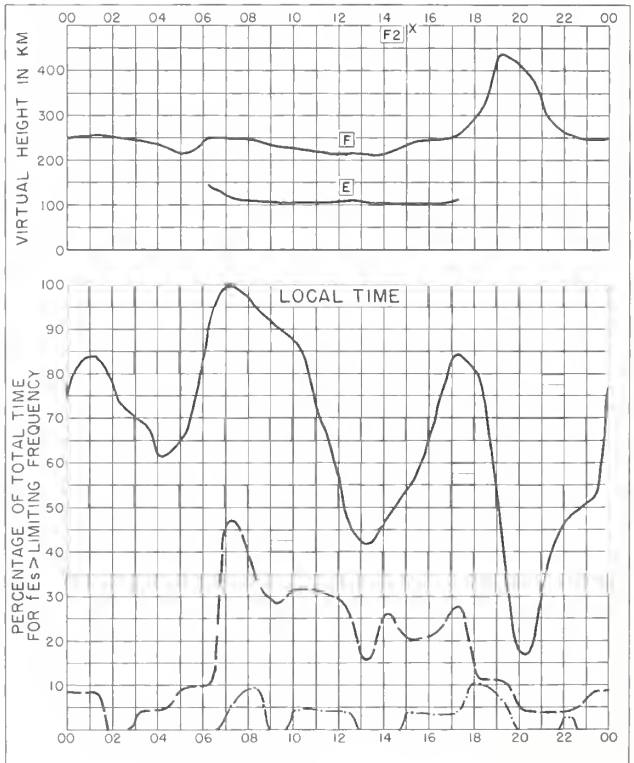


Fig. 128. BANGUI, FRENCH EQUATORIAL AFRICA MARCH 1958

NBS 490

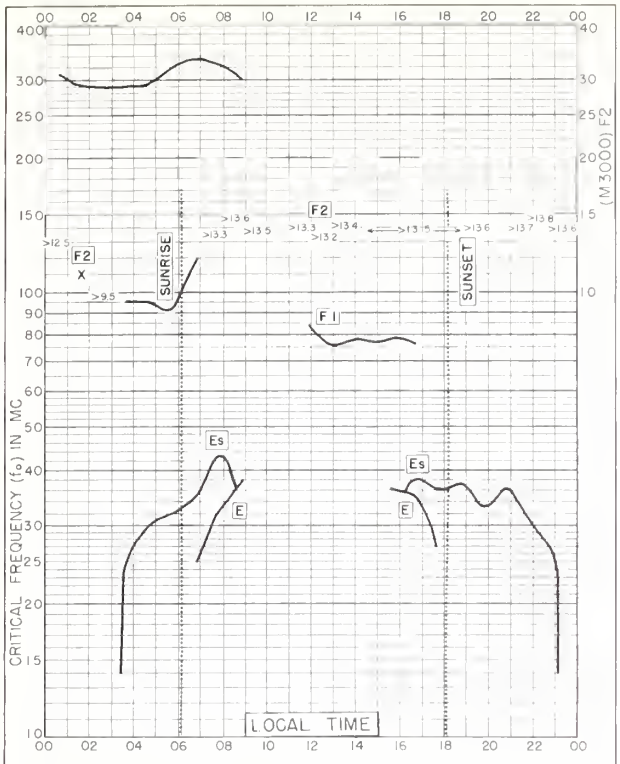
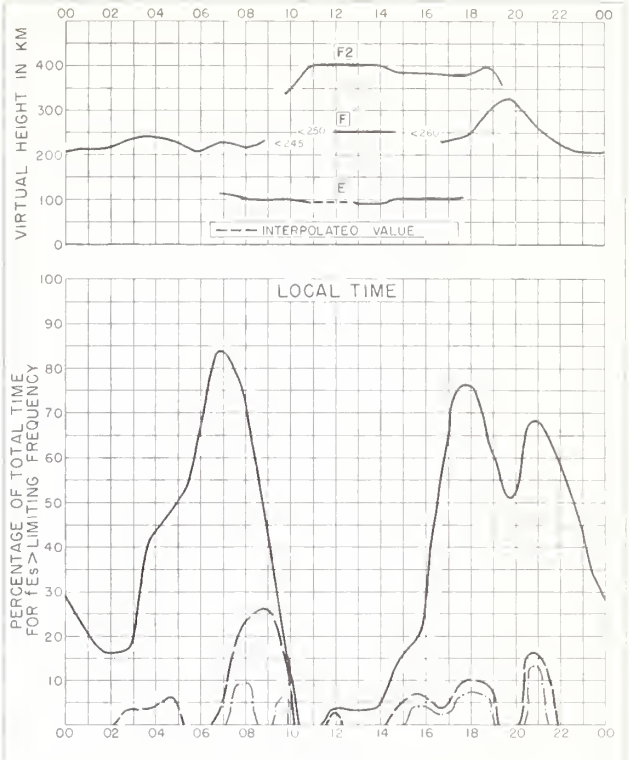


Fig. 129. HOLLANDIA, NETHERLANDS NEW GUINEA
2.5°S, 140.8°E MARCH 1958



MARCH 1958

Fig. 130. HOLLANDIA, NETHERLANDS NEW GUINEA

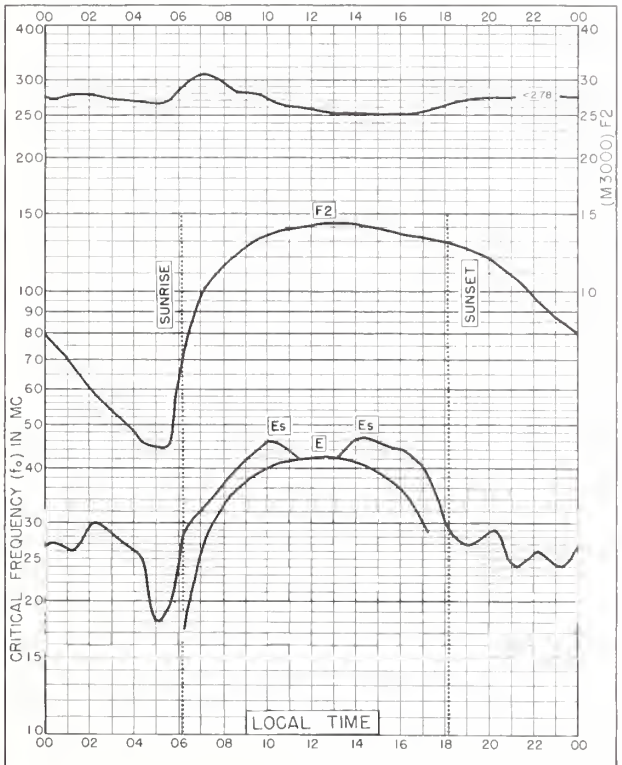


Fig. 131. TSUMEB, SOUTH W. AFRICA
19.2°S, 17.7°E MARCH 1958

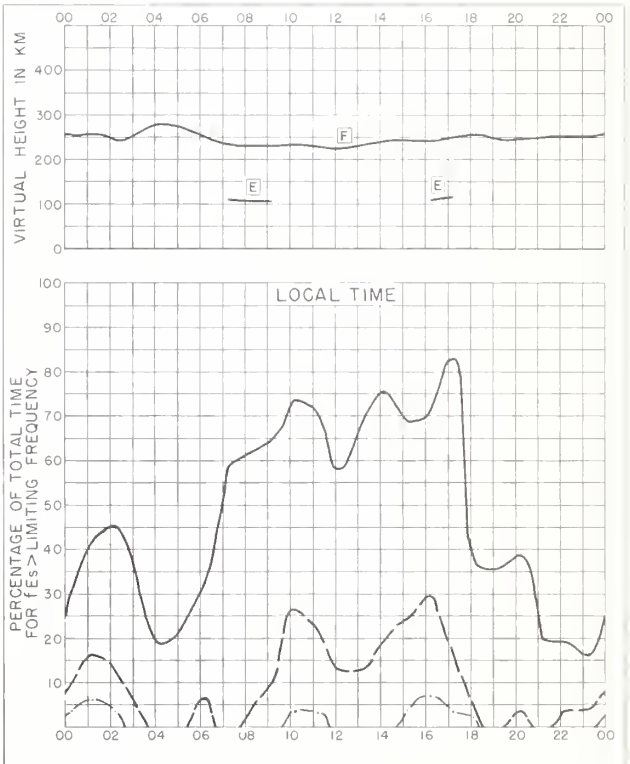


Fig. 132. TSUMEB, SOUTH W. AFRICA MARCH 1958

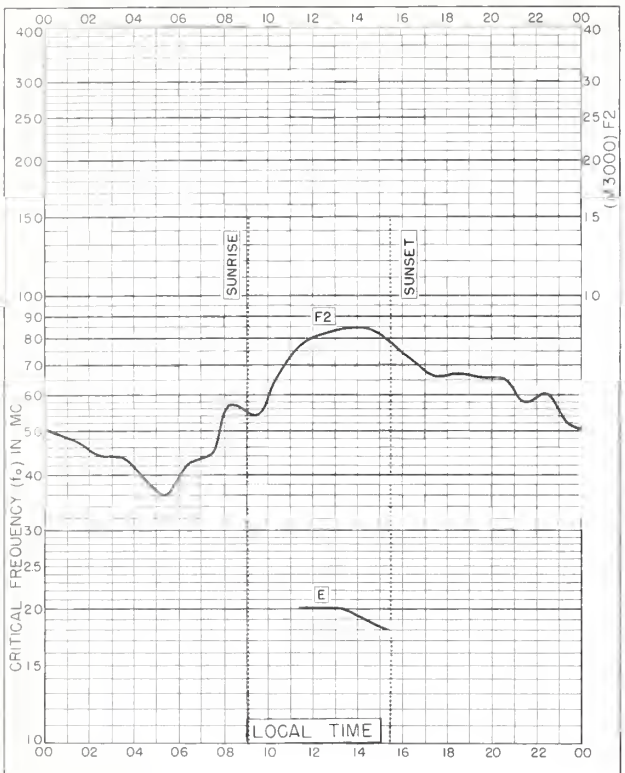


Fig. 133. CLYDE RIVER, CANADA
70.5°N, 68.6°W FEBRUARY 1958

NBS 503

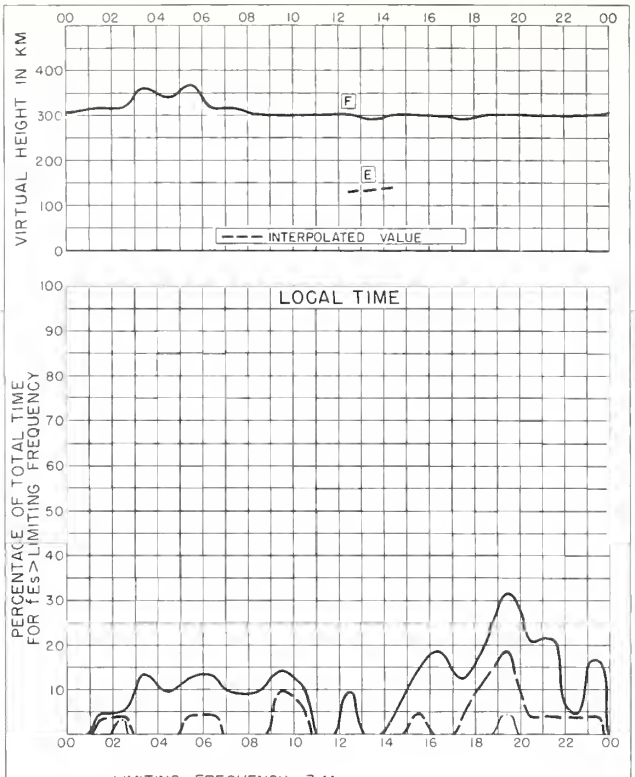


Fig. 134. CLYDE RIVER, CANADA FEBRUARY 1958

NBS 490

Fig. 135. POITIERS, FRANCE
46.6°N, 0.3°E FEBRUARY 1958

NBS 503

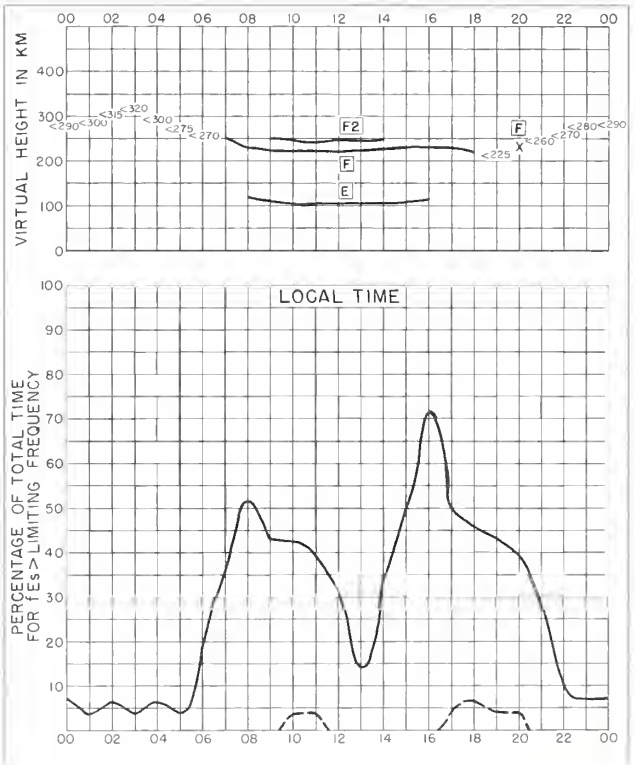


Fig. 136. POITIERS, FRANCE FEBRUARY 1958

NBS 490

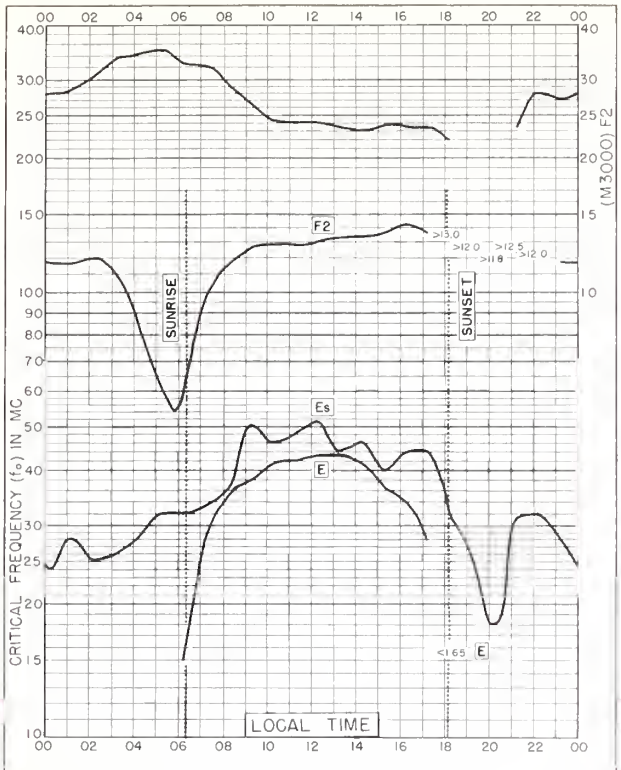
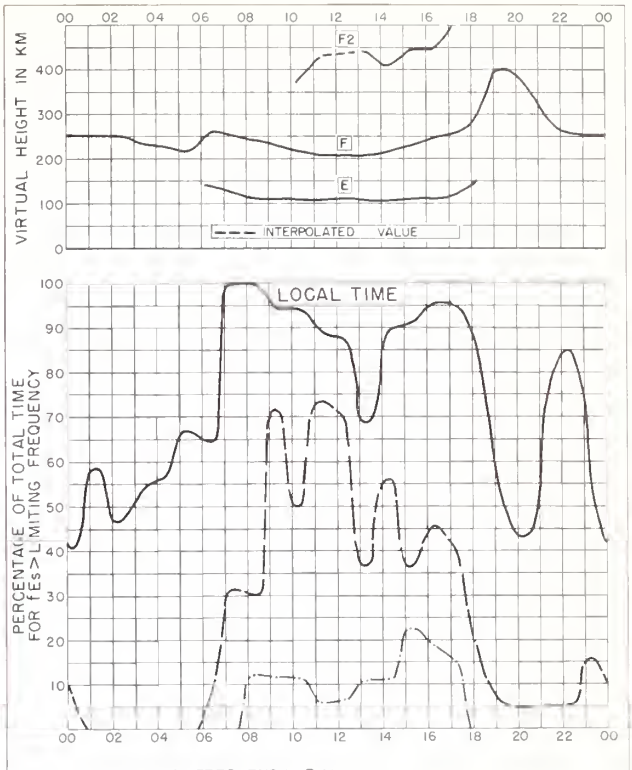


Fig. 137. BANGUI, FRENCH EQUATORIAL AFRICA
4.6°N, 18.6°E FEBRUARY 1958



FEBRUARY 1958

Fig. 138. BANGUI, FRENCH EQUATORIAL AFRICA

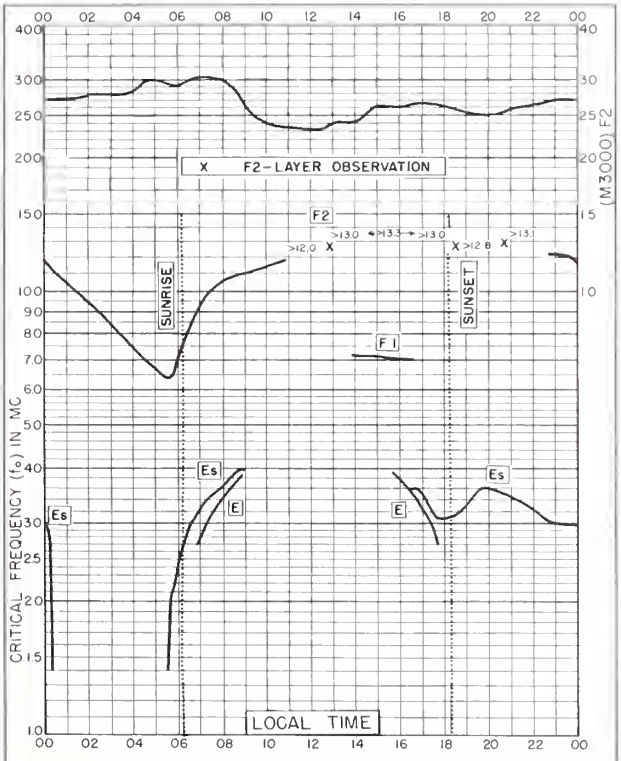
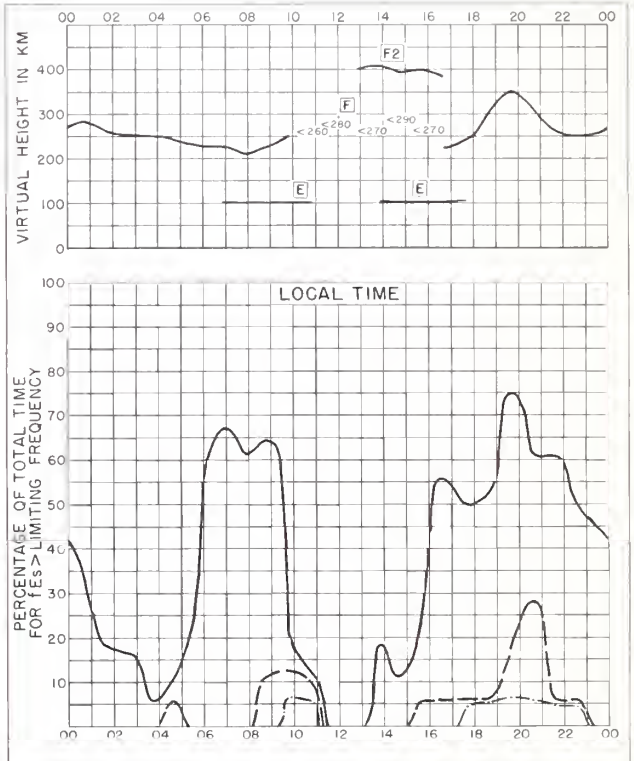


Fig. 139. HOLLANDIA, NETHERLANDS NEW GUINEA
2.5°S, 140.8°E FEBRUARY 1958



FEBRUARY 1958

Fig. 140. HOLLANDIA, NETHERLANDS NEW GUINEA

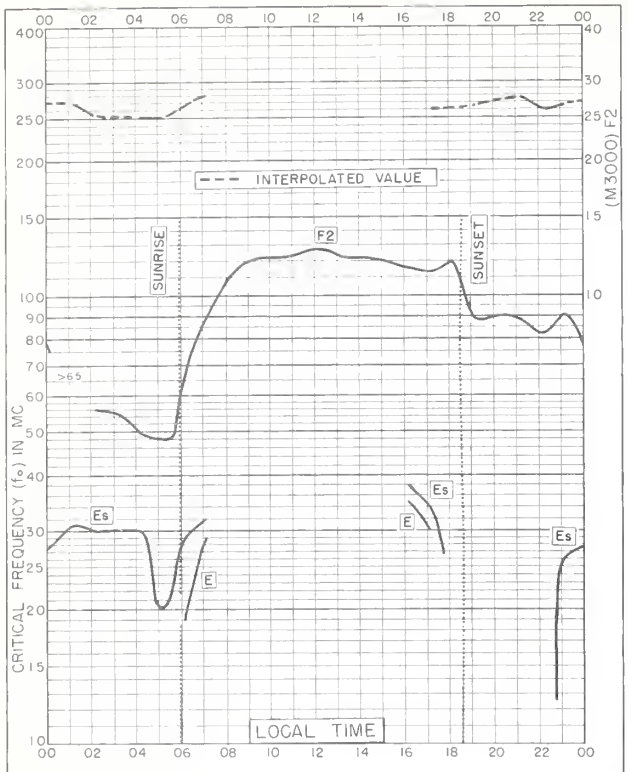
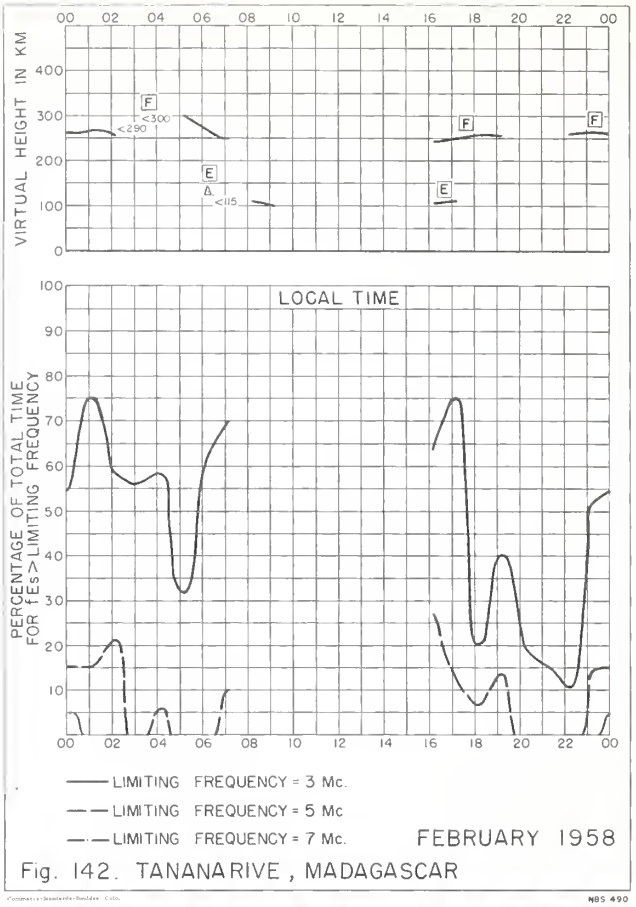


Fig. 141. TANANARIVE, MADAGASCAR
18.8°S, 47.5°E FEBRUARY 1958

NBS 503



FEBRUARY 1958

Fig. 142. TANANARIVE, MADAGASCAR

NBS 490

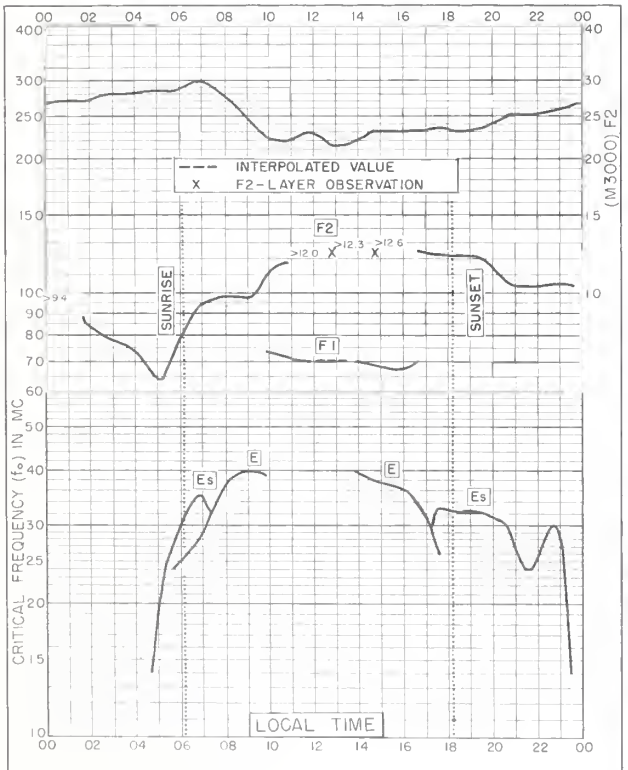


Fig. 143. HOLLANDIA, NETHERLANDS NEW GUINEA
2.5°S, 140.8°E JANUARY 1958

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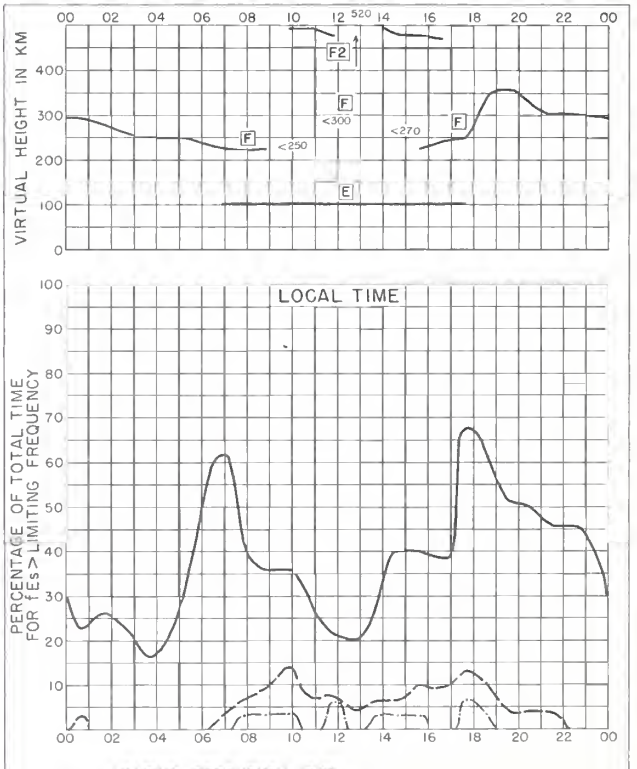

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Fig. 144. HOLLANDIA, NETHERLANDS NEW GUINEA

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