

CRPL-F 215 PART A

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PART A

IONOSPHERIC DATA

ISSUED
JULY 1962

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

CRPL-F215

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

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IONOSPHERIC DATA

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IONOSPHERIC DATA

The CRPL-F series bulletins are issued as part of the responsibility of the Central Radio Propagation Laboratory for the exchange and dissemination of ionospheric and related geophysical data. While originally a by-product of the collection of data by the CRPL for use in radio propagation studies, the CRPL-F series bulletins, Part A, "Ionospheric Data," and Part B, "Solar-Geophysical Data," have provided useful service by collecting and making available a wide variety of data in convenient form for use in research, not only on radio propagation and the ionosphere, but also on a wide variety of geophysical problems. Beginning with CRPL-F 211, Part A, "Ionospheric Data," a number of changes have been made in the tables of ionospheric data which, by providing more information, should increase their usefulness.

The current form of the tables of ionospheric data provides the monthly medians and, in addition, the number of values entering into median determination (count) for all ionospheric characteristics listed. Also, the upper and lower quartile values, indicated by UQ and LQ in the tables, are listed for foF₂, h'F₂, h'F, and (M3000)F₂. Quartile values are not listed for the other characteristics because of space limitations. The tables are prepared by IBM machine methods, which, by improving the speed and efficiency of preparation, permit earlier publication of the data.

Graphs of critical frequencies and (M3000)F₂ will continue to appear. Graphs of percentage of time of occurrence for fEs and virtual heights of the regular ionospheric layers are no longer included. This change was necessary to provide space for the enlarged tables. Data on percentage of time of occurrence of fEs above 3, 5, and 7 Mc are still available from the CRPL and the IGY World Data Center A for Airglow and Ionosphere.

For many years, the tables of ionospheric data appearing in the F-series, Part A, listed values of medians recomputed at CRPL. While this practice enforced a certain uniformity, it was subject to some valid criticism for tampering with original data. The tables and graphs now show the ionospheric data just as they are provided by the originating laboratory. Responsibility for the accuracy and reliability of the data now rests entirely with the originator.

Gaps in the tables when data normally might be expected indicate the data were not provided by the originator. Following the recommendation of the World-Wide Soundings Committee, only values of median foEs are listed. In the few cases where fEs is still reported instead of foEs, the data will not be printed. Data will appear in the F-series, Part A, only when the complete daily-hourly tabulations have been received by the CRPL or the IGY World Data Center A for Airglow and Ionosphere.

Information on symbols, terminology, and conventions may be found in the "URSI Handbook of Ionogram Interpretation and Reduction, of the World-Wide Soundings Committee," edited by W. R. Piggott and K. Rawer (Elsevier, 1961), which supersedes previous documents. A list of symbols is available from CRPL on request.

The following table contains the latest available information on smoothed observed Zurich sunspot numbers, beginning with the minimum of April 1954. Final numbers are listed through June 1961, the succeeding values being based on provisional data.

Smoothed Observed Zurich Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	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	146	141	137	132
1960	129	125	122	120	117	114	109	102	98	93	88	84
1961	80	75	69	64	60	56	53	52	52	51	50	48
1962												

Units of Ionospheric Data Tables

foF2, foEs - - - Tenth s of a megacycle
 foF1, FoE - - - Hundredths of a megacycle
 h'F2, h'F, h'E - Kilometers
 (M3000)F2 - - - Hundredths

NOTE: Occasionally, when the median falls between two of the observed values, the median is carried an extra decimal place beyond these units. Those cases are easily identifiable by the extra digit appearing to the right of the number, in a column usually left blank.

MED - Median
 CNT - Count
 UQ - Upper Quartile
 LQ - Lower Quartile

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 100 and figures 1 to 100 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:

 Trelew, Argentina

 Tucuman, Argentina

 Ushuaia, Argentina

Commonwealth of Australia, Ionospheric Prediction Service of the

 Commonwealth Observatory:

 Townsville, Australia

Belgian Royal Meteorological Institute:

 Dourbes, Belgium

 Lwiro (Central African Institute for Scientific Research)

Escola Politecnica, University of Sao Paulo:

 Sao Paulo, Brazil

Defence Research Board, Canada:

 Alert, Canada

 Clyde, Baffin I.

 Victoria, Canada

 Yellowknife, Canada

Danish National Committee of URSI:

 Godhavn, Greenland

 Narssarssuaq, Greenland

French National Center for Telecommunications Studies:

 Casablanca, Morocco

 Dakar, French West Africa

 Djibouti, French Somaliland

 Kerguelen I.

 Poitiers, France

 Tamanrasset, French W. Africa

 Tananarive, Madagascar

 Terre Adelie

Heinrich Hertz Institute, German Academy of Sciences, Berlin:

 Juliusruh/Rugen, Germany

Institute for Ionospheric Research, Lindau Über Northeim, Hannover,

 Germany:

 Tsumeb, South West Africa

Ionospheric Institute, Breisach, Germany:

 Freiburg, Germany

The Royal Netherlands Meteorological Institute:
Hollandia, Netherlands New Guinea

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

Indian Council of Scientific and Industrial Research, Radio Research
Committee, New Delhi, India:
Ahmedabad (Physical Research Laboratory)
Bombay (All India Radio)
Calcutta (Institute of Radio Physics and Electronics)
Delhi (All India Radio)
Kodaikanal (India Meteorological Department)
Madras (All India Radio)
Tiruchy (All India Radio)
Trivandrum (All India Radio)

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

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

Telecommunication Administration, Oslo, Norway:
Svalbard, Norway

Manila Observatory:
Baguio, P. I.

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

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Boulder, Colorado
Fairbanks (College), Alaska (Geophysical Institute of the
University of Alaska)
Pole Station, Antarctica

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 several stations associated with CRPL. For the present, the hourly profile data from one CRPL station, Puerto Rico, are appearing in the monthly CRPL-F Reports, Part A. 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 by Dr. H. H. Howe for a CDC-1604 computer.

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

<u>Quantity</u>	<u>Units</u>	<u>Remarks</u>
Electron Density (N)	$\times 10^3 = \text{electrons/cm}^3$	Body of table; given at each 10 km of height.
NMAX	$\times 10^3 = \text{electrons/cm}^3$	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.
KP		The standard Kp magnetic index, to one digit.
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	$\times 10^{10} = \text{electrons/cm}^2 \text{ column.}$	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 4+ or less. The number of profiles entering the average for each hour is given by CNT. The other parameters of the layer, HMIN, SCAT, HMAX, SHMAX, and the mean value of Kp are given for each hour.

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.

SPECIAL NOTICE

Termination of Hourly Electron Density Profile Tabulations

Hourly N(h) profiles for the Puerto Rico station have been published in the CRPL-F Reports, Part A, since May 1959, starting with the data for February 1959. This program now terminates with the publication in this issue of the data for March 1962. It is believed that this program has satisfied the objective of making available a large volume of profiles produced by methods of conventional accuracy. However, in anticipation of the increasing precision required by modern applications, we intend to concentrate further work on the calculation of more accurate profiles, inevitably in smaller volume.

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 1 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
G,RP	3	3	F3	3	F3	3	S3	3	3	3	3	3
HMIN	243	23	211	226	212	224	235	110	110	108	108	106
SCAT	364.2	324.2	324.3	324.4	304.3	274.0	384.5	34.1	374.5	42.9	54.5	314.3
HMAX	343	362	263	276	267	274	318	247	243	253	287	287
SHMAX	1	1	143	111	135	101	70	98	197	322	467	816
KM	330	340	350	360	370	380	390	400	410	420	430	440
330	340	350	360	370	380	390	400	410	420	430	440	450
340	350	360	370	380	390	400	410	420	430	440	450	460
350	360	370	380	390	400	410	420	430	440	450	460	470
360	370	380	390	400	410	420	430	440	450	460	470	480
370	380	390	400	410	420	430	440	450	460	470	480	490
380	390	400	410	420	430	440	450	460	470	480	490	500
390	400	410	420	430	440	450	460	470	480	490	500	510
400	410	420	430	440	450	460	470	480	490	500	510	520
410	420	430	440	450	460	470	480	490	500	510	520	530
420	430	440	450	460	470	480	490	500	510	520	530	540
430	440	450	460	470	480	490	500	510	520	530	540	550
440	450	460	470	480	490	500	510	520	530	540	550	560
450	460	470	480	490	500	510	520	530	540	550	560	570
460	470	480	490	500	510	520	530	540	550	560	570	580
470	480	490	500	510	520	530	540	550	560	570	580	590
480	490	500	510	520	530	540	550	560	570	580	590	600
490	500	510	520	530	540	550	560	570	580	590	600	610
500	510	520	530	540	550	560	570	580	590	600	610	620
510	520	530	540	550	560	570	580	590	600	610	620	630
520	530	540	550	560	570	580	590	600	610	620	630	640
530	540	550	560	570	580	590	600	610	620	630	640	650
540	550	560	570	580	590	600	610	620	630	640	650	660
550	560	570	580	590	600	610	620	630	640	650	660	670
560	570	580	590	600	610	620	630	640	650	660	670	680
570	580	590	600	610	620	630	640	650	660	670	680	690
580	590	600	610	620	630	640	650	660	670	680	690	700
590	600	610	620	630	640	650	660	670	680	690	700	710
600	610	620	630	640	650	660	670	680	690	700	710	720
610	620	630	640	650	660	670	680	690	700	710	720	730
620	630	640	650	660	670	680	690	700	710	720	730	740
630	640	650	660	670	680	690	700	710	720	730	740	750
640	650	660	670	680	690	700	710	720	730	740	750	760
650	660	670	680	690	700	710	720	730	740	750	760	770
660	670	680	690	700	710	720	730	740	750	760	770	780
670	680	690	700	710	720	730	740	750	760	770	780	790
680	690	700	710	720	730	740	750	760	770	780	790	800
690	700	710	720	730	740	750	760	770	780	790	800	810
700	710	720	730	740	750	760	770	780	790	800	810	820
710	720	730	740	750	760	770	780	790	800	810	820	830
720	730	740	750	760	770	780	790	800	810	820	830	840
730	740	750	760	770	780	790	800	810	820	830	840	850
740	750	760	770	780	790	800	810	820	830	840	850	860
750	760	770	780	790	800	810	820	830	840	850	860	870
760	770	780	790	800	810	820	830	840	850	860	870	880
770	780	790	800	810	820	830	840	850	860	870	880	890
780	790	800	810	820	830	840	850	860	870	880	890	900
790	800	810	820	830	840	850	860	870	880	890	900	910
800	810	820	830	840	850	860	870	880	890	900	910	920
810	820	830	840	850	860	870	880	890	900	910	920	930
820	830	840	850	860	870	880	890	900	910	920	930	940
830	840	850	860	870	880	890	900	910	920	930	940	950
840	850	860	870	880	890	900	910	920	930	940	950	960
850	860	870	880	890	900	910	920	930	940	950	960	970
860	870	880	890	900	910	920	930	940	950	960	970	980
870	880	890	900	910	920	930	940	950	960	970	980	990
880	890	900	910	920	930	940	950	960	970	980	990	1000
890	900	910	920	930	940	950	960	970	980	990	1000	1010
900	910	920	930	940	950	960	970	980	990	1000	1010	1020
910	920	930	940	950	960	970	980	990	1000	1010	1020	1030
920	930	940	950	960	970	980	990	1000	1010	1020	1030	1040
930	940	950	960	970	980	990	1000	1010	1020	1030	1040	1050
940	950	960	970	980	990	1000	1010	1020	1030	1040	1050	1060
950	960	970	980	990	1000	1010	1020	1030	1040	1050	1060	1070
960	970	980	990	1000	1010	1020	1030	1040	1050	1060	1070	1080
970	980	990	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090
980	990	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100
990	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110
1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 1 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
G,RP	3	B3	1	A1	1	2	S2	2	2	S2	S2	2
HMIN	108	108	108	108	108	108	108	108	108	108	108	108
SCAT	44.9	40.0	39.6	39.2	38.8	38.4	38.0	37.6	37.2	36.8	36.4	36.0
HMAX	289	278	276	275	275	275	275	275	275	275	275	275
SHMAX	1076	937	767	733	733	733	733	733	733	733	733	733
KM	350	340	330	320	310	300	290	280	270	260	250	240
350	340	330	320	310	300	290	280	270	260	250	240	230
340	330	320	310	300	290	280	270	260	250	240	230	220
330	320	310	300	290	280	270	260	250	240	230	220	210
320	310	300	290	280	270	260	250	240	230	220	210	200
310	300	290	280	270	260	250	240	230	220	210	200	190
300	290	280	270	260	250	240	230	220	210	200	190	180
290	280	270	260	250	240	230	220	210	200	190	180	170
280	270	260	250	240	230	220	210	200	190	180	170	160
270	260	250	240	230	220	210	200	190	180	170	160	150
260	250	240	230	220	210	200	190	180	170	160	150	140
250	240	230	220	210	200	190	180	170	160	150	140	130
240	230	220	210	200	190	180	170	160	150	140	130	120
230	220	210	200	190	180	170	160	150	140	130	120	110
220	210	200	190	180	170	160	150	140	130	120	110	100
210	200	190	180	170	160	150	140	130	120	110	100	90
200	190	180	170	160	150	140	130	120	110	100	90	80
190	180	170	160	150	140	130	120	110	100	90	80	70
180	170	160	150	140	130	120	110	100	90	80	70	60
170	160	150	140	130	120	110	100	90	80	70	60	50
160	150	140	130	120	110	100	90	80	70	60	50	40
150	140	130	120	110	100	90	80	70	60	50	40	30
140	130	120	110	100	90	80	70	60	50	40	30	20
130	120	110	100	90	80	70	60	50	40	30	20	10
120	110	100	90	80	70</td							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

3 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
4,RP	0	0	1	1	1	F1	1	S1	3	3	3	2
HMIN	247	259	241	222	200	247	238	109	107	106	109	103
SCAT	34.8	37.1	35.0	31.2	27.0	46.5	39.5	32.3	32.6	39.7	34.7	53.7
HMAX	322	343	320	280	238	340	311	252	236	244	250	274
SHMAX	108	117	124	135	96	97	49	177	314	430	514	728
KM												
350	225											
340	224											
330	223	218	259									
320	222	203	259									
310	216	180	254									
300	200	150	238									
290	175	115	210	354								
280	144	76.7	168	354								
270	107	39.6	122	345								
260	60.3	12.4	15.6	317								
250	21.5	36.7	263									
240		170	117									
230		62.5	112									
220		116										
210		125										
200		12.4										
190												
180												
170												
160												
150												
140												
130												
120												
110												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

3 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4,RP	2	2	3	1	1	F1	2	52	2	2	2	1
HMIN	107	105	108	107	108	109	107	108	109	107	202	211
SCAT	40.8	56.7	48.5	35.5	32.5	42.5	37.2	36.6	35.4	42.6	38.3	29.1
HMAX	280	301	300	284	271	277	286	293	293	303	342	308
SHMAX	803	944	1072	845	949	768	373	245	254	218	162	
KM												
360	360										430	
350	350										429	428
340	340										420	428
330	330										349	417
320	320										365	390
310	310	12.7	1248								323	351
300	300	12.7	1248								392	
290	1017	1017	1284	1240	1218						507	270
280	1017	942	1242	1237	1279	1184					131	210
270	1001	951	1171	1195	1223	1174					212	351
260	954	813	1073	1099	1131	1123					699	454
250	875	623	936	972	1009	1029					555	316
240	778	137	769	818	855	801					451	221
230	658	642	694	649	667	743					319	115
220	535	542	468	482	497	577					168	47.5
210	428	451	374	372	382	426					58.7	
200	362	376	323	308	309	315						
190	317	326	290	268	262	243						
180	297	294	267	239	231	198						
170	264	271	249	204	204	168						
160	240	248	230	174	177	143						
150	210	217	209	153	151	120						
140	179	187	182	141	130	101						
130	163	168	160	134	118	88.4						
120	154	159	151	128	112	82.1						
110	92.8	114	53.6	58.0	41.8	27.3						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

4 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
4,RP	2	2	1	1	F1	2	F2	52	2	2	2	1
HMIN	227	220	218	209	230	260	236	110	110	109	108	103
SCAT	28.4	32.0	40.0	20.7	34.7	29.0	38.4	28.0	30.9	44.3	49.6	44.3
HMAX	303	295	293	251	303	336	327	245	240	260	297	291
SHMAX	133	138	138	63	64	71	80	157	326	485	813	751
KM												
340												
330												
320												
310	310		167	123	135							
300	309	310	281	166	106	125						
290	294	308	281	162	83.4	109						
280	274	274	274	152	57.4	90.8						
270	214	264	258	138	30.9	71.8						
260	156	219	232	236	116	51.8						
250	39.4	160	188	236	87.1	33.5	279	541	634	752	970	
240	47.7	94.5	124	218	46.5	17.5	277	521	611	629	605	
230	19.3	41.2	59.3	164	3.1							
220	3.1	17.2	84.1									
210		12.4										
200												
190												
180												
170												
160												
150												
140												
130												
120												
110												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

4 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4,RP	1	1	A1	1	1	1	A1	1	1	1	1	1
HMIN	106	108	109	108	109	109	109	109	109	202	200	259
SCAT	41.6	36.3	47.9	42.7	47.2	38.1				33.4	32.6	41.2
HMAX	271	271	286	278	283	278				274	262	341
SHMAX	870	656	449	918	810	706				325	131	154
KM												
360	360										750	
350	350										246	295
340	340										233	295
330	330										217	287
320	320										196	266
310	310										170	237
300	300										140	199
290	290										105	146
280	1223	1240	1169	1298	1079	1080				714	64.5	87.4
270	1223	1240	1140	1288	1060	1068				711	310	34.2
260	1203	1210	1086	1243	1017	1020				681	310	12.4
250	1147	1150	1001	1161	951	933				619	249	
240	1055	1041	889	1043	857	804				527	273	
230	918	885	747	862	724	646				410	235	
220	733	704	603	658	559	496				257	175	
210	560	528	481	481	419	376				89.4	HR.2	
200	429	403	369	369	317	292						12.4
190	342	333	327	302	257	232						
180	277	273	267	266	220	168						
170	269	265	259	236	192	155						
160	245	244	230	215	164	129						
150	218	220	215	199	125	110						
140	189	189	179	174	120	1						

ELECTRON DENSITY

RAMEY AFR, PUERTO RICO

60

5 MAR 1964

ELECTRON DENSITY

50 h

5 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
U_RP	1	1	3	3	3	3	3	53	5	5	5	5
HMIN	247	220	231	200	211	211	280	110	104	104	109	103
SCAT	31.1	32.4	32.1	33.6	31.7	30.2	46.5	41.3	31.2	37.6	37.9	48.6
HMAX	311	289	298	281	266	260	361	259	241	260	264	287
SHMAX	107	104	86	107	82	46	57	207	336	501	667	765
KM												
370								97.6				
360								97.6				
350								96.2				
340								92.5				
330								66.8				
320	257							78.3				
310	257							66.4				
300	249		203					51.1				
290	228	246	200	226					31.3			
280	196	242	187	226								66.4
270	150	227	165	219	215	129					76	64.1
260	88.9	199	133	203	214	129	297		681	973	197	
250	25.5	150	78.6	177	202	125	294	645	671	945	731	
240	86.6	36.8	141	180	119		283	645	630	883	662	
230	40.5	95.6	137	93.4			261	624	581	793	576	
220	3.1	56.1	63.4	50.2			231	572	510	670	483	
210		30.4					192	466	435	531	400	
200							151	324	365	394	347	
190							119	225	305	308	301	
180							95.0	168	256	294	271	
170							77.4	132	216	216	250	
160							64.6	109	183	164	221	
150							56.0	94.6	154	157	181	
140							51.3	88.9	133	140	156	
130							45.7	64.8	114	130	146	
120							34.0	62.1	99.8	125	144	
110							12.4	23.4	41.8	29.7	34.9	

RAMEY AFB, PUERTO RICO											60	M	S	MAY 1962		
TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300				
4, KP	3	3	3	43	43	C2	S2	2	43	3	3	3	5			
HMIN	108	109	108				110	200	200	229	290	233				
SCAI	60.7	40.2	34.1	35.7			25.1	40.8	33.6	46.7	36.7	36.3				
HP XAF	338	299	265	280			265	283	255	344	340	320				
SHMAX	1147	1124	1019	965			563	557	178	193	128	131				
KM																
350													284			
340	1022												284	245		
330	1017												278	241	254	
320	999												265	228	252	
310	967												246	205	244	
300	917	1612											222	175	221	
270	862	1593	1605	1512				1027		193	137	194				
280	777	1524	1545	1512				1025		158	92.3	155				
270	721	1406	1524	1480				1240	1001		122	55.0	111			
260	639	1206	1382	1386				1229	945	411	87.3	29.7	75.4			
250	562	963	1174	1243				1129	859	409	58.1		45.1			
240	491	736	922	1054				548	743	315	33.4		23.1			
230	431	534	690	834				691	591	368	4.7					
220	380	399	501	513				442	398	328						
210	341	333	384	416				238	186	233						
200	310	294	319	314				213	12.4	12.4						
190	289	269	281	265									161			
180	264	251	256	237									125			
170	241	231	242	213									99.1			
160	212	202	206	187									81.6			
150	181	178	171	163									69.2			
140	165	163	156	145									59.8			
130	156	155	148	134									53.1			
120	151	150	144	127									49.7			
110	81.8	41.8	69.4	80.3									12.4			

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

50

6 MAR 1962

ELECTRON DENSITY

60 W

6 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
U,KP	5	5	4	4	4	4	44	54	56	46	6	4
HMIN	229	248	261	231	199	199	238	110	110	107	109	104
SCAT	40.0	35.2	36.9	36.2	20.2	20.2	70.6	36.5	28.2	40.7	63.3	35.6
HMAXF	324	337	346	313	247	311	323	244	266	293	284	283
SHMAX	154	138	132	136	79	80	61	174	372	645	875	1101
KM												
350												
340												
330	270	260	243									
320	269	246	224	281				115				
310	262	225	196	281				111				
300	244	197	161	272				103				
290	221	157	117	253				103				
280	190	118	70.1	220				78.3				
270	153	79.8	34.9	171				59.1				
260	113	42.7		115				41.2				
250	68.8	16.5		62.5				319				
240	35.5			29.4				317				
230	4.7			274				296				
220				204				263				
210				89.2				214				
200				12.4				161				
190								119				
180								207				
170								769				
160								87.4				
150								172				
140								223				
130								230				
120								188				
110								103				

RAMEY AFR, PUERTO RICO		60 W										6 MAR 1962		
TIME		1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
U,RP		4	4	4	4	54	2	A2	2	2	2	2	3	
HMIN		107	108	108	109	109	108		214	200	200	254	271	
SCAT		54.5	35.6	35.2	47.7	39.4	42.9		33.5	27.1	54.1	39.3	40.4	
HR AXF		288	283	267	271	268	283		277	254	283	349	360	
SHMAX		1089	963	887	703	640	661		301	151	126	77	93	
KM														
370													16.2	
360													16.1	
350													133	
340													132	
330													126	
320													116	
310													102	
300													85.0	
290		1281	1424					898					36.4	
280		1273	1421			890		897		737			197	
270		1249	1377	1411		890	898	879		729			65.9	
260		1194	1276	1397		879	899	835		690	430	187	18.2	
250		1129	1120	1328		846	852	768		618	427	177		
240		1026	916	1202		799	787	671		484	400	165		
230		895	998	1011		726	689	554		288	343	149		
220		746	524	745		634	569	444		68.7	247	126		
210		578	422	589		518	455	355			107	78.8		
200		465	351	432		412	367	285				12.4	12.4	
190		364	310	339		327	299	232						
180		300	282	266		277	243	192						
170		263	257	253		243	212	158						
160		234	232	229		215	185	130						
150		203	206	206		185	165	111						
140		173	174	180		155	147	106.3						
130		157	157	155		136	122	87.4						
120		150	150	144		127	110	82.9						
110		96.1	49.1	43.7	41.8	41.8	38.7							

ELECTRON DENSITY

RAMEY AF8, PUERTO RICO

60 W 7 MAR 1962

TIME	0000	G100	U200	0300	0400	0500	U600	0700	0800	0900	1000	1100
Q,RP	3	3	3	3	3	2	2	52	2	A2	2	2
HMIN	247	231	239	218	205	229	234	110	108	109	107	107
SCAT	46.6	42.2	30.4	30.0	73.8	40.5	44.0	31.3	29.3	37.1	41.4	48.1
MAXF	352	331	307	270	339	326	333	254	241	262	267	285
SHMAX	111	111	101	75	135	80	82	177	280	442	676	912
KM												
360	171											
350	171											
340	168	172			142		135					
330	162	172			142	137	135					
320	151	189			140	136	132					
310	136	179	234		137	131	126					
300	117	166	231		133	123	116					
290	93.8	147	215		127	110	101					1173
280	70.5	121	190	205	120	93.0	81.7					1171
270	48.7	87.5	156	205	111	74.7	61.7			602	971	1146
260	31.6	57.0	110	199	101	55.6	44.5	331		602	696	1096
250	15.3	33.6	58.9	182	89.7	38.6	30.2	330	489	587	929	1021
240		15.0	12.4	147	77.2	24.6	17.8	315	499	549	873	903
230				90.3	61.7	4.0		284	471	495	762	738
220				28.9	41.6			247	423	424	612	565
210					20.2			185	353	359	472	433
200								123	276	304	358	354
190								74.8	213	258	289	303
180								51.9	168	225	248	270
170								41.6	135	196	222	246
160								37.3	110	168	198	222
150								35.0	91.4	141	173	193
140								32.7	80.3	120	148	167
130								29.0	74.3	103	127	144
120								23.5	69.5	89.4	115	132
110								13.0	30.3	22.0	49.1	43.0

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 7 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
u,KP	2	2	A1	A1	A0	A0	A0	A1	I	I	I	2
HMLN	108	108	109	109	200	119	211	266	278			
SCAT	27.4	36.1	43.6	40.1	36.1	37.5	52.1	33.8	39.8			
HRXF	252	264	285	267	271	275	317	346	363			
SHMAX	710	775	842	783	210	105	100	68	86			
KM												
370												162
360												162
350												136
340												158
330												135
320												149
310												128
300												135
290			1055									115
280			1052									113
270		1184	1026		1240			450	205	125	36.5	12.4
260	12.2	1180	973		1232			450	204	114	18.1	
250	1290	1137	889		1187			413	181	83.3		
240	1230	1052	784		1105			368	159	64.9		
230	1085	908	664		980			298	130	43.6		
220	880	721	547		798			205	96.1	24.7		
210	624	560	444		557			103	60.3			
200	430	430	367		369			12.4	12.4			
190	340	342	315		277							
180	292	294	280		228							
170	259	265	253		198							
160	238	239	223		173							
150	221	199	178		148							
140	195	167	149		128							
130	158	155	137		113							
120	145	148	131		106							
110	81.4	69.4	39.4		41.8							

ELECTRON DENSITY

RAMEY AF8, PUERTO RICO

60 W 8 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
U,KP	2	2	1	1	1	F0	0	50	0	0	0	0
HMIN	253	223	227	211	207	197	237	110	110	107	109	107
SCAT	352.4	26.8	27.1	20.7	27.6	34.6	40.9	33.9	28.5	31.8	42.2	31.1
HMAXF	333	297	291	255	254	283	324	249	234	242	267	263
SHMAX	77	76	87	73	53	53	64	170	264	367	557	633
KM												
340	156											
330	156							117				
320	151							117				
310	140							114				
300	123	182	226					108				
290	39.1	178	226				95.4	97.4				
280	73.2	162	217				95.1	81.2				
270	45.7	138	193				91.8	60.4			707	1131
260	23.7	106	157	284	160	83.9	42.0				702	1120
250	70.1	108	275	160	75.7	27.3	281			567	678	1081
240	43.2	55.2	244	151	66.3	12.4	277	4.1	566	634		175
230	23.0	14.9	180	131	55.3		260	4.0	547	571	807	
220			71.4	89.5	4.3	1	232	464	500	493	616	
210				25.5	29.0		196	4.0	424	413	450	
200					12.4		153	32	347	340	346	
190							117	248	286	286	295	
180							88.6	182	242	251	265	
170							67.1	137	209	226	245	
160							53.3	114	182	202	227	
150							44.3	97.8	156	173	205	
140							33.7	84.1	129	155	178	
130							35.1	73.8	112	131	148	
120							29.4	66.7	94.2	121	133	
110							12.4	12.4	70.2	41.8	41.8	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 8 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
G,KP	0	0	AU	40	0	0	0	0	0	0	0	0
HMIN	109	109			108	108	108	200	199	198	234	238
SCAT	34.8	35.2			33.4	38.5	33.3	31.9	36.1	39.7	36.9	38.7
HMAXF	270	265			259	255	244	256	269	293	326	321
SHMAX	805	692			570	494	341	154	118	101	86	97
KM												
330											156	1b7
320											155	187
310											143	183
300											175	136
290											175	120
280	1217	1031									171	99.6
270	1217	1031									259	161
260	1192	1026			907	744		392	255	145	55.1	6d6.6
250	1115	985			890	741	681	389	242	126	36.5	38.2
240	989	901			830	716	679	368	218	103	20.6	12.4
230	817	781			734	664	651	328	180	77.1		
220	643	633			593	592	542	255	122	52.4		
210	475	490			450	502	489	142	51.8	33.3		
200	370	377			348	394	330	12.4	12.4	12.4		
190	309	308			280	297	204					
180	274	271			238	227	127					
170	254	248			211	182	91.8					
160	237	225			186	154	73.6					
150	216	197			163	132	61.7					
140	190	169			142	114	53.5					
130	158	141			123	48.9	48.4					
120	140	131			115	91.3	45.7					
110	73	61.8			38.2	39.3	29.4					

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 8

9 MAY 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
LWP	0	0	0	0	0	0	0	50	1	1	1	1
HMIN	216	219	218	201	199	206	220	110	107	108	107	109
SCAT	37.1	26.9	30.4	31.2	36.2	35.8	35.7	31.1	29.8	33.1	41.8	45.2
HR AFE	299	278	289	265	274	280	291	227	228	233	256	287
SIMAX	93	75	83	84	78	69	62	138	260	349	469	602
KM												
300	187							135				
270	164							145	135			176
240	175	145	200		158	145	132					970
210	154	191	184	205	158	142	123					191
180	135	175	160	204	152	134	109					583
150	102	148	127	193	140	118	95.2					585
120	65.8	107	82.7	172	122	95.8	55.5					547
90	36.4	55.1	43.8	138	48.4	67.4	30.0	259	471	547	531	571
60	12.4	12.4	16.5	84.5	73.2	40.6		256	463	527	481	667
30	210			37.1	41.8	18.4		239	429	461	421	373
00	200			12.4				210	367	413	363	314
-30	190							169	261	336	313	286
-60	180							125	211	273	274	264
-90	170							86.2	166	228	245	247
-120	160							60.1	135	192	217	232
-150	150							49.1	112	163	187	215
-180	140							44.6	94.0	139	152	193
-210	130							41.2	87.5	120	129	158
-240	120							31.1	76.2	106	121	139
-270	110							13.0	52.0	76.8	86.2	73.8

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60

9 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	100	2200	2300
L,KP	1	1	1	1	1	51	51	1	2	2	2	S2
HMIN	106	103	108	108	109	108	108	204	202	199	206	259
SCI	39.4	36.5	35.1	32.7	39.0	28.0	33.2	28.2	30.3	43.7	46.5	40.8
HMAXF	279	277	270	264	253	231	251	261	268	292	366	347
SHMAX	856	846	838	706	600	321	298	154	120	112	116	123
KM												
370												184
360												184
350												179
340												222
330												171
320												220
310												157
300												212
290												133
280												198
270												116
260												176
250												146
240												146
230												146
220												124
210												116
200	1168	1240	1248							189	37.1	78.4
190	1153	1228	1298	1157						180	18.1	40.7
180	1101	1170	1272	1154	976							
170	1011	1066	1193	1107	974	546	422	282	166			
160	879	910	1001	1004	948	651	532	365	226			
150	719	717	873	852	893	650	495	289	180	88.0		
140	569	542	667	667	797	625	425	178	120	57.2		
130	439	401	497	449	644	559	329	65.9	44.3	37.0		
120	353	332	375	364	448	441	239					5.9
110	306	293	307	293	309	297	168					
100	277	270	269	255	243	206	117					
90	258	254	248	230	207	164	77.8					
80	241	236	230	201	181	131	69.9					
70	221	217	210	163	161	106	57.7					
60	173	187	187	140	132	91.3	50.0					
50	161	150	155	133	111	80.6	43.4					
40	138	134	137	126	105	76.4	31.9					
30	112	57.8	45.8	40.4	29.7	40.4	17.8					

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

O MAR 1462

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
0, KP	2	2	3	3	3	3	3	3	3	3	43	3
HM1N	259	249	239	200	203	229	218	110	107	109	109	108
SCAT	39.4	29.8	36.6	28.9	58.6	40.2	32.3	25.8	30.9	46.4	52.1	42.5
HM4KF	337	324	315	249	296	304	295	227	226	247	304	301
SHMAX	1111	81	104	93	79	55	56	121	203	326	704	630
KM												
340	111											
330	145	111										
320	187	113	215									
310	173	167	214			103					744	485
300	154	167	206		116	103	120				742	485
290	129	133	191		115	100	119				729	470
280	82.2	101	164		114	94.0	114				703	427
270	43.2	51.1	129		110	84.6	103				661	54.5
260	12.4	32.9	82.2		105	72.7	85.4				608	76.0
250	4.7	41.8	271	97.7	57.8	63.9				409	539	66.0
240		12.4	264	86.3	38.5	43.6				406	461	56.9
230			241	72.0	12.9	26.9	257			342	394	390
220			196	50.2		7.9	252			338	372	331
210				56.1	25.0		232			319	342	282
200					12.4		183			281	305	260
190						133				236	262	260
180							92.3			170	224	220
170								64.2		150	192	194
160								50.2		121	165	158
150								42.7		101	142	140
140								31.6		120	132	148
130								31.0		80.3	108	121
120								33.1		70.2	102	120
110								13.0		24.1	33.8	39.4

ELECTRON DENSITY

KAMEY AFB, PUERTO RICO

50

10 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
G,KP	3	3	2	2	2	3	3	3	3	3	3	4
HMIN	106	108	108	108	110	108	108	219	224	204	197	241
SCAT	39.5	36.5	37.1	36.5	38.9	45.0	48.0	30.6	31.7	32.1	36.4	34.8
HRFXA	298	287	286	269	252	244	269	292	312	287	284	326
SHMAX	1005	1040	1195	1067	699	403	332	197	216	202	145	122
KM												
330												222
320												220
310												213
300	1353											
290	1339	1547	1947									198
280	1282	1530	1936									151
270	1180	1450	1863	1860								120
260	1030	1327	1723	1834	1184							252
250	836	1147	1493	1740	1184	583	413	252	342	300		39.2
240	659	935	1145	1576	1159	582	390	149	42.6	217		182
230	518	742	802	1295	1191	569	385	614	12.4	123		133
220	411	511	533	923	348	540	320	12.4				79.0
210	342	404	381	596	814	499	278					41.2
200	300	313	303	387	567	443	232					12.4
190	274	278	272	292	367	367	185					
180	258	256	250	253	257	283	140					
170	247	242	231	231	217	204	90.4					
160	226	229	212	211	169	159	75.2					
150	176	205	192	189	160	131	62.4					
140	169	165	163	161	134	107	54.9					
130	141	143	135	141	120	91.1	47.3					
120	133	133	127	129	112	85.7	45.5					
110	99.8	97.2	10.6	6.6	1.7	12.6	38.7	18.6				

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 N 11 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q _{MAX}	4	4	2	2	F2	3	3	S3	2	2	c	3
HMIN	236	257	257	233	219	198	210	102	109	108	107	107
SCAT	40.4	30.1	30.7	29.3	33.9	43.6	36.9	30.8	51.7	45.1	35.2	35.2
HMAXE	329	340	333	306	282	285	285	274	272	263	288	288

MAX	32.9	34.0	35.9	36.6	2.02	2.03	2.04	2.05	2.06	2.07	2.08	2.09
SHMAX	104	89	86	94	96	83	66		228	444	722	802
KM												
340		188	194									
330	179	183	193									
320	177	167	185									
310	169	143	165	226								
300	155	117	136	224								
290	137	86.1	101	210	226	142	136			831	1131	
280	114	57.7	64.3	183	226	142	135		489	822	1117	
270	88.1	34.5	37.3	141	219	138	130		489	793	1059	
260	61.8	15.8	16.0	90.3	203	131	120		483	740	959	
250	38.3			49.6	175	120	104		467	677	816	
240	18.1			23.8	132	105	82.6		373	443	594	670
230					72.6	85.8	55.4		371	408	511	528
220					12.4	62.8	30.4		352	363	427	403
210						37.5			314	318	359	324
200						12.4			263	277	305	282
190									214	243	264	257
180									174	216	245	240
170									143	192	226	221
160									120	170	208	185
150									104	148	191	161
140									87.1	129	170	148
130									74.2	109	143	141
120									68.6	100	127	137
110									24.1	39.4	80.1	74.0

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

TIME	1200	1300	1400	1500
Q, KP	3	3	2	
HMIN	107	109	109	
SCAT	35.6	47.1	40.3	35.6
HMAXE	275	282	276	

HRAY	275	282	278
SHMAX	875	953	874
KM			
380			
370			
360			
350			
340			
330			
320			
310			
300			
290		1229	
280	1353	1228	1234
270	1347	1210	1228
260	1246	1165	1187
250	1189	1073	1109
240	1028	907	941
230	803	838	839
220	590	665	654
210	427	513	492
200	337	395	377
190	290	320	307
180	264	281	268
170	247	258	245
160	230	239	226
150	207	216	205
140	183	192	176
130	156	163	152
120	138	145	142
110	55.6	41.8	41.8

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO 60 W 12 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	2	2	2	2	2	3	3	S3	3	3	3	4
HMIN	270	261	237	208	209	237	241	110	108	109	108	105
SCAT	38.1	30.5	30.1	24.3	30.5	37.8	34.4	24.2	30.5	33.5	36.3	45.7
HMAXF	351	319	303	261	262	306	321	230	227	245	276	310
SHMAX	91	70	95	73	64	54	39	130	198	312	515	648
KM												
360	176											
350	176											
340	172											
330	162							73.4				
320	147	179						73.3				
310	124	176	232					113	71.4			
300	95.1	162	232					112	66.0			
290	61.1	139	222					108	58.9			
280	33.4	103	199					99.9	50.1			
270		47.0	166	221	171	87.4	40.6				636	601
260			114	220	171	69.5	31.5				632	729
250			57.3	209	165	43.7	21.9				606	648
240			19.9	179	149	16.2					436	553
230				129	122						566	486
220				63.1	70.8						434	491
210					17.8	12.4					321	328
200							180	274	287	275	297	
190							134	221	247	244	274	
180							94.9	177	212	228	254	
170							69.4	143	182	205	234	
160							54.2	110	156	177	211	
150							46.9	101	133	149	181	
140							43.7	84.9	116	133	158	
130							38.4	69.6	106	125	145	
120							32.7	63.4	100	120	138	
110							13.0	28.0	41.8	62.7	62.7	

ELECTRON DENSITY

RAMEY AF8, PUERTO RICO

TIME	1200	1300	1400	1500
u, KP	4	4	53	
HMIN	108	105	108	
SLAL	37.3	32.9	39.4	23.2
HMAX	296	293	288	
SHMAX	917	968	1109	1101
KM				
360				
350				
340				
330				
320				
310				
300	1184	1411		
290	1178	1408	1605	1
280	1132	1359	1590	1
270	1062	1241	1524	1
260	922	1076	1408	1
250	784	943	1230	1
240	655	707	977	1
230	536	545	764	
220	428	426	562	
210	351	350	426	
200	308	306	344	
190	280	279	299	
180	260	259	270	
170	245	239	250	
160	229	216	232	
150	206	182	213	
140	177	159	187	
130	157	149	161	
120	145	143	148	
110	81.2	97.4	62.9	6

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 13 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
W,KP	2	2	1	A1	1	2	82	S2	2	A2	2	H1
HMIN	225	228	231	218	210	202	205	110	109	106	108	
SCAT	35.1	34.2	35.2	22.9	27.1	23.1	39.9	26.2	41.7	41.9	49.1	
HR AXF	317	309	293	261	257	242	311	235	247	257	278	
SHMAX	136	100	106	74	66	22	48	134	242	439	615	
KM												
320	257						72.7					
310	254	204					72.7					
300	242	200	247				71.4					
290	218	187	247				67.0					
280	190	167	239				62.0					740
270	155	139	222	259			55.9					735
260	113	106	194	259	206		49.2					715
250	13.0	69.1	147	244	203	77.9	42.1		383	560		677
240	43.1	34.0	56.4	202	187	77.7	35.1	261	380	541		628
230	20.2	12.4		125	151	72.6	28.5	259	367	507		556
220				20.6	73.4	58.7	21.8	237	342	455		464
210					33.1	12.4	207	203	309	393		376
200							163	269	332			305
190							118	228	281			259
180							82.8	188	240			229
170							61.8	155	208			200
160							48.0	130	180			168
150							40.8	112	150			145
140							37.9	93.1	140			135
130							32.6	77.1	120			129
120							27.9	68.5	104			125
110							13.0	24.1	74.5	85.7		

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

11M	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
L_KP	B1	1	0	0	0	1	B1	1	1	A1	H	F0
HMIN	104	107	108	107	108	103	203	149	230	266		
SCAT	44.8	43.8	40.6	39.0	33.8	32.9	28.5	42.4	36.3	29.0		
HMAX	265	273	263	276	259	253	264	280	319	337		
SIIMAX	642	765	916	861	678	501	144	117	108	81		
KM												
340												189
330												186
320												197
310												171
300		670										193
290		669	1287									150
280				652	1285	1298						183
270	819	809	1256	1291								118
260	816	750	1184	1245	1131	898						165
250	745	673	1075	1157	1109	896						81.4
240	754	598	910	1018	1037	863						215
230	692	513	711	822	915	790						145
220	543	438	532	608	751	664						44.3
210	477	375	403	438	552	500						213
200	382	330	325	330	392	351						121
190	316	299	282	275	294	242						18.4
180	278	276	256	244	242	242						204
170	254	256	238	220	211	157						92.8
160	234	235	221	196	186	131						168
150	208	212	203	171	163	111						5K+7
140	186	185	182	150	141	94.2						31.8
130	172	166	160	136	123	83.1						107
120	165	157	146	128	112	77.0						63.1
110	68.9	61.5	63.4	47.8	69.4	41.8						41.8

ELECTRON DENSITY

BANKEY AEB: PUERTO RICO

80 W 14 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QFLP	F0	F0	1	F1	A1	A1	F1	S1	1	1	1	1
HMIN		263	230	219	210	198	217	110	108	108	109	109
SCAT	25.9	27.2	23.3	25.7	29.1	41.2	36.3	30.2	45.1	38.5	38.4	38.4
HRAXF	31.1	28.5	26.9	25.7	27.0	31.5	24.2	23.2	24.6	26.3	27.0	27.0
SHMAX		73	85	80	63	64	59	149	273	363	547	700
KM												
320		197					74.1					
310		191					93.7					
300		169					91.0					
290		141	238				85.2					
280		101	237				77.4					77.0
270		47.8	221	247		147	68.4			71.4	97.0	
260		190	237	203	143	58.3				71.3	93.7	
250		139	204	149	129	46.7	23.6		45.6	69.4	86.9	
240		66.0	152	160	110	35.5	23.6	47.1	45.6	65.1	75.9	
230			81.7	137	85.2	25.1	22.9	47.1	44.5	58.3	61.0	
220			12.4	59.3	57.2	12.4	21.4	45.2	42.0	49.8	47.1	
210				4	33.3	9	18.9	40.6	39.1	41.7	37.3	
200				12.4	9	15.8	33.9	35.8	34.1	31.2		
190						12.8	26.6	31.9	29.9	27.4		
180							9.6	20.9	27.6	26.4	25.4	
170							7.3	16.5	23.2	23.8	23.1	
160							5.7	13.5	19.4	21.5	20.4	
150							5.1	11.7	16.2	19.4	17.9	
140							4.5	10.7	13.9	17.1	15.6	
130							3.5	8.4	12.7	15.9	14.3	
120							2.9	7.1	10.2	13.0	12.1	
110							1.3	3.6	7.3	9.4	8.3	1.1

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Lat, KP	1	1	AZ	2	2	1	51	1	2	2	2	3
HMIN	108	107		107	108	109		208	189	202	257	258
SC41	34.8	38.6		35.2	38.9	36.0		25.9	34.0	44.4	43.3	35.1
HR AXF	274	278		266	267	266		268	266	291	360	348
SHMAX	765	847		781	717	562		285	210	119	107	102
KM												
360												171
350												169
340												162
330												151
320												136
310												117
300												130
290												197
280	1105	1184										93.4
270	1101	1171		1257	1105	985		782	450	185	32.0	32.6
260	1060	1118		1247	1035	982		764	447	172	15.3	12.4
250	968	1027		1183	1050	948		686	427			155
240	845	880		1081	966	877		568	387	135		
230	685	713		899	850	757		391	325	109		
220	530	563		691	674	572		178	249	77.9		
210	414	433		503	505	383		38.1	162	39.3		
200	339	349		363	362	264			67.3			
190	297	302		294	272	200				12.4		
180	270	273		256	227	164						
170	250	253		233	197	134						
160	227	232		211	167	107						
150	200	208		185	140	85.2						
140	175	182		155	121	76.6						
130	159	162		134	110	71.7						
120	151	151		123	106	67.6						
110	102	72.6		97.2	67.2	41.6						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W

15 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
G,KP	3	F3	2	2	+2	F2	S2	1	1	1	1	1
HMIN	249	267	244	206	211	219	211	110	109	108	108	106
SCAT	34.6	29.3	31.5	29.9	24.2	36.4	42.2	28.1	36.0	42.5	47.5	43.3
HMAXF	322	331	311	276	254	285	304	233	239	247	271	291
SHMAX	86	88	126	106	76	48	58	137	278	395	600	863
KM												
340		z18										
330	185	218										
320	185	211	295									
310	180	190	295				94.1					
300	166	157	285				93.9					1031
290	146	110	261				102	41.5				1031
280	117	60.0	224	266		102	86.5				651	1015
270	74.8	20.7	173	264		98.0	78.7				645	971
260	39.4		184.2	247	247	90.0	70.0				626	938
250	12.4	34.2	215	246	79.3	59.2				512	591	806
240		156	227	62.2	47.4	269	442	508	504	534	637	
230		87.7	185	39.8	35.5	268	435	491	488	589		
220			45.3	120	12.4	22.3	255	411	457	434	468	
210				18.8			224	370	413	384	403	
200							182	308	358	339	342	
190							134	243	309	301	303	
180							91.1	132	266	269	276	
170							62.7	153	228	243	253	
160							51.4	123	196	217	230	
150							45.6	104	168	184	205	
140							40.5	92.4	145	158	174	
130							35.3	78.3	127	144	153	
120							28.3	71.4	111	136	144	
110							13.0	25.1	57.2	80.5	72.1	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

50 W

15 MAR 1962

TIML	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KMP	1	1	1	1	1	3	A3	3	1	51	1	1
HMIN	105	107	109	108	107	108		184	219	198	202	234
SCAI	34.6	32.7	33.1	36.2	31.4	33.1		41.2	47.5	39.6	31.3	20.5
HMAX	282	282	267	274	265	265		283	317	296	292	302
SHMAX	890	966	824	829	742	683		356	291	706	151	115
KM												
320										471		
310										469		
300										476	371	294
290	1240	1464								616	432	369
280	1239	1483	1240							615	344	356
270	1206	1437	1298	1236	1275	1229		599	352	329	261	196
260	1119	1314	1263	1194	1267	1222		563	287	295	230	137
250	983	1154	1210	1102	1203	1166		515	211	247	192	72.1
240	831	944	1079	968	1074	1052		449	128	190	147	30.0
230	684	729	893	791	890	875		368	56.4	122	99.1	
220	550	567	690	611	673	649		282	12.4	68.2	57.0	
210	442	418	527	463	473	452		181		34.2	28.5	
200	367	342	404	357	341	310		78.4		12.4		
190	318	301	328	299	274	231						
180	284	275	287	265	236	188						
170	260	250	264	241	209	157						
160	238	224	241	216	185	130						
150	215	193	207	192	162	103						
140	185	169	177	170	140	88.2						
130	163	156	158	149	122	80.6						
120	151	150	150	136	112	76.8						
110	112	66.2	41.8	41.6	88.2	57.4						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 h

16 MAR 1962

TIME	0000	0100	J200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	1	F1	1	1	1	2	2	S2	1	1	1	1
HMIN	268	247	244	224	229	219	211	109	108	108	108	108
SCAT	29.1	36.9	27.3	39.2	29.4	28.1	43.0	26.6	34.2	38.4	35.7	43.3
HMAXF	329	331	310	320	290	276	294	224	229	249	253	290
SHMAX	87	117	88	111	88	73	88	168	262	414	462	726
KM												
340		226										
330	226	226										
320	220	221		197								
310	201	210	224	193								
300	171	190	216	184	223		163					
290	121	163	193	168	223		162					442
280	59.7	122	158	147	216	196	158					32
270	16.8	74.4	112	118	196	193	150					79
260		42.9	63.3	88.2	164	179	137					651
250		16.2	28.0	60.2	119	152	117					742
240			37.8	55.5	108	86.7						576
230				21.0	12.4	56.1	51.4	369	428	521	585	482
220					12.4	27.5	367	420	474	513	580	403
210						344	353	409	424	424	347	
200						294	350	349	347	347	310	
190						220	294	299	290	290	284	
180						145	236	260	255	262		
170						89.8	148	229	229	230	230	
160						66.2	149	201	201	201	201	
150						54.1	124	174	169	182		
140						46.1	101	152	147	164		
130						40.4	84.7	124	136	152		
120						37.7	78.5	109	131	145		
110						21.6	43.3	49.1	66.6	75.1		

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 *n*

16 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q, KPH	1	1	1	1	A1	1	1	C1	1	S1	1	2
HMIN	108	108	105	108	105	108	109		203	204	203	227
SCAT	41.6	46.1	34.6	38.7	46.7	33.1	37.7		28.4	49.1	48.3	37.6
HMAAF	282	288	282	280	274	261	260		281	292	321	331
SHMAX	732	923	900	954	762	585	457		255	278	185	143
KM												
340												243
330												265
320												265
310												262
300												265
290	985	1121	1298	1411					514	450	239	179
280	985	1111	1298	1411	976				513	443	218	144
270	966	1076	1262	1387	974	1031			571	426	193	110
260	918	1010	1170	1316	955	1031	775		511	397	165	74.6
250	840	926	1031	1199	912	1004	762		430	364	134	50.9
240	747	817	861	1020	847	926	721		329	321	101	32.4
230	638	687	683	821	764	811	653		202	261	69.2	15.3
220	529	552	527	615	660	643	554		97.2	174	43.2	
210	429	440	407	446	541	450	429		36.1	62.9	23.0	
200	357	364	339	349	421	313	298					
190	312	312	301	296	324	233	200					
180	283	285	274	263	264	189	138					
170	257	265	254	237	225	158	104					
160	231	238	232	211	197	130	83.3					
150	202	203	210	183	171	103	69.6					
140	177	176	185	155	146	70.4	59.6					
130	161	160	162	140	129	85.3	55.0					
120	152	152	148	133	118	82.7	43.2					
110	133.8	109.4	130	80.3	102	41.2	21.2					

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 17 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	2	42	1	F1	1	1	1	1	2	2	2	1
HMIN	233	249	240	229	219	220	244	107	108	106	108	108
SCAT	31.5	33.5	31.7	27.8	33.4	33.3	35.0	21.2	34.2	41.1	35.8	35.4
HRAF	318	331	311	301	264	243	312	214	225	249	264	263
SHMAX	99	108	113	102	101	80	76	174	205	433	562	651
KM												
340		226										
330		226										
320		243	220	254				168				
310		239	204	257	238			168				
300		224	178	252	238			171	163			
290		197	143	231	220	236		171	151			
280		150	106	179	204	235	165	131				
270		81.6	60.1	153	173	225	151	101		730	170	
260		34.8	32.0	47.9	134	205	129	64.1		727	47.9	
250		44.7	42.7	82.2	174	103	30.0		583	700	945	
240		3.1	41.8	118	72.2				576	642	673	
230		12.4	54.9	40.2					450	593	570	76.9
220			12.4	3.1					491	448	514	492
210									635			
200									471	423	449	420
190									473			
180									396	30.9	375	361
170									382			
160									250	332	315	318
150									309			
140									118	263	269	261
130									271			
120									76.5	202	236	253
110									240			
									58.4	155	207	225
									201			
									50.3	122	177	198
									181			
									46.4	100	148	165
									165			
									41.7	87.9	122	135
									155			
									35.7	82.1	111	125
									14.9			
									19.9	37.6	82.1	59.0
									73.4			

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 17 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KP	41	1	0	0	0	A0	A0	0	50	50	0	1
HMIN	109	107	104	108	107				209	209	199	247
SLAT	40.8	49.2	40.9	41.1	38.7				34.9	36.9	32.4	40.5
HRAF	269	288	277	281	269				291	281	269	347
SHMAX	774	880	803	884	758				463	350	154	113
KM												
360												215
350												206
340												211
330												197
320												182
310												164
300												153
290												141
280												121
270												
260												
250												
240												
230												
220												
210												
200												
190												
180												
170												
160												
150												
140												
130												
120												
110												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 18 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	1	1	2	2	2	2	2	2	3	3	83	R2
HMIN	241	249	241	227	235	235	258	109	103	108	109	104
SLAT	33.2	34.0	35.5	31.2	32.0	38.5	36.4	31.7	33.3	43.5	47.4	31.4
HRAF	321	319	312	296	301	319	349	243	246	262	289	274
SHMAX	78	91	97	86	79	90	79	198	310	551	840	855
KM												
350												149
340												147
330												139
320												
310												
300												
290												
280												
270												
260												
250												
240												
230												
220												
210												
200												
190												
180												
170												
160												
150												
140												
130												
120												
110												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 18 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KP	2	2	2	2	2	52	A2	2	3	3	3	2
HMIN	109	110	107	109	109	109	110	219	211	189	208	259
SLAT	36.1	41.2	32.3	39.4	40.4	40.4	37.6	32.0	33.8	36.0	38.0	
HRAF	281	280	265	284	279	279	291	291	283	263	333	302
SHMAX	974	1063	764	866	867	754	644	512	459	221	175	110
KM												
370												184
360												189
350												185
340												224
330												223
320												221
310												214
300												204
290	1424	1477			1147			1080	1234	1075		191
280	1423	1477			1146	1240	1075	1057	1200	1072		174
270	1390	1455	1136	1113	1226	1061	975	1105	1033	469	153	254
260	1303	1387	1130	1039	1174	1015	896	940	950	466	131	34
250	1161	1278	1064	946	1086	934	776	696	791	452	107	
240	979	1127	972	814	957	577	588	344	564	413	41.5	
230	772	927	830	676	766	665	416	110	279	22.1	66.1	205
220	593	731	683	547	602	535	279	22.1	166.1			
210	452	554	549	442	456	412	186					
200	373	425	437	369	354	321	130					111
190	325	354	364	318	289	258	96.0					24.5
180	295	311	319	281	251	215	72.9					
170	272	265	287	251	222	184	59.9					

ELECTRON DENSITY

RAMÉY AF8, PUERTO RICO

60 W 19 MAR 1962

MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	2	2	2	2	2	2	2	2	44	4	C4	3
HMIN	258	254	249	235	239	208	258	109	109	109		109
SCAT	42.2	31.0	38.0	31.5	39.8	63.2	47.1	39.1	38.7	56.7		36.5
HR,AFX	358	328	323	296	309	303	344	248	254	284		265
SHMAX	110	81	95	80	82	104	70	232	332	691		1001

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 19 MAR 1961

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
G,KP	3	3	3	3	3	2	52	2	1	1	1	2
HMIN	109	107	107	109	109	109	108	221	112	130	254	298
SCAT	40.0	41.7	41.2	42.4	47.9	39.4	43.3	27.4	21.0	36.4	48.3	43.0
HMAX	295	308	296	291	296	297	313	287	244	263	381	391
SHMAX	1101	1244	1236	1164	1076	917	1037	692	313	154	93	94
KM												
400												160
390												124
380												124
370												122
360												118
350												110
340												102
330												91.6
320												80.5
310		1347						1491				55.4
300	1424	1339	1561	1547	1347	1298	1459					69.2
290	1418	1305	1553	1546	1343	1289	1389	1776				54.0
280	1373	1243	1502	1520	1311	1240	1278	1749				42.2
270	1277	1152	1403	1451	1251	1147	1137	1612				32.3
260	1152	1050	1266	1340	1157	1021	956	1382				23.4
250	1002	939	1106	1184	1047	966	754	1044	1131			14.2
240	822	818	+35	945	846	690	561	592	1122			2.7
230	660	672	764	803	711	538	401	173	1009			1.4
220	535	579	622	636	555	468	286					0.75
210	439	490	505	506	434	321	210					0.30
200	375	420	420	408	351	265	162					0.20
190	335	367	363	343	295	225	128					0.11
180	307	328	324	298	258	194	105					
170	284	297	299	264	231	168	86.0					
160	257	269	272	236	203	143	73.5					
150	219	241	240	210	177	119	64.7					
140	178	210	203	179	154	103	59.3					
130	160	183	181	153	138	95.2	56.3					
120	152	172	166	142	127	91.0	54.5					
110	133.5	134.4	88.1	33.2	41.8	27.3	27.3					

ELECTRON DENSITY

RAMEY AF8, PUERTO RICO

60 W 20 MAR 1962

MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	2	2	2	2	2	2	2	2	3	3	3	4
HMIN	277	289	287	269	221	202	197	111	110	108	106	107
SCAT	38.5	40.6	34.1	43.8	25.6	29.2	58.5	34.3	43.5	49.3	43.2	50.4
HMAFX	358	369	363	353	279	249	314	245	255	286	286	293
SUMX	92	92	92	106	95	60	69	226	239	670	801	1146

HMAX	87	87	83	104	85	50	69	226	388	679	891	1144
KM												
370		162	173									
360	166	160	172	186								
350	164	153	167	186								
340	155	142	152	182								
330	144	125	134	173								
320	124	102	106	160				85.8				
310	99.7	73.9	76.5	139				85.7				
300	73.8	43.9	45.8	111				84.5				1347
290	43.3	12.4	19.3	79.0				82.1		747	1121	1346
280	16.2		42.2	246				78.2		744	1115	1326
270			12.4	239				73.4		728	1083	1280
260				214				67.5		539	695	1017
250					169	149	60.8	407	537	647	929	1107
240					98.7	145	52.8	405	523	588	815	983
230					39.8	134	43.9	387	495	518	674	839
220						105	34.9	352	453	450	544	668
210						45.6	25.6	293	392	391	442	528
200							12.4	213	323	342	371	427
190								146	261	301	323	358
180								104	210	266	290	315
170								84.8	170	233	260	285
160								72.1	139	204	232	259
150								60.6	113	177	206	231
140								51.9	93.5	147	176	207
130								47.7	86.5	120	146	176
120								35.8	75.8	111	133	154
110									12.4	79.9	68.1	102

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 20 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
G,KP	4	4	3	3	A3	3	3	3	3	3	3	2
HMIN	108	108	107	108	109	109	110	111	201	209	277	279
SCAT	42.4	45.3	48.3	43.8	46.6	3.3b	39.2	31.6	41.6	50.6	43.4	41.1
HMFX	291	293	289	288	303	266	285	281	246	327	381	378
SIMAX	110.2	123.9	123.1	105.4	104.6	87.3	76.5	49.8	20.2	32.1	10.8	10.1

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 21 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
U,KP	52	52	3	43	43	3	3	3	3	3	3	3
HMIN	250	229	229	247	208	247	261	108	109	108	104	106
SCAT	39.4	30.5	34.4	40.3	40.3	35.4	45.4	45.2	33.6	33.8	42.8	51.8
HMAXF	340	248	300	318	283	343	347	248	245	276	289	303
SHMAX	189	157	152	129	100	105	102	223	413	681	1011	1293
KM												
350												
340	353											
330	347											
320	331											
310	302	326	245									
300	262	374	326	235								
290	211	363	319	217	195	112	48.3					
280	146	344	297	193	194	87.2	67.4					
270	82.0	298	263	160	170	60.6	35.6					
260	40.2	234	216	117	179	36.6						
250	3.1	155	134	61.0	162	16.0						
240	66.8	77.0	137									
230	12.4	12.4	101									
220		60.0										
210		17.2										
200												
190												
180												
170												
160												
150												
140												
130												
120												
110												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 21 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
U,KP	3	3	A3	3	3	54	4	54	51	1	S1	S1
HMIN	105	107		108	107	108	109	109	214	200	248	259
SCAT	47.2	44.6		38.6	41.3	40.2	37.2	38.9	41.5	40.7	45.2	43.3
HMAXF	309	275		289	289	285	288	309	301	348	383	358
SHMAX	1431	1369		1211	116	901	690	453	358	311	340	311
KM												
370												
360												
350												
340												
330												
320												
310	1704											
300	1687	1643										
290	1632	1638										
280	1535	1743										
270	1407	1700										
260	1230	1566										
250	1034	1356										
240	845	1115										
230	681	868										
220	550	639										
210	454	484										
200	391	341										
190	348	337										
180	318	302										
170	291	279										
160	263	216										
150	236	237										
140	202	146										
130	176	174										
120	167	165										
110	128	65.2										

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 22 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
U,KP	1	1	1	1	1	0	0	50	0	50	A0	0
HMIN	234	233	235	221	211	219	262	118	102	109	103	107
SCAT	30.0	39.9	31.1	32.3	31.9	68.5	50.0	37.5	28.8	40.0	35.3	37.3
HMAXF	304	319	301	298	294	353	360	273	262	272	268	280
SHMAX	235	248	167	149	124	170	122	302	375	645	849	953
KM												
360												
350												
340												
330												
320												
310	594	485	407	326	232	159	115					
300	590	664	407	326	232	159	115					
290	559	428	324	321	231	148	d7.8					
280	475	369	360	300	225	134	54.7	489	838	1293		
270	390	281	307	264	210	118	33.8	489	838	1275	1724	
260	230	177	224	217	189	99.1		475	819	1259	1202	
250	11.7	74.4	113	153	159	79.0		444	681	773	1193	1094
240	32.9	21.7	31.8	81.2	122	56.5		396	631	702	1075	939
230								326	653	614	918	770
220								247	584	519	727	615
210								179	482	436	550	493
200								130	365	360	427	406
190								76.3	271	312	355	351
180								74.8	204	267	306	315
170								62.7	141	233	271	28
160								56.4	131	201	243	262
150								46.3	96.7	143	191	207
140								46.6	96.7	143	191	207
130								39.5	35.1	122	162	174
120								23.2	80.0	114	141	153
110								68.1	54.4	106	134.5	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 22 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KP	0	0	1	1	1	1	3	A3	3	3	1	1
HMIN	108	107	108	106	109	106	109	106	227	218	238	269
SCAT	51.0	47.6	44.0	43.8	41.6	45.5	45.5	35.6	33.3	46.1	43.3	24.0
HMAXF	287	244	301	296	277	274	274	312	308	352	381	336
SHMAX	1071	1138	1216	1056	880	702	702	369	278	378	352	242
KM												
390												
380												
370												
360												
350												
340												
330												
320												
310												
300	1341	1477	1360									
290	1275	1338	1458	1360								
280	1270	1311	1409	1340	1240	967						
270	1241	1254	1324	1285	1231	1165						
260	1189	1163	1216	1195	1187	944						
250	1111	1050	1065	1066	1103	900						
240	1010	897	885	909	995	833						
230	874	744	702	746	846	736						
220	703	e14	543	591	660	615						
210	247	302	265	258	229	178						
200	246	422	364	381	380	356						
190	240	248	252	207	200	180	128					
180	210	224	176	164	155	112						
170	176	185	162	149	137	100						
160	160	162	154	143	125	94.9						
150	112	118	40.4	101	39.4	52.6						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 23 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	0	0	1	1	1	3	3	3	2	2	2	1
HMIN	231	209	220	209	208	267	286	110	109	109	109	108
SCAT	29.8	25.5	34.1	34.9	47.2	41.4	49.3	37.3	40.9	50.8	34.9	45.4
HMAXF	303	271	286	277	312	354	378	266	259	287	287	301
SHMAX	279	169	159	86	74	76	269	477	402	982	1307	
KM												
380								122				
370								121				
360								128	118			
350								128	112			
340								124	104			
330								117	91.0			
320								129	106	75.2		
310	681							129	91.9	57.4		1696
300	680							126	75.0	36.7		1696
290	651			371				121	56.0	18.4		1398
280	583	482	368	195	113	36.0					932	1384
270	481	482	351	193	103	16.2					909	1315
260	342	461	317	184	90.3				387	710	869	1189
250	157	403	259	166	75.9				371	702	808	1032
240	54.9	308	183	137	59.8				341	673	733	849
230		167	60.2	95.8	42.5				300	624	642	671
220		64.7	1.7	45.5	26.9				255	543	547	531
210		12.4		12.4	7.9				210	433	451	415
200									166	329	372	366
190									130	256	309	320
180									103	203	261	287
170									83.5	165	220	255
160									70.6	136	184	222
150									62.6	118	152	196
140									57.6	103	134	174
130									46.5	96.9	124	145
120									38.8	88.0	119	134
110									1.7	33.0	41.8	41.8

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 23 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,RP	A1	81	0	0	0	0	0	0	3	3	3	1
HMIN		111	108	109	110	111	109	224	211	220	251	287
SCAT		39.3	43.8	36.3	39.0	45.1	37.8	39.1	37.9	34.6	48.6	41.3
H'XAF		279	297	285	276	294	283	306	317	302	387	
SHMAX		1093	1195	979	857	885	638	476	392	279	307	296
KM												
370												494
380												490
370												463
360												463
350												456
340												395
330												439
320												345
310												410
300		1464				1163		927		651	490	325
290			1455	1372		1161	1031	893	621	432	208	24.6
280		1561	1410	1365	1173	1136	1029	828	571	382	140	
270		1540	1321	1311	1167	1083	999	730	507	322	78.0	
260		1468	1207	1202	1126	1000	929	596	424	257	37.2	
250		1345	1063	1064	1043	889	832	424	317	186		
240		1179	892	891	735	757	708	219	206	106		
230		961	735	720	810	612	563	59.7	106	44.4		
220		743	598	570	677	485	411		42.7	3.1		
210		571	493	451	548	377	281					
200		444	418	371	437	299	189					
190		362	362	321	352	247	132					
180		318	324	287	291	208	99.3					
170		289	293	258	248	176	78.9					
160		266	263	230	214	149	65.2					
150		240	234	202	183	126	57.8					
140		209	206	172	155	109	52.9					
130		176	181	151	136	99.1	49.6					
120		157	161	144	127	93.5	47.8					
110			81.8	38.1	12.4		21.8					

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 26 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	1	1	A1	A1	1	1	1	1	2	2	2	2
HMIN	268	247	209	183	219	267	267	110	108	108	102	108
SCAT	37.3	32.3	28.4	50.0	68.8	57.1	41.3	39.0	27.1	45.1	44.8	37.9
HMAXF	363	317	266	247	353	376	359	258	247	267	289	282
SHMAX	245	193	176	88	76	69	57	276	421	495	1002	1054
KM												
380								92.3				
370	450							92.1				
360	450							81.9	90.6	95.8		
350	437							81.9	87.7	94.7		
340	408							81.2	83.0	90.7		
330	364							79.7	77.6	83.7		
320	309	448						77.3	70.3	74.4		
310	246	443						73.5	60.9	61.9		
300	176	418						69.6	50.4	49.1		
290	103	371						64.9	39.3	37.3		
280	47.2	301						59.4	26.9	25.8		
270	16.5	202	517					52.6	12.4	12.4		
260		98.0	511					45.2			928	1176
250		25.5	474	178	37.1			422			922	1101
240			399	177	28.9			417	74.7	89.5	1002	1229
230			226	172	20.6			399	73.5	84.4	866	1036
220			81.5	165	3.3			366	67.3	77.0	729	835
210			12.4	154				319	57.1	66.4	598	647
200				127				255	45.2	53.1	486	504
190					50.5			198	35.2	42.1	406	409
180								154	27.7	33.9	349	352
170								120	22.2	28.3	31.1	315
160								94.6	18.1	23.9	27.9	28.6
150								77.1	14.9	20.2	24.7	26.2
140								66.0	15.5	17.2	21.5	23.4
130								59.8	10.8	15.1	18.4	20.2
120								46.5	9.6	9.1	13.5	16.2
110								40.5	9.0	8.2	12.6	15.2
								4.4	9.1	9.0	1.1	81.2

ELECTRON DENSITY

BANEY AFB - PUERTO RICO

60 W 26 MAR 1863

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 25 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
U, KP	3	3	3	3	A3	2	2	2	3	3	3	1
HMIN	214	270	249	204	198	247	292	104	102	102	107	103
SCAL	42.5	30.6	30.3	28.6	48.7	40.4	47.8	40.5	40.4	41.4	44.7	40.7
HMAXF	313	342	314	263	294	335	304	268	264	269	282	281
SHMAX	208	157	164	125	80	68	71	290	529	757	1053	1163
KM												
400	337											
310	337											
300	329											
310	313											
300	287											
350	250	354										
340	208	354										
330	167	340										
320	124	307	340									
310	77.8	257	388									
300	44.8	199	368									
290	22.8	136	327									
280	62.9	267										
270	4	196	340	117	51.7							
260	99.4	339	109	33.9								
250	22.0	322	99.2	19.8								
240												
230												
220												
210												
200												
190												
180												
170												
160												
150												
140												
130												
120												
110												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 25 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
U, KP	1	A1	1	1	1	A1	A1	1	A3	A3	A3	2
HMIN	101		108	108	110			209	218	229		278
SCAL	42.7		50.0	42.6	42.3			43.6	37.7	48.9		34.2
HMAXF	279		312	295	290			302	314	340		372
SHMAX	1124		1281	1156	1057			421	319	363		235
KM												
300	300											450
370	370											450
360	360											437
350	350											403
340	340											396
330	330											301
320	320		1411									240
310	310		1410									161
300	300		1389	1491	1491							92.2
290	290		1340	1486	1491							45.1
280	280		1265	1447	1469							16.5
270	270		1156	1359	1405							
260	260		1021	1243	1297							
250	250		872	1098	1152							
240	240		1182	718	919	958						
230	230		1004	594	745	724						
220	220		808	500	597	540						
210	210		631	434	473	415						
200	200		486	385	386	333						
190	190		394	343	325	280						
180	180		342	320	285	243						
170	170		309	295	255	211						
160	160		284	271	231	183						
150	150		252	243	210	159						
140	140		220	208	185	141						
130	130		192	178	158	129						
120	120		168	154	144	119						
110	110		157	105	95.1	12.4						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 26 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
U, KP	2	2	0	0	0	1	1	1	0	0	0	0
HMIN	278	264	227	207	202	217	266	119	107	108	112	101
SCAL	36.3	36.1	30.4	28.2	37.3	43.9	44.1	36.7	42.6	53.1	50.4	36.3
HMAXF	373	352	302	268	273	302	353	262	256	283	311	296
SHMAX	261	229	207	140	93	64	64	238	411	665	1085	1205
KM												
300	491											
370	470											
360	475	448										
350	440	448										
340	391	436										
330	324	406										
320	253	362										
310	179	300	474		111	81.7		1173				
300	42.7	228	493		110	68.1		1158	1635			
290	46.5	141	476		108	51.7		747	1120	1624		
280	16.5	70.7	431		196	103	34.6		747	1057	1560	
270	27.5	355	371	175	95.5	17.8	387		736	976	1442	
260	253	364	189	84.4					713	814	1267	
250	149	334	176	70.1					575	758	1055	
240	62.4	286	156	51.6					526	644	853	
230	21.6	205	123	33.4					513	595	843	
220	95.1	83.1	15.8						472	463	511	
210	25.1	38.8							472	463	511	
200									472	463	405	
190									395	398	419	
180									395	398	419	
170									307	299	321	
160									280	275	241	
150									172	167	157	
140									155	141	133	
130									140	134	124	
120									110			
110												

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 26 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
U, KP	0	0	0	0	A0	A0	A0	0	1	1	1	1
HMIN	111	112	111	111	110			202	228	220	259	281
SCAL	44.5	45.1	45.4	38.4	39.4							
HMAXF	300	299	311	291	286			303	346	344	359	368
SHMAX	13.6	1327	1349	1174	1079			533	489	441	328	327
KM												
370	370											616
360	360											603
350	350											582
340	340											535
330	330											511
320	320		1635									470
310	310		1634									433
300	1851	1688	1611	1760								424
290	1830	1672	1548	1759	1533							404
280	1761	1614	1444	1721	1522							382
270	1646	1515	1304	1624	1466							354
260	1483	1374	1140	1463	1354							327
250	1253	1206	950	1222	1218							304
240	986	1020	771	957	1043							282
230	755	813	615	723	832							262
220	578	632	491	537	637							242
210	461	489	405	408	486							222
200												

ELECTRON DENSITY

RAMSEY AFB, PUERTO RICO

60 W 27 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	1	1	1	51	1	1	1	1	1	1	1	1
HMIN	260	234	228	199	210	238	268	116	109	110	113	109
SCAT	44.8	35.7	36.3	26.9	35.9	41.8	31.5	43.1	42.9	47.4	46.6	40.1
HMAXF	353	305	300	251	278	327	339	258	256	281	294	300
SHMAX	322	250	253	121	93	84	59	260	441	689	951	1046
KM												
360	556											
350	556											
340	545											
330	519							146	127			
320	481							145	117			
310	423	567						139	102			
300	349	564	564				130	82.0				
290	253	543	554				116	59.4				
280	143	499	523				205	98.2	36.5			
270	50.9	427	463				203	77.5	12.4			
260	1.7	310	375	363	192	56.0		401	613	779	985	999
250	138	240	362	174	34.4		398	610	731	884	864	
240	37.8	89.0	346	144	12.4		385	571	666	771	726	
230	20.6	304	104				361	575	580	646	596	
220		219	55.2				323	503	491	531	485	
210		93.5	1.7				264	433	412	433	406	
200		12.4					198	375	349	364	353	
190							144	283	303	318	314	
180							105	226	263	284	287	
170							78.3	183	227	256	261	
160							65.3	150	197	229	233	
150							56.5	129	170	204	205	
140							48.7	109	145	179	173	
130							45.2	92.0	125	156	156	
120							27.8	83.0	119	144	149	
110							25.1	19.7			39.4	

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

27 MAR 1962

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 28 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	0	0	0	0	0	0	0	0	2	2	2	2
HMLN	267	247	231	209	202	199	227	118	110	109	112	109
SCAT	41.5	31.1	34.3	26.9	46.9	56.0	43.6	28.4	45.0	50.6	64.7	50.1
HMAXF	356	316	297	264	282	304	326	241	265	279	316	326
SHMAX	270	172	193	116	94	80	63	189	399	597	988	1234
KM												
360	485											
350	482											
340	466											
330	434							98.0				1298
320	392	411						97.5				941
310	337	407						111	94.5			938
300	263	385	463					111	88.9			926
290	172	341	458		170	109	80.9					902
280	68.7	276	435		170	106	71.5					866
270	23.7	188	392	342	167	101	61.0					1034
260		78.5	315	340	161	93.7	49.3					805
250		25.1	183	319	151	84.6	37.5	366				685
240			53.0	273	135	72.6	26.1	366				578
230				189	109	58.1	12.4	352				485
220					70.7	72.0	41.1	315				411
210						12.4	34.1	25.6				358
200							3.1	193				321
190								135				294
180									99.4			271
170									77.9			240
160									65.4			218
150									58.8			189
140									51.3			171
130									44.2			161
120									19.3			150
110									12.4	41.8		34.4

ELECTRON DENSITY

RAMSEY AFB, PUERTO RICO

28 MAR 1964

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 29 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	3	53	3	3	3	1	1	A1	2	2	B2	B0
HMIN	269	251	214	202	220	238	248	109	109	108	110	
SCAT	53.8	29.8	37.9	31.5	36.8	34.0	50.3	37.3	47.6	59.1	45.3	
HMAXF	388	318	291	262	299	333	356	253	269	307	312	
SHMAX	409	254	355	186	124	116	154	445	633	910	1163	KM
310	594											
320	591											
330	578											
340	555											
350	521											
360	474											
370	403											
380	321											
390	236											
400	140											
410	77.4											
420	37.4											
430	4.7											
440	71.4											
450	615											
460	508											
470	340											
480	153											
490	40.1											
500	230											
510	91.1											
520	452											
530	345											
540	270											
550	217											
560	178											
570	147											
580	122											
590	99.5											
600	89.2											
610	83.1											
620	26.0											
630	27.3											
640	61.1											
650	12.4											

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 29 MAR 1962

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KP	0	0	1	1	1	0	50	0	S1	S1	A1	1
HMIN	106	108	108	107	109	111	110	200	217	212	211	239
SCAT	42.2	37.0	39.4	46.1	33.6	34.4	36.5	45.0	32.8	44.5	44.1	35.0
HMAXF	304	234	286	304	276	278	264	297	307	309	309	330
SHMAX	1331	1292	1168	1240	916	882	593	434	337	332	220	159
KM												
310	330											311
320	320											305
330	1704											
340	1701	1877										
350	1659	1670	1712									
360	1570	1605	1703	1446								
370	1433	1670	1644	1342	1550	1538	1184	648	492	452	299	110
380	1294	1465	1525	1202	1475	1450	1181	594	350	386	255	62.0
390	1038	1205	1364	1024	1330	1296	1142	522	226	306	195	35.4
400	842	957	1128	836	1119	1077	1055	428	127	215	135	5.4
410	670	729	883	658	852	798	917	315	63.4	115	76.4	
420	534	547	659	514	600	542	640	200	21.6	43.6	36.5	
430	441	432	481	414	405	355	351	88.9				
440	379	365	372	350	314	258	203	12.4				
450	335	326	312	309	266	207	135					
460	304	301	277	281	233	171	102					
470	278	280	250	254	198	136	80.4					
480	255	258	227	223	162	107	65.4					
490	231	227	198	191	137	76.7	55.8					
500	206	193	176	168	128	91.3	49.2					
510	178	172	163	152	123	88.2	44.7					
520	160	160	156	143	119	85.9	42.3					
530	96.7	59.4	56.5	62.2	36.1	12.4						

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60 W 30 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
Q,KP	1	51	0	0	0	0	0	0	0	40	A0	
HMIN	243	250	211	200	199	240	111	110	107			
SCAT	30.6	32.6	36.4	39.4	37.9	54.5	38.1	32.7	36.6	42.7		
HMAXF	320	330	286	260	256	284	321	231	246	264		
SHMAX	141	147	149	96	60	54	56	175	334	567		KM
310	310											
320	311	303										
330	303	280										
340	278	267										
350	239	202	326									
360	192	147	324									
370	137	87.7	311	214								
380	109	183	131	63.2								
390	39.1	152	105	52.5								
400	93.7	57.7	35.6	29.4								
410	12.4	12.4	12.4	254	356	380						
420	200	210	140	69.9	2.4	326	576	655				
430	142	237	286									
440	787	774	929									
450	607	510	607	738								
460	468	420	476	561								
470	378	363	383	434								
480	327	326	327	342								
490	296	301	290	291								
500	271	273	259	258								
510	245	250	228	230								
520	212	231	200	202								
530	187	202	183	175								
540	130	176	179	167	155							
550	120	162	163	158	146							
560	63.5	35.7	71.7	66.3	7							

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
Q,KP	80	0	1	1	1	A1	A1	A1	A1	A2	A2	A1
HMIN	107	103	107	107	109							
SCAT	43.0	36.0	46.0	47.9								
HMAXF	286	295	296	287								
SHMAX	1029	1128	1166	1143								
KM												
330	330											430
340	320											429
350	303											414
360	280											378
370	1533	1491										
380	1360	1526	1485	1477								
390	1314	1367	1375	1432								
400	975	807	949	1115								
410	787	638	774	929								
420	607	510	607	738								
430	468	420	476	561								
440	378	363	383	434								
450	327	326	327	342								
460	296	301	290	291								
470	271	273	259	258								
480	245	250	228	230								
490	212	231	200	202								
500	187	202	183	175								
510	130	176	179	167	155							
520	120	162	163	158	146							
530	63.5	35.7	71.7	66.3	7							

ELECTRON DENSITY

RAMEY AFB, PUERTO RICO

60

31 MAR 1962

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
w, KP	1	1	2	2	2	40	0	0	0	0	0	41
HMIN	235	221	217	210	207	223	239	112	106	108	105	107
SCAI	35.2	33.6	27.1	27.9	30.2	40.7	40.3	35.3	38.3	41.7	53.3	48.7
HMAXF	321	296	281	269	266	308	317	236	234	259	287	283
SHMAX	216	184	143	134	104	106	100	213	375	562	895	970
KM												
330	430											
320	430											
310	419											
300	388	411										
290	345	407	374									
280	284	386	374									
270	217	347	358	358	271	154	121					
260	133	281	316	349	269	177	65.9					
250	66.8	204	256	317	253	92.2	48.1					
240	26.9	108	174	264	222	54.5	12.4	414	514	710	793	144
230	42.7	76.6	187	166	25.8			411	512	659	763	822
220		25.1	87.8	87.5				390	573	586	600	683
210			12.4	25.5				358	534	474	502	552
200								300	474	412	421	440
190								199	398	344	360	366
180								114	308	289	315	316
170								73.6	234	246	283	284
160								61.2	182	214	253	259
150								48.6	145	188	225	233
140								43.2	116	164	197	206
130								40.7	93.2	135	171	172
120								39.3	84.3	115	144	148
110								68.1	49.1	120	141	148

ELECTRICAL DENSITY

RAMEY AFB, PUERTO RICO

26

31 MAR 1962

Time (min)	Avg. Electron Density (cm^{-3})
0	~10 ^{13.5}
10	~10 ^{14.0}
100	~10 ^{13.0}

TABLE

1-0 MC IN 12.5 SECONDS.

TABLE 6

		BOULDER, COLORADO (40°N, 105°W)						
HOUR		00	01	02	03	04	05	06
16 FZ	MED	5.5	5.2	4.8	4.5	4.2	4.5	5.0
	CNT	2.4	2.4	2.6	2.4	2.3	2.7	2.0
	LO	5.2	4.9	4.5	4.2	4.0	4.5	4.6
17 FZ	MED	5.5	5.2	4.8	4.5	4.2	4.5	5.0
	CNT	2.4	2.4	2.6	2.4	2.3	2.7	2.0
	LO	5.2	4.9	4.5	4.2	4.0	4.5	4.6
18 F	MED	5.5	5.2	4.8	4.5	4.2	4.5	5.0
	CNT	2.4	2.4	2.6	2.4	2.3	2.7	2.0
	LO	5.2	4.9	4.5	4.2	4.0	4.5	4.6
19 FZ	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
20 F	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
21 FZ	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
22 F	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
23 FZ	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
24 F	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
25 FZ	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
26 F	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
27 FZ	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
28 F	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
29 FZ	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
30 F	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40
31 FZ	MED	2.65	2.6	2.60	2.74	2.70	2.85	2.70
	CNT	2.3	2.3	2.4	2.2	2.2	2.6	2.0
	LO	2.60	2.50	2.50	2.7	2.2	2.60	2.40

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TABLE I

EEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

TABLE E

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TIME 45.0W
GODHavn - GREENLAND (69°3'N* 53°5'W)

TABLE II

SYKJAVÍK, ICELAND (64°11'N, 21°04'W)

TABLE 10

FAIRBANKS, ALASKA (64° 9' N., 147° 8' W.)

HOUR	00	01	02	03	04	05	06
16 F2	MED U CNT UD LO	4.3 U 4.5 U 3.6 4.5 3.6	4.0 U 4.2 U 5.4 5.0 4.0	4.6 U 4.2 U 5.4 5.0 4.0	5.15 U 5.4 U 5.6 5.4 4.1	5.15 U 5.4 U 5.6 5.4 4.1	5.15 U 5.4 U 5.6 5.4 4.1
	MED CNT UD LO						
	MED CNT UD LO						
17 F2	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
18 F	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
(M3000)F2	MED U CNT UD LO	270 11 14 00 280 255	265 270 15 275 275	270 260 13 275 250	260 260 12 270 250	246 246 10 270 250	246 246 10 270 250
	MED CNT UD LO						
	MED CNT UD LO						
19 F1	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
20 E	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
21 E	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
22 E	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						

TABLE I

ANCHORAGE, ALASKA (61°2N, 140°9W)

	HOUR	00	01	02	03	04	05	06
f6 F2	MED	U	U	U	U	4.4	4.6	4.4
	CNT	U	U	U	U	2.6	2.6	2.6
	LO	3.3	3.6	3.5	3.8	4.2	4.5	4.6
h' F2	MED	U	U	U	U	5.1	5.1	5.1
	CNT	U	U	U	U	5.5	5.5	5.5
	LO	3.0	3.3	3.5	3.8	4.2	4.5	4.6
h' F	MED	U	U	U	U	5.1	5.1	5.1
	CNT	U	U	U	U	5.5	5.5	5.5
	LO	3.0	3.3	3.5	3.8	4.2	4.5	4.6
(M3000)F2	MED	U	U	U	U	2.6	2.6	2.6
	CNT	U	U	U	U	2.5	2.5	2.5
	LO	2.7	2.7	2.7	2.7	2.6	2.6	2.6
f5 F1	MED	U	U	U	U	2.6	2.6	2.6
	CNT	U	U	U	U	2.5	2.5	2.5
	LO	2.7	2.7	2.7	2.7	2.6	2.6	2.6
f9 E	MED	U	U	U	U	2.6	2.6	2.6
	CNT	U	U	U	U	2.5	2.5	2.5
	LO	2.7	2.7	2.7	2.7	2.6	2.6	2.6
h' E	MED	U	U	U	U	1.7	1.9	1.9
	CNT	U	U	U	U	1.6	1.8	1.8
	LO	1.9	1.9	1.9	1.9	1.9	1.9	1.9
f6 E	MED	U	U	U	U	2.1	2.4	2.5
	CNT	U	U	U	U	2.0	2.3	2.4
	LO	2.3	2.4	2.4	2.6	2.5	2.7	2.7

FARIBANKS, ALASKA (64° 0' N * 147° 0' W) TIME 150.0W

FAIRBANKS, ALASKA (64° 9' N., 147° 8' W.)

HOUR	00	01	02	03	04	05	06
16 F2	MED U CNT UD LO	4.3 U 4.5 U 3.6 4.5 3.6	4.0 U 4.2 U 5.4 5.0 4.0	4.6 U 4.2 U 5.4 5.0 4.0	5.15 U 5.4 U 5.6 5.4 4.1	5.15 U 5.4 U 5.6 5.4 4.1	5.15 U 5.4 U 5.6 5.4 4.1
	MED CNT UD LO						
	MED CNT UD LO						
17 F2	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
18 F	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
(M3000)F2	MED U CNT UD LO	270 11 14 00 280 255	265 270 15 275 275	270 260 13 275 250	260 260 12 270 250	246 246 10 270 250	246 246 10 270 250
	MED CNT UD LO						
	MED CNT UD LO						
19 F1	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
20 E	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
21 E	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						
22 E	MED CNT UD LO						
	MED CNT UD LO						
	MED CNT UD LO						

TABLE C 12

ANCHORAGE, ALASKA (61°2N, 149°9W)

	HOUR	00	01	02	03	04	05	06
f6 F2	MED	U	U	U	U	4.4	4.6	4.4
	CNT	U	U	U	U	2.6	2.6	2.6
	LO	3.3	3.6	3.5	3.8	4.2	4.5	4.6
h' F2	MED	U	U	U	U	5.1	5.1	5.1
	CNT	U	U	U	U	5.5	5.5	5.5
	LO	3.3	3.6	3.5	3.8	4.2	4.5	4.6
h' F	MED	U	U	U	U	5.1	5.1	5.1
	CNT	U	U	U	U	5.5	5.5	5.5
	LO	3.3	3.6	3.5	3.8	4.2	4.5	4.6
(M3000)F2	MED	U	U	U	U	2.6	2.6	2.6
	CNT	U	U	U	U	2.5	2.5	2.5
	LO	2.7	2.7	2.6	2.7	2.6	2.7	2.6
f5 F1	MED	U	U	U	U	2.6	2.6	2.6
	CNT	U	U	U	U	2.5	2.5	2.5
	LO	2.7	2.7	2.6	2.7	2.6	2.7	2.6
f9 E	MED	U	U	U	U	1.7	1.7	1.7
	CNT	U	U	U	U	1.6	1.6	1.6
	LO	1.9	1.9	1.9	1.9	1.9	1.9	1.9
h' E	MED	U	U	U	U	1.7	1.7	1.7
	CNT	U	U	U	U	1.6	1.6	1.6
	LO	1.9	1.9	1.9	1.9	1.9	1.9	1.9
f6 E	MED	U	U	U	U	2.6	2.6	2.6
	CNT	U	U	U	U	2.5	2.5	2.5
	LO	2.7	2.7	2.6	2.7	2.6	2.7	2.6

TABLE 17

TABLE 18

SEPTEMBER, 1955

SEPTEMBER 1955

SEPTEMBER 1951

SWEET 1.0 MC TO 25.0 MC IN 30 SECONDS

TABU

TABLE

COMBINE 1.0.3 MLC IN 1800 MSC IN 40 SEC

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TABLE 25

TIME 60.0W
TUCUMAN, ARGENTINA (54°45' S, 68°34' W)

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
10 F2	MEO	98	98	U	95	94	92	90	95	92	93	88	83	80	82	81	89	86	94	81	80	79	78	77
MEO	CNT	15	13	14	15	16	15	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
CNT	UD																							
LD																								
10 F2	MED	450	440	450	440	455	450	455	450	480	475	440	485	400	440	360	420	420	420	420	420	420	420	420
MED	CNT	7	9	11	21	18	15	12	13	6	10	8	13	9	13	1	1	1	1	1	1	1	1	1
CNT	UD																							
LD																								
10 F	MED	375	350	340	355	350	300	280	265	260	250	270	260	260	295	270	300	320	375	300	380	230	230	230
MED	CNT	21	25	24	27	23	19	20	11	6	2	1	1	1	3	6	7	9	14	14	15	16	17	18
CNT	UD																							
LD																								
(M3000)F2	MED	230	230	230	230	225	230	235	240	240	240	250	240	240	240	240	240	240	240	240	240	240	240	240
MED	CNT	13	11	14	17	16	9	11	9	8	7	2	4	3	7	7	1	18	20	21	19	21	14	12
CNT	UD																							
LD																								
10 F1	MED	340	410	500	560	500	610	610	610	610	610	610	610	610	610	610	610	610	610	610	610	610	610	610
MED	CNT	3	5	14	10	9	7	3	3	3	3	2	3	2	3	2	4	6	6	6	6	6	6	6
CNT	UD																							
LD																								
10 E	MED	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
MED	CNT	6	11	14	21	18	10	9	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CNT	UD																							
LD																								
10 E	MED	0	13	14	10	9	21	20	23	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
MED	CNT																							
LD																								

SWEEP 1.3 MC TO 18.0 MC IN 30 SECONDS*

SWEEP 1.0 MC TO 25.0 MC IN 30 SECONDS*

DECEMBER 1958

TABLE 26

TIME 60.0W
TUQUIMA, ARGENTINA (26°54' S, 65°44' W)

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
10 F2	MEO	15	13	14	15	16	15	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
MEO	CNT	UD																						
LD																								
10 F2	MED	450	440	450	440	455	450	455	450	480	475	440	485	400	440	360	420	420	420	420	420	420	420	420
MED	CNT	7	9	11	21	18	15	12	13	6	10	8	13	9	13	1	1	1	1	1	1	1	1	1
CNT	UD																							
LD																								
10 F	MED	375	350	340	355	350	300	280	265	260	250	270	260	260	295	270	300	320	375	300	380	230	230	230
MED	CNT	21	25	24	27	23	19	20	11	6	2	1	1	1	3	6	7	9	14	14	15	16	17	18
CNT	UD																							
LD																								
(M3000)F2	MED	230	230	230	230	225	230	235	240	240	240	250	240	240	240	240	240	240	240	240	240	240	240	240
MED	CNT	17	19	19	23	25	23	19	13	9	5	6	4	8	5	6	12	15	15	11	15	16	17	18
CNT	UD																							
LD																								
10 F2	MED	400	405	370	405	395	370	405	395	380	360	375	375	380	415	385	375	380	385	380	385	380	385	380
MED	CNT	2	4	1	8	1	8	1	3	5	7	5	7	6	7	1	1	1	1	1	1	1	1	1
CNT	UD																							
LD																								
10 F	MED	320	310	280	305	270	250	220	210	220	210	215	220	220	225	230	225	230	225	230	225	230	225	230
MED	CNT	17	19	19	23	25	23	19	13	9	5	6	4	8	5	6	12	15	15	11	15	16	17	18
CNT	UD																							
LD																								
(M3000)F2	MED	230	220	240	250	260	230	250	220	210	220	210	215	220	225	230	225	230	225	230	225	230	225	230
MED	CNT	8	11	11	17	17	11	13	14	10	9	8	7	6	5	4	3	2	3	2	1	1	1	1
CNT	UD																							
LD																								
10 F1	MED	670	660	680	660	670	640	640	660	660	670	670	670	670	670	670	670	670	670	670	670	670	670	670
MED	CNT	2	4	1	1	2	4	1	1	2	4	1	1	2	4	1	1	2	4	1	1	2	4	1
CNT	UD																							
LD																								
10 E	MED	143	97	95	97	95	95	95	95	95	97	96	96	96	96	96	96	96	96	96	96	96	96	96
MED	CNT	12	20	22	18	15	9	8	5	4	9	8	5	4	9	8	15	15	8	15	15	8	15	15
CNT	UD																							
LD																								
10 Es	MED	140	150	260	220	305	345	350	325	335	350	355	355	355	355	355	355	355	355	355	355	355	355	355
MED	CNT	14	20	11	11	13	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CNT	UD																							
LD																								

SWEEP 1.3 MC TO 18.0 MC IN 30 SECONDS*

NOVEMBER 1958

TABLE 27

TIME 60.0W
USHUAIA, ARGENTINA (54°53' S, 63°3' W)

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
10 F2	MEO	15	13	14	15	16	15	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15
MEO	CNT	UD																						
LD																								
10 F2	MED	450	440	450	440	455	450	455	450	480	475	440	485	400	440	360	420	420	420	420	420	420	420	420
MED	CNT	7	9	11																				

TABLE 29

A8LE 31

MEETINGS 1-3 MC TO 18.00 MC IN 30 SECONDS*

WEEP 1.6 MC TO 20.0 MC IN 15 SECONDS.

	Hour	00	01	02	03	04	05	06	07
fo F2	MED	U	145	160	112	98	92	11	2
	CNT	U	74	20	24	25	25	25	
	UQ	U							
	LO	U							
hi F2	MED	U							
	CNT	U							
	UQ	U							
	LO	U							
hi F	MED	U	265	230	215	220	230	240	25
	CNT	U	25	24	25	22	24	25	
	UQ	U							
	LO	U							
(N 3000)F2	MED	U	700	330	310	295	290	300	31
	CNT	U	16	15	22	22	23	25	2
	UQ	U							
	LO	U							
fo F1	MED	U							
	CNT	U							
	UQ	U							
	LO	U							
fo E	MED	U	150	125	230	20			
	CNT	U	1	6	20				
	UQ	U							
	LO	U							
hi E	MED	U	115	121	131	12	11		
	CNT	U							
	UQ	U							
	LO	U							
fo E#	MED	U							
	CNT	U							
	UQ	U							
	LO	U							

TABLE 30

OCTOBER, 1956

SLEEP 1.03 MC TO 18.0 MC IN 30 SECONDS.

TABLE 33

TABLE 34

TABLE 35

TOPIC 36

SACRED LOST IN ECONOMICS

SEPTEMBER, 1958

P 166 MC TO 200 MC IN 15 SECONDS.

SACRED LOST IN ECONOMICS

SEPTEMBER, 1958

P 166 MC TO 200 MC IN 15 SECONDS.

SLEEP 1.5 MC TO 18.0 MC IN 5 MINUTES. MANUAL OPERATION.

CWEEP 0.6 MC TO 25.0 MC IN 5 MINUTES, AUTOMATIC OPERATION.

SEPTEMBER 195

SEPTEMBER 1 1958

TABLE 3

SWEEPER 1-5 MC TO 118-0 MC IN 5 MINUTES* MANUAL OPERATION.

TABLE 39

TIME 75°F																									
		TRUCKS IN INDIA 110-8H4 78-7F1																							
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
16F2	MED	CNT	11	9	10	8	6	8	7	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
			17	4	6	12	18	28	28	25	15	29	30	25	25	28	12	25	22	13	3	6	5	7	
17F2	MED	CNT																							
18F	MED	CNT																							
19F2	MED	CNT																							
20F2	MED	CNT																							
21F2	MED	CNT																							
22F2	MED	CNT																							
23F2	MED	CNT																							
24F2	MED	CNT																							
25F2	MED	CNT																							
26F2	MED	CNT																							
27F2	MED	CNT																							
28F2	MED	CNT																							
29F2	MED	CNT																							
30F2	MED	CNT																							
31F2	MED	CNT																							
1F3	MED	CNT																							
2F3	MED	CNT																							
3F3	MED	CNT																							
4F3	MED	CNT																							
5F3	MED	CNT																							
6F3	MED	CNT																							
7F3	MED	CNT																							
8F3	MED	CNT																							
9F3	MED	CNT																							
10F3	MED	CNT																							
11F3	MED	CNT																							
12F3	MED	CNT																							
13F3	MED	CNT																							
14F3	MED	CNT																							
15F3	MED	CNT																							
16F3	MED	CNT																							
17F3	MED	CNT																							
18F3	MED	CNT																							
19F3	MED	CNT																							
20F3	MED	CNT																							
21F3	MED	CNT																							
22F3	MED	CNT																							
23F3	MED	CNT																							
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25F3	MED	CNT																							
26F3	MED	CNT																							
27F3	MED	CNT																							
28F3	MED	CNT																							
29F3	MED	CNT																							
30F3	MED	CNT																							
31F3	MED	CNT																							
1F4	MED	CNT																							
2F4	MED	CNT																							
3F4	MED	CNT																							
4F4	MED	CNT																							
5F4	MED	CNT																							
6F4	MED	CNT																							
7F4	MED	CNT																							
8F4	MED	CNT																							
9F4	MED	CNT																							
10F4	MED	CNT																							
11F4	MED	CNT																							
12F4	MED	CNT																							
13F4	MED	CNT																							
14F4	MED	CNT																							
15F4	MED	CNT																							
16F4	MED	CNT																							
17F4	MED	CNT																							
18F4	MED	CNT																							
19F4	MED	CNT																							
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27F4	MED	CNT																							
28F4	MED	CNT																							
29F4	MED	CNT																							
30F4	MED	CNT																							
31F4	MED	CNT																							
1F5	MED	CNT																							
2F5	MED	CNT																							
3F5	MED	CNT																							
4F5	MED	CNT																							
5F5	MED	CNT																							
6F5	MED	CNT																							
7F5	MED	CNT																							
8F5	MED	CNT																							
9F5	MED	CNT																							
10F5	MED	CNT																							
11F5	MED	CNT																							
12F5	MED	CNT																							
13F5	MED	CNT																							
14F5	MED	CNT																							
15F5	MED	CNT																							
16F5	MED	CNT																							
17F5	MED	CNT																							
18F5	MED	CNT				</td																			

KEEP 1.5 MC IN 10.0 ML IN 5 MINUTES, MANUAL OPERATION.

SEPTEMBER, 1958

TABLE I

CONDENSATION

SEPTEMBER 1950

TABLE 4.1

TIME 75°OE																		
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
fo F2	MED	116	111	98	87	80	58	79	113	130	133	126	122	120	125	128	129	128
CNT	14	17	16	20	19	19	28	30	30	30	29	24	24	26	23	26	29	20
UD	UO																	
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
h' F2	MED	260	240	230	230	220	220	265	240	230	220	215	215	220	225	265	230	265
CNT	14	17	16	20	19	19	30	30	30	30	29	24	24	26	23	25	28	20
UD	UO																	
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
h' F	MED	260	240	230	230	220	220	265	240	230	220	215	215	220	225	265	230	265
CNT	14	17	16	20	19	19	30	30	30	30	29	24	24	26	23	25	28	20
UD	UO																	
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
(W3000)F2	MED	285	245	280	300	210	315	295	285	250	220	215	210	205	210	210	205	280
CNT	14	17	15	20	19	19	28	30	30	29	24	24	26	23	26	29	20	4
UD	UO																	
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
fo F1	MED																	
CNT																		
UD																		
LO																		
fo E	MED																	
CNT																		
UD																		
LO																		
h' E	MED																	
CNT																		
UD																		
LO																		
fo E	MED	28	4	5	1	1	57	50	97	108	116	118	114	110	106	86	76	1
CNT	14	17	16	20	19	19	30	30	30	29	23	23	24	23	26	29	20	7
UD	UO																	
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO

SWEEP 1.0 MC TO 25.0 MC IN 27 SECONDS*

SEPTEMBER 1956

TABLE 4.2

TRIVANURUNI, INDIA (16.5N, 77.5E)																		
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
fo F2	MED	116	111	98	87	80	58	79	113	130	133	126	122	120	125	128	129	128
CNT	14	17	16	20	19	19	28	30	30	30	29	24	24	26	23	25	28	20
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
h' F2	MED	260	240	230	230	220	220	265	240	230	220	215	215	220	225	265	230	265
CNT	14	17	16	20	19	19	30	30	30	30	29	24	24	26	23	25	28	20
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
(W3000)F2	MED	285	245	280	300	210	315	295	285	250	220	215	210	205	210	210	205	280
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
fo F1	MED																	
CNT																		
UD																		
LO																		
fo E	MED																	
CNT																		
UD																		
LO																		
h' E	MED																	
CNT																		
UD																		
LO																		
fo E	MED	285	245	280	300	210	315	295	285	250	220	215	210	205	210	210	205	280
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
h' E	MED	260	240	230	230	220	220	265	240	230	220	215	215	220	225	265	230	265
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
fo E	MED	285	245	280	300	210	315	295	285	250	220	215	210	205	210	210	205	280
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
h' E	MED	260	240	230	230	220	220	265	240	230	220	215	215	220	225	265	230	265
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
fo E	MED	285	245	280	300	210	315	295	285	250	220	215	210	205	210	210	205	280
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
h' E	MED	260	240	230	230	220	220	265	240	230	220	215	215	220	225	265	230	265
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
fo E	MED	285	245	280	300	210	315	295	285	250	220	215	210	205	210	210	205	280
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
h' E	MED	260	240	230	230	220	220	265	240	230	220	215	215	220	225	265	230	265
CNT	14	17	16	20	19	19	30	30	30	29	24	24	26	23	26	29	20	4
UD	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO							
LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO	LO
fo E	MED	285	245	280	300	210	315	295</td										

TABLE 45

TABLE 46

WEEPS 1.6 MC TO 20.0 MC IN 15 SECONDS.

• SÓNOS ESTAMOS 2001-2002

WEEPER 160 MC TO 250 MC IN 30 SECONDS.

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TABLE 40

VICTORIA, CANADA (48°44'N, 123°44'W)														TIME 1200W													
Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
fo F2	MED	56	52	51	48	44	52	51	65	68	72	78	79	82	80	78	77	75	72	71	64	60	55	49	44	39	
CNT	CNT	28	28	28	28	27	27	27	27	27	26	25	24	25	26	29	27	27	27	27	27	27	27	27	26	25	
UD	UD																										
LO	LO																										
h F2	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
h F	MED	100	90	80	70	60	50	40	30	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
CNT	CNT	26	24	27	22	24	23	26	25	26	22	21	20	19	21	26	27	25	24	24	25	25	26	25	26	25	
UD	UD																										
LO	LO																										
(M3000)F2	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo F1	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo E	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
h F	MED	350	420	480	500	520	540	550	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	
CNT	CNT	5	10	10	26	24	26	25	26	25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
UD	UD																										
LO	LO																										
fo E	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo E	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo F	MED	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
CNT	CNT	3	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
UD	UD																										
LO	LO																										
fo E	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo F	MED	340	360	380	390	410	420	430	440	450	460	470	480	490	490	490	490	490	490	490	490	490	490	490	490	490	
CNT	CNT	23	22	24	23	22	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	
UD	UD																										
LO	LO																										
fo F	MED	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
CNT	CNT	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
UD	UD																										
LO	LO																										
fo E	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo E	MED	2	360	400	410	420	430	440	450	460	470	480	490	490	490	490	490	490	490	490	490	490	490	490	490	490	
CNT	CNT	11	12	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
UD	UD																										
LO	LO																										
fo F	MED	4	180	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	400	400	
CNT	CNT	14	17	17	15	12	10	6	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
UD	UD																										
LO	LO																										
fo E	MED	2	120	120	120	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	
CNT	CNT	6	11	11	17	17	9	8	5	10	12	12	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
UD	UD																										
LO	LO																										
fo E	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo F	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo E	MED																										
CNT	CNT																										
UD	UD																										
LO	LO																										
fo F	MED																										
CNT	CNT																										
UD	UD				</td																						

TABLE 53

VICTORIA. CANADA £ 48.04 N. 123.04 W.

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WEED 106 TO 200 MC IN 15 SECONDS.

1958.]

SUNDAY, NOVEMBER 11, 1962

FEBRUARY 195

二〇一六

TIME 15°CEST												TIME 15°CEST																																						
JULIUSRUHR/BRUNNEN, GERMANY (56.4N 13.4E)												JULIUSRUHR/BRUNNEN, GERMANY (56.4N 13.4E)																																						
HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
10F2	MED	5.3	50	51	50	50	49	48	46	51	62	82	85	88	110	131	112	124	104	76	64	60	63	53	10F2	MED	4.2	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F2	CNT	1.3	17	23	20	19	14	17	16	15	18	22	25	24	24	25	24	22	21	16	18	16	18	13	10F2	MED	4.2	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F2	UQ																								10F2	MED	4.2	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F2	LQ																								10F2	MED	4.2	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F2	MED	3.0	320	320	300	330	380	310	320	280	280	260	260	270	270	280	280	280	280	280	280	280	280	280	10F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F2	CNT	11	8	14	9	11	9	11	9	10	12	10	18	23	23	25	25	24	22	20	15	15	15	15	10F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F2	UQ																								10F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F2	LQ																								10F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
(M3000)F2	MED	3.0	320	320	300	330	380	310	320	280	280	260	260	270	270	280	280	280	280	280	280	280	280	(M3000)F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16			
(M3000)F2	CNT	1.0	8	14	9	11	9	11	9	10	12	10	18	23	23	25	25	24	22	20	15	15	15	15	(M3000)F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
(M3000)F2	UQ																								(M3000)F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
(M3000)F2	LQ																								(M3000)F2	MED	2.4	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	MED	2.0	100	100	90	200	200	100	200	260	260	250	250	260	260	250	250	260	260	250	250	260	260	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16			
10F1	CNT	4.5	6	6	7	9	6	10	8	9	11	9	11	9	11	9	11	9	12	10	8	10	8	10	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	UQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	LQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	MED	1.0	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	CNT	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	UQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	LQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	MED	1.0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	CNT	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	UQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	LQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	MED	1.0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	CNT	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	UQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	LQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	MED	1.0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	CNT	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	UQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	LQ																								10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	MED	1.0	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139	150	151	150	162	134	106	12	13	14	13	14	13	14	16		
10F1	CNT	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10F1	MED	1.5	18	36	36	34	68	107	139</																

WEEED 14 USE TO DO A MILE IN 17 SECONDS

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SEARCHES 1407

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TABLE 62

63

TABLE 64

MARCH 1957

SWEET 16 MC TO 17.0 MC IN 1 MINUTE.

TABLE 65

TANANARIVE. FRENCH W. AFRICA 118°E. 47°S.E.

		TIME 0-0																								
HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
fo F2	MEO	69	68	62	58	51	43	33	58	100	120	122	122	121	118	120	113	107	87	80	84	78	74	70	63	
CNT	UQ	29	22	27	24	24	30	26	25	25	20	18	20	25	21	20	23	20	19	20	24	30	30	20	23	
fo F2	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
(M3000)F2	MEO	280	280	280	280	280	280	280	280	280	320	320	300	300	280	280	270	270	260	260	260	260	260	260	260	
CNT	UQ	21	15	18	13	31	31	31	30	30	30	30	29	30	30	29	27	27	24	24	24	24	24	24	24	24
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' E	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									
fo E	MEO																									
CNT	UQ																									
h' F	MEO																									
CNT	UQ																									
h' F2	MEO																									
CNT	UQ																									
fo F1	MEO																									
CNT	UQ																									

TABLE

6

6

DECEMBER, 1946

1956

NOVEMBER 1 1956

1956

NOVEMBER 1956

NUMBER 1956

956

NUMBER 1956

1954

NOVEMBER 1956

TABLE 73

TABLE I

EEFP 1-2 MC TO 17-0 MC IN 1 MINUTE.

NOVEMBER 1956

CWEEDP 1.02 MC TO 17.0 MC.

MOWER • 19

MAY 75

FEB 1-25 MC TO 20-0 MC IN 10 MINUTES

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NOVEMBER 19
SWEEP 1.0 MC TO 13.0 MC IN 2 MINUTES.

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OCTOBER * 1956

REVIEWS 105

79

RECENT TRENDS IN THE ECONOMY

TABLE 80

THE ECONOMY OF THE MINI-YE

SCIENCE 14 NOVEMBER 1971

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TABLE 61

TANANARIVE, FRENCH M. AFRICA (12°28'N., 5°55'E.)

TIME 0-0																									
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
16F2	MED	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	
CNT	UQ	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
h#2	MED	220	215	210	205	220	230	250	220	215	210	205	200	200	218	210	235	245	200	205	220	200	215	220	220
CNT	UQ	24	25	26	27	28	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
hF	MED	220	215	210	205	220	230	250	220	215	210	205	200	200	218	210	235	245	200	205	220	200	215	220	220
CNT	UQ	24	25	26	27	28	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
(M300)F2	MED	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
CNT	UQ	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
16F1	MED	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
CNT	UQ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16E	MED	210	200	210	200	210	200	210	200	210	200	210	200	210	200	210	200	210	200	210	200	210	200	210	200
CNT	UQ	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26
hE	MED	110	105	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
CNT	UQ	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25
16E*	MED	22	24	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28
CNT	UQ	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26	28	26

SWEEP 1.2 MC TO 17.0 MC IN 1 MINUTE*

OCTOBER 1, 1956

TABLE 62

DAKAR, FRENCH M. AFRICA (14°48'N., 17°45'E.)

TIME 0-0																									
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
16F2	MED	128	126	124	122	120	118	68	72	67	75	121	134	146	148	146	146	146	146	146	146	146	146	146	
CNT	UQ	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	26	25	
h#2	MED	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
CNT	UQ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
hF	MED	215	210	215	210	215	210	215	210	215	210	215	210	215	210	215	210	215	210	215	210	215	210	215	210
CNT	UQ	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
(M300)F2	MED	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
CNT	UQ	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32
16F1	MED	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
CNT	UQ	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31
16E	MED	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
CNT	UQ	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31
hE	MED	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
CNT	UQ	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31
16E*	MED	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
CNT	UQ	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31	32	31

OCTOBER 1, 1956

TABLE 63

OBJOUTOU, FRENCH SOMALILAND (11°56'N., 43°25'E.)

TIME 4-5																									
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
16F2	MED	250	240	230	220	215	210	205	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
CNT	UQ	24	25	24	25	24	25	24	25	24	25	24	25	24	25	24	25	24	25	24	25	24	25	24	25
h#2	MED	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
CNT	UQ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
hF	MED	275	270	265	260	255	250	245	240	235	230	225	220	215	210	205	200	195	190	185	180	175	170	165	160
CNT	UQ	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3
(M300)F2	MED	275	270	265	260	255	250	245	240	235	230	225	220	215	210	205	200	195	190	185	180	175	170	165	160
CNT	UQ	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3
16F1	MED	275	270	265	260	255	250	245	240	235	230	225	220	215	210	205	200	195	190	185	180	175	170	165	160
CNT	UQ	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3
16E	MED	275	270	265	260	255	250	245	240	235	230	225	220	215	210	205	200	195	190	185	180	175	170	165	160
CNT	UQ	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3
hE	MED	275	270	265	260	255	250	245	240	235	230	225	220	215	210	205	200	195	190	185	180	175	170	165	160
CNT	UQ	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3
16E*	MED	275	270	265	260	255	250	245	240	235	230	225	220	215	210	205	200	195	190	185	180	175	170	165	160
CNT	UQ	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3

OCTOBER 1, 1956

TABLE 64

TANANARIVE, MADAGASCAR (18°45'S., 47°55'E.)

TIME 4-5			
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AGILE 85

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SLEEP 1.3 MC TO 17.0 MC IN 1 MINUTE.

OCTOBER • 1958

DOI 10.1007/s00332-019-02356-w

OPENATION

• 1958

THE JOURNAL OF CLIMATE

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SWEEP 1.25 M.R. TO 20.0 MC IN 10 MINUTES. AUTOMATIC OPERATION.
NOVEMBER 1954

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TABLE 97

TIME LOCAL

		LWIRG, CONGO (2.35°, 26.8E)																								
HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
fo F2	MED	31	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
	CNT	12	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
	UO	12	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
	LO	12	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
fo F2	MED	220	210	205	200	195	190	185	180	175	170	165	160	155	150	145	140	135	130	125	120	115	110	105	100	
	CNT	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	-1	
	UO	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	-1	
	LO	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	-1	
(M3000)F2	MED	162	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	
	CNT	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	UO	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	LO	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
fo F1	MED	290	285	280	275	270	265	260	255	250	245	240	235	230	225	220	215	210	205	200	195	190	185	180	175	170
	CNT	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5
	UO	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5
	LO	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5
fo F1	MED	198	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320
	CNT	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	UO	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	LO	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E4	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E4	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	UO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	LO	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
fo E5	MED	17	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3
	CNT	27	26	25	24</																					

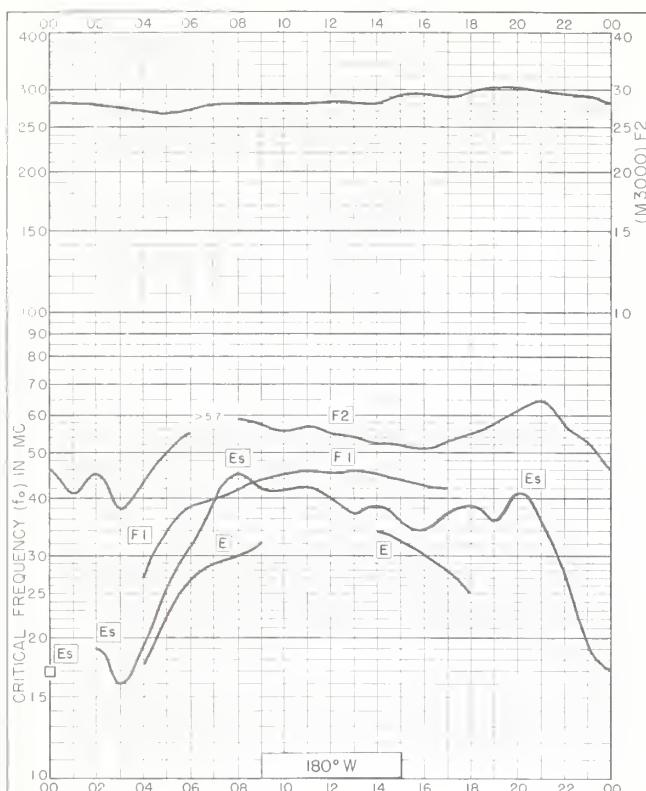


Fig. 1. ADAK , ALASKA
51.9°N, 176.6°W

JUNE 1961

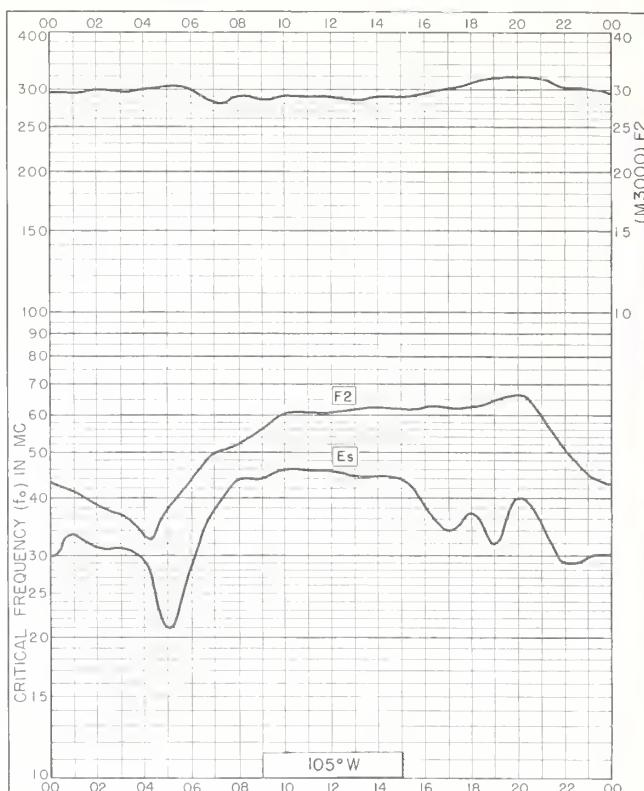


Fig. 2. BOULDER , COLORADO
40.0°N, 105.3°W

JUNE 1961

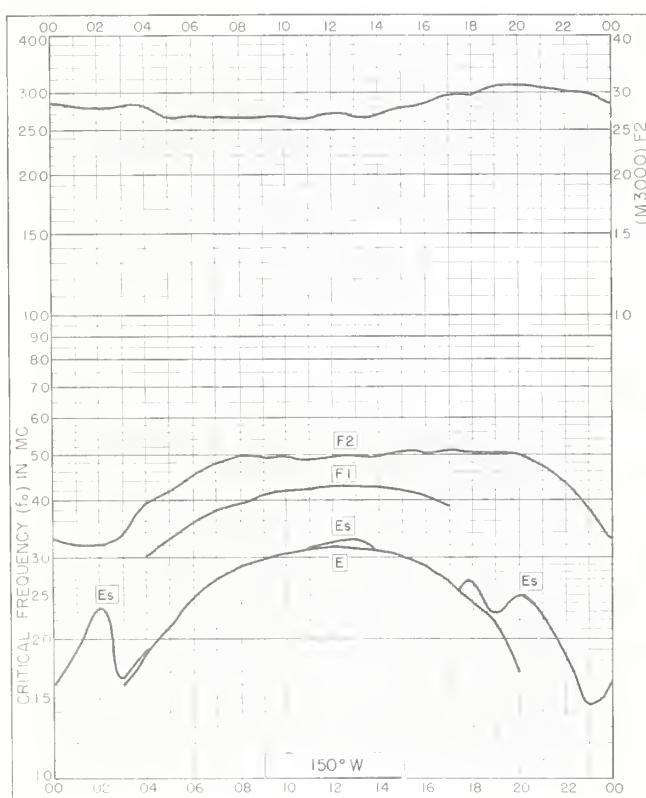


Fig. 3. ANCHORAGE , ALASKA
61.2°N, 149.9°W

MAY 1961

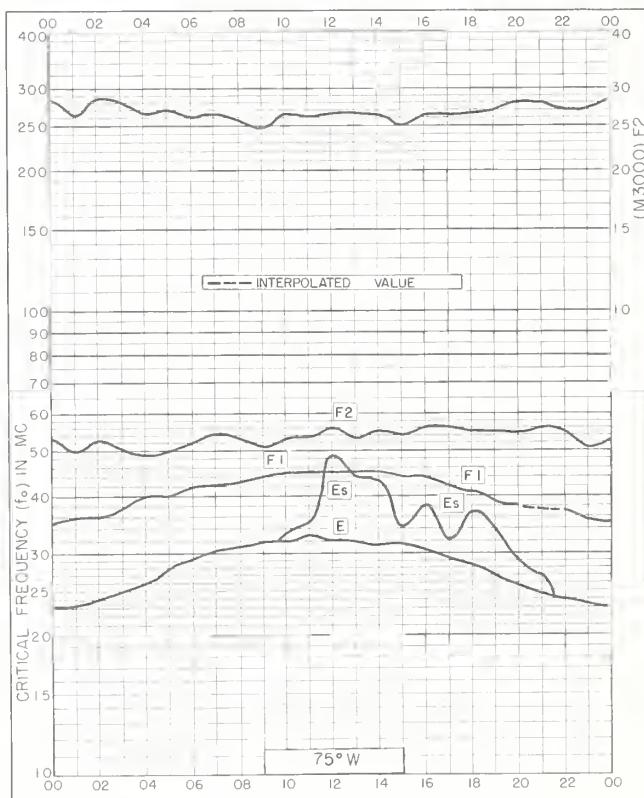


Fig. 4. THULE , GREENLAND
76.6°N, 68.7°W

JUNE 1960

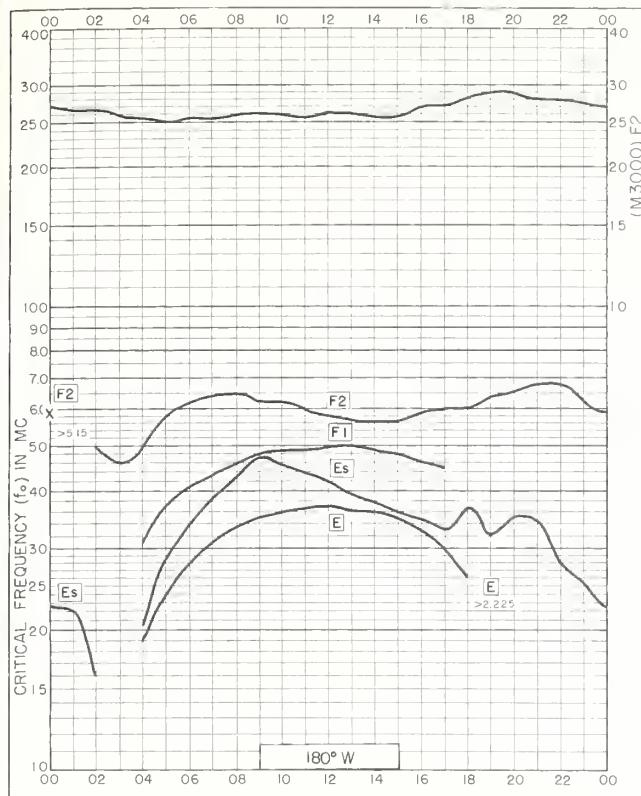


Fig. 5. ADAK, ALASKA
51.9°N, 176.6°W JUNE 1960

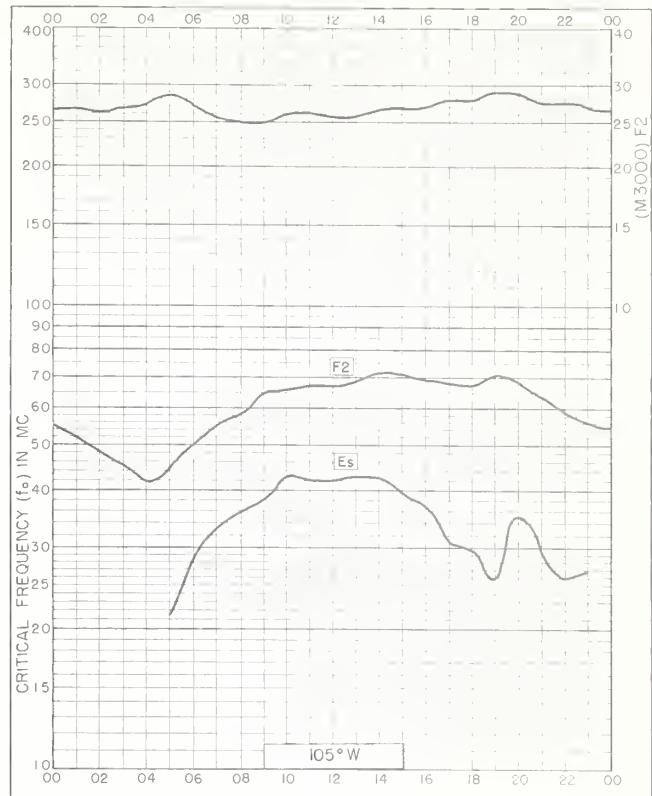


Fig. 6. BOULDER, COLORADO
40.0°N, 105.3°W JUNE 1960



Fig. 7. POLE STATION
90.0°S JUNE 1960

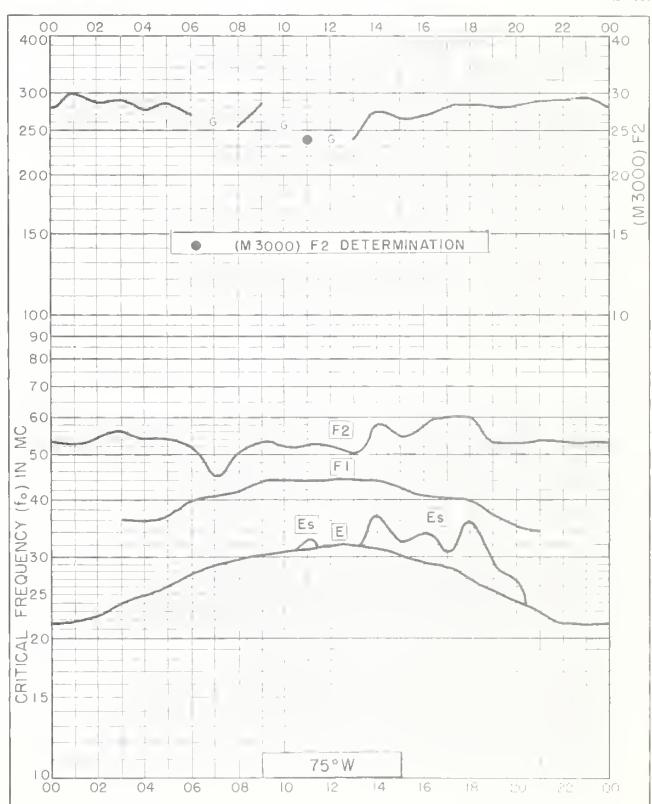


Fig. 8. THULE, GREENLAND
76.6°N, 68.7°W MAY 1960

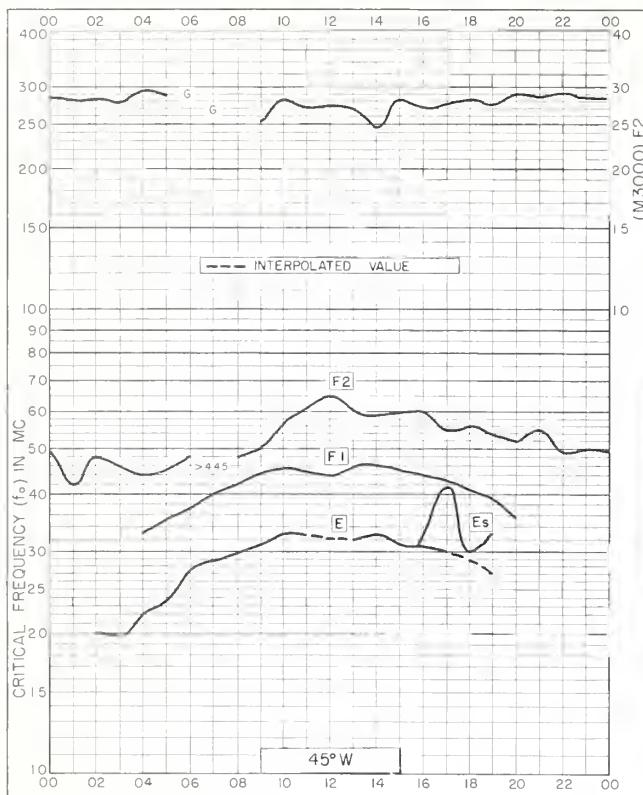


Fig. 9. GODHAVN, GREENLAND
 69.3°N , 53.5°W MAY 1960

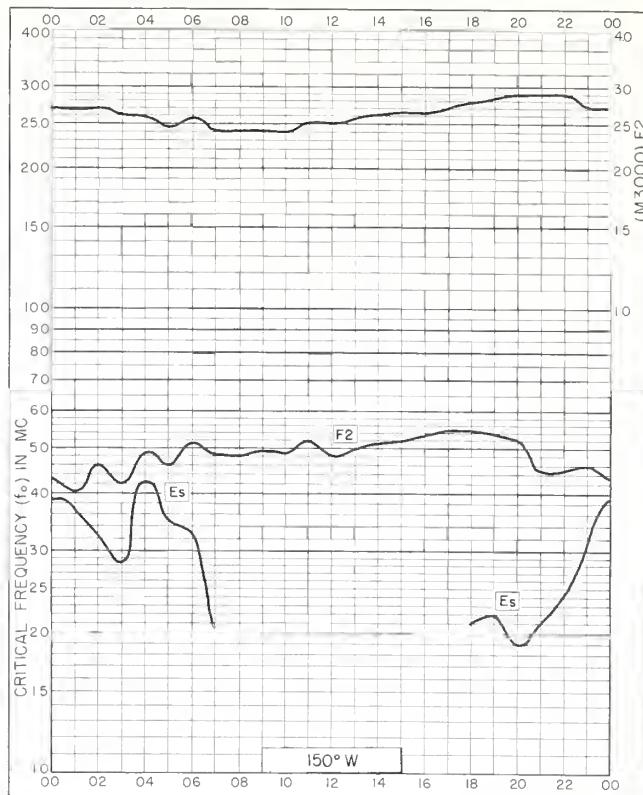


Fig. 10. FAIRBANKS, ALASKA
 64.9°N , 147.8°W MAY 1960

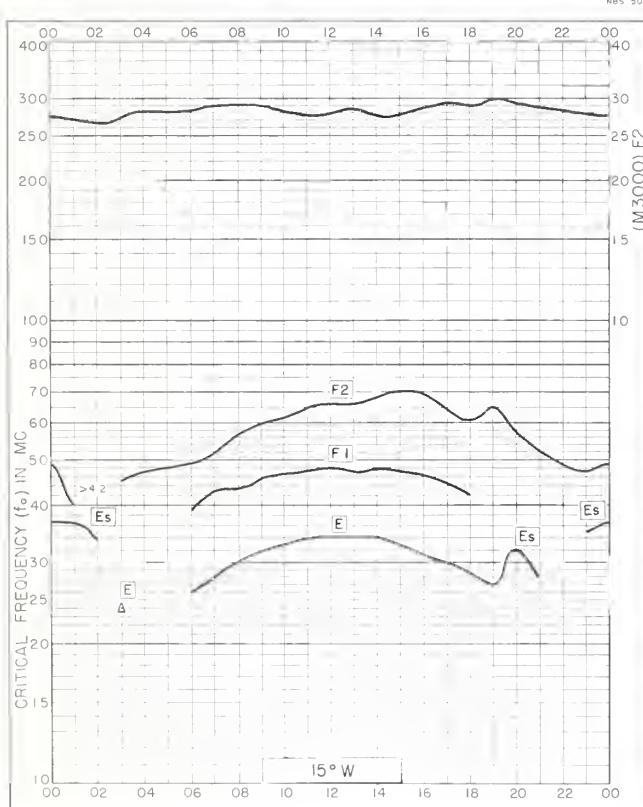


Fig. 11. REYKJAVIK, ICELAND
 64.1°N , 21.8°W MAY 1960

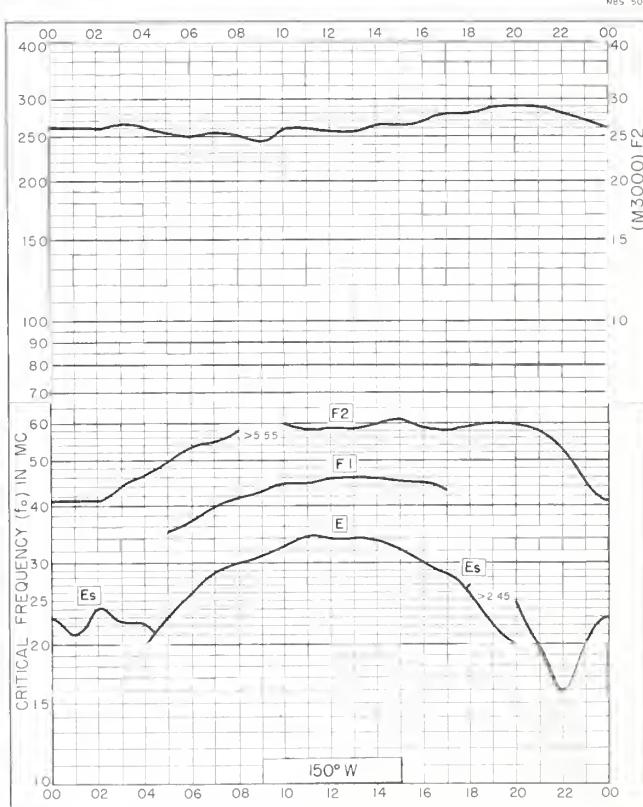


Fig. 12. ANCHORAGE, ALASKA
 61.2°N , 149.9°W MAY 1960

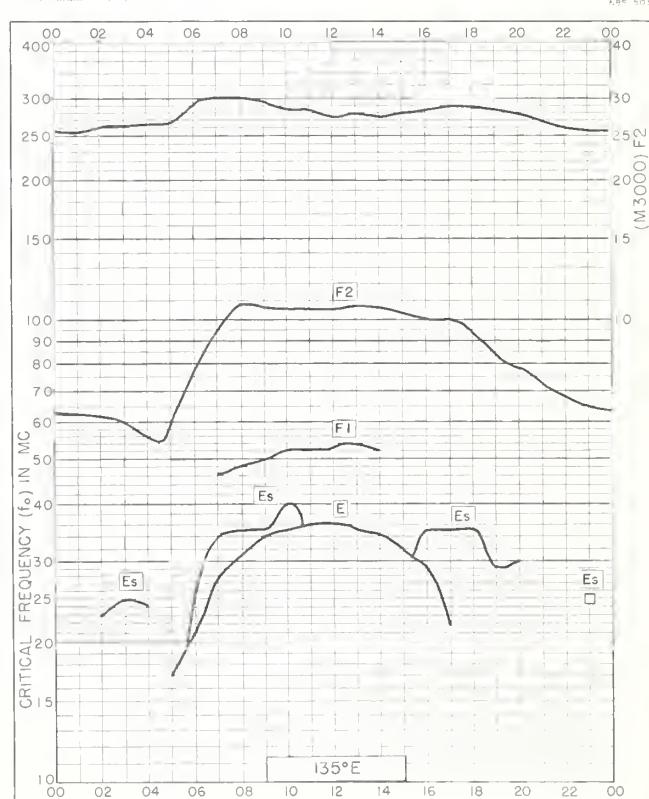
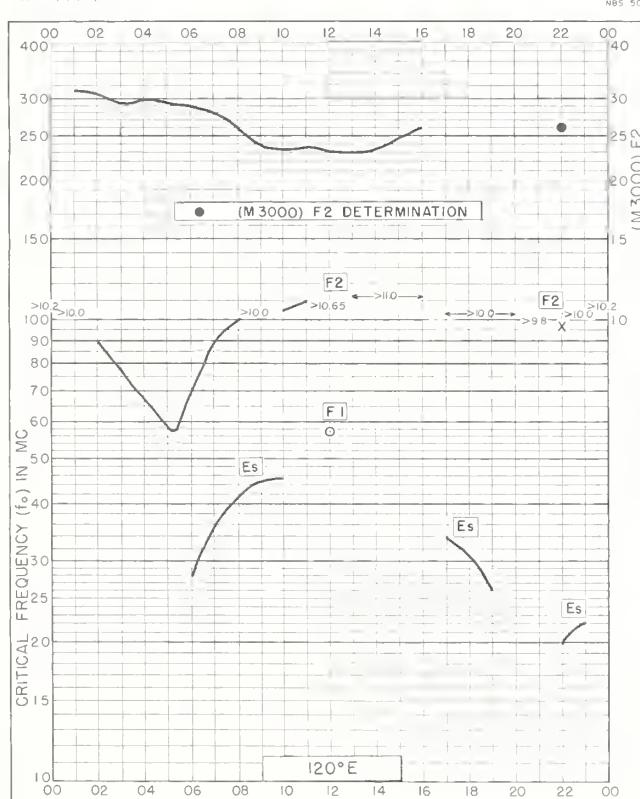
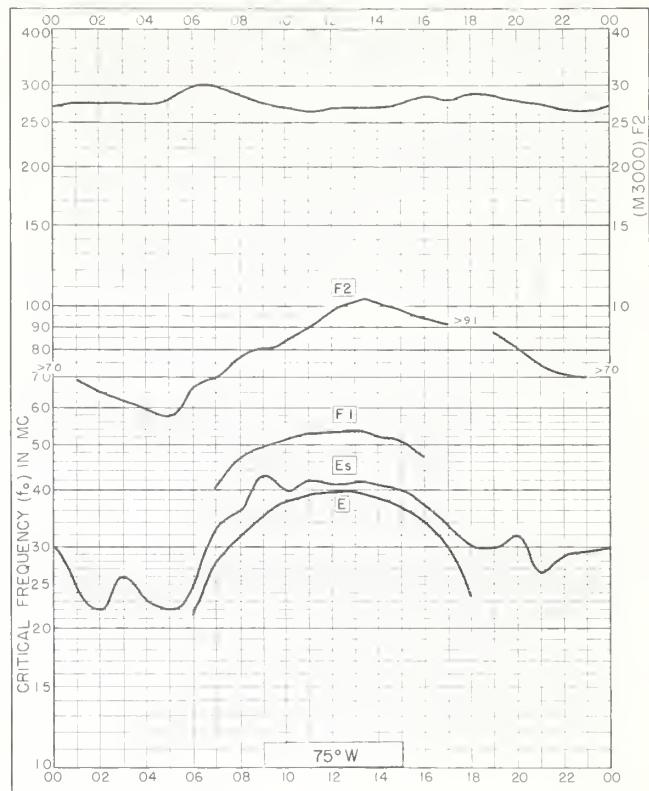
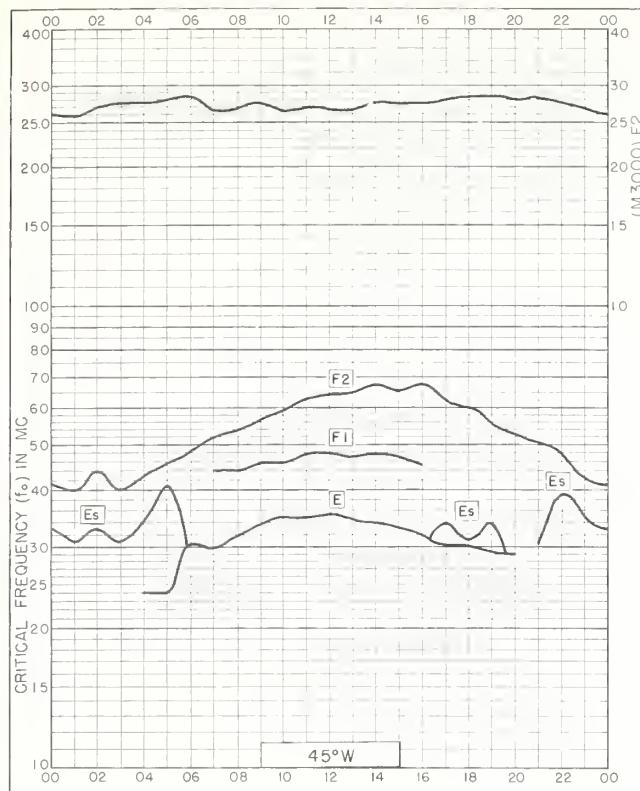




Fig. 17. AKITA, JAPAN
39.7°N, 140.1°E SEPTEMBER 1959

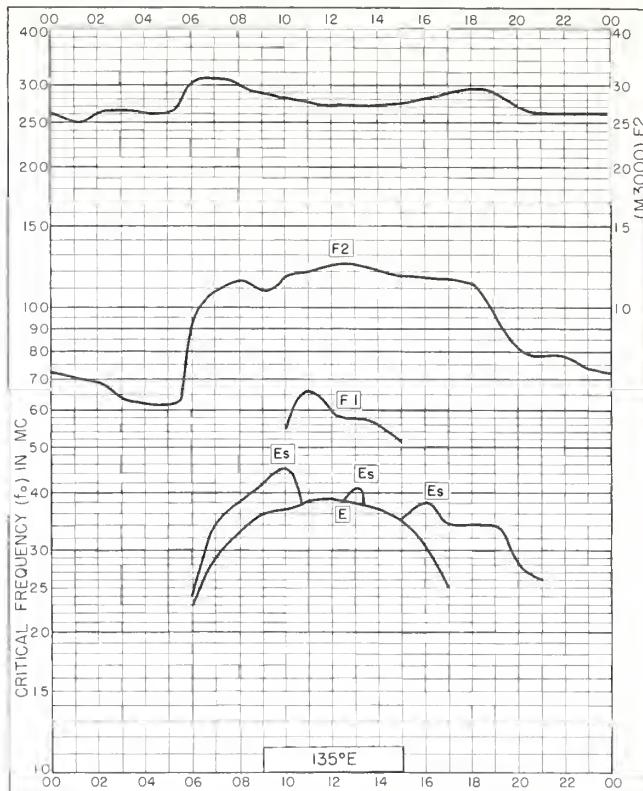


Fig. 18. TOKYO, JAPAN
35.7°N, 139.5°E SEPTEMBER 1959



Fig. 19. YAMAGAWA, JAPAN
31.2°N, 130.6°E SEPTEMBER 1959



Fig. 20. DOURBES, BELGIUM
50.1°N, 4.6°E JULY 1959

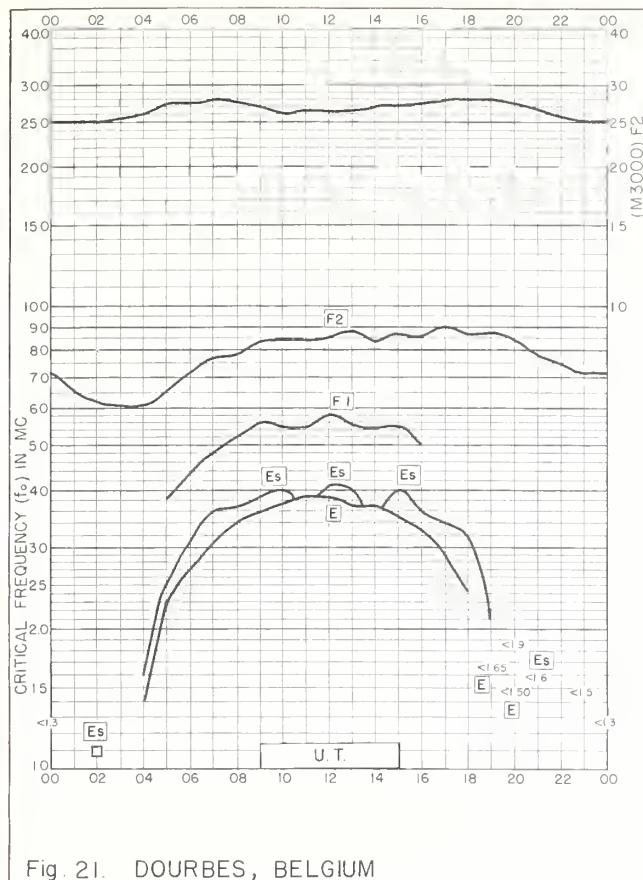


Fig. 21. DOURBES, BELGIUM
50.1°N, 4.6°E MAY 1959

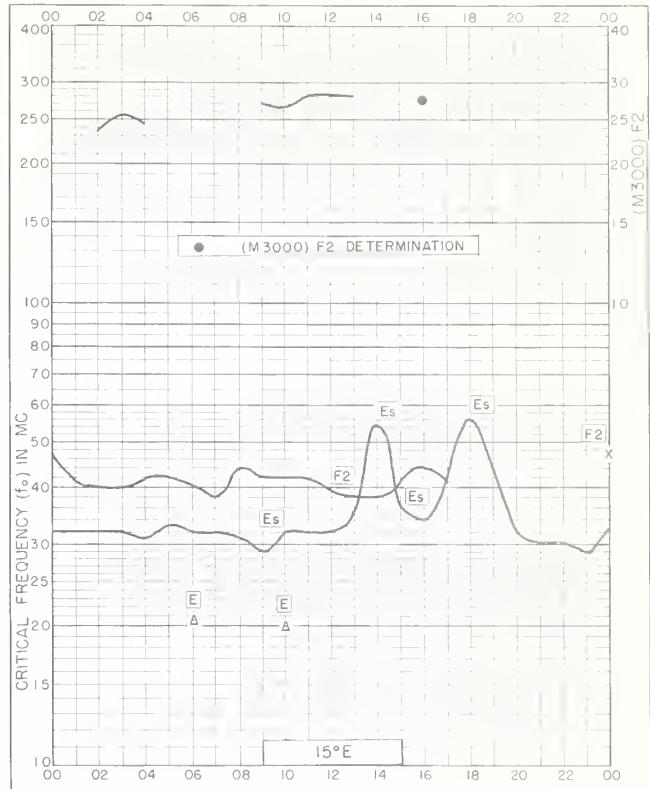


Fig. 22. SVALBARD, NORWAY
78.2°N, 15.7°E DECEMBER 1958

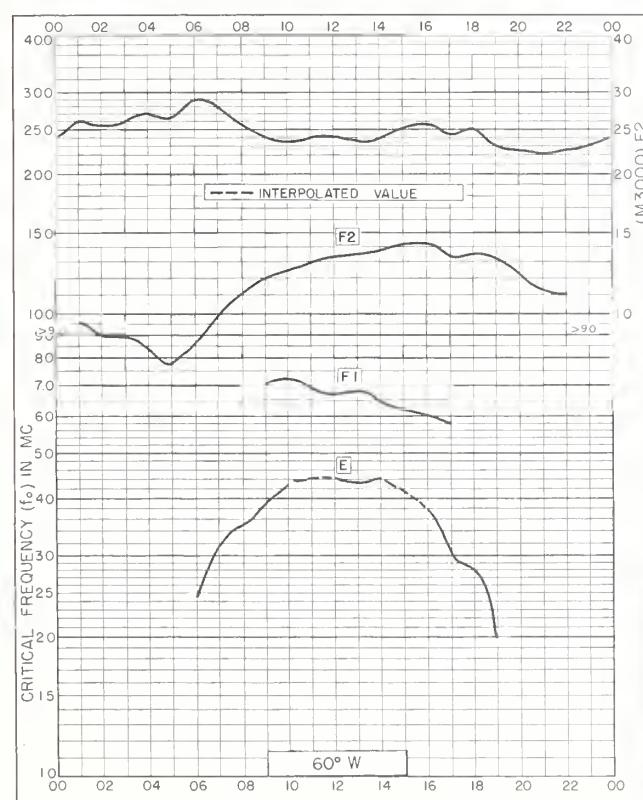


Fig. 23. TUCUMAN, ARGENTINA
 26.9°S, 65.4°W DECEMBER 1958

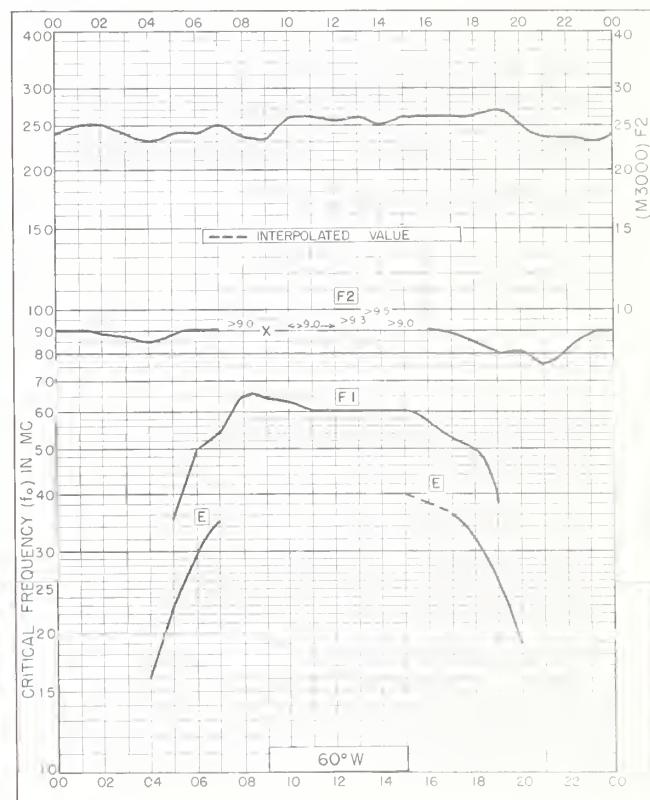


Fig. 24. TRELEW, ARGENTINA
 43.2°S, 65.3°W DECEMBER 1958

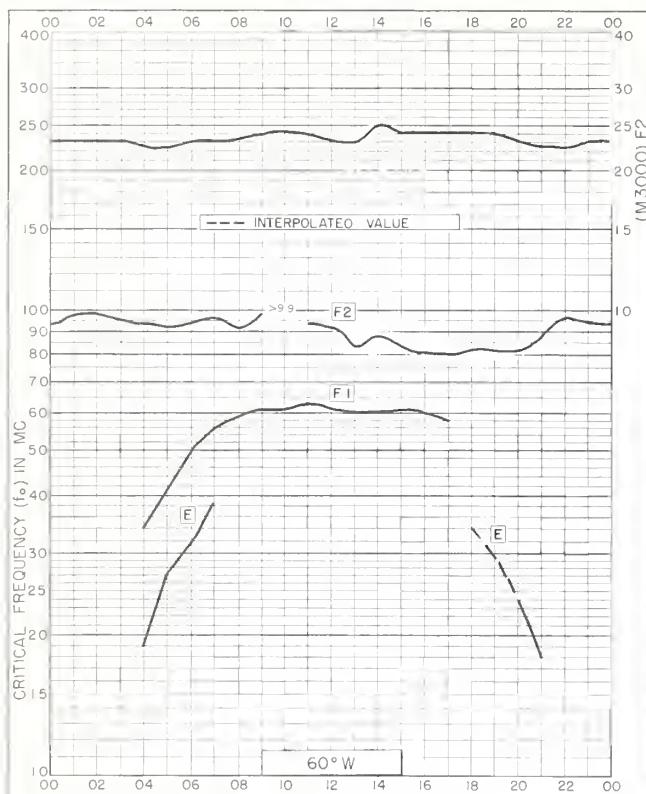


Fig. 25. USHUAIA , ARGENTINA
54.8°S , 68.3°W DECEMBER 1958



Fig. 26. TUCUMAN , ARGENTINA
26.9°S , 65.4°W NOVEMBER 1958

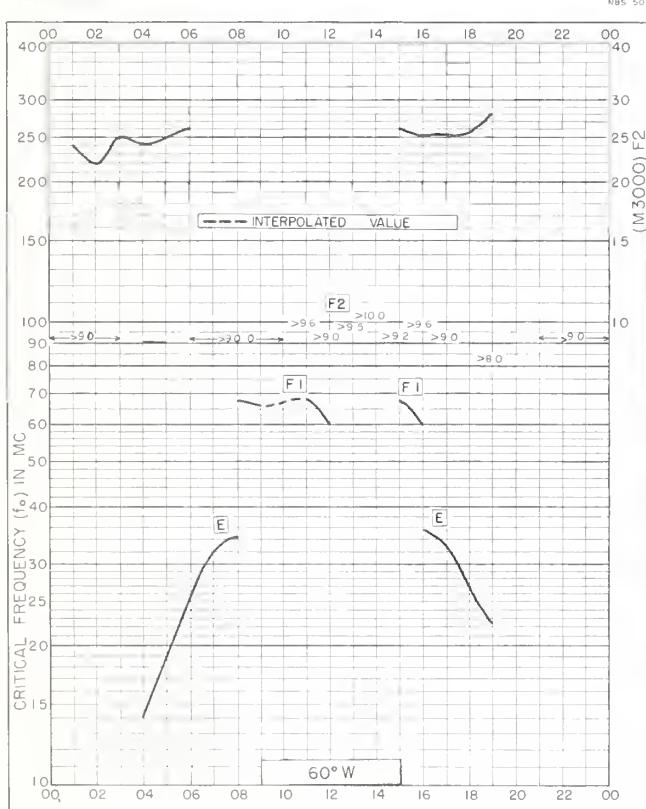


Fig. 27. TRELEW , ARGENTINA
43.2°S , 65.3°W NOVEMBER 1958

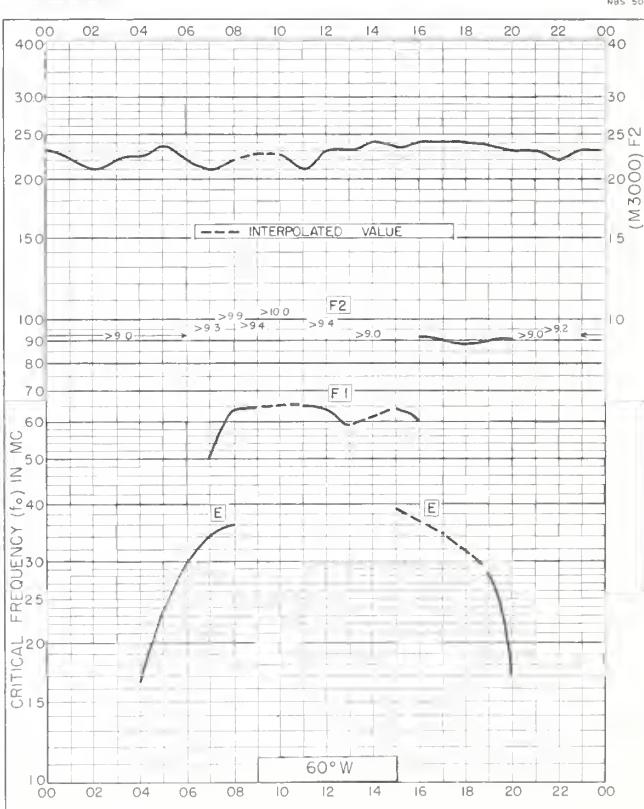


Fig. 28. USHUAIA , ARGENTINA
54.8°S , 68.3°W NOVEMBER 1958

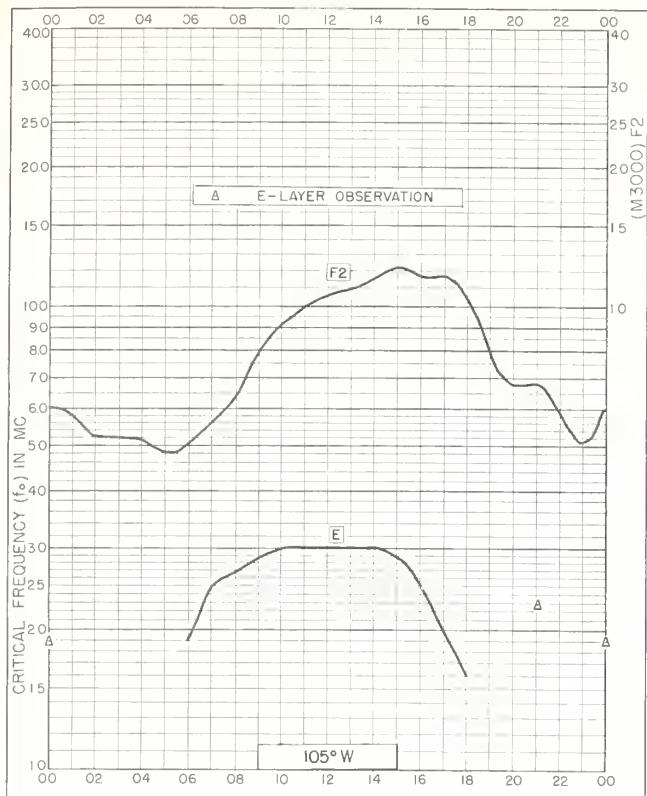


Fig. 29. YELLOWKNIFE , CANADA
62.4°N, 114.4°W OCTOBER 1958

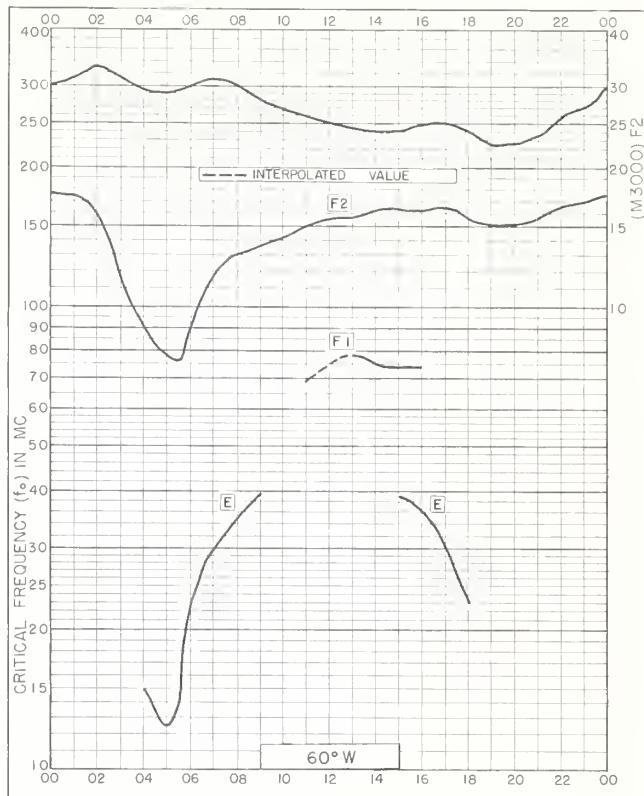


Fig. 30. TUCUMAN , ARGENTINA
26.9°S, 65.4°W OCTOBER 1958



Fig. 31. TRELEW , ARGENTINA
43.2°S, 65.3°W OCTOBER 1958

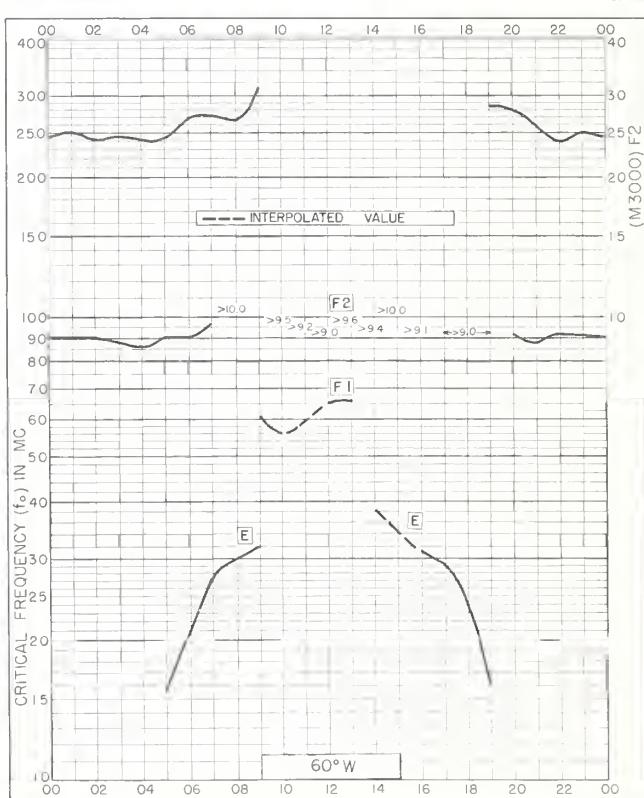


Fig. 32. USHUAIA , ARGENTINA
54.8°S, 68.3°W OCTOBER 1958

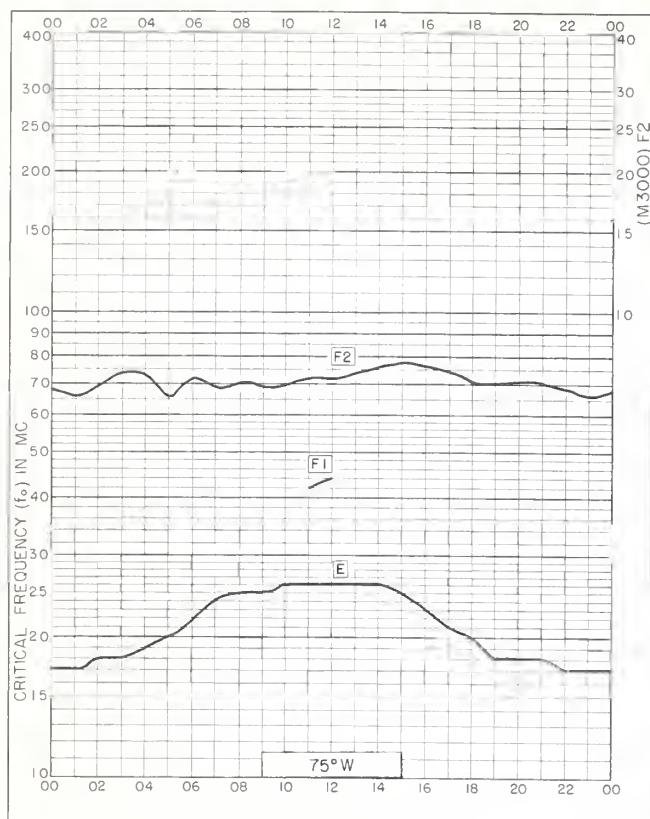


Fig. 33. ALERT, CANADA
82.6°N, 62.6°W SEPTEMBER 1958

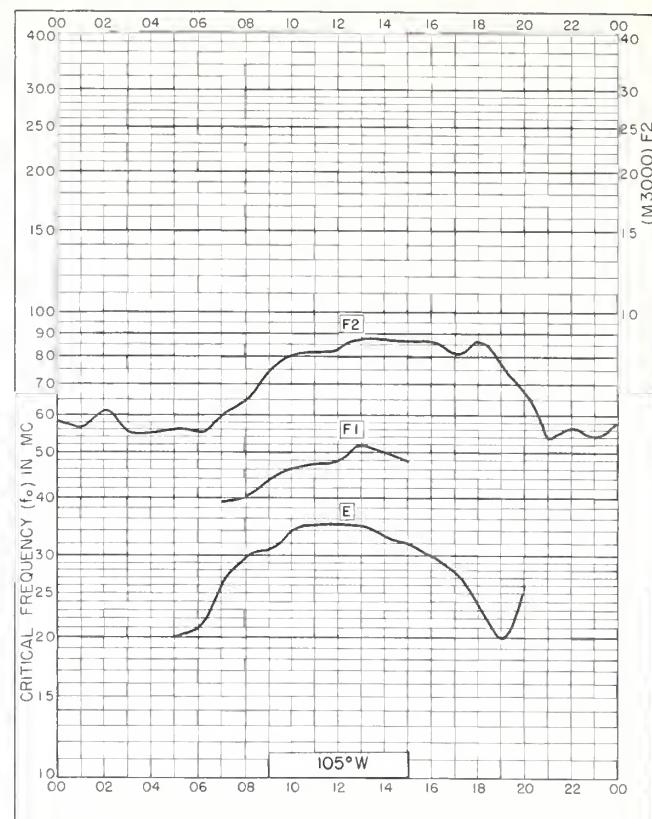


Fig. 34. YELLOWKNIFE, CANADA
62.4°N, 114.4°W SEPTEMBER 1958

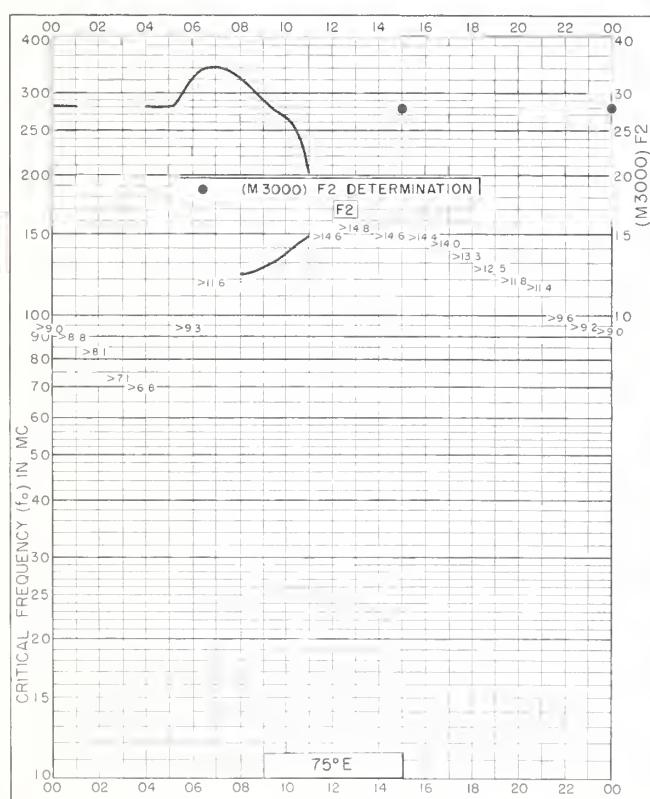


Fig. 35. DELHI, INDIA
28.6°N, 77.2°E SEPTEMBER 1958

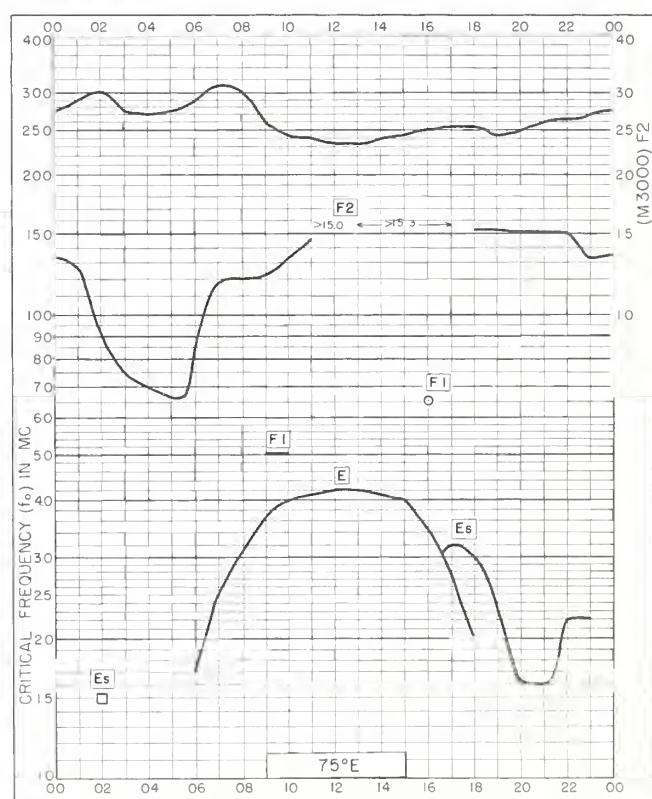


Fig. 36. AHMEDABAD, INDIA
23.0°N, 72.6°E SEPTEMBER 1958

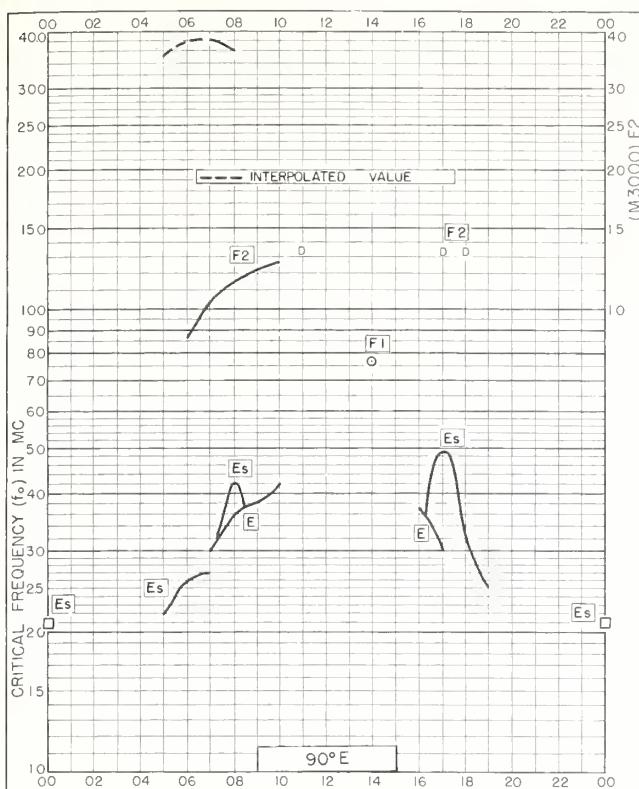


Fig. 37. CALCUTTA, INDIA
23°0'N, 88.6"E SEPTEMBER 1958

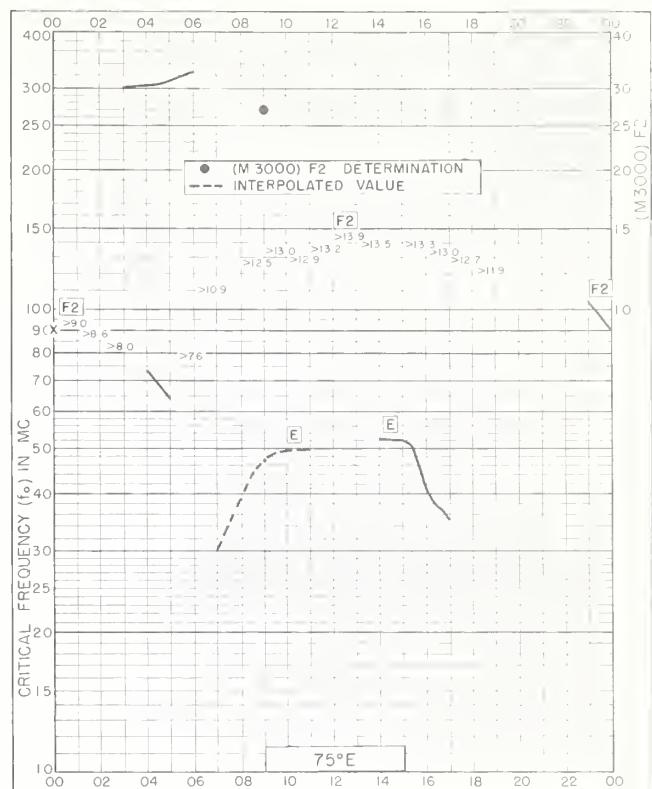


Fig. 38. BOMBAY, INDIA
19.0°N, 72.8°E SEPTEMBER 1958

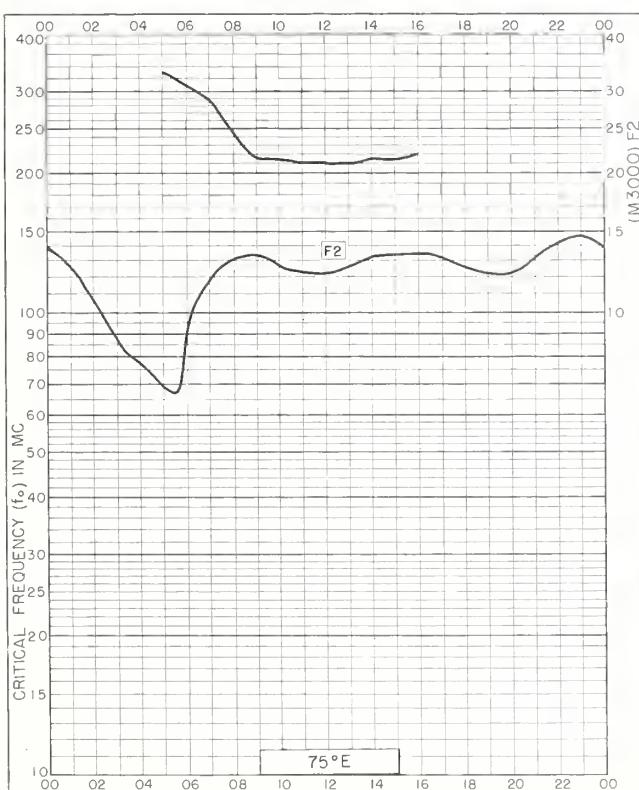


Fig. 39. MADRAS, INDIA
13.1°N, 80.3°E SEPTEMBER 1958

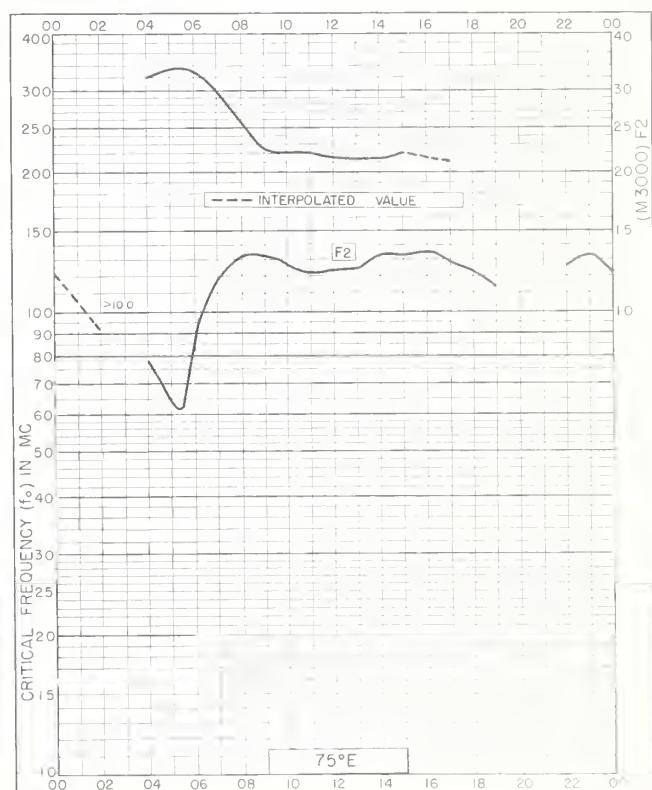


Fig. 40. TIRUCHY, INDIA
10.8°N, 78.7°E SEPTEMBER 1958

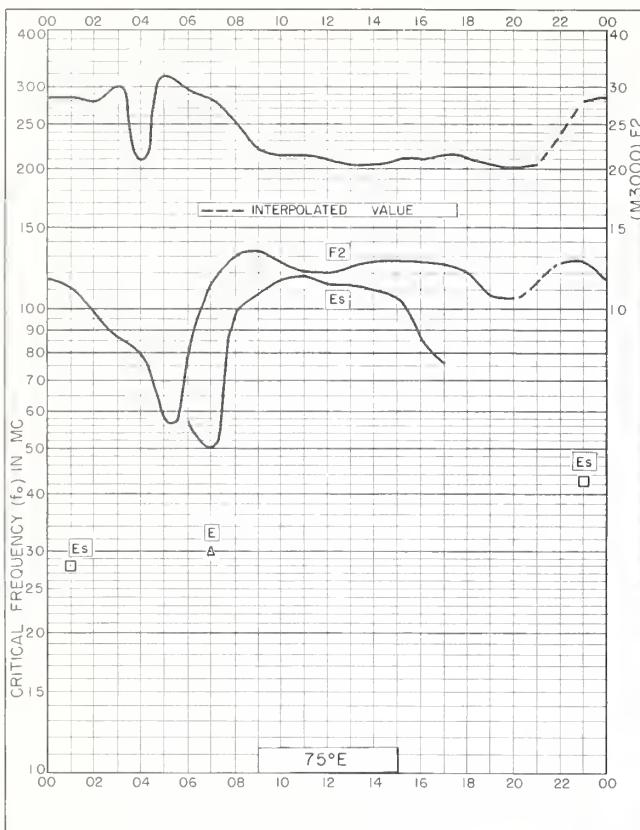


Fig. 41. KODAIKANAL, INDIA
10.2°N, 77.5°E SEPTEMBER 1958

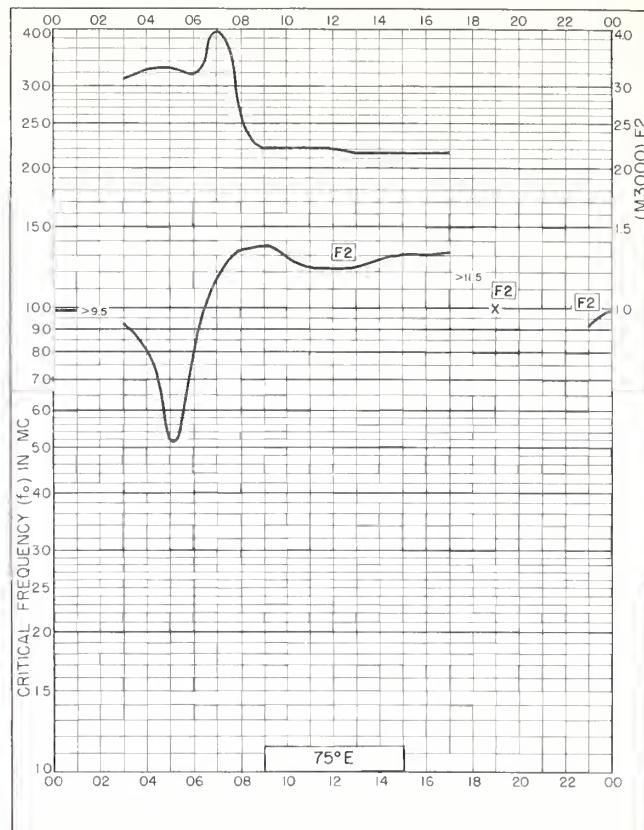


Fig. 42. TRIVANDRUM, INDIA
 8° 5' N, 77° 0' E SEPTEMBER 1958

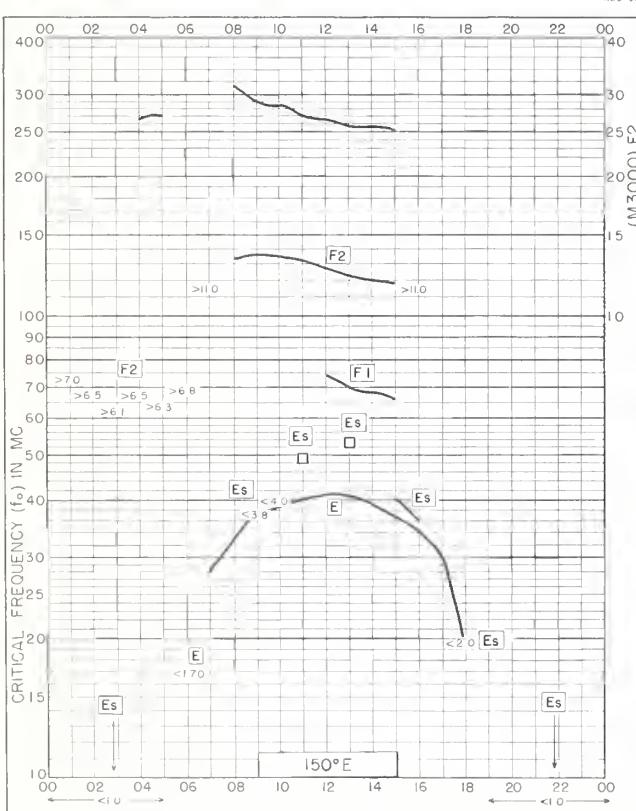


Fig. 43. TOWNSVILLE, AUSTRALIA
 19.3°S, 146.7°E SEPTEMBER 1958

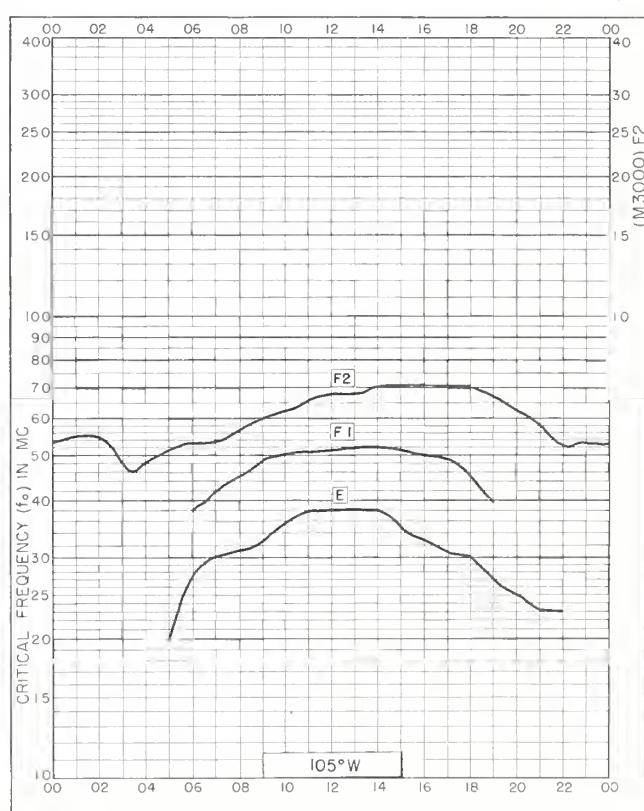


Fig. 44. YELLOWKNIFE, CANADA
 62.4°N, 114.4°W AUGUST 1958

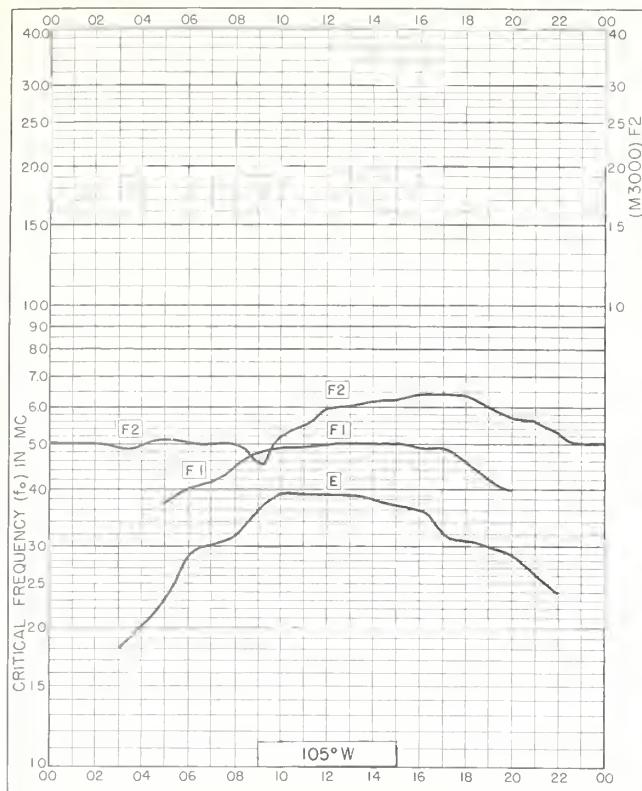


Fig. 45. YELLOWKNIFE, CANADA
62.4°N, 114.4°W JULY 1958

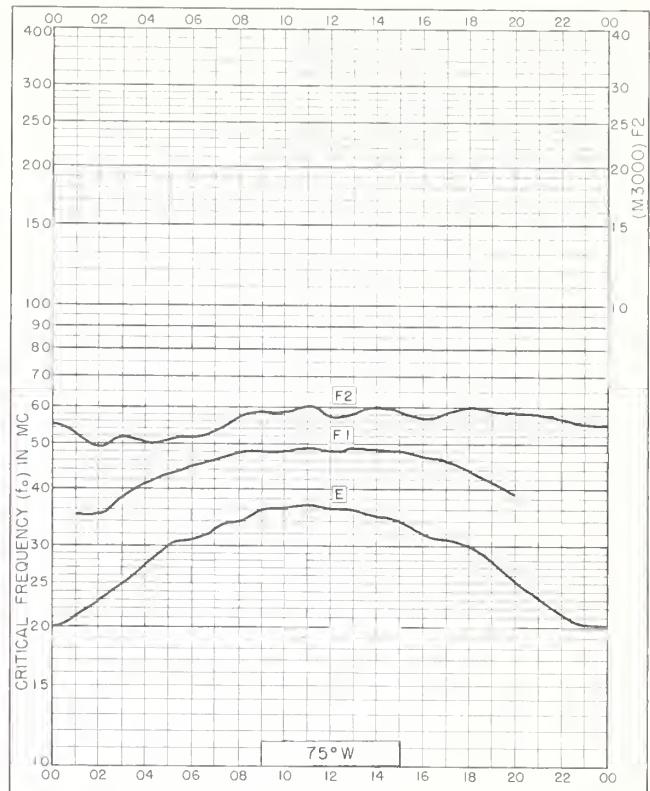


Fig. 46. CLYDE, BAFFIN I.
70.5°N, 68.6°W JUNE 1958

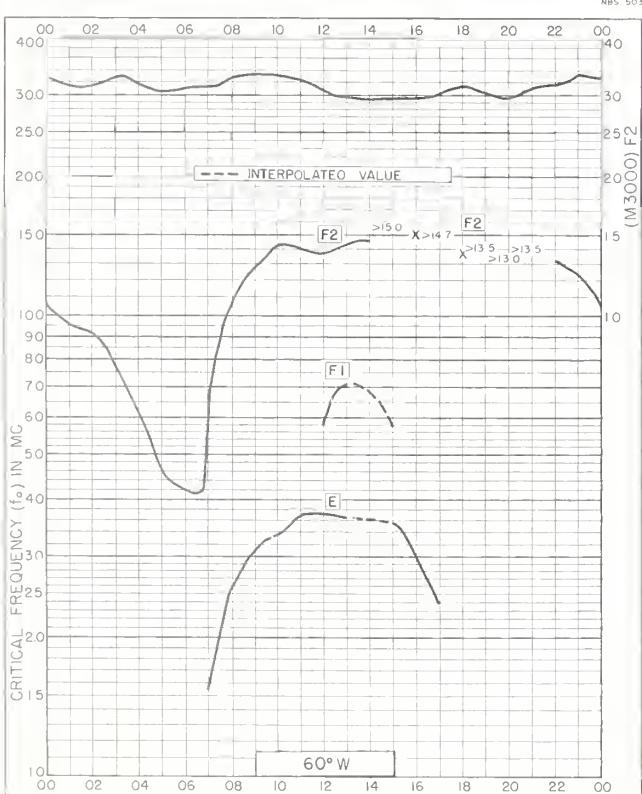


Fig. 47. TUCUMAN, ARGENTINA
26.9°S, 65.4°W JUNE 1958

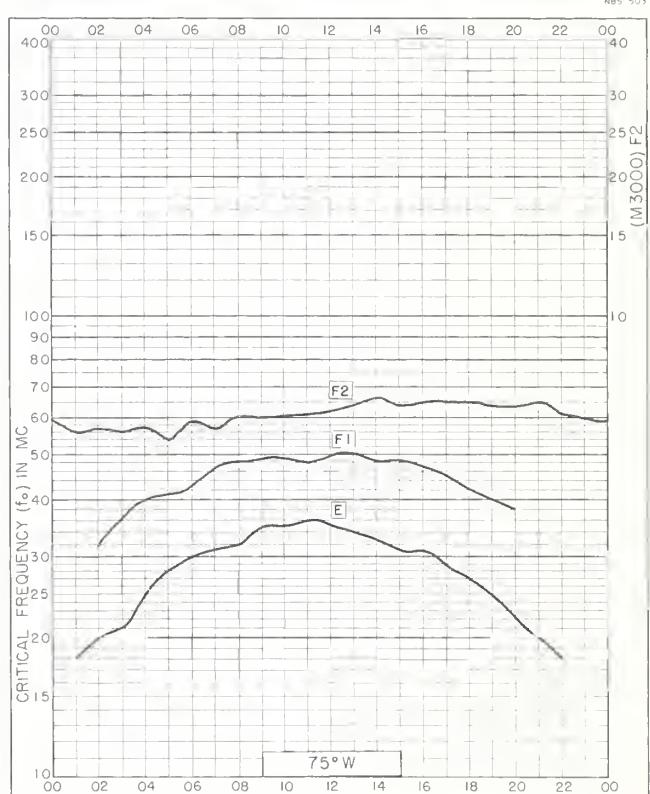


Fig. 48. CLYDE, BAFFIN I.
70.5°N, 68.6°W MAY 1958

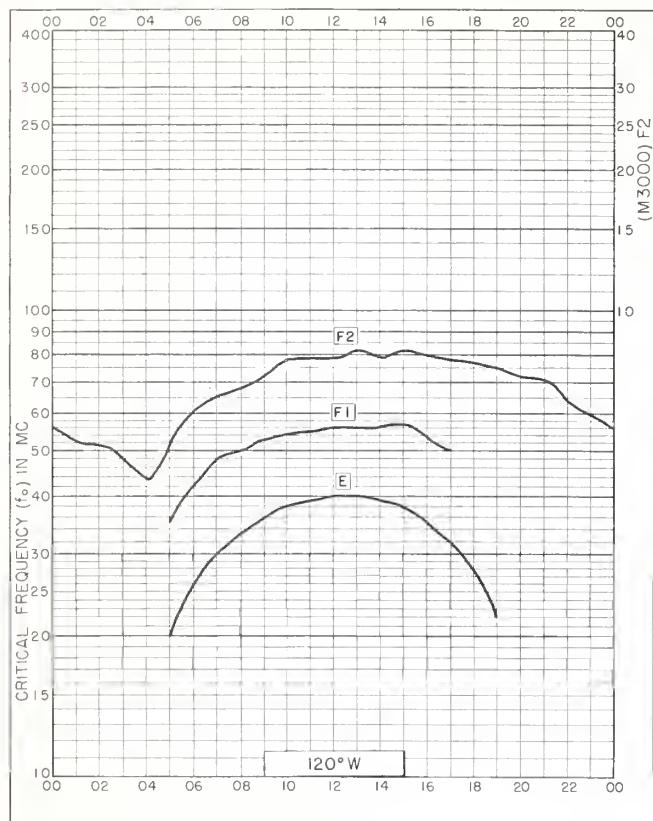


Fig. 49. VICTORIA, CANADA

 48.4°N , 123.4°W

MAY 1958



Fig. 50. TUCUMAN, ARGENTINA

 26.9°S , 65.4°W

MAY 1958

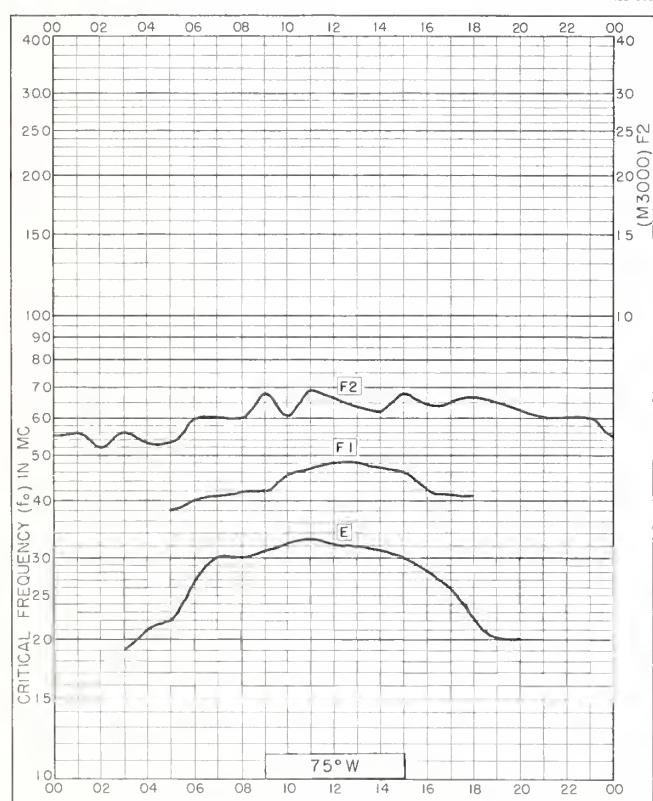


Fig. 51. CLYDE, BAFFIN I.

 70.5°N , 68.6°W

APRIL 1958

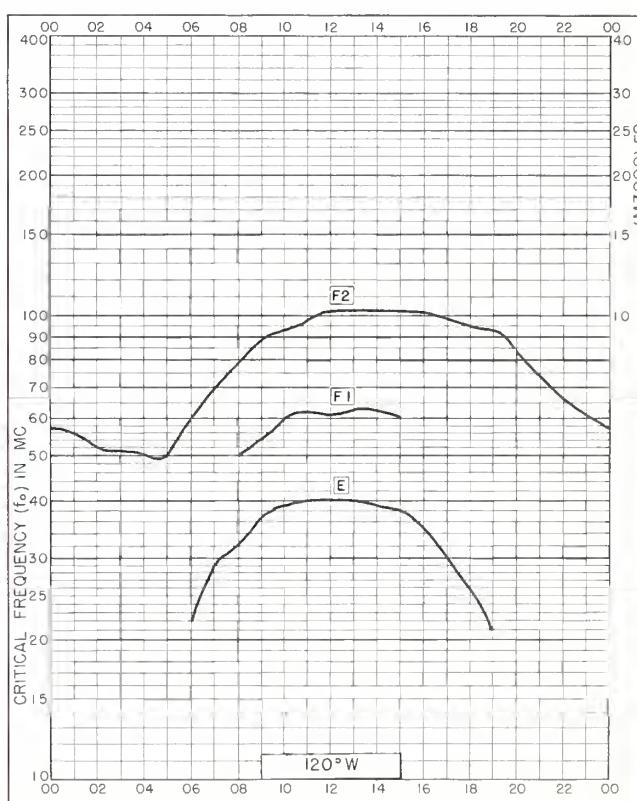
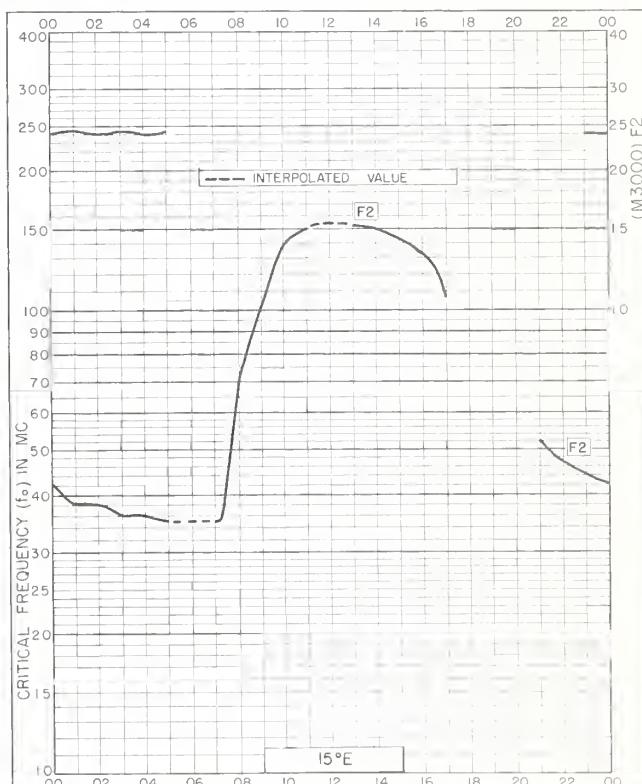
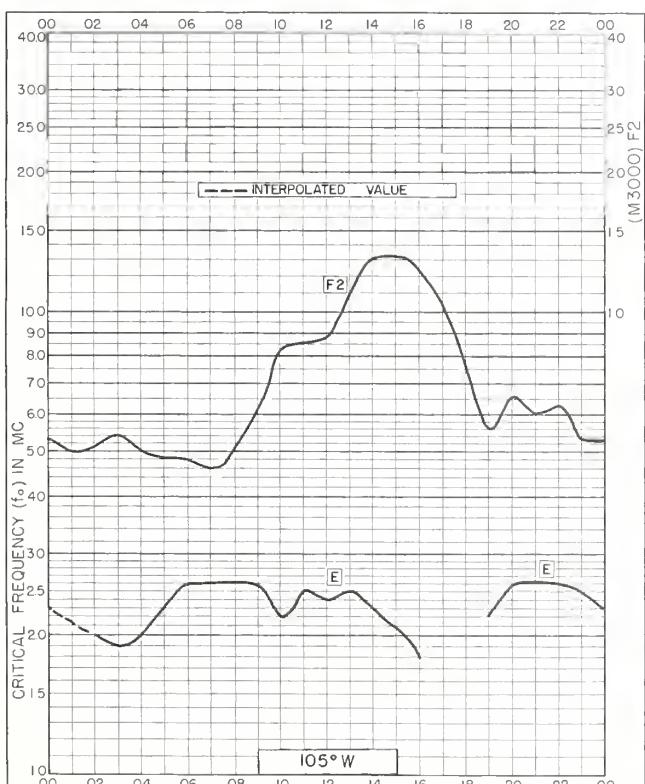
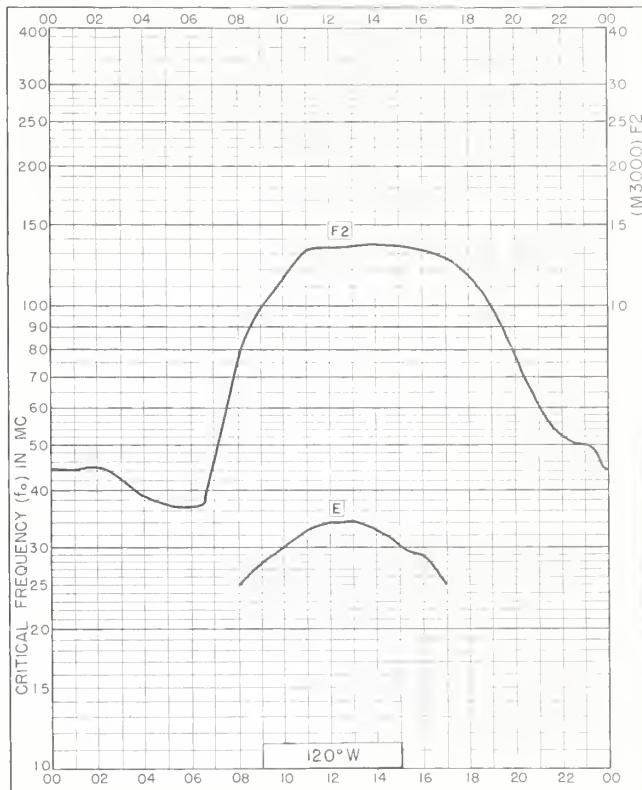


Fig. 52. VICTORIA, CANADA

 48.4°N , 123.4°W

APRIL 1958



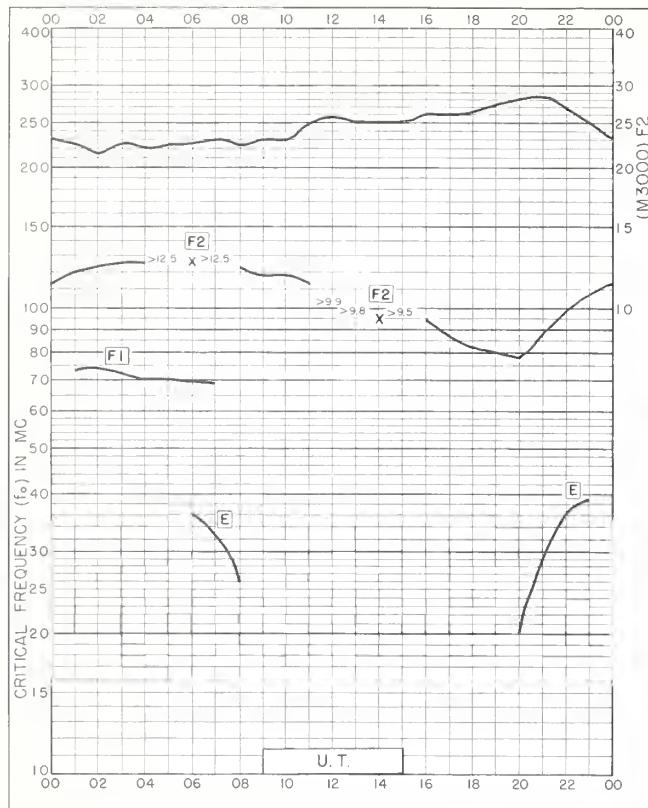


Fig. 57. HOLLANDIA , NETHERLANDS NEW GUINEA
2.5°S, 140.8°E DECEMBER 1957

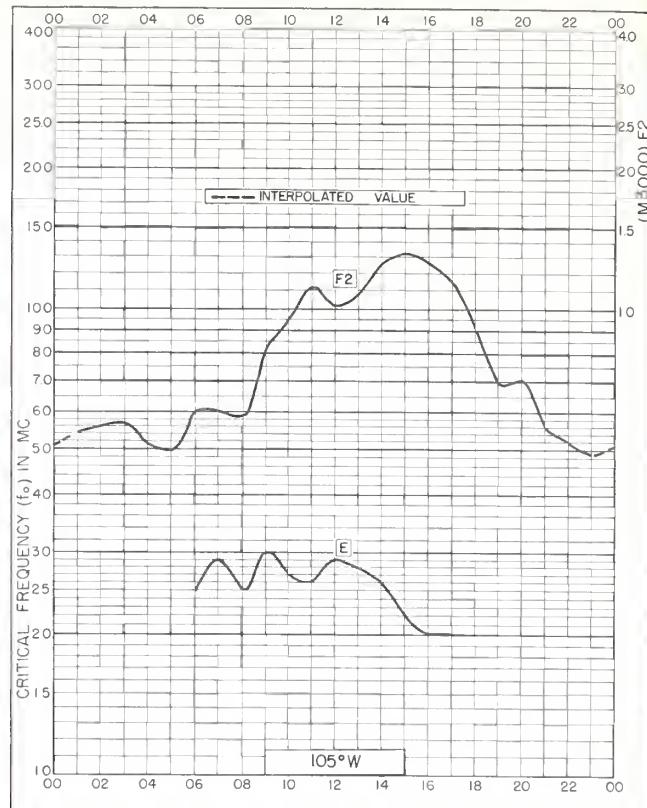


Fig 58 YELLOKNIFE , CANADA
62.4°N, 114.4°W NOVEMBER 1957

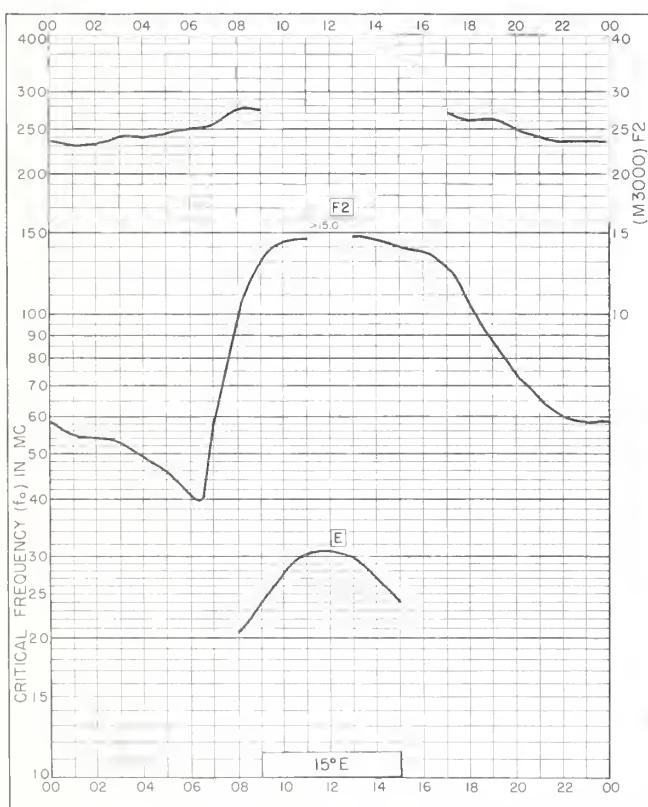


Fig. 59. JULIUSRUH/RÜGEN , GERMANY
54.6°N, 13.4°E NOVEMBER 1957

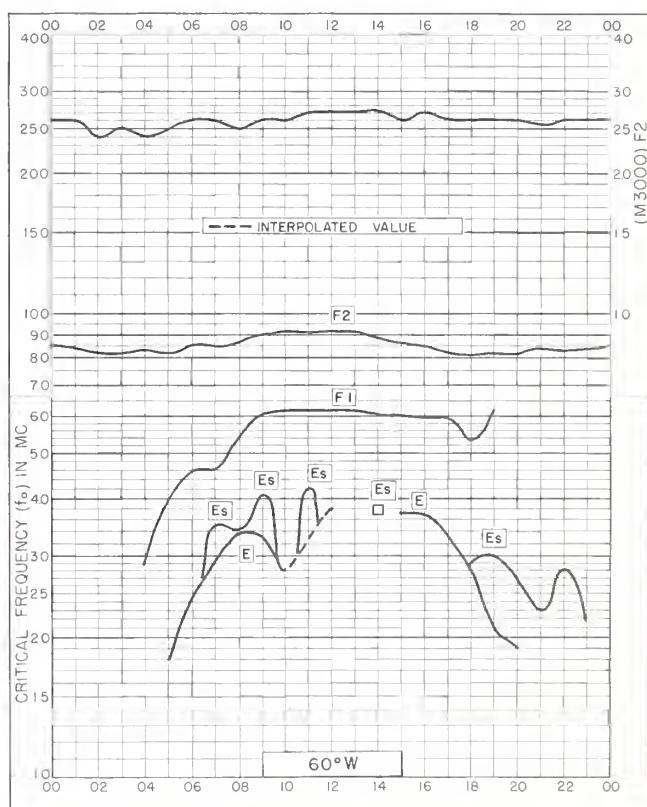


Fig. 60. USHUAIA , ARGENTINA
54.8°S, 68.3°W NOVEMBER 1957



Fig. 61. JULIUSRUH/RÜGEN, GERMANY
54.6°N, 13.4°E OCTOBER 1957

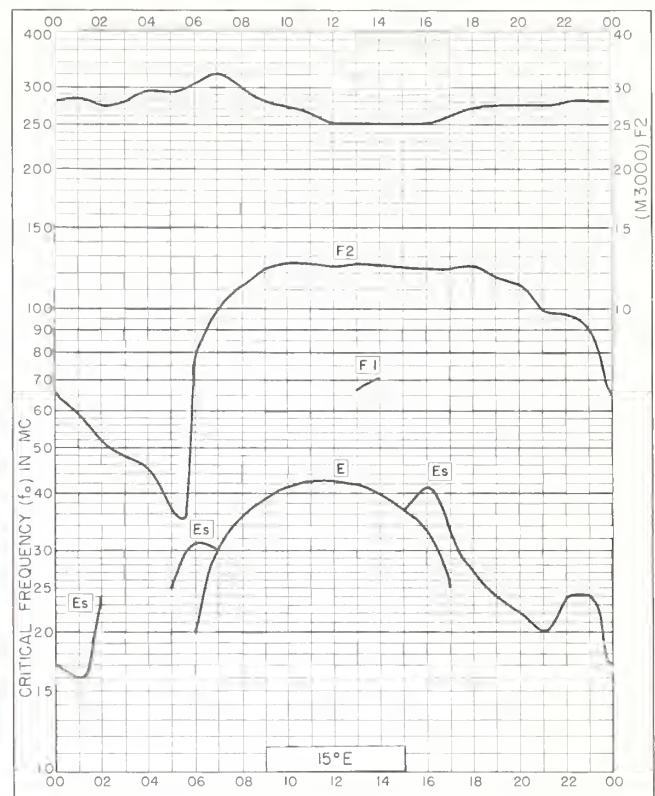


Fig. 62. TSUMEB, SOUTH W. AFRICA
19.2°S, 17.7°E SEPTEMBER 1957

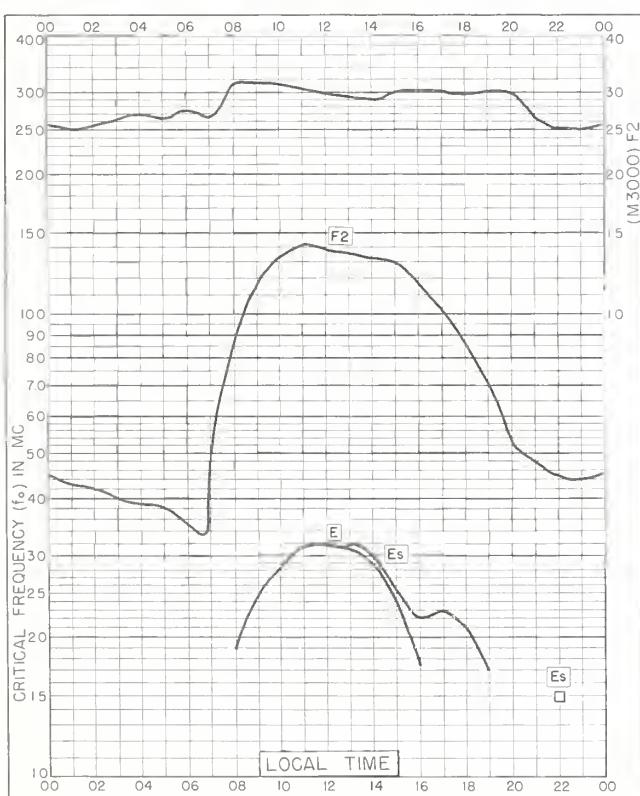


Fig. 63. FREIBURG, GERMANY
48.1°N, 7.8°E DECEMBER 1956

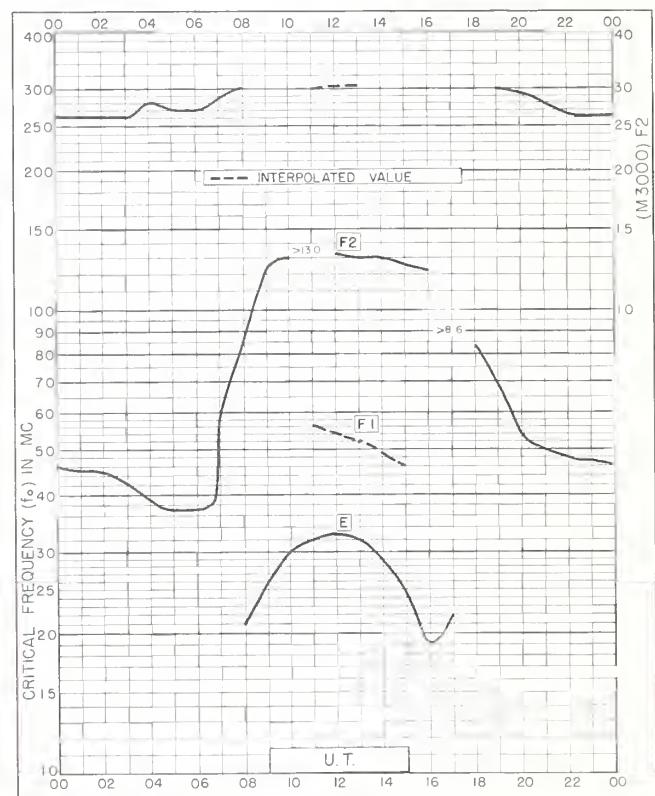


Fig. 64. POITIERS, FRANCE
46.6°N, 0.3°E DECEMBER 1956

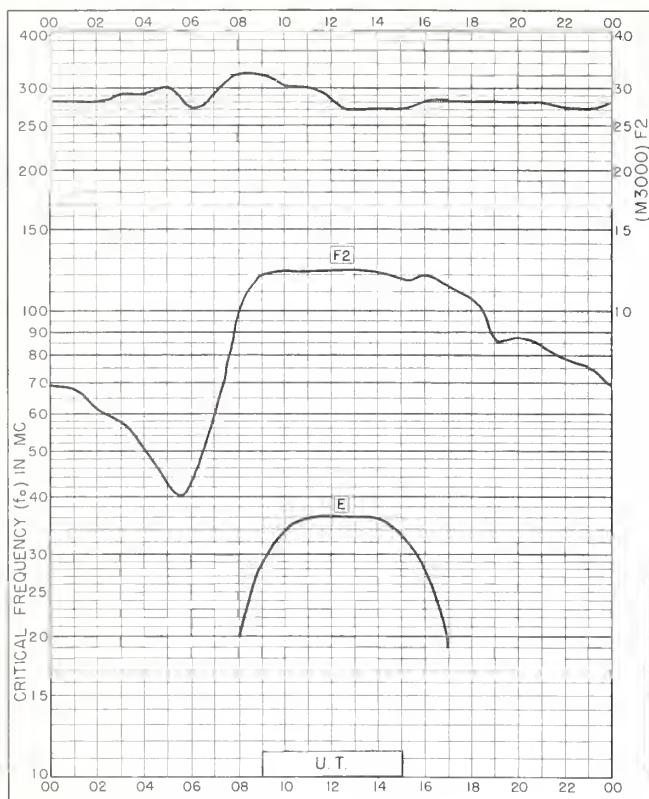


Fig. 65. CASABLANCA , MOROCCO
33.6°N, 7.6°W DECEMBER 1956

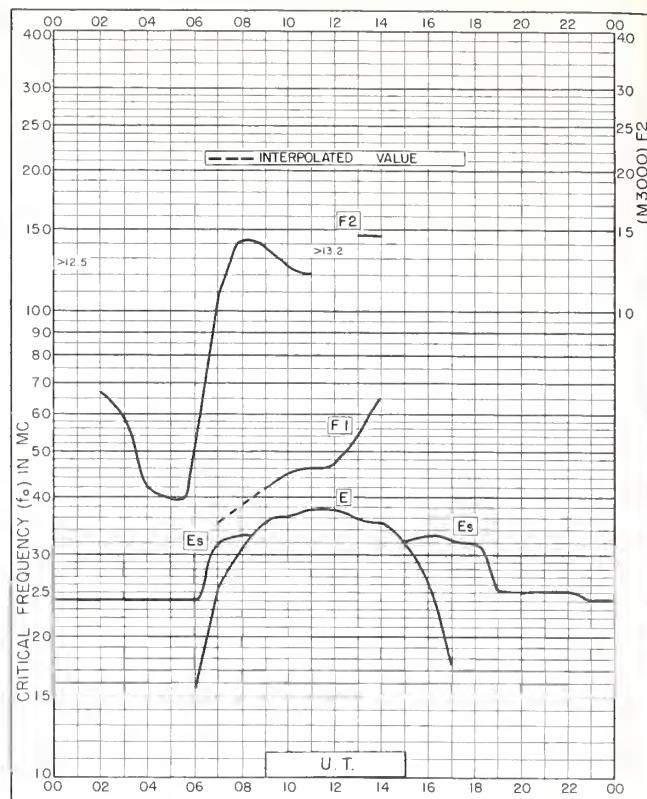


Fig. 66. TAMANRASSET , FRENCH W. AFRICA
22.8°N, 5.5°E DECEMBER 1956

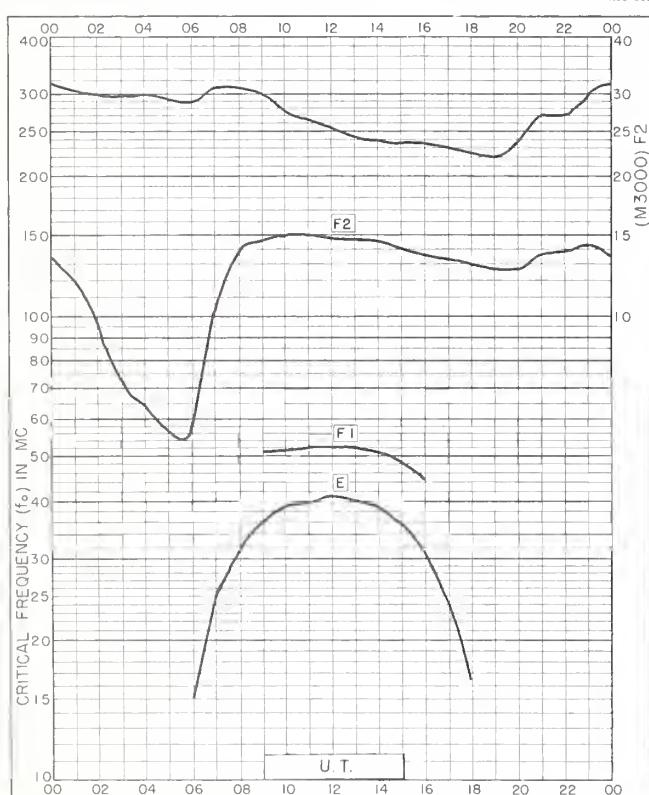


Fig. 67. DAKAR , FRENCH W. AFRICA
14.8°N, 17.4°W DECEMBER 1956

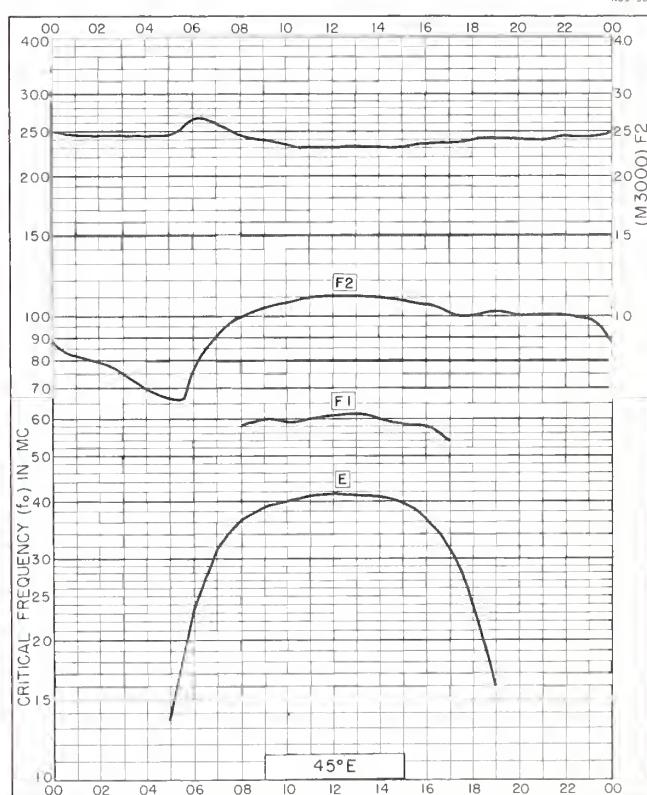


Fig. 68. TANANARIVE , MADAGASCAR
18.8°S, 47.5°E DECEMBER 1956

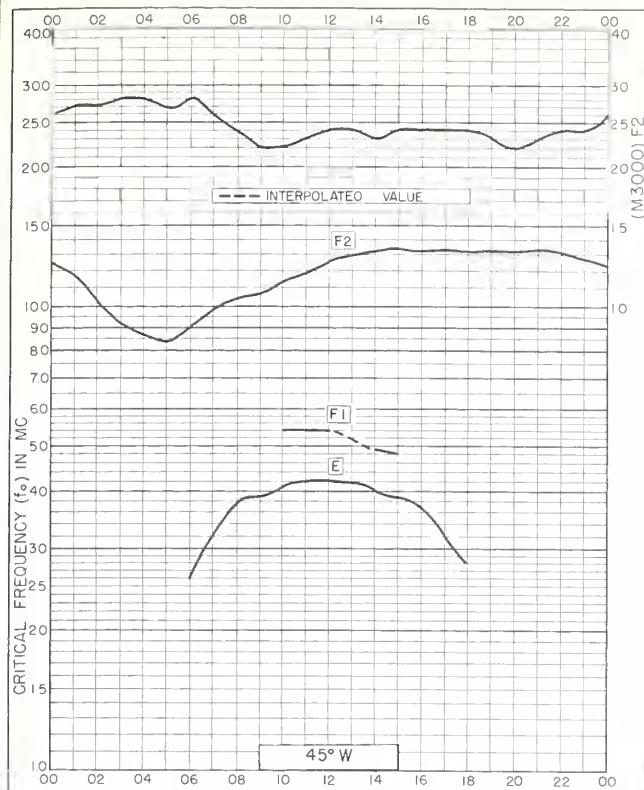


Fig. 69. SÃO PAULO, BRAZIL
23.5°S, 46.5°W DECEMBER 1956

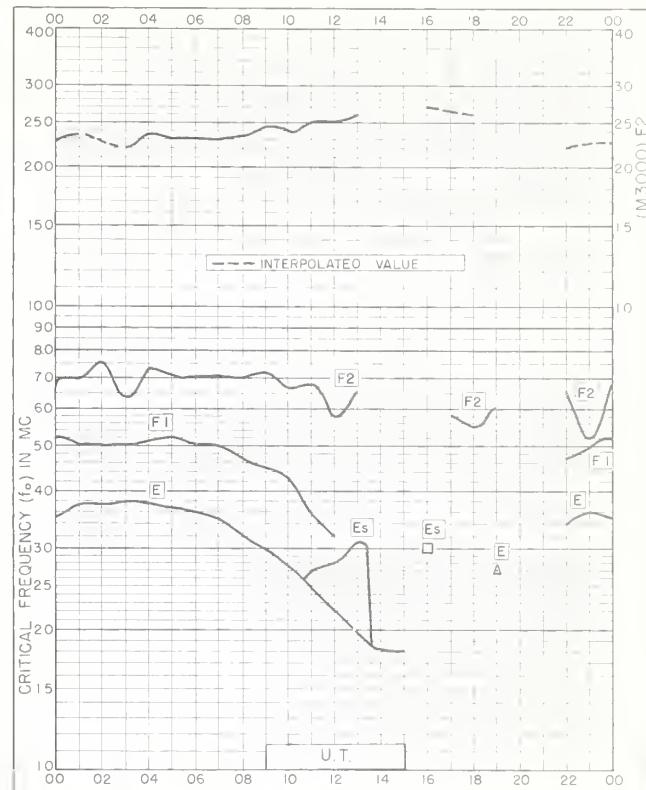


Fig. 70. TERRE ADELIE
66.7°S, 140.0°E DECEMBER 1956

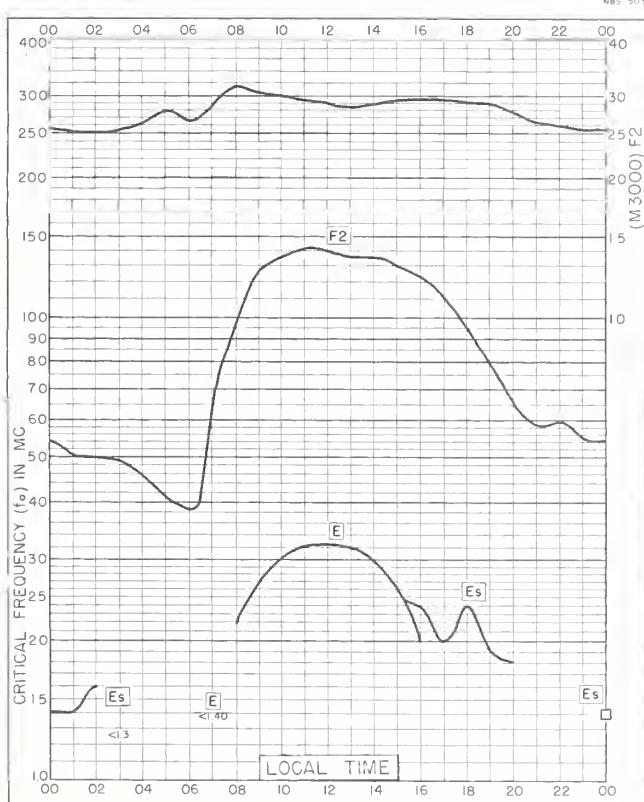


Fig. 71. FREIBURG, GERMANY
48.1°N, 7.8°E NOVEMBER 1956



Fig. 72. POITIERS, FRANCE
46.6°N, 0.3°E NOVEMBER 1956

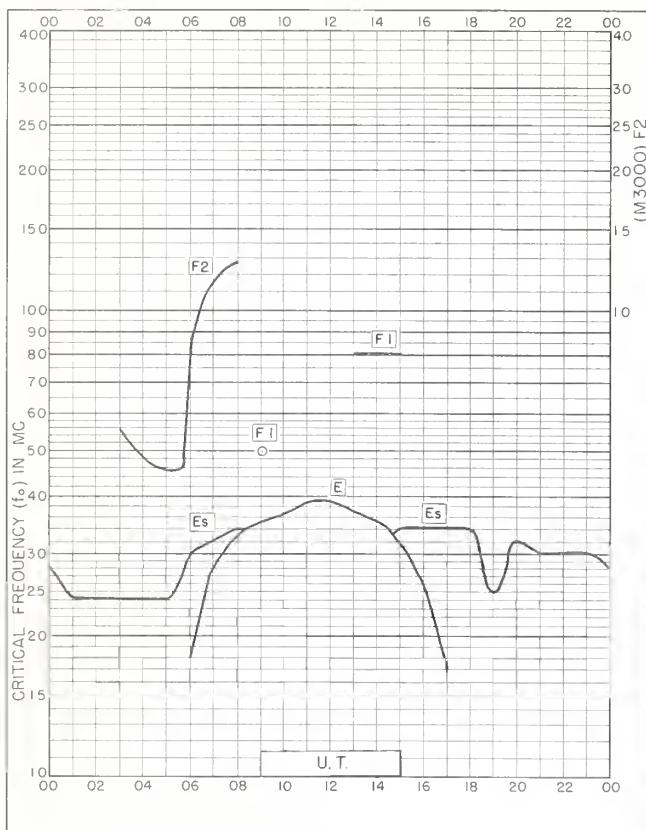


Fig. 73. TAMANRASSET, FRENCH W. AFRICA
22.8°N, 5.5°E NOVEMBER 1956

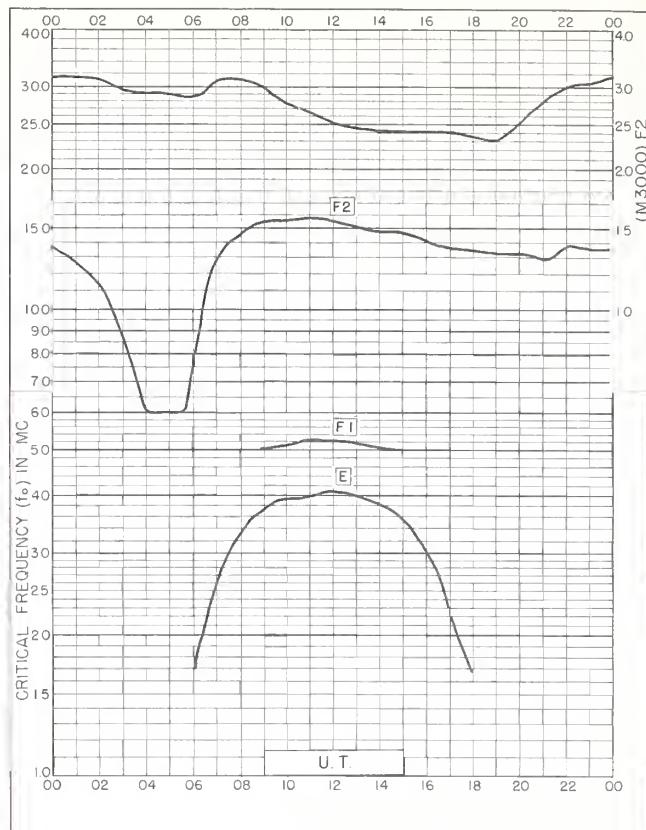


Fig. 74. DAKAR, FRENCH W. AFRICA
14.8°N, 17.4°W NOVEMBER 1956

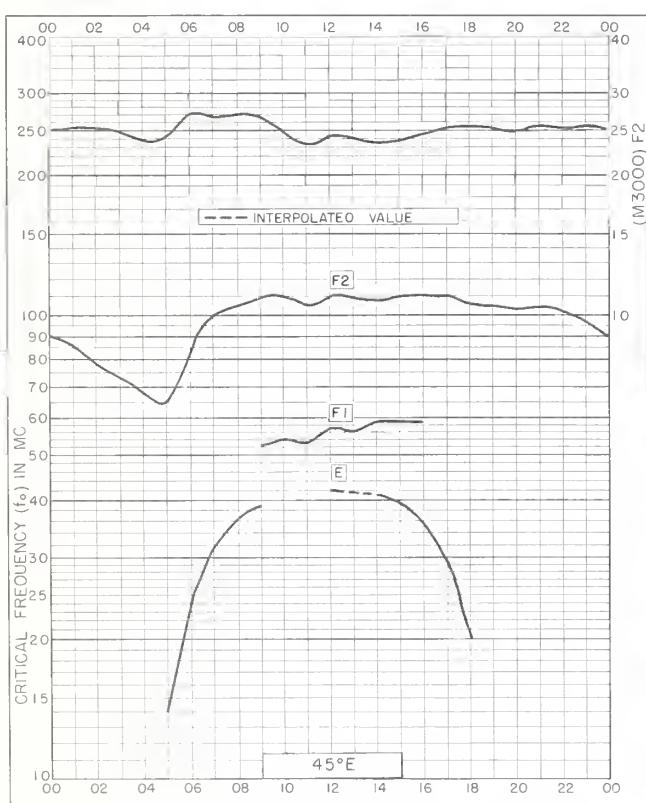


Fig. 75. TANANARIVE, MADAGASCAR
18.8°S, 47.5°E NOVEMBER 1956



Fig. 76. CAMPBELL I.
52.5°S, 169.2°E NOVEMBER 1956

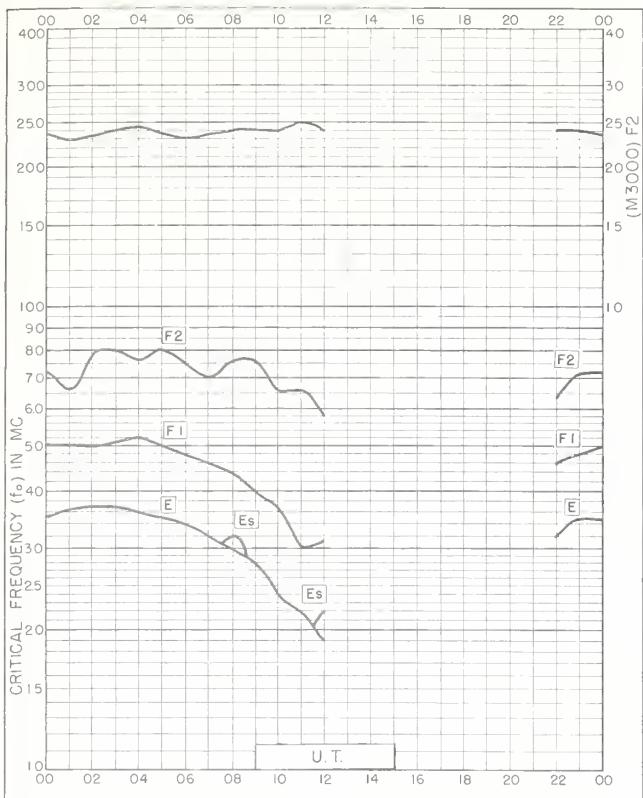


Fig. 77. TERRE ADELIE
66.7°S, 140.0°E NOVEMBER 1956

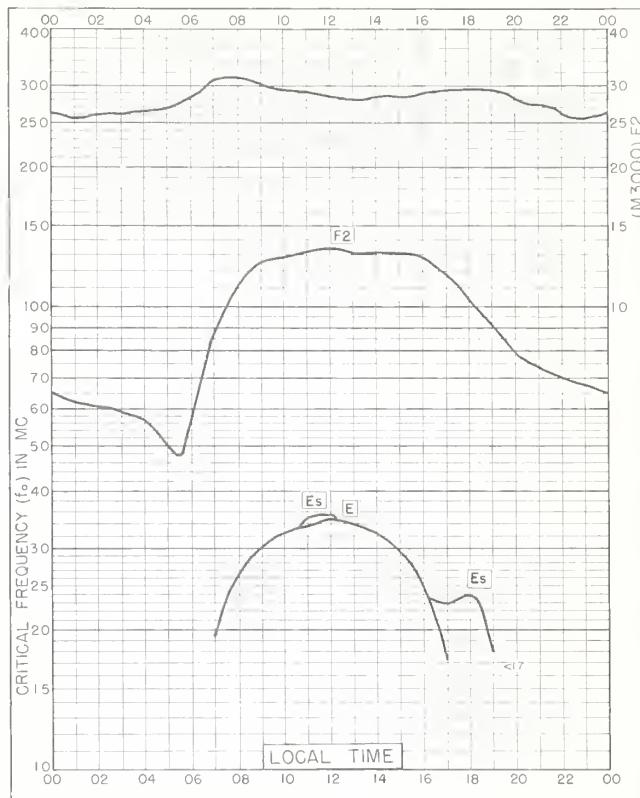


Fig. 78. FREIBURG, GERMANY
48.1°N, 7.8°E OCTOBER 1956

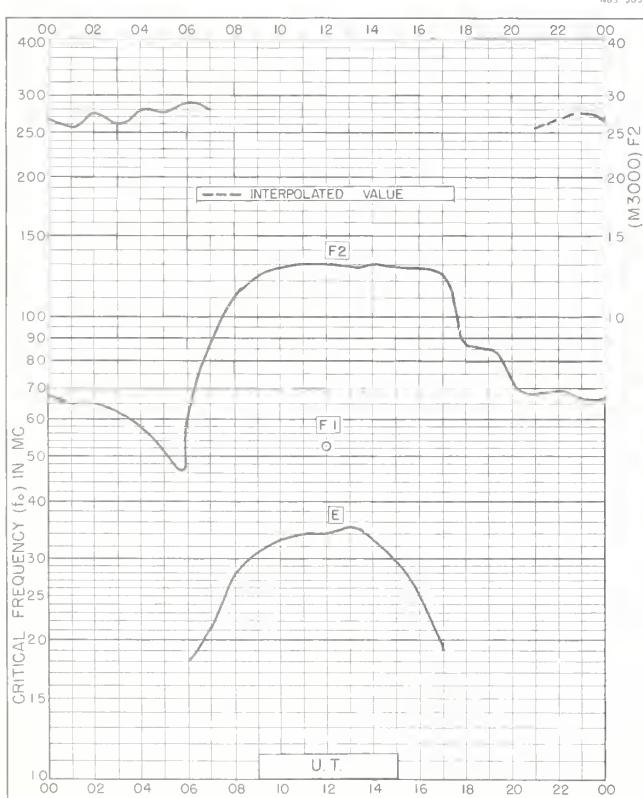


Fig. 79. POITIERS, FRANCE
46.6°N, 0.3°E OCTOBER 1956

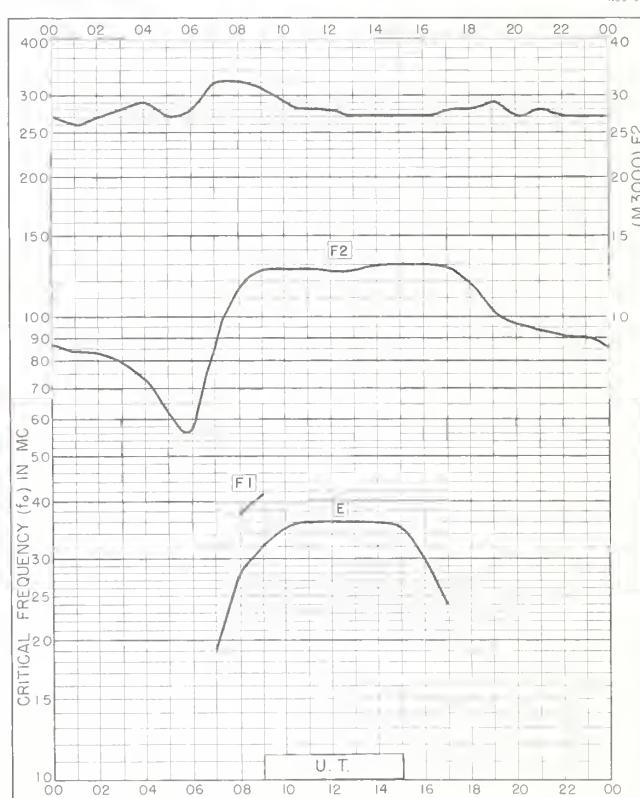


Fig. 80. CASABLANCA, MOROCCO
33.6°N, 7.6°W OCTOBER 1956

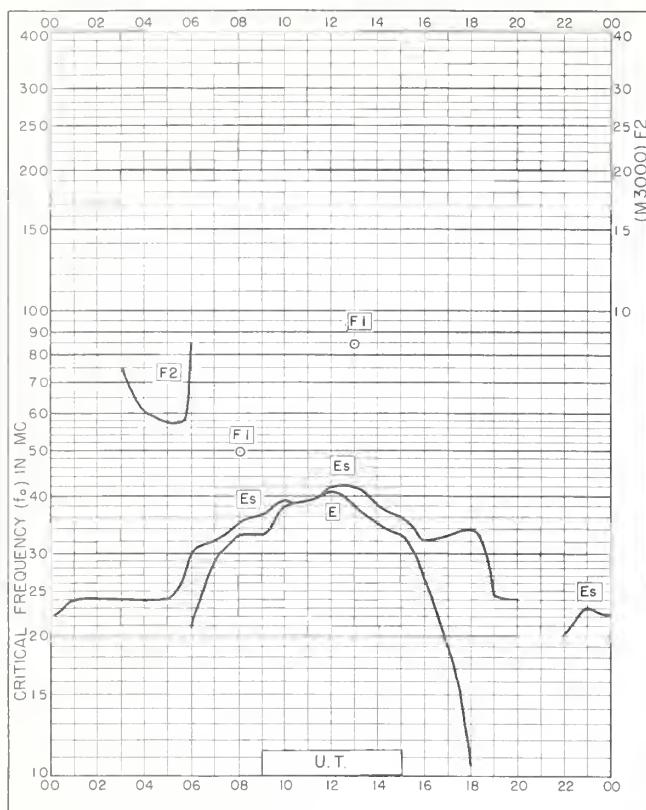


Fig. 81. TAMANRASSET, FRENCH W. AFRICA
22.8°N, 5.5°E OCTOBER 1956

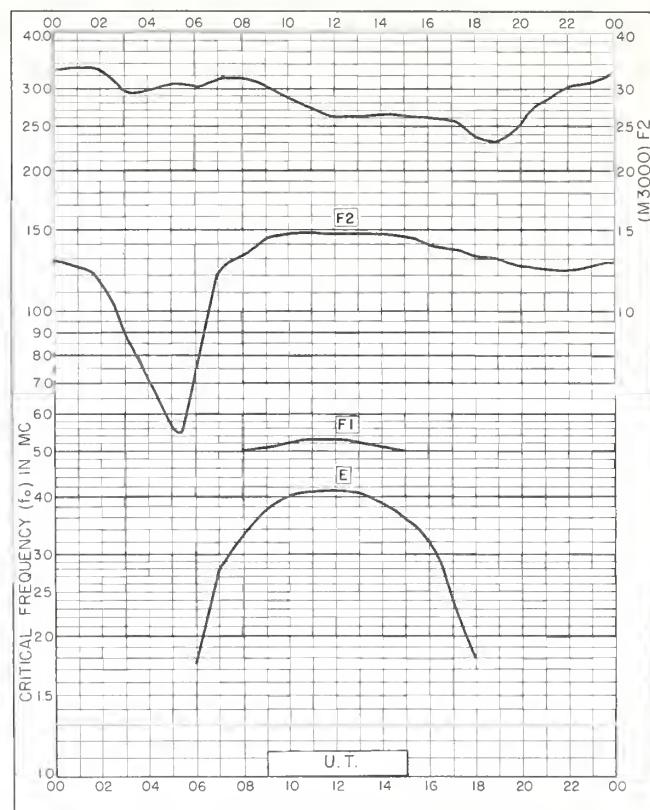


Fig. 82. DAKAR, FRENCH W. AFRICA
14.8°N, 17.4°W OCTOBER 1956

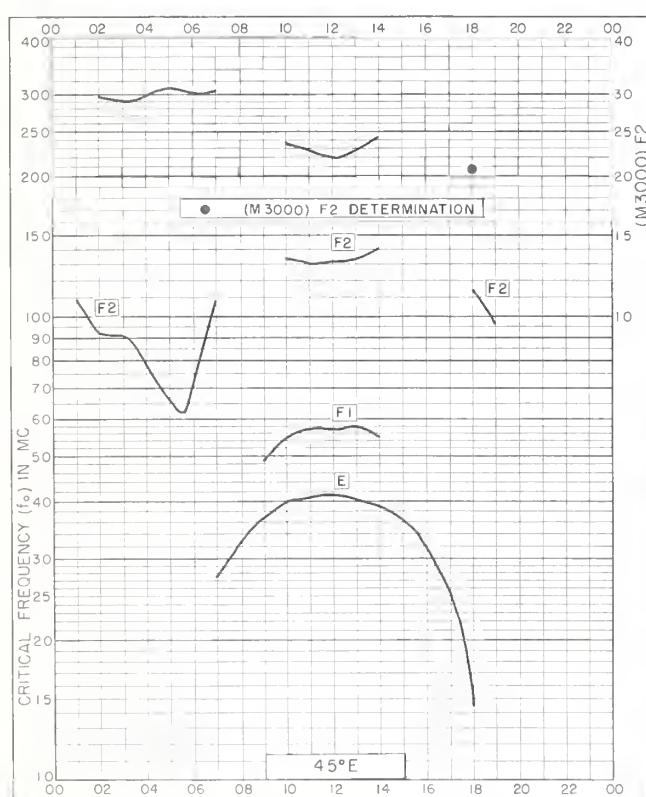


Fig. 83. DJIBOUTI, FRENCH SOMALILAND
II. 6°N, 43.2°E OCTOBER 1956

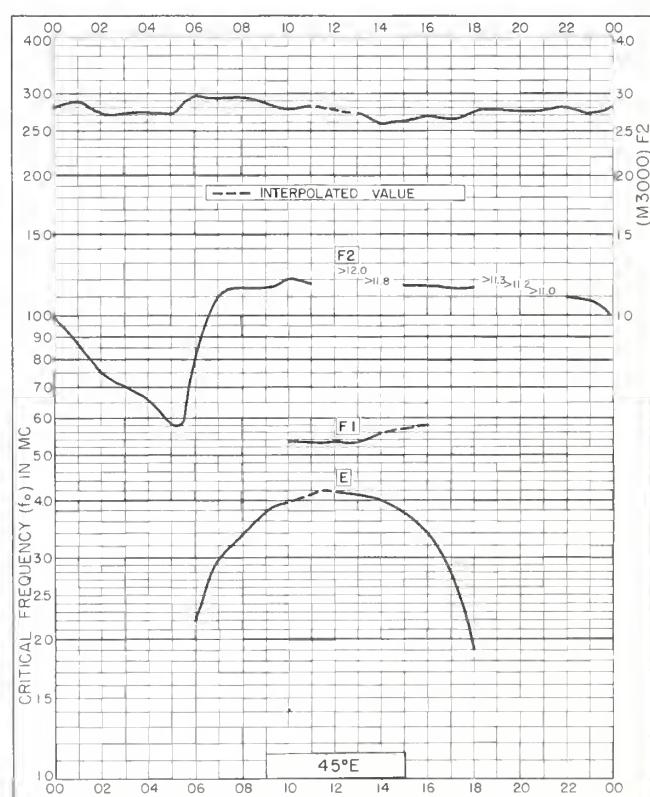


Fig. 84. TANANARIVE, MADAGASCAR
18.8°S, 47.5°E OCTOBER 1956

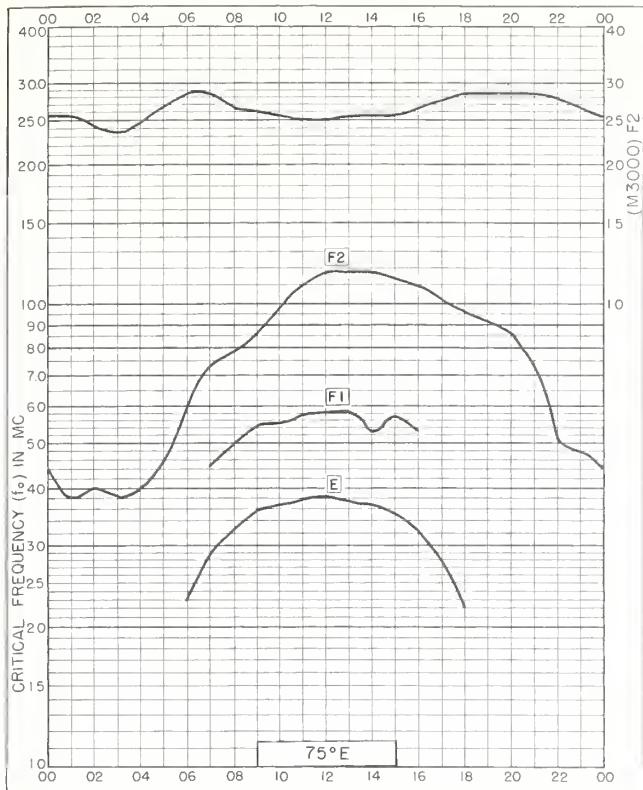


Fig. 85. KERGUELEN I.
49.4°S, 70.3°E OCTOBER 1956

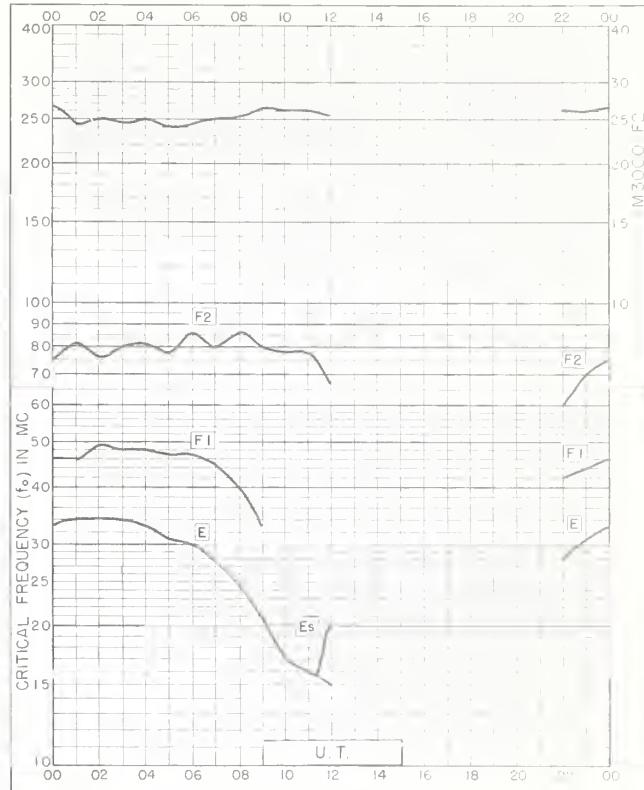


Fig. 86. TERRE ADELIE
66.7°S, 140.0°E OCTOBER 1956

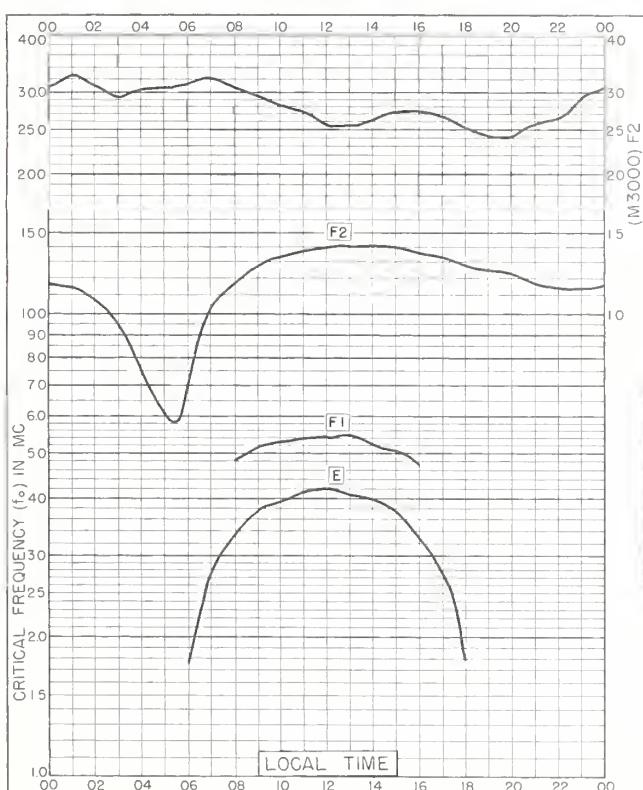


Fig. 87. DAKAR, FRENCH W. AFRICA
14.7°N, 17.4°W SEPTEMBER 1956

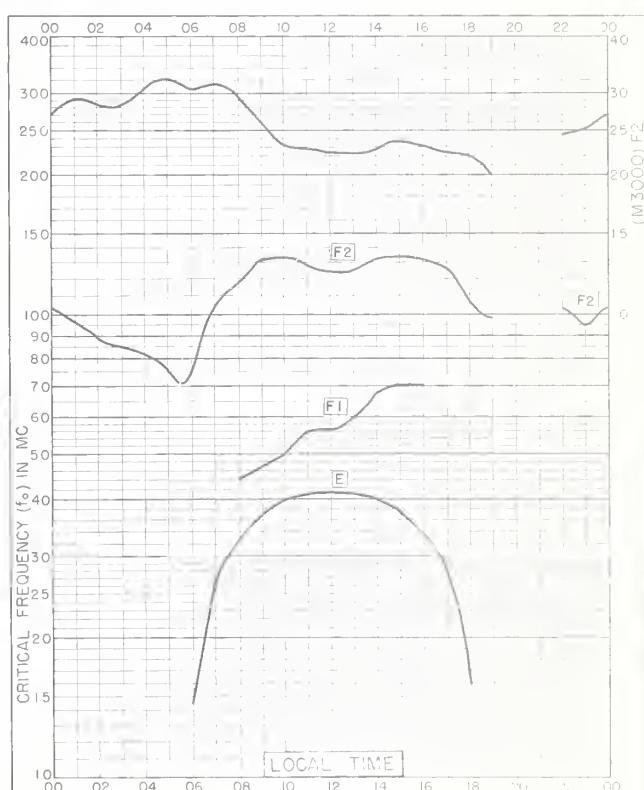
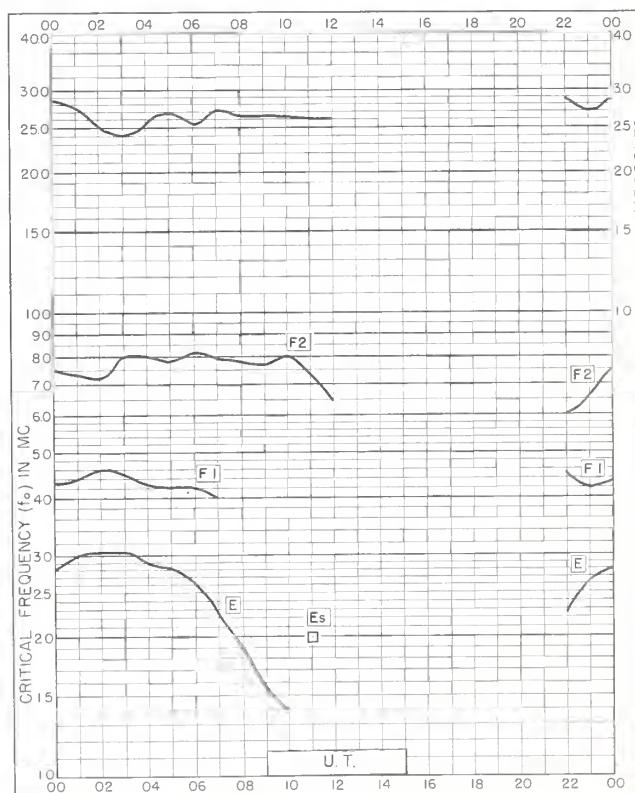
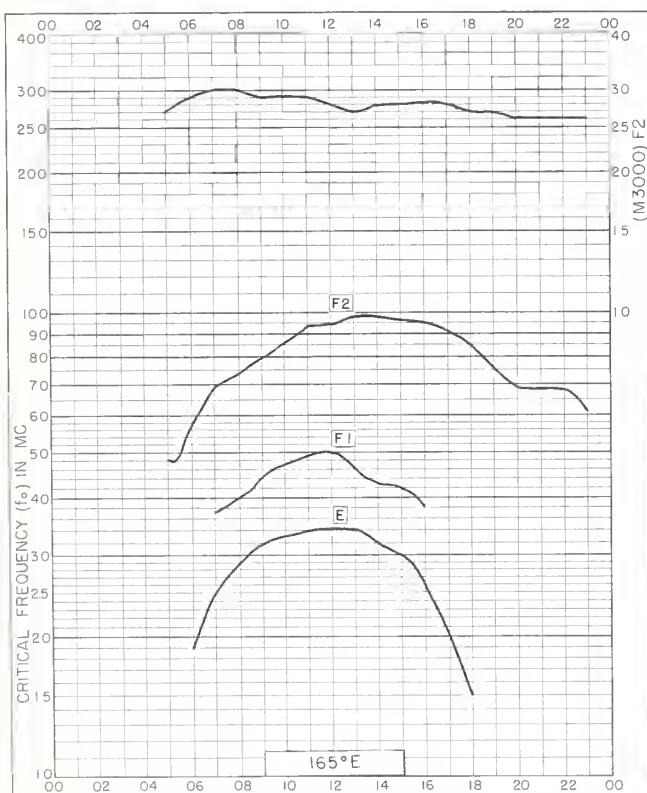
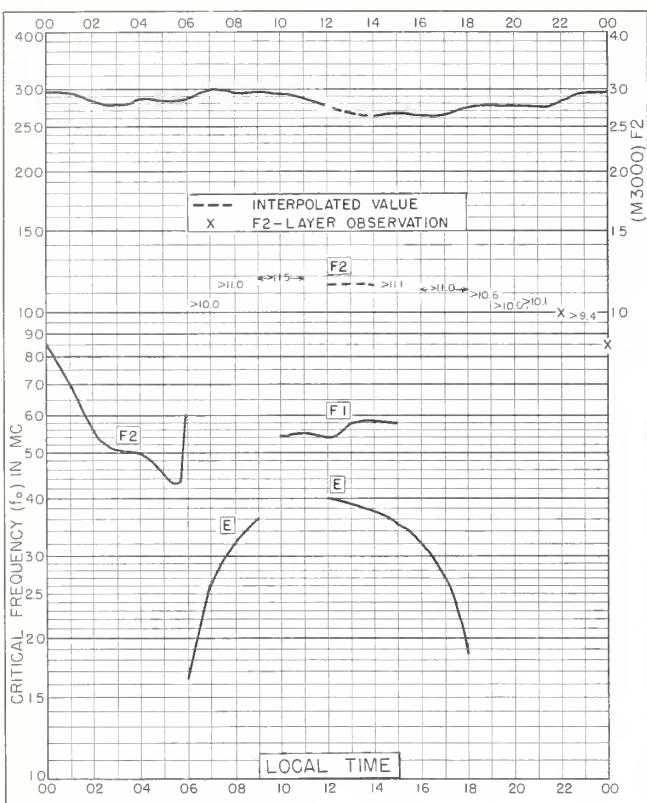


Fig. 88. DJIBOUTI, FRENCH SOMALILAND
11.5°N, 43.1°E SEPTEMBER 1956



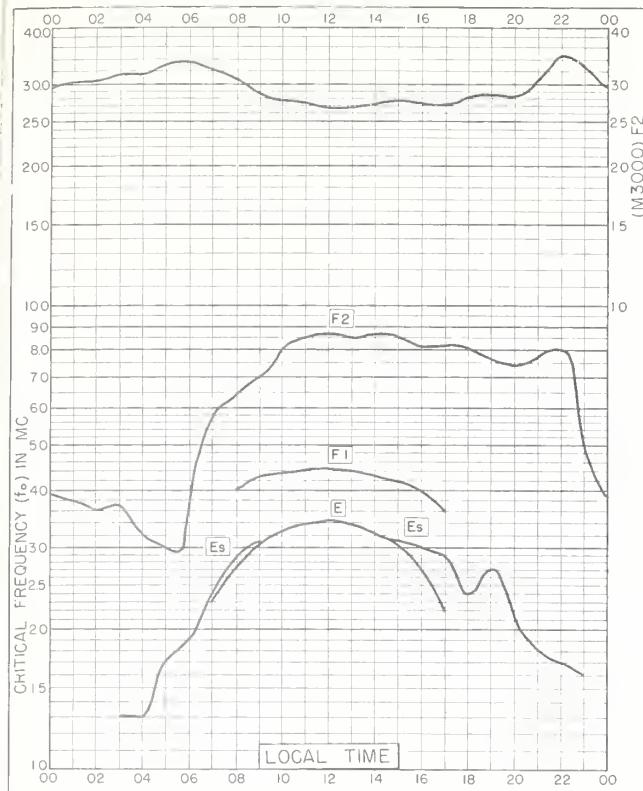


Fig. 93. LWIRO, CONGO
2.3°S, 28.8°E DECEMBER 1954

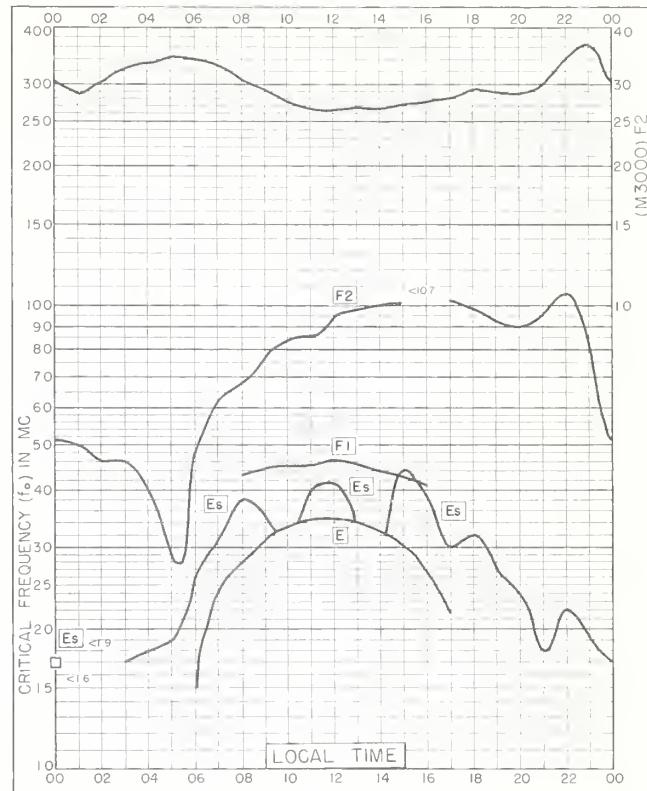


Fig. 94. LWIRO, CONGO
2.3°S, 28.8°E NOVEMBER 1954

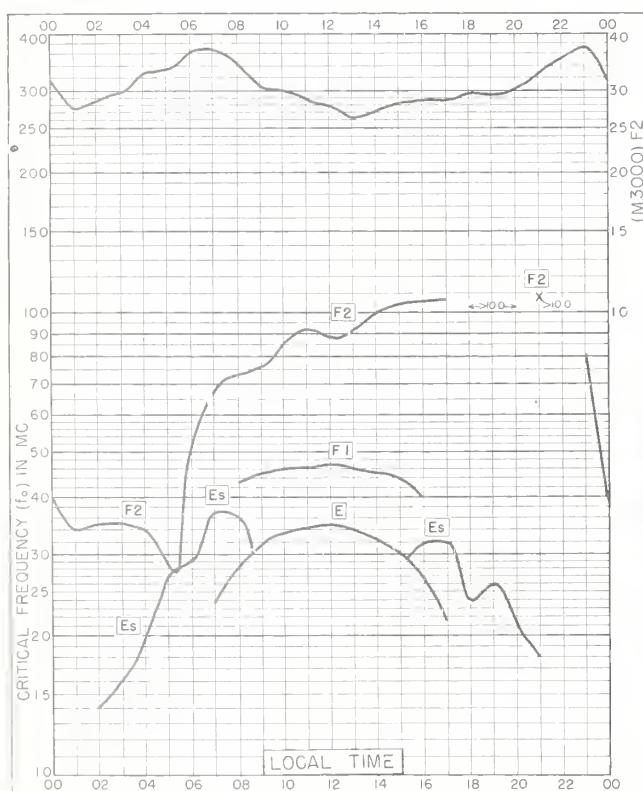


Fig. 95. LWIRO, CONGO
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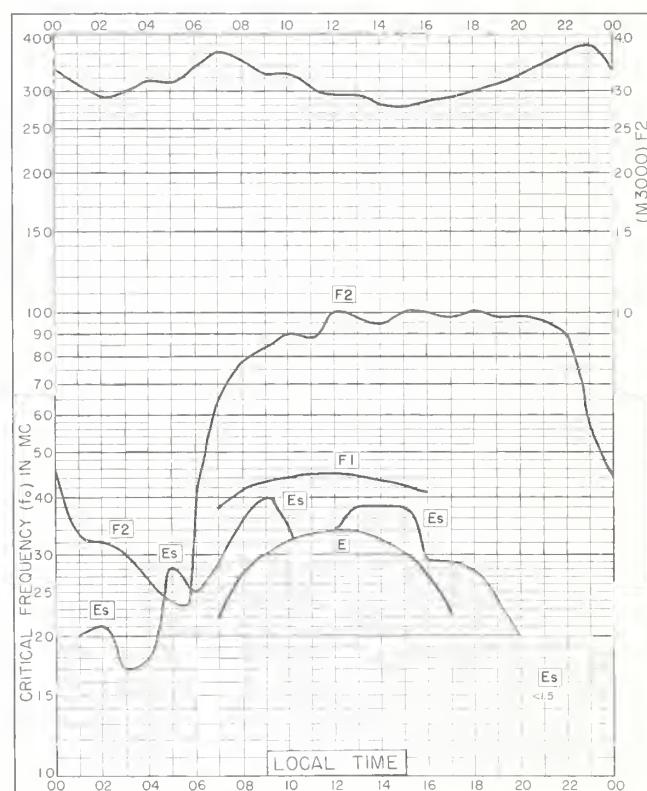
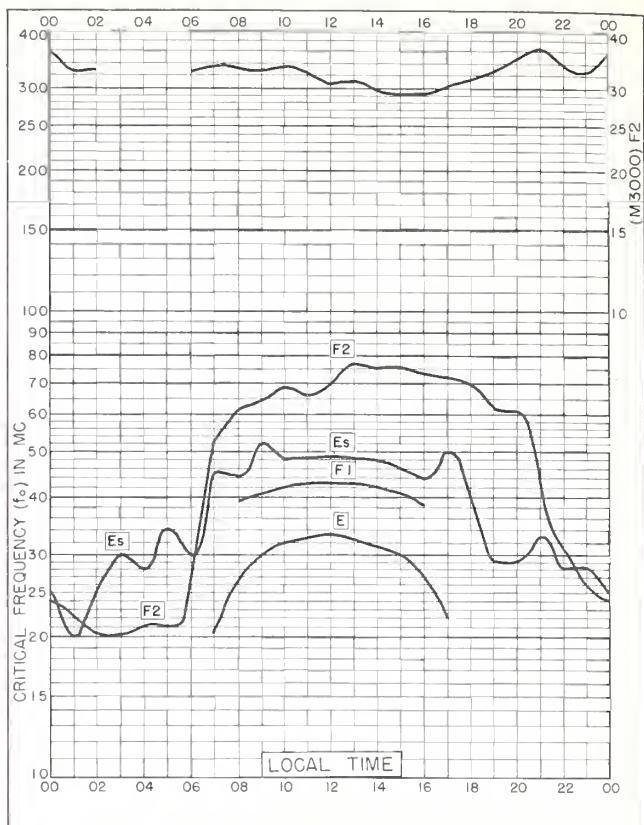


Fig. 96. LWIRO, CONGO
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