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PART A

IONOSPHERIC DATA

ISSUED
APRIL 1964

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

CRPL-F 236
PART A

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
20 April 1964

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 distribution of ionospheric and related geophysical data. Part A, "Ionospheric Data," and Part B, "Solar-Geophysical Data," of the CRPL-F series present a variety of data in convenient form for use in research in radio propagation and the ionosphere and in other geophysical problems.

The current form of the tables of ionospheric data provides the monthly medians and, in addition, the number of values entering into the median determination (count) for all ionospheric characteristics listed. Also, when available, the upper and lower quartile values indicated by UQ and LQ in the tables, are listed for foF2, h'F2, h'F, and M(3000)F2. Quartile values are not listed for the other characteristics because of space limitations. The tables are prepared by IBM machine methods.

Beginning with CRPL-F221, Part A, "Ionospheric Data," the hourly median values for the graphs of critical frequencies and M(3000)F2 were plotted by machine methods instead of manually, as in earlier issues. Graphs of critical frequencies and M(3000)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. Data on percentage of time of occurrence of fEs above 3, 5, and 7 Mc are available from the CRPL and the IGY World Data Center 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 the original data. The tables and graphs now show the ionospheric data as they are provided by the originating laboratory. Responsibility for the accuracy and reliability of the data rests entirely with the originator.

Medians of data for the U.S. stations are computed in accordance with the recommendations of the World-Wide Soundings Committee. 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 (Elsevir, 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 1963, 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	10	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	49
1962	45	42	40	39	39	38	37	35	33	31	30	30
1963	29	30	30	29	29	28	28	27	27			
1964												

Units of Ionospheric Data Tables

foF2, foEs - - - Tenths of a megacycle
foF1, foE - - - Hundredths of a megacycle
h'F2, h'F, h'E - Kilometers
M(3000)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 IN TABLES 1 TO 100 AND FIGURES 1 TO 100 WERE ASSEMBLED BY THE CENTRAL RADIO PROPAGATION LABORATORY FOR ANALYSIS, CORRELATION AND DISTRIBUTION. THE FOLLOWING ARE THE SOURCES OF THE DATA IN THIS ISSUE.

COMMONWEALTH OF AUSTRALIA, IONOSPHERIC PREDICTION SERVICE OF THE COMMONWEALTH OBSERVATORY.
- MAWSON, ANTARCTICA
- TOWNSVILLE, AUSTRALIA
- WILKES STATION, ANTARCTICA

UNIVERSITY OF GRAZ.
- GRAZ, AUSTRIA

BELGIAN ROYAL METEOROLOGICAL INSTITUTE.
- DOURBES, BELGIUM

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- SLOUGH, ENGLAND

DEFENCE RESEARCH BOARD, CANADA.
- CHURCHILL, CANADA
- OTTAWA, CANADA
- RESOLUTE BAY, CANADA
- ST. JOHNS, NEWFOUNDLAND
- WINNIPEG, CANADA

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- CONCEPCION, CHILE

RADIO WAVE RESEARCH LABORATORIES, DIRECTORATE GENERAL OF TELECOMMUNICATIONS, MINISTRY OF COMMUNICATIONS, TAIPEI, HSIAN, TAIWAN, REPUBLIC OF CHINA,
- TAIPEI (TAIWAN), CHINA

CZECHOSLOVAK ACADEMY OF SCIENCES.
- PRUHONICE, CZECHOSLOVAKIA

DANISH NATIONAL COMMITTEE OF URSI.
- GODHAVN, GREENLAND

GENERAL DIRECTION OF POSTS AND TELEGRAPHS, HELSINKI, FINLAND.
- NURMIJARVI, FINLAND

THE FINNISH ACADEMY OF SCIENCES AND LETTERS.
- SODANKYLA, FINLAND

IONOSPHERIC RESEARCH GROUP (GRI), FRANCE.
BANGUI, CENTRAL AFRICAN REPUBLIC
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POITIERS, FRANCE
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ICELANDIC POST AND TELEGRAPH ADMINISTRATION.
REYKJAVIK, ICELAND

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BOMBAY, INDIA (ALL INDIA RADIO)
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MADRAS, INDIA (ALL INDIA RADIO)
TIRUCHY, INDIA (ALL INDIA RADIO)
TRIVANDRUM, INDIA (ALL INDIA RADIO)

NATIONAL INSTITUTE OF GEOPHYSICS, CITY UNIVERSITY, ROME, ITALY.
ROME, ITALY

THE ROYAL NETHERLANDS METEOROLOGICAL INSTITUTE.
PARAMARIBO, SURINAM

NORWEGIAN DEFENCE RESEARCH ESTABLISHMENT, KJELLER PER LILLESTROM, NORWAY.
TROMSO, NORWAY

RESEARCH INSTITUTE OF NATIONAL DEFENCE, STOCKHOLM, SWEDEN.
KIRUNA, SWEDEN
LYCKSELE, SWEDEN
UPPSALA, SWEDEN

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UNITED STATES ARMY SIGNAL CORPS., UNITED STATES OF AMERICA.
THULE, GREENLAND
WHITE SANDS, NEW MEXICO

NATIONAL BUREAU OF STANDARDS, UNITED STATES OF AMERICA.
(CENTRAL RADIO PROPAGATION LABORATORY).

BARROW, ALASKA
COLLEGE (FAIRBANKS), ALASKA (GEOPHY INST OF UNIV OF ALASKA)
HUANCAYO, PERU (INSTITUTO GEOFISICO DEL PERU)
TALARA, PERU (INSTITUTO GEOFISICO DEL PERU)

When a "less than" sign occurs on the graph of the E-layer frequency and a qualifying E is not found in the table, the corresponding descriptive E (which at times means "less than") was not printed in the table

TABLES OF IONOSPHERIC DATA

July 1963 - January 1959

TABLE 1

THULE, GREENLAND (76.4N, 68.3W) TIME 75.0W

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	U	U	U	U	U		U	U			U								U	U	U		U	U
	CNT	42	39	40	40	40	39	40	41	43	43	42	41	44	43	44	44	43	43	42	43	40	41	40	41
	UQ	25	23	20	18	17	25	20	21	15	16	19	15	19	21	20	17	23	22	26	25	24	25	22	23
	LQ	44	42	42	41	43	43	43	46	45	46	46	46	48	47	47	46	45	46	46	46	44	44	45	45
		38	38	36	37	38	38	36	36	37	38	38	38	38	40	40	38	39	39	40	40	37	38	37	38
h' F2	MED	U	U	U							U		U	U								U			U
	CNT	288	305	300	304	330	343	404	390	390	380	405	410	400	412	385	378	360	379	340	311	315	295	288	290
	UQ	8	14	15	14	19	20	20	26	18	21	20	20	25	24	27	22	22	25	26	21	15	12	8	9
	LQ	305	330	321	340	385	440		660	470					550	500	417	418	413	390	338	370	350	310	338
		260	270	265	280	290	305	334	330	310	334	370	352	350	369	340	350	337	321	301	301	300	275	264	258
h' F	MED	220	220	220	216	210	200	200	200	201	200	200	200	200	200	200	203	203	204	210	219	213	220	220	220
	CNT	30	30	29	28	30	30	27	30	28	26	29	28	27	26	26	25	27	28	30	31	28	29	31	31
	UQ	230	225	230	222	220	211	210	213	210	209	210	209	210	205	210	214	220	215	220	230	228	238	229	225
	LQ	211	210	204	200	200	197	190	190	198	198	199	191	195	195	195	190	197	200	202	210	207	210	210	211
M(3000)F2	MED	U		U	U	U									270	285	295	295	292	305	U	310	320	328	U
	CNT	340	315	325	320	320	300	260	292	285	275	285									310				330
	UQ	20	18	13	15	13	20	13	18	13	13	16	13	17	17	18	15	19	18	22	22	14	20	16	21
	LQ	348	335	335	345	335	340	328	320	325	308	300	295	305	298	305	305	305	305	325	315	320	330	335	342
		320	300	300	300	290	265											265	260	295	305	305	308	318	320
fo F1	MED			U	U		U														U				
	CNT		3	7	8	335	350	360	360	370	380	380	380	380	380	380	370	370	360	350	340	320			
						16	18	25	27	27	26	26	27	26	24	26	23	25	25	25	16	10	3	1	
fo E	MED	U	U	U			U				U			U	U	U									U
	CNT	182	190	190	200	220	230	240	250	260	260	270	280	270	270	270	260	255	245	232	220	210	200	190	180
		16	20	22	22	18	25	21	19	17	9	13	7	15	17	12	16	16	18	16	20	17	19	16	13
h' E	MED																					E	E	E	
	CNT	120	120	110	111	110	108	103	102	100	100	100	100	100	100	100	100	101	101	109	110	115	118	120	116
		26	29	27	29	31	31	30	30	30	28	29	28	25	25	29	27	28	29	29	31	30	29	28	21
fo Es	MED	U	U	U			U				U					U									
	CNT	18	19	19	20	22	23	24	25	26	26	28	28	28	27	27	29	26	25	24	22	23	20	19	20
		27	30	31	31	31	31	30	30	30	29	30	31	31	31	31	29	29	30	30	31	31	30	28	28

SWEEP 0.25 MC TO 20.0 MC IN 3 MINUTES 36 SECONDS. JULY, 1963

TABLE 2

BARROW, ALASKA (71.3N, 156.8W) TIME 150.0W

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	U	U	U	U	U		U																U	
	CNT	40	40	38	39	38	41	41	43	45	44	44	43	44	45	46	45	45	45	44	43	42	43	40	40
	UQ	17	19	13	13	9	17	21	15	19	22	23	26	24	26	26	27	29	29	22	21	18	16	18	19
	LQ	43	41	42	44	43	44	46	46	46	46	47	45	46	47	46	47	47	46	46	45	44	44	42	43
		36	35	36	36	36	36	38	40	41	43	41	42	43	42	43	42	43	42	42	42	41	43	38	39
h' F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h' F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED			U	U	U																			
	CNT	315	312	320	315	295	292	292	270	275	275	280	265	265	270	282	280	288	295	308	310	315	315	312	310
	UQ	15	16	13	9	7	14	18	11	18	22	21	24	22	26	26	26	28	27	20	19	15	13	14	14
	LQ	335	325	330	335	320	305	305	280	300	300	305	300	290	300	300	305	305	315	318	320	320	325	325	325
		300	302	305	305	285	275	265	250	265	250	248	248	250	235	260	255	268	270	295	290	305	310	300	290
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT																								
h' E	MED																								
	CNT																								
fo Es	MED	44	44	39	40	44	40	36	40	34	32	34	32	33	33	29	21	24	21	28	26	35	39	37	43
	CNT	29	29	28	24	27	29	27	29	30	28	28	27	25	25	22	21	21	29	26	28	29	29	29	29

SWEEP 1.0 MC TO 25.0 MC IN 27 SECONDS. JULY, 1963

TABLE 3

COLLEGE (FAIRBANKS), ALASKA (64.9N, 147.8W) TIME 150.0W

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
foF2	MED	35	U	39	37	U	42	42	U	42	41	44	44	45	44	45	44	45	45	44	43	U	U	U	U
	CNT	11	8	6	7	6	9	6	9	10	13	9	12	12	12	12	16	12	15	14	11	37	34	36	38
	UQ	40	36	39	42	39	42	44	46	45	44	47	46	46	46	47	46	46	47	44	45	10	11	7	9
	LQ	33	32	36	36	35	39	37	38	41	38	38	42	44	42	44	42	44	44	43	42	45	42	39	39
																						36	33	31	29
h' F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h' F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED	310	U	312	305		285	290		285	250	282	275	275	275	265	280	302	300	305	312	U	U	U	
	CNT	9	305	10	5	4	6	5	3	9	8	8	10	12	9	11	13	10	15	11	10	325	310	310	
	UQ	322	310	320	315		285	308		292	268	292	300	288	288	295	282	310	315	320	320	7	9	6	4
	LQ	298	290	290	290		270	272		275			250	265	270	235	258	290	280	305	300	335	328	330	
																						310	298	295	
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT																								
h' E	MED																								
	CNT																								
foEs	MED	36	36	54	42	42	38	41	31	E	E		E	E		E	E	E			U			U	U
	CNT	13	13	12	10	7	10	8	7	26	30	36	29	32	31	30	30	34	30	27	35	35	35	41	40
										11	8	6	7	8	7	7	9	6	5	8	11	11	10	11	13

SWEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS. JULY, 1963

*Equipment failure 27th through 31st

TABLE 4

REYKJAVIK, ICELAND (64.1N, 21.8W) TIME 15.0W

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
foF2	MED	D		D	U																		U	U	U
	CNT	35		39	36	34	37	39	42	42	44	45	45	45	46	45	46	46	44	44	44	44	46	45	44
	UQ	9	4	6	12	16	16	19	19	24	26	28	29	28	28	28	27	27	30	29	25	21	15	11	6
	LQ	44		40	41	38	40	41	43	44	47	47	48	46	47	48	49	49	48	46	48	50	50	47	47
		32		34	32	31	35	35	39	38	40	39	42	43	43	44	44	44	43	42	42	42	42	40	37
h' F2	MED							508	360	460	430	400	410	415	435	460	410	380	370	350	350				
	CNT					1	3	12	15	20	25	24	28	24	24	25	24	26	25	21	12	3	1	1	
	UQ							470			740	710	542	522	526	500	460	430	428	380	360				
	LQ							340	320	370	360	368	350	375	385	368	360	350	345	325	325				
h' F	MED			E	E	E						E													
	CNT	280	280	305	290	280	240	235	230	212	210	215	210	210	210	220	220	220	220	230	230	260	280	270	285
	UQ	13	7	10	11	16	15	17	18	22	25	28	29	27	25	25	22	24	22	27	22	21	19	14	12
	LQ	355	290	330	320	310	280	260	240	235	230	220	220	220	230	228	230	232	250	250	285	328	320	300	335
		265	260	255	265	238	220	220	210	215	208	200	205	200	200	200	200	200	220	215	220	250	260	265	270
M(3000)F2	MED				U																		U		
	CNT	3	1	3	3	310	302	288	290	290	278	290	290	278	280	265	282	295	290	300	305	310	318	310	
	UQ					15	14	18	17	21	22	24	27	24	22	26	24	25	25	26	23	20	12	5	3
	LQ				305	320	320	320	320	320	310	310	310	300	290	295	300	305	310	310	310	318	322	325	
					282	300	285	220	268				240	252	260	255	265	275	270	290	295	302	310	280	
fo F1	MED							350	365	375	380	400	400	400	410	400	400	400	380	370					
	CNT					1	2	10	14	20	25	26	29	27	25	25	21	25	21	16	4				
fo E	MED						U	D	U					D	D	D	D	D	D	C					
	CNT						220	220	240	265	D	D	D	290	290	290	285	265	250	238	232	270			
		1	1		1	3	5	10	8	13	12	17	17	14	18	18	16	17	13	16	14	13	4		
h' E	MED																	E				E			
	CNT						119	115	115	112	111	111	111	111	113	111	114	114	114	117	119	121	131		
		1	2	1	2	4	5	10	9	12	13	17	18	15	19	19	18	18	14	17	17	14			
foEs	MED	40	42	46	42	34	26	26	26	27	28	32	31	32	32	32	31	31	35	31	31	32	38	49	48
	CNT	24	23	25	22	18	18	17	14	15	16	19	22	21	23	23	22	26	24	28	29	25	28	24	19

SWEEP 1.0 MC TO 25.0 MC IN 16.2 SECONDS. JULY, 1963

TABLE 5

HUANCAYO, PERU (12.0S, 75.3W) TIME 75.0W

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
foF2	MED	39	38	38	36	30	21	19	48	60	64	61	60	59	60	62	62	64	63	65	61	57	56	51	44
	CNT	25	25	25	19	20	17	25	30	30	30	29	29	28	28	28	27	27	27	27	30	29	26	25	26
	UQ	48	43	42	41	33	28	24	50	62	66	66	63	62	64	64	65	67	71	71	66	62	63	56	51
	LQ	36	33	34	25	20	18	16	45	57	61	58	57	57	57	59	60	59	60	62	57	50	51	46	40
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MEQ																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED	340	338	332	340	330	330	310	325	305	280	275	265	260	262	265	270	265	280	290	300	310	325	335	340
	CNT	25	24	24	19	19	14	22	29	30	30	29	29	27	28	24	25	27	27	27	49	28	26	24	26
	UQ	350	350	345	350	340	345	320	330	320	300	290	275	280	270	272	275	275	285	300	320	328	335	345	350
	LQ	332	320	320	330	325	320	290	320	300	275	270	260	250	250	260	258	260	270	280	288	295	310	330	325
foF1	MED										410	420	430	430	430	420									
	CNT										7	25	28	28	28	18	3								
foE	MED							U	U	U	U	U	U	U	U	U	U	U	U						
	CNT							1	23	24	27	16	9	10	11	17	19	22	19						
h'E	MEQ																								
	CNT																								
foEs	MED				17	26			43	46	47	48	49	48	48	48	48	48	45	25	43	41	24		19
	CNT	2	7	1	5	9	6	3	29	30	30	29	29	28	28	26	26	27	27	7	7	5	5	4	5

SWEEP 1.0 MC TO 25.0 MC IN 1 MINUTE 48 SECONDS. JULY, 1963

TABLE 6

WHITE SANDS, NEW MEXICO (32.3N, 106.5W) TIME 105.0W

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
foF2	MEQ	U																							
	CNT	37	35	36	34	32	34	46	50	56	58	60	62	64	66	64	64	62	62	63	65	64	52	44	40
	UQ	22	22	18	24	25	26	25	25	24	26	24	25	25	28	28	27	27	28	27	28	28	26	20	20
	LQ	43	39	39	37	36	36	48	56	63	65	63	68	70	69	69	71	73	71	72	69	71	61	50	42
		32	31	32	30	28	32	40	45	50	52	54	55	58	58	60	58	58	57	56	57	57	48	39	34
h'F2	MED							290	323	330	340	362	362	353	352	350	322	320	292	273					
	CNT							12	24	22	25	23	24	25	28	28	27	26	28	25	1				
	UQ							361	404	371	395	403	390	380	379	366	347	327	328	288					
	LQ							268	285	290	308	320	347	322	330	320	309	300	280	259					
h'F	MED	E	E	E	E											E				E				E	E
	CNT	280	282	280	270	264	250	220	219	202	190	188	200	194	200	215	230	209	224	240	248	232	230	240	272
	UQ	26	24	27	27	29	27	24	22	21	18	20	21	21	22	24	20	24	14	16	28	28	27	27	22
	LQ	300	300	300	290	272	270	230	250	236	207	200	225	209	220	228	245	222	231	263	250	250	250	280	300
		270	263	264	260	250	232	210	200	192	181	180	186	186	190	200	210	200	210	220	234	222	220	230	255
M(3000)F2	MED	300	302	308	310	310	325	325	315	310	300	292	290	300	290	295	300	310	315	325	320	330	330	320	310
	CNT	18	16	14	20	24	25	24	24	22	25	24	24	25	28	27	27	26	27	26	28	26	23	19	14
	UQ	310	312	315	320	325	342	340	325	325	318	305	302	305	300	300	310	320	330	330	332	340	340	330	310
	LQ	290	300	300	300	300	308	302	285	290	288	278	285	282	280	280	300	305	305	320	315	320	315	305	295
foF1	MED							340	390	410	430	445	450	450	450	440	430	410	390	345					
	CNT							7	20	19	18	18	20	22	22	25	19	21	13	6					
foE	MED									U						U		U							
	CNT							1	2	298	1	1	1	2	4	330	3	7	2	1					
h'E	MEQ							110	105	100	100	100	100	100	100	102	100	105	107	110					
	CNT							21	25	25	24	22	22	20	22	22	22	23	21	14					
foEs	MEQ							E																	
	CNT	46	42	40	37	34	40	30	39	45	50	58	63	50	45	44	49	42	45	50	50	48	45	50	48
		25	22	15	18	12	11	24	27	28	28	26	28	27	29	28	28	29	29	28	26	22	22	21	21

SWEEP 1.0 MC TO 25.0 MC IN 27 SECONDS. JUNE, 1963

TABLE 7

TROMSO, NORWAY (69.7N, 19.0E) TIME 15.0E

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
foF2	MEQ		20	19	20	19	25	34	38	43	45	48	48	49	50	49	49	46	44	42	39	40	34		
	CNT	1	7	9	13	20	19	18	25	23	25	26	29	29	28	30	28	26	24	20	10	9	8	2	4
	UQ		23	26	24	22	27	36	40	44	48	49	51	51	52	51	50	47	48	44	43	42	40		
	LQ		19	18	17	18	21	31	36	40	43	46	48	47	47	47	45	41	40	38	32	30	25		
h'F2	MEQ												300	275			245								
	CNT								1	2	2	4	6	5	2	4	5	4	4	3					
	UQ												300	310			250								
	LQ												260	250			240								
h'F	MED				E																				
	CNT				340	350	260	245	240	240	215	210	210	215	220	225	230	245	245	245	245	245			
	UQ				6	5	13	15	21	22	23	26	23	27	26	27	23	22	20	17	13	10	1		
	LQ						290	255	245	245	230	225	225	240	230	245	245	245	250	245	250	250			
					325	270	250	245	230	215	210	205	205	200	210	210	220	240	240	240	245	245			
M(3000)F2	MED			280	290	280	300	310	310	330	330	330	335	330	330	330	330	330	310	310					
	CNT	1	4	8	11	15	15	11	14	11	9	14	17	17	11	18	16	18	18	8	1	2	2	1	2
	UQ			290	290	290	310	310	330	335	335	335	335	335	335	335	335	335	325	315					
	LQ			275	270	270	290	310	310	310	315	315	310	315	315	315	315	310	310	310					
foF1	MED												360												
	CNT									1	1	4	5	3	2										
foE	MED						110	150	185	200	220	230	240	250	245	235	220	195	175	140					
	CNT				4	3	5	8	14	21	22	22	22	22	25	23	22	19	13	5					
h'E	MEQ						145	125	110	110	110	110	110	110	110	110	110	110	120	135					
	CNT				4	3	5	8	13	21	22	22	22	23	22	21	18	15	12	7	1				
foEs	MEQ	32	32	28	23	22	14	18	20	G	G	G	G	G	G	G	G	G							
	CNT	19	21	21	23	16	16	19	22	23	24	26	24	25	28	27	28	26	16	22	32	32	32	41	32
														26					26	24	17	21	17	19	21

SWEEP 0.7 MC TO 25.0 MC IN 5 MINUTES, AUTOMATIC. MARCH, 1963

TABLE 8

KIRUNA, SWEDEN (67.8N, 20.4E) TIME 15.0E

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
foF2	MEQ	20	21	20	18	20	24	32	38	42	45	47	48	49	49	48	48	45	44	42	37	29	25	30	23
	CNT	9	15	13	15	16	21	22	25	27	27	28	29	30	29	30	30	29	26	20	12	8	8	5	7
	UQ	24	23	26	24	21	27	34	39	43	47	48	51	51	53	52	49	48	48	45	42	32	29	31	26
	LQ	20	20	18	16	17	20	30	35	38	42	45	46	47	47	46	45	41	39	36	33	22	22	23	22
h'F2	MED								250	265	270	275	295	285	275	265	260	245							
	CNT								3	6	18	19	25	22	22	20	10	6							
	UQ								255	310	300	300	310	300	295	280	280	260							
	LQ								230	245	250	260	255	255	250	240	245	245							
h'F	MED	310	335	350	325	300	260	245	230	225	210	205	205	205	210	215	220	230	230	235	245	250	270	270	310
	CNT	10	15	15	16	16	17	21	25	25	27	29	29	30	30	30	30	30	28	28	28	24	24	18	13
	UQ	330	360	360	350	350	285	255	245	230	230	215	210	215	220	230	235	245	245	250	270	275	305	315	325
	LQ	300	300	305	295	295	250	230	220	210	205	195	195	195	205	210	210	225	220	230	230	240	245	260	275
M(3000)F2	MED	300	300	300	300	300	300	330	340	340	335	330	320	330	320	340	340	340	340	340	320	315	310	310	300
	CNT	9	14	12	13	13	19	22	25	27	26	27	27	30	29	29	30	29	26	19	11	8	8	4	7
	UQ	300	300	300	300	300	320	340	340	340	340	340	340	340	340	340	340	340	340	340	320	325	330	320	320
	LQ	280	280	280	290	300	300	320	320	320	320	320	310	320	320	320	320	320	320	320	300	300	300	290	280
foF1	MED								300	315	330	360	360	370	360	350	330	300							
	CNT								3	6	17	17	25	21	21	19	9	6							
foE	MEQ							160	180	200	220	240	240	250	240	230	210	180	170						
	CNT							3	11	21	22	27	27	27	27	28	27	25	18						
h'E	MEQ							115	110	110	110	110	110	110	110	110	110	110	125						
	CNT							1	2	9	17	25	25	22	20	20	16	12	5						
foEs	MEQ	35	30	32	38	40	40	28												19	30	32	32	38	44
	CNT	14	14	13	10	4	4	15	20	23	24	28	29	29	28	28	30	29	27	12	7	9	12	17	18

SWEEP 0.8 MC TO 15.0 MC IN 30 SECONDS. MARCH, 1963

TABLE 9

NURMIJARVI, FINLAND (60.5N, 24.6E) TIME 30.0E

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
foF2	MED	25		19	19	18		29	35	39	44	49	50	51	52	53	53	51	49	47	43	32			
	CNT	1		2	2	1		9	17	18	21	21	24	26	25	25	27	25	19	17	9	3			
	UQ							31	37	43	47	52	55	54	55	57	56	53	53	49	46	40			
	LQ							25	32	36	42	45	48	49	50	51	50	48	45	44	36	28			
h'F2	MED																								
	CNT																								
	UD																								
	LQ																								
h'F	MED	300	300	300	310	305	310	280	230	220	205	200	200	200	200	200	205	220	220	230	230	240	240	250	280
	CNT	23	21	22	23	21	15	24	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	25
	UD	310	350	320	330	320	310	300	240	220	220	210	205	210	210	210	210	220	230	240	250	250	250	280	300
	LD	295	300	295	300	290	290	270	220	200	200	200	200	200	200	200	200	205	210	220	220	230	230	230	265
M(3000)F2	MED	310		298	295	280		325	337	335	335	345	335	325	335	335	340	342	340	330	315	300			
	CNT	1		2	2	1		9	16	17	21	21	23	26	25	26	26	24	19	17	9	3			
	UQ							340	348	350	345	350	350	340	350	350	350	350	350	348	335	317			
	LD							320	330	320	320	320	310	315	328	325	330	335	330	320	310	300			
foF1	MED									310	360	370	390	370	380	380	370								
	CNT									1	4	13	14	19	18	17	5								
foE	MED								170	190	220	230	250	260	250	250	240	215	180	170					
	CNT								3	12	21	22	19	22	18	17	15	25	19	2					
h'E	MED																								
	CNT																								
foEs	MED		27	24			23		27	21	24	26	27	28	27	27	26	24	20	18			37		32
	CNT		1	1			1		5	14	26	24	23	23	18	18	18	25	20	6			1		2

SWEEP 1.0 MC TO 25.0 MC IN 1 MINUTE. MARCH, 1963

TABLE 10

GRAZ, AUSTRIA (47.1N, 15.5E) TIME 15.0E

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
foF2	MED	J 36	J 36	34	J 34	J 36	33	36	50	53	56	58	60	62	60	60	60	59	60	58	54	49	J 41	J 40	37
	CNT	24	24	24	23	24	23	21	31	30	29	29	27	29	28	28	30	29	28	30	31	29	24	19	24
	UQ	39	39	39	38	37	38	39	52	55	59	62	62	67	63	61	62	63	61	61	57	53	47	42	39
	LQ	31	31	30	30	31	30	31	46	49	51	56	55	57	57	57	57	57	55	53	51	43	38	31	32
h'F2	MED																								
	CNT																								
	UQ																								
	LD																								
h'F	MED																								
	CNT																								
	UD																								
	LD																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LD																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED	E 28	E 28	E 28	E 28	E 28	E 28	E 28	E 28	E 29	E 29	E 30	30	U 30	U 30	E 33	E 29	E 29	E 28	E 28	E 28	E 28	E 28	E 28	E 28
	CNT	28	27	29	28	28	27	25	27	20	11	9	7	3	4	2	6	19	27	26	29	27	26	24	27

SWEEP 2.0 MC TO 13.0 MC IN 50 SECONDS. MARCH, 1963

TABLE 11

TALARA, PERU (4.6S, 81.3W) TIME 75.0W

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
foF2	MED	82	66	57	46	29	21	22	52	70	79	82	86	90	93	94	96	94	96	96	95	91	90	91	88
	CNT	20	21	23	25	23	19	16	31	31	31	31	31	31	31	31	31	31	31	31	31	30	24	23	17
	UQ	91	74	68	50	35	29	25	54	75	83	88	92	95	99	102	103	106	104	101	100	98	96	95	100
	LQ	73	60	45	33	23	16	18	51	67	75	80	82	85	89	87	89	90	91	92	90	87	86	86	84
h'F2	MED											340	370	385	370	340	320								
	CNT										4	17	25	29	30	28	15	2							
	UQ											365	390	400	380	350	345								
	LQ											332	355	368	360	340	310								
h'F	MED	205	215	220	220		E	E	240	205	200	200	200	200	200	200	200	200	195	250	260	270	250	230	215
	CNT	29	30	29	30	222	240	275	29	29	26	26	27	28	28	26	23	19	18	28	29	31	26	27	28
	UQ	212	220	230	230	26	18	12	240	232	210	210	200	200	200	200	205	200	220	258	272	280	260	240	220
	LQ	200	210	215	215	230	255	308	202	180	180	185	180	190	190	200	200	190	185	242	260	260	240	220	210
M(3000)F2	MED	340	330	338	350	350	325	292	340	310	290	265	240	228	235	260	260	260	260	270	280	285	300	320	335
	CNT	20	20	20	23	21	17	10	31	31	31	31	31	30	31	31	31	31	31	31	30	29	23	23	17
	UQ	355	338	350	355	358	340	325	350	330	305	275	255	245	250	270	265	280	285	280	295	290	310	330	350
	LQ	330	318	330	350	322	312	285	325	300	265	250	230	220	225	250	240	245	245	260	275	272	290	310	325
foF1	MED											U 450	450	460	450	450	U 445								
	CNT											13	26	27	28	22	10								
foE	MED								U 188	260	300	330	345	352	350	340	U 325	300	258	195					
	CNT								20	28	27	26	25	26	22	25	17	13	12	8					
h'E	MED								123	115	111	109	109	109	109	109	107	109	111	E 131					
	CNT								24	29	29	27	27	29	26	29	26	23	16	8					
foEs	MED	36	35	35	28	24	21	30	23	31	36	42	37	36	42	39	44	46	41	35	42	30	25	38	36
	CNT	19	19	16	24	22	24	19	31	31	31	31	31	31	31	31	31	31	31	31	27	24	21	21	22

SWEEP 1.0 MC TO 25.0 MC IN 27 SECONDS. MARCH, 1963

TABLE 12

TROMSO, NORWAY (69.7N, 19.0E) TIME 15.0E

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
foF2	MED			23	21	21	18	18	23	37	44	48	51	52	52	50	49	44	40	31	28	26			
	CNT	2	4	11	11	10	14	10	18	23	23	23	23	24	24	24	23	21	15	13	10	6	4	4	2
	UD			28	24	22	20	20	28	39	46	51	53	55	55	52	51	46	43	40	35	30			
	LD			21	18	19	14	17	22	29	40	47	49	50	49	47	46	40	27	20	20	24			
h'F2	MED										245	225	225	240	225	230									
	CNT										5	11	14	15	15	13	4								
	UD										245	240	240	240	240	240									
	LQ										235	210	210	210	210	220									
h'F	MED					290	E		250	240	230	230	220	220	210	220	230	215	220	240					
	CNT		2	4	3	5	7	3	14	23	20	12	8	9	8	10	21	21	15	8	1	2	2		
	UQ					300			255	245	240	240	235	240	220	230	240	240	240	245					
	LQ					270	255		245	225	220	220	210	210	210	220	210	210	210	220					
M(3000)F2	MED			285	290	290	300	300	305	310	330	335	335	335	335	335	335	330	310	310		305			
	CNT	1	3	8	10	9	8	5	15	17	22	23	23	24	23	24	21	15	10	9	3	5	2	3	1
	UD			290	295	300	310	310	310	330	335	335	335	345	345	335	335	335	315	335		310			
	LD			280	285	290	290	290	290	310	320	335	335	335	335	335	330	310	305	305		290			
foF1	MED																								
	CNT																								
foE	MED						E		E	E 110	180	195	210	205	200	190	175								
	CNT		1	1		1	5	3	6	6	8	11	14	14	12	15	10	3	1						
h'E	MED						E		E	150	120	120	140				135								
	CNT		1	1		1	5	3	6	8	8	6	6	4	3	4	5	2	1						
foEs	MED	32	26	25	30	26	18	22	12	18	20	17	G 18	20	G 18	18	22	27	22	22	28	38	40	32	40
	CNT	18	18	19	14	11	12	12	15	22	20	17	16	17	17	20	22	23	20	14	17	16	14	18	15

SWEEP 0.7 MC TO 25.0 MC IN 5 MINUTES, AUTOMATIC. FEBRUARY, 1963

TABLE 13

KIRUNA, SWEDEN (67.8N, 20.4E) TIME 15.0E

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	23	20	20	23	19	18	23	27	35	45	49	50	52	51	49	46	43	33	31	30	27	22		
	CNT	3	3	4	5	6	5	4	14	22	22	23	24	24	25	25	21	16	13	8	5	6	2		
	UO	25	21	24	23	21	27	26	29	38	47	50	53	53	55	52	49	46	41	34	31	28			
	LO	22	19	17	16	16	16	20	23	33	43	47	49	49	48	46	41	40	30	27	26	23			
h'F2	MED										240	240	235	235	240	225									
	CNT										1	2	6	6	3	3									
	UO												235	245	240	225									
	LO												235	235	235	220									
h'F	MED	305	300	295	300	290	335	290	250	230	225	215	215	210	220	215	215	215	225	245	250	265	260	295	320
	CNT	4	5	8	5	4	2	4	12	22	22	23	24	24	25	25	23	23	23	20	13	10	6	7	5
	UO	325	320	315	350	345		330	255	235	235	230	230	230	230	225	230	230	235	255	285	285	275	325	345
	LO	275	275	275	265	265		275	240	225	210	210	205	205	210	210	210	210	215	230	245	255	255	275	285
M(3000)F2	MED	300	310	310	320	315	330	320	330	340	345	350	345	350	350	340	350	350	340	340	320	320	315		
	CNT	3	2	4	3	6	4	4	14	22	22	22	24	23	25	25	21	15	11	7	5	5	2		
	UO	300		320	320	320	340	330	340	350	360	360	360	360	360	360	355	360	350	340	340	320			
	LO	290		300	310	300	300	310	320	340	340	340	340	340	340	340	340	340	320	320	320	300			
fo F1	MED										280	300	300	310	300	280									
	CNT										1	2	5	6	3	3									
fo E	MED										200	210	230	230	220	200	160	150							
	CNT										3	3	4	3	3	3	3	3							
h'E	MED											115	115	115	115	115									
	CNT											2	2	2	3	1									
fo Es	MED	50	40	36	32	40	51		38										40	38	32	42	61	42	45
	CNT	11	11	8	7	5	4		1	8	18	15	17	17	17	19	16	8	3	3	6	6	6	9	10

SWEEP 0.8 MC TO 15.0 MC IN 30 SECONDS. FEBRUARY, 1963

TABLE 14

SODANKYLA, FINLAND (67.4N, 26.6E) TIME 30.0E

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	28	25	30	19	16	21	19	18	35	42	50	52	54	55	54	52	48	46	35	25	31	29	25	29
	CNT	3	2	1	2	2	4	4	3	11	20	19	20	20	25	25	23	22	11	7	6	4	1	3	2
	UO	29					23	23	19	35	45	52	56	56	58	57	54	53	47	43	40	32		31	
	LO	21					18	17	18	31	39	45	50	52	51	50	50	45	45	28	23	27		20	
h'F2	MED																								
	CNT																								
	UO																								
	LO																								
h'F	MED	312	310	310	300	310	300	300	270	230	220	210	210	210	210	210	210	210	215	220	240	250	270	285	285
	CNT	16	16	21	21	23	26	26	25	25	26	25	24	25	27	27	27	27	27	25	25	25	22	24	22
	UO	335	365	360	345	340	350	350	287	240	225	222	220	217	220	220	220	225	225	230	280	280	290	325	350
	LO	290	295	280	282	280	280	270	250	230	210	207	208	200	200	200	205	210	210	210	228	240	240	245	270
M(3000)F2	MED	285	282		275	280	280	285	305	320	330	335	335	340	338	340	340	330	330	300	305	280	285	290	305
	CNT	3	2		1	3	4	4	3	9	17	18	19	20	24	25	23	21	12	4	5	3	1	3	2
	UO	288				285	295	295	310	320	335	345	340	342	350	340	340	340	338	315	310	290		295	
	LO	283				275	277	280	278	310	323	320	330	327	330	330	330	330	320	280	285	275		285	
fo F1	MEO																								
	CNT																								
fo E	MED									135	180	185	210	215	220	215	200	180	140	130	130				
	CNT									10	9	10	8	16	16	14	11	14	8	1	1				
h'E	MED									110	120	120	117	115	125	120	120	125	132	130	160				
	CNT									8	9	9	8	13	15	15	11	13	8	1	1				
fo Es	MED	30	28	29	25	25	25	23	E 10	25	29	37	40	47	40	40	37	32	27	24	25	23	23	25	25
	CNT	24	26	26	26	25	27	21	19	18	19	15	14	10	11	10	13	17	22	23	23	21	25	21	23

SWEEP 1.4 MC TO 22.0 MC IN 8 MINUTES, AUTOMATIC. FEBRUARY, 1963

TABLE 15

LULEA, SWEDEN (65.6N, 22.1E) TIME 15.0E

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	U 28	U 24	25	21	U 20	U 21	18	27	40	46	52	53	54	55	54	50	45	40	U 29	U 31	U 23	U 22	U 20	19
	CNT	4	2	3	5	5	3	7	19	24	24	22	23	25	25	24	24	20	17	14	12	7	8	4	1
	UD																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LO																								
h'F	MED	275	260	290	290	270	250	270	200	190	180	180	180	180	180	180	185	180	185	200	210	210	230	250	250
	CNT	8	6	6	7	6	5	6	20	25	25	23	22	22	22	22	24	23	19	21	19	17	15	13	8
	UQ																								
	LO																								
M(3000)F2	MED	320	U 350	310	340	350	350	340	350	390	390	390	390	390	380	390	390	390	380	370	350	350	U 350	U 320	360
	CNT	1	1	3	4	2	2	4	13	23	24	22	22	25	25	24	24	18	16	8	7	2	3	2	1
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED									180	200	220	230	230	230	220	200	180							
	CNT									8	14	16	16	16	17	15	11	6							
h'E	MED									140	105	100	100	110	110	105	105	135							
	CNT									7	10	12	13	15	13	13	10	4							
fo Es	MED	J 23	J 22	J 21	J 24	J 23	J 33	23	23	E 18	E 20	E 22	E 23	E 23	E 23	E 22	E 20	C 18	J 18	J 20	J 22	J 23	J 21	J 24	J 23
	CNT	11	12	10	4	2	1	1	1	14	16	17	17	17	17	16	16	10	6	5	5	5	4	8	10

SWEEP 0.65 MC TO 25.0 MC IN 5 MINUTES, AUTOMATIC. FEBRUARY, 1963

TABLE 16

LYCKSELE, SWEDEN (64.7N, 18.8E) TIME 15.0E

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	21	16	12	11	12	12	13	22	38	46	50	53	54	54	52	51	46	40	36	30	25	21	19	18
	CNT	11	15	16	20	22	23	26	26	28	28	27	27	28	28	28	28	28	27	24	24	23	21	18	12
	UD	25	23	18	12	15	14	17	30	41	50	53	55	57	55	55	53	48	43	41	34	29	25	22	20
	LO	14	11	10	11	11	12	12	17	33	43	46	49	51	51	50	46	42	36	28	22	19	17	17	17
h'F2	MEO										220	235	235	235	240	230									
	CNT										2	4	5	10	3	1									
	UD											270	240	240	240										
	LO											230	225	225	235										
h'F	MED	U 330	300	U 300	290	U 290	290	U 275	250	230	215	215	215	210	210	215	225	220	220	230	240	240	255	260	U 285
	CNT	10	17	16	13	16	17	24	26	27	28	27	27	28	28	27	28	28	26	25	23	23	22	17	11
	UO	355	335	335	310	320	305	295	260	235	225	225	220	225	225	225	230	230	230	240	250	270	275	300	330
	LO	280	270	280	255	255	270	250	235	215	210	210	205	205	200	210	205	205	205	215	230	235	240	245	255
M(3000)F2	MED	275	280	285	290	290	300	300	300	330	330	340	330	330	330	330	330	330	320	310	300	300	300	290	290
	CNT	10	13	16	18	20	21	25	26	27	28	27	27	28	28	27	28	28	27	24	23	23	21	16	10
	UO	290	290	290	300	300	300	300	310	330	340	340	350	340	340	340	340	335	330	320	310	310	300	300	300
	LO	270	270	275	280	280	280	280	290	310	320	330	330	330	330	330	330	320	310	300	300	300	300	280	280
fo F1	MED										275	305	305	310	310	300									
	CNT										2	4	6	10	3	1									
fo E	MED								110	150	190	200	210	220	210	200	180	150	110	90					
	CNT								9	15	15	18	20	21	21	20	20	14	6	1					
h'E	MEO								120	115	110	110	110	110	110	115	120	130	130						
	CNT								7	11	11	11	10	13	13	8	9	7	3						
fo Es	MED	30	30	30	30	27	25	20	12	26	28	28	28	28	28	30	28	28	22	18	10	11	8	21	20
	CNT	25	27	28	26	28	25	22	25	24	25	25	24	25	24	26	26	25	23	20	17	19	22	21	24

SWEEP 0.33 MC TO 20.0 MC IN 3 MINUTES. FEBRUARY, 1963

TABLE 17

NURMIJARVI, FINLAND (60.5N, 24.6E) TIME 30.0E

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
foF2	MEO						17			35	44	52	57	55	56	55	53	51	49	44	36	32			
	CNT						1			4	15	21	21	22	22	22	21	20	9	2	1	2			
	UQ									39	47	55	59	59	58	58	57	52	50						
	LQ									30	40	45	52	53	53	53	51	48	43						
h'F2	MEO																								
	CNT																								
	UQ																								
	LQ																								
h'F	MEO	310	310	300	300	300	305	320	290	225	215	205	205	208	205	210	212	210	207	210	230	230	270	280	300
	CNT	11	9	12	17	15	10	6	16	28	28	28	28	28	28	28	28	28	28	28	25	23	19	15	12
	UQ	350	335	315	300	320	320	320	300	255	220	210	210	220	220	220	220	220	218	220	245	290	300	300	320
	LQ	300	300	300	300	300	300	310	265	210	210	200	200	200	200	200	210	205	200	200	212	220	230	270	285
M(3000)F2	MEO						310			355	360	365	360	355	360	360	360	360	352	340	320	335			
	CNT						1			4	15	21	21	22	22	22	21	20	10	2	1	2			
	UQ									360	360	365	367	360	360	365	365	360	360						
	LQ									330	350	342	350	345	350	350	352	350	350						
foF1	MED											310	320	340	330										
	CNT											1	1	1	1										
foE	MEO									170	180	210	220	230	228	220	210	190	155						
	CNT									1	8	11	11	11	10	16	15	8	1						
h'E	MEO																								
	CNT																								
foEs	MEO	35	34	32	32	31	26	26	28	23	21	23	24	25	24	24	22	21	23	33	24				35
	CNT	2	2	3	2	1	2	3	2	4	14	13	14	12	11	15	15	10	4	2	1				2

SWEEP 1.0 MC TO 25.0 MC IN 1 MINUTE. FEBRUARY, 1963

TABLE 18

UPPSALA, SWEDEN (59.8N, 17.6E) TIME 15.0E

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
foF2	MEO	19	17	18	17	16	14	15	24	42	51	55	55	55	55	54	53	49	43	40	30	22	20	18	18
	CNT	18	23	24	25	25	24	23	26	27	28	28	28	27	28	28	28	26	27	28	27	27	25	24	23
	UQ	21	20	20	19	18	16	17	31	44	53	58	57	59	60	58	55	51	49	44	39	33	25	23	20
	LQ	17	16	16	14	13	13	14	21	36	48	52	52	53	52	51	51	49	40	30	21	18	17	16	16
h'F2	MEO									295	290	245	245	250	245	240									
	CNT									1	1	5	9	10	8	5									
	UQ											300	265	255	250	250									
	LQ											240	235	235	240	235									
h'F	MEO	280	U 280	265	265	270	270	260	240	215	210	210	210	205	210	215	210	210	210	215	230	240	U 240	U 260	U 290
	CNT	18	24	26	25	24	24	24	26	27	28	28	28	27	28	28	28	28	28	28	27	27	25	23	24
	UQ	300	300	295	285	295	280	285	255	230	215	215	210	215	215	220	215	215	215	240	250	260	260	295	310
	LQ	260	260	255	255	255	255	245	230	205	200	200	200	200	200	210	210	205	205	210	215	220	220	235	250
M(3000)F2	MEO	285	280	280	270	290	290	300	310	340	350	350	350	350	345	340	350	350	340	320	310	310	300	290	290
	CNT	18	23	24	25	25	24	23	26	27	28	27	27	27	28	28	28	26	27	28	27	27	25	24	23
	UQ	300	290	290	290	290	295	310	320	350	350	350	350	350	350	350	360	350	340	330	320	320	310	300	300
	LQ	270	270	270	270	280	280	290	300	330	340	340	330	330	340	335	340	330	330	310	300	300	290	280	270
foF1	MEO									240		345	350	350	330										
	CNT									1		2	3	3	1										
foE	MED								120	170	200	235	240	240	240	230	210	170	135	80	90	75			
	CNT								11	18	23	27	27	25	26	27	28	25	8	1	1	1			
h'E	MEO								120	110	110	110	110	110	110	110	115	115	125	140	130	135			
	CNT								6	11	14	15	17	19	22	24	24	16	8	1	1	1			
foEs	MED	29	26	24	26	25	26	27	28	30	30	32	32	35	32	32	31	30	23	20	5	5	6	25	24
	CNT	24	27	27	27	23	22	22	24	27	27	28	28	26	27	28	28	28	25	20	17	14	20	18	19

SWEEP 0.33 MC TO 20.0 MC IN 5 MINUTES. FEBRUARY, 1963

TABLE 19

DOURBES, BELGIUM (50.1N, 4.6E) 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
foF2	MEO	28	30	29	30	27	24	24	40	54	58	59	60	59	58	58	56	54	50	48	42	32	28	29	30
	CNT	28	28	28	28	27	28	28	28	28	26	26	27	27	27	27	27	28	28	27	28	28	28	28	28
	UQ	33	34	34	33	30	28	28	45	56	59	62	62	61	60	60	59	56	55	50	47	36	32	32	32
	LQ	23	24	26	25	23	20	19	34	46	54	55	57	57	55	55	54	52	45	40	33	26	26	24	24
h'F2	MED									225	235	240	250	248	245	248	238	240							
	CNT									7	18	20	25	24	22	16	8	2							
	UQ									235	245	248	260	262	260	258	252								
	LQ									220	230	230	238	232	240	240	225								
h'F	MEO	278	274	268	269	260	252	245	225	220	220	215	210	211	210	225	230	228	225	225	228	230	250	264	260
	CNT	28	28	28	28	27	28	28	28	28	27	27	27	28	27	27	27	28	28	28	28	28	28	28	28
	UQ	298	286	290	289	280	269	262	235	225	225	225	220	220	220	230	232	238	230	232	235	245	260	288	272
	LQ	260	260	260	252	250	235	240	220	215	210	210	205	208	210	220	225	220	220	220	222	220	240	242	250
M(3000)F2	MED	300	302	303	302	304	320	319	356	365	364	361	359	357	351	353	355	358	346	333	339	326	314	308	302
	CNT	28	28	28	28	27	28	27	28	28	26	26	27	27	27	27	27	27	28	27	28	27	28	28	28
	UQ	306	308	310	308	314	337	332	364	377	378	373	367	360	362	367	362	365	353	345	348	341	321	316	310
	LQ	292	292	292	297	300	310	306	344	356	359	352	351	346	341	339	346	349	330	327	328	314	306	297	296
foF1	MED										335	365	370	375	370		350								
	CNT										3	6	4	7	3		1								
foE	MED								125	180	222	250	265	265	260	245	215	185	129						
	CNT								24	23	26	26	27	27	27	27	26	22	16						
h'E	MED								U 1.6	121	117	115	115	115	119	119	121	123	132						
	CNT								20	26	27	27	27	28	27	27	27	26	18						
foEs	MEO	E	E	E	E	E	E	E	E 12	E 18	E 22	E 25	E 26	E 26	E 26	E 24	E 22	E 18	E 13	E 11	E	E	E	E	E
	CNT	28	26	28	28	27	28	28	28	28	27	27	27	28	27	27	27	27	28	26	28	26	28	28	28

SWEEP 1.0 MC TO 20.0 MC IN 3 MINUTES. FEBRUARY, 1963

TABLE 20

GRAZ, AUSTRIA (47.1N, 15.5E) TIME 15.0E

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
foF2	MED	31	J 35	33	33	33	32	31	41	55	58	61	63	61	60	57	56	56	51	47	46	39	31	33	32
	CNT	22	25	24	25	24	23	21	22	28	25	26	24	26	28	27	28	26	28	28	26	23	25	24	24
	UQ	36	37	37	37	37	36	32	46	59	62	63	66	63	63	60	61	59	56	50	50	43	37	36	38
	LQ	31	30	30	30	31	30	30	34	52	54	57	61	60	58	55	55	55	47	41	40	32	30	31	31
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LQ																								
foF1	MEO																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MEO																								
	CNT																								
foEs	MEO	E	E	E	E	E	E	E	E	E	E	E					E	E	E	E	E	E	E	E	E
	CNT	28	28	28	28	28	28	28	28	28	24	27					28	28	28	28	28	28	28	28	28
		27	28	28	28	27	28	28	28	27	23	15	5	4	3	6	17	26	27	28	27	27	27	28	25

SWEEP 1.0 MC TO 13.0 MC IN 59 SECONDS. FEBRUARY, 1963

TABLE 21

ROME, ITALY (41.8N, 12.5E) TIME 15.0E

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	30	31	32	33	32	31	29	38	57	61	61	63	65	62	60	58	58	56	46	44	38	33	31	31
	CNT	21	23	21	22	23	22	19	25	25	25	25	27	28	27	26	27	25	27	26	25	22	24	24	22
	UQ	33	36	36	37	37	37	31	47	60	64	65	68	70	64	61	62	63	61	52	47	44	36	34	35
	LQ	30	30	31	31	31	30	26	35	53	59	58	59	63	60	57	55	56	50	44	40	32	30	30	30
h'F2	MED																								
	CNT													1	2										
	UQ																								
	LQ																								
h'F	MED	270	290	290	290	280	260	250	240	220	210	200	200	200	200	210	220	230	230	220	240	230	240	250	260
	CNT	24	24	23	23	24	23	23	25	24	25	26	27	28	28	27	26	25	27	25	26	25	26	26	23
	UQ	290	300	300	300	290	260	260	250	220	230	220	210	210	210	230	240	240	240	230	250	240	260	260	260
	LQ	260	270	270	270	260	250	240	230	210	200	200	200	200	200	200	200	230	220	210	230	220	240	250	250
M(3000)F2	MED	300	290	290	300	300	310	320	340	360	355	350	340	340	345	345	350	345	350	340	325	335	320	305	300
	CNT	21	23	21	22	23	22	19	25	24	25	25	27	28	27	25	27	25	27	26	25	21	22	23	22
	UQ	300	305	300	305	305	320	345	355	365	365	355	350	350	355	355	355	350	360	350	335	345	335	320	310
	LQ	285	285	280	290	290	300	305	325	340	350	345	330	335	340	340	340	340	340	325	320	320	305	300	300
fo F1	MED																								
	CNT													1	2										
fo E	MED									200	250	280	290	300	300	290	270	230	180						
	CNT								2	24	25	24	25	28	27	25	25	25	24						
h'E	MED									140	120	110	110	110	110	110	110	120	130						
	CNT									21	23	25	26	28	27	26	26	25	24						
fo Es	MED																								
	CNT	24	24	23	23	24	24	24	25	25	25	26	27	28	28	27	27	25	27	26	26	25	26	26	26

SWEEP 1.4 MC TO 15.0 MC IN 5 MINUTES. AUTOMATIC. FEBRUARY. 1963

TABLE 22

RESOLUTE BAY, CANADA (74.7N, 94.9W) TIME 90.0W

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	26	27	27	27	27	26	27	30	30	34	34	36	40	40	37	37	35	32	36	32	30	30	26	27
	CNT	28	29	31	28	27	28	29	28	28	30	31	30	29	30	29	31	29	29	30	31	31	29	26	25
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	250	240	240	250	240	250	250	240	230	230	230	220	210	210	220	210	210	220	220	230	240	235	230	240
	CNT	27	27	23	25	22	22	21	24	23	27	30	30	31	31	30	30	28	29	30	30	29	22	21	22
	UQ																								
	LQ																								
M(3000)F2	MED	320		U	U	U	U	U	U	U	U	U		U		U			U	U		U		U	
	CNT	17	20	320	310	310	320	310	310	320	310	310	320	320	320	320			320	320	300	320		310	320
	UQ		11	7	9	9	7	7	9	7	9	7	10	7	11	8	4	3	5	7	10	7	2	7	10
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT											1	1	2	4	2	1	1							
h'E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. JANUARY. 1963

TABLE 23

GODHAVN, GREENLAND (69.3N, 53.5W) TIME 45.0W

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
foF2	MED	U	U				U					U	U	U	U	U	U	U	U	U	U	U	U	U	U
	CNT	24	27	22			33					38	41	38	40	37	43	38	38	35	37	30	32	30	26
	UQ	10	5	6	4	4	5			1		6	11	10	7	11	11	11	16	17	9	6	8	11	10
	LQ	26	30	29			36					39	44	39	42	46	50	40	40	40	42	33	34	35	30
	LD	22	26	22			31					30	38	35	34	35	37	32	32	32	32	26	30	28	23
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED	34	44	35	37	32	38	48	36	45	30	42	46	55	60	54	58	40	51	44	46	50	50	48	41
	CNT	12	6	9	7	11	9	10	9	14	13	8	14	9	15	15	11	11	14	13	10	13	15	11	13

SWEEP 1.6 MC TO 20.0 MC IN 15 SECONDS. JANUARY. 1963

TABLE 24

LYCKSELE, SWEDEN (64.7N, 18.8E) TIME 15.0E

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	19	12	12	12	13	13	13	13	22	33	43	50	54	52	45	42	32	24	17	13	20	20	23	21
	CNT	9	22	26	24	23	24	22	24	30	30	29	30	30	30	30	30	30	27	19	8	6	7	9	8
	UD	21	20	20	18	17	17	18	17	24	38	48	53	57	55	50	46	36	25	20	16	24	24	28	25
	LD	11	11	11	11	11	12	12	12	19	30	41	46	51	48	42	39	26	21	15	12	11	14	21	20
h'F2	MED												270	250	250										
	CNT												1	1	1										
	UD																								
	LD																								
h'F	MED	300	280	290	275	280	275	280	260	250	220	220	215	215	215	210	210	215	230	250	295	300	300	300	300
	CNT	7	20	21	21	21	20	19	16	28	30	29	30	29	30	30	30	29	25	18	6	4	6	6	6
	UQ	330	300	315	300	300	295	300	280	255	240	225	220	225	220	215	215	225	240	270	310	305	300	340	340
	LQ	290	270	275	255	255	250	250	240	235	210	210	210	205	210	205	200	200	210	240	275	280	280	290	290
M(3000)F2	MED	300	290	290	300	300	300	300	290	300	320	330	340	340	340	340	335	315	320	300	295	290	290	280	300
	CNT	7	21	24	24	22	23	21	19	29	30	28	30	30	30	30	30	30	27	18	6	5	7	9	7
	UQ	300	300	300	300	300	300	310	300	300	330	345	350	350	350	350	340	340	330	310	300	300	290	300	300
	LQ	290	280	280	280	290	280	290	280	280	310	320	320	330	330	330	330	300	300	290	280	270	280	270	280
fo F1	MED												300	310	290										
	CNT												1	1	1										
fo E	MED									95	135	160	170	175	160	140	130	80							
	CNT									2	19	20	16	14	13	12	11	1							
h'E	MED									130	110	110	105	100	105	100	110	125							
	CNT									2	17	12	6	5	4	4	5	1							
fo Es	MED	30	26	25	23	28	29	27	20	22	30	30	31	35	32	30	30	22	30	30	30	30	30	30	30
	CNT	28	30	31	30	30	26	26	27	27	30	28	28	28	28	28	29	24	25	23	23	23	27	29	27

SWEEP 0.33 MC TO 20.0 MC IN 3 MINUTES. JANUARY. 1963

TABLE 25

CHURCHILL, CANADA (58.8N, 94.2W) TIME 90.0W

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
foF2	MED	U			U	U	U	U	U																
	CNT	24	24	25	25	26	30	26	23	23	39	48	52	55	60	60	57	53	47	35	30	26	27	28	25
	UQ	9	12	12	9	7	6	8	9	10	17	21	24	26	27	27	27	26	25	23	19	19	18	16	11
	LQ	32	32	32	31	27	32	30	28	25	42	50	54	58	62	63	60	57	50	38	34	36	32	32	31
		23	21	22	22	23	25	24	20	21	35	44	48	52	52	59	53	48	42	33	25	21	23	24	22
h'F2	MED											U		U		U									
	CNT											240		260	260	240									
	UQ											6		7	13	9	3								
	LQ																								
h'F	MED			U						U													U	U	U
	CNT			300						280	220	230	220	210	220	230	220	220	230	240	285	300	310	290	290
	UQ	4	3	5	3	2	2	4	4	5	13	20	21	19	19	23	25	26	22	19	16	12	8	9	5
	LQ																								
M(3000)F2	MED							U													U	U		U	
	CNT							320			340	340	340	340	340	340	340	330	320	330	320	310	310	320	
	UQ	3	1	1	1	2	1	6	2	3	10	17	22	19	24	25	26	22	13	13	9	8	10	7	4
	LQ																								
foF1	MED																								
	CNT													1	1	2	1								
foE	MED																	U							
	CNT										4	200	220	220	220	220	200	160							
												11	14	16	14	17	18	8							
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. JANUARY, 1963

TABLE 26

DOURBES, BELGIUM (50.1N, 4.6E) 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
foF2	MED	31	31	31	27	23	24	22	26	44	58	57	60	60	59	56	50	44	38	31	25	26	28	30	31
	CNT	31	31	31	31	31	31	31	31	28	28	30	30	29	30	30	29	30	30	28	29	31	31	31	31
	UQ	34	34	33	31	27	29	24	28	47	60	65	63	67	63	60	54	48	43	35	30	29	31	32	33
	LQ	29	29	28	25	20	20	19	24	41	54	55	57	56	56	52	48	43	35	29	23	23	26	27	27
h'F2	MED										238	240	245	230	245	230	212								
	CNT										4	11	21	19	11	13	4								
	UQ										265	250	250	240	250	238	222								
	LQ										228	235	230	230	235	228	210								
h'F	MED	260	260	260	262	260	240	240	248	220	230	220	225	218	230	225	220	215	230	235	240	262	273	270	268
	CNT	30	30	30	30	30	30	30	30	29	29	29	29	30	29	29	29	29	29	27	28	30	30	30	30
	UQ	270	270	275	280	270	258	268	260	232	230	230	231	230	235	230	228	220	232	240	255	290	300	288	282
	LQ	250	250	255	250	245	230	225	240	212	220	220	215	210	222	220	210	210	220	220	230	250	260	260	260
M(3000)F2	MED	306	309	304	303	306	328	325	321	357	363	369	361	364	362	364	372	354	335	333	326	300	300	303	303
	CNT	31	31	31	31	31	31	30	31	27	28	30	30	29	30	30	29	30	30	28	29	31	31	31	31
	UQ	317	314	316	316	316	345	348	336	368	374	375	371	375	373	377	378	367	344	341	338	317	308	318	315
	LQ	300	296	296	293	296	310	310	315	347	347	351	350	352	345	352	364	336	325	324	310	294	291	292	294
foF1	MED											350	330	338	340	290	250								
	CNT											1	5	2	1	1	1								
foE	MED									140	200	220	240	240	232	215	180	E							
	CNT									18	25	28	25	25	23	24	17	125							
																		7							
h'E	MED									U								U							
	CNT									126	121	120	120	121	121	121	123	131							
										21	27	29	30	29	28	27	23	7							
foEs	MED	E		E	E	E	E	E	E	G					E	E	E	G		E	E	E	E	E	E
	CNT		12	11						16	22	26	26	26	23	22	18	17	14	12	11	11	13	13	12
		31	31	31	31	31	31	31	31	29	30	30	31	31	30	30	30	30	30	30	30	31	31	31	31

SWEEP 1.0 MC TO 20.0 MC IN 3 MINUTES. JANUARY, 1963

TABLE 27

WINNIPEG, CANADA (49.9N, 97.4W) TIME 90.0W

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
foF2	MED	E	E	E	E	E	E	E	E														E	E	E
	CNT	27	25	27	26	26	27	25	18	25	43	51	55	58	59	62	63	56	50	40	30	21			
	UQ		26	22	20	19	21			25	25	27	29	30	30	30	30	30	29	29	26	23	19	25	31
	LQ									27	46	55	59	62	62	64	67	60	54	45	33	23	20		
										24	41	47	52	55	55	58	59	54	47	36	27	19			
h'F2	MED												250	250	250	250	235								
	CNT											4	17	24	21	17	15	2							
h'F	MED	E	E	E	E	E	E	E	E														E	E	E
	CNT									250	215	220	220	210	220	220	230	210	205	210	220	250			
	UQ	27	26	23	21	23	20	23	15	21	24	26	27	27	25	27	29	29	29	26	24	16	18	23	30
	LQ																								
M(3000)F2	MED																						U		
	CNT	2	3	4	1	3	1	1		330	340	350	330	340	340	330	340	340	340	330	330	330	320		
	UQ									18	20	24	27	27	29	29	29	28	26	26	23	13	6		1
	LQ																								
foF1	MED																								
	CNT												4	2	2	1	1								
foE	MED																	U							
	CNT										180	230	250	260	260	250	230	200							
										1	10	18	18	14	15	14	12	7	2						
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. JANUARY, 1963

TABLE 28

ST. JOHNS, NEWFOUNDLAND (47.6N, 52.7W) TIME 60.0W

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
foF2	MED	J	J	U				J															J	J	J
	CNT	17	17	18	18	17	16	17	28	42	51	55	56	59	59	56	53	50	45	37	30	23	20	17	17
	UQ	11	7	10	9	18	17	5	30	30	31	31	31	30	30	31	31	30	29	27	26	19	15	15	12
	LQ	18	20	19	20	18	17	18	30	45	53	58	61	60	61	59	56	52	50	41	32	27	22	18	17
		15	15	16	16	16	15	17	26	40	49	51	52	54	55	54	51	46	40	34	23	22	19	17	16
h'F2	MED											U				U									
	CNT										2	260	255	255	265	270									
	UQ											10	21	13	13	8	1								
	LQ																								
h'F	MED					U	U																		
	CNT					260	280		245	235	235	225	210	200	220	245	240	235	240	250	250				
	UQ			1		5	5		25	30	29	29	29	28	28	29	29	29	28	24	14	2	2		
	LQ																								
M(3000)F2	MED					U																			
	CNT					300			310	330	330	320	320	320	320	320	320	310	300	300	300	290			
	UQ		1		3	9	2		29	28	31	29	29	30	29	29	30	27	21	22	19	14	2		
	LQ																								
foF1	MED																								
	CNT										1	1	2	2											
foE	MED										U														
	CNT									3	240	260	270	280	270	250									
											8	17	15	15	12	10	2								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. JANUARY, 1963

TABLE 29

GRAZ, AUSTRIA (47.1N, 15.5E) TIME 15.0E

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	32	33	32	31	31	31	30	30	J 45	56	62	62	61	60	60	55	48	J 41	35	31	30	31	32	32
	CNT	30	31	29	30	28	23	24	30	26	29	26	24	20	28	28	31	29	31	29	28	27	26	30	26
	UQ	35	35	35	34	32	33	31	32	48	60	67	64	67	63	67	57	51	43	40	33	31	32	33	34
	LQ	30	31	30	30	28	27	29	29	44	50	58	58	59	58	57	52	44	37	32	30	27	29	31	31
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT																								
h'E	MED																								
	CNT																								
fo Es	MED	E 26	E 26	E 26	E 26	E 26	E 27	E 26	E 27	E 27	E 29	E 30	E 30	E 31	E 31	E 30	E 30	E 29	E 27	E 27	E 26	E 28	E 27	E 27	E 27
	CNT	31	31	31	31	31	29	28	31	31	30	31	31	31	31	31	31	31	31	30	30	28	31	31	31

SWEEP 2.0 MC TO 13.0 MC IN 50 SECONDS. JANUARY, 1963

TABLE 30

OTTAWA, CANADA (45.4N, 75.9W) TIME 75.0W

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	20	20	20	20	20	22	20	22	40	50	55	60	62	60	61	58	55	50	44	33	26	22	20	20
	CNT	13	13	18	20	23	24	24	29	31	31	31	31	30	30	31	31	30	30	31	31	30	26	18	10
	UQ	21	21	22	22	23	24	23	25	42	52	58	62	66	62	65	62	58	52	50	38	28	23	22	20
	LQ	18	19	20	19	20	20	20	20	38	47	52	55	60	58	58	55	62	48	40	30	24	20	20	18
h'F2	MED										U 250	250	265	255	260	265	250								
	CNT										5	28	30	30	29	30	28	3							
	UQ																								
	LQ																								
h'F	MED	365	380	370	350	320	310	300	300	225	230	210	210	205	200	210	230	230	220	235	235	270	300	345	350
	CNT	12	11	17	22	23	24	20	28	31	31	29	31	29	28	28	29	29	29	30	30	29	25	18	11
	UQ																								
	LQ																								
M(3000)F2	MED									360	350	340	340	340	340	340	340	340	330	U 330					
	CNT					1			1	14	14	14	15	19	13	18	21	12	14	6	4	2	2	2	
	UQ																								
	LQ																								
fo F1	MED													U 390											
	CNT											2	3	9	3	2	1								
fo E	MED									180	240	260	280	280	280	270	240	200							
	CNT									24	15	13	12	11	11	11	13	18	3						
h'E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. JANUARY, 1963

TABLE 31

ROME, ITALY (41.8N, 12.5E) TIME 15.0E

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	32	32	32	32	U 32	U 30	U 28	U 28	47	52	61	68	62	61	58	58	54	43	36	35	U 31	28	30	31
	CNT	27	30	28	29	28	27	25	28	29	29	29	27	28	27	29	25	27	27	29	28	21	21	24	24
	UQ	34	35	35	34	35	32	31	29	49	58	69	78	72	67	63	66	57	48	41	41	33	30	31	32
	LQ	30	31	30	30	28	26	23	26	44	49	55	63	60	58	57	55	50	42	32	31	30	26	29	30
h'F2	MED																								
	CNT														2	1									
	UQ																								
	LQ																								
h'F	MED	270	270	270	260	260	250	250	245	215	220	235	230	210	200	220	230	220	220	240	240	230	280	290	275
	CNT	29	30	28	29	30	30	29	28	30	30	30	31	31	29	30	30	30	30	30	29	28	27	28	30
	UQ	290	290	290	270	270	260	260	260	230	240	240	240	230	220	240	240	230	230	250	250	250	290	300	300
	LQ	250	260	260	250	240	220	240	240	210	220	210	220	200	200	210	210	210	210	230	235	220	250	270	260
M(3000)F2	MED	300	300	300	305	U 310	U 320	U 320	U 300	345	350	345	350	350	350	345	350	360	340	320	325	U 320	300	285	290
	CNT	26	30	27	26	28	25	21	28	28	29	28	27	28	27	28	25	27	27	28	27	19	18	21	21
	UQ	305	305	305	310	320	335	320	320	360	365	350	355	360	360	350	360	370	360	335	335	335	305	300	300
	LQ	290	285	295	295	295	305	300	295	340	335	340	335	345	335	335	345	350	335	305	315	315	290	270	280
fo F1	MED																								
	CNT														2	1									
fo E	MED									170	220	260	280	280	280	270	250	200							
	CNT									21	28	28	30	31	27	27	25	23	4						
h'E	MED									160	120	120	120	110	110	120	120	130							
	CNT									16	27	29	31	30	31	29	30	24	2						
fo Es	MED																								
	CNT	30	30	30	30	30	30	30	30	30	30	30	31	31	31	31	30	30	30	30	30	30	30	30	30

SWEEP 1.4 MC TO 15.0 MC IN 5 MINUTES. AUTOMATIC. JANUARY, 1963

TABLE 32

RESOLUTE BAY, CANADA (74.7N, 94.9W) TIME 90.0W

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	28	29	26	26	25	25	26	30	30	32	33	38	38	44	44	40	35	32	32	32	32	29	26	25
	CNT	28	27	28	26	23	25	29	30	30	31	30	30	30	30	31	30	29	31	30	30	31	30	29	30
	UQ	33	32	30	30	27	28	30	32	32	35	36	40	42	52	55	44	42	36	36	35	36	34	31	30
	LQ	24	22	24	20	21	24	23	26	27	30	30	34	33	34	35	32	32	30	27	30	30	26	24	24
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	260	240	250	255	270	265	250	250	260	230	245	230	220	220	210	210	220	225	230	230	230	230	250	240
	CNT	24	24	28	22	19	22	25	23	27	29	27	29	28	29	28	30	29	30	29	28	27	26	24	24
	UQ																								
	LQ																								
M(3000)F2	MED	U 310	310	320	320	300	310	320	U 310	310	310	U 310	320	U 320	U 310			U 300	U 300	U 300	U 320	300	310	320	U 320
	CNT	8	12	19	10	16	11	14	9	13	14	9	10	6	6	3	3	5	5	7	5	10	10	11	8
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT											1	3	3	3	1	1								
h'E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. DECEMBER, 1962

TABLE 33 *

GOODHAVN, GREENLAND (69.3N, 53.5W) TIME 45.0W

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
foF2	MED			U 29									U 38	U 34	U 36	U 34	U 34	U 36	U 32	U 32	U 32	U 34	U 27		
	CNT	4	4	5	2	2	1		2		1	4	6	6	10	7	5	5	5	6	5	6	5	3	4
	UQ			32									40	34	37	37	44	38	40	40	38	38	31		
	LQ			26									34	28	31	32	32	34	26	29	28	30	26		
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED	32	40	35	33	24	30	32	41	48	36	30	34	40	48	O 46	42	63	58	58	48	45	50	46	49
	CNT	12	8	7	8	8	9	10	12	10	9	11	12	10	14	15	14	15	14	11	14	12	13	15	12

SWEEP 1.6 MC TO 20.0 MC IN 15 SECONDS. DECEMBER, 1962

*Equipment failure beginning 21st hour on 7th day through 12th hour on 22nd day.

TABLE 34

CHURCHILL, CANADA (58.8N, 94.2W) TIME 90.0W

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
foF2	MED	U 25									U 39	U 48	U 53	U 56	U 57	U 61	U 59	U 52	U 46	U 35	U 30	U 24	U 30		
	CNT	5	4	4	4	3	2	2	2	3	6	6	6	6	6	5	5	6	6	6	5	5	6	3	4
	UQ	36									42	52	56	62	60	68	68	56	47	38	34	30	36		
	LQ	22									36	44	50	53	52	49	48	52	43	33	28	21	23		
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED											U 220	U 220	U 235	U 220		U 215	U 210	U 230	U 260	U 280				
	CNT	2	2	3	1	1	1	1	1	1	4	5	5	6	6	3	5	6	6	5	5	2	1	2	1
	UQ																								
	LQ																								
M(3000)F2	MED											U 340	U 340	U 340	U 340			U 320							
	CNT		1	1	1	2	1	1	1	1	4	5	5	6	6	3	4	6	4	3	4	1			1
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT											3	3	3	3	3	3								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. DECEMBER, 1962

TABLE 35

WINNIPEG, CANADA (49.9N, 97.4W) TIME 90.0W

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
foF2	MED	E	E	E	E	E	E	E	18	28	42	49	60	60	60	65	64	57	48	40	30	23	20	E	E
	CNT	24	24	23	25	23	23	24	16	26	26	27	27	26	26	27	26	28	29	29	30	26	24	24	25
	UQ	22	22	22	22	20	20	18	22	30	46	55	63	68	65	70	71	62	56	48	32	24	26	24	26
	LQ									25	37	44	50	52	54	54	56	53	42	33	27	20			
h'F2	MED											270	275	265	265	280	U 270								
	CNT											12	17	19	18	18	7								
	UQ																								
	LQ																								
h'F	MED	E	E	E	E	E	E	E	E	270	230	230	230	230	230	240	230	230	230	240	250	280	370	E	E
	CNT	20	20	19	16	18	19	20	10	23	24	26	20	22	24	22	23	26	25	28	25	15	14	18	21
	UQ																								
	LQ																								
M(3000)F2	MED									310	330	320	330	330	330	320	330	330	320	310	320	320	U 290	U 290	
	CNT	4	4	3	4	1	1	1	1	19	23	25	24	23	26	27	25	23	24	25	23	14	7	5	4
	UQ																								
	LQ																								
foF1	MED													U 350											
	CNT											2	3	5	2	1									
foE	MED										190	220	240	240	240	230	U 200	U 170							
	CNT									1	16	20	18	18	16	11	8	7							
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. DECEMBER, 1962

TABLE 36

ST. JOHNS, NEWFOUNDLAND (47.6N, 52.7W) TIME 60.0W

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
foF2	MED	U 17	J 18	U 19	17	17	17		28	44	50	57	60	60	61	60	56	50	40	32	26	22	21	17	18
	CNT	10	11	12	17	19	19	3	31	31	31	30	31	31	31	31	31	28	24	22	24	17	12	8	8
	UQ	18	20	20	20	19	18		32	48	56	60	69	63	65	64	60	52	45	36	30	26	24	21	20
	LQ	16	15	18	16	16	16		25	40	48	53	57	57	59	57	52	44	38	30	22	17	20	17	16
h'F2	MED											U 290	260	260	U 255	U 260									
	CNT										3	7	12	10	7	6	1								
	UQ																								
	LQ																								
h'F	MED					U 275	U 250		250	230	235	230	225	215	225	240	235	230	250	255	U 270				
	CNT			1	4	7	6		24	30	29	29	26	27	28	30	31	28	25	18	8	1	1		
	UQ																								
	LQ																								
M(3000)F2	MED				U 290	310	U 310		320	330	330	320	330	320	320	320	320	310	300	300	300	U 290			
	CNT	1	3	3	7	11	9		28	30	31	29	30	29	27	28	27	20	19	21	12	7	3		
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED											U 260	U 270	U 260	U 240										
	CNT									4	3	9	7	9	7	3	1								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. DECEMBER, 1962

TABLE 37

SOTTENS, SWITZERLAND (46.6N, 6.7E) TIME 15.0E

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
foF2	MED	31	30	31	31	29	27	26	23	35	48	56	60	64	59	58	58	56	45	35	31	30	28	29	30
	CNT	28	30	28	30	28	28	26	23	30	31	30	31	31	30	31	31	30	30	27	23	24	24	22	27
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	280	275	275	275	260	250	235	240	220	205	215	220	210	210	210	225	210	200	225	250	250	270	290	300
	CNT	28	31	31	31	30	28	26	20	31	31	31	31	31	29	30	31	31	30	24	23	22	19	19	24
	UQ																								
	LQ																								
M(3000)F2	MED	300	300	300	310	310	320	340	330	340	365	360	360	360	360	355	360	360	360	340	330	340	330	300	300
	CNT	26	27	26	30	27	25	25	16	25	24	24	25	24	25	26	28	27	28	25	20	22	19	16	23
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED										200	220	250	260	260	240	220								
	CNT									1	14	14	18	17	14	9	6	3							
h'E	MED										140	115	110	110	110	110	120								
	CNT									1	15	15	18	17	15	10	6	3							
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 25.0 MC IN 30 SECONDS. DECEMBER, 1962

TABLE 38

OTTAWA, CANADA (45.4N, 75.9W) TIME 75.0W

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
foF2	MED	20	20	20	20	20	20	20	22	42	50	56	65	67	62	65	66	60	50	42	33	25	22	20	20
	CNT	17	17	20	24	19	19	21	29	30	31	31	31	31	31	31	31	31	31	31	31	29	29	22	19
	UQ																								
	LQ																								
h'F2	MED										240	250	250	250	250	250	250								
	CNT										12	25	30	28	31	28	12								
	UQ																								
	LQ																								
h'F	MED	350	325	350	340	300	300	300	295	220	220	205	210	210	215	210	230	210	220	240	250	275	300	350	350
	CNT	14	15	18	20	18	17	17	29	30	31	31	29	29	27	28	28	31	31	31	30	28	23	20	17
	UQ																								
	LQ																								
M(3000)F2	MED									350	350	350	350	330	340	340	340	340	340		U 340				
	CNT				1				1	12	17	15	14	15	19	21	18	13	8	4	5	3		1	
	UQ																								
	LQ																								
foF1	MED										2	1	2	2	1										
	CNT																								
foE	MED									180	230	260	270	270	260	250	220	170							
	CNT									21	18	17	13	12	10	13	13	15							
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. DECEMBER, 1962

TABLE 39

TAIPEI (TAIWAN), CHINA (25.0N, 121.5E) TIME 120.0E

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
foF2	MED	31	32	U 32	33	26	U 24	30	50	66	77	81	85	95	96	96	89	U 79	69	55	U 51	U 50	47	U 40	35
	CNT	21	26	30	30	29	20	16	31	31	31	31	31	31	31	31	31	31	30	31	31	30	29	24	14
	UQ	38	34	37	41	31	25	31	56	71	87	90	94	112	123	126	112	97	79	60	56	58	54	45	39
	LQ	28	29	28	27	23	21	28	46	60	67	70	73	84	89	80	78	73	61	50	47	43	42	34	30
h'F2	MED									U 245	250	245	255	260	255	250	240	235							
	CNT									9	26	29	27	30	31	30	23	2							
	UQ																								
	LQ																								
h'F	MED	E 300	E 290	U 245	U 230	U 220	E 315	E 270	230	235	230	215	U 210	200	U 210	U 220	220	225	205	U 200	U 225	U 235	U 230	U 235	E 300
	CNT	21	27	30	30	29	17	9	31	31	31	31	30	30	31	29	30	31	31	30	31	30	28	23	11
	UQ	305	310	335	350	365	320	330	365	365	360	370	350	340	350	355	355	365	315	370	325	360	349	350	330
	LQ	290	290	305	315	330	280	300	340	345	340	340	315	315	320	335	330	345	345	340	295	305	325	310	300
M(3000)F2	MED	300	300	320	340	350	300	310	350	350	350	355	335	330	330	340	345	355	360	350	310	315	335	325	305
	CNT	14	24	25	26	24	8	8	30	31	30	29	30	26	28	25	29	27	27	26	26	24	23	17	8
	UQ	305	310	335	350	365	320	330	365	365	360	370	350	340	350	355	355	365	315	370	325	360	349	350	330
	LQ	290	290	305	315	330	280	300	340	345	340	340	315	315	320	335	330	345	345	340	295	305	325	310	300
foF1	MED										U 390	U 420	U 430	U 450	U 420		450								
	CNT										1	5	3	6	7		1								
foE	MED										U 280	U 300	U 310	U 305		U 310									
	CNT										1	2	3	1		1									
h'E	MED									E 117	E 115	U 110	U 107	E 113	U 116	E 118									
	CNT									1	6	18	9	7	2	2									
foEs	MED										30	33	35	35	34	34	31	32	27	26					
	CNT	31	31	31	31	31	31	27	5	17	28	31	30	31	30	26	22	23	15	10	31	31	31	31	31

SWEEP 1.0 MC TO 25.0 MC IN 30 SECONDS. DECEMBER, 1962

TABLE 40

RESOLUTE BAY, CANADA (74.7N, 94.9W) TIME 90.0W

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
foF2	MED	32	30	30	27	28	29	30	32	33	38	38	37	44	40	42	44	42	38	35	33	32	32	32	30
	CNT	28	29	29	28	27	27	27	28	29	26	27	26	28	28	27	28	29	29	29	30	30	30	29	27
	UQ	33	32	33	32	32	30	33	35	36	48	47	48	52	50	50	52	47	48	44	45	35	35	34	35
	LQ	28	28	26	25	25	23	28	30	30	34	34	34	36	35	36	38	35	34	32	31	30	29	29	29
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	240	240	260	260	245	280	255	240	230	220	230	230	230	230	230	220	220	220	220	240	245	230	220	240
	CNT	27	26	26	24	20	19	22	22	27	26	27	25	27	28	29	29	29	30	28	28	27	28	25	22
	UQ																								
	LQ																								
M(3000)F2	MED	U 320	310	310	310	300		U 310	U 300	U 300	U 310	U 310		320	320	U 320	U 320	U 320	U 300	U 320		U 320	310	U 320	310
	CNT	8	12	12	11	10	2	8	6	8	5	7	3	10	10	5	7	6	8	5	4	8	10	9	10
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED									110	U 110	120	120	120	120	110	110	U 110							
	CNT									10	9	10	14	18	15	13	10	5	1						
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. NOVEMBER, 1962

TABLE 41

CHURCHILL, CANADA (58.8N, 94.2W) TIME 90.0W

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	30	28	26	28	28	31	34	32	40	48	53	56	61	62	65	64	60	48	40	34	34	36	29	24
	CNT	18	23	24	23	20	12	11	12	16	18	25	28	29	30	30	30	30	28	30	28	26	25	19	17
	UQ	34	30	30	32	33	35	38	39	42	52	60	67	71	73	76	73	67	54	46	37	38	39	34	33
	LQ	27	25	23	23	24	24	22	24	38	43	48	51	54	55	57	54	53	39	35	30	32	32	26	22
h'F2	MED											U 230	260	260	250	240									
	CNT										1	6	12	17	18	10	3								
	UQ																								
	LQ																								
h'F	MED	265	290	300	290	315	U 285	U 295	U 300	240	220	245	230	220	230	230	220	220	255	290	280	295	280	U 260	U 280
	CNT	10	11	10	15	12	6	8	7	12	15	22	20	23	24	29	27	30	26	25	19	21	17	9	9
	UQ																								
	LQ																								
M(3000)F2	MED	U 320	U 320		U 320	U 300		U 310		330	340	330	330	330	330	330	330	330	320	320	320	320	U 320	U 330	U 320
	CNT	5	5	4	6	6	4	5	4	11	13	20	23	24	27	27	22	19	20	16	13	14	9	5	6
	UQ																								
	LQ																								
fo F1	MED																								
	CNT												1	3											
fo E	MED										U 200	220	230	240	240	230	190	160							
	CNT								1	3	8	11	11	14	22	21	18	11	1						
h'E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. NOVEMBER, 1962

TABLE 42

PRUHONICE, CZECHOSLOVAKIA (50.0N, 14.6E) 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	MED	33	33	33	30	27	26	36	54	62	70	76	72	68	69	66	60	50	43	34	30	29	30	30	32
	CNT	29	29	29	29	27	24	28	29	27	27	27	26	28	26	28	28	28	29	29	25	15	14	23	24
	UQ																								
	LD																								
h'F2	MED																								
	CNT																								
	UQ																								
	LD																								
h'F	MED	280	260	250	250	240	240	220	210	210	205	220	215	210	220	225	205	200	210	220	225	250	305	290	290
	CNT	27	26	28	28	23	20	28	29	28	27	23	24	24	28	27	26	26	23	24	15	9	5	12	9
	UQ																								
	LD																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LD																								
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT																								
h'E	MED																								
	CNT																								
fo Es	MED	E	E	E	E	E			E					E	E										E
	CNT	19	6	28	29	16	2	2	20 15	22 27	28 27	27 28	27 28	27 27	23 27	22 28	22 18	24 11	20 4		2				4

SWEEP 1.0 MC TO 18.0 MC. NOVEMBER, 1962

TABLE 43

WINNIPEG, CANADA (49.9N, 97.4W) TIME 90.0W

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	20	23	23	23	21	22	23	24	40	50	55	61	63	65	67	68	62	58	49	39	30	24	22	20
	CNT	23	23	21	18	15	14	13	21	27	28	29	29	29	29	29	30	30	30	30	30	29	28	25	23
	UQ	24	27	27	28	27	27	28	26	43	56	63	69	75	78	76	74	70	62	52	42	33	25	23	24
	LQ	18	19	20	19	18	20	19	20	36	44	48	52	57	62	62	60	59	52	41	33	27	23	20	19
h'F2	MED										285	270	290	285	275	275	270								
	CNT										10	18	27	27	28	20	15								
	UQ																								
	LD																								
h'F	MED	U 300	310	325	320	U 305	U 290	U 290	300	260	240	230	220	230	235	240	245	230	230	235	250	270	280	290	U 300
	CNT	7	10	10	11	9	9	7	11	24	28	27	23	25	25	28	29	29	30	30	28	28	20	14	9
	UQ																								
	LD																								
M(3000)F2	MED	U 300	U 290	300	290	U 290			U 300	320	320	320	310	320	320	320	320	320	320	310	310	310	310	300	300
	CNT	6	9	10	10	5	1	1	8	23	28	26	28	28	28	29	29	29	30	30	26	27	22	14	10
	UQ																								
	LQ																								
fo F1	MED											U 360	U 380	390											
	CNT										2	5	8	12	4	1									
fo E	MED									U 160	200	230	260	270	270	290	220	200	U 150						
	CNT									6	18	24	23	23	23	23	24	18	5						
h'E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. NOVEMBER, 1962

TABLE 44

ST. JOHNS, NEWFOUNDLAND (47.6N, 52.7W) TIME 60.0W

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	24	23	23	20	19	20	24	44	58	62	67	69	70	70	71	69	62	52	41	34	32	30	27	25
	CNT	14	17	17	22	25	22	24	30	30	30	30	30	30	30	30	29	29	28	27	24	18	15	15	16
	UQ	25	26	26	22	22	22	27	49	61	70	72	75	75	73	75	73	65	56	48	38	35	32	28	26
	LQ	23	20	20	18	17	18	21	38	51	58	62	63	65	63	64	62	60	47	32	26	29	25	25	24
h'F2	MED										U 250	255	250	260	260	U 260									
	CNT									1	6	15	18	18	14	6									
	UQ																								
	LD																								
h'F	MED		U 310	U 270		U 260	U 250	U 260	240	230	210	210	210	225	220	245	240	225	235	250	260	U 270			
	CNT		5	6	4	6	7	5	30	29	30	24	29	29	30	29	30	29	29	21	15	7	3	1	
	UQ																								
	LD																								
M(3000)F2	MED	280	280	280	290	300	300	300	320	330	330	330	320	320	320	320	320	320	300	300	290	290	290	280	280
	CNT	11	11	10	10	15	14	8	28	28	30	30	30	30	30	26	27	26	25	21	19	13	11	10	10
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED									U 220	260	280	285	280	270	250	U 200								
	CNT								3	9	18	19	21	20	16	14	5								
h'E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. NOVEMBER, 1962

TABLE 45

SOTTENS, SWITZERLAND 146.6N, 6.7E) TIME 15.0E

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	30	31	32	33	32	31	27	30	48	60	64	67	71	69	67	69	61	57	42	36	35	29	29	31
	CNT	25	26	27	27	24	27	25	20	25	27	25	28	28	26	27	27	27	27	24	25	20	17	24	26
	UQ																								
	LQ																								
h' F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h' F	MED	300	300	280	270	260	240	225	235	210	210	210	200	200	210	220	230	210	200	210	240	230	270	280	300
	CNT	26	27	27	27	27	27	26	22	27	27	26	25	25	25	25	26	26	22	25	24	22	17	19	26
	UQ																								
	LQ																								
M(3000)F2	MED	290	300	300	305	310	335	340	330	355	365	360	355	355	360	355	350	360	350	340	330	335	310	305	290
	CNT	25	23	24	23	21	20	20	16	17	13	19	21	23	20	25	20	19	19	21	22	18	16	18	24
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED										210	230	250	270	280	270	230								
	CNT									3	9	9	11	16	19	20	15	4							
h' E	MED										110	110	110	110	110	110	110	120							
	CNT									3	12	10	10	16	16	20	13	5							
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 25.0 MC IN 30 SECONDS. NOVEMBER, 1962

TABLE 46

OTTAWA, CANADA 145.4N, 75.9W) TIME 75.0W

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	22	23	22	20	20	22	23	38	50	58	65	72	75	73	74	72	68	60	50	40	32	29	25	24
	CNT	28	28	26	27	28	28	25	30	30	30	29	29	29	29	30	30	30	30	30	30	30	29	30	27
	UQ	26	25	25	25	26	25	25	40	58	66	70	78	80	76	77	78	72	69	55	43	35	30	27	27
	LQ	20	20	20	20	20	20	20	30	45	53	59	66	68	68	66	65	65	57	45	38	30	26	22	20
h' F2	MED										250	250	260	250	250	250	250								
	CNT									4	25	28	29	28	29	27	10								
	UQ																								
	LQ																								
h' F	MED	300	310	320	310	300	315	330	250	230	220	200	200	205	210	230	240	230	210	230	240	250	280	300	300
	CNT	28	26	24	26	27	26	24	30	30	30	28	28	28	29	30	30	30	30	30	30	30	29	29	23
	UQ																								
	LQ																								
M(3000)F2	MED								U	340	330	330	320	330	320	330	330	340	320	U	U	310	U	U	U
	CNT	2	4	2	1	3	3	3	330	16	15	19	22	21	18	23	15	17	13	320	320	11	310	300	300
	UQ								6											5	6		7	5	6
	LQ																								
fo F1	MED											3	2	2	1	1									
	CNT																								
fo E	MED								170	200	250	270	280	290	280	260	240	190							
	CNT								12	26	28	25	26	27	27	28	27	22							
h' E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. NOVEMBER, 1962

TABLE 47

RESOLUTE BAY, CANADA 174.7N, 94.9W) TIME 90.0W

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
foF2	MED	33	32	30	30	30	32	32	35	39	40	42	44	48	49	45	47	44	45	40	40	40	36	36	34
	CNT	31	30	31	29	30	29	28	27	29	30	31	30	30	30	29	29	30	31	29	28	26	28	30	29
	UQ	37	36	36	32	35	35	36	40	44	50	47	49	55	52	52	54	48	53	52	50	50	42	42	42
	LQ	30	30	27	28	28	29	30	30	34	36	38	40	42	42	40	42	37	37	36	34	35	34	31	31
h' F2	MED															U									
	CNT								1		1	290	295	295	290	290		1							
	UQ											10	11	10	12	5	4								
	LQ																								
h' F	MED	250	250	280	260	280	275	270	275	250	250	245	240	240	240	230	240	250	240	240	240	250	245	250	250
	CNT	29	27	29	21	26	27	28	26	27	26	26	29	26	30	22	28	28	29	28	27	27	27	28	28
	UQ																								
	LQ																								
M(3000)F2	MED	300	U	300	U	U	U	300	290	310	310	310	310	300	310	U	300	300	U	U	U	U	U	U	U
	CNT	12	8	11	9	8	8	10	11	11	15	23	20	15	17	300	14	14	310	300	300	300	300	300	300
	UQ															8			8	9	7	7	9	7	9
	LQ																								
fo F1	MED													U											
	CNT											3	4	330	4	2	1								
	UQ													7											
	LQ																								
fo E	MED								U						U			U	U						
	CNT							3	120	140	180	190	200	210	190	180	180	140	120						
	UQ								7	12	12	11	10	11	9	12	10	9	8	4	1				
	LQ																								
h' E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. OCTOBER, 1962

TABLE 48

CHURCHILL, CANADA (58.8N, 94.2W) TIME 90.0W

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	32	30	29	28	28	30	32	37	44	48	50	55	59	60	62	62	60	47	40	39	37	34	33	30
	CNT	22	21	20	22	18	14	10	12	16	21	25	27	31	31	30	30	30	30	31	31	29	26	21	16
	UQ	33	34	32	30	30	37	40	42	47	52	55	58	64	72	77	73	68	55	44	44	41	37	38	32
	LQ	28	26	24	24	23	25	26	25	39	43	46	52	53	58	59	56	50	42	36	35	34	32	30	27
h' F2	MED									U															
	CNT								1	280	290	295	290	300	280	285	260	265							
	UQ									5	11	18	22	27	28	26	23	10							
	LQ																								
h' F	MED	290	U	U	U	U	U		U	U	U			225	220	225	230	235	280	295	300	295	295	U	U
	CNT	13	280	295	345	300	300		280	260	230	215	220	14	17	20	19	21	28	24	16	13	12	290	230
	UQ		7	6	8	7	7	3	8	7	7	11	12											9	7
	LQ																								
M(3000)F2	MED	U		U	U				U	U				310	310	310	310	320	320	310	U	U	U		
	CNT	330		310	290				320	330	320	320	320	26	27	25	23	21	20	15	300	310	310		
	UQ	5	2	5	5	2	2	2	8	9	13	18	22								7	8	5	3	3
	LQ																								
fo F1	MED											U		390	400	380	U								
	CNT								1	1	2	380	390	21	16	11	350	1							
	UQ											8	17				5								
	LQ																								
fo E	MED										U	U							U						
	CNT									3	240	260	280	280	270	250	240	220	170						
	UQ										6	8	10	12	21	16	18	14	5						
	LQ																								
h' E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. OCTOBER, 1962

TABLE 4C

PRUHONICE, CZECHOSLOVAKIA (50.0N, 14.6E) 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
foF2	MED	33	32	32	29	26	30	46	56	62	63	68	68	70	68	69	68	60	58	54	44	36	33	34	32
	CNT	27	28	28	24	24	26	28	29	28	27	28	23	27	28	28	29	29	26	28	28	26	24	20	23
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	300	285	275	260	250	250	230	225	220	210	210	205	210	215	230	230	220	215	220	230	245	280	285	300
	CNT	25	24	25	26	21	24	28	27	23	20	20	17	20	23	24	28	26	23	22	20	19	14	11	14
	UQ																								
	LQ																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED	E	E		E	E										E									
	CNT	12	14	15		11	30	20	24	30	31	34	32	31	27	26	24	21	30	28	20	34	32	40	41
		17	28	29	27	10	4	21	26	27	27	28	27	29	29	28	26	21	14	12	5	10	10	9	5

SWEEP 1.0 MC TO 18.0 MC. OCTOBER, 1962

TABLE 5C

WINNIPEG, CANADA (49.9N, 97.4W) TIME 90.0W

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
foF2	MED	25	25	26	26	24	22	23	34	43	49	53	58	63	65	67	68	69	66	62	52	40	31	26	25
	CNT	25	26	19	17	20	16	15	21	23	24	27	29	28	30	30	31	31	29	29	31	31	31	30	29
	UQ	30	30	30	30	28	26	25	36	48	56	63	69	72	76	74	74	73	72	66	54	43	36	30	29
	LQ	22	20	22	23	22	22	21	31	40	48	50	54	58	62	62	62	62	64	56	48	32	27	24	22
h'F2	MED										300	315	330	320	300	300	290	240							
	CNT									4	17	26	26	26	28	29	30	20							
	UQ																								
	LQ																								
h'F	MED	315	340	325	320	340	U 320		285	260	230	230	220	220	230	235	250	260	260	250	260	270	290	300	300
	CNT	18	14	12	10	11	5	4	18	18	15	19	19	19	20	19	22	23	28	28	30	26	27	24	22
	UQ																								
	LQ																								
M(3000)F2	MED	280	280	U 280	U 280	280	U 280		310	310	310	300	300	300	300	300	300	310	310	310	300	300	300	290	290
	CNT	11	10	5	7	10	6	3	17	17	20	26	26	27	29	30	29	28	26	28	28	20	21	18	12
	UQ																								
	LQ																								
foF1	MED										U 360	390	400	410	410	400	U 400								
	CNT										7	21	23	21	22	18	6	2							
foE	MED									U 210	250	270	300	290	280	270	260	220	U 200						
	CNT								3	7	11	12	12	12	14	17	14	11	9	3					
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. OCTOBER, 1962

TABLE 1

ST. JOHNS, NEWFOUNDLAND (47.6N, 52.7W) TIME 60.0W

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
foF2	MED	27	25	20	20	19	20	31	50	59	61	65	71	72	71	70	71	70	70	60	46	35	33	30	23
	CNT	16	21	24	19	14	10	31	31	31	31	31	31	31	31	31	31	31	30	26	26	24	21	20	18
	UQ	29	28	26	24	23	22	40	54	62	68	75	79	80	79	80	80	78	72	62	52	41	36	32	25
	LQ	21	20	19	19	17	18	32	47	51	57	58	60	63	64	62	62	62	58	50	40	28	30	27	23
h'F2	MED									265	270	275	295	290	275	280	275								
	CNT								3	18	24	26	27	29	27	21	10								
	UQ																								
	LQ																								
h'F	MED		U 290	U 295	U 265	U 250		250	235	225	210	200	210	220	225	235	245	245	240	240	250	275	300		
	CNT	4	6	8	6	7	2	31	30	31	31	31	31	29	30	28	30	31	29	28	25	13	10	4	3
	UQ																								
	LQ																								
M(3000)F2	MED	U 280	U 280	280	290	300		310	320	320	310	310	310	310	310	310	310	310	310	300	290	280	270	280	270
	CNT	9	9	15	11	10	1	31	28	29	30	31	31	28	30	29	30	26	25	15	15	16	15	12	7
	UQ																								
	LQ																								
foF1	MED												U 410												
	CNT									1	3	3	5	2	2										
foE	MED								U 210	255	280	295	300	300	290	270	250								
	CNT								9	18	21	16	17	20	20	19	13	2							
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 20 SECONDS. OCTOBER, 1962

TABLE 52

OTTAWA, CANADA (45.4N, 75.9W) TIME 75.0W

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
foF2	MED	28	25	25	22	20	21	25	47	60	65	70	72	75	77	78	78	75	70	62	55	43	35	30	28
	CNT	31	31	30	26	23	17	31	31	31	31	30	31	31	31	31	31	31	31	31	31	30	30	30	31
	UQ	30	30	32	25	25	25	28	50	64	76	78	82	85	87	86	88	85	80	76	60	46	40	37	32
	LQ	22	22	20	20	20	20	25	42	51	58	63	60	65	68	69	72	70	65	60	50	35	30	27	25
h'F2	MED									250	270	270	275	280	280	270	260	260							
	CNT								3	26	31	30	31	31	31	30	31	10							
	UQ																								
	LQ																								
h'F	MED	300	300	300	320	340	320	280	240	225	220	200	200	200	205	220	230	240	230	230	240	250	270	300	300
	CNT	31	31	28	27	23	14	31	31	31	31	30	30	31	30	30	31	31	30	31	31	29	28	30	31
	UQ																								
	LQ																								
M(3000)F2	MED								U 340	340	330	330	330	320	320	320	320	330	330	U 320	U 320				
	CNT	1	3	2	2			4	4	22	27	28	27	27	30	27	28	22	11	8	7	3	4	2	1
	UQ																								
	LQ																								
foF1	MED									U 350	400	410	420	420	420	400	400	U 350							
	CNT								3	15	21	24	23	24	21	19	16	7							
foE	MED								200	240	270	290	300	300	300	280	260	240	180						
	CNT							4	26	24	23	22	25	26	26	27	27	23	19	1					
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 16 SECONDS. OCTOBER, 1962

TABLE 53

JOHANNESBURG, UNION OF S. AFRICA (26.15, 28.1E) TIME 30.0E

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
foF2	MED	38	37	36	32	31	31	50	64	73	76	78	83	90	94	92	92	92	89	82	70	56	44	38	38
	CNT	25	24	24	24	25	26	26	25	25	25	26	27	26	26	26	27	27	26	26	26	26	25	24	25
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	235	E 230	E 230	E 225	E 250	255	235	230	220	215	200	200	205	205	210	215	225	230	230	220	220	225	245	260
	CNT	3	4	6	10	11	16	26	25	24	23	22	18	13	11	16	15	15	17	25	18	13	8	5	3
	UQ																								
	LQ																								
M(3000)F2	MED	290	300	310	295	295	295	335	330	320	315	300	290	290	290	295	295	305	315	325	320	320	310	295	290
	CNT	24	24	24	24	25	26	26	25	25	25	26	27	26	26	26	27	27	26	26	26	26	24	23	23
	UQ																								
	LQ																								
foF1	MEQ								420	440	460	470	480	480	470	470	460	420	360						
	CNT								2	7	18	19	25	22	15	12	12	5	3						
foE	MED							170	250	290	320	340	350	350	350	340	320	290	240	170					
	CNT							21	24	22	19	18	19	22	25	24	21	19	9	2					
h'E	MEQ																								
	CNT																								
foEs	MEQ	12	12	E	E	11	E	G	27	31	34	37	39	40	40	38	36	33	27	20	16	15	15	14	12
	CNT	23	22	22	21	21	23	25	25	23	23	23	21	22	25	25	23	23	24	25	26	26	25	24	22

SWEEP 1.0 MC TO 15.0 MC IN 1 MINUTE 30 SECONDS. OCTOBER, 1962

TABLE 54

CAPETOWN, UNION OF S. AFRICA (34.15, 18.3E) TIME 30.0E

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
foF2	MED	35	34	36	36	34	30	41	58	68	71	76	81	90	94	96	96	91	86	82	74	58	45	37	36
	CNT	21	20	18	17	17	17	17	17	17	21	24	25	26	26	26	26	26	26	25	24	25	24	22	22
	UQ																								
	LQ																								
h'F2	MEQ																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED					235	295	245	235	225	220	215	200	200	200	200	210	215	220	230	220	220	225		
	CNT					2	2	15	17	15	17	17	16	17	19	19	22	23	21	22	24	18	7		
	UQ																								
	LQ																								
M(3000)F2	MED	285	280	285	285	305	285	320	330	315	310	300	295	290	290	290	295	305	320	325	330	330	320	300	300
	CNT	21	20	18	17	17	17	17	17	17	21	24	25	26	26	26	26	26	26	25	24	25	24	22	22
	UQ																								
	LQ																								
foF1	MEQ									430	440	460	470	480	470	470	460	440	390	270					
	CNT									2	10	13	19	20	19	21	18	10	5	3					
foE	MED							E 140	210	270	300	320	340	350	350	340	320	300	270	210	E 160				
	CNT							13	16	17	21	22	23	23	21	23	22	21	21	17	11				
h'E	MEQ																								
	CNT																								
foEs	MED	14	E 14	E 14	E 13	E 13	E 12	E 17	26	30	34	37	38	37	37	36	34	32	29	24	17	E 17	E 16	E 17	18
	CNT	21	20	18	17	15	16	17	17	15	18	22	25	24	26	25	24	26	24	24	24	23	24	21	22

SWEEP 1.0 MC TO 15.0 MC IN 1 MINUTE 30 SECONDS. OCTOBER, 1962

TABLE 55

PRUHONICE, CZECHOSLOVAKIA (50.0N, 14.6E) 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
foF2	MEQ	34	31	30	30	27	38	46	50	56	59	60	60	60	60	59	59	57	60	60	53	50	40	37	33
	CNT	30	29	29	29	27	28	29	29	30	28	28	28	28	30	29	29	29	27	22	24	26	29	27	27
	UQ																								
	LQ																								
h'F2	MEQ																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	290	280	280	270	260	240	220	220	200	200	200	200	200	205	210	215	240	240	235	240	220	240	270	
	CNT	24	23	23	22	15	21	17	19	19	18	18	18	17	21	19	17	13	20	15	20	13	12	8	3
	UQ																								
	LQ																								
M(3000)F2	MED																								
	CNT																								
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MEQ																								
	CNT																								
h'E	MEQ																								
	CNT																								
foEs	MEQ	E 15	E	E 11	E	18	22	25	28	33	34	34	35	35	32	30	26	26	28	28	28	40	30	18	
	CNT	18	24	30	29	16	20	28	30	30	30	28	29	29	30	30	29	30	26	15	10	10	8	4	

SWEEP 1.0 MC TO 18.0 MC. SEPTEMBER, 1962

TABLE 56

TAIPEI (TAIWAN), CHINA (25.0N, 121.5E) TIME 120.0E

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
foF2	MED	48	U 45	44	35	U 32	27	54	65	71	78	88	104	124	130	130	135	132	U 122	U 115	U 92	U 67	U 52	U 48	U 49
	CNT	27	28	27	27	28	28	30	28	29	28	29	29	30	30	29	29	30	29	30	30	30	29	29	28
	UQ	58	53	51	42	35	32	57	69	74	84	98	117	133	144	144	152	155	138	130	108	82	63	54	55
	LQ	42	42	37	31	28	24	49	62	65	72	82	94	107	110	114	118	113	100	91	74	58	46	43	44
h'F2	MED								250	260	275	300	325	300	300	290	275	250	255						
	CNT								8	16	17	23	25	29	30	29	29	28	7						
	UQ																								
	LQ																								
h'F	MED	265	U 250	230	230	U 230	U 240	235	U 220	U 220	U 210	U 200	E 215	U 205	U 215	U 210	U 220	U 225	230	225	U 215	U 220	U 260	U 290	U 300
	CNT	29	29	29	28	29	29	30	28	26	25	25	25	20	19	23	24	24	26	30	30	30	28	30	28
	UQ																								
	LQ																								
M(3000)F2	MED	300	310	315	315	315	315	340	360	335	320	295	295	310	305	310	320	335	340	335	330	310	280	280	285
	CNT	26	27	27	25	27	28	30	28	26	27	29	28	28	29	25	26	26	24	19	23	25	24	27	24
	UQ	315	320	335	330	335	330	355	370	350	330	310	310	315	320	315	330	340	340	340	340	320	300	285	290
	LQ	285	290	285	290	300	295	330	350	335	310	285	285	300	215	300	310	315	330	320	315	290	275	270	275
foF1	MEQ									U 430	U 460	U 480	U 480	U 480	U 480	U 470	U 455								
	CNT									1	3	11	18	16	12	12	8								
foE	MED									300	U 320				340	U 330	305	270							
	CNT									1	1				2	8	5	7							
h'E	MED								E 122	E 121	E 112	E 111	E 115	E 115	E 115	E 115	E 115	E 115	E 117						
	CNT								2	8	18	17	7	7	10	19	19	21	3						
foEs	MEQ	27						23	30	36	40	40	42	43	40	37	35	35	31	31	27	23			20
	CNT	29	29	29	29	29	28	21	28	29	29	29	29	30	30	29	29	30	28	26	30	30	30	30	30

SWEEP 1.0 MC TO 25.0 MC IN 30 SECONDS. SEPTEMBER, 1962

TABLE 57

JOHANNESBURG, UNION OF S. AFRICA (26.1S, 28.1E) TIME 30.0E

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
foF2	MED	34	34	32	28	28	28	38	58	67	74	77	80	83	84	84	80	76	73	69	64	49	38	36	36
	CNT	20	20	20	20	20	20	20	20	21	23	23	23	23	22	22	20	20	21	21	21	21	20	20	20
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UD																								
	LQ																								
h'F	MED	220	E 220	E 220	E 210	240	250	250	235	225	220	210	205	200	200	205	210	220	230	225	220	220	230	250	245
	CNT	1	6	11	12	10	11	19	20	21	21	19	18	18	18	15	12	10	13	18	14	12	7	5	1
	UQ																								
	LQ																								
M(3000)F2	MED	300	310	330	300	295	300	320	340	330	330	320	315	310	300	310	315	320	325	325	330	335	310	310	310
	CNT	20	20	20	20	20	20	20	20	21	23	22	23	23	22	22	20	20	21	21	21	21	20	20	20
	UQ																								
	LQ																								
foF1	MED									410	440	460	470	470	470	460	440	400							
	CNT									3	14	19	22	21	19	14	5	1							
foE	MED							E		270	310	330	340	340	340	330	310	280	230	E 140					
	CNT							13	210 20	21	22	22	21	20	20	16	14	13	11	3					
h'E	MED																								
	CNT																								
foEs	MED	E		E	E	E	E	E	G	G												E	U	E	E
	CNT	11 19	11 20	20	20	20	20	11 20	20	21	34 23	36 23	38 23	38 23	37 20	37 22	36 20	32 20	25 21	17 21	16 21	13 21	12 19	12 20	12 20

SWEEP 1.0 MC TO 15.0 MC IN 1 MINUTE 30 SECONDS. SEPTEMBER, 1962

TABLE 58

CAPETOWN, UNION OF S. AFRICA (34.1S, 18.3E) TIME 30.0E

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
foF2	MED	31	32	33	32	34	30	30	51	62	70	72	74	82	87	88	88	78	74	71	67	48	36	36	32
	CNT	15	15	15	15	14	13	12	12	12	13	15	14	14	15	15	16	16	15	15	15	15	14	15	15
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UD																								
	LQ																								
h'F	MED							255	230	230	225	210	210	200	200	200	205	210	220	230	220	215	225	240	
	CNT							1	12	12	13	14	12	9	10	13	11	9	8	14	14	9	1	1	
	UQ																								
	LQ																								
M(3000)F2	MED	295	295	305	315	305	300	295	340	340	330	325	310	305	305	305	310	320	325	335	335	335	320	310	310
	CNT	15	15	15	15	14	13	12	12	12	13	15	14	14	15	15	16	16	15	15	14	14	14	15	15
	UQ																								
	LQ																								
foF1	MED									380	420	450	460	470	460	460	440	410	300	240					
	CNT									1	2	7	7	11	10	12	9	8	1	1					
foE	MED								E 140	240	280	310	330	340	340	330	320	290	260	200	E 160				
	CNT								11	10	12	14	12	12	14	14	13	14	10	7	8				
h'E	MED																								
	CNT																								
foEs	MED	E	E	E	E	E	E	E	E		G	G								U				F	E
	CNT	15 15	16 15	15 15	14 14	13 13	14 13	14 13	14 11	26 10	11	13	33 14	36 11	36 14	36 15	34 14	33 14	29 15	21 15	16 15	17 13	17 14	17 15	16 12

SWEEP 1.0 MC TO 15.0 MC IN 1 MINUTE 30 SECONDS. SEPTEMBER, 1962

TABLE [illegible]

JULIUSRUH/RUGEN, GERMANY (54.6N, 13.4E) TIME 15.0E

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
foF2	MED	47	44	39	37	38	42	47	49	51	53	57	55	55	54	54	54	53	52	54	55	58	61	60	52
	CNT	31	30	30	31	30	30	30	22	26	27	20	23	23	25	22	25	29	27	27	28	29	30	29	30
	UQ																								
	LQ																								
h'F2	MED					340	340	350	355	385	350	345	395	340	380	370	370	360	365	315	290	280			
	CNT					4	11	15	11	24	20	19	19	22	24	17	22	25	24	22	14	2			
	UQ																								
	LQ																								
h'F	MED	270	270	280	285	270	250	230	220	210	210	210	200	210	205	210	210	220	210	235	250	260	250	250	250
	CNT	31	28	28	28	26	26	24	22	23	21	21	19	23	24	21	23	23	20	16	16	25	30	29	29
	UQ																								
	LQ																								
M(3000)F2	MED	280	280	275	280	290	290	300	290	290	295	310	290	300	295	295	290	300	290	300	300	305	300	295	290
	CNT	27	25	28	27	29	27	29	17	20	17	17	18	21	19	16	20	24	26	26	25	27	28	26	28
	UQ																								
	LQ																								
foF1	MED					U 260	320	360	400	420	440	440	450	460	460	450	440	430	410	U 380	U 330				
	CNT					2	9	13	25	26	24	24	18	24	23	21	24	26	23	15	7				
foE	MED					U 165	210	240	270	295	310	320	325	335	335	325	315	305	280	260	220				
	CNT					4	15	21	15	14	16	17	11	9	12	8	10	19	21	19	15				
h'E	MED																								
	CNT																								
foEs	MED	F	F	E	E																			E	E
	CNT	14 30	13 30	16 30	16 30	19 28	23 30	28 31	35 29	34 30	37 30	39 30	38 28	38 28	35 28	36 28	35 26	35 26	34 26	33 26	35 27	29 29	22 30	18 30	17 30

SWEEP 0.5 MC TO 20.0 MC IN 25 SECONDS. JULY, 1962

TABLE 60

JULIUSRUH/RUGEN, GERMANY (54.6N, 13.4E) TIME 15.0E

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
foF2	MED	55	51	46	44	46	50	52	56	56	58	59	61	60	59	58	56	56	57	60	62	66	67	66	61
	CNT	30	30	30	24	29	29	28	27	27	27	27	28	29	28	27	28	30	28	27	27	27	29	30	29
	UD																								
	LD																								
h'F2	MED					340	335	335	340	350	340	350	355	345	360	380	365	350	350	310	295	275			
	CNT					2	13	18	21	22	22	25	24	24	26	20	24	24	18	17	8	2			
	UQ																								
	LQ																								
h'F	MED	250	255	270	285	260	240	230	230	225	220	215	210	215	210	210	215	215	220	230	250	260	260	255	255
	CNT	28	28	27	28	26	22	23	18	16	17	18	21	19	23	25	28	23	21	12	10	15	19	22	28
	UQ																								
	LD																								
M(3000)F2	MED	285	280	280	280	285	290	290	295	290	295	295	295	295	295	290	290	295	295	295	295	300	295	290	290
	CNT	30	30	29	28	29	29	27	27	26	23	25	27	26	27	23	27	29	27	26	27	25	28	30	28
	UD																								
	LD																								
foF1	MED					290	350	390	410	440	450	460	470	460	460	470	460	450	420	400	360				
	CNT					1	12	18	20	22	20	22	24	24	24	23	25	29	16	13	4				
foE	MED				U 145	U 170	220	250	U 285	U 310	U 330	U 340	U 340	U 350	U 350	345	335	315	300	U 265	U 230	U 185			
	CNT				1	10	14	13	10	18	15	14	4	7	11	15	18	18	18	17	13	2			
h'E	MED																								
	CNT																								
foEs	MED	E	E	F																					E
	CNT	16 2	16	17	17	21 28	26 28	30 28	36 30	38 32	41 25	40 25	40 24	40 35	37 30	35 25	36 27	34 24	35 28	36 28	38 27	32 29	26 24	24 30	25 28

SWEEP 0.5 MC TO 20.0 MC IN 25 SECONDS. JUNE, 1962

TABLE 6.

JULIUSRUH/RUGEN, GERMANY (54.6N, 13.4E) TIME [illegible]

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	52	49	46	42	42	47	55	56	59	66	67	66	64	63	61	61	61	63	63	67	66	68	63	58
	CNT	30	31	31	31	31	31	31	31	28	29	29	29	29	31	28	28	28	29	29	31	31	31	29	29
	UQ																								
	LO																								
h' F2	MED						335	315	320	325	320	310	310	320	320	335	320	320	305	305	290	340			
	CNT						2	10	15	25	28	27	28	28	26	23	22	21	17	5	3	1			
	UQ																								
	LO																								
h' F	MED	260	270	270	275	275	260	240	230	225	220	210	210	210	210	220	220	225	230	240	235	230	250	240	255
	CNT	30	31	31	31	31	31	30	31	26	27	24	26	24	23	23	26	27	26	24	27	30	31	31	30
	UQ																								
	LO																								
M(3000)F2	MED	280	280	280	285	290	295	300	300	300	300	305	300	300	300	300	300	300	300	300	300	300	295	295	290
	CNT	28	31	31	31	31	31	31	29	28	29	29	29	28	31	28	28	28	28	29	30	31	31	29	29
	UQ																								
	LO																								
fo F1	MED							390	410	430	450	460	460	470	470	460	460	450	420	U 360					
	CNT							7	12	24	26	23	24	25	21	18	15	12	6	2					
fo E	MED																					U 180			
	CNT				160	150	205	235	265	300	320	330	340	340	340	330	320	300	270	240	205	1			
					1	7	23	26	20	16	15	15	11	11	10	13	13	15	19	22	23				
h' E	MED																								
	CNT																								
fo Es	MED	E 17	E 13	E 12	E 13	E 15	14	22	32	35	37	38	38	57	57	35	35	32	29	27	25	E 20	E 17	E 17	E 17
	CNT	30	31	31	31	30	29	30	28	28	28	29	27	26	27	24	26	28	29	29	30	31	31	31	30

SWEEP 0.5 MC TO 20.0 MC IN 25 SECONDS. MAY, 1962

TABLE 62

DELHI, INDIA (28.6N, 77.2E) TIME 75.0E

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	D 60	C 57			U 51	U 58	U 62	U 74	U 71		U 85	93	U 106	D 114	D 119	D 116	D 112	D 96	U 101	U 86	D 72	D 73	U 74	U 60
	CNT	14	15		2	15	13	22	21	17	15	16	15	12	17	14	21	18	20	18	11	15	17	12	15
	UQ																								
	LO																								
h' F2	MED																								
	CNT																								
	UQ																								
	LO																								
h' F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED							355	355	345	330	290	280	305						335					
	CNT	2	1		2		4	12	7	10	8	5	7	5	4	2	2	2	4	5	1	2	4	3	4
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED																								
	CNT							4	3		1	1	1	3	1	1	2								
h' E	MED																								
	CNT							4	3		1	1	1	3	1	1	2								
fo Es	MED																								
	CNT																								

SWEEP 0.75 MC TO 20.0 MC IN 5 MINUTES, MANUAL. MAY, 1962

TABLE 63

AHMEDABAD, INDIA (23.0N, 72.6E) TIME 75.0E

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	58	55	50	45	57	60	68	75	77	94	108	118	127	U 134	U 132	128	123	117	99	67	58	57	57
	CNT	7	8	6	10	13	19	27	24	26	21	21	19	15	17	18	17	17	20	24	23	17	14	8	5
	UQ																								
	LQ																								
h' F2	MED							250	275	305	350	370	375	370	350	320	300	285	270						
	CNT							16	17	20	24	25	22	27	25	27	27	27	23	1					
	UQ																								
	LQ																								
h' F	MED	310	300	280	255	260	245	240	220	210	205	225	250	245	230	240	230	250	245	255	240	250	275	310	310
	CNT	25	25	27	24	26	27	27	22	21	22	21	15	10	11	16	16	17	15	25	23	19	25	27	25
	UQ																								
	LQ																								
M(3000)F2	MED	260	270	285	300	295	320	320	310	290	265	290	295	260	260	270	U 295	280	300	305	310	285	285	260	260
	CNT	7	8	6	8	13	18	27	24	25	21	20	19	14	16	15	15	16	20	24	23	15	14	8	5
	UQ																								
	LQ																								
fo F1	MED							420	450	470	480	490	510	490	485	480	470	450	400						
	CNT							7	12	17	22	24	23	19	20	23	21	21	4						
fo E	MED							250	240		305	330			360		330	300	240						
	CNT							10	9	4	6	6	4	4	5	2	11	14	9	3					
h' E	MED							110	110	110	110	110	110	110	110	110	110	110	115						
	CNT							8	18	17	21	19	16	17	19	23	23	22	15	1					
fo Es	MED	25	25	25	25	24	25	29	28	39	38	38	40	39	C	C	C	37	42	43	43	42	33	33	25
	CNT	28	29	26	28	28	29	30	28	28	29	30	27	27	27	30	28	28	28	28	29	28	31	31	30

SWEEP 0.6 MC TO 25.0 MC IN 5 MINUTES, AUTOMATIC. MAY, 1962

TABLE 64

BOMBAY, INDIA (19.0N, 72.8E) TIME 75.0E

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	U 52	49	48	U 46	42	40	U 64	U 76		90	95	116	D 115		D 123	U 128	U 128	U 122	D 120	D 110	U 87	C 71	U 75	U 55
	CNT	18	23	21	22	22	23	29	31		30	30	29	29		30	29	29	31	29	29	5	10	17	22
	UQ																								
	LQ																								
h' F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h' F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED		255	265	270	270	285	285	280		255	240	235	240		245	260	265	285						
	CNT	4	5	6	9	8	9	11	16		24	14	13	8		7	12	13	7	2	4				2
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED								290		370	390	420	480		480	460	400	370	340					
	CNT							1	11		25	25	22	24		24	25	26	23	14					
h' E	MED								140		140	120	140	120		120	120	120	120	120					
	CNT							1	11		25	25	22	24		24	25	26	23	14					
fo Es	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES, MANUAL. MAY, 1962

TABLE 65

MADRAS, INDIA (13.1N, 80.3E) TIME 75.0E

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
foF2	MED	69	57	55	38	36	41	63	80	83	U 84	82	79	84		89	90	90	88	83	86	79	U 80	71	70
	CNT	9	9	5	10	14	14	24	10	23	25	17	14	20		17	18	14	20	23	15	17	13	16	18
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED							320		270	260	260	245	260		270	280								
	CNT				1	1	3	5	1	9	16	11	13	14		6	6	2	4	1	1			2	2
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES, MANUAL. MAY, 1962

TABLE 66

TIRUCHY, INDIA (10.8N, 78.7E) TIME 75.0E

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
foF2	MED	D 53	U 64	U 54	U 39	E 25	U 31	D 63	U 84	U 88	U 86	78	76	80	85	U 90	D 97	D 95	D 100	D 100	D 95	D 93	. 80	U 76	U 77
	CNT	17	17	18	10	9	18	25	22	25	21	12	11	12	11	10	10	9	15	26	22	11	7	13	16
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED		340	350				340	330	275	260	260	260	260	265										330
	CNT	4	6	5	1			8	10	11	12	8	8	8	5	3	3	1				1	3	4	5
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES, MANUAL. MAY, 1962

TABLE 67

KODAIKANAL, INDIA (10.2N, 77.5E) TIME 75.0E

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
foF2	MED	50	40	33	32	29	19	56	78	88	86	78	77	81	84	90	94	98	105	106	100	87	76	62	56
	CNT	23	23	21	19	23	21	29	29	30	30	30	29	30	28	30	31	30	9	30	30	29	28	27	25
	UQ																								
	LQ																								
h'F2	MED									300	320	350	360	370	360	340	315	300							
	CNT									8	16	20	20	22	20	19	17	9	3						
	UQ																								
	LQ																								
h'F	MED	305	300	300	270	250	260	240	220	210	200	200	200	195	195	195	200	220	240	260	260	260	260	260	285
	CNT	26	24	22	25	25	23	29	29	30	30	30	29	27	27	28	28	25	28	27	30	29	29	27	26
	UQ																								
	LQ																								
M(3000)F2	MED	295	295	290	320	340	345	330	315	280	250	250	250	250	250	260	270	280	290	295	300	310	310	305	300
	CNT	23	23	20	17	21	11	29	29	30	30	30	29	30	28	30	31	30	29	30	30	29	28	27	25
	UQ																								
	LQ																								
foF1	MED									460	470	490	490	490	480	470	480	450							
	CNT									7	13	18	15	17	14	13	12	5							
foE	MED							210	270																
	CNT							9	13	1	1				2	2	3	3	4						
h'E	MED							120	115								115	115	120						
	CNT							9	14	1	1		*		3	4	5	7	6						
foEs	MED	37	34		39			25	82	107	114	124	122	124	120	117	98	86	57	87	64	43			
	CNT	8	7	4	5	2	1	17	29	30	30	30	29	30	28	30	31	29	20	12	14	8	3	3	3

SWEEP 1.0 MC TO 25.0 MC IN 27 SECONDS. MAY, 1962

TABLE 68

TRIVANDRUM, INDIA (8.5N, 77.0E) TIME 75.0E

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
foF2	MED	U 60	U 43		E 25	E 25	E 25	54	81	93	U 95	82	78	82	84	91	96	102					81	U 73	U 66
	CNT	8	5	3	5	7	14	29	30	29	20	16	24	29	29	28	19	16	2	2		3	6	11	9
	UD																								
	LD																								
h'F2	MED																								
	CNT																								
	UD																								
	LQ																								
h'F	MED																								
	CNT																								
	UD																								
	LQ																								
M(3000)F2	MED							335	320	290	260	260	260	260	260	265	280	285							315
	CNT	2	1				2	22	30	27	12	15	22	25	29	26	17	13	2				2	3	5
	UD																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES, MANUAL. MAY, 1962

TABLE 69

DELHI, INDIA (28.6N, 77.2E) TIME 75.0E

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
foF2	MED	U	U			U	U	U		U				U	D	U	D	D	D	U	D	U	U	U	U
	CNT	50	46		37	42	37	56	72	80	86	94	100	124	125	133	118	114	105	107	92	82	60	55	52
	UQ	22	22	2	5	17	20	25	19	18	23	26	25	19	21	18	25	25	23	24	23	16	15	21	20
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED	310	300			300	325	365	360	335	330	320	315	320	320	330	320	330	345	360	340	350	300	295	290
	CNT	7	15		4	12	13	17	14	11	18	21	17	10	6	11	9	5	5	11	7	7	8	13	8
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED										300							350							
	CNT								2	1	5	4	1		1	3	2	5	4	2					
h'E	MED																	80							
	CNT								2	1	4	3	1		1	3	2	5	4	2					
foEs	MED																								
	CNT																								

SWEEP 0.75 MC TO 20.0 MC IN 5 MINUTES. MANUAL. APRIL, 1962

TABLE [illegible]

BOMBAY, INDIA (19.0N, 72.8E) TIME 75.0E

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
foF2	MED	U	U	U	U			D	D		U	U	U	D		D	D	U	U	D	D	D	D	U	U
	CNT	70	74	68	62	44	36	48	65		88	98	113	122		134	138	155	145	130	120	98	87	99	87
	UQ	17	21	20	18	18	22	28	29		30	29	29	28		30	30	30	29	28	29	9	12	16	21
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED				265	270	280	285	310		285	275	270	255			265	275	275						
	CNT	1			5	10	13	5	6		23	19	18	7		4	7	12	12	2	2	1			3
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED								320		400	420	450	470		460	460	420	360	320					
	CNT								9		29	28	29	28		29	29	29	25	13					
h'E	MED								140		120	120	120	120		140	140	140	140	120					
	CNT								9		29	28	29	28		29	29	29	25	13					
foEs	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES. MANUAL. APRIL, 1962

TABLE 71

MADRAS, INDIA (13.1N, 80.3E) TIME 75.0E

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
foF2	MED	71				38	44	U	74	84	90	86	89	94		100	101	97	U	U	U	85	U	82	U
	CNT	8	2	1	3	6	12	65	11	16	17	16	20	21		17	19	13	101	92	89	13	86	11	83
	UQ							18											13	16	12		7		13
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED								295	285	290	290	260	275		260	275								
	CNT		1				1		5	8	6	7	10	8		6	5	1		1			1		3
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES. MANUAL. APRIL, 1962

TABLE 72

TIRUCHY, INDIA (10.8N, 78.7E) TIME 75.0E

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
foF2	MED	U	U	U	U	U	D	D	U	U	U	U	U												
	CNT	90	82	74	65	48	43	61	84	98	91	90	90	94	98	101	102	102	95	94	94	90	88	95	95
	UQ	8	9	8	9	5	12	18	16	20	17	18	17	19	14	16	16	13	9	16	14	8	5	5	10
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED							355	345	300	260	260	260	260	265	260									
	CNT	1	2	2	1		1	7	10	7	10	10	12	14	8	6	2								2
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES. MANUAL. APRIL, 1962

TABLE 73

KODAIKANAL, INDIA (10.2N, 77.5E) TIME 75.0E

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
foF2	MED	84	74	64	59	48	35	56	82	93	90	84	86	90	97	102	107	114	117	116	106	102	98	94	90
	CNT	19	20	21	20	22	24	28	28	29	27	27	25	28	28	30	30	30	29	28	29	25	13	16	16
	UQ																								
	LQ																								
h'F2	MED										300	320	330	320	310	310	305								
	CNT								2	4	8	10	16	18	15	12	10	4							
	UD																								
	LQ																								
h'F	MED	280	270	250	245	230	225	250	230	215	200	200	200	200	200	200	210	220	240	260	320	310	300	280	290
	CNT	27	28	27	27	27	25	29	28	29	27	26	25	28	27	27	28	29	29	28	27	16	18	19	22
	UQ																								
	LQ																								
M(3000)F2	MED	300	310	330	335	340	345	330	320	280	250	255	255	260	260	270	270	280	280	280	260	270	285	290	285
	CNT	19	20	21	20	22	22	28	28	29	27	27	25	28	28	30	30	30	29	28	29	15	13	16	16
	UQ																								
	LQ																								
foF1	MED										480	500	490	490	480	480	480								
	CNT								1	2	6	8	11	13	8	10	6								
foE	MED								260								320								
	CNT							2	6							3	6	4							
h'E	MED								120	120						110	115	115							
	CNT							2	10	5	2			1	3	6	8	8							
foEs	MED								76	100	118	120	124	120	120	98	87	67	56						
	CNT	3	4	3	4	2	2	3	25	29	27	27	25	28	28	29	28	26	8	4	1		2	3	2

SWEEP 1.0 MC TO 25.0 MC IN 27 SECONDS. APRIL, 1962

TABLE 74

TRIVANDRUM, INDIA (8.5N, 77.0E) TIME 75.0E

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
foF2	MED						E			U	U							U							
	CNT	1	2	2	3	34	25	55	82	95	97	90	88	94	99	102	107	102							
	UQ					6	14	24	24	21	20	17	24	28	27	22	13	5						1	1
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED																								
	CNT																								
	UQ																								
	LO																								
M(3000)F2	MED																								
	CNT		1	3	3	3	345	340	330	290	270	265	265	270	280	280	285	3							
	UQ						5	22	22	13	14	15	23	25	25	18	12								
	LO																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 2.5 MC TO 20.0 MC IN 5 MINUTES. MANUAL. APRIL, 1962

TABLE 75

CONCEPCION, CHILE (36.6S, 73.0W) TIME 75.0W

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
foF2	MED	71	73	73	66	59	66	72	72	71	75	85	96	102	106	110	111	102	96	94	82	75	72	75	73
	CNT	25	24	27	26	26	28	28	28	29	29	27	28	28	29	29	28	28	28	28	28	28	27	25	25
	UQ	78	80	80	74	64	71	74	79	78	83	92	100	112	112	114	116	108	104	100	91	86	80	82	80
	LQ	68	69	69	57	54	62	66	68	68	68	77	86	94	102	106	106	95	88	82	74	68	70	70	67
h'F2	MED							250	260	270	300	315	310	300	290	290	280	270	260	260					
	CNT							9	15	15	21	21	26	27	28	29	28	28	19	7					
	UQ							255	280	290	330	350	360	320	305	308	290	280	280	270					
	LQ							240	245	260	280	302	300	290	280	282	270	260	250	240					
h'F	MED	302	290	260	235	250	230	230	230	220	220	E 240	E 280	E 270	E 255	E 255	E 260	240	240	250	E 260	270	310	310	E 308
	CNT	28	28	28	28	28	28	28	25	26	25	24	25	20	24	25	23	23	25	27	28	28	28	28	28
	UQ	320	300	280	245	280	240	240	240	240	260	285	302	300	290	278	280	260	260	260	260	312	335	312	325
	LQ	292	275	250	220	235	208	222	220	210	200	228	230	240	240	230	206	220	230	240	240	260	295	300	288
M(3000)F2	MED	280	290	310	320	300	325	340	330	330	310	298	300	312	320	320	330	330	330	320	310	288	270	280	275
	CNT	23	23	27	26	26	28	28	28	29	29	26	27	28	28	29	27	28	28	27	27	28	27	22	22
	UQ	285	305	320	330	310	338	345	345	340	325	305	310	320	320	325	335	335	338	335	320	300	280	280	280
	LQ	275	285	290	300	290	312	330	320	315	280	285	290	305	305	310	325	322	318	315	300	280	270	270	275
foF1	MED												480			U 470									
	CNT										1	2	6	4	3	5	1	1							
foE	MED						U 170	250	290	310	338	350	U 355	U 360	350	340	320	280	245						
	CNT					8	17	23	25	20	22	20	16	15	19	23	18	13	11	3					
h'E	MED						131	111	109	109	109	110	111	111	111	111	111	109	113	123					
	CNT					8	19	27	27	29	29	28	25	28	30	28	28	23	25	6					
foEs	MED	30	33	31	24	16	19	30	38	39	D 40	44	D 43	48	C 46	43	46	D 38	38	38	34	45	44	42	38
	CNT	22	24	23	21	21	27	28	28	29	28	26	24	21	26	29	27	28	28	28	26	23	23	19	19

SWEEP 1.0 MC TO 25.0 MC IN 31.5 SECONDS. NOVEMBER, 1961

TABLE 76

WILKES STATION, ANTARCTICA (66.3S, 110.5E) 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
foF2	MED	U 31	U 32	U 35	U 40	U 44	U 51	U 49	U 39	U 39	U 39	U 36	U 34	U 32	U 30	U 30	U 30	U 24	U 24	U 21	U 20	U 22	U 21	U 24	U 27
	CNT	9	20	14	21	26	21	25	22	17	19	21	19	19	20	18	15	18	15	19	18	10	13	9	10
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UD																								
	LQ																								
h'F	MED	U 225	220	240	240	240	250	250	250	250	255	250	260	260	250	260	U 235	240	U 225	245	U 225	235	U 220	240	225
	CNT	13	16	16	24	24	26	26	24	27	23	24	23	24	24	24	17	21	21	23	17	14	14	11	11
	UQ																								
	LO																								
M(3000)F2	MED		U 295	U 295	U 310	U 290	U 290	U 290	U 295	U 285	U 275	U 260	U 260	U 265	U 285	U 270	U 280	U 300	U 300	U 290	U 305		U 305		
	CNT	3	4	5	1	13	15	14	11	7	7	7	8	5	7	5	6	6	8	8	10	1	7	3	4
	UQ																								
	LO																								
foF1	MED																								
	CNT																								
foE	MED	E 100	E 100	120	150	155	160	150	125	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100
	CNT	26	14	13	21	25	25	23	17	24	28	27	28	28	29	29	27	28	28	28	26	25	28	28	27
h'E	MED	E 26	E 21	E 18	100 23	100 22	100 24	100 24	100 21	E 26	E 28	E 27	E 28	E 28	E 29	E 29	E 27	E 26	E 28	E 28	E 26	E 25	E 28	E 28	E 27
	CNT																								
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 25.0 MC IN 15 SECONDS. JUNE, 1961

TABLE 77

DAKAR, SENEGAL (14.7N, 17.4W) TIME 15.0W

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
foF2	MED	42	39	39	40	40	34	52	66	71	80	86	95	107	119	128	130	128	127	118	99	74	L 55	49	46
	CNT	10	11	7	13	15	12	28	31	31	31	31	31	31	30	30	31	31	31	29	29	29	20	18	13
	UQ																								
	LQ																								
h'F2	MED								U 215		U 255		352	358	352	330	310	U 290	U 270						
	CNT								1		1		12	20	20	24	16	3	1						
	UQ																								
	LQ																								
h'F	MED	340	315	290	268	255	230	235	225	220	215	218	210	200	200	200	200	215	225	245	255	322	362	350	350
	CNT	30	29	25	30	28	22	31	31	31	31	31	29	27	26	28	27	28	29	31	31	28	30	30	29
	UQ																								
	LQ																								
M(3000)F2	MED	260	282	270	285	310	320	335	335	315	285	265	265	265	265	270	285	280	285	295	290	260	250	250	255
	CNT	10	8	5	11	14	11	25	31	31	31	30	29	29	30	29	29	29	25	20	17	13	14	12	10
	UQ																								
	LQ																								
foF1	MED											U 500		U 500	490	U 490	U 490								
	CNT											7		20	15	13	3								
foE	MED				E	E	E														E	E	E		
	CNT				1	5	6	170 7	245 16	300 20	325 19	352 22	360 18	362 20	360 21	350 22	335 25	305 28	260 25	180 14	18	10	3		
h'E	MED				E	E	E	E	105	108	100	100	100	100	100	100	102	105	105	125	E	E	E		
	CNT				1	5	6	6	9	12	15	13	20	24	24	21	28	27	22	10	20	10	3		
foEs	MED	31	31	31	30	31	31	40	47	65	65	65	49	47	44	40	35	33	47	45	30	30	26	31	31
	CNT	27	27	30	30	29	31	31	31	31	31	31	31	31	30	30	31	31	30	29	30	28	27	27	30

SWEEP 1.2 MC TO 17.0 MC. MAY, 1961

TABLE 78

MAWSON, ANTARCTICA (67.6S, 62.9E) 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
foF2	MED				U 37	40	45	50	55	66	78	78	63	52	45	30									
	CNT	1	1	3	5	7	8	13	15	18	22	22	23	23	20	7	1	1							1
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED				240	300	295	U 290	265	270	260	240	250	255	260	260									
	CNT	1	1	4	5	9	8	13	15	18	22	22	23	24	20	7	1	1							1
	UQ																								
	LQ																								
M(3000)F2	MED					290	295	290	300	305	310	320	300	310	320	330									
	CNT		1	3	2	6	8	13	15	17	21	21	22	22	18	5	1								1
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED					260	320																		
	CNT	2		1	1	6	5	4	2	2	1	3	2	2	1										
h'E	MED					115	110																		
	CNT			1	1	6	5	4	2	2	1	3	1	2											
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 20.0 MC IN 15 SECONDS. MAY, 1961

TABLE 79

DAKAR, SENEGAL (14.7N, 17.4W) TIME 15.0W

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
foF2	MED	67	66	59	41	36	32	47	70	86	96	108	120	130	133	132	130	131	132	129	114	110	90	85	67
	CNT	11	16	21	23	24	26	25	27	27	24	25	28	27	28	28	27	26	28	25	20	16	7	8	9
	UQ																								
	LQ																								
h'F2	MED										U 245	U 335	325	338	335	310	U 300								
	CNT										1	3	6	12	10	8	1								
	UQ																								
	LQ																								
h'F	MED	300	250	218	225	240	242	250	230	220	210	202	200	195	195	190	195	215	225	245	285	348	348	335	320
	CNT	26	24	26	26	27	26	27	29	27	25	24	27	27	28	27	26	26	29	25	28	28	26	25	26
	UQ																								
	LQ																								
M(3000)F2	MED	272	285	335	305	290	295	315	330	300	280	270	265	255	250	250	255	265	280	280	265	U 250	U 250	U 255	U 265
	CNT	8	11	13	16	18	24	25	27	27	24	25	25	27	27	26	24	22	17	16	5	7	3	4	3
	UQ																								
	LQ																								
foF1	MED											U 480	U 500	U 500	U 500	U 500									
	CNT											1	5	12	6	2									
foE	MED		E	E	E	E	E	E													E	E	E		
	CNT		2	2	9	11	12	16	235 28	290 26	320 18	U 345 11	U 360 14	U 360 6	365 13	U 355 20	330 26	305 28	260 24	180 7	20	14	2		
h'E	MED		E	E	E	E	E	E													E	E	E		
	CNT		2	2	9	11	12	18	105 23	100 18	100 15	100 15	100 18	100 18	100 20	100 22	100 27	105 24	105 25	U 132 4	21	14	2		
foEs	MED	28	28	28	27	26	30	31	31	40	34	34	32	30	31	31	30	31	40	33	30	28	28	28	28
	CNT	24	24	26	26	27	26	27	29	27	24	25	28	28	28	28	28	28	29	25	27	25	23	19	23

SWEEP 1.2 MC TO 17.0 MC. APRIL, 1961

TABLE 80

WILKES STATION, ANTARCTICA (66.3S, 110.5E) 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
foF2	MED	U 49	U 51	U 52	U 56	U 49	U 64		U 60	U 57	U 55	U 54	U 47	U 53	U 43			U 35	U 25	U 29	U 35	U 32	U 34	U 40	U 43
	CNT	13	18	18	19	8	6	4	9	11	11	9	5	6	7	2	4	7	5	7	7	6	5	8	8
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	230	220	220	220	210	220	210	220	230	250	250	260	265	250	250	250	250	260	250	250	240	240	250	250
	CNT	24	28	27	24	25	17	13	19	23	23	21	19	20	27	26	29	23	26	23	22	17	15	19	23
	UQ																								
	LQ																								
M(3000)F2	MED	U 315	U 310	U 310	U 305	U 285	U 280		U 300	U 290	U 305	U 300		U 290	U 290			U 320	U 325	U 320	U 295	U 310		U 325	U 340
	CNT	12	15	14	17	5	5	4	9	9	10	5	4	6	7	2	4	7	5	6	5	5	4	6	8
	UQ																								
	LQ																								
foF1	MED	U 350	U 370	400	400	400	400	400	400	370	340	310	280						1					2	1
	CNT	9	19	26	23	23	20	13	18	21	21	15	9	2	1										
foE	MED	210	250	260	280	290	295	275	260	250	220	195	175	E 110	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	E 100	130	180
	CNT	23	29	27	26	20	16	9	14	21	20	21	19	24	27	29	31	29	31	28	29	27	24	17	22
h'E	MED	110	110	110	110	110	100	110	100	110	110	110	100	E	E	E	E	E	E	E	E	E	E	E	100
	CNT	21	31	30	30	25	23	20	23	27	26	17	18	29	30	30	31	29	31	28	29	28	26	23	18
foEs	MED																								
	CNT																								

SWEEP 1.0 MC TO 25.0 MC IN 15 SECONDS. MARCH, 1961

TABLE 81*

TOWNSVILLE, AUSTRALIA (19.3S, 146.7E) TIME 150.0E

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	D			D	D	U		D		U		U	U	D	U	D	D	U						
	CNT	66			55	58	56		60	69	74	80	90	103	92	109	102	95	80	71					
	UQ																								
	LQ	5	3	4	6	6	7	4	6	6	6	9	8	9	8	9	8	9	6	6	3	1		3	2
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	260	255	255	250	245	250	250	225	200	200	200	200	200	200	200	200	200	215		250	280	260	260	260
	CNT	7	6	8	8	7	7	7	7	6	5	7	7	6	6	5	5	5	8	3	7	7	5	6	7
	UQ																								
	LQ																								
M(3000)F2	MED									300	315	285	280	280		290									
	CNT			1	1	2	4	1	3	5	5	7	5	6	4	6	4	4	1	4	1				
	UQ																								
	LQ																								
fo F1	MED											490	490	510	500	480	470	450							
	CNT									1	3	7	7	8	7	9	7	6	1						
fo E	MED							E								U									
	CNT							170	250	310		370	370	375	375	375			300						
								5	7	7	4	8	8	9	5	5	4	4	7	4	4				
h'E	MED																								
	CNT																								
fo Es	MED																								
	CNT																								

SWEEP 1.0 MC TO 16.0 MC IN 1 MINUTE 55 SECONDS. JANUARY, 1961

*Observations taken 21st through 31st only

TABLE 82

POITIERS, FRANCE (46.6N, 0.3E) 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	MED	U	U	U	U	U						U	U	U	U	U	U	D	D	D	D	U	U	U	U
	CNT	60	57	56	54	51	45	46	68	77	85	95	106	107	108	110	110	90	85	80	70	72	70	65	60
	UQ																								
	LQ	30	31	31	30	31	31	31	31	31	31	31	31	31	30	30	31	31	31	31	31	31	31	31	31
h'F2	MED								U									U							
	CNT								298	330	320	275	280	270	300	270	265	270							
	UQ								4	5	14	21	21	15	15	14	8	3							
	LQ																								
h'F	MED	300	295	295	295	285	275	265	240	235	230	230	230	230	230	240	230	240	245	235	230	240	245	260	280
	CNT	31	31	31	31	31	31	31	31	31	29	31	31	29	30	30	31	31	31	31	31	31	31	31	31
	UQ																								
	LQ																								
M(3000)F2	MED	252		255	248	252	255	270	288	285	280	275	270	278	280	275		U 285	U			U 275	U 265	U 260	258
	CNT	12	U 10	U 16	18	26	28	29	24	19	15	12	10	8	7	8	280 4	2	280 2			2	8	6	10
	UQ																								
	LQ																								
fo F1	MED								U			U			U	U	U	U							
	CNT								340	420	460	470	480	480	510	480	450	430							
									4	7	15	21	21	15	15	14	9	4							
fo E	MED						E	E												E	E				
	CNT						3	31	215 30	270 31	300 31	330 30	340 29	350 28	345 29	335 29	320 31	285 30	228 30	26	9				
h'E	MED						E	E												E	E				
	CNT						3	31	120 29	110 30	105 31	105 31	108 30	110 30	110 29	110 30	110 30	110 30	115 28	26	9				
fo Es	MED	E	E	E	E	E	E	E	G	G	G				G	G					E	E	E	E	E
	CNT	31	31	31	31	31	31	31	31	30	31	32 31	28 31	22 31	30	22 30	18 31	20 30	24 31	18 31	31	31	31	31	31

SWEEP 1.5 MC TO 16.5 MC. MARCH, 1960

TABLE 83

RABAT, MOROCCO (30.9N, 6.8W) 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	MED		U									U		U	U			U	U	U	U				
	CNT	75	76	70	64	65	58	54	70	89	100	105	118	114	126	115	122	117	125	124	91	85	84	84	82
	UQ																								
	LQ	20	20	16	22	19	22	23	24	19	17	17	12	4	3	5	9	10	5	2	4	17	17	22	17
h'F2	MED										U	U				U									
	CNT										250	250	275	275	280	260	265								
	UQ										1	3	5	7	4	3	3								
	LQ																								
h'F	MED	E	E	E	E	E	E	E														E	E	E	E
	CNT	275	285	280	270	250	260	268	240	230	220	220	210	220	220	225	225	230	240	250	235	232	260	260	265
	UQ																								
	LQ	25	25	24	24	24	24	24	24	24	24	22	13	11	6	10	20	25	25	27	26	26	27	25	24
M(3000)F2	MED		U									U		U		U	U		U		U	U			U
	CNT	290	300	300	310	310	300	310	350	350	350	335	330	310		320	310		320		340	330	300	300	320
	UQ																								
	LQ	7	3	5	9	8	13	15	20	14	7	4	5	1		3	3		1		3	4	7	7	7
fo F1	MED																								
	CNT																								
fo E	MED							E							U	U					E				
	CNT								195	270	310	340	360	360	360	360	360	330	290	200					
								1	22	23	25	20	10	9	3	4	17	22	25	17	10				
h'E	MED							E	E												E				
	CNT								150	110	105	105	100	100	105	105	105	105	110	120					
								1	23	21	22	24	23	22	17	16	19	23	24	18	10				
fo Es	MEQ	E	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G				E	E	E	E
	CNT	25	25	24	24	24	24	24	24	24	25	26	25	24	23	23	24	25	31 26	26 27	26 26	27	27	26	25

SWEEP 1.6 MC TO 17.0 MC IN 1 MINUTE. MARCH, 1961

TABLE 84

TAMANRASSET, ALGERIA (22.8N, 5.5E) 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	MED	D													D	D	D	D	D	D	D	D	D	D	D
	CNT		150	131	131	71	64	76	110	120	128	140	148	156											
	UQ																								
	LQ	20	17	12	11	16	21	20	17	21	23	24	22	19	17	17	17	16	14	20	21	23	18	19	16
h'F2	MED									U	U	U	U	U	L			U							
	CNT									255	250	275	210	352	430	360	350	350							
	UQ									2	2	3	2	2	3	5	6	3							
	LQ																								
h'F	MED	245	240	240	225	240	250	255	250	240	220	210	210	250	210	230	240	245	250	275	300	250	245	242	250
	CNT	24	24	24	20	22	24	23	22	22	23	24	23	23	21	23	21	22	21	22	23	25	23	24	23
	UQ																								
	LQ																								
M(3000)F2	MED	285	305	304	292	295	280	295	310	310	300	295	285	275	280	250				U 270		U	U 270	U 295	U 280
	CNT	6	9	8	10	14	23	22	19	23	22	24	21	13	9	13	2	2	2	2	1		1	2	4
	UQ																								
	LQ																								
fo F1	MED																								
	CNT																								
fo E	MED	F	E	E	E	F	F													E	E	E	E	E	E
	CNT							160	250	310	345	370	380	385	385	360	342	300	222						
		5	3	2	2	4	14	21	19	17	17	9	6	8	6	9	16	21	18	16	13	9	6	5	2
h'E	MED	E	E	E	E	F	E	E												E	E	E	E	E	E
	CNT								110	105	105	105	105	105	105	105	105	105	110						
		5	3	2	2	4	14	21	20	14	24	23	22	21	24	22	21	22	20	16	13	9	6	5	[illegible]
fo Es	MED	E	E																			E	E	E	E
	CNT			20	19	19	16	26	40	23		32				26	23		28	24	18				
		24	23	24	20	22	24	23	21	22	22	23	22	22	22	21	21	24	21	21	22	23	22	22	22

SWEEP 1.36 MC TO 17.2 MC. MARCH, 1960

TABLE 85

BANGUI, CENTRAL AFRICAN REPUBLIC (4.6N, 18.6E) TIME 15.0-

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
foF2	MEQ	D	D		D									D				D	D	D	D	D		D	
	CNT	92	90	90	94	79	62	61	90	106	113	124	110	120	131	122	124	128	126	110	117	111		110	112
	UQ	7	8	9	6	8	8	10	10	12	11	12	11	11	11	11	11	11	12	7	6	2		3	5
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MEQ	210	220	230	220	205	200	230	230	220	212	200	200	200	200	200	210	220	238	270	365	315	265	230	200
	CNT	11	11	11	11	11	9	11	11	11	8	9	10	7	8	4	7	10	12	12	11	9	6	9	11
	UQ																								
	LQ																								
M(3000)F2	MEQ	U	U		U									U											U
	CNT	282	298	310	340	325	350	320	330	302	270	250	245	238	240	240	235	230	238	240	218				310
	UQ	2	2	6	1	7	8	9	9	12	11	7	5	4	6	8	7	5	2	1	2				3
	LQ																								
foF1	MEQ																								
	CNT																								
foE	MED		E	E			E	E	U	U	U	U	U	U	U	U	U	U			E				
	CNT		2	2			2	1	270	330	370	385	400	410	400	380	365	330	260	158	6				
									10	3	4	4	3	3	3	1	2	2	7	6	1				
h'E	MEQ		E	E			E	E			U					E				E	E				
	CNT		2	2			2	6	110	108	102					105	100	105	110	5	1				
									8	10	4					1	7	10	7						
foEs	MEQ	E	E	E												G		G	G	G	E	E			E
	CNT	9	10	10	16	18	22	20	30	36	40	32	44	29	37		34					9	18	20	
					10	10	11	11	13	12	10	10	6	5	8	8	10	12	12	9	10		6	7	8

SWEEP 1.36 MC TO 17.2 MC. MARCH, 1960

TABLE 86

POITIERS, FRANCE (46.6N, 0.3E) 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
foF2	MED	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	D	D	D	D	U	U	U	U
	CNT	54	51	51	49	50	45	40	57	85	112	122	126	125	126	126	128	100	85	70	70	68	64	60	54
	UQ	29	29	29	29	29	29	29	28	29	28	29	28	28	28	28	28	27	27	29	29	29	29	29	29
h'F2	MED									U	U	U	U	U	U		U								
	CNT									250	250	340	262	270	270	250	260								
	UQ									1	4	1	2	3	3	6	1								
h'F	MED	275	290	300	300	290	290	250	240	225	225	230	230	230	230	230	230	235	222	218	225	230	250	258	265
	CNT	29	29	29	29	29	29	28	29	29	29	29	28	28	28	28	28	27	28	29	29	29	29	29	29
M(3000)F2	MEQ	260	255	258	255	262	275	265	288	305	U	U	U	U	U	U	U				U	U		U	U
	CNT	19	19	22	22	24	21	26	20	6	300	300	305	290	290	300	298				295	285	275	272	265
	UQ										3	5	1	7	7	2	2				1	4	11	10	14
foF1	MED									U	U	U	U	U	U	U	U								
	CNT									350	370	480	490	600	470	450	410								
										1	4	1	2	3	3	7	1								
foE	MED								E											E					
	CNT								29	220	275	305	325	330	328	315	290	250	180	23	20				
										29	29	26	26	28	28	26	27	26	23						
h'E	MED								E										E	E					
	CNT								29	120	110	110	110	110	105	110	110	115	22	20					
										29	27	26	27	28	28	25	27	26							
foEs	MED	E	E	E	E	E	E	E	E	G	G	G	G	G	G	G	G				E	E	E	E	E
	CNT	29	29	29	29	29	29	29	29	29	29	28	27	28	28	26	28	28	20	22	29	29	29	29	29
																		27	28	29					

SWEEP 1.5 MC TO 16.5 MC. FEBRUARY, 1960

TABLE 87

RABAT, MOROCCO (30.9N, 6.8W) 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
foF2	MEQ			U							U								U	U					
	CNT	70	75	69	69	61	54	44	56	90	120	120	120	124	123	125	124	123	122	125	88	89	85	84	82
	UQ	13	12	12	10	8	16	16	20	14	5	12	15	13	11	15	9	9	7	3	6	18	13	12	11
	LQ																								
h'F2	MEQ													U	U	U									
	CNT													295	290	300									
	UQ													1	1	3									
	LQ																								
h'F	MEQ	E	E	E	E	E	E	E	E													E	E	E	E
	CNT	255	260	255	265	250	230	250	250	230	230	225	225	225	225	225	230	235	235	235	225	235	250	250	250
	UQ	21	21	20	21	21	21	21	21	21	22	22	22	19	17	18	22	22	22	20	20	20	21	21	20
	LQ																								
M(3000)F2	MEQ	U	U	U	U						U	U			U		U	U	U	U	U			U	U
	CNT	300	300	320	310		300	320	320	360	330	330	330	315	320	290	300	330	335	300	320	310	310	300	320
	UQ	3	1	1	3		6	13	17	12	1	2	10	6	3	7	4	1	2	1	3	7	5	4	4
	LQ																								
foF1	MED																								
	CNT																								
foE	MEQ								E											E					
	CNT								8	225	300	335	360	360	360	360	350	320	260	11					
										20	22	22	17	18	11	13	23	23	22						
h'E	MEQ								E											E					
	CNT								8	115	110	110	110	110	105	108	110	110	115	12					
										19	21	20	21	22	21	21	23	22	21						
foEs	MED	E	E	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G			E		E		
	CNT	21	21	21	21	21	21	21	21	21	22	22	22	23	23	23	23	23	28	24	21	22		20	22
																			23	21	21	21	21	21	21

SWEEP 1.6 MC TO 17.0 MC IN 1 MINUTE. FEBRUARY, 1960

TABLE 88

TAMANRASSET, ALGERIA (22.8N, 5.5E) 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
foF2	MEQ	D			U											D	D	D	D	D	D	D	D	D	D
	CNT		141	131	114	60	40	46	90	122	129	148	132	155	148			10	12	13	15	12	13	13	13
	UQ	13	13	12	3	9	13	8	8	15	16	15	17	20	15	15	15								
	LQ																								
h'F2	MEQ														U										
	CNT														350										
	UQ														1										
	LQ																								
h'F	MEQ	238	222	230	200	205	240	260	248	245	232	220	210	225	225	230	245	245	250	270	280	250	245	238	235
	CNT	20	20	19	18	19	18	17	18	17	18	18	19	21	18	19	18	16	18	19	19	17	19	18	19
	UQ																								
	LQ																								
M(3000)F2	MED	300	315	325	U	310	280	300	320	320	310	308	298	285	280	270	U	U		D				U	U
	CNT	5	7	10	350	9	14	8	7	15	14	12	10	12	10	7	280	280						290	310
	UQ				3												2	1	1		1	1	1	1	4
	LQ																								
foF1	MEQ																								
	CNT																								
foE	MED	E	E	E	E	E	E	E				U		U	U	U				E	E				
	CNT	5	2	1	1	4	5	13	240	300	338	365	382	388	375	370	335	290	215	11	12	E	E	E	E
									17	11	8	4	6	4	1	3	13	12	11	12	8	7	6	4	5
h'E	MED	E	E	E	E	E	E	E		105	105	105	105	105	105	105	105	110	125		E	E	E	E	E
	CNT	5	2	1	1	4	5	13	125	14	15	17	19	21	18	19	17	16	18	12	8	7	6	4	5
									16																
foEs	MEQ	20	22	20	E	24	21	26	31	32	48	40	44	49	42	33	32	24	28	21	17	18	20	19	E
	CNT	20	20	19	18	19	18	17	18	16	18	18	19	19	18	19	17	29	19	19	18	17	19	18	17

SWEEP 1.36 MC TO 17.2 MC. FEBRUARY, 1960

TABLE 89

BANGUI, CENTRAL AFRICAN REPUBLIC (4.6N, 18.6E) TIME 15.0E

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
foF2	MED	D 102	D 98	D 99	98	96	73	58	D 90	108	114	D 120	D 126	D 120	D 121	122	D 120	D 118	D 114	D 113	D 106		D 132	U 116	D 101
	CNT	13	12	18	16	14	16	17	24	23	17	17	16	18	20	17	15	15	14	4	7		2	2	4
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	225	230	240	240	210	200	230	230	220	208	210	200	200	200	200	200	222	245	285	372	370	280	230	210
	CNT	19	22	23	23	20	24	25	25	23	18	13	13	9	12	11	11	18	24	24	24	13	12	17	23
	UQ																								
	LQ																								
M(3000)F2	MED	275	U 290	305	308	328	360	320	335	310	270	258	245	245	235	235	U 235	U 230						U 250	
	CNT	5	4	7	8	8	13	16	10	17	14	8	7	7	7	9	3	3	2		2			1	
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED	E 4	E 3	E 5	E 1	E 1	E 3	E 11	260 20	U 338 18	360 9	U 392 4	U 420 1			U 390 1	U 370 1	330 5	260 11	E 14	E 1	E 1			
h'E	MED	E 4	E 3	E 5	E 1	E 1	E 3	E 10	110 22	102 18	100 15	100 8	U 100 4	U 100 1	U 100 2	U 100 4	102 12	105 19	105 19	E 12	E 1	E 1			
foEs	MED	E 21	E 22	E 23	E 23	E 21	E 25	18 25	24 24	23	19	41 14	8	30 7	5	8	15	22	24	19	24	22	23	24	23

SWEEP 1.36 MC TO 17.2 MC. FEBRUARY, 1960

TABLE 90

POITIERS, FRANCE (46.6N, 0.3E) 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
foF2	MED	U 43	U 42	U 41	U 40	U 38	37	34	U 44	U 80	U 110	U 124	U 130	U 126	U 128	U 124	U 127	D 100	D 70	D 70	65	U 53	U 50	U 47	U 44
	CNT	29	29	29	27	29	29	29	29	31	31	31	31	31	30	30	31	31	31	30	29	28	29	29	28
	UQ																								
	LQ																								
h'F2	MED												U 245	U 250	U 242	U 250									
	CNT												3	2	2	1									
	UQ																								
	LQ																								
h'F	MED	280	295	300	300	270	248	248	245	220	225	225	225	225	225	225	230	225	220	220	230	235	260	272	278
	CNT	29	30	29	29	29	29	29	25	31	31	31	31	31	31	30	31	30	31	30	30	29	29	30	29
	UQ																								
	LQ																								
M(3000)F2	MED	260	255	250	255	275	265	265	280	U 310	U 308	U 300	U 302	U 295	U 295	U 300	U 280		U 300	U 295	290	285	U 265	270	260
	CNT	19	20	20	19	19	21	26	25	8	2	2	6	4	7	3	1		3	3	15	17	20	16	24
	UQ																								
	LQ																								
foF1	MED												U 500 3	U 500 2	U 510 2	U 500 1									
	CNT																								
foE	MED								E 26	195 27	245 29	290 31	310 31	320 30	310 30	295 29	260 29	205 15	E 31	E 1					
h'E	MED								E 26	145 25	120 28	115 29	115 31	115 30	115 30	115 28	115 27	125 12	E 31	E 1					
foEs	MED	E 22	F 30	30 25	E 24	E 24	F 29	E 29	E 24	22 30	27 30	29 31	32 31	32 30	25 31	24 30	29 31	24 30	25 31	26 30	22 30	E 29	E 29	E 30	E 29

SWEEP 1.5 MC TO 16.5 MC. JANUARY, 1960

TABLE 91

RABAT, MOROCCO (30.9N, 6.8W) 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
foF2	MED	53	50	52	48	41	37	34	44	85	103	118	120	120	116	117	119	110	99	89	80	70	60	61	57
	CNT	24	22	20	21	23	25	26	24	25	19	20	19	23	23	20	23	21	17	14	20	25	24	25	21
	UQ																								
	LQ																								
h'F2	MED												U 280				U 285 1								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	E 250	E 258	E 270	E 250	E 250	E 250	E 275	E 260	225	225	225	225	225	225	225	225	232	225	225	230	E 235	E 230	E 250	E 250
	CNT	27	26	26	27	27	27	27	27	26	25	27	27	27	27	27	25	26	25	25	28	27	27	28	27
	UQ																								
	LQ																								
M(3000)F2	MED	310	310	320	325	350	315	300	320	360	360	340	330	330	320	330	330	330	345	345	330	340	325	320	320
	CNT	13	15	11	10	15	18	19	21	16	14	12	15	15	15	16	14	13	10	8	14	13	18	14	12
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED									200 26	280 22	320 24	350 27	360 23	360 20	350 21	340 25	300 24	290 22	250 [illegible]					
	CNT																								
h'E	MED									E 125 22	110 21	105 23	105 23	105 23	105 22	105 22	105 23	105 22	115 19	100 [illegible]					
	CNT																								
foEs	MED	E 27		20 26	E 26	E 27	E 27	E 27	E 27	C 26	C 25	[illegible] 27	[illegible] 27	C 27	C 27	C 27	C 26	C 25	C 24	20 25	22 28	20 28	26 27	F 28	E 27

SWEEP 1.6 MC TO 17.0 MC IN 1 MINUTE. JANUARY, 1960

TABLE 92

TAMANRASSET, ALGERIA (22.8N, 5.5E) 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
foF2	MED	C 125	102	[illegible] 72	62	36	44	44	88	130	150	150	141	D 160	C 160	150	148	C 145	140	U 144	C 145	145	U 145	D 140	D 132
	CNT	8	6	4	7	[illegible]	[illegible]	9	6	9	5	8	8	8	7	5	3	5	5	4	7	4	3	6	7
	UQ																								
	LQ																								
h'F2	MED									U 260 1	U 255 2				U 315 3	U 250 2	U 245 1								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	245 11	215 11	205 10	205 10	240 8	255 7	252 8	250 7	245 9	240 8	220 9	210 9	210 8	215 9	220 9	238 8	245 11	250 11	250 12	300 11	255 11	215 12	222 12	230 12
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED		U 340 4	U 332 4	318 4	U 288 4	300 4	275 4	230 4	300 7	U 225 3	315 4	295 5	U 280 3	U 285 1	U 288 2	U 280 1	U 280 1	U 290 3	U 280 1	U 285 2	U 270 1	U 290 1	U 300 1	U 308 2
	CNT																								
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED	E 1		E 1	E 1	F 4	E 4	U 135 5	240 7	315 [illegible]	350 7	370 1	390 4	390 7	390 8	375 6	345 7	292 12	190 7	E 6	E 2		E 1	E 3	E 1
	CNT																								
h'E	MED	C 1		E 1	E 1	F 4	E 4	F 4	115 8	125 4	115 7	117 8	110 6	100 7	100 5	120 8	115 7	115 7	E 6	E 6	E 2		E 1	E 3	E 1
	CNT																								
foEs	MED	20 11	26 10	26 15	25 1	23 9	22 9	22 8	30 7	47 9	50 8	54 7	51 7	33 5	50 9	51 7	[illegible] 7	32 11	22 11	24 11	26 10	26 11	19 11	E 8	22 10

SWEEP 1.36 MC TO 17.2 MC. JANUARY, 1960

TABLE 93

PARAMARIBO, SURINAM (5.8N, 55.2W) 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
foF2	MEQ	137	132	127	126	109	90	66	53	52	47	69	111	140	133	130	128	131	132	131	132	133	132	134	133
	CNT	20	14	13	17	18	20	21	22	20	25	26	26	24	27	28	27	24	26	27	26	23	23	20	22
	UQ	143	156	137	144	128	112	86	64	57	53	74	121	154	146	138	141	141	141	136	136	140	146	147	146
	LQ	124	116	116	111	87	79	59	40	36	36	63	104	131	128	120	122	125	128	127	128	126	129	129	128
h'F2	MED													250	250	260	300	325	355	360	360	350	U 300	[illegible]	
	CNT													16	23	18	22	18	19	23	23	17	5	[illegible]	
h'F	MEQ	265	250	240	220	210	215	220	235	245	250	250	250	235	225	230	245	U 250	U 250	240	240	240	250	255	255
	CNT	29	29	28	28	28	29	28	28	24	27	27	26	23	23	11	7	3	4	8	18	20	23	26	28
M(3000)F2	MEQ	275	290	295	310	310	310	320	295	300	295	315	315	315	310	295	285	275	265	265	265	265	270	285	280
	CNT	20	14	13	17	18	20	21	22	20	25	26	26	24	27	28	27	24	26	27	26	23	22	20	22
foF1	MEQ															U 620	U 530	U 670	U 710	650	U 650				
	CNT															1	1	2	7	5	4				
foE	MEQ										E	180	280	340	380	390	400	U 400	U 410	400	370	320	270	160	
	CNT										26	25	23	20	18	9	7	4	4	8	5	9	12	13	
h'E	MEQ										E	E	100	100	105	105	U 110	U 110		U 100	105	110	100	E	
	CNT										26	24	22	23	18	6	3	2		2	11	10	13	13	
foEs	MEQ																								
	CNT																								

SWEEP 1.4 MC TO 20.0 MC IN 40 SECONDS. JANUARY, 1960

TABLE 94

BANGUI, CENTRAL AFRICAN REPUBLIC (4.6N, 18.6E) TIME 15.0E

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
foF2	MED	D 90	D 90	90	90	79	57	60	89	109	110	110	112	112	118	121	128	127	D 116	D 114	111	D 105	106	108	110
	CNT	17	19	19	21	21	20	23	25	27	26	24	22	23	22	23	24	24	20	19	21	20	11	12	15
h'F2	MED																U 370	U 370							
	CNT																1	1							
h'F	MED	240	242	245	235	215	210	250	240	225	210	210	200	210	202	205	220	235	250	300	375	345	290	245	250
	CNT	26	28	28	28	27	27	28	29	26	21	15	14	12	14	12	16	21	28	28	28	25	20	23	24
M(3000)F2	MED	275	280	295	305	330	340	305	310	278	248	230	240	230	220	238	232	250	240	225	230	240	250	270	280
	CNT	8	9	10	15	18	14	21	19	16	22	19	15	14	13	14	16	15	7	8	15	8	7	8	8
foF1	MED																								
	CNT																								
foE	MED	E 2	E 3	E 4	E 2	E 1	E 6	138 12	278 20	U 340 14	U 380 5	U 398 2		U 420 1			U 375 2	U 335 6	262 16	145 12	E 2				
	CNT																								
h'E	MED	E 2	E 3	E 4	E 2	E 1	E 6	E 10	110 24	105 25	105 24	105 13	U 105 2	U 105 1	105 9	105 14	105 18	108 20	110 22	E 10	E 2				
	CNT																								
foEs	MED	19	16	16	18	E 27	19	22	28	23	G 28	G 27	G 22	44	G 7	G 14	G 20	G 26	24	23	20	22	22	E 26	E 27	26
	CNT	27	27	28	28		27	27	29				13				24		28	26	27				

SWEEP 1.36 MC TO 17.2 MC. JANUARY, 1960

TABLE 95

PARAMARIBO, SURINAM (5.8N, 55.2W) 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
foF2	MED	U 127	U 131	U 126	115	91	65	53	48	40	48	78	110	131	131	131	126	126	126	126	126	129	130	134	U 127
	CNT	7	6	9	14	22	22	25	24	26	28	29	27	24	20	18	14	15	16	17	16	14	10	12	8
	UQ	130	136	128	130	108	80	64	59	57	63	88	117	145	141	141	130	130	131	130	137	133	146	150	130
	LQ	119	127	117	113	74	55	46	35	31	40	67	103	128	126	126	119	122	120	120	122	124	124	126	125
h'F2	MED												U 245	250	260	290	U 300	U 305	U 320	U 370	U 340				
	CNT												2	13	11	10	5	6	5	6	1				
h'F	MED	235	235	240	220	210	210	230	235	245	E 240	250	245	225	220	215	250	250	U 245	235	235	250	260	255	255
	CNT	29	28	29	28	29	28	23	22	23	23	29	28	27	23	9	6	6	2	13	23	27	29	29	29
M(3000)F2	MED	U 285	U 285	U 295	315	335	310	305	305	300	290	320	315	315	310	300	285	280	275	270	275	280	285	290	U 295
	CNT	7	6	9	14	22	22	25	24	26	28	29	27	24	20	18	14	15	16	17	16	14	10	12	8
foF1	MED												U 500	530	U 560	U 510	U 650	U 670	U 660	630	U 640				
	CNT												1	6	4	3	1	3	2	5	1				
foE	MED										U 140	200	290	350	380	400	U 400	400	400	380	340	300	240		
	CNT										4	21	24	20	18	9	4	8	8	9	9	12	14		
h'E	MEQ										E	D 120	110	110	110	110	115	115	110	110	100	100	100		
	CNT										4	6	20	16	13	11	9	7	10	8	7	11	9		
foEs	MEQ																								
	CNT																								

SWEEP 1.4 MC TO 20.0 MC IN 40 SECONDS. DECEMBER, 1959

TABLE 96

WILKES STATION, ANTARCTICA (66.3S, 110.5E) 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
foF2	MEQ	54	53	54	56	58	64	60	58	56	55	57	56	59	55	54	52	48	50	50	50	52	53	54	57
	CNT	26	26	18	18	9	9	12	14	17	21	23	28	22	25	24	24	20	23	21	24	26	29	26	22
h'F2	MEQ																								
	CNT																								
h'F	MEQ	220	225	215	D 210	D 200	D 205	U 225	D 200	D 200	215	230	230	250	260	270	270	275	270	260	260	265	240	230	220
	CNT	24	23	16	14	6	5	7	16	18	19	20	22	23	23	25	22	22	22	23	27	21	21	22	22
M(3000)F2	MEQ	250	245	230	245		240		225	235	240	255	255	270	270	280	285	290	290	305	290	290	285	285	280
	CNT	17	13	8	7	2	5	2	6	11	14	9	20	18	16	17	11	9	13	13	16	19	22	19	12
foF1	MED	D 430	D 450	D 450	D 460			D 450	D 450	D 430	D 420	D 430	D 400	D 360	D 330									D 380	D 420
	CNT	22	20	12	8	3	2	5	7	9	13	13	17	9	6						1	1	4	11	16
foE	MEQ	U 330	U 345	D 340	D 350	D 350		D 350	D 340	D 310	D 310	295	280	D 250	D 210	U 195	D 170	D 150	D 150	D 160	D 185	D 220	D 250	D 270	D 300
	CNT	26	25	15	14	5	2	7	13	14	19	19	23	24	21	21	17	18	17	15	18	17	21	18	19
h'E	MEQ	100	100	100	100	100	100	100	100	100	100	100	105	100	105	100	105	105	100	105	105	100	100	100	100
	CNT	27	29	24	23	24	19	23	21	24	23	23	28	27	26	21	17	19	16	16	19	20	22	19	20
foEs	MEQ																								
	CNT																								

SWEEP 1.0 MC TO 25.0 MC IN 15 SECONDS. DECEMBER, 1959

TABLE 98

PARAMARIBO, SURINAM (5.8N, 55.2W) 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
foF2	MEQ	113	130	126	128	112	108	98	74	63	57	72	105	116	125	137	138	146	148	148	137	130	127	127	124
	CNT	9	11	14	17	21	26	25	27	26	25	28	28	25	22	20	14	20	22	24	22	23	23	22	16
	UQ				136	135	111	106	89	79	66	91	110	124	130	141		152	157	154	146	134	131	135	138
	LQ				101	96	90	77	72	76	49	78	99	109	118	127		139	144	141	130	122	122	108	101
h'F2	MEQ												U 460	U 280	290	330	350	350	355	350	350	355	U 360		
	CNT												1	9	11	14	17	23	24	22	17	14	4		
	UQ																								
	LQ																								
h'F	MED	300	275	270	25	250	240	245	235	240	240	245	235	230	225	U 250	U 260	U 250	U 240	U 230	235	240	255	300	320
	CNT	29	29	29	27	23	28	28	28	28	28	28	28	26	16	6	1	1	1	4	17	17	23	25	28
	UQ																								
	LQ																								
M(3000)F2	MED	U 255	265	275	280	295	295	295	295	285	270	305	310	290	280	275	270	270	270	265	265	255	255	250	250
	CNT	4	11	14	16	20	25	25	27	26	25	28	28	26	20	20	14	20	22	24	22	23	23	22	16
	UQ																								
	LQ																								
foF1	MED												U 470		U 400	U 440	U 780	790	770	580	746	740	U 470		
	CNT												1		1	3	1	1	1	5	5	5	1		
foE	MED										E 230	410	340	400	410			U 410	411	405	360	320	250	165	
	CNT										5	26	24	23	11	1		1	12	16	15	17	17	5	
h'E	MED											135	180	115	110	110	110	110	110	110	110	105	95	E 7	
	CNT											26	26	24	26	15	11	1	15	22	22	22	14		
foEs	MEQ																								
	CNT																								

SWEEP 1.4 MC TO 20.0 MC IN 4 MINUTES. SEPTEMBER, 1959

TABLE 98

LOWISH, ENGLAND (51.5N, 2.4W) 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
foF2	MEQ	62	60	58	53	44	52	59	66	69	73	77	80	76	78	79	78	78	78	84	84	81	80	73	68
	CNT	27	27	27	27	27	27	27	26	26	27	29	26	28	28	28	28	28	27	26	26	27	27	26	27
	UQ																								
	LQ																								
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MEQ																								
	CNT																								
	UQ																								
	LQ																								
M(3000)F2	MED	240	245	245	240	245	275	300	290	285	275	280	275	270	280	275	275	280	280	280	280	280	275	265	255
	CNT	27	25	23	25	27	27	24	26	24	24	27	26	27	28	28	28	27	27	24	23	23	20	15	24
	UQ																								
	LQ																								
foF1	MED							410	450	490	520	530	550	540	560	550	530								
	CNT							3	4	8	10	11	11	5	11	8	6	2							
foE	MED					120	185	250	310	335	365	375	390	395	390	380	375	350	320	280	210	E 170			
	CNT					4	16	11	5	8	11	12	6	11	7	15	16	17	11	7	10	5			
h'E	MED																								
	CNT																								
foEs	MEQ	14	20	21	22	21	23	28	34	38	40	44	43	46	46	41	39	39	35	39	34	35	27	22	24
	CNT	27	27	27	27	27	27	26	27	26	29	29	27	28	29	28	28	28	27	27	27	27	27	27	27

SWEEP AUGUST, 1959

TABLE 98

PARAMARIBO, SURINAM (5.8N, 55.2W) 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
foF2	MEQ	126	111	112	116	96	87	85	80	76	67	74	87	97	109	117	122	127	126	124	129	123	113	111	105
	CNT	6	8	11	7	12	15	22	19	26	30	25	27	27	25	23	15	11	10	9	15	23	17	12	7
	UQ	109	121	115	126	113	106	97	93	82	74	96	91	106	118	121	126	135	128	128	135	127	119	121	113
	LQ	141	108	105	103	85	85	82	75	68	62	68	82	90	102	113	119	115	122	110	126	113	108	102	101
h'F2	MEQ											400	U 620	U 150	275	365	370	385	375	400	400	355	U 330		
	CNT											1	1	3	4	4	14	22	22	21	20	14	1		
	UQ																								
	LQ																								
h'F	MEQ	315	315	290	265	250	250	260	250	240	245	250	245	230	240			240			240	235	255	245	350
	CNT	25	26	28	28	28	28	28	28	28	28	28	28	27	8			1			4	1	17	22	24
	UQ																								
	LQ																								
M(3000)F2	MED	24	255	255	245	255	275	290	295	275	255	300	265	250	275	255	250	245	240	255	255	260	255	243	240
	CNT	4	8	8	11	12	19	22	19	25	25	29	27	27	19	23	19	16	12	7	15	23	17	16	
	UQ																								
	LQ																								
foF1	MED											410	450	U 470	U 400			U 450	540	540	540	U 470			
	CNT											1	1	1	1			1	1	1	1	1			
foE	MED											140	130	130	400	400				400	360	340	270	170	
	CNT											7	24	25	14	1				17	14	24	14	1	
h'E	MED											160	160	105	115	110	105	110	110	110	110	105	100	100	
	CNT				1							23	27	27	7	1		1	4	14	14	17	11		
foEs	MEQ																								
	CNT																								

SWEEP 1.4 MC TO 20.0 MC IN 4 MINUTES.

TABLE 11C*

ROME, ITALY (41.8N, 12.5E) TIME 15.0

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
foF2	MED	48	51	43	51	45	41	50	54											71	87	62	54	54	56
	CNT	6	7	6	8	3	7	8	7	4					1					7	2	7	5	5	8
	UQ	53	56	53	58	53	43	53	57											47	100	87	56	59	66
	LQ	44	40	39	39	37	37	40	46											41	68	55	51	49	48
h'F2	MED																								
	CNT																								
	UQ																								
	LQ																								
h'F	MED	230	275	280																					260
	CNT		4																						4
	UQ																								
	LQ																								255
M(3000)F2	MED					7																			
	CNT																								
	UQ																								
	LQ																								
foF1	MED																								
	CNT																								
foE	MED																								
	CNT																								
h'E	MED																								
	CNT																								
foEs	MEQ																								
	CNT																								

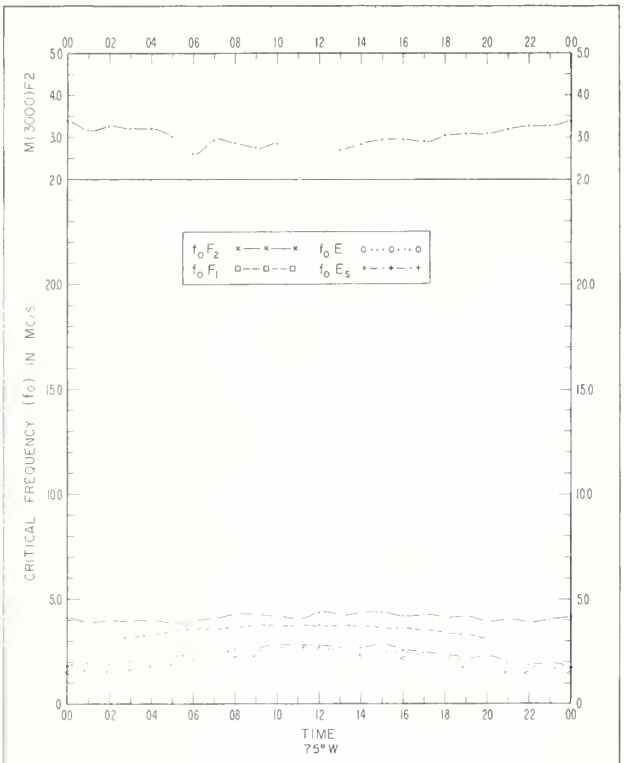

Fig 1 THULE, GREENLAND
76 4°N, 68 3°W JULY 1963

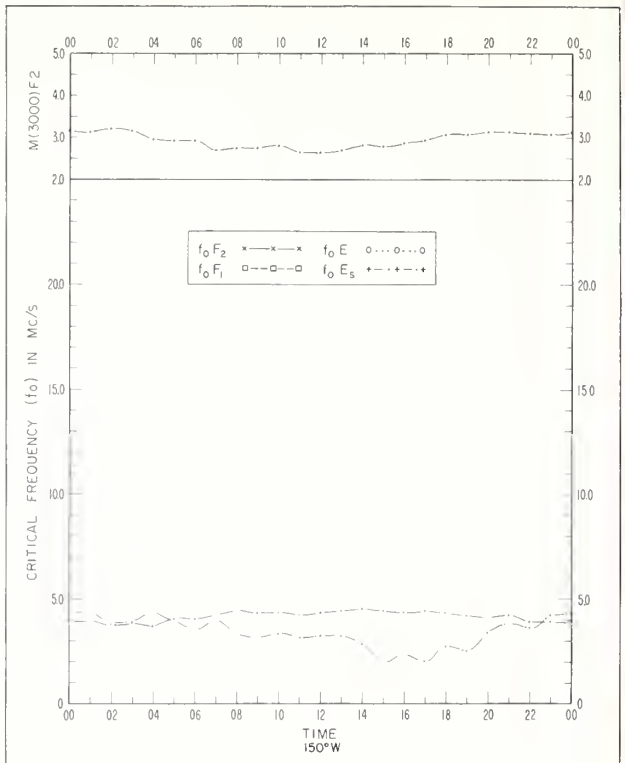

Fig 2 BARROW, ALASKA
71 3°N, 156 8°W JULY 1963

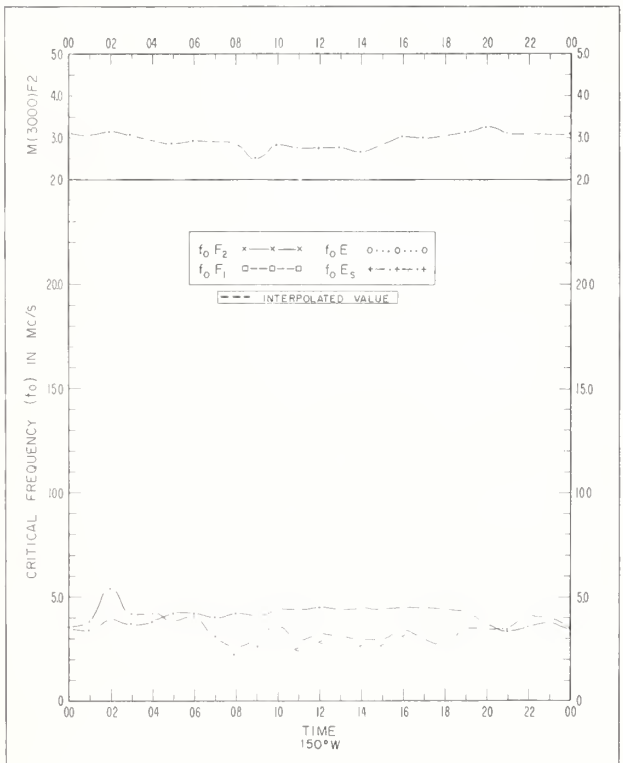

Fig. 3 COLLEGE (FAIRBANKS), ALASKA
64 9°N, 147 8°W JULY 1963

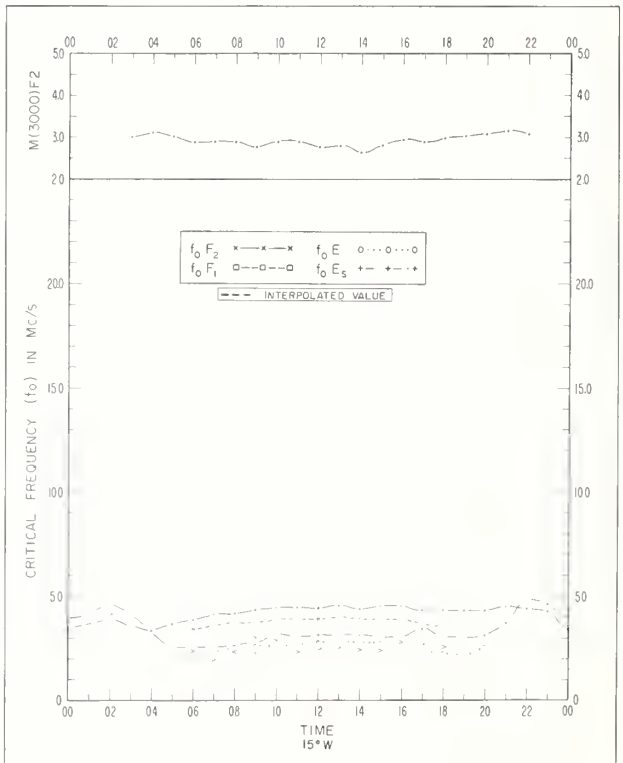

Fig 4 REYKJAVIK, ICELAND
64.1°N, 21.8° W JULY 1963

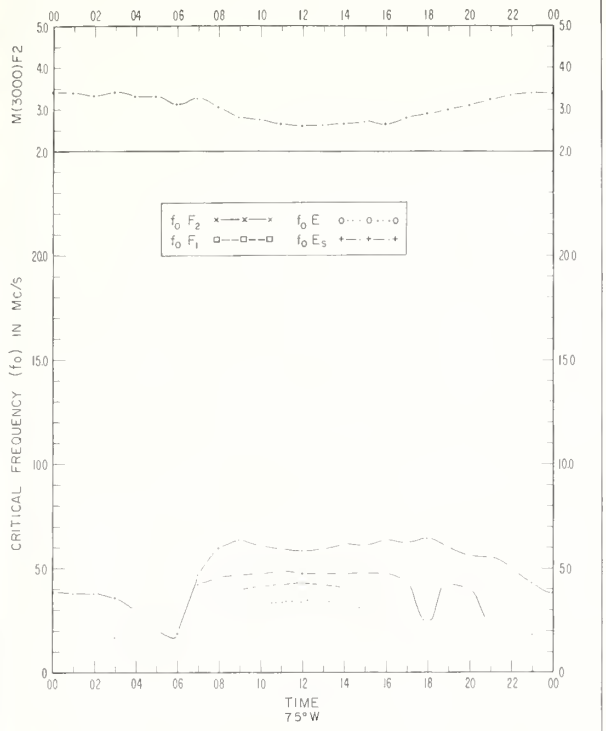

Fig 5 HUANCAYO, PERU
12.0°S, 75.3°W JULY 1963

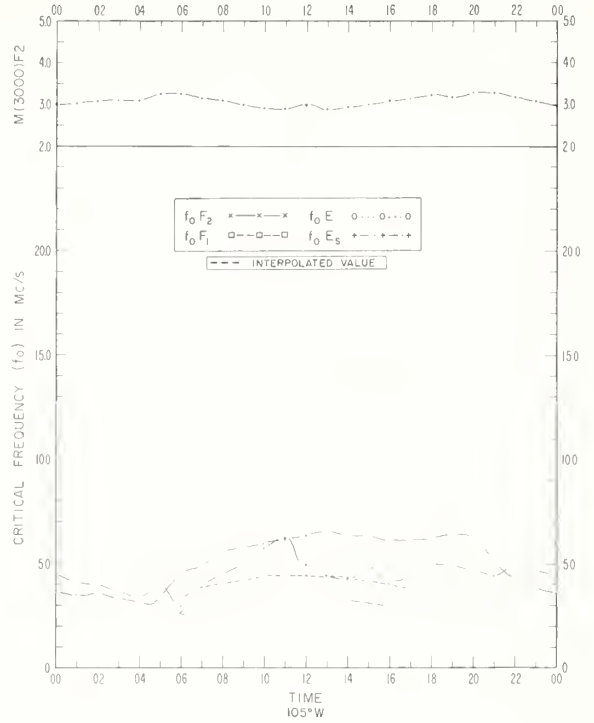

Fig 6 WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W JUNE 1963

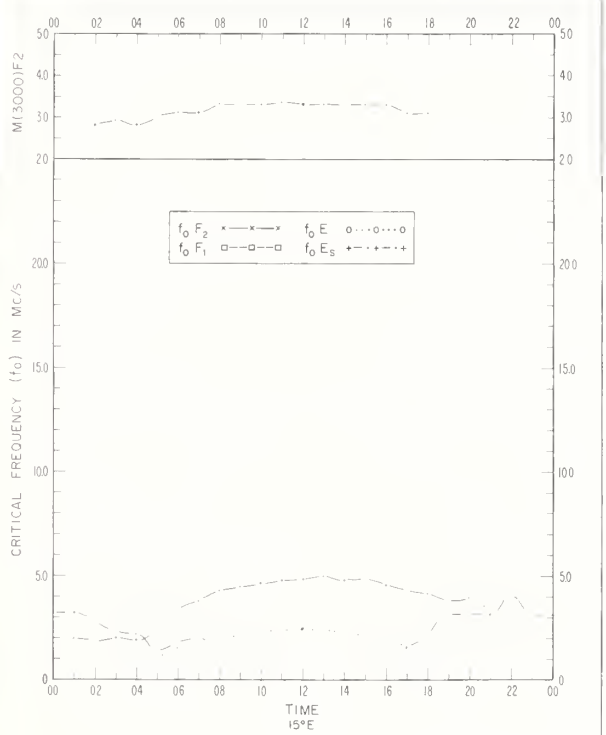

Fig. 7. TROMSO, NORWAY
69.7°N, 19.0°E MARCH 1963

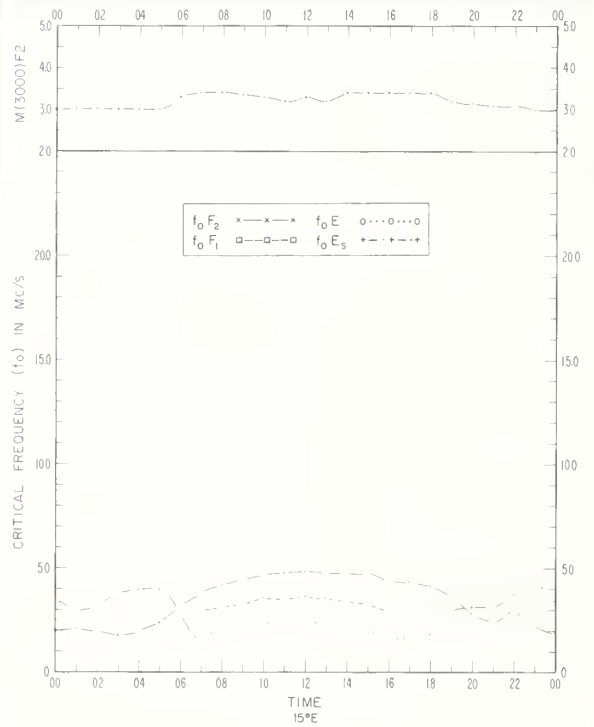

Fig 8. KIRUNA, SWEDEN
67.8°N, 20.4°E MARCH 1963

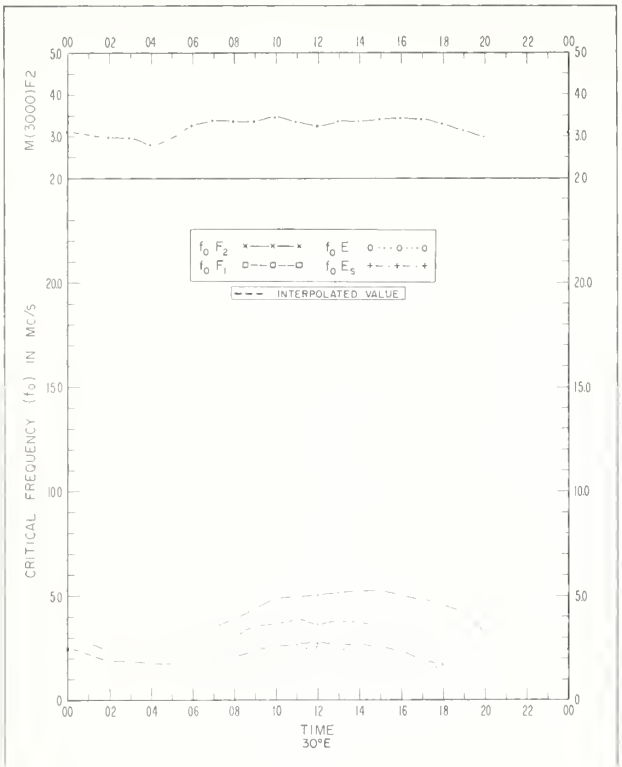

Fig 9 NURMIJARVI, FINLAND
60 5°N, 24 6°E MARCH 1963

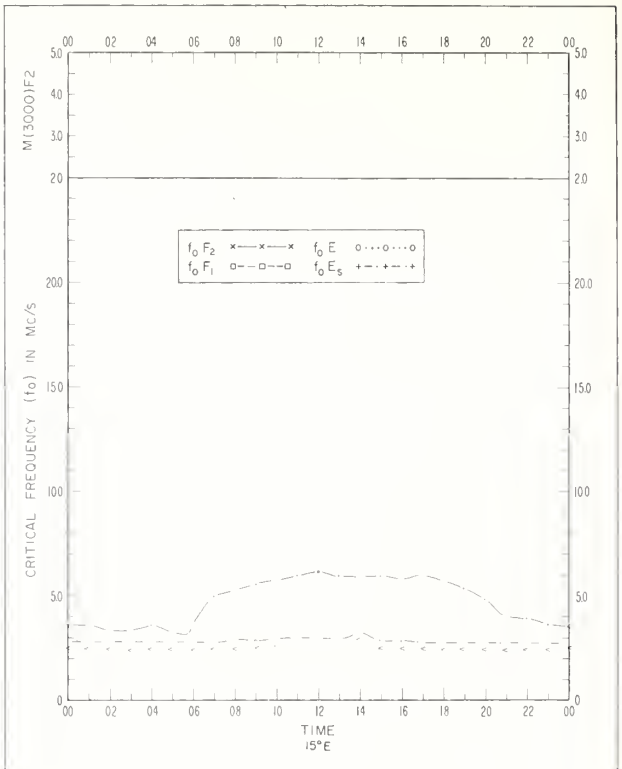

Fig 10. GRAZ, AUSTRIA
47.1°N, 15 5°E MARCH 1963

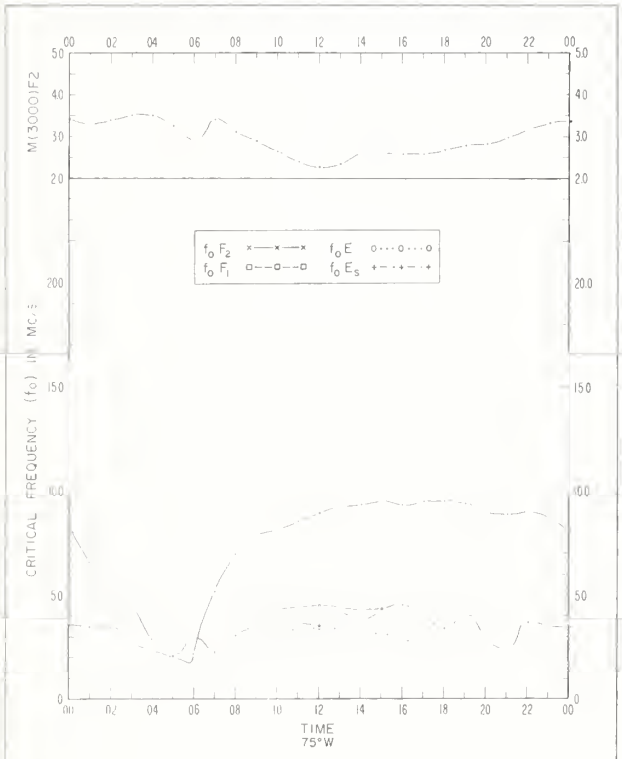

Fig 11 TALARA, PERU
4 6°S, 81 3°W MARCH 1963

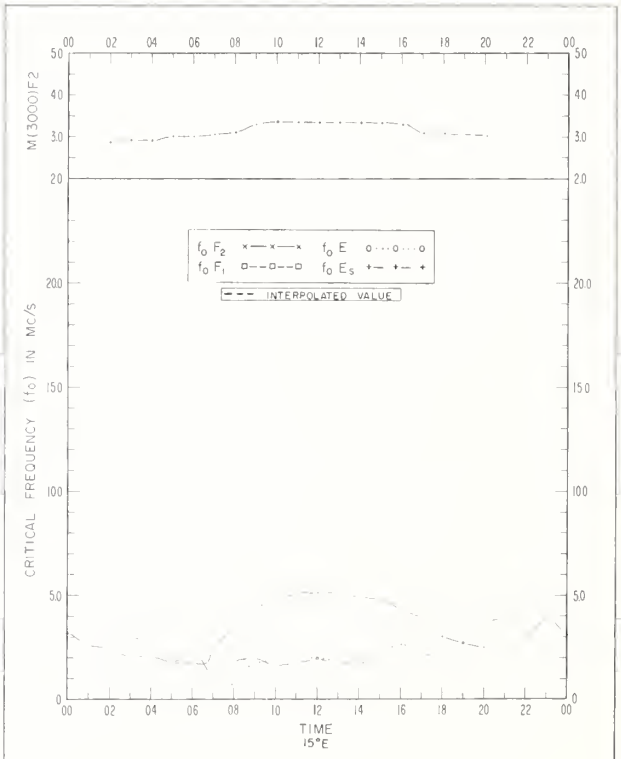

Fig 12 TROMSO, NORWAY
69 7°N, 19 0°E FEBRUARY 1963

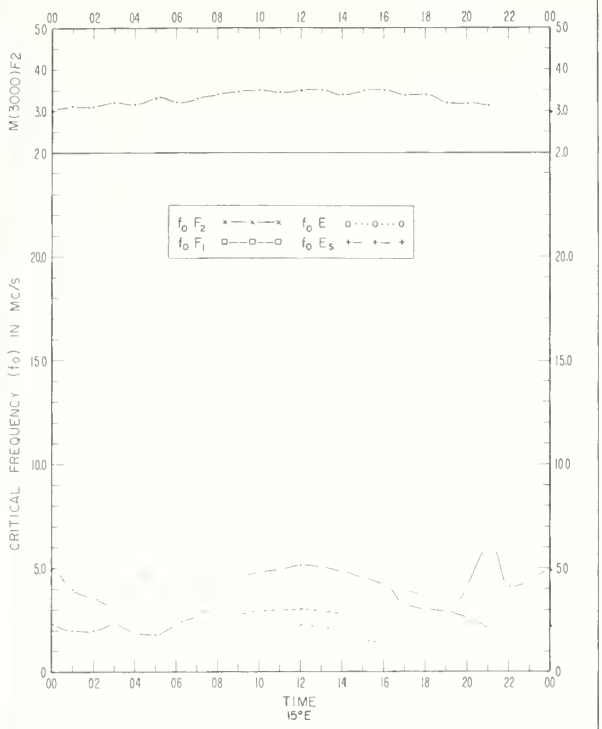

Fig 13 KIRUNA, SWEDEN
67.8°N, 20.4°E FEBRUARY 1963

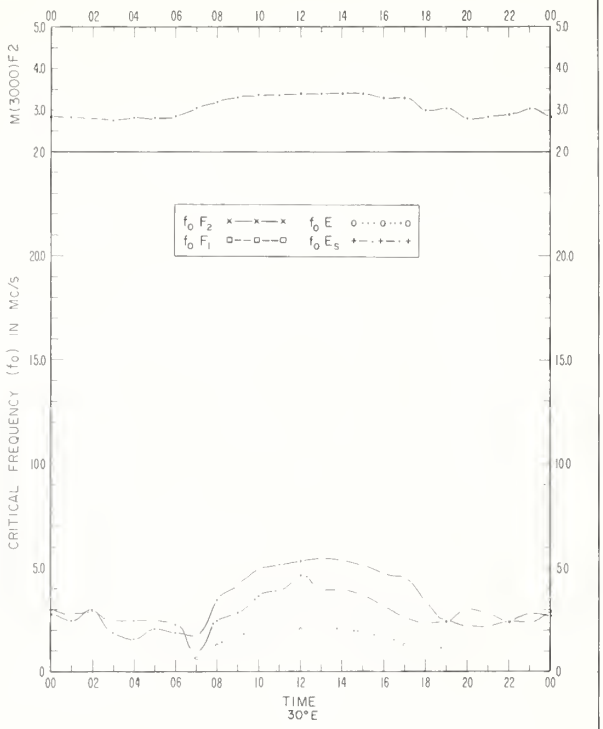

Fig 14 SODANKYLA, FINLAND
67.4°N, 26.6°E FEBRUARY 1963

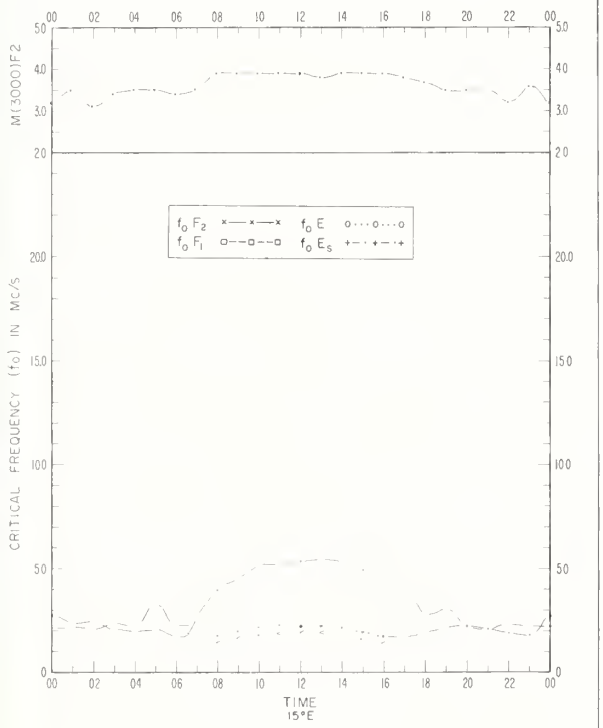

Fig 15 LULEA, SWEDEN
65.6°N, 22.1°E FEBRUARY 1963

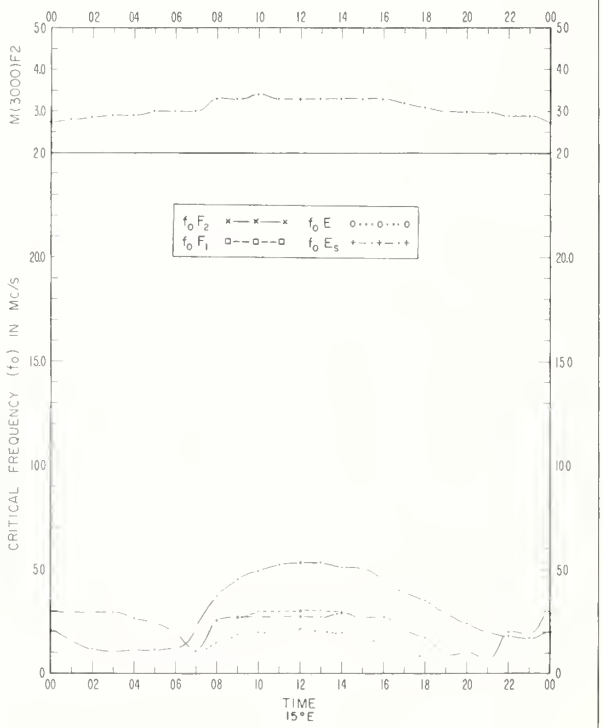

Fig 16. LYCKSELE, SWEDEN
64.7°N, 18.8°E FEBRUARY 1963

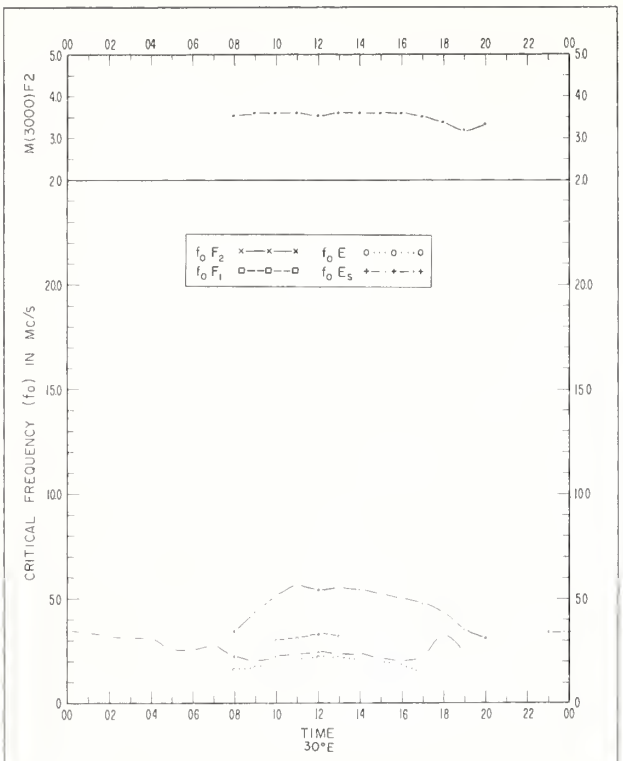

Fig 17 NURMIJARVI, FINLAND
60 5°N, 24 6°E FEBRUARY 1963

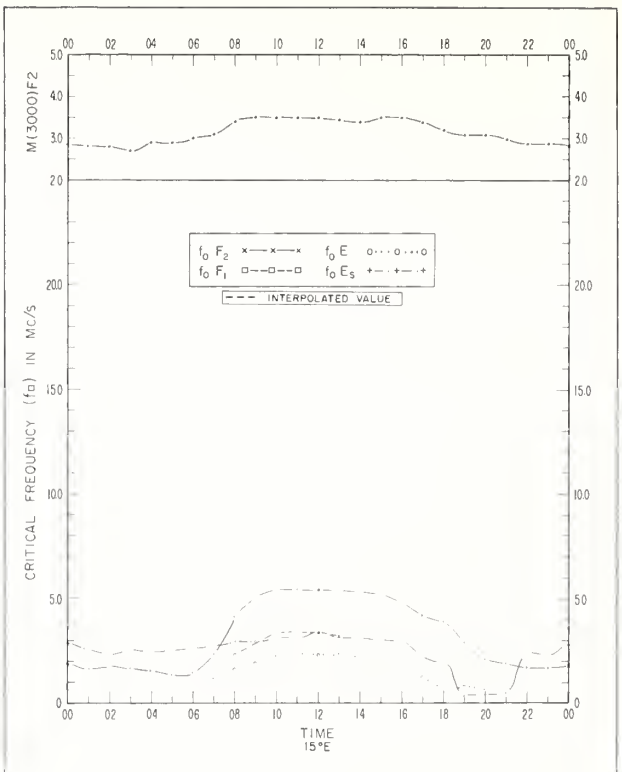

Fig. 18. UPPSALA, SWEDEN
59 8°N, 17.6°E FEBRUARY 1963

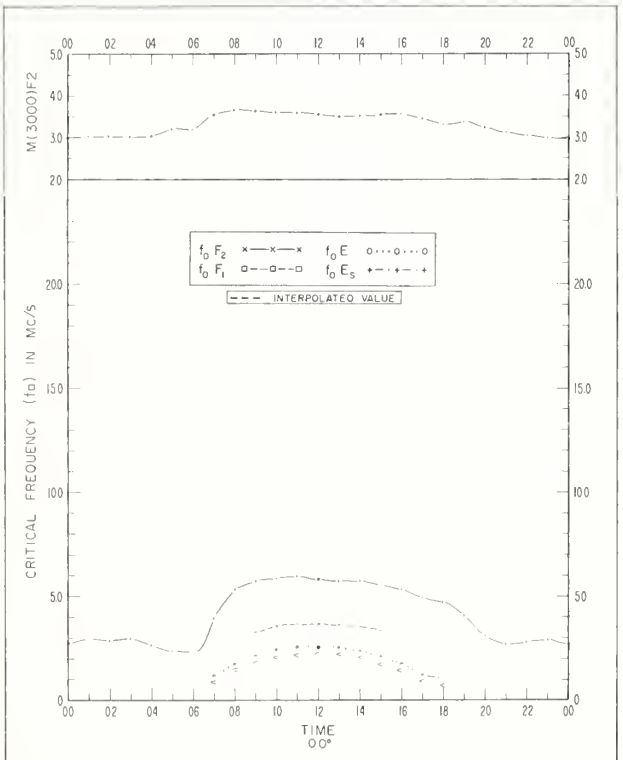

Fig 19 DOURBES, BELGIUM
50 1°N, 4 6°E FEBRUARY 1963

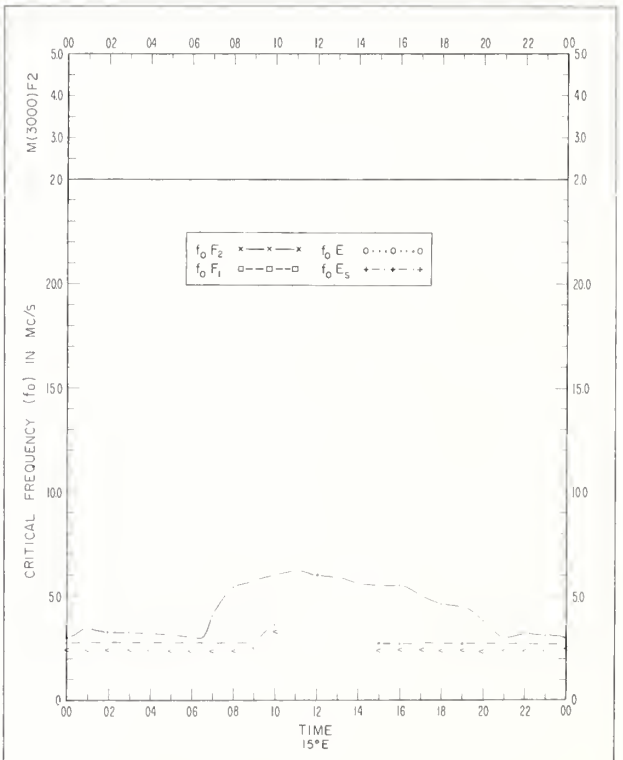

Fig. 20. GRAZ, AUSTRIA
47.1°N, 15 5°E FEBRUARY 1963

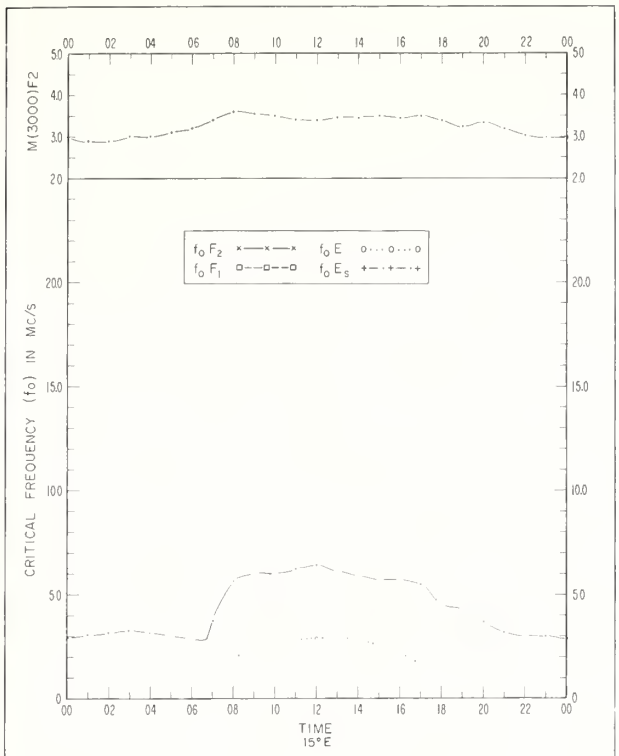

Fig. 21 ROME, ITALY
41.8°N, 12.5°E FEBRUARY 1963

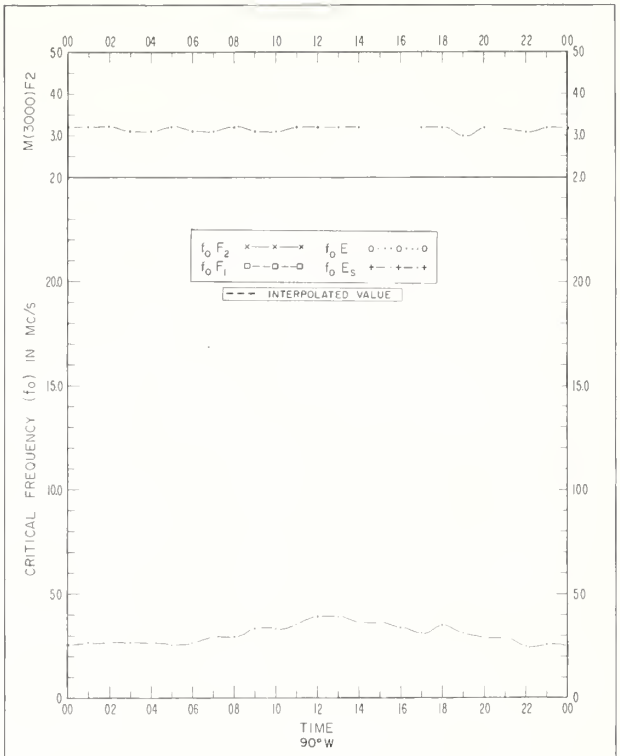

Fig. 22 RESOLUTE BAY, CANADA
74.7°N, 94.9°W JANUARY 1963

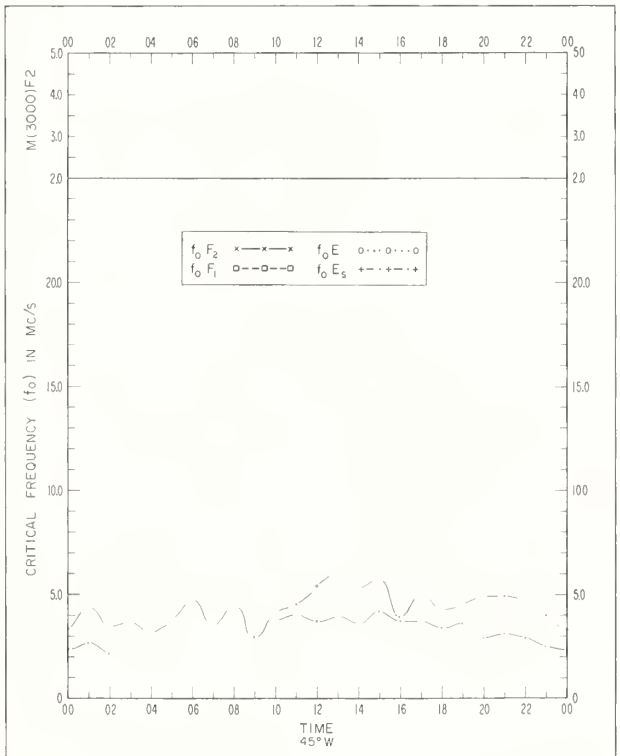

Fig 23 GODHAVN, GREENLAND
69.3°N, 53.5°W JANUARY 1963

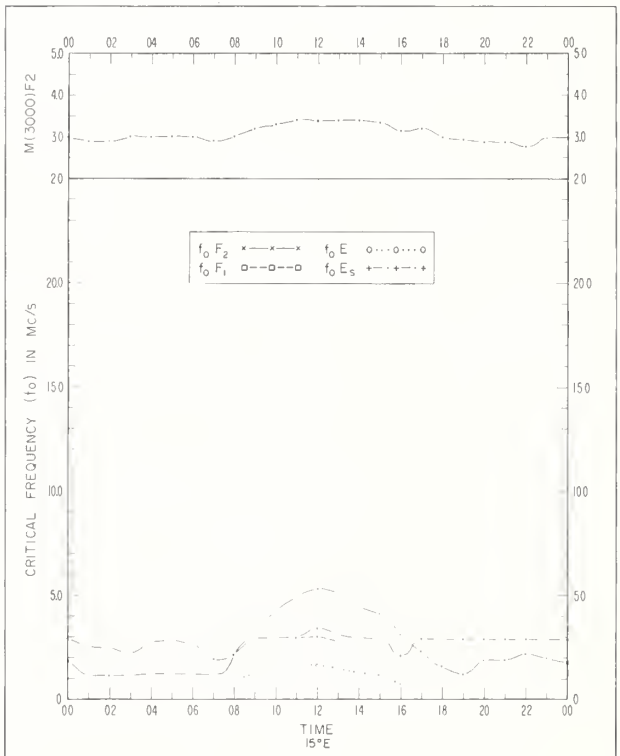

Fig 24 LYCKSELE, SWEDEN
64.7°N, 18.8°E JANUARY 1963

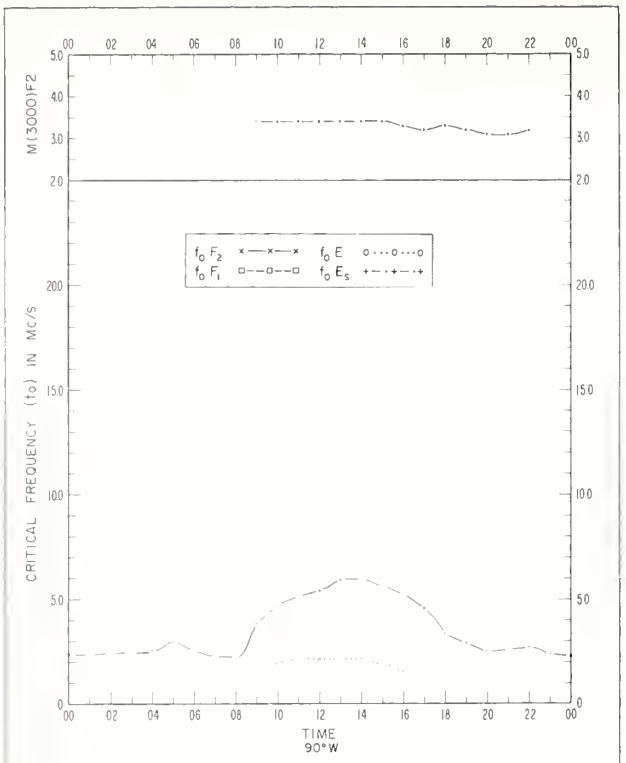

Fig 25. CHURCHILL, CANADA
58 8°N, 94 2°W JANUARY 1963

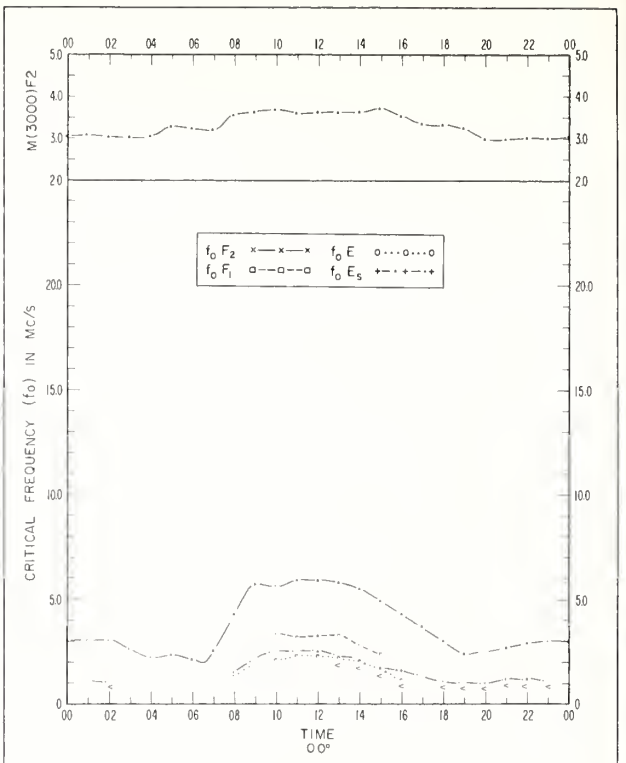

Fig 26. DOURBES, BELGIUM
50.1°N, 4 6°E JANUARY 1963

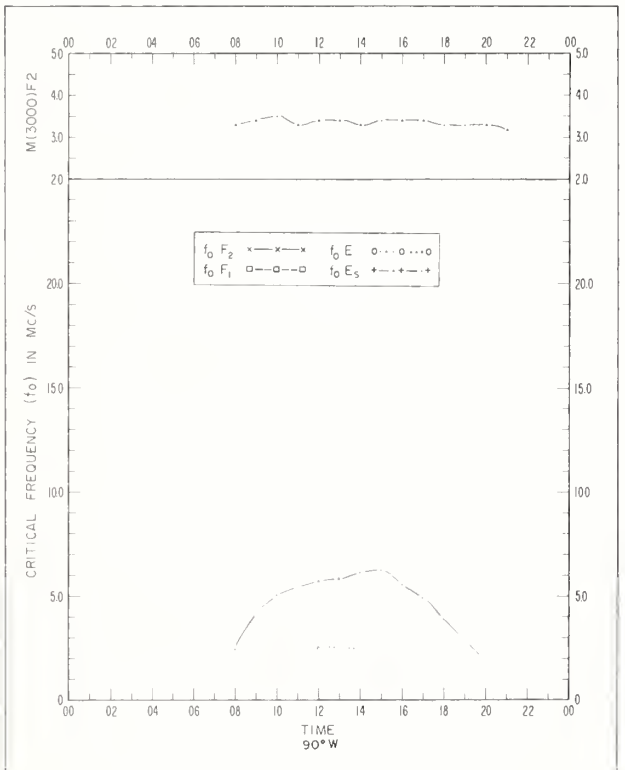

Fig 27 WINNIPEG, CANADA
49 9°N, 97 4°W JANUARY 1963

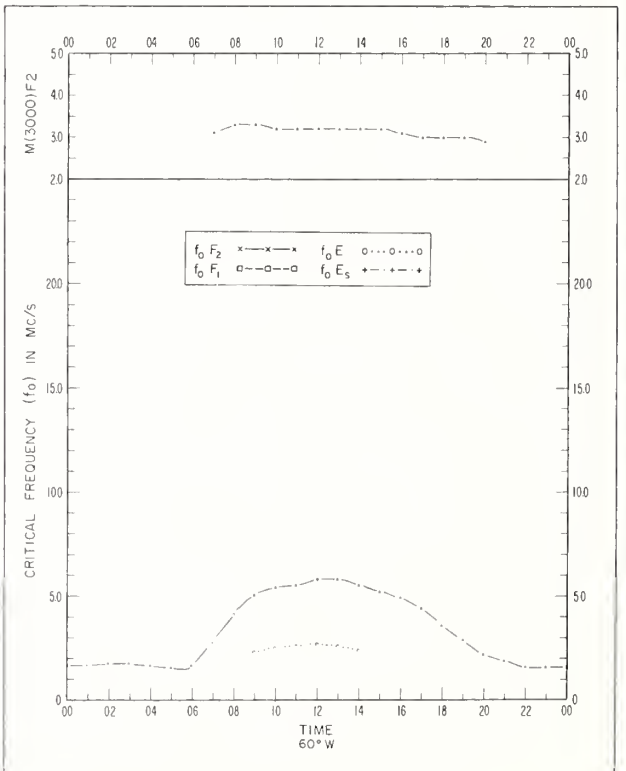

Fig. 28 ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W JANUARY 1963

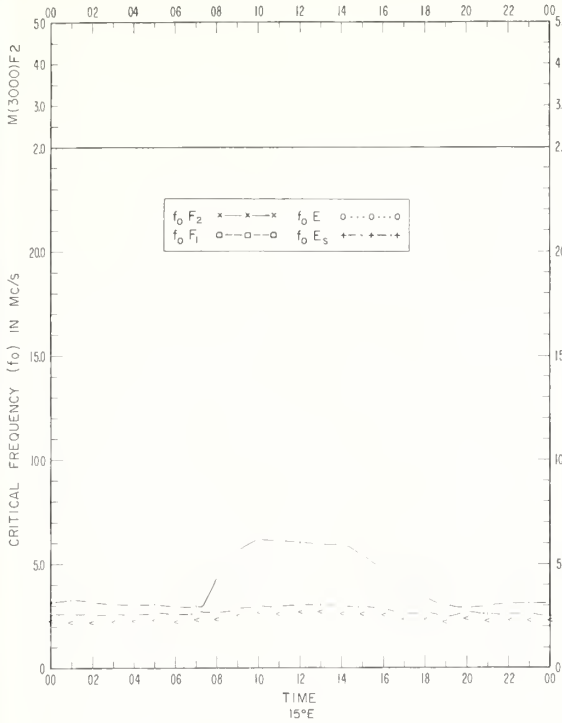

Fig 29 GRAZ, AUSTRIA
47.1°N, 15.5°E JANUARY 1963

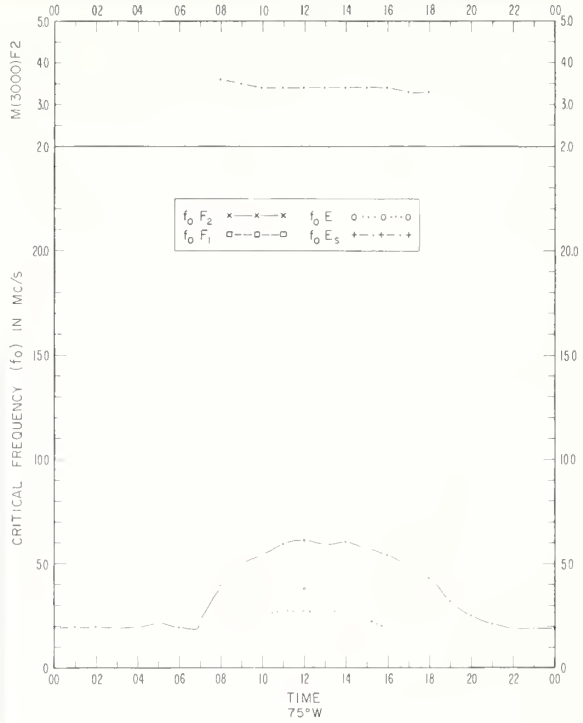

Fig 30 OTTAWA, CANADA
45.4°N, 75.9°W JANUARY 1963

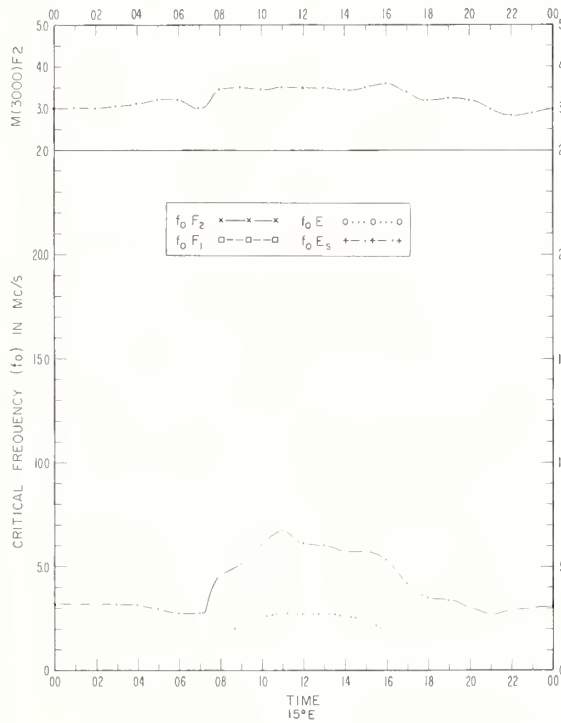

Fig 31 ROME, ITALY
41.8°N, 12.5°E JANUARY 1963

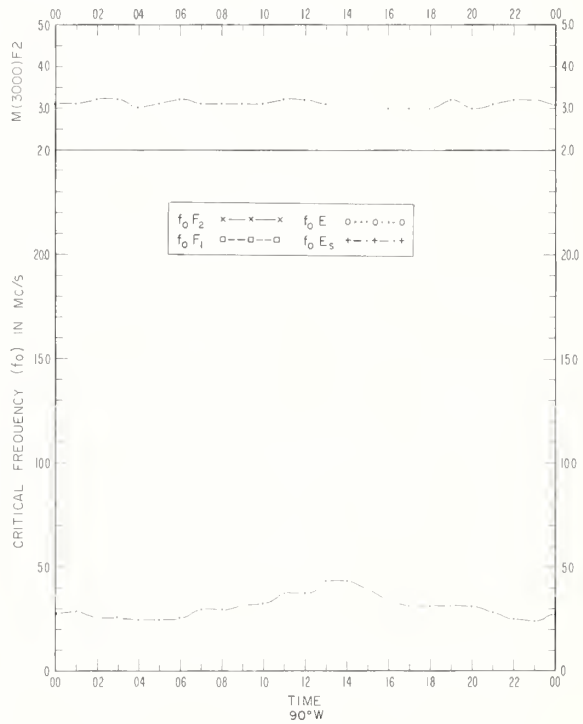

Fig 32 RESOLUTE BAY, CANADA
74.7°N, 94.9°W DECEMBER 1962

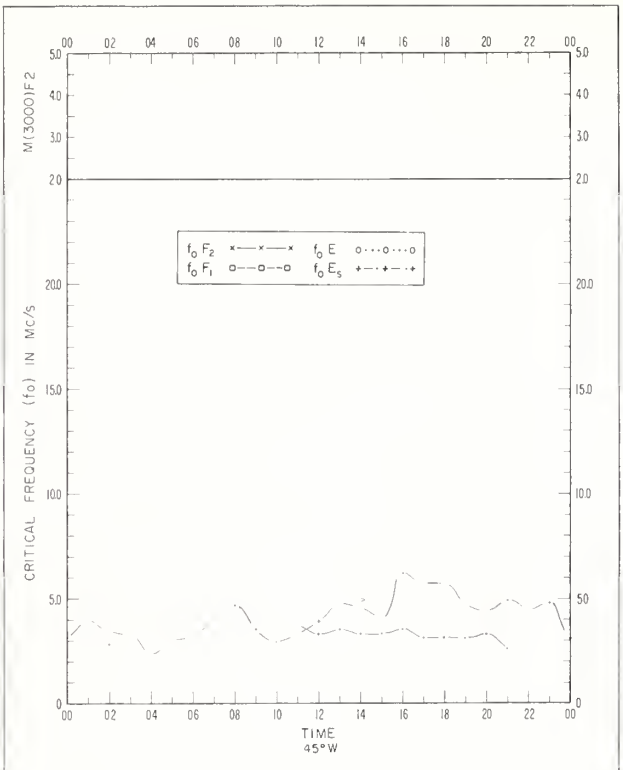

Fig 33 GODHAVN, GREENLAND
69 3°N, 53.5°W DECEMBER 1962

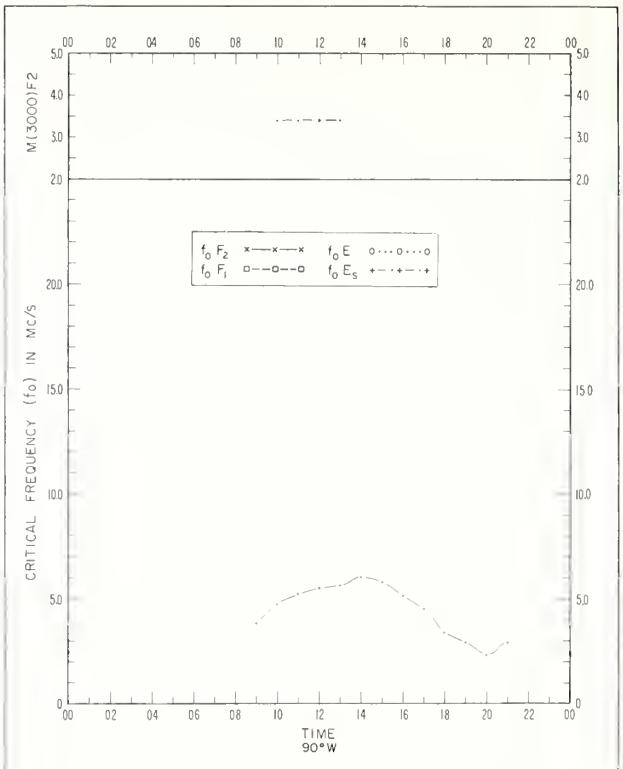

Fig 34 CHURCHILL, CANADA
58.8°N, 94 2°W DECEMBER 1962

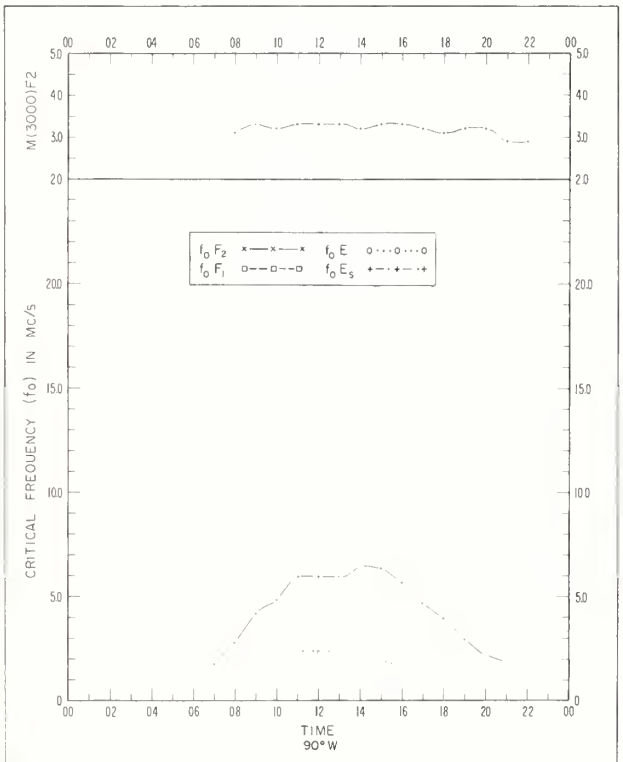

Fig. 35 WINNIPEG, CANADA
49 9°N, 97 4°W DECEMBER 1962

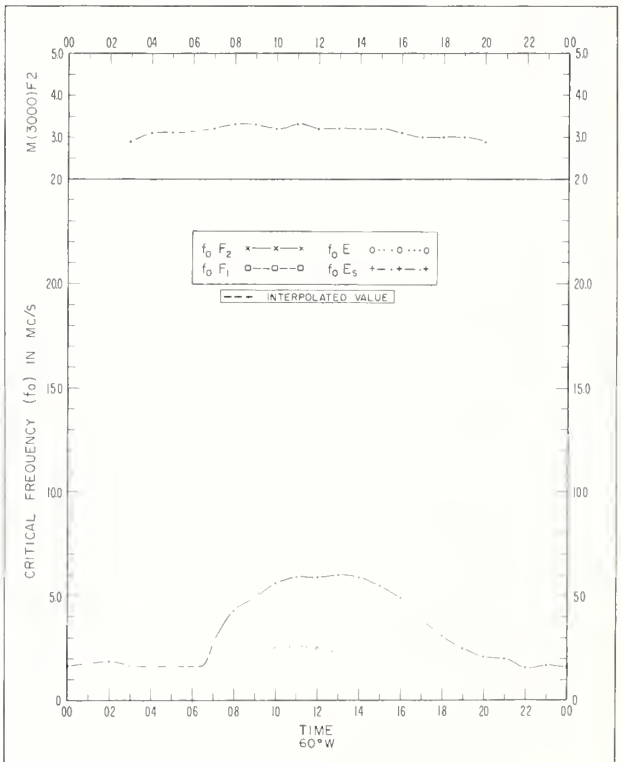

Fig 36 ST JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W DECEMBER 1962

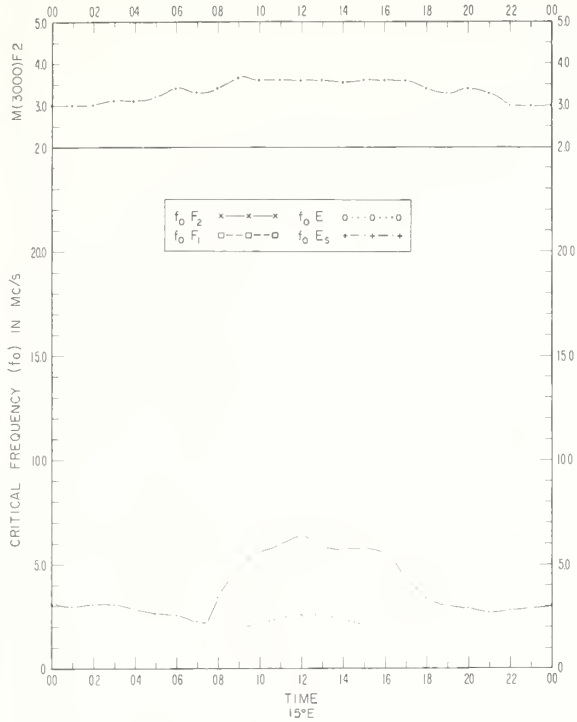

Fig. 37. SOTTENS, SWITZERLAND
46 6°N, 6.7°E DECEMBER 1962

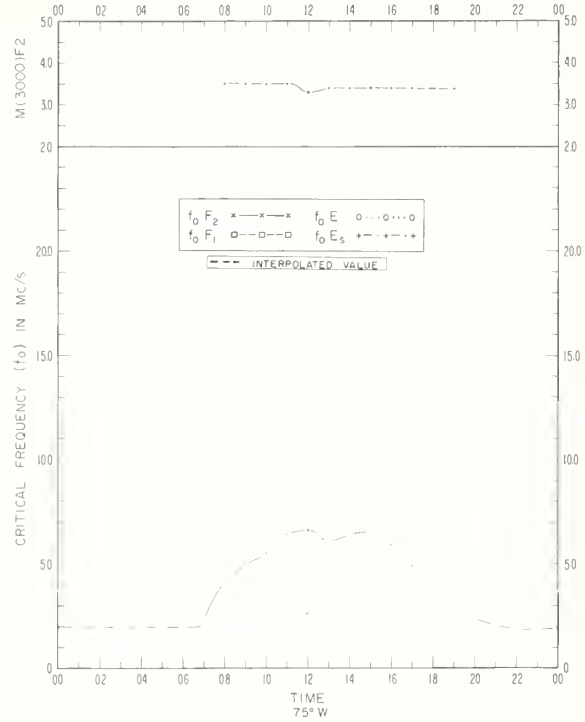

Fig 38 OTTAWA, CANADA
45 4°N, 75 9°W DECEMBER 1962

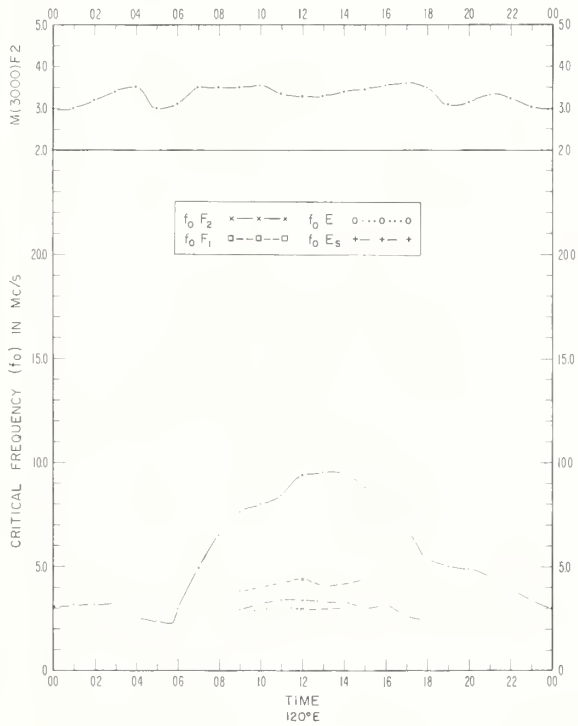

Fig 39 TAIPEI (TAIWAN), CHINA
25 0°N, 121 5°E DECEMBER 1962

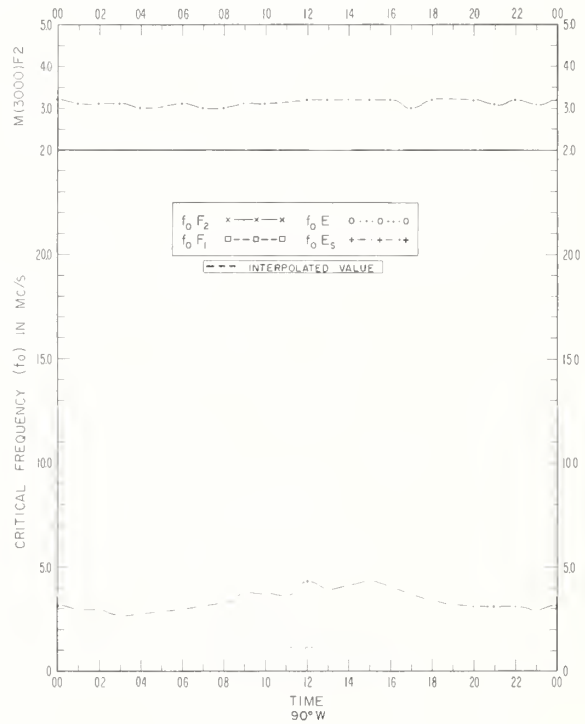

Fig 40. RESOLUTE BAY, CANADA
74 7°N, 94 9°W NOVEMBER 1962

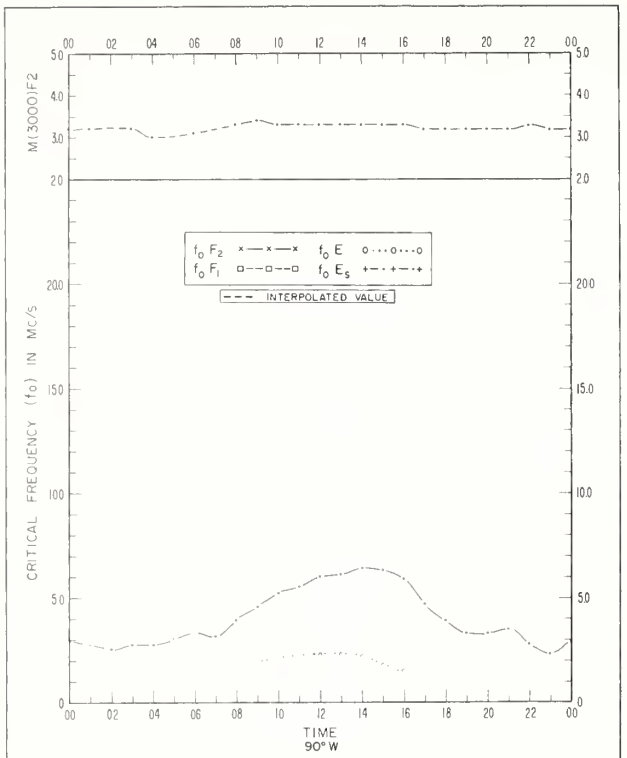

Fig 41. CHURCHILL, CANADA
58.8°N, 94.2°W NOVEMBER 1962

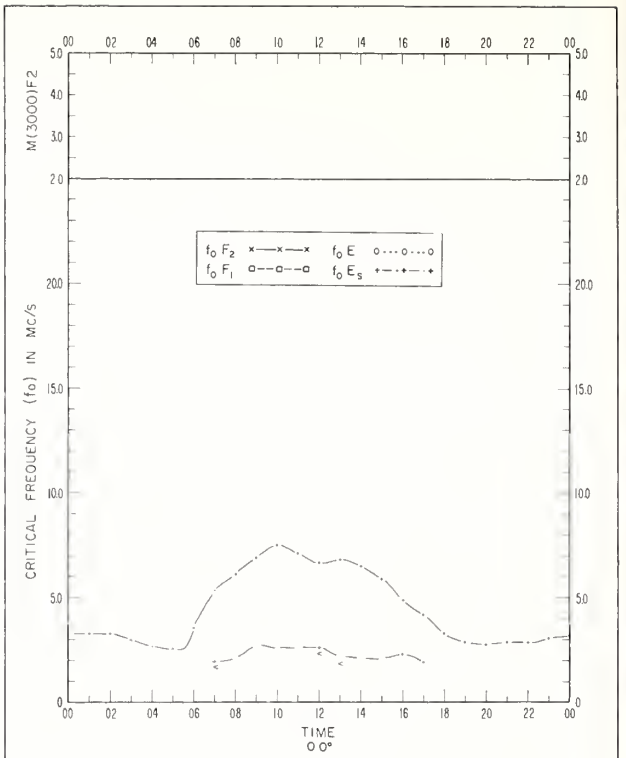

Fig 42. PRUHONICE, CZECHOSLOVAKIA
50.0°N, 14.6°E NOVEMBER 1962

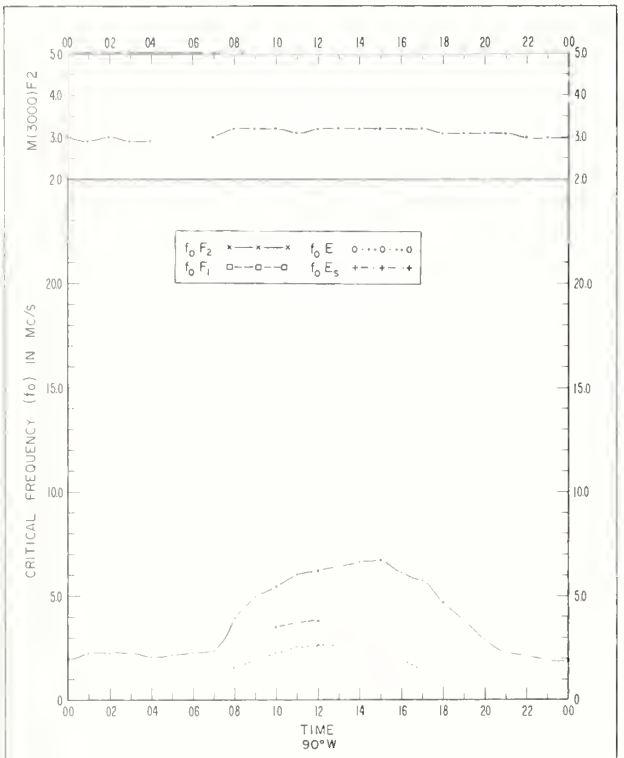

Fig 43 WINNIPEG, CANADA
49 9°N, 97 4°W NOVEMBER 1962

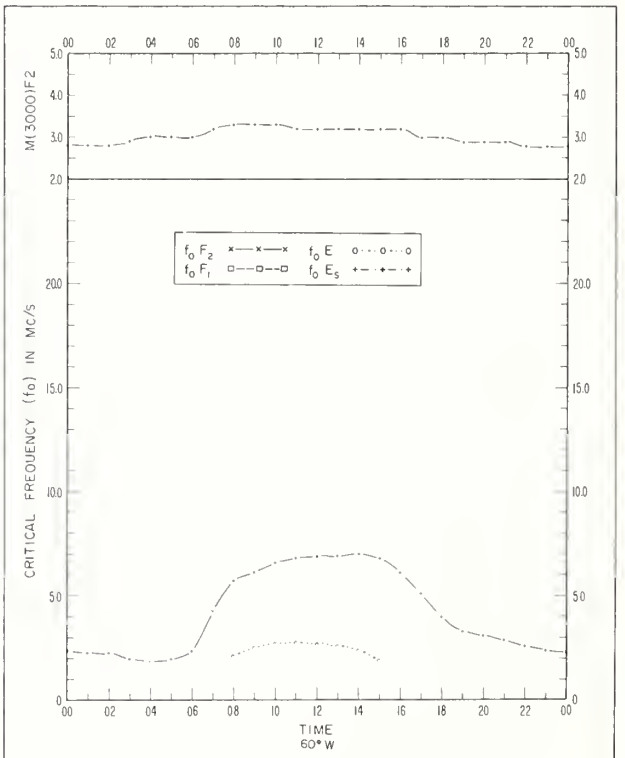

Fig. 44 ST JOHN'S, NEWFOUNDLAND
47.6°N, 52 7°W NOVEMBER 1962

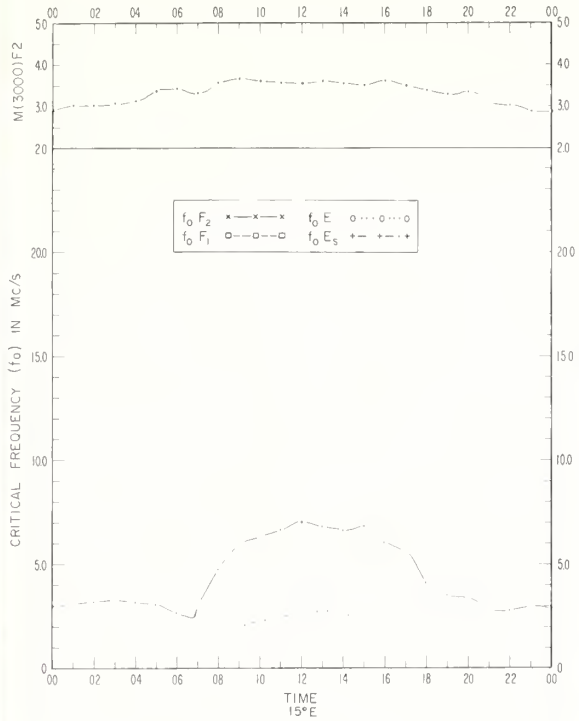

Fig 45. SOTTENS, SWITZERLAND
46 6°N, 6 7°E NOVEMBER 1962

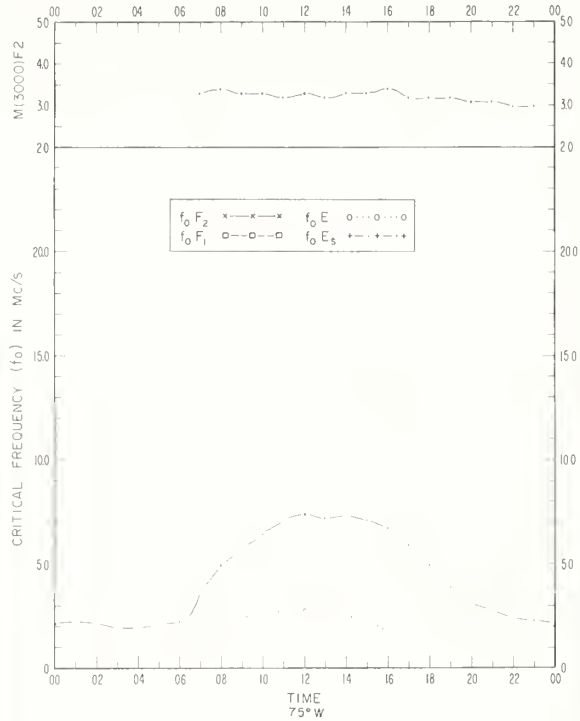

Fig 46 OTTAWA, CANADA
45.4°N, 75.9° W NOVEMBER 1962

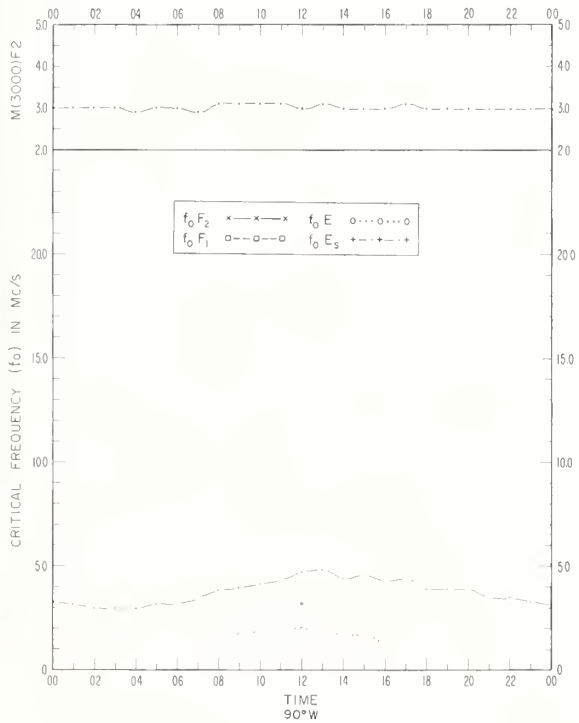

Fig. 47. RESOLUTE BAY, CANADA
74.7°N, 94 9°W OCTOBER 1962

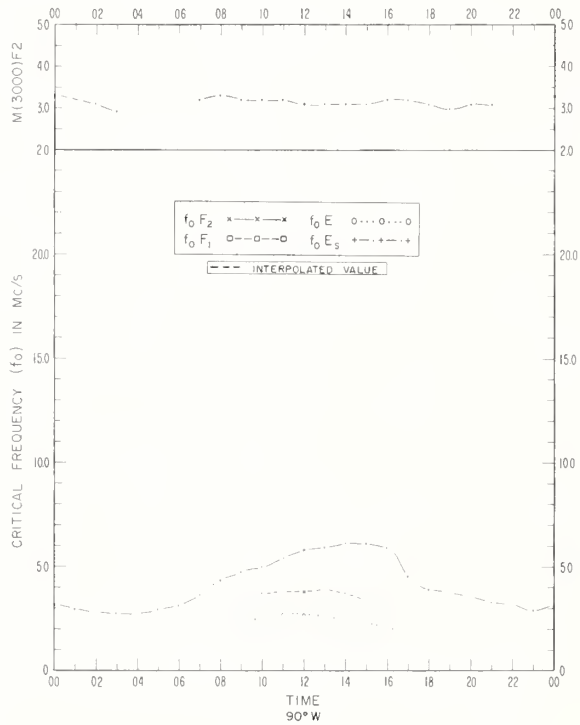

Fig 48 CHURCHILL, CANADA
58 8°N, 94 2°W OCTOBER 1962

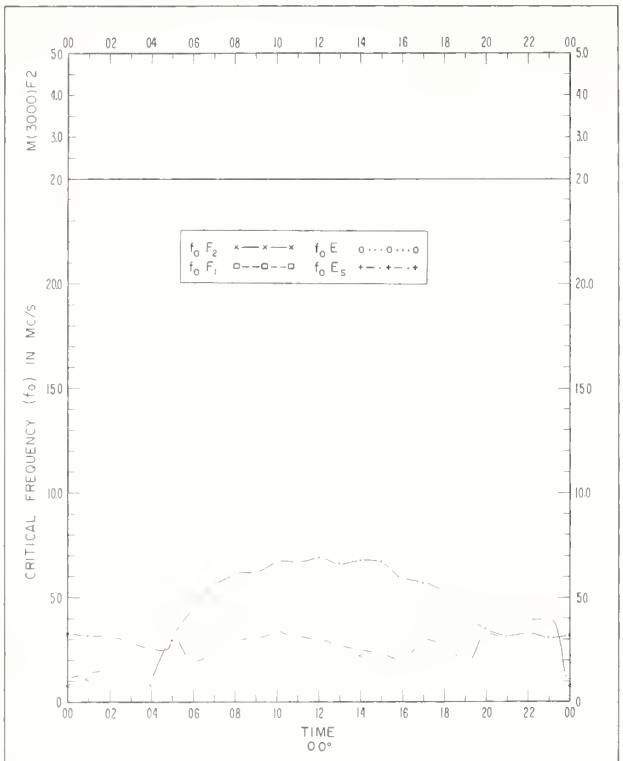

Fig 49. PRUHONICE, CZECHOSLOVAKIA
50 0°N, 14 6°E OCTOBER 1962

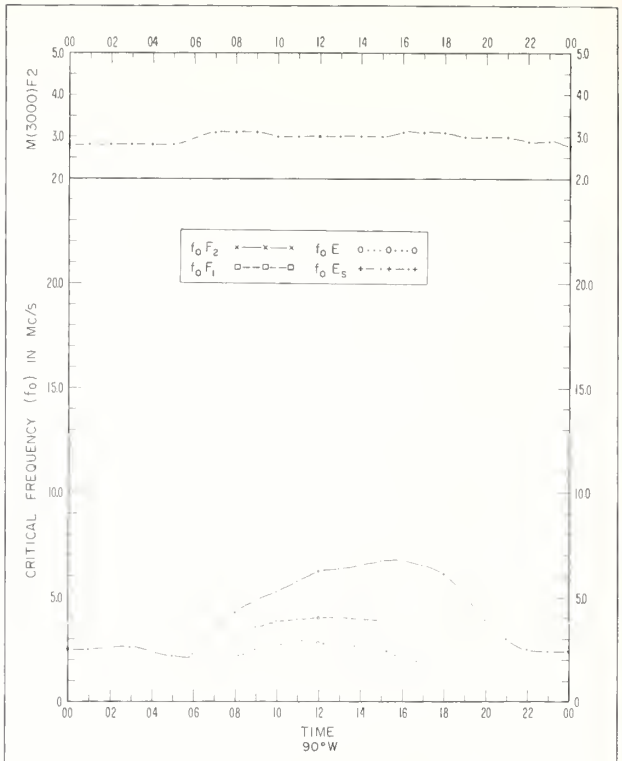

Fig 50 WINNIPEG, CANADA
49 9°N, 97.4°W OCTOBER 1962

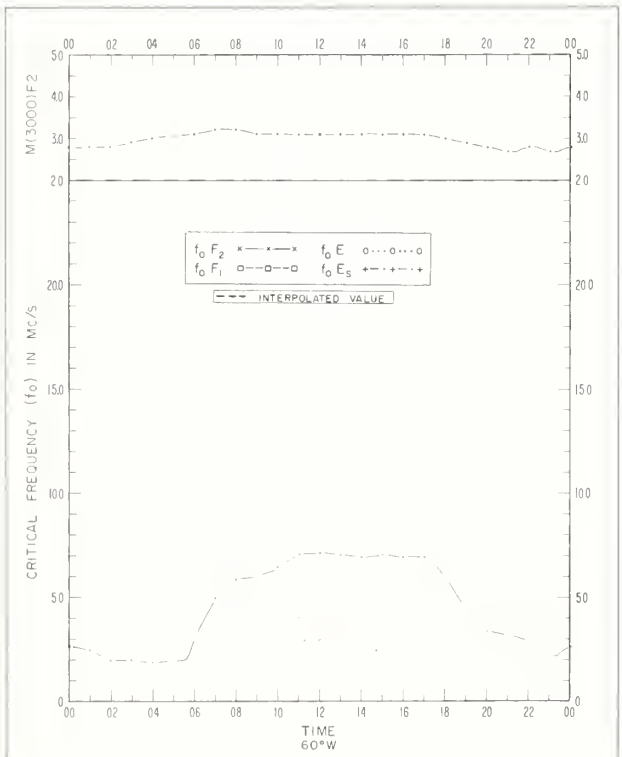

Fig 51 ST JOHN'S, NEWFOUNDLAND
47 6°N, 52 7°W OCTOBER 1962

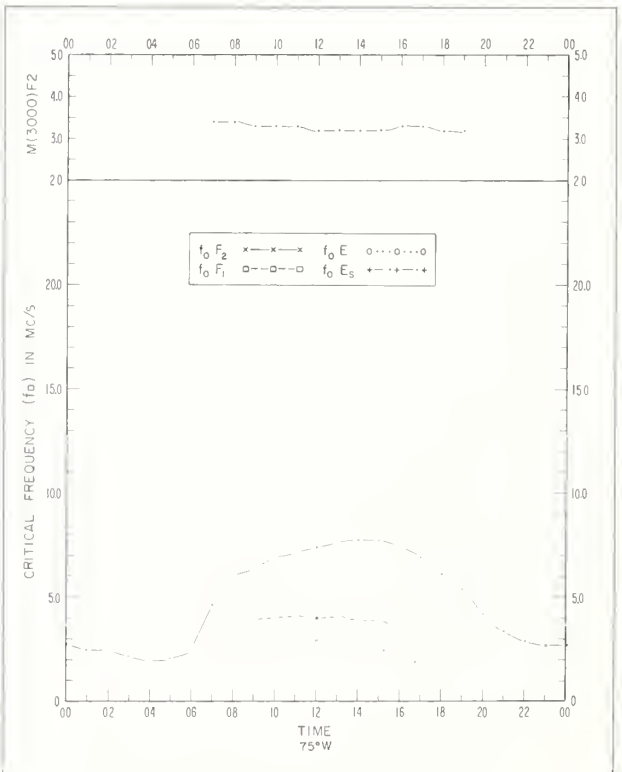

Fig 52. OTTAWA, CANADA
45 4°N, 75.9°W OCTOBER 1962

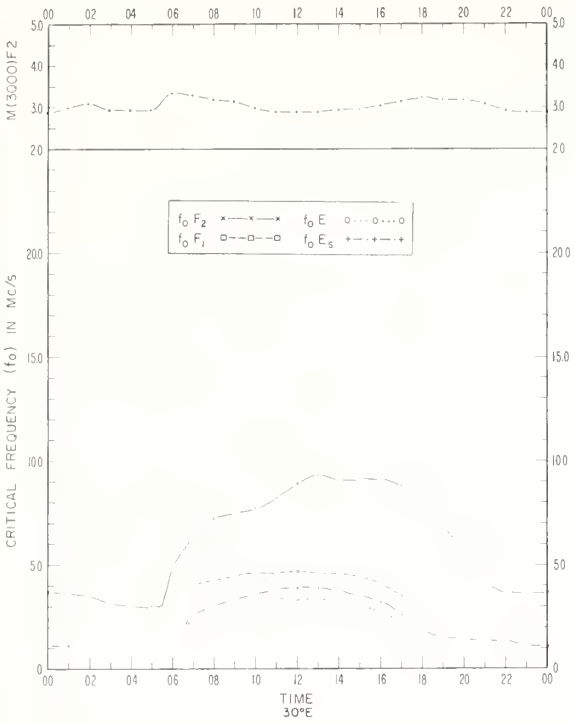

Fig 53. JOHANNESBURG, UNION OF S AFRICA
26 1°S, 28 1°E OCTOBER 1962

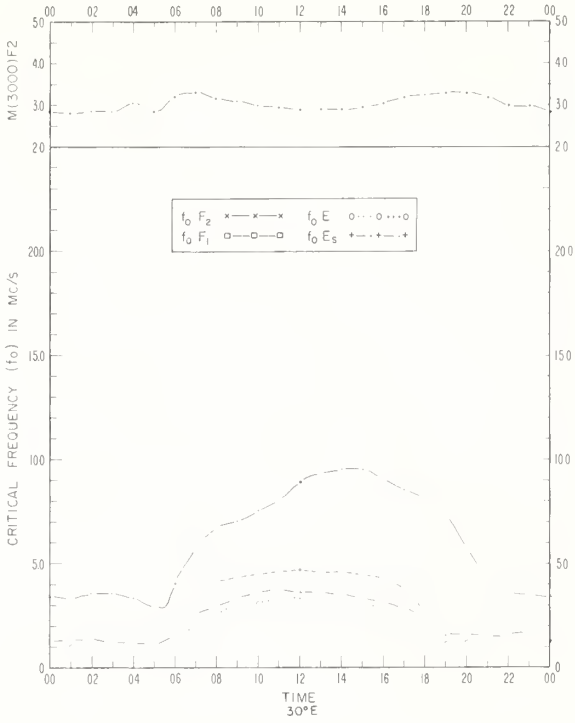

Fig 54 CAPETOWN, UNION OF S AFRICA
34 1°S, 18 3°E OCTOBER 1962

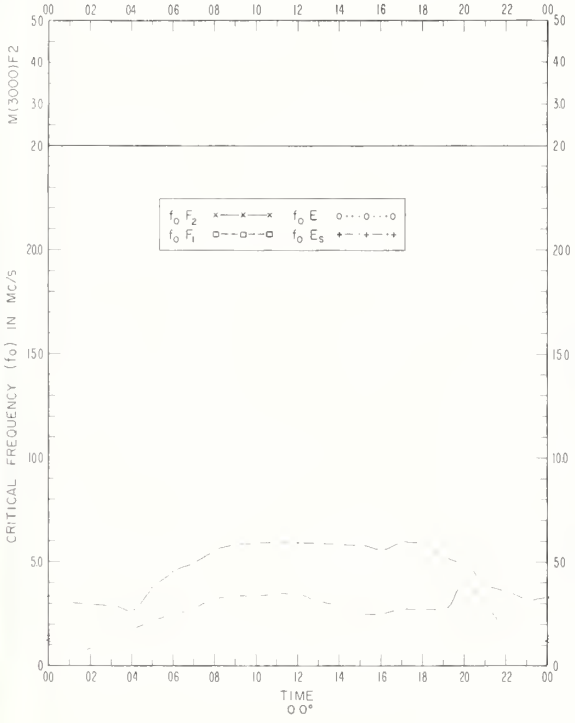

Fig. 55. PRUHONICE, CZECHOSLOVAKIA
50 0°N, 14 6°E SEPTEMBER 1962

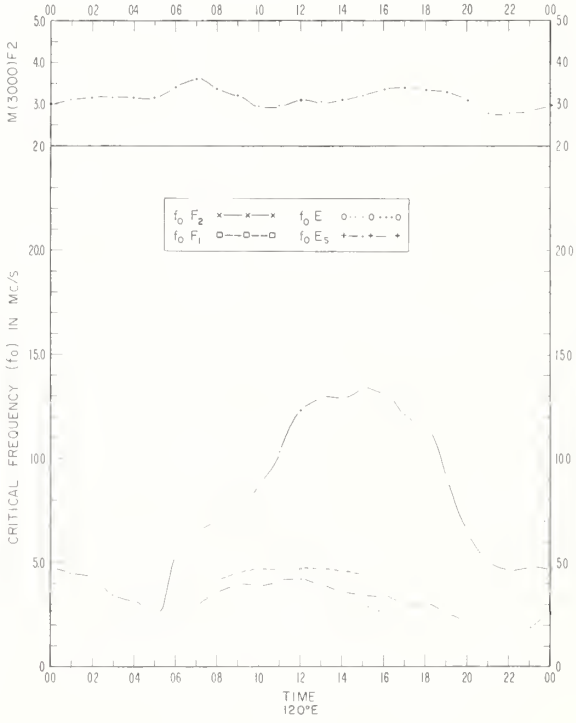

Fig. 56. TAIPEI (TAIWAN), CHINA
25.0°N, 121 5°E SEPTEMBER 1962

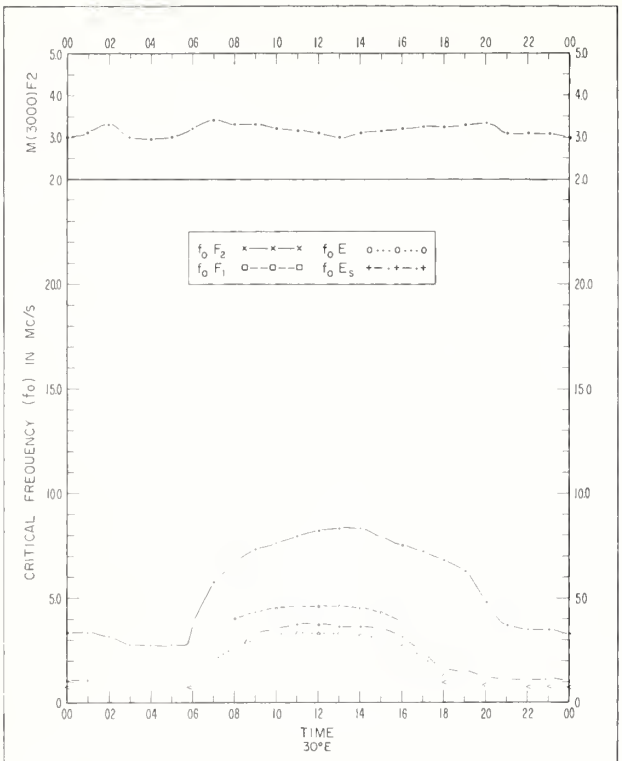

Fig 57 JOHANNESBURG, UNION OF S. AFRICA
26 1°S, 28 1°E SEPTEMBER 1962

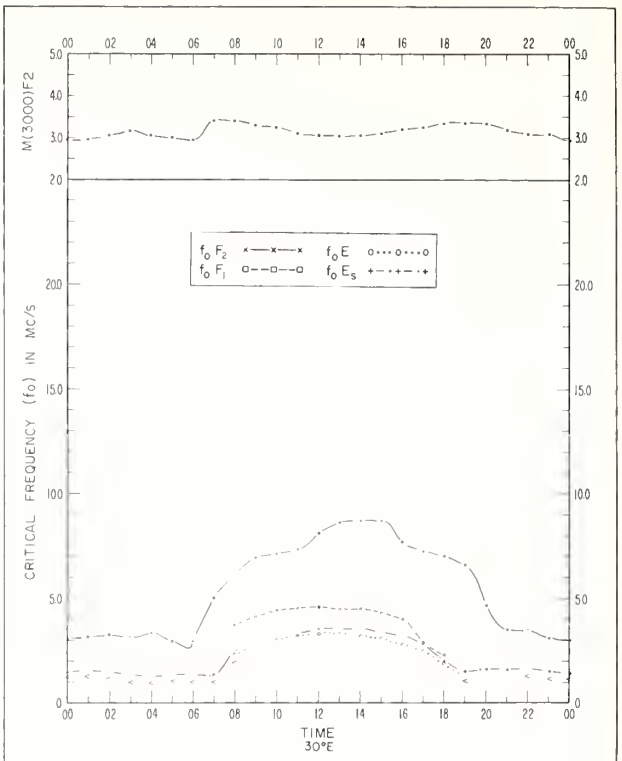

Fig 58 CAPETOWN, UNION OF S. AFRICA
34 1°S, 18 3°E SEPTEMBER 1962

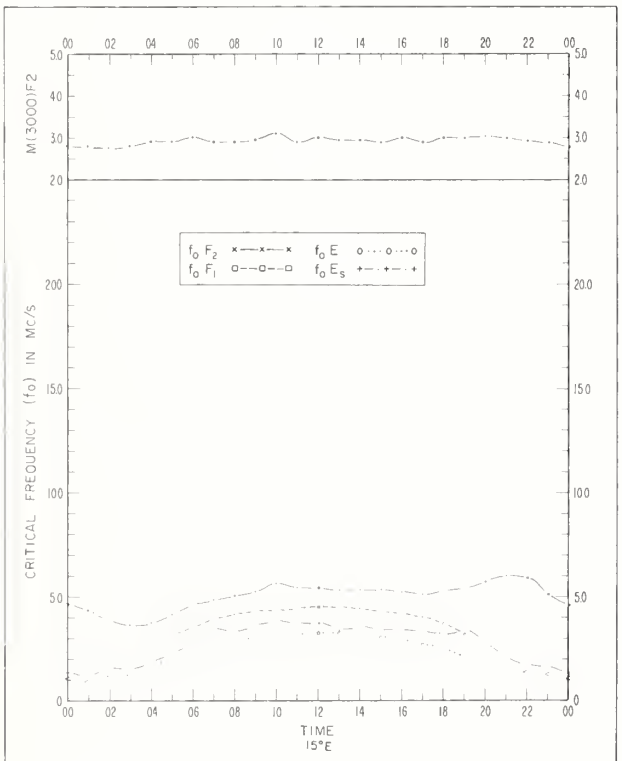

Fig 59 JULIUSRUH/RUGEN, GERMANY
54 6°N, 13 4°E JULY 1962

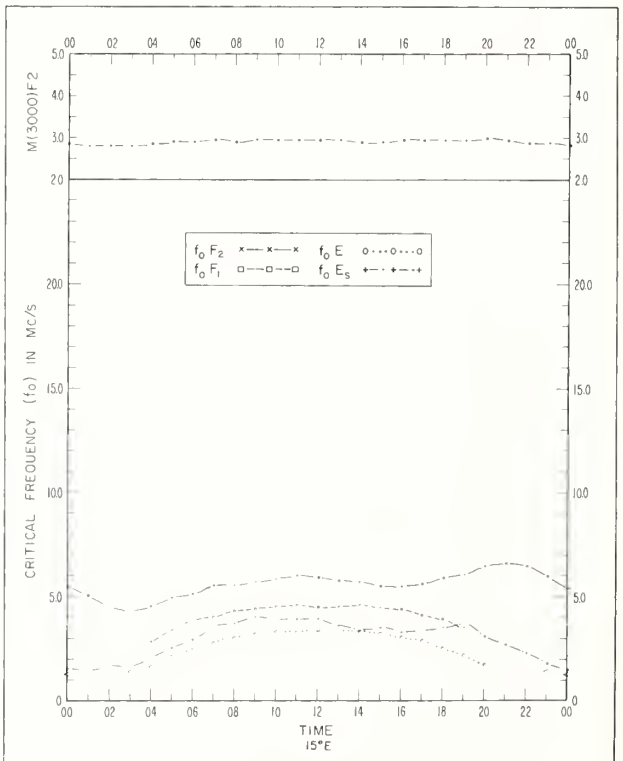

Fig 60 JULIUSRUH/RUGEN, GERMANY
54 6°N, 13 4°E JUNE 1962

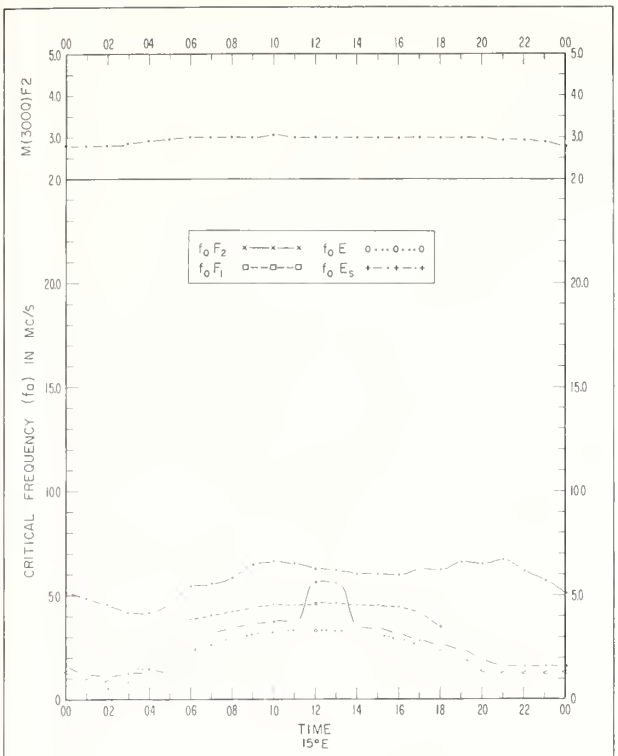

Fig 61 JULIUSRUH/RUGEN, GERMANY
54 6°N, 13 4°E MAY 1962

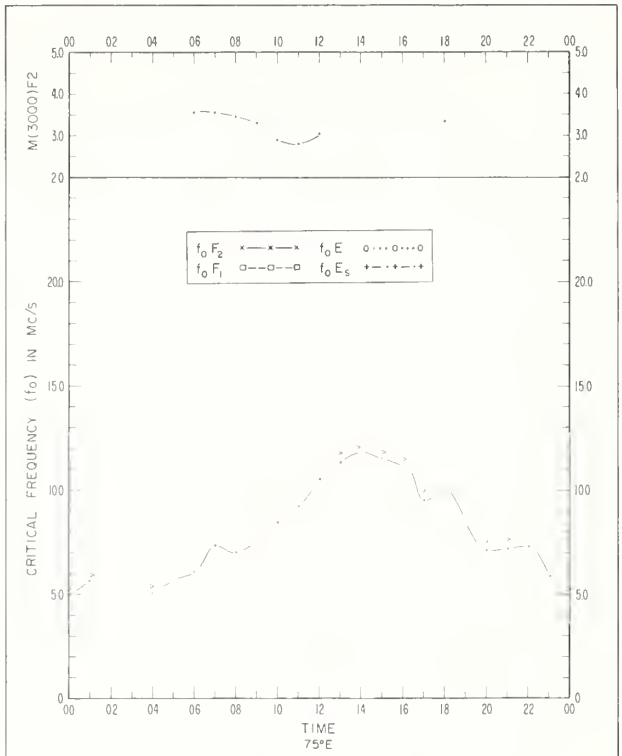

Fig. 62. DELHI, INDIA
28 6°N, 77 2°E MAY 1962

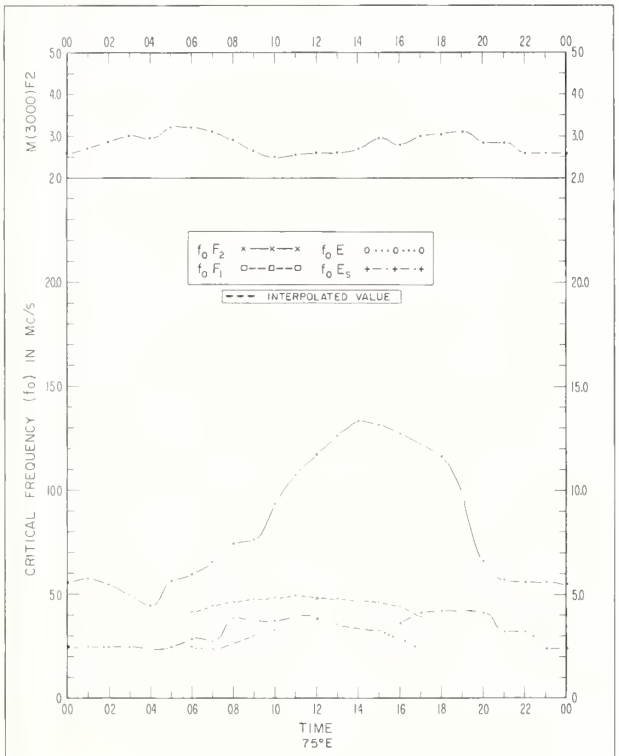

Fig 63. AHMEDABAD, INDIA
23.0°N, 72.6°E MAY 1962

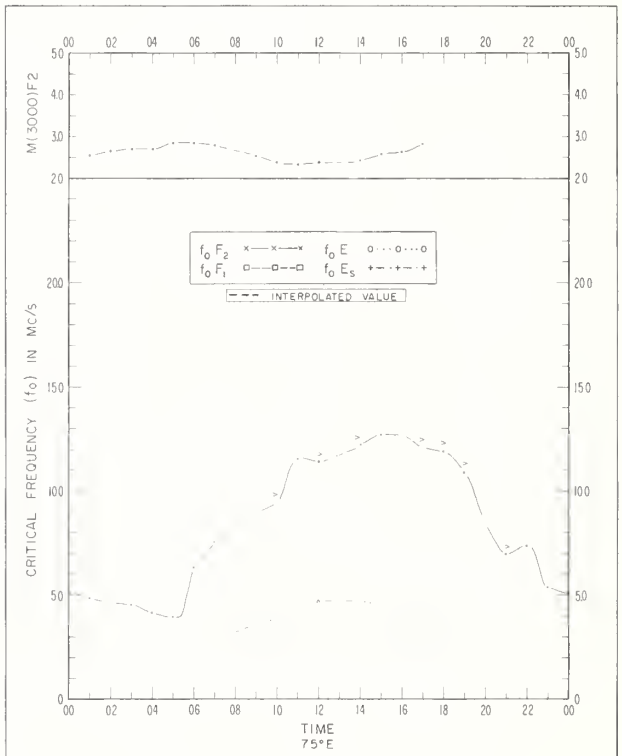

Fig 64 BOMBAY, INDIA
19.0°N, 72.8°E MAY 1962

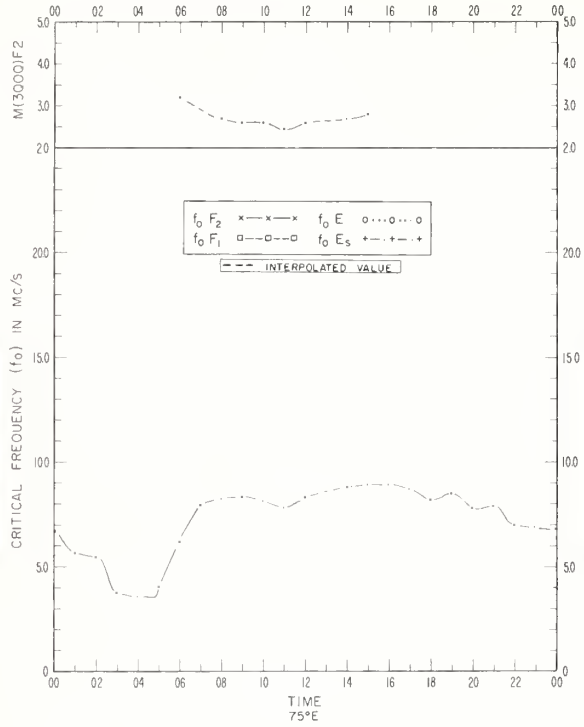

Fig 65 MADRAS, INDIA
13.1°N, 80.3°E MAY 1962

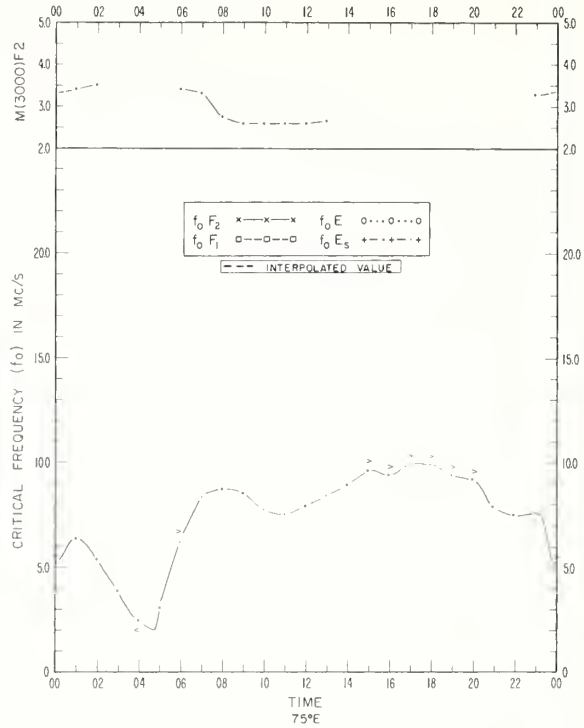

Fig. 66. TIRUCHY, INDIA
10.8°N, 78.7°E MAY 1962

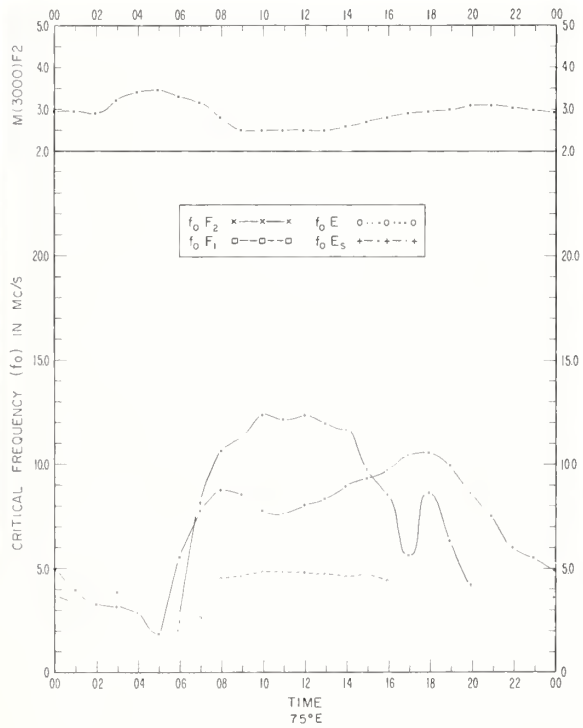

Fig 67 KODAIKANAL, INDIA
10.2°N, 77.5°E MAY 1962

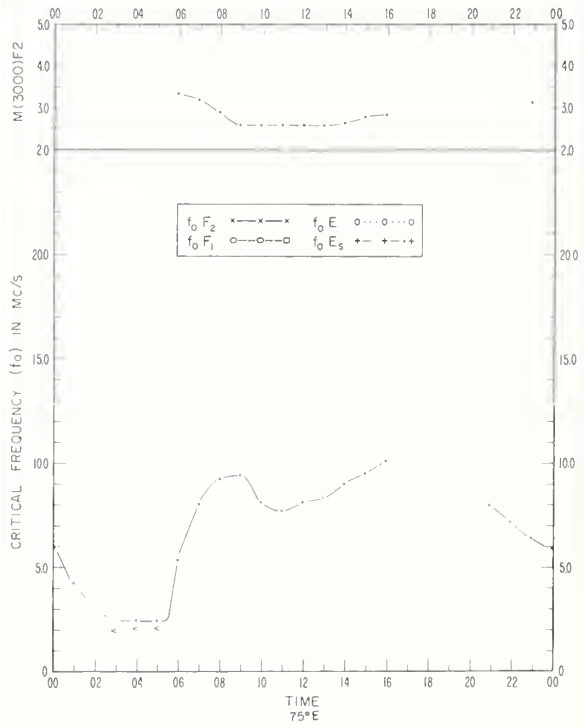

Fig 68 TRIVANDRUM, INDIA
8.5°N, 77.0°E MAY 1962

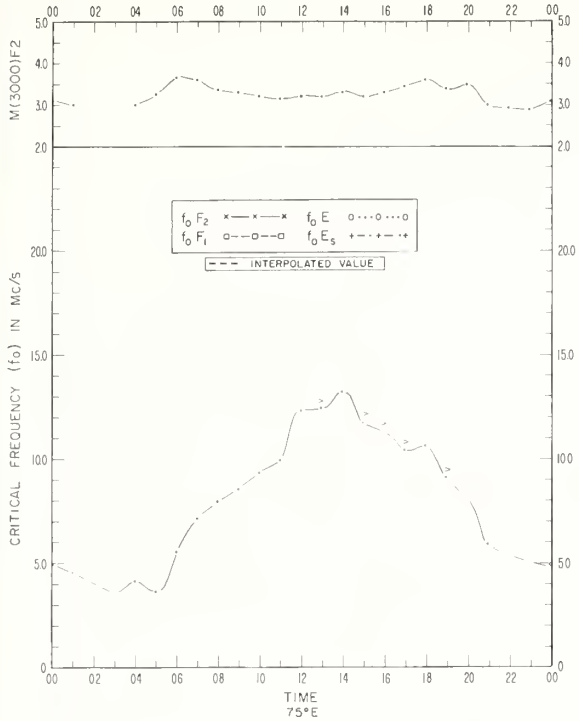

Fig 69. DELHI, INDIA
28.6°N, 77.2°E APRIL 1962

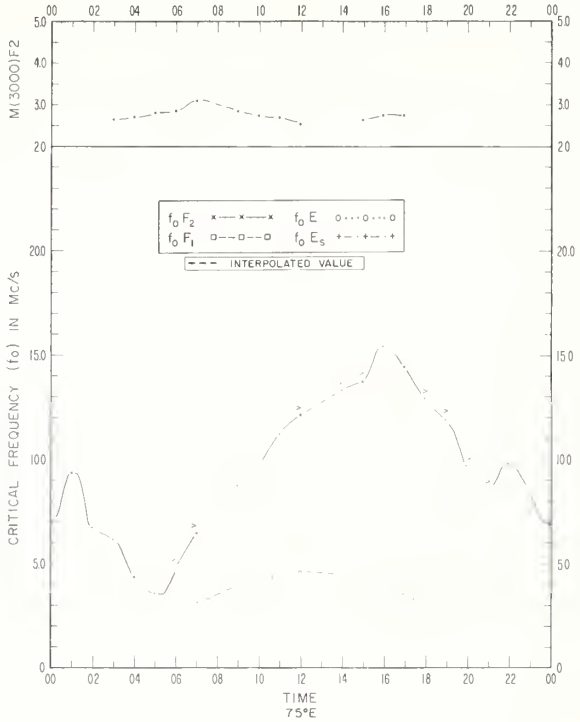

Fig 70. BOMBAY, INDIA
19.0°N, 72.8°E APRIL 1962

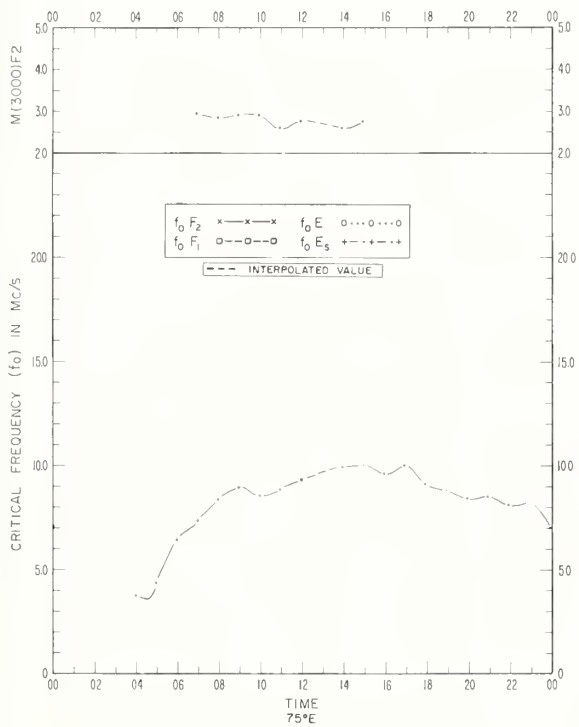

Fig 71 MADRAS, INDIA
13.1°N, 80.3°E APRIL 1962

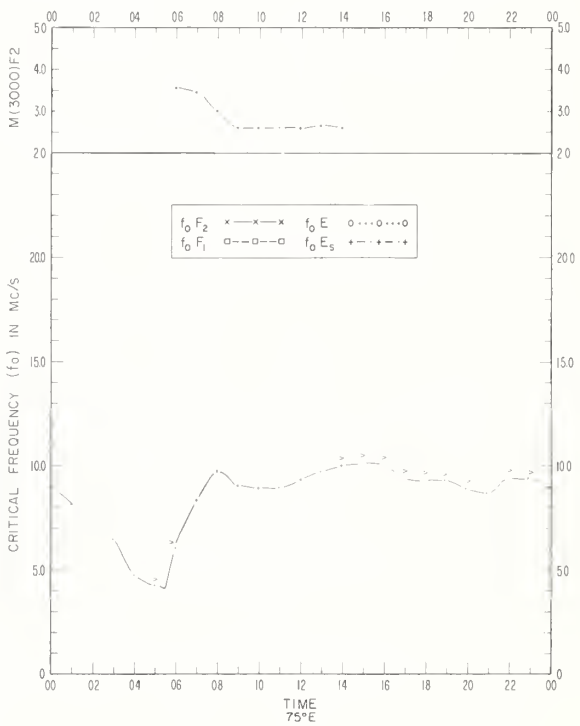

Fig 72 TIRUCHY, INDIA
10.8°N, 78.7°E APRIL 1962

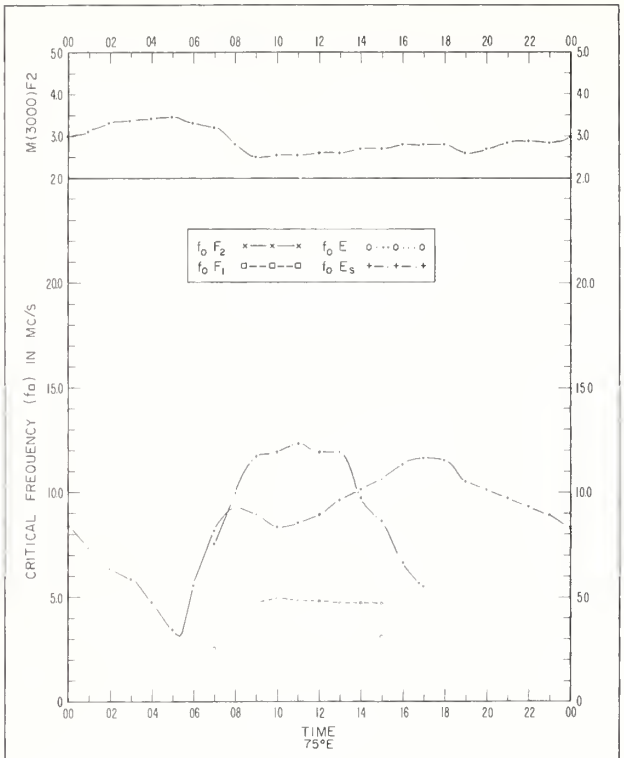

Fig. 73 KODAIKANAL, INDIA
10.2°N, 77.5°E APRIL 1962

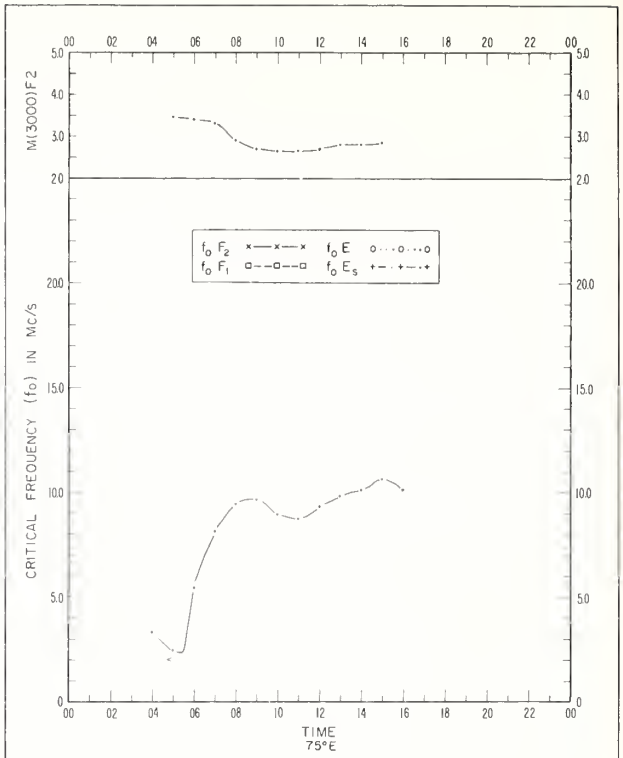

Fig. 74. TRIVANDRUM, INDIA
8.5°N, 77.0°E APRIL 1962

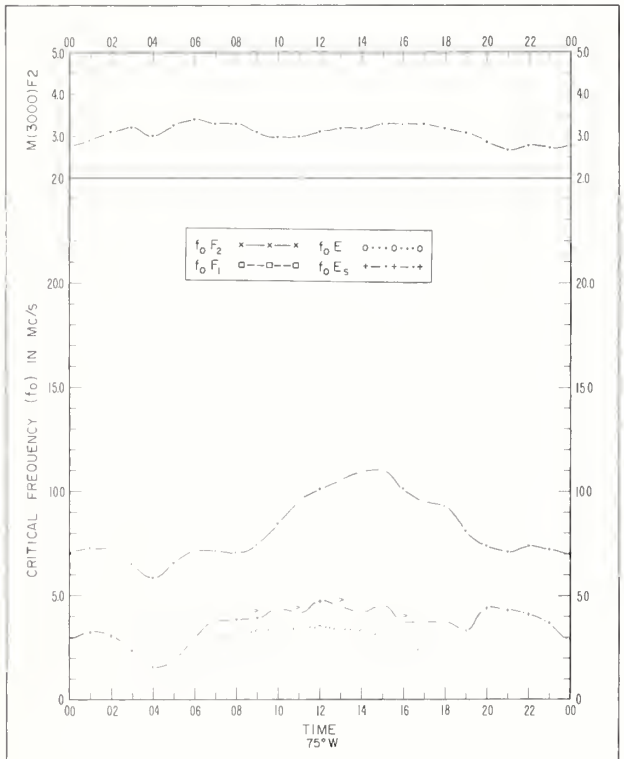

Fig 75. CONCEPCION, CHILE
36.6°S, 73.0°W NOVEMBER 1961

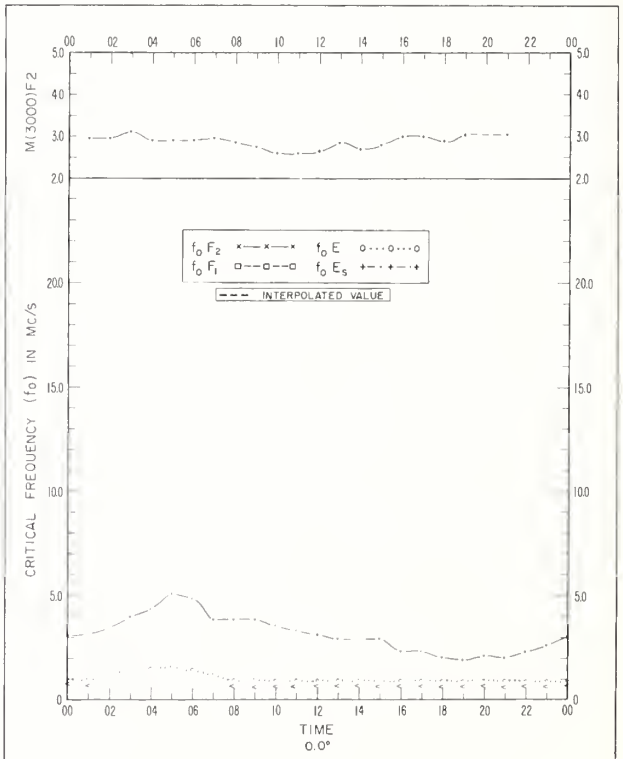

Fig. 76. WILKES STATION, ANTARCTICA
66.3°S, 110.5°E JUNE 1961

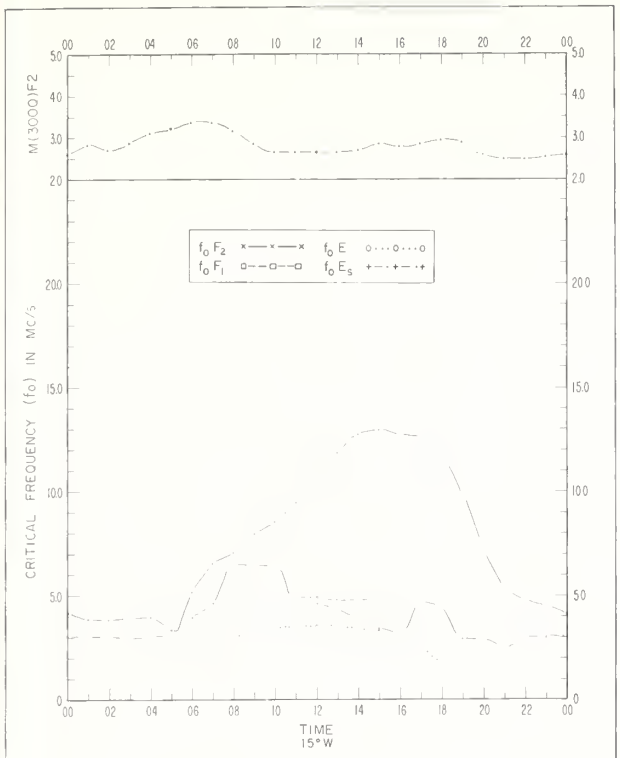

Fig 77 DAKAR, SENEGAL
14 7°N, 17 4°W MAY 1961

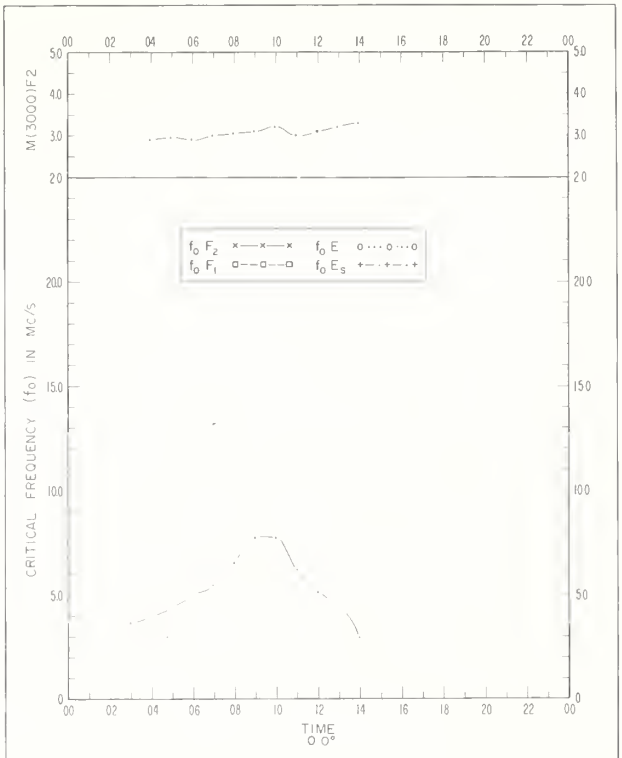

Fig 78 MAWSON, ANTARCTICA
67 6°S, 62 9°E MAY 1961

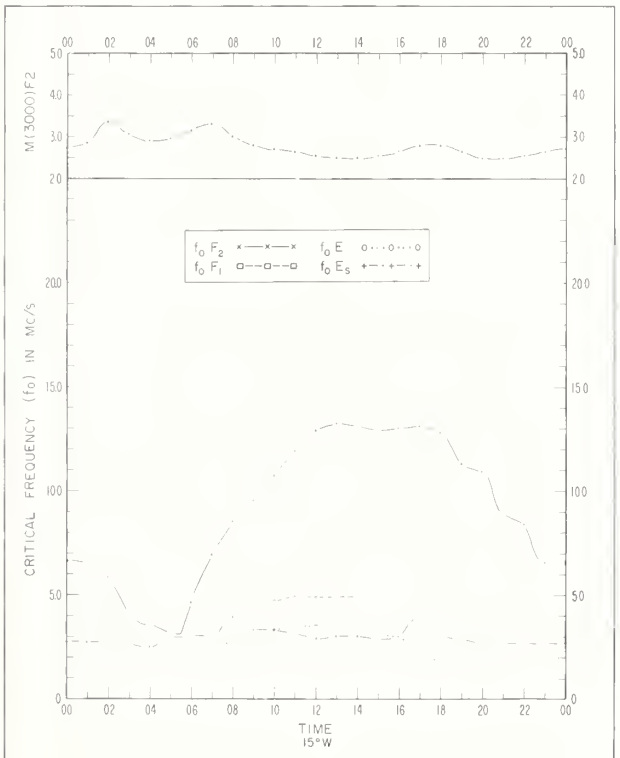

Fig 79. DAKAR, SENEGAL
14 7°N, 17.4° W APRIL 1961

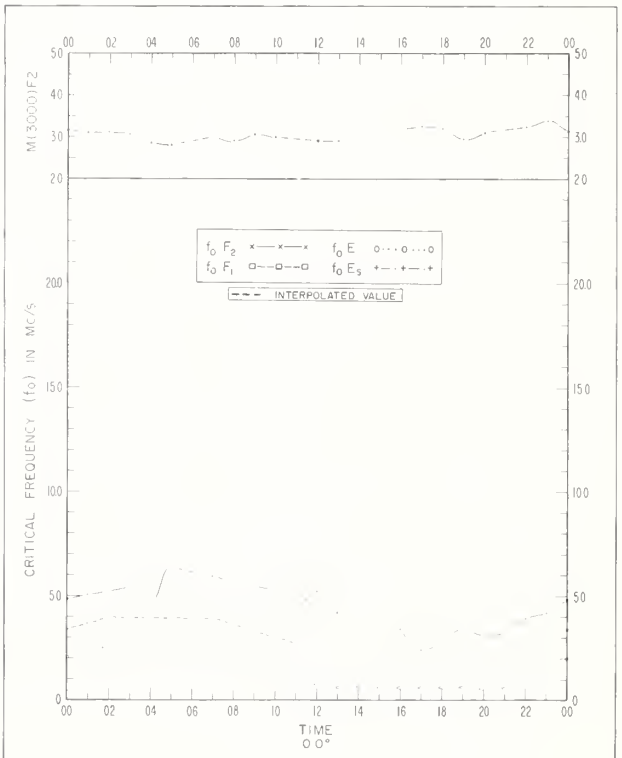

Fig 80. WILKES STATION, ANTARCTICA
66 3°S, 110 5°E MARCH 1961

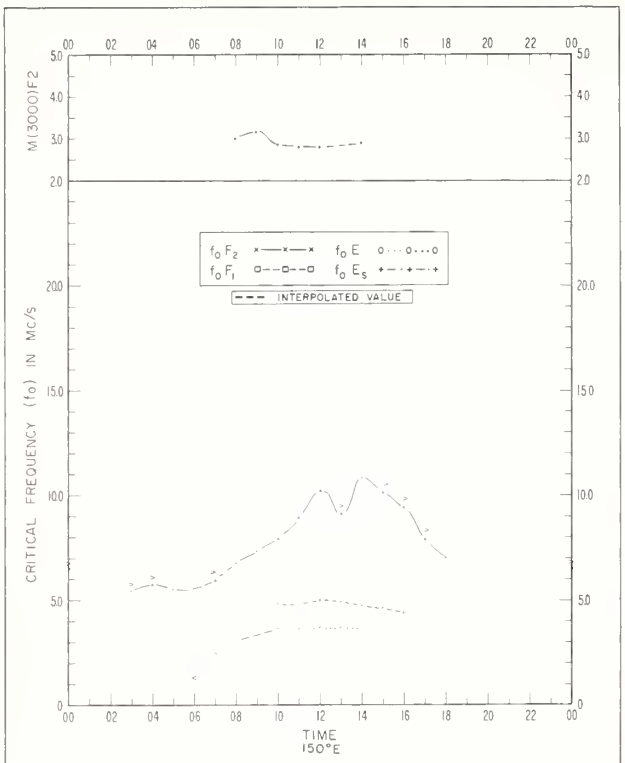

Fig 81 TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E JANUARY 1961

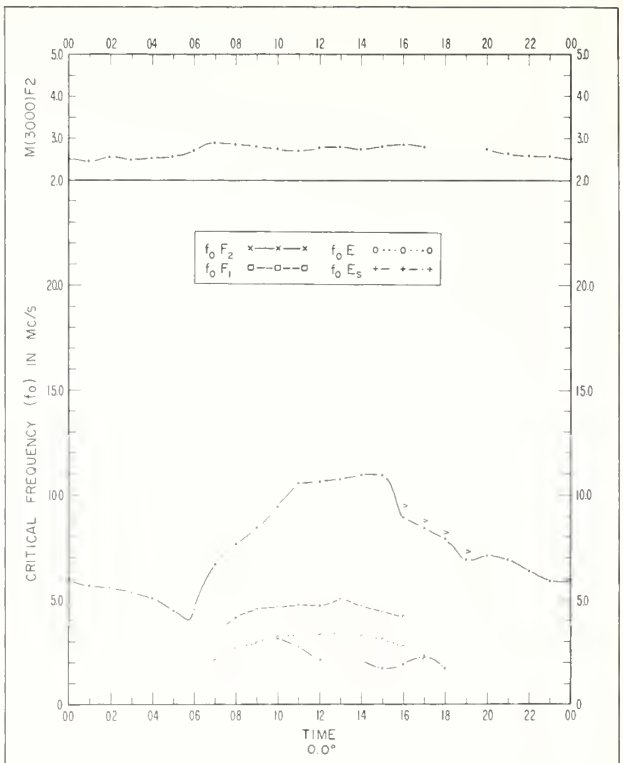

Fig 82 POITIERS, FRANCE
46.6°N, 0.3°E MARCH 1960

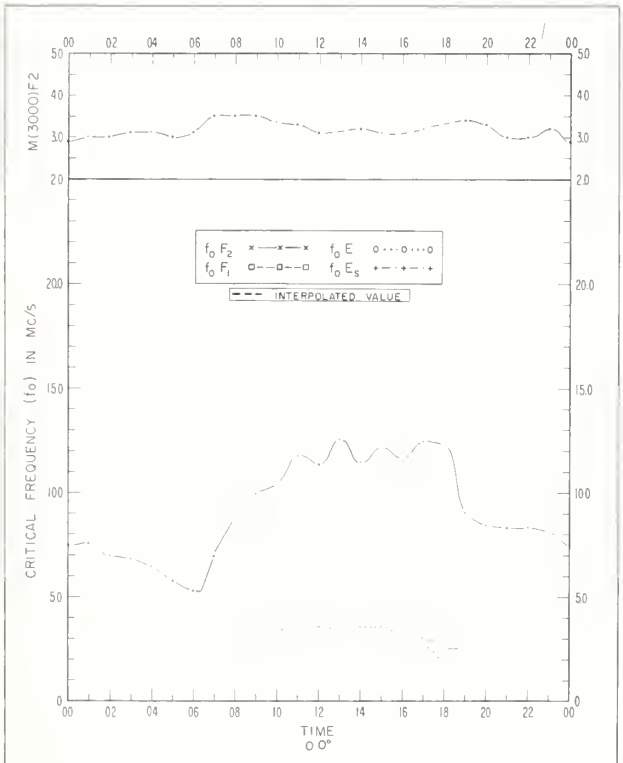

Fig 83 RABAT, MOROCCO
30.9°N, 6.8°W MARCH 1960

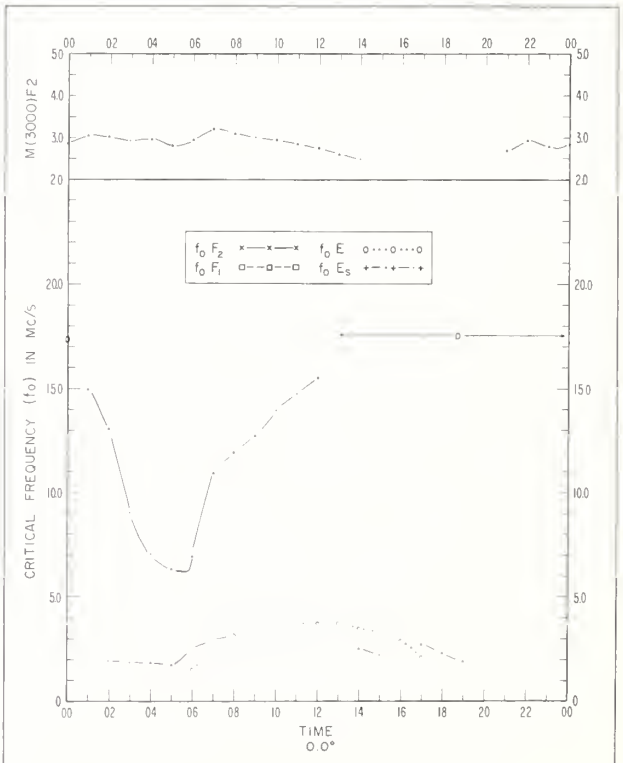

Fig 84 TAMANRASSET, ALGERIA
22.8°N, 5.5°E MARCH 1960

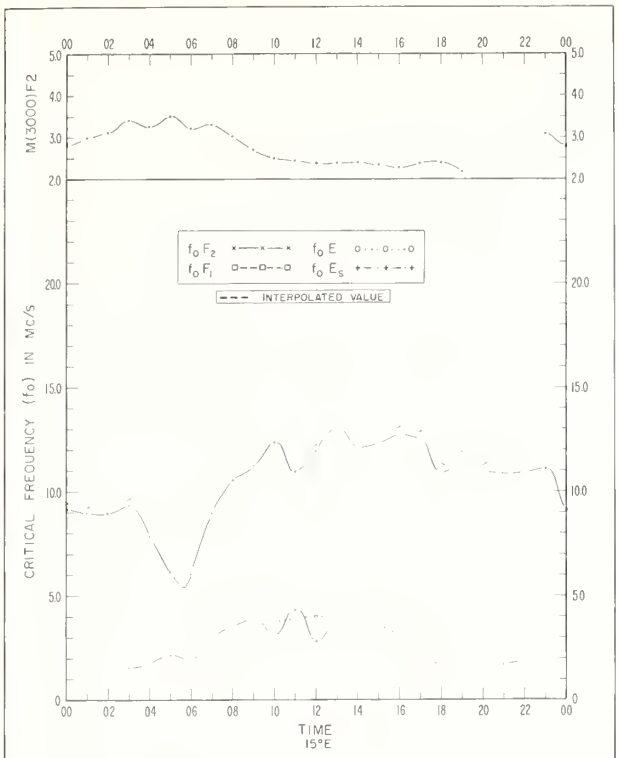

Fig. 85. BANGUI, CENTRAL AFRICAN REPUBLIC
4 6°N, 18 6°E MARCH 1960

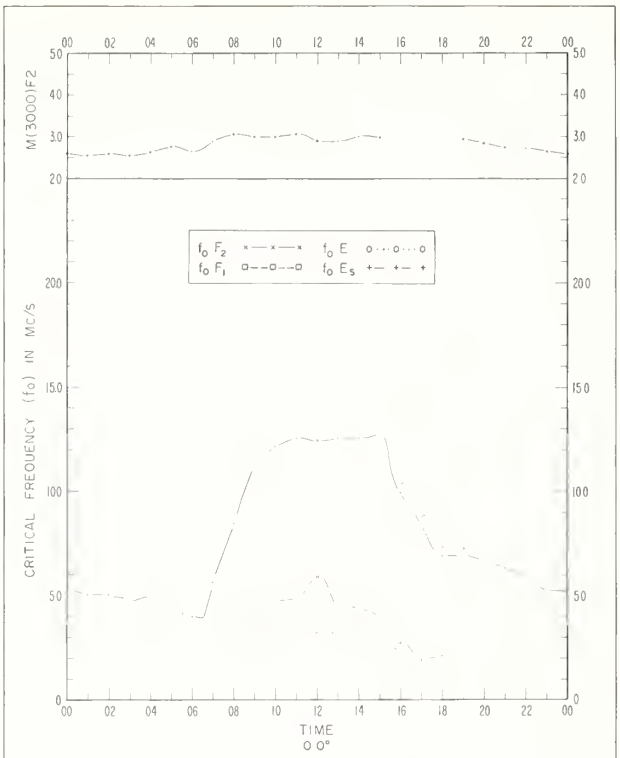

Fig 86. POITIERS, FRANCE
46 6°N, 0.3°E FEBRUARY 1960

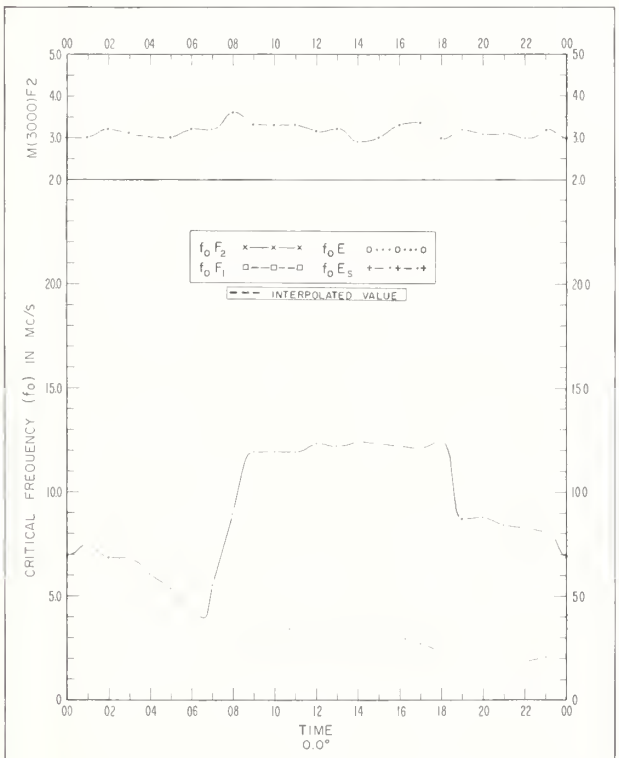

Fig 87 RABAT, MOROCCO
30.9°N, 6.8°W FEBRUARY 1960

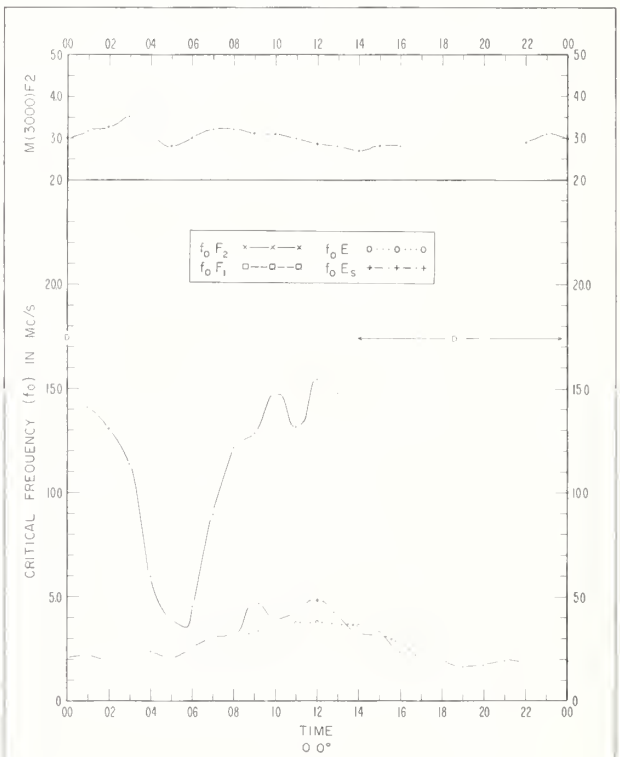

Fig 88 TAMANRASSET, ALGERIA
22 8°N, 5.5°E FEBRUARY 1960

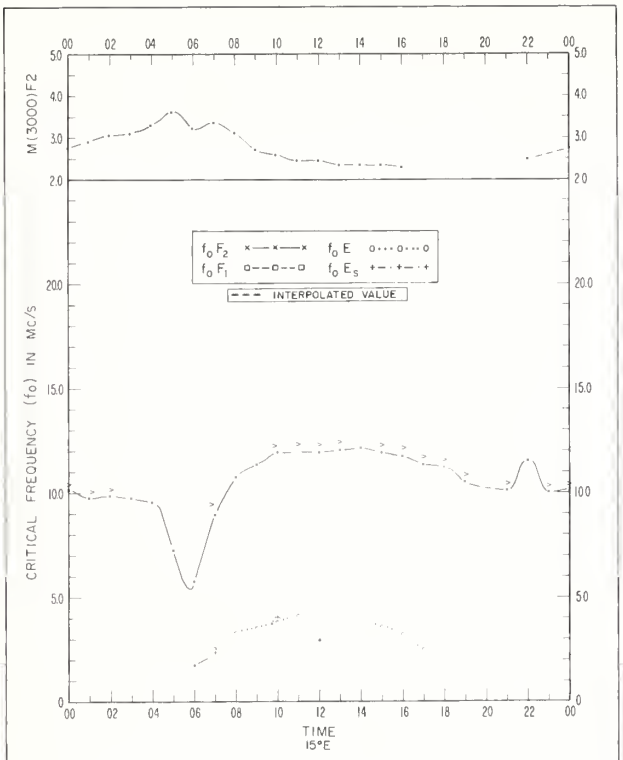

Fig 89 BANGUI, CENTRAL AFRICAN REPUBLIC
4 6°N, 18 6°E FEBRUARY 1960

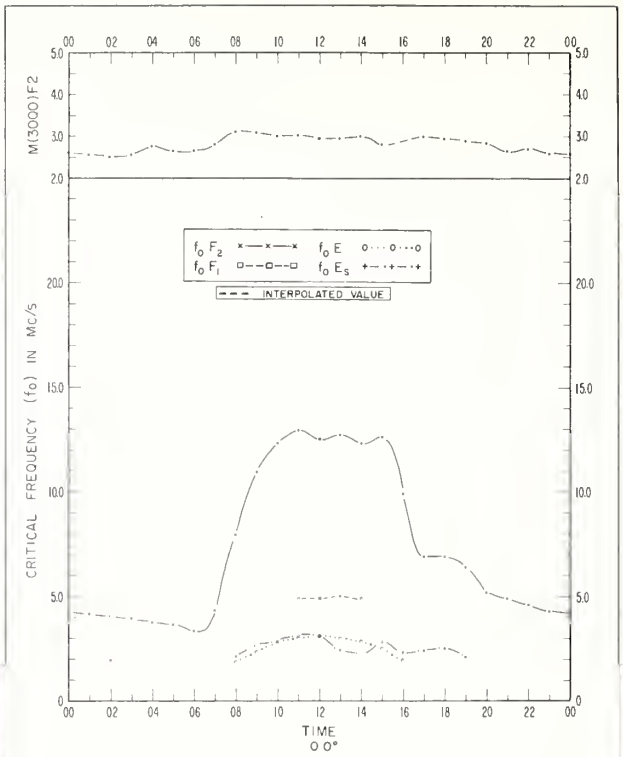

Fig 90. POITIERS, FRANCE
46 6°N, 0 3°E JANUARY 1960

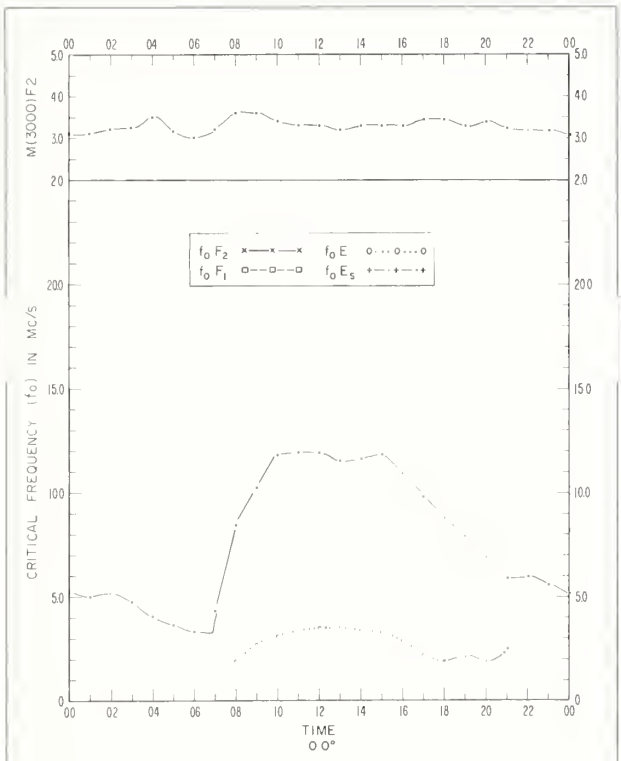

Fig 91 RABAT, MOROCCO
30 9°N, 6.8°W JANUARY 1960

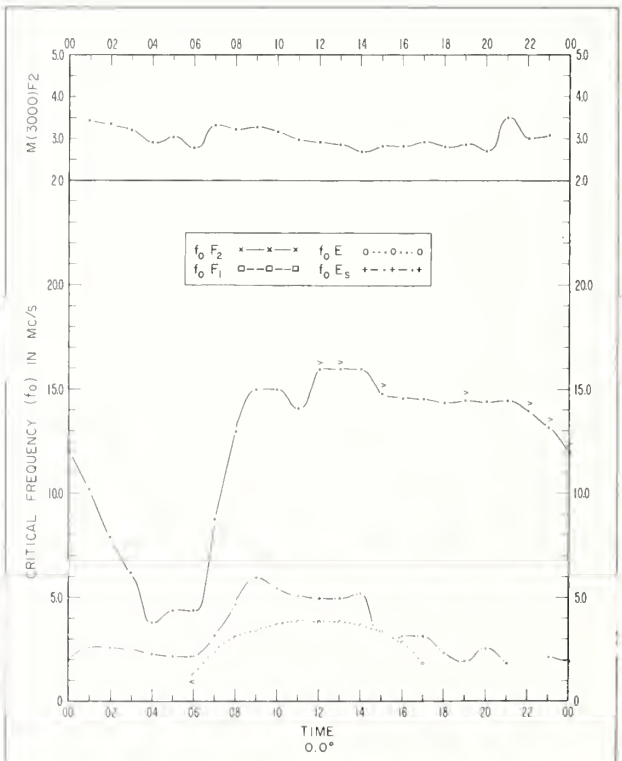

Fig 92 TAMANRASSET, ALGERIA
22.8°N, 5.5°E JANUARY 1960

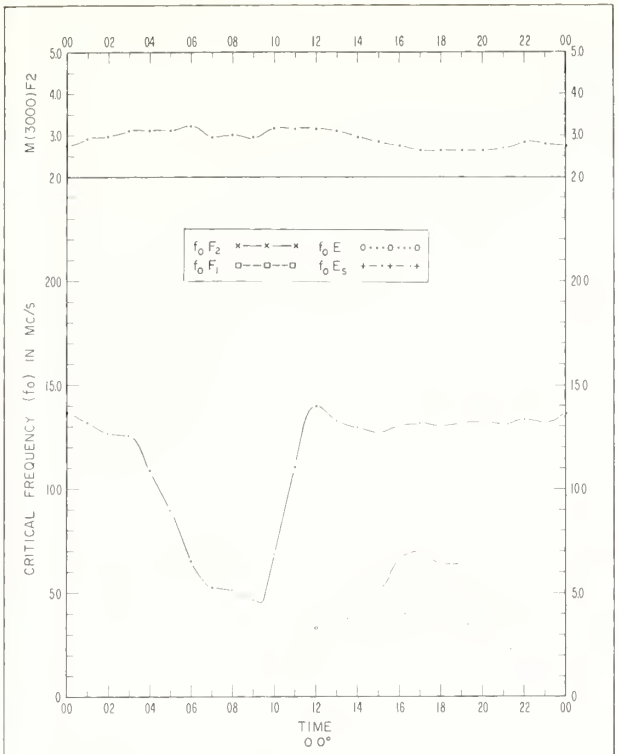

Fig. 93 PARAMARIBO, SURINAM
5 8°N, 55.2°W JANUARY 1960

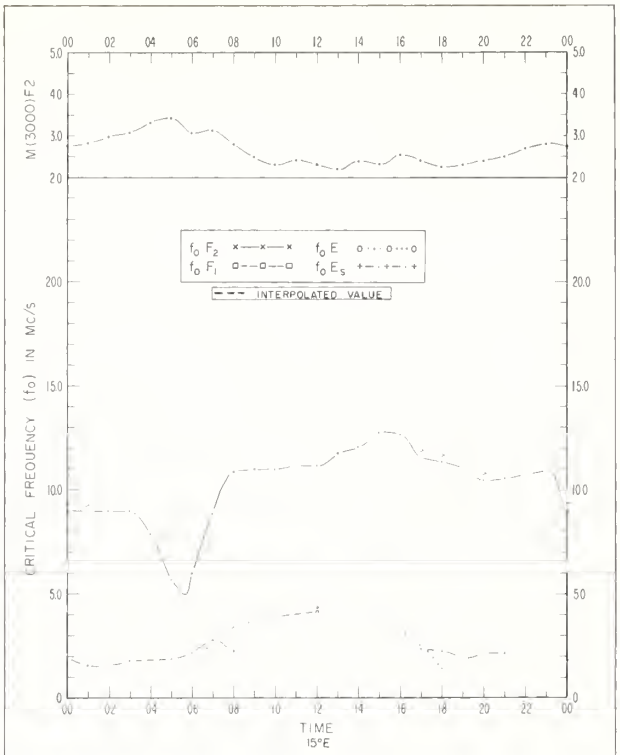

Fig 94 BANGUI, CENTRAL AFRICAN REPUBLIC
4 6°N, 18 6°E JANUARY 1960

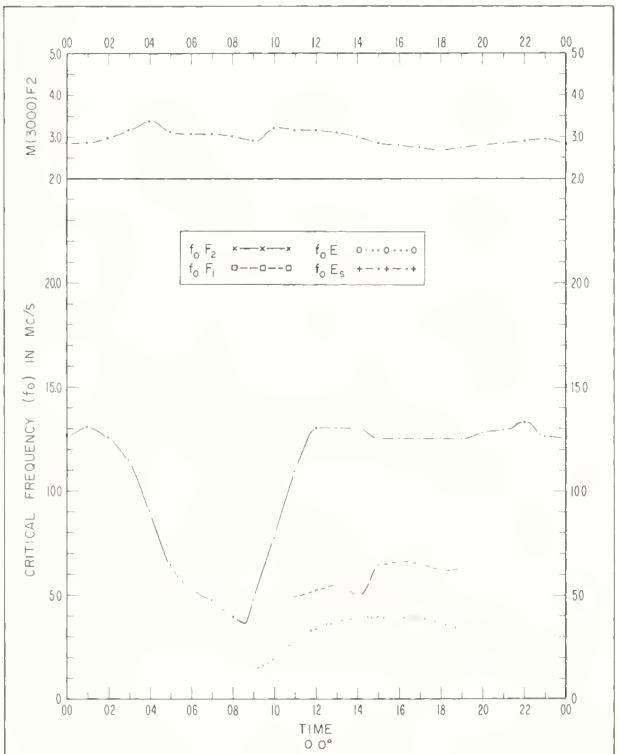

Fig 95 PARAMARIBO, SURINAM
5 8°N, 55 2°W DECEMBER 1959

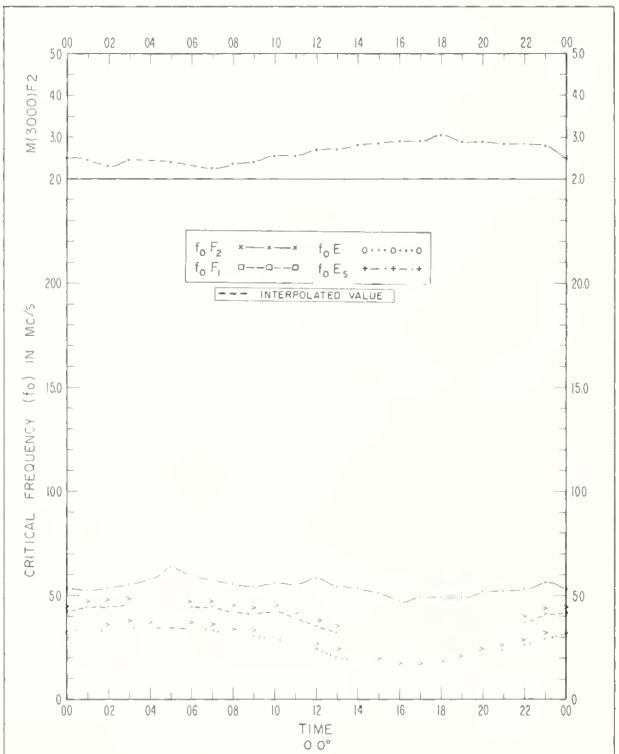

Fig 96 WILKES STATION, ANTARCTICA
66.3°S, 110. 5°E DECEMBER 1959

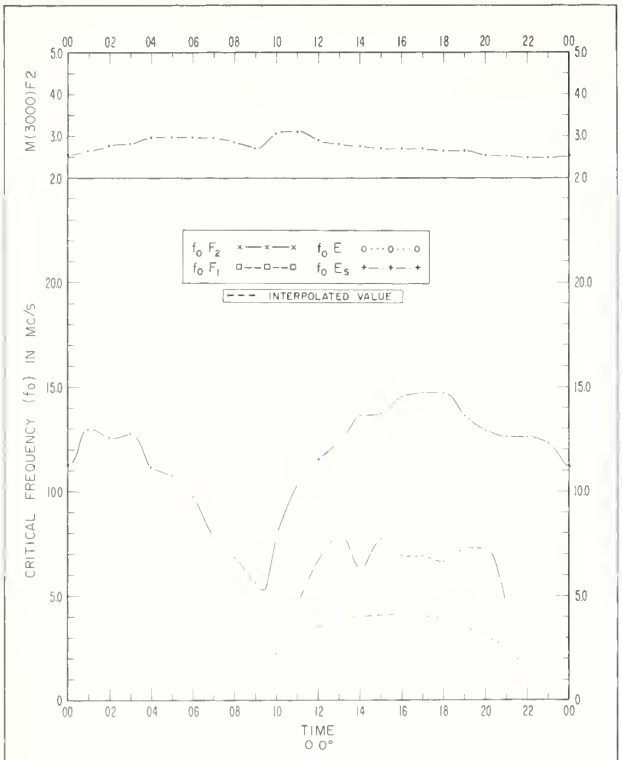

Fig 97 PARAMARIBO, SURINAM
5.8°N, 55.2°W SEPTEMBER 1959

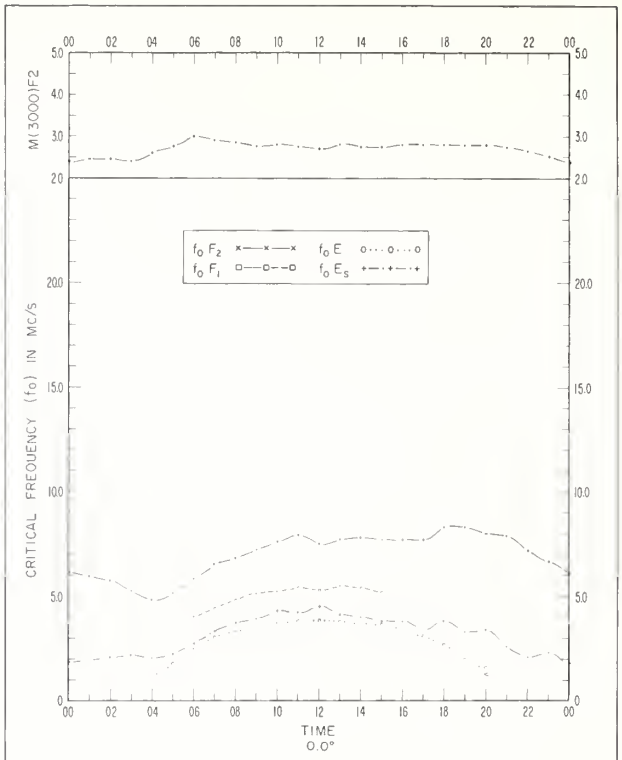

Fig 98 SLOUGH, ENGLAND
51.5°N, 0.6°W AUGUST 1959

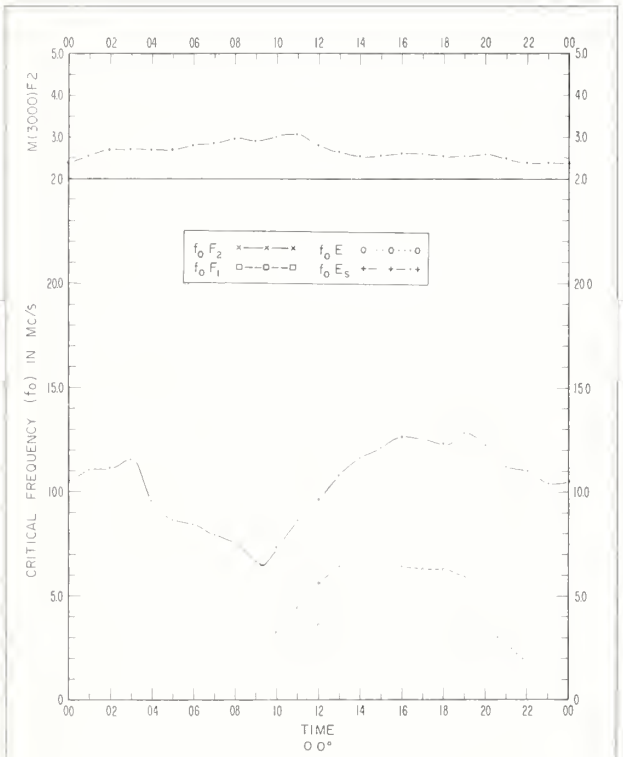

Fig 99 PARAMARIBO, SURINAM
5.8°N, 55.2°W AUGUST 1959

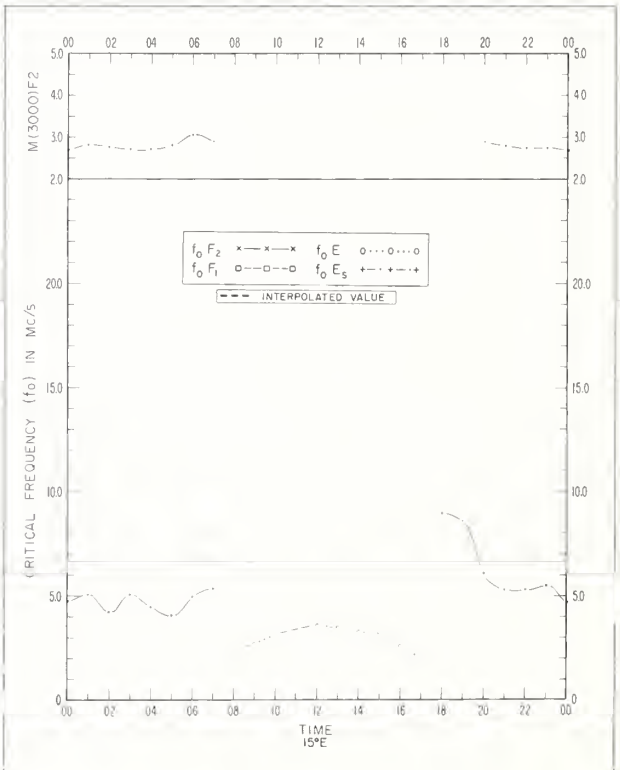

Fig 100 ROME, ITALY
41.8°N, 12.5°E JANUARY 1959

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