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IONOSPHERIC DATA IN JAPAN

FOR JUNE 1955

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PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR JUNE, 1955

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PREFACE

The origin of ionospheric sounding in Japan dates back to 1931 and the results of the work have been published in the form of the monthly "Ionospheric Data in Japan" since 1949. As a result of the reform of administrative structure of the Japanese Government effective on August 1, 1952, the observation, data coordination and publication were handed over to the charge of the Radio Research Laboratories newly set up within the Ministry of Postal Services.

The Radio Research Laboratories consists of three Divisions, i. e., First, Second and Administrative Divisions, located in Tokyo and five local radio wave observatories established at Wakkanai, Akita, Hiraiso, Inubo and Yamagawa, respectively.

The First Division has the following three sections:

Ionospheric Propagation Section which shall carry on researches on ionosphere and wave propagation;

Tropospheric Propagation Section which shall carry on researches on troposphere and wave propagation; and

Data Coordination Section which shall conduct the collection and arrangement of observational results, supply of operational data relating to radio propagation, preparation of radio propagation forecasts and radio disturbance warnings broadcast of URSIGRAM and physical basic studies of wave propagation in general.

The Second Division has the following two sections:

Frequency Standard Section which shall carry on researches on the frequency standard and broadcast the standard frequencies and time signals (J. J. Y.); and

Apparatus Section which shall carry on researches on radio apparatus used for radio regulatory purpose and conduct the approval service of types of radio equipments.

The Administrative Division shall conduct the general affairs of the Laboratories.

The ionospheric sounding is, as heretofore, being carried out by the four observatories at Wakkanai, Akita, Kokubunji (Tokyo) and Yamagawa.

This report provides the results of ionospheric sounding with symbols determined and in the form established on an international basis in the same way as followed by the former Radio Regulatory Commission and it is hoped that it will make any contribution toward the progress in world-wide short wave communications.

This report is intended for distribution on request to the largest possible number of organizations concerned all over the world, and any and every information that the organizations concerned might forward to us in exchange therefor would be highly appreciated.

Shogo Amari
Chief, Radio Research Laboratories,
Ministry of Postal Services

Aug, 1952

SITES OF THE IONOSPHERIC STATIONS

Ionospheric observation is carried out at the following four stations in Japan.

	Latitude	Longitude	Site
Wakkanai	45° 23.6' N.	141° 41.1' E.	Wakkanai-shi, Hokkaido
Akita	39° 43.5' N.	140° 03.2' E.	Tegata Nishishin-machi, Akita-shi, Akita-ken
Kokubunji	35° 42.4' N.	139° 29.3' E.	Koganei-machi, Kitatama-gun, Tokyo-to
Yamagawa	31° 12.5' N.	130° 37.7' E.	Yamagawa-machi, Ibusuki-gun, Kagoshima-ken

REMARKS ON SYMBOLS

All symbols in the table are used in accordance with "Production and Reduction of Ionospheric Data Standards. Symbols and Conventions (Recommendation No. 6 of Stockholm) at VIth Plenary Assembly C. C. I. R. Geneva, 1951" except f_{\min} E and f_{\min} F for E and F regions respectively instead of f_{\min} , taken as f_{\min} s in the above Resolution, in order to avoid the interruption of preceding form of data.

SOLAR RADIO EMISSION

Data on solar radio emission observed at Hiraiso Radio Wave Observatory has appeared from Vol. 6 No. 8 (F-68).

The location of the Observatory is as follows:

	Latitude	Longitude	Site
Hiraiso	36° 22.0' N.	140° 37.5' E.	Hiraiso-machi, Nakaminato-shi, Ibaragi-ken

Lat. 46°28.6'N
Long. 141°41.1'E

Wakkanai

IONOSPHERIC DATA

Jun. 1955

f_oF₂

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F	F	F	F _s	5.2	6.2	6.0	5.3	[5.4] ^A	5.6	[5.7] ^A	5.8	6.1	5.8	5.5	5.9	5.8	5.9	6.0	6.5	7.0	6.7	6.1	5.6
2	F	F	F	4.4	4.3	5.3	6.0	6.1	[5.6] ^A	5.2	5.0 ^H	5.6	5.3	5.8	5.2	[5.4] ^A	5.6	5.9	6.2	A	SF	SF	S	6.2
3	5.7	[5.4] ^S	5.0	4.6	[5.0] ^F	5.3	A	A	5.3	5.3	5.5	5.0	4.9	5.6	5.5	5.6	5.5	A	A	6.0 ^S	(6.5) ^S	6.3	5.5	(5.5) ^{SF}
4	F	F	4.5	4.3	4.5	5.0	5.3	6.5	6.6	A	A	5.1	5.3	5.5	5.0	5.1	5.6	5.5	6.1	7.2	[7.0] ^S	6.7 ^S	6.0	6.0
5	5.5	5.2	5.0 ^J	4.9	4.9	5.3	6.0	6.5	6.3 ^J	5.5	5.5	5.5	5.1	5.2	4.7	5.1	5.5	5.5	6.5	[6.7] ^S	6.9	6.9	5.3	5.3
6	4.8	4.7 ^J	4.6	4.6 ^T	4.8 ^T	4.7	5.0	5.6	6.2	5.5	5.2	5.1	5.4	5.5	5.3	5.3	4.9	[5.1] ^A	5.3	[6.3] ^S	7.3	6.7	6.3	6.0
7	5.3	4.7	4.7	4.5	4.6	5.0	5.5	5.0	6.1	[5.6] ^A	5.0	4.8	5.1	[5.4] ^A	5.7	5.6	[5.6] ^A	5.6	[5.8] ^A	6.1	[6.0] ^A	6.0	5.6	6.0
8	5.7 ^J	5.4 ^J	5.4 ^J	5.7	5.4	5.6	5.6	5.3 ^F	6.3 ^T	5.0	[5.2] ^A	5.3	6.1	5.7	5.2	[5.8] ^A	6.3	6.3	5.6	6.0	6.2	5.7	5.5	5.4
9	5.5	(4.8) ^T	F	F	F	4.4	5.1	5.2 ^F	4.7	A	B	5.2	5.4	4.8	4.9	A	A	A	A	A	A	A	A	A
10	F _s	F _s	F _s	F	4.1	4.8	4.6	A	A	5.3	6.0	4.7	5.2	4.8	4.7	4.6	4.7	4.8	5.0	5.3	6.1	5.9	(5.5) ^S	F _s
11	F	F	F	F	F	4.9	5.2	5.7	5.0	5.6	5.8	A	B	B	4.7	5.5	5.6	5.8	[4.2] ^A	6.5	7.0	6.1	5.6	C
12	C	C	C	C	C	C	C	C	4.7	4.8	5.3	C	C	C	C	C	5.3	5.8	5.6	6.3	6.3	F _s	F _s	F _s
13	F	F	F	A	A	A	B	A	A	A	A	A	A	A	A	A	5.0	[5.0] ^A	5.0	5.3	6.1	6.2	6.0	5.8
14	5.8 ^J	F	F	F	F	4.6	F	A	A	A	A	4.5	[4.6] ^A	4.7	[4.7] ^A	4.7	4.7	5.0	5.1	5.3 ^T	A	F _s	6.3 ^J	6.2
15	F _s	F	F	F	F	4.7	A	A	A	A	A	A	B	A	A	A	4.9	[5.0] ^A	5.0	5.6	6.7	6.7	6.1	5.7
16	5.2	4.8	5.0	4.5	4.4	5.3	C	C	C	C	C	5.1	5.3	5.8	5.8	5.8	5.5	5.4	5.3	6.0	6.1	6.2 ^S	6.0	6.1
17	6.0	5.8	[5.0] ^T	4.6 ^F	4.3	4.9	5.1	6.0	5.3	[5.3] ^A	4.8	4.7	5.0	W	5.0	5.5	5.3	5.5	5.9	5.8	6.0	5.8 ^J	5.7 ^S	5.5
18	5.3 ^S	4.9 ^S	5.0 ^S	4.7 ^F	4.5	4.5	5.3	[5.0] ^A	A	5.3	4.9	5.7	5.3	5.2	5.2	5.3	5.5	5.6	6.0	6.2	7.3 ^J	6.8	F	F
19	F	F	F	F	4.5 ^J	5.2	5.5	5.4	5.4	5.3	5.3	W	5.2	5.0	5.5	5.7	5.5	6.0	6.0	6.2	6.6	6.5	6.6 ^F	5.2
20	F	F	F	F	F	5.2 ^F	6.0	6.3	6.6	6.7	A	5.0	5.7	5.4	5.3	5.4	5.5 ^F	5.8	6.1	7.3	7.8 ^J	6.7	6.2	6.3
21	6.1	(5.5) ^T	5.2	5.0 ^F	(4.5) ^S	5.7	6.0	6.0	7.3	5.0 ^V	5.0	5.0	5.5	5.5	5.3	5.4	5.7	5.2	5.4	5.6	6.5	6.6	F	F
22	F	F	F	F	F	(5.5) ^F	6.0	6.0	5.3	7.8	6.1	5.9	5.6	(5.5) ^T	5.3	5.5	5.7	5.9	6.0	[6.5] ^E	[7.0] ^S	C	F _s	6.5
23	5.6	5.4	5.2 ^F	5.2 ^F	5.5	5.2 ^F	5.5	6.1	7.0	6.1	C	5.5	4.9	5.6	5.6	5.5	5.9	5.6	6.2	7.0	7.0	6.6 ^F	5.8	5.8
24	F	F	5.6	5.2 ^F	5.5	5.5	5.1	A	6.5	6.7	6.1 ^P	5.9	7.0	6.0	5.6	5.9	5.9	5.9	5.7	5.6	6.2	S	6.3 ^J	6.2
25	6.2	5.8 ^{SF}	5.6 ^F	5.3 ^F	[5.0] ^F	4.8 ^F	5.8	A	A	A	4.8	[4.8] ^A	4.8	5.2	5.3 ^F	[5.2] ^P	5.2 ^F	5.2 ^F	5.2 ^J	(5.8) ^T	(7.0) ^F	7.6	[7.0] ^S	6.4
26	5.6	5.3	5.1 ^F	5.0 ^F	5.1 ^F	6.3	5.9	5.9	C	C	C	C	C	C	C	C	C	C	5.1 ^F	5.3	5.8	6.2	6.4	6.5
27	F	F	F	F	4.7 ^F	4.7 ^F	4.7 ^F	4.9	5.4	5.5	A	A	5.6	5.1	5.2	5.3	5.0	5.2	5.3	6.0	6.3	6.6 ^J	F	F
28	5.3	5.0	F	F	F	F	5.0	5.0	5.6	5.5	5.7	5.7	6.1	6.8 ^T	5.8	5.0	5.8	6.6	6.0	6.8	6.5 ^J	6.3	5.2	
29	[5.1] ^J	5.0	(4.9) ^S	4.6 ^S	5.0 ^F	5.5	5.5	A	A	5.9	[5.8] ^A	5.8	5.3	5.6	[5.3] ^A	5.0	4.9	5.5	6.0	6.0	6.3 ^J	6.3	6.0	5.5
30	S ^F	S ^F	S ^F	F _s	4.1 ^F	4.9 ^F	5.5	6.1	5.9	5.0	[5.0] ^A	5.0	5.3	5.6	5.3	5.7	5.3	A	A	A	6.2	6.0	S	S ^F
31																								
Mean Value	5.5	5.2	5.1	4.8	4.8	5.1	5.5	5.7	5.8	5.6	5.4	5.3	5.4	5.4	5.3	5.4	5.4	5.5	5.7	6.1	6.6	6.5	6.0	5.8
Median Value	5.6	5.2	5.0	4.6	4.7	5.2	5.5	5.6	5.6	5.5	5.2	5.3	5.4	5.3	5.5	5.5	5.5	5.5	5.7	6.0	6.5	6.5	6.0	5.8
Count	16	15	15	16	21	27	23	20	21	22	20	23	26	25	26	25	28	27	27	28	26	23	22	21

Note: Observation was carried out every 15 minutes during 17th-23rd.

f_oF₂

Swamp 1.0 Mc to 2.2.0 Mc in ___ min

Manual

Automatic

Lat. $45^{\circ}28.6'N$
Long. $141^{\circ}41.1'E$

IONOSPHERIC DATA

Wakanai

Jun. 1955

R'F2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	260	300	290	260	310	260	270	A	A	400	(390) ^A	380	350	350	410	360	320	320	310	270	260	260	270	260
2	300 ^F	260	290	270	340	310	320	280	(320) ^A	360	370 ^M	350	380	350	370	(360) ^A	350	310	300	(280) ^A	270	270	260	290
3	260	270	250	250	300	260	A	A	360	360	340	400	540	380	360	350	340	A	A	300 ^A	270	290	290	280
4	280	270	260	260	260	340	380	290	280	A	A	400	410	360	460	380	360	330	320	300	260	220	260	260
5	250	260	260	260	260	L	330	320	320	330	310	360	410	430	510	400	330	310	300	300	260	240	240	260
6	290	300	290	270	260	260	350	310	300	320	320	460	390	370	370	350	360	(360) ^A	360	(310) ^S	260	270	250	260
7	280	260	280	280	290	300	330	360	320	(380) ^A	450	460	500	(440) ^A	390	390	(380) ^A	360	A	A	A	A	290	290
8	290	290	270	240	250	240	280	(340) ^A	290	440	(440) ^A	430	350	350	510	(440) ^A	340	300	300	270	260	280	310	300
9	300	330 ^F	310 ^F	310 ^F	300 ^F	360	340	420	420	A	B	400	350	410	460	A	A	A	A	A	A	A	A	A5
10	270	300 ^T	300	280	260	250	310	A	400	400	400	550	420	470	510	430	430	(350) ^A	340	280	300	270	260	260
11	280 ^T	280	260 ^F	280	240	260	370	300	400 ^A	350	370	A	B	B	400	360	340	320	(3200) ^A	290	260	260	300	310
12	C	C	C	C	C	C	C	C	C	360	560	490	430	C	C	C	430	340	330	290	260	300	300	C
13	290 ^F	250 ^F	260 ^F	A	A	A	A	A	480	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
14	320	310	280	220	340	370	350 ^F	A	A	A	A	A	580	(550) ^A	520	(490) ^A	460	400	370	360 ^A	300 ^A	300	320	300
15	300 ^A	260 ^F	240	340 ^M	280	340	A	A	A	A	A	A	B	A	A	A	420	(390) ^A	360	330	310	310	260	280
16	310	260	280	290	330	340	C	C	C	C	C	C	560	450	400	360	360	340	340	330	280	260	300	290
17	260	280	250 ^T	260	340	320	410	360	450	(370) ^A	500	620	450	W	510	400	400	360	260	260	300	290	290	250
18	290	270	290	260	290	450	340	A	380	450	350	390	390	460	500	440	380	340	320	300	270	230	260	260
19	280	280	270 ^F	260	360	350	370	360	380	360	430	W ^T	530	630	450	360	400	380	320	(330) ^A	280	240	270	250
20	290	280	260	260	280 ^F	320 ^L	310	320	330	290	A	510	380	420	460	400	390	350	320	290	260	240	270	270
21	260	260	260	260	360 ^H	320	290 ^L	300	370	330	550	420	410	400	440	380	360	390	320	290	260	240	270	270
22	280 ^F	280 ^F	280	280	260	310	310	300	280	300	340	340	420 ^F	420	360	360	350	340	310	(280) ^C	250	290 ^F	300 ^F	280
23	260	280	280	270	260	320	310	320	300	340	C	340	350	350	360	390	330	290 ^L	320	260	260	280	280	260
24	280	280	290	290	250	220	280	A	340	300	340	400	320	390	360	380	340	330	340	310	280	270	240	300
25	260	250	280	250	310 ^F	370	350	A	A	570	(580) ^A	600	450	450	350 ^F	(360) ^A	370	400	380	350 ^A	290	260	270	260
26	260	290	280	270	350 ^F	280	350	310	C	C	C	C	C	C	C	C	C	350	380	290	260	260	(270) ^A	280 ^F
27	240	290	290	240 ^F	230	250 ^L	280	270	340	380 ^A	A	A	350	440	390	330	430	330	330	290	260	270	280 ^F	260
28	260	270	260	250	310	300	260	380	310	370	330	360	350	320	290	290	420	340	300	260	260	240	240	240
29	310	280	260	260	280	280	320	A	340	(330) ^A	320	370	380	(380) ^A	370	(350) ^A	330	290	270	240	240	270	260	240
30	300	310 ^F	270	260	260	350	320	280	270	400	(420) ^A	430	390	340	470	320	320	A	A	270	280	270	270	230
31																								
Mean	280	280	270	270	290	310	330	330	340	360	410	430	420	410	420	380	370	350	330	290	270	270	270	270
Median	280	280	280	260	280	310	330	320	320	360	400	400	400	410	400	370	360	340	320	290	260	270	270	260
Count	29	29	29	28	28	26	25	18	20	22	20	23	26	25	26	25	28	27	26	28	28	28	29	29

Note: Observation was carried out every 15 minutes during 17th-23rd.

R'F2

Sweep 1.0 Mc to 2.2 Mc in 1 min

Manual

Automatic

W 2

Lat. $45^{\circ}23.6'N$
Long. $141^{\circ}41.1'E$

Wakkanai

IONOSPHERIC DATA

fEs

Jun. 1955

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	3.5 ^Y	2.5	3.0	5.3	4.6 ^F	4.6	5.6	6.0	6.5	5.0 ^Y	7.2	7.5 ^Y	7.0 ^Y	7.0 ^Y	7.5 ^Y	7.5 ^Y	7.0 ^Y	7.0 ^Y	3.8	E	2.4	3.5	4.5 ^S	3.0	
2	3.2	5.3	5.5	3.2	G	G	G	5.2	6.2	4.6 ^Y	4.7 ^Y	7.5 ^Y	6.0 ^Y	9.0 ^Y	9.0 ^Y	9.0	5.7	7.0	7.0	4.2	4.5	E	E	3.0 ^Y	
3	3.0 ^Y	5.0 ^Y	4.0	E	5.3	5.3	7.0	6.5	7.5 ^Y	9.0 ^Y	9.0 ^Y	11.0 ^Y	11.0 ^Y	9.0 ^Y	9.0 ^Y	9.5 ^Y	9.0	9.0 ^Y	8.5	6.0 ^Y	6.2	4.5 ^Y	3.5	2.5	
4	E	2.3	2.3	2.0	2.3 ^Y	3.6	4.2	4.5	6.1	7.0	7.5	G	G	G	G	G	4.6	11.0 ^Y	8.5 ^Y	9.0 ^Y	4.0	2.7	3.2	2.5	
5	2.5	3.5	3.5 ^Y	5.0 ^Y	1.5	6.0 ^Y	10.5 ^Y	10.5 ^Y	11.0 ^Y	11.0 ^Y	10.4 ^Y	G	10.4 ^Y	10.2 ^Y	10.5 ^Y	10.5 ^Y	7.0	7.0	6.5 ^Y	3.8	2.7	2.3	3.0		
6	2.6	E	2.3	2.3	2.3	3.5	4.5	5.6	5.5	5.3	5.0	4.5	4.7	4.2	4.0	G	G	6.1	5.6	5.6	3.3	3.0 ^S	3.0	2.7	
7	3.3 ^Y	2.5	2.5	2.7	G	G	4.5	4.9	5.6	6.6	4.6 ^Y	4.7	6.5	8.7	6.0	5.5	7.2	7.0	11.1	5.9	6.0	3.0	3.2	5.0	
8	3.2	4.5 ^F	2.5	2.7	G	G	G	6.0	4.9	5.3	6.1	6.0	G	G	4.5	9.3	5.7	5.5	3.0 ^Y	3.0 ^Y	4.0	3.5	3.0	3.0 ^Y	
9	3.5	4.0 ^Y	2.5	2.4	G	4.0	4.1	6.2	4.5	6.0	4.5	5.0 ^F	G	G	G	12.0	12.5	12.5	7.0	11.3	7.1	7.1	3.5		
10	7.0	3.7	3.5	2.5	G	3.6	4.5	7.0	11.5 ^Y	5.3	6.0	7.0 ^F	G	G	4.5	6.9	G	5.2	G	3.2	5.1	4.1	6.4	5.9	
11	2.6	3.5	2.3 ^Y	3.0	G	3.5	G	6.1	5.2	G	G	6.8	4.7	4.6	G	G	G	5.3	8.5	5.0	5.8	4.7	4.0	C	
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	4.5	G	3.8	3.5	6.5	4.6	6.2	6.0	
13	6.0	5.0	3.5	8.0	7.0	7.8	4.2	7.0	4.8	7.4	7.2	10.2	12.5	11.0	12.5	8.3	4.7	10.4	4.1	4.9	7.2	7.1	4.3	7.0	
14	6.5	5.0	2.5	2.5	2.3	4.4	6.0 ^F	7.2	10.5	11.0	7.5	5.5	4.5	8.5	4.5 ^Y	7.5	6.3 ^F	4.0	4.3	4.6	8.6	4.5	4.0	6.0	
15	5.3	4.0	3.5	5.3	3.5	8.6	6.9	9.0	10.5 ^Y	8.0	6.5	5.3	4.0 ^Y	10.5	10.0	5.8	4.5 ^Y	7.0	4.2	4.9	12.5	4.2	2.5	E	
16	3.5	3.0	2.4	3.5	1.9	G	C	C	C	C	C	C	4.5	4.2	5.1	G	G	G	G	5.0	3.5	E	E	E	
17	E	2.0	2.3 ^Y	2.0	2.3	G	4.3	5.6	6.5	6.4	4.8	5.9	4.5	4.5	5.2	4.5 ^Y	G	3.8	4.5	3.8	4.0	3.0 ^Y	5.9	2.2	
18	4.5	2.2	2.3	4.5 ^Y	G	3.5	4.0	8.5	6.9	5.9	5.0	5.7	4.7	G	G	G	G	3.5	4.6	E	3.5	2.6	2.3	E	
19	E	E	E	E	G	G	G	4.8	5.0	G	4.4 ^Y	4.9 ^Y	G	G	4.5	4.3 ^Y	6.3	4.1	5.3	6.5	4.0	3.4	3.8	2.5	
20	2.3	2.3 ^Y	E	3.5	4.3	G	G	G	4.8	5.9	7.5	6.0	G	G	G	G	5.8	5.0	5.8	4.0	6.0	E	4.2	2.3	
21	5.2	3.5	3.5	3.5 ^F	3.5 ^F	6.0 ^Y	5.2	6.2	7.3	6.7	10.5 ^F	4.8 ^Y	5.1 ^Y	4.6 ^Y	5.3	5.6	6.0	7.0 ^Y	3.4	2.5 ^Y	5.0 ^Y	4.6	6.0	6.0 ^F	
22	2.6 ^Y	E	E	E	G	G	G	G	4.4	G	4.7	4.8 ^Y	8.0	4.2 ^Y	5.0	4.4 ^Y	7.0 ^Y	9.0	11.5 ^Y	C	6.5	C	5.8	2.9	
23	2.2 ^Y	2.3	4.0	4.0	5.0	3.5	4.3	6.5	7.0	6.4	6.5	4.8	G	G	G	G	G	G	2.9	3.5	3.0	3.0	3.5	3.5 ^F	
24	E	E	2.3	5.7 ^F	3.0 ^F	4.1	8.0	6.1	11.2	8.0	5.9	6.8	8.0 ^Y	8.0	5.0	6.5	G	5.0	5.3	4.0	3.0	5.6	3.0	3.5	
25	E	E	2.3	2.3	G	3.5	4.1	4.7	C	C	C	C	C	C	C	6.5	G	G	5.8	2.3	3.5 ^Y	2.6	E		
26	4.8	4.3	3.3	2.6	3.5	G	3.5 ^Y	5.0	4.6	7.6 ^Y	9.1	6.6	4.5	4.8	4.2 ^Y	G	C	5.7	4.0	3.8	3.5	7.0	7.5	5.3	
28	2.3	2.5	2.3 ^F	2.3	G	G	3.5 ^F	G	5.5 ^Y	G	5.3	4.1	5.2	4.2 ^Y	G	G	G	G	3.5 ^Y	5.3	2.7	2.3	E	E	
29	2.3	E	2.5	3.8	G	2.3 ^F	5.3	6.5	8.0	5.9	6.5	5.2	7.0	6.5	6.1	6.4	7.5	4.2	3.5	3.5	2.7	5.1 ^Y	3.0 ^Y	3.2 ^Y	
30	4.3	3.7	3.5 ^F	3.5	3.0	6.0 ^Y	5.3	5.2	4.9	G	7.2 ^Y	G	G	5.5	6.2	6.2 ^Y	5.3	5.3	7.2	4.4	4.6	3.8	5.0 ^F	3.9 ^Y	
31																									
Mean Value	3.7	3.5	3.0	3.5	4.7	5.2	6.2	6.8	6.4	6.5	6.3	6.3	6.7	6.4	7.2	6.4	6.5	6.1	4.8	4.9	4.8	4.2	4.2	3.8	
Median Value	3.2	3.0	2.5	2.7	1.9	3.5	4.2	6.0	5.9	6.1	5.4	4.6	4.6	4.8	5.6	4.7	5.3	4.6	4.6	4.0	4.1	3.8	3.0	3.0	
Count	29	29	29	29	29	28	28	27	28	27	28	29	28	29	28	28	29	30	30	29	30	29	30	29	

Note: Observation was carried out every 15 minutes during 17th-23rd.

fEs

Sweep Manual Automatic

IONOSPHERIC DATA

Akita

Jun. 1955

foF2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	5.9 ^F	5.1 ^J	(5.1) ^P	5.9 ^F	5.2 ^F	5.9	5.7	A	A	A	A	B	A	A	A	6.5	6.5	7.0	6.9	A	A	6.1	5.9 ^F	6.0 ^F	
2	6.0 ^F	6.0 ^F	5.5 ^F	5.5 ^F	4.8 ^F	5.9 ^F	6.0	A	A	A	C	C	C	C	C	C	6.5	7.0	6.9	5.6	C	C	C	6.4 ^F	
3	6.4 ^F	6.4 ^F	(6.2) ^F	6.1 ^F	C	C	C	C	A	A	A	A	A	A	6.0	6.1	5.9	A	A	6.9	A	A	A	5.5	
4	4.8	4.5	4.5 ^F	4.0 ^F	3.9 ^F	4.5	(5.7) ^F	6.9	6.7	A	A	A	A	A	5.5	5.5	5.7	5.6	6.3	7.4	7.9	7.2	5.9	5.1	
5	5.0	5.0	4.8	4.7	4.5	4.8	5.5	(6.0) ^F	6.5	6.4	5.2	5.2	5.4	6.2	5.5	5.5	6.1	6.3	6.3	7.0	7.3	6.5	6.1	5.9	
6	5.2	5.0	4.6	4.5 ^F	4.6 ^F	4.5 ^F	5.5	(5.8) ^F	6.2	6.2	5.1	6.3 ^P	5.2	5.6	6.0	5.6	5.6	A	A	7.0	7.7 ^P	6.7	(6.5) ^F	6.3 ^F	
7	4.9 ^F	4.7	4.5	C	C	C	C	6.6	6.0	6.4	A	A	5.6	A	A	A	6.9	6.8	6.0	6.3	(6.4) ^F	6.6	(6.4) ^F	6.1	
8	5.5 ^F	5.6	5.6	5.1	4.6	(4.3) ^F	5.6	6.0 ^J	5.3	A	A	6.0	6.2 ^J	6.4	5.5	6.4	A	A	A	7.7	7.0	6.1	5.8	(5.6) ^F	
9	5.5	4.9	4.6 ^F	4.1 ^F	3.5 ^F	4.2 ^F	5.0 ^F	A	A	A	A	6.0 ^J	A	A	5.1	A	A	A	5.7	6.1 ^J	6.5	(6.2) ^F	5.9 ^F	5.7 ^F	
10	4.8	4.6	4.3	4.3 ^F	4.6	4.8	(4.8) ^F	4.9	5.3	5.2	A	A	5.3	5.2	5.0	A	A	5.5	5.5	6.0	6.1 ^J	5.5	5.6 ^J	5.0	
11	4.8	4.9	4.2 ^F	4.1 ^F	4.3 ^F	4.8	5.1	6.0 ^J	6.0	(6.0) ^F	5.9	5.9	6.0	6.0	6.0	6.0 ^J	6.2 ^J	6.5	6.3 ^J	7.0	6.1 ^J	6.0	5.9	5.0	
12	5.4 ^F	5.2 ^F	5.0 ^F	5.2 ^F	5.0 ^F	4.7	5.1	(4.9) ^F	5.9 ^J	5.9 ^J	5.6	A	B	B	5.3	5.9	5.4	6.0 ^J	6.5	7.1	7.0	6.0	(6.1) ^F	6.2 ^F	
13	6.0	6.5 ^F	5.4 ^F	4.4 ^F	A	A	A	4.8	5.3	A	A	5.0	A	A	C	A	A	5.3	5.3	5.9 ^J	5.8 ^J	5.8 ^J	5.7	5.9	
14	5.7	5.6 ^F	5.4 ^F	5.5 ^F	4.2 ^F	4.8	4.8 ^P	A	A	A	A	A	A	C	C	A	5.2	(5.4) ^F	5.5	6.0 ^P	7.0	6.5 ^F	6.2 ^F	6.5 ^F	
15	6.5 ^F	5.9 ^F	5.4 ^F	5.4 ^F	5.4 ^F	4.8	5.5	A	A	A	A	A	A	A	A	5.2	(5.1) ^F	5.0	4.9 ^P	5.1	5.6	6.6	5.9 ^F	5.5 ^F	
16	5.2 ^F	5.3 ^F	5.7 ^F	(5.3) ^F	4.9 ^F	5.0 ^F	5.3	5.1	6.5	A	T	T	T	T	T	6.4	6.2	6.1	5.9	6.5	6.6	6.6	6.8 ^F	6.8 ^F	
17	5.9 ^F	6.1	5.8	4.9 ^F	4.5	4.7	4.8	5.5	6.7	5.5	A	A	A	A	A	A	6.5	6.7	6.6	(6.0) ^F	6.2 ^P	6.2 ^P	6.1 ^J	5.9	
18	5.3	5.0	5.0	4.6	4.0	4.7	4.9	5.6	A	A	A	A	5.5	5.5	5.2	5.5	6.2	6.6	6.8	7.2	7.2 ^P	6.6	5.9 ^P	5.8 ^P	
19	5.5	5.2	4.4	4.9	4.6	5.1	5.7	6.2	5.9	6.0	5.0	5.2	5.9	5.6	A	5.9 ^J	6.4	6.9	6.6	7.1	6.7	6.4 ^F	6.6 ^F	5.2	
20	4.8	4.8	4.7 ^F	4.7 ^F	4.4 ^F	4.7	5.9	7.0	7.4	6.9	6.8	A	A	A	6.0 ^J	6.2	6.2	6.2	A	A	7.9	6.4 ^F	6.1 ^J	6.0 ^J	
21	5.8 ^F	5.6	5.6	4.9	4.7	6.1 ^J	6.0 ^J	7.4	A	A	A	5.9 ^P	5.9 ^J	5.5	(5.6) ^F	6.1 ^J	A	5.4	A	6.3 ^J	6.8	6.8	5.9 ^P	F	
22	AF	F	F	5.9 ^F	4.6 ^F	4.6	5.3	7.4	A	A	A	A	5.3 ^P	5.7	5.9 ^P	6.1 ^J	5.9 ^J	6.0 ^P	6.0 ^J	7.5 ^F	7.5 ^F	6.6	6.3 ^F	6.6 ^F	
23	5.9 ^F	6.0 ^F	5.9 ^F	4.7 ^F	4.8 ^F	4.6	5.6	6.4	C	C	C	C	C	C	C	C	C	6.0 ^J	6.4	7.0	7.1	6.0	5.8 ^P	5.5	
24	5.4	5.4	5.3	5.1	5.4	4.8	4.5	5.9 ^J	7.6	6.9	7.5 ^F	7.0	7.0	6.9	7.0	6.8	6.5	6.4	6.2	7.0	(7.4) ^P	7.9 ^J	7.0 ^F	6.3 ^F	
25	6.4 ^F	6.4 ^F	F	F	5.3 ^F	5.4 ^F	(5.2) ^F	5.0	A	A	A	A	A	5.5	5.0	5.4	5.2	5.5	5.1	6.5	7.0 ^F	6.7	6.5	6.0 ^J	
26	T	T	5.4	(5.1) ^F	4.8 ^F	4.8	6.4	A	A	A	5.0	5.4	5.4	5.4	5.6	5.5	5.2	5.1	5.5	6.4 ^J	6.5	6.8	5.9 ^F	5.3 ^F	
27	(5.0) ^F	4.8 ^F	4.3 ^F	4.1 ^F	3.8 ^F	3.6	4.5	5.2	5.5	5.8 ^P	5.6	5.5	5.7 ^P	6.3	6.2	(6.0) ^F	5.7	5.6	5.8 ^P	6.7	(6.7) ^P	6.1 ^P	5.6	5.5 ^F	
28	5.6 ^F	5.0 ^F	4.6 ^F	4.3 ^F	4.2 ^F	5.9 ^J	4.7	(5.2) ^F	5.0 ^J	6.0 ^J	6.5	6.6	6.4	6.8	5.7 ^J	5.7	5.3	6.0 ^J	7.0	6.8	7.6 ^F	6.9	5.9 ^P	5.5	
29	5.2	5.2 ^F	5.4 ^F	5.2 ^F	4.7 ^F	4.8	5.7	5.9 ^P	6.6	(6.4) ^F	6.3	A	A	A	5.7	5.3	5.3	A	6.5	6.6	6.6	6.2	5.7 ^F	5.5	
30	5.2	4.8	4.6	4.3	4.0 ^F	5.0	5.8 ^F	5.7	5.1 ^P	5.0	(5.2) ^F	5.3	5.3	5.2	6.0 ^J	6.3	5.6	5.1	5.4	6.5 ^P	6.5	6.1 ^P	5.6 ^V	5.6 ^F	
31																									
Mean	5.5	5.3	5.1	4.9	4.6	4.9	5.4	5.8	6.1	6.1	5.9	5.8	5.7	5.9	5.7	5.8	5.9	6.0	6.1	6.6	6.8	6.4	6.0	5.8	
Median	5.4	5.2	5.0	4.9	4.6	4.8	5.5	5.8	6.0	6.0	5.8	5.9	5.6	5.6	5.6	5.9	5.9	6.0	6.2	6.6	6.8	6.3	5.9	5.8	
Value	5.4	5.2	5.0	4.9	4.6	4.8	5.5	5.8	6.0	6.0	5.8	5.9	5.6	5.6	5.6	5.9	5.9	6.0	6.2	6.6	6.8	6.3	5.9	5.8	
Count	28	28	28	28	27	27	27	23	18	14	12	14	15	16	21	23	23	24	26	29	26	28	28	29	

Note: Observation was carried out every 15 minutes during 17th-23rd.

foF2

Sweep 0.95 Mc to 2.20 Mc in 2 min

Manual Automatic

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

135° E Mean Time

R'F2

Jun. 1955

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	330	300	350 ^A	360 ^A	310	250	490	A	A	A	A	B	A	A	A	A	340	300	290	A	A	210	280	310
2	290	260 ^F	240	270	310	300	320	350	A	A	C	330	C	C	C	A	A	320	290	A	C	C	C	270
3	290	300	[280] ^C	260	C	C	C	C	A	C	A	A	A	A	360	350	A	A	A	A	A	A	A	A
4	300	300	300 ^F	300 ^F	300	260	[280] ^A	310	270	A	A	A	A	A	360	370	350 ^A	350 ^A	390 ^A	320	270	240 ^A	290	300
5	290	300	300	260	290	350 ^L	280	390	[340] ^A	300	330	A	410	380	390	400	340	320	300	290	250	290	260	260
6	300	300	290	290	270	260	340	A	A	390	400 ^L	420	490	400	390	350 ^A	340 ^A	A	A	A	240 ^A	280	[290] ^A	300 ^F
7	270	280	290	C	C	C	C	260	A	A	A	A	410	410	A	A	A	330	320	280	A	A	A	300 ^F
8	280	300	270	250	270	250	300	300	400	A	A	370	370	380	400	440	A	A	320 ^A	A	260	350 ^A	330	310 ^A
9	280	300	340 ^F	330 ^F	300	290	A	A	A	A	A	A	A	A	450	A	A	A	A	330 ^A	A	[290] ^A	290	[320] ^A
10	350 ^A	320 ^A	300	280	290	220	[330] ^B	440	370	400	A	A	440	410	490	A	A	350	320	270	280	282	300 ^A	300
11	310	310	280 ^F	260 ^F	280 ^F	260	310 ^L	310	300	[320] ^A	350	360	430	400	390	350	A	A	310	A	290	[290] ^A	270	300
12	290	300	310 ^F	270	250	250	330	350	350	390	350	A	B	B	480	350	410	370	330	300	[290] ^A	290	[300] ^A	300
13	340	290 ^F	230	300	300	A	540	A	410	A	A	460	A	A	A	470	400 ^L	360	340	290	290	310	320	340
14	310	320 ^F	370 ^A	260	290	400	340	A	A	A	A	A	C	C	C	A	A	A	360	330	290	300	350 ^F	340
15	280	280	310	290 ^F	280	350	A	A	A	A	A	A	A	A	440	A	A	400	390	[340] ^A	270	290	310	340
16	A	330 ^A	290 ^F	[300] ^A	300 ^F	[340] ^L	370 ^L	A	A	A	A	T	T	T	T	330	340	340	330	290	[300] ^A	320	350 ^F	340 ^F
17	300	300	260	260	300	[280] ^L	450	[400] ^A	A	A	A	A	A	A	A	A	340	320	280 ^A	A	310	290	310	260
18	310	320 ^A	280	270	310	350	390	390	A	A	A	A	460	470	L	450	380	340	320 ^A	280 ^A	290 ^A	270	300	300
19	300	300	290	300	300	340	320	310	370	A	370	550	[440] ^A	410	A	430	A	320	[320] ^A	270	260	340	260	320
20	350	320 ^A	290	280	[270] ^A	270	350	350	340	350	290	A	A	A	A	390	380	A	A	A	A	250	280	280
21	300	300	280	290	300	300	A	A	A	A	A	400	360	A	A	A	A	380	A	A	280	250	280	280
22	[340] ^F	340 ^F	300	[280] ^A	280	250	A	310	A	A	A	A	410	410	390	360	340	A	A	A	270	[270] ^A	300 ^F	280
23	270 ^F	310	280 ^F	260 ^F	270	410	380	400	350	C	C	C	C	C	C	C	C	350	310	270	250	250	270	300
24	310 ^F	300	280	270	220 ^A	240	250	390	310	A	A	360	[380] ^A	390	400	350	340	320	A	A	310	290	290	210 ^F
25	290	280	[280] ^A	280 ^F	270	280	[320] ^A	350	A	A	A	A	A	A	510	400	400	340	370	300	320 ^A	300	[270] ^A	240
26	290	310 ^F	340	[320] ^F	310 ^F	270	270	A	A	A	420	420	[430] ^B	440	390	370	370	360	360	290	270	270	290	260
27	[260] ^A	270 ^F	290	300 ^F	220	290	340	320	[320] ^A	330	370	430	440	360	320	[340] ^A	360	A	330	290	280	280 ^A	270	AF
28	A	310	270	270	290 ^F	260	260 ^L	L	B	350	380	350	300	390	380 ^L	340	360	290	270	270	240	290	270	270
29	300	340 ^A	270	250	290 ^F	270	310	280	360	[340] ^A	320	A	A	A	370	A	A	A	300	260	270	260	280 ^F	300
30	290	290	300	250	270	290	320	290	390	500	[460] ^A	430	450	370	350	340	310	300	300	270	300	260	280	270
31																								
Mean Value	300	300	290	280	280	290	330	350	350	370	360	410	420	390	400	380	360	340	330	290	280	280	290	290
Median Value	300	300	290	280	290	280	320	350	350	350	350	410	410	400	390	370	340	340	320	290	280	280	290	300
Count	28	30	30	29	27	27	23	20	14	10	11	12	15	16	19	19	17	21	23	23	25	27	27	26

Note: Observation was carried out every 15 minutes during 17th-23rd.

R'F2

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual

Automatic

Lat. 39° 43.5' N
Long. 140° 08.2' E

IONOSPHERIC DATA

Akita

fEs

Jun. 1955

135° E - Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	4.0	3.5	4.5	4.3	5.1	3.5	5.0	6.5	10.5	8.5	7.3	4.5	9.0	11.5	9.5	8.0	4.5	3.5	3.5	8.0	6.5	5.5	3.5	4.5	
2	2.7	E	2.4	1.8Y	2.5Y	3.5	4.8	6.0	7.9	10.0	C	5.4	C	C	C	C	6.7	7.0	4.0	6.6	C	C	C	2.5	
3	3.0	3.0	C	4.0	C	C	C	C	7.0	C	8.8	8.5	7.0	7.5	6.5	3.5	8.5	12.1	14.5	5.5	8.3	7.5	7.5	6.5	
4	4.5	3.5	3.4	3.5	3.0	3.5	5.5	5.5	5.0	5.5	7.0	7.0	7.5	7.5	5.0	4.5	5.0	5.5	5.9	6.4	6.4	4.0	5.3	2.7	
5	2.8	3.5	2.8	2.7	3.5	3.5	4.5	5.4	7.5	5.5	5.5	5.5	4.5	4.4	5.2	4.4	4.1	4.4	4.5	3.5	3.1	5.4	2.7	2.5	
6	3.0Y	2.6	2.4	3.5	2.8	3.5	5.5	7.5	7.6	6.0	7.0	6.5	5.4	7.2	4.9	5.8	5.6	8.3	8.3	6.8	7.2	6.7	6.5	6.5Y	
7	3.5	2.4	3.0	C	C	C	C	C	6.6	7.8	6.6	5.8	5.0	11.0	7.3	7.0	7.3	6.8	5.6	6.0	6.9	6.9	6.5	6.0	
8	3.5	3.5	3.9	3.1	2.4F	2.9Y	G	4.9	7.2	7.2	7.8	7.2	4.7	4.7	6.0	6.3	9.7	9.7	7.2	8.4	3.3	6.0	3.5	4.9	
9	4.2Y	3.1	3.4	3.1	2.4	4.1Y	5.6	8.5	6.3	8.0	12.3	10.0	11.2	14.0	G	6.4	7.2	6.4	5.0	5.5	4.5	7.5	6.5	6.0	
10	4.8	6.9	3.1F	2.4F	2.4	G	4.3	4.5	4.9	4.7	6.7	7.6	4.8	4.9	G	7.8	7.1	4.5	4.5	4.5	4.6	7.0F	6.0	4.3	
11	4.2	4.5	3.5F	2.4F	2.7	3.2	G	6.0	5.0	6.0	G	G	G	4.5	5.5	4.5	4.0	3.4	6.9	5.5	4.7	4.5	4.0	3.5	
12	3.5	3.2	3.5F	3.5F	3.0F	3.3	3.3	3.5	G	6.5	8.6	13.4	G	G	5.0	4.5	4.5	4.2	4.0	4.1	3.5	3.3	7.0	4.0	
13	4.5	5.2	3.7Y	3.0	7.0	12.4	8.4	6.5	5.0	9.0	8.5	7.5	7.8	6.9	6.3	G	G	G	3.8	3.5	4.4	3.5	3.3	4.0	
14	3.5	3.5	5.5	4.5	3.1	3.8	4.0	5.0	6.1	11.6Y	13.0	8.8	C	C	C	7.2	5.6	8.7	7.3	3.5	4.4	4.0	4.4	4.5	
15	3.0	4.2	3.1	6.5F	3.8F	3.9	6.1	9.0	10.6	7.5	6.5	6.8	9.7	11.5	G	6.5	5.3	8.5	3.8	5.1	4.8	6.5F	6.5F	6.9	
16	7.2	4.5	4.3	8.5	10.2F	5.0F	G	5.6	6.7	6.8	T	T	T	T	T	4.0	4.5	5.3	3.9	3.1	6.7	7.7	4.1	6.5	
17	3.1	3.1	2.6	2.6	2.5	2.8	G	5.5	6.6	7.0	12.2	12.5	11.6	8.7	8.2	6.8	6.6	6.5	5.5	6.3	4.7	7.6	6.6	4.5	
18	5.0	3.5	3.1	3.1	3.1Y	G	G	5.6	8.8	10.2	11.7	7.2	5.0	5.4	6.8	G	G	G	4.7	5.1	5.0	3.6	3.5	3.5	
19	3.1	2.9	2.4F	3.4F	3.1	3.5F	3.6	4.8	4.6	6.0	4.5	5.3	11.6	5.6	7.0	7.8	6.9	6.0	6.7	5.9Y	3.8	4.0	3.5	4.5	
20	4.1	4.7	3.6	3.1	4.3	3.0	4.4	7.1	5.6	G	7.7	12.5	7.1	13.7	6.9	4.9	6.4	10.4	7.5	7.7	7.6	7.1Y	3.1	3.2	
21	4.2	3.4	3.0	3.1	3.1F	3.3	6.5	7.1	7.4	7.1	7.0	4.8Y	5.6	5.6	6.8	6.4	6.5	5.0	6.7	5.0	4.3	2.8	6.5	4.9	
22	6.0Y	6.3	4.3F	4.5	4.6	3.6	5.1	6.5	13.6	7.4	15.0	15.2	10.5	4.6	G	6.2	4.5	7.5	7.1	10.6	7.0F	7.1	7.1F	6.6F	
23	4.1	3.5	2.5F	2.6	3.5	3.2	G	4.4	5.6	C	C	C	C	C	C	C	C	3.4	3.4	2.4	3.5	2.3	2.4F	3.4	
24	3.3	2.4	2.5	3.7	3.1	2.7	3.3	3.4	5.5	6.8	6.5	6.1	8.1	6.5	G	G	3.5	4.8	6.3	3.8	5.5	9.0	5.0	3.2F	
25	2.7	4.2Y	6.5F	4.0F	3.3F	4.0	6.8	6.5	8.5	15.8	11.5	10.5	6.5	5.6	5.3	G	4.4	7.0	4.2	4.4	4.0	4.0	6.3	3.1Y	
26	2.1	4.2	4.6	6.6	4.7	3.6	4.5	7.0	7.5	11.8	5.6	G	4.0	4.0	4.0	3.5	3.5	4.3	3.7	5.4	8.5	12.0F	11.0Y	5.6Y	
27	6.1F	4.0F	5.5F	4.5F	4.5F	2.7F	3.5	5.5	5.6	4.8	5.3	6.4	6.0Y	5.5	6.5	6.5	5.6	5.5	4.5	4.5	4.5	4.9	5.5	4.4	5.5
28	4.4	3.5	2.3Y	2.4	3.5	2.7	G	4.1	G	4.6	5.0	5.0	4.2	4.6	4.0	4.1	3.9	G	4.4	4.6	5.6	3.5	3.5	4.6Y	
29	3.1	4.0	4.0Y	3.5YF	6.5F	4.4	4.7	G	5.6	10.0	6.8	9.2	7.5	7.5	5.6	5.6	7.2	7.9	5.2	3.5	4.5	3.1	4.1	5.1	
30	3.5	3.5	2.6	2.5F	3.0F	3.5F	5.5	6.6	4.0	5.2	8.5	6.3	4.6	7.2	6.6	4.9	G	4.8	4.0	5.4	5.5Y	3.1	4.4F	4.0	
31																									
Mean	3.9	3.8	3.5	3.7	3.8	3.8	5.0	5.9	6.9	7.7	8.2	8.0	7.0	7.2	6.1	5.8	5.7	6.4	5.5	5.4	5.3	5.5	5.1	4.6	
Median	3.5	3.5	3.4	3.4	3.1	3.5	4.4	5.6	6.4	7.0	7.0	6.9	6.2	6.0	5.6	5.6	5.3	5.5	4.8	5.2	4.8	5.5	4.4	4.5	
Count	30	30	29	29	28	28	28	29	30	28	27	28	26	26	26	28	29	30	30	30	30	29	29	30	

Note: Observation was carried out every 15 minutes during 17th-23rd.

fEs

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual

Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 36° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

f_oF₂

Jun. 1955

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	5.9	5.3 ^{UF}	5.4 ^F	5.2 ^F	5.0 ^F	5.6	5.4	6.0	6.5	6.0	A	A	A	A	6.5	6.7	7.9 ^P	7.2	7.9 ^P	7.2	7.9 ^P	6.0	(5.8) ^P	5.9	
2	AF	6.1 ^{UF}	5.4 ^F	5.0 ^F	4.5 ^F	4.7 ^F	6.4	5.8	C	C	A	7.7 ^P	6.3 ^P	5.7	6.0	7.4	7.9 ^P	8.1 ^P	7.0	6.2	6.5	6.5	6.2 ^F	6.2 ^J	
3	5.9	5.5	5.5 ^F	5.7	5.0 ^Z	C	C	C	C	C	6.5	6.2	A	A	6.5	6.7	7.0	7.0	7.0	7.2	5.6	5.2 ^J	A	A	
4	A	C	C	4.5 ^F	(3.6) ^F	4.3	5.8	[6.0] ^A	6.2	A	C	C	5.5	5.5	5.8	6.2	6.0	5.9	6.4 ^P	7.5	8.0 ^P	6.7	(4.8) ^F	5.0 ^F	
5	5.0 ^F	4.8 ^F	4.9 ^F	4.5 ^F	4.3 ^F	4.9	4.9	[5.8] ^A	6.7	7.1	5.9	5.2 ^P	5.8	5.8	6.2	6.4	6.0	6.6	7.0	7.0	7.1	6.4	5.9	5.9 ^P	
6	5.5	5.0	5.0 ^F	4.8 ^F	5.0 ^F	4.9	6.1	[6.2] ^A	5.8	5.8	5.8	5.9	5.4	5.8	A	A	5.7	6.3	A	7.1	(7.7) ^J	AF	A	AF	
7	5.5 ^F	4.8 ^F	4.7 ^F	4.3 ^F	4.3	4.8	5.4	[6.2] ^A	6.2	A	A	6.0	5.9	6.0	6.0	6.8	7.2	6.7	6.5	6.4	5.9	5.7	5.9 ^F	(5.3) ^{UF}	
8	5.3 ^F	5.5 ^F	5.9 ^F	4.0 ^F	3.8	4.0	5.4	6.5	5.8	5.6	5.6	5.7	5.7	6.8	6.4	6.8	8.5	8.5	9.2	A	A	5.5	5.4 ^F	(5.4) ^{UF}	
9	[5.4] ^{UF}	5.4 ^F	5.0 ^{UF}	4.4 ^F	3.9 ^F	4.4	5.0	[5.3] ^A	5.3	6.5	6.8	6.2	6.2	5.5	5.1	5.5	5.5	[5.7] ^A	5.9	6.4	6.2	6.1	6.1 ^{UF}	F	
10	5.1 ^F	4.9	5.0 ^F	(4.7) ^F	(4.6) ^F	4.9	4.8	5.0	5.2	5.8	5.5	(5.0) ^{UF}	5.9	5.5	5.5	5.8 ^P	5.6	5.6	[6.0] ^A	(6.1) ^A	5.9	5.5 ^F	5.0 ^F	5.0	
11	4.9 ^F	4.9 ^{UF}	4.5 ^{UF}	3.8 ^F	3.8	4.7 ^P	5.3	[5.8] ^A	6.2	6.0	6.0	[5.8] ^A	5.6	6.1	7.1	6.9	[6.8] ^A	6.8	6.9	6.5	5.7	5.5	6.0 ^{UF}	5.2 ^F	
12	5.0 ^F	4.8 ^F	4.8 ^F	4.9 ^F	4.6 ^F	4.5	5.5	6.0	6.5	6.6	6.1	5.7	5.8	A	A	A	A	A	6.0	7.0	7.0	5.8	(5.0) ^{UF}	6.1	
13	5.7	(5.5) ^{UF}	6.0	[5.6] ^A	5.1	3.6	4.2	4.8	5.8	6.0	5.1	5.1	[5.3] ^A	5.5	5.6	5.4	5.6	5.8	5.8	6.5	6.5	6.0	5.8	6.2	
14	5.9	5.6	5.7	5.5 ^F	4.5 ^F	4.5	4.5	4.8	5.0	A	A	A	A	A	A	5.1	5.5	5.4	5.9	6.6	7.0	6.3 ^J	6.2	6.4	
15	6.5	6.1	5.9	5.1	4.9	5.5	6.2	A	A	A	A	A	A	A	5.5	5.6	5.4	5.6	5.5	6.1	6.5 ^J	6.0	5.3 ^{UF}	5.3	
16	(5.2) ^{UF}	5.4 ^F	5.7	A	A	4.9	4.8 ^H	4.9	5.6	6.0	5.6	[5.8] ^A	6.0 ^J	6.4	7.3	6.6	[6.3] ^A	6.3	6.5	6.6	6.5	6.6	6.3	6.0	
17	5.9	6.0	5.7	4.8 ^F	4.0 ^F	4.8	5.1	[5.4] ^A	5.7	6.0	5.5	5.5	5.4	5.6	5.7	6.4	7.3	7.4	6.7	6.7	6.6	(6.2) ^F	6.2 ^F	6.5 ^{UF}	
18	6.0 ^F	5.5 ^{UF}	5.4	C	C	C	C	5.5	6.0	(5.5) ^{UF}	A	A	A	A	A	5.9	6.8	7.5 ^P	7.9 ^P	7.5	6.5 ^J	6.2	5.9	6.3 ^{UF}	
19	5.7	5.5	5.3	5.2 ^F	5.2 ^F	5.2	6.1	6.4	6.4	A	A	A	5.9	6.0	5.8	6.6	7.0	7.9	7.9 ^P	7.5	6.5 ^J	6.2	5.9	6.3 ^{UF}	
20	5.9	5.5	5.5 ^{UF}	4.9 ^F	4.3 ^F	4.5	5.8	6.9	7.3 ^P	7.6	7.6 ^J	5.9 ^P	[6.0] ^A	6.0	6.7	(6.8) ^P	A	A	A	7.1	8.0 ^P	7.9 ^{UF}	7.4 ^{UF}	6.8 ^{UF}	(6.5) ^F
21	[6.2] ^A	6.0	5.2 ^F	5.4	4.9 ^F	5.7	5.7	6.7	A	A	A	A	5.8	6.0	6.2	6.4	6.0	5.8	6.2	7.1	7.3	6.5	5.0	(4.9) ^{UF}	
22	5.0 ^{UF}	5.4 ^F	5.2 ^{UF}	5.2 ^F	4.8 ^F	4.4	5.2	8.0 ^P	A	A	A	A	5.6	6.2	[6.2] ^A	6.2	6.2	A	A	7.2	7.2 ^F	6.0 ^F	A	AF	
23	(6.5) ^{UF}	5.9 ^{UF}	5.3 ^F	4.6 ^F	4.7 ^F	4.5	5.4	6.3	7.9	(6.0) ^P	6.7	A	A	A	5.9	6.4	6.3	7.0	7.6 ^P	8.1 ^P	7.0	6.0	5.7	5.4	
24	5.5	5.5 ^{UF}	5.4	5.7	3.9	4.5	5.2	5.5	7.2	7.0	7.1	A	A	A	8.3 ^J	[7.6] ^A	6.8	6.7	7.2	8.0 ^P	8.0 ^P	8.0 ^P	7.0	6.2 ^F	
25	[6.3] ^F	(6.4) ^{UF}	5.9 ^F	(5.5) ^F	5.7 ^F	5.2	A	5.2 ^P	(4.8) ^A	A	A	A	A	A	A	5.6	5.5	A	A	7.0	6.7	6.8 ^{UF}	6.0	6.0	
26	6.0 ^{UF}	6.1	6.5	6.4	A	A	6.2	A	A	A	A	A	4.9	5.9	5.6	5.8	5.7	5.5	6.2	6.9	6.7	6.2	A	A	
27	4.2 ^F	4.7 ^{UF}	4.7 ^F	4.3 ^F	4.0 ^F	4.0	5.2	5.3	5.3	A	A	A	6.1	7.3	6.9	6.8	6.7	6.7	6.9	7.1	6.6	5.9	5.6	5.4 ^F	
28	5.4	5.4	(5.5) ^{UF}	[5.0] ^A	4.4 ^F	5.4	4.8 ^J	5.7	[5.8] ^A	5.8	6.7	6.7	5.2	6.2	6.0	6.3	7.7	8.5	9.1 ^P	6.0	5.7	5.8	5.8	5.8	
29	5.6	5.4	5.7	5.0 ^F	(4.9) ^F	[5.6] ^A	6.2	6.1	6.1	A	A	A	A	A	6.2	A	6.4	6.4	7.1	7.2	6.1	5.9	5.1	5.2	
30	5.0 ^J	4.9 ^F	4.7 ^F	4.9	4.4	4.8	5.5	5.5	4.9	5.0	6.1	5.0 ^J	5.4 ^J	6.2 ^J	6.6	6.2	6.2	5.4	6.0	6.2	6.9	6.1	4.6	4.8 ^F	
31																									
Mean Value	5.5	5.4	5.4	5.0	4.5	4.7	5.4	5.9	6.0	6.2	6.2	5.6	5.7	6.0	6.1	6.3	6.5	6.6	6.8	7.0	6.9	6.2	5.8	5.7	
Mean Value	5.6	5.5	5.4	5.0	4.5	4.8	5.4	5.8	6.0	6.0	6.0	5.8	5.8	6.0	6.0	6.4	6.3	6.4	6.9	7.0	6.9	6.1	5.8	5.9	
Count	28	29	29	28	27	27	27	26	24	21	16	15	21	23	23	27	28	27	27	28	29	29	26	25	

Note: Observation was carried out every 15 minutes during 17th-23rd.

f_oF₂

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

The Radio Research Laboratories
Koganei-machi, Kitakama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

Jun. 1955

f_pF₂

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	330	(370) ^F	340 ^F	330 ^F	300 ^F	260	290	(280) ^M	270	300	A	A	A	A	A	A	350 ^F	310 ^F	310	300 ^F	270	310	(340) ^F	340		
2	AF	(370) ^F	310 ^F	330 ^F	330 ^F	340 ^F	280	280	C	C	A	290 ^F	320 ^F	U	390	320	310 ^F	290 ^F	270	320	340	330	340 ^F	(350) ^F		
3	320	320	300 ^F	290	290 ^F	C	C	C	C	C	A	A	A	A	A	A	340	290	280	260	330	(330) ^F	A	A		
4	A	C	C	370 ^F	(320) ^F	310	290	A	A	A	C	C	A	A	U	320	A	360	330 ^F	310	300 ^F	250	(320) ^F	370 ^F		
5	330 ^F	370 ^F	350 ^F	330 ^F	330 ^F	270	320	(310) ^M	300	(330) ^M	360	U	U	U	350	330	360	320	290	310	290	290	310	310 ^F		
6	340	340	300 ^F	330 ^F	320 ^F	290	300	280	A	A	U	U	450	U	A	A	350	310	A	310	(300) ^F	AF	A	AF		
7	320 ^F	320 ^F	330 ^F	290 ^F	270	250	310	A	A	A	U	A	A	A	380	400	330	A	300	330	320	370	320 ^F	(330) ^F		
8	340 ^F	330 ^F	270 ^F	300	270	270	300	230	270	A	330	A	U	U	360	A	430	350	340	280	A	A	350	340 ^F	(350) ^F	
9	(360) ^F	370 ^F	340 ^F	360 ^F	400 ^F	290	290	350	A	U	330	330	310	A	A	U	A	A	A	A	A	310	(320) ^M	F		
10	310	360	370 ^F	(340) ^F	(300) ^F	260	310	310	U	U	U	U	B	U	U	340 ^F	360	310	A	A	A	300	310 ^F	360 ^F	350	
11	350 ^F	(310) ^F	330 ^F	330 ^F	300	260 ^F	270	(280) ^M	290	U	A	A	A	U	360	350	340	(330) ^M	320	270	300	320	310	(310) ^F	300 ^F	
12	340 ^F	310 ^F	350 ^F	300 ^F	300 ^F	320	330	280	340	280	320	U	U	A	A	U	U	A	350	340	330	300	360	350 ^F	310	
13	310	(370) ^F	300	(270) ^M	240	270	U	U	320	300	U	U	U	U	U	U	U	U	330	320	320	320	320	380	350	
14	360	350	340	260 ^F	340 ^F	320	U	U	A	A	A	A	A	A	A	A	U	420	350	360	320	(350) ^F	390	340		
15	350	320	370	300	320	340	310	A	A	A	A	A	A	U	B	U	A	A	330	340	350	330 ^F	320	(310) ^M	360	
16	(340) ^F	370 ^F	320	A	A	300	280 ^H	U	A	350	A	A	A	A	A	320	320	330	A	A	330	330	350	370	330	
17	360	340	300	310 ^F	320 ^F	290	310	(320) ^M	340	320	U	U	U	U	U	380	320	310	310	320	320	(360) ^F	390 ^F	(390) ^F		
18	360 ^F	(350) ^F	330	C	C	C	C	C	380	320	U	A	A	A	A	390	360	310 ^F	310	300	310	330	330	350	350	
19	360	350	340	350 ^F	350 ^F	310	310	300	290	300	A	A	A	A	A	A	A	320	330	320 ^F	310	(290) ^N	320	350	(340) ^F	
20	360	360	320 ^F	290 ^F	330 ^F	310	330	330	300 ^F	310	(290) ^N	A	A	A	A	A	A	A	330	310 ^F	310 ^F	350 ^F	330 ^F	(320) ^F	(330) ^F	
21	(340) ^M	350	370 ^F	350	350 ^F	270	270	290	A	A	A	A	A	A	A	A	A	A	350	380	340	320	290	270	310	(360) ^F
22	(360) ^F	(320) ^F	(330) ^F	290 ^F	310 ^F	310	(300) ^M	290 ^F	A	A	A	A	U	U	340	(340) ^M	330	320	A	A	310	290 ^F	300 ^F	A	AF	
23	(350) ^F	(320) ^F	330 ^F	300 ^F	360 ^F	310	330	360	(260) ^F	A	A	A	A	A	G	U	360	340	300 ^F	300 ^F	270	320	340	350		
24	360	350 ^F	320	260	310	250	290	360	310	380	A	A	A	A	A	(320) ^F	(320) ^F	320	A	400	360 ^F	300 ^F	300	370 ^F		
25	(360) ^F	(350) ^F	340 ^F	(350) ^F	270 ^F	260	A	A	A	U	A	A	A	A	A	A	A	A	A	A	A	350	350	(290) ^F	350	
26	(320) ^F	330	340	310	A	A	A	A	A	U	A	A	U	360	U	350	A	A	A	320	300	300	330	A	A	
27	310 ^F	(320) ^F	310 ^F	320 ^F	320 ^F	290	270	300	320	A	A	A	A	A	320	330	310	300	310	290	290	330	(340) ^M	340		
28	330	340	(320) ^F	(310) ^M	300 ^F	290	U	280	(300) ^M	330	300	320	320	290	U	320	350	350	320	310	280 ^F	320	340	330		
29	350	340	320	290 ^F	(330) ^F	(310) ^F	(300) ^M	240	250	300	A	A	A	A	A	A	A	310	310	270	290	310	310	340		
30	(330) ^F	350 ^F	330 ^F	270	270	270	270	270	A	U	290	B	A	A	(360) ^N	300	290	350	270	320	300	260	320	320 ^F		
31																										
Mean Value	340	340	330	310	290	290	300	310	310	310	320	310	350	350	350	340	330	330	310	320	310	320	320	340	340	
Median Value	340	350	330	310	290	290	300	300	300	300	320	320	320	360	350	340	330	320	310	310	310	310	300	320	340	
Count	28	29	29	28	27	27	23	21	15	12	7	3	4	9	9	18	21	23	23	27	29	29	26	25		

Note: Observation was carried out every 15 minutes during 17th-23rd.

f_pF₂

Sweep 1.0... Mc to 17.2... Mc in 2... min

Manual

Automatic

The Radio Research Laboratories
Koganei-machi, Kfkatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Jun. 1955

R'F2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	280 ^F	330 ^A	290 ^A	280	230	210	280	[280] ^A	270	300	A	A	A	A	360	360	320	280	270	250	250 ^A	[280] ^A	300	280 ^F
2	300 ^F	300 ^F	240 ^F	250 ^F	280	240	260	270	C	C	A	240	320	370	290	290	290	270	240	280 ^A	300 ^A	270	300 ^A	300 ^A
3	280	270	240	260 ^A	240	C	C	C	C	C	350 ^A	300 ^A	A	A	350	340	330	280	250 ^A	250 ^A	300 ^A	310 ^F	A	A
4	A	C	C	300 ^A	290 ^A	240	290	[280] ^M	260 ^A	A	C	C	390 ^A	440 ^A	350	320	320 ^A	360	320 ^A	290 ^A	250 ^A	210 ^F	300 ^A	290 ^F
5	260 ^F	280	300 ^F	260	280	250 ^L	L	A	300	280 ^A	350	370	370	350	330	350	310	280	270	260 ^A	240	230	250	240
6	280	270	260 ^F	260	250	260	290	270	A	A	330	340	450	360	A	A	350	300	[280] ^M	260 ^A	250	AF	A	AF
7	250	290 ^A	260 ^F	280 ^A	240 ^F	240	310	300 ^A	[320] ^M	330 ^A	A	A	A	380	400	330 ^A	A	A	280 ^A	290 ^A	280 ^A	330 ^A	320 ^A	260 ^F
8	270 ^F	260 ^F	230 ^F	200 ^F	210	230	290	230	270 ^A	330	350	310	390	360	A	430	330	300	260 ^F	A	A	230 ^F	270 ^F	300 ^F
9	[280] ^F	260 ^F	280 ^F	290 ^F	310 ^A	250	290	340	[380] ^M	420	330	330	310	380	430	360	350 ^A	[340] ^M	320 ^A	270	[260] ^A	250	270	340 ^F
10	260 ^A	310 ^F	300 ^F	270 ^F	230	230	310	310	460	280	350	370	440	340	380	340	360	310	A	270 ^F	230	230	290	280
11	280	280 ^F	270	310 ^A	240	230	250	[270] ^M	290	280	300	[340] ^M	390	360	340	320 ^A	[310] ^M	300 ^A	250	230	250 ^A	240 ^F	250 ^F	260 ^A
12	300 ^A	260	330 ^A	260 ^A	250	230 ^A	330	280	330	280	320	350	380 ^L	A	A	A	A	350	300 ^A	250	230 ^A	320 ^A	280	250
13	250	310 ^A	250 ^A	[240] ^M	230 ^A	230	450	400	320	300	380	400	[400] ^M	400	450	350	350	330	300	250	250	250	310	290
14	300 ^A	290	270	200 ^A	230	320	L	380	430	A	A	A	A	A	A	450	350	420	330	280	260	[280] ^M	310	290
15	280	250	330 ^A	260	250	240	300	A	A	A	A	A	A	400	520	370	370	330	330	280	300 ^A	270 ^A	300 ^A	270
16	300 ^A	300 ^F	290 ^A	A	A	280 ^A	240 ^H	440	360	350	A	A	A	A	320	320	330	A	A	250	250	260	310	300 ^A
17	320 ^A	260	250	250	290 ^A	230	310	[320] ^M	340	320	400	460	410	410	430	380	310	290	280	260	260 ^F	310 ^F	320 ^F	310 ^A
18	280 ^F	270 ^F	260 ^F	C	C	C	C	380	320	360	A	A	A	A	A	390	350	290	280	250	220	250	280	280
19	290	280	290	290	280	230	270	300	290	300	A	A	A	A	A	A	310	300	280	240	240	280 ^A	310 ^A	300 ^F
20	330 ^A	310 ^A	300 ^A	230 ^F	260	270	330	310	280	290	290	A	A	A	A	A	A	A	300 ^A	270	260 ^F	260 ^F	270 ^F	280 ^F
21	[300] ^A	330 ^A	330 ^F	290 ^A	280 ^A	250	260	280	A	A	A	A	A	380	360	270 ^A	A	A	300 ^A	270	260 ^F	260 ^F	270 ^F	280 ^F
22	310	310 ^A	310 ^A	260	260 ^F	250	370	280	A	A	A	A	400	390 ^A	360	330	350	340	320	A	240	210	230 ^F	320 ^F
23	310 ^A	310 ^A	290 ^A	250	260	260	310	350	340	250	A	A	390	340	[340] ^M	330	320	A	A	260	250 ^F	230 ^F	A	AF
24	290	280	260	220	230 ^F	230	280	350 ^L	290	360	330 ^A	A	A	G	380	360	360	320	280	240	220	240	280	280
25	310 ^F	310 ^A	[300] ^A	280 ^F	230 ^F	230	A	A	300 ^A	460	A	A	A	A	A	310	[310] ^M	310	A	340 ^A	300 ^F	240 ^F	250	310 ^F
26	310 ^A	290 ^A	270	250	A	A	A	A	A	A	A	A	A	A	A	360	320	A	A	A	300 ^A	300 ^A	250 ^A	320 ^A
27	240	290	250	280 ^A	270	250	270	300	320	A	A	A	530	360	380	350	A	A	300	260 ^A	240	250	A	A
28	280	300 ^A	250	[250] ^M	250	220	350	280	[300] ^M	330	300	320	370 ^A	320	320	330	300	300	280	250	230	240	[240] ^A	250 ^A
29	280	280	300 ^A	240 ^A	300 ^F	250	[270] ^M	290	250	300	A	A	320	290	330	320	350	350	290	250	220	200	300 ^A	280
30	310 ^A	290	300 ^F	230	200	250	250	270	A	500	290	330	370 ^A	400	360	300	280	350 ^A	270 ^A	290 ^A	250 ^A	220 ^A	260	270
31																								
Mean Value	290	290	280	260	250	240	300	310	310	320	330	350	380	380	370	340	330	320	290	260	260	260	280	290
Median Value	280	290	280	260	250	240	290	300	320	310	330	340	390	380	360	340	330	300	290	260	250	250	280	280
Count	29	29	29	28	27	27	24	25	23	20	14	13	18	20	21	26	26	24	25	27	28	29	26	26

Note: Observation was carried out every 15 minutes during 17th-23rd.

R'F2

Bweep - 1.0 Mc to 1.2 Mc in 2 min

Manual

Automatic

IONOSPHERIC DATA

Kokubunji Tokyo

Jun. 1955

foF1

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							3.5L	[3.9]A	4.3	A	A	A	A	A	A	A	A	A	A					
2							3.6	3.8	C	C	A	A	A	4.4	A	A	A	3.9	A					
3							C	C	C	C	A	A	A	A	A	4.4	A	A	A					
4							A	A	A	C	C	C	A	A	4.4	4.1	A	A	A					
5						L	L	A	A	A	4.5	4.5H	A	A	4.4	4.4	A	A	3.5L					
6						L	A	A	A	A	4.4	4.5	4.4H	4.4	A	A	A	A	A					
7						L	A	A	A	A	A	A	A	4.5	4.3	A	A	A	A					
8						Q	3.8	A	A	A	A	A	4.4	A	A	A	A	A	A					
9						Q	3.8L	A	A	A	A	A	4.4	A	A	A	A	A	A					
10						Q	3.9H	[4.1]A	4.3	4.4	4.5	[4.6]A	4.8	4.4	4.4H	A	A	3.9	A					
11							A	A	A	4.5	A	A	4.5	A	A	A	A	A	A					
12							4.2	4.0	4.5	4.6	A	A	4.7L	A	A	A	A	4.0	A					
13						Q	3.6	4.5	4.2	4.4	4.5	[4.5]A	4.5	4.7	4.3	4.2	4.2	4.2	3.5					
14						A	L	4.0	A	A	A	A	A	A	A	A	4.2	4.0	3.4					
15						Q	3.7	A	A	A	A	A	A	4.8	4.3	4.3	A	A	3.5					
16							Q	4.3	A	4.5	A	A	A	A	4.5	4.4	4.3	A	A					
17							3.7	A	4.4	A	A	4.6	4.5	A	4.5	4.3	4.2	4.0	A					
18						C	C	4.0	4.4	4.5	A	A	A	A	4.4	4.4	4.2	A	3.5					
19						L	3.6L	4.2	4.4	A	A	A	A	A	A	A	A	A	A					
20						L	4.4L	4.3	4.3	A	A	A	A	A	A	A	A	A	A					
21							3.6L	A	A	A	A	A	A	A	A	A	A	A	A					
22							A	4.1	A	A	A	A	A	A	A	A	4.3	A	3.5					
23						2.9	3.9L	[4.2]A	4.5	4.4	A	A	4.6	4.5	4.3	4.4	4.5	4.0	3.4					
24							3.6L	4.1L	4.2	4.5	A	A	A	A	A	A	A	A	A					
25						Q	A	A	A	4.4	A	A	A	A	A	A	A	A	A					
26							A	A	A	A	A	A	4.4	4.5	4.3	4.3	A	A	3.4					
27						Q	3.5	A	4.2	A	A	A	A	A	A	A	4.0	3.9	3.3					
28							3.9	4.0	[4.2]A	4.4	4.5	4.5	4.4	4.4	4.5	[4.3]A	4.1	4.0	3.5					
29							A	4.0	A	A	A	A	A	A	A	A	A	3.9	3.3					
30						L	3.5	4.0	[4.2]A	4.5H	[4.4]A	4.4	A	4.5	4.4	[4.3]A	4.2	A	A					
31																								
Mean						2.9	3.8	4.1	4.3	4.5	4.5	4.5	4.5	4.5	4.4	4.3	4.2	4.0	3.4					
Median						2.9	3.7	4.0	4.3	4.5	4.5	4.5	4.5	4.5	4.4	4.3	4.2	4.0	3.5					
Value						1	17	16	13	11	7	7	11	10	12	13	11	10	11					
Count																								

Note: Observation was carried out every 15 minutes during 17th-23rd.

foF1

Sweep 1.0 Mc to 17.2 Mc in 2 mi.

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

f_oF₁

Jun. 1955

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							230	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
2							A	280 ^A	C	C	A	A	A	210	A	A	A	A	260	A	A	A	A	A
3							C	C	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4							A	A	A	A	C	C	A	A	A	230 ^A	A	A	A	A	A	A	A	A
5						230	240	A	A	A	A	230 ^H	A	A	A	230	A	A	A	A	A	A	A	250
6						240	A	A	A	A	200	A	190 ^H	A	A	A	A	A	A	A	A	A	A	A
7						230	A	A	A	A	A	A	A	230	A	A	A	A	A	A	A	A	A	A
8						Q	270	A	A	A	A	A	190	A	A	A	A	A	A	A	A	A	A	A
9						Q	260	A	A	A	A	A	220	A	A	A	A	A	A	A	A	A	A	A
10						Q	200 ^H	[210] ^M	220	A	230	[240] ^M	260 ^A	210	200 ^H	A	A	A	A	A	A	A	A	A
11							A	A	A	A	A	A	190	A	A	A	A	A	A	A	A	A	A	A
12							220	220	220	A	220	A	A	A	A	A	A	A	A	A	A	A	A	A
13						Q	210 ^A	230	210	210	210	A	A	220	200	200	220	220	250	250	250	250	250	250
14						A	260	A	A	A	A	A	A	A	A	A	A	A	230	250	250	250	250	250
15						Q	240	A	A	A	A	A	A	A	210	210	210	A	A	A	A	A	A	240
16						Q	230	A	A	210	A	A	A	A	A	230	230	300 ^A	A	A	A	A	A	A
17						C	C	230	A	A	A	250 ^A	230	A	220	210	210	250	A	A	A	A	A	A
18																								
19						240	210	190	260	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
20						230	230	230	250 ^A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
21							230	A	A	A	A	A	A	A	A	A	A	240	A	A	A	A	A	A
22							A	A	A	A	A	A	A	A	A	A	240	240	A	A	A	A	A	A
23						200	240	A	300 ^A	A	A	A	210	230	180	210	230	240	210	210	210	210	210	210
24						230	230	230	240	230 ^A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
25						Q	A	A	A	250 ^M	A	A	A	A	A	A	A	A	A	A	A	A	A	A
26							A	A	A	A	A	A	250	220	250	A	A	A	A	A	A	A	A	A
27						Q	240	A	A	A	A	A	A	A	A	A	A	A	250 ^A	230	230	230	230	230
28						220	270	[250] ^M	230	250	240	200	230	200	[200] ^M	210	250	250	250	250	250	250	250	250
29							A	220	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
30						230	220	220	[220] ^M	210 ^H	[200] ^M	200	A	250	270	[240] ^M	220	A	A	A	A	A	A	A
31																								
Mean Value						230	230	230	240	220	220	230	220	220	220	220	240	240	240	240	240	240	240	240
Median Value						230	230	220	240	220	220	240	210	220	220	220	230	230	240	240	240	240	240	250
Count						7	18	12	9	6	6	5	9	9	10	10	9	9	9	9	9	9	9	9

Note: Observation was carried out every 15 minutes during 17th-23rd.

f_oF₁

Sweep 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Kokubunji Tokyo
Lat. 35° 42.4' N
Long. 139° 29.3' E

foE

Jun. 1955

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							2.3	2.8	2.9	3.0	3.1	3.2 ^A	3.1 ^A	3.0	A	A	A	A	A					
2							2.3	2.7	C	C	A	(3.2) ^A	A	A	A	3.3	3.0	2.8	2.5	A				
3							C	C	C	C	3.0	3.0	A	A	A	A	B.3	2.9	2.5	A				
4							A	A	A	A	C	C	2.9	3.0	3.3	3.2	3.0	2.5	A					
5							1.9	2.3	3.0	3.1	(3.2) ^A	(3.2) ^A	(3.3) ^A	(3.3) ^A	3.3 ^A	3.3	2.9	2.5	1.9					
6							1.9	2.4	3.0	3.1	3.2	3.2 ^A	3.1	3.2	A	A	2.8	2.5	A					
7							1.8	2.5	3.1	3.1	3.2	3.2	A	A	3.2	3.1	2.8	2.5	1.8					
8							1.9	2.5	2.9 ^F	3.0	3.2	3.1	3.1	A	A	3.2	2.9	2.6	A					
9							1.5	2.3	3.0	A	A	3.2	3.4 ^B	3.4	3.4	3.2	2.9	2.5						
10							1.7	2.4	3.0	3.2	3.3	3.3	3.5	3.5	A	A	2.8	2.6	A					
11							A	2.9	3.0	3.4	3.4	3.5	3.5	3.4	3.3	(2.9) ^A	2.5	A	A					
12							2.5	2.9	(3.0) ^A	3.1	3.1	3.3	3.2	3.2	A	A	A	A	A					
13							1.7	2.4	A	A	A	(3.4) ^A	(3.4) ^A	(3.4) ^A	(3.4) ^A	(3.2) ^A	2.9	2.6	2.1					
14							1.8	2.5	2.8	3.2	3.4	3.5	3.5	3.5	3.4	3.3	2.9	2.5	A					
15							1.6	2.5	2.9	3.0	3.2	(3.2) ^A	3.2	3.3	A	A	A	2.9	2.6	2.0				
16							A	2.9	3.2	3.2	3.4	3.4	3.4	3.2	(3.2) ^A	A	A	2.5	A					
17							1.6	2.5	3.0	3.2	3.4	3.4	3.5	3.5	3.3	A	A	2.6	A					
18							C	C	2.7	C	3.3	3.5	3.5	3.3	A	A	A	A	A					
19							1.4	2.4	2.8	A	3.0	A	A	3.5	(3.4) ^A	3.3	3.0	2.5	2.1	A				
20							A	2.7	A	A	3.4	(3.5) ^A	(3.6) ^B	3.6	3.4	(3.2) ^A	3.0	2.8	3.0	2.0				
21							2.4	2.9	3.0	3.3	3.5	(3.5) ^A	3.6	(3.6) ^A	3.5	3.3	3.0	A	A					
22							2.3	2.8	3.0	3.0	A	A	3.0	3.1	3.2	3.1	2.6	2.1						
23							A	2.5	2.6	3.0	(3.1) ^A	(3.2) ^A	A	A	(3.0) ^A	A	A	A	A					
24							2.3 ^A	A	A	A	3.5	3.5	3.4	(3.2) ^A	3.0	3.0	(2.5) ^A	2.5	1.9					
25							(1.6) ^A	2.4	2.7	3.0	3.2	3.3	3.3	3.2	A	A	2.9	A	A					
26							A	2.7	3.1	3.1	(3.2) ^A	A	A	A	A	3.4	2.9	2.6	A					
27							1.7	2.3	2.7	3.1	3.2	3.3	3.3	3.4	3.2	3.0	A	A	A					
28							2.4 ^F	2.7	2.9	(3.1) ^A	3.2	(3.2) ^A	3.3	(3.2) ^A	3.2	(3.0) ^A	2.9	2.6	A					
29							A	2.8	3.0	3.2	3.2	3.3	3.4	3.2	3.2	A	A	A	A					
30							A	2.1	2.6	2.9	3.0	(3.0) ^A	3.0	(3.2) ^A	3.3 ^A	3.2	2.9	2.5	2.0					
31																								
Mean Value							1.7	2.4	2.8	3.1	3.2	3.3	3.3	3.3	3.2	3.1	2.8	2.5	2.0					
Median Value							1.7	2.4	2.8	3.0	3.2	3.3	3.4	3.2	3.3	3.2	2.9	2.5	2.0					
Count							13	23	25	22	24	24	24	25	21	19	19	21	21	8				

Note: Observation was carried out every 15 minutes during 17th-23rd.

foE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

1' E

Jun. 1955

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							120	110	110	110	110	110	110	110	A	A	A	A	A					
2							120	110	C	C	A	110	A	A	110	110	110	110	110	A				
3							C	C	C	C	110	110	A	A	A	110	110	110	110	A				
4							110	110	110	A	C	C	110	110	110	110	110	110	110	A				
5						(130) ^A	110	110	110	110	(110) ^A	110	110	(110) ^A	110	110	110	110	110	120				
6						140	110	110	110	110	110	110	110	110	A	140 ^A	130	A	A					
7						140	110	110	110	110	110	110	A	A	110	110	110	120	120					
8						120	110	110	110	110	110	110	110	A	A	110	110	110	A					
9						120	110	110	110	A	A	110	110	110	110	110	110	110	A					
10						160	110	110	110	110	110	110	110	110	A	A	110	110	A					
11							110	110	110	110	110	110	110	110	110	(110) ^A	110	A	A					
12							110	110	(110) ^M	110	110	110	110	110	A	A	A	A	A					
13						140	110	A	A	A	A	A	110	(110) ^M	110	(110) ^M	110	110	120					
14						140	110	110	110	110	110	110	110	110	A	A	A	A	120					
15						130	110	110	110	110	(110) ^A	110	110	110	110	110	110	110	120					
16							A	110	110	110	110	110	110	110	A	A	A	A	120					
17						120	110	110	110	110	110	110	110	110	110	110	A	A	A					
18						C	C	110	C	110	110	110	110	A	A	A	A	A	A					
19						B	120	110	A	110	A	A	110	(110) ^A	110	110	110	110	A					
20						A	110	A	A	120	110	(110) ^B	110	110	110	110	120	120	120					
21							120	120	110	110	110	110	110	(110) ^M	110	120	110	A	A					
22							120	110	110	110	A	A	110	110	110	110	110	110	120					
23							A	120	110	110	110	A	A	A	110	A	A	A	A					
24							A	A	A	A	110	110	110	110	110	110	110	110	120					
25						140	120	110	110	110	110	110	110	A	A	110	A	A	A					
26							A	110	110	110	110	A	A	A	A	110	110	110	A					
27						140	110	110	110	110	110	110	110	110	110	A	A	A	A					
28							110	110	110	110	110	(110) ^A	110	(110) ^M	110	(110) ^M	110	110	110	A				
29							A	110	110	110	110	110	110	110	A	A	A	A	A					
30						A	110	110	110	110	(110) ^A	110	110	110	A	110	110	110	120					
31																								
Mean Value						130	110	110	110	110	110	110	110	110	110	110	110	110	120					
Minimum Value						140	110	110	110	110	110	110	110	110	110	110	110	110	110	120				
Count						12	26	26	23	24	24	24	24	25	20	18	19	21	20					

Note: Observation was carried out every 15 minutes during 17th-23rd.

1' E

Sweep 1.0 Mc to 17.2 Mc in 2 min
 Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Jun. 1955

fEs

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	45	54	5.7	4.0 ^F	3.0	3.0	3.5	7.7	8.5 ^F	9.5	10.0	10.0	10.0	10.0	7.0	7.0	8.5	6.1	5.6	5.7	10.0	7.2 ^F	7.0	7.0	3.7 ^F
2	59	7.0	3.0	4.2	3.0 ^F	4.2	4.2	6.9	C	C	8.5	5.5	6.8	4.5	5.6	5.7	5.5	5.6	3.9	4.2	4.8	5.0	6.7	4.2	
3	52	4.6	3.5	4.0	3.5	C	C	C	C	C	7.0	7.1	10.0	10.0	8.5	5.0	6.5	5.8	5.5	9.0	6.5	8.5 ^F	7.1	7.3	
4	68	C	C	5.0 ^F	5.0 ^F	3.7	5.0	9.5	6.5	7.0	C	C	6.5	8.2	5.2	5.0	6.1	5.6	5.9	8.5	8.5 ^F	7.5 ^F	4.5 ^F	5.0	
5	2.9 ^Y	2.8	4.3	3.6	2.9	3.0	4.2	8.2	6.3	7.2	5.0	4.6	5.0	5.0	5.0	4.0	5.1	5.0	4.5	7.2	7.0	4.3	3.9 ^F	2.9	
6	4.9	2.3	2.4	2.4	3.5	3.0	4.3	5.4	8.5	6.5	4.5	4.5	4.7	5.0	9.2	8.6	5.2	5.5	7.0	10.0	9.0	7.4	7.0	7.4 ^F	
7	3.6	8.5	4.3 ^F	5.4	4.3	3.3	5.5	6.5	8.2	6.8	6.5	5.5	10.0	5.5	4.6	6.5	7.7	7.7	5.7	5.4	5.0	5.7	4.7	7.2	
8	7.0	3.0	3.0	3.4 ^Y	3.0	3.0	4.5	7.0	7.0	7.1	5.5	5.2	4.7	7.0	7.1	6.9	7.1	7.0	8.0	8.5	8.5	6.5	7.0 ^S	5.0	
9	7.0	4.1	3.2	3.2	6.6	2.8	4.1	5.0	6.8	5.5	5.6	7.1	4.1	5.6	5.1	5.0	5.7	7.0	6.0	4.4	6.0	5.1	7.0	4.7	
10	6.7	5.0	4.0	3.0	2.5	2.8	3.7	5.2	4.4	5.2	4.6	5.2	4.8	4.7	4.4 ^Y	5.0	5.0	4.2	9.0	8.5	5.4 ^F	2.1	7.0	3.5	
11	3.0	3.6	4.0	5.0	2.9	5.0	4.8	7.0	6.5	5.5	6.0	5.5	5	7.4	7.2	8.5	8.8	6.2	4.9	3.9	4.9	5.7 ^F	6.0	5.6	
12	5.3	5.0	5.0	4.2	3.7	4.8	4.0	4.2	4.3	6.8	5.0	5.7	5.0	7.0	6.7	7.5	7.2	5.0	5.0	3.9	4.9	5.2	4.7	5.0	
13	5.0	4.3	5.0	7.5	4.5	2.9	3.8	5.0	4.2	4.2	4.5	5.5	5.8	5.0	5	5.0	3.7	2.8	3.0	3.2	2.9	3.5	3.9	4.9	
14	4.4	4.2	3.6	3.5	1.9	4.5	4.2	4.5	5.0	6.8	7.4	8.0	7.0	8.5	8.7	7.0	7.1	7.2	4.3	4.0	3.5	5.7	4.9	3.0	
15	4.0	3.8	4.5	4.5	2.8	3.0	4.1	8.2	10.5	10.3	10.2	6.4	5.5	3.9	4.4	5.7	6.9	6.4	3.5	3.2	7.0	5.5	5.0	7.0	
16	6.6	7.2 ^F	5.7	8.4	8.5	7.1	5.7	4.1	5.3	5.6	6.5	10.0	10.2	5.0	4.9	4.4	4.5	8.4	9.0	5.0	2.9	2.6	3.0	5.9	
17	4.5	6.8	7.0	5.4	4.3	2.9	2.9	6.6	5.0	5.3	5.4	5.4	5	5.0	4.0	4.0	4.0	4.0	4.5	9.0	5.5 ^F	6.9 ^F	7.0 ^F	4.5	
18	3.9	2.5	4.5	C	C	C	C	4.3	5.0	5.6	9.4	10.0	7.6	9.5	6.7	5.4	4.2	5.2	4.2	3.2	3.5	4.5	2.9	4.3	
19	4.0	2.6	2.3	4.8	3.2	5	3.0	3.5	3.7	5.3	9.6	6.6	5.9	5.6	5.7	7.1	5.5	5.6	5.5	3.9	7.0	5.7	4.8	7.2 ^F	
20	6.9	5.5	4.5	7.0	3.2	2.7	3.4	4.7	4.8	5.0	6.3	5.7	6.9	6.3	6.5	6.5	5.1	8.5	6.0	7.8	7.0 ^F	5.8 ^F	7.0 ^F	7.6	
21	6.8	6.5	5.9 ^F	3.0	6.7	4.4	2.9	8.8	9.5	8.7	8.1	10.2	6.9	8.5	6.6	7.2	4.8	9.8	10.0	5.0	2.9	2.4	2.7	4.0	
22	2.9	7.0	7.6	6.5	4.3	3.6	5.2	5.0	8.5	8.5	8.0	6.9	8.5	6.6	3.5	4.4	4.3	3.6	3.0	2.9	2.4	2.7	4.0	2.9	
23	7.0	9.5	5.8	4.0	4.3 ^F	2.9	4.0	5.0	4.6	5.0	6.4	8.6	7.0	3.4	3.5	6.9	4.3	4.3	3.0	2.9	2.4	2.7	4.0	2.9	
24	2.8	3.8	4.2	3.7	2.8	2.8	2.9	3.8	4.0	4.3	6.9	9.8	10.0	10.5	10.0	7.1	9.5	6.1	1.7	7.3	4.3 ^F	3.8	4.5	5.1 ^F	
25	5.5	5.9	5.7 ^F	4.9 ^F	3.6 ^F	2.9	7.0	8.8	7.1	5.3	10.1	10.2	10.0	10.0	6.9	5.5	10.0	6.5	8.5	10.0	6.5	6.0	7.0	6.8	
26	6.5	5.5	5.7 ^F	5.7 ^F	8.5	7.2	8.4	10.0	9.5	10.0	10.0	7.0	4.0	4.0	4.4	4.0	6.8	5.4	3.6	4.7	3.9	4.9	9.0 ^F	5.4 ^F	
27	4.4 ^F	4.9	4.3	4.5	4.0	2.7	3.5	5.0	5.0	7.1	6.2	6.2	5.5	5.0	7.0	6.5	5.9	4.4	3.1	2.9	2.7	4.5 ^Y	7.0	7.0	
28	4.4	4.9	5.5	7.1	3.5	2.9	2.8	2.9	6.5	4.9	4.9	3.5	4.3	3.9	3.7	3.8 ^Y	5	4.2	5.5	4.7	4.5	3.7	4.0	4.9	
29	4.5	5.0	7.4	5.0	7.0	4.9	7.2	4.2	5.1	5.4	8.5	7.2	7.2	6.7	9.7	10.0	7.0	5.4	3.6	4.0	4.5	3.7	3.5		
30	4.3	4.0	5.4	2.9	3.5	2.8	3.6	4.5	5.0	4.2	3.5	3.7	6.0	4.0	4.7	7.0	3.8	5.4	4.2	4.5	7.0	6.5	6.0 ^Y	4.9	
31																									
Mean Value	5.0	5.0	4.7	4.7	4.2	3.7	4.4	5.9	6.3	6.4	6.8	6.8	6.8	6.3	6.2	6.2	6.2	5.9	5.5	5.3	5.6	5.2	5.6	5.3	
Median Value	4.7	4.9	4.5	4.5	3.5	3.0	4.1	5.2	5.8	5.6	6.4	6.9	6.0	5.6	6.1	6.1	5.8	5.6	5.4	5.8	5.4	5.2	5.5	5.0	
Count	30	29	29	29	29	28	28	28	28	28	29	29	30	30	30	30	30	30	30	30	30	30	30	30	

Note: Observation was carried out every 15 minutes during 17th-23rd.

fEs

Sweep 10 Mc to 17.2 Mc in 2 min

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitakama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

(M3000)F2

Jun. 1955

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	2.9	(2.8) ^F	2.9 ^F	3.0 ^F	3.1 ^F	3.5	3.3	[3.3] ^A	3.3	3.3	A	A	A	A	2.9	2.9	2.9 ^P	3.1 ^P	3.0	3.2 ^P	3.3	3.0	(3.0) ^F	3.0	
2	AF	(2.9) ^F	3.0 ^F	2.9 ^F	3.0 ^F	3.2	3.3	C	C	C	A	3.3 ^P	3.1 ^P	3.1	2.8	3.0	3.1 ^P	3.3 ^P	3.2	2.9	2.9	3.0	2.9 ^P	(2.9) ^F	
3	3.0	3.0	3.2 ^F	3.1	3.2 ^F	C	C	C	C	C	2.9	3.3	A	A	3.0	2.9	3.0	3.1	3.2	3.4	3.0	(2.9) ^F	A	A	
4	A	C	C	2.8 ^F	(3.0) ^F	3.0	3.2	[3.3] ^A	3.4	A	C	C	2.9	2.7 ^A	3.1	3.2	3.3	2.9	3.0 ^F	3.2	3.3 ^P	3.3	(3.0) ^F	2.7 ^F	
5	3.0 ^F	2.7 ^F	2.8 ^F	2.9 ^F	3.0 ^F	3.2	3.0	[3.0] ^A	3.1	3.5	2.9	2.9 ^P	3.0	3.0	3.1	3.0	3.1	3.1	3.0	3.2	3.1	3.2	3.0	3.1 ^P	
6	2.9	3.0	3.0 ^F	3.0 ^F	3.0 ^F	3.2	3.2	3.1	[3.2] ^A	3.2	3.1	3.1	2.6	3.1	A	A	3.1	3.2	A	3.0	(3.3) ^F	AF	A	AF	
7	3.1 ^F	3.1 ^F	2.9 ^F	3.2 ^F	3.2 ^F	3.4	3.1	3.3	[3.2] ^A	3.2	A	A	A	2.9	2.8	3.0	2.9	2.8	3.1	3.0	3.0	2.8	3.0 ^F	(3.0) ^F	
8	2.9 ^F	3.0 ^F	3.2 ^F	3.1	3.2	3.2	3.2	3.6	3.5	3.2	3.0	3.2	2.7	2.9	A	2.6	2.9	2.9	3.3	A	A	2.8	2.9 ^F	(2.9) ^F	
9	(2.8) ^F	2.8 ^F	3.0 ^F	2.8 ^F	2.6 ^F	3.2	3.0	3.0	[2.9] ^A	2.8	3.0	3.0	3.2	2.9	2.8	2.9	3.1	(3.1) ^A	3.1	3.0	3.0	3.0	(3.1) ^F	F	
10	3.1 ^F	2.8	2.8 ^F	(2.9) ^F	(3.2) ^F	3.4	3.1	3.2	2.8	3.4	3.1	2.9	B	3.1	2.9	3.0 ^P	3.0	3.1	A	A	2.8	3.2 ^F	2.8 ^F	2.8	
11	2.9 ^F	(3.1) ^F	3.0 ^F	3.0 ^F	3.0 ^F	3.2	3.3 ^P	[3.3] ^A	3.3	3.3	3.3	[3.1] ^A	2.9	3.0	2.8	3.0	(3.0) ^A	3.0	3.2	3.1	3.1	2.9	(3.0) ^F	3.0 ^F	
12	3.0 ^F	3.0 ^F	2.9 ^F	3.1 ^F	3.1 ^F	2.8	3.0	3.1	2.9	3.2	3.1	3.1	2.8	A	A	A	A	3.0	2.9	3.0	3.1	2.7	3.0 ^B	3.1	
13	3.1	(2.8) ^F	3.1	(3.3) ^A	3.5	3.3	2.6	3.1	3.1	3.3	3.0	2.9	[2.8] ^A	2.8	2.6	3.0	3.0	3.1	3.1	3.1	2.9	3.0	2.8	2.9	
14	2.8	2.9	2.9	3.3 ^F	2.8 ^F	3.0	3.0	2.9	2.8	A	A	A	A	A	A	2.7	3.0	2.7	2.8	2.8	3.1	(2.8) ^F	2.7	2.9	
15	2.9	3.1	2.8	3.1	3.0	2.9	3.0	A	A	A	A	A	A	A	2.5	2.9	2.9	3.1	2.9	2.9	2.9 ^V	3.0	(3.0) ^F	2.8	
16	(2.9) ^F	2.7 ^F	2.9	A	A	3.1	3.0 ^H	2.8	3.0	3.0	3.0	(2.8) ^A	2.8	2.8	3.0	3.0	3.0	(3.0) ^A	3.0	2.9	2.8	2.9	2.7	3.0	
17	2.8	3.0	3.1	2.8 ^F	3.0 ^F	3.2	3.0	[3.0] ^A	2.9	3.1	2.8	2.7	2.8	2.8	2.7	2.8	3.0	3.1	3.1	3.0	3.0	(2.9) ^F	2.7 ^F	(2.7) ^F	
18	2.8 ^F	(2.9) ^F	2.9	C	C	C	C	2.7	3.1	(3.1) ^F	A	A	2.7	A	A	2.8	2.8	3.1 ^P	3.1	3.2	3.0	3.0	2.8	2.9	
19	2.9	2.9	2.8	2.9 ^F	2.9 ^F	3.0	3.0	3.1	3.1	3.2	A	A	2.8	(2.8) ^A	(2.7) ^A	2.8	3.0	3.0	3.1 ^P	3.0	(3.1) ^F	3.0 ^F	2.9	(2.9) ^F	
20	2.8	2.9	2.8 ^F	3.2 ^F	3.0 ^F	3.1	2.9	2.9	3.2 ^P	3.1	(3.5) ^F	3.1 ^P	[3.0] ^A	2.8	2.9	(3.5) ^F	A	A	3.0	3.1 ^P	3.0 ^F	3.0 ^F	(3.0) ^F	(2.9) ^F	
21	(2.9) ^A	2.9	2.8 ^F	2.8	2.9 ^F	3.2	3.3	3.2	A	A	A	A	2.7	2.9	2.9	3.1	2.9	2.8	2.9	3.0	3.1 ^P	3.0 ^F	(3.0) ^F	(2.9) ^F	
22	(2.8) ^F	2.9 ^F	(3.0) ^F	3.2 ^F	3.0 ^F	3.0	2.8	3.3 ^P	A	A	A	A	2.9	3.1	[3.0] ^A	3.0	3.0	A	A	3.0	3.2	3.2	3.0	(2.8) ^F	
23	(2.9) ^F	(3.0) ^F	3.0 ^F	3.2 ^F	2.8 ^F	3.0	3.0	2.8	2.8	(3.5) ^F	(3.0) ^A	A	A	G	2.8	2.9	2.9	3.0	3.1 ^P	3.2 ^P	3.2	3.0	2.9	2.9	
24	2.9	2.9 ^F	3.0	3.5	3.0	3.3	3.3	2.9	3.0	2.8	3.1	A	A	A	(3.1) ^F	(3.0) ^A	(3.0) ^A	3.0	3.6	2.7	2.8 ^P	3.2 ^P	3.1	2.9 ^F	
25	(2.9) ^F	(2.9) ^F	2.9	(2.9) ^F	3.3 ^F	3.3	A	A	3.2 ^P	(2.7) ^A	A	A	A	A	A	3.0	3.2	A	A	A	2.9	2.9	(3.2) ^F	2.9	
26	(3.0) ^F	3.0	3.0	A	A	A	3.0	A	A	A	A	A	2.5	3.0	2.9	3.0	3.0	2.8	3.0	3.0	3.1	2.9	A	A	
27	3.0 ^F	(3.0) ^F	3.0 ^F	2.9 ^F	3.0 ^F	3.2	3.4	3.2	3.0	A	A	A	3.0	3.1	3.1	3.0	3.1	3.1	3.0	3.2	3.1	3.0	2.9	2.9 ^F	
28	2.9	2.8	(3.0) ^F	(3.0) ^A	3.1 ^F	3.1	(3.1) ^F	3.3	[3.2] ^A	3.1	3.0	3.1	3.1	3.2	3.1	3.2	2.9	2.9	3.0	3.1	3.3 ^P	3.0	2.9	2.9 ^F	
29	2.8	2.9	2.9	3.2 ^F	(3.0) ^F	(3.1) ^F	[3.2] ^A	3.2	3.4	3.2	A	A	A	A	2.9	A	A	3.1	3.0	3.2	3.2	3.1	3.0	2.9	
30	(3.0) ^F	2.9 ^F	2.9 ^F	3.2	3.2	3.3	3.3	3.4	3.1	2.6	3.3	[3.1] ^B	[2.9] ^F	(2.9) ^F	(2.9) ^F	3.1	3.2	2.9	3.3	3.0	3.1	3.3	2.9	3.1 ^F	
31																									
Mean Value	2.9	2.9	3.0	3.0	3.0	3.2	3.1	3.1	3.1	3.2	3.1	3.0	2.9	2.9	3.0	3.0	3.0	3.0	3.1	3.0	3.1	3.0	2.9	2.9	
Median Value	2.9	2.9	2.9	3.0	3.0	3.2	3.1	3.2	3.1	3.2	3.0	3.1	2.8	2.9	2.9	3.0	3.0	3.0	3.0	3.1	3.0	3.1	3.0	2.9	
Count	28	29	29	28	27	27	26	24	21	16	15	20	23	22	27	28	27	28	27	26	27	29	29	26	25

Sweep 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

Note: Observation was carried out every 15 minutes during 17th-23rd.

(M3000)F2

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Jun. 1955

f_{minE}

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	1.4	1.4	E	E	1.4	1.5	1.5	1.4	1.5	1.5	2.1	2.1	1.8	2.1	2.1	2.0	1.5	1.4	1.4	1.4	1.4	1.2	1.3	1.4	
2	1.4	1.4	E	E	E	1.4	1.4	1.4	C	C	2.1	2.2	2.1	2.1	1.5	1.5	1.4	1.4	1.5	1.4	1.3	1.4	1.4	1.4	
3	1.4	1.4	E	E	1.4	C	C	C	C	C	1.5	1.5	2.1	1.5	1.4	1.4	1.5	1.5	1.3	1.4	1.5	1.4	1.5	1.2	
4	1.4	C	C	E	E	1.4	1.4	1.4	1.4	<2.2 ^c	C	C	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.4	1.4	1.4	1.4	
5	1.4	1.5	1.3	E	E	1.4	1.4	1.4	2.1	1.5	1.5	2.1	2.1	2.1	2.1	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.2	
6	1.4	1.4	1.0	E	E	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	2.1	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.4	
7	1.4	1.4	1.0	E	E	1.4	1.4	1.4	1.4	1.5	2.1	1.6	1.6	1.5	2.1	1.5	1.4	1.8	1.5	1.5	1.5	1.4	1.5	1.4	
8	1.4	1.4	E	E	E	1.3	1.5	1.4	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4	
9	1.4	1.4	1.0	E	E	1.4	1.4	1.4	1.4	1.5	1.6	2.1	2.1	2.3	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4	
10	1.4	1.4	1.0	E	E	1.0	1.4	1.4	1.4	1.5	2.1	2.1	2.1	2.2	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.2	1.4	
11	1.0	1.4	E	E	E	1.4	1.4	1.4	1.5	1.5	1.6	2.1	1.9	2.1	2.1	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.3	1.3	
12	1.4	1.4	E	E	E	1.4	1.4	1.5	1.4	1.5	1.5	2.1	2.1	2.1	2.1	2.1	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
13	1.4	1.4	1.2	E	E	1.4	1.4	1.4	1.5	2.1	2.1	2.0	2.1	2.1	2.2	2.1	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.3	
14	1.3	1.3	E	E	1.4	1.4	1.4	1.5	1.6	1.6	1.6	2.1	2.1	2.1	1.6	1.5	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.4	
15	1.3	1.4	E	E	E	1.4	1.4	1.5	1.5	2.1	2.1	2.1	2.1	2.1	2.2	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.1	1.4	
16	1.3	1.4	E	E	E	1.4	1.4	1.4	1.4	1.5	1.5	1.5	2.1	2.1	2.1	1.5	1.5	1.5	1.4	1.3	1.4	1.5	1.4	1.3	
17	1.3	1.4	1.0	E	E	1.4	1.5	1.5	1.4	1.5	2.1	2.1	2.2	2.1	2.1	1.5	1.5	1.4	1.4	1.4	1.4	1.2	1.4	1.4	
18	1.4	1.4	1.2	C	C	C	C	1.4	<3.5 ^c	1.4	2.1	2.1	2.1	2.1	2.1	2.1	1.4	1.5	1.4	1.5	1.5	1.3	1.4	1.5	
19	1.4	1.4	E	E	E	1.4	1.4	1.5	2.3	1.5	2.1	2.1	2.4	2.3	2.1	2.1	1.4	1.5	1.4	1.4	1.4	1.4	1.5	1.4	
20	1.4	1.4	E	E	E	1.4	1.4	2.1	2.1	2.3	2.1	(2.2) ⁸	2.3	2.3	2.2	1.0	2.3	2.1	1.4	1.4	1.4	1.4	1.5	1.4	
21	1.4	1.4	E	E	E	1.4	1.5	1.5	2.2	1.9	2.1	2.3	2.3	2.3	2.3	2.1	2.3	2.1	1.4	1.4	1.4	1.2	1.4	1.2	
22	1.4	1.4	E	E	1.0	1.4	1.4	1.4	1.4	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.1	1.5	1.5	1.4	1.4	1.4	1.4	1.4	
23	1.3	1.4	1.2	E	1.4	1.4	1.5	1.5	2.2	2.1	2.0	2.1	2.1	2.2	2.0	2.2	1.5	1.5	1.4	1.4	1.5	1.4	1.5	1.5	
24	1.4	1.4	E	E	E	1.4	1.5	1.5	1.5	1.5	1.5	2.1	2.0	2.1	2.2	1.4	1.5	1.5	1.4	1.3	1.4	1.4	1.5	1.9	
25	1.2	1.4	E	E	E	1.4	1.4	1.5	1.4	1.5	1.5	1.6	1.8	1.5	2.1	2.1	1.5	1.5	1.4	1.5	1.5	1.4	1.5	1.5	
26	1.3	1.5	1.3	E	1.4	1.4	1.4	1.4	2.1	1.5	1.5	1.5	1.9	2.1	1.9	1.5	2.1	1.5	1.4	1.4	1.3	1.3	1.3	1.3	
27	1.4	1.4	E	E	1.0	1.4	1.5	1.4	1.5	1.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	1.5	1.5	1.3	1.4	1.4	1.5	1.5	
28	1.4	1.3	1.1	1.3	E	1.4	1.5	1.5	1.5	1.5	2.1	2.1	2.1	2.1	2.1	2.1	2.0	1.5	1.5	1.4	1.4	1.5	1.5	1.4	
29	1.5	1.4	1.4	E	E	1.4	1.5	1.5	2.1	1.5	1.8	1.5	2.0	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.4	1.4	E	
30	1.4	1.3	1.0	E	1.0	1.4	1.4	1.4	1.6	2.1	2.1	2.1	1.7	2.1	1.5	2.1	2.1	1.5	1.4	1.5	1.4	1.4	1.4	E	
31																									
Mean	1.4	1.4	1.1	1.2	1.2	1.4	1.4	1.4	1.6	1.6	1.8	1.9	2.0	2.1	1.9	1.7	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.4	
Median	1.4	1.4	E	E	E	1.4	1.4	1.4	1.5	1.5	2.1	2.1	2.1	2.1	2.1	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	
Count	30	29	29	29	29	28	28	29	27	27	29	29	30	30	30	30	30	30	30	30	30	30	30	30	

Note: Observation was carried out every 15 minutes during 17th-23rd.

f_{minE}

Group 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 28.3' E

Jun. 1955

YPF2

135° E. Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	90	(40) ^F	80 ^F	70 ^F	90 ^F	30	60	[50] ^A	40	80	A	A	A	A	A	A	60 ^P	70 ^P	70	70 ^P	60	80	(60) ^F	60	
2	AF	(50) ^F	70 ^F	70 ^F	50 ^F	60 ^F	80	70	C	C	A	60 ^P	60 ^P	U	60	60	70 ^P	60 ^P	80	70	90	(70) ^J	60 ^P	(70) ^J	
3	80	60	50 ^F	100	70 ^J	C	C	C	C	C	A	A	A	A	A	50	60	70	70	70	60	(70) ^J	A	A	
4	A	C	C	60 ^F	(40) ^F	80	70	A	A	A	C	C	A	A	U	70	A	80	30 ^P	60	60 ^P	70	(70) ^F	80 ^F	
5	60 ^F	80 ^F	80 ^F	80 ^F	60 ^F	80	80	[70] ^A	60	[60] ^A	70	U	U	U	40	60	60	80	80	50	60	70	80	60 ^P	
6	60	40	90 ^F	70 ^F	60 ^F	60	50	80	A	A	U	U	70	U	A	A	50	50	A	70	(50) ^J	AF	A	AF	
7	50 ^F	70 ^F	70 ^F	70 ^F	70	80	60	A	A	A	U	U	A	50	50	60	A	A	70	50	90	70	70 ^F	(70) ^F	
8	60 ^F	70 ^F	70 ^F	60	80	80	60	40	30	A	50	A	U	90	A	100	60	70	60	A	A	60	80 ^F	(60) ^F	
9	[60] ^F	60 ^F	40 ^F	90 ^F	70 ^F	50	60	50	A	U	60	50	40	A	A	U	A	A	A	90	[80] ^A	70	(50) ^F	F	
10	30 ^F	70	60 ^F	(80) ^F	(60) ^F	50	70	50	U	U	U	U	B	U	U	60 ^P	30	60	A	60	80	50 ^F	70 ^F	60	
11	50 ^F	(70) ^F	60 ^F	60 ^F	50	80 ^P	90	[60] ^A	30	U	A	A	U	40	50	60	[70] ^A	80	70	60	60	90	(80) ^F	90 ^F	
12	50 ^F	80 ^F	80 ^F	50 ^F	50 ^F	90	60	80	80	50	50	U	U	A	A	A	A	70	90	70	70	90	40	50	
13	80	(50) ^F	70	[60] ^A	50	100	U	U	40	60	U	U	A	U	U	U	U	60	70	90	90	90	80	70	
14	90	70	80	50 ^F	100 ^F	60	U	U	A	A	A	A	A	A	A	A	U	80	90	70	60	(80) ^J	90	80	
15	70	40	80	60	70	80	80	A	A	A	A	A	A	U	B	U	A	40	70	80	90 ^V	80	(60) ^F	90	
16	(60) ^F	80 ^F	80	A	A	50	140 ^H	U	A	50	A	A	A	A	60	70	60	A	A	A	110	80	70	80	70
17	80	60	60	90 ^F	70 ^F	50	60	[60] ^A	60	40	U	U	U	U	U	50	70	50	50	70	80	(60) ^F	70 ^F	(80) ^F	
18	70 ^F	(60) ^F	60	C	C	C	C	90	40	U	A	A	A	A	A	A	A	A	70 ^P	70	80	70	80	80	
19	70	70	70	60 ^F	50 ^F	90	90	60	80	50	A	A	A	A	A	A	60	70	50 ^P	70	90	(90) ^J	90	(90) ^F	
20	60	40	50 ^F	60 ^F	80 ^F	50	80	100	50 ^P	50	(30) ^J	A	A	A	A	A	A	A	50 ^P	70	60 ^F	40 ^F	(60) ^F	(70) ^F	
21	[70] ^A	70	50 ^F	80	50 ^F	70	50	60	A	A	A	A	A	A	A	A	A	80	80	60	60	80	60	(60) ^F	
22	(70) ^F	60 ^F	(70) ^F	60 ^F	90 ^F	90	[70] ^A	50 ^P	A	A	A	A	U	U	40	160 ^A	70	70	A	60 ^P	70 ^F	100 ^F	A	AF	
23	(60) ^F	(80) ^F	50 ^F	40 ^F	80 ^F	100	90	80	90	(40) ^P	A	A	A	G	U	50	60	80	70 ^P	70 ^P	90	80	60	70	
24	60	60 ^F	70	50	70	50	50	50	70	50	A	A	A	A	A	(50) ^J	[40] ^A	30	A	80	60 ^P	60 ^P	70	70 ^F	
25	[70] ^F	(70) ^F	80 ^F	(60) ^F	70 ^F	70	A	A	A	U	A	A	A	A	A	A	A	40	A	A	60	60	(40) ^F	70	
26	(60) ^F	60	80	90	A	A	A	A	A	A	A	A	U	40	U	60	A	A	A	90	70	110	A	A	
27	70 ^F	(60) ^F	90 ^F	80 ^F	80 ^F	70	60	60	60	A	A	A	A	50	50	70	60	60	60	60	60	60	[60] ^A	70 ^F	
28	70	70	(70) ^F	[70] ^A	70 ^F	60	U	60	[60] ^A	60	50	40	40	30	U	40	70	70	50	70	50 ^P	70	80	80	
29	70	60	80	60 ^F	(70) ^F	(60) ^F	[60] ^A	60	50	40	A	A	A	A	A	A	60	90	60	60	60	70	80	60	
30	(70) ^J	50 ^F	80 ^F	60	70	60	70	50	A	U	30	B	A	U	(50) ^J	50	60	70	60	70	50	50	80	50 ^F	
31																									
Mean	60	60	70	70	70	70	70	60	60	50	50	50	50	50	60	60	60	70	70	70	70	70	70	70	70
Median	70	60	70	60	70	70	70	60	60	50	50	50	50	40	60	60	60	70	70	70	70	60	70	70	70
Value	70	60	70	60	70	70	70	60	60	50	50	50	50	40	60	60	60	70	70	70	70	60	70	70	70
Count	29	29	29	28	27	27	23	21	15	12	7	3	4	9	9	18	21	23	23	27	29	29	26	25	

Sweep 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

YPF2

Note: Observation was carried out every 15 minutes during 17th-23rd.

The Radio Research Laboratories
Koganei-machi, Kitakama-gun, Tokyo, Japan

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Jun. 1955

foF2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F	F	4.3F	5.9	5.5V	5.4	6.8	6.6	6.4	[6.0]A	5.5	6.2	6.7	7.4	8.0	8.5	8.5	7.6	7.3	7.2	6.5	7.0F	F	6.5
2	FS	FS	4.5F	[4.6]F	4.7	6.2	5.9	[6.2]A	6.5	6.4	6.3	6.4	6.6	7.2	8.5	10.0	10.0	9.0	6.7	7.0	7.2	7.0	6.5	6.9
3	7.0	6.5	6.4H	6.7V	3.8	3.5	5.0	A	A	A	8.5	8.0	7.7	8.0	8.9	9.1	9.1	9.5	9.4	7.5	5.4	5.7	FS	FS
4	FS	5.0F	FS	4.0F	F	3.8F	5.7	6.4	5.9	A	5.5	5.9	[6.6]A	7.2	7.4	7.3	7.4	7.4	7.0	C	C	C	C	C
5	C	C	C	C	C	C	C	C	6.4	6.5	6.0	6.8	7.1	8.0	8.5	8.5	8.2	7.1	7.2	8.0	7.8	6.4	F	F
6	F	F	F	F	F	4.8F	6.0	6.4	6.1	6.6	A	A	A	6.7	7.5	7.9	8.3	7.7	7.0H	8.2	8.2	5.9H	A	A
7	A	AS	F	F	F	F	6.0	6.0	5.5	6.4	A	A	6.5	7.4	6.5	7.5	8.1	7.0	6.4	6.0	6.4	6.3J	FS	FS
8	F6	A	FS	4.5Z	3.8V	3.8F	5.3	6.0	5.5	6.4	[6.0]A	6.1	7.9	7.7	7.7	7.7	7.4	10.6	10.0	7.5	5.8	A	A	A
9	5.3F	5.4	FS	F	F	3.8F	4.9	5.0	5.6	6.6	[7.5]A	8.4	8.5	8.1	7.4	8.5	7.9	[7.3]A	6.7	6.9	7.7	7.5	[7.2]F	6.8J
10	6.4F	[6.2]F	5.9F	7.0F	5.5Y	4.2Z	4.4	[5.0]A	5.7	6.4	6.2	5.9	[5.9]A	5.9	6.1	6.1	6.4	7.0	7.0	6.7	6.5	5.5F	FS	F
11	5.7F	F	F	F	F	4.1	3.9Z	4.9	5.5	A	6.0	5.3	5.6	6.5	8.5	8.9	7.7	[7.8]A	7.8	7.4	6.9	6.1	7.0	6.9
12	6.4F	6.6	F	F	F	F	5.5F	5.9V	7.2	6.9	7.2	A	5.5	5.9	6.5	6.4	6.4	6.6	7.3	7.6	7.3	7.0Z	7.4	6.8
13	6.2	6.2	7.0	5.1	3.9	3.8	4.8	6.3	6.5	5.9	5.8	5.7	5.7	6.4	6.4	5.8	6.8	7.4	7.4	6.8	6.8	6.1	6.2	6.3F
14	6.5	6.3	6.3V	6.3H	6.2	5.0F	5.3	5.3	5.4	A	A	A	A	5.0	5.0	5.5	5.2	5.8	6.3	6.4	6.9	6.7	6.8	6.5
15	6.3	5.9	F	F	7.5F	4.9F	5.5	[6.1]S	6.7	6.1	A	A	A	A	A	A	6.2	6.0	5.8	5.9	6.5	6.4	5.3	6.2F
16	[6.0]F	5.9	6.0F	A	A	A	5.4	6.5	C	C	C	C	C	C	C	C	C	C	C	C	C	7.0	7.0	7.3
17	6.3	6.8	6.2J	5.9F	3.9	3.9	5.9	5.9	6.6	[6.2]A	5.8	6.0	6.7	(7.9)P	7.5P	7.9P	8.8	8.8	7.9	7.3	5.9	6.0	5.8F	[6.0]F
18	6.1F	[6.0]F	5.9Z	F	F	FS	5.9F	5.9	6.1J	A	A	5.8	6.3	A	A	A	8.2	8.9	8.6	8.4	6.6	5.9	[6.0]S	5.9
19	5.5F	5.4F	5.5F	F	F	F	6.4	5.7	5.9	6.5	5.7	6.3	6.1J	6.5	6.1J	7.4	8.3	9.0	9.3P	8.4	6.6	6.5H	6.4	6.4
20	6.3F	6.5F	6.4F	5.8	4.7	4.6	5.7	6.5	6.8	6.4	6.5	5.5H	6.2	6.9	7.4	7.5	8.0	9.0	8.7	8.6	8.5	6.7	A	FS
21	FS	F	PH	F	F	4.4J	4.5	5.5	6.0	[7.2]A	7.7	6.3	7.0	7.3	7.8	7.6	[7.4]A	7.2	7.4	9.0	8.5	6.1	5.9	5.8
22	5.6	5.8	F	F	F	4.0F	3.8	5.5	7.9	5.5	5.4H	5.6	A	A	6.5	6.7	6.3	6.9	7.9	8.1	[6.6]A	5.4	5.5	F
23	F	6.2F	6.4F	F	F	5.2F	5.0V	5.5	7.9	8.5	6.4	[5.9]A	5.4	5.5	6.7	7.0	C	C	C	7.9	7.2	6.3	6.0	6.1
24	6.0	5.8	6.3J	5.2F	3.4	3.2	4.5	6.0	6.2P	7.1	6.9	6.2	6.0J	6.2	7.9	8.5	7.6	7.4	7.5J	[8.0]A	8.6	5.5V	6.6	5.8
25	5.9	5.9	5.5	[5.4]F	5.3V	4.6F	5.2	6.5	A	5.0	[5.3]A	5.6	5.7	6.5	[6.4]A	6.3	[6.1]A	5.9	[6.6]A	7.4	7.4	7.7P	5.9	5.9
26	F	F	6.3F	F	A	A	5.0	A	A	A	A	A	A	A	A	6.3	6.7	7.3	7.5	7.4	7.3	7.3	6.9	5.8
27	F	F	F	F	F	5.2F	5.0	5.6	5.9	A	A	5.8	6.3	[6.6]A	6.9	7.7	7.9	8.7	8.6	6.9	6.1	6.0	5.9	5.7F
28	F	F	5.5F	4.7F	3.6F	3.3F	4.6	5.4	5.8	5.8	5.9	[6.0]A	6.2	6.4	6.5	6.8	7.2	7.5	9.1	10.2P	8.0J	[7.0]A	6.1	6.8J
29	FS	FS	6.5	F	F	F	C	C	C	A	5.8	5.3	[5.6]A	5.8	6.1J	A	A	8.0	(8.3)P	7.4	7.0	5.5	4.6	4.6H
30	4.5	4.5	4.2	4.4	4.1	3.4F	4.4	5.5	5.2	5.8	5.6	6.1	[6.0]A	6.0J	7.4	7.9	A	8.2	7.1	6.1J	7.2	5.8	5.3	5.2F
31																								
Mean Value	6.0	5.9	6.0	5.4	4.6	4.2	5.3	6.0	6.2	6.5	6.2	6.1	6.3	6.6	7.0	7.4	7.6	7.7	7.6	7.5	7.1	6.4	6.2	6.2
Median Value	6.1	6.0	6.3	5.3	4.1	4.0	5.3	5.9	6.1	6.4	6.0	6.0	6.2	6.6	7.2	7.6	7.8	7.4	7.4	7.4	7.0	6.3	6.1	6.2
Count	17	18	17	14	16	22	27	26	23	19	20	22	24	25	26	26	26	28	28	28	28	28	21	21

Note: Observation was carried out every 15 minutes during 1.7th-2.3rd.

foF2

Sweep 1.0 Mc to 22.0 Mc in _____ min

Manual Automatic

Y I

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Jun. 1955

R'F2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	300F	300	270	280F	240	250	250	270	250	A	A	4-80	4-30	390	360	350	300	280	290	250	[270]A	290	320	290	
2	360F	280	260H	300F	320A	300	240	280	[280]A	290	300	[320]A	340	390	370	340	290	260	280	290	290	270	300	310	
3	300	300	250H	250	230	250	270	A	A	A	A	3-20	3-30	370	370	340	310	290	260	[260]A	270A	300	300	270	
4	320F	370	300	300F	290	260	290	270	290	A	A	4-20	4-00	[380]A	350	340	320	310	310	C	C	C	C	C	
5	C	C	C	C	C	C	C	C	300	290	350	4-00	3-50	350	340	320	310	310	300	280A	270	250	340F	300F	
6	320F	270F	290	300	300	270	270	290	[300]A	320	A	A	A	390	(390)A	340	310	300	300H	260	230A	210A	A	A	
7	A	290	330A	250	250	260	[290]A	320	A	A	A	A	4-30	350	390	340	290	300	290	250	260	250	310S	360	
8	310	[280]A	(250)A	250	290A	230	240A	250	300A	300	290	[360]A	4-30	360	350	4-20	370	280	230A	(290)A	220A	A	A	A	
9	270	250	300F	300	300	280	240	240	420A	370A	[340]A	3-20	3-10	300	350	350	290	[300]A	310	[300]A	300	250	330A	310	
10	300A	320A	250	250	250	250	250	[300]A	360	300	340A	4-00	[4-00]A	4-00	370	360	340	300	290	290A	(300)A	330A	350A	300	
11	280	300	270	300	300	260	220	280	A	A	A	A	(450)A	380	340	290	300	[300]A	300	290A	310A	290	310	260	
12	300	270	270	250F	290	290	280	300	270	300	280	[4-20]A	5-60	480	360	360	380	360	310	270	300	300	290	260	
13	290	300	220A	260	290	270	250	300	270	330	340	380	4-50	350	340	4-10	350	310	290	270	250	260	290	340A	
14	300	270	290	290H	210A	290	270	310	360	A	A	A	A	530	540	4-00	4-80	4-00	340	310	280	290A	280	300	
15	270	250	300	320A	270A	240	[260]A	290A	300	330	A	A	A	A	A	A	350	290	300	320	290	290	350A	350	
16	360A	300	270	A	A	A	320	270A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	260	
17	310	300	250	280A	[280]A	290	280	[300]A	320	A	[4-00]A	370	390	350	360	[340]A	330A	290	290	270	240	280A	330A	320	
18	310	300F	270	250	270	290	250	340	300	300	A	390A	390	A	A	A	350	300	290	260	250	290	280	300	
19	300	320	320A	280	290	270	240	270	350	320	330	390	3-50	370	4-70	370	340	310A	270	250	260	280H	300	300A	
20	330	290	250	250	260	290	280	290	260	340	320	390H	4-30	360	380	370	350	320	290	[300]A	260A	240A	[270]A	300	
21	300	300A	300H	290	300A	250	230	300	[320]A	330	300	310	4-00	360	350	340	[350]A	360	340	260	240	240	260	290	
22	340A	310	330A	220A	300	320A	300	240	250	290H	350	A	A	360	350	340	4-20	380	300	260	[260]A	290A	350A	340A	
23	300	310A	290	280	300A	250	300	4-00	[340]A	290	280	[360]A	4-30	580	380	360	C	C	C	240	240	240	300	310	
24	280	290	250	200F	250	270	[310]A	280	340	300	290	370	490	410	370	320	310	320	A	A	300	240	270	270	
25	300A	290	290	270	250	250H	240	250	A	A	(4-30)A	[4-30]A	4-30	4-40	340	[340]A	350	[380]A	4-00	[340]A	270	250	230	330	
26	330A	290	270	A	A	A	A	A	A	A	A	A	A	A	A	A	390	350	300	290	300	280	250	250	
27	270	280	250	290	250	250	240	260	300A	A	A	A	3-40	[340]A	350	330	330	290	250	240	240	270	250	290	
28	320F	270A	240	250	200A	250	250	290	280	340	350	[340]A	3-40	340	340	340	330	360	290	230A	230A	[270]A	310	300	
29	250	320	250	230	260F	280	260	C	C	A	320	(410)A	[4-00]A	4-00	4-00	A	A	290	300A	240	240	230	300A	290H	
30	290	290	280	240	200	240	220	270	280	300	370	320	[3-60]A	4-00	330	300A	[300]A	290	280	270	250	220	280	270	
31																									
Mean Value	300	290	280	270	270	270	260	290	310	310	330	380	4-00	390	370	350	340	310	300	270	270	270	270	300	300
Median Value	300	290	270	260	270	260	260	280	300	300	340	390	4-00	380	360	340	330	300	290	270	260	270	270	300	300
Count	28	29	29	28	27	27	28	26	23	17	18	21	24	25	26	26	27	28	27	28	27	28	28	27	27

Note: Observation was carried out every 15 minutes during 17th-23rd.

R'F2

Sweep 1.0 Mc to 22.0 Mc in 1 min

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Jun. 1955

fEs

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.5	4.1	3.5	2.4F	2.3	2.3	3.8	4.3	5.8	7.8	9.5	8.5	6.1	11.8	5.9	9.8	6.0	3.8	3.8	3.6	8.9	5.8F	6.5F	6.6
2	8.5F	3.8	3.5	3.1	3.5	2.3F	3.4	4.4	7.7	6.4	8.9Y	9.0	6.5	6.5	6.5	5.9	5.9	5.0	5.7	3.0	4.2	3.7	3.8	3.3
3	4.1	5.5	3.8	5.9	3.2F	3.0	4.8	8.5	9.0	1.5Z	1.5Y	8.0Y	1.30	11.8	8.4	4.9	5.9	4.2	3.8	7.2	1.30	8.9	8.5	7.2
4	6.4	7.3F	7.2F	5.0F	3.1	5.1	4.0	4.0	6.0	7.0	11.5	9.0	5.9	12.0	4.7	7.0	5.8	5.9	8.9	C	C	C	C	C
5	C	C	C	C	C	C	C	C	7.1	5.9	6.5	5.9	5.9	6.2	6.6	7.0	6.6	7.0	4.9	5.9	5.9	5.9	5.9	8.9F
6	8.9Y	3.5F	5.9F	5.9F	4.3F	3.0F	3.8	4.0	6.8	7.1	10.5	9.8	8.4	7.0	7.2	6.3	5.8	5.4	4.1	3.1	3.5	5.9	7.0	6.9
7	9.6	6.0	5.9F	8.3	5.9	E	6.0	4.1	7.9	1.30	10.2	16.0	5.9	6.2	5.9	6.5	5.0	5.7	5.9F	3.8	3.3	2.4	5.9	7.2
8	3.5	8.9	10.5	3.8F	5.5	2.9F	4.9	5.8	6.9	6.8	6.6	9.5	9.5	6.3	6.0	5.7	5.7	4.5	7.9	7.2	7.0	9.5	9.0	8.7
9	7.2	6.5	8.9	2.3	3.0	3.4	2.3	4.1	6.0	8.1	11.0	6.0	6.5	12.8Y	5.6	7.2	4.9	10.2	8.0Y	7.4	8.9	5.8	8.9	6.5
10	9.5Y	5.9	6.7	5.3	3.8	3.5	3.8F	6.8	5.8	5.5	6.5	9.5	8.5	6.6	5.7	6.5	5.8	4.8	6.7	5.8	9.1	8.5	6.3	8.9Y
11	3.4	3.4	6.5	3.8	5.2	3.8	3.1	4.8	8.9	8.6	6.7	6.4	5.9	6.4	5.9	5.9	6.5	12.7Y	5.9	12.7Y	8.8	3.9	5.9	6.5
12	5.9	8.9	6.0	3.8F	3.8	3.7	4.2	4.4	5.7	5.0	8.9	6.1	6.1	5.9	6.2	5.7	5.9	5.9	4.2	3.7	5.7	5.8	3.6	2.3
13	2.2	2.4	7.0	5.1	3.8	2.3	3.8	3.8	4.9	5.8	5.9	5.8Y	5.3	5.5Y	5.7	5.7	7.2	3.3	3.8	2.9	3.0	3.8	3.6	3.8
14	3.0	3.5	3.2	3.5	6.6	2.3	3.0	4.0	5.0	8.7	11.0	10.5	8.6	6.5	6.5	6.5	6.5	6.5	4.1	4.8	3.1	3.5	2.6	2.5
15	3.2	2.4	7.4	5.9Y	3.5	2.3	5.5	5.9	5.8	6.5	12.5	11.0	11.5	10.0	10.7	13.3	5.9	5.9	3.6	4.2	3.8	3.5	7.2	5.9
16	6.6	5.9	9.6Y	9.0	11.0	8.5	3.8F	4.8	C	C	C	C	C	C	C	C	C	C	C	C	C	2.5	3.8	3.5
17	5.9	7.0F	8.6	5.9	6.5	3.0	6.7	7.0F	5.9	6.9	7.3	5.1	5.9	6.1	5.8	8.1	6.9	6.1	4.1	3.7	3.2	3.3	3.6	3.4
18	7.0	4.8	3.0	2.0	3.0	3.0	3.0	5.9	5.9	7.8	7.9	6.1	5.9	8.0	10.0F	9.1	9.2	6.2	4.6	4.4	3.6	2.9	3.4	5.0
19	8.8	3.5	3.8	5.0	3.8F	5.1F	3.8F	5.0Y	5.5	7.0	5.9	7.2	6.7	5.8	8.5Y	6.7	5.9Y	7.0	3.4	5.2	3.8	4.2	6.4F	4.9
20	3.4	3.0	3.2	2.4	2.3	2.3	3.5	3.4	6.5	5.0	4.9	5.2	6.5	5.0	5.9	5.9	6.5	8.5Y	5.9	8.6	8.9	6.5	7.0	8.9
21	7.0	5.9F	5.9F	6.5F	3.8F	3.8F	3.0	4.7	1.20	1.30	5.9	5.7	5.9	8.5	6.5	12.6	9.7	7.0	3.8Y	4.2	3.1	3.2	3.2	2.9
22	3.6	3.8	5.9	3.8	8.9	3.8	5.7	5.7Y	3.8	6.1	8.0	14.4	1.53	1.42	5.9	6.5	9.2	9.2	6.5	5.7	9.2	5.9	9.5	5.7
23	5.9	5.8	6.5	3.8F	3.6Y	3.0F	4.3	5.5	7.9	1.25	5.6	8.4	5.9	5.9	6.5	8.9	C	C	C	2.3	2.3	2.1	5.1	3.8
24	3.6	3.2	2.4	3.8F	3.4F	2.9	5.8	5.9	6.0	4.2	5.5	6.3	8.5	6.2	5.0	5.9	4.6	5.9	7.7	14.0	5.9	2.9	13.7F	8.9
25	3.4	5.9	5.7Y	5.9	3.2	3.4F	6.5	5.7	9.2	1.30	9.2	9.2	9.5	6.7	12.0	9.5	11.8	1.35	8.9	10.5	3.6	3.6	3.2	3.7
26	5.9	5.9	5.9F	4.0	9.5F	8.9Y	5.7	8.5	9.5	8.9	9.6	10.1	1.53	1.29	1.55	9.5	5.3	4.9	3.7	4.7	7.0	6.6	1.30	6.5
27	5.9	8.9F	3.5	3.6F	3.1F	2.3F	6.5	5.2	6.5	8.9	12.0	8.7	7.3	8.9	6.2	5.5	5.8	3.5	2.9	2.9	2.3	2.4	3.5	3.6
28	5.7	6.5	3.5	4.6F	3.6	3.0	3.4	3.8	5.4F	5.8	11.6	1.30	8.5	8.9	8.5Y	5.9	5.9	3.5F	6.5	5.9	8.9	1.30	8.9	9.0
29	9.0F	9.2	5.9	4.9	5.9	3.4	3.4F	C	C	7.0	5.7	8.8	8.9	8.8	7.0	12.3	1.35	8.9	1.54	5.9F	4.6	2.9	3.7	2.9
30	2.3	3.1	2.4	E	E	1.9	2.3	6.5	6.5	5.8	5.9	6.2	8.9	6.5	4.7	6.4	7.2	5.7Y	5.9	3.8	3.0	2.4F	5.8	5.7
31																								
Mean Value	5.6	5.3	5.6	4.6	4.6	3.4	4.2	5.2	6.8	7.9	8.5	8.5	8.1	8.2	7.1	7.7	6.9	6.5	5.7	5.6	5.6	4.9	6.2	5.6
Median Value	5.9	5.8	5.9	4.0	3.8	3.0	3.8	4.8	6.0	7.0	8.0	8.5	6.7	6.6	6.0	5.9	5.9	5.9	4.8	4.8	4.4	3.8	5.9	5.7
Count	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.9	2.9	2.9

Note: Observation was carried out every 15 minutes during 17th-23rd.

fEs

Sweep 1.0 Mc to 2.2 Mc in _____ min
 Manual Automatic

SOLAR RADIO EMISSION

JUNE, 1955

Observing Station: HIRAISSO

Frequency: 200 Mc/s.

Flux in $10^{-22} \text{ w.m.}^{-2} (\text{c/s})^{-1}$, 2 polarizations

Time in U.T.

Daily Data

Date	Steady Flux		
	00-03	03-06	Daily Averages
1	-	-	(5)
2	4	5	4
3	5	5	5
4	4	4	4
5	5	5	5
6	4	6	5
7	-	-	-
8	6	6	6
9	5	5	5
10	6	5	6
11	6	5	6
12	5	6	5
13	6	5	5
14	7	6	6
15	6	6	6
16	(6)	-	-
17	-	4	4
18	5	5	5
19	21	17	19
20	10	7	9
21	8	9	8
22	8	6	8
23	5	4	5
24	9	-	9
25	5	4	5
26	5	4	5
27	-	5	5
28	-	-	-
29	5	4	5
30	4	5	5

Outstanding Occurrences

Date	Starting Time	Duration	Type	Peak Flux	Time
8	0132-00s	40s	SD	124	
9	0000-50s	1m	SD	87	0901-30s
13	0027-40s	1m10s	SD	870	0028-00s
14	0700-00s	50s	SD	190	0700-20s
	0923-50s	1m10s	CD	340	0924-20s
	2318-50s	30s	SD	320	2319-00s
	2322-30s	1m30s	CD	300	2322-30s
15	0239-20s	1m00s	CD	300	0239-50s ...1st peak
				100	0240-30s ...2nd peak
17	0516-30s	2m00s	CD	110	0517-20s
18	0431-50s	2m00s	SD	650	0432-10s
21	2333-00s	1m30s	SD	11	2333-30s
	2336-00s	4m30s	CD	26	2339-00s ...2nd peak

IONOSPHERIC DATA IN JAPAN FOR JUNE 1955

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