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IONOSPHERIC DATA IN JAPAN

FOR MARCH 1956

Vol. 8 No. 3

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Prepared by

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

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KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR MARCH, 1956

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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. 45° 23.8' N
Long. 141° 41.1' E

Wakanai

IONOSPHERIC DATA

foF2

Mar. 1956

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	F	F	F	7.6	9.3 ^J	10.5	12.0	11.2	12.5	11.6	10.1	10.6	10.7	9.3 ^J	7.0	6.0 ^F	5.8 ^J	5.0 ^F	(5.3) ^F	(5.3) ^F	
2	5.3 ^F	(5.3) ^F	F	F	4.5 ^F	4.5	5.3 ^J	8.0	9.0	10.7 ^J	11.6	10.6	11.5	11.8	11.5	11.4	10.3 ^J	10.0 ^J	9.8 ^J	7.7 ^F	6.5	(5.1) ^F	FS	F	
3	F	F	F	F	5.0	5.0	5.3 ^J	7.5	9.0	10.2	10.7 ^J	11.3 ^J	11.5	12.2	10.5	10.0	10.8 ^J	11.0 ^J	10.1	7.5 ^K	6.6 ^K	6.0 ^K	5.9 ^K	5.0 ^K	
4	3.8 ^K	4.0 ^K	4.1 ^K	3.4 ^K	2.9 ^K	2.8 ^K	3.4 ^K	4.0 ^K	4.5 ^K	W ^K	W ^K	W ^K	W ^K	4.8 ^K	5.2 ^K	5.3 ^K	5.5 ^K	5.9 ^K	4.0 ^K	F ^K	F ^K	F ^K	F ^K	F ^K	
5	2.7 ^K	2.7 ^K	2.5 ^K	2.4 ^K	2.3 ^K	1.8 ^K	3.6 ^K	5.3 ^K	6.6 ^K	8.0	10.0 ^J	10.0	10.3	9.5	9.8	9.3	9.2	8.7	7.3	5.8	4.5	4.3	4.2	4.2	
6	4.0	3.9	3.7	3.5	3.3	3.2	4.3	7.0	(8.3) ^F	(9.5) ^F	10.3 ^J	10.2 ^J	12.0	10.3 ^J	10.5	10.0	9.0	8.8	7.8 ^F	6.0	5.3 ^J	5.2 ^J	5.2 ^J	5.0 ^F	
7	4.7	4.5	4.4	4.5	4.2	3.7	5.3 ^J	7.0	9.5	10.5	10.5 ^J	11.0	11.9	11.2	10.8	11.5	9.8	9.8 ^J	6.2	5.3 ^J	5.3 ^J	4.8	5.0		
8	4.9	4.9	4.9	4.7	4.6	4.3	5.8	7.8	10.0	10.3	10.3	11.3	11.4	12.0	11.7	10.7	10.0	9.7 ^J	8.3 ^J	7.0 ^J	6.7	6.0	5.3 ^J	5.2 ^J	
9	5.0 ^F	5.1 ^J	5.1 ^J	5.2	5.0	4.5	5.6	8.3 ^J	9.0	10.4	11.3	11.3	12.0	10.8 ^J	10.0	10.0	10.1	10.3 ^J	9.0 ^J	8.0 ^J	7.3 ^J	6.0	5.3 ^J	5.4 ^J	
10	5.3 ^J	5.3 ^J	5.4 ^J	5.3 ^J	5.2	4.8	6.0	8.0	9.7	10.7	11.4	12.5	11.4	10.8	(10.4) ^F	10.0	10.0	9.8	8.5 ^J	7.5	6.2	6.0	6.0	5.9	
11	6.0	6.2	6.0	5.7 ^J	5.7 ^J	5.3 ^J	6.0	7.8 ^F	11.0	C	C	C	C	C	C	C	C	9.0	8.8	8.3 ^J	7.0	6.5	5.8 ^J	6.2	
12	6.2	6.1	6.0 ^F	F	F	5.8 ^F	7.3	9.1	10.3 ^J	11.6	12.5	12.6 ^F	12.4	(12.0) ^F	11.5	11.1	10.8 ^J	10.6 ^J	10.0	9.0 ^J	8.0	7.1 ^F	6.5	6.4	
13	6.5 ^J	6.2	6.0 ^F	(6.0) ^F	F	F	7.5 ^J	10.5	10.8	12.3	12.3	12.2	12.3	12.0	12.3	12.0	11.8	11.3	10.5 ^J	7.9	7.8	7.3 ^J	6.8 ^J	6.8 ^J	
14	6.3 ^J	6.2	6.0	6.0 ^V	6.0 ^V	(6.0) ^F	6.7	9.3	11.5	(12.8) ^F	(13.3) ^F	(13.5) ^F	(13.0) ^F	(12.8) ^F	12.3	11.8	11.5	10.8 ^J	9.8 ^J	8.6	8.0	6.8 ^J	6.2		
15	6.0	6.3	6.5	6.3	5.8	5.7	7.0	9.8	11.6	(14.0) ^F	(14.0) ^F	C	C	12.7 ^P	12.1	11.3	10.7 ^J	10.0	9.0	7.9	7.3 ^J	7.7 ^F	7.3	6.5 ^P	
16	6.0	6.0	5.8	5.7	5.7 ^J	5.7	8.0	10.0 ^J	11.8	(13.0) ^F	12.5	12.5	12.5	12.0	12.0	11.3	10.8	10.3	9.8 ^J	8.3 ^J	8.3 ^J	7.3 ^J	7.3 ^J	6.5	
17	6.1	6.0	6.1	6.0	5.8	6.2	C	C	C	C	C	C	C	C	C	C	C	C	9.8 ^J	8.8 ^F	8.0 ^J	7.8 ^J	7.7	7.0	
18	6.7	6.6	6.5	6.5	6.5	6.1	8.5 ^F	10.1	11.5	12.7 ^P	12.5	12.5	12.5	12.5	12.2	11.8	11.6	11.7	11.0	9.8 ^J	8.8 ^J	(7.8) ^F	(8.0) ^F	(6.8) ^F	
19	(7.3) ^F	7.4 ^P	6.5	6.5	7.0 ^J	7.4 ^P	9.3	10.4	11.3	(13.3) ^F	(13.8) ^F	(13.3) ^F	(13.0) ^F	(12.8) ^F	12.7 ^F	12.6	11.6	11.6	11.8	10.3	10.0 ^P	8.3 ^F	(6.8) ^F	7.0	7.5
20	7.3	7.0	6.6	6.5	6.5	6.6	8.0	9.0 ^J	10.7	12.2	13.0 ^F	13.3 ^F	13.7 ^F	13.0 ^F	12.2	11.8	12.0	11.3	10.4	9.2	8.8 ^J	7.2 ^P	6.3 ^J	6.5	
21	6.3	6.1	6.0	6.0	5.8	6.0	8.0	10.0	11.6	11.8	12.3	12.3	12.5 ^F	12.5 ^F	12.5	11.8	11.3	11.3	11.5 ^P	10.3 ^J	8.3 ^F	8.3 ^F	6.5	6.3	
22	6.0	6.0	6.0	5.8	5.7	5.6	7.3	8.0	9.5	(10.2) ^F	10.8	11.8	12.7 ^P	12.5 ^F	11.8	11.5	11.7	11.0	10.3 ^J	10.3 ^J	8.8 ^F	7.3 ^P	7.3 ^P	7.2	
23	7.4 ^P	7.5	7.6	6.8 ^F	7.3	7.7	9.0	10.8	12.0	11.3	11.4	12.7 ^P	12.5	12.5	13.0 ^F	12.0	11.5	11.5	10.8 ^J	8.8 ^F	6.8 ^F	7.0 ^F	(7.3) ^F	(7.3) ^F	
24	FS	FS	FS	FS	F	6.4	8.0	9.5	9.8	10.0	10.8	11.7	12.8 ^J	13.0 ^P	12.5	11.5	11.0	10.9	10.4	8.7	8.5	7.4 ^P	7.0	6.8	
25	7.0	6.8	6.3	5.7	6.0	6.3	6.0	6.5	C	C	C	C	C	C	C	C	C	9.7	9.0	8.3 ^J	(8.3) ^F	(7.8) ^F	6.7	6.5	
26	6.3 ^J	6.3	6.0	5.9	5.7	6.0	8.5	9.5	10.8 ^J	10.2	10.3	11.8	12.7 ^P	12.5	11.9	11.3	11.0	10.8	10.4	9.5	9.3	7.2	7.2 ^P	7.3 ^F	
27	6.5	6.8 ^P	6.6	6.1	5.6	5.5	6.2	7.5	8.0	9.4	9.6	10.3	10.8	11.5	11.5	11.0	10.7	10.3	10.0 ^J	8.0 ^P	7.0	(7.0) ^F	7.0 ^P	7.0	
28	6.6	6.5	6.0	6.1	6.0	5.9	8.0	9.5	12.0	(12.7) ^F	12.5	12.7 ^P	12.8 ^P	12.7 ^P	12.5	12.2	11.3	11.0	10.8 ^J	8.8	7.8 ^J	7.5	6.7 ^F	6.7 ^F	
29	6.6 ^F	7.0	7.0	6.2 ^F	C	C	7.3	7.3	8.6	8.3 ^J	9.0	9.8	9.6	9.6	9.8	9.8	9.5	9.0	9.0	8.7	7.5	7.0	6.5	(6.6) ^F	
30	6.6	6.5	6.5	6.0	6.0	6.0 ^F	8.2	9.2	10.8	11.3	12.0	13.0 ^P	12.7 ^P	12.2	12.0	12.2	12.0	11.8	(12.0) ^F	6.5 ^H	6.0	6.3 ^J	6.0	6.0	
31	6.0	5.8	(6.0) ^F	5.5 ^F	5.5 ^F	(5.3) ^F	7.8 ^J	9.2	11.7	(11.9) ^F	12.1	11.5	12.2	12.4	12.3	12.0	11.7	11.5	9.8 ^J	(8.3) ^F	(7.5) ^F	(7.6) ^F	7.1	(7.5) ^F	
Mean Value	5.9	5.9	5.8	5.6	5.4	5.4	6.7	8.5	10.3	11.1	11.6	11.8	12.1	11.7	11.3	11.0	10.6	10.3	9.5	8.1	7.4	6.8	6.4	6.3	
Median Value	6.2	6.2	6.0	6.0	5.7	5.7	7.3	8.6	10.3	10.7	11.5	11.8	12.4	12.1	11.8	11.4	10.8	10.4	9.8	8.3	7.5	7.0	6.7	6.5	
Count	28	28	27	26	26	28	29	30	29	28	28	27	27	28	28	28	28	28	30	31	30	30	29	29	

foF2

Swamp 1.0 Mc to 22.0 Mc in / min

Manual

Automatic

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

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

Mar. 1956

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	270	280	310	320	350	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370
2	290	260	260	290	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
3	310F	310F	310	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
4	300HK	310K	260K	320K	390K	410K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K	370K
5	380F	370K	320K	300K	290K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K	270K
6	340	320	300	290	300	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
7	310	290	280	310	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
8	320	310	270	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
9	310	310	290	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
10	290	270	260	250	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
11	300	270	280	280	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310
12	310	290	300	280	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
13	270	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
14	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
15	290	320	280	240	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
16	260	260	300	290	270	280	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
17	260	290	280	270	270	280	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
18	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
19	260	260	290	300	260	240	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
20	260	260	260	300	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
21	300	290	290	270	260	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
22	310	340	320	320	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310
23	330	290	270	270	280	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
24	270	260	260F	270F	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
25	310	300	340	360	310	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290
26	300	290	280	300	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
27	280	310	270	260	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
28	290	270	270	290	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
29	310F	300	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
30	310	310	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
31	280	280	280	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
Mean Value	290	290	290	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
Median Value	300	290	280	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
Count	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

R'F2

Sweep 1.0 Mc to 2.2 Mc in 1 min

Manual Automatic

W 2

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

Lat. 45° 28.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

Mar., 1956

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	E	E	E	E	2.3Y	E	E	G	G	4.6	G	4.9	5.0Y	G	G	G	G	G	E	E	E	E	2.0	E
2	E	E	E	2.1	E	E	G	G	G	4.6	G	5.3	G	5.3	5.5	G	G	G	E	E	E	E	E	E
3	E	2.2	2.3Y	2.0Y	3.5	E	G	G	G	G	G	6.3Y	4.4Y	G	G	G	G	G	3.5	E	E	E	E	E
4	E	2.0	E	E	2.5	E	G	G	G	4.2	G	4.5Y	G	G	G	G	G	G	E	E	E	E	E	E
5	2.3	E	E	E	E	E	G	G	G	4.2Y	G	G	G	G	G	G	G	G	3.5	2.5	E	E	E	E
6	2.3Y	2.3	E	E	E	2.3	G	G	G	G	G	G	4.2Y	G	G	G	G	G	2.0	E	E	E	E	E
7	E	2.3	3.5	3.5	2.2Y	E	G	G	G	G	G	4.8Y	4.2Y	G	G	G	G	3.5Y	E	E	E	E	2.5	2.1
8	2.3	2.2	E	E	2.2Y	E	G	G	3.5	G	4.5Y	4.8Y	4.0Y	4.1Y	G	G	G	G	E	E	4.0	E	E	3.5
9	4.2	3.5	2.8	2.1Y	E	E	G	G	4.2Y	G	G	G	G	G	G	G	4.2	3.8	3.0Y	2.5Y	3.5	4.5	4.3	4.5
10	2.3	E	2.2	E	E	G	G	G	G	G	G	4.6	4.2	5.0	G	G	G	G	E	E	2.5	E	E	E
11	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	2.5	E	E	E	E	E
12	E	E	2.2Y	E	E	E	G	G	G	G	5.8	G	G	G	G	G	G	G	E	E	E	E	E	E
13	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	2.6	E	E	E	E	E
14	E	E	E	2.3Y	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
15	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
16	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
17	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
18	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
19	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
20	3.0	E	E	E	E	E	G	G	G	G	G	G	G	G	G	4.5	3.5	G	E	E	E	E	E	3.0
21	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
22	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
23	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	2.3	E	E	E	E	E
24	E	E	E	E	E	E	G	G	G	G	G	5.5	G	G	G	G	4.0	G	3.3	3.0	2.3	2.3	E	E
25	E	3.2	E	E	E	E	G	3.5	G	G	G	G	G	G	G	G	G	G	2.5Y	3.2	E	E	E	E
26	2.2	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
27	E	E	2.3Y	3.0	2.5	4.2	G	G	5.3	G	G	6.8	4.9	G	G	G	G	G	E	E	5.5	E	E	E
28	E	E	E	2.1	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
29	E	E	E	2.5	E	E	G	G	G	G	G	G	G	4.2Y	G	G	G	G	3.0Y	E	E	E	3.5	E
30	E	3.0	2.3Y	E	2.2Y	3.0	G	3.5	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
31	E	2.0	2.2	2.0	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
Mean Value	2.7	2.5	2.5	2.4	2.5	3.2	2.9	3.5	4.3	4.3	5.2	5.4	4.5	4.7	4.9	4.5	3.9	3.6	3.1	2.8	3.4	3.4	3.2	3.3
Median Value	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
Count	31	31	31	31	30	30	30	30	29	26	28	27	27	27	27	28	28	30	31	31	31	31	31	31

fEs

SwEEP 1.0 Mc to 2.0 Mc in ___ min

Manual

Automatic

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

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956

f_oF₂

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	5.6 ^P	5.2	4.9 ^F	5.1 ^F	5.0	4.8	4.9 ^P	7.5	10.0	11.0	C	C	11.3 ^H	12.6	C	C	C	10.3	7.4	6.5	6.0 ^J	4.6	5.0	4.9
2	5.2	5.2	4.9	4.8	4.6 ^F	4.6 ^F	5.1 ^F	9.0	10.6	10.6	11.1	12.4 ^H	11.5	12.8	12.8 ^J	12.5 ^J	10.6	9.9	9.4	8.5 ^J	7.1	5.3 ^P	4.8 ^F	5.0 ^F
3	F	F	5.7 ^F	5.8 ^F	5.6 ^F	5.4 ^F	5.9	8.4	10.6	(12.0) ^P	11.6	12.0 ^P	12.8	13.0	12.6	10.6	11.6	11.5	10.2	8.5 ^R	8.6 ^K	9.5 ^K	7.2 ^P	6.0 ^R
4	5.5 ^R	5.7 ^R	5.9 ^K	3.1 ^K	2.9 ^K	3.2 ^K	3.5 ^K	5.8 ^K	4.5 ^K	4.6 ^K	4.6 ^K	4.6 ^K	5.0 ^K	5.2 ^K	5.8 ^K	6.1 ^K	6.1 ^K	6.2 ^K	5.1 ^K	3.7 ^K	3.6 ^K	3.6 ^K	3.5 ^K	3.7 ^K
5	3.7 ^K	3.7 ^K	3.7 ^K	3.8 ^R	3.7 ^K	3.5 ^K	3.7 ^K	6.0 ^K	8.0 ^K	9.4	10.2	12.4 ^J	10.6	10.5	10.2	9.8	9.5	9.1	7.8	5.6	4.8	4.5	4.2	4.2
6	4.1	4.1	4.0	4.0	3.7	3.7	4.6	8.4	8.4	9.6	10.4	(12.0) ^S	11.5	11.9 ^P	11.0	10.6	10.2	9.0	8.3 ^P	6.1	5.8	5.7	5.6	5.5
7	5.2	5.1	5.1	4.8	4.7	4.0	(5.3) ^S	7.7	9.0	11.1	12.0 ^J	11.7	11.9 ^P	12.1 ^J	11.6	11.5	10.6	9.7	7.7	6.0	5.6	5.7	(5.4) ^J	5.2 ^F
8	5.1	5.0	5.3	5.2	4.9	4.2	5.2	7.9	8.8	10.0	11.0	11.8 ^P	12.0 ^P	(11.9) ^S	(11.9) ^S	11.6	10.9	10.4	8.9	7.0	6.7	5.9 ^P	(5.8) ^A	5.6
9	(5.4) ^B	5.3	5.4	5.5	5.1	4.0	5.4 ^P	8.2	9.7	10.3	10.9	(11.9) ^P	(11.9) ^P	10.5	10.6	10.6	10.5	10.4	9.5	7.5	7.5	6.5	5.9 ^P	5.9 ^P
10	5.7	5.5	5.7	5.6	4.5	4.2	5.3	7.9	9.6	10.8	11.5	11.8 ^P	11.7	10.7	10.4	10.0	10.5	10.1	8.5 ^J	7.3	6.7	6.2	6.5	6.4
11	6.2	6.5	6.0	5.6	5.4	5.7	6.0	9.0	12.5	12.4 ^P	12.7 ^J	13.6	11.8	12.8	(12.5) ^S	11.1	9.9	9.1	9.0	8.4 ^P	7.0	6.6	6.1	6.0
12	6.4	6.5	5.9 ^P	5.7	5.8	5.6	6.8	9.0	10.6	11.6	(12.4) ^S	13.0	11.7	12.0 ^J	11.5	11.5	11.0	10.8	10.0	8.4 ^P	8.4 ^P	7.2	6.8	7.0
13	6.9	6.6	6.5	6.4	6.0	6.1	8.0	10.0	11.1	11.6	12.0	12.0	12.2 ^P	12.6 ^J	12.0 ^P	(11.9) ^S	11.8	11.0	9.9	7.3 ^P	7.7	7.7	7.3	6.7
14	6.6	6.6	6.6	6.0	5.9	5.9 ^P	7.0	9.6	11.0	12.4 ^J	13.0	13.1	13.5	13.0	11.8	11.6	11.0	11.0	10.9	(8.8) ^J	8.4 ^P	8.2	7.1	6.1
15	6.0	6.0	6.5	6.4	5.6	5.6	7.4	10.0	11.0	(12.8) ^S	14.5	13.7	12.6	12.5 ^P	11.9	11.5	11.0	10.5	9.2	8.5 ^J	8.4 ^P	7.1	7.1	6.1
16	6.0	6.0	6.0	5.9	5.8 ^F	6.0 ^F	7.8	10.2	10.6	(12.0) ^S	12.0 ^J	12.5 ^J	12.0 ^P	11.9 ^P	11.7	11.7	11.5	10.8	10.4	9.0	8.7 ^P	(7.7) ^J	7.2	6.5
17	5.5	5.6	6.3	5.4	5.7	6.4	8.2	10.7	11.0	11.5	12.0 ^J	13.0	12.5	13.5	(12.0) ^S	(11.9) ^S	(11.9) ^S	11.8	10.5	8.8	8.2 ^P	7.6	(7.1) ^S	(7.5) ^P
18	(7.2) ^P	7.4 ^P	7.2	6.9 ^P	6.5	5.5	8.2	10.5	10.7	11.6	11.8 ^P	12.1 ^J	12.0 ^J	12.0 ^J	12.0 ^J	(11.9) ^S	12.0 ^P	11.8 ^P	10.7	8.8	8.0 ^J	8.0 ^J	(7.6) ^J	(7.3) ^F
19	(7.3) ^P	7.3	6.5	6.7	6.9	7.3	9.0	10.5	11.5	11.8 ^P	13.0	13.8	13.5	13.5	12.6	12.6	12.0 ^J	11.9 ^P	10.5	8.5 ^J	(8.6) ^F	(7.8) ^J	(7.7) ^J	7.5
20	(8.0) ^P	7.0	6.8	6.5	6.6	6.7	8.4 ^P	10.5	11.5	12.0 ^J	13.6	13.5 ^P	13.5	13.5	13.0 ^J	13.0	12.9 ^J	(12.0) ^J	10.6	8.9	8.7	7.5 ^P	6.4	6.3 ^P
21	6.4	6.3	6.3	6.0	5.9	6.0	8.2	10.7	11.5	(11.6) ^H	11.8	11.8	12.9 ^J	12.9 ^J	12.6	12.0 ^P	11.8	11.7	11.0	9.6	7.6	6.9	6.8	6.8
22	6.5	6.5	6.5	6.2	5.9	5.9 ^P	8.8	9.5	10.3	11.0 ^H	11.8 ^P	13.0	13.5	13.0	12.9 ^J	12.4 ^J	11.8	11.6	10.6	9.8	8.9 ^J	(8.1) ^P	8.0	8.0
23	7.1 ^P	8.5	8.0	7.3 ^P	7.3	7.8	9.5	11.6	(12.0) ^S	11.1	12.7 ^J	11.9 ^P	12.6	12.9 ^J	12.6	(12.0) ^S	(12.0) ^S	11.7	11.5	8.8	7.2	(7.5) ^J	(7.6) ^J	(8.0) ^F
24	(7.6) ^P	7.7	7.1	7.0	6.8 ^F	6.9 ^F	8.4 ^P	10.6	12.8 ^J	13.5	13.0	13.4 ^J	14.6	14.3	13.5	12.0 ^J	12.0 ^J	12.0 ^J	11.5	9.9	8.8	7.3	7.0	7.0 ^P
25	7.4	7.3	6.5 ^F	6.5	6.4	7.1	7.0	7.0	8.9 ^J	8.7	10.0	10.5	11.0	11.7	11.7	11.0	10.5	10.4	10.4	9.0	8.4 ^P	(7.2) ^S	6.8	6.7
26	6.5 ^F	6.5	6.7	6.2	6.0	6.0	8.4 ^P	10.6	10.6	11.0	10.2	(11.6) ^S	13.0 ^J	13.4 ^J	12.9 ^H	(12.0) ^S	11.8 ^P	11.8	11.1	9.7	8.9 ^J	8.0 ^J	7.4	(7.8) ^J
27	7.0	6.8	7.3	6.5	6.2 ^J	6.2	8.1	10.4	11.5	11.1	11.1	11.7	(12.0) ^H	(12.0) ^H	(11.9) ^S	(11.9) ^S	11.5	11.4	10.7	8.3 ^P	7.3	7.4	7.0 ^F	7.2
28	6.6	6.5	6.5	6.0 ^J	5.9	(5.6) ^P	8.2	11.2	11.5	(12.0) ^S	(12.0) ^S	(12.9) ^S	13.4 ^J	13.0 ^J	(11.9) ^S	12.6	12.0 ^J	11.6	11.3	8.8 ^J	7.6	7.5	7.5	7.2
29	7.1	7.1	7.2	6.4	6.0	6.1	7.9	8.2	10.1	10.5 ^H	10.1 ^H	11.5 ^H	11.5	11.4	11.7	11.0	10.9	9.7	9.8 ^P	8.8	7.2	7.0	6.9	7.0
30	6.9	6.9	6.7	6.2	5.8 ^P	5.9	8.0	9.6	11.0 ^H	12.4 ^J	13.0	13.0	13.0	12.8 ^J	12.6	12.6 ^J	12.7	12.8	11.6 ^H	B	7.0	7.2	6.8	6.4 ^J
31	6.0 ^P	5.9	5.7	5.7	5.2	4.4	7.6	9.5	11.4	12.4 ^J	(11.9) ^H	(11.9) ^H	11.7	11.6 ^H	12.5 ^H	(12.0) ^S	(11.9) ^J	11.7	10.4	8.0 ^F	(7.7) ^J	(8.0) ^F	7.8	(8.0) ^F
Mean Value	6.1	6.2	6.1	5.8	5.6	5.5	7.0	9.2	10.6	11.1	11.6	12.4	12.1	12.2	11.8	11.4	11.1	10.7	9.8	8.1	7.4	6.9	6.6	6.4
Median Value	6.4	6.5	6.3	6.0	5.8	5.6	7.6	9.5	10.6	11.3	11.8	12.0	12.0	12.6	12.0	11.8	11.5	11.0	10.4	8.5	7.6	7.2	6.9	6.5
Count	30	30	31	31	31	31	31	31	31	31	30	30	31	31	30	30	30	31	31	30	31	31	31	31

Sweep 0.85 Mc to 22.0 Mc in 2 min Manual Automatic

f_oF₂

A 1

Lat. 38° 48.5' N
Long. 140° 08.2' E

A k i t a

IONOSPHERIC DATA

135° E Mean Time

RF2

Mar. 1956

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	310	310	350 ^F	380 ^F	340	250	280	250	260	270 ^L	(280) ^C	280	300 ^{LH}	290	C	C	C	250	250	260	280	290	340	350
2	320	320	290	320	310	360 ^F	290	250	260 ^L	250	280 ^L	250 ^H	290 ^L	300	280 ^L	280 ^L	250	270	260	260	330 ^F	260	320 ^F	320
3	360 ^F	350 ^F	350 ^F	310 ^F	310	310 ^F	290	250	270	280 ^L	270	280 ^L	300	310 ^L	260	L	290	260	270	300 ^K	330 ^K	280 ^K	330 ^K	270 ^K
4	350 ^K	360 ^K	310 ^K	290 ^K	430 ^K	450 ^K	400 ^K	350 ^K	G K	650 ^K	460 ^K	G K	650 ^K	470 ^K	450 ^K	360 ^K	310 ^K	270 ^K	260 ^K	280 ^K	300 ^K	320 ^K	350 ^N	400 ^K
5	390 ^K	380 ^K	350 ^K	300 ^K	260 ^K	320 ^K	300 ^K	250 ^K	260 ^K	270 ^L	(280) ^L	280	270	290 ^L	270	270	260	250	240	240	260	320	360	350
6	370	350	350	340	350	360	300	250	250	260	260 ^L	280 ^L	270	280 ^L	280	270	250	250	240	240	260	300	310	290
7	310	300	290	300	290	290	290	250	250	260 ^L	270	280 ^L	280 ^L	290	280	260 ^L	250	250	240	240	270	290	300	320
8	340	370 ^A	340 ^A	280	260	300	270	250	240	260	270 ^L	260	290 ^L	290 ^L	280 ^L	270	250	260	250	240	270	260	(280) ^N	300
9	330	340	330	300	260	260	270	250	250	250	270 ^L	270 ^L	280 ^L	290 ^L	280 ^L	290 ^L	260	250	270 ^N	240	260	250	280	300
10	300	300	300	260	250	300	280	250	250	260	290 ^L	290 ^L	290 ^L	290	(280) ^B	280	280	260	250	300 ^A	330	300	330	300
11	310	300	300	300	350	330	310	260	290 ^L	270	280 ^L	290 ^L	270 ^L	290 ^L	270	270	250	270	270	260	250	290	300	350
12	340	310	300	300	290	270	270	250	260	270	280 ^L	290 ^L	270	270 ^{LH}	(280) ^L	280 ^L	260	260	260	250	270	280	300	300
13	300	300	300	290	320	300	270	250	250	(260) ^L	270	280	L	L	L	C	270 ^L	250	250	290	280	280	280	280
14	300	310	300	290	290	290	260	250	250	270	260	270 ^L	290 ^L	290	260	260	260	270	260	250	290	290	260	280
15	340	390	340	260	260	290	280	250	250	(270) ^L	290 ^L	270	270 ^L	270 ^L	270 ^L	(280) ^L	280 ^L	260	260	280	260	260	280	290
16	300	300	320	330	330	310	270	250	250	270 ^L	(270) ^L	270	290 ^L	L	L	L	270 ^L	260	250	250	280	280	250	270
17	330	350	340	300	330	330 ^F	270	250	250	(270) ^L	290 ^L	290 ^L	L	L	270 ^L	270	270	270	250	250	270	260	290	310
18	300	300	290	290	280	290	250	250	260 ^L	260 ^L	260	280	L	L	L	L	L	270	250	240	280	290	290	290
19	290	280	330	350	330	290	260	250	260 ^L	260 ^L	270 ^L	270	270	300 ^L	300 ^L	300 ^L	270	260	250	250	290	290	310	310
20	310	300	320	340	350	350	280	250	260 ^L	280	260 ^L	280	270 ^L	L	L	L	310	290	250	250	250	250	270	320
21	340	340	310	310	300	310	270	250	250	M	L	L	L	L	L	L	290	280	260	260	240	250	300	310
22	360	390	370	360	350	410	260	240	260	250 ^H	(270) ^L	290	L	L	L	L	L	270	280	280	240	250	300	310
23	360	350	300	300	340	340	260	250	250	260	L	L	L	L	L	L	L	280	280	260	250	240	300	310
24	310	300	290	310	290	310	250	250	250	260	260	(280) ^L	290 ^L	290 ^L	270	L	L	270	250	260	280	270	360	350
25	410 ^A	350 ^A	340	410	390	320	290	260	350 ^L	300	290 ^L	L	L	L	L	L	L	270	270	270	280	280	310	310
26	350	340	320	320	350	350	270	250	280 ^L	260	260	C	L	280 ^H	260 ^H	(260) ^L	260	280	260	270	300	270	300	310
27	300	370	300	280	310	330	270	260	260	260	270 ^A	(260) ^L	260 ^{LH}	L	280 ^L	(270) ^L	260	260	260	250	260	300	350	310
28	300	310	340	320	340	430	270	250	250	270 ^L	260	260	LH	290 ^H	L	L	290 ^L	270	260	240	280	300	310	350
29	350	340	300	260	310	340	250	250	L	LH	280 ^H	280 ^H	280	290	280	290	270	270	270	280	300	320	350	
30	350	340	300	290	310	350	250	250	(260) ^{LH}	260	270 ^L	260	260	260	280 ^L	(280) ^L	270	290	230 ^L	220	260	250	310	310
31	310	300	300	290	300	400 ^F	290	260	(270) ^L	280 ^L	280 ^{LH}	280 ^L	260	260	260 ^H	260 ^H	260	270	270	250	290	330	350	360
Mean Value	340	340	320	310	320	330	280	250	260	280	280	280	300	300	280	280	270	270	260	260	270	290	310	320
Median Value	330	340	310	300	310	320	270	250	250	260	270	280	280	290	280	280	260	270	260	250	280	290	310	310
Count	31	31	31	31	31	31	31	31	29	29	29	26	22	22	21	21	21	26	31	31	31	31	31	31

RF2

Swamp 0.85 Mc to 2.20 Mc in 2 min

Manual Automatic

IONOSPHERIC DATA

Akita

Mar. 1956

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	2.5Y	2.6	2.5	2.5	2.5F	2.4Y	2.6Y	G	G	G	C	4.7	G	5.1	4.1 ^{SC}	C	C	2.9	2.4	2.5	2.5	2.5	2.5	2.4	
2	3.1	2.5	3.0	2.8	2.0Y	2.6F	E	G	4.5	G	G	G	4.3	4.2	G	4.3	3.5	7.0	4.6	4.5	4.0	3.0	2.5	2.4Y	
3	2.5	3.2F	3.2	3.1F	2.6F	2.6F	E	G	G	4.4	6.2	4.5	5.5	G	5.0	4.5	3.5	3.6	3.2	2.4Y	2.5Y	E	E	E	
4	2.2	3.0	2.6	2.7	2.5	2.5	2.4Y	G	G	G	G	G	G	G	G	G	G	3.7	4.5	3.2	2.2	2.1	2.4Y	E	
5	E	E	E	2.5Y	2.0Y	2.1	2.4	G	G	G	G	G	G	G	G	G	3.5	G	E	2.2	2.3	2.6	3.0	E	
6	E	E	E	2.4F	2.7F	2.5	E	G	G	G	G	G	5.2	G	G	G	G	G	E	2.0Y	E	E	E	E	
7	2.7Y	E	2.5Y	E	E	E	E	G	G	G	4.6	G	G	4.3	G	3.5	3.5	G	3.1F	2.4	E	E	E	E	
8	3.0F	3.6Y	4.5F	3.1F	2.6F	2.5	2.6F	G	G	G	G	G	G	G	G	G	G	G	2.4Y	E	3.7	2.7	6.0	3.0	
9	4.4Y	2.4Y	2.7	2.9	3.1	2.6F	2.4Y	G	G	4.5	G	G	G	G	G	G	G	3.8	4.5	2.5	2.6	E	2.7Y	2.2Y	
10	E	6.4Y	3.8	2.5	2.5	E	E	G	G	4.4	G	B	G	G	B	3.6	4.5	4.5	4.1	4.5	6.6Y	2.6Y	E	E	
11	2.5Y	E	2.7Y	2.4Y	2.5F	2.5	3.2	2.8	G	4.2	G	G	G	G	G	G	G	G	E	E	E	2.2	2.7	4.5	
12	2.6F	2.6F	2.5F	2.5Y	E	E	2.4Y	2.2	G	G	G	G	G	G	G	G	G	G	2.5Y	E	E	E	2.4Y	E	
13	E	2.4Y	E	2.5Y	2.4Y	2.6	G	G	G	G	G	G	G	G	G	C	G	G	2.4	3.0	2.2	2.1	2.7	2.4Y	
14	E	2.4Y	E	2.5Y	2.4Y	3.1Y	G	G	G	G	G	G	G	G	G	G	G	G	2.1	2.4Y	E	E	2.2	2.2	
15	2.2	2.5Y	2.5Y	2.5Y	2.5	2.5Y	2.4	G	G	C	G	G	G	G	G	G	G	G	3.1	3.1	2.5	2.1	2.0	E	E
16	E	E	2.6Y	E	E	2.5	2.4	G	G	G	G	G	G	G	G	G	G	G	2.9	E	E	2.5Y	E	E	
17	E	2.6	E	2.5	E	2.2Y	2.5Y	G	G	G	G	G	G	G	G	G	G	3.1	2.9	2.5	2.3Y	2.1	E	E	
18	E	E	E	E	2.9Y	E	G	G	G	G	G	G	G	G	G	G	G	G	G	2.4Y	E	E	E	E	
19	E	E	E	E	2.5Y	2.0Y	G	G	G	4.4	G	G	G	G	G	G	G	2.4Y	3.0Y	E	E	E	E	E	
20	E	E	2.3	2.5	2.5	2.5	G	G	G	G	G	G	B	G	G	G	G	G	E	E	E	E	E	E	
21	E	E	E	2.5Y	E	E	2.4Y	G	G	M	G	G	G	G	G	G	G	G	3.0	2.5	E	E	2.4	2.1	
22	2.0	E	2.2	2.3Y	E	E	2.4	G	G	G	G	G	G	G	3.8	G	G	G	2.1	2.5	2.4	E	E	E	
23	E	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	3.7	3.6	3.2	2.3	2.5	2.2	3.5	
24	2.6	2.5	2.5	2.5	E	E	3.1	G	G	5.0	6.0	5.3	4.2	4.0	G	G	G	G	E	2.4	3.7	3.1	4.7	3.0	
25	4.7	3.7	E	E	E	E	E	G	G	G	G	G	G	G	G	3.7	G	G	2.1	2.6	2.6	2.7	2.9	3.1	
26	3.2	2.5F	2.9F	2.8F	2.5F	E	G	G	4.8	4.8	4.9	C	G	4.3	G	G	3.3	3.1	3.0	3.0	3.3	2.4	2.3	2.2Y	
27	2.6	2.4	2.4	2.4	2.4Y	2.2Y	2.2	3.1Y	G	G	6.8	G	G	G	G	G	G	G	2.1	2.2	2.2Y	2.0	4.7	2.4	
28	2.6	E	E	E	E	2.3Y	G	3.1Y	G	4.7	G	G	G	G	G	G	G	3.8	3.1	2.6Y	2.3Y	E	E	3.1	
29	4.1	3.5	4.0	3.0	2.9F	2.4Y	2.2Y	G	G	G	G	G	G	G	G	G	G	2.4Y	2.6	2.5	3.5	2.5	E	2.7	
30	2.4	2.4	2.4	2.3	2.2	2.1	2.4Y	G	G	G	G	G	G	G	G	G	G	G	G	2.1	3.1	2.9	2.5	3.0	2.4Y
31	3.2Y	2.3	2.4Y	2.5	2.3	2.1	3.1Y	G	G	G	G	G	4.1	G	G	4.9	G	G	2.4	2.4	E	E	2.1Y	E	
Mean Value	2.9	3.0	3.1	2.6	2.5	2.3	2.5	2.8	4.7	4.6	5.7	4.8	4.7	4.4	4.4	4.1	3.6	3.5	3.6	2.7	2.9	2.4	3.0	2.7	
Median Value	2.4	2.4	2.4	2.5	2.4	2.2	2.2	2.2	G	G	G	G	G	G	G	G	G	G	G	2.5	2.5	2.3	2.0	2.2	2.2
Count	31	31	31	31	31	31	31	31	31	29	30	30	31	31	31	30	30	30	31	31	31	31	31	31	31

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. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

138° E Mean Time

foF2

Mar. 1956

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	5.4	5.5	5.0	5.1 ^F	5.0	5.0	4.9	8.5	10.1	11.0	11.2	11.6	11.4	13.0 ^H	12.0 ^H	11.5	11.4	10.2	8.5	7.0	6.5	4.8	5.0	4.7
2	5.1	4.9	4.8	4.7	4.5 ^F	4.7 ^F	5.5	9.4	10.9	10.2	10.5	13.0 ^H	12.3 ^H	12.6 ^H	12.9 ^H	11.8 ^F	10.8	10.5	9.7	9.5	7.0	5.6	4.5	5.0
3	4.9 ^F	4.8 ^F	4.8 ^F	5.0 ^F	5.1 ^F	(5.4) ^F	6.0 ^F	9.5	10.4	11.0	13.1	13.4 ^K	12.4	13.5 ^F	13.0	11.6	(11.8) ^F	12.1	10.3	10.2 ^K	>9.0 ^R	8 ^K	8 ^K	8.6 ^K
4	7.0 ^K	7.2 ^K	7.0 ^K	4.4 ^K	4.0 ^K	3.5 ^K	4.0 ^K	6.1 ^K	5.2 ^K	6 ^K	5.5 ^K	5.9 ^K	5.5 ^K	6.4 ^K	6.3 ^K	7.4 ^K	7.0 ^K	6.6 ^K	5.9 ^K	4.4 ^K	4.2 ^K	4.0 ^K	3.8 ^K	3.5 ^K
5	3.8 ^K	3.8 ^K	3.8 ^K	3.8 ^K	3.2 ^K	3.2 ^K	3.9 ^K	7.4 ^K	9.2	9.1	9.6	(11.2) ^H	11.0	11.0 ^H	10.0	9.7	9.6	9.6	8.4	6.0	5.0	4.7	4.8	6.0
6	4.5	4.6	4.5	4.6	4.5	4.4	4.9	9.0	9.0	9.0	11.5	12.4	(12.0)	12.3 ^H	11.7 ^F	(12.0) ^K	12.4	10.0	8.7	6.9	6.5	6.1	6.1	6.0
7	5.6	5.5	5.4	5.1	4.8	4.0	4.9	8.0	9.2	12.0	13.0 ^H	13.0 ^H	12.9 ^H	12.8 ^H	12.2	11.9	11.0	9.8	8.4	6.5	6.4	6.4	5.9	5.7
8	5.4	5.2	5.8	6.0	4.5	4.0	5.2	7.4	9.2	10.2	11.8	12.2 ^H	12.8	12.1	12.2 ^H	12.3	11.8	10.2	9.7	7.6	6.5	6.2	6.0	6.0
9	5.6	5.5	5.6	5.9	5.3	4.0	5.3	8.0	10.1	10.3 ^F	10.9	12.3 ^H	12.4 ^H	12.0	11.8	11.1	10.9	10.2	9.3	8.5	7.9	7.4	6.6	6.4
10	6.3	6.1	5.9	6.2	4.2	3.9	5.4	8.2	9.5	11.0	11.9	11.9 ^F	12.3	11.5	8	10.1	10.5	10.2	8.6	7.4	6.9	6.6	6.5	6.9
11	6.6	6.5	6.4	6.0	5.5	5.9	6.2	9.5	(11.4) ^F	(12.5) ^F	12.4 ^F	(12.3) ^H	12.3	12.5	12.5	11.8	10.9	9.5	9.5	8.8	7.2	5.9	5.9	5.9
12	6.2	6.2	5.8	5.4	5.3	4.9	6.2	8.7	10.5	12.5	10.5 ^F	11.4 ^F	12.3	12.5	12.5	11.8	10.9	9.5	9.5	8.8	7.2	5.9	5.9	5.9
13	7.0	C	C	C	C	C	C	9.6	11.0	(11.0) ^K	11.0	11.3 ^H	12.3	(12.0) ^K	11.7	11.5 ^H	11.7 ^F	10.6	C	C	C	C	C	C
14	6.5	6.6	6.7	6.3	5.8	5.6	(7.4) ^K	9.1	10.8	C	C	C	>11.0 ^K	12.0 ^H	12.2 ^H	12.0 ^H	11.3	(11.0) ^F	(10.9) ^F	9.3	8.8	8.2	(7.2) ^F	6.3 ^F
15	5.9	5.8	6.2	6.3	5.0	4.9	6.8	9.2	11.0 ^F	12.5 ^H	13.6 ^H	13.9 ^H	13.6 ^F	12.9 ^H	12.0 ^H	11.8	11.0	11.0	10.0	8.9	8.6	7.5	7.1	6.4
16	6.0	6.1	6.0	5.8	5.5	5.5	7.5	10.8	11.8 ^F	11.0 ^H	12.0	13.0 ^H	12.7	>11.0 ^T	>11.0 ^T	(11.8) ^F	(11.4) ^F	11.0 ^F	10.8	9.0	8.0	7.2	7.2	6.5
17	5.9	5.7	5.9	5.8	5.4	5.5	8.1	10.8 ^F	10.3	11.0	(11.3) ^F	>10.9 ^T	(13.2)	11.6 ^H	>10.8 ^T	>10.8 ^T	>10.8 ^T	10.7	10.8	9.0	7.9	7.5	7.1	7.0
18	7.2 ^F	7.3	7.0	6.9	5.9	5.5	7.8	10.0	10.0	10.8 ^H	11.0	(11.3) ^F	>10.8 ^T	>10.8 ^T	(11.2) ^F	(11.2) ^F	>10.8 ^T	(11.4) ^F	10.6	8.4	8.0	8.5	8.4	8.2
19	8.0	7.3	6.6	6.3	6.3	6.8	8.4	9.9	11.0	11.1 ^F	>10.8 ^T	>9.0 ^T	13.6 ^H	13.8 ^H	13.7 ^H	13.7 ^H	13.1	12.4	10.5 ^F	8.6	7.7	7.5	7.5	7.6
20	7.9	7.4	7.0	6.6	6.5	6.8	8.7	11.4	11.6	12.3	13.5	13.2	13.6	13.9 ^H	13.7 ^H	14.0	12.6	13.4	11.0	9.3	9.0	8.3	6.6	6.7
21	6.6	6.6	6.5	6.0	6.0	5.9	8.1	10.2	10.8	10.2 ^H	11.5 ^H	12.6 ^H	12.5	13.0 ^H	13.0 ^H	13.2 ^H	12.4	12.3	11.7	9.2	7.2	7.0	7.1	6.3
22	6.4	6.5	6.5	6.3	5.9	6.0	9.1	10.1	9.6	9.6 ^H	12.8 ^H	14.0	13.9	13.4 ^H	13.1	13.5	12.5	12.0	10.1	9.4	8.7	8.1	8.0	8.4
23	7.9	8.4	8.5	7.4	7.5	7.8	9.9	12.0	11.5	11.2	12.1 ^H	12.3 ^H	13.3 ^H	12.9	12.7 ^H	13.4 ^H	12.6	12.2	12.1	9.2	7.6	7.8	8.0	8.4
24	8.1	7.8	7.2	6.7	6.3	6.4	8.6	11.8	12.5	14.0	13.5	13.6	14.0 ^H	14.5	14.0	13.3 ^H	13.1	13.2	13.7	11.8 ^F	9.2	8.1	8.1	8.4
25	8.5	8.1	7.5	6.5	6.8	7.4	8.0	8.1	9.7 ^H	10.9	11.5	12.0	12.5	13.0 ^F	13.0	12.1	11.8	11.5 ^F	11.3	9.7	8.5	7.7	7.1	7.3
26	6.9	6.9	7.0	6.4	6.4	6.4	8.5	10.3	10.9 ^F	10.9	11.5	13.3 ^H	13.4 ^H	(13.2) ^H	13.2 ^H	13.4 ^H	13.5	12.7	12.3	9.6	9.0	8.8	7.9	8.6
27	M	M	7.7	6.7	6.3	6.4	9.1	11.9	12.5	11.7	10.8	12.2 ^H	12.5	13.2 ^H	13.2	13.0	12.5	12.3	11.3	9.0	7.1	7.1	7.1	6.7
28	6.6	6.5	6.5	5.8	5.8	5.5	8.0	11.5	11.0	11.9	12.6	12.7	12.5 ^H	13.7 ^H	13.9 ^H	13.1	12.5	12.5	12.1	9.2	7.9	7.9	8.0	7.4
29	7.2 ^F	7.5	7.5	6.7	6.2	5.9	7.5	10.7	11.9	11.7	12.2 ^H	13.0	12.4 ^F	12.8 ^H	12.5	12.4	12.0	10.4	10.6	8.7	6.5	6.8	7.3	7.4 ^F
30	7.5	7.6	7.3	6.5	6.0	6.2	8.1	10.5	10.6	12.3	12.8	13.1 ^H	13.7 ^H	13.2 ^H	13.3	12.7	12.7 ^H	12.3	10.9 ^F	(9.4) ^F	8.0	7.5 ^F	7.3	7.2
31	7.0	6.7	6.2	6.1	5.5	5.1	7.2	10.9 ^F	10.0	10.8 ^H	12.0	12.6	12.0 ^H	12.5	13.0 ^H	12.5	12.5	11.5	9.8	8.5	7.7	7.8	8.0	8.0
Mean Value	6.4	6.4	6.3	5.9	5.5	5.4	7.0	9.6	10.4	11.2	11.6	12.3	12.5	12.6	12.3	12.1	11.7	11.1	10.2	8.6	7.5	7.1	6.8	6.8
Median Value	6.6	6.5	6.4	6.0	5.5	5.5	7.4	9.6	10.6	11.0	11.8	12.6	12.5	12.6	12.0	11.8	11.8	11.0	10.4	9.0	7.8	7.5	7.1	6.9
Count	30	29	30	30	30	30	30	31	31	30	29	28	29	29	28	30	29	31	30	30	30	29	29	31

foF2

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 1

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

Lat. 35° 42.4' N
Long. 139° 29.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956

ApF2

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	350	370	370	400 ^F	340	280	290	270	270	310	280	300	330	350 ^H	320 ^H	310	300	280	320	310	310	350	390	390
2	360	330	350	370	380	370 ^F	320	260	260	270	320	300 ^H	(330) ^H	(320) ^H	(300) ^J	290 ^F	300	300	320	290	290	350	470	390
3	420 ^F	380 ^F	360 ^F	350 ^F	350 ^F	(370) ^F	320 ^F	270	270	310	310	310	340	300 ^F	310	330	(330) ^F	320	350	380 ^K	B ^K	B ^K	B ^K	360 ^K
4	440 ^K	420 ^K	340 ^K	280 ^K	470 ^K	480 ^K	390 ^K	380 ^K	320 ^K	G ^K	U ^K	A ^K	U ^K	350 ^K	340 ^K	320 ^K	310 ^K	290 ^K	280 ^K	320 ^K	360 ^K	350 ^K	390 ^K	450 ^K
5	410 ^K	400 ^K	380 ^K	310 ^K	360 ^K	400 ^K	340 ^K	280 ^K	270	270	(300) ^B	(300) ^B	290	310 ^H	260	270	300	270	280	280	320	360	380	370
6	410	370	380	370	380	390	320	270	260	280	300	320	(290) ^F	320 ^F	320 ^F	330	300	290	300	310	330	350	360	340
7	350	370	340	330	300	340	330	270	280	330	310 ^H	320 ^F	320 ^F	310 ^F	300	310	300	280	290	310	340	350	350	370
8	380	390	350	290	280	380	320	260	270	300	330	320 ^H	310	320	340 ^H	310	310	290	290	290	310	360	360	340
9	350	360	330	330	290	220	310	270	290	290 ^F	310	340 ^H	320 ^H	330	360	340	320	290	290	300	340	320	340	350
10	330	350	330	290	350	360	310	270	280	300	310	(320) ^F	320	330	B	320	330	290	310	360	360	390	380	360
11	350	360	350	390	430	390	370	300	(340) ^F	(290) ^B	(320) ^B	(330) ^H	350	350	340	330	350	310	320	330	320	400	390	410
12	400	360	350	390	350	370	320	280	290	330	340 ^F	(340) ^C	340	(340) ^C	350	350 ^H	320 ^F	330	C	C	C	C	C	(390) ^F
13	360	C	C	C	C	C	C	330	300	(300) ^C	310	330 ^F	340 ^H	350	330	350 ^H	330	330	320	350	370	340	340	370 ^F
14	360	380	360	330	370	360	(320) ^F	280	310	C	C	C	C	330	350 ^H	350 ^H	330	(320) ^F	(310) ^B	310	350	330	(310) ^F	310
15	420	460	380	310	350	370	310	270	310 ^F	330 ^H	320 ^H	340 ^F	340 ^F	340 ^H	360 ^H	320 ^H	350	330	320	340	310	340	350	370
16	370	380	370	380	410	370	310	280	280 ^F	320 ^H	330	340 ^H	350	T	T	(350) ^F	(340) ^F	320 ^F	330	320	350	340	340	340
17	400	410	390	360	400	380	290	280 ^F	290	320	(310) ^F	T	(350) ^F	(330) ^B	T	T	T	300	320	300	340	350	360	360
18	350 ^F	350	330	320	310	330	300	260	280	310 ^H	320	(340) ^F	T	T	(330) ^F	(330) ^F	T	(300) ^F	300	350	380	390	360	370
19	350	330	360	400	400	350	300	280	290	290 ^F	T	T	360 ^H	370 ^H	360 ^H	360 ^H	350	330	310 ^F	330	360	370	370	380
20	370	350	390	400	430	420	320	300	290	330	340	360	380	370 ^H	350 ^H	340	330	340	320	320	340	340	360	400
21	380	380	360	380	380	370	300	270	290	310 ^H	(340) ^H	360 ^H	360	370 ^H	370 ^H	350 ^H	340	320	310	310	350	380	370	370
22	430	450	440	410	430	480	300	240	290	320 ^H	340 ^H	340	370	390 ^H	370	380	360	360	330	320	390	420	400	410
23	450	420	360	350	420	420	280	300	300	300	370 ^H	360 ^H	360 ^H	350	370 ^H	360 ^H	330	350	320	320	390	420	400	380
24	350	350	340	350	370	390	320	300	290	320	340	350	350 ^F	360	330	360 ^H	340	340	300	330 ^F	310	380	450	430
25	410	400	420	480	460	390	320	300	330 ^F	300	360	360	360	350 ^F	330	350	350	350 ^F	330	320	350	380	380	380
26	400	410	370	380	410	410	310	380	300 ^F	310	330	360 ^H	340 ^H	(350) ^H	360 ^H	350 ^H	330	320	310	310	380	370	390	380
27	M	M	360	360	380	370	310	310	280	270	340	350 ^H	340	360 ^H	360	350	330	320	300	300	340	370	380	360
28	360	390	390	380	410	470	330	290	310	320	330	370	360 ^H	360 ^H	360 ^H	350	350	340	310	310	380	400	380	420
29	400 ^F	420	350	340	400	410	330	320	340	330	320 ^H	350	(360) ^F	360 ^H	320	340	340	320	300	350	330	390	390	410 ^F
30	410	390	340	370	380	410	300	280	290	320	310	340 ^H	350 ^H	360 ^H	350	350	340 ^H	330	290 ^F	(320) ^B	360	330 ^F	360	370
31	360	360	370	370	380	460	330	280 ^F	270	340 ^H	320	320	350 ^H	370 ^H	370	370 ^H	340	330	310	380	380	400	430	430
Mean Value	380	370	360		400	390	320	290	290	310	320	340	340		340	340	330	320	310	320	340	360	380	380
Median Value	380	380	360	360	380	380	320	280	290	310	320	340	340	350	340	340	330	320	310	320	350	360	380	370
Count	30	29	30	30	30	30	28	31	31	30	28	27	28	29	28	30	29	31	30	30	29	29	29	31

ApF2

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

K 2

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956

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	290	260	290	350	280	230	260	230	230	240	240	260	260	250H	270H	260	250	230	210	240	250	280	300A	300
2	290	270	260	270	270	300	260	230	230	230	230	270F	250H	260H	270	280A	230	220	230	240	210	230	290	300
3	300	300	280	280	260	280F	260	240	230	230	240	260	260	260	250	260	260	240	220	200K	210K	210K	210K	250K
4	310K	310K	280K	230K	360K	390K	330K	350K	320K	G	K 590K	360K	340K	350K	330K	300K	280K	260K	230K	250K	290K	300K	280K	400K
5	350K	330K	280K	240K	210K	310K	280K	240K	240	220	240	280	250	240H	240	250	240	230	220	210	250	270	300	300
6	350	300	290	270	280	300	260	230	230	230L	260	260	260	250L	260	250L	240	240	220	230	260	260	270	260
7	260	280	250	250	240	270	270	230	240	250H	260	250H	280	260	260	250	240	240	210	230	270	260	270	300
8	310	320	270	250	220	280	260	220	230	250	250	260H	260	260	250H	260	240	240	230	220	230	250	280	290
9	280	270	290	250	220	230	250	230	250	250	250	250H	260	260	250L	260L	250	240	230	230	250	220	250	270
10	270	270	260	240	200	270	260	230	240	250	260	280	260	270	280	270	260	240	230	280A	300A	350	300	280
11	270	270	260	260	300	290	270	240	260	250	260H	260	260	260H	260	250	240	250	250	250	250	230	300	310
12	310	280	260	250	250	260	260	240	240	260	270L	C	250	250L	250L	260H	260	240	C	C	C	C	C	290
13	280	C	C	C	C	C	C	330	230	240L	240	250H	250H	270	270	250H	260	240	C	C	C	C	C	290
14	280	280	270	250	240	250	240L	240	230	C	C	C	280	270	260H	250H	260L	250	220	220	260	260	250	270A
15	330	350	300	230	230	250	250	230	250	250H	240H	270	260H	250H	250H	250H	250	250	250	250	250	250	250	260
16	280	280	270	270	300	280	250	230	230	LH	260	240H	240	270	250	260	250	240	230	230	250	250	250	250
17	280	310	300	250	270	300	250	230	230	240L	250	250	250H	270H	290	280	260	250	240	230	230	240	270	290
18	270	260	250	250	220	250	240	230	230	240H	240	250L	250L	260	260L	250	260	250	230	230	230	A	270	280
19	270	250	270	280	280	260	240	230	240	250	260H	270	LH	260H	270H	LH	250	250	230	230	250	260	270	300
20	280	270	280	290	310	330	250	230	250	250L	250	250L	250L	250H	260H	280	250	240	230	230	230	230	250	290
21	290	300	270	270	280	270	250	230	240	250H	240H	280	260H	250H	260H	280	260H	260	240	230	270A	260	290	290
22	330	340	330	310	270	370	250	220	230	260H	250H	280	270	250H	260L	260	260	250	240	250	240	270	320	310
23	310	320	270	240	290	320	240	230	240	230	250H	250H	260L	260L	260L	260L	260	250	260	240A	250A	240	290	290
24	270	270	250	240	240	260	240	250	240	240	240	240	LH	260	L	240H	250	250	250	250	250	250	320	350
25	310	310	290	350	330	320	240	250	240H	260	250L	250L	250L	250L	260L	260L	260	250	230	240	240	250	310	280
26	280	310	280	260	300	320	250	220	240	250	250H	260H	260H	260H	260H	270H	270	260	240	230	260	270	260	290
27	M	M	270	240	260	300	250	230	240	240	230	240H	260	276H	260L	270	260	250	230	230	230	270	300	300A
28	300A	300	290	270	290	370	250	230	230	250L	250L	250L	260H	260H	250H	250	250	250	240	230	250	280	300	310
29	320	300	260	220	290	270	240	240	250L	260	250H	250	260L	LH	280	240	240	250	260	230	230	300	300	310
30	320	300	250	230	260	310	230	230	230	260L	250	240H	LH	250H	270L	250	250H	260	220	240	300	280	270	280
31	270	270	260	260	260	370	260	240	240	240H	260L	260	260H	260H	260L	260H	250	250	230	230	260	310	330	330
Mean Value	290	300	270	260	270	290	260	240	240	250	260	260	260	260	260	260	250	250	240	240	250	270	280	290
Median Value	290	300	270	250	270	280	250	230	240	250	250	260	260	260	260	260	250	250	240	230	250	260	280	290
Count	30	29	30	30	30	30	31	31	31	29	29	29	28	30	29	29	31	31	30	30	29	29	29	31

R'F2

Manual Automatic

Sweep 1.0 Mc to 17.2 Mc in 2 min

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

foF1

Mar. 1956

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								Q	L	A	5.2	A	A	A	L	4.8	A	Q						
2								Q	L	L	4.8	A	A	A	L	A	3.4							
3								L	Q	A	L	5.2	5.0	4.5	4.5	L	A	Q						
4								3.7	4.0	4.5	4.7	4.8	4.8	5.0	4.7	4.6	A	A						
5								Q	L	4.9	4.9	5.2	5.0	L	4.8	4.4	L	Q						
6								Q	Q	L	L	5.0	4.9	L	L	C	Q	Q						
7								Q	L	L	L	5.0	L	5.5	L	4.0	Q	Q						
8								Q	Q	4.8	4.6	4.8	4.9	4.9	4.7	4.7	Q	Q						
9								Q	4.6	L	4.6	L	L	L	L	L	L	Q						
10								Q	Q	4.7	L	5.5	L	5.0	B	L	A	Q						
11								Q	L	L	4.8	L	5.4	L	L	L	L	Q						
12								Q	L	L	C	C	4.6	C	L	L	L	L						
13								Q	Q	C	L	L	L	4.8	L	L	L	Q						
14								Q	Q	C	C	C	5.8	5.2	4.6	4.0	L	Q						
15								Q	L	L	L	L	6.0	L	L	L	Q	Q						
16								L	L	L	5.0	4.6	L	5.2	L	L	L	Q						
17								Q	Q	L	4.7	4.8	4.9	5.0	5.0	5.6	L	Q						
18								Q	Q	L	4.8	5.0	L	5.0	L	L	4.0	3.5						
19								Q	Q	4.0	L	5.0	5.5	L	L	L	L	Q						
20								Q	Q	L	L	4.8	L	L	4.8	5.0	4.2	Q						
21								Q	3.3	4.8	4.7	L	L	5.7	4.8	Q	4.5	Q						
22								Q	Q	L	4.9	5.2	5.0	L	L	L	L	Q						
23								Q	3.3	4.9	4.8	4.8	4.9	L	L	L	Q	Q						
24								Q	L	L	4.9	L	L	4.9	L	L	L	A	Q					
25								Q	Q	Q	5.0	L	5.0	L	4.8	4.8	Q	Q						
26								Q	L	L	4.8	4.9	A	5.5	M	L	A	A						
27								Q	Q	L	L	L	4.8	5.1	L	L	L	L						
28								Q	Q	Q	L	L	L	L	L	Q	Q	Q						
29								Q	Q	L	L	A	4.8	L	5.6	Q	Q	Q						
30								Q	Q	L	L	L	L	L	L	L	Q	Q						
31								Q	Q	L	L	L	5.0	L	L	L	Q	Q						
Mean Value								3.4	4.5	4.8	4.8	5.0	5.2	5.0	5.0	4.7	4.2	3.5						
Minimum Value								3.3	4.6	4.8	4.8	5.0	5.0	5.0	4.8	4.8	4.1	3.5						
Count								3	5	8	16	17	17	13	10	10	4	1						

foF1

Sweep 1.0 Mc to 17.2 Mc in 3 min

Manual

Automatic

IONOSPHERIC DATA

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

RFI

Mar. 1956

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								Q	Q	230	[230] ^A	230	A	A	250	240	A	Q						
2								Q	240	230	230	A	A	A	260	A	230							
3								230	Q	A	230	230	220	230	220	230	A	Q						
4								280	270 ^H	240 ^H	230 ^H	[240] ^A	260 ^H	260	260	A	A							
5								Q	240	230	220	200	230	230	230	220	230	Q						
6								Q	Q	230	230	230	230	240	230	C	Q	Q						
7								Q	230	220	230	230	220	220	230	210	Q	Q						
8								Q	Q	230	230	220	230	230	230	240	Q	Q						
9								Q	230	220	230	230	230	230	230	240	230	Q						
10								Q	Q	230	240	230	230	220	B	260	A	Q						
11								Q	250	250	230	210	240	240	250	230	230	Q						
12								Q	240	250	C	C	220	[220] ^C	230	240	250							
13								Q	Q	C	C	210	230	210	230	240	240	Q						
14								Q	Q	C	C	C	230	230	230	230	250	Q						
15								Q	230	230	230	220	230	240	220	250	Q	Q						
16								Q	240	230	230	210	200	220	230	230	240	Q						
17								Q	Q	220	220	230	220	200	230	220	250	Q						
18								Q	Q	230	210	220	230	230	240	250	230	260						
19								Q	230	230	220	230	200	220	230	240	240	Q						
20								Q	240	230	230	230	230	230	240	230	240	Q						
21								Q	250	230	230	230	230	230	Q	Q	240	Q						
22								Q	Q	230	230	230	210	230	230	240	240	Q						
23								Q	240	230	230	230	230	250	240	250	Q	Q						
24								Q	250	240	230	210	210	230	240	230	240	A	Q					
25								Q	Q	240	230	220	220	210	230	230	Q	Q						
26								Q	230	230	230	A	210	[230] ^M	250	A	A	Q						
27								Q	240	230	220	200	250 ^A	230	240	230	250	250						
28								Q	Q	230	230	220	220	220	230	Q	Q	Q						
29								Q	240	240	[230] ^A	220	230	230	230	Q	Q	Q						
30								Q	Q	230	240	250	210	250	260	250	Q	Q						
31								Q	Q	220	250	250	230	230	260	230	Q	Q						
Mean								250	240	230	230	220	230	230	240	240	240	260						
Median								240	240	230	230	230	230	230	230	240	240	260						
Value								7	17	28	29	27	29	29	29	29	240	16						
Count																								

RFI

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

foE

Mar. 1956

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								2.2	3.1	3.3	3.5	3.5	3.6	3.6	3.4	3.2	3.2	A						
2								2.0	2.6	3.0	[3.2] ^A	3.5	3.3	A	A	A	2.8							
3								2.1	3.0	3.3	3.3	3.5	[3.4] ^A	3.4	A	A	A	A						
4								2.0	2.6	3.0	3.3	3.4	3.5	3.4	3.5	3.1	2.7	A						
5								1.9	2.8	3.2 ^H	3.4 ^A	3.6	3.5	3.7	3.5	3.3	A	1.6						
6								1.5	2.7	3.1	3.3	3.6	3.7	3.5	3.2	[3.0] ^C	2.7	A						
7								2.2	2.7	3.3	3.3	3.3	[3.5] ^A	3.7	A	A	2.9	B						
8								2.4	3.0	3.2 ^H	3.4	3.4	[3.4] ^B	3.9	3.8	A	[3.0] ^A	B						
9								2.2	2.9	3.2	3.4	A	A	3.8	[3.6] ^A	3.4	[2.9] ^A	A						
10							1.7	2.5	3.1	3.5	A	B	A	A	B	B	A	B						
11							B	B	3.0 ^H	3.3	A	A	3.8	3.9	3.7	3.3	2.9	B						
12								2.4	3.1	B	C	C	3.9	[3.8] ^C	3.7	A	C							
13								C	2.1	C	C	3.9	3.7	3.7	[3.4] ^B	2.8	B							
14								2.5	3.0	C	C	C	3.8	3.8	3.8	3.5	3.0	2.4						
15								2.6	3.1	3.2	3.7	3.8	3.9	3.9	3.8	3.7	3.3	2.4						
16								1.9	2.6	3.2	3.5	3.7	3.5	[3.8] ^B	3.8	3.4	3.0	2.5						
17								1.7	2.6	3.2	3.3	[3.5] ^A	3.7	3.8	3.6	[3.3] ^A	3.0	A						
18								1.6	2.5	3.0	3.4	3.6	[3.7] ^A	3.8	3.8	3.6	3.1	2.3						
19								1.9	2.7	3.3	3.4	3.6	3.7	3.6	[3.6] ^B	3.7	3.6	3.1	2.5					
20								1.9	2.5	3.2	3.6	3.6	A	B	[3.8] ^B	3.6	3.6	3.2	2.4					
21							B	2.5	3.2	3.6	3.7	3.8	[3.8] ^A	3.9	3.5	[3.1] ^A	[2.7] ^A	2.5 ^A						
22							B	3.0	3.2	3.4	[3.6] ^A	3.7	A	A	A	3.2	2.9	2.4						
23							B	2.5	3.2	3.5	3.7	A	B	B	3.4	3.4	3.2	2.5						
24							A	2.6	3.2	3.4	[3.4] ^B	3.5	A	A	A	A	3.0	A	A					
25							2.0	2.8	3.1	3.3	3.3	B	A	A	A	A	A	2.5	1.6					
26							1.8 ^A	2.7	3.4	3.3	3.5	A	A	M	A	A	A	A						
27							B	2.7	3.2	[3.2] ^A	3.6	A	A	A	A	A	3.0	2.4						
28							1.9	2.7	3.2	3.5	A	A	3.7	3.7	3.7 ^H	3.5	3.2	2.5						
29							2.2	2.9	3.2	3.5	3.7	3.6	3.7	3.6	3.7	3.2	3.0	2.5						
30							1.5	2.5	3.1	3.4	3.5	3.5	A	A	A	A	3.2	2.5						
31							2.2 ^A	2.9	3.3	3.4	[3.6] ^A	3.7	3.6	3.7	3.5 ^B	[3.2] ^A	3.0	2.4						
Mean Value							1.8	2.5	3.0	3.3	3.5	3.6	3.6	3.7	3.6	3.4	3.0	2.3						
Median Value							1.9	2.5	3.0	3.3	3.5	3.6	3.7	3.8	3.7	3.4	3.0	2.4						
Count							12	29	31	28	25	20	22	22	21	20	25	16						

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° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956

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								130	110	110	110	110	110	110	110	120	120	A							
2								120	110	110	(110) ^A	110	110	A	A	A	130 ^A								
3								120	110	110	110	120	(120) ^A	110	A	A	A	A							
4								120	110	110	110	110	110	110	110	110	110	A							
5								110	110	110 ^H	A	B	B	B	130 ^B	110	A	120							
6								120	110	110	110	110	110	110	110	(110) ^C	110	A							
7								120	110	110	110	110	A	A	A	A	120	B							
8								120	110	110 ^H	110	110	110	110	110	A	110	B							
9								120	110	110	110	A	A	110	(110) ^A	110	110	A							
10							160	120	110	A	B	A	A	A	B	B	A	B							
11							B	B	110 ^H	A	A	A	110	110	120	110	120	B							
12								140	110	110	C	C	110	C	A	A	C								
13							C	C	120	C	C	120	110	110	120	110	110	B							
14								120	120	C	C	C	120	120	110	110	130 ^A	120							
15								140	120	110	110	110	110	120	120	130	120	130							
16							160	120	110	110	110	110	110	110	110	100	120	130							
17							160	110	110	110	(110) ^A	110	110	110	110	(110) ^A	110	A							
18							150	110	110	110	110	110	(110) ^A	110	110	110	110	110							
19							170	110	110	110	110	110	110	(110) ^B	110	120	110	120							
20							140	110	110	110	110	A	B	130 ^B	120	110	110	120							
21							B	120	110	110	110	(110) ^A	110	110	110	110	A	A							
22							B	110	110	(110) ^A	110	A	A	A	110	110	110	120							
23							B	110	110	110	110	A	B	110	110	120	120	110							
24							A	110	110	110	110	110	A	A	A	A	110	A							
25							150	110	110	110	110	110	A	A	A	A	A	120	130						
26							A	110	110	110	110	A	A	M	A	A	A	A							
27							B	110	110	110	110	A	A	A	A	A	110	120							
28							B	120	110	110	A	A	110	110	110 ^H	110	120	130							
29							150	110	110	110	110	110	110	110	110	110	120	120							
30							130	110	110	110	120	110	110	A	A	A	110	120							
31							A	110	110	(110) ^A	110	110	110	110	110	(110) ^A	110	120							
MEAN Value							150	120	110	110	110	110	110	110	110	110	120	120							
Median Value							150	120	110	110	110	110	110	110	110	110	110	120							
Count							9	29	31	29	24	20	20	21	20	20	24	15							

135° E

K 7

Sweep 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Mar. 1956

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	E	2.4 ^Y	2.2 ^Y	4.2	2.5	E	E	4.3	G	4.5	4.0	6.5	6.0	5.2	6.5	4.5	5.7	3.1	3.1	3.0	3.4	3.7	3.2	3.9
2	3.0	3.9	2.8	3.2	2.3	2.7	E	2.4	3.6	4.4	4.1 ^Y	6.0	5.3	11.0	6.5	9.2	3.5	2.2	2.7	3.0	2.7	2.5	E	E
3	E	E	2.5	3.0	2.7	2.5	E	3.0	3.2	4.5	5.0	6.0	5.8 ^Y	4.5	3.9	4.0	6.0	3.9	3.0	2.4	E	2.8	3.0	E
4	2.1	1.9	3.2	2.5	2.1	1.2	E	3.1	2.9	G	4.5	5.4	3.6	G	5.0	4.5	5.8	4.9	3.5	3.2	2.9	4.5	E	2.4
5	3.0	2.0 ^Y	2.0	2.2	2.5	2.3 ^Y	E	G	G	G	3.7	G	3.8	4.5	4.3	3.6	3.5 ^Y	2.0	E	2.3 ^Y	3.0	2.6	2.2	E
6	3.0	E	E	E	E	E	E	2.4	3.2	G	G	G	G	4.5	3.9	C	G	3.0	E	E	E	E	E	E
7	E	E	E	E	2.0 ^Y	E	E	G	G	G	3.5	4.3	4.9	4.2	4.4	4.1	4.2	B	E	E	2.8	E	E	2.9
8	3.9	3.1	2.4	4.9	3.8	2.3	E	G	G	G	3.7	3.8	3.7	G	G	3.6	3.6	2.4 ^Y	2.4 ^Y	2.4 ^Y	E	2.5	3.0	4.3
9	3.1	2.9	3.0	2.4	2.4	1.9 ^Y	E	G	3.6	4.5	5.5	4.0	4.5	4.5	5.0	4.5	4.5	3.7	3.5	5.1	E	E	E	3.2
10	E	E	E	4.4	E	E	G	G	3.2	4.8	4.8	B	6.0	4.6 ^Y	B	B	6.1	B	2.5	4.8	5.8	4.8	E	E
11	E	E	E	E	1.5 ^Y	E	2.2	2.4	3.1	3.6	3.8	4.0	G	G	G	G	G	B	E	2.9 ^Y	E	E	E	E
12	3.8	2.8	2.4	2.1	2.2	2.0 ^Y	2.4 ^Y	G	G	G	C	C	G	C	3.7	C	C	B	C	C	C	C	C	E
13	E	C	C	C	C	C	C	C	2.2	C	C	C	G	G	G	G	G	2.2	E	E	E	E	E	E
14	E	E	E	E	E	E	C	G	G	G	G	G	G	G	G	G	2.9	2.5	E	2.4	E	E	E	5.8
15	3.2	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
16	E	E	E	E	2.3	E	G	G	3.8	3.6	4.5 ^Y	3.6	G	G	G	3.5	G	G	2.4 ^Y	E	E	E	E	E
17	E	E	E	E	E	E	2.7	2.9	3.7	3.6	4.4	3.8	4.5	G	G	3.9	4.5	3.0	E	E	E	E	E	E
18	E	E	E	E	E	E	G	2.9	G	4.2	G	4.5	3.7	G	G	G	3.7	2.8	3.9	3.0	8.5	3.0	2.9	E
19	E	E	E	E	E	E	G	3.0	G	3.9	G	G	G	B	G	G	G	G	E	E	E	E	E	E
20	E	E	E	E	E	E	G	G	3.9	3.7	3.9	3.9	B	G	G	G	3.6	G	E	E	E	E	E	E
21	E	E	E	E	E	E	B	2.9	3.6	3.7	3.8	G	3.9	G	3.7	3.5	3.9	3.6	3.2	3.0	5.0	E	E	E
22	1.9	E	E	2.5 ^Y	E	E	B	2.9	3.6	4.7	3.5	5.0	3.7	3.7	3.7	3.4	G	2.9	2.5	2.7	2.4	E	E	E
23	E	E	E	E	E	E	B	G	3.7	3.8	3.9	4.0	B	3.8	3.7	3.7	3.7	4.3	4.5	4.4	2.5	2.3	2.6	2.4
24	2.8 ^Y	2.6	2.4	2.7 ^Y	2.6	E	2.7 ^Y	3.7	4.5	4.9	4.8	5.0	4.7	4.7	6.2	3.7	3.6	4.5	3.5	3.2	2.9	2.7	2.6	E
25	E	3.3	2.3	2.2	E	E	2.7	3.6	4.3	4.5	3.6	3.7	3.9	3.9	4.2	3.6	3.6	3.0 ^Y	2.4	2.5 ^Y	3.0	2.2	3.9	3.0
26	2.9	2.0	2.0 ^Y	2.4	E	E	2.7	3.6	G	4.5	3.8	5.6	6.0	M	5.0	5.7	5.5	3.5	3.2	3.0	E	E	E	E
27	M	M	2.5	2.5	3.0	3.0	B	3.5	4.2	4.4	3.7	3.9 ^Y	5.7	4.4	4.8	3.4	G	G	2.5	E	E	E	E	5.9
28	3.8	3.2	2.5	3.0	2.2	E	3.1	3.8	3.6	4.8	5.2 ^Y	5.4 ^Y	G	G	G	G	G	E	E	E	E	E	E	E
29	E	E	E	E	E	E	G	G	G	4.9	5.7	5.7	6.3	G	G	G	G	3.5	3.0	2.4	2.4	2.9	2.0 ^Y	E
30	E	2.0	2.0 ^Y	2.0 ^Y	2.0 ^Y	1.8 ^Y	G	3.3	G	5.9 ^Y	3.9	5.3	4.9 ^Y	5.1 ^Y	4.7 ^Y	3.7 ^Y	G	G	E	3.0 ^Y	E	2.9 ^Y	E	E
31	E	E	1.6	1.7	E	E	G	G	G	G	3.7	G	4.1	4.3	5.1	3.3	G	G	2.3	E	E	E	E	E
Mean Value	3.0	2.7	2.4	2.9	2.4	2.2		3.2	3.6	4.4	4.2	4.7	4.8	4.9	4.7	4.2	4.4	3.3	3.0	3.1	3.6	3.0	2.9	3.8
Median Value	E	E	1.8	1.9	1.6	E	G	2.4	3.1	3.9	3.8	4.0	3.9	3.8	3.7	3.6	3.5	2.8	2.4	2.4	3.0	3.0	3.0	E
Count	30	29	30	30	30	30	25	30	31	29	28	28	29	28	30	28	30	27	30	30	30	30	30	31

fEs

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° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956
(M3000)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	2.8	2.9	2.9	2.8 ^F	3.1	3.4	3.3	3.4	3.4	3.4	3.3	3.2	3.1	3.0 ^H	3.1 ^H	3.2	3.2	3.2	3.1	3.1	3.0	2.8	2.7	2.7
2	2.9	3.0	2.9	2.7	2.7	2.8 ^F	3.0	3.4	3.5	3.3	3.0	3.2 ^H	(3.0) ^H	(3.0) ^H	(3.0) ^H	3.2 ^P	3.3	3.1	3.1	3.2	B ^K	B ^K	2.3	2.7
3	2.5 ^F	2.8 ^F	2.9 ^F	2.9 ^F	2.8 ^F	(2.8) ^F	3.0 ^F	3.3	3.4	3.1	3.1	3.1	3.0	3.1 ^P	3.0	3.1	(3.0) ^F	3.1	2.8 ^K	2.8 ^K	B ^K	B ^K	2.6 ^K	2.9 ^K
4	2.5 ^K	2.6 ^K	3.0 ^K	3.4 ^K	2.4 ^K	2.4 ^K	2.7 ^K	2.8 ^K	3.2 ^K	G ^K	2.6 ^K	3.1 ^K	3.0 ^K	3.0 ^K	2.9 ^K	3.0 ^K	3.1 ^K	3.2 ^K	3.3 ^K	2.9 ^K	2.8 ^K	2.8 ^K	2.6 ^K	2.6 ^K
5	2.6 ^K	2.6 ^K	2.7 ^K	3.0 ^K	2.7 ^K	2.6 ^K	2.8 ^K	3.2 ^K	3.4	3.3	3.3	(3.3) ^B	3.3	3.2 ^H	3.5	3.4	3.2	3.4	3.3	3.3	3.1	2.8	2.8	2.8
6	2.6	2.8	2.7	2.8	2.7	2.6	3.0	3.4	3.5	3.3	3.2	3.0	(3.2) ^F	2.9 ^P	3.1 ^P	(3.0) ^C	3.2	3.3	3.1	3.1	3.0	2.9	2.8	3.0
7	2.8	2.8	3.0	3.0	3.1	2.9	2.9	3.3	3.2	3.0	3.0 ^H	3.0 ^P	3.0 ^H	3.0 ^P	3.2	3.1	3.2	3.3	3.2	3.0	2.9	2.9	3.0	2.8
8	2.8	2.8	2.9	3.3	3.1	2.7	3.0	3.4	3.4	3.2	3.0	3.1 ^H	3.0	3.0	3.0 ^H	3.0	3.1	3.2	3.2	3.2	3.0	2.9	2.8	3.0
9	2.9	2.8	2.9	3.0	3.1	3.0	3.1	3.4	3.2	3.2 ^P	3.1	2.9 ^H	3.0 ^H	3.0	2.9	3.0	3.2	3.3	3.1	3.2	3.0	2.9	3.0	2.9
10	3.0	2.9	2.7	3.2	2.8	2.8	3.1	3.4	3.2	3.2	3.1	(3.1) ^P	3.0	3.0	B	3.0	3.0	3.1	3.1	2.8	2.7	2.8	2.8	
11	2.9	2.9	2.9	2.6	2.6	2.7	2.7	3.1	(3.0) ^P	(3.2) ^B	(3.0) ^F	(2.9) ^H	2.9	2.9	2.9	3.0	2.8	3.1	3.0	3.0	3.0	2.7	2.7	2.6
12	2.7	2.8	2.9	2.7	2.8	2.7	3.0	3.3	3.2	3.0	3.1 ^P	(3.0) ^C	2.9	[2.9] ^C	2.9	2.9 ^H	2.9	2.9	3.0	3.0	C	C	C	(2.6) ^P
13	2.8	C	C	C	C	C	C	3.0	3.0	3.2	3.1 ^C	3.0 ^H	2.8 ^H	2.8	3.0	3.0 ^H	3.0	(3.0) ^B	(3.3) ^B	3.1	2.9	3.0	(3.1) ^F	3.0
14	2.8	2.7	2.8	2.9	2.7	2.8	(3.0) ^C	3.2	3.1	C	C	C	C	3.0	2.9 ^H	2.9 ^H	2.9	3.0	3.0	3.0	3.1	3.0	2.9	2.8
15	2.8	2.5	2.7	3.1	2.8	2.7	3.1	3.2	3.2 ^P	3.0 ^H	3.0 ^H	3.0 ^H	3.0 ^H	3.0 ^P	2.9 ^H	2.9 ^H	(3.0) ^F	3.2 ^P	3.0	3.1	2.9	3.0	2.9	2.9
16	2.8	2.7	2.8	2.7	2.7	2.8	3.0	3.3	3.2 ^B	3.0 ^H	3.0	2.9 ^H	(2.8) ^B	(3.0) ^B	T	T	T	3.2	3.1	3.2	3.0	2.9	2.9	2.8
17	2.6	2.7	2.7	2.9	2.7	2.8	3.2	3.3 ^P	3.1	3.0	(3.2) ^F	T	(2.8) ^B	(3.0) ^B	T	T	T	(3.2) ^F	3.1	2.8	2.8	2.8	2.8	2.9
18	2.9 ^P	2.9	3.0	3.0	3.1	3.0	3.3	3.6	3.3	3.2 ^H	3.0	(3.0) ^P	T	T	3.0 ^P	3.0 ^H	2.9	2.9	3.2 ^P	3.0	2.9	2.8	2.8	2.9
19	2.9	3.0	2.8	2.7	2.6	2.9	3.2	3.3	3.3	3.1 ^P	T	T	2.9 ^H	2.9 ^H	2.9 ^H	3.0 ^H	2.9	2.9	3.2 ^P	3.0	2.9	2.8	2.8	2.8
20	2.8	2.9	2.7	2.7	2.6	2.6	3.0	3.2	3.2	3.0	3.0	2.9	2.4	2.9 ^H	3.0 ^H	3.0	3.0	2.9	3.0	3.1	2.9	3.0	2.8	2.7
21	2.8	2.7	2.8	2.7	2.8	2.8	3.2	3.5	3.2	3.2 ^H	3.0 ^H	2.9 ^H	2.9	2.8 ^H	2.9 ^H	3.0 ^H	2.9	3.0	3.1	3.0	2.8	2.1	2.9	2.8
22	2.6	2.5	2.7	2.6	2.5	2.5	2.7	3.6	3.2	3.1 ^H	2.9 ^H	3.0	2.8	2.8 ^H	2.8	2.8	2.8	3.0	3.0	3.0	2.8	2.1	2.6	2.6
23	2.6	2.6	2.9	2.8	2.6	2.7	3.3	3.2	3.2	3.2	2.8 ^H	2.9 ^H	2.8	2.8	2.9 ^H	2.9 ^H	2.9	2.9	3.0	3.1	2.7	2.7	2.8	2.8
24	2.9	2.9	2.9	2.9	2.8	2.6	3.0	3.1	3.2	3.0	3.0	2.9	2.9 ^H	2.9	3.0	2.8 ^H	2.9	3.0	3.1	3.1 ^P	3.1	2.8	2.6	2.6
25	2.6	2.7	2.6	2.6	2.5	2.7	3.0	3.2	3.0 ^H	3.2	2.9	2.9	2.9	3.0 ^P	3.0	2.9	3.0	3.0	3.0	3.0	2.9	2.8	2.8	2.8
26	2.7	2.6	2.7	2.7	2.6	2.7	3.1	3.2	3.2 ^P	3.1	3.0	3.0 ^H	2.9 ^H	[2.9] ^H	2.9 ^H	3.0 ^H	3.0	3.1	3.1	3.2	2.8	2.8	2.7	2.8
27	M	M	2.9	2.8	2.7	2.8	3.1	3.1	3.3	3.3	2.9	2.9 ^H	2.9	2.8 ^H	2.8	2.9	3.0	3.0	3.2	3.2	2.9	2.8	2.8	2.9
28	3.0	2.7	2.7	2.7	2.6	2.5	3.0	3.2	3.1	3.0	2.9	2.7	2.8 ^H	2.8 ^H	2.8 ^H	2.9	2.8	2.9	3.1	3.0	2.7	2.7	2.7	2.6
29	2.6 ^P	2.6	2.9	2.8	2.6	2.6	2.9	2.9	2.8	3.0	2.9 ^H	2.9	(2.9) ^H	2.9 ^H	3.0	2.9	2.9	3.0	3.2	2.8	2.9	2.7	2.7	2.6 ^P
30	2.6	2.7	2.9	2.7	2.8	2.7	3.1	3.2	3.2	3.0	3.0	2.9 ^H	2.9 ^H	2.9 ^H	2.9	2.9	2.9 ^H	2.9	3.2 ^P	[3.0] ^B	2.8	2.9 ^P	2.7	2.7
31	2.8	2.8	2.7	2.7	2.8	2.5	2.9	3.3 ^P	3.2	2.9 ^H	2.8	3.0	2.9 ^H	2.7 ^H	2.8	2.8 ^H	2.9	2.9	3.0	2.7	2.8	2.8	2.7	2.6
Mean Value	2.8	2.8	2.8	2.8	2.8	2.7	3.0	3.3	3.2	3.1	3.0	3.0	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.0	2.9	2.8	2.8	2.8
Median Value	2.8	2.8	2.8	2.8	2.7	2.7	3.0	3.3	3.2	3.1	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.0	2.9	2.8	2.8	2.8
Count	30	29	30	30	30	30	30	31	31	30	29	28	29	29	28	30	29	31	30	30	29	29	29	31

(M3000)F2

Sheep 1.0 Mc to 1.7.2 Mc in 2 min

Manual

Automatic

K 9

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956

fminf

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	1.3	1.8	1.4	1.4	1.6	3.4	3.3	3.8	4.2A	4.3	5.0A	4.8A	4.5	3.3	4.0	2.4	2.0	1.6	2.0	2.6A	(2.2)A	1.9
2	1.8	1.7	1.3	1.5	1.2	1.3	1.5	2.6	3.2	3.5	3.7	5.2A	4.8A	(4.6)M	4.4	8.2A	3.1	2.3	1.9	2.2	1.3	1.7	1.8	1.5
3	1.2	1.4	1.4	1.4	1.4	1.5	1.5	2.5	3.2	4.0	3.4	4.0	4.2	4.0	3.6	3.3	4.9A	2.5	2.0	2.2	1.8	B	B	1.3
4	1.2	1.3	2.1A	A	1.3	1.1	1.4	2.4	2.8	3.5	3.8	5.0A	4.0	4.5	4.2	4.1A	4.4A	3.4A	A	2.2	2.2	2.2	1.3	2.2
5	2.0	1.3	1.2	E	E	1.3	1.8	2.4	3.0	3.3	3.7	3.7	4.1	3.8	3.6	3.3	3.0	2.5	1.5	1.5	1.8	1.6	1.3	1.4
6	1.8	1.3	E	E	E	1.3	1.4	2.6	3.5	3.6	3.5	4.0	3.7	4.0	3.4	(3.0)C	2.7	2.3	1.4	1.4	1.5	1.5	1.4	1.3
7	1.3	1.3	E	E	E	1.0	1.8	2.5	2.8	3.5	3.7	4.0	4.3	3.8	3.6	3.5	2.9	2.6	1.4	1.3	1.6	1.4	1.3	2.1
8	2.1	2.0	1.1	2.1A	1.9	1.3	1.4	2.4	3.1	3.7	4.0	4.0	4.0	4.1	4.0	3.5	3.0	2.5	1.8	1.5	1.5	2.0	2.3	2.8
9	1.8	1.3	1.3	1.4	1.0	1.3	1.7	2.5	3.2	3.8	4.0	4.3	4.0	4.2	4.2	3.7	3.3	2.8	2.1	1.7	2.0	1.2	1.4	1.5
10	1.3	1.3	1.3	1.5	1.0	1.0	1.8	2.6	3.2	4.0	4.1	4.3	4.4	4.2	B	4.1	4.9A	2.7	1.3	3.5A	4.1A	4.1A	1.3	2.0
11	1.5	1.2	E	E	E	1.3	1.7	2.6	3.1	4.0	4.0	4.0	4.0	4.0	4.1	3.3	3.3	2.5	1.5	2.1	1.4	1.4	1.8	1.4
12	1.3	1.3	E	E	E	1.1	1.5	2.5	3.2	4.2	<7.5	C	4.0	(3.9)C	3.8	3.6	3.6	2.5	C	C	C	C	C	2.0
13	1.3	C	C	C	C	C	C	3.6	3.4	(3.6)C	3.8	+1	4.2	4.0	3.7	3.4	3.3	2.5	1.5	1.5	1.5	1.5	1.5	1.5
14	1.3	1.2	E	E	E	1.2	1.3	(2.0)C	3.4	C	C	C	4.1	4.0	4.2	3.5	3.4	2.6	1.8	1.6	1.5	1.5	2.0	3.4A
15	2.0	1.4	E	E	E	1.3	2.1	2.8	3.4	3.5	4.2	4.2	4.3	4.4	2.6	3.8	3.3	2.7	1.8	1.5	1.5	1.5	1.4	1.3
16	1.4	1.2	1.0	E	E	1.2	1.0	1.9	3.3	3.6	4.3	4.0	4.0	4.1	4.0	3.4	3.2	2.7	2.1	1.4	1.3	1.5	1.5	1.4
17	1.3	1.2	1.0	E	E	1.3	1.9	2.9	3.3	3.9	4.0	4.2	4.1	4.0	4.0	3.7	3.0	2.5	1.5	1.5	1.4	1.5	1.5	1.3
18	1.2	1.3	1.2	E	E	1.0	1.1	2.0	3.3	3.7	3.9	4.3	4.0	4.0	4.0	4.1	3.2	2.6	1.8	2.2	5.4A	1.9	1.6	1.4
19	1.4	1.3	E	E	E	1.0	1.0	2.1	3.3	4.0	4.0	4.2	4.1	4.0	4.2	3.6	3.3	2.5	1.6	1.5	1.5	1.3	1.3	1.5
20	1.4	1.4	E	E	E	1.4	2.2	2.8	3.5	4.0	4.0	4.0	4.3	4.0	4.0	4.0	3.3	2.7	1.5	1.4	1.5	1.4	1.5	1.5
21	1.3	1.3	E	E	E	1.0	2.0	2.8	3.3	4.0	4.0	4.3	4.3	4.0	4.1	4.2	3.3	2.6	2.1	2.0	4.0A	1.5	1.5	1.4
22	1.4	1.3	E	E	E	1.4	2.1	2.8	3.6	3.9	4.1	4.3	4.0	4.0	3.9	4.0	3.3	2.7	1.9	1.8	1.5	1.4	1.4	1.4
23	1.3	1.3	E	E	E	1.3	2.1	2.8	3.3	4.0	4.0	3.9	4.1	4.0	4.3	4.0	3.8	3.6	A	3.9A	1.9	1.5	1.4	1.4
24	1.3	1.3	1.1	E	E	1.0	2.0	2.9	4.0	4.1	4.0	4.1	4.3	4.3	4.1	3.5	3.2	4.0A	3.5A	2.0	2.0	1.8	1.5	2.1
25	1.3	2.5	1.3	1.1	E	1.2	2.0	2.9	3.5	4.0	4.0	4.2	4.0	4.0	4.1	3.5	3.0	2.6	1.6	2.2A	1.9	1.7	3.3A	1.8
26	1.3	1.3	E	E	E	1.0	2.2	2.8	3.4	3.9	4.0	4.8A	4.1	(4.0)C	4.0	5.2A	5.0A	2.9	2.3	2.0	1.4	1.5	1.4	1.4
27	M	M	1.5	1.3	1.4	1.8	2.1	2.9	3.5	3.6	3.8	3.9	4.8A	4.0	4.0	3.5	3.3	2.5	1.8	1.4	1.4	1.4	1.7	2.5A
28	2.5A	1.4	1.5	1.3	1.5	1.4	2.3	3.3	3.4	4.1	4.2	4.1	4.1	3.8	3.8	3.5	3.5	2.6	1.7	1.5	1.5	2.0	1.3	1.3
29	1.5	1.3	E	E	E	1.0	2.2	2.9	3.5	4.1	5.0	4.0	4.4	4.0	4.0	3.7	3.5	2.8	2.2	1.5	1.5	1.8	1.9	1.4
30	1.4	1.3	1.0	E	E	1.0	1.0	2.2	3.5	4.0	4.1	4.7	4.2	4.6	4.4	4.0	3.3	2.6	1.9	1.6	2.3	1.3	1.5	1.6
31	1.2	1.3	1.0	E	E	1.0	1.3	2.5	3.4	4.0	4.2	4.3	4.3	4.3	4.5	3.5	3.5	2.6	1.8	1.5	1.4	1.5	1.4	1.4
Mean Value	1.5	1.4	1.3	1.4	1.2	1.2	1.9	2.8	3.3	3.8	4.0	4.2	4.2	4.1	4.0	3.8	3.5	2.7	1.8	1.8	1.9	1.7	1.6	1.7
Median Value	1.4	1.3	1.0	E	1.0	1.3	2.0	2.8	3.3	3.9	4.0	4.2	4.1	4.0	4.0	3.6	3.3	2.6	1.8	1.6	1.5	1.5	1.5	1.5
Count	30	29	30	29	30	30	30	31	31	30	29	29	31	31	30	31	31	31	28	30	30	29	29	31

fminf

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

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

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

IONOSPHERIC DATA

135° E Mean Time

f_{min}E

Mar. 1956

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	E	1.2	1.0	E	E	E	E	1.6	1.6	1.5	1.7	1.9	2.0	2.3	1.8	1.8	1.8	1.5	1.4	1.3	1.4	1.4	1.5	1.4
2	1.2	1.4	E	E	E	1.0	E	1.4	1.5	1.7	1.6	1.8	1.8	2.0	1.9	1.7	1.6	1.6	1.0	1.0	1.3	1.3	E	E
3	E	E	E	E	1.0	E	E	1.4	1.6	1.4	1.5	1.8	1.8	1.5	1.3	2.2	1.4	1.3	1.5	1.3	E	2.0	1.6	E
4	1.4	1.4	1.0	E	E	1.0	E	1.2	1.3	1.5	2.1	2.2	2.2	1.8	1.9	1.4	1.1	1.3	1.3	1.0	1.0	1.3	E	2.0
5	1.4	1.0	E	E	1.0	E	E	1.4	1.4	1.5	2.1	3.3	3.4	3.0	2.0	1.7	2.0	1.4	E	1.4	1.4	1.3	1.6	E
6	1.3	E	E	E	E	E	E	1.2	1.4	1.4	2.1	2.1	1.5	1.4	1.4	[1.4] ^f	1.5	1.4	E	E	E	E	E	E
7	E	E	E	E	E	E	E	1.4	1.3	1.4	1.4	1.4	1.5	1.6	1.5	1.5	1.3	B	E	E	1.1	E	E	1.2
8	1.2	1.2	E	E	E	1.0	E	1.4	1.3	2.1	1.5	1.6	1.6	1.6	2.1	1.4	1.4	B	1.3	1.3	E	1.3	1.2	1.2
9	1.3	1.2	E	E	E	1.0	E	1.4	1.5	1.6	1.5	1.3	2.0	1.4	1.4	1.4	1.4	1.3	1.3	1.0	E	E	E	2.2
10	E	E	E	E	E	E	E	1.4	1.5	1.4	1.6	[2.5] ^g	3.4	1.9	B	B	1.5	[1.4] ^h	1.2	1.4	1.5	1.3	E	E
11	E	E	E	E	E	E	E	1.6	1.3	1.4	1.5	1.8	1.5	2.0	2.4	1.8	1.9	B	E	1.3	E	E	E	E
12	1.3	1.0	E	E	E	1.0	E	1.6	1.9	2.0	C	C	2.2	[1.9] ^c	1.6	1.5	C	B	C	C	C	C	C	E
13	E	C	C	C	C	C	C	C	1.4	C	C	2.4	1.5	1.8	2.0	1.5	1.4	2.0	E	E	E	E	E	E
14	E	E	E	E	E	E	E	1.5	2.0	C	C	C	2.1	2.4	2.2	1.6	1.5	1.3	E	2.0	E	E	E	1.4
15	1.3	E	E	E	E	E	E	2.1	2.0	1.7	2.1	2.0	2.1	2.3	1.7	1.5	2.0	1.9	E	E	E	E	E	E
16	E	E	E	E	1.8	E	E	1.2	1.4	2.0	1.8	2.0	1.6	2.2	2.0	1.5	2.0	1.8	1.4	E	E	E	E	E
17	E	E	E	E	E	E	E	1.6	1.6	2.0	2.0	1.9	2.0	2.3	2.4	1.9	1.6	1.4	E	E	E	E	E	E
18	E	E	E	E	E	E	E	1.4	1.5	1.8	1.9	2.2	2.1	2.3	2.3	2.1	1.8	1.5	1.5	1.4	1.5	1.5	1.5	E
19	E	E	E	E	E	E	E	1.4	1.6	2.1	1.6	2.0	2.2	[2.2] ^b	2.3	2.2	1.9	1.5	E	E	E	E	E	E
20	E	E	E	E	E	E	E	1.5	1.4	1.5	2.1	2.0	[2.6] ^b	3.3	2.1	1.9	1.8	1.5	E	E	E	E	E	E
21	E	E	E	E	E	E	E	B	1.5	2.0	2.0	2.1	1.5	2.1	2.0	1.5	1.5	1.4	1.4	1.5	1.4	1.5	1.4	E
22	1.5	E	E	E	1.2	E	E	B	1.4	1.5	1.7	2.0	1.5	2.0	2.0	1.6	1.5	1.4	1.4	1.3	1.3	E	E	E
23	E	E	E	E	E	E	E	B	1.4	1.4	2.0	1.9	B	2.0	2.2	2.0	1.9	1.9	1.3	1.4	1.3	1.2	1.2	1.4
24	1.1	1.2	1.3	1.2	1.3	E	E	1.4	1.5	1.5	1.5	2.1	2.3	2.0	1.8	1.4	1.4	1.3	1.3	1.4	1.2	1.3	E	E
25	E	1.4	1.1	E	E	E	E	1.5	1.3	1.8	2.1	2.5	2.2	2.1	2.0	2.0	1.4	1.3	1.3	1.3	1.3	2.0	1.6	1.4
26	1.2	1.4	E	E	E	E	E	1.8	1.4	2.0	2.0	2.0	1.9	[2.0] ^m	2.0	2.0	1.5	1.5	1.4	1.4	E	E	E	E
27	M	M	E	E	E	E	E	B	1.4	2.0	1.7	2.0	2.0	2.0	2.0	2.0	1.6	1.4	1.3	E	E	E	E	1.3
28	1.3	1.3	E	E	E	E	E	1.9	1.8	1.8	1.4	1.2	1.1	1.2	1.3	1.5	1.0	1.4	E	E	E	E	E	E
29	E	E	E	E	E	E	E	1.5	1.4	1.6	2.0	2.1	1.9	2.0	2.0	1.8	2.0	1.7	1.5	1.5	1.5	1.3	1.3	E
30	E	1.5	E	E	E	1.4	1.3	1.5	1.4	1.5	2.0	1.4	1.6	1.4	2.0	1.6	1.2	1.4	E	1.4	E	1.5	F	E
31	E	E	1.3	1.3	E	E	1.4	1.3	1.5	1.6	[1.8] ^m	2.1	2.0	2.0	1.9	1.8	1.4	1.6	1.7	E	E	E	E	E
Mean Value	1.3	1.3	1.1	1.3	1.3	1.1	1.4	1.5	1.5	1.7	1.8	2.0	2.0	2.0	1.9	1.7	1.6	1.5	1.4	1.3	1.3	1.4	1.4	1.5
Median Value	E	E	E	E	E	E	1.4	1.4	1.5	1.6	1.8	2.0	2.0	2.0	2.0	1.6	1.5	1.4	1.3	1.3	E	E	E	E
Count	30	29	30	30	30	30	25	30	31	29	28	29	30	31	30	30	30	27	30	30	30	30	30	31

f_{min}E

Sweep 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

K 11

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956

YP 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	110	70	60	60 ^F	40	60	50	50	60	50	80	50	60	40 ^H	40 ^H	60	50	60	80	60	80	80	70	100
2	70	70	100	110	90	80 ^F	80	50	40	60	60	50 ^H	50 ^H	60 ^A	60 ^J	60 ^P	40	60	50	60	80	70	120	60
3	70 ^F	70 ^F	60 ^F	70 ^F	90 ^F	80 ^F	50	50	80	50	70	60	70	70 ^P	70	50	40 ^P	80	90	60 ^K	B ^K	B ^K	B ^K	50 ^K
4	110 ^K	80 ^K	60 ^K	40 ^K	110 ^K	80 ^K	80 ^K	60 ^K	50 ^K	G ^K	U ^K	A ^K	U ^K	50 ^K	70 ^K	80 ^K	100 ^K	70 ^K	100 ^K	90 ^K	120 ^K	100 ^K	110 ^K	50 ^K
5	90 ^K	80 ^K	120 ^K	110 ^K	150 ^K	150 ^K	90 ^K	80 ^K	50	80	80	30 ^B	40	30 ^H	50	60	50	60	70	70	60	90	70	80
6	80	70	50	80	100	100	60	40	50	60	70	60	70 ^P	90 ^P	50 ^P	60	60	70	90	70	70	70	70	80
7	80	70	60	80	60	60	80	80	70	50	60 ^H	70 ^P	70 ^H	70 ^P	50	50	30	70	70	100	70	80	60	80
8	70	70	80	60	90	60	100	60	50	60	50	50 ^H	70	60	60 ^H	70	70	80	70	60	90	90	80	80
9	60	70	50	90	80	80	90	70	80	70 ^P	60	70 ^H	80 ^H	70	40	50	60	60	90	100	70	110	70	70
10	70	70	80	60	100	90	90	60	90	50	70	60 ^J	70	70	B	90	70	50	80	70	100	90	70	100
11	70	70	80	130	70	110	80	70	60 ^P	60 ^P	60 ^J	90 ^H	70	60	70	50	70	80	90	70	80	80	80	70
12	80	90	80	80	100	110	80	70	80	70	50 ^P	50 ^J	50	50 ^F	50	60 ^H	60 ^P	80	C	C	C	C	C	90 ^P
13	50	C	C	C	C	C	C	70	40	50 ^C	60	60 ^H	80 ^H	80	50	70 ^H	80	80	70	50	60	60	70	80 ^P
14	70	80	80	90	100	70	70 ^J	70	60	C	C	C	C	70	60 ^H	70 ^H	60	40	50 ^B	60 ^B	70	70	40 ^P	90
15	80	90	80	90	150	90	90	90	50 ^P	70 ^H	60 ^H	30 ^H	70 ^P	70 ^H	60 ^H	100 ^H	60	40	80	90	60	60	70	80
16	60	70	60	80	70	80	80	80	70 ^{HP}	60 ^H	70	70 ^H	70	T	T	70 ^P	60 ^T	40 ^P	70	80	70	70	70	70
17	80	90	70	90	100	50	60	50 ^P	100	50	40 ^P	T	80 ^J	60 ^J	T	T	50	50	40	60	60	80	80	70
18	60 ^P	60	80	80	60	70	70	60	70	50 ^H	50	40 ^P	T	T	50 ^P	50 ^P	T	50 ^P	60	100	70	70	90	60
19	60	60	80	100	90	100	60	80	40	80 ^P	T	T	50 ^H	40 ^H	60 ^H	50 ^H	60	90	50 ^P	80	60	60	50	60
20	60	60	80	60	90	100	70	60	60	70	60	50	60	50 ^H	50 ^H	60	50	70	50	60	80	60	70	90
21	70	70	90	100	100	80	50	50	70	60 ^H	60 ^H	50 ^H	60	90 ^H	50 ^H	50 ^H	70	60	50	70	90	90	60	80
22	70	70	70	100	100	80	60	40	60	50 ^H	70 ^H	70	60	50 ^H	60	60	70	50	70	60	90	60	70	100
23	80	80	80	80	80	90	60	50	60	60	50 ^H	60 ^H	50 ^H	50 ^H	90	50 ^H	80	70	60	60	70	70	70	70
24	60	60	70	100	90	80	70	50	70	80	70	70	70 ^H	70	80	70 ^H	90	70	80	40 ^P	60	80	70	100
25	40	60	130	120	80	110	110	70	80 ^H	70	90	80	60	70 ^P	90	80	70	70 ^P	70	80	80	80	80	80
26	80	100	110	130	110	90	100	90	70 ^P	50	80	50 ^H	60 ^H	60 ^H	50 ^H	40 ^H	50	40	60	40	70	80	70	60
27	M	M	60	110	80	80	60	50	40	60	50 ^H	50 ^H	60	60 ^H	60	60	50	60	60	50	80	60	60	40
28	80	90	110	80	90	90	110	60	50	80	70	90	60 ^H	60 ^H	60 ^H	60	70	70	60	90	90	80	70	80
29	80 ^P	90	70	100	90	100	80	90	110	60	60 ^H	60	50 ^J	50 ^H	50	70	70	70	40	70	70	70	60	60 ^P
30	70	70	70	110	90	90	60	60	70	70	70	80 ^H	70 ^H	50 ^{HP}	50	70	80 ^H	60	60 ^P	80 ^B	90	70 ^P	100	80
31	70	70	100	80	70	90	80	70 ^P	100	60 ^H	100	60	60 ^H	80 ^H	80	60 ^H	70	80	60	70	70	60	80	70
Mean Value	70	70	90	90	90	90	80	60	70	60	70	60	60	60	60	60	60	60	60	70	70	80	70	80
Median Value	70	70	80	90	90	90	80	60	60	60	60	60	60	60	60	60	60	60	70	70	70	70	70	80
Count	30	29	30	30	30	30	30	31	31	30	28	27	28	29	28	30	29	31	30	30	29	29	29	31

YP F2

IONOSPHERIC DATA

Yamagawa

Lat. 31° 12.6' N
Long. 130° 37.7' E

foF2

Mar. 1956

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	M	M	M	M	M	M	M	M	M	11.5	12.0	12.6 ^H	12.0	13.6	13.5 ^H	13.8	13.8	12.4	12.7	(11.5) ^P	9.0	7.3	5.8 ^H	5.4	
2	5.3	5.0	4.9	4.4	4.4	4.4	4.6	7.4	9.4	9.8	9.9	12.3 ^H	13.0	13.5	14.6	14.6	13.6 ^H	13.4	13.5	12.5	[9.7] ^S	6.9 ^J	4.3	4.6	
3	4.6	4.5	4.8 ^J	5.1	S	4.3 ^J	4.3	6.5	8.7	10.3	12.5 ^H	12.4	12.5	13.4 ^H	13.8	14.0	12.5	12.7 ^H	11.8	12.2 ^K	12.2 ^K	6.2 ^K	(10.0) ^S	(10.0) ^S	
4	S	S	10.6 ^K	6.6 ^K	6.3 ^K	6.0 ^K	6.0 ^K	7.0 ^K	7.9 ^K	6.7 ^K	6.7 ^K	9.6 ^K	8.5 ^K	8.5 ^K	9.0 ^K	10.9 ^K	11.4 ^K	10.2 ^K	9.0 ^K	7.0 ^K	6.2 ^K	6.3 ^K	6.2 ^K	[5.8] ^A	
5	5.3 ^K	[5.2] ^K	5.0 ^K	4.6 ^K	3.8 ^K	3.2 ^K	2.9 ^K	6.3 ^K	9.0	9.0	10.6	11.3	12.3	13.1	12.4	11.6 ^H	10.0 ^S	10.6	11.1	8.7	(7.0) ^S	6.1	5.7	5.7 ^P	
6	5.7 ^P	5.2	5.1	5.0	4.7	4.5 ^J	4.5 ^J	7.5 ^J	9.5	10.0 ^S	11.6	14.0	14.6 ^P	14.5 ^P	14.6 ^P	13.5	14.3	14.1 ^J	12.4 ^J	10.0	S	8.0 ^J	S	S	
7	6.5 ^J	5.6	5.9	5.9	4.8	3.9	4.0 ^P	6.2	10.3	11.1	11.6	13.1	13.6	13.2	12.7	12.4	12.1	10.9	10.1	9.0	8.7	S	S	7.2	
8	7.0	6.4	6.3	7.2	5.4	3.5	3.5	6.5	7.9	9.9	11.0	12.3 ^H	12.5	12.6	13.1 ^H	13.4	13.0	12.2	11.0	9.3	8.5	8.2	8.1	8.2	
9	7.2	7.0	6.4	6.4	5.8	4.2	3.8	7.0 ^H	9.0	10.3	11.2	12.2 ^H	12.9 ^H	13.5 ^H	13.4 ^H	13.0	12.5	12.0	11.4	11.4 ^J	C	S	10.6	9.7	
10	8.8	7.0	6.9	7.2	5.7	4.0	3.9	6.8	9.0	10.7	12.0	12.4	12.1	13.1	[12.6] ^P	12.2	11.8	11.5	[10.6] ^S	9.6	8.8	8.2	7.9 ^J	8.3	
11	8.5	8.1	7.2	6.6	5.9	5.9	5.5	7.7 ^J	9.8	12.7	12.2 ^H	11.6 ^H	13.2 ^H	12.8 ^H	13.2 ^H	13.4 ^H	12.8 ^H	11.9	11.5	[10.6] ^S	9.7 ^S	(7.8) ^S	7.0	7.2	5
12	7.5 ^H	7.5 ^S	7.2 ^S	7.1	6.0	5.4	4.2 ^P	7.5	9.7 ^S	11.6	11.5	12.2 ^H	14.0 ^H	13.1 ^H	12.6 ^H	12.5 ^H	12.6	12.1	11.0 ^J	10.5	9.6	9.0	5.5	8.1 ^J	
13	[7.6] ^S	7.0	7.1 ^J	6.6	5.8	5.9	5.9	8.4	11.3	11.7	11.0 ^H	12.0	13.1 ^H	13.7 ^H	13.6 ^H	13.5 ^H	13.3	12.1	11.1	11.0 ^J	10.0	[9.1] ^S	8.2 ^J	6.8 ^J	
14	7.5	7.0	7.0	7.5	6.1	4.6	4.4 ^J	7.3 ^J	[9.6] ^S	12.0	12.3	13.6 ^H	14.0 ^H	14.3 ^H	14.5 ^H	13.6 ^H	13.6 ^H	13.5	14.0	13.0	10.2 ^S	9.1	8.9	7.6	
15	6.5	6.3	6.3	7.3	5.7	4.5 ^J	4.5 ^J	7.2	C	C	C	C	C	C	C	C	C	C	C	S	S	9.2	[8.0] ^S	6.8	
16	[6.6] ^S	6.5	6.6	[6.2] ^S	5.9	5.9	5.7	8.8	10.0	10.4	11.6	13.1 ^H	13.6	13.6	13.6 ^H	SH	SH	(13.6) ^H	13.0	12.1	[10.4] ^S	8.7	8.6	S	S
17	6.3	6.7	6.8	7.2	5.7 ^H	5.4 ^H	5.9	8.5	10.1 ^J	10.3	12.5 ^H	13.6 ^H	13.8	14.5	[14.4] ^H	14.2 ^H	14.0 ^H	14.0	13.6	12.7	9.8 ^J	9.5 ^S	S	S	
18	9.5 ^P	8.7	8.5	8.0 ^J	7.2 ^S	5.4 ^J	S	8.1 ^J	10.0 ^S	10.4 ^S	11.0	12.5 ^H	13.5	14.5 ^H	14.6 ^P	14.4 ^H	13.6	12.7	[11.3] ^S	9.9 ^J	9.5	10.4 ^J	[10.2] ^S	(9.9) ^P	
19	9.5	9.3	S	7.0 ^P	6.5	6.5	(6.8) ^P	8.7	10.7	11.7	13.0	13.5 ^H	13.7 ^H	[14.0] ^H	14.4 ^H	13.7 ^H	14.5 ^H	13.5	12.5	10.1 ^S	S	S	9.8	9.0	
20	9.2	9.2	8.1 ^S	7.9	7.0	7.3	8.2	S	S	10.5	13.5	13.0	13.0 ^H	13.2 ^H	SH	SH	15.9 ^S	14.6 ^H	[14.3] ^S	14.0	13.5	S	S	S	
21	S	10.0	S	S	6.5	S	(7.6) ^S	9.4	10.6	11.0 ^H	12.0 ^H	13.0 ^H	13.2 ^H	14.0 ^H	14.4 ^H	14.6	15.0	13.5	12.5	[10.5] ^S	8.5	[8.0] ^S	7.5	6.7 ^J	
22	6.9 ^J	6.6 ^P	7.2	6.8	6.5	6.2	6.7	8.6	9.4	11.0 ^H	13.4 ^H	14.5	14.4	13.6 ^H	14.5 ^H	14.5 ^H	14.0 ^H	13.0	S	S	S	8.5 ^H	8.5	8.5	
23	8.9	[8.8] ^S	8.8	8.5	7.1	(7.0) ^S	8.3	[9.5] ^S	10.7	11.5	11.6 ^H	12.2 ^H	13.3	13.8	13.6 ^H	13.5 ^H	13.5 ^H	13.4	13.0	S	S	S	S	S	
24	S	S	S	9.0	6.3	6.3	6.4	9.8	12.6	12.9	13.4	14.4 ^H	14.5 ^H	14.6 ^H	[14.6] ^S	14.5 ^S	14.5 ^H	(14.6) ^P	14.6	[12.0] ^S	9.5	10.0 ^S	S	S	
25	S	S	C	S	C	C	S	9.5	10.6 ^J	13.0	12.3	13.2 ^H	14.0 ^H	14.4 ^H	15.0	14.0 ^H	13.1 ^H	13.2	13.2	12.4	[10.4] ^S	8.4 ^J	8.1 ^J	[7.5] ^H	
26	6.9 ^J	7.0	[6.9] ^S	6.8	6.3	6.3	B	9.8	10.4	10.5	12.3	14.0 ^H	14.0 ^H	14.3 ^H	14.5 ^H	15.0 ^H	14.5 ^H	14.0	(15.0) ^P	13.2	10.6	S	S	S	
27	9.6 ^S	S	S	8.4	7.8	[8.0] ^S	8.2	10.5	12.2	11.0	10.8	12.5	14.3 ^H	14.3 ^H	14.8 ^H	S	SH	S	14.2	12.2	(11.2) ^S	[10.4] ^S	9.5	9.5	
28	9.5	S	S	8.0	6.5	6.2 ^H	6.0	6.0 ^H	10.6	11.1	12.6 ^H	12.6 ^H	13.5 ^H	14.5 ^H	[14.5] ^H	14.5 ^H	14.3 ^H	13.2	13.5	11.0	9.0	8.9	9.2	8.5	
29	[8.3] ^S	8.1	8.5	7.4	6.5 ^P	5.8	6.4	9.7	11.0	12.8 ^H	14.5	14.0	13.6 ^H	14.7 ^H	15.0 ^H	14.7 ^H	14.3 ^H	13.3	12.7	10.3 ^H	9.0	[8.8] ^H	8.7	8.9	
30	8.7	[8.8] ^S	9.0	8.2	6.1	6.0 ^H	6.6	9.8	10.9	11.3	14.5 ^H	14.5	14.5 ^H	SH	SH	SH	13.7 ^H	[13.8] ^H	14.0 ^J	12.0	S	SH	9.7	9.7	
31	9.0	8.8	7.5	7.0	6.0	5.2	5.5	S	10.7	10.5	11.5 ^H	13.4 ^H	13.5	13.2 ^H	14.5 ^H	14.3 ^H	13.9 ^H	13.6	12.6	12.0	[10.2] ^S	8.5	S	S	
Mean Value	7.6	7.2	7.2	6.9	6.0	5.4	5.6	8.2	10.1	10.9	11.9	12.9	13.3	13.6	13.8	13.7	13.4	12.8	12.4	11.0	9.4	8.7	8.1	7.8	
Min Value	7.5	7.0	7.0	7.0	6.0	5.6	5.7	8.2	10.0	11.0	12.0	12.8	13.5	13.6	14.4	13.7	13.6	13.2	12.5	11.0	9.5	8.6	8.2	8.1	
Count	26	25	26	28	27	28	27	28	28	30	30	30	30	28	27	27	29	29	29	28	23	24	22	23	

foF2

Manual Automatic

Sweep J... Mc to 2.2.0. Mc in ... min

Y I

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

Lat. 31° 12.6' N
Long. 130° 37.7 E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Mar. 1956

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	M	M	M	M	M	M	M	M	M	240	240	270 ^H	250	290	260 ^H	250	250	220 ^A	240	200 ^A	200 ^A	250	240 ^H	280
2	290	290	290	290	250	320	280	220	220	240	240	240 ^H	250	[260] ^H	280	250	240 ^H	250	240	240	200 ^A	210	250	340
3	300	290	270	280	240	270	320	230	220	240	250 ^H	240	250	250 ^H	250	250	250	240 ^K	270 ^K	270 ^K	240 ^K	270 ^K	240 ^K	240 ^K
4	330 ^A	290 ^K	240 ^K	210 ^F	340 ^K	350 ^K	310 ^K	270 ^K	240 ^K	340 ^K	430 ^K	290 ^K	290 ^K	280 ^K	290 ^K	280 ^K	260 ^K	240 ^K	210 ^K	200 ^K	230 ^K	250 ^K	280 ^K	[290] ^K
5	300 ^K	[280] ^K	260 ^K	240 ^K	210 ^K	240 ^K	350 ^K	240 ^K	230	230	240	240	250	250	250	250 ^H	240	240	230	200	220	240	270	300 ^A
6	290	300 ^A	300	260	250	290	300	240	210	240	240	250	250	250	250	240	240	240	240	200 ^A	240	240	250	270
7	260	280	270	240	220	240	330	240	240	240	240	250	260	260	250	250	250	240	210 ^A	240	240	240	250	250
8	250	280	290	240	200	250	290	220	230	240	240	250 ^H	250	260	250 ^H	260	250	240	230	220	210	240	250	250
9	250 ^F	250	260	240	210	230	250	240 ^H	230	240	250	250 ^H	270 ^H	270 ^H	270 ^H	260	250	240	240	240	[240] ^C	240	230	240
10	240	240	240	240	210	250	270	240	230	250	250	250	250	270	[280] ^B	280 ^B	270	250	240	240	250	280	290	290
11	290 ^A	240	250	260	270	270	260	240	240	240 ^H	240 ^H	250 ^H	260 ^H	260 ^H	250 ^H	250 ^H	250 ^H	250 ^H	250	240	240	230	260	280
12	290 ^H	280	250	240	200	230	270	240	240	250	250	240 ^H	250 ^H	250 ^H	240 ^H	250 ^H	250	240	240	240	250	270	250	260
13	250	270	270	240	240	250	290	240	240	240	240 ^H	250	250 ^H	250 ^H	240 ^H	250 ^H	250	240	240	250	240	240	210	250
14	280	240	250	240	210	240	260	250	240	250	250	250 ^H	250 ^H	260 ^H	250 ^H	250 ^H	250 ^H	250 ^H	240	230	210	250	240	240
15	320	340	300	240	200	240	250	240	C	C	C	C	C	C	C	C	C	C	240	240	230	230	240	250
16	280	290	280	260	260	250	240	240	230	230	240	240 ^H	250	240	250 ^H	250 ^H	250 ^H	250 ^H	250	230	230	250	240	250
17	260	300	290	250	240 ^H	290 ^H	240	230	230	240	250 ^H	240 ^H	250	L	240 ^H	260 ^H	260 ^H	270	240	230	230	240	250	280
18	270	240	250	250	220	230	260	230	220	240	240	250 ^H	250	260 ^H	280	260 ^H	270	250	[240] ^A	220	250	260	250	250
19	270	240	250	290	270	240	240	230	230	240	260	260 ^H	250 ^H	250 ^H	270 ^H	250 ^H	250 ^H	240	240	220	250	250	250	270
20	280	260	260	270	270	290	240	220	230	240	250	250	240 ^H	260 ^H	250 ^H	270	250 ^H	240	240	240	220	220	230	240
21	260	270	250	240	220	240 ^F	250	230	230	230 ^H	230 ^H	240 ^H	250 ^H	250 ^H	270 ^H	270	260	250	250	220 ^A	210 ^A	300	300 ^A	270
22	330	340	310	290	260	340	330	210	240	240 ^H	240 ^H	260	250	250 ^H	270 ^H	250 ^H	250 ^H	250	250	240	220 ^A	270 ^H	310	300
23	300	300	280	240	240	300	260	220	230	240	240 ^H	240 ^H	250	240 ^H	250 ^H	240 ^H	250 ^H	260	240	240	230	270	290	290
24	280	250	240	230	210	250	270	240	240	240	240	240 ^H	240 ^H	240 ^H	250 ^H	250 ^H	250 ^H	250 ^H	240	240	240	240	290	300
25	290	260	[280] ^C	300	C	C	240	240	240	240	240	240 ^H	250 ^H	250 ^H	250 ^H	240 ^H	250 ^H	250 ^H	250	240	210	250	270	270 ^H
26	270	290	270	250	290	320	290	230	230	240	240	230 ^H	240 ^H	250 ^H	240 ^H	260 ^H	260 ^H	250	240 ^A	220 ^A	240	260	250	250
27	250	300	290	250	240	240	250	230	240	240	230	240	220 ^H	240 ^H	250 ^H	290	250 ^H	250	250	250	250	250	300	290
28	250	270	290	240	270 ^H	320	320 ^H	230	230	240	240 ^H	250 ^H	250 ^H	250 ^H	250 ^H	240 ^H	250 ^H	250 ^H	250	230 ^A	240	260	280	270
29	300	290	260	220	220	260	300	230	240	240 ^H	240	250	250 ^H	250 ^H	250 ^H	250 ^H	240 ^H	250	280 ^H	230	280 ^H	290	290	290
30	300	290	250	230	200	280 ^H	290	220	230	240	250 ^H	240	240 ^H	240 ^H	240 ^H	240 ^H	240 ^H	240 ^H	250	220	250	240 ^H	250	240
31	240	240	250	250	220	340	300	240	230	240	240 ^H	240 ^H	260	260 ^H	250 ^H	250 ^H	250 ^H	250 ^H	240	240	240	270	290	300
Mean Value	280	280	270	250	240	270	280	230	230	240	250	250	250	260	260	250	250	250	240	230	230	250	260	270
Median Value	280	280	260	240	240	250	270	240	230	240	240	250	250	250	240	250	250	250	240	240	230	250	250	270
Count	30	30	30	30	29	29	30	30	29	30	30	30	30	29	30	30	30	30	31	31	31	31	31	31

Sweep 1.0 Mc to 22.0 Mc in _____ min Manual Automatic

R'F2

Y 2

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

Lat. 35° 12.5' N
Long. 139° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

fEs

Mar. 1956

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	M	M	M	M	M	M	M	M	M	Q	5.1	5.9	6.4	6.9	5.5	5.5	3.8	3.7	2.3	3.5	3.3	3.6	2.4	E
2	3.2	3.1	3.4	3.5	2.3	2.4	2.4	2.3	3.6	Q	Q	Q	5.0	Q	3.8	5.2	4.6	4.2	4.5	5.9	2.4	E	E	E
3	E	2.2	E	2.1	E	2.2	E	2.4	Q	Q	Q	5.0	6.5	9.0	6.7	8.6	5.0	3.8	3.2	4.1	3.8	3.0	2.4	2.9
4	3.8	2.3	2.2	4.5	2.3	2.4	2.3	2.4	Q	Q	Q	5.2	5.1	Q	4.9	4.8	3.8	3.6	3.0	2.3	2.4	E	3.5	5.9
5	3.2	5.9	3.0	2.3	2.2	2.4	2.2	2.4	Q	Q	Q	Q	Q	4.7	Q	Q	Q	3.6	3.0	2.2	2.4	2.0	2.2	3.3
6	3.0	3.6	2.3	E	2.2	E	E	2.2	Q	Q	Q	4.8Y	4.8	Q	4.8	4.5Y	3.6	3.3	B	2.3	2.3	2.3	2.2	E
7	E	E	E	2.3Y	E	E	E	B	Q	Q	Q	4.7	Q	5.9	5.9	5.8	5.9	3.2	3.0	3.0	2.3	E	2.2	2.3
8	E	E	E	E	2.3F	2.3	2.3	2.3	Q	Q	Q	Q	Q	Q	Q	3.8	Q	Q	Q	E	2.1	2.4	3.0	2.4
9	2.2	E	E	E	2.4	2.2	2.2	Q	Q	Q	Q	5.0Y	5.9	4.9	4.9	Q	4.6Y	Q	2.3	2.3	C	2.4	2.4	2.3
10	2.3	2.2	2.3	2.3	2.3	E	2.2	Q	Q	Q	Q	5.0	Q	Q	B	6.2	6.2	6.0	3.8	3.4	3.6	3.6	5.9	3.6
11	5.9	E	E	E	2.3	2.3	2.3	Q	Q	Q	4.5Y	4.9	Q	5.5	Q	4.5Y	4.6	3.4	3.4	5.9	5.0	2.3F	2.3F	3.2
12	E	E	2.1	2.3	E	E	2.3	Q	Q	Q	Q	Q	3.8	3.8	3.8	Q	Q	3.2	3.8	2.3	3.8	2.9	2.4	2.3
13	2.3	2.2	2.3	2.3	2.3	2.4	E	2.3	Q	Q	Q	4.6Y	4.8	Q	Q	Q	Q	3.5	2.3	3.1	2.3	E	E	2.3
14	E	E	E	E	E	2.3	2.2	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	2.0	2.3	E	2.2	E	E
15	2.3	E	E	2.2	E	E	E	Q	C	C	C	C	C	C	C	C	C	C	Q	E	E	E	E	E
16	E	E	E	E	E	E	E	Q	B	Q	Q	Q	Q	B	Q	Q	Q	Q	3.0	3.1Y	2.4	E	E	E
17	3.5	3.7	2.3	E	E	E	E	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	2.3	E	3.3	2.3	E	E
18	2.1	E	E	E	E	E	E	Q	Q	Q	4.9	5.9	Q	3.8	Q	Q	5.1	4.4	5.8	2.4	E	E	E	E
19	3.0	2.3	2.3	2.3	2.0	E	E	Q	Q	Q	Q	4.9Y	B	B	B	Q	Q	Q	Q	2.3	E	E	E	E
20	E	E	E	E	E	E	E	Q	Q	Q	Q	3.8	B	Q	3.8	3.8	Q	Q	Q	E	2.2	E	E	E
21	E	2.2	E	2.3	E	E	E	Q	3.3	Q	Q	Q	Q	B	Q	Q	Q	Q	3.3	3.6	3.0	3.1	3.8	2.2
22	E	3.2F	2.2	E	2.2	E	E	Q	Q	Q	Q	Q	Q	Q	4.7	Q	Q	Q	3.3	2.3	2.4	3.4	E	E
23	E	E	E	E	E	E	E	Q	Q	Q	Q	4.9	Q	Q	Q	Q	Q	3.8	3.6	4.9	2.3	2.3	E	E
24	E	E	E	E	2.4	2.3	2.3	Q	Q	4.9	5.2	5.2	4.6Y	Q	Q	5.6Y	Q	Q	Q	E	2.4	2.3	E	2.3
25	E	E	E	E	E	C	2.3	Q	Q	Q	Q	5.4Y	5.9	Q	Q	Q	Q	Q	3.3Y	3.1	2.4	3.1	2.4	2.3
26	E	E	E	2.2	2.3	2.4	2.2	3.3Y	Q	Q	Q	Q	Q	B	B	Q	Q	3.7	4.3	3.2	3.2	2.2	2.1	E
27	E	E	E	E	E	2.1	2.4	B	Q	4.7	5.0	4.7	4.8	3.8	3.8	7.0	3.8	3.6	5.0Y	5.9	5.9	3.0	5.9	3.2
28	3.5	2.4	3.8	E	2.1	E	E	Q	Q	Q	4.8Y	Q	6.5	3.8	3.9	Q	Q	Q	3.1	3.6	2.3	E	E	E
29	2.2	1.8	2.1	E	E	E	E	Q	Q	Q	B	5.9	Q	5.9	B	Q	Q	Q	3.2Y	3.3	2.4	3.3	2.3	E
30	2.3	2.3	2.4	2.7	2.3	2.4	2.1	Q	Q	5.9Y	B	B	B	B	Q	B	Q	Q	Q	2.3	E	E	E	2.0
31	1.9	E	2.4	E	E	E	E	Q	2.4	Q	B	5.2Y	Q	Q	Q	5.1Y	Q	3.5	2.3	3.3	2.4	E	2.2	E
Mean	2.9	2.8	2.5	2.6	2.3	2.3	2.3	2.5	3.1	5.2	4.9	5.1	5.3	5.3	4.7	5.4	4.6	3.8	3.3	3.3	2.9	2.7	2.9	2.8
Median	2.0	E	E	E	E	E	E	Q	Q	Q	Q	4.7	Q	Q	Q	Q	Q	3.2	3.0	3.0	2.4	2.3	2.2	E
Value	3.0	3.0	2.9	3.0	2.9	3.0	3.0	2.8	2.8	3.0	2.7	3.0	2.7	2.5	2.6	2.9	3.0	3.0	3.0	3.1	3.0	3.1	3.1	3.1
Count	30	30	29	30	29	30	30	28	28	30	27	30	27	25	26	29	30	30	30	31	30	31	31	31

fEs

Sweep 1.0 Mc to 22.0 Mc in 1 min

Manual Automatic

Y 3

SOLAR RADIO EMISSION

MAR., 1956

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	8	10	9
2	7	7	7
3	12	9	10
4	10	12	11
5	17	20	18
6	12	14	13
7	7	8	8
8	8	7	8
9	7	6	7
10	7	6	7
11	6	5	5
12	7	5	6
13	(10)	11	11
14	30	22	26
15	10	14	12
16	16	22	19
17	25	17	21
18	11	13	12
19	9	7	8
20	10	15	13
21	9	11	10
22	8	11	9
23	8	10	9
24	10	13	12
25	11	8	9
26	9	8	8
27	-	9	-
28	9	13	11
29	5	5	5
30	6	7	6
31	8	8	8

Outstanding Occurrences

Date	Starting Time	Duration	Type	Peak Flux	Time
8	0319	14m	CD	260 1420 435	0322.....1st peak 0325.....2nd peak 0328.....3rd peak
10	0448-00s	8m	CD	1560 1820	0452.....1st peak 0454.....2nd peak
15	0320-40s	4m	CD	240 68	0321-50s..1st peak 0323-40s..2nd peak
	0543-?	ca 3m	CD	230	0544-00s
16	0205-30s	2m	CD	300	0206
19	0456	9m	M	204 93 77	0456.....1st group 0502.....2nd group 0504.....3rd group
	0653	ca 20m	M	5 130 235	0653 (peak flux 0706 increased 0712 gradually)
20	0228	60m	CD	78 490 280 380 330 230	0228-30s 0236-20s..1st peak 0240.....2nd peak 0243-40s..3rd peak 0247.....4th peak 0253.....5th peak
30	0228-40s	40s	SD	330	-
	0312-50s	5m	SD	330	0315-30s

IONOSPHERIC DATA IN JAPAN FOR MARCH 1956

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発 行 人

藤 木 栄
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発 行 所

郵 政 省 電 波 研 究 所
東京都北多摩郡小金井町小金井新田一之久保573
電 話 国 分 寺 138, 139, 151

印 刷 所

今 井 印 刷 所
東京都新宿区筑土八幡町8番地
電 話 九 段 (33) 2304
