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551. 510. 535. 05(52) (047.3)

IONOSPHERIC DATA IN JAPAN

FOR DECEMBER 1955

Vol. 7 No. 12

Issued in January 1956

Prepared by

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

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CONTENTS

	Page
Preface	2
Site of the Ionospheric Stations.	3
Remarks on Symbols	3
Solar Radio Emission.	3
Ionospheric Data for Every Day and Hour at Wakkanai.	4
Ionospheric Data for Every Day and Hour at Akita	7
Ionospheric Data for Every Day and Hour at Kokubunji.	10
Ionospheric Data for Every Day and Hour at Yamagawa	22
Data on Solar Radio Emission	25

P R E F A C E

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° 28.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

Dec. 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	3.3	3.3	3.5	3.5F	3.3	3.3	3.3	5.2	7.6	8.6	8.2	8.0	9.3P	7.8	7.8	7.1	5.8H	4.8	4.2	3.1	2.8	2.6	2.8	2.9P	
2	2.9	3.0P	2.8	2.8	2.0	3.0F	3.3F	5.0	8.1	9.5F	10.4	12.0	11.0	10.5	9.3	8.8P	7.2	5.5	5.0	4.5	4.2A	3.8	3.8F	3.7	
3	4.0F	3.5F	3.5F	3.7F	3.8F	3.7	3.8	6.0	7.8P	9.0	9.0H	9.5J	8.7J	9.0P	8.2	8.0	5.0	4.0J	3.6	3.5A	3.1	2.8	3.0	3.4F	
4	3.3	3.2J	3.2	3.4	3.3	3.2	3.2	5.5	7.5	8.4P	9.3	9.8J	9.5P	9.8J	9.4	8.2	5.8	5.0	3.5	3.3	2.8	2.7	2.8	3.1	
5	3.2	3.3	3.3	3.4	3.7	3.2	3.2	5.5	7.6	8.2	7.8	9.3J	8.0	8.5	8.2	7.5	6.1	4.4	3.6	3.2	2.8	2.7	2.8	3.1	
6	3.3	3.2	3.4	3.5	3.5	3.1	3.1	5.5	8.3P	9.3P	8.5J	9.1	9.3P	8.0	8.3P	7.5J	6.5	5.7	4.5	4.5	3.6	3.2	3.1	3.2	
7	3.5	3.6	3.6	3.5	3.5	3.5	3.5	5.5	8.0	7.5	8.5J	9.3J	9.3J	8.3J	8.0	7.5	7.3J	5.0	4.3	3.4	3.2	2.5J	2.8	3.0	
8	3.1	3.0	3.2	3.2	3.2	3.3	3.0	5.0	7.8J	7.8P	9.8J	9.5J	8.0	8.1	7.8H	8.8P	6.2	4.5	4.1	3.1	2.6	2.3	2.7	2.8	
9	2.8	3.0	3.0	3.1	3.3	3.3F	3.2	4.8	6.6	8.3J	9.6J	9.0	7.8	B	B	8.5	6.5	5.0	4.5	3.9	3.3	3.0	3.0	3.0	
10	3.1	3.0	3.1	3.6	2.0	2.3	2.5	5.3J	8.5	10.1J	9.5J	9.3	8.5	8.1	8.5	8.0	6.2	4.8	3.8	3.7J	3.6	3.3	3.3	3.5	
11	3.5	3.5F	3.6	3.6	3.6	3.6	4.0	5.5	C	C	C	C	C	C	C	C	C	4.0	3.8	3.1	2.9	2.6	2.8	3.1	
12	3.2	3.3	3.3	3.2	3.4	3.5	3.3	5.3J	7.5J	8.8J	9.0	9.8P	9.3J	8.5	8.3	7.3J	6.2	4.7	3.7	3.4	3.5	2.7	2.9F	3.0F	
13	3.3	3.3	3.2	3.2	3.3F	3.5	2.7	4.8	7.5	7.3J	8.5P	8.6P	10.0J	8.2	7.0	7.6	6.6	3.8V	3.3	3.1	2.8	2.3	2.8J	3.1J	
14	3.2	3.0	3.3	3.5	3.5	3.3F	3.3	5.3	7.0	8.0	8.0	9.0	9.8P	7.7	7.3	6.8	7.1	3.9	3.7	3.6	3.2	2.3	2.7	2.7	
15	2.8	3.0	3.4	3.0	3.5	3.0	3.5	5.3	7.0	7.0	7.7	8.4	7.8	8.0	7.5	6.5	5.1	3.3	3.3	3.0	2.7	2.3	2.7	3.0	
16	3.0	3.2	C	C	C	C	C	C	C	C	C	C	C	C	7.0	7.0	6.1	4.0	3.5	3.3	2.6	2.7	3.0	3.2P	
17	3.5	3.3	3.3	2.6	2.9	2.9	2.9	5.3J	8.8P	7.3J	9.3P	B	8.6	7.3J	6.6	6.7	5.6	4.3J	3.1	2.9	2.8	2.7	2.8	3.0	
18	3.1	3.2	3.0	2.9	3.0	3.0	3.2	5.0J	6.7	8.3J	10.3J	8.8	8.7	7.0	7.7P	7.3	6.0	3.6	2.7	3.0	2.4	2.5	2.7	2.9	
19	3.0	3.1	3.2	3.0	3.0	3.0	2.9	4.1	6.0	7.2J	8.8P	10.3J	8.9P	7.5	7.8	7.8	5.6	4.0	4.0	2.8	2.3	2.7	2.8	3.2	
20	3.1	3.1	3.2	3.0	3.0	3.2	2.2	4.3	6.5V	7.5	7.0F	10.6	9.2P	7.8	7.6	7.3	6.0	4.9J	3.5	3.2	2.8	3.0	3.3	3.3	
21	3.4	3.3	3.4	3.1	3.3	2.9	2.8	4.1	7.1	8.0	9.5	9.5	8.2	8.1	8.0	6.6	5.3	4.5	4.0	3.0	2.8	3.0	3.0	3.2	
22	3.2	3.3	3.5	3.5	3.5	3.1	2.2F	4.1	7.6	7.7	9.0	9.5J	9.4	8.2	7.5	7.1	5.6	4.8	3.6	3.3	3.0	2.8	3.3	3.0F	
23	3.4	3.4F	3.6F	3.0F	3.2F	3.2F	2.7F	4.9	6.2	7.2	7.7	10.8P	9.5	7.8	8.5	7.4	5.6	4.0	3.5	3.1	3.5F	3.4J	3.5J	3.7	
24	3.6V	3.7	3.8	3.7	3.6	3.3	3.3	4.5	6.4	6.8J	9.5	9.8J	8.9P	8.0	8.0	7.5	5.7H	4.9J	4.1	2.6	2.5	2.5	2.7	3.0F	
25	3.2F	3.3F	3.3	3.2F	3.5F	3.5	3.3F	4.0	6.2	7.8J	10.3P	10.0J	9.3J	8.6	8.6	6.8	5.8	4.8	4.5	4.0	2.9	3.0A	3.0	3.1	
26	3.2	3.3	3.2	3.3	3.8	2.0F	2.0	4.6P	5.7J	8.5Z	8.4P	8.2	9.3J	7.5	9.3J	7.2J	5.3	4.3	3.5	3.4	3.0	3.0	3.5F	3.8F	
27	4.1	4.3F	3.5	3.5F	2.6F	2.6F	2.9P	4.0	6.5	10.0J	11.0J	9.3J	8.0	9.5P	8.2H	8.2P	8.2	5.8	4.0	2.8V	C	C	C	C	
28	C	C	C	C	C	C	C	C	C	C	C	C	C	C	8.0	8.0	7.3	4.6	3.7	2.8	2.6	3.0F	F	F	
29	2.7F	2.9F	3.0F	3.1	3.1	2.7	2.6	4.5	5.8	9.0	9.3J	8.5	8.0	8.3	7.0P	7.9	5.0J	4.8	3.8	2.7	2.3	2.6F	2.8J	3.0F	
30	3.3F	3.5F	F	F	3.5F	3.2F	2.6F	4.3	6.5	7.3	7.8	8.0	8.2	8.2	8.6	7.9	6.6	4.3	3.5F	2.5	2.5	2.5	2.9F	2.8F	2.7
31	3.0	3.0	3.1	3.1	3.3	3.1	2.5	4.1	6.1	7.8	7.6	10.0	8.2	8.0	7.5	7.8	6.5	4.3	4.6	3.5	2.5	2.4A	2.3	2.5	
Mean	3.2	3.3	3.2	3.2	3.2	3.1	3.0	4.9	7.1	8.2	8.9	9.4	8.9	8.2	8.0	7.5	6.1	4.5	3.8	3.3	2.9	2.8	3.0	3.1	
Median	3.2	3.3	3.3	3.2	3.2	3.2	3.0	5.0	7.0	8.0	9.0	9.3	8.9	8.1	8.0	7.5	6.0	4.5	3.7	3.2	2.8	2.7	2.8	3.1	
Count	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.8	2.7	2.9	2.9	3.0	3.0	3.1	3.1	3.0	3.0	2.9	2.9	

W 1

Automatic

Manual

Sweep L.D. Mc to 22.0 Mc in _____ min

foF2

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

Lat. 46° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

R'F2

Dec. 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	320	310	290	280	250	230	210	220	220	230	220	230	220	230	230	220	210	230	250	290	290	350	350	350
2	350	360	340	370	300	320	340	240	220	250	220	260	240	240	230	230	210	230	260	270	260	260	310	260
3	250	260	300	310	290	270	250	230	220	230	220	240	230	250	220	220	200	220	260	260	260	290	320	340
4	340	350	300	280	240	270	240	220	220	220	220	220	260	260	220	220	210	220	260	260	270	270	320	320
5	300	310	270	270	260	240	220	220	220	230	240	240	220	240	230	220	210	210	240	250	260	300	350	330
6	320	330	310	280	260	250	220	220	220	210	250	230	230	220	250	220	230	240	250	240	250	260	310	350
7	310	290	270	260	260	250	220	220	220	210	240	230	240	240	220	210	220	220	250	250	260	260	350	340
8	300	300	290	280	280	260	250	220	210	220	250	220	210	220	220	220	210	220	250	250	260	300	350	350
9	340	310	220	300	280	240	250	220	210	220	240	230	220	230	240	230	210	230	220	240	230	290	320	350
10	360	360	310	230	210	320	300	240	220	230	230	230	230	230	230	230	250	220	270	260	260	270	320	330
11	320	330	340	270	260	250	240	220	220	220	220	220	220	220	220	220	220	210	260	260	260	260	330	330
12	340	310	330	270	280	260	250	230	220	220	240	250	220	230	220	220	210	230	250	260	240	270	320	360
13	310	310	310	320	280	340	230	240	220	210	240	210	240	240	220	210	230	220	250	220	270	300	350	320
14	300	300	310	270	280	260	250	220	220	220	220	250	240	250	220	220	220	230	300	260	260	350	320	360
15	350	320	300	290	290	280	280	260	220	220	230	230	230	230	230	220	220	210	250	250	250	330	320	360
16	300	310	250	260	300	260	250	230	220	220	220	220	220	220	220	220	220	210	250	250	290	360	370	330
17	290	270	250	260	300	260	250	230	220	240	230	250	240	250	210	220	210	210	240	260	260	340	370	360
18	320	300	270	260	300	290	250	250	220	230	240	230	240	220	230	230	230	200	280	250	270	350	320	310
19	310	310	270	260	270	260	250	230	220	220	230	240	220	230	240	240	220	230	240	270	350	320	360	320
20	300	320	320	320	250	250	270	230	220	230	220	220	220	220	220	220	220	230	260	250	270	340	310	300
21	330	300	270	250	250	260	260	230	240	220	250	230	220	220	220	220	210	220	260	250	290	320	320	330
22	320	340	310	270	240	210	300	260	210	220	230	230	240	220	220	220	220	230	240	240	250	360	320	320
23	350	310	320	250	250	230	300	220	220	220	220	260	220	250	240	220	210	220	270	270	310	340	320	300
24	310	300	270	260	240	270	260	220	220	250	260	240	250	230	240	220	220	240	240	240	210	310	360	320
25	360	310	300	320	270	260	260	220	210	240	250	240	240	230	230	220	220	240	260	240	260	300	340	340
26	330	320	310	280	220	210	350	240	200	220	220	220	240	220	240	220	210	210	270	270	260	350	310	310
27	310	270	260	220	210	350	310	270	240	240	230	220	230	240	260	250	220	220	270	270	260	340	340	340
28	300	300	300	280	220	220	250	240	210	240	220	220	240	220	230	220	210	220	240	240	240	330	310	270
29	300	320	310	280	220	220	250	240	210	240	220	230	240	220	230	220	210	260	240	260	270	330	270	270
30	320	310	310	280	250	210	300	240	210	220	240	230	230	250	240	240	230	250	250	260	300	360	370	360
31	340	310	340	300	260	250	260	230	240	220	230	250	240	230	240	220	220	250	250	220	250	300	350	350
Mean Value	320	310	300	280	260	260	220	220	220	230	230	230	240	240	230	220	220	230	250	250	270	310	340	330
Median Value	320	310	300	270	260	250	230	230	220	220	230	240	230	240	230	220	220	220	250	250	260	310	340	330
Count	30	30	29	29	29	29	29	29	28	28	28	28	28	28	30	30	29	31	31	31	30	30	30	30

R'F2

Group _____ Mc to 2.2.0 Mc in _____ min

Manual Automatic

W 2

Lat. 45° 28.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

138° E Mean Time

fEs

Dec. 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	E	E	E	E	E	E	E	E	E	E	E	E	E	4.2Y	E	E	E	E	E	E	E	E	E	E
2	3.0	2.2	2.2	3.0	2.5	E	E	E	E	5.0	3.5	4.5	E	E	E	E	E	E	E	4.5	6.8Y	4.5	5.6	3.6
3	E	E	2.0Y	E	E	E	E	5.6	E	E	E	E	E	E	E	E	E	E	E	6.1	3.7	3.5	2.0Y	3.0
4	E	E	E	E	E	3.5	4.5	3.5	E	3.5	E	E	E	4.5Y	4.0Y	3.0Y	3.5	3.5Y	5.0	5.0	3.5Y	E	E	2.3
5	E	2.6	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	3.5	3.0F	3.0F
6	2.5F	3.0	E	E	E	E	E	E	E	E	E	E	E	E	E	E	3.6	E	E	E	E	E	E	E
7	E	E	E	E	E	E	E	E	E	E	E	E	E	4.2Y	E	E	3.5Y	E	E	E	E	E	E	2.1
8	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
9	2.2	2.0	2.5	2.0	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
10	E	2.2	2.2	2.1Y	E	2.5	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
11	2.0	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
12	3.3	E	E	E	2.3	E	E	E	E	E	E	E	E	E	E	E	2.5Y	E	E	E	E	E	E	E
13	2.2Y	2.3Y	E	2.2Y	2.5	E	E	E	E	E	4.7	4.5	E	E	E	E	E	E	E	3.5	E	E	E	E
14	3.5	E	2.3	E	2.5	3.5	E	E	E	3.5	E	E	6.1	6.5	5.0	3.6Y	E	2.2	3.5Y	7.0Y	7.2	5.8F	E	2.3
15	2.7	3.0	2.5	2.3	1.7	2.3	3.2	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
16	E	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
17	E	2.1	E	E	E	E	E	E	E	5.8	3.5	E	E	E	E	E	E	3.2	1.8	E	E	E	E	E
18	2.0	2.0	E	E	E	E	E	E	E	E	3.5	E	E	E	E	E	E	E	E	E	E	E	E	E
19	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
20	E	3.5Y	2.3	2.5	2.2	E	E	E	E	E	E	E	E	E	5.2	3.5	E	E	E	E	E	E	E	E
21	2.6	E	E	E	E	E	E	E	E	E	6.0Y	E	E	4.0	E	3.5Y	E	E	E	E	E	E	E	E
22	2.0	2.3	E	E	E	E	E	E	E	E	E	E	4.0Y	E	3.6	E	E	E	E	3.0	E	E	3.0	2.5
23	2.5	2.2	2.5	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	2.6	E	E	E	E
24	2.2	E	2.3	2.3	E	E	E	E	E	4.0	6.0	E	E	E	E	E	E	E	E	E	E	E	E	E
25	E	2.5	2.2	E	E	2.2	E	2.5	E	E	E	E	E	E	E	E	E	E	E	3.5	E	6.0	3.5	2.9
26	2.3	1.8	E	3.0	E	E	E	E	4.8Y	5.0	E	E	E	E	E	E	E	E	4.8	3.5	3.2	E	E	E
27	E	2.0	E	E	E	1.8	E	E	E	E	E	E	E	E	E	E	E	E	E	2.3	E	E	E	E
28	E	E	E	E	E	E	E	E	E	E	E	E	E	E	4.4Y	E	E	E	E	E	E	E	E	E
29	2.5	3.1Y	E	E	E	E	E	E	E	E	E	E	E	E	E	E	3.5	3.0Y	3.5	3.5Y	E	E	E	E
30	E	E	E	3.0	2.5	2.5	2.3	2.5	E	E	E	E	E	E	E	4.0	4.7	7.5	4.0Y	E	2.5Y	E	E	2.5
31	2.5	E	1.5	E	2.3Y	4.2Y	6.0	3.5Y	E	E	E	E	E	E	4.2Y	4.8Y	6.0	4.8	E	2.5	E	4.3	E	E
Mean Value	2.5	2.4	2.2	2.5	2.4	2.8	4.0	3.5	4.8	4.5	4.3	4.6	4.9	4.7	4.5	3.9	3.8	3.7	3.5	3.9	4.2	4.0	3.6	2.7
Median Value	2.0	2.0	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Count	30	30	29	29	29	29	28	28	28	27	27	28	27	28	30	30	29	31	31	30	30	30	30	29

fEs

Sweep 1.0 Mc to 2.5 Mc in 1 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

Dec. 1955

30F2

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	3.3	3.3	3.5	3.5	3.2	3.0	3.5	5.6	7.2	8.5	8.5	8.6	8.6	7.9	8.1	(8.0) ^P	6.7 ^P	5.1	4.6	4.6	2.7	2.7	2.6	2.8
2	2.8	2.9	2.8	2.9	2.8	2.8F	3.7	5.9	C	8.0 ^P	(11.0) ^F	10.7	9.2	9.6	(8.8) ^S	8.1	7.5	5.8	5.2	6.0 ^P	4.0	3.5	3.6	3.7
3	3.6	3.6V	3.6	3.6	3.7	3.6	4.0	6.6	7.6	8.5	9.5	8.0 ^F	8.5	8.5 ^P	C	7.7	6.8	4.4 ^P	3.7	3.4	2.7	2.7	2.8	3.0
4	3.0	3.2	3.4	3.5	3.5	3.3	3.2	6.0	8.1	8.5	9.1	(8.7) ^S	8.3 ^P	8.5 ^F	9.0	(8.0) ^S	7.0	4.9	3.7	3.6	3.8	3.3	3.2	3.3
5	3.3	3.3	3.6	3.6	3.6	3.5	3.3	5.9 ^F	7.1	7.7	8.5 ^F	8.6 ^F	(8.5) ^F	8.6	(8.1) ^S	7.6	6.3	4.5	4.6	3.2	2.8	2.6	2.6	2.8
6	2.9	3.0	3.0	3.4	3.5	3.3	3.4	6.5 ^P	7.2	7.4	(8.0) ^S	8.6	(8.4) ^F	(8.6) ^F	(8.5) ^F	C	T	T	T	T	T	T	T	T
7	T	T	T	T	T	T	T	T	T	C	6.8 ^J	8.5	(8.5) ^F	8.5	(8.2) ^S	8.0	(8.3) ^F	5.9 ^F	3.9 ^F	3.8	3.5	3.0	2.7	2.7
8	3.0	2.9	3.0	3.2	3.1	3.2	3.1	5.5 ^P	7.5 ^J	(8.2) ^F	(8.8) ^F	9.4	C	C	C	(7.7) ^P	(8.0) ^F	4.6	3.0	3.0	2.6 ^J	2.6	2.8	
9	3.0	3.0	3.0	3.1	3.2	3.1	3.2	6.3	8.6 ^F	C	C	C	(8.4) ^F	8.2	7.4	7.4	(5.9) ^F	5.2	4.8	3.5	3.0	2.8	3.1	
10	3.2	3.1	3.4	3.5	A	A	2.6	6.5	1.74 ^S	8.4	(8.6) ^S	8.7	(8.4) ^F	8.2	(7.8) ^S	7.4	7.5	4.5	3.6	3.1	3.5	2.8	2.9	
11	3.0	2.2	3.3	3.4	3.5	3.4	3.7	6.4	C	8.2	8.4	9.0	9.5	(8.5) ^F	7.9	7.7	6.4	3.5 ^P	2.9	2.6	2.5 ^J	2.3 ^J	2.7	
12	2.8	2.8	2.8	3.3	3.2	3.2	2.8	6.0 ^J	7.5 ^P	7.2	7.9 ^J	8.3	8.5 ^P	(8.6) ^P	7.6	7.5	6.1	5.6	3.6	3.7	3.3	2.7 ^J	2.6 ^J	2.6
13	2.7	3.0	3.2	3.2	3.3	3.2	2.9	6.0	7.2	8.1	7.9 ^P	8.0 ^J	8.0 ^J	7.6	C	8.6	5.5	5.1	3.6	3.2	2.7 ^P	2.4 ^J	2.6	2.8
14	2.9	2.8	3.0	2.9	2.8	2.7	2.9	5.8	C	6.5 ^J	8.0 ^J	8.1	8.7 ^J	(8.5) ^F	7.6	7.0 ^H	5.9 ^F	4.5	3.6	3.2	3.2	2.2 ^H	2.3 ^J	2.7
15	2.6	2.7	3.0	3.0	3.1	2.8	2.8	5.7	7.7 ^P	7.1	7.6	8.2	8.3	8.0	7.6	7.0	6.6	4.2	3.5	3.5	2.7	2.7	2.8	3.1
16	3.3	3.3	3.5	3.6	3.3	3.0	3.2	6.0 ^P	6.7	9.1	9.5 ^T	10.1	9.4	9.1	7.6	7.1	6.6	5.0	3.5	3.2	3.0	3.0	3.1	3.5
17	3.6	3.6	3.6	2.8	2.8	2.9	3.0	5.5	6.8	9.1 ^H	10.7	9.1	9.5	9.6 ^H	10.0 ^J	6.5	6.6	4.4	4.0	3.3	2.9	(2.9) ^A	2.9	3.0
18	3.1	3.2	3.2	3.2	3.1	3.0	3.3	5.5	7.7	7.4	10.7	10.0	8.6	8.1	7.0 ^V	7.2	6.5	4.1	3.8 ^P	2.9	2.9 ^P	3.0 ^V	2.8	3.0
19	3.2	3.2	3.3	3.3	3.2	3.1	3.0	(5.1) ^F	7.0	8.0	7.6	8.9	8.8	7.7	6.7	7.5	6.8	5.0	3.4	3.2	3.1	3.0	3.1	3.3
20	3.2	3.2	3.4	3.3	3.2	3.2	3.3	5.1	6.6	8.5	9.1	8.8	8.5	8.1	7.4	7.4	5.9	5.7	4.4	3.1	3.4	2.6	3.0	3.1
21	3.3	3.2V	3.2	3.3	3.0	3.1	3.0	5.8	6.5	9.0	10.0	9.5	7.7	8.1	7.7	7.8	6.5	4.7	4.6	3.0	2.7	2.7 ^F	2.9 ^F	3.1
22	3.2	3.2	3.3	3.3	3.4	3.2	2.6	4.8	8.1	9.0	9.1	11.0	9.8	8.2	7.7	6.5	6.8	4.9	4.7	3.0	A	A	3.0	3.2
23	3.4	3.2F	3.2F	3.5F	2.6 ^P	2.8 ^{VF}	2.8	5.5	7.6	7.8 ^H	8.3	8.1	9.3	8.8	7.6	7.5	6.6	4.1	3.5	3.2	(3.2) ^A	3.3	3.5	3.5
24	3.5	3.4	3.5	3.4	3.0	2.7	2.7	5.5 ^P	6.5	6.6	8.5 ^P	11.6	10.3	8.3	8.3	7.8	6.3	5.1	5.1	3.3	2.7	2.8	2.7	2.7
25	3.1	3.1	3.2	3.1	3.4	3.2	3.6	4.8	7.0	8.0	7.1	11.5	9.3	9.7	7.5	7.0	6.1	5.7	5.2	5.0	3.1	2.8	2.7	3.1
26	3.2	3.2	3.5	3.2	3.6	2.6	2.6 ^H	4.8	9.6	6.8 ^T	8.1	9.5	8.9	8.7	8.7	8.2	6.6	4.9	3.9	3.3	3.5	2.7	3.1 ^F	3.5
27	3.3	3.5	3.9	3.6 ^F	2.5 ^F	2.3 ^F	2.3	4.3	7.6	9.0	11.0 ^P	11.8 ^T	7.9	7.1	8.1	9.9	8.4 ^F	7.1	4.6	2.5	2.8	3.1	3.0	3.3 ^F
28	3.2F	C	3.2	3.4 ^F	2.8 ^F	2.8 ^F	2.7	4.5	7.0	7.6	10.3	9.7	10.4	9.1	7.5	8.1	6.4	4.5	4.4	C	C	C	C	C
29	C	C	3.2	2.8	2.9	2.8	2.7	(5.1) ^F	6.5	8.2	10.5	9.9	8.1	7.9	7.9	8.1	6.5 ^H	3.9 ^V	3.7	3.3	2.6	A	A	2.5 ^J
30	3.3	3.3	3.5	3.5	3.5 ^F	3.0 ^F	2.8 ^F	5.2 ^P	7.2	7.6	7.4	8.4	7.7	8.9 ^T	9.5	9.5	7.6	5.3	3.9	3.2	2.7	2.5	2.6	2.8
31	2.8	3.0V	3.0F	3.1V	3.1 ^{VF}	2.9	(4.0) ^A	(5.0) ^P	6.6	8.1	(8.8) ^F	8.6 ^H	10.4	(8.4) ^P	8.0 ^H	7.6	7.7	4.5	4.9	4.5	2.9	2.3	2.6	2.6
Mean	3.1	3.2	3.3	3.3	3.2	2.9	3.1	5.6	7.3	8.0	8.8	9.3	8.8	8.5	8.0	7.7	6.8	5.1	4.2	3.6	3.1	2.8	2.8	3.0
Median	3.2	3.2	3.2	3.3	3.2	3.0	3.0	5.6	7.2	8.1	8.6	8.8	8.6	8.5	7.8	7.6	6.6	5.0	4.0	3.3	3.0	2.7	2.8	3.0
Count	29	29	30	30	29	29	30	30	27	29	30	30	30	30	27	30	30	30	30	29	28	27	28	29

30F2

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual Automatic

Lat. 39° 43.5' N
Long. 140° 08.3' E

A k i t a

IONOSPHERIC DATA

135° E Mean Time

f'F₂

Dec. 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	350	330	300	290	250	270	270	250	240	260	260 ^A	250	260 ^A	260	260	250	260 ^A	240	260	240	280	300	370	350
2	350	350	350	350	280	360	250	240	260	270	270	270	270 ^A	280	250	250	260	250	270	250	250	280	310	310
3	260	300	300	300	300	300	280	240	240	250	260	240	260	260	260	250	240	210	250	280	250	300	360	360
4	350	360	310	300	260	270	280	240	240	240	270 ^A	250	250	270	270	240	220	210	250	300	270	260	310	350
5	310	320	310	290	270	250	230	240	240	250	250	250	250	250	250	250	230	250	250	270	270	250	350	360
6	350	340	340	300	250	270	240	240	240	240	260	270	250	260	260	260	T	T	T	T	T	T	T	T
7	T	T	T	T	T	T	T	T	T	T	240	240	260	260	250	250	250	220	250	280	260	280	350	360
8	310	310	340	310	300	290	260	240	240	250	270	270	260	260	240	250	240	230	250	250	280	320	370	360
9	350	340	320	320	300	250	270	260	250	250	260	250	250	250	250	240	240	240	240	240	240	300	330	390
10	400	360	320	250	A	A	320	260	250	240	250	250	260	280 ^A	250	240	250	240	270	270	370 ^A	280	280	360
11	350	350	350	300	290	300	260	250	250	250	250	270	270	260	250	250	250	230	220	250	270	270	350	360
12	350	350	350	310	270	260	280	260	250	250	260	260 ^A	260 ^A	260	250	250	230	220	270	270	250	250	320	410
13	370	350	320	340	300	230	290	250	250	240	250	270 ^A	260	250	260	260	230	250	220	250	260	310 ^A	390	350
14	310	310	320	300	270	300	300	250	260	250	250	240	290	290	250	250	220	230	260	240	250	300 ^H	370	350
15	360	340	C	C	C	C	C	C	C	240	240	260	250	250	250	250	240	240	250	240	260	310	350	350
16	330	310	300	270	290	310	280	270	240	280	260	260	280 ^A	270	260	250	240	240	240	240	290	320	370	360
17	290	270	290	250	350	310	310	260	240	250 ^H	270	260	260	260	280 ^H	240	240	270	250	260	300 ^A	380	390	390
18	350	350	300	300	330	300	290	260	250	250	260	260	260	260	260	250	250	260	270	250	240	290	340	350
19	340	320	300	290	300	300	280	240	250	270	250	270	260	260	250	240	250	230	250	240	240	300	350	330
20	300	310	340	310	350	350	250	250	250	250	260	250	260	260	240	240	230	230	240	270	250	280	380	340
21	330	340	300	270	270	280	250	250	240	260	260 ^A	250	250	250	250	250	250	250	250	240	300	330	360	360
22	360	360	340	300	270	260	260	260	270	250	260	260	260	260	250	240	250	260	250	300 ^A	A	A	370	360
23	360	420 ^A	380 ^F	260	290	330	300	250	250	240 ^H	250	240	270	260	250	250	240	230	230	250	270	360	[360 ^A]	350
24	300	300	290	260	250	310	300	260	230	240	270 ^A	290 ^A	260	260	260	240	230	260	260	220	280	290	310	350
25	310	330	310	350	280	280	250	250	250	270	250	260	260	260	250	240	260	240	260	250	290 ^A	310	360	400 ^A
26	410	390	290	250	260	250	270	290	260	240	290 ^A	280 ^A	260	260	260	260	250	240	250	250	290 ^A	300	350	350
27	290	300	260	240	300	340	300	270	280 ^L	250	260	260	250	240	260	290	250	240	240	A	310	360	340	360
28	320	340	320	290 ^F	280	290	250	240	250	240	270	250	240	210	250	260 ^A	230	250	260	C	C	C	C	C
29	C	350	310	290	290	250	280	240	240	250	270	250	260	250	250	250	270 ^H	210	250	240	260	A	A	A
30	330	330	300	290	300 ^A	260 ^F	290 ^F	250	240	240	250	270	270	270	280	250	240	250	260	260	300 ^A	410 ^A	380	380
31	370	380	380 ^F	300	250	300 ^A	[280 ^A]	250	230	250	240	260 ^H	270	260	260 ^H	260	230	250	280	250	250	A	400 ^A	380
Mean Value	340	340	320	290	280	280	240	240	250	250	260	260	260	260	250	250	240	240	250	260	260	300	350	360
Median Value	340	340	320	300	280	290	250	250	250	250	260	260	260	260	250	250	240	240	250	250	270	300	360	360
Count	29	29	29	29	28	28	29	29	29	31	31	31	31	31	31	31	30	30	30	28	28	26	28	28

f'F₂

Swng 0.85 Mc to 22.0 Mc in min

Manual Automatic

IONOSPHERIC DATA

A k i t a

Dec. 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	2.5Y	2.5	2.1Y	2.9	2.5	2.3	2.4Y	3.0	G	G	G	G	4.5	4.2	3.2	2.5	2.5	2.5	E	2.5	2.5	2.6	3.6	3.5
2	4.6	2.6	2.8	E	2.5	E	E	2.2	3.5	4.6	4.4	4.2	3.7	4.1	3.8	3.2	3.7	4.2	2.5	2.8	2.5	3.0	2.8	2.5
3	2.6	2.5	2.5F	2.5	3.0	E	E	G	G	G	G	G	G	G	G	G	2.2	2.4	2.2	E	E	3.2	E	E
4	F	E	E	2.2Y	2.6Y	2.5Y	2.5	3.2	3.4	2.8	G	G	G	G	4.3	3.7	2.7	E	3.2	3.0	3.5	2.5F	2.2Y	
5	3.0	2.6Y	2.5Y	3.2	2.5	2.2	2.3	G	G	G	6.8Y	G	G	G	G	G	G	2.5	2.3Y	E	2.3Y	2.5	2.3	E
6	2.5	2.5	2.5F	3.2	3.1	2.5	2.6	2.7	G	G	G	G	5.2	4.5	3.1Y	T	T	T	T	T	T	T	T	T
7	T	T	T	T	T	T	T	T	T	G	3.8	G	G	4.4	4.5	4.4	3.1	2.3Y	E	E	E	E	E	E
8	E	2.5Y	E	E	2.5Y	E	2.5Y	3.0Y	3.5	G	3.8	3.7	G	G	G	3.0	3.4Y	2.4Y	E	E	E	2.5	2.9	E
9	E	2.5	3.0	2.5Y	2.5Y	E	E	G	3.1	G	G	G	G	4.8	4.5	3.6	4.1	3.0Y	4.5	3.1	E	2.0Y	F	2.1Y
10	E	E	E	2.4Y	3.7	4.8	E	2.9Y	3.1	G	G	4.4	G	4.4	4.2	3.1	G	2.3	6.5	3.7	4.5	4.0Y	2.1	2.1
11	E	2.5Y	2.8Y	2.9Y	2.5Y	2.5Y	2.1Y	2.7	3.0	G	G	G	G	G	G	G	2.5Y	2.2	2.4Y	2.5	2.5	E	2.5Y	E
12	2.5	2.5	2.5	2.5Y	3.2	2.5	2.5	G	G	G	G	G	G	G	G	G	G	2.5	2.5	E	E	E	2.0	2.4Y
13	E	2.2Y	2.5Y	2.3Y	2.5	2.4	2.5	2.5	G	G	4.0	G	4.5	G	3.7	2.6	2.8Y	E	2.2	E	2.2	3.4	3.2	2.5
14	2.5	2.5	2.0Y	2.5F	2.5F	2.5	2.5Y	G	G	G	G	G	G	G	4.5	5.1	3.2	3.1	2.5	E	E	2.1	2.2	E
15	E	2.5Y	C	C	C	C	C	C	C	C	G	G	3.5	3.5	3.1	3.2	G	2.5	E	E	2.5	2.5	2.5	2.5
16	E	E	E	E	E	2.5	E	G	G	3.4	G	4.3	4.5	4.5	3.3	3.0	2.9	2.6	2.5	3.5	2.5	2.5	E	E
17	E	E	E	2.5Y	2.5Y	E	E	2.7	2.9	G	4.4	4.5	3.3	3.5	3.5	3.7	G	2.5Y	3.5	2.5	4.8	6.5	2.5	E
18	2.4Y	3.0	2.4Y	2.5Y	E	E	2.5Y	G	3.0	G	4.5	4.6	G	3.5	3.2	3.0	2.2	E	2.5	2.6	E	F	2.9	E
19	E	2.5Y	E	2.5Y	E	E	E	E	3.2	G	G	G	G	G	G	G	G	E	E	E	E	F	E	E
20	E	E	E	E	E	E	E	2.5	G	G	G	G	G	G	3.5	G	3.0Y	3.0	E	E	E	F	E	E
21	2.6	E	2.6	2.5	2.6	E	E	2.5	G	4.6	G	6.5	3.9	G	G	G	3.5	2.5	E	E	2.2	2.4	2.5	2.6
22	3.2	2.5Y	2.5	2.4	2.5Y	2.5	E	2.7	G	G	G	G	4.5	G	G	3.5	3.5	2.5	E	E	E	E	2.3Y	2.6Y
23	3.8	4.5	3.1	2.5F	2.5Y	E	E	2.2	G	G	4.4	4.6	4.5	G	G	G	2.5	2.7	2.5	4.7	3.2	4.5	4.5	4.2
24	2.0	2.3Y	3.5	2.5	3.0	3.0F	2.5F	2.5Y	3.0	G	G	4.5	4.5	3.9	3.2	3.5	G	E	3.2	2.5	2.8	2.5	2.1	2.7
25	2.3	2.5F	2.5Y	3.3	2.5	2.5	E	2.5	G	3.2	G	G	G	G	G	3.2	3.1	2.5	2.9	3.1	2.5	3.2	2.5Y	3.5
26	3.2	2.5Y	2.5	2.5Y	2.5Y	E	E	G	3.0	6.5	6.9	7.1	3.6	3.5	3.4	2.6Y	3.1	3.0Y	2.5	2.5Y	5.5	3.9Y	2.1Y	2.1Y
27	E	2.5Y	2.5Y	E	2.5Y	2.8Y	2.6Y	2.5Y	4.5	6.2	7.1	G	G	G	G	3.2	2.5	2.7Y	3.1Y	3.3	3.0	5.0Y	3.4Y	2.5Y
28	E	2.5	3.1	2.5F	2.5F	2.5Y	E	2.6	3.0	G	G	4.7	G	G	3.1	4.5	2.5	2.6	C	C	C	C	C	C
29	C	C	2.5	2.5Y	E	E	2.6	2.5	G	4.5	5.5	G	G	G	G	3.5	G	2.7	2.4	E	E	4.8	4.5	3.8
30	3.5Y	3.0	2.8	4.0	6.5Y	4.5	4.5	2.5F	G	G	G	G	G	G	G	3.5	5.3	7.0	2.5Y	2.4Y	4.5	3.5	3.1	2.7F
31	3.5	2.7	2.7	2.6	2.5	3.6	5.0	6.0	6.6	4.5	G	6.0Y	G	G	4.5	5.0	6.5	4.0	3.8	2.5	2.5	3.2	3.0	2.5F
Mean Value	2.9	2.6	2.6	2.7	2.8	2.8	2.8	2.8	3.5	4.5	5.1	4.9	4.2	4.1	3.8	3.4	3.1	2.9	2.9	3.1	3.4	3.3	2.9	2.7
Median Value	2.3	2.5	2.5	2.5	2.5	2.4	2.1	2.5	G	G	G	G	G	G	3.2	3.1	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.2
Count	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.9

fEs

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual

Automatic

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Dec. 1955

135° E Mean Time

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	3.2	3.3	3.5	3.2	3.0	2.9	3.3	6.1	7.2	9.2	10.2	9.2	8.9	8.9	8.0	9.2	7.0	6.0	5.5	5.3	2.9	3.3	3.0	3.0
2	3.1	[3.0]A	2.8	3.0	2.9	2.7	4.0	5.9	9.5	8.8	14.5	10.9	9.8	9.0	9.0	8.5	7.9	6.1	5.0	4.9	4.0	3.2H	3.3	3.7
3	4.0	3.3	3.5	3.6	3.6	3.6	4.1	7.4	8.1	9.5	10.9	11.0	9.0H	9.0	9.1	8.8	8.0	5.4	3.6	3.8	4.3	2.8	2.8	2.9
4	2.9	3.0	3.2	3.3	3.3	3.0	3.3	6.9	8.0	8.7	8.9	9.5	8.9	8.0H	9.4	9.2	8.5	4.9	4.5	4.7	4.4	3.8	3.0	3.2
5	3.4	3.3	3.5	3.7	4.0	2.9	3.2	6.5	7.4	9.0	8.7	9.4	9.5	C	C	8.9	6.9	4.6	4.9	4.7	3.1	3.0	2.8	2.9
6	3.0	3.2	3.2	3.4	3.8	2.8	3.3	6.3	7.9	8.6	8.5	9.1	9.2	9.5	8.2	9.0	8.5	6.0	5.7	5.3	5.0	3.8	3.0	3.2
7	3.3	3.6	3.6	3.3	3.2	3.2	3.4	6.6	7.6	9.0	8.7	9.2	9.9H	9.9	9.7	9.6	9.0	7.3	4.3	4.2	4.5	3.6	2.9	2.8
8	2.9	3.0	3.0	3.0	3.2	3.0	3.0	6.0	7.4	8.8	9.0	9.3	9.1	8.9	9.0	8.2	9.0	6.3	4.4	4.1	3.5	3.0	2.8	3.0
9	3.1	3.3	3.4	3.3	3.3	3.1	3.2	6.4	9.1	9.3	8.9	9.3	9.0	9.0	9.5	8.7	7.0	6.4	5.5	5.0	3.5	3.0	3.3	3.0
10	3.0	3.3	3.5	3.2	2.8	2.5	3.0	7.3	9.3	9.0	9.7	9.9	9.3	8.7	7.9H	8.0	7.5	6.1	5.6	3.7	3.0	3.5	3.0	2.8
11	3.1	3.1	3.2	3.4	3.5	3.2	3.6	6.5	9.1	9.6	9.6	9.3	11.0	10.9	7.9H	8.0	7.7	6.5	4.8	3.6	3.5	3.0	2.8	2.8
12	3.0	2.9	3.0	3.0	3.2	2.7	2.6	6.1	8.6	9.0	10.6H	9.1	9.2	9.0	8.1	7.3	7.0	5.5	4.6	4.7	4.4	2.9	2.4	2.7
13	2.8	2.9	3.0	3.0	3.1	(2.4)J	2.8	6.2	7.4	9.0	8.6	9.4	11.1	9.6	9.1	9.1	7.9	4.9	5.7	3.6	3.2	2.9	2.8	2.7
14	2.9	2.9	3.2	2.9	2.9	2.7	2.8	6.5P	7.3	9.5	10.6P	9.8P	8.5	9.6	8.6	7.5	7.0	5.2	4.6	3.6	3.2	2.5	2.4	2.7
15	2.8	2.9	3.2	3.2	3.3	2.3	2.8	5.8P	7.9	8.4	8.7	8.7	8.0	7.9	8.5	7.5P	6.5	5.4	3.8	4.2	3.0	3.2	2.9	3.2
16	3.1	3.4	3.5	3.7	3.5	2.9	3.1	5.7	8.0	8.0	8.6	11.7	8.5H	9.9	(7.0)P	7.4	6.5	5.4	4.5	3.5	3.6	3.4	3.4	3.8
17	4.2	4.3	3.6	2.9	2.8	2.8	3.1	6.5	8.0H	10.0	10.0	(10.6)	9.8	9.4	8.9	7.9	7.1	4.9	4.1	3.5	2.9	2.9	2.9	3.0
18	3.3	3.2	3.3	3.4	3.2	3.0	3.4	6.5	9.0	9.5	9.4	10.4J	8.8	8.3	8.1	7.6	6.3	4.7	4.6	3.3	3.3	3.2	3.0	3.3
19	3.3	3.4	3.4	3.2	3.2	3.0	3.1	6.0	9.0	7.0	8.6	8.7	9.3	8.6	7.3P	7.2	7.7	6.0	4.6	3.3	3.2	3.3	3.2	3.4
20	3.5	3.4	3.4	3.3	3.3	3.3	3.5	6.0	7.4	7.6	10.2J	9.5	9.0	8.4	7.5	8.0	7.4	5.1	5.0	3.5	3.7	2.8	2.7	2.9
21	2.9	C	C	C	C	C	C	C	C	8.5	9.1	9.4	9.3	8.6	6.6	7.8J	7.0	5.6	4.3	4.2	[3.6]C	(3.0)P	3.2	3.2J
22	3.3	3.4P	3.3	3.4	3.6	3.1	(3.0)PB	5.6	C	10.9	9.1	11.5	9.0	8.7	6.5	8.2	6.7	5.8	4.6	4.1	3.3	B	A	2.9
23	A	A	3.2	3.2	2.7P	2.2	B	5.6	7.7	[8.4]C	9.0	8.7	7.5	9.6	8.1	6.9	6.7	5.0P	4.0P	3.0	2.9	3.1	3.2	3.5
24	3.8	3.8	3.9	3.9	2.2H	2.4	2.4	5.7	7.0	7.6	8.0	9.2	11.5	9.5	9.0	7.6	7.1	5.8	4.7	5.1P	3.4	2.7	[2.7]A	2.7
25	3.1	2.9	3.3	3.1	3.2	2.9	3.0	5.6	6.6	8.0	9.1	10.5B	9.1	8.9	8.0	6.8	5.8	6.5	5.1	5.7	3.6	2.5	2.5	2.8
26	3.1	3.2	3.5	3.5	2.9	2.6	2.8	4.7	9.1	10.5B	8.2	(10.4)P	9.8	9.9P	7.9	[7.4]T	6.8P	7	T	13.0T	3.2	[3.0]A	2.9F	3.0
27	3.1	3.2	4.0	2.6	1.6	1.6J	2.3	4.8	7.0	(10.0)P	(10.4)J	[9.8]T	9.3P	8.7	8.6	7.5P	8.5	7.0	4.8	2.5	2.6	3.1	2.9	2.9
28	3.1	3.1	3.3	3.3	3.3	2.8	3.1	5.6J	7.3	9.1	10.8	11.5	11.2	8.9	9.0	7.5	7.9	5.6	4.9	4.3	(3.4)P	B	(2.8)P	2.9
29	3.2	3.0	2.9	3.0	2.9	2.9	3.4SP	6.3	6.9	7.7P	10.0	10.9	9.6	8.9	8.0	7.6	6.9	4.9	4.8	4.1	3.0	(2.5)P	3.0	3.0
30	3.3	3.3	3.5	3.6	3.8	3.1	A	6.1	7.6	7.4	8.8	8.1H	8.8	9.0	9.2	9.2	6.7	5.6	A	5.0	3.2	A	A	A
31	2.5	3.0	2.7J	2.9	3.0	2.4	2.6	5.7	7.6	7.4	C	10.3P	10.5	9.8P	9.2	8.9	7.5	6.6	4.9P	5.1	3.9	B	2.4	2.8
Mean Value	3.2	3.2	3.3	3.3	3.1	2.8	3.1	6.1	7.9	8.8	9.5	9.5	9.4	9.1	8.4	8.1	7.4	5.7	4.7	4.2	3.5	3.1	2.9	3.0
Median Value	3.1	3.2	3.3	3.2	3.2	2.9	3.1	6.1	7.7	8.9	9.1	9.5	9.3	9.0	8.4	8.0	7.1	5.6	4.7	4.1	3.4	3.0	2.9	3.0
Count	30	29	30	30	30	30	30	30	29	30	30	31	31	30	30	31	31	30	29	30	31	27	29	30

foF2

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Dec. 1955

h_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	360	350	330	320	280	350	320	250	280	250	270	270	270	270	260	260	250	260	270	260	290	300	350	360
2	320	360 ^H	400	400	370	410	290	250	280	330	280	270	280	300	280	290	270	270	310	300	320	380 ^H	350	350
3	320	360	350	340	330	330	310	250	240	280	300	270	300 ^H	290	310	300	260	240	330	310	270	350	360	360
4	390	410	360	350	310	340	340	260	270	260	280	260	270	260 ^H	280	290	270	280	310	310	310	290	330	390
5	380	390	330	330	270	320	350	270	260	260	270	280	280	C	C	280	280	310	310	270	300	300	370	380
6	380	380	390	360	280	320	300	250	280	270	310	290	300	290	270	300	260	300	330	350	280	310	390	400
7	380	320	290	320	330	320	300	260	240	270	270	300	320 ^F	270	280	270	290	280	320	330	300	300	300	380
8	370	350	350	370	330	300	320	270	250	280	280	260	260	290	250	240	270	280	280	310	320	340	390	410
9	400	360	350	350	340	320	320	280	270	260	290	290	280	270	290	250	270	290	300	270	300	290	320	440
10	440	400	320	360	310	380	360	270	250	260	270	280	280	230	330 ^H	280	270	280	270	250	300	310	330	380
11	410	400	410	380	330	360	300	260	260	250	310	300	270	290	280 ^H	270	260	270	270	320	280	320	330	380
12	350	380	380	360	300	330	340	270	260	260	B	280	270	280	230	260	280	280 ^A	(290) ^F	280	260	310	340	390
13	390	400	350	350	300	(260) ^F	350	280	260	260	260	260	290	280	330	260	260	310	280	300	280	330	300	380
14	350	350	380	330	300	350	330	270	260	250	270	260 ^F	300	280	270	250	250	270	270	260	300	280	310	380
15	380	380	350	310	300	270	310	250 ^P	270	250	250	260	270	260	270	280 ^P	270	270	320	280	260	320	380	370
16	390	370	330	290	280	370	340	270	270	260	250	270	310 ^H	280	(260) ^F	260	250	270	280	330	320	360	380	410
17	350	310	310	260	390	370	330	270	320 ^H	270	310	(260) ^F	290	270	300	260	250	250	290	310	260	320	400	390
18	400	360	360	340	330	360	370	280	260	270	280	(250) ^F	280	270	260	260	250	300	300	300	310	320	350	370
19	380	350	320	330	330	370	340	260	250	240	240	230	280	270	270	280	260	270	240	290	360	350	380	360
20	340	360	350	360	390	360	280	260	240	270	(260) ^F	270	270	280	240	270	260	310	260	270	270	280	390	380
21	340	C	C	C	C	C	C	C	C	C	C	C	280	270	240	(250) ^F	260	270	290	260	(310) ^C	(360) ^F	380	(360) ^F
22	390	360 ^F	350	350	330	310	(300) ^F	280	C	260	280	260	260	260	230	260	250	A	A	250	290	B	A	410
23	A	A	350	340	330	B	270	240	(240) ^F	250	260	260	260	270	250	260	260	270 ^F	300 ^F	280	320	340	410	390
24	350	330	300	240	350 ^H	340	310	260	250	290	270	270	270	260	260	250	270	260	280	(270) ^F	280	310	(330) ^F	350
25	330	310	320	350	320	340	300	260	230	240	270	B	260	260	260	250	250	270	270	260	250	320	320	370
26	410	430	320	250	330	330	280	250	260	B	240	(300) ^F	280	270 ^F	260	(240) ^F	230 ^F	T	T	T	290	(340) ^F	400 ^F	370
27	290	330	260	210	260	(330) ^F	320	270	270	(260) ^F	(290) ^F	(280) ^F	270 ^F	270	270	270 ^F	280	240	(300) ^F	340	330	290	370	
28	330	380	350	300	250	330	280	(260) ^F	260	240	280	260	300	290	250	300	250	280	300	290	(240) ^F	S	(360) ^F	400
29	320	360	390	370	320	320	300 ^F	270	220	310 ^P	290	270	270	270	270	240	240	280	340	290	280	B	340	330
30	350	350	350	330	260	360	A	260	240	270	250	300 ^H	270	300	280	250	230	270	A	270	290	A	A	A
31	340	370	(420) ^F	330	250	330	A	270	250	290	C	280 ^F	310	280 ^P	270	240	270	240	310 ^F	260	210	B	400	370
Mean Value	360	360	350	330	310	340	320	260	260	270	270	270	280	270	270	270	260	270	290	290	290	320	350	380
Median Value	360	360	350	340	320	330	320	260	260	270	270	270	280	270	270	260	260	270	290	280	290	320	350	380
Count	30	29	30	30	30	30	27	30	29	30	29	30	31	30	30	31	31	29	28	30	31	26	29	30

Swamp 1.0 Mc to 17.2 Mc in 2 min
 Manual Automatic

h_pF₂

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

Lat. 35° 42.4' N
Long. 139° 58.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Dec. 1955

f'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	300	290	270	240	230	270	250	220	220	260	230	230	230	240	240	240	220	220	230	210	200	240	280	300
2	260	280A	300	320	270	330	240	220	270	260L	260	230	250	260	230	230	230	220	240	230	220	210H	270	290
3	260	270	270	270	250	270	250	230	220	260	260	240	230H	250	230	230	230	210	250A	250	230	290	310	320
4	350	350	300	270	230	270	270	240	220	230	240	240	230H	240	240	240	240	210	260	260	270	260	270	330
5	300	320	280	250	230	250	260	230	230	240	230	260	250	C	C	240	210	210	250	230	210	250	280	310
6	310	310	310	280	230	250	250	220	220	230	230	230	240L	230	240A	240A	230A	210	260	230	240	240	300	340
7	310	270	240	250	260	260	250	230	220	230	230	250L	240L	240	260	240	230	210	210	250	250	250	260	310
8	300	280	290	290	280	250	270	230	230	230	240	240	240	240	230	230	230	210	210	280	240	260	340	340
9	330	290	280	280	260	240	260	230	240	230	220L	230	270	230	270	220	220	220	230	220	250	230	290	360
10	380	320	260	220	230	320	300	240	230	230	230	230	240	220	220H	230	230	210	230A	220	250	250	290A	310
11	320	350	320	290	270	270	250	230	230	230	280	280	240	260	220H	230	230	200	200	250	240	240	280	310
12	300	300	300	280	240	270	270	240	240	230	260	250	240	240	230	230	230	220	240	230	220	250	270	320
13	320	340	290	300	240	270	300	250	220	240	250	260L	270	240	290	240	220	210	240	230	250	270	250	300
14	300	290	280	260	250	280	270	240	230	230	240	240	240	260	240	230	230	210	220	220	240	250	270	320
15	310	290	280	250	240	220	270	230	230	230	230	240	230	230	240	230	220	220	210	240	210	270	280	300
16	300	300	260	230	240	280	270	240	220	230	230	270	230H	260	240A	230	230	220	250A	290A	250	270	340	320
17	280	240	240	230	310	310	280	240	230H	260	280	240	240	240	240	230	230	220	240	280A	230	270	310	310A
18	310	290	270	270	250	300	280	240	240	240	250	240	240	240	240	230	210	210	240	240	260	280	260	310
19	330	280	250	260	260	290	290	240	240	220	220	230	240	260	240	230	230	210	210	250	300	300	330	300
20	280	280	280	280	270	300	240	240	230	230	240	250	250	250	230	240	230	200	220	240	250	250	330	330
21	290	C	C	C	C	C	C	C	C	C	240	240	260	240	230	240	250	220	220	220	250L	280	310	310
22	320	300	280	270	240	210	250	230	230	240	250	240	230	240	220	230	210	220	240A	240A	240	B	A	370
23	A	A	290	280	200	290	B	240	230	230	240	240	230	250	230	220	220	210	250A	250	290	290	320	330
24	300	250	240	210	190H	270	300	240	220	230	250L	240	250	240	240	230	220	230	220	240	250	250	280A	300
25	270	250	260	280	240	330	270	240	220	230	240	270	240	230	230	230	220	220	230	220	230	300	290	330
26	340	340	260	210	280	260	240	240	250	230	230	250	260	250	240	230	220	T	T	240	280	310L	340	340
27	260	280	230	190	250	300	290	240	240	230	260	250	240	250	250	240	220	210	200	260	350	270	240	300
28	280	300	290	290A	220	270	250	220	220	230	260	240	230	230	230	220	220	230	250	240	230	250	340L	350
29	270	280	310	300	250	260	250L	220	210	220	240	240	240	240	230	230	210	210	250	250A	260A	420L	300	300
30	300	290	270	260	220	260	A	230	230	220	230	230H	260	270	240	230	210	230A	A	220	270A	A	A	A
31	320	300	300	280	220	270	A	260	230	250	C	4270L	270	250	250	230	240	220A	280	210	200	B	250	320
Mean Value	300	290	280	270	250	270	260	240	230	240	240	240	240	240	240	230	230	220	230	240	250	270	290	320
300 Value	300	290	280	270	240	270	270	240	230	230	240	240	240	240	240	230	230	210	230	240	250	260	290	320
Count	30	29	30	30	30	30	27	30	30	31	30	30	31	30	30	31	31	30	29	31	31	27	29	30

f'F2

Swamp 1.5 Mc to 17.2 Mc in 2 min

Manual Automatic

IONOSPHERIC DATA

135° E Mean Time

Dec. 1955

foF1

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	4.9L	4.8L	4.2	L	L	4.2L	L	Q							
2								Q	L	L	A	4.8HL	4.6	4.5	3.9	L	Q							
3								Q	3.4	4.2L	4.8	4.8	4.5	4.6L	3.4	Q	Q							
4								Q	Q	3.9L	4.0	4.5L	4.8L	A	4.0	Q	Q							
5								Q	Q	Q	L	L	4.8L	C	C	L	B							
6								Q	3.2	3.5	Q	Q	L	L	4.0L	A	A							
7								Q	Q	3.9L	L	L	L	4.8L	4.7L	L	Q							
8								Q	3.0	L	4.0L	[4.4]L	4.9L	4.1L	3.5	L	Q							
9								Q	L	4.0L	L	4.5L	L	4.7L	4.6HL	L	Q							
10								Q	L	4.1	4.5L	4.5	[4.6]L	4.6L	Q	Q	Q							
11								Q	2.9	L	6.2L	6.2H	4.9	5.0	3.9	Q	Q							
12								Q	Q	L	B	4.8	L	A	Q	L	Q							
13								Q	3.0	L	4.4L	L	5.0	A	5.5	L	Q							
14								Q	Q	4.5L	4.7	4.5	4.5L	4.6	3.7	L	Q							
15								Q	Q	Q	4.0	L	4.5L	4.0	L	Q	Q							
16								Q	Q	Q	4.5	4.8L	4.4	4.7	A	Q	A							
17								Q	Q	4.8HL	4.8	4.5	4.2	4.1L	3.9	L	Q							
18								Q	L	4.0L	4.1L	4.0	4.4L	[4.2]L	3.9	Q	Q							
19								Q	L	3.3	L	4.0	4.7L	4.0L	3.9	L	Q							
20								Q	L	Q	4.6HL	4.7	4.2L	4.2	4.0	L	2.4							
21								C	C	4.0L	3.9	L	4.8L	L	L	L	L							
22								Q	Q	L	4.5L	4.8	4.5	4.2	3.9	L	Q							
23								B	Q	L	4.0	L	L	L	3.9	Q	Q							
24								Q	Q	L	L	4.5L	4.8	4.5L	4.0	3.3	Q							
25								Q	3.3L	L	4.3	4.6	4.5	4.4	4.0L	L	Q							
26								L	L	B	4.0	L	4.5H	L	4.2L	T	Q							
27								Q	Q	L	A	L	L	L	L	A	A							
28								Q	Q	L	4.0L	4.8L	Q	4.0	L	L	Q							
29								Q	Q	Q	A	L	L	L	4.0L	3.4L	Q							
30								Q	A	Q	LH	4.5	4.7	L	4.0L	4.0L	Q							
31								A	Q	C	C	C	5.5	4.6	B	Q	Q							
Mean Value									3.1	4.1	4.4	4.6	4.6	4.4	4.1	3.6	2.4							
Median Value									3.0	4.0	4.4	4.5	4.6	4.5	4.0	3.4	2.4							
Count									6	12	19	20	22	19	22	3	1							

foF1

Group 1.0 Me to 17.2 Mc in 2 min

Manual

Automatic

K 4

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

Lat. 36° 42.4' N
Long. 139° 28.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

R'F1

Dec. 1955

138° 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	220	210	230	240	230	250	Q								
2								Q	250	230	220 ^H	210 ^H	220	210	230	230	Q								
3								Q	230	230	240	240	220	200	A	Q	Q								
4								Q	Q	220	220	240	240	A	240	Q	Q								
5								Q	Q	230	210	240	C	C	C	230	B								
6								Q	220	220	Q	Q	220	230	230	A	A								
7								Q	Q	210	230	230	230	240 ^A	240	240	Q								
8								Q	230	230	200	220	220	220	230	240	Q								
9								Q	240	230	210	220	240	240	220 ^H	230	Q								
10								Q	240	230	230	230	230	230	Q	Q	Q								
11								Q	200	240	230	200 ^H	240	220	230	Q	Q								
12								Q	Q	240	240 ^H	240	240	A	Q	230	Q								
13								Q	230	240	240	220	250	A	240	240 ^H	Q								
14								Q	Q	230	230	220	220	220	220	230	Q								
15								Q	Q	Q	230	240	220	210	230	Q	Q								
16								Q	Q	Q	230	A	230	200	A	Q	A	Q							
17								Q	Q	200 ^H	230	230	210	230	220	230	Q								
18								Q	240	230	210	200	230	230	230	Q	Q								
19								Q	240	220	240	200	220	200	200	230	Q								
20								Q	230	Q	210 ^H	230	A	220	230	240	210								
21								C	C	240	220	240	210	240	250	230	230								
22								Q	Q	240	210	260	230	230	230	230	Q								
23								B	Q	240	230	240	220	250	220	Q	Q								
24								Q	Q	230	220	240	250	230	220	220	Q								
25								Q	230	230	230	250	230	230	220	230	Q								
26								220	240	B	200	260	200 ^H	250	230	T	Q								
27								Q	Q	230	A	A	220	250	250	A	A								
28								Q	Q	230	200	230	Q	210	230	210	Q								
29								Q	Q	Q	A	A	230	230	220	230	Q								
30								Q	Q	A	210 ^H	220	230	240	230	240	Q								
31								A	Q	C	C	C	260	250	B	Q	Q								
Mean Value								220	230	230	220	230	230	230	230	230	220								
Median Value								220	230	230	230	230	230	230	230	230	230								
Count								1	13	23	27	26	29	27	25	19	2								

R'F1

Group 1D 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

foE

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

foE

Group 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

f_oE

Dec. 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								130	120	110	A	A	110	110	120 ^A	120 ^A	A								
2								130	110	A	A	A	A	110	110	110	A								
3								A	A	120	120	[120] ^B	120	120	130	A	B								
4								B	A	110	120	120	120	120	[130] ^A	140	B								
5								B	120	130	120	120	120	C	C	C	B								
6								B	110	110	110	110	120	120	110	120	A								
7								B	120	A	A	A	A	130	110	A	A								
8								150	110	110	110	110	110	110	A	A	B								
9								B	120	120	120	110	110	120	110	110	110								
10								150	110	110	120	[120] ^A	110	110	A	A	A								
11								B	110	110	110	110 ^A	110	110	100	120	B								
12								150	120	110	110	110	110	110	110	A	A								
13								A	B	110	110	110	[110] ^A	110	110	A	A								
14								B	120	110	110	110	110	110	110	A	B								
15								170	A	110	[110] ^A	110	120 ^A	110	110	110	A								
16								A	A	110	110	110	A	A	A	A	A	A							
17								B	120	110	A	A	A	A	120 ^A	A	B								
18								B	120	120	110	110	120	110	110	110	A								
19								B	(120) ^B	110	110	110	110	110	130	130	B								
20								B	A	110	110	110	110	110	120	120	B								
21								C	C	110	110	110	[110] ^A	110	110	110	A								
22								B	110	110	A	A	A	A	A	B	B								
23								B	B	110	B	A	B	B	B	A	B								
24								150	[130] ^A	110	110	110	110	120	110	120	B								
25								160	120	110	110	110	120	120	120	120	A								
26								B	110 ^H	B	110	110	[120] ^A	120	A	T	B								
27								140	[120] ^B	110	A	A	A	110	110	A	A								
28								B	A	A	120	110	B	A	120	130 ^A	A								
29								S	T	120	110	110	[110] ^A	110	110	A	B								
30								B	A	A	120	120	A	B	120	100	A								
31								A	A	110	C	C	B	B	B	A	A								
Mean Value								150	120	110	110	110	110	110	110	120	110								
Median Value								150	120	110	110	110	110	110	110	110	120								
Count								9	19	26	23	23	21	23	23	15	1								

f_oE

Group L-O Mc to 7.2 Mc in 2 min Manual Automatic

K 7

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Dec. 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	E	2.0	2.0Y	2.2	2.2	2.7Y	1.9	2.3	3.1	3.8	3.9	3.6Y	3.5	G	3.2	2.9	2.0	E	E	2.8	E	E	E	2.3
2	4.5	5.0	E	2.7H	2.4	E	2.6Y	3.7	6.0	9.5	4.5	4.1	3.9	3.9	3.5	2.9	2.8	2.1	E	2.2Y	2.1	E	E	4.3Y
3	3.5Y	E	E	E	2.7	E	E	2.1	3.2F	G	G	B	3.3	3.0	3.3	2.7	B	E	E	E	E	4.0	E	E
4	E	E	E	2.2Y	2.3	2.1S	2.0	B	3.3	3.4	3.7	3.7	4.7	5.5	3.2	2.8	B	E	3.5	3.8	3.0	3.2Y	E	E
5	E	E	E	3.2Y	3.1	2.2S	2.0	B	2.6	3.8	4.3	4.5	4.2	C	C	C	B	1.7	E	E	E	E	E	E
6	E	E	2.2	2.7	2.1	E	4.2	B	G	G	3.5	3.6	3.5	3.8	4.0	5.0	4.9	1.9	E	E	3.8	3.8	2.7	E
7	E	E	2.1Y	2.0Y	2.8Y	E	E	B	3.0	3.6	3.8	4.0	4.2	4.8	4.5	3.5	3.1	E	E	E	E	E	E	E
8	E	E	E	3.0	1.6Y	E	E	B	3.2	3.8	3.9	3.5	3.9	4.0	4.5	3.2	B	E	E	E	E	E	E	E
9	E	2.1	E	2.2	1.7	E	E	E	3.2	G	3.7	3.7	4.2	4.3	4.0	3.1	1.9	E	E	E	E	E	E	E
10	E	E	E	E	2.2Y	E	E	G	3.1	3.8	4.4	4.5	4.8	5.3	4.6	4.0	3.0Y	2.4Y	3.6	2.3Y	E	E	E	4.5
11	E	E	2.1Y	E	2.9Y	E	E	3.2	3.2	3.5	3.5	3.6	4.2	3.4	2.8	2.7	B	E	E	E	E	E	E	E
12	E	E	E	3.3	3.3Y	E	E	G	3.5	3.4	3.6	4.3	4.8	5.8	3.7	2.5Y	3.1	5.5	3.0	E	E	E	E	E
13	E	E	E	2.2	2.2Y	E	E	2.8	2.0	3.1	3.5	5.7	3.7	4.2	4.5	4.8	(2.7Y)	E	E	E	E	E	E	E
14	E	4.8Y	3.2Y	2.4Y	2.1Y	E	E	B	G	3.3	3.8	3.8	3.8	3.9	3.6	(3.0Y)	B	E	E	E	E	E	E	E
15	E	E	E	2.1Y	1.7Y	E	E	G	2.5Y	G	3.5	3.7	4.3	3.6	4.5Y	2.8	2.7	2.3Y	E	E	E	E	E	E
16	E	E	E	E	1.7	E	E	3.0Y	2.9F	3.3	4.0	4.8	5.1	4.5	6.9	4.7	6.1	4.5	3.3	2.9	E	E	E	E
17	E	E	E	E	E	E	E	B	3.3	G	3.0	4.8	8.0Y	4.7	4.5Y	2.3	B	E	2.7	3.1	2.1	1.8	4.5	3.7
18	5.5Y	E	E	2.1Y	E	E	E	B	3.1	3.2	3.8	4.4	5.5	3.7	3.5	3.4	3.8	3.2	E	E	3.1	E	E	E
19	E	E	2.9Y (3.7)S	E	E	E	E	B	3.7	G	3.7	3.5	G	G	G	3.5Y	B	E	E	E	E	E	E	E
20	E	E	E	E	E	E	E	B	2.9	3.3	3.8	3.6	4.7	3.5	3.5	2.9	B	2.4Y	2.1Y	E	E	E	E	E
21	E	E	E	E	E	E	E	C	C	C	C	C	4.1	3.7	5.6	3.2	3.1	E	E	E	E	E	E	E
22	E	E	2.4	E	E	E	E	B	G	3.8	3.6	6.2	5.6	3.7	3.9	B	3.7	6.0	3.9	4.2	E	B	5.9	3.9
23	6.0	3.7	E	4.2Y	3.6	2.2	E	B	3.3	3.3	3.9	3.5	B	B	G	4.5Y	B	3.9	3.5	E	E	E	E	4.5
24	E	E	E	1.7	E	E	E	G	3.3	3.3	4.3	4.2	3.5	G	G	G	B	3.2	2.3Y	E	3.7	3.1	3.6	E
25	E	E	E	E	E	E	E	G	2.5	3.3	4.3	4.2	3.5	G	3.3	3.0	3.9	1.6	1.6	3.1	3.0	E	E	E
26	E	E	E	2.1	1.1	E	E	B	2.4	B	G	G	3.0	3.0	3.0	T	B	T	E	E	6.0	E	E	E
27	E	E	2.4	E	E	E	E	1.7	2.0	B	4.3	5.0	4.0	3.8	4.0	4.5	5.2	3.6	E	E	2.5	E	E	E
28	E	E	2.9	3.0	E	E	E	B	3.0	3.0	G	3.5	B	3.1	3.1	2.6	3.2	2.3	3.0	E	E	E	E	E
29	E	E	2.4	E	E	E	E	S	T	2.9	4.5	5.4	3.4	3.1	3.7	3.2	B	E	E	3.6	2.3	E	E	E
30	E	E	2.5	E	2.3	1.9	6.3	B	6.4	5.7	3.4	3.6	3.7	G	3.1	2.6	6.2	10.5	7.9	3.8	3.3	6.3	6.5	4.5
31	E	1.6	1.5	2.4	2.9	3.2	3.2	4.3	3.9	6.7	C	C	B	B	B	4.2Y	6.0Y	3.0	2.5	E	E	B	E	E
Mean Value	4.6	3.6	2.5	2.6	2.3	3.0	2.7	3.2	3.8	4.1	4.2	4.3	4.0	3.9	3.9	3.4	3.7	3.5	3.3	3.2	2.8	4.0	4.6	4.2
Median Value	E	E	E	2.2	2.1	E	E	2.0	3.1	3.3	3.8	3.8	4.1	3.7	3.6	3.0	3.2	1.8	E	E	E	E	E	E
Count	31	30	30	30	30	29	14	27	30	30	29	28	28	28	28	28	18	30	30	31	30	29	30	31

fEs

Group 10 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

Dec. 1955

(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	2.8	3.0	2.9	3.2	2.9	3.0	3.5	3.4	3.4	3.6	3.3	3.3	3.3	3.5	3.5	3.4	3.4	3.4	3.3	3.2	3.0	2.8	2.8	
2	2.9	[2.8] ^H	2.7	2.7	2.8	2.5	3.2	3.6	3.3	3.0	3.0	3.3	3.1	3.1	3.3	3.2	3.4	3.2	3.2	3.2	3.0	2.8 ^H	2.8	2.9	
3	3.1	2.8	2.8	2.9	3.0	3.0	3.0	3.5	3.6	3.3	3.2	3.3	3.2 ^H	3.2	3.0	3.2	3.5	3.7	2.9	3.0	3.4	2.9	2.8	2.8	
4	2.7	2.6	2.9	2.9	3.0	2.9	2.9	3.3	3.4	3.4	3.2	3.4	3.3	3.2 ^H	3.2	3.2	3.4	3.3	3.1	3.0	3.1	3.1	3.0	2.7	
5	2.7	2.7	3.0	3.0	3.4	3.0	2.8	3.4	3.4	3.4	3.3	3.3	3.2	C	C	3.3	3.3	3.0	3.1	3.3	3.1	3.1	2.8	2.7	
6	2.7	2.7	2.7	2.8	3.2	3.0	3.1	3.5	3.3	3.3	3.1	3.2	3.0	3.1	3.3	3.1	3.3	3.1	2.9	3.2	3.2	3.3	3.0	2.7	2.6
7	2.7	3.0	3.2	3.0	2.9	2.9	3.0	3.5	3.5	3.4	3.3	3.2	3.1 ^P	3.4	3.3	3.4	3.2	3.3	3.0	2.9	3.1	3.1	3.1	2.7	2.7
8	2.8	2.9	2.9	2.9	3.0	3.0	3.0	3.3	3.5	3.2	3.3	3.2	3.4	3.1	3.7	3.4	3.3	3.1	3.2	3.0	3.2	2.9	2.7	2.6	
9	2.7	2.8	2.8	2.8	2.9	3.0	2.9	3.2	3.4	3.4	3.2	3.2	3.3	3.2	3.3	3.5	3.2	3.2	3.1	3.4	3.2	3.1	3.0	2.5	
10	2.6	2.6	3.0	2.8	3.1	2.8	2.9	3.3	3.5	3.5	3.3	3.4	3.3	3.5	3.1 ^H	3.3	3.3	3.3	3.3	3.4	3.1	3.0	3.0	2.8	
11	2.6	2.7	2.6	2.6	2.9	2.8	3.1	3.3	3.5	3.5	3.2	3.2	3.1	3.2	3.2 ^H	3.4	3.4	3.3	3.3	2.9	3.1	2.9	3.0	2.7	
12	2.9	2.7	2.8	2.8	3.1	2.9	2.9	3.3	3.4	3.5	B	3.2	3.4	3.1	3.6	3.4	3.3	3.0	(3.1) ^P	3.2	3.4	3.1	2.9	2.7	
13	2.7	2.7	2.8	2.8	3.0	(3.4) ^P	2.8	3.3	3.4	3.4	3.3	3.0	3.3	3.1	3.0	3.5	3.5	3.0	3.2	3.0	3.2	3.0	3.2	2.7	
14	2.8	2.9	2.7	3.0	3.1	2.7	2.9	3.3 ^P	3.4	3.5	3.4 ^P	3.4 ^P	3.1	3.3	3.3	3.5	3.6	3.4	3.3	3.4	3.1	3.0	3.0	2.7	
15	2.7	2.7	2.9	3.0	3.0	3.2	3.0	3.5 ^P	3.5	3.5	3.5	3.4	3.3	3.4	3.4	3.3 ^P	3.3	3.3	3.0	3.3	3.3	3.0	2.7	2.8	
16	2.7	2.7	3.0	3.2	3.2	2.8	2.9	3.3	3.3	3.4	3.4	3.5	3.0 ^H	3.4	(2.4) ^P	3.5	3.5	3.4	3.2	2.9	2.9	2.8	2.7	2.6	
17	2.8	3.0	3.0	3.4	2.7	2.8	3.0	3.3	3.1 ^H	3.4	3.2	(3.5) ^P	3.2	3.3	3.1	3.5	3.5	3.4	3.1	3.1	3.3	3.1	2.6	2.7	
18	2.6	2.8	2.8	2.8	2.9	2.8	2.7	3.2	3.5	3.3	3.3	(3.4) ^P	3.2	3.4	3.4	3.3	3.4	3.1	3.2	3.2	3.0	3.0	3.0	2.8	
19	2.7	2.9	3.0	3.0	3.0	2.8	2.9	3.5	3.6	3.4	3.6	3.7	3.2	3.4	3.3 ^P	3.1	3.4	3.4	3.6	3.1	2.8	2.9	2.7	2.8	
20	2.8	2.8	2.8	2.8	2.7	2.8	3.4	3.4	3.5	3.4	(3.6) ^P	3.4	3.3	3.2	3.6	3.3	3.4	3.1	3.5	3.3	3.3	3.2	2.7	2.8	
21	3.0	C	C	C	C	C	C	C	C	3.3	3.4	3.3	3.4	3.3	3.5	(3.4) ^P	3.4	3.3	3.2	3.5	(3.3) ^P	(2.9) ^P	2.7	(3.0) ^P	
22	2.8	2.8 ^P	2.9	2.8	3.0	3.0	(3.2) ^B	3.3	C	3.5	3.2	3.4	3.5	3.4	3.6	3.5	3.4	3.4	3.3	3.5	3.1	B	A	2.6	
23	A	A	2.8	3.0	3.5 ^P	2.8	B	3.3	3.6	(3.6) ^P	3.6	3.5	3.4	3.4	3.5	3.3	3.5	3.3 ^P	3.1 ^P	3.1	3.1	3.0	2.7	2.7	
24	2.8	2.9	3.1	3.6	2.8 ^H	2.9	3.0	3.5	3.5	3.5	3.2	3.3	3.4	3.5	3.5	3.5	3.4	3.4	3.2	(3.5) ^P	3.1	3.0	(2.9) ^H	2.8	
25	2.9	3.1	2.9	2.9	2.9	2.8	3.1	3.4	3.7	3.7	3.4	B	3.4	3.3	3.4	3.5	3.4	3.3	3.3	3.5	3.4	3.0	3.0	2.8	
26	2.6	2.5	3.1	3.4	3.0	3.0	3.2	3.5	3.5	B	3.7	(3.1) ^P	3.4	3.4 ^P	3.4	(3.5) ^P	3.6 ^P	T	T	T	3.2	(2.9) ^H	2.6 ^F	2.8	
27	3.1	3.0	3.4	3.8	3.5	(3.0) ^T	3.1	3.4	3.3	(3.4) ^P	(3.2) ^T	(3.2) ^T	3.3 ^P	3.4	3.3	3.3 ^P	3.2	3.5	3.4	3.1	3.0	3.2	2.8		
28	3.0	2.7	2.8	3.2	3.4	3.0	3.2	(3.3) ^T	3.4	3.6	3.3	3.2	3.2	3.2	3.5	3.0	3.5	3.2	3.1	3.2	(3.6) ^F	5	(2.8) ^F	3.0	
29	3.1	2.9	2.7	2.8	3.1	3.1	3.0 ^{SP}	3.5	3.6	3.1 ^P	3.3	3.4	3.4	3.4	3.4	3.5	3.6	3.3	3.0	3.1	3.2	(2.7) ^B	2.9	3.0	
30	2.9	2.9	2.9	3.0	3.4	2.8	A	3.4	3.4	3.4	3.6	3.2 ^H	3.3	3.1	3.3	3.5	3.6	3.3	A	3.3	3.1	A	A	A	
31	2.8	2.9	(2.6) ^T	3.1	3.6	3.0	3.3	3.3	3.4	3.2	C	3.4 ^P	3.2	3.4 ^P	3.3	3.6	3.3	3.6	3.1 ^P	3.4	3.7	B	2.6	2.7	
Mean Value	2.8	2.8	2.9	3.0	3.1	2.9	3.0	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.3	3.2	3.2	3.2	3.0	2.8	2.8	
Median Value	2.8	2.8	2.9	2.9	3.0	2.9	3.0	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.3	3.2	3.2	3.2	3.0	2.8	2.8	
Count	30	29	30	30	30	30	28	30	29	30	29	30	31	30	30	31	31	30	29	30	31	27	29	30	

(M3000)F2

Group 1.0 Me 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° 26.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

f min F

Dec. 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	1.3	1.3	1.2	E	1.3	1.2	1.5	2.4	2.9	3.3	3.5	3.5	3.6	3.8	3.1	3.1	2.4	1.5	1.5	1.9	1.5	1.3	1.4	1.5
2	1.6	A	E	E	1.3	1.3	1.4	2.5	2.8	3.3	4.8 ^A	3.4	3.3	3.3	3.1	2.5	2.5	1.6	1.3	1.5	1.6	1.5	1.5	2.1
3	1.3	1.4	1.4	1.3	1.2	1.4	1.4	2.1	2.5	3.5	3.6	3.1	3.2	3.5	3.4 ^A	2.7	2.3	2.5	2.5	1.5	2.0	1.5	1.8	2.0
4	1.9	1.4	1.2	E	E	1.3 ^S	1.5 ^S	2.2	2.7	3.1	3.3	3.5	4.0 ^A	4.3 ^A	3.5	3.0	2.5	1.3	2.2 ^S	1.9	2.5	1.9	1.5	1.6
5	1.1	1.4	1.2	E	E	1.5 ^S	1.3 ^S	2.3	2.7	3.3	3.5	3.6	3.8	C	C	3.0	2.2	1.8	1.6	1.3	1.6 ^S	1.3	1.4	1.4
6	1.3	1.4	E	E	E	1.3	1.4	2.5	2.7	3.4	3.7	3.8	3.5	3.4	3.4	A	A	1.9	1.5	1.5	2.0	1.9	1.5	1.5
7	1.3	1.2	E	E	E	1.4	1.5	2.0	2.5	3.0	3.4	3.3	3.4	3.9 ^A	3.0	2.6	2.3	1.4	1.4	1.5	1.7	1.4	1.4	1.4
8	1.3	1.0	1.0	1.1	E	1.3	1.3	1.9	2.5	3.3	3.3	3.3	3.3	3.3	3.1	2.5	2.5	1.5	1.4	2.3	1.5	1.3	1.9	1.5
9	1.3	1.3	1.0	E	1.1	1.4	1.3	2.5	2.6	3.0	3.3	3.5	3.7	3.6	3.1	2.7	1.9	1.8	1.5	1.3	1.5	1.4	1.8	1.5
10	1.3	1.4	E	E	E	1.3	1.5	1.8	2.5	3.0	3.7	3.5	3.5	4.5 ^A	4.0 ^A	2.7	2.5	1.5	2.5 ^A	1.9	2.0	1.9	2.1 ^A	1.6
11	1.5	1.4	1.3	1.0	E	1.3	1.6	2.5	2.5	3.3	3.5	3.5	3.6	3.3	3.1	3.0	2.2	1.5	1.5	1.5	1.9	1.6	1.5	1.5
12	1.3	1.3	1.3	E	E	1.4	1.5	2.3	2.8	3.3	6.5	3.8	4.3	4.4 ^A	3.3	2.6	2.3	4.9 ^A	2.0	1.5	1.4	1.4	1.5	1.5
13	1.4	1.3	1.2	E	E	1.3	1.9	2.1	2.5	3.1	3.4	3.5	3.7	4.2 ^A	4.2	3.9	2.2	1.6	1.4	1.3	1.8	1.4	1.4	1.3
14	1.4	1.3	E	1.0	E	1.3	1.4	2.0	2.5	3.0	3.2	3.4	3.5	3.3	3.0	2.7	2.3	1.6	1.5	1.4	1.5	1.4	1.5	1.5
15	1.4	1.3	E	1.3	E	1.4	1.4	2.4	3.0	3.2	3.4	3.9	3.5	3.3	3.3	2.8	2.3	1.6	1.5	1.5	1.4	1.5	1.5	1.5
16	1.3	1.3	E	E	E	1.4	1.5	1.9	2.7	3.3	3.3	4.0	3.3	3.1	5.0 ^A	3.3	4.1 ^A	2.6	2.4 ^A	2.4 ^A	1.7	1.6	1.6	1.3
17	1.3	1.3	E	E	E	1.0	1.4	1.3	3.0	3.0	3.5	3.5	3.4	3.7	3.3	2.5	2.4	1.9	2.0	2.2 ^A	1.5	1.5	1.4	2.4 ^A
18	1.4	1.4	1.2	1.3	1.1	1.3	1.4	2.0	2.4	3.1	3.3	3.5	3.2	3.1	3.2	2.6	2.3	1.7	2.4 ^S	1.4 ^S	1.5	1.9	1.6	1.3
19	1.7	E	1.3	E	E	1.5	2.0	1.9	2.6	3.0	3.5	3.4	3.3	3.3	3.1	2.7	2.2	1.6	1.5	1.5	2.0	2.0	1.7	1.4
20	1.3	1.0	E	E	E	1.3	1.5	1.9	2.4	3.1	3.8	3.6	4.2	3.3	3.0	2.9	2.0	1.4	1.8	1.8	1.5	1.5	1.4	1.5
21	1.3	C	C	C	C	C	C	C	C	3.1	3.3	3.7	3.3	3.3	3.4	3.2	2.8	1.9	1.9	1.9	1.6 ^S	1.3	1.3	1.4
22	1.2	1.3	1.0	1.0	1.0	1.1	2.3	2.8	2.5	3.3	3.3	4.0	3.8	3.4	3.2	2.6	2.5	4.9 ^A	2.6 ^A	3.0 ^A	1.5	B	A	2.0
23	A	A	1.3	1.7	E	1.0	B	3.3	2.9	3.0	3.3	4.0	3.4	3.2	3.2	3.3	2.3	1.9	2.5 ^A	2.0	2.2	1.3	1.5	1.8
24	2.0	1.0	E	E	E	1.0	1.8	2.1	2.5	3.0	3.3	3.3	3.8	3.3	3.0	2.6	2.3	2.5	1.8	2.0	2.0	1.5	1.5 ^A	1.5
25	1.3	1.3	1.0	1.0	E	1.0	1.9	2.0	2.5	3.2	3.4	4.0	3.5	3.3	3.4	3.0	2.3	1.6	2.0	2.0	2.1 ^A	2.0	1.6	1.4
26	1.3	1.3	E	1.0	1.1	1.0	1.6	2.0	2.6	4.8	3.3	4.0	3.5	3.5	3.0	2.6 ^T	2.3	T	T	1.4	2.3	2.0 ^A	1.6	2.0
27	1.4	1.3	1.2	E	1.0	1.5	1.5	2.1	3.3	4.0	4.3 ^A	4.5	3.5	4.0	3.7	4.8 ^A	3.4 ^A	2.0	1.5	2.1	2.1	1.5	1.3	1.4
28	1.3	1.0	1.3	2.3 ^A	1.0	1.1	1.5	2.0	2.5	3.3	3.3	4.0	4.0	3.5	4.0	2.7	2.3	2.1	3.3 ^S	2.0	2.0	2.0 ^S	2.1 ^S	1.4
29	1.3	1.2	1.0	1.0	E	1.0	2.0 ^S	2.2 ^S	<2.8 ^T	3.0	4.0 ^A	4.3 ^A	3.6	3.4	3.1	2.6	2.2	1.6	2.0	2.5 ^A	2.1 ^A	(2.2) ^B	1.5	2.0
30	1.5	1.3	1.2	1.0	1.0	1.0	1.5 ^A	2.0	4.0 ^A	2.9	3.4	3.8	3.8	3.8	3.3	2.8	3.3	4.0 ^A	A	2.5 ^A	2.4 ^A	A	A	A
31	1.8	1.2	1.4	1.4	1.0	1.3	2.2 ^A	3.3 ^A	2.6	<5.2 ^C	C	C	4.0	4.3	4.3	4.0	3.5	4.0 ^A	3.5	2.0	1.8	[1.6] ^B	1.5	1.6
Mean Value	1.4	1.3	1.1	1.2	1.1	1.2	1.5	2.2	2.7	3.2	3.6	3.7	3.6	3.6	3.4	2.9	2.5	2.1	2.0	1.9	1.8	1.6	1.6	1.6
Median Value	1.3	1.3	1.0	E	E	1.3	1.5	2.1	2.6	3.2	3.4	3.6	3.5	3.4	3.2	2.7	2.3	1.8	1.9	1.9	1.8	1.5	1.5	1.5
Count	3.0	2.8	3.0	3.0	3.0	3.0	3.0	3.0	2.9	3.0	3.0	3.0	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.1	2.9	2.9	3.0

f min F

Group 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatics

K 10

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

f_{min}E

Dec. 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	E	1.5	1.5	1.4	1.2	1.5	1.5	1.4	1.5	1.5	1.4	2.4	1.5	1.9	1.5	1.5	1.5	E	E	E	1.5	E	E	1.6
2	1.2	1.3	E	1.3	1.4	E	E	1.3	1.3	1.5	1.5	2.3	1.5	1.4	1.5	1.4	1.4	1.5	E	1.3	1.5	E	E	E
3	1.7	E	E	E	E	E	1.8	E	1.5	2.4	2.5	2.8	2.0	1.4	2.5	2.4	B	E	E	E	2.5	E	E	E
4	E	E	E	1.2	E	1.2	1.3 ^B	E	1.4	1.5	2.2	2.5	2.4	2.2	2.2	2.4	B	E	1.5	1.0	1.4	2.5	E	E
5	E	E	E	1.1	E	1.2	1.7 ^B	E	2.2	2.4	2.0	2.3	2.4	C	C	C	B	1.3	E	E	E	E	E	E
6	E	E	E	E	E	1.3	1.4 ^B	E	1.4	1.6	<1.9 ^C	2.3	2.3	2.3	1.5	1.5	1.5	1.5	E	E	1.3	1.3	1.6	E
7	E	E	1.1	1.2	1.1	E	B	E	2.1	1.4	2.4	2.4	1.5	1.2	1.0	1.4	1.2	E	E	E	E	E	E	E
8	E	E	E	E	1.3	E	1.4	E	1.5	1.4	1.3	1.5	1.5	1.4	1.4	1.3	B	E	E	E	E	E	E	E
9	E	1.4	E	1.5	1.2	E	1.6	E	1.5	1.4	2.2	1.5	1.4	2.4	1.4	1.3	1.3	E	E	E	E	E	E	E
10	E	E	E	E	1.3	E	1.3	E	1.5	2.3	2.4	1.5	2.3	2.4	1.4	1.5	1.5	1.4	1.5	1.3	E	E	1.4	E
11	E	E	1.5	E	E	E	B	E	1.4	2.0	1.9	1.5	1.9	1.6	1.4	1.9	B	E	E	E	E	E	E	E
12	E	E	E	E	1.6	E	1.4	E	1.5	1.5	2.3	2.0	2.0	2.0	1.5	1.5	1.5	1.4	1.5	E	E	E	E	E
13	E	E	E	E	E	E	1.3	E	1.5	1.5	1.5	1.6	2.3	1.5	2.0	2.4	1.5	1.4	E	E	E	E	E	E
14	E	1.4	1.4	1.3	1.3	E	B	E	1.5	1.4	1.5	1.7	1.9	1.7	1.7	1.4	B	E	E	E	E	E	E	E
15	E	E	E	1.4	1.1	E	1.4	E	1.9	1.5	1.9	1.5	1.4	1.5	1.5	2.0	2.1	1.7	E	E	1.4	E	E	E
16	E	E	E	E	1.2	E	1.5	E	1.5	1.4	1.6	1.5	1.6	1.6	1.6	1.4	1.4	1.4	1.3	1.4	E	E	E	E
17	E	E	E	E	E	E	B	E	1.4	1.6	1.8	2.3	1.9	1.8	2.0	1.5	B	E	1.4	1.4	1.4	1.4	1.0	1.0
18	1.4	E	E	E	E	E	B	E	1.4	1.4	1.4	1.5	2.0	1.4	1.5	1.6	1.4	1.4	E	E	1.5	E	E	E
19	E	E	E	E	E	E	B	E	2.0	1.4	1.5	2.0	2.0	1.4	2.4	2.4	B	E	E	E	E	E	E	E
20	E	E	E	E	E	E	B	E	1.3	1.7	2.3	2.2	1.5	1.5	2.3	1.9	1.8 ^B	1.6	E	E	E	E	E	E
21	E	E	C	C	C	C	C	C	C	1.5	1.0	1.5	1.5	1.4	1.9	1.9	1.9	E	E	E	C	E	E	E
22	E	E	1.0	E	E	E	E	E	1.4	1.5	2.6	2.6	2.8	2.8	2.2	1.2 ^B	2.5	1.5	1.3	1.2	E	B	2.0	1.5
23	1.5	1.4	E	E	E	E	B	B	B	1.9	3.4	3.0	B	B	B	2.0	1.8 ^B	1.5	1.4	E	E	E	E	1.6
24	1.4	E	E	1.5	E	1.5	1.6	E	1.5	1.4	1.5	1.8	2.0	2.0	1.8	2.0	1.8 ^B	1.5	1.5	E	1.4	1.5	1.4	E
25	E	E	E	E	E	E	1.5	E	1.4	1.5	2.0	2.0	2.1	2.3	1.9	2.1	2.0	1.4	1.5	1.5	1.5	E	E	E
26	E	E	E	1.0	E	E	B	E	1.4	1.4 ^B	1.5	2.0	2.0	2.1	2.1	T	B	T	E	E	1.4	E	E	E
27	E	E	E	E	E	1.4	1.3	1.3	1.6 ^B	2.0	2.3	2.5	2.3	2.3	1.7	1.6	2.1	1.5	E	E	1.5	E	E	E
28	E	E	1.1	1.1	E	E	E	E	1.5	1.6	2.3	2.3	2.3	2.3	2.0	2.0	1.4	1.5	1.9	E	E	E	S	E
29	E	E	1.0	E	E	E	S	E	T	2.1	1.7	1.6	2.0	1.3	1.5	1.5	B	E	E	1.4	1.2	E	E	E
30	E	E	1.3	E	1.0	1.1	1.3 ^B	E	1.6	2.1	2.1	2.5	2.3	3.2	2.4	1.9	1.4	1.4	1.4	1.3	1.5	1.3	1.5	2.1
31	E	1.2	1.3	1.1	1.0	1.1	1.5	1.4	1.9	2.1	C	<55 ^C	B	B	B	2.0	2.0	1.7	1.5	E	B	E	E	E
Mean Value	1.4	1.6	1.2	1.3	1.2	1.2	1.3	1.4	1.6	1.7	1.9	2.0	2.0	1.9	1.8	1.8	1.7	1.5	1.5	1.3	1.5	1.7	1.3	1.6
Median Value	E	E	E	E	E	E	E	1.4	1.5	1.5	1.9	2.0	2.0	1.8	1.7	1.9	1.5	1.4	E	E	E	E	E	E
Count	31	30	30	30	30	30	29	1.8	28	31	30	30	29	28	28	29	21	30	30	31	30	29	30	31

f_{min}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

135° E Mean Time

Dec. 1955

YPF2

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	70	50	50	80	80	80	70	60	40	50	50	70	60	50	30	70	60	40	70	60	70	60	60	60
2	90	[80] ^A	80	70	90	90	60	40	40	70	50	80	50	50	60	50	50	80	70	50	80	70 ^H	60	90
3	50	50	70	60	70	70	80	30	40	40	60	80 ^H	70	100	60	60	40	50	90	110	70	70	90	90
4	60	80	60	50	60	60	80	60	60	60	100	100 ^H	90	90	70	70	50	70	60	90	90	70	70	70
5	70	70	80	80	50	120	100	60	60	50	60	40	70	C	80	80	50	80	90	90	100	110	110	90
6	90	80	60	50	80	110	60	70	60	60	60	50	80	90	60	60	90	90	80	50	70	90	90	90
7	60	70	90	60	90	80	80	40	50	50	60	60 ST	80	60	50	60	60	70	90	80	60	100	70	70
8	70	80	70	50	60	100	80	80	60	70	40	80	70	30	50	90	50	90	90	70	80	100	110	90
9	60	70	70	80	70	80	110	70	50	70	70	70	100	40	70	70	70	60	80	80	70	110	80	80
10	60	70	80	100	70	60	80	90	70	50	60	50	60	70	80 ^H	40	50	40	40	80	90	80	70	80
11	90	60	90	70	70	70	80	60	40	40	30	60	50	30	80 ^H	50	50	50	60	100	70	110	100	100
12	80	70	70	80	70	100	90	70	40	30	B	70	40	80	50	60	50	[60] ^A	(80) ^T	90	50	80	60	80
13	80	60	80	70	100	(100) ^T	100	50	50	60	60	50	40	80	40	40	50	50	70	100	70	70	100	80
14	70	80	50	70	80	110	100	40 ^P	60	30	40 ^P	50 ^P	70	40	50	40	30	50	40	50	60	80	90	90
15	80	70	70	90	80	130	90	60 ^P	30	40	50	50	60	50	50	60 ^P	90	60	100	70	60	80	100	50
16	60	60	70	70	70	90	70	70	70	50	80	30	100 ^H	40	(50) ^P	40	50	40	80	120	120	110	70	100
17	100	90	80	70	90	80	50	50	50 ^H	40	50	(50) ^P	50	60	60	40	50	40	60	50	80	80	100	70
18	90	70	70	90	110	70	60	120	50	70	50	(60) ^T	80	60	70	70	100	100	60	50	90	90	70	70
19	70	90	80	70	80	80	60	50	50	60	60	40	100	40	80 ^P	110	50	50	70	70	70	50	70	50
20	90	50	60	70	70	60	80	60	70	50	(40) ^T	50	80	30	50	50	40	80	50	70	80	80	90	70
21	60	C	C	C	C	C	C	C	C	70	50	50	80	60	(60) ^T	60	60	60	80	50	[50] ^C	(50) ^T	70	(40) ^T
22	40	60 ^P	50	80	70	90	(60) ^{SP}	70	C	40	50	40	60	80	40	60	60	A	A	60	70	B	A	60
23	A	A	60	60	70 ^P	80	B	50	40	[30] ^C	20	30	60	40	40	70	40	80 ^P	90 ^P	70	40	60	40	100
24	70	90	90	40	80 ^H	80	90	50	30	30	60	60	40	40	50	50	50	90	70	(40) ^T	70	100	[100] ^A	90
25	80	90	80	70	90	100	60	50	40	30	50	B	60	50	60	50	60	50	80	40	50	80	60	60
26	90	90	60	80	80	80	60	60	40	B	30	(60) ^P	40	40 ^P	50	[40] ^T	40 ^P	T	T	T	60	[60] ^A	70 ^F	60
27	60	70	50	50	90	(60) ^T	50	30	40	(40) ^P	(50) ^T	[50] ^T	50 ^P	40	50	50 ^P	40	50	[60] ^B	60	60	80	80	
28	70	60	90	50	70	70	(40) ^T	70	60	40	60	70	80	60	100	50	50	80	80	70	(50) ^T	S	(80) ^{SP}	100
29	80	80	70	70	60	60	70 ^{SP}	40	50	90 ^P	70	50	60	50	70	70	60	90	70	80	80	B	B	90
30	60	50	60	60	50	70	A	70	80	60	50	70 ^H	70	80	60	50	50	70	A	80	80	A	A	A
31	80	80	(80) ^T	70	70	90	A	70	60	70	C	40 ^P	50	40 ^P	60	30	50	50	60 ^P	50	50	B	B	80
Mean Value	70	70	70	70	80	80	80	60	50	50	50	60	70	60	60	60	50	70	70	70	70	80	80	80
Median Value	70	70	70	70	70	80	80	60	50	50	50	60	60	60	60	50	50	70	70	70	70	80	80	80
Count	30	29	30	30	30	30	27	30	29	30	29	30	31	30	30	31	31	29	28	30	31	26	29	30

YPF2

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 12

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

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

foF2

Dec. 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	3.3	3.5	3.6	3.2	3.3	2.8	2.9	5.0	7.6	[9.8] ^S	12.0	12.6	9.4	10.0	9.0	9.5	9.8 ^S	8.2	6.6	7.8	5.2	5.0	5.2	4.2
2	4.4	4.1	3.9	3.4	3.4	3.1	3.4	5.7	6.2	9.0	13.2	12.9	10.4	10.3 ^H	M	M	M	M	M	M	M	M	M	M
3	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
4	2.9	3.0	3.2	3.3	3.5	3.0	3.0	5.3	8.0	9.4	9.1	10.4	12.2	11.5	12.1	11.0 ^H	11.7	9.3 ^J	7.0	5.6	5.3	4.6	3.1	2.7
5	2.8	2.9	3.0	3.2	4.0	2.4	2.3	4.6	7.3	9.0	9.6	9.7	9.5	9.7	10.3	10.5	9.5	8.5	6.7	5.4	5.4	5.4	5.1	5.3 ^P
6	3.7	3.4	3.3	3.3	3.5	3.0	2.5	4.8	7.9	10.5	10.0	9.5 ^H	11.9	10.6	11.0	11.2	12.0	8.8	8.0	8.1	8.1	5.9	4.3	4.3
7	4.0	4.5	5.2	4.2 ^J	3.4	3.5	3.4 ^H	4.6	7.7	10.4	9.2	8.8	9.8	10.8	11.3	11.5	10.4	10.0	7.5	5.9	6.5	6.8	4.3 ^P	3.0
8	2.9	3.0	3.2	3.1	3.2	2.9	2.6	4.6	8.0	8.9	9.8	10.3	10.7	10.8	9.5	10.4 ^P	10.9	9.4	6.7	6.4	5.8	5.7	4.4	3.7
9	3.5	3.8	4.2 ^J	3.2	3.4	2.9	2.6	4.6	8.8	10.4	10.5	9.3	9.5	11.3	9.5	10.8	9.5 ^V	8.0	7.8	5.7 ^H	6.8	5.7	4.4 ^J	3.3
10	3.0	3.4	3.7	3.2	2.9	2.4	2.4	4.8	9.8	11.0	11.4	9.8	9.6	10.3	8.9 ^H	9.3	10.2	8.7	8.2	6.6	5.5	5.1	5.2	3.7
11	3.3	3.3	3.3	3.2	3.4 ^F	3.4	3.2	5.0	8.5	10.3	10.9	12.4	11.8	12.8	12.0	11.3	9.4	8.7	8.4	6.4 ^P	6.1	6.0	(5.2) ^P	3.9
12	3.2	3.3	3.2	3.0	3.5	3.0	2.3	4.5	7.2	9.9	10.5	10.1	8.8 ^H	9.2	10.4 ^H	9.2	8.8	8.2	9.2	6.9	6.9	5.3	3.9	3.3
13	3.1	3.0	3.1	2.9	2.9	2.7	2.4	4.2	7.6	10.5	10.4	10.8	12.4	13.1	13.3	12.0	10.9	9.6	7.5	6.8	5.2	4.8	4.5	2.5
14	2.6	2.9	3.0	3.0	3.1	3.2	3.2	4.5	7.9	10.4	11.8	9.5	10.6	11.8	12.0	9.8	9.0	8.1	6.0	4.8	5.0	4.6	3.8	3.0
15	2.9	3.2	3.2	3.4	3.6	3.5	3.2	4.2	C	C	C	C	C	C	C	9.5	8.1	7.5	6.9	4.8	5.2	5.0 ^H	4.5 ^P	3.7
16	3.5	3.3	3.7	3.3 ^V	3.9	3.0	2.9	4.2	8.0	10.2	10.6	11.0	10.5	10.0	11.0	9.6	8.7	7.2	6.0	5.2	5.8	5.2 ^H	5.3	4.7
17	4.2	3.8	3.4	3.1	2.8	3.1	3.0	4.4	8.3 ^F	9.7	9.0	12.0	10.9	11.5	9.9 ^H	10.0	8.9	8.2	6.0 ^J	4.7 ^H	5.1	4.5	4.2	3.7
18	3.6	3.3	3.2	3.4	3.3	3.0	2.9	4.4	8.5	8.5	10.4	10.3	8.8	10.6	9.0	9.5	7.7	6.6	6.7	5.1	5.7	6.0	4.6 ^J	3.2
19	3.2	3.3	3.4	3.1	3.3	3.0	3.0	4.6	9.0	9.0	9.5	8.0	8.3 ^H	11.0	9.3 ^H	8.9	8.5	7.8	5.9	5.1	5.3	5.1	4.3	3.8
20	3.5	3.7	3.6	3.4	3.4	3.3	3.5	5.1	8.3	9.0	9.2	8.9	10.5	10.6	9.6	8.7	8.5 ^H	8.0	7.6	6.2	5.4	5.2	3.2	3.0
21	3.2	3.3	3.0	2.5	2.7	2.9	3.0	4.7	8.9	8.9	8.9	8.8	10.5	9.0	8.6	8.5	7.5	8.6	6.3	5.8 ^H	5.3	4.3	3.8	3.8
22	3.8	3.9	4.2	4.1	4.5	3.5	3.1	4.4	7.6	11.0	9.0	8.9	10.0	11.0	9.3	7.8	9.0	8.0 ^P	7.0	5.3	5.4 ^H	4.7	5.3	4.5
23	3.8	3.9	[4.0] ^M	4.0	2.8 ^E	2.1 ^E	2.3 ^F	3.9	7.6	8.8	10.1	8.1	8.3	9.5	9.6	8.7	8.0	7.2	5.2	4.5	(5.0) ^P	4.5 ^J	4.5 ^J	3.8
24	3.7	4.0	[4.0] ^M	3.9	3.4	2.3	2.3	3.8	8.0	9.5	8.8	10.5	10.7	13.1	12.2	11.5	10.6	9.7	8.2	6.4	6.3 ^P	4.1	3.2	3.9
25	4.2	3.5	3.2	3.2	3.1	3.1	2.5	3.7	7.0	9.2	9.0	10.5	11.6	9.0	8.6	7.7	7.1	7.8	7.6	6.1 ^P	5.7	4.6 ^H	3.8	3.3
26	3.3	3.4	4.5	4.6	2.4	2.3	2.4	4.0	8.0	S	9.5	8.8	9.7	12.5	8.9	10.5	8.2	6.6	5.8	4.7	3.8	3.8	3.8 ^V	3.2
27	3.7	3.7	3.5	3.4	2.3	2.1	2.2	3.6	7.1	9.7	10.2	8.8	10.2	10.0	11.5	9.8	10.0	10.0	7.0	5.6	5.3	4.9 ^J	4.6	3.2
28	2.9	3.0	2.9	3.0	3.5	2.4	2.5	3.9	7.4	8.5	11.6	11.4	12.0	11.0 ^H	12.8	11.7	11.0	8.8	6.5	6.0	4.4 ^J	3.8	3.2	2.9
29	2.9	3.0	3.0	3.1	3.1	2.5	2.7	3.9	7.6	7.4	10.4	10.5	12.0	10.7	9.6 ^J	7.9	8.6	7.4	5.5 ^H	4.6	4.6	3.5	3.0	3.1
30	3.1	3.1 ^V	3.0	3.0	3.4	2.6	2.6	3.9	6.9	7.9	9.6	10.0	11.4	13.0	15.0	14.6	13.6	11.5 ^H	11.2 ^J	7.8	6.8	4.3	[3.9] ^M	3.5
31	3.5	3.5	3.2	3.3	3.6	2.3	2.4	3.9	6.5	7.9 ^V	9.5 ^P	10.5	9.8	11.3	13.5	11.5	8.8	9.5	7.5	7.5	5.9	5.0 ^P	3.3	2.8
Mean Value	3.4	3.4	3.5	3.3	3.3	2.8	2.8	4.4	7.8	9.5	10.2	10.2	10.5	10.9	10.6	10.1	9.5	8.5	7.1	5.9	5.6	5.0	4.2	3.6
Median Value	3.3	3.4	3.3	3.2	3.4	3.0	2.6	4.4	7.9	9.5	10.0	10.2	10.5	10.8	10.3	9.9	9.2	8.4	7.0	5.8	5.4	5.0	4.3	3.6
Count	30	30	30	30	30	30	30	30	29	29	30	30	30	30	29	30	30	30	30	30	30	30	30	30

foF2

Y I

Sweep 1.0 Mc to 22.0 Mc in _____ min
 Manual Automatic

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

Dec. 1955

RF2

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	320	290	270	240	250	250	320	240	230	250	250	240	240	290	230	250	240	220	230	230	200	270	250	260
2	290	300	290	310	290	390	290	230	230	260	270	240	250	250 ^H	M	M	M	M	M	M	M	M	M	M
3	M	M	M	M	M	M	M	M	M	250	250	240	240	240	240	230 ^H	240	200	200	200	230	230	290	290
4	350	350	310	290	260	250	310	270	220	240	240	260	260	240	270	250	250	220	200	220	260	230	240	240
5	310	320	300	280	240	200	330	250	240	230	240	250	260	240	250	250	230	220	240	240	210	250	250	240
6	300	300	300	300	250	210	280	240	240	240	260	250 ^H	270	250	270	250	240 ^A	230	230	230 ^A	240	200	290	300
7	300	270	250	240	260	250	210 ^H	240	240	240	240	240	240	250	270	250	230	220	210	220	240	230	220	290
8	310	290	260	280	270	240	300	270	240	240	240	250	240	250	240	240	240	230	200	220	240	240	240	300
9	340	300	250	240	270	220	270	270	240	240	240	240	250	250	240	250	220	220	240	210 ^H	240	200	220	300
10	400	320	250	200	250	300	350	290	250	240	240	240	240	260	240 ^H	250	240	230	220	210	220	260	240	250
11	330	330	280	290	320	260	250	240	240	240	240	240	300	260	270	250	240	220	200	200	240	240	250	250
12	320	300	290	300	260	220	300	250	240	250	240	240	240 ^H	250	240 ^H	230	230	220	210	220	220	220	280	290
13	330	310	290	270	280	250	280	250	240	240	240	250	240	280	280	230	230	200	200	220	230	210	240	210
14	360	320	290	290	290	280	290	280	240	240	240	240	240	250	250	240	240	250 ^A	200	200	230	240	250	280
15	350	290	290	280	270	240	280	250	C	C	C	C	C	C	C	250	230	210	200	250	240	240 ^H	240	260
16	290	290	270	240	250	240	300	290	240	250	250	260	290	240	260	240	240	230	200 ^A	290 ^A	240	250 ^H	250	240
17	290	250	250	280	290	300	250	280	240	240	240	280	250	250	240 ^H	240	240	220	200	240 ^H	210 ^A	270	250	290
18	290	290	320	290	270	270	310	270	250	230	240	240	240	240	250	240	230	210	240	210	250	240	230	270
19	330	290	250	250	250	290	300	260	240	230	240	240	240 ^H	250	LH	240	230	210	200 ^A	210	240	240	240	300
20	320	320	290	270	290	310	290	240	240	240	240	250	270	290	250	250	230 ^H	240	220	220	200	240	220	350
21	330	290	250	(410)	270	290	290	270	240	220	240	240	270	240	250	240	230	240	210	220 ^H	210	240	290	300
22	330	330	300	290	250	240	280	250	240	240	240	240	240	250	250	240	240	240	220	240	200 ^H	240	250	300
23	290	300	[280]	250	250	350	340	260	230	240	240	240	240	250	230	240	240	230	200	230	230	290 ^A	260	270
24	310	300	[280]	250	[260]	260	310	290	240	230	240	250	260	280	250	240	240	220	200	240	200	230	250	300
25	380 ^A	350 ^A	270	270	290	220	340	280	240	240	240	300	250	240	240	240	240	240	220 ^A	240	200	230 ^H	240	310
26	370	350	290	210	270	340	300	260	240	240	250	240	250	280	240	250	240	240	220	230	250	250	300	[300] ^A
27	290	290	260	220	270	320	340	290	250	240	240	240	260	260	250	250	240	240	220	240	250	250	240	300
28	310	290	310	290	230	340	290	270	240	240	260	250	250	240 ^H	250	250	240	220	210	220	200	240	290	290
29	300	330	320	300	230	320	300	280	230	230	260	240	250	260	250	240	240	220	220 ^A	240	240	300	300	290
30	300	280	300	300	250	220	290	250	240	240	250	240	260	290	250	240	230	210 ^H	200 ^A	230	220	200	[250] ^A	300
31	310	310	320	290	230	220	320	250	240	240	260	270	250	240	240	240	240	230	230	220	220	210	300	360
Mean Value	320	310	280	270	260	270	300	260	240	240	250	250	250	260	250	240	240	220	210	230	230	240	260	280
Median Value	320	300	280	280	260	260	300	260	240	240	240	240	250	250	250	240	240	220	210	220	230	240	250	290
Count	30	30	30	30	30	30	30	30	29	30	30	30	30	30	28	30	30	30	30	30	30	30	30	30

RF2

Group 1.0. Me to 22.0. Me in 1 min

Manual Automatic

Y 2

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

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

Dec. 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	E	2.0	E	E	E	E	E	2.1	3.2	3.7	G	5.8Y	G	G	G	3.8	G	3.2	2.3	E	E	E	2.3	E	
2	E	E	2.1	E	E	E	E	122Y	G	G	G	6.4	7.2	8.9Y	M	M	M	M	M	M	M	M	M	M	
3	M	M	M	M	M	M	M	M	M	M	M	G	G	G	G	G	G	G	2.2	E	3.2	E	E	E	
4	E	1.9	2.3	2.4	E	E	E	2.1	G	G	G	5.9	G	5.9	5.3	5.9Y	5.9	3.2	2.2	3.2	E	E	E	E	
5	2.1	E	E	E	E	E	E	2.1	3.4	G	3.8	G	4.7	5.9Y	3.8	8.9	3.8	G	3.6	2.3	2.1	2.1	E	E	
6	E	E	E	E	E	E	E	E	3.2	3.5	G	5.8	G	4.9	5.9	G	8.1	4.6	E	2.3	3.6Y	2.3	E	E	
7	E	E	2.2	E	E	E	E	2.3	G	G	3.8	G	4.7	5.9Y	5.9Y	5.2	G	3.2	2.3	2.3	2.3	E	E	E	
8	E	E	E	E	E	E	E	2.3	G	G	G	G	5.9Y	G	G	G	G	G	E	E	E	2.3	2.3	E	
9	E	E	E	E	E	E	E	3.6	3.2	G	G	G	G	G	G	G	3.8	3.3	2.3	2.3	2.3	E	E	2.3	
10	3.5	2.3	2.3	E	E	E	E	E	G	G	G	G	5.9	5.8Y	4.8	4.9	4.5	G	2.3	4.8	3.0	2.3	2.0	E	
11	E	E	E	2.2	2.3	E	E	5.5	2.1	G	3.8	5.9Y	5.9Y	G	G	G	G	G	E	E	E	E	2.3	E	
12	E	E	E	E	2.2	2.9	2.3	E	G	G	4.9	G	5.1	6.2	4.9	3.6	G	3.3	2.1	E	E	E	E	2.1	
13	E	E	E	E	E	2.2	2.4	2.3	G	G	G	G	G	5.2	6.7	G	3.5	2.3	E	2.3	E	E	2.2	E	
14	E	2.4	2.2	2.5	3.0F	2.3	2.2	E	3.3	G	G	8.0Y	5.8	G	G	G	3.6	7.2	E	E	2.1	2.1	2.3	3.6	
15	2.1	2.2	E	E	2.2	2.2	2.3	E	C	C	C	C	C	C	C	G	G	G	2.6	2.4	2.1	E	E	E	
16	E	E	E	E	2.2	2.3	2.3	E	G	G	G	5.0	6.0	6.2	G	3.8	6.2	3.6	3.8	3.5	2.3	2.2	E	E	
17	E	E	E	E	E	2.3	2.1	2.1	3.2	3.8	G	5.7	G	G	G	G	G	3.0	E	2.3	3.7	2.3	2.0	2.3	
18	E	E	2.1	E	2.1	2.1	E	E	G	3.6	3.8	G	G	G	G	5.9Y	3.2	B	2.2	E	E	2.0	E	E	
19	E	E	E	E	E	E	E	E	3.2F	5.9	5.7	G	G	G	G	5.9	4.9	5.8Y	2.9	E	3.2	E	E	E	
20	E	E	E	E	E	E	E	E	3.3	4.0	3.5	G	5.9Y	G	G	G	G	G	E	E	E	E	2.0	2.3	
21	3.4	3.3	3.2	3.1	E	2.3	2.3	2.1	G	G	G	5.7Y	5.9	6.2	4.2	4.2	4.4	3.0	1.9	E	E	E	E	E	
22	2.3	E	E	3.4	2.1	2.3	2.1	2.3	3.2	5.9	G	5.9	4.5	6.2	9.5	3.7	4.4	3.8	2.3	3.0	2.3	E	E	E	
23	E	9.5Y	10.5	3.5	3.8	6.5F	3.8	2.3	G	G	4.2	4.3	5.7	5.9Y	5.7Y	G	4.4	3.2	2.3	2.6	2.2	3.8	2.1	2.0	
24	3.6	2.3	5.9	5.1Y	3.8	2.2	1.9	E	G	G	5.9Y	7.5	5.9	G	4.9	G	3.5	2.1	2.3	2.3	2.9	2.2	2.0	2.3	
25	4.8	3.5	2.3	3.1	2.3	E	E	E	G	G	5.6	G	5.8	6.4	5.8Y	4.1	G	3.8	3.4	3.6	2.1	2.3	3.2	2.2	
26	1.9	E	E	2.1	2.3	E	E	E	G	G	3.8	4.5	5.9	G	G	5.9	5.8	3.0	2.1	2.3	2.3	2.2	3.5	5.9	
27	2.7	2.2	E	2.2	E	E	E	2.2	G	G	G	8.6Y	G	5.9	5.9	G	5.7	3.4	3.6F	2.3	E	E	E	E	
28	2.2	2.1	2.3	2.3	E	E	E	2.1	G	3.6	G	3.8Y	5.9Y	5.6Y	5.9Y	7.2	5.7	4.0	3.1	3.0	2.3	E	E	2.3	
29	2.2	E	E	3.0	2.3	2.2	E	E	G	G	4.4	5.9	5.9	5.8	3.7	G	G	3.0	3.1	3.1	3.4	3.4	2.3	2.1	
30	2.1	E	E	E	E	2.3	E	3.3	G	3.5	G	8.9Y	G	G	G	G	3.2	2.3	3.0	3.5	2.4	2.3	4.5	3.0	
31	3.1	2.1	E	E	2.1	3.5	2.1	2.4	3.1	5.7	5.8	8.9Y	G	5.8	G	5.9	3.4	5.8	3.7	3.6F	3.3	2.4	3.6	3.1	
Mean Value	2.8	3.0	3.4	2.9	2.5	2.6	2.5	3.0	3.2	4.3	4.5	6.3	5.8	6.0	5.5	5.3	4.7	3.6	2.7	2.9	2.7	2.4	2.6	2.7	
Median Value	E	E	E	E	E	E	E	2.1	G	G	G	4.8	5.4	5.4	3.7	G	3.3	3.2	2.3	2.3	2.2	E	E	E	
Count	30	30	30	30	30	30	30	30	29	30	30	30	30	30	29	30	30	29	30	30	30	30	30	30	30

fEs

Sweep 1.0 Mc to 22.0 Mc in _____ min

Manual Automatic

SOLAR RADIO EMISSION

DEC., 1955

Observing Station: HIRAIISO

Frequency: 200 Mc/s.

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

Daily Data

Date	Steady Flux		
	00-03	03-06	Daily Averages
1	15	10	12
2	11	14	12
3	15	24	19
4	35	27	31
5	11	11	11
6	8	7	8
7	6	6	6
8	6	6	6
9	8	7	8
10	5	5	5
11	6	6	6
12	5	6	5
13	6	7	7
14	6	6	6
15	9	8	8
16	15	15	15
17	16	10	14
18	10	13	12
19	10	14	11
20	-	-	-
21	6	6	6
22	10	10	10
23	6	6	6
24	7	6	6
25	6	8	7
26	7	6	7
27	9	9	9
28	7	6	6
29	7	7	7
30	7	7	7
31	6	6	6

Outstanding Occurrences

Date	Starting Time	Duration	Type	Peak Flux	Time
12	0604-?	ca. 2m	CD	240	0605-00s

IONOSPHERIC DATA IN JAPAN FOR DECEMBER 1955

電波観測報告 第7巻 第12号

1956年1月25日 印刷
1956年1月30日 発行

(不許複製非売品)

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