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# IONOSPHERIC DATA IN JAPAN

FOR MARCH 1955

Vol. 7 No. 3

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PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR MARCH, 1955

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## 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



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

# IONOSPHERIC DATA

## Wakkanai

Lat. 46° 28.6' N  
Long. 141° 41.1' E

Mar. 1955

f<sub>o</sub>F<sub>2</sub>

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.5	4.0	3.2	2.7	3.0 <sup>F</sup>	2.6	3.0	5.3	6.7 <sup>J</sup>	6.5	7.0	8.0	7.1	7.0	5.9	6.5	5.7	5.0	4.3	4.0	3.4	3.0	3.2	3.2
2	3.2	3.3	3.1	3.0	2.9	2.6	3.5	4.9	6.0	5.3	6.5 <sup>M</sup>	7.0	6.2	6.5	6.7	6.0	6.3	6.0	4.1	3.7	3.5	3.5	3.5	3.7
3	3.6	3.8	3.5	3.5	3.6	3.6	3.5	4.6	5.4	5.3	7.0	8.5 <sup>F</sup>	6.5	5.8	6.0	5.6	5.7	5.5	4.6 <sup>J</sup>	4.0	3.8	3.8 <sup>J</sup>	3.5	3.6
4	3.6	3.7 <sup>F</sup>	3.5 <sup>F</sup>	3.7	3.8	3.3	3.8 <sup>F</sup>	5.2	6.0	6.4	6.4	6.5	6.5 <sup>J</sup>	6.1	5.5	5.6	5.7	4.8	4.8 <sup>J</sup>	3.8 <sup>J</sup>	3.8	3.8 <sup>J</sup>	3.1	3.2
5	3.2	3.3	3.4	3.4	3.3 <sup>F</sup>	3.0	3.6	5.2	6.3 <sup>J</sup>	5.9	6.2	6.6 <sup>V</sup>	6.6	6.5	5.7	6.5	6.3	5.2	5.5	5.0	4.4	4.4	4.5	4.5
6	4.5	4.5	4.9	4.7	5.0	4.5	4.5	5.1	6.1	5.6	7.0	6.9	6.5	6.7	6.3 <sup>J</sup>	5.9	7.1	5.6	4.9	4.7	5.2	4.4	4.5	3.6
7	3.5	3.5	3.8	3.9	3.9	3.0	3.7	5.1	6.0	5.8	5.6	6.8 <sup>J</sup>	6.5	7.0	6.5	7.0 <sup>J</sup>	6.2	6.1	4.7	4.6	4.5	4.2	4.1 <sup>J</sup>	4.1
8	3.9	3.9	3.6	3.6	3.5	3.3	3.8	5.6	7.0	7.0	6.5	6.8 <sup>H</sup>	6.7	7.4 <sup>P</sup>	6.6	6.6	7.0	5.3	4.8	4.9	4.2	3.9	4.3	4.1
9	4.2	4.2	4.0	4.1	4.0	3.8	4.2	5.4	5.8 <sup>J</sup>	5.7	7.0 <sup>P</sup>	7.1	(7.5) <sup>P</sup>	(7.8) <sup>P</sup>	6.1	6.0	6.4	5.0	4.1	4.4	4.1	4.2	4.4	4.1
10	4.2	3.9	4.0	3.5	3.0	2.5	3.5	5.0	6.5	8.8 <sup>J</sup>	7.1	6.3	6.8	8.8	6.6	7.3 <sup>J</sup>	6.7	6.0	5.0	4.6	4.0	3.8	3.9 <sup>P</sup>	4.3
11	4.1 <sup>J</sup>	4.4	(4.1) <sup>F</sup>	3.1	2.8	2.8	3.8 <sup>J</sup>	4.5	5.5	6.6 <sup>J</sup>	7.0 <sup>P</sup>	6.9 <sup>F</sup>	7.1 <sup>P</sup>	7.4 <sup>P</sup>	6.4	5.8	6.0	6.0	4.5	3.9	3.9	3.6	3.5	(3.7) <sup>F</sup>
12	(3.5) <sup>F</sup>	(3.5) <sup>F</sup>	(3.6) <sup>F</sup>	F	F	F	3.5 <sup>F</sup>	4.4	4.8 <sup>J</sup>	6.3	5.9	6.2	7.1	6.7	6.0	6.1	6.4	5.9	4.5	4.1	4.1	4.0	3.7	4.0
13	3.8	3.6	3.9	3.5 <sup>F</sup>	(3.2) <sup>F</sup>	2.9	3.7	5.0	5.1	C	C	C	C	C	C	C	C	5.6	4.6	3.6	3.7	3.6	3.7	(3.6) <sup>J</sup>
14	3.5	3.4	3.2	3.0	2.8 <sup>F</sup>	(3.4) <sup>F</sup>	4.0	5.0	6.0	(7.3) <sup>P</sup>	(8.3) <sup>P</sup>	6.2	7.3	6.1	7.0	6.3	6.2	5.6	4.5	3.9	3.6	3.6	3.5	3.6 <sup>J</sup>
15	3.5	3.5	3.3	3.2	3.0 <sup>F</sup>	(3.6) <sup>F</sup>	4.2	5.1	6.1	6.8 <sup>J</sup>	6.5	5.6	6.5	6.3	7.0	5.8	6.1	6.0	6.0	4.7	4.6	4.6	4.6	4.4
16	(4.4) <sup>J</sup>	4.5	4.4	4.1	3.8	3.6 <sup>F</sup>	4.8	6.5	6.1	5.5	5.9	6.7	6.5	7.2	7.3 <sup>P</sup>	6.8 <sup>J</sup>	6.2	5.8	5.1	4.4	3.9	3.5	3.7	3.6
17	3.4 <sup>F</sup>	3.3 <sup>F</sup>	3.1	3.0	3.0 <sup>F</sup>	3.0 <sup>F</sup>	4.6 <sup>J</sup>	5.3	6.5	7.8 <sup>J</sup>	8.3 <sup>J</sup>	7.0	6.1	6.7	6.7	5.9	5.9	5.6	6.6	5.6	5.5	4.7	4.4	4.3
18	C	C	4.0	3.9	3.3	(3.4) <sup>F</sup>	3.4	3.6	B	4.9	M	M	M	M	M	M	M	M	M	M	M	M	M	M
19	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
20	4.0	3.8	3.6	3.3	3.2	3.0	4.0	C	C	6.1	6.3	7.2 <sup>J</sup>	7.1	7.2	6.6	5.7	5.6	6.0	4.6	4.5	4.4	4.0	4.0	4.0
21	3.6	3.5	3.5	3.4	3.0	2.6	3.7	4.6 <sup>J</sup>	4.9	5.9	6.8 <sup>J</sup>	6.4	6.5	6.6	6.0	5.2	5.3	(5.3) <sup>J</sup>	5.3	5.0	5.0	4.5	4.4	4.0
22	4.0 <sup>F</sup>	(3.8) <sup>F</sup>	3.6 <sup>F</sup>	(3.8) <sup>F</sup>	3.6 <sup>F</sup>	3.6 <sup>F</sup>	4.0	4.4	5.3	6.0	6.0	5.9	6.0	6.3	6.1	5.3	5.3	5.9	4.8	4.6	4.4	4.3	3.9	4.0
23	3.6	3.9	3.4	3.6	3.0	2.9	3.5	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	A <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	4.4 <sup>K</sup>	3.9 <sup>K</sup>	3.8 <sup>K</sup>	4.0 <sup>K</sup>	4.0 <sup>K</sup>	3.6 <sup>K</sup>	3.5 <sup>K</sup>	F <sup>K</sup>
24	F <sup>K</sup>	F <sup>K</sup>	F <sup>K</sup>	3.1 <sup>F<sup>K</sup></sup>	F <sup>K</sup>	F <sup>K</sup>	3.6 <sup>K</sup>	4.9 <sup>K</sup>	4.5 <sup>K</sup>	5.2 <sup>K</sup>	(5.2) <sup>K</sup>	5.3 <sup>K</sup>	4.9 <sup>K</sup>	5.6 <sup>K</sup>	5.5 <sup>K</sup>	5.9	5.5	4.9	4.3	F	F	F	F	F
25	F	4.1	4.1	4.1	3.6	2.7	4.0	4.5	5.0	5.5	6.0	5.7	6.3	6.9	6.0	5.3	5.3	5.1	4.5	4.3 <sup>P</sup>	4.2	3.5	3.2	3.5
26	3.5	3.7	(3.6) <sup>F</sup>	3.6	3.5 <sup>F</sup>	3.2 <sup>F</sup>	4.5	4.5	5.3	6.1	6.5	5.8	6.1	6.0	7.0	6.0	6.1	5.6	5.0	5.3	4.8	4.6	4.5	4.1
27	4.4	3.9	3.8	4.2	(3.3) <sup>F</sup>	(3.4) <sup>F</sup>	3.6	4.3	4.8	C	C	C	C	C	C	C	C	5.3	5.4	4.6	4.2	3.9	(3.7) <sup>F</sup>	3.5
28	3.6	3.7	3.3	3.1	2.6	2.8	3.9	4.4	5.2	5.5	6.3	6.0	6.2	6.6	6.3	6.1	5.3	5.1	4.8	4.2	3.9	4.1	4.2 <sup>F</sup>	4.1
29	4.0	(3.8) <sup>F</sup>	3.5 <sup>F</sup>	3.1	3.0	3.0 <sup>F</sup>	3.9	4.6	5.6	6.3	5.9	6.3	7.0	6.7	6.0	5.5	5.0	5.3	5.3	4.9	5.0	4.5	4.2	4.4
30	4.3	4.0 <sup>F</sup>	4.0	F	F	F	3.3 <sup>F</sup>	4.4	4.6	5.3	5.7	6.4	6.5	6.3	6.0	6.0	5.8	5.3	4.9	5.0	4.8	4.6	4.3 <sup>J</sup>	4.2 <sup>J</sup>
31	4.4	4.1	F	F	F	3.3 <sup>F</sup>	4.5	4.6	4.8	5.2	6.2	6.4	6.5	6.9	6.7	6.6	6.4	5.3	5.7	6.5	5.3	4.4	3.8	4.3
MEAN Value	3.8	3.8	3.7	3.5	3.3	3.2	3.9	4.9	5.7	6.0	6.5	6.6	6.6	6.7	6.3	6.1	5.9	5.5	4.9	4.5	4.3	4.0	3.9	3.9
MEDIAN Value	3.6	3.8	3.6	3.5	3.2	3.1	3.8	4.9	5.6	5.9	6.5	6.5	6.5	6.7	6.3	6.0	6.0	5.5	4.8	4.5	4.2	4.0	3.8	4.0
Count	27	27	28	27	26	28	30	28	27	27	27	27	27	27	27	27	28	30	30	29	29	29	29	28

f<sub>o</sub>F<sub>2</sub>

Sweep 1.0 Mc to 3.2.0 Mc in 1.1 min  
 Manual  Automatic

W I

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

Lat. 45° 23.6' N  
Long. 141° 41.1' E

# IONOSPHERIC DATA

## Wakkanai

Mar. 1955

R'F2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	300	230	260	260	230	250	240	250	260	250	260	260	240	270	250	240	240	220	220	250	250	280	300	310
2	300	260	240	240	260	230	230	220	250	250	260 <sup>F</sup>	280	260	270	260	260	250	230	210	240	260	260	270	270
3	260	260	260	260	260	220	220	210	240	230	270	260	260	260	270	250	260	230	220	240	240	240	260	270
4	280	290	270	270	250	210	230	240	260	260	280	250	290	260	280	270 <sup>L</sup>	250	240	230	270	260	250	240	270
5	280	260	270	280	250	240	240	230	240	240	270	270	270	270	270	270	250	240	230	230	240	270	250	260
6	270	270	270	280	240	230	210	220	250	260	270	250	270	260	270 <sup>L</sup>	260	250	240	220	260	260	230	260	260
7	260	300	270	280	240	200	230	230	230	240 <sup>L</sup>	240	270	350	270	280 <sup>H</sup>	260	250	230	230	290	270	250	280	270
8	250	270	250	270	290	210	250	230	250	250	240	280	290	280	270	270	240	230	240	250	230	260	290	270
9	290	280	250	260	250	250	250	230	230	270	260	270	270	260	260	250	240	220	230	260	270	290	300	290
10	280	260	240	260	240	240	260	230	230	240	240	290	310 <sup>L</sup>	270	260	260	240	230	240	250	240	280	300	300
11	310	260	250	210	240	280	270	260	280	280	270	310	280	290	270	270	260	240	230	260	250	270	300	300
12	300	300	260	250	250	240	240	280	240	260	260	270	270	260	260	270	250	230	240	280	270	270	310	290
13	260	300	280	250	260	270	240	250	260	C	C	C	C	C	C	C	C	230	240	260	260	280	300	3300 <sup>C</sup>
14	290	290	260	250	240	240	230	250	270	270	230	280	280	280	270	270	250	240	240	250	280	280	290	270
15	290	300	260	260	250	250	230	240	240	260	260	260	280	260	280	270	260	240	230	260	260	250	280	270
16	290	270	250	260	240	250	240	250	260	230	250	280	270	280	280	280	250	240	230	240	230	290	300	270
17	300	290	270	270	260	250	240	230	260	290	260	280	260	270	270	250	260	240	240	240	250	260	280	290
18	C	C	230	260	240	240	250	240	B	400	M	M	M	M	M	M	M	M	M	M	M	M	M	M
19	M	M	M	M	M	M	M	M	M	M	M	260	310	290	270	260	260	240	230	240	250	260	280	290
20	260	290	250	250	240	250	230	C	C	270	260	270	290	280	280	260	250	240	230	240	260	250	300	300
21	280	280	260	250	230	220	230	240	260 <sup>L</sup>	290	270	280	310	280	270	260	270 <sup>L</sup>	260	240	240	240	260	250	250
22	290	260	260	260	250	240	240	240	290	290	280	300	290	290	270	280	260 <sup>L</sup>	240	240	240	270	280	330	310
23	340	310	260	250	310	360	290	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	A <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	B <sup>K</sup>	260 <sup>K</sup>	260 <sup>K</sup>	260 <sup>K</sup>	260 <sup>K</sup>	260 <sup>K</sup>	250 <sup>K</sup>	280 <sup>K</sup>	300 <sup>K</sup>
24	300 <sup>K</sup>	300 <sup>K</sup>	270 <sup>K</sup>	260 <sup>K</sup>	270 <sup>K</sup>	260 <sup>K</sup>	250 <sup>K</sup>	290 <sup>K</sup>	440 <sup>K</sup>	310 <sup>K</sup>	320 <sup>K</sup>	320 <sup>K</sup>	430 <sup>K</sup>	340 <sup>K</sup>	350 <sup>K</sup>	300	270	240	240	260	260	290	310 <sup>F</sup>	310 <sup>F</sup>
25	290 <sup>F</sup>	290 <sup>F</sup>	270	260	220	210	240	240	280 <sup>L</sup>	300	290	340	340	290	290	270	270 <sup>L</sup>	260	250	250	250	270	290	290
26	270	270	270	260	240	250	240	240	270 <sup>L</sup>	280	280	310	310	280	280	270	270	260	240	260	260	260	260	260
27	250	290	260	260	220	250	250	260	370	C	C	C	C	C	C	C	C	250	240	230	250	300	310	310
28	290	280	240	240	260	270	250	260	310	320	300	280	320 <sup>A</sup>	280	290	270	270 <sup>L</sup>	250	240	240	260	270	280	260
29	280	270	250	250	240	260	240	240	270	270	280	300	300	270	280	270	270	260	240	260	270	260	260	280
30	270	290	270	260 <sup>F</sup>	240	250	230	250	300	290	290	280	290	300	280	270	250	240	240	250	270	270	280	280
31	280	280	270	240 <sup>F</sup>	220	270	260	280	450	340	320	310	310	290	310	260	250	250	270	240	250	270	270	280
Mean Value	280	280	260	260	250	250	240	240	280	280	270	280	290	280	280	270	260	240	240	250	260	260	280	280
Median Value	280	280	260	260	240	250	240	240	260	270	270	280	290	280	270	270	250	240	240	250	260	260	280	290
Count	29	29	30	30	30	30	30	28	27	27	27	27	27	27	27	27	28	30	30	30	30	30	30	30

R'F2

Group 1-9 Mc to 2-9 Mc in 1 min

Manual

Automatic

W 2

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

Lat. 45° 23.6' N  
Long. 141° 41.1' E

# Wakkanai

## IONOSPHERIC DATA

Mar. 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	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
2	E	E	E	E	E	E	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
3	E	2.3	E	2.3	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	2.1	2.7	E	E	E
4	2.6	2.6	2.3	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	2.3	2.3	E	E	E	E
5	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	2.6	2.5	4.0	2.5	E	E
6	3.5	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	2.2	3.0	2.3	E	E	2.6
7	E	2.2	2.3	2.3	E	E	E	E	E	E	E	E	E	E	E	E	3.5	E	E	E	2.5	E	E	E
8	2.3	2.2	2.3	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	2.3	2.2	E	E	E	E
9	E	2.3	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	2.3	2.2	E	E	E	E
10	E	E	E	E	E	E	E	E	E	E	4.5	4.5	E	E	E	E	E	2.5	3.5	E	E	E	E	2.5
11	2.1	1.9	E	E	E	E	E	E	E	E	E	E	E	4.0	E	E	E	E	E	E	2.2	E	E	E
12	E	E	E	E	2.3	E	E	E	E	4.1	3.5	5.3	3.5	E	E	E	E	2.3	E	E	E	E	E	E
13	E	2.5	2.5	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	2.5	3.5	E	E	E	E	E
14	2.3	2.3	2.3	E	E	E	E	4.1	E	4.1	4.5	3.5	E	E	E	E	E	2.9	3.4	2.5	E	E	E	E
15	E	E	E	2.3	2.3	2.1	E	E	E	E	E	3.5	E	E	E	E	E	3.2	2.3	E	E	E	E	E
16	E	E	E	E	E	E	E	E	E	E	E	5.3	E	4.6	E	E	E	3.2	2.3	E	E	E	E	E
17	E	E	E	E	E	2.3	E	E	E	E	E	E	E	E	E	E	E	E	2.5	2.5	F	2.3	E	E
18	C	C	E	E	E	E	E	E	E	3.5	M	M	M	M	M	M	M	M	M	M	M	M	M	M
19	M	M	M	M	M	M	M	M	M	M	5.8	4.6	E	E	E	E	E	E	E	E	E	E	E	E
20	E	E	E	E	E	E	E	E	E	E	E	3.9	E	E	E	E	E	E	E	E	E	E	E	E
21	1.9	2.3	2.3	E	E	E	E	E	E	3.5	E	E	E	E	E	E	E	E	E	E	E	E	E	E
22	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
23	2.0	1.7	E	E	E	E	E	4.1	E	4.1	5.3	E	E	E	4.2	E	E	2.5	E	E	E	2.2	2.5	2.5
24	2.3	2.3	2.3	2.1	E	E	E	E	E	E	E	4.5	E	E	E	E	E	E	2.3	E	E	E	E	E
25	E	E	E	2.3	E	E	E	E	E	E	4.5	E	E	E	E	E	E	E	2.6	2.5	E	E	E	E
26	E	3.5	E	E	E	E	E	E	E	3.5	E	4.0	E	E	E	E	E	E	2.5	2.3	E	E	E	E
27	E	1.9	1.8	2.3	2.3	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
28	E	E	E	E	E	2.3	2.3	E	E	E	4.2	4.5	6.0	E	E	4.0	3.4	3.0	2.6	2.7	2.3	2.7	2.3	E
29	E	E	E	2.3	2.3	2.3	2.3	E	E	E	E	E	E	4.1	E	E	E	2.6	2.3	2.5	3.0	2.6	E	E
30	E	E	2.3	E	E	2.3	E	E	E	E	E	4.0	E	E	4.0	E	3.5	E	2.6	2.5	3.0	E	E	E
31	E	1.9	E	E	2.3	2.3	E	E	E	E	4.1	4.0	E	E	E	3.5	E	E	E	E	2.6	2.3	2.3	2.5
Mean Value	2.4	2.5	2.3	2.3	2.3	2.3	2.4	3.8	4.1	3.7	4.6	4.8	4.5	4.2	4.1	3.8	3.5	2.7	2.6	2.5	2.8	2.0	2.7	2.5
Median Value	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Count	29	29	30	30	30	28	30	29	29	28	28	28	28	28	28	28	28	30	30	30	30	30	30	30

fEs

Sweep 1.0 Mc to 2.2 Mc in \_\_\_\_\_ min

Manual  Automatic

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

Lat. 39° 43.5' N  
Long. 140° 08.3' E

# IONOSPHERIC DATA

## Akita

Mar. 1955

f<sub>o</sub>F<sub>2</sub>

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	3.6	3.6	2.7	2.8	2.8	2.6	2.9	5.6	6.8P	7.9	8.2	7.4	10.1	7.6	6.3	6.5	6.1	5.6	4.5	3.6	3.6	3.3	[3.3]	3.3
2	3.3	3.3	3.4	3.1	2.9	2.8	3.1	5.0	[5.6]	6.1	B	7.4	6.9	7.1	5.7	6.6	6.7	5.5	4.7	3.7	3.7	3.5	3.6	3.5
3	3.5	3.6	3.5	3.5	3.7	3.9P	3.5	4.9	5.0	5.9	5.2	7.5	7.3	7.2	6.1	6.5	5.5	5.6	[5.0]	4.4	3.6	3.7	3.4	3.3
4	3.3 <sup>V</sup>	3.5 <sup>F</sup>	3.4 <sup>F</sup>	3.4 <sup>F</sup>	3.4 <sup>V</sup>	2.8 <sup>F</sup>	3.1 <sup>V</sup>	5.0	5.7	6.0	5.8	6.5	6.4	6.6	5.9	5.7	6.1	6.0	[5.1]	4.2	3.7	3.4	2.9	3.0
5	3.0	3.1	3.0	3.1	3.1	[3.4]	3.6	4.9P	5.9	6.3	6.1	6.9	6.9	6.9	6.4	7.0	6.7	5.7	5.4	4.6	4.3	3.6	3.9	3.5
6	3.6	3.7	3.8	4.1	4.1	4.0	4.9	5.0	5.6	6.7 <sup>H</sup>	6.3 <sup>H</sup>	8.6	9.0	7.3	6.4	6.1	7.0	6.6	4.7	4.3	4.6	4.5	3.6	3.2
7	3.3	3.3	3.4 <sup>V</sup>	3.6 <sup>V</sup>	3.8 <sup>F</sup>	2.8 <sup>F</sup>	3.8	5.1	5.8	6.0	6.8	6.7	6.8	7.2	7.6	7.3	6.5	6.7	4.6	4.1	4.5	4.2	3.6	3.9
8	3.8	4.0	3.9	3.7	3.3	3.5	3.6	6.1	6.7	6.6	6.3	7.0P	6.8P	7.1P	7.6	6.3	7.0	5.9	4.8	4.2	4.0	3.6	3.7	[3.8]P
9	3.8P	3.8	3.7	3.7	3.7	3.2	3.9	5.0P	6.4P	6.4	5.7	8.0	9.5	8.8P	6.6	5.1	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	6.6	6.0	4.7 <sup>H</sup>	4.2	4.2	3.5	3.6	3.6
11	3.7	3.8	3.6	3.1	2.8	2.8	3.3	5.6	6.6	6.8	6.4	6.6 <sup>H</sup>	6.5 <sup>H</sup>	7.6	8.0	6.7	6.0	6.5	4.9	[3.9]P	3.7	3.2	3.1	3.1
12	3.1	3.2	3.3	2.9	2.5	2.4	3.6	5.3	5.5	6.3	6.5	6.5	7.7	7.1	6.7	6.3	6.4	6.0 <sup>P</sup>	5.3	3.5	3.9	3.9	3.5	3.6
13	3.7	3.5	3.5	3.7	3.4	3.2	3.7	4.7	5.5	5.6	6.5	7.8	7.7	8.6	7.0	6.8	6.5	5.7	4.7	3.5	3.5	[3.5]	3.5	3.5
14	3.6	3.5	3.3	3.2	3.0 <sup>V</sup>	2.1	3.6	5.5	6.4	6.5	6.6	7.9	6.5	8.1	7.5	6.6	5.9	5.5	5.5	4.4	3.4	3.5	3.3	3.5
15	3.5	[3.4]P	3.4	3.3	3.1	2.8	4.2	5.5	6.7	5.9	5.9	7.4	6.0	6.6	6.6	6.5	6.7	6.2	6.1	4.5	4.5	4.3	3.8	4.0
16	3.8P	3.9	3.9	3.7	3.3	2.9	4.7	5.7	7.0	6.6	5.6	6.5	7.6	7.5	8.0	7.1	7.6	5.9	5.6	4.7	3.6	3.2	3.5	3.6
17	3.6F	3.5F	3.4F	3.3F	3.2F	3.0 <sup>F</sup>	4.3	5.0	6.0	5.8	7.0	7.7	8.3	7.0	6.6	5.8	6.6	6.5	6.6	5.7	[5.1]A	4.5	3.9	3.8P
18	3.7	3.9	3.7	3.8P	3.2	2.7 <sup>F</sup>	3.8	5.1	5.4 <sup>H</sup>	5.8	8.0	9.0	7.6	7.4	6.0	6.0	5.8	7.1 <sup>P</sup>	6.2	4.1	3.7	3.7	3.6	3.7
19	[3.9]P	3.7	3.5	3.3F	3.2	3.2	4.1	6.6	6.3	6.6	6.8	7.0	6.6	7.7	7.1	6.1	5.8	5.9	5.6	4.7	4.2	3.9F	3.9F	3.9F
20	3.7F	3.6	3.6	3.8F	3.1F	2.9F	4.1	5.1	5.8P	5.9 <sup>H</sup>	6.4	6.9	7.0	8.1	8.4	6.6	5.5	6.0	6.0	4.1	4.0	3.8	3.6	3.6
21	3.6	3.4	3.4	3.3	2.9	2.7	3.8	4.7	4.8	5.5	6.4	6.5	6.5	7.0	6.6	5.5	5.4	5.5	[6.1]P	5.4	4.4	3.7	3.7	3.8P
22	3.8	[3.9]P	3.8	4.0	3.8 <sup>V</sup>	3.5F	4.5	5.3	5.5	5.4	6.5	C	6.2	5.5	6.6	[5.8]	4.9	5.5P	6.0	5.2	4.0	3.8	3.5	3.6
23	3.5	3.5	3.7	3.4	2.9	3.2	3.6	3.9K	G <sup>K</sup>	G <sup>K</sup>	4.9K	4.7K	4.7K	4.6K	4.3K	4.3K	4.0K	4.1K	4.1K	4.2K	3.6K	3.2K	3.4K	3.7 <sup>V</sup>
24	3.8 <sup>FK</sup>	3.8 <sup>FK</sup>	3.8 <sup>FK</sup>	3.6K	3.5 <sup>FK</sup>	3.3 <sup>FK</sup>	3.4K	C <sup>K</sup>	C <sup>K</sup>	5.0K	4.9K	5.0K	6.0K	6.1K	7.0	6.7	6.1	5.6	4.5	4.2	4.4	4.2	4.3	4.5
25	4.4	4.2	4.1F	3.9F	3.2F	2.5F	3.8P	4.5	4.7	5.5	5.7	6.5	6.8	7.2	6.5	5.8	5.4	5.3	5.2	4.7	4.0	3.3	3.3	3.4
26	3.5F	3.3F	3.2F	3.1F	3.2 <sup>V</sup>	2.8	4.3	3.4	5.3	5.8	6.1 <sup>F</sup>	6.0	6.1	6.5	6.5	7.2	6.1 <sup>F</sup>	6.0	5.3	5.1	5.2	4.7	4.3	4.3
27	4.4	3.8	3.9	3.7F	3.7	2.8F	4.3	5.8	6.0	7.1	8.0	8.1	8.0	7.6	6.1	5.7	5.5	5.8	5.7	5.0	4.2	3.8	3.9	3.8F
28	4.0	3.9	3.6	2.8	2.8F	2.8F	3.9	4.8	5.7	5.6	6.0	6.1	6.2	7.1	7.0	6.7	5.7	5.2	5.0	4.6	4.2	4.1	[4.0]A	4.0F
29	3.6	3.8F	3.6F	3.2F	3.2F	3.0F	4.2	5.0	5.4	6.1	6.0	6.5	6.6	7.3	5.6	5.6	5.6	5.5	5.5	4.8	4.6	4.1F	3.8F	3.8
30	3.8	3.6	3.5	3.6	3.2F	2.7F	4.0	4.8	5.3	6.4	6.2	6.1	6.7	7.2	[6.6]C	6.0	5.4	[5.2]C	5.0	5.0	4.5	4.0	3.8 <sup>F</sup>	3.7
31	3.7	3.6	3.6	3.2F	2.6F	2.7F	4.6	5.1	6.2	6.8	6.5	7.6	8.1	7.2	6.8	7.1	6.8	5.7	5.2	6.4	4.4	4.3	3.3F	3.8
Mean Value	3.7	3.6	3.5	3.4	3.2	3.0	3.9	5.2	5.8	6.2	6.4	7.0	7.1	7.1	6.7	6.3	6.1	5.8	5.3	4.5	4.1	3.8	3.6	3.7
Median Value	3.6	3.6	3.6	3.4	3.2	2.8	3.8	5.1	5.7	6.0	6.3	6.9	6.8	7.2	6.6	6.4	6.1	5.8	5.2	4.4	4.1	3.8	3.6	3.6
Count	30	30	30	30	30	30	30	29	29	30	29	29	30	30	30	30	30	30	30	30	30	30	30	30

Sweep 0.95 Mc to 22.0 Mc in 2 min

Manual

Automatic

f<sub>o</sub>F<sub>2</sub>

A 1



Lat. 39° 43.5' N  
Long. 140° 08.3' E

**Akita**

**IONOSPHERIC DATA**

195° E Mean Time

Mar. 1955

R'F2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	260	230	210	240	220	240	260	230	[240] <sup>H</sup>	260	260	250	250	250	250	240	240	270	200	240	250	240	[260] <sup>C</sup>	290	
2	270	250	220	220	240	240	230	210	220	230	300 <sup>H</sup>	240	250	260	250	250	240	210	240	230	230	250	250	250	
3	290	250	240	250	240	210	240	220	210	250	L	280	270	260	280	250	240	230	[240] <sup>C</sup>	210	210	230	220	290	
4	310	300	280	260	220	210	220	220	230	240	280	300	260	250	280	280	250	210	[220] <sup>C</sup>	220	230	220	240	260	
5	250	260	260	260	240	[250] <sup>C</sup>	260	250	270	230	240	290	300	260	290	290	230	220	220	220	240	250	240	260	
6	290	250	240	250	230	230	200	200	220	250 <sup>H</sup>	240	270	270	270	260	250	250	270	210	240	250	230	220	250	
7	260	290	280	260	220	230	210	200	210	240	270	290	250	290	280	240	230	230	200	260	280	250	210	260	
8	250	250	230	250	270	220	220	230	240	230	260	250	280 <sup>B</sup>	260	260	240	230	220	210	220	240	240	270	270	
9	270	290 <sup>A</sup>	240	250	220	250	220	210	240	240	240	260	280	250	240	230	C	C	C	C	C	C	C	C	
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	230	220	200 <sup>H</sup>	220	250	220	300	300	
11	290	260	200	210	210	260	240	250	260	240	280	290 <sup>H</sup>	260 <sup>H</sup>	270	250	240	230	230	200	220	230	220	270	280	
12	290	290	250	230	220	250	210	220	220	240	280	250	250	240	250	250	240	230	220	220	210	270	240	260	
13	260	240	250	230	270	250	220	220	240	240	300	250	290	250	250	250	240	220	200	230	270	[280] <sup>C</sup>	290	280	
14	270	250	290	260	210	200	240	240	240	220	260	270	250	260	250	240	240	230	220	220	250	250	270	280	
15	280	250	270	260	250	250	270	270	240	210	290	250	260	260	260	260	250	240	210	200	250	250	240	260	
16	250	270	250	280	200	240	220	240	220	250	250	250	270	270	320	250	270	240	220	240	200	270	300	250	
17	260 <sup>F</sup>	250 <sup>F</sup>	260	250	270	230	210	210	240	250	270	260	250	250	260	250	260	A	230	210	[220] <sup>A</sup>	220	260	270	
18	290	260	260	240	200	240	220	240	230 <sup>H</sup>	330	270	250	270	250	250	270	240	240	220	220	250	290	290	270	
19	260	260	220	250	290	250	220	220	230	250	240	250	260	260	270	250	230	240	210	210	240	250	290 <sup>F</sup>	270 <sup>F</sup>	
20	260 <sup>F</sup>	250	260	230	220	220	220	230	240	270 <sup>H</sup>	260	270	270	270	250	240	240	240	210	230	260	230	260	270	
21	270	260	270	240	210	230	220	230	240	270	270	280	280	280	270	240	250	250	220	220	210	220	260	250	
22	250	250	250	230	220	240	220	240	250	270	270	280	260	260	280	250	240	240	230	240	200	240	290	270	
23	300	290	240	280	300	300	250	390 <sup>K</sup>	G <sup>K</sup> G <sup>K</sup> G <sup>K</sup>	G <sup>K</sup> G <sup>K</sup> G <sup>K</sup>	400 <sup>K</sup>	360 <sup>K</sup>	370 <sup>K</sup>	390 <sup>K</sup>	390 <sup>K</sup>	330 <sup>K</sup>	270 <sup>K</sup>	240 <sup>K</sup>	250 <sup>K</sup>	270 <sup>K</sup>	220 <sup>K</sup>	250 <sup>K</sup>	290 <sup>K</sup>		
24	290 <sup>K</sup>	270 <sup>K</sup>	280 <sup>K</sup>	240 <sup>K</sup>	290 <sup>K</sup>	250 <sup>K</sup>	240 <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	290 <sup>K</sup>	290 <sup>K</sup>	430 <sup>K</sup>	300 <sup>K</sup>	300 <sup>K</sup>	300 <sup>K</sup>	280	250	240	230	240	240	280	290	290 <sup>K</sup>	
25	290	280 <sup>F</sup>	250	240	210	250	240	240	250	300	330	310	300	300	280	260	270	250	240	220	230	240	270	280	
26	260	250	230	240	240	240	230	240	250	270	270	310	290	290	300	260	250	240	240	230	240	250	[240] <sup>A</sup>	240	
27	240	270	240	250	220	220	220	240	260	290	270	260	260	260	260	270	250	240	230	240	210	250	270	290 <sup>F</sup>	
28	290	250	200	230	260	260	240	240	270	270	310	280	300	300	260	270	250	240	230	230	230	240	[260] <sup>A</sup>	250	
29	260	220	240 <sup>F</sup>	250	250	250	230	240	270	260	260	300	300	300	290	[270] <sup>A</sup>	270	270	260	260	310	290 <sup>F</sup>	300 <sup>F</sup>	300	
30	300	300	290	270	220	290	250	260	300	280	300	310	320	300	[290] <sup>C</sup>	280	280	[260] <sup>C</sup>	240	250	250	270	310	310	
31	300	310	260	280	250	270	260	260	310	280	370	300	270	310	320	300	250	260	270	270	230	230	340	320	
MEAN Value	270	260	250	250	240	240	230	240	240	260	280	280	280	280	270	260	250	240	240	220	230	240	250	270	280
MEDIAN Value	270	260	250	250	240	240	220	240	240	250	270	280	270	270	260	260	250	240	240	220	230	240	250	270	280
Count	30	30	30	30	30	30	30	29	29	30	29	30	30	30	30	30	30	29	30	30	30	30	30	30	

Sweep 0.85 Mc to 2.20 Mc in 2 min

Manual  Automatic

R'F2

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

Lat. 39° 43.5' N  
Long. 140° 08.2' E

# IONOSPHERIC DATA

## Akita

Mar. 1955

fEs

136° 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	E	E	E	E	E	E	G	G	3.7	3.5	3.5Y	3.5	4.1	3.5	4.0	3.3	2.3	2.4Y	2.4	2.3	3.5	C	2.5	
2	2.0Y	2.5	E	E	C	2.4	3.0	G	G	3.5	G	G	3.5	G	G	G	3.0	G	1.9	2.0	E	E	E	E	
3	E	E	E	E	E	E	E	G	G	3.3	3.5	3.5	G	G	G	G	3.0	G	C	E	E	E	2.4	3.5	
4	3.5	3.5	2.8	3.1	2.3Y	1.9	2.0	G	G	3.5	3.5	3.5	4.1	3.5	G	G	G	C	C	2.8	3.0	2.5	3.1	3.2	
5	E	2.3	E	E	1.6	C	E	G	2.9	3.5	3.5	G	4.0	3.5	G	G	G	2.7	2.5	E	E	2.2	2.2	2.2	
6	E	E	3.0	E	E	E	2.2	G	G	3.5	G	4.2	4.1	3.5	G	G	3.6	3.1	2.7	E	1.9	E	2.2	1.7	
7	E	E	1.6	E	1.6	1.8Y	E	G	G	3.5	G	4.2	4.3	2.8	G	3.5	3.8	2.9	3.5	3.1	3.1	E	2.0	2.3	
8	3.1	2.7	2.3	2.6	3.4	E	G	G	G	G	3.5	G	G	G	G	G	G	3.0	2.5	2.3	3.1	2.4	1.8	2.6	
9	2.5	4.3	2.3	3.1	2.5	E	E	G	G	3.5	G	G	G	G	G	G	C	C	C	C	C	C	C	C	
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	G	2.3	2.3	2.6	2.7	3.2	1.9	2.0	
11	E	E	1.8Y	E	2.5	E	2.3	G	3.5	3.8	3.5	6.5Y	3.5	6.1Y	4.3	4.5	3.0	G	E	E	2.3	2.4	2.5	2.0	
12	2.2	E	1.9	1.9	1.9	E	2.3	3.1Y	G	3.5	4.0	4.3	4.6	3.5	3.5	4.5	3.5	3.5	2.9	2.5	2.4	2.0	1.9	E	
13	E	2.2	2.3	2.2Y	2.3	2.7	2.2Y	G	G	4.3	4.0	4.3	4.0	G	4.5	3.1	4.0Y	G	2.2	1.9	2.1	C	E	E	
14	E	E	E	E	2.2	E	E	G	G	G	3.8	3.5	4.0	G	3.5	G	3.1	G	2.6	2.6	E	E	E	E	
15	E	E	E	2.4	2.2	2.1	2.5	3.4	G	3.5	3.5	4.2	3.5	G	3.5	3.4	3.0	3.1	2.5	2.5	1.8	2.5	2.1	E	
16	E	2.1Y	1.9	E	2.2Y	2.2Y	2.5Y	3.0	3.5	3.5	G	3.9	6.5	4.5	G	3.2	4.2	3.5	3.5	3.5	1.8	2.1	2.0	E	
17	E	2.0	2.9	2.5	2.7	2.3	3.5	2.6	G	3.5	G	4.5	4.5	G	4.1Y	3.5	4.9	7.1	3.5	4.0	5.1	2.0	E	E	
18	E	E	2.6	2.2Y	2.3	F	G	G	G	G	G	G	3.9	3.8	2.8	4.0	2.7	4.7	3.8	3.5	3.5	3.5	2.6	2.9	
19	3.1	2.9	2.1Y	2.3	3.5F	2.8	2.2Y	G	G	4.1	4.5	5.0	4.5	4.8	5.0	4.2	4.2	3.5	3.5	2.2	2.1Y	E	E	E	
20	1.8	1.8	2.1	E	E	2.9	3.2Y	G	G	3.5	4.1	4.9	5.5	3.4	3.5	3.5	3.5	3.5	3.5	2.3	2.3	E	E	E	
21	2.3	2.5	2.2	2.6	1.8	2.4	2.2	G	G	3.5	4.2	3.5	4.1Y	4.0	3.5	3.5	3.5	3.5	3.5	E	E	E	E	E	
22	F	E	2.2Y	F	2.2Y	2.2Y	2.5	3.3Y	G	G	G	3.4	3.5	G	G	G	G	G	2.3	E	E	E	E	E	
23	2.0	2.1	E	2.0	E	2.2	2.8	3.3	G	G	G	3.5	G	G	G	G	3.1	2.8	2.6	2.2Y	2.5	3.0	3.5	2.6	
24	3.2	2.1	3.0	2.6	2.2Y	E	2.9Y	C	C	4.1Y	3.5	3.5	3.5	4.9	3.5	3.5	3.5	2.4	2.4	E	E	2.3Y	E	E	
25	E	E	2.3Y	2.2Y	2.3	F	2.5Y	3.0Y	3.0	G	4.0	8.5	4.0Y	4.7	4.5	G	G	2.3	E	2.6	2.4	2.0	3.0	2.9	
26	E	E	1.6	3.0	2.5	3.0	2.4Y	2.8	3.2	G	4.6	3.7	4.2	3.5	G	3.3	3.5	4.3	3.5	2.7	2.1	4.5	3.0	E	
27	1.8	2.5F	2.3	2.2	2.2F	2.2Y	2.8Y	G	G	3.5	4.1	4.0	4.2	3.5	4.6	G	2.8	3.1	2.6	2.3	2.3	2.3	3.0	E	
28	E	E	2.5Y	E	2.3Y	2.3Y	2.2	3.5	G	G	4.1	4.3	4.6	4.5	4.8	5.0	4.2Y	2.9	1.8	2.5	2.3	4.6	5.7	3.5	
29	2.2	4.0	3.0	3.5	2.2	2.6	G	G	G	G	G	4.0Y	4.0	4.2	6.0	6.1	5.6	4.3	3.5	6.8	6.5Y	5.6	4.2	4.2	
30	2.8F	2.5	2.4	2.3	2.2Y	1.8	G	3.5	G	G	4.6	4.6	4.1	4.1	C	3.5	3.5	C	1.7	1.8	3.1	2.2Y	3.1	2.4	
31	2.4Y	2.5	2.4	2.3	2.3	E	G	G	G	G	G	G	G	G	G	2.2	3.1	3.1	3.1	2.6	2.4	2.0	1.8	2.5	
Mean Value	2.5	2.6	2.3	2.5	2.3	2.3	2.5	3.1	3.2	3.6	3.9	4.3	4.2	4.0	4.1	3.8	3.6	3.4	2.7	2.7	2.8	2.9	2.7	2.7	
Median Value	E	2.0	2.2	2.2	2.2	1.8	2.2	G	G	3.5	3.5	3.8	4.0	3.5	3.5	3.2	3.2	3.0	2.5	2.3	2.3	2.1	2.0	1.8	
Count	30	30	30	30	29	28	30	29	29	30	30	30	30	30	29	30	30	30	28	28	30	29	29	30	30

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°28.3' E  
**Kokubunji Tokyo**

**IONOSPHERIC DATA**

135° E Mean Time

Mar. 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	3.7	3.7	2.7	3.1	2.7	2.4	2.9	5.9	6.8	8.2	9.1	9.6	10.4	10.0	7.1	9.7	6.1	6.2	4.4	3.5	3.6	3.6	3.1	3.2
2	3.4	3.4	3.2	3.0	3.4	2.4	3.0	5.0	6.1	6.5	5.5	7.3	7.5	(7.2) <sup>F</sup>	7.0	6.0	7.0	6.5	5.0	3.7	3.3	3.1	3.4	3.2
3	7.3 <sup>08</sup>	3.4	3.5	3.3	3.4	3.2	3.4	4.8 <sup>P</sup>	5.6	6.0	5.8	6.4	7.1	7.8 <sup>J</sup>	6.6	5.9	6.1	5.2	5.2	4.2	3.6	3.4	2.8	2.7
4	2.9	3.0	3.0	3.0	3.3	2.5	3.1	5.2	5.6	6.0	6.7	6.4	7.1	7.5	5.6	6.2	6.1	6.7	4.6	4.1	3.6	3.1	3.3	3.0
5	3.1	3.0	3.0	3.1	3.0	2.9	3.7 <sup>P</sup>	5.4	5.5	5.4	6.1	6.0	(7.5) <sup>P</sup>	6.6	7.0	6.7	6.9	6.1	5.2	5.2	3.5	3.3	3.3	3.2
6	3.4	3.5	3.5	3.5	3.8	3.3	4.6	5.5	4.9	5.8	7.3	8.8	8.2 <sup>P</sup>	7.9	7.3 <sup>P</sup>	6.9	6.2	7.0	5.7	4.3	4.6	4.7	3.7	2.8
7	3.0	3.0	3.2	3.3	3.2	2.5	3.3	5.3	5.3	6.0	6.7	7.1	7.5	7.2	7.9	8.7	7.0	5.9	4.9 <sup>H</sup>	4.2	4.5	4.5	4.3	3.5
8	3.8	3.6	3.7	3.4	3.3	3.5	3.7	6.0	7.1	6.1	6.2	7.0	7.2	7.5	9.2	7.9	6.7	6.5	5.5	3.8	3.7	3.5	3.5	3.7
9	3.6	3.6	3.7 <sup>J</sup>	3.6	3.6	2.7	3.8	5.0	6.0	6.8	6.5	8.0	10.0 <sup>8</sup>	10.2	6.7	5.9	6.4	6.6	4.7	3.4	3.5	3.6	3.6	3.6
10	3.5	3.7	3.3	3.3	2.5	2.5	3.8	7.1	6.4	5.4	7.0	8.9	8.5	10.2	9.2	7.3 <sup>P</sup>	6.5	6.6	4.8	4.6	4.4	3.6	3.4	3.4
11	3.5	3.6	3.0	2.9	2.5	2.5	3.7	5.4	6.7	6.9	7.0	7.3	7.8 <sup>J</sup>	8.2 <sup>P</sup>	9.4	8.5	6.0	5.7	6.0	4.2	3.8	3.7	2.9	3.1
12	3.1	3.2	3.3	2.9	2.5	2.3	4.0	5.2	6.0	5.9	7.0	7.5	8.7	7.4	6.7	6.5	6.1	5.9	5.4	3.9	3.8	3.9	3.4	3.4
13	3.5	3.6	3.2	3.2	3.0	3.0	4.0	5.0	5.6	6.8	6.0 <sup>H</sup>	9.1	7.3	9.9	8.7	7.9 <sup>J</sup>	7.5	6.4	5.4	3.4	3.4	3.5	3.3	3.5
14	3.5	3.5	3.3	3.3	3.1	2.7	3.7	5.4	7.0	6.5	5.7 <sup>H</sup>	6.8	8.3 <sup>J</sup>	9.4 <sup>P</sup>	9.0	7.7	5.7	5.8	6.3 <sup>P</sup>	4.8	3.5	3.5	3.4	3.6
15	3.6	3.5	3.4	3.2	3.2	3.0	4.3	5.5	6.2	6.3 <sup>P</sup>	5.8	7.0	7.6 <sup>P</sup>	6.8	6.8	7.9 <sup>J</sup>	6.8	6.5	6.5	4.8	4.0	4.1	3.9	3.9
16	3.7	3.7	3.8	3.8	3.0	2.8	4.7	6.0	6.8	7.0	6.0	6.7	7.0	9.1	9.0	8.2 <sup>J</sup>	8.0 <sup>J</sup>	6.7	5.6	5.4	3.0	2.6 <sup>H</sup>	3.0 <sup>F</sup>	3.2
17	3.1 <sup>F</sup>	3.2	3.2	3.1 <sup>F</sup>	3.0 <sup>F</sup>	2.7	4.0	5.5	5.9	6.3	6.8 <sup>JM</sup>	7.4	8.3	7.0	6.7	5.7	6.2	6.8	6.6	6.2	A	A	3.7	3.3 <sup>F</sup>
18	3.3 <sup>F</sup>	3.5 <sup>F</sup>	3.2 <sup>F</sup>	3.5	2.8	2.4	4.2	5.8	7.0	6.0 <sup>J</sup>	7.3	8.6	9.5	8.4	6.5	5.5	7.2	7.3 <sup>P</sup>	6.4	3.9	3.4	3.8 <sup>F</sup>	3.5	3.6
19	3.5	3.5	3.5	3.5	3.0	3.2	4.3	5.6	6.8	5.6	7.1	6.8	7.2	7.6 <sup>J</sup>	7.9 <sup>P</sup>	6.3	6.0	6.0	6.5	4.2	[4.0]A	3.8	3.6 <sup>F</sup>	3.6 <sup>F</sup>
20	3.6 <sup>JF</sup>	3.4 <sup>F</sup>	3.5	3.6	3.2	2.8	4.1	5.4	6.5	6.1	6.1	7.0	(7.8) <sup>P</sup>	8.5	9.3	7.9 <sup>P</sup>	6.1	5.3	6.2	4.1	3.9	4.3	3.6	3.5
21	3.4	3.4	3.2	3.4	3.0	2.6	3.8	4.7	5.5	5.8	5.8	6.5	7.1	7.9	7.1	5.9	5.5	6.0	6.5	5.3	4.3	3.4	3.4	3.4 <sup>JF</sup>
22	3.4 <sup>PF</sup>	3.4	3.5	3.4	3.2	3.0	4.4	5.2	5.7	5.6	6.5	8.2 <sup>J</sup>	7.8	7.1	6.5	6.1	5.2	5.7	6.2	5.9	4.0	3.7 <sup>P</sup>	3.5	3.5
23	3.1	3.2	3.6	3.0	2.9	3.2	3.6	4.1 <sup>K</sup>	4.5 <sup>K</sup>	4.2 <sup>K</sup>	4.7 <sup>K</sup>	5.1 <sup>K</sup>	5.5 <sup>K</sup>	4.8 <sup>K</sup>	4.7 <sup>K</sup>	4.6 <sup>K</sup>	3.9 <sup>K</sup>	4.7 <sup>K</sup>	5.2 <sup>K</sup>	5.0 <sup>K</sup>	2.7 <sup>K</sup>	2.7 <sup>K</sup>	2.9 <sup>K</sup>	3.0 <sup>K</sup>
24	(3.0) <sup>PK</sup>	3.2 <sup>K</sup>	3.0 <sup>PK</sup>	3.5 <sup>PK</sup>	2.9 <sup>PK</sup>	(3.0) <sup>PK</sup>	3.6 <sup>K</sup>	4.6 <sup>K</sup>	5.2 <sup>PK</sup>	5.0 <sup>HK</sup>	6.4 <sup>K</sup>	5.4 <sup>K</sup>	6.1 <sup>K</sup>	6.8 <sup>K</sup>	7.9	7.9	6.6	5.8	M	M	M	M	4.1 <sup>J</sup>	3.7 <sup>F</sup>
25	3.8	3.7	3.7	3.9	2.7	2.1	3.8	4.8	5.1	5.3	C	C	C	C	C	6.3 <sup>P</sup>	5.4	5.5	5.9	4.9	3.5	3.1	3.1	4.0
26	3.1	3.2	3.1	3.3	2.6	2.4	4.0	5.4	5.5	5.5	6.0	6.0	7.0	7.2	6.5	6.7	6.8	5.9	5.5	5.0	4.9	4.9	4.5	4.0
27	4.0 <sup>J</sup>	4.3 <sup>F</sup>	4.1 <sup>F</sup>	3.2	3.5	3.4	4.4	5.9	6.3	6.9	8.4	8.4	8.0 <sup>J</sup>	6.9	7.4	5.9	5.7	5.9	5.9	4.5	3.8	3.7	3.7 <sup>F</sup>	4.2
28	4.0	3.8	3.9	2.4 <sup>H</sup>	2.5 <sup>F</sup>	2.5 <sup>F</sup>	4.2	5.2 <sup>P</sup>	5.5	5.5	6.1	6.5	6.7	7.3	7.9 <sup>J</sup>	7.0	6.7	5.5	5.5	5.0	4.0	3.9	3.8	3.8
29	3.9	3.7	3.5 <sup>F</sup>	3.4 <sup>F</sup>	3.1	3.3	4.5	5.0	5.4	6.0	6.0	6.2	6.9	7.0	7.3 <sup>P</sup>	7.2 <sup>P</sup>	5.9	5.7	5.8 <sup>P</sup>	5.4	4.4	4.0	3.2 <sup>F</sup>	3.3 <sup>F</sup>
30	3.7 <sup>JF</sup>	3.5 <sup>JF</sup>	3.6 <sup>F</sup>	3.7 <sup>F</sup>	2.6 <sup>F</sup>	2.7 <sup>F</sup>	4.1	5.1	5.6	6.4	6.4	6.7	7.3	8.5	8.2 <sup>J</sup>	6.2	5.6	5.7	5.5	5.1	4.4	3.8 <sup>J</sup>	3.7 <sup>F</sup>	3.7
31	3.6	3.4	3.6	3.0	2.6	2.5	4.2 <sup>P</sup>	5.6	6.0	7.0	(7.8) <sup>JM</sup>	8.5	7.0	7.0	7.0	7.5	8.1 <sup>J</sup>	5.9	5.1	6.0	4.9	3.6	2.9	3.1
Mean Value	3.5	3.5	3.4	3.3	3.0	2.8	3.9	5.4	5.9	6.1	6.5	7.2	7.6	7.8	7.5	6.8	6.3	6.1	5.6	4.6	3.9	3.7	3.5	3.4
Median Value	3.5	3.5	3.4	3.3	3.0	2.7	3.9	5.4	5.9	6.0	6.4	7.0	7.5	7.5	7.4	6.7	6.2	5.9	5.5	4.6	3.8	3.6	3.4	3.4
Count	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.0	3.0	2.9	2.9	3.1	3.1

foF2

Group 1.0. Me to 17.2. Me in 2 min

Manual  Automatic

K 1

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

Lat. 35° 42.4' N  
Long. 139° 28.3' E

**Kokubunji Tokyo**

**IONOSPHERIC DATA**

Mar. 1955

f<sub>o</sub>F<sub>2</sub>

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	330	290	320	280	290	260	320	290	280	290	290	300	320	270	260	260	260	240	260	330	330	280	340	340
2	340	320	280	300	250	340	270	240	260	250	270	320	270	(320) <sup>F</sup>	270	240	240	240	270	260	310	300	310	340
3	B	340	320	330	280	290	260	250 <sup>F</sup>	240	270	260	290	280	(280) <sup>F</sup>	270	250	260	240	250	270	280	270	310	360
4	350	340	330	310	250	270	260	230	240	280	260	310	320	310	280	270	270	260	230	270	290	340	280	320
5	330	340	350	340	300	300	270 <sup>F</sup>	230	230	270	270	280	(270) <sup>F</sup>	300	270	260	250	240	280	250	280	270	270	350
6	350	320	310	310	260	300	250	220	220	250	270	320	300 <sup>F</sup>	300	290 <sup>F</sup>	270	250	260	240	320	320	270	230	360
7	320	330	360	320	270	260	250	230	230	250	270	290	320	290	330	270	240	250	290 <sup>H</sup>	330	330	310	280	350
8	340	330	310	310	310	320	260	260	240	240	300	290	300	300	300	270	270	240	250	270	310	310	330	340
9	340	330	(310) <sup>F</sup>	300	220	330	250	260	240	250	300	320	B	260	260	250	280	240	250	270	330	350	350	340
10	330	290	320	260	320	310	280	260	230	240	330	280	340	270	290	250 <sup>F</sup>	280	240	240	300	300	310	370	370
11	330	320	250	290	290	340	270	260	260	270	280	280	(290) <sup>F</sup>	290 <sup>F</sup>	290	260	250	280	250	280	300	280	350	360
12	360	350	290	270	330	320	260	240	230	280	260	300	280	260	280	260	270	260	260	270	340	300	310	380
13	330	300	270	300	330	330	250	240	240	260	260	280	300	300	300	(290) <sup>F</sup>	260	240	250	310	350	330	340	340
14	340	320	330	310	300	280	270	240	250	240	260 <sup>H</sup>	270	(280) <sup>F</sup>	310 <sup>F</sup>	280	240	250	250	270 <sup>F</sup>	260	290	320	340	350
15	330	330	340	320	330	310	250	240	230	260 <sup>F</sup>	290	270 <sup>F</sup>	270 <sup>F</sup>	290	280	(270) <sup>F</sup>	260	260	260	270	330	340	360	330
16	330	350	310	300	260	310	260	240	260	260	280	260	340	290	310	(270) <sup>F</sup>	(270) <sup>F</sup>	260	260	230	280	380 <sup>H</sup>	390 <sup>F</sup>	330
17	330	310	320	320 <sup>F</sup>	290 <sup>F</sup>	300	250	260	270	280	(280) <sup>M</sup>	280	270	270	260	280	280	270	270	270	A	A	320	(350) <sup>F</sup>
18	(350) <sup>F</sup>	350 <sup>F</sup>	(340) <sup>F</sup>	300	260	270	270	250	250	(270) <sup>F</sup>	310	310	280	280	270	280	270	270	240	A	340	350 <sup>F</sup>	360	340
19	340	320	300	270	370	330	260	250	250	230	280	280	(290) <sup>M</sup>	(300) <sup>F</sup>	280 <sup>F</sup>	280	260	270	250	260	(300) <sup>A</sup>	330	(350) <sup>F</sup>	360 <sup>F</sup>
20	(340) <sup>F</sup>	330 <sup>F</sup>	330	290	270	310	250	250	250	240	280	300	(300) <sup>F</sup>	320	280	270 <sup>F</sup>	250	270	260	280	320	300	310	340
21	350	330	330	300	270	300	250	240	250	240	300	310	300	290	260	260	270	270	270	270	270	300	320	(350) <sup>F</sup>
22	320 <sup>F</sup>	320	320	310	270	310	250	230	250	280	300	(290) <sup>N</sup>	280	280	280	270	280	280	280	270	270	340 <sup>F</sup>	360	370
23	390	380	320	400	380	320	290	300 <sup>K</sup>	UK	UK	UK	UK	UK	UK	UK	UK	UK	310 <sup>K</sup>	270 <sup>K</sup>	250 <sup>K</sup>	270 <sup>K</sup>	400 <sup>K</sup>	370 <sup>K</sup>	340 <sup>K</sup>
24	(330) <sup>K</sup>	330 <sup>K</sup>	340 <sup>K</sup>	280 <sup>K</sup>	330 <sup>K</sup>	(330) <sup>K</sup>	250 <sup>K</sup>	250 <sup>K</sup>	(260) <sup>K</sup>	300 <sup>K</sup>	260 <sup>K</sup>	320 <sup>K</sup>	350 <sup>K</sup>	330 <sup>K</sup>	320 <sup>K</sup>	280	260	250	M	M	M	M	(360) <sup>F</sup>	360 <sup>F</sup>
25	360	350	330	280	270	320	250	270	270	310	C	C	C	C	C	270 <sup>F</sup>	280	270	260	A	290	330	330	330
26	340	300	290	260	330	320	260	250	270	290	300	320	320	300	300	290	270	260	270	310	310	310	320	330
27	(320) <sup>N</sup>	350 <sup>F</sup>	290 <sup>F</sup>	320	300	280	260	270	280	300	300	300	(280) <sup>F</sup>	310	280	A	A	260	260	270	310	350	360 <sup>F</sup>	320
28	390	300	250	330 <sup>H</sup>	360 <sup>F</sup>	340 <sup>F</sup>	260	270 <sup>F</sup>	300	310	300	330	(290) <sup>F</sup>	280	(290) <sup>F</sup>	280	270	260	270	280	290	320	350	350
29	310	300	360 <sup>F</sup>	310 <sup>F</sup>	330	290	230	260	280	270	280	300	310	300	290 <sup>F</sup>	290 <sup>F</sup>	270	260	270 <sup>F</sup>	260	300	320	350 <sup>F</sup>	330 <sup>F</sup>
30	(350) <sup>H</sup>	(330) <sup>F</sup>	310 <sup>F</sup>	280 <sup>F</sup>	230 <sup>F</sup>	350 <sup>F</sup>	240	260	270	280	290	310	330	290	(280) <sup>F</sup>	270	270	270	A	270	300	(320) <sup>F</sup>	350 <sup>F</sup>	350
31	350	340	280	310	290	330	290 <sup>F</sup>	280	310	290	(300) <sup>M</sup>	320	310	290	320	300	(260) <sup>F</sup>	250	310	320	250	310	340	390
Mean Value	340	330	310	300	290	310	260	250	250	270	290	300	300	290	290	270	260	260	260	280	300	330	330	350
Median Value	340	330	320	300	290	310	260	250	250	270	290	300	300	290	280	270	260	260	260	270	300	320	340	350
Count	30	31	31	31	31	31	31	31	30	30	29	29	28	29	29	29	29	31	29	28	29	29	31	31

f<sub>o</sub>F<sub>2</sub>

Sweep 1.0 Mc to 17.2 Mc in Z min  
 Manual  Automatic

K 2



Lat. 35° 42.4' N  
Long. 139° 29.3' E

**Kokubunji Tokyo**

**IONOSPHERIC DATA**

135° E Mean Time

Mar. 1935

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	270	250	220	230	230	230	270	270	250	270	260	280	280	250	250	240	250	230	220	230	260	230	270	300
2	280	260	220	240	220	250	230	230	250	250	(250) L	310	260	270	260	270	240	230	230	210	250	250	260	290
3	300	280	250	260	240	220	230	270	230	270	260	290	280	270	270	250	250	220	220	230	230	230	250	300
4	300	290	290	270	220	230	230	220	230	280	260	310	310	290	280	260	270	240	210	230	250	300	250	260
5	270	310 A	280	270	250	250	230	220	230	(250) L	270	280	270	300	270	250	240	230	230	210	230	240	250	290
6	290	270	250	240	220	230	230	220	210	250	270	290	250	280	280	270	230	240	210	240	270	250 A	200	280
7	280	290	290	270	210	210	210	220	220	250	270	290	310	280	310	250	230	230	210 M	250	260	250	230	300
8	280	280	250	250	260	270	220	240	240	230	290	280	300	290	270	260	250	230	220	230	250	270	270	290
9	270	260	270	230	200	270	230	230	240	250	300	310	270	250	250	250	280	240	210	250	270	300	300	290
10	280	240	240	220	270	270	250	240	220	230	300	270	300	260	270	240	230	220	220	250	240	250 A	310	320
11	280	270	200	250	230	290	250	240	250	260	280	260	290	280	270	240	240	240	220	230	250	250	260	340 A
12	320	300	240	230	260	280	240	220	230	250	260	300	260	250	280	250	240	230	220	240	290	250	250	310
13	280	250	220	230	260	280	220	230	240	260	260 H	280	280	280	260	270	250	230	220	250	280	270	280	290
14	280	250	260	250	230	210	240	230	240	240	250 H	270	280	290	250	230	240	240	240	230	220	250	280	290
15	270	270	260	260	260	260	230	230	230	260	270	270	270	240	240	260	240	240	230 A	210	270	280	310	270
16	260	290	260	240	210	250	240	240	240	250	270	260	340	280	280	260	250	230 A	240 A	220 A	270 A	290 H	330	270
17	260	260	270	270	250	230	230	230	250	280	(260) M	250	260	260	260	260	270	250	230	230	A	A	260	330 F
18	300	290	290	240	200	230	240	250	240	270	300	290	270	260	270	270	260	240	220	A	A	280 F	320	310
19	290	260	240	230	300	260	230	230	250	230	290	280	(280) A	280	260	250	250	230	220	200	(240) A	280	270	270 F
20	270 F	260 F	260	230	230	250	230	230	250	240	280	300	290	300	300	250	260	250	230	210	250	250	240	270
21	290	270	270	240	220	250	230	230	250	250	300	310	300	270	260	260	270	250	230	210	210	280	250	290
22	260	260	250	240	220	250	230	230	250	280	300	280	270	270	280	270	260 L	250	250	230	220	280	300	320
23	340	330	270	310	310	270	270	260 K	400 K	340 K	500 K	400 K	350 K	350 K	350 K	310 K	280 K	290 K	250 K	220 K	260 K	350 K	340 K	330 K
24	300 K	300 K	300 K	250 K	270 K	280 K	220 K	250 K	260 K	LHK	240 K	320 K	350 K	330 K	300	270	260	240	M	M	M	M	310	310
25	310	290	270	240	220	280	240	260 L	270	310	C	C	C	C	C	270	260	250	240	270 A	260 A	270	300 A	290
26	290	250	240	220	250	280	240	240	270	290	300	320	320	290	280	290	260	240	260	270	A	A	260	280
27	280	270 F	250	250	240	230	230	270	280	300	280	280	270	290	280	280 A	280 A	250	230	230	250	300	310 F	270
28	310	240	220	210 H	290	300	240	250	290	310	300	330	330	300	270	280	260	240	230	230	240	270	280	300
29	270	250	280 F	250	270	250	210	250	270	270	280	300	300	300	280	280	270	250	240	230	230	270	310	280
30	290 F	280 F	250	230	200	270	230	250	270	280	270	310	320	280	260	270	270	260	A	240	230	280	300	300
31	300	290	250	240	230	280	250	260 L	300	280	(290) M	300	280	290	310	290	250	240	260	260	210	260	250	330
Mean Value	290	270	260	240	240	260	230	240	250	270	290	280	290	280	270	260	250	240	230	240	250	270	280	300
Median Value	280	270	250	240	230	250	230	230	250	260	280	290	280	280	270	260	250	240	230	230	250	270	270	290
Count	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	31	31	31	29	28	28	28	31	31

R'F2

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° 28.3' E

**IONOSPHERIC DATA**

Mar. 1955

f<sub>o</sub>F<sub>1</sub>

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								L	4.0 L	4.2 L	4.4	4.5	4.5 L	4.4	4.0	3.9 L	L							
2								Q	4.0 L	4.0 L	(4.1) L	4.4	4.5 H	4.4	4.1	4.0	3.9 L	L						
3								Q	3.5 L	4.0	4.3	4.4	4.1	4.4 H	4.3	4.0								
4								Q	3.5	4.2 H	4.3	4.5	4.4 H	4.5	4.3	4.1	3.9 L	2.7 L						
5								Q	Q	L H	4.3	4.4	4.1	4.5	4.4 H	4.0	3.5	L						
6								L	Q	4.0	4.3 H	4.5 H	4.4	4.2	4.3	4.0	3.7	L						
7								2.8 L	3.3	3.8	4.2	4.5	4.6 H	4.6	4.5	4.0 H	3.5							
8								Q	3.9 L	3.9	4.5 H	4.4	4.4	4.5	4.3	4.0	3.5	L						
9								2.7	3.7	4.0	4.2	4.2	4.2	4.1	4.0	4.0	3.7 L	2.5						
10								3.4 L	3.6	3.9	4.5 L	4.5 H	4.7	4.4	4.3	4.0	3.4	L						
11								L	3.8	4.0	4.4 H	4.4 H	4.4	4.4	4.3	4.1	3.5	2.3						
12								Q	3.6	4.0	4.3 H	4.7	4.4 H	4.3	4.3	4.0	3.1 H	L						
13								L	L	4.0	4.2	4.4	4.3	4.5	4.3	4.0 H	3.4	L						
14								Q	3.9 L	4.1	4.2 L	4.1	4.3	4.4	4.4	4.0 L	3.4	Q						
15								Q	3.8	L H	4.0	4.4	4.4	4.5	4.0	4.2	3.5 L	A						
16								Q	3.3	4.0 L	4.1	4.0	4.4	4.7	4.5 H	4.4	4.0	3.5 L						
17								Q	Q	L	4.3	M	4.2	4.3	4.2	4.0	L	A						
18								Q	3.5 L	4.0	4.2 L	4.5	4.2	4.2	4.2	4.0	3.8	3.0 L						
19								Q	4.0	4.0	4.5	4.5	[4.5] A	4.5	4.3	4.0	2.9							
20								Q	L	4.0	4.1	4.4 H	4.2	4.6	4.5	4.2	4.1	3.5	2.3					
21								Q	Q	4.0	4.1	4.3	4.5	4.5	4.2	4.0	3.5	3.2 L						
22								Q	3.3 L	4.0	4.3	4.3	4.5	4.4 H	4.3	4.1	3.6 L	2.6						
23								Q	Q	3.5	3.6	4.1	4.1	4.1	4.2	4.1	4.0	3.5 L	3.3 L					
24								Q	L	3.9	L	4.2	4.3	4.4	4.5	4.2	4.0	3.5	M					
25								Q	L	L	4.0	C	C	C	C	4.1	3.8	3.0 L						
26								Q	Q	4.0	4.2	4.3	4.4	4.4	4.4	4.4	4.1	A	A					
27								Q	3.8 L	4.3 L	4.3	4.4	4.3	4.4	4.3 L	A	A	L						
28								Q	L	4.0	4.3	4.4	4.4	4.4	[4.2] A	4.1	3.8 L	3.0 L						
29								Q	L	4.0	4.1	4.3	4.5	4.5	[4.4] A	4.2	3.7	A						
30								Q	Q	4.0	4.2	4.4	4.5	4.4	A	A	4.1	A	A					
31								3.5 L	4.2 L	4.2	M	M	4.5	4.4	4.3	4.1	3.8	L						
Mean								3.3	3.9	4.1	4.3	4.4	4.4	4.4	4.3	4.0	3.6	2.8						
Median								3.4	4.0	4.1	4.3	4.4	4.4	4.4	4.3	4.0	3.5	2.8						
Value								8	2.6	2.8	2.8	2.8	3.0	2.9	2.8	3.0	2.6	1.0						
Count																								

K 4

Manual  Automatic

SwEEP 1.0 Mc to 17.2 Mc in 2 min

f<sub>o</sub>F<sub>1</sub>

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

Lat. 35° 42.4' N  
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Mar. 1955

R'F1

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								240	240	230	210	220	190	260	270	240	240	Q							
2								Q	240	230	220	220	250 <sup>H</sup>	230	220	220	250	240							
3								Q	220	230	210	190	170 <sup>H</sup>	230	230	230	220	240							
4								Q	210	190 <sup>H</sup>	220	210	200 <sup>H</sup>	190	220	240	220	240							
5								Q	Q	200 <sup>H</sup>	220	230	210	250	210 <sup>H</sup>	220	220	240							
6								230	Q	210	190 <sup>H</sup>	180 <sup>H</sup>	220	210	230	230	230	240							
7								220	200	200	180	180 <sup>H</sup>	250	230	210 <sup>H</sup>	230	230	240							
8								Q	230	200	190 <sup>H</sup>	200	200	230	230	220	220	240							
9								210	200	220	200	190	180	240	210	220	190	240							
10								250	230	210	210	240 <sup>H</sup>	220	220	230	230	210	230							
11								230	210	200	200 <sup>H</sup>	190 <sup>H</sup>	190 <sup>H</sup>	240	220	240	220	220							
12								Q	220	210	180 <sup>H</sup>	200	190 <sup>H</sup>	240	190	240	220 <sup>H</sup>	230							
13								230	230	230	200	200	220	250	230	210 <sup>H</sup>	250	240							
14								Q	230	230	220	190	180	200	200	230	220	Q							
15								Q	220	190 <sup>H</sup>	180	230	230	250 <sup>A</sup>	190	260	240	A							
16								Q	240	220	210	190	240	190 <sup>H</sup>	240	250	260 <sup>A</sup>								
17								Q	Q	240	230	M	M	210	230	210 <sup>A</sup>	250	260	A						
18								Q	240	230	220	250	200	210	240	A	200	230 <sup>A</sup>	240						
19								Q	240	220	[210 <sup>A</sup>	200	[200 <sup>A</sup>	200	230	240	220								
20								Q	240	250	210	200 <sup>H</sup>	210	230	200	200	230	210	230						
21								Q	Q	230	210	200	230	210	200	200	210	240							
22								Q	230	230	220	200	230	200 <sup>H</sup>	220	210	240	230							
23								Q	Q	200	240	210	200	290	250	210	230	250							
24								Q	240	230	230 <sup>A</sup>	200	200	210	230	230	220	M							
25								Q	250	240	220	C	C	C	C	C	230	250							
26								Q	Q	230	220	190	230	250	270	A	A	A							
27								Q	240	250	230	210	190	210	A	A	A	250							
28								Q	240	230	220	210	190 <sup>H</sup>	230	[240 <sup>A</sup>	240	240	230							
29								Q	240	230	220	A	200	200	250	250 <sup>A</sup>	250	230	A						
30								Q	Q	230	[230 <sup>A</sup>	230	210	A	A	A	250 <sup>A</sup>	A							
31								250	230	210	M	M	210	210	230	230	230	240							
Mean Value								240	230	220	210	200	210	220	220	230	230	240							
Median Value								240	230	220	210	200	210	230	230	230	230	240							
Count								17	29	31	27	28	30	29	27	29	28	19							

R'F1

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual  Automatic

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

# IONOSPHERIC DATA

**Kokubunji Tokyo**  
Lat. 35° 42.4' N  
Long. 139° 28.3' E

Mar. 1955

foE

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								1.9	2.5	2.8	3.0	3.1	3.3	3.2	3.1	2.8	2.5	1.8						
2								1.8	2.5	2.9	3.0	3.1	3.5	3.3	3.0	2.9	2.5	A						
3								2.0	2.5	2.9	3.0	3.2	3.2	3.1	3.1	2.8	2.6							
4								2.0 <sup>H</sup>	2.5	2.9	3.1	(3.2) <sup>A</sup>	3.2	3.2	(3.0) <sup>A</sup>	2.8	2.5	A						
5								1.9	2.6	2.8	3.0	3.2 <sup>P</sup>	3.3	3.3	3.0	2.9	2.5 <sup>F</sup>	A						
6								1.8	2.5	(2.9) <sup>A</sup>	3.0	3.1	(3.1) <sup>B</sup>	3.1	3.1	2.8	2.5	1.8						
7								1.8	2.5	2.7	2.9	3.0	3.4	3.4	3.1	3.0	(2.5) <sup>A</sup>							
8								1.9	2.4	2.7	2.9	3.0 <sup>H</sup>	3.0	3.0	3.0	2.9	2.5	2.0						
9								1.9	2.5	2.8	(3.0) <sup>A</sup>	3.0 <sup>B</sup>	A	A	2.9	2.8	2.4	1.9						
10								1.7	2.2	2.6 <sup>F</sup>	2.7 <sup>F</sup>	3.0	3.0	3.2	3.0	2.8	2.5	1.8						
11								2.0	2.5	2.8	(2.9) <sup>A</sup>	3.1	(3.0) <sup>B</sup>	3.0	3.0 <sup>H</sup>	2.9 <sup>H</sup>	2.5	1.7 <sup>A</sup>						
12								2.0	2.5	2.9	3.0	3.0	3.1	3.0	3.0	2.8	2.5	1.9						
13								1.9	2.6	2.9	2.9	3.3	3.2	3.2	A	2.9	2.6	1.9						
14								2.2	2.6	3.0	A	A	3.2	3.3	(3.1) <sup>A</sup>	2.9	2.6	A						
15								2.0	2.6	A	>2.8 <sup>B</sup>	3.2	3.3	A	A	2.8	2.5	1.9						
16								1.6	2.0	AF	2.9	(3.0) <sup>A</sup>	3.0	3.0	(2.8) <sup>A</sup>	2.7	2.4							
17								1.7	2.1	2.5	2.8	M	3.0	A	A	2.8	2.5	2.1 <sup>A</sup>						
18								1.6	2.0	2.6	2.9	2.8	A	A	A	2.9	A	A						
19								2.3	2.5	2.7	(2.8) <sup>A</sup>	A	A	A	3.0	(2.8) <sup>A</sup>	2.5							
20								1.6	2.1	2.3	2.9	3.0	(3.0) <sup>A</sup>	3.0	3.2	3.0	2.6	2.1						
21								1.7	1.9	2.7	2.7	3.2	3.2	3.2	3.2	2.9	2.6	2.1						
22								B	1.8	2.6 <sup>F</sup>	3.0 <sup>F</sup>	3.0	(3.1) <sup>A</sup>	3.2	3.2	2.9	(2.2) <sup>A</sup>	1.5 <sup>A</sup>						
23								1.4 <sup>T</sup>	2.0	2.5	2.7	3.0	3.0	A	3.0	2.9	2.6	2.0						
24								1.6	2.4	2.5	2.7 <sup>F</sup>	(2.9) <sup>A</sup>	3.1	3.2	(3.1) <sup>A</sup>	(3.0) <sup>A</sup>	2.8	2.5	M					
25								1.9	2.4 <sup>H</sup>	2.5	2.7	C	C	C	C	2.7	A	A						
26								1.6 <sup>J</sup>	2.2	2.5 <sup>A</sup>	2.8	2.9	2.9	(3.0) <sup>A</sup>	3.0	3.0	A	A						
27								1.4 <sup>B</sup>	2.2	2.5	2.6	2.9	A	A	A	A	A	A						
28								1.8	2.3	2.5	2.9	3.0	3.0	A	A	A	2.5	2.3						
29								1.8	2.1 <sup>A</sup>	2.6	2.9	3.0	3.0	A	A	A	2.8	2.4 <sup>A</sup>						
30								1.8 <sup>T</sup>	2.3 <sup>A</sup>	2.7	3.1	3.0	A	A	A	A	A	A						
31								2.4	2.7	2.9	M	M	3.0	(3.0) <sup>A</sup>	A	A	2.6	A						
Mean Value								1.6	2.0	2.5	2.8	2.9	3.1	3.1	3.0	2.8	2.5	1.9						
Minimum Value								1.6	2.0	2.5	2.8	3.0	3.1	3.2	3.2	3.0	2.8	2.5	1.9					
Count								13	31	30	30	26	23	24	20	21	25	26	16					

foE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 6



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

Mar. 1955

f'F<sub>2</sub>

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								120	110	110	110	110	110	110	110	110	120	130						
2								130	110	110	110	110	110	110	110	120	120	A						
3								130	120	110	110	110	110	110	110	110	120	A						
4								130 <sup>H</sup>	110	110	110	(110) <sup>A</sup>	110	110	(110) <sup>A</sup>	110	120	A						
5								130	110	110	120	110	110	110	110	110	120	A						
6								120	110	110	110	110	110	110	110	110	110	120						
7								120	110	110	110	110	110	110	110	110	120	130						
8								130	120	110	110	110 <sup>H</sup>	110	110	110	110	120	130						
9								130	110	110	110	110	A	A	110	110	110	120						
10								120	110	110	110	110	110	110	110	110	110	120						
11								120	110	110	110	110	110	110	110	110 <sup>H</sup>	110	A						
12								120	120	110	110	110	120	120	120	120	130	130						
13								140	120	110	110	110	110	120	A	110	120	130 <sup>A</sup>						
14								130	130	110	A	A	120	110	(120) <sup>A</sup>	120	120	A						
15								120	140 <sup>A</sup>	(110) <sup>A</sup>	110	110	110	110	A	110	120	130						
16								160	120	A	110	110	110	110	(120) <sup>A</sup>	120	120	A						
17								170	120	110	110	M	110	A	A	120	130 <sup>A</sup>	A						
18								150	120	110	110	110	A	A	A	120	A	A						
19								120	110	110	110	110	A	A	A	120	(120) <sup>A</sup>	120						
20								150	120	110	110	(110) <sup>A</sup>	110	120	A	120	130 <sup>A</sup>	120	130					
21								150	120	110	110	110	110	110	120	120	110	120						
22								B	120	110	110	A	A	130 <sup>A</sup>	120	120	A	A						
23								140	120	110	110	110	110	(110) <sup>A</sup>	110	110	120	120						
24								150	120	110	110	(110) <sup>A</sup>	110	110	110	(120) <sup>A</sup>	130 <sup>A</sup>	120	M					
25								160	120 <sup>H</sup>	110	110	C	C	C	C	110	A	A						
26								150	120	(120) <sup>A</sup>	110	110	110	110	110	110	A	A						
27								B	120	110	110	110	A	A	A	A	A	A						
28								150	110	110	110	110	120	A	A	A	120	120						
29								150	(130) <sup>A</sup>	110	110	110	A	A	A	A	130	A						
30								150	A	110	110	A	A	A	A	A	A	A						
31								120	110	110	M	110	110	110	A	A	130	A						
Mean Value								150	130	110	110	110	110	110	110	110	110	120						
Median Value								150	120	110	110	110	110	110	110	110	110	120						
Count								12	30	29	31	27	22	23	21	21	25	25						

f'F<sub>2</sub>

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**

fEs

Mar. 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	E	E	2.5Y	1.9Y	3.0Y	2.8Y	E	2.7	3.0	3.3	G	2.7	6.5Y	G	2.9	3.0	2.7	2.5Y	2.5	1.9	1.9	1.8	E	E
2	E	E	2.5F	2.4	2.5	2.5	E	2.8	2.9	G	G	G	G	G	G	2.5	3.0	2.5	2.5	E	E	E	E	E
3	E	1.9	1.8	2.3Y	2.5Y	E	E	G	G	3.0	2.9	G	G	G	G	G	3.2	2.4Y	E	2.5	2.3Y	2.1	2.8	E
4	2.5	2.5F	2.9F	2.6F	2.4Y	E	E	2.5	2.8	G	G	3.8	4.3	4.3	3.5	4.0	G	2.7	2.4	2.7	2.5	4.2	3.0	1.8
5	1.7	3.2	2.0	2.3	1.8	E	E	2.5	3.0	2.8	3.0	3.0	3.7	4.5	2.9	2.7	G	3.3	2.5	1.9	2.9	2.4	E	E
6	1.8	2.5	E	2.7Y	2.6Y	E	1.9	2.8	3.0	3.5	3.5	3.1	G	G	G	2.8	3.5	3.4	2.5Y	2.4Y	2.6	3.9	2.7	E
7	2.5Y	E	2.0F	1.8	2.5Y	2.5Y	2.5	3.0	2.6	2.8	2.9	G	G	G	3.5	4.3	G	3.9	2.9	2.8	E	E	2.7	2.9
8	4.4	3.5	2.6	2.9	2.6	1.9	2.2	2.0	3.0	3.2	3.4	G	G	G	3.2	2.9	3.4	2.7	2.7	2.9	2.6Y	C	2.7Y	2.2
9	E	1.8	>2.2C	2.7F	2.4	2.8	E	2.7	3.0	2.9	3.6	G	3.6	3.7Y	3.5	3.1	2.9	2.9	E	2.5Y	2.4Y	E	E	E
10	E	2.4Y	2.6	2.5	2.4Y	2.4	3.0	2.9	2.9	3.2	4.0	4.4	3.5	3.5	4.2	3.7	3.2	2.9	2.1	E	E	3.4	3.5	1.8
11	2.4Y	2.5Y	2.5	E	2.3Y	E	E	G	2.7	4.0	5.7Y	3.8	G	3.7	3.2	3.0	2.6	2.5	2.5Y	E	E	4.1	2.0	4.0
12	2.8	2.5	2.5Y	2.5	2.7Y	2.8	E	2.8	G	2.9	3.3	3.3	2.8	2.8	G	G	2.9	2.8	2.4	E	2.4	2.5	E	E
13	E	2.5Y	2.5Y	2.9	1.8Y	2.7	2.8	G	2.9	3.0	3.0	2.6	3.0	3.2	4.3	G	2.5	2.9	2.4	2.9Y	1.8	E	E	1.8
14	E	E	E	E	2.5Y	2.7	E	G	2.8	3.5	3.7	3.7	2.5	G	4.0	3.0	3.2	2.9	2.6	2.9Y	E	E	E	E
15	E	E	2.9Y	1.9Y	2.5Y	E	2.5Y	2.8	3.0	3.5	3.5	3.5	4.4	4.4	4.2	4.2	3.5	3.8	4.5	2.9	3.1	3.2	2.9	2.4Y
16	E	2.5	2.0Y	2.0Y	2.4Y	2.5Y	2.5Y	2.8	3.5	3.5	4.0	G	G	G	4.0	3.5	4.1	4.5	4.4	3.5	4.5	2.1	1.8	3.0
17	2.5	2.7	2.2	3.7F	2.7F	2.7	2.4	2.4	3.9	4.3	M	M	4.6	4.4	3.9	4.5	4.5	4.5	3.5	4.5	6.0	5.7	2.5	3.0
18	E	3.0	2.4Y	E	2.1	E	G	2.6	2.7	3.2	3.5	3.7	4.3	5.5	6.8	3.9	3.9	3.7	3.2	4.5	3.8	3.5	3.0	3.2F
19	3.8	2.7F	2.6F	2.6	2.5	2.5Y	E	2.6	3.7	4.1	4.9	7.0	8.3	4.0	2.9	5.4	3.2	4.1	3.0	2.8	5.9	3.2	E	2.8
20	E	E	2.5	2.5Y	2.5	E	G	2.8	2.8	3.2	3.2	4.1	3.1	2.9	3.0	3.4	2.9	2.9	E	E	E	1.9	2.5	2.5
21	2.5	2.5Y	2.5	2.5	1.8	2.9Y	G	3.2	G	3.2	3.2	3.0	G	G	2.9	3.5	2.7	2.7	2.5Y	1.7	E	2.0	E	E
22	E	E	2.0Y	2.2	2.3YF	E	2.4	2.5	3.2	G	3.2	4.0	3.1	3.5	3.0	3.5	3.2	2.7	2.4	1.8	2.5	E	E	1.8
23	1.8	2.4	1.8	2.6Y	2.6Y	2.1	2.7	3.1	3.7	4.0	3.5	3.0	4.3	4.1	3.5	G	3.3	2.7	E	3.1	3.7	4.0	3.2	4.5
24	3.5	3.7	2.8	2.8	2.8	2.9	2.4	G	4.0	4.2	4.6	3.7	3.2	G	4.5	3.2	2.8	M	M	M	M	M	E	E
25	E	E	2.3Y	2.5Y	E	E	G	3.0	3.0	G	C	C	C	C	C	4.4	3.7	3.7	6.8Y	7.0	4.5	4.2	5.0	2.4Y
26	4.2Y	2.5	2.4Y	1.9	2.4Y	1.9	2.8	2.7	3.0	3.1	4.0	G	3.6	2.9	G	4.0	5.6	5.0	7.0	4.5	4.6	4.7	5.0	2.8
27	E	2.5	2.8F	E	2.4Y	2.5	2.7	2.7	3.0	2.9	2.8	4.0	3.9	3.8	5.0	6.3	6.9	2.9	3.0	3.2	2.5	2.5	1.6	E
28	E	E	1.8Y	2.5Y	1.8	E	G	2.8	2.7	4.0	3.5	G	4.3	4.3	5.2	3.0	2.4	2.9	2.5	2.4	E	E	2.7	2.9
29	4.5	2.8	2.9	2.7F	2.8	2.8	2.7	3.0	3.0	4.2	4.7	4.5	3.2	3.1	4.5	3.1	2.9	4.0	3.3	2.8	E	1.8	3.0Y	6.9
30	3.5	2.9	2.4	2.7	2.5	2.9Y	2.8	3.5	3.0	3.9	4.9	5.0	4.7	5.1	5.0	5.5	6.6	5.0	5.9	4.0	E	3.8	2.7	4.2
31	3.0	2.8	2.5	2.3Y	2.5Y	E	2.7	3.6	3.1	2.7	M	M	G	3.5	3.0	3.1Y	2.5	2.8	2.8	E	2.4Y	E	2.4	E
Mean Value	3.0	2.6	2.4	2.4	2.4	2.6	2.6	2.8	3.1	3.4	3.7	3.8	4.0	3.8	3.9	3.7	3.5	3.2	3.3	3.1	3.2	3.2	2.9	3.0
Median Value	1.7	2.5	2.5	2.5	2.4	2.2	2.2	2.7	3.0	3.2	3.5	3.2	3.2	3.5	3.5	3.1	3.2	2.9	2.5	2.6	2.4	2.4	2.5	1.3
Count	31	31	30	31	31	31	31	31	31	31	2.8	2.8	3.0	3.0	3.0	3.1	3.1	3.0	3.0	3.0	3.0	2.9	3.1	3.1

Sweep  Manual  Automatic

fEs

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

### IONOSPHERIC DATA

**Kokubunji Tokyo**

Lat. 35° 42.4' N  
Long. 139° 28.3' E

Mar. 1955

(M3000)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	2.9	3.2	3.0	3.2	3.1	3.3	3.0	3.2	3.2	3.2	3.2	3.1	3.1	3.4	3.5	3.4	3.4	3.5	3.4	3.0	3.0	3.4	3.0	3.0
2	2.9	3.0	3.2	3.1	3.7	2.8	3.3	3.6	3.4	3.5	3.2	3.1	3.3	(3.1) <sup>P</sup>	3.3	3.3	3.6	3.5	3.3	3.4	3.0	3.1	3.1	2.9
3	B	3.0	3.0	3.0	3.3	3.2	3.5	3.4 <sup>P</sup>	3.7	3.3	3.4	3.1	3.1	(3.5) <sup>V</sup>	3.4	3.4	3.4	3.4	3.5	3.3	3.2	3.5	2.9	2.8
4	2.8	3.0	3.0	3.2	3.5	3.2	3.3	3.6	3.4	3.5	3.2	3.1	3.2	3.1	3.2	3.3	3.3	3.3	3.6	3.2	3.2	2.9	3.2	3.0
5	3.1	2.9	2.9	2.9	3.2	3.1	3.3 <sup>P</sup>	3.7	3.6	3.2	3.3	3.2	(3.6) <sup>P</sup>	3.2	3.2	3.3	3.5	3.6	3.3	3.5	3.1	3.2	3.1	2.9
6	2.9	3.0	3.0	3.0	3.4	3.1	3.4	3.8	3.8	3.5	3.4	3.0	3.0 <sup>P</sup>	3.2	3.2 <sup>P</sup>	3.3	3.3	3.5	3.5	3.0	3.0	3.3	3.6	2.7
7	3.0	3.0	2.8	3.0	3.2	3.2	3.5	3.5	3.4	3.3	3.3	3.3	3.1	3.2	3.0	3.3	3.6	3.4	3.2 <sup>H</sup>	3.0	3.0	3.1	3.2	2.9
8	2.8	3.0	2.9	3.1	3.1	3.1	3.4	3.4	3.5	3.6	3.3	3.1	3.1	3.1	3.2	3.5	3.2	3.5	3.5	3.2	2.9	3.0	3.0	2.9
9	2.9	2.9	(3.0) <sup>V</sup>	3.0	3.7	2.9	3.4	3.5	3.5	3.5	3.0	3.0	B	3.3	3.4	3.5	3.2	3.5	3.7	2.9	3.0	2.8	2.8	2.8
10	3.0	3.2	2.8	3.3	3.0	3.0	3.2	3.5	3.6	3.5	3.0	3.3	3.0	3.4	3.3	3.6 <sup>P</sup>	3.1	3.6	3.5	3.2	3.1	3.0	2.8	2.8
11	3.0	2.9	3.4	3.1	3.0	2.9	3.2	3.3	3.3	3.2	3.3	3.4	(3.2) <sup>V</sup>	3.2 <sup>P</sup>	3.2	3.3	3.4	3.2	3.4	3.1	3.1	3.2	2.8	2.8
12	2.8	2.8	3.1	3.4	3.0	3.0	3.4	3.6	3.7	3.2	3.5	3.3	3.3	3.6	3.2	3.3	3.3	3.3	3.5	3.5	2.8	3.1	3.0	2.8
13	3.0	3.0	3.2	3.2	2.9	3.0	3.4	3.6	3.6	3.5	2.7 <sup>H</sup>	3.3	3.1	3.2	3.1	(3.4) <sup>V</sup>	3.5	3.4	3.6	3.0	3.0	3.0	3.0	3.0
14	3.0	3.0	3.0	3.1	3.2	3.1	3.3	3.5	3.6	3.6	2.9 <sup>H</sup>	3.2	(3.3) <sup>V</sup>	3.1 <sup>P</sup>	3.3	3.7	3.4	3.4	3.3 <sup>P</sup>	3.4	3.2	3.0	3.0	2.9
15	3.0	3.0	3.0	3.1	3.1	3.2	3.4	3.6	3.5	3.3 <sup>P</sup>	3.2	3.1	3.4 <sup>P</sup>	3.2	3.2	(3.5) <sup>V</sup>	3.2	3.3	3.3	3.3	3.0	2.9	2.8	2.9
16	2.9	2.9	3.0	3.1	3.3	3.0	3.5	3.5	3.5	3.4	3.4	3.4	3.0	3.3	3.2	(3.5) <sup>V</sup>	(3.5) <sup>V</sup>	3.4	3.4	3.6	3.1	2.7 <sup>H</sup>	2.6 <sup>F</sup>	3.0
17	3.0	3.1	3.1	3.1 <sup>F</sup>	3.2 <sup>F</sup>	3.0	3.5	3.4	3.3	3.3	(3.2) <sup>M</sup>	3.2	3.3	3.3	3.5	3.3	3.2	3.3	3.3	3.4	A	A	2.9	(2.9) <sup>F</sup>
18	(2.9) <sup>F</sup>	2.8 <sup>F</sup>	(3.0) <sup>F</sup>	3.0	3.2	3.3	3.3	3.4	3.5	(3.4) <sup>V</sup>	3.6	3.2	3.3	3.2	3.4	3.3	3.3	3.1 <sup>P</sup>	3.5	3.0	3.0	2.9 <sup>F</sup>	2.8	3.0
19	3.0	3.1	3.2	3.4	2.8	3.0	3.4	3.5	3.6	3.6	3.1	3.2	3.3	(3.1) <sup>V</sup>	3.3 <sup>P</sup>	3.2	3.4	3.3	3.3	3.2	(3.0) <sup>M</sup>	2.8	(2.8) <sup>F</sup>	2.9 <sup>F</sup>
20	(2.8) <sup>F</sup>	2.9 <sup>F</sup>	3.0	3.0	3.3	3.0	3.4	3.4	3.3	3.6	3.5	3.2	(3.0) <sup>P</sup>	3.0	3.3	3.4 <sup>P</sup>	3.5	3.4	3.3	3.1	2.9	3.1	3.0	2.9
21	2.9	3.0	3.0	3.0	3.3	3.0	3.4	3.5	3.5	3.5	3.2	3.1	3.2	3.1	3.2	3.5	3.4	3.3	3.3	3.4	3.2	3.1	3.0	(3.0) <sup>F</sup>
22	3.1 <sup>F</sup>	3.1	3.0	3.1	3.3	3.1	3.5	3.6	3.5	3.3	3.1	(3.2) <sup>V</sup>	3.3	3.3	3.2	3.3	3.4	3.3	3.3	3.3	3.3	2.8 <sup>P</sup>	2.9	2.8
23	2.8	2.8	3.0	2.7	2.7	3.1	3.2	3.2 <sup>K</sup>	2.8 <sup>K</sup>	3.1 <sup>K</sup>	2.5 <sup>K</sup>	2.9 <sup>K</sup>	3.0 <sup>K</sup>	3.1 <sup>K</sup>	3.1 <sup>K</sup>	3.2 <sup>K</sup>	3.5 <sup>K</sup>	3.1 <sup>K</sup>	3.4 <sup>K</sup>	3.4 <sup>K</sup>	3.4 <sup>K</sup>	2.7 <sup>K</sup>	2.8 <sup>K</sup>	3.0 <sup>K</sup>
24	(3.0) <sup>K</sup>	3.1 <sup>K</sup>	3.0 <sup>K</sup>	3.1 <sup>K</sup>	3.1 <sup>K</sup>	(3.0) <sup>K</sup>	3.4 <sup>K</sup>	3.5 <sup>K</sup>	(3.4) <sup>K</sup>	3.0 <sup>K</sup>	3.4 <sup>K</sup>	3.2 <sup>K</sup>	3.1 <sup>K</sup>	3.0 <sup>K</sup>	3.0	3.4	3.3	3.4	M	M	M	M	(2.9) <sup>V</sup>	2.9 <sup>F</sup>
25	2.8	2.9	2.9	3.3	3.1	3.0	3.4	3.3	3.4	3.2	C	C	C	C	C	3.3 <sup>P</sup>	3.3	3.4	3.3	3.4	3.1	3.0	3.0	3.1
26	3.0	3.2	3.2	3.4	2.9	3.0	3.4	3.5	3.4	3.3	3.3	3.1	3.0	3.1	3.2	3.1	3.2	3.3	3.3	3.1	3.1	3.0	2.8	3.0
27	(3.0) <sup>V</sup>	3.0 <sup>F</sup>	3.2 <sup>F</sup>	3.1	3.2	3.2	3.4	3.3	3.3	3.0	3.2	3.3	(3.4) <sup>V</sup>	3.1	3.3	3.4	3.3	3.4	3.4	3.3	3.0	2.9	2.8 <sup>F</sup>	3.1
28	2.6	3.1	3.3	2.9 <sup>H</sup>	2.8 <sup>F</sup>	3.0 <sup>F</sup>	3.4	3.4 <sup>P</sup>	3.3	3.2	3.2	3.1	3.1	3.2	(3.2) <sup>V</sup>	3.3	3.4	3.4	3.4	3.2	3.2	3.0	3.1	3.1
29	3.0	3.1	2.9 <sup>F</sup>	3.0 <sup>F</sup>	3.0	3.1	3.6	3.3	3.5	3.5	3.4	3.2	3.1	3.1	3.4 <sup>P</sup>	3.2 <sup>P</sup>	3.3	3.3	3.3 <sup>P</sup>	3.3	3.1	3.0	2.9 <sup>F</sup>	3.0 <sup>F</sup>
30	(2.9) <sup>F</sup>	(2.9) <sup>F</sup>	3.0 <sup>F</sup>	3.2 <sup>F</sup>	3.5 <sup>F</sup>	2.9 <sup>F</sup>	3.6	3.4	3.4	3.4	3.2	3.1	3.0	3.3	(3.4) <sup>V</sup>	3.4	3.4	3.4	3.4	3.3	3.1	(3.0) <sup>V</sup>	2.9 <sup>F</sup>	2.9
31	2.9	3.0	3.3	3.1	3.2	3.0	3.2 <sup>P</sup>	3.3	3.2	3.2	(3.2) <sup>M</sup>	3.1	3.2	3.2	3.0	3.2	(3.5) <sup>V</sup>	3.4	3.1	3.0	3.4	3.0	2.8	2.8
Mean	2.9	3.0	3.0	3.1	3.2	3.1	3.4	3.5	3.5	3.5	3.2	3.2	3.2	3.2	3.3	3.4	3.4	3.4	3.4	3.2	3.1	3.0	2.9	2.9
Median	2.9	3.0	3.0	3.2	3.2	3.0	3.4	3.5	3.5	3.4	3.2	3.2	3.1	3.2	3.2	3.3	3.4	3.4	3.4	3.2	3.1	3.0	2.9	2.9
Count	30	31	31	31	31	31	31	31	31	31	30	30	27	30	30	31	31	31	31	30	29	29	31	31

(M3000)F2

Sweep 1.0 Mc to 11.2 Mc in 2 min

Manual

Automatic

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N  
Long. 139° 28.3' E

f min F

Mar. 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	1.4	1.3	1.0	E	E	1.3	1.4	2.2	2.7	3.0	3.3	3.5	3.4	3.9	3.4	3.0	2.5	2.1	1.5	1.4	1.4	1.3	1.4	1.5
2	1.4	1.0	1.0	E	E	1.3	1.4	2.3	2.9	3.3	3.4	3.6	3.6	3.4	3.1	2.9	2.8	2.1	1.4	1.4	1.4	1.3	1.5	1.4
3	1.4	1.4	E	1.0	1.3	1.4	1.5	2.3	2.8	3.1	3.4	3.4	3.3	3.3	3.3	2.8	2.4	2.1	1.4	1.3	1.4	1.3	1.5	1.4
4	1.3	1.4	E	1.2	E	1.3	1.5	2.1	2.8	3.3	3.5	3.4	3.5	3.5	3.4	3.4	2.6	2.1	1.4	1.6	1.6	2.0	1.5	1.4
5	1.4	(1.2) <sup>A</sup>	1.0	1.0	1.0	1.4	1.3	2.3	3.4	3.0	3.7	3.7	3.7	3.8	3.4	3.0	2.6	2.2	1.5	1.3	1.7	1.4	1.2	1.5
6	1.3	1.3	1.1	E	E	1.3	1.3	2.2	2.7	3.0	3.1	3.3	3.5	3.3	3.3	3.1	2.8	2.1	1.5	1.5	1.5	2.7 <sup>A</sup>	1.3	1.3
7	1.4	1.3	E	E	E	1.4	1.3	2.3	2.7	3.2	3.5	3.4	3.4	3.5	3.3	2.9	2.6	2.1	1.5	1.5	1.5	1.5	1.3	1.9
8	1.5	1.4	1.3	1.3	1.4	1.4	1.5	2.3	2.7	3.3	3.3	3.3	3.4	3.2	3.2	2.9	2.6	2.0	1.3	1.5	1.5	1.5	1.3	1.6
9	1.3	1.3	1.5	E	E	1.3	1.4	2.2	2.7	3.0	3.3	3.3	3.3	3.5	3.3	2.9	2.5	2.1	1.3	1.5	1.4	1.5	1.5	1.4
10	1.3	1.3	1.2	E	1.0	1.3	1.5	2.1	2.6	3.0	3.3	3.4	3.4	3.4	3.2	2.8	2.5	2.2	1.5	1.5	1.5	2.1 <sup>A</sup>	1.5	1.5
11	1.3	1.3	E	1.1	E	1.3	1.5	2.0	2.6	3.1	3.3	3.5	3.2	3.4	3.3	3.0	2.5	2.0	1.4	1.4	1.5	2.2	1.4	2.2 <sup>A</sup>
12	1.4	1.5	E	1.2	E	1.3	1.4	2.3	2.6	3.1	3.5	3.4	3.4	3.5	3.3	3.1	2.5	2.0	1.5	1.5	1.6	1.5	1.4	1.5
13	1.4	1.4	1.2	E	1.2	1.4	1.5	2.2	2.7	3.0	3.4	3.4	3.5	3.5	3.5	2.9	2.7	2.1	1.6	2.0	1.5	1.4	1.4	1.5
14	1.4	1.4	1.2	1.2	E	1.0	1.4	2.3	2.7	3.0	3.4	3.4	3.3	3.3	3.3	2.9	2.6	2.2	1.6	1.5	1.4	1.4	1.5	1.5
15	1.4	1.0	E	E	E	1.4	1.5	2.3	2.7	3.1	3.3	3.5	3.7	4.0 <sup>A</sup>	3.5	3.5	3.0	3.0 <sup>A</sup>	(2.2) <sup>A</sup>	1.5	1.5	1.7	2.0	1.5
16	1.4	1.4	1.0	E	E	1.4	1.6	2.2	2.5	3.0	3.3	3.5	3.5	3.5	3.5	3.2	A	A	3.7 <sup>A</sup>	2.2 <sup>A</sup>	2.3 <sup>A</sup>	1.5	1.4	1.4
17	1.4	1.5	1.2	1.4	1.5	1.4	1.7	2.5	3.5	3.5	M	(5.0) <sup>M</sup>	3.5	3.5	(3.4) <sup>A</sup>	3.4	3.4	3.7 <sup>A</sup>	1.6	1.9	A	A	1.5	1.5
18	1.4	1.4	E	E	E	1.3	1.7	2.3	2.7	3.3	3.5	3.5	3.7	3.5	4.0 <sup>A</sup>	3.0	3.5	2.3	2.3	3.3 <sup>A</sup>	2.8 <sup>A</sup>	1.7	2.0	2.1
19	1.5	1.4	E	1.1	E	1.2	1.5	2.3	2.7	3.3	4.3 <sup>A</sup>	3.5	6.3 <sup>A</sup>	3.4	3.3	3.5	2.5	2.0	2.0	1.6	(1.6) <sup>A</sup>	1.5	1.3	1.5
20	1.4	1.4	E	1.1	E	1.4	1.6	2.4	2.8	3.0	3.3	3.7	3.9	3.5	3.3	3.1	2.6	2.0	1.5	1.4	1.3	1.3	1.4	1.3
21	1.3	1.4	E	E	E	1.3	1.7	2.6	3.0	3.0	3.4	3.5	3.7	3.5	3.3	3.0	3.0	2.3	1.5	1.5	1.3	1.5	1.3	1.5
22	1.3	1.5	E	E	E	1.3	1.7	2.5	2.9	3.0	3.3	3.5	3.6	3.4	3.5	3.3	2.9	2.3	1.5	1.4	1.5	1.5	1.5	1.5
23	1.4	1.4	E	1.0	E	1.4	1.9	2.6	3.0	3.3	3.5	3.5	3.7	3.5	3.3	2.9	2.6	2.3	1.5	1.5	2.1 <sup>A</sup>	2.0	1.9	2.0
24	1.7	1.5	1.2	1.3	1.0	1.4	1.9	2.4	3.3	3.0	3.8 <sup>A</sup>	3.5	3.4	3.4	3.2	2.9	2.5	M	M	M	M	M	1.5	1.5
25	1.5	1.5	1.2	1.5	1.2	1.4	1.9	2.5	2.9	3.5	C	C	C	C	C	3.3	3.0	2.3	2.2	4.2 <sup>A</sup>	2.7 <sup>A</sup>	1.5	2.1 <sup>A</sup>	1.4
26	1.4	1.4	1.2	E	E	1.4	2.1	2.5	2.8	3.3	3.5	3.5	3.6	3.9	4.0	3.8 <sup>A</sup>	4.3 <sup>A</sup>	3.4 <sup>A</sup>	4.0 <sup>A</sup>	2.1	2.1	4.0 <sup>A</sup>	1.5	1.6
27	1.4	1.4	1.3	1.4	E	1.4	2.0	2.5	3.4	3.0	3.5	3.5	3.7	3.5	4.3 <sup>A</sup>	5.0 <sup>A</sup>	5.0 <sup>A</sup>	2.2	2.1	2.5	1.6	1.5	1.4	1.5
28	1.4	1.4	1.0	1.0	E	1.4	1.8	2.8	2.8	3.4	3.5	3.8	3.5	3.6	4.5 <sup>A</sup>	3.5	2.6	2.3	1.5	1.5	1.5	1.5	1.5	1.4
29	1.5	1.5	1.2	1.2	1.4	1.4	2.0	2.5	3.0	3.5	4.2 <sup>A</sup>	3.7	3.7	3.8	4.3 <sup>A</sup>	3.5	2.9	3.4 <sup>A</sup>	2.2	2.1	1.5	1.5	1.5	1.5
30	1.4	1.4	1.2	1.0	1.0	1.3	2.2	2.8	3.3	3.5	4.2 <sup>A</sup>	4.0	3.8	4.4 <sup>A</sup>	4.5 <sup>A</sup>	3.8 <sup>A</sup>	4.0 <sup>A</sup>	4.1 <sup>A</sup>	5.0 <sup>A</sup>	2.2 <sup>A</sup>	1.4	1.5	2.0	1.7
31	1.5	1.4	1.4	E	1.4	1.4	2.1	3.0	3.2	3.3	M	M	3.7	3.5	3.3	3.3	2.7	2.2	1.6	1.5	1.5	1.5	1.5	1.5
Mean Value	1.4	1.4	1.2	1.2	1.2	1.3	1.6	2.4	2.9	3.2	3.5	3.5	3.4	3.4	3.3	3.2	2.9	2.4	1.9	1.8	1.6	1.7	1.5	1.5
Median Value	1.4	1.4	1.2	1.0	E	1.4	1.5	2.3	2.8	3.1	3.4	3.5	3.5	3.5	3.3	3.0	2.6	2.2	1.5	1.5	1.5	1.5	1.5	1.5
Count	31	31	31	31	31	31	31	31	31	31	28	28	30	30	30	31	30	29	30	30	29	29	31	31

f min F

K 10

Manual  Automatic

Sweep 1.0 Mc to 1.02 Mc in 2 min



Lat. 35° 42.4' N  
Long. 139° 28.3' E

**Kokubunji Tokyo**

**IONOSPHERIC DATA**

135° E Mean Time

Mar. 1955

f<sub>min</sub>E

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	1.3	E	1.0	1.4	1.4	E	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	E	E	
2	E	E	E	E	1.0	1.9	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.3	E	E	E	E	E	E	
3	E	1.4	1.2	1.3	1.4	E	E	1.4	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.4	E	1.7	1.5	1.6	1.4	E	
4	1.6	1.5	E	E	1.3	E	E	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.2	1.4	1.4	1.4	1.4	1.5	
5	1.4	1.0	1.4	1.0	1.5	E	E	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.3	1.5	1.3	1.5	1.4	E	
6	1.5	1.5	E	1.5	1.3	E	1.5	1.3	1.5	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.5	2.0	1.5	1.5	E	
7	1.5	E	1.5	1.4	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.4	1.4	1.5	E	E	1.7	1.5	
8	1.4	1.4	E	E	1.1	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.5	(1.5)	1.5	1.5	
9	E	1.5	(1.4) <sup>c</sup>	1.3	1.3	1.5	E	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.4	E	1.5	1.6	E	E	E	
10	E	1.5	1.4	1.3	1.0	1.4	1.6	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.7	E	E	1.3	1.0	1.5	
11	1.5	1.5	1.3	E	1.5	E	E	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.3	1.5	E	E	1.2	1.5	1.4	
12	1.4	1.4	1.5	E	E	1.5	E	1.4	1.4	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.4	1.5	E	1.4	1.3	E	E	
13	E	1.4	1.3	1.3	1.3	1.0	1.4	1.5	1.4	1.4	1.5	1.5	2.1	1.5	1.4	1.4	1.4	1.4	1.4	1.6	1.5	E	E	1.5	
14	E	E	E	E	1.3	1.5	E	1.4	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	E	E	E	E	
15	E	E	1.3	1.2	1.3	E	1.5	1.4	1.4	1.4	1.5	1.4	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.5	
16	E	1.4	1.2	1.3	E	1.5	1.2	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.5	1.5	1.4	1.5	1.4	1.2	1.3	1.2	1.5	1.5	
17	2.1	1.3	1.0	1.0	E	E	1.4	1.4	1.4	1.4	M	M	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.4	1.3	1.4	1.5	1.1	
18	E	1.5	1.5	E	1.5	E	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.4	
19	1.4	1.5	1.3	E	1.4	1.4	E	1.5	<2.3 <sup>c</sup>	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.5	E	2.1	
20	E	E	1.5	1.3	1.4	E	1.5	E	E	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	E	E	E	1.5	1.6	1.5	
21	1.6	1.5	1.2	1.4	1.0	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E	1.5	E	E	
22	E	E	1.3	1.3	1.4	E	1.4	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.9	E	E	E	1.5	
23	1.5	1.0	1.3	1.0	1.6	1.5	1.4	1.3	1.4	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	E	1.3	1.4	1.2	1.3	1.5	
24	1.4	1.4	1.1	1.2	1.2	1.5	1.5	1.5	1.3	1.5	1.4	1.5	1.5	1.5	1.4	1.4	1.5	<3.2 <sup>M</sup>	M	M	M	M	E	E	
25	E	E	1.5	1.5	E	E	1.4	1.4	1.5	1.5	C	C	C	C	C	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.5	
26	1.5	1.4	1.3	1.3	1.2	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.4	1.5	
27	E	1.5	1.2	E	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.5	2.1	1.5	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.3	E	
28	E	E	1.5	1.4	1.4	E	1.4	1.4	1.4	1.5	1.5	1.5	2.2	2.0	1.5	2.2	1.5	1.4	1.4	E	E	E	1.5	1.4	
29	1.4	1.4	1.0	E	1.4	1.4	1.4	1.5	1.4	1.5	2.1	2.1	1.5	2.1	2.1	1.4	1.4	1.4	1.5	1.5	E	1.5	1.5	1.4	
30	1.5	1.4	1.2	1.0	E	1.4	1.4	1.4	1.5	2.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.4	E	1.4	1.4	1.5	
31	1.5	1.4	1.4	1.4	1.5	E	1.4	1.4	1.5	1.5	M	<5.6 <sup>M</sup>	1.5	1.5	1.5	1.4	1.5	1.5	1.5	E	1.4	E	1.7	E	
Mean Value	1.5	1.4	1.3	1.3	1.3	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.4	1.5	1.5	
Median Value	1.5	1.4	1.3	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
Count	31	31	31	31	31	31	31	31	30	31	28	28	30	30	30	31	31	30	30	30	30	30	30	31	31

f<sub>min</sub>E

Sweep J.L.O. Mc to J.2.2. Mc in 2 min

Manual  Automatic

K 11

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. 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	70	80	70	90	100	80	50	80	80	70	60	60	50	50	90	50	60	50	70	60	50	50	50
2	70	80	90	80	50	110	50	50	50	50	100	50	80	(40) <sup>F</sup>	60	60	60	80	40	90	70	80	60	90
3	B	70	60	60	50	80	70	70 <sup>F</sup>	30	60	80	70	50	(40) <sup>F</sup>	40	90	60	80	60	70	80	50	90	70
4	70	60	60	50	50	80	80	60	40	40	30	30	40	50	100	80	60	50	50	80	60	70	70	80
5	80	60	50	70	50	60	80 <sup>F</sup>	50	70	80	50	60	(30) <sup>F</sup>	50	60	40	50	30	70	50	70	50	90	50
6	50	70	50	50	60	60	50	30	30	60	70	80	90 <sup>F</sup>	50	60 <sup>F</sup>	70	70	40	60	80	70	80	60	90
7	80	70	60	60	90	90	50	50	70	60	50	40	50	50	70	60	60	50	60 <sup>H</sup>	70	70	60	70	40
8	60	60	90	60	70	40	70	60	60	70	60	70	60	60	40	50	60	60	50	80	90	50	50	70
9	60	70	(60) <sup>F</sup>	70	30	120	70	40	40	60	60	60	B	40	40	50	80	40	60	80	60	60	60	60
10	70	70	80	50	90	70	70	40	40	60	70	60	60	50	30	50 <sup>F</sup>	70	40	50	80	60	80	50	50
11	50	60	60	90	80	70	80	60	60	70	70	40	(100) <sup>F</sup>	60 <sup>F</sup>	50	90	80	60	50	90	60	70	80	70
12	60	60	80	60	70	80	50	60	40	60	50	50	70	60	60	60	70	80	60	50	70	80	70	50
13	50	80	80	70	70	70	60	40	50	50	60 <sup>H</sup>	40	70	60	90	(70) <sup>F</sup>	70	60	40	80	60	70	60	40
14	60	60	70	50	80	80	80	60	60	40	150 <sup>H</sup>	70	(60) <sup>F</sup>	50 <sup>F</sup>	50	50	50	60	50 <sup>F</sup>	60	60	60	70	70
15	70	60	70	60	50	60	60	40	70	50 <sup>F</sup>	80	80	50 <sup>F</sup>	60	70	(40) <sup>F</sup>	50	50	50	90	50	60	60	80
16	70	50	70	60	80	80	50	60	50	40	40	60	40	60	60	(50) <sup>F</sup>	(50) <sup>F</sup>	40	40	40	90	70 <sup>H</sup>	90 <sup>F</sup>	70
17	70	80	70	60 <sup>F</sup>	70	70	50	70	70	60	(70) <sup>H</sup>	80	60	50	40	70	70	50	40	50	A	A	80	(60) <sup>F</sup>
18	(60) <sup>F</sup>	50 <sup>F</sup>	(70) <sup>F</sup>	50	90	90	80	60	50	(30) <sup>F</sup>	60	50	40	70	60	50	60	60 <sup>P</sup>	60	A	60	60 <sup>F</sup>	70	50
19	50	60	50	60	60	70	50	50	40	50	60	60	(60) <sup>F</sup>	50 <sup>F</sup>	50 <sup>F</sup>	70	60	80	60	90	(80) <sup>F</sup>	70	(80) <sup>F</sup>	70 <sup>F</sup>
20	(90) <sup>F</sup>	70 <sup>F</sup>	60	70	60	90	60	90	70	30	40	40	(70) <sup>F</sup>	60	60	70 <sup>F</sup>	50	80	60	80	90	90	90	60
21	60	70	70	80	80	100	60	60	40	30	60	50	50	60	50	50	50	70	40	70	70	90	80	(60) <sup>F</sup>
22	50 <sup>F</sup>	50	60	70	80	70	50	60	50	30	70	(50) <sup>F</sup>	60	50	70	40	70	60	60	70	60	70 <sup>F</sup>	50	60
23	60	70	50	60	80	80	60	50 <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	U <sup>K</sup>	60 <sup>K</sup>	50 <sup>K</sup>	50 <sup>K</sup>	70 <sup>K</sup>	70 <sup>K</sup>	60 <sup>K</sup>	
24	(70) <sup>F</sup>	70 <sup>K</sup>	60 <sup>F</sup>	60 <sup>F</sup>	50 <sup>F</sup>	(70) <sup>F</sup>	70 <sup>K</sup>	40 <sup>K</sup>	(60) <sup>F</sup>	120 <sup>H</sup>	40 <sup>K</sup>	40 <sup>K</sup>	30 <sup>K</sup>	60 <sup>K</sup>	80 <sup>K</sup>	80 <sup>K</sup>	50	60	M	M	M	M	(40) <sup>F</sup>	50 <sup>F</sup>
25	60	50	70	90	90	100	70	80	40	50	C	C	C	C	C	50 <sup>F</sup>	50	50	80	A	50	80	70	40
26	40	60	70	40	100	80	50	50	40	40	60	60	50	50	70	70	80	90	80	70	70	80	80	70
27	(80) <sup>F</sup>	50 <sup>F</sup>	60 <sup>F</sup>	60	40	70	90	70	60	60	60	60	(70) <sup>F</sup>	60	60	A	A	50	60	90	90	40	60 <sup>F</sup>	70
28	70	60	60	90 <sup>H</sup>	60 <sup>F</sup>	50 <sup>F</sup>	50 <sup>F</sup>	50 <sup>F</sup>	40	20	50	50	40	50	(70) <sup>F</sup>	50	40	60	50	50	50	80	80	80
29	80	70	60 <sup>F</sup>	90 <sup>F</sup>	70	60	60	60	30	30	40	50	60	50	50 <sup>F</sup>	60 <sup>F</sup>	70	80	60 <sup>P</sup>	80	80	80	60 <sup>F</sup>	70 <sup>F</sup>
30	(70) <sup>F</sup>	(70) <sup>F</sup>	50 <sup>F</sup>	80 <sup>F</sup>	80 <sup>F</sup>	60 <sup>F</sup>	50	40	50	50	70	60	60	40	(50) <sup>F</sup>	50	50	40	A	50	80	(70) <sup>F</sup>	50 <sup>F</sup>	60
31	60	70	60	90	70	60	80 <sup>F</sup>	40	40	60	[60] <sup>H</sup>	50	50	40	70	70	(60) <sup>F</sup>	90	60	70	70	70	110	40
Mean Value	60	60	70	70	70	80	70	50	50	50	60	60	60	60	60	60	60	60	60	70	70	70	70	60
Median Value	60	70	60	60	70	70	60	50	60	60	60	60	60	60	60	60	60	60	60	70	70	70	70	60
Count	30	31	31	31	31	31	31	31	30	30	29	29	28	29	29	29	29	31	29	28	29	29	31	31

YPF2

Group 10 Me to 17.2 Me in 2 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

foF2

Mar. 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	4.3 <sup>U</sup>	3.9	3.7	3.6	3.3	2.9	2.6 <sup>J</sup>	4.3 <sup>J</sup>	6.5	8.6	9.0	9.9	10.8 <sup>J</sup>	12.0	10.2	6.8	6.2 <sup>P</sup>	5.9	4.1	3.5 <sup>J</sup>	3.7 <sup>S</sup>	3.9 <sup>P</sup>	3.2	3.5 <sup>S</sup>
2	3.5	3.5	3.5	3.4	3.5	3.0	2.6	4.3 <sup>J</sup>	C	C	7.2	6.7	8.4	9.6 <sup>J</sup>	9.1	7.7	6.8	6.6	7.2	6.0	3.3	3.0	3.2	3.2
3	2.8	3.0	3.2	3.1 <sup>H</sup>	3.2	3.2	2.7	4.4	5.7	5.9	6.5	6.4	7.4	8.4	8.7	7.6	6.0	5.9	6.4 <sup>J</sup>	5.0	4.2	3.6	3.4	[3.2] <sup>A</sup>
4	3.0	3.2	3.3	3.4	3.3	3.2	3.0	4.1	5.0	5.8	6.4	6.3	6.7	8.0	8.0	6.7	7.2	7.4	4.9 <sup>H</sup>	3.5	3.0	3.3	3.3	2.9
5	2.9	3.0	3.0	3.0	3.0	3.0	3.0	4.5	4.8	5.4	6.3	6.1	6.0	7.5	9.2	8.1	6.9	6.4	6.5 <sup>J</sup>	5.9	M	2.9	3.1	3.2
6	3.2	3.3	3.4	3.4	3.9	2.7	2.4	4.6	5.2	6.0	7.9	8.9	8.0	8.8	10.4	10.7 <sup>P</sup>	8.8	6.9	6.9 <sup>J</sup>	5.6	4.6 <sup>T</sup>	4.7	3.4	2.6
7	2.8 <sup>J</sup>	2.9	2.9	3.0	3.7	3.0	2.5	4.2 <sup>J</sup>	5.6	6.2	6.5	6.0	7.4	8.7	9.2	10.0 <sup>S</sup>	8.4	5.9	5.4	5.6	5.2	4.8	4.4	3.7
8	3.5	3.6	3.4	3.3	3.5	3.3	2.8 <sup>J</sup>	5.3	7.3	5.9	6.8	7.3	7.5	9.8 <sup>J</sup>	10.7 <sup>J</sup>	9.9 <sup>J</sup>	7.9 <sup>J</sup>	6.5	6.7	5.1	3.4	3.4	3.5	3.5
9	3.6	3.6	3.5	3.7	3.8	2.4	2.4	4.6	5.8	6.2	6.5	8.0	10.8	11.9 <sup>J</sup>	8.8	7.2	5.9 <sup>J</sup>	7.0	7.5 <sup>S</sup>	4.6	[4.2] <sup>S</sup>	3.8	3.8	4.0
10	4.0	3.9	3.5	3.0 <sup>H</sup>	2.4	2.3	2.7	5.9	6.0	5.5	7.0	8.6	9.8 <sup>J</sup>	13.1	9.7 <sup>J</sup>	7.9	7.0	6.5	6.4	5.5	4.6	3.8	3.7	3.6
11	3.9	3.7	3.6	3.4	2.8	2.3	2.7 <sup>J</sup>	5.7	6.1	6.4	6.4	7.5	7.7 <sup>J</sup>	9.1 <sup>P</sup>	11.2 <sup>J</sup>	9.5	7.1	6.4	6.9	6.6	4.7	3.6	3.8	3.0
12	3.3	3.3	3.3	2.5	2.4 <sup>F</sup>	2.4	2.7	5.1	5.7	5.9 <sup>J</sup>	7.0	8.2	10.7	10.2	7.9 <sup>J</sup>	8.0	6.8	6.5	6.5	5.9	4.5	3.8 <sup>J</sup>	3.4	3.2
13	3.5	3.7	3.8 <sup>J</sup>	2.7	2.6	2.7	2.8	5.3 <sup>J</sup>	5.9	6.4	6.5	6.6	8.7	10.7	9.6	9.2 <sup>P</sup>	8.7	6.8	5.9	5.4	5.0	3.9	3.8	3.8
14	3.8	3.8	3.3	3.2	3.1	2.6	2.6	5.9	C	C	C	C	C	C	C	C	C	C	6.2	6.0	5.4	3.7	3.8	M
15	3.8	3.8	3.3	3.2	3.1	3.0	2.9	C	C	6.2	6.7	7.0	6.5	7.5	8.9	8.7	8.2 <sup>J</sup>	6.7	[6.6] <sup>A</sup>	6.4	3.8	3.8	4.2	3.5
16	3.1	[3.2] <sup>A</sup>	3.3	3.6	3.1	2.8	2.8	[4.0] <sup>C</sup>	5.3	6.5	5.9	6.4	6.8	10.2 <sup>J</sup>	10.7 <sup>S</sup>	9.5	8.3	S	M	M	3.3	2.7	2.9	3.1
17	3.3	3.4	3.1	3.0 <sup>J</sup>	2.9	2.8	2.9	4.5	5.7	7.0	6.9	7.2	8.5	C	C	C	C	C	C	C	5.1	4.0	3.8	3.5 <sup>J</sup>
18	3.7	3.8	3.7	3.7	3.4	2.7	2.7	5.2	7.5	6.9	6.4	7.6	[8.8] <sup>C</sup>	10.0	9.5	8.3	7.9	6.5	7.3 <sup>S</sup>	4.5	3.9	3.8	4.0	3.9
19	3.9	3.7	3.7	3.5	3.2	3.3	3.7	5.4	5.9	6.7	6.7	6.5	8.9	10.3	11.0	8.9	6.5	7.4	[6.2] <sup>S</sup>	5.0 <sup>H</sup>	4.5	4.6	4.6	3.2
20	3.3 <sup>V</sup>	3.2	3.2	3.2	3.0	2.8	3.1	5.8	6.6 <sup>P</sup>	6.4	6.0	6.2	8.4	9.9	11.5	11.9	8.8	6.0	6.2 <sup>H</sup>	6.4	5.6	4.8	4.1	2.8
21	3.0	3.0	3.0	3.1	3.3	2.4	2.6	4.7	[5.4] <sup>M</sup>	6.0	5.4	6.2	7.9	10.0	9.2 <sup>S</sup>	7.1 <sup>J</sup>	5.7	[7.0] <sup>A</sup>	8.2 <sup>J</sup>	S	A	A	2.9	2.9
22	3.0	3.1	2.9	3.0	3.3	2.4 <sup>V</sup>	2.7	4.7	5.6	6.2	7.4	8.2	8.2	8.9	9.1	8.8	7.7 <sup>J</sup>	6.7	6.5	7.1	6.5 <sup>J</sup>	3.8 <sup>P</sup>	3.3	3.4
23	3.3	3.3	S	2.8 <sup>J</sup>	3.2	3.0	3.6	5.1	5.2	B <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	6.4 <sup>K</sup>	5.3 <sup>K</sup>	[7.2] <sup>P</sup>	5.3 <sup>K</sup>	3.1 <sup>K</sup>	2.8 <sup>J</sup>	A <sup>K</sup>	A <sup>K</sup>	
24	3.1 <sup>K</sup>	3.1 <sup>K</sup>	3.2 <sup>K</sup>	3.5 <sup>K</sup>	2.6 <sup>J</sup>	2.6 <sup>F</sup>	3.3 <sup>K</sup>	4.6 <sup>K</sup>	4.9 <sup>K</sup>	5.3 <sup>K</sup>	6.1 <sup>K</sup>	5.6 <sup>K</sup>	6.0 <sup>K</sup>	7.5 <sup>K</sup>	9.6	9.6	8.0	6.0 <sup>J</sup>	5.4	4.6	4.4	3.7	3.8	[3.8] <sup>S</sup>
25	3.8	F	3.3 <sup>J</sup>	3.3	2.6 <sup>J</sup>	2.2 <sup>F</sup>	2.6 <sup>P</sup>	4.4	5.1	6.0	5.7	6.8	7.7	9.2	[9.2] <sup>S</sup>	9.2	6.2	6.2	6.9	6.3	3.5	3.2	[3.3] <sup>S</sup>	3.4
26	3.4	3.4	3.4	3.3	2.5	2.5	2.8	4.7	5.2	5.4	5.7	6.4	7.4	8.9	8.6	8.2	6.9	6.2	5.8	5.9	5.3	4.8	4.1 <sup>J</sup>	S
27	S	4.0 <sup>J</sup>	3.8 <sup>S</sup>	3.5 <sup>S</sup>	3.5	3.3	3.1	5.0	7.0 <sup>S</sup>	8.1	7.9	8.4	8.3	7.5	8.3	8.2	6.1	6.0	5.7	5.3	5.0	3.7	3.8	[3.8] <sup>S</sup>
28	3.8 <sup>J</sup>	3.8	[3.4] <sup>S</sup>	2.9	2.4 <sup>J</sup>	2.7	3.2	6.0	[5.8] <sup>M</sup>	5.7	6.0 <sup>J</sup>	6.5	8.1	10.0 <sup>S</sup>	10.0 <sup>S</sup>	7.9	7.0	6.4	6.0	6.6	5.3	3.7	3.6	(3.7) <sup>J</sup>
29	3.8	3.4	3.1	A	F	3.2 <sup>S</sup>	3.5	5.1	5.9	6.0 <sup>J</sup>	6.0 <sup>J</sup>	6.2	7.1	8.7	8.9	8.8	7.8	6.5	6.6	6.7	4.4	3.4	3.7	3.4
30	3.6	3.7	3.3 <sup>F</sup>	3.3 <sup>F</sup>	2.6 <sup>PF</sup>	2.1 <sup>F</sup>	3.3	4.8	6.0	6.1	5.9	6.4	7.8	9.2 <sup>P</sup>	S	7.3	6.4	6.4	5.9	6.3	5.7	4.0 <sup>P</sup>	3.8	3.7
31	3.7	3.8	3.7	3.1	2.6	2.3	3.3	5.4	5.9	5.9	6.0	8.9	9.5	7.4	7.1	8.8	9.5	6.7	5.5	6.0	6.8	3.1	3.2	3.0 <sup>H</sup>
Mean Value	3.5	3.5	3.4	3.2	3.1	2.7	2.9	4.9	5.8	6.2	6.6	7.1	8.1	9.4	9.4	8.5	7.2	6.4	6.5	5.7	4.6	3.7	3.7	3.4
Median Value	3.5	3.4	3.3	3.2	3.1	2.7	2.8	4.8	5.8	6.0	6.5	6.7	8.0	9.2	9.2	8.3	7.0	6.5	6.5	5.9	4.6	3.7	3.8	3.4
Count	30	30	30	30	30	31	31	30	28	28	29	29	29	28	27	29	29	28	29	28	29	30	30	28

foF2

Sweep 1.0 Mc to 22.0 Mc in \_\_\_\_\_ min

Manual

Automatic

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

# IONOSPHERIC DATA

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

Mar. 1955

R'F2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	280	270	240	260	240	240	310	260	280	280	260	280	260	270	270	250	250	250	230	230	300	290	260	260
2	280	260	250	250	250	210	290	230	C	C	280	280	300	290	260	260	260	260	240	220	230	300	280	240
3	300	300	290	270 <sup>H</sup>	260	240	250	230	250	280	270	300	290	300	280	270	260	250	230	220	230 <sup>A</sup>	280	250	[280] <sup>A</sup>
4	310	290	280	250	250	240	220	220	230	270	280	290	260	300	290	290	260	250	230	210 <sup>H</sup>	210	290	260	270
5	330	300	290	290	280	250	240	200	220	260	280	290	390	320	290	260	270	250	240	220	210	310	[300] <sup>H</sup>	300
6	300	290	270	270	240	210	240	220	230	320	300	290	290	310	300	270	260	250	250	220	250	240	230	350
7	340	300	300	280	240	200	210	220	230	260	250	330	300	300	300	270	240	240	230	240	250	250	260	250
8	300	290	260	270	260	260	260	250	240	240	270	340	350	310	290	260	250	250	240	210	240	290	290	300
9	300	290	260	260	220	260	300	240	250	260	300	300	300	260	250	270	260	280	230	220	260	300	310	310
10	280	260	250	220 <sup>H</sup>	260	260	310	240	230	250	300	310	300	290	260	270	250	250	240	230 <sup>A</sup>	220	300 <sup>A</sup>	300	350
11	310	290	250	250	250	300	310	230	240	250	300	290	320	310	280	250	240	250	240	220 <sup>A</sup>	210	250	250	320
12	300	290	240	240	300	280	250	210	240	340	290	290	290	260	280	290	260	260	240	240 <sup>A</sup>	230	[240] <sup>A</sup>	250 <sup>F</sup>	340
13	310	270	230	250	250	270	260	240	240	270	290	310	340	280	270	280	260	240	240	230	230	280	250	300
14	280	260	250	270	240	230	290	230	C	C	C	C	C	C	C	C	C	C	250	240	230 <sup>A</sup>	250	280	290
15	300	250	270	270	250	230	260	C	C	260	260	300	290	320	290	280	260	A	A	230 <sup>A</sup>	250 <sup>A</sup>	320	260	260
16	300	[300] <sup>A</sup>	290	240 <sup>A</sup>	220	230	250	[240] <sup>C</sup>	220	240	260	380	340	320	290	270	260	240	240	230	200	330	350	310
17	300	250	260	290	240	250	250	220	240	280	270	260	300	C	C	C	C	C	C	270 <sup>A</sup>	300 <sup>A</sup>	280	310	
18	300	270	290	260	220	290	290	240	260	260	290	320	[300] <sup>C</sup>	290	280	260	270	240	240	210	240	300	280	300
19	290	260	250	260	330 <sup>A</sup>	300	250 <sup>F</sup>	240	250	250	260	300	300	290	270	270	260	270	240	230	230 <sup>H</sup>	270 <sup>A</sup>	240	310 <sup>A</sup>
20	320 <sup>A</sup>	310	290	250	240	250	270	230	240	260	260	350	300	310	290	260	240	240	240 <sup>H</sup>	240	240	240	220	290
21	310	280	270	260	220	250	290	230	[240] <sup>M</sup>	240	280	340	360	280	250	270	290	[280] <sup>A</sup>	260	230 <sup>A</sup>	A	A	300 <sup>A</sup>	320
22	320	300	260	240	230	200	250	230	250	290	280	290	290	290	290	260	280	270	240	240	220	(300) <sup>A</sup>	350	360
23	350	340	270	250	300	260	290	240	320	340 <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	C <sup>K</sup>	370 <sup>K</sup>	330 <sup>K</sup>	290 <sup>K</sup>	250 <sup>K</sup>	[280] <sup>K</sup>	300 <sup>K</sup>	A <sup>K</sup>	A <sup>K</sup>	A <sup>K</sup>
24	350 <sup>K</sup>	330 <sup>K</sup>	350 <sup>K</sup>	250 <sup>K</sup>	260 <sup>K</sup>	330 <sup>K</sup>	250 <sup>K</sup>	230 <sup>K</sup>	240 <sup>K</sup>	300 <sup>K</sup>	280 <sup>K</sup>	320 <sup>K</sup>	380 <sup>K</sup>	360 <sup>K</sup>	300	280	250	250	240	240	240	300	310	300
25	300	300 <sup>F</sup>	280	250	230	250	290	250	250	290	320	330	320	320	280	260	270	280	250	220 <sup>A</sup>	210 <sup>A</sup>	300	310	300
26	300	300	250	250	260	290	270	240	240	290	290	310	350	310	290	290	280	270	240	250	260	330 <sup>A</sup>	300	310
27	300	290	260	250	270	240	270	250	280	270	290	270	290	300	300	270	270	260	240	230	240	250	330	300 <sup>F</sup>
28	270	270	240 <sup>H</sup>	250	290	310	280	230	[240] <sup>M</sup>	240	310	310	310	300	270	270	270	270 <sup>A</sup>	260 <sup>A</sup>	240	220 <sup>A</sup>	250	290	300
29	270	250	250	[270] <sup>A</sup>	290 <sup>F</sup>	290	250	240	250	270	290	330	340	300	290	280	270	270	270	250	230	230 <sup>A</sup>	290	300
30	300	250	280	250	220	340	270	240	260	290	310	350	330	290	270	260	290	270	250	240	230	240	290	320
31	310	290	250	220	220	290	300	240	270	290	340	320 <sup>A</sup>	270	290	350	310	250	240	250	250 <sup>A</sup>	210	240	300	350 <sup>H</sup>
Mean Value	310	280	270	260	250	260	270	230	250	270	290	310	310	300	280	270	260	260	240	230	240	280	280	300
Median Value	300	290	260	250	250	270	240	240	270	280	310	300	300	300	280	270	260	250	240	230	230	290	280	300
Count	31	31	31	31	31	31	31	30	28	29	29	29	29	28	28	29	29	28	29	30	30	30	30	30

Y 2

Automatic

Manual

Sweep 1.0 Mc to 22.0 Mc in \_\_\_\_\_ min

R'F2



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

Lat. 31° 12.6' N  
Long. 130° 37.7 E

Yamagawa

IONOSPHERIC DATA

fEs

Mar. 1955

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.3	2.4	E	E	2.3	2.1	E	2.4	G	G	G	G	G	G	G	G	G	G	2.2	2.3	3.3	2.3	2.4	2.4F
2	E	E	2.3	2.3	2.3	2.3	2.3	2.3	C	C	G	G	G	G	G	G	3.7	G	E	2.0	E	E	E	E
3	2.3	E	E	2.1	2.3	E	E	B	G	G	G	G	5.7Y	G	G	G	3.6	3.0	2.1	2.1	2.1	3.0	2.4	5.9
4	3.2	2.3	2.3	2.3	2.4	2.3F	2.3	B	G	G	G	G	G	G	G	G	G	3.1	2.4	2.3F	E	3.3	3.5	2.4
5	2.4	2.1	2.4	2.4	E	E	E	2.4	G	G	G	G	G	G	5.8	G	G	3.4	2.4	2.4	2.3	2.9	4.2	2.3
6	E	2.3	2.4	E	2.3	E	E	B	G	G	G	G	G	G	G	G	G	G	2.2	E	E	2.1	E	E
7	2.4	2.0	E	E	2.2	2.4	2.4	2.4	G	G	G	G	G	G	G	G	G	3.2	2.4	2.4	2.4	2.1	2.3	2.4
8	2.4	2.4	2.3	2.4	2.4	2.3	3.7	3.5	3.0	G	5.9	G	G	G	G	G	G	3.1	2.3	E	2.1	E	E	E
9	E	2.4	E	2.4	2.4	2.0	2.1	2.4	G	G	3.6	G	G	G	G	G	G	G	1.9	E	E	E	2.3	2.0
10	2.3	E	E	2.3	E	E	E	2.4	G	G	G	G	G	G	G	G	G	3.1	E	2.4	E	3.8	3.2	3.0
11	3.0	2.3	2.4	3.0	2.4	2.3	E	G	G	3.5	G	G	G	G	G	G	3.5	2.9	2.2	2.2	E	E	2.4	2.3
12	E	E	E	2.3	E	E	E	G	G	G	G	G	G	5.7Y	G	G	4.2	3.5	2.9	2.2	2.4	3.9	2.2	3.0
13	2.4	E	E	2.2	1.3	E	E	G	3.4	3.4	G	G	G	G	G	G	3.4	3.1	2.7	E	2.4	E	E	E
14	2.3	E	E	E	2.4	2.3	2.3	2.3	C	C	C	C	C	C	C	C	C	C	3.1	3.1	3.5	2.3	E	E
15	E	2.4	E	E	E	E	E	C	C	C	G	G	G	G	G	4.3	4.1	7.1	8.8	4.5	5.9	2.7	2.4	2.3
16	2.8	5.1	2.4	2.3	2.1	E	2.3	C	G	4.2	4.3	4.0	G	G	G	G	3.8	3.2	2.7	2.3	2.4	5.9	2.4	2.1
17	2.2	2.3	2.1	1.3	2.4	E	2.1	2.4	G	3.4	3.8	4.5	4.5	C	C	C	C	C	C	C	5.7	4.3	4.2	4.2
18	E	2.3	2.7	2.2	E	E	E	G	G	G	G	G	C	4.4	4.4	4.3	4.0	3.4	3.4	2.4	2.7	2.1	2.1	2.7
19	2.2	2.3	2.3	2.7	2.7	2.4	2.1	G	3.4	G	4.4	4.5	5.4Y	4.6	5.7	4.6	4.2	4.7	3.5	3.8	2.8	3.8	2.7	3.2
20	2.4	3.4	2.3	2.4	2.4	2.3	2.1	2.4	G	G	G	G	G	4.0	G	4.1	3.4	4.4Y	4.5	3.0	2.7	2.3	2.0	2.3
21	E	2.3	2.3	E	E	2.4	2.1	3.0	3.8K	G	4.0	4.3	G	G	G	G	G	8.1	5.9	5.3	5.3	5.7	3.4	2.3
22	E	E	2.3	2.1	2.2	2.3	E	G	G	G	G	G	G	G	4.4	3.8	4.4	3.3	2.3	2.3	2.3	3.1	E	E
23	E	E	E	2.1	2.3	2.3	2.0	G	3.4	G	C	C	C	C	C	G	G	3.4	2.3	8.7Y	5.9	4.9	4.9Y	5.9
24	3.8	2.3	3.7	3.2	3.4	2.4	2.8	G	3.5	G	5.9Y	5.4	G	G	6.0	4.2	G	G	2.3	2.3	2.3	2.1	E	E
25	2.1	E	E	E	E	2.3	E	G	G	G	G	G	G	G	G	5.9Y	3.7	G	3.1	3.0	3.0	2.2	2.3	3.1
26	2.3	2.3	3.2	3.5	2.3	2.3	2.3	3.6	3.4	G	G	3.4	3.7	5.7Y	G	G	5.0	5.8Y	3.0	3.6	3.4	2.3	3.7	4.5
27	3.8	3.2	2.3	2.3	2.3	E	E	G	G	5.9Y	G	G	3.8	G	5.9	5.8Y	3.8	4.9	3.7	3.5	3.0	3.0	2.9	2.3
28	2.1	2.3	E	E	E	E	E	3.1	G	5.6	4.6Y	4.6	3.8	3.8	5.9	5.7	5.9	5.4	4.2	2.4	2.4	2.3	E	E
29	E	2.3	2.3	5.9	3.1	2.3	E	G	G	G	G	G	3.7	G	G	G	G	3.3	2.3	3.0	3.6F	2.3	2.3	3.6
30	3.6	2.2	E	3.1Y	2.3	2.1	2.1	G	G	4.3Y	5.9Y	5.0	3.8	G	3.8	3.7	4.9	3.7	2.8	2.3	2.1	2.3	2.0	2.0
31	E	1.9	2.1	2.1	E	E	2.3	G	G	4.7	G	G	G	G	G	G	G	3.3	3.3	3.0	E	E	E	1.9
Mean Value	2.7	2.5	2.4	2.6	2.4	2.3	2.3	2.7	3.4	3.8	4.8	4.5	4.3	4.7	5.2	4.6	4.1	4.0	3.1	3.0	3.2	3.1	2.8	3.0
Median Value	2.3	2.3	2.3	2.3	2.3	2.1	2.1	2.6	G	G	G	G	G	G	2.8	2.9	3.4	3.3	2.7	2.4	2.4	2.3	2.3	2.3
Count	31	31	31	31	31	31	31	26	28	29	29	29	28	28	28	29	29	29	30	30	31	31	31	31

fEs

Sweep 1.0 Mc to 22.0 Mc in 1 min

Manual  Automatic

## SOLAR RADIO EMISSION

MARCH, 1955

Observing Station: HIRAISSO,

Frequency: 200 Mc/s.

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

Time in U.T.

## Daily Data

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

IONOSPHERIC DATA IN JAPAN FOR MARCH 1955

電波觀測報告 第7卷 第3号

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