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

IONOSPHERIC DATA IN JAPAN

FOR APRIL 1955

Vol. 7 No. 4

Issued in May 1955

PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR APRIL, 1955

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

PREFACE

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

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

The First Division has the following three sections:

- Ionospheric Propagation Section which shall carry on researches on ionosphere and wave propagation;
- Tropospheric Propagation Section which shall carry on researches on troposphere and wave propagation; and
- Data Coordination Section which shall conduct the collection and arrangement of observational results, supply of operational data relating to radio propagation, preparation of radio propagation forecasts and radio disturbance warnings broadcast of URSIGRAM and physical basic studies of wave propagation in general.

The Second Division has the following two sections:

- Frequency Standard Section which shall carry on researches on the frequency standard and broadcast the standard frequencies and time signals (J. J. Y.); and
- Apparatus Section which shall carry on researches on radio apparatus used for radio regulatory purpose and conduct the approval service of types of radio equipments.

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

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

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

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

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

Aug, 1952

SITES OF THE IONOSPHERIC STATIONS

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

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

REMARKS ON SYMBOLS

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

SOLAR RADIO EMISSION

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

The location of the Observatory is as follows:

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

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

foF2

Apr. 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	F	F	F	F	F	F	4.6	4.7	5.3	6.3	7.0	8.0 ^J	6.5	7.0	6.5	6.3	6.3	6.5	6.1	5.5	5.3	(4.3) ^S	F	F
2	F	4.1	(3.8) ^F	(3.5) ^F	(2.6) ^F	3.0 ^F	4.2	4.8	5.2	6.0	6.5	7.2	6.5	6.0	7.3	6.5	6.1	5.7	6.3	6.0	5.1	(5.3) ^S	F	F
3	F	F	F	3.6 ^F	3.5	[3.5] ^F	3.5	4.3	4.6	5.0	5.3	6.5	6.1	6.4	6.3	5.8	5.3	5.0	5.6	5.3	4.7	4.7	4.4	4.0 ^F
4	4.1 ^F	3.8	3.8	4.2	3.9 ^V	3.8	4.3	5.0	5.1	5.8	6.4	7.9 ^J	7.4	6.5	6.8 ^J	6.1	5.9	5.7	6.0	6.1	5.6	5.1	4.5	4.2
5	3.7	3.5	3.7	3.7	3.3	3.8	4.0	5.3	4.7	5.3	6.5	5.9	6.7	7.2	6.5	5.6	5.5	5.6	5.7	5.4	5.5	5.5	4.3	3.9
6	3.8 ^F	3.8 ^F	3.9 ^F	F	F	3.8 ^F	4.2	4.5	4.7	5.7	6.0	6.5	6.2	6.1	6.0	6.2	6.2	5.3	5.1	5.3	4.9	4.5	4.4	4.3
7	4.2	4.4	4.1	4.4	3.3	3.7	4.5	5.3	5.8	6.7 ^J	6.7	7.5	7.2	7.0	6.8	6.3	6.2	6.5	5.8	5.3	5.3	4.7	4.7	4.5
8	4.5	4.3	4.3	4.0	3.8	4.3	5.0	5.8	6.1	6.9	6.8	6.5	7.0	6.9	6.5	6.3	6.5	5.9	5.9	6.0	6.0	5.5	4.6	[4.4] ^F
9	4.2	[4.1] ^F	4.0 ^F	4.4	(3.7) ^F	(3.6) ^F	4.5	5.0	5.5	5.7	6.7	7.0	6.6	7.0	7.2	7.0	6.2	5.6	6.0	6.1	5.5	4.8	4.0	3.9
10	3.7	3.7	3.5 ^F	3.4	3.6	4.3	4.5	4.6	5.3	C	C	C	C	C	C	6.0	6.3	5.9	6.0	6.0	5.3	5.0	4.9	4.6
11	4.6	4.5 ^F	(4.3) ^F	(2.5) ^F	(2.3) ^F	3.4	4.1	4.5	5.8	(7.5) ^F	7.0	6.8	6.6	6.3	6.0	5.9	5.7	5.2	5.3	5.0	5.2	5.3	4.9	4.5
12	4.3	F	F	F	F	4.0	4.5	5.3	5.8	6.0	7.0	7.6 ^J	7.2	6.5	7.1	6.5	6.1	5.3	5.7	5.0	5.2	4.6	4.6 ^F	4.5
13	4.6	C	C	C	C	C	C	C	C	6.6	6.5	5.7	6.6	C	C	6.0	5.7	5.3	5.7	5.0	5.2	4.4	4.3	(4.1) ^S
14	[4.0] ^F	4.0	3.8	3.6	3.5	4.4	4.7	4.7	5.6	5.8	6.5	6.0	6.7	7.6	6.5	6.2	5.8	6.3	6.6	6.6	5.7	4.0	3.5	(3.5) ^S
15	F	F ^S	F	F	(3.3) ^F	3.8	4.5	5.0	6.0	6.2	6.0	6.0	6.1	6.1	5.8	5.9	5.4	5.6	6.0	6.8	6.2	5.9	4.3	3.9
16	3.8 ^J	3.9 ^F	F	5 ^F	F	4.3	4.7	4.9 ^H	5.3	5.5	5.7	6.2	6.4	6.1	5.8	6.0	5.6	5.3	5.5	6.3 ^J	6.0	[5.6] ^S	5.1	4.5
17	4.3	4.0	3.9	4.0	3.9	4.1	[4.6] ^S	5.0	6.0	5.8	6.1	6.0	5.9	6.3	6.8	6.1	5.8	5.5	5.7	6.7 ^J	6.8 ^J	5.8	4.6	4.0
18	4.0	4.0	3.9	3.7	3.5	4.3	5.3	5.0	5.0	5.1	5.6	5.1	6.0	5.6	5.7	5.7	5.9	5.9	6.4	6.7	5.7	5.1	4.9	4.6 ^J
19	(4.6) ^S	4.5	F	F	F	5 ^F	4.5	4.9	5.0	5.9	6.2	5.8	5.8	6.0	6.1	6.1	6.1	6.0	5.7	6.0	5.5	[5.2] ^S	5.0	4.5
20	F	F	F	F	F	4.2	5.1	5.3	5.5	6.2	7.2	6.5	6.1	6.5	6.0	5.6	5.5	6.0	6.5	(6.3) ^S	6.4	5.6	4.5	4.2
21	4.0	[4.0] ^S	4.0	3.8 ^F	4.0 ^F	4.8	5.3	5.0	5.5	5.3	5.3	6.2	6.9	7.0	6.5	5.8	5.7	5.2	5.0	5.7	6.2	6.2	4.9	4.3
22	4.4 ^J	4.5 ^F	4.1	3.8 ^F	3.6	4.0	4.6	4.9	5.2	5.5	6.1	6.6	7.2	6.2	5.6	6.0	6.6 ^S	6.1	5.6	5.6	5.3	4.9	4.2	4.1 ^S
23	4.0 ^J	3.9 ^F	3.9 ^F	3.3 ^F	3.3 ^F	4.2	4.8	5.3	6.0	6.3	6.2	6.4	6.0	6.3	5.9	5.9	6.0	5.5	5.3	5.7	5.5	5.5	5.5	4.3 ^P
24	[4.4] ^F	4.4 ^F	4.3 ^F	4.1	3.9 ^F	4.0	5.1	6.0	6.7	7.2	6.5	6.0	6.5	6.5	6.4	6.0	6.0	5.8	6.1	6.6	6.4	6.0	5.6	5.3
25	4.7	4.8	4.7	4.2	3.5	3.8	3.6	4.3 ^H	4.9	4.8	B	B	5.8	5.3	5.5	5.8	5.8	5.3	5.3	5.6	5.7	5.4	5.3	5.2
26	5.3	5.1	4.9	5.1	4.3	4.4 ^F	4.5	4.5	4.7	5.2	5.4 ^F	6.2 ^F	6.1 ^F	6.5	6.2	5.9	5.8	5.5	5.6	6.3	6.0	6.0 ^F	6.3 ^F	5.5
27	5.5	4.3	4.4	4.5	4.4	3.2	4.4	5.4	5.0 ^H	6.2	7.2 ^P	5.8	6.0	5.8	6.0	6.0	5.9	6.4	6.6	6.7	5.7	5.2	5.0	5.0
28	4.3 ^F	4.4	4.0 ^F	(3.7) ^F	(2.3) ^F	4.3	3.6 ^F	(5.5) ^F	5.3 ^F	(6.0) ^F	6.1	5.0	5.6	6.0	6.4	7.7	6.9 ^F	7.0	6.8	6.1	[6.0] ^F	5.9 ^F	F	F
29	(5.3) ^F	(5.3) ^F	5.2 ^F	F	4.5 ^F	4.2 ^F	4.5	5.5	5.5	5.2	6.5	6.3	6.6	6.9	7.5	6.8	6.9	7.0	6.4	6.3	6.1	6.2	5.6	5.6
30	5.5	5.4	4.9	(4.8) ^F	4.1 ^F	4.4	4.5	4.9	5.7	5.7	5.5	5.7	5.4	6.1	6.3	6.7	6.3	6.0	6.0	5.9	5.8	5.5	5.0	4.9
31																								
Mean Value	4.4	4.3	4.2	3.9	3.6	4.0	4.5	5.0	5.4	5.9	6.3	6.4	6.4	6.4	6.4	6.2	6.0	5.8	5.8	6.0	5.7	5.3	4.8	4.5
Median Value	4.3	4.2	4.0	3.8	3.6	4.0	4.5	5.0	5.3	5.8	6.4	6.2	6.5	6.4	6.3	6.0	6.0	5.7	5.8	6.0	5.6	5.3	4.9	4.4
Count	25	24	22	21	23	27	29	29	29	29	28	28	29	28	28	3.0	30	30	30	30	30	30	27	27

foF2

Sweep — 1.0 Mc to 2.2.0 Mc in — min Manual Automatic

W 1

Lat. 46° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

Apr. 1955

K'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	310F	280	270	280	250	250	230	240	360	290	270	270	290	270	280	260	270L	260	240	240	250	260	280F	270F
2	310F	250	260	240	240	260	240	240	270L	280	330	270	290	310	270	260	270	250	240	240	250	240	240F	290F
3	320F	300F	290F	260	260	240F	240	280	350	310	370	310	300	310	280	280	270	260	250	240	270	280	260	270
4	280	270	300	280	240	230	240	250	330L	310	270	300	290	290	280	280	270	260	260	260	260	250	260	260
5	260	280	270	250	280	260	240	270L	270	320	280	320	320	290	260	260	270L	260	240	260	270	250	260	290
6	270	310	310	270	240	240	250	230	260	300	310	300	300	320	310	290	270	250	260	250	260	290	300	300
7	300	290	270	270	260	260	240	260	270	290	300	310	280	320	270	280	260	260	240	250	260	290	280	270
8	290	280	250	240	250	260	230	250	280	280	270	270	310	300	270	300	270	260	260	260	260	240	250	290F
9	270	310	270	240	240F	260	260	280L	290	310	290	270	300	300	270	290	260	260	240	240	240	250	260	290
10	290	290	290	270	250	230	220	240	290	C	C	C	C	C	C	320	280	260	240	240	250	280	290	310
11	270	290F	230	210	300F	260	230	240	320	290	270	300	270	290	280	290L	270L	250	260	260	240	260	260	270
12	260	310F	260F	240	260	240	240	260L	300	300	310	290	290	310	290	290	270	240	240	270	260	290	300	290
13	270	C	C	C	C	C	C	C	C	310	290	310	310	C	C	310L	270	260	260	250	240	260	260	310
14	270	270	260	260	280	260	240	300	280	290	310	290	290	290	280	300	280	270L	260	240	240	240	270	310F
15	320F	270	270	240	240	240	240	300	310	340	320	320	290	290	280	300	300	270	260	240	240	230	240	300
16	270	310F	300F	280	250	250	250	250H	300	320	310	300	320	310	310	270	260	290	300	270	280	280	260	260
17	270	300	300	270	240	240	240	270L	300	270	290	300	310	330	330	310	290	290	260	260	240	240	250	290
18	300	290	260	260	250	260	240	360L	310	360	330	300	310	330	330	310	290	290	260	260	250	250	250F	250F
19	290	290	280F	260F	270F	240	240	270	310	300	290	320	350	320	320	290	290	270	260	250	250	240	250	270
20	290F	270F	250F	230	240F	240	260	260	310	310	300	280	340	310	310	300	290L	290	260	240	240	240	250	270
21	280	290	270	260	250	240	260	260L	290	300	340	320	300	300	300	300	280	260	250	250	250	230	240	260
22	270	300	250	250	250	250	250L	300	310	340	360	360	290	290	310	320	290	260	250	260	250	250	270	290
23	280	280	240	230	270	240	270L	280L	300	290	320	300	300	310	300	290	280	250	270	270	260	260	240	260
24	280F	290	270	260	250	250	260L	280	280	280	300	280	300	300	300	320	280	260	250	260	250	250	270	290
25	320	280	260	250	250	240	260	250H	310	310	310	310	330	330	350	320	300	280	270	250	250	250	260	270
26	280	280	260	240	300	240	250	300	430	400	400	350	340	380	380	320	300	280	270	260	260	280	300	300
27	260	260	270	260	250	230	270L	300	330H	310	310	310	340	320	330	310	300	290	270	240	250	270	260	280
28	290	280	260	250	320F	260	250L	400	380F	450	300	460	430	360	320	300	300	280	260	250	270	280	290	310
29	280	270	280	230	250	250	230L	280	270	L	330	330	340	330	300	290	290	280	270	250	290	280	280	300
30	280	270	270	250	250	250	360	A	350	A	350	330	370	360	330	300	290	280	260	260	288	280	260	280
31																								
Mean Value	290	290	270	250	260	250	250	280	310	320	310	310	310	310	300	290	280	270	260	250	260	260	270	280
Median Value	290	290	270	250	250	250	240	270	300	310	310	300	310	310	300	290	280	260	260	250	260	260	260	290
Count	30	29	29	29	29	29	29	28	28	28	28	28	29	28	28	30	30	30	30	30	30	30	30	30

K'F2

Sweep: J. E. Mc to 2.2.0 Mc in _____ min
 Manual Automatic

W 2

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

fEs

Apr. 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	2.5F	E	2.6	E	E	E	G	G	G	5.3	4.5	4.4Y	4.0Y	G	G	G	G	G	2.6	2.5	2.3	2.2	E	E	
2	2.5	2.3Y	2.3	2.3	2.5	2.3	2.3	G	G	G	G	4.5	G	G	G	G	G	2.6Y	2.3	2.6	E	E	E	E	
3	E	E	E	2.6	2.5	2.3	G	3.5F	3.5F	4.3	5.6	5.8	G	G	G	G	G	G	E	E	E	E	E	E	
4	E	E	2.5	2.5	2.3	2.3	G	G	G	G	4.1Y	G	4.5Y	G	G	G	G	3.5Y	2.6	2.3	E	2.3	2.3	2.1	
5	2.5	1.9	E	E	E	E	G	G	G	4.3	G	G	G	G	G	G	G	G	2.3	2.2	2.5Y	2.2	2.6	3.8Y	
6	E	2.3	2.5	2.0	2.3 ^S	2.3	G	G	G	G	G	G	G	G	G	G	G	G	E	2.3	E	E	E	E	
7	E	E	E	E	E	E	G	G	3.7F	G	G	G	G	6.0	G	5.0	4.4	3.4Y	2.5	2.3	3.2Y	3.3Y	E	E	
8	2.3	2.3	2.3	2.3	E	2.3	G	G	G	G	4.0	G	G	G	4.2	3.5Y	4.0	3.8	2.6Y	2.3	E	E	E	E	
9	E	E	E	2.2	E	2.2Y	G	G	G	3.6Y	4.5	4.3Y	G	G	G	G	G	G	2.8Y	E	2.3	E	E	2.3	
10	E	E	E	2.3	E	E	G	G	G	C	C	C	C	C	C	C	G	G	2.3	E	E	2.0	E	E	
11	E	E	E	2.3	E	2.6	G	G	G	G	G	4.4	4.0	4.1	G	G	G	G	G	E	E	E	E	2.2	
12	2.5	E	E	E	E	E	G	G	G	G	4.1	4.1Y	G	G	4.3	G	G	G	2.3	2.2	E	E	E	2.3	
13	E	C	C	C	C	C	C	C	C	G	4.6	4.3	4.5	C	C	C	4.1	G	3.3	4.2	2.6	2.5	E	E	
14	E	3.5	E	2.6	2.3Y	2.3Y	2.6	G	G	G	G	G	4.0	3.9	3.7Y	3.5	4.1	G	2.3	3.0	3.5	2.3	E	2.3	
15	E	E	E	2.3	E	2.3	G	G	G	G	4.5	4.4	4.0	3.9	3.7Y	3.5	4.1	2.6	3.1	3.0	2.0	E	3.3Y	4.0	
16	3.0Y	3.7Y	2.6	2.6	3.4	3.9	4.1	3.7Y	G	G	4.7	4.7	4.5	4.0	G	G	G	4.1	4.6	3.5	4.0	4.9	4.5	3.7	
17	3.5	2.3	2.2	2.0	E	G	4.9	G	G	G	G	G	G	4.8	4.5	G	G	G	3.0	2.3	E	E	E	E	
18	E	E	E	E	2.3	E	G	G	G	G	4.5	G	5.0Y	5.7	4.0	5.0	4.7	G	4.2	4.5	3.5	E	E	2.3	
19	2.3	E	E	E	E	E	G	G	G	G	4.6	4.5	G	G	G	G	G	4.0	3.5	2.7	2.5	C	E	E	
20	2.0	1.9	1.9	E	E	E	G	G	G	4.7	G	G	4.6Y	4.5	G	G	G	G	G	2.5	E	E	E	1.8	
21	E	E	2.3	2.3 ^S	E	2.3	G	G	G	4.5	G	G	G	G	G	G	G	G	2.4Y	2.0	E	E	2.4	1.8	
22	E	E	E	2.3	E	2.5Y	2.5Y	G	G	G	G	G	G	G	4.2Y	4.7Y	4.5Y	2.7Y	2.2Y	2.4Y	3.6	2.1	2.5Y	2.3Y	
23	2.8	4.5Y	E	E	E	2.3Y	G	G	G	G	G	G	4.2	4.2	G	G	3.5Y	G	2.3	2.3	2.2	E	E	E	
24	E	E	E	2.5	E	E	G	G	G	G	G	G	G	4.2	6.0Y	G	4.7	4.1	2.8	E	E	2.8Y	2.4	2.3	
25	E	E	E	E	E	2.5Y	G	G	G	4.7	4.6	4.6	4.6	4.4	G	G	G	G	2.5	2.3	2.2	2.8Y	2.4	2.3	
26	2.4	1.8	2.3	2.1	2.3	2.4	G	G	4.0Y	G	G	G	G	G	G	G	G	G	2.5	E	E	E	E	E	
27	E	E	E	1.9	2.2	2.6	G	G	G	G	G	G	4.1	G	G	G	G	G	2.1	2.6	2.6	2.2	2.7Y	E	
28	2.1Y	1.8	1.8	E	E	2.7	G	G	G	G	G	5.2Y	6.2Y	G	G	G	G	G	1.8	E	E	E	E	E	
29	F	E	E	E	E	E	G	G	G	G	G	G	4.7	G	6.6	4.9	6.6	4.5	4.8	E	E	E	E	E	
30	2.3	1.9	1.6	E	1.8	E	G	5.3	6.0	4.8Y	5.2	G	5.2	G	G	6.0	5.5	5.2	4.5	5.5Y	3.2Y	2.5Y	2.3Y	E	
31																									
Mean Value	2.5	2.6	2.2	2.3	2.4	2.5	3.3	4.2	4.3	4.5	4.6	4.5	4.5	4.7	4.7	4.7	4.5	3.7	2.9	2.8	2.8	2.6	2.8	2.6	
Median Value	E	E	E	2.0	E	E	G	G	G	G	G	G	G	G	G	G	G	G	2.5	2.3	E	E	E	E	
Count	30	29	29	29	29	29	29	29	29	29	29	29	29	28	28	30	30	30	30	30	30	29	30	30	

fEs

Sweep 1.0 Mc to 2.2.0 Mc in ___ min

Manual

Automatic

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

Lat. 39° 43.5' N
Long. 140° 08.3' E

IONOSPHERIC DATA

Akita

Apr. 1955

f_oF₂

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	38	40	36 ^F	34 ^F	32 ^F	33 ^F	48	55	54	6.9	7.5	8.6	7.8	7.2	7.4	5.8	6.5	6.6	7.5	6.2	5.1	4.0	4.1	4.1	
2	39 ^F	39 ^F	37	35	2.9	2.8	4.1	5.3	5.7	6.0	6.0	8.0	6.7	6.5	6.9	6.5	6.4	6.2	7.0	6.6	5.1	4.5 ^{VF}	4.4	4.3	
3	40 ^F	42 ^F	4.7 ^F	4.0 ^F	3.5 ^F	3.5 ^F	4.0	4.5	5.0	6.0	6.5	7.0	7.3	7.0	7.5	6.5	(5.9) ^F	(5.9) ^F	6.0	6.6	5.3	4.4	4.6	4.5	
4	44	4.1	3.9	3.9 ^F	4.0	3.9	3.8	4.9	5.4	6.4	6.6	7.0	8.4	7.9	6.5	6.5	5.9	6.0	6.5	6.5	5.9	5.0	4.7	4.5	
5	44	3.9	3.9	3.8 ^F	3.5	4.2	4.5	5.9	5.6	5.5	6.6	7.6	7.6	9.5	8.1	6.1	5.9	6.0	6.1	6.3	5.7	5.3	4.4	(3.9) ^F	
6	3.9	3.7 ^F	3.6 ^F	3.8	3.5 ^F	3.1 ^F	4.5	4.9	5.1	5.7	6.5	7.6	7.2	7.0	6.9	6.5	6.6	6.0	5.0	5.5	5.1	4.6	4.5	4.6	
7	4.4 ^F	4.6	4.4	3.9	2.9 ^F	3.2	4.8	5.8	5.8 ^P	6.0	6.1	7.3	7.7	7.0	8.1	6.9	6.9	6.4	6.2	5.5	5.0	4.4	4.5	4.6	
8	4.4	4.0	4.2	4.0	3.7	3.6	5.2	6.6	6.0	C	C	7.1	M	M	8.1	6.6	6.7	6.0	6.2	6.5	6.2	6.0	4.5	4.0	
9	3.9 ^F	3.8 ^F	3.7	4.1	3.3	4.0	4.8	6.0 ^T	6.5	6.6	8.1	7.6	7.1	7.5	7.5	8.0	7.4	6.5	6.2	6.7	6.5	4.3	4.0 ^F	3.8 ^F	
10	3.8	3.7	3.7	3.6	3.7 ^F	3.5 ^F	4.2	5.1	5.3	6.0	7.0	8.2	8.5	6.6	6.0 ^T	6.5	6.1	6.6	6.6	6.1 ^F	5.2	4.6	4.5	4.1 ^F	
11	4.5 ^F	4.4	4.4	3.0 ^F	2.7 ^F	2.7 ^F	4.4	4.8	6.0 ^T	8.1	8.6	6.7	9.2	6.4	6.6	6.0	6.2 ^T	5.6	5.9	6.5	6.4	4.8	4.2	4.1	
12	4.0	(3.9) ^F	3.6 ^F	3.5 ^F	3.0 ^F	3.5	4.8	5.6	6.2 ^T	6.6	7.4	8.1	9.2	7.8	6.6	6.5	7.3	6.5	5.3	5.5	5.5	4.8	4.6	4.6	
13	4.6	4.5 ^F	3.7 ^F	3.4 ^F	3.5 ^F	3.4	4.9	(6.0) ^H	7.1	7.3	7.6	6.6	6.6	7.5	6.9	6.8	6.9	6.5	6.5	6.3	5.5	3.7	4.2 ^F	4.2 ^F	
14	3.8 ^F	4.0 ^F	3.4 ^F	3.5 ^F	3.2 ^F	3.5	4.7	5.6 ^H	6.1	6.5	7.3	7.5	7.3	(7.4) ^T	9.5	7.5	(7.0) ^C	6.5	7.4	7.4	5.8	3.1 ^{VF}	3.1 ^F	3.2 ^F	
15	3.5 ^{VF}	3.2 ^F	3.5	3.2 ^F	3.2 ^F	3.5	(4.9) ^P	(5.5) ^P	6.3	6.4	7.0	7.0	7.1	6.6	6.4	6.1	6.4	5.9	6.9	7.5	6.8	4.1	3.5	3.6	
16	3.7	3.6	3.7	3.8 ^F	3.6	3.6	4.9	5.2	5.6	6.5	6.1	7.0	7.2	6.4	6.4	6.4	6.2	5.5	5.5	6.6	7.0	4.7	4.4 ^F	4.2 ^F	
17	C	C	C	C	C	C	C	C	C	C	C	C	6.2	(6.6) ^S	6.9	7.1	6.5	6.0 ^P	6.1 ^F	7.8	7.2	4.5	3.7	3.7	
18	3.7	3.7	3.6	3.5	3.3	4.0	4.4	5.4	6.0	5.8	6.1	6.2	6.4	6.3	6.2	6.6	6.9	6.6	7.0	6.9	5.8 ^J	4.5	4.4	4.4	
19	4.4	4.0 ^F	3.8 ^F	3.6 ^F	3.3 ^F	4.0	4.6	4.7 ^T	5.6	6.4	6.2	6.1 ^F	6.5	6.4	7.2	7.2	7.8	6.6	7.0	7.1	6.5	4.6	4.5	4.3	
20	3.9	3.8	4.1 ^F	3.8 ^F	3.1 ^F	3.8 ^F	4.9	5.5	5.7	6.9	7.6	6.5	6.6	7.4	6.7	6.6	6.6	6.2	6.8	7.3	6.6	5.2	4.2	4.2	
21	4.1 ^F	4.0 ^F	4.0 ^F	3.9 ^F	3.7	4.1	5.2	5.9	5.8	5.5	6.0 ^F	6.5	7.0	8.1	7.9	7.6	6.3	5.5	5.5	6.5	6.9	6.1 ^J	4.0	3.5 ^F	
22	3.5 ^{VF}	3.5 ^{VF}	3.5 ^F	3.3 ^F	3.0 ^F	3.9	5.5	5.8 ^P	6.0 ^J	6.2	6.3	7.4	7.7	8.0	6.4	6.5	7.1	6.9	6.5	6.5	4.8	(3.9) ^F	3.7	3.6 ^F	
23	3.8 ^F	3.7 ^F	3.6 ^F	2.9 ^F	2.9 ^F	3.9	5.7 ^T	5.5	6.0	7.0	6.5	6.9	7.1	7.0	6.6	6.8 ^J	6.5	5.7	5.3	5.9	5.9	5.5	4.7	4.4	
24	3.8	4.0	3.9 ^F	3.9	3.4	3.9	5.5	6.4	7.2	6.4	6.5	6.5	7.3	7.3	7.2	7.0	6.9	6.2	6.0	6.7	6.4	6.5	5.9	5.4	
25	5.1 ^F	5.0 ^F	4.9 ^F	4.5 ^F	3.3	3.5	5.0	5.1	5.4 ^J	5.0	G	5.6	6.5	6.7	6.0 ^T	6.5	6.4	5.9	5.8	5.6	5.9	5.0 ^F	5.0	4.9	
26	4.8	4.6	4.6	4.6	3.7	3.9 ^F	4.5	4.8 ^H	5.1	5.7	6.5	6.7	7.6	6.8	7.4	6.4	6.4	6.4	5.9	6.1	7.3	6.6	6.1	(5.0) ^F	
27	5.2	4.8	4.1	4.4	3.8 ^S	4.1	4.9	6.6	6.1	6.0	6.6	6.1	7.2	6.6	6.5	6.8	7.2	6.8	7.5	7.6	6.3	5.3	4.9	(4.6) ^P	
28	4.0 ^F	4.4	3.6 ^J	3.3	3.0 ^F	(3.6) ^P	4.0	5.9 ^T	6.0 ^J	6.9	(5.5) ^S	6.5	7.6	8.1	8.0	8.0	8.0	7.5	7.9 ^F	6.9	6.2	6.0 ^J	4.9	5.9 ^F	
29	5.9	5.5	5.2	5.4	4.2	4.1	4.8	5.7 ^T	6.1	6.1	6.5	7.1	7.3	7.6	8.6	9.7	8.5	1.8 ^D	7.7	7.6	5.9	5.7	5.8	5.5	
30	5.3	5.3	5.2	4.7 ^F	3.9 ^F	4.2	4.8	(5.6) ^A	6.5	6.3	[6.2] ^A	6.2	6.9	6.5	7.2	8.1	7.1	6.8	6.2	6.5	5.9	5.2	5.3	4.9	
31																									
Mean Value	4.1	4.1	4.0	3.8	3.4	3.7	4.7	5.5	5.9	6.3	6.8	7.0	7.2	7.2	7.1	6.9	6.8	6.3	6.4	6.6	6.0	4.9	4.5	4.4	
Median Value	4.0	4.0	3.8	3.8	3.3	3.6	4.8	5.5	5.9	6.2	6.5	7.0	7.2	7.0	6.9	6.6	6.6	6.2	6.2	6.6	5.9	4.8	4.5	4.3	
Count	29	29	29	29	29	29	29	29	29	28	28	29	29	29	30	30	30	30	30	30	30	30	30	30	30

f_oF₂

Sweep 0.25 Mc to 22.0 Mc in 2 min

Manual

Automatic

A1

Lat. 39° 43.5' N
Long. 140° 08.3' E

IONOSPHERIC DATA

Akita

Apr. 1955

R'F2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	08	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	330	330 ^A	310 ^F	280	290	260	250	260	290	320	300	290	280	310	280	290	270	280	250	240	240	280	310	320	
2	340	300	250	250	260	240	250	250	250	250	300	300	300	340	310	290	290	290	260 ^A	250	250	270	300	320 ^F	
3	350 ^F	300 ^F	320 ^F	290 ^F	270	270	250	250	300 ^L	340	340	310	310	A	300	290	340	280	280	250	250	270	310	320	
4	300	300	290	300	250	250	280 ^L	280 ^L	320	320	340	320	300	280	310	290	290	290	280	270	250	270	330	300	
5	290	300	290	280	290	290	240	270	260	A	300	300	350	310	290	250	270	270	280	260	260	260	290	290	
6	330	340 ^F	330	290	240	290	250	250	300	330	350	310	310 ^A	330	310	300	280	270	270	270	260	280	350	310	
7	330 ^F	290	260	240	280	300	250	270	290	300	300	320	310	350	300	300	280	260	250	240	260	270	340	290	
8	270	300	270	250	250	280	240	260	250	C	C	300	M	M	310	300	300	280 ^L	270	280	260	250	250	290	
9	300	310	280	230	290	260	250	280	370	330	300	310	310	310	320	300	270	280	270	270	240	270	320	300 ^F	
10	300	320	290	270	240	270	280	260	290 ^L	330	310	310	280	300	360 ^L	310	310	290	270	270	250	250	330	330 ^F	
11	310 ^F	280	250	210	300	270	280	260	340	300	280	280	330	300	300	200	300	280	280	260	250	250	290	300	
12	300	300	300 ^F	260	290	290	250	250	300	300	320	300	340	280	310	310	270	260	260	290	270	270	320	300	
13	290	260	250	290	290	290	260	290	300 ^A	300	290	300	340	320	310	330	300	280	280	260	240	A	340	340	
14	300 ^F	300 ^F	300 ^F	300 ^A	290	290	250	250 ^H	310	320	340	300	340	340	310	290	290	290 ^C	280	280	250	230	270	360	330
15	310	350 ^F	250	240	260	270	270	290	300	300	320	310	330	300	330	310	300	300	280	240	240	250	270	310	
16	300	300	280	250	240	250	250	290	300	300	340	330	300	300	320	310	280	270	270	270	240	250	320 ^F	340 ^F	
17	C	C	C	C	C	C	C	C	C	C	C	C	C	360	340 ^L	310	300	290	290	260	250 ^A	250 ^A	300	330	
18	320	300	290	250	270	260	250	280 ^L	300	350	300	320	350	310	300	310	300	290	270	270 ^A	260	300	320	320	
19	310	310 ^F	300 ^F	300 ^F	260 ^F	250	250	280 ^A	320	320	310	330	340	310	330	340	300	300	270	270 ^A	260 ^A	300	320	320	
20	310	290	280	250 ^H	250	250	250	250	290	330	310	300	350	340	350	310	300	300	270 ^A	270 ^A	250	270	270	290	
21	300	320	300 ^F	270	260	250	250	280	300	300	340	350	360	360	330	330	300	310	280	280	250	250	270	300	
22	340 ^F	310	280	260	270	270	280	290	290	340	320	340	330	310	330	340	290	280	240	240	250	240	240	300	
23	330 ^F	290 ^F	290 ^F	250	300	280	270	280	340	300	340	330	330	330	320	300	290	270	260	240	250	250	250	350 ^F	
24	300	300	290	250	280	260	260	280	290	300	300	350	330	330	320	300	290	270	250	270	280	280	270 ^F	300 ^F	
25	350 ^F	310 ^F	280 ^F	250 ^F	260	270	300	330	370	300	G	450	360	340	350	340	300	290	270	250	290 ^A	270	330	330	
26	300	300	290	250	290	250	250	L-H	L	350	360	360	320	350	300	310	320	360 ^L	290	270	270	270	270	300	
27	300	260	290	260	260	250	270	270	300	340	300	360	350	310	320	300	290	270	240	240	250	280	280	300	
28	320	310	290	240	360	270	340	350	330 ^M	350	340	490	340	320	320	320	300	300	270	240	290	300	300	330	
29	310	300	290	250	240	250	260	300	300	320 ^M	350	340	350 ^A	340	330	300	280 ^A	260	260	250	270	300	300	330	
30	310	270	250	240 ^F	240 ^F	290	A	A	330	350	360 ^A	380	350	350	340	300	300	270 ^A	270	270	260	270	310	320	
31																									
Mean Value	310	300	280	260	270	270	260	280	310	320	320	330	330	320	310	300	300	290	270	260	260	270	300	310	
Median Value	310	300	290	250	260	270	250	280	300	320	310	320	330	320	310	300	300	290	270	260	250	270	300	310	
Count	29	29	29	29	29	29	28	27	28	27	28	29	29	29	28	30	30	30	30	30	30	29	30	30	

R'F2

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual Automatic

A2

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

Lat. 39° 43.5' N
Long. 140° 08.3' E

IONOSPHERIC DATA

Akita

fEs

Apr. 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	28	35	31	21 ^Y	22	23	35	G	G	4.6	4.5	4.5	4.8	3.6	3.5	3.3 ^Y	3.1	3.5	3.2	2.9	2.9 ^Y	E	E	E	
2	30	35	E	3.0	E	E	28	3.5	3.5	3.5	4.5	5.4	5.5	5.7	3.5	G	3.4	5.5	3.0	6.4 ^Y	7.0 ^Y	3.0	4.2	E	
3	E	2.3 ^Y	2.3	3.0 ^Y	2.5	E	G	G	G	4.5	5.7	4.9	5.8	6.5	3.5	2.9	2.5	2.8	2.4	2.4	2.4	2.0	E	E	
4	E	1.6 ^Y	1.7	2.5	3.1	2.9	G	G	G	4.5	4.2	4.2	4.3	4.5	3.5	3.5	3.9	3.4	3.0	2.5	3.5	6.2	3.5	2.7	
5	30	21	2.4	2.4 ^Y	2.1 ^Y	E	G	G	G	6.4	4.0	3.5	3.5	3.5	4.5	4.0	3.5	3.0	4.5	3.5	2.4 ^Y	2.2	2.1 ^Y	E	
6	2.6	3.0 ^F	3.3	2.6	2.5	3.5	G	3.3	G	G	G	4.5	6.6	8.0	5.0	3.5	3.0	4.6	3.5	2.6	2.5	2.2	3.0	2.8	
7	2.4	1.5	2.8	1.7	2.3 ^Y	E	2.6	G	4.1	G	4.0	G	4.0	3.5	G	3.0	G	3.1	E	2.2	2.2	2.0	2.6	1.8	
8	E	1.8	E	1.9	1.9	2.4 ^Y	2.3	3.4	4.5	C	4.3	M	M	M	M	G	3.5	2.8	3.4	3.5	M	E	E	E	
9	E	2.1	1.7	1.8	2.3	2.5 ^Y	G	3.0	4.1	6.0	G	4.7	4.4	4.2	3.8	3.6	4.5	3.5	3.5	2.8	3.1	2.3	2.2	2.1	
10	E	3.5	1.6	2.1 ^Y	1.8	2.1	2.5 ^Y	G	G	4.1	G	3.3	G	4.1	4.4	3.5	3.5	2.9	2.6 ^Y	2.4	E	E	E	2.0	
11	E	E	1.6	1.8	E	2.6	4.3	G	G	G	G	G	4.0	4.0	3.5	3.5	3.5	3.5 ^Y	2.4 ^Y	2.4 ^Y	E	E	E	E	
12	E	2.5	2.5	2.3 ^Y	E	2.2	G	G	G	G	3.5	G	4.5	3.5	G	4.5	4.2	3.2 ^F	3.5	2.6	2.4	2.5	E	E	
13	E	1.6	1.6	1.6	E	2.1	3.2	G	6.3	5.1 ^F	5.0	6.5	4.5	3.5	G	G	3.5 ^Y	G	4.5	4.0	2.7	6.5 ^Y	4.5	3.0	
14	3.0	3.0	2.5	3.5	4.0	2.8	G	3.0	4.3 ^Y	4.4	G	G	4.5	6.1	G	G	C	G	2.7	3.4	3.8	4.3	3.0	1.9	
15	2.2	1.8	2.1	E	2.2 ^Y	3.0	4.0	4.0	7.2	6.5	9.6	7.1	6.9	5.0	3.5	G	3.4 ^Y	G	2.7 ^Y	2.4	4.0	3.5	2.3	3.1	
16	4.1	2.6	E	2.4 ^Y	E	2.8 ^Y	3.1 ^Y	G	G	G	G	G	G	G	G	G	G	G	3.0	3.0 ^Y	3.0	4.1	3.7	4.2	
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	3.5	3.5	2.7	3.5	3.0	1.8	E
18	2.2	2.0 ^Y	2.0	1.7	2.0	2.0 ^Y	G	G	G	G	4.2	G	G	5.0	5.6	4.2	4.5	3.5	5.2	4.5	4.5	3.0	2.8	3.5	
19	3.2	3.0	2.7	2.8	3.0	G	G	5.1	4.1	5.5	4.9	4.5	4.5	4.7	5.5	4.9	G	4.0	4.5	5.3	4.4	1.9	1.8	1.9	
20	E	1.6	2.2 ^Y	1.6	E	E	G	G	G	G	G	4.6	4.5	4.5	G	G	G	G	3.5	4.8	4.0 ^Y	2.5	1.9	E	
21	E	2.7 ^Y	2.2 ^Y	2.5 ^Y	2.3	2.5	2.7	3.1 ^Y	4.3	4.5	G	4.4	G	G	G	G	G	G	3.1 ^Y	2.9	3.5	2.2	2.2	2.2 ^Y	
22	E	1.9 ^Y	2.4	E	2.1 ^Y	2.4	G	3.1	G	G	4.0 ^Y	G	4.2	4.1 ^Y	3.5	3.5	G	G	3.0	2.4	2.7	2.8	3.1	3.4	
23	2.3 ^Y	2.6	2.5 ^F	2.5	2.2 ^Y	3.2 ^Y	G	G	G	4.5	G	4.0	3.5	4.0	3.5	3.5	3.5	3.3	2.7	2.5	2.1	1.8	2.2 ^Y	2.0 ^Y	
24	E	E	2.3 ^Y	E	E	2.4	G	G	G	G	G	G	G	6.0	G	G	G	4.0	4.2	4.1	3.5	2.9	E	E	
25	E	E	3.0 ^Y	E	2.3 ^Y	G	G	G	G	4.5	4.9	G	G	G	G	G	3.3	G	2.4	3.0	5.0	2.0	2.2	2.6	
26	2.3	3.1	3.0	2.8	2.5 ^Y	2.4 ^Y	G	G	G	G	3.5	6.3	3.8	3.5	3.1	3.3	G	1.8	2.2	2.1	E	E	E	2.4	
27	2.1	1.7	2.2	2.0	2.1	2.6	G	G	G	6.5	3.5	3.5	5.0	7.7	G	G	3.4	3.1	2.9 ^Y	2.8	2.6	2.6	E	2.3	
28	2.4	2.6	2.9	2.3	E	G	G	G	G	G	5.0	4.3	5.0	7.7	G	4.5	4.9	3.5	G	E	E	E	2.1	E	
29	2.1	1.6	2.6 ^Y	E	E	2.3 ^Y	3.7	4.5	4.5	G	4.6	6.5	7.3	5.5	5.1	5.6	7.2	7.1	3.2	2.4	E	2.1	E	2.2	
30	2.0	2.1	2.5 ^Y	2.3 ^Y	E	3.0 ^Y	4.8	5.5	6.5	5.5	7.5	5.5	6.6	3.3	6.5	6.5	5.2	6.4	3.6	2.6	2.6	3.2	2.9	3.5	
31																									
Mean Value	2.6	2.4	2.4	2.3	2.4	2.6	3.3	3.7	4.9	5.1	4.9	4.8	4.9	5.0	4.2	3.9	3.8	3.8	3.3	3.1	3.3	3.0	2.7	2.6	
Median Value	2.1	2.1	2.3	2.1	2.1	2.4	2.9	2.9	3.8	3.8	4.0	4.3	4.2	4.1	3.5	3.4	3.4	3.2	3.0	2.8	2.7	2.2	2.2	2.0	
Count	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.9	2.9	2.8	2.9	3.0	2.9	3.0	3.0	3.0	2.9	3.0	3.0	3.0	

fEs

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual

Automatic

Lat. 36°42.4' N
Long. 139°28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Apr. 1955

foF2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.4	3.5F	3.8	3.4	3.3	3.0	5.3	5.5	5.4	6.8	7.4	8.7	8.7	7.9J	7.5P	6.1	6.0	7.1	8.5	7.5P	4.6	3.8	3.8	3.9
2	3.9	3.9	4.0	3.4	3.1	3.0F	4.3	5.4	5.9	6.6	6.1	7.1	8.7	6.8	6.9	7.0	6.9	7.0	7.1 (6.9)P	5.2	3.4	3.4F	3.2F	3.2F
3	3.0F	3.0F	3.0F	3.3F	2.7F	3.0	4.4	5.0	5.4	6.6	7.1	7.6	7.9J	8.3	7.9	7.3	6.9	6.3	6.4	7.4P	5.7	3.9	3.9	4.2
4	4.2	4.1	4.0	3.8	3.6	3.5	4.2	4.8	5.7	6.8	7.1	7.0	8.7	8.7	7.0	6.8	6.5	6.2	7	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	5.4	6.9	8.1J	8.5	(9.9)P	9.2	6.6	5.5	6.1	7.1	7.0P	6.4	4.8	4.0P	4.2F
6	4.0F	4.0J	3.9P	3.9F	3.5F	2.9	4.5	5.0	5.4	5.5	6.5	7.9J	7.8J	7.3	8.0J	6.8	7.0	6.5	5.2	5.2	5.2	4.4	4.3	4.4
7	4.2	4.3	4.5	3.2	2.7	2.8	5.2	6.0	6.0	6.5	6.2	6.7	7.9P	7.8P	8.4	8.7	7.3	6.5	6.0	5.7	4.6	4.3	4.2	4.3
8	4.3	4.0	4.1	4.1	3.4	3.4	5.2P	6.7	6.3	6.1	[6.6]C	7.1	7.1	8.0J	8.1J	(7.4)P	6.6	6.8	6.6	7.2	6.5	4.9	3.9	4.0
9	4.0	3.9	3.3	3.6	3.1F	3.4F	5.1	5.6	6.7	6.6	8.0P	8.0P	8.2J	8.6	7.8P	8.4	8.5	7.9J	7.3	(8.0)P	6.9	3.1	3.4F	3.9P
10	3.7P	4.2P	4.7F	4.5F	2.7F	2.8	4.6	5.3	5.4	6.0	7.2	8.5	[7.8]C	7.0	7.2	7.0	6.8	7.2	7.4	6.5	5.4	4.5	4.4P	4.4
11	4.0F	4.4	4.5	4.1	2.3	2.7	4.5	5.5	6.7	7.9P	8.8	7.5	6.4	6.9	6.7	6.5	6.7	6.6	7.0	7.0	7.0	4.5	3.9	3.8
12	3.7	3.6	3.6	3.2P	3.1F	2.9	5.0	6.0	6.4	7.2	7.5	8.8	10.2	8.7	6.6	7.1	8.0P	7.7P	5.7	5.9	5.7	4.8	4.4F	4.4P
13	4.5	4.1	3.1	3.0	3.0F	3.0	5.0	6.5	7.0	7.4	7.4	6.9	6.7	7.2	7.1	8.2J	8.7J	7.5	6.5	5.8J	5.2	3.3	3.3F	3.4F
14	3.7P	3.4P	3.5P	3.3P	3.0F	3.0	4.9	6.5	6.7	6.9	7.4	8.6	(8.1)J	7.8P	7.8P	9.2P	7.7	7.1	7.4	(8.0)P	5.5	2.5F	2.7F	3.0F
15	3.0F	2.9	3.1	2.9	2.0F	3.0	5.4	5.6	6.3	6.6	7.2	7.1	8.1P	7.4	6.9	7.3	7.1	6.6	7.2	8.0P	7.2	A	3.2	3.4P
16	3.5	3.6	3.6	3.1P	3.1	3.2	4.6	5.9	6.1P	6.0	6.5	7.2	7.9	7.5	7.1	7.0	6.6	5.9	5.8	7.0	6.7	4.2	3.8P	3.8
17	3.6F	3.7F	3.5	3.7	3.6	3.4	5.0	5.9	7.0	(7.4)P	6.0	6.2P	6.8	7.0	7.2	7.8P	7.1	6.5	7.1	(8.9)P	6.1	3.6	3.5	3.7
18	3.6	3.8	3.5	3.1F	3.2	3.4	4.9	5.5	5.5	6.5	6.6	6.0	6.6	6.9	6.8	7.6	7.7	8.2	7.4P	7.1	5.4	3.9	4.0	4.0
19	3.6	3.5	3.5F	3.4	3.3	3.5P	4.8	5.4	6.2	6.0	5.9	6.5	6.9	7.9P	8.1P	8.1P	8.1P	C	C	C	4.8	4.2	4.1	4.2
20	4.2	4.0	(3.5)P	3.9F	(2.9)F	3.1	4.7	5.5	6.0	(7.6)P	7.5	7.0	7.3P	(7.4)P	7.4	8.0P	6.9	6.4	7.2	7.8	6.7	4.5	4.2F	4.4F
21	3.5F	4.0F	3.9P	(3.6)F	3.3F	3.9	4.9	5.9	6.4	(6.0)M	5.5	6.4	7.5	8.7	8.6	8.7	7.3	7.3	6.4	7.4P	7.5	5.0	3.4	3.3
22	3.0	3.0	3.0	3.0	2.8	3.6	5.6	6.3	(6.2)C	6.2	6.4	7.9P	7.9P	8.2	7.9P	7.6P	7.9	7.8P	7.5	6.5	4.8	3.1	3.4	3.3
23	3.3F	3.4	3.4	3.0F	3.2	3.8	5.9	5.9	5.7	7.2	7.1	7.3	8.0	8.6	8.5P	7.2	6.5	6.0	5.6	6.3	6.5	5.4	4.5	4.5
24	4.4	3.9J	4.0	3.6	C	3.8	6.0	6.5	6.2	6.7	6.5	7.3P	8.3	8.5	8.3	8.3P	7.9P	6.4	6.5	[6.6]A	6.6P	5.6	F	(5.8)P
25	(5.1)P	4.4F	4.4F	4.3	3.0F	3.9J	5.9	[6.2]C	6.4	5.6	(5.8)M	6.5	(8.0)P	8.5	(7.5)P	6.7	7.2	6.3	6.0	5.9	5.9	4.4	(3.8)P	(3.9)P
26	4.1P	4.4	4.5	3.6	3.0	3.6	4.8P	4.6	5.4	5.8	6.6	7.0	8.0P	8.0P	8.9	7.2	6.6	6.1	6.6P	7.4P	7.3	6.0	5.1	5.4J
27	5.0	4.4P	4.6	4.1	3.5	4.4	(5.0)P	6.2J	6.7	6.0	6.1	6.7	8.0P	8.5	8.1	7.6P	7.5P	7.2	7.3	7.9P	6.5	5.2	4.9	4.7
28	4.4	4.4P	4.5	7.3P	2.8	3.6J	4.0	5.6J	8.0P	6.2H	6.2	6.0	8.0P	(8.5)P	8.9	[8.7]A	8.5	8.3P	8.5	7.9P	5.2	5.4	5.4	5.4
29	5.4P	5.4	4.9	5.1	3.7	4.3	5.5	5.0	6.5	6.4	5.9	7.8P	8.0P	7.9	8.8	10.3	10.1	9.5	(9.0)P	7.9P	5.5	5.4P	5.4	5.5
30	5.5	5.4	5.7	4.5	2.6	3.3	5.3	6.7	6.8	[6.7]A	6.6	[6.9]A	7.2P	7.0	8.5	8.9	8.1P	7.2	6.7	7.0	5.5	A	4.9	4.9
31																								
Mean Value	4.0	4.0	3.9	3.7	3.1	3.4	5.0	5.7	6.2	6.5	7.1	7.3	7.8	7.9	7.8	7.7	7.3	6.9	6.9	7.1	5.6	4.3	4.1	4.2
Median Value	4.0	4.0	3.9	3.6	3.1	3.4	5.0	5.6	6.3	6.6	6.6	7.1	8.0	8.0	7.9	7.5	7.2	6.6	7.0	7.0	5.7	4.4	4.0	4.2
Count	29	29	29	28	28	29	29	29	29	30	30	30	30	30	30	30	30	29	28	28	29	27	28	29

foF2

Group 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 1

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Apr. 1955

f_oF₂

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	340	360 ^F	320	320	330	290	250	250	290	300	310	310	280	(300) ^N	270 ^F	280	310	300	290	260 ^F	260	360	380	380	
2	360	330	280	310	300	290 ^F	240	240	260	260	290	330	260	280	280	290	300	280	270	(260) ^F	250	310	350 ^F	350 ^F	
3	380 ^F	350 ^F	330 ^F	300 ^F	330 ^F	310	250	240	270	280	290	280	(270) ^F	310	300	280	270	270	300	270 ^F	250	350	350	340	
4	330	340	320	320	320	280	250	270	290	290	310	320	310	280	280	280	270	280	T	C	C	C	C	C	
5	C	C	C	C	C	C	C	C	260	310	(330) ^F	(330) ^F	360	(300) ^N	280	260	260	280	290	280 ^F	260	350	330 ^F	380 ^F	
6	340 ^F	(350) ^F	360 ^F	310 ^F	270 ^F	310	260	240	280	350	320	(300) ^F	(300) ^F	310	290 ^F	290	270	250	270	300	290	330	390	370	
7	370	320	270	260	330	340	260	260	260	280	300	320	310 ^F	310 ^F	320	260	270	260	270	270	310	330	380	330	
8	320	350	330	290	310	320	250 ^F	250	250	270	(280) ^F	290	300	(310) ^N	(300) ^F	(270) ^F	280	290	300	290	270	290	330	360	
9	330	340	360	260	300 ^F	320 ^F	250	240	260	300	300 ^F	310 ^F	(300) ^F	300	320 ^F	320	300	290 ^F	290	(280) ^F	240	310	350 ^F	(340) ^F	
10	(360) ^F	(350) ^F	310 ^F	260 ^F	230 ^F	340	240	250	280	290	300	310	(320) ^F	320	300	300	290	290	290	280	280	270	370	360 ^F	
11	380 ^F	350	310	250	360	340	260	260	290	300 ^F	280	260	290	290	290	290	290	290	290	290	260	250	350	360	
12	350	320	300	260 ^F	370 ^F	320	270	280	280	290	300	330	280	280	300	310	300 ^F	270 ^F	290	300	290	330	410 ^F	350 ^F	
13	330	270	310	330	350 ^F	320	280	270	270	310	270	290	340	310	330	(320) ^F	280 ^F	250	260	(260) ^F	260	360	410 ^F	360 ^F	
14	(360) ^F	(330) ^F	300 ^F	310 ^F	320 ^F	300	260	270	270	290	330	310	(310) ^N	B	B	280 ^F	290	300	280	(270) ^F	230	400 ^F	390 ^F	380 ^F	
15	340 ^F	340	290	220	300 ^F	290	250	250	280	280	290	290	290 ^F	310	310	290	290	280	280	260 ^F	230	A	340	(360) ^F	
16	330	330	300	(260) ^F	260	290	280	270	(260) ^N	300	320	320	290	300	280	270	270	260	290	290	250	270	(340) ^F	340	
17	350 ^F	350 ^F	310	300 ^F	250	290	270	270	270	(270) ^F	310	(310) ^F	310	310	280	(290) ^F	260	290	290	(260) ^F	220	320	350	340	
18	330	320	290	270 ^F	270	280	250	260	270	270	270	270	300	300	300	290	290	270	260 ^F	250	250	350	350	320	
19	340	320	320 ^F	310	290	300 ^F	230	260	A	270	310	300	300	(300) ^F	300 ^F	310 ^F	(270) ^N	C	C	C	290	300	330	330	
20	330	320	(310) ^F	300 ^F	(260) ^F	270	240	260	280	(270) ^F	250	300	300	300	(300) ^F	300	(280) ^F	270	310	280	270	250	300	320	
21	310 ^F	330 ^F	(330) ^F	(260) ^F	270 ^F	270	250	250	260	M	M	360	330	310	280	290	270	290	300	290 ^F	260	220	320	350 ^F	
22	380	350	310	270	330	300	250	250	(260) ^F	260	350	(310) ^N	300 ^F	310	290 ^F	300 ^F	290	290	(280) ^N	250	230	330	350	390	
23	350 ^F	320	300	290 ^F	310	270	240	240	270	280	290	320	290	290	(290) ^F	280	270	250	270	290	270	280	330	330	
24	350	(320) ^F	310	C	C	310	250	250	260	270	320	310 ^F	310	310	300	290 ^F	(280) ^F	260	A	A	300 ^F	340	F	(310) ^F	
25	(330) ^F	390 ^F	320 ^F	280	310 ^F	(300) ^F	280	(300) ^F	310	290	(300) ^F	360	(300) ^F	300	(280) ^F	310	280	270	270	280	280	310	(350) ^F	(350) ^F	
26	320 ^F	330	300	280	300	250	250 ^F	240	290	310	310	310	320 ^F	(330) ^N	280	280	290	300	320 ^F	300 ^F	290	290	330	(330) ^F	
27	340	300 ^F	290	300	310	280	(270) ^F	(250) ^F	280	270	U	380	320 ^F	310	300	290 ^F	290 ^F	280	270	280 ^F	270	270	290	350	
28	330	(310) ^F	280	C	390	(290) ^F	250	(330) ^F	(220) ^F	C	350	U	(340) ^F	(290) ^F	A	A	A	300 ^F	270 ^F	270 ^F	350	380	360	390	
29	360 ^F	360	360	290	310	270	250	250	300	270	300	(310) ^F	(330) ^F	330	350	310	280	290	280 ^F	270 ^F	330 ^F	340 ^F	360	370	
30	340	300	270	240	310	310	280	270	260	(290) ^N	320	(300) ^N	290 ^F	320	310	280	(270) ^F	270	280	260	300	A	340	350	
31																									
Mean Value	340	330	310	280	310	300	260	260	270	290	300	310	310	300	300	290	280	280	280	280	270	270	320	360	360
Median Value	340	330	310	290	310	300	250	260	270	280	300	310	300	310	300	290	280	280	280	280	270	260	330	350	350
Count	29	29	29	27	28	29	29	29	28	28	28	29	30	29	28	29	29	29	27	27	29	27	28	29	

K2

Automatic

Manual

Sweep 1.0 Mc to 17.2 Mc in 2 min

f_oF₂

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

Lat. 35° 42.4' N
Long. 139° 28.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Apr. 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	290	300	260	240	260	240	230	230	270	300	290	280	270	280	260	270	250	270	250	230	210	280	320	310
2	280	260	230	230	240	250	220	230	250	260	290	320	250	280	280	280	270	270	250	220	210	240	320	330
3	350	300	300	260	280	240	220	240	260	280	280	270	260	280	280	260	260	250	250	230	210	270	300	280
4	270	280	260	260	250	230	230	230	290	280	280	300	280	270	280	270	270	260	250	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	260	300	310	310	280	250	260	260	270	250	240	230	250	270	300
6	300	300	310	260	220	260	230	240	280	350	320	290	290	300	280	280	260	230	230	250	240	250	320	300
7	300	270	230	210	260	300	230	250	260	280	290	320	300	300	300	260	250	240	230	230	230	250	330	280
8	260	280	270	240	230	260	230	250	250	270	280	290	300	300	280	270	270	270	250	250	230	230	250	300
9	290	280	300	220	250	270	230	230	250	300	280	300	280	280	270	280	270	260	270	270	210	250	300	310
10	300	290	250	230	200	280	230	250	280	290	290	290	300	300	300	290	280	270	240	230	230	230	310	300
11	320	280	240	210	280	280	240	260	280	280	270	250	290	290	300	280	280	270	250	240	230	210	260	320
12	290	270	230	220	290	270	240	260	280	280	290	310	270	260	290	300	280	250	250	250	240	240	320	280
13	270	220	230	270	300	280	270	270	260	290	270	280	340	310	320	300	270	250	240	240	220	320	300	320
14	300	280	240	240	280	270	230	270	270	280	320	280	290	300	280	260	270	280	240	230	210	320	350	350
15	290	290	250	200	270	250	240	240	280	280	280	280	280	280	300	280	280	260	250	230	210	260	320	320
16	280	280	250	230	220	240	230	270	260	290	320	320	280	280	270	270	270	260	250	240	220	230	270	310
17	300	300	290	250	210	260	240	270	270	270	310	310	310	310	300	280	260	270	260	230	200	270	290	290
18	280	270	250	220	230	230	230	250	250	270	270	270	300	300	300	280	270	250	230	220	210	240	290	270
19	270	270	250	250	230	250	230	250	270	270	310	300	290	280	280	280	260	C	C	C	C	290	230	280
20	280	270	250	220	200	250	230	260	280	270	250	300	300	300	290	280	270	270	270	270	210	220	290	260
21	260	280	260	230	230	240	220	240	260	M	M	330	320	290	270	270	250	250	260	240	220	200	250	270
22	320	300	270	220	270	250	230	230	250	260	350	300	270	300	280	290	260	250	230	210	200	250	280	330
23	300	270	250	210	250	240	230	240	250	270	290	310	290	280	270	270	270	240	240	240	230	230	270	260
24	270	280	250	240	C	250	230	240	260	270	310	300	290	290	A	270	270	270	240	240	210	250	290	260
25	290	310	250	230	250	250	280	280	280	290	270	300	300	280	270	300	260	240	240	260	230	250	300	310
26	280	270	240	210	220	230	230	240	290	310	310	310	310	310	270	270	280	280	280	250	230	230	240	270
27	270	250	240	230	240	240	260	240	280	270	380	380	310	290	280	280	270	260	250	230	220	240	290	270
28	280	270	250	200	330	260	240	330	220	C	L	360	330	270	A	A	A	280	230	230	230	290	300	270
29	290	280	260	230	190	240	230	240	300	270	280	290	320	300	320	280	260	250	240	210	210	280	300	350
30	320	280	220	220	250	270	260	260	250	280	320	300	300	320	300	260	250	250	230	230	230	A	300	290
31																								
Mean Value	290	280	250	230	250	250	240	250	270	280	300	300	290	290	280	270	270	260	250	240	220	260	300	300
Median Value	290	280	250	230	250	250	230	250	270	280	290	300	290	290	280	270	270	260	250	230	220	250	300	300
Count	29	29	27	29	29	29	29	29	29	28	28	30	30	30	29	29	29	29	29	27	29	28	29	29

R'F2

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K3

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

IONOSPHERIC DATA

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

foF1

Apr. 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							Q	Q	L	4.4	4.5	A	B	4.5	4.3	4.0L	A							
2							Q	Q	4.0	4.2	4.3	A	A	A	A	4.2	A	L						
3							Q	Q	L	4.2	4.4	4.5	A	A	4.4	4.2	3.6	2.8L						
4							Q	Q	4.1L	4.2	4.4	4.3	4.5	4.4	4.3	4.2	3.8	L						
5							C	C	C	4.2	4.5	4.5	4.4L	4.5	4.3	4.0	L	L						
6							L	3.4L	4.2L	4.5H	4.2H	4.4	4.5	4.4	4.2	4.1	3.7	L						
7							Q	3.6L	4.0	4.4	4.4	4.5	4.5	4.5	4.4	4.3	3.9	L						
8							Q	3.7	4.2	4.3	[4.4]C	4.5	4.5	4.5	4.4	[4.2]A	4.0	3.5L						
9							Q	3.5	4.1	4.5	4.5	4.5	4.6	4.5	4.5H	4.5	4.0	A						
10							Q	L	4.2L	4.3	4.4	4.3	[4.4]C	4.5	4.4	4.2	4.0	3.6L						
11							Q	3.6L	4.1	4.3	4.4	4.4	4.5	4.4	4.4	4.1	4.0L	L						
12							Q	3.7L	4.0	4.4	4.4	4.6	4.5	4.5	4.4	4.2	4.3L	L						
13							L	3.9	4.0	A	A	4.5	4.6	[4.6]A	4.5	4.4	3.9	3.1						
14							Q	3.9L	4.2	4.3	4.5	[4.5]A	4.5	4.5	4.5	[4.2]A	4.0	3.5L	2.4L					
15							Q	3.6L	4.0	4.5	4.5H	4.5	4.5	4.5	4.4	4.2	4.0	3.3	2.5L					
16							Q	4.0L	4.1	4.3	4.4	4.5	4.5	4.4	4.4	4.3	3.9	3.5	Q					
17							Q	A	4.0	4.2	4.5	4.7H	4.6	4.6	4.4	4.4H	4.1	A	A					
18							Q	L	A	4.3	4.4	4.4	4.5	4.6	[4.4]A	4.2	4.1H	3.5	Q					
19							Q	A	A	4.5	A	A	A	A	A	4.2	4.2	C	C					
20							Q	3.9L	4.2	[4.3]A	4.4	4.5	4.5	4.5	[4.4]A	4.2	4.0H	3.5L						
21							Q	3.5	4.2	M	M	4.5	4.6	4.5	4.5	4.2	3.9	3.3	L					
22							Q	3.9	4.0	4.4	4.4	4.4	4.5	4.5	4.5	4.3	4.0	3.5	Q					
23							L	3.9L	[4.1]A	4.3	4.5	4.7	4.5	4.5	4.5	4.3	4.0	3.5L	Q					
24							Q	4.0L	4.1L	4.4	4.5L	4.6	4.7	4.5	4.5	4.4	A	A						
25							3.5	[3.8]C	4.1	4.2	A	4.5	4.6	4.5B	4.4	4.2	4.0	3.5L						
26						Q	Q	A	4.2	4.3	4.8	4.6	4.6	4.6	4.4	4.4	4.0	3.5						
27							L	3.9L	4.2	4.4	5.0L	4.8	4.5	4.6	4.4	4.2	4.0	3.6L	2.5L					
28						Q	Q	4.3	4.0	[4.4]C	4.8L	4.7	A	A	A	A	A	A	2.5L					
29						Q	Q	Q	A	A	4.6L	[4.8]A	4.9	4.4	4.6L	4.5H	4.1	3.9	Q					
30							A	A	A	A	A	A	A	4.6	A	A	A	A						
31																								
Mean Value							3.5	3.8	4.1	4.3	4.4	4.5	4.5	4.5	4.4	4.2	3.9	3.4	2.5					
Mean Value							3.5	3.8	4.1	4.3	4.4	4.5	4.5	4.5	4.4	4.2	4.0	3.5	2.5					
Count							1	18	23	26	25	26	25	26	26	28	25	16	4					

foF1

Sweep 1.0 sec. Me to 17.2 Mc in 2 min

Manual

Automatic

K 4

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

R'F1

Apr. 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							Q	Q	250 ^A	A	A	B	240	220	220	230	A							
2							Q	Q	230	210	A	A	A	A	A	A	A	A						
3							Q	Q	240	220	230	250 ^A	A	A	200	240	240	250						
4							Q	Q	230	230	210	210	B	250	230	240	250							
5							C	C	220	A	A	210	A	230	240	250	250							
6							230	230	210	220 ^H	200 ^H	A	230	220	220	230	220	240						
7							Q	240	230	230	220	200	190	210	210	240	230	240						
8							Q	240	<250 ^C	230	220	220	210	210	B	A	270 ^A	250						
9							Q	240	230	220	210	230 ^A	230	200	200 ^H	250	250	A						
10							Q	240	240	250	240	230	230	230	B	350	280	240						
11							Q	240	230	220	220 ^B	230	200	250	250	230	220	250						
12							Q	230	230	270 ^A	220	210	240 ^A	250	230	230	260	250						
13							250	260	240	A	A	260	210	250 ^A	290	280	260	240						
14							Q	260 ^A	250	230	210	210 ^H	210	230	280	260 ^A	230	250	240					
15							Q	230	210	240	190 ^H	250	200	220	210	230	230	240	250					
16							Q	230	230	210	220	230	210	200	220	200	230	240	Q					
17							Q	A	200	220	230	220 ^H	220 ^C	230	250	220 ^H	A	A	A					
18							Q	240	A	250	230 ^A	210	200	220	220 ^A	220	220 ^H	230	Q					
19							Q	A	A	220	A	A	A	A	A	230	A	C						
20							Q	230	230	240 ^A	250	200	220	270	240 ^A	200	210 ^H	230						
21							Q	230	240	M	M	210	200	250	220	220	230	220	250					
22							Q	230	220	250	250	230	230	220	200	230	230	230	Q					
23							230	230	230 ^A	230	230	220	220	230	230	200 ^A	210	230	Q					
24							Q	230	220	210	230	230	230	200	280	230	A	A						
25							250	240 ^C	240	A	A	230	220	200	280	230	A	A						
26							Q	A	220	230	280	250	210	220	220	230 ^A	240	230						
27							240	240	220	220	230	220 ^C	200	220	210	220	240	240	260					
28							Q	260	220	240 ^C	260	270	A	A	A	A	A	A	230					
29							Q	Q	A	A	A	A	250	230	210	210 ^H	250	250	Q					
30							A	A	A	A	A	A	A	270	A	A	A	A						
31																								
Mean							240	240	230	230	230	230	220	230	230	230	240	240	250					
Median							240	240	230	230	220	230	210	230	220	230	230	240	250					
Value							5	20	24	25	22	23	23	25	23	25	24	22	5					
Count																								

R'F1

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

foE

Apr. 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							B ¹	2.3	2.8	3.0	3.0	3.0	3.0	A	A	2.9	2.4	A						
2							2.1	2.3	2.7	3.0	3.0	3.0	(3.0) ^B	A	A	A	A	2.2						
3							1.9	2.1	2.6	3.0	A	A	A	A	A	2.9	2.6	A						
4							1.9 ^H	2.2	2.7	3.0	3.0	(3.0) ^B	>2.9 ^B	>3.0 ^B	>2.9 ^B	2.9	2.7	2.2						
5							C	C	C	2.9	A	A	A	A	3.1	2.9	2.5	A						
6							1.7	2.4	2.8	2.9	3.0	(3.0) ^A	A	A	3.0	2.9	2.5 ^A	A						
7							1.6	2.3 ^A	2.7 ^A	2.9	2.9	(3.0) ^B	3.2	>2.9 ^B	3.0	3.0	2.6	2.1						
8							1.8	2.4 ^A	[2.7] ^C	3.0	(3.0) ^C	(3.1) ^P	A	>2.8 ^B	A	A	A	A						
9							1.6	2.1	2.7	2.9	(3.0) ^A	(3.0) ^A	3.1	3.0	A	A	2.7	A						
10							1.8	2.2	2.7	3.0	(3.1) ^B	3.2	(3.1) ^C	3.0	A	A	2.7	2.2						
11							(2.1) ^A	2.5	2.9	3.0	3.1	3.1	A	A	3.0	3.0	2.7	2.3						
12							1.9	2.5	2.7	3.0	B	>3.0 ^B	A	>2.9 ^B	A	A	2.6	2.3						
13							A	2.5	2.8	3.0	3.1	3.1	3.2	3.1	3.0	2.8	2.6	2.2						
14							A	A	2.8	3.1	3.1	3.2	3.2	3.1	3.1	2.9	2.7	2.3	A					
15							1.9	2.5	2.7 ^A	3.0	3.1	(3.1) ^B	3.1	A	A	2.9	2.6	2.1	A					
16							2.1	2.5	2.9 ^F	3.0	>3.0 ^B	3.3	>3.0 ^B	3.0	3.0	2.9	2.8	2.3	1.5 ^B					
17							2.1	2.5	2.9	3.0	3.2	3.1	(3.2) ^C	3.2	3.2	2.9	2.7	2.2	(4.5) ^A					
18							1.9	2.7	2.9	3.1	3.2	3.3	>3.0 ^B	3.0	3.0	3.0	2.7	2.3	1.7					
19							1.7	2.6	2.9	3.1	3.2	(3.2) ^B	3.3	3.3	3.1	2.8	2.6 ^F	C						
20							1.7	2.6	2.8	3.2	(3.2) ^A	3.2	3.2	3.2	3.0	2.9	2.8	2.3						
21							1.7 ^H	2.5	2.8	M	M	3.2	3.3	3.2 ^B	3.1	3.0	2.9	2.2	1.5					
22							1.7	2.6	2.8	3.0	3.2	3.2	3.3	>3.0 ^B	B	3.0	2.7	(2.2) ^A	1.7					
23							2.0	2.6	2.9	3.1	3.1	3.1	3.1	3.1	A	A	2.7	2.3	1.5 ^B					
24							2.0	2.5	2.9	3.0	3.0	3.1	3.2	3.2	3.2	A	2.8	2.2						
25							1.9	(2.4) ^C	2.9	3.0	3.1	3.2	>3.0 ^B	3.3	(3.1) ^B	3.0	2.8	2.3						
26							1.5	1.9	2.5	2.9	3.0	>2.8 ^B	>2.7 ^B	>3.0 ^B	A	3.0	2.7	2.3						
27							2.1	2.5	2.9	3.0	3.0	(3.1) ^C	3.2	>2.9 ^B	3.1	3.0	2.8	2.4	1.5 ^A					
28							1.8	2.0	2.5	3.0	(3.0) ^C	3.1	3.2	3.4	3.3	3.2	2.8	2.2	1.9					
29							2.1 ^A	2.5	2.9	3.0	3.2	3.3	(3.4) ^B	3.3	3.1	3.0	2.7	2.3	1.6					
30							2.0	2.5	2.9	2.9	3.3	3.4	3.4	3.3	3.2	3.0	2.8	2.2						
31																								
Mean Value							1.7	1.9	2.4	2.8	3.0	3.1	3.2	3.2	3.1	2.9	2.7	2.2	1.6					
Median Value							1.6	1.9	2.5	2.8	3.0	3.1	3.2	3.2	3.1	2.9	2.7	2.2	1.5					
Count							2	26	28	29	29	24	26	20	16	18	23	28	23	9				

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

f_oE

135° E Mean Time

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

f_oE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K7

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Apr. 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	1.8	E	1.8	1.8	5	2.7	3.9	5.0	5.0	5.6	3.6	3.9	3.0	3.2	2.9	4.9	3.2	3.0	E	E	E	E	
2	1.7	3.5	2.5	2.4	2.4	2.4	5	2.8	3.0	3.2	4.3	5.5	5.9	5.5	6.9	7.0	5.8	4.0	4.5	3.2	3.8	4.3	3.9	3.0	
3	3.4	2.5	2.0	1.7	E	1.7	5	3.8	4.1	4.2	4.3	4.6	5.7	6.6	4.0	5	3.0	2.8	2.2	1.9	E	E	2.0	2.8	
4	1.7	2.4	2.5	2.4	1.9	E	2.5	2.8	2.8	4.1	4.2	5	5	5	5	5	3.0	3.2	4.0	C	C	C	C	C	
5	C	C	C	C	C	C	C	C	C	4.3	7.0	4.3	3.2	5.0	4.6	4.3	3.7	2.9	2.5	6.6	5.2	3.2	4.2	E	
6	2.9	C	2.6	3.0	2.9	1.8	5	2.9	3.4	5	3.4	4.3	3.2	3.2	5	5	3.5	3.0	3.5	3.2	2.8	E	2.8	2.8	
7	2.9	E	2.6	2.4	2.8	1.8	2.9	3.0	3.4	5	3.0	5	5	5	5	3.0	3.1	3.0	1.6	1.9	1.7	2.3	2.8	2.7	
8	2.0	E	2.4	E	2.4	2.7	3.0	3.7	C	3.6	C	4.5	3.2	5	3.2	6.8	4.7	3.0	2.8	3.0	2.4	2.4	E	2.4	
9	2.4	E	E	2.3	E	E	2.8	3.5	3.9	3.5	3.6	4.5	3.5	5	3.5	4.1	3.7	5.6	7.0	6.7	4.5	3.7	3.0	2.7	
10	2.9	E	3.5	2.7	2.5	2.9	5	2.9	3.9	4.4	4.5	3.9	C	3.4	3.0	3.5	3.9	3.0	1.6	2.5	3.5	2.5	2.9	E	
11	E	2.4	1.9	1.9	1.9	E	3.0	3.0	4.2	4.3	4.3	3.6	3.0	3.1	5	5	3.0	2.8	2.9	2.4	2.3	E	1.9	E	
12	E	E	1.9	2.7	1.8	E	2.7	3.0	3.2	4.3	3.5	5	3.9	3.0	4.0	3.0	2.9	2.6	3.1	2.4	3.1	5.0	4.0	3.5	
13	E	E	2.4	E	2.5	2.3	3.0	3.8	4.0	5.0	4.5	3.5	4.3	4.5	5	5	5	3.0	3.7	2.9	4.0	4.4	3.0	3.5	
14	2.8	2.4	1.8	2.4	4.2	2.4	2.4	3.0	4.3	4.3	4.3	5.3	3.6	3.5	5	6.7	2.8	3.5	2.7	3.0	3.8	4.0	4.7	3.0	
15	E	2.0	2.2	2.5	1.9	2.4	5	2.7	3.8	4.2	3.5	4.5	5	5.5	4.0	3.8	5	5	2.5	2.5	2.8	4.2	2.7	3.1	
16	2.7	2.5	2.5	2.3	2.7	E	3.0	2.9	3.0	5	5	3.5	5	5	5	5	5	5	4.1	2.7	2.9	3.0	3.0	4.8	
17	2.9	2.7	3.1	3.6	2.9	3.7	3.0	5.5	4.0	5	3.4	5	C	5	5	5	4.7	5.0	3.8	3.2	4.2	4.4	2.7	3.0	
18	2.5	E	2.0	1.7	E	E	2.9	3.2	4.7	4.5	4.8	3.7	4.0	5	5	4.4	3.2	3.5	3.0	4.0	3.5	E	E	E	
19	2.5	E	2.5	2.5	1.8	E	3.2	4.3	6.5	4.2	5.5	5.2	5.2	8.5	5.9	>5.0	5.5	C	C	C	5.4	3.9	C	E	
20	1.8	E	E	E	1.8	2.4	5	3.2	3.2	4.4	4.5	4.5	3.8	3.5	5	5	2.9	3.0	5.4	5.8	3.2	2.9	3.0	5.0	
21	E	2.3	2.0	E	2.5	E	3.5	2.9	>3.8	M	M	3.5	3.7	4.4	4.3	5	2.9	5	2.8	2.5	2.8	3.5	2.9	E	
22	1.7	E	1.8	2.4	2.4	2.8	2.9	3.0	3.8	3.5	4.7	4.5	3.5	5	5	3.2	3.6	3.2	2.8	2.8	2.4	1.9	2.4	3.2	
23	2.6	1.8	1.9	3.0	1.9	2.5	2.8	4.0	4.6	4.3	5.0	3.7	3.5	3.4	4.2	4.0	3.0	2.5	3.2	2.5	2.5	2.3	2.0	2.3	
24	2.5	E	E	C	C	E	5	2.8	3.4	4.2	4.5	4.5	3.9	5	4.0	4.3	7.0	6.7	6.4	7.5	7.0	4.5	3.0	E	
25	2.4	E	2.4	E	1.9	E	3.4	C	4.4	4.5	5.0	4.0	5	3.6	3.7	4.5	3.2	3.0	2.7	2.4	2.3	4.5	E	4.5	
26	3.1	2.4	E	E	E	2.4	2.5	4.0	3.4	4.3	3.7	5	5	3.4	3.0	4.7	5	2.5	4.3	3.0	E	E	E	1.8	
27	2.8	2.8	2.5	2.3	2.4	2.5	3.1	3.0	3.2	3.2	4.7	C	5	5	3.5	3.1	5	3.2	3.0	2.9	3.5	3.1	3.7	2.5	
28	C	2.4	2.7	C	2.4	2.5	3.5	3.2	5	C	4.2	4.5	7.1	5.2	8.8	9.5	8.3	5.5	2.4	E	E	E	E	3.0	
29	3.1	2.9	2.5	2.3	1.8	E	3.2	4.1	6.0	5.9	5.3	10.0	4.2	5.0	5	3.4	4.3	3.6	5	E	2.3	2.5	3.9	4.4	
30	5.0	4.2	3.0	2.9	3.0	2.4	4.2	5.9	6.0	10.0	5.7	8.3	6.5	5.0	6.2	6.8	5.0	6.6	8.5	2.5	2.9	5.0	7.0	4.5	
31																									
Mean Value	2.7	2.5	2.4	2.5	2.4	2.4	3.1	3.5	4.0	4.4	4.5	4.8	4.2	4.5	4.1	4.7	4.0	3.6	3.6	3.3	3.3	3.5	3.3	3.4	
Median Value	2.5	1.8	2.4	2.3	2.2	1.8	2.9	3.1	3.8	4.2	4.4	4.3	3.6	3.4	3.2	3.4	3.2	3.0	3.0	2.8	2.9	3.0	2.9	2.8	
Count	2.8	2.8	2.9	2.7	2.8	2.9	2.9	2.8	2.8	2.8	2.8	2.9	2.8	3.0	3.0	3.0	3.0	2.9	2.9	2.8	2.9	2.9	2.9	2.8	2.9

fEs

Group 1.0 Me to 17.2 Mc in 2 min

Manual Automatic

K8

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

(M3000)F2

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

K9

Manual Automatic

Swamp 1.0 Mc to 17.2 Mc in 2 min

(M3000)F2

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 36° 42.4' N
Long. 139° 28.3' E

Apr. 1955

fminF

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	1.4	1.4	1.1	E	E	1.4	1.5	2.7	3.5 ^A	3.4	4.0 ^A	5.0 ^A	4.5	4.0	3.5	3.2	2.6	3.2 ^A	2.5	2.3	1.5	1.4	1.5	1.5	
2	1.4	1.4	1.1	E	1.0	1.4	2.1	2.6	3.2	3.3	3.5	4.8 ^A	4.5 ^A	4.5 ^A	4.7 ^A	4.0 ^A	4.3 ^A	3.3 ^A	4.0 ^A	(2.8) ^A	1.5	1.7	2.1 ^A	2.1 ^A	
3	1.5	1.4	1.4	1.4	1.4	1.4	2.0	3.3	3.4	3.5	3.5	4.0 ^A	4.8 ^A	5.4 ^A	3.4	3.4	2.7	2.2	1.5	1.4	1.5	1.5	1.5	1.4	
4	1.4	1.5	1.2	1.0	1.0	1.4	2.2	2.6	2.8	3.4	3.5	3.6	4.2	3.8	3.4	3.5	3.0	2.7	3.0 ^A	C	C	C	C	C	
5	C	C	C	C	C	C	C	C	3.7	4.2 ^A	4.0 ^A	3.5	4.4 ^A	3.6	3.6	3.4	3.0	2.3	1.7	2.3 ^A	1.5	1.7	1.7	1.5	
6	1.5	(1.4) ⁰	1.4	1.5	1.6	1.3	2.0	2.5	2.9	3.2	3.4	4.2 ^A	3.8	3.5	3.5	3.4	2.6	2.3	2.1	2.3 ^A	1.5	1.5	1.9	1.5	
7	1.4	1.4	E	1.4	E	1.3	2.2	2.7	3.3	3.3	3.5	3.5	3.7	4.0	4.0	3.3	2.9	2.3	1.6	1.5	1.4	1.5	2.0	1.5 ^A	
8	1.4	1.4	1.2	1.4	1.0	1.4	2.2	2.9	(4.0) ⁰	3.6	(3.6) ⁰	3.5	3.7	3.5	4.2	6.2 ^A	3.7 ^A	2.4	2.1	2.5	1.5	1.5	1.5	1.5	
9	1.4	1.5	1.1	E	E	1.4	2.3	3.4	3.3	3.5	3.4	4.0 ^A	3.7	3.5	3.3	3.5	3.0	4.8 ^A	5.3 ^A	5.5 ^A	A	1.9	1.4	1.5	
10	1.5	1.4	1.2	1.4	E	1.3	2.4	2.9	3.4	3.7	3.9	3.9	(4.0) ⁰	4.0	4.3	3.8	3.5	2.5	1.8	1.5	(1.8) ^A	2.2	2.0	1.4	
11	1.5	1.4	1.3	E	1.0	1.4	2.3	2.7	3.2	3.6	4.0	3.7	3.5	3.6	3.9	3.2	2.7	2.5	2.1	1.4	1.3	1.5	1.5	1.5	
12	1.5	1.4	1.0	1.2	1.4	1.3	2.1	2.7	3.2	3.8 ^A	3.8	3.9	4.0	3.7	3.5	3.5	3.2	2.5	2.2	1.5	1.5	3.6 ^A	2.1	1.4	
13	1.4	1.4	1.0	1.4	1.4	1.4	2.3	3.4	3.0	4.1 ^A	4.4 ^A	4.0	3.7	4.9 ^A	4.0	3.5	3.2	2.5	2.6	1.6	2.1	2.1 ^A	1.5	1.5	
14	1.4	1.4	1.2	1.2	1.7	1.4	2.6	3.2 ^A	3.6	3.5	3.7	4.5 ^A	3.6	3.7	4.0	5.5 ^A	2.7	2.7	2.0	2.1	2.1	1.5	1.5	2.1 ^A	
15	1.4	1.4	1.2	1.0	1.0	1.4	2.1	2.5	2.8	3.6	3.4	4.0	3.7	3.6	3.3	3.3	2.7	2.3	1.8	1.4	1.9	(2.5) ^M	1.4	1.5	
16	1.5	1.4	1.2	1.4	1.4	1.4	2.3	2.7	3.4	3.4	3.8	3.8	3.8	3.6	3.7	3.3	2.9	2.6	2.2	2.1	2.1	1.4	1.4	2.1 ^A	
17	1.5	1.4	1.5	1.5	1.4	2.2 ^A	2.4	4.9 ^A	3.4	3.6	3.5	3.6	(3.6) ⁰	3.6	3.7	3.4	3.9 ^A	4.0 ^A	3.0 ^A	1.4	2.1 ^A	2.1 ^A	1.5	1.7	
18	1.4	1.4	1.2	E	1.4	1.4	2.4	3.5	3.9 ^A	3.7	4.0 ^A	3.6	4.0	3.6	4.2 ^A	3.4	3.0	2.7	2.6	3.3 ^A	2.5 ^A	1.5	1.5	1.3	
19	1.4	1.4	1.1	1.4	E	1.4	2.4	3.5 ^A	5.5 ^A	3.5	4.8 ^A	4.5 ^A	4.3 ^A	7.3 ^A	4.9 ^A	3.5	4.2 ^A	C	C	C	4.0 ^A	1.5	1.4	1.4	
20	1.4	1.4	1.5	1.4	E	1.5	2.3	3.2	3.4	4.3 ^A	4.0	3.8	3.8	4.0	4.4 ^A	3.4	2.9	2.6	4.9 ^A	4.8 ^A	1.5	1.4	1.8 ^F	1.4	
21	1.4	1.4	1.2	1.2	1.1	1.4	2.7	3.0	3.8	M	<5.7 ^M	4.0	3.9	4.0	3.5	3.5	2.9	2.3	2.0	1.7	2.0	1.5	1.5	1.2	
22	1.4	1.5	1.2	1.4	E	1.4	2.3	2.8	3.4	4.0	4.0 ^A	4.0	4.0	4.0	3.5	3.5	3.2	2.2	2.0	1.5	1.5	1.5	1.5	1.4	
23	1.5	1.4	1.2	E	E	1.4	2.5	3.2	4.0 ^A	3.8	4.0	4.0	3.5	3.8	3.7	(3.2) ^M	2.8	2.5	2.1	1.6	(1.4) ^A	1.2	1.5	1.5	
24	1.4	1.4	1.3	E	C	1.4	(2.7) ⁰	2.8	3.2	3.5	4.0	4.0	3.8	4.0	4.0	3.6	6.0 ^A	3.8 ^A	5.5 ^A	(3.9) ^A	2.3	1.5	2.1	1.5	
25	1.4	1.4	1.0	1.2	1.2	1.4	2.7	(3.2) ⁰	3.7	4.0 ^A	4.3 ^A	4.0	4.0	3.9	4.0	4.0 ^A	2.8	2.5	2.1	3.0	1.5	2.1	1.5	1.5	
26	1.6	1.4	1.3	E	1.4	1.5	3.0	3.5	3.5	3.7	4.3	4.0	3.9	3.9	3.5	4.1 ^A	3.4	2.5	3.5 ^A	2.0	1.3	1.3	1.4	1.4	
27	1.4	2.3 ^A	1.4	1.4	1.4	1.4	2.1	3.2	3.2	3.5	4.0	(4.8) ⁰	3.7	3.8	3.5	3.2	3.4	2.9	2.1	1.7	1.5	2.2	2.5	1.5	
28	1.4	1.5	2.1	1.5	1.4	2.1	2.8 ^A	3.5	3.5	(4.5) ⁰	4.3	4.0 ^A	5.3 ^A	4.5 ^A	8.0 ^A	(8.0) ^A	8.0 ^A	3.5 ^A	1.9	1.5	1.4	1.4	1.4	1.5	
29	1.4	1.4	E	1.1	E	2.1	2.2	3.5	5.4 ^A	5.0 ^A	4.3 ^A	5.0 ^A	4.2	4.0	3.5	3.4	3.5	3.0	2.1	1.4	1.4	1.5	2.1	4.0 ^A	
30	4.0 ^A	2.1	1.4	2.6 ^A	1.7	1.6	3.5 ^A	4.3 ^A	4.0	(4.5) ^A	5.0 ^A	(4.6) ^A	4.3 ^A	4.0	5.3 ^A	5.8 ^A	4.0 ^A	3.5 ^A	2.1	1.5	2.0	(2.0) ^A	2.1	2.1	
31																									
Mean Value	1.5	1.5	1.3	1.4	1.3	1.5	2.4	3.1	3.5	3.7	3.9	4.0	4.0	4.1	4.0	3.9	3.4	2.8	2.6	2.3	1.8	1.7	1.7	1.7	1.6
Median Value	1.4	1.4	1.2	1.2	1.0	1.4	2.3	3.2	3.4	3.6	4.0	4.0	3.9	4.0	3.7	3.5	3.0	2.5	2.1	1.7	1.5	1.5	1.5	1.5	1.5
Count	29	29	29	29	28	29	28	29	28	28	29	29	30	30	30	30	30	29	29	28	28	29	29	29	29

fminF

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

Manual

Automatic

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

Lat. 36° 42.4' N
Long. 139° 28.5' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Apr. 1955

fminE

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	1.3	E	E	1.4	1.4	1.4	1.4	1.5	1.5	1.5	2.1	1.5	2.1	1.5	1.4	1.5	1.4	1.5	E	E	E	E	
2	1.5	1.4	1.1	E	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.4	1.5	1.4	1.4	1.5	
3	1.4	1.5	1.5	1.5	E	1.5	1.4	1.4	1.4	1.5	1.5	2.1	2.1	2.1	2.1	1.5	1.5	1.4	1.5	1.5	E	E	1.5	1.5	
4	1.5	1.4	1.1	E	E	1.4	1.5	1.5	1.5	1.5	1.5	2.1	2.1	2.1	1.5	1.4	2.0	1.5	1.5	C	C	C	C	C	
5	C	C	C	C	C	C	C	C	C	C	1.5	1.5	2.3	2.0	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.4	1.4	E	
6	1.5	[1.4] ^c	1.2	E	1.4	1.5	1.4	1.5	1.5	1.5	2.1	2.1	2.1	2.1	1.5	1.5	1.5	1.5	1.5	1.5	E	E	1.4	1.5	
7	1.4	E	1.3	1.5	1.4	1.5	1.4	1.4	1.5	1.6	2.1	2.1	1.6	2.1	2.1	1.5	1.5	1.4	1.4	1.5	1.5	1.4	1.3	1.3	
8	1.5	E	1.5	E	1.5	1.5	1.5	1.5	[1.8] ^c	1.5	[1.8] ^c	2.1	2.1	2.1	2.1	2.1	1.5	1.5	1.4	1.4	1.5	1.5	E	1.3	
9	1.5	E	E	1.5	E	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.1	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	
10	1.4	E	1.3	1.4	1.3	1.5	1.4	1.5	1.4	2.2	2.2	1.5	[1.8] ^c	2.1	2.1	1.5	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.5	
11	E	1.5	1.5	1.3	1.3	E	1.4	1.4	1.5	1.6	2.2	2.1	2.1	2.1	1.5	1.4	1.5	1.5	1.4	1.8	1.5	E	1.5	E	
12	E	E	1.4	E	1.5	E	1.5	1.4	1.4	1.4	2.1	2.1	2.1	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.4	
13	E	E	1.3	E	1.5	1.5	1.5	1.4	1.4	1.4	2.1	2.1	2.1	2.1	1.5	1.5	1.5	1.4	1.5	1.4	1.4	1.4	1.5	1.5	
14	1.4	1.4	1.4	E	1.0	1.4	1.4	1.4	1.5	2.1	2.1	2.1	2.1	1.5	2.1	2.1	1.5	1.5	1.4	1.4	1.4	1.5	1.4	1.5	
15	E	1.4	1.4	1.5	1.2	1.6	1.4	1.4	1.5	1.5	2.1	2.1	2.1	2.1	1.5	1.4	1.5	1.4	1.4	1.4	1.3	1.4	1.4	1.4	
16	1.5	1.4	1.3	1.5	1.5	E	1.5	1.4	1.5	1.5	2.1	2.1	2.1	2.1	1.5	1.5	1.5	1.4	1.5	1.4	1.4	1.5	1.5	1.4	
17	1.5	2.1	1.4	1.4	1.4	1.4	1.5	1.4	1.4	2.1	2.1	2.1	[2.7] ^c	2.1	2.1	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.4	1.4	
18	1.5	E	1.3	1.3	E	E	1.5	1.5	1.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.5	1.4	1.5	1.4	1.4	E	E	E	
19	1.5	E	1.2	1.3	E	E	1.4	1.4	1.5	1.5	1.5	2.1	2.1	2.1	1.8	1.6	1.4	C	C	C	1.4	1.5	C	E	
20	1.5	1.5	E	E	1.5	1.5	1.4	1.5	2.1	2.1	1.6	2.0	2.1	2.1	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.3	1.3	
21	E	1.5	1.2	E	1.5	E	1.4	1.5	1.4	M	M	2.1	2.1	1.6	2.0	2.1	1.5	1.4	1.3	1.4	1.4	1.4	1.4	E	
22	1.4	E	1.5	1.7	1.3	2.1	1.4	1.4	1.5	1.4	2.1	2.1	2.1	2.1	2.1	1.5	1.4	1.4	1.5	1.4	1.5	1.5	2.1	1.4	
23	1.5	1.5	1.3	E	E	2.1	1.4	1.5	1.4	1.5	2.1	2.1	2.1	2.1	2.1	2.1	1.4	1.4	1.5	1.4	1.4	1.7	1.5	2.0	
24	1.6	E	E	C	C	E	1.5	1.5	1.5	2.1	2.1	2.1	2.1	B	2.1	2.1	1.5	1.4	1.4	1.5	1.5	1.4	1.4	E	
25	2.1	E	1.5	E	1.4	E	1.4	[1.4] ^c	1.4	1.5	2.1	1.8	2.1	2.1	2.1	2.1	1.5	1.5	1.5	1.4	1.5	1.4	E	1.4	
26	1.4	1.4	E	E	E	1.3	1.5	1.5	1.5	1.5	2.1	2.1	2.1	2.1	2.1	1.5	2.1	1.4	1.5	1.4	E	E	E	1.5	
27	1.5	1.4	E	E	1.5	1.2	1.4	1.4	2.1	2.0	1.5	[1.8] ^c	2.1	2.1	2.0	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.5	
28	[1.5] ^c	1.4	1.4	[1.4] ^c	1.5	1.4	1.4	1.4	1.5	[1.8] ^c	2.1	2.1	2.1	2.1	1.5	1.5	1.5	1.5	1.4	E	E	E	E	1.5	
29	1.4	1.4	1.2	E	1.4	E	1.4	1.3	1.4	2.1	2.1	2.1	2.1	2.1	1.5	1.4	1.5	1.4	1.4	E	1.6	1.6	1.3	1.4	
30	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.5	1.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.5	1.4	1.5	2.1	1.4	1.4	1.4	1.5	
31																									
Mean Value	1.5	1.5	1.3	1.5	1.4	1.5	1.4	1.4	1.5	1.7	1.9	1.9	2.0	2.0	1.9	1.7	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	
Median Value	1.5	1.4	1.3	E	1.4	1.4	1.4	1.4	1.5	1.5	2.1	2.1	2.1	2.1	2.1	1.5	1.6	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
Count	29	29	29	28	28	29	29	29	29	29	30	30	30	29	30	30	30	29	29	28	29	29	28	29	

fminE

Sweep J.L.O. Mc to 1.7.2. 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

Apr. 1955

YPF2

135° E Mean Time

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

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° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Apr. 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	32 ^S	31	32	33	29	27	32	5.1	5.9	7.0	8.0	8.9	8.8	9.4	8.9	7.9	6.7	7.8	8.9	C	C	C	C	4.2	
2	38	42	42P	35	30	2.5	3.5	5.5	6.5	6.4	6.2	6.7	9.3	8.5	7.2	7.9	8.5	8.7	8.4	8.5	C	C	C	C	
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
4	C	C	C	C	C	C	C	C	C	C	C	C	8.7	9.6	9.2	7.9	6.4	6.6	7.4	8.1 ^S	6.7	3.8	3.7	9	
5	S	4.1	4.2	4.3 ^J	3.4	3.3	[4.4] ^S	5.6	5.7	5.4	6.1	7.7 ^J	8.9	S	10.0	8.5	6.5	6.5	7.4	8.8	6.3P	3.4	3.4	3.3	
6	S	S	S	3.6	3.1	2.1	3.4	4.9	5.7	6.0	6.9	7.2	8.7	9.0	9.8 ^J	9.2P	8.0	6.7	5.9	5.9	5.8	5.0	(4.4) ^P	4.4	
7	4.4	4.5	4.4	3.3	2.6 ^J	2.5	3.8	5.2	6.6	6.3	6.5	6.3	8.5	8.9	10.2 ^P	[9.4] ^S	8.5	8.5	S	S	8.5	3.9	3.5	3.6	
8	[3.8] ^A	3.7	3.8	4.0	3.0 ^H	2.8	3.9	6.0	6.0	6.1	6.5	7.9	9.5	9.7	9.5	11.0	11.7	C	C	C	C	C	C	4.4	
9	3.7	S	S	4.0 ^S	2.6	2.6 ^F	4.2 ^J	5.5	6.0	6.1	6.5	7.9	9.5	9.7	9.5	11.0	11.7	(9.3) ^P	8.5	8.1 ^J	S	5.0	5.2 ^J	4.9	
10	4.1	4.0	5.4	(8.2) ^P	3.0	[3.5] ^S	4.0	[4.9] ^C	5.8	5.9	7.3	7.8	7.8	8.5	8.7	8.5	8.9	(9.3) ^P	8.5	8.1 ^J	S	5.0	5.2 ^J	4.9	
11	4.6	4.7	5.5	4.7	2.2	2.4	3.6	7.0	7.0	7.7 ^J	7.5	7.8	7.4	7.3	7.9	7.9	8.0	8.9	10.0	9.5	8.3 ^J	4.9	3.6	3.7	
12	3.8	3.8	3.8	3.4 ^H	2.4 ^J	2.4 ^J	3.5	6.0	7.0	7.4	8.0	8.8	9.7	9.0	8.9	8.2	7.7	8.4	7.3	7.9	7.0	5.8	3.6	3.8	
13	3.9	4.0	3.3 ^S	3.5	3.2 ^S	3.2 ^S	3.9	6.0	7.3	7.4	6.6	6.7	7.5	8.5	8.6	10.1	10.0	9.6	7.4	7.2	6.9	3.2	3.3	[3.5] ^C	
14	3.7	3.7	3.7 ^H	3.5	2.0 ^S	2.9	4.1 ^P	6.2	5.9	6.4	6.5	7.9	8.5	10.0	10.7	10.4	8.9	8.8	10.1	(10.2) ^P	4.8 ^S	3.2	2.7 ^S	2.9 ^S	
15	AS	FS	4.0 ^F	4.2 ^S	2.0 ^S	[3.0] ^S	4.0	5.9	6.2	6.1	7.4	7.8	7.9	8.9	8.8	8.5	9.0	9.2 ^P	9.4	9.5	7.9	3.2	3.1	3.2	
16	3.3	3.2	3.7 ^J	4.5	2.4	2.0	3.9	5.5	6.0	6.1 ^J	6.3	7.3	8.6	8.5	8.2	7.3	7.2	6.7 ^H	7.1	8.3	7.2	5.0	3.1	3.3 ^H	
17	3.2	3.3	3.5 ^P	[3.2] ^F	3.0	1.8 ^J	3.9	5.9	6.8	6.7	6.4	7.1	7.7	8.5	8.0	8.6	8.9	9.3 ^P	9.9	10.9 ^J	7.3	4.4 ^J	[4.4] ^A	4.4	
18	4.0	4.1	4.4 ^H	4.6	4.0 ^F	3.3 ^F	4.2	5.5	6.1	7.0	7.5	7.5	6.8	7.3	8.3	9.4	8.6	8.9 ^H	9.5	8.8	5.9	4.9	4.5 ^V	4.7 ^V	
19	5.0	F	F ^H	4.9 ^F	3.7	3.7	4.7	6.1 ^J	6.9	6.2	6.1	7.0	8.0	8.7	9.6	10.4	9.7	9.0	10.5	11.2	7.7	4.9	3.7	3.8	
20	3.9	3.8 ^F	4.2 ^{S^H}	4.0	FS	FS	FS	6.0	6.4	7.8	7.3	7.4	8.5	9.0	(10.8) ^P	10.0	8.9	7.8 ^S	8.8 ^S	8.2	7.6	4.1 ^S	3.3 ^H	FS	
21	FS	FS	FS	FS	FS	FS	4.5	6.0	6.0	6.1	5.9	7.3	9.0	10.0	10.8	10.1	8.9	8.4	9.2 ^P	9.8	8.5	6.5	3.2	3.1	
22	3.2	3.3	3.2	3.8	2.6	2.4 ^V	4.3	5.9	6.9	5.9	6.0	7.5	8.7	9.2	8.8	7.9	8.3	8.5	8.0	6.7	4.6	3.5	3.6	3.8	
23	4.0	4.1	4.0	3.6	3.3	3.1	4.9	5.8	5.9	6.7	7.0	7.8	8.8	10.0	9.5	8.5	7.9	7.0	6.7	7.3	7.6	5.5	3.6	3.7	
24	3.6	3.5	3.4	3.5	3.2	3.0	4.8	7.0	6.6	6.0	6.9	8.5	10.3	11.5	11.7	11.0	9.4 ^P	8.2	8.5	9.0	8.4	6.3	5.9 ^H	6.4	
25	6.3 ^F	5.9	6.4 ^F	5.9	3.9	3.6 ^F	5.3	5.7	5.9	5.5	7.4	8.6	9.4	11.3	10.0	8.9	9.4	8.5	7.2	7.0	6.3 ^P	4.6	4.5	4.6	
26	4.7	F	F	4.7	2.7	F	4.2	4.9	5.6	5.9	7.0	7.3	8.8	10.1	10.9	10.4	9.0	8.5	8.3 ^J	8.8	9.6	6.6	5.7	5.5	
27	5.5	5.4	3.7	3.3 ^F	3.1 ^V	3.4	4.9	6.9	6.1	5.8	6.2 ^J	7.4	7.5	9.5	10.7	9.4	8.6	8.8	9.2	9.0	8.4	5.4 ^S	3.9 ^H	3.9	
28	3.9	3.9	3.8	3.3 ^S	2.4 ^J	3.0	4.3	7.9	6.8	6.5	5.0 ^H	6.4	8.8	12.2	8.4	7.3	8.5	9.6	10.5	9.5	5.9	5.9 ^H	5.8	5.9	
29	5.7	5.7	5.5	4.8	3.4	3.2	4.5	5.6	6.4	6.6	6.6	6.9	9.1	8.4	8.8	10.0	11.5	12.1	12.7	8.8	5.9	6.1	6.5	6.4	
30	5.9 ^H	6.3	7.0	3.5	2.5	2.6	5.3	6.2	6.5	6.2	7.0	8.0	7.9	8.5	9.9	10.4	10.0	8.8	9.4	7.2	5.8	5.2	5.0	5.2	
31																									
Mean Value	4.2	4.2	4.3	4.1	2.9	2.8	4.2	5.9	6.3	6.4	6.7	7.5	8.5	9.3	9.4	9.1	8.7	8.5	8.6	8.6	7.0	4.8	4.1	4.1	4.3
Median Value	3.9	4.0	4.0	3.8	3.0	2.9	4.2	5.9	6.2	6.2	6.6	7.5	8.7	9.0	9.4	9.0	8.8	8.5	8.5	8.8	7.1	4.9	3.7	3.7	3.9
Count	24	22	23	27	26	25	28	28	27	27	27	27	28	28	28	28	28	28	27	25	24	25	26	26	26

Y 1

Manual Automatic

Sweep 1.0 Mc to 22.0 Mc in 1 min

foF2

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

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

136° E Mean Time

R'F2

Apr. 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	260	270	250	250	250	240	270	290	290	280	290	290	270	280	290	290	250	C	C	C	C	320	
2	290	250	250	220	250	270	260	230	240	270	280	310	280	280	300	310	300	260	250	C	C	C	C	C	
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
5	300	270	250	240	220	300	250	240	240	260	[300]C	340	300	280	260	270	270	280	260	240	220	210	300	310	350
6	340	320	310	280	210A	250	240	230	250	290	300	300	300	300	260	270	260	290	270	230A	210	300	310	310	350
7	300	260	220	240	220	300	250	230	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	340B
8	[340]A	330A	290	240	220H	260	250	240	240	250	290	370	310	300	290	290	280	300	270	240	220	220A	340	310	310
9	320	290	260F	240	210	290	240	240	250	270	300	300	290	280	300	300	270	280	300	C	C	C	C	320	
10	300	300	300	220A	200	300	250	[250]S	250	290	290	300	300	300	300	300	300	280	250	250	220	220	220	310	300
11	300	300	240	200	350	350	260	250	250	270	280	270	310	310	290	300	320	290	260	240	220	220	220	310	300
12	300	260	250	210H	300	300	250	250	270	280	280	290	290	290	290	280	300	260	250	250	240A	230A	230A	300	320
13	300	270A	270	300	300	300H	250	250	260	260	310	310	330	330	320	290	260	260	250	250	240A	230A	260	350A	350A
14	300	300	280H	250	250	320	250	250	230	290	300	[320]A	330	310	280	310A	290	300	260	220	200	400	400	350	370
15	[360]A	350E	260	210	400S	[320]S	240	240	260	280	290	300	310	300	300	300	290	270	250	250	220	230	230	340	310
16	330	300	260	220	200	400	250	240	260	260	310	320	290	290	270	290	280	280H	290A	250	230A	210	350	350F	
17	310	300	280	250F	210	250	250	240	250	280	340	310	320	290	310	290	300	280	260	240A	230A	A	A	300	
18	310	300	280H	250	250	260	230	240	300A	290	290	270	300	350	320	290	270	280H	250	240A	220	250	250	310	320
19	290	290	250H	250	250	260	240	250	250	290A	320	340	300	320	320	300	280	300	270	230	210	250A	310	320	
20	320	300	270H	250	250	300	250	240	270	(300)A	270	350	330	340	300	290	280	A	A	250	250	280	320H	350	
21	330	340F	250	250F	250	300	240	250	250	280	370	350	350	310	280	280	290	290	260	240	230	200	300	320	
22	340	310	290	250	250	350	250	240	250	300	350	340	320	300	290	310	290	270	250	220	200	300	340	310	
23	300	300	250	210	250	250	240	240	250	310	310	350	310	280	280	300	280	280	270	240A	240A	210	310	320	
24	310	300	280	260	260	280	250	240	250	290	340	340	320	290	290A	280	280	270	270	240	230	220	300H	300	
25	290	310	270	210A	220	350	250	220	250	250	310	300	350	290	270	300	290	260	250	240	240	250A	350	330	
26	310	300	290F	220	270	310F	250	250	250	320	320	350	350	300	300	280	300	280F	290	280	240	250	240	300	
27	270	240	230	300	300	250	250	250	250	290	380	330	370	330	280	280	290	270	260	250	220	210	300H	300	
28	300	300	250	210	350	300	230	260	240	440	AH	440	360	270	280	320	310	290	250	240	220	300H	300	340	
29	290	290	270	220	250	230	260	260	260	280	300	410	300	300	370	330	290	280	240	220	240	300	320	320	
30	300H	280	230A	220A	390	350	250	240	250	300	330	310	340	340	310	290	270	260	250	230	250	260	360	290	
31																									
Mean Value	310	300	260	240	260	300	250	240	250	280	310	330	320	300	290	290	290	280	260	240	230	250	310	320	
Median Value	300	300	260	240	250	300	250	240	250	280	300	320	310	300	290	290	290	280	250	240	230	230	230	310	
Count	28	28	28	28	28	28	28	28	27	27	26	27	28	28	28	28	28	28	26	27	25	25	24	28	

Y 2

Automatic

Manual

Sweep 1.0 - Mc to 22.0 - Mc in 1 min

R'F2

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

Lat. 35° 12.5' N
Long. 139° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

fEs

Apr. 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	3.5	2.3	2.9	2.3	2.3	2.1	G	G	G	3.9	4.8	5.9	3.8	5.5Y	5.3Y	3.7	G	3.2	C	C	C	C	2.3F	
2	2.3	E	E	2.3	2.3	2.3	2.3	G	G	G	G	4.5	4.7	5.9	5.6	7.1	4.8	3.8	2.3	C	C	C	C	C	
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
4	C	C	C	C	C	C	C	C	C	C	C	C	G	G	G	G	G	3.4	2.8	E	E	2.1	2.3	3.0	
5	3.8	4.8	3.1S	5.7	2.3	2.3	2.3	G	G	G	C	3.7	G	3.8	G	3.8	4.7	4.8	4.8	2.9	3.2	2.2	E	E	
6	2.3	3.0	2.3	3.0	3.5	2.3	2.3	G	G	G	C	G	G	3.8	4.7Y	5.2	3.7	4.7	2.3	3.8	2.3	E	3.2	3.0	
7	2.1	E	2.3	2.3	2.3	2.3	2.4	3.3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	2.2	
8	6.8	3.5	2.3	2.1	E	E	G	G	G	G	4.9	5.9Y	G	4.9	5.8	5.9	G	C	3.6	3.5	2.3	3.0	4.5	E	
9	E	E	E	E	E	E	2.3	3.4	4.0	G	4.9	G	G	4.9	5.8	5.9	G	C	C	C	C	C	C	2.2	
10	2.4	2.4	3.0	3.8	3.6	5.0	3.0	C	G	G	3.5	4.6Y	3.8	G	G	G	G	G	G	3.0	2.3	3.6	2.3	2.8	
11	E	E	E	E	2.1	2.3	2.4	3.3	G	G	G	G	G	G	G	G	G	G	3.7	3.6	3.2	5.0	3.6	2.3	
12	E	E	E	E	E	E	2.4	3.5	3.8	4.3Y	5.8Y	4.7	3.8	G	G	G	G	3.8	2.7	E	E	E	E	C	
13	3.2	8.4Y	3.2	3.2	2.3	E	2.8	3.8	5.7Y	4.9	G	3.8	5.9Y	4.8	6.0Y	G	G	3.8	2.7	E	E	E	E	C	
14	E	2.1	2.9	2.2	3.2	2.5	3.0	3.2	G	G	5.8	8.7	5.8	G	5.8	9.9	5.9	6.4	5.9	2.4	E	E	E	5.9Y	
15	5.9Y	3.4	E	E	E	E	B	3.2	3.5	3.6	G	5.8	G	5.9	G	G	G	3.6	3.1	5.8	3.2	3.6	2.3	E	
16	3.2	2.2	2.1	E	2.3	2.0	2.6	3.3	3.6F	G	G	G	G	4.7	4.6	G	G	4.0	5.8	5.0	4.2	2.2	2.3	2.3	
17	3.0	3.2	2.3	2.3	E	2.0	2.3	3.4	4.3	5.0	5.9	5.9	4.9	G	4.6	5.9Y	5.8	4.9	5.8	5.4	6.9	4.9	6.6	6.6	
18	6.5	6.2	3.2	3.0	3.7	3.2	2.4	3.8	5.9	6.0	7.1	6.0	6.0	5.4	4.7Y	4.9	G	3.7	2.7	3.8	3.2	2.1	2.0	3.0	
19	3.6	3.0	2.4	3.5	2.4	2.3	2.7	3.8	5.3	5.7	5.8	6.0	6.0	6.0	6.2	6.0	5.8	3.7	3.1	2.4	2.3	3.8	E	E	
20	3.5	3.5	3.5	3.5	2.3	2.3	2.9	3.5	4.8	7.4F	6.0	9.8Y	6.0	6.0Y	G	G	5.8F	7.3F	8.0F	3.4	3.7	4.1	2.4	2.4	
21	E	3.8	3.8	2.4	3.5	E	3.0	3.8	5.8F	4.7	G	5.9	5.8Y	5.7	4.9	4.9	G	3.8	3.0	3.8	2.3	3.6	E	E	
22	E	2.3	2.3	2.4	2.1	E	2.4	3.4	3.8	5.9Y	5.8	3.7	G	4.8Y	6.2	5.5	4.9	4.4	3.8F	2.9	2.4	3.0	2.9	2.5	
23	2.5	E	2.3	3.0	2.1	2.1	2.3	3.4	5.8	6.0	5.9Y	5.8	5.8Y	3.8	3.6	3.8	G	3.0	3.6	3.8	2.3	2.3	E	E	
24	E	2.1	2.3	2.3	2.4	3.5	2.6	3.5	4.2	5.9Y	5.8	5.9Y	5.9	5.9	8.5	5.3	5.8	4.7	3.8	3.1	3.2	2.3	2.3	2.1	
25	3.2	3.1	2.6	3.3	3.0	2.1	2.7	3.5	6.0	5.8	5.8	6.0	5.9	5.1	G	6.0	G	3.8	3.2	2.8	3.6	2.2	3.6	4.6	
26	3.0	3.1	3.2	2.3F	2.3	2.0	2.8	3.4	5.8	5.8	G	5.8Y	G	G	G	6.0	6.0	3.8F	3.5	3.8	2.3	E	E	E	
27	E	2.2	E	3.2	2.3	E	2.4	3.8	3.8	5.8	G	5.8	G	5.9	5.8	3.8	4.5	3.5	G	3.5	3.2	E	3.2	E	
28	E	E	E	E	E	E	3.2	3.8F	5.7	G	5.9	5.9	4.8	4.8	5.8Y	G	G	3.7	3.7	2.3	E	2.3	2.2	E	
29	2.3	2.3	2.3	2.1	2.2	3.7Y	3.7	3.5	5.8Y	5.7Y	7.0	G	6.2Y	5.8	G	G	G	G	2.9	E	E	E	2.3	3.1	
30	2.3	3.4	3.5	3.5	3.1	E	3.0	6.5Y	6.0	6.1	6.3	7.0	5.1	4.6	G	4.8	5.9	5.7	3.7	2.3	2.3	2.3	3.8	3.7	
31																									
Mean Value	3.4	3.4	2.7	2.9	2.6	2.6	2.6	3.6	4.9	5.4	5.6	5.7	5.5	5.1	5.4	5.4	5.2	4.3	3.7	3.4	3.4	3.0	3.0	3.3	
Median Value	2.3	2.7	2.3	2.4	2.3	2.1	2.4	3.4	4.0	4.7	5.4	5.8	5.8	5.8	5.6	4.3	4.3	3.8	3.2	3.1	2.4	2.3	2.3	2.3	
Count	28	28	28	28	28	28	27	27	27	27	26	27	28	28	28	28	28	28	27	28	25	25	25	26	27

fEs

Sweep f.o. Mc to 22.0 Mc in _____ min

Manual

Automatic

SOLAR RADIO EMISSION

APRIL, 1955

Observing Station: HIRAI SO

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

IONOSPHERIC DATA IN JAPAN FOR APRIL 1955

電波觀測報告 第7卷 第4号

1955年5月25日 印刷
1955年5月30日 発行

(不許複製非売品)

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