

F — 69

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

IONOSPHERIC DATA IN JAPAN

FOR SEPTEMBER 1954

Vol. 6 No. 9

Issued in October 1954

PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR SEPTEMBER, 1954

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 will appear from the current issue.

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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Sep. 1954

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	2.8	2.9	3.0	2.8	3.0	3.0	4.1	4.6	A	A	5.5	4.4	5.2	4.5	4.6	4.9	5.2	[4.5] ^A	4.3	4.6	4.5 ^J	4.6	5.1	3.8 ^F
2	3.4 ^F	3.5	3.5	3.8 ^J	3.6 ^F	(3.2) ^F	4.0	4.0	[4.4] ^A	4.7	4.1 ^B	A	B	4.4	[4.3] ^B	4.2	4.1	4.6	4.0	4.0 ^P	3.8 ^S	3.5	3.5 ^F	3.0 ^F
3	3.0	3.3 ^F	(3.3) ^F	3.5 ^F	3.5 ^F	4.0	4.0	4.9	4.7 ^F	4.5	[4.8] ^A	5.0	5.2	4.8	5.0	4.7	4.6	4.5	4.5	4.6	4.5 ^P	4.1 ^P	3.9	3.8
4	3.5 ^F	3.5 ^F	3.2 ^F	(3.5) ^F	3.0 ^F	3.1 ^H	4.1	4.2	[4.3] ^A	4.4	[4.4] ^A	4.5	4.5	4.1	4.6	4.1	4.5	4.5	C	C	C	C	A	3.8
5	3.2	3.0 ^F	3.0	3.3	3.3 ^F	3.1 ^F	3.5	4.6	4.1	4.4	C	C	C	C	C	C	C	C	C	C	C	C	C	3.8
6	C	C	C	C	C	C	C	C	C	(4.8) ^B	5.1	4.5	[4.6] ^C	4.7	5.1	5.3	5.0	4.9	5.3	5.6	5.9	4.7	3.2 ^V	3.2
7	[3.2] ^A	3.1	3.0 ^F	3.2 ^F	3.0 ^F	2.7	3.5	A	A	A	4.5	4.5	[4.8] ^A	5.1	5.0	5.3	5.2	4.4	4.2	4.2	4.1	3.8	3.0	3.1
8	[3.3] ^A	3.5 ^F	3.6 ^F	[3.4] ^F	3.2 ^V	3.4 ^F	4.5	4.6 ^P	5.6	4.6	4.7	4.5	4.5	5.2	5.3	5.2	4.7	5.1	4.5	4.5	4.8 ^P	4.5	4.1	3.8
9	3.6	4.0	4.0	(3.8) ^F	F	FH	4.2	4.5	5.3	5.5	4.7	4.8	4.7	5.1	5.2	4.6	4.6	4.6	5.2	5.3	5.1	[4.5] ^F	3.9 ^P	3.8 ^F
10	(3.0) ^F	(3.0) ^S	3.0	F	F	(3.5) ^F	3.6	4.1	4.0	5.0	5.0	4.7	4.5	4.6	5.1	5.0	4.8	4.4	5.2	5.4	(4.8) ^S	4.5	3.8	3.5 ^F
11	F	F	F	FS	F	3.3 ^F	4.1	4.1	4.4	5.3	5.0	B	B	4.6	4.9	4.7	4.5	4.6	4.5	5.0	4.3 ^P	4.5	4.0	3.2
12	3.6	3.5	3.0	3.0	2.5 ^H	2.7	3.4	C	C	C	C	C	C	C	C	C	C	4.5	4.5	4.5	4.0	4.5	4.0	3.2
13	2.9	2.9	2.8	2.8	2.8	3.2	4.0	4.6	[4.7] ^A	4.8	[4.8] ^P	4.8	4.8	4.8	4.8	5.0	4.5	4.5	[4.8] ^A	5.0	[5.0] ^F	4.4	3.5	3.5
14	(3.5) ^F	(3.5) ^F	3.3	(3.4) ^F	3.5 ^F	4.3	4.2	4.2	5.2	5.1	5.4	6.0	5.8	5.0	5.1	5.0	5.0	5.9	5.8	[5.4] ^C	4.9	4.4	4.0	3.9
15	3.6	3.7	(4.4) ^F	(4.0) ^F	(3.4) ^A	2.7	4.0	4.3 ^V	5.5	6.3	5.2 ^V	5.3	5.3	5.0	4.6	5.0	4.7	5.0	5.3	5.2	(5.3) ^S	4.9	3.9	3.8
16	3.5	3.2 ^F	3.3 ^F	3.1 ^F	3.5	2.9 ^F	4.0 ^V	4.2	4.6	4.8 ^P	4.6	4.6	4.5	4.8	4.5	4.5	4.6	4.4	4.8	4.5	4.0	3.7	3.0	3.0
17	3.2	2.9	3.0	2.8	2.7	3.0	3.5	4.2	4.5	5.0	5.5	5.0	5.2	5.0	5.2	5.0	4.9	5.0	5.5	4.5	4.2	3.9	3.5	3.3
18	3.1	3.1	3.1	3.1	3.1	3.3	4.2	4.4	5.1	5.3	5.5	4.8	4.9	4.8	5.7	5.0	5.0	4.7	4.8	5.0	5.0	F	F	4.0
19	3.6	3.6	3.6	3.5	3.6	3.8	4.3	5.0	5.6	5.1	5.2	5.0	5.2	5.3	5.3 ^H	5.5	5.3	6.0	5.8	5.3	4.8 ^P	4.1	4.0	3.6
20	3.4	3.4	3.4	3.3	3.3	3.1	4.8 ^P	5.1	5.1 ^V	6.0	5.6	5.4	5.3 ^H	5.2	5.2	5.9	5.9	5.5	5.0	5.3	4.6	4.5	3.9	3.8
21	3.7	4.0	3.9	4.8 ^P	(3.2) ^F	[3.2] ^F	3.3 ^H	4.1	[4.7] ^B	5.3	4.1 ^H	4.4	4.5	5.0	4.5	4.4	4.8	4.9	4.5	4.5	4.2	3.5	3.5	3.5
22	4.0	3.8 ^P	3.8 ^F	3.8 ^F	3.2	2.5	4.2	5.2	4.9 ^V	5.0	4.6	5.0	4.9	5.0	4.7	5.1	4.7	4.5	4.4	4.6	4.1	3.5	3.4	3.3
23	3.1	2.9	2.9	2.8	2.8	3.8	3.8	5.0	5.2	5.5	5.0 ^V	5.5	5.6 ^H	5.3	5.2	4.8	5.1	6.3	5.7	4.6 ^P	4.3	3.8	3.5	3.5
24	3.1	3.2	3.1	3.0	3.1	3.2	4.4	5.0	4.7	6.0	6.4	5.9	5.5	4.9	4.8	5.9	5.4	5.5	4.7	3.9	4.0	3.9	3.8	3.6
25	3.3	3.3	3.3	3.1	3.2	3.4	4.4	4.9	5.5	5.3	6.6	6.0	5.7	5.6	5.5	5.3	5.3	5.2	6.1	6.2 ^P	5.5	S	S	3.5
26	3.4	3.8	3.5	3.9	[3.8] ^F	3.6 ^F	[4.0] ^A	4.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	4.9	5.4	[5.4] ^A	5.4	4.3 ^P	4.5	4.0 ^F	3.7	3.5
28	3.3	3.4 ^F	3.5	3.5	3.8 ^P	4.0	4.2	4.9	6.1	5.9	5.3 ^V	5.9	6.1	5.3	6.5	5.3	6.3	5.5	5.2	5.3	4.8 ^P	4.4	4.0	4.0
29	4.0	3.9	3.8	4.0	3.8	3.0 ^F	4.3	5.5	5.7	7.4	7.9	5.8	6.0	6.3	6.0	5.3	5.7	5.8	5.8	4.6	4.6	4.5	4.2	4.0
30	3.8	3.9	3.9	3.8	3.8	3.5	4.7	5.7	6.5	8.2	7.2	6.6	6.0	5.5	6.0	7.3	6.7	7.2	7.0	5.5	3.8	3.5	3.6	3.9
31																								
Mean Value	3.4	3.4	3.4	3.4	3.4	3.3	4.1	4.6	5.0	5.4	5.1	5.1	5.1	5.0	5.1	5.1	5.1	5.1	5.1	4.9	4.6	4.2	3.8	3.4
Median Value	3.4	3.4	3.3	3.3	3.2	3.2	4.1	4.6	5.0	5.1	5.0	5.2	5.2	5.0	5.1	5.0	5.0	4.9	5.2	4.0	4.6	4.4	3.8	3.6
Count	27	27	26	26	25	27	28	26	24	25	25	24	24	26	26	27	27	27	27	27	27	25	25	28

foF2

Sheep 1.0 Mc to 2.2.0 Mc in _____ min

Manual

Automatic

W 1

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

Lat. 45° 2.8.6' N
Long. 141° 41.1' E

IONOSPHERIC DATA

Wakkanai

R'F2

Sep. 1954

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	300	340	300	300	260	320	450	A	A	270	500	340	410	440	350	290	(380) ^A	280	330	290	320	270	260
2	260	260	300	280	260	360 ^F	310	390	(380) ^A	380	450	A	B	430	(420) ^B	400	390	290	300	310	300	390	250	300
3	270	280	290	300 ^F	270	280	350	320	310	350	(350) ^F	350	300	360	330	290	320	270	250	310	300	260	290	270
4	300	260	330 ^A	280	260	330 ^H	350	340	(390) ^A	440	(420) ^F	390	400	310	370	520	360	280	C	C	C	C	A	330
5	320	300	300	280	260	290	320 ^L	310	310	320	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7	(340) ^A	350 ^A	310	290	300 ^F	260	300	A	A	A	350	450	(380) ^F	300	400	320	310	290	270	270	270	230	300	330 ^A
8	(320) ^A	320	250	(240) ^F	240	270	260	270	280	300	340	470	(390) ^A	350	350	320	310 ^A	330	260	280	270	280	350 ^A	330
9	290	260	270	250	270	300 ^H	280	300	290	310	300	360	400	350	320	350	330	280	290 ^A	270	280	260	260	260
10	280	320	310	290	270	270	240	330 ^L	350	300	330	350	350	420	340	320	290	380 ^A	260	240	250	260	240	320
11	270	300	270	250	230	270	270	340 ^L	370	280	270	B	B	380	360	370	320 ^L	270	260	260	260	250	240	290
12	290	250	250	260	220 ^H	290	230	C	C	C	C	C	C	C	C	C	C	C	C	C	C	250	240	290
13	270	270	270	260	290	280	260	300	(360) ^A	420	(380) ^F	340	330	350	350	310	270	290	(380) ^A	270	270	240	250	250
14	260	260	280	270	260	240	240	240	300	300	340	310	300	330	340	310	330	270	240	(240) ^L	270	260	270	290
15	290	300	270 ^F	230	(260) ^A	300 ^A	260	430	310	270	310	330	310	300	250	310	310	270	250	280	270	260	270	290
16	260	260	290	270	260	290 ^L	300 ^L	310 ^F	260	300	330	400	420	370	380	330	300	300 ^A	(250) ^A	250	270	260	290	280
17	290	310	270	270	240	260	250	280	320	340	280	340	350	370	330	300	270	270	240	240	250	270	280	270
18	290	280	260	270	260	250	240	270	320	350	280	300	380	380	290	290	270	250	250	260	260	290	300	270
19	250	270	290	260	250	260	250 ^A	280	260	260	290	400	330	330	330 ^H	280	280 ^T	260	240	240	250	280 ^A	300	290
20	290	300	300	270	250	260	240	260	290	260	250	270	270 ^H	310	310	320	270	260	230	270	260	250	250	290
21	300	290	280	230	260	270 ^F	310 ^H	400	(350) ^B	300	340	430	390	390	420	340 ^L	320	260	260	260	290	260	310	310
22	300	250	280	250	310	270	310	280	330	330	370	340	380	350	320	280	270	250	250	260	250	280	290	290
23	290	290	270	250	260	250	250	280	290	270	310	300 ^F	360 ^H	320	310	320	270	260	240	240	260	240	270	270
24	280	260	260	260	260	260	250	250	310	260	270	270	280	300 ^L	300 ^L	290	260	240	350	280	270	270	280	270
25	280	260	290	290	260	240	230	260	240	310	270	270	280	270	300	270 ^A	290 ^A	260	270	240	240	250	280 ^A	280
26	300	290	280	250	260	250	(260) ^A	270	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
28	280	290	270	260	240	250	230	240	270	240	460	330	260	420	270	270	260	260	260	250	260	250	260	270
29	260	270	260	240	220	230	230	250	260	280	250	260	270	290	270	260 ^L	260 ^L	240	230	260	270	260	270	260
30	280	300	250	240	250	230	260	240	290	260	240	260	280	270	300	280	280	240	230	230	240	260	280	290
31																								
Mean Value	290	280	280	260	270	270	270	300	310	310	320	350	340	350	340	320	300	270	260	270	270	270	280	290
Median Value	290	280	280	260	260	260	280	280	310	300	310	340	340	350	330	330	290	270	250	260	270	260	270	290
Count	28	28	28	28	28	28	28	26	24	25	25	24	24	26	26	27	27	27	27	27	27	27	27	28

Sweep 1.0 Mc to 2.2.0 Mc in _____ min

Manual Automatic

R'F2

W 2

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

Sop. 1954

fEs

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	4.3	3.5	3.5	4.2Y	3.5	2.7	4.0	5.8	8.0	5.6	4.5	4.2	4.2	5.1Y	4.9	5.7Y	3.4	4.5	4.5	6.1F	2.7	5.6	6.5	5.0	
2	3.5Y	2.1	2.3	2.5	2.4	2.6	3.9	7.0Y	4.2Y	4.3	4.5	4.2Y	4.2Y	4.0	4.0Y	4.5	4.9F	4.1	4.5	4.5	4.0	2.4	4.5	E	
3	E	2.4	2.5	3.0	2.8	2.4	3.5	7.6F	4.0	4.1Y	5.9Y	4.2	4.0	4.0	3.5Y	4.7	4.0	3.3Y	3.1	4.5	C	C	2.4	3.1	
4	2.6	2.4	3.1	2.5	2.9	3.0	4.1	5.2	4.2	5.9	3.9Y	4.1Y	4.1Y	4.0	4.0	4.2	4.6	4.2	C	C	C	C	5.0	4.3	
5	3.3	6.0	3.0Y	2.0	2.3	2.1	3.0	6.0Y	4.2	4.2	4.2	C	C	C	C	C	C	4.2	C	C	C	C	C	C	
6	C	C	C	C	C	C	C	4.1Y	6.5Y	6.0	6.0	C	C	C	C	C	4.2	4.2	5.0	6.0Y	5.8	8.0Y	4.6	4.6	
7	6.6	6.5F	2.2	E	3.9F	3.1F	3.4Y	5.1	6.5	5.6	6.5Y	4.9	4.6	4.2	3.5Y	3.5Y	6.0	5.6	4.2	3.5	3.9	2.7	5.6Y	4.5	
8	5.6F	3.8	3.2	5.7Y	2.7F	3.2Y	2.6	4.0Y	4.0Y	3.9	4.0Y	4.0	4.0	4.0	4.0	4.0	3.5	2.7Y	3.5	3.5	3.9	3.5	3.5	3.5	
9	2.5	3.0Y	2.6	E	2.8	2.3	3.5F	4.0	3.5	5.1Y	4.2Y	4.3Y	4.6	7.5	3.9Y	3.5	4.0	3.0	4.5	3.5	2.6	3.6	3.7	3.9	
10	4.3	3.5	2.6	2.5	3.6	3.9	3.5	4.5	6.0Y	5.3	4.0Y	4.0	4.0	4.0	4.0	4.0	3.5	3.8	2.6	3.0Y	2.4	2.4	3.3	3.2	
11	3.2F	2.4	2.5	2.4	2.4	2.6	3.9	3.5	3.9	4.5	6.1Y	4.0	4.0	4.0	4.0	4.0	4.0	2.2	E	E	E	2.5	E	2.2	
12	E	2.3	2.4	3.5Y	2.2	2.6	3.5	C	C	C	C	C	C	C	C	C	C	C	3.6	3.5	3.0	3.4	2.7	3.5	
13	2.4	2.1	2.5	2.3	2.2	2.6	4.4	6.5F	6.5	5.9	3.5	3.9	3.5Y	4.9Y	4.0	4.0	4.0	4.0	4.9	4.4Y	3.1	3.5	3.5	2.5	
14	2.4	2.1	2.5	2.3	2.4	2.5Y	4.1	4.0	6.1Y	3.9Y	4.0Y	4.0	7.5Y	4.2Y	3.9Y	4.0	4.0	4.0	2.7	C	4.5F	2.1	2.8	2.2	
15	2.3Y	E	2.4	3.0	4.7Y	3.5	4.1	3.5	4.5	7.5	6.7Y	5.9Y	4.0	4.0	4.0	4.0	4.0	3.2	2.6	2.7	6.0Y	4.3	3.9	2.4	
16	E	E	E	2.4	2.5	2.9	3.5	4.8F	3.9	3.5Y	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.6	3.5	3.0	3.0Y	4.0	2.4	
17	3.6Y	2.0	2.4	2.1Y	2.5	3.1Y	4.3	3.4Y	3.5	3.5Y	3.5	3.5	4.0	4.0	4.1Y	3.5Y	3.4Y	4.0	3.4Y	3.5	2.6	2.7	2.5	2.1	
18	E	2.2	E	2.0	2.5	2.2	1.9	3.5	3.9	4.1Y	4.1Y	4.1Y	3.9Y	5.7Y	4.0	3.4Y	3.4Y	3.2	2.5Y	E	2.6Y	4.2	4.5	4.0	
19	4.3	3.5	3.3	2.4	2.9Y	2.3	3.5	3.5	5.3	5.2	4.0	3.5	6.0Y	4.0	3.8Y	3.5F	3.5	2.1	2.3Y	2.5Y	4.0	6.0	3.9F	3.5	
20	3.5	3.5	2.6	3.0Y	4.4	4.5	4.8F	5.5	3.8Y	4.5	4.0	3.5	3.8	3.5Y	3.4Y	4.3	4.3	4.2F	3.5Y	3.5Y	3.1	2.3	2.5Y	2.3	
21	2.0	E	1.9	2.4Y	2.5	2.5	3.5Y	4.0	3.5Y	4.0	4.0	4.0	4.0	3.8Y	4.0	4.0	4.0	3.5	3.1Y	2.7	2.5	3.4Y	2.6	2.7	
22	2.1	2.4	E	2.0	2.7	E	2.6	3.0	4.0	5.3Y	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5Y	2.3	E	2.2	2.3	E	2.0	
23	E	E	E	E	2.4	2.3	4.0	4.0Y	4.0	4.0Y	4.0Y	4.0Y	3.8	4.0	4.0	4.0	4.0	4.0	2.1	E	E	E	E	2.4	
24	2.0	2.0	2.0	1.8	2.0	2.3	3.5F	4.0	4.0	4.0	4.0	4.0	4.0	3.4	4.0	4.0	4.0	3.5	3.6	3.1	2.5Y	2.3	1.9	E	
25	2.1	E	E	E	E	E	E	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.2	2.5Y	3.0Y	3.0	3.8	3.1Y	
26	2.3	2.5	2.4	2.1	2.6	3.5	5.6	5.9Y	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	8.0	3.9	3.5	4.2	4.5	3.9	3.4
28	2.3	3.0	2.5	2.3	2.5	2.2	2.7	4.0	4.5	5.3F	6.5Y	4.9F	4.5	4.2	3.5Y	4.0	4.0	3.7	3.2	4.2Y	3.5Y	3.0Y	2.5	E	
29	2.4	2.2	2.5	2.4Y	2.4	2.3Y	3.0	4.6	3.5	4.5	4.0	3.5	3.5F	3.5F	6.1Y	4.0	4.0	3.0Y	E	2.3	2.4	E	2.5	2.7	
30	4.3	3.2	3.0F	2.3	2.4	2.3	2.3	3.5Y	4.0	4.1	3.9	3.9	5.6Y	4.0Y	4.0Y	4.0	4.0	4.0	3.0	2.3	2.3	2.2	2.2	2.1Y	
31																									
Mean	3.2	3.0	2.6	2.6	2.8	2.8	3.5	4.3	5.3	5.0	4.9	4.4	4.3	4.1	4.0	4.1	4.1	3.8	3.4	3.5	3.3	3.5	3.5	3.1	
Median	2.4	2.4	2.5	2.4	2.5	2.6	3.5	3.5	4.0	4.2	4.0	3.7	3.8	3.4	4.0	4.0	4.0	3.5	3.4	3.3	3.0	3.0	3.2	2.6	
Count	28	28	28	28	28	28	28	27	26	27	26	26	25	26	26	27	27	27	27	27	26	27	27	28	

fEs

Manual Automatic

Sweep 1.0 Mc to 2.2.0 Mc in 1 min

W 3

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

IONOSPHERIC DATA

Lat. 39° 48.5' N
Long. 140° 08.2' E

Akita

Sept. 1954

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	3.5F (3.5)	3.1F	3.1F	A	A	2.8F	(4.0)	4.1	5.4P	5.1	(5.1)	5.1	A	A	5.4	5.6	5.4	4.9P	4.5	5.0P	(4.9)	4.8P	4.8	3.9	
2	3.0	(3.2)	3.3	3.8F	3.6F	3.0	B	B	4.5P	4.6	B	A	B	4.8	4.8	4.8	4.5	5.0	4.1	4.0	3.7F	3.6F	3.6F	3.3F	
3	3.5F	3.2F	3.1F	3.1F	3.1F	3.2F	4.2	5.3P	(5.2)	5.2	5.2	4.8	5.4	A	A	4.7	5.0	4.9	4.5	4.5	4.2	4.0F	4.2F	4.2	
4	3.7	3.7	3.5	3.3	3.5F	3.2	4.0	3.7	4.0F	5.3	5.0	B	B	B	4.7	4.8	4.5	4.9	4.5	4.7	4.2	3.8	3.9	3.7F	
5	3.2F	3.3F	(3.2)	3.2F	3.2F	3.1F	4.0	4.5	(4.6)	4.6	(4.8)	4.9	5.0	4.8	5.0	5.0	5.0	4.7	(5.3)	5.9	4.0	3.8	3.8F	3.7F	
6	3.6F	3.5	3.2F	3.4	2.8F	2.9	4.7P	4.5	A	A	4.8P	5.7	(5.4)	5.1	5.4	6.4	5.9	(6.2)	6.5	6.0	6.1	A	A	2.9F	
7	3.0F	3.1F	2.9F	(2.8)	2.8F	2.9F	B	B	B	5.0	(4.9)	4.8P	A	C	5.5	6.3	5.5	4.8	4.8	3.9	(4.0)	3.6	3.5	3.2F	
8	3.5F	3.4F	3.7F	3.0F	2.6F	(3.4)	4.1	4.9P	(4.9)	4.9	5.0	G	G	5.5	5.5	5.6	5.4	4.9	4.6	4.6	4.7	4.8	4.0	3.7	
9	3.7	3.9	3.8	3.3	3.3	3.0	4.3H	5.4P	C	C	C	C	C	C	C	C	C	(5.0)	5.7	6.6	5.0	(4.1)	3.2F	3.0	
10	3.0F	2.9F	3.0F	3.0F	3.1	3.5	4.1	(4.8)	5.3P	4.7	4.7	4.8P	5.5	5.0	5.2	4.8	5.4	4.9	5.4	5.6	(4.8)	4.0	3.5P	3.5F	
11	3.5F	3.4F	3.6F	3.5F	3.1F	3.2	3.8	3.8	(4.6)	5.6	6.4	4.7	5.0	4.7	5.0	4.6	5.0	4.7	4.7	5.4	5.4	4.5P	3.9	3.6	
12	4.0	3.4	3.5	3.4	2.8	2.7	4.0	B	B	B	5.6	4.7	5.3	5.1	4.8	5.2	4.7	4.7	5.1	(5.1)	5.1P	(4.8)	3.9	3.6	
13	C	C	3.1	2.8	2.7	2.8	3.8	5.0	5.1	5.3	5.1	4.7	5.5	4.8	4.8P	5.1	5.3	4.8	(4.8)	5.5	6.0	3.7	3.1	3.2	
14	3.2F	3.4F	3.2F	3.3F	3.3F	3.3F	(4.4)	4.5	(5.0)	5.6	5.6	5.7	5.4	5.8	5.5	5.2	5.0	6.2	7.5	5.5	3.7	3.9	3.8F	4.0	
15	3.5	3.6	3.8	4.0	2.3	2.5	4.1	4.8	6.5	6.5	6.1	5.9	5.7	5.4	5.0	5.0	5.7	5.4	6.6	5.5	4.9	4.5	4.0	4.0	
16	3.8P	3.4	3.2	3.3	3.0	3.1	4.0	4.4P	(4.6)	4.7	4.7	5.0	4.8	5.0	4.7	5.0	4.5	4.4	5.4	5.0	4.0	3.6	3.4	3.2	
17	3.3	2.8	3.2	3.2	2.7	2.7	4.2	A	B	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
18	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
19	4.6P	3.8	3.5	3.5	3.4	3.5F	4.9P	4.8	5.3	5.5	4.8	5.5	4.5	5.1	5.5	5.9	6.3	6.3	6.5	5.7	4.1	3.6	3.6F	3.6F	
20	3.5F	3.5F	3.4F	3.5F	3.0	2.9	4.8P	5.8	6.0	6.2	(6.2)	6.1	5.8P	5.1	5.8	6.0P	6.4	6.5	6.2	5.1	(4.8)	4.0	4.0	3.8P	
21	3.7	3.8P	3.9	4.4K	2.8K	3.4K	3.3K	4.2K	(4.8)	5.4K	4.6K	4.7K	5.4K	5.1K	4.9K	5.0K	4.6K	5.9K	5.4K	5.5	3.5	(3.9)	3.5	3.5	
22	3.3	3.6	3.1	3.2	2.5	2.7	(3.9)	4.8P	5.5	5.0	5.1	(4.9)	4.6	5.4	5.5	5.1	5.0	5.5	(4.9)	4.9	4.3	(4.0)	3.8	3.8	
23	3.9P	3.6	3.3	3.3	3.0	2.9	4.2	5.1	5.5	5.1	5.7	5.1	5.4	5.6	5.5	5.2	5.5	6.0	6.1	4.7	4.5	4.1	3.6	3.5	
24	3.5	3.2	3.3	3.2	3.0	3.0	4.4	(5.6)	6.6	6.3	6.2	5.8P	5.5	5.5	5.0	5.2	(5.6)	6.0P	6.0P	4.6	3.9	3.7	3.6	3.5	
25	3.5	3.4	3.3	3.2	3.2	3.0F	4.6F	5.8P	(5.2)	5.8	C	C	C	C	C	C	C	C	C	C	5.8P	(4.7)	3.6	3.7	
26	3.7	3.5	3.6	3.8	3.6	3.3F	4.0	B	B	B	6.2	5.1	5.5	6.4	6.1P	6.0P	5.8	C	C	C	C	C	C	C	
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	5.4	6.0	C	C	A	4.2F	3.5	3.5V	3.5F
28	(3.5)	3.5F	3.5	3.6	3.7	3.4V	5.0	5.5	6.0P	C	C	5.5	6.6	(6.6)	6.7	6.3	5.8	6.9	(6.1)	6.3	(4.9)	3.6F	3.6	3.8P	
29	3.9P	3.3	3.5	3.6	2.6	2.6	4.6	5.5	7.0	6.9	6.7	6.5	5.9	6.0	6.5	6.5P	6.0	6.0P	6.1P	5.6	4.8P	4.5	4.2	4.2	
30	3.9	3.8	3.9P	3.2	3.4	3.3	4.3	6.7	6.1	9.0P	7.5	6.2	6.6	5.9	6.0	7.1	7.5	7.7	7.1	5.1	4.5	3.4	3.4	3.5	
31																									
Mean	3.6	3.4	3.4	3.4	3.0	3.0	4.2	5.0	5.4	5.6	5.3	5.3	5.5	5.4	5.4	5.5	5.3	5.5	5.5	5.2	4.6	4.0	3.8	3.6	
Median	3.5	3.4	3.3	3.3	3.0	3.0	4.2	4.8	5.3	5.4	5.1	5.0	5.4	5.2	5.4	5.2	5.4	5.3	5.4	5.2	4.6	4.0	3.6	3.6	
Count	27	27	28	27	27	28	26	23	22	25	24	24	22	22	25	26	27	27	26	26	28	27	27	28	

foF2

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual

Automatic

A 1

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

Lat. 39° 43.6' N
Long. 140° 08.2' E

A k i t a

IONOSPHERIC DATA

135° E Mean Time

Sep. 1954

f'F2

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

f'F2

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual Automatic

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

Lat. 39° 43.5' N
Long. 141° 08.2' E

Akita

IONOSPHERIC DATA

fEs

Sop. 1954

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	4.1	4.1	4.1	4.0	4.2	3.0	3.2	4.0	5.4	6.4	8.5	4.2	7.3	6.4	4.5	5.7	3.0	1.8	2.7Y	2.4	3.0	3.5	4.6	4.5	
2	5.7	5.5	4.1	4.0Y	3.0	2.4	3.6	3.6Y	4.0Y	6.0	4.7	6.7	5.7	5.2	3.8	4.5	3.7	3.7	3.2	3.1	3.1	3.6	3.1	3.0	
3	3.1	3.5	3.0	3.5	3.2	3.1	3.1	3.1	5.1Y	6.0	5.0	6.1Y	5.5	5.4	6.5	5.4	5.7	3.5	2.9	2.5	3.5	2.0	4.2	3.6	
4	3.1	3.2	3.0	3.0	3.0	3.1Y	3.6	5.8	4.0	4.0	4.1	4.2	4.5	3.4	5.7	5.4	3.2	3.6	3.3	4.5	4.8Y	4.6Y	4.7Y	4.6Y	
5	4.2	4.0	6.3	3.1	4.3	3.0	3.0	3.5	3.6Y	4.0	4.6	4.1	7.0	5.0	5.4	4.4	4.5	5.2	6.7	5.5Y	7.4	5.7	5.5Y	6.5	
6	4.2	3.0	3.0	2.6	2.3	2.2	2.8	5.5	7.1	8.0	4.6	4.0	5.7	4.2	6.5Y	8.1	5.2	11.8	7.4	7.3Y	3.6	5.5	6.5Y	7.1	
7	5.3Y	3.1	5.3Y	6.6	3.6	2.3	2.7	3.6	4.7	6.4Y	7.5	4.6	6.1	5.8	5.8	4.3	3.5	2.9	3.1	3.1	3.1	2.3	2.6	4.0	
8	4.0	3.1	2.8Y	3.0	4.1	7.0	4.3	3.5	4.7	3.6	3.3	3.0	4.1	4.0	3.5	3.4	3.4	3.5	3.5	2.9	4.0	1.1	1.1	2.3	
9	2.3	E	2.1Y	E	2.3Y	C	2.9	3.2	C	C	C	C	C	C	C	C	C	4.5	3.5	3.5	4.5	6.5	4.7	3.5	
10	3.2	4.3	4.0	3.3	3.1	3.5	4.2	4.2	3.7	4.6	3.7	4.0	4.8	4.2	4.3	3.1	3.9	4.4	3.0	3.5	2.3	4.2	2.8	2.7	
11	3.1	2.8Y	2.9	2.2	3.0	2.3	3.0	4.0Y	4.0	4.3	3.6	3.6	4.0Y	5.7	3.5	3.7	3.6	3.3	2.4	2.1	E	2.3	2.4	2.4	
12	3.0	2.2Y	1.8	1.6	1.8	1.8	1.8	5.7	4.0	4.3	6.4	5.7	4.0	3.6	4.1	3.5	4.2	4.2	4.5	C	2.5	4.0	3.5	2.8	
13	C	C	2.3	2.1	2.9Y	2.1	3.2	3.6	4.0	5.6	4.1	4.1	3.5	3.5Y	3.6Y	4.2	4.2	3.5	3.6	3.0	3.0	4.5	3.0	3.1	
14	3.0	2.4	2.9Y	3.0Y	3.0	3.0	3.5	4.0	4.0	4.5	4.5	4.0	3.5	3.1	3.5Y	4.0	4.0Y	3.0	3.0	4.3	3.0	4.1Y	2.8	2.9	
15	2.5	2.5	2.5	2.8	3.0Y	2.9Y	4.3	3.5	4.0	4.4	4.5	3.9	5.7	4.0	4.0	4.0	3.1	3.6	2.8	3.5	3.1	3.4	2.5	3.1	
16	2.2Y	2.8	2.3	2.4	2.1	2.6	2.6	3.0	3.0	3.5	3.4	3.5	2.9	4.0	3.5	5.7	4.1	3.4	2.4Y	2.0	E	E	3.5	1.8	
17	3.3	2.2	3.0	1.8F	2.5	3.0	3.5	5.9	3.5	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
18	M	M	M	M	M	M	M	M	M	G	5.7G	3.5	3.5	3.5	G	G	3.6	3.4	3.5	3.4	3.0	2.8	2.8	4.0	
19	4.4	3.1	3.6	2.9	2.0Y	1.9Y	5.7	4.0	4.0	3.2	3.7	4.0	4.0	4.0	4.0Y	3.5	4.2	3.5F	3.0Y	2.7Y	E	E	3.1	3.2	
20	3.1	3.0	2.5	2.2	1.9	2.3Y	2.9	3.7	4.0	4.4	C	3.6	4.0	4.0	3.5	4.0	3.5	3.0	3.5	3.5	3.5	3.1	2.4	2.4	
21	2.7	2.3	1.9	2.2Y	2.5	2.5	3.5	4.0	3.9	4.2	3.6	3.5	4.1	3.5	3.5	3.2	3.1	3.0Y	2.2	2.5	2.9	2.8	2.5	2.1	
22	2.3	2.2Y	2.4	2.1Y	2.3Y	2.5	2.1Y	3.0	3.0	3.5	G	3.5	4.1	3.5	3.5	3.2	3.1	3.5	2.9Y	E	E	E	2.0Y	E	
23	1.8Y	2.0Y	1.6Y	1.8	1.8	2.1	2.0	3.0	3.0	4.0	4.0	2.6	2.9Y	3.5	3.1	3.1	3.1	3.5	3.0	2.4	2.8	3.3	3.1	E	
24	E	E	E	E	2.3	E	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.6	2.4	2.8	2.8	3.3	3.1	E	
25	2.0	2.0	2.4Y	2.0Y	2.4Y	2.5	2.9	3.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
26	2.3	2.3	2.4	2.3Y	2.1	2.0Y	2.7	3.0	3.6	4.2	5.5	3.6	3.6	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
28	C	2.3F	2.3	2.6	2.4	2.3Y	3.0	3.5	3.5	C	C	4.2	4.1	C	3.5	3.3	3.3	3.3	2.5	2.9	3.5	4.2	3.1	2.2	
29	3.1	E	2.0Y	2.0	2.0	3.0Y	2.8	3.5	3.5	3.4	3.5Y	3.5Y	4.0	3.1	3.1	3.1	2.5	2.6	2.4	2.7Y	E	2.0Y	E	E	
30	2.2Y	2.2Y	2.0Y	2.4Y	2.3Y	2.3	2.5	3.0	3.0	3.0	3.0	3.7	3.5	3.5	3.5	3.5	4.0	2.9F	3.0	2.3	2.4Y	E	2.3	E	
31																									
Mean Value	3.2	2.9	2.9	2.8	2.7	2.7	3.1	3.9	4.0	4.7	4.6	4.1	4.3	4.1	4.2	3.9	3.8	3.7	3.3	3.4	3.5	3.8	3.5	3.4	
Median Value	3.1	2.5	2.5	2.4	2.4	2.5	3.0	3.5	3.6	4.1	4.1	3.8	3.8	3.5	3.5	3.4	3.5	3.5	3.0	3.0	3.0	3.4	3.1	3.0	
Count	26	27	28	28	28	27	28	28	26	26	24	26	26	24	26	26	26	26	27	26	26	28	28	28	28

fEs

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual Automatic

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

30F2

Sep. 1954

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] ^A	3.0 ^F	3.0 ^F	2.9 ^E	3.0 ^F	2.7 ^F	3.6	5.5	5.7	5.1	A	A	4.9	[5.4] ^A	6.1	6.0	5.5	5.0	4.6	5.2 ^P	4.9	4.9 ^Z	5.0	A
2	AF	(2.6) ^F	3.1 ^F	A	A	A	4.5	4.8	6.1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	5.7	5.0 ^T	5.5	5.3	[5.2] ^A	5.0 ^T	5.3 ^T	4.9	4.7	4.8	4.2	3.9 ^F	4.0	3.8 ^F
4	3.7	3.4 ^F	3.4 ^F	3.1 ^F	3.2 ^F	3.1	4.1	5.0	5.9	5.9	5.6	4.6	G	4.9	4.9	5.0	5.0	5.0	5.3	4.9	4.5	4.0	3.7 ^V	[3.6] ^F
5	3.6 ^F	C	C	C	C	3.9	4.5	4.7	B	4.6	4.4	5.0	4.9	4.9	5.5	5.0	5.4	5.5	5.7	5.5	4.5	3.4	3.7 ^F	3.5
6	3.4 ^F	3.3 ^F	3.4 ^F	3.2	3.0	3.3	5.3	4.8	5.1	5.5	5.4 ^T	5.3	5.2 ^P	4.7	[5.4] ^A	6.0	6.4	6.9	7.5	7.0	4.8	3.0	2.9	3.0 ^F
7	3.0 ^F	3.1 ^F	2.9 ^F	2.7 ^F	2.8	3.0	3.9	4.4	[5.0] ^A	5.5	5.4 ^T	4.7	5.2	[5.6] ^A	6.0	7.0	6.0	5.6	5.0	3.5	3.5	3.4	3.4 ^F	3.4 ^F
8	3.1 ^F	3.2 ^F	3.5 ^F	3.4	2.3 ^F	(2.5) ^F	4.1	5.1	5.0	5.4	5.3	5.0	5.5	5.4	5.5	5.6	5.8	4.9	4.5	4.6	4.5	4.4	4.0 ^V	3.6
9	3.6	3.5	3.5	3.6	3.0	3.0	4.1	5.5	5.4	5.5	5.7	4.9	5.1	5.5	5.0	5.3 ^T	4.9	4.9 ^P	6.5	7.3	5.1 ^P	3.0 ^F	A	A
10	2.9	3.0	3.0 ^F	3.0 ^F	3.0 ^F	(2.7) ^F	4.5	5.1	6.5	5.3 ^T	4.9	4.7	5.4	5.3 ^P	5.1 ^T	5.0	5.4 ^T	6.1	6.0	6.2	4.5	4.5	3.6	3.6
11	3.6	3.5	3.5	3.6	2.7 ^F	3.0 ^F	3.7	5.7	5.9	5.4	4.8	4.7	G	4.9	4.9	5.4	4.9	4.7	5.3 ^P	5.9	5.4 ^P	4.5	3.9	3.7
12	3.7	3.6	3.7	3.7	2.9	3.0	4.6	5.7	5.4 ^T	5.0	5.4 ^P	5.2	5.1	5.5	5.1	5.5	5.0	5.1	5.9	5.8	5.5	4.0	A	A
13	A	3.2 ^F	3.0	3.0 ^F	2.8	2.8 ^P	4.1	5.4	6.0	5.6	5.0 ^T	5.0	4.8	5.1	5.3 ^P	5.0	5.9	5.6	[6.0] ^A	6.4	4.6	3.6	3.0 ^F	3.3
14	3.2	3.0	3.1	3.0	3.0	3.0 ^F	4.6	5.4	5.5	5.5	6.1	5.7	5.7	6.5	5.8	5.4	5.3 ^T	7.2	7.0	5.7	[4.7] ^A	3.7	3.5	3.7
15	3.5	3.4	3.2	3.4	[2.8] ^A	2.2	4.2	5.3 ^P	7.7	5.5	7.1	5.7	5.8	5.9	5.5	5.4	5.1 ^T	6.5	7.0	6.0	4.5	4.1	4.2	3.7 ^F
16	3.6	3.5	3.4	3.3	3.2	2.9	4.1	4.5	4.5	5.4 ^T	5.3 ^P	5.3 ^T	5.1	5.0	5.4	5.3	5.2	4.5	5.8 ^P	5.8	4.4 ^P	3.2	3.4	3.1
17	3.0	2.9	2.9	3.3	2.2	2.4	4.2	5.3 ^T	5.0	5.5	6.0	5.8	5.7	6.1	6.4	6.5	6.4	5.8	6.0	4.9	[4.0] ^A	3.1	C	C
18	C	3.1	3.0	3.0	3.2	3.3	4.7	4.9	5.5	5.5	6.1	6.0 ^H	5.2	5.8	6.1	5.6	4.9	5.6	5.9	6.0	4.8	4.8	4.5	4.6
19	4.6	4.2	3.6	3.4	3.2	3.4	4.8	5.4 ^T	5.0	5.6	5.6	5.5	6.0	5.4	5.5	6.0	6.7	7.3	6.3	4.7	3.6	3.3	3.2 ^F	3.3 ^F
20	3.4	3.4	3.2 ^F	3.3	2.5 ^F	2.6	4.4	6.6	6.6	6.3	5.6	5.5	5.5	5.0	5.4	5.9	7.0	6.6	7.1	5.5	4.7 ^P	3.6	3.5	3.4
21	3.6	3.7	3.5	3.7	2.6	3.0	4.2	5.2	5.3 ^T	4.9	5.4	5.1	5.9	6.0	5.5	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	4.0	3.5	3.2	3.2	2.5	2.5	4.6	6.4 ^P	5.7	5.0	5.6	5.5	5.2	5.9	6.0	5.2	5.0	5.0	5.2	4.8	4.3	4.3	4.0	4.0
24	3.4	3.1	3.3	3.3	3.1	3.0	4.2	6.2	8.0 ^P	6.0	5.6	5.6	5.8	5.6	5.6	6.0	6.0	5.8	6.1	4.8	4.3	4.1	3.6	3.5
25	3.2	3.2	3.2	3.1	3.0	3.0	5.2	6.0	6.0	5.7	6.2	6.3	6.6	5.6	5.2	5.3	5.7	7.1	7.5	5.5	3.1	3.1	3.3	3.2
26	3.7	3.4	3.4	3.4	3.3	3.3	3.3	5.2	5.7	7.3	5.5	5.0	5.7	6.5	6.8	6.8	5.7	6.5	7.2	4.5 ^F	4.3 ^F	3.9	3.3	3.0
27	2.9	3.2	3.2 ^P	3.0	A	A	B	B	B	B	B	B	B	6.6	6.7	B	C	C	6.8	5.2	3.1	3.2 ^F	3.0 ^F	3.0
28	3.0	3.2 ^E	3.2	3.4	3.2	3.0	4.7	5.2 ^P	6.0	7.4	5.4	6.0	6.0	6.5	6.5	7.2	5.5	6.6	6.9	6.6 ^P	5.2	3.0	3.0 ^F	3.0 ^F
29	3.3	2.9	3.0	3.0	2.0 ^F	2.3	4.7	6.1	8.2	6.7	6.4	7.0	6.0	5.9	6.5	6.2	5.9	6.0	6.2	6.7	4.6	4.1	4.1	4.0
30	4.0	3.7	3.9	3.4	3.1	3.2	4.7	6.7	7.0	7.5	7.0	6.3	5.3	6.0	6.5	7.5 ^F	8.0	9.0	8.6	5.4	3.7	3.4	3.2	3.2
31																								
Mean Value	3.4	3.3	3.3	3.2	2.9	2.9	4.4	5.4	5.9	5.6	5.6	5.4	5.5	5.6	5.7	5.8	5.7	5.9	6.2	5.6	4.5	3.8	3.6	3.5
Median Value	3.4	3.2	3.2	3.3	3.0	3.0	4.5	5.4	5.7	5.5	5.6	5.3	5.4	5.6	5.5	5.5	5.5	5.8	6.0	5.5	4.5	3.6	3.6	3.5
Count	2.5	2.7	2.7	2.6	2.5	2.6	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.9	2.9	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.5	2.4

30F2

Sweep 1.0 Mc to 1.7.2 Mc in 2 min

Manual Automatic

K I

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Sep. 1954

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	(320) ^M	310 ^F	300 ^F	(320) ^F	350 ^F	330 ^F	300	250	250	U	A	A	A	A	A	300	300	310	310 ^F	320	320 ^Z	300	A		
2	AF	(380) ^F	360 ^F	A	A	A	280	320	250	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
3	C	C	C	C	C	C	C	C	C	C	290	U	U	U	U	U	(290) ^F	280	290	260	310	350 ^F	370	330 ^F	
4	300	320 ^F	340 ^F	300 ^F	320	320	250	270	U	U	280	U	U	U	U	350	280	300	270	270	270	360	330 ^F	(320) ^F	
5	(300) ^F	C	C	C	C	260	250	260	B	U	A	U	A	U	350	370	280	270	280	290	270	340	350 ^F	300	
6	310 ^F	310 ^F	330 ^F	330	300	270	250	240	280	270	U	U	U	U	A	310	310	300	270	260	230	310	330	330 ^F	
7	330 ^F	350 ^F	340 ^F	350 ^F	320	280	250	250	A	U	A	U	U	A	340	320	270	250	270	270	300	330	360 ^F	350 ^F	
8	340 ^F	280 ^F	290 ^F	220	330 ^F	(340) ^F	240	230	U	U	U	U	U	U	U	300	240	260	270	310	300	270	330 ^F	320	
9	310	320	280	300	320	350	290	250	270	310	270	U	U	U	U	330 ^F	310	U	300	250	220 ^P	350 ^F	A	A	
10	320	280	340 ^F	310 ^F	340 ^F	(320) ^F	270	270	250	(280) ^F	U	U	U	U	310 ^F	U	(330) ^F	320	290	270	270	320	320	310	
11	320	320	320	270	220 ^F	320 ^F	290	260	270	U	U	U	U	U	300	300	290	300	290 ^P	290	280 ^F	280	330	340	
12	320	340	310	250	340	300	280	240	(250) ^F	260	U	U	U	U	300	320	300	280	290	290	260	320	A	A	
13	A	330 ^F	300	310 ^F	330	330 ^F	280	280	260	U	U	U	U	U	U	U	U	270	(280) ^A	280	260	270	350 ^F	320	
14	300	330	300	310	280	290 ^F	250	250	280	300	300	320	U	300	310	290	(340) ^F	280	260	210	(260) ^A	300	340	310	
15	350	350	340	260	(300) ^A	330	280	280 ^F	250	280	300	300	U	U	290	280	U	U	280	260	260	360	360	320	
16	330	310	330	290	310	310	310	280	U	U	U	U	U	U	290	280	280	280	290 ^P	260	260 ^F	340	310	310	
17	340	340	350	240	290	310	280	(250) ^F	250	310	280	330	340	320	320	290	280	260	270	360	(360) ^F	350	C	C	
18	C	320	300	300	330	350	250	250	270	280	310	330 ^H	U	290	290	270	260	300	290	290	350	340	340	320	
19	300	290	310	330	330	320	250	(230) ^F	260	270	270	310	320	300	320	300	280	260	260	250	290	310	350 ^F	330 ^F	
20	330	330	320 ^F	270	290 ^F	320	260	240	250	230	270	270	300	U	300	320	290	270	260	250	250	260 ^F	320	380	370
21	340	330	330	300	250	360	250	270	(280) ^F	370	300	U	350	300	310	C	C	C	C	C	C	C	C	C	
22	C	C	C	C	C	C	C	C	C	U	U	U	300	280	300	290	280	270	280	280	320	390	310	350	
23	310	330	290	340	290	340	280	250 ^F	240	U	U	U	U	320	300	280	250	260	260	280	300	310	330	330	
24	270	320	310	280	300	330	270	280	240 ^F	250	250	270	290	300	280	290	290	270	250	230	310	330 ^F	330	340	
25	320	320	320	310	330	310	250	230	250	260	270	260	270	260	280	330	290	290	260	250	230	300	320	340	
26	300	310	310	310	300	340	230	250	230	260	270	U	330	320	280	260	290	280	260	280 ^F	350 ^F	350	350	350	
27	330	300	300 ^F	260	A	A	B	B	B	B	B	B	B	B	300	B	C	C	C	250	220	330	360 ^F	350 ^F	
28	320	320 ^Z	320	290	260	350	240	260 ^F	250	250	280	300	320	290	310	260	280	270	280	260 ^P	230	390	400 ^F	350 ^F	
29	290	290	350	250	300 ^F	310	250	260	250	240	280	270	290	310	280	280	280	280	260	270	300	310	310	340	
30	330	330	310	260	330	310	250	250	250	270	260	260	260	300	300	300 ^P	300	270	260	260	270	320	360	360	
31																									
Mean Value	320	320	320	290	310	320	260	260	260	280	280	290	310	300	300	300	290	280	270	270	290	330	340	330	
Upper Value	320	320	320	300	300	320	250	250	250	270	270	300	300	300	300	300	290	280	270	270	280	320	330	340	
Lower Value	320	320	320	260	270	270	270	270	220	180	160	110	110	110	150	200	230	250	260	260	270	280	280	280	
Count	25	27	27	26	25	26	27	27	22	18	16	11	11	15	20	23	25	26	28	27	28	28	25	24	

K 2

Manual Automatic

Sweep 1.0 Mc to 17.2 Mc in 2 min

f_oF₂

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

Sep. 1954

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	[260] ^M	260	250	300 ^F	300 ^F	270	250	250	250	280	A	A	370	[350] ^A	330 ^A	300	300	290	230	250	250	250	240	[270] ^A	
2	300 ^F	350 ^F	300	A	A	A	250	320	250	C	C	C	C	C	C	C	C	C	C	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	250	250	270	250	270	250	240	270	350	280	270	370	G	420	370	350	280	300	230	240	250 ^A	250 ^A	320	300	280 ^F
5	250 ^F	C	C	C	C	240	240	260	300	340	L	360	370	430	350	370	280	270	280 ^A	250 ^A	220	220	310 ^A	300 ^A	260
6	270	270 ^F	280	240	250	240	280	240	280	270 ^A	300	320	330	450	[380] ^A	310	290	270	240 ^A	220	200	240	270	290	
7	290 ^F	300	320 ^F	300 ^A	290	250	230 ^A	230 ^A	[260] ^M	300	A	510	350	[340] ^A	330	300	250	250	220	250	270 ^A	270 ^A	290	300 ^F	320 ^F
8	320 ^A	250 ^F	230	200	300 ^F	300 ^F	240	230	330	310	340	300	340	310	310	300	240	250	230	250	250	230	270	270	
9	270	270	210	240	250	290	240	250	270	310	270	360	370	300	350	330	300	320	270	220	200	330	A	A	
10	310	260	280	270 ^F	320 ^F	310 ^F	270	270	250	280	300	380	350	310	310	340	330 ^A	270 ^A	250	220	220	220	230	260	260
11	270	260	270	230	200	280	270	260	270	260	310	420	G	380	300	300	290	[280] ^L	260	230	230	230	270	270	
12	260	310	260	210	270	250	270	240	250	260	290	340	380	290	330	320	290	270	250	300 ^A	320	230	A	A	
13	A	260	260	270	280	290	230	280	260	260	300	320	450	360	330	360	290	270 ^A	[270] ^M	270 ^A	260 ^A	240 ^A	300	280	
14	280	300	270	250	230	260	240	250	270	300	300	320	380	300	310	290	340	260	220 ^A	210	[240] ^A	270 ^A	290	270	
15	290	310	290	220	[260] ^M	310	270	280	250	380	290	290	290	280	280	350	290	260	250 ^A	250 ^A	280	280	260	260	
16	280	260	280	240	260	250	300	290	280	280	360	340	330	390	290	280	280	260	250	230	210	290	260	260	
17	290	290	290	210	240	280	280	250	250	310	280	330	340	320	310	290	260	250 ^A	250 ^A	A	A	320 ^A	C	C	
18	C	260	250	260	270	280	240	230	270	280	310	[330] ^M	350	290	290	270	260	270	240	240	230	270	280	260	
19	250	230	270	280	280	270	220	230	260	270	270	310	320	300	320	300	270	240	220	200	220	250	300 ^F	290 ^F	
20	270	270	280	220	250	270	230	240	250	230	270	270	290	320	300	320	270	250	220	220 ^A	230	300	320	320	
21	290	270	270	250	230	300	230	260	280	370	300	350	350	300	370	C	C	C	C	C	C	C	C	C	
22	C	C	C	C	C	C	C	C	C	C	C	400	300	280	300	280	270	240	240	230	250	310	260	290	
23	250	260	230	250	240	290	240	250	240	300	300	290	330	320	300	280	250	250	230	230	230	250	250	270	
24	230	260	260	240	250	280	240	270	240	250	250	270	290	280	280	280	270	240	230	200	230	250	290	280	
25	260	270	250	260	270	250	230	230	250	260	270	260	270	260	280	330	270	260 ^A	220 ^A	220 ^A	210	240	280	300	
26	260	250	250	240	240	230	220	250	230	240	270	[300] ^L	330	320	280	260	260	240	230 ^A	250 ^A	260	260	280	300	
27	300	250	250	240	A	A	B	240	240	B	B	270	330	B	300	280	C	C	220	200	250	300 ^F	300 ^F		
28	270	260	270	240	220	300	220	240	250	250	280	300	320	290	300	250	250	240	230	230	200	330	350 ^F	300	
29	250	240	260	200	190	270	240	250	250	240	280	260	290	310	280	270	250	240	230	240	230	240	260	280	
30	280	260	240	230	260	260	230	240	250	250	250	250	290	290	300	290	270	230	220	220	220	260	300	310	
31																									
Mean	270	270	260	240	260	270	240	250	260	280	290	330	330	310	300	280	280	260	240	230	240	270	280	280	
Median	270	260	270	240	260	270	240	250	250	280	290	320	340	310	300	270	270	260	240	230	230	260	280	280	
Count	26	27	27	26	25	26	27	28	28	27	25	28	29	28	29	28	27	27	27	28	27	28	25	25	

K'F2

SwEEP J.1.0 Mc to J.7.2 Mc in 2 min

Manual Automatic

K 3

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

foF1

Sep. 1954

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	3.7	4.0	A	A	A	A	A	A	4.0	3.8	3.3L						
2							L	3.3	A	C	C	C	C	C	C	C	C	C						
3							C	C	C	C	4.1	4.1	A	A	A	4.0	3.7	Q						
4							Q	3.5	3.7	4.0 ^H	4.0	4.2	4.4	4.2	4.0	4.0	3.7	3.2						
5							2.7L	3.5L	4.0	4.2	4.2	4.3	[4.2]A	4.2	4.2	4.2	3.7	A						
6							L	3.4L	4.0	[4.1]A	4.2	[4.2]A	4.3	4.3	A	A	A	A						
7							L	A	A	A	4.3	4.2	A	A	A	3.9	3.6	3.2L						
8							2.8	3.4L	4.0	4.2	4.1	4.3	4.4L	4.2	4.2	4.0	3.7	L						
9							L	3.5	4.0	4.0	4.2	4.3	4.2	4.2	4.1	4.0	3.8	3.2L						
10							A	3.5L	3.8	4.1	4.3	4.4	4.3	4.2	4.0	4.0	A	A						
11							2.3	3.5	4.0	4.0	4.3	4.4	4.4	4.2	4.0L	3.9	3.8L	L						
12							L	3.5	4.0	4.1	4.2	4.3	4.4	4.3	4.1	4.0	3.7	L						
13							Q	3.6	3.9	[4.0]A	4.2	[4.3]A	4.4	4.2	4.1	4.0	4.0	A						
14							Q	A	4.0	4.0	4.2	4.3	4.4	4.2	4.2	4.0	3.8	3.2						
15							A	A	3.9	4.0	4.3	4.2	4.2	4.0	3.7	[3.6]C	3.6	3.0						
16							2.9L	3.7L	3.9	3.5	4.1	4.2	4.2	4.2	4.3	4.0	3.9	3.5L	L					
17							A	A	3.8	4.0	4.2	4.3	4.4H	4.3	4.3	4.0	3.6	A						
18							Q	Q	3.9	4.2	4.3	4.4	4.3	4.2	4.0	4.0	3.5	3.0L						
19							Q	L	4.0	4.2	4.2	4.4	4.5	4.2	4.34H	4.0	3.7	3.1L						
20							Q	3.5	4.0	4.2	4.2	4.4H	4.4	4.2	4.1	3.9	3.9L	L						
21							Q	3.3	[3.6]A	4.0	4.2	4.3	4.2	4.1	4.1	C	C	C						
22							C	C	C	4.0	4.1H	4.3	4.2	4.1	4.0	3.9	3.4L	L						
23							Q	3.5L	3.8	4.0	4.1	4.3H	4.4	4.3	4.2	4.0	3.5	L						
24							A	3.5	3.9	4.0	4.2H	4.2H	4.4	4.1	4.2H	3.9	3.5	2.9L						
25							Q	3.7	3.8	4.3	4.1	4.4	4.3	4.3	4.1L	4.2	L	A						
26							Q	3.5	4.0	4.0	4.1	[4.2]L	4.4	4.2	4.1	4.0	3.3	A						
27							A	B	B	B	4.1	4.2	4.4L	[4.2]B	4.1L	B	C	C						
28							Q	A	A	4.2	4.3	4.5L	4.5	4.4	4.1	4.0	L	L						
29							Q	3.5L	4.0	4.3	4.4	4.4	4.4	4.2	4.2	4.0L	3.5L	Q						
30							Q	3.5L	4.0	4.1	4.3	4.2	3.9	4.3L	4.3	4.0	3.3L	2.5L						
31																								
Mean							2.7	3.5	3.9	4.1	4.2	4.3	4.3	4.2	4.1	4.0	3.6	3.1						
Min							2.8	3.5	4.0	4.1	4.2	4.3	4.4	4.2	4.1	4.0	3.7	3.2						
Median							4	2.0	2.4	2.5	2.7	2.8	2.7	2.6	2.5	2.6	2.3	1.0						
Value																								
Count																								

foF1

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° 29.8' E
Kokubunji Tokyo

IONOSPHERIC DATA

Sep. 1954

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							Q	250	A	A	A	A	A	A	A	250 ^A	230	220							
2							250 ^A	250	A	C	C	C	C	C	C	C	C	C							
3							C	C	C	C	210	180	A	A	A	240	240	240	Q						
4							Q	250	250	220 ^H	200	220	200	200	220	230	240	240	220						
5							230	230	230	A	240	220	[220] ^A	220	250	260	270	A							
6							230	220	200	[200] ^A	210	[200] ^A	200	200	A	A	A	A							
7							230	A	A	A	A	220	A	A	A	250	250	240							
8							200	240	240	A	200	230	200	230	230	210	230	220							
9							240	220	220 ^A	200	190	180	170	250	220	220	230	270 ^A							
10							A	250	250	210	200	200	200	230	230	240	A	A							
11							200	240	220	200	210	200	210	220	230	250	270 ^A	230 ^A							
12							240	230	210	200	210	200	230	200	200	220	230	240							
13							Q	230	230	[220] ^A	200	[200] ^A	210	200	210	240	250	A							
14							Q	A	230	200	210	230	210	200	230	250	240	250							
15							A	A	A	200	240	[220] ^A	200	220	[230] ^A	240	[260] ^A	270							
16							250 ^A	220	200	A	200	200	240	210	230	250	260 ^A	250							
17							A	A	230 ^A	220 ^A	210	200	190 ^H	240	240	220	230	A							
18							Q	Q	230 ^A	220	200	200	230	230	210	230	240	240							
19							Q	230	200	220	250	200	200	200	200 ^H	220	240	240							
20							Q	230	220	210	200	190 ^H	210	210	220	220	250	250							
21							Q	240	[240] ^A	230	240	220	210	210	240	C	C								
22							C	C	C	200	190 ^H	210	270	240	220	230	240	240							
23							Q	250	230	200	200	190 ^H	210	210	230	230	240	240							
24							A	240	210	200	200 ^H	180 ^H	200	200	200 ^H	240	250	230							
25							Q	220	220	210	200	220	210	210	190	240	250	A							
26							Q	240	230	200	230	210	190	240	240	230	230	A							
27							A	B	B	B	270	190	280	B	B	B	C	C							
28							Q	A	A	200	200	200	250	210	220	250	230	240							
29							Q	240	230	210	200	190	200	220	240	240	230	Q							
30							Q	230	230	220	200	200	190	260	250	230	230	A							
31																									
Mean							230	240	230	210	210	200	210	220	220	240	240	240							
Maximum							230	240	230	210	200	200	210	220	230	240	240	240							
Minimum							9	21	22	22	27	28	26	25	24	26	25	17							
Count																									

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Sep. 1954

f_oE

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

f_oE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

K 6

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

f_oE

Sep. 1954

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

f_oE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

K 7

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 28.8' E

Sep. 1954

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	4.5	5.0	3.2	3.2	6.5	3.2	3.2	4.9	4.8	6.0	7.5	5.7	6.5	7.5	6.5	5.0	3.5	3.5	2.5	2.1	2.3	2.7	5.0	8.5	
2	5.7	5.6	6.0	5.6	4.9	4.4	3.2	3.5	5.0	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
3	C	C	C	C	C	C	C	C	C	C	7.0	4.2	5.0	7.5	7.0	4.0	3.2	3.2	3.1	4.5	3.2	2.5	4.2	2.1	
4	2.4	2.1	2.5	3.0	2.4	2.5	2.9	3.2	4.0	4.0 ^Y	5.0	4.5	4.7	5.0	4.9	4.5	4.5	4.5	5.0	5.5	4.4	4.5	4.0	3.0	
5	3.2	C	C	C	C	3.3	3.5	3.6	4.0	5.0	5.0	4.5	5.0	4.9	5.0	4.5	4.5	4.5	5.0	5.5	4.4	4.5	4.0	3.0	
6	3.2	3.2	3.1	3.0 ^F	3.1	2.3	3.0 ^Y	3.2	4.5	6.6	5.0	7.5	3.2	5.0	7.3	5.0	6.5	5.2	4.8	4.2	3.2	2.1	E	4.9	
7	5.1	4.1	4.8	3.5	3.0	3.0	2.6	4.0	6.5	5.0	5.4	4.3	4.7	6.0	6.5	3.5	4.3	3.5	4.5	3.2	3.2	3.1	3.1	3.1	
8	4.0	3.0	3.0	2.6	3.0	3.2 ^F	2.4	5.5	4.5	5.0	3.2	3.2	3.5	5.0	5.0	3.2	3.2	3.5	3.9	4.5	3.0	2.7	2.5	2.0	
9	E	2.5	2.4	2.5	2.9	2.5	3.2	3.2	4.4	3.8	5.0	4.5	4.0	5.0	5.0	3.2	3.2	4.0	3.3	3.7	3.1	3.5	3.8	7.0	
10	4.7	2.9	4.5	3.3	3.2	3.2	4.8	4.6	4.5	4.5	4.2	4.0	5.0	5.0	3.0	4.2	4.5	5.8	3.9	4.5	4.2	3.0	2.6	2.5	
11	2.4	2.6	3.2	3.0	2.2	2.2	3.0	3.7	4.5	3.2	4.5	3.2	3.2	5.0	5.0	4.4	4.0	3.2	2.5	E	E	2.0	2.5	1.9	
12	2.4	2.2	2.4	2.5 ^Y	3.0	2.4 ^Y	2.6	3.5	3.8	3.2	5.0	5.0	4.5	3.2	3.2	3.2	3.7	3.4	4.0	6.0	3.0	3.2	5.2	7.0	
13	5.0	3.2	3.0	3.0	3.0	2.8	3.2	4.0	4.4	5.0	4.4	5.0	4.5	5.0	5.0	3.2	3.2	5.2	6.4	6.5	5.0	4.7	3.9	3.2	
14	3.0	2.5	2.6	2.1	2.5	3.6	3.3	5.1	4.4	5.0	4.5	4.3	5.0	4.5	5.0	5.0	3.2	2.7	3.2	2.5	5.7	4.5	2.5	2.5	
15	2.5	2.5	2.2	2.2	3.8	2.7	4.3	4.5	4.3	4.3	4.3	5.0	4.3	4.2	5.0	5.0	4.2	4.5	4.9	4.5	2.4	2.4	2.5	1.9	
16	E	1.8	2.0 ^Y	2.0	2.5	2.5	3.2	3.2	3.2	3.2	5.0	5.0	5.0	3.8	3.0	4.3	4.0	3.2	2.4 ^Y	2.1	E	E	E	E	
17	E	E	2.0	2.1	2.5	2.5	4.3	4.5	6.7	5.0	5.0	4.5	4.5	4.4	3.5	3.2	3.2	4.9	5.5	5.2	5.0 ^F	3.2	C	C	
18	C	1.8	2.0	1.9	2.5	E	2.6	4.4	4.4	3.7	6.5 ^Y	7.0	3.7	5.0	5.0	3.2	4.0	3.2	3.0	3.0	3.6	3.0	6.0	4.5	
19	2.5	4.5	4.2	2.6	3.0	2.5	1.8	2.9	3.2	3.0	3.5	3.2	3.2	5.0	5.0	3.7	3.2	2.9	2.5	2.0	2.5 ^Y	E	3.0	3.0	
20	3.2	3.2	3.0	2.9	2.9	2.5	3.0	3.0	3.0	4.5	3.4	3.2	3.5	5.6 ^Y	4.0	3.2	4.0	4.0	3.2	4.5	4.4	4.3	3.1	2.9	
21	2.5	2.8 ^Y	2.0 ^Y	2.5	2.0	2.5 ^Y	3.0	3.5	4.5	5.0	5.0	6.0	3.9	3.5	3.5	C	C	C	C	C	C	C	C	C	
22	C	C	C	C	C	C	C	C	C	3.8	3.8	3.8	4.3	3.6	3.0	2.9	2.8	3.0	2.7	2.7	1.7	E	E	E	
23	1.7	2.4	2.5 ^Y	E	2.6	E	2.6	2.8	3.0	3.2	5.0	5.0	5.0	5.0	5.0	3.0	2.8	3.2	3.5	3.0	2.2	E	E	2.4	
24	2.5	E	2.2	3.2	3.0	2.2	2.7	2.8	3.2	5.0	5.0	5.0	5.0	5.0	5.0	2.8	2.8	2.9	2.1 ^Y	E	E	E	2.5	2.5 ^Y	
25	2.4	3.2	2.3	2.4	2.4	E	2.9	3.4	3.5	3.6	2.8	5.0	5.0	5.0	5.0	3.2	3.2	3.5	3.0	3.6	3.2	5.8	7.0	2.6	
26	2.0	2.5	2.5	2.4	2.5	1.9	3.2	3.2	4.4	5.5	3.6	3.2	3.0	3.1	3.0	3.0	3.0	3.2	3.5	5.0 ^F	3.1	3.0	2.5	2.1 ^Y	
27	E	E	2.5	3.0	3.2	3.5	3.2	4.0	3.0	2.8	3.2	3.2	3.0	3.0	3.0	3.0	C	3.0	3.0	3.2	3.2	4.5	3.2	2.5	
28	2.4	2.5	2.5	2.5	2.6	2.5	3.2	4.0	5.4	3.7	4.0	3.2	3.7	3.5	3.5	3.2	2.8	2.8	2.5	2.3	2.7	3.1	3.2	3.0	
29	3.2	2.4	2.5 ^Y	2.5	2.5 ^Y	2.5	2.6	3.3	3.2	3.5	5.0	5.0	5.0	5.0	5.0	3.2	2.8	2.7	E	2.8	E	2.5	E	E	
30	E	E	2.0	E	2.5	2.4 ^Y	2.6	3.0	3.6	4.0	3.8	5.0	5.0	5.0	5.0	3.2	2.8	2.9	3.7	2.2	2.5	1.8	E	3.8	
31																									
Mean Value	3.2	3.0	2.9	2.8	3.0	2.8	3.1	3.7	4.2	4.3	4.6	4.4	4.1	4.7	4.5	3.7	3.6	3.6	3.5	3.7	3.3	3.3	3.7	3.6	
Median Value	2.5	2.5	2.5	2.5	2.9	2.5	3.0	3.5	4.4	4.0	4.2	4.2	3.5	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.0	3.0	3.0	2.6
Count	27	27	27	27	27	28	28	28	28	28	29	29	29	29	29	29	28	27	27	28	28	28	28	27	27

fEs

Sweep 1.0 sec to 17.2 sec in 2 min

Manual

Automatic

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Sep. 1954
(M3000)F2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	(3.0) ^A	3.0 ^F	3.0 ^F	(2.9) ^F	2.8 ^F	2.9 ^F	3.0	3.4	3.5	3.3	A	A	3.0	(3.0) ^A	3.1	3.1	3.2	3.1	3.0	3.1 ^P	3.0	3.0 ^F	3.0	3.0	A
2	AF	(2.7) ^F	2.9 ^F	A	A	A	3.1	3.1	3.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	3.3	(2.8) ^F	3.0	3.1	A	(3.1) ^F	(3.2) ^F	3.0	3.1	3.3	3.0	2.8 ^F	2.7	2.8 ^F	2.8 ^F
4	3.1	2.9 ^F	2.7 ^F	3.0 ^F	3.1 ^F	2.9	3.3	3.4	2.8	3.1	3.3	2.9	3.0	2.7	2.9	3.0	3.4	3.2	3.3	3.2	3.3	2.7	2.9 ^F	(3.0) ^A	(3.0) ^A
5	(3.0) ^F	C	C	C	C	3.4	3.5	3.4	B	3.0	2.6	2.8	2.9	2.7	3.0	3.0	3.2	3.3	3.2	3.2	3.2	2.8	2.8 ^F	3.1	3.1
6	3.0 ^F	3.0 ^F	3.0 ^F	2.9	3.2	3.1	3.5	3.6	3.3	3.5	(3.3) ^F	3.2	3.2 ^P	2.6	(2.8) ^A	3.0	3.1	3.2	3.3	3.5	3.5	3.1	2.9	2.9	2.9 ^F
7	2.8 ^F	2.9 ^F	2.8 ^F	2.8 ^F	2.9 ^F	3.2	3.5	3.5	(3.4) ^A	3.3	(3.0) ^F	2.5	3.0	3.0	3.0	3.0	3.0	3.4	3.3	3.3	3.0	2.9	2.7 ^F	2.7 ^F	2.7 ^F
8	2.9 ^F	3.1 ^F	3.0 ^F	3.7	2.9 ^F	(2.8) ^F	3.6	3.7	3.1	3.1	3.1	3.3	3.0	3.2	3.1	3.2	3.4	3.4	3.3	3.0	3.1	3.3	3.0 ^F	3.0 ^F	2.9
9	3.0	3.0	3.1	3.0	3.0	2.8	3.1	3.4	3.4	3.2	3.5	3.0	3.0	3.3	3.1	3.1 ^P	3.1	3.1 ^P	3.0	3.0	3.8	3.0 ^F	A	A	A
10	3.0	3.2	2.9 ^F	3.0 ^F	2.9 ^F	(2.9) ^F	3.3	3.3	3.3	(3.2) ^F	3.2	2.8	2.9	3.1 ^P	(3.3) ^F	3.1	(3.0) ^F	3.3	3.2	3.4	3.3	3.1	2.9	3.0	3.0
11	3.0	3.0	3.0	3.0	3.6 ^F	3.0 ^F	3.2	3.5	3.3	3.4	3.1	2.8	3.0	(2.9) ^J	3.1	3.1	3.2	3.0	3.1 ^P	3.0	3.3 ^P	3.2	2.9	2.9	
12	2.9	2.9	3.2	3.6	2.8	3.1	3.3	3.6	(3.6) ^F	3.4	3.4 ^P	3.2	3.0	3.1	3.2	3.0	3.3	3.2	3.2	3.1	3.4	3.3	3.2	2.9	2.9
13	A	3.1 ^F	3.2	3.1 ^F	3.0	3.0 ^P	3.0	3.5	3.5	3.5	3.4 ^J	3.3	2.7	3.0	3.1 ^P	2.9	3.1	3.3	(3.2) ^A	3.2	3.3	3.3	2.9 ^F	2.9	3.0
14	3.1	3.3	3.1	3.0	3.3	3.2 ^F	3.4	3.6	3.4	3.4	3.2	3.0	2.8	3.2	3.2	3.3	(3.1) ^F	3.2	3.4	3.7	(3.4) ^A	3.2	2.9	3.0	3.0
15	2.8	2.9	2.9	3.4	(3.0) ^A	2.7	3.2	3.3 ^P	3.7	3.4	3.2	3.1	3.3	3.3	3.3	3.0	(3.5) ^F	3.2	3.4	3.3	3.2	2.7	2.9	2.9	3.1 ^P
16	3.0	3.1	2.9	3.2	3.1	3.1	3.1	3.3	3.5	3.4 ^P	2.9 ^P	(3.2) ^F	3.2	2.8	3.3	3.4	3.2	3.2	3.2 ^P	3.2	3.4 ^P	2.8	3.0	2.9	2.9
17	2.9	2.8	2.8	3.6	3.1	3.0	3.2	(3.5) ^F	3.5	3.2	3.4	3.1	3.0	3.1	3.0	3.2	3.1	3.4	3.3	2.8	(2.8) ^A	2.9	C	C	
18	C	3.0	3.1	3.1	3.0	2.9	3.4	3.4	3.4	3.4	3.2	3.0 ^H	3.0	3.2	3.2	3.3	3.4	3.2	3.2	3.1	2.9	2.9	2.8	2.9	
19	3.1	3.1	3.0	2.9	3.1	3.0	3.4	(3.6) ^F	3.4	3.3	3.4	3.0	3.1	3.3	3.0	3.1	3.2	3.4	3.4	3.4	3.0	3.0	2.8 ^F	2.8 ^F	
20	2.9	2.9	3.0 ^F	3.2	3.1 ^F	2.8	3.2	3.6	3.5	3.6	3.3	3.5	3.2	3.1	3.2	3.0	3.1	3.2	3.3	3.4	3.4	3.0	3.0	2.8 ^F	2.8 ^F
21	2.8	2.9	2.8	3.2	3.4	2.8	3.5	3.3	(3.2) ^F	2.8	3.3	3.1	2.9	3.3	3.0	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	3.4	3.6	2.7	3.1	3.3	3.3	3.2	3.3	3.3	3.2	3.2	2.9	2.7	3.0	2.8	2.8
23	3.1	3.0	3.2	2.9	3.2	2.9	3.3	3.4 ^P	3.6	3.2	3.3	3.3	3.0	3.2	3.2	3.3	3.5	3.3	3.4	3.1	3.1	3.1	3.0	2.9	2.9
24	3.3	3.0	3.0	3.3	3.1	2.9	3.2	3.3	3.6 ^P	3.5	3.5	3.3	3.3	3.1	3.3	3.2	3.2	3.3	3.3	3.9	2.9	2.9	3.0	2.9	2.9
25	3.0	2.9	2.9	3.0	3.0	3.1	3.5	3.6	3.5	3.4	3.3	3.3	3.4	3.4	3.3	3.0	3.1	3.2	3.4	3.5	3.4	3.2	3.2	2.8	2.8
26	3.1	3.0	3.0	3.0	3.2	3.2	3.4	3.5	3.7	3.6	3.6	3.1	3.0	3.2	3.3	3.4	3.3	3.3	3.5	3.0 ^F	2.9 ^F	3.0	2.9	2.9	2.9
27	3.1	3.2	3.1 ^P	3.3	A	A	B	B	B	B	B	B	B	B	3.4	3.3	C	C	3.5	3.6	2.8	2.8 ^F	2.9 ^F	2.9	2.9
28	3.1	3.0 ²	3.0	3.1	3.3	3.0	3.4	3.3 ^P	3.5	3.5	3.2	3.1	3.0	3.2	3.0	3.3	3.2	3.2	3.1	3.2 ^P	3.5	2.7	2.6 ^F	2.8 ^F	2.8 ^F
29	3.2	3.1	2.8	3.4	3.0 ^F	3.1	3.6	3.4	3.5	3.5	3.3	3.5	3.3	3.2	3.2	3.3	3.2	3.3	3.3	3.2	3.0	3.0	3.0	3.0	3.0
30	3.0	2.9	3.1	3.4	3.0	3.1	3.4	3.6	3.7	3.4	3.3	3.3	3.3	3.1	3.2	3.2 ^P	3.2	3.4	3.3	3.5	3.3	3.0	2.9	2.8	2.8
31																									
Mean Value	3.0	3.0	3.0	3.2	3.1	3.0	3.3	3.5	3.4	3.3	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.3	3.3	3.3	3.2	3.0	2.9	2.9	2.9
Median Value	3.0	3.0	3.0	3.1	3.1	3.0	3.3	3.4	3.5	3.4	3.1	3.0	3.1	3.0	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.0	2.9	2.9
Count	25	27	27	26	25	26	27	27	26	27	27	27	28	29	28	27	27	27	27	28	28	28	28	25	24

(M3000)F2

Sweep 1.0 sec to 1.7.2 Mc in 2 min

Manual Automatic

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

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

Sep. 1954

f min F

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	[1.5] ^A	1.5	1.5	1.1	[1.3] ^A	1.5	2.1	3.3	3.9 ^A	4.0 ^A	A	A	4.5 ^A	[5.0] ^A	5.5 ^A	3.5 ^A	2.7	2.4	1.5	1.5	1.5	1.5	1.5	[1.5] ^A
2	1.5	1.5	1.2	A	A	A	A	2.9	4.0 ^A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	3.1	3.3	4.5 ^A	4.2 ^A	[3.6] ^A	3.1	2.7	2.1	1.8	1.9	1.7	1.5	1.8	1.4
4	1.4	1.4	1.2	E	1.4	1.4	2.1	2.6	3.0	3.3	3.3	3.5	3.3	3.4	3.4	3.0	2.8	2.2	1.5	2.0	2.1 ^A	1.7	1.9	1.5
5	1.5	C	C	C	C	1.8	2.3	2.3	3.0	3.9 ^A	3.9	3.5	4.3 ^A	3.5	3.5	3.7	3.0	3.5 ^A	4.4 ^A	2.4 ^A	1.5	2.1 ^A	2.0	1.7
6	1.5	1.4	1.6	E	E	1.4	2.0	2.4	3.4	4.5 ^A	3.5	4.5 ^A	3.5	3.4	[3.7] ^A	4.0 ^A	4.5 ^A	4.1 ^A	3.8 ^A	1.8	1.5	1.5	1.4	1.5
7	1.4	1.7	1.5	[1.6] ^A	1.7	1.4	1.9	A	A	4.3 ^A	5.2 ^A	3.7	4.0 ^A	[4.4] ^A	4.8 ^A	3.2	3.0	2.4	2.0	1.6	2.1 ^A	1.9	1.5	1.5
8	[1.4] ^A	1.4	E	E	1.0	1.5	2.0	3.1	3.4	4.0 ^A	3.3	3.4	3.5	3.4	3.0	2.9	2.8	2.3	1.6	1.5	1.5	1.5	1.5	1.5
9	1.4	1.3	E	E	1.0	1.4	1.9	2.4	[2.7] ^A	3.0	3.2	3.2	3.4	3.5	3.2	2.9	2.8	3.0 ^A	2.4	1.5	1.6	1.5	A	A
10	2.0	1.5	1.3	1.2	1.7	1.5	3.5	3.2	3.0	3.4	3.3	3.3	3.3	3.5	3.2	3.5	[4.0] ^A	4.5 ^A	1.9	1.5	1.5	1.5	1.4	1.5
11	1.3	1.4	1.2	1.0	1.0	1.4	1.9	2.6	3.0	3.1	3.5	3.4	3.3	3.5	3.3	3.0	3.4 ^A	[2.5] ^A	1.6	1.4	1.4	1.5	1.5	1.3
12	1.4	2.0	1.0	E	E	1.4	1.9	2.7	3.2	3.3	3.5	3.5	3.7	3.3	3.1	2.9	2.8	2.2	2.8 ^A	5.0 ^A	1.5	2.2 ^A	A	A
13	A	1.4	1.5	1.4	1.5	1.5	1.9	3.0	3.0	4.4 ^A	3.6	4.3 ^A	3.7	3.4	3.4	3.3	2.9	4.5 ^A	4.5 ^A	5.0 ^A	3.8 ^A	2.5 ^A	1.5	1.9
14	2.3 ^A	1.9	1.8	1.4	1.4	1.6	2.2	3.8 ^A	3.0	3.4	3.7	3.7	3.7	3.3	3.2	3.0	2.6	2.2	[2.0] ^A	1.8	2.2 ^A	1.5	1.5	1.5
15	1.5	1.0	1.2	1.2	[1.4] ^A	1.5	3.0 ^A	3.5 ^A	3.5 ^A	3.2	3.6	4.0 ^A	3.5	3.7	3.5 ^A	3.5	3.5 ^A	2.6	4.1 ^A	4.0 ^A	1.5	1.4	1.5	1.4
16	1.3	1.4	1.0	E	1.2	1.4	2.2 ^A	2.4	2.7	3.2 ^A	3.5	3.2	3.5	3.2	3.0	3.4	3.4	2.3	1.5	1.5	1.4	1.5	1.4	1.5
17	1.3	1.4	E	E	E	1.5	3.5 ^A	3.5 ^A	A	A	3.5	3.5	3.5	3.5	3.4	3.0	2.6	4.0 ^A	4.5 ^A	4.0 ^A	A	A	C	C
18	C	1.3	1.3	1.2	1.3	1.3	2.0	2.2	3.2	3.1	3.8	3.5	3.5	3.4	3.1	3.0	2.8	2.0	1.9	1.8	1.5	1.7	1.5	1.5
19	1.5	1.5	1.8	1.4	1.3	1.1	1.8	2.5	2.9	3.1	3.5	3.5	3.4	3.4	3.0	2.9	2.6	2.1	1.5	1.3	1.3	1.5	1.5	1.5
20	1.4	1.4	1.3	1.7	1.5	1.3	2.1	2.6	2.9	3.4	3.4	3.2	3.4	3.2	3.1	3.2	3.0	2.7	1.9	2.1 ^A	1.8	2.0	1.7	1.5
21	1.3	1.3	1.2	1.1	1.2	1.2	2.0	2.6	3.8 ^A	3.0	3.5	3.4	3.4	3.3	3.4	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	3.0	3.4	3.5	3.6	3.4	3.0	2.9	3.0	2.1	2.0	1.8	1.5	1.5	1.3	1.3
23	1.3	1.3	E	E	E	1.3	2.0	2.6	2.9	3.2	3.5	3.4	3.4	3.4	3.0	3.0	2.6	2.5	1.5	1.7	1.4	1.4	1.4	1.4
24	1.0	1.4	1.0	E	1.2	1.3	1.9	2.5	2.8	3.0	3.3	3.5	3.4	3.3	2.9	3.0	2.5	2.1	1.5	1.4	1.3	1.3	1.5	1.3
25	1.4	1.3	E	1.2	1.2	1.0	2.2	2.5	2.8	3.4	3.4	3.5	3.5	3.5	3.0	3.0	2.5	2.3 ^A	A	A	1.6	1.5	1.7	1.6
26	1.3	1.4	1.2	E	E	1.2	1.8	2.3	2.8	3.0	3.6	3.5	3.3	3.5	3.4	2.8	2.6	2.3	[2.9] ^A	3.5 ^A	1.5	1.2	1.2	1.6
27	2.0	1.5	1.6	1.8	A	A	A	4.0	4.2	[4.7] ^B	4.0	3.5	4.0	5.9	4.0	4.0	C	C	1.5	1.7	1.5	1.5	1.3	
28	1.4	1.3	1.2	1.2	1.3	1.4	2.3	3.2 ^A	4.0 ^A	3.3	3.4	3.2	3.5	3.2	3.5	3.0	2.7	2.1	1.7	1.3	1.5	1.5	1.7	1.5
29	1.3	1.3	E	E	E	1.4	1.8	2.6	2.9	3.2	3.4	3.4	3.5	3.5	3.4	3.0	2.2	2.1	1.5	1.9	1.5	2.0	1.4	1.5
30	1.4	1.3	E	E	1.0	1.4	2.0	2.6	2.9	3.0	3.5	3.5	3.5	3.5	3.4	2.9	2.7	2.3 ^A	2.3	1.5	1.5	1.2	1.5	1.5
31																								
Mean Value	1.5	1.4	1.3	1.3	1.3	1.4	2.2	2.8	3.2	3.4	3.6	3.5	3.6	3.6	3.4	3.2	2.9	2.6	2.3	2.2	1.7	1.6	1.5	1.5
Median Value	1.4	1.4	1.2	1.0	1.2	1.4	2.0	2.6	3.0	3.3	3.5	3.5	3.5	3.4	3.3	3.0	2.8	2.3	1.9	1.8	1.5	1.5	1.5	1.5
Count	26	27	27	26	25	26	26	27	26	27	28	28	29	29	29	28	27	27	27	27	27	27	25	25

f min F

Group 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 10

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

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.8' E

IONOSPHERIC DATA

135° E Mean Time

f min E

Sep. 1954

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	1.2	1.3	E	E	E	1.3	1.4	1.5	1.5	1.5	C	C	C	1.7	1.5	1.5	1.5	1.5	1.7	1.5	1.6	1.4	1.5	1.5
2	1.4	1.2	1.2	E	E	1.2	1.5	1.5	1.5	C	C	C	C	C	C	C	C	C	C	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	1.4	1.3	E	E	E	1.5	1.4	1.3	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.5	1.4	1.4
5	1.3	C	C	C	C	1.2	1.4	1.4	1.4	1.5	1.4	1.4	1.5	1.5	1.4	1.5	1.4	1.4	1.3	1.5	1.4	1.0	1.3	1.3
6	1.4	E	E	E	E	1.4	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.6	1.2	1.5	E	1.2
7	1.5	1.0	E	E	E	E	1.4	1.4	1.5	1.5	1.5	1.8	1.6	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.6	1.4	1.5	1.5
8	1.4	E	1.0	E	E	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.3	1.0	1.5	1.5	1.5
9	E	E	1.3	1.7	E	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.3	1.3	1.4	1.5
10	1.4	E	E	E	E	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.3	1.5	1.5	1.4	1.5	1.7	1.5	1.5
11	1.5	1.4	1.0	E	E	1.5	1.5	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.5	E	E	1.5	1.2	1.5
12	1.5	1.4	1.5	E	E	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.5	1.5	1.4	1.2	1.2	1.4	1.3
13	1.0	1.0	E	1.0	E	1.0	1.4	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.5	1.4	1.5	1.3	1.4	1.2	1.4
14	1.4	1.4	1.0	1.4	1.1	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.2	1.5	1.5
15	1.4	E	1.5	E	E	1.0	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.7	1.5	1.4	1.5	1.4	1.4	1.5	1.5	1.5	1.2	1.4
16	E	1.5	1.5	E	E	1.0	1.4	1.5	1.5	1.4	1.5	1.5	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	E	E	E	E
17	E	E	1.3	1.3	1.0	1.0	1.3	1.5	1.5	1.5	1.4	1.5	1.4	1.4	1.5	1.5	1.3	1.3	1.5	1.3	1.3	1.5	C	C
18	C	1.4	1.5	1.5	1.5	E	1.5	1.5	1.4	1.5	1.5	1.5	1.7	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.4	1.5	1.2	1.3
19	1.5	1.4	1.0	E	E	E	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.3	1.5	1.5	1.5	E	1.5	1.5
20	1.3	E	E	E	E	1.4	1.4	1.4	1.4	1.4	1.4	1.5	2.1	1.7	1.5	1.5	1.5	1.4	1.3	1.4	1.4	1.3	1.1	1.3
21	1.5	1.0	E	E	E	1.0	1.2	1.3	1.3	1.5	1.5	1.5	1.5	1.5	1.5	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	1.5	1.4	1.5	1.5	1.4	1.4	1.3	1.3	1.4	1.5	1.3	1.5	E	E	E
23	1.4	1.4	1.3	E	1.2	E	1.4	1.4	1.4	1.4	1.3	1.5	1.2	1.4	1.5	1.4	1.0	1.3	1.3	1.4	1.5	E	E	1.4
24	2.0	E	E	1.5	E	1.5	1.4	1.4	1.4	1.5	1.5	1.5	2.1	1.5	1.5	1.5	1.5	1.5	1.5	E	E	E	1.5	1.4
25	1.4	1.4	1.3	1.3	E	E	1.3	1.4	1.5	1.4	1.2	1.5	1.2	1.2	1.4	1.5	1.4	1.3	1.2	1.4	1.4	1.3	1.2	1.3
26	1.4	1.4	1.4	E	E	1.5	1.4	1.4	1.5	1.4	1.5	1.4	1.5	1.5	1.4	1.4	1.4	1.5	1.4	1.3	1.3	1.4	1.5	1.6
27	E	E	1.4	1.1	1.4	1.5	1.5	1.5	1.5	2.0	2.1	2.2	2.2	2.1	2.1	2.1	C	C	1.4	1.3	1.3	1.4	1.3	1.5
28	1.4	1.4	1.3	E	E	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.7	1.5	1.3	1.3
29	1.3	1.3	E	E	E	1.3	1.5	1.4	1.4	1.4	1.4	1.5	1.4	1.5	1.4	1.4	1.4	1.3	E	1.5	E	1.5	E	E
30	E	E	1.4	E	E	1.6	1.4	1.4	1.4	1.5	1.3	1.5	1.5	1.5	1.4	1.5	1.5	1.4	1.5	1.5	1.4	1.6	E	1.3
31																								
Mean Value	1.4	1.3	1.3	1.4	1.2	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Minimum Value	1.4	1.2	1.0	E	E	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.4	1.4	1.3	1.4
Count	27	27	27	27	27	28	28	28	28	29	29	29	29	29	29	28	27	27	28	28	28	28	27	27

f min E

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

YPF2

Sep. 1954

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

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

Sep. 1954

foF2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.3	[3.2] ^A	3.1	A	A	2.6	3.4	5.1	A	A	A	A	A	5.8	6.8	6.8	6.2	5.8	6.4	6.4	5.7	4.8 ^J	3.8 ^H	4.0
2	3.7	3.5	3.0	2.9	3.1 ^J	3.0 ^J	3.2	8.2	C	C	C	C	C	C	C	C	C	C	5.8	4.9	[4.0] ^A	3.1	3.0	3.0
3	A	A	AS	2.6	2.4	2.6	3.7	4.4 ^J	5.0	5.2	M	M	M	M	M	M	M	M	M	M	M	M	M	M
4	M	M	M	M	M	M	M	M	M	6.3	5.5	4.8	5.0	6.0	6.0	6.1	5.9	6.4	6.9	7.0 ^Σ	4.4	3.3 ^H	[3.2] ^A	3.2
5	3.2	2.7	2.6	2.4	2.4	2.5 ^J	3.7	4.9	5.0	4.9 ^H	5.1 ^V	4.9	4.8	5.5	5.9	5.9	6.0	6.1	A	C	5.4	A	A	A
6	3.1 ^F	3.2 ^S	3.1	3.1	3.1	3.0 ^F	3.8	4.9	4.6 ^H	5.8	5.5	4.9	6.1	5.3	[5.6] ^A	5.9	7.1	7.8 ^J	9.5	7.4 ^Σ	A	3.1	A	A
7	F	3.0	A	A	3.2 ^F	2.7 ^H	3.1	4.3 ^J	5.3	5.6	5.3	5.2	5.6	6.7	C	C	7.7	6.4 ^J	A	A	A	A	A	3.3 ^J
8	3.3	3.2	3.5	[2.6] ^A	1.8 ^E	2.0 ^F	3.7	4.2	4.8	5.4	5.4	6.3	4.0	5.3	6.6	7.5	[6.5] ^A	5.5	5.4	5.6	5.7	3.8	3.4	3.4 ^F
9	3.4	3.5	3.4	2.8	2.5 ^H	2.5	3.3	5.5	5.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	5.4	5.4	4.9	5.4	6.7	5.8	5.2	5.1	5.9	6.7	7.6	6.5	C	C	C	C
11	C	C	C	C	2.6 ^J	2.4	3.1	5.5	6.5	5.4 ^Σ	4.9	5.6 ^Σ	5.2	5.4	5.3	5.4	4.9	5.2	5.8	6.9	6.5	3.4 ^S	3.4	3.5
12	3.5	3.8	3.4	3.4	3.0	3.2	4.0	5.2	5.7	4.9	5.5	5.5	5.8	6.4	6.0	5.8	6.0	5.9	7.2	6.8	6.7	A	FB	3.2
13	C	C	A	2.3 ^J	2.3	2.4 ^J	[4.0] ^C	5.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	5.4	7.2	8.5	7.8 ^J	7.0	6.5	7.0	7.9	6.3	[4.6] ^A	2.9	2.9	3.3
15	A	A	2.9	A	A	2.1	[4.2] ^A	6.2	6.5	6.1	6.6	7.4	9.0	7.4	5.5	5.6	5.8 ^H	6.4	5.2	6.1	4.0	4.2	3.8	3.8
16	3.7	3.7	3.6	3.8	3.2	2.7	3.0	4.9	5.5	4.7	5.2	6.2	6.6	6.1	6.7	5.8	5.4	5.4	7.2	6.5	5.5	3.9 ^H	3.5	3.4
17	3.2	3.3	3.0	3.7	A	1.8 ^J	3.2	4.7	5.4	5.6	5.6	6.3	6.5	6.5	8.2	9.0 ^J	8.6	7.7	7.7	5.6	A	A	2.5 ^F	A
18	F	3.2	3.3 ^V	3.1	2.5	2.4	3.8	5.2 ^H	4.9	6.0	6.3	6.1	6.2	6.7 ^P	6.8	6.4	6.4	5.4	6.7	6.6	5.8	4.9	4.8	4.9
19	4.6	3.7	3.5	3.5	3.3	3.5	3.8	5.2	5.3	5.3	5.5	6.3	7.5	7.9	6.9	7.0	8.3	7.1	6.7 ^Σ	5.9	4.7	3.8	3.7	3.3
20	3.3	3.3	3.2	3.2	2.4	2.3 ^H	3.2	5.2	6.8 ^S	6.0	5.6	5.7	6.0 ^J	5.8	6.3	6.6	6.8	6.7	7.1	7.0	5.6	2.8	3.2	3.3
21	3.2	3.4	3.5	3.5	2.9	2.7	3.7	5.5	6.3	6.0	6.0	7.1 ^P	7.6	7.7	8.0	6.5	5.7	6.5	7.5	4.9	3.6	3.8	[3.8] ^S	3.9
22	3.8 ^S	3.7	2.9	2.8	2.5	2.5	3.0	5.3	C	C	C	C	C	C	C	C	C	C	C	4.8	4.8	4.5 ^J	4.6	4.4
23	4.2	3.5	3.0	2.9	1.9	2.2	3.1	5.7	5.9	5.4	5.0 ^H	6.2	6.3	6.4	8.0	7.7	6.0	5.4	6.1	5.8	4.4	3.7 ^S	AS	FS
24	3.7	3.4	3.3	3.2	3.2	2.8	3.1	6.0 ^J	7.7 ^J	6.4	5.4	5.9	6.8	5.8	6.5	5.6	4.9	6.6	8.5	8.5	A	2.9	2.9	3.0
25	3.1	3.1	3.2	2.9	2.7	C	C	C	C	7.2	5.6	7.2	6.6	5.4	5.8	6.1	6.4	7.2	8.9	9.0	4.8	A	2.8	3.0
26	3.2	C	C	C	C	C	C	C	C	6.2 ^J	5.8	6.1	6.8	8.3	8.3	6.8	6.1	7.5 ^J	7.9	5.9	4.9	3.4	3.0	3.1
27	3.0	3.3	3.1	2.9	2.4 ^F	2.2 ^F	2.4	5.7	5.5	6.3	6.4	6.1 ^H	7.0	8.1	7.6	6.3	6.2	7.3	7.9 ^P	6.2	2.8	2.7	2.9	2.8
28	2.9	3.0	3.0	3.1	2.8	2.3	3.4	4.6	6.0	7.3	5.9	5.9	6.5	8.8	8.3	7.8	6.2	6.3	7.5	7.3 ^S	4.9	2.9	3.3	3.4
29	3.5	3.5	2.9	3.1	2.4	2.0	3.3	6.0	7.0	7.9	6.4	6.0	7.4	7.8	7.7	6.9	5.5	6.4	6.6	6.9	6.1 ^P	3.4	3.4	3.2
30	3.2	3.3 ^H	3.3	3.0	2.6 ^P	2.9	3.7	6.2	7.0	6.7	6.8	7.6	6.2	6.3	7.8	8.6	8.9	9.0	7.0 ^P	5.8	(4.1) ^E	3.2	3.2	3.2
31																								
Mean Value	3.4	3.3	3.2	3.0	2.7	2.5	3.4	5.4	5.8	5.9	5.7	6.0	6.4	6.6	6.8	6.6	6.4	6.6	7.1	6.4	5.0	3.5	3.4	3.4
Median Value	3.3	3.3	3.2	3.0	2.6	2.5	3.4	5.3	5.5	5.8	5.5	6.0	6.4	6.4	6.8	6.4	6.1	6.4	7.2	6.4	4.8	3.4	3.3	3.3
Count	21	22	22	22	23	25	25	25	22	23	23	24	24	24	25	24	24	25	24	25	22	21	21	22

foF2

Sweep 1.0... Mc to 2.2.0... Mc in 1... min

Manual Automatic

Y I

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

Lat. 31° 12.6' N
Long. 130° 37.7 E

IONOSPHERIC DATA

Yamagawa

Sep. 1954

KF2

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	390A	[370]A	350	[320]A	300	300	250	240	250	A	A	A	A	350	330	290	300	330	290	240	240	300	300	270
2	290	320	320	320	300	290	260	230	C	C	C	C	C	C	C	C	C	C	C	[280]A	300	380	350	350A
3	A	A	A	350	350	310	250	270	290	320	M	M	M	M	M	M	M	M	M	M	M	M	M	M
4	M	M	M	M	M	M	M	M	M	M	M	M	M	340	340	310	320	300	250	230	220	270	[300]A	340
5	340	340	350	360	300	260	250	250	290	330	420	440	410	400	350	370	330	300	A	C	250	A	A	A
6	290F	310	290	280	260	250	220	250	240	270	280	440	310	360	[360]A	350	310	290	250	220	250	280	[310]A	340F
7	310	320	[320]A	320	250F	270	200	280	340	290	350	380	400	370	C	C	260	250	A	A	A	A	(380)A	(350)A
8	330A	290	260	[300]A	(350)A	350F	240	230	300	340	(310)A	290	340	370	320	280	[270]A	260	270	250	250	250	300	300
9	300	290	250	250	300	300	260	250	250	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	280	370	370	310	320	350	370	320	280	250	250	C	C	C	C
11	C	C	C	C	260	290	260	280	230	290	330	340	330	380	360	300	350	330	300	250	210	230	290	300
12	310	310	260	240	250	250	240	230	250	330	290	320	350	300	310	310	310	300	260	240	230	[240]A	250F	270
13	C	C	A	A	300	310	[290]C	270	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	450	350	300	300	310	300	290	250	220	[300]A	370	360	320
15	A	A	A	A	A	350A	[300]A	250A	250	[270]C	290	310	290	270	300	330	310	280	280	230	390A	340A	300	300
16	300	250	280	250	240	250	270	280	260	250	360	330	290	320	290	310	300	280	290	250	220	250	290	310
17	340	300	330	230	[280]A	330	250	240	250	290	340	330	310	350	330	290	280	250	250	210	A	A	350F	[320]A
18	280	280	280	250	280	300	240	230	260	330	290	340	320	310	300	290	300	300	260	250	230	260	290	270
19	280	260	270	290	270	250	250	210	250	260	320	330	290	290	310	310	270	250	230	240	230	280	260	300
20	310	310	270	250	210	310	250	230	250	240	250	310	300	320	320	290	290	260	260	240	220	220	360	350
21	350	340	290	260	200	350	250	290	290	300	300	320	310	280	280	270	290	260	250	220	290	340	300	300
22	290	280	230	260	250	320	280	260	C	C	C	C	C	C	C	C	C	C	C	270	280	290	260	280
23	250	250	300	210	350	350	270	260	250	250	250	300	310	330	290	260	260	260	240	240	220	250	290	250
24	270	280	260	280	250	310	280	260	240	240	270	260	290	300	300	260	280	290	250	220	[260]A	290	300	320
25	300	300	270	250	270	C	C	C	C	240	280	260	290	310	340	310	300	290	260	210	200	[280]A	350A	[330]A
26	310	C	C	C	C	C	C	C	C	C	270	290	340	330	280	290	300	270	240	230	220	[350]A	350A	340
27	310	260	260	240	260	330	260	240	240	280	260	300	320	300	280	290	290	260	240	210	210	360	290	310
28	340	270	290	250	240	300	260	240	260	250	270	320	390	290	290	270	270	280	240	230	210	240	320	320
29	[280]C	250	300	250	250	(300)A	260	250	260	250	250	290	310	300	300	290	280	260	240	250	210	260	290	340
30	310	250	260	250	260	310	260	240	250	260	280	270	300	360	320	290	280	260	250	220	230	290	[300]A	320
31																								
Mean	310	290	290	270	270	300	260	250	260	280	300	330	330	330	310	300	290	280	260	240	250	280	310	310
Median	310	290	280	250	260	300	260	250	250	270	290	320	310	320	310	290	300	280	250	240	230	280	300	320
Count	23	22	22	23	25	25	25	25	22	23	23	24	24	25	24	24	25	25	24	25	24	23	25	25

Sweep 1.0 Mc to 2.2 Mc in 1 min Manual Automatic

KF2

Y 2

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

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

fEs

Sep. 1954

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	5.8	5.7	5.7	5.7	3.7	3.8	G	3.8	5.8	6.7	6.0	10.2	8.1	4.2	5.0	5.8	G	G	2.7	E	2.7	2.7	2.7	2.7	
2	3.8	2.7	E	E	2.4	2.4	2.7	4.7	C	C	C	C	C	C	C	C	C	C	2.6Y	5.0	5.7	5.8	5.8	3.7	
3	5.8	5.7	2.9	2.9	2.9	3.0	3.0	3.2	3.8	3.8	M	M	M	M	M	M	M	M	M	M	M	M	M	M	3.7
4	M	M	M	M	M	M	M	M	M	5.9	4.7	4.2	5.3	5.6	4.9	4.2	G	G	3.7	E	E	2.2	3.6	2.4	
5	2.8	2.4	4.1	2.4	E	E	B	2.7	5.1	4.6	5.8	5.2	5.8	6.0	5.9	5.9	6.2	6.3	7.0	C	5.8	6.4	5.9	5.9F	
6	3.3	3.1	2.3	2.4 ^s	2.3	2.3F	2.4	3.0	3.7	5.2	6.5	5.9	8.6Y	G	8.5	G	4.8	5.1	5.9	5.9	3.6	3.2	4.5Y	3.5Y	
7	3.0	3.3	4.6Y	3.3	2.4F	2.7	2.4	3.4	5.8	6.2	6.5	4.8	5.5	G	C	C	4.2	5.9	12.5	11.6	5.8	5.8	5.9	3.5	
8	3.2	6.0Y	3.1	5.5	3.0	2.4	2.4	3.5	3.4	4.2Y	5.5	4.6	3.7	3.6	G	4.7	8.2	4.1	3.3	2.4	3.6	2.9	2.9	2.1	
9	E	2.1	2.4	2.1	2.3F	2.1	2.4	G	3.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
10	C	C	C	C	C	C	C	C	C	4.6Y	4.6Y	G	G	G	G	G	G	4.7	5.8	8.9	C	C	C	C	
11	C	C	C	C	2.3	2.4	2.4	G	3.5	G	G	3.6	G	G	4.8	G	5.0	4.4	3.8	3.1	3.0	2.3F	2.3 ^s	2.4	
12	2.4	2.8	2.4F	E	2.1 ^s	2.4	2.4	3.3	5.6	5.8	G	G	4.6Y	3.8	4.7	5.9	5.8	3.1	3.5	3.8	3.4	5.8	2.7	E	
13	C	C	3.4	3.4	3.3	2.3	C	4.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
14	C	C	C	C	C	C	C	C	C	C	C	4.9	5.0	4.5Y	G	4.2	3.8	G	5.3	2.3	4.6	3.8	2.8	2.3	
15	5.8	5.8	5.9	5.9	3.3	2.9	5.7	5.9	4.8	C	5.4	5.5	4.8	5.5	5.0	5.1	4.3	5.1	6.4	5.6	4.2	4.4	4.8	2.9	
16	2.3	2.3	2.3	2.3	2.4	2.3	2.4F	3.5	3.8	4.2	3.7	G	G	G	G	4.1Y	3.8Y	3.8	3.8	6.0	3.5	3.0	2.7	2.1	
17	2.4	2.4	2.4	2.4	2.4	2.3F	2.3	G	3.8	4.4	4.5	4.6	5.8	5.9Y	6.2	6.2	5.6	3.8	6.4	4.1	3.8	5.8F	2.9F	3.8	
18	2.3	2.1	2.3	2.6	2.4	2.3	2.3	G	G	G	3.8	3.7	B	4.3Y	4.5Y	G	G	G	2.7	3.1	3.2	3.2	2.4	E	
19	2.4	3.5	4.0	2.4	2.7	2.3	2.4 ^s	2.7	G	5.7	G	G	G	G	G	G	G	G	2.4 ^s	E	2.3	E	E	2.4	
20	E	3.1	E	2.4	2.4	2.3 ^s	2.3 ^s	3.2F	3.5	G	4.8	G	G	G	G	G	G	G	3.4	2.4	2.4	2.4	3.4	4.3	
21	4.4	3.5	3.0	2.3	2.3	2.2	2.3	3.1F	3.4	G	6.5	4.1	8.5	5.8Y	4.5	3.7	3.3	G	3.0	3.0	2.0	2.1	E	2.3	
22	E	E	E	2.1Y	E	2.1	2.2F	G	C	C	C	C	C	C	C	C	C	C	C	3.1	2.9	2.1	2.1	E	
23	E	E	E	E	2.4	2.3	2.3	3.1	3.4	G	G	G	G	G	G	G	3.3	3.6	3.1	2.7	2.3	8.8	6.7	3.2 ^s	
24	2.4	E	2.3 ^s	2.2	2.4	2.4 ^s	2.4F	3.0	3.3	3.6	5.6Y	G	G	G	G	G	G	G	3.0	2.7	4.8	3.4	3.0	2.7	
25	2.4	2.2	E	E	E	C	C	C	C	4.7	G	5.1	5.1	G	G	G	G	3.3	2.4Y	4.6	3.0	3.7	3.2	3.4	
26	2.3	C	C	C	C	C	C	C	C	C	G	G	G	G	G	G	5.9Y	3.5	2.4	2.4	2.4	3.1	5.0Y	3.0	
27	2.4	2.1	E	2.4	E	2.3	2.6	3.6	3.8	4.7	4.7Y	G	G	G	G	G	3.4	3.1	2.3	E	E	2.3	3.1		
28	2.3	E	E	2.3	2.3	3.4	3.8	3.6	G	G	G	G	G	G	G	G	G	3.1	2.4	2.0	E	2.3	2.4	2.3	
29	C	2.4	2.4	2.2	3.2	2.6	2.3	3.1	3.3	G	G	G	G	G	G	G	G	2.4	2.3	2.3	2.3 ^s	E	E	E	
30	E	E	E	E	2.1Y	2.1	2.3	G	3.3	5.8	G	G	G	G	G	G	4.2	4.9	3.7	2.5	2.4	2.4	4.9	2.3 ^s	
31																									
Mean Value	3.2	3.3	3.3	3.0	2.6	2.5	2.6	3.5	4.0	5.0	5.3	5.1	5.9	4.9	5.4	5.0	4.8	4.1	4.1	4.1	3.5	3.8	3.7	3.0	
Median Value	2.4	2.4	2.4	2.4	2.4	2.3	2.4	3.1	3.5	4.2	4.6	3.7	G	G	G	G	3.4	3.4	3.2	2.8	3.0	3.0	2.9	2.6	
Count	2.4	2.4	2.5	2.5	2.6	2.5	2.3	2.5	2.2	2.3	2.4	2.5	2.4	2.5	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	

Y 3

Manual Automatic

Sweep 1.0 Mc to 22.0 Mc in _____ min

fEs

SOLAR RADIO EMISSION

SEPT. 1954

Observing Station: HIRAISO

Frequency: 200 Mc/s.

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

Daily Data

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

IONOSPHERIC DATA IN JAPAN FOR SEPTEMBER 1954

電波觀測報告 第6卷 第9号

1954年10月25日 印刷

1954年10月30日 發行

(不許複製非売品)

編集兼
發行 人

好 川 得 太 郎
東京都北多摩郡小金井町小金井新田一之久保573

發行所

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

印刷所

今 井 印 刷 所
東京都新宿区筑土八幡町8番地