

F — 65

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

IONOSPHERIC DATA IN JAPAN

FOR MAY 1954

Vol. 6 No. 5

Issued in June 1954

PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR MAY, 1954

CONTENTS

	Page
Preface	2
Site of the Ionospheric Stations	3
Remarks on Symbols	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

P R E F A C E

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

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

The First Division has the following three sections:

Ionospheric Propagation Section which shall carry on researches on ionosphere and wave propagation;

Tropospheric Propagation Section which shall carry on researches on troposphere and wave propagation; and

Data Coordination Section which shall conduct the collection and arrangement of observational results, supply of operational data relating to radio propagation, preparation of radio propagation forecasts and radio disturbance warnings broadcast of URSIGRAM and physical basic studies of wave propagation in general.

The Second Division has the following two sections:

Frequency Standard Section which shall carry on researches on the frequency standard and broadcast the standard frequencies and time signals (J. J. Y.); and

Apparatus Section which shall carry on researches on radio apparatus used for radio regulatory purpose and conduct the approval service of types of radio equipments.

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

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

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

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

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

Aug, 1952

SITE OF THE IONOSPHERIC STATIONS

Ionospheric observation is carried out at four stations in Japan.
The stations are situated as follows:

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

IONOSPHERIC DATA

Wakanaï

May, 1954

135° E Mean Time

foF2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	5.8	4.8 ^F	4.9	4.6	4.7	4.7	4.4 ^A	4.5	4.8	5.5	6.7	6.5	4.2	3.6	6.3 ^A
2	3.3 ^F	3.3 ^F	(3.3) ^F	(3.4) ^F	3.9 ^H	4.6	4.7	4.7	5.0	5.4	6.0 ^V	6.1	5.1	4.8	5.8	6.6	6.6	6.2	6.1	7.0	5.3	3.9	3.9	3.8
3	3.6	3.6 ^S	3.5 ^T	3.4 ^F	4.5	4.9	4.9	6.0	5.8	6.1	5.5	5.2	5.8	5.5	5.8	5.7	5.5	5.5	6.2	7.2 ^F	6.7	6.5	5.1	3.5
4	3.5	3.4 ^F	(3.3) ^F	C	C	3.8 ^F	4.5	4.9	4.9	4.7	4.8	5.1	4.1	4.1	C	C	A	A	A	7.3 ^S	7.1 ^S	5.7	4.1 ^S	3.5
5	3.3	3.3	3.2	3.1	4.0	4.5	3.8	4.4	4.3	4.7 ^F	5.1	5.4	5.1	4.6	5.0	4.8	5.2	5.4	5.9	6.5 ^F	6.6	6.5	6.1	4.5
6	4.0	3.9	3.8	4.0 ^F	4.0	4.5 ^H	5.5	5.1	5.0	5.4	5.0	5.6	5.5	5.2	5.3	5.5	5.6	5.7	5.6	6.0	5.4	4.9	5.0 ^S	C
7	C	C	3.8	C	C	C	5.1 ^S	4.8 ^S	5.0	5.5	5.9	5.4	5.6	5.3	5.5	5.2	5.3	5.5	5.8	6.5 ^S	6.1	6.2	5.2 ^S	4.2
8	4.0	3.9 ^T	3.8 ^F	3.6 ^F	3.7 ^F	4.8 ^H	5.4	5.8	5.5	5.5	5.4	5.5	5.3	5.4	5.2	5.5	5.5	5.6	6.0	6.1	6.1	7.5	(5.9) ^F	5.8
9	F	F	F	F	F	4.7 ^T	5.5	4.9	C	C	C	C	C	C	C	5.2	5.5	4.9	5.2	5.9	5.9	5.9	5.1	4.8 ^S
10	(4.0) ^S	(4.0) ^S	(3.8) ^S	(3.8) ^S	4.1 ^F	4.3	(4.8) ^S	5.2	4.9	5.4	5.0	5.0	4.9	5.0	5.6	6.5	(6.2) ^S	4.8	5.7	5.9	5.7	5.8	5.7	5.0 ^S
11	3.8	3.9 ^S	3.5 ^T	3.4 ^T	3.5 ^F	4.1 ^F	4.7	4.9	4.7	5.1	4.9	5.9	5.4	6.2	7.0	7.3	5.9	(5.5) ^F	5.1	6.1	6.5	7.0 ^S	6.1	(5.8) ^F
12	4.2 ^S	4.3	3.9 ^F	3.6	4.9	4.0 ^F	4.5	5.9 ^F	(5.3) ^F	5.3	5.4	5.4	5.6	5.8	5.9	5.9	5.5	A	A	6.5	5.9	5.5	4.9	4.8 ^F
13	4.6 ^F	(4.9) ^F	(4.7) ^F	(4.4) ^F	4.0 ^F	4.8 ^F	4.1	4.1	6.0	5.0	5.2	5.1	5.4	5.6	5.3	5.3 ^F	5.5	A	A	5.3	(5.8) ^F	6.2	4.5 ^S	(4.5) ^F
14	4.0	4.0	4.0	3.9 ^F	4.0 ^F	4.1	4.1	5.1	6.5	6.5	5.8	5.0	A	A	A	5.7	6.1	5.3	(5.8) ^F	6.2	5.6	4.6 ^S	4.5 ^S	(4.5) ^F
15	(4.5) ^F	4.3	(4.3) ^F	(4.1) ^F	3.9 ^F	4.4	A	A	A	A	A	5.1	4.7	4.6 ^S	5.1	5.0	4.8	4.9	4.9	5.6	(5.8) ^F	6.0	5.0	F
16	4.1 ^F	(3.9) ^F	(3.5) ^F	(3.8) ^F	3.1 ^F	A	A	A	A	A	A	4.6	4.9	A	4.6	4.7	4.6	4.9	5.0	4.5	4.9 ^S	4.8	4.6	4.4 ^F
17	4.1 ^F	3.8 ^F	(3.6) ^F	3.6 ^F	3.7 ^F	3.8	4.8	4.5 ^F	4.8	5.2	5.7	5.5	4.9	5.0	5.3	5.5	5.5	4.9	5.1	5.3	5.4	5.5	(5.3) ^S	4.7 ^S
18	4.5 ^T	(4.2) ^S	4.0	(4.0) ^S	4.0 ^T	4.0 ^V	4.9	5.0	5.6	5.7	4.9	5.7	5.5	4.7	4.9	5.0	6.0	6.2	6.5	7.1	6.6	6.1	6.3	5.5 ^F
19	5.3 ^F	5.1	4.9	(3.5) ^F	A	A	A	A	5.5	(5.5) ^A	5.3	5.1	5.3 ^F	4.7	4.6	4.9	5.6	5.3	4.9	5.5 ^F	6.1	5.7	5.5 ^F	4.8
20	4.6 ^F	4.3	4.1 ^F	(4.2) ^F	4.7	A	A	A	5.2	5.4	5.2	5.5	5.5	5.6	4.8	5.4	A	A	A	A	6.5	6.2	5.5 ^S	4.9 ^F
21	4.4 ^F	4.0 ^F	(4.0) ^F	F	4.8 ^F	4.9 ^H	5.6	6.0	4.7 ^V	A	A	A	A	A	A	A	A	A	5.0	(5.5) ^F	6.0	6.1	(6.0) ^S	F
22	A	F	3.9 ^F	3.3 ^F	4.7	4.3	A	A	A	A	5.8	6.4	6.4	5.9	5.4	A	A	6.0	6.6	6.5 ^S	5.8	C	F	F
23	A	4.4	F	A	4.0 ^F	5.5	C	C	C	C	C	C	C	C	C	C	C	C	5.4	6.1	6.1	C	F	A
24	F	F	F	F	4.5	4.5 ^H	5.0	5.0	A	A	A	5.4 ^V	4.9	5.0	5.0	(4.8) ^F	4.7	4.8	5.4	6.0	(6.5) ^F	F	F	F
25	F	F	3.6 ^T	3.6	3.8 ^F	4.3	4.7	5.0	5.5	5.2	5.5	5.3	5.3	4.9	4.8	4.6	4.8	A	A	6.5	(6.5) ^F	(6.0) ^S	(5.0) ^F	(4.6) ^F
26	3.6 ^F	F	F	F	F	A	A	5.5	5.6	(5.2) ^A	4.9	4.8	4.8	4.6	4.8	5.0	5.0	4.8	5.5	6.0	6.3	5.7	5.4	5.0
27	4.5	4.2	4.3	4.3 ^F	4.7	4.3	5.3	5.4	5.5	5.2	4.9 ^F	4.8	5.7	5.3	5.6	5.5	5.3	(5.5) ^S	6.0	6.5	6.2	6.0	5.5	4.7
28	4.6	4.6	4.5 ^T	4.5 ^T	4.7	5.2	5.4	5.2	5.6	6.1	5.0	4.7	4.9	5.4	4.8 ^T	4.8	5.0	4.7	5.1	6.5	7.3 ^S	6.0	5.6	4.4 ^T
29	(4.4) ^F	(4.3) ^F	(4.2) ^F	(4.2) ^F	4.0	A	A	A	A	A	4.6	A	B	5.3	5.3	A	A	A	5.5	A	A	F	A	A
30	4.2 ^S	4.2 ^S	4.6 ^F	4.6 ^F	5.0 ^Z	5.3	A	A	5.8 ^F	A	A	A	5.0	4.9	4.9	5.4	5.3	5.5	6.0	6.6	6.2	6.2	S	S
31	S	S	S	S	4.6 ^S	4.9	A	A	A	C	C	C	C	C	C	C	C	C	C	5.9	6.3	6.8	6.4	4.6
Mean Value	4.1	4.1	3.9	3.8	4.4	4.9	5.1	5.4	5.4	5.3	5.3	5.2	5.2	5.1	5.2	5.4	5.4	5.3	5.6	6.2	6.1	5.7	5.2	4.5
Maximum Value	4.1	4.0	3.9	3.7	4.0	4.4	4.9	5.0	5.5	5.4	5.2	5.3	5.2	5.0	5.2	5.3	5.5	5.4	5.6	6.1	6.1	6.0	5.2	4.6
Count	23	23	24	21	2.0	2.6	2.3	2.0	2.0	2.2	2.2	2.5	2.4	2.5	2.5	2.5	2.4	2.4	2.6	2.9	2.9	2.6	2.6	2.2

foF2

Manual Automatic

Swapp 1.0 Mc to 2.2 Mc in _____ min

W1

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

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

May. 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	C	C	C	C	C	C	C	C	C	280	370	370	350	420	390	(380) ^A	380	330	290 ^A	250	230	240 ^A	250	(320) ^A	
2	360 ^F	280 ^F	290 ^F	260	240	210 ^H	290	290	290	320	300	290	340	490	350	320	290	290	260	230	230	270	290	280	
3	280	280	260	270	250	240	280	(290) ^L	300	300	280	320	380	360	350	380	300	350 ^A	290 ^A	(250) ^A	(270) ^S	250	220	260	
4	270	290	290 ^F	C	C	240	300	A	A	A	360	400	350	380	C	C	A	A	A	270 ^A	240	240	230	270	
5	280	280	290	270	290	L	250	320	L	A	360	320	380	430	370	380	360	370	290 ^A	270 ^A	270	250	240	240	
6	260	280	270	270	280	240 ^H	290	280	310	310	360	350	330	350	340	340	300	280	280	250	240	270	260	C	
7	C	C	C	C	C	C	230	280	350	330	290	320	330 ^F	350	330	350	320	300	280	250	240	250	230	250	
8	270	270	270	260	270	260 ^H	270	260	290	310	320	340	350	350	390	330	300	290	(290) ^A	250	260	270	330	(320) ^S	
9	300 ^F	290 ^F	300	260	230 ^F	280	250	270	C	C	C	C	C	C	C	C	310	300 ^L	290 ^L	(260) ^L	250 ^A	260 ^S	270 ^H	260	
10	260 ^{AS}	300 ^{AS}	320 ^A	260 ^F	260 ^F	230	(260) ^L	280	320	330	340	350	(480) ^F	420	(360) ^A	310	410 ^A	(340) ^L	280	270	280	270	250	270	
11	280	280	260	260	270	240	(260) ^L	270	350	A	300	370	360	310	310	310	310	330 ^L	270	260	270	280	(270) ^L	260	
12	280	250	250	260	280	250	300	270	310	350	300	390	370	320	310	310	300	280 ^S	290 ^A	300 ^A	270	250	230	(250) ^A	
13	260	270	270	240	250	380	380	300	280 ^A	320	330 ^A	420	370	340	370	350	320	A	A	(250) ^A	250	250 ^A	240	260	
14	270	280	280	260	240	230	L	340	310	280	280	350	A	A	A	350	280	300	(280) ^A	270 ^A	(250) ^A	270 ^A	300 ^A	260	
15	250 ^F	250	270	250	250	250	A	A	A	A	A	360	400 ^A	B	360	340	350	(340) ^A	340 ^A	270 ^A	270 ^A	250	240	260 ^F	
16	270	280 ^F	320 ^F	270	250	A	A	A	A	A	A	A	A	A	450	(350) ^A	380	(330) ^A	290 ^A	270	270	260	270	280	
17	250	250	250	240	240	(260) ^L	290	310	340	340	320	330	390	400	360	(330) ^S	300	310	300	270	(270) ^A	270	260	260	
18	260	250	260 ^F	260 ^F	260	240	310	280	290	260	450	340	310	A	A	400	320	320 ^A	290	250	240	270	260	290	
19	280	270	250	260 ^F	A	A	A	A	330	(340) ^A	340	370	350 ^F	390	440	370	300	290	280	270	260	270	250	260	
20	280	270	270	270 ^F	250 ^H	260	A	A	A	A	330	340	440	340	360	330 ^A	A	A	A	A	A	300 ^A	260 ^A	270	
21	270 ^S	270	290	270	270 ^H	320	280 ^{MF}	310	250	390	A	A	A	A	A	A	A	A	300 ^A	(310) ^A	320 ^A	320	300 ^A	300 ^A	
22	(280) ^A	270	270 ^F	230	300	260	300 ^A	A	A	A	A	360	300 ^A	350 ^A	320	A	A	330 ^A	270	280 ^A	SA	A	A	270 ^F	
23	A	300 ^A	300 ^F	A	A	A	280	290	C	C	C	C	C	C	C	C	C	C	C	310	250	250	(240) ^L	240	
24	270 ^F	270	260 ^F	250 ^F	240 ^F	240	250 ^H	A	A	A	A	340	340	(340) ^A	350	(340) ^A	340	330	A	A	270	270 ^S	(260) ^S	240	
25	(260) ^F	300	280	260	250	300	320	320	300	320 ^F	320	340 ^F	320	360	380	400	370	A	A	260 ^A	270	290 ^S	(260) ^S	240	
26	270 ^F	290 ^F	280 ^F	280 ^F	240 ^F	A	A	330 ^A	310 ^A	(330) ^A	350	370	400	450	400	360	330	350	300	280 ^A	240	250	250	250	
27	260	290	280	280	260	380	320	310	280	300	340	440	410	400	350	370	350	300	310	250 ^A	260	270	(250) ^S	270	
28	250	260 ^{MF}	270	230	250	310	300	(300) ^A	310 ^A	270	310	(340) ^A	370 ^F	340	400 ^F	380	340	350 ^A	320	280	250	270	250	260 ^H	
29	280 ^{MF}	(290) ^F	300 ^F	250	270	300 ^A	A	A	A	A	380	A	B	370	370	A	A	350 ^A	A	A	300 ^{BF}	A	A	A	300 ^A
30	240	250	250	270	310	290 ^A	A	A	A	A	A	A	380	420	390	340	340	(360) ^A	290 ^A	270 ^A	270 ^A	280	250 ^S	270	
31	250	250	240	240	250	(280) ^L	300	A	A	C	C	C	C	C	C	C	C	C	310	290 ^A	270	250	220	240	
Mean Value	270	280	280	260	260	270	290	300	310	320	340	360	360	380	370	350	320	320	290	270	260	270	260	270	
Median Value	270	280	270	260	250	260	290	290	310	320	340	350	360	360	360	350	320	330	290	270	260	270	250	260	
Count	28	29	29	27	26	25	22	19	18	20	21	24	24	23	24	25	24	24	25	28	30	29	30	29	

f_oF₂

IONOSPHERIC DATA

135° E Mean Time

May. 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	C	C	C	C	C	C	C	C	C	G	4.6	4.9Y	G	G	G	6.1	4.2	5.8	4.3	4.3	3.0	3.0	3.9	4.8
2	4.4	2.4Y	3.3	4.0Y	2.0	2.7	G	4.2	4.6	4.7	5.0	4.5	5.0Y	4.4Y	4.3Y	4.7Y	5.2Y	5.3	5.4Y	3.5Y	3.8Y	2.3Y	2.3	2.4Y
3	2.2S	2.2S	2.2S	3.1Y	2.9Y	2.3F	G	4.0	4.3	G	G	G	5.4	4.8Y	5.0Y	4.0Y	5.0	4.0	4.6	5.7	5.7	3.4Y	2.5Y	2.4Y
4	2.5Y	E	2.4F	C	C	2.5	5.3Y	5.5	6.2	6.5Y	6.2	7.2Y	G	4.3Y	C	C	6.2	6.9	4.6	4.1	2.5Y	3.5Y	1.9	2.1
5	2.0	S	1.9	E	F	2.3	G	5.3Y	G	5.0Y	4.9	G	4.2	G	G	3.4Y	5.4	5.4	4.4	4.0	2.6Y	2.4Y	2.4Y	2.1
6	2.3Y	2.0Y	1.8	(2.3)	2.0Y	2.6	3.5	G	4.7	5.9Y	4.2	4.3Y	4.0Y	G	G	G	G	G	2.5	2.4	2.6	2.0	2.1	C
7	C	C	C	C	C	C	2.6Y	4.0	3.9Y	4.3Y	G	4.6Y	4.7Y	4.3Y	4.3Y	4.3Y	3.5Y	4.2	3.5Y	3.1Y	2.5Y	2.3Y	E	E
8	E	E	2.0Y	2.5	2.3	B	4.0F	4.8	5.3	5.8	6.3Y	G	4.2Y	4.0Y	4.9Y	7.0Y	6.1Y	5.0	6.5	7.0Y	6.5Y	3.1Y	7.2Y	6.0S
9	4.5	3.4Y	3.5Y	3.5Y	2.7	2.9Y	5.5	4.8	C	C	C	C	C	C	C	G	4.2	3.5	3.5	3.7	3.7	3.0	4.0	4.2Y
10	4.0Y	4.3	4.0F	3.5Y	2.4Y	3.5F	C	5.2Y	5.0	6.2	5.4	4.8Y	6.5Y	G	6.0	4.8Y	7.4Y	4.4Y	3.0Y	3.6Y	4.0Y	5.8Y	3.0Y	2.5Y
11	2.3S	2.4Y	2.3Y	2.4Y	2.5Y	3.5Y	G	4.3Y	5.3	5.3	6.2	6.4	4.8	6.1	6.0Y	6.0Y	5.3Y	5.8Y	5.7Y	3.5Y	3.0	4.0	7.0	4.0
12	3.9F	3.0	2.6Y	3.0Y	2.2Y	G	6.3Y	5.0Y	G	5.5	5.5	G	G	G	G	5.7	6.2	4.7	6.2Y	3.0Y	3.0Y	2.5Y	2.0	5.8Y
13	4.5Y	2.5Y	2.7Y	2.4Y	2.3Y	3.5Y	4.3	6.0Y	6.5	5.2	6.4Y	4.4Y	G	G	5.2Y	7.4	6.5	10.6	7.5Y	5.9Y	3.1	4.3	2.7	3.0
14	2.0	3.0Y	4.0	2.5Y	3.5Y	3.4Y	4.4	4.0	5.6	5.8Y	5.4Y	12.0Y	9.0	12.5Y	10.4Y	7.2Y	4.3Y	4.5	7.0	5.7Y	3.5	5.7Y	4.0	6.0Y
15	2.5Y	2.1	3.5Y	2.4Y	3.4Y	3.5Y	5.4	5.2	9.5	8.3	9.3	6.3	6.3	4.3Y	5.2	5.7	4.3	6.3	6.3	3.5	3.5	2.9	3.5	4.2Y
16	4.0	2.7Y	3.4Y	3.0F	2.9Y	6.5	9.5	12.1Y	9.5Y	6.0	12.5	6.0	6.0	6.6	5.3	5.3	4.7	6.2Y	4.9	3.5	3.5	3.5	2.2	3.0
17	2.2Y	E	2.0Y	E	E	G	4.7	5.2	5.3Y	5.2	6.0	5.2	5.0Y	4.2Y	G	C	4.5	4.6	3.7	4.4	4.6Y	6.5Y	4.2	4.0Y
18	2.5F	2.5Y	2.5Y	4.4Y	3.1Y	G	3.5Y	4.3Y	4.3	4.5Y	4.5Y	G	G	5.7	7.6	4.4Y	4.1Y	8.0Y	5.6Y	2.8Y	2.3	5.0Y	E	2.5
19	3.5Y	2.2Y	2.9Y	2.7Y	5.7	6.3	8.0	8.8	7.0	8.8	6.7	5.8	6.0Y	3.5	4.7	5.9	10.5	7.4Y	5.0Y	2.8Y	2.7	4.1	2.7	2.2
20	6.0Y	2.7Y	E	1.1	1.1	4.0	14.5Y	10.3Y	6.0	4.8Y	4.8	6.5Y	5.3	4.5Y	4.8Y	7.4Y	7.0	7.7	6.5	7.1	5.3Y	5.2Y	4.4Y	4.2Y
21	3.5Y	2.9Y	5.0Y	3.5Y	2.5Y	3.6	4.5	5.7Y	5.8Y	5.2	7.1Y	11.6Y	9.5	10.2	10.5	9.5	10.0	7.0Y	4.4Y	6.7	5.0	6.0	5.7	5.0
22	7.2Y	3.5	3.5F	3.5Y	3.5Y	G	4.5	8.0	7.0	8.9	7.5	4.8Y	6.3Y	6.4	6.0	6.5	12.4Y	1.8Y	12.0Y	8.0Y	13.0Y	8.0Y	6.0Y	5.5
23	7.5Y	6.0Y	6.0Y	5.3Y	7.0Y	4.2Y	5.5	C	C	C	C	C	C	C	C	C	C	C	5.4Y	3.5Y	4.0Y	C	7.2	11.3
24	10.6Y	5.2Y	3.4Y	2.5Y	2.5Y	3.5Y	4.4	6.2	6.5	7.0	8.9	4.8Y	6.3Y	6.4	6.0	6.5	12.4Y	1.8Y	12.0Y	8.0Y	13.0Y	8.0Y	6.0Y	5.5
25	6.0Y	4.1Y	3.0Y	3.0Y	3.0Y	3.5	4.5	4.8	6.1Y	4.8Y	4.8	4.8Y	5.3Y	4.4	4.3	4.3Y	4.3Y	7.3	7.0	6.0Y	6.5Y	4.0Y	7.2	11.3
26	2.6	2.5Y	2.6Y	3.5Y	2.5Y	5.1	5.9	6.0	6.0	6.9	6.0Y	6.5	4.8Y	4.8Y	4.8Y	5.3Y	4.8	7.3	7.0	4.2Y	3.0Y	3.5	3.0Y	2.6Y
27	3.5Y	2.9Y	2.5Y	2.3Y	2.3Y	G	3.9Y	5.0	5.3Y	6.5	6.5	6.5	4.8Y	4.2Y	4.5	4.0Y	5.3	6.2	4.2	4.2	4.2Y	4.5	4.5	4.0
28	2.7	2.9	2.9Y	2.4Y	2.3Y	3.4	5.8Y	6.3	8.0Y	5.9	7.3Y	6.0	5.4Y	4.4Y	7.0Y	4.0Y	5.8Y	6.3Y	4.5Y	4.0Y	3.4Y	4.0Y	3.5	4.3Y
29	4.4Y	5.9Y	3.5Y	3.2Y	2.5Y	4.3	6.0	8.0	11.7	12.0	7.3Y	6.1Y	6.4Y	5.2Y	4.8Y	7.3	7.3	6.2	12.5Y	10.7	7.5Y	9.0	9.5	6.5
30	2.5	2.6Y	2.5Y	2.9Y	2.5	4.7Y	6.0	6.6	6.5	11.1	9.1	7.2	7.7	4.5	4.0Y	4.9	6.0	5.7Y	5.8Y	5.8Y	4.3	4.3	2.7Y	E
31	2.2Y	E	E	2.3Y	E	G	3.5Y	5.2Y	5.9Y	C	C	C	C	C	C	C	C	C	4.3	4.3	4.4	4.2	2.3	5.0Y
Mean Value	4.0	3.2	3.0	3.0	2.9	3.7	5.4	6.0	6.1	6.4	6.4	6.2	5.8	5.5	5.7	5.7	5.8	6.4	5.6	4.8	4.4	4.3	4.3	4.2
Median Value	3.5	2.7	2.7	2.8	2.5	3.4	4.5	5.2	5.8	5.8	6.1	5.0	4.4	4.8	4.8	5.3	4.9	6.2	5.0	4.2	3.8	4.0	3.5	4.0
Count	29	28	29	28	28	28	29	29	28	28	28	28	28	28	27	27	29	29	31	31	31	30	31	30

fEs

Sweep 1.0 Mc to 2.2.0 Mc in 1 min
 Manual Automatic

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

Lat. 39° 43.6' N
Long. 140° 08.2' E

IONOSPHERIC DATA

Akita

May, 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	3.7F	3.7F	4.0F	4.0F	AF	3.7	4.5F	5.3	5.8	5.8	4.9	4.7	4.9	5.1	5.1	A	A	5.1	5.7	6.8	6.4	3.5F	(3.4)	3.4F
2	3.1F	3.4F	3.2F	3.1F	2.9F	3.6	4.7	A	A	A	6.7	5.9F	5.1	5.4	6.1	7.4	7.9	7.1	7.3	6.9	3.7	3.2	3.3	3.4F
3	3.3F	3.3F	3.2F	3.2F	3.0F	3.7	5.4	5.6	5.4	6.3	6.2	5.5	5.5	5.6	5.8	6.5	6.4	6.7	5.8	A	7.5	(5.5)	3.7F	3.4F
4	A	A	3.2F	3.2F	3.2F	4.3	5.2	A	A	5.0	5.5	5.5	5.6	5.7	5.4	5.8	6.1	(6.5)	6.9	8.0	6.7	(5.5)	3.5F	3.4F
5	3.4F	3.4F	3.3F	3.2F	2.9F	5.5	(5.4)	5.4	(5.2)	5.1	5.1	5.8	6.0H	5.3F	5.1	5.1	5.6	5.7	5.8	6.6	6.6	6.6	5.5	3.9F
6	3.9	3.7	3.6	3.5F	3.4F	3.8F	5.3	5.6	5.5	5.0	5.0	5.1	5.8F	5.7	5.5	5.9F	6.5	5.6	5.7F	6.0F	5.9	4.5	4.7	4.5
7	3.8	3.8	3.6	3.5	3.5	4.2	4.5	5.0	5.0	5.4	6.7	6.0	5.6	5.5	5.7	5.2	5.6	5.9F	(6.1)	6.5	(6.4)	5.5	4.9	3.9
8	3.8	3.5	3.6	3.4	3.2	4.7F	5.3	5.4	5.6	5.2	(5.4)	5.7	5.7	5.2	5.5	5.7	6.6	6.1	6.6	6.0	5.5	5.5	4.6	(4.6)
9	4.7F	4.1F	3.9F	3.7F	3.8F	4.0	4.2	5.4	5.3	(5.6)	5.8	6.5	6.6	6.6	6.5	6.6	6.6	5.9	5.7	6.6	6.0F	5.1	5.0	4.5
10	4.0	3.5F	3.3F	3.4F	3.6	4.0	4.7	5.3	5.1	5.0	5.2	5.3	5.5	5.4	5.8	7.2	7.6	5.5	6.0	6.4	5.7	5.1F	4.1	3.6
11	3.6F	3.5F	3.5F	3.2F	3.3F	4.1	4.5	4.6	4.6	5.2	5.4	5.8	5.7	6.3	7.4	8.2	6.8	6.6	6.6	6.5	6.0	5.5	4.9F	4.7
12	4.5F	4.4F	3.9	3.5F	3.5F	4.2	5.4	6.4	5.3	5.5	5.6	5.5	5.5	6.5	6.5	6.2	6.5	5.0	4.7	6.0	7.0	5.9F	5.4	3.8
13	3.5F	3.9F	3.9F	3.5F	3.4F	3.6	5.2	6.7	5.7F	5.0	(5.0)	5.0	5.5	5.9	6.3	(6.4)	6.6	A	A	7.0	6.4	(4.7)	(4.4)	4.1
14	4.0	4.0F	3.4F	3.9F	3.3F	3.6	4.3	(3.4)	6.4	6.8	5.3	A	A	A	6.0	7.5	6.5	6.1	6.0	6.2	4.7	3.9F	A	A
15	A	3.7F	(3.4)	3.0F	3.0F	4.0	4.7	5.0	A	A	5.5	A	A	A	A	A	A	A	A	6.0	A	A	4.2F	3.6F
16	4.0F	A	A	4.0F	3.3F	3.8F	4.9F	A	A	A	5.5	5.2	(5.1)	5.0	5.6	5.7	5.4	(5.0)	4.7	4.9F	4.6F	4.5F	4.1F	4.2F
17	4.1	3.9	4.0F	3.8	3.3F	3.9	4.8	4.5	4.7	5.1	5.3	5.1	5.5	5.4	5.6	5.8	6.4	6.0	5.5	5.5	5.6	(5.3)	5.4	5.0
18	4.8P	4.6	4.4	3.6F	3.3	4.4	5.2	A	A	5.4	4.8	C	C	A	5.3	5.7	6.5	A	8.1	7.0	5.7	5.7	5.4	5.0
19	4.4	4.3F	4.1	3.8	3.7	4.8	4.2	A	A	A	5.4	5.4	5.5	(5.2)	5.0	5.3	5.9F	(5.6)	5.2	5.8	5.8	5.6	(5.2)	(4.8)
20	4.4	4.3F	4.1	3.8	3.7	4.8	4.2	A	A	A	A	A	5.9	6.3	5.9	5.6	5.7	A	A	A	6.5F	5.9F	5.9F	A
21	A	4.5F	4.4F	3.9	3.5	4.7	5.3	6.8	5.4	5.3	5.2	6.0	6.5	6.5	5.8P	5.6	5.6	6.0	5.7	5.8	6.1	6.0F	(5.9)	5.8
22	5.0	A	A	4.1F	3.6F	4.2	4.8	4.7	A	M	5.6	(5.8)	6.0	A	A	5.4	6.0	6.8F	6.8	(6.6)	6.5	A	A	4.0
23	3.9	A	A	3.5F	3.0F	3.7	4.9F	5.7	5.8	A	A	A	6.6	6.4	6.2	A	A	5.4	(5.6)	5.7	(5.4)	5.1	4.5	3.7
24	(3.7)	3.7F	A	(3.8)	3.5F	(4.2)	4.8	(5.4)	6.1	A	A	5.4	5.0	(5.0)	5.1	5.1	5.3	(5.8)	A	A	6.2F	6.4F	4.9F	4.5F
25	(4.2)	4.0	(3.8)	3.5F	3.5F	4.1	5.7	A	A	6.1	6.0	5.0	4.9	(5.0)	5.0	5.3F	5.5	(5.8)	6.0	7.3	7.5F	A	A	4.2F
26	4.0F	3.8F	3.8F	3.3F	3.3F	3.7F	A	A	6.0F	5.9	4.9	B	B	B	B	5.6	A	A	5.4	6.4	6.1	5.5	5.4	4.2F
27	3.9	3.6	3.5F	3.5F	3.4F	4.0	5.1	5.7	C	C	C	C	C	C	C	C	C	A	A	A	A	A	5.0	5.2F
28	4.3	4.5	4.5	4.0	3.7	4.6	5.0	5.5	(5.8)	6.1	(5.6)	5.0	4.9	5.5H	A	A	5.3	5.4	(6.2)	7.0	6.7F	4.9	(4.7)	4.5
29	4.0	3.6F	3.6F	3.8F	3.5F	4.0	A	A	A	A	A	A	4.7	(5.2)	5.7	5.3	A	A	A	7.0	6.3F	A	A	A
30	C	A	A	4.2	4.4	4.8	(5.6)	6.4	A	A	A	A	5.7	5.9	6.0	6.0	6.0	6.0	6.1	(6.1)	6.1F	5.0F	A	A
31	4.5F	A	A	3.5F	3.3F	(4.0)	4.8	M	A	A	5.3	A	A	5.4	A	A	5.5	5.2	5.5	6.1F	6.9	5.9F	4.9	4.7
Mean Value	4.0	3.8	3.7	3.6	3.4	4.1	4.9	5.5	5.5	5.5	5.5	5.6	5.6	5.6	5.8	5.8	6.2	5.8	5.9	6.4	6.2	5.3	4.7	4.3
Median Value	4.0	3.7	3.6	3.5	3.4	4.0	4.9	5.4	5.4	5.4	5.5	5.5	5.5	5.4	5.7	5.7	6.1	5.8	5.8	6.4	6.2	5.5	4.9	4.2
Count	27	25	24	30	30	30	28	21	18	19	25	21	24	26	25	25	29	22	23	27	29	27	26	26

foF2

Sweep 085 Mc to 22.0 Mc in 2 min

Manual Automatic

A1

IONOSPHERIC DATA

Lat. 39° 48.5' N
Long. 140° 08.2' E

A k i t a

135° E Mean Time

May. 1954

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	310	270	250	230	200	250	300	270	290	300	270	300	370	340	A	A	A	270	270	260 ^A	220 ^A	A	A	280	
2	280	[270] ^A	300	260	230	[240] ^A	260	A	A	A	270	270	420	360	370	320	280	270 ^A	260 ^A	210 ^A	280	210	270	300	
3	270	290	300	300	250	230	240	260	290	280	260	360	350	380	330	310	300	A	A	250 ^A	260	210	300	A	
4	A	A	A	300	290	240	250 ^A	A	A	350 ^A	350 ^A	330	330	320	340	340	300	[280] ^A	270 ^A	250	220 ^A	[240] ^A	260	270	
5	[260] ^A	280	310 ^{AF}	290	300	220	[240] ^B	250	A	350	430	320	330	340	380	350	310	290	270	(290) ^A	290 ^A	240	220 ^A	260	
6	270	290	270	250	270	270	280	250	270	310	350	380	340	320	350	320	260	270	(300) ^A	240 ^A	250 ^A	250	270	240	
7	250	280	270	250	220	220	220	300	310	350	280	290	300	340	320	340	310	[270] ^A	270	260 ^A	250 ^A	240	220	260	
8	270	260	270	270	270	250	250	250	A	A	A	300	310	370	330	320	270	270	230 ^A	230 ^A	240	250	270	[280] ^{AF}	
9	280 ^A	300 ^F	320 ^A	280	220	220	250 ^A	(270) ^A	270	[300] ^A	320	310	320	300	300	300	280	280	270	A	250	240	270	260	
10	230	310	290	290	240	220	280	260	330	A	A	350	330	360	370	330	280	270	280	250	[240] ^A	240	240	270	
11	290 ^F	270 ^F	270	280	260	230	270 ^A	320	A	350	370	320	340	[340] ^A	340	280	290	270	270	240	250	280	280 ^{AF}	310 ^F	
12	250 ^F	250	250 ^F	260	270	250	310	250	300	300	350	350	350	330	300	290	260	250	290 ^A	300 ^A	260	250	220	240	
13	270	260	250	270 ^F	270	270	370	310	250	320	350	430	350	350	310	[300] ^A	290	A	A	220 ^A	220 ^A	250	[270] ^A	270 ^A	
14	280	260	300	250 ^F	210	240	A	A	290	270	320	A	A	A	360	290	280	270	260	220 ^A	240	320 ^F	A	A	
15	A	300 ^F	[280] ^A	270 ^F	270	220	250	A	A	A	A	320	A	A	380	A	A	A	A	A	300	A	210 ^A	260	
16	270	A	A	260	300 ^A	250	270	A	A	A	330	350	[350] ^A	410	340 ^A	300	300	[280] ^A	250	230 ^A	250 ^F	270 ^F	270	250 ^F	
17	240	250	260	240	240	250	270	270 ^A	350	330	350	370	350	360	340	330	300	260	230 ^A	250	280 ^A	[280] ^A	270	250 ^A	
18	240	250	250	250	250	240	270	A	A	290	340	C	C	A	380	350	330	A	A	230	210	250	280 ^A	280	
19	290	270	240	280	250	C	A	A	A	A	A	340	340	[360] ^A	370	300	300 ^A	[280] ^A	270	250	270	250	A	A	
20	290	260	280	270	250	240	230 ^A	A	A	A	A	A	A	370	320	340	290	A	A	A	260	260	260	A	
21	A	290	290	300	270 ^A	270 ^A	[240] ^A	220	270 ^A	320	400	330	320	300	350	A	A	A	280	260	[290] ^A	320	A	A	280
22	260	A	A	230	240	230	250	280 ^A	A	M	350	[340] ^A	340	A	A	370	A	330	300	[250] ^A	340	A	A	A	
23	310	A	A	230 ^F	250 ^A	(260) ^A	310	280	270	A	A	A	A	330	320	A	A	A	A	A	A	A	A	A	
24	[260] ^A	280	A	A	A	A	270	[280] ^A	280 ^A	A	300 ^A	A	A	350	370	350	300	A	A	A	300	250	240 ^A	[260] ^A	
25	300	A	AF	300 ^{AF}	290 ^{AF}	[280] ^A	260	A	A	A	A	A	A	390	390	350	320	[320] ^A	320 ^A	270 ^A	250	A	A	A	
26	300 ^{AF}	300	300 ^{AF}	260	260	340	340	A	A	270	B	B	B	B	B	340	A	A	A	250	250	280	250	250	
27	260	270	270	290	300	340	300	270	C	C	C	C	C	330 ^H	A	C	C	A	A	A	A	A	A	250	
28	270	270	210	210	240	270	290	A	A	A	350	400	400	330 ^H	A	A	330	A	A	260	260 ^A	220 ^A	[260] ^A	230 ^A	
29	280 ^A	280	270	260	A	250 ^A	A	A	A	A	A	A	A	470	A	370	A	A	A	A	290 ^A	A	A	A	
30	C	A	A	A	A	340	A	A	A	A	A	A	A	350	340	390	270	300	270	250 ^A	240 ^A	280	A	A	
31	270	A	A	250	240	M	L	M	A	A	A	A	A	330	A	A	320	320	[300] ^A	290 ^A	250 ^A	250	250	290	
Mean Value	270	280	280	260	260	270	270	270	290	310	330	340	350	340	350	330	300	280	270	260	250	260	260	250	270
Median Value	280	280	280	260	250	260	270	270	290	300	340	340	340	340	340	330	320	280	270	270	250	250	250	260	260
Count	27	24	23	29	29	27	25	17	14	16	18	19	22	24	22	24	24	21	21	26	27	23	23	23	

R'F2

Sweep 0.85 Mc to 2.20 Mc in $\frac{2}{-}$ min
 Manual Automatic

A 2

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

IONOSPHERIC DATA

Lat. 39° 48.5' N
Long. 140° 08.2' E

A k i t a

May. 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	4.1	4.5	4.2	2.2Y	3.5	4.2	3.5	3.8	4.3	4.3	4.1Y	4.5	G	4.0	5.5	11.5	15.5	6.8	4.1	5.6	4.1Y	6.5Y	6.9	4.3
2	3.5	4.5	4.3	4.3	3.5Y	4.6	3.6	15.4	6.5	7.1	5.2	5.5	4.4	4.4	5.5	4.2	5.5	6.6	5.2	3.0	2.5	2.4	2.3	2.4
3	2.4	2.5	3.2	3.4	3.1	2.4F	3.0	3.9	4.3	5.0	G	5.1	4.4	4.8	4.0Y	4.2	G	7.5	9.0	7.0	6.3	3.2	6.5	9.5
4	5.5	6.6	5.5	8.0	3.7	2.8Y	4.7	6.6	5.4	6.0	5.7	4.5	4.5	G	4.7	G	4.4	9.7	4.6	4.2	6.6	9.8	3.5	5.6Y
5	4.2	4.2	2.6	2.8Y	2.8	3.0	4.1	G	6.0	5.4	4.5	3.8	3.7	G	G	G	4.2	4.3	3.1	6.0	6.7	4.1	7.1	2.3
6	2.3	2.3	3.4	2.5	2.6	2.3	3.5	4.8	4.7	4.4	4.0	4.1	4.1	4.2	4.0Y	G	3.5	4.5	5.5	3.2	4.0	3.0	3.1	E
7	2.0	1.8	2.3	2.3	2.3	3.1	G	3.2	3.5	G	G	5.1	5.3	4.2	4.2	3.5	3.5	5.9	4.5	4.0	3.5	3.5	2.9	E
8	1.8	2.9	2.3F	2.1	E	2.9	3.7	5.1	6.1	6.1	7.1	4.3	4.3	4.2	4.2	3.6	4.5	6.8	6.5	4.5	7.2Y	3.1	7.0	11.5Y
9	4.4	4.2	3.3	3.5	2.3Y	1.9	4.1	5.3	5.3	7.5	8.2	6.5	4.5	G	5.2	5.3	5.5	4.9Y	3.0	6.7	4.5	3.5	3.0Y	4.1
10	4.3	4.1	3.2	3.0	3.0	2.0	G	G	5.5	5.5	6.5	6.7	4.2	5.5	4.2	5.2	3.5	7.7	4.2	3.0	6.6	4.2F	3.1	4.2Y
11	2.5	2.4	2.9	2.5	2.9	2.8Y	4.2	4.5	5.1	4.6	5.5	6.6	4.6	6.5	6.0	4.2	G	G	3.2	2.7	3.5	4.2	3.5Y	4.5
12	4.0	4.4	2.8Y	2.8Y	2.2F	3.5	3.1	4.1	G	4.0	5.5	5.5	4.3	6.5	G	G	G	4.5	4.1	4.5	6.5Y	4.5	4.2	4.3
13	1.9	E	E	2.1	E	3.0	4.0	4.3	5.5	4.4	4.7	4.5	4.0	4.7	7.7Y	11.5	6.8	10.5	12.0	4.5	7.0Y	6.5	5.5Y	4.3
14	3.5	3.0	3.5	4.0	3.5	3.0	4.5	7.0	5.6	6.8	6.3	9.0	14.5	12.5	10.2	8.0	6.8	10.5	4.7	4.2	3.8	4.5	7.0	9.5Y
15	6.4Y	6.5	7.0	7.2	4.2	3.3	4.5	5.8	10.5	8.0	9.5	9.0	9.5	G	9.5	14.5	8.0	7.0	11.0	6.7	9.3	7.0	6.7	2.6
16	4.0	6.4	6.8	3.0	4.2	G	4.7	8.0	8.9	10.1	7.5	5.2	5.9	4.8	5.8	G	4.9	6.7	4.3	4.6	7.0Y	3.5	3.0	3.0
17	2.0	2.6	2.0	2.2	2.2	3.4	G	4.4	5.4	4.7	4.5	4.5	4.1	T	4.5	4.1	G	3.5	4.3	3.5	4.2	5.0	4.5	4.4
18	3.0	4.3	3.1	2.2Y	2.1Y	2.6	4.2	6.5	7.0	6.3Y	5.1	C	C	8.5	G	5.4	6.5	9.0	7.1	2.4	1.9	2.7	4.0	3.1Y
19	3.2	3.3	3.1	2.2	2.3	C	4.2	6.0	7.2	7.8	6.8	4.3	5.5	6.5	5.5	4.5	7.3	14.5	7.2	9.7	4.3	3.5	8.0	7.0
20	4.5	2.8	3.1	2.5	1.9	2.6	4.2	7.2	10.5	10.5	6.3	6.8	7.5	5.7	4.4	4.3	9.2Y	12.0	13.0	16.5	10.3	9.5Y	7.4	7.4
21	7.8	6.5	5.3	5.1	4.4	4.5	6.2	6.2	5.7	7.0	7.0	7.0	9.5	5.4	4.0	5.5	6.5	5.6	4.3	7.0	6.0	7.0	6.6	4.2
22	4.4	5.3	7.0	3.5	4.1	G	3.5	5.0	7.1	M	5.0	7.2	4.6	9.4	10.5	G	G	9.7	11.0	7.3	6.4Y	5.7	6.5	5.7
23	4.1Y	5.5	4.5	4.1	4.4	3.9	4.1	4.3	6.3	8.7	13.7	10.2Y	6.5	6.7	7.1	9.3	6.5	5.5	9.1	7.6	7.4	9.5	7.2	9.5
24	6.6	6.7	4.9	6.9	7.0	7.1	4.5	3.5	6.8	7.1	7.0	7.0	6.7	7.2	4.3	4.7	6.5	7.5	13.0	7.5	4.5	7.0	4.2	7.0
25	5.3	7.2	4.5	4.5	4.2	4.3	5.0	6.5	6.5	7.2	7.0	6.7	6.8	7.0	4.2	4.4	3.3	7.1	7.2	7.1	5.2	6.8	6.6	5.3Y
26	4.4	4.3F	3.5	4.3	3.1	4.3	6.8	8.0	6.5Y	4.9	4.3	G	G	G	3.5	4.0	6.2	5.8	4.7	3.0	4.8	6.7	3.7	3.2
27	1.9	2.7	4.0	3.5	3.9	3.9	3.5	4.5	C	C	C	C	C	C	C	C	C	14.0	14.5	13.0	8.0	12.5	5.0	6.5
28	4.2	4.3	3.3Y	3.0	2.1Y	2.3	4.6	5.7	6.5	6.7	6.5	5.6	6.5	4.8	6.5	12.5	12.0	14.5Y	13.9	10.5	7.2	4.4	6.7	5.4
29	4.2	4.0	3.1	3.5	4.2	3.2	6.4	7.2	8.0	13.0	11.8Y	13.7	6.4Y	16.0	10.5	7.2	8.5	12.5	8.7	5.1	7.9	7.5	8.1	9.1Y
30	C	6.5	6.7	4.7	3.0F	4.1	6.6	7.0	8.0	9.8	8.0	10.2	7.7	4.5	4.3	5.0	6.2	4.2	4.9	13.5	4.3	3.5	5.1	3.7
31	4.5	5.5	5.0	4.4	3.5	M	4.0	M	7.2	6.5	5.7	6.2	6.8	6.1	6.5	6.5	6.5	5.3	5.5	4.6	4.7	5.6	3.4	3.5
Mean Value	3.9	4.4	4.0	3.6	3.3	3.4	4.4	3.9	6.4	6.8	6.5	6.4	6.0	6.4	5.8	6.4	6.6	7.8	7.0	6.2	5.7	5.5	5.2	5.3
Median Value	4.1	4.3	3.4	3.4	3.1	3.0	4.1	5.4	6.2	6.5	6.0	5.6	4.6	4.8	4.6	4.4	5.8	6.8	5.5	5.1	6.0	4.5	5.1	4.3
Count	2.9	3.1	3.1	3.1	3.1	2.9	3.1	3.0	3.0	2.9	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1

fEs

Energy 0.95 Mc to 22.0 Mc in 2 min

Manual Automatic

A 3

IONOSPHERIC DATA

135° E Mean Time

May, 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	4.2 ^F	4.2 ^F	4.2	(4.4) ^F	3.7 ^A	3.4	4.6	5.7	5.9	5.5	6.4	B	5.4	5.6	5.4	6.0	7.1	5.9	6.2	7.2	5.7 ^F	A	A	A	
2	A	A	3.7 ^F	3.6 ^F	2.5 ^F	3.4	5.2	5.1	5.6 ^A	6.2	6.4	5.6	5.8	6.4	7.0	8.5	A	A	A	A	7.4 ^F	3.2	3.2	3.3	
3	3.1 ^F	3.0 ^F	3.0 ^F	3.0 ^F	2.6	3.9	4.6	5.7	5.8	A	A	5.3	6.0	5.9	7.0	7.5	7.9	8.5	9.0	9.3	7.4 ^F	(6.0) ^A	A	A	
4	A	A	A	AF	AF	4.5 ^F	5.1	5.4	A	A	A	6.5	6.9	6.3	6.8	7.3	7.2	7.2	(8.0) ^A	8.9	7.0	A	A	A	
5	A	A	A	3.4 ^F	(3.2) ^F	5.1	4.2	5.0	A	A	A	6.4	6.5	6.1	5.5	5.9	6.1	6.1	6.1	7.0	7.2	6.5	4.3	3.5 ^F	
6	3.6 ^M	3.8 ^F	3.8 ^F	AF	AF	3.8 ^F	5.6	6.5	5.3	5.0	5.1	5.2	5.9	6.4	6.0	7.0	7.0	5.7	5.9	6.0	6.0	5.0	4.6	4.4 ^F	
7	4.1	3.9	3.7	3.7	3.5	4.3	4.4	5.2	5.3	5.5	7.3	6.8	5.9	5.5	5.7	5.8	6.3	6.7	6.5	7.2	6.8 ^P	4.8	4.3	3.7	
8	3.8	3.7 ^J	3.6	3.4	3.2	4.2	6.1	5.5	5.5	5.7	6.0	5.8	5.9	5.7	6.1	6.6	7.7	A	A	6.4	5.3	5.0	4.5	4.5	
9	4.5 ^F	4.0 ^F	3.7 ^F	3.5	3.9	3.6	4.7	5.6	A	A	A	6.5	6.5	6.7	7.5	8.0	7.1	7.1	6.1	B	5.9	4.3	4.2	3.9 ^F	
10	3.8 ^F	3.4	3.4	3.5 ^F	3.2 ^F	4.4	5.0	5.0	5.2	4.9	5.0	5.9	6.1	A	A	7.8	9.4	8.5	7.1	7.5 ^P	7.0	5.0	4.0	4.0 ^F	
11	3.7 ^F	3.9 ^F	3.6 ^F	3.1 ^F	3.1 ^F	3.9 ^A	4.7	4.6	5.2	5.2	6.5	6.4	6.5	6.4	8.5	9.2	8.8	7.5	7.1	7.1	6.0	4.9 ^P	5.0 ^F	(4.9) ^A	
12	4.8	4.4 ^F	4.4 ^F	3.6 ^F	3.1 ^F	4.1	5.0	6.3	5.2	(5.5) ^M	5.8	6.5	5.6	7.0	7.9	7.6	7.5	5.6	A	A	A	6.4	5.0 ^F	(4.9) ^A	
13	3.7	3.5	3.3	3.1 ^F	3.1 ^F	3.5 ^H	5.6	7.0	5.3	5.1	4.7	5.4	6.0	(6.5) ^A	7.0	7.5	7.9 ^F	7.4	7.0	7.5	A	A	A	A	
14	4.0 ^F	4.3 ^F	3.8 ^F	5.0 ^F	2.1 ^F	3.6	A	A	A	A	5.0	5.5	5.7	7.0	8.0	8.5	8.5	(7.4) ^A	6.4	A	A	A	A	A	
15	A	A	AF	AF	3.2 ^F	4.0	4.5	A	A	A	5.5	5.1	5.5	A	A	5.7	6.0	(6.5) ^A	7.0	6.9	6.1	A	A	A	
16	AF	AF	AF	A	F	3.7	5.6	A	A	A	A	A	A	A	6.9	8.1	7.2	6.0	5.2	A	A	3.7 ^F	(3.9) ^A	4.1 ^F	
17	(3.6) ^F	3.8 ^F	3.4 ^F	A	AF	3.8	4.7	5.3	4.8	5.2	4.7	5.1	6.1	6.1	6.6	7.1	7.9	7.0	6.4	5.8	(5.6) ^A	5.5	5.5	4.8	
18	4.0	3.6	3.6	3.9 ^F	4.0 ^F	4.4	4.9	5.6	5.4	5.5	(5.4) ^A	5.3	5.5	5.8	6.6	6.6	7.3	8.4	8.7	8.8	7.3 ^P	4.9	5.2 ^P	4.8	
19	4.8 ^F	4.6 ^F	4.6	3.3	3.0 ^F	4.0	4.4	5.9	A	A	A	6.0	(6.0) ^A	6.0	6.0	5.9	A	A	A	6.2	5.7	(5.9) ^F	A	A	
20	A	4.3	4.0 ^F	3.8 ^F	4.3 ^F	4.0	5.0	(5.5) ^A	6.0	A	A	A	A	A	7.3	6.9	6.8	A	A	A	A	A	A	A	
21	A	F	(4.8) ^F	4.8 ^F	4.4 ^F	4.4	6.0	6.2	5.1	4.7	5.0	6.5	7.4	7.2	6.7	6.4	6.7	6.8	6.0	5.6	(5.4) ^F	(5.6) ^A	5.7 ^F	BF	
22	A	A	A	5.3 ^F	3.0 ^F	3.9	4.9	5.0	A	A	6.4	6.5	6.3 ^P	6.1	6.0	6.1	6.9	(7.4) ^A	8.0 ^J	8.1 ^P	6.7	4.1	4.1 ^F	4.3	
23	4.4	4.2 ^F	4.5 ^F	3.9 ^F	2.8 ^F	3.6	4.7	6.0	5.3	5.5	6.3	6.2	6.6	B	B	7.2	6.4	6.0	A	A	6.5	5.9	8 ^F	A	
24	AF	A	3.9 ^F	(3.4) ^F	(3.2) ^A	3.8	4.7	5.3	6.4	A	A	5.4	A	A	5.5	A	A	A	A	A	6.5	6.5	5.9	BF	A
25	A	A	A	AF	3.4 ^F	4.1	A	A	A	A	5.5	A	A	A	5.7	6.0	(6.0) ^A	5.9	6.5	(6.6) ^B	6.7	5.0	A	A	
26	A	A	A	3.4 ^F	4.0 ^F	(2.9) ^F	3.4	5.0	A	A	A	A	5.2	5.0	5.7	A	A	A	A	6.0	6.5	6.1	5.0	F	
27	4.8 ^F	(4.8) ^F	4.1 ^F	(3.8) ^M	(3.5) ^F	3.7	5.4	6.3	5.9	A	A	A	5.6	(6.3) ^A	7.0	A	A	A	A	6.9	6.1	A	A	A	
28	A	4.3 ^F	(4.0) ^A	3.6	(3.9) ^M	4.2	4.9	5.5	6.0	6.1	5.0	5.0 ^J	A	A	A	A	A	A	7.2	7.2	5.6	4.1	A	A	
29	A	A	A	3.7 ^F	3.6 ^F	4.0	5.0 ^F	5.5	A	A	A	A	5.8	5.6	5.5	5.7	5.7	A	A	A	A	A	A	A	
30	A	A	A	4.2	4.1 ^F	4.5	6.0	7.9 ^P	A	A	A	A	A	6.7	6.9	7.2	(6.8) ^A	6.5	A	A	A	A	F	F	
31	(4.7) ^F	4.2 ^F	A	A	A	3.6	5.0	5.2	A	A	5.4	5.7	5.8	5.5	5.5	5.2	5.5	A	A	7.0	7.2	5.7	A	A	
Mean Value	4.1	4.0	3.8	3.8	3.3	4.0	5.0	5.7	5.5	5.4	5.7	5.8	6.0	6.1	6.4	6.8	7.1	6.9	6.8	7.1	6.2	5.1	4.6	4.2	
Median Value	4.0	4.0	3.7	3.6	3.2	3.9	5.0	5.6	5.4	5.5	5.6	6.0	6.0	6.0	6.3	6.8	7.1	6.8	6.5	7.0	6.2	5.0	4.6	4.2	
Count	17	19	23	24	26	31	29	26	18	14	16	21	24	22	26	30	25	21	20	22	24	22	16	14	

K 1

Manual Automatic

Sweep 1.0 Mc to 17.2 Mc in 2 min

foF2

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

May, 1954

h_pF₂

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	360 ^F	340 ^F	280	(240) ^F	(250) ^M	280	260	270	270	370	270	B	U	U	U	320	270	280	280	260	300 ^F	A	A	A	
2	A	A	380 ^F	350 ^F	290 ^F	260	250	250	(280) ^F	300	A	310	U	340	380	A	A	A	A	A	280	360	350	320	
3	350 ^F	330 ^F	330 ^F	300 ^F	250	260	240	250	A	A	A	U	330	350	320	350	330	330	300	250	240 ^F	(250) ^M	A	A	
4	A	A	A	AF	AF	250 ^F	240	230	A	A	A	A	330	300	(310) ^M	320	310	320	(280) ^F	250	230	A	A	A	
5	A	A	A	360 ^F	(370) ^F	230	270	230	A	A	A	370	320	300	U	340	(320) ^F	300	330	300	290	260	300	350 ^F	
6	(360) ^F	360 ^F	370 ^F	AF	AF	300 ^F	270	240	250	A	U	U	340	320	330	310	280	280	270	300	(290) ^F	280	340	(310) ^F	
7	320	340	320	310	280	250	250	270	300	360	290	290	330	350	320	330	310	290	290	290	250 ^F	280	360	330	
8	350	(340)	320	320	350	290	220	A	A	A	310	340	330	350	330	310	300	A	A	260	320	320	300	300	
9	320	(320)	350 ^F	350 ^F	280	250	260	270	A	A	A	330	A	A	330	310	310	270	280	B	270	320	320	(300) ^F	
10	(290) ^F	340	320	330 ^F	300 ^F	260	250	250	270	U	A	340	310	A	A	350	310	290	300	280 ^F	260	300	290	320 ^F	
11	(350) ^F	(350) ^F	(320) ^F	320 ^F	310 ^F	(280) ^M	240	U	300	U	320	340	320	400	350	310	300	290	300	270	280	300 ^F	320 ^F	(320) ^F	
12	310	320	300 ^F	300 ^F	300 ^F	280	300	280	280	(300) ^F	330	300	400	330	310	300	260	280	A	A	A	A	270	(300) ^M	(320) ^F
13	320	330	270	270 ^F	(320) ^F	340 ^F	280	250	250	280	U	U	350	(340) ^M	320	310	300	(280) ^F	270	270	A	A	A	A	A
14	350 ^F	(400) ^F	330 ^F	230 ^F	350 ^F	270	A	A	A	A	U	U	U	400	360	320	290	(280) ^F	280	A	A	A	A	A	A
15	A	A	AF	AF	390 ^F	250	280	A	A	A	A	U	U	A	A	360	A	A	300	270	A	A	A	A	A
16	AF	AF	AF	A	F	270	260	A	A	A	A	A	A	A	A	A	280	300	280	A	A	360 ^F	(340) ^F	(330) ^F	
17	(260) ^F	(310) ^F	(300) ^F	A	AF	260	260	280	U	U	U	U	450	330	330	310	300	290	290	310	(300) ^M	300	290	310	
18	300	360	350	330 ^F	320 ^F	250	240	260	260	A	A	A	U	U	370	350	350	310	A	A	250 ^F	320	340 ^F	340	
19	320 ^F	330 ^F	280	290	310 ^F	260	300	A	A	A	A	A	340	(320) ^M	310	300	A	A	A	300	310	(310) ^F	A	A	
20	A	350	360 ^F	360 ^F	320 ^F	270	(260) ^M	260	U	U	U	A	A	A	290	310	310	A	A	A	A	A	A	A	
21	A	F	(300) ^F	300 ^F	(280) ^F	280	270	230	U	U	U	340	310	320	330	340	320	280	290	290	(330) ^M	(340) ^M	(360) ^F	BF	
22	A	A	A	(310) ^F	(270) ^F	250	240	A	A	A	320	290	A	330	350	340	330	(310) ^M	(290) ^F	300 ^F	270	320	340 ^F	350	
23	350	(310) ^F	290 ^F	(270) ^F	300 ^F	280	300	300	270	390	320	350	350	B	B	290	300	290	A	A	330	260 ^F	(280) ^F	(290) ^M	
24	AF	A	330 ^F	(310) ^F	A	270 ^F	270	300	270	A	A	U	U	A	A	A	A	A	A	A	310	280	260	BF	A
25	A	A	A	AF	(300) ^F	260	A	A	A	A	A	U	U	A	A	A	A	300	(300) ^F	(300) ^F	270	310	A	A	
26	A	A	(320) ^F	350 ^F	(300) ^F	300	270	A	A	A	A	A	A	U	U	A	A	A	A	290	300	290	300	F	
27	(340) ^F	(310) ^F	340 ^F	(350) ^F	(360) ^F	300	280	250	A	A	A	A	A	A	A	310	A	A	A	300	300	300	A	A	
28	A	340 ^F	(320) ^F	300	(280) ^F	260	(270) ^M	280	280	280	U	U	U	A	A	A	A	A	290	270	300	320	A	A	
29	A	A	A	(310) ^F	(310) ^F	270	300 ^F	A	A	A	A	A	A	A	350	A	A	340	A	A	A	A	A	A	A
30	A	A	A	370 ^F	(310) ^F	310	310	250 ^F	A	A	A	A	A	A	A	320	310	310	A	A	A	A	A	F	F
31	(330) ^F	(340) ^F	A	A	A	290	290	280	A	A	A	A	A	330	330	U	340	340	A	300	270	(250) ^F	A	A	
Mean Value	330	340	320	310	310	270	270	260	270	330	310	330	340	340	330	320	310	290	290	280	280	300	320	320	
Median Value	330	340	320	320	300	270	270	260	270	300	320	340	330	330	330	310	310	290	290	290	280	300	320	320	
Count	17	19	23	24	25	31	29	20	13	7	7	11	14	17	19	23	23	19	18	21	23	22	16	14	

h_pF₂

Group 1.0 Me to 17.2 Me in 2 min

Manual Automatic

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

IONOSPHERIC DATA

135° E Mean Time

May, 1954

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	300	290	250	200	220A	250	260	270	260	370	270	450	350	330	350	320A	270A	260	260	230A	230A	A	A	A	
2	A	A	260	250A	230A	230A	240	250	280A	300	300A	310	390	340	380A	A	A	A	A	250	270	270	300	270	
3	310	320A	270	250	200	240	230	250	270A	A	A	400	330	350	320	330	300	300A	250A	220 ^{AF}	210A	(250)A	A	A	
4	A	A	A	290 ^F	300A ^F	230	230	A	A	A	A	A	320	300	300A	310	300	320A	280A	240A	210A	A	A	A	
5	A	A	A	290 ^F	300 ^F	200	240	230	A	A	A	370	320	300	360	340	320A	300A	330A	260A	240	220	220	250	300
6	330A	300	300	300A ^F	310	250A	250	240	240A	300	320	370	340	320	300	300	270	280	270A	A	A	230	260	270	
7	260	270	250	240	230	220	240	270	300	360	290	290	330	350A	320	330	310	270	260	240	230A	230A	270	280	
8	270	280	270	250	270	250	220	260A	290A	280A	310	340	330	350	330	300	280	A	A	220A	270A	260	250	240	
9	250 ^F	250 ^F	300 ^F	290	240	230	240	270	A	A	A	330	A	A	A	330	290A	260	260	230	230A	290A	270	250	
10	250	280	250	270	200	240	230	250	270	310	A	340	310	A	A	330	280	250	250A	220	220	260A	240A	250	
11	300 ^F	300	270	300A	290A	260A	240	290	300	390	320	340	320	400	330	280	270	260	270	230	220	250A	270	270A	
12	270A	270	250A	240	250	250A	270	280	280	300M	330	300	390	320	280	290	280	280A	260	270A	A	A	A	A	
13	280	270	240	210	280 ^F	260 ^H	280	240	250	280	L	390	350	330A	310	300	280	280A	280A	A	A	A	A	A	
14	300 ^F	300 ^F	290 ^F	200 ^F	300 ^F	250	A	A	A	A	A	370	360	400	350	290	270	280A	280A	A	A	A	A	A	
15	A	A	AF	AF	330	230	280	A	A	A	320	440	350	A	A	350	280A	280A	270A	250	270A	A	A	A	
16	AF	AF	AF	A	260 ^F	260	250	A	A	A	A	A	A	A	A	290	270	280	260	A	A	310A	300A	300A	
17	230	260 ^F	250	A	AF	230	250	280	290	300	400	430	350	330	320	300	280	260	250	240	260A	270A	250A	230	
18	250	300	330A	280	270	230	240	260	260	320A	300	330A	360	350	370	340	330	280A	A	A	230A	270A	320A	300	
19	270	280	240	230	270	240	250	300	A	A	A	340	320A	310	300	A	A	A	A	260A	260	250A	A	A	
20	A	300A	320A	300A	240 ^F	260	260	260A	260A	A	A	A	A	A	A	290	310	310	A	A	A	A	A	A	
21	A	300A	270A	260 ^F	240 ^F	250A	260	230	250	400	500	340	300	320	320	340A	300	260	260	240	290	300A	320	300 ^F	
22	A	A	A	220 ^F	220 ^F	240	240	260	A	A	320	290	A	330	350	340	320	290A	260	240	210A	230	300	290	
23	290	270	250	240	260	240	300	300	270	370	310	350A	350A	310	300	280	290	270	A	A	A	250	A	A	
24	270 ^F	280A	300A	270	250A	260	230	300	270A	A	A	A	390	A	A	380A	A	A	A	280A	240A	240A	300A	A	
25	A	A	A	260	250 ^F	250A	A	A	A	A	A	320	A	A	A	340	A	A	A	300	320A	220A	A	A	
26	A	A	260 ^F	270 ^F	260 ^F	250	270	A	A	A	A	A	A	A	A	370	A	A	A	250A	240	240	270A	300 ^F	
27	280	250	300 ^F	300 ^F	290	230	280	250	250A	A	A	A	A	A	A	300	A	A	A	280A	260A	A	A	A	
28	A	270	270A	270A	260 ^F	230	250	260A	270	280	340A	400	340	A	A	A	A	A	A	220	230	290	A	A	
29	A	A	270 ^F	270 ^F	250 ^F	250	290	A	A	A	A	A	A	A	360 ^A	370 ^A	340	A	A	A	A	A	A	A	
30	A	A	A	300A	280	270	310A	250	A	A	A	A	A	A	340A	320A	270	300A	300A	A	A	A	300 ^F	300 ^F	
31	280 ^F	300 ^F	A	A	A	250	290	280	A	A	A	350A	340A	330	330	400	340	A	A	260	240	200	A	A	
Mean Value	280	280	270	260	260	240	260	260	270	330	360	340	340	340	330	320	290	280	270	240	240	250	280	280	
Median Value	280	280	270	270	260	250	250	260	270	300	320	340	340	330	330	310	290	280	270	240	240	250	270	280	
Count	18	21	23	27	24	31	24	24	18	14	14	22	22	21	25	27	24	21	18	21	22	21	17	16	

K 3

Manual Automatic

Sweep J.C. Mc to 17.2. Mc in 2 min

R'F2

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

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 39.3' E

Kokubunji Tokyo

May, 1954

f_oF1

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							3.5L	[3.8]A	4.0	4.2	4.4 ^H	4.5	4.3	4.1	4.1	A	A	3.5	A					
2							L	L	A	4.2	[4.3]A	4.4	4.5	4.4	A	A	A	A						
3							A	3.7	A	A	A	4.7	[4.5]H	4.3	4.2	4.0	3.9	A						
4							A	A	A	A	A	A	4.3	A	A	A	3.9	A						
5							Q	L	A	A	A	A	4.4	4.1	4.2	A	A	A						
6							L	3.8	A	A	4.4	4.4	4.4	4.3	4.2	4.0	4.0	A						
7						Q	3.1 ^L	3.8 ^L	4.0	4.3	4.2	4.4	A	A	A	A	4.0	A	A					
8							L	A	A	A	4.2	4.3	4.3	4.2	4.2	4.0	A	A						
9							L	Q	3.7	A	A	A	A	A	A	A	A	3.5	L					
10							Q	L	3.7 ^L	[4.0]A	4.3 ^L	A	4.3	A	A	4.1	3.9	3.5						
11								3.4 ^L	4.0 ^L	4.1	4.2	4.2	[4.3]A	4.4	4.2	4.2	4.0	3.5	3.0 ^L					
12							L	A	A	M	M	4.4	4.5	4.3	4.1	4.2	3.9	A	A					
13							Q	A	4.0	4.2 ^L	L	4.3 ^H	A	A	A	A	A	A						
14							A	A	A	A	4.4	4.3	A	A	A	4.0	A	A						
15							A	A	A	A	A	4.3	4.3	A	A	A	A	A						
16							A	A	A	A	A	A	A	A	A	A	A	A						
17							Q	L	A	4.2	4.3	4.3	4.3	4.3	4.0	4.0	3.9	3.6	L					
18							L	3.2 ^L	A	A	A	A	4.4	[4.3]A	4.2	4.0	A	A						
19							Q	A	A	A	A	A	A	A	A	4.0	A	A						
20							2.3 ^H	A	A	A	A	A	A	A	A	A	A	A						
21							A	A	4.2	[4.2]A	4.3	[4.2]A	4.1	A	A	A	3.9	3.5	L					
22							Q	A	A	A	4.2 ^H	[4.2]A	4.3	4.1	4.1	4.0	3.9	A						
23							Q	A	3.8	4.1	A	A	A	A	4.1	4.1	4.0	3.5						
24							Q	A	A	A	A	A	A	A	A	A	A	A						
25							A	A	A	A	4.4	A	A	4.1	A	A	A	A						
26							A	A	A	A	A	4.2	[4.2]A	4.2	A	A	A	A						
27							A	A	A	A	A	A	A	A	A	A	A	A						
28							A	A	A	A	4.2	4.3	A	A	A	A	A	A						
29							Q	A	A	A	A	A	A	A	A	A	A	A						
30							A	A	A	A	A	A	A	A	A	A	A	A						
31							3.5	A	A	A	A	A	A	A	4.2	[4.0]A	3.9	A						
Mean Value						2.3	3.3	3.8	4.1	4.2	4.3	4.4	4.3	4.3	4.2	4.0	3.9	3.5	3.0					
Upper Value						2.3	3.4	3.8	4.0	4.2	4.3	4.4	4.3	4.3	4.2	4.0	3.9	3.5	3.0					
Count						1	5	8	7	8	8	16	18	13	14	13	12	7	1					

f_oF1

Group 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 4

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

May, 1954

K'F1

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							240	[240] ^A	230	200	190 ^H	220	230	230	A	A	A	A	260	A				
2							240	240	A	A	A	A	250 ^A	200	A	A	A	A	A					
3							A	240	A	A	A	210	A	A	A	250	270	A	A					
4							A	A	A	A	A	180	260	A	A	A	250	A	A					
5							Q	250 ^A	A	A	A	A	220	[240] ^H	250	A	A	A	A					
6							250 ^A	A	A	A	A	210	200	200	240	230	230	A	A					
7						Q	220	250 ^A	240	220	240	250	A	A	A	A	220	A	A					
8						220	230	A	A	A	A	210	[220] ^A	240 ^A	220	240	A	A	250	250				
9						Q	220	230	[240] ^H	240	A	A	A	A	A	230	220	240	240					
10						Q	220	220	230	220	200	190	[200] ^H	220	210	240	250	240	250					
11							250	A	A	M	M	240 ^A	250	A	A	A	A	A	A					
12						Q	A	A	A	A	230	200	200	A	A	A	A	A	A					
13							A	A	A	A	A	220	A	A	A	A	A	A	A					
14							A	A	A	A	A	A	A	A	A	A	A	A	A					
15							A	A	A	A	A	A	A	A	A	A	A	A	A					
16							A	A	A	A	A	A	A	A	A	A	A	A	A					
17						Q	240	A	A	230	220	200	210	[220] ^H	220	230	220	220	240 ^A	240				
18						240	230	A	A	A	A	A	A	A	A	200	260	A	A					
19						Q	A	A	A	A	A	A	A	A	A	230	A	A	A					
20						220 ^H	A	A	A	A	A	A	A	A	A	A	A	A	A					
21							A	A	A	A	210	[200] ^H	190	A	A	A	A	A	260	250				
22						Q	A	A	A	A	A	210	[210] ^H	210	200	220	250	A	A					
23						Q	A	A	A	A	A	A	A	A	A	210	240	250	240					
24						Q	A	A	A	A	A	A	A	A	A	A	A	A	A					
25							A	A	A	A	A	A	A	A	A	250	A	A	A					
26							A	A	A	A	A	A	200	[200] ^H	210	A	A	A	A					
27							A	A	A	A	A	A	A	A	A	A	A	A	A					
28							A	A	A	A	200	200	200	A	A	A	A	A	A					
29						Q	A	A	A	A	A	A	A	A	A	A	A	A	A					
30						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
31							250 ^A	A	A	A	A	A	A	A	A	250	[250] ^H	(250) ^A	A					
Mean Value						230	240	240	240	220	210	210	210	220	220	240	240	240	250					
Median Value						220	240	240	240	220	200	210	210	220	220	240	250	250	240					
Count						3	11	7	5	6	6	13	15	10	11	13	12	7	4					

K 5

Manual Automatic

Sweep 1.0 Mc to 1.7.2 Mc in 2 min

K'F1

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

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

May, 1954

foE

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						2.2	2.5	2.7	2.9	3.1	[3.2] ^A	3.3 ^A	3.3	3.1	2.9	2.5	2.2	1.4						
2						2.0	2.5	2.8	3.1	3.1	3.0	A	3.4	3.2	3.0	2.5	2.2							
3						AF	2.7 ^F	2.9	3.0	3.1	3.4	3.4	3.2	3.2	3.0	2.9 ^F	2.3							
4						2.3	2.5	2.9	3.0	3.1	3.1	3.3	3.4	3.4	3.1	2.7 ^F	2.3							
5						2.1	2.4	2.9	[3.0] ^A	3.2	3.0	[3.2] ^A	3.5	3.4 ^A	3.0	2.8	2.4							
6						2.1	2.5	2.8	3.0	3.1	(3.1) ^A	3.4 ^A	A	A	A	2.6 ^A	2.4							
7					1.5	2.2	2.7	(3.0) ^F	3.2	3.2	3.3	3.3	3.0	[3.0] ^A	3.0	2.7	2.4	1.6						
8						2.1	2.5	2.9	3.0	3.0	3.1	3.0	3.0	3.1	3.0	2.8	2.3							
9					B	1.9	2.6	2.8	3.0	3.1	3.2	3.0 ^F	3.0	A	A	2.5	2.1	A						
10						1.5	2.2 ^F	2.7	2.9	3.0	3.1	3.1	3.0	A	A	2.7 ^F	A							
11						2.0	2.7	3.0	3.0	(3.2) ^A	3.3 ^A	3.3	3.4	A	A	2.5	2.3	1.8						
12						2.1	2.6	2.9	M	M	3.2	3.2	[3.1] ^A	3.0	2.8	2.7	2.3	1.6						
13					1.1	2.1	2.4	2.9 ^F	(3.0) ^A	[3.1] ^A	3.2 ^A	3.2	3.2	3.3	3.2	3.0	[2.6] ^A	2.3						
14						2.3	2.5	2.9	3.0	3.0	3.2	3.2	3.2	3.0	2.6	2.6	2.7	2.2	1.5					
15					1.6 ^A	2.3	2.5	2.8	3.0	3.1	3.2	[3.2] ^A	3.3	3.2	3.0	2.6	A							
16						2.3	2.5	2.7	3.0	3.2	3.0	3.1	3.0	[3.0] ^A	2.9	2.4	A							
17					1.4	2.4	2.6	3.0	3.0	3.2	3.3	3.2	3.0	3.2	3.0	2.9	2.3	1.5						
18					1.2 ^A	2.2	2.7	2.9	3.0	3.2	3.1	3.3	3.3	3.1	3.0	2.7	2.4							
19					1.1 ^A	2.1	2.6	2.8	3.1	3.2	3.2	3.2	3.2	3.0	3.0	2.7	2.4							
20					A	AF	A	2.9	3.0	A	A	3.1	3.0	A	A	2.8	2.3							
21						1.9	[2.4] ^A	2.8	2.9	A	A	A	3.6	A	A	2.7	2.4	A						
22					1.4	2.3	2.5	2.7	A	A	A	A	3.2	3.0	3.0	2.7	2.4							
23					1.5	2.1	2.6 ^F	2.9 ^F	3.0	3.1	3.2	[3.2] ^A	3.2	3.2	3.0	2.7	2.4 ^A							
24						2.3 ^A	2.5	2.9	3.0	3.2	3.2	3.0	(2.9) ^A	(3.0) ^A	3.0	2.8	2.4							
25						2.2	2.5	2.7	A	A	3.0	A	A	A	A	(2.8) ^A	2.5							
26						A	2.9 ^A	3.0	[3.0] ^A	(2.9) ^A	(3.0) ^A	A	A	3.2 ^A	3.0 ^A	[2.6] ^A	2.3							
27						2.1	2.7 ^F	2.9	3.0	3.2	3.1	A	A	3.3	3.0	2.7	2.3							
28						2.1	2.6	2.9 ^A	3.0	3.1	3.2	3.2	3.2	3.3	3.0	2.8	2.4							
29					1.6	2.1	2.5	2.9	3.0	3.0	3.1	3.2	3.2	3.2	3.0	2.8	2.4							
30					1.6	2.2	2.5	2.9	3.0	3.0	3.2	3.1	3.2	3.1	3.0	2.7	2.4							
31						2.4	2.5	3.0	3.0	3.3	3.3	3.1	3.2	A	A	A	A							
Mean Value					1.4	2.2	2.6	2.9	3.0	3.1	3.2	3.2	3.2	3.2	3.0	2.7	2.3	1.6						
Median Value					1.5	2.2	2.5	2.9	3.0	3.1	3.2	3.2	3.2	3.2	3.0	2.7	2.3	1.6						
Count					11	28	30	31	28	26	28	25	25	23	24	30	27	6						

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

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

IONOSPHERIC DATA

135° E Mean Time

May. 1954

R'E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						130	110	110	110	110	A	A	A	110	110	110	110	120	120					
2						120	110	110	110	110	110	110	A	A	110	110	110	110	110					
3						AF	110	110	110	110	110	110	110	110	110	110	110	110	120					
4						120	110	110	110	110	110	110	120	110	110	110	110	110	120					
5						120	110	110	110	110	110	110	110	110	110	110	110	110	110					
6						110	110	110	110	110	110	110	A	A	A	A	A	110	110					
7					150	120	110	110	110	110	110	110	110	110	110	110	110	110	130					
8						120	110	110	110	110	110	110	110	110	110	110	110	110	110					
9						B	110	110	110	110	110	110	110	110	A	A	110	110	A					
10						140	110	110	110	110	110	110	110	A	A	A	100	A	A					
11						110	110	110	110	110	110	110	110	110	110	110	110	110	120					
12						120	110	110	110	M	M	110	110	110	110	110	110	110	120					
13						130	110	110	110	110	A	A	110	110	110	110	110	120	120					
14						120	110	110	110	110	110	110	110	110	100	110	110	110	120					
15						A	110	110	110	110	110	110	110	110	110	110	110	110	A					
16						120	110	110	110	110	110	110	110	110	110	110	110	110	A					
17						140	110	110	110	110	110	110	110	110	110	110	110	110	120					
18						A	A	120	110	110	110	110	110	110	110	110	110	120	120					
19						A	110	110	110	110	110	110	110	110	110	110	110	110	130					
20						A	AF	A	110	110	A	A	110	110	A	A	A	110	120					
21						110	110	110	110	110	A	A	A	110	110	A	A	140	A					
22						A	110	110	110	A	A	A	A	110	110	110	120	120						
23						160	110	110	110	110	110	110	110	110	110	110	110	110	A					
24						A	110	110	110	110	110	110	110	110	110	110	110	120	120					
25						110	110	110	110	A	A	110	A	A	A	110	110	110	110					
26						A	A	110	110	110	110	110	A	A	A	A	A	120						
27						120	110	110	110	110	110	110	A	A	110	110	110	110	110					
28						110	110	110	110	110	110	110	110	110	110	110	110	110	120					
29						120	110	110	110	110	110	110	110	110	110	110	110	110	120					
30						130	110	110	110	110	110	110	110	110	110	110	110	110	120					
31						120	110	110	110	110	110	110	110	110	110	A	A	A	A					
Mean Value						140	110	110	110	110	110	110	110	110	110	110	110	110	120					
Median Value						140	110	110	110	110	110	110	110	110	110	110	110	110	120					
Count						7	26	29	31	28	25	26	23	25	22	23	27	26	6					

K 7

Manual Automatic

Group 1.0 Mc to 1.02 Mc in 2 min

R'E

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

May. 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	2.5	4.5	3.4	3.2	3.6	2.5	4.0	4.4	5.5	4.6	4.9	4.3	4.0	6.8	4.7	6.5	8.5	5.0	4.0	5.8	5.8	5.5	6.8	6.4
2	7.0	6.0	4.8	4.9	5.0	3.5	3.5	5.0	6.5	4.9	10.0	10.2	7.0	7.0	6.7	8.2	9.5	10.2	8.0	7.3	6.6	2.2	E	E
3	3.0	3.8	3.2	2.5	2.4	2.2	3.0	3.0	6.5	8.6	10.3	6	5.3	4.5	4.7	4.7	5.0	7.0	6.0	9.0	6.5	7.0	9.5	8.6
4	5.3	6.8	5.8	5.5	4.7	3.0	4.8	7.2	8.4	7.1	7.1	7.5	4.5	4.7	6.7	5.7	5.0	6.5	8.5	8.5	5.6	6.8	7.5	5.0
5	5.0	4.5	5.8	4.5	4.0	2.9	3.9	5.2	6.0	6.0	7.0	6.0	4.5	4.7	4.3	5.5	6.5	5.5	6.3	4.0	4.0	4.5	4.0	7.0
6	5.2	3.0	4.2	5.0	5.0	5.0	3.8	5.0	5.5	5.3	5.3	4.6	4.3	4.0	5.0	3.8	3.5	4.7	4.8	5.8	7.4	4.5	2.2	3.0
7	2.5	2.3	E	2.4	1.5	3.0	3.0	4.3	5.5	5.0	5.0	5.4	5.5	7.0	7.0	5.5	5.0	4.4	4.3	3.2	4.8	3.8	3.3	3.0
8	2.5	3.0	2.9	2.3	1.1	3.2	3.6	5.8	5.6	5.7	5.7	4.3	4.5	5.0	4.4	5	5.7	8.6	7.0	7.0	8.7	4.5	4.0	E
9	3.2	3.0	2.5	3.1	3.1	B	3.0	4.5	8.0	10.0	8.6	5.5	8.5	7.0	6.7	7.0	6.5	4.0	3.3	6.6	6.0	5.7	3.9	3.0
10	4.2	3.0	3.0	3.0	E	1.6	3.0	4.0	4.9	4.7	5.5	6.0	5.0	9.4	9.0	5.5	6.6	5.5	6.5	7.0	4.3	6.9	8.5	3.0
11	6.1	4.0	3.0	4.4	3.2	3.1	3.5	4.2	5.5	5.0	4.5	4.4	5.2	4.5	3.8	3.7	5	5	3.0	2.9	2.5	6.0	3.5	5.5
12	4.5	5.4	5.5	3.5	2.0	3.2	4.4	7.0	6.0	M	5.5	7.2	5.7	5.7	5.5	4.2	4.3	5.0	7.2	6.5	6.7	6.5	6.5	5.5
13	2.2	2.3	2.9	2.2	E	3.1	4.3	5.0	7.0	5.6	7.0	5.0	5.6	10.0	5.5	7.4	10.5	9.0	10.0	9.6	10.5	9.5	9.3	6.6
14	6.5	7.1	5.3	3.5	3.0	3.5	5.8	7.5	8.1	8.4	8.5	5.5	5.1	6.7	8.5	4.5	6.9	8.5	8.5	10.2	10.1	6.7	6.0	6.5
15	6.6	3.4	6.1	5.5	5.0	4.0	5.5	6.5	9.0	10.2	6.1	6.5	5.0	8.3	8.5	8.5	8.4	11.3	7.0	6.5	6.8	7.5	7.0	6.9
16	4.7	4.5	4.8	4.4	3.5	4.3	4.4	8.5	10.0	10.2	10.0	14.0	9.0	9.3	7.4	6.0	6.0	4.7	4.3	9.5	10.0	4.7	4.3	5.5
17	4.6	3.1	2.6	5.0	4.4	2.7	3.2	4.7	5.0	4.8	4.5	4.5	4.5	6.6	4.0	4.5	5	4.0	3.1	11.0	9.0	4.3	4.5	5.6
18	3.1	3.6	4.4	3.6	4.1	2.8	3.2	4.6	5.5	5.5	5.8	7.3	5.0	5.2	5	5	5.7	6.2	9.5	8.5	4.7	4.0	4.7	3.6
19	6.5	4.3	3.2	2.8	2.5	3.1	4.1	5.9	7.5	9.7	7.2	9.4	6.5	9.7	6.0	5.5	10.2	10.0	10.0	8.5	9.0	6.5	5.9	6.7
20	5.8	5.6	4.4	4.6	3.5	2.2	4.6	6.6	7.0	8.5	10.5	10.5	9.0	10.5	4.5	4.5	10.0	10.2	8.5	9.4	7.0	9.0	9.5	9.0
21	6.5	4.3	4.7	4.6	2.0	4.3	4.6	5.2	4.7	5.6	5.5	5.0	5.0	5.2	6.8	6.1	4.7	4.2	3.2	3.3	4.5	6.5	3.7	4.5
22	5.5	4.0	6.3	3.9	4.2	3.7	4.0	5.1	8.5	8.5	5.7	7.0	6.8	4.6	5	5	4.5	7.0	4.7	5.7	4.5	E	E	3.2
23	2.1	3.2	3.0	5.0	4.7	3.5	4.7	4.8	5.5	5.5	6.1	4.0	8.5	5.0	5	3.5	3.4	3.9	7.5	7.3	6.0	7.0	6.5	10.0
24	5.4	4.7	4.5	5.8	5.0	4.5	3.5	4.7	5.6	4.0	7.4	9.5	5.5	4.7	7.1	6.6	6.9	7.5	7.0	4.5	4.2	4.5	4.3	8.5
25	5.8	5.7	5.5	4.6	4.0	4.5	7.0	9.0	7.5	10.5	10.0	5.3	6.5	5.6	4.3	8.5	10.0	5.7	5.5	3.5	5.0	5.5	7.1	7.0
26	8.4	7.4	4.8	4.0	3.8	3.0	5.4	8.5	9.5	10.5	9.1	5.5	4.8	6.4	5.0	6.7	10.1	8.0	4.5	4.4	2.5	3.5	5.5	3.8
27	3.4	4.5	5.0	4.5	5.5	3.4	4.7	4.8	6.5	7.1	7.0	8.5	8.2	6.4	8.7	7.5	10.0	10.4	9.3	6.3	4.0	7.0	6.5	9.0
28	10.0	5.2	5.4	4.7	6.6	3.0	4.3	4.5	6.5	6.5	6.0	5.5	5.5	7.0	7.2	8.5	7.5	9.5	9.0	4.4	7.5	10.0	9.0	6.9
29	7.0	7.0	4.3	5.0	5.0	3.2	4.5	7.0	8.0	10.0	10.5	11.0	6.5	8.0	5.7	5.8	6.0	7.5	10.0	10.0	9.5	9.0	8.5	6.8
30	6.7	5.7	7.3	10.0	4.4	3.4	5.7	6.8	6.5	9.0	10.4	10.5	7.0	7.2	6.5	5.8	5.8	7.0	7.3	4.4	4.0	4.4	4.3	4.5
31	4.2	5.7	5.8	6.0	5.6	5.7	3.8	4.7	5.7	6.9	6.4	6.5	5.7	5.0	5.6	6.4	4.5	7.5	9.5	3.4	3.5	6.5	4.3	4.5
Mean Value	5.3	4.7	4.5	4.5	3.9	3.5	4.2	5.7	6.7	7.4	7.2	7.0	6.1	6.6	6.3	6.2	6.8	7.0	6.8	6.7	6.5	6.0	5.9	5.8
Median Value	5.2	4.5	4.5	4.5	4.0	3.3	4.1	5.1	6.5	7.0	7.0	6.0	5.5	6.6	5.7	5.8	6.0	7.0	7.0	6.6	6.5	6.0	5.5	5.5
Count	31	31	31	31	31	30	31	31	31	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31

fEs

Sweep 1.0 Me to 17.2 Me in 2 min

Manual Automatic

K 8

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

Lat. 35° 42.4' N
Long. 139° 28.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

(M3000)F2

May, 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	2.8F	2.9F	3.0	(3.5) ^P	[3.4] ^A	3.2	3.4	3.4	3.3	2.9	3.4	B	3.1	3.2	3.1	2.9	3.2	3.2	3.4	3.4	3.1F	A	A	A	
2	A	A	2.8F	2.8F	3.1F	3.5	3.5	3.4	[3.3] ^J	3.2	3.2	3.0	2.8	2.9	A	3.0	A	A	3.2	3.3	3.4F	2.7	2.8	3.0	
3	2.9F	3.1F	3.0F	3.1F	3.3	3.3	3.4	3.4	3.4	A	A	A	2.8	2.8	3.0	2.8	3.0	3.0	3.2	3.3	3.4	(3.6) ^F	A	A	
4	A	A	A	AF	AF	3.4F	3.5	2.8	A	A	A	A	3.0	2.9	3.0	3.0	3.0	2.9	[3.1] ^A	3.3	3.4	A	A	A	
5	A	A	A	2.8F	(2.7) ^F	3.5	3.1	3.8	A	A	A	2.8	2.9	3.2	3.0	3.1	3.1	3.1	3.0	3.1	3.1	3.3	3.0	2.8F	
6	[2.8] ^F	2.8F	2.7F	AF	AF	3.0F	3.3	3.5	3.5	3.3	3.2	2.9	3.0	3.1	3.0	3.1	3.2	3.2	3.3	3.1	3.1	3.1	2.9	(3.3) ^F	
7	2.9	2.8	3.0	3.0	3.2	3.5	3.4	3.4	3.3	3.0	3.1	3.2	3.0	2.9	3.1	3.0	3.1	3.2	3.2	3.1	3.3P	3.1	2.9	2.9	
8	2.9	(2.8) ^F	3.0	3.0	2.9	3.0	3.7	3.4	3.3	3.5	3.1	3.0	3.1	2.9	3.1	3.1	3.2	A	A	3.3	3.0	3.0	3.0	3.1	
9	3.0F	(3.0) ^F	2.9F	2.8	3.2	3.3	3.4	3.3	A	A	A	2.9	2.9	2.8	3.0	3.1	3.1	3.3	3.3	B	3.3	3.0	(3.1) ^F	A	
10	(3.2) ^F	2.9	2.9	2.8F	3.1F	3.4	3.5	3.5	3.5	2.8	2.9	3.0	3.1	A	A	3.0	3.1	3.2	3.1	3.3P	3.2	3.1	3.1	(3.0) ^F	
11	(2.8) ^F	(2.8) ^F	(2.9) ^F	3.2F	3.0F	[3.2] ^F	3.5	3.3	3.3	3.3	3.1	3.0	2.9	2.6	2.8	3.1	3.2	3.1	3.1	3.3	3.2	3.2P	3.0F	[3.0] ^F	
12	3.0	2.9F	3.1F	3.0F	3.0F	3.2	3.1	3.3	3.4	[3.2] ^F	3.0	3.2	2.7	3.0	3.1	3.1	3.0	3.2	A	A	A	A	A	A	
13	2.9	2.9	3.1	3.2	(3.1) ^F	2.8 ^H	3.3	3.5	3.5	3.3	2.6	2.8	3.0	[3.0] ^F	3.0	3.0	3.3P	3.3	3.3	A	A	A	A	A	
14	2.8F	(2.7) ^F	2.9F	3.6F	2.9F	3.3	A	A	A	A	A	3.0	3.0	2.7	2.8	3.1	3.2	[3.2] ^F	3.2	A	A	A	A	A	
15	A	A	AF	AF	2.8F	3.5	3.3	A	A	A	3.2	2.7	3.0	A	A	2.9	3.0	[3.1] ^A	3.2	3.3	3.4	A	A	A	
16	AF	AF	AF	A	F	3.2	3.4	A	A	A	A	A	A	A	2.8	3.0	3.2	3.1	3.2	A	A	3.0F	[3.0] ^F	(2.9) ^F	
17	(3.3) ^F	(3.0) ^F	(3.0) ^F	A	AF	3.4	3.4	3.3	3.3	3.4	2.9	2.8	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.1	[3.2] ^F	3.2	3.1	3.1	
18	3.1	2.9	2.9	3.0F	2.9F	3.5	3.6	3.6	3.5	3.2	3.3	[3.2] ^A	3.0	3.0	2.8	2.8	2.9	3.0	2.9	3.4	3.5P	3.1	2.8F	2.9	
19	3.0F	2.9F	3.2	3.2	3.1F	3.4	3.0	3.1	A	A	A	A	3.0	[3.0] ^F	3.1	3.3	A	A	A	A	3.1	3.2	(3.1) ^F	A	
20	A	3.0	2.8F	2.9F	3.0F	3.1	3.4	[3.4] ^F	3.3	A	A	A	A	A	3.1	3.0	3.3	A	A	A	A	A	A	A	
21	A	F	(3.2) ^F	3.1F	(3.4) ^F	3.3	3.3	3.5	3.5	2.8	2.7	2.9	3.0	3.0	2.9	3.0	3.1	3.2	3.1	3.2	(3.0) ^F	[3.0] ^F	2.9F	BF	
22	A	A	A	(3.0) ^F	(3.4) ^F	3.3	3.5	3.6	A	A	3.1	3.2	2.8P	3.0	3.0	2.9	2.9	[3.1] ^F	(3.3) ^J	3.3P	3.3	3.0	2.9F	2.9	
23	2.8	(3.0) ^F	3.1F	(3.2) ^F	3.1F	3.1	3.2	3.1	3.5	2.6	3.0	2.9	2.8	B	B	3.1	3.1	3.2	A	A	3.0	2.9	3.4F	[3.2] ^F	
24	AF	A	2.9F	(3.0) ^F	(3.5) ^F	3.3	3.2	3.1	3.3	A	A	A	2.9	A	A	3.1	2.3	A	A	A	3.0	3.2	3.0	A	
25	A	A	A	AF	(3.2) ^F	3.3	A	A	A	A	A	2.7	A	A	3.1	2.3	[2.6] ^A	3.0	2.9	[3.0] ^F	3.2	3.0	A	A	
26	A	A	(3.0) ^F	2.8F	(3.1) ^F	3.3	3.3	A	A	A	A	A	A	A	3.0	3.0	A	A	A	A	3.2	3.3	3.1	3.2	
27	(2.9) ^F	(3.0) ^F	2.9F	[2.8] ^F	(2.7) ^F	3.0	3.3	3.5	3.5	A	A	A	A	2.9	[3.0] ^F	3.0	A	A	A	A	3.1	3.1	A	A	
28	A	3.0F	[3.0] ^A	3.0	[3.1] ^F	3.2	3.4	3.3	3.6	3.2	3.1	(3.0) ^F	3.1	A	A	A	A	A	3.3	3.4	3.1	3.0	A	A	
29	A	A	2.7F	(2.9) ^F	(3.0) ^F	3.2	3.2 ^F	3.1	A	A	A	A	A	A	3.0	2.9	3.0	A	A	A	A	A	A	A	
30	A	A	A	2.9	2.9F	3.0	3.1	3.6P	A	A	A	A	A	A	3.0	2.8	3.0	[3.1] ^F	3.2	A	A	A	F	F	
31	(3.0) ^F	(2.9) ^F	A	A	A	3.2	3.2	3.3	A	A	A	3.0	3.0	3.1	3.1	2.8	3.0	A	A	A	3.1	(3.3) ^F	A	A	
Mean Value	2.9	2.9	3.0	3.0	3.1	3.3	3.3	3.4	3.4	3.1	3.1	3.0	3.0	2.9	3.0	3.0	3.1	3.1	3.2	3.2	3.2	3.1	3.1	3.0	3.0
Median Value	2.9	2.9	3.0	3.0	3.1	3.3	3.4	3.4	3.4	3.2	3.1	3.0	3.0	3.0	3.0	3.0	3.1	3.2	3.2	3.2	3.2	3.1	3.1	3.0	3.0
Count	17	19	23	24	26	31	29	26	18	14	16	21	24	22	26	30	25	21	20	22	24	22	24	22	14

Manual Automatic

Sweep 1.0 Mc in 17.2 Mc in 2 min

(M3000)F2

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

May. 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	1.6	1.5	1.4	(1.4)	1.4	2.9	3.8	3.5	3.6	3.4	3.5	3.7	3.7	3.9	5.0	5.0	2.9	3.0	A	A	A	A	A
2	A	A	1.3	2.1	A	A	2.7	3.2	(3.6)	4.1	5.6	4.2	4.0	3.6	5.7	7.5	A	A	A	A	2.5	1.5	1.6	1.5
3	1.4	2.2	1.3	E	E	1.4	2.3	3.1	5.1	A	A	3.7	4.5	4.0	4.0	3.7	3.3	6.5	4.0	AF	A	(5.4)	A	A
4	A	A	A	1.7	(1.6)	1.6	3.8	5.0	A	A	A	A	3.5	3.8	6.0	4.4	3.4	5.5	(5.4)	5.2	A	A	A	A
5	(1.7)	A	A	2.0	1.7	1.7	2.3	A	A	A	A	4.5	3.5	4.1	3.5	4.4	5.8	4.5	5.0	3.2	1.9	1.8	2.1	1.9
6	1.5	1.8	1.8	AF	E	2.0	3.0	3.6	4.0	4.3	4.5	3.6	3.5	3.4	3.5	3.3	2.9	3.9	4.2	4.9	5.1	2.0	1.5	1.6
7	1.4	1.0	E	E	E	1.6	2.5	3.5	3.4	3.5	3.7	3.9	4.9	4.5	4.5	4.0	3.0	3.5	3.6	2.0	A	A	2.0	1.5
8	1.4	1.2	1.0	E	E	2.1	2.8	5.0	4.8	5.0	4.0	3.8	4.1	4.0	3.5	3.3	4.1	A	A	A	2.9	2.0	1.4	1.5
9	1.5	E	1.2	E	E	1.3	2.6	3.5	A	A	A	4.5	5.8	6.0	4.7	4.0	5.2	2.8	2.5	1.9	(2.4)	2.8	2.0	1.6
10	1.8	1.5	E	E	E	1.8	2.2	2.9	2.9	3.8	4.8	4.3	3.5	A	A	3.5	2.9	2.7	4.0	2.0	2.0	3.2	2.5	1.5
11	1.6	1.4	1.5	A	A	A	2.6	3.2	3.4	3.5	3.4	3.7	4.2	3.5	3.3	3.3	3.3	2.8	2.3	2.1	1.8	2.8	2.0	(2.2)
12	2.5	2.0	(2.8)	1.2	E	A	2.3	5.0	4.0	M	<4.8	3.8	3.7	4.0	3.9	3.5	3.2	3.5	A	A	A	2.0	(2.0)	1.9
13	2.0	1.4	E	E	E	1.4	3.5	3.8	3.8	3.8	3.5	3.6	4.3	(4.2)	4.0	4.9	4.0	6.3	5.0	6.3	A	A	A	A
14	1.6	1.2	1.9	1.4	1.7	1.3	A	A	A	A	A	4.0	4.0	4.5	5.2	3.3	5.0	(5.0)	5.0	A	A	A	A	A
15	A	A	AF	AF	1.7	2.1	3.5	A	A	A	4.9	4.0	3.5	A	A	4.3	5.3	(5.2)	5.0	3.0	5.4	A	A	A
16	AF	AF	AF	A	1.0	2.4	3.4	A	A	A	A	A	A	A	6.1	4.9	4.5	3.5	2.8	A	A	2.4	(2.4)	2.4
17	1.5	1.0	E	A	AF	1.9	2.5	4.0	4.0	3.8	3.8	3.9	3.8	4.2	3.4	3.4	3.2	(2.8)	2.4	1.6	(2.4)	3.3	2.9	2.0
18	1.8	1.4	2.7	1.4	1.7	2.0	2.5	4.0	4.5	5.0	4.9	(4.4)	4.0	4.5	3.5	3.5	5.0	5.4	8.0	8.0	(5.0)	2.7	4.0	2.7
19	1.5	1.5	1.7	E	1.8	2.2	3.2	5.0	A	A	A	A	5.0	(4.8)	4.5	3.5	A	A	A	4.2	2.1	2.2	A	A
20	A	A	2.8	(2.0)	1.3	1.5	3.4	(4.2)	5.0	A	A	A	A	A	5.0	5.2	5.1	A	A	A	A	A	A	A
21	A	A	2.8	2.8	E	2.5	4.0	4.2	4.0	4.2	3.3	4.4	3.5	4.5	4.5	5.4	3.3	2.9	2.2	1.5	2.0	(2.2)	2.5	(3.5)
22	A	A	E	E	1.4	2.5	3.0	4.4	A	A	4.2	3.5	5.5	3.5	3.4	3.4	3.3	(3.4)	3.4	2.9	(2.2)	1.5	1.5	2.0
23	1.5	1.6	1.3	E	1.4	2.0	3.7	3.7	3.6	4.0	4.2	5.0	5.0	4.2	3.5	3.4	3.3	3.0	A	A	5.0	3.5	(3.5)	3.5
24	1.7	A	A	1.4	2.7	2.8	2.8	4.0	5.0	A	A	A	4.2	A	A	5.0	A	A	A	3.7	2.9	3.3	2.5	A
25	A	A	A	1.0	1.7	2.7	A	A	A	A	A	4.3	A	A	3.7	4.1	(4.0)	4.0	5.0	A	A	4.0	A	A
26	A	A	E	E	1.4	1.9	3.5	A	A	A	A	A	3.8	4.4	3.5	5.4	A	A	A	3.9	1.5	1.5	3.5	2.9
27	2.0	1.9	AF	A	E	1.7	3.9	3.7	5.0	A	A	A	5.3	(5.2)	5.1	A	A	A	5.0	4.0	4.0	A	A	A
28	A	1.3	(1.8)	2.4	(2.5)	2.1	(3.6)	5.0	4.4	4.4	4.6	3.7	3.7	A	A	A	A	A	5.9	A	A	2.8	A	A
29	A	A	1.4	1.4	E	1.7	3.5	5.0	A	A	A	A	A	4.1	5.0	5.0	4.1	A	A	A	A	A	A	A
30	A	A	A	A	1.7	2.6	5.0	5.0	A	A	A	A	A	A	5.8	5.5	4.2	(5.0)	5.8	A	A	A	1.5	1.7
31	1.7	1.9	A	A	A	2.0	(3.0)	4.0	A	A	A	4.9	4.9	4.2	3.9	4.0	3.4	A	A	2.4	2.5	1.7	A	A
Mean Value	1.7	1.5	1.8	1.7	1.7	1.9	3.1	4.1	4.1	4.1	4.2	4.1	4.2	4.2	4.3	4.3	4.0	4.1	4.2	3.5	3.0	2.6	2.3	2.1
Median Value	1.6	1.4	1.4	1.3	1.4	2.0	3.0	4.0	4.0	4.0	4.2	4.0	4.0	4.2	4.0	4.0	4.0	3.5	4.1	3.1	2.4	2.4	2.0	1.9
Count	18	18	21	23	27	28	29	25	18	13	15	22	25	23	27	30	25	21	20	18	18	21	18	17

f min F

Sweep 1.0 Me to 17.2 Me in 2 min

Manual Automatic

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

Lat. 35° 42.4' N
Long. 139° 39.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

fminE

May, 1954

Day	00	01	02	03	04	05	06	07	08	08	08	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.4	E	E	E	E	E	1.5	1.4	1.4	1.4	1.4	1.5	2.0	2.1	1.9	1.5	1.4	1.4	1.3	1.3	1.5	1.5	1.5	1.6	1.3
2	1.3	E	E	E	E	E	1.4	1.4	1.4	1.4	1.5	1.4	1.3	1.5	1.9	2.0	1.4	1.3	1.4	1.2	1.9	1.4	1.7	E	E
3	1.3	E	E	E	E	E	1.0	1.3	1.3	1.4	2.1	2.0	2.0	2.1	1.9	1.4	1.4	1.4	1.4	1.3	1.4	1.5	1.4	1.3	1.4
4	1.3	E	E	E	E	E	1.0	1.3	1.5	1.4	1.4	1.4	1.4	2.2	1.5	1.5	1.5	1.5	1.4	1.2	1.2	1.3	1.4	1.3	1.0
5	1.2	1.0	E	E	E	E	E	1.1	1.5	1.4	1.5	1.9	2.1	2.0	1.9	1.8	1.5	1.4	1.4	1.4	1.4	1.4	1.2	1.7	1.4
6	1.0	E	E	E	E	E	E	1.4	1.5	1.4	1.4	1.4	2.2	2.2	1.4	1.5	1.4	1.5	1.4	1.3	1.4	1.5	1.5	1.8	1.8
7	2.2	1.0	E	E	E	E	1.0	1.3	1.2	1.9	1.4	1.9	1.9	2.0	1.9	1.5	1.5	1.4	1.5	1.2	1.5	1.3	1.4	1.4	1.8
8	1.4	E	E	E	E	E	1.0	1.3	1.4	1.4	1.4	1.4	1.5	1.6	2.0	2.1	1.9	1.4	1.4	1.3	1.4	1.4	1.3	1.3	E
9	1.5	E	E	E	E	E	1.3	1.4	1.4	1.4	2.1	2.1	1.5	2.1	2.1	2.1	1.4	1.4	1.4	1.5	1.5	1.6	1.5	1.6	1.8
10	1.2	E	E	E	E	E	E	1.4	1.4	1.4	1.5	1.5	1.5	2.1	2.1	1.9	1.4	1.4	1.3	1.3	1.5	1.4	1.3	1.4	1.3
11	1.3	E	E	E	E	E	E	1.4	1.4	1.5	1.9	1.5	2.1	1.9	2.1	1.5	1.9	1.4	1.3	1.2	1.4	1.3	1.3	1.5	1.4
12	1.1	E	E	E	E	E	E	1.4	1.4	1.5	M	M	1.5	1.4	1.5	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.5	1.4	1.6
13	E	E	E	E	E	E	E	1.3	1.3	1.5	1.4	2.1	1.5	1.8	2.1	1.4	1.4	1.4	1.4	1.2	1.5	1.4	1.5	1.3	1.3
14	1.2	E	E	E	E	E	E	1.3	1.3	1.4	1.5	1.5	2.0	2.0	1.5	1.4	1.4	1.4	1.4	1.2	1.5	1.5	1.5	1.4	1.4
15	1.2	1.2	E	E	E	E	E	1.3	1.4	1.5	1.4	1.5	1.5	2.2	1.5	1.4	1.4	1.4	1.4	1.2	1.5	1.3	1.3	1.3	1.3
16	1.0	E	E	E	E	E	E	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.4	1.5	1.4	1.5	1.3	1.4	1.2	1.3	1.3	1.2
17	1.3	1.4	E	E	E	E	E	1.3	1.3	1.4	1.4	1.4	1.5	2.1	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.5	1.4	1.5
18	1.4	1.0	E	E	E	E	E	1.1	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.5	1.4	1.3	1.4	1.5	1.3
19	1.7	1.3	E	E	E	E	E	1.0	1.4	1.4	1.4	1.5	1.5	2.1	2.1	2.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
20	1.4	E	E	E	E	E	E	1.0	1.5	1.4	1.5	1.5	1.5	2.1	1.5	1.6	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5
21	1.4	1.0	1.0	E	E	E	E	E	1.4	1.5	1.4	1.5	1.5	2.2	2.2	2.1	1.5	1.4	1.3	1.5	1.5	1.7	1.4	1.5	1.5
22	1.4	1.0	E	E	E	E	E	E	1.4	1.5	1.5	1.5	1.5	2.1	2.1	2.1	1.5	1.5	1.4	1.4	1.5	1.3	E	E	1.4
23	1.0	E	E	E	E	E	E	1.0	1.5	1.5	1.5	1.5	1.5	2.1	2.1	2.1	1.5	1.4	1.5	1.4	1.4	1.3	1.3	1.5	1.4
24	1.5	1.3	E	E	E	E	E	1.0	1.4	1.4	1.4	1.5	1.5	2.1	2.1	2.2	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.5	1.5
25	1.5	E	E	E	E	E	E	1.5	1.5	1.5	1.6	1.5	1.5	2.1	2.1	2.1	1.5	1.4	1.5	1.4	1.5	1.4	1.4	1.5	1.5
26	1.4	E	E	E	E	E	E	1.4	1.4	1.4	1.4	1.4	1.5	2.1	2.1	2.1	1.5	1.4	1.4	1.4	1.3	1.4	1.5	1.4	1.5
27	1.2	E	E	E	E	E	E	1.4	1.3	1.5	2.1	1.5	1.5	2.1	2.1	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.4	1.3	1.5
28	1.3	1.0	E	E	E	E	E	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.6
29	1.5	E	E	E	E	E	E	1.0	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.5	1.5	1.5	1.3	1.3	1.5	1.5	1.5	1.5
30	1.3	1.0	1.0	E	E	E	E	E	1.4	1.3	1.4	1.5	1.5	1.6	2.1	1.5	1.5	1.5	1.5	1.3	1.4	1.5	1.4	1.3	1.4
31	1.0	E	1.0	1.0	1.0	1.4	1.5	1.5	1.5	1.5	1.5	1.5	2.1	1.5	2.0	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.5	1.4	1.4
Mean Value	1.3	1.1	1.0	1.0	1.2	1.1	1.4	1.4	1.5	1.6	1.6	1.7	1.9	1.8	1.7	1.7	1.5	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4
Median Value	1.3	E	E	E	E	E	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.9	1.5	1.5	1.5	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4
Count	31	31	31	31	31	31	31	31	31	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31

fminE

Group 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

YPF2

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

YPF2

Energy 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 12

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

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

foF2

May. 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	4.5F	F	F	3.6	2.1	2.4	5.1V	5.5	5.7	6.0	5.6	6.0	5.7	6.1	6.6	8.4	8.6	6.3	6.4	5.9	5.3	5.5	4.3F	[4.0]A
2	3.7	3.5	[3.3]F	3.1F	2.9	2.6	4.3	5.9J	6.2	6.8	A	A	8.7	9.4	[10.2]A	10.9J	10.9P	9.0	6.5	6.1	6.0	[4.6]A	3.1F	A
3	F	4.1	4.0	4.0	3.9	2.5	4.9	5.4	5.8	C	C	C	C	C	C	C	9.5	9.9	10.1J	9.3J	A	3.8P	3.4	3.5
4	3.4	[3.2]F	3.0	3.0F	3.0F	3.3F	4.5	5.8	A	A	A	A	7.1	8.6	8.7	9.0	9.6	9.4	A	A	6.7	F	F	3.5
5	F	F	F	3.0	3.0	3.4	4.4	6.0	5.3H	A	A	A	7.0	6.3	5.8	6.5	7.6P	7.5	[7.8]A	8.1	8.5	6.7	4.0	4.0P
6	3.7	3.7	3.5	3.1	3.0F	3.0	5.8	5.6X	C	C	C	C	C	C	C	C	C	C	6.0	(6.7)P	7.0	5.9	4.6F	4.9F
7	4.5	4.0	3.9	3.8	3.3	2.4	4.1	5.0	5.5	6.5	7.0	7.7P	6.6	6.6	6.8	8.0	8.6	7.4	7.3	8.0	S	C	C	C
8	C	C	C	C	C	C	C	C	C	6.2	6.0	5.7	5.9	6.4	7.0	7.7	8.5	8.8	6.5	7.0	[6.2]A	5.5	5.4	FS
9	A	A	A	A	3.4	3.4F	4.6	5.7	5.7	6.1	6.8	[6.4]A	6.0	7.0	7.5	8.6	8.9	9.9J	9.0	8.3	8.0	4.9V	3.5	A
10	A	A	A	F	3.4F	3.5F	5.4	5.1	5.5	5.2	5.6	[6.9]A	8.2	8.4	9.0	10.1	11.5	12.8	11.6	11.0J	8.4	6.3	5.6	F
11	F	F	F	F	3.6	3.7	4.4	4.9	5.4	C	C	C	7.2	8.4	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	5.5	6.5	6.1	7.1	8.0	9.1	8.4	7.6	7.0	7.0	8.0	7.6	6.5	4.2V	F
13	F	F	F	4.6	3.5F	[4.4]A	5.2	7.2	5.4	5.8	5.4	5.8	7.4	7.8	8.0	9.0	9.8	A	A	8.0	6.4	[5.0]A	3.6X	3.3
14	A	A	F	F	3.3	2.5	A	A	A	A	A	6.5	7.5	7.5	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	7.4	8.4	8.9	7.3	5.8	3.3	A	A
16	C	C	A	A	A	2.6F	C	C	C	6.0	5.5	A	A	9.4	9.7	10.9	10.5	[8.6]A	6.8	6.5	[6.0]A	5.4	FS	A
17	A	A	3.5F	[3.2]F	2.9	[3.9]A	4.9	5.4	[5.4]A	5.4	[5.2]A	5.0	6.3	7.3	8.0	9.2	9.3	A	A	5.9	5.9	5.9	4.9	[4.8]S
18	4.6V	F	F	F	3.1	[3.8]F	4.4	6.0	5.4	5.0	5.2	5.0	5.4	6.0	6.3	7.6	8.1	9.2	10.0	10.0	5.9	5.1	4.8	4.6
19	F	F	F	3.5F	[3.1]A	2.7	4.2	6.0	7.0	6.8	[6.2]A	5.5	5.8	7.6	9.0	6.7	5.6	6.5	7.7	7.0	6.8	5.5	[5.1]F	4.7
20	4.9	4.6	4.4	4.8	FS	FS	5.4	A	C	C	C	C	C	C	C	C	C	C	8.0	7.9J	C	C	6.0	[5.8]S
21	5.6F	[5.3]F	5.0F	4.7	4.5J	4.1	5.9	5.7	4.2	5.3	[4.2]A	7.0	6.6	6.1J	8.0	8.7	8.8	[7.9]C	7.0	6.0	6.0	6.0	4.8	[5.4]A
22	5.9	[5.8]F	5.7	F	A	F	4.2	C	C	C	C	6.0	6.5	7.6	7.6	7.8	8.5	9.4P	9.4	7.8J	6.0	4.3	4.0	4.2
23	4.1	4.4	4.6F	3.7F	3.7F	3.2F	4.4J	5.3	5.8	5.5	A	A	A	A	7.8	7.4	7.6J	6.1	[5.8]A	5.5	5.6	F	F	AS
24	A	3.3F	3.0F	F	A	3.2F	4.8	5.5	A	A	A	A	6.3	A	A	A	A	A	A	A	A	4.9H	4.3	4.3
25	4.4J	4.1	A	B	F	3.4F	4.2	5.7	8.0	5.1	A	A	A	A	6.3	6.7J	6.7	7.2	6.3	6.4	6.4	A	B	A
26	A	A	A	2.3J	2.8J	2.8	4.4	5.5	5.8	5.6	A	A	5.8	A	A	A	A	A	A	A	(6.7)P	[5.0]A	3.2	A
27	A	3.7	F	A	A	A	4.7	5.8	A	A	A	A	A	5.6	6.7	8.3	6.7	6.3	6.8	5.7	6.3	6.3S	A	A
28	A	A	F	F	A	F	4.3	5.5	M	A	A	5.8	A	A	A	5.2	6.5	8.5	7.7	6.3	5.4	5.0	4.4	A
29	A	A	A	3.3F	[3.4]F	3.4F	4.5	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
30	C	C	C	C	C	C	C	C	C	A	A	A	A	6.9	7.6	8.1	8.4	8.5	[8.1]A	7.7	6.5	5.3F	5.5F	FS
31	FS	FS	3.7F	FS	F	A	4.7	A	A	A	A	A	A	6.3P	[6.4]A	6.5	6.7	7.6	8.3	7.4J	A	A	S	A
Mean Value	4.5	4.1	4.0	3.5	3.3	3.2	4.7	5.6	5.8	5.8	5.9	6.1	6.6	7.2	7.7	8.2	8.4	8.3	7.8	7.4	6.5	5.3	4.4	4.4
Minimum Value	4.5	4.0	3.9	3.5	3.3	3.2	4.5	5.6	5.6	5.7	5.8	5.9	6.5	7.0	7.6	8.2	8.5	8.4	7.7	7.3	6.2	5.4	4.4	4.3
Count	11	12	13	15	19	22	25	21	16	16	12	12	19	21	21	22	24	22	23	25	24	22	20	13

foF2

Group 1.0 Mc to 2.2.0 Mc in _____ min

Manual Automatic

Y1

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

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

138° E Mean Time

May, 1954

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	320	300	270	200	320	290	250	220A	260	290	300	360	350	370	340	300	260	270	250	270	270	310	A	A	
2	350	300	300	220A	260	250	250	270	[260]A	260	A	C	C	C	[300]A	300	290	230	240	310A	250	[300]A	350F	[300]A	
3	280F	290	260	250	220	220	250	240	250	C	C	C	C	C	C	C	290	280	250	240A	210	300A	320	290	
4	270	320	310	300	250F	250	230	240	A	A	A	A	350	310	320	320	300A	300	340A	380	240	[260]A	310	280	
5	310F	330	350F	300	310	250	260	260	250H	A	A	A	310	340	390	350	300	300	[300]A	300	240A	230A	270	290	
6	330A	290	270	270	320F	300	250	240	C	C	C	C	C	C	C	C	C	C	270	300	260	220A	350A	290F	
7	300	290	270	250	210	260	240	250	300	300	270	290	340	350	360	320	280	290	290	300	350	C	C	C	
8	C	C	C	C	C	C	C	C	C	270	270	320	[330]A	340	350	320	290	250	250A	240A	[260]A	290	230A	270	
9	A	A	A	A	470	280	240	250	280	290	A	A	350	350A	340	310	300	280	260	250	230	220	350A	[370]A	
10	300A	A	A	330	260	250	240	230	260	290	A	A	300	320	330	330	310	250	250	220A	230	230	310	330F	
11	290	260F	280	250	280	220	220	240	290	C	C	C	360	350	C	C	C	C	C	C	C	C	C	C	
12	C	C	C	C	C	C	C	C	C	350	330	290	360	340	290	280	300	310	300	250A	240A	360	300	330A	
13	340A	340A	270	330A	290	[310]A	330A	240	250	[310]A	[370]A	370	360	310	340	310	320	A	A	250	250	[270]A	290	350	
14	A	A	350	310A	230	A	A	A	A	A	A	A	370	330	C	C	C	C	C	C	C	C	C	C	
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	340	290	250	220A	200A	A	A	A	
16	C	C	A	A	A	250A	C	C	C	260	310	A	A	320	320	290	270	A	A	250A	[240]A	230A	340	A	
17	A	A	300	250F	290	[270]A	250A	240	[260]A	290	[380]A	460	370A	350	340	300	300	300	A	A	250	280	290	300	280A
18	280	270	290	290	290	260	250	270	260	330	320	460	400	380	370	350	340	300	260	230A	260	290	300	330A	
19	300	270	250	240	[280]A	310	260	310	260	260	[320]A	370	440	350	280	270	360	320	270	260	250	230A	300	290	
20	300	350	320A	250	280	250F	260A	A	C	C	C	C	C	C	C	C	C	C	380A	A	C	C	300	320A	
21	280	330F	300F	260	260	250	240	250	210	320	[320]A	310A	350	380	330	320	280	[270]C	260	[310]A	320A	260	250	[280]A	
22	320A	350A	250	210A	350	220A	A	C	C	C	C	C	360	350	350	330	300	280	250	230A	250	300	300	300	
23	300	300	280	290	290	270	270	290	280	330	A	A	A	A	330	300	280	250	[260]A	270	300	300	340F	240	
24	[240]A	250	280F	210A	[260]A	320A	300A	280	A	A	A	A	350	A	A	340	A	A	A	A	A	A	250H	280	320
25	300	300	[280]A	250	250	250	260	310	240	270	A	A	A	A	340	310	320	270	270	270A	260A	[260]A	250	A	
26	A	A	A	320	300	300	300	270	240	A	A	A	[350]A	A	A	A	A	A	A	A	A	310	[300]A	300	A
27	A	280	310	A	A	A	260	410	A	A	A	A	A	430	360	290	290	300	280	(300)A	290	270	A	A	
28	A	A	300	210A	[220]A	240A	260A	280	M	A	A	(350)A	A	A	A	440	340	290	250	250	270	240	A	A	
29	A	A	A	310	290	260	270	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
30	C	C	C	C	C	C	C	C	C	A	A	A	A	350	340	320	300	290	[280]A	260	270	320A	300F	300	
31	300F	280F	250F	350	250	290A	240	A	A	A	A	A	A	360A	[360]A	360	330	310A	270	260	A	A	350	A	
Mean Value	360	300	270	270	280	260	260	270	260	290	320	360	350	350	340	320	300	280	270	270	270	260	270	300	300
Median Value	300	300	280	260	280	260	250	250	260	290	320	360	350	350	340	320	300	290	260	260	260	260	270	300	300
Count	19	19	22	24	25	25	24	21	16	15	10	10	19	21	21	23	24	21	23	24	21	23	25	24	19

Y2

Automatic

Manual

Sweep 1.0 Mc to 2.20 Mc in 1 min

R'F2

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

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

May, 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	28	24	23	27	30	30	32	55	34	36	36	32	32	34	49	47	58	69	59	50	60	60	59	42
2	59	59	59	36	35	23	38	59	72	125	95	116	65	72	102	80	71	65	59	130	122	100	34	51
3	E	E	E	24	23	23	G	G	G	C	C	C	C	C	C	C	5.8	6.0	4.0	5.1	3.6	3.3	5.5	3.2
4	59	34	24	24F	E	E	24	G	8.5	7.4	11.9	123	65	G	G	9.1	7.5	11.7	135	9.0	9.0	6.0	3.5	3.5
5	25	30	37	35	27	24Y	34	37	5.2	6.2	8.0	65	60	62	50	5.9	8.2	5.7	8.0	9.0	5.7	8.7	5.9	3.5
6	35	32	35	48Y	2.9	24	29	44	C	C	C	C	C	C	C	C	C	C	3.6	6.0	6.0	2.9	4.5	3.0
7	30Y	24	1.8	23	E	E	2.9	G	G	5.5	5.9	5.5	9.9Y	5.8	G	5.0	4.7	6.0	6.0	6.0	C	C	C	C
8	C	C	C	C	C	C	C	C	C	6.5	8.7Y	6.0	6.5	6.4	G	G	G	3.7	3.7	3.6	1.9	9.1	9.2	7.0
9	9.0	10.5	8.9	6.0	7.0	2.8	3.2	4.8	5.5	5.9	7.1	9.7	6.1	5.9	3.5	G	G	3.4	3.5	3.3	3.2	3.5	5.9	5.9
10	5.8	6.2F	4.2	5.8	2.7Y	2.4	G	3.4	5.5	6.2	3.8	7.2	4.8	G	7.0	G	5.4	8.4Y	5.8	7.0	3.7	3.2	5.8	5.1
11	34	24	24Y	24	24Y	2.5	2.9	3.6	4.8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	8.9	8.9	5.9	G	5.5	6.3	G	3.5	3.7	6.0	3.6	3.0	3.8	5.9	3.2	6.0
13	5.8	3.5	5.9	5.9	3.5	4.4	5.9	4.8	4.8	6.0	5.9	6.4	5.8	G	G	G	5.9	1.55	1.21	1.22	5.9	6.0	3.2	3.4F
14	5.9	5.9	5.0	4.8F	4.9	5.8	5.8	8.5	9.2	6.6	8.3	8.7	8.7	6.1	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	3.5	6.5	6.4	5.9Y	3.6	3.8	7.0	6.3
16	C	C	5.9	6.8	5.9F	3.4F	C	C	C	6.2	5.7Y	1.20	1.88	6.6	6.8	3.8	10.0	9.0	7.0	4.9	6.6	3.7F	5.8	7.0
17	9.0	7.2	5.4	5.2F	3.5	5.6	4.0	5.1	6.0	5.9	6.8	5.9	6.2	7.9	4.5	7.0	8.6	10.5	8.0	4.5	4.1	7.0	5.8	3.4
18	3.6	2.4	2.4	2.4	2.4	E	3.4	3.6	3.4	4.2Y	3.7Y	4.8	4.9Y	3.4	5.9Y	G	4.9	3.5	5.3	4.5	5.8	3.2	2.4 ^s	2.7
19	3.2	3.0	3.0	2.3	3.8	3.3	3.7	4.2	4.8	5.7	1.49	G	5.7	5.4	6.5	5.4	5.6	6.2	3.8	2.7	3.4	2.7	3.5	3.2
20	2.4	4.1	3.6	3.2	3.1	3.0	5.9	1.23	C	C	C	C	C	C	C	C	C	C	7.8	8.5	C	C	5.9	5.8
21	4.8	3.6	3.6	3.5	2.4	E	2.7	4.1	3.6Y	3.6	6.5	8.5	5.6	G	3.5	3.3	3.6	C	G	5.5	5.7	3.2	5.9	7.0
22	5.0	5.9	9.7	3.5	6.0	5.9Y	4.6	C	C	C	C	C	4.5Y	G	G	G	G	G	5.2	5.8	4.2	3.6	3.0	3.0
23	3.4	3.2	3.3	3.1	3.6	4.2Y	3.2	3.7	3.6	5.7	6.4	9.9	8.5	8.5	6.2	6.0	5.9	4.2	6.1	5.9	5.9	5.1	5.9	5.9
24	5.9	6.3	3.8	3.3	3.4	4.6	5.1	4.7	6.5	6.5	1.49	1.23	5.7	6.7	1.30	1.25	1.2.2	8.8	8.4	1.27 ^s	1.2.4	3.5	2.4	5.9
25	6.4	3.5	5.0	3.1	2.4F	2.3	3.2	4.9	8.2Y	5.9Y	6.4	8.8	9.6	8.9	6.1	5.0Y	3.5	5.7	4.7	4.7	6.0	3.9	5.9	5.9
26	6.1	5.9	3.6	2.4	5.8Y	3.2	3.2	3.7	5.9	6.5	6.7	1.30	7.2	9.5	9.4	8.0	1.30	1.2.5	6.7	8.7	9.5	7.2	3.6	5.9
27	9.1	6.2	3.6	5.8	6.0	5.9	3.2	6.8	9.5	9.5	1.35	8.8	8.3Y	5.0Y	6.1	5.8	5.7	5.6	5.9	1.33	1.2.7	5.9	6.0	6.0
28	9.4	8.7Y	4.9	5.0Y	7.3	2.4	4.7	4.8	7.1	8.0	7.1	5.7	6.7	5.9	7.0	4.9	6.0	7.1	5.7	4.1	4.2	2.3	5.9	7.0
29	8.5Y	6.4	6.5	5.8	2.9	3.3	3.3	6.8	6.8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
30	C	C	C	C	C	C	C	C	C	10.3	1.20	1.35	1.25	6.0Y	G	4.6	4.9Y	5.7Y	10.0	5.7	5.2	6.3	3.0F	5.3
31	5.8	3.5	5.4	6.4	3.5F	6.9F	3.2	7.2	7.3	6.4	6.8	7.3	7.3	10.0	1.2.8	8.7Y	5.3	5.8	6.6	5.6	8.9	8.7	8.5	6.0
Mean	5.5	4.7	4.5	4.0	3.9	3.7	3.7	5.3	6.0	6.7	8.0	8.5	7.1	6.4	7.0	6.1	6.5	6.9	6.3	6.8	6.5	5.4	5.1	5.0
Median	5.8	3.6	3.7	3.5	3.4	3.0	3.2	4.7	5.5	6.2	6.8	7.8	6.4	6.0	5.4	4.6	5.6	6.0	5.9	5.8	5.9	5.5	5.8	5.8
Count	26	26	27	27	27	27	26	25	22	2.4	2.4	2.4	2.6	2.6	2.4	2.4	2.6	2.5	2.8	2.8	2.7	2.6	2.7	2.7

Y3

Manual Automatic

Group 1.0 Mc to 22.0 Mc in 1 min

fEs

IONOSPHERIC DATA IN JAPAN FOR MAY 1954

電波觀測報告 第6卷 第5号

1954年6月25日 印刷
1954年6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 国分寺 138, 139, 151

印 刷 所

今 井 印 刷 所
東京都新宿区筑土八幡町8番地