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IONOSPHERIC DATA IN JAPAN

FOR JUNE 1954

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PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR JUNE, 1954

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P R E F A C E

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

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

Lat. 46° 23.8' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

Jun. 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	4.5 ^F	4.9	4.9 ^P	5.3 ^F	5.3	6.4	5.5	5.2	4.7 ^P	4.7	5.5	5.8	5.0	5.5	5.2	4.8	5.3	6.1	6.2	6.6	5.7	4.5 ^F	4.6	4.7 ^S
2	4.6 ^S	4.7 ^S	4.6	4.8 ^F	(4.6) ^F	4.8	4.9	4.9	A	A	5.5	4.9	B	A	A	A	A	5.1	(5.4) ^F	5.7	6.1	(6.0) ^F	6.0 ^F	5.0 ^F
3	FS	FS	4.5 ^F	4.0 ^F	(4.6) ^F	5.2 ^F	(5.7) ^F	6.2	6.1	6.0	5.5	4.9 ^F	(4.9) ^A	4.9	4.6	4.7	4.7	4.7	5.4	5.9	6.0	FS	FS	4.9
4	4.4	4.0	(4.0) ^S	4.3 ^F	3.4 ^F	3.7	4.3	5.4	5.9	(5.5) ^F	5.1 ^F	4.7	5.0	5.0	4.4	4.8	5.2	(5.1) ^A	A	6.9	(7.0) ^S	FS	FS	FS
5	4.8 ^P	4.3	4.1	4.1	4.2	4.5	5.5	4.5	A	A	B	A	4.6	5.0	4.3	4.4	4.3	(5.1) ^A	5.9	6.1	6.5	5.8	5.0 ^J	4.8
6	4.8	4.2	4.3	4.1	4.0 ^V	4.8	5.3	A	A	A	A	A	5.5	5.5	5.0	5.3	4.8	4.4	4.6	5.2	6.0	5.9	5.7	5.0
7	4.7	4.8 ^P	4.7	4.7 ^F	(5.0) ^F	4.4	5.0	5.2 ^F	5.5	5.0	5.5	4.8 ^F	5.3	5.5	5.0	5.3	4.9	(5.2) ^A	5.4	6.0	6.0	6.0 ^S	5.7	(5.5) ^F
8	F	A	FS	FS	A	4.1 ^F	4.1 ^F	(4.6) ^A	5.2 ^F	5.1	5.5	5.4	4.6	(4.6) ^A	4.7	4.9	5.1	5.3	5.5	5.3	5.7	5.6	5.6 ^F	T
9	F	F	4.5 ^F	(4.0) ^F	4.8	4.3 ^H	4.5	4.5	(5.2) ^A	5.8	5.8	4.9 ^F	(4.8) ^A	4.6	A	A	A	5.5	A	A	6.0	(5.5) ^V	FS	A
10	FS	A	F	F	(4.2) ^F	4.1 ^F	(4.9) ^A	5.7 ^F	(4.8) ^F	5.3	B	B	5.0	5.1 ^F	5.6	5.5	5.2 ^H	5.0	5.8	6.2	6.5 ^F	5.9	5.3 ^J	4.0
11	3.9 ^F	3.9 ^F	F	C	C	C	C	4.8	A	A	A	B	B	A	A	4.7	4.6	4.6	(4.7) ^A	4.8	5.5	5.7	5.7	5.7
12	F	4.1 ^F	4.0 ^H	(3.9) ^S	3.9 ^F	4.7 ^P	4.1	4.7	4.8	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	FS	FS	A	(4.8) ^F	4.5 ^F	5.6	A	A	A	A	A	A	A	4.9 ^F	A	A	A	A	A	5.0	5.5	A	A	FS
15	A	A	A	F	F	4.0 ^F	A	A	A	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	4.6	4.6 ^F	A	A	A	4.8	(4.6) ^A	4.4	(5.1) ^A	5.8	(5.3) ^S	A	A
17	A	A	A	F	F	(4.5) ^F	A	A	A	C	C	A	A	A	A	A	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	5.9	5.9 ^Z	(5.2) ^A	4.6	4.7	4.6	4.8	(4.7) ^A	4.6	5.2	(5.8) ^A	6.4	5.9	(5.4) ^A	4.8
19	A	F	F	F	3.4 ^F	4.0	4.6	(5.2) ^A	5.7 ^V	6.0	(5.5) ^A	5.0	4.9	4.6	(4.6) ^B	4.7	5.2	5.1 ^F	5.3	5.9	6.5	5.3 ^F	4.6 ^F	4.3
20	3.6	4.0 ^P	3.8 ^F	3.8 ^F	(4.5) ^F	4.6	4.9	A	A	A	4.7	B	C	A	A	A	A	A	A	A	A	(6.0) ^J	F	F
21	(4.8) ^F	(4.8) ^F	A	FS	(3.8) ^F	4.7	A	A	A	A	A	A	A	A	A	A	A	A	4.2	(4.1) ^A	4.0	(4.8) ^S	(5.3) ^S	A
22	A	FA	A	F	F	F	(4.8) ^F	A	A	A	5.3	4.9	A	A	A	A	4.9 ^V	5.2 ^F	5.6 ^F	6.1	(5.5) ^S	5.3	FS	FS
23	FS	F	F	(4.4) ^F	(5.0) ^F	(5.6) ^F	5.4	(5.1) ^A	4.8	A	A	6.1	6.0	A	A	5.3	5.2	(5.0) ^C	4.9	(5.1) ^C	5.3	A	A	5 ^F
24	5 ^F	5 ^F	FS	F	(3.9) ^F	4.0 ^F	(4.7) ^A	5.4	A	A	A	A	C	A	A	5.1	5.3	4.7	4.9	5.3	A	A	A	FS
25	4.5	C	F	F	3.7 ^F	4.0	4.5	5.0 ^F	A	A	A	A	A	A	4.7	4.8 ^F	5.0	5.2	(4.9) ^C	4.6	5.1	5.7	(5.7) ^F	4.4 ^F
26	4.1	4.0 ^T	4.8	3.9 ^F	4.3 ^F	4.6 ^F	A	A	A	A	A	A	5.1	4.5	(4.4) ^A	4.4 ^P	(4.5) ^F	A	A	5.7	6.5	4.8	(4.5) ^S	(4.3) ^F
27	(4.1) ^S	(3.8) ^F	F	F	(3.9) ^F	4.3 ^F	A	A	C	C	C	C	C	C	C	C	C	4.9 ^F	5.4	6.2	6.5	5.9	5.0	4.0
28	4.0 ^S	4.3	F	F	F	5.0	F	5.4 ^F	(5.2) ^F	5.1 ^P	A	A	A	5.8	5.3	4.6	A	A	A	5.9	(5.9) ^F	5.9	A	A
29	FS	A	F	F	(3.4) ^T	3.5 ^F	A	A	A	A	A	A	A	A	A	B	4.8	A	A	A	6.1	F	A	A
30	A	F	A	F	A	4.3 ^F	4.8	(5.0) ^A	5.3	4.8	B	A	A	A	A	A	C	A	C	A	FS	5.9	F	A
31																								
Mean Value	4.4	4.3	4.4	4.3	4.2	4.6	4.9	5.1	5.3	5.4	5.4	5.1	5.0	5.0	4.8	4.9	4.9	5.0	5.2	5.5	6.0	5.6	5.2	4.6
Median Value	4.5	4.2	4.5	4.1	4.2	4.5	4.8	5.1	5.2	5.3	5.5	4.9	5.0	5.0	4.7	4.8	4.9	5.0	5.3	5.7	6.0	5.9	5.3	4.8
Count	13	13	11	13	20	24	18	17	12	11	11	12	14	13	14	16	18	19	19	23	24	19	11	12

f_oF₂

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

Manual

Automatic

W 1

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

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

IONOSPHERIC DATA

Jun. 1954

f'F₂

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	270	270	260	250	290	240	270	310 ^A	300	460	320	300	390	330	360	420	350	310	280	250	220	250	250	260
2	270	280	280	240	260	260	350	340	A	A	290	320	A	A	A	A	A	310	(300)	300 ^A	A	320 ^A	240	250
3	250 ^F	300	270	270	270	290	(300) ^A	300	270	320 ^A	320	A	A	390 ^A	(400) ^A	400	370	330 ^F	300	300	340 ^A	250	240	250
4	250 ^A	270	260	220	230	250	400	360	270	(300) ^A	310	390	380	370	L	400	320	A	A	A	250	A	A	250 ^F
5	220 ^A	260	270	240	250	340	290	340	A	A	B	A	480	380	530	560	370	(340) ^A	300	270	260	240	260	250
6	260	250	240	250	220	280	A	A	A	A	A	A	360	360	370	320	340	370	320 ^H	260 ^H	260	250	250	230
7	250	260	270	260	240 ^F	350	300 ^F	380 ^F	310	310	360	440	340	330 ^T	360	320	340	(320) ^A	310 ^A	270	300 ^A	310 ^A	250	260
8	(270) ^F	A	A	A	A	A	250	(280) ^A	320 ^A	(330) ^A	340	310	410	(400) ^A	400	370	320	310	290	280	260	240	250	240 ^F
9	250 ^F	260 ^F	250 ^F	240	220	210 ^H	320	400	(360) ^A	310	290	380	(440) ^A	510	A	A	A	A	A	A	360 ^A	240	(240) ^F	(260) ^F
10	(270) ^F	(280) ^A	290 ^F	250 ^F	260 ^A	L	A	280	420	320	B	B	430	400	380 ^F	320	340 ^H	350 ^A	290	270	270 ^A	A	A	260
11	260	260	290 ^F	C	C	C	C	310	A	A	A	A	A	A	A	380	360	350	(320) ^A	280	260	280	270	260
12	260 ^F	260	280	280	250	260	290	310	330	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	270	260	(250) ^A	240	230	250	A	A	A	A	A	A	A	A	420 ^F	A	A	A	A	290 ^A	300 ^A	300 ^A	A	A
15	A	C	C	C	C	330	A	A	A	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	440	420 ^F	A	A	A	350	(320) ^A	280	(270) ^A	260	(300) ^A	A	A
17	A	A	(280) ^F	(280) ^F	260 ^F	300	A	A	A	A	A	A	A	A	A	A	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	290	320 ^F	(380) ^A	440 ^A	490	350	360	(380) ^A	390	320	(290) ^A	260	300 ^A	(300) ^A	300 ^A
19	(290) ^A	280	260	310 ^A	320 ^A	350	330	(330) ^A	330	270	(300) ^A	340	340	490 ^F	(440) ^F	390	340	340	(310) ^A	280	240	220	240	280
20	250	270	250	270	250	270	250	A	A	A	A	B	C	C	A	A	A	A	A	A	280 ^A	280	280	280 ^F
21	270 ^F	250	A	270	280	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	280 ^A	280	280 ^F
22	A	A	A	270 ^F	260 ^F	270 ^L	310	A	A	A	A	A	A	A	A	A	A	A	A	A	310 ^A	A	A	A
23	240	260	260 ^F	260	290	240	260	(300) ^A	340	A	A	A	A	A	A	A	A	A	A	A	300 ^A	A	A	A
24	250 ^F	280	270 ^F	(300) ^F	250	380	(360) ^A	350	A	A	A	A	C	A	A	360	340	(320) ^A	290	280 ^A	A	A	A	A
25	A	C	260 ^F	260	240	260	380	350 ^A	A	A	A	A	A	A	410 ^A	380	330	290	250	260	260	270 ^F	260	270
26	260	260	260	240	290	220	A	A	A	A	A	A	350	450	(450) ^A	450	400	A	A	300 ^A	260	260	260	290
27	270	270	270 ^F	260 ^F	250	350 ^L	A	A	C	C	C	C	C	C	C	C	C	C	C	350	290	250	240	280
28	320	310	280	240	310	290 ^A	(400) ^T	330	400	340	A	A	A	A	330	420	A	A	A	310 ^A	300 ^A	250 ^A	A	A
29	330 ^A	(300) ^A	270 ^A	240 ^F	300 ^A	A	A	A	A	A	A	A	A	A	A	B	510	A	A	A	A	290 ^A	A	A
30	A	260	(300) ^A	340 ^A	(330) ^A	320	330	(320) ^A	320 ^A	370	B	A	A	A	A	A	C	C	C	A	320 ^A	270 ^A	270 ^A	A
31																								
Mean Value	270	270	270	260	260	290	320	330	330	330	330	370	400	400	400	390	360	330	300	280	260	270	260	260
Minimum Value	260	260	270	260	260	270	310	330	320	320	320	380	400	390	400	380	340	320	300	280	260	270	260	260
Count	22	22	22	23	24	23	17	17	12	11	9	12	13	13	13	16	17	18	19	20	23	21	17	19

Sweep 1.0... Mc to 2.2... Mc in ... min Manual Automatic

f'F₂

IONOSPHERIC DATA

135° E Mean Time

fEs

Jun. 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	3.5F	3.7F	2.4Y	2.2T	2.5Y	5	4.0	6.3	4.0Y	4.5F	6.5	5	5	5	5	5	6.0Y	5	3.1Y	2.6Y	2.8Y	3.5Y	2.5Y	E
2	7.0Y	3.5Y	3.9Y	2.5Y	5.7F	3.2F	4.2Y	4.8	6.4	8.7	3.9	5.0	4.9	8.0	12.6	12.0F	7.2F	3.4Y	7.9Y	5.7Y	7.3F	5.7Y	4.7	4.2Y
3	4.5Y	3.7F	3.5	3.9	4.7Y	5.0	7.5	5.3	5.3	6.1	6.5	6.4	6.1	6.2	6.5	5.8	4.6Y	6.4	3.4F	5.5	6.2	4.4	2.4	2.3
4	2.6	2.3	2.5	2.4Y	2.7	2.7	3.9	4.4	6.0	7.6	7.0Y	5.3F	4.2	4.2Y	4.0Y	6.0	7.2	11.3Y	14.0	8.0	3.9	5.1Y	(7.0)	6.4Y
5	4.5	3.6	3.9	2.9Y	2.6	3.5	4.5	4.9	6.3	6.5	4.7Y	4.9	7.5Y	5.0Y	4.0Y	4.0	4.5	11.5	9.0Y	4.1	5.0	2.0	4.5	3.0Y
6	2.5	2.0	2.5Y	(2.5)	7.5Y	3.9Y	5.0	6.0	6.4	8.7	7.6	6.7	6.7F	4.3Y	3.9Y	4.0Y	4.0Y	5	4.0	2.5Y	2.4	2.5	3.2F	2.5Y
7	E	2.7	3.5Y	3.0F	(5.0)	4.5Y	3.5F	4.5	4.9	4.5Y	5	5	5	5	5	4.0Y	4.6Y	6.9F	5.6F	3.8	5.7Y	8.6	7.0Y	3.7
8	4.4	8.0F	7.2F	8.0F	8.8	9.2F	7.2F	7.5	5.4	5.7	5.9	7.2Y	4.4F	6.2	5	5.2	5	4.3	4.5Y	4.3	3.9	3.7Y	9.5F	3.0F
9	3.9F	3.5Y	3.5Y	7.0Y	2.5Y	3.5Y	6.0Y	4.9Y	6.5	5.0Y	6.4Y	6.2Y	6.5	5.3Y	7.3Y	8.0Y	6.2	5.9	9.5	8.0	7.7F	4.7F	7.5F	6.9
10	4.5F	5.5F	3.6F	5.5F	4.2F	3.1F	5.5	5.3F	4.7F	5	5.0Y	5	4.7	5.9	5.9	6.0	5.7Y	6.4	4.7F	4.0F	4.8	7.5	5.9Y	3.0
11	2.4Y	2.5F	4.2Y	C	C	C	6.5	7.5	7.5	12.5F	8.0F	5	4.9	8.1	6.2Y	4.3Y	5.3	4.5	7.0	3.0	3.3	3.5	5.0Y	3.5Y
12	3.0	1.9	5.0F	4.0Y	2.6Y	3.6	3.5	5	5.3	6.2	7.0	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	6.0	4.3	4.6	5.8Y	7.0Y	6.0	6.9Y
14	9.0F	9.0Y	6.4	4.2F	2.6Y	3.5F	5.9	7.4	7.2	7.3Y	10.4F	12.5	9.5	7.6	6.4	7.5	9.0Y	8.0F	7.0F	5.0F	3.5	6.0Y	12.0Y	11.0
15	8.0	9.2F	6.9	5.2	3.9	4.0	7.5	11.5	10.6	11.2Y	12.5	12.5	9.3F	12.5F	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	7.5	4.4	5.9F	10.0	10.9	8.0	5.5	7.5	2.7	6.3	5.3	5.5	11.5	7.6
17	6.3F	6.3F	5.5F	3.8F	3.5F	5.2	7.5	11.0	10.0	C	7.5	7.5	7.0	10.3	8.0	6.9	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	5.0	7.3Y	7.5	5.8F	4.6Y	6.3F	12.5	7.8	4.1	7.2	6.0Y	5.3	8.5	6.0
19	6.5	2.7	6.1	4.4	4.1F	4.0Y	4.8	7.2	5.6	5.5	6.5	7.4	10.4Y	7.7Y	4.4	4.1	5	4.1	6.2	5.3	2.7	2.7	2.3	3.2
20	2.4Y	2.4	2.3F	2.6	3.5	4.1	5.0	9.0	9.0	8.0	8.0	3.9	C	7.1F	6.5F	5.8	5.2	4.5	4.2	6.4	7.2	6.0	5.3Y	4.1
21	6.2	3.0Y	7.4F	4.3F	4.3F	2.6	6.7	8.0	7.7	6.0	6.2	7.9	8.0	7.2F	7.5Y	7.1	5.9	4.5	7.6	3.8F	5.0F	-7.0	9.0	9.5
22	5.3F	6.2F	6.0F	4.1	4.0Y	2.9F	5.1	6.0	7.1	7.7	5.6	6.2	7.3	7.5	9.0	6.2	5.8	5.3Y	4.4	6.6	6.0	2.6	4.2	2.7
23	3.0	3.5F	2.3	2.5	2.5	4.0Y	5	5.2	7.2	8.5	10.5Y	9.0	8.0	11.0	7.8	7.0	7.0F	C	3.4	C	6.2	10.3	10.8	10.3F
24	8.9	4.5	4.4	6.5F	4.3	3.5F	6.4	6.2	7.9	8.5	10.5	9.0	C	9.5F	7.0	4.8Y	8.1	4.8	3.9	5.2	6.2	6.0	6.0	7.2Y
25	6.5	C	4.2	6.1	3.9	3.4	6.5Y	5.9	7.3	11.0	6.5	7.7	6.0	6.4	5.4	4.8	4.4	4.1	3.2	4.0	3.0	6.0Y	6.0Y	2.9
26	2.5	2.2	2.4F	2.5F	2.4	4.0	6.1	9.0	8.9	5.6	6.7	8.5	6.0Y	6.0	6.0	4.6	5.3	5.4	5.7	7.2	5.7	7.0	4.3	6.0
27	6.2Y	3.9Y	3.4	2.4	3.4	4.4	6.4	6.7	C	C	C	C	C	C	C	C	C	6.0	6.4	5.9	3.4Y	7.7	4.5Y	6.0Y
28	5.5F	5.7F	6.0F	3.1	2.6	5.3	7.0	6.0	4.6	6.3	8.0	7.2	7.2	8.9	7.7	7.0	8.6	11.0	8.0	6.0	7.0	7.5	9.0	6.0F
29	4.4	6.2F	3.5F	4.0	3.5	4.3	7.0	8.8	10.5	9.2	7.8	8.3	10.1Y	10.2	5.3	4.0Y	4.8	8.5	9.0	11.0Y	6.0	5.6Y	6.3	6.5
30	6.6	3.1Y	7.2	7.0	6.5	4.5	4.6	7.4	6.5	5.8Y	4.6	5.9	5.8Y	7.2F	6.2	8.6	C	9.7	C	7.3	8.7Y	7.7Y	5.7	7.2F
31																								
Mean	5.0	4.3	4.5	4.1	4.0	4.1	5.7	6.8	6.9	7.3	7.2	7.2	6.8	7.5	6.7	6.1	6.2	6.6	5.9	5.5	5.2	5.6	6.3	5.5
Median	4.5	3.6	3.9	4.0	3.7	3.8	5.7	6.2	6.5	6.4	6.5	6.7	6.1	7.2	6.2	5.8	5.6	6.0	5.6	5.4	5.7	5.9	6.0	6.0
Count	27	26	27	26	26	26	26	27	26	26	27	27	25	27	26	26	24	26	26	26	27	27	27	27

W3

Manual Automatic

Sweep 1.0 Mc to 22.0 Mc in ___ min

fEs

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

Lat. 39° 43.5' N
Long. 140° 08.3' E

Akita

IONOSPHERIC DATA

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

A1

Manual Automatic

Sweep 0.55 Mc to 22.0 Mc in 2 min

foF2

Lat. 39° 48.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

135° E Mean Time

Jun. 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	270	250	250	260	250	230	240	320	310	320	300	360	360	350	350	330	320	270	250	240	220 ^A	240	290 ^A	270
2	280	260	250	220	320	320	300	A	A	250	320	[350] ^A	380	A	A	A	A	A	A	A	A	A	A	A
3	270 ^A	300	A	AF	290	320	320	A	A	350	340	370	A	A	380	340	310	310	280	250 ^A	A	A	300 ^F	250 ^F
4	260	270	260 ^F	240 ^F	250	220	350	290	280	[270] ^A	300	A	A	A	360	380	320	320	[300] ^A	270 ^A	370	270	A	A
5	A	270	AF	AF	300 ^F	340	380	A	A	A	A	A	A	390	340	400	A	A	A	A	A	250	A	A
6	270	300	260	[280] ^A	[300] ^A	300	280	A	A	A	A	A	A	A	A	A	300	350	300	270	260	240	230	250
7	260	280	260	250	250	230	240	270	300	270	A	A	A	320 ^A	[340] ^A	350	330	330	A	A	A	280 ^A	A	A
8	A	A	A	A	A	250 ^A	250	A	A	A	A	A	A	A	370	320	A	A	A	A	A	A	AF	A
9	A	250	250	200	230	220	240	A	A	270	A	A	A	A	470	[400] ^A	320	270	250	250	210 ^A	230	250	270
10	AF	AF	A	250	250	250	290	260	A	A	A	A	460	370	350	320	300	340	320	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	A	C	C	C	G	330	290	320	310	290	230	210 ^A	230	280 ^F	[280] ^A
12	270	250	240	230	210	200	260	250 ^A	300	A	A	A	370	380 ^A	[340] ^A	290	300	310	300	240 ^A	200	250	AF	AF
13	250	270	260 ^F	250 ^F	220	300	A	A	300	320	A	A	350	440	330	450	[370] ^A	270	250	240	[240] ^A	250 ^A	A	A
14	270 ^A	[260] ^A	260	210 ^A	220	210 ^A	A	A	A	A	300	A	A	A	A	350	320	320	A	A	A	250	A	A
15	A	A	A	A	A	330	A	A	A	A	A	A	A	A	A	A	360	320	290	240	230 ^A	A	A	A
16	A	250	[250] ^A	250 ^F	220	330	300	A	A	A	A	A	470	[440] ^A	400	A	A	270	280	280	250 ^A	250	A	A
17	230	230 ^F	250 ^F	240	270	[270] ^A	270	250	240	240	A	A	330	[360] ^A	400	340	330	280	280	240	A	A	A	A
18	A	A	A	250	[300] ^A	350	A	A	A	A	A	A	A	A	330	450	400	340	A	A	A	230	240	A
19	A	A	A	A	A	260 ^F	220	A	A	A	280	A	A	A	A	340	300	290	260	[250] ^A	240 ^A	220	270	270 ^{AF}
20	250 ^F	270	A	A	A	A	A	A	A	270	330	A	A	A	A	A	310	270 ^A	A	A	250	260	230	260
21	A	A	250	[240] ^{AF}	220	210	A	A	A	A	A	A	A	A	A	A	300	A	A	A	250	A	A	A
22	A	270	270	[250] ^{AF}	230	220	220	A	A	A	270	A	A	350	[340] ^A	320	280	260	230	220 ^A	190	210	240 ^F	270 ^F
23	250 ^F	260	A	A	A	230 ^A	220	A	A	A	270	A	A	A	A	A	A	A	A	A	210 ^A	A	A	A
24	A	A	250 ^A	230 ^F	230 ^F	240 ^A	270	A	C	C	C	C	C	C	C	C	C	C	270	260 ^A	240 ^A	250 ^F	250 ^F	270 ^F
25	240	210	230 ^F	[230] ^{AF}	230	300 ^L	280	250	A	A	A	A	A	A	340	[300] ^A	270	230 ^A	A	A	A	220 ^F	250 ^F	260
26	270 ^F	270 ^F	250	240 ^{AF}	220	220	[240] ^A	270	270	A	A	A	A	A	A	A	A	330	A	A	A	250	A	A
27	250	290	[260] ^A	240	220	270	A	A	A	A	A	A	A	370	340 ^A	300	A	A	230	220	220	230	A	A
28	A	A	230	260	310	200	[240] ^A	270	A	A	A	A	A	A	A	270	A	A	A	A	A	A	A	M
29	M	M	M	M	M	M	M	M	M	A	A	A	G	G	A	A	A	A	A	A	230	A	A	250
30	230 ^F	270 ^F	270 ^F	250	[270] ^A	290	A	A	250	A	A	A	A	A	A	A	A	A	A	A	A	210 ^A	A	A
31																								
Mean Value	260	270	250	240	250	260	270	270	280	290	300	350	390	380	360	340	320	300	270	240	240	240	260	270
Median Value	260	270	250	240	240	250	270	270	290	270	300	360	380	370	340	330	320	300	280	240	240	240	250	270
Count	16	20	19	21	24	27	19	9	8	9	9	4	8	13	18	19	19	20	18	16	20	18	11	11

R'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. 140° 08.9' E

IONOSPHERIC DATA

Akita

Jun. 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	30	21	25	40	34	29	39	52	47	70	65Y	52	G	G	50	57	52	36	43	80Y	35	36	40	33	
2	34	30	28F	26	30	31	39	70	80	58	46	55	55	65	65	105	82	120	85	65	58	68	67	45	
3	40	45	43	45	43	80	55	75	95Y	52	G	53	56	65	56	55	49	45	35	44	80	49	43	32	
4	31	31	34	33	35	32	36	45	48	72	65	112	72	G	57	42	45	71	78	57	105	115Y	115	69	
5	1.5F	39	65F	43F	41F	36F	52	76	80	70	79	72	60	52	45	60	70	105	106	105	50	104	70	85	
6	65	42	41	51	44	42	45	57	70	81	87	75	125	120	105	89	42	43	30	36	42	31	30	35	
7	35	28	23F	31	30	31	35	42	47	80Y	65	70	92	120	105	57	44	42	58	48	66Y	45	35	57	
8	95	85	96	79	84	71	39	57	68	96	137	72	73	50Y	70	66	107	138	93	75	53	75Y	72	67	
9	43	36	52Y	24	32	G	G	48	60	54	68	67	53	68	53	70	63	43Y	55	32	31	25	43	47	
10	40	50	40	42	42	42	42	67	80	72	71Y	115Y	G	65	121	57	45	37	35	C	C	C	C	C	
11	C	C	C	C	C	C	C	C	C	71	C	C	54	44	42	50	54	44	44	40F	33	29	34	55	
12	55	33	21	29Y	30Y	39	34	45	49	68	87Y	56	57	80Y	117	45	G	36	35	23	43	80	65	65	
13	45	52Y	43	44F	30F	30F	55	54	55	57	68	104	65	58	67	64	56	44	37	42	64	65	69	67	
14	65	65	42	42	29	39	65	80	59	76	92	100	75	108	80	64	40	120	60	57	48	65	65	68	
15	70	50F	47F	43F	53	70Y	80	125	95	120	93	120	155	91	52	71	57	45	30	32	69	79	72	108	
16	71	93Y	57	49	22	30	49	62	65	62	118Y	123	50	54	90	71	60	47	36	50	38	35	71	57	
17	43	44	36	36	32	42	60	80	104	95	77	60	65	110	45	67	53	45	35	35	65	66	75	70	
18	80	66	65	57	74	35F	60	105	134	130	125	160	122	118	45	44	45	71	126	68	55Y	100	68	70	
19	103	73	71	66F	54F	52	65Y	81	121	80	78	102	67	66	65	55	45	44	40	86	105Y	31	38	42	
20	44	53Y	102	65	109Y	6Y	67	84	67	50	46	70	70	80	85	60	43	56	61	66	85	45	35	31	
21	65	70	70	70	34	23Y	47	75	90	105	72	70	140	135	125	160	120Y	78	65	77Y	54Y	58	71Y	80	
22	71	43	40	54	64Y	31	42	68	110	118	64	110	90	55	86	42	45	51	40	41	24	35	42	44	
23	43	52	54	65	60	63	42	50	65	72	65	85	100	80	71	90Y	122	72	105	102Y	76	72	55	78	
24	72	54	51	53	33	40	44	75	C	C	C	C	C	C	C	C	C	49	59	44	46	43	50	33	
25	49	42	42	31	51	31	41	52	78	70	71	71	98	113	70	65	65	71	91	91	71	35	28	42	
26	42	52	42	33	30	31	45	71	65	81	80	90	93	120	80	55	53	70	67	105	63	31	60	43	
27	65	65	55	35	23	36	65	80	80	80	77	113	56	42	65	61	65	60	42	39	32	35Y	67	65	
28	50Y	72	57	35	65	42	75	54	70	66	67	80	105Y	67	117	47	155Y	125	105Y	112	95	114	115	M	
29	M	M	M	M	M	M	M	M	M	66	69	65	43	40	57	58	71Y	92	56	67	42	55	56	77	
30	39	65	40	35F	38	42	60	70	78	140	67	95	105	75	103	75	86	150	85	105	93	43	103	79	
31																									
Mean Value	56	52	51	45	45	43	50	68	74	80	78	86	81	79	75	66	66	69	60	63	59	56	61	59	
Median Value	50	51	43	42	36	38	46	69	70	72	71	78	70	67	70	60	54	54	58	57	55	45	65	61	
Count	28	28	28	28	28	28	28	28	27	29	28	28	29	29	29	29	29	29	30	30	29	29	29	28	

fEs

Sweep 0.85 Mc to 22.0 Mc in Z min

Manual

Automatic

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

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

IONOSPHERIC DATA

135° E Mean Time

foF2

Jun. 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	F	AF	AF	F	4.3F	4.5F	4.6	4.6	5.6	5.6	5.0J	5.3	5.2	5.5	5.5	6.6	(6.5)A	(7.0)A	7.5	8.5	5.6	3.9	A	A	
2	3.8	4.1F	4.1F	3.6F	(3.6)F	3.7H	4.7	5.5	A	A	A	A	4.9	(5.0)A	5.2	6.2	5.8	A	A	7.0	6.8	A	A	A	
3	A	4.2JF	3.6F	3.5F	(3.2)F	3.8	A	A	A	A	A	5.7	6.2	6.2	5.8	5.8	5.6	5.9	6.6	6.1	5.6P	AF	F	F	
4	AF	AF	F	F	2.6F	A	5.6	7.3	5.4	(5.4)A	5.3	A	A	5.0	5.5	5.6	6.4	6.5	7.1	7.2	7.2	6.7	A	A	
5	F	4.5F	4.5F	4.0F	4.1F	4.0	5.7	7.2	A	A	A	A	A	5.2	A	A	5.9J	5.6	6.5	C	C	C	C	C	
6	C	C	C	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	5.9	6.1	5.9	4.7	4.2	
7	4.0	3.8	3.7	3.8J	3.4J	4.0	4.5	4.6	5.2	5.1	(5.3)A	5.5	5.8	A	A	5.0	5.8	6.0	6.1	5.9	5.9	(5.2)A	4.5F	4.6	
8	A	A	A	A	3.0F	3.8	4.9	4.9	5.4	A	A	A	A	A	A	A	5.7	(5.8)A	5.9	6.5	A	A	AF	3.5JF	
9	(4.2)A	5.0F	5.1F	3.6F	(3.6)A	3.5	3.8	4.5	5.7	6.0	5.0J	4.9	(4.9)A	4.9	A	A	A	7.0	7.8P	A	A	5.5	4.2	4.5F	
10	(3.9)F	3.5F	A	F	3.1F	4.0	A	A	5.1	A	A	A	A	A	A	6.9	7.1	A	6.7	7.4	8.0P	A	A	4.1	
11	4.0F	4.0F	3.5FP	3.0F	3.1	3.5	4.7	C	C	A	A	A	A	A	5.5	5.0	4.7	4.9	5.0	5.3	5.5	4.9	4.2F	4.1F	
12	4.1	(4.2)A	4.2FP	3.7F	3.0F	4.0	4.4	5.0	A	A	A	A	A	5.2	5.8	6.5	6.2	5.0	4.9	6.0	6.1P	5.3J	A	A	
13	A	A	3.8	(3.6)A	3.5F	3.7	(4.4)A	5.1	6.2	5.5	5.1	5.0	5.0	4.9P	5.5	5.4	5.3	6.0	5.8	6.0	5.0P	A	A	3.9J	
14	4.0J	(3.9)F	3.8J	(3.4)F	3.0	3.7	A	A	A	A	5.5	(5.2)A	4.8	(5.2)A	5.5	6.0	6.0	6.0	A	A	A	A	A	A	
15	A	A	A	A	3.0	4.5	4.5	A	A	A	A	A	A	A	A	5.1	5.4	5.2	5.2	5.6	5.8	3.2	A	A	
16	A	A	A	2.7F	A	A	4.3	6.0	5.4	B	4.5	A	B	A	5.0J	5.6	5.5	5.7	5.5	5.2P	4.0JF	4.7	4.7	4.7F	
17	4.0F	A	A	F	AF	3.9	4.2	5.3	5.7	6.1	A	A	A	5.0	5.0	5.2	4.8P	5.8	5.7	(5.8)A	6.0	5.0P	A	A	
18	4.5	A	A	3.6F	(3.6)A	3.6	4.5	5.7	5.5	5.9	A	4.8	(4.9)A	5.0	(4.9)A	4.8	(4.8)A	4.7	5.1	(5.8)A	6.5	5.0J	A	A	
19	A	A	AF	3.0F	3.0F	3.9	A	A	A	A	A	A	A	A	5.3	6.0	5.5	5.2	5.7	6.4	6.0	3.7	A	A	
20	A	A	A	A	3.2	3.6	A	A	6.0	(5.4)A	4.8	(4.8)A	4.9	5.0	(4.9)A	4.8	5.5	5.5	5.7	6.4	(6.2)A	6.0	8F	5.4	
21	4.0	3.8	3.9	AF	AF	(3.1)A	4.0	A	A	A	A	A	A	A	A	A	6.0	5.6	4.6	(4.8)A	5.1J	4.7	4.0	3.2FP	
22	A	A	A	A	3.4F	4.1	4.3	A	A	A	A	5.7	A	A	5.6	6.6	7.4	7.4J	7.2	7.0	5.1P	7.0J	4.0F	A	
23	A	A	A	3.6F	3.2J	3.4F	4.0	4.6	A	A	A	A	A	A	A	6.0	6.5	6.5	7.0	6.9	5.8	4.5	4.1F	(4.0)A	
24	3.9	A	A	A	2.9	(3.6)A	4.2	(4.8)A	5.4J	6.5	5.6	(5.3)A	5.0	5.0	5.7	6.5	6.1	6.5	(6.0)P	A	A	4.0J	4.0	3.8	
25	4.2F	3.4JF	3.6FP	2.4FP	2.6	3.6H	4.5	(5.0)A	5.4	A	A	5.7	A	A	5.3	6.2	6.7	7.0	4.5	4.9J	A	AF	A	A	
26	A	3.3	(3.2)A	3.2F	2.6F	4.2	4.3	A	A	A	A	A	A	A	5.6	5.5	5.5	5.7	6.5	6.7	4.0	3.9	3.8	4.0F	
27	3.7F	3.0F	3.3F	3.4F	3.2F	3.5	4.0H	A	A	5.1	A	A	A	A	A	6.5	6.9	6.5	(5.9)A	5.3	(4.8)P	4.5	3.8	A	
28	A	A	A	A	A	3.7H	A	A	6.9	5.7	A	A	A	A	6.4	(6.4)A	6.5	5.5	(5.2)A	5.0	6.0J	6.7	A	A	
29	A	A	(2.8)P	3.3F	3.2JF	3.9	4.7	(4.8)A	4.9	A	A	A	B	B	4.4	4.8	4.5	4.2	(5.0)A	5.8J	C	C	C	C	
30	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	A	A	4.9P	5.8	6.7P	5.9	4.1	(3.6)A	
31																									
Mean Value	4.0	3.9	3.8	3.4	3.2	3.8	4.5	5.2	5.7	5.7	5.1	5.3	5.2	5.3	5.4	5.8	5.8	5.9	5.9	6.2	5.9	4.8	4.2	4.1	
Median Value	4.0	3.9	3.7	3.4	3.2	3.8	4.5	5.1	5.5	5.5	5.1	5.3	5.0	5.0	5.5	5.9	5.8	5.8	5.8	6.0	5.9	4.8	4.1	4.0	
Count	13	13	15	17	24	26	25	15	15	15	11	9	12	1.0	14	19	24	27	26	27	26	23	20	12	14

foF2

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

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

f_pF₂

Jun. 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	F	AF	AF	F	260 ^F	250 ^F	270	280	270	A	U	U	U	U	350	310	A	A	290	250	A	A	A	A	
2	310	310 ^F	(300) ^F	310 ^F	(310) ^F	310 ^H	300	300	A	A	A	A	A	A	U	A	A	A	A	A	290	A	A	A	
3	A	(370) ^F	340 ^F	(270) ^F	(310) ^F	340	A	A	A	A	A	U	340	310	320	330	340	310	230	280	270 ^F	AF	F	F	
4	AF	AF	F	F	310 ^F	A	A	300	280	U	A	U	A	U	U	U	320	340	320	340	280	300	A	A	
5	F	320 ^F	340 ^F	340 ^F	320 ^F	320	A	A	A	A	A	A	A	U	A	A	A	340	320	C	C	C	C	C	
6	C	C	C	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	A	300	300	300	320	
7	320	320	330	(270) ^F	(270) ^F	230	290	290	290	U	A	U	U	A	A	U	320	330	280	A	320	(320) ^A	330 ^F	310	
8	A	A	A	A	(340) ^F	290	270	290	320	A	A	A	A	A	A	A	A	A	A	A	320	A	AF	(320) ^F	
9	(340) ^M	(350) ^F	(270) ^F	200 ^F	(240) ^M	270	250	A	A	260	A	A	A	U	A	A	A	330	300 ^F	A	A	290	310	340 ^F	
10	(330) ^F	340 ^F	A	F	310 ^F	250	A	A	A	A	A	A	A	A	A	310	300	A	310	290	260 ^F	A	A	330 ^A	
11	320 ^F	310 ^F	300 ^F	340 ^F	340 ^F	350	U	C	C	A	A	A	A	A	U	U	U	U	310	290	240	270	360 ^F	370 ^F	
12	350	(320) ^M	300 ^F	300 ^F	250 ^F	230	270	U	A	A	A	A	A	A	U	300	290	310	310	300	270 ^F	(250) ^F	A	A	
13	A	A	300	(310) ^M	320 ^F	260	A	A	270	U	U	U	U	U	350	360	350	280	290	270	320 ^F	A	A	A	
14	(350)	(320) ^M	(300) ^F	(300) ^A	300	250	A	A	A	A	320	A	U	A	350	330	300	300	A	A	A	A	A	A	
15	A	A	A	A	300	A	A	A	A	A	A	A	A	A	A	U	340	300	290	280	240	260	A	A	
16	A	A	A	A	360 ^F	A	A	260	260	B	U	A	B	A	U	A	340	310	280	280 ^F	310 ^F	(330) ^F	330	380 ^F	
17	310 ^F	A	A	F	AF	280	U	A	290	260	A	A	A	U	U	U	U	320	290	(290) ^M	290	330 ^F	A	A	
18	340	A	A	(310) ^F	(310) ^M	310	A	270	320	280	A	A	A	U	A	U	A	350	320	(320) ^M	310	(260) ^F	A	A	
19	A	A	AF	330 ^F	(250) ^F	A	A	A	A	A	A	A	A	A	A	310	A	330	310	270	260	230	A	A	
20	A	A	A	A	270	A	A	A	A	A	A	A	A	A	A	A	320	310	310	310	(280) ^M	250	BF	320	
21	330	(310) ^M	290	AF	AF	A	A	A	A	A	A	A	A	A	A	A	300	270	A	(300) ^F	280	320	320	340 ^F	
22	A	A	A	A	340 ^F	260	250	A	A	A	A	A	A	A	430	(370) ^M	310	(240) ^M	270	260	230 ^F	320 ^F	300 ^F	A	
23	A	A	A	(320) ^F	(300) ^F	250	U	A	A	A	A	A	A	A	A	350	300	330	310	280	280	300	350 ^F	A	
24	A	A	A	A	300	A	A	A	A	390	A	A	A	A	U	A	300	320	300	A	A	(270) ^F	310	350	
25	340 ^F	(320) ^F	250 ^F	(280) ^F	300	300 ^H	U	A	A	A	A	A	A	A	A	A	300	250	280	(270) ^F	A	AF	A	A	
26	A	350	(300) ^M	250 ^F	310 ^F	220	230	A	A	A	A	A	A	A	350	A	350	300	270	240	280	350	360	(330) ^F	
27	300 ^F	310 ^F	330 ^F	310 ^F	300 ^F	280	260 ^H	A	A	U	A	A	A	A	A	330	310	280	A	A	(250) ^F	360	380	A	
28	A	A	A	A	350 ^H	A	A	A	280	A	A	A	A	A	350	A	A	A	A	A	(290) ^F	290	A	A	A
29	A	A	(420) ^F	340 ^F	(280) ^F	A	A	A	A	A	A	A	A	B	B	U	A	A	A	A	C	C	C	C	
30	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	A	A	A	A	330 ^F	330	250 ^A	310	(340) ^M
31																									
Mean Value	330	330	310	300	280	270	280	290	290	300	320		340	330	360	330	320	310	300	290	280	290	330	340	
Median Value	330	320	300	300	280	270	290	280	270	270	320		340	330	350	330	310	310	300	280	280	290	330	340	
Count	12	13	15	17	24	20	9	7	9	4	1		1	2	6	11	17	21	22	19	22	19	12	12	

f_pF₂

Sweep 1/1.5 Mc to 17.2 Mc in 2 min

Manual

Automatic

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Jun. 1954

K'F2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	300 ^F	280 ^F	290 ^F	250 ^F	230 ^F	240	250	270A	270	310A	350	360	370	360	350	310	A	A	240A	230A	A	A	A	A	
2	270	250	250 ^F	290 ^F	270 ^F	230 ^H	300	300	A	A	A	A	460	420A	390	330 ^A	A	A	250 ^A	250A	A	A	A	A	
3	A	310A	300 ^F	260 ^F	300 ^F	250A	A	A	A	A	A	360	340	310	320	330	340	300	250	230	230	290 ^F	330 ^F	310 ^F	
4	250 ^F	300 ^F	300 ^F	230 ^F	280 ^F	A	300	A	270	280	310A	340	A	430	340	370	310	340 ^A	320A	280	250 ^A	250	A	A	
5	310 ^A	270 ^F	240 ^F	280 ^F	280	250	300A	250A	A	A	A	A	A	400	A	A	320A	340	320A	C	C	C	C	C	
6	C	C	C	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	A	250	220	240	270	
7	260	280	270	250	230	220	290	290	290	320	340A	350A	300	A	A	400	320	330	260	300A	280	280 ^A	270	300A	
8	A	A	A	A	320A	250	270	290	320	A	A	A	A	A	A	A	A	A	280 ^A	A	A	A	300 ^F	260	
9	290A	320A	200A	200A	220 ^A	250	240A	390	300A	250	A	A	A	400	A	A	A	310A	290 ^A	A	A	230 ^A	250	270	
10	320A	300	290A	270 ^F	250 ^F	230	A	A	280	A	A	A	A	A	A	310	300	380	300	250	220	A	A	330 ^A	
11	280 ^F	250 ^F	240	280 ^F	250 ^F	250	340	C	C	A	A	A	A	A	310	330	350	320	300A	250 ^A	230	230	310 ^A	300 ^A	
12	320A	290A	260 ^F	250	220	230	280	270	A	A	A	A	A	A	350	300	290	310	250A	250	220 ^A	A	A	A	
13	A	280A	280A	280	280	240	330A	350A	260	300	340	480A	370	440	350 ^H	360	350	280	270	250 ^A	310 ^A	A	A	320A	
14	300	250 ^F	270	250 ^F	240	240	A	A	A	A	320	390A	460	440A	350	330	300	300	A	A	A	A	A	A	
15	A	A	A	A	270	270 ^A	330	A	A	A	A	A	A	A	A	380	340	300	290	250A	220	250 ^A	A	A	
16	A	A	A	300	A	A	370 ^A	260	260	A	L	A	470	440A	400	340A	340	300	270	250A	250	300 ^F	270	330A	
17	250 ^F	A	A	280 ^F	250 ^F	260	400	A	290	260	A	A	A	A	380	380	380	310	270	260A	250 ^A	300A	A	A	
18	300	A	A	260	260A	270A	340A	270	320	280	A	A	A	A	390	440A	420	380A	350	310	A	A	A	A	
19	A	A	AF	280	220 ^F	A	A	A	A	A	A	A	A	A	A	310	300A	330	290	250 ^A	220	220A	A	A	
20	A	A	A	A	270 ^A	A	A	A	A	A	410	380A	360	A	A	450A	320	310	300	270 ^A	260A	250A	330	290 ^A	
21	270	260A	250A	AF	AF	A	320A	A	A	A	A	A	A	A	A	A	A	A	A	A	260 ^A	250A	330	290 ^A	
22	A	A	A	A	270 ^F	260	220	A	A	A	A	A	A	A	A	430	360A	300	270A	250	240A	200	300A	270 ^A	
23	A	A	280	300A	270	250	310	A	A	A	A	A	A	A	A	350	300	300	270	250 ^A	220	260 ^A	300	A	
24	A	A	A	A	270	A	A	A	350	390	A	A	450A	450	380A	300	320A	290	A	A	A	A	A	270	270
25	280 ^F	290 ^F	210A	250 ^F	300	250 ^H	310	A	A	A	A	290	A	A	A	330A	290	240 ^A	240	250A	260A	270	A	A	
26	A	310A	280A	250	300A	210	230	A	A	A	A	A	A	A	350	350A	350	300	250	220	200	270A	300	290 ^F	
27	250 ^F	280	280	230	250	240A	230 ^H	A	A	310	A	A	A	A	A	A	330	290	280	A	A	250A	360A	310	A
28	A	A	A	A	A	280 ^H	A	A	280	260	A	A	A	350	A	A	A	A	A	350A	270A	230	A	A	A
29	A	A	310A	280 ^F	240 ^F	330A	260 ^A	310A	360	A	A	A	B	B	520	400	430	350	310A	270A	C	C	C	C	
30	C	C	C	C	C	C	C	C	C	A	A	A	A	A	480	A	A	A	320	310A	270 ^A	220	260	280A	
31																									
Mean Value	280	280	270	260	260	250	290	290	300	330	370	400	400	480	380	350	330	310	290	260	240	260	290	290	
Median Value	280	280	280	260	270	250	300	290	290	340	360	370	400	400	350	350	320	310	290	250	250	260	300	290	
Count	15	15	18	21	25	22	20	12	13	10	6	8	9	14	15	23	24	24	24	21	22	20	15	14	

K'F2

Sweep 1.0 Mc to 17.2 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

f_oF₁

Jun. 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							3.3L	[3.6]A	4.0	[4.1]A	4.2	4.2	4.2	4.2	4.2	A	A	A						
2							3.6	A	A	A	4.5	A	A	A	A	A	A	A						
3							A	A	A	A	A	A	A	A	4.1	[4.0]A	3.9	3.5	2.9L					
4							A	3.8	[4.0]A	4.3	[4.3]A	4.3	4.3	4.2	4.1	4.0	3.9	A	A					
5							A	A	A	A	A	A	A	A	A	A	A	A	A					
6							C	C	C	C	C	A	A	A	A	A	A	A	A					
7							Q	L	3.8L	A	A	A	4.3	A	A	4.0	3.7	A	A					
8							Q	3.5	A	A	A	A	A	A	A	A	A	A						
9							Q	A	A	A	A	A	4.2	A	A	A	A	A						
10							A	A	A	A	A	A	A	A	A	A	4.0	4.2	3.3					
11							3.5	C	C	A	A	A	A	A	4.0	4.0	4.0	A						
12							Q	3.5L	3.9	A	A	A	A	A	A	A	4.0	3.7	3.0L					
13							A	A	A	4.0	4.3	A	A	4.1	4.1	4.1	3.9	3.5	Q					
14							A	A	A	A	4.1	[4.2]A	4.2	[4.1]A	4.0	4.0	3.8	A	A					
15							A	A	A	A	A	A	4.1	A	A	4.0	3.8	A						
16							A	A	4.0	4.2	4.2	[4.2]A	4.2	[4.1]A	4.0	[3.9]A	3.8	3.5	3.2					
17							Q	L	A	4.1	A	A	4.2	4.1	4.0	A	A	A						
18							A	A	A	4.1	A	A	4.3	4.3	[4.2]A	4.0	A	A	3.2					
19							A	A	A	A	A	A	A	A	A	A	A	3.5	3.2					
20							A	A	A	A	4.3	A	A	A	A	A	3.9	3.5	3.1					
21							A	A	A	A	A	A	A	A	A	A	A	3.5	A					
22							L	Q	A	A	A	A	A	A	A	A	A	A	3.1					
23							3.6	A	A	A	A	A	A	A	A	4.0	3.9	3.5	3.2					
24							A	A	A	A	A	A	A	4.2	A	A	A	A	A					
25							Q	3.3L	A	A	A	A	A	A	A	A	A	A	L					
26							Q	A	A	A	A	A	A	A	A	A	A	A	3.1					
27							Q	A	A	4.1	A	A	A	A	A	A	A	A	A					
28							A	A	A	A	A	A	A	A	A	A	A	A	A					
29							A	A	A	A	A	A	4.1	4.0	A	A	A	A	A					
30							C	C	C	A	A	A	A	4.1	A	A	A	A	A					
31																								
Mean Value							3.5	3.8	4.0	4.1	4.3	4.2	4.2	4.1	4.1	4.0	3.9	3.6	3.1					
Minimum Value							3.5	3.8	4.0	4.1	4.3	4.2	4.2	4.1	4.1	4.0	3.9	3.5	3.2					
Count							7	4	4	7	7	4	9	11	9	10	12	9	10					

f_oF₁

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

K 4

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

R'F1

Jun. 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							240	[250 ^A	260	[240 ^A	230	200	230	200	220	A	A	A							
2							250 ^A	A	A	A	A	A	A	A	A	A	A	A	A						
3							A	A	A	A	A	A	A	A	250	[240 ^A	230	220	260						
4							A	A	A	A	A	220	200	200	220	240	250	A	A						
5							A	A	A	A	A	A	A	A	A	A	A	A	A						
6							C	C	C	C	C	A	A	A	A	A	A	A	A						
7							Q	230	250	A	A	A	A	A	A	200	230	A	A						
8							Q	A	A	A	A	A	A	A	A	A	A	A	A						
9							Q	A	A	A	A	A	A	200	A	A	A	A	A						
10							A	A	A	A	A	A	A	A	A	A	A	A	240						
11							230	C	C	A	A	A	A	A	220	210 ^A	250	A	A						
12							Q	220	240 ^A	A	A	A	A	A	A	A	260	230	230						
13							A	A	A	220	230	A	A	190	220	220 ^A	240	A	Q						
14							A	A	A	A	A	A	A	A	210	240	220	A	A						
15							A	A	A	A	A	A	240	A	A	210	240	A	A						
16							A	A	240	210	200	[220 ^A	230 ^A	A	A	A	230	230 ^A	270 ^A						
17							Q	250 ^A	A	A	A	A	A	210	A	A	A	A	A						
18							A	A	A	200	A	A	200	A	A	220	A	A	250						
19							A	A	A	A	A	A	A	A	A	A	A	A	240						
20							A	A	A	A	A	200 ^A	A	A	A	A	A	A	250						
21							A	A	A	A	A	A	A	A	A	A	A	A	A						
22							250	Q	A	A	A	A	A	A	A	A	A	A	250						
23							240	A	A	A	A	A	A	A	A	220	240	210	260						
24							A	A	A	A	A	A	A	200	A	A	A	A	A						
25							Q	240	A	A	A	A	A	A	A	A	A	A	200						
26							Q	A	A	A	A	A	A	A	A	A	A	A	230						
27							Q	A	A	250 ^A	A	A	A	A	A	A	A	A	A						
28							A	A	A	A	A	A	A	A	A	A	A	A	A						
29							A	A	A	A	A	A	230	220	A	A	A	A	A						
30							C	C	C	A	A	A	A	A	A	A	A	A	A						
31																									
Mean Value							250	240	250	250	220	210	220	200	220	220	240	230	240						
Median Value							250	240	250	220	220	220	230	200	220	220	240	230	240						
Count							1	8	3	2	5	4	3	6	7	4	10	5	11						

K 5

R'F1

Sweep 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

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

IONOSPHERIC DATA

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

Jun. 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							2.0 ^F	2.7	2.9	3.0	3.0	3.0	3.2	3.1	3.1	3.0	2.7	2.3						
2							(2.3) ^F	2.5 ^A	3.0	3.0	3.1	3.2	3.2	3.0	(3.0) ^A	A	A	2.3						
3							2.1	2.7	2.9	3.0	3.2	3.2	3.1	A	A	A	A	2.5	A					
4							2.3 ^F	(2.6) ^A	3.0	3.0	3.0	A	A	A	A	AF	3.0	2.4 ^F	1.9					
5							2.3	2.6	2.9	3.0	3.1	3.2	3.0	A	A	2.9 ^J	2.8	2.4	1.8					
6							C	C	C	C	C	3.4	3.4	3.2	A	A	A	A						
7							1.4	2.3	2.5	3.0	(3.1) ^A	(3.2) ^A	3.3	3.2	3.2	3.0	2.8	2.4	(1.9) ^A					
8							1.8	2.2	2.6	2.8	3.1	3.2	3.2	3.1	3.0	2.9	2.8	A						
9							1.6 ^A	2.4	2.7 ^F	2.9	3.2	3.1	3.2	3.3	3.1	3.0	A	A						
10							2.3	2.6	3.0	3.1	A	A	3.3	3.2	3.1	3.0	2.7	A						
11							(2.4) ^F	C	C	3.0	3.1	3.2	A	A	A	A	A	A						
12							1.6	2.1 ^A	2.7 ^A	3.0	3.2	3.2	3.3	3.3	3.1	3.0	2.8	2.5	1.9					
13							2.2	2.5	2.9	3.2	3.2	3.2	3.3	3.3	A	A	A	2.4	1.9					
14							1.5	2.2	2.5	2.9	3.2	3.3	3.4	3.2	3.0	2.9	2.9	2.5						
15							2.4	2.6	2.9	3.0	3.1	3.3	3.3	3.1	2.8	A	A	A						
16							A	(2.3) ^A	A	A	3.2	3.3	3.3	3.3	3.1	3.0	2.7	2.4	A					
17							1.6	2.2	2.8	(3.0) ^A	(3.1) ^A	3.2	3.3	3.2	3.3	3.1	3.0	2.8	2.5	1.9				
18							2.3	2.5	2.9	3.0	3.1	3.1	3.1	3.1	3.1	3.0	2.8	2.4	A					
19							1.6	2.1	2.6	2.9	3.0	3.1	3.2	3.1	A	A	2.4	A	A					
20							1.6 ^A	(2.1) ^A	2.6	2.9	3.0	A	A	3.4 ^A	3.2	3.0	2.8	2.5	1.8					
21							A	2.3	2.8	3.0	3.1	3.2	3.2	3.2	3.1	2.8	2.6	2.4	A					
22							A	2.3	2.6	2.8	[3.0] ^A	3.3	3.2	3.2	[3.1] ^A	3.0	A	A						
23							2.2 ^A	2.5	2.9	3.1	3.1	3.2	3.2	3.0	[3.0] ^A	3.0	2.8	2.5	1.8					
24							1.4	2.1	2.5	2.9	3.0	A	A	3.2	3.4	3.0	2.8	2.4	2.0					
25							1.6	2.2	2.6	2.8	3.1	3.2	3.3	3.3	3.1	3.0	A	A						
26							2.5	2.5	2.9	3.0	3.1	A	A	A	2.9	A	A	A						
27							2.4	2.5	2.9	3.0	(3.0) ^A	(3.0) ^A	(3.1) ^A	(2.8) ^A	(2.5) ^A	A	A	A						
28							2.3	2.7	(2.8) ^A	3.1	3.2	3.3	3.4	3.3	3.3	3.0	2.7	2.6	1.7					
29							2.0	2.4	(2.5) ^A	(2.9) ^A	(3.0) ^A	3.0	(3.2) ^A	3.3 ^A	3.2	3.0	2.7	A						
30							C	C	C	A	3.0	3.1	3.2	3.2	3.2	3.0	2.9	(2.4) ^A	1.8					
31																								
Mean Value							1.6	2.2	2.6	2.9	3.1	3.1	3.2	3.2	3.1	3.0	2.8	2.4	1.9					
Median Value							1.6	2.3	2.6	2.9	3.0	3.1	3.2	3.2	3.1	3.0	2.8	2.4	1.9					
Count							1.0	2.7	2.7	2.6	2.7	2.5	2.5	2.5	2.3	2.1	1.4	1.8	1.1					

foE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

K 6

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

1'E

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

K 7

Sweep 1.0 Me to 17.0 Me in 2 min Manual Automatic

1'E

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Jun. 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	33	55	47	32	27	28	34	45	46	7.0	5.8	5.9	5.0	4.5	4	5.0	10.0	7.0	6.0	45	35	67	75	5.8	
2	31	26	41	31	32	30F	55	50	8.0	8.2	5.0	5.6	5.9	7.0	4.6	6.5	7.0	6.8	8.5	6.8	75	7.0	9.0	5.9	
3	57	38	7.0	43F	7.0	4.3	10.0	8.6	9.0	8.9	9.5	6.6	6.5	6.5	4.5	7.4	4.5	4.2	4.0	3.0	5.5	3.2	4.3		
4	43	3.9	3.2	3.2	3.2	4.6	5.6	4.5	6.5	6.0	6.9	6.5	5.5	4.4	4.5	4.5	4.4	6.5	6.5	5.6	5.8	6.5	9.0F	6.5	
5	47	4.1	3.2	4.1	3.2	3.2	6.0	7.0	8.5	9.0	8.0	9.7	9.3	6.7	9.4	8.3	6.5	7.0	6.5	C	C	C	C	C	
6	C	C	C	C	C	C	C	C	C	C	C	6.0	6.8	9.0	14.3	10.6	7.2	7.6	6.5	6.9	4.3	3.0	3.0	3.0	3.2
7	2.5	3.0	3.0	3.0	3.0	2.4	3.2	4.5	5.5	4.5	6.7	9.0	6.7	8.3	6.8	6	4.5	6.0	4.5	5.6	6.0	4.0	3.2	6.0	
8	4.5	7.2	7.5	7.0	4.0F	2.7	3.8	4.7	4.8	9.5	8.7	10.0	11.0	10.4	10.3	7.2	7.5	10.0	9.0	7.0	7.0	9.1	7.0	10.0	
9	9.7	5.6	5.5	4.5	4.5	4.0	3.5	4.7	6.2	6.5	5.2	5.6	7.0	6.0	7.5	7.1	7.7	5.5	7.0	8.5	9.0	4.0	3.2	5.5	
10	5.5	4.3	4.6	3.0	2.5	3.0	6.0	6.5	7.1	10.0	10.0	6.5	7.7	7.5	8.6	5.5	5.2	7.1	2.8	3.2	3.0	4.2	7.5	5.8	
11	3.8	3.5	3.0	2.5	3.2	2.6	3.5	C	C	6.5	5.7	10.5	10.5	9.6	5.0	4.2	4.0	5.7	5.4	3.5	2.6	2.2	3.9	3.2	
12	4.5	7.0	4.2	3.8	2.4	2.7	3.1	4.0	5.5	5.6	6.5	8.5	7.3	5.3	5.5	4.6	4	3.8	4.0	3.7	4.0	3.7	5.7	9.0	
13	4.5	6.0	4.6	5.5	8.5F	3.0	5.0	5.9	6.5	5.5	6.5	6.9	7.0	4.7	5.0	5.3	5.2	4.4	4.0	5.7	7.0	6.5	6.0	6.8	
14	5.7	7.3	7.0	6.5	5.6F	3.0	5.2	7.2	7.4	9.5	7.2	7.0	5.7	6.9	6.5	4.5	4.5	7.0	10.0	9.0	5.5F	9.0	6.5	7.0	
15	6.5	6.8	7.0	5.5	5.7	5.7	4.7	6.5	10.2	9.1	11.0	10.5	7.0	9.5	6.1	4.0	4.3	4.5	4.1	3.2	4.0Y	4.2	4.7	9.0Y	
16	7.5	5.9F	5.5	3.2	4.4	6.5	5.6	5.1	4.6	4.5	4	5.9	4	6.8	9.5	7.5	5.8	4.3	5.7	3.2	3.0	3.1	4.2F	5.5	
17	4.5	5.2	5.5F	4.5	4.5	3.9	4.5	6.5	5.5	10.0	7.3	10.0	10.2	10.2	6.5	5.8	5.7	7.0	5.0	5.9	6.5	6.0	7.1	5.0	
18	6.7	7.0	7.0	6.3	4.5F	3.8F	4.8	4.5	5.8	6.2	6.0	5.2	6.5	5.4	6.5	4	9.0	10.0	9.0	10.0	7.0	5.0	5.7	7.2	
19	1.5	10.0	5.3	5.7F	3.5	4.2	5.5	6.0	6.7	7.0	10.3	10.5	10.0	10.6	6.5	6.1	6.6	3.7	4.0	4.8	4.3	4.4	5.6	4.5	
20	7.0	5.0	6.0	5.2	4.7	5.8	6.0	9.0	6.8	7.0	6.6	10.5	5.5	6.5	6.0	5.5	5.1	4.6	4.0	6.0	8.0	7.0	3.2	4.7	
21	6.7	4.6	6.5	6.9	6.0	5.4	4.5	7.0	6.1	7.2	10.1	10.2	14.3	10.1	9.4	10.0	6.5	4.0	4.6	4.5	6.5	4.5	4.5	7.0	
22	6.5	5.0	5.0	5.0	6.0	3.0	3.6	5.0	5.9	10.0	10.5	7.4	7.3	9.0	7.0	7.0	6.0	6.5	3.5	5.5	4.5	3.5	3.2	5.5	
23	6.5	7.1	5.6	4.2	3.5	3.2	4.5	5.5	6.5	10.5	10.0	8.5	7.2	10.8	9.5	4	4.5	4.5	4.0	5.5	4.5	5.6	5.6	5.3	
24	5.0	6.9	5.6	5.0	4.0	7.0	4.5	5.5	10.0	7.2	7.0	7.0	6.5	5.5	10.0	6.0	7.1	6.5	6.7	9.6	8.7	6.5	5.5	7.0	
25	3.2	3.5	3.2	3.2	3.2	3.0	3.5	7.0	5.7	7.0	7.5	6.8	6.4	7.0	5.5	7.0	7.1	9.0	4.7	8.5	6.5	4.5	9.0	7.0	
26	4.7	4.5	5.5	4.3	4.4	4.5	4.2	6.0	6.5	10.0	7.0	10.0	9.5	7.0	5.4	6.5	5.7	5.0	3.2	2.8	5.5	3.9	3.1	3.5	
27	3.2	3.2	3.1	4.5	4.0	3.0	3.9	6.5	8.5	7.0	10.0	7.5	7.0	5.8	7.0	5.6	6.0	5.5	7.0	5.5	5.6	5.5	6.0	5.0	
28	7.0	7.0	7.0	7.0	5.5	5.8	6.0	9.0	7.0	7.0	10.0	7.5	10.4	7.5	9.0	10.0	6.7	7.0	10.0	9.0	4.2F	5.7	8.5	7.0	
29	4.0	10.0	10.0	5.0F	4.3	4.5	4.6	7.0	5.1	7.2	6.0	6.5	4.1	3.2	4.5	4.5	5.5	5.0	6.2	6.7	C	C	C	C	
30	C	C	C	C	C	C	C	C	C	4.5	10.0	10.2	10.0	7.0	10.5	9.0	7.0	10.0	5.3	6.0	5.5	4.2	4.0	6.0	
31																									
Mean Value	5.5	5.5	5.3	4.6	4.3	4.0	4.8	6.1	6.7	7.5	8.0	7.4	7.7	7.3	7.3	6.5	7.3	6.1	5.7	5.9	5.7	5.1	5.5	6.0	
Minimum Value	5.2	5.4	5.4	4.6	4.0	3.5	4.6	6.0	6.5	7.0	7.2	7.4	7.0	7.0	6.5	5.4	6.6	5.8	5.4	5.6	5.6	4.8	5.6	5.8	
Count	28	28	28	28	28	28	27	27	27	27	24	30	30	30	30	30	30	30	30	29	25	25	25	28	

fEs

Sheep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 8

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.5' E

135° E Mean Time

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

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

K 9

(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

Jun. 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	2.0	1.9	2.0	E	1.4	1.7	2.7	3.6A	3.7	5.2A	3.8	3.8	3.6	3.5	3.5	4.1A	5.5A	(4.0)A	2.5A	2.7A	5.0A	3.5A	A	A
2	1.5	1.4	1.9	(1.8)A	1.6	1.7	(2.7)A	3.7A	A	A	4.0A	(4.2)A	4.4A	(4.2)A	4.0A	5.9A	A	A	A	3.0A	3.5A	A	A	A
3	A	A	2.0	2.8A	(2.6)A	2.3	A	A	A	A	A	4.2A	5.0A	4.3A	3.7	4.5A	3.4	2.5	2.6	2.0	1.8	2.0	1.5	2.0
4	1.5	1.5	1.3	1.2	1.5	A	A	3.7A	5.3A	4.0A	(4.0)A	3.9	3.5	3.5	3.5	3.5	3.4	5.4A	5.5A	4.0A	5.0A	2.0	A	A
5	A	2.0A	1.0	1.7	1.4	1.5	5.0A	6.4A	A	A	A	A	A	A	4.4A	A	5.3A	4.0A	5.2A	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	1.3	1.6	1.2	1.2	1.5	1.9	2.7	3.4	4.2A	4.0A	(4.5)A	5.0A	4.1A	A	A	A	3.2	3.3	5.0A	3.4A	5.0A	1.5	(1.7)A	1.9
8	A	A	A	A	A	2.2	3.3A	4.0A	4.0A	A	A	A	A	A	A	A	5.0A	(4.2)A	3.5A	5.4A	A	A	2.1A	1.5
9	A	A	A	A	A	2.3	2.9	3.8A	5.0A	4.8A	5.0A	4.5A	(4.2)A	3.8	A	A	A	A	4.8A	6.3A	A	A	2.3A	1.5
10	2.9A	1.7	(1.7)A	1.7	1.2	1.9	A	A	4.5A	A	A	A	A	A	A	4.1A	3.7A	4.0A	2.3	2.5A	2.0	A	A	A
11	2.0	1.7	1.7	1.4	1.5	1.5	2.6	C	C	C	C	C	C	C	C	(3.2)A	3.0	3.8A	(3.2)A	2.5A	1.5	1.5	2.2A	2.3A
12	A	A	1.7	1.3	1.4	1.9	2.5	3.2A	A	A	A	A	A	A	4.8A	4.9A	4.0A	3.4	2.9	2.3	A	A	A	A
13	A	A	2.4A	A	E	2.1	(3.4)A	4.6A	4.9A	3.7A	3.6	4.5A	4.3A	3.7	3.0	(3.1)A	3.2	3.2A	2.9	3.5A	4.0A	A	A	A
14	2.0	1.4	2.5A	1.2	1.7	2.3A	A	A	A	A	4.0A	(4.0)A	4.0A	(3.8)A	3.5	3.5	3.1	4.1A	A	A	A	A	A	A
15	A	A	A	A	1.5	4.0A	4.0A	A	A	A	A	A	3.5	A	A	3.4A	3.0	3.4A	3.2A	2.4A	1.9	2.5A	A	A
16	A	A	A	1.4	A	A	3.9A	3.7A	3.5	3.5A	3.6	(3.8)A	4.0A	(4.0)A	3.9A	5.0A	3.3	(3.2)A	3.0A	2.6A	1.8	2.0A	1.9	(1.7)A
17	1.5	A	A	1.4	1.4	1.8	3.2A	5.0A	3.8A	4.0A	A	A	4.0A	3.5	3.8A	4.0A	4.7A	4.0A	3.0A	(3.1)A	3.2A	3.5A	A	A
18	1.6	A	A	2.3A	(2.4)A	2.6A	4.0A	3.8A	4.2A	3.5	(4.0)A	4.5A	3.7	4.0	(3.8)A	3.5	(3.5)A	3.5A	2.8	(4.1)A	5.4A	3.5A	A	A
19	A	A	AF	1.3	(2.4)A	3.5A	A	A	A	A	A	A	A	A	4.9A	4.0A	5.0A	3.2A	2.5	2.4A	1.9	2.7A	A	A
20	A	A	A	A	2.5A	3.5A	A	A	5.5A	(4.8)A	4.0A	(4.1)A	4.2A	4.6A	(4.6)A	4.5A	3.6A	3.2A	2.6	4.4A	(4.7)A	5.0A	1.9	3.6A
21	1.7	3.5A	2.3A	AF	AF	2.5A	3.5A	A	A	A	A	A	A	A	A	4.5A	5.0A	3.2A	4.2A	(3.2)A	2.3A	2.5A	3.3A	2.1A
22	A	A	A	A	1.6	1.8	2.7	A	A	A	A	5.3A	A	A	4.6A	6.0A	5.0A	5.0A	5.3A	2.4	3.3A	2.4	2.5A	2.4A
23	A	A	1.8	(1.8)A	1.8	2.4	2.9	A	A	A	A	A	A	A	A	A	3.3	3.3	2.5	2.8	(2.2)A	1.5	3.5A	2.0
24	3.5A	A	A	A	1.8	(2.8)A	3.9A	(4.4)A	5.0A	5.2A	5.4A	(5.0)A	4.7A	3.8	5.4A	4.0A	5.0A	5.0A	5.5A	A	A	4.0A	1.5	1.4
25	1.4	1.9	(1.6)A	1.3	1.7	1.9	2.8	(3.9)A	5.0A	A	A	5.1A	A	A	5.0A	(5.0)A	5.0A	5.5A	2.1	2.5A	(2.2)A	2.0	A	A
26	A	A	A	1.8A	(2.0)A	2.3	3.2	A	A	A	A	A	A	A	4.2A	5.0A	4.0A	4.0A	2.3	2.1	1.5	2.8A	2.0	2.0
27	1.5	1.4	1.5	1.4	1.5	(2.1)A	2.7	A	A	A	A	A	A	A	A	5.0A	4.0A	4.9A	(5.0)A	5.0A	4.0A	(2.8)A	1.5	A
28	A	A	A	A	A	2.5	A	A	5.5A	4.9A	A	A	A	4.8A	(5.4)A	6.0A	4.2A	(4.2)A	4.3A	4.1A	1.5	A	A	A
29	A	A	A	1.5	1.2	(2.8)A	4.3A	(4.4)A	4.5A	A	A	A	3.8	3.6	4.1A	4.0A	4.0A	4.0A	(4.6)A	5.2A	C	C	C	C
30	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
31																								
Mean Value	1.4	1.5	1.5	1.6	1.6	2.3	3.3	4.1	4.6	4.3	4.2	4.4	4.0	4.1	4.2	4.2	4.2	4.0	3.5	3.4	2.8	2.7	2.0	2.2
Minimum Value	1.6	1.7	1.7	1.4	1.5	2.2	3.2	3.8	4.5	4.0	4.0	4.4	4.0	4.0	4.0	4.0	3.8	4.0	3.0	3.2	2.2	2.5	1.9	2.0
Count	13	11	15	14	23	26	21	15	15	12	11	14	15	17	19	24	26	27	29	25	23	21	15	13

f min F

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

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

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

f_{minE}

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

K 11

Sweep 1.0 Mc to 17.2 Mc in 2 min
 Manual Automatic

f_{minE}

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

IONOSPHERIC DATA

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

YPF2

Jun. 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	F	AF	AF	F	70F	50F	70	100	30	A	U	U	U	U	60	80	A	A	60	50	A	A	A	A
2	90	90F	(50)F	90F	[90]F	90H	90	90	A	A	A	A	A	A	U	60	A	A	A	60	A	A	A	A
3	A	(60)F	70F	(70)F	(40)F	60	A	A	A	A	A	U	80	80	50	60	50	90	80	70	70P	AF	F	F
4	AF	AF	F	F	60F	A	A	A	70	U	A	U	A	U	U	100	60	60	60	80	40	60	A	A
5	AF	60F	60F	70F	80F	80	A	A	A	A	A	A	A	U	A	A	A	60	80	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	A	60	90	90	60
7	70	80	70	(90)F	(80)F	60	60	40	50	U	A	A	U	A	A	U	80	60	70	A	80	(60)A	50F	70
8	A	A	A	A	(60)F	60	50	60	70	A	A	A	A	A	A	A	A	A	80	A	A	A	AF	(70)F
9	[70]A	(70)F	(70)F	60F	[70]A	80	110	A	A	70	A	A	A	U	A	A	A	70	60P	A	A	60	90	70F
10	(70)F	60F	A	F	50F	60	A	A	A	A	A	A	A	A	A	70	70	A	50	70	40P	A	A	60A
11	80F	90F	70FP	60F	60	U	U	C	C	A	A	A	A	A	U	U	U	U	60	80	60	70	70F	70F
12	70	(70)A	70FP	60F	80F	50	80	U	A	A	A	A	A	A	A	70	100	50	80	70	60P	(60)J	A	A
13	A	A	70	[60]A	60F	100	A	A	90	U	U	A	U	U	30	50	70	60	70	70	90P	A	A	A
14	(50)J	[50]A	(50)J	[80]A	100	70	A	A	A	A	70	A	U	A	50	60	80	40	A	A	A	A	A	A
15	A	A	A	A	80	A	A	A	A	A	A	A	A	A	A	A	70	60	70	60	60	70	A	A
16	A	A	A	60F	A	A	A	50	60	B	U	A	B	U	U	A	50	60	60	70P	(70)F	70	80F	80F
17	90F	A	A	F	AF	90	U	A	60	40	A	A	A	U	U	U	U	80	80	[60]A	40	70P	A	A
18	60	A	A	(50)F	[50]A	50	A	40	60	50	A	A	U	U	A	90	A	50	50	[70]A	90	(40)J	A	A
19	A	A	A	AF	60F	(70)F	A	A	A	A	A	A	A	A	A	A	A	60	80	80	60	70	A	A
20	A	A	A	A	80	A	A	A	A	A	U	A	A	A	A	A	50	70	90	90	[80]A	60	BF	70
21	70	[60]A	60	AF	AF	A	A	A	A	A	A	A	A	A	A	A	90	50	A	A	(70)J	80	80	60FP
22	A	A	A	A	70F	80	100	A	A	A	A	A	A	A	60	[60]A	60	(70)J	50	40	70P	70	80F	A
23	A	A	(50)F	(60)F	70F	60	U	A	A	A	A	A	A	A	A	60	80	100	90	70	70	50F	50F	A
24	A	A	A	A	100	A	A	A	A	60	A	A	A	U	A	60	40	40	A	A	A	(70)J	70	90
25	70F	(50)F	50FP	(70)F	80	80H	U	A	A	A	A	A	A	A	A	A	60	30	90	(50)J	A	AF	A	A
26	A	50	(50)A	50F	70F	40	70	A	A	A	A	A	A	A	40	A	70	80	60	60	80	90	(70)F	(70)F
27	90F	80F	60F	70F	80F	50	120H	A	A	U	A	A	A	A	A	60	60	50	A	A	(50)P	60	60	A
28	A	A	A	A	A	60H	A	A	60	A	A	A	A	60	A	A	A	A	A	(70)J	50	A	A	A
29	A	A	(100)P	50F	(50)F	A	A	A	A	A	A	A	B	B	A	U	A	A	A	A	A	C	C	C
30	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	A	A	90P	70	60P	90	70	[60]A
31																								
Mean	70	70	60	70	70	70	80	60	60	60	70	—	80	70	50	70	70	60	70	70	60	70	70	70
Median	70	60	60	60	70	60	80	60	60	60	70	—	80	70	50	60	70	60	70	70	60	70	70	70
Value	70	60	60	60	70	60	80	60	60	60	70	—	80	70	50	60	70	60	70	70	60	70	70	70
Count	12	13	15	17	24	20	9	7	9	4	1	—	1	2	6	11	17	21	22	19	22	19	12	12

YPF2

Sweep 1.0 Mc to 17.2 Mc in 2 min
 Manual Automatic

K 12

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

Lat. 31° 12.6' N
Long. 130° 37.7 E

Yamagawa

IONOSPHERIC DATA

foF2

Jun. 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	A	FS	FS	FS	FS	FS	4.6	[5.0] ^A	5.3	A	B	5.1	5.5	6.1	6.9	7.7	8.0	A	A	8.8	5.3 ^S	A	C	C	
2	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	6.5	6.3	6.2	6.1 ^J	7.0	6.9	6.0 ^P	A	A	
3	A	A	A	4.6	3.5	[4.4] ^F	5.2 ^F	A	A	A	A	A	A	A	7.1	7.8	7.8	8.3	6.5	5.8 ^S	5.6	5.6	5.7 ^V	5.2 ^S	
4	F	F	F	4.7 ^F	FS	2.7	4.2	A	A	5.9	A	A	A	5.4	6.5	7.5	7.1	7.5	7.8 ^J	8.2	8.4	7.9	4.8 ^Z	F	
5	A	F	F	F	F	4.3	5.7	6.3	A	A	A	A	A	A	A	A	A	A	7.1	A	A	5.4	A	A	
6	AS	FS	A	F	F	3.3 ^F	3.9	[4.7] ^A	5.5	5.9 ^J	4.7	A	A	A	6.5	6.5	7.4	6.6	5.8	5.8	6.6	5.3	4.4 ^H	5.0	
7	4.6	4.2	F	4.1	F	3.3 ^F	4.4	5.1 ^A	4.5	5.3	5.2	5.6	5.8	5.0	5.1	5.5	7.1	7.8	6.1	5.8	6.1	S	FS	FS	
8	4.9 ^S	A	F	A	A	3.2 ^H	4.3	6.2	4.8	A	A	A	6.0	6.8 ^J	6.7	6.4	7.2	7.2	7.1	7.4	7.9 ^J	FS	FS	A	
9	A	AS	FS	A	A	2.4 ^F	3.7	5.1	A	A	5.4	5.1	A	A	A	A	8.0	8.8	A	A	A	5.2	5.1	4.9 ^F	
10	4.5	FS	FS	M	3.2 ^F	3.1 ^F	4.3	4.9	M	A	A	A	A	A	6.1	7.6	7.1	7.2	7.8 ^P	8.5	6.0	4.2	S	A	
11	FS	FS	3.5 ^F	FS	FS	3.2 ^Z	[4.4] ^A	5.5	5.0	5.5	5.4	5.2 ^J	A	A	A	5.3	5.5	5.2	5.8	6.6	5.9	4.8	4.4	4.4	
12	S	FS	A	A	A	FS	4.3	4.2	5.0	[4.9] ^A	4.8	A	A	A	5.9	6.8	6.0	5.7	5.6	[6.0] ^A	6.5	4.7	S	AS	
13	FS	3.4 ^F	3.3 ^F	2.7 ^S	3.4 ^F	3.6 ^F	3.9	5.6	6.7	5.6	A	A	A	A	6.9	7.9	8.8	7.9	6.2	5.2	5.2	5.7	5.1	A	
14	5.4 ^Z	FS	F	A	A	2.5 ^F	4.6	4.9	5.2	[5.6] ^A	5.9	4.8	5.5	6.1	6.9	7.9	8.8	7.9	6.9	5.2	5.9	5.7	5.1	A	
15	A	A	5.2	F	F	FS	4.4	6.0	5.1	A	A	A	A	5.1	A	A	6.3	[6.8] ^A	7.2	6.5	6.8	A	A	A	
16	A	A	AS	A	AS	4.3	4.6	5.3	5.5	[5.0] ^A	4.5	[4.6] ^A	4.8	A	A	A	A	7.3	6.7	4.9	4.9	5.0	4.6 ^S	S	
17	S	FS	3.5 ^F	3.1 ^S	[3.0] ^F	2.8	4.8	A	C	C	C	C	C	C	C	C	C	C	C	6.1	6.0	5.6	4.2	A	
18	A	A	A	3.3 ^F	3.3 ^S	F	4.3	4.5	5.0	A	A	A	A	A	A	5.3	5.4	5.4	[5.4] ^A	5.4	AS	6.3 ^F	AS	AS	
19	AS	3.4 ^S	FS	FS	F	2.9 ^F	A	A	A	7.6	A	A	A	5.6	5.7	6.1	5.8	[6.2] ^A	6.6	6.4	S	S	S	3.4	3.6 ^S
20	S	S	A	3.1 ^F	F	3.2 ^S	3.7	5.2	6.0	5.3	[5.2] ^A	5.1	A	A	A	5.8	5.9	6.4	6.5	7.0	[6.1] ^A	5.2	3.7	3.6 ^S	
21	F	A	4.6 ^Z	A	A	F	4.0	5.0	A	A	A	A	A	A	5.8	7.2	7.4	6.6	6.3	6.1	6.3	5.1	3.5	A	
22	FS	A	A	A	A	A	3.4	4.5 ^J	A	A	A	A	A	A	A	6.8	8.0	8.4	9.1	8.3	6.7	C	C	C	
23	F	F	FSH	A	A	M	M	M	5.5	[5.5] ^A	5.5	C	C	C	C	C	C	C	C	C	C	C	C	C	
24	C	C	C	C	C	C	C	C	C	C	4.9	A	C	C	C	C	C	C	C	C	C	C	C	C	
25	C	C	C	C	C	C	C	C	C	C	A	4.8	4.9	5.1	[6.0] ^A	7.0	7.3	5.9	5.6	[4.8] ^A	3.9 ^P	3.9	3.8	FS	
26	FS	A	3.3 ^S	3.0 ^F	3.0 ^F	2.4 ^F	4.0	4.9	5.1	A	A	A	A	A	A	6.6	A	A	6.1	A	A	A	FS	A	
27	A	A	A	A	A	A	4.2	4.8	6.8	6.0	A	A	A	A	7.0	7.3	7.9	7.9	5.2	5.3	5.9	6.2 ^H	A	AS	
28	A	A	A	A	A	3.2	4.2	4.8	5.2 ^J	A	A	A	A	A	B	4.8	5.4	5.9	6.0	5.3	5.0	4.9	[4.2] ^A	3.5	
29	A	A	FS	3.3 ^F	F	A	A	5.2	5.2 ^J	A	A	A	A	A	4.9	5.3	[5.2] ^A	5.2	5.6	6.2	6.4	6.7	6.6	6.2	
30	F	F	FH	C	C	C	C	C	C	C	C	C	C	5.1	4.9	5.3									
31																									
Mean	4.9	3.8	3.9	3.5	3.2	3.2	4.3	5.1	5.4	5.7	5.2	5.0	5.4	5.6	6.2	6.6	6.9	6.8	6.4	6.4	6.1	5.4	4.6	4.6	
Median	4.8	3.8	3.5	3.3	3.2	3.2	4.3	5.0	5.2	5.6	5.2	5.1	5.5	5.4	6.4	6.7	7.1	6.6	6.1	6.1	6.0	5.2	4.6	4.9	
Count	4	4	7	9	6	17	22	20	17	12	10	8	6	9	15	22	23	23	25	24	22	20	15	9	

foF2

Sweep 1.0 Mc to 22.0 Mc in 1.0 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

135° E Mean Time

Jun. 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	A 300 ^A	270	290	290	250	240	250	[270] ^A	290	A	B	430	390	370	340	320	290	A	A	240	240 ^A	A	C	C
2	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	310	300	320	260	220 ^A	A	A	A
3	A	A	270	270	310 ^A	270	280	A	A	A	A	A	A	A	340	310	310	260	290	270	250	260	300	290
4	340 ^A	300	280	220	300 ^F	A	A	A	A	280	A	A	A	400	360	320	350	340	330 ^A	280	260	230 ^A	220 ^A	320
5	[320] ^A	330 ^A	280	290 ^F	290 ^F	270	260	240	A	A	A	A	A	A	A	A	A	A	A	A	A	(280) ^A	A	A
6	340 ^A	360 ^F	[330] ^A	300	270 ^F	250	250	A	A	A	A	A	A	A	350	370	320	(300) ^A	300	(350) ^A	250	280	290 ^H	300
7	280	290	250 ^F	220 ^A	300	250	260	250	290	290	360	310	330	460	[440] ^A	410	320	290	300 ^A	(330) ^A	300	240 ^A	240 ^F	260
8	350 ^A	[320] ^A	290	A	A	300 ^H	260 ^A	250 ^A	310 ^A	A	A	A	370	310	330	360	330	300	300	300	250 ^A	240 ^A	300 ^F	260
9	A	AS	250 ^A	A	A	300	300 ^A	320	A	A	350	380	A	A	A	A	330	(360) ^A	A	A	A	270	300	300
10	260	300	230	290	250	250	240	280	M	A	A	A	A	A	410	340	310	350	290	250 ^A	210	280	300	[300] ^A
11	300 ^F	270	250	290	260	270	[280] ^A	290	300	300	370	A	A	A	A	A	360	350	290	260	250	250	290	300
12	340 ^A	340 ^A	A	A	A	280 ^F	250	250 ^A	290	A	A	A	A	A	350	310	310	320	350	[300] ^A	240 ^A	250	280	290
13	320	280 ^F	280	300	290	250	250	310	270	290	A	A	A	A	A	A	330 ^A	[310] ^A	290 ^A	290 ^A	[280] ^A	270 ^A	350	320
14	320 ^A	350 ^A	250 ^F	A	A	300	260	250	290	[300] ^A	300 ^A	450	440	(410) ^A	(390) ^A	340	290	290	280	260	230	280	300	A
15	A	A	270 ^A	230	290	260	240 ^A	270	250	A	A	A	A	A	A	A	A	A	A	A	280	260	300	A
16	A	A	290	[280] ^A	280	240	290	300	290 ^A	[370] ^A	450	[460] ^A	480	A	A	A	A	A	300	290 ^A	250	270	300	390 ^A
17	250	320 ^F	250	260	280 ^F	300	240	A	C	C	C	C	C	C	C	C	C	C	C	290 ^A	260	250	240	A
18	A	A	A	250	290	280	240	220	350	A	A	A	A	A	A	A	360	(350) ^A	340	A	A	AS	230 ^A	AS
19	AS	300 ^A	270	230	250	250	A	A	A	280 ^A	A	A	A	350	340	(350) ^A	330	A	A	A	250	[260] ^A	270	350 ^A
20	310 ^A	320 ^A	[310] ^A	300 ^F	300	270 ^A	[310] ^A	(350) ^A	270	330	[560] ^A	400	A	A	A	A	360 ^A	340	350 ^A	310	290	[270] ^A	250 ^A	300 ^F
21	340 ^A	[290] ^A	240	A	A	280 ^F	320	280	A	A	A	A	A	A	390	340	(300) ^A	300	290	250	270 ^A	200 ^A	300 ^A	[310] ^A
22	320 ^A	310	A	A	A	A	A	A	A	A	A	A	A	A	A	370	320	310	260	240	220 ^A	C	C	C
23	300	260 ^F	330 ^H	A	A	M	M	M	310	[320] ^A	[340] ^A	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	360 ^A	A	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	A	A	(430) ^A	(440) ^A	440	[380] ^A	310	290	290	(280) ^A	[280] ^A	290 ^A	300	340 ^A	300
26	A	A	270	300 ^F	250	260	240 ^A	290	290	A	A	A	A	A	A	A	A	A	A	(400) ^A	A	A	A	390 ^F
27	A	250	290 ^F	290 ^F	A	A	A	A	(270) ^A	A	A	A	A	A	390	(350) ^A	A	A	A	290 ^A	A	A	A	A
28	A	A	A	300 ^A	[300] ^A	300 ^A	240	270	250 ^A	240 ^A	A	A	A	A	(340) ^A	300 ^A	290 ^A	260	270 ^A	300 ^A	250 ^H	A	A	A
29	A	A	A	300	250 ^A	A	A	300	A	A	A	A	A	A	B	450	360	330	280	(300) ^A	250	260	[280] ^A	300
30	290 ^F	310 ^F	250 ^H	C	C	C	C	C	C	C	C	C	C	410	450	360	[350] ^A	340 ^A	330 ^A	310	300 ^A	250	220 ^A	220 ^A
31																								
Mean Value	310	310	280	270	280	270	260	280	290	300	360	410	400	400	380	350	320	310	300	280	260	260	290	300
Median Value	320	300	270	290	280	270	250	280	290	300	360	430	400	400	370	350	320	300	290	270	260	260	300	300
Count	16	19	22	19	18	21	21	18	15	10	8	7	6	8	14	20	22	22	24	23	23	22	20	16

Sweep 1.0... Mc to 22.0... Mc in 1... min Manual Automatic

R'F2

Y2

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

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Jun. 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	7.5	5.9	3.6	4.3	3.1	2.5	3.1	6.0	5.9	6.2	5.2Y	5.6	5.0	5.0Y	6.2	4.9Y	G	15.1	15.2	12.0Y	9.5Y	>70°	C	C
2	C	C	C	C	C	C	C	C	C	8.6	11.8	10.0	6.2	6.2	8.0	6.7	6.1	3.6	4.9	3.6	2.2	5.8	7.3	7.0
3	6.9	6.1	6.3	7.2	6.1	3.7	3.6	8.5	8.9	9.0	10.5	13.2	15.0	12.7	10.5	8.1	6.0	8.7	5.8	5.8	3.5	3.3	5.6	6.9
4	7.2	5.6	5.9	3.5	3.0F	3.4	5.3	7.5	9.8	6.1	14.4	9.8	9.0	6.6	5.0	4.6	3.6	3.6	6.4	4.2	5.1	4.7F	3.2	6.0F
5	9.0	6.1	6.3	2.3	3.1	2.9	3.2	4.9	9.0	10.4	8.7	9.1	11.3	14.2	11.0	13.5	8.8	8.5	5.7	9.5	8.7	7.1	6.0	6.0
6	6.0	5.8	6.4F	3.0	3.4	2.4	3.5	6.6	8.4Y	8.0Y	6.0	6.2	5.8	7.2	6.2	6.1	5.8	6.3	3.8	5.9	3.6	3.7	4.5	3.2
7	3.1	3.7	3.5	3.4F	3.0	2.7	3.2	3.8	4.7	5.9	6.4	5.4	G	5.0Y	5.7	G	5.0	5.1	6.1	5.6	5.6	3.2	9.6	3.8
8	5.9	7.0	5.9	5.1	6.0	6.9	4.9	5.7	5.8	6.8	8.8	12.8	5.1	6.0	6.3	G	G	G	6.1	3.4	9.5	5.9	6.0	5.9
9	12.6	6.2	5.8	8.8	5.0	2.4	3.9	5.5	8.5	5.9	5.1	5.1	9.6	9.4	9.8	8.9	8.7	8.9	13.5	12.9	6.6	6.0	6.2	4.3
10	3.6	6.2	5.8	2.4	2.4	2.4	3.5	4.2	M	5.8	8.8	9.5	9.5	11.7Y	6.2	G	4.1	6.0	3.4	8.5	3.4Y	3.7	2.7	6.2
11	6.0	3.3	2.3	3.0	2.3	3.1	6.6	4.2	5.5	6.1	G	8.6Y	9.2	14.5	13.5	6.1	G	G	4.0	3.2	5.8	3.4	3.0	3.5
12	3.7	5.8	8.9	8.7Y	6.2	3.0	5.8	3.6	4.5	7.0	5.9	6.3	8.5	10.2	9.2	5.8	5.8	4.4	4.8	9.0	6.0	5.7	3.5	6.3
13	9.0Y	6.1	3.6	3.2	5.9	2.4F	3.3	5.1	5.1	6.3	8.7	8.7	7.0	9.7	9.5	7.7	8.6	9.0	5.9	5.1	6.5	4.5	5.9	3.7
14	5.9Y	6.2	5.9	8.4Y	6.2	2.4	3.8	3.7	6.0	8.5	8.4	6.2	4.9	7.0	8.6	G	4.2Y	4.2Y	3.4	G	8.6	6.9	5.8	8.1
15	8.8	6.6F	8.5Y	5.7F	3.6	4.0	3.5	5.1	4.6	8.8	9.1	6.1	12.8	6.9	8.4	8.2	7.1	12.2	5.8	7.0	8.8	5.9	6.7	6.2
16	5.8	6.1	8.8Y	6.1	5.7	5.7Y	5.8	3.5	8.5	8.2	4.9	6.7	G	7.0	7.0	6.5	10.9	7.2	7.2	3.8	4.3	5.8	5.9	5.8
17	7.4	3.7	3.2	5.1Y	2.7	3.6	3.7	12.8	C	C	C	C	C	C	C	C	C	C	C	4.9	3.8	5.9	3.4	5.9
18	7.1	6.1	6.1	3.4	8.9	5.0F	4.9Y	5.9	5.1	11.7	6.5	8.6	9.8	9.6	10.7	4.9	6.5	8.7	8.7	13.7	13.5	8.7Y	6.9	11.5Y
19	9.1	5.8	8.5	3.5	2.3	3.2	5.8	9.0	9.0	11.5	9.9	8.5	7.1	5.8	8.3Y	9.0	8.8	8.2	9.2	5.8	4.8	3.5	5.8	3.6
20	5.9	5.9	6.5	5.8Y	5.8	3.5	4.2	6.4	5.1	4.7	6.5	6.4	11.5	12.8	6.8	6.4	6.1	6.1	6.0	8.5	9.0	5.8	3.4S	3.4S
21	3.2	6.0	3.5	5.9	5.3F	5.9F	3.5	5.0	8.2	8.8	6.3	8.2	8.8	9.1	7.3	4.7	6.6	4.4	5.2	3.9	4.4	2.3	3.0	5.9
22	3.5	3.1	4.5	5.6	5.9	5.9Y	3.3	5.2	7.2	7.0	6.7	10.5	13.0	12.1	12.0	4.7	5.6	4.3	4.0	3.0	3.2	2.6	3.8	2.9
23	2.4	2.4F	3.5	3.7	6.2	M	M	M	5.8	8.2	6.1	5.0	5.7	G	G	G	5.8	3.4	3.7	5.2	3.4S	2.7S	5.9	5.9Y
24	6.0	5.2	5.0	6.0F	3.8	3.2	5.7	13.7	12.7	13.5	13.5	9.2	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	9.3	8.5	8.5	5.9	6.3	13.9	8.7	5.8	5.2	11.5	6.0	3.6	2.4	4.1	5.9
26	5.9	5.9	6.5	3.3	3.0	2.8	3.6	5.8	9.0	11.7	14.0	13.1	12.5	15.2	7.2	7.2	15.0	9.3	7.2	10.5	8.8	5.9	5.9	6.1
27	6.5	5.7	3.6	5.0	9.5Y	11.2	9.5	7.2	9.2	8.6	6.1	8.5	12.0Y	8.6	8.7	9.0	8.5	6.5	6.5	8.7	9.0F	7.0	8.6	7.1
28	6.0	8.6	8.8	6.3	9.0	6.0	5.4	4.2	5.9	6.6	9.1	9.0	13.2	15.5	8.5	8.5	6.9	8.5Y	5.4	3.6	6.0	9.1	8.5	5.9
29	9.5F	6.4	3.5	5.9	4.9	9.0	6.9	5.6	6.5	8.7	8.2Y	8.8	7.0	5.8	4.7	4.6Y	G	G	8.5Y	5.6	3.1	4.7Y	5.9	5.8
30	5.6Y	5.6Y	3.5	C	C	C	C	C	5.9	9.0	8.2Y	C	C	6.4	7.0	8.5Y	10.1	8.1	6.7	6.1	6.9	5.8	5.9	5.9
31																								
Mean Value	6.4	5.7	5.5	5.0	4.9	4.2	4.6	6.1	7.1	8.2	8.3	8.3	9.0	9.1	8.4	7.1	7.1	7.0	6.6	6.6	6.1	5.1	5.5	5.7
Median Value	6.0	5.9	5.8	5.1	5.0	3.3	3.8	5.6	6.2	8.2	8.2	8.6	8.8	7.9	8.2	6.2	6.0	6.2	6.0	5.8	5.8	5.8	5.9	5.9
Count	28	28	28	27	27	26	26	26	26	29	29	28	27	28	28	28	28	28	28	28	29	29	28	28

fEs

Sweep 1.0 Mc to 22.0 Mc in ___ min

Manual

Automatic

Y3

IONOSPHERIC DATA IN JAPAN FOR JUNE 1954

電波觀測報告 第6卷 第6号

1954年7月25日 印刷

1954年7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