

CRWO—F 38

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

IONOSPHERIC DATA IN JAPAN

FOR FEBRUARY 1952

Vol. 4 No. 2

Issued in March 1952

PREPARED BY THE CENTRAL RADIO WAVE OBSERVATORY
THE RADIO REGULATORY COMMISSION

KOKUBUNJI, TOKYO, JAPAN

CRWO—F 38

THE CENTRAL RADIO WAVE OBSERVATORY
THE RADIO REGULATORY COMMISSION

KOKUBUNJI, TOKYO, JAPAN

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PREFACE

The radio administration in Japan has hitherto been carried out by the Radio Regulatory Agency. With the reorganization of part of the government offices effective on June 1, 1950, the Radio Regulatory Commission was established and the work of researches on radio propagation has become to fall under the charge of the radio wave observatories, auxiliary organs of the Radio Regulatory Commission.

The radio wave observatories are composed of the Central Radio Wave Observatory located at Kokubunji, Tokyo, and five local radio wave observatories established at Wakkanai, Akita, Hiraiso, Inubo and Yamagawa respectively.

The Central Radio Wave Observatory has the following four 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;

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, and physical basic studies of wave propagation in general; and

Administrative Section which shall conduct the general affairs of the observatory.

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 Radio Regulatory Agency 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.

Uyeda Hiroyuki
Chief, Central Radio Wave Observatory,
Radio Regulatory Commission

March 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° 08.2' 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 Information" of "RESOLUTION OF THE IX GENERAL ASSEMBLY OF URSI SEPTEMBER 1950" (CRWO-F25) 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.

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 23.8' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

foF2

Feb. 1952

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	3.3	3.0	3.0	2.7 ^F	3.5 ^{F2}	3.4 ^{PT}	2.6	C	C	C	C	C	C	C	C	C	6.2	5.1	3.2	3.1	3.2	3.0	2.8	3.2	
2	2.8	2.9 ^T	(2.8) ^S	2.6	2.2	2.4	2.3	B	A	6.6	6.8	9.0	9.0	8.5	8.0	7.5	6.6	3.8	2.8	2.6	2.6	2.8	3.1	2.9	
3	3.3	3.1 ^F	3.1	2.6	3.6	3.0 ^F	2.8	3.8	6.1	5.5	6.9	8.1	B	6.6	6.6	6.6	6.3	4.2	3.5 ^T	A	2.8 ^F	2.9 ^F	3.0 ^F	3.2 ^F	
4	4.2 ^F	(4.2) ^S	4.2	4.1 ^F	3.8 ^{F2}	3.2 ^{F2}	4.3	3.2 ^{F2}	5.2	6.4	7.4	7.5	C	C	C	5.5	5.5	4.4	4.0 ^H	3.1	2.5	2.6	2.9 ^F	(3.5) ^F	
5	3.3 ^F	2.6	2.8	2.5	2.4	2.4	4.6	C	C	C	C	C	C	C	C	C	5.3	4.6	3.6	3.3	2.6	2.5	A	A	
6	A	3.3 ^F	3.3	3.2	3.2	2.6 ^F	4.2	2.6 ^F	7.0	6.2	B	6.0	8.0	7.2	6.7	7.0	6.1	5.2	5.6	5.0	3.4	2.9	A	2.9	
7	3.0	4.0	2.8	A	S	2.1	2.2	3.9	5.1	6.3	8.7	8.5	7.9	8.0	8.6	9.0	8.5	6.5	5.2	5.3 ^F	3.7 ^F	4.8 ^F	5.1 ^F	5.1	
8	5.0	3.6	4.5	4.3	4.0	5.0	5.1 ^F	5.5	C	C	C	C	C	C	C	C	C	6.3	7.0	(5.6) ^P	4.3 ^F	4.3 ^F	SF	SF	
9	C	4.4 ^T	4.4 ^T	3.8 ^F	4.0 ^T	C	C	4.5	6.5	8.4	8.7	8.2	8.6 ^H	8.1 ^H	8.7	C	C	C	C	C	C	C	C	2.8	(3.8) ^S
10	2.8	3.1	A	3.6 ^T	4.0 ^T	2.5 ^H	2.2	4.5	6.0	8.4 ^P	8.3	9.1	8.7	8.4	8.7	7.6	7.6	5.7	5.5	4.6 ^F	4.0 ^F	3.6 ^F	(3.5) ^F	4.3 ^F	
11	3.7 ^T	3.7 ^T	4.1 ^T	SF	4.4	5.2	2.6	5.4	(6.3) ^F	7.2	9.1	9.1	8.8	8.4	8.7	7.6	7.6	5.7	5.5	C	C	C	C	3.8	
12	4.0 ^F	3.0 ^F	3.4 ^F	3.3 ^{F2}	4.7 ^F	3.6 ^{FH}	3.5 ^F	4.6	C	8.3	8.4	(8.8) ^S	(9.6) ^S	8.3 ^P	7.3	6.5	5.6	4.5	S	C	A	3.3	3.4 ^F	3.3 ^F	
13	3.3 ^T	(3.0) ^F	C	C	C	C	C	C	C	C	9.2	(9.2) ^C	9.1	8.0	C	C	C	C	5.8	4.0	S	4.3	4.1	4.6	
14	3.3	3.2	3.1	3.4 ^T	3.4	2.3	A	4.9	C	C	C	C	C	C	C	C	C	5.8	4.0	S	S	4.3	4.1	4.6	
15	S	4.4	4.3	S	5.0 ^T	4.0 ^T	4.3	4.7	6.7	6.1	C	C	C	C	C	C	C	5.6	4.3	4.0	2.5	2.6	3.1	3.2 ^F	
16	3.6	3.6	3.5 ^T	3.8	3.6 ^T	2.9	3.2	5.3	6.8	(7.2) ^F	7.7	8.4	8.5	8.5 ^T	8.2	8.1	7.4	5.7	5.0	4.9	S	5.2	5.3	5.0	
17	5.0	4.7	C	C	2.5	3.8	4.0	5.8	S	6.9	8.5	8.4	8.4	C	8.3	7.6	6.7	(5.4) ^C	4.1	S	S	4.8	4.8	4.0	
18	4.1 ^T	4.3 ^T	4.2	4.1	4.2	4.0	(4.7) ^P	6.3	7.3	C	C	C	C	C	C	7.4	6.7	6.5	6.0	S	S	5.2	5.3	5.0	
19	2.8	2.7	(3.0) ^S	3.4 ^S	3.8	3.1	2.7	5.0	C	C	C	C	C	C	C	8.3	8.3	6.4	6.1	4.5	4.1	4.1 ^T	C	C	
20	C	C	C	C	C	C	C	C	C	9.5 ^P	8.0	8.0	7.9	8.3	8.3	8.2	8.1	6.3	5.9	3.5	3.3	3.7	3.7 ^T	3.8	
21	(3.6) ^P	4.1 ^T	4.1 ^T	4.0	4.1	3.0 ^F	3.1	5.1	7.3	7.8	8.0	8.8	8.6	9.2	6.4	8.2	6.3	5.0	3.4	3.5 ^P	S	2.9	2.6	3.0 ^S	
22	3.1	3.1	3.2	2.9	2.8	2.8	3.5	5.8	C	C	C	C	6.4	C	C	C	5.2	4.7	4.3	3.3 ^S	3.1 ^S	3.3 ^T	C	C	
23	C	C	C	3.5	3.1 ^F	3.1 ^T	(3.8) ^P	6.4 ^P	(7.8) ^{PT}	8.2	7.7	8.0	S	7.8	7.8	7.2	6.7	(6.8) ^P	3.8	4.0	3.7	(3.0) ^S	(3.0) ^S	(3.0) ^S	
24	(3.5) ^S	4.0	4.0	(4.0) ^S	4.0	S	S	6.5	7.8	7.6	8.5	9.0	9.0	9.1	9.3	8.8	8.8	6.4	4.0	2.9 ^K	S ^K	4.4 ^T	4.0 ^T	3.8 ^T	
25	2.5 ^K	2.6 ^K	2.1 ^K	2.3 ^K	2.4 ^K	2.4 ^K	3.2	6.3	8.7	6.8	9.0	(9.0) ^B	8.5	8.5	7.6	7.1	C	C	4.6	4.1	3.3 ^T	3.2	3.8 ^T	3.5	
26	3.6 ^T	3.4 ^T	3.7 ^F	4.6	3.9	2.6	4.3	C	C	C	C	C	C	C	C	7.1	7.7	6.4	(5.3) ^F	4.3	2.8 ^S	(3.0) ^S	3.7 ^F	3.4 ^F	
27	2.9	3.0	(3.4) ^S	3.3	3.2	2.9	3.8 ^T	5.5	7.7	7.8	7.0	(8.9) ^S	7.3	8.2	8.2	7.2	8.1	7.1	6.0	6.0	S	3.7	3.7 ^T	3.8	
28	3.3 ^H	4.0 ^F	3.6 ^T	4.0 ^T	3.5 ^T	3.2	4.3	5.5	C	C	C	C	C	C	C	C	C	7.0	C	C	C	C	C	2.6	
29	3.0	(3.0) ^S	3.0	S	2.7	2.7	2.7	5.0 ^K	C ^K	B ^H	4.3 ^K	4.8 ^K	4.9 ^K	5.6 ^K	5.6 ^K	5.6 ^K	5.4 ^K	5.5 ^K	5.4	A	4.1	S	SF	3.9	
30																									
31																									
Mean Value	3.5	3.5	3.5	3.5	3.5	3.2	3.3	5.1	6.8	7.3	7.9	8.2	8.3	7.9	7.7	7.4	6.7	5.5	4.7	4.1	3.4	3.5	3.6	3.6	
Median Value	3.3	3.3	3.4	3.4	3.6	3.0	3.2	5.0	6.8	7.2	8.2	8.4	8.6	8.0	7.9	7.3	6.6	5.6	4.3	4.0	3.3	3.2	3.6	3.4	
Count	24	27	24	22	26	25	24	24	15	18	18	19	18	18	18	18	23	26	25	20	20	24	22	25	

Sweep 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

W 1

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 46° 28.6' N
Long. 141° 41.1' E

IONOSPHERIC DATA

Wakanai

Feb. 1952

f_pF₂

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	440	400	340	430 ^F	(350) ^F	(370) ^F	420	C	C	C	C	C	C	C	C	C	270	270	340	350	400	460	430	360	
2	360	(340) ^F	(350) ^F	340	420	410	S	B	A	280	400	290	290	320	320	280	270	290	330	340	340	400	430	390	
3	440	420 ^F	360	370	310	300 ^F	310	340	280	260	290	290	B	280	280	240	300	300	(320) ^F	A	330 ^F	330 ^F	370 ^F	360 ^F	
4	340 ^F	(340) ^F	340	340 ^F	340 ^F	(360) ^F	340 ^F	290	260	320	300	310	C	C	C	300	270	280	360 ^H	300	320	390	440 ^F	(400) ^F	
5	400 ^F	460	380	360	330	350	340	280	C	C	C	C	C	C	C	C	280	290	320	290	350	380	A	A	
6	A	370 ^F	360	350	370 ^S	360 ^F	340 ^F	300 ^S	270	320	B	280	340	310	310	300	280	310	330	310	300	420	A	500	
7	300	300	310	A	S	400	380	340	300	310	310	310	310	320	310	320	310	300	350	(350) ^F	350 ^F	(360) ^F	(410) ^F	420	
8	460	400	390	340	330	350 ^F	(350) ^F	300	C	C	C	C	C	C	C	C	C	330	320	(310) ^F	(360) ^F	(370) ^F	SF	SF	
9	C	(410) ^F	(410) ^F	(360) ^F	(310) ^F	C	C	C	300	290	300	290	320 ^H	340 ^H	300	C	C	C	C	C	C	C	C	C	420
10	420	410	A	(350) ^F	(300) ^F	380 ^H	360	300	310	310 ^P	320	290	290	300	310	300	280	280	(310) ^F	S	300	340	380	(360) ^S	
11	(350) ^F	(360) ^F	(420) ^F	SF	320	310	250	310	(310) ^C	310	310	300	290	300	290	280	290	300	350	310 ^F	(350) ^F	380 ^F	(380) ^F	(360) ^F	
12	410 ^F	360 ^F	400 ^F	350 ^F	(310) ^F	(330) ^F	300 ^F	290	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
13	(390) ^F	(380) ^F	C	C	C	C	C	C	C	320	310	(300) ^S	(290) ^S	310 ^F	300	280	310	340	S	C	C	C	(430) ^F	400	
14	320	360	370	(350) ^F	300	300	A	300	C	C	300	(300) ^C	310	300	C	C	C	260	280	S	A	340	(330) ^F	(350) ^F	
15	S	390	390	S	(320) ^F	(340) ^F	370	290	290	280	C	C	300	C	C	C	270	290	310	320	S	S	370	370	
16	410	360	(390) ^F	380	(370) ^F	340	320	290	290	(300) ^F	300	300	300	290	290	280	290	310	360	S	S	410	350	400	
17	390	390	C	C	320	390	380	330	S	290	310	300	320	(310) ^F	300	300	290	290	370	340	A	400	340	420	
18	(380)	(400) ^F	380	A	400	380	(370) ^F	260	270	C	C	C	C	C	300	290	280	(290) ^C	300	S	(350) ^F	S	360	(340) ^S	
19	330	350	(340) ^F	340 ^S	380	380	330	310	C	C	C	C	C	C	C	C	300	270	300	350	340	(390) ^F	C	C	
20	C	C	C	C	C	C	C	C	C	300 ^P	290	310	300	290	310	300	280	290	350	330	370	360	(370) ^F	400	
21	(410) ^F	(440) ^F	(370) ^F	400	390	350 ^F	410	280	290	280	290	310	290	290	300	330	280	300	310	370 ^F	S	350	370	400 ^S	
22	390	360	350	390	330	350	340	320	C	C	C	C	300	C	300	330	340	310	310	350 ^S	340 ^S	(310) ^F	C	C	
23	C	C	C	350	330 ^F	(310) ^F	(320) ^F	280 ^F	(300) ^S	300	310	330	S	310	310	320	300	(320) ^F	320	350	360	(380) ^S	(360) ^S	(340) ^S	
24	(350) ^S	360	390	(390) ^S	390	S	S	310	320	310	300 ^S	320	370	310	330	290	290	300	350	420 ^K	S ^K	(400) ^K	(390) ^K	(330) ^K	
25	280 ^K	350 ^K	360 ^K	480 ^K	420 ^K	410 ^K	300	300	280	280	330	(300) ^F	310	300	300	290	300	300	340	S	S	350	350 ^F	360 ^F	
26	(420) ^F	(380) ^F	(350) ^F	330	330	440	290	C	C	C	C	C	C	C	C	C	290	C	C	320	310	A	400	(370) ^F	
27	310	350 ^F	(350) ^F	380	420	380	(320) ^F	320	290	290	300	(300) ^C	280	300	300	300	300	290	340	330	S	S	350	360 ^F	
28	450 ^H	(370) ^F	(370) ^F	(380) ^F	(410) ^F	360	320	300	C	C	C	C	C	C	C	C	330	330	C	C	C	C	C	310	
29	360	(340) ^S	360	S	340	340	340	420 ^K	C ^K	B ^K	U ^K	U ^K	360 ^K	330 ^K	300 ^K	290 ^K	280 ^K	300 ^K	280	A	330	S	SF	400 ^F	
30																									
31																									
Mean Value	380	380	370	370	350	360	340	300	290	300	310	300	310	310	300	300	290	300	330	330	340	380	380	390	
Median Value	390	370	360	360	340	360	340	300	290	300	300	300	300	310	300	300	280	300	320	330	350	380	370	390	
Count	24	27	24	21	26	25	23	24	15	18	17	18	18	18	18	18	23	26	25	19	17	24	22	25	

f_pF₂

Manual

Every 1.0 Mc to 1.5 Mc in 0.2 min

Automatic

W 2

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

Feb. 1952

f'F2

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	330	320	300	310	300	300	330	250	C	C	C	C	C	C	C	C	260	260	300	300	380	390	400	300
2	310	290	280	290	400A	350	S	270	A	270	340	280	280	280	290	270	250	250	270	290	300	330	340	320
3	360	330	310	310	250	250	260	280	260	260	290	280	270	280	280	270	260	260	300H	290	290	300	320	310F
4	300	300	300	300	270	290	280.5	270	250	250	250	300	C	C	C	260	250	260	300H	290	300	320	390	320F
5	340F	320	330	300	Z90	290	280	270	C	C	C	C	C	C	C	C	250	270	330	260	A	320	A	A
6	A	350A	310	280	300	270	270	250	250	260	280	270	310	300	310	280	260	260	280	260	260	380A	A	470
7	300A	280	270	A	300	B	(380)B	300	280	280	290	280	290	290	290	280	280	280	290	290	310	300	350	290
8	320	320	320	280	290	300	260	270	C	C	C	C	C	C	C	C	C	290	250	250	280	300	300	300
9	C	330	340	340A	270	210	(Z40)C	280	250	260	280	280H	270H	290	300	280	C	C	C	C	C	C	370S	390S
10	380	390	A	320	300	220H	320	280	280	280	300	280	270	270	300	280	270	270	280	S	300	300	320	A
11	310	300	300	310	250	230	230	280	(Z80)C	270	Z90	290	260	280	270	250	270	260	270	250	290	320	320	300
12	300	300	300	280	270F	200H	280	260	C	C	C	C	C	C	C	C	310	C	C	C	C	C	340	350
13	310	310	C	C	C	C	C	C	C	280	270	280	280	280	280	270	280	280	260	C	A	300A	300	300
14	280	320	320	300F	280	280	A	270	C	C	290	(Z40)C	290	290	C	C	C	250	250	250	S	320	320	350
15	320	320	320	330	280	300	300	250	270	270	C	C	C	C	C	C	260	260	310	290	S	360	320	360
16	320	310	310	300	280	Z70	290	270	210	(Z80)C	290	290	290	300	300	300	280	280	270	280	290	330	330	350S
17	310	310	C	C	320S	330	350	300	270	280	290	290	C	C	C	C	250	250	270	270	290	330	330	(Z20)S
18	350	320	330	360A	350	300	320	250	260	C	C	C	C	C	C	C	290	250	260	280	290	310	C	C
19	320S	330S	(320)S	350	300	310	320S	280	C	C	280	280	270	280	280	280	270	260	250	270	290	320	320	330
20	C	C	C	C	C	C	C	C	C	280	280	270	280	280	280	280	260	260	280	320S	290	310	320	330
21	340	340	300	320	300	300	390	280	250	260	Z80	280	270	270	Z90	280	270	260	280	280	290	310	320	330
22	360	300	310	340	320	300	300	260	C	C	C	C	C	C	C	C	270	270	280	280	290	300	300	C
23	C	C	C	310	300	300	290	260	270	270	270	300	300	300	260	280	280	270	280	280	300	360	350	310
24	(310)S	310	310	310	300	300	320	280	280	300	290	300	300	290	290	270	270	260	270	420S	320K	360K	350K	290K
25	230K	250H	320K	400K	400K	350K	260	280	250A	250A	310	290	280	300	300	280	C	C	290	290	A	320	330	320
26	360	350	300	270	250	250	270	260	C	C	C	C	C	C	C	C	270	260	260	240	300	(300)C	310	310
27	280	300	290	310	320	350	290	260	260	260	270	(Z80)C	280	270	300	280	270	270	300	280	240	300	310	310
28	350H	300	300	320	330	320	300	280	C	C	C	C	C	C	C	C	C	280	C	C	C	C	C	300
29	300	300	300	300	300	300	280	400K	C	B	490K	400K	360K	330K	300K	290K	Z70K	Z70K	250	A	300	300	350F	340F
30																								
31																								
Mean Value	320	320	310	310	300	290	300	280	260	270	300	300	290	290	290	270	270	270	280	290	310	320	330	330
Upper Value	320	310	300	310	300	290	290	270	260	270	290	290	280	280	290	270	270	270	280	290	300	320	330	330
Lower Value	320	310	300	310	300	290	290	270	260	270	290	290	280	280	290	270	270	270	280	290	300	320	330	330
Count	25	27	24	25	27	26	25	27	16	18	19	19	19	18	18	18	24	26	26	22	20	25	24	25

Sweep 1.0 Mc to 15.5 Mc in 2 min Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

IONOSPHERIC DATA

Wakkanai

foF1

Feb. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	C	C	C	C	C	C	C	C	Q							
2								Q	A	Q	4.0	4.2	4.3	4.0	4.0	Q	Q							
3								Q	Q	Q	4.2	4.0	4.0	4.0	L	Q	Q							
4								Q	Q	Q	Q	4.0	C	C	C	Q	Q							
5								Q	C	C	C	C	C	C	C	C	Q							
6								Q	B	Q	A	A	A	A	A	B	Q							
7								Q	Q	Q	Q	A	B	3.8	B	Q	Q							
8								Q	C	C	C	C	C	C	C	C	C							
9								Q	Q	Q	4.1	Q	Q	Q	L	C	C							
10								Q	Q	Q	4.3	4.3	4.3	Q	Q	Q	Q							
11								Q	C	Q	L	4.4	4.0	L	3.8	3.5	Q							
12								Q	C	C	C	C	C	C	C	C	Q							
13								C	C	Q	B	4.4	4.2	3.7	3.7	Q	Q							
14								Q	C	C	4.0	(4.0) ^C	4.0	Q	C	C	C							
15								Q	Q	Q	C	C	4.1 ^J	C	C	C	Q							
16								Q	Q	C	L	4.5	4.8	4.3	4.3	Q	C							
17								Q	Q	Q	Q	B	Q	A	Q	Q	Q							
18								Q	Q	C	C	C	C	C	Q	Q	Q							
19								Q	C	C	C	C	C	C	C	C	4.0							
20								C	C	Q	Q	Q	4.0	Q	Q	Q	Q							
21								Q	Q	Q	L	L	Q	L	Q	Q	Q							
22								Q	C	C	C	C	C	C	C	Q	Q							
23								Q	Q	3.7	L	L	L	L	L	C	Q							
24								Q	Q	L	L	L	L	4.5	L	Q	Q							
25								Q	Q	Q	L	4.2	C	4.3	4.0	3.6	C							
26								Q	Q	C	C	C	C	C	C	C	Q							
27								C	C	Q	Q	C	4.0	Q	4.0 ^J	Q	Q							
28								Q	C	C	C	C	C	C	C	C	C							
29								3.3	C	B	4.0	4.0	4.0	4.0	L	Q	3.0							
30																								
31																								
Mean Value								3.3				4.1	4.2	4.3	4.1	4.0	3.6							
Median Value								3.3			4.0	4.2	4.0	4.0	4.0	4.0	3.6							
Count								1		1	6	10	11	8	6	2	2							

foF1

Sweep 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

Feb. 1952

f'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								Q	C	C	C	C	C	C	C	C	Q							
2								Q	A	Q	250	280 ^B	290	270	270	Q	Q							
3								Q	Q	Q	290 ^B	270 ^B	280 ^B	B	270	Q	Q							
4								Q	Q	Q	Q	260	C	C	C	Q	Q							
5								Q	C	C	C	C	C	C	C	C	Q							
6								Q	B	Q	A	A	A	A	A	B	Q							
7								Q	Q	Q	Q	A	B	270 ^B	B	Q	Q							
8								Q	C	C	C	C	C	C	C	C	C							
9								Q	Q	Q	250	Q	Q	Q	280	C	C							
10								Q	Q	Q	300	280	260	Q	Q	Q	Q							
11								Q	C	Q	270	240	230	230	B	250	Q							
12								Q	C	C	C	C	C	C	C	C	Q							
13								C	C	Q	B	280	270	230	260	Q	Q							
14								Q	C	C	230	[240] ^C	250	Q	C	C	C							
15								Q	Q	Q	C	C	280	C	C	C	Q							
16								Q	Q	Q	280	290	280	270	280	Q	C							
17								Q	Q	Q	Q	B	Q	A	Q	Q	Q							
18								Q	Q	Q	C	C	C	C	Q	Q	Q							
19								Q	C	C	C	C	C	C	C	C	230							
20								C	C	Q	Q	Q	250	Q	Q	Q	Q							
21								Q	Q	Q	260	260	Q	260	Q	Q	Q							
22								Q	C	C	C	C	C	C	C	C	Q							
23								Q	Q	260	230	280	280	260	260	Q	Q							
24								Q	Q	230	230	250	280	250	260	Q	Q							
25								Q	Q	Q	250	B	C	260	280	280	C							
26								Q	Q	C	C	C	C	C	C	C	Q							
27								C	C	Q	Q	C	280	Q	270	Q	Q							
28								Q	C	C	C	C	C	C	C	C	C							
29								270	C	B	310	300	280	300 ^B	280	Q	260							
30																								
31																								
Mean Value								270			250	260	270	270	260	270	270							
Median Value							270				240	260	280	280	260	270	260							
Count							1			2	12	12	13	10	10	2	2							

Swamp 1.0 Mc to 15.5 Mc in 2 min Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

foE

Feb. 1952

Wakkanai

Lat. 45° 28.6' N
Long. 141° 41.1' E

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	C	C	C	C	C	C	C	C	B							
2								A	2.0 ^B	2.2	2.6	2.8	B	B	B	2.4	B							
3								A	2.2	2.6	B	B	B	B	B	2.5	B							
4								B	A	2.6	2.6	B	C	C	C	B	A							
5								B	C	C	C	C	C	C	C	C	B							
6								1.6	B	B	B	B	B	B	B	B	B							
7								1.6	A	2.5	B	A	B	B	B	2.6	2.2							
8								1.6	C	C	C	C	C	C	C	C	1.6							
9								B	2.2	2.8	2.9 ^B	2.9	3.0	3.0	2.7	C	C							
10								2.0	B	2.6	B	3.1	B	3.1	A	2.8	2.0							
11								1.4 ^B	[2.0] ^C	2.5	2.9	3.0	2.9	3.0	3.2	2.6	1.6							
12								B	C	C	C	C	C	C	C	C	B							
13								C	C	2.5	A	3.0	B	3.0	A	S	B							
14								A	C	C	B	C	B	B	C	C	C							
15								1.6	B	B	C	C	B	C	C	C	B							
16								2.1	2.5	C	B	3.0	3.0	B	B	B	C							
17								B	B	B	B	A	B	A	A	B	B							
18								B	B	C	C	C	C	C	B	B	B							
19								B	C	C	C	C	C	C	C	C	A							
20								C	C	2.8	B	3.0	3.1	B	2.9	B	B							
21								1.7	B	2.8	3.2	2.9	3.0	2.9	B	2.6	2.2							
22								B	C	C	C	C	C	C	C	C	B							
23								B	B	A	B	B	3.0	2.9	2.9	2.6	B							
24								B	2.0	2.6	2.6	3.0	B	B	2.8	2.7	2.0							
25								A	A	A	A	3.0	3.0	A	B	2.8	C							
26								A	C	C	C	C	C	C	C	C	B							
27								A	1.8	B	3.2	[3.1] ^C	3.0	3.1	3.0	2.7	2.2							
28								B	C	C	C	C	C	C	C	C	C							
29								B	C	B	B	B	B	B	B	B	B							
30																								
31																								
Mean Value								1.7	2.1	2.6	2.9	3.0	3.0	3.0	2.9	2.6	2.0							
Median Value								1.6	2.0	2.6	2.9	3.0	3.0	3.0	2.9	2.6	2.0							
Count								8	7	11	7	11	8	7	6	10	7							

foE

Sweep 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

W 6

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

h' E

Feb. 1952

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	C	C	C	C	C	C	C	C	B							
2								A	B	110	130B	120	B	110	110	110	110							
3								A	120	150B	B	B	B	B	B	150B	B							
4								B	A	110	120	130	C	C	C	120	A							
5								B	C	C	C	C	C	C	C	C	B							
6								B	150B	B	B	B	B	B	B	B	B							
7								B	A	120	B	B	B	B	B	B	140							
8								120	C	C	C	C	C	C	C	C	130							
9								B	120	120	110	120	120	120	130	120	C							
10								B	120	130	B	160	130	150	A	150	150							
11								B	C	120	110	110	110	120	110	110	120							
12								110	C	C	C	C	C	C	C	C	B							
13								C	C	130B	A	120	B	130	A	S	B							
14								A	C	C	120	C	B	B	C	C	C							
15								160B	B	130	C	C	B	C	C	C	B							
16								B	140B	C	130	130	130	B	B	130	C							
17								B	B	B	B	A	120	A	A	130	120							
18								B	B	C	C	C	C	C	B	B	B							
19								B	C	C	C	C	C	C	C	C	A							
20								C	C	130	130	130	130	B	130	140	B							
21								B	130	130	120	120	120	120	B	120	120							
22								110	C	C	C	C	C	C	C	C	B							
23								B	120	A	B	120	120	130	120	120	B							
24								B	120	120	120	110	B	110	110	110	110							
25								A	A	A	A	120	120	A	110	110	C							
26								A	C	C	C	C	C	C	C	C	120							
27								A	120	110	110	110C	110	110	110	110	120							
28								130	C	C	C	C	C	C	C	C	C							
29								B	C	B	120	120	120	120	120	120	120							
30																								
31																								
Mesh Value								130	130	120	120	120	120	120	120	120	120							
Median Value								120	120	120	120	120	120	120	110	120	120							
Count								5	9	13	11	14	11	10	9	14	11							

Sweep L. O. Mc to 15.5 Mc in 2 min Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

fEs

Feb. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	1.6	2.2	E	E	E	2.4	2.6	C	C	C	C	C	C	C	C	B	E	E	E	E	E	E	E
2	E	E	E	1.7	3.3	E	S	1.5	7.2	2.6	C	G	B	G	G	G	G	E	E	E	E	E	E	E
3	E	E	E	E	E	E	E	3.0	G	G	B	B	B	B	B	B	B	4.0Y	4.7	8.7	E	E	E	E
4	E	1.6	1.6	1.4	E	E	S	B	2.3	G	G	G	C	C	C	C	4.0	3.0	3.0	2.4Y	E	E	E	E
5	E	1.4	1.6	1.6	E	E	E	B	C	C	C	C	C	C	C	C	B	6.0	5.4	1.6	3.0	4.7	4.0	4.0
6	5.5	3.0	3.0	2.4	1.6	1.6	E	G	G	5.4	4.0	4.8	5.8	6.0	5.8	B	B	1.6	E	1.6	3.1	3.2	3.0	3.1
7	3.0	2.7	1.8	3.0	1.6	1.6	E	G	3.0	3.0	B	6.2	B	B	B	G	G	E	1.6	E	E	E	E	E
8	2.2	1.6	1.4	1.2	2.2	1.2	E	G	C	C	C	C	C	C	C	C	C	E	E	E	E	E	E	E
9	C	E	3.0	3.6	3.0	E	C	B	G	G	G	4.0	5.0	G	G	C	C	C	C	C	C	C	S	S
10	E	3.0	4.5	3.0	2.6	E	E	G	G	G	G	G	G	G	3.4	G	G	2.8	2.2	3.0	E	E	E	2.9
11	E	E	E	E	E	E	E	G	C	C	C	C	C	C	C	G	G	E	E	E	E	E	E	E
12	E	E	E	C	C	C	C	C	C	C	C	C	C	C	C	C	B	C	C	C	C	C	C	E
13	E	E	E	C	C	C	C	C	C	G	3.0	G	B	G	3.0	S	B	E	3.8	C	4.0	3.8S	3.0S	3.0S
14	2.6	E	E	E	E	2.6	3.1S	4.0	C	C	G	C	B	B	C	C	C	E	E	2.6	S	2.6	1.6	3.6
15	1.6	E	E	E	3.0	2.6	1.6	G	G	B	C	C	B	B	C	C	B	E	E	E	S	E	E	E
16	E	E	E	E	E	E	E	G	G	C	C	G	G	B	B	C	C	E	E	E	E	E	S	S
17	E	E	C	C	S	E	E	B	B	3.0	B	3.3	5.8	5.8	3.1	G	G	E	E	3.1	4.0	2.7	E	4.4
18	E	E	E	3.9	3.7	E	E	B	B	C	C	C	C	C	B	G	B	C	E	E	E	3.2S	2.6S	S
19	S	S	S	E	E	E	S	B	C	C	C	C	C	C	C	C	3.0	2.4	E	2.6	E	E	C	C
20	C	C	C	C	C	C	C	C	C	G	G	G	G	G	G	G	G	B	E	E	E	1.6	E	E
21	E	1.8	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	E	E	S	S	E	2.6	2.6
22	2.6	2.4	2.4	2.6	2.4	E	1.6	G	C	C	C	C	C	C	C	C	B	E	E	S	S	E	C	C
23	C	C	C	E	E	E	E	B	G	3.8	B	G	G	G	G	G	B	E	E	S	S	E	C	C
24	S	E	E	E	E	E	E	B	G	G	G	G	G	G	G	G	G	E	E	S	S	E	E	E
25	E	E	E	E	E	E	E	2.4	2.9	3.9	3.0	G	G	5.0	G	G	C	C	3.0Y	2.6	2.9	E	E	E
26	E	2.2	E	E	E	E	E	C	C	C	C	C	C	C	C	C	G	3.0	3.0	E	E	C	E	E
27	E	1.6	E	1.2	E	2.6	2.6	3.0	2.6	G	G	C	G	G	G	G	G	E	E	E	E	E	E	E
28	E	E	1.2	E	E	2.6Y	E	G	C	C	C	C	C	C	C	C	C	2.6	C	C	C	C	C	E
29	E	E	E	E	2.6	2.2	2.6	2.8	C	B	G	G	G	G	G	G	G	1.6	2.6	4.0	4.0	E	E	E
30																								
31																								
Mean Value	2.9	2.1	2.3	2.4	2.6	2.1	2.3	2.8	3.6	3.6	3.3	4.6	5.4	5.6	3.8	—	3.5	3.0	3.3	3.3	3.3	3.1	2.8	3.3
Mean Value	E	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E	E
Count	24	26	24	26	26	27	23	18	14	16	15	16	12	13	13	16	13	25	26	22	21	25	24	24

Sweep 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

fEs

W 8

The Central Radio Wave Observatory
Koganei-machi, Kitakama-gun, Tokyo, Japan

Lat. 45° 28.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

(M3000)F2

Feb. 1952

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	25	26	28	25F	(28)F	(27)F	25	C	C	C	C	C	C	C	C	C	3.3	3.2	3.0	2.9	2.7	2.6	2.7	2.8
2	28	(28)T	(28)P	2.9	2.7	2.6	2.6	B	A	3.2	2.6	3.2	3.1	3.0	3.0	3.3	3.3	3.2	2.8	2.9	2.8	2.6	2.5	2.6
3	25	26F	2.7	2.8	3.0	3.0F	3.1	2.8	3.2	3.4	3.3	3.3	B	C	3.1	3.3	3.5	3.0	(29)T	A	2.9F	2.9F	2.9F	2.9F
4	2.9F	(2.8)S	2.8	2.9F	2.8F	(2.7)T	2.9F	3.1	3.3	3.1	3.2	3.0	C	C	C	3.1	3.2	3.1	2.7H	3.1	3.0	2.7	2.4F	(2.7)F
5	2.8F	2.8	2.8	2.8	3.0	2.9	2.8	3.2	C	C	C	C	C	C	C	C	3.2	3.1	3.0	3.3	2.8	2.6	A	A
6	A	2.8F	2.9	2.8	2.8	2.8F	2.9F	3.1	3.4	2.9	B	3.2	3.0	3.1	3.1	3.1	3.2	3.0	2.9	3.1	3.0	2.5	A	2.3
7	3.2	3.2	2.9	A	S	2.8	2.8	2.9	3.1	3.0	3.1	3.0	3.0	3.0	3.1	3.0	3.0	3.1	2.8	(2.8)F	2.8F	(2.6)F	2.5	2.5
8	2.4	2.6	2.6	2.8	2.9	2.8F	(2.8)F	3.0	C	C	C	C	C	C	C	C	C	2.9	3.0	(3.1)F	(2.7)F	(2.7)F	SF	SF
9	C	(2.5)T	(2.6)T	(2.8)F	(3.0)T	C	3.1	3.1	3.1	3.2	3.2	3.3	3.0H	2.9H	3.1	C	C	C	C	C	C	C	2.9	2.7
10	2.7	2.7	A	(2.9)T	(3.1)T	2.8H	2.8	3.2	3.1	3.0P	3.0	3.1	3.1	3.2	3.2	3.1	3.3	3.3	(3.0)T	(3.0)T	2.9	3.0	(2.8)S	(2.8)S
11	(2.8)T	(2.8)T	(2.5)T	SF	3.0	3.1	3.5	3.2	(3.2)C	3.1	3.1	3.1	3.1	3.0	3.3	3.3	3.2	3.1	2.8	3.1F	(2.8)F	2.8F	(2.6)F	(2.7)F
12	2.5F	2.7F	2.7F	2.9F	(3.1)F	(2.9)F	3.1F	3.1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	(2.8)T	2.6
13	(2.6)T	(2.7)P	C	C	C	C	C	C	C	3.0	(3.2)S	(3.2)S	(3.2)S	3.0P	3.0	3.3	3.0	2.8	S	C	A	3.0	(2.9)F	(2.8)F
14	3.0	2.9	2.9	(2.9)F	3.0	3.2	A	3.1	C	C	2.9	(3.0)C	3.0	3.2	C	C	C	3.4	3.3	S	S	2.8	2.8	2.5
15	S	2.6	2.7	S	(3.0)T	(2.8)T	2.6	3.1	3.3	3.2	C	C	C	C	C	C	3.2	3.1	2.7	3.0	2.8	2.8	2.8	2.6P
16	2.6	2.9	(2.7)T	2.7	(2.9)T	2.9	3.0	3.2	3.2	(3.2)C	3.2	3.1	3.2	3.1	3.2	3.3	3.2	2.9	2.8	S	S	2.6	2.8	2.8
17	2.7	2.6	C	C	3.0	2.7	2.8	3.0	3.2	3.1	3.2	3.1	3.2	(3.1)T	3.1	3.2	3.2	3.2	2.8	2.8	2.7	2.6	2.8	2.5
18	(2.7)T	(2.6)T	2.7	2.7	2.6	2.7	(2.8)P	3.3	3.3	C	C	C	C	C	3.2	3.2	3.1	(3.1)C	3.1	S	(2.8)T	S	2.9	(3.0)S
19	3.0	2.9	(3.0)S	3.0S	3.0S	2.7	2.7	3.0	C	C	C	C	C	C	C	C	3.1	3.3	3.2	2.8	2.9	(2.6)T	C	C
20	C	C	C	C	C	C	C	C	C	3.1P	3.2	3.1	3.2	3.1	3.1	3.1	3.2	3.3	2.8	3.0	2.8	2.7	(2.8)T	2.6
21	(2.6)P	(2.4)T	(2.6)T	2.6	2.7	2.9F	2.7	3.3	3.2	3.3	3.1	3.1	3.2	3.1	3.0	2.9	3.3	3.1	3.0	2.7P	S	2.8	2.8	2.7S
22	2.7	2.8	2.9	2.7	3.0	2.8	2.8	2.9	C	C	C	C	3.2	C	C	C	3.0	3.1	3.0	2.9S	2.9S	(3.0)T	C	C
23	C	C	C	2.9	3.0P	(3.1)T	(3.1)P	3.2P	(3.2)P	3.1	3.0	2.9	S	3.1	3.1	3.0	3.1	(3.0)P	3.0	2.9	2.8	(2.8)S	(2.9)S	(3.0)S
24	(2.9)S	2.8	2.6	(2.6)S	2.7	S	S	3.0	3.0	3.2	3.1S	3.0	2.8	3.0	2.9	3.1	3.1	3.1	2.8	S	S	(2.6)K	(2.6)K	(2.9)K
25	3.2K	2.9H	2.8K	2.6K	2.8K	2.6K	3.2	3.1	3.2	3.2	(3.2)B	3.1	3.3	3.2	3.2	3.2	C	C	3.0	3.0	(3.1)T	2.6	(2.8)T	2.9
26	(2.6)F	(2.7)T	(2.8)F	3.0	3.0	2.5	3.2	C	C	C	C	C	C	C	C	C	3.1	3.1	(3.0)F	3.0	2.8S	(2.9)C	2.9F	2.9F
27	3.1	2.9F	(2.9)P	2.7	2.6	2.7	(3.0)T	3.0	3.2	3.1	(3.2)C	3.1	3.1	3.2	3.1	3.1	3.2	3.1	2.9	2.8	S	2.9	(2.9)T	2.8
28	2.6H	(2.7)F	(2.7)F	(2.7)F	2.9	3.0	3.1	C	C	C	C	C	C	C	C	C	C	2.9	C	C	C	C	C	3.1
29	2.8	(3.0)S	2.8	S	3.0	2.9	2.9	2.6K	2.6K	2.6K	2.6K	2.6K	2.9K	3.1K	3.1K	3.2K	3.2K	3.2K	3.1	A	3.0	S	SF	2.6
30																								
31																								
Mean Value	2.8	2.8	2.8	2.8	2.9	2.8	2.9	3.0	3.2	3.1	3.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1	2.9	2.9	2.9	2.7	2.8	2.7
Median Value	2.7	2.8	2.8	2.8	3.0	2.8	2.9	3.1	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.0	3.0	2.8	2.8	2.8	2.7
Count	24	27	24	22	26	25	24	24	15	18	18	19	18	18	18	18	23	26	25	20	20	24	22	25

Sweep 1.0 Me to 15.5 Me in 2 min

Manual Automatic

W 9

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

IONOSPHERIC DATA

Wakkanai

Feb. 1952

fminF

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.2	1.2	1.2	E	E	E	1.4	1.4	C	C	C	C	C	C	C	2.2	2.0	1.8	1.8	2.0	E	1.7	E	
2	1.1	E	E	E	1.5	E	2.0 ^S	2.5	A	2.8	2.8	3.6	3.5	3.4	2.8	2.6	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4
3	E	E	E	E	E	E	E	2.1	2.6	2.6	3.4	3.6	3.6	3.6	3.2	2.7	2.0	2.0 ^A	2.0 ^A	A	1.6	1.6	1.6	1.9F
4	1.2	2.0	2.0	1.4	E	E	2.0 ^S	1.4	2.2	3.0	3.2	3.0	C	C	C	3.0	2.7	2.0 ^A	2.0 ^A	1.8	1.5	1.4	1.4	1.4F
5	E	1.6	1.4	1.1	E	E	1.2	1.8	C	C	C	C	C	C	C	3.3	3.2 ^A	2.8 ^A	1.9	2.0 ^A	1.6	A	A	A
6	A	2.2 ^A	2.0 ^A	E	1.1	E	E	1.9	3.4	3.0	4.0	4.5 ^A	4.8 ^A	5.2 ^A	4.8 ^A	3.6	2.1	1.8	2.0	1.2	2.2 ^A	2.0 ^A	A	2.0 ^A
7	2.4 ^A	1.9	1.7	A	1.7	1.8	1.8	1.9	2.4	3.3	3.2	5.4 ^A	4.0	3.6	3.6	3.2	2.3	1.5	2.2	1.6	1.8	1.4	1.4	1.4
8	1.4	1.2	1.4	E	1.6	2.2	1.4	1.8	C	C	C	C	C	C	C	C	C	1.3	E	1.4	1.2	1.2	1.8	1.8 ^S
9	C	E	E	E	3.0 ^A	E	1.8	1.8	2.2	2.8	3.3	3.6	3.8	3.6	3.2	C	C	C	C	C	C	2.0 ^S	2.0 ^S	2.0 ^S
10	E	1.1	A	2.0 ^A	3.0	E	1.3	2.0	2.6	3.2	3.8	3.8	3.6	3.6	3.6	2.9	2.4	2.0 ^A	1.7	3.8 ^S	1.6	1.6	2.0	A
11	1.1	E	E	E	E	E	1.6	1.9	2.4 ^C	2.8	3.2	3.3	3.2	3.0	3.6	2.7	2.1	1.8	1.4	1.4	1.4	1.4	1.6	1.4
12	E	E	E	E	E	E	1.3	1.8	C	C	C	C	C	C	C	C	1.9	C	C	C	C	C	1.3	1.5
13	1.4	1.1	C	C	C	C	C	C	C	2.9	3.8	3.4	3.6	3.3	3.4	2.5	1.8	2.0	E	C	A	2.2 ^A	E	E
14	E	E	E	E	E	E	A	2.0	C	C	3.4	(3.5) ^C	3.6	3.7	C	C	C	1.6	1.8	2.1 ^A	S	2.0 ^A	2.0	2.0 ^A
15	2.0	1.2	1.2	2.0 ^A	1.8	2.8	1.8	1.9	2.8	3.2	C	C	3.6	C	C	C	3.1	2.2	2.2	2.4	2.2 ^S	1.8	1.4	2.0
16	1.1	1.4	1.2	1.4	1.4	1.4	2.0	2.2	2.6	(3.1) ^C	3.6	3.6	3.6	3.2	3.3	3.3	(2.8) ^C	2.2	2.0	2.2	2.0	2.0	3.0 ^S	2.8 ^S
17	2.0	E	C	C	2.1 ^S	E	2.0	2.0	2.2	3.0	3.5	3.4	3.9	4.8 ^A	3.8	3.3	3.2	2.3	1.5	2.0 ^A	4.2 ^A	4.0 ^S	2.0	2.0 ^A
18	2.0	1.3	1.8	3.4 ^A	1.6	1.2	2.0	2.0	2.3	C	C	C	C	C	3.2	2.8	2.6	(2.2) ^C	1.8	1.9	2.0	2.4 ^A	2.0	(2.0) ^S
19	2.0 ^S	2.0 ^S	S	E	E	E	2.2 ^S	2.0	C	C	C	C	C	C	C	C	3.2	2.2 ^A	2.0	1.9	2.0	2.0	C	C
20	C	C	C	C	C	C	C	C	C	3.0	3.1	3.3	3.3	3.3	3.3	3.2	2.0	1.8	E	E	2.0	2.0	1.5	2.0
21	1.4	E	E	E	E	E	1.4	2.6	3.0	3.3	3.3	3.2	3.3	3.0	3.2	3.2	2.4	1.6	1.7	2.2 ^S	2.2 ^S	1.4	2.2 ^S	1.8
22	1.6	1.4	1.7	1.4	2.0	1.4	1.8	2.8	C	C	C	C	C	C	C	C	2.3	1.8	1.7	2.0 ^S	1.8 ^S	2.0	C	C
23	C	C	C	C	1.6	E	2.0	2.0	3.0	2.6	3.7	3.0	3.0	3.0	3.0	2.6	2.5	2.2	1.8	1.8	1.8	2.0	1.8	1.6
24	(1.6) ^S	1.6	1.6	1.7	E	E	1.7	1.8	3.0	2.6	3.2	3.2	3.4	3.2	2.8	3.2	2.4	1.8	1.8	2.2 ^S	2.2 ^S	1.4	1.4	2.0
25	2.0	1.1	E	E	E	E	1.5	2.2	A	A	3.6	3.8	(3.4) ^C	3.0	3.7	3.0	C	C	2.2	1.9	3.0 ^A	1.4	2.0	1.3
26	E	1.2	E	E	E	E	2.1	2.4	C	C	C	C	C	C	C	C	2.2	2.0 ^A	2.0 ^A	1.4	1.4	(1.5) ^C	1.4	1.4
27	1.4	1.2	E	E	E	1.4	1.9	1.6	2.7	2.8	3.6	(3.4) ^C	3.3	3.7	3.3	3.0	2.4	1.9	1.4	1.4	1.4	2.0	2.0	1.6
28	E	E	E	E	E	1.4	2.0	1.8	C	C	C	C	C	C	C	C	C	2.2 ^A	C	C	C	C	C	2.0
29	E	E	E	E	1.4	E	1.2	2.3	C	B	3.6	3.6	3.6	3.5	3.1	3.4	2.4	1.9	2.0	A	2.2 ^A	1.3	1.3F	1.4F
30																								
31																								
Mean Value	1.6	1.5	1.6	1.9	1.7	1.7	1.7	2.0	2.6	2.9	3.4	3.6	3.6	3.5	3.4	3.0	2.4	2.0	1.9	1.9	2.0	1.8	1.7	1.8
Median Value	1.2	1.2	E	E	E	E	1.8	2.0	2.6	3.0	3.4	3.5	3.6	3.4	3.3	3.0	2.4	2.0	1.8	1.9	2.0	1.6	1.6	1.8
Count	25	27	23	25	27	27	25	27	15	17	19	19	19	18	18	19	24	24	26	25	23	24	24	24

fminF

Sweep 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 46° 2.8, 6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

fminE

Feb. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	E	E	E	E	E	E	1.6	1.2	C	C	C	C	C	C	C	C	B	E	E	E	E	E	E	E	
2	E	E	E	E	E	E	S	1.2	2.0	1.2	2.2	1.4	B	1.4	1.4	1.4	1.4	E	E	E	E	E	E	E	
3	E	E	E	E	E	E	E	1.3	1.4	2.0	B	B	B	B	B	2.0	B	1.4	1.6	1.6	E	E	E	E	
4	E	E	E	E	E	E	S	B	1.4	2.0	2.0	C	C	C	C	2.2	E	E	1.4	1.4	E	E	E	E	
5	E	E	E	E	E	E	E	B	C	C	C	C	C	C	C	C	B	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
6	E	E	E	E	E	E	E	1.5	2.0	3.6	3.6	3.9	3.6	3.6	3.6	B	B	1.2	E	1.2	1.3	1.3	1.4	1.4	
7	E	E	E	E	E	E	E	1.5	1.5	1.4	2.9	2.8	B	B	B	2.5	1.6	E	1.4	E	E	E	E	E	
8	E	E	E	E	E	E	E	E	C	C	C	C	C	C	C	C	E	E	E	E	E	E	E	E	
9	C	E	E	E	E	E	C	B	E	1.2	1.6	2.0	1.5	1.5	2.0	C	C	C	C	C	C	C	S	S	
10	E	1.1	E	E	E	E	E	1.3	1.2	1.3	2.0	2.1	2.0	2.0	1.4	1.9	1.3	E	E	1.2	E	E	E	1.6	
11	E	E	E	E	E	E	E	1.4	[1.4]C	1.4	1.4	1.4	1.4	2.2	2.2	1.4	1.4	E	E	E	E	E	E	E	
12	E	E	E	E	E	E	E	1.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	E	E	
13	E	E	C	C	C	C	C	C	C	2.2	2.4	2.2	B	2.0	2.0	2.0	B	E	E	C	E	E	E	E	
14	E	E	E	E	E	E	2.0	E	C	C	2.2	C	B	B	C	C	C	E	E	1.6	S	1.4	1.4	1.4	
15	1.4	E	E	1.3	1.1	1.1	1.2	1.4	1.4	B	C	C	B	C	C	C	B	E	E	C	S	E	E	E	
16	E	E	E	E	E	E	E	1.9	2.2	C	2.0	2.2	2.2	B	B	2.2	C	E	E	C	E	E	S	S	
17	E	E	C	C	C	C	E	B	B	2.8	B	2.5	2.3	2.3	1.5	1.6	1.6	E	E	1.4	1.3	1.6	E	1.9	
18	S	S	S	C	C	C	S	B	B	C	C	C	C	C	B	2.0	B	C	E	1.4	E	2.0	S	S	
19	C	C	C	C	C	C	C	C	C	2.2	2.0	2.2	2.0	B	2.2	1.8	B	1.4	E	2.2	E	E	C	C	
20	E	E	E	E	E	E	E	1.4	1.2	1.8	1.4	1.4	1.8	1.4	B	1.3	1.4	E	E	E	E	E	E	E	
21	1.4	1.4	1.4	E	E	E	1.4	1.4	C	C	C	C	C	C	C	C	B	E	E	S	S	E	2.2	1.8	
22	C	C	C	E	E	E	E	B	1.5	1.4	B	1.4	2.1	2.0	1.4	2.0	B	E	E	E	E	E	E	E	
23	S	E	E	E	E	E	E	B	E	E	2.0	1.4	1.4	1.4	1.4	1.8	1.8	E	E	S	S	E	E	E	
24	E	E	E	E	E	E	E	1.5	1.1	1.3	1.2	1.4	1.4	1.4	1.4	1.4	C	C	1.4	1.4	E	E	E	E	
25	E	E	E	E	E	E	E	E	C	C	C	C	C	C	C	C	1.2	E	1.4	E	E	E	E	E	
26	E	E	E	E	E	E	E	1.2	1.4	1.4	1.4	[1.4]C	1.4	1.4	1.4	1.4	1.4	E	E	E	E	E	E	E	
27	E	E	E	E	E	E	E	1.3	C	C	C	C	C	C	C	C	C	2.0	E	E	C	C	C	E	
28	E	E	E	E	E	E	E	2.2	C	B	2.4	2.0	2.4	2.1	1.4	1.4	1.4	1.4	1.4	1.4	E	E	E	E	
29	E	E	E	E	E	E	E																		
30																									
31																									
Mean	1.4	1.3	1.4	1.3	1.2	1.1	1.5	1.4	1.4	1.8	1.9	2.0	2.0	1.9	1.8	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.6
Measure	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Value	2.4	2.6	2.4	2.6	2.6	2.7	2.3	1.9	1.5	1.4	1.4	2.0	2.0	2.0	1.4	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4
Count	24	26	24	26	26	27	23	19	15	14	1.4	1.4	2.0	2.0	1.4	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6

Sweep 1.0 Mc to 15.5 Mc in 2 min Manual Automatic

W 11

A k i t a

IONOSPHERIC DATA

f_pF2

Feb. 1952

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 (310) ^{JF}	(280) ^{JF}	330	330 ^{PF}	320	340	280	260	(230) ^J	260	290	260	230	230	260	230	240	240	260	360	(330) ^{JF}	380	320 ^F	C
2	C	300	(340)	380	370	280	240	250	230 ^S	300 ^P	250	320	BS	260	240 ^P	250	220	240	330	290	260	300	340	360
3	340	320 ^Z	370	300 ^Z	260 ^Z	280 ^Z	300	240	240	240	240	BS	270	280	250	240	240	230	270	250	310	340	350	340
4	300	310 ^F	290 ^F	(290) ^{JF}	(290) ^{JF}	F	(290) ^{JF}	240	A	250	310 ^H	250	270	250	250	230	250	240	250	300	250	310	300	(380) ^{PF}
5	(370) ^F	350	340	300	290	290	290	B	210	230	260	250	250	260	A	A	240	230	230	260	300 ^F	290 ^S	320	320 ^S
6	380 ^S	(330) ^F	290 ^F	300 ^{VF}	290 ^{VF}	(310) ^{JF}	(280) ^C	260	240	240	280	260	220	230	250	230	230	230	270	250	210	370	320 ^V	BS
7	350	240	300	350 ^F	330	260	350	250	260	(240) ^P	320 ^H	B	270	280	290	280	(240) ^J	240	320	350	280	350	340	320
8	330 ^Z	330	300	310	300	340	290	250	250	260	(260) ^J	270	250	260	230	260	260	280	250	260	260	300	270	320 ^S
9	330	360	360	300	320	320 ^H	290	250 ^H	250	270	250	250	280	280	260	260	260	280	310	(340) ^S	380	360	310	410
10	350	330	340	280	270	360 ^F	330 ^F	260	270	270	280	260	260	230	230	250	270	240	280	290	250	300	330	310
11	370	300	350	370	310	280	260	240	S	250	330	280	250	260	260	230	230	250	240 ^F	270	270	340	320	360
12	280	290	270	(250) ^{JF}	(250) ^{JF}	(300) ^{JFH}	(280) ^H	S	240	270	260	310	270	260	250	240	240	240	240	(280) ^S	310	320	(330) ^{JF}	320 ^F
13	350	340	320 ^F	260	300	290 ^S	310 ^S	240	250 ^S	270	270 ^F	290	250 ^Z	260	270	260	230	250	280	290	300	300	330	350
14	330	310	320	310	270	270	300 ^H	250	230	270	260	280	250 ^H	280	250	(240) ^C	240	230	260	290	290	(350) ^{MH}	330 ^F	330
15	330	330	310	310	270	330 ^F	310	250	C	C	C	C	C	C	C	(260) ^J	250	250	300	280	310	320	330	310
16	340	310	270	250	230	360	280	240	270	(280) ^F	290	280	(270) ^S	(260) ^P	250	250	260	260 ^{MH}	260 ^{MH}	FHS	FS	FS	FS	FS
17	320 ^S	330 ^F	290	290	300 ^Z	340	320	280	280 ^H	(250) ^P	290	(280) ^J	290	250	(280) ^S	240	(240) ^J	230	300 ^H	290	310	320	340	410 ^S
18	380	350	370	340	320	310	290	240	260	230	250	260	260	[2600]B	250	240	240	260	A	(270) ^F	290	300	320	(360) ^{JF}
19	350	370	330	320	320	320	330	270	C	C	C	C	C	C	C	C	250	240	260	280	350	300	350	360
20	350	290	310	310	290	AS	280	280	220 ^S	260	270	270	(250) ^J	(270) ^S	270	250	260	210	280	260 ^V	280	300	310	310
21	320	310	330	300 ^H	290	330	300	230	230	260	280	280	270	260	250	260	250	S	220	380	A	370	310	330
22	300	300	290	300	320	330	310	(240) ^J	230	240	270	250	250	270	250	240	230	220	270	280	270	300	340	300
23	300	310	310	330	320	320	280	270	260	230	270	290	280	260	270	240	240	240	270	290	290	290	330	340
24	330	310	310 ^H	310 ^H	290	300	290	280	250	250	280	250	330	280	330	270	250	260	300	370 ^S	400 ^S	S	330 ^S	270 ^K
25	250 ^K	300 ^F	390 ^K	430 ^K	380 ^H	390 ^K	270	240	B	270	(250) ^J	250	250	250	(270) ^S	(250) ^J	B	A	A	A	A	330	400	310
26	350	360	310	270	330 ^H	290	300	250	270	260	270	(270) ^S	250	270	250	(230) ^H	220	270	250	370 ^H	250	370 ^H	300	310 ^F
27	280	300	320	300 ^F	310 ^H	(350) ^{PF}	280	230	250	260	280	280	280	260	270	260	260	240	300	(280) ^S	S	230	300	340
28	400	350	350	390 ^F	300 ^F	310 ^F	280	240	250	290 ^H	250	260	(260) ^J	250	280	270	280 ^H	230	250	310	A	A	A	A
29	A	340	340	320	310	340	320	310 ^K	290 ^K	C ^K	C ^K	C ^K	270 ^K	250 ^K	B ^K	230 ^K	230 ^K	240	230	230	290	A	A	(340) ^F
30																								
31																								
Mean Value	330	320	320	310	300	320	290	250	250	260	270	270	260	260	260	250	250	240	270	270	300	320	330	330
Minimum Value	340	310	320	310	300	320	290	250	250	260	270	270	260	260	250	250	240	240	270	280	290	320	330	330
Count	26	29	29	29	29	27	29	27	24	26	26	25	26	27	25	27	28	27	27	27	24	25	26	25

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 39° 48.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

Feb. 1952

RF2

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

RF2

Sweep 1.0 Mc to 17.0 Mc in 15 min

Manual

Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

f_oF1

Feb. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	Q	A	4.4	4.5	4.2	4.0	Q	Q	Q	Q						
2								Q	Q	L	L	Q	L	4.3	L	Q	Q	Q						
3								Q	Q	L	L	B	4.2	4.1	3.8	3.4	3.0	Q						
4								Q	A	Q	Q	4.3	L	4.1	3.9	3.8	Q	A						
5								Q	Q	Q	B	Q	4.2	4.2	A	A	Q	A						
6								Q	Q	Q	B	A	B	B	3.9	B	Q	Q						
7								Q	Q	A	4.1	L	Q	L	4.1	B	Q	Q						
8								Q	Q	L	L	L	L	A	A	3.1	Q	Q						
9								Q	Q	Q	4.4 ^J	4.7	4.2	L	4.0	3.2	A	Q						
10								Q	Q	L	L	4.6 ^J	4.6	4.3	L	3.2	Q	Q						
11								Q	Q	Q	L	L	4.5	L	3.9	Q	Q	Q						
12								Q	Q	L	L	L	L	L	Q	Q	Q	Q						
13								Q	Q	Q	4.6	4.6	4.4	L	Q	Q	Q	Q						
14								A	L	L	L	L	B	4.0	3.9	C	Q	Q						
15								A	C	C	C	C	C	C	C	L	Q	Q						
16								Q	Q	C	B	Q	Q	Q	L	L	A	Q						
17								Q	Q	Q	4.3	4.4	4.2	4.0	L	L	L	Q						
18								A	Q	Q	4.3	4.2	L	4.3	4.2	3.6	3.1	A						
19								Q	C	C	C	C	C	C	C	C	Q	A						
20								Q	Q	Q	L	L	4.5	4.0	L	L	Q	Q						
21								Q	Q	3.5	L	L	4.5	L	4.0	L	Q	Q						
22								Q	Q	Q	L	4.4	L	4.0	3.9	3.6	Q	Q						
23								Q	L	4.1	3.8	L	5.2	A	A	A	Q	Q						
24								Q	L	L	L	3.6	4.6	L	L	L	Q	Q						
25								Q	Q	L	A	A	L	L	A	Q	Q	A						
26								Q	L	4.0	4.1	3.8	Q	L	L	Q	Q	Q						
27								Q	Q	Q	L	4.0	4.8	L	L	Q	Q	Q						
28								Q	L	L	L	4.2	4.2	4.2	B	Q	Q	Q						
29								Q	Q	C	C	4.2	4.2	3.8	4.0	L	Q	Q						
30																								
31																								
Mean										3.9	4.3	4.3	4.4	4.1	4.0	3.4	3.1							
Median										4.0	4.3	4.3	4.4	4.1	3.9	3.4	3.1							
Mode										3	8	13	15	13	11	7	1							
Count																								

Sweep 1.0 Mc to 7.0 Mc in 15 min Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitakama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 39° 48.5' N
Long. 140° 08.2' E

A k i t a

Feb. 1952

h'F1

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	Q	A	240	230	210	210	Q	Q	Q	Q						
2								Q	Q	230	220	Q	260	220	240 ^B	Q	Q	Q						
3								Q	Q	230	210	B	210	230	210	200	Q	Q						
4								Q	A	Q	Q	220	220	220	220	230	Q	A						
5								Q	Q	Q	B	Q	240	240	A	A	Q	A						
6								Q	Q	Q	B	A	B	B	210	B	Q	Q						
7								Q	Q	A	A	B	Q	230	220	220	Q	Q						
8								Q	Q	230	210	200	210	210	A	210	Q	Q						
9								Q	Q	Q	220	230	230	230 ^A	250	220	A	Q						
10								Q	Q	230	230	220	220	210	210	200	Q	Q						
11								Q	Q	Q	220	220	210	230 ^B	200	Q	Q	Q						
12								Q	Q	Q	240	210	240	230	Q	Q	Q	Q						
13								Q	Q	Q	220	210	220	200	Q	Q	Q	Q						
14								A	200	210	220	250	220 ^B	220	210	C	Q	Q						
15								A	C	C	C	C	C	C	C	230	Q	Q						
16								Q	Q	C	B	Q	Q	Q	Q	210	220	A	Q					
17								Q	Q	Q	220	240 ^B	210	210	210	210	220	Q						
18								A	Q	Q	210	210	220	210	220	220	200	A						
19								Q	C	C	C	C	C	C	C	C	Q	A						
20								Q	Q	Q	220	230	230	210	210	220	Q	Q						
21								Q	Q	220	230	230	240	230	220	210	Q	Q						
22								Q	Q	210	210	220	210	230	210	210	Q	Q						
23								Q	200	190	200	220	280	A	A	A	Q	Q						
24								Q	230	210	220	200	230	220	220	220	Q	Q						
25								Q	Q	240 ^B	A	A	230 ^A	230 ^A	A	Q	Q	A						
26								Q	220	210	200	200	Q	230	220	Q	Q	Q						
27								Q	Q	Q	200	220	220	220	230	Q	Q	Q						
28								Q	210	210	220	210	210	210	B	Q	Q	Q						
29								Q	Q	C	C	A	250 ^B	210	220	220	Q	Q						
30																								
31																								
Mean Value									210	220	220	220	230	220	220	220	210							
Median Value									210	220	220	220	220	220	220	220	210							
Count								5	11	20	19	23	24	24	19	15	2							

Sweep 1.0 Mc to 17.0 Mc in 15 min

Manual Automatic

h'F1

A 5

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 39° 43.5' N
Long. 140° 03.2' E

A k i t a

IONOSPHERIC DATA

f_oE

Feb. 1952

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

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 39° 48.5' N
Long. 140° 08.3' E

IONOSPHERIC DATA

A k i t a

Feb. 1952

19' E

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

Sweep 1.0 Mc to 17.0 Mc in 1.5 min

Manual Automatic

19' E

A 7

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

Feb. 1952

135° E Mean Time

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	2.5	E	E	1.2	E	E	E	3.0	2.3	6.7	Q	Q	Q	Q	2.8	2.8	Q	Q	1.6	2.4	2.3	2.2	E	C
2	C	E	C	E	2.1	E	2.0	2.2	3.3	Q	Q	Q	Q	Q	Q	Q	B	B	2.0	2.8	2.2	E	E	E
3	1.6	E	E	E	E	E	E	B	Q	3.2	Q	Q	Q	Q	Q	3.5	3.2	3.3	2.7	E	2.1	2.3	E	3.2
4	2.9	2.2	2.3	2.5	E	1.4	E	2.8	6.6	3.4	4.8	4.2	Q	Q	4.2	3.2	2.8	3.2	2.8	2.8	3.0	2.2	2.4	2.0
5	1.8	2.4	3.5	3.4	E	1.8	E	2.2	3.8	Q	Q	Q	Q	Q	8.0	6.8	2.4	3.7	4.9	3.8	3.3	E	E	E
6	1.7	3.6	3.6	1.5	1.6	2.2	C	1.9	Q	Q	Q	4.0	3.4	3.2	B	B	B	2.1	2.6	3.3	2.6	2.2	2.2	E
7	1.6	2.2	1.4	1.6	2.6	2.4	E	B	3.0	4.4	4.1	3.8	3.3	B	2.7	2.6	Q	2.2	E	1.6	1.6	2.4	E	E
8	E	E	E	1.4	1.3	1.4	E	B	Q	Q	Q	Q	3.4	3.4	3.4	Q	Q	Q	2.6	E	E	E	E	E
9	E	E	E	E	E	E	E	E	Q	Q	Q	Q	Q	4.4	Q	Q	4.1	3.3	2.8	C	2.1	1.8	E	1.8
10	2.1	E	E	E	E	E	E	E	Q	Q	3.2	3.2	Q	Q	Q	Q	Q	B	E	E	2.6	E	E	E
11	E	E	E	E	E	E	E	2.2	1.7	Q	Q	Q	Q	Q	Q	3.0	Q	Q	E	E	4.6	3.2	E	E
12	E	E	E	E	E	E	E	E	2.1	Q	Q	Q	Q	Q	Q	Q	Q	2.0	E	E	E	E	E	E
13	E	E	1.8	E	E	1.2	2.2	1.8	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	E	E	E	E	E	3.0
14	2.8	3.0	3.2	E	E	2.2	E	3.8	3.2	4.7	4.2	5.0	Q	Q	Q	C	Q	Q	E	E	E	E	E	E
15	E	1.2	E	E	3.3	2.4	3.4	3.8	C	C	C	C	C	C	C	Q	Q	Q	E	E	2.4	2.6	2.8	2.4
16	E	2.2	E	E	E	E	E	E	Q	C	Q	Q	Q	Q	Q	4.4	3.4	B	E	E	E	E	E	2.0
17	2.4	1.9	E	1.3	E	E	E	E	2.3	3.6	Q	Q	3.3	Q	Q	2.9	Q	4.2	5.6	2.6	2.3	E	2.2	3.2
18	5.1	2.6	2.8	2.8	2.7	2.4	2.4	2.8	3.6	4.6	3.6	Q	Q	Q	Q	Q	Q	Q	5.6	2.6	2.3	E	2.2	2.4
19	E	E	2.5	2.3	2.3	2.4	1.9	B	Q	C	C	C	Q	C	C	C	3.0	3.0	3.2	3.0	3.0	2.8	2.2	2.0
20	1.8	2.6	3.8	3.3	3.0	2.9	2.5	Q	3.2	Q	Q	Q	Q	Q	Q	B	Q	B	E	E	2.4	3.7	2.2	2.2
21	1.7	1.6	2.6	E	1.8	E	E	Q	Q	Q	Q	3.4	4.6	4.8	3.3	Q	Q	B	2.0	4.9	5.4	4.7	2.4	3.7
22	2.9	3.4	2.9	3.0	2.6	2.6	2.5	Q	Q	Q	Q	Q	Q	Q	3.0	3.6	2.7	4.6	2.4	2.4	2.2	2.2	2.0	1.8
23	1.8	2.2	2.0	1.8	2.2	E	E	Q	Q	Q	Q	Q	Q	Q	4.0	4.8	4.8	3.8	3.0	2.4	2.7	2.4	E	E
24	E	E	3.1	1.8	E	E	E	Q	Q	3.3	Q	Q	Q	Q	Q	3.2	3.2	2.4	2.6	E	E	E	E	E
25	E	E	E	E	E	E	E	Q	Q	3.4	5.7	5.2	5.7	4.2	4.6	Q	4.3	6.4	5.2	8.4	4.4	2.6	2.4	E
26	E	E	E	1.4	E	E	E	Q	Q	3.1	Q	Q	Q	Q	Q	Q	2.7	3.6	3.4	E	2.6	2.4	2.3	E
27	E	E	E	E	E	E	E	2.3	3.0	3.4	Q	Q	Q	Q	Q	3.7	3.4	Q	1.9	3.8	2.8	2.2	1.9	E
28	E	E	E	E	1.2	2.1	2.0	Q	3.1	3.8	4.0	4.3	3.2	3.2	Q	3.0	Q	2.4	E	2.8	3.0	3.2	4.4	4.0
29	4.2	2.8	2.3	E	E	1.5	E	3.0	B	C	C	4.4	Q	Q	Q	Q	Q	2.3	2.7	2.4	2.4	5.2	4.6	E
30																								
31																								
Mean Value	2.5	2.4	2.7	2.1	2.2	2.1	2.4	2.5	3.4	3.9	4.2	4.2	4.0	4.2	4.0	3.7	3.3	3.3	3.0	3.3	2.8	2.7	2.7	2.6
Median Value	1.6	E	E	E	E	E	E	1.8	Q	3.1	Q	Q	Q	Q	Q	2.6	Q	2.4	2.0	2.4	2.4	2.2	1.9	E
Count	28	29	28	29	29	29	28	25	26	25	26	27	27	26	26	25	27	22	22	29	28	29	29	28

Sweep 1.0 Mc to 17.0 Mc in 15 min

Manual Automatic

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

135° E Mean Time

Feb. 1952

(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	(3.1) ^F	(3.2) ^F	(2.9) ^F	3.0	2.8	3.4	3.4	(3.6) ^F	3.3	3.3	3.4	3.6	3.6	3.4	3.5	3.6	3.6	3.4	3.0	(3.0) ^F	2.8 ^F	3.1	C
2	C	3.2	(3.0)	2.7	3.0	3.1	3.5	3.4	3.9 ^S	3.3 ^F	3.4	3.0	B ^S	3.5	3.5 ^F	3.4	3.6	3.5	3.0	3.1	3.4	3.1	3.0	2.8
3	2.9	3.0 ^S	2.8	3.1 ^S	3.3 ^S	3.2 ^S	3.0	3.5	3.5	3.5	3.6	B ^S	3.4	3.3	3.5	3.7	3.6	3.5	3.4	3.4	3.0	2.8	3.0	2.9
4	3.1	3.0 ^F	2.8	3.0 ^F	(3.0) ^F	F	(3.1) ^F	3.6	A	3.5	3.1 ^H	3.3	3.3	3.5	3.5	3.7	3.4	3.5	3.4	3.0	3.3	3.0	3.0	(2.7) ^F
5	(2.7) ^F	2.9	3.0	3.1	3.2	3.2	3.1	B	3.9	3.6	3.5	3.4	3.6 ^H	3.4	A	3.6	3.7	3.6	3.7	3.4	3.0 ^F	3.1 ^S	3.0	3.1 ^S
6	2.7 ^S	(3.0) ^F	3.1 ^F	3.2 ^F	3.4 ^F	(3.2) ^F	(3.3) ^F	3.4	3.4	3.5	3.2	3.5	3.7	3.5	3.5	3.5	3.6	3.4	3.4	3.5	3.9	2.7	3.0 ^V	2.6 ^S
7	2.9	3.6	3.2	2.9 ^F	3.0	3.3	2.9	3.5	3.4	(3.6) ^F	2.9 ^H	B	3.3	3.3	3.4	3.3	(3.5) ^F	3.5	2.9	2.8	3.2	2.8	2.9	3.0
8	2.7 ^S	3.0 ^S	3.1	3.1	3.1	2.8	3.1	3.4	3.6	3.4	(3.5) ^F	3.3	3.6	3.5	3.6	3.4	3.4	3.3	3.4	3.3	3.3	3.0	3.2	3.0 ^S
9	2.9	2.7	2.8	3.2	2.9	3.0 ^H	3.2	3.5 ^H	3.5	3.4	3.5	3.5	3.2	3.3	3.4	3.3	3.2	3.1	(2.9) ^S	3.2	3.7	2.8	3.1	2.7
10	2.9	2.9	2.9	3.4	3.7	2.8 ^F	2.9 ^F	3.4	3.2	3.3	3.3	3.4	3.5	3.7	3.6	3.4	3.6	3.4	3.2	3.2	3.4	3.1	3.0	3.1
11	2.7	3.1	2.8	2.8	3.1	3.2	3.3	3.3	S	3.4	3.0	3.4	3.5	3.4	3.3	3.5	3.6	3.4	3.3 ^F	3.3	3.3 ^S	3.0 ^F	3.0 ^F	3.0 ^F
12	3.2	3.2	3.2	(3.3) ^F	(3.0) ^F	(3.1) ^F	(3.2) ^H	S	3.5	3.4	3.6	3.1	3.4	3.4	3.6	3.6	3.5	3.6	3.3 ^S	(3.2) ^S	3.1	2.8	3.0	2.8
13	2.9	2.9	3.0 ^F	3.3	3.0	3.1 ^S	3.1 ^S	3.5	3.6 ^S	3.3	3.2 ^F	3.2	3.5 ^S	3.5	3.2	3.2	3.5	3.4	3.2	3.1	3.1	3.1	2.9	2.8
14	3.0	3.1	3.0	3.0	3.2	3.3	3.2	3.5	3.6	3.2	3.3	3.2	3.5 ^H	3.1	3.5	(3.6) ^F	3.6	3.6	3.3	3.2	3.2	(2.8) ^H	2.9 ^F	3.0
15	3.0	3.0	3.0	3.1	3.3	3.0 ^F	3.1	3.5	C	C	C	C	C	C	C	(3.5) ^F	3.5	3.3	3.1	3.3	2.9	2.9	3.0	3.1
16	2.9	3.1	3.2	3.4	3.6	2.7	3.2	3.4	3.2	(3.2) ^C	3.2	3.4	(3.3) ^S	(3.4) ^B	3.6	3.5	3.3	3.3 ^H	3.0 ^H	FSH	FS	FS	FS	FS
17	3.0 ^S	3.0 ^F	3.2	3.1	3.0 ^S	3.0	3.0	3.1	3.2 ^H	(3.4) ^S	3.3	(3.4) ^S	3.3	3.5	(3.4) ^S	3.5	(3.5) ^F	3.6	3.2 ^H	3.1	3.1	3.0	2.9	2.5 ^S
18	2.6	2.8	2.7	2.8	2.9	3.0	3.2	3.4	3.4	3.4	3.5	3.3	3.4	(3.4) ^S	3.3	3.6	3.5	3.4	(3.5) ^F	(3.3) ^S	3.3	3.2	3.1	(2.9) ^F
19	2.9	2.8	2.9	2.9	2.9	3.0	3.0	3.3	C	C	C	C	C	C	C	C	3.4	3.5 ^H	3.3	3.2	2.9	2.8	2.7	2.8
20	2.8	3.1	2.9	3.1	3.3	AS	3.3	3.2	3.7 ^S	3.3	3.4	3.3	(3.5) ^F	(3.2) ^S	3.3	3.4	3.4	3.9	3.2	3.4 ^V	3.2	3.2	3.0	3.1
21	3.0	3.1	3.2	3.1 ^H	3.2	3.0	3.1	3.6	3.7	3.2	3.2	3.2	3.5	3.4	3.5	3.3	3.5	S	3.8	2.7	3.2	2.8	3.2	3.0
22	3.1	3.1	3.2	3.1	3.0	2.8	3.1	(3.7) ^S	3.6	3.7	3.3	3.6	3.5	3.3	3.5	3.6	3.7	3.6	3.2	3.1	3.3 ^H	3.0	2.8	3.1
23	3.0	3.0	3.0	2.9	2.9	2.9	3.2	3.2	3.3	3.5	3.4	3.1	3.3	3.4	3.4	3.5	3.8	3.7	3.2	3.2	3.2	3.1	3.0	3.0
24	3.0	3.1	3.1 ^H	3.2 ^H	3.2	3.5	3.2	3.3	3.5	3.5	3.2	3.3	3.0	3.3	3.0	3.3	3.4	3.4	3.1	2.8 ^S	2.7 ^K	S ^K	2.9 ^K	3.3 ^K
25	3.4 ^K	3.0 ^K	2.6 ^K	2.6 ^K	2.7 ^K	2.6 ^K	3.4	3.4	B	3.3	(3.6) ^F	3.4	3.5	3.4	(3.5) ^F	(3.5) ^F	B	A	A	A	A	2.9	2.6	3.1
26	2.8	2.7	3.1	3.3	3.6 ^F	3.3	3.2	3.5	3.3	3.4	3.3	(3.2) ^F	3.5	3.4	3.4	3.4	(3.7) ^H	3.7	3.4 ^H	3.4	2.7 ^H	3.0	3.1 ^F	(2.9) ^F
27	3.2 ^F	3.0 ^F	2.9 ^F	3.1 ^F	3.1 ^H	(2.8) ^F	3.2	3.5	3.5	3.4	3.2	3.1	3.3	3.3	3.3	3.4	3.4	3.6	3.1	(3.4) ^F	S	3.6	3.1	2.9
28	2.7	2.8	2.9	2.7 ^F	3.0 ^F	3.1 ^F	3.3	3.5	3.4	3.1 ^H	3.5	3.3	(3.4) ^S	3.4	3.1	3.3	3.3 ^H	3.6	3.3	3.0	3.1	A	A	A
29	A	2.9	2.8 ^V	3.0	3.0	2.9	3.0	3.1 ^K	C ^K	C ^K	C ^K	3.4 ^K	3.4 ^K	3.4 ^K	B ^K	3.4 ^K	3.5 ^K	3.6	3.5	3.6	3.2	A	A	(2.9) ^F
30																								
31																								
Mean Value	2.9	3.0	3.0	3.0	3.1	3.0	3.2	3.4	3.5	3.4	3.3	3.3	3.4	3.4	3.4	3.5	3.5	3.5	3.3	3.2	3.1	3.0	3.0	2.9
Median Value	2.9	3.0	3.0	3.1	3.0	3.0	3.2	3.4	3.5	3.4	3.3	3.3	3.4	3.4	3.4	3.5	3.5	3.5	3.3	3.2	3.2	3.0	3.0	3.0
Count	2.6	2.9	2.9	2.9	2.9	2.7	2.9	2.7	2.4	2.6	2.6	2.5	2.6	2.7	2.5	2.8	2.8	2.7	2.8	2.7	2.6	2.5	2.6	2.6

(M3000)F2

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

fminF

135° E Mean Time

Feb. 1952

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 ^F	1.3	1.1	1.2	E	E	1.6	2.0	2.3	4.2 ^A	3.5	3.5	3.3	3.3	3.0	2.8	2.2	2.2	1.4	1.5	1.5	1.5	1.5	C	
2	C	1.2	C	E	1.1	E	1.5	1.6	2.4	2.8	3.0	4.0	3.6	3.3	3.7	3.0	2.1	2.1	1.6	1.5	1.5	1.4	1.5	1.4	
3	E	E	E	E	E	E	1.3	1.7	2.5	2.8	3.1	4.0	3.3	3.0	2.9	2.7	2.3	2.2	1.6	1.5	1.5	1.5	1.5	1.4	
4	1.3	1.2	1.2	1.1 ^F	E	E	1.4	1.8	5.0 ^A	A	3.3	3.2	3.2	3.6	3.4	3.0	2.2	2.8 ^A	1.7	2.0 ^A	2.5 ^A	1.7	1.6	1.4	
5	A	A	A	2.4 ^A	E	E	1.5	1.8	2.2	3.0	4.2	3.8	3.6	3.8	A	5.4 ^A	2.2	A	2.6 ^A	2.1 ^A	1.7	1.6	1.5	1.6	
6	1.5	1.7	1.7	1.2	E	1.5	[1.6] ^C	1.6	2.3	3.1	4.3	4.2	4.0	4.0	3.1	4.0	2.8	1.9	2.2 ^A	2.0 ^A	1.5	1.5	1.5	1.4	
7	E	E	E	E	E	1.4	1.6	1.4	1.8	4.1 ^A	4.0 ^A	4.3	4.0	3.4	3.0	2.9	2.5	1.8	1.5	1.4	1.4	1.4	1.6	1.4	
8	E	E	E	E	E	E	1.4	1.8	3.0	2.9	2.9	3.1	3.2	3.2	3.6	2.8	2.2	1.8	1.6	1.5	1.4	1.5	1.5	1.5	
9	1.2	1.1	1.2	1.2	1.2	1.8	1.4	1.8	2.2	3.2	3.1	3.2	3.4	4.2 ^A	3.0	2.8	3.8 ^A	2.2	1.5	[1.6] ^C	1.7	1.6	1.6	1.5	
10	1.2	E	E	E	E	1.2	1.4	1.9	2.5	3.4	3.2	3.2	3.4	3.2	3.0	2.8	2.4	1.8	1.4	1.6	1.6	1.6	1.6	1.6	
11	E	E	E	E	E	E	1.4	1.8	2.4	3.2	2.9	3.3	3.3	3.5	2.9	3.0	2.5	1.8	1.6	1.6	1.6	1.6	1.4	1.4	
12	1.4	E	E	E	E	1.2	1.4	2.1	2.4	2.9	3.2	3.1	3.2	3.1	3.1	3.0	2.2	1.9	1.5	2.1 ^A	2.0 ^A	1.5	1.8	1.5	
13	1.3	E	E	E	E	1.2	1.5	1.8	2.5	2.6	2.8	3.4	3.3	3.4	3.4	3.4	2.6	2.0	1.6	1.4	1.4	1.4	1.4	1.4	
14	1.4	1.2	2.0 ^A	1.2	1.1	1.6	1.5	3.6 ^A	2.6	3.0	3.5	3.6	3.3	3.3	3.2	[2.8] ^C	2.5	1.9	1.5	1.6	1.4	1.4	1.4	1.4	
15	1.2	1.2	E	E	2.0 ^A	1.4	1.8	3.8 ^A	C	C	C	C	C	C	C	3.0	2.7	1.9	1.6	1.4	1.5	1.5	1.5	1.6	
16	1.2	E	E	E	E	E	1.4	1.9	2.4	[3.2] ^C	4.0	4.0	4.1	4.1	3.2	3.0	A	1.9	1.6	1.5	1.5	1.5	1.5 ^F	1.5	
17	1.6	1.2	E	E	E	E	1.4	1.9	2.8	3.6 ^A	3.2	4.2	3.4	3.5	3.8	2.9	2.4	2.2	1.6	1.6	1.6	1.6	2.0 ^A	2.0 ^A	
18	3.2 ^A	2.2 ^A	2.0 ^A	1.8	1.2	1.2	1.4	A	2.4	3.0	3.2	3.4	3.4	3.4	3.3	3.0	2.4	3.2 ^A	4.7 ^A	1.6	1.6	1.6	1.6	2.1 ^A	
19	1.3	E	E	E	E	E	1.4	1.5	1.9	C	C	C	C	C	C	C	2.8	3.0 ^A	3.0 ^A	2.6 ^A	2.2 ^A	1.6	1.6	1.4	
20	1.4	1.4	1.6	2.0 ^A	2.0 ^A	1.6	1.6	2.0	2.9	2.9	3.1	3.8	3.5	3.3	3.2	2.9	2.9	2.9	1.8	1.8	1.6	1.4	1.6	1.4	
21	1.4	E	1.3	E	E	E	1.5	2.0	2.8	2.9	3.3	3.3	3.9 ^A	4.0 ^A	3.2	2.8	2.4	2.4	2.0 ^A	2.5 ^A	2.2 ^A	2.3 ^A	1.6	1.5	
22	A	1.5	1.7	2.0 ^A	1.8	1.4	1.5	2.0	2.5	2.7	3.0	3.2	3.2	3.3	3.0	3.0	2.7	2.0	1.5	1.6	1.4	1.4	1.4	1.2	
23	1.2	1.2	1.2	E	E	E	1.4	2.1	2.4	3.0	3.2	3.3	3.8	4.2 ^A	4.0 ^A	4.0 ^A	2.2	1.9	1.8	1.7	1.5	1.4	1.4	1.4	
24	1.4	E	E	E	E	E	1.4	1.9	2.5	2.8	N	3.1	4.1	3.2	2.9	2.9	2.3	2.0	1.6	1.4	1.4	1.4	1.4	1.4	
25	1.2	1.2	1.2	1.2	1.1	E	1.4	2.0	2.4	3.9	5.2 ^A	4.9 ^A	3.7	3.9	4.2 ^A	3.2	2.4	6.1 ^A	A	A	A	1.6	1.6	1.6	
26	E	E	E	E	E	E	1.4	1.9	3.2	2.8	3.0	3.1	3.4	3.4	3.2	3.1	2.6	2.8 ^A	2.8 ^A	1.5	1.5	1.8	1.5	1.5 ^F	
27	1.2	E	E	E	E	E	1.4	2.4	2.0	3.6	2.9	3.2	3.2	3.4	3.5	3.0	2.8	2.1	1.6	1.7	1.6	1.7	1.6	1.6	
28	1.4	1.1	E	E	E	1.3	1.4	2.0	2.4	3.0	3.2	3.2	3.3	3.2	4.0	3.6	3.0	2.2	1.8	2.3 ^A	2.8 ^A	A	A	A	
29	A	A	1.5	E	E	E	1.4	2.0	3.0	C	4.1 ^A	3.9	3.9	3.3	3.0	2.9	2.6	2.2	2.0 ^A	1.8	1.6	A	A	1.6 ^F	
30																									
31																									
Mean Value	1.4	1.3	1.5	1.5	1.4	1.4	1.5	2.0	2.6	3.1	3.4	3.6	3.5	3.5	3.3	3.1	2.5	2.3	1.9	1.7	1.7	1.6	1.6	1.5	1.5
Median Value	1.3	1.1	E	E	E	E	1.4	1.9	2.4	3.0	3.2	3.4	3.4	3.4	3.2	3.0	2.4	2.1	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Count	25	27	27	29	29	29	29	28	27	25	25	27	27	27	27	26	28	28	28	28	28	28	27	27	27

Sweep 1.0 Mc to 17.0 Mc in 1.5 min

Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

Feb. 1952

fminE

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	E	E	E	E	E	E	1.5	1.8	1.8	1.8	2.0	2.0	1.9	2.0	2.0	1.6	1.5	1.4	1.8	1.5	1.6	E	C
2	C	E	C	E	1.5	E	1.6	1.5	1.6	1.8	1.7	1.7	2.0	1.8	1.7	1.6	B	B	1.6	1.7	1.6	E	E	E
3	E	E	E	E	E	E	E	B	1.6	1.7	1.7	1.8	1.9	1.9	1.8	1.6	1.6	1.6	1.6	E	1.5	1.5	E	1.5
4	1.9	1.8	E	E	E	1.1	E	1.4	1.6	1.8	1.8	1.8	1.8	1.8	2.6	1.9	1.7	1.6	1.6	1.4	1.4	1.4	1.4	1.4
5	1.2	1.2	E	E	E	E	E	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.0	2.0	1.7	1.4	1.5	1.5	1.5	E	E	E
6	1.5	E	E	E	E	1.4	(1.4) ^c	1.4	2.0	1.8	2.0	2.7	2.8	3.0	B	B	B	1.6	1.6	1.4	1.4	2.0	1.9	E
7	E	E	E	E	E	E	E	B	1.6	2.0	2.1	2.1	2.8	B	2.1	2.0	2.0	1.8	1.4	1.4	1.4	1.4	E	E
8	E	E	E	E	E	E	E	B	1.7	1.9	2.3	2.8	1.9	1.9	2.2	1.9	1.6	1.5	1.6	E	E	E	E	E
9	E	E	E	E	E	E	E	1.6	1.4	1.8	1.8	2.6	1.7	1.7	1.6	1.6	1.6	1.6	1.5	(1.6) ^c	1.7	1.6	E	1.6
10	1.2	E	E	E	E	E	E	1.6	1.6	1.6	1.8	1.8	1.7	1.8	1.8	1.6	1.5	B	E	E	1.6	E	E	E
11	E	E	E	E	E	E	E	1.8	1.4	1.5	1.6	1.7	1.8	1.9	1.6	1.6	1.7	B	E	E	E	E	E	E
12	E	E	E	E	E	E	E	1.5	1.6	1.6	1.6	1.9	1.8	1.8	2.0	1.9	1.6	1.6	E	1.5	1.4	E	E	E
13	E	E	E	E	E	E	E	1.8	1.6	1.8	2.0	2.0	2.1	2.0	2.0	2.0	1.8	1.6	E	E	E	E	E	1.2
14	1.2	1.2	E	E	E	E	E	1.6	1.6	1.8	1.9	1.7	1.9	2.1	1.8	(1.8) ^c	1.7	1.6	E	E	E	E	1.9	E
15	E	E	E	E	E	E	E	1.4	1.6	C	C	C	C	C	C	2.0	1.7	1.7	E	E	1.6	1.5	1.5	1.6
16	E	E	E	E	E	E	E	1.6	1.6	(1.8) ^c	2.0	2.0	2.1	2.2	1.9	1.8	1.6	B	E	E	E	E	1.5	1.5
17	E	E	E	E	E	E	E	1.6	1.5	1.9	1.9	1.8	1.9	2.0	2.1	2.0	1.8	B	E	1.8	E	1.8	1.6	1.6
18	1.2	E	E	E	E	1.2	1.4	1.4	1.4	1.5	1.6	1.8	1.8	1.9	2.3	1.9	1.8	2.0	1.6	1.6	2.0	E	1.6	1.5
19	E	E	E	1.7	E	E	1.5	B	C	C	C	C	C	C	C	C	1.6	1.6	1.4	1.6	1.6	1.6	1.6	1.4
20	1.4	E	E	E	E	E	1.4	1.5	1.5	1.7	1.9	1.8	1.8	1.9	2.2	B	1.8	B	E	E	1.6	1.4	1.8	1.4
21	1.4	E	E	E	E	E	E	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.7	2.3	B	1.6	1.5	1.5	1.5	1.5	1.5
22	1.2	1.2	E	E	E	E	E	1.9	1.6	1.6	1.6	1.8	2.2	2.0	1.8	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.2
23	1.2	1.2	1.2	1.4	1.6	E	E	1.7	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.7	1.6	1.6	1.5	1.6	E	E
24	E	E	E	1.4	E	E	E	1.6	1.6	1.6	1.8	2.0	2.2	2.2	1.6	1.6	1.6	1.6	1.6	E	E	E	E	E
25	E	E	E	E	E	E	E	1.9	2.2	1.6	1.6	1.9	1.8	1.8	1.7	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	E
26	E	1.6	E	E	E	E	E	1.6	1.7	1.7	1.6	1.9	1.8	1.8	2.0	1.8	1.6	1.9	1.4	E	1.5	1.5	1.5	E
27	E	E	E	E	E	E	E	1.4	1.4	1.6	1.7	1.7	1.7	1.7	1.9	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	E
28	E	E	E	E	E	E	E	1.9	1.4	1.7	1.7	1.8	1.9	2.2	2.0	1.8	1.8	1.8	E	1.6	1.6	1.6	1.6	1.6
29	1.2	E	E	E	E	E	E	1.6	B	C	C	2.1	2.8	2.1	2.0	1.8	1.7	1.6	1.5	1.6	1.8	1.6	1.6	E
30																								
31																								
Mean Value	1.3	1.4	1.2	1.5	1.4	1.2	1.6	1.5	1.6	1.7	1.8	1.9	2.0	2.0	1.9	1.8	1.7	1.6	1.5	1.6	1.6	1.6	1.6	1.5
Median Value	E	E	E	E	E	E	E	1.6	1.6	1.7	1.8	1.9	1.9	1.9	1.9	1.8	1.6	1.6	1.5	1.4	1.5	1.4	1.4	E
Count	28	29	28	29	29	29	29	25	26	26	26	27	27	26	26	26	27	22	22	29	29	29	29	28

Sweep 1.0 Mc to 17.0 Mc in 1.5 min

Manual

Automatic

fminE

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 36° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Feb. 1952

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	3.2 ^P	3.5 ^F	2.8 ^F	3.4 ^F	2.3 ^F	2.6	2.7	4.7	8.0 ^J	6.6 ^S	B	(11.3)	10.0	7.7	7.5	6.7	5.5	4.2	3.7	3.9 ^F	3.7 ^F	3.5	3.5	4.0
2	4.6	3.4	2.6	A	2.0	2.4 ^H	2.7	5.7	7.6	5.6	9.6	7.4	10.0	9.8	7.8	7.5 ^P	6.5	4.7 ^P	(3.5) ^P	3.3	3.5	(2.8)	2.1	2.6
3	3.1 ^H	3.1 ^F	2.9	3.2	3.4	3.5	2.9	5.5	6.0 ^H	6.9	6.6	6.6	8.6	9.7	9.7	7.5 ^J	6.1	5.2	2.9	2.6	2.4	2.4	2.8 ^P	2.9
4	3.0	3.2 ^J	3.2 ^J	3.1	2.8	2.9 ^P	(3.9) ^F	5.0	5.9	6.5	7.7 ^P	11.1	9.7	9.6	8.6	7.1	5.9	A	A	3.5	3.2	2.8	2.8	2.9
5	2.9 ^F	3.0	3.0	3.1	3.1	2.8	2.6 ^H	5.0	5.5	6.1	6.7	8.9	9.7	7.0	7.7	6.5	6.1	4.5	3.7	3.0	3.0	2.7	2.7	A
6	B	A	3.4	3.1	2.8	2.8	2.6	5.6	6.3	7.6	7.6	(7.9) ^P	7.4	7.5	7.3	6.9	6.1	5.0	5.0	3.3	3.3	2.4	2.6	2.8
7	3.0 ^F	3.8	2.3 ^F	A	2.4 ^F	2.8	2.5	5.7	5.1	8.4 ^J	6.4	10.3	(8.3) ^P	8.2 ^P	(8.1) ^P	8.6	8.0	6.5	3.9	3.8	4.3	3.0	2.5	3.6 ^F
8	3.2	3.3	3.3	3.2	2.5	2.2	3.7	5.3	5.8	7.9	8.1 ^J	9.3	9.3	7.4	6.6	7.0	7.4	7.2	6.2	4.8	4.5	S	3.1 ^J	2.8 ^J
9	(3.1) ^P	3.4	3.9	4.1	4.4	2.5	2.8	5.6	6.4	8.3 ^P	8.6	8.9	8.2	9.3	9.6	8.9	6.9	5.6	4.3	4.5	2.7	2.5	2.9	2.3
10	3.1	3.4	3.4	2.9	2.4	1.9	2.4	5.3	6.0	8.6	10.6	11.7	10.3	8.2	7.1	6.8	6.5	(5.2) ^P	4.0	4.8	4.0	(2.9) ^P	2.9 ^P	3.2
11	3.1 ^J	3.4	2.9	2.1	2.6	3.0	2.7	4.9	5.8	7.4	7.5	10.9	11.0	8.5	7.9	7.5 ^B	7.3	6.5	(5.8) ^P	5.8 ^P	3.6	(3.7) ^F	4.3	(4.5) ^F
12	4.1 ^H	4.0	(4.3) ^P	3.2 ^J	2.2	2.7	3.1 ^P	4.7	6.7	7.3	7.9	7.3	10.6	(9.7) ^C	8.8	8.6	6.7	5.5	5.0	4.4	3.2	3.5	3.7	3.3
13	3.6	3.7	3.4	3.0	3.1	2.9	2.7	5.5	6.4	9.4	9.0	8.8	8.7	7.5	8.0 ^P	7.5	6.8	5.7	5.0	4.1	4.1	3.5	3.9	4.1
14	3.9 ^F	4.2	3.8	3.7	3.4	3.3	4.0	5.2	6.0	8.4 ^J	9.2 ^J	8.1 ^P	10.0	8.2 ^J	8.6 ^V	7.6	7.3	5.6	4.4	4.1	3.7	3.7	3.7	3.7
15	3.7	3.7	3.8	3.5	3.2	2.7 ^F	3.3 ^F	6.1	C	C	8.6 ^P	9.6	9.2	7.9	8.2	6.8	7.5	(5.4) ^P	4.9	4.4	3.5	(3.7) ^F	3.7	3.6
16	3.4	3.6	3.3	3.4	3.6	1.7	2.5	5.3	6.8	(8.0) ^C	9.2	(9.2) ^C	9.2	8.5	7.5	7.1	7.4	6.3	5.7	5.0	4.9	4.8	(4.1) ^P	4.8
17	5.6	5.3	4.8	3.6	2.7	2.8 ^Z	4.3	5.9	8.7 ^H	11.5	9.1	9.4	9.1	8.7	8.7	9.3	8.6	7.5	5.0	4.9	5.1	4.8	4.6	4.4
18	4.2	4.4	4.5	4.0	4.2	3.7	3.7	(7.0) ^P	6.8	8.6	8.9	9.7	10.1	9.9	9.5	7.8	6.8	6.2	6.3	5.8	3.6	3.1	3.1	3.2
19	3.3 ^F	3.7 ^V	3.6 ^F	3.8	3.0	2.9	2.9	6.2	7.1 ^P	8.5 ^J	8.8	8.7 ^J	9.3 ^J	11.1	10.8 ^P	(8.9) ^P	6.6 ^J	5.9	5.0	4.4	3.6 ^F	3.6	3.4	3.7
20	3.7	4.1	3.4	3.2	2.9	3.0	2.8 ^F	6.3	7.6	7.5	9.5	10.7	10.7	7.2	8.5	9.2	8.6	7.3	4.9	4.1	3.7	3.3	3.3	3.5
21	3.6	3.6	3.6	3.4 ^F	3.3	3.3	3.2	5.9	6.2	7.9	7.3	9.1	10.7	8.5	8.9 ^J	7.3	6.9 ^P	5.6	4.7	3.1	3.3	3.7	3.5	3.4
22	4.1	4.3	A	A	3.4	3.0	3.1	6.5	C	C	C	C	8.6	C	C	C	C	6.1 ^S	4.2	4.2	3.7	3.6	3.5	3.5
23	3.6	3.7	3.6	3.0	3.1	2.5	3.6	6.4	6.5	(8.1) ^P	7.7	8.5	10.7	10.6 ^J	8.9	8.8	6.7	5.5 ^T	(5.0) ^P	3.8	4.1	3.3	3.2 ^P	3.1 ^J
24	3.3 ^F	3.5	3.7	3.8	3.1	2.7	3.1	6.0	7.1	9.3	8.9	(8.1) ^P	7.4	(10.5) ^S	(10.2)	10.1	7.0	6.4 ^H	4.9 ^H	4.7 ^K	5.1 ^K	5.2 ^K	4.7 ^K	
25	(3.5) ^K	2.5 ^K	1.9 ^K	2.3 ^K	2.3 ^K	2.4 ^K	3.7 ^F	5.6	8.5 ^J	10.9	10.4	8.8	8.8	7.9	7.5	7.7	7.3	5.9	4.7	3.7	A	A	3.6 ^F	3.3 ^J
26	2.9	2.9	3.7	3.3	2.4	2.5	2.9 ^H	6.4	7.2	9.4	8.9	9.2	9.2	8.5	(8.3) ^P	8	8.0 ^P	6.7 ^P	5.3 ^P	4.9 ^P	(3.2) ^P	3.6	3.5 ^J	3.8
27	3.8 ^V	3.7	3.3	3.3	3.3	3.3 ^F	4.2	6.1	7.2 ^P	8.3	8.9	11.3	11.8	8.7	7.7	7.8	7.8	5.8 ^P	5.5	(5.8) ^P	6.4	2.3	2.8	2.9
28	3.3	3.4	3.4	3.5	3.2	2.7	3.6	5.8 ^H	7.5	9.6	11.1	11.5	11.1	9.9	9.4	8.6	7.1	8.9	7.1	4.9	3.8	3.9	2.4	2.6
29	3.0	3.3	3.5	3.6	3.4	3.3	3.6	5.7 ^J	C	C	C	C	9.4	C	C	C	C	6.4	5.8	4.0	3.1	3.2	3.4	2.8
30																								
31																								
Mean	3.5	3.6	3.4	3.3	3.0	2.8	3.2	5.7	6.7	8.2	8.6	9.3	9.6	8.7	8.3	7.8	7.0	6.0	4.9	4.4	3.9	3.4	3.4	3.4
Median	3.4	3.6	3.4	3.2	3.1	2.8	3.1	5.7	6.6	8.2	8.8	9.2	9.4	8.5	8.2	7.6	6.9	5.8	5.0	4.4	3.6	3.4	3.4	3.4
Count	28	28	28	26	29	29	29	29	26	26	26	27	29	27	27	26	27	29	28	26	28	26	28	27

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

IONOSPHERIC DATA

Kokubunji Tokyo

Feb. 1952

h_pF₂

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	340 ^P	F	300 ^F	270 ^F	290 ^F	350	300	260	(280)	260 ^S	B	(300)	250	240	280	240	270	250	260	330	380 ^F	390	370	350	
2	310	300	300	A	310	390 ^H	300	270	260	280	290	290	320	260	260	250	230	380 ^P	(260) ^P	290	280	(260) ^P	310	390	
3	(400)	(350)	400	360	270	420	470	280	(240)	290	280	310	300	300	(280)	(230)	290	250	230	280	260	320	360 ^F	340	
4	330	(300)	(310)	310	290	340 ^F	(310)	240	240	260	290 ^F	290	280	270	250	230	250	250	A	A	320	300	350	35	
5	380 ^F	350	330	320	300	280	410 ^H	250	240	290	310	270	290	270	270	270	260	240	270	300	310	310	320	A	
6	B	A	310	270	240	260	300	260	250	280	290	(300)	260	280	280	270	260	290	290	260	250	410	410	410	
7	390 ^F	250	280	A	400 ^F	310	400	220	260	(300)	290	300	(280)	310 ^P	(290)	300	260	280	310	340	310	300	5B	(400)	
8	340	340	290	340	250	350	260	250	250	250	(290)	270	270	260	250	290	270	270	280	320	310	S	(330)	(350)	
9	(360)	390	420	380	250	350	320	290	290	270 ^P	290	290	290	290	280	280	280	270	320	340	260	(320)	330 ^P	360	
10	410	360	280	260	240	360	300	300	310	310	300	290	270	260	250	270	250	(250)	320	340	260	(320)	330 ^P	380	
11	(380)	360	330	360	360	280	280	270	280	280	320	300	290	280	280	250	250	300	(300) ^P	260 ^P	290	(370)	320	(350) ^F	
12	270 ^H	290	(260)	(260)	290	330	310 ^F	230	260	280	(270)	260	300	280	(280)	270	270	240	260	290	270	360	340	370	
13	390	300	310	310	340	300	290	290	270	280	(270)	260	280	(270)	280	270	250	270	300	300	BS	BS	250	360	
14	380 ^F	340	370	360	300	300	310	280	260	280	(290)	290	280	280	240 ^S	240	240	260	260	290	270	380	350	320	
15	370	360	350	320	270	400 ^F	360 ^F	240	C	C	290 ^P	280	280	280	280	270	270	240	260	300	310	(380) ^F	350	320	
16	340	320	310	320	230	300	350	280	C	(260)	260	(240)	230	230	250	240	240	240	300	280	300	280	(380)	370	
17	350	320	310	280	310	360	260	270	310 ^H	250	240	280	280	270	270	230	230	270	290	270	280	280	310	360	340
18	340	300	350	300	280	260	260	(270)	220	240	250	240	260	310 ^P	300	(250)	(220)	260	300	280	400 ^F	360	380	390	
19	420 ^F	390 ^F	350 ^F	A	330	A	340	250	280 ^P	(310)	300	(310)	(330)	310	250	240	240	230	240	240	310	250	330	360	320
20	350	290	290	320	330	A	390 ^F	280	260	240	280	240	220	(290)	290	260	280 ^P	240	230	320	360	320	330	350	
21	350	300	300	390 ^F	350	360	330	240	270	240	C	C	C	C	C	C	C	(250)	310	280	310	320	330	350	
22	370	330	A	A	350	350	300	240	C	C	C	C	280	C	C	C	C	(250)	310	280	300	320	330	350	
23	340	330	330	340	310	300	290	280	290	(290)	300	320	320	(310)	290	290	260	(260)	(290)	300	300	320	350 ^P	A	
24	(360)	340	340	290	270	310	300	270	290	250	290	(270)	350	(310)	(290)	270	260	260 ^H	300	400 ^K	380	410 ^K	(320)	280 ^K	
25	(340)	270	A	K	(520)	410	430	300 ^F	(330)	300	270	260	260	250	240	250	250	260	240	320	A	A	330 ^F	(420)	
26	350	350	310	230	280	290	330 ^H	270	270	270	280	290	280	280	(280)	280	250 ^P	250 ^P	270 ^P	260 ^P	330	(330)	330	360	
27	310	290 ^F	330	350	380 ^F	290	240	240	290 ^P	290	310	310	290	290	280	290	300	250 ^P	290	(280)	240	260	400	340	
28	360	350	370	370	270	310	330	290 ^H	340	300	330	290	300	300	300	280	300	280	280	310	260	280	400	350	
29	380	350	400	390	320	370	310	(280)	C	C	C	C	270	C	C	C	C	260	230	270	300	A	320	330	
30																									
31																									
Mean Value	360	330	330	330	300	330	320	260	270	270	280	280	280	280	270	260	260	260	260	280	300	340	350	360	
Median Value	360	330	310	320	300	340	310	270	270	280	290	290	280	280	280	260	260	260	260	290	300	330	350	350	
Count	28	27	27	25	29	27	29	29	26	27	26	27	29	27	27	26	27	29	28	26	28	25	28	26	

h_pF₂

Sweep 1. 0 Mc to 17.2 Mc in 2 min

Manual Automatic

K 2

The Central Radio Wave Observatory
Koganei-machi, Kitakama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

f'F2

Feb. 1952

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

Manual Automatic

Sweep _L_0_ Mc to _J_7.2_ Mc in _2_ min

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Feb. 1952

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								Q	L	3.8	4.4 ^H	4.4	4.4	4.2	B	L	Q	Q						
2								Q	Q	Q	L	4.5	L	4.5	4.1	L	Q	Q						
3								Q	Q	Q	L	4.3	L	4.2	L	A	Q	Q						
4								Q	Q	Q	A	B	B	A	B	A	Q	Q						
5								Q	Q	L	L	4.0	4.2	4.3	4.1	A	Q	Q						
6								Q	L	4.2	4.4	4.6	4.5	4.2	4.1	L	Q	Q						
7								Q	Q	L	A	L	L	L	L	L	L	Q						
8								Q	Q	L	L	L	L	L	L	L	L	Q						
9								Q	Q	L	L	L	4.4	4.4	L	A	L	Q						
10								Q	Q	L	L	L	4.4	4.3	4.2	L	Q	Q						
11								Q	Q	L	L	4.4	L	L	L	Q	L	Q						
12								Q	Q	L	L	L	L	L	C	4.2	L	L	Q					
13								L	L	L	L	L	L	4.2	L	Q	S	Q						
14								Q	Q	L	4.1	L	L	4.2	L	L	L	Q						
15								Q	C	C	4.2	L	4.4	L	L	L	Q	Q						
16								Q	Q	C	L	C	L	L	L	A	Q	Q						
17								Q	Q	L	L	L	L	L	L	L	L	L						
18								Q	Q	Q	L	L	L	4.5	L	L	L	Q						
19								Q	L	L	L	L	Q	L	L	A	Q	Q						
20								L	L	L	L	L	L	L	L	L	4.2	L	Q					
21								Q	Q	Q	L	L	4.4	L	L	L	Q	Q						
22								Q	C	C	C	C	4.4	C	C	C	C	Q						
23								Q	Q	L	L	4.2	L	4.5	L	L	Q	A						
24								Q	Q	L	L	L	L	L	L	L	L	Q						
25								Q	L	L	L	L	L	L	L	L	L	Q						
26								Q	L	L	4.3	L	L	L	L	L	L	Q						
27								Q	Q	L	L	L	A	Q	Q	Q	Q	Q						
28								L	3.5	L	L	L	4.3	L	L	L	Q	Q						
29								L	C	C	C	C	L	L	L	L	C	Q						
30																								
31																								
Mean Value									3.5	4.0	4.3	4.4	4.4	4.3	4.1	4.2								
Median Value									3.5	4.0	4.3	4.4	4.4	4.3	4.1	4.2								
Count									1	2	6	6	9	11	5	1								

f_oF1

Sweep 1. 0 Mc to 17.2 Mc in 2 min

Manual

Automatic

K 4

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

f'F1

Feb. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	290	240	200 ^H	280	240	220	B	230	Q							
2								Q	Q	Q	220	230	220	250	200	200	Q							
3								Q	Q	250	220	270	270	230	250	A	Q							
4								Q	Q	Q	A	A	A	A	A	A	Q							
5								Q	Q	210	240	230	220	230	220	A	Q							
6								Q	220	220	220	210	220	200	230	230	Q							
7								Q	Q	250	A	290	270	250	250	220	B	Q						
8								Q	Q	240	220	230	210	240	Q	Q	Q							
9								Q	Q	240	220	210	230	240	240	A	220	Q						
10								Q	Q	230	250	220	220	240	230	210	Q							
11								Q	Q	230	240	240	220	230	230	Q	220	Q						
12								Q	Q	230	230	220	200	200	200	220	230	Q						
13								250	250	250	230	220	230	230	240	Q	S	Q						
14								Q	Q	280	230	220	210	220	200	240	230	Q						
15								Q	C	C	220	210	220	220	240	Q	Q	Q						
16								Q	Q	C	230	220	200	200	200	A	Q	Q						
17								Q	Q	220	220	240	250	210	210	220	200	210						
18								Q	Q	Q	210	180	230	220	210	200	Q	Q						
19								Q	210	210	230	190	Q	250	250	A	Q	Q						
20								240	230	Q	220	220	200	200	200	220	220	Q						
21								Q	Q	Q	210	200	230	220	220	220	Q	Q						
22								Q	C	C	C	C	220	C	C	C	C	Q						
23								Q	Q	210	250	230	230	250	240	250	Q	A						
24								Q	Q	210	250	220	220	260	[240]	230	Q	Q						
25								Q	250	200	200	220	230	220	210	220	230	Q						
26								Q	240	220	220	210	270	240	230	230	Q	Q						
27								Q	Q	210	270	270	A	Q	Q	Q	Q	Q						
28								230	220	230	220	220	270	250	230	220	Q	Q						
29								250	C	C	C	C	A	C	C	C	C	Q						
30																								
31																								
Mean Value																								
Median Value								240	240	230	230	230	230	230	220	220	220	210						
Count								4	8	20	25	26	26	25	23	16	7	1						

Sweep 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

IONOSPHERIC DATA

Kokubunji Tokyo

foE

Feb. 1952

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	2.3	BH	BH	3.0	3.2 ^H	3.1 ^H	2.6	2.4 ^H	2.0	B						
2								2.0	2.7	2.8	3.1	3.0	2.8	2.8	2.8	2.6	2.0	B						
3								B	B	2.5	A	3.0	3.1	B	2.8	2.5	2.5	A						
4								B	A	A	A	A	A	A	A	A	A	A						
5								1.5	2.7	2.9	3.2	3.3	3.2	3.5	2.9 ^J	A	A	A						
6								B	2.4	A	B	B	B	B	B	B	A	A						
7								B	2.4	2.5	3.0	3.0	B	B	B	B	B	A						
8								1.9	2.3	2.9	3.1	3.1	3.2	3.1	A	A	A	1.5						
9								1.7	2.2	2.7 ^J	2.9	2.9	3.2	3.2	3.0	A	2.3	A						
10								1.7	2.4	2.7	2.7	3.2	3.2	3.0	2.8	2.7	2.3	1.8						
11								1.8	2.5	A	B	B	B	3.2 ^B	3.1	2.7	2.3	1.9						
12								1.8	2.3	2.6	3.0	3.2	B	C	B	B	2.4	1.8						
13								1.8	2.3	2.5	2.9	3.1	3.0	3.0	B	2.8	2.4	1.7						
14								A	2.4	2.7	B	A	A	3.4	A	A	A							
15								B	C	C	3.0 ^H	3.2	3.3	3.3	3.0	2.7	2.4	B						
16								2.0	2.4	(2.8) ^C	3.1	(3.2) ^C	3.4	3.2	3.2	2.9	B	A						
17								1.7	2.5	2.8	A	B	3.2	3.1	2.9	2.4	2.2	1.9						
18								1.8	2.6	2.7	3.1	3.3	3.3	3.2	3.0	2.9	A	A						
19								1.6	2.4	2.8	3.0	B	3.3	3.3	A	A	A	A						
20								1.9 ^F	A	A	A	B	B	B	B	B	2.3 ^J	2.0						
21								2.1	2.6	2.9	3.0	B	A	A	A	A	A	1.4						
22								1.7 ^J	C	C	C	C	A	C	C	C	C	A						
23								B	2.6 ^F	2.8	3.0	3.3	3.4	3.2	3.1	A	2.5	A						
24								1.7	2.3 ^J	3.0	3.2	3.3	3.2	3.2	C	A	A	1.8						
25								2.0	2.4	2.6	2.8	3.0	3.2	3.0	3.1	3.0	2.2 ^J	A						
26								1.6	2.3	2.8	B	3.2	3.3	3.2	3.0	B	A	1.9						
27								2.0	A	2.6 ^B	3.0	3.1	3.2 ^A	3.1	3.1	2.9	2.4	A						
28								A	A	A	A	A	A	A	B	B	B	1.8						
29								2.0	C	C	C	C	A	C	C	C	C	2.0						
30																								
31																								
Mean								1.8	2.4	2.7	3.0	3.1	3.2	3.2	3.0	2.7	2.3	1.8						
Median								1.8	2.4	2.7	3.0	3.2	3.2	3.2	3.0	2.7	2.3	1.8						
Mode								2.0	2.1	2.0	1.7	1.8	1.8	1.9	1.5	1.2	1.4	1.2						
Count																								

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

foE

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 36° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

f' E

Feb. 1952

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	120	110 ^H	120 ^H	120	110 ^H	110 ^H	110	120 ^H	120	B						
2								150	120	110	110	110	100	110	110	110	100	B						
3								B	130	A	A	110	110	110	100	100	110	A						
4								B	A	A	110	A	A	A	A	A	A	A						
5								120	120	110	110	120	120	120	120	A	A	A						
6								B	110	A	B	B	B	B	B	110	A	A						
7								B	120	110	110	120	120	B	120	B	120	A						
8								160	120	110	110	110	120	120	A	A	A	B						
9								140	120	120	110	120	110	120	120	A	A	A						
10								B	130	120	110	110	110	110	110	110	110	B						
11								B	150	A	120	110	100	110	110	110	110	170						
12								140	110	110	110	120	(120) ^C	110	110	110	110	110						
13								160	110	110	120	120	120	120	120	120	110	130						
14								A	120	110	100	A	A	110	A	A	A	A						
15								B	C	C	110 ^H	110	140	110	110	110	110	110						
16								150	120	(110) ^C	100	(100) ^C	100	100	110	100	B	A						
17								120	110	120	110	100	110	110	110	110	100	120						
18								130	100	100	100	100	100	100	100	100	A	A						
19								120	110	110	120 ^B	B	110	110	110	A	A	A						
20								B	A	A	A	100	100	100	110	B	110	100						
21								130	110	100	100	100	A	A	A	A	110							
22								120	C	C	C	A	A	C	C	C	C	A						
23								110	120	110	110	110	110	110	120	A	110	A						
24								B	120	120	120	100	110	110	C	A	A	110						
25								B	110	110	110	110	110	110	110	110	110	A						
26								120	120	110	110	110	110	110	110	100	A	120						
27								110	A	110	110	110	A	110	110	110	110	A						
28								A	A	A	A	A	A	120	120	130	120	B						
29								120	C	C	C	C	A	C	C	C	C	120						
30																								
31																								
Mean Value								130	120	110	110	110	110	110	110	110	110	110						
Median Value								120	120	110	110	110	110	110	110	110	110	110						
Count								16	22	21	23	22	21	23	20	16	16	16						

Sweep 1.0 Me to 17.2 Me in 2 min Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Feb. 1952

fEs

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	E	1.6	E	1.6	1.6	E	E	2.4	G	3.2	G	G	4.4Y	G	G	G	G	D	E	E	E	E	E	1.7	
2	2.0	2.0	2.0	2.2	1.6	1.8	E	G	G	3.8	4.2	G	G	G	G	G	2.3	1.8	E	E	2.2	2.1	E	E	
3	E	2.2	E	E	E	E	1.6	2.1	G	3.6	4.0	3.6	4.7	3.6Y	4.3	3.6	G	3.8	3.2	2.4	2.4	1.9	2.0	2.2	
4	3.8	1.8	2.0	1.6	1.6	E	E	1.6	4.0	5.0	7.0	3.7	3.7	6.3	3.5	3.7	3.2	3.8	8.0	6.0	3.4	2.2	2.6	2.8	
5	2.1F	2.1	2.4	2.3F	1.9	2.0	E	G	3.4	3.6	4.2	3.9	G	4.1	G	4.7	3.5	2.6	2.4	3.3	2.0	2.0	E	5.6	
6	B	6.0	2.6	1.8	E	E	E	B	G	3.9	B	4.4	4.8	B	B	G	2.4	2.0	2.8	1.7	E	E	E	E	
7	E	E	2.4Y	3.2	2.3	2.2	2.5	B	G	3.8	4.9	4.3	G	B	B	B	G	1.8	E	E	E	E	E	E	
8	E	E	E	2.2	E	E	E	1.7	G	G	G	G	G	G	3.8	4.0	2.4	G	E	E	E	E	E	E	
9	E	E	E	E	E	E	E	E	G	G	G	G	G	G	G	5.4	G	1.9	2.8	2.0	1.7	1.7	E	E	
10	2.0	E	E	E	E	E	E	G	G	4.2	4.6	4.9	G	G	G	G	G	G	2.2	E	E	E	E	E	
11	E	E	E	E	E	E	E	2.4F	G	3.5	3.2	3.9	G	G	G	G	G	1.6	E	E	E	E	2.4	E	
12	E	2.5	E	E	E	E	E	E	G	G	G	G	G	C	G	G	G	G	E	E	E	E	2.0	E	
13	E	E	E	E	E	E	E	1.9	G	G	G	G	G	G	G	G	G	G	E	E	E	2.4	E	E	
14	2.4	3.2	2.8	2.0	E	E	E	2.0	2.7	G	G	3.8	G	3.4	3.3	3.0	3.0	2.3	2.4	E	E	E	E	E	
15	E	2.2Y	E	E	E	E	E	E	2.2	C	C	G	G	G	G	3.6	G	G	2.2	E	E	E	E	E	
16	E	E	E	E	E	E	E	E	G	C	C	C	G	G	G	6.4	B	3.7	5.5Y	2.4	E	E	E	1.7	
17	1.9	2.1	1.8	2.2	2.1	2.4	2.3	G	3.7	3.6	4.0	5.0	4.0	3.8	G	G	G	G	E	E	E	E	E	E	
18	2.0	E	2.8	E	E	E	E	E	G	3.8	5.1	6.0	4.3	4.0	G	G	4.0	3.2	2.6	3.6	E	E	2.4	3.0	
19	2.8	3.0	3.2F	3.5	3.0	2.8	E	G	G	3.2	G	3.8	G	4.2	4.4	5.6	3.5	3.6	3.5	4.9	4.1	4.2	5.8	3.8	
20	2.7	2.2	2.2	2.8	3.6F	3.2F	2.8	G	3.7F	4.8	4.3	G	G	G	G	B	G	G	3.7	2.4	2.6	2.2	2.4	3.8	
21	3.6Y	2.5	2.3	2.3	2.3	2.1	E	G	G	G	G	G	3.9	4.2	4.4	3.1	2.4	G	E	E	E	E	E	E	
22	1.6	1.7	4.8	5.4F	3.0F	2.5	1.9	G	C	C	C	C	3.6	C	C	C	C	2.0	3.5	3.2Y	E	E	E	2.5	
23	E	1.7	1.5	1.9	2.0	1.6	E	E	G	G	G	G	G	G	G	4.9	4.9	4.5	2.3	2.6	2.3	2.2	2.2	5.3	
24	2.0	E	1.6	1.4	E	E	E	E	G	G	G	G	G	G	C	3.4	3.0	G	2.2	E	E	E	E	E	
25	1.6	E	2.2	2.5	2.0	E	E	E	G	G	G	G	G	G	G	G	G	3.8	3.0	2.9	5.7	5.5	2.7	2.2	
26	2.4	E	2.4	E	E	1.5	E	E	G	G	G	G	4.9	4.4	G	G	2.8	3.4	2.6	2.8	3.6	2.8	2.4	E	
27	E	E	1.6	E	E	E	E	G	2.9	G	G	4.7	4.4	4.7	5.6	6.3	5.5	4.6	4.1	2.2	3.6	1.8	E	2.2	
28	1.6	1.7	E	E	E	E	E	1.9	2.9	3.6	3.6	3.7	3.7	G	G	G	G	G	2.2	3.2	2.5	2.9	2.3	3.0Y	
29	4.2Y	4.4	3.3	3.7	2.5	2.0	E	G	C	C	C	C	5.2	C	C	C	C	3.2	3.2	2.2	2.4	3.6	4.4	4.2	
30																									
31																									
Mean Value	2.4	2.5	2.4	2.5	2.3	2.2	2.1	2.2	3.4	3.8	4.5	4.3	4.2	4.4	4.2	4.5	3.4	3.0	3.2	3.0	2.9	2.7	2.8	3.1	
Median Value	1.6	1.7	1.8	1.6	E	E	E	E	G	3.2	G	G	G	G	G	G	G	2.0	2.4	2.0	E	E	E	E	
Count	28	2.9	2.9	2.9	2.9	2.9	2.9	2.7	2.6	2.5	2.6	2.6	2.9	2.4	2.5	2.5	2.6	2.8	2.9	2.9	2.9	2.9	2.9	2.9	

fEs

Swamp J... Mc to J... Mc in ... min

Manual Automatic

K 8

IONOSPHERIC DATA

f_{min}F

Feb. 1952

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	1.3	E	E	E	E	E	1.3	1.7	2.8	2.8	3.1	3.6	3.6	3.2	4.0	3.1	2.7	2.0	1.5	1.8	1.6	1.4	1.3	1.2	
2	1.1	1.6	1.2	A	1.1	1.4	1.4	2.1	2.5	3.1	2.8	3.1	3.1	3.3	3.2	2.6	2.6	1.7	1.4	1.5	1.5	1.2	1.5	1.3	
3	1.1	1.2	1.2	1.2	1.2	1.2	1.1	2.0	3.2	3.0	3.2	4.0	3.6	3.3	3.6	3.6	2.8	2.6A	2.3A	2.0A	2.1A	1.5	1.4	1.4	
4	1.8	E	1.8	1.6	1.2	1.3	1.5	1.6	3.2	3.4	5.5A	5.2	4.7	4.7A	4.5	4.1	2.8	2.9A	A	A	2.7A	1.7	2.0A	A	
5	1.7	E	1.2	1.2	1.2	1.3	1.3	1.9	2.8	3.2	3.5	3.5	3.3	3.5	3.5	4.0A	2.9	2.0	2.2A	1.6	1.8	1.4	1.4	A	
6	β	A	2.0A	1.2	E	1.1	1.5	2.2	2.1	3.2	3.5	3.8	3.8	3.4	3.4	3.4	3.0	2.8	2.5A	1.7	1.3	1.3	1.3	1.2	
7	E	E	1.6	A	1.5	1.3	1.5	1.7	2.4	3.1	4.1	3.8	3.5	3.6	3.5	3.1	2.8	2.0	1.6	1.6	1.3	1.6	1.2	1.5	
8	1.1	E	E	E	E	E	E	2.1	2.6	3.1	3.2	3.5	3.2	3.2	3.6	3.2	2.6	1.9	1.6	1.6	1.5	1.8	1.4	1.8	
9	1.7	1.1	1.6	1.2	1.2	1.4	1.4	1.8	2.6	3.1	3.2	3.4	3.4	3.5	3.6	4.6A	2.5	2.0	2.0A	1.7	1.5	1.6	1.4	1.5	
10	1.4	1.2	1.2	1.3	1.3	1.2	1.2	2.0	2.7	3.4	3.4	3.3	3.3	3.4	3.2	2.9	2.7	1.9	1.6	1.5	1.6	1.7	1.7	1.5	
11	1.5	1.2	1.5	1.1	1.2	1.7	1.6	1.8	2.5	3.3	3.5	3.4	3.4	3.4	3.2	3.4	2.7	1.9	1.4	1.2	1.4	1.4	1.8	1.5	
12	1.6	E	1.3	1.2	1.6	1.2	1.5	1.8	2.7	3.3	3.2	3.4	3.5	(3.3) ^C	3.1	3.1	2.8	1.8	1.5	1.3	1.4	1.3	1.3	1.3	
13	E	1.1	1.2	1.2	1.1	1.4	1.4	1.9	2.4	3.1	3.2	3.6	3.5	3.7	3.6	3.5	3.6	1.8	1.4	2.0	1.8	1.8	1.4	2.0	
14	1.7	2.5	1.6	1.2	1.4	1.3	1.5	1.6	2.6	3.4	3.5	3.4	3.5	3.3	3.1	2.8	1.9	1.2	1.4	1.5	1.4	1.5	1.5	1.5	
15	1.5 ^S	1.2	1.2	1.2	1.2	1.2	1.2	2.2	C	C	3.4	3.5	3.6	3.4	3.2	3.3	2.9	2.4	1.6	1.4	1.4	1.5	1.4	1.6	
16	1.4	1.3	1.3	1.3	1.3	1.3	1.5	2.2	2.9	(3.0) ^C	3.2	(3.4) ^C	3.5	3.5	3.4	6.0A	2.4	3.3A	2.8A	1.5	1.3	1.4	1.3	1.6	
17	1.3	1.3	1.2	1.2	1.3	1.2	1.7	2.1	2.8	3.2	3.8	4.3	3.6	3.4	3.3	3.4	2.6	2.2	1.6	1.5	1.2	1.2	1.5	1.4	
18	1.3	1.4	1.8	2.0	1.4	1.4	1.3	2.0	2.8	3.1	3.6	3.7	3.3	3.4	3.5	2.9	3.4	2.2	2.0A	3.6A	1.5	1.5	1.4	2.0A	
19	2.0A	2.1A	2.7A	3.2A	1.8	2.6A	1.4	2.0	2.5	3.2	3.4	3.2	4.0	3.6	3.4	5.3A	3.6A	2.2	3.2	2.8A	2.0A	2.4A	2.0	2.0	
20	1.8	E	1.6	1.8	1.9	2.6A	1.7	2.3	3.0	3.0	3.3	4.3	3.6	3.5	3.2	3.2	3.2	2.0	1.9	1.6	1.6	1.4	1.6	1.6	
21	1.5	1.3	1.2	1.7	1.1	1.3	1.3	2.1	2.8	2.9	3.2	3.4	4.1	3.5	3.3	3.1	2.6	2.1	1.2	1.6	1.6	1.6	1.6	1.5	
22	1.3	1.4	A	A	1.4	1.2	1.5	2.3	C	C	C	C	3.4	C	C	C	C	2.2	1.4	2.0A	1.5	1.3	1.4	1.4	
23	1.1	1.2	1.1	1.4	1.4	1.3	1.8	2.3	2.8	2.9	3.6	3.6	3.4	3.4	3.5	3.4	2.6	3.5A	2.6	2.2A	2.3A	1.8	1.6	3.6A	
24	1.5	1.2	1.2	1.2	1.2	1.2	1.2	2.0	2.7	3.2	3.4	4.0	3.5	4.1	(3.6) ^C	3.1	3.6	2.3	2.0A	1.3	1.4	1.3	1.2	1.2	
25	1.1	1.6	1.8	1.3	1.3	1.3	1.3	2.0	2.8	3.1	3.3	3.3	3.3	3.3	3.2	3.0	2.9	2.2	2.0A	2.3A	A	A	2.3	2.1A	
26	2.0A	1.3	1.3	1.3	1.3	1.3	1.5	2.1	2.4	2.9	3.3	3.2	3.6	3.5	3.3	3.8	3.2	2.1	2.4A	3.0	2.2A	2.0A	1.6	1.6	
27	1.2	1.2	F	E	1.2	1.1	1.4	2.0	3.1	2.8	3.8	3.7	4.4A	4.1	3.6	3.1	2.8	2.0	3.4A	1.5	1.5	1.5	1.4	1.5	
28	E	1.2	1.1	1.1	1.1	1.2	1.2	1.9	2.6	3.0	3.3	3.2	3.2	3.2	3.3	3.2	3.1	2.0	2.0	1.5	2.1A	2.2A	1.6	1.3	
29	1.3	2.6A	3.0A	3.0A	1.4	1.2	1.2	2.1	C	C	C	C	4.0	C	C	C	C	2.0	2.2A	1.6	2.0	3.0A	1.5	1.6	
30																									
31																									
Mean Value	1.5	1.4	1.6	1.5	1.3	1.4	1.4	2.0	2.7	3.1	3.5	3.6	3.6	3.5	3.4	3.5	2.9	2.2	1.9	1.8	1.7	1.6	1.5	1.6	
Minimum Value	1.4	1.2	1.2	1.2	1.2	1.2	1.4	2.0	2.7	3.1	3.4	3.5	3.4	3.4	3.4	3.2	2.8	2.0	2.0	1.6	1.5	1.5	1.4	1.5	
Count	28	28	28	26	29	29	29	29	26	26	27	27	29	27	27	27	27	27	29	28	28	28	29	27	

f_{min}F

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. $35^{\circ}42.4'N$
Long. $139^{\circ}29.3'E$

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

fminE

Feb. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	E	E	E	1.3	E	E	1.3	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	B	E	E	E	E	E	E
2	1.1	1.1	E	E	1.4	1.4	E	1.4	1.4	1.3	1.3	1.4	1.3	1.4	1.3	1.4	1.2	1.6	1.6	E	1.6	1.5	E	E
3	1.3	1.3	E	E	E	1.3	1.3	1.8	1.6	1.5	1.6	1.6	1.4	1.8	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.6	1.5	1.4
4	1.4	1.2	E	E	1.4	E	E	1.4	1.4	1.5	1.6	1.6	1.6	1.6	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.4	1.4	1.3
5	1.2	E	E	E	E	1.1	E	1.2	1.4	1.4	1.4	1.6	1.7	1.7	1.9	1.8	1.4	1.6	1.4	1.6	1.6	1.4	E	1.6
6	B	1.4	1.1	1.1	E	E	E	B	1.4	1.8	B	3.4	3.2	B	B	2.1	1.8	1.4	1.3	1.3	E	E	E	E
7	E	E	1.1	1.1	1.1	1.8	1.7	B	1.6	1.4	1.6	1.8	2.1	B	2.1	B	2.0	1.4	E	E	E	E	E	E
8	E	E	E	E	E	E	1.5	1.5	1.4	1.4	1.4	1.8	2.2	1.6	1.8	1.6	1.4	1.5	E	E	E	E	E	E
9	E	E	E	E	E	E	E	1.5	1.6	1.7	1.4	1.4	1.4	1.5	1.4	1.2	1.2	1.4	1.6	1.5	1.6	1.5	E	E
10	1.4	E	E	E	E	E	E	1.5	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.2	1.2	1.5	1.6	E	E	E	E	E
11	E	E	E	E	E	E	1.7	1.6	2.3	1.5	1.9	1.4	1.4	1.4	1.4	1.6	1.3	1.4	E	E	E	E	2.0	E
12	E	E	E	E	E	E	E	1.5	1.3	1.3	1.4	1.4	1.5	0.4	1.4	1.4	1.7	1.3	E	E	E	E	1.9	E
13	E	E	E	E	E	E	1.3	1.4	1.2	1.3	1.4	1.4	1.5	1.6	1.4	1.3	1.4	1.4	1.4	E	E	1.6	E	E
14	1.5	1.6	1.6	1.3	E	E	1.2	1.3	1.6	1.4	1.4	1.4	1.4	1.6	1.4	1.3	1.3	1.4	1.6	E	E	E	E	E
15	E	1.4	E	E	E	E	E	1.5	C	C	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.6	E	E	E	E	E
16	E	E	E	E	E	E	E	1.5	1.3	[1.4] ^C	1.4	[1.6] ^C	1.8	1.4	2.0	1.4	B	1.5	1.9	1.3	E	E	E	1.4
17	1.6	1.1	1.2	1.2	1.3	2.0	1.3	1.3	1.4	1.3	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	F	E	E	E	E	F
18	1.2	E	1.4	E	E	E	E	1.3	1.4	1.4	1.4	1.2	1.2	1.3	1.2	1.3	1.2	1.2	1.7	1.3	E	E	1.6	1.4
19	1.4	1.2	1.2	1.2	1.2	1.2	E	1.3	1.4	1.5	2.6	3.2	2.6	1.9	2.0	1.5	1.3	1.3	1.3	1.4	1.3	1.4	1.4	1.5
20	E	E	E	E	E	E	E	1.4	1.6	1.4	1.4	1.6	1.5	1.6	1.6	B	2.0	1.3	1.4	1.2	1.3	1.3	1.3	1.3
21	1.2	1.1	1.1	1.2	1.3	1.2	E	1.3	1.5	1.4	1.3	1.3	1.4	1.3	1.3	1.3	1.4	1.2	E	E	E	E	E	E
22	1.3	1.4	1.4	1.2F	1.3	1.4	1.6	1.4	C	C	C	1.6	C	C	C	C	C	1.3	1.4	1.4	E	E	E	1.6
23	E	1.3	1.1	1.1	1.1	1.2	E	1.5	1.2	1.4	1.4	1.5	1.4	1.5	1.3	1.4	1.3	1.4	1.3	1.2	1.5	1.4	1.4	1.5
24	1.7	E	1.3	1.4	E	E	E	1.6	1.2	1.4	1.6	1.4	1.4	1.6	0.5	1.4	1.4	1.4	1.4	E	E	E	E	E
25	1.4	1.1	1.1	1.3	1.8	E	E	1.8	1.7	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.6	1.6	1.6	1.6	1.6	1.6
26	1.5	E	1.3	E	E	1.3	E	1.3	1.5	1.2	1.8	1.3	1.3	1.9	1.4	1.4	1.5	1.3	1.4	1.6	1.6	1.6	1.6	E
27	E	E	1.4	E	E	E	E	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.5	1.5	1.8	E	1.5	E	1.5
28	1.4	1.6	E	E	E	E	E	1.3	1.4	1.6	2.0	2.0	2.0	2.1	1.6	1.5	1.5	1.7	1.6	1.5	1.4	1.5	1.5	1.9
29	1.3	1.2	1.1	1.1	1.1	1.1	E	1.4	C	C	C	C	2.2	C	C	C	C	1.4	1.4	1.6	1.6	1.6	1.6	1.6
30																								
31																								
Mean Value	1.4	1.4	1.2	1.2	1.3	1.4	1.5	1.4	1.5	1.4	1.5	1.6	1.7	1.6	1.6	1.5	1.4	1.4	1.4	1.5	1.4	1.5	1.6	1.5
Median Value	1.2	E	E	E	E	E	E	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.4	1.4	1.4	1.4	1.4	1.2	E	E	E	E
Count	28	29	29	29	29	29	29	27	26	26	26	27	29	25	26	25	26	28	29	29	29	29	29	29

Sweep 1.0— Mc to 17.2— Mc in 2— min

Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

foF2

Feb. 1952

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	3.0 F	C	C	C	C	C	C	C	4.0	4.2	(7.0) ^F	(10.2) ^F	11.3	[9.2] ^C	7.0	7.7	5.9 ^P	(5.0) ^P	5.2	(5.5) ^P	3.5	4.9	5.0	4.2	
2	5.3	(5.7) ^F	2.0 ^F	2.2 ^F	2.0	2.1	2.2	3.6	6.6 ^F	6.2	6.9	[7.6] ^C	8.2	9.0 ^P	[9.1] ^C	8.4	6.7	6.9	4.5	3.2	3.5	2.7	2.4	2.6	
3	2.7	2.9	(3.0) ^F	3.7 ^F	3.7	2.1 ^F	2.1 ^F	3.1	6.3 ^F	6.0	7.5	7.7	7.4	9.7	[8.2] ^F	6.6	6.3 ^P	6.6	5.0	4.1	3.2	3.3	2.5	2.6	
4	2.8	2.8	3.0	2.9	2.8	2.5	2.4	3.3	5.7	6.3 ^F	7.7	(8.5) ^F	(9.5) ^P	8.6 ^P	(10.4) ^F	10.2	7.2	6.6	4.0	2.8	3.1	3.1	3.1	2.0	
5	3.2 ^F	3.3 ^F	3.4 ^F	3.9 ^F	4.4	3.1 ^F	2.8 ^F	3.3 ^F	5.7	6.3 ^F	6.9	7.8	8.7	(8.9) ^J	C	C	7.4	5.6	4.5	3.6	3.7	3.5	3.2	2.9	
6	3.0	3.2	3.2	3.4	3.4	2.3	2.4	3.1	5.7	(6.4) ^F	7.9 ^F	(7.9) ^F	C	C	7.1	[7.2] ^C	7.3	6.4 ^P	5.6	5.6	3.0	3.7	3.4	3.2 ^P	
7	3.4	4.2	3.0	2.2	2.2	2.4	1.8	3.5	5.5	5.4 ^F	7.1	7.7	10.2	(8.6) ^F	C	C	(7.3) ^P	5.9	4.6	4.6	4.1	2.6	3.2		
8	3.3	3.1	[3.2] ^C	3.3	3.1	2.6 ^H	2.9	4.0	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
9	M	M	M	M	M	M	M	M	C	C	C	(7.3) ^P	[9.0] ^C	10.7	11.2	10.3	C	C	C	C	(5.5) ^P	4.1	3.1	2.7	3.1
10	2.9	3.2	3.2	3.5	2.9	1.7	2.0	3.5	6.8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	4.1 ^J	3.6	3.6	3.5	3.2	2.5	2.5	4.3	[5.3] ^F	(4.3) ^P	C	C	C	C	C	C	C	7.0	6.1 ^P	4.1	3.7	3.8	4.0	3.8	
13	3.5	3.7	3.0	3.2	3.0	2.8	2.9	3.9	5	(8.0) ^P	(8.3) ^P	(8.5) ^P	7.5	[7.2] ^F	(7.0) ^P	[7.0] ^C	7.1	6.3	5.5	5.0	4.2	4.3	4.3	4.1	
14	4.0	3.9	3.7	3.6	4.0	C	C	C	C	C	C	C	C	C	(8.1) ^P	(8.5) ^P	7.4 ^P	7.1	5.8	4.4	4.5	A	3.2	3.4 ^F	
15	3.7 ^F	3.7	3.8	3.9	3.0	2.7	2.4	4.3	5.0 ^P	C	C	C	C	C	C	(7.8) ^P	6.7	6.0 ^F	5.3	4.8	3.7	3.6	3.4	3.4	
16	3.4	3.4	3.5	3.8	4.3	1.7	1.8	3.7	C	C	C	C	C	10.5	[10.0] ^C	9.5	7.6	7.6	6.4 ^P	7.0	[6.1] ^C	5.2	3.9	4.1	
17	4.8	5.3 ^P	(5.9) ^P	4.4	2.7	2.7	2.9	4.7	(4.5) ^P	9.6 ^F	7.5	[7.5] ^P	(7.5) ^P	9.5	[8.8] ^C	(8.0) ^F	7.5	7.1	6.6 ^J	6.6 ^J	5.7	5.0	4.8	4.4	
18	4.5 ^F	4.3 ^F	4.4	4.0	4.3	3.7	2.9	5.0	6.6 ^J	7.1	(8.3) ^F	(4.5) ^P	C	C	C	C	(7.8) ^P	7.1	7.8	7.1	4.8	4.2	4.0	4.3	
19	C	C	4.7	4.0	3.8	3.5	C	C	C	C	(7.8) ^P	C	C	C	C	C	8.1 ^P	6.4 ^J	6.4 ^J	(5.6) ^P	3.8	3.4	C	C	
20	C	C	C	C	C	C	C	C	C	C	M	M	M	(8.4) ^F	9.1	(8.5) ^P	7.2	6.6 ^J	4.8	4.6	3.2	3.3	[3.4] ^C		
21	3.5	3.8	3.9	3.5	3.3	3.3	3.2	4.5	C	C	C	(8.0) ^P	8.8	[8.8] ^F	(8.4) ^F	7.8	7.6 ^F	7.1	6.9	4.7	3.9	4.4	4.7	4.4	
22	4.1	3.8	3.4	3.2	2.5	2.6	2.6	3.9	7.2	(7.4) ^P	(8.4) ^P	[9.6] ^C	(8.8) ^J	8.5	(8.9) ^F	C	C	7.0	5.7	4.8	4.5	4.7	4.4	4.2	
23	4.0	3.7	3.8	3.7	4.0	2.8	2.7	4.2	[6.1] ^C	8.0 ^F	7.8 ^P	(8.2) ^P	[8.4] ^C	8.6	C	(8.0) ^F	6.1 ^J	5.2 ^J	5.5	5.5	4.7	3.5	3.4		
24	3.5	3.6	3.8	4.3	3.9	2.7	2.2	4.0	6.6 ^J	C	C	C	7.6	C	C	C	7.3	6.8	6.2 ^J	(6.4) ^P	(6.6) ^J	(6.6) ^J	7.0	4.3	
25	4.0	2.8	2.0	2.2	2.4	2.5	2.8	4.4 ^F	C	C	C	(4.9) ^F	C	C	C	C	(7.5) ^P	6.9	6.7	5.2	4.4 ^F	4.0	3.2	A	
26	F	C	C	C	C	C	C	C	C	7.5	(7.7) ^P	[8.7] ^F	9.7	11.2	10.2	(10.0) ^P	7.2	(8.0) ^P	7.5	4.6	4.0	4.0	3.4	3.0	
27	3.2	3.1	3.0	3.0	3.9	3.0	3.3	4.6	5.6 ^J	[8.0] ^C	10.3	11.0 ^P	12.2	9.7	C	C	8.0 ^P	7.3	[6.4] ^C	(5.5) ^P	2.4	2.8 ^P			
28	3.0	3.1	3.2	3.2	3.5	3.2	3.3	4.3	5.6	[8.7] ^C	10.0	12.2	11.5	13.0	C	C	C	C	C	7.2	(5.8) ^F	3.1	2.4	2.8	
29	3.0	A	3.2	3.2	3.4	3.2	3.7	[4.6] ^C	5.5	7.3	[9.4] ^C	10.9	10.9	C	C	7.7	[7.4] ^C	(7.0) ^P	6.1	4.5	3.9	3.8	2.5		
30																									
31																									
Mean Value	3.6	3.6	3.4	3.4	3.3	2.7	2.6	4.0	6.2	7.2	9.0	9.8	9.3	9.5	8.8	8.4	7.3	6.9	6.0	5.1	4.4	4.1	3.6	3.5	
Value	3.4	3.6	3.3	3.5	3.2	2.7	2.6	4.0	5.8	7.3	7.8	8.4	9.0	9.2	8.8	8.2	7.4	7.0	5.8	5.0	4.1	3.9	3.4	3.4	
Count	2.4	2.2	2.4	2.4	2.4	2.3	2.2	2.2	1.8	1.7	1.7	2.0	1.7	1.7	1.4	1.6	2.0	2.4	2.5	2.7	2.7	2.6	2.6	2.5	

Y 1

Manual Automatic

Sweep 1.0 - Mc to 22.0 - Mc in 2 min

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

R'F2

Feb. 1952

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	C	C	C	C	C	C	C	210	250	240	280	250	240	240	250	200	240	240	210	240	210	250	320
2	260	200	250	300	250	340	300	250	230	240	300	260	280	270	250	240	250	230	210	240	250	270	300	320
3	300	300	330	250	210	300	340	260	230	200	250	250	290	270	230	250	240	220	220	200	270	240	280	330
4	250	310	290	240	240	290	340	240	230	210	280	250	250	270	250	250	A	A	200	220	200	280	250	260
5	300	340	300	250	220	200	300	250	230	250	300	260	250	260	250	250	240	220	210	250	250	230	250	250
6	270	300	300	250	220	350	350	300	230	230	270	280	280	270	260	280	240	240	240	210	210	240	200	350
7	300	220	[200]	200	350	230	440	280	230	230	260	240	270	290	290	250	250	240	210	240	260	220	280	320
8	250	320	[200]	240	210	250	290	230	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
9	M	M	M	M	M	M	M	M	240	230	260	260	230	280	260	250	250	230	210	210	210	230	250	280
10	290	270	270	250	190	410	350	270	250	250	C	C	C	C	C	C	C	C	C	C	C	C	C	
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	250	280	250	230	210	240	310	240	220	230	C	C	C	C	C	C	C	230	210	210	250	270	260	250
13	280	250	230	270	250	290	280	250	240	230	240	240	250	260	250	250	220	210	210	210	210	250	260	260
14	270	250	250	260	210	C	C	C	C	C	C	C	C	C	250	240	240	230	200	220	260	A	320	320
15	300	300	250	240	210	290	310	240	220	230	250	240	240	250	260	250	220	230	210	220	240	240	300	290
16	280	290	260	240	200	190	350	250	250	240	270	260	270	250	260	250	220	240	230	250	210	200	300	340
17	300	250	240	200	260	270	270	250	240	230	240	260	260	260	250	250	210	210	200	230	210	240	250	250
18	260	250	230	250	250	250	290	220	200	240	250	250	270	250	250	240	200	210	230	200	220	240	250	270
19	C	C	220	260	250	240	C	C	C	C	220	240	280	270	250	240	240	220	230	200	200	220	C	C
20	C	C	C	C	C	C	C	C	C	C	M	M	280	250	290	250	240	220	210	210	220	260	290	[300]
21	300	260	240	250	250	270	300	230	C	C	250	250	260	250	250	250	240	240	210	210	260	280	250	250
22	250	250	240	230	250	280	310	250	240	230	250	260	250	260	260	250	240	210	210	210	230	260	250	250
23	260	270	250	240	240	210	290	250	[250]	250	280	290	290	260	250	240	230	200	210	200	220	220	250	280
24	270	260	250	230	200	220	300	250	C	C	300	350	350	270	250	250	240	210	220	260	210	240	320	210
25	230	210	320	250	350	300	280	250	250	230	250	240	260	250	250	250	240	220	210	210	230	290	310	A
26	340	C	C	C	C	C	C	C	C	200	240	270	290	250	250	240	240	240	200	200	220	270	260	250
27	260	250	270	290	300	270	250	210	200	260	270	250	250	250	260	260	270	230	200	250	200	200	320	340
28	310	290	330	240	260	240	230	240	240	260	270	250	260	260	260	250	250	220	220	200	200	200	300	310
29	340	A	300	300	270	310	260	200	220	290	260	260	250	250	250	250	250	240	200	220	240	240	240	320
30																								
31																								
Mean Value	280	270	260	250	240	270	310	250	230	240	260	260	270	260	250	250	240	230	210	220	240	250	280	290
Median Value	280	260	250	250	240	270	300	250	230	230	250	260	260	260	250	250	240	230	210	210	230	240	260	280
Count	25	22	24	24	24	23	22	22	22	22	22	23	24	25	25	25	24	25	27	27	27	26	26	25

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. $31^{\circ} 12.5' N$
Long. $130^{\circ} 37.7' E$

Yamagawa

IONOSPHERIC DATA

foF1

Feb. 1952

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	Q	Q	L	4.3	4.6	4.5	4.3	L	Q	Q						
2								Q	Q	Q	L	4.5	4.5	4.5	4.4	4.1	B	Q						
3								Q	Q	Q	4.3	4.4	L	4.4	4.5	4.0	L	Q						
4								Q	Q	Q	4.5	L	4.5	4.4	A	A	A	A						
5								Q	A	L	4.2	4.5	4.5	4.5	4.4	4.2	L	Q						
6								Q	Q	Q	4.4	4.5	4.5	4.5	L	4.1	L	Q						
7								Q	Q	3.2	L	L	A	4.5	4.5	L	L	Q						
8								Q	M	M	M	M	M	M	M	M	M	M						
9								M	Q	L	L	L	A	L	A	A	L	Q						
10								Q	Q	L	C	C	C	C	C	C	C	C						
11								C	C	C	C	C	C	C	C	C	C	C						
12								Q	Q	Q	C	C	C	C	C	C	C	Q						
13								Q	Q	L	L	L	L	L	L	L	L	Q						
14								C	C	C	C	C	C	L	4.5	L	Q	Q						
15								Q	Q	Q	L	L	L	L	L	L	L	Q						
16								Q	Q	Q	L	L	4.5	4.5	L	4.3	Q	Q						
17								Q	Q	L	L	L	L	4.5	4.5	4.3	L	Q						
18								Q	L	L	L	L	4.5	4.5	4.5	L	L	Q						
19								C	C	Q	Q	L	L	L	L	4.0	4.0	Q						
20								C	C	C	M	M	L	L	L	L	4.0	Q						
21								Q	C	C	L	L	4.7	4.5	4.5	L	L	Q						
22								Q	Q	Q	L	4.6	4.6	L	L	L	4.0	Q						
23								Q	C	L	L	L	A	4.5	4.5	L	L	Q						
24								Q	Q	C	C	4.8	4.8 ^H	L	4.4	L	Q	Q						
25								Q	Q	L	L	L	L	L	L	L	L	Q						
26								C	Q	L	L	L	L	4.5	4.5	3.7	3.5	3.0						
27								Q	Q	L	L	L	L	L	L	L	L	Q						
28								Q	Q	L	L	L	L	4.0	L	L	L	Q						
29								Q	Q	L	L	4.5	L	4.5	4.4	4.2	L	Q						
30																								
31																								
Mean Value										3.2	4.4	4.5	4.6	4.5	4.5	4.1	3.9	3.0						
Median Value										3.2	4.4	4.5	4.5	4.5	4.5	4.1	4.0	3.0						
Count										1	4	8	10	15	13	9	4	1						

foF1

Sweep 1.0' Mc to 22.0 Mc in 2 min

Manual Automatic

Y 4

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

f'F1

Feb. 1952

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	Q	Q	220	220	240	230	200	190	Q	Q						
2								Q	Q	Q	240	240 ^A	230 ^A	230	230 ^A	210	200	Q						
3								Q	Q	Q	200	180	200	230	230	200	200	Q						
4								Q	Q	Q	210	210 ^A	220 ^A	200	A	A	A	A						
5								Q	A	240	240	230	210	200	200	210	240	Q						
6								Q	Q	Q	230	220	220 ^A	220	240	210	220	Q						
7								Q	Q	200	240	220	A	220 ^A	220 ^A	210	250	Q						
8								Q	M	M	M	M	M	M	M	M	M	M						
9								M	Q	220	210	230	A	260 ^A	A	A	200	Q						
10								Q	Q	230	C	C	C	C	C	C	C	C						
11								C	C	C	C	C	C	C	C	C	C	C						
12								Q	Q	Q	C	C	C	C	C	C	C	Q						
13								Q	Q	220	210	200	200	200	230	200	200	Q						
14								C	C	C	C	C	C	C	220	210	Q	Q						
15								Q	Q	Q	230	220	210	220	220	240	Q	Q						
16								Q	Q	Q	230	220	220	230	200	200	Q	Q						
17								Q	Q	230	230	250	250	230	210	210	210	Q						
18								Q	Q	200	220	220	200	210 ^A	200	200	200	Q						
19								C	C	C	Q	240	250	260	220	240	210 ^A	Q						
20								C	C	C	M	M	210	210	210	220 ^A	210 ^A	Q						
21								Q	Q	C	200	210	210	200	220	220	220	Q						
22								Q	Q	Q	220	210	210	210	210	220	220	Q						
23								Q	Q	C	240	230	250	A	240	210	210 ^A	Q						
24								Q	Q	C	C	200	200 ^H	220	240	230	Q	Q						
25								Q	Q	230	220	230	210	240	220	220	210	Q						
26								C	C	C	200	200	200	250	240	200	210	200						
27								Q	Q	240	240	240	220	200 ^H	220	250	230	Q						
28								Q	Q	220	230	220	210 ^A	200 ^A	230	200	200	Q						
29								Q	Q	220 ^A	240	240	230	210	230	240	240	Q						
30																								
31																								
Mean Value										220	220	220	220	220	220	210	220	200						
Median Value										220	230	220	210	220	220	210	210	200						
Count										12	21	23	21	25	23	23	18	1						

Y 5

Manual Automatic

Swamp L.P. Mc to 22.2 P. Mc in 2 min

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

IONOSPHERIC DATA

Yamagawa

Feb. 1952

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								C	2.1	2.6	2.9	3.1	3.1	3.1	2.9	2.8	2.6	2.1						
2								B	1.8	2.3	2.9 ^F	3.0	3.0	3.0	2.8	2.6	[2.4] ^B	2.1 ^F						
3								B	1.9	2.5 ^F	2.8	3.0	3.1	3.1	3.1	2.9	2.7	2.1						
4								B	1.9	2.5	2.8	3.0 ^F	A	3.2	A	A	A	A						
5								B	2.3	2.7	2.9	A	3.1	A	3.2	3.0	2.7	2.0 ^F						
6								A	2.1 ^F	2.8	3.0	3.3	A	A	A	A	3.0	2.8	3.1					
7								B	2.0	2.5	2.8	3.1	A	A	A	3.0	A	2.0						
8								B	M	M	M	M	M	M	M	M	M	M						
9								M	2.0	2.6	3.0	3.0	A	A	A	A	2.6	2.0						
10								B	2.3	2.7	C	C	C	C	C	C	C	C						
11								C	C	C	C	C	C	C	C	C	C	C						
12								B	2.2	2.5	C	C	C	C	C	C	C	C						
13								B	1.9	2.6	2.8	3.0	3.3	3.3	3.1	3.0	2.7	2.0						
14								C	C	C	C	C	C	3.1	3.3	3.1	2.7	2.5						
15								B	2.0	2.6	2.8	3.0	3.2	3.3	3.2	3.0	2.7	2.1						
16								B	2.1	2.5	3.0	3.2	3.4	3.5	3.1	2.9	2.6	2.1						
17								B	2.1	2.6	3.1	3.1	3.3	3.3	3.2	3.1	2.5	A						
18								B	2.2	2.6	3.0	3.0	3.1	3.2	3.1	3.1	2.7	2.3						
19								C	C	C	3.1	3.2	3.0	3.0	3.0	2.9	A	2.2						
20								C	C	C	M	M	A	3.1	A	A	2.6	A						
21								B	C	C	3.0	3.1	3.1	3.2	3.0	A	2.6	A						
22								B	2.2	2.5	3.0	3.2	3.3	3.3	3.2	3.0	2.8	2.2						
23								B	C	2.7	3.0	3.2	3.3	3.3	3.3	2.9	2.4	2.0						
24								B	2.2	C	C	3.2	3.4	3.3	3.3	3.1	2.8	2.2						
25								B	2.1	2.5	3.0 ^F	3.1	3.3	3.3	3.2	3.0	2.8	2.9						
26								C	C	2.8	3.0	3.1	3.2	3.1	3.2	3.0	2.7	2.1						
27								B	2.1	2.7	3.0	3.1	3.2	3.2	3.2	3.0	2.8	2.2						
28								B	2.3	2.7	3.1	3.1	A	A	3.1	3.0	2.9	2.2						
29								B	2.2	2.6	2.9	3.1	3.2	A	3.2	2.9 ^F	2.7	2.2						
30																								
31																								
Mean Value									2.1	2.6	3.0	3.1	3.2	3.2	3.1	3.0	2.7	2.2						
Median Value									2.1	2.6	3.0	3.1	3.2	3.2	3.2	3.0	2.7	2.1						
Count									21	22	22	22	18	19	20	21	22	22						

Sheep 1.0 Mc to 3.2.0 Mc in 2 min Manual Automatic

foE

The Central Radio Wave Observatory
Koganei-machi, Kitakama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

ft E

Feb. 1952

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

Swamp 1.0 Mc to 5.0 Mc in 0.2 min

Manual Automatic

Y 7

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Yamagawa

Lat. 31° 12.5' N
Long. 130° 37.7 E

fEs

Feb. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	C	C	C	C	C	C	C	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E
2	E	E	2.5	2.5	2.5	2.3	E	G	G	G	4.3	5.5	5.5	5.5	3.9	4.1	3.5	G	2.5	2.5	2.0	3.3	2.2	1.9
3	2.5F	2.5	2.5	E	E	2.5Y	2.5	2.4	G	4.2	G	G	G	3.9	4.2	G	3.1Y	2.5	2.5	2.3	2.3	2.5	4.3	
4	3.0	4.7	4.7	2.1	2.0	2.6	3.3	B	3.3	4.5	4.4	4.0F	4.7F	5.4F	0.0	7.3F	7.1	7.0F	5.5	4.0F	4.4	3.3	2.5	2.2
5	2.2	3.1F	3.4F	2.5	2.5	2.3	2.0	B	3.2	3.9	4.5	4.7	4.4	4.1	4.1	4.0	G	3.5F	3.1Y	2.3	2.6F	3.0	2.8	2.4
6	2.1	3.9	3.3	2.5	2.8	2.5	2.8	3.0	3.4F	4.0	7.0Y	G	4.3	4.5	3.9	3.8	G	G	E	2.0	2.1	E	E	2.3
7	2.5F	2.5F	2.5F	2.5F	E	2.5	E	B	G	3.4	4.0	4.1	5.7	5.3	5.3	4.1	4.0	4.0Y	2.9	E	E	2.2F	E	E
8	E	E	E	E	E	2.3	E	G	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
9	M	M	M	M	M	M	M	M	G	G	G	4.2	5.3	5.3	5.5	6.8Y	G	G	2.5	2.5	1.8	E	E	1.8
10	E	E	E	E	E	2.5	E	2.1	4.0	3.3	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	2.5	2.5	2.3	E	E	E	E	B	G	G	C	C	C	C	C	C	C	3.1	3.5	3.1	2.4	2.4	1.9	2.4
13	2.2	E	E	1.9	2.3	2.1	E	B	G	4.0	5.0	4.5	G	G	4.0	4.0	G	G	G	E	E	1.8	1.9	2.2
14	2.1	2.2	2.5	2.2	C	C	C	C	C	C	C	C	C	4.0	4.5	3.8	G	G	4.3	5.1Y	4.3	4.7	4.3	4.7
15	2.0	E	E	2.2	E	E	E	2.5	G	G	G	G	G	G	G	3.5	5.2	5.1	2.5	1.8	E	E	E	E
16	E	E	E	E	E	E	E	E	G	G	3.8	4.2	G	G	4.1	3.9	3.9	3.7Y	E	1.8	2.4	4.5	1.8	E
17	E	E	2.1	2.1Y	1.6	E	E	G	3.9	4.0	4.5	4.7	4.8	4.4	G	4.4	4.0	4.0	3.1	2.5	2.5	2.3	2.0	E
18	E	E	2.5	2.5F	2.5	2.4	2.5F	F	G	3.9	4.1	4.2	4.4	5.0	4.3	3.9	4.7	G	G	2.5	2.5	2.3	2.5	2.5
19	C	C	C	2.5	2.3	C	C	C	C	C	3.8	5.0	4.7	4.6	3.9	4.2	4.7	G	G	2.4	2.5	2.3	C	C
20	C	C	C	C	C	C	C	C	C	C	M	M	5.0	4.5	4.5	3.9	3.9	3.7	2.5	E	2.3	3.0	2.4	C
21	4.0F	4.5	3.1F	3.5	2.1	2.5	2.4	3.0Y	C	C	5.0	4.2	3.8	4.3	4.1	4.0	3.8	3.3	2.5	2.0	2.4	2.2	E	1.8
22	E	E	E	E	E	E	2.0	2.5	G	G	G	G	G	4.5	4.5	3.8	3.8	3.1	2.5	2.5	2.5	2.5	2.2	2.0
23	2.5	E	E	2.5	2.5	2.5	2.4	C	C	G	G	5.0	5.5	G	G	4.0	4.6	3.1	2.5	2.5	E	E	E	2.1
24	2.0	E	E	2.2	2.4Y	2.0	E	2.5	G	C	C	G	G	G	G	G	4.7	4.5	3.0Y	2.8	E	2.5	E	E
25	E	2.0	2.0	2.0	2.0	1.8	1.8	B	G	3.7	3.8	G	G	G	G	G	4.7	4.5	3.4	3.0	2.4	2.5	3.2	3.5
26	2.5	C	C	C	C	C	C	C	C	G	G	G	G	G	G	G	G	G	G	E	2.5	2.4	2.5	2.5
27	E	1.9	1.7	2.0	E	E	E	B	2.7Y	3.9	G	G	G	G	G	4.7	G	G	2.2	E	E	E	2.1	2.3
28	2.2	2.5	3.0	1.8	E	1.8	E	B	3.8	G	G	G	4.5	4.0	G	4.0	G	G	E	E	2.9Y	E	1.8	2.3
29	2.5	4.8	2.5	2.3	2.0	1.8	E	2.3	G	4.0	4.7	G	G	4.9	4.4	4.0	G	G	E	E	2.2	4.7	2.1	2.0
30																								
31																								
Mean Value	2.5	3.1	2.7	2.3	2.3	2.3	2.4	2.5	3.3	4.2	4.5	4.5	4.8	4.6	4.6	4.4	4.4	3.9	2.9	2.9	2.6	2.9	2.5	2.6
Median Value	2.1	1.9	2.5	2.1	2.0	2.3	E	2.4	G	3.4	3.8	4.0	4.0	4.0	4.0	4.0	G	G	2.5	2.5	2.3	2.3	2.0	2.2
Count	2.5	2.3	2.3	2.3	2.3	2.3	2.2	1.4	2.1	2.2	2.2	2.3	2.4	2.5	2.5	2.5	2.5	2.6	3.7	2.7	2.7	2.7	2.6	2.5

fEs

Sweep 1.0 Mc to 22.0 Mc in 2 min

Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

Feb. 1952

fminF

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	1.6	C	C	C	C	C	C	C	2.5	3.2	3.0	3.5	3.6	3.5	3.1	2.9	2.7	2.5	1.6	1.6	1.6	1.5	1.4	1.6	
2	1.4	1.2	1.3F	1.2	1.3	1.5	1.5	1.5	2.2	2.8	3.2	A	A	A	3.3	2.9	2.7	3.1	1.6	1.5	2.2A	1.5	1.5	1.5	
3	1.6	1.3	1.3F	1.3F	E	1.4	1.4	1.5	2.3	2.5	3.2	3.0	3.5	3.7	3.5	3.1	2.7	2.1	1.6	1.5	1.5	1.6	A	1.6	
4	1.4	1.8	1.8	1.3	1.3	1.4	1.6	1.5	2.2	2.9	3.3	3.2	A	3.3	5.9A	5.2A	A	A	A	1.8	A	1.7	1.6	1.6	
5	1.6	1.7	1.6	1.3	1.1	1.1	1.5	1.5	2.6	3.1	2.9	3.3	3.3	3.4	3.2	3.1	2.7	2.1	1.6	1.6	1.6	1.6	1.7	1.6	
6	1.5	2.0A	1.6	1.8	1.6	1.6	2.0A	A	2.4	2.9	3.2	3.5	A	3.6	3.4	3.0	2.8	2.3	1.5	1.5	1.4	1.4	1.4	1.6	
7	1.6	1.2	1.2	1.2	1.2	1.2	1.5	1.5	2.2	2.5	3.0	3.1	4.0A	A	A	3.0	3.2A	2.2	1.8	1.5	1.5	1.5	1.5	1.3	
8	1.3	1.1	C	E	1.1	1.2	1.5	1.7	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
9	M	M	M	M	M	M	M	M	2.2	2.6	3.0	3.4	4.5A	4.3A	5.2A	6.2A	2.1	2.4	1.6	1.7	1.4	1.4	1.5	1.5	
10	1.1	E	1.0	E	E	1.2	1.4	1.5	2.3	2.8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	1.8	A	1.5	1.8	1.7	1.8	
12	1.6	1.6	1.3	1.3	1.4	1.3	1.6	1.6	2.2	2.8	C	C	C	C	C	C	C	2.2	1.5	1.5	1.5	1.4	1.3	1.3	
13	1.5	1.3	1.3	1.3	1.4	1.3	1.4	1.6	2.5	2.7	2.8	3.0	3.3	3.3	3.5	3.1	2.7	2.1	1.6	1.5	1.5	1.5	1.5	1.5	
14	1.3	1.1	1.1	1.1	C	C	C	C	C	C	C	C	C	3.3	3.3	3.1	2.8	2.5	1.5	1.6	2.8A	A	2.8A	1.5	
15	1.4	1.4	1.2	1.3	1.2	1.3	1.4	1.5	2.6	3.0	3.4	3.6	3.7	3.6	3.5	3.0	2.8	2.1	1.8	1.5	1.5	1.4	1.5	1.5	
16	1.4	1.3	1.3	1.2	1.3	1.2	1.4	1.7	2.7	3.1	3.3	3.6	3.5	3.5	3.4	3.0	3.0	2.5	1.6	1.4	1.6	A	1.4	1.5	
17	1.6	1.3	1.1	1.2	1.3	1.4	1.6	1.7	2.6	3.2	3.4	3.3	3.5	3.5	3.4	3.3	2.7	2.6	1.8	1.5	1.5	1.6	1.5	1.5	
18	1.1F	1.3	1.1	1.2	1.6	2.7A	1.5	1.7	2.5	3.0	3.3	3.5	3.3	A	3.3	3.1	2.7	2.6	1.8	1.5	1.5	1.5	1.6	1.5	
19	C	C	1.1	[1.2]C	1.2	1.2	C	C	C	C	3.6	4.0	4.0	3.5	3.3	3.1	A	2.9	1.8	A	1.5	1.5	C	C	
20	C	C	C	C	C	C	C	C	C	C	M	M	3.3	3.4	3.6	A	A	2.8	1.7	1.5	1.9	1.5	1.5	1.5	
21	1.5	1.6	1.3	1.2	1.2	1.2	1.6	1.8	C	C	3.1	3.3	3.2	3.6	3.2	3.0	2.7	2.6	2.0A	2.0A	1.5	1.4	1.6	1.6	
22	1.6	1.4	1.4	1.4	1.3	1.4	1.6	1.5	2.5	2.9	3.0	3.3	3.4	3.5	3.3	3.0	2.8	2.2	1.8	A	1.6	1.4	1.5	1.6	
23	1.6	1.3	1.3	1.4	1.2	1.3	1.6	1.7	[3.4]C	3.0	3.7	3.6	4.8	3.5	3.5	2.9	A	2.2	2.0	1.7	1.5	1.5	1.5	1.5	
24	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.6	2.6	C	C	3.4	3.4	3.3	3.3	3.1	2.8	2.2	1.8	1.9	1.5	1.7	1.5	1.5	
25	1.4	1.3	1.3	1.3	1.2	1.2	1.5	1.5	2.2	2.8	3.1	3.5	3.5	3.3	3.3	3.0	2.8	3.0	A	A	1.5	1.8	A	A	
26	1.6	1.1	1.3	1.2	1.0	1.0	1.4	1.5	3.0	3.2	3.5	3.5	3.3	3.2	3.5	3.0	2.7	2.5	1.6	1.7	1.9	1.7	1.6	A	
27	1.4	1.3	2.2A	1.2	1.2	1.2	1.4	1.7	2.5	2.9	3.2	3.1	A	A	3.3	3.0	2.9	2.8	1.8	1.5	1.4	1.5	1.5	1.4	
28	1.4	1.3	1.3	1.2	1.2	1.2	1.4	1.7	2.5	2.9	3.2	3.1	A	A	3.3	3.0	2.9	2.2	1.8	1.6	1.6	1.4	1.6	1.5	
29	1.5	A	1.3	1.2	1.3	1.2	1.6	1.4	2.5	A	3.4	3.5	3.5	3.5	3.4	3.3	3.1	2.6	1.7	1.5	1.4	1.4	1.6	1.5	
30																									
31																									
Mean Value	1.5	1.4	1.3	1.3	1.3	1.3	1.5	1.6	2.4	2.9	3.2	3.4	3.6	3.5	3.6	3.3	2.8	2.4	1.7	1.6	1.6	1.6	1.6	1.5	1.5
Median Value	1.5	1.3	1.3	1.2	1.2	1.3	1.5	1.5	2.5	2.9	3.2	3.4	3.5	3.5	3.4	3.0	2.8	2.4	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Count	25	22	23	24	23	23	22	21	22	21	22	22	20	21	24	24	21	24	24	23	26	25	25	25	23

fminF

Breep J.O. Mc to 22.0 Mc in 2 min
 Manual Automatic

The Central Radio Wave Observatory
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

fminE

Feb. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	E	E	C	C	C	C	C	C	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E	E	E	E	E	E	
2	E	E	1.3	1.5	1.2	1.5	E	1.7	1.5	1.5	1.4	1.5	1.4	1.6	1.5	1.4	1.5	1.4	1.5	1.5	1.6	1.5	1.6	1.6	
3	1.5 ^F	1.3 ^F	1.3 ^F	E	E	1.4	1.6	1.6	1.5	1.5	1.4	1.4	1.6	1.5	1.5	1.4	1.5	1.6	1.5	1.5	1.7	1.6	1.6	1.5	
4	1.5	1.2	1.6	1.8	1.8	1.3	1.5	B	1.4	1.4	1.4	1.4	1.4	1.5	1.8	1.4	1.5	1.3	1.5	1.5	1.5	1.5	1.7	1.6	
5	1.7	1.2	1.2 ^F	1.7	1.7	1.8	1.6	B	1.4	1.5	1.6	1.4	1.4	1.4	1.5	1.6	1.5	1.4	1.4	1.6	1.6 ^F	1.6	1.5	1.8	
6	1.7	1.3	1.3	1.4	1.3	1.2	1.5	1.4	1.6	1.6	1.7	2.0	2.0	1.8	1.8	1.8	1.6	1.5	E	1.8	1.8	E	E	1.8	
7	1.6	1.7	1.7	1.8 ^F	E	1.8	E	B	1.4	1.4	1.4	1.4	1.5	1.5	1.7	1.5	1.6	1.4	1.6	E	E	E	E	1.8	
8	E	E	C	E	E	1.7	E	1.5	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
9	M	M	M	M	M	M	M	M	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.3	1.5	1.5	1.2	1.6	E	E	1.6	
10	E	E	E	E	1.2	1.0	E	1.7	1.4	1.2	1.4	C	C	C	C	C	C	C	C	C	C	C	C	C	
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	1.6	1.6	E	1.6	1.7	1.6	
12	1.6	1.6	1.4	E	E	E	E	B	1.5	1.5	C	C	C	C	C	C	1.4	1.5	1.5	1.5	1.6	1.7	1.6		
13	1.7	E	E	1.6	1.4	1.4	E	B	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.6	1.5	1.5	E	E	1.6	1.6	1.5		
14	1.5	1.5	1.5	1.3	C	C	C	C	C	C	C	C	C	C	1.6	1.5	1.4	1.4	1.5	1.4	1.4	1.5	1.6	1.5	
15	1.6	E	E	1.7	E	E	E	1.7	1.5	1.6	1.5	1.5	1.6	1.6	1.4	1.4	1.4	1.6	1.6	1.6	E	E	E	E	
16	E	E	E	E	E	E	E	1.4	1.6	1.6	1.5	1.6	1.6	1.6	1.4	1.5	1.6	1.6	1.5	1.5	1.7	1.5	1.7	E	
17	E	E	1.3	1.3	1.4	E	E	1.5	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.6	1.6	1.5	1.5	1.5	1.7	1.6	1.6	E	
18	E	E	1.6	1.1 ^F	1.1	1.5 ^F	1.6 ^F	1.6 ^F	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.4	1.5	1.5	1.8	1.6	E	1.6	1.5	
19	C	C	1.6	[1.4]	1.2	1.4	C	C	C	C	1.4	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.6	1.5	1.7	1.7	C	C	
20	C	C	C	C	C	C	C	C	C	C	M	M	1.4	1.4	1.5	1.4	1.4	1.5	E	E	1.7	1.5	1.7	[1.6] ^C	
21	1.5 ^F	1.2	1.2	1.4	1.4	1.4	1.6	1.5	C	C	1.5	1.4	1.4	1.6	1.6	1.5	1.4	1.5	1.5	1.7	1.5	1.7	E	1.6	
22	E	E	E	E	E	E	1.6	1.6	1.5	1.7	1.4	1.5	1.4	1.6	1.4	1.4	1.5	1.4	1.5	1.6	1.6	1.6	1.6	1.5	
23	1.6	E	E	1.4	1.4	1.4	1.7	[1.6] ^C	1.4	1.4	1.5	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.5	1.5	E	E	E	1.6	
24	1.4	E	E	1.4	1.4	1.4	E	1.5	1.4	C	C	1.6	1.5	1.6	1.6	1.5	1.4	1.5	1.4	1.5	E	1.5	E	E	
25	E	1.5	1.4	1.5	1.6	1.6	1.6	B	1.4	1.4	1.4	1.5	1.6	1.5	1.4	1.6	1.8	1.5	1.6	1.5	1.5	1.5	1.5	1.5	
26	1.5	C	C	C	C	C	C	C	C	1.4	1.5	1.6	1.6	1.6	1.6	1.5	1.5	1.5	E	E	1.6	1.4	1.5	1.5	
27	E	1.6	1.5	1.5	E	E	E	B	1.5	1.4	1.4	1.4	1.4	1.5	1.7	1.6	1.4	1.4	1.9	E	E	E	1.6	1.6	
28	1.4	1.4	1.3	1.6	E	1.4	E	B	1.5	1.4	1.5	1.5	1.7	1.7	1.7	1.6	1.5	1.5	E	E	1.5	E	E	1.6	
29	1.4	1.2	1.7	1.2	1.5	1.4	E	1.4	1.4	[1.6] ^M	1.8	1.7	1.6	1.6	1.7	1.6	1.4	1.4	E	1.7	1.6	1.5	1.5	1.6	
30																									
31																									
Mean Value	1.5	1.4	1.4	1.5	1.4	1.4	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	
Median Value	1.4	E	1.3	1.4	1.2	1.4	E	1.6	1.4	1.4	1.4	1.5	1.5	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	
Count	25	23	23	24	23	23	22	14	22	22	22	23	24	25	25	25	25	26	27	27	27	27	26	26	26

Sweep 1.0. Mc to 22.0. Mc in 2 min

Manual Automatic

IONOSPHERIC DATA IN JAPAN FOR FEBRUARY 1952

電波觀測報告 第4卷 第2号

1952年3月25日 印刷

1952年3月30日 發行

(不許複製非売品)

編集兼
者 行人

菅野 菊雄
東京都北多摩郡小金井町小金井新田一之久保573

發行所

電波監理委員会 中央電波觀測所
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

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