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IONOSPHERIC DATA IN JAPAN

FOR FEBRUARY 1951

Vol. 3 No. 2

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PREPARED BY THE CENTRAL RADIO WAVE OBSERVATORY
THE RADIO REGULATORY COMMISSION

KOKUBUNJI, TOKYO, JAPAN

CRWO—F 26

THE CENTRAL RADIO WAVE OBSERVATORY
THE RADIO REGULATORY COMMISSION

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CONTENTS

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 observateries 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, 1951.

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 dada.

ERRATUM

CRWO-F25, p. 8 and p. 9 should be exchanged.

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

IONOSPHERIC DATA.

Feb. 1951 | foF2 | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0	3.4	3.4	3.3	3.4	3.3	3.8	5.1	6.7 J	9.3	(10.7) B F	B	10.0	B	BH	7.4	7.5	7.1	6.4	4.6	A	4.4 Z	4.1	4.1
2	4.1	3.9	3.6	3.5	2.1	2.4	2.2	C	A	C	(9.8) F B	9.4	9.0	8.1	8.3	7.3	7.0	7.0	6.6	4.3 J	A	3.3	(3.2) JA	3.1
3	3.1	2.8	2.9	3.1	3.2 H	2.9	3.0	5.0	6.7 H	8.2	9.3	9.7	7.8	(7.7) F S	7.7	7.6	6.5 H	6.5	5.5	4.6	3.6 J	3.9	3.3	3.5
4	3.5 H	3.2 Z	3.2	3.2	3.3 J	3.3	3.2	5.0	7.1	7.8	7.3	7.8	7.4	7.5	7.2	7.3	6.7	6.0	5.7	4.7	3.5	3.6	3.4	3.7
5	3.6 H	3.1	3.4	3.2	3.0	3.1	2.9	6.3 J	7.1	9.4	8.8	8.2	9.2	8.3	8.3	8.3	7.0	4.8	5.1	4.6	2.6	3.2	3.0	3.1
6	3.0	3.1	3.1 H	3.3	3.5 J	2.6	2.4	5.2	7.6	7.6	(10.4) F	7.6	S	9.8	B	B	7.8	6.5	4.7	(3.3) F M	4.0	4.4	4.5	3.6
7	3.6	2.9	3.1	3.7	4.4 H	4.3	3.7 H	4.9	6.8	8.7	8.7	8.3	8.8 F S	(8.8) F	7.3	6.5	6.3	6.2	4.7	4.5	3.4	3.4	3.4	3.5
8	3.3 J F	2.7 F	2.6 F	3.2 F Z	2.9 F	2.9 F	3.3	3.7	7.8	7.4	7.5	8.9	8.6	7.2	7.7	7.1	5.7	[5.8] J C	5.8	4.6 F S	3.8 H	4.1	4.0	A
9	2.6	2.8	2.9	3.1	(4.0) F	3.8 J F	3.8 J F	5.8 F Z	6.8	(8.7) J F	7.9	8.7 J	8.7	8.7	S	8.0	6.7	6.7 H	5.5 H	5.6 H	4.4 H	3.8	4.4	4.1 J F
10	3.9 J F	3.4 J F	3.5 J F	3.8 J F	3.6 J F	3.3	2.8 J	5.8	6.8	7.0	8.6	9.4	8.1 J	8.9	8.9	7.1	7.0	5.3	5.2	3.8	3.2	3.4	3.2 H	4.2
11	3.5	3.6 J F	3.5 F	2.5	2.9	2.6	3.1 H	6.1 J S	7.2	7.5 J S	9.4	10.2	9.6	9.3	8.8	7.6	6.8 H	5.2	4.7 H	3.5	3.4 S	3.9 J	3.9 S	4.0 F
12	4.4	4.0	4.3 Z	3.9	4.3	4.0	A	5.7	6.7	6.6	8.2	7.8 J	8.1 J	7.8 J	7.6 J	7.3 J	7.0 J	[5.6] C	4.1	4.0	2.5 Z K	2.9 F K	3.0 K	3.2 K
13	3.2 K	3.3 K	3.2 K	3.6 K	2.6 K	3.0 K	3.0 K	5.7 Z	7.1	8.3	8.6	9.0	8.6	9.1	7.4	7.3	7.3	5.8	4.8	4.7	4.1	3.5	3.3	3.6
14	3.3	3.4	3.4	3.6	3.3	3.1	3.5 H	5.8	C	C	C	C	C	C	C	C	7.2	5.7	4.3	4.4	4.1	3.9	3.4	3.4
15	3.4	3.6	3.5	3.8 J	4.1	3.8	4.1 H	5.4	7.0	C	B	B	7.5	8.6	8.5	7.6	6.9	5.5	4.4	4.9	3.8 J	3.2	3.9	3.8
16	3.5	3.3	3.3	3.8	3.8	3.5	3.6	6.3	8.3	8.3	(8.3) J	7.2	7.6	7.7	7.6	7.3	6.1	6.2	5.7	4.3	3.9	A	3.2	3.1
17	3.1 F	[3.4] J C	3.6	3.7	3.8	3.9	3.5 F	4.8 J	6.9 J S	S	8.5	8.7	8.8 F	8.1	7.3	7.6	7.2	6.1	4.7	(4.1) F	3.6	3.5	3.1	3.0
18	3.5	3.3	3.2	3.4	3.3	3.4	4.1	7.1 J	7.7 J	8.4	B	8.0	7.9	8.2	8.1 J S	7.3	7.4	7.1	6.0	5.9	5.6	B	5.4	4.6 Z
19	4.8	4.6	4.5 Z	4.2	3.9	3.9	3.9	6.7	(7.9) F Z	8.7 J	11.0	10.8	9.0	7.8	7.9	7.8	7.7	7.1	5.3	4.7	3.5 J	3.4	3.5	3.7 J
20	4.0	3.8	3.5	3.5	[3.4] J C	3.3	4.2	5.7	7.5	8.8	8.6 J	9.4 J	8.0 J	8.1 J	8.0 J	7.6	7.1	6.2	5.3	4.9	4.8	3.2	3.3	3.5
21	3.1	3.5	3.7	3.5	3.4	3.5	C	6.9	9.2	8.8	9.0	9.5	S	8.5	8.1	8.1	7.4	6.0	5.1	3.8 J	(3.6) F	(3.8) F	3.9 J	(3.8) F
22	3.3	3.8	3.3	3.0	3.2 H	3.9 H	4.1	6.0	(9.0) F	7.7 B	8.3	8.8 F S	9.1 S	9.1	8.8 S	8.5	8.1	6.7	5.4	5.6	4.0	4.2	4.1	4.1
23	4.3	4.6	5.2	4.5 J	3.7 J H	3.5	(3.7) F	7.3	(7.7) F	C	C	10.8 J	9.3	8.7	8.4 J	7.8 J F	6.4	6.3	4.7	4.3	5.2 H	5.7 H	4.8	4.3
24	4.6	4.1 H	4.1	3.0	3.0	2.7	3.3	6.0	9.0	8.6	10.0 F	9.9	8.1 J S	8.2	8.0	8.1	7.4 J	7.7	5.8	3.8	4.3	3.8	3.5	4.2
25	4.2	3.7	3.2	(2.7) J	3.0 J F	3.1 J B	3.5	6.8	B	9.2	8.8 F S	11.0 J	10.2	(8.6) F	8.1	8.4 J	7.2	6.3	5.6	5.1	4.2	3.7	3.7	3.7
26	3.4	3.4	3.7	3.5	3.4	3.3	4.1	6.7	8.7	10.2 J	(7.3) J B	9.6	[9.4] B C	9.3 F	8.3	8.3 S	7.4	7.3	5.8	5.1	4.1	4.3	4.2	4.3
27	3.9	3.6	3.6	4.2	3.6	3.7	4.3	6.7	7.8 J S	10.1	9.9 J S	10.2	[10.7] C	11.2	11.3	10.9	8.6	6.0	6.0	4.6	5.1 H	3.7	4.1	5.0
28	4.5	4.3 H	4.2	4.2	3.9	3.1	5.3	6.3	8.3	C	C	C	C	C	C	C	S	8.7	9.2	5.9	4.6 H	4.7	4.6	4.7
29																								
30																								
31																								
Mean Value	3.6	3.5	3.5	3.5	3.6	3.3	3.6	5.9	7.6	8.4	8.9	9.1	8.7	8.6	8.2	7.8	7.1	6.3	5.4	4.6	4.0	3.8	3.6	3.8
Median Value	3.5	3.4	3.4	3.5	3.4	3.3	3.6	5.8	7.5	8.5	8.7	9.2	8.8	8.5	8.1	7.6	7.1	6.2	5.4	4.6	4.0	3.8	3.6	3.7
Count	28	28	28	28	28	28	26	27	25	22	23	24	24	25	23	25	27	28	28	28	26	26	28	27

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 1

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

IONOSPHERIC DATA

Feb. 1951 — h_pF2

135° E Mean Time

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

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

h_pF2

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 2

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

IONOSPHERIC DATA

Feb. 1951 | h'F2 | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

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

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 3

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

IONOSPHERIC DATA

Feb. 1951 | foF1 | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N, Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	Q	L	L	4.3	A	L	Q	Q	Q	Q						
2								C	A	Q	Q	Q	Q	L	Q	Q	Q	Q						
3								L	Q	L	Q	L	Q	Q	Q	Q	Q	Q						
4								Q	L	L	L	Q	L	L	Q	Q	Q	Q						
5								Q	Q	B	Q	Q	Q	Q	Q	Q	Q	Q						
6								Q	Q	L	L	L	L	Q	Q	B	L	Q						
7								Q	L	Q	Q	B	Q	Q	Q	B	Q	Q						
8								Q	Q	Q	B	B	B	B	B	Q	Q	C						
9								Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q						
10								Q	A	Q	Q	Q	L	L	Q	Q	L	Q						
11								A	Q	L	L	L	Q	Q	L	Q	Q	Q						
12								A	Q	Q	L	L	L	L	L	Q	Q	C						
13								Q	Q	Q	L	L	L	L	L	Q	Q	Q						
14								Q	C	C	C	C	C	C	C	C	Q	Q						
15								Q	Q	C	Q	Q	L	Q	Q	Q	Q	Q						
16								Q	Q	L	Q	L	Q	L	L	L	Q	Q						
17								Q	Q	Q	Q	Q	L	L	L	Q	Q	Q						
18								Q	Q	Q	Q	B	4.7	Q	Q	Q	Q	Q						
19								Q	A	L	L	L	Q	Q	Q	Q	Q	Q						
20								A	L	L	L	L	Q	L	Q	Q	Q	Q						
21								Q	Q	Q	L	L	Q	4.4	L	Q	Q	Q						
22								Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q						
23								L	Q	L	A	Q	L	L	Q	Q	Q	Q						
24								L	L	L	L	4.7	L	L	L	L	L	Q						
25								Q	Q	Q	Q	L	L	L	L	Q	Q	Q						
26								Q	Q	L	Q	4.8	Q	Q	L	Q	Q	Q						
27								Q	Q	L	Q	L	L	L	L	L	Q	L						
28								Q	Q	C	C	C	C	C	C	C	Q	Q						
29																								
30																								
31																								
Mean Value												4.6	4.7	4.4										
Median Value												4.7	4.7	4.4										
Count												3	1	1										

foF1

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 4

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

IONOSPHERIC DATA

Feb. 1951 | h'F1 | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

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

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 5

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

IONOSPHERIC DATA

Feb. 1951 | foE | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								A	A	2.6 H	B	B	A	A	A	24	A	1.7 J						
2								C	A	2.5	2.7 A	B	B	B	B	B	(2.2) B	A						
3								B	2.4	2.5	2.9 B	B	B	B	B	2.5	A	A						
4								1.5	2.0 F	2.6	2.7	2.8	A	2.9	A	A	A	A						
5								1.7	2.0	2.2	B	B	B	B	B	2.6	B	B						
6								B	B	A	B	B	(3.1) B	B	B	B	A	A						
7								1.6	B	B	B	B	B	B	B	A	B	1.7						
8								1.8	2.2	B	B	B	B	B	B	B	B	C						
9								B	2.0	2.6	2.7	2.9	2.9	3.0 B	2.6	B	1.6	B						
10								A	A	B	B	B	B	B	B	B	B	B						
11								A	A	A	B	3.0 B	3.0 B	2.9 B	B	2.5 B	B	A						
12								A	A	2.5	A	A	2.9	3.0	2.8	2.7	2.3	C						
13								A	A	B	2.9	2.9	3.0	2.9	B	2.6	A	B						
14								B	C	C	C	C	C	C	C	C	B	A						
15								1.5	2.1 B	[2.5] C	2.9	3.1	A	A	2.9	2.6	B	1.8 B						
16								B #	A	2.5	2.8 B	B	3.2 H	B	B	B	1.8 B	B						
17								A	A	B	2.9	A	B	3.1	2.9	B	B	B						
18								A	2.6	B	3.1	B	B	2.9	B	B	A	1.7						
19								1.9 B	A	A	B	B	3.1	B	B	B	2.3	B						
20								A	B	A	A	A	A	2.7	2.9	2.9	2.6	1.5						
21								1.9	2.4	2.6	2.8 B	2.9	B	3.2	2.8	2.7	2.3	1.6 B						
22								1.8	2.3	2.9	B	3.0	3.0	3.1	2.9	2.5 J	B	A						
23								A	A	2.7	A	B	3.0	B	3.0	2.7	2.3	B						
24								1.6	2.0	2.8	3.1	2.7	B	3.1	3.1	A	A	A						
25								A	B	A	A	A	A	A	A	2.7	2.3	A						
26								B	A	B	2.8	B	B	B	B	2.5	B	1.8						
27								1.5 J	A	B	3.2	B	3.1	2.9	2.6	2.5	B	B						
28								2.1	2.4	C	C	C	C	C	C	C	B	1.8						
29																								
30																								
31																								
Mean Value								1.7	2.2	2.6	2.9	2.9	3.0	3.0	2.9	2.6	2.2	1.7						
Median Value								1.7	2.2	2.6	2.9	2.9	3.0	3.0	2.9	2.6	2.3	1.7						
Count								11	11	13	13	8	10	12	10	14	9	8						

foE

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 6

6

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

IONOSPHERIC DATA

Feb. 1951 | h'E | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

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

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 7

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

IONOSPHERIC DATA

Feb. 1951 | fEs | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	1.8	2.2	3.2	2.0	2.1	3.5	3.2	3.4	G	B	B	5.6Y	6.3	5.7	G	3.8	4.4	4.5	4.4	4.9	G	G	G
2	1.4	1.6	2.3	3.3	2.4	G	G	C	8.7	G	3.8	B	B	B	B	B	G	2.8	2.8	5.0	6.8	4.4	4.8	3.5
3	2.9	3.2	3.6	2.7	2.4	G	G	2.4	G	G	G.	B	B	B	G	G	G	2.0	2.0	G	G	2.8	3.2	G
4	G	1.4	G	2.4	2.2	G	2.1	2.6	G	G	G	G	34	G	G	G	3.0	2.4	2.4	G	G	G	G	G
5	G	G	G	G	G	G	G	G	G	B	B	B	B	B	G	G	G	G	G	G	G	G	G	G
6	G	G	G	G	G	G	G	B	B	G	G	B	G	B	B	B	G	3.0	1.4	2.5	3.4	1.8	2.6	2.0
7	3.0	1.4	1.2	1.1	2.9	1.6	G	G	G	B	B	B	B	B	B	B	B	G	2.1	2.6	3.2	2.4	2.0	2.5
8	1.8	G	G	G	G	G	G	G	G	B	B	B	B	B	B	B	B	C	4.2	2.2	2.1	2.8	3.0	4.1
9	2.5	1.6	G	G	G	G	2.3	G	B	G	B	G	G	B	G	G	G	G	3.0	2.4	3.1	1.9	2.9	3.4
10	1.3	2.1	G	G	2.2	2.2	2.8	3.4	4.8	G	B	B	G	B	B	G	B	G	G	G	G	G	G	G
11	2.4	1.5	1.3	G	1.9	G	G	3.7	3.6	4.4	G	G	G	G	G	G	G	2.7	2.4	G	G	2.0	2.0	G
12	1.5	G	G	G	G	G	4.5	4.3	3.4	G	3.6	3.8	G	G	G	G	G	C	G	G	G	G	G	G
13	G	G	G	G	G	G	G	G	4.1	G	G	G	G	G	G	G	G	G	G	2.0	G	G	G	G
14	2.1	2.4	1.3	G	G	G	G	G	C	C	C	C	C	C	C	C	G	2.6	2.7Y	1.9	2.2	1.9	G	G
15	G	G	G	G	G	G	G	G	G	C	G	G	4.8	4.5	G	G	G	G	24Y	2.9	2.4	G	2.3	3.2
16	G	1.2	G	G	2.2	2.3	2.3	B	3.7	G	G	G	G	G	G	G	G	G	G	G	G	4.8	G	G
17	2.0	C	2.0	B	G	G	2.0	G	3.2	B	G	3.4	4.8Y	G	G	B	G	G	G	G	G	G	G	G
18	G	G	G	G	G	G	1.7	2.4	G	G	G	B	B	G	G	G	B	G	G	2.0	G	3.4	2.4	G
19	G	G	G	1.2	G	1.9	G	G	4.5	5.8	G	B	G	G	G	G	G	G	1.3	G	G	G	G	2.1
20	G	2.4	G	G	G	G	2.6	G	G	3.4Y	3.4	G	G	G	G	G	G	G	2.7	G	G	G	G	G
21	G	G	G	G	G	G	C	G	G	G	G	G	B	G	G	G	G	G	G	G	G	G	G	G
22	G	1.2	G	G	G	G	G	G	G	G	B	G	G	G	G	G	G	2.0	1.9	G	2.5	2.4	G	G
23	G	G	G	G	G	1.7	2.4	2.9	G	G	6.0	G	G	B	4.7	G	G	G	G	G	G	G	G	G
24	G	2.0	1.8	G	G	G	G	G	G	G	G	G	G	G	G	3.5	3.7	3.8	3.4	3.2	3.2	G	3.8	G
25	2.4	G	G	3.0	G	G	G	2.6Y	3.1	3.6	3.8	3.6	4.4	3.8	G	G	G	G	G	G	G	G	G	G
26	G	G	G	G	G	G	G	G	G	G	G	B	B	G	B	G	B	G	G	G	G	G	G	G
27	G	G	G	G	G	G	2.4	2.3	3.0	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
28	G	G	G	G	G	G	G	G	G	C	C	C	C	C	C	C	B	G	2.0	G	2.4	2.4	G	G
29																								
30																								
31																								
Mean Value	2.1	1.8	2.0	2.4	2.3	2.0	2.6	3.0	4.1	4.3	4.1	3.6	4.6	4.9	5.2	3.5	3.5	1.7	2.6	2.8	3.3	2.8	2.9	3.0
Median Value	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	1.6	G	G	G	G	G
Count	28	27	28	27	28	28	27	25	25	21	19	15	18	17	20	21	22	26	28	28	28	28	28	28

fEs

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 8

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

IONOSPHERIC DATA

Feb. 1951 | (M3000)F2 | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0	2.9	3.0	3.0	3.1	3.1	2.9	3.1	(3.2)J	3.2	(3.1)BF	B	3.2	B	BH	3.3	3.3	3.1	3.1	3.0	A	3.0Z	2.9	2.7
2	2.7	2.8	3.0	3.3	3.0	3.3	3.0	C	A	C	(3.2)BF	3.2	3.3	3.1	3.2	3.3	3.0	2.9	3.0	(3.1)J	A	2.7	A	2.8
3	2.7	3.0	2.9	2.9	3.2H	3.6	2.8	3.1	3.4H	3.2	3.2	3.2	3.1	(3.5)PS	3.2	3.2	3.2H	3.1	3.2	3.3	(2.9)J	3.0	3.0	2.6
4	2.6H	2.8Z	2.8	3.0	(3.1)J	3.0	3.0	3.3	3.3	3.2	3.2	3.2	3.3	3.2	3.2	3.1	3.2	3.0	3.1	3.4	2.8	2.9	2.7	2.6
5	2.8H	2.7	2.8	3.1	2.6	2.9	3.1	(3.2)J	3.0	3.1	3.3	3.4	3.3	3.3	3.4	3.4	3.2	3.7	2.9	3.2	2.5	2.8	2.8	2.6
6	2.4	2.4	2.5H	2.6	(3.1)J	2.5	2.6	3.0	3.2	3.2	(3.2)P	3.3	S	3.1	B	B	3.3	3.2	3.1	(2.7)PH	2.7	3.0	2.8	2.8
7	2.9	3.0	2.8	3.1	2.8H	3.2	3.2H	3.1	3.1	3.3	3.2	3.1	3.3PS	(3.3)P	3.4	3.3	3.1	3.3	3.1	3.3	3.1	3.0	2.8	3.1
8	(3.0)JF	3.2F	2.9F	2.8FZ	3.1F	3.1F	3.4	3.7	3.8	3.4	3.2	3.2	3.1	3.4	3.3	3.5	3.4	[3.2]C	3.1	3.3PS	2.9H	2.9	3.2	A
9	2.6	2.7	2.6	2.6	(2.5)PF	(2.6)JF	(2.9)JF	3.1FZ	3.2	(3.1)JF	3.2	(3.2)J	3.2	3.2	S	3.3	3.2	3.2H	3.3H	3.3H	3.2H	3.3	3.1	(3.2)JF
10	(2.7)JF	(2.8)JF	(2.7)JF	(2.7)JF	(2.8)JF	2.9	(2.8)J	3.0	3.0	3.5	3.3	3.3	(3.3)J	3.4	3.4	3.3	3.5	3.4	3.2	3.2	3.0	2.8	2.8H	2.8
11	3.0	(2.8)JF	3.0F	3.1	3.1	2.8	2.9H	(3.4)JS	3.4	(3.3)JS	3.1	3.1	3.2	3.3	3.1	3.3	3.2H	3.2	3.1H	3.1	2.9S	(3.0)J	2.7S	2.8F
12	3.0	2.8	2.8Z	2.8	2.7	2.9	A	3.5	3.2	3.0	3.0	(3.2)J	(3.1)J	(3.3)J	(3.2)J	(3.3)J	(3.1)J	[3.1]C	3.1	3.2	2.8ZK	3.1FK	2.7K	2.7K
13	2.9K	2.9K	2.8K	3.2K	3.2K	2.6K	2.5K	3.1Z	3.4	3.0	3.1	3.0	3.1	3.2	3.2	3.3	3.4	3.2	3.0	3.1	3.2	2.9	2.9	2.7
14	2.9	2.8	2.9	3.0	2.9	2.9	3.1H	3.5	C	C	C	C	C	C	C	C	3.5	3.2	3.3	3.1	2.9	3.0	3.0	2.9
15	3.0	2.7	2.8	(2.8)J	2.9	3.2	3.0H	3.4	3.4	C	B	B	3.3	3.0	3.2	3.3	3.2	3.4	3.0	3.2	(3.5)J	2.9	2.8	3.2
16	2.8	2.8	3.0	3.0	3.1	3.0	3.2	2.9	3.3	3.5	(3.2)J	3.3	3.1	3.3	3.3	3.4	3.2	3.0	3.3	3.1	3.3	A	3.0	2.8
17	2.7F	[2.8]C	2.8	2.9	3.0	3.3	3.2F	(3.5)J	(3.3)JS	S	3.1	3.1	3.0P	3.3	3.3	3.1	3.3	3.3	3.3	(3.1)P	3.0	3.0	3.2	3.0
18	2.6	3.0	2.8	2.8	3.0	3.0	3.0	(3.2)J	(3.2)J	3.8	B	3.3	3.3	3.3	(3.3)JS	3.2	3.4	3.2	3.1	3.2	3.0	B	3.1	2.8Z
19	2.8	2.8	2.8Z	2.8	2.7	2.5	3.2	3.2	(3.2)PZ	(3.2)J	3.2	3.1	3.3	3.1	3.4	3.2	3.0	3.0	3.0	2.9	(3.1)J	2.9	2.7	(2.6)J
20	2.8	3.1	2.8	2.8	[2.8]C	2.9	3.0	3.5	3.5	3.2	(3.1)J	(3.1)J	(3.2)J	(3.2)J	(3.3)J	3.2	3.1	3.7	3.3	3.3	3.5	3.1	3.1	3.1
21	3.2	3.3	2.8	2.8	2.9	3.0	C	3.1	3.2	3.2	3.2	3.1	S	3.4	3.3	2.9	3.1	3.3	3.3	(3.5)J	(2.9)P	(2.9)P	(2.8)J	(2.8)P
22	2.9	2.8	3.3	3.0	3.1H	2.8H	2.9	3.4	(3.4)P	3.4B	3.2	3.0PS	2.9S	3.3	3.1S	3.2	3.2	3.1	3.1	3.0	2.9	3.0	3.0	2.9
23	2.7	2.8	2.9	(2.8)J	(2.9)JH	2.9	(2.7)P	3.2	(3.1)P	C	C	(3.3)J	3.2	3.2	(3.3)J	(3.3)JF	3.2	3.0	2.9	2.9	3.4H	2.9H	3.0	2.6
24	2.6	2.5H	2.6	2.6	3.0	2.8	3.0	3.2	3.1	3.3	3.4P	3.4	(3.5)JS	3.5	3.5	3.5	(3.3)J	3.3	3.5	3.4	3.3	3.2	3.2	3.3
25	3.0	3.0	2.9	(3.2)J	(3.0)JBZ	(2.8)JB	3.0	3.2	B	3.0	(3.1)PS	(3.1)J	3.1	(3.0)P	3.0B	(3.2)J	3.1	3.4	3.0	3.2	3.4	3.2	2.8	2.9
26	3.0	3.2	2.9	3.0	3.0	3.2	3.8	3.2	3.4	(3.1)J	(3.4JB	3.2	[3.2]B	3.2P	3.3	3.2S	3.1	3.5	3.2	3.2	3.3	3.0	2.7	2.7
27	2.7	2.7	2.8	3.0	3.1	2.9	3.0	3.2	(3.2)JS	3.1	(3.1)JS	3.1	[3.0]C	2.9	3.0	3.1	3.2	3.0	2.9	2.8	3.1H	3.1	3.0	2.8
28	2.8	2.7H	2.7	2.8	3.0	2.7	3.0	3.3	3.1	C	C	C	C	C	C	C	S	3.1	3.1	2.8	(2.6)HB	2.6	2.9	2.6
29																								
30																								
31																								
Mean Value	2.8	2.9	2.8	2.9	3.0	2.9	3.0	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.0	3.1	3.0	3.0	2.9	2.8
Median Value	2.8	2.8	2.8	2.9	3.0	2.9	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.2	3.1	3.2	3.0	3.0	2.9	2.8
Count	28	28	28	28	28	28	26	27	25	22	23	24	24	25	23	25	27	28	28	28	26	26	27	27

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 9

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

IONOSPHERIC DATA

Feb. 1951 | fminF | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.6	1.2	1.3	1.2	1.2	1.3	1.3	A	A	2.7	2.9	3.6	A	A	A	2.5	A	2.3	A	A	A	1.2	1.8	1.6
2	1.2	E	1.2	1.2	1.1	1.2	1.2	C	A	2.8	3.3	2.7	4.4	3.8	3.4	3.9	2.2	A	A	A	A	A	A	A
3	1.3	1.5	1.8	1.3	1.3	1.2	1.4	2.0	2.4	2.8	3.2	3.8	3.8	3.8	3.0	2.7	2.1	1.7	1.7	1.4	1.5	1.5	1.5	1.5
4	1.5	E	E	E	E	1.3	E	1.5	2.5[F]	2.6	2.8	2.8	2.8	2.9	2.8	2.4	2.6	1.8	1.4	1.6	E	1.2	1.6	1.2
5	1.4	E	E	1.2	E	E	1.5	2.0	2.3	3.8	3.7	3.8	3.7	3.8	3.7	2.7	2.4	1.5	1.2	1.2	1.2	1.3	1.2	1.2
6	1.1	1.3	1.2	1.2	1.1	1.3	1.1	1.8	1.8	2.7	3.1	4.0	3.3	4.3	4.0	4.2	2.4	1.8	1.4	1.4	A	1.5	A	1.5
7	1.7	1.3	E	E	E	E	1.5	1.6	3.0	3.1	3.8	4.4	4.0	4.1	3.8	4.0	3.0	1.7	1.6	A	1.8	1.6	1.5	1.6
8	1.3	E	E	1.2	1.4	1.1	1.2	1.8	2.5	3.0	3.9	3.7	4.6	4.2	4.4	3.8	2.0	C	A	A	1.2	A	A	A
9	1.8	1.2	E	1.1	E	E	1.5	1.8	3.5	2.8	3.9	3.0	3.1	4.1	2.8	2.6	2.2	1.3	1.6	1.4	1.5	1.5	A	1.5
10	1.1	1.4	1.3	1.2	1.2	1.2	A	A	A	2.8	3.8	2.8	3.1	3.1	3.6	2.6	2.2	1.5	1.2	1.6	1.5	1.5	1.5	1.5
11	1.5	E	E	E	E	E	E	A	2.6	A	2.9	3.1	3.8	3.3	3.0	2.6	2.6	3.0	1.4	1.8	1.5	1.9	1.5	1.3
12	1.3	E	E	E	E	E	A	4.4	2.5	3.0	2.8	3.4	3.4	3.4	2.8	2.7	2.3	[1.8][C]	1.3	1.2	1.1	1.2	1.2	1.2
13	1.3	1.1	1.1	1.1	1.1	1.1	1.3	2.4	2.1	2.6	3.1	3.5	3.3	3.2	3.3	2.9	2.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4
14	1.2	E	1.3	1.2	E	E	1.7	2.1	C	C	C	C	C	C	C	C	2.2	2.0	1.6	1.5	1.4	1.3	1.2	1.2
15	E	1.1	1.2	1.2	1.3	1.3	2.2	1.5	2.4	[2.9][C]	3.4	3.1	A	A	3.1	3.0	2.4	(2.0)[B]	1.8	A	1.6	E	1.2	1.5
16	E	E	E	E	E	E	E	2.5	2.3	2.9	3.0	3.2	3.2	3.2	3.0	2.9	1.9	1.4	1.3	1.2	1.2	A	1.2	1.2
17	1.2	[1.2][C]	1.1	1.2	E	E	1.4	2.0	2.8	3.9	3.4	3.4	3.5	3.4	3.0	2.7	1.7	1.6	1.5	1.4	1.5	1.3	1.6	1.4
18	1.4	1.3	1.2	1.1	1.1	E	1.5	1.9	2.7	2.8	3.1	4.2	3.7	3.3	3.4	3.6	3.7	1.8	1.2	1.5	1.5	A	1.5	E
19	1.2	E	E	E	E	E	1.5	2.0	A	2.8	3.0	3.4	3.8	3.8	3.8	2.8	2.4	1.5	1.5	1.2	1.3	1.3	1.2	1.2
20	1.1	1.7	1.2	1.1	1.1	1.4	1.4	A	2.4	2.7	2.8	2.8	3.6	3.1	3.1	2.9	2.6	1.6	1.5	1.2	1.1	1.3	1.2	1.2
21	1.2	1.3	1.2	1.2	1.2	1.2	C	2.0	3.0	2.9	3.1	3.1	4.2	3.8	3.3	2.8	2.7	1.8	1.4	1.4	1.5	1.4	1.4	1.4
22	1.1	E	E	E	E	E	1.2	1.8	2.6	3.4	3.7	3.8	3.8	3.8	3.8	3.6	2.4	1.5	1.4	1.2	1.2	1.2	1.2	1.2
23	1.1	1.1	1.1	1.1	1.1	1.3	1.7	3.0	2.6	2.7	A	3.2	3.4	4.0	3.3	2.8	2.3	2.0	1.3	1.2	1.2	1.2	1.2	1.3
24	1.2	1.2	1.4	1.1	1.3	1.4	1.5	1.8	2.5	2.9	3.1	2.7	3.2	3.3	3.4	3.4	A	A	A	A	1.8	1.2	A	1.3
25	1.2	E	E	1.5[S]	E	E	E	2.2	A	2.9	3.1	2.9	2.9	2.8	2.8	2.7	2.3	2.0	1.6	1.6	1.5	1.6	1.6	1.6
26	1.1	1.1	1.3	1.2	E	E	1.6	2.1	3.1	3.0	3.4	3.8	4.6	3.8	3.2	3.0	1.8	2.2	1.4	1.4	1.5	1.5	1.4	1.4
27	1.8	1.4	1.4	1.3	1.3	1.2	1.8	2.6	2.7	3.0	3.2	3.3	3.5	3.2	3.4	3.0	2.6	1.8	1.1	1.5	1.5	1.6	1.4	1.9
28	1.5	1.2	1.2	1.2	1.2	1.4	1.5	2.4	2.5	C	C	C	C	C	C	C	2.5	1.9	1.5	1.5	2.0	1.5	1.5	1.5
29																								
30																								
31																								
Mean Value	1.3	1.1	1.1	1.2	1.2	1.3	1.5	2.1	2.6	2.9	3.3	3.4	3.6	3.6	3.3	3.0	2.4	1.8	1.4	1.4	1.4	1.4	1.4	1.4
Median Value	1.2	1.1	1.2	1.2	1.1	1.1	1.4	2.0	2.5	2.9	3.1	3.4	3.6	3.6	3.3	2.8	2.4	1.8	1.4	1.4	1.5	1.4	1.4	1.4
Count	28	28	28	28	28	28	25	23	22	25	25	26	24	24	25	26	26	25	24	22	25	24	23	26

fminF

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 10

13

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

IONOSPHERIC DATA

Feb. 1951 | fminE | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	B	1.2	1.1	1.1	1.2	1.2	1.2	1.1	1.3	1.3	B	B	2.7	B	2.1	2.2	1.8	1.5	1.5	1.9	1.5	E	B	B
2	1.2	E	E	E	1.1	E	E	C	1.2	2.2	2.1	B	B	B	B	2.0	1.9	1.4	1.3	1.2	1.2	1.2	1.2	1.2
3	1.1	1.2	1.1	1.1	1.1	E	B	1.5	1.6	1.5	2.0	2.2	B	2.2	2.1	1.5	1.5	1.5	1.5	B	B	1.5	1.5	B
4	B	E	E	E	E	B	1.5	E	1.2	1.2	1.3	1.6	1.9	2.1	2.2	1.9	1.4	1.2	1.2	B	E	E	B	E
5	B	E	E	E	E	E	B	E	1.3	1.3	B	B	B	B	2.0	1.6	1.7	B	E	E	E	B	E	E
6	E	B	E	E	E	B	E	B	B	2.0	2.1	1.6	3.1	B	B	B	1.7	1.5	1.3	1.3	1.2	1.2	1.2	1.6
7	1.2	1.1	E	E	E	E	B	1.5	2.2	B	B	B	B	B	B	1.3	E	1.5	1.2	1.2	1.2	1.2	1.3	1.2
8	1.2	E	E	E	B	E	E	1.3	1.3	B	B	B	B	B	B	1.7	B	C	1.3	1.2	1.2	1.2	1.2	1.2
9	E	1.2	E	E	E	E	1.2	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.2	B	1.3	1.4	1.5	1.7	1.4	1.5
10	1.1	1.2	B	E	1.2	1.1	1.1	1.1	1.6	1.4	B	B	2.2	B	B	1.5	B	B	E	B	B	B	B	B
11	E	E	E	E	1.4	E	E	E	E	2.1	2.2	1.8	2.1	2.0	2.0	1.4	1.4	1.2	1.2	B	B	1.2	1.6	B
12	1.2	E	E	E	E	E	E	E	1.3	1.4	1.7	2.2	2.7	2.2	2.2	1.7	1.4	C	B	E	E	E	E	E
13	B	E	E	E	E	E	B	1.3	1.5	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.3	B	B	1.4	B	B	B	B
14	1.2	E	1.2	E	E	E	1.5 B	1.2	1.5	C	C	C	C	C	C	C	1.9	1.4	1.2	1.2	1.2	1.3	E	E
15	E	E	E	E	B	B	B	1.2	1.7	[1.5]	1.3	1.8	E	1.6	1.4	E	1.5	1.2	E	1.2	1.6	E	E	E
16	E	E	E	E	E	E	E	1.3 B	1.2	1.4	1.7	1.6	2.0	2.0	2.0	1.4	1.3	B	B	E	E	1.2	E	E
17	1.2	[1.2] C	1.1	B	E	E	1.8	1.4	1.4	E	E	E	E	E	E	E	E	B	B	B	B	B	B	B
18	B	B	E	E	E	E	1.1	1.1	1.2	1.6	1.6	B	B	1.7	1.8	1.7	1.4	1.2	E	1.5	B	1.2	E	E
19	E	E	E	E	E	E	B	E	E	1.4	1.4	B	2.0 B	2.2	2.0	1.4	1.3	B	1.1	E	B	B	E	1.9
20	E	2.3	E	E	E	B	2.3	1.4	1.4	1.5	1.7	2.1	2.2	2.2	2.2	1.4	1.3	1.1	1.5	E	E	B	E	E
21	E	B	E	E	E	E	C	1.2	1.2	1.4	1.9	1.5	E	1.2	1.2	1.2	1.2	1.5	B	B	B	B	B	B
22	E	E	E	E	E	E	E	E	1.5	2.1	B	1.5	1.4	1.7	1.4	1.4	1.6	1.2	1.2	E	1.4	1.2	E	E
23	E	E	E	E	E	E	1.1	1.2	1.5	1.4	2.1	2.2	1.4	1.9	1.4	1.2	1.2	1.2	B	E	E	E	E	B
24	E	1.6	1.7	E	B	B	B	1.4	1.4	1.4	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.2	1.2	1.4	1.4	E	1.2	B
25	1.3	E	E	E	E	E	E	E	2.1	2.2	1.9	1.9	1.8	1.6	1.6	1.4	1.3	1.4	B	B	B	B	B	B
26	E	E	B	E	E	E	B	1.3	1.4	2.2	1.5	2.4	[2.2] B	2.0	1.5	1.9	B	1.4	B	B	B	B	B	B
27	B	B	B	B	B	E	1.1	1.3	1.9	1.5	1.4	1.5	2.6	1.8	1.5	1.5	1.4	B	E	B	B	B	B	B
28	B	E	E	E	E	B	1.1	1.2	1.2	C	C	C	C	C	C	C	B	1.2	1.5	B	2.0	1.4	B	B
29																								
30																								
31																								
Mean Value	1.2	1.4	1.2	1.1	1.2	1.2	1.4	1.3	1.5	1.5	1.5	1.9	2.0	1.8	1.8	1.5	1.5	1.3	1.3	1.4	1.4	1.3	1.3	1.4
Median Value	E	E	E	E	E	E	1.1	1.2	1.4	1.4	1.6	1.6	2.0	1.8	1.6	1.4	1.4	1.3	1.2	1.2	1.2	1.2	E	E
Count	21	24	25	26	24	22	19	26	27	24	20	18	20	19	21	25	24	18	20	18	17	18	18	15

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

W 11

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

IONOSPHERIC DATA

Feb. 1951 | foF2 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.0	3.0	2.9	2.4F	2.5F	2.5F	2.9F	(5.8)AF	7.2	8.9	9.3FB	12.3	10.3	9.4	8.4	8.0	8.6	7.8	7.4	5.5	5.1	4.4	4.0	4.1
2	3.8	4.2	4.2	3.3F	2.4F	2.5F	2.7	5.7	8.3	8.8	10.4	9.2	8.0	8.2	8.9	8.6	7.0	C	C	C	C	C	C	C
3	F	F	3.9	3.8	3.8	3.0	2.6	5.4	7.0	C	C	C	8.5	8.4	7.8	7.1	7.0	6.3	6.0	5.1	4.1	3.5	3.4	F
4	3.6	3.6	3.7	3.7	3.8	3.1	2.9	B	6.5	8.0	8.8	8.0	8.5	7.5	7.2	7.0	7.7	6.4	5.6	5.2	3.6	3.8	3.6	3.8
5	3.4	3.3	3.6H	3.5	3.0	2.9	3.1	5.4	6.8	8.6	11.1	9.5	8.5	8.5	8.6	7.1H	7.3	7.0	5.6	3.6	3.2	3.4	3.1	3.1
6	3.2	3.2	3.0	3.3	3.0	3.4	2.6Z	4.9	7.8	8.2	9.7	9.8	8.8	9.3	8.2	9.2	9.1	6.2	5.5	3.9	4.0	4.1	3.4	4.2
7	3.5	3.0	2.9	3.0	3.4	3.9	3.2	4.9	7.2H	8.8	9.1	8.6F	8.7	7.7	7.3	6.5	6.4H	6.5	4.7	3.8	3.2	2.5	3.4	3.3
8	3.3Z	2.9Z	3.0Z	3.4Z	3.3	3.5	3.4	6.4	8.3	7.2	7.8	9.4	9.2	8.6	7.1	7.0	6.9	5.3	6.1	5.5	3.6	3.8	3.6F	2.5
9	2.5	2.6H	2.8	2.6J	3.0	3.0	4.0H	6.7	6.6	7.7	10.3	10.4	9.3	8.8	C	C	C	6.6	5.4	5.3	4.2	3.9	4.5	5.6
10	4.0	4.0	4.4	4.2	4.2F	3.5JF	3.3	5.6	8.8	7.3	8.4	10.0	9.4	8.6	8.7	7.5	6.7	5.6J	5.1H	5.3	3.5	3.4	3.6	3.9
11	4.0	3.9	3.9	3.3	2.4F	2.2J	3.0ZF	5.8	8.2	(9.0)C	9.7	11.5	9.9	8.8	7.9	8.0	6.5	5.6	4.3	3.6	3.5	3.5	3.5	3.6
12	3.7	3.6	3.5	3.4	3.6	4.1	4.2	5.6H	7.5	7.1	8.1	10.8	10.8	10.0	9.5	8.5	8.1	6.8	5.4	3.9	2.0K	3.0ZK	3.0KZ	2.8K
13	2.7VK	2.6JFK	3.5K	3.4K	2.3K	2.3K	2.7JHK	5.2	6.2	C	C	C	C	C	C	C	C	5.8	5.0	5.0	4.2	3.9	3.6	3.6
14	3.8	3.8	3.8	3.1	3.1	3.1	3.2	5.5	7.3	8.1	8.2P	8.8	7.8H	9.6	9.4	8.9	8.1	6.0	4.3	4.7	4.2	3.7	4.2	3.8
15	4.0	4.2	4.3F	4.3F	4.7	4.0F	2.9H	5.6	7.0	(7.6)C	(8.1)JP	9.2	9.4	8.2	8.6	8.0	7.1	5.8	(5.2)C	4.6	4.2	3.4	3.4	3.7
16	3.2	3.4Z	3.3	3.6	3.8	3.7H	3.3H	6.0	7.4	8.6	9.0	8.5	8.4	7.6	7.3	8.1	7.3	6.1	6.0	5.1	4.0	3.8	3.1	3.1
17	3.2F	3.3	3.3	3.3	3.8	3.1	2.8	5.9	7.3	(7.7)P	8.1	7.4	(8.0)P	7.8	7.7	7.6	7.7	6.4	4.6	4.2	4.2	3.8	3.9	3.6
18	3.6	3.8	3.6	3.9	4.0JP	3.2	3.4J	5.8	8.1J	9.7	9.3	9.0	B	7.9	8.4	7.6	7.5	7.4	6.5	6.0	5.2	5.0	4.1B	4.3
19	4.4H	4.3	4.2	3.9	4.0	3.8H	4.4	7.2	8.8	9.3	10.1	11.3	9.1	7.2	7.4	8.1J	7.7	7.9	6.3	4.6	3.7	3.3	3.7	3.5
20	3.8	3.4	3.5	3.8	3.9	3.6	4.1	7.2	8.1	9.1	10.0	11.0	8.9	7.9	8.0	8.8	6.9	6.4	5.9H	5.4	4.4	3.8	4.0	4.2
21	4.4	4.3	4.2	4.2	4.0	3.7	3.9	5.7	8.5	(9.0)P	9.6	8.4J	9.6	9.1	8.7	8.3	8.1	6.8	5.1	4.4	3.8	3.9	4.0	3.5
22	3.6	3.6	3.7H	3.3	2.9	3.1	3.8	7.1	7.1	8.4	8.6	10.4	11.1	10.7	9.8	8.8	7.9	6.6	6.0	6.0	5.3	4.8	4.4	4.7
23	4.2	4.7	4.4	3.9	3.1	3.5	3.8	6.7	8.3H	10.6	10.3	10.6	11.1	8.8	8.7	7.0	7.2	6.6	5.9	6.3	6.8	4.8	4.3	4.0
24	4.2	3.8H	4.0	3.9	3.7	3.8	3.8Z	7.0	7.8	7.8	11.0	11.4	11.5	(11.0)P	9.2	8.2	8.3	8.4	7.4	6.2	6.0H	5.1	4.8	4.4
25	4.0	4.3	3.5	3.2	3.3	3.1	3.7	7.5	(9.8)P	9.1	9.9	10.6	12.2	10.2	8.0	7.8	8.0	7.6	5.8	4.8	4.6	3.7	3.8	4.0
26	4.0	3.6	3.9	3.4	3.0	3.3	4.1	7.5	8.6	9.3	9.8	9.0	9.3H	10.0H	8.8	8.7	8.6	7.2	5.9	4.2	4.5	4.3	4.3	4.4
27	4.4	4.1	4.3	4.2	3.7	3.5	B	(7.6)PB	8.2	9.1	10.1	11.1	11.7	11.5	11.6	10.3	8.9	(7.5)C	6.1	6.0	5.9	4.7	4.7	5.0
28	4.7	4.5	4.8	4.2	4.0	3.9	4.5	6.6	7.6	8.9	10.5	11.9	12.1	12.0	11.0	10.2	12.0	9.5	8.8	5.9H	5.0	4.7	5.0	4.8
29																								
30																								
31																								
Mean Value	3.8	3.7	3.7	3.6	3.4	3.3	3.4	6.2	7.7	8.5	9.4	9.9	9.6	9.0	8.5	8.1	7.8	6.7	5.8	5.0	4.3	3.9	3.9	3.9
Median Value	3.8	3.6	3.7	3.4	3.5	3.4	3.3	5.8	7.7	8.7	9.6	9.9	9.3	8.8	8.5	8.0	7.7	6.6	5.8	5.1	4.2	3.8	3.8	3.8
Count	27	27	28	28	28	28	27	27	28	26	26	26	26	27	26	26	26	27	27	27	27	27	27	26

foF2

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | h_pF2 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

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

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | h'F2 | 135° E Mean Time | Akita | Lat. 38° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	240	270	260	260	310	330	310	A	250	250	260	260	220	250	250	240	220	250	250	220	280	(220)^{A}	(310)^{A}	290
2	290	280	230	210	300	310	270	220^{A}	230	240	240	220	260	250	270	230	220	C	C	C	C	C	C	C
3	350	360	280	270	250	220	270	230	210	C	C	C	220	230	230	220	230	220^{A}	230	210	230	270	280	360^{A} E
4	290	300	300	290	250	220	240	220	190	210	250	250	250	230	250	220	240	210	220	230	230	280	270	260
5	310	300	240^{H}	230	240	280	240	230	230	240	270	240	260	250	240	220^{H}	240	250	210	210	280	280	290	300
6	320	300	300	320	280	250	220	250	240	240	260	230	260	260	260	250	220^{A}	220^{A}	230	210	330	260	270	280
7	240	260	280	280	280	240	A	260	230^{H}	260	250	260	240	250	230	230	240^{H}	240	220	260	260	220	230	300
8	240	260	300	300	300	290	290	240	210	230	250	260	240	230	230	230	230	210	280	220^{A}	260	360	290	230
9	270	310^{H}	310	310	320	310	220^{H}	210	210	260	240	260	230	230	C	C	C	240	240	250	260	280	250	270
10	230	270	250	310	230	280	280	270	240	220	270	260	270	270	230	230	220	230	230^{H}	220	250	320	340	320
11	270	260	250	230	260	A	360	230^{A}	220	(240)^{C}	270	260	260	230	270	240	(230)^{A}	(230)^{A}	(230)^{A}	230	280	300	300	310
12	300	240	290	280	290	280	210	220^{A}	230^{A}	270	290	290	270	260	250	260	240	240	240^{A}	240	B^{K}	290^{K}	340^{K}	350^{K}
13	330^{K}	310^{K}	300^{K}	240^{K}	260^{K}	350^{K}	310^{KH}	230	240	C	C	C	C	C	C	C	C	230^{A}	230^{A}	260	240	280	280	290
14	240	280	280	270	260	270	240	240	240	240	300	270	270^{H}	300	250	270	260	240	270	260	240	260	290	270
15	270	280	240	250	220	210	220^{H}	220	210	(220)^{C}	230	220	220	240	270	250	220	240	240	250	220	240	280	300
16	320	320	300	280	270	240^{H}	230^{H}	240	230	230	250	230	250	270	260	270	250	230	240^{A}	240^{A}	240	250	260	330
17	230	310	290	300	250	230	290	250	230	240	250	250	260	280	270	250	250	230	230	230	250	250	270	280
18	300	300	330	300	250	240	280	220	230	230	270	260	N	260	240	240	240	240	220	240	230	270	320	310
19	300^{H}	280	270	290	250	320^{H}	270	230	220^{A}	230	280	240	240^{A}	230	270	280	230	230	220	240	250	330	320	310
20	270	290	250	300	280	290	290	240	230	240	270	250	260	260	270	270	250	230	240^{H}	270	220	280	320	310
21	290	280	290	300	290	290	270	240	270	260	260	260	300	280	230	240	260	220	230	220	310	300	300	270
22	320	320	270^{H}	240	240	340	280	250	230	250	270	270	290	260	240	240	240	230	240	260	260	260	290	310
23	330	260	220	230	240	280	270	220	210^{H}	220	220	250	220	220	240	220	220	220	250	240	250	220	250	290
24	310	300^{H}	290	250	230	220	250	240	200	230	250	240	240	240	240	220	220	220	220	230	220^{H}	230	250	240
25	270	270	240	250	300	260	260	230	220	220	240	250	270	250	230	250	260	240	230	240	250	260	270	270
26	260	240	230	230	240	270	230	210	220	250	220	230	240^{H}	250^{H}	240	220	220	220	220	260	230	290	300	300
27	290	290	270	250	240	260	230	220	220	230	220	250	250	270	270	240	230	230	210	220	220	220	280	280
28	260	270	240	250	250	270	250	210	210	240	250	250	250	240	220	250	250	210	220	250^{H}	250	270	270	280
29																								
30																								
31																								
Mean Value	280	290	270	270	260	270	260	230	230	240	250	250	250	250	250	240	240	230	230	240	250	270	290	290
Median Value	290	280	280	270	260	270	270	230	230	240	250	250	250	250	240	240	240	230	230	240	250	270	280	290
Count	28	28	28	28	28	27	27	27	28	26	26	26	26	27	26	26	26	27	27	27	26	27	27	27

h'F2 | Sweep 1.0 Mc to 17.0 Mc in 15 min Manual | A 3

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

IONOSPHERIC DATA

Feb. 1951 | foF1 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								A	Q	Q	Q	L	Q	L	L	Q	Q	Q						
2								Q	Q	L	Q	Q	L	L	L	Q	Q	C						
3								Q	Q	C	C	C	Q	Q	Q	Q	Q	Q						
4								Q	Q	Q	L	Q	B	Q	L	Q	Q	Q						
5								Q	Q	Q	L	L	L	L	Q	Q	Q	Q						
6								Q	Q	Q	L	Q	L	L	L	Q	A	Q						
7								Q	Q	L	Q	L	Q	L	Q	Q	Q	Q						
8								Q	Q	Q	L	L	Q	Q	Q	Q	Q	Q						
9								Q	Q	L	Q	L	Q	Q	C	C	C	Q						
10								Q	Q	Q	L	L	L	L	Q	Q	Q	Q						
11								Q	Q	C	L	B	L	Q	L	B	A	A						
12								Q	A	L	L	L	L	L	Q	Q	Q	Q						
13								Q	Q	C	C	C	C	C	C	C	C	Q						
14								Q	Q	Q	B	5.0	B	B	Q	L	L	Q						
15								Q	Q	C	B	B	B	B	L	L	Q	Q						
16								Q	Q	Q	L	Q	L	L	L	L	Q	Q						
17								Q	Q	Q	L	Q	B	B	L	Q	Q	Q						
18								Q	Q	Q	L	B	N	Q	Q	Q	Q	Q						
19								Q	Q	Q	L	4.6	A	A	4.2	4.1	Q	Q						
20								Q	Q	Q	B	B	L	B	L	L	L	Q						
21								Q	L	Q	B	B	L	B	Q	Q	L	Q						
22								Q	Q	L	L	L	L	Q	4.0	3.8	Q	Q						
23								Q	Q	Q	Q	B	Q	Q	4.4	Q	Q	Q						
24								Q	Q	Q	L	B	B	Q	Q	Q	Q	Q						
25								Q	B	B	B	B	L	L	Q	L	L	Q						
26								Q	Q	L	B	B	B	B	B	Q	Q	Q						
27								B	Q	L	Q	L	L	L	L	L	Q	Q						
28								Q	Q	Q	L	B	Q	L	Q	L	Q	Q						
29																								
30																								
31																								
Mean Value												4.8			4.2	4.0								
Median Value												4.8			4.2	4.0								
Count												2			3	2								

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | h'F1 | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								A	Q	Q	Q	Z40	Q	Z30	Z20	Q	Q	Q						
2								Q	Q	Z40	Q	Q	Z30	Z30	Z10	Q	Q	C						
3								Q	Q	C	C	C	Q	Q	Q	Q	Q	Q						
4								Q	Q	Q	Z20	Q	B	Q	Z20	Q	Q	Q						
5								Q	Q	Q	Z50	Z30	Z20	Z50	Q	Q	Q	Q						
6								Q	Q	Q	190	Q	Z30	Z40	Z30	Q	A	Q						
7								Q	Q	Z40	Q	Z30	Q	Z30	Q	Q	Q	Q						
8								Q	Q	Q	Z10	Z20	Q	Q	Q	Q	Q	Q						
9								Q	Q	Z10	Q	Z40	Q	Q	C	C	C	Q						
10								Q	Q	Q	Z20	Z50	Z40	Z30	Q	Q	Q	Q						
11								Q	Q	C	Z30	Z30	Z20	Q	Z30	B	A	A						
12								Q	A	Z40	Z40	Z50	Z40	Z50	Q	Q	Q	Q						
13								Q	Q	C	C	C	C	C	C	C	C	Q						
14								Q	Q	Q	B	B	A	B	Q	A	Z40	Q						
15								Q	Q	C	B	B	B	B	Z20	Z30	Q	Q						
16								Q	Q	Q	Z30	Q	Z50	Z30	Z50	Z50	Q	Q						
17								Q	Q	Q	Z20	Q	B	B	Z30	Q	Q	Q						
18								Q	Q	Q	Z30	Z30	N	Q	Q	Q	Q	Q						
19								Q	Q	Q	Z30	Z30	A	A	Z30	Z30	Q	Q						
20								Q	Q	Q	B	Z20	Z40	Z40	Z30	Z30	Z40	Q						
21								Q	Z20	Q	B	Z10	Z80	Z20	Q	Q	Z30	Q						
22								Q	Q	Z30	Z10	Z10	B	Q	Z20	Z20	Q	Q						
23								Q	Q	Q	Q	A	Q	Q	Z20	Q	Q	Q						
24								Q	Q	Q	Z30	B	B	Q	Q	Q	Q	Q						
25								Q	B	B	B	Z10	Z10	Z40	Q	Z20	Z30	Q						
26								Q	Q	Z30	B	B	B	B	(Z20)^{B}	Q	Q	Q						
27								Z10	Q	Z10	Q	Z00	Z40	Z20	Z20	Z10	Q	Q						
28								Q	Q	Q	Z30	B	Q	Z20	Q	Z20	Q	Q						
29																								
30																								
31																								
Mean Value								Z10	Z20	Z30	Z20	Z30	Z40	Z30	Z30	Z30	Z40							
Median Value								Z10	Z20	Z30	Z30	Z30	Z40	Z30	Z20	Z20	Z40							
Count								1	1	7	14	15	11	13	14	8	4							

h'F1 | Sweep 1.0 Mc to 17.0 Mc in 15 min | Manual

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

IONOSPHERIC DATA

Feb. 1951 | foE | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								A	A	A	A	A	3.3	3.0 B	3.0	2.6	2.4	2.0						
2								A	2.4	2.8	A	B	B	B	B	A	2.5	C						
3								A	2.6 B	C	C	C	B	B	B	2.7	2.1	A						
4								1.9	2.3	2.8	3.0	B	B	3.0	A	B	2.2	A						
5								1.9 B	2.7 B	B	B	B	B	B	B	B	B	B						
6								2.0	2.0	(2.8) B	B	B	B	B	3.0 B	2.5	A	A						
7								A	2.7 B	(3.0) B	B	B	B	B	B	B	B	1.8 B						
8								B	B	B	B	B	B	B	B	2.7	B	1.8 B						
9								1.9 B	2.2 J	A	A	B	(3.3) J B	2.9 J	C	C	C	2.1						
10								A	2.3 H	B	B	B	B	B	B	B	2.2	1.8 B						
11								A	A	A	3.0	3.1	B	B	3.0	B	A	A						
12								A	A	2.8	A	A	A	B	3.1	2.9	A	A						
13								1.9	A	C	C	C	C	C	C	C	C	A						
14								1.7 B	2.3	A	A	A	B	B	A	A	2.3	A						
15								2.0	2.4	C	B	B	B	B	3.0	2.8	2.3	B						
16								1.9	2.2	A	3.0	3.2	B	3.2	3.1	2.5	2.3	A						
17								2.0	2.3 A	2.7 J	3.0	3.0	B	B	A	2.8	2.4	1.9						
18								1.8 B	2.4	2.9	3.1	B	B	3.1	B	B	2.4 A	2.0						
19								A	A	B	B	B	A	A	A	2.8	2.6	A						
20								2.1	2.3	2.8 H	B	B	B	B	B	3.1	2.3	A						
21								1.9	2.4	B	B	B	B	B	3.0	3.0	A	1.9						
22								1.9	2.4	2.9 H	B	B	B	3.1	3.0	2.8	2.4	1.9						
23								2.0	2.6	3.0	B	A	3.6 A	A	3.1	2.9	B	1.7						
24								2.0 B	2.5 H	2.6	B	B	B	B	B	B	2.6 J	2.0 B						
25								1.9	B	B	B	A	A	B	A	2.7 J	A	A						
26								1.7 B	A	A	B	B	B	B	B	B	2.5	A						
27								B	B	2.9	B	B	B	B	B	B	B	2.1 B						
28								1.8 B	2.6	2.8	B	B	B	A	B	2.8	B	2.0						
29																								
30																								
31																								
Mean Value								1.9	2.4	2.8	3.0	3.1	3.4	3.1	3.0	2.8	2.4	1.9						
Median Value								1.9	2.4	2.8	3.0	3.1	3.3	3.0	3.0	2.8	2.4	1.9						
Count								18	19	13	5	3	3	6	9	15	15	13						

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | h'E | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

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

h'E

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 7

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

IONOSPHERIC DATA

Feb. 1951 | fEs | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.7	1.9	1.9Y	2.2	G	G	2.9	6.5	4.8	5.2	7.0	6.0	G	G	G	G	G	G	2.0	2.4	1.9	4.6	3.9	2.6
2	2.6	2.4	2.6	2.1	2.4	2.4	2.4	3.4	G	G	G	G	B	G	B	3.1	4.0	C	C	C	C	C	C	C
3	3.6	3.6F	2.0	1.8B	2.0	2.0	2.1	G	G	C	C	C	B	B	B	G	G	3.3Y	2.4	G	2.2	3.0	3.6	3.6
4	3.3	G	G	G	G	G	G	G	G	G	G	G	B	G	G	B	G	2.2	1.9	2.2	2.0	1.8	2.0	1.8
5	1.6	1.8	2.1Y	G	2.0	G	G	G	G	B	B	B	3.8	3.6	G	B	B	G	G	2.3	2.3	2.4	G	G
6	G	G	G	G	G	G	G	G	G	G	B	B	B	G	G	3.3	5.0	4.0	2.0	G	3.0	G	2.4	2.8
7	G	G	G	G	G	G	3.2	4.0	G	G	B	B	B	B	B	B	B	G	G	2.6	2.6	2.2	G	G
8	G	G	G	G	G	G	G	B	G	B	B	G	B	B	B	G	B	G	4.2	3.0	2.4	3.0	3.3	G
9	2.0	G	G	G	G	G	G	G	G	4.8	G	G	G	G	C	C	C	G	2.4	3.2	2.0	2.2	2.0	2.2
10	2.2	2.0	G	G	1.1	2.0Y	G	3.6	3.0	G	G	B	B	B	B	B	G	G	G	G	G	G	B	G
11	2.3B	G	3.0	2.5	2.2	2.3	G	3.3	3.7	C	G	G	B	3.8	G	B	4.5	4.0	3.2	G	G	G	G	G
12	G	G	G	G	G	2.3	2.1	4.8	3.8	G	3.6	4.0	G	G	G	G	G	3.4	3.0	2.2	G	G	G	G
13	1.8	2.1	1.4	G	G	G	B	G	3.0	C	C	C	C	C	C	C	C	2.6	3.0	2.2	3.0	G	G	G
14	G	2.0	2.2	2.3	G	G	G	2.3	G	3.0	3.6	G	B	B	4.2	4.0	G	G	G	2.0	2.0	1.7	2.4	2.0
15	2.0	1.8	2.2Y	2.4Y	G	G	G	G	G	C	B	B	B	B	G	G	2.9	B	G	G	G	G	G	B
16	G	G	G	G	G	G	G	G	G	G	G	G	B	G	G	G	3.1Y	2.8	3.0B	2.6B	G	G	G	2.3
17	G	2.3	G	G	G	G	G	G	3.2	G	G	B	B	B	G	G	G	G	G	G	G	G	G	G
18	G	G	G	G	G	G	G	G	G	3.6	G	G	3.7B	G	G	3.4Y	G	G	G	G	G	G	G	G
19	G	G	2.0	1.9	G	G	G	2.4	G	B	G	B	5.0	G	G	G	3.6	3.8	3.2	G	G	G	G	2.1
20	2.5	2.1	2.2Y	G	G	G	G	G	G	G	B	B	B	G	B	G	G	3.2	1.8	G	2.2	2.2	2.0	G
21	2.0Y	G	G	G	G	G	G	G	G	G	3.7B	B	B	G	G	G	2.9	G	G	G	G	G	G	2.2
22	G	G	G	G	G	G	2.3	G	G	G	G	G	B	G	G	G	G	G	2.2	G	G	G	G	G
23	G	G	G	G	G	G	G	G	G	G	B	5.2	4.2	G	G	G	G	G	G	G	G	G	2.0	2.0
24	G	G	G	G	G	G	G	G	G	G	G	B	B	B	B	G	G	G	G	2.2	2.0	2.0	2.0	2.2
25	1.8	2.4	2.2	2.2Y	2.3Y	G	G	G	B	B	B	G	G	B	G	G	3.0	3.4	1.9	2.8	3.3	2.1	G	2.1
26	2.2	1.9	G	G	G	G	G	G	3.8	3.2	B	B	B	B	B	B	G	G	2.4	G	2.4	2.5	G	G
27	G	G	G	G	G	G	G	B	B	G	B	B	B	G	B	G	G	B	G	G	G	G	B	G
28	G	G	G	G	G	G	G	G	G	G	B	B	B	4.0	3.8	G	B	G	2.0	G	2.7	2.2	2.6	2.4
29																								
30																								
31																								
Mean Value	2.3	2.2	2.2	2.2	2.0	2.2	2.5	3.8	3.6	4.0	4.5	5.1	4.2	3.8	4.0	3.4	3.6	3.3	2.5	2.5	2.4	2.5	2.6	2.3
Median Value	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	1.9	G	2.0	G	G	G
Count	28	28	28	28	28	28	27	26	26	20	15	13	8	17	17	20	22	25	27	27	27	27	25	26

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | (M3000)F2 | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.2	2.7	3.1	3.0 F	2.6 F	2.5 F	3.1 F	A	3.3	3.3	3.3 P B	3.4	3.2	3.5	3.2	3.1	3.2	3.0	3.2	3.2	2.9	3.4	2.7	2.7
2	2.7	2.9	3.5	2.5 F	2.7 F	2.8 F	2.9	3.4	3.5	3.3	3.5	3.5	3.4	3.4	3.3	3.4	3.4	C	C	C	C	C	C	C
3	F	F	2.9	3.1	3.2	3.0	3.0	3.3	3.4	C	C	C	3.5	3.4	3.6	3.4	3.3	3.1	3.3	3.3	3.3	3.0	3.0	F
4	2.8	2.8	2.9	2.9	3.1	3.0	3.1	B	3.6	3.5	3.3	3.5	3.4	3.4	3.3	3.4	3.2	3.5	3.1	3.1	3.2	2.9	2.6	2.7
5	2.7	2.8	3.1 H	3.0	3.1	2.8	3.2	3.4	3.2	3.0	3.3	3.6	3.4	3.5	3.4	3.3 H	3.4	3.4	3.3	3.0	3.0	3.1	2.9	2.8
6	2.6	2.6	2.9	2.8	2.8	2.8	3.3 Z	3.2	3.3	3.1	3.2	3.2	3.1	3.4	3.2	3.2	3.5	3.5	3.3	3.5	2.8	2.9	2.9	3.0
7	3.0	3.1	2.6	2.8	2.8	3.1	2.9	3.2	3.1 H	3.3	3.2	3.4 F	3.4	3.3	3.4	3.4	3.3 H	3.2	3.3	3.2	3.4	3.2	3.5	3.0
8	3.4 Z	3.1 Z	2.9 Z	2.7 Z	2.9	2.8	2.7	3.3	3.6	3.6	3.3	3.3	3.5	3.6	3.4	3.6	3.6	3.1	3.0	3.3	3.2	2.8	3.2 F	3.2
9	2.8	2.8 H	2.9	(2.9) J	2.5	2.9	3.2 H	3.5	3.3	3.3	3.4	3.3	3.3	3.1	C	C	C	3.3	3.4	3.3	3.1	3.0	3.0	3.0
10	3.2	2.9	3.0	2.6	3.2 F	(2.9) J F	3.1	3.1	3.3	3.5	3.3	3.2	3.4	3.4	3.5	3.3	3.5	(3.3) J	3.1 H	3.4	3.2	2.8	2.7	2.9
11	3.1	2.8	3.3	3.4	3.5 F	A	2.4 Z F	3.4	3.5	(3.4) C	3.2	3.8	3.4	3.3	3.4	3.4	3.6	3.5	3.6	2.9	2.9	2.9	2.8	2.7
12	2.9	3.0	2.7	2.7	2.7	2.8	3.8	3.3 H	3.5	3.3	3.1	3.0	3.1	3.1	3.0	3.3	3.2	3.1	3.2	3.1	3.6 K	2.6 K Z	2.7 Z K	2.7 K
13	2.8 V K	(2.9) K J F	2.9 K	3.5 K	3.2 K	2.4 K	(2.8) K J H	3.6	3.4	C	C	C	C	C	C	C	C	3.3	3.2	3.3	3.2	3.0	3.0	2.8
14	2.9	2.8	3.2	3.1	2.9	3.1	3.1	3.5	3.4	3.4	3.3 P	3.3	3.0 H	2.9	3.1	3.2	3.4	3.3	3.0	3.1	2.9	3.0	2.8	2.9
15	2.9	2.9	3.0 F	2.9 F	3.6	3.5 F	3.2 H	3.7	3.7	(3.6) C	(3.4) J P	3.4	3.7	3.5	3.3	3.5 B	3.6	3.3	(3.2) J C	3.2	3.2	3.4	3.0	3.0
16	3.0	3.0 Z	3.0	3.0	2.9	3.2 H	3.4 H	3.3	3.5	3.4	3.1	3.2	3.3	3.2	3.3	3.2	3.5	3.5	3.5	3.3	3.3	3.0	3.1	2.8
17	3.0 F	2.7	2.9	2.8	3.2	3.5	3.1	3.2	3.7	(3.4) P	3.6	3.3	(3.4) P	3.0	3.3	3.4	3.5	3.6	2.9	2.8	2.8	2.9	3.0	3.0
18	2.6	2.7	2.8	2.9	(3.0) J P	3.0	(3.1) J	3.5	(3.2) J	3.3	3.2	3.4	B	3.2	3.2	3.3	3.2	3.4	3.4	3.3	3.1	3.1	3.0 B	2.6
19	2.9 H	3.1	2.8	2.8	2.9	2.6 H	2.9	3.3	3.2	3.4	3.1	3.3	3.6	3.7	3.1	(3.2) J	3.1	3.2	3.2	3.3	3.3	2.8	2.7	2.9
20	3.2	3.1	2.8	2.7	2.6	2.7	2.8	3.1	3.4	3.3	3.3	3.4	3.4	3.2	3.3	3.3	3.4	3.5	3.0 H	3.0	3.3	2.8	2.7	2.9
21	2.7	2.9	2.9	2.9	2.9	2.9	3.1	3.5	3.2	(3.1) P	3.3	(3.2) J	3.1	3.3	3.1	3.2	3.3	3.3	3.1	3.1	2.9	2.8	3.0	3.0
22	2.7	2.7	3.0 H	3.1	3.2	2.8	3.0	3.3	3.5	3.4	3.0	3.0	3.2	3.2	3.1	3.4	3.6	3.5	2.9	3.0	3.1	3.0	3.2	2.9
23	2.9	3.0	3.1	3.1	3.1	3.1	3.0	3.4	3.3 H	3.3	3.4	3.3	3.5	3.4	3.5	3.6	3.4	3.4	2.9	3.1	3.4	3.0	3.1	2.8
24	2.6	2.8 H	2.8	3.0	3.0	3.2	3.2 Z	3.4	3.4	3.4	3.4	3.2	3.3	(3.3) P	3.3	3.5	3.2	3.2	3.1	3.2	3.0 H	3.2	3.0	2.9
25	2.9	3.1	2.8	2.8	2.9	2.9	3.1	3.5	(3.5) P	3.7	3.5	2.9	3.2	3.4	3.3	3.5	3.3	3.4	3.2	3.1	3.3	2.8	2.8	3.0
26	3.0	3.1	3.2	3.0	3.0	2.9	3.4	3.4	3.4	3.4	3.3	3.5	3.2 H	3.2 H	3.5	3.4	3.6	3.4	3.3	3.3	3.2	3.1	3.0	2.9
27	2.9	2.8	2.8	3.0	3.0	3.0	B	(3.5) P B	3.5	3.4	3.3	3.1	3.2	3.2	3.1	3.2	3.3	(3.2) C	3.1	3.1	3.2	2.8	2.9	2.8
28	3.0	2.8	3.0	3.0	2.8	2.9	3.3	3.7	3.3	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.4	3.3	3.0 H	2.9	2.7	3.0	2.7
29																								
30																								
31																								
Mean Value	2.9	2.9	3.0	2.9	3.0	2.9	3.1	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.3	3.2	3.2	3.1	3.0	2.9	2.9
Median Value	2.9	2.9	2.9	2.9	3.0	2.9	3.1	3.4	3.4	3.4	3.3	3.3	3.4	3.3	3.3	3.4	3.4	3.3	3.2	3.2	3.2	3.0	3.0	2.9
Count	27	27	28	28	28	27	27	26	28	26	26	26	26	27	26	26	26	27	27	27	27	27	27	26

(M3000)F2 | Sweep 1.0 Mc to 17.0 Mc in 15 min | Manual

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

IONOSPHERIC DATA

Feb. 1951 | fminF | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	1.1	E	E	E	E	A	A	2.8	A	A	3.5	3.6	3.4	3.4	3.0	3.0	2.0	1.8	1.5	1.5	A	A	1.5
2	1.4	E	E	E	1.3	E	1.4	A	2.5	3.0	3.7	3.6	3.8	3.6	4.0	2.9	A	C	C	C	C	C	C	C
3	1.8	A	1.6	1.8	1.6	E	1.4	2.0	2.9	C	C	C	3.8	3.8	3.4	3.0	2.7	A	1.8	1.6	1.5	A	A	AF
4	1.8	1.3	1.3	1.3	1.4	E	1.5	1.9	2.1	2.8	3.5	3.4	4.6	3.4	2.8	3.4	2.4	1.6	1.8	A	1.8	1.6	1.6	1.8
5	1.4	1.4	1.2	1.2	E	1.2	1.5	1.9	2.7	3.2	3.4	3.7	3.8	3.6	3.7	3.0	2.6	1.9	1.5	1.6	1.8	1.5	1.6	1.6
6	1.5	E	E	E	E	1.2	1.2	2.0	2.4	3.5	3.0	3.4	3.4	3.8	3.3	3.2	A	A	1.5	1.5	1.6	1.6	1.6	1.7
7	1.4	1.2	E	E	E	E	A	A	2.7	3.4	3.5	3.6	3.6	3.8	3.4	2.8	2.8	1.8	1.6	A	1.7	1.2	1.4	1.4
8	1.4	1.3	1.2	E	1.1	1.2	1.2	2.0	1.8	3.5	3.2	3.6	3.8	3.4	4.4	2.8	2.7	1.8	A	A	1.6	A	1.8	1.6
9	1.4	1.4	1.4	1.6	1.4	1.6	1.6	1.9	2.8	2.4	3.2	4.0	3.9	3.5	C	C	C	2.2	A	A	1.6	1.8	1.8	A
10	A	1.6	E	E	E	1.7	1.6	2.6	2.4	2.6	3.2	3.4	3.8	3.7	3.6	3.7	2.6	1.8	1.8	1.8	1.8	1.7	2.2	1.8
11	1.5	1.2	A	A	1.9	A	1.9	A	A	A	3.4	3.4[B]	3.7	3.8	3.7	5.0	A	A	A	1.6	1.6	1.6	1.6	1.6
12	1.4	E	E	E	E	E	1.5	2.1	A	3.5	3.3	3.6	3.4	3.6	3.4	3.0	3.4	1.8	A	1.5	1.8	1.4	1.4	1.6
13	A	1.6	1.8	E	1.6	E	2.0	2.4	2.8	C	C	C	C	C	C	C	C	A	A	1.7	1.8	1.6	1.6	1.6
14	E	1.6	1.2	1.2	1.2	E	1.7	1.7	2.4	2.6	5.0	4.8	5.2	5.4	3.8	A	3.2	2.0	1.9	1.6	1.5	1.6	1.4	1.4
15	1.4	1.6	E	1.1	E	E	1.7	2.0	2.7	C	5.0	5.0	5.6	5.0	3.4	3.4	2.6	2.0	1.6	1.6	1.7	1.4	1.4	2.4
16	1.9	1.5	1.5	E	1.2	E	1.6	1.8	2.7	3.4	3.4	3.4	3.8	3.4	3.3	3.2	2.6	2.0	A	A	1.7	1.5	1.6	1.5
17	1.3	E	E	E	E	E	1.6	2.0	3.3	3.3	3.0	4.1	5.2	4.6	3.2	3.4	2.6	1.9	1.6	1.5	1.5	1.5	1.5	1.5
18	1.3	1.3	1.9	1.8	1.6	E	1.8	1.8	3.0	3.4	3.6	3.5	4.3	3.1	3.4	3.0	2.4	2.0	1.6	1.5	1.5	1.6	1.6	1.6
19	1.5	E	1.2	1.2	1.2	1.2	1.4	1.8	A	3.2	3.4	3.0	A	3.2	3.6	2.8	2.9	2.7	A	1.6	1.6	1.6	1.6	1.6
20	1.5	1.6	E	E	E	E	1.6	2.2	2.3	3.4	4.8	3.6	4.0	3.6	3.4	3.2	2.8	A	1.8	1.6	1.6	1.6	1.6	1.7
21	E	E	E	E	1.2	1.3	1.4	2.0	2.4	2.6	4.7	3.6	4.7	3.6	3.4	3.4	3.0	1.9	1.6	1.6	1.5	1.5	1.6	1.6
22	1.4	E	E	E	E	E	1.5	2.0	2.3	3.0	3.4	3.5	4.8	4.0	3.2	2.9	2.9	2.0	1.6	1.6	1.6	1.6	1.6	1.6
23	1.6	1.2	E	E	E	E	E	2.1	2.8	3.1	3.4	5.8	3.6	3.6	3.4	3.6	2.6	2.1	1.6	1.6	1.6	1.6	1.6	1.7
24	1.7	E	1.3	E	E	E	1.4	2.0	2.8	3.0	3.6	5.0	5.2	4.4	4.0	3.2	3.0	2.1	1.6	1.6	1.4	1.4	1.4	1.4
25	1.4	1.4	1.3	E	E	E	1.3	2.0	5.0	5.6	4.8	3.8	3.6	4.0	4.0	3.3	2.9	2.6	1.8	1.8	1.7	1.6	1.6	1.6
26	1.6	1.3	1.2	1.1	1.2	1.2	1.6	2.2	2.8	3.4	4.7	5.0	5.4	5.0	3.8	3.4	2.6	2.1	1.3	1.9	1.8	1.6	1.6	1.5
27	1.3	1.4	E	E	E	E	1.6	2.2	3.8	3.4	3.5	3.6	4.8	3.6	3.4	3.4	2.6	2.1	1.6	1.6	1.6	1.6	1.6	1.6
28	E	E	E	E	E	E	1.6	2.3	2.8	3.4	4.6	4.6	4.4	A	3.9	3.4	3.3	2.2	1.6	1.5	1.5	1.5	1.5	1.5
29																								
30																								
31																								
Mean Value	1.5	1.4	1.4	1.4	1.4	1.3	1.5	2.0	2.8	3.2	3.8	3.9	4.2	3.8	3.5	3.3	2.8	2.0	1.7	1.6	1.6	1.6	1.6	1.6
Median Value	1.4	1.3	E	E	E	E	1.6	2.0	2.7	3.3	3.5	3.6	3.8	3.6	3.4	3.2	2.7	2.0	1.6	1.6	1.6	1.6	1.6	1.6
Count	25	27	27	27	28	27	26	24	25	23	25	26	26	26	26	25	23	22	20	22	27	24	25	25

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 10

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

IONOSPHERIC DATA

Feb. 1951 | fminE | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.4	1.6	E	1.9	E	E	1.5	1.5	1.6	1.5	1.7	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.4	1.5	1.5	1.5	1.5	1.5
2	1.2	E	E	E	E	E	1.8	1.5	1.5	1.6	2.2	2.6	B	2.8	2.8	1.8	1.5	C	C	C	C	C	C	C
3	1.6	1.8	E	E	E	E	1.4	1.4	1.5	C	C	C	B	B	B	1.6	1.6	1.6	1.6	B	1.8	1.4	1.5	1.5
4	1.5	B	B	B	B	E	B	1.5[B]	1.6	1.6	1.6	2.0	2.4	2.4	2.6	1.8	1.7	2.2	1.4	1.4	1.4	1.4	1.4	1.2
5	1.2	1.2	E	E	1.8	E	B	1.6[B]	1.7	2.1	B	B	3.3	3.3	3.0	B	B	B	B	1.8	1.5	1.5	B	B
6	B	E	E	E	E	E	E	1.3[B]	1.7	2.8[B]	B	B	B	B	3.0	2.3	1.7	1.5	1.8	B	1.6	B	1.9	1.6
7	B	E	E	E	E	E	1.5	1.6	1.6	3.0	B	B	B	B	B	B	B	1.7	B	1.6	1.8	1.6	B	B
8	B	B	E	E	E	E	E	B	B	B	B	2.8	B	B	B	2.1	B	B	1.5	1.5	1.5	1.6	1.6	B
9	1.4	B	B	B	B	B	B	1.7	1.6	1.6	2.6	3.4	3.4[B]	2.0	C	C	C	1.8	1.3	1.2	1.2	1.3	1.3	1.2
10	1.2	1.2	E	E	E	E	B	1.5	1.6	1.6	1.8	B	B	B	B	B	1.7	B	B	B	B	B	B	B
11	1.8[B]	E	1.2	E	E	E	B	1.8	1.8	1.8	1.8	2.0	1.2	3.4	1.8	B	1.7	1.7	1.8	B	B	B	B	B
12	B	E	E	E	E	1.9	1.8	1.5	1.7	2.2	2.0	1.8	1.7	1.9	2.0	1.8	1.6	1.6	1.4	1.6	B	B	B	B
13	E	E	E	E	B	E	B	1.7	1.8	C	C	C	C	C	C	C	C	1.7	1.7	1.8	1.8	B	B	B
14	E	1.8	1.9	E	E	E	B	2.0	1.6	1.6	1.8	2.1	3.2	B	1.9	1.8	2.1	1.7	B	1.4	1.4	1.3	1.3	1.2
15	1.2	1.4	E	E	E	E	B	1.6	1.7	C	B	B	B	B	1.9	2.0	1.6	B	B	B	B	B	B	B
16	B	B	B	E	E	E	B	1.8[B]	1.6	1.7	2.2	2.2	2.0	2.2	1.8	1.6	1.6	1.5	1.6[B]	1.6[B]	B	B	B	1.9
17	B	E	E	E	E	E	B	1.6	1.6	1.7	2.4	2.7	B	B	1.8	2.1	1.6	1.6	1.6	B	B	B	B	B
18	B	B	B	B	B	E	B	1.8	1.8	1.8	1.7	2.1	2.4	2.1	2.0	1.8	1.6	1.7	B	B	B	B	B	B
19	B	E	1.4	1.5	E	E	B	1.4	1.4	B	1.8	B	1.8	1.8	2.2	1.9	1.8	1.8	1.7	B	B	B	B	1.8
20	2.0	1.9	E	E	E	E	B	1.6	1.6	1.7	1.8	B	B	2.6	B	1.8	1.8	1.6	1.6	B	1.8	1.7	1.8	B
21	1.2	E	E	E	E	B	B	1.6	1.6	1.7	1.9	2.1	B	2.7	1.6	1.8	1.6	1.6	B	B	B	B	B	1.9
22	B	E	E	E	E	E	1.9	1.6	1.6	1.8	1.9	2.0	2.0	1.7	1.8	1.8	1.6	1.6	1.9	B	B	B	B	B
23	B	E	E	E	E	E	E	1.6	1.6	1.8	1.8	1.8	1.8	1.6	1.8	2.0	1.8	1.6	B	B	B	1.6	1.8	1.8
24	B	E	B	E	E	E	B	1.6[B]	1.6	2.2	2.5	B	B	B	B	1.6	2.0	1.8	B	1.8	1.5	1.5	1.6	1.6
25	1.3	1.2	E	E	E	E	E	1.5	B	B	B	2.8	1.9	2.0	2.1	2.2	1.9	1.7	1.6	1.6	1.6	1.8	B	1.8
26	1.3	1.8	E	E	E	E	B	1.7	1.6	1.6	1.7	2.4	B	B	B	B	1.8	1.7	1.6	B	1.9	1.8	B	B
27	B	B	E	E	E	E	B	B	B	1.9	1.9	1.9	1.8	1.8	B	1.9	1.8	B	B	B	B	B	B	B
28	E	E	E	E	E	E	B	1.8	1.8	1.8	B	B	B	3.0	3.4	2.7	B	1.7	1.9	B	1.5	1.5	1.5	1.4
29																								
30																								
31																								
Mean Value	1.4	1.5	1.5	1.7	1.8	1.9	1.3	1.6	1.6	1.9	2.0	2.3	2.2	2.3	2.1	1.9	1.7	1.7	1.6	1.6	1.6	1.5	1.6	1.6
Median Value	1.2	E	E	E	E	E	1.4	1.6	1.6	1.8	1.8	2.1	2.0	2.1	2.0	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.6
Count	16	22	23	25	24	26	10	26	25	22	19	17	14	17	18	21	22	22	17	12	15	14	11	13

fminE

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 11

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

IONOSPHERIC DATA

Feb. 1951 | foF2 | 135° E Mean Time | **Kokubunji Tokyo** | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.6	3.0	2.7	2.0	2.3	2.3	3.0	5.7	(7.0)P	10.0S	(10.9)JP	11.7	(11.3)P	8.4	8.4	(8.3)P	8.3	7.6	7.0	6.1	4.9	4.6	3.6	3.5
2	(3.9)P	4.1	3.9	2.5	2.3	2.4	2.6	(6.1)P	(7.5)P	9.0	(10.6)J	9.3	8.5	8.2	8.7	9.8	7.6	B	5.7	6.1	6.1	4.5H	4.1	4.4H
3	4.0	4.2P	4.0	3.8	3.7	2.6	2.7	5.5	6.8	8.5	9.3P	10.7	8.7	8.0	7.9	(7.2)P	6.9	6.3	6.4	5.9	4.0	3.5Z	3.4S	(3.3)JS
4	3.6	3.5	(3.5)P	3.8	3.8	2.9	2.8	5.5	7.3	7.7	8.6	8.4	8.0	7.3	6.9	7.0	6.9	6.9	4.6	4.9	4.0S	3.9	(3.8)P	(3.8)PS
5	3.7	(4.4)P	3.6	3.4	2.9	3.0	3.3J	5.7P	6.7	7.6	11.2	(11.9)P	8.6	8.5	8.2P	7.8P	7.2	6.9	5.8	4.2J	3.1	3.0	3.1	3.0
6	3.1	3.3	3.2	3.5P	3.1	2.5	2.6	4.7	8.2	9.1	10.1	10.1	7.8	8.9	8.3	8.6	8.6	7.0	(5.1)P	5.0	3.8F	SF	3.6J	4.2
7	3.2	3.1	2.4	2.7	3.0	3.1	2.8	6.2	7.1	8.7	(10.8)JP	9.8P	7.9	7.5	6.9	7.7	6.6	6.4	6.4	3.6	3.3JF	3.7	3.5	4.0
8	3.0	3.0	3.3	3.1	3.0	2.8	2.6	(5.5)P	8.8	7.2	7.8	(9.4)P	10.3	8.7	7.7	6.9	7.5	(6.2)P	(5.5)P	(5.2)P	4.0	B	3.2JS	2.9PF
9	2.7J	2.7	2.6	2.7	2.6	2.8	2.4	6.0S	7.0	9.1	11.8	11.1	8.0	7.0	(7.4)P	8.6	(7.7)P	6.2	5.7	3.7	4.3P	2.3	4.0J	4.1JF
10	4.0	3.9	3.9	3.2P	3.5J	3.3PF	3.4	5.8	10.2J	B	8.3P	9.5	(10.6)P	8.6	8.3P	7.0	7.0	6.0	(5.1)PS	5.8P	3.8	3.3	(3.6)B	4.0
11	S	3.8	3.9	2.7	1.9F	2.1	2.4	6.2	5.7	8.0	(10.5)P	B	(11.9)P	8.4	7.7P	7.8	7.3	5.1	4.7	3.6	3.6	3.7	(3.4)JP	(3.2)P
12	(3.3)P	3.3P	3.0	3.1	3.0	3.2	4.2	(5.2)P	7.3	6.8	8.4	11.3	11.3	9.5J	9.2	8.6	7.0	6.5	6.2	3.3K	3.0K	3.0K	(3.1)KJPF	(3.2)KJPF
13	3.2KF	4.0KF	4.0KF	4.3KJ	1.5K	2.0K	2.5K	6.1	[6.2]C	6.4	7.7	9.5S	B	10.7	9.6	7.3	7.0	6.5	5.1P	(4.7)S	4.3P	4.1P	(4.0)S	3.8
14	4.0	4.0	(3.5)P	3.3P	C	C	3.0	5.5	7.0	7.0	(8.0)P	7.0	8.5	[8.6]B	8.6	9.9P	(8.5)JP	8.0	6.1	4.3P	4.2	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	7.7	6.3	(5.0)P	(4.8)C	4.6	4.1	(3.6)P	3.3JF
16	3.3J	3.0P	B	B	B	(3.5)P	2.6	6.1	B	B	(13.0)HP	8.8P	B	B	B	7.4	B	6.5	5.8	5.0	(4.4)P	3.2	2.7	3.0
17	2.9	3.0	3.1	3.2	4.3P	2.3	2.6	6.2	(8.0)P	8.1J	8.2J	[8.0]B	7.7JB	8.9P	8.4J	(8.1)P	7.3	6.5	4.8	3.9	4.2	(3.5)P	3.4	3.7
18	3.3	3.5	3.3	3.6	4.0	2.6	2.9	5.7P	8.0	9.6	(9.7)P	9.4	9.1	7.7	7.6	7.9	7.3	7.7	6.7	6.0	6.0	(4.4)P	4.5JP	4.2
19	4.0	4.2	3.8	3.7	3.7	3.1	3.8	(6.1)P	8.1	8.0	10.2	B	10.6	7.3J	7.1S	B	(8.3)P	C	6.3	5.7	5.2J	SA	3.4J	S
20	3.8	3.2	3.7	3.8	3.9	3.2	3.7Z	B	8.3	9.4	(10.3)P	10.4J	10.7	(8.3)P	7.5	7.7	7.5	6.9	5.4	(5.0)P	4.7	(3.4)P	(3.6)P	3.8
21	(4.2)P	4.0	(4.1)P	4.3P	(4.4)P	3.4	3.9	6.2J	8.1	9.1	9.2J	(9.2)C	9.1J	9.0	9.2	8.9J	8.1	7.2	5.6	4.7	4.0J	3.6P	3.5B	3.7
22	3.5	3.7	3.8	3.5	3.0	2.7	3.1	7.3	7.0	[8.2]C	(9.5)P	11.1	(11.3)C	(11.5)P	11.3	9.8	7.3	6.9	5.9	6.0P	5.1	4.7	4.1J	3.9
23	4.0	(3.8)P	3.7	3.3	3.2	3.7	3.4	6.9	9.3P	(11.4)P	(11.1)P	(11.5)P	11.2	9.7	8.8P	8.1	7.1	7.1P	(5.7)P	6.7	B	3.8	(3.2)P	3.2P
24	3.4J	3.4	3.5	3.5	3.0	3.3P	3.3	6.4	(8.3)J	10.1	10.5P	(12.1)P	12.6	(12.2)P	9.8	7.9H	(7.9)P	(8.6)P	7.3	6.8	5.7	5.1	4.8	4.1
25	3.9	3.9	3.8	3.2	3.2P	3.3	3.6	8.8	(10.6)P	11.7	11.3	9.5	11.8P	(12.6)P	9.5	7.4	(7.9)PH	(8.2)P	6.4	5.0P	4.9PH	3.5	(3.6)P	3.6
26	4.0	3.5	3.3	3.0	2.6	2.8	4.2	5.8	7.3	9.6	10.7	[10.5]C	10.3	(10.5)P	(10.2)P	(9.7)P	8.4	6.9	6.0	5.0	5.0	4.3H	4.2	4.4
27	(4.5)P	4.1	4.4	4.0	3.3	3.2	4.1	7.1	7.9	9.6	10.7	11.6	12.8	11.9P	12.5P	(10.5)P	9.2	7.3	6.4	5.8	5.7S	(4.3)SP	4.1P	4.7
28	4.8S	4.7	5.3	3.3	3.5	3.6	M	M	M	9.0	11.4	12.0	13.3P	(12.3)P	12.8	11.7	(11.1)BP	S	7.5	6.4	4.9	4.8	5.1	4.8
29																								
30																								
31																								
Mean Value	3.7	3.6	3.6	3.3	3.1	2.9	3.1	6.1	7.7	8.8	10.0	10.1	10:1	9.2	8.8	8.4	7.7	6.8	5.9	5.1	4.5	3.8	3.7	3.8
Median Value	3.8	3.7	3.6	3.3	3.1	3.0	3.0	6.1	7.5	9.0	10.3	10.1	10.3	8.6	8.4	8.0	7.5	6.9	5.8	5.0	4.3	3.8	3.6	3.8
Count	26	27	26	26	25	26	26	25	25	25	27	25	25	26	26	26	27	25	28	28	28	24	27	26

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 1

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

IONOSPHERIC DATA

Feb. 1951 | foF2 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	310	290	280	380	420	400	300	240	(270)P	300S	(300)JP	270	(270)P	270	300	(290)P	290	280	330	250	340	280	320	350
2	(360)P	300	240	360	380	350	320	(240)P	(270)P	270	(250)J	250	270	280	300	260	240	B	320	310	270	280H	330	350H
3	350	350P	320	310	280	300	310	240	240	290	280P	270	250	270	260	260	260	280	290	270	270	290Z	350S	(340)JZS
4	400	330	(350)P	310	250	350	330	280	280	270	260	250	270	250S	270	260	250	250	260	300	280S	300	(340)P	(380)PS
5	380	(330)P	300	330	320	370	(300)J	270P	260	310	320	260	260	290	260P	260P	260	300	260	(270)J	300	350	360	370
6	400	380	340	340P	280	330	390	310	300	280	300	270	290	290	280	320	270	260	(290)P	(310)S	350F	SF	(360)J	320
7	300	300	340	360	370	320	360	290	270	310	(270)JP	290P	260	250	270	270	260	280	270	270	(330)JF	B	280	290
8	320	350	350	330	350	340	350	(310)P	240	240	270	(300)P	270	270	250	230	280	(270)P	(330)P	(280)P	300	B	(250)JS	350FP
9	(350)J	340	360	380	390	380	240	(250)JS	280	300	290	270	270	280	(290)P	300	(260)P	270	270	290	290P	350	(280)J	(290)JF
10	360	(360)S	280	380P	(330)J	320PF	(320)B	320	(250)J	B	300P	290	(270)P	260	280P	260	270	260	(290)PS	270P	290	330	(370)B	(410)B
11	S	300	270	240	300F	350	340	270	240	290	(320)P	B	(260)P	270	280P	290	250	250	270	260	300	350	(300)P	(340)P
12	(350)P	300P	300	330	340	360	240	(240)P	280	280	310	310	290	(280)J	270	250	260	260	260	250K	320K	350K	KJP (410)F	KJP (400)F
13	380KF	(420)KF	300KF	(230)KJ	250K	410K	310K	250	(260)C	260	290	250S	B	290	260	280	270	270	270P	(290)S	310P	320P	(340)S	360
14	330	290B	(300)P	300P	C	C	260	250	250	260	(280)P	290	(330)B	(320)B	(310)B	300P	(270)JP	250	270	260P	310	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	230	330	(340)P	(310)C	280	270	(270)P	(340)JF
16	(350)J	320P	B	B	B	(250)P	310	(290)B	B	B	(270)PH	280P	B	B	B	280	B	250	270	250B	(260)P	320	280	360
17	350	350	330	330	270P	250	310	260	(250)P	(270)J	(260)J	(280)B	(290)JB	290P	(270)J	(260)P	260	260	260	280	290	(320)P	310	320
18	360	370	340	320	260	320	320	260P	280	280	(270)P	280	290	270	280	260	270	260	290	270	280	(280)P	(320)JF	360
19	320	320	330	340	320	360	350	(260)P	270	(300)B	280	B	260	(270)J	270S	B	(270)P	C	250	B	(260)J	AS	(350)J	S
20	260	300	340	390	380	360	340Z	B	250	290	270	(300)J	270	(270)P	260	270	260	270	290	(260)P	280	(270)P	(350)P	340
21	(320)P	320	(330)P	330P	(270)P	310	320	(270)J	270	280	(270)J	(280)C	(280)J	270	280	(270)J	250	260	250	270	(290)J	310P	310B	310B
22	360	350	310	300	240	400	320	250	240	[270]C	(300)P	300	[300]C	(290)P	280	260	240	270	270	310P	280	300	(320)J	330
23	310	(290)P	280	290	310	350	310	260	260P	(290)P	290	(290)P	280	290	270P	230	280	260P	(330)P	350	B	260	(350)P	370P
24	(390)J	360	360	310	330	250P	260	250	(290)J	260	300P	(290)P	290	(300)P	260	260H	(270)P	(280)P	270	270	270	270	300	320
25	310	340	330	330	380P	340	310	250	(260)P	250	270	300	310P	(290)P	270	300	(280)PH	(270)P	260	290P	270PH	300	(350)P	340
26	280	290	280	290	320	340	260	210	270	290	250	[260]C	280	(320)P	(280)P	(290)P	240	270	270	290	290	330H	340	370
27	(360)P	330	340	300	290	350	290	240	240	280	310	290	300	310P	290P	(300)P	270	250	280	290	310S	(280)PS	330P	340
28	340S	320	280	230	370	330	M	M	M	300	290	300	290P	(290)P	300	310	(290)P	S	310	280	310	360	350	340
29																								
30																								
31																								
Mean Value	340	330	310	320	320	340	310	260	260	280	280	280	280	280	280	270	260	270	280	280	290	310	330	350
Median Value	350	330	320	330	320	340	310	260	260	280	280	280	280	280	280	270	260	270	270	280	290	300	330	340
Count	26	27	26	26	25	26	26	25	25	25	27	25	25	26	26	26	27	25	28	27	27	23	27	26

foF2

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 2

27

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

IONOSPHERIC DATA

Feb. 1951 | h'F2 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

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

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 3

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Feb. 1951 | foF1 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35°42.4'N | Long. 139°29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	Q	L	L	L	L	L	L	Q	Q	A						
2								Q	Q	L	L	L	L	L	L	L	Q	A						
3								Q	Q	L	L	L	L	L	L	L	L	Q						
4								Q	L	Q	Q	L	L	5.2	L	Q	Q	Q						
5								Q	Q	L	L	L	L	L	L	L	Q	Q						
6								Q	Q	Q	L	L	L	L	L	Q	Q	Q						
7								Q	Q	L	L	L	L	A	L	L	L	Q						
8								Q	L	3.4	L	L	L	L	L	L	L	Q						
9								Q	Q	L	L	L	Q	L	L	L	Q	Q						
10								Q	L	4.0	L	4.4	L	(4.4)L	L	L	L	Q						
11								Q	Q	Q	L	L	L	L	L	L	3.7	Q						
12								L	A	A	L	L	L	L	L	L	Q	Q						
13								Q	C	L	L	L	4.6	L	L	L	Q	A						
14								Q	Q	L	L	L	L	L	L	L	Q	Q						
15								C	C	C	C	C	C	C	C	C	Q	Q						
16								Q	Q	L	Q	L	L	L	L	B	L	Q						
17								Q	L	L	L	B	Q	L	L	L	L	Q						
18								Q	L	L	L	L	L	L	L	L	L	L						
19								Q	L	L	L	L	L	L	L	Q	Q	Q						
20								3.6	Q	Q	L	L	Q	L	L	L	L	Q						
21								Q	Q	L	L	C	L	L	L	L	L	Q						
22								Q	A	C	4.5	L	C	4.5	L	L	Q	Q						
23								Q	Q	L	L	L	L	L	L	4.1	L	Q						
24								Q	Q	L	L	L	L	L	L	Q	Q	Q						
25								Q	B	L	L	L	L	L	L	Q	Q	L						
26								Q	Q	L	L	C	Q	L	4.5	4.5	Q	Q						
27								Q	Q	L	L	L	4.5	L	L	L	Q	Q						
28								M	M	L	L	L	L	L	L	L	L	Q						
29																								
30																								
31																								
Mean Value								3.6		3.7	4.5	4.4	4.6	4.7	4.5	4.3	3.7							
Median Value								3.6		3.7	4.5	4.4	4.6	4.5	4.5	4.3	3.7							
Count								1		2	1	1	2	3	1	2	1							

foF1

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 4

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

IONOSPHERIC DATA

Feb. 1951 | h'F1 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

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

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 5

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

IONOSPHERIC DATA

Feb. 1951 | foE | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

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

foE

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 6

31

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Feb. 1951 | h'E | 135° E Mean Time | Kokubunji Tokyo | Lat. 35°42.4'N | Long. 139°29.3E

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	A	A	A	110	110	110	A	AF						
2								AF	120[A,F]	110	100	100	100	100	110	100	100	A						
3								100	120	110	100	100	100	100	100[F]	AF	110	110						
4								150	110	100	100	100	100	100	100	100	100[H]	120						
5								A	120	110	110	100	100	100	100	110	110	A						
6								110	110	120	120	100	120	110	110	110	110[F]	110						
7								B	110	130[A]	A	120	120	A	120[A]	110	120[A]	100						
8								B	120	120	120	120	120	120	110	100[F]	120	110						
9								B	110	120	A	A	110	110	110	120	120	A						
10								A	A	110	110	100	110	110	110	110	110	A						
11								130	110[H]	110	100	110	110	110	110	110	120	120						
12								B	A	A	110	100	100	100[F]	110	110	110	A						
13								B	110	110	110	110	110	110	110	110	110	A						
14								130	130[A]	A	A	100	110	110	100	100	120	120						
15								C	C	C	C	C	C	C	C	C	A	A						
16								140	120	100	A	110	110	110	110	110	110	100						
17								B	110	110	110	100	100	100	100	110	110	120						
18								B	110	100	100	110	100	100	100	100	100	120						
19								B	110	110	A	100	100[H]	110	110	100	A	110						
20								130	110	110	110	110	110	100	110	110	110	120						
21								130	110	110	A	C	110	100	100	110	110	110						
22								130	110[F]	[120][C]	120	120	[120][C]	110	110	120	110[A]	A						
23								120	100	110	100	110	110	110	100	100	100	120						
24								120	110	110	100	100	100	110	110	110	110	110						
25								120	B	110	100	100	100	100	100	100	110	A						
26								110	100	100	100	C	B	100	90	100	100	A						
27								110	100	100	100	100	100[F]	100	100	100	100	110						
28								M	M	100	100	100	110[B]	100	A	100	100	110						
29																								
30																								
31																								
Mean Value								120	110	110	110	110	110	110	110	110	110	110						
Median Value								120	110	110	100	100	110	100	110	110	110	110						
Count								15	22	24	20	23	25	26	26	26	25	17						

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 7

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

IONOSPHERIC DATA

Feb. 1951 | fEs | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

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	3.1 B F	2.6	1.9	1.6	1.6	1.6	G	G	3.8	5.0	4.6	4.8 Y	6.0	G	G	G	3.8 Y	5.4	2.5	3.2	2.6	2.4	2.4	3.4 F
2	2.7	2.8	2.6	2.6 F	2.5 F	2.1 F	G	2.5 F	G	G	G	B	G	G	3.6	3.7 Y	3.8 F	4.7	3.8	3.9	4.6	3.8 Y	2.0	2.6
3	3.2	2.6	2.0	2.0	G	G	G	G	G	3.4 Y	G	G	G	G	G	3.2 F	G	G	2.3	G	G	2.0	2.2	G
4	2.3	2.6 F	2.5	2.1	1.9 F	1.8	1.6	G	G	G	G	G	G	B	G	G	G	G	2.2	G	G	G	G	G
5	G	G	G	2.4	2.8	G	1.8	2.5 Y	G	G	G	G	4.8	G	G	G	G	2.2	2.4	G	G	2.9	G	G
6	G	G	G	G	1.5 B	1.8	2.0	G	G	G	G	G	G	G	G	G	G	2.6 Y	2.4	G	G	G	G	2.4
7	G	G	G	1.6	G	1.7	G	G	G	G	3.8	G	G	4.6 Y	G	G	G	2.4 Y	2.3	2.8	2.7 F	2.9	2.6 F	2.9
8	2.5	2.4	1.8	1.8	1.6	1.6	1.5	G	G	G	G	B	G	B	G	G	G	G	2.2	2.5	4.6	2.2	2.3	2.3
9	1.6	2.0	1.6	1.6	G	G	G	G	2.9	G	4.7 F	4.8	B	G	G	B	G	3.2 Y	2.7	2.4	2.2	4.8	3.0	2.2 F
10	2.4	2.4	G	1.5	1.5	2.0	2.5	3.2	3.9	G	G	G	G	G	G	G	G	2.3	G	G	G	2.0	G	G
11	G	G	2.5	2.6 F	2.4 F	1.8	G	G	G	G	G	4.5	5.8	5.2	G	G	G	G	G	2.2	2.5	2.3	2.1	1.5
12	1.6	G	G	G	1.8	G	G	2.6	4.8	6.8	G	B	B	G	G	G	G	3.0	2.5	3.0	3.0	G	1.9	1.6
13	2.1 F	1.7	1.8	G	1.6	1.7 F	1.6	G	C	G	G	G	G	G	4.0 Y	G	3.9	4.7	3.1	4.2 Y	2.6	2.6	3.4	1.9
14	1.8	1.6	G	G	C	C	G	G	2.9	2.8	2.9	B	B	B	3.9 Y	G	B	G	3.4	G	G	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	3.8	2.6	3.0	C	G	1.7	G	1.6
16	G	G	G	G	G	G	G	G	G	G	3.4	B	B	G	B	B	G	G	1.9	1.6	G	G	2.2	2.2
17	G	2.7	2.2 Y	2.6	2.0	G	G	G	G	G	G	B	B	G	G	G	3.2	G	G	G	2.2	2.5	G	G
18	G	G	1.6	1.6	1.6	G	G	G	G	G	G	B	G	B	G	G	3.0	G	G	G	G	G	G	G
19	G	G	G	G	G	G	G	G	G	G	4.8	G	G	G	G	C	3.3	G	2.8	4.4	4.1	4.8	G	G
20	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	4.0 Y	3.9	3.1	3.6	3.1 F	3.1	1.6	2.2
21	2.6	G	2.2	G	G	G	G	G	G	G	4.6 Y	C	G	G	G	G	G	2.6 Y	2.1	2.4	1.8	G	G	G
22	2.4	1.6	1.6	1.7	G	1.6	G	G	2.7	C	G	G	C	G	G	3.8	G	3.2	2.6	2.0	G	G	G	G
23	1.9	2.3	2.6	1.6	1.6	1.6	B	G	G	G	G	G	4.7	4.7	4.5 Y	B	G	2.7 Y	2.2	2.0	2.2	3.0	2.2	2.5
24	2.5	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	2.6 Y	G	G	G	G	2.1	2.0
25	3.1	3.4	2.4	2.2	G	G	G	G	B	G	G	G	G	G	G	G	3.8	2.9	2.6	2.7	2.8	3.0	2.8	3.2
26	2.5	2.1 F	1.8	2.1 F	G	G	G	2.7 Y	G	G	G	C	B	G	G	G	G	3.4	3.1	3.0 B	3.2	3.8	2.5	G
27	G	1.6	1.6 F	2.2 Y	1.6	1.6	2.6	G	G	G	G	G	G	G	G	G	G	G	1.7	1.7	G	G	G	G
28	G	G	G	G	G	G	G	M	M	G	G	3.7	G	4.8	4.6	G	G	G	G	G	2.1 Y	G	G	G
29																								
30																								
31																								
Mean Value	2.4	2.2	2.3	2.0	1.9	1.7	1.9	2.7	3.5	4.5	4.1	4.5	5.3	4.8	4.1	3.6	3.6	3.2	2.6	2.8	2.9	2.9	2.4	2.3
Median Value	1.8	1.6	1.6	1.6	1.5	G	G	G	G	G	G	G	G	G	G	G	G	2.5	2.4	2.0	2.2	2.2	1.9	1.6
Count	27	27	27	27	26	26	26	26	24	26	27	18	20	23	26	23	27	28	28	27	28	27	27	27

fEs

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 8

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

IONOSPHERIC DATA

Feb. 1951 | (M3000)F2 | 135° E · Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

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	3.1	3.1	3.2	2.8	2.6	2.7	3.2	3.6	(3.3)P	3.2S	(3.1)JP	3.7	(3.3)P	3.3	3.0	(3.1)P	3.1	3.2	3.1	3.4	3.0	3.2	3.0	2.8
2	(2.8)P	3.1	3.7	2.7	2.7	3.0	3.0	(3.4)P	(3.4)P	3.3	(3.6)J	3.7	3.4	3.3	3.1	3.4	3.5	B	2.9	3.0	3.3	3.3H	3.0	2.8H
3	2.9	2.9P	3.0	3.0	3.2	3.0	3.0	3.7	3.5	3.2	3.2P	3.3	3.5	3.3	3.4	3.3	3.5	3.1	3.3	3.4	3.3	3.3Z	2.9S	(2.8)JS
4	2.6	3.0	(2.9)P	3.1	3.5	2.8	2.9	3.2	3.5	3.2	3.4	3.5	3.3	3.5	3.5	3.3	3.4	3.5	3.4	3.2	3.3S	3.3S	(2.9)P	(2.7)PS
5	2.8	(2.9)P	3.1	3.0	3.0	2.7	(3.1)J	3.2P	3.2	3.2	3.1	(3.3)P	3.5	3.3	3.2P	3.3P	3.3	3.1	3.4	(3.3)J	3.1	2.7	2.8	2.8
6	2.6	2.7	2.9	2.9P	3.2	2.9	2.6	3.1	3.1	3.2	3.1	3.5	3.1	3.1	3.3	2.9	3.3	3.5	(3.0)P	(3.0)S	2.8F	SF	(2.8)J	2.9
7	3.1	3.1	2.8	2.8	2.9	3.0	2.8	3.3	3.4	3.2	(3.2)JP	3.2P	3.4	3.4	3.3	3.4	3.3	3.3	3.3	3.3	(3.0)JF	2.8	3.4	3.2
8	3.0	2.9	2.8	3.0	2.8	2.9	2.9	(3.0)P	3.6	3.6	3.4	(3.0)P	3.4	3.4	3.4	3.6	3.1	(3.3)P	(2.9)P	(3.1)P	3.2	B	(3.6)JS	2.8FP
9	(3.0)J	3.0	2.8	2.7	2.7	2.7	3.8	(3.3)JS	3.2	3.2	3.3	3.4	3.2	3.2	(3.1)P	3.3	(3.5)P	3.3	3.5	3.2	3.2P	2.8	(3.2)J	(3.1)JF
10	2.8	2.8	3.3	2.6P	(3.0)J	3.0PF	(3.0)B	2.9	(3.7)J	B	3.0P	3.3	(3.3)P	3.2	3.2P	3.4	3.4	3.4	(3.1)PS	3.2P	3.1	3.0	(2.8)B	2.6
11	S	3.2	3.3	3.7	3.1F	2.8	2.9	3.4	3.6	3.2	(3.0)P	B	(3.4)P	3.3	3.2P	3.2	3.6	3.5	3.3	3.5	3.2	2.8	(3.1)PB	(2.9)PB
12	(2.8)P	3.1P	3.1	2.9	3.0	2.8	3.7	(3.6)PB	3.5	3.2	3.1	3.1	3.5	(3.3)J	3.3	3.4	3.4	3.3	3.4	3.4K	3.0K	2.7K	(2.2)KJPF	(2.5)KJPF
13	2.7KF	2.5KF	3.2KF	(3.7)KJ	3.3K	2.5K	3.0K	3.4	(3.4)C	3.4	3.2	3.5S	B	3.2	3.4	3.3	3.2	3.3	3.3P	(3.2)S	3.1P	3.1P	(2.9)S	2.8
14	3.0	3.2	(3.0)P	3.1P	C	C	3.3	3.6	3.6	3.4	(3.2)P	3.2	(3.0)B	(3.0)B	(3.0)B	3.2P	(3.3)JP	3.5	3.3	3.4P	3.1	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	3.5	3.0	(3.0)P	(3.1)C	3.3	3.2	(3.3)P	(2.9)JF
16	(2.9)J	3.1P	B	B	B	(3.5)PB	3.0	3.3	B	B	(3.4)PH	3.2P	B	B	B	3.3	B	3.5	3.3	3.5	(3.5)P	3.0	3.3	2.8
17	2.8	2.8	3.0	3.0	3.3P	3.4	3.0	3.3	(3.5)P	(3.3)J	(3.4)J	(3.4)B	(3.3)JB	3.2P	(3.5)J	(3.4)P	3.6	3.4	3.5	3.1	(2.9)P	3.2	3.0
18	2.7	2.8	3.0	3.0	3.5	3.0	3.1	3.3P	3.2	3.4	(3.2)P	3.3	3.3	3.3	3.3	3.4	3.3	3.3	3.2	3.3	3.3	(3.2)P	(3.0)JP	2.8
19	3.0	3.0	2.9	2.9	3.0	2.9	2.8	(3.3)P	3.3	(3.0)B	3.2	B	3.3	(3.4)J	3.3S	B	(3.2)P	C	3.4	3.2	(3.2)J	AS	(2.9)J	S
20	3.2	3.1	2.9	3.0	2.7	2.8	2.9Z	B	3.3	3.1	3.4	3.2	3.3	3.3	3.3	3.3	3.4	3.3	3.1	(3.2)P	3.3	(3.3)P	2.9	3.0
21	(3.0)P	3.0	(2.9)P	3.0P	(3.3)P	3.0	3.0	(3.3)J	3.2	3.3	(3.5)J	(3.5)C	(3.5)J	3.3	3.3	(3.3)J	3.4	3.4	3.4	3.3	(3.1)J	3.0P	3.2B	3.1
22	2.8	2.9	3.1	3.1	3.5	2.7	3.1	3.5	3.6	(3.3)C	(3.0)P	3.1	(3.2)C	(3.2)P	3.3	3.3	3.7	3.3	3.3	3.1P	3.2	3.1	(3.1)J	3.0
23	3.0	(3.1)P	3.2	3.3	3.0	2.9	3.1	3.4	3.4P	(3.4)P	(3.1)P	(3.1)P	3.3	3.3	3.2P	3.7	3.4	3.3P	(2.9)P	2.8	B	3.4	(2.9)P	2.8P
24	(2.6)J	2.9	2.8	3.1	3.0	3.5P	3.4	3.5	(3.1)J	3.5	3.0P	(3.2)P	3.3	(3.1)P	3.4	3.4H	(3.2)P	(3.3)P	3.3	3.3	3.3	3.3	3.1	3.1
25	3.1	2.9	3.0	3.0	2.8P	2.9	3.2	3.5	(3.4)P	3.4	3.3	3.1	3.1P	(3.2)P	3.3	3.1	(3.2)PH	(3.2)P	3.4	3.2P	3.2PH	3.0	(2.9)P	3.0
26	3.3	3.2	3.4	3.1	3.0	2.9	3.4	3.7	3.3	3.2	3.4	(3.3)C	3.2	(2.9)P	(3.1)P	(3.1)P	3.4	3.3	3.2	3.2	3.1	2.8H	2.9	2.8
27	(2.8)P	2.9	3.0	3.2	3.2	2.9	3.2	3.5	3.5	3.2	3.1	3.3	3.1	3.1	3.1	3.1	3.3	3.4	3.2	3.2	3.1S	(3.2)PS	3.0P	2.7
28	(2.9)S	3.0	3.3	3.6	2.7	3.0	M	M	M	3.1	3.2	3.2	3.1P	(3.2)P	3.1	3.1	(3.3)P	S	3.1	3.2	3.0	2.8	2.9	3.0
29																								
30																								
31																								
Mean Value	2.9	3.0	3.1	3.1	3.0	2.9	3.1	3.4	3.4	3.3	3.2	3.3	3.3	3.2	3.2	3.3	3.4	3.3	3.2	3.2	3.2	3.0	3.0	2.9
Median Value	2.9	3.0	3.0	3.0	3.0	2.9	3.0	3.4	3.4	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.4	3.3	3.3	3.2	3.2	3.0	3.0	2.8
Count	26	27	26	26	25	26	26	25	25	25	27	25	25	26	26	26	27	25	28	28	27	24	27	26

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 9

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

IONOSPHERIC DATA

Feb. 1951 | fminF | 135° E Mean Time | Kokubunji Tokyo | Lat. 35°42.4'N | Long. 139°29.3E

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

fminF

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 10

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

IONOSPHERIC DATA

Feb. 1951 | fminE | 135° E Mean Time | Kokubunji Tokyo | Lat. 35°42.4'N | Long. 139°29.3E

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^{F}	E	1.4	1.4	1.4	1.5	E	1.3	1.2	1.3	1.3	1.4	1.4	1.3	1.1	1.2	1.4	1.5^{F}	1.4^{F}	1.4	1.3	1.2	1.2	1.3
2	1.2	1.1	1.1	1.1	1.3^{F}	1.3	B	1.3	1.3^{F}	1.4	1.3	1.4	1.7	1.4	1.4	1.3	1.5	1.4	1.3	1.3	1.3^{F}	1.2^{F}	1.5	1.2
3	1.3	1.1	1.1	1.5	E	E	B	1.5	1.4	1.5	1.3	1.6	1.4	1.4	1.3	1.3	1.4	1.4	1.5	B	B	1.7	1.3	B
4	1.4	1.1	E	E	1.1	1.4	1.4	1.3	1.2	1.3	1.4	1.4	1.3	1.3	1.1	1.3	1.1	1.5	1.5	B	B	B	B	B
5	E	E	E	1.1	1.1	E	1.5	1.4	1.3	1.4	1.5	1.4	1.4	1.4	1.3	1.4	1.4	1.2	1.1	E	B	2.6	B	B
6	B	E	B	B	1.2^{B}	1.4	1.4	1.5	1.4	1.4	1.9	1.4	1.8	2.2	1.6	1.3	1.3^{F}	1.3	1.4	B	B	B	B	1.6
7	E	E	E	1.4	B	1.3	B	1.2	1.2	1.4	1.3	2.0	1.3	1.4	1.3	1.3	1.2	1.6^{S}	1.5^{S}	1.5^{S}	1.5^{S}	1.4	1.4^{F}	1.4^{S}
8	1.2	1.4	1.5	1.4	1.4	1.5	1.4	B	1.4	1.8	2.2	2.2	2.2	2.2	1.8	1.4^{F}	1.5	1.4	1.4	1.4	1.4	1.6	1.5	1.4
9	1.1	1.4	1.1	1.1	B	E	B	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.2	1.2	1.4	1.4	1.4	1.4	1.4	1.5^{F}
10	1.1	E	E	1.4	1.4	E	1.6	1.1	1.2	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.2	1.1	B	B	B	1.5	B	B
11	E	E	E	1.1	E	1.4	B	1.2	1.2	1.4	1.2	1.4	1.4	1.4	1.6	1.2	1.4	1.3	B	1.7	1.6	1.5	1.8	1.4
12	1.2	E	E	E	1.6	E	B	1.3	1.3	1.4	1.2	1.4	1.3	1.4^{F}	1.4	1.4	1.2	1.1	1.2	1.4	1.1	B	1.4	1.4
13	1.2^{F}	1.4	1.4	E	1.4	1.3^{F}	1.5	1.4	1.3	1.4	1.4	1.4	1.3	1.5	1.6	1.4	1.4	1.4	1.4	1.4^{F}	1.4	1.4	1.4	1.5
14	1.4	1.4	B	E	C	C	B	1.4	1.3	1.1	1.5	1.3	1.4	1.4	1.4	1.4	2.1	1.4	1.3	B	B	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	1.3	1.3	1.4	C	B	1.4	B	1.4
16	E	B	E	E	B	E	B	1.4	1.4	1.4	1.4	1.4	1.5	1.9	1.4	1.4	1.4	1.2	1.5	1.5	B	E	1.2	1.4
17	E	1.4	1.3	1.1	1.9	E	B	1.4	1.3	1.4^{S}	1.4	1.3	1.4	1.5	1.3	1.2	1.3	1.3	B	B	1.3	1.4	B	E
18	E	E	1.4	1.4	1.4	E	E	1.4	1.3	1.2	1.4	1.8	1.5	1.7	1.4	1.3	1.3	1.2	E	E	E	B	E	E
19	E	E	E	E	E	E	E	1.4	1.3	1.4	1.3	1.4	1.5	1.6	1.6	1.4	1.3	1.2	1.3	1.5	1.4	1.4	B	B
20	E	E	E	E	E	E	B	1.1	1.3	1.4	1.4	1.4	1.5	1.4	1.9	1.5	1.4	1.2	1.1	1.3	1.4	1.3	1.5	1.1
21	1.2	E	1.2	B	B	E	B	1.2	1.3	1.4	1.4	[1.4]^{C}	1.5	1.3	1.4	1.3	1.4	1.2	1.5	1.4	1.4	B	B	B
22	1.2	1.3	1.4	1.3	E	1.4	E	1.2	1.2^{B}	C	3.3	2.4	[2.0]^{C}	1.7	1.2	1.2	1.3	1.2	1.4^{S}	1.5	B	B	B	B
23	1.4	E	E	1.4	1.3	1.4	B	1.3	1.2	1.4	1.3	1.4	1.3	1.2	1.3	1.6	1.3	1.2	1.1	1.7	1.1	1.3	1.6	1.4
24	1.2	E	E	E	E	E	1.7^{B}	1.3	1.2	1.4	1.4	1.6	1.5	1.4	1.9	1.4	1.4	1.2	E	E	B	B	1.5	1.5
25	1.2	1.1	E	E	E	E	E	1.3	B	2.0	1.7	1.5	1.6	1.5	1.5	1.3	1.2	1.4	1.3	1.2	1.3	1.5	1.4	1.2
26	1.4	1.4^{F}	1.4	1.4^{F}	E	E	B	1.4	1.2	1.4	1.4	C	B	1.4^{F}	2.1	1.2	1.4	1.1	1.3	1.2	1.4	1.3	2.2	B
27	E	1.3	1.3^{F}	1.3^{F}	1.3	1.3	2.0	1.2	1.3	1.3	1.4	E	1.4	1.4	1.3	1.2	1.1	1.4	1.2	1.4	B	B	E	B
28	E	E	B	E	E	E	B	M	M	1.9^{M}	1.3	1.4	3.3	1.4	1.4	1.4	1.4	1.3	B	B	1.1	B	E	B
29																								
30																								
31																								
Mean Value	1.2	1.3	1.3	1.3	1.4	1.4	1.6	1.3	1.3	1.4	1.5	1.5	1.6	1.5	1.5	1.3	1.4	1.3	1.3	1.4	1.3	1.5	1.5	1.4
Median Value	1.2	E	E	1.1	1.2	E	1.4	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4
Count	26	26	24	25	22	26	13	25	25	26	27	26	26	27	27	27	28	28	24	20	17	18	18	17

Sweep 1.0 Mc to 18.5 Mc in 2 min Automatic

K 11

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

IONOSPHERIC DATA

Feb. 1951 | ypF2 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35°42.4'N | Long. 139°29.3E

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	70	90	120	60	80	70	60	60	(70)P	70S	(90)JP	10	(100)P	100	90	(100)P	90	60	50	90	60	110	120	50
2	(80)P	60	40	150	120	50	110	(80)P	(70)P	80	(30)J	30	50	60	80	60	80	B	100	70	60	70H	60	80H
3	70	80P	90	100	80	120	110	40	80	50	80P	90	60	50	60	70	50	100	50	50	80	40Z	50S	(110)JZS
4	70	60	(80)P	60	60	100	90	50	30	110	90	60	70	100S	30	70	90	40	80	50	60S	50	(80)P	(70)PS
5	50	(90)P	60	60	90	90	(70)J	110P	130	60	60	100	60	50	100P	90P	80	90	70	(80)J	80	110	100	100
6	80	90	100	80P	90	90	110	90	70	110	90	40	110	120	60	100	70	40	(100)P	(80)S	90F	SF	(70)J	120
7	80	70	100	70	60	80	80	60	60	40	(110)JP	60P	80	90	80	50	140	60	60	90	(70)JF	B	50	80
8	80	70	100	60	90	60	60	(90)P	50	40	60	(130)P	60	60	100	80	90	(70)P	(90)P	(100)P	50	B	(50)JS	100PF
9	(50)J	50	100	80	70	80	20	(120)JS	60	60	50	50	80	90	(120)P	40	(80)P	70	30	60	70P	100	(90)J	(80)JF
10	80	(60)S	60	100P	(60)J	70PF	(70)B	100	(30)J	B	110P	60	(80)P	100	70P	100	60	60	(80)PS	100P	80	70	(70)B	(70)B
11	S	40	70	30	200F	80	120	50	50	80	(90)P	B	(50)P	90	70P	70	40	70	90	60	50	100	(80)P	(80)P
12	(90)P	60P	90	70	60	70	50	(70)P	30	90	60	60	10	(30)J	70	100	60	90	70	80K	80K	130K	(100)KJF	(120)KJPF
13	90FK	(90)FK	40FK	(60)JK	120K	140K	90K	60	(60)C	60	60	50S	B	100	70	70	100	80	70P	(80)S	80P	60P	(60)s	70
14	60	70B	(100)P	90P	C	C	80	50	50	70	(80)P	70	(70)B	(70)B	(70)B	60P	(80)JP	70	80	60P	60	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	90	60	(70)P	(70)C	70	80	(60)P	(80)JF
16	(60)J	60P	B	B	B	(60)P	100	(50)B	B	B	(80)PH	110P	B	B	B	60	B	70	80	70B	(50)P	80	70	80
17	70	80	70	70	100P	200	100	80	(60)P	(80)J	(80)J	(60)B	(50)JB	70P	(50)J	(70)P	30	70	40	100	80	(90)P	30	60
18	90	60	40	110	50	90	60	70P	80	40	(90)P	70	50	70	70	60	90	100	60	90	60	(80)P	(100)JP	70
19	70	60	80	60	90	60	70	(80)P	70	(120)B	110	B	90	(80)J	70S	B	(90)P	C	90	B	(100)J	AS	(80)J	S
20	80	70	70	80	90	60	70Z	B	70	90	80	(60)J	70	(80)P	90	90	70	70	100	(90)P	50	(70)P	(60)P	60
21	(60)P	70	(80)P	60P	(70)P	70	80	(60)J	70	70	(10)J	(20)C	(20)J	80	70	(80)J	90	70	80	80	(110)J	70P	40B	60B
22	80	70	70	70	70	80	60	80	60	(80)C	(90)P	90	(80)C	(80)P	50	80	40	90	70	80P	60	100	(70)J	50
23	90	(80)P	80	50	70	50	70	60	90P	120P	(180)P	(130)P	50	70	90P	160	50	100P	(70)P	70	B	90	(90)P	80P
24	(90)J	60	70	100	70	50P	80	100	(100)J	70	100P	(70)P	60	(90)P	90	90H	(130)P	(70)P	110	90	70	80	100	70
25	100	100	100	80	70P	90	40	80	(70)P	60	60	90	60P	(70)P	60	80	(90)PH	(70)P	80	100P	90PH	160	(90)P	60
26	60	80	50	140	70	80	90	60	90	90	90	(80)C	80	(120)P	(110)P	(110)P	80	70	90	120	110	70H	70	80
27	(100)P	120	80	90	70	70	40	90	100	70	80	40	70	60P	80P	(100)P	70	90	100	60	60S	(80)PS	50P	90
28	100S	100	80	50	100	70	M	M	M	100	70	60	80P	(80)P	70	60	(70)P	S	90	100	80	90	60	80
29																								
30																								
31																								
Mean Value	80	70	80	80	80	80	80	70	70	80	80	60	70	80	80	80	80	70	80	80	70	90	70	80
Median Value	80	70	80	70	70	80	80	70	70	70	80	60	70	80	70	80	80	70	80	80	70	80	70	80
Count	26	27	26	26	25	26	26	25	25	25	27	25	25	26	26	26	27	25	28	27	27	23	27	26

ypF2

Sweep 1.0 Mc to 18.5 Mc in 2 min Manual

K 12

37

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

IONOSPHERIC DATA

Feb. 1951 | foF2 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.1	3.2	3.5 P	A	A	A	2.7	5.2 J	6.7	7.8	10.8	13.1	12.7	7.9	8.7	9.2	9.3	8.5	8.3	8.2	5.2	6.0	3.7	3.3 H
2	3.1	3.1	2.9	2.8	2.4	2.3	3.6	4.3	6.2	9.2	9.3	11.1	9.1	8.9	[9.4] C	9.8	10.1	7.7	6.1	5.7 H	(7.4) P S	5.9	4.2	4.3 F
3	3.9 F	4.0 F	4.6 J	3.6 H	3.2	2.7	2.8	3.9	6.8	8.5	8.4	11.7	10.2	8.9	9.5	8.9	7.7	7.8 S	7.2	[6.5] C	5.8	4.3 H	3.7 H	3.6
4	3.5	3.6	3.7	3.5	3.2	3.0	2.6	3.7	7.5	C	C	C	C	7.7	C	C	C	C	6.9	5.1	5.5	6.1	4.7	3.9
5	3.8	4.1	3.9	2.5	3.0	3.0 H	3.7 H	4.2	6.9	7.3	7.8	13.0	12.1	10.8	8.7	9.1	8.7	8.5	7.5	4.7 J S	5.9	5.5	4.8	4.8
6	4.0	3.8	3.4	3.6	2.8	2.1	2.5	3.3	7.5 S	8.2	8.3	11.3	8.8	7.8	8.7	8.9	10.6	9.0	6.8	7.0	5.8	4.5	3.7	3.7
7	3.6	3.2	2.8	2.7	2.7	2.8	2.6	3.1	6.9	9.5	10.0	12.7	[10.8] C	8.8 H	7.6	7.7	8.0	7.1	6.6	5.7	5.1	4.2	3.7	3.9
8	2.9	(2.8) J	3.1	3.0	2.9	2.9	2.7	3.6	8.3	8.4	9.4	13.5	15.1 J	(13.6) P	11.2	9.5	9.5	8.8	7.9	6.1	6.7	6.9	5.2	4.1
9	3.5	3.2	3.2	3.0	2.7	2.8	3.0	C	C	C	C	C	C	C	C	C	C	C	C	C	4.8	3.8	3.6 F	(4.0) J F
10	3.8	4.0	3.6	3.3	2.9	2.6	3.3	4.9 F H	(9.2) P S	8.4	8.9	9.5	10.7	11.7	12.9	12.7	12.2	9.1	7.1	5.2 H	4.9	4.1	3.5	4.0 S F
11	4.3 S	S	4.0	4.2	1.9	1.7 J F	(2.3) P F H	3.6	8.8	8.5	9.7	B	B	13.2	11.4	10.5	10.5	7.0	5.4 J	5.5	4.7	4.3	3.8	3.4
12	3.1	3.3 H	3.1	2.6	2.3	2.5	3.1	4.5	6.3	7.5	7.8 J	10.7	12.7	12.1	8.8	8.5	7.6	7.6	7.1	5.1	3.3	3.7	3.5	3.5
13	(3.8) P F	3.8 F J	3.2 F	4.4 F	3.7	2.8	2.6	4.1	7.6	8.0	9.0	11.5	12.8	13.0	12.7	9.9	8.8	7.3	7.0 B	5.2	4.2	4.7	4.0	3.6
14	3.9	4.6 J	3.0	3.0	2.4	2.8	2.7	4.2	7.6	7.9	7.3	7.9	9.2 H	10.4	10.7	9.5	8.2	6.9	6.8	5.4	4.8	3.9	3.1	3.2
15	3.9 F	3.4	3.5	3.3	3.5	3.2	2.6 H	4.2	7.2	7.6	7.3	9.1	10.7	10.5	8.5	9.3	9.0	8.6	8.1	7.0	6.0	5.4	5.2	4.9
16	3.7	3.5	3.5	3.4	4.0	2.9	2.2	3.9	7.3	8.3	8.2	9.2	10.0	8.1	8.2	9.1	8.9	7.6	7.2	6.0	4.6	4.0	3.1	3.0
17	3.1	3.2	3.1	3.3	3.6	2.9	2.6	4.0	7.1	7.2	7.7	8.2	8.9	9.5	10.0	10.5	8.6	8.3	6.9	5.3	5.0	5.3 H	4.0	3.8
18	3.2	3.4	3.4 H	3.7	4.4	2.7	2.6	3.9	7.1	C	C	C	C	C	8.9	8.5	7.9	8.1	7.7	6.1 S P	5.8	5.2	4.7	4.8 P
19	4.6	4.1	4.2	3.8	3.7	2.7	2.4	4.8	6.1	8.4	10.2	12.2	11.7	9.8	9.5	9.2	9.0	8.8	7.8	5.7	4.5	3.9	3.9	3.9
20	4.6	2.9	2.9	4.0	3.0	2.9	2.5	4.9	7.7	7.7	8.6	8.9	9.6	10.1	10.5	10.8	11.8	10.0	6.3	5.4	4.7	4.4	3.8	3.9
21	3.8	3.6 H	3.1	3.8	3.2	2.6	2.5	3.9	6.9	8.9	10.5	10.8	11.3	11.4	11.4	10.7	8.9	8.6	7.7	5.9	4.9	4.3	3.9	3.8
22	3.8	4.1	4.6	4.4	4.3	2.4	2.6	5.2	7.8	7.2	9.0	12.0	13.6 P	13.2	13.8 H	11.9	8.6	7.8	6.9	6.3	5.9	5.9	5.0	4.2
23	4.3	4.3	4.4	3.2	3.3 H	3.1	2.8	C	C	C	C	C	C	C	C	C	C	C	C	8.2 V	7.2	5.3	2.7	3.1
24	3.3	3.6	[3.6] C	3.7	3.2	3.7	2.1	4.8	9.6	9.3	9.7	12.4 J	12.9	13.7 J S	11.9	9.9	8.7	9.4	9.7	9.2	7.1	6.9	5.1	3.8
25	4.0	3.5	3.6	3.6	3.0 S	3.7	3.7 J	5.8	9.1	[10.5] C	11.9	11.9	12.5	15.1 J S	15.3 J S	13.6	12.3	11.4	10.0	9.7	6.7	4.9	4.1	4.2
26	4.8	4.0 S	3.2 S	3.1	3.1	2.9	3.0	5.2 S	6.7 H	8.7	11.5	12.8	12.0	12.1	13.0 H	[11.6] C	9.6	9.3	8.2	6.1	6.0	5.3	5.1	4.8
27	3.9	3.6	4.3	4.4	3.9	3.3	3.4	(6.4) P	7.1	7.9	[10.0] C	12.2	12.3	11.4 H	[11.6] C	11.8	8.7	8.7 P	7.8	6.8	4.8	4.3	4.3	4.4
28	4.8	5.1	5.5	4.1	3.9	3.7	3.1	5.6	7.6	10.1	12.0	13.4	13.1	S	S	S	S	(13.6) P	7.5	9.6	7.0 H	6.2 J	6.3 J	5.7
29																								
30																								
31																								
Mean Value	3.8	3.7	3.8	3.5	3.2	2.8	2.5	4.4	7.4	8.3	9.3	11.0	11.4	10.4	10.5	11.2	9.8	9.4	7.4	6.4	5.3	5.0	4.1	3.9
Median Value	3.8	3.6	3.5	3.5	3.2	2.8	2.6	4.2	7.2	8.4	9.2	11.7	11.7	10.6	10.2	9.6	8.9	8.5	7.2	6.0	5.4	4.8	4.0	3.9
Count	28	27	28	27	27	27	28	26	26	24	24	23	23	24	24	24	24	25	26	27	28	28	28	28

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

Y 1

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

IONOSPHERIC DATA

Feb. 1951 | h_pF2 | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	300	(350)B	300P	A	A	A	330	(290)J	270	290	320	310	250	290	350	300	310	300	300	280	280	270	280	320H
2	330	330	290	290	270	280	310	300	280	300	300	280	270	300	[300]C	300	300	270	260	390HS	(330)PS	270	360	350F
3	400F	370F	(280)F	270H	260	320	310	300	340	240	270	260	260	300	300	280	280	280S	290	[280]C	270	300H	320H	300
4	350	370	330	340	380	370	400	320	300	C	C	C	C	270	C	C	C	C	260	320	330	290	270	370
5	380	320	290	350	380	380H	340H	290	280	300	310	300	310	310	310	290	280	270	260	(240)JS	290	260	300	310
6	290	350	310	310	210	400	420	360	260S	260	290	300	240	290	300	310	310	230	260	280	250	270	310	300
7	280	300	280	360	390	330	440	350	300	280	290	290	[270]CJ	250H	290	290	280	260	260	280	280	280	330	300
8	330	(350)J	300	310	320	360	390	360	280	250	290	320	(280)J	(280)P	260	290	290	300	280	310	310	310	350	420J
9	380	360	350	400	410	400	330	C	C	C	C	C	C	C	C	C	C	C	C	C	270	310	360F	(350)F
10	320	310	270	340	330	300	400	370FH	(260)PS	260	320	320	310	300	290	310	290	280	290	270H	270	320	340	360FS
11	320P	S	250	240	220	(230)JF	400H	320	250	280	250	B	B	260	300	300	280	230	(250)J	280	A	280	280	300
12	380	320H	320	320	330	250	300	260	260	250	(230)J	330	290	270	290	280	290	270	250	250	300	310	390	400
13	(370)PF	(340)JF	360F	300F	340	430	370	310	270	290	300	300	300	300	280	280	300	270	280B	290	300	340	300	320
14	330	(280)J	280	270	340	300	340	290	280	280	300	300	300H	270	290	280	260	280	280	270	310	270	320	330
15	350	310	310	310	280	270	360H	300	260	250	350	300	300	300	290	300	280	290	270	250	300	240	270	290
16	310	320	310	290	240	210	330	280	250	280	270	280	280	290	300	290	280	260	250	250	270	270	330	320
17	320	350	320	370	310	340	330	270	250	250	280	260	270	300	270	270	280	230	250	250	270	300H	290	300
18	300	360	270H	340	290	300	360	320	310	C	C	C	C	C	290	270	280	270	260	300SP	300	300	360	330
19	340	360	350	330	320	280	260	300	280	300	300	300	290	290	310	300	280	280	270	250	270	390	370	350
20	280	350	350	310	350	390	350	300	280	280	300	300	310	300	280	300	300	290	220	290	280	250	320	310
21	310	310H	320	280	380	370	360	320	270	300	290	270	300	300	300	290	270	270	230	270	280	310	300	320
22	330	320	320	300	270	370	400	310	260	300	330	340	300P	300	300H	290	250	290	330	290	310	320	320	330
23	310	320	300	320	340H	310	350	C	C	C	C	C	C	C	C	C	C	C	C	320V	300	270	440	430
24	330	350	[320]C	300	320	300	440	310	290	270	300	(310)J	310	(300)JS	280	300	290	300	300	290	280	300	310	310
25	320	300	340	360	350S	350	(300)J	300	280	[280]C	290	290	320	(310)JS	(290)JS	290	330	300	280	270	240	280	290	350
26	300	290S	300S	330	290	320	300	250S	250H	300	320	300	300	320	340H	[320]C	290	290	280	240	260	320	250	300
27	310	310	370	320	330	350	330	(260)P	270	290	[300]C	310	300	360H	[330]C	300	300	300	290	300	310	330	330	340
28	350	320	290	240	260	290	290	310	290	340	340	310	310	S	S	S	S	(290)P	310	300	300H	(370)JS	(340)J	340
29																								
30																								
31																								
Mean Value	330	330	310	310	320	330	350	310	280	280	300	300	290	290	300	290	290	280	270	280	290	300	320	330
Median Value	320	320	310	310	320	320	340	300	280	280	300	300	300	300	300	290	280	280	270	280	280	300	320	320
Count	28	27	28	27	27	27	28	26	26	24	24	23	23	24	24	24	24	25	26	27	27	28	28	28

h_pF2

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

Y 2

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

IONOSPHERIC DATA

Feb. 1951 | h'F2 | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

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

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | foF1 | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37. 7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L	Q	Q	L	L	4.6	L	4.5	4.1	A	Q	Q					
2								Q	L	Q	L	L	Q	Q	L	Q	Q	Q	Q					
3								Q	Q	L	L	L	L	L	L	L	L	Q	Q					
4								Q	Q	L	C	C	C	C	C	C	C	C	Q					
5								Q	Q	Q	4.7	L	L	4.4	4.5	4.5	L	L	Q					
6								Q	Q	Q	L	L	L	L	L	L	L	Q	Q					
7								Q	Q	L	L	L	C	L	Q	4.5	L	Q	L					
8								Q	Q	Q	L	L	L	L	Q	L	L	L	Q					
9								C	C	C	C	C	C	C	C	C	C	C	C					
10								Q	L	Q	B	L	L	A	B	L	L	A	Q					
11								Q	L	Q	L	4.7	L	L	L	4.6	L	Q	Q					
12								Q	L	L	L	L	L	L	L	L	Q	Q	Q					
13								Q	Q	L	L	L	L	L	L	L	L	L	Q					
14								Q	Q	Q	L	L	L	L	L	L	L	Q	Q					
15								Q	L	Q	L	L	L	L	L	L	Q	L	Q					
16								Q	L	L	L	L	L	L	L	Q	L	Q	Q					
17								Q	Q	Q	4.4	4.5	L	L	L	L	L	Q	Q					
18								Q	Q	C	C	C	C	C	L	L	L	L	Q					
19								Q	Q	L	L	L	L	4.5	L	L	L	Q	Q					
20								Q	Q	L	L	L	L	L	Q	L	Q	Q	Q					
21								Q	L	L	L	L	4.6	L	L	L	L	L	Q					
22								Q	Q	L	L	L	4.6	L	L	L	L	Q	Q					
23								C	C	C	C	C	C	C	C	C	C	C	C					
24								Q	L	L	L	L	L	L	L	L	L	L	Q					
25								Q	Q	C	L	L	L	L	L	L	L	Q	Q					
26								Q	Q	Q	L	L	L	4.9 L	4.8	L	Q	Q	Q					
27								L	Q	L	C	L	L	L	C	L	L	Q	Q					
28								Q	Q	L	4.7	L	L	L	L	L	L	Q	L					
29																								
30																								
31																								
Mean Value											4.6	4.6	4.6	4.6	4.6	4.4								
Median Value											4.7	4.6	4.6	4.5	4.5	4.5								
Count											3	2	3	3	3	4								

foF1

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | h'F1 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

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

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | foE | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

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

foE

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | h'E | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

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

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | fEs | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.4	2.8	2.5	4.5	5.0	3.1	3.0	G	3.1	5.8	5.8	4.8	4.6	4.8	G	3.8	4.9	4.0	4.4	3.2	G	2.4	3.2	2.6
2	3.2	G	G	G	G	G	G	G	2.7	3.4	3.8	3.8	4.4	4.2 B	4.0	G	3.8	4.0 Y B	2.8 B	6.0	4.4	2.2	G	3.2
3	3.1	2.9	2.0	G	G	G	G	G	3.0 Y	3.9 Y	3.5	4.9 Y	4.2	4.2	4.8	4.8 Y	4.2	3.2	2.6	C	3.0	2.2	G	G
4	G	G	G	G	G	G	G	G	G	C	C	C	C	G	C	C	C	C	2.2	1.3	G	G	G	2.2
5	G	G	G	G	G	G	G	G	3.0	4.2	G	4.2 Y	5.6 Y	4.2	5.4	4.7	4.6	5.1	3.0	2.6	2.2	G	2.0	2.8
6	2.5	2.0	3.1	2.9	G	1.7	2.1 Y	G	G	G	G	4.3	3.9 Y	G	G	4.4	3.8	3.7	3.3	2.5	1.9	2.0	2.2	1.8
7	1.7	G	G	G	G	G	G	G	G	3.3	3.8	3.8	C	4.0 Y	3.8	4.0	3.7 Y	3.0 F	2.5	3.5	G	2.0	G	G
8	G	G	G	G	G	2.1	2.2	G	3.8	3.5 Y	G	G	4.1 Y	G	4.3 Y	G	3.6	3.8	3.2	2.6	2.2	G	G	G
9	G	G	G	G	G	G	G	C	C	C	C	C	C	C	C	C	C	C	C	C	3.5	3.0	2.1	2.4
10	2.4	G	2.4	1.8	2.2 Y	2.0	2.2	2.0	2.6	3.9	G	4.4 B	4.6	4.6	4.4	4.9	4.8	4.9	(3.3) Y B	2.2	G	G	G	G
11	1.7	G	G	G	1.2	2.2	1.8	G	G	G	3.5	G	6.2	5.0	4.0	3.5	G	3.2	3.0	3.8 Y	4.8	4.0	2.4	3.2
12	2.2	G	G	G	1.6 B	2.1	2.1	1.9	3.2	3.0	G	G	3.8	3.8	3.8	3.8	4.2	3.0	2.4 Y	3.6	4.2	2.4	G	2.0
13	2.4	2.6	2.0	G	2.4	G	G	G	G	3.2 Y	4.3	4.1	4.1	4.1	4.4	4.2	3.8	3.4	2.8	2.2	2.6	G	G	2.2
14	3.0	2.0	2.0	2.2	1.2	G	G	G	G	G	G	G	G	4.0	4.0	3.8	3.6	3.2	G	G	G	G	G	G
15	G	2.4	G	G	G	G	1.9	G	G	4.0 B	3.8	3.8	4.2	3.8	4.8	3.6	3.8	3.6	2.6	3.6	2.9	3.0	3.8	2.4
16	2.5 B	2.4	1.2	G	G	G	G	2.4 Y	G	3.6	4.0	G	G	G	G	G	G	3.1	2.4 Y	2.3	2.4	G	G	G
17	G	G	G	G	G	G	G	G	3.2 B	G	4.0	4.4	3.9	4.4	4.4	3.9	3.9	4.2	G	3.0	G	B	G	B
18	G	G	G	G	G	G	2.6	2.4	G	C	C	C	C	C	4.2	G	G	G	G	G	G	G	G	G
19	G	G	G	G	G	1.6	1.7	2.1	3.7	G	3.6	3.8	3.8	B	4.6	4.2	3.6	3.0	2.4	1.9 Y	1.3	G	G	G
20	G	G	G	G	1.2	2.0 Y	G	2.1	G	3.3	G	4.0	4.7	4.8	4.3	4.2	G	4.9	2.8	3.4	G	G	G	G
21	G	2.2	1.8	2.4	2.0	G	G	2.4	3.1	3.4	4.8	4.9	4.6	3.9 Y	4.4 Y	4.0	3.8	3.1	2.8	3.0	2.2	3.0	G	G
22	G	G	G	G	G	G	G	G	G	3.9 Y	4.1	4.9	4.4 Y	4.3	4.4	4.8	3.6	3.6	2.7	G	G	G	2.2	2.8
23	2.6	2.6	2.8	3.1	1.7	1.8 Y	1.8	C	C	C	C	C	C	C	C	C	C	C	C	2.2	2.4	2.6	2.4	G
24	1.7	2.2 Y	C	2.0	1.8	G	G	G	3.0	G	G	3.6	5.2	5.4	4.2	3.8	3.4	3.8	2.6	G	G	G	G	G
25	G	2.4	3.4	3.2	2.2	2.2	3.2	G	G	C	4.3 Y	4.4	4.8	4.7	4.9	4.1 F	3.9	3.8	2.0	2.8	2.4	G	4.2	3.8
26	2.6	3.0 Y	2.3	2.4	2.4	G	G	G	G	G	G	4.4 Y	B	G	G	4.0	4.4	4.0	G	G	2.1	2.3	2.2	2.4
27	2.5	1.6	G	G	G	G	G	G	G	G	C	G	4.9	G	C	4.0	4.0	G	3.0	2.8	2.4	G	G	G
28	G	G	G	2.2	1.6	G	G	G	3.0	3.8 Y	3.9	4.0	5.6	4.2	4.9 Y	G	3.7	G	2.1	2.2	1.9	G	2.2	G
29																								
30																								
31																								
Mean Value	2.4	2.4	2.3	2.7	2.0	2.1	2.2	2.2	3.2	3.7	4.1	4.3	4.6	4.4	4.3	4.1	4.0	3.7	2.8	2.9	2.7	2.6	2.6	2.6
Median Value	1.7	G	G	G	G	G	G	G	G	3.3	3.6	4.0	4.4	4.2	4.3	4.0	3.8	3.6	2.6	2.6	2.2	G	G	G
Count	28	28	27	28	28	28	28	26	26	23	23	24	22	24	24	25	25	25	26	26	28	27	28	27

fEs

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

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

IONOSPHERIC DATA

Feb. 1951 | (M3000)F2 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.1	2.6	3.0 P	A	A	A	3.0	(3.4) J	3.4	3.3	3.0	3.1	3.4	3.1	2.8	3.1	3.0	3.1	3.2 B	3.3	2.8	3.3	3.2	3.0 H
2	2.9	2.9	3.2	3.3	3.3	3.4	3.2	3.3	3.5	3.3	3.3	2.8	3.3	3.2	[3.2] C	3.2	3.4	3.4	3.3	2.7 S H	(2.9) P S	3.3	2.8	2.9 F
3	2.8 F	2.8 F	(3.2) J	3.1 H	3.3	3.0	3.0	3.1	3.4	3.6	3.3	3.5	3.4	3.2	3.2	3.3	3.3	3.4 S	3.4	[3.4] C	3.4	3.1 H	3.0 H	3.2
4	2.8	2.8	2.9	2.8	2.6	2.6	2.7	3.0	3.3	C	C	C	C	3.4	C	C	C	C	3.4	2.9	3.0	3.3	3.3	2.8
5	2.7	3.1	3.2	2.8	2.6	2.8 H	2.8 H	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.2	3.4	3.4	3.5	3.4	(3.4) J S	3.4	3.4	3.1	3.1
6	3.1	2.8	3.0	3.1	3.5	2.8	2.6	2.8	3.4 S	3.5	3.4	3.3	3.7	3.2	3.1	3.1	3.2	3.6	3.6	3.4	3.5	3.5	3.1	3.2
7	3.3	3.2	3.2	2.8	2.8	2.9	2.5	2.8	3.1	3.3	3.2	3.3	[3.4] C	3.6 H	3.5	3.2	3.4	3.5	3.4	3.3	3.1	3.3	2.9	3.3
8	3.1	(2.8) J	3.2	3.3	2.9	2.7	2.7	2.7	3.3	3.5	3.2	3.0	(3.3) J	(3.4) P	3.3	3.3	3.2	3.3	3.3	3.0	3.1	3.0	3.2	2.6
9	2.7	2.8	2.8	2.7	2.6	2.6	2.9	C	C	C	C	C	C	C	C	C	C	C	C	C	3.3	2.9	2.8 F	(2.7) J F
10	3.0	3.1	3.3	2.9	3.1	3.2	2.7	2.7 F H	(3.5) P S	3.4	3.0	3.2	3.3	3.2	3.3	3.3	3.4	3.4	3.4	3.2 H	3.3	3.0	2.9	(2.8) S F
11	3.0 P	S	3.4	3.6	3.6	(3.4) J F	(2.7) P F H	3.0	3.5	3.4	2.9	B	B	3.4	3.3	3.1	3.3	3.5	(3.5) J	3.2	3.1	3.3	3.2	3.1
12	2.8	3.1 H	3.0	3.1	2.9	3.6	3.2	3.5	3.6	3.4	(3.0) J	3.0	3.4	3.5	3.2	3.4	3.2	3.3	3.4	3.3	3.1	3.0	2.7	2.6
13	(2.6) P F	(2.8) J F	2.8 F	3.1 F	2.9	2.4	2.7	2.9	3.4	3.4	3.0	3.2	3.2	3.1	3.3	3.2	3.1	3.4	3.4 B	3.2	3.1	3.0	3.1	2.9
14	3.0	(3.1) J	3.3	3.4	2.9	3.0	2.9	3.3	3.4	3.3	3.4	3.3	3.2 H	3.3	3.2	3.3	3.5	3.3	3.3	3.2	3.1	3.3	2.9	3.0
15	2.8 F	3.2	3.1	3.0	3.4	3.3	2.9 H	3.1	3.6	3.5	3.1	3.2	3.4	3.2	3.2	3.3	3.3	3.3	3.3	3.6	3.3	3.6	3.5	3.3
16	3.2	3.1	3.1	3.2	3.5	3.8	3.0	3.3	3.5	3.4	3.5	3.4	3.4	3.2	3.1	3.3	3.3	3.4	3.5	3.4	3.3	3.3	2.9	3.0
17	3.0	2.9	3.0	2.8	3.1	2.9	3.0	3.5	3.5	3.6	3.4	3.6	3.5	3.2	3.4	3.6	3.5	3.8	3.4	3.5	3.3	3.1 H	3.2	3.3
18	3.2	2.7	2.8 H	2.9	3.2	3.3	2.9	3.0	3.2	C	C	C	C	C	3.2	3.3	3.3	3.3	3.5	3.2 S P	3.3	3.2	2.9	2.9
19	2.9	2.8	2.8	2.9	3.0	3.3	3.4	3.3	3.5	3.1	3.2	3.3	3.2	3.2	3.1	3.2	3.2	3.3	3.3	3.4	3.3	2.7	2.8	2.9
20	3.3	2.8	2.8	3.0	2.7	2.7	2.6	3.1	3.2	3.3	3.2	3.3	3.2	3.2	3.4	3.2	3.3	3.3	3.6	3.3	3.2	3.3	3.0	3.1
21	3.1	3.1 H	3.0	3.4	2.7	2.6	2.8	3.0	3.4	3.2	3.3	3.4	3.1	3.2	3.2	3.3	3.3	3.3	3.6	3.3	3.2	3.2	3.1	2.9
22	2.9	2.8	3.0	3.1	3.3	2.7	2.6	3.0	3.4	3.2	2.9	3.0	3.3 P	3.2	3.2 H	3.3	3.3	3.3	3.1	3.3	3.1	3.1	3.1	3.1
23	3.2	3.1	3.0	3.0	3.0 H	3.1	2.8	C	C	C	C	C	C	C	C	C	C	C	C	3.1 V	3.0	3.2	2.5	2.5
24	2.9	2.8	[3.0] C	3.1	3.0	3.2	2.5	3.0	3.3	3.3	3.1	(3.1) J	3.3	(3.1) J S	3.3	3.2	3.4	3.0	3.3	3.3	3.3	3.3	3.1	3.1
25	3.2	3.0	2.9	2.7	2.9 S	2.8	(3.2) J	3.2	3.3	[3.2] C	3.2	3.2	3.0	(3.1) J S	(3.4) J S	3.2	2.9	3.2	3.4	3.4	3.5	3.2	3.1	2.8
26	2.9	3.3 S	3.1 S	3.0	3.2	3.0	3.2	3.5 S	3.4 H	3.2	3.1	3.1	3.2	2.9	2.9 H	[3.0] C	3.2	3.2	3.3	3.5	3.3	3.1	3.5	3.1
27	3.1	3.2	2.8	3.1	3.1	2.9	2.9	(3.4) P	3.4	3.2	[3.2] C	3.1	3.2	2.8 H	(3.0) C	3.3	3.3	3.1	3.2	3.2	3.1	3.0	2.8	3.0
28	2.8	3.1	3.2	3.5	3.5	3.2	3.1	3.1	3.3	2.9	3.0	3.1	3.0	S	S	S	S	(3.0) P	3.2	3.0	3.3 H	(2.7) J S	(2.9) J	2.9
29																								
30																								
31																								
Mean Value	3.0	3.0	3.0	3.1	3.1	3.0	2.9	3.1	3.4	3.3	3.2	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.4	3.3	3.3	3.2	3.0	3.0
Median Value	3.0	2.9	3.0	3.1	3.0	3.0	2.9	3.1	3.4	3.3	3.2	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.4	3.3	3.2	3.2	3.0	3.0
Count	28	27	28	27	27	27	28	26	26	24	24	23	23	24	24	24	24	25	26	27	28	28	28	28

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

Y 9

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

IONOSPHERIC DATA

Feb. 1951 | fminF | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.3	1.6	1.2	A	A	A	1.1	1.1	2.1	A	N	3.4	3.4	3.6	3.5	3.2	A	A	A	A	1.6	1.6	1.4	1.1
2	1.5	E	1.1	1.1	E	1.1	1.3	1.3	2.6	3.0	A	A	3.6	A	A	3.4	3.0	2.2	A	A	1.8	A	E	1.4
3	1.6	1.5	E	E	E	E	1.2	1.2	2.4	3.0	3.5	3.6	3.6	3.6	A	3.8	A	2.7	2.0	[1.6]C	1.2	1.7	E	E
4	E	E	1.2	E	E	E	E	E	2.4	C	C	C	C	3.6	C	C	C	C	1.8	1.4	1.4	1.4	1.1	1.4
5	1.1	E	E	E	E	E	E	1.1	2.2	3.2	3.5	3.4	3.6	4.0	3.9	A	A	A	A	1.6	1.8	1.3	1.6	A
6	1.6	1.3	1.9	1.9	E	E	E	E	2.4	3.0	3.5	3.6	3.6	3.4	3.4	3.2	A	2.6	A	1.5	1.3	1.3	1.2	E
7	1.2	1.2	E	E	E	E	1.1	1.4	2.3	2.8	3.4	3.3	[3.4]C	3.4	3.4	3.2	3.2	2.4	A	A	2.1	1.6	1.6	1.5
8	1.2	1.7	1.1	E	E	E	1.5	1.1	2.1	2.9	3.1	3.4	3.5	3.7	3.6	A	A	2.0	2.2	1.4	1.4	1.2	1.2	E
9	E	E	E	E	E	E	E	C	C	C	C	C	C	C	C	C	C	C	C	C	A	1.7	1.5	1.5
10	1.7	E	E	1.4	1.2	1.6	1.7	1.6	2.6	A	3.0	3.8	4.1	A	3.9	3.9	A	A	2.0	1.8	E	1.1	E	E
11	E	E	E	E	E	E	E	E	2.1	2.9	3.6	3.7	3.6	3.6	3.5	A	2.7	A	2.2	1.8	A	1.8	1.6	1.8
12	1.6	E	E	E	1.1	1.1	1.7	1.4	2.9	N	3.5	4.1	A	3.6	3.4	3.3	3.4	2.3	1.7	A	A	1.1	E	1.1
13	1.1	E	E	E	1.4	E	E	E	2.4	2.9	3.1	3.0	3.4	3.4	3.7	3.1	3.1	2.5	1.6	1.8	1.6	1.2	1.3	1.6
14	1.5	1.5	1.5	1.2	E	E	E	E	2.3	2.9	3.2	3.2	3.5	A	3.4	A	3.0	2.2	1.8	1.1	1.1	E	E	E
15	E	E	E	1.1	E	E	E	1.3	2.4	A	3.2	3.6	3.4	3.6	A	3.2	2.4	2.2	A	A	1.3	1.2	1.2	1.3
16	1.2	1.3	E	E	E	E	E	1.4	2.3	2.6	3.1	3.6	3.7	3.6	3.6	4.3	3.0	2.7	1.7	A	A	1.2	1.5	1.4
17	1.4	1.1	1.2	E	E	E	E	2.2	2.2	2.9	3.5	A	3.5	3.5	3.6	3.6	3.0	A	2.3	A	1.8	2.0	1.5	2.1
18	1.3	1.5	1.4	1.3	1.2	1.2	1.3	1.5	2.5	C	C	C	C	C	3.6	3.6	3.1	2.7	1.7	E	E	E	E	E
19	E	E	E	E	E	E	E	1.2	2.5	2.5A	3.8	3.8	2.8	3.5	A	3.5	A	A	1.9	1.6	1.4	1.1	1.5	E
20	E	E	E	E	E	E	E	1.5	2.3	3.2	4.6	4.0	3.8	4.1	A	A	3.8	3.0	1.7	A	E	E	1.2	1.1
21	E	E	E	A	E	E	E	1.6	2.4	3.3	3.4	3.7	3.5	3.5	3.5	3.6	3.0	2.7	1.9	1.6	A	1.6	1.1	E
22	E	E	1.2	1.1	E	1.3	1.2	1.6	2.4	3.4	3.0	A	3.5	3.8	3.6	3.3	2.4	2.2	1.3	1.1	1.1	1.1	1.1	1.2
23	1.2	1.1	1.1	A	E	E	E	1.5	C	C	C	C	C	C	C	C	C	C	C	1.2	A	1.2	1.4	1.3
24	1.4	1.2	C	E	E	E	1.7	1.9	2.6	2.8	3.5	3.6	4.0	3.8	3.8	3.6	2.8	A	2.2	1.4	1.4	1.4	1.2	E
25	E	1.2	1.6	A	E	E	E	1.6	2.8	[3.2]C	3.6	3.7	3.8	3.7	3.5	3.0	A	2.8	1.8	1.8	1.4	1.4	1.8	1.3
26	1.2	E	1.1	1.2	E	E	E	1.6	2.4	3.4	3.6	3.7	4.4	3.8	3.6	3.6	2.8	2.6	1.6	1.4	1.3	1.3	1.4	1.2
27	1.2	E	E	E	E	E	E	1.8	2.5	3.0	[3.4]C	3.8	3.7	3.9	[3.6]C	3.4	2.8	2.4	1.9	[1.7]C	1.5	E	E	E
28	E	E	E	E	A	E	E	1.8	2.5	3.2	3.5	3.5	4.0	3.6	3.5	3.5	3.3	2.8	1.9	1.6	1.5	1.1	E	1.6
29																								
30																								
31																								
Mean Value	1.4	1.4	1.3	1.3	1.3	1.3	1.4	1.5	2.4	3.0	3.4	3.6	3.6	3.7	3.6	3.5	3.0	2.5	1.8	1.5	1.5	1.4	1.4	1.4
Median Value	1.2	E	E	E	E	E	E	1.4	2.4	3.0	3.5	3.6	3.6	3.6	3.6	3.4	3.0	2.6	1.8	1.6	1.4	1.2	1.2	1.2
Count	28	28	27	24	26	27	28	27	26	20	22	21	23	22	20	20	17	18	20	19	22	27	28	27

fminF

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

Y 10

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

IONOSPHERIC DATA

Feb. 1951 | fminE | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

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

Sweep 1.0 Mc to 18.5 Mc in 15 min Manual

IONOSPHERIC DATA IN JAPAN FOR FEBRUARY 1951

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