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IONOSPHERIC DATA IN JAPAN

FOR AUGUST 1950

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PREPARED BY THE CENTRAL RADIO WAVE OBSERVATORY
THE RADIO REGULATORY COMMISSION

KOKUBUNJI, TOKYO, JAPAN

CRWO—F20

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, Kokuhunji (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

September, 1950.

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, Soya-gun, 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

Except Zd, f_{min} E and f_{min} F, other symbols are used in accordance with recommendation of C.C.I.R. Zd, f_{min} E and f_{min} F in the table are defined as follows:

Zd Half breadth of the layer, calculated by the method of Booker.

f_{min} E Minimum frequency, on which echo reflected from E-layer begins to appear by use of the observation equipment on routine work.

f_{min} F Minimum frequency, on which echo reflected from F-layer begins to appear by use of the observation equipment on routine work.

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

IONOSPHERIC DATA

Aug. 1950 | 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	6.8	6.6Z	6.2	6.1	5.6H	6.2	7.6H	8.7H	9.0JF	7.5F	[7.4]S	7.2	7.2	S	S	A	7.3	6.8	A	6.9	7.1F	7.7JF	7.7	6.7
2	6.1	5.5	5.6	[5.6]C	5.5	6.3	7.7	9.3	7.4	6.8F	7.5F	7.6F	7.4	7.2F	8.1JF	7.3	7.8	7.2	7.4	7.8	7.9	8.0	7.7H	8.0P
3	6.8H	6.9	6.8	6.6	6.2	5.0	A	5.4	6.8	6.9	(6.7)A	A	A	6.6	A	A	6.8F	7.1F	7.2F	A	7.3JP	8.7F	8.3PH	7.4
4	6.9	6.1	6.1	5.4	5.3	6.0	7.0	A	A	6.3	6.8	6.4	6.8	6.7J	7.3	7.4	A	7.0	7.4	7.4	7.7	6.7	5.9F	(5.8)JF
5	5.8	6.0	A	6.3Z	6.3	(6.5)F	6.4	A	A	A	6.8	6.3	(6.7)JP	7.1	7.1F	7.0	(6.1)ZP	7.4H	7.5	7.4H	7.4	6.8F	6.8H	6.9H
6	6.2H	6.4ZH	6.4JH	6.7ZH	5.9H	6.4	6.7	7.9	7.1	6.9	7.6	6.9	6.6	6.5J	6.8J	7.2P	7.5J	7.5	7.1	7.0J	(7.0)JH	7.5	7.5	6.1
7	5.9	5.6	5.6	5.6	5.9	6.6	6.3	6.3	6.6	6.5	[6.8]C	7.2	7.2	6.8H	7.3	7.1	6.6	7.1	7.0	7.3	7.5	8.1	7.8	7.0
8	6.7	6.7	6.5	C	C	6.1	6.0	6.2	5.8	A	5.6Z	6.0	7.0	6.8	7.2	6.3	6.4	(7.0)P	7.5J	7.2JP	7.1J	6.3F	A	4.7K
9	4.7K	4.6K	5.0KHF	3.6FK	4.1KJF	4.6K	5.0K	7.0K	5.4K	AK	AK	AFK	AFK	5.2K	5.1K	AK	5.1K	5.1K	5.7HK	A	7.1H	6.8	6.0	6.4
10	5.6F	5.0F	5.0F	4.8F	5.1	4.4K	5.3K	5.2K	AK	AK	AK	4.9K	5.2FK	5.1K	AK	5.3FK	5.3JK	6.0K	5.9JK	5.7	5.7	5.5	5.4	5.4
11	4.7	5.4ZF	5.0F	5.0F	4.7	4.6	5.0K	5.2K	AK	BK	5.3K	5.3K	AK	AK	5.9K	5.3K	6.0K	5.1K	5.2	5.4	5.6	5.6F	5.0FH	4.8FV
12	5.0F	5.0FZ	4.4F	3.8JF	3.7F	(4.3)F	4.5ZF	5.3ZF	5.9	A	5.6	5.2	6.3	6.0	6.1	6.1	5.7	5.8	5.6	6.4	6.1	5.8	5.5	5.4H
13	5.3	4.8	4.3J	4.1J	3.6	4.2J	4.6J	C	C	C	C	C	C	C	C	5.8	6.4	6.8	6.5	6.4	5.9	6.0H	5.5	5.1
14	6.5ZF	6.2ZF	4.8ZF	4.5ZF	A	4.5	5.9	7.8	9.4J	A	C	A	6.2	6.3	6.4	6.5	A	6.6A	7.2	7.2	(7.1)JF	6.7	6.6	5.8F
15	5.4P	[5.2]B	5.1F	5.1F	4.8F	5.1	(6.5)JF	6.4J	A	6.3	(6.3)P	6.2	6.7	6.2	6.5	A	A	A	6.4	A	7.0F	6.6	6.7	6.3
16	6.0F	5.3F	5.0F	4.9F	4.2F	4.9F	6.0F	7.0F	7.5	7.4	7.1	6.6	6.4	6.6	6.6	A	6.4J	6.5	7.4	A	8.2PS	7.3	6.3	5.6
17	5.7H	5.6	5.5	5.5	(5.1)P	5.7	6.5	7.0	(8.0)JPS	A	6.5	6.4	6.6	6.2	A	A	6.7P	6.7	6.8	(6.6)P	(6.7)JF	6.6J	S	5.9
18	5.6	5.7	5.4	5.3	4.8	5.5	6.0	6.6	6.4	6.6	6.4	6.2	6.2	7.2	7.1	7.1	6.7	7.0	6.7	8.5	7.9	(7.7)PS	6.8F	6.6
19	6.6F	6.6F	6.1	5.0	4.7	5.1	6.4	6.6	5.7	B	6.4J	5.4	5.6	5.2	5.2	5.8J	8.0P	[7.7]B	7.4J	B	BH	B	(6.7)P	4.8
20	3.8K	(3.5)KPF	3.4KF	3.4KZ	3.2ZK	4.2K	3.9K	4.4K	GK	GK	GK	GK	AK	AK	AK	AK	4.9K	GK	4.5K	[4.8]KC	5.0K	[5.0]KC	5.0KJF	BK
21	BK	AK	6.2K	6.8K	6.1K	BK	AK	4.7K	CK	GK	GK	GK	GK	AK	AK	5.1K	5.1K	5.3K	4.7K	4.4KJ	AK	4.8K	4.1KH	4.2K
22	3.8K	3.8K	3.5K	3.3KFV	3.5KF	BK	4.5K	4.8K	AK	4.9K	AK	5.1K	5.2K	5.1K	5.6K	5.7K	5.4K	5.7K	5.3K	(5.9)PK	6.7	6.8	6.6	5.4
23	5.1	4.5J	(4.3)P	(4.3)P	4.1	4.4	6.2	7.3	A	5.9	6.6	6.3	6.0	5.7	7.1Z	6.5	[6.6]C	(6.7)JPS	6.7	6.8	A	C	C	5.8
24	5.5	5.2	5.0	4.6	4.7V	4.9	5.7F	5.3F	5.8	6.3	6.4	6.3	6.3	6.5	6.5	6.6	6.9	6.9	6.8	6.8	7.0J	6.8J	5.9	5.6
25	5.3	5.4	5.0	4.8	4.8	5.7	6.0	6.7	7.6	7.2H	6.3	6.8	6.1	6.7	6.8	6.7	7.0	7.0	6.4	6.9H	6.4JH	6.7JH	(5.3)JPH	4.6
26	[4.9]C	5.2	5.0	5.2	4.5	5.0	6.1	7.4	7.4	6.8	7.1	7.2	6.5	6.4J	6.8H	7.1	6.7	7.2	(9.4)PS	7.6S	(6.8)JPS	6.5	6.0	5.6ZH
27	5.2	5.3	5.4	5.3	5.3H	5.8	6.7	C	C	C	C	C	C	C	C	6.7	6.8	7.1J	(6.8)JPS	(6.9)JPS	S	(7.4)PS F	(6.2)PF	5.7
28	5.4	5.4	5.4H	5.5	5.1	5.4	7.3	(7.9)P	7.8	7.6	7.1	6.8H	7.4	6.6	7.1	7.1	6.8	7.0	6.7JF	6.9J	7.2J	7.8	7.1	6.7H
29	6.5H	5.2H	4.7H	5.0	[5.0]B	5.0	5.2	7.2	6.5	6.4	6.8	6.9	6.6J	[6.6]B	(6.5)JF	7.3S	C	B	B	B	6.6	6.6	(5.8)P	5.6
30	5.3Z	5.0	5.5Z	5.2V	4.6	5.2	6.3	6.6	6.3	6.5	7.1	7.6	7.6	7.5J	7.7	7.0	7.0	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	6.5	6.9	7.5	7.0	7.2	7.0	C	C	7.2	7.3	7.1	7.2H	6.2	5.5	5.4
Median Value	5.6	5.4	5.1	5.1	4.8	5.1	6.0	6.6	6.7	6.5	6.7	6.4	6.6	6.6	6.8	6.7	6.6	7.0	6.8	6.9	7.0	6.7	6.2	5.7
Count	29	29	29	29	28	28	28	26	20	20	25	26	25	25	23	23	26	28	28	24	26	28	27	29

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 1

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

IONOSPHERIC DATA

Aug. 1950 | 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	320	330^{Z}	330	300	300^{H}	360	320^{H}	300^{H}	(300)^{JF}	290^{F}	S	300	370	S	S	A	330	490	A	340	330^{F}	(330)^{JF}	310	310
2	380	400	400	[360]^{C}	320	280	310	290	300	A	400^{F}	300^{F}	320	340^{F}	(290)^{JF}	330	350	320	310	320	320	320	340^{H}	350^{P}
3	310^{H}	340	390	320	320	300	A	400	A	G	A	A	A	390	A	A	A	300^{F}	300^{F}	A	A	300^{F}	300^{PH}	310
4	360^{P}	360	360	320	320	300	300	A	A	G	310	G	330	G	350	A	A	310	350	320	340	310	350^{F}	(330)^{JF}
5	410	400	A	350^{Z}	360	(320)^{F}	290	A	A	A	A	G	(350)^{JP}	340	350^{F}	330	(310)^{ZP}	380^{H}	360	440^{H}	320	360^{F}	(360)^{JH}	330^{H}
6	400^{H}	400^{ZH}	(410)^{JH}	410^{ZH}	360^{H}	330	370	370	350	320	330	360	330	(310)^{J}	(340)^{J}	380^{P}	(300)^{J}	300	310	(330)^{J}	(320)^{JH}	290	320	300
7	320	310	320	370	330	300	240	230	310	300	[300]^{C}	300	350	310^{H}	300	300	320	300	300	300	300	280	350	330
8	400	360	350	C	C	320	360	340	G	A	A	G	260	380	300	320	430	(330)^{P}	(300)^{J}	A	(290)^{J}	350^{F}	A	370^{K}
9	350^{K}	310^{K}	310^{KHF}	300^{FK}	(300)^{JF}	300^{K}	270^{K}	280^{K}	330^{K}	A^{K}	A^{K}	AF^{K}	AF^{K}	G^{K}	G^{K}	A^{K}	G^{K}	G^{K}	A^{K}	A	390^{H}	370	390	A
10	360^{F}	320^{F}	370^{F}	310^{F}	(280)^{B}	390^{K}	A^{K}	G^{K}	A^{K}	A^{K}	A^{K}	G^{K}	G^{K}	G^{K}	A^{K}	A^{K}	G^{K}	380^{K}	350^{K}	280	310	340	340	340
11	400	360^{ZF}	350^{F}	370^{F}	330	320	390^{K}	G^{K}	A^{K}	B^{K}	G^{K}	G^{K}	A^{K}	A^{K}	G^{K}	G^{K}	G^{K}	G^{K}	330	320	380	360^{F}	420^{FH}	420^{FV}
12	390^{F}	450^{FZ}	430^{F}	(360)^{JF}	A	(390)^{F}	B	300^{FZ}	A	A	G	G	G	G	300	300	320	280	300	280	270	270	380	320^{H}
13	350	340	(320)^{J}	(320)^{J}	300	(280)^{J}	(320)^{J}	C	C	C	C	C	C	C	C	G	330	280	270	270	260	340^{H}	310	370
14	300^{ZP}	290^{FZ}	340^{FZ}	360^{FZ}	A	310	A	320	(290)^{J}	A	C	A	380	380	330	340	A	A	300	310	(340)^{JP}	360	350	310^{F}
15	370^{PF}	A	310^{F}	260^{F}	290^{F}	300	A	A	A	G	G	310	310	380	330	A	A	A	A	A	(300)^{BF}	340	(390)^{B}	330
16	370^{F}	360^{F}	370^{F}	310^{F}	310^{F}	300^{F}	320^{F}	270^{F}	280	290	280	350	310	330	310	A	(290)^{J}	300	320	A	300^{FS}	300	300	320
17	320^{H}	330	300	270	(270)^{P}	240	260	300^{A}	(310)^{JPS}	A	320	310	320	290	A	A	310^{P}	310	300	(300)^{P}	A	(270)^{J}	S	280
18	310	310	310	300	310	300	300	300	260	320^{F}	A	320	G	300	320	300	310	360	360	310	A	(310)^{PS}	300^{F}	330^{F}
19	340^{F}	350^{F}	340	320	310	300	340	300	G	B	G	G	G	G	300	G	340^{PF}	[320]^{B}	(300)^{J}	B	BH	B	(430)^{P}	360
20	340^{K}	(520)^{FP}	380^{FK}	550^{FZ}	(490)^{KZB}	600^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	A^{K}	A^{K}	A^{K}	A^{K}	G^{K}	G^{K}	A^{K}	C^{K}	470^{K}	[390]^{KC}	(310)^{KJF}	B^{K}
21	B^{K}	A^{K}	290^{K}	290^{K}	280^{K}	B^{K}	A^{K}	G^{K}	C^{K}	G^{K}	G^{K}	G^{K}	G^{K}	A^{K}	A^{K}	G^{K}	400^{K}	G^{K}	B^{K}	A^{K}	A^{K}	320^{K}	300^{KH}	380^{K}
22	360^{K}	420^{K}	410^{K}	380^{KFV}	A^{K}	B^{K}	390^{K}	G^{K}	A^{K}	G^{K}	A^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	310^{K}	A^{K}	350	380	280	260
23	270	(330)^{J}	(350)^{P}	(320)^{P}	320	300	310	260	A	280	300	G	270	400	300^{Z}	300	[300]^{C}	(300)^{JPS}	300	300	A	C	C	310
24	320	300	350	390	330^{V}	300	A	A	280	220	G	290	300	310	300	310	290	310	310	320	(310)^{J}	(280)^{J}	340	400
25	300^{A}	350	390	330	330	290	270	(300)^{A}	290	400^{H}	300	370	G	310	310	310	340	300	310	320^{H}	(230)^{JH}	(280)^{JH}	(310)^{JH}	290
26	[320]^{C}	350	310	320	320	320	300	290	300	300	360	400	400	G	450^{H}	460	260	250	(280)^{PS}	270^{S}	(310)^{JPS}	290	340	360^{ZH}
27	360	370	390	370	340^{H}	320	330	C	C	C	C	C	C	C	C	300	360	(350)^{J}	(320)^{JFS}	(330)^{JPS}	S	(330)^{JPS}	(350)^{P}	340
28	400	360	340^{H}	410	370	320	350	(320)^{P}	310	300	300	350^{H}	400	400	300	300	300	320	(370)^{JF}	(310)^{J}	(310)^{J}	340	380	430^{H}
29	410^{H}	380^{H}	400^{H}	420	400	440	460	350	290	300	330	320	(380)^{J}	[340]^{B}	(300)^{JP}	350^{S}	C	B	B	B	350	400	(350)^{P}	290
30	430^{Z}	410	370^{Z}	390^{V}	410	320	310	300	300	310	340	350	310	(300)^{J}	330	330	300	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	380	320	360	290	320	340	C	C	300	290	320	320^{H}	280	340	350
Median Value	360	360	350	330	320	300	310	300	300	320	340	360	350	380	320	330	330	320	310	320	320	320	340	330
Count	29	28	29	29	26	28	23	24	18	19	20	26	25	25	23	21	25	27	24	20	23	28	27	28

foF2

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 2

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

IONOSPHERIC DATA

Aug. 1950 | 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)A	(300)A	(300)A	250	250H	220A	290H	280H	250	260	350	300	370	370	370	A	310	490	A	340	320	320	270	300A
2	380	400	300	[290]C	280	250	300	280	300	A	390	300	320	340	280	320	300	310	280	290	280	260	240H	250
3	250H	280	330	300A	270	300A	A	400A	350A	380	A	A	A	390	A	A	A	290	290	A	(300)A	280	210H	270
4	250	300A	300A	270	280	300	270	A	A	320	310	400	330	310	350	A	A	300AF	280	270	270	280	300	300
5	410A	400A	340A	300A	350	320	270	A	A	A	A	400	350	340	350	320	300	250H	280	340H	300	350	(300)AH	250H
6	280H	310AH	300H	290H	300AH	290	290	280	330	320	310	360	330	310	340	340	300	280	300	250	240H	210	220	240
7	260	(300)A	280	290	300	290	220	200A	310	300	[300]C	300	350	300H	(300)A	300	320	300	270	250	230	250F	260	250
8	340	300A	290	C	C	250	350	200	300	A	A	600	260	380	300	320	420	300	210	360	240	230	A	(300)K
9	(300)AK	(300)AK	250HK	(300)AK	300FK	250K	250K	280K	330K	AK	AK	AFK	AFK	500K	AK	AK	350K	500K	470KAH	A	280H	290	370	420A
10	340	310	360	290	240	370K	300K	410K	AK	AK	AK	650A	500FK	400K	AK	590KAF	490K	370K	330K	250	250	260	250	(300)A
11	270	260	270	260	270	310	390AK	450K	AK	540K	400K	370K	AK	AK	460K	370K	350K	290K	300	250	300	300	310H	360
12	320A	360	320F	320F	A	280	B	250	290	A	410	480	320	310AF	300	300A	300	260	220	220	220	220	280	260H
13	270	280	280	260	280	280	320	C	C	C	C	C	C	C	C	350	300	260	270	260	250	300AH	250	(300)A
14	250	240	250	350A	A	220	A	260	250	A	C	A	380	380	330	330	A	A	270	310A	310	330	280	300
15	370A	(380)A	300A	250	210	290	A	(300)A	A	300	450	310	310	380	300	A	A	A	360A	A	270	330	340	260
16	(300)A	290	280	250	230	250	250	250	280	280	280	350	310	330	310	A	290	300	280	A	250	280	250	280
17	250H	(300)A	250	250	260	200A	200A	300A	300	A	320A	310	320	290A	A	A	300	310	280	290	280A	270	260	260
18	270	260	280	300A	280	250	250	290	250	310	A	320	390	300	310	300A	300	300	290	250	A	250	300A	300AF
19	300A	250	270	270	300A	280	310	280	490	300	300	590	460	370	300A	320	300A	290	300	270	370H	290	350	300A
20	290K	390K	290K	420K	420K	600K	S K	350K	GK	GK	GK	GK	AK	AK	AK	AK	640K	GK	450KA	[400]Kc	340K	[300]Kc	270K	280K
21	270K	290K	280K	280K	250K	BK	AK	330K	CK	GK	GK	GK	GK	AK	AK	460K	400K	400K	390KB	450K	AK	250K	260HK	330K
22	350K	310K	310K	350K	AK	BK	390K	400K	AK	400K	AK	450K	480K	500K	350K	330K	350K	350K	310AK	AK	320	280	240	200
23	230	260	300A	280	270	270	310	250	A	280	300	390	260	400	300	280	[280]C	280	240	240	A	C	C	230
24	230	280	280	270	290	240	A	A	280	220	270	290	300	310	300	310	290	290	300	230	240	210	270	280
25	300A	(300)A	300A	300A	260	230	250	(300)A	280	HL	300	370	300	310	310	300	320	290	300	260H	230H	200H	250H	270
26	[300]C	320	280	250	250	270	260	270	300	300	330	400	400	470	450H	400	250	240	210	260	260	250	280	280H
27	300	310A	320	300	250H	260	260	C	C	C	C	C	C	C	C	300	330	330	300	260	300	300	300	290
28	320A	310	260H	290	300	240	260	300	290	300	300	290H	400	400	300	300	280	300	320	280	250	290	300A	340H
29	300H	270H	370H	360	370	400	420	350	280	290	310	320	380	290	300	340	[300]C	250	270	250	290F	290	300F	250F
30	310	330	290	290	330	310	300	300	300	300	L	350	300	300	320	310	300	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	360	310	350	290	300	330	C	C	270	260	260	260H	260	260	280
Median Value	300	300	290	290	280	280	290	290	300	300	310	360	330	340	310	320	300	300	290	260	270	280	270	280
Count	30	30	30	29	26	28	23	25	20	20	20	26	25	26	23	22	26	28	29	25	27	29	28	30

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 3

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

IONOSPHERIC DATA

Aug. 1950 | 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	L	4.5^{J}	A	A	5.4	4.4	5.2	4.7	A	A	Q	5.0	A					
2						A	L	A	A	A	5.3	5.0	5.1	5.1	4.8	5.0	L	L	L					
3						A	A	A	A	5.3	A	A	A	5.1	A	A	A	4.0	A					
4						L	A	A	A	5.1	4.9	5.0	5.0	5.1	4.9	A	A	A	Q					
5						A	Q	A	A	B	A	L	5.0	5.4	L	L	L	Q	Q					
6						Q	Q	Q	4.8	4.9	(5.0)^{L}	5.1	4.9	4.8	5.1	4.6	S	Q	Q					
7						Q	L	Q	5.0	4.8^{P}	[5.0]^{C}	5.2	5.4^{J}	4.7	A	4.3	L	L	L					
8						Q	L	Q	4.2	A	A	4.7	5.0	4.9	4.8	5.0	4.5	4.3	Q					
9						Q	Q	A	4.1	A	A	A	A	4.7	4.6	A	4.2	3.9	A					
10						Q	A	4.5	A	A	4.7^{F}	4.7	4.7	4.7	A	A	4.4	4.0	4.2					
11						A	A	4.1	A	4.8	4.5	4.7	4.7	A	4.5	4.4^{A}	4.6	4.4^{J}	3.2					
12						Q	B	L	L	A	4.6	4.6	4.6	A	4.4^{J}	A	4.3	L	A					
13						Q	Q	C	C	C	C	C	C	C	C	L	A	A	L					
14						A	A	4.3	4.6^{A}	A	A	5.0^{J}	4.8	4.8	4.7	L	A	A	A					
15						A	A	A	A	5.0^{J}	4.8	5.0^{A}	5.0	4.8	4.8	A	A	A	A					
16						Q	A	A	L	A	L	5.0	5.0	4.9	5.0	A	A	4.0	A					
17						Q	Q	A	L	A	A	L	5.0	A	A	A	A	L	A					
18						Q	A	A	A	Q	A	4.8	L	5.1	A	4.8	4.3^{J}	4.4	L					
19						A	4.5	L	4.5	(4.9)^{B}	4.8^{A}	4.9	4.9	4.8	A	4.9	4.6^{A}	3.7	Q					
20						2.8	3.2	3.4	4.0	4.0	4.0	4.2	A	A	A	A	4.6	4.1	A					
21						A	A	3.8	[4.2]^{C}	4.6	4.5	4.4	4.5	4.5	A	4.5	L	4.3	B					
22						A	3.6	3.6	A	4.6	A	4.6	4.7	4.8	4.8	4.6	4.6	4.1^{J}	A					
23						Q	3.8	4.4^{J}	A	L	L	4.9	L	4.0	L	A	C	A	Q					
24						Q	A	A	4.4	A	4.9	L	5.0	4.8	4.9	L	L	L	L					
25						Q	4.6	5.0^{A}	4.5	L	4.6	5.1^{F}	L	5.2	L	4.8	4.5	L	L					
26						Q	L	L	4.3	4.6	4.8	4.9	5.0	4.9	4.6	4.1	L	L	Q					
27						Q	Q	C	C	C	C	C	C	C	C	4.4	L	4.0	Q					
28						Q	Q	L	L	L	L	L	5.0	L	4.5	L	L	L	Q					
29						Q	Q	L	L	L	L	4.6	5.0	Q	A	A	C	A	Q					
30						Q	L	L	L	L	L	5.0	5.0	L	L	4.4	4.0	C	C					
31						C	C	C	C	4.7	L	4.6	4.4	L	L	C	C	Q	A					
Median Value						—	3.8	4.3	4.4	4.8	4.8	4.9	5.0	4.8	4.8	4.6	4.5	4.1	—					
Count						1	5	9	11	12	15	23	23	21	14	13	11	13	2					

foF1

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 4

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

IONOSPHERIC DATA

Aug. 1950 | 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	A	A	A	A	A	200	280	220	A	A	Q	330^{A}	A					
2						A	280	A	A	A	200	200	210	200	200	200	A	250	250					
3						A	A	A	A	350	A	A	A	A	A	A	A	200	A					
4						250	A	A	A	300^{A}	300	300	210	A	320^{A}	A	A	A	Q					
5						A	Q	A	A	B	A	310^{A}	A	200^{A}	230	260	220	Q	Q					
6						Q	Q	Q	320	240	230	270^{A}	240	230	210	240	280	Q	Q					
7						Q	200	Q	200	200^{A}	[210]^{C}	220	(280)^{B}	220^{A}	A	250	210	230	220					
8						Q	300	Q	A	A	A	A	250	300^{B}	220	260	200	210	Q					
9						Q	Q	A	A	A	A	A	A	200^{A}	A	A	A	390	A					
10						Q	A	320	A	A	A	200^{A}	200	210	A	A	300	290^{A}	270					
11						A	A	300^{A}	A	350^{A}	A	B	200	A	210	A	300	A	220					
12						Q	B	220	290	A	A	210	300^{A}	A	A	A	240	210	A					
13						Q	Q	C	C	C	C	C	C	C	C	250	A	A	260					
14						A	A	200	A	A	A	A	220	210	260^{A}	300^{A}	A	A	A					
15						A	A	A	A	A	250	A	230	230	250	A	A	A	A					
16						Q	A	A	A	A	A	A	230	220	230	A	A	280^{A}	A					
17						Q	Q	A	A	A	A	240	200^{A}	A	A	A	A	A	A					
18						Q	A	A	A	Q	A	A	A	A	A	200^{A}	210	260	260					
19						A	230	200^{A}	A	250^{F}	230	260	250^{A}	240	A	300	210	210	Q					
20						300	A	310	250	250	220^{A}	300	A	A	A	A	270	B	A					
21						A	A	290	[240]^{C}	200	200	210	200	A	A	A	290	200	B					
22						A	230	300	A	A	A	210	200	210	200	200	300^{A}	B	(280)^{A}					
23						Q	230	220	A	200	190	210	200^{A}	200	260	A	C	A	Q					
24						Q	A	A	200^{A}	A	200	200	190	210	210	B	210	230	270					
25						Q	200	230	200^{A}	200^{A}	200^{A}	250	200	A	220	250	260	250	280					
26						Q	230	230	270	200	230	280	A	300	350^{A}	330	210	200	Q					
27						Q	Q	C	C	C	C	C	C	C	C	220	300	300	Q					
28						Q	Q	260	240	200	200	200	230	260	230	B	210	A	Q					
29						Q	Q	280	250	200	240	230	230	Q	A	A	C	A	Q					
30						Q	300	250	280	240	B	210	230	220	230	250	240	C	C					
31						C	C	C	C	280	250	230	240	250	250	C	C	Q	A					
Median Value						—	230	260	250	240	220	220	230	220	230	250	240	240	260					
Count						2	9	14	11	15	15	21	23	19	17	14	18	16	9					

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 5

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

IONOSPHERIC DATA

Aug. 1950 | 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						B	A	2.9	A	A	A	A	A	A	A	3.4	C	A	A					
2						A	2.2^{J}	A	A	A	A	A	A	B	A	A	A	A	A					
3						A	A	A	A	3.2$^{A}_{F}$	3.4	3.2	A	A	A	3.2	A	2.7	AF					
4						1.9	A	A	A	A	3.6	A	A	A	A	A	A	A	A					
5						A	2.3^{J}	3.2	3.3	B	B	B	B	A	A	3.6	A	A	A					
6						2.0^{A}	2.2	2.6	3.1	3.3	A	A	A	A	A	A	A	A	A					
7						1.6	B	A	3.0	3.2	[3.4]^{F}	3.5	B	3.0	A	B	A	(2.8)$^{A}_{F}$	A					
8						A	2.4	A	3.1	A	A	A	B	3.8	B	3.0	3.0	2.8	2.3					
9						1.8	2.1	2.6	A	B	A	A	A	A	A	A	A	2.5	A					
10						A	A	2.9	3.0	A	A	A	A	A	3.6	3.3	2.9	A	A					
11						A	2.5	2.8^{J}	A	3.3	3.3	3.3	3.3	A	3.5^{F}	3.3$^{A}_{F}$	3.2	2.5	A					
12						A	2.1^{J}	A	A	A	A	A	A	A	A	A	3.0	AF	A					
13						A	A	C	C	C	C	C	C	C	C	A	A	A	B					
14						A	A	AF	A	A	A	A	A	A	A	A	A	A	A					
15						A	A	A	A	A	3.2	A	3.2	3.3	3.3	B	3.2	2.5	A					
16						A	2.2	A	A	A	A	A	A	B	A	A	A	2.4	A					
17						A	A	A	3.4	A	A	B	A	3.7	A	3.4	3.3	A	A					
18						A	A	3.1	A	A	A	A	A	A	3.1	3.2	3.2	2.6	A					
19						A	A	A	A	3.5	A	A	A	A	3.3	A	3.0^{F}	A	A					
20						1.7^{J}	A	2.4	2.7	2.7^{J}	A	A	A	A	A	A	2.8^{A}	A	2.0					
21						A	A	2.4	[2.8]^{C}	3.3	3.4	3.7	3.7	[3.6]^{B}	3.4	3.4^{A}	3.0	2.7	B					
22						A	B	2.9^{F}	3.0	3.2^{A}	A	3.3^{A}	B	3.2	A	3.2	A	2.7^{J}	A					
23						1.7	B	2.7	A	A	A	3.3^{A}	A	B	A	A	C	A	A					
24						A	2.6	2.7	A	A	B	3.7	B	3.7	3.5	B	2.9	A	A					
25						6	A	A	A	A	A	3.4$^{A}_{J}$	A	A	3.6	3.2	2.9	2.4	1.9					
26						1.5	2.0	2.5^{J}	2.8^{J}	3.0	3.4	3.3	3.4	3.6^{J}	A	2.6	A	2.6	2.0					
27						A	A	C	C	C	C	C	C	C	C	3.3	3.0	2.4	1.2^{B}					
28						1.5	A	2.5^{J}	3.2	A	A	3.2	3.4^{H}	3.4	3.3	3.1	2.8^{A}	A	B					
29						A	B	2.5	2.7^{B}	A	3.3^{A}	B	A	B	B	A	C	A	B					
30						1.5^{J}	2.1	2.7	A	A	A	B	A	B	3.4	3.2	A	C	C					
31						C	C	C	C	A	A	A	A	A	3.4	C	C	A	A					
Median Value						1.7	2.2	2.7	3.0	3.2	3.4	3.3	3.4	3.6	3.4	3.2	3.0	2.6	2.0					
Count						9	11	16	12	9	8	10	5	9	11	15	14	13	5					

foE

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

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

IONOSPHERIC DATA

Aug. 1950 | 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
1						B	A	100	A	A	A	A	A	A	A	100	C	A	A					
2						A	100	A	A	A	A	A	A	100	A	A	A	A	A					
3						A	A	A	A	100	100	100	A	A	A	100	A	100	A					
4						100	A	A	A	A	100	A	A	A	A	A	A	A	A					
5						A	110	100	110	B	B	B	110	A	A	100	A	A	A					
6						A	100	100	100	100	A	A	A	A	A	A	A	A	A					
7						120	100	A	100	100	[100]^{C}	100	B	100	A	100	A	100	A					
8						A	100	A	100	A	A	A	100	100	100	100	100	100	100					
9						100	100	100	A	100	A	A	A	A	A	A	A	110	A					
10						A	A	100	110	A	A	A	A	A	130	100	110	100	100					
11						A	100	100	A	100	100	100	100	A	100	100	100	100	A					
12						A	100	A	A	A	A	A	A	A	A	A	100	A	A					
13						A	A	C	C	C	C	C	C	C	C	A	A	A	B					
14						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
15						A	A	A	A	A	110	A	100	110	100	B	100	100	A					
16						A	100	A	A	A	A	A	A	100	A	A	A	100	A					
17						A	A	A	100	A	A	100	A	110	A	100	120	A	A					
18						A	A	100	A	A	A	A	A	A	100	100	100	100	A					
19						A	A	A	A	100	A	A	A	A	100	A	100	A	A					
20						100	A	100	100	100	A	A	A	A	A	A	100	A	110					
21						A	A	100	[100]^{C}	100	100	100	100	100	100	130	100	120	B					
22						A	100	100	110	100	100	100	100	100	A	100	A	100	A					
23						100	100	100	A	A	A	100	A	100	A	A	C	A	A					
24						A	100	100	A	A	100	100	100	100	100	100	100	A	A					
25						B	A	A	A	A	A	A	A	A	100	100	100	100	100					
26						100	100	100	100	100	100	100	120	100	A	B	A	100	90					
27						A	100	C	C	C	C	C	C	C	C	100	100	110	B					
28						100	A	110	110	A	A	100	100^{H}	100	100	100	100	A	B					
29						A	150	100	B	A	A	110	A	100	100	A	C	A	B					
30						130	110	120	A	A	A	100	A	100	100	100	A	C	C					
31						C	C	C	C	A	A	A	A	A	100	C	C	A	A					
Median Value						100	100	100	100	100	100	100	100	100	100	100	100	100	100					
Count						8	16	16	11	10	9	12	9	14	13	16	14	14	5					

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

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

IONOSPHERIC DATA

Aug 1950 | 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	(5.0)^{B}	4.6	3.6	3.0	3.0	3.1	4.6	5.7	9.4^{B}	5.7	5.4	6.5	6.3	5.7	8.8	8.0	7.1	7.1	7.4	6.5	9.0	8.2	5.9	3.5
2	4.4^{B}	3.7	G	C	2.7	3.0	3.6	6.5	7.0	6.6	5.0	5.0	4.9	G	3.8	3.7	3.9	3.2	3.4^{Y}	3.4^{Y}	5.5	4.4	1.6	5.8
3	3.6	3.2	5.4	5.2	3.6	5.6	7.6	5.6	7.9	6.9	10.3	9.2	8.8	7.3	10.1	8.8	7.9	5.9	6.0	11.7	7.2	6.8	3.4	3.3
4	4.5	3.3	3.2	2.2	1.8	G	4.4	(8.3)^{Y}	7.4	6.6	7.4	6.0^{Y}	6.4	6.8	5.8	7.4	11.8	8.0	5.8	3.0	8.9	7.2	6.6	6.5
5	6.3	6.2	6.8	6.2	6.8	7.2	5.4	7.4	12.2$^{B}_{F}$	7.2	6.6	5.6	5.9^{Y}	4.6	4.6	4.6^{Y}	6.3	4.5	4.8	4.4	3.4	4.7	3.4	2.4
6	2.4	4.4	3.3	3.1	2.3	2.1	3.6	3.5^{Y}	4.6^{Y}	4.6	4.3	4.6	4.2	4.4	4.6	4.2	4.2	3.1	2.4	3.0	2.2	G	G	G
7	2.6	3.5	1.3	1.5	1.3	G	3.3^{Y}	3.2	G	G	C	4.8	B	4.0	5.5	G	4.4	4.8	2.8	2.8	4.6	4.2	3.2	4.8
8	4.4	4.0	3.0	C	C	3.0	4.4	3.7^{F}	4.4	7.8^{B}	5.0	5.0	B	G	5.2^{Y}	B	3.5^{Y}	3.8^{Y}	G	7.0^{B}	2.6	2.1	7.2	3.6
9	2.5	5.0	3.8	3.6^{B}	2.9^{B}	3.0	4.6	5.3	6.2^{B}	9.4^{Y}	10.2	10.8$^{B}_{F}$	11.6	5.5	6.7^{B}	7.4	7.2	6.3	7.4	7.3	6.3	5.3	7.2	7.8
10	5.8	5.1	3.4	2.2	2.2	2.2	5.1	4.4	7.2	8.2	5.8	5.8	5.1	5.5	9.2	8.0$^{B}_{F}$	5.0	4.4	4.4	7.5	3.4	2.0	3.2	3.8
11	1.4	G	3.2	3.0	5.4	5.2	5.4	5.4	6.7	5.4	4.7	7.6	6.3	6.2	G	4.9	5.6	4.6	5.5$^{B}_{Y}$	3.4	4.4	3.5	G	2.9^{B}
12	4.4	3.5	2.0	4.6^{B}	4.6	2.1	3.6^{F}	3.1	7.0^{F}	12.2	7.8	5.8	6.8	7.6	7.3^{Y}	6.4	4.9	4.0	3.7	4.4	3.2	3.5	3.2	2.6
13	G	G	2.8	3.3	1.3	4.8	7.9^{B}	C	C	C	C	C	C	C	C	4.5	5.2	7.2	4.4	5.6^{B}	5.0^{B}	6.7	7.0^{B}	6.0
14	3.2	3.6	3.6	5.2	8.9	3.3	8.2$^{B}_{Y}$	4.2	7.2	10.0	C	6.5^{F}	4.4	4.7	5.0	4.2	11.4	8.4	4.9	7.2	4.6	4.6	G	5.1
15	7.3	5.4	6.7	5.8	4.4	3.3	5.8	7.3	7.3	7.3^{B}	4.7	5.2	4.5	4.6	5.8	7.3	7.6	8.6	7.5	7.8	5.0	6.6	6.4	2.6
16	5.6	3.2	2.0	2.2	2.0	2.0	4.4	6.6	6.6	6.5	5.8	5.2	4.2	G	4.4	7.4	6.6	5.9^{B}	4.4	8.2	3.5	5.4	3.8	1.8
17	3.2	3.4	3.3$^{B}_{Y}$	4.6	4.8	3.5	4.3^{B}	5.8^{B}	5.6	7.8	7.2^{B}	G	5.4	5.5	8.2	7.4	7.4	7.2	7.4	7.2	7.6	6.2	5.8	4.2
18	3.9	2.2	4.9	4.4	4.4	4.6	4.7	5.0	7.3	6.3	7.6	6.7	6.2	7.6	6.7	5.9	4.4	5.2	5.6	4.8	7.6	6.8	6.5	5.8
19	5.2	7.2	4.8	4.8	4.2	4.4	4.2	5.4	4.5	4.9	5.9	4.6	4.8	5.4	6.6^{B}	6.9$^{B}_{Y}$	6.0	5.2	2.2^{B}	G	G	G	2.1^{Y}	2.2^{B}
20	2.1	1.7	2.2^{Y}	2.4^{Y}	2.1^{Y}	G	3.8	G	4.2	4.5	4.7	4.4	5.7	5.8	6.6	5.7	3.6	3.0	5.2^{Y}	C	G	C	4.6	(4.4)^{Y}
21	4.0	5.7	6.2	5.6	4.8	3.9	6.9	3.3	C	4.4^{Y}	G	G	4.6^{Y}	6.4^{Y}	6.9	5.2	4.3^{Y}	4.4$^{B}_{Y}$	B	5.5^{B}	6.4	G	2.2	4.8
22	3.0	1.4	1.1	G	3.6	3.8	4.8^{Y}	5.8	6.6	5.5	5.6	4.1	4.6^{Y}	G	4.0	G	4.6	G	4.4	5.4	4.7	3.6	2.9	G
23	1.6	1.3	1.6	1.4	1.2	G	3.6^{Y}	3.6	7.6	4.2	4.3	4.3	5.6	G	A	A	C	4.8	3.6	5.4	7.2	C	C	1.6
24	1.6	2.0	2.0	2.3	2.7	3.8	6.6	6.1^{B}	7.3	5.1	G	G	G	G	4.8^{Y}	B	G	4.6	3.5	3.2	2.9	2.8	2.8	1.6
25	3.1	3.6	3.5	1.6	G	2.6	3.1	(6.1)^{B}	3.8	5.6	4.7	5.0^{Y}	5.8	6.0^{Y}	G	G	4.9	G	2.2	1.2	2.2	2.8	2.0	3.0
26	C	2.2	2.4	1.7	G	G	G	G	4.7	4.6	G	G	4.6	3.6	4.0^{B}	4.6^{B}	3.6	3.4	G	3.2	2.2	1.4	2.9	3.2
27	3.6	3.6	4.2	3.8	3.2	3.6	3.8	C	C	C	C	C	C	C	C	4.2	4.4	5.1	3.5	3.5	3.7	3.6	3.8	3.4
28	3.6	3.0	1.8	1.6	G	G	3.0	G	G	3.5	4.6	G	G	G	G	G	3.9	4.0	B	G	2.2	3.0	2.8	2.8
29	G	2.2	1.3	2.0	1.7	2.4	G	4.7	4.9	3.6	3.8	4.4^{Y}	6.5	5.7^{Y}	7.3^{Y}	6.0	C	4.3	3.4	4.3	5.8^{B}	6.0	5.3	5.5
30	3.4^{F}	3.0	3.2	3.7	3.0	G	3.4^{F}	4.2	4.0	5.0	4.0	G	4.8	G	G	3.4	3.2	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	4.4	4.4	4.6	G	4.6	G	C	C	5.2	6.6	G	3.4	4.6	3.2	3.8
Median Value	3.6	3.4	3.2	3.0	2.9	3.0	4.4	5.2	6.6	5.6	5.0	5.0	5.1	4.7	5.4	5.2	4.9	4.7	4.4	4.4	4.5	4.3	3.2	3.4
Count	29	30	30	28	29	30	30	28	27	29	27	29	27	29	28	27	28	30	28	29	30	28	29	30

fEs

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 8

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

IONOSPHERIC DATA

Aug. 1950 | (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	2.8	2.8	2.9	3.1	3.1	2.7	2.9	3.2	(3.1)	3.2	[3.2]	3.1	2.8	S	S	A	2.9	2.4	A	3.0	3.1	(3.1)	3.1	3.0
2	2.7	2.7	3.1	[3.0]	3.0	3.1	3.1	3.1	3.2	2.8	2.8	3.2	2.9	2.9	(3.2)	3.0	2.9	2.9	3.0	3.0	3.0	3.0	2.9	2.8
3	3.0	2.9	2.6	3.0	2.7	3.1	A	2.7	3.0	3.0	(3.1)	A	A	2.8	A	A	2.9	3.3	3.2	A	(3.1)	3.1	3.0	3.0
4	2.7	2.7	2.7	3.1	3.0	3.0	3.1	A	A	3.1	3.2	2.6	3.0	(3.1)	2.9	2.9	A	3.1	2.9	2.9	2.9	2.9	2.8	(2.8)
5	2.7	2.8	A	2.9	2.9	(3.0)	3.1	A	A	A	3.3	2.9	(2.8)	2.9	3.0	3.0	(2.9)	2.7	2.8	2.4	3.0	2.7	(2.9)	2.9
6	2.7	2.6	(2.6)	2.7	2.8	2.9	2.6	2.8	2.8	3.0	2.9	2.8	2.9	(3.0)	(2.9)	2.8	(3.0)	3.1	2.9	(2.9)	(3.0)	3.1	3.0	3.1
7	3.0	3.1	2.9	2.7	2.9	3.3	3.5	3.5	3.0	3.2	[3.2]	3.2	3.0	3.1	3.2	3.1	3.1	3.2	3.1	3.1	3.2	3.2	2.8	2.9
8	2.6	2.8	2.8	C	C	2.9	2.8	(3.6)	3.3	A	2.8	2.1	3.3	2.7	3.3	3.1	2.5	(2.9)	(3.1)	(2.9)	(3.2)	2.8	A	2.7
9	2.8	3.0	2.8	3.3	(3.2)	3.2	3.3	3.4	3.0	A	A	AF	AF	2.5	A	A	3.1	2.5	2.4	A	2.6	2.6	2.6	2.6
10	2.7	3.0	2.8	3.0	(3.1)	2.7	3.2	2.9	A	A	A	2.2	2.5	2.9	A	2.2	2.6	2.7	2.9	3.2	3.0	2.9	2.9	2.9
11	2.5	2.7	2.8	2.7	2.9	3.0	2.7	2.6	A	B	2.9	3.0	A	A	2.7	3.0	3.1	3.4	3.0	3.0	2.7	2.8	2.6	2.5
12	2.7	2.4	2.5	(2.8)	2.7	(2.6)	(2.6)	3.0	3.4	A	2.9	2.6	3.1	3.2	3.1	3.2	3.0	3.3	3.2	3.2	3.3	3.2	2.6	2.9
13	2.9	2.9	(2.9)	(2.9)	3.2	(3.3)	(3.0)	C	C	C	C	C	C	C	C	3.1	2.9	3.3	3.4	3.2	3.2	2.9	3.1	2.7
14	3.1	3.1	2.9	2.9	A	3.1	3.2	3.3	(3.2)	A	C	A	2.9	2.9	3.1	2.8	A	A	3.1	3.1	(2.9)	2.8	2.8	3.1
15	2.8	[3.0]	3.1	3.3	3.1	3.1	(3.1)	(2.9)	A	3.4	(2.6)	3.0	3.2	2.9	2.9	A	A	A	2.9	A	3.0	2.8	(2.7)	2.9
16	2.7	2.6	2.8	3.1	3.1	3.2	3.0	3.2	3.2	3.2	3.3	2.9	3.1	3.0	3.2	A	(3.2)	3.2	2.9	A	3.2	3.0	3.0	3.0
17	3.0	3.0	3.2	3.2	(3.2)	3.5	3.3	3.2	(3.1)	A	3.0	3.0	3.1	(2.7)	A	A	3.1	3.1	3.1	(3.2)	(3.2)	(3.3)	S	3.2
18	3.0	3.0	3.1	3.0	3.0	3.0	3.0	3.1	3.2	3.1	A	3.0	2.9	3.2	3.0	3.2	3.1	2.7	2.9	3.0	2.8	(3.0)	3.1	3.1
19	2.8	2.8	2.8	3.0	3.1	3.1	2.8	3.0	2.5	B	(3.3)	2.3	2.7	3.1	3.2	(3.0)	(2.8)	[3.0]	(3.1)	B	BH	B	(2.5)	2.9
20	2.8	(2.1)	2.7	2.0	2.3	2.0	S	3.0	G	G	G	G	A	A	A	A	2.2	G	2.4	[2.4]	2.4	[2.7]	(3.0)	B
21	B	A	3.2	3.3	3.2	B	A	3.3	C	G	G	G	G	A	A	2.7	2.9	2.8	2.7	(2.5)	A	2.9	3.2	2.6
22	2.9	2.5	2.5	2.7	A	B	2.8	3.0	A	2.9	A	2.7	2.6	2.6	3.2	3.1	3.1	2.9	2.9	(2.8)	2.8	2.6	3.1	3.2
23	3.2	(2.9)	(2.8)	(3.0)	2.9	3.1	3.1	3.5	A	3.3	3.2	(2.8)	3.1	2.7	3.3	3.3	[3.2]	(3.1)	3.1	3.1	A	C	C	3.0
24	3.0	3.0	2.8	2.8	3.0	3.2	A	A	3.4	3.6	3.4	3.3	3.1	3.2	3.2	3.1	3.3	3.2	3.1	3.0	(3.2)	(3.2)	2.9	2.7
25	3.2	2.8	2.7	2.9	2.9	2.4	3.3	3.3	3.2	2.6	3.1	3.0	3.4	3.1	3.2	2.9	3.0	3.1	3.1	3.0	(3.7)	(3.2)	(2.9)	3.2
26	[2.8]	2.5	3.0	3.0	3.1	3.0	3.0	3.1	3.3	3.2	2.7	2.7	2.6	(2.5)	2.5	2.3	3.6	3.1	(3.3)	3.3	(3.1)	(3.3)	2.8	2.9
27	2.8	2.9	2.6	2.7	2.8	2.9	2.8	C	C	C	C	C	C	C	C	3.2	2.8	(3.0)	(3.1)	(2.9)	S	(2.9)	(2.8)	2.8
28	2.6	2.7	2.8	2.5	2.7	3.0	3.0	(3.0)	3.1	3.3	3.2	2.7	2.8	2.7	3.1	3.2	3.0	3.0	(2.8)	(3.1)	(3.1)	2.8	2.8	2.6
29	2.6	2.8	2.7	2.6	B	2.4	2.5	3.0	3.2	3.1	3.0	3.1	(2.9)	[3.0]	(3.0)	2.8	C	B	B	B	2.8	2.6	(2.8)	2.6
30	2.6	2.6	2.8	2.6	2.6	3.0	3.0	3.3	3.1	3.0	3.0	3.0	3.1	(3.2)	3.0	2.9	3.1	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	2.7	3.0	2.8	3.2	3.0	2.9	C	C	3.1	3.1	3.0	2.9	3.2	2.9	2.8
Median Value	2.8	2.8	2.8	2.9	3.0	3.0	3.0	3.1	3.2	3.1	3.0	2.8	2.9	2.9	3.1	3.0	3.0	3.1	3.0	3.0	3.0	2.9	2.9	2.9
Count	29	29	29	29	26	28	26	25	20	20	24	26	25	25	22	23	26	27	28	24	26	28	27	29

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 9

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

IONOSPHERIC DATA

Aug. 1950 | fmin F | 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	A	A	1.4	A	A	A	A	A	A	4.0	4.4	4.3	A	A	A	A	A	A	A	A	A	A
2	A	4.2	E	E	1.6	A	3.4	A	A	A	3.9	4.0	3.9	4.2	3.7	3.7	A	3.2[A]	2.8	2.4	A	A	1.7	A
3	1.2	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	2.7	A	A	A	A	E	E
4	E	A	A	1.3	E	2.2	A	A	A	A	4.4	4.3	4.0	A	4.1[A]	A	A	A	A	A	A	A	A	A
5	A	A	A	A	A	A	A	A	A	A	A	A	A	3.8[A]	4.0	3.8	2.8	2.2	A	A	1.4	A	A	1.4
6	1.7	A	1.5	1.1	A	2.0	2.2	2.9	3.7	3.8	3.7	4.4[A]	4.1	3.9	3.7	3.6	A	3.0	2.6	A	A	1.2	1.2	1.2
7	1.7	A	E	E	E	2.2	3.0	2.2	3.3	A	C	A	(4.4)[B]	A	A	3.3	3.7	3.4	2.4	1.8	A	AF	1.6	1.4
8	1.4	A	1.9	C	C	2.4	A	3.0	A	A	A	A	4.4	4.5	3.8	4.0	3.2	3.3	2.3	A	1.5	E	A	A
9	A	A	1.8	A	1.4[a]	2.2	2.7	A	A	A	A	A	A	A	A	A	A	3.0	A	A	A	A	A	A
10	A	A	3.8	1.7	2.6	3.0	A	A	A	A	A	4.2[A]	4.0	4.3	A	A	3.8	3.2	A	A	1.6	1.4	1.6	A
11	E	E	E	1.6	A	A	A	A	A	A	A	4.1	4.0	A	3.5	A	4.1	A	1.6	1.6	A	1.7	E	E
12	A	A	E	A	A	1.7	3.6[F]	2.6	A	A	A	4.1	4.2[A]	A	A	A	3.7	3.0	2.2	A	A	A	A	1.2
13	1.1	1.4	1.2	1.4	E	2.8	3.0	C	C	C	C	C	C	C	C	3.8	A	A	A	A	A	A	A	A
14	1.8	A	1.5	A	A	2.3	A	3.0	A	A	A	A	4.1	4.1	4.2	A	A	A	A	A	A	A	E	A
15	A	A	A	A	A	2.5	6.4	A	A	A	4.0	A	4.0	4.1	3.8	A	A	A	A	A	A	A	A	1.8
16	A	1.2	1.2	1.1	1.2	2.0	3.0	A	A	A	A	A	4.3	4.0	3.9	A	A	A	A	A	A	A	A	E
17	1.2	A	1.6	A	A	A	A	A	A	A	A	4.2	4.2	4.2	A	A	A	A	A	A	A	A	A	A
18	A	A	A	A	A	2.3	A	A	A	3.8	A	A	A	A	A	3.7[A]	3.2	3.4	2.6	A	A	A	A	A
19	A	A	A	A	A	2.5	A	A	A	4.4[F]	3.7	4.4	A	3.8	A	A	A	2.6	1.5	1.5	1.2	1.3	1.6	A
20	E	E	E	1.2	1.2	2.4	A	2.7	3.2	3.2	A	3.8	A	A	A	A	3.0	4.0	A	C	1.2	C	A	A
21	A	A	A	A	A	A	A	3.1	[3.4][C]	3.8	3.6	3.8	3.8	A	A	A	3.0	3.0	4.2	A	A	1.3	1.5	A
22	A	1.4	1.2	1.5	A	2.4[F]	2.7	3.2	A	A	A	4.1	3.8	4.1	3.6	3.5	A	4.0	A	A	A	A	A	1.2
23	1.2	E	A	E	E	1.9	2.6	2.9	A	3.2	4.1	3.8	A	2.8	A	A	C	A	A	A	A	C	C	1.2
24	1.2	1.1	1.2	1.2	2.0	2.2	A	A	A	A	3.8	4.1	4.0	3.7	3.6	4.4	3.1	3.8	2.8	A	A	1.4	1.5	1.3
25	A	A	A	A	1.1	2.3	2.6	A	A	A	A	4.1	3.8	A	3.6	3.4	3.8	2.6	1.9	1.3	1.2	1.3	1.4	A
26	C	1.8	1.2	1.2	E	2.0	2.2	3.3	A	3.6	3.4	3.4	A	3.6	3.5	3.2	A	2.8	2.0	A	1.2	1.5	1.6	A
27	1.8	A	1.4	A	A	2.2	2.6	C	C	C	C	C	C	C	C	3.3	3.4	2.5	1.2	1.2	A	1.5	1.6	1.2
28	A	A	E	E	E	1.5	2.5	3.5	3.4	3.4	3.5	3.0	3.6	3.4	3.5	4.2	3.5	A	2.1	1.3	1.5	A	A	1.5
29	1.2	E	E	E	E	A	2.4	2.8	3.3	3.2	3.8	4.0	3.5	4.2	A	A	C	3.3	2.5	1.1	A	1.2	A	A
30	A	A	1.6	A	A	2.0	2.6	3.4	A	4.2	4.4	3.7	3.9	3.7	3.7	3.4	2.1	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	4.0	3.8	3.8	3.9	3.8	3.9	C	C	3.1	A	1.2	1.6	A	1.2	A
Median Value	1.2	1.2	1.2	1.2	1.1	2.2	2.6	3.0	3.4	3.8	3.8	4.0	4.0	4.0	3.7	3.6	3.3	3.0	2.3	1.3	1.4	1.3	1.5	1.2
Count	14	10	20	15	15	22	16	13	6	11	13	20	21	19	16	14	14	20	15	9	9	11	14	13

fmin F

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 10

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

IONOSPHERIC DATA

Aug. 1950 | fmin 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
1	E	1.2	1.7	E	E	2.7	2.3	1.8	2.4	2.4	3.3	(2.6)B	3.2	2.6	2.1	2.2	3.9	2.4	1.3	1.4	1.4	1.3	E	E
2	E	E	E	E	E	E	E	E	1.4	1.5	1.8	2.0	2.0	2.6	2.4	2.0	2.6	2.2	1.2	E	E	E	E	E
3	E	E	E	E	E	E	1.2	1.2	1.7	2.0	2.1	1.8	2.2	1.8	1.6	1.6	E	E	E	E	E	E	E	E
4	E	E	E	E	E	E	E	E	1.3	1.4	2.7	1.9	2.1	2.0	1.6	1.8	E	E	1.1	1.2	1.5	1.2	1.2	1.3
5	E	E	E	E	E	E	1.2	1.4	2.0	5.2	4.2	3.8	3.2	3.0	2.6	2.2	2.1	1.8	E	1.2	1.4	1.4	1.4	1.8
6	E	E	E	1.1	E	1.1	1.2	1.1	1.2	1.2	1.3	1.9	2.0	2.3	2.2	2.0	1.4	1.4	1.3	E	E	E	E	E
7	E	E	E	E	E	1.2	1.4	E	2.4	2.4	[2.4]C	2.3	B	2.9	2.1	2.1	2.2	1.4	1.2	1.2	1.2	E	E	E
8	E	E	E	C	C	1.2	1.1	1.2	2.0	1.8	1.8	1.8	2.1	2.5	2.2	2.1	1.9	1.5	1.3	1.1	E	E	E	E
9	1.1	1.1	1.2	E	1.3	E	1.3	1.3	E	E	2.2	2.1	2.2	3.0	1.3	1.6	1.4	1.2	1.2	E	1.4	1.2	E	1.2
10	1.1	E	E	E	E	E	E	1.2	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.6	E	E	E	E	E
11	E	E	E	E	E	1.1	1.1	1.4	1.7	2.0	1.8	2.2	2.2	2.2	2.3	2.2	2 0	1.2	E	1.2	E	E	E	E
12	E	E	E	E	E	E	1.1	1.1	1.2	1.8	2.2	1.9	2.1	2.1	2.4	1.8	E	E	E	E	E	1.2	1.1	2.2
13	E	B	1.2	E	E	1.3	2.0	C	C	C	C	C	C	C	C	1.9	2.1	2.2	2.1	1.8	1.2	1.1	1.4	1.1
14	E	E	E	E	E	E	1.5	1.5	1.7	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.8	1.4	1.4	1.2	E	E	E	E
15	E	E	E	E	E	E	1.8	1.4	2.6	2.1	2.9	3.0	2.6	2.8	2.6	3.6	2.1	1.4	1.1	1.1	E	E	1.1	E
16	E	E	1.1	1.4	1.2	1.4	1.4	2.0	1.4	1.6	2.0	2.1	2.3	2.6	2.6	2.5	2.1	1.8	1.1	E	E	1.2	E	E
17	1.2	1.1	1.1	1.2	1.2	1.2	1.6	1.8	1.9	2.2	2.2	3.2	3.2	2.3	2.4	2.4	1.2	1.3	2.2	1.8	1.4	1.2	1.2	1.2
18	E	E	E	E	E	E	E	1.2	1.9	1.8	2.0	2.2	2.2	2.2	2.2	2.0	2.0	1.4	1.2	E	E	E	E	E
19	E	E	E	E	1.1	1.2	1.1	1.2	1.7	2.4	2.8	2.0	2.0	1.8	2.3	1.8	1.5	1.6	1.3	1.2	E	B	1.2	E
20	1.6	1.3	E	E	E	E	E	1.2	1.2	1.2	1.4	2.2	1.4	2.0	1.4	1.3	1.5	1.2	1.4	C	E	C	1.2	1.2
21	1.2	1.2	1.3	E	E	1.2	1.2	1.7	[2.0]C	2.2	2.1	2.1	2.2	2.2	2.2	2.4	2.1	1.2	B	3.1B	1.2	B	1.1	1.1
22	E	E	E	B	E	E	1.7	2.2	1.2	1.5	2.2	2.1	2.2	2.0	2.1	2.2	1.4	1.3	1.2	1.2	1.2	1.2	1.2	E
23	E	E	E	E	E	E	E	1.1	1.3	2.2	2.5	2.1	2.6	E	2.0	2.0	C	1.1	1.1	1.1	E	E	C	E
24	E	1.1	1.1	1.2	2.0	1.2	1.4	1.9	2.0	2.3	2.2	2.6	2.5	2.2	2.2	2.1	1.9	1.6	1.4	1.2	E	E	E	E
25	1.2	1.1	1.2	1.2	E	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.0	2.0	1.6	1.5	1.2	1.2	1.1	E	1.2	1.2	1.2	1.2
26	C	E	E	E	E	E	E	E	2.0	2.2	2.4	2.2	2.6	2.6	2.6	2.4	2.2	1.6	1.2	E	E	E	E	E
27	E	E	E	E	E	E	1.1	C	C	C	C	C	C	C	C	1.2	E	E	1.2	E	E	E	E	E
28	E	E	E	E	E	E	E	E	1.2	2.0	2.0	2.0	1.9	2.0	2.1	1.8	1.4	1.2	B	E	1.2	1.2	1.2	1.2
29	E	E	E	E	E	E	E	1.2	2.7	2.3	2.0	2.2	2.0	1.9	2.0	2.0	[2.2]C	2.4	2.2	1.1	1.2	1.2	1.4	1.2
30	1.2	E	E	E	E	E	E	E	1.9	2.2	2.2	2.2	2.2	2.2	1.5	1.4	1.4	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	1.5	2.0	2.0	2.1	2.2	1.8	C	C	1.6	1.2	E	1.1	1.1	E	E
Median Value	E	E	E	E	E	E	1.2	1.2	1.8	2.0	2.2	2.1	2.2	2.2	2.2	2.0	1.9	1.4	1.2	1.1	E	E	E	E
Count	29	29	30	28	29	30	30	28	28	29	29	29	28	29	29	30	29	30	28	29	30	27	29	30

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 11

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

IONOSPHERIC DATA

Aug. 1950 | 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	6.9	7.0	6.4	6.4	5.9	6.1	8.0	9.8^{H}	9.4	9.6	8.1^{H}	A	9.2^{P}	9.0	9.2	8.7	8.0	7.7	8.0	7.6	7.0	7.8^{Z}	(7.3)^{P}	BF
2	6.9	6.6	5.7	5.7^{P}	5.7	6.6	7.5	9.2	7.7	7.4^{H}	7.5	7.9	8.7	7.9	9.0	8.3	8.1	8.3	7.7	8.4	8.7	8.0	8.2^{Z}	7.4^{Z}
3	7.3	6.3^{F}	6.0	(6.2)^{B}	6.4	(4.8)^{J}	5.6	5.8	7.2	7.8^{H}	7.2	7.0	7.0	8.0	8.9	8.6	6.7	6.6	7.0	7.9	8.0	F	F	F
4	(8.0)^{P}	7.5^{F}	(7.3)^{F}	6.6^{H}	5.6	6.3	7.0	7.5	7.2	6.6	A	8.1	8.1	10.0	A	8.6	8.4	8.4	7.9	8.4	7.7	5.9	(6.2)^{P}	(6.3)^{P}
5	6.2^{P}	6.2^{P}	6.0^{F}	5.8^{F}	5.7^{F}	5.2^{F}	6.0	7.5^{F}	A	B	A	A	A	A	8.1	8.5	8.6	8.9	(9.5)^{P}	8.7	7.8	7.8	F	7.5
6	7.1^{V}	6.7^{F}	7.4^{F}	6.8	5.8	6.3	6.6	7.6	8.0	8.3	7.7	7.5	7.2	7.4	8.6	9.7	9.0	8.8	8.2	8.7	8.5^{H}	7.5	7.6	6.9
7	5.6	5.9^{H}	5.7	5.9	6.0	6.7	6.1	6.2	6.4	6.9	7.7	7.9	8.5^{H}	8.5	7.9	7.7	7.5	7.5	7.8	8.4	8.6	8.2^{H}	7.9^{J}	7.2^{P}
8	6.9	6.8	6.7	6.3	5.9	6.1	7.8^{H}	7.5	A	6.6	6.5	6.3	9.1^{H}	7.8	7.2	7.3	6.3	9.0	10.4	8.4	A	5.4^{K}	5.8$^{P}_{K}$	5.1^{K}
9	A^{K}	5.4^{K}	5.3^{K}	5.2^{K}	3.6^{K}	4.3^{K}	4.9^{K}	A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	B^{K}	B^{K}	5.2^{K}	4.7^{K}	A	6.5	S	6.7^{V}	6.1$^{P}_{S}$	5.5
10	6.1^{Z}	(6.0)$^{P}_{F}$	6.2$^{P}_{F}$	5.0^{F}	(5.0)$^{P}_{K}$	5.3^{K}	5.6^{K}	6.1^{K}	B^{K}	B^{K}	B^{K}	B^{K}	A^{K}	A^{K}	B^{K}	6.1^{K}	5.9^{K}	6.2	6.0	6.1	4.3^{P}	5.5	5.6	5.2
11	4.8	4.6	4.9	4.6	5.0	4.8	5.1^{K}	B^{K}	5.6^{K}	5.5$^{J}_{K}$	B^{K}	B^{K}	A^{K}	A^{K}	B^{K}	5.9^{K}	6.2	5.4	5.4^{J}	5.5	5.5	(5.9)^{P}	4.9^{Z}	4.5
12	5.0	4.9	4.6	4.5	4.6	3.3	5.0	4.6	B	B	7.0	B	6.6	6.8	6.5^{Z}	6.4	5.9	6.8	(7.6)^{P}	6.2	5.8	(4.8)^{P}	5.3^{P}	5.4
13	5.4^{Z}	5.1	4.8	4.1	4.3^{H}	B	A	A	5.9	6.4	6.6	6.5	5.9	6.4	6.4^{J}	6.9	6.7	7.0	6.9	6.8	6.4	5.5	AH	6.0^{F}
14	5.6^{F}	F	F	F	3.7^{F}	3.8	5.7	8.9^{F}	9.5^{H}	6.6	5.6	5.7^{J}	6.2	7.1	8.0^{H}	7.0	7.2	A	A	A	A	6.4^{F}	AF	5.8^{F}
15	(5.8)$^{P}_{F}$	5.2^{F}	5.7^{F}	4.8	4.2	4.3$^{P}_{F}$	6.0	A	8.3^{J}	6.7	A	6.5	7.5	A	7.2	6.9^{J}	A	c	A	(8.9)^{P}	A	AF	A	(5.9)$^{P}_{F}$
16	A	5.4^{F}	(5.3)$^{F}_{Z}$	5.1^{F}	(5.2)^{F}	4.7	5.5	(7.0)^{J}	8.5^{P}	7.4	7.4	7.2	A	(7.4)^{P}	7.5	7.4	7.2	A	A	A	8.1	7.2	A	5.9^{F}
17	5.7^{H}	6.1	(5.8)$^{P}_{F}$	5.8	5.2	5.0	5.8	7.6	8.2	7.0	B	7.0	7.0	7.2	6.7	6.9	6.7	7.3	7.5	8.7^{H}	8.9^{H}	S	7.0	(6.8)^{B}
18	6.6	6.5	C	C	C	5.7	6.4	7.9	7.7	8.0	6.8	7.4	7.7	7.8	7.8	8.2	7.2	7.2	7.4	(7.9)^{P}	(7.8)^{P}	7.1	6.8	F
19	(6.5)^{F}	F	7.1^{F}	6.6	5.5	5.4	6.4	7.8	8.0	A	7.0	(7.2)^{P}	8.3^{H}	8.9	10.5	10.0	9.0	8.8	8.9	(8.1)^{P}	F	F	F	F
20	5.2$^{F}_{Z}$	(5.2)^{H,F}	4.1$^{F}_{H}$	3.7^{K}	3.7^{K}	3.2^{K}	G^{K}	G^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	B^{K}	B^{K}	4.3^{K}	4.4^{K}	5.5^{K}	(5.1)$^{K,F}_{P}$	3.7^{K,F}
21	B^{K}	4.2^{K}	B^{K}	(3.5)$^{P}_{K}$	2.1^{K}	2.8^{K}	3.5^{K}	G^{K}	4.7^{K}	G^{K}	G^{K}	G^{K}	B^{K}	A^{K}	A^{K}	A^{K}	5.4$^{J}_{K}$	5.5^{K}	5.1^{K}	5.0^{K}	5.8^{K}	5.5^{K}	4.9^{K}	4.6^{K}
22	3.9^{K}	4.1^{K}	3.6^{K}	3.7^{K}	3.4^{K}	3.6^{K}	3.5^{K}	5.6^{K}	5.1$^{J}_{K}$	5.4^{K}	B^{K}	B^{K}	B^{K}	6.1^{K}	5.8^{K}	6.0^{K}	5.9^{K}	6.0^{K}	5.7^{K}	6.5^{K}	6.8	6.7	6.3^{H}	5.8
23	5.2	5.0	4.5	4.5	4.2	4.2	6.5	7.8	7.2	6.6	6.3	6.3	6.5	6.3	7.5	7.5	6.9	7.2	6.8	7.4	7.6	6.8	6.2	6.0
24	5.8	5.3^{F}	5.0	5.0$^{P}_{F}$	4.4	4.7	6.0	6.0	7.4	7.0	6.7	6.8	6.6^{J}	7.0	B	7.3	7.2	7.8	7.3	7.8	7.1	6.9^{H}	6.5	5.7
25	4.6	5.5	5.4	5.2	5.1	5.2	6.9	8.1	6.7	6.7	6.8	7.0	8.0	7.4	7.9^{J}	7.7	7.9	7.6	7.2	8.3	8.2	6.6	5.4	5.3
26	5.2	5.3	5.1	5.1	4.8	5.7	6.1	7.0	8.0	(7.1)$^{P}_{S}$	7.3	7.2	6.8	7.6^{J}	8.1	8.7	8.2	7.8	7.7	B	8.1	7.7	6.0	5.0^{H}
27	5.0	5.3^{Z}	5.1^{F}	5.0^{V}	5.5	5.3	6.2	8.2	8.8	7.6	7.6	7.6	A	7.3	7.5	7.6	7.4	7.7	8.8	8.6	8.2	7.4	6.9	6.1
28	5.5	5.3	5.2	5.4	5.2	5.4	6.8	9.1	8.6	7.0	7.2	6.7	8.1	9.0^{H}	8.2	7.2	7.1	7.2	8.1	8.9^{H}	9.3^{P}	8.1	7.2	(5.8)^{P,F}
29	6.1	6.5	6.0	6.1^{S}	5.8^{S}	4.8	7.4^{S}	8.4	7.9	7.0	7.2	7.7	7.9	B	B	7.4	9.0	10.2	10.4	9.6^{S}	B	6.0	5.8	(5.8)^{P}
30	5.5	5.5^{P}	5.5	5.0	4.6	5.3	7.8	B	8.0^{J}	(7.6)$^{P}_{N}$	7.6	8.3	8.1	8.4	8.9	7.8	7.9	8.0	8.6	7.4	7.0	7.0^{H}	6.9^{P}	6.3
31	6.4^{Z}	6.4^{Z}	5.6	5.9	6.2	7.2	5.8	7.3	8.3	7.3	7.4	7.6	8.1	7.8	7.9	7.9	8.9^{P}	A	9.2	9.0	6.7	6.4	6.3	6.0^{F}
Median Value	5.8	5.5	5.6	5.2	5.2	5.2	6.0	7.5	7.9	7.0	7.2	7.2	7.8	7.6	7.9	7.6	7.2	7.6	7.7	8.0	7.7	6.7	6.2	5.8
Count	28	29	28	29	30	30	30	26	25	25	22	23	22	23	23	28	29	26	26	28	25	27	24	27

foF2

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 1

15

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

IONOSPHERIC DATA

Aug. 1950 | 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	390	340	370	340	390	390	290	420^{H}	280	320	410^{H}	A	A	380	350	310	320	310	330	330	290	420^{E}	(420)^{P}	BF
2	340	370	400	390^{P}	360	300	340	300	340	340^{H}	310^{A}	350	370	390	360	310	340	310	330	350	340	360	370^{F}	390^{F}
3	420	(390)^{F}	340	(350)^{B}	360	B	310	280	370	380^{H}	340	A	390	370	340	310	320	A	A	350	380	F	F	F
4	(420)^{P}	380^{F}	(340)^{F}	330^{H}	370	350	280	310	300	A	A	A	A	300^{A}	A	A	320	300	320	320	310	380	(400)^{FP}	(410)^{F}
5	410^{P}	370^{F}	390^{F}	370^{F}	280^{F}	AF	250	280^{P}	A	B	A	A	A	A	340	340	340	310	(310)^{P}	300	350	340	F	330
6	380^{V}	400^{F}	380^{F}	350	300	320	300	300	330	340	300	360	340	380	360	320	310	300	310	330	310^{H}	330	330	340
7	340	400^{H}	390	340	300	270	260	280	290	360	340	360	350^{H}	330	340	350	300	310	310	340	320	330^{H}	A	350^{P}
8	360	380	360	370	370	350	370^{H}	300	A	350	380	370	380^{H}	310	330	360	480	420	310	300	A	380^{K}	360^{KP}	370^{K}
9	A^{K}	380^{K}	360^{K}	290^{K}	300^{K}	320^{K}	330^{K}	A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	B^{K}	B^{K}	B^{K}	G^{K}	A	340	S	390^{V}	330^{P}S	340
10	410^{Z}	(430)^{P}	410^{P}F	380^{F}	(390)^{P}F	440^{K}	410^{K}	390^{K}	B^{K}	B^{K}	B^{K}	B^{K}	A^{K}	A^{K}	B^{K}	A^{K}	A^{K}	350	310	290	300^{P}	410	410	410
11	400	380	340	400	290	280	330^{K}	B^{K}	430^{K}	B^{K}	B^{K}	B^{K}	A^{K}	A^{K}	B^{K}	B^{K}	330	290	(320)^{J}	320	360	(440)^{P}	350^{Z}	390
12	380	360	380	380	350	380	300	G	B	B	340	B	B	B	B	340	310	300	(300)^{P}	300	370	(330)^{P}	360^{P}	390
13	350^{Z}	340	320	340	340^{H}	B	A	A	310	380	360	G	B	380	(330)^{J}	400	340	290	300	310	330	360	AH	(340)^{FJ}
14	350^{F}	F	F	F	380^{F}	360	320	320^{F}	280^{H}	A	A	A	A	350	360^{H}	330	320	A	A	A	A	340^{F}	AF	350^{F}
15	(360)^{FP}	(400)^{F}	380^{F}	270	290	360^{F}	310	A	(270)^{J}	310	A	G	310	A	320	(320)^{J}	A	C	A	A	A	AF	A	AF
16	A	(320)^{J}	(380)^{FP}	(330)^{F}	(310)^{J}F	300	330	(320)^{C}	300^{P}	310	310	360	A	(360)^{P}	350	310	A	A	A	A	280	290	A	(330)^{FJ}
17	420^{H}	420	(380)^{P}F	340	300	300	320	310	290	290	B	330	370	320	360	300	360	320	300	330^{H}	320^{H}	S	330	(340)^{B}
18	350	290	C	C	C	330	320	300	310	260	310	340	300	350	340	310	320	340	320	(340)^{P}	(310)^{P}	340	350	F
19	(390)^{JF}	F	(370)^{FJ}	340	370	310	320	290	300	A	B	(390)^{P}	360^{H}	370	360	340	330	350	340	(330)^{J}	F	F	F	F
20	440^{F}	(440)^{FH}	500^{FH}	450^{K}	440^{K}	520^{K}	G^{K}	G^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	C^{K}	B^{K}	B^{K}	420^{K}	440^{K}	430^{K}	(360)^{KFP}	320^{KF}
21	B^{K}	290^{K}	B^{K}	(280)^{KP}	400^{K}	390^{K}	270^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	B^{K}	A^{K}	A^{K}	A^{K}	A^{K}	320^{K}	300^{K}	360^{K}	350^{K}	350^{K}	360^{K}	390^{K}
22	360^{K}	380^{K}	350^{K}	360^{K}	350^{K}	350^{K}	A^{K}	420^{K}	(330)^{KJ}	B^{K}	B^{K}	B^{K}	B^{K}	390^{K}	G^{K}	320^{K}	320^{K}	290^{K}	320^{K}	340^{K}	350	A	390^{H}	350
23	360	360	380	370	380	400	310	260	290	280	340	320	340	360	330	320	310	340	310	330	330	360	380	380
24	350	390^{F}	400	370^{P}F	350	300	270	260	290	300	A	290	(320)^{J}	G	B	330	310	300	310	300	310	320^{H}	340	340
25	370	390	370	380	370	330	280	300	270	290	330	330	310	340	(330)^{J}	320	300	300	310	330	330	310	310	390
26	390	380	360	380	320	290	280	270	270	(250)^{P}S	320	310	370	(330)^{J}	330	300	300	300	A	*B	290	290	310	350^{H}
27	350	390^{Z}	340^{F}	(360)^{V}	310	290	290	280	280	280	310	310	A	370	340	310	310	300	300	300	300	320	330	320
28	370	380	360	350	360	340	320	270	290	290	290	B	340	330^{H}	300	290	310	310	320	320^{H}	310^{P}	310	290	(370)^{FP}
29	320	(340)^{S}	(390)^{S}	390^{S}	370^{S}	310	290^{S}	270	270	260	300	300	360	B	B	340	370	300	290	260^{S}	B	370	280	(380)^{P}
30	390	390^{P}F	360	330	280	300	280	B	(280)^{J}	(270)^{P}	330	300	310	330	300	300	290	300	300	300	340	360^{H}	360^{P}	340
31	380^{Z}	350^{Z}	360	290	(290)^{B}	280	230	270	260	270	300	300	310	310	300	320	300^{P}	A	280	280	300	340	340	360^{F}
Median Value	380	380	370	360	350	320	310	300	290	300	330	340	340	360	340	320	320	310	310	330	320	340	350	350
Count	28	29	28	28	30	28	29	26	25	21	19	19	17	22	22	25	25	25	24	27	25	26	23	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

Aug. 1950 | h'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	(310)A	280	280	270	300	250	280	390H	270	280	400H	A	380	370	330	300	300	290	270	320	(280)A	(320)A	330	A
2	270	310	310	300	(300)A	240	280	250	240	310H	310A	330	310	380	320	300	330	300	290	270	250	250	280	310
3	(320)A	(310)A	(300)A	A	240	B	300	270	370	310H	320	A	380	350	320	300	320	360	310F	(300)A	290	350F	270F	250F
4	250F	(300)A	290	250H	300	260	280	270	300	270	A	360A	360A	300	A	A	310	290	300	260	240	270	(310)A	300
5	(310)A	300	(300)A	310	240	A	240	230	A	B	A	A	A	A	320	340	320	290	270	240	250	260	A	230F
6	290	310A	280F	270	260	270	290	270	300	280	260	350	340	380	340	300	300	280	270	250	230H	250	270	250
7	270	320H	300	280	250	260	210	250	290	350	340	350	340H	310	300	300	300	290	300	300	290	240H	310	320
8	300	290	280	260	270	230	260H	300	A	350	380	370	290H	280	320	360	480	400	290	300	A	370K	310K	370K
9	AK	360K	310K	260K	280K	290K	280K	AK	AK	AK	AK	AK	AK	AK	BK	BK	BK	420K	A	280	250	340A	310	270
10	380	370	350	(310)A	310	360K	390K	380K	350K	BK	BK	BK	AK	AK	BK	AK	370K	340	310	250	240F	320	310	320
11	310	320	280	280	240	250	320K	BK	420K	BK	BK	BK	AK	AK	AK	450K	330	290	290	290	270	330	300	330
12	300	290	310	320	280	270	250	270	390	350	330	B	360	350	290	340	310	270	300	260	260	280	310	300
13	320A	320	250	300	280H	270	A	A	290	370A	360	330	350	380	320	350B	330	280	280	250	260	260	300H	300
14	(300)A	(300)A	290	250	240	290	320	300	240H	A	300A	A	300	350	340H	320	320	A	A	A	A	300	A	280
15	310	360	(300)A	260	270	260	300	A	260	300	A	400	310	A	320	320	A	C	A	300	A	AF	(270)A	300
16	A	270	290	270	270	270	270	[280]C	280	300	300	350	A	360	340	300	A	A	A	A	270	280	A	(310)A
17	330H	290	290	250	220	250	230	270	280	290	B	320	370	310	360	300	300	290	270	(210)H	250H	230	260	290
18	260	260	C	C	C	260	240	280	280	260	280	340	290	340	320	300	290	280	270	250	250	260	310	270
19	300	350	360A	260	300	280	240	240	290	A	300	380	360H	330	330	310	300	320	260	230	370F	350F	290	300
20	390	350H	410H	390K	400K	500K	GK	GK	CK	CK	CK	CK	CK	CK	CK	CK	CK	BK	BK	350K	340K	330K	230K	270K
21	(290)KA	270K	250K	260K	380A	390K	270K	GK	470K	GK	GK	GK	BK	AK	AK	AK	330K	310K	270K	320K	250K	280K	250K	300K
22	280K	320K	310K	300K	300K	300K	AK	420K	310K	390K	(360)KB	BK	BK	370K	390K	320K	320K	280K	250K	270K	260	A	320H	270
23	290	270	(310)A	300	300	310	260	250	280	280	340	320	340	360	330	300	290	300	270	300	290	300A	330	290
24	270	290	300	290	280	270	220	240	290	280	310	280	320	350	310	330	240	270	270	290	300	250H	(300)A	(280)A
25	(300)A	310A	300	300	280	280	220	260	270	280	310	310	310	340	310	300	300	290	290	250	250	230	250	290
26	300	300	290	280	260	250	270	250	260	250	310	310	360	330	320	290	290	270	A	250	230	250	230	230H
27	310	300	270	280	250	250	220	280	280	280	290	310	A	290	320	290	290	290	270	270	240	250	250	270
28	280	290	300A	290	290	280	240	240	260	270	290	300	330	320H	280	280	300	300	270	260H	230	230	240	(300)A
29	280	260	280	280	290	290	260F	260F	250	260	300	280	330	300	330	330	350	300	250	220A	280	(320)A	280	(300)A
30	(310)A	(310)A	290	290	260	280	250	230	260	250	300	300	310	310	290	300	270	250	250	230	250	270H	280	300
31	330	280	270	240	240	220	220	260	250	260	290	300	300	310	280	300	290	A	270	250	240	260	270	280
Median Value	300	300	300	280	280	270	260	270	280	280	310	330	340	340	320	300	300	290	270	260	250	270	280	300
Count	29	31	30	29	30	29	29	27	27	24	23	21	22	24	25	26	27	26	25	29	28	29	28	30

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

Aug. 1950 | 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						Q	L	A	A	A	5.0^{J}	A	A	A	A	4.8^{A}	A	4.1	4.0					
2						Q	A	A	A	A	A	5.1	5.1	5.6^{B}	A	A	A	A	A					
3						(3.8)^{L}	4.0	A	L	A	5.1^{J}	A	A	A	5.0	4.8	A	A	A					
4						Q	L	L	A	A	A	A	A	A	A	A	A	A	L					
5						A	A	L	A	B	B	A	A	A	A	A	4.7	L	A					
6						L	L	L	B	A	A	L	B	5.0	4.8	4.8	4.5	4.2	4.0					
7						Q	Q	Q	L	(4.9)^{L}	(5.0)^{L}	(5.0)^{L}	B	B	(4.7)^{L}	(4.6)^{L}	L	(4.0)^{L}	L					
8						Q	Q	L	A	A	B	B	B	L	5.0	4.8^{J}	A	A	A					
9						Q	Q	A	A	A	A	A	A	A	A	B	4.3	4.2	A					
10						A	3.4	A	4.4	4.5	B	4.7	5.1^{F}	A	5.1^{J}	4.6	A	A	A					
11						Q	A	A	4.2	4.2	B	B	A	A	A	B	4.0	3.8	L					
12						Q	Q	4.0	4.2	4.5^{B}	A	5.2^{J}	B	B	B	B	4.8	4.0	L					
13						Q	A	A	A	4.5^{J}	4.9	(4.8)^{B}	(4.8)^{B}	(5.0)^{B}	4.8	B	L	A	L					
14						Q	L	L	Q	A	A	A	A	A	A	B	L	A	A					
15						Q	A	A	A	4.6	A	L	A	A	A	B	A	C	A					
16						Q	A	C	A	A	A	A	A	A	A	B	A	A	A					
17						Q	Q	L	L	A	5.1^{B}	B	5.3	5.1^{J}	5.2	A	(4.4)^{L}	L	A					
18						Q	Q	A	(4.5)^{L}	5.1	A	5.4	5.0	5.2	(5.1)^{L}	4.7	L	A	A					
19						Q	Q	Q	A	A	5.1^{J}	A	5.4^{B}	A	A	4.7	4.4	A	A					
20						2.3	3.3	3.7	C	C	C	C	C	C	C	C	C	4.2	3.7					
21						Q	Q	3.7	4.1	4.4	4.5	4.7	B	A	A	A	A	L	Q					
22						Q	A	4.1	4.3^{B}	4.5	B	B	B	5.0	5.0	4.3	L	L	Q					
23						Q	L	L	4.4	4.8	A	A	5.0	5.0	4.9	4.6	4.6	4.3	Q					
24						Q	A	Q	A	L	A	A	A	5.4^{J}	B	B	Q	L	A					
25						Q	Q	L	L	B	B	5.1	5.2	5.0	5.1	L	L	L	Q					
26						Q	L	L	L	A	L	L	A	A	5.4	A	A	A	A					
27						Q	Q	4.0	L	A	A	A	A	B	L	L	L	A	A					
28						Q	Q	4.2^{B}	L	L	L	B	5.2^{B}	5.1	5.0	4.7	4.7	4.3	Q					
29						Q	L	L	L	A	4.7	A	5.0	B	L	L	L	A	A					
30						AF	L	4.0	4.2	4.8	L	B	A	5.0	4.5	L	L	Q	Q					
31						Q	Q	4.1	L	A	B	B	5.0^{B}	B	L	A	A	A	A					
Median Value						–	–	4.0	4.2	4.5	5.0	5.0	5.1	5.0	5.0	4.7	4.5	4.2	–					
Count						2	3	8	8	11	8	8	11	11	14	11	9	9	3					

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

Aug. 1950 | h'F1 | 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						Q	260	A	A	A	A	A	A	A	A	A	A	(210)^{A}	270^{A}					
2						Q	A	A	A	A	A	210	B	B	A	A	A	A	A					
3						250	240	A	250	A	A	A	A	A	A	A	A	A	A					
4						Q	240^{A}	230^{A}	A	A	A	A	A	A	A	A	A	A	250					
5						A	A	210^{A}	A	B	B	A	A	A	A	A	250	250	A					
6						250	240	230	230	A	A	A	B	200	200	260^{B}	220	230	230					
7						Q	Q	Q	210	180	190	220	220	B	220	210	210	230	250					
8						Q	Q	230	A	A	B	B	A	280	290	260	A	A	A					
9						Q	Q	A	A	A	A	A	A	A	A	A	A	240	A					
10						A	A	A	220	B	B	A	A	A	A	290	A	A	280					
11						Q	A	A	230	220	B	B	A	A	A	B	240	240	270					
12						Q	Q	230	210	A	A	A	230	B	B	B	250	240	240					
13						Q	A	A	A	A	240^{A}	210	230	220	290	B	240	A	230					
14						Q	260	230	Q	A	A	A	A	A	A	B	250	A	A					
15						Q	A	A	A	200^{B}	A	A	A	A	A	250^{B}	A	C	A					
16						Q	A	C	A	A	A	A	A	A	A	B	A	A	A					
17						Q	Q	230	210^{A}	A	B	B	220	B	A	A	250^{A}	A	A					
18						Q	Q	A	230^{A}	230	A	B	260	230	250	250^{A}	250	A	A					
19						Q	Q	Q	A	A	B	A	B	A	A	230	260^{A}	A	A					
20						350	A	300	C	C	C	C	C	C	C	C	C	250	320					
21						Q	Q	240	230	210	200	260	A	A	A	A	A	A	Q					
22						Q	A	A	B	A	230	210	210	B	230	220	220	A	Q					
23						Q	210	220	220	220	A	A	220	220	270	230	240	A	Q					
24						Q	A	Q	A	230	A	A	A	B	A	B	Q	210	A					
25						Q	Q	230	210	(210)^{B}	200	230	B	260^{B}	220	230	250	220	Q					
26						Q	240	230	220	A	230^{A}	260	A	A	300	A	A	A	A					
27						Q	Q	240	260	A	A	A	A	B	210^{A}	240	230	A	A					
28						Q	Q	(210)^{A}	A	(210)^{A}	250	B	B	250	250	220	250	240	Q					
29						Q	210	220	240	A	230	A	240	B	240	A	320	A	A					
30						AF	210	220	200	210	200	B	A	220	240	240	230	Q	Q					
31						Q	Q	240	230	A	B	B	B	B	240	A	A	A	A					
Median Value						—	240	230	220	210	230	220	220	220	240	240	240	240	250					
Count						3	9	17	16	10	9	17	8	8	14	13	17	11	9					

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

Aug. 1950 | 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						1.7^{A}	2.3^{A}	2.8	A	A	B	A	A	A	A	A	3.2	3.0	A					
2						1.8	2.3	A	3.2	3.2^{A}	3.2^{A}	A	B	B	A	3.2	A	3.0	A					
3						A	2.6^{A}	3.1	3.0	3.2	3.2	A	3.3^{A}	A	A	A	A	A	A					
4						A	2.6	2.9	3.1	3.2	3.3	B	A	A	B	A	A	A	A					
5						A	A	A	3.4	B	B	B	A	A	A	A	A	2.8	A					
6						A	2.2^{A}	2.9	A	A	A	A	A	3.8	3.5	3.4	3.0	2.8	2.4^{J}					
7						A	2.4	3.0	3.4	3.5^{A}	B	B	3.6	3.7	3.4	3.2	3.1	2.8	A					
8						1.5	2.4	2.6	3.2	A	B	B	B	3.3	3.2^{A}	3.1	3.2	A	A					
9						1.8^{A}	2.3	2.7	B	A	A	A	A	3.6	A	(3.4)^{A}	3.4	2.5	A					
10						A	2.4	2.8	2.8^{A}	3.2	3.5	3.5	3.6	3.6	3.6	3.4	3.0	2.5	AF					
11						1.8	2.0	2.7	3.3	3.5	B	B	3.6	A	3.4	3.3	3.1	2.4	2.2					
12						A	B	3.0^{A}	3.2	3.4	3.2	A	3.6^{J}	3.7	3.6	B	A	2.7	2.4					
13						1.7	A	A	A	3.1	3.0	B	3.7	3.3	3.2	3.4	3.0	2.6	2.0					
14						1.6^{A}	2.3	2.8	3.0	3.1	A	3.3	A	A	A	3.2	3.2	A	A					
15						A	2.2	2.5	3.0	3.3^{A}	3.3	3.5	3.4	A	A	3.5	3.1	C	A					
16						A	2.2^{A}	C	A	A	3.6^{A}	3.0^{A}	A	B	A	3.6	3.3	2.8	A					
17						A	A	A	A	A	A	A	B	B	3.6^{H}	3.5	3.2	2.7	A					
18						A	2.1^{A}	3.2^{A}	A	A	A	A	3.5	3.6	3.5	3.4	3.2	2.7	A					
19						A	2.4^{H}	2.7	3.4^{B}	A	A	A	B	A	3.4	3.4	(3.4)^{A}	A	A					
20						A	A	A	C	C	C	C	C	C	E	C	C	2.5	2.0^{A}					
21						A	2.7	2.9	2.8	3.4	B	B	3.6	3.6	A	3.5	3.1	2.4	A					
22						A	2.3	2.7	3.0^{A}	3.2	A	A	3.8	B	3.5	3.4	3.2	3.0	A					
23						A	A	A	3.0	3.0	A	3.0	B	A	A	A	A	A	A					
24						A	A	A	3.1	3.2	3.2	A	A	B	3.6	3.4	A	A	A					
25						A	2.3^{H}	2.7	3.0	B	B	3.6	3.6	B	3.5	3.4	3.0	2.5	2.1^{B}					
26						A	2.2	2.6	3.1	A	A	A	A	A	A	A	A	A	2.1					
27						E	2.2^{J}	2.8	3.1	3.4	3.4	A	A	A	A	3.4	3.2	2.8	A					
28						A	A	2.4	A	A	A	A	B	A	B	3.6	3.2	A	A					
29						1.4^{J}	A	A	A	3.0	3.2^{A}	3.8^{A}	3.8	3.5	3.6	3.4	3.1	A	A					
30						AF	A	2.6^{A}	2.8	B	A	A	A	4.0	3.6	3.3	2.9	2.4	A					
31						B	2.0	2.5	2.8	2.8	B	B	B	B	A	A	2.9	A	A					
Median Value						1.7	2.3	2.8	3.1	3.2	3.2	3.5	3.6	3.6	3.5	3.4	3.2	2.7	2.1					
Count						9	21	22	21	17	11	17	12	11	15	22	22	19	17					

Sweep 1.9 Mc to 17.0 Mc in 15 min Manual

A 6

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

IONOSPHERIC DATA

Aug. 1950 | 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						B	110	110	A	A	B	A	A	A	A	A	110	A	A					
2						120	110	A	110	110	110	A	110	110	A	110	110	100	A					
3						A	110	110	100	100	100	A	100	A	A	A	A	A	A					
4						A	110	110	110	110	110	110	110	A	110[B]	A	A	A	A					
5						A	A	A	110	B	B	B	B	A	A	A	A	110	A					
6						A	100[F]	110	A	A	A	A	A	110	110	110	110	110	110					
7						A	110	110	110	110	110	110	110	110	110	110	110	110	A					
8						110	110	110	110	A	110	110	B	110	100	110	110	A	A					
9						A	110	110	110	A	A	A	A	110	A	110	110	110	A					
10						A	120	110	110	110	110	110	110	110	110	110	110	110	AF					
11						120	110	110	110	110	B	B	110	A	110	110	110	110	120					
12						A	B	A	110	110	110	A	110	110	110	110	A	110	120					
13						110	A	A	A	110	110	100	110	110	110	110	100	110	130					
14						A	120	110	110	110	110	110	110	A	A	110	110	A	A					
15						A	110	110	110	110	110	110	110	A	A	110	110	C	A					
16						A	120	C	A	A	110	110	A	110	A	100	110	110	A					
17						A	A	A	A	A	A	A	110	110	110[H]	110	110	110	A					
18						A	110	110	A	A	A	A	110	110	110	100	100	110	A					
19						A	110[H]	110	B	A	A	A	110	A	110	110	110	A	A					
20						A	A	A	C	C	C	C	C	C	C	C	C	110	A					
21						A	110	110	110	110	110	110	110	110	A	110	110	110	A					
22						A	110	B	110	110	A	A	110	110	110	110	110	110	A					
23						A	A	A	100	110	A	100	100	A	A	A	A	A	A					
24						A	A	110	110	110	110	A	A	110	110	110	A	A	A					
25						A	110[H]	110	110	110	110	110	110	110	110	110	110	110	120					
26						A	120	110	110	A	A	A	A	A	A	A	A	A	110					
27						E	100	110	100	110	110	110	A	A	A	110	110	110	A					
28						A	A	110	A	A	A	A	110	A	100	100	100	A	A					
29						110	A	A	A	110	110	110	110	110	110	110	110	A	A					
30						AF	A	A	110	110	A	A	A	100	110	110	100	110	A					
31						B	110	110	110	110	110	110	110	110	A	A	110	A	A					
Median Value						120	110	110	110	110	110	110	110	110	110	110	110	110	120					
Count						6	21	20	21	19	17	14	20	18	17	23	23	18	6					

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

Aug. 1950 | 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	3.9	2.8	6.6	3.6^{B}	2.6	2.8	3.4	7.2	7.6	7.6^{B}	6.8	11.8	10.4	8.6	5.2	6.0	7.2	3.8	4.4	7.2	5.6	4.8	4.4	4.4
2	4.2	4.3	2.8	3.2	3.0	3.2^{Y}	4.0^{Y}	4.8	5.6	5.6	7.4	4.2	B	B	(5.4)^{Y}	5.9^{Y}	6.8	7.4	5.4	4.4	3.4	3.0	4.2	5.4
3	4.7	6.7	5.8	3.8	2.7	3.8	3.8	5.8	7.5	7.8^{B}	7.0	7.9	6.9	6.9	7.0	5.4	6.0	8.8	6.9	8.7	6.8	5.1	4.2	2.8
4	3.0	3.3	3.6	3.1	3.3	3.3	G	5.5	5.7^{Y}	5.8	12.2	14.5^{Y}	11.0	7.0	13.0^{B}	9.2	5.8	4.6	5.0	3.0	3.2	4.8	4.4	3.2
5	3.6	3.7	3.7	4.4	4.0	5.3	6.6	6.8	10.5	B	9.3	10.2	13.2	13.2^{Y}	7.1	6.8	4.3	G	4.4	3.6	3.9	2.7	6.8	3.7
6	2.7	4.6	3.4	3.8	2.9	2.8^{B}	3.6^{F}	4.2	3.6	5.0	5.0	5.2	4.6	G	G	G	G	G	3.6	3.0	2.8	G	3.4^{B}	3.0
7	2.0	2.6	2.7	2.6	2.4	1.7	G	3.4^{Y}	3.6	G	G	G	4.6	4.1	4.1	G	G	3.8	3.8	3.2	4.0	G	7.0	6.0
8	3.0	4.0	5.8^{Y}	3.0	3.5	G	4.8	4.0	11.8	4.9	B	B	5.9^{Y}	G	G	4.2	7.5	11.4	11.3^{Y}	7.3^{B}	10.8	7.5	9.3	5.7
9	6.9	5.4	5.8	4.3	3.4	3.4	G	7.4	9.0^{Y}	8.8	7.0	6.0	7.0	13.4^{B}	4.6	4.2	4.0	3.8	7.8	3.5	3.4	4.7	4.0	3.2
10	6.8	6.4	4.4^{B}	4.0^{B}	3.0	8.0	4.2	4.6	3.8	B	G	4.6	6.8	7.0^{Y}	5.8	5.9	7.4	9.3	5.9	5.2	3.8	3.9	3.2	3.9
11	3.2	3.4^{B}	2.4	3.5^{B}	2.4	G	5.6	4.0	G	G	B	B	6.2^{Y}	5.8	5.5	4.8	G	3.6^{B}	3.7	4.6	3.1	3.2	2.4	2.3
12	2.6	3.4	3.7	3.3	3.2	2.8	3.0	3.7	G	3.8	7.5	5.8	4.5	4.4	5.8^{Y}	B	4.0	G	3.4	4.2	3.4	3.9	4.6	3.4
13	4.2	3.2	4.0	G	3.2	G	6.1	7.0	8.8	7.1	4.1	G	G	G	G	4.2^{Y}	G	4.8^{B}	3.3	G	2.4	3.0	6.4	5.9
14	5.9	3.7	2.4^{F}	3.0	G	2.3	3.5	4.0	4.0	6.2	5.0	6.8	7.4^{Y}	6.2	6.8	4.0	4.6	9.0	9.6	8.2	8.2	6.4	6.7^{B}F	6.2
15	5.9	3.6	3.6	4.7	4.8	3.6	4.4	8.6	5.8	G	11.6^{B}	6.5^{Y}	8.0	9.9^{Y}	11.0	G	7.6^{Y}	C	8.4	8.6	7.8	6.8	9.0	7.4
16	7.2	2.6	3.9	2.4	4.0	2.8	4.0	C	7.0	7.4	7.2	6.0	9.8	8.2^{Y}	6.1	G	7.6	9.0	8.8	9.2	5.8	6.8	7.4	5.2
17	3.8	3.7	3.8	3.9	2.7	2.7	3.4	6.7	3.9	6.9	4.6	4.6	G	B	5.7	5.7	4.8	5.2	6.8	3.0	3.8	3.0	5.0	4.8
18	3.6	3.6	C	C	C	4.4	3.3	5.0	4.0	4.5	6.6	4.0	4.5^{Y}	G	G	4.0	4.6	4.8	4.0	2.4	3.8	5.1	4.0	4.6
19	4.2	4.1	5.2	2.9^{B}	3.8	3.6^{B}	(3.0)^{Y}	4.0	6.2	10.0	4.5	5.4	B	6.8	6.8	4.2^{Y}	5.9^{Y}	7.8	7.8	4.2	2.8	2.3^{B}	2.0	1.5^{B}
20	2.3^{F}	2.0	2.0	2.4	2.2	1.8	3.4	5.2	C	C	C	C	C	C	C	C	C	4.0	G	2.4	G	2.4	G	4.0
21	4.0	3.4	3.6	2.9	3.4	3.4	3.4	G	3.2	G	G	4.0^{Y}	4.5^{Y}	6.2^{Y}	6.2	5.8	5.8	4.0	3.7	7.1	3.2	3.6^{B}	4.1	3.9
22	3.1	2.2	G	G	G	2.0	4.0	3.9	B	4.2	4.0	3.8	G	B	G	3.6	3.9	4.4	3.6	3.0	6.8^{Y}	8.2	4.8	4.0
23	4.0	3.0	3.0	3.6	3.0	2.0	3.8	4.0	4.0	G	5.8	5.4	G	4.1^{B}	5.2	5.2	5.2	5.4	4.1	5.4	4.6	5.9	4.9	3.8
24	3.2	2.4	G	2.3	2.3	2.0	3.8	3.8	6.0	4.2	6.8	6.4	(5.4)^{B}	B	(4.8)^{B}	G	4.0	3.8	6.0^{B}	6.0	6.4	3.2	4.0^{B}	4.0
25	4.4	2.6	3.2	2.4	3.2	2.4	G	3.2^{Y}	3.4^{Y}	B	G	G	B	B	G	G	4.0^{Y}	3.5	G	2.0	3.6	G	2.0	G
26	G	G	G	G	2.7	3.2	G	G	4.8	6.8	7.2	5.8	5.8	6.2	5.2	7.0	6.4^{B}	5.2	8.8	3.8	3.8	3.2	2.4	G
27	3.3	3.2	3.2	1.9	1.2	G	3.2	4.3	4.1	7.0^{Y}	5.4	7.0	9.2	6.2^{Y}	4.2	G	3.8	5.1	4.0	5.7	2.5	3.6	3.4	3.4
28	5.6	3.7	3.5	3.6	2.3	2.9	3.2^{B}	4.0	3.2	4.0	4.0^{B}	4.0	B	5.1	G	G	4.0	4.1	3.6	3.0	G	G	4.6	4.0
29	2.8	2.9	2.4	G	2.6	2.8	3.7	3.7	4.4	5.0	5.2^{Y}	6.4	G	B	G	G	6.1^{Y}	6.6^{Y}	4.2	3.2	6.8	4.8	6.4	4.2
30	2.6	3.2	3.9	4.8	6.9	4.0	3.8	4.2	3.6	3.7^{Y}	3.8	4.4^{B}	6.8	4.4	G	G	G	3.7	2.8	6.1	3.1	4.7	4.3	4.5
31	5.0	3.2	2.9	2.4	G	G	3.6	3.6	4.5^{Y}	5.4	B	B	B	6.2^{Y}	4.0	4.4^{B}	5.6^{Y}	9.2	5.4	4.2	(4.0)^{Y}	1.9^{B}	3.8	5.6
Median Value	3.8	3.4	3.6	3.0	3.0	2.8	3.6	4.1	4.4	5.0	5.4	5.4	5.9	6.2	5.2	4.2	4.7	4.7	4.2	4.2	3.8	3.6	4.3	4.5
Count	31	31	30	30	30	31	31	30	29	27	27	27	25	24	30	29	30	30	31	31	31	31	31	31

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 8

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

IONOSPHERIC DATA

Aug. 1950 | (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	2.7	2.9	2.7	2.8	2.7	2.7	3.1	2.7	3.3	3.1	2.5	A	2.8	2.7	2.8	3.1	2.9	3.0	3.0	3.0	3.2	2.6	(2.7)	BF
2	2.8	2.8	2.5	2.6	2.8	3.1	2.9	3.1	3.6	2.9	3.0	3.0	2.9	2.7	2.8	3.1	2.9	3.0	2.9	2.8	2.8	2.8	2.7	2.7
3	2.5	(2.6)F	3.0	[3.0]	2.9	B	2.9	3.2	2.9	2.9	3.0	A	2.7	2.8	2.9	3.1	3.0	3.0	3.2	2.7	2.7	F	F	F
4	(2.5)F	2.8	(2.7)F	2.9	2.9	2.8	3.2	3.2	3.1	3.4	A	3.0	3.1	3.1	A	2.9	3.0	3.2	2.9	3.1	3.0	2.6	(2.6)H	(2.5)
5	2.7F	2.7F	2.7F	2.8	3.1F	3.1F	3.3	3.4	A	B	A	A	A	A	2.9	2.9	2.9	3.0	(3.1)	3.1	2.9	2.9	F	2.9
6	2.8F	2.7F	2.7F	2.8	3.1	3.0	3.1	3.1	2.9	2.8	3.1	2.7	3.0	2.7	2.7	3.1	3.0	3.0	3.0	2.9	3.0H	3.0	3.0	2.8
7	3.1	2.7H	2.7	2.7	3.0	2.9	3.4	3.3	3.2	2.9	3.0	2.8	2.9H	2.9	2.9	2.9	3.1	3.0	2.9	2.9	2.9	2.9H	(3.1)J	2.8
8	2.8	2.6	2.7	2.6	2.7	2.8	2.7H	3.3	A	3.0	2.9	3.0	2.7H	3.0	2.9	2.9	2.4	2.5	2.9	3.1	A	2.7K	2.8	2.7K
9	AK	2.7K	2.8K	3.0K	3.2K	2.9K	2.9K	AK	AK	AK	AK	AK	AK	AK	BK	BK	BK	2.7K	A	2.8	S	2.6V	3.0	2.8
10	2.7Z	(2.5)F	2.6F	2.7F	(2.6)F	2.5K	2.7K	2.8K	BK	BK	BK	BK	AK	AK	BK	AK	2.9K	2.9	3.1	3.2	3.1F	2.5	2.6	2.6
11	2.7	2.6	2.9	3.1	3.2	3.2	3.0K	BK	2.7K	BK	BK	BK	AK	AK	BK	2.7K	3.0	3.2	(3.0)J	3.1	2.7	(2.4)F	2.9Z	2.6
12	2.8	2.8	2.8	2.7	3.0	2.8	3.2	3.4	B	B	2.9	B	2.9	2.9	3.2Z	2.9	3.3	3.2	(3.2)F	3.0	2.7	(2.9)F	2.7F	2.6
13	2.8Z	2.9	3.1	2.9	2.9H	B	A	A	3.0	2.7	2.8	3.1	3.0	2.8	(2.9)J	2.9	2.9	3.2	3.1	3.0	3.0	2.7	AH	(2.9)J
14	2.9F	F	F	F	2.7F	2.8	3.0	3.0F	3.1H	A	3.2	A	3.3	3.0	3.0H	3.0	3.0	A	A	A	A	3.0F	AF	2.8F
15	(2.7)F	(2.5)F	2.7F	3.2	3.3	2.7F	3.1	A	(3.2)J	3.0	A	2.8	3.1	A	3.1	(3.1)J	A	C	A	(3.0)F	A	AF	A	(2.7)F
16	A	(2.8)F	(2.7)F	(2.7)F	(2.9)J	3.0	2.9	[3.0]C	3.0F	3.1	3.1	2.8	A	(2.9)F	3.0	3.1	3.2	A	A	A	3.1	3.1	A	(2.9)J
17	2.6H	2.5	(2.8)F	2.8	3.0	3.1	2.9	3.1	3.3	3.4	B	3.0	2.9	3.1	2.9	3.1	2.9	3.0	3.0	2.9H	2.9H	S	3.0	[2.9]B
18	2.8	3.0	C	C	C	3.0	3.0	3.0	3.2	3.5	3.0	2.9	3.1	2.8	3.0	3.1	3.0	2.9	3.0	(2.9)F	3.0F	2.9	3.0	F
19	(2.6)J	F	(2.7)J	2.8	2.7	3.1	2.9	3.2	3.2	A	3.2	(2.7)F	2.9H	2.7	2.9	2.9	2.9	2.8	2.8	(2.9)F	F	F	F	F
20	2.4F	(2.5)F	2.3F	2.4K	2.5K	2.3K	GK	3.2K	CK	CK	CK	CK	CK	CK	CK	CK	CK	BK	BK	2.6K	2.5K	2.5K	(2.8)KF	2.9KF
21	BK	3.3K	BK	(3.2)KF	2.5K	2.8K	3.3K	GK	2.6K	GK	GK	GK	BK	AK	AK	AK	(3.0)KJ	3.1K	3.1K	2.8K	2.8K	2.9K	2.8K	2.6K
22	2.8K	2.7K	2.8K	2.8K	2.9K	2.8K	3.0K	2.7K	(3.4)KJ	2.9K	BK	BK	BK	2.9K	2.8K	3.1K	3.1K	3.2K	3.0K	2.9K	2.8	2.9	2.7H	2.8
23	2.8	2.8	2.6	2.8	2.7	2.6	3.1	3.4	3.2	3.2	3.0	3.1	3.0	2.9	3.0	2.9	3.0	2.9	3.1	2.9	2.9	2.8	2.7	2.8
24	2.7	2.6F	2.6	2.7F	3.0	3.1	3.3	3.4	3.3	3.0	3.3	3.2	(3.3)J	2.9	B	3.1	3.0	3.0	3.0	3.2	3.2	3.0H	2.9	2.8
25	2.8	2.7	2.7	2.6	2.9	3.0	3.2	3.1	3.3	3.2	2.9	3.1	3.2	2.9	(3.0)J	3.0	3.1	3.1	3.1	3.0	3.1	3.1	3.0	2.7
26	2.7	2.7	2.7	2.6	2.9	3.2	3.2	3.4	3.5	(3.5)FS	3.1	3.2	2.9	(3.0)J	2.9	3.2	3.1	3.0	A	B	3.1	3.1	3.0	3.0H
27	2.9	2.7Z	2.5F	2.8V	3.1	3.2	3.2	3.3	3.4	3.3	3.1	3.2	A	3.1	3.0	3.1	3.1	3.2	3.0	3.2	3.1	3.0	2.9	2.9
28	2.8	2.6	2.8	2.8	2.8	2.9	3.0	3.4	3.1	3.2	3.2	3.1	2.9	3.0H	3.1	3.3	3.0	3.1	3.0	3.0H	2.9F	3.0	3.1	(2.7)F
29	3.1	2.9	2.6	2.6S	2.8S	2.9	3.3S	3.4	3.3	3.5	3.2	3.1	2.9	B	B	2.9	2.8	3.2	3.2	3.4S	B	2.8	3.4	(2.7)F
30	2.7	2.8F	2.8	2.9	3.1	3.1	3.2	B	(3.2)J	(3.2)FS	2.9	3.2	3.1	3.0	3.2	3.2	3.2	3.1	3.1	3.1	2.8	2.8H	2.8F	2.9
31	2.8Z	2.9Z	2.8	3.1	3.2	(3.1)B	3.6	3.4	3.4	3.4	3.3	3.1	3.1	3.1	3.2	3.0	3.2F	A	3.2	3.2	3.1	2.8	2.9	(2.7)F
Median Value	2.8	2.7	2.7	2.8	2.9	2.9	3.1	3.2	3.2	3.1	3.0	3.0	3.0	2.9	2.9	3.1	3.0	3.0	3.0	3.0	2.9	2.9	2.9	2.8
Count	28	29	28	29	30	29	30	26	25	23	22	21	22	23	23	27	28	26	25	28	25	27	24	27

(M3000)F2 | Sweep 1.0 Mc to 17.9 Mc in 15 min | Manual

A 9

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

IONOSPHERIC DATA

Aug. 1950

fmin F

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	1.8	1.9 A F	1.8	1.2	1.7	2.8	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
2	A	A	1.9	1.8	A	1.8	A	A	A	A	A	A	5.1	5.6	A	A	A	A	A	A	A	A	A	1.6
3	A	A	A	A	1.8	A	2.7	3.6	A	A	A	A	A	A	A	A	A	A	A	A	1.9	A	1.5	1.1
4	E	A	1.2	1.4	1.4	2.3	2.3	3.9	A	A	A	A	A	A	A	A	A	5.0	2.8	2.0	3.4	A	A	1.8
5	A	1.4	A	A	A	A	A	A	A	B	A	A	A	A	A	A	3.5	3.1	A	A	A	1.7	A	1.3
6	1.6 A	1.2	1.7 F	1.1	1.9	1.6	1.8	2.9	3.6	A	A	5.5	5.4	4.0	3.7	4.2	3.3	3.1	3.0	2.4	A	1.5	A	1.8
7	1.6	1.7	1.4	1.4	1.3	1.5	2.4	3.0	3.4	3.5	4.0	4.2	4.2	5.9	3.9	3.6	3.3	2.9	A	1.8	A	1.8	A	A
8	A	E	E	E	E	1.5	2.5	2.7	A	A	5.0	4.6	A	4.3	4.2	4.1	A	A	A	A	A	A	A	A
9	A	A	A	A	A	1.8	2.5	A	A	A	A	A	A	A	A	A	A	2.7	A	A	1.5	A	A	A
10	A	A	A	A	A	A	A	A	2.9	4.5	B	A	A	A	A	4.2	A	A	2.8	A	AF	1.7	1.6	1.3
11	1.2	1.2	E	1.7	E	1.7	A	A	3.5	4.0	B	B	A	A	A	5.4	3.2	3.0	2.8	A	1.4	A	A	1.8
12	1.3	1.3	1.2	1.4	1.6	2.0	2.6	3.0	3.2	A	A	A	4.2	5.9	5.5	5.0	3.8	3.4	2.4	A	1.6	1.7	A	A
13	A	A	1.5	E	1.3	1.6	A	A	A	A	A	4.1	4.4	4.0	4.2	5.1	3.4	A	2.2	1.9	1.6	1.6	A	A
14	A	A	1.1	1.4	E	1.6	2.4	3.0	A	A	A	A	A	A	A	5.0	3.7	A	A	A	A	1.6	A	1.8
15	1.6	1.8	A	A	A	1.7	A	A	A	4.2	A	A	A	A	A	4.2	A	C	A	A	A	A	A	(1.5) A
16	A	1.2	1.2	1.5	A	1.9	A	C	A	A	A	A	A	A	A	4.7	A	A	A	A	A	A	A	A
17	A	1.2	E	1.5	1.6	2.5	2.6	3.4	3.4 A	A	4.9	4.9	4.2	5.2	A	A	A	A	A	4.8	A	1.4	A	1.7
18	1.6	A	C	C	C	1.3	2.0	A	A	A	A	5.4	A	4.4	4.5	4.0 A	4.0	A	A	1.6	1.7	A	A	1.7
19	A	A	A	1.4	A	1.7	2.4	2.8	A	A	5.0	A	5.4	A	A	4.0	4.0 A	A	2.6	A	1.5 F	AF	1.3	1.4
20	1.6	1.4	1.6	1.8	1.8	1.6	A	A	C	C	C	C	C	C	C	C	C	2.7	2.0	1.6	1.4	1.4	1.4	E
21	E	E	E	E	1.2 A	2.2	2.2	2.9	3.4	3.7	4.0	4.2	A	A	A	A	A	A	2.6	A	1.9	A	1.5	1.9
22	1.6	1.9	1.8	1.4	[illegible]	2.0	A	A	4.3	A	3.6	3.2	3.6	4.3	4.0	3.8	3.4	A	A	1.6	1.6	A	A	E
23	E	E	A	E	E	1.6	2.0	2.0	3.4	4.0	A	A	4.0	4.3	A	A	A	A	A	A	A	A	A	1.8
24	1.4	1.4	1.3	1.4	1.4	2.0	2.3	4.0	A	3.9	A	A	A	5.6	5.0	5.5	3.6	2.0	A	A	A	A	A	A
25	A	A	1.2	1.3	1.2	1.4	2.4	2.9	3.2	4.0	4.0	4.3	5.2	4.6	3.8	3.5	3.6	2.7	2.2	1.6	A	1.5	1.5	1.3
26	1.1	1.2	1.2	1.2	A	2.0	2.3	2.8	2.8	A	A	A	A	A	A	A	A	A	A	A	A	A	A	1.7
27	1.6	1.4	1.4	1.1	1.2	1.2	2.4	2.8	A	A	A	A	A	4.8	A	3.5	3.3	A	A	1.8	1.8	1.4	A	A
28	A	1.4	1.4 A	1.4	1.4	1.9	A	2.7	A	A	4.6	5.7	5.2	4.2	4.0	3.8	3.8	2.9	A	A	1.4	1.4	A	A
29	1.4	1.3	1.1	E	1.5	1.5 B	2.4	2.6	A	A	4.2	A	4.1	6.7	4.0	4.1	A	A	A	A	A	A	A	A
30	A	A	1.7	A	A	AF	1.8	2.6	2.7	3.6	3.8	5.0	A	4.0	4.0	3.5	3.2	2.7	2.6	A	A	A	A	A
31	A	1.9	1.2	1.2	1.4	1.3	A	2.8	3.2	A	5.4	4.8	5.0	A	A	A	A	A	A	A	A	1.7	A	1.8
Median Value	1.4	1.4	1.2	1.4	1.4	1.7	2.4	2.9	3.3	4.0	4.2	4.7	4.4	4.5	4.0	4.1	3.5	2.9	2.6	1.8	1.6	1.6	1.5	1.7
Count	15	20	23	24	21	27	20	19	14	9	11	12	13	16	12	19	15	12	11	9	13	13	17	19

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

Aug. 1950 | fminE | 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	E	E	E	E	E	1.7	1.6	1.6	1.8	1.8	5.0	2.2	2.2	2.4	2.2	1.8	1.8	1.8	1.6	1.6	1.6	1.4	1.4	1.4
2	1.2	1.1	1.1	E	E	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.8	2.2	1.8	1.8	1.7	1.6	1.6	1.6	1.4	1.4	1.4	1.4
3	1.4	1.4	1.4	1.4	1.4	1.4	1.8	1.8	1.6	1.7	1.9	2.1	2.3	2.7	3.2	3.0	2.8	1.6	1.6	1.6	1.4	1.4	1.4	1.1
4	E	E	E	1.4	1.4	1.6	1.6	1.8	1.8	1.8	2.0	2.2	2.0	2.8	2.8	1.8	2.7	1.8	1.6	1.6	1.6	1.4	1.4	1.2
5	1.2	1.1	1.1	1.1	1.1	1.5	1.6	1.6	1.8	B	5.8	5.0	3.8	2.8	1.8	1.7	1.7	1.8	1.6	1.5	1.6	1.6	1.5	1.5
6	1.1	E	E	E	E	1.4	1.4	1.6	1.6	1.6	1.6	1.8	1.8	2.0	1.8	1.7	1.6	1.6	1.6	1.4	1.4	B	1.5	1.2
7	1.1	1.1	E	E	E	1.4	1.4	1.6	1.8	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.4	B	1.6	1.2
8	1.3	1.2	E	E	E	1.2	1.6	1.6	1.6	1.6	1.6	2.5	3.9	2.1	2.3	1.8	1.8	1.8	1.6	1.6	1.6	1.4	1.4	1.2
9	1.1	1.2[B]	E	E	E	1.4	1.5	1.7	1.8	1.8	2.5	2.4	2.8	2.4	1.8	1.8	1.8	1.8	1.5	1.5	1.5	1.4	1.4	1.2
10	1.1	1.2	1.2	1.2	1.2	1.4	1.4	1.6	1.8	1.7	1.8	1.8	1.8	2.2	2.3	2.2	1.8	1.7	1.5	1.5	1.4[F]	1.5	1.4	1.2
11	E	E	E	E	E	1.6	1.6	1.6	1.7	1.8	B	B	2.6	2.7	2.4	1.8	1.8	1.6	1.5	1.4	1.4	1.4	1.4	1.1
12	1.1	E	E	E	1.2	1.2	2.2	1.5	1.8	1.8	1.8	1.8	2.1	1.8[B]	1.8	1.9	1.7	1.7	1.7	1.4	1.4	1.6	1.6	1.3
13	E	E	E	E	1.3[B]	1.4	1.3	1.8	1.8	1.8	2.1	2.2	2.6	2.7	1.7	1.7	1.7	1.5	1.6	B	2.0	1.6	1.5	1.3
14	E	E	E	1.2	E	1.4	1.6	1.6	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.0	1.7	1.6	1.6	1.4	1.4	1.4	1.4
15	1.4	1.1	1.1	1.1	1.1	1.4	1.5	1.7	1.9	2.1	2.3	2.4	2.5	2.9	1.8	1.9	1.8	[1.6][C]	1.5	1.5	1.6	1.5	1.5	1.2
16	E	E	E	1.1	E	1.5	1.6	[1.6][C]	1.6	1.8	1.8	2.0	2.2	2.2	2.0	1.8	2.0	1.7	1.6	1.4	1.4	1.4	1.4	1.4
17	1.1	1.1	E	E	E	1.4	1.6	1.7	2.5	1.7	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.6	1.8	1.4	1.4	1.6	1.7
18	1.6	1.2	C	C	C	1.3	1.6	1.7	1.6	1.6	1.8	2.1	2.1	1.7	1.9	1.9	1.6	1.6	1.6	1.4	1.4	1.5	1.6	1.3
19	1.1	1.1	1.1	1.1	E	1.5	1.6	1.6	3.4	2.5	2.5	2.0	2.5	2.0	2.0	2.0	1.6	1.6	1.4	1.4	1.8	1.5	1.6	1.2
20	1.1[B]	1.2	1.2	1.2	1.2	1.4	1.4	1.4	C	C	C	C	C	C	C	C	C	1.6	1.6	1.7	B	1.4	B	E
21	E	E	E	E	E	1.4	1.5	1.6	1.6	1.6	1.7	2.6	2.8	2.8	2.7	1.8	1.6	1.5	1.6	1.4	1.4	1.4	1.5	1.2
22	1.1	1.4	B	B	B	1.4	1.6	2.7	1.8	2.2	2.2	2.4	2.6	2.1	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	E
23	E	E	E	E	E	E	1.8	1.7	1.7	1.8	2.1	2.1	2.1	2.1	2.2	1.8	1.6	1.6	1.7	1.5	1.5	1.5	1.4	1.4
24	1.1	1.6	B	1.2	1.1	1.5	1.6	1.6	1.7	1.8	2.0	1.7	2.2	2.0	2.0	2.0	1.7	1.7	1.6	1.6	1.4	1.4	1.2	1.2
25	1.2	1.3	1.2	1.1	1.1	1.4	1.5	1.5	1.8	2.0	2.0	2.1	2.1	1.7	1.7	1.7	1.7	1.7	1.5	1.8	1.5	B	1.8	B
26	E	E	E	E	1.2	1.4	1.4	1.4	1.5	1.8	1.7	1.8	1.9	1.8	1.8	1.8	1.8	1.7	1.6	1.4	1.4	1.5	1.8	B
27	1.3	1.2	E	1.7	E	E	1.4	1.6	1.7	1.7	1.8	1.9	2.2	1.8	1.8	1.8	1.5	1.5	1.5	1.5	1.5	1.3	1.3	1.1
28	1.2	E	E	E	E	1.4	1.5	1.5	1.6	1.7	2.0	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.5	1.4	B	B	1.5	1.4
29	1.1	E	E	E	E	1.4	1.4	1.5	1.7	1.9	2.1	2.1	2.2	2.1	2.0	2.0	2.0	1.7	1.6	1.6	1.6	1.6	1.6	1.2
30	1.1	E	1.1	E	E	1.4	1.5	1.6	1.7	1.7	2.1	2.1	2.1	1.8	2.0	1.8	1.8	1.5	1.5	1.4	1.4	1.4	1.4	1.2
31	1.1	1.1	1.4[B]	1.9	B	B	1.6	1.8	1.8	1.8	1.9	2.2	2.3	1.8	1.8	1.7	1.5	1.5	1.4	1.5	1.5	1.4	1.4	1.2
Median Value	1.1	1.1	E	E	E	1.4	1.6	1.6	1.8	1.8	2.0	2.1	2.2	2.2	2.0	1.8	1.8	1.7	1.6	1.5	1.4	1.4	1.4	1.2
Count	31	31	28	29	28	30	31	31	30	29	29	29	30	30	30	30	30	31	31	30	29	27	30	29

fminE

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 11

25

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

IONOSPHERIC DATA

Aug. 1950 | 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	(7.9)$^{J,P}_{F}$	6.5	6.5	6.0	5.9	6.0	7.6	9.8	B	7.3	(6.8)^{P}	(6.6)^{P}	B	B	9.6	8.8	8.9	8.8^{P}	8.4^{S}	7.4	7.7	7.0	(7.1)$^{P}_{F}$	6.5
2	F	A	5.9	(6.6)^{J,P}	[7.1]^{C}	7.6$^{J}_{F}$	8.1$^{J}_{F}$	8.3^{J}	7.7	(8.0)$^{P}_{F}$	7.8	8.0	7.8	7.6	9.2	9.3	8.7^{J}	A	8.7^{J}	(8.7)^{P}	C	7.9	7.2	(7.3)^{P,F}
3	F.S	F.S	F	F	5.4^{F}	5.1^{F}	5.6	7.1	7.4	7.5	7.2	A	8.6^{J}	9.0	10.2	A	A	A	8.2^{J}	(8.4)^{P}	7.7	B	C	6.5
4	C	C	C	C	C	B	6.F.H	8.3^{J}F	7.7	7.6	A	A	A	10.6	9.9	9.7	9.1^{P}	9.0	9.2^{H}	9.1	7.0	5.6^{H}	5.4^{H}	5.8
5	5.9^{Z}	5.8^{Z}	5.6	C	C	C	B	B	A	C	B	B	A	A	8.7	B	(9.2)^{P}	10.3^{P}	>10.6	B	7.2	7.5	7.5	F
6	7.7	7.7$^{F}_{Z}$	7.7^{F}	7.0^{F}	5.9^{F}	5.9^{F}	C	7.2	7.6^{J}	7.5^{B}	7.1	(8.1)^{P}	[7.9]^{C}	7.7	B	B	9.9	9.5	10.0	10.3	9.4^{J}	8.2	8.3	7.6
7	7.2	6.4	6.0	6.2	5.6^{P}	5	(6.1)$^{P}_{S}$	6.2	6.6	6.6	7.5	B	8.1^{J}	[7.9]^{C}	7.7	8.2	8.2	8.4^{P}	(8.7)^{P}	8.9^{J}	(8.5)^{P}	8.3^{J}	7.7^{P}	7.1
8	6.8	7.0$^{P}_{S}$	6.9^{P}	6.6$^{P}_{F}$	5.9	(7.0)^{P}	7.3	7.1	6.6	7.0	7.2	6.7	9.0	9.3	7.5	7.3	A	A	B	B	B	5.2^{K}	5.6^{K}	5.0^{K,P}
9	A^{K}	5.2^{K}	5.0^{K,P}	5.2^{K,H}	4.6^{K}	4.3^{K,P}	4.4^{K}	4.9^{K}	A^{K}	A^{K}	A^{K}	B^{K}	B^{K}	B^{K}	A^{K}	5.2^{K}	B^{K}	5.3^{K}	5.5	(6.2)^{P}	6.1	5.7	5.8^{H}	6.1
10	5.9	5.3^{F}	5.0^{J,P}	5.5	4.8^{V}	A^{K}	5.5^{K}	5.3^{K,J}	A^{K}	5.5^{K}	A^{K}	A^{K}	6.2^{K}	6.4^{K}	(6.0)^{K,J,P}	A^{K}	6.5^{K}	A	6.3	6.7	5.2	5.2	5.4^{F}	5.4
11	5.3	4.8	5.3	4.9	4.4	4.7	4.9^{K}	6.4^{K}	5.6^{K}	6.8^{K}	B^{K}	B^{K}	6.0^{K,P}	6.1^{K}	5.6^{K}	6.0^{K,J}	6.5	5.5	5.6^{F}	6.0	5.6	5.3^{F}	5.4	5.2
12	5.3	5.2	4.6^{S}	5.0	4.3^{J}	3.8	5.4	5.4	A	6.8	6.8	7.6	7.4	7.0	6.7	[6.8]^{C}	6.8	8.0	S	5.5	5.3	5.4	5.1	(5.0)^{C}
13	5.0	5.4	4.9^{J}	4.3	4.4^{Z}	4.4^{Z}	5.8^{Z}	6.2	6.9^{Z}	6.0	5.9	7.0	6.4	6.4	7.1	7.3	7.6	7.2	7.5^{P}	B	6.1^{P}	[5.8]^{B}	5.6	5.5
14	5.2	5.2	4.9	4.6	4.2	4.0	5.9	8.7^{J}	7.9^{J}	6.5	5.9	6.5	A.F	7.2	7.4	7.8	8.3^{S}	7.2	7.1	A	(7.1)^{J}	5.6	5.9$^{J}_{F}$	5.7$^{J}_{F}$
15	5.2	(4.8)$^{P}_{F}$	6.2	4.9^{F}	3.3$^{J}_{F}$	3.9	5.6	B	8.3^{J}	7.0	6.9^{J}	7.1	7.3	7.4	7.4	7.3	6.6	6.7	7.9	8.9^{J,P}	A	A	A	5.4
16	A	5.7^{F}	6.0$^{J,F}_{P}$	5.7^{J,P}	4.5	4.4	5.8	7.4^{B}	(8.3)^{P}	7.5^{J}	A	A	7.4	7.1^{F}	7.4	(8.1)^{P}	7.5^{S}	7.1	7.3^{S}	8.6^{J}	(8.5)^{P}	7.0	[6.6]^{C}	6.3$^{J}_{F}$
17	(5.8)$^{P}_{F}$	5.8$^{F}_{Z}$	5.8	5.6	4.7	4.4	5.8	(8.1)^{P}	7.9	A	7.2	7.2	7.7	7.6	7.2	7.6^{Z}	7.2	(7.6)$^{P}_{S}$	7.9	(7.9)$^{P}_{S}$	(9.0)^{J}	(8.2)$^{P}_{S}$	7.1	6.5
18	(6.1)$^{P}_{S}$	6.8^{F}	6.8^{F}	6.4	5.8$^{J}_{F}$	(5.6)$^{J,F}_{Z}$	6.6	8.3	9.2^{J}	7.1	6.6	7.7	7.8	7.3	8.4	8.1	8.0	7.5	8.5^{P}	7.8^{S}	8.0	6.8	7.1$^{J}_{F}$	7.3
19	B.F	6.2^{F}	(7.1)^{P}	7.0^{H}	6.3^{F}	B	6.5	8.4	(7.8)$^{J,P}_{S}$	S	7.9	7.2	7.9	A	10.2	10.6^{P}	10.3^{P}	9.2^{P}	B	S	B	B	B	(7.5)^{P}
20	F	5.4^{J}F	(5.4)^{J,F}	4.7^{J}F	4.3^{J,F}	4.0^{K,J}F	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	C^{K}	C^{K}	C^{K}	C^{K}	4.2^{K}	4.4^{K}	4.6^{K}	5.9^{K}	3.7^{K}
21	B^{K}	S^{K}	A^{K}	A.F^{K}	A^{K}	3.5^{K}	G^{K}	4.4^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	A^{K}	A^{K}	G^{K}	5.9^{K}	5.7^{K}	5.2^{K}	4.8^{K}	5.2^{K}	A^{K}	5.1^{K}	4.7^{K}
22	4.1^{K}	4.4^{K}	4.1^{F,K}	4.0^{K,F}	3.9^{K}	3.7^{K,F}	5.2^{K}	6.5^{K}	6.4^{K}	5.6^{K}	5.6^{K}	5.9^{K}	5.7^{K}	6.0^{K}	6.2^{K}	6.4^{K}	6.4^{K}	6.3^{K}	6.2^{K,F}	6.4^{K}	6.5^{P}	(5.6)$^{P}_{F}$	7.0^{P,F}	6.8^{P}
23	6.0^{F}	5.7^{F}	4.7^{F}	(4.6)$^{P}_{F}$	4.6^{F}	4.1^{F}	6.1	6.6	7.0	6.8	6.7	7.0	6.8	6.7	(7.2)^{J,P}	7.4	7.2	A	6.9	7.5	7.7^{P}	(7.1)$^{P}_{S}$	B	B
24	6.4^{H}	4.9	3.5	3.9	4.8	5.0	7.1^{J}	6.4	7.0	7.4	7.4^{J}	6.7	8.0	7.3	7.5	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	7.9	7.6	(8.5)$^{P}_{S}$	8.6	(8.3)^{P}	7.7	(8.5)^{P}	9.4^{J,P}	7.6	6.5	5.5	5.2
26	5.3	5.2	5.0	4.9	4.5	4.3	6.4	7.4	7.3	C	C	7.0	7.2	7.8	8.9	A	7.5^{J}	7.9	8.7	S	8.1^{S}	6.9	6.0	5.1
27	5.1	(5.1)^{S,F}	5.1^{F,P}	5.5^{J}F	5.4	(5.2)^{S}	7.0	8.2	7.8	6.7	6.4^{J}	A	6.7^{J}	6.9^{J}	A	(8.2)^{P}	7.9	7.9	S	S	6.9	7.4	S	6.1^{H}
28	5.7	5.3	5.1^{F}	5.1^{F}	5.0	5.3	6.9	10.2^{J}	7.6	6.6	6.6^{J}	8.4^{P}	9.2	9.1	8.7	7.4	7.6	A.F	A	8.6^{J}	B	7.6	6.9^{P}	7.6
29	6.7	6.8	5.8	5.9	5.8	(6.2)^{P,S}	8.4^{J}	7.5	7.8	7.5	7.5	7.3^{J}	7.6^{J}	8.5^{J}	7.9^{J}	7.5	8.2	(11.6)^{J,P}	11.8	C	5.9	6.4	(6.2)^{J,F}	A
30	6.4^{F}	6.5^{F}	6.0^{F}	5.9	5.0^{F}	4.1^{F}	A.F	7.2	8.2	8.6^{J}	8.7	B	9.0^{J}	9.4	8.9	8.6^{J}	(8.1)^{P}	8.2^{P}	(9.2)^{P}	7.4	6.5	6.7	6.8	B
31	6.0	6.2	6.2	6.2^{P}	6.3	(6.4)^{P}	6.8	B	7.3	A	7.5	8.3^{J}	B	B	9.2	8.9^{J}	9.4	(9.5)^{P}	S	8.7^{P}	5.3	5.7^{P}	5.0$^{P}_{S}$	5.2^{P}
Median Value	5.9	5.6	5.6	5.5	4.8	4.4	6.0	7.2	7.6	6.9	6.9	7.0	7.6	7.4	7.7	7.7	8.0	7.9	8.2	7.8	7.0	6.6	6.0	5.8
Count	22	26	27	26	27	25	26	27	25	24	23	20	25	25	27	24	26	23	23	22	25	26	25	24

Sweep 1.0 – Mc to 17.0 Mc in 15 min Manual

K 1

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

IONOSPHERIC DATA

Aug. 1950 | h_pF2 | 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	(360)	310	340	360	270	350	300	290	B	280	A	(380)	B	B	310	340	310	320	290	280	340	320	(380)	BF
2	F	A	350	(350)	C	(280)	(270)	(270)	G	A	320	330	320	350	330	310	A	A	A	(310)	C	320	310	(390)
3	FS	FS	F	F	360	330	370	280	320	A	A	A	(360)	330	A	A	A	A	(320)	(300)	310	B	C	BS
4	C	C	C	C	C	B	BFH	(300)	280	430	A	A	A	320	320	340	370	320	320	300	230	370	370	390
5	360	340	380	C	C	C	B	B	A	C	B	B	A	A	370	B	(310)	310	280	B	330	350	330	F
6	B	380	320	310	290	310	C	290	(270)	320	310	(370)	(370)	370	B	B	290	310	300	280	(280)	350	330	320
7	360	360	320	280	260	S	(240)	230	290	330	340	B	(350)	C	320	310	310	320	(320)	(310)	(330)	(330)	340	320
8	380	380	340	350	400	(330)	270	280	290	340	330	300	410	300	310	320	A	A	B	B	B	410	380	390
9	A	390	350	310	270	350	280	300	A	A	A	B	B	B	A	G	B	G	370	(330)	330	340	330	340
10	379	380	(320)	320	330	A	380	A	A	G	A	A	G	G	A	A	380	A	310	280	410	410	420	370
11	380	400	330	280	300	260	420	G	350	220	B	B	G	350	G	(370)	320	270	300	320	340	400	380	400
12	380	360	320	300	(300)	350	270	310	A	330	320	290	330	330	350	(340)	330	310	S	250	390	390	360	(360)
13	370	320	(310)	A	360	320	330	320	A	350	G	310	G	390	340	320	300	300	290	B	300	B	360	390
14	370	330	340	370	420	390	330	(310)	(270)	290	300	G	AF	A	A	320	280	290	320	A	A	A	A	(350)
15	380	(380)	340	270	(280)	330	310	B	(290)	320	A	340	340	320	320	310	310	320	310	(300)	A	A	A	420
16	A	390	(350)	(320)	360	320	310	320	(290)	(250)	A	A	360	340	360	(310)	310	320	310	(320)	(310)	280	C	(390)
17	(390)	350	330	330	260	260	280	(280)	280	A	280	350	340	240	310	B	320	(320)	330	(300)	(310)	(280)	310	320
18	(360)	330	320	300	(330)	(360)	310	300	(270)	270	360	330	300	330	360	320	290	300	290	270	280	300	(320)	310
19	BF	(410)	(390)	310	320	B	320	270	(270)	S	330	A	390	A	350	310	320	380	B	S	B	B	B	(380)
20	F	(410)	(470)	(440)	(440)	(450)	G	G	G	G	G	G	G	G	G	C	C	C	C	400	410	480	310	380
21	B	S	A	AF	A	A	G	G	G	G	G	G	G	A	A	G	400	300	270	360	310	A	360	330
22	320	380	400	360	360	380	G	290	270	G	G	G	G	390	360	330	310	310	300	360	320	(370)	400	340
23	360	370	380	(400)	350	340	250	280	280	270	310	300	350	380	(330)	300	300	A	300	300	300	(340)	B	B
24	350	340	330	350	330	290	(300)	250	290	G	(290)	290	320	310	320	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	350	320	(340)	310	(300)	310	(310)	(300)	250	320	370	390
26	400	380	310	330	300	270	260	240	270	C	C	330	330	350	330	A	(260)	310	340	S	280	290	320	360
27	370	(350)	(330)	(300)	290	(290)	260	240	250	220	A	A	G	(320)	A	(310)	290	290	S	S	290	320	S	330
28	320	380	380	350	340	380	300	(290)	240	280	G	320	320	320	300	310	320	AF	A	A	B	300	330	450
29	380	320	360	390	360	(310)	(260)	240	250	310	300	(320)	(310)	(290)	(310)	320	340	(280)	250	C	340	400	(380)	A
30	360	400	400	310	270	260	AF	A	290	(280)	340	B	B	320	310	(310)	(290)	290	(290)	270	340	350	340	B
31	340	370	340	320	300	(280)	260	B	250	A	340	(290)	B	B	300	(300)	300	(310)	S	250	340	(340)	320	320
Median Value	370	380	340	320	320	320	300	290	280	320	330	330	360	330	330	320	310	310	300	300	320	340	340	360
Count	21	26	27	25	26	24	26	25	24	22	19	19	24	23	24	23	25	23	22	21	24	24	23	24

h_pF2 | Sweep 1.0 Mc to 17.0 Mc in 15 min | Manual | K 2

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

IONOSPHERIC DATA

Aug. 1950 | 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	280	260	290	290	190	270	290	240	270	280	310^{A}	380	300	330	310	290	290	270	290	220	(300)^{A}	260	320^{A}	A
2	(340)^{A}	A	(330)^{A}	320	C	260^{F}	240	250	280	290	310	320	300	350	320	290	390	A	350	260	270	280	270	340
3	400	300	300^{A}	(300)^{A}	320^{F}	290	360	250^{A}F	320	310	400	A	350	300	A	(480)^{A}	A	A	(300)^{A}	270	(300)^{A}	(390)^{A}	C	240
4	C	C	C	C	C	340	240^{H}	260	250	360^{F}	A	A	A	290	290	290	300	290	270^{H}	250	210^{A}	(300)^{A}H	310^{H}	320
5	300^{A}	280	290	C	C	C	220	270	A	C	A	A	A	A	350	310	300	300	250	220	250^{A}	250	300	270^{F}
6	300^{A}	300^{F}	280^{F}	250	240^{F}	290	C	280	250	300	310	360	(350)^{C}	340	350	300	260	280	240	220	230	240^{A}	240	240
7	250	290	290	250	210	210	220	190	270	320	310	360	340	(320)^{C}	300	300	300	290	260	240	240	260	250	240
8	270	(310)^{A}	240	270	340	270	250	270	290	340	330	300	400	290	300	320	A	A	300	250	A	370^{KA}F	300^{KA}	(300)^{KA}
9	A^{K}	(390)^{KA}	(300)^{KA}	270^{KH}	(250)^{KB}	(300)^{KA}	240^{K}	240^{K}	A^{K}	A^{K}	A^{K}	B^{K}	B^{K}	B^{K}	A^{K}	390^{K}	B^{K}	360^{KB}	340	310^{A}	250	270	310^{A}H	320^{F}
10	310^{A}	320	290	300^{A}	280	A^{K}	380^{K}	A^{K}	A^{K}	390^{K}	A^{K}	A^{K}	340^{K}	G^{K}	A^{K}	A^{K}	370^{K}	310	290	260	A	330	330	290
11	290	330^{A}	320^{A}F	260^{F}	250^{F}	230^{F}	420^{K}	G^{K}	330^{K}	220^{K}	B^{K}	B^{K}	430^{K}	350^{K}	450^{K}	370^{K}	270^{A}	270	280	280	250	340	330	320
12	310	310	300	240	250	310	250	270	A	320	320	290	330	330	340	(340)^{C}	330	300	230	230	300	290	300	(320)^{C}
13	330	280	300^{A}	AF	310	270	320	300	(310)^{A}	370	300	310	320	390	330	220	290	220	230	230	230	250	290	310
14	290	280	250	280	300	300	240	290	250	270	300	340	AF	A	350^{A}	320	270	280	320	A	A	A	A	320
15	370^{A}	A	280	230^{B}	280^{A}	260	240	B	270	320	A	330	340	320	320	300	300	300	290	280^{A}	A	A	A	(410)^{A}
16	A	(370)^{A}	(300)^{A}	250	280^{F}	300^{F}	260	300	240	250	A	A	350	340	360	290	310	300	300	260	250	250	(280)^{C}	320
17	290	300^{A}	300	280^{A}	250	240	240	270	260	A	280	350	320	240	300	B	320	300^{F}	300	290	250	230	230	250
18	280	260	260	240	250	240	230	270	260	260	L	330	290	320	340	310	280	220^{F}	240	250^{F}	240	230^{F}	280^{A}	250
19	300^{A}F	320^{F}	310^{A}	250^{AH}	240	270	220	220	270	A	330	450	390	A	330	290	290	300	280	250	370	310	280^{F}	290
20	290	340^{F}	400	410	370^{F}	440^{KF}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	C^{K}	C^{K}	C^{K}	C^{K}	330^{K}	310^{K}	380^{K}	260^{K}	300^{K}
21	260^{KA}	260^{KA}F	A^{K}	AF^{K}	A^{K}	A^{K}	G^{K}	270^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	A^{K}	A^{K}	G^{K}	400^{K}	280^{K}	230^{K}	250^{K}	270^{K}	A^{K}	310^{K}	290^{K}
22	290^{K}	290^{K}	310^{K}	290^{K}	290^{K}	250^{K}	360^{K}	290^{K}	270^{K}	330^{K}	370^{K}	380^{K}	460^{K}	390^{K}	360^{K}	330^{K}	310^{K}	300^{K}	270^{K}	280^{K}	270	320^{A}	(370)^{A}	280
23	280	280	290	280	260	310	230	220	270	270	310	300	340	370	330	300	(300)^{A}	A	270	250	240	250	(320)^{B}	B
24	240^{H}	270^{F}	300	300	290	280	250	240	200	250	290	290	310	310	310	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	350	320	320	300	300	290	290	240	220	210	250	300
26	310	300	260	250^{F}	240	240	220	220	220	C	C	330	310	330	320	A	240	290	250	230	240	240	240	320
27	290	320	320^{F}	250	240	230	230	220	250	220	A	A	310	320	320	300	270	280	270	260	250^{F}	270^{A}F	270^{A}F	250^{H}
28	270^{F}	290	320	290	290	260	240	230	230	280	400	300	310	300	290	300	300	(240)^{AF}	A	(310)^{AF}	310	200	250	300^{A}
29	290	250	250	300	290	250	230	210	250	290	300	300	300	280	310	300	340	260	230^{F}	(210)^{AF}	270^{AF}	310	AF	A
30	320^{F}	320^{A}F	320^{A}	280	250	260	AF	240	280	270	320	320	B	300	300	290	250	280	260	210	280	280	280	270
31	290	290	290	270	240	200	220	240	230	A	320	250	290	A	300	290	290	280	250	210	310	280	250	250
Median Value	290	300	300	280	260	270	240	260	270	300	320	330	340	320	320	300	300	290	270	250	250	270	280	300
Count	27	27	28	26	26	27	28	28	26	24	20	22	26	25	27	26	26	25	28	29	26	27	26	27

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 3

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

IONOSPHERIC DATA

Aug. 1950 | 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	L	A	AS	A	A	L	5.0	5.0	5.0	4.9	4.6J	4.5	L					
2						L	AE	AE	A	A	A	A	5.0	5.3	5.1	A	A	A	A					
3						Q	A	AE	A	A	A	A	A	A	A	A	A	A	A					
4						A	Q	L	4.4	4.5J	A	A	A	L	L	4.9	A	L	L					
5						C	Q	L	A	C	A	A	A	A	5.2	A	A	A	A					
6						L	C	L	A	L	L	5.1	C	L	4.9J	(4.7)B	L	A	A					
7						Q	Q	Q	4.7	L	L	5.1	L	C	L	4.9	4.6	L	Q					
8						Q	Q	L	L	4.9	A	5.1	5.1	L	A	A	A	A	A					
9						Q	Q	Q	A	A	A	S	A	A	4.7	4.4	A	4.1J	3.8					
10						A	A	A	A	4.6	A	A	A	4.8	4.6B	A	4.5	A	A					
11						Q	3.7	4.1	A	4.6	4.7	B	4.8	4.7	4.7	4.6	A	A	A					
12						Q	Q	A	A	4.4	4.8	4.8	4.9	4.8	L	C	L	L	Q					
13						Q	L	A	A	4.3	4.7	4.7	4.8	4.9	4.9	4.8	L	Q	Q					
14						Q	Q	L	A	A	L	5.0	AE	A	A	4.8	4.4A	A	A					
15						Q	Q	A	L	A	A	L	4.9	4.9	4.8	4.7	L	A	L					
16						AE	Q	L	4.6	4.8	A	A	A	4.8	5.1	4.7	A	4.0	L					
17						Q	Q	L	Q	A	4.9	4.9	5.1	5.2	5.1	5.1	AE	AE	AE					
18						Q	Q	L	L	A	L	A	4.9	4.9	L	L	L	Q	Q					
19						Q	Q	Q	L	A	A	A	5.2	A	A	A	A	A	A					
20						Q	3.0J	3.8	3.8J	4.0	4.1	4.4	4.4	4.2	4.2	C	C	C	C					
21						A	3.5	3.8	4.1	4.5	4.6	4.7	4.8	A	A	4.5J	4.4	Q	Q					
22						Q	5.0	5.0	A	4.7	4.7	4.9	5.0	5.0	5.0	4.7	4.5	L	Q					
23						Q	Q	Q	L	AE	(5.0)L	4.9	L	(5.0)L	(4.9)L	A	A	A	A					
24						Q	Q	L	Q	4.9J	4.8	L	5.2	4.9	5.2	C	C	C	C					
25						C	C	C	C	C	C	C	5.1	5.0	5.1	4.8	L	L	L					
26						Q	Q	Q	Q	C	C	L	L	5.1	5.0	A	A	A	Q					
27						Q	Q	Q	L	L	A	A	L	5.0	L	L	L	A	A					
28						Q	Q	Q	AE	L	5.0	5.0	5.2	5.2	L	L	A	A	A					
29						Q	Q	Q	L	L	L	L	L	L	5.1J	L	A	L	L					
30						Q	AE	AE	L	L	L	5.4	A	L	B	4.6	4.2	L	Q					
31						Q	Q	Q	Q	A	L	A	L	A	L	L	L	AE	A					
Median Value							—	—	4.4	4.6	4.8	4.9	5.0	5.0	5.0	4.7	4.5	—	—					
Count							4	4	5	11	10	13	16	18	18	15	7	3	1					

foF1

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 4

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

IONOSPHERIC DATA

Aug. 1950 | 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	260[A]	A	AS	A	A	200	200	240	250[A]	240	230	A	230					
2						210	AF	AF	A	A	A	A	A	220	A	A	A	A	A					
3						Q	A	AF	A	A	A	A	A	A	A	A	A	A	A					
4						A	Q	240	210	220	A	A	A	230	230	240[A]	A	230	A					
5						C	Q	230	A	C	A	A	A	A	290	A	A	A	A					
6						A	C	200	A	250	200	210	(200)[C]	200	200	200	A	A	A					
7						Q	Q	Q	210	200	200	180[B]	240	(220)[C]	200	240	210	A	Q					
8						Q	Q	220	210	220	A	220	280	220	A	A	A	A	A					
9						Q	Q	Q	A	A	A	A	A	A	A	A	230	A	310[A]					
10						A	A	A	A	210	A	A	A	230	A	A	280	A	A					
11						Q	240	240	A	220[A]	210	(250)[A]	210	240	A	280	A	A	A					
12						Q	Q	A	A	200	190	(260)[B]	240	260	220	C	290	(240)[A]	Q					
13						Q	260	A	A	210	220	220[A]	210	200	230	220	290	Q	Q					
14						Q	Q	250	A	A	A	200	AF	A	A	220	A	A	A					
15						Q	Q	A	220	A	A	230	220	220	220	230	220	A	280					
16						A	Q	250	220	210[A]	A	A	A	A	A	220	A	270	280					
17						Q	Q	250	Q	A	200	200	200	200	220	250	AF	AF	AF					
18						Q	Q	230	230	A	220	A	230	230	210	220	260	Q	Q					
19						Q	Q	Q	220	A	A	A	A	A	A	A	A	A	A					
20						Q	360[A]	A	270	240	250	(240)[B]	230	230	260	C	C	C	C					
21						A	A	230	210	220	200	200	260	A	A	A	220	Q	Q					
22						Q	250	A	A	210	210	190	190	200	220	230	230	230	Q					
23						Q	Q	Q	200	A	300	200	210	210	200	A	A	A	A					
24						Q	Q	220	Q	220	200	230	230	220[A]	300[A]	C	C	C	C					
25						C	C	C	C	C	C	C	210	200	260	230	A	240	260					
26						Q	Q	Q	Q	C	C	230	280[A]	200	220	A	A	A	Q					
27						Q	Q	Q	230	220	A	A	260	210	210	260	A	A	A					
28						Q	Q	Q	AF	210	200	250[A]	240	240	230	220	A	A	A					
29						Q	Q	Q	200	200	200	240	250	230	B	270	A	250	210[F]					
30						Q	AF	AF	240	230	260[A]	280	A	A	B	210	220	250	Q					
31						Q	Q	Q	Q	A	230	A	280	A	240	230	AF	AF	A					
Median Value						—	260	230	220	220	200	220	230	220	220	230	230	240	270					
Count						1	5	11	13	17	16	19	21	22	19	19	11	7	6					

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

Aug. 1950 | 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						A	2.3H	2.8	A	A	B	A	A	3.7	3.7	3.6	A	A	A					
2						A	A	A	(3.2)AF	3.3	A	A	A	A	3.7J	3.4J	A	A	A					
3						A	2.2A	2.8	A	3.5	A	3.6	3.9H	3.5	A	A	A	A	A					
4						A	A	A	A	A	A	A	A	A	A	3.5A	A	A	A					
5						C	A	A	A	C	B	A	A	A	A	A	A	A	A					
6						A	C	2.9	A	A	A	A	C	A	B	3.5	(3.2)A	A	A					
7						1.7A	A	2.9	3.2	A	A	3.6A	A	C	A	A	3.1	2.7	A					
8						A	2.2	2.8	AF	3.2A	A	3.5	3.5	3.7	3.5	3.5	A	A	A					
9						A	2.0	A	A	A	A	A	4.0A	3.8A	3.5	3.6A	3.0	2.8	2.0					
10						A	A	A	A	3.5	3.5	B	3.6	B	B	3.5	3.2	2.6	A					
11						AF	2.4H	2.6A	A	A	B	3.6	A	B	B	3.6	A	A	A					
12						B	2.4	A	A	A	A	3.7B	3.7	3.6	3.1	(3.0)C	3.0	A	A					
13						B	2.4	2.6A	3.0	3.3	3.3	3.6	3.6	3.6H	3.4B	3.4B	3.2	A	1.9					
14						1.6A	A	A	A	A	A	3.8B	A	A	A	A	A	2.7	2.1A					
15						A	A	A	3.0	A	A	A	A	3.6F	3.5	3.5	3.1	2.8	A					
16						A	A	A	2.8	3.0A	3.4	3.4	A	3.5A	A	3.2	A	2.5H	(2.0)A					
17						A	A	A	A	A	A	A	3.8	4.0	A	B	3.1	2.6	A					
18						1.6J	A	2.9JA	A	A	A	3.7	3.7H	3.6	3.5	3.4	2.8A	2.7	2.0					
19						B	2.4	2.8	A	A	B	B	B	A	A	A	3.2	A	A					
20						A	2.0	A	3.2	3.2A	3.6	A	A	B	3.7H	C	C	C	C					
21						B	2.2	2.5F	AF	B	B	3.7B	4.0	3.6	(3.6)A	3.2	3.0A	A	2.0F					
22						B	(2.2)A	(2.8)A	2.9	(3.2)A	B	A	B	B	B	B	3.2	2.6B	A					
23						(1.6)A	2.3A	A	2.8	2.7	3.0	3.0	2.9	3.0J	A	2.6	A	1.8	1.2					
24						B	2.1	A	2.9JF	A	A	A	A	A	A	C	C	C	C					
25						C	C	C	C	C	C	C	B	3.6	3.6	3.4	3.0	2.6	A					
26						AF	2.3H	2.9H	3.4	C	C	A	A	A	3.8J	A	A	A	A					
27						B	2.2	2.8A	A	A	A	A	A	A	(3.6)A	(3.5)A	A	2.6F	1.8J					
28						A	A	A	2.7	2.8	(3.6)A	A	A	A	A	(3.5)A	3.3A	A	A					
29						B	A	2.4	A	3.3	A	(3.6)B	B	B	B	3.4	2.9	2.1	A					
30						A	A	A	2.9A	A	A	A	A	A	B	3.3B	3.0	2.4	A					
31						B	2.4	2.5	(3.0)A	3.1A	A	B	B	A	3.5A	A	A	A	A					
Median Value						—	2.2	2.8	3.0	3.2	3.4	3.6	3.7	3.6	3.6	3.4	3.1	2.6	2.0					
Count						4	16	15	13	12	6	12	10	13	14	20	16	14	8					

foE

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 6

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

IONOSPHERIC DATA

Aug. 1950 | 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						A	100^{H}	110	100	A	B	A	A	100	110	100	A	100	A					
2						A	A	A	100	100	100	A	A	A	110	100	A	A	A					
3						A	A	110	110	100	100	100	100^{H}	100	A	A	A	A	A					
4						A	A	A	A	A	A	100	100	A	100	100	A	A	A					
5						C	A	A	A	C	B	110	110	A	A	A	110	110	A					
6						A	C	100	100	110	A	A	C	A	110	100	A	A	100					
7						A	A	A	110	A	100	100	A	C	A	100	100	110	A					
8						A	100	100	AE	100	A	100	110	110	100	100	A	A	A					
9						A	100	A	A	100	A	A	100	100	100	100	120	120	110					
10						A	A	A	100	100	100	110	100	110	(100)^{B}	110	100	100	110					
11						AF	100^{H}	100	A	A	110	100	A	B	110	100	100	100	A					
12						B	100	A	A	100	100	(100)^{B}	110	120	110	(100)^{C}	100	100	A					
13						B	110	100	110	110	100	100	110	100^{H}	110	110	100	100	100					
14						A	A	A	100	100	A	110	A	A	A	100	A	100	110					
15						A	A	A	110	A	A	A	A	110	110	110	110	110	A					
16						A	A	A	100	100	110	100	A	110	A	110	A	110^{H}	110					
17						A	A	100	100	A	A	A	100	110	A	110	110	110	A					
18						100	A	A	A	A	A	100	100^{H}	100	110	100	100	100	100					
19						B	A	100	100	100	100	100	100	100	A	100	110	100	A					
20						A	110	A	110	110	110	100	110	100	100^{H}	C	C	C	C					
21						B	110	100	AE	100	100	100	100	100	100	100	100	110	110					
22						B	100	100	100	100	110	A	100	100	100	110	100	110	110					
23						A	110	110	100	100	100	100	110	110	A	110	A	100	B					
24						(100)^{B}	100	100	100	100	A	A	A	A	A	C	C	C	C					
25						C	C	C	C	C	C	C	110	110	110	110	100	110	A					
26						AF	110^{H}	110^{H}	100	C	C	A	A	A	100	A	A	110	A					
27						B	110	100	A	A	A	A	A	A	A	A	A	100	100					
28						A	A	100	100	100	A	100	A	A	A	110	100	A	A					
29						B	A	100	100	110	A	110	100	B	110	100	100	100	A					
30						A	A	A	100	100	100	A	A	A	100	100	100	110	A					
31						B	110	110	100	100	100	B	B	A	100	A	100	A	100					
Median Value						—	110	100	100	100	100	100	100	100	100	100	100	100	110					
Count						2	14	17	21	20	15	18	17	17	20	24	18	22	11					

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 7

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

IONOSPHERIC DATA

Aug. 1950 | 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	3.4F	3.4F	4.7	3.6	3.7	3.6	3.9Y	8.9Y	5.2	6.4Y	(7.6)Y	4.8	4.8	G	G	5.6Y	5.2	4.5	3.5	3.5	7.1	3.8	5.2	6.6
2	5.2	8.0	5.4	4.4	C	3.6	6.4	5.6	7.0	9.2Y	11.2Y	11.6	5.6	4.2	4.6	6.8	9.6	10.3	9.8	5.4	6.7	4.6	4.0	5.8
3	7.0	3.5	4.7	4.6	3.6BF	3.4	4.0	5.2B	6.7	(11.0)BF	(10.8)BF	10.0	6.8	8.5BF	10.3Y	(14.5)FB	13.4	13.4	9.2	(8.8)Y	6.4	(7.6)Y	C	2.2
4	C	C	C	C	C	6.2	3.6	4.9B	4.7	5.3	9.4	13.5BF	12.2	4.8	5.2	4.6	5.8	3.6	3.9	3.8	5.2	4.3	3.7	3.6
5	3.6	(2.8)Y	2.0	C	C	C	3.6F	6.0	8.8	C	7.1	7.3	12.2	10.6	5.4	5.2	5.0	6.2	3.8	4.6	3.3	3.5	4.5	5.4
6	3.5	3.2F	(3.6)YF	2.7F	3.5	4.2F	C	4.2	6.0	5.6	4.4	4.8	C	4.6	B	C	5.1	5.7	4.2	4.3	3.2	2.4	G	3.7
7	3.5	2.6	2.2	2.2	(3.0)Y	2.0	4.0	3.2	G	4.6	(4.4)Y	G	5.0	C	5.8	4.6	G	4.4	3.7	2.8	2.2	3.6	2.2	2.4
8	4.8	5.0	2.4	2.5	4.9	3.6	3.5	4.2Y	(4.4)F	4.8	7.3	6.8	5.5Y	G	4.7Y	6.7	7.0	9.8	7.4	4.0	7.0	4.4	4.3	4.7
9	7.0	5.5	3.6	3.6	3.2	3.8	G	(4.0)Y	7.5	11.4	9.8BF	5.0	5.8	6.0	7.2	5.3Y	5.3Y	(4.3)Y	G	4.8Y	2.3	G	3.7YB	3.5YF
10	3.5Y	3.9Y	6.4	4.4	3.6	7.5BY	6.6	5.8	13.6BF	9.4YB	8.6Y	8.5Y	5.3Y	4.1Y	5.2	7.2	4.8Y	9.8	9.8	4.0	6.5	4.0	3.5	2.9F
11	1.8Y	3.1	4.9	3.8	3.6	(3.4)F	G	3.5	6.4	4.4	G	5.1	7.2	5.4	5.0Y	G	4.3	4.0	3.9	3.8	2.8	3.4	3.5	3.4
12	3.5	3.2	2.8	2.4	2.4	(2.2)Y	G	4.4Y	6.8	4.3	4.5F	G	G	B	3.7	C	4.0	4.4	4.4	4.0	3.0	1.7	2.3	C
13	5.0Y	4.6	6.0	4.8	3.0	3.6	3.6	5.5	7.0	9.1F	7.4	6.3	4.5	G	G	G	4.1	4.4	5.0	5.4	3.6	2.2	2.4	4.9
14	2.8	2.8	2.0	2.8	3.3	2.7	2.5	3.2	6.0	4.8	5.1	G	(14.5)BF	8.7	7.2	4.5	5.1	5.8	6.7	7.7	7.9	5.6	5.3	3.6
15	3.7	4.1	2.9	2.6	2.9	2.2	3.6	5.0	4.3	7.3	8.9	4.9	6.4	G	G	G	4.7Y	7.1Y	4.4	6.7	9.0	9.5	11.8	9.3
16	8.3	6.8	8.5	3.4	3.0	3.0	3.0	7.4	6.2	7.0	11.8	9.4	7.2B	5.6	5.5	G	5.6	4.4	3.5	4.6	3.8	4.2	C	3.7
17	2.9Y	2.8	3.6	4.6	4.2	3.4	4.6	4.8	5.0	10.1	5.0	4.0	G	5.0	5.0	G	6.5	5.2	5.4	5.6B	2.4	2.2	G	2.1
18	2.2	2.3	2.2	2.2	2.0	G	5.2	4.4	4.5Y	5.2	4.8	5.6	5.0	5.2Y	G	4.5	4.8	3.7	3.8	4.3	6.2	5.0	5.4	3.7
19	5.3	3.8	4.8	3.8	3.8	2.8	(4.0)Y	G	4.8	9.0YB	6.6	6.2Y	9.0YBF	10.2	7.4Y	7.5	10.2	6.0	5.8	3.6	G	G	G	G
20	2.0	2.0	2.2	2.0	2.2	2.5	2.8F	3.2	G	G	G	4.5Y	4.1Y	G	G	C	C	C	C	B	1.8	2.1	3.1	2.4
21	2.5	5.2	6.5	5.5FB	6.5	3.7	3.7	4.2F	3.5F	G	G	G	G	5.6	6.6	5.1	4.4Y	5.6	5.6	G	4.8	6.0	3.0	3.4
22	2.2	2.2	2.0	2.0	2.0	2.3	3.2	4.1	5.8	G	G	4.6	G	B	B	G	G	3.7	3.2Y	2.0	2.2	8.4	5.0	4.5
23	3.6	3.2	2.1	2.0	1.6	2.3Y	3.2	3.4	G	6.2	5.3	4.3	4.1	G	5.4Y	6.6	6.2	7.4	7.2	3.6	3.2B	2.6	3.8B	3.4
24	3.4	3.5	2.4	2.4	2.0	G	G	3.2	G	4.9	4.2	9.2F	6.8	5.2	4.7	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	G	G	G	G	4.7	5.6	4.2	3.9	2.7B	3.0	G	1.8
26	2.2	2.7	2.4F	2.6	2.1Y	2.2	G	3.5F	G	C	C	4.2	5.6	5.0	5.8	11.1	4.5	4.7	3.6	2.8	5.8	3.5	G	2.0
27	2.2	3.6	4.4	3.8	2.8	B	3.4	3.6	5.0	5.6	7.8	9.0B	5.8	6.2	8.0	5.8	5.2	6.2B	5.4B	4.8	4.2	3.7	6.2	3.5
28	3.6	3.5	2.8F	3.5Y	2.2	2.7Y	3.9B	3.8	4.8	G	4.6	4.9	5.2	4.7	4.2	5.0	5.6	10.0	10.5	8.0	5.8	2.0	1.9	2.0
29	2.1	B	2.4	2.2Y	2.0Y	2.0	2.8	3.6	4.6	G	4.0	G.	B	B	B	4.2Y	5.8B	3.8	2.8	5.2YB	(3.8)BF	4.5	5.5	9.8
30	4.8	3.8F	3.6	2.0	3.0F	3.6F	9.0BF	6.8	4.6	4.5	5.0	7.5YBF	7.4	4.7	B	G	3.6	3.6	2.7	3.5	4.8	3.5	3.6	3.3
31	3.8	3.0	(4.1)Y	3.4	3.7	2.5	G	4.0	4.9	8.9	6.4	5.5	4.1	7.2YB	G	4.6	5.4	6.3	8.4	6.6	(3.6)Y	B	1.7B	2.2
Median Value	3.5	3.5	3.6	3.1	3.0	2.9	3.6	4.2	5.0	5.4	5.3	5.0	5.5	5.0	5.0	4.6	5.1	5.6	4.4	4.3	3.8	3.6	3.6	3.5
Count	29	28	29	28	27	28	29	30	30	28	29	30	29	27	27	28	29	29	29	29	30	29	28	29

fEs

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 8

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

IONOSPHERIC DATA

Aug. 1950 | (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	(2.7)$^{J,P}_{F}$	3.0	3.0	2.8	3.2	2.8	3.1	3.2	B	3.4	(3.2)^{P}	(2.8)^{P}	B	B	3.1	2.9 B	3.0	3.0 P	3.1^{S}	3.2	2.9	3.0	(2.7)$^{P}_{F}$	B F
2	F	A	2.8	(2.8)^{J}P	(3.1)^{C}	(3.4)^{J}F	(3.3)^{J}F	(3.3)^{J}	3.5	(3.2)^{P}F	3.2	2.8	2.9	2.8	3.0	3.0	(2.8)^{J}	A	(3.1)^{J}	(3.0)^{P}	C	3.0	3.0	(2.7)^{P}F
3	FS	FS	F	F	(2.8)^{F}	2.9 F	2.8	3.4	3.0	3.0	2.9	A	(2.9)^{J}	3.0	B	A	A	A	(3.0)^{J}	(3.1)^{P}	3.0	B	C	BS
4	C	C	C	C	C	B	BFH	(3.2)^{J}F	3.2	2.6	A	A	A	2.7	3.0	2.9	2.8^{P}	3.0	3.0^{H}	3.2^{B}	3.4	2.8^{H}	2.9^{H}	2.8
5	2.9^{Z}	2.8^{Z}	2.6	C	C	C	B	B	A	C	B	B	A	A	2.8	B	(3.1)^{P}	3.1 P	3.3	B	2.9	2.8	2.9	F
6	2.6	2.6$^{F}_{Z}$	3.0^{F}	3.1^{F}	3.1 F	3.0 F	C	3.3	(2.4)^{J}	3.1^{B}	3.2	(2.8)^{P}	(2.7)^{C}	2.6	B	B	3.4	3.0	3.0	3.1	(3.3)^{J}	2.9	2.9	3.0
7	2.7	2.8	3.0	3.2	3.3^{P}	S	(3.4)$^{P}_{S}$	3.5	3.2	3.0	2.9	B	(2.9)^{J}	(3.0)^{C}	3.0	3.1	3.1	2.9^{P}	(2.9)^{P}	(3.1)^{J}	(2.9)^{P}	(3.0)^{J}	2.9^{P}	2.9
8	2.7	2.7$^{P}_{S}$	2.8^{P}	2.9$^{P}_{F}$	2.7	(3.0)^{P}	3.4	3.2	3.4	3.0	2.9	3.1	2.6	3.1	3.0	3.0	A	A	B	B	B	2.6^{K}	2.7^{K}	2.6^{K,P}
9	A^{K}	2.7^{K}	2.7^{K,P}	3.1^{K,H}	3.2^{K}	2.7^{K,P}	3.2^{K}	3.2^{K}	A^{K}	A^{K}	A^{K}	B^{K}	B^{K}	B^{K}	A^{K}	2.9^{K}	B^{K}	2.9^{K}	2.9	(2.9)^{P}	2.9	2.9	3.0^{H}	2.9
10	2.7	2.7 F	(3.0)^{J}P	3.0	2.9^{V}	A^{K}	2.8^{K}	(3.1)^{K,J}	A^{K}	2.9^{K}	A^{K}	A^{K}	3.0^{K}	G^{K}	(2.6)^{K,J,P}	A^{K}	2.7^{K}	A	3.1	3.2	2.6	2.6	2.5^{F}	2.8
11	2.7	2.6	3.0	3.1	3.1	3.3	2.6^{K}	G^{K}	2.9^{K}	3.6^{K}	B^{K}	B^{K}	2.7^{K,P}	3.1^{K}	2.6^{K}	(2.9)^{J,K,C}	3.0	3.4	3.0F	3.0	2.8	2.6 F	2.7	2.6
12	2.6	2.8	3.1^{S}	3.0	(3.2)^{J}	(2.8)^{B}	3.4	2.9	A	(3.0)^{B}	3.0	3.2	3.0^{B}	2.9	2.9	(3.0)^{C}	3.0	3.1	S	3.4	2.8	2.7	2.8	(2.8)^{C}
13	2.8	2.9	(3.1)^{J}	2.6	2.7^{Z}	3.0^{Z}	2.9^{Z}	2.9	2.9^{Z}	2.9	3.3	3.2	3.2	2.8	2.9	3.0	3.3	3.1	3.1^{P}	B	3.1^{P}	(2.9)^{B}	2.7	2.7
14	2.7	2.8	2.8	2.6	2.5	2.6	2.9	(3.1)^{J}	(3.2)^{J}	3.1	3.1	3.0	AF	A	3.0	3.0	3.2^{S}	3.2	3.1	A	A	2.8	(2.7)^{J}F	(2.8)^{J}F
15	2.7	(2.8)$^{P}_{F}$	2.9	3.2$^{B}_{F}$	(3.3)^{J}F	2.9	3.0	B	(3.2)^{J}	3.2	A	2.9	2.9	3.0	3.1	3.1	3.0	3.0	3.0	(3.2)^{J}P	A	A	A	2.7
16	A	2.8 F	(2.8)$^{J,P}_{F}$	(2.9)^{J,P}	2.7	2.9	3.0	2.9^{B}	(3.1)^{P}	(3.5)^{J}	A	A	(3.1)^{B}	3.0 F	2.8	(3.1)^{P}	3.1^{S}	3.0	3.0^{S}	(3.0)^{J}	(3.0)$^{P}_{B}$	(3.1)^{B}	(2.9)^{C}	(2.7)$^{J}_{F}$
17	(2.6)^{F}	2.9$^{F}_{Z}$	2.9	2.9	3.3	3.4	3.1	(3.3)^{P}	3.5	A	3.4	3.0	2.8	3.7	3.2	2.8^{Z}	3.1	(2.9)$^{P}_{S}$	3.0	(3.2)$^{P}_{S}$	(3.2)^{J}	(3.2)$^{P,S}_{F}$	2.9	2.9
18	(2.8)$^{F}_{S}$	2.9F	3.0^{F}	3.1	(2.9)^{J}F	(2.9)^{J}F^{Z}	3.0	3.1	(3.4)^{J}	3.4	3.0	3.1	3.2	2.9	2.9	3.0	3.2	3.0	2.9^{P}	3.3^{S}	3.1	3.0	(3.1)^{J}F	3.0
19	BF	2.5^{F}	(2.6)^{P}	3.1^{H}	3.0F	B	2.9	3.4	(3.3)$^{J,F}_{S}$	S	3.1	2.7	2.8	A	2.8	3.0^{P}	3.0^{P}	2.7^{P}	B	S	B	B	B	(2.9)^{P}
20	F	(2.6)^{J}F	(2.4)^{J,P}F	(2.5)^{J}F	(2.5)^{J,P}F	(2.5)^{J,K}F	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	C^{K}	C^{K}	C^{K}	C^{K}	2.6^{K}	2.5^{K}	2.4^{K}	3.1^{K}	2.7^{K}
21	B^{K}	S^{K}	A^{K}	AF^{K}	A^{K}	A^{K}	G^{K}	3.7^{K}	G^{K}	G^{K}	G^{K}	G^{K}	G^{K}	A^{K}	A^{K}	G^{K}	2.8^{K}	3.3^{K}	3.2^{K}	2.8^{K}	3.2^{K}	A^{K}	2.8^{K}	2.9^{K}
22	3.0^{K}	2.7^{K}	2.6^{K}F	2.8^{K}F	2.8^{K}	2.7^{K}F	3.0^{K}	3.2^{K}	3.5^{K}	3.2^{K}	3.0^{K}	3.0^{K}	2.6^{K}	2.8^{K}	2.9^{K}	3.0^{K}	3.2^{K}	3.1^{K}	3.2^{K}F	2.8^{K}	3.0^{P}	(3.0)^{P}F	2.6^{P}F	2.9^{P}
23	2.8^{F}	2.8^{F}	2.7^{F}	(2.7)$^{P}_{F}$	2.8F	2.8F	3.5	3.2	3.4	3.4	3.1	3.4	3.0	2.9	(3.0)^{J,P}	3.4	3.1	A	3.0	3.2	3.1^{P}	(2.8)$^{P,B}_{S}$	B	B
24	2.8^{H}	2.8	2.9	2.8	2.9	3.3	(3.3)^{J}	3.4	3.1	3.6	(3.3)^{J}	3.2	3.1	3.0	3.1	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	2.9	3.0	(2.9)$^{P}_{S}$	3.2	(3.2)^{P}	3.1	(3.0)^{P}	(3.1)^{J,P}	3.3^{B}	3.0	2.7	2.7
26	2.6	2.8	3.0	2.9	3.1	3.2	3.4	3.4	3.2	C	C	3.0	3.0	2.9	3.0	A	(3.4)^{J}	3.0	2.9	S	3.2^{S}	3.1	3.0	2.8
27	2.8	(3.0)^{S}F	(3.1)^{J,P}F	(3.2)^{J}F	3.1^{F}	(3.0)^{S}	3.4	3.8	3.5	3.6	(3.4)^{J}	A	(3.3)^{J}	(3.1)^{J}	A	(3.1)^{P}	3.1	3.3	S	S	3.3	3.0	S	2.9^{H}
28	2.9	2.7	2.7F	2.9F	2.9	2.8	3.1	(3.3)^{J}	3.5	3.2	(2.7)^{J}	2.9^{P}	3.0	3.0	3.2	3.1	3.0	AF	A	(3.1)^{J}	B	3.0	2.9^{P}	2.5
29	2.6	2.9	2.8	2.7	2.9	(3.0)$^{P}_{S}$	(3.4)^{J}	3.5	3.4	3.3	3.1	(3.0)^{J}	(3.2)^{J}	(3.3)^{J}	(3.1)^{J}	3.0	3.3	(3.3)^{J,P}	3.4	C	2.8	2.6	(2.7)^{J}F	A
30	2.9^{B}F	2.5F	2.7F	3.1	3.3 F	3.4 F	AF	3.7	3.1	(3.2)^{J}	(2.9)^{S}	B	(3.3)^{J}	3.2	3.1	(3.2)$^{J}_{S}$	(3.2)^{P}	3.2 P	(3.1)$^{P}_{B}$	3.4	2.9	2.8	2.9	B
31	2.9	2.8	2.9	2.9 P	3.1	(3.2)^{P}	3.3	B	3.6	A	2.9	(3.2)^{J}	B	B	3.2	(3.1)^{J}	3.3	(3.1)^{P}	S	3.4^{P}	2.9	2.9 P	3.0$^{P}_{S}$	3.0 P
Median Value	2.7	2.8	2.9	2.9	3.0	3.0	3.1	3.2	3.2	3.2	3.0	3.0	2.9	3.0	3.0	3.0	3.1	3.1	3.0	3.1	3.0	2.9	2.9	2.8
Count	22	26	27	26	27	24	27	27	25	24	22	20	25	24	26	24	26	23	23	22	24	26	25	24

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K .9

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

IONOSPHERIC DATA

Aug. 1950 | 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	AE	1.7	A	A	1.7	1.8	A	A	AS	A	A	4.4	4.4	4.2	4.4	4.2[A]	A	A	2.0	A	A	A	A	A
2	A	A	A	A	C	2.0	AE	AE	A	A	A	A	A	4.0	A	A	A	A	A	A	A	A	A	A
3	A	A	A	A	AE	2.3	A	AE	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4	C	C	C	C	C	A	2.5	A	3.5	4.2	A	A	A	3.8	4.4	4.3	A	3.0	A	A	A	A	C	1.8
5	A	1.8	1.6	C	C	C	N	3.0	A	C	A	A	A	A	4.6[A]	A	A	A	3.2	A	A	A	A	A
6	A	AE	AE	AE	AE	AE	C	3.3	A	4.4	4.1	4.1	C	4.3	4.1	3.5	A	A	A	A	A	A	1.3	1.7
7	A	1.8	A	1.2	1.2	1.7	2.8	3.2	3.4	3.8	3.8	4.1	4.4	C	4.2	4.0	3.4	A	2.8	A	A	A	A	1.4
8	1.2	A	1.8	A	A	2.3	2.8	3.2	3.6	A	A	4.3	4.3	4.1	A	A	A	A	A	A	A	AE	A	A
9	A	A	A	A	3.6	A	A	2.8	A	A	A	A	A	A	A	A	3.5	4.3	3.0	A	A	1.4	A	A
10	A	A	A	A	E	A	A	A	A	3.8	A	A	A	4.1	A	A	4.0	A	A	A	A	A	A	1.1
11	1.1	1.9	AE	AE	1.9[F]	2.0	2.4	3.3	A	A	4.0	A	4.2	4.2	A	4.1	A	A	A	A	A	A	A	1.1
12	A	1.8	1.8	1.4	A	1.6	(2.8)[B]	A	A	3.5	3.8	4.1	4.2	4.2	3.6	C	3.8	(2.8)[A]	A	1.4	A	1.7	1.7	C
13	1.7	A	A	AE	1.1	1.4	2.4	A	A	3.8	4.0	4.1	4.2	4.1	4.1	3.7	A	3.0	2.0	A	1.4	1.6	A	1.2
14	1.4	1.5	1.3	A	1.6	1.6	A	2.9	A	A	A	4.1	AE	A	A	3.6	A	A	A	A	A	A	A	A
15	A	A	A	3.5	A	A	2.7	A	3.5	A	A	4.2	4.2[A]	4.1	4.1	3.6	3.4	A	2.7	A	A	A	A	A
16	A	A	A	A	AE	AE	N	2.7	3.4	A	A	A	A	A	A	3.8	A	3.4	2.7	A	A	A	A	A
17	1.1	A	A	A	A	(2.2)[B]	2.8	A	A	A	4.2	4.2	3.8	4.6	4.1	4.0	A	A	A	A	1.6	1.4	1.2	1.5
18	1.4	E	E	E	E	1.1	2.2	3.2	3.6	A	4.2	A	4.2	4.2	3.8	3.9	A	2.7	2.8	AE	1.6	AE	1.5	1.4
19	AE	1.6[F]	A	A	1.9	2.0	2.4	3.0	4.0	A	A	6.7	A	A	A	A	A	A	A	A	1.6	1.4[F]	1.4[F]	1.4
20	1.6	1.4[F]	1.5	1.6	1.4[F]	1.8	2.6	3.2	3.4	3.2	3.6	(3.7)[B]	4.1	3.7	3.7	C	C	C	C	1.5	1.5	1.8	1.8	1.2
21	A	AE	A	AE	A	A	A	2.8	3.5	3.7	3.8	4.3	4.2	A	A	A	3.2	A	2.0	1.4	A	A	A	1.8
22	1.6	1.1	E	1.2	E	1.2	2.6	A	A	4.1	4.3	4.2	4.1	4.0	3.8	3.6	3.3	2.7	2.7	A	1.8	A	A	A
23	A	1.8	1.1	1.2	1.2	1.9	2.3	2.8	3.2	A	A	4.0	3.3	4.1	A	A	A	A	A	A	A	A	1.6	(1.6)[B]
24	E	AE	1.1	A	1.2	1.6	2.1	A	3.5	4.4	4.0	4.3	4.5	4.5	A	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	4.1	4.1	4.1	3.6	A	2.7	2.6	A	1.4	1.4	1.2	1.1
26	1.1	1.3	1.4	1.2[F]	1.1	1.6	2.4	2.9	3.4	C	C	4.2	4.8[A]	4.4[A]	4.2	A	A	A	2.6	A	A	A	1.4	1.5
27	1.2	1.6	A	A	1.6	2.0	2.8	2.8[F]	3.2	3.6	A	A	4.4	4.2	A	4.0	A	A	A	A	AE	AE	AE	A
28	AE	A	A	1.3	1.7	1.3	A	2.8	AE	3.5	4.1	4.5	4.1	4.1	3.6	3.8	A	A	A	A	A	1.6	1.4	A
29	1.5	1.2	1.4	A	1.2	1.4	A	N	3.4	4.0	4.1	4.4	4.6	4.2	5.5	A	A	2.9	1.9[F]	AE	AE	1.7	AE	A
30	AE	A	A	1.6	A	1.8	AE	AE	A	A	A	A	8.7	A	4.8	3.6	3.3	3.0	2.3	1.7	A	A	A	A
31	A	A	A	A	A	1.5	3.2	2.8	3.2	A	4.4	A	4.8	A	4.1	4.0	AE	AE	A	A	A	1.6	1.7	1.8
Median Value	1.3	1.6	1.4	1.2	1.2	1.8	2.6	2.9	3.4	3.8	4.0	4.2	4.2	4.2	4.1	3.8	3.4	3.0	2.6	—	1.6	1.6	1.4	1.4
Count	12	14	11	10	17	22	17	17	15	13	14	18	21	21	18	17	8	10	14	4	7	11	11	15

fminF

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

Aug. 1950 | 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	1.1F	E	1.3	1.3	1.3	1.4	1.4	1.5	1.6	2.0	4.2	2.8	2.8	2.8	3.0	2.0	1.4	1.3	1.3	1.6	1.4	1.4	1.3	1.3
2	1.1	1.1	1.1	1.1	C	1.3	1.4	1.4	1.9	1.4	1.4	1.4	1.5	3.2	(2.0)B	2.0	1.6	1.6	1.6	1.4	1.4	1.4	1.4	1.4
3	1.2	1.1	1.1	1.1	2.2	1.2	1.4	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.7	1.5	2.0	1.6	1.4	1.4	1.6	1.4	C	1.4
4	C	C	C	C	C	1.2	1.5	2.0	2.0	1.5	1.5	2.6	2.6	2.0	2.1	1.5	1.6	1.4	1.6	1.6	2.0	2.0	2.0	2.0
5	1.2	1.1	1.2	C	C	C	1.4	1.3	1.5	C	4.3	2.9	2.9	2.8	2.8	2.0	1.4	1.4	1.3	1.4	1.5	1.5	1.4	1.1
6	1.4	E	E	E	E	1.1	C	1.2	1.8	2.0	2.0	2.0	C	2.6	2.8	2.0	1.4	1.4	1.3	1.2	1.3	1.3	B	1.2
7	E	1.1	1.2	1.2	1.2	1.6	1.6	1.5	1.6	1.4	1.6	1.8	1.6	C	2.0	1.4	1.4	1.4	1.8	1.2	1.4	1.4	1.4	1.3
8	1.2	1.1	1.2	E	1.1	1.3	1.3	1.4	1.3	1.5	1.5	1.7	3.1	2.1	1.6	1.9	2.0	2.0	1.3	1.3	1.6	1.4	1.3	E
9	1.1	1.2	1.2	E	1.2	1.4	1.4	(1.6)B	1.3	1.2	1.4	2.2	2.0	2.8	2.5	2.0	2.0	2.0	1.4	1.4	1.5	B	1.4	1.2
10	1.2	1.2	1.1	1.2	1.1	1.2	1.3	1.2	1.4	1.4	1.9	2.8	2.6	(2.0)B	(2.0)B	2.7	1.5	1.4	1.4	1.4	1.4	1.4	1.1F	
11	1.1	1.1	1.1	1.1	E	1.1	1.2	1.3	1.7	2.0	3.0	3.1	2.8	2.8	2.8	2.0	1.5	1.3	1.2	1.2	1.3	1.5	1.3	1.2
12	1.1	1.1	1.2	1.2	1.1	1.6	1.4	1.6	1.4	1.4	1.4	(1.6)B	(1.6)B	2.1	1.6	C	1.9	1.4	1.3	1.7	1.4	1.4	1.5	C
13	1.1B	1.1	1.2	1.1	1.1	1.6F	1.4	1.6	1.4	1.4	1.4	1.5	2.0	1.7	2.0	1.6	2.0	1.8	1.4	1.6	1.6	1.8	1.3	1.2
14	1.4	1.1	1.3	1.3	1.2	1.3B	1.6	1.6	1.4	1.4	1.5	1.6	1.6	2.6	2.0	1.4	1.5	1.3	1.3	1.3	1.3	1.3	1.4	
15	1.2	E	1.1	1.1	1.1	1.5	2.0	1.5	1.9	2.0	2.6	2.9	2.8	2.0	2.0	1.9	2.0	1.4	1.3	1.4	1.4	1.4	1.4	1.1
16	1.1	1.1	1.1	1.2	1.1	1.3	1.5	1.6	1.6	1.8	1.6	2.0	2.7	2.8	2.7	2.0	2.7	1.4	1.4	1.5	1.4	1.8	1.6	1.3
17	1.1	1.2	1.1	1.2	1.1	1.2	1.2	1.4	1.3	2.0	2.0	2.5	2.0	2.0	2.5	1.7	1.4	1.3	1.2	1.6	1.3	1.4	E	1.2
18	1.1	E	E	E	E	E	1.1	1.2	1.7	1.7	1.4	1.4	1.4	1.9	1.9	1.6	1.5	1.6	1.3	1.4	1.5	1.4	1.3	1.1
19	1.1	1.1F	1.1	1.2	E	1.8	1.2	1.4	1.4	1.6	1.6	1.6	1.6	1.6	1.7	(1.6)B	1.6	1.4	1.4	1.4	B	B	B	B
20	1.2FB	1.4	1.5	1.6	1.4	1.4	1.4	1.4	1.5	1.5	1.9	2.0	2.8	2.0	1.5	C	C	C	C	B	1.7	1.8	3.0	1.3
21	1.1	(1.3)F	1.1F	1.2B	1.1F	1.6	1.2	1.1	1.5	1.7	1.7	2.3	2.0	2.2	1.6	1.6	1.2	1.6	1.3	B	1.3	1.4	1.4	1.2
22	1.1	1.1	1.1F	1.1F	E	1.2	1.4	1.3	1.6	1.4	1.6	(2.0)B	2.0	2.0	2.0	2.0	2.0	1.4	1.4	1.4	1.8	1.5	1.5	1.3
23	1.1	1.1	1.4	1.1	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.8	1.9	2.0	2.0	1.6	1.6	1.4	1.2	1.4	1.6	1.4B	1.6	1.4
24	E	E	1.1	1.1	1.2	1.4	1.6	1.4	1.4	1.9	1.9	2.0	2.0	2.5	2.0	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	2.7	1.8	1.6	1.3	1.4	1.3	1.2	1.4	1.6B	1.4	E	1.6
26	1.1	1.1	1.1	E	E	1.1	1.1	1.1	1.4	C	C	1.6	2.0	2.0	2.0	2.0	1.4	1.3	1.2	1.2	1.2	1.2	B	1.2B
27	1.2	1.2	1.2	1.2	1.2	B	1.4	1.3	1.4	1.5	1.4	1.4	1.4	1.8	1.6	1.4	1.4	1.2	1.4	1.2	1.3	1.3	1.4	1.1
28	1.1	1.1	1.1	1.3	1.1	E	1.3	1.7	1.3	1.3	1.4	1.6	1.6	1.6	1.4	1.4	1.4	1.3	1.3	1.6	1.6	1.6	1.6	1.5
29	1.5	B	E	1.2	E	1.6	1.4	1.4	1.4	1.6	(2.0)B	(2.0)B	1.8	B	2.0	2.0	1.4	1.3	1.4	1.8	1.6	1.6	1.6	1.1
30	1.1	1.2	1.3	1.5	1.6	1.4	1.5	1.4	1.5	1.6	1.9	2.7	2.8	3.3	2.1	2.0	1.4	1.3	1.7	1.4	1.4	1.4	1.5	1.1
31	E	1.1	E	1.1	E	1.5	1.3	1.2	1.5	2.0	2.0	4.0	3.6	2.7	2.3	2.8	1.8	1.6	1.6	1.4	1.6	B	1.5B	1.4
Median Value	1.1	1.1	1.1	1.2	1.1	1.4	1.4	1.4	1.5	1.5	1.6	2.0	2.0	2.0	2.0	1.9	1.5	1.4	1.3	1.4	1.4	1.4	1.4	1.2
Count	29	28	29	28	27	28	29	30	30	28	29	30	30	29	31	28	29	29	29	28	29	27	26	28

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

Aug. 1950 | Zd | 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	(120)JPF	120	60	70	110	90	100	60	B	50	A	(80)P	B	B	80	100	80	90P	120S	90	90	90	(80)PF	BE
2	E	A	70	(110)JP	C	(50)JF	(60)JF	(90)J	G	A	50	110	130	100	80	110	A	A	A	(110)P	C	80	110	(80)PF
3	FS	FS	F	F	80F	80F	130	60	110	A	A	A	(70)J	100	A	A	A	A	(80)J	(100)P	120	B	C	BS
4	C	C	C	C	C	B	BHF	(80)JF	100	60	A	A	A	100	80	120	60P	90	80H	60	100	90H	50H	60
5	50Z	100Z	100	C	C	C	B	B	A	C	B	B	A	A	90	B	(80)P	70P	70	B	110	90	70	F
6	B	160FZ	90F	140F	100F	80F	C	50	(100)J	60B	60	(110)P	(120)C	120	B	B	110	100	140	120	(90)J	80	100	90
7	90	130	100	100	120P	S	(100)PS	120	190	90	100	B	(50)J	C	110	80	60	110P	(110)P	(80)J	(100)P	(90)J	70P	(90)S
8	90	80PS	130P	80PF	50	(60)P	60	80	30	90	110	140	100	90	140	70	A	A	B	B	B	110	110	140P
9	A	130	160P	60H	110	140P	80	80	A	A	A	B	B	B	A	G	B	G	60	(90)P	80	70	80H	80
10	80	80F	(90)JP	70	80V	A	80	A	A	G	A	A	G	G	A	A	80	A	110	90	110	100	90F	80
11	100	90	110	150	100	130	100	G	70	120	B	B	G	30	G	(70)J	70	60	100F	100	100	90F	60	120
12	150	90	40S	120	(80)J	110	50	90	A	70	90	80	60	120	80	[80]C	70	60	S	70	40	70	80	(80)C
13	70	100	(80)J	A	90Z	70Z	120Z	110	A	110	G	50	G	80	120	90	40	80	90P	B	110P	B	130	110
14	110	150	150	180	120	110	110	(60)J	(110)J	80	90	G	AF	A	A	80	80S	130	50	A	A	A	A	(90)JF
15	90	(120)JPF	100	140F	(60)JF	90	120	B	(60)J	40	A	110	80	80	90	50	110	90	120	(70)JP	A	A	A	50
16	A	60F	(170)JPF	(130)JP	100	160	120	100B	(130)P	(60)J	A	A	60	70F	90	(110)P	60S	90	90S	(80)J	(90)P	100	C	(100)JF
17	(110)PF	70FZ	80	80	110	100	80	(90)P	80	A	50	60	110	120	110	B	40	(120)PS	90	(60)PS	(50)J	(70)PS	100	90
18	(70)PS	90F	60F	90	(110)JF	(120)JFZ	110	80	(40)J	60	120	70	100	110	70	90	90	140	160P	90S	140	100	(130)JF	90
19	BF	(130)F	(110)P	50H	60F	B	100	70	(90)JP	S	50	A	50A	A	80	90P	100P	100P	B	S	B	B	B	(40)P
20	F	(90)JF	(130)JP	(80)JF	(110)JF	(80)JF	G	G	G	G	G	G	G	G	G	C	C	C	C	120	130	70	70	110
21	B	S	A	AF	A	A	G	G	G	G	G	G	G	A	A	G	50	40	100	80	40	A	90	80
22	80	100	110F	90F	70	70F	G	90	50	G	G	G	G	30	80	80	50	90	90F	80	80P	(110)PF	90PF	80P
23	60F	100F	120F	(80)PF	90F	130F	70	130	50	60	60	40	50	40	(70)JP	40	60	A	140	70	90P	(90)PS	B	B
24	110H	160	70	120	80	40	(40)J	250	100	G	(20)J	110	40	90	50	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	70	70	(90)PS	50	(60)P	120	(160)P	(90)JP	(80)B	90	130	100
26	130	80	110	140	130	130	90	100	130	C	C	60	50	80	70	A	(100)J	100	110	S	100S	100	120	70
27	70	(60)SF	(50)JF	(60)JF	90	(130)S	90	20	80	80	A	A	G	(50)J	A	(80)P	100	60	S	S	60	80	S	110H
28	90	100	90F	80F	110	80	60	(50)J	80	130	G	200P	100	70	60	80	100	AF	A	A	B	110	90P	80
29	120	90	90	90	80	(120)PS	(70)J	80	110	20	80	(70)J	(40)J	(70)J	(70)J	110	110	(60)JP	110	C	130	100	(90)JF	A
30	80F	100F	70F	90	120F	90F	AF	A	90	(120)J	80	B	B	40	80	(70)J	(100)P	80P	(120)P	50	60	90	70	B
31	80	90	80B	110P	50	(120)P	70	B	30	A	90	(120)J	B	B	70	(110)J	40	(100)P	S	90P	80	(80)PB	80PS	80P
Median Value	90	100	90	90	100	100	100	90	100	80	90	110	100	80	80	80	80	90	100	90	90	90	90	80
Count	21	26	27	25	26	24	26	25	24	22	19	19	24	23	24	23	25	23	22	21	24	24	23	24

Zd

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 12

37

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

IONOSPHERIC DATA

Aug. 1950 | 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	8.3	7.0	6.5	5.7	5.8	5.6	7.0	8.5	6.5	6.3	6.9	7.4	9.0	9.3	9.4	10.4	10.6	9.4	8.5	8.5	8.0	7.1	A	7.1
2	6.8	7.0	6.1	(5.1)	5.4	5.4	5.5	C	C	C	C	C	C	C	C	C	C	C	C	8.5	[8.1]	7.8	8.2	7.9
3	7.3	8.0	7.1	6.9	6.2	5.1	5.6	7.6	7.6	8.4	A	A	A	A	A	10.0	9.6	10.5	11.6	11.3	8.5	8.1	7.9	7.7
4	8.0	8.4	8.5	7.4	A	6.7	7.0	8.1	C	A	7.2	9.5	A	9.0	9.5	11.0	11.0	10.9	11.8	10.6	7.7	6.0	6.3	6.6
5	6.9	6.8	6.3	6.5	6.7	(6.3)	6.3	6.5	6.7	[7.2]	7.7	7.3	7.4	9.7	10.1	11.0	11.4	10.4	A	A	C	9.4	6.6	6.0
6	6.2	8.1	8.2	8.5	6.5	5.1	5.9	7.8	8.4	A	7.2	7.9	8.6	8.5	10.3	10.9	11.2	11.1	11.5	11.4	[10.0]	8.7	8.8	9.0
7	S	7.3	7.6	7.7	7.2	3.9	4.8	6.0	6.8	7.9	7.7	8.2	8.5	8.6	8.5	8.9	10.1	10.2	10.1	9.9	8.8	8.6	8.2	7.6
8	6.5	6.9	7.7	7.0	6.8	[6.4]	6.0	5.5	6.9	7.4	7.2	6.9	8.1	11.4	8.5	8.4	8.3	A	A	8.5	B	8.5	C	C
9	(5.8)	6.1	5.8	6.1	5.5	4.7	5.5	6.0	A	A	A	5.4	A	A	5.8	[5.8]	(5.9)	5.9	6.1	6.4	7.0	(6.0)	6.0	6.0
10	6.3	5.6	5.1	4.7	4.7	4.4	4.7	5.5	5.4	5.9	6.2	5.8	6.0	6.1	6.4	6.5	6.9	7.1	7.2	6.5	6.0	5.6	6.1	(6.4)
11	5.9	5.4	5.8	6.1	4.4	4.9	[5.2]	5.6	8.0	A	A	A	8.9	9.1	8.9	9.0	7.7	7.3	7.2	7.1	6.2	6.0	6.1	5.8
12	5.7	5.7	5.6	5.2	4.3	4.1	5.2	5.9	5.5	7.5	7.6	8.0	8.5	8.4	7.3	7.2	9.0	10.9	10.5	8.6	5.0	5.9	C	C
13	C	5.9	5.6	4.8	4.9	5.2	6.3	C	C	6.7	7.1	6.9	7.1	6.7	7.7	9.1	9.7	8.6	7.7	(8.5)	7.4	5.8	5.9	5.7
14	5.3	4.9	4.7	4.3	4.0	3.4	4.3	5.7	7.7	6.0	7.1	6.7	7.6	8.4	8.7	9.0	8.7	8.1	8.6	9.1	8.1	5.4	S	C
15	A	F	F	C	C	(4.6)	(4.8)	7.2	8.7	A	6.5	7.7	8.0	[8.4]	8.7	9.0	9.3	9.2	9.0	9.2	9.0	6.2	4.9	5.2
16	5.4	5.4	5.5	(5.3)	4.3	(4.1)	4.5	7.3	7.9	7.7	A	A	A	10.9	9.2	9.4	9.1	8.4	8.4	9.4	9.1	(7.3)	5.7	6.0
17	(6.7)	F	S	(5.6)	(4.6)	5.0	5.2	C	C	C	C	C	C	C	C	C	C	C	C	10.2	9.6	8.5	7.2	7.2
18	7.1	7.2	7.2	6.9	5.8	5.3	5.8	9.5	9.5	9.6	9.9	10.0	10.2	10.0	10.7	9.8	10.0	9.7	10.7	10.2	8.3	7.3	8.0	7.8
19	6.1	6.2	6.2	6.2	(5.3)	5.0	6.1	8.0	7.8	7.8	7.4	7.4	7.8	9.4	9.7	11.4	A	A	A	11.0	9.9	8.0	8.1	7.2
20	6.9	F	7.2	F	F	F	F	C	G	G	A	A	G	G	G	A	A	4.0	4.7	4.4	[4.1]	3.8	4.7	3.3
21	3.0	3.9	3.4	2.9	3.2	A	3.6	4.0	5.1	A	5.3	B	A	A	A	5.7	6.3	6.3	6.4	6.3	5.9	5.6	5.8	[5.5]
22	5.2	5.1	5.7	3.9	4.1	4.8	4.8	7.4	7.0	7.0	[6.8]	6.6	6.4	6.9	7.1	7.6	6.7	7.1	6.9	6.4	(7.2)	7.0	6.7	6.5
23	6.9	6.6	6.0	5.7	4.5	4.6	4.8	6.4	8.3	8.2	7.4	7.5	7.2	8.0	7.6	8.3	8.5	8.8	7.6	8.3	8.1	7.6	7.9	6.7
24	5.9	6.4	6.1	5.7	5.2	5.5	5.5	7.1	8.3	7.4	[7.4]	7.3	8.9	8.6	9.1	[9.0]	8.9	9.0	9.4	8.7	9.0	8.8	7.3	6.3
25	6.0	5.0	4.9	4.8	4.0	4.0	5.2	6.7	6.7	7.7	8.0	8.1	8.0	9.0	10.2	10.1	11.3	9.9	10.1	11.5	10.8	8.6	7.3	[6.6]
26	5.9	5.8	C	C	5.5	4.6	5.6	C	7.3	7.3	7.2	7.7	8.1	8.7	9.3	9.4	9.5	(9.4)	[10.5]	11.5	10.6	5.9	5.7	5.8
27	5.8	5.9	5.7	5.2	5.6	5.6	6.7	7.4	6.9	8.4	8.7	8.9	9.3	9.3	9.9	9.4	9.5	9.6	8.7	A	6.8	6.8	6.4	6.2
28	(6.6)	6.5	5.9	5.7	5.3	4.5	5.0	B	B	6.3	7.5	9.1	10.0	10.8	11.1	10.0	9.6	9.4	A	A	A	A	A	A
29	A	7.3	(7.0)	(6.9)	6.8	(6.6)	7.1	7.5	7.1	7.7	7.8	8.0	9.6	10.8	9.1	8.0	8.8	12.7	11.3	10.8	8.4	8.0	5.9	5.9
30	6.1	5.9	5.7	4.8	4.8	4.8	6.0	S	C	7.3	A	9.7	11.1	10.6	10.2	9.9	9.6	9.3	9.3	8.7	7.2	5.8	6.6	7.5
31	7.1	6.9	6.9	7.0	6.1	4.7	7.0	7.1	6.8	7.3	7.2	A	9.3	10.0	9.9	10.7	10.4	10.9	11.5	10.7	7.3	5.7	5.9	5.8
Median Value	6.2	6.3	6.0	5.7	5.3	4.9	5.5	7.1	7.0	7.4	7.2	7.7	8.3	9.0	9.1	9.2	9.5	9.4	9.0	8.9	8.1	7.0	6.5	6.4
Count	27	28	28	28	28	29	30	24	24	23	23	23	24	26	27	28	27	27	25	28	28	30	26	27

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 1

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

IONOSPHERIC DATA

Aug. 1950 | 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	410	360	330	380	400	380	300	250	250	270	360	370	360	350	390	370	320	300	310	310	310	300	A	(390)
2	(380)	(390)	(360)	(350)	320	300	320	C	C	C	C	C	C	C	C	C	C	C	C	350	[360]	370	350	380
3	370	410	(350)	330	330	350	380	300	330	300	A	A	A	A	A	360	350	370	350	300	300	340	400	400
4	410	370	(390)	350	A	390	370	260	C	A	370	330	A	400	370	370	360	330	300	280	300	360	390	370
5	390	370	390	380	310	(310)	260	250	270	[290]	310	A	A	380	420	380	380	320	A	A	C	330	310	340
6	340	370	330	270	300	300	320	300	280	A	330	350	370	400	400	360	350	350	320	300	[300]	310	360	340
7	S	360	330	300	270	250	270	250	270	300	330	360	400	360	410	410	380	330	330	310	320	320	330	260
8	420	380	410	340	350	[290]	230	280	290	300	310	300	490	320	340	350	400	A	A	A	B	290	C	C
9	(430)	410	390	420	340	350	340	350	A	A	A	G	A	A	G	C	(410)	370	400	310	(320)S	(330)H	410	420
10	350	330	340	330	320	320	350	290	280	G	G	A	B	G	G	430	360	340	310	(300)	330	360	420	(390)S
11	380	410	390	290	280	280	C	390	330	A	A	A	400	360	340	380	310	310	300	300	290	420	370	400
12	400	370	340	340	360	410	420	260	G	320	370	370	300	320	330	380	340	300	300	320	350	380	C	C
13	C	340	350	390	390	(360)S	290	C	C	330	340	310	330	A	370	360	300	260	290	(330)S	340	330	420	(430)
14	260	250	320	320	300	330	310	310	250	260	310	380	350	320	320	320	300	300	310	250	240	390	S	C
15	A	F	F	C	C	(370)	(340)	310	260	A	320	350	350	[350]	350	340	330	310	290	300	230	340	430	410
16	420	(350)	320	(310)	300	(370)	330	300	230	320	A	A	A	280	330	360	270	350	320	290	280	(350)	410	(390)
17	(460)	F	S	(360)S	(350)S	330	310	C	C	C	C	C	C	C	C	C	C	C	C	330	300	280	340	340
18	350	370	300	310	320	380	330	320	330	340	340	360	370	420	410	370	350	340	320	290	280	360	400	380
19	370	370	(400)	310	(410)	410	320	270	280	300	360	350	440	360	A	360	A	A	A	320	340	370	320	350
20	360	F	450	F	F	F	F	C	G	G	A	A	G	G	G	A	A	280	360	340	[390]	440	350	380
21	360	360	400	340	A	A	360	G	280	A	G	B	A	A	A	G	G	330	300	330	380	340	320	(360)
22	400	380	350	330	350	410	320	330	280	250	C	G	330	390	340	300	320	300	290	320	(360)	350	(340)	400
23	350	330	340	340	340	340	310	280	300	300	300	320	350	330	330	310	320	340	310	300	300	300	320	300
24	310	360	370	370	330	280	290	230	270	290	[300]	310	370	310	320	C	280	290	300	300	320	300	320	350
25	400	360	350	330	300	320	260	260	250	290	380	290	370	350	340	330	330	320	300	290	300	310	340	[360]
26	380	380	C	C	290	360	270	C	250	290	310	370	350	360	350	350	350	(330)	[320]	300	260	350	420	380
27	370	390	330	350	310	390	270	240	350	400	380	340	380	400	390	360	350	310	280	A	280	370	350	(330)F
28	(390)	400	390	340	350	330	330	B	B	(260)	340	360	340	350	340	320	330	A	A	A	A	A	A	A
29	A	390	(380)	(430)	(340)	(300)	280	280	260	300	310	360	340	A	300	340	360	330	270	300	280	300	360	330
30	380	330	370	500	330	340	(300)	S	C	290	A	390	340	330	320	310	300	290	290	250	280	280	450	420
31	360	360	350	320	300	310	300	270	260	300	300	A	360	350	330	330	310	320	300	260	260	360	410	360
Median Value	380	370	350	340	330	340	310	280	280	300	340	360	360	360	340	360	340	320	300	300	300	340	360	380
Count	27	28	28	28	27	29	29	24	24	23	22	21	22	24	26	26	27	26	25	27	28	30	26	27

foF2

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 2

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

IONOSPHERIC DATA

Aug. 1950 | 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	340	300A	280	300A	300	320F	270	250	240	230	350	370	350	330	360	340	220H	280	280	250H	(250)S	260A	A	350
2	340	300	300	300	280	270	280	C	C	C	C	C	C	C	C	C	C	C	C	(300)A	[310]C	320	290	270
3	300A	310	300	250	240	250	270	300	280	290	A	A	A	A	A	320A	320	340	300H	270H	260H	280	330	300A
4	330	300	330	250	A	300	270	260	C	A	370	320A	A	370	360	330	300	300	280	250	250	300A	340	310
5	340	290	300	280	260	230	230	230	270	[290]C	310	A	A	370	400	340	330	310A	A	A	C	290	290	300
6	290	300A	(300)A	240	230	220	280	250	250	A	310	330	330	400	370	310	310	310	290	260	[240]C	230	300FA	260
7	290	300	280	250	220A	220A	260	230	250	280	310	350	380	340	400	400	360	290	280	260H	240	260	250	230FA
8	300	330	300	300	300	[260]C	210	210	240	300	290	300	470	300	320	340	360	A	A	A	A	220A	C	C
9	370HK	350K	340K	400K	270K	330K	(300)AK	300KA	AK	AK	AK	500K	AK	AK	460KC	[430]KC	(400)KB	370K	380K	290	290	220H	310	320H
10	290	300	300	300	290	300K	290K	280K	280AK	380K	370K	AK	BK	400K	400K	430K	360	330	300	270	260H	310	370	300
11	300	380	300	260	210	260	270	300	290	A	A	A	370	310	320H	320	300	300	290	240	230A	380	(330)A	310H
12	320H	(350)A	300	270H	300	330	270	250	390	320	370	350	300	320	330	380	330	280	250	250H	300	300	C	C
13	C	300	280	300	330	300	270	C	C	320	340	310	330	400	360	350	300	260	280	260	300	300FA	320	340FA
14	220A	210	280	290	270	280	270	280	250	200	310	380A	310	310	300	290	290	290	250	210	210	310	360	320
15	A	350F	330F	C	C	240H	320	290	260	A	230A	350	350	[340]C	340	330	310	290	280	290	210	280	370	360
16	350	290	280	240	240	260	280A	290	230	300	A	A	A	280	320	340	(260)A	320	320A	250	250	350	270H	320F
17	350	280	280	280	270	330	280	C	C	C	C	C	C	C	C	C	C	C	C	280	260	230	270	290
18	290	300	260	280	300	300	300	300	300	300	320	320	300H	360A	370	350	330	300	280	220AH	210A	230H	300	240H
19	250H	300	340	270	350	340	290	250	280	290	L	350	440	350	A	330	A	A	A	300	330	310	270	280
20	290	(380)F	(350)F	380F	A	A	400F	CK	GK	GK	AK	AK	GK	GK	GK	AK	AK	280K	420K	310K	[300]KC	290KH	280K	300K
21	350HK	300K	350K	260K	AK	AK	300HK	560K	280K	AK	AK	BK	AK	AK	AK	BK	330K	310K	290KH	280K	270KH	250H	270	[280]C
22	300A	330	320	300	320	360	310	260	270	250	[290]C	330K	320K	390K	340K	300K	320K	300K	280K	260K	290	260	290	270
23	300	300A	260	260	300A	300A	240	250	290	290	300C	310	320	330	300	310	300	300A	300	290	240H	230H	250H	230
24	250H	330	300	300	290	250	270	220	260	270	[280]C	300	250	310A	300	290	270	280	280	290	290	240	220	260
25	300	290	290	260	290	290	260	230	250	280	300H	290	300	340	310	300	300	300	270	240	250	240	270	[320]C
26	360	310	C	C	250	220H	240	250	240	260	290	370	350	350	350	330	340	300	260	250	210	200	290	300
27	290	300A	280	280	280	230	240	220	290	370	350	310	370H	360H	360H	310	310	280	250	A	250AF	360A	290	280
28	290	290	360	300	280	280	320	260	250	260	320	300	310	320	310	300	320	320A	A	A	A	A	A	A
29	A	310A	270	340A	(300)A	270	250	250	260	290	300	330	320	A	300	340	330	330A	250	230	230	300A	300HA	300A
30	300A	300A	320	480H	320	280	280	A	240	290	A	370A	310	300	300	300	280	270	260	230	210	250H	330	300A
31	300	290	300	280	280	280	270	250	240	270	280	A	330	350	320	310	300	300	280	220	220	240	320	290
Median Value	300	300	300	280	280	280	270	250	260	290	310	330	320	340	340	330	310	300	280	260	250	280	290	300
Count	28	31	30	29	27	29	31	26	26	23	21	21	22	25	26	27	27	27	25	27	28	30	27	28

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 3

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

IONOSPHERIC DATA

Jul. 1950 | 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							A	L	Q	Q	L	L	5.6	4.8	L	5.1	Q	4.1	L	Q				
2							Q	C	C	C	C	C	C	C	C	C	C	C	C	A				
3							Q	L	Q	5.0 J	A	A	A	A	A	A	4.8	A	L	Q				
4							A	L	C	A	5.0	A	A	L	A	L	4.8	4.7	L	Q				
5							Q	L	L	A	A	A	A	A	5.6 B	5.8	A	A	A	A				
6							Q	Q	4.4	A	L	L	5.0	5.2	5.2	5.0	4.8	L	L	Q				
7							Q	Q	4.0	4.6	A	5.0	5.0	A	A	A	A	L	A	Q				
8							Q	Q	L	4.7	4.7	4.9	5.5	A	L	5.2	L	A	A	A				
9							A	A	A	A	A	4.7	A	A	4.9 F	[4.6] C	4.2	4.3	L	Q				
10							Q	L	A	4.4	4.6	A	5.0	4.8	4.9	4.7	4.5	4.3	L	A				
11							Q	Q	L	A	A	A	A	4.9	5.1	4.6	4.6	L	L	Q				
12							Q	Q	4.8	4.8	4.9	L	5.0	5.0	5.0	5.0	4.8	4.2	L	Q				
13							Q	C	C	A	4.8	5.0	A	A	4.9	5.0	4.5	L	L	Q				
14							Q	Q	L	Q	L	A	5.1	4.8 J	4.9	L	A	A	L	A				
15							F	A	A	A	A	5.2	5.2	[5.2] C	(5.1) L	4.8	4.6	L	L	A				
16							A	4.8	Q	A	A	A	A	A	A	L	A	A F	A	A				
17							Q	C	C	C	C	C	C	C	C	C	C	C	C	Q				
18							Q	L	4.6	A	A	A	A	5.0	B	5.5	L	L	L	L				
19							Q	Q	L	L	L	A	A	A	A	A	A	A	A	A				
20							Q	C	3.8	4.1	A	A	4.4	4.5	4.3	A	A	Q	3.4	Q				
21							Q	3.7	4.0	4.3	4.7 C	A	A	A	A	4.7	4.4	L	L	Q				
22							Q	L	4.2	4.4	[4.6] C	4.9	4.9	5.1	5.0	L	L	4.7	L	Q				
23							Q	L	L	4.8	L	L	L	5.1	L	L	L	Q	Q	L				
24							L	Q	L	L	C	5.1	L	A	Q	L	A	A F	A	A				
25							Q	Q	L	L	5.0	5.0	5.0	L	L	L	L	Q	L	Q				
26							Q	L	Q	L	L	5.6	5.4	L	4.9	5.0	L	4.5	L	Q				
27							Q	Q	Q	4.6	4.9	5.0	4.5	4.8	5.1	L	4.8	L	Q	A				
28							A	Q	Q	L	5.2	L	5.2	A	A	5.0	A	A	A	A				
29							L	4.8	L	L	L	L	A	A	A	A	L	A	A	Q				
30							L	A	A	A	A	A	5.2	L	L	L	L	L	Q	Q				
31							Q	Q	L	L	L	A	A	A	L	L	A	Q	A	Q				
Median Value								—	4.2	4.6	4.8	5.0	5.0	5.0	5.0	5.0	4.6	4.3	—					
Count								3	7	10	10	10	15	12	13	14	11	7	1					

foF1

Sweep 1.2 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

Aug. 1950 | 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							A	230	Q	Q	230	220	220	210	240	250	Q	220A	250	Q				
2							Q	C	C	C	C	C	C	C	C	C	C	C	C	A				
3							Q	270	Q	A	A	A	A	A	A	A	230	A	260	Q				
4							A	A	220	A	230	A	A	230	A	A	A	260	260	Q				
5							Q	220	220	A	A	A	A	A	A	A	A	A	A	A				
6							Q	Q	A	A	A	220	230A	A	220	230	230	240	240	Q				
7							Q	Q	210	250	A	A	230	A	A	A	A	A	A	Q				
8							Q	Q	220A	230	250	A	A	A	250	320	250	A	A	A				
9							A	A	A	A	A	250	A	A	A	240	220	260	260	Q				
10							Q	230	A	230	220	A	240	220	280	A	270	250	260	A				
11							Q	Q	A	A	A	A	A	220	A	A	210	220	240	Q				
12							Q	Q	200	210	230	230A	240	230	230	220	250	260	250	Q				
13							Q	C	C	A	220	240	A	A	230	250	280	220	270	Q				
14							Q	Q	240	Q	A	A	220A	210C	220	280A	A	A	270	A				
15							F	A	A	A	A	320	240A	[230]C	220	240	250	250	A	A				
16							A	280	Q	A	A	A	A	A	A	A	A	AF	A	A				
17							Q	C	C	C	C	C	C	C	C	C	C	C	C	Q				
18							Q	250	230	A	A	A	A	230	B	A	320	240	240	A				
19							Q	Q	260	240	260	A	A	A	A	A	A	A	A	A				
20							Q	C	280	250	A	A	A	230	360	A	A	Q	280	Q				
21							Q	290	A	A	A	A	A	A	A	A	240	250	260	Q				
22							Q	250	220	190	[190]F	190	190	A	230	200A	220	240	250	Q				
23							Q	220	210	210	190	220	220	210	220	240	250	Q	Q	240				
24							240	Q	220	200	[200]C	200	200	A	Q	250	A	AF	A	A				
25							Q	Q	200	200	200	200	200	210	A	A	230	Q	250	Q				
26							Q	230	Q	200A	220	210	240	A	250	270	280	240	240	Q				
27							Q	Q	Q	230	A	210	220	210	300	260A	270	AF	Q	A				
28							A	Q	Q	230	A	210	220	A	A	A	A	A	A	A				
29							230	220	230A	200F	A	220	A	A	A	A	A	A	A	Q				
30							280	A	A	A	A	A	210	210A	210	210	220	220	230	Q				
31							Q	Q	A	220	250	A	A	A	250	A	A	Q	A	Q				
Median Value							—	230	220	220	220	220	220	220	230	240	250	240	250	—				
Count							3	11	14	15	13	14	15	13	15	14	17	14	17	1				

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 5

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

IONOSPHERIC DATA

Aug. 1950 | 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							A	A	A	A	A	A	A	(3.8)B	(3.8)A	A	A	A	A	A				
2							A	C	C	C	C	C	C	C	C	C	C	C	C	A				
3							2.0A	2.8	3.0	A	A	A	A	A	A	A	A	A	A	B				
4							A	(2.8)A	A	A	A	A	A	3.6A	3.2A	3.0A	2.9A	A	A	A				
5							2.0A	2.7	3.1	B	3.8	A	A	A	A	A	A	A	A	A				
6							1.8J	2.4	3.0A	3.0	3.5	3.5	3.6A	(3.4)A	A	3.6A	3.3	2.9A	2.4A	A				
7							2.1	(2.6)H	A	3.3J	A	A	A	3.8A	(3.6)A	A	A	2.8A	A	1.6				
8							2.0	2.4	A	3.2A	3.2	3.9	3.6	3.8	3.7	3.5	3.5	3.0	A	A				
9							A	A	3.0A	3.4	3.8A	AF	A	A	A	B	3.4A	2.9	(2.5)A	1.6				
10							A	A	2.9A	3.2	A	3.6	B	B	(3.8)A	3.6	3.4	3.1	2.5A	A				
11							A	A	A	A	A	A	A	A	A	A	A	(2.6)A	A	B				
12							(2.8)A	2.2A	A	A	A	A	A	3.8A	3.5	A	3.6	2.8	A	A				
13							B	C	C	A	3.5H	A	A	A	A	A	3.2A	A	A	A				
14							2.0A	(2.4)A	3.1A	3.1	3.4	3.5	3.5	3.9A	3.7	3.5A	3.3	3.0	2.3	A				
15							AF	AF	A	2.3	A	A	A	A	3.8	A	3.4A	2.9	2.4	1.4J				
16							1.6	2.5H	A	A	A	A	A	A	A	A	A	A	A	A				
17							A	C	C	C	C	C	C	C	C	C	C	C	C	A				
18							A	A	A	A	A	A	A	A	A	3.3J	A	2.8	A	A				
19							A	2.5	3.0	(3.4)A	3.6	3.8	4.0	3.6J	3.8	B	A	A	A	B				
20							A	C	2.8	3.4A	3.4	3.6	3.8A	3.6	3.4	3.4	3.2	A	A	1.9				
21							2.2H	2.4	3.2A	(3.6)AF	A	3.6	3.9	3.8	A	B	(3.5)A	(3.0)A	2.4A	1.8				
22							B	A	2.4	A	C	3.4A	A	A	A	A	3.4	3.0	2.0	A				
23							A	A	2.8	3.0	B	A	B	A	A	A	A	A	A	B				
24							2.1A	2.2A	3.2J	3.4A	C	A	A	A	A	A	A	AF	A	A				
25							A	A	2.7	3.3A	3.6A	A	3.7	3.7A	3.9A	3.6A	3.3	3.0	A	A				
26							1.6	2.4	3.2	3.5	3.8	A	A	B	3.8	3.6	3.4	3.0	A	1.6				
27							1.6A	2.6	2.5	A	A	3.7J	A	A	A	A	A	3.0	2.4A	A				
28							A	A	A	3.2	A	A	A	A	A	A	3.4	A	A	A				
29							A	A	A	2.8	A	A	A	4.0	A	3.5	3.3	A	A	A				
30							A	A	2.6	AF	A	A	A	A	3.6A	AF	3.2	3.0A	A	A				
31							A	A	A	3.0	3.3	3.6	3.6	3.6	3.6	3.6	3.2	2.8	2.2	A				
Median Value							2.0	2.4	3.0	3.2	3.5	3.6	3.6	3.8	3.7	3.5	3.4	3.0	2.4	1.6				
Count							12	14	16	17	11	10	8	13	14	11	18	17	9	6				

foE

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 6

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

IONOSPHERIC DATA

Aug. 1950 | 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							A	A	A	A	A	A	A	110	A	A	A	A	A	A				
2							A	C	C	C	C	C	C	C	C	C	C	C	C	A				
3							A	120	100	A	A	A	A	A	A	A	A	A	A	B				
4							A	A	A	A	A	110	110	110	110	110	100	A	A	A				
5							A	110	110	B	110	A	A	A	A	A	A	A	A	A				
6							100	110	100	110	110	110	110	110	110	110	110	110	110	A				
7							A	110 H	A	110	A	A	A	140	130	130	A	100	100	100				
8							A	120	A	110	110	110	110	110	110	110	120	100	A	A				
9							A	A	130 A	110	110	A	A	A	A	130	110	110	110	110				
10							A	A	110	100	A	110	100	110	100	110	110	110	110	A				
11							A	A	A	A	A	A	A	A	A	A	A	A	A	B				
12							A	110	A	A	A	A	A	A	110	A	120	110	A	A				
13							B	C	C	A	100 H	A	A	A	A	A	A	A	A	A				
14							110 A	110 A	A	100	100	100	100	A	100	A	100	110	110	A				
15							AF	AF	A	100	A	A	A	A	110	A	A	100	110	110				
16							120	110 H	A	A	A	A	A	A	A	A	A	A	A	A				
17							A	C	C	C	C	C	C	C	C	C	C	C	C	A				
18							A	A	A	A	A	A	A	A	A	100	A	100	A	A				
19							A	110	110	A	110	110	110	110	110	110	A	A	A	B				
20							A	C	120	A	110	100	110	110	110	110	110	A	A	A				
21							110 H	110	110	110	A	110	110	110	A	B	100	100	A	A				
22							B	A	100	A	C	100	A	A	A	A	A	100	110	A				
23							A	A	100	100	B	A	110	A	A	A	A	A	A	B				
24							A	110	110	A	C	A	A	A	A	A	A	AF	A	A				
25							A	A	110	A	A	A	110	110	A	A	100	A	A	A				
26							110	110	110	110	110	A	A	110	110	110	110	100	A	B				
27							A	120 A	A	A	A	A	A	A	A	A	A	A	A	A				
28							A	A	A	110	110	A	A	A	A	A	110	A	A	A				
29							A	A	A	110	A	A	A	110	110	100	100	A	A	A				
30							A	A	110	AF	A	A	A	A	A	A	110	A	A	A				
31							A	A	A	110	110	110	110	110	110	110	110	110	130	A				
Median Value							110	110	110	110	110	110	110	110	110	110	110	100	110	—				
Count							5	13	14	13	11	10	11	13	13	12	15	13	8	3				

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 7

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

IONOSPHERIC DATA

Aug. 1950 | 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	8.2	6.2	5.0	3.2	2.2	6.8 Y	5.4	3.9	3.4 Y	5.7	6.0	5.6	5.0	G	5.6	4.7	6.6	7.8	5.4	5.8	10.7	6.9	8.6	6.0
2	6.8	2.7	2.7	3.3	3.3	2.9	2.2	C	C	C	C	C	C	C	C	C	C	C	C	6.4	C	6.4	3.0	3.0
3	3.8	3.6	4.2	4.6	2.2 F	3.0	2.9	G	G	7.2	9.9 F	10.1 F	10.1	10.5	10.7	7.7	9.6	6.4	5.0	7.2 Y	4.0	4.0	3.0	3.4
4	3.6	4.8	5.6	3.8	9.4	4.2	6.0	5.4	5.0	8.8	6.6	8.8	13.4	5.6	7.8	10.0	5.6	4.4	3.8	4.6	4.6	3.6	G	3.6
5	G	2.0	2.6	G	G	G	2.4	G	4.0 Y	7.6 Y	12.2	10.2	11.8	8.4	5.8	7.0	9.6 B	7.9	11.2	11.1	C	4.2	4.2	2.9
6	2.4	5.0	4.6	3.6	2.8	3.6	3.4 Y	5.2	6.9	8.8	10.0	5.6	9.2	7.0	4.9	4.3	4.2	4.1	3.4	3.1	C	3.0	5.8	3.4
7	3.0	3.4	2.6	2.4	1.8	3.2	2.2	G	3.6	4.6	5.2	4.8	4.4	6.4	5.8	7.4	6.6	6.9	5.2	4.7	3.8	4.6 Y	3.7	5.8
8	3.6 Y	3.0	2.2	3.8	3.6	C	3.2	3.4 Y	4.2	4.4	5.0	5.8	7.0	6.5	(4.9) B Y	6.0	5.4	11.2	7.6 B	8.7	7.2	6.6	C	C
9	5.2	4.8	5.4	3.8	2.6	3.8	5.0	4.6	8.4	6.6	8.7 Y	5.3	7.6	8.8	5.8	G	4.0	3.4	G	4.6 B	6.5 Y	3.2 F	3.4	G
10	2.4	2.9	3.6	3.9	4.1	3.4	3.4	3.2	5.4	4.4 Y	5.2 Y	4.8 Y	G	5.0 Y	5.2	5.2	4.4	4.2	4.3	5.9	6.5	5.2	4.0	3.2
11	6.7 Y	4.8 B	4.2	3.8	3.4	3.8	4.0	4.4	5.7	7.7	9.0	9.3	6.9	5.1	5.1	5.0	3.6	3.6	3.2	2.4	4.2	4.4	4.4	3.8
12	4.4	7.2	4.4	4.1	1.6	2.2	3.2	4.0	4.4	5.2	6.4	7.6	5.8	4.0	4.6	G	G	G	3.8	3.8	G	3.8	C	C
13	C	3.4	3.6	3.0	6.8	3.6 B	4.0	C	C	5.8	4.2	6.2	(7.2) B	6.7	4.4	5.2	4.5	5.2 Y	3.6	2.9	6.8 Y	4.1	3.3 F	4.1
14	3.3	3.7	3.3	3.3	2.4	3.6	2.6	3.4	5.2	5.0	6.7	6.7	6.5	5.0 F	5.2	7.5	8.6	6.2	4.7	6.5	4.2	5.5	4.6	4.0
15	7.6	4.2	3.6 F	C	C	2.8	4.0	7.0	8.0	12.8	8.2	6.4	6.2	C	4.8	4.2	3.5	5.0	4.6	7.0 B	7.4 Y	3.8	3.8	4.0
16	4.4	G	3.6	1.4	G	5.0 Y	4.2	5.6	5.4	6.8	12.8	15.4	14.4 B	8.8	8.6	5.7	6.8	6.4	6.8	4.0	4.8	5.8	4.6	5.6
17	6.4 Y	3.6	2.4	2.8	(4.0) Y	5.0	5.0	C	C	C	C	C	C	C	C	C	C	C	C	3.6 Y	3.2	2.0	3.2	3.8
18	3.8	5.0	3.2	3.8	3.6	3.2	3.0	3.8	4.0 F	6.0	6.4 F	5.8	7.2	6.2	5.8 B	5.7	6.5	4.6	3.8	4.6	3.2	4.4	4.6	5.0
19	3.8	3.0	3.9	3.4	4.1	4.0	3.7	5.6 Y	4.0	8.6 Y	6.6	7.4	6.6	6.8	10.4	8.8 Y	14.5	12.4	11.6	6.1	5.0	3.2	2.6	B
20	G	3.2	2.8 Y	2.4	3.0 Y	3.2	3.1	C	G	3.8	6.4	5.8	5.4	6.0	5.4	6.6	7.6	4.1 F	3.0	3.4	C	3.1	3.8	3.8 Y
21	3.2	2.3	2.1	2.4	4.5	5.7	3.1	3.8	4.9	8.8	5.1	5.5 Y	6.1 Y	5.6	9.2	6.1 Y	5.8	4.0 F	4.2	3.2	3.2	2.4	2.1	C
22	3.0	2.4	3.0	G	G	G	G	3.0	3.4	4.2	C	4.2	5.0	5.2	4.2	4.3	4.2	3.6	3.4	3.3	3.0	2.5	2.8	5.8
23	4.6	4.4	3.0	3.0	2.8	3.0	2.8	3.6	4.1	G	G	4.4	G	4.6	4.4	4.4	3.8	4.6	5.0	4.0	3.8	3.8 Y	3.6	3.2
24	4.6	5.8	5.0 B Y	3.0	4.2	3.0	3.0	3.4	G	4.0 F	C	5.2	5.0	7.7	6.6	5.2	7.6	7.0	8.0	8.4	7.0	6.8	G	G
25	3.4	3.6	3.2	3.2	2.1	2.9	2.9	3.1	3.7 Y	4.0	4.1	5.7	4.2	4.2	5.0	5.0	4.7 Y	5.6	3.8	3.6	4.4	3.8	3.6	C
26	4.4 B	3.0	C	C	1.8	2.2	2.4	G	G	G	G	4.6	4.0 Y	5.0 Y	4.8 B Y	5.2	4.8	4.1 Y	3.2	G	2.8	2.4	3.2 B	2.6
27	2.4	3.4	1.8	1.6	G	2.0	2.8	3.8	3.2	4.2	4.9	4.6	G	4.6	4.7	4.4	4.8	5.2	4.6	9.4	6.3	8.8	6.0	4.2
28	4.0	4.6	6.6 Y	5.2	3.8	G	4.4	4.2	5.0	5.4	6.4	4.8	5.5	5.2	6.0	6.4	8.8	9.2	8.9	8.6	9.2	8.9	8.3	7.8
29	7.3 F	5.8	3.8	3.8	3.8	3.4	2.4	6.0 Y	5.4	7.2	7.4	6.6	7.0 Y	11.4	6.8 Y	8.9 B F	8.0	12.0	8.8	6.8	4.4	6.8	3.8	3.4
30	3.6	4.5	4.3	4.0 B	4.1	3.8 B	4.5 B	7.0	C	14.0	10.0	9.2	6.7	6.3	6.7	6.4	4.8	4.0 Y	4.0	3.2	2.3	G	4.0	4.2
31	4.2	2.2	3.6	3.0	4.8 B Y	3.8	3.6	2.8	4.4	4.0	4.8	8.5	7.2	9.8	4.7 Y	5.5	7.2	4.8	5.6	4.0	5.0	4.2	2.8	2.6
Median Value	3.8	3.6	3.6	3.3	3.2	3.3	3.2	3.8	4.2	5.7	6.4	5.8	6.5	6.1	5.4	5.5	5.6	5.0	4.6	4.6	4.4	4.1	3.7	3.8
Count	30	31	30	29	30	30	31	27	27	29	27	29	29	28	29	29	29	29	29	31	27	31	29	26

fEs

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 8

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

IONOSPHERIC DATA

Aug. 1950 | (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	2.7	2.7 F	2.9 F	2.7 F	2.7	2.8 Z F	3.1 F	3.4 P	3.3 F	3.3	2.8	2.8	2.8	2.9	2.8	2.8	3.1 H	3.2	3.0	3.1 H	3.1	3.1	A	(2.6) J F
2	(2.7) J F	(2.7) J F	(2.7) J F	(2.8) P F	3.0	3.1 Z	3.0	C	C	C	C	C	C	C	C	C	C	C	C	2.8	[2.8] C	2.8	2.8	2.7
3	2.8	2.6	(2.8) J	3.0 J	2.9	2.8	2.7	3.2	2.9	3.2	A	A	A	A	A	2.8	2.8	2.7	2.8 H	3.2 H	3.0 H	2.9 Z	2.7	2.6
4	2.6 Z F	2.7 F	(2.6) J F	2.7 Z F	A	2.5 Z P F	2.8 V	3.3	C	A C	2.9	3.0	A	2.7	2.9	2.8	2.8	3.0	3.2	3.3	3.1 Z	2.8	2.8	2.8
5	2.7	2.7	2.7	2.7	2.9	(3.0) P	3.3 P	3.3	3.4	[3.3] C	3.2	A	A	2.8	2.5	2.7	2.8	3.0	A	A	C	2.9	3.1	2.9
6	2.9	2.8	2.9	3.3	3.1	3.0 F	2.9	3.1	3.2	A	2.9	2.8	2.7	2.6	2.7	2.8	2.8	2.8	3.0	3.0	[3.0] C	3.0	2.7	2.8
7	S	2.7	2.9	3.1	3.3	3.3	3.2	3.3	3.2	3.2	2.9	2.8	2.6	2.6	2.6	2.7	2.7	2.9	2.9	3.2 H	2.9	2.8	3.0	3.2
8	2.6	2.7	2.6	2.9	2.9	[3.2] C	3.5	3.3	3.2	3.1	3.0	3.1	2.4	3.1	3.0	2.9	2.6	A	A	A	B	3.0 P	C	C
9	(2.7) K F H	2.6 Z K	2.7 Z K	2.6 K	2.8 P K	2.8 K	2.8 K	2.9 K	A K	A K	A K	2.6 K	A K	A K	2.6 K	[2.6] C K	(2.5) B K	2.8 K	2.7 K	3.0	(3.0) J S	(3.0) H P S	2.6	2.7 H
10	2.8 Z	2.5	2.9	3.0	3.0	3.0 K	2.8 K	3.2 K	3.1 P K	2.9 K	(2.8) J K	2.8 K	2.5 K	2.8 K	2.7 K	2.6 K	2.8	3.0	3.2	(3.1) J	2.8 H	2.7	2.6	(2.7) P S
11	2.7 P	2.7	2.7	3.2	3.3	3.3	[3.0] C	2.7	3.0	A	A	A	2.7	2.8	2.9 H	2.8	3.1	3.1	3.2	3.1	3.2	2.7 Z	2.8	2.6 H
12	2.7 Z H	2.8	2.7	2.9 H	2.7	2.7 P	2.9	3.3	2.8	3.2	2.8	2.7	3.1	3.1	2.9	2.7	3.0	3.2	3.1	3.0 H	2.9	2.7	C	C
13	C	2.8	2.8	2.9	2.7	(2.7) P S	3.2	C	C	2.9	3.0	3.1	3.1	2.9	2.8	2.8	3.1 S	3.3	3.1	(3.1) J S	3.1	2.9	2.5	2.6
14	3.2	3.5	3.0	3.1	3.2	3.0 J F	3.0	2.9	3.5	3.3 F	3.1	2.8	2.9	3.0	3.0	3.0	3.2	3.1	3.0	3.4	3.6	2.7	S	C
15	A	F	F	C	C	(2.7) J H	3.0 J F	3.2	3.4	A	2.9	2.9	2.9 F	[2.8] C	2.8	3.0	2.9	3.1	3.2	3.1	3.6	2.9	2.6 F	2.6 V
16	2.6 Z	(2.7) J F	2.9	(3.0) V F	3.2 F	2.6 F P	2.8 F	3.2	2.9	3.0	A	A	A	3.3	2.9	2.9	3.3	2.8	3.0	3.2	3.3	(2.9) S	2.6 H	2.6 S
17	(2.5) P F	F	S	(2.7) P F S	(2.8) P F S	3.0 S	2.9 V	C	C	C	C	C	C	C	C	C	C	C	C	3.0	3.2	3.2	2.8	2.9
18	2.7	2.8	3.0 J	3.0	2.9 J	2.7	3.0	3.1	3.1	2.9	2.9	2.9	2.8 H	2.7	2.7 J	2.8	2.9	2.8	2.9	3.2 H	3.2	2.8 H	2.7 F	2.7 H
19	2.7 H	2.8	(2.6) J	3.2	(2.6) J F	2.7 F	2.9	3.3 F	3.3	3.3	2.9	2.9	2.5	2.7	(2.8) J	2.8	A	A	A	3.0	3.0	2.7	3.1	2.9
20	2.9	F	2.6 F	F	F	F	F	C K	G K	G K	A K	A K	G K	G K	G K	A K	A K	3.2 K	2.5 K	2.9 K	[2.7] C K	2.5 H K	2.7 P K	2.7 K
21	2.8 H K	2.8 K	2.6 K	2.8 F K	2.8 K	A K	2.8 K H	2.4 K	3.3 K	A K	A K	B K	A K	A K	A K	2.8 K	3.1 K	3.2 K	3.2 H K	3.0 K	2.7 H K	2.8 Z H	3.0	(2.8) C
22	2.7	2.7	2.8	3.0	2.9	2.5	3.1	3.3	3.4	3.0	[3.4] C	3.1 K	2.9 K	2.8 K	2.9 K	3.2 K	3.1 K	3.1 K	3.2 K	2.9 K	(2.8) P	2.8	2.9	2.6 F
23	2.8	2.8	2.8	2.8	2.8	2.8 V	3.1	3.2	3.1	3.3	3.2	3.1	2.9	3.1	2.9	3.1	3.1	2.8	3.1	3.2	3.1 H	3.2 H	3.0 H	3.2
24	3.1 H	2.7	2.7 Z F	2.6	2.9	3.2 Z	3.1	3.6	3.3	3.3	[3.2] C	3.1	2.8	3.0	2.9	[3.0] C	3.1	3.2	3.1	3.2	(3.0) B	3.2	3.0	2.8 C
25	2.6	2.8	2.5	2.9	3.2	3.0	3.4	3.3	3.4	3.3	2.9 H	3.2	2.8	2.8	2.9	2.9	2.9	2.9	3.1	3.2	3.1	3.0	2.8	[2.8] C
26	2.8	2.7	C	C	3.2	3.0 H	3.2	C	3.4	3.3	3.2	2.8	2.9	2.7	2.9	2.9	2.8	(2.9) P	[3.0] C	3.2	3.4	2.8	2.7	2.7
27	2.6	2.8	2.9	2.8	3.0	3.2	3.4	3.5	2.9	2.7	2.8	3.0	2.6 H	2.7 H	2.8 H	2.9	2.9	3.0	3.2	A	3.2	2.9	2.8	(2.9) J F
28	(2.7) P	2.6 V	2.5 V	2.6	2.8	2.9	2.8	B	B	(3.4) J	2.9	3.1	2.8	2.8	2.9	3.0	2.9	3.1	A	A	A	A	A	A
29	A	2.6	(2.7) F P	(2.5) F J	(2.8) F J	(3.0) F J	3.2	3.2 P	3.5	3.4	3.2	2.7	2.9	A	3.1	3.1	2.8	3.1	3.4	3.2	3.3	3.2	2.8 H	3.1
30	2.7	3.0	2.7	2.4 H	2.9	2.9	(3.2) J	S	C	3.3	A	2.7	2.9	2.9	3.1	3.1	3.1	3.2	3.2	3.4	3.2	2.7 H	2.4 F	2.5 F
31	2.8	2.8	2.9	3.0	3.1	3.0	3.1	3.3	3.4	3.3	3.1	A	2.8	3.0	2.9	2.9	3.0	3.0	3.2	3.4	3.4	2.8	2.7	2.8
Median Value	2.7	2.7	2.7	2.9	2.9	3.0	3.0	3.2	3.2	3.3	2.9	2.9	2.8	2.8	2.9	2.8	2.9	3.0	3.1	3.1	3.1	2.8	2.8	2.7
Count	27	28	28	28	28	29	30	24	24	23	22	22	23	25	27	28	27	27	25	27	28	30	26	27

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 9

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

IONOSPHERIC DATA

Aug. 1950 | 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	A	A	A	A	1.3	A	A	3.0	3.4	3.4	A	3.8	4.2	4.4	4.2	4.1	4.2	A	A	A	A	A	A	A
2	A	A	1.8	1.7	1.9	2.1	1.9	C	C	C	C	C	C	C	C	C	C	C	C	A	C	A	1.8	1.8
3	A	A	1.6	1.9	A	1.7	2.0	2.0	3.7	A	A	A	A	A	A	A	3.8	A	3.0	2.4	A	A	A	A
4	A	A	A	A	A	A	A	A	A	A	3.8	A	A	5.6	A	A	A	A	A	A	A	A	1.6	E
5	E	1.7	1.4	E	E	1.3	2.0	2.7	3.2	B	A	A	A	A	A	A	A	A	A	A	C	A	A	1.9
6	A	A	A	A	1.6	A	1.8	2.4	A	A	A	4.3 A	4.4 A	A	4.1	3.7	3.5	3.1	2.4	A	C	1.7	A	1.6
7	A	1.6	E	E	A	A	2.1	2.7	3.4	4.2	A	4.2	A	A	A	A	A	A	A	A	A	A	A	A F
8	1.4	A	E	A	1.8	[1.9] C	2.0	2.5	A	3.6	4.1	A	A	A	4.1	A	3.8	A	A	A	A	A	C	C
9	A	A	A	A	1.4	A	A	A	A	A	A	4.0	A	A	A	3.6	3.4	3.4 F	3.0	A	A	A	1.8	E
10	1.4	1.4	1.4	1.5	1.5	1.4	2.4	2.9	A	3.6	3.8	A	4.2	4.2	4.2	A	3.7	3.2	A	A	1.8	A	A	A
11	A	A	E	A	1.6	A	A	A	A	A	A	A	A	4.5	A	A	3.4	2.4	2.0	A	A	A	A	A
12	A	A	A	1.9	E	1.6	2.0	2.2	3.4	3.6	4.2	3.8	4.0	4.0	3.2	3.6	2.8	A	2.2	E	A	A	C	C
13	C	A	A	E	1.6	A	2.1	C	C	A	3.5	4.2	3.6	A	3.8	4.2 A	3.6	3.1	3.0	2.3	1.8	A	A	A
14	A	A	E	E	A	1.8	2.1	2.5	3.1	3.2	A	A	4.0	4.1	4.3	4.3 A	A	A	3.1	A	A	A	A	1.8
15	A	2.0	E	C	C	1.8	A	A	A	A	4.4	4.8	4.4	A	3.8	3.6	3.5	3.2	A	A	1.6	1.6	A	A
16	1.6	1.5	A	E	E	1.3	A	A	3.3	A	A	A	A	A	A	A	A	A	A	A	A	A	1.4	1.8
17	A	E	E	E	1.8	A	A	C	C	C	C	C	C	C	C	C	C	C	C	2.0	A	1.8	A	1.4
18	E	A	E	1.4	E	1.4	1.8	2.8	3.6	A	A	A	A	4.5	6.7	A	A	3.4	2.8	A	A	A	A	A
19	A	1.8	A	A	A	A	A	2.7	3.1	3.9	4.4	A	A	A	A	A	A	A	A	A	A	A	A	2.4
20	1.8	A	A	A	A	A	A	C	2.8	3.1	A	A	A	4.0	3.6	A	A	2.7	2.6	1.9	[1.8] C	1.6	1.6	1.7
21	A	1.4	E	A	A	A	2.4	2.6	3.2	A	A	B	A	A	A	A	3.5	3.0	2.4	2.2	1.9	E	A	C
22	A	E	E	E	1.4	1.3	1.4	2.4	3.0	3.3	[3.6] C	4.0	4.0	A	4.2	A	3.4	3.2	A	2.1	1.9 A	1.7	1.8	E
23	A	A	A	A	A	A	1.4	2.8	3.1	3.4	3.2	4.0	4.2	3.6	4.2	4.2	3.6	4	A	2.2	2.0	1.8	1.8	2.0
24	2.0	A	A	1.4	E	1.4	2.1	2.2	3.4	3.4	[3.8] C	4.3	4.4	A	A	A	A	A	A	A	A	A	1.4	1.6
25	1.4	E	E	E	1.9	1.9	A	2.4	3.1	3.3	3.6	3.8	3.8	4.2	A	A	3.8	A	2.4	A	A	A	1.6	C
26	A	E	C	C	E	1.4	1.8	1.6	3.2	3.5	4.0	4.0	4.0	A	4.3	4.2	4.0 B	3.4	2.2	1.6	1.6	1.5	1.7	1.9
27	1.6	A	E	E	E	1.4	1.6	2.6	2.5	4.2	A	4.3	5.1	A	A	4.1 A	A	A	A	A	A	A	A	A
28	A	1.6	A	A	1.4	E	A	A	A	3.2	A	3.6	3.8	A	A	A	A	A	A	A	A	A	A	A
29	A	A	1.6	1.4	A	1.8	1.8	A	A	3.5	A	4.1	A	A	A	A	A	A	A	A	A	A	A	A
30	A	A	A	1.9	1.8	A	2.8	A	A	A	A	A	3.5	A	3.7	4.0	3.2	3.1	2.2	1.8	1.6	E	A	A
31	1.6	1.8	1.8	1.8	A	1.6	1.6	2.2	3.2	3.5	A	A	A	A	4.0	A	A	A	A	1.6	A	E	1.6	E
Median Value	1.5	1.5	E	1.4	1.4	1.5	2.0	2.5	3.2	3.5	3.8	4.0	4.0	4.2	4.1	4.1	3.6	3.2	2.4	2.0	1.8	1.6	1.6	1.7
Count	10	13	17	18	20	18	20	19	18	17	12	15	15	10	15	11	16	12	13	11	9	10	11	15

fminF

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 10

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

IONOSPHERIC DATA

Jul. 1950 | 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	E	E	E	E	E	E	1.3	1.3	1.4	1.6	2.6	1.9	2.6	2.5	2.4	2.4	2.4	1.5	1.3	E	1.3	1.3	E	E
2	E	E	E	E	E	E	1.5	C	C	C	C	C	C	C	C	C	C	C	C	1.5	C	E	E	E
3	E	E	E	E	E	E	1.3	1.6	2.6	2.4	2.5	2.5	2.6	3.1	2.9	2.9	2.2	2.2	2.0	2.0	2.0	2.0	2.0	1.7
4	E	E	E	E	E	1.3	1.4	2.0	2.0	2.0	2.4	2.6	2.6	2.8	2.7	2.3	1.8	2.0	1.6	1.6	1.4	1.6	B	E
5	E	E	E	E	E	E	1.4	1.5	1.7	1.8	2.7	2.8	2.7	2.6	2.5	2.5	2.3	2.1	2.0	1.9	C	1.8	1.8	1.5
6	E	E	E	E	E	E	E	1.7	E	1.6	1.7	1.9	1.8	1.8	1.8	1.6	1.4	1.4	E	E	C	E	E	E
7	E	E	E	E	E	E	1.3	1.4	2.2	2.2	2.4	2.2	2.6	2.4	2.4	2.2	2.4	1.8	1.3	E	E	1.6	1.4	1.4
8	E	E	E	E	E	C	1.4	E	1.4	1.8	1.7	2.0	2.2	2.6	2.5	2.1	2.5	1.5	1.5	1.5	2.0	E	C	C
9	E	1.3	1.2	E	E	E	1.4	1.6	1.4	1.6	1.7	1.6	1.9	2.0	1.7	1.8	1.5	1.6	E	E	E	E	E	E
10	E	1.4	1.4	1.3	1.3	E	1.5	2.2	1.5	1.8	2.2	2.2	2.2	2.2	3.0	2.2	2.4	2.4	1.3	1.3	1.3	1.5	E	1.3
11	E	E	E	E	E	1.3	1.4	1.4	1.7	2.1	2.6	3.1	3.1	2.7	2.7	2.6[F]	2.0	2.0	1.8	2.0	1.6	1.6	1.6	1.6
12	1.8	E	E	E	E	E	E	E	1.4	1.6	1.8	1.8	1.7	1.8	2.6	1.8	2.2	1.3	1.6	1.4	E	E	C	C
13	C	E	E	E	E	1.8	2.1	C	C	1.7	2.0	2.0	2.6	2.5	2.5	2.4	1.8	1.3	1.4	1.3	1.2	1.3	1.5	E
14	E	E	E	E	E	E	1.8	1.6	1.7	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.6	1.6	1.5	1.5	1.5	1.3	1.6	E
15	E	E	2.1	C	C	1.8	1.5	1.4	1.5	1.7	1.9	2.6	2.5	2.6	2.5	1.8	1.8	1.7	1.6	1.4	E	1.4	E	E
16	E	1.5	E	E	E	E	E	1.6	1.7	2.2	2.2	2.4	2.8	3.4	3.4	2.6	2.2	1.6	E	E	E	1.3	1.2	E
17	E	E	E	E	E	1.8	E	C	C	C	C	C	C	C	C	C	C	C	C	1.4	1.6	1.4	1.4	E
18	E	E	E	E	E	E	1.4	1.4	2.0	2.2	2.8	2.8	3.1	3.0	3.4	2.5	2.3	2.0	1.8	2.0	1.8	2.0	2.1	2.1
19	2.1	E	E	E	E	1.4	E	1.3	1.8	1.8	1.8	2.4	2.2	2.2	2.2	2.2	2.5	2.2	2.0[F]	1.9	1.8	1.8	1.6	B
20	B	E	E	E	E	1.2	1.3	C	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.5	1.4	1.4	[1.4][C]	1.5	1.7	1.8
21	1.5	E	E	E	E	E	1.2	1.6	1.4	1.4	1.7	2.6	2.7	2.8	2.9	3.7	1.9	1.5	2.4	1.3	E	E	E	C
22	E	E	E	E	E	E	B	1.4	1.4	1.8	[2.1][C]	2.5	2.5	2.5	1.6	1.5	1.5	1.5	1.4	E	1.5	1.4	1.5	E
23	E	E	E	E	E	E	E	1.4	1.6	1.6	2.7	2.8	2.3	2.2	2.8	2.4	2.2	2.0	2.0	2.0	3.4	1.8	2.2	2.6
24	1.8	E	E	E	E	E	E	1.6	1.4	1.7	[1.6][C]	1.6	2.2	2.6	2.8	1.6	1.5	1.3	E	E	E	E	E	E
25	E	E	E	E	E	E	1.5	1.9	1.4	1.6	1.8	2.7	2.7	2.7	2.7	1.8	1.7	1.6	1.6	1.4	1.4	1.4	E	C
26	E	E	C	C	E	E	E	E	1.7	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.0	1.6	1.7	B	1.6	1.5	1.5	1.4
27	E	E	E	E	E	E	1.4	1.5	1.6	2.2	2.5	2.8	3.3	3.1	2.5	3.1	2.2	1.3	E	E	E	E	E	1.6
28	E	E	E	E	E	E	E	E	E	1.8	2.0	2.1	2.8	2.8	2.8	1.8	1.8	1.7	1.9	1.8	1.6	1.7	1.5	1.4
29	1.3	E	E	A	E	E	E	E	1.5	1.4	1.6	1.9	2.0	2.0	2.0	2.1	1.8	2.0	1.6	1.6	1.6	1.5	1.4	E
30	E	E	E	E	E	E	E	1.9	1.5	1.6	1.7	2.0	1.9	2.0	1.7	1.7	1.6	1.5	1.5	E	E	E	1.5	1.3
31	E	E	E	E	E	E	1.4	1.5	1.6	1.7	1.7	1.9	2.0	1.8	1.9	1.7	1.6	1.7	E	E	E	E	E	E
Median Value	E	E	E	E	E	E	1.3	1.5	1.6	1.8	2.0	2.2	2.5	2.5	2.5	2.1	1.9	1.6	1.5	1.4	1.4	1.4	1.4	E
Count	29	31	30	28	30	30	30	27	28	29	29	29	29	29	29	29	29	29	29	30	28	31	28	25

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

IONOSPHERIC DATA IN JAPAN FOR AUGUST 1950

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