

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

IONOSPHERIC DATA IN JAPAN

FOR JULY 1950

Vol. 2 No. 7

Issued in August 1950

PREPARED BY THE CENTRAL RADIO WAVE OBSERVATORY
THE RADIO REGULATORY COMMISSION

KOKUBUNJI, TOKYO, JAPAN

Errata

Page	Date	Time	Error	Right	Page	Date	Time	Error	Right
4	Count	06	29	28	18	29	13	5.2 ^L	(5.2) ^L
5	2	12	380	G	"	"	14	5.2 ^L	(5.2) ^L
"	"	13	410	G	27	12	13	(290)P	(390)P
"	"	14	390	400	"	25	08	390K	G ^K
"	4	09	360	G	"	Median Value	15	330	340
"	"	10	340	G	28	29	09	290	280
"	6	10	340	350	38	Median Value	02	7.3	7.2
"	"	14	380	390	"	"	10	8.2	8.1
"	13	08	490 ^K	500 ^K	"	"	23	7.8	7.6
"	16	15	320	A	39	13	12	490 ^K	G ^K
"	18	08	290	A	"	30	10	250	G
"	Median Value	09	360	370	40	18	11	350	250
"	"	10	360	380	41	18	17	4.8 ^L	(4.8) ^L
"	"	13	410	440	"	20	16	C	A
"	"	14	380	390	42	20	16	C	A
"	Count	08	19	18	43	6	06	2.6 ^A	A
"	"	15	23	22	"	19	12	C	3.8
16	6	14	390	G	"	20	16	C	A
"	10	13	360	G	"	Count	06	13	12
"	17	16	300	G	"	"	12	12	13
"	"	17	310	360	44	19	12	C	110
"	29	12	270	370	"	20	16	C	A
"	Median Value	13	360	370	"	"	17	100	A
17	7	10	320	330	"	Count	12	15	16
"	17	07	360	260	"	"	17	12	11
"	20	07	310	300	47	29	11	A	C
18	6	07	4.5 ^L	(4.5) ^L	"	30	12	3.8	A
"	21	10	5.3 ^L	(5.3) ^L					
"	22	08	4.7 ^L	(4.7) ^L					

Erratum.
for Vol.2, No.6, P.14 (June 1950)

Median Value	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
E	E	E	E	E	E	E	E	E	E	E	E	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.1	E	E	E	E
30	30	30	30	30	30	30	28	29	30	30	28	28	28	28	28	28	28	28	28	28	28	28	29	29	29	29	30	30	30	30	30

THE CENTRAL RADIO WAVE OBSERVATORY
THE RADIO REGULATORY COMMISSION

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR JULY 1950

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PREFACE

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

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

The Central Radio Wave Observatory has the following four sections:

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

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

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

Administrative Section which shall conduct the general affairs of the observatory. The ionospheric sounding is as heretofore being carried out by the four observatories at Wakkanai, Akita, 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

July, 1950.

SITE OF THE IONOSPHERIC STATIONS

four

Ionospheric observation is carried out at ~~five~~ 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 Z_d , $f_{\min} E$ and $f_{\min} F$, other symbols are used in accordance with recommendation of C.C.I.R. Z_d , $f_{\min} E$ and $f_{\min} F$ in the table are defined as follows:

- Z_d 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.

Jul. 1950

foF2

135° E Mean Time

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

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	5.9	5.6	5.3F	5.0F	5.1F	6.3	6.7	6.8 ³	A	A	A	A	A	6.4	A	(6.1) ^P	(6.6) ^S	6.6	(7.0) ^S	7.3	7.6 ^P	7.6	7.7	7.5 ^H	
2	6.3	6.1	5.4	5.7	6.1V	5.9	6.7	(6.5) ^P	A	6.9 ^T	A	A	5.9	6.2	6.6	6.1	6.4	6.5	6.8	7.1	7.5	7.6 ^H	(7.9) ^P	8.1 ^H	
3	7.3	7.2	7.3	6.5	6.4	7.1	7.7	7.5	7.3 ^Z	A	A	6.5	6.4	6.8	6.9	6.6	A	7.2	7.3	A	7.6	7.7 ^F	7.8 ^F	7.6 ^F	
4	7.5 ^J	6.6	6.1	6.5 ^J	6.0	6.1 ^H	5.9	6.0 ^T	6.1 ^F	6.8	5.8	C	C	C	C	C	C	C	C	C	7.0 ^H	6.2 ^H	6.3 ^H	6.2 ^H	
5	5.9	6.2	5.4 ^H	C	C	6.5 ^F	(5.7) ^K	G ^K	G ^K	5.8 ^K	5.8 ^K	B ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	7.1 ^H	6.5 ^K	
6	7.2 ^H	(7.6) ^F	(6.5) ^F	(6.6) ^F	6.1 ^H	6.9	6.8	7.9	7.9	7.3	7.0	5.6	7.4 ^H	7.0	6.8	7.0	7.2	7.2	7.4	7.2	7.8	7.3 ^T	7.4	7.3 ^H	
7	7.4	7.1	7.1 ^F	7.1 ^F	7.0 ^F	6.7	7.2	7.2	6.0	6.3 ^V	A	A	7.1	7.2	7.8	6.5 ^H	6.8	7.1	7.0	7.2	7.1	7.2	7.8	7.9 ^P	
8	7.5	7.6	6.8 ^F	6.7 ^F	6.8 ^F	6.7	6.5	(6.8) ^F	A	A	A	A	6.8	6.9	6.6	6.2	6.2	6.8 ^J	7.6	7.3	[7.2] ^C	7.0	(7.3) ^S	7.3	
9	6.9	6.5	6.4	6.0	5.8	6.1	6.2	C	C	C	C	C	C	C	C	8.1	8.0	7.9	8.2 ^J	B ^H	7.3	6.8	7.2 ^P	7.2 ^H	
10	(6.9) ^J	6.9	6.8	6.6	6.3 ^H	7.2	7.0	8.8	8.5 ^H	7.0	C	C	C	C	C	A	7.0	6.7	7.1	(8.2) ^J	(7.6) ^F	(8.0) ^S	7.3 ^H	7.4 ^H	
11	7.3	6.8	6.8 ^Z	5.8	5.5 ^F	5.9	A	A	A	A	5.5	A	5.6	5.2	5.5 ^F	5.9	5.5 ^F	A	5.8	A	A	7.5 ^F	6.9 ^F	6.5 ^F	
12	(6.5) ^F	5.6	5.3	5.0	4.6	A	6.8	6.2	6.1	A	5.0	5.3	5.2	5.5 ^J	5.9	A	AS	5.9	6.0	6.2	6.1 ^H	A	5.9	5.9	
13	5.5	5.4	5.7	6.1	6.0	6.0	A ^K	A ^K	5.6 ^K	5.4 ^K	G ^K	G ^K	A ^K	5.4 ^K	5.6 ^K	5.4 ^K	A ^K	A ^K	A ^K	A ^K	6.2	AS	A	5.9	5.8
14	5.7 ^F	(6.0) ^F	5.7 ^F	4.0 ^K	(5.2) ^S	5.3 ^K	4.8 ^K	A ^K	5.8	A	A	A	A	A	A	5.7	5.6	5.8	A	A	A	A	A	6.6 ^F	5.8
15	5.7	5.4 ^F	5.5 ^F	5.5 ^F	5.5 ^F	5.8 ^F	6.7 ^F	6.9 ^F	6.1 ^F	5.8	5.8	6.3	7.0	6.3	[6.2] ^B	6.1	6.3	A	A	A	7.3	A	6.8 ^J	7.1	6.7
16	5.5 ^H	5.8 ^H	6.1	(6.2) ^S	6.3	6.8	6.5	7.6	5.5	A	A	6.4	6.0	6.5	6.3	6.1	5.8	6.4	6.5	7.1	7.1	7.2 ^P	7.5	7.1	
17	6.9	5.7	6.1	5.4	5.5	6.3	6.6	A	A	6.0	6.0	6.4	6.3	6.2 ^J	6.1	6.0	(5.6) ^F	5.8	6.2	A	A	A	A	F	
18	S	6.5 ^F	6.8 ^F	6.0 ^F	5.0	5.4	5.7	6.3	6.7	A	A	6.5	6.3	6.1	6.1	5.8	5.9	5.8	6.3	6.3	6.7 ^S	7.0	6.7	6.1	
19	5.9 ^F	6.1 ^F	6.2 ^F	6.2 ^F	6.0 ^F	6.3 ^F	[6.6] ^C	7.0	7.0 ^F	A	A	A	C	6.6 ^J	6.8 ^J	A	6.7 ^F	6.7	6.4	6.2 ^F	6.3 ^F	A	A	7.1 ^F	
20	6.9 ^F	(7.3) ^F	7.1 ^F	(6.6) ^F	6.3	6.1	6.4	6.8 ^Z	7.2	7.6	7.7	7.1	A	7.2	A	7.3	6.5	6.6	6.8	7.2	6.0 ^H	6.9 ^Z	6.9	6.8 ^H	
21	6.5	6.6	6.5	6.4	6.6 ^S	7.5	7.7 ^T	7.7	7.8	7.5	6.1 ^T	6.1	7.3	7.4	7.9	7.4	7.4	7.0	7.4	6.8 ^F	8.3 ^F	7.5	7.3	7.0	
22	7.3	7.1	7.3	5.4	5.3	5.3	5.8	A	5.8 ^T	6.4	6.6	6.4	6.8	7.0	6.9	7.2	7.1	A	7.3	7.0	7.8	(7.0) ^S	8.0 ^S	7.5	
23	7.5	7.1 ^F	6.5 ^F	6.4 ^F	6.0	6.1 ^F	7.0 ^F	C	C	C	C	C	C	C	C	C	6.9	6.9	7.2	7.4	7.7	7.7	7.1	7.6	
24	7.0	6.9	6.8	7.0 ^H	6.6	7.8	8.2	8.2	8.0	7.3	7.1	S	7.1	7.3	6.6	B	6.3 ^P	6.5	[6.9] ^C	7.3 ^J	6.8 ^T	7.2 ^H	7.3 ^H	6.9	
25	7.0	7.3	7.5	6.8	6.1	6.3	6.2	6.1 ^K	6.1 ^K	A ^K	5.9 ^K	5.8 ^K	6.5 ^K	6.8 ^K	7.0 ^K	6.8 ^K	6.4 ^K	6.0 ^K	A ^K	A ^K	6.3 ^K	5.9 ^K	5.9 ^K	5.7 ^K	
26	5.5 ^K	5.8 ^K	5.4 ^K	5.7 ^K	5.5 ^K	5.9 ^K	A ^K	5.6 ^K	A ^K	A	C	C	6.8	6.4	6.3	7.3	6.4	6.3	6.8	A	7.0 ^F	7.2 ^F	7.5 ^F	7.2 ^F	
27	(7.2) ^F	6.9 ^F	(6.4) ^F	6.3 ^F	5.7	5.7	6.7	7.3	A	7.3 ^F	6.2	6.3 ^T	6.6	6.1 ^F	6.1	6.4	A	A	A	A	A	A	(7.3) ^F	6.7 ^F	
28	7.2 ^F	7.1	6.8 ^F	6.6	6.8	6.0	6.7	7.1 ^F	A	A	A	A	7.0	6.4	6.2	6.7	6.5	6.6	6.6	6.8	7.0	7.1	(6.6) ^S	F	
29	6.2 ^F	6.3 ^F	5.7	5.4	5.4 ^F	6.3 ^F	8.2 ^F	8.8 ^F	8.8	6.7	6.5	A	7.2	6.4	7.2	7.7	7.1	7.1	7.6 ^S	A	A	(7.2) ^S	7.1		
30	A	B	5.6 ^H	5.2 ^F	5.6 ^F	6.6	8.0	8.1	7.0	6.8	6.8	6.9	6.9	7.0	7.1	7.8 ^H	7.5	7.2	7.4	7.3 ^H	7.2	7.0	7.0		
31	6.8	6.2	6.0 ^F	5.8 ^F	5.6 ^F	6.9 ^F	7.5 ^F	7.9 ^F	7.4 ^S	6.7	7.3	6.8	7.1	7.0	7.1	6.9	7.5	7.7	7.1	7.2	7.3	7.2	6.8	6.9	
Median Value	6.9	6.6	6.4	6.2	6.0	6.1	6.7	7.0	6.7	6.8	6.2	6.4	6.8	6.6	6.6	6.6	6.5	6.7	7.0	7.2	7.2	7.2	7.2	7.0	
Count	29	30	31	30	30	29	29	24	21	17	16	16	20	24	23	24	25	23	24	20	23	25	29	29	

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

IONOSPHERIC DATA

Jul. 1950

f_pF₂

Lat. 45° 2 3.6' N
Long. 141° 41.1' E

Wakkanai

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	A	430	440 ^F	480 ^F	390 ^F	410	450	(400) ^F	A	A	A	A	A	460	A	(470) ^F	(380) ^F	380	(390) ^F	330	330 ^P	420	410	420 ^H	
2	360	400	380	380	390 ^V	380	350	(320) ^F	A	(380) ^F	A	A	380	410	390	400	410	390	400	320	360	380 ^M	(410) ^P	390 ^H	
3	380	390	400	390	350	380	430	370	350 ^E	A	A	A	A	A	380	A	A	390	320	A	A	(360) ^F	(360) ^F	(370) ^F	
4	(350) ^F	400	380	(460) ^F	380	370 ^H	390	(440) ^F	340 ^P	360	340	C	C	C	C	C	C	C	C	C	320 ^H	380 ^H	410 ^H	400 ^H	
5	380	400	370 ^H	C	C	C	360 ^H	A ^K	G ^K	G ^K	G ^K	B ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	420 ^F	380 ^K	
6	(480) ^F	(420) ^F	(430) ^F	(450) ^F	410 ^H	320	390	320	310	350	340	410	300 ^H	360	380	390	430	350	320	330	370	(340) ^F	A ^K	420 ^F	380 ^K
7	360	410	(380) ^F	(360) ^F	(400) ^F	330	330	(320) ^F	G	420 ^V	A	A	400	410	350	320 ^H	310	370	350	330	A	360	410 ^P	410 ^P	
8	320	360	(350) ^F	(370) ^F	390 ^F	330	320	(420) ^F	A	A	A	A	400	310	370	400	400	(430) ^F	390	330	[360] ^C	390	(410) ^F	390	
9	440	400	410	330	340	320	310	C	C	C	C	C	C	C	C	350	320	310	(330) ^F	BH	310	380	360 ^F	410 ^H	
10	(330) ^F	410	390	370	400 ^H	370	340	370	330 ^H	360	C	C	C	C	C	C	300	300	320	(340) ^F	(300) ^F	(370) ^F	350 ^H	420 ^H	
11	430	400	(410) ^F	390 ^F	(350) ^F	370	A	A	A	A	A	A	A	A	A	G	F	A	360	A	A	310 ^F	400 ^F	340 ^F	
12	(430) ^F	350	350	360	G	A	400	310	310	A	G	G	G	G	G	A	A	AS	410	380	370	400 ^H	450	400	
13	470	420	470	420	380	360	A ^K	A ^K	490 ^K	G ^K	G ^K	G ^K	A ^K	G ^K	G ^K	G ^K	A ^K	A ^K	A ^K	A	A	A	400	380	
14	450 ^F	(420) ^F	(350) ^F	410 ^K	(370) ^F	280 ^F	440 ^K	A ^K	G	A	A	A	A	A	A	A	G	G	390	A	A	A	A	360 ^F	350
15	390	380 ^F	390 ^F	410 ^F	360 ^F	320 ^F	350 ^F	330 ^F	370 ^F	G	A	470	380	G	B	400	410	A	A	A	A	(340) ^F	360	370	
16	450 ^H	410 ^P	410	(440) ^F	320	300	400	320	A	A	A	380	G	G	G	320	390	400	420	310	350	390 ^P	370	370	
17	390	350	380	320	360	330	310	A	A	G	G	G	440	G	G	380	(340) ^F	390	380	A	A	A	A	F	
18	S	380 ^F	360 ^F	330 ^F	340	340	360	310	A	A	A	410	G	G	G	G	390	400	350	320	350 ^S	340	370	340	
19	370 ^F	(420) ^F	(410) ^F	(420) ^F	360 ^F	380 ^F	C	B	280 ^F	A	A	C	C	G	(380) ^F	A	A	A	350 ^F	A	AF	A	A	(360) ^F	
20	340 ^F	(350) ^F	(430) ^F	(370) ^F	310	G	320	360 ^Z	350	400	360	G	A	A	A	G	340	300	320	310	300 ^H	310 ^Z	350	280 ^H	
21	300	350	340	320	360 ^S	270	(290) ^F	340	310	300	(350) ^V	G	400	400	380	G	360	350	320	300 ^F	320 ^P	340	310	330	
22	320	360	320	310	360	320	310	A	A	A	G	G	400	400	360	300	350	A	A	330	330	(330) ^F	350 ^S	350	
23	320	340 ^F	(350) ^F	(350) ^F	340	330 ^F	380 ^F	C	C	C	C	C	C	C	C	C	430	330	330	330	350	350	320	370	
24	360	410	320	350 ^H	360	250	310	320	340	290	300	S	380	390	400	B	G	300	[310] ^C	(380) ^F	(300) ^F	370 ^H	420		
25	390	410	410 ^H	330	330	310	A	300 ^K	G ^K	A ^K	G ^K	G ^K	G ^K	500 ^K	430 ^K	460 ^K	G ^K	420 ^K	A ^K	A ^K	400 ^H	410 ^H	410 ^K	430 ^K	
26	400 ^K	450 ^K	410 ^K	410 ^K	400 ^K	(370) ^K	A ^K	(410) ^S	A ^K	A	C	C	C	G	A	G	410	280	270	280	A	310 ^F	340 ^F	360 ^F	
27	(330) ^F	340 ^F	(350) ^F	330 ^F	300	400	400	390	A	260 ^F	340	(400) ^F	250	G	A	A	330	A	A	A	A	(300) ^F	(310) ^F	(310) ^F	
28	310 ^F	290	350 ^F	360	320	G	B	B	A	A	A	A	390	380	A	390	300	260	G	300	310	300	(300) ^F	F	
29	(300) ^F	270 ^F	310	320	300 ^F	280 ^F	280 ^P	300 ^F	270	270	310	A	330	300	300	280	260	310	300 ^S	A	A	A	A	320	
30	A	B	390 ^H	310 ^F	370 ^F	330 ^F	310	310	300	300	300	G	300	300	300	330	340 ^H	300	310	320	300 ^H	370	350	320	
31	300	340	320 ^F	320 ^V	340 ^V	280 ^F	280 ^F	280 ^F	(300) ^F	350	A	340	340	340	300	300	300	290	290	280	290	310	310	350	
Median Value	360	400	380	360	360	330	350	320	340	360	360	G	400	410	380	400	360	350	330	330	330	350	360	370	
Count	28	30	31	30	30	29	25	21	19	17	14	15	19	22	19	23	23	22	23	18	20	25	28	29	

f_pF₂

Sweep 1.0 Mc to 14.0 Mc in 15 min

Manual

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

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jul. 1950

f'F2

Wakkanai

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	(350) ^F 360 ^A	(400) ^F 360 ^A	(350) ^F 370 ^A	350 ^F (330) ^A	390 350	390 340	400 ^A 320	390	A	A	A	A	A	460	A	450	380	380	350	290	280	330	310	(330) ^A	
2	(350) ^A 350	350	350 ^A	350 ^A 290	300	300	300	340	380 ^F	A	A	A	440	400	400	400	400	350	380	300	300	340 ^H	350 ^A	250 ^H	
3	280	280	290	300	300	300	360	360	350	A	A	A	600	A	370	A	A	350	310	A	280	300	280	320	
4	270 ^F	350	320	350	310	330 ^H	380	440	340	370	500	C	C	C	C	C	C	C	C	C	280 ^H	300 ^H	310 ^H	310 ^H	
5	320	310 ^A	300 ^A	C	C	C	240 ^H	A ^K	G ^K	G ^K	510 ^K	B ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	360 ^K	280 ^H	
6	300 ^H	310 ^F	(300) ^A	(300) ^A	300 ^H	300	340	300	300	340	350	400	300 ^H	360	390	390	430	320	320	290	280	280	270	280 ^H	
7	300	300	300	260	300	290	300	300	520	A	A	A	400	410	310	320 ^H	310	340	320	300	300	450	320	320	360
8	(300) ^A	(310) ^A	(310) ^A	300 ^A	390	280	300	420	A	A	A	A	400	310	360	400	400	400	380 ^A	270 ^A	(320) ^C	380	350	300	
9	300	300	330 ^A	280	300	300	300	C	C	C	C	C	C	C	C	330	(320) ^A	300	310	260 ^H	250	360	300	300 ^H	
10	290	300	310 ^F	300	300 ^H	260	310	300	300 ^H	320	C	C	C	C	C	A	300	300	300	300	300	(350) ^A	300 ^H	350 ^H	
11	330	330	340 ^F	290 ^F	290	320	A	A	A	A	500	A	A	A	490	400	380	A	A	A	A	A	290	300	
12	(300) ^A	(300) ^A	300 ^A	360 ^A	480	A	390	320	310	A	570	580	540	560	510	A	A	A	(400) ^A	370	320	300 ^H	350	350	
13	360 ^A	380	380	310	350	300	A ^K	A ^K	500 ^K	510 ^K	G ^K	G ^K	A ^K	520 ^K	450 ^K	460 ^K	A ^K	A ^K	A ^K	A ^K	A	A	A	(300) ^A	
14	400 ^A	300	320	400 ^A	350 ^K	240 ^K	440 ^K	A ^K	390	A	A	A	A	A	A	500	420	380	A	A	A	A	A	(320) ^A	310
15	290 ^F	320	320 ^A	340	330	300	300	300	370	400	A	470	380	380	(390) ^B	400	400	400	A	A	A	A	280	270	320
16	320 ^H	370	(400) ^A	320	310	300	390	320	A	A	A	380	430	400	400	330	390	390	400	400 ^A	310	350	330	340	300
17	270	290	280	270	280	300	290	A	A	440	480	400	410	390	400	380	A	A	360	370	A	A	A	A	380
18	A	290	300	300	300	300	360	300	300	A	A	A	450	350	450	400	L	400	350	300	300	310	300	350	320 ^A
19	A	310	350	350 ^F	320	330	C	B	A	A	A	C	C	310	380	A	A	A	380 ^A	370 ^A	A	AF	A	A	350
20	270	260	(300) ^A	(300) ^A	(300) ^A	A	300	350	L	390	360	430	A	380	A	360	340	300	300	300	280 ^H	(300) ^A	350	250 ^H	
21	250	(300) ^A	(300) ^A	240	240	220	220 ^F	A	300	300	350	400	400	400	350	330	350	300	300 ^A	300 ^A	300 ^A	320	270	310	
22	300	330	280	280	340	310	300	A	A	410	400	420	350	400	360	300	340	A	A	A	300	270	280	280 ^F	
23	270	290	280	280	240	240	300	C	C	C	C	C	C	C	C	C	400	230	250	290	280	280	270	290	
24	250	300 ^A	300 ^A	270 ^H	300	230	290	300	300	290	300	400	380	390	400	400	400	400	300	300 ^F	300	300	250 ^H	300 ^H	400
25	350	350	300 ^H	300	300	300	A	300 ^A	340 ^K	A ^K	A ^K	520 ^K	410 ^K	500 ^K	430 ^K	440 ^K	370 ^K	390 ^K	A ^K	A ^K	A ^K	400 ^K	410 ^K	380 ^K	
26	380 ^K	380 ^F	360 ^F	370 ^K	370 ^K	370 ^F	A ^K	400 ^K	A ^K	A	C	C	340	300	390	390	270 ^F	210	270	A	A	A	280 ^H	300 ^A	270
27	290	280	270	270	400	380	370	A	A	250	310	400	250	310	300 ^A	330	A	A	A	A	A	A	280	(300) ^H	300
28	280	240	300 ^F	340	310	410	B	500	A	A	A	A	390	380	380	380	300	260	280	(300) ^A	300 ^A	300 ^A	290	250	
29	300 ^F	200	230	240	220	240	200 ^A	230	270	290	A	A	330	300	300	280	250	270	240	A	A	A	A	A	300
30	A	B	310 ^H	280 ^F	290 ^F	300	300	300 ^A	300 ^A	300	320	300	300	300 ^A	300	330	310 ^F	300	290	300 ^A	300 ^A	270	320 ^A	300 ^A	300 ^A
31	260	250	260	250	240	260	220	220	300	350	A	340	340	340	300	300	300	210	220	200	200	230	220	270	
Median Value	300	300	310	300	300	300	300	320	310	370	360	400	400	380	390	380	370	320	310	300	290	300	290	300	300
Count	28	30	31	30	28	25	21	17	17	13	16	20	23	23	24	23	23	23	22	19	22	25	28	31	

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

Jul. 1950

foF1

Lat. 45° 23.6' N

Long. 141° 41.1' E

Wakkanai

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1					A	L	A	A	A	A	A	A	5.3	4.9	A	4.9	4.2	4.1 ^J	4.0	Q					
2					A	Q	Q	A	A	4.8 ^F	A	A	5.0	4.9	5.0 ^H	4.8	4.5	A	A	A	L				
3					Q	3.8	4.5	(5.1) ^A	A	A	A	A	A	A	A	A	A	A	A	A	A				
4					B	4.0	Q	L	A	4.8	5.1	C	C	C	C	C	C	C	C	C	C				
5					C	C	Q	(4.7) ^J	4.9 ^J	4.8	4.8	A	A	A	A	A	A	A	A	A	A				
6					Q	3.5	A	Q	4.7	5.0	5.1	L	Q	5.2	L	L	5.1	4.7 ^J	4.1 ^J	Q					
7					Q	A	L	L	A	5.2	5.0 ^J	A	A	5.0	4.9	5.0	4.8	L	Q	Q					
8					A	Q	Q	L	A	A	A	A	A	4.9	L	4.8	4.4	A	A	A	A				
9					Q	L	L	C	C	C	C	C	C	C	C	4.9	4.5	L	4.2 ^J	Q					
10					Q	Q	L	L	Q	L	A	C	C	C	C	5.0	L	L	Q	L					
11					Q	L	A	A	A	A	A	5.0 ^A	A	A	A	4.2	4.3	A	A	A	A				
12					L	A	L	4.3	4.5	4.8	4.5	4.6	4.5	4.7	5.1 ^A	A	A	A	A	Q					
13					L	3.3	A	A	A	4.4	4.5 ^F	A	4.7	5.0 ^F	4.7	4.7	A	A	A	A	A				
14					Q	Q	A	A	4.4	A	A	A	4.8	4.9	A	4.8	4.8	4.7	Q	A	A				
15					A	Q	Q	Q	4.6	4.6 ^F	A	4.8	4.8	4.9	B	L	4.5	A	A	A	A				
16					L	L	A	A	A	A	A	5.2	5.0	4.8	5.1	A	4.3 ^J	A	A	A	A				
17					Q	L	L	4.3 ^J	A	4.7	4.9	5.0	5.0	5.0	5.0	4.6	A	A	Q	A	A				
18					Q	Q	L	4.5	4.4	A	A	4.9	5.0	4.9	5.0	4.8	L	4.2	A	Q					
19					Q	L	C	A	A	A	A	C	C	5.3	4.9	A	A	A	A	A	A				
20					A	4.2 ^J	4.5	Q	L	A	A	A	A	5.3	A	5.1	B	4.0	Q	L					
21					Q	L	L	A	Q	L	5.1	5.0	5.0	5.2	4.9	5.1	5.0	A	A	A					
22					L	L	L	3.9	A	4.8 ^J	5.2	4.9	5.3	5.3	5.0 ^A	5.0	A	A	A	A					
23					Q	Q	Q	Q	C	C	C	C	C	C	C	C	L	Q	Q	Q					
24					Q	Q	L	L	5.0	A	A	4.8 ^J	5.3	4.8	5.0	5.0	5.0	A	C	Q					
25					L	Q	Q	A	5.0	A	A	5.1	5.0	4.9	4.9	4.3	A	L	A	A					
26					Q	AF	A	Q	A	A	C	C	4.9	A	A	4.8	4.8	Q	L	A					
27					Q	4.6	L	L	A	A	5.4	5.0	4.9	5.1 ^F	A	A	A	A	A	A					
28					4.3 ^J	4.9	4.7 ^J	A	A	A	A	A	4.9	5.0	A	4.8	L	4.8	A	A					
29					Q	Q	L	A	4.5	5.0	A	A	4.8 ^J	5.0	5.1	5.1	L	Q	Q	A					
30					Q	Q	Q	3.9	4.3	A	5.0	A	5.1	5.1	A	(4.7) ^A	L	Q	A	A					
31					Q	L	L	Q	L	5.1	A	5.0	4.9	5.2	4.9	5.1	5.0	Q	Q	Q					
Median Value					4.0	4.5	4.4		4.8	4.8	5.1	5.0	5.0	5.0	5.0	4.8	4.6	4.2	-						
Count					7	7	6		10	13	9	15	19	21	16	21	14	5	3						

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

Jul. 1950

f'F1

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

135° E Mean Time

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

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

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

foE

Jul. 1950

135° E Mean Time

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

Sweep 1.0 Mc to 14.0 Mc in 15 min M. Unit

foE

W 6

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

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

f'F₂

135° E Mean Time

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

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

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jul. 1950

fEs

Wakkanai

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	6.8	4.8	4.8	3.2	4.8	4.8	6.7	7.8	6.7	9.0	8.7	9.1	10.0	4.4	10.3	5.0	5.2	4.8	3.4	5.2	5.6	8.6	5.0	5.6	
2	5.4	4.9	5.0	6.2	5.6	4.8	6.8	7.8	8.6	7.2	9.2	7.4	4.4	4.6	6.7	5.0	5.0	5.0	5.0	3.7	3.7	3.7	3.4	2.2	
3	2.7	5.2	4.5	3.2	4.6	4.4	G	6.1	6.3	8.7	10.8	7.4	10.2	7.8	6.8	8.6	11.5	5.4	5.6	7.9	6.6	3.4	5.8	4.9	
4	2.9	3.6	3.4	2.6	3.1	3.9	4.4	5.2	5.5	5.0	5.0	C	C	C	C	C	C	C	C	C	3.2	3.2	2.2	G	
5	2.9	3.8	2.6	C	C	C	4.5	8.2	5.8	7.0	5.4	5.7	8.7	11.8	10.8	4.6	11.3	9.4	7.7	9.7	9.4	9.3	4.8	6.5	
6	6.0	4.3	4.0	3.2	3.0	3.3	5.5	7.0	8.6	7.9	8.2	7.6	7.5	5.6	6.2	8.2	6.4	4.6	4.8	3.8	2.2	2.6	2.7	3.4	
7	3.8	3.7	5.0	2.4	3.0	4.8	3.4	4.2	8.5	6.7	12.3	12.5	5.8	6.2	4.5	7.3	6.3	7.4	8.6	5.2	9.4	7.1	4.4	5.2	
8	5.6	6.0	5.2	5.6	6.7	5.6	5.1	8.2	9.2	10.0	10.7	11.0	10.8	5.7	4.3	4.4	G	6.4	6.6	4.4	C	5.2	2.7	G	
9	G	1.4	3.2	2.2	G	G	4.4	C	C	C	C	C	C	C	C	5.0	7.2	4.5	3.8	3.0	3.7	6.7	5.6	6.7	
10	5.2	4.4	3.6	4.8	3.6	3.3	3.8	5.2	5.2	5.6	C	C	C	C	C	7.6	4.1	4.5	3.3	5.6	3.3	5.0	G	3.0	
11	4.6	4.4	4.5	2.4	2.3	G	7.3	8.4	7.4	12.4	10.6	7.7	9.7	9.6	7.2	5.2	5.0	9.9	7.5	7.8	8.2	6.6	3.4	4.7	
12	3.7	4.8	3.6	4.3	4.4	6.7	5.2	6.2	7.4	7.4	5.7	4.2	5.2	5.1	7.5	12.1	7.7	7.6	6.8	7.2	1.7	G	3.6	4.8	
13	2.7	4.3	3.8	7.5	5.5	4.3	7.8	11.6	8.6	12.2	7.0	8.2	9.4	7.4	5.4	8.8	11.8	9.4	8.6	6.7	8.6	8.3	5.2	4.4	
14	5.0	7.9	6.0	8.8	5.3	4.9	7.7	7.8	6.5	7.8	8.2	6.8	7.2	10.3	8.3	7.3	6.8	7.2	7.8	7.8	7.8	7.6	5.4	5.6	
15	4.6	4.6	4.9	5.0	4.8	5.0	5.0	5.8	6.2	8.2	6.7	5.6	G	G	B	G	5.5	7.9	7.6	4.6	8.1	3.1	2.6	3.8	
16	4.4	4.0	4.6	3.8	3.9	2.8	6.2	5.6	11.7	10.3	8.6	7.6	7.7	4.6	G	5.3	5.3	6.4	6.6	5.7	6.3	4.4	4.5	5.0	
17	G	2.0	2.4	1.4	G	4.2	4.6	10.6	9.2	4.7	5.6	5.0	5.0	B	6.5	4.6	5.7	4.3	5.8	9.3	8.2	7.6	10.2	5.0	
18	4.4	3.8	2.0	G	G	G	5.9	5.6	6.1	8.4	6.8	5.5	4.8	5.3	4.4	5.4	4.4	G	5.3	4.7	4.4	4.5	6.5	4.4	
19	5.8	3.0	4.8	4.6	5.0	3.6	C	5.6	6.3	7.7	8.4	C	C	6.6	6.6	8.5	7.4	9.0	7.0	7.6	7.0	8.7	9.5	6.3	
20	4.2	6.4	5.8	6.2	5.4	5.6	5.2	5.7	6.7	6.6	6.8	7.3	9.1	5.1	9.3	4.6	3.8	3.7	4.3	3.2	3.7	4.3	5.5	4.7	
21	3.7	5.6	4.7	4.0	3.9	G	3.3	5.0	4.2	6.2	4.4	4.2	7.2	G	G	4.5	4.9	6.8	5.5	4.0	6.5	4.9	5.0	6.3	
22	5.6	5.0	3.5	3.9	5.8	4.4	4.7	7.8	5.6	4.9	4.0	6.9	4.4	6.6	6.4	4.8	7.4	11.8	7.4	4.3	3.7	6.6	7.6	6.0	
23	5.2	5.8	4.4	4.4	G	3.4	4.0	C	C	C	C	C	C	C	C	C	G	3.4	3.3	4.8	5.3	3.7	2.6	3.4	
24	4.4	(4.0)	(5.0)	2.9	3.0	3.1	4.6	5.6	5.7	7.0	6.7	5.3	5.7	4.4	5.7	G	5.6	7.5	(6.6)	(6.6)	4.9	2.7	1.3	4.4	
25	5.3	8.6	5.0	3.3	3.1	3.0	7.7	6.6	5.3	8.2	7.4	11.2	10.4	4.4	5.4	6.9	5.9	5.8	7.6	7.5	7.0	6.7	5.6	5.2	
26	5.5	5.2	5.4	5.2	7.2	8.2	9.4	7.8	13.8	D	C	C	6.2	7.0	7.0	4.0	G	G	3.4	7.6	5.0	5.8	7.0	5.8	
27	5.5	3.1	2.8	3.2	G	3.2	4.5	5.2	11.8	7.2	G	4.0	6.0	11.6	8.6	10.9	11.5	8.2	10.5	10.0	11.9	4.4	6.6	5.3	
28	5.4	6.4	5.7	5.3	5.2	3.9	4.4	(7.1)	11.1	13.9	D	8.8	7.6	4.8	7.3	4.9	7.2	6.7	6.0	7.3	6.7	7.5	7.2	5.8	
29	6.5	2.6	3.4	4.4	3.6	2.9	4.4	7.0	7.2	7.8	7.2	12.4	7.8	5.0	5.8	5.4	4.8	7.8	6.0	7.4	8.7	7.8	7.6	7.3	
30	7.5	5.2	4.9	3.1	2.4	(3.3)	5.2	5.9	6.6	4.5	7.8	5.2	6.3	5.4	4.9	5.4	6.4	6.6	7.2	7.2	6.2	5.4	5.8	6.8	
31	5.0	3.0	2.4	2.0	2.0	3.0	3.3	4.3	G	5.7	9.4	5.0	5.1	6.4	5.2	5.0	5.3	G	4.4	4.1	2.6	2.5	2.0	3.1	
Median Value	5.0	4.4	4.5	3.8	3.8	3.8	4.8	6.2	6.7	7.7	7.4	7.3	7.2	5.5	6.4	5.3	5.6	6.5	6.0	6.2	6.2	5.2	5.0	5.0	5.0
Count	31	31	31	30	30	30	29	29	29	29	27	25	26	26	26	29	30	30	29	30	30	31	31	31	31

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

Jul. 1950

M3000F2

135° E Mean Time

Wakanai

Lat. 45° 2 3.6' N
Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	3.0	2.5	2.5	2.4 ^F	2.2 ^F	2.6	2.4	(2.7) ^F	A	A	A	A	A	2.5	2.8	(2.6) ^F	2.8	(2.7) ^F	2.9	2.9 ^P	2.5	2.1	2.6	2.6 ^H	
2	2.8	2.7	2.7	2.9	2.7 ^V	2.7	(2.9) ^F	(2.9) ^F	A	(2.8) ^F	A	A	A	2.7	2.8	2.8	2.5	2.6	2.9	2.7	2.7 ^H	(2.6) ^F	2.6 ^H	2.6 ^H	
3	2.7	2.7	2.5	2.7	2.8	2.6	2.5	2.7	2.9 ^Z	A	A	A	2.7	2.3	2.7	3.1	A	2.7	3.0	3.1	(2.7) ^F	(2.8) ^F	(2.7) ^F	(2.7) ^F	
4	(2.8) ^F	2.6	2.8	(2.5) ^F	2.8	2.7 ^H	2.7	(2.7) ^F	2.9 ^P	2.8	2.4	C	C	C	C	C	C	C	C	2.9 ^H	2.5 ^H	2.3 ^H	2.5 ^H	2.5 ^H	
5	2.7	2.6	2.8 ^H	C	C	C	2.9 ^F	(2.8) ^K	G ^K	G ^K	2.5 ^K	B ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	2.5 ^F	2.7 ^K	
6	2.3 ^F	(2.5) ^F	(2.4) ^F	(2.4) ^F	2.5 ^H	2.8	2.6	2.9	3.0	2.9	3.2	3.1 ^H	2.9	2.9	2.7	2.8	2.6	2.8	3.1	2.9	2.7	(2.8) ^F	2.8	2.7 ^H	
7	2.7	2.6	(2.7) ^F	2.5 ^F	(2.6) ^F	2.9	3.0	(2.9) ^F	2.5	2.6 ^V	A	A	2.7	2.6	2.8	2.9 ^H	3.1	2.8	3.0	3.0	2.6	2.8	2.6 ^P	2.6 ^P	
8	2.9	2.8	(2.7) ^F	(2.6) ^H	(2.7) ^F	2.8	2.9	(2.6) ^F	A	A	A	A	2.7	3.0	2.7	2.7	(2.6) ^F	2.6	3.0	[2.9] ^C	2.8	(2.6) ^F	(2.6) ^F	2.6 ^P	
9	2.4	2.6	2.5	2.8	2.9	3.0	2.9	C	C	C	C	C	C	C	C	2.8	3.1	3.0	BH	3.0	2.7	2.8 ^V	2.7 ^H	2.7 ^H	
10	(2.9) ^F	2.5	2.6	2.7	2.7 ^H	2.7	2.8	2.7	3.1 ^H	2.7	C	C	C	C	C	A	3.2	3.1	(2.9) ^P	(3.0) ^F	(2.7) ^F	2.8 ^H	2.5 ^H	2.5 ^H	
11	2.6	2.6	2.5 ^Z	(2.4) ^F	(2.4) ^F	2.7	A	A	A	A	A	2.6	A	A	2.6	2.8	2.6 ^F	A	2.6	A	A	3.0 ^F	(2.6) ^F	2.9 ^F	
12	(2.5) ^F	2.7	2.8	3.0	2.5	A	2.8	3.3	3.0	A	2.4	2.3	2.4	(2.4) ^F	2.5	A	A	AS	2.5	2.6	2.8	2.6 ^H	2.5	2.7	
13	2.5	2.6	2.4	2.5	2.6	2.8	A ^K	A ^K	2.5 ^K	G ^K	G ^K	G ^K	A ^K	2.5 ^K	2.7 ^K	2.5 ^K	A	A	A ^K	A ^K	A	A	2.7	2.6	
14	2.5 ^F	(2.6) ^F	(2.9) ^F	2.7 ^K	(2.8) ^F	3.2 ^K	2.5 ^K	A ^K	2.9	A	A	A	A	A	2.5	2.8	2.8	2.8	A	A	A	A	2.7 ^F	2.8	
15	2.6	2.6	2.6 ^F	2.5 ^F	2.8 ^F	3.0 ^F	2.8 ^F	3.0 ^F	2.8 ^F	2.9	2.3	2.5	2.7	2.8	(2.8) ^F	2.7	2.6	A	A	2.6	A	(2.8) ^F	2.8	2.7	
16	2.5 ^H	(2.6) ^F	2.6	(2.7) ^F	2.9	3.1	2.7	3.0	A	A	A	2.8	2.7	2.8	2.7	3.0	2.7	2.8	2.6	3.1	2.9	2.6 ^P	2.6	2.7	
17	2.6	2.8	2.7	2.9	2.8	2.6	3.1	A	A	A	2.4	2.6	2.7	2.8	(2.8) ^F	2.8	2.9	(2.9) ^F	2.7	2.8	A	A	A	F	
18	S	2.7 ^F	2.8 ^F	2.9 ^F	3.0	2.9	2.8	3.0	3.1	A	A	2.6	2.7	3.1	2.7	2.7	2.7	2.8	2.8	3.0	2.8 ^F	3.0	2.8	2.9	
19	2.7 ^F	(2.5) ^F	(2.6) ^F	(2.5) ^F	2.6 ^F	2.7 ^F	[2.5] ^F	(3.3) ^F	3.4 ^F	A	A	C	C	(3.1) ^F	(2.8) ^F	A	A	2.9 ^F	2.9 ^F	A	(2.8) ^F	A	A	(2.8) ^F	
20	(2.7) ^F	(2.8) ^F	(2.5) ^F	(2.7) ^F	3.0	3.1	2.9	2.8 ^Z	2.9	2.7	2.8	2.6	A	2.8	A	2.8	3.0	3.1	2.9	3.0	3.1 ^H	3.1 ^Z	3.0	3.3 ^H	
21	3.2	2.9	2.9	2.9 ^F	(2.8) ^F	3.3	(3.5) ^F	A	3.1	3.3	(3.1) ^F	2.8	2.8	2.8	2.8	2.9	3.3	2.8	2.9	3.2 ^P	3.0 ^P	2.9	3.0	2.9	
22	3.0	2.8	3.0	2.9	2.8	3.0	3.1	A	A	2.7	2.8	2.8	2.8	2.8	2.9	3.3	2.8	2.8	2.9	3.2 ^P	2.9	(2.9) ^F	3.0 ^F	2.8	
23	2.9	2.8 ^F	(2.7) ^F	2.8 ^F	2.8	2.9 ^F	2.6 ^F	C	C	C	C	C	C	C	C	C	2.5	2.9	2.9	2.9	2.8	2.8	2.9	2.7	
24	2.8	2.6	2.9	2.7 ^H	2.7	3.2	3.0	2.9	2.8	3.1	3.2	S	2.9	2.9	2.7	B	2.8 ^P	3.3	[3.2] ^C	(3.0) ^F	(2.7) ^F	(3.2) ^H	2.7	2.7	
25	2.7	2.6	2.6 ^H	2.9	2.9	3.0	2.9	3.2 ^K	3.0 ^K	A ^K	A ^K	2.5 ^K	2.6 ^K	2.4 ^K	2.6 ^K	2.4 ^K	2.8 ^K	2.6 ^K	A ^K	A ^K	2.6 ^K	2.7 ^K	2.5 ^K	2.4 ^K	
26	2.7 ^K	2.4 ^K	2.7 ^K	2.6 ^K	2.6 ^K	(2.7) ^F	A ^K	(2.6) ^F	A ^K	A	C	C	3.0	3.4	3.0	2.6	3.2	3.3	3.2	A	3.1 ^F	3.1 ^F	2.9 ^F	2.9 ^F	
27	(3.0) ^F	2.8 ^F	(2.7) ^F	2.9 ^F	3.1	2.6	2.6	2.7	A	3.4 ^F	3.3	(2.8) ^F	3.7	3.3 ^F	3.1	2.9	A	A	A	A	A	(3.1) ^F	(3.1) ^F	(3.0) ^F	
28	(3.0) ^F	3.1	2.9 ^F	2.8	3.1	2.8	B	2.6 ^F	A	A	A	A	2.7	2.7	3.0	2.7	3.2	3.4	3.3	3.3	3.0	3.1	(3.0) ^F	F	
29	(3.3) ^F	3.1 ^F	3.1 ^F	3.0 ^F	3.0 ^F	3.1 ^F	3.2 ^P	3.2 ^P	3.2	3.3	3.2	A	3.0	3.3	3.1	3.2	3.4	3.0	3.1 ^S	A	A	A	A	2.9	
30	A	B	2.7 ^H	3.0 ^F	2.6 ^F	2.9 ^F	3.0	3.0	3.1	3.2	3.2	(3.0) ^B	3.3	3.3	3.1	3.1	2.8 ^H	3.2	3.1	3.1	3.1 ^H	2.7	2.8	3.0	
31	3.0	2.8	3.0 ^F	2.9 ^F	3.2 ^F	3.1 ^F	3.2 ^F	3.2 ^F	(3.2) ^S	3.0	3.0	3.0	3.0	3.0	3.1	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.0	2.8
Median Value	2.7	2.6	2.7	2.7	2.8	2.9	2.8	2.9	3.0	2.8	2.8	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.8	2.8	2.8	2.7
Count	29	30	31	30	30	29	29	27	23	19	17	15	16	20	24	23	24	24	23	19	23	25	28	28	29

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

Jul. 1950

fminF

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	AF	1.8	1.4 ^F	A	3.2	A	A	A	A	A	A	A	4.3 ^A	A	4.0	A	3.2	2.2	A	A	A	A	A
2	A	E	E	A	A	A	A	A	A	4.2	A	A	A	4.0	A	3.7	A	A	A	1.5	1.5	1.4	1.4	1.4
3	1.5	1.4	1.4	E	A	2.3	3.3	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	1.8 ^B	A
4	AF	A	1.9	E	1.6	2.7	A	A	A	3.6	4.3	C	C	C	C	C	C	C	C	C	C	1.4	1.3	E
5	A	A	A	C	C	C	3.0	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
6	1.4	1.1	E	AF	1.3	2.2	A	3.2	3.6	3.2	A	A	4.3	A	A	A	3.6	3.2	2.6	A	1.6	1.5	1.5	1.1
7	1.1	A	1.6	E	1.6	A	A	A	A	A	A	A	3.8	A	4.4	4.2	A	2.9	A	A	A	A	A	A
8	A	A	A	A	A	2.2	3.4	A	A	A	A	A	A	A	N	N	3.4	A	A	A	C	A	1.4	E
9	E	E	A	1.9	1.8	2.2	3.6	C	C	C	C	C	C	C	C	A	A	A	A	2.2	A	A	1.8	E
10	E	E	1.4 ^F	A	2.2 ^F	1.9	2.8	3.3	A	A	C	C	C	C	C	A	A	A	2.4	1.6	1.6	A	1.2	1.3
11	A	A	A	A	A	1.6	2.7	A	A	A	A	A	A	A	A	A	4.0 ^A	A	A	A	A	A	A	1.2
12	A	A	A	A	A	A	A	A	3.9	4.1	A	A	A	A	A	A	A	A	A	2.2	1.4	1.6	A	1.7
13	A	1.1	1.1	1.4	1.3	A	A	A	A	A	A	A	A	4.2	4.0	A	A	A	A	A	A	A	E	A
14	A	1.8	E	A	1.5	2.0	A	A	3.1	A	A	A	4.0	A	A	4.3 ^A	A	3.7	A	A	A	A	A	A
15	1.7 ^F	A	A	A	A	A	A	A	A	A	A	A	4.2	4.2	[3.9] ^B	3.6	3.2	A	A	A	A	A	1.6	A
16	1.2	1.4	A	A	A	2.4	A	A	A	A	A	A	4.4	4.2	3.8	A	A	A	A	A	A	A	A	1.8
17	E	1.4	E	1.3	1.6	2.7	A	A	A	A	A	A	4.5 ^A	4.7	A	A	A	E	A	A	A	A	A	A
18	A	1.8	E	E	E	2.9	A	A	A	A	A	4.2	4.4	4.3	4.0	4.3	A	A	A	A	A	A	A	A
19	A	E	A	A	A	3.0	C	A	A	A	A	C	C	A	A	A	A	A	A	A	A	A	A	A
20	A	A	A	AF	A	A	2.8	A	3.7	A	A	A	A	A	A	4.2	4.6	A	A	1.8	1.6	A	A	A
21	A	A	A	A	2.4	2.4	2.9	A	4.4	4.4	4.6	4.2	AF	4.1	3.8	3.9	4.0	A	A	A	A	A	A	A
22	A	A	A	A	(2.2) ^B	2.9	2.9	A	A	A	3.8	A	4.9	A	A	3.7	A	A	A	2.5	1.8	E	A	1.8 ^F
23	A	A	A	A	2.0	A	2.8	C	C	C	C	C	C	C	C	C	3.3	2.6	2.2	A	A	A	A	A
24	A	A	A	1.2	1.2	2.3	A	A	4.4 ^A	A	A	A	A	A	A	3.9	3.7	A	C	2.2	A	1.7	1.3	A
25	A	A	A	A	A	3.5	A	A	A	A	A	A	A	4.3	A	A	A	A	A	E	1.6	1.3	1.9	
26	A	AF	AF	A	2.2	AF	A	A	A	A	C	C	4.2	A	A	A	3.4	3.0	2.6	AF	A	A	A	A
27	A	A	A	A	1.8	2.2	A	3.9	A	A	3.8	4.5	A	4.2	A	A	A	A	A	A	A	A	A	A
28	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	1.5	A
29	A	A	E	E	1.5	2.5	2.8	A	3.8	A	A	A	A	3.8	4.5	3.8	A	A	1.4	A	A	A	A	A
30	A	A	A	1.9 ^F	1.2	A	A	A	A	3.8	A	A	A	A	4.4	A	A	A	A	A	A	A	A	A
31	A	1.5	E	E	1.5	2.2	2.6	3.0	3.2	3.5	A	4.3	3.7	A	A	4.0	A	3.2	3.0	1.6	1.2	E	E	A
Median Value	1.2	1.2	E	1.2	1.6	2.4	2.9	-	3.8	3.8	-	-	4.2	4.2	4.0	4.0	3.6	3.2	2.3	2.0	1.6	1.4	1.4	1.3
Count	8	12	13	12	14	20	11	4	8	7	4	4	10	11	8	12	9	7	8	8	8	8	13	11

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

Jul. 1950

fmin E

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	E	E	E	1.2	E	1.2	1.1	1.5	1.6	1.7	1.9	2.0	3.7	3.6	1.9	1.9	E	E	E	E	E	E	E
2	E	E	E	E	E	1.3	E	E	1.2	1.2	1.4	1.6	1.6	1.7	1.4	1.3	1.5	E	E	E	E	1.1	1.4 ^B	1.1
3	E	E	E	E	E	E	1.2	1.3	1.2	E	E	2.2	E	1.5	1.8	1.2	1.5	1.4	1.3	1.1	1.1	1.1	1.1	E
4	1.1	E	E	E	1.1	1.4	1.2	1.2	1.3	1.4	1.2	C	C	C	C	C	C	C	C	C	1.2	1.4	1.2	E
5	E	E	E	C	C	E	E	1.5	1.6	1.4	1.7	1.5	1.8	1.6	1.8	1.6	1.4	1.1	E	E	E	E	E	E
6	E	E	E	E	1.2	1.2	1.1	1.2	1.2	1.3	1.3	1.5	1.4	1.4	1.5	1.5	1.2	1.1	1.1	1.1	E	E	E	E
7	1.1	1.3	E	E	E	1.2	1.2	1.2	E	E	E	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.3	1.1	E	E	E	E
8	1.1	1.2	E	1.1 ^B	E	1.1	1.1	1.2	1.3	1.5	1.8	2.0	1.5	1.2	1.2	1.3	1.1	1.4	1.2	1.1	[1.2] ^C	1.2	1.3	E
9	E	E	E	E	E	E	E	C	C	C	C	C	C	C	C	1.5	E	1.5	E	1.6	E	E	E	E
10	E	E	E	E	E	E	E	1.1	1.4	1.5	C	C	C	C	C	1.6	E	1.4	1.2	1.2	1.5	1.2	E	E
11	E	E	E	E	E	1.2	1.2	1.3	1.9	1.6	1.4	1.4	1.5	1.6	E	E	1.5	1.1	1.2	1.2	1.2	1.2	1.2	1.2
12	E	1.2	1.2	E	E	1.1	1.4	1.1	1.2	1.3	1.4	1.5	1.8	1.7	1.6	1.5	1.4	1.4	1.2	1.2	1.2	B	1.3	1.5
13	E	E	E	1.1	E	E	1.2	1.5	E	1.1	1.3	1.4	1.1	1.4	1.1	1.6	1.2	E	E	E	E	E	E	E
14	E	E	E	1.3	E	E	E	E	1.2	1.3	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.1	E	E	E	E	E	E
15	E	E	E	E	E	1.2	1.4	1.5	1.2	2.0	1.9	1.2	1.2	1.8	B	1.2	1.3	1.2	E	E	E	E	E	E
16	1.2	1.4	1.2	E	1.3	1.2	1.4	1.4	E	1.2	1.2	1.4	1.5	1.5	1.4	1.3	1.4	1.2	1.4	E	E	1.1	1.2	1.5
17	E	E	E	E	E	1.2	1.1	1.6	1.9	(2.0) ^B	2.1	2.0	2.0	2.0	1.9	1.5	1.8	E	E	E	E	E	E	E
18	E	E	E	E	E	E	E	E	1.4	1.3	1.2	1.3	1.3	1.3	E	E	E	1.2	1.1	E	E	E	E	E
19	E	E	E	E	E	E	C	1.2	E	1.9	4.0	C	C	3.6	3.0	1.5	1.8	2.0	1.2	1.2	1.2	1.2	1.2	1.1
20	1.2	1.1	E	E	E	E	1.3	1.4	1.3	1.4	1.7	1.9	1.8	2.1	2.1	2.0	1.4	1.3	1.2	1.2	1.4	1.4	1.5	1.3
21	E	E	E	E	E	1.2	1.2	1.2	1.4	1.4	3.8	1.8	1.5	1.8	1.9	1.9	1.3	E	1.1	E	1.1	E	E	E
22	E	E	E	E	E	E	E	E	1.5	3.6 ^S	1.6	1.8	1.6	1.8	1.8	2.0	1.9	1.7	E	1.2	E	E	E	E
23	E	E	E	E	E	1.5	1.5	C	C	C	C	C	C	C	C	C	1.6	1.5	1.4	1.2	E	E	E	E
24	1.2	1.2	1.2	1.2	1.2	1.3	1.2	1.3	1.8	E	1.2	1.5	3.0	2.2	E	E	E	1.3	[1.3] ^f	1.3	E	E	E	E
25	1.3	E	E	E	E	E	E	1.2	1.4	1.6	1.7	1.8	1.8	2.8	3.6	1.9	1.4	1.5	E	E	E	E	E	E
26	E	E	E	E	E	E	1.2	1.2	1.9	1.5	C	C	2.0	2.0	1.9	1.8	1.2	1.2	E	1.6	1.6	1.2	E	E
27	E	E	E	E	E	1.2	1.2	1.2	1.1	E	1.2	1.6	1.5	E	E	E	1.5	1.5	1.5	1.2	1.2	1.2	1.2	1.2
28	E	E	E	E	1.2	1.3	1.4	1.4	1.6	1.7	1.9	2.1	1.8	1.8	1.8	1.6	1.6	1.6	1.7	1.5	1.7	1.4	1.5	1.5
29	1.6	E	E	E	E	1.2	E	E	1.1	1.4	2.8	2.1	1.8	2.0	2.0	1.8	1.2	1.2	E	E	E	E	E	E
30	E	E	E	E	E	E	E	1.2	1.5	1.8	1.7	1.9	2.5	1.8	1.9	1.8	1.1	1.1	E	1.2	E	E	E	E
31	E	E	E	E	1.5	1.2	1.5	1.4	1.6	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.2	E	E	E	E	E
Median Value	E	E	E	E	E	1.2	1.2	1.2	1.3	1.4	1.4	1.6	1.6	1.7	1.8	1.5	1.4	1.2	1.1	1.1	E	E	E	E
Count	31	31	31	30	30	30	30	29	29	29	27	25	26	27	26	29	30	30	30	30	31	30	31	31

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

Lat. 38° 43.5' N
Long. 140° 08.2' E

Jul. 1950

foF2

Akita

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	π.2	6.9 ^F	(6.5) ^F	6.8	π.0 ^F	π.1 ^F	9.6	10.1	9.6	π.6	A	A	A	B	π.6	8.1	π.2	π.7	π.7	8.6	8.8	π.1	8.3 ^S	8.2	
2	8.0 ^S	π.6 ^F	6.8 ^F	π.1 ^F	8.1 ^F	6.7	9.3	9.6	(8.3) ^F	A	A	A	6.4	A	A	π.0	π.7	A	π.9	A	π.8	8.0 ^F	π.7	π.8	π.7 ^F
3	π.9	π.7	6.9	6.6	π.3	π.9	9.3	π.0	8.2	6.5	π.2	π.2 ^J	π.8	A	8.0	π.7 ^H	π.7	8.1	8.5	8.6	8.0 ^F	8.2 ^F	π.7 ^F	π.7 ^F	
4	π.6 ^F	F	π.5 ^F	A	6.2 ^F	π.1	A	π.0	8.2	6.5	6.8	6.5	6.7	π.9	8.2	π.8	π.1	6.6	π.2	8.3	6.8	6.4	6.4	6.6	
5	6.4	6.4	6.5	6.1	6.8	π.2	6.4	6.1 ^F	5.6 ^K	B ^K	A ^K	6.9 ^K	A ^K	A ^K	6.8 ^K	π.0 ^K	A ^K	A ^K	6.3 ^K	π.5 ^K	8.1	A	π.3	π.3	
6	F	F	8.3 ^F	π.0 ^F	5.8	6.6	6.2	8.7	8.3	π.5 ^J	A	A	A	π.6	π.0	π.5	π.7	π.8	π.0	9.1	9.1	A	(9.1) ^F	F	
7	A	F	F	F	8.1 ^F	F	8.5	8.5	π.6	π.2	π.0	π.2	π.8	π.6	8.1	π.8	π.7	8.5	8.7	8.2	(8.0) ^F	π.5	π.5	π.1	
8	A	9.1 ^F	(π.5) ^F	(π.0) ^F	(π.3) ^H	π.1	6.8 ^H	8.0	8.4	AF	A	A	A	A	A	A	6.7	π.3	8.0 ^J	8.5 ^J	π.2	A	(π.6) ^H	π.4	
9	π.0	π.0	6.5	6.6 ^F	6.1	6.1 ^F	6.8	8.5	8.2	π.3	A	A	A	8.3	8.4 ^F	9.2	9.7 ^F	9.2	9.7	8.8	π.7	π.0	π.1	π.6 ^F	
10	π.9 ^H	π.3	6.9	(π.0) ^F	6.5 ^F	π.8	9.0	9.8	9.8	9.1	8.1	π.9	π.3	π.0	π.0	π.3	8.4	8.4	8.0	9.0	8.8	8.3	π.8	(π.6) ^S	
11	8.0	π.7	8.0 ^F	π.0 ^F	6.9 ^F	6.5	6.0	6.0	5.9 ^J	6.2	A	A	A	6.6	6.1	6.0	6.2	6.2	6.7	6.7	6.8 ^F	π.0	6.5	6.1	
12	5.4	5.5	5.6	4.π	4.1	5.0 ^F	6.4 ^F	8.4	A	A	6.3	6.5 ^J	A	A	A	A	A	6.8 ^F	6.4	6.5	6.3	6.8 ^F	6.2	F	
13	(π.0) ^F	(6.6) ^F	6.0	6.2	5.1 ^F	5.5	6.1	A ^K	A ^K	A ^K	6.0 ^K	B ^K	A ^K	6.2 ^K	5.6 ^K	6.2 ^F	5.8 ^K	A ^K	C	6.9	6.7	6.4	6.5	π.0	
14	6.5	6.0	6.0	A	A ^K	A ^K	6.0 ^K	6.0 ^K	6.8	A	A	A	6.2	G	5.6	5.π	5.9	5.9	A	π.8	π.3	π.3	6.3 ^F	6.0 ^F	
15	5.9 ^F	5.8 ^F	5.7 ^F	5.8 ^F	5.4 ^F	6.3 ^F	A	A	A	6.2	6.4	π.1	π.6	π.1	6.8	A	6.8 ^J	π.1 ^J	A	A	π.5	8.0	A	A	
16	A	A	6.2 ^H	6.2 ^H	5.9 ^H	π.1 ^F	π.6	π.8	π.8	A	8.2 ^H	π.8	A	π.5	A	6.7	6.6	A	A	8.9 ^Z	8.3	π.6	π.7	π.0	
17	π.0	6.5	6.0	6.8 ^H	6.0	5.8	π.5	8.8	A	A	A	A	π.2	6.9	6.6	6.7	6.0	6.6	π.1	π.2	π.1	π.2	6.9 ^H	π.2	
18	π.7 ^F	F	F	(π.0) ^F	F	5.5 ^F	(6.7) ^F	(6.9) ^F	π.1 ^J	A	A	6.2	A	6.8	6.π	6.8	6.3	6.4	6.π	A	A	A	6.0	(5.1) ^S	
19	5.π ^F	5.π ^F	(6.π) ^F	6.4 ^F	5.1 ^V	6.2	6.6 ^F	π.π ^F	6.5 ^H	6.4	6.8 ^Z	6.2	B	π.4	π.2	6.9 ^J	S	π.6	6.9	6.8	π.1	π.3	π.2	6.π ^F	
20	F	π.3	π.4	π.1 ^F	6.6 ^F	6.6 ^F	6.7	6.6	π.3	8.2	π.8	π.3 ^J	A	8.0	8.4	8.1	π.π	8.0	π.8	π.7	(π.9) ^F	π.9	8.0	π.π	
21	π.9	π.2 ^F	π.3 ^F	π.2	π.4	π.6	π.4	8.5	6.9	8.4	π.6 ^H	π.7	8.0	8.8	9.0	9.3	8.9	8.4	8.3	9.1	8.4	π.9	π.4	B	
22	B	F	F	6.6 ^F	4.9 ^F	5.8	5.5	8.4	π.3	C	C	C	C	8.2	π.9	8.0	8.0	8.0	8.0	π.5	π.6	8.0	π.4	π.8 ^H	
23	B	C	C	6.π ^F	6.6 ^F	6.π	8.6	8.4	π.3	C	C	C	C	8.2	π.9	π.4	π.3	π.8	8.2	8.4	π.5 ^F	8.6 ^F	8.1	π.5	
24	π.5	π.2	π.5 ^F	π.2	6.6	π.0	π.8	8.2	π.π	8.3	π.6	π.9	π.8	B	π.8	8.0	8.1	A	9.8	1.0 ⁴	9.8	8.3	8.0	π.7	
25	π.3	6.6	π.1 ^F	F	π.0 ^F	π.2 ^F	6.8 ^F	A ^K	A ^K	A ^K	(5.π) ^H	6.π ^K	π.2 ^K	A ^K	π.9 ^K	π.1 ^K	A ^K	A ^K	6.8 ^K	π.0 ^K	π.1 ^K	π.5 ^K	π.1 ^K	6.4 ^F	
26	6.5 ^H	6.5 ^K	6.5 ^K	5.8 ^K	5.5 ^K	5.8 ^K	5.4 ^K	5.6 ^K	6.3	π.1	6.9	6.4	π.1	π.9	π.7	π.2	π.3	π.1	6.9	π.4	8.0	8.1	π.6	6.5	
27	π.3	8.1 ^F	π.2	6.9 ^F	5.8 ^V	5.8	π.0	8.2	8.8	8.3	A	π.1	π.4	π.4	π.1	π.5	π.4	8.0 ^J	π.3	A	C	C	π.6	π.0 ^V	
28	(π.3) ^H	F	π.5 ^F	6.5 ^F	5.2 ^F	5.2 ^F	6.9	π.5 ^Z	π.2	8.0	π.π	(π.1) ^F	6.8	π.1	6.8	π.4	π.8	8.0	π.5 ^F	6.6 ^H	6.4 ^J	6.8 ^F	6.9 ^F	F	
29	6.5 ^F	6.8 ^F	6.8 ^F	6.0 ^Z	5.7	8.1	8.1	10.1	6.9	6.1	6.2	6.8	π.3	π.7	π.3	8.7	π.8 ^J	(π.8) ^F	A	8.7	8.9	(π.5) ^F	(π.9) ^F	(π.5) ^F	
30	π.1 ^F	(6.8) ^F	(5.9) ^F	(6.0) ^F	6.3 ^F	6.0	π.3	8.0	8.0	A	B	A	A	A	A	π.π	8.7	8.4	8.0	8.2	8.0	π.9 ^H	π.9 ^H	F	
31	F	8.5 ^F	8.6 ^F	π.6 ^F	π.0 ^F	π.3 ^V	π.π ^F	A	π.9	π.3	π.5 ^J	π.5 ^J	π.4	π.4	π.9	π.7	8.π	9.1	8.9	π.9	π.2	π.1	(π.1) ^S	6.8	
Median Value	π.2	6.9	6.8	6.π	6.3	6.6	6.8	8.1	π.6	π.3	π.0	π.1	π.3	π.4	π.4	π.4	π.7	π.8	π.8	8.2	π.7	π.6	π.5	π.2	
Count	23	23	27	2π	29	29	28	26	25	18	1π	20	18	22	26	28	25	25	25	2π	29	24	24	29	25

foF2

Sweep 1.0 Mc to 17.0 Mc in 1.5 min

Manual

A 1

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

IONOSPHERIC DATA

Jul. 1950

f_oF₂

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	420 ^F	(400 ^F)	370	400 ^F	310 ^F	330	300	330	330	A	A	A	B	390	350	320	340	310	350	350	S	390 ^S	370
2	350 ^F	350 ^F	360 ^F	360 ^F	370 ^F	310	340 ^F	C	A	A	A	A	A	A	400	400	C	A	370	A	400	360	400	370
3	390	380	390	370	370	350	360	280	(310 ^F)	A	A	(350 ^F)	350	A	320	380 ^H	360	330	340	330	310 ^F	370 ^F	390 ^F	350 ^F
4	370 ^F	F	310 ^F	A	360 ^F	320	A	340	300	440	380	450	9	380	340	330	350	340	330	300	330	410	400	410
5	410	390	380	360	320	250	320	400 ^K	(310 ^K)	B ^K	A ^K	380 ^K	A ^K	A ^K	410 ^K	470 ^K	A ^K	A ^K	350 ^K	360 ^K	340	A	A	(430 ^K)
6	F	F	(380 ^F)	(410 ^F)	340	350	390	310	300	A	A	A	A	340	390	390	340	A	A	A	A	A	(390 ^F)	F
7	A	F	F	F	(370 ^F)	F	320	310	340	330	400	400	360	330	330	330 ^F	380	320	340	340	(330 ^F)	340	460	380
8	A	370 ^F	(350 ^F)	(370 ^F)	(410 ^F)	330	430 ^H	360	350	AF	A	A	A	A	A	A	370	310	(350 ^F)	(320 ^F)	400	A	(360 ^H)	380
9	350	380	370	360 ^F	320	400 ^F	310	320	380	300	A	A	A	A	350 ^F	360	410 ^F	330	310	290	380	380	400	400 ^F
10	370 ^F	370	380	(380 ^F)	380 ^F	350	360	310	300	310	360	B	(320 ^F)	360	A	390	350	310	(360 ^F)	360	310	330	390	(390 ^F)
11	420	400	390 ^F	380 ^F	400 ^F	390	420	410	A	B	A	A	A	410	A	440	380	A	320	340	(330 ^F)	390	380	380
12	440	390	370	280 ^F	380	350 ^F	A	A	A	A	A	A	A	A	A	A	A	360 ^F	340	330	390	430 ^F	410	F
13	(450 ^F)	(430 ^F)	370	360	400 ^F	420	390	A ^K	A ^K	A ^K	A ^K	B ^K	A ^K	390 ^F	B ^K	A ^K	300 ^K	A ^K	A ^K	320	380	370	400	370
14	420	380	350	A	A ^K	A ^K	A ^K	400 ^K	380	A	A	A	G	G	G	410	A	A	A	320	300	A	(380 ^F)	A
15	(380 ^F)	A	(370 ^F)	(340 ^F)	(310 ^F)	F	A	A	A	A	440	A	390	A	A	A	A	(340 ^F)	A	A	340 ^F	320 ^F	A	A
16	A	A	(360 ^F)	(370 ^F)	(370 ^F)	(310 ^F)	360	340	A	A	360 ^H	A	A	A	A	320	320	A	A	350 ^F	320	360	360	360
17	360	360	360	430 ^F	360	340	320	280	A	A	A	A	390	370	410	340	300	310	A	300	310	350	370 ^F	370
18	(400 ^F)	F	F	(340 ^F)	F	(400 ^F)	F	(370 ^F)	A	A	A	A	A	A	A	350	380	330	A	A	A	A	330	(400 ^F)
19	(320 ^F)	380 ^F	(370 ^F)	350 ^F	370 ^F	330 ^F	310	320 ^F	340 ^H	390	380 ^F	390	B	360	350	340	350	330	360	300	340	380	350	(380 ^F)
20	F	(380 ^F)	(350 ^F)	(350 ^F)	(310 ^F)	320 ^F	300	300	A	320	A	A	A	A	350	340	350	330	360	350	350	(350 ^F)	370	350
21	350	370 ^F	350 ^F	360	330	330	320	310	330	290	370	390	A	A	370	370	340	320	320	300	320	360	380	B
22	B	F	F	320 ^F	320 ^F	340	330	380 ^K	A	370	A	G	370	C	370	380	340	370	320	340	310	360	380	350
23	B	C	C	390 ^F	390 ^F	370	330	280	300	C	C	C	C	C	330	320	340	340	350	310	310	370 ^F	320	390
24	370	350	360 ^F	330	320	300	300	310	310	330	A	A	360	B	390	370	370	A	370	390	290	380	350	380
25	360	380	400 ^F	F	(360 ^F)	(330 ^F)	330 ^F	A ^K	A ^K	A ^K	B ^K	G ^K	430 ^K	A ^K	380 ^K	A ^K	A ^K	A ^K	340 ^K	370 ^K	360 ^K	380 ^K	440 ^K	410 ^K
26	420 ^H	420 ^H	400 ^H	390 ^H	390 ^H	380 ^H	370 ^H	G ^H	400 ^H	A	330	340	390	350	320	330	310	300	300	340	370	360	340	330
27	380	380 ^F	340	370 ^F	300 ^F	320	360	340	300	320	A	340	370	340	330	330	A	A	290	A	C	C	400	360
28	(420 ^H)	F	F	(320 ^F)	340	370 ^F	360	320 ^F	370	320	310	(330 ^F)	A	A	390	380	320	300	390 ^F	370 ^F	440 ^F	400 ^F	F	
29	F	420 ^F	390 ^F	420 ^F	360 ^F	340	320	270	270	A	A	A	270	380	390	360	(330 ^F)	A	A	330	(370 ^F)	(360 ^F)	(350 ^F)	
30	(370 ^F)	(350 ^F)	(370 ^F)	(360 ^F)	360 ^F	350	300	340	300	A	B	A	A	A	340	370	370	310	310	310	330	380	(370 ^F)	
31	F	(350 ^F)	(370 ^F)	300 ^F	340 ^F	270 ^F	290 ^F	A	280	310	(300 ^F)	(310 ^F)	340	A	390	340	440	310	280	290	370	390	(380 ^F)	380
Median Value	380	380	370	360	360	340	330	320	310	320	360	380	370	360	350	350	350	330	330	330	330	340	370	380
Count	22	22	26	27	29	29	26	25	20	13	10	12	14	16	21	25	23	21	23	26	28	24	29	24

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

IONOSPHERIC DATA

Jul. 1950

RF2

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	(330) ^A	(300) ^A	(300) ^A	(300) ^A	300	280	250	300	330	A	A	A	A	B	380	350	300	330	300	300 ^A	260	A	280	(310)	
2	(300) ^F	(320) ^F	320	(320) ^A	240	320	C	A	A	A	A	A	360 ^A	A	340	310	C	A	360	A	370	320	350	300	
3	300	270	280	310	300	310	260	280	A	A	400	350	340	A	(310) ^A	310 ^F	340	310	280	260	260	320	320	300	
4	340	320	250	A	340	250	A	300	280	440	380	450	520	380	330	330	350	320	260 ^F	260	240	300	300	300	
5	320	300	300	290	260	220	300	380 ^K	310 ^K	B ^K	A ^K	A ^K	A ^K	A ^K	410 ^K	440 ^K	A ^K	A ^K	350 ^K	(300) ^K	280	A	A	330 ^A	
6	(300) ^A	300 ^F	270	280	280	280	350	300	300	320	A	A	A	A	330	400	350	310	(350) ^A	A	340	A	340	370 ^A	
7	A	(310) ^A	(310) ^A	(310) ^A	350 ^F	310	290	260	330	340	370	350	350	A	A	330	370	310	300 ^A	270	280	300	(300) ^A	(300) ^A	
8	300	300	270	(300) ^A	280	300	270	340	AF	A	A	A	A	A	A	A	350	280	350	300	370	A	(310) ^H	A	
9	300	320 ^A	300	260	250	300	220	300	370	280 ^A	A	A	A	A	380	350	390	290	290	250	270	260	300	290	
10	300 ^H	280	290	300	310	260	300	290	300	300	360	B	320	390	380	360	330	300 ^A	300	270	250	250	260	290	
11	(310) ^A	300 ^A	(300) ^A	270	250	310	380	360 ^A	480	B	410 ^A	A	A	A	400	410 ^A	400	380	A	310	270	260	340 ^F	270	320 ^F
12	300	300	300	240	320	280	380 ^A	A	A	A	A	A	A	A	A	A	A	A	300	300	290 ^A	310	310	300	A
13	310	300	320	300 ^A	360 ^F	310	290	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	380 ^B	430 ^B	300 ^K	A ^K	C	280	320 ^A	280	300	300 ^A	
14	310 ^A	310 ^A	250	A	A ^K	A ^K	A ^K	400 ^K	330	A	A	A	490	G	500	400	340	380	A	290	260 ^A	A	330	A	
15	320 ^A	A	320	290	270	290 ^H	A	A	A	450 ^A	430	370	350	A	A	A	A	320	A	290	240	280	A	A	
16	A	A	(300) ^A	(300) ^A	290 ^A	270	300	300	A	A	340	350	A	A	360	A	310	320	A	280	310 ^A	280	280	270	
17	260	(350) ^A	(330) ^A	340 ^H	270	280	320	360	A	A	A	A	390	370	400	340	400	360	310	290 ^A	300	(320) ^A	(300) ^A	(300) ^A	
18	(310) ^A	A	290	(310) ^A	270	260 ^H	A	350	A	A	A	A	A	A	340 ^A	A	370	300	320 ^A	A	A	A	A	250	380 ^A
19	260	260	270	250	A	260	280	300	340 ^H	390	380	390	B	360	350	A	S	370	270	260	270	280	280	330 ^F	
20	300	310 ^H	300 ^A	(300) ^A	280	250	300	310	A	320	A	A	A	A	350	330	320	320	300	260	(310)	270	290	(300) ^A	
21	280	300	290	(300) ^A	280	260	300	270	L	290	360 ^H	390	A	A	360	350	320	300	280	250	240	260	310 ^A	310 ^A	
22	370	(310) ^F	290	280	290	280	330	350 ^H	A	370	A	420	370	C	310 ^F	380	330	300 ^A	270	260	270	270	270	230 ^H	
23	(300) ^F	C	C	280	300 ^F	290	300	240	300	C	C	C	C	C	310	320	330	330	300	270	270	270	270	230 ^H	
24	(300) ^A	300	290	270	240	260	270	280	280	370	330	A	A	A	350	340	340	340	300	270	250	240	330 ^A	290	
25	270	290	280	320	310	320	310	A ^K	A ^K	A ^K	B ^K	450 ^K	430 ^K	A ^K	380 ^K	370 ^K	A ^K	320 ^K	300 ^K	340 ^K	330 ^K	310 ^K	(300) ^K	(300) ^K	
26	300 ^H	360 ^K	(390) ^A	360 ^K	320 ^K	350 ^K	370 ^K	480 ^K	400 ^K	A	300	340	340	340	310	330	300	300	270	260	270	260	260	290 ^F	
27	310 ^F	290 ^F	290 ^F	280	250 ^F	250	290	310	300	320	A	340	370	A	330	330	A	A	270	A	C	C	C	340 ^A	
28	(350) ^A	340	(300) ^A	280	290	270	330	270	370	320	310	330	A	A	380	380	310	280	260	260 ^H	(370) ^A	(380) ^A	370 ^A	290 ^A	
29	300	320 ^A	280	320 ^A	290	270	300	260	270	300	A	410	370	350	360	310	320	A	A	300	(320) ^A	340 ^A	320 ^A	(310) ^A	
30	300 ^A	(300) ^A	(300) ^A	330	(300) ^A	300	280	300	280	A	A	A	A	A	A	340	320	290	290	260	270	290	330 ^H	AF	
31	350 ^F	310 ^A	(310) ^A	270	270	240	290	A	250	270 ^B	300	310	340	370	390	340	330	270	250	(240) ^A	310 ^A	320 ^A	290	(300) ^A	
Median Value	300	300	300	300	290	280	300	300	300	320	360	370	360	360	380	340	330	300	300	270	280	280	280	300	300
Count	29	27	30	29	29	30	27	25	20	16	13	15	15	22	23	27	24	23	25	26	29	24	29	26	

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

IONOSPHERIC DATA

Jul. 1950

foF1

Akita

Lat. 38° 43.5' N
Long. 140° 08.2' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						Q	Q	Q	A	L	A	A	A	B	B	B	L	(4.4) ^L	A					
2						Q	A	C	A	A	A	A	A	A	A	A	C	A	A					
3						L	L	L	AF	A	(5.5) ^A	A	A	A	A	B	5.0	L	3.6					
4						Q	A	L	A	5.1 ^A	A	4.9	5.0	L	4.8	4.6	4.0	Q						
5						Q	L	A	4.6	A	5.0 ^A	A	A	A	A	B	A	A						
6						Q	A	4.5 ^L	L	A	A	A	A	A	L	4.9	4.5	A	A					
7						AF	A	A	L	5.2 ^B	B	A	5.2 ^A	4.7 ^A	4.7	A	A	A						
8						L	Q	4.2	A	A	A	A	A	A	A	A	4.5	A	A					
9						Q	Q	4.8	L	A	A	A	A	A	A	A	A	A	L					
10						Q	L	A	L	B	B	L	5.6 ^A	5.3	A	B	5.0 ^A	L	A					
11						L	A	A	A	B	A	A	A	A	A	4.9	4.5	A	L					
12						Q	A	A	A	A	A	A	A	A	A	A	A	L	A					
13						Q	Q	A	A	A	A	B	A	4.8	B	4.7	4.0 ^T	A	C					
14						A	A	A	4.4	A	A	5.5	5.1	5.0	4.6	4.2	A	A						
15						Q	A	A	A	A	5.2 ^A	A	5.2 ^B	A	A	A	A	A						
16						Q	A	A	A	A	A	A	A	A	A	4.8	A	A						
17						Q	4.0	A	A	A	A	5.3	5.0	5.0	5.0	4.9	5.1	A	A					
18						Q	A	A	A	A	A	A	A	A	A	(4.8) ^A	4.4	3.8	A					
19						Q	(4.0) ^L	Q	L	4.6	5.0	L	B	A	5.0	B	S	A	A					
20						Q	L	A	A	A	A	A	A	5.2	5.1	5.0	5.0	4.3	L					
21						Q	L	L	L	A	5.3 ^T	B	A	A	A	(5.0) ^A	4.9 ^T	A	AF					
22						Q	L	L	A	5.1	A	5.5	5.4	5.5 ^T	5.4 ^A	A	A	A	Q					
23						Q	4.0	4.4	4.7 ^L	C	C	C	C	5.2 ^B	B	B	4.8	A	A					
24						Q	B	A	A	5.0	A	A	A	L	A	B	A	A	L					
25						A	L	A	A	4.7	5.3	5.3	5.3	5.3	5.3 ^A	A	A	Q						
26						Q	4.0	4.5	A	A	L	B	5.2	5.3	5.2	5.4	4.5	4.3	L					
27						Q	A	A	A	A	A	5.0	(5.5) ^A	5.1	5.0	A	A	A	A					
28						Q	(4.2) ^L	Q	A	A	A	A	A	A	A	A	L	4.2 ^T	L	Q				
29						Q	L	L	Q	A	A	(5.4) ^T	A	5.2 ^L	5.2	5.0	A	A	A					
30						A	L	3.8 ^A	A	A	A	A	A	A	A	A	4.8	L	L					
31						Q	A	A	(4.3) ^A	B	A	5.5	A	A	A	B	(5.4) ^T	A	L					
Median Value						4.0	4.4			5.2	5.3	5.4	5.2	5.1	5.1	4.9	4.6	4.3						
Count						5	6	4	4	4	5	7	10	11	11	13	17	5						

Sweep 1.0 Mc to 17.0 Mc in 1.5 min Manual

A 4

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

IONOSPHERIC DATA

Jul. 1950

R'F1

Lat. 36° 43.5' N
Long. 140° 08.2' E

Akita

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						Q	Q	Q	A	A	A	A	A	B	B	B	270	A	A					
2						Q	A	C	A	A	A	A	A	A	A	A	C	A	A					
3						270	290	260	A	A	A	A	A	A	A	A	240	B	230	240				
4						Q	A	(230)	A	A	A	250	260	B	B	220	A	250	Q					
5						Q	240	A	240	A	A	A	A	A	A	B	A	A	A					
6						Q	A	(240)	(230)	A	A	A	A	A	A	A	A	A	A					
7						AF	A	A	220	A	B	B	A	A	A	290	A	250	A	A				
8						240	Q	A	A	A	A	A	A	A	A	A	A	A	A					
9						Q	Q	240	240	A	A	A	A	A	A	A	A	A	A					
10						Q	220	A	A	B	B	B	A	A	A	A	A	A	270					
11						260	A	A	A	B	A	A	A	A	A	A	300	270	A	A				
12						Q	A	A	A	A	A	A	A	A	A	A	A	A	230	A				
13						Q	Q	A	A	A	A	B	A	B	B	B	A	A	A	220				
14						A	A	B	230	A	A	A	A	A	240	240	A	A	A					
15						Q	A	A	A	A	A	A	A	A	A	A	A	A	A					
16						Q	A	A	A	A	A	A	A	A	A	A	(220)	A	A	A				
17						Q	250	A	A	A	A	A	A	A	A	230	220	240	A	A				
18						Q	A	A	A	A	A	A	A	A	A	A	A	240	230	A				
19						Q	240	Q	210	200	B	A	B	A	A	A	B	S	A	A				
20						Q	240	A	A	A	A	A	A	A	B	B	(220)	250	250	230				
21						Q	250	250	240	A	A	B	A	A	A	A	A	A	A	AF				
22						Q	250	250	A	A	A	A	B	B	A	A	A	A	A	Q				
23						Q	A	220	250	C	C	C	C	B	B	B	B	230	A	A				
24						Q	B	A	A	230	B	A	A	B	A	A	B	A	A	260				
25						A	230	A	A	A	A	B	A	A	A	A	A	A	A	Q				
26						Q	240	220	A	A	230	B	B	230	240	210	220	230	220					
27						Q	A	A	A	A	A	A	A	A	230	260	A	A	A					
28						Q	250	Q	A	A	A	A	A	A	A	A	(280)	A	A	A				
29						Q	230	230	Q	A	A	A	A	B	B	A	A	240	Q					
30						A	230	A	A	A	A	A	A	A	A	A	A	A	A					
31						Q	A	A	A	B	B	A	210	A	A	A	B	A	A					
Median Value								240	240							230	250	230	250					
Count						3	13	9	8	2	1	1	2	2	4	10	9	8	8					

R'F1

Sweep 1.0 Mc to 1.1 Mc in 1.5 min Manual

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

Jul. 1950

foE

IONOSPHERIC DATA

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						A	A	3.2 ^A	3.3	3.4	A	A	B	B	B	B	3.3	3.1	2.3					
2						2.0 ^H	2.6	C	A	A	A	A	B	A	A	A	C	A	2.3					
3						2.1 ^J	2.6	2.9	3.5	B	B	B	B	A	A	A	3.4	3.0	2.9	2.2				
4						A	2.6 ^J	3.0	3.3	3.4	3.7	3.8	3.6	A	A	A	A	A	2.8	2.3				
5						2.0	2.6	3.0	3.4 ^H	3.4	3.7	A	B	B	B	A	A	A	A					
6						2.0	2.5	2.9	3.3	3.5	A	A	A	A	A	A	A	3.3	3.0	2.3 ^A				
7						A	2.5 ^A	(3.3)	A	A	A	4.2	A	3.8 ^B	3.8	3.6	3.6	3.0	A					
8						2.0 ^A	3.0	3.0	3.5	3.6	3.7 ^B	A	B	3.5	A	A	A	A	A					
9						A	2.8	3.1 ^H	3.5 ^J	A	B	A	A	A	A	A	A	A	A					
10						2.2	2.6	2.8	3.4 ^J	A	B	B	B	A	A	(3.8)	A	2.8	2.3 ^A					
11						A	A	3.2	3.6	3.6	A	3.6	3.6	A	A	A	3.6	3.4 ^H	A	2.4				
12						A	A	A	3.4	A	A	A	A	A	A	A	A	A	A					
13						A	A	3.2	3.4 ^H	3.5	4.0	B	A	A	B	A	3.4	3.0	(2.4)					
14						A	A	A	3.2	A	3.6	A	4.0	3.7	3.7	3.6	3.0	3.0	A					
15						A	2.4	2.8	3.2	3.3	3.4	3.4	(3.4)	A	A	A	A	3.0	(2.4)					
16						A	A	3.0	3.3	3.4	3.6	A	A	A	A	A	3.4	3.0	(2.4)					
17						2.0	A	A	A	A	A	A	A	A	A	3.6 ^J	A	3.4	2.9	A				
18						A	2.5	3.0	A	A	A	A	3.4	3.4	3.4	3.4	3.0	2.7 ^J	A					
19						A	2.4	3.1	A	3.6	B	4.0	B	B	A	3.7	3.3	A	A					
20						AF	2.5	3.1	3.4	A	A	A	A	A	A	A	(3.2)	A	2.2 ^J					
21						A	2.4	A	3.4	A	B	A	A	A	A	A	A	3.1	2.3 ^F					
22						A	2.5 ^F	3.0	3.3	3.5	3.4	3.6	B	A	A	A	A	A	A					
23						2.0	A	2.8	3.5	C	C	C	C	A	A	A	3.4 ^A	3.5	3.0	2.4				
24						A	A	A	3.3	3.5	B	B	B	A	A	A	A	3.2	2.8	2.1				
25						(1.7)	2.2	2.9	3.2	3.4	3.5	A	B	B	B	3.5 ^A	A	(3.0)	(2.3)					
26						A	2.3	3.0	3.4	3.6	A	B	3.6	3.6	3.6	A	3.3	2.8	2.2					
27						1.8 ^F	2.6 ^F	3.0	A	3.6	A	A	A	A	A	4.0	3.8	3.3	2.7	2.3				
28						1.8	2.6	3.0	3.1	3.5	A	A	A	A	A	A	A	A	2.8	2.1 ^A				
29						A	2.5	2.6	3.2	A	A	A	A	B	A	A	3.5	3.3	2.9	A				
30						A	2.5 ^A	2.8	3.2	3.4	A	A	A	A	A	A	A	A	(3.0) ^F	A				
31						A	A	2.8 ^A	3.2 ^A	A	A	A	A	A	A	A	A	A	A	A				
Median Value						2.0	2.5	3.0	3.3	3.5	3.6	3.6	3.6	3.6	3.7	3.6	3.3	3.0	2.3					
Count						11	21	25	25	17	9	7	6	5	7	12	17	21	18					

Sweep 1.0—Mc to 3.0—Mc in 1.5 min Manual

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

IONOSPHERIC DATA

Jul. 1950

f'E

Akita

Lat. 39° 43.5' N
Long 140° 08.2' E

135° E Mean Time

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

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

Jul. 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	6.7	5.2	4.0	4.2	2.8	4.2	3.4	9.0	7.9	5.9 ^Y	7.8	8.9	10.9 ^Y	B	B	G	4.4	7.2	6.4	5.8	8.2 ^B	3.4	5.2		
2	6.4	7.0	4.4	5.2	5.0	3.0	6.0	C	9.0	12.0	12.5	12.0	6.8 ^Y	12.0	11.6	5.4	C	11.2	13.6	13.2 ^B	9.6	11.0	6.8	4.8	
3	4.6	3.4 ^B	3.2	3.6	3.7	3.4	3.6	5.6	7.8	8.3 ^Y	7.4 ^Y	6.2 ^Y	7.6 ^Y	12.6 ^B	9.2	4.5	B	3.8	3.6	4.2 ^B	7.4	5.6	7.0	7.0	
4	7.0	6.0	4.0	7.0	4.4	5.0	10.2	7.0	7.2	6.7 ^Y	6.2	4.6 ^B	G	4.4	4.0	3.8	5.0	G	3.8 ^Y	3.4	2.2	2.2	G	G	
5	3.0 ^B	2.3 ^B	2.1	2.1	G	3.3 ^Y	4.1	5.9	6.4 ^Y	5.2 ^Y	9.2 ^B	7.8 ^B	12.5 ^B	11.9 ^B	7.0	3.8	12.0 ^B	12.0 ^B	6.2	3.6 ^F	9.2	10.0	5.4		
6	4.4	3.6	3.8	5.0	4.0	3.1	5.0	4.4	6.1	7.5	11.0 ^F	14.0	12.0	7.6	6.8	4.8	4.8	12.0	14.1	10.1	9.0	10.4 ^B	9.0	7.2	
7	9.6	10.2	9.6	9.4	4.7	6.7	9.8	5.8	3.8	6.8	4.2	4.8	6.2	7.8 ^Y	10.7	10.8 ^Y	10.0	10.0	4.4	3.8	4.2	7.6 ^Y	5.4	3.6 ^B	
8	10.8	6.5	4.8	4.6	4.1	3.3	G	5.5	9.1	11.0 ^F	14.4	11.4 ^Y	14.2	13.6	15.2	10.8 ^F	7.3	14.3	10.2	12.2	5.6	9.2	5.4	8.8	
9	3.8	3.2	2.4	2.0 ^B	3.2 ^B	4.2	3.5 ^Y	4.7	5.3	7.2	12.4	9.6 ^F	9.2	7.2	9.2	9.2	7.2	7.2	6.2	4.0	3.6	3.8	G	7.5	
10	3.6	3.8	4.3	6.8	4.4	G	G	5.9	5.6	4.0	B	5.5	6.6	5.8	6.7	5.0	9.4	6.0	6.2	5.3	3.6	4.0	3.2	2.6	
11	3.3	3.2	4.0	3.2	2.4	2.8	4.0	4.2	5.6	4.2	6.8	11.3	8.8	7.0	6.8	G	4.9 ^Y	9.4 ^B	7.2	4.2 ^B	9.2	4.8	5.6	5.6	
12	3.3	3.4	3.6	2.2	2.4 ^B	4.8 ^B	9.7 ^B	8.8	12.2	4.2	9.2	6.4	9.2	8.6	8.2	9.2	10.8	6.2	4.4	5.6	4.7	6.3	2.6	5.6	
13	5.4	7.2	4.2	3.2	3.8 ^F	4.2	4.4	9.6 ^B	10.8 ^Y	7.2	8.2	4.7 ^B	7.4	4.2	4.2 ^B	4.2	7.6	9.2	C	12.4	4.4	3.0	G	3.2	
14	3.0	3.5	3.4	6.0	8.0	9.0	6.2	4.0	4.6	14.6	10.8	7.6	5.3	6.2 ^Y	G	5.7 ^Y	7.2	10.3	8.4	6.2	6.6	8.2	6.2	6.1	
15	5.8	6.2	4.0	6.1	4.5	4.8	9.0	14.7	12.6	10.0	7.0	7.8 ^Y	5.0	11.8	6.8	7.9	7.8	6.2	12.8	14.0	8.4	9.4	10.4	9.2	
16	8.6	8.2	4.0	3.6	3.4	3.0	5.8 ^B	6.8	9.0	10.8 ^B	6.2	7.5 ^Y	12.0	9.2 ^F	8.2	5.8	6.8	11.4 ^B	13.4 ^F	9.2	9.5	7.0	4.8	4.8	
17	5.6	6.5	5.4	5.6	3.6	G	4.8	7.2	10.8	10.2	11.2	11.0	5.0	6.6	G	5.8	4.4	6.5	6.0	7.6 ^B	6.6	5.8	4.2	3.2	
18	6.6	6.6	9.3	4.9	4.5	4.4	6.7	6.2	7.7 ^B	10.0	9.4	9.8	9.2	6.8 ^Y	7.0	5.0	6.2 ^Y	3.7	6.5	8.5	8.2	8.3	5.4	5.7	
19	G	2.6	6.8 ^Y	4.0	6.0	3.4	4.0	4.1	3.8	G	B	6.2 ^Y	B	6.2	6.2	7.2	7.2	6.7 ^Y	4.4 ^B	3.6	6.4	5.8	4.8	4.0	
20	3.5	5.5	4.8	4.7	5.2	4.0	4.0	7.0	8.2	6.4	7.0	7.4	12.5	4.4	4.6	3.6	G	4.4	3.3	3.4 ^B	4.8	2.8 ^B	3.2	3.4	
21	6.0	4.4	4.8	3.4	4.0	2.6	3.4	4.4	5.1	8.0	B	6.1 ^Y	9.8	7.2 ^Y	6.8	6.0	5.4	6.4	3.8	3.8	3.6	4.8	4.8	6.2	
22	6.8	4.1	4.8	4.6	3.0 ^F	3.5	4.3	4.8	11.0 ^B	5.6	13.8	5.9 ^Y	5.3 ^Y	5.0	5.8	6.5	5.4	7.0	3.4	3.4	G	2.2	G	3.0	
23	6.3	C	C	3.6 ^F	2.4	3.8	4.2	5.2	4.8	C	C	C	C	4.4	4.0	G	G	4.8 ^B	9.3	4.4	5.4	5.6 ^F	4.3	4.2	
24	4.5	4.4 ^F	3.2	3.0	3.4	4.0	3.4	7.0	5.2	G	7.4	8.2	6.7 ^Y	4.6	7.2	B	G	9.3	3.6	3.8	4.0	3.4	4.0	3.1	
25	2.9 ^B	2.3 ^B	2.5	5.6	7.0	6.8	3.6	12.0 ^F	12.6	10.2	4.9	B	5.6 ^Y	7.8	5.2	7.0	7.8	4.5	5.0	4.8 ^B	6.8	6.8	5.8	5.6	
26	4.4	8.5	9.0	5.8	4.2	3.4	3.6	4.6	6.1	8.4	6.7 ^B	B	14.5 ^B	G	G	G	G	3.4	4.2	2.8	13.0 ^Y	2.0 ^B	2.8	3.7	
27	4.2	5.6 ^B	4.4 ^F	4.4	4.6	3.6	5.0 ^B	5.5	5.2	6.6	11.8	6.0	5.6	4.0	5.9 ^Y	6.6	10.7	8.0	7.3	8.7	C	C	4.0	5.5 ^B	
28	5.0	5.8	9.3	4.5	4.8	3.7 ^Y	4.1	7.3	8.0	7.1	7.3	7.4	7.4	8.7	8.7 ^B	5.8 ^B	4.2	3.9 ^F	4.0	6.5 ^B	8.5	4.0 ^F	6.8	5.7 ^F	
29	4.7 ^F	7.0	3.2	3.0	3.7 ^B	3.1	3.5	5.2	8.2	8.2	7.8	9.2	8.2	B	4.0	4.6	8.6 ^Y	12.3	12.0	8.2	8.8	9.4	9.7	9.3	
30	7.3	5.5	4.9	5.1	2.6	3.8 ^Y	3.4	5.0	5.0	9.2	7.0	13.5 ^Y	10.2	11.2 ^B	11.4 ^B	7.0	4.6	4.2	4.0	G	5.9	2.6	7.1	6.9	
31	7.1	6.0	5.4	4.4	4.0	3.0	7.9	11.0 ^B	8.6 ^B	4.1	4.4	6.1	6.8	6.8	6.8	4.2 ^B	5.0	6.6	4.5	4.8	5.0	4.4	5.2	3.9	
Median Value	5.0	5.5	4.2	4.5	4.0	3.6	4.2	5.8	7.7	7.4	7.8	7.6	7.4	7.0	6.8	5.7	6.2	6.5	6.1	5.0	5.7	5.0	3.0	3.1	3.1
Count	31	30	30	31	31	31	31	30	31	30	27	28	29	29	30	29	29	31	30	30	30	30	31	31	31

Sweep 1.0 - Mc to 17.0 Mc in 1.5 min Manual

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

IONOSPHERIC DATA

Jul. 1950

(M3000)F2

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

135° E Mean Time

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

(M3000)F2

The Central Radio Wave Observatory
Koraneimachi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Jul. 1950

fminF

Akita

Lat. 38° 43.5' N
Long. 140° 08.2' E

136° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(1.8) ^A	A	(1.6) ^A	(1.6) ^A	1.6 ^A	2.0	N	3.2	A	A	A	A	A	B	6.0	5.5	3.4	A	A	A	1.8 ^A	A	1.6	A
2	A	A	A	A	AF	2.6	A	C	A	A	A	A	A	A	A	A	C	A	A	A	A	1.8	1.8	A
3	A	1.6	1.2	1.2	1.6	2.7	3.7	A	A	A	A	A	A	A	A	4.0	4.8	2.9	2.2	A	A	A	A	A
4	A	A	1.6	A	2.2	A	3.5	A	A	A	A	A	4.5	5.7	5.2	3.6	A	3.2	2.5	A	1.6	1.6	1.6	1.4
5	A	1.3	E	E	1.2	2.0	2.0	A	3.8	A	A	A	A	A	A	5.6	A	A	A	A	1.6	A	A	A
6	A	1.8 ^A	A	A	A	2.1	A	3.0	3.6	A	A	A	A	A	A	A	4.0	A	A	A	A	A	AF	A
7	A	A	A	A	A	A	A	A	3.4	A	5.2	5.5	A	A	A	A	A	A	A	A	A	A	A	A
8	A	A	A	A	A	2.0	3.0	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9	1.5	A	1.2	A	A	A	3.0	3.2	4.2	A	A	A	A	A	A	A	A	A	A	A	A	1.4	1.4	1.5
10	A	1.5	1.5	1.4	1.7	2.2	2.9	A	A	5.0 (5.0) ^B	6.0	A	A	A	A	A	A	A	A	A	A	A	1.5	1.5
11	A	1.6 ^A	A	A	A	2.0	A	A	A	5.5	A	A	A	A	A	4.3	3.9	A	A	A	1.5	A	1.5	A
12	1.1	1.2	A	1.6	A	A	A	A	A	A	A	A	A	A	A	A	A	3.2	A	A	1.7	1.4	1.4	A
13	1.7 ^A	1.4	1.6	A	A	A	A	A	A	A	A	B	4.8	5.1	4.7	A	A	A	2.4	1.8 ^A	A	A	1.5	A
14	A	A	A	A	A	A	A	5.0	3.8	A	A	A	A	A	4.0	3.9	A	A	A	A	A	A	A	A
15	A	A	A	1.3	1.4	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	1.8	1.8	A
16	A	A	A	A	A	1.9	A	A	A	A	A	A	A	A	A	(4.1) ^A	A	A	A	A	A	A	1.6	1.6
17	1.4	A	A	A	A	2.0	A	A	A	A	A	A	4.3	4.0	4.0	4.0	A	A	A	A	A	1.6	1.6	1.6
18	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	3.6	A	A	A	A	A	A
19	1.4	E	E	E	A	A	2.7	A	3.8	4.0	5.0	A	6.6	A	A	A	A	A	A	A	A	1.6	A	A
20	A	A	A	A	A	2.3	2.7	A	A	A	A	A	A	5.2	5.1	(3.8) ^B	3.8	A	2.5	2.1	A	1.5	A	A
21	A	A	A	A	1.8	2.2	2.6	A	A	A	5.1	5.7	A	A	A	A	A	A	A	A	2.1	A	1.5	A
22	A	A	A	A	1.8	2.4	2.5	3.0	A	A	A	A	5.4	5.7	A	A	6.2	A	2.5	1.8	1.8	1.8	A	A
23	AF	C	C	A	A	2.0	A	3.2	4.2	C	C	C	C	5.2	5.6	4.8	3.8	3.2	A	1.9	1.4	1.4	1.5	1.4
24	A	1.5	1.6	1.9	A	2.5	5.0	A	A	A	A	A	A	5.2	A	5.6	A	A	A	1.7	A	1.6	A	A
25	1.9 ^A	1.2	1.2	A	A	A	3.0	A	A	A	A	5.3	A	A	A	A	A	A	A	1.7	A	A	A	1.6
26	A	A	A	A	A	A	2.3	A	A	A	4.0	5.0	4.4	4.2	4.2	3.9	3.6	3.0	2.3	1.9	1.6	1.6	1.6	AF
27	AF	1.6 ^F	1.8	1.4	AF	1.8	A	A	A	A	A	A	4.0	4.7	A	A	A	A	A	C	C	C	A	A
28	A	A	A	A	A	1.8	2.7	A	A	A	A	A	A	A	A	A	A	3.0	A	A	A	A	A	A
29	A	A	A	A	A	2.0	2.5	2.7	A	A	A	A	A	5.2	5.2	4.6	A	A	A	A	A	A	A	A
30	A	A	A	A	A	A	2.5	A	A	A	A	A	A	A	A	A	A	A	3.0	2.0	A	1.9	A	A
31	A	1.6 ^F	A	A	A	A	A	2.8	A	5.7	5.2	A	4.2	A	A	6.4	A	A	A	1.6	A	A	1.7	A
Median Value	1.5	1.5	1.5	1.4	1.6	2.0	2.7	3.2	3.8	-	5.0	5.5	4.5	5.2	5.1	4.3	3.9	3.1	2.4	1.9	1.6	1.6	1.6	1.5
Count	7	12	11	9	9	1.9	1.5	9	7	4	6	5	5	9	10	15	9	8	7	9	9	1.3	1.2	6

Sweep 1.9 - Mc to 17.0 Mc in 1.5 min Manual

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

IONOSPHERIC DATA

Lat. 39° 43.5' N
Long. 140° 08.2' E

Jul. 1950

fminE

135° E Mean Time

Akita

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	1.1	1.2	1.2	1.4	1.4	1.6	1.6	1.6	1.8	1.8	1.8	1.9	2.2	1.8	2.3	2.0	1.8	1.8	1.7	1.5	1.5	1.4	1.2	1.1
2	1.1	1.1 ^B	E	E	E	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	1.8	1.6	1.4	1.7	1.4	1.5	1.4	1.4	1.1
3	1.1	1.2	E	E	E	1.4	1.7	1.7	1.8	1.8	2.6	1.8	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.2	1.2	1.2
4	1.2	1.2	E	E	E	1.4	1.8	1.6	1.5	1.6	1.8	1.8	1.9	2.2	2.6	2.0	1.7	1.6	1.6	1.8	1.9	2.0	B	B
5	1.4 ^B	2.0 ^B	1.8	1.7	E	1.6	1.7	1.8	1.8	1.8	1.8	2.0	2.4	5.0	4.6	2.0	2.5	1.8	1.8	1.6	1.4	1.4	1.4	1.4
6	1.4	1.3	E	E	E	1.6	1.5	1.7	1.8	1.9	2.4	1.8	1.9	3.0	2.8	2.8	1.6	1.8	1.6	1.5	1.5	1.5	1.5	1.1
7	1.1	E	E	E	E	1.4	1.6	1.6	1.6	1.6	2.4	2.4	2.4	1.8	2.0	2.0	1.6	1.8	1.6	1.4	1.5	1.4	1.2	E
8	1.1	E	E	E	E	1.4	1.4	1.6	2.1	2.2	2.4	2.6	2.7	2.0	1.8	2.1	1.7	1.7	1.7	1.7	1.7	1.7	1.4	1.4 ^B
9	1.2	1.2	E	E	E	1.6	1.6	1.7	1.6	2.4	4.6	2.8	2.6	2.7	2.4	1.8	1.7	1.8	1.7	1.6	1.4	B	B	1.5
10	1.4	1.2	1.3	1.3	1.2 ^B	1.6	1.7	1.8	1.7	1.7	3.0	4.6	5.0	3.2	2.6	2.0	2.0	1.8	1.5	1.5	1.5	1.5	1.5	1.5
11	1.5	1.4	1.4	1.4	1.5	1.6	1.6	1.6	1.9	1.8	1.8	1.9	2.0	2.0	1.8	1.8	1.8	1.6	1.6	1.5	1.4	1.4	1.4	1.1
12	E	E	E	E	E	1.6	1.6	1.5	1.8	1.8	1.9	1.8	2.0	2.0	2.2	2.0	1.8	1.8	1.8	1.7	1.4	1.4	1.4	1.2
13	1.1	1.1	E	E	E	1.2	1.4	1.4	1.7	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.6	1.6	1.6	1.4	1.4	1.2	B	1.1
14	1.1	1.2	1.2	1.2	1.2	1.8	1.8	1.8	1.8	2.0	1.9	2.2	2.6	2.5	1.8	2.2	1.4	1.5	1.7	1.6	1.7	1.5	1.6	1.1
15	1.1	1.1	1.1	1.2	1.1	1.4	1.4	1.6	1.6	1.8	1.8	2.4	2.2	2.6	3.2	2.9	1.8	2.7	1.6	1.6	1.6	1.6	1.4	1.4
16	1.4	1.2	1.1	1.1	E	1.4	1.4	1.7	1.8	1.8	2.0	2.0	2.0	2.9	2.1	2.1	1.8	1.8	1.6	1.6	1.4	1.3	1.3	1.1
17	1.1	1.1	E	E	E	1.5	1.6	1.6	1.6	1.6	1.8	1.8	2.0	1.8	1.8	1.8	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.6
18	1.2	1.2	E	E	E	1.4	1.5	1.6	1.6	1.6	1.7	1.8	2.2	1.8	1.8	1.8	1.8	1.8	2.0	1.4	1.7	1.6	1.8	1.4
19	B	E	E	E	E	1.4	1.4	1.6	1.6	1.6	B	2.8	B	4.2	3.3	2.0	1.6	1.7	1.6	1.6	1.6	1.6	1.5	1.4
20	1.4	E	E	E	E	1.5	1.6	1.7	1.7	1.8	2.5	1.8	5.0	2.2	2.0	1.8	1.8	1.8	1.6	2.7 ^B	1.5	1.5	1.5	1.1
21	1.1	1.2	1.2	1.2	1.4	1.4	1.5	1.4	1.7	1.9	B	1.9	1.9	2.3	2.0	1.8	1.9	1.6	1.5	1.5	1.5	1.4	1.4	E
22	E	1.1	1.1	1.1	E	1.3	1.6	1.6	1.6	1.7	1.7	1.8	2.5	2.6	2.6	2.6	1.8	1.8	1.6	1.6	B	1.8	B	1.2
23	1.2	F	C	1.2	B	E	1.6	1.8	1.6	C	C	C	C	1.9	2.2	2.1	1.6	1.6	1.5	1.5	1.4	1.4	1.4	E
24	E	E	E	E	E	1.4	1.8	1.8	1.7	1.8	5.2	4.6	3.8	1.8	1.8	1.8	1.7	1.7	1.6	1.5	1.7	1.6	1.6	1.4
25	1.2	1.6	1.4	1.2	1.2	1.4	1.4	1.6	1.8	1.8	1.8	1.8	1.8	4.7	4.8	1.8	1.8	1.8	1.8	1.6	1.4	1.4	1.4	1.4
26	1.4	1.1	1.1	1.1	1.1	1.4	1.4	1.6	1.8	1.8	1.8	1.9	1.9	2.0	2.1	1.8	1.7	1.7	1.6	1.6	1.8	1.6	1.6	1.4
27	E	E	E	E	E	1.4	1.4	1.8	2.0	1.9	2.0	2.2	2.2	2.0	1.9	2.0	1.8	1.8	1.6	1.6	C	C	1.5	1.1
28	1.1	E	E	E	E	1.4	1.5	1.6	1.6	1.8	1.6	1.8	1.8	1.8	2.1	1.8	1.7	1.5	1.6	1.5	1.5	1.5 ^F	1.5	1.1
29	1.1	E	E	E	E	1.4	1.4	1.6	1.8	2.2	2.5	2.6	2.9	2.7	2.8	1.8	1.7	1.7	1.6	1.6	1.6	1.4	1.4	1.4
30	1.4	1.4	E	E	E	1.5	1.6	1.5	1.8	1.8	2.6	2.5	2.5	2.2	2.1	2.1	1.8	1.6	1.6	1.6	1.4	1.5	1.5	1.2
31	1.1	1.1	1.1	1.1	1.1	1.4	1.6	1.6	1.5	1.5	1.9	1.8	1.8	2.6	2.8	2.0	1.9	1.7	1.6	1.4	1.4	1.4	1.2	E
Median Value	1.1	1.1	1.1	1.1	1.1	1.4	1.6	1.6	1.7	1.8	1.9	1.9	2.2	2.2	2.1	2.0	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.2
Count	30	30	30	31	31	31	31	31	31	30	28	30	29	31	31	31	31	31	31	31	29	29	27	30

fminE

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

Jul. 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	(6.7)P	7.0	B	6.5	(7.3)P	7.8	9.1	B	A	(9.3)S	T	7.7	8.6	8.4P	9.2	(10.0)S	9.0	9.3	8.9	8.6	8.0S	9.2	(9.1)F	9.0H
2	(9.5)S	8.5	(8.8)F	F	(7.1)F	6.7F	8.0P	7.2	7.3	B	7.4P	7.0J	6.6	6.8	6.9	7.9P	8.3J	8.8J	8.1P	7.9	7.3P	7.2F	SF	B
3	BF	(7.6)F	(7.5)F	F	AF	8.2F	(10.3)F	10.2F	A	A	A	A	A	8.5P	8.7J	8.4P	8.7	9.2J	(9.4)P	B	8.0J	SF	SF	7.9F
4	SF	F	8.8	6.0F	6.0	6.9F	7.2F	A	8.5	A	A	7.4	A	(9.2)P	10.1P	9.4	7.8	7.4	B	(8.9)P	A	B	B	B
5	(6.4)B	6.4	6.5F	6.3	7.0J	(7.0)B	6.3H	7.1	A	6.4K	A	6.2F	A	6.6K	7.4K	7.8K	7.6K	7.5K	6.7K	A	7.2K	6.4K	6.7K	5.7K
6	A	4.9K	6.7K	7.8H	(7.2)C	6.6	7.7	8.4	8.2	8.2H	A	7.8	AF	AF	(8.6)P	8.5J	8.4J	A	A	9.5P	A	A	A	(8.7)F
7	A	8.3	F	F	F	7.1F	7.3F	7.6F	B	7.1	6.9	6.7J	7.8	8.3P	B	8.1J	9.6	9.4	9.1	7.9	7.2	(7.2)F	F	F
8	SF	SF	BF	BF	(6.8)F	(6.7)P	6.8H	8.0	9.0	9.5	7.0	7.5J	A	A	8.6J	AF	BS	A	A	A	(6.5)J	A	A	A
9	SF	6.4H	(7.1)F	(7.6)F	(6.0)F	5.6F	6.8	8.6	8.8P	7.2	A	A	A	A	A	A	A	9.4J	9.1	7.8	B	(7.4)P	(7.7)F	(7.7)F
10	7.9	(6.9)P	(6.7)P	7.2	(6.4)P	7.2	B	B	9.2S	8.9	9.0S	(8.1)S	8.0	7.6J	7.1	7.9	A	8.2J	(8.4)P	B	7.4J	6.7P	BF	8.3
11	B	B	(8.4)P	6.4	5.7	6.0	6.3J	B	6.8J	A	6.5	6.6	6.1	(6.9)P	(6.9)P	6.9	A	A	A	7.3J	A	6.4	B	(7.7)P
12	B	5.7F	5.4F	5.1F	4.6F	4.8F	6.8	7.2	7.2	A	A	A	7.7	7.5	7.4	(6.9)P	7.4	7.2	6.8	6.5	6.2	6.3	6.2	6.3
13	6.1S	5.6	5.7	6.2J	A	A	6.6	S	5.8K	6.2K	6.7K	6.3K	6.3J	6.3K	(6.4)B	6.5K	6.9K	6.1J	A	6.6	6.7	6.8H	6.8	7.1Z
14	6.4	6.7P	6.7P	7.1	4.6K	4.6K	5.6K	6.4K	7.2	6.3	B	B	A	6.0	6.1J	A	A	A	A	B	6.6	5.8H	(6.2)P	C
15	C	C	B	BF	BF	5.5	(7.2)P	7.6J	A	A	A	A	A	A	A	A	7.2	8.1	8.0	7.6H	(6.9)P	A	A	B
16	BF	(5.7)F	6.6	6.4J	6.0	6.7J	7.5	AS	8.2S	8.4	8.4S	9.0	A	S	8.9F	7.9	AF	AF	AF	A	A	7.6J	F	7.4
17	7.0	6.3	5.9	5.6H	5.4	5.7	7.4	6.7	B	AF	AF	A	A	A	(7.4)F	B	C	6.8P	6.9J	8.0S	F	6.5F	6.9F	6.5F
18	5.7P	(6.6)J	BF	B	BF	5.8F	(6.8)F	C	AF	7.0	A	A	AF	A	A	A	A	6.6	7.1	6.9J	7.2	BF	7.5F	(6.2)H
19	(6.2)F	SF	F	5.3F	5.3F	5.5F	7.0	7.2	7.0	6.4	6.9	7.7	8.2	8.0	8.0	7.8	7.7	7.7	7.8	7.4	7.5B	7.8P	7.7	6.7
20	6.4	6.8J	6.7J	(6.8)B	(6.8)P	7.2	7.0	7.0	A	AF	6.8	7.4	A	A	9.1P	9.0	(8.4)P	8.2F	(8.3)P	8.8J	(8.4)S	7.9	(7.7)P	(7.4)P
21	7.6	(7.6)B	7.6	(7.4)B	7.3	7.7	8.3	8.9	7.8	8.0F	8.1	7.7	8.7	9.0	9.7	10.3	9.8	A	10.0J	C	9.0J	A	6.9F	7.7Z
22	7.5Z	BH	7.1F	7.5P	7.0	6.4	5.9	6.7	6.8	A	A	A	A	A	8.0	8.4J	8.4	8.6	9.1	8.5J	7.6	7.9	7.7	7.4
23	7.3F	6.5P	(7.5)P	7.0	(6.9)P	(6.7)P	B	8.0	8.1	7.4	7.7	8.9	9.1	9.2	8.5J	8.4	7.5	7.9	S	9.2A	AF	SF	SF	8.2F
24	8.0H	F	7.4F	BF	6.7F	6.8F	7.3	7.5	5.8F	8.4	8.1	7.9F	8.3J	AF	9.5	9.4	A	A	A	A	A	9.2A	AF	SF
25	B	B	B	7.6P	6.4	6.6F	7.2	7.5	6.1K	6.6K	6.1K	6.9K	7.7K	7.9K	8.2J	7.7K	7.3H	7.3H	6.7H	6.2K	5.8H	5.4Z	5.7F	(5.5)F
26	6.0K	6.5K	6.4F	6.3K	6.4K	5.4F	6.0H	6.1H	6.8K	7.3	7.9	7.3	7.4	(8.4)S	8.7	7.9	7.6	7.7	(7.8)P	7.8	(8.3)P	8.3	7.8	7.7
27	7.6	C	C	6.8F	6.4V	5.4	6.4H	8.1	8.4J	A	A	A	A	7.9F	7.0S	6.6	7.8	9.7	9.0	7.4	7.2	7.4J	S	B
28	(7.1)F	6.8S	7.2F	6.4F	6.0F	5.5F	7.3S	7.6	7.0	8.3	7.8	8.5J	7.9F	7.0S	6.6	7.8	9.7	9.0	7.4	6.7	6.6	6.6	6.8	6.7J
29	6.6P	6.6F	(6.8)B	C	C	5.7	9.0J	9.2J	A	6.0	6.3	6.6	7.9	8.7	8.8	8.6	B	8.8J	8.7J	9.1P	7.7	7.7J	7.6	6.6
30	6.5P	6.9P	(7.0)B	7.2J	6.5	B	B	B	C	7.3	S	(6.1)S	C	B	9.1	9.0J	9.2	9.6	9.0J	(8.1)P	8.2P	(8.0)P	7.8P	8.0
31	8.6F	(8.4)F	8.2	7.9	(8.0)P	9.0P	7.5	7.5	7.5J	8.0F	A	(8.1)S	A	A	8.8J	(8.9)J	9.3J	10.9J	10.0	7.6	6.5	6.7	7.2	7.2
Median Value	6.8	6.6	7.0	6.8	6.4	6.6	7.2	7.5	7.4	7.3	7.2	7.4	7.9	7.9	8.4	8.2	8.4	8.2	8.3	7.8	7.4	7.2	7.3	7.4
Count	20	22	23	23	25	29	28	23	20	21	16	22	15	19	26	24	21	24	23	21	24	21	20	20

Sweep 1.0 — Mc to 17.0 — Mc in 1.5 min Manual

K 1

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

IONOSPHERIC DATA

Jul. 1950

f'F2

135° E Mean Time

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.8' 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 ^A	290	(300) ^A	310	260	260	270	240	A	300	310	300	300	330	350	300 ^H	290	300	290	270	250	260	260 ^A	300 ^H	
2	(310) ^H	250	280	280	240	250	300	290	320 ^F	360	310	350	S	350	380	360	320	300	250	(300) ^A	330 ^A	310 ^A	310 ^A	A	
3	AF	(300) ^A	270	A	320 ^A	280	230	230	A	A	A	A	A	330	340	330	300	300	280	250	250 ^B	280 ^B	300	300 ^F	
4	290 ^F	290 ^A	280 ^F	290 ^F	(300) ^A	250	250	A	(300) ^A	A	A	A	A	360	300	290	(300) ^A	330	(270) ^A	240	A	260 ^A	280	300	
5	(300) ^A	280 ^F	(300)	280 ^F	230 ^F	230 ^F	(210) ^H	280	A	370 ^K	A	(370) ^A	A	420 ^K	370	320 ^K	300 ^K	300 ^K	300 ^K	A	220 ^K	270 ^K	280 ^K	290 ^K	
6	A	A	K	260 ^F	C	300	280	270	240	310 ^H	A	350 ^A	AF	AF	A	330	300 ^A	300 ^A	A	(300) ^A	A	A	A	(300) ^A	
7	A	290	270 ^F	270 ^F	290 ^F	270 ^F	220	250	320	310	310	360	310	350	A	340	320	280	240	280 ^A	250	240	310 ^A	340 ^F	
8	310 ^A	(340) ^A	310 ^A	290 ^A	270 ^F	220	230 ^H	300	250	290	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
9	A	280 ^H	(300) ^F	(300) ^F	AF	300 ^A	290	260	250	380	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
10	260	240	280	290	280	270	300	240	310	250	320	330	340	330	410	340	A	A	A	(280) ^A	280 ^A	260 ^A	A	300	
11	290	290	250	240	230	270	360	290	350	A	400	340 ^B	B	380	350	320	A	A	A	(280) ^A	A	B	320	270	
12	AF	300 ^A	(290) ^A	290	260	380	310	340	A	A	A	A	A	350	380	390	290 ^A	320	280	250	320 ^A	A	A	A	
13	(300) ^A	(300) ^A	(300) ^A	(300) ^A	A	A	290	S	400 ^B	430 ^K	340 ^K	450 ^K	K	410 ^K	(380) ^B	360 ^K	330 ^K	A	A	260	270	280 ^H	340 ^A	290	
14	300	300 ^A	270	240	A	A	310 ^K	360 ^K	340	310	330	B	A	400 ^A	390	A	A	A	A	230	200	250 ^H	220	C	
15	C	C	(300) ^A	270	250	240	220	280	A	A	A	A	A	A	A	330	320	300	260 ^H	260 ^F	(310) ^A	A	A	(310) ^A	
16	A	A	(300) ^A	270	270	240	250	A	260	290	350	A	A	(270) ^A	300 ^A	320	AF	AF	A	A	A	AF	280 ^F	290	
17	260	270	260	300 ^H	300	350 ^A	300	260	250	(250) ^A	A	A	A	350	(350) ^A	310	C	320	310 ^A	250	260 ^A	250 ^A	310	(320) ^A	
18	(320) ^A	A	(230) ^A	250	300	260	310	C	A	A	A	A	A	A	A	A	A	A	440	320	A	260 ^A	(330) ^A	310	
19	A	260 ^F	280 ^F	260	290 ^A	240	230	200	270	340	370	340	320	340	370	350	300	290	240	250	250	240	250	(300) ^A	
20	350 ^A	(300) ^A	A	A	220	230	230	240	260	AF	340 ^A	220	A	A	330	300	310	320	270	250	240	270	260	270	
21	270	300	260	260	250	240	270	270	260	A	290	350	380	350	340	310	300	A	270	240 ^F	230 ^F	A	A	350 ^F	
22	330 ^F	330 ^H	290	270	290	260	290	290	260	A	A	A	A	A	A	300	310	280	260	240	250	280	260	270	
23	270	(300) ^A	280	280	290	240	220	250	280	S	290	310	310	280	300	300	320	310	280	240	240	240	240	280	
24	300 ^H	280	280	260	240	250	230	210 ^F	A	300	320	320	350	A	A	A	A	A	A	A	(260) ^A	A	330 ^A	300 ^A	
25	B	270	300 ^A	300	260 ^F	250	240	300 ^A	400 ^K	430 ^K	510 ^K	390 ^K	380 ^K	350 ^K	330 ^K	330 ^K	320 ^K	290 ^H	320 ^H	320 ^H	320 ^H	350 ^K	330 ^K	300 ^A	
26	330 ^A	(360) ^A	380 ^A	360 ^A	(300) ^A	300 ^K	230 ^H	280 ^H	380 ^K	360	280	300	360	330	290	290	300	290	240	260	250	260 ^F	240	280	
27	290	C	C	280	230	230	220 ^H	270	290	A	A	A	B	B	350	320	230	A	A	A	(300) ^A	A	(300) ^B	(300) ^A	
28	310 ^A	300 ^A	(320) ^A	260	250	260	300	260	340	330	320 ^B	310	330	370	370	350	290	260	230	250	250 ^A	300 ^A	300 ^A	290	
29	(300) ^A	280	(310) ^A	C	C	310	290	220	A	290	270	390	340	320	290	300	310	300	290	250	240	250 ^F	(300) ^A	300	
30	(290) ^A	(300) ^A	350	300	290	280	270	280	(280) ^C	270	270	320	310	310	330	320	300	290	290	(280) ^A	250	280	360	(330) ^A	
31	300	290	300 ^A	260	230 ^F	240	240	230	280	A	A	300	A	A	340	C	380	280	A	(260) ^F	280 ^F	(350) ^A	A	330 ^F	
Median Value	300	290	290	280	260	270	270	270	280	310	330	340	340	350	340	320	310	300	280	260	250	270	270	300	300
Count	22	26	29	28	26	30	31	27	23	19	17	19	13	21	24	26	22	23	22	24	26	22	24	28	

Sweep 1.0 — Mc to 17.0 — Mc in 1.5 min

Manual

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

IONOSPHERIC DATA

Jul. 1950

foF1

Lat. 35° 42.4' N
Long. 139° 29.3E

135° E Mean Time
Kokubunji Tokyo

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1						Q	Q	A	A	A	A	55B	50	51	50	45	46	L	L						
2						Q	L	L	(50)F	50	(50)F	50	S	50B	52	L	L	L	AF						
3						L	Q	L	A	A	A	A	A	52	L	L	47	L	LF						
4						Q	A	A	A	A	A	A	A	L	48	L	A	L	A						
5						Q	Q	50	A	47	A	A	A	A	A	L	L	A	Q						
6						L	L	50	A	A	A	A	A	A	A	A	A	A	A						
7						L	Q	L	L	L	50	51B	48	B	A	A	46J	L	L						
8						Q	Q	46	Q	A	A	A	A	A	A	A	52	A	A						
9						A	A	A	A	L	A	A	A	A	A	A	A	L	AF						
10						Q	44	Q	L	44F	51A	A	54	A	54	A	A	45	A						
11						Q	(42)L	44F	49	A	48	48A	52	50	48B	46	A	A	A						
12						L	41	A	A	A	L	A	A	50A	51	47	A	L	L						
13						A	L	42S	45	45A	44	50	A	50	(48)A	47	45	39A	A						
14						Q	L	42	45	47	49	49	A	A	A	A	A	A	A						
15						Q	Q	L	A	A	A	A	A	A	B	47	A	L	A						
16						Q	A	A	A	49	A	A	A	A	A	A	A	AF	AF						
17						A	39	A	AF	A	A	A	A	A	A	A	C	46	A						
18						Q	37B	C	A	A	A	A	A	A	A	A	A	A	A						
19						Q	Q	Q	47	L	A	(50)L	A	A	A	52	50A	AF	Q						
20						Q	Q	Q	A	A	A	50	A	A	49	L	L	L	L						
21						Q	L	L	L	A	L	54F	L	54H	A	49A	L	A	AF						
22						Q	L	45	48	A	A	A	A	A	A	50	49	L	A						
23						Q	Q	A	L	S	A	55S	A	B	A	A	L	L	A						
24						Q	Q	Q	A	A	A	55	54	A	A	50	A	A	A						
25						Q	Q	A	L	A	51	51	52A	A	49A	L	L	39							
26						A	Q	Q	46	48	52	L	58	54	51	L	L	Q							
27						Q	Q	L	L	A	A	A	(50)J	47	47J	(44)J	Q	A	A						
28						Q	A	L	A	A	A	A	A	A	A	A	46	L	Q						
29						L	A	Q	A	L	L	(55)L	50	50	L	A	45	AF	B						
30						Q	Q	L	C	47	A	L	C	A	47	A	46	L	L						
31						Q	Q	Q	A	A	A	A	A	A	A	A	AF	AF	A						
Median Value						4.1	4.5	4.7	4.7	5.0	5.1	5.2	5.0	4.9	4.9	4.8	4.6	—	—						
Count						5	7	7	7	8	13	9	10	12	12	9	4	4	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

Jul. 1950

f'F1

Lat. 35°42.4'N
Long. 139°28.3'E

Kokubunji Tokyo

135° E Mean Time

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

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

Jul. 1950

foE

Lat. 35°42.4'N
Long. 139°29.8E

Kokubunji Tokyo

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	- 23
1						2.1H	2.7	3.1	A	A	A	A	4.0H	4.1H	4.0H	B	3.1J	2.8	2.2J					
2						(1.9)H	2.5	3.0	A	A	B	A	B	B	4.0	(3.6)B	3.1B	2.8	A					
3						A	A	AF	3.3	3.5	A	A	A	A	3.6J	3.5	3.0A	2.7A	A					
4						A	A	3.0H	3.3	(3.3)B	3.5	3.5	A	3.5	3.4	3.3A	A	2.8	2.0J					
5						A	A	A	A	A	A	A	A	A	A	A	B	A	A					
6						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
7						A	2.2	2.5	2.8	B	3.2A	A	B	B	3.4B	3.3	A	A	A					
8						1.9A	(2.6)A	A	A	A	A	A	A	A	A	B	B	3.2	A	A				
9						A	A	A	A	A	3.5A	3.6H	B	A	A	A	A	A	A					
10						1.8A	2.8	A	A	A	A	A	A	A	A	A	A	3.2	A	A				
11						1.6F	A	A	3.6	3.7	3.6	A	A	A	A	(3.6)T	A	A	A					
12						2.1	2.7	3.0	A	A	A	A	A	A	A	3.6	3.4	A	A					
13						A	A	A	A	A	A	A	B	B	A	3.6	3.3	2.8	A					
14						2.0A	A	2.9	3.2	3.5	3.7	3.8	3.9B	3.9	3.7B	3.4	3.2	2.8	2.4					
15						A	A	A	3.3	A	A	A	A	(4.0)A	B	A	3.1	2.8	A					
16						A	2.7H	2.8	A	A	A	A	A	A	A	A	3.5	2.9	A					
17						A	A	A	A	A	A	A	A	A	A	B	C	A	A					
18						A	A	C	A	(3.5)A	3.5H	B	A	A	A	A	A	A	A					
19						A	A	(3.2)J	AF	A	B	A	3.9B	3.9	3.7	3.7	A	A	A					
20						A	2.6H	A	A	A	A	A	A	A	A	A	3.3	A	A					
21						A	(2.7)A	3.2J	3.5A	3.6A	B	A	A	A	3.7T	(3.5)A	A	A	A					
22						1.8A	2.5	A	3.2	A	A	3.6	A	A	A	B	A	A	A					
23						A	2.4B	A	A	3.8	3.9	A	B	(3.9)J	A	A	A	3.0	A					
24						A	A	A	A	A	3.6	A	A	3.6	3.6	3.6	3.2	A	A					
25						1.6F	A	A	3.5A	3.5	3.7	(3.7)B	A	A	A	3.6	3.2	2.7	2.0J					
26						A	2.9	3.0	A	A	A	A	B	B	3.9	(3.8)A	3.5	2.5	2.0A					
27						1.9	2.3	3.1	A	A	A	A	A	A	A	A	3.4A	A	A					
28						A	A	A	A	A	A	A	A	A	A	B	A	3.0	2.4					
29						A	2.4	2.8A	A	3.5	AF	A	(4.0)A	A	3.8A	3.7J	3.2J	3.0	A					
30						A	A	2.8	C	A	A	3.6A	(3.6)C	(3.6)A	A	A	3.2	3.0A	2.0A					
31						A	2.3	A	A	A	A	A	A	A	A	A	A	A	A					
Median Value						1.9	2.6	3.0	3.3	3.5	3.6	3.6	3.9	3.9	3.7	3.6	3.2	2.8	2.0					
Count						10	15	13	9	9	9	6	5	8	12	14	15	14	7					

foE

Recep. 1.0 Mc to 17.0 Mc in 1.5 min Manual

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

Jul. 1950

R'E

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3E

135° E Mean Time

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

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

Jul. 1950

fEs

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	48	47	24	(23)Y	20	30	41	52	94	70B	65	42	48	G	G	G	44	35	35	32	32	45	62	62	
2	72	70	42	32F	G	29	42	45	72	53	B	41	B	B	50	G	52Y	(48)Y	54	59	54	50	72F	78F	
3	66	62	42	90	92	31	62	66F	136B	139Y	143Y	145F	156	102	G	G	43	52	42	32	37	34	26	23	
4	37	76	76	86	36	36	54	92F	72	93	105	74	88	55	51	41	92	44	52	34	70B	24	28	G	
5	36Y	49	34	24	32	31	34	57	94F	75F	89F	(102)F	(102)F	58	73	54	60Y	(75)B	50B	88B	50	42	30	30	
6	60	49	44	50	C	36	48	49	56	64	120Y	28	154F	134	94Y	74	56	87	110	88F	80	90	80	90	
7	92	80	56	36	(90)F	56	38	38Y	48	44	46	46Y	44	G	70	58	78	46	32	54	G	47	38	63	
8	37	65	48	44	36	G	36	44	50	80	146	118F	102F	131F	112F	(124)F	84	149	142	92B	92	94	98	96	
9	54	22	48	60	36	46	118	86	84	53	117F	(151)F	D	D	94	(153)F	90	55	88	53	58Y	40	30	B	
10	G	43	41	(20)Y	50	32B	36	43	60	56	66	77	87	89	81	89	114	101	86	90	54	36	38	33F	
11	32	24	B	24	20	28	44	52	60	90	57	62	48	50	38	46	87	91	71	67	98	70	42	41	
12	55	45	38	34	27	39	50	(79)F	146F	106F	89F	76	54Y	56Y	50Y	73Y	93	54	50	46	39	88	70F	52	
13	46	30	56	68	82	84	40	50	G	84	62	61	66Y	B	46Y	52Y	G	68Y	94	55	28	30	34	34	
14	45	28	42	34	38	28Y	40B	G	50Y	G	G	48Y	66Y	64Y	64Y	(91)Y	78	110	86F	34	22	44	42	C	
15	C	C	48	41	33	30	34	48	150	148	138B	145F	104F	146	102	G	56	64	78	79	70	80	72	54	
16	50	41Y	38	26	28	26	52	85	64	53	64	89	155	66	84F	80	145F	150F	125	118	145	75F	58	(58)F	
17	42	50	44	45	33	49	G	94	72	145	100F	110	118	76	76	55	C	50	88	85	79	55	72	74	
18	60	60	48	54	38	28	36	C	142F	101F	148B	146	144F	144F	88B	90	89	72B	62B	52	78	74	79F	65	
19	55	46	46	32	36F	30	(34)Y	G	45F	(42)F	60	55	64Y	56	61Y	52Y	50	48	83	30	40	41	55	43	
20	48	44	46	36	30	G	48	48	75	107F	66Y	60	125B	72	56Y	42	43Y	72Y	67	27	23	24	20	22	
21	43	46	36	32	20	38Y	G	G	50	98F	66	51Y	49Y	50	50	115	62	100	85	(50)F	42	92	78	62	
22	60	69	51	40	37	33Y	39	38	46	76F	144	104	120F	146	(72)Y	52	46	48	57	35	23	26	35	52	
23	35	48	58	34	32	27	32	36	44	50	50	62	70Y	G	55Y	57	46	46	89F	75Y	101	94Y	85Y	44	
24	49Y	48	58	48	46	56	29	(50)Y	88	75	85	157	58	(140)Y	98Y	54	(140)Y	120B	150F	134	84	76	50	34	
25	28	34	24	20	20	G	34B	55B	49	56	G	41Y	54Y	62	52	50	43	G	G	50	31	39	43	43	
26	38	62	50	50	30	36	G	40	52	49	52	46	G	G	G	G	38	33	32	28	G	45	28F	22	
27	28F	C	C	34	22	36Y	32	G	45	93F	70	74	55	48	47	40Y	56	92	76B	72Y	54	58	37	44	
28	50	78	78	48	26	35	66	52	52	54	56	74	57	59	63	54	46	36F	G	23	36	48	(52)Y	58	
29	62	48	48	C	C	34	72	54B	(110)F	82	54	44	57	49F	59	65	G	50	35	34B	63	64	45	47	
30	48	50	56	37	24	(34)Y	36	40	C	48Y	64	48	C	78Y	(52)Y	64Y	G	G	30Y	54	22	36Y	(47)Y	52	
31	41F	58	48	38	34	30F	34	48	86B	85	92	67	90	88	66	89	(73)F	75	92	62	48	54	55	62	
Median Value	48	48	48	36	33	32	38	48	62	75	66	67	70	64	59	54	56	55	71	54	50	48	45	52	52
Count	30	29	29	30	29	31	31	30	30	31	30	31	29	29	31	31	30	31	31	31	31	31	31	31	29

fEs

Sweep 1.0 Me to 17.0 Me in 15 min

Manual

K 8

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

IONOSPHERIC DATA

Jul. 1950

M3000F2

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	(26)B	27	B	27	(28)P	30	28	B	A	(29)S	B	(27)B	29	28P	26	28H	31	30	30	30 ⁵	28	(28)F	(27)H	
2	(27)H	30	(26)F	F	(33)F	32F	30P	31	30	B	(27)F	(30)S	29	29	27B	27F	(30)F	(31)F	31P	30	30P	(29)F	SF	B
3	BF	(29)F	(28)F	F	AF	29F	(34)F	A	A	A	A	A	A	30P	(29)F	29P	29	(30)F	(32)F	B	(30)F	S	SF	27F
4	SF	F	32	30F	30	33F	32F	A	30	A	A	27	A	(27)P	29P	(30)B	31	29	B	(29)P	A	B	B	27
5	(28)B	28	29F	30	(34)B	(31)H	32	A	A	28K	A	(28)A	A	27K	29K	30K	33K	32K	30K	A	31K	29K	32K	29K
6	A	K	30K	31K	27F	(28)C	28	32	34	29H	A	27	AF	AF	A	(29)F	(30)F	(31)F	A	26P	A	(31)F	F	
7	A	28	F	BF	F	31F	33F	32F	B	31	28	(30)F	B	28P	B	(29)F	(30)F	29	31	28	29	28	(28)F	F
8	FS	FS	BF	BF	(28)F	(29)F	28H	30	34	33	31A	(27)A	A	A	A	AF	BS	A	A	A	A	A	A	A
9	SF	29H	(28)F	(30)F	(30)F	30F	31	32	33P	29	A	A	A	A	A	A	A	(33)F	31	29	A	A	(27)P	(28)P
10	28	(29P)	(28)P	26	(26)P	27	B	B	(30)S	35	27S	(28)S	29	(31)F	27	30	A	(29)F	(30)H	B	(32)F	(32)F	BF	28
11	B	B	(30)P	31	28	25	(29)F	B	(30)F	A	28	30	B	(29)F	30	(27)F	34	A	A	(31)F	A	27	B	(26)P
12	B	24F	28F	27F	28F	27F	30	29	A	A	A	A	30	28	29	(27)F	34	31	32	31	26	27	26	27
13	25S	28	29	(30)F	A	A	33	S	28K	26K	30K	26K	(28)F	27K	(28)B	29K	(30)B	(29)F	A	29	27	28H	26	26Z
14	27	28P	30P	33	28K	28K	29K	28K	29	29	B	B	A	28	(28)F	A	A	A	B	B	31	29H	(26)F	C
15	C	C	B	BF	BF	30	(32)P	(32)F	A	A	A	A	A	A	31	29	29	32	31H	29H	(30)F	A	A	BF
16	BF	(26)F	27	(29)F	28	(32)F	33	AS	30S	31	28S	28	A	S	31F	31	AF	AF	AF	A	(29)F	F	28	
17	28	29	27	28H	28	29	31	34	B	AF	AF	A	A	29	(29)P	B	C	29P	(31)F	30S	F	29F	27F	29F
18	29P	(29)F	BF	B	BF	30F	(28)F	C	A	A	A	A	AF	A	A	A	A	25	29	S	29	BF	(26)F	(25)F
19	(26)F	SF	F	(30)F	(31)F	31F	32	33	34	B	29	29	30	30	28	29	29	30	30	29	28 ⁵	29P	29	26
20	26	(28)F	(33)F	(33)F	(33)P	30	32	33	33	A	AF	30	37	A	30P	31	(30)P	29P	(29)P	(31)F	(30)S	29	(28)F	(29)P
21	29	(28)B	27	(27)B	28	26	30	30	33	A	31	28	27	28	28	29	29	29	(31)F	C	(33)F	A	(28)F	26Z
22	26Z	BH	29F	27P	28	30	32	32	33	A	A	A	A	A	31	(30)F	30	29	31	(31)F	28	27	28	28
23	26F	29P	(30)P	29	(27)P	(29)P	B	34	31	31	32	30	29	31	(29)F	30	30	30	31	S	(29)A	AF	SF	(27)F
24	24H	F	(32)F	BF	32F	31F	34	34	A	31	28	30F	(28)F	A	(28)A	29	A	A	A	A	B	27	(27)B	27
25	B	B	B	25P	28	30F	32	29	27K	25K	27K	27K	27K	29K	(29)F	29K	30H	30H	29H	30K	30H	28Z	28F	(27)F
26	29K	26K	26F	28K	25K	28F	30H	25H	28K	29	33	32	29	(29)F	33	32	31	33	(28)F	30	(27)P	31	29	26
27	27	C	C	28F	31V	31	28H	32	(32)F	A	A	A	B	B	29P	B	32P	A	31	(28)F	S	S	B	(28)B
28	(29)F	28S	28F	(31)F	28F	24F	(30)S	31	29	30	30	(30)F	26F	30S	29	29	32	35	33	31	27	27	(29)F	
29	29P	28F	(26)F	C	C	29	(31)F	(35)F	A	34	30	28	30	30	30	29	B	(31)F	(29)F	(31)F	33	(32)F	27	27
30	29P	26P	(27)B	(28)F	28	B	B	C	C	34	S	(30)S	C	B	30	(28)F	28	30	(30)F	29P	(28)B	27P	27	
31	(29)F	(28)F	28	31	(28)P	30P	33	33	(33)F	A	A	(29)S	A	A	(28)F	(29)F	(31)F	(33)F	34	33	28	27	28	27
Median Value	28	28	28	29	28	30	31	32	30	30	30	28	29	29	29	29	30	30	31	30	29	28	28	27
Count	20	22	23	23	25	29	28	23	19	19	16	22	13	19	25	24	21	24	23	20	23	21	20	26

Sweep 1.0... Mc to 17.0... Mc in 1.5... min

Manual

K 9

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

IONOSPHERIC DATA

Jul. 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	A	1.4	(1.2)A	1.2	E	2.1	2.8	A	A	A	A	4.2	4.6A	(4.8)A	(4.6)A	4.1	3.8	3.2	ZBA	A	1.6	1.2	A	A
2	A	A	1.4	1.1	1.1	N	3.1	3.2	4.1	A	4.1	4.1	4.5	4.3	4.5	5.0	A	(3.2)A	AF	A	A	AF	A	A
3	AF	A	A	A	A	2.3	2.9	4.0	A	A	A	A	A	4.5A	4.3	3.9	A	A	A	A	A	A	4.1	1.7
4	AF	A	AF	AF	A	AF	AF	AF	A	A	A	A	A	A	4.1	4.1	A	A	A	ZZA	A	A	1.6	1.2
5	A	AF	A	AF	AF	AF	AF	AF	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
6	A	A	AF	A	A	2.4	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
7	A	1.3	AF	1.1F	1.2F	2.5F	2.4	3.6	(3.6)A	A	A	A	4.2	(4.0)B	A	A	A	3.5	A	A	1.5	1.4	A	A
8	A	A	A	A	A	1.9	A	4.0	3.6	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9	A	1.2	AF	1.1	AF	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10	1.2	1.3	1.3	E	A	2.4	3.4	3.2	4.2	A	A	A	4.2	A	4.5	A	A	A	A	A	A	4.6	A	1.4
11	A	1.6	1.4	1.2	1.4	2.4	2.4	A	A	A	4.4	A	4.4	4.1	4.9	4.0	A	A	A	A	A	A	A	A
12	AF	A	(1.1)A	A	1.4	2.8	3.4	A	A	A	A	A	A	A	A	4.2	A	2.2	A	A	A	A	A	A
13	A	A	A	A	A	A	2.8	A	4.0	A	4.2	A	A	4.9	A	4.2	3.3	3.5	A	A	1.4	1.5	A	1.8
14	A	A	A	A	A	2.0	3.4	3.2	3.8	3.8	3.9	4.5	A	A	A	A	A	A	A	1.8	1.4	1.6	A	C
15	C	A	A	A	1.9	N	N	3.6	A	A	A	A	A	A	A	4.0	A	A	A	A	1.4	1.6	A	A
16	A	A	1.8	1.4	N	A	A	A	A	4.2	A	A	A	A	A	A	AF	AF	AF	A	A	AF	AF	A
17	A	1.9	1.1	A	A	2.9	A	A	AF	A	A	A	A	A	A	A	C	3.5	A	A	A	A	A	A
18	A	A	AF	A	A	2.3	3.2	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
19	A	AF	AF	1.6	A	2.4	3.4	3.3	3.8	3.9	A	4.6	A	A	A	A	A	A	AF	N	1.5	A	1.6	1.6
20	A	A	A	A	A	2.4	2.8	3.6	A	A	A	A	A	A	A	4.2A	3.4	A	A	A	1.6	1.4	1.4	1.3
21	1.3	A	A	A	A	2.7	3.2	4.1	3.8	A	4.4	4.6	4.1	A	A	4.2	AF	A	AF	AF	AF	A	A	AF
22	AF	A	A	A	A	1.8	2.6	3.2	A	A	A	A	A	A	A	A	4.1	3.2	A	A	2.0	1.3	1.6	1.6
23	A	A	A	A	A	2.0	3.2	A	A	6.2	A	A	5.7	6.0	A	A	A	(3.2)A	A	A	A	1.8	A	A
24	1.1	1.1	1.2	A	A	A	A	3.2F	A	A	A	A	4.4	A	A	4.2	A	A	A	A	A	A	A	A
25	B	1.2	A	A	1.2F	1.6F	A	A	3.5	4.1	3.8	4.1	A	A	A	4.0	4.0	3.0	2.7	A	A	A	A	A
26	A	A	A	A	A	A	A	3.6	A	A	A	4.2	4.1	4.1	4.0	4.0	3.5	2.8	2.8	2.2	1.4	(1.6)A	1.6	1.3
27	1.1	C	C	1.3	1.2	1.9	2.7	3.2	A	A	A	A	4.4	5.4	A	A	3.6	A	A	A	A	A	5.0	A
28	A	A	A	A	A	2.0	A	3.8	A	A	6.6	A	A	A	A	A	3.6	3.2	2.4	2.0	A	A	A	A
29	A	A	A	C	C	A	A	3.0	A	A	4.1	4.2	4.2	4.3	4.7A	A	3.6	A	2.0	A	1.6	AF	A	A
30	A	A	A	A	1.8	2.0	3.4	3.6	C	4.4	7.3	4.4	C	A	4.4	A	A	3.0	2.0	A	1.6	1.6	A	A
31	AF	A	A	A	1.4F	(2.4)A	2.6	A	A	A	A	A	A	A	A	A	AF	AF	A	AF	AF	A	A	AF
Median Value	-	1.3	1.2	1.2	1.4	2.2	3.0	3.6	3.8	4.2	4.4	4.2	4.2	4.4	4.5	4.2	3.6	3.2	2.6	2.0	1.4	1.6	1.6	1.4
Count	4	8	7	9	10	20	18	17	9	6	9	9	9	10	11	12	9	13	6	7	9	12	7	7

fminF

Sweep 1.0 - Mc to 17.0 - Mc in 1.5 min

Manual

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

IONOSPHERIC DATA

Jul. 1950

fminE

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3E

135° E Mean Time

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

Recep. 1.0 Mc to 17.0 Mc in 1.5 min Manual

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

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3E

Kokubunji Tokyo

135° E Mean Time

Jul. 1950

Z d

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	(110) ^P	120	B	70	(60) ^P	90	160	B	A	(120) ^S	T	70	100	90 ^P	90 ^B	(120) ^S	100	120	90	110	90 ^S	90	(70) ^F	(80) ^H	
2	(60) ^H	120	(140) ^F	F	(40) ^F	70 ^F	100 ^P	70	80	B	(70) ^F	(70) ^T	S	(50) ^B	70	120 ^P	(100) ^T	(90) ^T	110 ^P	80	80 ^P	(80) ^F	SF	B	
3	BF	(90) ^F	(100) ^F	F	AF	130 ^F	(90) ^F	120 ^F	A	A	A	A	A	100 ^T	(100) ^T	110 ^P	80	(100) ^T	B	(130) ^T	S	SF	110 ^F		
4	SF	F	60	70 ^F	70	100 ^F	110 ^F	A	160	A	A	80 ^A	A	(140) ^P	110 ^F	130	80	100	B	(110) ^P	A	B	B	130	
5	B	170	120 ^F	110	(80) ^T	100 ^B	G	80	A	70	A	A	A	G	(50) ^A	70	40	80	120	A	100	110	130	100	
6	A	(30) ^A	90	30 ^H	C	110	90	90	80	90 ^H	A	120	AF	AF	A	(70) ^P	(110) ^T	(80) ^T	A	A	140 ^P	A	A	(120) ^F	
7	A	80	F	F	F	110 ^F	90 ^F	140 ^F	B	60	B	G	150	120 ^P	B	B	110	100	A	A	110	100	(80) ^F	F	
8	SF	SF	BF	BF	F	(90) ^F	(100) ^F	80 ^H	100	90	60	A	A	A	A	AF	BF	A	A	A	A	A	A	A	A
9	SF	70 ^H	(50) ^F	(100) ^F	(110) ^F	70 ^F	60	70	110 ^P	60	A	A	A	A	A	A	A	(60) ^T	110	130	A	B	(90) ^T	(60) ^P	
10	100	(90) ^P	(80) ^P	80	(120) ^P	120	B	B	(70) ^S	60	100 ^S	(110) ^S	80	(40) ^T	90	90	A	(130) ^T	(60) ^P	B	(60) ^T	(70) ^P	BF	70	
11	B	B	(120) ^P	90	90	130	(60) ^T	B	(60) ^T	A	30	40	B	(60) ^T	(110) ^P	110	A	A	A	(100) ^T	A	110	B	(110) ^P	
12	B	130 ^F	70 ^F	130 ^F	150 ^F	110 ^F	50	100	A	A	A	A	40	40	70	(70) ^P	A	80	70	80	140	90	110 ^A	100	
13	110 ^S	90	90	(90) ^T	A	A	50	S	G	G	110	G	A	A	A	B	60	A	A	B	120	100 ^H	110 ^Z	C	
14	80	80 ^P	100 ^P	120	110 ^A	150	140	80	70	170	B	B	A	A	A	A	70	90	50	60 ^H	(90) ^P	A	A	BF	
15	C	C	B	BE	BE	100	(100) ^P	(70) ^T	A	A	A	A	A	A	A	A	70	90	40	AF	AF	A	A	AF	
16	BF	(80) ^F	80	(100) ^T	90	(160) ^T	100	AS	210 ^S	100	90 ^S	A	A	S	70 ^F	40	AF	AF	AF	A	A	A	AF	F	
17	140	150	90	70 ^H	70	70	100	70	B	AF	AF	A	A	A	A	A	A	80	70 ^P	(70) ^T	80 ^S	F	110 ^F	120 ^F	
18	80 ^P	(110) ^T	BF	B	BE	80 ^F	(110) ^F	C	AF	A	A	A	A	A	A	A	A	80	110	S	80	BF	(150) ^F	(110) ^F	
19	(80) ^F	SF	F	(70) ^F	(60) ^F	90 ^F	110	80	30	110	30	130	100	70	60	80	120	110	120	100	100 ^P	90 ^P	90	100	
20	100	(60) ^T	(30) ^T	B	B	90	120	80	A	AF	A	90	A	A	60 ^P	60	(90) ^P	100 ^P	(100) ^P	(70) ^T	(60) ^S	50	(100) ^P	(60) ^P	
21	60	(80) ^B	90	(80) ^B	60	70	80	70	70	A	70	90	170	70	100	100	90	A	(120) ^T	C	(60) ^T	A	50 ^F	150 ^Z	
22	90 ^Z	BH	100 ^F	90 ^P	110	70	70	70	90	A	A	A	A	A	50	(70) ^T	90	120	90	(90) ^T	110	120	80	80	
23	130 ^F	70 ^P	(130) ^P	70	(120) ^P	(80) ^P	B	50	70	S	80	90	60	100	(110) ^T	90	70	90	100	S	100 ^A	AF	SF	(140) ^F	
24	110 ^H	F	(60) ^F	BE	130 ^F	100 ^F	60	160	A	(100) ^B	110	90 ^F	AF	A	70	A	A	A	A	A	A	B	80	(180) ^B	80
25	B	B	B	110 ^P	140	80 ^F	70	90	90	80	G	G	90	90	(90) ^T	90	G	60 ^H	120 ^H	80	40 ^H	70 ^Z	60 ^F	(70) ^H	
26	60	60	80 ^F	120	160	160 ^F	150 ^H	G	60	110	50	80	G	(80) ^S	50	60	90	30	(140) ^P	150	(140) ^P	70	190 ^B	120	
27	120	C	C	90 ^F	130 ^V	90	100 ^H	60	(50) ^T	A	A	A	B	B	B	G	B	90 ^P	A	(130) ^A	S	S	(100) ^P		
28	(100) ^S	90 ^S	120 ^F	(130) ^F	70 ^S	120 ^F	(90) ^S	80	60	90	90	(80) ^T	100 ^F	A	60	40	100	60	80	80	100	120	130	(90) ^T	
29	110 ^P	120 ^F	(80) ^F	C	C	90	(90) ^T	(100) ^T	A	60	40	G	50	100	110	190	B	(70) ^T	(150) ^T	(80) ^F	100	(70) ^T	110	80	
30	140 ^P	(100) ^B	(80) ^F	(60) ^T	90	B	B	B	C	70	S	(90) ^S	C	B	100	(70) ^T	140	70	(80) ^T	(130) ^P	90 ^P	(80) ^P	80 ^P	70	
31	(90) ^F	BF	100	140	(90) ^P	110 ^P	170	170	(70) ^T	A	A	(110) ^S	A	A	(80) ^T	(90) ^T	(60) ^T	(60) ^T	A	100	120	80	110	90	
Mean Value	100	90	90	90	90	100	100	80	70	90	80	90	100	90	80	80	90	80	100	100	100	100	90	100	100
Count	19	21	23	22	23	29	28	23	19	17	13	19	12	17	22	24	20	23	21	20	23	20	20	20	26

Steep 1.0 - Mc to 17.0 - Mc in 1.5 min

Z d

K 12

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

IONOSPHERIC DATA

Jul. 1950

f_oF₂

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	T.1 ^H	T.0	T.1 ^F	6.7	T.3 ^F	6.1	6.3	C	C	C	C	C	C	C	C	C	C	C	C	10.4	10.1	10.6	9.3	8.0
2	T.9	9.5	11.2	8.8	9.2 ^H	9.0	8.7 ^F	8.2	8.7	8.3	9.3	9.7	10.4	10.6	10.7	12.0	11.4	9.1	8.5	8.5	8.1 ^H	7.9	7.7 ^V	7.8 ^V
3	8.2 ^F	8.3 ^H	8.8	7.7	7.6	8.0	7.8	8.3	7.0	A	T.1	8.1	8.7	8.9	9.3	10.2	10.7	10.7	10.6 ^H	10.2	9.7	8.1 ^H	8.1	8.3 ^V
4	(T.6) ^F	(T.7) ^F	T.0 ^F	6.3	4.7	5.0	5.7	6.3	7.2	A	A	A	A	A	11.8	A	9.0	9.3	9.9	10.3	7.9 ^H	6.7 ^H	7.0	7.3 ^F
5	(T.5) ^F	(T.4) ^F	T.0 ^F	6.1	6.3	5.4	5.8	6.5	7.7	1.05	B	8.1	8.5	7.8	9.0	10.5	9.0	7.8	7.5	8.0	8.0	7.7 ^H	8.2	8.3 ^F
6	T.7 ^H	8.2 ^Z	8.6	T.8	5.9 ^P	5.8	7.6	9.1	6.8	7.2	A	T.9	8.6	9.7	10.1	10.3	10.2	9.3	9.7	8.3	8.8 ^H	8.7 ^C	8.6	(8.7) ^V
7	(9.2) ^F	(9.0) ^F	T.7 ^F	T.1 ^F	7.6 ^F	7.8 ^F	7.5	6.8	7.7	7.9	7.4	7.4	8.2	8.7	9.1	9.6	10.8	11.3	11.0	11.2	10.6	9.5	9.1	9.3
8	8.2	T.2	T.4	6.7	5.7	5.8	6.4	7.8	C	C	C	T.8	8.3	8.7	9.2	8.4	8.3	(9.0) ^F	10.0	8.1	7.5 ^P	(7.4) ^F	7.1	F
9	F	F	F	F	F	F	F	9.2	F	T.0 ^F	6.9	T.5	A	8.4	9.4	A	11.7	11.4	A	9.0	(8.4) ^F	7.7	7.6	7.4
10	C	C	T.4	6.1	5.6	T.0	7.6	8.9	(9.0) ^C	9.0 ^H	9.1	7.9	8.1	7.9	8.0	8.8	10.2	10.7	9.9	A	A	9.4	9.4	9.5
11	F	1.0 ^T	9.4	8.7	8.3	T.1	8.0	9.0	9.8	1.01 ^P	9.7	10.3 ^P	10.6	11.6	11.8	12.0	10.9	7.8	8.0	7.5	6.6 ^J	6.6	6.4	F
12	T.1	6.8 ^F	6.8 ^F	6.4	5.1	4.9 ^H	6.8 ^F	8.5	7.6	8.4	9.7	8.8	T.2	T.5	8.3	T.8	8.5	8.9	9.6	9.2	7.9	7.5	6.8	6.8
13	6.9	6.7	6.2	5.8	4.9	5.4	6.2	6.0 ^K	6.4	8.3 ^K	8.1 ^K	T.1 ^K	6.4 ^K	6.4 ^K	7.5 ^K	7.8 ^K	7.6 ^K	7.5	7.1 ^H	6.9	6.7	5.8	7.0 ^H	7.2 ^H
14	T.0 ^H	6.9	T.0	6.5	5.1 ^K	3.7 ^K	4.0 ^K	8.0	8.5 ^H	8.9	6.8	6.8	T.2	T.6	8.4	8.2	8.7	8.7	10.5	9.3	7.3	A	6.7 ^V	6.5 ^V
15	T.1 ^V	T.0 ^Z	6.7	6.0	5.1	5.4	7.4	T.1	T.2	6.8	8.3	8.5	A	8.3	8.1	8.4	9.6	9.7	8.1	7.8	7.7	7.2 ^F	7.7 ^F	7.4
16	T.0 ^F	(6.0) ^F	(7.0) ^F	F	7.0 ^F	(6.7) ^F	5.2 ^F	C	C	C	C	C	C	C	C	C	C	C	C	C	8.7	7.9	F	9.3 ^F
17	8.5	8.2	(7.9) ^F	T.0 ^F	(7.6) ^F	7.3 ^F	(7.8) ^F	8.4	A	6.6	A	T.9	7.9	8.3	8.2	T.9	7.4	8.1	8.2	7.6	6.7	(6.2) ^P	F	(6.6) ^F
18	(4.4) ^F	(7.4) ^F	(5.9) ^F	(5.5) ^F	5.5	5.3	5.8	T.4	8.5	8.1	7.4	8.4	A	9.5	10.1	A	8.8	8.8	9.3	8.6	A	6.7	(6.9) ^F	F
19	(8.8) ^F	F	F	(7.0) ^F	(7.8) ^F	F	T.2	T.8 ^V	T.6	T.7	T.2	T.8	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	T.0	T.6	T.6	T.9	T.2 ^F	(6.6) ^V	6.8	T.0	T.3	7.6	8.1	T.6	A	9.2	10.2	10.9	11.1	11.4	12.0	11.7	9.3	7.6	7.9	F
22	F	F	F	F	F	(T.6) ^F	T.0	6.7	8.8	9.0	9.0	9.2	9.6	9.8	A	A	8.9	8.8	9.0	8.1	7.7	T.5	7.8	T.1
23	T.1 ^V	6.8	6.6	6.6	5.8	T.0 ^F	T.0	T.7	8.5	9.1	8.6	9.9	8.6	8.5	9.3	9.1	9.2	9.7	10.1	9.9	8.7	T.2 ^H	7.8 ^F	T.1
24	8.2 ^V	(6.2) ^P	6.2	B	B	B	6.4	6.9	7.7	9.5	9.1 ^Z	T.9	10.8	10.0	10.4	10.0	10.1	11.7	13.0	12.8	10.4	9.7	9.7	(7.9) ^P
25	10.8 ^H	F	F	9.0	T.8	6.5 ^J	T.9	6.9	6.7	5.8 ^K	6.5 ^K	T.9	T.6	8.8	8.1	9.2 ^P	9.0	8.9	7.9	7.0	6.2	6.9	6.8	6.7
26	5.9	6.4 ^J	6.6	6.4	5.2 ^K	4.9 ^K	5.0 ^K	5.8 ^K	T.1	T.4	8.2	T.6	T.8	8.8	9.1	9.3	8.7	8.5	8.9	9.0	7.0	6.5	6.6	6.4
27	6.8	8.0	8.2	6.9	6.3	5.9	6.5	8.6	B	(7.4) ^P	T.9	T.9	8.6	8.8	9.2	9.2	8.7	7.7	7.2	7.6	8.0	8.0	8.1	
28	F ^H	9.2 ^F	9.2	(9.2) ^F	(8.3) ^F	6.5 ^F	6.4	6.6	8.2	8.3	8.7	9.0	9.6 ^H	10.0	10.3	10.4	9.8	9.8	9.7	7.5	7.2	7.3	6.9	6.6
29	(6.2) ^F	T.2	T.4	6.8 ^F	6.4 ^F	T.4 ^F	8.9 ^F	8.3	T.3	A	A	C	9.1	8.9	8.9	8.9	9.7	9.7	9.9	9.7	9.4	7.7	7.4	6.8
30	6.5	6.5 ^F	(6.1) ^F	(6.0) ^F	F	6.3	6.6	T.2	8.0	T.0	6.3	6.7	T.6	10.0	10.4	10.4	10.8	11.4 ^H	10.5	9.3	8.9	8.1	8.1	8.3 ^F
31	9.5 ^F	B	9.4	8.5 ^H	8.3 ^V	T.3	6.6	T.7	6.7	7.6	T.0	T.2	T.9	8.3	9.0	10.0	10.3	10.8	10.8	8.9	6.9	T.1	7.5	8.0
Median Value	7.4	7.3	7.3	6.8	6.4	6.5	6.8	7.7	7.6	8.0	8.2	7.9	8.4	8.8	9.2	9.3	9.6	9.3	9.7	9.0	8.0	7.6	7.6	7.8
Count	26	24	26	26	26	27	29	28	24	24	22	26	22	26	26	23	28	28	27	29	28	28	28	26

Group 1.2 Mc to 18.5 Mc in 1.5 min

Manual

Y 1

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

IONOSPHERIC DATA

Jul. 1950

f_oF₂

Yamagawa

Lat. 31° 12.5' N
Long. 130° 37.7' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	340 ^H	330	330	310	320 ^A	220 ^F	260	C	C	C	C	C	C	C	C	C	C	C	C	300	290	260	250	290
2	320	300	260	260	260 ^H	260	300	270	310	320	330	340	350	360	370	360	330	300	310	290	260 ^H	280	300	330
3	330	310 ^A	310	300 ^A	290	280	240	270	250	A	A	A	A	A	280	A	330	310	270	240	260 ^H	260 ^H	330 ^A	330 ^A
4	330	320 ^F	280	260	240	250	270	270	250	A	A	A	A	A	280	A	330	310	270	260	240	220	330	310 ^A
5	310	300	290	260	240	240	240	240	300	240	240	400	270 ^A	370	370 ^A	260	270	(300 ^A)	320	300	300 ^A	300 ^A	370 ^A	(320 ^A)
6	330 ^H	330	290	250	230 ^A	320	300	260	260	320	A	340	390	390	350	310	310	340	300	250	280 ^H	(290 ^H)	(300 ^H)	(300 ^H)
7	(300 ^A)	300	260	240	280	280	220	210	280	300	330	410	(350 ^A)	390	370	380	370	370	220	230	230	230	240	280
8	250	280	260	240	250	320	290	290	C	C	C	390	380	380	330	360	340	330	300	280	290	330	300	A
9	A	A	A	(240 ^A)	320 ^A	A	280	260	A	290	300	410	A	400	350	A	310	280	A	(300 ^H)	(300 ^H)	(300 ^H)	330	310 ^A
10	C	C	280	260	280	220	290	260	(260 ^C)	270	310	310	350	370	380	390	380	370	320	290	A	A	370	330
11	390	280	250	260	260	270	280	290	270	300	370	370	330	280	300 ^A	300	300	330	300	250	260	310	310	310
12	(300 ^A)	300	300 ^A	250	270	310 ^H	350	(300 ^H)	340	(300 ^H)	300	250	360 ^A	280	380	360	370	360	290	280	300	300	320 ^A	300
13	280	(300 ^A)	(300 ^A)	(300 ^A)	300 ^A	A	260	380 ^K	450 ^K	360 ^K	330 ^K	320 ^K	510 ^K	G	380 ^K	330 ^K	320 ^K	300	280 ^H	280	250	330	320	300
14	310 ^H	330	320 ^A	330	280 ^K	360 ^K	320 ^K	350 ^K	300	280	310	400	350	410	330	360	320	340	290	250	210	A	310	310
15	310	340	(300 ^A)	290	290	270	300 ^A	250	290 ^H	400	370	340	A	380	400	390	340	300	300	280	(300 ^H)	290	300	300
16	390 ^F	300	(300 ^A)	290	300	240	300	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	400 ^F	A	330	340	300	280	(280 ^C)	280	A	370	A	400	400	390	340	360	350	A	300	270	250	290	A	290
18	320	370 ^F	290	290	290	290	260	260	300	330	380	350	A	300	320	A	300	330	300	300	A	280	400	410 ^A
19	280	300 ^F	290 ^F	280	300 ^H	(300 ^F)	290	300	310	300	340	360	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	300	(300 ^A)	310	250	260 ^H	260	240	250	270	370 ^A	370	400	A	400	380	260	340	330 ^A	300	310 ^A	A	290	320	310
22	350 ^F	310 ^A	260	290	280	280	270	300	270	290	320	380	390	380	A	A	360	320	300	280	290	400 ^A	A	A
23	330	300	290	(300 ^A)	300 ^A	270	240	300	330	300	310	340	300	360	330	350	330	310	300	290	260	340 ^A	300 ^A	300 ^A
24	330	320	320	A	A	A	290	240	290	300	330 ^A	320 ^A	220 ^A	220 ^A	330	360	400	350	280	250	300 ^A	300 ^A	300 ^H	320
25	280 ^H	280	300 ^F	270	250	260	250	280 ^K	290	230 ^K	390	430	370	400	350	350	350	330	300	290	300 ^A	300 ^A	300 ^H	330
26	360	340	350	300 ^A	310 ^K	310	280 ^K	250 ^K	310	330	310	320	380	330	400	320	300	300	300	290	280	290	300	360
27	290	290	270	260	250	270	290	290	280	280	380	350	330	370	320	300	300	300	300	270	280	270	260	260
28	300 ^H	310	280	330 ^A	360 ^A	300 ^A	260	300	260	290	360	400	360 ^H	380	400	400	390 ^F	290	290	250	270	300	300	330 ^A
29	310 ^A	310	310 ^A	320	320 ^A	290	280	270	240	A	C	370	A	340	380	350	350	290	290	250	270	290	290	290
30	300	350	350	320	300	260	300	260	280	300	280	380	500	360	350	360	340	320 ^H	290	280	280	260	260	300
31	290	260	270	250 ^H	260	230	220	220 ^A	290	280	290	390	390	360	350	320	320	300	270	250	360	360	360	330 ^A
Median Value	310	300	290	290	290	270	280	270	280	300	330	360	360	370	350	360	340	310	300	280	280	290	300	310
Count	27	27	29	29	29	27	30	28	25	24	23	26	22	25	26	23	28	27	27	29	27	28	28	28

Sweep 1.2 Mc to 1.8.5 Mc in 1.5 min

Manual

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							Q	C	C	C	C	C	C	C	C	C	C	C	C	L	L			
2							Q	L	Q	4.4	4.8	5.0	(5.1) ^A	5.2	5.2	5.1	L	L	L	L	L	L	L	L
3							Q	L	Q	A	4.7	5.1	5.0	5.2 ^A	5.4	(5.0) ^B	L	L	L	L	L	L	L	L
4							Q	L	Q	A	A	A	A	A	A	A	L	L	L	L	L	L	L	L
5							Q	L	Q	(5.0) ^A	5.3	A	A	A	A	A	L	L	L	L	L	L	L	L
6							L	L	L	L	A	5.1	A	A	A	A	5.4 ^A	L	L	L	L	L	L	L
7							Q	L	L	L	L	L	5.2	5.2	5.2	A	4.9	A	A	Q	Q			
8							L	L	C	C	C	A	A	A	A	L	L	L	L	L	L	L	L	L
9							Q	A	A	L	L	L	A	A	A	A	A	A	A	A	A	A	A	A
10							Q	Q	C	Q	L	L	A	5.0	5.0	A	A	A	A	A	A	A	A	A
11							Q	Q	4.4	5.0	5.0	5.2	5.5 ^F	A	A	Q	Q	4.5	(4.1) ^B	Q				
12							A	A	A	Q	A	Q	Q	Q	Q	4.8	4.7	4.8	L	L	Q			
13							Q	L	4.7	4.7	4.8	5.4 ^J	5.0	5.3	4.8	4.8	L	L	L	L	L	L	L	L
14							Q	4.5	L	L	L	L	5.0	L	L	5.2	4.8	L	L	L	L	L	L	L
15							A	Q	L	L	5.0	A	A	5.3	B	4.9	4.8	4.5	L	L	A			
16							Q	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17							C	Q	A	A	A	4.9	5.3	5.2	5.0	A	A	A	A	L	L	L	L	L
18							Q	Q	L	5.1	L	Q	A	A	A	A	Q	4.8	L	L	A			
19							L	L	L	(5.0) ^L	(5.1) ^L	A	A	C	C	C	C	C	C	C	C	C	C	C
20							C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21							Q	Q	Q	A	L	A	A	A	A	5.4	A	4.8	L	L	A			
22							Q	L	L	4.4	4.6	A	A	A	A	A	A	Q	L	L	Q			
23							Q	L	L	L	L	5.5	L	L	L	5.4	4.8	L	L	L	L	L	L	L
24							A	Q	Q	A	A	L	A	A	A	A	5.1	A	(5.0) ^A	L	L	L	L	L
25							Q	L	L	L	Q	5.3	5.2	5.3	A	5.4	A	(4.8) ^L	4.2	Q	Q			
26							Q	Q	L	L	5.2	5.3	5.5	5.0	5.2	5.2	5.0	4.6	L	L	L	L	L	L
27							L	L	L	L	L	5.2	L	5.2	A	5.0	5.0	L	L	L	L	L	L	L
28							Q	L	4.0 ^J	4.6	5.2 ^A	5.2	A	A	A	5.2	4.6	4.3	L	L	Q			
29							L	L	4.6	A	A	C	A	A	A	L	5.0	Q	Q	Q	Q			
30							L	Q	4.5	L	L	A	5.9	5.1	4.9	5.4	L	L	L	L	Q			
31							Q	Q	L	4.5	4.9	L	5.4	L	5.0	4.8	4.9	L	L	Q	Q			
Median Value									4.5	4.7	5.0	5.2	5.3	5.2	5.2	5.0	4.8	4.6	-					
Count								1	5	9	12	11	11	10	13	14	12	8	2					

foF1

Frequency 1.2 Mc to 18.5 Mc in 1.5 min

Manual

Y 4

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

Lat. 31° 13.5' N
Long. 130° 37.7' E

Y a m a g a w a

R'F1

Jul. 1950

135° E Mean Time

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

Steep 1.2 Mc to 18.5 Mc in 1.5 min Manual

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

IONOSPHERIC DATA

Jul. 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							2.1 ^F	C	C	C	C	C	C	C	C	C	C	C	C	A				
2							2.1	2.4 ^A	(2.9) ^A	A	A	3.9 ^J	A	3.8 ^A	A	A	A	3.2	(2.5) ^A	A				
3							A	2.8	3.1	A	3.5	A	A	3.9	3.9	3.7	3.4	3.2	2.6	B				
4							(2.2)	A	3.0	(3.0) ^A	3.6	3.7	A	A	(3.8)	A	A	3.0	2.4	(1.4) ^B				
5							A	(3.0) ^A	(3.0) ^A	A	A	A	A	4.0	A	A	A	A	2.4	(1.8) ^J				
6							2.6	2.4	3.0	(3.5) ^A	3.5	A	A	A	A	A	A	A	A	A				
7							A	A	3.4 ^F	3.8	A	A	4.0 ^J	A	4.0 ^A	3.9 ^J	3.6 ^H	A	A	A				
8							2.2	2.7	C	C	C	3.8	3.8	3.8	3.8	A	A	(3.2)	2.6	A				
9							A	A	A	3.4	A	A	3.8	3.8	3.8	A	A	A	A	A				
10							A	A	C	3.5	3.9	A	(3.9) ^A	A	3.9	3.9	3.6	A	A	(2.2) ^A				
11							A	2.8	A	A	A	A	A	A	A	A	A	A	A	A	(2.0) ^A			
12							A	2.5	A	3.8 ^A	(3.8) ^J	A	(3.6) ^A	(3.8) ^A	3.8	4.0 ^J	A	A	A	A				
13							A	(2.6) ^A	(3.2) ^A	3.4	3.4	3.6	3.9	3.9	B	B	A	3.2	(2.6) ^A	A				
14							A	A	A	A	(3.8) ^A	A	(4.2) ^J	4.0 ^J	3.8	(3.7) ^A	3.4	3.0	2.7	AF				
15							A	A	3.0	A	A	A	A	A	A	A	A	3.6	3.0	2.5 ^H	1.8			
16							2.0 ^F	C	C	C	C	C	C	C	C	C	C	C	C	C	C			
17							C	A	A	3.2	3.3	A	A	A	A	A	A	A	A	A				
18							2.4 ^J	2.8 ^J	A	(3.8) ^A	(3.8) ^A	A	A	A	A	A	A	A	3.2	2.7	A			
19							A	2.7 ^A	3.1	3.4	3.9	3.8	C	C	C	C	C	C	C	C				
20							C	C	C	C	C	C	C	C	C	C	C	C	C	C				
21							A	2.6	3.4	3.6	A	3.6 ^A	A	A	A	A	A	A	A	A				
22							1.6 ^B	A	A	3.5 ^J	A	A	A	A	A	A	A	A	A	A				
23							1.9	2.4	3.0	A	3.6	(3.6) ^A	3.7	3.6	3.9 ^A	3.4	3.5 ^A	A	AF	A				
24							A	A	(3.1) ^A	A	A	A	A	A	A	A	A	A	A	A				
25							(1.7) ^A	2.6	3.0	3.4	3.5	3.7	3.9	3.7	3.7	3.6	3.4	A	A	A				
26							B	2.4	A	A	A	A	A	A	A	A	(3.4) ^J	A	A	A				
27							(1.7) ^B	2.4 ^A	3.4	B	A	A	A	A	A	A	A	A	A	A				
28							A	A	A	3.4	3.5	A	4.0 ^A	A	A	A	A	3.0	A	A				
29							(1.8) ^A	(2.5) ^A	3.0	A	A	C	A	A	3.8	3.8 ^B	A	A	A	A				
30							B	2.6	A	A	A	A	3.6	A	A	A	A	A	A	A				
31							1.8	A	(3.0) ^A	3.4	3.6	A	B	B	3.8	3.7	3.4	A	A	A				
Median Value							2.0	2.6	3.0	3.4	3.6	3.6	3.8	3.8	3.8	3.7	3.4	3.2	2.6	(1.8)				
Count							13	17	16	16	14	8	12	9	11	12	9	9	10	5				

foE

Sweep 1.2 Mc in 1.5 min

Manual

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

IONOSPHERIC DATA

Jul. 1950

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

Sweep 1.2 Mc to 18.5 Mc in 1.5 min Manual

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

IONOSPHERIC DATA

Jul. 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	5.4	5.4	5.4	3.8	6.6	3.8	3.9	C	C	C	C	C	C	C	C	C	C	C	C	3.6	3.8	3.8	3.8	4.4
2	3.2	G	2.2	G	2.2	4.2	4.2	5.2	5.3	5.9	6.1	5.7	5.7	4.9	5.1	5.3	6.1	5.6	5.4	4.2	3.2	G	2.6	4.5
3	5.2	3.4	6.8	3.4	2.8	2.8	3.6	G	5.0	11.0	16.6	10.8	6.8	6.6	6.4	G	4.8	6.6	8.2	5.0	3.8	2.4	4.4	5.8
4	9.0	7.6	6.8	4.2	3.8	3.7	3.6	4.8	5.6	(12.1) ^B	14.4	D	14.8	13.6	7.6	14.8	4.4	4.9	6.8	5.2	4.4	2.4	3.7	3.5
5	3.8	G	2.4	3.0	G	4.2	2.9	G	5.2	7.8	8.8	5.2	6.6	7.0	7.4	10.0	7.8	6.4	4.2	4.2	5.2	7.2	5.4	7.4
6	5.8	3.8	4.0	2.6	2.6	2.4	3.2	3.5	4.1	5.4	9.2	7.6	7.6	9.6	8.8	7.4	6.8	5.0	3.8	4.4	5.4	C	4.6	5.0
7	3.8	3.6	6.2	5.0	3.4	3.8	3.0	3.8	6.8	5.0	5.8	5.4	8.6	5.0	6.8	9.2	5.4	7.4	5.4	5.2	5.4	4.2	3.8	3.7
8	3.5	G	2.4	2.0	2.8	G	G	4.2	C	C	C	7.8	7.2	5.6	7.4	5.0	5.0	5.8	10.6	5.8	10.6	10.8	5.4	7.4
9	10.6	8.8	10.4	8.4	7.0	5.4	4.4	7.2	9.4	G	6.6	5.4	15.1	7.4	9.0	13.6	8.4	8.4	11.8	7.8	4.8	5.6	3.8	3.4
10	C	C	3.1	2.9	2.7	2.6	4.6	5.1	C	9.6	6.7	5.6	7.9	6.6	G	7.2	7.8	8.6	8.0	7.4	10.4	10.2	5.6	6.4
11	5.4	3.8	2.8	2.6	2.6	2.2	3.2	G	4.0	4.9	4.6	5.6	6.2	8.2	7.5	6.6	5.1	4.7	G	3.3	3.8	4.8	3.4	3.2
12	3.8	2.4	2.5	2.4	2.4	1.4	7.1	9.2	6.2	6.8	8.8	5.8	6.4	5.8	5.6	G	5.4	5.2	4.2	4.0	3.2	2.4	(4.6) ^B	3.4
13	4.2	5.4	4.0	5.2	5.2	3.8	(2.8) ^B	5.0	5.8	7.0	6.6	5.4	5.1	5.2	6.1	4.9	5.0	4.6	3.2	3.8	3.4	5.0	4.0	4.2
14	3.8	5.2	3.8	3.6	4.4	3.4	3.8	4.2	3.8	5.0	5.0	4.4	G	G	G	4.7	(4.4) ^Y	4.7	3.9	3.8	3.3	9.6	4.4	5.7
15	7.0	5.8	5.0	5.4	4.0	2.8	2.8	4.0	5.6	6.4	6.2	9.2	14.0	6.6	5.2	5.2	5.2	5.2	4.2	3.8	5.0	9.4	5.0	6.7
16	6.7	4.4	4.6	3.8	1.8	G	C	C	C	C	C	C	C	C	C	C	C	C	C	C	5.8	6.8	3.0	5.2
17	9.0	8.0	5.0	4.2	5.0	3.4	C	4.6	D	5.8	10.6	8.9	7.5	8.3	5.4	8.0	6.1	8.8	9.2	5.0	4.8	7.8	5.6	9.4
18	5.9	5.8	5.4	5.6	4.8	3.2	3.5	4.0	5.2	5.5	7.4	6.4	13.4	7.0	10.0	9.8	7.0	7.0	G	7.2	9.4	4.8	6.4	8.0
19	6.8	3.8	2.0	2.4	5.5	5.4	3.4	4.9	5.6	5.3	8.0	7.2	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	10.0	9.4	7.8	7.2	7.2	6.6	5.4	3.9
21	3.8	5.4	4.6	3.9	3.4	2.8	4.5	3.2	5.4	9.0	7.0	9.0	12.8	9.2	7.6	11.8	8.8	4.7	5.0	6.8	8.2	7.0	8.1	10.3
22	5.6	4.8	2.6	3.0	3.8	G	2.8	3.4	3.8	G	5.2	8.4	8.9	8.4	11.1	9.4	8.4	7.6	5.8	4.7	3.8	4.2	2.6	3.2
23	3.8	3.8	3.0	3.2	2.4	2.8	3.0	4.4	9.0	9.6	5.4	5.8	4.8	(5.4) ^Y	6.7	7.2	3.8	5.6	4.5	4.7	3.8	3.4	3.8	(3.8) ^Y
24	4.8	4.0	5.0	5.8	5.5	5.9	4.9	2.8	4.0	8.8	7.4	6.8	6.8	7.6	6.8	4.4	4.8	5.4	5.4	4.8	8.7	6.4	3.6	2.2
25	2.7	G	1.4	G	1.4	2.5	2.8	G	5.2	G	4.9	6.6	4.9	6.5	7.0	6.6	5.2	3.8	3.8	3.2	3.8	G	G	G
26	G	5.4	3.8	3.6	3.0	4.0	3.8	3.8	3.8	4.8	5.3	5.0	4.9	5.5	4.8	3.8	3.8	4.4	3.9	3.1	2.4	2.6	2.7	2.2
27	2.7	2.4	2.4	2.4	3.8	2.6	3.0	3.9	G	3.6	4.4	5.4	7.0	6.6	8.0	5.8	6.6	4.6	4.0	3.4	6.8	4.2	4.4	6.8
28	3.6	5.4	8.0	7.8	8.0	2.8	3.8	5.4	5.3	4.5	4.9	4.9	6.5	7.3	6.9	5.9	5.1	G	3.9	3.6	3.6	3.3	2.6	4.4
29	3.8	3.4	6.0	5.0	4.6	4.4	4.6	5.2	7.2	8.8	8.8	C	11.2	8.4	6.2	G	4.6	4.3	4.0	3.2	2.5	2.4	4.8	3.4
30	3.9	3.4	2.6	2.6	G	G	3.2	3.8	3.8	4.6	5.4	6.4	4.4	3.8	4.7	6.4	4.8	4.2	3.8	3.4	3.1	3.8	3.8	3.8
31	4.6	3.0	5.2	2.4	2.8	4.6	2.6	5.2	5.0	4.9	4.7	4.0	G	G	4.8	5.9	3.9	4.8	4.4	4.8	5.2	5.6	6.6	7.4
Median Value	4.2	3.8	4.0	3.5	3.6	3.0	3.4	4.1	5.2	5.5	6.6	5.8	6.8	6.6	6.8	6.4	5.2	5.1	4.3	4.4	4.8	4.8	4.2	4.4
Count	29	29	30	30	30	30	29	28	26	27	27	27	27	27	27	27	28	28	28	29	30	29	30	30

fEs

Sweep 1.2-Mc to 18.5-Mc in 1.5 min

Manual

Y 8

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

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

135° E Mean Time

(M3000)F2

Jul. 1950

IONOSPHERIC DATA

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.5 ^H	2.6	2.8 ^F	2.6	2.8 ^F	3.0	2.7	C	C	2.8	2.8	2.7	2.6	2.7	2.7	2.6	2.8	2.9	C	2.9	2.8	2.8	2.9	2.7
2	2.7	2.7	2.9	2.9	2.8 ^H	2.8	2.9 ^F	3.0	2.9	2.8	2.8	2.7	2.6	2.7	2.7	2.6	2.8	2.9	2.8	3.0	2.9	2.9	2.8 ^V	2.6
3	(2.6) ^F	2.6 ^H	2.6	2.8	2.8	2.8	3.3	3.2	3.4	A	2.8	2.9	2.7	2.6	2.7	2.7	2.8	2.8	3.0 ^H	2.9	2.9	2.7 ^H	2.6	2.7
4	(2.7) ^F	(2.8) ^F	(2.9) ^F	3.2	3.1	3.2 ^F	3.1	3.2	3.0	A	A	A	A	A	3.0	A	2.8	2.7	2.8	3.0	3.2 ^H	2.6 ^H	2.6	(2.7) ^F
5	(2.5) ^F	(2.7) ^F	2.9	3.1	2.8	3.0	3.2	3.3	3.1	3.3	B	2.7	3.2	2.5	2.7	3.0	3.1	2.9	2.9	3.0	3.0	2.7 ^H	2.5	2.6
6	2.7 ^H	2.8 ^Z	2.9	3.1	2.8 ^P	2.6	2.8	3.5	3.5	3.0	A	2.8	2.6	2.6	2.7	2.9	2.8	2.8	3.0	3.0	(2.8) ^H	(2.8) ^S	2.8	(2.6) ^V
7	(2.6) ^F	(2.6) ^F	2.9 ^F	3.0 ^F	2.8 ^F	2.9 ^F	3.3	3.1	3.2	3.1	2.9	2.7	2.7	2.6	2.7	2.6	2.6	2.9	3.2	3.1	3.1	3.0	2.9	3.0
8	3.4	2.7	3.0	3.0	2.8	2.6	2.8 ^F	2.8	C	C	C	2.8	2.6	3.0	2.9	2.8	2.8	(2.8) ^F	2.9	2.9	(2.8) ^F	(2.8) ^F	2.8	F
9	F	F	F	F	F	F	F	3.2	F	3.1 ^F	3.1	2.7	A	2.6	2.6	A	3.0	3.1	A	2.8	(2.8) ^C	2.7	2.7	2.8
10	C	C	3.0	3.1	3.1	3.4	3.1	3.0	(3.0) ^C	3.1 ^H	3.0	3.0	2.8	2.8	2.7	2.7	2.7	2.8	2.9	3.0	A	A	2.6	2.7
11	2.5 ^F	2.8	2.9	2.9	2.8	2.7	2.8	2.7	3.2	2.4 ^P	2.6	2.5 ^P	2.7	2.9	2.8	2.8	2.8	3.0	3.1	3.2	(2.8) ⁷	2.6	2.6	F
12	2.7	(2.6) ^F	2.6	2.6	3.0	2.7	(2.7) ^F	3.2	2.9	2.9	2.8	2.8	2.7	2.9	2.8	2.8	2.9	2.8	3.0	3.0	2.9	2.9	2.7	2.9
13	2.9	2.7	2.9	2.9	2.8 ^K	3.0	3.3	2.8 ^K	2.5 ^K	2.1 ^K	2.9 ^K	3.0 ^K	2.5 ^K	2.7	2.8 ^K	3.0 ^K	3.0 ^K	3.1	3.3 ^H	3.0	2.8	2.9	2.6 ^H	2.7
14	2.7 ^H	2.6	3.0	2.7	2.9 ^K	2.6	2.6 ^K	2.8	3.0	3.2	2.9	2.7	3.0	2.6	2.8	2.8	3.0	2.8	3.1	3.2	3.0	A	2.6 ^V	2.5 ^V
15	2.6 ^V	2.1 ^F	2.7	3.0	3.1	3.0	2.9	3.1	2.6 ^H	2.7	2.7	2.8	A	2.6	2.6	2.7	2.8	3.0	3.0	2.9	2.8	2.7 ^F	(2.7) ^F	2.8
16	2.7 ^F	(2.4) ^F	(2.5) ^F	F	2.4 ^F	(3.1) ^F	(2.7) ^F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	2.9	2.8 ^F	3.1 ^F
17	2.5 ^F	2.5 ^F	(2.6) ^F	2.5 ^F	(2.6) ^F	(2.9) ^F	(3.0) ^F	3.1	A	2.9	A	2.6	2.6	2.8	2.9	2.8	2.9	2.8	3.0	3.1	2.9	(2.7) ^P	F	(2.6) ^F
18	(2.7) ^F	(2.7) ^F	(2.8) ^F	(2.7) ^F	3.0	2.9	3.2	3.0	3.0	2.9	2.9	3.3	A	2.8	2.8	A	2.7	2.8	3.1	3.0	A	2.6	(2.6) ^F	F
19	(2.7) ^F	F	(3.0) ^F	(2.8) ^H	F	2.7 ^F	3.2 ^V	3.2 ^V	3.0	3.1	2.7	2.8	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	2.7	2.7	2.9	2.9	2.8	2.8	2.8	2.8
21	3.0	2.7	2.7	3.0	2.9 ^H	(2.9) ^V	3.3	3.1	3.2	2.9	2.9	2.7	A	2.5	2.5	2.7	2.8	2.8	2.9	3.2	3.2	2.7	2.6	F
22	F	F	F	F	F	(2.7) ^F	3.1	3.2	3.0	2.8	2.6	2.7	2.5	2.6	A	A	2.8	2.9	3.0	3.2	2.8	2.6	3.0	2.8
23	2.8	2.8	2.9	2.7	2.7	2.8 ^F	3.1	2.9	2.9	3.2	3.0	2.8	2.9	2.8	2.9	2.8	2.9	2.8	2.8	3.1	3.1	2.7 ^H	2.4 ^F	(2.5) ^F
24	2.6 ^V	(2.8) ^P	(2.9) ^F	B	B	B	2.9	3.0	2.8	3.1	2.8 ^Z	2.8	3.6	3.1	2.7	2.6	2.6	2.7	3.0	3.3	2.8	2.6	2.6	2.4 ^H
25	(2.8) ^H	F	F	2.9	3.0	(2.8) ^F	3.3	3.1	3.3	3.0 ^K	2.4 ^K	2.8	2.6	2.8	2.7	2.8 ^P	2.8	3.0	3.0	2.9	2.8	2.7	2.6	2.5
26	2.5	(2.5) ^F	2.5	2.8	2.7	2.5 ^K	2.8 ^K	2.7	2.8	2.9	3.0	3.1	2.8	3.0	3.0	3.2	3.0	3.0	3.0	3.0	3.1	3.2	3.2	3.2
27	2.9	2.8	3.1	2.8	2.9	2.8	2.9	3.0	B	(3.1)	2.7	2.6	2.9	2.8	2.9	3.2	3.4	3.2	2.9	2.9	3.0	3.0	2.7	2.8
28	F ^H	2.3 ^F	3.1	(2.5) ^F	(2.6) ^F	2.6 ^F	3.0	3.0	3.4	3.1	2.8	2.6	2.6	2.6	2.6	2.5	2.5	3.0	3.1	3.1	2.7	2.7	2.7	2.8
29	(2.6) ^F	2.6 ^F	2.7 ^F	2.6 ^F	2.6 ^F	2.8 ^F	3.0 ^F	3.3	3.4	A	A	C	2.8	A	2.8	2.7	2.8	2.9	3.0	3.1	3.1	3.2	2.6	2.8
30	3.0	2.6 ^F	(2.6) ^F	(2.5) ^F	F	3.0	3.0	3.2	3.2	3.2	3.3	2.7	2.5	3.6	3.4	3.5	3.5	3.3	3.2	3.0	2.9	2.7	2.7	2.5 ^F
31	2.7 ^F	B	2.9	2.8 ^H	2.8 ^H	3.0	3.0	3.2	3.3	3.3	3.1	2.7	2.7	2.6	2.7	2.7	2.9	2.9	3.2	3.1	2.7	2.8	2.8	2.7
Median Value	2.7	2.6	2.9	2.8	2.8	3.0	3.1	3.0	3.0	3.0	2.8	2.8	2.7	2.7	2.8	2.8	2.8	2.9	3.0	3.0	2.9	2.7	2.7	2.7
Count	26	24	26	26	27	29	28	29	24	24	22	26	22	25	26	23	28	28	27	29	28	28	28	26

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

IONOSPHERIC DATA

Jul. 1950

fminF

135° E Mean Time

Yamagawa

Lat. 31° 13.5' 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	2.0	2.1	C	C	C	C	C	C	C	C	C	C	C	C	2.0	1.8	1.8	A	E
2	1.4	1.4	E	E	E	1.8	2.1	(3.2) ^A	2.9	3.9	A	4.4 ^A	A	4.5 ^A	4.4 ^A	A	A	3.6 ^A	A	1.8	A	1.5	1.8	1.3
3	A	A	A	A	A	E	N	2.8	A	A	A	A	4.3	A	4.3	A	4.1	A	A	A	A	1.6	A	A
4	A	A	A	A	A	A	A	2.4	2.6	3.5	A	A	A	A	A	A	A	A	A	3.1	A	1.6	A	A
5	A	1.8	1.4	1.4	1.4	2.0	3.0	3.0	A	A	4.2	A	A	A	A	4.2	4.2	A	3.4	2.2	A	A	A	A
6	A	1.4	E	1.8 ^A	1.6	1.5	2.6	2.8	3.3	3.9	A	4.4 ^A	A	A	A	A	A	A	A	2.5	2.6	A	A	A
7	1.4	1.6	A	1.8	1.5	1.5	2.4	A	3.4	4.2	4.2	4.4	A	4.3	4.2	A	4.2	A	A	A	A	A	A	A
8	A	1.5	1.5	1.5	1.4	1.4	2.2	2.9	C	C	C	A	A	A	A	A	A	3.6	A	A	A	A	1.4	A
9	A	A	A	A	A	A	2.3	A	A	3.7	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10	C	C	A	1.7	1.6	A	A	2.7	(3.6) ^C	4.4	4.5	4.9	A	4.4	4.5	A	A	A	A	A	A	A	A	A
11	A	A	A	E	E	E	N	2.9	3.9	A	4.2	A	A	A	A	A	4.2	A	3.0	2.7	2.0	A	1.8	3.2
12	A	E	A	A	A	E	E	A	A	A	A	4.2	A	4.6	A	A	4.2	A	3.2	A	A	A	A	A
13	A	A	A	A	A	A	A	2.0	A	A	4.4	4.2	4.6	4.3	4.2	3.8	3.6	A	2.6	2.2	A	A	A	A
14	A	A	A	E	E	1.6	N	A	2.8	3.8	3.8	A	4.6 ^A	4.3 ^A	4.3	4.4	A	3.3	2.9	2.3	E	A	1.7	
15	1.6	A	A	A	A	1.6	A	A	3.2	A	A	A	A	A	6.6	A	A	A	A	A	A	1.8	A	A
16	A	1.7	A	A	A	A	2.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	A	A
17	A	A	A	1.6	1.6	1.6	C	A	A	A	A	A	A	A	4.4	A	A	A	A	A	A	A	A	A
18	A	A	A	A	1.8	A	2.7	3.2	3.4	3.8	A	4.2	A	A	A	A	A	3.4	2.8	A	A	A	A	A
19	A	1.8	1.8	A	1.8	A	2.2	3.0	A	4.3	4.5	A	A	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	A	A	A	1.8	1.6	1.5	2.0	3.1	3.6	A	A	A	A	A	4.5 ^A	A	A	A	A	A	A	A	A	A
22	A	A	1.6	A	1.6	E	1.8	2.7	3.3	4.1	4.1	A	A	A	A	A	A	A	A	A	A	A	A	A
23	1.6	A	1.8	A	A	1.4	1.9	2.8	A	A	4.3	4.3	4.3	4.3	A	A	3.5	3.2	2.7	A	A	2.0	2.2	A
24	A	A	A	A	A	A	A	A	2.6	A	A	2.2	A	A	A	4.2	A	A	A	A	5.6	A	A	1.8
25	E	E	E	E	E	E	E	2.7	3.2	3.4	4.3	4.3	4.3	A	A	A	4.3	3.6	2.8	2.4	A	1.6	E	E
26	E	A	A	A	A	A	2.2	2.6	3.4	A	4.4	4.4	4.4	A	A	4.7	4.3	3.3	3.3	2.5	1.8	1.8	1.7	1.8
27	A	1.7	E	E	1.3	1.8	2.1	2.7	4.4	4.4	3.8	4.2	4.4	4.2	A	A	4.0	3.2	2.8	2.0	A	A	1.8	1.9
28	A	1.6	A	A	A	A	A	3.2	3.9	4.3	A	A	A	A	A	A	3.2	3.2	2.8	2.0	A	A	1.8	1.9
29	A	1.6	A	A	A	A	1.8	2.8	3.4	A	A	A	A	A	A	4.2	3.4	A	A	A	A	1.8	A	A
30	A	A	1.8	E	E	E	1.4	N	3.3	A	A	A	3.8	3.8	4.2	A	4.2	3.4	2.4	2.2	1.7	A	1.6	A
31	A	A	1.6	E	1.4	1.5	2.4	A	3.4	4.2	4.2	4.2	4.2	4.3	4.3	4.2	4.2	3.4	3.4	A	A	A	A	A
Median Value	1.4	1.6	1.5	E	1.4	1.5	2.2	2.8	3.4	4.1	4.2	4.2	4.4	4.3	4.3	4.2	4.2	3.4	2.8	2.2	—	1.8	1.6	1.8
Count	6	11	11	13	14	19	22	19	19	13	11	14	8	10	11	7	12	11	13	12	4	9	9	8

fminF

Swamp 1.2 Mc to 18.5 Mc in 1.5 min

Manual

Y 10

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

IONOSPHERIC DATA

Jul. 1950

f_{min}E

135° E Mean Time Yamagawa Lat. 31° 12.6' N Long. 130° 37.7' E

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

Manual

Sweep 1.2 Mc to 18.5 Mc in 1.5 min

IONOSPHERIC DATA IN JAPAN FOR JULY 1950

電波觀測報告 第2卷 第7號

1950年8月25日 印刷

1950年8月30日 發行

(不許複製非売品)

編集兼
發行人

菅野菊雄

東京都北多摩郡小金井町小金井新一之久保573

發行所

電波監理委員會 中央電波觀測所

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電話 國分寺 138, 139, 151

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