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# IONOSPHERIC DATA IN JAPAN

FOR APRIL 1950

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(DENPACHO)

TOKYO, JAPAN

RADIO REGULATORY AGENCY

(DENPACHO)

TOKYO, JAPAN

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## FOREWORD

Since November 1949, the observation of ionosphere and most part of the research related to the propagation of radio wave excepting those parts directly connected with the Telecommunication Service were transferred to the jurisdiction of the Radio Regulatory Agency from that of the Electrical Communication Laboratory.

Considering the role played by the reports related to the results of the ionospheric observations hitherto prepared by the Laboratory to the world scientific circles, we would like to continue the issue of this pamphlet.

Taking this happy occasion when Japan has resumed the membership in the International Telecommunication Conference, we wish to make every efforts in contributing to the improvement and development of radiocommunications.

We shall be very much obliged to receive the similar publications from the organizations concerned with radio propagation in the world.

April 1950

Tsuyoshi Amishima  
Radio Regulatory Commissioner

## SITE OF THE IONOSPHERIC STATIONS

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-cho, 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 both  $f_{\min} E$  and  $f_{\min} F$ , other symbols are used in accordance with recommendation of C.C.I.R.  $f_{\min} E$  and  $f_{\min} F$  in the table are defined as follows:

- Z<sub>d</sub>. 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.

Radio Regulatory Agency (Denpacho)

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

IONOSPHERIC DATA

Lat. 45° 28.8' N  
Long. 141° 41.1' E

Wakkanai

135° E Mean Time

f<sub>o</sub>F<sub>2</sub>

Apr. 1950

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	6.0	5.7	5.1	5.2	5.4	5.8	7.6	8.6	8.6 <sup>T</sup>	9.4	11.5 <sup>H</sup>	11.7	11.0	11.2	10.0	(9.9) <sup>S</sup>	[10.1] <sup>S</sup>	10.3	9.2	7.6	7.3	(7.3) <sup>T</sup>	7.2	6.8	
2	6.8	7.2	6.6	5.6	5.3	5.6	[8.4] <sup>T</sup>	9.5 <sup>T</sup>	11.1	[11.3] <sup>C</sup>	11.5	11.4	11.1	10.7	10.4	10.7	[9.0] <sup>S</sup>	10.7	7.2	(7.8) <sup>T</sup>	(7.5) <sup>S</sup>	7.4	6.8	7.0	
3	6.7	6.9	6.8	6.2	5.4 <sup>P</sup>	6.2	7.9	10.1	10.9	11.6	12.5	12.0	12.2	11.8	11.2	10.6	9.3 <sup>S</sup>	10.7 <sup>P</sup>	9.3 <sup>S</sup>	7.9 <sup>P</sup>	7.9	7.2	7.0	7.5	
4	6.9 <sup>P</sup>	6.2	6.0	5.6	5.5	5.9	5.8	6.5	7.2	7.6	7.9	9.6	[9.4] <sup>C</sup>	9.2	9.8 <sup>T</sup>	9.3	9.2	8.9	8.8	7.1 <sup>S</sup>	7.1 <sup>S</sup>	6.2	6.1	6.0	
5	5.8 <sup>V</sup>	5.9 <sup>V</sup>	5.4 <sup>F</sup>	5.4 <sup>F</sup>	4.1	4.4	5.4	5.9 <sup>K</sup>	6.8 <sup>K</sup>	7.5 <sup>P</sup>	6.8 <sup>K</sup>	8.8	8.4	8.0	8.4	8.2	8.5	8.6	5	7.2	6.0 <sup>F</sup>	5.7 <sup>H</sup>	6.4 <sup>H</sup>	6.0	
6	6.2	5.8	5.2	4.4	4.3	4.8	5.8	[6.7] <sup>B</sup>	7.6 <sup>T</sup>	8.6	9.3	9.7	[10.1] <sup>S</sup>	10.5 <sup>S</sup>	10.8 <sup>T</sup>	10.8 <sup>T</sup>	9.3 <sup>T</sup>	8.5	5	7.3	7.1	6.5	5.5 <sup>F</sup>	5.4 <sup>F</sup>	
7	5.4 <sup>F</sup>	5.0 <sup>F</sup>	5.4 <sup>F</sup>	5.7 <sup>F</sup>	5.2 <sup>Z</sup>	5.9	7.1	8.0	9.1 <sup>S</sup>	10.2 <sup>B</sup>	(10.6) <sup>B</sup>	11.1	[11.3] <sup>C</sup>	11.2	(11.4) <sup>F</sup>	11.2	10.5	10.3	9.7	(8.5) <sup>P</sup>	7.6	8.2	(8.3) <sup>S</sup>	(7.0) <sup>S</sup>	
8	6.5 <sup>H</sup>	6.6	7.0	6.4	6.4	6.7	8.4	10.0	C	C	C	C	C	C	C	C	C	C	C	8.6	C	C	C	C	
9	7.0	6.5	6.6	6.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	8.6	C	C	C	C	
10	C	C	C	C	C	6.0	6.6	7.7	8.7	9.5	10.4	10.7	10.6	10.3	10.1	9.3 <sup>S</sup>	9.2	9.2	(8.7) <sup>S</sup>	7.8 <sup>H</sup>	7.6 <sup>S</sup>	6.7	6.4	6.4	
11	6.5 <sup>F</sup>	6.3	6.2 <sup>F</sup>	6.0	5.9	6.6	7.5	(9.7) <sup>P</sup>	10.0	11.1	11.4 <sup>F</sup>	(11.0) <sup>P</sup>	11.3	11.4	10.9	11.1	(10.7) <sup>S</sup>	5	SF	S	S	S	6.7 <sup>P</sup>	6.5	
12	5.4	6.4 <sup>H</sup>	6.4	6.1	5.9	7.8	9.5	B	9.6	11.0 <sup>T</sup>	10.2	[10.8] <sup>T</sup>	11.3	11.5	11.7	10.8	11.2	(11.0) <sup>S</sup>	11.1 <sup>H</sup>	(10.3) <sup>S</sup>	S	6.4	6.3	6.3	
13	(7.0) <sup>F</sup>	(7.2) <sup>P</sup>	6.0 <sup>P</sup>	6.2	5.9 <sup>F</sup>	6.2	8.8	10.0 <sup>H</sup>	10.9 <sup>H</sup>	11.5 <sup>H</sup>	11.3 <sup>H</sup>	11.9	11.6 <sup>F</sup>	(11.8) <sup>S</sup>	11.2 <sup>H</sup>	(11.0) <sup>S</sup>	11.0	(10.10) <sup>S</sup>	9.5	9.2	8.5	7.9	6.9 <sup>H</sup>	6.7 <sup>H</sup>	
14	6.6 <sup>H</sup>	6.5	6.3	6.3 <sup>Z</sup>	6.2	6.2	8.7	8.5	8.4	9.0	(9.5) <sup>T</sup>	10.8	10.8	11.2 <sup>P</sup>	10.7	9.8	10.4	9.4	9.4 <sup>T</sup>	8.4 <sup>T</sup>	(8.3) <sup>P</sup>	7.8	6.5	6.8	
15	6.6	6.6	6.6	6.4 <sup>H</sup>	6.2 <sup>H</sup>	7.2	8.6	9.1	10.0	10.1	10.4	10.8	11.3	11.3	10.9	10.2	10.9	10.4	11.2	9.5 <sup>S</sup>	(8.7) <sup>S</sup>	7.9	7.0	7.2	
16	6.7 <sup>H</sup>	6.7	6.8	6.5	6.7	7.5	9.0	9.8	10.6	10.5 <sup>P</sup>	10.6	10.6	10.6 <sup>H</sup>	10.8 <sup>H</sup>	11.1	11.6	11.2	10.4	10.3	8.4 <sup>F</sup>	(8.1) <sup>P</sup>	7.4 <sup>F</sup>	6.6 <sup>H</sup>	(5.9) <sup>P</sup>	
17	6.6 <sup>P</sup>	6.4	6.5	6.5	5.9	6.8	8.5	9.1	9.7	11.1	9.6	9.2	11.2	11.8	11.5	9.7	9.3	9.8 <sup>P</sup>	8.9	8.4 <sup>S</sup>	7.5 <sup>H</sup>	6.9	7.0	6.9	
18	7.1	6.9	7.0	5.7	5.6	6.2	7.7	8.0	8.9	8.3	8.8	10.0	10.6 <sup>H</sup>	10.6	10.7	11.8	10.8	(9.4) <sup>S</sup>	8.4 <sup>S</sup>	8.4 <sup>S</sup>	7.5 <sup>H</sup>	6.9	7.0	C	
19	C	C	C	6.4	6.4	6.4	6.5	7.4 <sup>H</sup>	6.8 <sup>K</sup>	6.9 <sup>K</sup>	8.0 <sup>K</sup>	8.8 <sup>H</sup>	9.8	9.4	10.9	10.4	9.4	5	5	8.4 <sup>S</sup>	7.5 <sup>H</sup>	6.9	C	C	
20	5.8 <sup>H</sup>	5.7	5.8 <sup>F</sup>	5.5	5.8 <sup>H</sup>	6.4	8.8	8.8	8.9	10.1	11.3	11.7	[11.8] <sup>C</sup>	11.8	10.9	10.2	9.5	9.8	(9.7) <sup>S</sup>	[8.4] <sup>S</sup>	7.7 <sup>T</sup>	6.5 <sup>T</sup>	6.7 <sup>T</sup>	7.5	
21	7.8	7.5	6.7	6.2	5.7	5.2	5.8	6.5 <sup>H</sup>	7.2 <sup>K</sup>	7.5 <sup>V</sup>	7.5 <sup>K</sup>	7.4 <sup>K</sup>	8.1	8.1	8.0	7.9	[7.7] <sup>S</sup>	7.5	7.3	7.4	7.0	6.5	6.3	6.6 <sup>H</sup>	
22	6.4	6.4	6.5	6.6	5.6	7.0	7.8	8.2	9.0	9.9	10.6	10.2	11.0	11.7	11.1	11.6 <sup>P</sup>	9.8	9.6	(9.5) <sup>S</sup>	(8.9) <sup>S</sup>	7.6	7.1	7.1	7.1	
23	7.0	7.1 <sup>H</sup>	7.0 <sup>H</sup>	6.9	6.2	7.0	8.4	9.3 <sup>P</sup>	C	C	C	C	C	C	C	C	(9.3) <sup>S</sup>	(9.3) <sup>S</sup>	8.8 <sup>H</sup>	B	C	(7.3) <sup>P</sup>			
24	6.9 <sup>P</sup>	6.8	6.6	6.7 <sup>Z</sup>	5.8	6.1	7.4	7.4	7.5	7.6	9.0 <sup>H</sup>	9.4 <sup>H</sup>	10.0	10.4	11.0	10.3	10.1	10.9	(9.5) <sup>T</sup>	7.6	(7.6) <sup>H</sup>	7.0	6.6	6.6	
25	6.4	6.5	6.6	5.9	4.6	5.3	6.7	6.2 <sup>F</sup>	6.5 <sup>Z</sup>	7.0	7.3	7.7	8.8	8.9	9.2	8.8	8.9	[8.6] <sup>S</sup>	(8.3) <sup>T</sup>	8.4	8.3	7.8 <sup>H</sup>	[7.2] <sup>F</sup>	7.3	
26	6.8	6.3 <sup>H</sup>	6.2	6.2	6.3	7.2	6.3 <sup>P</sup>	7.6	7.4	7.6	7.8 <sup>H</sup>	9.4 <sup>H</sup>	9.2	9.3	9.5	(9.9) <sup>T</sup>	(9.8) <sup>F</sup>	9.2	9.0 <sup>F</sup>	8.5 <sup>S</sup>	(8.0) <sup>S</sup>	7.4 <sup>H</sup>	[7.4] <sup>F</sup>	6.7	
27	7.2	[7.1] <sup>C</sup>	7.0 <sup>P</sup>	6.6	6.3	7.1	7.8 <sup>H</sup>	8.4	9.0	9.4	9.5	9.5	9.5	9.5	10.1	11.1	11.0	[9.6] <sup>S</sup>	8.2 <sup>S</sup>	8.1	7.7	8.0	7.6	7.8	
28	7.7	7.6 <sup>H</sup>	7.6 <sup>H</sup>	7.3	7.2	7.5	8.2	8.3	8.6	9.0 <sup>S</sup>	8.9	[9.4] <sup>C</sup>	9.9 <sup>H</sup>	10.0	11.0 <sup>H</sup>	10.8 <sup>H</sup>	(8.9) <sup>S</sup>	(8.4) <sup>T</sup>	8.1	7.2	7.2	7.0 <sup>P</sup>	6.4	8.0 <sup>H</sup>	
29	7.5	7.0	6.9	6.4	5.4	5.3	5.9 <sup>K</sup>	5.9 <sup>K</sup>	6.8 <sup>K</sup>	7.3 <sup>K</sup>	7.6 <sup>K</sup>	8.1 <sup>K</sup>	8.0 <sup>K</sup>	8.1 <sup>K</sup>	7.8	7.8	7.8	7.7	7.3	6.7	6.7	6.9	6.8	6.8	
30	6.7	6.4	6.3	6.0	5.9	6.4	6.9 <sup>H</sup>	6.9	7.9	8.8	9.7	10.3 <sup>H</sup>	9.6	(10.0) <sup>P</sup>	(9.5) <sup>T</sup>	9.7 <sup>F</sup>	9.8 <sup>F</sup>	8.9 <sup>S</sup>	(8.0) <sup>F</sup>	(7.7) <sup>S</sup>	(7.2) <sup>S</sup>	6.7 <sup>H</sup>	7.0 <sup>H</sup>	7.0 <sup>H</sup>	
31																									
Median Value	6.7	6.5	6.6	6.2	5.8	6.3	7.6	8.2	8.8	9.4	10.2	10.6	10.6	10.8	10.2	10.0	9.5	9.0	8.1	7.5	7.2	6.7	6.7	6.8	6.8
Count	28	28	28	28	29	30	30	29	28	28	28	28	28	28	28	28	28	26	25	29	27	27	27	28	28

Steep 1.0 Mc to 4.0 Mc in 1.5 min

Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 45° 23.6' N  
Long. 141° 41.1' E

Apr. 1950

hpF2

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	340	410	440	480	470	420	340	330	(310) <sup>F</sup>	310	370 <sup>H</sup>	360	370	330	320	(300) <sup>S</sup>	(320) <sup>S</sup>	340	330	340	360	(430) <sup>F</sup>	380	360	
2	390	390	350	350	410	380	330	(320) <sup>C</sup>	(300) <sup>F</sup>	(330) <sup>B</sup>	(340) <sup>C</sup>	350	350	(330) <sup>B</sup>	320	300	310	(300) <sup>S</sup>	290	(290) <sup>H</sup>	(390) <sup>S</sup>	400	360	380	
3	400	390	400	420	450	410	380	320	330	320	330	340	390	330	350	340	340 <sup>S</sup>	370 <sup>F</sup>	310 <sup>S</sup>	370 <sup>F</sup>	370	400	370	450	
4	390 <sup>F</sup>	420	410	460	440	440	300	340	330	330	350	350	(340) <sup>C</sup>	330	(330) <sup>F</sup>	290	290	330	330	300 <sup>S</sup>	290 <sup>S</sup>	360	410	430	
5	400 <sup>V</sup>	440 <sup>V</sup>	380 <sup>V</sup>	430 <sup>F</sup>	420 <sup>F</sup>	380	300	320	320	400	390	360	320	320	330	330	320	310	310 <sup>S</sup>	390	400	440 <sup>H</sup>	490 <sup>H</sup>	530	
6	440	360	440	460	540	540	480	340 <sup>K</sup>	450 <sup>K</sup>	380 <sup>F</sup>	470 <sup>K</sup>	390	400	360	370	400	390	320	S	300	360 <sup>F</sup>	(430) <sup>F</sup>	(450) <sup>F</sup>		
7	400 <sup>F</sup>	380 <sup>F</sup>	390 <sup>F</sup>	340	390	370	B	(300) <sup>F</sup>	310	280	310	320	(320) <sup>B</sup>	320 <sup>B</sup>	340 <sup>F</sup>	(320) <sup>F</sup>	(300) <sup>F</sup>	S	S	310	370	350	400	430 <sup>H</sup>	
8	440 <sup>H</sup>	370	340	380 <sup>F</sup>	400 <sup>H</sup>	310	270	290	320 <sup>S</sup>	300 <sup>B</sup>	300	300	310	300	(300) <sup>F</sup>	330	300	300	310	(320) <sup>F</sup>	370	330	360 <sup>S</sup>	(360) <sup>S</sup>	
9	360	380	400	410	370	340	290	300	C	C	C	C	C	C	C	C	C	C	C	(330) <sup>B</sup>	C	C	C	C	
10	C	C	C	C	C	320	290	310	290	340	(330) <sup>B</sup>	320	340	(350) <sup>B</sup>	330	300 <sup>S</sup>	300	340	(300) <sup>S</sup>	(320) <sup>H</sup>	340 <sup>H</sup>	370 <sup>S</sup>	340	400	
11	390 <sup>F</sup>	390	340 <sup>F</sup>	390	340	320	300	(290) <sup>F</sup>	300	310	320 <sup>F</sup>	(330) <sup>F</sup>	340	340	350	330	(320) <sup>F</sup>	S	S	S	S	S	350 <sup>F</sup>	380	
12	330	410 <sup>H</sup>	340	380	360	310	290	B	(280) <sup>F</sup>	310	(320) <sup>B</sup>	340	340	(360) <sup>B</sup>	330	310	310	(300) <sup>S</sup>	290 <sup>H</sup>	(310) <sup>P</sup>	S	320	350	350	
13	(380) <sup>F</sup>	(390) <sup>F</sup>	310 <sup>F</sup>	320	340 <sup>F</sup>	300	260	(300) <sup>H</sup>	270 <sup>H</sup>	320 <sup>H</sup>	390 <sup>H</sup>	370	(370) <sup>S</sup>	(380) <sup>S</sup>	400 <sup>H</sup>	(380) <sup>B</sup>	360	(340) <sup>S</sup>	330	350	380	360	400 <sup>H</sup>	430 <sup>H</sup>	
14	430 <sup>H</sup>	420	430	460 <sup>H</sup>	420	410	330	340	340	370	(350) <sup>F</sup>	410	360	370 <sup>F</sup>	350	(320) <sup>B</sup>	350	330	(340) <sup>F</sup>	(350) <sup>F</sup>	(330) <sup>F</sup>	340	340	340	
15	370	430	420	420 <sup>H</sup>	420 <sup>H</sup>	330	340	330	350	340	310	320	380	360	310	330	300	310	330	310 <sup>F</sup>	(320) <sup>S</sup>	330	350	350	
16	410 <sup>H</sup>	460 <sup>H</sup>	400	410	390	340	380	360	370	370 <sup>P</sup>	330	330	380 <sup>H</sup>	380 <sup>H</sup>	440	340	350	330	330	320 <sup>F</sup>	(330) <sup>F</sup>	360 <sup>P</sup>	350 <sup>H</sup>	(380) <sup>F</sup>	
17	370 <sup>F</sup>	400	410	420	360	330	320	330	320	300	280	290	370	330	330	320	340	350 <sup>P</sup>	330	340	370	400	400	450	
18	420	430	420	390	440	350	280	330	300	280	310	340	320	320	320	320	300	(300) <sup>S</sup>	(320) <sup>S</sup>	330	360 <sup>H</sup>	390	C	C	
19	C	C	C	340	340	330	320	390 <sup>S</sup>	440 <sup>H</sup>	G <sup>K</sup>	350 <sup>X</sup>	360 <sup>H</sup>	410	330	390	340	320	S	S	310	360	(410) <sup>H</sup>	380	380	
20	460 <sup>H</sup>	500	540 <sup>F</sup>	460	420 <sup>H</sup>	380	320	320	340	370	380	380	(380) <sup>F</sup>	390	410	360	310	320	(320) <sup>F</sup>	(310) <sup>F</sup>	(300) <sup>F</sup>	(330) <sup>F</sup>	(350) <sup>F</sup>	390	
21	360	350	340	360	340	400	320	BH <sup>K</sup>	310 <sup>K</sup>	410 <sup>V</sup>	390 <sup>K</sup>	400 <sup>K</sup>	370	360	330	320	(320) <sup>F</sup>	330	340	310	370	400	400	410 <sup>H</sup>	
22	410	420	390	350	360	340	280	300	350	320	320	310	350	350	340	350	320 <sup>P</sup>	310	320	(350) <sup>S</sup>	(370) <sup>H</sup>	340	370	430	
23	430	430 <sup>H</sup>	400 <sup>H</sup>	400	360	360	310	300 <sup>F</sup>	C	C	C	C	C	C	C	350	(330) <sup>S</sup>	(330) <sup>S</sup>	(340) <sup>H</sup>	(340) <sup>H</sup>	360 <sup>H</sup>	B	C	(440) <sup>F</sup>	
24	400 <sup>F</sup>	460	440	340 <sup>F</sup>	380	400	300	340	320	370	390 <sup>H</sup>	320	(370) <sup>F</sup>	370	370	370	350	320	(330) <sup>P</sup>	350	(390) <sup>S</sup>	410 <sup>H</sup>	(420) <sup>B</sup>	430	
25	420	440	410	470	470	410	400	360 <sup>P</sup>	(340) <sup>S</sup>	340	330	400	330	360	350	340	330	(350) <sup>B</sup>	(360) <sup>F</sup>	350	400	380 <sup>H</sup>	(400) <sup>C</sup>	(410) <sup>J</sup>	
26	450	400 <sup>H</sup>	430	420	430	370	(350) <sup>S</sup>	320	300	340	430 <sup>H</sup>	430 <sup>H</sup>	360	340	320	(330) <sup>F</sup>	(330) <sup>F</sup>	320	310 <sup>P</sup>	310 <sup>S</sup>	(330) <sup>S</sup>	340 <sup>F</sup>	(360) <sup>F</sup>	380	
27	390	(400) <sup>C</sup>	400 <sup>F</sup>	390	350	320	310 <sup>H</sup>	300	310	350	340	330	330	360	360	370	340	(340) <sup>S</sup>	340 <sup>S</sup>	330	370	370	360	380	
28	390	430 <sup>H</sup>	430 <sup>H</sup>	400	400	340	310	340	350	370 <sup>S</sup>	370 <sup>S</sup>	380 <sup>C</sup>	380 <sup>H</sup>	330	330 <sup>H</sup>	(280) <sup>S</sup>	(350) <sup>F</sup>	(350) <sup>F</sup>	340	350	380	(370) <sup>F</sup>	380	460 <sup>H</sup>	
29	360	450	500	500	310	410	470 <sup>K</sup>	G <sup>K</sup>	G <sup>K</sup>	400 <sup>K</sup>	420 <sup>K</sup>	410 <sup>K</sup>	400 <sup>K</sup>	400 <sup>K</sup>	400 <sup>K</sup>	400 <sup>K</sup>	390	370	360	420	450	460	460	490	
30	480	520	480	440	450	380	350 <sup>H</sup>	330	330	320	330	360 <sup>H</sup>	330	(360) <sup>F</sup>	(350) <sup>F</sup>	370 <sup>F</sup>	310 <sup>F</sup>	300 <sup>S</sup>	(330) <sup>F</sup>	(310) <sup>F</sup>	(340) <sup>S</sup>	(320) <sup>H</sup>	430 <sup>H</sup>	420 <sup>H</sup>	
31																									
Month Value	400	420	400	410	400	360	320	320	320	340	340	350	360	350	340	330	320	330	330	330	370	370	370	380	410
Count	28	28	28	29	29	30	29	28	28	28	28	28	28	28	28	28	28	26	25	29	27	27	27	28	

Mean in 15 min

## IONOSPHERIC DATA

Apr. 1950

h'F2

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	300 <sup>A</sup>	300 <sup>A</sup>	330	370	360	300	260	280	260	240	290 <sup>H</sup>	260	270	270	260	200	220	240	250	240	230	A	280	270
2	320	290	250	240	290	300	290	(280) <sup>C</sup>	260	280	(280) <sup>C</sup>	290	270	270	270	270	280	230	240	210	220	280	300	290
3	(300) <sup>A</sup>	290	260	290	270	290	250	270	290	240	280	280	290	300	250	300	260	240	250	250	290	290	290	300
4	290	320	320	350	370	350	240	240	320	310	300	300	(280) <sup>C</sup>	270	290	230	240	230	240	260	230	280	310	320
5	330 <sup>A</sup>	350	290	270	290	300	260	250	300	280	280	310	290	270	270	280	250	280	270	280	300	310 <sup>H</sup>	340 <sup>H</sup>	390
6	380	340	320	340	400	400	350	320 <sup>K</sup>	450 <sup>K</sup>	370 <sup>K</sup>	470 <sup>K</sup>	370	230	290	240	290	340	250	230	240	250 <sup>K</sup>	280 <sup>K</sup>	310 <sup>K</sup>	330 <sup>K</sup>
7	320	300	300	290	290	270	220	280	280	220	220	230	290	290	260	240	250	280	270	230	250	270	300	310 <sup>H</sup>
8	340 <sup>H</sup>	300	260	250	250	270	220	220	240	280	270	280	300	300	250	290	280	240	250	270	270	260	270	260
9	260	300	300	290	270	250	250	240	C	C	C	C	C	C	C	C	C	C	C	220 <sup>F</sup>	C	C	C	C
10	C	C	C	C	C	290 <sup>A</sup>	250	250	240	300 <sup>A</sup>	300 <sup>A</sup>	300 <sup>A</sup>	A	290	280	250	250	290	290	250 <sup>H</sup>	250 <sup>H</sup>	250 <sup>B</sup>	250	300
11	(300) <sup>A</sup>	300	300	(300) <sup>A</sup>	280 <sup>A</sup>	260	250	250	250	260	270	240	280	250	300	300	240	240	230	230	210	220	260	300
12	A	AH	260	240	260	220	220	220	200	220	240	310	300	290	280	230	220	270	230 <sup>H</sup>	220	210	230	280	270
13	310	(300) <sup>A</sup>	260	250	230	230	220	220	200 <sup>A</sup>	220 <sup>H</sup>	300 <sup>H</sup>	300	240	280	220 <sup>B</sup>	260	290	280	290	240 <sup>A</sup>	300	300	280	300 <sup>H</sup>
14	320 <sup>H</sup>	300	310	320	300	300	290	250	250	300	280	260	260	240	300	290	260	280	300 <sup>A</sup>	270	280	270	270	290
15	300	A	310	300 <sup>H</sup>	310 <sup>H</sup>	300	280	260	280	270	290	260	280	280	310	280	300	220	210	220	220	220	230	250
16	310 <sup>H</sup>	300 <sup>H</sup>	300	310	300 <sup>A</sup>	280	300	310	290	290	280	300	300 <sup>H</sup>	290 <sup>H</sup>	300	310	300	290	260 <sup>A</sup>	270 <sup>A</sup>	240	250	250 <sup>H</sup>	290
17	300	300	300	300	290	250	270	270	280	250	250	250	300	300	290	280	250	250	270	260	250	260	290	300
18	310	320	290	310	350	310	220	250	240	260	250	260	250	260	290	280	260 <sup>A</sup>	230	270	250	270	250	260	300
19	C	C	C	290	290	300	300 <sup>H</sup>	300 <sup>H</sup>	240 <sup>H</sup>	400 <sup>K</sup>	350 <sup>K</sup>	220 <sup>H</sup>	350	300	310	310	280	230	270	250	270	250	260	290
20	340 <sup>H</sup>	390	400	380	350 <sup>H</sup>	300	290	260	250	310	300	300	(300) <sup>C</sup>	310	350	270	280	260	270	260	270 <sup>A</sup>	270	270	310 <sup>H</sup>
21	280	280	290	(300) <sup>A</sup>	300 <sup>A</sup>	290	290	390 <sup>H</sup>	300 <sup>K</sup>	320 <sup>K</sup>	370 <sup>K</sup>	400 <sup>K</sup>	300	300	310	290	290	300	260	250	290	300	290 <sup>A</sup>	310 <sup>H</sup>
22	320 <sup>A</sup>	320 <sup>A</sup>	290	300 <sup>A</sup>	(300) <sup>A</sup>	290	250	280	290	290	290	280	300 <sup>H</sup>	290 <sup>H</sup>	300	310	250	230	A	280 <sup>A</sup>	260	(300) <sup>A</sup>	300 <sup>A</sup>	290
23	310	300 <sup>H</sup>	290 <sup>H</sup>	(300) <sup>H</sup>	290	290	280	260	C	C	C	C	(300) <sup>C</sup>	310	350	270	280	260	270	270	270 <sup>A</sup>	270 <sup>A</sup>	290	320
24	310 <sup>A</sup>	320	330	290	300	310	280	330	300	350	300 <sup>H</sup>	300 <sup>H</sup>	290	330	320	300	300	290	290	270	250	290	290	310 <sup>H</sup>
25	310	320	300	280	360	310	310	330	280	300	330	300	300	320	300	300	300	300	290	270	250	290	290	300
26	300	310 <sup>H</sup>	310	290	300	300	300	270	290	270	270	260 <sup>H</sup>	290	300	300	300 <sup>A</sup>	260	250	270	250	300	270 <sup>H</sup>	(280) <sup>C</sup>	290
27	300	(300) <sup>C</sup>	300	300	280	270	240 <sup>H</sup>	230	220	220	280	280	280	300	290	290	270	300	280	270	300	300	280	280
28	290	300 <sup>H</sup>	300 <sup>H</sup>	290	280	270	280	290	280	290	290	(280) <sup>F</sup>	280 <sup>H</sup>	280 <sup>H</sup>	280 <sup>H</sup>	260 <sup>H</sup>	260	300	300	320	310	290	300	360 <sup>H</sup>
29	340	330	320	370	400	320	460 <sup>K</sup>	520 <sup>K</sup>	G <sup>K</sup>	420 <sup>K</sup>	400 <sup>K</sup>	420 <sup>K</sup>	400 <sup>K</sup>	400 <sup>K</sup>	390 <sup>K</sup>	390 <sup>K</sup>	280	280	350	330	350	330	330	360
30	370	390	390	350	380	290	240 <sup>H</sup>	300	290	280	290	280 <sup>H</sup>	280	280	310	290	270	270	290	240	250 <sup>A</sup>	240	240	310 <sup>H</sup>
31																								
Median Value	310	300	300	300	290	260	270	280	280	290	280	290	290	290	290	290	260	270	270	260	250	270	280	300
Count	27	26	28	29	29	30	30	28	28	28	28	28	27	28	28	28	28	29	28	30	29	25	26	28

Sweep 15.0 Mc to 15.5 Mc in 15-min

Manual

Radio Regulatory Agency (Denpacho)

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

IONOSPHERIC DATA

Apr. 1950

f<sub>o</sub>F<sub>1</sub>

Lat. 45° 28.6' 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						Q	Q	Q	Q	L	L	L	L	L	L	Q	Q	Q	Q					
2						Q	Q	Q	5.0	L	C	L	L	L	L	L	L	Q	Q					
3						Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q					
4						Q	Q	Q	4.8	L	L	L	L	L	L	L	L	Q	Q					
5						Q	Q	Q	L	Q	L	L	4.8	5.0	5.0	5.0	L	Q	Q					
6						Q	Q	Q	5.0 <sup>9</sup>	5.1	5.5	5.3 <sup>P</sup>	Q	Q	Q	Q	L	Q	Q					
7						Q	Q	Q	(5.2) <sup>1</sup>	Q	Q	Q	L	L	Q	Q	Q	L	L					
8						Q	Q	Q	Q	L	L	Q	L	Q	L	L	L	Q	Q					
9						Q	Q	Q	Q	C	C	C	C	C	C	C	C	C	C					
10						Q	Q	Q	Q	A	A	A	A	A	L	L	Q	Q	L					
11						Q	Q	Q	Q	L	L	Q	L	Q	L	L	Q	Q	Q					
12						Q	Q	Q	Q	L	L	L	L	L	L	L	Q	Q	L					
13						Q	Q	Q	A	Q	Q	A	Q	L	Q	Q	Q	Q	Q					
14						Q	Q	Q	Q	L	Q	5.7	Q	Q	L	L	L	Q	Q	A				
15						Q	Q	Q	Q	L	L	L	4.6	L	L	L	L	Q	Q					
16						Q	Q	L	L	L	L	L	L	L	L	L	L	L	L					
17						Q	Q	Q	Q	L	4.6	L	L	L	L	L	L	L	L					
18						Q	Q	Q	Q	L	L	5.0	L	L	L	L	A	Q	Q					
19						Q	Q	Q	Q	L	L	Q	L	L	L	L	L	Q	Q	A				
20						Q	Q	Q	Q	L	L	L	C	L	L	L	L	L	Q					
21						Q	Q	4.2	A	4.5	5.1	5.2	4.5	L	L	L	L	L	Q					
22						Q	Q	L	L	A	A	Q	Q	Q	Q	Q	L	L	L					
23						Q	Q	Q	C	C	C	C	C	C	C	C	C	C	C					
24						Q	Q	L	L	L	L	L	L	L	L	L	L	L	L					
25						Q	Q	Q	Q	Q	5.0 <sup>7</sup>	B	L	A	Q	L	A	Q	Q					
26						Q	Q	Q	Q	Q	Q	Q	L	L	L	L	A	Q	Q					
27						Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	L					
28						Q	L	Q	(4.9) <sup>1</sup>	Q	C	Q	Q	L	L	L	L	L	L					
29						Q	L	5.1	5.4	5.3	5.2	5.6	5.3	5.3	5.3	5.3	Q	Q	L					
30						Q	Q	Q	L	L	L	L	L	L	L	L	L	L	L					
31																								
Mean Value Count								3	5	5	5	5	4	2	3	2	1							

Sweep 1.0 Mc to 14.0 Mc in 1.5 min Manual



IONOSPHERIC DATA

Lat. 45° 23.0' N  
Long. 141° 41.1' E

Apr. 1950

h'F1

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					Q	Q	Q	Q	Q	Q	210	220	210	230 <sup>B</sup>	220	Q	Q	Q	Q						
2					Q	Q	Q	C	220	250	[260] <sup>C</sup>	260	240	230	240	230	220	Q	Q						
3					Q	Q	Q	Q	210	Q	220	230	250	250	Q	230	Q	Q	Q						
4					Q	Q	Q	Q	250	230	250	230	[230] <sup>C</sup>	230	230	Q	Q	Q	Q						
5					Q	Q	Q	Q	250	Q	Q	260	220	200	230	220	220	240	240						
6					Q	Q	Q	Q	300	300	240	250	Q	Q	Q	Q	300	Q	Q						
7					Q	Q	Q	Q	210	Q	Q	Q	230	230	Q	Q	Q	240	230						
8					Q	Q	Q	Q	230	210	Q	200	Q	200	Q	250	250	240	Q	Q					
9					Q	Q	Q	Q	C	C	C	C	C	C	C	C	C	C	C						
10					Q	Q	Q	Q	Q	A	A	A	A	250	240	Q	Q	230	240						
11					Q	Q	Q	Q	230	240	Q	250	Q	250	240	Q	Q	Q	Q						
12					Q	Q	Q	Q	Q	210	200	240	240	240 <sup>B</sup>	Q	Q	230	Q	Q						
13					Q	Q	Q	Q	A	Q	Q	A	Q	210	Q	Q	Q	Q	Q						
14					Q	Q	Q	Q	Q	250	Q	260	Q	Q	280 <sup>A</sup>	260	Q	Q	A						
15					Q	Q	Q	Q	Q	210	200	220	220	220	200	200	Q	Q	Q						
16					Q	Q	Q	290	270	270	220	230	260	240	200	200	280	270	Q						
17					Q	Q	Q	Q	Q	210	210	200	200	210	230	250	Q	Q	Q						
18					Q	Q	Q	Q	Q	220	220	220	200	200	220	A	Q	Q	Q						
19					Q	Q	Q	Q	Q	220	230	Q	240	220	250	230	Q	Q	A						
20					Q	Q	Q	Q	Q	260	250	260	[260] <sup>C</sup>	260 <sup>B</sup>	B	Q	260	Q	Q						
21					Q	Q	270	A	A	240	250	210 <sup>B</sup>	260	Q	B	230	A	240	Q						
22					Q	Q	250	260	A	A	Q	Q	Q	Q	Q	Q	230	240 <sup>A</sup>	Q						
23					Q	Q	Q	Q	C	C	C	C	C	C	C	C	C	Q	Q						
24					Q	Q	250	250	270	230	200	200	240	240	250	250	260	Q	Q						
25					Q	Q	Q	Q	Q	300	250	280	A	Q	280	A	Q	Q	Q						
26					Q	Q	Q	Q	Q	Q	Q	Q	230	240	240	A	Q	Q	Q						
27					Q	Q	Q	Q	Q	Q	240	240	250	240	220	220	Q	250	Q						
28					Q	240	Q	Q	Q	250 <sup>B</sup>	Q	C	Q	220 <sup>B</sup>	240 <sup>B</sup>	220	(200) <sup>A</sup>	270	Q						
29					Q	300	300	250 <sup>B</sup>	250 <sup>B</sup>	230	A	280	280	300 <sup>B</sup>	280	Q	Q	300							
30					Q	Q	220	230	220	A	250 <sup>A</sup>	200	230	260	Q	200	220	Q							
31																									
Median Value							260	250	240	230	240	230	240	230	240	230	240	240	240						
Count						2	6	6	11	16	19	18	22	22	20	16	10	10	4						

Sweep 1.0 Mc to 4.0 Mc in 1.5 min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 45° 23.6' N  
Long. 141° 41.1' E

Wakkanai

135° E Mean Time

f<sub>o</sub>E

Apr 1950

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	2.1	2.5 <sup>F</sup>	3.0 <sup>F</sup>	3.3	3.2	3.2	3.5 <sup>B</sup>	[3.4] <sup>B</sup>	3.4 <sup>B</sup>	3.0	3.0	2.5	1.6					
2						1.4 <sup>F</sup>	1.8	C	3.1	3.3	[3.4] <sup>C</sup>	3.6	3.5	3.6	[3.4] <sup>B</sup>	3.3	(2.9) <sup>B</sup>	2.2	(1.5) <sup>B</sup>					
3						1.4	1.9	2.7	3.2	3.3	3.6	3.6	3.5	3.3	3.5	3.2	2.7	2.5	1.7 <sup>B</sup>					
4						(1.2) <sup>B</sup>	2.2	2.7	3.0	3.3 <sup>P</sup>	3.4	3.5	[3.4] <sup>C</sup>	[3.3] <sup>B</sup>	[3.3] <sup>B</sup>	3.2	2.7	2.4	(1.8) <sup>A</sup>					
5						1.3	2.3	2.9	3.3	3.1 <sup>J</sup>	[3.3] <sup>B</sup>	3.5	3.7	3.7	[3.4] <sup>B</sup>	3.2	2.8	2.5	1.8					
6						E	2.0	2.6 <sup>J</sup>	3.1	3.5	3.6	B	B	4.0	3.6	3.1	3.0 <sup>H</sup>	2.6	A					
7						1.2 <sup>J</sup>	B	2.8 <sup>H</sup>	3.2 <sup>H</sup>	3.5	3.6	[3.7] <sup>B</sup>	3.8	3.5	3.4	3.2	2.7	2.4	1.7					
8						1.2	2.2	3.0	3.1	3.2	3.7	3.5	B	A	3.4	[3.0] <sup>B</sup>	2.7	2.6	2.3					
9						1.7	2.6	3.0	C	C	C	C	C	C	C	C	C	C	C					
10						A	2.5	2.8	3.3	B	B	B	B	B	3.4 <sup>P</sup>	[3.2] <sup>B</sup>	3.0	2.1 <sup>H</sup>	1.4 <sup>J</sup>					
11						(1.9) <sup>A</sup>	2.2	3.0	3.3	3.4	3.5	(3.6) <sup>B</sup>	3.5	3.7	3.5 <sup>B</sup>	3.3	3.2	2.5	1.9					
12						1.6	2.5	3.1	3.5	B	B	B	B	B	B	(3.3) <sup>B</sup>	3.1	2.6	1.6					
13						1.9	2.4 <sup>H</sup>	3.0	B	B	3.5 <sup>B</sup>	B	3.7 <sup>B</sup>	3.4	3.4	3.2	(2.9) <sup>B</sup>	2.6	1.9					
14						1.8	2.5	2.9 <sup>B</sup>	3.1	3.4	3.5 <sup>B</sup>	3.7	3.7	B	A	A	3.1	2.6	A					
15						1.9 <sup>H</sup>	2.5	2.8	3.3	3.5 <sup>B</sup>	A	(3.7) <sup>B</sup>	3.8	A	3.7	3.4	3.0	2.6	2.2					
16						1.8 <sup>H</sup>	2.5	2.9	3.3	3.4	(3.6) <sup>B</sup>	(3.8) <sup>B</sup>	3.7 <sup>H</sup>	(3.9) <sup>H</sup>	3.7 <sup>H</sup>	(3.5) <sup>H</sup>	3.3	(3.0) <sup>B</sup>	A	A				
17						1.8 <sup>H</sup>	2.3	3.0	3.5	A	3.4	A	(3.8) <sup>B</sup>	(3.8) <sup>B</sup>	(3.7) <sup>B</sup>	A	3.0	2.7	1.9 <sup>J</sup>					
18						1.8 <sup>H</sup>	2.6	3.0	3.3	3.5 <sup>B</sup>	[3.5] <sup>B</sup>	3.5 <sup>J</sup>	3.5	B	B	A	3.0	2.9	B					
19						1.9 <sup>H</sup>	2.6	3.0 <sup>H</sup>	3.4	3.6	3.7	3.6	3.5	(3.5) <sup>A</sup>	3.5	(3.4) <sup>A</sup>	(2.8) <sup>A</sup>	2.5	A					
20						1.9	2.5	(2.8) <sup>J</sup>	3.0	3.3	B	B	C	B	B	3.2	3.1	A	A					
21						1.7 <sup>H</sup>	2.6 <sup>H</sup>	2.8	3.0	A	A	A	B	B	B	3.0	A	2.6	A					
22						A	2.6	3.0	3.2	3.7	3.5	A	A	A	A	(3.0) <sup>A</sup>	A	A	A					
23						1.7 <sup>H</sup>	2.6 <sup>H</sup>	3.0	3.3	C	C	C	C	C	C	C	C	2.5	2.2					
24						1.9	2.6	3.1	3.2	(3.4) <sup>B</sup>	3.6 <sup>H</sup>	[3.6] <sup>B</sup>	3.6 <sup>B</sup>	A	A	3.3	3.2	(2.8) <sup>B</sup>	1.9 <sup>P</sup>					
25						1.8 <sup>H</sup>	2.4	2.8	3.5	3.6	3.6	3.5	3.6	3.5 <sup>J</sup>	3.4 <sup>J</sup>	3.5	A	A	A					
26						2.0 <sup>H</sup>	2.6 <sup>H</sup>	3.0 <sup>H</sup>	3.4	3.5	A	B	A	A	A	A	A	A	A					
27						1.9 <sup>H</sup>	2.6	2.9	B	3.5	3.4	(3.5) <sup>B</sup>	3.5	A	3.6 <sup>B</sup>	3.3 <sup>H</sup>	3.2	2.7	2.1					
28						2.2	2.8	2.8 <sup>J</sup>	3.5	3.7	(3.8) <sup>B</sup>	[3.8] <sup>C</sup>	(3.7) <sup>B</sup>	B	B	B	A	2.7 <sup>H</sup>	2.0					
29						1.7	2.6	(3.0) <sup>J</sup>	3.5	3.4 <sup>B</sup>	3.4	(3.5) <sup>A</sup>	A	A	3.5	3.2 <sup>B</sup>	3.0	2.6	2.2 <sup>H</sup>					
30						1.8	2.6	3.0	3.2 <sup>A</sup>	A	A	A	A	A	A	A	3.0	2.5	2.2					
31																								
Median Value						1.8	2.5	2.9	3.3	3.4	3.5	3.6	3.6	3.5	3.4	3.2	3.0	2.6	1.9					
Count						28	29	29	27	22	21	18	18	13	18	21	24	24	19					

Sweep 100 Mc to 14.9 Mc in 15-min Manual



Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Apr. 1950

h' E

IONOSPHERIC DATA

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

Sweep 1.0 Mc to 2.4 Mc in 1.5 min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

fEs

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	2.2 <sup>Y</sup>	2.5	2.0	2.3	2.0	2.3	G	G	G	4.5	G	G	G	G	G	G	G	G	G	G	G	3.3	2.4	2.1
2	2.4	1.3	1.6	2.8	2.0	G	G	C	4.4 <sup>Y</sup>	G	C	G	4.2 <sup>Y</sup>	G	G	G	G	G	G	G	G	G	1.8	G
3	2.2	1.1	G	G	2.0	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
4	G	G	G	G	G	G	G	G	G	G	G	G	C	G	B	G	G	G	2.0	2.2	G	3.0	G	G
5	3.4	1.5	2.1	B	B	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
6	G	G	G	G	2.8	2.7 <sup>B</sup>	G	G	5.2	4.5 <sup>Y</sup>	4.6 <sup>Y</sup>	G	G	G	G	G	G	2.4	G	G	G	G	G	G
7	2.1	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
8	G	G	G	G	G	G	G	G	G	G	G	G	G	4.9	G	G	G	G	G	G	G	G	G	G
9	G	G	G	G	G	G	G	G	C	C	C	C	C	C	C	C	C	C	C	C	2.0	2.4	G	2.3
10	C	C	C	C	C	5.0	G	G	6.4 <sup>Y</sup>	6.8 <sup>Y</sup>	7.9	6.8	B	B	B	G	G	G	G	3.6	3.6	G	2.5	G
11	1.7	1.3	2.4	2.4	3.4	2.2	G	G	G	G	G	G	G	G	G	G	G	G	G	(2.9) <sup>Y</sup>	2.2	2.2	1.5	G
12	2.5	2.2	1.3	G	G	G	G	G	G	B	G	G	4.3 <sup>Y</sup>	B	B	G	G	G	G	G	G	G	2.5	4.7
13	3.4	3.4	3.6	3.2	2.4	4.2	3.4 <sup>Y</sup>	G	(6.0) <sup>Y</sup>	G	G	5.6 <sup>Y</sup>	G	G	G	G	G	G	2.6	3.7	1.6	G	G	G
14	G	G	G	B	B	G	G	G	G	G	G	G	4.8	G	4.4	4.2	G	G	(5.0) <sup>B</sup>	4.4	2.4	G	G	G
15	G	2.7 <sup>B</sup>	2.3	2.2	(2.1) <sup>Y</sup>	G	G	G	G	4.4 <sup>Y</sup>	6.0	4.6 <sup>Y</sup>	G	G	G	G	G	G	G	G	G	G	G	3.0
16	1.8	2.6	2.7	2.7	2.6	G	3.6 <sup>Y</sup>	G	G	G	G	G	G	G	G	G	G	4.3	3.4	3.8	2.0	1.1	G	G
17	G	1.6	2.0	1.8	G	G	G	3.8	G	4.4 <sup>Y</sup>	4.6	3.9	G	4.2 <sup>Y</sup>	B	3.6	G	G	3.2	3.3	3.2	G	1.9	B
18	G	G	2.0	2.6	2.2	G	G	G	G	5.0 <sup>Y</sup>	4.8 <sup>Y</sup>	4.8	4.9 <sup>Y</sup>	G	G	4.6	4.6	G	G	2.6 <sup>F</sup>	2.0	2.5	C	C
19	C	C	C	G	G	G	G	G	G	G	G	4.6	G	5.0	4.8	4.7	5.0	3.4	4.0 <sup>Y</sup>	4.2	2.8	2.9	2.4	B
20	G	G	G	G	G	G	G	G	4.2	G	B	B	C	B	B	G	G	3.9	4.0	3.7	5.2	3.6	3.2	4.4
21	3.7	3.8	4.4	3.6	3.2	2.3	G	5.8 <sup>Y</sup>	6.8 <sup>Y</sup>	5.4	4.4	4.9	G	G	G	G	(3.3) <sup>B</sup>	3.6	2.6	2.8	2.8	2.0	4.4	3.0
22	5.6	4.8	4.8	4.3	4.2	4.2	G	G	4.1	7.3	6.8	7.1	5.5	6.3	5.8	4.7	3.6	5.0	3.3	2.8	2.4	2.2	G	2.2
23	(2.0) <sup>Y</sup>	2.4	2.4	4.3 <sup>Y</sup>	2.4	2.5 <sup>Y</sup>	G	G	C	C	C	C	C	C	C	C	C	C	G	4.3	2.9	(4.0) <sup>B</sup>	C	3.3 <sup>B</sup>
24	2.0	2.0	1.2	2.2	G	G	G	G	G	4.8 <sup>Y</sup>	G	G	4.2 <sup>Y</sup>	4.4 <sup>Y</sup>	4.7 <sup>Y</sup>	G	G	G	3.2 <sup>Y</sup>	G	2.8 <sup>Y</sup>	3.0 <sup>B</sup>	G	2.4
25	2.8	2.4	2.0	2.8	2.5	2.8	G	4.4	4.8 <sup>Y</sup>	6.2	5.9	G	G	6.5	G	5.6	6.2	3.1	3.6	4.4	2.7	2.5	C	G
26	G	G	3.2 <sup>B</sup>	2.0	1.8 <sup>Y</sup>	G	G	4.8 <sup>Y</sup>	4.8 <sup>Y</sup>	4.1	4.7	G	5.8	4.3	4.6	5.8	5.4	5.0	3.0	3.4	3.1	2.2	C	G
27	G	C	G	G	G	G	G	G	G	G	G	G	4.0	4.2	G	G	G	G	G	G	G	G	G	G
28	2.5 <sup>Y</sup>	G	G	1.8	2.1	G	G	G	4.3	G	C	C	B	B	G	3.6	G	3.0 <sup>B</sup>	G	G	G	G	G	G
29	G	G	G	G	G	G	G	G	G	G	G	4.3	4.3	4.5	G	G	G	G	G	G	3.2	G	G	G
30	G	G	G	G	G	G	G	4.2 <sup>Y</sup>	4.8	4.3	4.7	5.1	4.5	4.3	3.8	3.7	G	G	G	3.3	3.2	4.2	G	G
31																								
Median Value	1.8	1.3	1.4	1.8	2.0	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	2.6	2.2	G	G
Count	28	27	28	27	27	30	30	29	28	27	26	26	26	25	23	28	28	29	29	30	29	29	25	26

Sweep 1.0 Mc 104.5 Mc in 1.5 min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Lat. 45° 23.6' N  
Long. 141° 41.1' E

Wakkanai

135° E Mean Time

(M3000)F2

Apr. 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	2.7	2.5	2.4	2.3	2.4	2.5	2.8	2.9	(3.0) <sup>F</sup>	(2.9) <sup>S</sup>	2.8 <sup>H</sup>	2.8	(2.7) <sup>B</sup>	2.9	2.9	(2.8) <sup>S</sup>	2.9	2.9	2.9	2.9	2.7	(2.6) <sup>F</sup>	2.7	2.7	
2	2.7	2.6	2.8	2.8	2.6	2.6	3.0	[3.0] <sup>C</sup>	(3.1) <sup>F</sup>	(2.9) <sup>B</sup>	[2.8] <sup>C</sup>	2.7	(2.9) <sup>B</sup>	(2.9) <sup>B</sup>	(2.9) <sup>B</sup>	(3.0) <sup>B</sup>	3.0	[3.0] <sup>S</sup>	3.1	(3.2) <sup>F</sup>	(2.6) <sup>S</sup>	2.5	2.7	2.7	
3	2.6	2.6	2.6	2.6	2.4	2.6	2.7	2.9	3.0	3.0	2.9	2.9	2.7	2.9	2.7	2.8	2.7 <sup>S</sup>	2.7 <sup>P</sup>	2.9 <sup>F</sup>	2.7 <sup>P</sup>	2.7	2.5	2.6	2.4	
4	2.6 <sup>P</sup>	2.5	2.6	2.4	2.5	2.5	3.0	2.8	2.9	2.8	2.9	[2.9] <sup>C</sup>	2.9	(2.9) <sup>F</sup>	(2.9) <sup>F</sup>	3.1	3.1	3.0	3.1 <sup>S</sup>	3.1 <sup>S</sup>	2.7	2.7	2.7	2.5	
5	2.6 <sup>V</sup>	2.5 <sup>V</sup>	2.7	2.5 <sup>F</sup>	2.5 <sup>F</sup>	2.7	3.0	2.9	3.0	2.6	2.7	2.7	2.9	2.9	2.9	2.9	2.9	3.1	3.0 <sup>S</sup>	3.1 <sup>S</sup>	2.6	2.5 <sup>H</sup>	2.3 <sup>H</sup>	2.2 <sup>F</sup>	
6	2.4	2.4	2.4	2.4	2.1	2.1	2.3	2.9 <sup>K</sup>	2.6 <sup>K</sup>	2.6 <sup>K</sup>	2.4 <sup>K</sup>	2.8	(2.6) <sup>P</sup>	2.7	2.8	2.5	2.8	2.9	3.1	3.0 <sup>S</sup>	2.7	2.6	2.5 <sup>H</sup>	2.2 <sup>F</sup>	
7	(2.7) <sup>F</sup>	2.7 <sup>F</sup>	2.6 <sup>F</sup>	2.8	2.7	2.7	B	(3.1) <sup>F</sup>	3.0	3.2	3.0	3.0 <sup>F</sup>	[3.0] <sup>B</sup>	3.0 <sup>B</sup>	2.9 <sup>F</sup>	(2.9) <sup>F</sup>	(3.1) <sup>F</sup>	S	S	3.0	2.7	2.8	2.6	2.6 <sup>H</sup>	
8	2.5 <sup>H</sup>	2.8	2.8	2.8	2.6 <sup>Z</sup>	3.0	3.3	3.2	3.1 <sup>S</sup>	3.2 <sup>B</sup>	(3.1) <sup>B</sup>	3.1	2.9	3.0	(3.0) <sup>P</sup>	3.0	3.2	3.1	3.2	(3.0) <sup>F</sup>	2.7	2.8	(2.7) <sup>S</sup>	(2.7) <sup>S</sup>	
9	2.7	2.7	2.6	2.6	2.6	2.8	3.1	3.2	C	C	C	C	C	C	C	C	C	C	C	(3.0) <sup>B</sup>	C	C	C	C	
10	C	C	C	C	C	3.0	3.1	3.0	3.1	2.9	2.9	2.9	2.9	2.9	2.8	3.0 <sup>S</sup>	3.0	2.8	(3.1) <sup>F</sup>	(3.0) <sup>F</sup>	2.9 <sup>F</sup>	2.7 <sup>S</sup>	2.8	2.6	
11	2.6 <sup>F</sup>	2.7	2.7 <sup>F</sup>	2.6	2.8	3.0	3.0	(3.0) <sup>F</sup>	3.1	3.1	2.9 <sup>P</sup>	(2.9) <sup>F</sup>	2.9	2.9	(2.9) <sup>P</sup>	2.9	2.9	S	S	S	S	2.8 <sup>P</sup>	2.7	2.8	
12	2.9	2.6 <sup>H</sup>	2.8	2.6	2.8	3.0	3.0	B	3.3	(3.2)	3.0	(3.0) <sup>H</sup>	(2.9) <sup>B</sup>	2.8	3.0	(3.0) <sup>B</sup>	2.9	(3.1) <sup>S</sup>	3.2 <sup>H</sup>	(3.0) <sup>F</sup>	S	3.0	2.8	2.8	
13	(2.7) <sup>F</sup>	(2.6) <sup>F</sup>	3.0 <sup>P</sup>	3.0	2.8 <sup>F</sup>	(3.1) <sup>B</sup>	3.4	3.1 <sup>H</sup>	3.3 <sup>H</sup>	3.1 <sup>H</sup>	(2.6) <sup>B</sup>	2.7	2.7 <sup>P</sup>	(2.7) <sup>S</sup>	2.7 <sup>H</sup>	(2.8) <sup>B</sup>	2.8	(2.8) <sup>S</sup>	2.9	(2.8) <sup>S</sup>	2.7	2.8	2.8	2.6 <sup>H</sup>	2.5 <sup>H</sup>
14	2.5 <sup>H</sup>	2.6	2.5	2.4 <sup>Z</sup>	2.5	2.5	3.0	2.8	2.9	2.7	(2.9) <sup>F</sup>	(2.8) <sup>B</sup>	2.6	2.8 <sup>P</sup>	(2.8) <sup>B</sup>	2.9	(2.8) <sup>B</sup>	2.9	(2.8) <sup>S</sup>	(2.8) <sup>S</sup>	(2.8) <sup>S</sup>	2.9	3.0	2.9	
15	2.7	2.5	2.5	2.5 <sup>H</sup>	2.5 <sup>H</sup>	2.9	2.8	2.9	2.8	2.8	3.0	2.9	2.7	2.8	3.0	3.0	3.1	3.0	2.8	3.0 <sup>S</sup>	[3.0] <sup>S</sup>	2.9	2.9	2.9	
16	2.6 <sup>H</sup>	2.4 <sup>H</sup>	2.6	2.6	2.6	2.9	2.6	2.7	2.7	2.7 <sup>P</sup>	2.9	2.8	2.8 <sup>H</sup>	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.9 <sup>P</sup>	2.8 <sup>P</sup>	2.9 <sup>H</sup>	2.7 <sup>F</sup>	
17	2.8 <sup>P</sup>	2.6	2.6	2.5	2.7	2.9	2.9	2.9	2.9	3.1	3.2	(3.0) <sup>B</sup>	2.7	2.8	2.9	2.9	(2.9) <sup>B</sup>	(2.7) <sup>S</sup>	2.9	2.9	2.8	2.8	2.5	2.5	
18	2.5	2.5	2.5	2.6	2.5	2.8	3.2	3.0	3.1	3.2	3.0	2.9	2.9 <sup>H</sup>	2.9	2.9	2.9	3.2	(3.3) <sup>S</sup>	(3.0) <sup>S</sup>	3.0 <sup>S</sup>	2.9 <sup>H</sup>	2.6	C	C	
19	C	C	C	C	2.7	2.8	2.9	3.0	2.8 <sup>H</sup>	2.5 <sup>K</sup>	2.7 <sup>K</sup>	2.8 <sup>K</sup>	2.7 <sup>H</sup>	2.6	2.9	2.7	2.8	2.9	S	S	2.9	2.7	(2.6) <sup>H</sup>	2.8	
20	2.4 <sup>H</sup>	2.4	2.1 <sup>F</sup>	2.4	2.6 <sup>H</sup>	2.6	2.9	2.9	2.8	2.7	2.7	2.7	[2.7] <sup>C</sup>	2.7	2.7	2.7	3.1	3.0	(2.9) <sup>P</sup>	[3.0] <sup>B</sup>	[3.0] <sup>B</sup>	(2.9) <sup>F</sup>	(2.8) <sup>F</sup>	2.7	
21	2.7	2.8	2.7	2.8	2.7	2.8	2.9	3.2	3.1 <sup>K</sup>	2.6 <sup>V</sup>	2.6 <sup>K</sup>	2.7 <sup>K</sup>	2.7	2.8	2.9	3.0	[3.0] <sup>S</sup>	3.0	2.9	3.0	2.7	2.7	2.5	2.6 <sup>H</sup>	
22	2.5	2.6	2.7	2.8	2.8	2.9	3.2	3.1	2.8	2.9	2.9	3.0	2.8	2.8	2.8	2.8	(3.0) <sup>B</sup>	3.0	3.1	(2.8) <sup>S</sup>	(2.8) <sup>S</sup>	2.8	2.7	2.5	
23	2.6	2.5 <sup>H</sup>	2.6 <sup>H</sup>	2.6	2.7	2.7	3.0	3.1 <sup>F</sup>	C	C	C	C	C	C	C	C	C	(2.9) <sup>S</sup>	(2.9) <sup>S</sup>	[2.8] <sup>H</sup>	(2.7) <sup>H</sup>	B	C	(2.4) <sup>F</sup>	
24	2.7 <sup>P</sup>	2.4	2.5	2.8 <sup>Z</sup>	2.6	2.6	2.6	3.0	2.9	3.0	2.8	2.8 <sup>H</sup>	2.9	2.7	2.7	2.7	2.8	(2.9) <sup>P</sup>	(2.9) <sup>P</sup>	(2.9) <sup>P</sup>	(2.6) <sup>H</sup>	2.6 <sup>H</sup>	2.5	2.5	
25	2.6	2.5	2.6	2.3	2.3	2.5	2.6	2.7 <sup>V</sup>	(2.8) <sup>H</sup>	2.9	2.9	2.7	2.8	2.8	2.8	2.8	2.8	(2.8) <sup>S</sup>	2.8	2.8	2.6	2.7 <sup>H</sup>	[2.6] <sup>C</sup>	(2.6) <sup>F</sup>	
26	2.4	2.6 <sup>H</sup>	2.6	2.6	2.5	2.6	(2.7) <sup>B</sup>	2.9	(3.1) <sup>B</sup>	2.8	2.6 <sup>H</sup>	2.5 <sup>H</sup>	2.8	2.9	3.0	(3.0) <sup>P</sup>	(2.9) <sup>P</sup>	3.0	3.1 <sup>F</sup>	3.0 <sup>S</sup>	(2.8) <sup>S</sup>	2.8 <sup>H</sup>	[2.6] <sup>C</sup>	(2.6) <sup>F</sup>	
27	2.7	(2.6) <sup>C</sup>	2.6 <sup>F</sup>	2.7	2.8	2.9	3.0 <sup>H</sup>	3.1	3.0	2.8	2.9	2.9	2.8	2.7	2.7	2.8	2.8	[2.8] <sup>S</sup>	2.9 <sup>S</sup>	2.9	2.8	2.8	2.8	2.7	
28	2.7	2.6 <sup>H</sup>	2.5 <sup>H</sup>	2.6	2.6	2.8	3.0	2.8	2.9	2.7 <sup>S</sup>	2.6	[2.8] <sup>C</sup>	3.0 <sup>H</sup>	3.0	2.8 <sup>H</sup>	2.9 <sup>H</sup>	(3.4) <sup>S</sup>	(2.8) <sup>F</sup>	2.9	2.8	2.7	2.7 <sup>P</sup>	2.8	2.4 <sup>H</sup>	
29	2.4	2.4	2.3	2.3	2.2	2.6	2.5	2.4 <sup>K</sup>	G <sup>K</sup>	2.6 <sup>K</sup>	2.6 <sup>K</sup>	2.6 <sup>K</sup>	2.6 <sup>K</sup>	2.6 <sup>K</sup>	2.7 <sup>K</sup>	2.7 <sup>K</sup>	2.8	2.8	2.8	2.6	2.5	2.5	2.5	2.3	
30	2.4	2.2	2.3	2.4	2.4	2.7	2.8 <sup>H</sup>	3.0	2.8	2.9	2.9	2.8 <sup>H</sup>	3.0	(2.8) <sup>P</sup>	(2.8) <sup>P</sup>	2.7 <sup>P</sup>	3.0 <sup>P</sup>	3.2 <sup>S</sup>	(3.1) <sup>F</sup>	(2.9) <sup>S</sup>	(3.0) <sup>F</sup>	2.5 <sup>H</sup>	2.6 <sup>H</sup>		
31																									
Median Value	2.6	2.6	2.6	2.6	2.6	2.7	3.0	2.9	3.0	2.9	2.8	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.8	2.7	2.7	2.7	2.6
Count	28	28	28	29	29	30	29	29	28	28	28	28	28	28	28	28	28	26	25	29	27	27	27	28	28

Sweep 1.0-Mc to 4.0-Mc in 15 min

Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr 1950

fminF

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	E	A	E	E	E	E	2.2	3.5	3.8	3.4	3.7	4.1	3.6	4.0	3.9	3.3	3.0	2.6	1.6	1.1	1.4	A	1.5	1.1
2	E	E	E	E	E	1.4	1.8	C	3.3	3.5	[3.6] <sup>c</sup>	3.8	3.8	3.7	3.7	3.5	2.9	2.6	1.7	E	E	E	E	E
3	A	E	E	E	E	1.4	2.3	2.7	3.2	3.4	3.6	3.8	3.6	3.5	3.5	3.3	2.9	2.6	1.8	E	E	1.1	1.3	1.3
4	1.2	E	E	E	E	1.2	2.4	2.9	3.3	3.8	4.0	3.9	[3.9] <sup>c</sup>	3.9	4.0	3.6	2.9	2.5	1.8	E	E	A	E	E
5	A	E	E	E	E	1.3	2.3	2.9	3.3	3.6	4.0	3.5	4.0	4.2	4.2	3.3	3.0	2.6	1.8	1.3	1.1	1.2	1.1	1.1
6	E	E	E	E	E	E	2.3	3.3	3.2	3.5	3.9	4.0	4.0	4.2	3.6	3.4	3.0	2.6	2.0	1.5	1.1	1.2	1.3	1.4
7	1.1	E	E	E	E	1.9	2.7	2.9	3.4	3.5	4.1	3.9	4.0	4.1	3.6	3.7	2.9	2.6	1.7	1.2	1.2	E	E	E
8	E	E	E	E	E	1.6	2.7	3.1	3.3	3.5	3.9	4.7	3.8	A	4.6	3.0	3.2	2.6	2.3	A	1.7	E	E	E
9	E	E	E	E	E	1.7	2.6	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	A	2.5	2.9	4.0	A	A	A	A	A	4.2	4.0	3.6	3.2	2.8	2.1	A	1.3	1.5	1.6
11	A	1.5	A	A	A	1.9	2.2	3.0	3.7	3.8	3.7	4.0	3.7	4.2	3.6	3.5	3.2	2.5	2.0	A	1.6	E	1.2	E
12	A	A	E	E	E	1.6	2.5	3.1	3.5	4.7	3.9	3.9	4.1	4.2	4.7	3.9	3.1	2.6	1.6	1.2	1.1	1.2	1.4	1.3
13	A	A	E	E	1.6	2.0	2.7	3.1	A	4.1	4.3	5.6	4.0	3.4	4.1	3.5	3.0	2.7	1.9	1.3	1.3	1.2	E	E
14	E	E	E	E	E	1.8	2.5	3.1	3.4	3.8	4.2	4.1	4.2	4.4	4.1	3.9	3.4	2.8	A	A	A	1.4	1.3	1.3
15	1.1	A	E	E	1.1	1.9	2.6	3.0	3.3	3.5	3.9	3.9	3.8	3.8	3.7	3.5	3.2	2.7	2.5	1.3	E	E	E	E
16	E	E	E	E	E	A	2.8	3.2	3.4	3.6	4.0	3.8	4.4	3.8	3.6	3.4	3.7	A	A	A	1.2	1.2	E	E
17	E	E	E	E	E	1.9	2.4	3.7	3.7	3.8	3.8	3.9	4.0	3.9	3.7	3.5	3.0	2.8	1.8 <sup>N</sup>	1.2	1.2	1.2	E	E
18	E	E	E	E	E	1.8	2.6	3.0	3.3	3.5	4.2	4.4	4.2	3.8	4.0	A	3.2	2.9	2.7	A	1.6	A	C	C
19	C	C	C	E	E	1.9	2.6	3.0	3.4	3.6	3.9	3.7	3.7	3.5	3.6	3.6	2.8	2.5	A	A	3.3	A	A	E
20	E	E	E	E	E	1.9	2.5	3.2	3.8	4.2	4.2	4.3	[4.4] <sup>f</sup>	4.4	4.4	3.6	3.2	2.6	A	A	A	1.9	1.8	1.8
21	A	A	A	A	A	1.8	2.6	3.0	A	A	3.8	4.0	4.1	4.2	4.3	3.0	A	2.6	2.1	1.8	1.6	1.4	A	1.8
22	1.8 <sup>A</sup>	1.2	1.8	A	A	2.3	4.0	3.0	3.4	A	A	4.2	A	A	A	A	3.0	A	A	A	A	A	1.3	1.2
23	E	A	1.9 <sup>A</sup>	A	1.4	1.7	2.6	3.1	C	C	C	C	C	C	C	C	C	3.8	2.2	1.6	1.2	A	C	1.9 <sup>A</sup>
24	A	E	E	E	E	1.9	2.8	3.3	3.6	3.9	4.0	4.0	4.2	4.2	4.1	3.6	3.2	2.9	2.4	1.8	1.6	1.8	1.5	1.6
25	1.5	1.2	E	E	E	1.8	2.4	3.4	3.8	3.4	4.5	4.3	4.3	A	4.3	4.2	A	3.2	A	A	1.4	1.4	[1.4] <sup>c</sup>	1.3
26	E	E	E	E	E	2.0	3.0	3.2	3.6	3.7	3.8	3.8	3.7	3.8	3.8	A	3.7	A	A	A	4.3	1.5	C	E
27	E	C	E	E	E	2.3	2.8	3.2	3.6	4.1	3.9	3.8	3.7	3.8	3.6	3.6	3.2	2.7	2.2	1.6	1.1	1.1	1.1	E
28	E	E	E	E	E	1.2	2.4	2.9	3.6	3.7	4.3	4.3	[4.4] <sup>c</sup>	4.4	4.3	4.2	4.0	2.8	2.2	1.4	1.2	E	E	E
29	E	E	E	E	E	2.3	2.6	3.3	3.9	3.8	3.7	(4.3) <sup>f</sup>	4.4	3.9	4.0	3.4	3.6	2.7	2.2	1.4	A	1.2	1.2	E
30	E	E	E	E	E	2.1	2.8	3.2	3.9	3.9	A	4.2 <sup>A</sup>	3.8	3.7	3.7	3.8	3.1	2.8	2.2	1.4	A	E	E	E
31																								
Median Value	E	E	E	E	E	1.9	2.6	3.1	3.4	3.7	3.9	4.0	4.0	3.9	4.0	3.5	3.1	2.6	2.0	1.3	1.2	1.2	1.2	E
Count	21	21	26	25	25	29	30	28	26	25	27	26	25	27	27	25	25	26	22	18	24	22	24	28

Manual

Sweep: 1.5 Mc 10°-5 Mc 10-15 min

Radio Regulatory Agency (Denpacho)

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

IONOSPHERIC DATA

Apr. 1950

f<sub>min</sub> E

Lat. 45° 28.6' 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	E	E	E	E	E	E	E	1.2	1.2	1.3	1.4	1.5	1.9	1.4	1.3	E	E	E	E	E	B	E	E	1.1	1.8
2	E	E	E	E	E	E	E	1.1	1.2	1.1	1.2	1.6	1.7	1.5	1.5	1.4	1.5	1.6	B	E	E	E	E	1.7	E
3	E	E	E	E	1.8	E	E	E	E	1.1	1.2	1.8	1.5	1.5	1.2	1.3	E	1.1	1.4	E	E	E	E	B	E
4	E	E	E	E	E	E	E	1.2	1.2	1.1	1.2	1.2	[1.2] <sup>c</sup>	1.2	1.2	1.4	1.2	1.1	1.1	1.2	E	E	E	E	E
5	E	E	E	E	B	E	E	E	E	E	1.2	1.2	1.4	1.6	1.5	1.2	1.2	1.2	1.2	E	E	E	E	E	E
6	E	E	E	E	E	E	1.3	1.2	E	E	1.8	2.0	2.0	2.0	1.6	1.6	E	1.1	1.5	B	E	E	E	B	B
7	1.1	E	E	E	E	1.2	E	1.3	1.4	1.4	1.5	1.5	1.5	1.4	1.2	1.2	E	E	E	E	E	E	E	E	E
8	E	E	E	E	E	1.2	1.1	E	E	E	1.8	1.4	1.4	3.0	2.2	2.4	1.7	E	1.2	E	E	E	E	E	E
9	E	E	E	E	E	E	1.2	1.2	C	C	C	C	C	C	C	C	C	C	C	E	E	C	C	C	C
10	C	C	C	C	C	E	1.1	1.2	1.3	2.2	1.9	3.6	4.0	1.8	1.8	1.2	E	1.2	1.3	1.4	1.3	B	1.3	B	B
11	E	E	E	E	E	E	1.1	1.2	1.4	1.7	2.0	1.8	2.1	2.0	2.1	1.5	1.2	E	E	E	E	E	E	E	E
12	E	E	E	E	E	E	E	E	1.5	2.0	2.0	2.0	1.9	1.6	1.8	1.9	1.5	1.4	1.2	E	E	E	E	E	E
13	E	E	E	E	E	E	E	E	2.0	1.9	1.9	2.0	2.1	1.3	1.4	1.4	2.0	E	1.1	1.1	1.2	E	E	E	E
14	E	E	E	E	E	E	E	E	1.4	1.4	1.5	1.6	1.7	1.9	2.0	1.7	1.5	E	1.3	1.6	1.5	B	B	B	B
15	E	E	E	E	E	E	E	1.2	1.3	1.5	E	1.9	1.4	2.0	1.6	1.4	1.1	1.1	1.2	B	E	E	E	1.4	1.4
16	E	E	E	E	E	E	E	1.1	1.2	1.3	2.0	2.6	2.1	2.1	1.5	1.1	1.5	1.3	E	E	E	E	E	E	E
17	E	E	E	E	E	E	1.2	1.3	1.4	1.5	(1.2) <sup>B</sup>	1.9	2.1	2.9	1.8	1.8	1.4	E	E	E	1.1	1.2	E	E	E
18	E	E	1.4	E	E	E	E	E	1.1	E	1.6	1.2	1.6	2.0	1.6	1.2	E	1.1	1.1	1.6	1.6	E	E	C	C
19	C	C	C	E	E	1.1	1.3	1.4	1.4	1.4	1.3	1.3	1.6	1.4	1.3	1.4	1.2	E	E	E	E	E	E	E	E
20	E	E	E	E	E	E	E	E	1.4	1.4	1.7	1.6	[1.6] <sup>f</sup>	1.7	1.6	1.5	1.3	1.4	1.2	1.2	E	E	E	E	E
21	E	E	E	E	E	E	E	E	1.2	2.0	1.8	1.8	1.8	2.1	1.8	1.8	1.2	1.1	E	1.1	1.2	1.2	1.2	1.2	1.2
22	E	E	E	E	E	E	1.4	1.2	1.5	1.6	1.8	2.0	2.1	2.1	1.9	1.9	1.6	1.2	1.2	1.2	E	1.3	B	2.0	
23	E	E	E	E	E	E	E	E	1.6	C	C	C	C	C	C	C	C	E	E	E	E	E	E	E	E
24	E	E	E	E	E	E	E	E	1.5	1.7	1.7	1.6	1.5	1.4	1.4	1.4	1.3	1.2	1.1	E	E	E	E	B	1.5
25	1.5	1.2	1.2	E	E	E	E	E	1.2	1.3	1.2	1.3	1.2	1.4	1.2	1.2	1.2	1.3	1.4	1.3	1.4	1.2	C	B	B
26	E	E	1.8	E	E	E	E	1.2	E	1.3	1.3	1.5	1.6	1.6	1.5	1.6	1.5	1.2	1.2	E	E	E	E	E	E
27	E	C	E	E	E	1.3 <sup>F</sup>	1.3	1.4	1.4	1.2	1.4	1.7	1.7	1.6	1.5	E	E	E	E	E	E	E	E	E	E
28	E	E	E	1.5	E	E	E	1.2	1.3	1.3	1.4	[1.6] <sup>f</sup>	1.8	1.8	1.7	1.3	E	E	E	E	E	E	E	E	E
29	E	E	E	E	E	E	E	1.4	1.4	1.4	1.5	1.2	1.2	1.2	1.7	1.2	1.2	E	E	E	E	1.4	E	E	E
30	E	E	E	E	E	E	E	1.4	E	1.1	1.2	1.3	1.4	1.4	1.4	1.4	1.2	1.3	E	1.2	E	E	E	E	E
31																									
Median Value	E	E	E	E	E	E	E	1.2	1.3	1.3	1.4	1.6	1.6	1.8	1.6	1.4	1.2	1.1	1.1	E	E	E	E	E	E
Count	28	27	28	28	28	30	30	29	29	28	28	28	28	28	28	28	28	28	29	28	28	28	27	20	24

Sweep 1.0 Mc to 4.4 Mc in 1.5 min Manual



Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

30F2

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	6.7	6.3	5.7	5.9	5.8	6.5	8.7	9.4	10.8	11.9	12.1	12.3	12.4	12.7	11.5	11.3	11.7	11.6	10.5	6.5	6.4	7.3	8.0	7.7
2	6.9	7.3	7.3	5.6	5.6	5.8	8.7	10.0	10.9	11.8	12.6	12.0	12.5	11.9	11.8	11.9	12.2	11.3	10.7	9.4	7.0	7.4	7.7	7.9
3	7.2	7.8	7.1	6.4	5.6	6.0	8.4	10.1	11.0	12.5	13.2	13.4	13.1	12.9	11.9	11.7	10.1	11.1	10.6	8.2	8.0	8.0	7.8	6.5
4	9.0	6.4	5.7	5.9	6.2	5.7	8.1	9.1	10.6	11.1	10.6	12.3	12.3	11.8	10.3	10.6	10.6	10.3	8.4	8.4	8.5	6.6	6.6	6.7
5	6.8	6.8	6.6	5.9	6.0	6.0	8.1	9.3	11.3	12.6	13.9	13.9	13.6	13.8	13.4	11.8	11.9	11.0	9.6	8.1	6.7	6.9	7.0	6.6
6	6.8	6.9	5.6	5.3	4.6	4.5	5.7	8.1	8.5	10.5	A	11.0	10.9	10.2	10.3	10.0	9.4	11.0	10.7	8.2	5.1	6.9	6.9	6.6
7	6.1	5.8	5.5	5.6	4.8	5.2	7.3	8.0	9.5	10.4	11.6	11.1	11.5	11.8	12.0	11.4	10.7	10.0	9.6	8.4	6.8	7.0	6.8	6.8
8	6.8	7.1	7.6	5.5	4.7	5.2	7.4	8.7	9.5	11.0	11.7	12.1	12.7	12.0	12.0	11.9	11.7	11.0	10.2	8.5	8.2	8.6	8.4	8.4
9	7.5	7.3	6.9	7.0	7.6	9.7	10.6	10.6	10.9	11.5	11.7	12.1	12.7	12.4	12.1	12.4	12.1	11.3	10.7	9.6	8.2	7.1	7.5	7.6
10	A	7.1	A	6.8	5.8	6.2	7.5	9.0	10.5	11.3	12.5	13.0	12.4	12.0	11.1	10.9	10.4	9.8	10.1	10.0	8.1	7.0	6.8	6.8
11	6.8	6.6	6.5	6.4	6.1	6.5	8.0	9.2	10.5	11.5	11.3	11.5	12.6	12.8	12.4	12.3	12.2	11.8	10.1	10.0	8.1	7.0	6.8	6.8
12	7.3	7.3	6.7	6.7	6.4	7.3	9.4	10.4	11.0	11.3	11.3	11.3	12.2	12.4	12.5	12.0	12.0	11.7	11.5	10.5	7.6	6.5	6.3	6.5
13	7.2	7.3	6.7	6.3	5.7	6.0	8.3	9.5	10.8	11.7	12.1	12.3	12.1	12.6	11.8	11.7	11.6	11.7	11.6	10.4	8.3	8.1	7.8	7.5
14	7.4	7.1	6.8	6.7	6.8	7.3	9.7	10.6	10.6	11.7	12.1	12.2	12.6	12.0	11.9	11.6	11.0	11.0	10.9	9.9	8.8	8.1	7.4	7.5
15	7.4	7.1	6.8	6.8	6.5	7.2	8.6	9.8	10.1	10.4	11.0	12.1	12.2	12.4	11.5	11.5	11.8	11.4	11.7	11.6	8.8	7.5	7.6	7.4
16	6.8	7.0	7.0	7.0	7.0	7.6	9.5	9.8	10.3	10.8	11.0	11.3	11.4	11.8	12.3	12.4	12.0	11.7	11.0	9.4	8.4	7.9	7.6	7.7
17	7.5	7.4	7.2	7.6	7.0	8.0	9.8	11.0	11.3	11.6	10.6	11.3	12.0	11.8	12.5	11.7	11.5	10.9	10.8	10.2	8.6	7.9	7.8	7.6
18	7.5	7.6	7.3	6.7	6.1	5.9	9.0	10.1	10.1	10.2	10.3	10.5	12.0	11.8	12.0	12.6	12.6	12.0	11.3	9.5	8.0	7.2	7.0	7.0
19	6.9	6.9	7.1	7.6	6.3	7.1	8.0	9.0	10.1	10.7	10.3	11.8	12.5	12.7	12.0	12.6	11.7	10.9	11.0	8.9	7.0	5.9	6.7	7.0
20	6.5	6.5	5.9	6.0	6.2	6.7	C	9.6	10.0	10.3	12.7	13.0	13.6	12.9	12.5	11.6	11.6	11.4	11.1	8.4	A	7.2	A	8.1
21	7.9	7.5	7.4	6.6	6.1	5.5	7.1	7.2	8.6	8.8	7.9	8.5	9.1	11.0	10.3	9.5	9.4	8.6	8.9	8.3	6.8	6.4	7.0	6.7
22	6.5	7.0	S	6.6	6.2	7.2	8.3	8.1	8.9	10.5	10.9	12.4	13.0	12.5	12.3	12.2	11.7	11.2	10.9	10.1	7.5	8.5	B	7.7
23	7.9	7.8	7.6	7.8	6.4	7.4	8.9	9.0	9.3	10.4	11.0	11.4	11.4	12.2	12.3	12.2	11.5	11.1	10.8	10.3	8.6	8.5	8.0	8.0
24	7.8	7.5	(7.0)	7.6	6.3	7.8	8.7	9.0	9.5	9.6	11.0	11.4	11.4	12.2	12.4	12.5	11.6	11.2	10.2	7.8	7.5	7.1	7.8	7.7
25	7.5	7.4	7.2	6.6	5.8	5.7	8.3	7.2	8.1	9.0	8.4	8.6	9.9	10.6	10.7	11.1	10.2	9.8	9.5	9.5	8.7	8.2	7.6	7.2
26	7.0	7.1	6.9	6.8	6.7	6.7	9.3	9.4	9.4	9.1	7.9	8.6	9.9	11.3	12.0	12.7	12.6	11.1	11.0	10.7	9.6	8.3	8.0	8.1
27	8.0	8.1	7.6	6.8	6.2	7.3	8.4	9.2	9.4	10.2	10.8	11.0	11.0	12.4	12.7	12.5	11.6	11.2	10.2	7.8	7.5	7.1	7.8	7.7
28	8.8	8.2	7.9	7.0	6.0	7.0	8.0	9.0	8.7	9.3	10.2	11.0	11.5	11.7	11.4	11.6	11.1	11.0	10.6	10.3	9.8	9.6	8.7	8.2
29	8.3	7.8	7.1	6.7	6.6	5.5	7.0	6.8	7.6	8.9	9.0	8.9	8.9	10.1	10.1	9.4	9.4	8.6	8.4	8.1	7.0	7.6	8.0	7.8
30	7.7	7.2	7.1	7.0	6.5	6.9	7.4	8.7	8.8	9.0	10.1	10.6	11.1	11.1	11.3	11.1	11.6	10.3	9.4	9.7	7.4	8.5	7.2	8.4
31																								
Mean Values	7.3	7.2	7.0	6.7	6.2	6.6	8.4	9.2	9.6	10.5	11.0	11.6	12.2	12.0	12.0	11.7	11.6	11.0	10.7	9.4	8.0	7.4	7.6	7.5
Count	29	30	28	30	30	30	29	30	30	30	29	30	30	30	30	30	30	30	30	30	29	28	28	29

Sweep 1.0 Mc to 1.5 Mc in 1.5 min

Manual

Radio Regulatory Agency (Denpacho)

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

Lat. 39°43.5'N  
Long. 140°08.2'E

Akita

135° E Mean Time

IONOSPHERIC DATA

h<sub>p</sub>F<sub>2</sub>

Apr. 1950

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	370	460	450	430	370	280	280	300	300	310	330	330	340	340	340	340	320	290	310	340	370 <sup>H</sup>	400	380
2	410	360	340	310	430	400	300	280	(280) <sup>C</sup>	290	310	340 <sup>H</sup>	320	320	340	340	320	300	300	320	340	420	380	380
3	380	390	350	360	420 <sup>H</sup>	450	310	310	340	300	330 <sup>H</sup>	330	340	340	310	320	310 <sup>B</sup>	310	280	340	360	340	400	360
4	380	380	330	410	430	410	270	280	310	300	320	350	300	310	310	320	320	300 <sup>H</sup>	280 <sup>H</sup>	(300) <sup>H</sup>	310	390 <sup>H</sup>	440	420
5	420 <sup>H</sup>	400	350	400 <sup>H</sup>	440	380	300	320	310	320	290	320	320	330	310	340	300	290	280	320	400	430	420	430
6	450 <sup>F</sup>	400	440 <sup>V</sup>	420	440	450	370	310	350	320	A	740	710	720	710	720	290	300	700	260	260	430	420	430
7	420	400	380	360	380	380	310 <sup>F</sup>	700	290	310	300	320	340	360	330	710	710	300	290	300	380	400	400	440
8	340	390	310	340	390 <sup>H</sup>	370	260	300	290	300	320	(310) <sup>S</sup>	340	360 <sup>B</sup>	350	340	710	720	300	320	360	380	350	400
9	340	410 <sup>H</sup>	400	380	420 <sup>F</sup>	360	300	290	290	310	330	340	360	330	370	340	720	720	300	320	310	340	420	430
10	A	A	A	380 <sup>F</sup>	390 <sup>F</sup>	390 <sup>F</sup>	390 <sup>F</sup>	390 <sup>F</sup>	320	330	310	330	330	330	320	350	720	720	310	300	300	340	400	420
11	400	370	370	380	370	370	280	290	320	310	340	350	360	370	340	350	720	720	310	300	380	430	400	410
12	410	410	390	390	380	340	280	280	310	300	330	380	370	340	380	350	360	320	320	310	350	410	460	460
13	420	340	340	350	380	290	290	300	330	330	310	380	330	340	330	350	730	700	710	290	340	390	360	420
14	420	380	380	390	400	350	270	270	290	350	330	350	350	340	340	320	720	(320) <sup>S</sup>	310	310	340	370	380	380
15	400	420	360 <sup>H</sup>	410 <sup>H</sup>	370	330	280	290	290	300	360	370	350	350	(340) <sup>F</sup>	360	750	720	320	300	300	370	380	420
16	400	400	400	390	370	340 <sup>F</sup>	280	280	280	720	340	340 <sup>H</sup>	(360) <sup>F</sup>	350	350	730	730	330	300	290	330	350	380	420
17	390	390	340	360	390	310	310	300	310 <sup>H</sup>	300	310	360 <sup>H</sup>	350	360	330	730	710	300	310	300	(280) <sup>S</sup>	380	370	370
18	380	380	370	370	400	350	290	310	710	290	330	350	350	350	350 <sup>S</sup>	340	290	310	310	300	330	370	380	320
19	380	380	350	390	360	310	290	310	710	340	340	340	330	330	370	360	720	710	290	300	700 <sup>H</sup>	390	390	360
20	430	450	420	420	390	370	C	300	360	310	350	370 <sup>H</sup>	340	330	360	730	740	310	310	290	A	370	A	380
21	360 <sup>F</sup>	350	340	370	340	360	380 <sup>H</sup>	330	420	370 <sup>K</sup>	380 <sup>K</sup>	400 <sup>K</sup>	350	350	360	710	(320) <sup>F</sup>	310	320	310	370	430	420	420
22	410	390	S	340 <sup>S</sup>	350	310	280	270	360	350	350	330	320	330	360	730	710	300	310	300	340	400 <sup>B</sup>	430 <sup>B</sup>	430 <sup>B</sup>
23	390	390	380	350	340	300	270	290	300	310	730	710	760	740	340	730	730	310	330	330	340	370	400	400
24	420	410	BH	BH	(310) <sup>T</sup>	280	310	290	290	300 <sup>B</sup>	350	370	370	360	360	760	710	710	330	310	420	390	390	420
25	390	390	340	350	470	430	310	300	390 <sup>H</sup>	310	370 <sup>H</sup>	360 <sup>H</sup>	350	360	360	730	710	300	330	310	420	360	400	400
26	410	400	380	370	360	290	280	290	280	280	320 <sup>Z</sup>	350	340 <sup>H</sup>	380	340	710	720	710	310	320	310	370	390	390
27	370	370	360	350	390	310	300	300	300	320	720	750	750	780	350	730	720	720	330	330	760	380	390	390
28	360	400	350	350	360	340	270	280	300	350 <sup>F</sup>	(350) <sup>S</sup>	350	370	360	360	730	740	360	350	350	360	330	390	420
29	390	430	340	310	440	370	(370) <sup>K</sup>	390 <sup>K</sup>	340 <sup>K</sup>	340 <sup>K</sup>	340	360	360	340	330	720	720	290	300	340	360	410	440 <sup>H</sup>	440 <sup>H</sup>
30	430	420	420	370	330	330	350	320	710	360	720	720 <sup>H</sup>	360	370	350	730	730	320	720	720	780	410	450	400
31																								
Median Value	400	390	360	370	380	360	290	300	310	310	330	340	350	340	340	340	340	310	310	310	340	380	390	410
Count	29	29	27	29	30	29	29	30	30	30	29	30	30	30	30	30	30	30	30	30	30	28	28	29

Recep. J.OMC to J.OMC in 1.5 min

Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 34°47.5'N  
Long. 140°08.2'E

R'F2

Apr. 1950

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	290	280	240	330 <sup>A</sup>	320	280	240	250	240	220	220	280	280	290	300	280	260	250	230	220	260	280 <sup>H</sup>	310 <sup>A</sup>	300
2	300	260	250	220	300	290	270	270	230	230	250	230 <sup>H</sup>	290	280	270	280	280	250	240	220	220	290	290	280
3	280	280	250	270	270	360	250	270	290	250	220 <sup>H</sup>	250	270	300	270	300	270	260	230	230	270	250	280	290
4	270	270	290	240	310	310	210	230	250	230	210	250	270	280	220	290	240	250	250	240	250	240	320	340 <sup>H</sup>
5	300 <sup>H</sup>	300 <sup>A</sup>	280	240 <sup>H</sup>	320	240	240	240	240	270	250	270	270	260	270	300	260	250	220	270	260	220	300	320
6	320	280	270	280	330	350	260	240	310	290 <sup>A</sup>	A	320	280	300 <sup>A</sup>	290	300	270	240	270	220	220	A <sup>H</sup>	A <sup>F</sup>	A <sup>F</sup>
7	(330)	310	300	270	260	240	220	240	260	240	250	260	240	260	280	240	270	240	240	220	230	290	310	340
8	340	310	250	210	250 <sup>H</sup>	280	210	210	230	250	270	290	310	300	300	290	250	250	240	250	280	230	290	340
9	280	300 <sup>H</sup>	320	270	260	240	250	260	240	250	260	260	270	280	280	270	270	250	240	250	280	230	290	280
10	A	A	A	250 <sup>A</sup>	280 <sup>A</sup>	300	240	240	250	240	250	260	270	270	270	270	260	270	260	260	260	260	310 <sup>A</sup>	310
11	310 <sup>F</sup>	(340)	280	270 <sup>H</sup>	260	280	230	250	250	300 <sup>A</sup>	270	360	310	310	300	300	280	260	230	200	230	300 <sup>A</sup>	(300)	240
12	(300)	(300)	240	270	280	270	220	220	260	240	260	260	300	300	300	300	240	270	260	220	210	250	350	360
13	320	280	280	260	260	290	250	270	260	300	300	300	290	260	280	260	240	240	250	230	250	250	270	310
14	300	300	290	290	270	240	230	250	260	270	240	240	260	250	290	280	300	290	280	280	230	250	310 <sup>A</sup>	340
15	290	290 <sup>H</sup>	280	250	270	240	240	230	270	260	310	270	280	280	300	320	270	250	260	260	260	(260)	250	270
16	310	320	290	290	270	250	240	230	270	300	260	260	280	280	280	240 <sup>H</sup>	240	240	230	260	260	250	260	300
17	300	300	310	270	250	250	240	240	230 <sup>H</sup>	260	260	290	300	300	300	240	250	230	240	270	A	(280)	A	280
18	290	(310)	270	270	300	280	240	230	250	260	260	290	300	300	310	300	280	250	260	260	220	250	A	220
19	A	310 <sup>A</sup>	290	260	260	240	240	220	240	270	260	290	280	A	310	300	290	250	240	220	220	A	A	220
20	A	330	330	310	300	260	240	230	240	270	310	280 <sup>H</sup>	300	260	A	270	280	260	260	(270)	A	330 <sup>A</sup>	A	A
21	(270)	260	270	270	260	280	250	270	340	330 <sup>K</sup>	340 <sup>K</sup>	360 <sup>K</sup>	300	310	300	280	250	270	260	A	230	280	(300)	350
22	300	300 <sup>A</sup>	A	260 <sup>A</sup>	250	250	240	220	220	220	260	260	310	300	280	300	250	270	260	A	270	280	270	290
23	300 <sup>A</sup>	300 <sup>A</sup>	280	250	240	230	220	220	220	220	250	240	370	370	300	310	290	260	250	260	250	260	270	290
24	300	310	310 <sup>H</sup>	270 <sup>H</sup>	210	240	270	220	270	300	290	320	330	300	310	300	270	250	250	260	240	290	280	310
25	300	300	270	270	310	300	250	250	250 <sup>H</sup>	310	300 <sup>H</sup>	310	310	320	370	300	270	270	260	260	240	290	280	250
26	300	300	290	270	270	250	230	230	240	250	260	270	280	300	300	300	220 <sup>H</sup>	270	260	240	240	300	300	300
27	290	280	260	260	240	220	220	220	220	230	300	300	290	280	280 <sup>H</sup>	310	230	240	240	210	270	270	280	290
28	280	290	280	250	280	230	230	220	230	230	290 <sup>F</sup>	320	290	300	320	250	230	240	250	250	270	270	260	320
29	270	310	290	310	310	300	260	370 <sup>K</sup>	G	350 <sup>K</sup>	380 <sup>K</sup>	290	300	300	280	290	260	250	270	240	260	330 <sup>A</sup>	320	
30	320 <sup>A</sup>	320	330	300	220	270	230	230	300	320	290	290 <sup>H</sup>	340	310	300	300	290	240	240	260	260	270	250	330 <sup>F</sup>
31																								
Mean Value	300	300	280	270	270	280	240	230	250	260	260	290	290	300	290	290	260	250	250	240	250	280	290	300
Count	27	29	28	30	30	30	30	30	30	30	29	30	30	30	29	30	30	30	30	28	29	26	27	27

Sweep 1.0 Mc to 1.5 Mc in 1.5 min

Manual

A 3



Radio Regulatory Agency (Denpacho)

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

Apr. 1950

f<sub>o</sub>F<sub>1</sub>

135° E Mean Time

Lat. 39°43.5' N  
Long. 140°08.2' E

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						Q	Q	Q	Q	Q	Q	L	L	L	L	L	L	Q	Q					
2						Q	Q	Q	Q	Q	Q	Q	L	L	L	L	L	Q	Q					
3						Q	Q	Q	L	Q	Q	Q	L	L	Q	L	L	Q	Q					
4						Q	Q	Q	Q	Q	Q	Q	L	L	Q	L	L	Q	Q					
5						Q	Q	Q	Q	L	Q	Q	Q	Q	Q	B	L	Q	Q					
6						Q	Q	Q	L	A	A	L	A	A	L	(5.1) <sup>F</sup>	L	Q	Q					
7						Q	Q	Q	Q	Q	Q	Q	L	L	L	L	Q	Q	Q					
8						Q	Q	Q	Q	L	L	L	L	L	L	L	Q	Q	Q					
9						Q	Q	L	Q	Q	Q	Q	A	A	L	L	Q	Q	Q					
10						Q	Q	Q	Q	Q	Q	Q	Q	Q	L	L	Q	Q	Q					
11						Q	Q	Q	Q	A	A	L	L	L	L	L	L	Q	Q					
12						Q	Q	Q	L	Q	L	B	Q	Q	S	L	L	Q	Q					
13						Q	Q	Q	L	L	L	L	Q	Q	L	L	Q	Q	Q					
14						Q	Q	L	L	L	L	L	L	L	L	L	L	L	Q					
15						Q	Q	Q	L	L	B	Q	B	Q	S	B	B	Q	Q					
16						Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q					
17						Q	Q	Q	Q	L	L	Q	B	Q	S	Q	Q	Q	Q					
18						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	Q					
19						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	Q					
20						Q	Q	Q	Q	L	L	Q	Q	L	L	L	L	L	Q					
21						Q	Q	Q	A	Q	Q	5.8	A	L	L	L	L	Q	Q					
22						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	Q					
23						Q	Q	Q	Q	Q	Q	L	L	5.0	L	(4.6) <sup>L</sup>	Q	A	Q					
24						Q	Q	Q	A	L	B	L	L	L	L	L	L	L	A					
25						Q	Q	Q	Q	4.7	4.8	5.0	L	L	L	B	Q	A	A					
26						Q	Q	Q	Q	Q	Q	B	Q	B	B	B	A	A	Q					
27						Q	Q	Q	Q	Q	B	B	B	L	L	L	Q	Q	Q					
28						Q	Q	Q	Q	Q	L	L	L	L	L	L	Q	Q	Q					
29						Q	Q	L	L	(6.0) <sup>L</sup>	L	L	L	L	L	L	Q	Q	Q					
30						Q	Q	L	L	L	L	L	L	L	L	L	L	Q	Q					
31						Q	Q	Q	L	L	L	L	L	L	L	L	L	Q	Q					
Median Value																								
Count																								

Sweep LQMc to UQMc in 1.5 min Manual

A 4

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Apr. 1950

h'F1

Lat. 39°43.5'N  
Long. 140°08.2'E

Akita

IONOSPHERIC DATA

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	Q	Q	Q	230	210	240	230	230	210	Q	Q						
2						Q	Q	Q	Q	Q	Q	Q	220	220	220	250	240	Q	Q						
3						Q	Q	Q	240	Q	Q	Q	230	240	Q	220	230	Q	Q						
4						Q	Q	Q	Q	Q	Q	Q	Q	220	Q	250	Q	Q	Q						
5						Q	Q	Q	Q	230	Q	Q	Q	Q	B	260	Q	Q	Q						
6						Q	Q	Q	240	A	A	(220) <sup>A</sup>	A	A	240	220	230	Q	Q						
7						Q	Q	Q	Q	Q	Q	Q	260	Q	250	Q	Q	Q	Q						
8						Q	Q	Q	220	220	220	220	(270) <sup>B</sup>	(270) <sup>B</sup>	250	Q	Q	Q							
9						Q	Q	210	Q	Q	Q	Q	A	A	220	220	Q	Q	Q						
10						Q	Q	Q	Q	240	Q	Q	Q	Q	250	Q	Q	Q	A						
11						Q	Q	Q	Q	A	A	250	250	240	B	250	Q	Q	Q						
12						Q	Q	Q	240	Q	Q	Q	Q	Q	S	260	Q	A	Q						
13						Q	Q	Q	230	240	250	260	Q	Q	230	Q	Q	Q	Q						
14						Q	Q	220	210	220	230	240	220	Q	B	260	240	C	Q						
15						Q	Q	Q	230	220	B	Q	B	Q	S	B	B	Q	Q						
16						Q	Q	Q	Q	220	230	Q	B	B	S	Q	Q	Q	Q						
17						Q	Q	Q	Q	240	260	210	B	B	240 <sup>B</sup>	Q	Q	Q	Q						
18						Q	Q	Q	Q	240	230	210	220	220	240	240	240	220	Q						
19						Q	Q	Q	Q	Q	A	B	A	A	280	250	270	Q	Q						
20						Q	Q	Q	Q	240	240	Q	Q	220	A	Q	Q	Q	A						
21						Q	Q	Q	A	Q	Q	A	A	A	240	230	240	Q	Q						
22						Q	Q	Q	Q	220	220	210	220	230	230	250	Q	A	Q						
23						Q	Q	Q	Q	Q	Q	220	240	260	280	260	Q	240	A						
24						Q	Q	Q	A	270 <sup>A</sup>	B	210	220	B	250	A	260	240	Q						
25						Q	Q	Q	Q	230	230	220	B	B	B	B	Q	A	A						
26						Q	Q	Q	Q	Q	Q	B	B	B	B	B	A	A	Q						
27						Q	Q	Q	Q	Q	Q	B	B	B	240 <sup>B</sup>	220	Q	Q	Q						
28						Q	Q	Q	Q	Q	240	220	230	240	250	Q	Q	Q	Q						
29						Q	Q	B	240	250	240	250 <sup>A</sup>	230	250	Q	250	Q	Q	Q						
30						Q	Q	Q	230	210	240	230	210	230	220	240	220	Q	Q						
31																									
Median Value									240	230	230	220	220	240	240	250	240	-							
Count								2	8	14	13	15	15	14	18	18	11	3							

IONOSPHERIC DATA

Apr. 1950

f<sub>o</sub>E

135° E Mean Time

Akita

Lat. 39°43.5'N  
Long. 140°08.2'E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1																									
2						A	2.4	(2.4) <sup>N</sup>	3.1	3.2	3.2	3.2	3.6	3.6 <sup>H</sup>	3.6	3.3	3.1 <sup>B</sup>	2.6 <sup>H</sup>	2.1						
3						E	2.3 <sup>H</sup>	2.8	3.2	3.3	B	B	B	3.7	(3.5) <sup>B</sup>	A	(3.0) <sup>A</sup>	2.6	A						
4						B	2.2 <sup>H</sup>	2.7	3.2 <sup>F</sup>	B	B	B	B	B	3.4 <sup>B</sup>	3.4 <sup>A</sup>	(2.9) <sup>A</sup>	2.6 <sup>H</sup>	1.9 <sup>F</sup>						
5						1.2	(2.2)	3.0	3.2	3.5	3.5	3.8 <sup>H</sup>	3.8	3.8 <sup>H</sup>	3.7	(3.4) <sup>B</sup>	3.1 <sup>B</sup>	2.6 <sup>F</sup>	1.9 <sup>H</sup>						
6						E	2.3 <sup>H</sup>	2.0 <sup>H</sup>	3.2 <sup>H</sup>	3.6	B	B	B	B	B	B	A	2.7	1.8						
7						1.4 <sup>B</sup>	2.2 <sup>A</sup>	2.9 <sup>F</sup>	3.3 <sup>F</sup>	3.5	A	B	B	A	A	A	A	2.6 <sup>H</sup>	1.9						
8						(1.4) <sup>A</sup>	N	(3.0)	3.4	3.6	A	B	B	A	(3.5) <sup>B</sup>	3.5 <sup>B</sup>	3.0	2.6	1.9 <sup>H</sup>						
9						1.4 <sup>B</sup>	2.5 <sup>H</sup>	2.8	3.5 <sup>H</sup>	3.5	(3.5) <sup>B</sup>	(3.7) <sup>B</sup>	A	B	A	A	A	A	A						
10						B	2.2	2.8 <sup>H</sup>	3.5	A	A	B	A	A	A	A	A	A	A						
11						B	A	A	A	A	B	B	A	A	B	B	A	A	A						
12						1.5	2.3	3.0	3.4	A	A	A	A	A	A	B	A	3.3	2.7	1.9 <sup>B</sup>					
13						1.4	2.6 <sup>H</sup>	3.0	3.3	A	B	B	3.7 <sup>J</sup>	3.6	S	B	3.2	A	1.7						
14						1.6	2.4	A	3.3	3.4 <sup>J</sup>	B	B	B	B	B	3.4	B	3.1	2.6 <sup>F</sup>	2.0					
15						1.8 <sup>B</sup>	2.4	B	3.6	3.6	(3.5) <sup>N</sup>	B	B	B	B	B	3.6	A	C	1.9 <sup>H</sup>					
16						1.6 <sup>B</sup>	2.4 <sup>H</sup>	3.0 <sup>H</sup>	3.6	B	B	B	B	B	B	S	B	B	2.8	A					
17						1.3	2.3	2.8	3.3	3.6	3.7	B	A	B	S	B	B	2.7 <sup>H</sup>	1.7						
18						(1.3) <sup>A</sup>	2.0	2.9	3.2	A	A	A	A	A	3.8	A	(3.1) <sup>A</sup>	2.8	A						
19						1.6	2.6	3.1	3.5 <sup>H</sup>	3.5	A	A	A	3.5	3.5 <sup>J</sup>	3.2 <sup>J</sup>	3.2	3.0	A						
20						1.8	2.5 <sup>H</sup>	2.8	A	3.7	A	B	B	B	3.6	(3.2) <sup>N</sup>	3.5	A	2.6	(2.5) <sup>N</sup>					
21						1.6	2.5 <sup>H</sup>	3.0	3.5	B	A	B	B	A	A	A	A	3.0	2.7	A					
22						(1.7) <sup>A</sup>	2.3	2.6	A	3.4	3.6	3.6	B	A	A	A	A	2.6	A						
23						1.6	2.5	3.0	3.3	3.4	3.5	3.7	B	3.6	B	3.2 <sup>A</sup>	3.2	2.7	B						
24						1.8	2.4 <sup>H</sup>	3.1	(3.4) <sup>H</sup>	3.6	3.6 <sup>B</sup>	3.8	B	B	(3.6) <sup>B</sup>	AH	3.1	2.6	(1.8) <sup>B</sup>						
25						B	A	7.1	A	B	B	B	B	B	3.6	3.6	3.2	2.6	1.9 <sup>A</sup>						
26						1.7 <sup>B</sup>	2.7 <sup>H</sup>	2.9 <sup>H</sup>	3.2 <sup>H</sup>	3.3	B	B	B	B	B	B	B	2.8	A						
27						1.8 <sup>H</sup>	2.4	3.0	3.4	3.7	B	B	B	B	B	B	A	A	2.6 <sup>N</sup>						
28						1.9 <sup>F</sup>	2.6 <sup>F</sup>	3.2	3.3	3.5	B	B	B	B	B	3.6	3.5	3.2	2.8	1.8					
29						1.9	2.5	3.2	3.4	3.6 <sup>J</sup>	3.6 <sup>J</sup>	3.7 <sup>H</sup>	3.7	3.7 <sup>H</sup>	3.6 <sup>B</sup>	3.6	3.2	2.8	1.8						
30						1.5 <sup>B</sup>	2.6	B	B	3.7	(3.7) <sup>A</sup>	B	B	3.8	3.8	3.3 <sup>J</sup>	3.0	2.6	1.8 <sup>B</sup>						
31						1.9 <sup>H</sup>	2.6	3.0	3.5	B	B	3.7 <sup>B</sup>	B	B	3.4	A	(3.0) <sup>J</sup>	2.8	1.9						
Median Value	1.6	2.4	3.0	3.3	3.5	3.6	3.7	-	3.6	3.6	3.4	3.1	2.7	1.9											
Count	2.5	2.7	2.6	2.5	2.0	1.0	4	9	1.6	1.2	1.9	2.5	1.9												

Sweep 1.5 Mc to 13.5 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Lat. 39°47.5'N  
Long. 140°08.2'E

Apr. 1950

4'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						A	150	120	120	110	110	110	110	110 <sup>H</sup>	110	110	110	110 <sup>H</sup>	110					
2						E	140 <sup>H</sup>	110	110	110	110	110	110	110	110	110	A	110	A					
3						B	BH	120	110	120	120	120	120	120	110	A	A	110 <sup>H</sup>	100 <sup>F</sup>					
4						B	110	100	110	100	100	100	100	100 <sup>H</sup>	110	110	110	120	BH					
5						E	110 <sup>H</sup>	120	110 <sup>H</sup>	110	B	B	B	110	110	110	A	110	B					
6						110 <sup>B</sup>	130	110	110	110	A	110	B	A	A	A	A	110 <sup>H</sup>	B					
7						A	120	A	110	110	A	110	110	A	100	100	110	100	BH					
8						B	100 <sup>H</sup>	100	100 <sup>H</sup>	110	110	110	110	B	A	A	A	A	A					
9						B	B	120 <sup>H</sup>	110	A	A	120	A	A	A	A	A	100	A					
10						B	A	A	A	A	B	B	A	A	A	B	110	A	A					
11						110	130	120	110	A	A	A	A	110	110	110	110	110	130 <sup>B</sup>					
12						B	110 <sup>H</sup>	110	110	A	110	B	100	110	S	B	120	A	B					
13						B	100	A	100	110	120	120	110	120	110	100	100	120	100					
14						B	110	110	110	100	110	110	110	B	B	120	110	110	120 <sup>H</sup>					
15						B	120 <sup>H</sup>	110 <sup>H</sup>	110	B	B	B	B	B	B	S	B	110	110	A				
16						B	110 <sup>H</sup>	110	110	110	110	110	A	110	110	120	110	110 <sup>H</sup>	110 <sup>H</sup>					
17						150	120	110	110	A	A	A	A	A	110	A	110	110	A					
18						B	100	110	100 <sup>H</sup>	110	110 <sup>A</sup>	110 <sup>A</sup>	110 <sup>A</sup>	110	110	110	110	120	A					
19						B	120 <sup>H</sup>	110	110 <sup>A</sup>	110	A	110	110	110	100	110	A	100	120					
20						B	110 <sup>H</sup>	110	110	110	A	B	B	A	A	110 <sup>A</sup>	120	120	A					
21						A	120	110	A	120	110	110	B	A	A	A	110	110	A					
22						B	120	110	110	110	110	110	100	110	110	110	110	110	B					
23						B	100	100	100 <sup>H</sup>	110	110	110	110	110	110	110 <sup>H</sup>	110	110	B					
24						B	A	110	A	100	100	100	110	100	100	100	110	110	A					
25						B	120 <sup>H</sup>	110 <sup>H</sup>	120 <sup>H</sup>	110	110	110	B	B	B	110	110	110	A					
26						110 <sup>H</sup>	110	100	110	110	B	B	110	B	B	110	A	110 <sup>A</sup>						
27						BH	120 <sup>H</sup>	110	110	110	110	B	B	110	110	110	110	120						
28						160 <sup>B</sup>	120	110	110	110	110	110	110	110 <sup>H</sup>	110	120	110	120						
29						B	110	110	110	100	100	100	110	110	110	110	120	120						
30						BH	110	110	110	110	110	110	B	B	110	110	110	110	120					
31																								
Median Value						150	120	110	110	110	110	110	110	110	110	110	110	110	120					
Count						T	26	27	27	24	19	21	17	17	19	20	22	26	12					

Sweep 1.5 Mc to 17.5 Mc in 1.5 min

Manual

IONOSPHERIC DATA

fEs

Apr. 1950

Lat. 34°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	2.2	2.1	2.0	1.9	G	2.3 <sup>Y</sup>	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	2.2	4.0 <sup>B</sup>	3.8	
2	G	G	2.3	2.2 <sup>F</sup>	2.6 <sup>F</sup>	G	G	G	G	G	G	G	G	G	G	4.0	3.8	G	3.6	G	G	G	G	G	
3	G	G	G	G	G	G	G	3.6 <sup>Y</sup>	G	G	G	G	G	G	G	3.8	3.2	G	G	G	G	G	G	G	
4	G	G	G	G	G	G	G	G	4.0	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	
5	2.2	2.3	2.0	G	G	G	G	G	G	G	G	B	B	B	B	B	G	G	G	G	2.2	G	G	G	
6	G	G	2.2	2.2	1.9	G	3.6 <sup>Y</sup>	4.4 <sup>Y</sup>	4.4 <sup>Y</sup>	6.7	11.3 <sup>F</sup>	5.9 <sup>Y</sup>	7.0	6.4	4.2	3.4	3.4	G	G	2.4 <sup>F</sup>	2.2	4.2	4.7	4.8 <sup>F</sup>	
7	6.8	6.4 <sup>F</sup>	4.4	3.0	2.4	G	G	4.0	G	G	4.2	4.8 <sup>Y</sup>	5.4 <sup>Y</sup>	4.6	G	G	G	G	G	2.8	G	G	G	G	
8	G	G	G	G	G	G	G	G	G	G	G	G	4.7	B	3.8	3.6	3.6	2.6	3.8	G	G	3.2	2.4	2.8	
9	3.2	2.8	2.4	1.5	1.6	G	G	G	G	4.6	4.8	B	6.8	5.4	4.1	4.4	3.5	G	3.5	3.4	3.4	7.4 <sup>B</sup>	5.0	3.8	
10	7.4	6.6	7.2	6.6 <sup>Y</sup>	3.8	3.7	3.7	4.8	4.8	4.3	B	B	5.6	4.0	G	B	G	3.8	6.2	6.8	10.4	7.5	6.6	4.0	
11	4.4	4.6	3.2	4.0	1.6	G	G	4.8	4.6	7.0	5.5	4.6	4.4	G	B	G	G	G	G	3.2	3.0 <sup>B</sup>	2.6	4.6	3.4	
12	3.0	2.6	3.2	G	G	G	G	G	G	4.0	B	B	G	G	S	G	G	5.0	G	G	G	G	G	G	
13	3.1	3.2	G	2.2	G	G	G	G	G	G	B	B	B	B	G	G	G	2.8	G	1.8	G	G	G	G	
14	G	G	G	G	G	G	3.2 <sup>Y</sup>	G	G	G	G	B	B	B	B	G	G	G	G	3.1	2.6	10.3	7.4	3.8	2.5
15	G	G	G	G	G	G	G	G	G	G	B	B	B	B	S	B	B	G	2.3	4.4	6.2 <sup>F</sup>	2.4	G	G	
16	2.2	3.4	2.4	2.2	G	G	G	G	G	(5.8 <sup>Y</sup> )	G	4.5 <sup>Y</sup>	4.5	B	S	G	G	G	3.2	3.2	3.2	2.4	G	G	
17	G	G	G	G	G	G	G	G	G	4.0	4.0	B	4.0	G	S	G	G	4.2	5.8	5.6	5.6	2.2	2.2	G	
18	G	3.6 <sup>B</sup>	G	G	G	G	G	G	G	4.4	4.4	4.4	4.1	G	G	G	G	G	4.2	3.0	3.0	7.0	3.2	2.8	
19	3.6	3.0	G	G	G	G	G	4.5	G	G	4.6	4.8 <sup>B</sup>	B	10.4	8.7 <sup>Y</sup>	4.3 <sup>Y</sup>	6.8	G	G	2.4	2.2	4.0	4.8	3.4	
20	3.4	2.4	G	G	G	G	G	G	G	B	6.8	B	B	5.0	(13.3)	3.8	5.4	3.4	(7.0)	6.4	8.6	3.4	4.2	6.0	
21	3.6	3.0	2.8	3.8	3.2	2.3	G	3.4	6.2	5.2	6.2	5.8	6.8	5.4	4.9	4.8	G	G	2.8	2.8 <sup>B</sup>	2.8	2.0	2.2	1.8	
22	1.8	3.0	4.6	3.6	3.7	G	G	G	G	G	G	G	G	G	G	G	G	4.2	3.6	3.2	3.2	3.6	3.4	(3.0) <sup>B</sup>	
23	2.6	2.4 <sup>Y</sup>	2.1	G	G	G	G	G	G	G	B	G	G	B	B	G	G	3.8 <sup>Y</sup>	4.8	3.0	G	2.6	2.5	G	
24	G	G	G	G	G	G	G	G	5.0	5.0 <sup>Y</sup>	B	G	G	B	G	5.6	G	4.2	3.8	2.8	2.3 <sup>Y</sup>	2.1	2.3	2.6	
25	2.3	2.0	G	G	G	G	G	G	G	G	G	G	B	B	B	B	B	5.2	7.2	4.3	5.4	3.0	3.4	3.2 <sup>B</sup>	
26	2.8	G	G	G	2.2 <sup>Y</sup>	G	G	G	4.8 <sup>Y</sup>	G	B	B	B	B	B	B	6.2	5.0	3.2	3.2	5.2	4.0 <sup>F</sup>	3.0	(2.4)	
27	(3.0) <sup>F</sup>	G	G	G	G	G	G	G	G	G	B	B	B	B	G	G	G	G	G	2.7	2.7	3.2 <sup>Y</sup>	G	G	
28	G	G	G	G	G	G	G	G	G	G	G	4.4	G	G	G	G	G	3.8 <sup>Y</sup>	G	G	3.0	G	3.4	G	
29	G	G	G	G	G	G	G	G	G	G	G	4.6	G	G	G	G	G	G	G	G	2.4	2.4	2.4	2.2	
30	3.0 <sup>B</sup>	2.5 <sup>B</sup>	G	G	G	G	G	G	G	G	4.6 <sup>Y</sup>	G	B	B	G	G	3.7 <sup>Y</sup>	G	G	3.2	2.4	3.2 <sup>B</sup>	3.2 <sup>B</sup>	3.8	
31																									
Median Value	2.2	2.2	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	2.4	2.8	2.4	2.6	2.4	2.3	
Count	30	30	30	30	30	29	30	29	30	28	23	19	21	18	21	25	28	29	30	30	30	30	30	30	

Sweep 1.0-Mc to 17.0-Mc in 1.5 min

Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

(M3000)F2

135° E Mean Time

Akita

Lat. 39°43.5' N  
Long. 140°08.2' E

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

Sweep 100 Mc to 11 Mc in 15 min Manual

A 9



Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Lat. 39°43.5'N  
Long. 140°08.2'E

Akita

136° E Mean Time

IONOSPHERIC DATA

5 min F

Apr. 1950

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	1.1	1.4	1.4 <sup>A</sup>	1.2	1.4	2.4	2.8	3.3	3.5	3.7	4.0	4.0	4.0	3.8	3.5	3.2	2.6	2.1	1.4	1.4	1.4	A	A
2	1.4	1.2	1.2	E	1.2	1.2	2.3	2.8	3.2	3.6	4.0	4.2	4.0	4.0	3.6	3.4	3.0	2.6	A	1.8	1.7	1.5	1.6	1.5
3	1.2	1.1	1.5	1.2	1.2	1.3	2.2	2.8	3.2	3.8	4.0	4.0	4.2	4.2	3.9	3.4	2.9	2.6 <sup>F</sup>	1.9 <sup>F</sup>	1.4	1.4	1.4	1.4	1.4
4	1.3	1.5	1.4	1.4	1.4	1.2	2.2	3.0	3.2	3.8	3.6	4.0	3.9	3.9	3.9	3.6	3.1	2.7	1.9	1.4	1.4	1.4	1.4	1.4
5	1.4	A	E	E	1.2	E	2.3	2.9	3.8	4.0	N	4.2	4.4	4.2	5.0	4.5	A	2.8	1.8	1.5	1.5	1.7	1.5	1.5
6	1.2	1.1	1.1	1.2	1.1	1.4	2.2	3.0	3.4	A	A	A	A	4.2	A	3.4 <sup>A</sup>	3.2	2.6	1.9	1.4	1.5	A	AF	A
7	A	1.5	1.6 <sup>A</sup>	1.2	1.2	1.4	N	3.0	3.8	4.0	4.2 <sup>A</sup>	5.0	4.8 <sup>A</sup>	4.6 <sup>A</sup>	4.0	3.6	3.1	2.6 <sup>F</sup>	1.9	1.8	1.6	1.6	1.6	1.4
8	1.2	1.2	1.1	1.1	1.2	1.4	2.5	2.8	3.5	3.7	4.0	4.1	4.0	5.2	5.0	5.0	2.2 <sup>A</sup>	A	2.2 <sup>A</sup>	A	1.9	1.8	A	A
9	1.2	A	1.2	1.3	1.2	1.4	2.2	2.8	3.5	4.8	4.8	4.8	A	A	A	A	3.3	3.7	1.8	A	A	A	A	A
10	A	A	A	1.4 <sup>A</sup>	A	A	A	A	3.6	5.0	5.0	4.4	4.4	5.0	3.8	4.6	3.1	2.9 <sup>A</sup>	A	A	AF	A	A	A
11	A	A	1.7 <sup>A</sup>	(1.8 <sup>A</sup> )	1.4	1.6	2.4	3.3	3.6	A	A	4.8	5.4	4.6	5.6	5.2	3.7	2.8	2.0	1.8 <sup>A</sup>	A	A	A	A
12	A	A	E	1.2	1.1	1.4	2.6	3.2	3.7	4.6	4.0	5.0	5.0	5.0	5.6	4.2	3.3	A	1.8	1.6	1.4	1.4	1.4	1.4
13	1.4	A	1.4	1.5 <sup>A</sup>	1.3	1.6	2.5	3.3	3.5	4.6	5.0	4.8	5.0	4.8	3.6	4.3	3.2	2.7	2.0 <sup>F</sup>	1.9	1.4	1.4	1.4	1.3
14	1.2	1.2	1.2	1.2	1.2	2.0	2.4	4.0	4.0	3.9	4.2	4.2	4.1	4.2	5.2	3.9	3.4	{2.7}	2.0	1.7	1.9 <sup>A</sup>	A	A	1.4
15	1.2	1.4	1.4	1.5	1.4	1.6	2.4	3.0	4.0	4.0	5.7	4.4	5.2	4.8	7.0	6.0	5.0	3.0	4.0	A	A	1.2	1.2	1.4
16	1.2	A	1.1	1.1	1.3	2.3	3.2	3.2	3.6	4.1	4.1	5.0	5.5	5.2	5.2	4.0	4.2	2.8	1.8	A	1.8 <sup>A</sup>	1.4	1.3	1.2
17	E	1.1	E	1.2	1.4	N	3.4	3.6	3.6	5.0	4.0	5.0	4.3	5.0	4.1	3.9 <sup>A</sup>	3.2	2.8	A	A	A	A	1.8	1.2
18	E	A	E	E	E	1.6	2.6	3.3	3.5	3.9	4.1	4.1 <sup>A</sup>	4.0	4.1	4.2	4.0	N	N	A	A	A	A	A	A
19	A	A	E	E	E	1.8	2.5	2.9	4.3	4.4	A	A	5.2	A	A	3.7	A	A	2.6	2.6	1.6	1.6	A	A
20	A	1.4	1.4	1.2	1.2	1.7	2.6	3.0	3.6	4.0	A	5.0	5.0	4.2	A	4.2	A	2.8	A	A	A	A	1.6 <sup>A</sup>	A
21	A	1.6	1.4	A	1.8 <sup>A</sup>	1.8	2.6	3.2	A	A	A	A	A	A	A	A	3.6	2.8	2.2	A	1.4	1.4	1.4	1.4
22	1.4	A	A	A	1.6 <sup>A</sup>	1.5	2.5	3.2	3.6	3.8	4.0	4.3	4.1	4.2	4.2	4.0	3.3	A	A	A	1.4	1.4	A	A
23	A	A	E	E	E	1.8	2.7	3.8	3.8	3.8	3.8	4.2	4.4	4.8	5.2	4.0	3.9	2.9	A	1.8	1.8	A	1.2	1.2
24	1.2	1.2	1.2	E	E	2.4	N	4.0	A	A	5.4	4.1	4.4	5.2	4.4	4.0	3.6	A	1.9	1.6	1.8	1.5	1.6	A
25	1.5	1.3	E	E	E	1.8	2.8	2.9	4.1	3.8	4.0	3.9	4.8	5.3	5.8	4.7	4.0	2.8	A	A	A	A	A	A
26	1.4	1.4	1.3	1.2	1.4	1.8	2.7	3.3	3.5	3.7	3.8	5.2	4.6	5.3	5.6	5.0	4.0	2.8	A	2.6	1.6	A	A	A
27	1.6	1.2	E	E	E	1.9 <sup>F</sup>	2.8	3.3	3.9	4.1	6.5	6.2	5.2	4.7	4.0	3.8	3.3	2.8	2.1	1.7	1.6	1.6	1.4	1.3
28	1.1	1.1	E	E	1.1	1.9	2.8	3.6	3.6	3.9	4.3	4.2	4.3	4.4	4.6	4.2	3.6	3.0	2.2	1.8	A	1.3	1.2	1.2
29	1.2	1.2	1.2	1.3	1.4	1.8	2.6	4.4	3.6	4.0	4.3	A	4.0	4.4	4.6	3.9	3.6	2.6	2.1	1.6	1.8 <sup>A</sup>	A	1.6	1.6
30	A	1.6	1.6	1.6	1.2	1.9	2.8	3.4	4.0	4.0	4.5	4.5	4.3	4.2	3.6	4.0	3.7	2.8	2.4	A	1.8	1.8	1.7 <sup>A</sup>	A
31																								
Median Value	1.2	1.2	1.2	1.2	1.2	1.6	2.5	3.2	3.6	4.0	4.1	4.4	4.4	4.6	4.4	4.0	3.3	2.8	2.0	1.6	1.6	1.6	1.4	1.4
Count	21	19	28	28	29	29	26	29	28	26	24	26	26	26	26	25	24	24	24	18	20	16	17	16

Steep-LΔMc 14.7-Mc in 1.5 min

Manual

A 10

Radio Regulatory Agency (Denpacho)

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

IONOSPHERIC DATA

Apr. 1950

f<sub>min</sub>E

135° E Mean Time

Akita

Lat. 39°43.5' N  
Long. 140°08.2' E

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

Sweep 1.0 Mc to 1.7 Mc in 15 min

Manual

A 11



Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 35° 42.4' N  
Long. 139° 29.3E

Kokubunji Tokyo

135° E Mean Time

Apr. 1950

f<sub>o</sub>F<sub>2</sub>

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6.9	6.6	5.7	5.7	5.9	6.5	B	(11.0) <sup>B</sup>	T	12.1	(12.4) <sup>F</sup>	12.2	12.1	12.5	11.9	11.8 <sup>F</sup>	11.7 <sup>F</sup>	11.7 <sup>H</sup>	10.2 <sup>J</sup>	7.6	8.0	7.5	(8.4) <sup>F</sup>	7.9
2	6.8	7.4	6.9 <sup>F</sup>	5.6	5.2	5.4	6.9 <sup>F</sup>	11.0 <sup>J</sup>	11.3 <sup>F</sup>	11.7	11.9	12.0	(12.6) <sup>B</sup>	(12.7) <sup>B</sup>	12.4	(12.6) <sup>B</sup>	(12.5) <sup>F</sup>	12.1	11.3	9.3	8.0	7.1	7.8	7.8
3	7.4	7.7	7.7	6.1	5.3	5.6	9.0	9.8	10.9	13.2 <sup>B</sup>	12.5	13.5	13.0	12.7	(12.7) <sup>C</sup>	12.2	12.1	11.9 <sup>P</sup>	11.6	9.0 <sup>J</sup>	S	(8.8) <sup>F</sup>	(8.1) <sup>F</sup>	(8.1) <sup>F</sup>
4	9.1 <sup>P</sup>	(7.4) <sup>F</sup>	6.6	6.1	6.2	5.3	9.5	9.9	11.8	11.7	12.0	12.5	13.1	12.5	11.3 <sup>H</sup>	11.0 <sup>J</sup>	11.1 <sup>H</sup>	11.3	(10.9) <sup>J</sup>	(9.9) <sup>J</sup>	8.2 <sup>H</sup>	6.3	6.4	6.7 <sup>R</sup>
5	6.8	6.7	6.5	5.4	5.5	6.1	7.5	10.1	12.1	13.8 <sup>F</sup>	13.9	14.4	13.7	13.7	13.4	12.6	12.5	11.8	(10.6) <sup>B</sup>	7.5	7.5 <sup>S</sup>	7.4 <sup>F</sup>	(7.4) <sup>B</sup>	7.4
6	6.7 <sup>H</sup>	6.9 <sup>H</sup>	5.7	5.3	4.9	4.5	7.1	B	(10.2) <sup>B</sup>	11.9	11.3	11.9	S	11.4	11.7	10.9	(10.1) <sup>F</sup>	10.0	11.1	(7.8) <sup>F</sup>	5.4 <sup>K</sup>	5.2 <sup>K</sup>	5.4 <sup>K</sup>	AK
7	6.0 <sup>K</sup>	6.0 <sup>K</sup>	5.7 <sup>K</sup>	5.4 <sup>K</sup>	4.9	4.7	7.2	8.6	10.1	10.8	11.8	12.2	10.6	12.2	13.4	12.3 <sup>F</sup>	11.1	10.6 <sup>F</sup>	9.9	8.4 <sup>J</sup>	6.8	7.0	7.2	6.8
8	6.9	7.2	7.5	5.8	4.0	4.9	7.9	8.9	9.8	(10.4) <sup>C</sup>	11.0	12.4	11.5	12.2	12.0	12.2	11.6	10.6	9.9	8.9 <sup>J</sup>	6.7	8.9	8.3	8.0
9	7.1	6.8	6.6	6.5	6.5	7.5	10.0 <sup>J</sup>	(9.8) <sup>P</sup>	10.6	11.0	11.4	12.2	13.1	13.1	12.6	12.2	11.8	11.6 <sup>H</sup>	(11.1) <sup>F</sup>	9.9 <sup>S</sup>	(8.5) <sup>S</sup>	7.2 <sup>H</sup>	7.7	(7.6) <sup>S</sup>
10	7.2	7.2 <sup>H</sup>	7.2	6.7	6.0	6.6	8.0	9.6 <sup>F</sup>	11.4	11.8	13.0	13.3	13.4	12.4	11.9	11.5	11.1	10.8	10.7	10.6	7.6	6.8	6.6	7.1
11	7.3	7.2	7.0	6.5	5.9	6.5	8.8	9.1	9.2	10.8	11.0	11.9	13.1	13.2	13.3	13.1	12.9	12.3	11.6 <sup>S</sup>	8.5 <sup>F</sup>	6.4	S	(5.8) <sup>V</sup>	7.8
12	7.7	(7.2) <sup>F</sup>	6.9	6.7	6.6 <sup>H</sup>	(7.1) <sup>S</sup>	9.3	9.7 <sup>F</sup>	10.9	10.8	11.7	12.0	12.2	(13.0) <sup>B</sup>	B	12.8	12.3	12.0	11.1	10.1 <sup>S</sup>	7.5	7.0	6.6	6.8
13	7.6	8.7 <sup>B</sup>	7.2	6.1	5.3 <sup>F</sup>	5.6	7.9	10.5	10.7	11.2	11.9	12.3	13.1	12.7	(12.6) <sup>B</sup>	12.5	11.9	(12.4) <sup>P</sup>	12.1 <sup>S</sup>	10.2 <sup>S</sup>	7.9 <sup>S</sup>	8.6	8.7	8.2
14	7.8	7.6	7.4	7.0	7.0	(7.5) <sup>F</sup>	(9.9) <sup>F</sup>	(9.9) <sup>F</sup>	10.0	10.3	11.8	12.6	12.8	C	C	C	11.5 <sup>S</sup>	11.2	11.6 <sup>S</sup>	S	(8.5) <sup>S</sup>	(8.3) <sup>F</sup>	8.2	8.0
15	7.7	7.7	7.6 <sup>F</sup>	7.0	6.8	6.8	9.1	9.2	9.6	10.2	11.3	12.6	13.2	13.2	13.5	12.8	12.7	12.9	(12.8) <sup>B</sup>	11.8 <sup>B</sup>	9.1	(7.5) <sup>F</sup>	7.8	7.3 <sup>B</sup>
16	7.5	7.5	6.5	7.1	7.0	7.7	9.2	(10.0) <sup>F</sup>	(10.1) <sup>F</sup>	10.0 <sup>H</sup>	11.0	11.6	12.0	13.2	12.8 <sup>S</sup>	12.8	13.0 <sup>S</sup>	12.7	11.5	9.1	8.1 <sup>B</sup>	7.8	(8.1) <sup>B</sup>	7.6
17	7.6	7.6	7.0	7.4	7.2	8.0	9.4	10.1	10.8	10.6	10.7	12.0	12.8	13.2	13.2	12.7 <sup>S</sup>	12.4	11.8	11.7	(10.6) <sup>F</sup>	7.8	7.4 <sup>F</sup>	8.0 <sup>F</sup>	7.9
18	7.9	7.8	7.2	6.7	6.3	6.8	9.5	9.6	9.9	10.3	10.5	10.9	12.3	12.5	12.5	12.9	13.4	13.3 <sup>S</sup>	12.3 <sup>S</sup>	10.5 <sup>J</sup>	7.7 <sup>S</sup>	7.2 <sup>S</sup>	7.8	7.6 <sup>S</sup>
19	7.6 <sup>S</sup>	7.5 <sup>S</sup>	7.3	7.6	6.1	6.4	(8.3) <sup>B</sup>	(8.6) <sup>B</sup>	9.8	9.3	10.9	12.5	13.6	13.5	12.4	12.8	12.4	(12.0) <sup>S</sup>	11.6	S	6.8	6.2 <sup>F</sup>	6.6	6.9
20	6.5	6.6	6.1	6.2	6.1	6.3	8.7 <sup>B</sup>	9.4	9.5	10.7	12.3	14.1	13.9	13.3	13.0	13.0	12.3	12.5 <sup>F</sup>	12.4 <sup>B</sup>	12.1	7.7	7.1 <sup>B</sup>	7.0	7.6
21	7.5	7.1	7.4 <sup>B</sup>	6.7	6.1	5.5	7.4	8.3	9.4	8.4	(7.8) <sup>S</sup>	9.6 <sup>K</sup>	13.9	11.9	(12.5) <sup>F</sup>	12.2	(11.5) <sup>F</sup>	(10.1) <sup>F</sup>	9.6	9.5	8.4	6.6	7.0	7.0
22	6.9	7.2	7.1	6.6	6.0	6.4	(7.8) <sup>S</sup>	(8.6) <sup>F</sup>	(8.6) <sup>F</sup>	9.7	C	(12.9) <sup>F</sup>	12.6 <sup>B</sup>	13.2	13.2	13.1	12.5	12.2	11.6	10.5 <sup>J</sup>	8.2 <sup>S</sup>	(8.6) <sup>S</sup>	8.3	8.2 <sup>F</sup>
23	8.1	8.6	8.5	7.8	7.2	7.1	8.3	9.0	8.9	10.2	11.6	12.2	12.6	12.6	12.9	13.1	12.6	12.1	11.4	B	(9.1) <sup>F</sup>	8.6 <sup>J</sup>	(9.0) <sup>F</sup>	(8.9) <sup>F</sup>
24	(8.9) <sup>S</sup>	8.0 <sup>F</sup>	7.6	8.3 <sup>S</sup>	7.4 <sup>S</sup>	6.3 <sup>S</sup>	8.2	10.3	10.3	11.0	12.1	(12.4) <sup>S</sup>	13.2 <sup>S</sup>	13.7	S	12.6	12.2	(11.8) <sup>S</sup>	11.2	7.4	7.0 <sup>S</sup>	7.2	7.6	8.0 <sup>S</sup>
25	8.0 <sup>S</sup>	7.4	7.6	6.2	5.9	5.8	8.2	7.7	8.6 <sup>S</sup>	9.2	10.0	9.8	11.3	11.4	11.9	12.3	11.0	10.7	10.6	(9.4) <sup>S</sup>	(8.4) <sup>B</sup>	7.7	7.7	7.3
26	7.2	7.2 <sup>H</sup>	7.0	7.1	7.0	(9.4) <sup>B</sup>	(9.4) <sup>C</sup>	9.4	9.6	9.7	9.6	11.1	12.0	13.1 <sup>S</sup>	(14.0) <sup>S</sup>	13.6 <sup>S</sup>	12.5 <sup>S</sup>	11.9	(12.2) <sup>S</sup>	(10.3) <sup>F</sup>	7.9	7.6	7.8	(7.3) <sup>B</sup>
27	(7.2) <sup>B</sup>	7.1	6.9	6.6	6.2	7.1	7.8	9.0	9.8	10.8	11.2	11.7	12.3	12.3	12.6	B	12.2	11.7	10.7	9.9 <sup>B</sup>	(8.5) <sup>B</sup>	9.3 <sup>S</sup>	9.3 <sup>S</sup>	(9.2) <sup>B</sup>
28	9.0 <sup>S</sup>	8.3	8.0	7.7	7.0	(8.3) <sup>F</sup>	9.6	8.1	8.8	9.8	10.8	11.2	11.8	12.4	12.4	12.5	12.5	12.2	11.6	B	9.8 <sup>J</sup>	B	(7.7) <sup>J</sup>	(8.6) <sup>S</sup>
29	8.7	S	6.9	6.9	6.7	6.9	7.7 <sup>F</sup>	6.6 <sup>K</sup>	6.9 <sup>K</sup>	8.9 <sup>J<sup>K</sup></sup>	10.1 <sup>F</sup>	10.1	10.4	11.1	11.5	10.8	10.1	(9.0) <sup>F</sup>	8.5	8.0	8.2 <sup>S</sup>	8.0	8.2 <sup>F</sup>	
30	7.8	7.6	7.4	7.4	6.8	(7.0) <sup>F</sup>	8.7	9.2	8.8	10.1	11.4	11.4	11.9	12.0	12.1	12.0	12.3	11.2	9.7	8.9	7.9	(8.7) <sup>B</sup>	7.9	(8.6) <sup>B</sup>
31																								
Median Value	7.5	7.4	7.0	6.6	6.2	6.5	8.3	9.4	9.9	10.6	11.4	12.2	12.6	12.7	12.6	12.6	12.2	11.8	11.2	9.2	7.9	7.4	7.8	7.8
Count	30	29	30	30	30	30	29	29	29	30	2.9	3.0	2.9	2.9	2.7	2.8	3.0	3.0	3.0	2.6	2.8	2.8	3.0	2.9

Manual

Sweep 10 Mc to 12 Mc in 1<sup>1/2</sup> min

K

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr 1950

hp FZ

Lat. 35° 42.4' N  
Long. 139° 29.3E

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

Radio Regulatory Agency (Denpacho)

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

IONOSPHERIC DATA

Apt 1950

A'F2

Lat. 35° 42.4' N  
Long. 139° 29.3E

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	300	270	300	310	310	250	230	230	250	260	270	270	280	280	290	260	250	240 <sup>H</sup>	230	220	250	260	(300) <sup>A</sup>	270
2	290	260 <sup>F</sup>	220 <sup>A</sup>	220	200	270	250	230	230	260	260	280	250	280	280	280	230	250	220 <sup>A</sup>	220	220	220	270	250
3	260	270	220	220	260	300	230	240	230	250	220	200	200	(250) <sup>C</sup>	210	220	220	230	220	210	230	220	250	260
4	240	210	260	250	290	300	240	240	230	240	270	270	270	250	240 <sup>H</sup>	240	240 <sup>H</sup>	230	230	220	230	210	310	300
5	300	260	250	240	280	300	210	230	290	230	230	270	270	290	260	250	230	210	220	230	270 <sup>A</sup>	300	290	260
6	270 <sup>H</sup>	270 <sup>H</sup>	240	280	300	340	250	250	230	280	260	270	270	270	290	290	260	250	260	210	210 <sup>K</sup>	350 <sup>K</sup>	A	A
7	320 <sup>A</sup>	(300) <sup>F</sup>	A	A	310 <sup>F</sup>	A	220	230	230	260	280	290	260 <sup>A</sup>	310	290	290	270	240	240	220	230	270	300	300
8	300	290	250	200	270	270	220	210	220	(210) <sup>C</sup>	200	290	290	290	310	300	260	230	240	A	A	270 <sup>A</sup>	280	270
9	300	270 <sup>F</sup>	300	280	260	250	230	230	220	220	310	300	300	300	290	290	270	270 <sup>H</sup>	240	230	250 <sup>A</sup>	280	280	300 <sup>A</sup>
10	300 <sup>A</sup>	290 <sup>H</sup>	A	250 <sup>A</sup>	A	A	A	230	220 <sup>F</sup>	230	220	270	270	220	290	290	290	240	250	A	240	(280) <sup>F</sup>	(320) <sup>B</sup>	320 <sup>A</sup>
11	330 <sup>A</sup>	310 <sup>A</sup>	300 <sup>A</sup>	250	240	260	240	220	A	250	300	300	300	300	290	290	270	(230) <sup>B</sup>	230	230	(290) <sup>A</sup>	(300) <sup>A</sup>	310 <sup>A</sup>	310 <sup>A</sup>
12	300 <sup>A</sup>	290 <sup>A</sup>	260	240	240 <sup>H</sup>	250	240	230	230	290	300	290	330	300	B	280	280	250	230	230	A	A	250	310
13	270	230	200	230	240	280	220	200	240	280	280	280	280	270	280	280	290	280	230	220	210	270	260	280
14	260	260	260	260	260	260	220	220	210	290	290	280	280	280	C	C	C	270	240	250	230	230	250	280 <sup>F</sup>
15	(300) <sup>A</sup>	280 <sup>F</sup>	280	250 <sup>A</sup>	260	250	240	240	250	250	290	280	290	290	290	290	280	280	250	220 <sup>A</sup>	220 <sup>A</sup>	280	270	290
16	290	290	260	260	260	260	230	230	200	220 <sup>H</sup>	250	210	290	290	280	250 <sup>A</sup>	240	230	220	A	250 <sup>A</sup>	250	270	280
17	290	270	290	260	(250) <sup>A</sup>	250	240	250	220	200	210	280	300	300	290	280	260	210	250	240 <sup>A</sup>	230	280	310 <sup>A</sup>	300
18	290	280	250 <sup>F</sup>	240 <sup>F</sup>	280	280	230	220	230	250	230	230	320	290	280	280	270	250	230	210	210	240	(280) <sup>A</sup>	270
19	260	260	240	230	200 <sup>A</sup>	230	200	200	200	220 <sup>A</sup>	250	300	290	290	250	270	240	240	230	220	210	270	310	320
20	(350) <sup>A</sup>	290	290 <sup>A</sup>	290	280	260	220	220	250	230	270	300	280	280	280	270	300 <sup>A</sup>	250 <sup>A</sup>	230 <sup>F</sup>	A	230 <sup>F</sup>	(300) <sup>A</sup>	(300) <sup>A</sup>	300 <sup>A</sup>
21	A	270 <sup>A</sup>	270 <sup>A</sup>	250 <sup>A</sup>	250 <sup>A</sup>	230	240	300	250	260 <sup>A</sup>	260 <sup>K</sup>	(220) <sup>KA</sup>	300	300	280	250	220	220	220	220	240	290	290	290
22	290	280 <sup>A</sup>	260	230	220	240	230	220	210	290	(300) <sup>C</sup>	300	290	280	280	270	260	240	220 <sup>F</sup>	220	220	250	290	310
23	280	250	250	230	220	240	210	240	240	250	260	270	270	300	300	270	250	240	230	220	230 <sup>F</sup>	260 <sup>A</sup>	270	290
24	280	280	280	240	200	230	220	260	280	270	210	300	320	300	300	290	260	240	240	220	230 <sup>F</sup>	260 <sup>A</sup>	270	290
25	290	290	250	240	300	280	230	240 <sup>A</sup>	290	280	280	260	310	300	240 <sup>A</sup>	280	230 <sup>A</sup>	240	240	A	A	A	(760) <sup>B</sup>	270
26	290	260 <sup>H</sup>	260	270	260	230	(230) <sup>C</sup>	230	240	220	240 <sup>A</sup>	300	320	300	280	240	270 <sup>A</sup>	240 <sup>B</sup>	240 <sup>F</sup>	230 <sup>F</sup>	210	240	270	280
27	290 <sup>A</sup>	(300) <sup>A</sup>	(300) <sup>A</sup>	220 <sup>A</sup>	240	230	230	230	230 <sup>B</sup>	240 <sup>A</sup>	230 <sup>B</sup>	280 <sup>H</sup>	290	310	300	280	250	270	220	230 <sup>F</sup>	250	270	260	270
28	250	260	250	240	240	250	230	220	210	220	300	290	290	310	290	260	280	240	250	220	240	240	230	(310) <sup>A</sup>
29	280	290	270	300	300 <sup>A</sup>	350	240	230 <sup>K</sup>	230 <sup>K</sup>	360 <sup>K</sup>	290	280	280	280	270	280	220	230 <sup>F</sup>	230	260 <sup>A</sup>	260	290	310	(330) <sup>A</sup>
30	300	300	300	270	290	250	230	230	230	230	270	290	300	310	300	300	280	240	240	250	240 <sup>A</sup>	280	280	A
31																								
Median Value	290	280	260	250	260	260	230	230	230	250	260	280	290	290	280	250	260	240	230	220	230	270	290	290
Count	29	30	28	29	29	28	30	30	29	30	30	30	30	29	28	29	30	30	29	24	26	29	29	28

Sampled 30 sec to 100 Mc in 15 min

Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 35°42.4'N  
Long. 139°29.8'E

f<sub>o</sub>F1

Apr. 1950

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	Q	T	L	L	L	L	L	L	L	L	Q	Q					
2						Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q					
3						Q	Q	Q	Q	Q	Q	Q	Q	L	C	Q	Q	Q	Q					
4						Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
5						Q	Q	Q	L	Q	Q	L	L	L	L	L	L	L	Q	Q				
6						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	Q	Q				
7						A	Q	Q	Q	L	L	L	Q	6.0	L	AF	L	L	Q	Q				
8						Q	Q	Q	Q	C	Q	L	A	L	L	L	L	Q	Q	AF				
9						Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
10						AF	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
11						Q	Q	Q	A	A	L	L	L	L	L	L	L	L	B	Q				
12						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	AF	AF				
13						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	L	Q				
14						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	L	Q				
15						Q	Q	Q	L	L	L	L	L	L	L	L	L	L	L	Q				
16						Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	L	Q				
17						Q	Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q				
18						Q	Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q				
19						Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	Q				
20						Q	Q	Q	L	5.0	L	L	A	L	L	L	L	L	A	A				
21						Q	Q	L	L	Q	A	L	L	L	L	L	L	L	L	Q				
22						Q	Q	Q	L	L	L	L	L	L	L	L	L	L	L	Q				
23						Q	Q	L	4.4	L	L	L	L	L	L	L	L	L	L	Q				
24						Q	Q	L	L	L	L	L	L	L	L	L	L	L	L	Q				
25						Q	Q	Q	L	L	L	L	5.6	Q	L	L	L	L	L	Q				
26						Q	Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q				
27						Q	Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q				
28						Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	Q				
29						L	Q	Q	Q	5.8	L	L	L	L	L	L	L	L	L	Q				
30						Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	Q				
31																								
Median Value						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Count						0	0	0	1	2	0	0	1	1	0	2	0	0	0	0	0	0	0	0

Sweep 1.0 Mc to 12.0 Mc in 15-min Manual

Radio Regulatory Agency (Denpacho)

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

IONOSPHERIC DATA

APR. 1950

F/F1

Lat. 35°42.4'N  
Long. 139°29.3'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	Q	T	Z20	Z00	Z00	Z10	Z40	Z30	Z20	Z20	Q	Q					
2						Q	Q	Q	Q	Z30	Z10	Z10	Z20	Z30	Z20	Z50 <sup>A</sup>	Q	Q	Q					
3						Q	Q	Q	Q	Q	Q	Q	Q	Z10	C	Q	Q	Q	Q					
4						Q	Q	Q	Q	Z20	Z00	Z10	Z20	Z10	Z10	Z20	Q	Q	Q					
5						Q	Q	Q	Q	Z20	Q	Q	Z00	Z30	A	Z20 <sup>A</sup>	Z10 <sup>A</sup>	Z20	Q	Q				
6						Q	Q	Q	Q	Z30	Z30	Z40	Z30	Z10	Z30	Z30	Z30	Q	Q					
7						A	Q	Q	Q	Z20	A	A	Q	Z30 <sup>A</sup>	Z10 <sup>A</sup>	AF	Z30	Q	Q					
8						Q	Q	Q	Q	C	Q	Z00	A	Z40	Z30	Z50	Q	Q	AF					
9						Q	Q	Q	Q	Q	Z00	Z30	Z20	Z20	Z40	Z30	Z50	Z50	Q					
10						AF	Q	Q	Q	Q	Z00	Z00 <sup>A</sup>	A	Q	Z30	Z20	Z40	Q	Q					
11						Q	Q	Q	A	A	Z10	A	Z10	Z30	Z20	Z20	Z50	B	Q					
12						Q	Q	Q	Q	Z40	Z10	Z30 <sup>B</sup>	Z20	Z10	B	Z40	Z50	AF	AF					
13						Q	Q	Q	Q	Z00	Z20	Z10	Z10	Z20	Z10	Z20	Z40	Z30	Q					
14						Q	Q	Q	Q	Z00	Z10	Z00	Z00	C	C	C	Z30	Z30	Q					
15						Q	Q	Q	Q	Z20	Z20 <sup>A</sup>	Z10	Z30	Z10	Z10	Z10	Z30	Q	Q					
16						Q	Q	Q	Q	Q	Z10	Q	Z10	Z40 <sup>A</sup>	Z40	Q	Q	Q	Q					
17						Q	Q	Q	Q	Q	Q	Z00	Z00	Z10	Z00	Z20	Q	Q	Q					
18						Q	Q	Q	Q	Q	Q	Q	Z20	Z20	Z20	Z40	Z40	Q	Q					
19						Q	Q	Q	Q	Q	Z00	Z10	Q	Q	Q	Z30	Q	Q	Q					
20						Q	Q	Q	Q	Z10	Z00	Z30	Z30 <sup>A</sup>	A	Z30	Z30	A	A	A					
21						Q	Q	Z10	(Z10 <sup>A</sup> )	Q	A	Q	A	(Z30 <sup>A</sup> )	A	A	Q	Q	Q					
22						Q	Q	Q	Q	Z10	(Z20 <sup>C</sup> )	Z20 <sup>A</sup>	Z50	Z20	Z20	Z00	Z30	Q	Q					
23						Q	Q	Z20	Z00	Z00	Z20	Z30	Z30	Z60	Q	Q	A	Q	Q					
24						Q	Q	Z20	Z30	A	Q	Z50	Z50	Z80	Z50	A	Q	Q	Q					
25						Q	Q	Q	A	A	Z30	Z30	Z50	Q	Z40	Z20	Q	Q	A					
26						Q	C	Q	Q	Q	Q	Z20	Z20	A	Z10 <sup>A</sup>	Q	Q	Q	Q					
27						Q	Q	Q	Q	Q	Q	Z10 <sup>A</sup>	Z00	Z10	Z00 <sup>B</sup>	Z10	Z30	Z30	Q					
28						Q	Q	Q	Q	Q	Z20	Z30	Z00	Z00	Z00	Z20	Z30	Q	Q					
29						Z40	Q	Q	Q	Q	Z10	Z10	Z00	Z00	Z00	Z10	Q	Q	Q					
30						Q	Q	Q	Q	Q	Z10	Z10	Z10	Z30	Z40	Z40	Z40	Q	Q					
31																								
Median Value						-	-	-	Z20	Z20	Z10	Z10	Z20	Z20	Z20	Z20	Z20	Z30	-					
Count						1	0	3	6	13	20	24	25	23	25	22	17	3	0					

Sweep 10 Mc to 15 Mc in 1 1/2 min Manual



Radio Regulatory Agency (Denpachio)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 35°42.4'N  
Long. 139°29.3'E

f<sub>o</sub>E

APT. 1950

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						B	2.0J	ZB	T	(31)B	B	B	B	B	3.5B	3.4	A	2.6	1.9						
2						E	2.0H	Z7	3.4B	B	B	B	B	B	B	(28)A	A	A							
3						A	2.5H	Z8H	3.2B	3.5	B	B	B	B	C	B	B	2.6	B						
4						E	(2.4)A	(2.8)A	B	3.7	3.7J	A	A	A	A	B	B	3.1	A	1.7					
5						E	N	(2.7)A	3.4	3.5	3.4	3.8	3.7	3.5	3.4A	A	(30)J	2.4J	1.8						
6						E	2.4	(2.8)B	A	3.5	3.6B	B	B	B	B	B	B	(27)B	(1.8)B						
7						A	(2.4)B	3.1B	A	A	A	A	A	A	A	A	A	B	2.5	1.5B					
8						1.1	2.4H	3.1H	3.4H	C	A	A	A	A	3.7	A	(32)B	A	A						
9						1.3F	2.5	2.9	3.4B	3.6	3.7B	A	A	A	A	B	3.4B	B	B	2.1					
10						AF	(2.2)A	3.0F	A	A	A	A	A	A	A	A	A	A	A	A					
11						1.4J	2.4B	2.9	3.4	A	A	A	A	A	A	A	B	B	2.6	A					
12						1.2	(2.6)B	3.2B	3.4B	(3.5)B	A	A	(3.8)B	B	B	B	A	A	2.6	A					
13						1.5	2.5	3.0	3.4	B	(3.6)B	B	B	B	(3.5)B	B	A	2.6	A						
14						(1.2)B	2.3	B	AF	3.5B	3.5	(3.5)A	(3.7)B	C	C	C	3.2	2.6	(2.0)A						
15						1.3	2.2	2.9	3.4	3.3	A	A	A	A	B	3.7	3.5B	3.1B	2.6	2.0					
16						E	(2.4)A	A	A	A	A	A	A	A	A	A	3.5	(3.2)A	(2.6)A	A					
17						1.6B	B	(3.0)B	B	3.5	3.8	A	B	3.6	A	A	(3.1)A	2.7H	A						
18						1.4	2.4H	2.8H	3.2	3.6	3.8H	3.7	3.8	4.0	3.6	3.4	A	A	A						
19						1.4	2.4H	2.8	3.4	3.6	A	A	A	A	A	B	3.0J	3.0F	2.7	(1.7)A					
20						1.2A	2.2	3.0A	3.3	3.6A	3.7	A	A	3.5	3.6	3.4H	3.1	A	A						
21						A	2.1	A	A	(3.6)A	A	(3.6)A	A	A	A	A	A	3.0	A	1.9					
22						1.4	2.2	3.0	3.2	3.5	C	A	B	(3.6)J	3.4	3.5	BH	2.5	A						
23						1.4	2.4	3.0H	(3.4)A	B	B	B	B	B	A	B	B	3.5	A	A					
24						1.8A	2.5	2.9	(3.2)A	3.4	(3.8)A	A	A	A	A	B	A	3.2	A	(1.9)J					
25						1.6	2.4H	2.9F	3.1B	3.3	3.9	4.0H	4.0A	4.0	B	3.5	3.3J	2.6	A						
26						A	C	3.3	A	A	A	A	A	A	A	3.6J	A	A	A						
27						1.5	2.6	3.0	3.5	3.4H	B	B	B	B	B	B	B	3.2	2.7H	A					
28						1.7H	2.3	3.0	3.3	3.4	3.9	4.0J	B	B	3.5J	3.4	3.4	2.8	2.1						
29						1.5	2.3	2.8	3.4	B	3.8	B	3.9J	4.0J	3.6	3.6	3.2	2.6	A						
30						1.3	2.3H	2.8	3.2	3.7	3.7	3.9	B	4.0H	3.5	3.6	A	A	2.0						
31																									
Median Value	1.4	2.4	2.9	3.4	3.5	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.6	3.5	3.2	2.6	1.9						
Count	24	27	27	20	20	14	7	6	8	12	12	17	18	13											

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 35° 42.4' N  
Long. 139° 29.3E

145 E

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

Manual

Sweep 10-Mc to 12.0-Mc in 15-min

K 7

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

fEs

135° E Mean Time

Lat. 35° 42.4' N  
Long. 139° 29.3E

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	G	2.0	1.6	2.0	2.0	2.0	G	G	T	B	B	B	B	B	G	G	3.4	G	G	G	G	(38)F	(42)Y	2.8	G
2	3.2	2.8	2.6	2.4	(2.0)Y	B	G	G	G	G	B	B	B	B	B	5.2	3.2	4.4	3.7	2.5	2.4	G	G	G	G
3	G	G	B	2.0	1.6	2.5	G	G	B	G	G	C	C	C	G	G	G	G	G	G	G	G	G	G	G
4	G	G	2.0	2.0	1.5	1.6	G	4.2Y	G	4.2Y	G	4.2Y	4.2	4.6	G	G	G	2.7	G	G	B	G	G	2.4Y	G
5	G	G	G	G	G	B	G	G	G	G	G	G	4.7	5.2	4.2	3.6	4.3Y	3.4	G	3.0	2.8	B	G	G	G
6	G	G	G	1.9	G	2.0	G	G	4.3	G	4.6Y	5.0Y	B	G	B	G	G	G	G	G	G	B	B	3.6	5.2
7	(5.0)Y	3.6 <sup>B</sup> F	3.4 <sup>B</sup> F	(5.2)Y	4.0	2.6B	G	G	3.4	6.4	6.1B	5.6	5.2	5.5	5.2Y	7.6 <sup>B</sup> F	G	G	G	2.3	2.1	1.9	G	G	2.5
8	G	(2.1)Y	2.1F	G	B	B	(2.9)Y	3.4F	G	C	4.6	4.0	6.8	4.2	G	3.8	4.6Y	4.5Y	7.5	6.2	4.0	3.0	G	G	G
9	2.7	3.6	3.0	(2.2)Y	2.2Y	1.6	G	G	G	4.8	4.2	(5.0)Y	G	4.8Y	G	G	B	B	B	2.2	2.4Y	3.4	G	3.2	G
10	3.2B	3.4 <sup>B</sup> F	4.2F	5.2Y	4.2	4.4F	4.2Y	(4.2)Y	G	4.7	4.7	5.2	7.5	4.6	G	4.8	4.8	4.1	2.4	3.2	7.5	4.6	6.4Y	3.8	G
11	4.1	4.5	4.2	3.0	(3.4)Y	(2.6)Y	G	3.4	6.2Y	6.2	4.6	6.6	4.4	4.4	4.0Y	B	B	B	2.9Y	3.4	4.1	3.6Y	2.7	(3.5)Y	G
12	2.9	3.2	2.5	1.2	2.3Y	2.3Y	G	G	G	G	(4.4)Y	B	G	G	B	G	4.4	6.8	5.6	7.2	6.5	3.4	2.0	G	G
13	3.8	1.7	2.4	2.8	1.6	G	B	G	G	G	G	B	B	C	C	C	5.2	3.6	B	G	G	G	4.7	5.6	
14	G	G	G	G	G	G	G	G	G	G	G	G	G	C	C	C	5.2	3.6	B	G	G	G	4.7	5.6	
15	3.6	2.8	3.0	3.2	2.6	1.6	G	G	3.7	5.0Y	6.2	5.8Y	4.6	G	G	G	4.4	5.2	3.6	3.4	3.6	4.4	G	B	
16	G	G	2.0	1.6	2.0	G	G	3.4	3.4	4.8	4.7	5.1	4.7	5.5	4.7	4.8	4.8	5.2	5.2	7.8 <sup>B</sup>	4.6	2.4	2.2	2.2	
17	1.6	2.2	B	2.2Y	3.8 <sup>B</sup>	G	G	G	G	4.4F	4.8Y	4.7	4.8	G	4.6	G	3.5F	G	(3.7)F	(3.4)F	2.4	2.7Y	3.6F	1.7	G
18	2.1	2.2	2.1	2.0	B	B	G	G	4.2	5.2	5.4	4.8	4.8	G	G	4.4	4.0	3.5	3.6	2.8	2.3	G	G	2.4	G
19	2.2	2.0	(2.2)Y	2.0	1.8	G	G	G	G	5.0	G	G	G	7.0	G	G	G	5.0Y	5.2	3.6	G	G	3.2	7.8	G
20	7.7	5.0	3.8	3.0 <sup>B</sup> F	(2.8)B	G	G	G	5.2Y	5.0	5.6	5.8	7.6	7.4	(4.9)Y	G	6.3	4.3	7.5	6.4	5.0	7.5	6.8	5.4	G
21	5.0	4.1	5.0	5.2	3.6Y	2.9B	G	3.4	4.6	4.6	5.6	5.2	5.6	4.6	5.2	3.8	G	3.4F	G	(3.4)Y	2.2	2.4	2.0	2.0	
22	2.8	2.4	2.4	2.4	2.2	G	G	B	G	G	B	B	B	B	5.5	4.6Y	G	(4.1)	4.0	2.3	2.4	2.2	2.1	2.8Y	G
23	(2.8)Y	2.2F	G	2.4	2.2	G	G	G	G	G	C	4.5	B	B	G	B	G	4.8	3.8	3.0	4.2	2.8	G	2.2	G
24	2.6	2.2	1.7	1.6	2.0	G	G	G	5.5	5.4	B	5.2	6.0Y	4.8	G	6.0	7.2	5.0	6.2	6.6	4.2	2.5	G	2.0	G
25	3.0	2.2	(2.8)Y	B	G	G	G	4.2	5.2	5.8	G	4.6Y	5.1	G	B	G	4.6	3.6	4.8	9.4	4.7	6.4	2.4	2.2	G
26	3.0	2.2	3.4Y	2.0	2.0	2.9	C	4.1	5.2	5.2	5.7	4.9	4.9	6.2	G	7.1	5.5	3.5	5.5	4.7	2.8	2.4	2.4	2.2	G
27	2.3	2.7	2.2	1.6	B	B	G	G	G	5.2Y	G	4.6Y	G	G	G	G	4.2Y	3.4	3.6	2.5	2.2	2.0	2.0	2.4	G
28	G	G	G	2.1	G	G	G	G	G	G	G	5.0Y	B	4.6	G	G	G	G	G	G	3.0	3.2	B	3.4	G
29	G	G	G	3.0	2.0B	G	G	G	G	G	4.7Y	G	G	G	G	G	4.5	5.2	3.0	3.4	2.6	G	G	4.2	G
30	G	G	G	1.5	B	G	G	G	G	4.9Y	G	G	G	5.0	(5.2)Y	G	4.4	3.5	G	B	3.4	2.4	2.0	3.4 <sup>B</sup>	G
31																									
Median Value	2.4	2.2	2.2	2.0	2.0	G	G	G	G	4.8	4.5	4.8	4.6	4.6	G	G	3.8	3.5	3.2	3.0	2.6	2.4	2.0	2.4	G
Count	30	30	28	29	26	25	28	28	28	27	26	25	23	25	24	27	28	28	28	29	29	28	29	29	29



Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi Minato-Ku, Tokyo, Japan

Lat. 35° 42.4' N  
Long. 139° 29.8E

**Kokubunji Tokyo**

135° E Mean Time

(M3000)F2

Apr. 1950

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	2.0	2.8	2.6	2.6	2.5	2.8	B	(32)B	T	3.1	(30)F	3.1	2.9	2.9	3.0	3.1P	3.2P	3.1H	3.3J	2.9	2.8	2.7	(2.6)F	2.9	
2	2.7	2.9	3.0P	3.2	2.7	2.8	2.9F	(33)J	3.2P	3.1	3.1	3.0	(30)B	(2.9)B	2.9	(2.9)B	(3.0)F	3.2	3.3	3.2	3.1	2.6	2.8	2.9	
3	3.0	2.9	3.2	3.2	2.6	2.4	3.3	3.2	2.9	3.2B	3.2	3.2	3.0	2.9	(3.0)C	3.1	2.9	3.1P	3.3	(3.3)J	S	(2.9)F	(2.9)F	(3.0)P	
4	3.0P	(3.3)F	2.8	2.7	2.6	2.7	3.2	3.2	3.3	3.2	3.1	3.2	3.0	3.2	3.1H	(3.0)J	3.1H	(3.3)J	(3.1)F	3.1H	2.6	2.6	2.6	2.6K	
5	2.7	2.9	2.9	2.8	2.7	2.7	3.2	3.1	3.1	3.0P	3.0	2.9	2.9	2.9	3.0	3.1	3.2	3.2	(3.2)B	3.0	2.7S	2.7P	(2.8)B	2.9	
6	2.6H	2.9H	2.7	2.7	2.5	3.0	2.8	B	3.1	3.0	T	3.0	S	2.9	3.0	3.0	(3.0)F	2.9	3.0	(3.4)F	2.5K	2.5K	2.4K	AK	
7	2.6K	2.8K	2.7K	2.9K	2.5	2.6	3.2	3.3	3.0	3.0	2.9	2.9	2.8	2.7	2.9	2.9F	2.8	3.1F	3.1	3.2	2.7	2.6	2.6	2.6	
8	2.6	2.7	3.0	3.6	2.7	3.0	3.5	3.3	3.2	(3.1)C	3.0	2.8	3.0	2.8	2.8	2.9	3.0	3.3	3.1	(3.0)J	(3.0)J	2.7	2.7	3.0	
9	2.6	2.9	2.6	2.7	2.7	3.1	(3.2)J	(3.3)F	(3.3)B	3.2	2.8	2.7	2.9	2.9	2.8	2.8	3.0	3.1H	(3.0)B	(3.0)S	(2.9)S	2.7H	2.7	(2.6)S	
10	2.6	2.6H	2.7	2.8	2.7	2.7	3.1	2.9F	3.0	3.1	2.9	2.9	2.8	2.8	2.9	2.9	3.0	3.0	3.0	3.2P	3.0	2.8	2.9	2.6	
11	2.5	2.5	2.8	2.7	3.0	2.9	3.3	3.2	3.1	3.2	3.0	2.8	2.8	2.9	2.9	2.8	(3.0)B	3.1	3.3S	3.1P	2.9	S	(3.0)J	2.8	
12	2.6	(2.8)F	2.8	2.8	2.6H	(2.8)S	3.1	3.2P	3.2	2.9	2.8	2.7	(2.8)B	B	3.5	3.0	3.0	3.3	3.2	(3.4)S	3.0	2.7	2.7	2.8	
13	2.8	3.1B	3.3	3.0	2.9F	2.8	3.1	3.1	3.0	3.1	2.9	2.9	2.9	2.9	(2.9)B	2.8	3.0	(2.9)F	3.3S	3.3S	3.0S	2.8	2.9	2.8	
14	2.8	2.8	2.9	2.7	2.8	(2.9)F	(3.5)F	(3.4)F	3.3	2.9	2.9	3.0	2.9	2.9	C	C	3.0S	3.0	3.1S	S	(2.9)S	(2.9)P	2.8	2.9	
15	2.8	2.9	2.9P	2.8	2.9	3.0	3.2	3.4	3.2	3.1	2.9	3.0	2.9	2.8	2.9	3.0	2.9	3.1	(3.0)B	3.2B	3.5	(2.7)F	2.8	2.7B	
16	2.7	2.8	3.0	2.8	2.8	2.8	3.3	(3.3)P	(3.3)P	3.1H	3.0	3.0	2.9	2.9	2.9S	3.0	3.0S	3.1	3.2	3.1	2.9B	2.8	(2.9)B	2.9	
17	2.8	2.9	2.6	2.9	2.8	2.9	3.3	3.3	3.3	3.3	3.0	3.0	2.9	3.0S	3.1	3.1S	3.1	3.0	3.1	(3.2)P	2.9	2.6P	2.7P	2.9	
18	2.7	2.9	3.0	2.8	2.6	2.8	3.4	3.5	3.3	3.0	2.8	2.7	2.8	2.9	2.8	3.0	2.9	3.0S	3.3S	(3.3)J	3.1S	2.8S	2.8	2.8S	
19	2.9S	2.9S	3.0	3.2	3.2	3.0	(3.4)B	(3.4)B	3.4	3.1	3.0	3.2	3.3	3.1	3.1	3.3	3.3	(3.2)S	3.1	S	3.0S	2.7P	2.7	2.8	
20	2.8	2.7	2.7	2.7	2.7	2.8	3.1B	3.4	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9F	3.2B	3.4	3.1	B	2.7P	2.7	2.7	
21	2.8	3.0	3.0B	3.0	3.1	2.9	2.9	2.9	3.0	3.2	(3.1)S	2.7K	3.1	(3.0)P	3.1	(3.2)F	(3.1)P	3.1	3.4	3.1	2.8	2.6	2.8	2.7	
22	2.8	2.8	2.9	3.0	3.1	3.2	(3.3)S	(3.4)P	(3.2)P	2.9B	(3.0)C	(3.0)F	3.1B	3.0	3.0	3.0	3.0	3.1	3.2	(3.4)J	3.1S	(2.7)S	2.8	(2.8)P	
23	2.8	3.0	3.3	3.1	3.2	3.1	3.4	3.3	3.2	2.9	3.1	3.0	3.0	3.0	3.1	3.1	3.0	3.2	3.3	B	(3.0)F	(2.7)S	(2.8)P		
24	(2.7)S	2.8P	2.7	2.9S	3.1	2.9S	3.1	3.1	2.8	2.9	2.7	(2.9)S	2.9	2.9	S	3.1	3.1	(2.9)S	3.1	3.2	2.6S	2.8	2.7	2.6S	
25	(2.7)S	2.8	2.9	2.9	2.5	2.6	3.1	3.6	(3.0)S	2.9	2.9	2.7	3.0	2.9	3.0	3.1	3.0	2.9	3.1	(3.3)S	(3.0)B	2.9	2.9	2.9	
26	2.7	2.8H	2.9	2.6	2.7	(2.9)B	(3.2)C	3.4	3.2	3.2	2.9	2.8	2.9	2.9S	(3.0)S	3.2S	3.0S	3.1	(2.9)B	(3.2)P	3.1	3.0	2.9	(3.0)B	
27	(3.1)B	3.1	2.6	3.3	2.8	3.2	3.2	3.3	3.2	3.1	2.9	2.9H	2.9	2.9	3.0	B	3.1	3.1	3.1	3.1B	(2.9)B	(2.8)S	(2.9)S	(2.9)B	
28	3.0S	3.0	2.9	2.8	2.7	(2.9)P	3.3	3.4	3.2	3.0	2.8	2.9	2.8	2.9	2.9	2.9	2.9	3.1	3.2	B	(3.0)J	B	(3.0)J	(2.7)S	
29	2.8	S	2.9	2.6	2.5	2.6	3.1F	3.4K	3.0K	(2.8)K	3.0F	3.1	3.1	3.0	3.2	3.3	3.4	(3.2)P	3.1	2.9	2.9S	2.6S	2.7	2.6F	
30	2.7	2.7	2.6	2.8	2.6	(2.7)F	3.1	3.1	(2.8)B	2.8	3.0	2.9	2.9	2.9	2.9	2.9	3.0	3.2	(3.1)B	3.1	2.9	(2.6)B	2.7	(2.7)B	
31																									
Median Value	2.8	2.8	2.9	2.8	2.7	2.9	3.2	3.3	3.2	3.1	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.1	3.2	3.2	3.0	2.7	2.8	2.8	
Count	30	29	30	30	30	30	29	29	29	30	29	30	29	29	29	27	28	30	30	30	26	28	28	30	29

Frequency Mc to MHz, Mc in 10<sup>-1</sup> min

Manual

K 9

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

fminF

Lat. 36°42.4'N  
Long. 139°26.3'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	1.1	1.1	1.1	1.2	1.2	1.2	2.4	3.2	5.2	4.2	4.2	4.2	3.9	4.3	3.7	3.5	3.0	2.6	1.9	1.2	1.2	1.6	A	1.8	
2	A	1.4	A	1.2	1.1	1.1	2.0	2.8	3.4	3.7	4.1	4.0	4.4	4.0	3.7	A	2.8	AF	A	A	A	1.2	1.3	1.2	
3	E	E	E	E	E	1.1	2.5	2.8	3.2	4.1	3.9	4.0	4.0	4.0	C	3.7	3.2	2.6	2.0	1.2	1.4	1.2	1.2	1.1	
4	1.1	1.2	1.1	1.1	1.1	1.1	2.4	2.8	3.7	3.7	4.0	4.2	4.0	4.0	4.0	3.8	3.2	3.2	1.9	1.2	1.2	1.2	1.6	1.2	
5	1.2	1.2	E	E	E	1.1	N	2.7	3.6	3.7	3.8	4.0	4.1	A	A	A	3.5	3.0	2.2	3.2	A	1.4	1.4	1.2	
6	1.1	E	1.1	1.1	1.1	1.3	2.4	3.0	3.5	4.0	4.3	A	4.4	4.2	4.0	3.4	3.4	2.8	1.9	1.1	1.2	1.3	A	A	
7	A	A	A	A	(1.6)F	A	N	3.2	3.4	4.1	A	A	A	A	4.4	A	3.3	2.5	1.8	1.4	1.4	1.4	1.4	1.1	
8	E	E	E	E	E	1.1	2.4	3.1	3.4	C	4.0	4.1	A	4.7	4.0	3.8	3.8	2.4	A	A	A	A	1.8	1.8	
9	A	1.2F	E	1.4	1.4	1.3	2.6	3.2	3.8	3.8	4.2	4.4	4.0	4.0	4.0	3.8	4.0	3.5	2.7	1.6	1.6	A	1.3	A	
10	A	A	AF	AF	AF	AF	2.3	3.1	3.8	3.7	4.1	A	A	4.1	4.1	3.7	3.5	2.9	2.0	A	AF	AF	4.2	A	
11	AF	A	A	A	1.8	1.8	2.6	3.2	A	A	4.4	A	4.2	4.0	4.2	3.8	3.8	2.8	2.3	A	A	A	A	A	
12	A	A	1.2	1.2	1.6	1.2	2.6	3.2	3.4	4.0	4.0	4.6	4.2	4.0	4.0	3.8	3.2	2.7	AF	AF	AF	A	A	1.2	
13	A	AF	1.2	E	1.4	1.5	N	3.4	3.6	4.1	4.1	4.3	4.2	4.1	4.1	3.8	3.2	3.2	2.6	2.0	1.4	1.4	1.6	1.1	
14	E	E	E	E	1.1	1.2	2.7	2.7	4.0	3.9	4.1	4.0	4.1	C	C	C	3.4	2.8	2.0	1.2	1.1	1.1	1.6	AF	
15	A	AF	A	A	A	1.3	2.7	3.1	3.8	4.0	A	4.2	4.1	4.1	4.0	3.8	3.4	2.8	2.0	A	A	2.0	1.2	1.2	
16	1.2	1.4	1.1	1.1	1.1	1.2	2.9	3.4	3.7	4.3	4.1	4.1	4.1	A	4.2	A	3.4	2.8	2.4	A	A	A	1.6	1.4	
17	1.4	1.1	1.1	1.4	A	1.6	N	N	3.9	4.0	4.0	4.4	4.0	4.1	A	3.6	3.2	2.7	2.7	A	1.6	1.3	A	1.2	
18	1.1	E	E	E	1.1	1.5	2.5	3.1	3.4	4.0	4.2	4.2	4.0	4.0	3.9	3.4	3.3	3.2	A	1.3	1.4	1.2	A	1.4	
19	1.2	1.1	1.2	1.2	A	1.4	2.4	3.2	4.0	4.2	4.0	4.1	4.4	A	4.1	4.2	3.7	3.3	2.0	1.8	1.5	1.7	1.8	A	
20	A	1.1	A	1.6	1.6	1.2	2.4	3.2	3.6	4.2	4.2	A	A	A	4.1	3.7	A	A	A	AF	AF	A	A	A	
21	A	A	A	A	A	1.7	2.5	3.2	4.2	A	A	A	A	4.4	A	A	3.1	2.8	2.0	1.6	1.6	1.6	1.4	1.3	
22	1.6	A	1.6	1.6	1.6	1.4	2.6	3.0	3.6	3.8	C	A	4.5	4.2	A	4.0	3.4	2.7	AF	1.7	1.5	1.4	A	A	
23	1.4	E	E	E	E	1.4	2.5	3.4	3.4	4.0	4.1	4.2	4.1	4.3	4.2	4.3	3.5	A	A	A	A	A	1.2	A	
24	1.8	1.4	1.1	1.1	1.1	2.0	2.5	3.2	3.5	A	A	4.4	4.6	4.6	4.4	4.1	A	A	A	A	A	A	1.3	A	
25	1.3	1.8	1.6	1.2	1.1	1.6	2.7	A	A	A	4.1	4.4	4.4	4.4	4.4	3.8	A	3.2	A	A	A	1.8	1.3	A	
26	1.4	1.4	1.3	1.1	1.4	2.0	C	3.3	3.7	4.1	A	4.3	4.5	A	4.2	A	A	4.0	AF	AF	A	1.6	1.6	1.4	
27	A	A	A	1.2	1.2	1.8	2.7	3.4	4.0	A	4.4	4.4	4.1	4.2	4.1	3.8	3.5	2.8	A	A	A	1.7	A	A	
28	E	E	E	E	E	1.7	2.7	3.2	3.6	4.0	4.1	4.6	4.2	4.2	4.0	4.4	3.4	3.0	2.1	1.2	A	A	1.4	A	
29	1.2	1.2	1.2	1.2	1.2	1.5	2.6	2.9	3.8	3.8	4.0	4.1	4.2	4.1	3.9	3.7	4.0	AF	2.4	A	A	1.3	1.4	AF	
30	1.2	1.2	1.1	1.1	1.2	1.3	2.3	3.2	3.8	4.2	4.0	4.4	4.2	4.5	4.4	3.8	3.3	3.2	2.2	1.6	A	A	1.6	A	
31																									
Median Value	1.4	1.3	1.1	1.1	1.1	1.4	2.5	3.2	3.6	4.0	4.1	4.2	4.2	4.2	4.1	3.8	3.4	2.8	2.0	1.4	1.4	1.4	1.5	1.2	
Count	19	21	22	25	25	28	25	28	27	24	25	23	24	22	24	22	26	24	19	15	13	18	22	16	

Swamp. Log. Mc to 1.5 Mc in 15-min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Lat. 35° 42.4' N  
Long. 139° 29.3E

### Kokubunji Tokyo

135° E Mean Time

f min E

Apr. 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	E	1.1	1.1	1.6	1.6	1.6	1.2	2.0	T	2.0	2.4	B	2.0	B	2.0	1.8	1.8	1.5	1.4	E	E	2.0	1.2	E
2	E	1.1	E	E	1.1	E	1.4	1.6	1.4	1.8	(1.6)B	B	B	2.0	3.2	2.0	1.6	1.1	1.3	1.2	1.2	E	E	E
3	E	E	B	E	1.2	E	1.4	1.4	1.5	2.0	2.0	B	B	B	C	2.0	2.0	1.6	B	E	B	E	E	E
4	E	E	1.8	1.1	1.4	1.1	1.2	1.5	1.8	1.6	2.2	(2.4)B	2.8	2.8	2.0	2.0	1.4	1.5	1.6	E	E	E	(1.6)B	E
5	E	E	E	E	E	E	1.2	1.4	1.8	1.6	1.9	2.0	2.0	2.0	2.0	1.9	1.4	1.6	1.6	2.0	1.6	B	B	E
6	E	E	E	1.5	E	1.3	1.3	1.3	1.5	1.3	2.0	3.6	B	2.6	1.8	1.8	1.2	1.3	1.2	E	E	B	1.1	(1.4)B
7	1.1	1.1	1.1	E	E	E	1.4	1.2	1.2	1.8	1.8	1.8	2.0	1.8	1.8	1.8	2.3	1.2	1.2	1.7	1.7	1.7	B	2.3
8	E	1.4	1.3	E	E	1.8	1.5	1.2	1.2	C	2.7	2.6	2.6	3.6	2.0	3.2	2.2	1.5	1.3	1.3	1.3	1.5	B	B
9	E	1.1	E	E	E	E	(1.5)B	1.6	1.8	2.0	2.3	2.6	2.6	2.4	2.7	2.0	B	B	1.3	1.6	(1.6)B	1.3	B	B
10	E	1.1	1.2	1.2	1.2	1.2	1.4	1.4	1.6	1.8	1.9	2.4	2.5	2.5	2.7	2.0	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.6
11	E	1.1	E	E	1.1	E	1.5	1.5	2.0	2.8	3.6	(2.8)B	2.8	(2.8)B	2.0	2.0	2.4	1.3	1.3	1.5	1.6	1.7	(1.5)B	1.8
12	1.4	1.1	E	1.1	1.1	1.2	1.6	(1.6)B	(1.6)B	2.0	2.8	B	3.2	2.7	B	2.5	2.0	1.7	1.4	1.6	1.4	1.5	1.2	E
13	E	E	E	E	1.1	1.5	1.4	1.4	(1.6)B	2.0	2.0	2.0	2.3	C	C	C	1.2	1.1	1.2	1.2	B	B	B	E
14	E	E	E	1.2	1.2	1.6	1.6	1.4	2.0	2.3	2.0	(2.8)B	(2.8)B	C	(2.0)B	2.3	2.0	1.2	1.2	E	E	E	1.2	B
15	1.1	1.1	E	1.1	1.1	E	1.6	1.8	1.9	1.8	2.0	2.2	2.3	3.2	2.0	1.7	1.6	1.6	1.4	1.4	1.8	2.0	E	B
16	E	B	E	1.3	1.5	E	1.5	1.6	2.0	1.9	1.8	2.7	2.7	2.6	2.6	2.0	1.3	1.4	1.6	1.4	1.3	1.4	1.6	2.0
17	1.4	1.1	B	1.2	1.2	1.2	1.2	1.2	1.6	2.0	2.0	2.8	1.9	2.1	1.9	1.9	1.8	1.3	1.4	1.6	1.5	1.7	1.4	1.6
18	1.4	1.3	1.4	E	B	1.1	1.2	1.3	1.2	1.4	2.1	2.6	2.2	2.6	2.0	1.5	1.8	1.8	1.4	1.3	1.3	1.3	E	1.1
19	1.1	1.1	1.2	1.6	1.2	1.2	1.4	1.3	1.6	1.8	2.6	2.0	1.9	1.9	1.8	1.8	1.6	1.3	1.2	1.3	1.3	B	B	1.3
20	1.2	E	1.1	1.1	1.1	1.1	1.4	1.4	2.0	1.6	2.7	2.0	2.0	2.7	2.0	1.9	1.5	1.3	1.3	2.0	1.5	1.5	1.3	1.6
21	1.4	1.4	1.2	1.4	E	1.1	1.6	1.6	1.6	1.4	2.0	2.8	2.9	2.9	2.0	1.9	1.4	1.4	1.4	1.6	1.5	1.6	1.6	1.4
22	1.4	1.2	1.1	1.1	1.1	1.1	1.4	1.4	1.6	1.6	2.0	C	2.5	B	2.0	1.6	1.6	1.5	1.5	1.3	1.4	1.2	1.3	1.2
23	1.8	1.3	E	1.2	1.2	E	1.4	1.3	1.5	1.6	2.0	2.0	2.0	B	2.0	1.6	1.6	1.4	1.1	1.4	1.4	1.4	E	1.6
24	1.2	1.2	1.1	E	1.1	1.1	1.3	1.3	1.4	2.0	(2.8)B	(2.8)B	3.3	3.4	2.7	2.6	2.0	1.6	1.5	1.3	1.3	1.6	B	1.5
25	1.3	1.3	1.2	B	E	1.1	1.3	1.2	1.6	1.6	1.6	2.0	(2.2)B	2.0	B	2.5	1.8	1.5	1.4	1.6	1.6	1.6	1.6	1.6
26	1.4	E	E	E	E	1.3	C	1.6	1.6	1.6	2.6	1.7	2.6	2.6	2.8	2.5	1.7	1.7	1.4	1.4	1.6	1.6	1.6	1.6
27	1.3	1.5	1.2	1.2	B	1.1	1.4	2.0	2.0	2.0	2.8	3.2	3.4	2.8	2.0	2.0	1.9	1.6	1.4	1.4	1.4	1.4	1.6	1.5
28	E	E	E	1.3	E	E	1.4	1.4	1.6	2.8	2.7	4.0	B	4.4	3.2	2.8	2.0	1.4	1.4	E	1.4	1.2	B	1.2
29	E	E	E	2.8	1.4	1.2	1.4	1.4	(1.6)B	1.8	1.9	2.5	3.1	2.8	2.5	2.4	1.8	1.3	1.3	1.3	1.3	B	B	1.6
30	E	E	E	1.1	B	1.1	1.3	1.2	2.0	2.0	2.0	2.0	2.0	2.7	(2.1)B	1.9	1.6	1.6	1.6	1.6	1.6	1.4	1.6	1.6
31																								
Median Value	E	1.1	E	1.1	1.1	1.1	1.4	1.4	1.6	1.8	2.0	2.5	2.3	2.6	2.0	2.0	1.8	1.4	1.4	1.3	1.4	1.4	1.3	1.4
Count	30	29	28	29	27	28	29	30	29	29	29	26	25	26	26	29	29	29	29	29	26	25	21	28

Sampled Mc to 1.0 Mc in 1.5 min

Manual

K 11

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

Zd

135° E Mean Time  
Kokubunji Tokyo

Lat. 35° 42.4' N  
Long. 139° 29.3'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	80	110	90	90	100	120	B	(90)B	T	90	(110)P	70	110	80	100	100P	180P	100H	140	100	150	(120)P	140		
2	90	90	80P	80	100	80	100P	(50)P	100P	80	80	80	(120)P	(100)B	80	(100)B	(110)P	80	80	100	110	110	90	90	
3	100	70	70	140	110	160	70	120	110	60B	60	70	100	80	(70)C	60	100	90P	70	(80)P	S	(80)P	(60)P		
4	90P	(80)P	110	100	110	150	70	60	60	80	130	60	90	80	80H	(110)P	110H	80	(110)P	100H	130	80	90R		
5	80	80	90	100	90	90	120	100	70	80P	70	80	100	70	60	110	70	120	(90)B	100	100S	100P	B	90	
6	110H	100H	130	120	120	90	110	B	(50)P	80	T	110	S	120	110	90	(130)P	90	(90)B	(90)P	160	80	120	A	
7	90	100	110	110	130	110	80	90	80	130	90	90	140	110	100P	110	110P	80	90	110	110	90	110	100	
8	100	100	80	90	130	90	80	90	90	(100)C	120	90	90	110	70	90	80	100	110	(80)P	(50)P	80	110	60	
9	90	60	80	100	90	80	(70)P	(110)P	110	130	130	120	70	100	120	130	110	80H	(100)P	(90)S	(120)S	60H	70	(90)S	
10	100	90H	100	110	140	130	110	120P	140	130	110	120	90	130	100	130	90	80	100	110P	110	110	80	110	
11	100	120	120	110	110	90	80	130	90	90	70	100	70	80	100	110	90	90	70	70P	80	S	(50)P	70	
12	100	(80)P	70	90	120H	(100)S	80	80P	90	120	110	100	90	(90)B	B	120	110	90	90	(60)S	150	130	110	80	
13	100	90B	60	100	90F	140	90	100	110	100	100	100	90	90	(100)B	110	100	(100)P	70S	90S	100	80	90		
14	90	100	110	110	100	(90)P	(90)P	(110)P	90	100	120	80	90	C	C	C	100S	110	80S	(120)S	(100)P	90	60		
15	90	110	110P	110	90	70	80	60	90	110	140	80	80	100	90	80	90	80	(100)B	80B	70	(80)P	110	90B	
16	110	90	90	120	100	100	80	(110)P	(90)P	140H	100	90	120	90	90S	90	120S	80	90	100	110B	110	(90)B	70	
17	90	80	70	80	80	120	50	40	90	90	110	100	90	90S	80	80S	90	110	70	(110)P	120	80P	90P	80	
18	90	80	100	110	100	120	70	90	90	110	150	120	80	80	110	100	80	90S	80S	(110)P	90S	70S	130	110S	
19	110S	60S	60	60	100	150	(70)B	(90)B	60	130	110	60	50	80	90	60	40	S	70	S	70S	80P	80	80	
20	100	80	90	110	120	120	90B	100	100	110	80	70	110	90	90	90	110P	90B	80	80	B	90B	110	110	
21	90	80	130B	80	120	150	140	140	100	70	(130)S	140	100	(100)P	90	(100)P	(110)P	(100)B	70	80	140	100	80	60	
22	90	100	80	120	70	60	(80)S	(110)P	(130)P	120	C	(80)P	60B	100	90	90	90	130	100	(90)P	90S	(100)S	100	90P	
23	100	120	100	100	100	80	70	70	90	120	90	100	120	70	100	70	70	100	110	B	(80)P	(120)P	(110)P	(110)P	
24	(120)S	80P	80	80S	80S	100S	120	80	100	150	150	(50)S	(80)S	140	S	70	100	(100)S	80	60	80S	100	70	80S	
25	80S	60	120	140	110	120	120	50	(80)S	110	110	110	80	100	100	100	110	120	100	(50)S	(60)B	90	70	80S	
26	(50)B	60H	80	110	90	(120)B	(120)C	110	90	80	110	110	90	90S	(100)S	70S	100S	60	(130)B	(120)P	80	80	70	(60)B	
27	(50)B	40	100	90	130	100	80	80	110	110	130	BH	120	70	70	B	100	110	110B	(120)B	(90)S	(100)S	(100)B		
28	100S	110	90	80	80	(110)P	60	60	100	120	130	120	120	90	110	90	110	100	80	B	(110)P	B	(80)P	(110)S	
29	110	S	100	90	130	110	140F	100	180	(90)P	180P	100	110	100	70	70	60	(140)P	90	100	110S	100S	70	110P	
30	60	90	100	70	80	(110)P	90	130	(110)B	140	120	110	110	90	90	120	100	90	110	60	90	(110)B	80	(110)B	
31																									
Median Value	100	90	90	100	100	110	80	90	90	110	110	100	90	90	90	100	100	100	90	90	100	100	100	90	90
Count	30	29	30	30	30	30	29	29	29	30	28	29	29	29	27	28	30	29	29	26	28	28	29	29	

Radio Regulatory Agency (Denpacho).  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

50F2

136° E Mean Time

Yamagawa

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	8.2	8.3	7.6	6.8	6.4	6.1	5.7	8.2	11.0	11.1	11.7	11.6	11.5	13.7	13.7	13.0	12.4	11.2	11.1	10.7	10.1	9.7	7.6	6.9
2	7.5	6.8	6.6	6.4	4.8	5.0	5.9	9.6	C	C	C	C	C	C	C	C	C	C	C	C	9.6	6.7	7.4	8.2
3	8.3	8.0	9.1	6.7	4.8	4.6	5.2	8.6	10.6	12.3	13.2	13.3	13.7	13.8	15.7	15.1	14.3	13.9	14.1	13.4	12.1	13.0	11.5	11.3
4	12.1	11.9	7.5	6.8	5.2	5.4	5.0	8.8	11.2	11.9	12.2	13.0	14.7	13.9	13.1	12.1	12.6	13.1	12.8	11.1	9.5	6.7	7.0	7.6
5	7.5	7.4	6.7	6.9	6.0	5.7	7.0	8.5	10.0	13.5	14.4	13.9	15.4	15.8	15.4	14.5	14.5	14.3	C	C	C	C	C	11.1
6	8.8	9.2	8.5	7.0	5.4	5.0	5.0	7.0	10.4	11.4	12.2	12.7	12.9	13.0	13.3	12.8	12.7	12.0	12.9	10.7	6.3	5.9	5.8	6.0
7	7.2	7.4	6.8	7.0	6.7	5.5	5.6	7.8	9.8	10.5	11.1	12.5	12.0	13.8	14.9	14.0	14.1	13.8	11.6	11.3	9.5	9.8	9.8	8.1
8	8.3	8.9	7.6	6.1	5.8	5.2	3.8	8.2	9.5	11.1	11.4	11.9	12.8	13.6	12.6	13.2	13.4	12.9	12.1	11.4	10.6	9.3	6.8	8.1
9	C	4.0	4.0	6.9	6.3	6.7	7.4	9.5	11.6	C	(12.4)	14.0	14.1	14.4	14.4	14.4	14.1	13.8	13.8	13.1	10.7	10.4	10.0	9.8
10	9.5	8.8	8.4	7.7	5.4	5.8	7.1	10.0	11.1	12.4	13.0	13.0	13.3	13.8	14.1	14.1	13.5	12.5	12.7	12.4	10.6	9.4	9.0	7.5
11	6.5	6.3	8.1	9.2	8.2	6.5	6.7	8.9	9.9	11.2	11.6	12.4	13.8	14.7	14.9	15.2	14.7	13.7	13.1	11.5	8.1	8.2	9.8	9.3
12	10.0	9.0	9.7	9.7	9.6	9.5	8.4	10.0	9.6	10.2	11.5	12.6	13.1	13.8	14.7	14.4	13.5	11.4	12.4	11.7	8.7	7.7	7.1	6.9
13	6.3	7.9	8.3	5.5	4.4	4.2	5.9	9.0	9.2	10.9	11.0	12.2	12.3	13.2	12.0	12.1	12.7	13.1	13.2	12.2	(9.6)	10.2	11.1	10.9
14	9.4	8.3	8.5	8.1	7.8	6.9	7.8	9.8	9.7	10.2	11.4	12.9	13.3	13.6	13.9	13.5	12.9	12.5	13.2	11.7	10.2	10.1	10.0	9.9
15	9.3	9.1	8.9	6.8	6.3	5.5	4.7	8.6	8.9	9.2	10.9	12.6	13.5	13.2	14.2	14.3	14.3	14.6	14.4	13.7	11.5	11.2	10.8	10.1
16	9.7	10.5	10.6	9.0	8.7	8.0	8.9	C	C	C	C	C	C	C	C	C	C	C	C	C	10.0	9.5	9.9	9.7
17	9.2	8.4	9.2	8.3	7.6	7.5	8.7	10.4	10.8	10.4	10.8	12.8	14.0	13.7	13.8	13.7	14.0	13.8	13.4	12.7	9.3	8.6	7.8	7.4
18	8.6	8.8	8.9	8.6	6.3	5.4	6.4	8.7	10.9	9.6	11.7	11.7	13.6	14.2	13.7	13.9	14.4	14.6	13.5	12.2	8.9	8.7	9.3	8.9
19	8.6	8.7	8.6	8.4	6.9	5.6	6.9	8.4	8.6	8.8	11.0	13.1	13.7	13.6	13.9	14.5	15.1	14.6	13.7	12.1	8.7	7.6	7.4	7.8
20	7.8	7.2	7.9	7.6	6.4	7.0	7.8	8.9	8.0	9.2	10.9	13.3	13.3	13.6	14.0	13.7	13.8	13.8	12.3	10.1	8.0	A	7.9	8.2
21	7.8	8.0	8.0	8.2	6.4	5.4	6.3	9.9	12.5	10.3	8.3	11.0	13.2	14.3	14.2	13.2	12.3	11.8	11.4	10.8	10.0	9.1	8.6	7.4
22	8.2	8.0	7.6	7.0	5.8	4.8	6.8	8.2	8.7	8.6	10.4	12.4	13.5	14.9	15.2	15.7	14.8	15.0	14.4	12.9	10.0	8.9	9.6	9.3
23	8.9	10.4	10.3	9.1	7.2	5.7	7.7	8.2	8.3	9.4	11.4	11.9	14.2	14.3	14.7	15.4	15.4	14.4	13.7	12.8	11.6	10.3	10.7	10.3
24	9.1	9.3	9.0	10.4	9.0	5.6	7.7	10.2	9.8	10.4	11.8	13.0	10.4	14.7	14.8	15.1	14.0	12.5	12.3	10.1	8.6	8.9	8.3	8.6
25	8.9	8.8	8.6	7.4	6.8	6.4	5.7	9.1	9.4	10.3	11.2	12.0	12.0	12.4	13.6	13.7	12.9	12.1	12.2	12.0	9.8	7.7	7.5	7.7
26	7.3	7.1	7.4	7.5	6.4	6.5	8.7	8.9	8.8	8.0	9.4	11.1	12.9	13.7	14.1	14.4	15.4	14.7	13.4	10.8	10.2	10.3	10.2	10.2
27	9.7	10.1	10.0	7.5	6.2	6.1	7.9	8.3	9.4	10.3	10.0	11.0	12.5	13.7	13.8	13.1	12.9	11.9	12.0	10.9	10.8	9.2	8.6	8.5
28	7.9	7.3	7.4	7.8	6.4	7.3	9.3	8.9	8.4	9.5	10.6	11.3	12.3	13.1	13.5	13.9	14.1	13.9	14.7	13.0	11.3	11.1	10.2	9.4
29	9.1	9.5	9.4	6.8	7.4	7.0	8.5	7.1	6.9	9.1	9.3	10.3	10.2	10.4	10.4	11.1	11.2	11.4	9.9	10.1	9.7	8.4	8.3	8.5
30	8.2	8.1	6.9	7.6	6.7	7.2	8.1	9.2	8.9	9.5	10.3	12.1	12.9	13.2	13.2	13.7	13.5	12.3	11.7	10.3	9.7	8.7	8.9	9.0
31																								
Median Value	8.6	8.4	8.4	7.5	6.4	5.8	7.0	8.9	9.6	10.3	11.2	12.4	13.2	13.7	14.0	13.9	13.9	13.4	12.9	11.7	9.8	9.0	8.8	8.6
Count	29	30	30	30	30	30	30	29	28	27	27	28	28	28	28	28	28	28	27	27	29	28	29	29

Swampy 1.2-3.0 Mc 10-15 min

Manual

Y 1



Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

RP F2

135° E Mean Time Yamagawa

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	340	330	360	390	370 <sup>C</sup>	350	380	280	300	270	310	340	380	380 <sup>H</sup>	370 <sup>H</sup>	340	310	340	320	320	330	320	350	370	
2	360	350 <sup>V</sup>	340 <sup>C</sup>	320 <sup>Z</sup>	380	340	340	310	C	C	C	C	C	C	C	C	C	C	C	C	C	C	360	360	
3	320 <sup>B</sup>	340 <sup>B</sup>	290	270	420	430	390	320	310	320	320 <sup>H</sup>	320	250	360	(350) <sup>F</sup>	340	350	350	330 <sup>P</sup>	310	330	360	390	400	
4	340	(340 <sup>P</sup> )	340	380	350	350	370	290	330	300	350	360	(340 <sup>P</sup> )	350	350	380	370 <sup>H</sup>	340	310	300	300 <sup>Z</sup>	340 <sup>H</sup>	420	410	
5	410	390	370	390 <sup>P</sup>	430	390	390	300	310	340	320	340	(360 <sup>F</sup> )	(350) <sup>F</sup>	(350) <sup>F</sup>	370	360	340	C	C	C	C	C	360	
6	420	380	370	350	410	330	340	320	310	330	290	310	350	330	340	330	330	350	310	290	350 <sup>M</sup>	(390 <sup>M</sup> )	(420 <sup>S</sup> )	410 <sup>M</sup>	
7	380	350	310	330	340	370	320	270	270	300	340	350	350	370	370	350	370	330	320	320	330	360	280	380	
8	380 <sup>H</sup>	360	310 <sup>F</sup>	240	280	330	320	280	300	300	310	340 <sup>F</sup>	360	370	350	350	370	320	340	340	320	340	320	330	C
9	C	350	340	360	330	310	300	300	300	C	C	(410) <sup>P</sup>	370	360	380 <sup>P</sup>	330	350	350	330	300	(350) <sup>S</sup>	(380) <sup>S</sup>	410 <sup>S</sup>	(400) <sup>S</sup>	
10	400 <sup>B</sup>	400	340	340	350	360	330	290	340	340	310	370	360	370	370	340	350	250	310	280	270	310	380	360	
11	350	350	340	320	280	300	320	290	320	330	340	380	400	370	370	(360) <sup>P</sup>	350	320	310	320	350	390	300	360	
12	380 <sup>H</sup>	340	370	350	(330) <sup>F</sup>	300	(310) <sup>H</sup>	300	310	340 <sup>H</sup>	380	340	380	(390) <sup>P</sup>	360	360	350	350	360	330	330	(330) <sup>M</sup>	400	380	360
13	390	350 <sup>Z</sup>	270	290	360	400	340	290	310	330	360	360	350	380	360	380	370	360	350	320	300	(360) <sup>C</sup>	300	360	
14	350	390	370	350	340	320	300	270	320	320	370	360	370	370	360	360	350	360	340	(320) <sup>C</sup>	300	(360) <sup>C</sup>	410	360	
15	370	370	280	290	300	310	310	260	280	320 <sup>H</sup>	C	360 <sup>P</sup>	380	370	360	360	370	340 <sup>P</sup>	330	310 <sup>P</sup>	320 <sup>S</sup>	C	410	430	
16	410 <sup>P</sup>	410	340	330	340	300	290	C	C	C	C	C	C	C	C	C	C	C	C	C	360	(380) <sup>H</sup>	410 <sup>P</sup>	390	
17	400 <sup>H</sup>	340	350	380	350	390	340	300	300	330	380 <sup>H</sup>	390	360	360 <sup>H</sup>	370	350	350	320	330	330	310	400 <sup>H</sup>	380	360	
18	380	360	360	(370) <sup>P</sup>	350	380	310	260	290	330	350	380	390	360	380	370	360	320	300	300	310	370	380	390	
19	390	360	350	310	290	330	320	260	(280) <sup>C</sup>	310	410	380	370	370	390	390	350	320	310	310	340	360	420	400	
20	400	460	440	420	410	390	340	300	280	280	360	380	360	350	380	390	370	320	310	320	380	A	400	400	
21	390	360 <sup>H</sup>	(380) <sup>B</sup>	310	310	350	380	340	290	300	390	480	400	350	360	330	320	340	320	280	400	400	340	370	
22	380	380	310	300	280	380	300	270	290	300	350	360	370	370	(350) <sup>F</sup>	(360) <sup>F</sup>	350	340	310	300	320	340	430	420	
23	390	360 <sup>V</sup>	340	310	300	350	320	260	280	360	370	380	390	380	380	380	(330) <sup>F</sup>	330	320	320	310	410	380	380	
24	370	370	410	350	270	330	370	300	300	370	410	410	400	400	410	400	390	360 <sup>P</sup>	330	320	390	380	390	400	
25	390	(380) <sup>C</sup>	370	350	370	350	340	320	320	350	(340) <sup>C</sup>	340	360	390	380 <sup>H</sup>	350 <sup>H</sup>	390	360	340	320	310	320	400	410	
26	420	410	390	340	340	350	300	300	290	280	380	420	390	370	370	390	360	340	320	310	320	400	410	410	
27	410	370	310	280	360	380 <sup>H</sup>	300 <sup>F</sup>	280	310	330	360	390	410	380	360	370	380	330	350	340	380	390	410	390	
28	340	340	370	330	330	350	310	300	300	370	360	400	400	400	400	400	380	330	350	340	380	350	340	340	
29	380	380	370	390 <sup>P</sup>	440	440	270	(240) <sup>V</sup>	370 <sup>H</sup>	330	360	360	370	340	360	340	350	350	350 <sup>H</sup>	350	360	360	370	380	
30	410	420	470	340	410 <sup>Z</sup>	410	310	300	280	330	330	390	390	380	380	360	360	340	340	360	340	400	410	400	
31																									
Median Value	380	360	350	340	340	350	320	290	300	330	360	360	370	370	370	360	360	340	320	320	340	370	390	390	
Count	29	30	30	30	30	30	30	29	28	27	26	28	28	28	28	28	28	28	27	27	29	27	29	29	

Frequency in Mc 108.5 Mc in 1.5 min

Manual



Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

135° E Mean Time

R'F2

Apr. 1950

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	260	250	290	300	[300] <sup>C</sup>	330	240	250	230	260	290	290	300	300 <sup>H</sup>	290	290	280	270	280	270	280	280	290	290
2	310	290	[270] <sup>C</sup>	250	290	270	300	250	C	C	C	C	C	C	C	C	C	C	C	C	230	260	[280] <sup>C</sup>	300
3	290	290	250	220	320	310	320	270	260	270	260	280	310	280	300	250	310	290	280	250	260	250	290	310
4	290	240	250	300	300	310	320	250	250	260	270	290	300	270	270	250	220	280	270	250	260	220	390	310 <sup>A</sup>
5	330	320	310	300	310	320	290	280	270	300	260	280	320	290	290	300	300	280	250	C	C	C	C	290
6	290	290	280	270	300	280	310	270	260	270	250	250	300	270	280	280	270	290	270	220	220	320	250	330 <sup>K</sup>
7	320	280	260	310	A	(370) <sup>A</sup>	A	240	230	260	210	300	250	270	250	300	270	250	270	240	240	270	220	330
8	330 <sup>H</sup>	300	270	230	230	300	300	270	270	250	250	250	300	250	260	240	240	250 <sup>A</sup>	250 <sup>A</sup>	260	270 <sup>A</sup>	260	300 <sup>A</sup>	A
9	C	300	310	300	260	280	280	240	260	250	C	300	320	300	320	290	250	290	270	240	230	240	310	320
10	300	350	A	A	240	310	270	240	230	290	260	240	350	340	330	300	300	250 <sup>A</sup>	260	270	210 <sup>A</sup>	230	320	320
11	310	310	290	250	230	230	260	240	240	280	300	290	330	310	300	320	290	250 <sup>A</sup>	260	240	220	300	310	300 <sup>F</sup>
12	300 <sup>H</sup>	300	290	250	220 <sup>F</sup>	240	260	240	240	290 <sup>H</sup>	300	300	330	330	310	300	290	270	270	250	260	300	340	370
13	320	A	220	220	250	300	280	250	230	220	250	300	300	300	300	300	310	240	260	230	240	280	290	290
14	290	290	290	270	270	230	240	240	260	290	270	310	300	300	300	320	300	300	290	240	260 <sup>C</sup>	240	300	300
15	310	300	250 <sup>F</sup>	260 <sup>F</sup>	270	290	290	250	240	220	290	280	340	330	330	320	300	290	270	250	220	220	290	300 <sup>A</sup>
16	320 <sup>A</sup>	320 <sup>A</sup>	280	280	270	260	270	C	C	C	C	C	C	C	C	C	C	C	C	C	260	280 <sup>H</sup>	290	310
17	310	290	280	290	260	270	290	250	250	260	260	240	300	290	300	300	300	260	270	250	240	270	320	A
18	A	A	280	250	300	340	280	250	260	250	310	270	350	320	290	310	310	290	280	260	250	300	290	300
19	310	290	280	270	220	260	260	230	[240] <sup>C</sup>	250	320	300	310	310	310	330	300	270	(250) <sup>A</sup>	(240) <sup>A</sup>	220 <sup>H</sup>	250	300	320
20	340 <sup>A</sup>	370	(340) <sup>A</sup>	(350) <sup>A</sup>	360 <sup>A</sup>	(350) <sup>A</sup>	280	280	280	270	340 <sup>A</sup>	350 <sup>A</sup>	370	300	320	310	280 <sup>A</sup>	290	300 <sup>A</sup>	270 <sup>A</sup>	290 <sup>A</sup>	A	(390) <sup>A</sup>	300
21	300	300	300	260	250	280	280	270	280	250 <sup>A</sup>	290 <sup>H</sup>	290 <sup>H</sup>	340 <sup>H</sup>	340	310	270	280	270	250	250 <sup>A</sup>	350	230	250	340
22	340	340	280	250	250	270	280	260	280	240	300	350	320	290	290	300	280	290	270	250	240	280	300	330 <sup>F</sup>
23	(340) <sup>F</sup>	280	270	260	230	240	250	250	310	290	300	310	310	320	340	330	310	290	280	230 <sup>A</sup>	230	250	300 <sup>A</sup>	310
24	310 <sup>A</sup>	310 <sup>A</sup>	310 <sup>A</sup>	280 <sup>A</sup>	220 <sup>A</sup>	240	280	260	250	270	260	350	350	350	340	330	270	(300) <sup>A</sup>	280	270	A	A	300 <sup>A</sup>	330
25	310	[300] <sup>C</sup>	300	280	300	280	300	280	270	320	[310] <sup>C</sup>	300	310	300	330	320	300	270	260	260	250	240	280	290
26	320	330	310	280	280	300	260	260	250	260	270	310	360	330	330	340	320	290	270	250	240	250	300	300
27	A	300	250	240	250	280 <sup>H</sup>	260	250	260	260	260	280	370	360	340	300	260	270	280	290	280	300	300	300
28	290	290	330	300	280	300	260	270	270	320	300	300	350	340	320	360	330	320	290 <sup>A</sup>	(280) <sup>C</sup>	260	270	270	310 <sup>A</sup>
29	310 <sup>A</sup>	300	280	280	340	360	260	240 <sup>K</sup>	250 <sup>H</sup>	280 <sup>K</sup>	300 <sup>K</sup>	300	330	300	290	290	290	280	320	280	290	280	240	340
30	320	310	290	290	260	300	250	240	230	230	300	270	280	300	320	330	280	260	270	270	280	270	320	320
31																								
Median Value	310	300	280	270	270	280	250	250	260	270	300	320	300	300	300	300	290	280	270	250	240	270	300	310
Count	27	28	29	29	29	30	29	28	28	27	28	28	28	26	26	28	28	28	28	27	28	27	29	28

Sweep: 1.2-Mc to 8.5-Mc in 1.5-min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Apr. 1950

f<sub>o</sub>F<sub>1</sub>

Yamagawa

Lat. 31° 12.5' N  
Long. 130° 37.7' E

IONOSPHERIC DATA

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	Q	L	L	L	L	L	L	L	L	Q	Q				
2							Q	Q	C	C	C	C	C	C	C	C	C	C	C	C				
3							Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
4							Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
5							Q	Q	Q	L	L	5.3	L	L	L	L	L	L	Q	Q				
6							Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
7							A	Q	Q	L	L	L	Q	L	Q	L	L	L	Q	Q				
8							Q	Q	Q	Q	Q	Q	L	Q	Q	Q	Q	Q	Q	Q				
9							Q	Q	Q	Q	C	L	L	L	L	L	L	L	Q	Q				
10							Q	Q	Q	A	L	Q	Q	L	L	L	L	L	Q	Q				
11							Q	Q	Q	L	L	L	L	L	L	L	L	L	Q	Q				
12							Q	Q	Q	L	L	L	L	L	L	L	L	L	Q	Q				
13							Q	Q	Q	L	L	L	L	L	L	L	L	L	Q	Q				
14							Q	Q	Q	L	L	L	L	L	L	L	L	L	Q	Q				
15							Q	Q	Q	L	L	L	L	L	L	L	L	L	L	L				
16							Q	C	C	C	C	C	C	C	C	C	C	C	C	C				
17							Q	Q	Q	A	A	Q	L	L	Q	L	L	L	Q	Q				
18							Q	Q	Q	Q	L	L	L	L	L	L	L	L	L	L				
19							Q	Q	Q	C	L	L	L	L	L	L	L	L	L	L				
20							Q	Q	Q	L	A	L	L	L	L	L	A	Q	A	A				
21							Q	Q	L	Q	L	L	L	L	L	L	L	L	L	Q				
22							Q	Q	L	Q	L	L	L	L	L	L	L	L	L	Q				
23							Q	Q	L	L	L	L	L	L	L	L	L	L	L	L				
24							Q	Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q				
25							Q	Q	Q	L	C	L	L	L	L	L	L	L	L	Q				
26							Q	Q	Q	Q	Q	A	L	L	5.6	A	L	L	L	Q				
27							Q	Q	Q	Q	Q	Q	L	L	L	L	L	L	Q	Q				
28							Q	Q	Q	L	L	L	L	L	L	L	L	L	L	Q				
29							Q	Q	Q	Q	4.6	5.0	5.4	L	Q	Q	Q	Q	L	Q				
30							Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
31							Q	Q	Q	Q	L	L	L	L	L	L	L	L	Q	Q				
Median Value																								
Count																								

Sweep: 2 Mc to 5 Mc in 1.5 min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Apr. 1950

RFI

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

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	Q	230 <sup>A</sup>	270	260 <sup>B</sup>	200	260	220	210	A	Q	Q				
2							Q	Q	C	C	C	C	C	C	C	C	C	C	C	C	Q			
3							Q	Q	Q	Q	240	240 <sup>B</sup>	240	200	200	Q	260 <sup>A</sup>	250	A	A				
4							Q	Q	Q	230	230	230	230	230	230	230	Q	Q	Q	Q				
5							Q	Q	Q	250	230	230	210	260	A	240	230	260	Q	C				
6							Q	Q	Q	200	200	200	210	210	210	220	240	Q	Q					
7							A	Q	Q	240	230	260	Q	220	Q	260	260	Q	Q	Q				
8							Q	Q	Q	Q	Q	Q	230	Q	Q	Q	Q	Q	Q	Q				
9							Q	Q	Q	Q	C	220	200	210	210	250	Q	260	Q	Q				
10							Q	Q	Q	A	220	Q	Q	220	240	230	Q	Q	Q	Q				
11							Q	Q	Q	250	210	210	260 <sup>A</sup>	280	230	230 <sup>A</sup>	240	Q	Q	Q				
12							Q	Q	220	240	230	250	250	290	B	250	260	Q	Q	Q				
13							Q	Q	Q	Q	Q	210	260	240	A	A	(260)	Q	Q	Q				
14							Q	Q	240	220	230	230	(240)	A	Q	A	A	A	A	C				
15							Q	Q	Q	(220)	220	220	220	230	220	230	230	250	260	Q				
16							Q	C	C	C	C	C	C	C	C	C	C	C	C	C				
17							Q	Q	Q	A	A	Q	230	250	Q	A	260	Q	Q	Q				
18							Q	Q	Q	Q	250	240	250	240	230	270	270	270	250	230				
19							Q	Q	C	Q	240	240	250	230	240	270	260	250	A	Q				
20							Q	Q	Q	A	A	A	(210)	(270)	(240)	A	Q	A	A	A				
21							Q	Q	250	Q	240	220	220	250	250	230	240	250	Q	Q				
22							Q	Q	230	Q	240	220	240	250	250	220	230	250	Q	Q				
23							Q	Q	230	220	A	230	270	A	240	240	290	270	250	Q				
24							Q	Q	Q	Q	300	280	280	280	280	280	Q	A	Q	Q				
25							Q	Q	Q	250	(250)	240	240	240	230	270	270	Q	Q	Q				
26							Q	Q	Q	Q	Q	A	250	230	240	A	280	270	Q	Q				
27							Q	Q	Q	Q	Q	Q	250	220	230	240	220	Q	Q	Q				
28							Q	Q	Q	250	250	260	250	250	230	270	240	270	Q	C				
29							Q	Q	Q	Q	250	270	230	270	Q	Q	Q	Q	280	Q				
30							Q	Q	Q	Q	220	220	A	230	240	240	240	Q	Q	Q				
31																								
Median Value									230	240	230	230	240	240	240	240	240	260	260	—				
Count								5	9	19	22	25	25	25	20	20	21	12	4	—				

Sweep 12-Mc (48) Mc in 1.5-min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

foE

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

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							E	2.0 <sup>H</sup>	(3.2) <sup>J</sup>	A	A	B	(3.6) <sup>J</sup>	3.6	3.8	A	3.2	A	(2.1) <sup>A</sup>	B					
3							B	2.4 <sup>H</sup>	C	C	C	C	C	C	C	C	C	C	C	C	C				
4							(1.6) <sup>B</sup>	2.4 <sup>H</sup>	3.0	3.4	3.7	3.8 <sup>B</sup>	3.8 <sup>B</sup>	3.6 <sup>A</sup>	(3.5) <sup>J</sup>	(3.4) <sup>A</sup>	A	A	A	A	A				
5							1.7 <sup>B</sup>	2.0	3.0	3.5	(3.7) <sup>A</sup>	A	B	(3.8) <sup>J</sup>	3.8	A	A	3.1	(2.3) <sup>A</sup>	(1.9) <sup>B</sup>					
6							A	(2.6) <sup>J</sup>	(3.2) <sup>A</sup>	3.3	3.4	3.9	(4.0) <sup>J</sup>	3.8	A	A	A	2.8	A	C					
7							1.8	2.4	3.0	3.4	A	A	A	A	A	A	(3.4) <sup>A</sup>	2.9	2.3	A					
8							A	2.8	3.4 <sup>A</sup>	3.4	3.8	A	(4.0) <sup>J</sup>	3.6 <sup>J</sup>	A	A	A	A	A	A					
9							B	2.4	A	A	A	(3.9) <sup>A</sup>	A	A	(3.9) <sup>A</sup>	A	A	A	A	A					
10							(1.9) <sup>J</sup>	2.9	A	3.4	C	A	A	A	A	B	3.6	A	B	2.6	A				
11							(1.8) <sup>J</sup>	(2.6) <sup>A</sup>	A	A	A	A	A	A	A	A	3.8 <sup>B</sup>	3.4	A	A					
12							1.4	2.6	(3.1) <sup>F</sup>	3.4	3.7	B	A	A	A	A	A	3.5	A	A					
13							(2.0) <sup>J</sup>	(2.8) <sup>A</sup>	A	A	A	3.9 <sup>J</sup>	(4.0) <sup>B</sup>	(3.9) <sup>J</sup>	B	B	3.5	A	A	A					
14							2.1 <sup>H</sup>	2.5 <sup>H</sup>	3.2 <sup>H</sup>	3.6	3.9	3.8 <sup>J</sup>	A	A	A	A	A	2.8	2.1	A					
15							1.6	2.7	3.0 <sup>A</sup>	3.4	3.6 <sup>A</sup>	(3.8) <sup>A</sup>	(3.8) <sup>A</sup>	B	B	A	3.4	A	A	C					
16							A	2.8	3.4 <sup>H</sup>	(3.6) <sup>A</sup>	3.6	A	A	A	A	A	(3.4) <sup>J</sup>	3.1	A	(1.6) <sup>B</sup>					
17							1.8	C	C	C	C	C	C	C	C	C	C	C	C	C					
18							1.8	2.7 <sup>P</sup>	3.0	A	A	3.8	3.9	B	3.8	(3.5) <sup>B</sup>	3.4	3.0	(2.2) <sup>A</sup>	B					
19							B	(2.5) <sup>H</sup>	3.3 <sup>A</sup>	3.4	3.7	A	A	3.7 <sup>A</sup>	3.9	3.8	3.5	3.0	2.2	(1.4) <sup>B</sup>					
20							1.9	2.5	C	3.4 <sup>H</sup>	3.6	3.7 <sup>A</sup>	A	B	3.6	3.7 <sup>H</sup>	3.3	3.0	A	A					
21							A	2.6	A	A	A	A	A	A	A	A	A	(3.1) <sup>A</sup>	(2.4) <sup>A</sup>	A					
22							2.0	2.4	3.1	A	A	A	A	A	A	A	3.6	3.5	3.4	A					
23							2.0	2.6	(3.2) <sup>A</sup>	3.3 <sup>H</sup>	A	A	A	A	A	A	3.6	3.4	2.5 <sup>A</sup>	A					
24							1.8	2.8 <sup>H</sup>	3.1 <sup>H</sup>	3.6	A	A	A	(3.8) <sup>B</sup>	3.7 <sup>A</sup>	3.4	3.4	3.0	2.3	A					
25							2.2	2.5 <sup>H</sup>	3.4	A	A	A	A	A	A	A	A	A	2.4	A					
26							A	2.7	3.0	3.6	3.6	(3.7) <sup>B</sup>	4.0	4.0	4.0	3.9	3.4	3.2 <sup>J</sup>	A						
27							2.1	3.0	A	3.4 <sup>H</sup>	3.7	A	3.6 <sup>A</sup>	A	A	A	3.5	3.1	2.6	2.2					
28							2.0	2.9	3.2	B	B	3.6 <sup>J</sup>	B	3.8	3.8	3.6 <sup>J</sup>	A	A	A	A					
29							2.4	A	2.9	3.4	3.8	3.9	(3.9) <sup>B</sup>	3.9	3.6	3.4	2.8	A	C						
30							A	2.7	A	A	A	A	A	A	A	A	3.3 <sup>J</sup>	A	A	1.7					
31							A	2.6	3.4	3.7	3.7	A	A	A	A	(3.6) <sup>J</sup>	A	A	A						
Median Value																									
Count							1.9	2.6	3.2	3.4	3.7	3.8	3.9	3.9	3.8	3.6	3.4	3.0	2.3	1.7					
							2.0	2.8	2.0	1.7	1.4	1.1	1.0	1.0	1.1	1.3	1.7	1.4	1.2	1.5					

Sweep 1.2 Mc to 3.3 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

f<sub>o</sub>'E

Apr. 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							E	A	10.0	A	A	11.0	11.0	11.0	11.0	A	11.0	A	A	B					
2							B	12.0 <sup>H</sup>	C	C	C	C	C	C	C	C	C	C	C	C	C				
3							B	13.0 <sup>H</sup>	12.0	12.0	11.0	12.0	11.0	11.0	11.0	11.0 <sup>A</sup>	11.0 <sup>A</sup>	A	A	A	A				
4							B	12.0	12.0	11.0	11.0	A	11.0	12.0	13.0	A	11.0 <sup>A</sup>	A	A	A	12.0				
5							B	13.0	12.0	11.0	11.0 <sup>H</sup>	11.0	11.0 <sup>A</sup>	11.0	11.0	11.0 <sup>A</sup>	A	A	12.0	A	C				
6							B	12.0	12.0	A	11.0	A	A	A	A	A	A	12.0	11.0	11.0 <sup>H</sup>	A				
7							A	A	10.0	11.0	11.0	A	12.0	11.0	A	11.0	A	A	A	A	A				
8							B	12.0	A	A	A	(12.0)	(13.0)	A	13.0 <sup>A</sup>	A	A	A	A	A	A				
9							A	A	A	12.0	C	A	A	A	A	12.0	12.0	11.0	B	A	A				
10							(13.0)	A	12.0	11.0 <sup>A</sup>	A	11.0	A	A	A	A	11.0	11.0	A	A	A				
11							E	11.0	(11.0)	11.0	11.0	11.0	A	A	A	A	A	12.0	A	A	A				
12							A	A	A	A	11.0	11.0	11.0	11.0	B	B	12.0	A	A	A	A				
13							B <sup>H</sup>	12.0 <sup>H</sup>	12.0	13.0	13.0	13.0	13.0	A	A	A	A	12.0	12.0	A	A				
14							16.0	11.0	11.0	11.0	11.0	11.0	11.0	B	B	A	11.0	A	A	C	C				
15							A	13.0	13.0 <sup>H</sup>	A	A	A	A	A	A	A	11.0	11.0	A	B	B				
16							B	C	C	C	C	C	C	C	C	C	C	C	C	C	C				
17							B	13.0 <sup>B</sup>	13.0	A	A	11.0	11.0	11.0	10.0	11.0	11.0	A	A	B	B				
18							B	12.0 <sup>B</sup>	12.0	11.0	11.0	A	A	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0				
19							B	12.0	C	11.0 <sup>H</sup>	12.0	11.0	A	A	11.0	12.0	12.0 <sup>H</sup>	12.0	11.0	A	A				
20							A	13.0	A	A	A	A	A	A	A	A	A	A	A	A	A				
21							17.0	12.0	12.0	A	A	A	A	A	A	A	11.0	10.0	11.0	A	A				
22							B	12.0	11.0 <sup>A</sup>	11.0 <sup>H</sup>	A	A	A	A	A	A	A	A	(12.0)	FA	A				
23							13.0	12.0 <sup>H</sup>	12.0 <sup>H</sup>	11.0	11.0 <sup>A</sup>	12.0 <sup>A</sup>	11.0 <sup>A</sup>	A	12.0	12.0 <sup>A</sup>	11.0	11.0	11.0	A	A				
24							A	12.0 <sup>H</sup>	11.0	14.0 <sup>A</sup>	A	A	A	13.0	A	A	A	A	11.0	A	A				
25							A	12.0	12.0	11.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	13.0	A	A				
26							B	12.0	A	11.0 <sup>H</sup>	11.0	11.0 <sup>A</sup>	(11.0)	A	A	A	A	12.0	12.0	11.0 <sup>B</sup>	11.0				
27							14.0	12.0	11.0	11.0	11.0	11.0	B	11.0	11.0	11.0	A	A	A	A	A				
28							13.0 <sup>A</sup>	15.0	14.0	12.0	12.0	12.0	12.0	12.0	13.0	11.0	11.0	13.0	A	C	C				
29							A	12.0	A	12.0	13.0	13.0	13.0	A	A	A	12.0	11.0	12.0	A	A				
30							A	11.0	11.0	10.0 <sup>A</sup>	A	A	A	A	A	11.0	(11.0)	A	A	A	A				
31																									
Median Value	15.0	12.0	12.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	12.0	11.0	11.0	12.0	11.0	11.0	12.0	11.0	11.0	11.0	11.0
Count	8	23	21	20	17	17	17	17	17	17	17	17	15	13	13	13	20	13	13	13	13	13	13	13	2

Sweep 1.2-Mc to 5.5-Mc in 1.5 min Manual

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Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

135° E Mean Time

Apr. 1950

SES

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	G	G	G	G	C	G	G	3.4	G	3.8	5.0 <sup>B</sup>	-G	G	G	G	3.8	G	3.4	3.1	G	2.2	G	G	G	
2	G	G	C	G	G	G	G	G	C	C	C	C	C	C	C	C	C	C	C	C	3.4	G	C	G	
3	G	G	2.4 <sup>B</sup>	G	G	G	G	G	G	G	G	G	G	G	G	4.7	4.2	4.7	4.2	3.2	3.4	G	G	G	
4	G	G	G	G	G	G	G	G	G	G	4.8 <sup>Y</sup>	5.0	G	4.6	4.8	4.2	3.4	3.0	3.0	G	G	G	2.8	3.2	
5	G	2.6	4.4	2.4 <sup>F</sup>	3.8 <sup>F</sup>	4.2 <sup>F</sup>	4.9 <sup>Y</sup>	3.0	G	4.6	(4.7)	5.0	6.0	5.4	5.7	4.0	3.8	G	2.6	C	C	C	C	3.0	
6	G	G	G	G	G	G	G	G	4.6 <sup>Y</sup>	4.9	4.4	4.4	4.4	5.4	4.1	4.5	G	G	G	3.2	1.9	G	G	G	
7	3.0 <sup>B</sup>	2.2	2.4	5.2	3.8	5.7	4.6	G	4.2 <sup>B</sup>	4.4	4.6	5.2	G	G	4.4	4.4	4.4	4.9	4.1	3.6	3.2	2.2	2.4	3.2	
8	3.5	2.2	2.9	3.0	4.1	2.5	2.7	3.2	4.0	4.2	4.6	5.4	5.0	4.6	5.0	6.2	6.0	5.0	8.7	5.2	4.8	G	3.8	3.0	
9	C	G	G	G	G	G	2.4	3.2	4.2	G	C	4.0	5.0	4.4 <sup>Y</sup>	G	G	G	8 <sup>B</sup>	3.2	2.6	2.2	G	G	3.0	
10	3.0	4.8	3.8	4.2	G	G	3.6	G	3.8	4.4	4.4	4.4	5.2 <sup>Y</sup>	(5.0)	4.4	G	G	3.1	3.4	2.9	3.5	2.9	2.4	4.2 <sup>F</sup>	
11	3.0	G	G	G	G	G	G	G	4.8 <sup>Y</sup>	G	4.8	G	5.4	5.7	4.6	5.0	G	3.8	4.2	3.4	2.2	β	G	G	
12	3.9	4.4	4.4	3.2	3.0	3.0	4.2	3.6	4.2	5.3	5.2	G	G	G	β	5.4	5.4	4.8	3.4	3.5	3.4	G	4.6	2.4	
13	G	3.8	3.2	β	G	G	G	3.7	β	G	G	G	G	5.1	4.4	4.3	4.9	G	G	3.4	2.4	G	G	G	
14	G	G	G	G	G	G	G	G	G	4.6	4.6	5.0	4.8	4.8	4.8	7.2	6.8	6.8	6.8	C	3.0 <sup>Y</sup>	C	2.2	2.4	
15	4.8	3.8	4.0	4.4	4.3	3.8	2.4	G	G	4.5	4.0	4.8	4.6	5.2	4.4	4.8	C	3.8	3.1	G	3.8	3.2	2.9	3.8	
16	3.8	3.4	3.8	5.6	3.8 <sup>Y</sup>	2.8	G	C	C	C	C	C	C	C	C	C	C	C	C	C	C	G	5.4	G	β
17	3.4	2.1	G	G	G	G	G	G	4.7	6.8	1.0	8	5.2	5.2 <sup>Y</sup>	6.0	6.0	4.6	3.4	3.4	3.8	5.0	G	2.8	3.2	
18	3.8	4.0 <sup>B</sup>	2.8	4.7	4.4	G	2.1	Y	G	5.4	5.9	5.0	5.6	6.4	6.8	G	G	G	5.0	5.2	5.0	4.4	2.4	2.8	
19	4.0	G	G	G	G	2.2	4.4	(3.5)	C	4.9	5.4	5.5	4.3	5.2	Y	4.9	5.1	4.2	5.2	2.8	G	4.8	2.0	G	
20	3.8	G	3.8	3.8	5.0	4.8	3.0	G	5.0	5.3	8.1	5.8	5.6	5.4	4.5	5.1	6.7	5.6 <sup>B</sup>	8.4	5.4	5.4	14.8	7.2	5.0	
21	3.2	6.2	3.2	3.8	2.6	2.4	G	3.5	4.7	6.0	6.0	5.4	5.1	5.2	4.4	G	G	4.1	4.2	3.9	3.0	4.1	2.8	3.6	
22	3.6	4.6	3.4	3.8	3.0	2.4	G	G	4.8	5.0	5.9	6.3	4.4	5.0	5.0	4.8	4.2	3.4	3.6	5.0 <sup>B</sup>	3.7	4.4	G	G	
23	3.0	2.0	G	G	G	G	G	4.2	4.2	4.6	4.8	4.8	G	7.2	G	5.0	4.5	4.8	4.3	4.2	3.6	3.4	5.4	4.2	
24	3.4	3.2	2.0	3.4	2.2	G	3.1	Y	G	4.8	5.2	6.6	6.2	5.6	5.8	5.4	3.8	(7.0) <sup>B</sup>	G	3.4	4.6	3.6	2.8	2.2	
25	2.4	C	2.8 <sup>B</sup>	2.1	3.2	G	3.1	3.0	G	4.3	C	G	G	G	G	G	G	7.0	5.0	3.4	2.8	5.2	2.2	3.8 <sup>B</sup>	
26	2.2	G	2.0	3.8	G	G	G	G	4.8	5.4	7.0 <sup>B</sup>	6.8	5.3	4.9	6.3	11.4	6.6	G	3.4	G	3.2	G	4.6	7.6	
27	3.4	3.2	3.5	1.8	2.8	G	G	G	5.2	5.2 <sup>Y</sup>	5.7	5.6	β	4.8	G	4.8	4.2	4.4	3.2	4.2	3.6	3.5	3.9	2.5	
28	3.2	3.6	2.6	G	G	G	G	G	4.7	6.0	5.6	5.4	5.4	G	4.9	5.4	5.6	6.2 <sup>B</sup>	4.8	C	3.0	3.4	2.8	4.2	
29	3.4	(3.6)	4.4	3.2	4.4	3.6	3.4	G	3.4	G	G	4.3	4.6	4.6	4.9	4.5	G	4.0 <sup>B</sup>	3.5	3.0	G	G	2.2	G	
30	G	G	G	4.0	2.8	G	3.0	G	5.0	4.8	5.0 <sup>F</sup>	4.6	4.8	5.4	5.0	5.0	4.8	4.0	3.0	3.2	3.2	2.6	3.2	2.4	
31																									
Median Value	3.2	2.2	2.6	2.4	2.2	G	G	G	4.1	4.6	4.9	4.9	4.8	5.0	4.4	4.8	4.2	4.0	3.4	3.4	3.2	2.6	2.4	2.8	
Count	29	29	29	29	29	30	29	29	26	28	26	28	27	28	27	27	26	27	28	25	29	27	28	29	

Sweep 12-Mc 10-55-Me in 1.5-min Manual



Radio Regulatory Agency (Denpacho)

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

IONOSPHERIC DATA

Apr. 1950

M3000F2

Lat. 31° 12.5' N  
Long. 130° 37.7' E

135° E Mean Time Yamagawa

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	2.9	3.0	2.8	2.7	(2.8) <sup>C</sup>	2.9	2.6	3.2	3.2	3.4	3.1	2.9	2.9	2.8	2.8 <sup>H</sup>	2.9	3.1	2.9	3.0	2.9	2.9	3.0	2.8	2.7
2	2.8	2.7	(2.8) <sup>C</sup>	2.9	2.7	3.0	(3.0) <sup>C</sup>	3.0	C	C	C	C	C	C	C	C	C	C	C	C	2.7	(2.8) <sup>C</sup>	2.9	2.9
3	3.1	2.8	3.2	3.4	2.5	2.6	3.0	3.0	3.0	3.0	3.0	3.0	2.9	2.8	(2.9) <sup>J</sup>	2.9	2.9	2.7	2.9	3.0	2.8	2.7	2.6	2.7
4	2.9	2.8	(3.3) <sup>S</sup>	2.8	2.9	2.7	2.8	3.2	3.0	3.0	2.9	2.8	(2.9) <sup>F</sup>	2.8	2.8	2.7	2.7	2.9	3.0	3.1	3.0	2.8	2.5	2.6
5	2.6	2.6	2.7	2.6	2.4	2.7	2.6	3.2	2.9	2.9	3.0	2.8	(2.8) <sup>J</sup>	(2.8) <sup>J</sup>	(2.8) <sup>P</sup>	2.8	2.8	3.0	C	C	C	C	2.8	2.8
6	2.6	2.8	2.8	3.0	2.6	2.9	2.8	3.2	3.0	2.9	3.2	3.1	2.9	3.0	3.0	3.2	2.8	3.0	3.1	3.2	2.8	(2.7) <sup>K</sup>	(2.6) <sup>S</sup>	2.6
7	2.7	2.9	3.1	3.0	2.9	2.9	3.1	3.3	3.3	3.1	2.8	2.9	3.0	2.9	2.8	2.9	2.8	2.9	3.1	3.3	2.9	3.8	3.1	2.7
8	2.7	2.8	3.0	3.4	3.3	2.9	3.0	3.4	3.1	3.2	3.1	2.8	2.9	2.9	2.8	2.9	3.0	3.0	3.0	2.8	2.9	2.9	2.9	2.7
9	C	3.0	2.9	2.8	2.9	3.1	3.2	3.2	3.2	C	C	(2.6) <sup>P</sup>	2.8	2.8	2.8	2.9	2.9	2.8	3.0	3.1	2.8	(2.6) <sup>S</sup>	2.6	2.6
10	2.7	2.6	3.0	3.0	2.9	2.8	3.0	3.2	3.2	2.9	2.2	2.8	2.8	2.7	2.8	2.9	2.8	2.8	3.1	3.3	3.2	3.0	2.7	2.9
11	2.9	2.8	2.9	3.1	3.1	3.1	2.9	3.1	2.9	2.9	2.8	2.7	2.7	2.7	2.8	2.9	2.8	3.0	3.1	3.0	2.8	2.7	2.6	2.7
12	2.9	3.0	2.7	2.7	(3.0) <sup>J</sup>	3.0	(2.9) <sup>F</sup>	3.0	3.0	2.8	2.7	2.8	2.7	(2.8) <sup>P</sup>	2.8	2.7	2.8	2.8	2.9	3.0	2.8	2.8	2.8	2.6
13	2.8	2.9	3.3	3.0	2.7	2.7	2.8	3.2	3.0	2.9	2.8	2.8	2.8	2.8	2.8	2.9	2.8	2.8	2.8	(2.9) <sup>C</sup>	3.0	(2.8) <sup>C</sup>	2.6	2.8
14	2.7	2.7	2.8	2.8	2.8	2.9	3.0	3.2	3.0	2.9	2.8	2.8	2.8	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.6	2.8
15	2.8	2.7	3.3	3.1	3.1	3.1	3.1	3.5	3.3	3.2	C	2.7	2.8	2.8	2.9	2.9	2.9	2.9	3.0	3.1	2.9	(2.8) <sup>C</sup>	2.6	2.5
16	2.6	2.6	2.8	3.0	2.8	3.1	3.2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	2.6	2.5
17	2.7	2.9	2.8	2.6	2.8	2.6	2.9	3.0	3.0	2.8	2.6	2.7	2.8	2.8	2.8	2.8	2.9	3.0	2.9	3.0	2.8	2.7	2.6	2.7
18	2.7	2.7	2.8	(2.9) <sup>P</sup>	2.8	2.8	3.0	3.5	3.2	2.9	3.1	2.9	2.9	2.7	2.9	2.8	2.9	3.0	3.1	3.1	3.0	2.8	2.7	2.6
19	2.6	2.7	2.8	2.9	3.2	2.9	2.9	3.3	(3.1) <sup>C</sup>	2.9	2.5	2.7	2.7	2.7	2.7	2.7	2.8	3.0	3.0	3.1	2.8	2.7	2.5	2.7
20	2.6	2.5	2.5	2.7	2.7	2.7	2.9	3.0	3.3	3.2	3.1	2.7	2.8	2.9	2.8	2.6	2.7	3.0	3.0	2.9	2.7	A	2.6	2.6
21	2.8	2.7	(2.6) <sup>B</sup>	3.0	3.0	2.7	2.7	2.8	3.2	3.0	2.7	2.4	2.7	2.8	2.8	3.0	3.0	2.8	3.0	3.2	2.6	2.7	2.8	2.8
22	2.7	2.8	3.0	3.0	3.2	2.7	3.0	3.1	3.3	3.2	2.7	2.8	2.9	2.8	(2.9) <sup>J</sup>	(2.8) <sup>J</sup>	2.9	3.0	3.0	3.1	3.0	2.6	2.5	2.6
23	2.7	2.8	2.8	3.0	3.1	2.8	3.1	3.4	3.1	2.8	2.8	2.7	2.7	2.7	2.8	2.9	(3.0) <sup>J</sup>	3.0	3.0	2.9	3.0	2.6	2.8	2.7
24	2.7	2.7	2.6	2.7	3.4	2.8	2.8	3.1	3.1	2.7	2.6	2.7	2.8	2.8	2.7	2.7	2.8	2.9	3.0	2.9	2.6	2.7	2.6	2.5
25	2.7	(2.8) <sup>C</sup>	2.8	2.8	2.7	2.7	2.9	2.9	3.0	2.9	(2.8) <sup>C</sup>	2.9	2.7	2.7	2.7	2.9	2.8	2.8	3.0	3.0	3.0	2.9	2.6	2.6
26	2.6	2.6	2.7	2.9	2.9	2.8	3.1	3.1	3.2	2.9	2.6	2.6	2.6	2.7	2.7	2.9	2.8	2.8	3.0	3.0	3.0	2.9	2.6	2.6
27	2.6	2.7	3.0	3.1	2.6	2.8	3.0	3.1	3.0	2.8	2.8	2.6	2.6	2.7	2.9	2.8	2.9	2.9	2.9	2.9	2.8	2.6	2.6	2.6
28	2.8	3.0	2.8	3.0	3.0	2.8	3.1	3.1	3.0	2.7	2.7	2.7	2.6	2.7	2.7	2.8	2.7	2.8	2.8	(2.8) <sup>C</sup>	2.8	2.7	2.8	2.8
29	2.7	2.7	2.7	2.6	2.5	2.5	3.2	(3.3) <sup>J</sup>	2.6	2.8	2.8	2.8	3.0	2.8	2.8	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.6	2.4
30	2.6	2.5	2.5	2.9	2.5	2.6	2.9	2.9	3.1	2.8	2.9	2.7	2.8	2.8	2.8	2.8	3.0	3.0	3.0	2.7	2.8	2.6	2.6	2.6
31																								
Median Value	2.7	2.8	2.8	2.9	2.8	2.8	3.0	3.1	3.1	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.9	3.0	3.0	2.8	2.7	2.6	2.7
Count	2.9	3.0	3.0	3.0	3.0	3.0	2.9	2.8	2.7	2.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.9	2.8	2.6	2.9

Sweep 1.2 Mc to 0.5 Mc in 1.5 min

Manual

Y 9

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

f<sub>min</sub>F

Apr. 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	1.4	E	1.4	E	C	E	1.4	2.0	A	3.8	A	3.8	4.2	4.2	4.2	3.6	3.2	A	2.7	2.1	2.0	2.0	1.6	1.5
2	1.6	1.5	[1.4]C	1.3	1.7	1.5	1.6	2.4	C	C	C	C	C	C	C	C	C	C	C	C	1.6	1.7	[1.6]C	1.5
3	1.3	1.3	1.6	1.6	1.8	1.6	1.6	2.4	3.0	3.4	3.7	4.4	4.2	4.0	4.0	A	A	3.2 <sup>A</sup>	2.8 <sup>A</sup>	2.0	A	1.7	1.5	1.5
4	E	1.4	E	E	E	1.7	2.0	2.0	3.0	3.5	3.8	4.0	4.2	4.0	4.0	3.8	3.6	3.1	2.3	1.9	1.4	1.4	A	1.8
5	1.3	1.4	E	1.4	1.6	1.6	1.7	2.8 <sup>A</sup>	3.2	3.5	3.8	4.0	4.1	4.4	A	3.8	3.2	3.2	2.2	C	C	C	C	A
6	1.8	1.8	1.8	1.4	1.4	1.8	2.4	3.4	3.4	4.1	4.1	4.1	4.3	4.4 <sup>A</sup>	4.1	4.1	3.4	2.9	2.3	1.8	1.5	1.5	1.5	1.6
7	1.8	1.7	1.8	1.6	A	A	A	2.8	A	3.8	4.2	4.2	4.4	4.4	4.4	4.2	3.8	4.2	(3.7) <sup>A</sup>	A	A	A	1.6	A
8	A	1.6	1.7	1.7	1.6	1.5	1.7	2.5	A	4.2 <sup>A</sup>	4.2	4.6	4.2	4.4	4.4	4.4	4.4	A	A	A	A	A	1.6	A
9	C	1.4	1.3	1.3	1.5	1.5	2.2	2.9	A	3.5	C	4.2	4.3	4.8	4.2	4.1	3.6	3.8	2.7	1.8	1.5	1.5	1.6	A
10	1.9	A	A	A	1.4	1.6	2.0	2.6	2.8	A	4.0	4.5	4.6 <sup>A</sup>	4.4	4.4	4.4	3.5	2.7	A	1.9	A	1.9	1.8	1.7
11	1.7	1.8	1.3	E	1.3	1.3	1.4	2.7	3.2	4.2	4.1	4.4	A	A	4.3	A	3.5	3.2	(2.8) <sup>A</sup>	2.4	1.6	1.5	1.3	1.5
12	A	A	A	1.7	1.3	2.0	2.6	2.8	3.4	3.6	3.8	4.5	4.5	4.4	6.6	4.5	4.5	3.6	A	2.2	A	1.5	A	1.4
13	E	A	A	1.5	1.5	E	2.1	2.9	3.2	3.6	3.9	4.1	4.1	A	A	A	A	2.8	2.6	2.0	1.5	1.6	1.6	1.5
14	1.5	1.5	E	E	E	1.6	2.7	3.4	A	4.2	4.2	4.2	4.4 <sup>A</sup>	4.4 <sup>A</sup>	5.4	A	A	A	A	C	1.6	C	1.8	1.8
15	A	A	A	A	1.9 <sup>A</sup>	1.8	1.8	N	3.7	3.6	A	4.2	4.4	4.4	4.4	4.2	3.6	3.2	2.8	1.6	1.5	1.6	A	A
16	A	A	A	1.5	1.5	1.8	1.8	C	C	C	C	C	C	C	C	C	C	C	°C	C	1.8	A	1.8	1.4
17	A	1.5	E	1.3	E	1.3	1.8	2.9	3.7	A	4.4	4.6	4.5	A	A	4.2	3.0	2.2	A	A	1.6	A	A	A
18	A	A	E	1.5	A	1.9	2.1	2.7	3.6	3.5	4.4	4.2	4.4	A	3.9	4.4	4.3	3.4	2.4	2.2	A	A	1.6	A
19	1.3	1.3	1.3	E	E	2.0	2.8	C	4.2	4.4	A	4.3	4.3	4.2	4.2	4.2	4.2	3.3	A	1.4	A	1.5	1.6	
20	A	1.3	A	A	A	A	2.2	N	3.0	A	A	A	A	A	A	A	A	A	A	A	A	A	A	1.6
21	A	A	A	1.6	A	1.7	2.0	2.8	3.3	A	3.8	4.3	4.2	(4.4) <sup>A</sup>	4.2	4.2	3.6	3.4	2.8	2.3 <sup>A</sup>	A	A	A	A
22	A	A	A	1.8	A	1.4	2.1	2.7	3.2	4.2	3.7	3.8	4.2 <sup>A</sup>	4.3	4.3	3.6	3.5	3.2	2.5	A	1.2	A	1.6	1.5
23	A	1.4	E	1.3	E	1.3	2.1	2.9	3.4	3.6	4.2	4.4	4.6	A	4.2	3.8	4.2	3.3	2.3	A	A	A	A	A
24	A	A	A	1.6	A	1.4	2.2	2.9	4.2	A	4.2	A	4.4	4.4	4.6	4.2	3.0	A	2.6	A	A	A	A	A
25	1.8	[1.6]C	1.4	1.5	1.6	1.7	N	2.8	3.3	3.9	C	(4.3) <sup>B</sup>	4.2	4.2	4.3	4.2	4.4	4.2	4.2	A	1.8	1.8	1.4	1.8 <sup>B</sup>
26	1.6	E	E	E	1.4	E	2.1	3.0	A	3.7	A	A	4.5	4.3	4.3	A	4.1	3.3	2.7	2.2	1.7	1.6	A	A
27	A	1.8	1.6	A	1.3	1.3	2.0	2.9	3.5	4.4	A	A	4.6	4.2	4.2	4.2	3.8	3.2	2.4	2.2	2.2	2.0	1.9	1.8
28	1.8	1.7	1.4	1.4	1.6	E	2.4	3.0	2.9	4.2	4.6 <sup>A</sup>	4.7	4.5	4.3	4.1	4.6	3.8	3.2	A	C	A	A	1.8	A
29	A	1.6	1.4	1.6	1.3	1.4	1.8	2.7	3.3	4.2 <sup>A</sup>	4.0	4.0	4.0	4.2 <sup>A</sup>	4.4	4.3	3.9	3.8	4.3	1.8	1.5	1.6	1.6	1.6
30	1.5	1.4	1.4	A	E	2.0	2.6	3.4	3.7	F	4.3	4.1	A	4.6 <sup>A</sup>	4.2	4.1	4.0	3.4	2.4	1.8	1.8	1.6	A	A
31																								
Median Value	1.6	1.5	1.4	1.4	1.4	1.4	2.0	2.8	3.3	3.8	4.1	4.2	4.3	4.4	4.2	4.2	3.7	3.2	2.6	2.0	1.6	1.6	1.6	1.6
Count	1.6	2.1	2.1	2.3	2.2	2.8	2.8	2.7	2.2	2.2	2.0	2.3	2.5	2.2	2.4	2.1	2.4	2.3	1.9	1.6	1.7	1.9	1.7	1.8

Sweep 1.2-Mc to 8.5-Mc in 1.2-min Manual

Radio Regulatory Agency (Denpacho)  
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Apr. 1950

fminE

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	E	E	E	E	C	E	E	1.6	1.8	2.0	2.2	2.2	2.2	2.2	2.2	1.8	1.7	1.7	1.6	B	1.8	B	B	B
2	B	B	C	E	B	B	B	1.4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	B
3	E	E	2.0 <sup>B</sup>	B	B	B	B	1.5	1.6	1.6	1.9	3.0	2.4	2.5	2.0	1.9	1.8	1.7	1.3	1.4	1.6	B	B	B
4	E	E	E	E	E	E	E	1.6	1.8	2.0	2.0	2.2	2.3	3.0	2.9	2.0	2.2	1.8	1.4	1.5	E	E	1.3	1.5
5	E	E	E	E	3.0 <sup>F</sup>	2.8 <sup>F</sup>	1.6 <sup>B</sup>	1.6	1.6	1.8	2.0	2.1	2.1	2.3	2.4	2.1	2.1	2.2	1.5	C	C	C	C	1.9
6	E	B	B	E	E	E	E	2.0	1.7	2.2	(2.0) <sup>B</sup>	2.8	3.0	3.4	3.5	3.3	2.9	1.6	1.4	1.4	1.7	B	B	1.6
7	1.5	1.7	1.6	E	E	E	E	1.4	1.8	2.0	2.1	2.2	2.2	2.4	2.6	2.6	2.2	2.1	1.9	1.4	1.4	1.4	1.5	1.4
8	1.6	1.4	1.5	2.4	3.4	1.5	1.7	1.8	2.4	2.2	2.2	2.0	2.2	2.6	2.4	2.2	2.0	2.0	2.0	1.8	1.6	B	1.4	1.4
9	C	E	E	E	B	B	1.4	1.8	1.8	2.0	[2.4]	2.8	3.2	2.8	2.8	2.9	1.9	B	1.7	1.4	1.8	B	B	1.5
10	1.4	1.5	1.6	E	B	B	1.8	2.0	2.0	2.1	2.2	2.2	2.4	3.0	3.2	2.2	2.0	2.1	2.1	1.8	1.7	1.7	1.6	2.7
11	2.1	B	E	E	E	E	1.3	1.5	1.7	2.0	2.9	2.6	2.9	3.0	3.0	2.1	2.0	1.8	1.4	1.3	1.4	B	B	1.4
12	1.4	1.3	E	1.3	1.5	1.3	1.3	1.8	2.0	2.1	2.1	2.9	2.5	2.3	B	B	2.3	2.0	1.8	1.8	1.5	B	1.6	1.4
13	E	E	1.3	B	B	E	1.4	1.6	1.8	2.6	2.8	3.1	3.0	3.5	2.8	2.5	2.3	2.0	1.5	1.5	1.5	B	B	B
14	B	B	E	E	E	E	1.3	2.7	1.8	2.0	2.2	2.4	2.2	4.2	4.5	2.6	2.2	2.0	1.7	[0.6]	1.6	[1.5] <sup>C</sup>	1.4	1.5
15	1.5	1.4	1.6	1.6	1.5	1.4	1.6	2.1	2.1	2.0	2.2	2.5	2.9	3.0	2.8	2.8	2.8	1.9	1.6	B	1.8	1.6	1.5	1.7
16	1.5	1.4	1.4	1.6	1.8	1.4	1.7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	1.3	1.6	E	E	E	E	1.4	1.6	1.7	2.0	2.1	2.1	2.3	2.2	2.7	2.1	2.0	1.8	1.8	1.8	1.6	B	1.6	1.4
18	E	E	E	E	1.3	1.8	B	1.9 <sup>B</sup>	1.7	1.8	1.5	1.8	2.0	2.7	2.0	1.8	1.6	1.8	1.5	1.4	1.5	1.4	1.4	1.5
19	1.8	E	E	E	E	1.9	1.5	1.4	[1.6]	1.7	1.9	2.0	2.2	2.3	2.2	2.3	2.0	1.6	1.6	1.4	E	1.4	1.8	B
20	1.3	E	1.3	1.4	E	E	1.4	1.6	1.8	2.5	2.1	2.3	2.8	2.7	2.6	2.2	2.1	1.8	1.7	1.4	1.5	1.5	1.7	1.4
21	1.4	E	E	E	E	1.3	1.4	1.6	1.7	1.8	2.1	2.3	3.0	2.5	2.8	2.2	1.8	1.8	1.8	1.7	1.5	1.5	1.6	1.6
22	2.1	1.9	E	E	E	E	1.5	1.5	1.7	1.8	1.8	2.0	2.1	2.1	2.2	2.1	2.0	1.7	1.6	1.4	1.7	1.5	B	B
23	1.4	1.4	E	E	E	E	1.4	1.5	1.8	1.8	2.1	2.0	2.4	2.3	2.2	2.2	2.0	1.7	1.5	1.5	1.4	1.5	1.5	1.5
24	1.3	1.3	1.3	1.4	E	E	1.4	1.5	1.7	2.2	2.2	2.2	2.4	2.8	3.4	2.2	2.0	1.8	1.6	1.6	1.5	1.5	1.5	1.6
25	1.5	[1.4] <sup>C</sup>	1.4	1.7	1.4	B	1.5	1.8	2.0	2.0	[2.1] <sup>C</sup>	2.2	2.7	2.6	2.7	2.2	2.0	1.8	1.8	1.4	1.8	1.5	1.8	1.5
26	2.0	E	1.6	2.0	E	E	1.5	1.6	1.8	1.9	2.1	2.2	2.3	2.4	2.2	2.1	2.1	1.9	1.3	1.5	1.5	B	1.5	1.5
27	1.3	1.4	E	E	1.3	E	1.4	1.4	1.7	1.9	2.2	2.8	[2.5]	2.2	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.8	1.9	1.7
28	2.0	2.0	1.4	E	B	E	1.6	1.8	1.8	2.0	2.2	2.4	2.3	2.5	2.5	2.3	2.1	2.1	1.8	[1.7] <sup>C</sup>	1.6	1.4	1.5	1.5
29	1.5	1.6	1.8	1.3	3.8	2.2	1.4	1.6	1.9	2.0	2.2	2.4	2.6	2.8	2.7	2.5	2.1	2.0	1.3	1.4	B	B	1.4	B
30	B	E	E	1.3	E	E	1.4	1.5	1.4	1.5	2.1	2.1	2.2	2.6	3.0	2.8	1.8	1.8	1.6	1.4	1.5	1.8	1.6	1.6
31																								
Median Value	1.4	1.3	E	E	E	E	1.4	1.6	1.8	2.0	2.1	2.2	2.4	2.6	2.7	2.2	2.0	1.8	1.6	1.5	1.6	1.6	1.5	1.5
Count	25	26	28	28	24	24	27	29	28	28	28	28	28	28	27	27	28	27	28	25	27	17	20	21

Manual

Sweep 12-Mc to 8.5-Mc in 5-min

Y 11

IONOSPHERIC DATA IN JAPAN FOR APRIL 1950

電波觀測報告 第2卷 第4號

1950年5月25日印刷

1950年5月30日發行

(不許複製非賣品)

編集兼  
發行人

莊 宏  
東京都港區青山北町4丁目1

發行所

電 波 廳  
東京都港區青山北町4丁目1  
電話 赤坂(48) { 3913-3915  
                  { 3991-3995

印刷所

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