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IONOSPHERIC DATA IN JAPAN

FOR AUGUST 1952

Vol. 4 No. 8

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KOKUBUNJI, TOKYO, JAPAN

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THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR AUGUST 1952

CONTENTS

	Page
Preface	2
Site of the Ionospheric Stations	3
Remarks on Symbols	3
Ionospheric Data for Every Day and Hour at Wakkanai	4
Ionospheric Data for Every Day and Hour at Akita	15
Ionospheric Data for Every Day and Hour at Kokubunji	26
Ionospheric Data for Every Day and Hour at Yamagawa	38

P R E F A C E

The origin of ionospheric sounding in Japan dates back to 1931 and the results of the work have been published in the form of the monthly "Ionospheric Data in Japan" since 1949. As a result of the reform of administrative structure of the Japanese Government effective on August 1, 1952, the observation, data coordination and publication were handed over to the charge of the Radio Research Laboratories newly set up within the Ministry of Postal Services.

The Radio Research Laboratories consists of three Divisions, i.e., First, Second and Administrative Divisions, located in Tokyo and five local radio wave observatories established at Wakkanai, Akita, Hiraiso, Inubo and Yamagawa, respectively.

The First Division has the following three sections:

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

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

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

The Second Division has the following two sections:

Frequency Standard Section which shall carry on researches on the frequency standard and broadcast the standard frequencies and time signals (J. J. Y.); and

Apparatus Section which shall carry on researches on radio apparatus used for radio regulatory purposes and conduct the approval service of types of radio equipments.

The Administrative Division shall conduct the general affairs of the Laboratories.

The ionospheric sounding is, as heretofore, being carried out by the four observatories at Wakkanai, Akita, Kokubunji (Tokyo) and Yamagawa.

This report provides the results of ionospheric sounding with symbols determined and in the form established on an international basis in the same way as followed by the former Radio Regulatory Commission and it is hoped that it will make any contribution toward the progress in world-wide short wave communications.

This report is intended for distribution on request to the largest possible number of organizations concerned all over the world, and any and every information that the organizations concerned might forward to us in exchange therefor would be highly appreciated.

Shogo Amari
Chief, Radio Research Laboratories,
Ministry of Postal Services

Sep. 1952

SITE OF THE IONOSPHERIC STATIONS

Ionospheric observation is carried out at four stations in Japan.

The stations are situated as follows:

	longitude	latitude	site
Wakkanai	141° 41.1' E	45° 23.6' N	Wakkanai-shi, Hokkaido
Akita	140° 08.2' E	39° 43.5' N	Tegata Nishishin-machi, Akita-shi, Akita-ken
Kokubunji	139° 29.3' E	35° 42.4' N	Koganei-machi, Kitatama-gun, Tokyo-to
Yamagawa	130° 37.7' E	31° 12.5' N	Yamagawa-machi, Ibusuki-gun, Kagoshima-ken

REMARKS ON SYMBOLS

All symbols in the table are used in accordance with "Production and Reduction of Ionospheric Information" of "RESOLUTION OF THE IX GENERAL ASSEMBLY OF URSI SEPTEMBER 1950" (CRWO-F25) except f_{\min} E and f_{\min} F for E and F regions respectively instead of f_{\min} , taken as f_{\min} s in the above Resolution, in order to avoid the interruption of preceding form of data.

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Aug. 1952 foF2

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	5.4	5.3 ^z	5.4	4.4	4.1	4.1 ^k	A ^k	A ^k	4.6 ^k	4.5 ^{PH}	5.0 ^H	5.1 ^H	5.1 ^H	A ^k	B ^k	5.1 ^k	[5.2] ^H	5.3 ^H	5.2	6.0	6.0	[5.8] ^H	5.5	4.6	
2	4.1	4.2	4.0	3.9	3.8	5.0	6.0	4.9 ^k	4.9 ^k	5.4 ^k	A ^k	A ^k	4.8 ^k	[4.3] ^{PH}	[4.3] ^{PH}	4.7 ^k	4.6 ^k	5.0 ^k	5.7 ^k	5.4 ^k	6.2 ^k	5.6 ^k	4.6 ^k	A ^k	
3	A ^k	(4.2)	4.4	4.0 ^{PH}	4.0 ^k	4.3 ^k	[4.4] ^H	A ^k	4.6 ^k	A ^k	A ^k	A ^k	5.0 ^k	4.8 ^k	A ^k	4.6 ^k	5.0 ^k	5.3 ^k	5.7 ^k	(6.4) ^k	6.0 ^k	5.5 ^k	4.5 ^k	3.2 ^k	
4	3.2 ^k	3.3 ^k	3.3 ^k	3.7 ^k	3.9 ^k	B ^k	A ^k	B ^k	B ^k	B ^k	A ^k	A ^k	B ^k	B ^k	A ^k	4.5 ^k	5.5 ^k	[5.2] ^H	5.0 ^k	A ^k	A ^k	4.3 ^k	(4.3) ^k	3.1 ^{PH}	
5	3.2 ^{PH}	3.0 ^{PH}	2.6 ^{PH}	3.5 ^{PH}	(3.2) ^{PH}	[4.2] ^H	5.1 ^k	4.8 ^k	[5.0] ^{PH}	5.2 ^k	A ^k	B ^k	B ^k	4.9 ^k	4.7 ^k	4.5 ^k	5.3 ^k	5.3 ^k	5.1	5.8	6.1	6.0 ^z	5.7 ^F	4.3	
6	5.3 ^v	4.0 ^F	4.0 ^F	3.0 ^F	3.2	3.9 ^H	5.0	5.5	(6.4) ^F	5.0	A	A	A	5.2	4.9	5.6	6.1	5.3	5.3 ^z	A	A	A	A	A	
7	A	3.2	3.1	3.2	3.3	4.2	5.3	4.3	A	A	A	A	A	5.2	4.9	A	A	A	5.2	A	A	A	6.3	6.2	4.8
8	(4.2) ^F	C	C	C	C	3.9	4.8	6.1	5.8	W	A	A	5.3	B	B	A	A	A	A	A	A	5.8	5.8	(5.4) ^{PH}	
9	5.2	4.5	3.3	3.6	3.8 ^F	4.1	4.3	[5.0] ^A	5.8	5.1	5.1	B	B	4.8	B	A	5.2	5.3	5.3	(5.2) ^F	[5.3] ^A	[5.4] ^F	(5.1) ^{PH}	(4.8) ^{PH}	
10	4.3	4.1	4.2	4.0	3.8 ^F	4.3	5.1	5.5	6.2	5.3	5.5	5.8	6.1	6.0 ^v	6.1	6.0	5.6	5.8	5.8	6.2	6.2	6.2	(5.6) ^F	(5.7) ^F	
11	5.0 ^F	4.6 ^F	(4.3) ^F	4.5	(4.0) ^F	4.3 ^F	4.6	4.8 ^v	5.0	5.5	6.0	5.9	5.0	5.4	5.2	5.4	5.2	5.0	5.0	5.9	6.2	6.0	6.0	5.6	4.9
12	4.2	3.5	3.8	M	M	M	M	M	M	5.9	6.0	5.8	6.0	6.1	6.1	5.6	5.5	5.3	5.5	6.0	5.8	5.8	5.8	5.5	5.3
13	5.0	4.8	C	C	C	C	C	C	C	B	C	5.1	C	C	5.6	5.5	5.5	5.7	5.7	A	A	6.0	A	A	A
14	A	A	4.7 ^F	4.6 ^F	(3.8) ^F	4.6	5.1	A	A	5.8	5.8 ^v	5.4	5.3 ^z	5.3	[5.4] ^A	5.5	5.5	5.3	5.5	5.6	A	A	6.0	A	A
15	SA	A	SA	3.3	3.3	4.6	A	A	6.0	5.2	5.3	A	A	5.3	5.4	5.3	5.3	5.5	5.5	5.6	SA	SA	6.0	5.0	
16	4.4	4.1	4.1	4.2 ^J	3.3	3.8	4.9	[5.4] ^A	6.0	6.2 ^F	5.4	A	A	6.1	5.8	6.2	6.6	[6.0] ^S	6.5	5.6	[5.9] ^A	6.2 ^{PH}	6.1 ^F	5.6	
17	[5.6] ^A	5.6 ^F	4.5	4.5	4.3	4.2 ^J	5.2	5.8	A	C	A	A	A	A	A	6.2	6.1	6.0	A	A	7.3	(6.4) ^F	(6.4) ^A	6.4	
18	5.5	4.0	4.0	3.5	3.2	3.0	4.2	5.1	4.6	5.4	6.0	W	5.7	6.0	6.2 ^P	6.0	6.0	6.2	7.0	6.7	6.0	5.7	5.5	4.8	
19	4.7	4.7	4.6	3.8	4.6	[4.7] ^S	4.8	6.7	6.8 ^J	A	A	6.2	5.8	A	A	6.0	6.1	C	C	A	A	A	A	A	
20	(5.3) ^{PH}	4.7	4.2	(4.2) ^A	4.2	3.9	4.6	5.2	A	A	A	5.4	[5.2] ^A	5.1	5.9	5.2	C	A	A	A	S	7.3	7.3 ^{PH}	(6.3) ^F	5.0 ^F
21	(5.0) ^{PH}	4.5 ^F	4.1 ^{PH}	3.5	3.7 ^F	4.1	4.0 ^J	[4.3] ^A	4.6	C	C	C	C	C	C	C	C	C	C	A	A	(5.8) ^P	5.9	6.0	4.2
22	3.8	4.0 ^P	4.1 ^P	3.6	4.0	4.5	4.8	5.4	5.4	5.5	5.5	5.7	5.5	5.3	5.8	5.8	5.9	5.9	6.0	6.1	6.0	6.0	(5.1) ^S	5.3	
23	4.6	(4.2) ^F	[4.2] ^S	4.3 ^F	4.4	4.7 ^P	4.1	4.8	5.0	6.3	6.0	C	C	C	C	C	C	C	C	6.5	6.1	6.0	6.2	6.0	
24	5.0	SA	SA	4.3	4.2	4.5	5.3	5.4	6.4	6.3	6.0	6.0	6.0	5.8	6.0	6.1	(5.7) ^F	5.7	5.2	5.8	[5.9] ^A	6.0	6.3	[5.7] ^{PH}	
25	(5.1) ^F	(5.2) ^F	5.1 ^F	4.7 ^F	4.4 ^F	4.5 ^F	4.6	6.0	(6.3) ^F	B ^k	B	6.4 ^P	6.1	6.1	5.5	(5.4) ^F	5.6	5.9	6.0	6.3 ^F	(6.4) ^F	6.3 ^F	[5.8] ^A	(5.3) ^{PH}	
26	4.1	4.0	4.5	4.0	4.0	4.4 ^J	5.4 ^P	6.2 ^P	[6.4] ^A	(7.1) ^P	6.0	5.6	(6.3) ^P	5.9	5.8	6.0	6.2	(6.3) ^F	(6.3) ^P	A	S	5.4 ^P	4.4	(4.4) ^F	
27	4.1 ^P	4.1	3.8	4.1	4.2 ^{PH}	5.0 ^P	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	6.0	6.0	6.2 ^F	3.8
28	(3.8) ^{PH}	3.9	[3.9] ^C	3.9 ^F	3.9	4.2	4.8	[4.7] ^B	4.6	5.4 ^F	W	6.0	(6.4) ^F	6.2	6.4 ^P	6.0	5.4	5.5	5.7	6.0	6.1	5.8	6.0	5.4 ^{PH}	
29	5.0 ^F	4.6	4.5	4.5 ^{PH}	4.5 ^{PH}	5.1	6.1	C	B	6.0	5.8	5.8	5.8	B	B	5.9	(6.4) ^F	6.0	5.4	S	S	(6.6) ^F	5.3	4.5 ^F	
30	4.3 ^F	3.8	3.6	3.7	4.0	4.1 ^P	5.0	5.0	5.5	5.8	6.0	B	B	C	C	C	C	C	B	(6.3) ^F	6.2 ^P	6.0	6.0	5.6	
31	5.6	5.5	5.3	4.8	4.6	4.8	5.3	C	C	6.0	5.8	6.2 ^P	6.6	6.2 ^P	(6.3) ^P	(6.4) ^P	(6.3) ^P	(6.3) ^P	(6.5) ^P	(6.6) ^P	(6.6) ^P	6.0	4.5	4.5 ^F	
Mean Value	4.6	4.3	4.1	4.0	3.9	4.3	4.9	5.4	5.6	5.6	5.6	5.7	5.7	5.5	5.6	5.6	5.6	5.6	5.7	6.0	6.0	6.1	5.9	5.5	4.8
Median Value	4.7	4.2	4.1	4.0	4.0	4.3	4.9	5.4	5.6	5.4	5.8	5.8	5.8	5.8	5.8	5.8	5.5	5.5	5.5	5.6	6.0	6.0	6.0	5.7	4.8
Count	27	27	27	28	28	28	25	23	20	18	16	16	19	20	19	23	23	23	23	23	20	23	27	27	26

Group 1.0 Mc to 15.5 Mc in 2 min Manual Automatic

W 1

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Aug. 1952

f_oF₂

135° E Mean Time

Wakkanai

Lat. 46° 23.6' N
Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	380	450	420	420	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
2	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
3	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
4	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
5	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
6	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
7	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
8	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
9	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
10	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
11	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
12	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
13	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
14	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
15	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
16	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
17	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
18	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
19	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
20	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
21	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
22	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
23	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
24	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
25	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
26	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
27	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
28	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
29	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
30	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
31	400	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
Mean Value	390	400	390	380	370	370	340	330	330	350	370	400	370	370	380	360	360	360	360	370	380	370	370	390
Min Value	400	400	400	380	370	360	330	330	330	340	380	390	380	390	370	350	350	350	350	360	380	370	370	390
Count	26	27	27	28	28	27	21	16	11	10	9	10	9	8	9	15	15	19	22	20	23	27	27	25

Sweep 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

f_oF₂

W 2

Lat. 46° 28.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

Aug. 1952

R'F2

195° 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	210	340	370	360A	350A	450K	A	A	500K	500K	500K	500H	500H	A	B ¹	410K	350K	350K	320	380A	340K	300	300	320	
2	310	300	300	300	300	320	320	360K	500K	430H	A	A	530K	530K	500K	470K	500K	400K	330K	310H	320	300K	280	A	
3	A	340K	340K	280K	300K	530K	520K	A	A	A	A	A	430K	480K	540K	560K	470K	410K	390K	320K	320K	310K	310K	320K	
4	340K	380K	350K	390K	370K	B	A	B	B	B	A	A	A	A	A	A	450K	400K	380K	A	A	300K	320K	300K	
5	350K	380K	380K	340K	310K	350K	390K	A	A	A	A	B	A	A	450K	520K	400K	310AK	370	320	330	310	310	320	
6	310	320K	360K	380A	330	300H	310H	320	350	410	570	510	410	500	370	390	380	380A	A	A	A	A	A	A	
7	A	390A	300	300	C	300	400	360	300	A	A	A	A	470	470	A	A	A	A	A	A	A	A	320A	
8	310	C	C	C	C	300	400	360	300	W	A	A	430	B	A	A	A	A	A	A	A	A	A	320A	
9	280	300	280	300	300	300	300	A	350	430	370	B	B	B	450	A	400	A	320A	450A	440A	370A	350A	360A	
10	360	330	370A	340	300	300	290	370	310	330	400	440B	350	400	360	370*	380	360A	350A	320A	310A	400	340	360A	
11	300	340	380	320	320	370	390	430	480	410	400	400	380	500	400	370	370	310	300	320	340A	380	300	270	
12	300	400A	320	M	M	M	M	M	M	M	330	380	540	400	370	370	360	290	330	300	290	300	300	310	
13	300	A	C	C	C	C	C	C	B	B	C	450	C	C	C	C	C	C	C	300	300	350A	A	A	
14	A	A	300	300	300	A	290	A	A	290	360	430A	470	410	430A	450	400	310	A	A	290	A	A	A	
15	330	330A	330	310	320	300	A	A	380	440	400	A	A	A	440	430	370	310	300	320	5A	5A	320	310	
16	300A	310	320	310	320	330A	360	340A	330	330	410	A	A	A	460	450	370	300	260	300	300	300	330	320	
17	A	310	300	300	270	280	290	320	A	C	A	A	A	A	A	330A	340	360A	A	A	A	A	380	380	
18	300	350	310	300	310	300	430	320	400	380	370	300	380	400	370	370	360	300	300	310	310	330	330	360	
19	320	330	310	310	320	300	410	320	300	A	A	330	380A	A	420	380	320	C	C	A	A	A	A	A	
20	330	310	310	300A	300	260A	310	320	A	A	C	C	C	C	C	390	A	A	A	A	330A	210	310	300	
21	330	300	300K	310	210	300	260A	320	A	C	C	C	C	C	C	390	A	A	A	350A	310	280	280	310	
22	330	340	320	320	300	300	260	300	260	A	380	380	380	400	370	370	350	320	300	300	310	300	300	300H	
23	300	310	320	320	300	260	300	(320)L	260	C	C	C	C	C	C	C	C	C	C	300	320	300	300	300	
24	300	SA	SA	320	300	300	300	300	320	310	310	340	370	400	380	360	310	300A	300	340A	300	280	280	A	
25	A	310F	320	350A	300F	310F	290	310	330	310	350	340	370	370	400	340	350	310	300A	300F	300F	300F	A	A	
26	230	300	290	300	350	300A	280	310A	310	330	380	330	380	390	410	410	350	310	300	310A	300A	300A	300	320	
27	310	350	370	340A	300	300	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	360	300	
28	320	350	360	360	380	320	320	380B	440	400	480	480	480	370	370	320	270	240	300	270	300	350	260	330	
29	270	300	300	320	330	300	300	310	320	350	380	420	370	360	360	310	280	300	300	300	300	280	280	360	
30	310	350	390	400	320	300	310	330	380	340	400	390	340	C	C	C	C	300	300	240	310	310	310	310	
31	330	330	360	300	300	310	270	C	C	310	360	420	380	340	360	320	320	330	290	250	260	280	310	320	
Mean Value	310	330	330	320	320	320	350	360	370	370	420	410	420	400	410	390	370	330	310	310	320	320	300	300	320
Median Value	310	330	320	310	310	300	310	320	340	380	420	380	380	400	400	360	370	310	300	300	310	310	300	300	320
Count	26	27	28	28	28	27	24	20	18	19	18	17	19	21	20	22	23	22	22	23	24	27	26	23	

Sweep 1.0 Mc to 15.5 Mc in 2 min Manual Automatic

W 3

The Radio Research Laboratories
Koganei-machi, Kitakama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

foF1

Aug. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						2.6	A	A	A	4.0	[4.2]B	4.3	4.3	A	B	4.1	C	B	Q					
2						3.2	3.8	4.0	4.0	4.1	A	A	4.3	4.2	4.1	4.0	4.0	3.7	A					
3						3.3	3.5	3.7	A	A	A	A	4.3	4.4	4.3	4.2	4.0	3.7	3.3					
4						3.2	[3.4]A	3.6	3.9	4.0	A	A	A	A	A	A	A	A	A					
5						A	3.5	A	A	A	A	B	B	A	4.3	4.0	3.9	A	A					
6						Q	A	3.9	4.0	4.0	4.3	4.3	B	4.5	[4.4]A	4.2	A	A	A					
7						Q	3.8	4.0	A	A	A	A	A	A	A	4.2	A	A	A					
8						Q	3.4	3.8	[4.0]A	4.2	A	A	4.2	B	A	A	A	A	A					
9						Q	A	A	A	4.0	4.2	[4.2]B	4.2	A	B	A	4.0	A	A					
10						Q	Q	Q	4.0	4.2	4.3	4.3	4.6	4.4	[4.3]A	4.2	4.1	A	A					
11						2.8	3.4	4.0	4.2	4.1	4.2	4.2	4.2	4.3	4.2	3.8	3.8	3.6	Q					
12						M	M	M	M	4.3	4.2	4.5	A	A	A	4.0	4.0	4.0	Q					
13						C	C	C	B	B	C	4.2	C	C	C	B	C	O	A					
14						A	A	A	A	A	A	4.2	C	C	A	A	A	A	A					
15						Q	A	3.9	A	4.3	4.5	A	4.6	[4.4]A	4.3	4.1	4.1	3.9	Q					
16						Q	3.8	A	A	A	A	A	A	A	A	4.5	4.3	A	A					
17						Q	Q	Q	A	C	A	A	A	A	A	A	3.9	A	A					
18						Q	3.2	3.7	3.9	4.1	4.3	4.8	4.1	4.1	4.3	4.2	4.0	3.6	A					
19						2.8	3.8	A	A	A	A	4.5	A	A	A	4.2	3.9	C	C					
20						C	A	A	A	A	A	A	A	A	A	4.1	A	A	A					
21						Q	A	A	A	C	C	C	C	C	C	C	C	C	A					
22						Q	Q	A	A	A	4.3	4.3	4.1	4.1	4.2	4.0	3.9	3.4	Q					
23						Q	L	L	3.9	C	C	C	C	C	C	C	C	C	Q					
24						A	3.2	3.8	4.0	4.4	4.3	4.5	4.5	4.3	4.5	4.2	A	A	A					
25						Q	Q	Q	4.1	A	A	4.3	4.5	4.3	4.6	4.5L	A	A	A					
26						Q	Q	Q	[4.1]A	4.2	4.4	4.6	4.3	4.4	4.6	4.3	3.9	3.8	Q					
27						Q	C	C	C	C	C	C	C	C	C	C	C	C	C					
28						Q	3.0	4.0	3.9	4.2	4.5	4.5	4.0	4.5	4.2	4.3	Q	Q	Q					
29						Q	3.0	4.0	C	A	4.3	4.3	4.4	4.3	4.1	4.0	3.7	Q	Q					
30						Q	3.3	3.7	4.0	4.2	4.5	4.7	4.5	C	C	C	C	Q	Q					
31						Q	Q	C	C	4.1	4.2	4.9	4.6	4.5	4.4	4.2	L	L	Q					
Mean Value						3.0	3.4	3.9	4.0	4.2	4.3	4.4	4.3	4.3	4.3	4.2	3.9	3.7	3.3					
Median Value						3.0	3.4	3.9	4.0	4.2	4.3	4.3	4.3	4.3	4.3	4.2	4.0	3.7	3.3					
Count						6	14	15	13	16	15	17	17	15	18	20	15	7	1					

foF1

Every 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

W 4

Lat. 40° 23.6' N
Long. 141° 41.1' E

Wakanai

IONOSPHERIC DATA

R/F1

135° E Mean Time

Aug. 1952

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

The Radio Research Laboratories
Koganei-machi, Kitama-gun, Tokyo, Japan

Lat. 46° 28.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

Aug. 1952

f_oE

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						1.8	2.1	2.5	2.7	A	B	3.2	[5.1]A	3.0	B	A	C	B	B					
2						1.7	2.2	2.6	2.8	2.7	3.3	3.0	3.0	2.7	2.4	A	A	A	A					
3						A	2.2	2.5	2.7	3.0	3.2	3.2	A	A	A	A	A	A	2.5	1.9				
4						1.8	2.2	2.4	2.4	2.9	3.0	3.0	3.1	2.0	3.0	3.0	2.6	2.0	1.7					
5						A	2.1	2.7	2.7	3.0	3.2	3.1	3.1	3.0	[3.0]A	3.0	2.7	2.4	1.8					
6						A	2.1	[2.6]A	3.0	A	A	3.2	3.3	3.1	3.0	3.0	3.0	3.0	A					
7						1.5	A	A	2.9	3.0	2.7	A	A	A	A	A	2.7	2.4	1.3					
8						A	2.0	2.5	2.6	[2.9]A	3.2	[3.2]A	3.1	3.3	3.4	3.0	2.9	2.3	A					
9						1.9	2.3	2.8	2.9	2.9	3.0	A	B	3.1	A	A	2.7	2.3	A					
10						B	2.3	2.6	2.9	2.9	2.9	[3.0]A	3.0	3.0	[3.0]A	3.0	2.9	2.6	2.1	1.5				
11						1.6	2.1	[2.4]A	2.7	2.7	2.8	2.8	A	B	B	A	2.8	2.4	A					
12						M	M	M	M	3.0	3.0	3.0	2.5	A	A	A	B	2.4	A					
13						C	C	C	A	B	C	3.1	C	C	C	A	A	B	2.4	A				
14						A	2.0	2.4	A	A	A	3.0	[3.2]A	3.4	3.3	3.0	2.8	C	A					
15						A	1.9	2.2	2.8	3.0	[3.1]A	3.2	3.4	2.9	2.9	2.8	2.8	2.7	A					
16						1.9	2.2	2.8	2.9	3.0	2.9	2.8	A	A	A	A	2.6	A	A					
17						A	1.9	2.7	2.7	C	A	A	A	A	A	A	A	A	A					
18						1.5	2.1	2.6	2.8	2.9	3.0	3.2	3.5	3.4	3.1	2.9	2.7	2.4	1.9					
19						A	1.9	2.6	2.7	3.1	3.2	3.2	3.3	3.1	[3.0]A	2.9	A	C						
20						C	A	2.6	3.0	3.0	3.0	2.9	3.0	3.0	3.2	3.0	2.8	2.3	A					
21						1.3	2.0	2.3	2.7	C	C	C	C	C	C	C	C	A						
22						A	2.0	2.2	2.7	2.9	2.8	2.7	A	B	3.1	2.8	A	A	A					
23						1.4	2.0	2.4	2.8	C	C	C	C	C	C	C	C	C	A					
24						A	A	2.6	2.8	3.0	3.0	3.0	3.0	3.0	2.8	A	A	A	A					
25						A	2.1	2.4	2.8	3.0	3.1	A	A	A	A	A	3.0	A	A					
26						A	2.2	2.5	2.7	[3.0]A	3.2	3.1	A	A	A	A	3.0	A	A					
27						1.2	C	C	C	C	C	C	C	C	C	C	2.7	2.2	A					
28						B	2.0	2.6	[2.6]A	2.5	[2.8]A	3.0	B	3.0	3.0	2.5	2.4	A						
29						A	2.0	2.6	[2.8]C	3.1	3.0	A	A	3.2	3.0	2.7	2.4	2.0	A					
30						1.5	1.9	2.4	2.7	2.9	3.0	B	B	C	C	C	C	1.8	A					
31						1.5	2.1	C	C	3.2	3.2	3.3	[3.4]A	3.4	3.3	3.0	2.7	2.2	1.4					
Mean Value						1.6	2.1	2.5	2.8	2.9	3.0	3.1	3.1	3.1	3.0	2.9	2.7	2.3	1.8					
Median Value						1.5	2.1	2.6	2.8	3.0	3.0	3.0	3.1	3.0	3.0	3.0	2.7	2.4	1.8					
Count						13	25	26	26	23	22	22	15	17	16	16	18	19	7					

f_oE

Strip 1.0 Mc to 15.5 Mc in 2 min

Manual

Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

11.5 R'E

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1						130	130	120	120	A	B	120	[120]A	130	130	A	C	B	120						
2						120	120	120	120	130	130	130	130	130	130	A	A	A	A						
3						A	120	120	120	130	130	130	A	A	A	A	A	130	130						
4						A	130	130	130	120	110	110	120	140	130	110	120	120	120						
5						A	120	120	120	120	120	120	120	120	[120]A	120	130	140	130						
6						A	130	[130]A	130	A	A	120	120	120	120	120	120	110	A						
7						120	A	A	120	120	120	A	A	A	110	120	120	130	130						
8						A	130	120	120	[120]A	110	[120]A	130	130	120	130	120	130	A						
9						110	120	120	160	130	120	(110)A	100	120	A	A	120	120	A						
10						110	120	120	120	120	130	[120]A	120	120	[120]A	120	130	130	140						
11						150	130	[120]A	120	120	120	120	[120]A	120	120	[120]A	120	120	A						
12						M	M	M	M	130	120	120	120	A	A	A	120	120	A						
13						C	C	C	C	A	B	C	C	C	C	B	C	C	A						
14						A	110	110	A	A	A	120	[120]A	120	110	120	120	120	A						
15						A	120	120	120	120	[120]A	110	120	120	120	110	110	110	A						
16						140	130	120	120	110	110	110	A	A	A	A	110	A	A						
17						110	120	120	120	C	A	A	A	A	A	A	A	A	A						
18						A	120	120	120	120	120	130	120	120	120	120	120	120	130						
19						A	120	120	110	130	130	130	130	120	[120]A	120	A	C	C						
20						C	A	130	[120]A	110	110	110	120	120	110	110	110	110	A						
21						150	120	120	110	C	C	C	C	C	C	C	C	C	A						
22						A	130	130	130	130	120	130	[130]A	130	130	120	A	A	A						
23						140	130	120	130	C	C	C	C	C	C	C	C	C	A						
24						A	140	130	120	120	120	130	130	130	130	130	A	A	A						
25						A	120	110	120	120	130	120	A	A	120	[130]A	140	140	A						
26						A	120	C	C	C	C	C	C	C	C	C	C	C	A						
27						130	C	C	C	C	C	C	C	C	C	C	C	C	C						
28						130	130	130	[140]A	140	[130]A	120	120	120	120	120	120	120	120						
29						A	120	120	[120]C	120	120	120	A	A	120	120	120	120	120						
30						120	120	120	120	120	120	120	120	120	C	C	C	C	A						
31						120	120	C	C	110	110	130	[120]A	120	110	120	120	130	140						
Mean Value						130	120	120	120	120	120	120	120	120	120	120	120	120	130						
Median Value						120	120	120	120	120	120	120	120	120	120	120	120	120	130						
Count						14	25	26	26	23	23	24	20	19	20	18	19	19	8						

Sweep 1.0 Mc to 15.5 Mc in 2 min Manual Automatic

W 7

The Radio Research Laboratories
Koganei-machi, Kitakama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 48° 23.8' N
Long. 141° 41.1' E

Wakkanai

Aug. 1952

fEs

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	4.7	5.5	4.3	3.4	3.1	3.1	6.0	7.0	6.0	6.0	B	5.5	4.5	7.0Y	B	3.9	C	B	5.0	6.0	5.5	4.5	5.6	5.6	
2	2.6	E	E	2.4	2.6	4.0	4.0	4.2	3.8	3.4	12.7	6.0	6.0	4.3	4.5Y	3.9	3.0	3.0	4.4	6.0	6.0	4.8	4.0	6.0	6.0
3	7.2	4.5	4.6	1.7	3.9	4.0	4.2	7.0	6.0	6.0	5.6	11.3	5.8	3.3	4.2	12.3	3.5	4.0	6.0	4.2	3.8	3.8	5.7	3.2	3.2
4	3.0	1.5	2.6	2.9	2.7	3.2	5.1	3.8	4.0	4.0	5.0	6.0	5.0	6.0	4.7	6.0	6.0	6.0	6.0	6.0	6.0	3.0	3.8	3.8	E
5	E	E	3.7	5.0	5.0	7.1	3.8	5.8	6.2	6.0	8.0	3.8	3.8	3.8	3.8	4.0	3.3	5.3	4.1	5.5	4.6	5.5	4.6	4.6	
6	4.5	2.2	3.0	3.8	2.3	3.8	5.0	4.7	6.0	5.8	5.0	4.0	4.0	4.7	4.7	5.1	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
7	6.0	3.9	E	2.3	3.2	6.0	3.0	4.6	6.0	6.0	6.0	6.0	6.0	3.2	3.2	6.0	6.0	6.0	5.8	6.0	6.0	5.0	6.0	4.0	4.0
8	3.1	C	C	C	C	2.9	3.3	6.0	6.0	4.8	6.0	8.3	4.0	5.0	3.9	6.0	6.0	13.0	7.2	7.4	6.3	8.0	6.0	4.7	4.7
9	2.2	3.0	2.3	4.4	2.2	3.1	4.7	6.2	5.0	5.4	3.8	4.0	4.0	5.0Y	3.9	6.0	6.0	6.0	4.5	6.4	6.0	5.0	5.0	3.0	3.0
10	3.0	3.0	3.1	4.0	3.0	4.0	2.9	4.5	3.4	4.7	4.8	3.5	4.0	3.5	4.5	4.0	4.0	6.0	7.9	6.0	5.5	3.6	4.1	3.0	3.0
11	3.1	2.3	2.8	2.3	2.3	4.0	3.2	3.9	3.5	4.6	4.5	4.5	5.0	4.0	4.0	4.0	4.0	4.2	8.0	4.2	3.6	5.0	2.9	2.6	2.6
12	E	3.0	3.0	1.1	M	M	M	M	M	5.4	3.5	4.9	5.6	7.5	6.0	3.9	4.0	3.8	6.0	3.6	1.6	1.6	1.6	E	E
13	3.2	4.3	C	C	C	C	C	C	3.6	5.2	C	4.8	C	C	C	B	C	C	5.0	6.0	4.6	6.0	6.0	5.5	5.5
14	6.0	6.0	E	3.0	5.0	4.7	5.8	6.0	6.2	6.0	6.2	6.0	3.8	5.0	13.0	12.0	6.0	6.0	8.5	8.0	6.0	6.0	10.0	6.0	6.0
15	6.0	4.6	4.2	3.4	5.0	2.4	6.0	6.0	6.0	5.0	6.1	6.5	9.0	3.9	6.0	5.0	3.5	4.0	6.0	6.0	6.0	5.5	5.0	6.0	6.0
16	3.6	3.0	3.0	3.2	3.0	2.6	4.0	6.0	6.0	8.3	6.0	9.7	9.0	6.0	5.1	5.9	6.0	5.0	4.4	6.0	8.0	3.3	5.0	5.0	5.0
17	6.0	3.3	1.6	1.6	2.5	2.0	4.5	4.8	9.0	8.2	13.8	13.9	9.0	6.2	5.6	6.2	6.0	6.0	6.0	4.2	3.6	4.1	4.7	3.2	3.2
18	6.0	4.0	3.0	E	2.6	4.0	3.4	4.5	4.0	4.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9	4.6	4.2	6.0	6.0	8.6	9.0	9.0
19	2.0	1.6	S	2.2	2.7	3.2	3.6	6.0	6.5	6.0	6.0	6.0	6.0	10.0	10.0	4.0	4.8	C	C	7.0	6.0	6.0	8.6	9.0	9.0
20	6.0	6.0	3.0	5.8	6.0	C	6.0	4.0	6.2	8.8	8.1	6.0	6.0	4.9	4.0	5.2	6.2	6.1	9.0	3.5	6.4	5.5	6.2	5.8Y	5.8Y
21	3.0F	2.9	E	3.0	3.0	5.7	5.0	6.0	6.0	6.0	C	C	C	C	C	C	C	7.0	6.0	7.0	6.0	3.6	6.0	2.4	2.4
22	6.0	3.2	3.0	2.8	2.0	2.2	2.2	6.0	6.0	6.0	4.6	4.5	3.6	4.0	4.0	4.0	4.4	3.4	3.0	1.6	E	1.6	4.1	2.7	2.7
23	3.0	2.4	2.5	2.4	2.3	4.0	2.6	2.9	4.0	C	C	C	C	C	C	C	C	4.0	3.0	5.0	3.8	E	3.0	3.0	3.0
24	3.2	5.0	5.8F	3.2	3.8	5.0	3.0	4.0	4.0	6.0	5.6	4.0	4.0	5.1	4.8	3.6	6.0	6.0	2.2	2.2	4.3	5.6	3.0	8.6	8.6
25	4.5	3.2	4.7	2.8	2.8	2.4	4.0	4.0	4.5	6.0	5.7	3.7	3.8	3.8	4.0	5.0F	5.1	5.0	6.0	5.7F	4.1	3.0	6.0F	4.0	4.0
26	2.1	2.2	2.6	E	E	2.0	4.0	5.0	6.1	5.5	3.8	6.0	5.0	4.5	4.0	4.0	3.3	3.0	3.9	5.5	6.0	6.0	4.8	6.0	6.0
27	6.0	6.0F	5.1F	6.0	3.2F	4.0	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	6.0	3.0	2.2	2.2
28	3.8	3.9	4.0	3.0	3.0	2.2	4.0	3.4	3.3	4.6	4.2	4.3	4.0	4.0	4.0	4.0	4.0	3.6	3.0	E	5.8	5.7	4.6	3.6	3.6
29	3.0	1.6	2.6	3.0	3.0	3.8	4.0	3.7	4.0	5.4	5.0	5.2	4.6	4.0	3.5	4.0	4.0	2.8	2.1	E	E	E	2.4	4.2	4.2
30	3.4	2.4	3.0	2.4	2.6	4.0	5.3	6.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.9	E	E	3.4	2.4	2.8	2.8
31	2.2	E	2.4	E	E	4.0	4.0	4.0	5.0	6.0	3.9	3.9	4.0	4.5	4.5	3.9	3.9	4.0	3.8	2.5	E	3.3	3.9	4.2	4.2
Mean Value	4.1	3.5	3.3	3.2	3.2	3.6	4.2	5.0	5.5	5.7	5.9	6.0	5.8	5.4	5.6	5.7	5.5	5.2	5.3	5.5	5.5	4.7	4.8	4.8	4.6
Median Value	3.2	3.0	3.0	3.0	2.8	2.6	3.9	4.7	6.0	5.4	5.6	5.0	4.5	4.4	3.9	4.4	4.8	5.0	4.6	5.6	6.0	5.0	4.7	4.7	4.2
Count	31	30	27	28	28	28	28	27	27	27	26	28	27	26	25	26	25	26	29	30	31	31	31	31	31

fEs

Sweep 1.0 Mc to 15.5 Mc in 2 min

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

(M3000)F2

Aug. 1952

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

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 23.6' N
Long. 141° 41.1' E

IONOSPHERIC DATA

Wakanaï

Aug. 1952

f min F

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	2.0	2.2	2.7A	2.4A	2.5A	2.2	A	A	A	3.6	[3.7] ^B	3.7	3.6	A	B	3.2	[3.7] ^C	4.2	2.5	3.0A	4.0A	SA	1.7	1.8
2	1.5	E	E	1.5	1.9	1.8	2.2	2.7	2.8	3.3	A	A	4.2A	3.6	2.7	3.8A	2.7	2.7	[2.5]A	2.0A	1.8	2.0	A	A
3	A	1.8	2.0	E	2.0	2.8A	2.3	2.9	2.9	3.6	A	A	3.8	3.9	3.6	3.6	3.4	3.1	2.4	3.8A	3.6A	3.6A	2.8A	2.2
4	1.5	1.5	1.5	2.0A	1.5	2.2	[2.4]A	2.6	2.9	3.6	A	A	A	A	A	4.8A	[4.5]A	4.5A	3.8A	A	A	2.0	2.0	2.0F
5	1.2F	E	1.5	3.5A	2.0	[2.4]A	2.8	4.5A	[4.6]A	4.7A	[4.2]A	3.7	3.7	4.3A	3.7	3.2	3.4	4.5A	3.4	2.3A	3.0A	2.6A	4.4A	1.9
6	1.5	E	1.8F	[1.5]A	1.2	2.0	4.0A	2.6	3.1	3.3	3.5	3.7	4.3	3.7	4.8	3.7	3.8A	4.8A	A	A	A	A	A	A
7	A	2.1A	E	1.2	1.3	[1.6]N	1.8	2.2	A	A	A	A	A	4.4A	A	A	A	4.8A	4.7A	A	A	2.7A	1.7	3.6A
8	2.4A	C	C	C	C	1.7	2.2	3.2A	4.5A	3.6	A	A	3.8	A	A	A	A	4.8A	A	A	A	4.2A	3.6A	2.1A
9	1.4	2.0A	1.5	1.8	1.4	1.9	3.9A	[4.0]A	4.1	3.5	3.6	3.7	3.7	4.3A	A	A	3.3	4.7A	3.8A	4.0A	[3.9]A	3.8FA	3.6F	3.2
10	2.0	2.0	3.2A	2.0A	2.0A	2.2	2.6	3.7A	3.6	3.9A	4.2A	3.5	2.9	4.0	4.3	3.6	2.9	4.7A	3.8A	4.3A	3.8A	4.0	2.7A	2.1A
11	2.0A	E	2.0A	2.0A	E	1.9	2.3	2.8	3.0	3.7	3.7A	3.8	3.8	3.5	3.6	3.1	2.7	2.6	2.6	2.7A	3.2A	2.4A	2.0A	2.0A
12	1.6	2.6A	1.2	M	M	M	M	M	M	3.5	3.6	4.0A	4.3A	5.4A	4.2A	A	2.9	2.6	2.2A	3.4A	2.0	1.4	2.2	1.8
13	1.8	3.8A	C	C	C	C	C	C	A	4.0A	[3.8]C	3.6	C	C	C	5.0	C	C	3.6A	4.0A	4.2A	4.0A	A	A
14	A	A	2.0	2.2A	2.0	4.1A	3.6A	A	A	4.6A	5.0A	5.0A	3.8	4.7A	[4.9]A	4.1A	3.6A	3.5A	A	A	3.6A	A	A	A
15	1.5	[1.6]A	1.8	2.0	1.7	1.7	[2.6]A	3.6A	4.0A	3.6	3.6	A	A	3.8	4.8A	4.0A	3.3	2.8	3.0A	4.2A	SA	SA	3.0A	3.5A
16	3.0A	1.5	2.2A	2.4A	2.0	2.5	2.2	[3.2]A	4.2A	4.2A	4.3A	A	A	5.0A	3.8A	3.6A	4.3A	3.8A	2.3	3.5A	[3.2]A	3.0A	2.5A	3.8A
17	[2.6]A	1.5	E	E	E	1.5	3.0A	4.0A	A	C	A	A	A	A	A	5.0A	3.8A	5.0A	5.0A	A	6.0A	3.4A	[3.7]A	4.0A
18	4.0A	2.4A	E	E	E	1.6	1.7	2.1	3.0	3.2	3.6	3.7	3.6	3.6	3.3	3.1	3.2	2.8	4.5A	4.0A	3.1A	3.3A	2.8A	1.8
19	1.7	2.0	3.8S	2.0A	2.2A	2.2	2.4	5.0A	5.5A	A	A	4.0A	4.7A	A	A	3.0	3.2A	C	C	A	A	A	A	A
20	2.0A	1.8	2.0A	[2.0]A	2.0	<3.0	4.0A	3.6A	A	A	A	5.0A	[4.5]A	4.0A	3.7	4.0	A	A	A	3.6A	5.0A	4.1A	4.0A	2.2F
21	1.2	E	E	1.4	1.8	2.0	3.0A	[3.6]A	4.3A	C	C	C	C	C	C	C	A	A	A	4.0A	4.0A	1.4	2.0A	1.4
22	1.8	1.4	1.7	E	1.6	2.2	2.1	3.9A	4.7A	5.0A	3.9A	3.6	3.5	3.4	3.4	3.0	3.8A	2.4	2.0A	1.8	2.0A	1.4	2.0A	1.8
23	E	2.2A	1.4	1.4	1.8	1.5	2.2	2.9	3.3	C	C	C	C	C	C	3.0	C	C	2.0	4.0A	2.0A	1.9	2.0A	1.9
24	1.7	A	A	1.7	2.0A	2.8A	2.3	2.6	3.3	3.8	3.8	3.8	3.8	3.8	4.0A	3.8	4.5A	4.0A	2.0	2.0A	4.0A	3.2A	2.1A	4.7A
25	4.5A	1.8	1.9	2.8A	E	2.1	2.4	2.8	3.8A	5.0A	4.5A	3.9	3.9	3.5	3.5	4.0A	4.0A	3.7A	4.8A	1.5F	1.4	1.5	[2.8]A	4.0A
26	1.1	1.1	1.2	E	1.8	[2.0]A	2.3	2.5	[3.2]A	3.9A	3.6	4.0	4.0A	3.9A	3.6	3.3	3.0	3.0	3.0A	[4.0]A	5.0A	4.3A	1.5	1.4
27	1.1	2.0A	2.2A	3.6FA	2.2A	1.6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	1.4	4.9A	1.3
28	1.4	E	C	E	1.9	1.8	2.1	2.6	3.6	3.7	4.0	3.6	3.9	4.0	3.8	3.0	2.5	3.0	2.0	1.4	2.0A	3.0A	1.5	2.4A
29	1.7	E	E	1.2	E	2.0	2.0	2.6	[3.5]C	4.4A	3.7	3.6	3.8	3.4	3.6	2.8	2.5	2.0	2.0	E	E	1.3	E	2.0A
30	2.0	1.8	1.8	1.8	1.8	1.6	2.2	2.4	2.8	3.8	4.0	3.7	4.0	C	C	C	C	2.6	1.9	1.4	2.0	5.0F	1.4	1.8
31	1.4	E	1.5	E	E	2.0	2.2	C	C	3.8A	3.8	3.9	3.6	3.6	3.7	3.7	2.8	2.4	2.1	1.4	1.3	1.5	2.0A	2.5A
Mean Value	1.9	2.0	1.9	2.1	1.8	2.1	2.6	3.2	3.7	3.9	3.9	3.9	3.9	4.0	3.8	3.6	3.4	3.5	2.9	3.0	3.1	3.0	3.0	2.4
Median Value	1.7	1.7	1.7	1.8	1.8	2.0	2.3	2.9	3.6	3.8	3.8	3.8	3.8	3.9	3.7	3.6	3.3	3.3	2.6	3.4	3.1	3.1	3.1	2.1
Count	28	28	27	28	28	28	28	25	21	23	20	22	21	19	22	22	23	24	23	23	25	26	27	26

f min F

freq. — / — Mc to /5.5 — Mc in — Z — min

Manual

Automatic

W 10

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 45° 28.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

f_{min}E

Aug. 1952

135° E Mean Time

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

Swamp 1.0 Mc to 1.55 Mc in 2 min Manual Automatic

The Radio Research Laboratories
Koganei-machi, Khatama-gun, Tokyo, Japan

Lat. 39° 48.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

135° E Mean Time

foF₂

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	(5.7) ^F	(5.7) ^F	F	F	F	A	A	A	A	A	A	A	5.8 ^T	A	A	5.2 ^K	6.0 ^H	5.7	5.7	6.0	5.7 ^S	5.5 ^S	5.5 ^S	5.5 ^S		
2	4.9 ^F	4.7 ^F	4.6	4.6	5.1	(5.8) ^A	6.6	6.0	6.0	5.6 ^K	5.8 ^K	A	A	A	5.2 ^K	5.3 ^K	4.9 ^K	4.9 ^K	5.1 ^K	6.7 ^K	6.7 ^K	4.8 ^K	4.7 ^K	4.2 ^K		
3	3.9 ^F	3.7 ^F	4.0 ^K	3.7	3.8 ^K	3.6 ^K	3.7	5.2 ^K	5.7 ^K	A	A	A	6.1 ^K	A	A	A	A	5.1 ^K	6.4 ^K	7.7 ^K	(4.4)	5.1 ^K	4.3 ^K	3.9 ^K		
4	3.9 ^F	3.7 ^F	3.8 ^K	3.6	4.2	3.8 ^K	4.0	4.3 ^K	4.5 ^K	4.8 ^K	4.7 ^K	5.4 ^K	5.2 ^K	5.7 ^K	A	A	5.2 ^K	4.8 ^K	(5.3) ^K	5.8	6.0	4.4 ^F	4.1 ^F	3.9 ^F		
5	3.7 ^F	(3.6) ^A	3.5 ^F	(3.4) ^A	3.4 ^F	3.8 ^F	5.2	5.8	6.2	5.7	(5.8) ^A	5.9	(6.0) ^A	6.1	6.4	5.4	A	A	6.0	6.7	6.2 ^H	5.8	5.6	5.2 ^P		
6	4.2 ^F	4.3 ^F	4.3 ^F	4.3 ^F	4.3 ^F	3.5	6.0	7.0	6.2	5.6	A	A	A	6.6	7.4	7.4	7.2	(6.5) ^F	5.8	6.1	6.6	6.6	6.2	5.2 ^P		
7	(4.3) ^A	3.4 ^F	3.6	4.0 ^F	3.0 ^F	3.8	5.2	(6.0) ^A	6.9	A	A	A	A	A	5.7	A	A	A	A	6.5	6.6	6.5	5.8 ^H	4.8		
8	(4.4) ^A	4.0 ^F	4.0 ^F	4.2	4.0	4.1	5.5	7.0	A	C	5.0	(5.4) ^A	5.7	5.2	(5.1) ^A	5.0	5.1	5.6	(5.8) ^A	6.0	5.2	B ^F	(6.1) ^S	5.7 ^F		
9	4.7 ^F	5.0 ^F	4.7 ^F	4.1	4.0	4.5	6.4	5.6 ^H	6.1	7.4 ^F	C	C	C	5.5	5.6	5.7	(6.0) ^A	6.2	6.0	6.0	A	A	A	5.7 ^F		
10	4.8 ^F	F	F	4.8 ^F	(4.4) ^F	4.3 ^F	5.4 ^F	5.4 ^H	A	A	5.7	A	C	C	C	C	C	C	7.3	A	A	5.3 ^F	5.4 ^F	5.2 ^F		
11	5.4 ^F	4.9 ^F	BF	5.2	4.5 ^F	3.9 ^F	4.6	5.5	6.0	6.1	6.3	7.0	7.0	6.7	6.1	5.9	6.3	5.7	5.6	6.4	6.7	6.6 ^F	F ^S	A		
12	4.5 ^F	4.0 ^F	3.9	4.2	3.9	4.2	5.9	6.3	6.5	(6.2) ^A	6.0	6.1	5.9	6.1	6.6	6.7	5.5	5.6	5.8	7.0	(5.4) ^A	5.7	5.0	5.4		
13	5.4 ^F	4.9 ^F	5.1 ^F	5.1	3.6	3.6 ^F	4.5	5.5	(5.8) ^A	6.1	(6.0) ^A	5.9 ^A	5.5	6.2	7.0	6.9	6.8	6.6	6.7	5.8	5.5	5.1	(4.9) ^A	4.7 ^F		
14	4.9 ^F	4.7 ^F	4.9	4.4	4.2	3.9 ^F	4.6	A	A	6.4	(6.1) ^A	5.8	A	A	A	A	A	A	6.5	6.8	6.1	4.7 ^F	4.9 ^F	3.9 ^F		
15	A	A	A	A	5.0	(4.9) ^F	5.0	5.6	A	A	5.4	5.2	A	A	6.1	6.1	6.0	6.1	5.8	5.9	5.7	5.3 ^F	5.3 ^F	F		
16	4.8 ^F	4.5 ^F	4.3 ^F	4.2 ^F	(3.9) ^F	4.6 ^F	5.0	(5.4) ^A	5.8	6.4	(6.2) ^A	6.1	5.8	6.3	7.4	7.8	7.8	6.3	6.4	5.6	5.3	4.9 ^F	5.2	4.7 ^F		
17	4.9 ^F	4.8 ^F	4.7	4.6	4.3	3.8	4.6	6.8	6.0	5.7	6.0	6.1	6.4	7.6	8.3	(7.2) ^A	6.0	6.1 ^J	6.0	5.5	6.4	6.0	5.4	5.1		
18	6.1	5.3	(4.4) ^A	3.4	3.4	3.5	4.6	5.8	5.5	(5.6) ^A	5.7	5.8	6.0	7.2	7.7	6.9	6.4	7.0	6.5	6.7	6.0	5.6 ^H	5.5	5.1 ^H		
19	5.1	4.8 ^F	5.0	4.3	A	A	4.9	7.9	7.7	5.9	6.2	7.0	7.0	6.8	6.7	A	A	7.0	8.7	8.9 ^H	7.0	5.7 ^H	(5.3) ^S	5.9 ^S		
20	(5.3) ^A	4.7 ^F	A	A	4.4 ^F	4.7	5.3	5.7	A	A	A	A	A	5.8	6.5	6.3	6.4	6.8	7.2	8.3	7.0	6.6 ^H	5.8	5.0		
21	4.9	4.9	4.6	4.7	5.3	4.5	3.9	4.4	(5.2) ^A	6.1 ^F	5.5	5.2	5.1	5.4	5.9	5.6	5.6	5.7	6.0	(6.4) ^H	5.9	5.0 ^F	4.6	4.7 ^F		
22	4.7 ^F	4.5 ^F	(4.4) ^F	4.2 ^F	4.3 ^F	4.8	5.0	5.4 ^H	6.3	(6.2) ^A	6.1	5.8	6.2	6.6	7.2	7.4	7.1	6.5	6.6	6.6 ^H	6.0 ^H	5.3	5.2	4.6		
23	4.6	4.5 ^F	4.8	4.8	4.2 ^F	4.6 ^F	5.6	5.3	5.8	6.5	6.4	6.7	4.4	6.6	6.5	(6.4) ^A	6.4	6.8	8.3	8.0	7.3	A	A	6.2		
24	5.9	5.8	5.3	5.5 ^F	4.9 ^F	4.2	5.5	6.1	6.5	7.4 ^F	6.2	7.0	(6.6) ^A	6.2	7.1	6.6	6.4	5.9	5.7	5.7	6.1	6.1 ^J	5.5	4.8		
25	4.6	4.3 ^F	(4.5) ^F	(4.6) ^F	(4.7) ^F	4.9	5.4	6.6	7.1	7.1	6.2	6.3	6.5	5.8	6.4	6.4	7.1	6.8	6.5	6.9	7.6	F ^B	F ^B	F ^S		
26	BFH	4.8 ^F	4.4 ^F	4.0 ^F	3.8	3.9	5.4	5.8	C	C	C	C	C	C	C	C	C	C	7.8	7.4	7.0	5.6	(5.3) ^A	5.0		
27	4.7 ^F	4.5	4.7	4.5	5.0	5.4	5.6	7.1	A	A	6.1	(6.5) ^A	6.9	6.7	7.0	7.2	7.0	6.7	6.2	7.4	8.2 ^P	6.8	5.5 ^F	4.9 ^F		
28	5.2 ^F	4.5 ^F	4.7	4.2	4.0	4.1	5.9 ^H	5.8	5.4	5.7	5.8	6.2	7.4	8.6	7.8	6.5	6.7	6.3	6.2	6.7	6.2	5.9	6.0 ^F	5.7 ^F		
29	5.2 ^F	5.7 ^F	5.1 ^F	4.4	4.1	4.5	5.8	5.8	6.6	6.5	6.3	5.8	6.4	6.7	6.9	7.1	6.5	6.0 ^H	6.5	6.9	6.5	6.5	5.4	5.0		
30	4.6	4.1	3.6	4.0	4.3	4.2	5.4	6.8	6.2	6.0	6.5 ^H	7.5	8.1	7.6	7.2	8.4	8.6	8.3	7.2	B	5.6	6.1	5.9	(5.6) ^S		
31	5.2	5.3	5.1	5.1	4.9 ^F	5.1	6.3 ^F	6.1	7.0	6.8	6.4	6.4	7.0	7.0	6.8	6.7	7.4	7.3	6.9	7.3	6.8	(6.0) ^S	5.1	4.9		
Mesh Value	4.9	4.6	4.5	4.3	4.3	4.3	5.2	5.9	6.1	6.1	5.9	6.2	6.2	6.5	6.7	6.5	6.5	6.3	6.4	6.6	6.5	6.4	5.7	5.4	5.0	
Median Value	4.9	4.7	4.5	4.2	4.2	4.2	5.3	5.8	6.1	6.1	6.0	6.1	6.1	6.6	6.7	6.6	6.4	6.3	6.2	6.5	6.2	6.2	5.7	5.4	5.0	
Count	2	9	2	9	2	9	3	1	2	9	2	2	2	3	2	5	2	4	2	6	3	0	2	9	2	8

Sweep 1.0 Mc to 17.0 Mc in 1.5 min

Manual Automatic

foF₂

A 1

Lat. 39° 48.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

185° E Mean Time

h p f_z

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	(340) ^F	(350) ^{PH}	F	F	F	A ^K	B ^K	A ^K	A ^K	U ^K	A ^K	A ^K	U ^K	A ^K	A ^K	U ^K	330 ^H	300	300	270	270 ^{ES}	A	(370) ^{PH}	(375)	
2	(320) ^{PH}	(320) ^{ES}	280	310	300	(290) ^A	280	330	330	U ^K	U ^K	A ^K	A ^K	A ^K	U ^K	U ^K	U ^K	U ^K	320 ^K	320 ^K	270 ^K	320 ^K	310 ^K	320 ^K	
3	(310) ^I	(340) ^I	340 ^K	300 ^K	340 ^K	330 ^K	290 ^K	290 ^K	270 ^K	A ^K	A ^K	B ^K	A ^K	A ^K	A ^K	A ^K	A ^K	A ^K	320 ^K	280 ^K	A ^K	A ^K	260 ^K	330 ^K	
4	(330) ^{PH}	360 ^E	380 ^E	410 ^E	370 ^E	330 ^K	U ^K	U ^K	U ^K	U ^K	U ^K	U ^K	U ^K	370 ^K	A ^K	A ^K	360 ^K	U ^K	A ^K	A ^K	310	280	320	A	(320) ^{PH}
5	(320) ^{PH}	(350) ^I	380 ^F	(340) ^{PH}	300 ^F	(310) ^{PH}	(300) ^A	290	300	U	A	A	A	A	U	U	A	A	300	310	300 ^H	300	A	300	340
6	330 ^{PH}	330 ^{PH}	370 ^F	(390) ^{PH}	(360) ^{PH}	340	300	260	A	A	A	A	A	A	A	A	360	320	310	280	(280) ^A	290	330	310	310 ^F
7	(300) ^A	300 ^F	300 ^F	(280) ^{PH}	290 ^F	320	A	270	A	A	A	A	A	A	U	A	A	A	A	A	A	A	320	290	310
8	(320) ^A	330	330 ^F	340 ^F	320 ^F	350	300	260	A	C	U	A	U	U	A	U	U	U	300	(300) ^A	290	310	BF	(370) ^{PH}	(310) ^{PH}
9	(340) ^{PH}	(330) ^{PH}	350 ^F	320	340 ^H	330	330	350 ^H	310	(270) ^F	C	C	C	C	U	U	A	A	290	290	A	A	A	A	(320) ^{PH}
10	(340) ^{PH}	F	F	(380) ^{PH}	(340) ^{PH}	(310) ^{PH}	280 ^F	300 ^H	A	A	U	A	C	C	C	C	C	C	C	C	C	C	C	C	(320) ^{PH}
11	(340) ^{PH}	(380) ^{PH}	BF ^H	300 ^F	270 ^F	300 ^F	290	300	(320) ^A	350	330	350	320	320	310	310	290	280	300	310	330	(340) ^{PH}	FS	A	A
12	(310) ^{PH}	320 ^F	350	320	310	310	270	290	260	(280) ^A	290	U	U	U	390	300	280	300	300	280	(300) ^F	320	340	340	340
13	320	340 ^V	340 ^F	280	300	(330) ^F	350	A	A	A	A	U	U	U	350	300	310	300	290	320	280	A	AS	(270) ^{PH}	
14	(310) ^{PH}	(310) ^{PH}	(310) ^{PH}	(290) ^{PH}	(300) ^{PH}	(270) ^{PH}	240	A	A	A	A	A	U	U	A	A	A	A	A	290 ^F	300	290	(300) ^{PH}	310	(310) ^{PH}
15	A	A	A	A	330	(330) ^{PH}	320	290	A	A	U	A	A	A	A	A	310	310	300	(300) ^A	300	290	(260) ^{PH}	(350) ^{PH}	F
16	280 ^F	(310) ^{PH}	(310) ^{PH}	(300) ^{PH}	(300) ^{PH}	280 ^F	250	(260) ^A	270	290	(300) ^A	320	U	U	370	350	300	300	280	260	290	310	(300) ^F	300	(330) ^{PH}
17	(350) ^{PH}	(350) ^{PH}	320 ^F	300 ^F	260 ^F	270	290	270	240	270	320	U	U	U	360	310	300	A	A	300	270	350	370	350	350
18	290	360	(360) ^H	360	360	310	300	300	A	A	U	U	U	U	320	310	300	290	280	290	270	310	340	340	390 ^H
19	340	350 ^{PH}	320	270	A	A	280	270	220	280	380	310	300	310	320	A	A	A	300	290	280 ^{PH}	(280) ^{PH}	(280) ^{PH}	(280) ^{PH}	(390) ^{PH}
20	(360) ^A	(320) ^{PH}	A	A	(310) ^{PH}	280	260	260	A	A	A	A	A	U	U	350	310	310	310	340	310	270	290 ^H	340	310
21	370	310	340	350	290	330	290	300	(300) ^A	(290) ^F	U	U	U	U	U	U	320	300	280	(310) ^{PH}	290	(290) ^{PH}	(280) ^{PH}	380 ^{PH}	
22	(340) ^{PH}	(320) ^{PH}	(360) ^{PH}	(320) ^{PH}	330 ^{PH}	270	250	290 ^H	A	A	A	300	300	300	300	320	300	290	290	280	310 ^H	310	310	330	(320) ^{PH}
23	(290) ^{PH}	(300) ^{PH}	330 ^F	330 ^F	(330) ^{PH}	250 ^F	250	240	290	300	300	290	U	U	370	300	(300) ^C	310	310	280	280	320	A	A	330
24	310	300	340	(350) ^{PH}	(340) ^{PH}	300	280	250	270	(240) ^F	U	300	A	A	300	290	290	(280) ^A	280	290	290	290	(290) ^{PH}	280	300
25	330	(330) ^{PH}	(330) ^{PH}	(330) ^{PH}	(310) ^{PH}	300	310	280	270	280	290	300	300	U	300	300	320	300	290	300	320	FB	FB	FB	FS
26	BF ^H	360 ^F	(350) ^{PH}	(320) ^{PH}	340	320	290	270	C	C	C	C	C	C	C	C	C	C	C	270	290 ^H	280	290	(300) ^A	310
27	(300) ^{PH}	300	320	330	330	290	300	280	A	A	A	300	(310) ^H	320	320	300	300	300	290	320	320	270 ^F	260	(370) ^{PH}	(300) ^{PH}
28	(350) ^{PH}	(340) ^A	330 ^F	350 ^F	330 ^F	310	270 ^H	270	A	A	U	U	U	U	320	310	290	300	300	310	290	300	300	(350) ^{PH}	(310) ^{PH}
29	(360) ^{PH}	(320) ^{PH}	300 ^F	290	320	290	250	270	280	270	300	350	330	350	300	300	280	280	290 ^{PH}	330	300	260	290	320	
30	350	350	350	390	330	310	290	270	260	280	360 ^H	320	300	310	330	320	300	300	280	300	B	320	340	350	(330) ^{PH}
31	310	340	370	350	(360) ^{PH}	340	310 ^{PH}	270	300	290	240	320	300	310	290	300	270	300	300	290	310	(300) ^{PH}	300	310	310
Mean Value	330	330	340	330	320	310	290	280	280	300	300	320	320	310	310	300	300	290	300	300	300	300	310	320	320
Min Value	330	330	340	320	330	310	270	280	270	280	300	310	310	320	300	300	300	300	300	300	300	300	300	300	320
Count	29	29	26	28	29	29	28	26	17	13	13	11	10	16	20	17	20	22	29	28	28	24	25	28	

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 38° 43.5' N
Long. 140° 08.2' E

Akita

Aug. 1952

R'FZ

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	310 ^A	290	290	310 ^A	290	A ^K	B ^K	A ^K	A ^K	320 ^K	A ^K	A ^K	370 ^K	A ^K	A ^K	370 ^K	320 ^K	300	300	250	230	410 ^A	320	290
2	320 ^A	290	280	280	280	(280 ^K)	270	280	310	380 ^K	310 ^K	A ^K	A ^K	A ^K	390 ^K	360 ^K	400 ^K	370 ^K	310 ^K	290 ^K	220 ^K	260 ^K	270 ^K	300 ^K
3	280 ^K	300 ^K	300 ^K	280 ^K	270 ^K	270 ^K	270 ^K	290 ^K	270 ^K	A ^K	A ^K	A ^K	350 ^H	A ^K	A ^K	A ^K	A ^K	350 ^K	290 ^K	280 ^K	300 ^K	320 ^K	240 ^K	320 ^K
4	310 ^K	300 ^K	300 ^K	330 ^K	300 ^K	310 ^K	440 ^K	420 ^K	590 ^K	350 ^K	330 ^K	300 ^K	350 ^K	370 ^K	A ^K	A ^K	A ^K	400 ^K	(350 ^K)	300 ^A	230 ^A	280	360	300
5	300	A	A	A	280	300 ^H	(300 ^A)	290	300	370	(330 ^A)	290	(320 ^A)	360	300	360	A	A	300 ^A	260	250 ^H	270	270	300
6	240	350 ^A	300	300	300	260 ^A	290 ^A	250	260	A	A	A	A	360	320	310	280	(280 ^A)	290 ^A	270	250	260	240	250
7	300	310 ^A	270	240	(250 ^A)	260	A	A	270	A	A	A	A	A	350 ^A	A	A	A	A	310 ^A	260	250	290	250
8	(280 ^K)	320 ^A	300	300	300	280	300	260	A	C	450	(400 ^A)	350	400	(400 ^A)	400	390	300	(280 ^K)	250	300	370 ^A	290	290
9	270 ^H	290 ^A	290 ^A	260	270 ^H	270	250	280 ^H	310	270	C	C	C	400	380	370	(320 ^A)	280	280	240	A	A	A	270
10	310 ^{AF}	290	280	310 ^A	310 ^A	290	230	230 ^H	280	(340 ^A)	390	A	C	C	C	C	C	C	280	A	A	A	A	270
11	290	300	300	280	250	290	260	300 ^A	300 ^A	340	330	350	320	320	310	310	290	280	300 ^A	290 ^A	280	300	300	270
12	280	280	290	260	260	270	250	260 ^A	260	(280 ^A)	290	410	340	390	300	280	300	300	290	240	250	270	280	290
13	280	300	280	220	240	290 ^A	340	A	A	A	A	A	290	470	350	300	300	290	280	270	300	(280 ^A)	260	260
14	310	270	300 ^A	260	220	290	240 ^A	A	A	A	300	(320 ^A)	330	A	A	A	A	A	250	260 ^A	260 ^A	260	280	310 ^A
15	A	A	A	A	300 ^A	280	280	260	A	A	290	A	A	A	A	310	310	300	290 ^A	240	270 ^A	250	300	240
16	230	250	260	240	250	250	230 ^A	(250 ^A)	270	280	(300 ^A)	320	390	370	350	300	300	270	250	250 ^A	270	280	250	270
17	300	290	280	250	220	230	230	260	240	270	320	390	360	300	290 ^A	A	A	A	260	250	300 ^A	310 ^A	300 ^A	270
18	260	280	(290 ^A)	300	310 ^A	300	300	300	A	A	380	290	390	320	300	300	290	270	270	240	240	290	260	290 ^H
19	290	280	250	210 ^A	A	A	260	260	210	280	380	310	300	310	320	A	A	290	270	240	240	290	260	290 ^H
20	(330 ^A)	290 ^A	(300 ^A)	300	290	280 ^A	220 ^A	260	A	A	A	A	A	370	350	310	310	300	290	260	250	210 ^H	250	370 ^A
21	300	260	270	270	260	270	260	260	(280 ^A)	290	320	420	480	420	310	350	310	300	290	260	230	250	210 ^H	250
22	310	300 ^A	300 ^A	300 ^A	270	240	220 ^A	220 ^H	340 ^A	(320 ^A)	300	300	290	290	310	290	280	270	250	230 ^H	290 ^A	270 ^A	250	380 ^{AF}
23	290	270	290	250	290	240	250	240	290	300	300	290	300	(300 ^A)	300	(300 ^A)	300	300	250	250 ^H	230 ^H	250	260	300
24	290	280	270	310 ^A	310 ^A	290 ^A	280	250	270	240	280	300	(340 ^A)	370	300	270	290	(280 ^A)	270	260	270	270	270	250
25	310	260	310 ^A	270	230	280	300 ^A	240	260	280	290	300	300	400	300	300	310	260	240	280	290	280	(270 ^{AF})	260 ^{AF}
26	330 ^H	290	250	290	270	260	260	260	C	C	C	C	C	C	C	C	C	C	250	250 ^H	250 ^A	260	(260 ^A)	260
27	270	260	280	270	260	250	270	240	A	A	300	(310 ^A)	320	320	310	300	290	290	280	290	230	200	340 ^{AF}	220
28	330 ^{AF}	(320 ^A)	310 ^A	300 ^A	300 ^A	270	260 ^A	270	A	400	350	370	320	300	290	290	280	280	300	250	280 ^A	260	300 ^{AF}	290
29	300	280	250	250	260	260	230	270	280	270	300	330	330	300	300	280	280	270	260	250	260	220	230	260
30	280	300	(320 ^A)	350 ^A	270 ^A	260	270	270	260	(280 ^H)	300 ^H	320	300	310	330	310	290	250	280	220	250	290	290	290
31	290	300	290	270	300 ^A	270	240	260	290	280	240	300	300	300	280	300	260	250	260	250	250	260	240	280
Mean Value	290	290	290	280	270	270	270	270	290	320	320	330	340	350	320	320	310	290	280	260	260	280	280	290
Minimum Value	300	290	290	280	270	260	260	260	280	280	310	310	330	360	310	300	290	290	280	250	260	270	280	290
Count	30	29	29	30	29	29	29	27	21	20	23	21	23	25	25	23	23	25	30	30	29	29	27	31

Sweep 1.0 sec. Me to LFL. Me in 1.5 min

Manual Automatic

R'FZ

A 3

The Radio Research Laboratories
Koganei-machi, Kitama-gun, Tokyo, Japan

Lat. 39° 48.5' N
Long. 140° 08.2' E

A k i t a

IONOSPHERIC DATA

foF1

135° E Mean Time

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						A	3.4	A	A	4.3	4.5	(4.6) ^H	4.6	A	A	4.5 ^H	A	A	3.7 ^L					
2						A	Q	A	Q	4.4	4.4	A	A	A	4.4	4.3	4.3 ^L	3.8	3.4					
3						Q	Q	3.8	4.2	A	A	4.4 ^J	A	A	A	A	A	A	Q					
4						2.6	3.4	3.8	4.2	4.4	3.9	4.3	4.4	4.2	A	A	4.0	3.8	A					
5						Q	A	Q	4.2	4.5	A	A	A	4.7	4.4	4.4	A	A	A					
6						A	A	A	A	A	A	A	A	A	4.4	A	A	A	A					
7						Q	4.0	A	A	A	A	A	A	A	4.6	A	A	A	A					
8						Q	4.3	L	A	4.4	4.5	(4.5) ^H	4.5	4.5	(4.4) ^H	4.3	4.0	3.5	A					
9						Q	Q	Q	4.2	A	C	C	C	4.6	4.5	A	A	3.8	3.6 ^L					
10						Q	Q	Q	A	A	4.5	A	C	C	C	C	C	C	A					
11						2.6	A	A	A	4.6	4.6	4.7	4.6	4.6	4.4	4.4	4.1	3.7	A					
12						Q	Q	A	A	A	4.7	4.7	4.6	(4.5) ^A	4.4	4.3	4.2	4.0	A					
13						A	Q	A	A	A	A	4.6	4.6	4.5	4.5	4.5	4.2	4.2	3.6					
14						L	A	A	A	A	4.4	(4.5) ^H	4.6	A	A	A	A	A	Q					
15						Q	Q	Q	A	A	4.6	4.2 ^J	4.4 ^J	(4.4) ^A	4.5	4.4	4.3	3.8	A					
16						Q	A	A	4.2	4.5	(4.6) ^A	4.8	4.8	4.9	4.5	A	A	A	Q					
17						Q	Q	3.7	4.2	4.6	4.6	4.7	4.7	4.7	4.5	4.3	4.0	3.3	L					
18						A	3.4	A	A	A	4.7	4.7	4.7	4.7	4.5	4.3	4.0	3.3	L					
19						A	3.4 ^L	A	Q	4.5	4.8	4.8	(4.8) ^H	4.8	A	A	A	3.8 ^L	A					
20						A	A	A	A	A	A	A	A	4.7	4.6	4.4	(4.2) ^A	3.9	3.1					
21						Q	Q	Q	A	3.8 ^J	4.2	4.5	4.6	4.6	5.0	4.7	4.2 ^L	3.9	Q					
22						Q	A	Q	A	A	4.7	4.6	4.6	4.6	4.4	4.4	3.9	A	Q					
23						Q	3.6	3.8	4.3	4.6	4.8	4.7	3.7	4.8	4.7	(4.4) ^C	4.2	3.8	A					
24						A	3.8	3.9	4.2	4.6	4.6	A	A	A	4.5	(4.2) ^A	4.0 ^J	A	Q					
25						Q	A	3.7	(4.0) ^A	4.4	4.7	4.6	4.7	5.0	4.4	4.5	4.3 ^L	Q	A					
26						Q	Q	A	C	C	C	C	C	C	C	C	C	C	A					
27						Q	3.7	Q	A	A	4.9	(5.0) ^A	5.0	4.9	4.8	4.4	4.0 ^L	3.6 ^L	3.1 ^L					
28						Q	3.9	4.2	A	A	4.8	(4.8) ^A	4.8	4.7	4.6	Q	Q	L	L					
29						Q	Q	L	4.4	4.6	4.7 ^L	4.8 ^L	4.8	5.0 ^H	4.6	4.4	4.0	3.5	A					
30						Q	L	3.9	4.3	L	4.7 ^L	4.7	4.7	4.9	5.0	4.6	4.2	A	A					
31						Q	Q	4.0	4.2	4.5	4.6	4.6 ^L	4.8	4.7	4.0	4.0	Q	Q	Q					
Mean Value						2.6	3.7	3.9	4.2	4.4	4.6	4.6	4.6	4.7	4.5	4.4	4.1	3.8	3.4					
Median Value						2.6	3.6	3.8	4.2	4.5	4.6	4.6	4.6	4.7	4.5	4.4	4.2	3.8	3.5					
Count						2	10	9	1.2	15	23	22	21	22	23	1.9	17	17	6					

Manual Automatic

Sweep 1.0 Mc to 17.0 Mc in 15 min

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

Aug. 1952

R'F1

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						A	220	A	A	A	A	A	A	A	A	220 ^H	A	A	260					
2						A	Q	A	Q	210 ^A	A	A	A	A	A	280 ^A	260 ^A	220	250 ^A	220				
3						Q	270	A	250	A	A	A	A	A	A	A	A	A	A	Q				
4						Q	280	250	230	250	B	A	A	A	A	280 ^A	A	240	A	A				
5						Q	A	Q	A	A	A	A	A	A	A	210	240 ^A	A	A	A				
6						A	A	A	A	A	A	A	A	A	A	A	A	A	A	A				
7						Q	260	A	A	A	A	A	A	A	A	A	A	A	A	A				
8						Q	250	240 ^A	A	200	200	[200] ^A	200	220	220	[220] ^A	230	280 ^A	230	A				
9						Q	Q	Q	A	A	C	C	C	220	270 ^A	A	A	A	230	230				
10						Q	Q	Q	A	A	A	A	C	C	C	C	C	C	C	A				
11						210	A	A	A	A	220	220	230	230	230	220	240	230	230	A				
12						Q	Q	A	A	A	220	190	220	[220] ^A	220	A	A	A	280 ^A	A				
13						A	Q	A	A	A	A	260 ^A	200	210	240	240	260 ^A	A	A	A				
14						260	A	A	A	A	220	A	A	A	A	A	A	A	A	Q				
15						Q	Q	Q	A	A	A	A	A	A	A	A	210	220	250	A				
16						Q	A	A	210	250	[240] ^A	240	310 ^A	A	A	A	A	A	230	Q				
17						Q	A	210	210	210	200	210	200	A	A	A	A	A	Q					
18						A	280	A	A	A	A	210	220	220	240 ^A	220	220	240 ^A	240 ^A					
19						A	230	A	Q	220	230	220	[240] ^A	260	A	A	A	A	A	A				
20						A	A	A	A	A	A	A	A	A	A	A	A	A	A	A				
21						Q	Q	Q	A	A	220	190	A	A	A	A	230	[220] ^A	220	A				
22						Q	A	Q	A	A	280 ^A	250 ^A	250 ^A	250 ^A	250 ^A	200	210	240	Q					
23						Q	230	220	210	220	210	210	220	220	230	[230] ^G	230	280 ^A	A					
24						A	250	230	210	A	A	A	A	A	A	A	A	A	A	Q				
25						Q	A	220	[230] ^A	240 ^A	230 ^A	260 ^A	250 ^A	200	230	230	250	Q	A					
26						Q	Q	A	C	C	C	C	C	C	C	C	C	C	C	A				
27						Q	230	Q	A	A	220	[220] ^A	210	210	230 ^A	220	220	230	240					
28						Q	260	220 ^A	A	A	220	[220] ^A	230 ^A	210	210	Q	Q	260	260					
29						Q	Q	260 ^A	200	220	220	230	180	200 ^{HH}	220	230	200 ^A	240	A					
30						Q	250	250	220	220	200	200	200	210	230	270 ^A	260	A	A					
31						Q	Q	240	230	[230] ^A	230 ^A	200	240 ^A	230	240	250	Q	Q	Q					
Mean Value						250	250	230	220	220	220	220	220	230	230	230	230	240	240					
Median Value						260	250	230	220	220	220	220	220	220	220	230	220	220	240					
Count						3	11	11	11	11	17	17	16	17	18	17	15	15	6					

R'F1

Sweep 1.0 Me to 17.0 Mc in 15 min. Manual Automatic

Lat. 39° 43.5' N
Long. 140° 08.2' E

A k i t a

IONOSPHERIC DATA

f_oE

135° E Mean Time

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						A	A	A	A	A	A	A	A	33	31	29	A	A	A					
2						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
3						A	A	2.8	3.2	A	A	A	A	A	A	A	A	A	A					
4						1.6	2.3	2.7	2.8	2.9	3.2 ^J	3.6	A	A	3.3	3.1	2.8	2.5	A					
5						A	A	2.8	3.1	3.2	3.3	3.4	3.4	{3.4} ^A	3.4	3.3	2.9	2.6	2.1					
6						A	2.3	2.7	2.8	A	A	A	A	A	3.3	A	A	A	A					
7						A	A	A	A	A	3.0	3.2	A	A	A	A	A	A	A					
8						A	A	A	A	A	3.3	3.4	{3.5} ^A	3.6	3.4	3.0	2.8	A	A					
9						A	A	2.7	3.1	C	C	C	C	A	3.3	3.0	2.9	2.5	A					
10						A	2.4	2.7	3.0	3.2	A	A	C	C	C	C	C	C	A					
11						A	A	A	3.2	3.1	A	A	A	A	A	3.3	A	A	A					
12						A	A	A	2.9	A	A	A	A	A	A	A	A	A	2.6 ^J	A				
13						A	A	A	A	2.9	3.2	A	A	A	A	A	A	A	A					
14						A	A	A	A	A	A	A	A	3.4	3.3	3.0	2.8	A	A					
15						E	A	A	A	A	A	A	A	3.2	{3.2} ^A	3.2	2.9	2.5	A					
16						A	A	A	3.2	3.3	A	A	A	A	A	A	3.3	2.7	2.4	A				
17						A	2.3	2.6	A	A	A	A	A	A	A	A	A	A	A					
18						A	A	A	2.8	2.9	3.3	3.3	3.3	A	A	A	2.9	2.5	2.0					
19						A	A	A	2.8	{3.0} ^A	3.1	3.2	3.3	3.4	3.4	3.1	2.8	2.5	A					
20						A	A	A	A	3.0	3.2	3.2	A	A	3.4 ^F	3.2	3.0	2.8	A					
21						E	B	A	A	A	A	A	A	A	A	A	3.0	2.4	A					
22						A	A	2.6	A	A	A	A	A	A	3.2	A	A	A	1.8					
23						A	A	A	2.9	3.2	3.2	3.2	A	A	A	C	A	A	A					
24						A	A	2.7	A	A	A	A	A	A	A	A	A	A	A					
25						A	A	A	A	3.1	A	A	A	A	3.4	3.0 ^J	A	A	A					
26						1.4	A	A	C	C	C	C	C	C	C	C	C	C	A					
27						A	2.8	2.9	{3.0} ^A	3.2	3.3	A	A	A	A	A	A	2.8	A					
28						A	2.4	2.7	3.0	3.0	3.0	A	A	3.3	3.3	3.0	2.5 ^J	2.4 ^J	2.4 ^J					
29						A	A	A	3.0	3.3	A	A	A	A	A	A	A	2.4	A					
30						E	2.0	2.6	2.9	3.1	3.2	{3.4} ^A	3.5	3.5	{3.4} ^A	3.2	2.7 ^J	A	A					
31						A	2.0	2.7	3.0	3.2	3.4	3.5	A	A	A	A	A	A	A					
Mean Value						1.5	2.3	2.7	3.0	3.1	3.2	3.3	3.4	3.4	3.3	3.1	2.8	2.5	2.1					
Median Value						E	2.3	2.7	3.0	3.1	3.2	3.4	3.4	3.4	3.3	3.1	2.8	2.5	2.0					
Count						5	8	13	17	17	13	10	6	8	14	14	13	13	4					

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 39° 43.5' N
Long. 140° 08.5' E

Akita

IONOSPHERIC DATA

135° E Mean Time

Aug. 1952

R'E

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

R'E

Sweep 1.0 Mc to 17.0 Mc in 1.5 min
 Manual Automatic

A 7

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

fEs

Aug. 1952

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	42	32	34	40	38	52	36	94	15.5	48	73	88	52	78	92	44	5.7	6.6	5.0	3.6	6.6	5.0	4.2	3.6
2	52	42	30	34	38	64	54	42	6.0	54	48	64	120	78	46	64	4.1	3.6	3.1	2.3	2.3	E	2.7	34
3	24	32	30	28	24	26	32	3.5	44	82	74	56	86	88	95	12.5	11.5	8.2	5.1	6.7	6.0	4.8	3.5	4.0
4	36	26	27	14	16	G	G	G	G	42	G	46	42	52	64	72	5.7	5.6	6.8	4.2	3.7	3.5	4.4	3.6
5	21	71	36	48	26	36	44	46	49	48	65	60	69	52	38	42	6.9	74	5.5	34	34	38	4.2	38
6	34	38	34	28	27	28	52	52	61	152	135	115	115	60	38	72	7.2	7.8	6.6	3.8	4.2	3.8	34	36
7	66	32	22Y	38	48	52	39	102	68	86	145	112	104	72	47	80	134	128	11.6	60	5.6	4.9	4.2	36
8	56	46	40	35	35	36	41	39	9.2	C	50	78	54	100	100	44	38	36	74	38	5.7	5.8	34	40
9	32	38	32	28	29	30	34	4.1	50	57	C	C	C	47	58	5.2	8.2	5.9	5.8	34	84	72	74	50
10	58	35	32	34	26	32	38	38	132	72	56	114	C	C	C	C	C	C	88	142	76	40	45	42
11	76	82	34	36	46	38	34	48	68	52	46	44	46	38	46	4.5	5.1	4.3	5.7	5.2	5.2	5.8	52F	61F
12	23	26	20	22	31	28	48	48	68	82	44	61	49	67	46	42	64	52	42	38	1.7	2.0	1.6	1.6
13	15	22	25	12	25	44	46	64	74	62	73	47	45	43	40	39	42	50	34	38	34	46	56	52
14	52	48	35	39	26	40	46	94	14.5	132	64	135	68	88	84	86	82	137	64	42	40	38	38	43
15	51	66	70	68	36	42	32	32	9.6	102	66	56	68	152	122	44	35	44	5.7	24	66	74	36	54
16	34	50	32	30	26	21	36	72	4.7	44	98	52	44	52	46	4.7	64	38	26	52	46	32	35	39
17	E	24	32	18	26	26	24	32	38	44	62	58	48	58	88	82	76	72	42	34	44	44	46	36
18	40	32	52	30	29	29	34	51	94	82	52	5.7	53	43	41	40	G	42	41	42	34	38	32	38
19	34	22	24	27	52	62Y	34	49	60	84	61	64	68	66	74	116	82	53	44	38	44	64	52	60
20	92	58	86	68	70	47	38	63	113	66	76	82	110	51	52	42	54	G	38	40	40	26	22	20
21	26	28	30	30	30	28	30	28	84	76	5.2	46	44	58	40	4.7	G	39	4.5	58Y	5.1	5.2	4.2	48
22	42	46	42	38	38	32	44	38	92	104	56	40	42	46	36	5.2	3.9	44	2.2	2.2	2.5	3.7	2.2	36
23	36	30	26	12	14	24	32	42	G	37	44	46	34	40	34	C	4.6	38	4.3	4.6	40	88	84	50
24	48	44	50	45	44	42	36	35	42	47	5.5	5.6	11.5	96	54	5.8	5.4	64	56	44	40	82	4.8	38
25	54	22	42	46	29	25	50	36	60	68	64	4.5	5.2	G	G	G	3.4	42	3.8	5.1	48	54	46	49
26	49	47	18	20	18	G	30	45	C	C	C	C	C	G	C	C	C	C	4.8	4.6	5.0	5.6	60	4.2
27	48	50	48	44	38	30	34	36	104	91	58	9.7	61	48	5.2	4.7	4.8	3.8	3.7	40	5.2	36	54	38
28	47	50	34	34	38	32	34	40	56	5.7	64	6.2	5.6	G	3.5	G	3.6	34	3.6	2.4	4.8	36	38	38
29	50	47	26	28	28	36	34	42	38	46	36	4.2	G	50	5.1	5.0	4.6	G	4.2	30	30	34	30	26
30	26	28	39	34	24	1.2	G	G	3.9	48	44	4.4	39	G	4.8	40	42	40	42	32	33	31	22	19
31	34	34	22	13	25	22Y	47	G	4.5	50	69	G	5.1	5.2	4.6	40	30	38	36	28	34	26	26	28
Mean	43	40	36	33	32	35	38	49	74	69	65	67	64	64	58	58	5.9	5.6	5.0	4.3	4.5	4.7	4.1	3.9
Median	42	38	32	34	29	32	36	42	60	62	6.1	5.7	5.2	5.2	4.7	4.7	5.1	44	44	38	44	40	42	38
Count	31	31	31	31	31	31	31	31	30	29	29	29	28	29	29	28	29	29	29	31	31	31	31	31

Sweep 1.0 — Mc to 17.0. Mc in 15 min Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitama-gu, Tokyo, Japan

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Aug. 1952

(M3000)F2

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	[2.9]F (3.0)F	[2.9]F (2.9)F	F	F	F	AK	2.7K	AK	AK	3.1K	AK	AK	(2.9)F	AK	AK	3.0K	2.9H	3.2	3.2	2.9K	3.3	3.3ZS	2.8S	(2.6)F	(2.8)F
2	(3.0)F	(2.9)F	3.2	3.0	3.0	[3.1]A	3.2	2.9	2.9	(2.9)K	3.2K	AK	AK	AK	3.0K	3.1K	2.9K	2.9K	2.9K	2.9K	3.3Z	3.0K	3.1K	3.0K	3.0K
3	(3.0)F	(2.8)F	2.9K	3.1K	2.8K	3.0K	3.1K	3.0K	3.3S	AK	AK	BK	2.9K	AK	AK	AK	AK	3.0K	3.0K	3.3K	[3.2]A	3.1K	3.3K	3.3K	3.0K
4	(2.8)F	2.7F	2.6F	2.6K	2.8F	3.0K	2.7K	2.9K	2.3K	2.4K	3.1K	3.3K	3.1K	2.8K	AK	AK	3.0K	2.9K	(3.0)A	3.1	3.2	3.0	(3.0)F	(2.8)F	
5	(2.7)F	[2.6]A	2.6F	[2.8]A	3.1F	(2.9)F	3.0	3.3	3.2	2.9	[3.2]A	3.4	[3.2]A	3.0	3.3	2.9	A	A	3.1	3.0	3.1H	2.9	3.0	2.9	
6	2.9F	2.9F	(2.7)F	(2.6)F	2.9	3.1	3.3	3.6	A	A	A	A	A	A	2.9	3.0	3.4	[3.3]A	3.2	3.0	3.1	3.0	3.3	3.0P	
7	[3.0]A	2.9F	2.9F	(3.2)F	2.9F	2.9	[3.2]A	3.3	3.3	A	A	A	A	A	3.0	A	3.1	3.1	3.1	2.9	3.3	3.1	3.1	3.1	
8	[3.0]A	3.0	2.9F	2.8F	3.0F	2.7	3.2	3.4	A	C	2.6	[2.8]A	3.0	2.9	[2.9]A	2.9	2.9	3.3	[3.2]A	3.1	3.1	3.1	3.1	3.1	
9	(2.8)F	(3.0)F	2.9F	2.9	2.9H	3.1	(3.4)F	C	C	C	2.8	2.9	2.9	[3.1]A	3.3	3.4	3.3	A	A	A	A	A	A	(2.9)F	
10	(2.8)F	F	F	(2.6)F	[2.8]F	(3.0)F	3.3F	3.1H	A	A	2.9	A	C	C	C	C	C	C	C	3.4	A	(2.9)F	(2.8)F	(2.8)F	
11	(2.8)F	(2.6)F	BF	3.1F	3.3F	3.4	3.2	3.3	3.3	3.0	3.0	2.9	2.9	3.0	3.2	3.2	3.2	3.2	3.1	3.0	2.8	(2.8)F	FS	A	
12	(3.0)F	2.9F	2.8	3.0	3.0	3.0	3.2	3.2	3.6	[3.4]A	3.3	2.7	3.1	2.7	3.2	3.4	3.3	3.2	3.1	3.2	(3.1)P	3.0	2.9	2.9	
13	3.1	2.9V	2.7F	3.2	3.2	(2.8)F	2.9	3.2	[3.2]A	3.1	[3.2]A	3.4V	2.6	2.9	3.0	3.0	3.2	3.1	2.9	3.1	3.2	3.1	[3.2]A	(3.2)F	
14	(2.9)F	(2.9)F	(3.1)F	(3.0)F	(3.1)F	(3.3)F	3.5	A	A	A	3.3	[3.2]A	3.1	A	A	A	A	A	3.1F	3.0	3.2	(3.1)F	3.0	(3.0)F	
15	A	A	A	A	2.9	(2.8)F	3.0	3.4	A	A	3.5	2.9	A	A	3.1	3.1	3.2	3.2	3.2	3.1	3.1	(3.3)F	(2.7)F	F	
16	3.2F	(3.0)F	(3.0)F	(3.0)F	(3.1)F	3.2F	3.4	[3.3]A	3.2	3.1	[3.0]A	3.0	2.9	2.8	2.8	3.1	3.1	3.3	3.4	3.2	3.1	3.1	(3.0)F	3.1	(2.9)F
17	(2.8)F	(2.8)F	2.9F	3.0F	3.2F	3.2	3.1	3.3	3.5	3.5	3.0	2.8	3.0	3.0	3.2	[3.1]A	3.0	(3.4)F	3.2	3.2	3.2	2.9	2.7	2.8	2.8
18	3.2	2.7	[2.8]A	2.8	2.8	3.1	3.1	3.1	3.6	[3.2]A	2.9	3.3	2.9	3.1	3.2	3.3	3.2	3.5	3.2	3.3	3.0	3.0	2.9	2.8	2.7H
19	2.9	3.0F	2.9	3.2	A	A	3.2	3.2	3.7	3.3	2.9	3.2	3.2	3.2	3.1	A	A	3.2	3.2	3.3H	[3.3]F	(3.3)F	(3.0)F	(2.7)F	
20	(2.8)A	(2.9)F	A	A	(3.0)F	3.2	3.5	3.4	A	A	2.9	A	A	A	2.9	3.0	3.0	3.0	3.0	2.9	3.1	3.2	3.1H	2.9	3.0
21	2.7	3.0	2.8	2.8	3.2	2.9	3.2	3.0	[3.2]A	(3.3)F	3.2	2.8	2.6	2.9	3.3	3.0	3.2	3.2	3.2	(3.0)F	3.2	(3.2)F	(3.0)F	2.8F	
22	(2.8)F	(2.7)F	(2.7)F	(3.0)F	3.0F	3.0	3.3	3.2H	3.0	[3.1]A	3.2	3.1	3.0	3.1	3.0	3.1	3.2	3.3	3.3	3.1H	3.1H	3.1	2.9	2.9	(3.0)F
23	(3.2)F	(3.2)F	2.9F	3.0F	(2.9)F	3.5F	3.4	3.5	3.4	3.3	3.2	3.4	3.2	2.8	3.2	[3.2]A	3.1	3.1	3.2	3.2	3.0	A	A	A	2.9
24	3.0	3.0	2.8	(2.8)F	(3.0)F	3.1	3.4	3.6	3.5	(3.6)F	3.4	3.3	[3.1]A	2.9	3.2	3.5	3.3	3.3	3.3	3.3	3.0	3.2	(3.2)F	3.2	3.2
25	3.0	(2.9)F	[2.9]F	(2.9)F	(2.9)F	3.1	3.1	3.2	3.5	3.3	3.2	3.1	3.4	2.8	3.1	3.2	3.0	3.1	3.2	3.2	3.1	3.2	3.1	3.2	3.2
26	BFH	2.7F	(2.8)F	(3.0)F	2.8	3.0	3.3	3.3	C	C	C	C	C	C	C	C	C	C	3.3	3.2H	3.2	3.1	3.2	3.1	3.0
27	(3.2)F	3.1	3.0	2.8	2.9	3.2	3.0	3.2	A	A	3.3	[3.2]A	3.1	2.9	3.1	3.3	3.2	3.3	3.0	3.1	3.2P	3.3	(2.8)F	(3.0)F	
28	(2.8)F	2.9F	2.9F	2.9F	3.0F	3.1	3.3H	3.4	3.3	2.9	3.0	2.9	3.1	3.2	3.2	3.1	3.1	3.1	3.0	3.1	3.2	3.1	3.2	3.1	(2.8)F
29	(2.7)F	(2.9)F	3.1F	3.1	3.1	3.2	3.4	3.4	3.4	3.3	3.2	2.9	3.0	3.0	3.2	3.1	3.2	3.3	3.2H	2.9	3.1	3.3	3.1	3.0	
30	2.8	2.8	2.9	2.7	2.8	3.0	3.4	3.4	3.3	3.1	2.9H	3.1	3.1	3.0	3.0	3.0	3.1	3.2	3.1	B	3.1	2.8	2.8	[2.9]F	
31	3.0	2.8	2.7	2.7	(2.7)F	2.8	3.0F	3.3	3.4	3.2	3.6	3.0	3.2	3.1	3.2	3.2	3.3	3.1	3.0	3.2	3.0	[3.0]F	3.1	3.0	
Mean Value	2.9	2.9	2.9	2.9	2.9	3.0	3.2	3.2	3.3	3.2	3.1	3.1	3.0	2.9	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.1	3.1	3.0	2.9
Median Value	2.9	2.9	2.9	3.0	3.0	3.0	3.2	3.2	3.3	3.2	3.1	3.1	3.1	2.9	3.1	3.1	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0
Count	29	29	26	28	29	29	31	29	23	21	24	22	23	23	25	24	24	26	30	29	29	27	27	27	28

(M3000)F2

IONOSPHERIC DATA

Akita

fminF

135° E Mean Time

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	A	1.6	1.7	3.0 ^A	2.3 ^A	(2.3) ^A	2.3	A	A	4.3 ^A	4.0	(4.3) ^A	4.6 ^A	A	A	3.4	4.1 ^A	3.6 ^A	2.3	2.4 ^A	1.8	4.8 ^A	2.6 ^A	2.4 ^A	
2	3.9 ^A	1.7	1.6	1.4	1.8	(2.0) ^A	2.2	4.0 ^A	3.6	(3.9) ^A	4.2	A	A	A	4.0	3.8	3.8	3.2	2.0	1.6	1.6	1.6	1.6	(1.6)	
3	1.6	1.4	(1.5)	1.8	1.4	1.4	1.6	3.3	3.8	A	A	4.8 ^A	5.2 ^A	A	A	A	A	3.5 ^A	3.0 ^A	6.4 ^A	A	A	2.8 ^A	A	
4	A	1.5	1.4	E	E	E	1.8	2.4	3.8	3.8	3.7	4.2	4.2	3.8	A	A	3.2	3.5 ^A	(3.8) ^A	4.2 ^A	3.1 ^A	2.2 ^A	3.9 ^A	1.9	
5	1.5	(2.0)	2.6 ^A	A	E	2.2	4.6	3.6	3.8	4.1	(4.7) ^A	5.3 ^A	(5.0) ^A	4.7 ^A	3.8	3.9	A	A	A	2.2 ^A	2.5 ^A	2.4 ^A	1.6	1.6	
6	1.4	1.4	2.6 ^A	1.4	1.6	2.0	4.6 ^A	4.6 ^A	5.4 ^A	A	A	A	A	5.1 ^A	3.7	5.4 ^A	5.6 ^A	(5.1) ^A	4.6 ^A	2.6 ^A	1.6	1.5	1.5	1.4	
7	1.4	(1.2)	1.1	1.6	2.2	1.9	3.3 ^A	(4.0) ^A	4.6 ^A	A	A	A	A	A	4.6 ^A	A	A	A	A	5.6 ^A	1.6	1.8	2.9 ^A	2.4 ^A	
8	(2.6)	2.8 ^A	2.1 ^A	2.0 ^A	1.8	1.8	2.9	4.0 ^A	(3.7) ^A	3.8	4.0	(4.1) ^A	4.2	4.0	(3.9) ^A	3.8	3.8 ^A	3.0	(3.0) ^A	3.0 ^A	2.0 ^A	3.6 ^A	2.8	3.0 ^A	
9	1.7	2.8 ^A	1.5	1.6	1.8	1.6	1.8	3.1	4.2 ^A	4.6 ^A	C	C	C	4.1	4.3 ^A	4.6 ^A	(4.0) ^A	3.3	2.8	2.7 ^A	A	A	A	1.8	
10	(1.6)	1.5	1.4	A	A	1.6	2.4	3.4	5.7 ^A	(5.0) ^A	4.3	C	C	C	C	C	C	C	4.3 ^A	A	A	2.5 ^A	2.2 ^A	2.0 ^A	
11	2.1 ^A	1.7	1.4	1.3	2.2 ^A	2.4	3.2	4.2	5.5 ^A	4.4 ^A	3.8	3.8	3.9	3.8	3.9	3.8	3.4	3.3	4.2 ^A	4.7 ^A	2.3 ^A	2.4 ^A	4.0 ^F	(2.7) ^A	
12	1.4	1.3	E	1.3	1.3	1.6	2.6	4.2	4.8 ^A	(4.4) ^A	4.0	3.8	3.9	4.7 ^A	3.6	4.1 ^A	4.0 ^A	3.6 ^A	3.0 ^A	1.8	1.4	1.4	1.4	1.4	
13	1.2	1.5	E	E	1.4	2.8 ^A	2.6	5.2 ^A	(5.3) ^A	5.4 ^A	(4.8) ^A	4.2	3.8	3.3	3.6	3.4	3.7	3.8 ^A	3.4	3.8 ^A	3.0 ^A	4.3	(3.4) ^A	2.4 ^A	
14	(2.2)	1.9	(2.1)	2.3 ^A	1.7	2.6	3.7	A	A	A	4.1	(4.2) ^A	4.3	A	A	A	3.1	3.1	3.2	3.8 ^A	1.9	4.2 ^A	3.5 ^A	2.4 ^A	2.4 ^A
15	A	A	A	A	A	1.2	1.6	2.8	A	A	4.3	4.6 ^A	4.8 ^A	(4.3) ^A	3.8	3.3	3.2	3.1	3.1	5.0 ^A	1.9	4.2 ^A	3.5 ^A	2.4 ^A	
16	2.2 ^A	1.6	1.2	E	E	1.4	A	3.0	3.3	4.0	(4.2) ^A	4.3	(4.4) ^A	4.4 ^A	4.2	4.4 ^A	5.6 ^A	3.1	2.0	3.8 ^A	2.3 ^A	1.8	1.9	1.8	
17	1.5	1.3	1.2	E	1.8	1.8	2.4	3.0	3.3	3.4	4.0	4.0	4.0	4.6 ^A	6.4 ^A	(5.9) ^A	5.4 ^A	6.2 ^A	2.6	2.0 ^A	A	A	A	A	
18	1.8	1.4	(1.6)	1.8	(2.0)	2.4	2.7	4.0 ^A	5.2 ^A	(5.0) ^A	4.8 ^A	4.2	4.0	4.1	4.0	3.9	3.1	3.1	4.0	2.3 ^A	1.6	2.6 ^A	1.8	1.5	
19	1.4	E	1.2	A	A	A	2.3	4.0 ^A	3.3	3.9	4.1 ^A	3.9	5.8 ^A	4.2	5.2 ^A	A	A	A	4.0	3.8 ^A	3.0 ^A	3.4	3.7 ^A	3.8 ^A	
20	(3.2)	2.6 ^A	(2.2)	1.8	1.8	3.9 ^A	A	4.3 ^A	A	A	A	A	A	4.4 ^A	4.5 ^A	4.3 ^A	4.3 ^A	3.1	3.1 ^A	3.0 ^A	3.8 ^A	1.6	1.6	1.7	
21	1.8	1.3	1.4	1.2	1.8	1.4	1.4	1.8	(3.1) ^A	4.4 ^A	3.8	3.8	4.3 ^A	4.6 ^A	4.6	3.8	3.0	2.9	2.1	3.0 ^A	3.8 ^A	3.1 ^A	1.9	3.8 ^A	
22	A	A	A	A	1.2	1.8	A	A	5.4 ^A	(4.8) ^A	4.2 ^A	4.0	4.1	4.2	3.4	3.9 ^A	3.1	3.8 ^A	1.9	1.7	1.7	1.7	1.6	1.8	
23	3.0 ^A	1.6	E	E	1.2	1.4	2.8	2.8	3.2	3.2	3.9	4.0	3.0	4.0	3.8	(3.5) ^A	3.2	3.2	3.8	3.4 ^A	3.8 ^A	A	A	2.8 ^A	
24	2.0 ^A	1.6	1.2	A	A	2.9 ^A	2.3	2.9	3.6	4.0	4.5 ^A	4.8 ^A	(5.1) ^A	5.4 ^A	4.2	4.3 ^A	4.3 ^A	5.4 ^A	2.8	1.8	2.0 ^A	1.8	2.4 ^A	1.4	
25	A	E	A	1.5	1.5	1.5	(2.2)	2.9	4.8 ^A	4.1 ^A	4.4 ^A	4.3	4.2	4.0	3.8	3.8	3.8	3.6 ^A	3.4 ^A	3.1 ^A	3.2 ^A	1.9	(2.6) ^A	3.2 ^A	
26	4.2 ^A	1.2	E	1.3	E	1.4	2.0	4.0 ^A	C	C	C	C	C	C	C	C	C	C	C	3.8 ^A	4.2 ^A	4.2 ^A	3.0 ^A	(2.5) ^A	2.0 ^A
27	1.8	1.4	1.2	1.2	1.4	1.6	3.0	3.2	A	4.0	4.0	(4.0) ^A	4.0	3.9	4.1	3.6	3.5	2.9	2.2	3.7	4.6 ^A	1.6	2.8 ^A	1.6	
28	4.0 ^A	4.0 ^A	4.0 ^A	A	A	1.8	2.3	3.2	4.9 ^A	5.2 ^A	4.2	4.9 ^A	4.0	4.0	4.0	3.7	3.2	3.7	3.0	3.0	1.7	4.3 ^A	1.9	3.5 ^A	1.8
29	1.8	1.8	1.4	1.4	1.3	2.2	2.2	3.8 ^A	3.0	3.8	4.2	4.0	3.8	(4.0) ^A	4.1	3.8	(3.2)	2.6	3.4	2.6 ^A	2.6 ^A	2.4 ^A	1.6	1.4	
30	1.4	1.4	2.8 ^A	2.5 ^A	1.8	E	2.4	2.9	3.0	4.2 ^A	4.0	4.0	3.8	3.8	4.0	3.6	3.3	3.8 ^A	3.8 ^A	1.8	1.6	1.6	1.5	1.5	
31	1.8	1.6	1.6	E	A	1.1	2.5	2.9	3.1	4.4 ^A	3.8	4.1	4.0 ^A	3.2	3.0	3.1	3.1	3.1	2.4	2.8 ^A	3.0 ^A	1.9	1.6	1.8	
Mean Value	2.1	1.7	1.7	1.7	1.7	1.9	2.6	3.4	4.1	4.3	4.2	4.2	4.3	4.2	4.1	3.9	3.8	3.5	3.2	3.1	2.8	2.4	2.4	2.1	
Value	1.8	1.5	1.4	1.4	1.6	1.8	2.4	3.4	3.8	4.2	4.2	4.2	4.2	4.2	4.0	3.8	3.7	3.3	3.0	2.9	2.6	1.9	2.4	1.8	
Count	2	6	2	9	2	7	2	4	2	5	2	4	2	4	2	5	2	4	2	6	3	0	2	7	2

The Radio Research Laboratories
Koganei-machi, Kitama-gumi, Tokyo, Japan

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.3' E

Aug. 1952

f_{min}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	1.6	E	E	E	E	E	1.5	1.5	1.6	1.7	1.7	1.7	1.8	1.9	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6
2	E	E	E	E	1.2	1.2	1.4	1.4	1.6	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.7	E	1.5	1.5
3	1.4	1.3	1.2	1.2	1.2	1.2	1.4	1.4	1.6	1.6	1.6	1.6	1.8	2.4	1.8	1.7	1.5	1.5	1.5	1.6	1.5	1.5	1.5	1.4
4	1.4	E	E	E	E	1.2	1.5	1.6	1.6	2.0	2.6	3.2	3.0	2.8	1.9	1.8	1.7	1.6	1.6	1.5	1.5	1.5	1.5	1.5
5	1.5	E	E	E	E	E	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.9	1.8	1.8	1.7	1.6	1.6	1.5	1.6	1.6	1.4	1.4
6	1.2	1.2	1.1	E	E	E	1.6	1.6	1.6	1.6	2.0	2.3	2.1	1.7	1.6	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4
7	1.4	E	E	E	E	E	1.5	1.5	1.5	1.7	1.8	1.9	1.8	1.9	2.0	2.2	2.0	1.8	1.6	1.6	1.6	1.6	1.6	1.6
8	E	E	E	E	E	E	1.4	1.5	1.5	1.7	1.6	1.7	1.7	1.6	1.7	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6
9	1.2	E	E	E	1.2	1.4	1.6	1.6	1.8	1.7	C	C	C	1.7	1.7	1.7	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4
10	E	E	E	E	E	1.4	1.5	1.6	1.6	1.6	1.6	1.7	C	C	C	C	C	C	1.6	1.6	1.5	1.5	1.4	1.4
11	1.3	E	E	E	E	E	1.6	1.6	1.6	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5
12	1.7	1.2	E	E	E	E	1.5	1.5	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.6	1.6	1.6
13	1.2	E	E	E	E	E	1.5	1.5	1.5	1.7	1.8	1.9	1.8	1.8	2.0	2.0	2.0	1.6	1.5	1.5	1.5	1.4	1.4	1.4
14	1.6	E	E	E	E	E	1.6	1.5	1.5	1.7	1.8	1.9	1.8	1.8	2.0	2.0	2.0	1.8	1.8	1.6	1.6	1.6	1.6	1.6
15	1.3	E	E	1.2	1.2	1.2	1.4	1.5	1.5	1.6	1.7	1.6	1.6	1.7	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6
16	1.2	E	E	E	E	E	1.2	1.2	1.8	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5
17	E	E	E	E	E	E	1.2	1.6	1.6	1.8	2.0	2.2	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.6	1.6
18	E	E	E	E	E	E	1.6	1.7	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.6	1.6	1.6
19	1.4	E	E	E	E	E	1.6	1.6	1.6	1.7	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.5	1.6	1.4	1.2	1.2	1.2
20	1.2	E	E	E	E	E	1.5	1.5	1.5	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.6	1.6	1.5	1.6	1.5
21	1.4	E	E	E	E	E	1.4	1.4	1.4	1.5	1.6	1.8	1.9	1.8	1.8	1.8	1.8	1.7	1.6	1.6	1.6	1.5	1.9	1.6
22	1.2	E	E	E	E	E	1.4	1.6	1.7	1.8	1.6	1.7	1.7	1.7	1.8	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5
23	E	E	E	E	E	E	1.6	1.6	1.6	1.6	2.0	2.2	2.2	2.2	1.7	1.6	1.8	1.6	1.6	1.6	1.9	1.5	1.5	1.5
24	1.2	1.2	E	E	E	E	1.5	1.7	1.9	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.4	1.4	1.6	1.4	1.4
25	E	E	E	E	E	E	1.5	1.5	1.5	1.6	1.8	1.8	1.8	1.8	2.0	2.2	2.0	1.8	1.6	1.5	1.6	1.4	1.4	1.4
26	1.4	E	E	E	E	E	1.5	1.6	C	C	C	C	C	1.8	2.0	2.2	2.0	2.0	1.6	1.5	1.5	1.5	1.5	1.5
27	1.6	E	E	E	1.2	1.4	1.8	1.8	1.6	1.6	1.6	1.9	1.9	1.9	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6
28	E	E	E	E	1.4	1.5	1.6	1.6	1.6	1.6	1.7	1.8	1.9	1.9	1.7	1.8	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5
29	E	E	E	E	E	E	1.6	1.6	1.6	1.6	1.8	2.0	1.9	1.8	1.6	1.6	2.2	2.0	2.2	1.5	1.5	1.6	1.5	1.5
30	1.2	1.4	1.2	E	E	E	1.4	1.6	1.6	1.7	1.8	2.0	1.9	1.8	1.6	1.6	1.5	1.5	1.5	1.8	1.6	1.6	1.4	1.2
31	1.4	E	E	E	E	E	1.5	1.5	1.5	1.8	1.5	1.8	1.8	1.8	1.7	1.8	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Mean Value	1.4	1.3	1.2	1.2	1.3	1.3	1.5	1.6	1.6	1.7	1.8	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5
Median Value	1.2	E	E	E	E	E	1.5	1.6	1.6	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5
Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Swep 1.0 Me to 17.0 Me in 15 min Manual Automatic

f_{min}E

Lat. 35° 42.4' N
Long. 139° 29.8' E

IONOSPHERIC DATA

Kokubunji Tokyo

foF2

135° E Mean Time

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	AF	F	5.0 ^{UF}	4.7 ^{UF}	4.3 ^{FP}	3.7 ^K	4.3 ^K	(4.8) ^K	5.4 ^K	5.9 ^K	5.2 ^K	(5.4) ^K	5.7 ^K	6.2 ^K	A ^K	A ^K	6.5	6.1	6.6	6.6	5.7	3.9	4.2	(4.2) ^F	
2	4.2 ^{FP}	4.3 ^K	4.1 ^K	3.5 ^{FP}	3.5 ^F	4.2	5.5	5.8	6.1	5.3 ^K	5.7 ^K	4.7 ^K	A ^K	A ^K	5.8 ^K	5.3 ^K	5.1 ^K	5.0 ^K	5.4 ^K	6.7 ^K	5.5 ^K	4.9 ^K	4.8 ^K	4.3 ^K	
3	4.2 ^K	4.0 ^K	4.1 ^K	4.1 ^K	3.2 ^K	3.3 ^K	4.6 ^K	4.9 ^K	4.4 ^K	A ^K	B ^K	5.7 ^K	6.2 ^K	6.3 ^K	6.1 ^K	5.4 ^K	5.5 ^K	6.1 ^K	7.2 ^K	8.4 ^K	5.9 ^K	4.5 ^K	4.5 ^K	4.2 ^K	
4	3.7 ^K	3.8 ^K	3.7 ^K	3.3 ^K	4.0 ^{UF}	3.7 ^K	4.3 ^K	4.4 ^K	4.4 ^K	(4.6) ^K	4.7 ^K	4.9 ^K	(4.9) ^K	4.9 ^K	B ^K	A ^K	5.1 ^K	5.0 ^K	5.2 ^K	6.1	5.7	4.5	3.8	3.8 ^P	
5	4.0	(3.9) ^F	3.5	3.5 ^{FP}	3.0 ^F	3.5	(4.0) ^A	5.7	6.7	6.7	6.2	6.2	5.6 ^J	6.4	6.6	6.5	6.1	6.1	6.3	7.4	7.6 ^P	6.0	A	SB	
6	A	AF	(4.0) ^F	(4.0) ^F	F	AF	5.5	5.7	6.0	5.7	5.6	5.6	5.3	6.7	8.0	(8.2) ^A	8.5	6.5	6.1	6.5	7.1	6.6	5.9	4.9	
7	4.4 ^Z	4.5	3.7	(4.0) ^Z	3.2 ^F	3.4	4.9	(6.0) ^A	7.2	A	A	A	A	5.5	6.2	5.5	(5.6) ^A	5.8	6.0	(6.6) ^A	7.2	6.5	6.0	F	
8	4.5	4.5 ^F	4.3 ^{FP}	(4.2) ^A	4.1 ^F	3.8	4.4	5.7	5.6	5.5	(5.6) ^A	5.8	5.8	5.7	5.5	(5.7) ^A	5.9	6.2	6.0	6.6	5.7	4.9	5.4 ^{FP}	5.0 ^J	
9	(4.8) ^F	(4.5) ^F	4.5	(4.3) ^{FP}	3.2	3.5	5.3	5.5	6.3	C	C	C	C	C	C	C	6.3	6.6	6.1	6.2 ^F	5.7	4.6	4.9 ^F	AF	
10	AF	AE	C	C	C	C	4.9	5.0	(5.2) ^A	5.5	A	A	5.7	5.8	A	A	7.4	8.1	7.2	6.5	5.5	5.1	5.3 ^F	(5.4) ^{FP}	
11	5.5	5.1	5.4 ^{UF}	5.6 ^{ZF}	4.5	4.1 ^F	4.5	6.2	6.6	6.4	6.5	A	T	T	6.1	6.5	7.0	6.2	6.4	7.1	6.6	(6.0) ^A	5.5 ^F	4.4 ^F	
12	4.3 ^V	4.1	3.9 ^J	4.0	3.7	3.8	5.5	7.1	5.5 ^P	5.3	A	A	A	6.0	7.2	6.7	6.2	5.8	6.4	6.7	6.7	5.3	(5.4) ^F	5.5 ^Z	
13	(5.2) ^F	4.9 ^Z	4.4 ^{UF}	4.6 ^F	4.2 ^V	3.3	4.7	5.9	(6.0) ^A	6.2	(6.3) ^A	(6.4) ^{FP}	5.7	6.4	7.8	7.1	6.7	6.1	5.9	5.8	6.0	5.6	5.0	F	AF
14	F	(4.6) ^F	(4.9) ^F	4.1 ^F	4.1 ^F	3.6	4.3	5.5	6.3	5.7	5.7 ^V	(5.8) ^A	5.8 ^P	A	A	6.0	6.1	7.0	7.0	7.3	6.2	5.0	4.4 ^{FP}	4.0	
15	3.6 ^{FP}	AF	T	3.3 ^F	3.5	5.4	5.4	(5.8) ^A	6.1	6.4	6.2	5.2	5.6	5.8	6.3	6.6	6.4	6.2	5.8	6.2	6.3	5.5	F	F	
16	4.5 ^F	4.0 ^F	3.8 ^{UF}	3.9 ^{UF}	3.9 ^F	4.7	4.7	6.2	6.0	5.6	5.7	(5.0) ^A	5.7	6.9	8.4	9.0	8.0	8.0	7.0	6.3	5.5	4.9	4.9	4.8 ^F	
17	4.6 ^F	(4.6) ^F	4.7	4.7	4.0	3.3	5.0	7.7 ^P	5.4	6.0	5.9	6.8	8.0	8.7	9.5 ^P	(9.3) ^A	7.1	6.7	5.9	7.0	7.0	6.5	(5.4) ^F	4.3 ^F	
18	F	(6.0) ^F	4.0 ^F	3.3 ^H	3.4 ^F	3.6	4.7	5.6	5.7	5.3	5.8	(6.0) ^A	6.2	7.7	9.0	8.4	7.2	6.3	6.6	7.2	5.7	5.3	5.3	4.9 ^F	
19	4.9 ^F	4.8 ^F	4.9 ^F	3.6 ^H	3.5	3.3	4.9	8.0	7.5	(6.6) ^A	5.6	7.2	8.0	6.9	6.2	6.6	6.6	6.6	6.0	C	C	SF	4.2	AF	
20	A	3.9 ^P	(4.4) ^F	4.1 ^{UF}	(4.1) ^F	(4.8) ^P	5.3	(5.6) ^C	6.0	6.4	6.0	6.9	(6.8) ^A	6.7	6.5	6.7	7.5	7.1	7.7	(9.7) ^P	8.2	5.5	5.4	5.1	
21	4.8	4.9	4.4	(4.2) ^C	4.0	3.4	4.2	(4.9) ^A	5.6	A	A	5.1 ^V	5.5	5.8	6.6	6.3	5.8	6.5	7.0	7.2	6.3	5.0	4.4 ^F	(4.2) ^A	
22	4.0 ^F	4.0 ^F	4.0 ^F	4.0 ^F	3.7 ^F	3.9	4.7	5.2	5.7	6.5	6.3	6.0	7.2	8.5	9.2	9.5	8.6	7.6	7.2	6.7	6.7	5.6	5.2	5.0	
23	5.0 ^F	5.1 ^{FP}	4.5 ^{FP}	4.9 ^P	4.2	4.7	5.5	6.0	6.1	6.2	6.5	6.6 ^H	5.8	6.5	7.2	7.4	7.1	8.0	8.6	7.7	5.7	5.4	5.2	5.2	
24	5.0 ^F	4.8	4.5	(4.4) ^F	(3.8) ^{FP}	4.5	5.1	7.2	6.8	6.8	6.6	5.7	6.4	7.0	7.0	7.1	6.2	6.3	6.5	6.7	7.2	(6.0) ^{AF}	4.9	4.1	
25	(4.4) ^F	4.1	3.8 ^F	3.7 ^F	3.8 ^F	3.9	5.5	7.6	6.7	6.6	6.2	6.1	6.6	6.1	7.5	7.7	6.7	6.7	6.3	6.5	6.5	6.7 ^F	AF	AF	
26	F	F	4.2	(4.0) ^{UF}	(3.9) ^F	3.8 ^F	5.5	6.4	7.8	8.0	7.1	6.4	(6.3) ^A	6.2	6.2	6.4	7.3 ^P	7.9	8.4	(7.2) ^A	6.1	(6.2) ^C	6.2	(5.7) ^A	
27	(5.2) ^{UF}	C	C	4.3 ^{FP}	4.2	4.0	6.2	6.0 ^Z	7.2	8.0	6.5	6.2	6.5	(7.0) ^{MS}	7.6 ^P	8.2	7.6	7.2	7.0	7.4	7.6	6.2	4.6	4.2 ^{FP}	
28	4.7 ^F	4.5 ^F	F	F	F	F	6.5	7.2	6.1	(6.4) ^A	6.7	6.7	8.6	9.5	7.1	(7.0) ^A	6.8	6.8	(7.0) ^A	7.2	7.2	6.3	5.9	5.4 ^F	
29	5.1 ^{FP}	(5.2) ^F	5.3 ^F	4.8 ^F	4.2	4.1	5.7	6.2	7.0	6.2	6.2	6.4	7.0	7.3	7.1	7.6	7.6	7.0	7.5	7.6 ^P	(7.2) ^{AF}	6.7	5.6	(4.7) ^P	
30	4.8	4.3	4.1	4.0	4.0	4.2	6.1	8.1	7.4	6.0	6.5	7.6	9.0	8.0	8.4	9.1	9.0	9.6	A	B	6.1 ^P	6.0	5.9	6.0 ^F	
31	5.7	5.4	C	C	C	C	C	C	6.4	6.5	7.2	7.1	6.8	6.9	7.8	8.3	9.1	6.6	7.1	7.3 ^F	C	C	C	5.0 ^F	
Mean Value	4.6	4.5	4.3	4.1	3.8	3.8	5.1	6.1	6.2	6.2	6.1	6.1	6.4	6.7	7.2	7.2	6.9	6.7	7.0	6.7	7.0	6.4	5.5	5.1	4.8
Median Value	4.6	4.5	4.2	4.0	3.9	3.8	5.0	6.0	6.1	6.2	6.2	6.0	6.2	6.5	7.1	7.0	6.7	6.5	6.5	6.7	6.2	5.5	5.2	5.2	4.8
Count	24	24	26	28	27	27	30	30	31	27	25	26	26	27	26	27	31	31	29	29	29	28	28	26	25

Sweep 1.0 Mc to 17.2 Mc in min Manual Automatic

K 1

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 38.8' E

Kokubunji Tokyo

135° E Mean Time

Aug 1952

f_oF₂

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	AF	F	(350) ^F	440 ^P	430 ^P	420 ^K	410 ^K	[460] ^A	390 ^K	310 ^K	U ^K	A ^K	U ^K	320 ^K	A ^K	A ^K	320	[310] ^A	300	270	270	290	390 ^F	[360] ^F	
2	320 ^K	350 ^F	300	300 ^P	240 ^F	300	300	[280] ^A	270	U ^K	U ^K	U ^K	A ^K	A ^K	A ^K	U ^K	400 ^K	400 ^K	330 ^K	310 ^K	310 ^K	350 ^K	330 ^K	370 ^K	
3	370 ^K	380 ^K	350 ^K	310 ^K	300 ^K	400 ^K	330 ^K	U ^K	U ^K	A ^K	B ^K	A ^K	A ^K	370 ^K	310 ^K	420 ^K	A ^K	A ^K	330 ^K	310 ^K	260 ^K	400 ^K	400 ^K	400 ^K	
4	360 ^K	380 ^K	400 ^K	420 ^K	500 ^K	500 ^K	400 ^K	U ^K	U ^K	B ^K	U ^K	U ^K	B ^K	U ^K	U ^K	A ^K	A ^K	A ^K	330 ^K	320 ^K	280	340	360	390 ^F	
5	380	(410)	360	340 ^P	320 ^F	320 ^F	[330] ^A	340	340	280	310	350	U	350	B ^K	320	330	330	350	320 ^P	300 ^P	320	320	A	S ^B
6	A	AF	(330) ^F	(410) ^F	F	AF	A	A	300	U	U	U	B	410	390	[340] ^A	360	300	310	350	320 ^P	300	320	300	
7	350 ^Z	350 ^F	(200) ^F	(200) ^F	300 ^F	340	400	A	A	A	A	A	A	U	U	380	340	[340] ^A	340	[340] ^A	340	350	350 ^F	350 ^F	
8	380	390 ^F	340 ^F	[400] ^A	400 ^F	350	300	240	350	U	A	U	U	U	A	A	A	A	320	330	330	290	370	360 ^F	(310) ^F
9	[340] ^F	(380) ^F	350	(240) ^F	320	(340) ^F	320	[340] ^A	350	C	C	C	C	C	C	C	A	A	320	[310] ^A	320 ^F	310	370	450 ^F	AF
10	AF	AF	C	C	C	C	C	C	A	A	A	A	U	A	A	A	A	320	300	270	350	330	400 ^F	430 ^F	[400] ^F
11	370	440	(420) ^F	330 ^F	340 ^F	350 ^F	370	300	300	320	390	A	T	T	350	350	310	310	310	310	310	A	A	350 ^F	350 ^F
12	380 ^V	320	[320] ^F	310	340	320	320	270	270 ^P	U	A	A	A	A	390	330	340	[320] ^A	330	310	300	370	[390] ^F	400 ^Z	
13	[360] ^F	420 ^Z	400 ^P	350 ^F	350 ^V	330	320	320	A	A	A	(430) ^{JP}	U	U	370	310	300	300	270	300	230	320	340	F	AF
14	F	F	(340) ^F	(310) ^F	270 ^F	270 ^F	270	340	A	U	310 ^V	A	A	A	A	A	350	350	310	310	300 ^P	320 ^P	340 ^F	300	
15	(350) ^F	AF	T	360 ^F	(370) ^F	350	240	[360] ^A	310	A	300	U	U	U	U	350	300	300	300	270	330	310	280	F	F
16	310 ^F	310 ^F	(270) ^F	(340) ^F	300 ^F	320	280	300 ^F	250	[300] ^A	350	U	A	380	330	300	340	260	260	280	290	350	350	350	330
17	400 ^F	(370) ^F	340 ^F	300	300	230	300	250 ^P	260	350	[380] ^A	400	360	[340] ^A	330 ^P	[310] ^A	290	300	350	340	380	350	[400] ^F	440 ^F	
18	F	(320) ^F	410 ^F	410 ^F	470 ^F	320	330	320	270	U	290	[360] ^A	440	340	310	300	280	280	310	320	320	320	390	380	380 ^F
19	420 ^F	380 ^F	330 ^F	260 ^H	390	370	320	270	260	A	U	330	300	320	350	330	350	310	B	C	C	C	S ^F	(300) ^F	AF
20	A	A	(360) ^F	(340) ^F	(330) ^F	(260) ^F	260	[280] ^A	300	310	330	330	[320] ^A	320	350	A	320	[340] ^A	360	[350] ^P	270	310	370	370	
21	380	340	360	[320] ^F	280	300	U	A	310	A	A	U	U	U	A	300	310	300	300	300 ^P	270	280	330 ^F	[340] ^A	
22	360 ^F	320 ^F	360 ^F	330 ^V	300 ^F	270	260	300	290	300	330	350	350	350	330	310	300	300	300	300	300	320	310	360	350
23	370 ^F	300 ^P	350 ^V	330 ^P	310	320	250	260	300	290	320	300	370	370	340	320	330	310	280	260	300	370	390	370	
24	380 ^F	350	340	(280) ^F	(440) ^F	310 ^F	300	260	270	280	290	300	360	[350] ^A	340	300	300	300	300	340	310	[310] ^F	320	350	
25	(370) ^F	350	(350) ^F	330 ^F	350 ^F	350 ^F	300	260	260	300	A	U	300	370	320	300	290	320	320	320	340 ^F	AF	AF	AF	
26	F	F	370	(320) ^F	(360) ^F	340 ^F	270	300	270	280	260	A	A	A	370	340	A	310 ^P	310	290	[280] ^A	280	[320] ^F	370	[350] ^A
27	(330) ^F	C	C	390 ^P	320 ^F	300	260	280	290	250	280	310	320	[330] ^A	330 ^P	320	300	300	300	320	350 ^P	280 ^F	330	+320 ^F	
28	370 ^P	320 ^F	F	F	F	F	260	300 ^Z	280	[300] ^A	310	370	340	310	290 ^F	[320] ^A	310	A	A	A	A	240 ^P	320	350	380 ^F
29	350 ^P	[350] ^F	350 ^F	350 ^F	340	340	230	260	290	260	310	350	340	320	340	320	200	300	300	300	300 ^F	[360] ^A	360	320	[340] ^P
30	340	370	390	340	350	340	270	270	250	270	390	350	330	340	330	340	320	300	A	B	A	C	370	400	400 ^F
31	360	(350) ^F	C	C	C	C	C	C	260	300	290	310	350	350	320	370	270	270	270	300	310 ^P	C	C	C	340 ^F
Mean Value	360	360	350	340	340	330	310	290	290	290	320	350	350	350	340	320	320	310	310	310	310	310	340	360	360
Median Value	360	350	350	330	330	330	300	280	290	300	310	350	340	350	340	320	310	310	310	310	320	310	340	360	360
Count	24	23	26	28	27	27	28	25	25	16	18	14	14	21	24	23	27	29	28	28	27	27	26	25	

f_oF₂

Sweep 1.0 Me to 17.2 Mc in 2 min

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Aug. 1952

135° E Mean Time

R1F2

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	AF	F	300F	300	330A	400K	400K	[390]A	380K	310K	330K	[340]A	350K	320K	A K	A K	320	[290]A	270	250	220	250	220	330A
2	300	300A	270A	260	250	280	280	[280]A	270	450K	340K	L K	A K	A K	A K	360K	400K	400K	310K	270K	220K	270K	270K	300K
3	300K	300K	280K	240K	230K	270K	330K	300K	L K	L K	B K	A K	370K	350K	310K	420K	380K	350K	320K	260K	230K	320K	370K	[360]A
4	360K	310K	340K	300K	300K	330K	400K	460K	B K	B K	540K	490K	[460]A	420K	B K	A K	A K	A K	330K	270K	240A	390A	310	300
5	290	300F	280	280	240	280	[310]A	340	330	280	300	350	350	350	340	320	330	330	330	280A	260A	250	[250]A	250
6	A	A-F	300F	330A	310F	A	A	A	300	330	360	360	[360]A	350	350	[320]A	280	280	280	300A	270	230	A	A
7	280	300F	280F	280	230F	280	380	A	A	A	A	A	A	460	330	370	[360]A	330	340	[310]A	280	260	240	280
8	310	280	310	[300]A	300	320	280	240	350	370	[400]A	420	400	400	A	A	330A	310	290	260	230A	280	310F	300A
9	[310]A	320A	280	240F	280F	280F	290	310A	350	270	C	C	C	C	C	C	310A	290	[270]A	250F	220A	250	310	A-F
10	A-F	A-F	C	C	C	L	L	L	A	310	A	A	360	440A	A	A	300	290	250	230	240	300A	330	[320]A
11	300	[300]A	300	260	270	270	[280]A	290	300	320	370A	A	T	T	350	340	300	300	300A	260	A	A	250	310A
12	350A	300A	300	290	290	250	300	260	270	270	A	A	A	390	330	280	300	[300]A	300A	250F	230F	310F	300	[290]A
13	290F	280	300	250	240A	280	340	320	A	A	A	430A	330	370	300	300	300	300	260	250	250	270	320A	A-F
14	A-F	A-F	300A	250	230A	240	220	340	290A	320	310	A	A	A	A	A	340A	350	290	270A	250A	260	280	250
15	270A	300F	[280]T	270	280	270	280	[300]A	310	280A	300	510	420	380	350	300	300	280A	270A	260	250	220A	270F	[270]A
16	270A	270F	270	260F	250	300	250	270	250	[300]A	350	[400]A	450	380	330	300	300	280A	270A	260	250	220A	270F	[270]A
17	300F	300	290	250	240F	280	280	240	240	350	350	370	340	[320]A	300	[280]A	270	280	240A	(240)F	290	330F	320A	[300]A
18	290A	240	300	350	310	280	320	320	270	320	320	[350]A	420	340	300	280	270	260	270	[260]A	250A	280	340A	330A
19	330A	300	260	200H	300	290	250	260	260	[400]A	550	330	300	310	350	320	350	300	260	C	C	260	270F	300F
20	A	A	310F	300F	280	240A	310	310	300	310	320	330	[320]A	320	350A	[320]A	300	[310]A	320A	280F	240	220	300	290
21	300	270	280	260F	230	250A	340	[320]A	310	A	A	490	430	380	[340]A	300	300	290	260	270A	240F	240F	300	[320]A
22	330F	280	340A	300A	260	250	240	280	290	300	330	350	350	320	310	290	270	280	260	240	250	260	290	270
23	310	250F	300A	260	240	260	240	250	290	280	320	300	370	370	320	310	310	300	250F	250A	220A	280	310A	280
24	290F	[280]F	260	230	370A	280	250	250	250	280	290	300H	360	330A	360	300A	270	280A	260	270	250	230A	250A	270
25	300	300	300	250	300	290	280	260	260	280	[320]A	370	300	370	320	300	280	280	250F	250A	300A	A-F	270A	270A
26	[270]A	270	310A	270F	280	270	260	290	260	260	310A	320	[320]A	320	340	350A	310A	290	250A	[250]A	250A	[260]C	260F	[260]A
27	270A	C	C	310A	280	250	260	270	280	250	280	310	360	320	320	300	300	280	[300]A	330	250	220A	270	310
28	280F	260	290F	[300]A	300	300	250	270	270	[390]A	310	370	310	290	A	A	300A	A	A	A	260A	250F	280F	330F
29	270F	[280]F	280F	250	250	260	250	250	280	260	310	350	340	320	340	310	290	270	260	250	[240]A	230	250	260
30	260	310	310	360	360	300	250	260	250	270	380	340	310	330	320	320	290	270	[280]A	300A	[300]A	290	300	300
31	260	260	C	C	C	C	C	C	260	300	270	310	350	350	360	310	260	260	250	250	C	C	C	280
Mean Value	300	290	300	280	270	280	290	290	290	310	340	370	370	350	330	320	310	270	250	270	240	260	290	300
Median Value	300	300	300	270	270	280	280	280	280	300	320	350	360	350	330	310	300	290	270	260	250	260	260	300
Count	26	25	28	29	29	28	28	27	26	26	24	23	25	27	24	25	30	29	30	29	28	28	28	28

Group 1.0 Mc in 1.22 Mc in 2 min Manual Automatic

K 3

The Radio Research Laboratories
Koganei-machi, Kitakama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Aug 1952

f_oF1

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						2.3	3.3	(3.7) ^A	4.1	A	A	4.3 ^H	4.5	4.5	A	A	A	A	A					
2						Q	A	A	4.2	4.4	4.6	4.3 ^H	A	A	4.3	4.2	4.1	4.0	L					
3						A	3.4	3.7	L	A	4.6	(4.6) ^A	4.6	4.7	4.5	4.4	(4.1) ^A	3.8	AF					
4						L	3.3	3.7	4.0	4.3	4.2	4.3	4.4	4.3	4.4	A	A	3.8	3.3					
5						Q	A	4.0	4.2	4.4 ^H	4.5	4.6	4.5	4.5 ^H	4.4	4.3	A	A	A					
6						AF	A	4.2	4.2	4.7 ^J	4.5	4.6	4.5	4.5	4.5	(4.4) ^A	4.2	3.8	L					
7						A	3.9	A	A	A	A	A	A	A	4.4	4.2	(4.0) ^A	3.8	A					
8						A	3.5	3.8 ^L	4.4	4.5	A	A	(4.7) ^A	A	A	A	A	3.8	L					
9						A	A	A	4.2	4.4	C	C	C	C	C	C	A	3.9	A					
10						C	L	L	A	A	A	A	4.5	4.7 ^A	A	A	A	3.7	L					
11						Q	A	4.0	A	A	A	A	T	T	4.5	4.5	4.0	A	A					
12						L	3.3	3.9	4.2	A	A	A	A	4.6	(4.4) ^A	4.3	4.2	A	AF					
13						Q	L	A	A	A	A	A	4.6	4.6	4.5	A	A	3.7	A					
14						Q	Q	4.3	(4.4) ^A	4.6	4.4 ^F	A	A	A	A	A	4.2	3.9	AF					
15						Q	3.5	A	A	A	4.5	4.8	4.5	4.5	4.5	4.4	4.1	A	A					
16						Q	L	4.0	4.2	(4.4) ^A	4.6 ^H	A	A	4.4	4.5	4.3 ^H	4.2	3.8	L					
17						Q	L	3.9	(4.1) ^L	4.5	(4.6) ^A	4.7	A	4.3	A	A	A	3.7 ^L	Q					
18						Q	3.3	4.0	4.2	4.5	4.5	(4.6) ^A	4.6	4.5	4.4	4.3	4.0	L	A					
19						Q	Q	3.8	4.0 ^L	(4.4) ^A	4.9	4.7	4.7	4.6	4.7	4.4	4.3	3.8	L					
20						A	L	L	4.2	4.3	4.4	4.4	(4.4) ^A	4.5	A	A	A	A	A					
21						Q	L	A	A	A	A	4.6 ^H	4.2	A	A	4.1	(4.0) ^A	3.8 ^L	L					
22						Q	Q	L	4.2	4.4	A	A	4.7	4.5	4.5	4.3	4.0	3.7	Q					
23						Q	Q	L	4.2	4.5	4.6 ^A	4.7	4.8	4.6	4.6	4.4	4.0	L	AF					
24						Q	Q	4.1	4.2	4.5	4.5	4.5	A	A	A	A	L	A	Q					
25						Q	L	4.0	4.2	4.5	(4.8) ^A	5.0 ^H	4.6	4.7	4.3	4.3	4.2	L	Q					
26						Q	L	L	4.3	(4.5) ^A	4.7	A	A	4.5 ^H	4.5	A	A	A	A					
27						Q	L	L	4.4	(4.6) ^A	4.7	4.5	L	A	A	A	4.2	L	A					
28						Q	L	A	A	A	A	5.0	4.8	A	A	A	A	A	A					
29						Q	Q	L	A	A	4.7	4.7	4.9	4.7	4.9	(4.6) ^A	4.2	3.7	Q					
30						Q	Q	4.0	4.3	L	L	4.9	4.6	4.9	4.9	4.5	A	A	Q					
31						C	C	C	4.3 ^L	4.6 ^L	4.8	4.9	5.4	4.8	4.7	4.6 ^L	L	A	Q					
Mean Value	2.3	3.4	3.9	4.2	4.5	4.6	4.7	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.4	4.1	3.8	3.3						
Median Value	2.3	3.4	4.0	4.2	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.4	4.1	3.8	3.3						
Count	1	8	15	22	19	19	19	19	19	19	19	19	20	21	21	18	17	16	1					

f_oF1

Sweep r.0 Mc to 7.2 Mc in z min

Manual Automatic

K 4

Kokubunji Tokyo
Lat. 35° 42.4' N
Long. 139° 29.3' E

IONOSPHERIC DATA

135° E Mean Time

RF1

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						290	A	[230]A	210	A	A	A	230	A	A	A	A	A	A					
2						Q	A	A	250	200	190H	190	A	A	230	[240]A	240	250	250					
3						A	[230]A	[230]A	220	[210]A	200	[240]A	270A	[260]A	240	220	[240]A	270A	A					
4						310	260	240	220	240	210	220	240	[240]A	230	A	A	A	260					
5						Q	A	250	210	220H	210	200	200	260H	220	240	A	A	A					
6						AF	A	A	A	A	210	210	210	A	A	A	A	260	250A	A				
7						A	A	A	A	A	A	A	A	A	A	A	A	A	290	A				
8						A	A	A	230	210	210	A	A	220A	A	A	A	A	270A	250				
9						A	A	A	230	200	C	C	C	C	C	C	A	A	250A	A				
10						C	250	220	A	A	A	A	210	240	A	A	A	A	270	260				
11						Q	A	250	A	A	A	A	T	T	A	230	300A	A	A					
12						260	220	250	230A	A	A	A	A	220	[220]A	210	A	A	A	AF				
13						Q	260A	A	A	A	A	A	A	220A	A	A	A	A	240	A				
14						Q	Q	A	A	200	200	A	A	A	A	A	A	A	A	AF				
15						Q	250	A	A	A	210	200	240	260	240	230	230	A	A					
16						Q	250	240	250	[220]A	200H	A	A	200	A	AH	260	200A	200					
17						Q	250	240	[220]A	190	[190]A	190	A	A	250	A	A	250A	Q					
18						Q	250	250	250	220	260A	A	A	250A	220	230	230	230	A					
19						Q	Q	230	240A	[240]A	230A	270	230	250	250	A	A	260A	260A					
20						A	230A	220A	220	A	A	260A	A	A	A	A	A	A	A					
21						Q	A	A	A	A	190H	250A	A	A	230	[240]A	250	250						
22						Q	Q	200	230F	260	A	A	200	200	240	220	230	220	Q					
23						Q	Q	240	210	250A	230	200	220	220	230	280A	230	A	A					
24						Q	Q	240	230	[230]A	230	200	A	A	A	A	A	250A	A					
25						Q	240	220	220	200	[200]A	210H	200A	220	210	250	220	230A	Q					
26						Q	250	240	A	A	250	A	A	200H	A	A	A	A	A					
27						Q	250A	230	230	[220]A	200	200	190	A	A	A	240	260	A					
28						Q	250	A	A	A	A	240	220	A	A	A	A	A	A					
29						Q	Q	230	A	A	200	210	220	210	240	[240]A	250	240	Q					
30						Q	Q	240	240	[220]A	210	220A	220	240	A	A	A	A	A					
31						C	C	C	230	220	200	200	230	210	200	240	230	A	Q					
Mean Value						290	250	230	230	220	210	210	220	230	230	240	240	250	250					
Median Value						290	250	240	230	220	210	200	220	220	230	230	240	250	250					
Count						3	15	21	20	18	19	18	18	17	15	13	15	17	17					

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

foE

Aug. 1952

135° E Mean Time

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

foE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 28.8' E

Kokubunji Tokyo

IONOSPHERIC DATA

138° E Mean Time

Aug. 1952

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

Speed 1.0 Mc to 17.2 Mc in 2 min Manual Automatic

K 7

The Radio Research Laboratories
Koganei-machi, Kikatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.8' E

Aug. 1952

fEs

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	6.7	3.5F	2.9F	3.0F	3.7	2.9F	3.5	10.0	6.5	6.3F	6.5	6.0	4.8	5.0	7.3	10.0	10.0	6.3	5.6F	3.9F	4.3F	3.1F	2.5	3.7	
2	4.0	3.9	4.5	3.0	3.7	3.3	9.0	9.0	7.5	G	4.4	3.8	5.7	8.0	8.0	7.3	4.3	5.5F	3.8F	3.7F	2.9	2.9	2.9F	2.9F	
3	2.9	2.5F	3.8	2.1Y	3.5Y	2.5Y	2.6	6.8	4.0	6.3	4.7	6.7	6.1	5.5	5.7	5.6F	5.5F	6.0F	8.5F	4.5F	4.5F	5.1	4.0	4.0	
4	3.5	2.8	2.7	3.0	4.0	2.9	3.1	4.3	4.0F	4.2	3.9	4.0	3.8	3.9	G	10.0	9.0	6.2	3.9	4.0	6.0F	3.7	4.5	3.0	
5	2.9F	5.3	5.5F	3.2F	2.6	3.3	5.6	4.1	4.6	G	5.0	4.0	4.6	4.3	4.0	4.1	5.3	6.0	4.6	4.5	6.0	2.6	6.5	3.2	
6	4.5	4.7F	4.4F	2.9F	2.6FY	4.1	6.0	8.5	4.8	5.6	5.6	5.0	4.7	5.5	4.0	8.5	4.0	4.4	5.5	5.5Y	4.7	3.0	5.0	4.9	
7	3.7	5.5F	3.8	2.9	3.2FY	2.9F	6.0Y	9.0	7.2	10.0	9.5	8.0	10.0	7.4	G	5.0	7.0	4.7F	6.7	9.0	8.9F	4.5F	4.1	4.7	
8	5.3	4.5F	5.0	5.2F	3.1	3.9	3.9	6.0	3.9	4.6	5.3	5.5	7.2F	6.0	6.1	8.5	5.6	7.0	9.0F	4.0F	4.6F	5.8F	4.7F	4.8	
9	3.7F	4.1F	4.0F	4.5F	2.9	3.2	3.9	5.6	3.8	4.5	C	C	C	C	C	C	6.9	8.0	7.0	9.0F	4.2F	5.5F	3.7F	6.8F	
10	7.3F	6.4F	C	C	C	5.3	3.8	3.8	7.3	6.6	10.2	9.0	7.5	5.6	7.5	7.6	4.5	4.3	3.8	3.7	3.1	3.1	5.7	3.1	6.5
11	3.8	7.0F	6.5	3.0	2.9	3.0	4.5	4.5	6.0	5.6	6.5	8.5	T	T	6.5	4.2	4.5	4.3	5.1	7.0F	7.1F	6.7F	6.5F	4.7F	
12	4.0	4.0	3.4	2.6	3.0	3.0	4.0	4.0	4.8	6.5	8.5	8.6	8.7	5.5	6.5	4.2	6.5	6.4	6.6	5.4	6.0F	4.4F	2.9F	3.9	
13	3.0F	2.5Y	2.3FY	2.5YF	2.9	2.8Y	3.9	5.1	9.5	9.2	9.5	8.7	5.0	4.8	5.0	5.9	5.0	3.5	3.5	3.0	3.2	3.2	5.5	7.0	
14	4.5	5.5F	3.5F	3.2	3.0	3.0	2.9	4.3	6.5	8.5F	5.0	8.8	9.0	8.5	9.2	5.8	4.7	5.0	5.2	5.0	6.6	5.7	5.5Y	5.6	
15	7.0	6.5F	T	2.3Y	4.0	3.1	3.2	9.0	5.6	8.0	4.5	5.9	4.9	4.3	3.7	G	4.3	5.3	5.0	3.0	3.9F	4.5F	6.5	5.7F	
16	8.0F	4.0	4.0F	2.5	2.3FY	4.0Y	3.0	4.8F	7.0F	7.1	4.6	8.6	8.5	6.8	5.5	4.6	5.7	4.0	2.9	2.9F	3.6F	3.0F	2.5F	2.5	
17	2.5	3.2	3.1	3.5	3.7F	3.6	3.8F	3.7	5.5	5.5	5.5	G	6.5	8.2	5.5	8.0	6.5F	4.8F	4.0F	3.9F	2.3	4.3F	4.5F	7.2F	
18	5.5F	3.7F	3.7Y	6.5F	3.8	2.6	3.2	3.9	G	8.5F	6.5	7.6	7.0Y	6.5	4.1	4.4	3.9F	3.5F	4.1F	6.7	4.5F	2.9	4.3	4.7	
19	4.5	3.2	2.0Y	2.2Y	2.7F	2.9F	2.7	3.7Y	4.7	10.0	9.0	9.5	G	G	4.3	4.7	4.7	3.9	3.0F	C	C	2.9Y	6.5	6.5	
20	5.8	10.0	5.5F	6.9F	6.5	3.2	3.0	4.3	4.5	5.7	4.8	4.7	10.0	6.5	6.0	7.9	5.5F	6.8	6.5F	5.7F	4.8Y	3.0F	4.2	2.9Y	
21	2.8	2.5Y	2.5Y	2.5	2.3	2.6	3.7	6.0	5.2	7.2	9.0	4.5	4.2	5.4	6.8	4.4	4.7	4.0	3.1	5.5	4.5	6.5F	6.5F	6.5F	
22	3.6F	3.9	3.9F	3.2	3.0	2.5Y	2.9F	4.0	5.0	7.3	9.2Y	8.5	5.0F	5.7	7.0F	4.3	4.2	G	G	2.5	3.0Y	2.6	2.6	3.7FY	
23	2.9Y	4.0F	3.5	3.2	2.3	2.5Y	2.6	3.8	4.5	5.0	4.6	4.2	3.7	4.0	3.9	5.0	4.2	4.6	5.6	4.5Y	4.5	3.1	3.8	3.0	
24	3.0F	7.0	3.9Y	6.2	4.0	4.0	3.0	4.0	4.2	5.0	4.8	5.5	6.2	6.9	6.9	6.5	4.3	4.3	3.1	3.9	4.0F	7.0F	3.5	4.7	
25	4.5	4.4	2.4	2.6F	3.5	3.0	3.0	4.0	4.2	4.7	6.7	4.6	5.5	4.3	G	4.0	4.0	4.0	5.5F	6.0F	5.7F	5.5F	6.5F	4.5	
26	4.1	3.9	6.0	2.6	2.7	2.5	3.0	4.0	5.7	5.7	6.9	8.7	8.6	6.2	6.5	8.0	6.9F	6.8F	5.6F	9.0F	6.5F	C	5.5F	7.1F	
27	6.5F	C	C	4.0F	2.9F	2.5Y	3.7F	4.0	4.2	6.0	6.9	9.0F	6.5	8.0	6.5	5.5	3.7	3.0	6.5	8.0	5.5	4.2	4.7	4.5	
28	5.6	6.5	6.0F	4.2F	4.1F	3.0	3.0F	5.0	4.9	7.1	6.5	5.7	5.1	7.3	8.7	9.5	9.0	9.0Y	9.5Y	7.2	4.7	3.5Y	3.5	6.5Y	
29	7.0	4.5	5.4	3.0	2.7	2.9	4.0	4.2	6.7	5.2	5.0	5.5	5.0	4.5F	5.6F	5.0	G	3.5	2.9	6.5	9.0	7.0F	3.5	2.5	
30	E	2.5	2.5Y	2.5	3.2	2.8	3.0	3.8	4.4	5.0	5.0	5.3	5.1	5.6	5.0	5.0	5.9	6.2	8.5	6.0	6.3F	2.9F	3.0F	2.4F	
31	E	E	C	C	C	C	C	C	3.8F	4.0	4.0	4.0	6	4.0	4.3	4.0	3.7	4.6	3.8	2.9	C	C	C	3.9	
Mean Value	4.6	4.6	4.0	3.4	3.3	3.1	3.8	5.2	5.4	6.4	6.3	6.5	6.3	5.9	6.1	6.1	5.5	5.2	5.3	5.2	5.0	4.3	4.4	4.7	
Median Value	4.0	4.0	3.8	3.0	3.0	3.0	3.2	4.3	4.8	5.7	5.6	5.8	5.5	5.6	5.6	5.2	5.0	4.7	5.1	4.8	4.6	4.2	4.2	4.7	
Count	31	30	27	29	29	29	30	30	31	31	30	30	29	29	30	30	31	31	31	30	29	29	30	31	

Swamp 1.0 Mc to 17.2 Mc in 2 min

Manual Automatic

fEs

K 8

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

f minF

AUG. 1952

135° E Mean Time

Table with columns: Day, 00-23, Mean Value, Median Value, Count. Rows contain ionospheric data for August 1952, including frequency and virtual height measurements.

Sweep 1.0 Mc to 1.7.2 Mc in 2 min

Manual Automatic

f minF

Count

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 35° 42.4' N
Long. 139° 29.3' E
Kokubunji Tokyo

IONOSPHERIC DATA

fminE

135° E Mean Time

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.0	E	E	E	E	E	1.4	1.6	1.6	1.6	1.8	1.8	1.8	1.9	1.8	1.7	1.6	1.6	1.2	1.6	1.4	1.7	1.5	
2	1.2	1.0	1.0	E	E	E	1.6	1.6	1.4	1.6	1.6	1.8	1.8	1.8	1.8	1.7	1.8	1.5	1.5	1.6	1.6	1.5	1.5	
3	1.5	1.6	E	E	E	E	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.8	1.5	1.6	1.6	1.2	1.1	1.2	1.6	1.6	1.5	
4	1.2	E	E	E	E	E	1.2	1.2	1.8	1.7	1.7	1.8	1.8	1.8	1.7	1.6	1.6	1.6	1.2	1.0	1.6	1.6	1.2	
5	E	E	E	E	E	E	1.6	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.8	1.6	1.2	1.2	1.6	1.5	1.5	1.8	1.5	
6	1.2	E	E	E	E	E	1.6	1.7	1.6	1.6	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.6	1.5	1.6	1.5	
7	1.2	E	E	E	E	E	1.6	1.7	1.6	1.7	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.2	1.2	1.5	1.6	1.6	1.6	
8	1.6	E	E	E	E	E	1.6	1.7	1.7	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.3	1.7	1.6	1.5	1.4	
9	1.2	E	E	E	E	E	1.6	1.7	1.7	1.7	C	C	C	C	C	1.2	1.7	1.2	1.4	1.4	1.6	1.0	1.5	
10	E	E	C	C	C	C	1.7	1.7	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.7	1.7	1.2	1.6	1.8	1.7	1.6	
11	1.8	E	E	E	E	E	1.5	1.7	1.8	1.8	1.8	1.8	T	T	T	1.7	3.3	1.7	1.2	1.6	1.6	1.6	1.6	
12	E	E	E	E	E	E	1.5	1.7	1.8	1.8	1.8	1.8	1.6	1.8	1.7	1.7	1.3	1.2	1.0	1.5	1.2	1.5	1.6	
13	1.0	1.9	E	E	E	E	1.2	1.2	1.6	1.6	1.8	1.7	1.8	1.8	1.8	1.7	1.6	1.6	1.2	1.2	1.5	1.7	1.6	
14	E	E	E	E	E	E	1.2	1.7	1.7	1.7	1.6	1.7	1.7	1.8	1.7	1.6	1.6	1.2	1.5	1.3	1.2	1.6	1.2	
15	1.4	E	E	E	E	E	1.2	1.2	1.7	1.7	1.7	1.9	1.8	1.8	1.7	1.7	1.6	1.2	1.4	1.2	1.5	1.5	1.5	
16	1.2	E	E	E	E	E	1.6	1.4	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.6	1.5	1.5	1.7	1.6	1.6	
17	1.2	E	E	E	E	E	1.5	1.6	1.6	1.7	1.8	1.7	1.7	1.7	1.8	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.6	
18	1.5	E	E	E	E	E	1.6	1.6	1.7	1.8	1.7	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.7	1.6	1.8	1.2	
19	1.2	E	E	E	E	E	1.2	1.7	1.8	1.8	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.7	C	C	1.6	1.6	1.6	
20	1.2	E	E	E	E	E	1.6	1.6	1.5	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.2	1.6	1.8	1.6	1.2	
21	1.2	E	E	E	E	E	1.7	1.6	1.7	1.7	1.7	1.8	1.7	1.8	1.8	1.9	1.7	1.6	1.8	1.5	1.6	1.6	1.7	
22	1.1	E	E	E	E	E	1.7	1.6	1.6	1.6	1.8	1.7	1.8	1.7	1.6	1.6	1.6	1.3	1.4	1.9	1.2	1.3	1.6	
23	1.0	E	E	E	E	E	1.3	1.6	1.3	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.3	1.2	1.1	1.2	1.6	1.2	1.4	
24	1	E	E	E	E	E	1.2	1.3	1.2	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.6	1.8	1.5	1.6	
25	E	E	E	E	E	E	1.0	1.2	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.6	1.6	1.6	1.6	1.5	1.6	1.6	
26	1.2	E	E	E	E	E	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.2	1.6	1.6	1.6	[1.6]C	1.7	
27	1.5	C	C	E	E	E	1.2	1.3	1.8	1.8	1.9	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.5	1.2	1.6	1.2	
28	E	E	E	E	E	E	1.7	1.7	1.7	1.6	1.7	1.8	1.9	1.7	1.7	1.6	1.6	1.2	1.0	1.6	1.6	1.1	1.6	
29	1.2	E	E	E	E	E	1.3	1.3	1.7	1.7	1.8	1.7	1.8	1.8	1.6	1.6	1.6	1.7	1.5	1.8	1.6	1.6	1.7	
30	E	E	E	E	E	E	1.6	1.7	1.7	1.5	1.8	1.7	1.5	1.9	1.8	1.8	1.7	1.6	1.2	1.6	1.6	1.5	1.6	
31	E	E	E	C	C	C	C	C	1.7	1.7	1.7	1.8	1.9	1.8	1.8	1.8	1.7	1.6	1.2	1.2	C	C	C	
Mean Value	1.3	1.5	1.0	1.9	E	1.0	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.5	1.4	1.5	1.5	1.6	1.5	
Median Value	1.2	E	E	E	E	E	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.6	1.5	1.6	1.6	1.6	1.5	
Count	31	30	28	29	29	29	30	30	31	31	30	30	29	29	29	30	31	31	31	30	29	30	30	31

K 11

Manual Automatic

Swamp 1.0 Mc to 1.72 Mc in 2 min

Yamagawa

Lat. 31° 12.5' N
Long. 130° 37.7' E

IONOSPHERIC DATA

195° E Mean Time

f_oF₂

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	S	S	C	C	C	C	C	C	(5.8) ^P	5.1	T	T	T	6.0	[6.2] ^A	6.3	7.3	7.9	7.2	6.8	(5.3) ^P	4.5	4.4	3.9	
2	3.8	3.9	3.8	3.1	2.9	2.8	4.0	5.4	(6.5) ^P	A	A	A	T	6.0	(6.8) ^P	6.0	6.0	5.5	5.8 ^P	6.7	S	S	(5.3) ^P	5.5 ^F	
3	5.0	4.8	4.8	C	C	C	C	C	C	C	C	C	C	7.0	7.2	6.2	6.4 ^P	6.7	8.5	8.6	C	C	3.5	3.5	
4	3.6	3.3	3.3	3.5	3.2	3.3	[3.8] ^A	4.4	T	T	T	4.8	T	T	T	5.0	5.7 ^J	5.8	5.4	A	A	4.7	4.2 ^H	4.1	
5	4.3	3.9	4.4 ^J	4.5	4.0	2.5	3.8	(5.8) ^P	6.9	[6.2] ^T	5.4 ^J	[5.6] ^T	[5.7] ^P	(6.3) ^P	8.1	7.5	6.5	6.0	6.4 ^P	[7.2] ^C	7.9	[6.4] ^H	4.8 ^H	[4.8] ^F	
6	(4.7) ^P	4.3 ^P	4.0	3.5	3.5 ^F	3.3 ^F	4.9	6.1	C	C	C	C	T	6.0	[6.9] ^T	7.8	8.5	7.5	6.5	C	C	C	3.8	4.5 ^H	
7	3.7	[3.5] ^A	3.3 ^V	3.4	3.4 ^H	3.3	4.1 ^H	7.5	C	C	5.6 ^J	6.0	5.7	7.2	8.0	7.1	6.3	6.3	6.8	[7.2] ^C	7.7	6.5	5.1 ^P	(5.3) ^P	
8	5.1 ^P	[4.4] ^A	3.8 ^H	3.7	3.7	4.7	6.0	5.7	T	T	A	A	C	6.0	6.2	7.5	7.3	A	A	A	6.5	6.2	5.7 ^J	5.7	
9	5.0 ^H	4.9	[4.6] ^E	4.4	4.0 ^H	3.4	4.2	5.4	5.9	A	A	A	A	A	6.2	[6.4] ^A	6.6	6.3	6.0	6.2	6.1	5.7 ^P	5.1	4.8	
10	5.0 ^P	4.8 ^P	4.5	4.4 ^P	3.6	2.8 ^V	3.8	5.8	6.0	5.6 ^J	5.8 ^J	[5.6] ^A	5.4 ^J	5.9	6.6	7.7	8.5	[7.5] ^A	6.5	[6.5] ^A	6.5	C	A	C	
11	8.5	M	M	M	M	M	M	M	M	6.4	A	C	8.6	C	C	7.9	[7.4] ^A	7.0	7.1	7.1	7.0	A	A	5	
12	S	S	S	S	S	S	S	6.5	5.7	5.9	A	A	7.3	[8.0] ^M	(8.7) ^F	7.5	6.5	6.8	6.9	6.6	6.0 ^J	5.4 ^P	5.4		
13	4.9 ^P	FS	FS	4.8	4.4	3.0 ^F	3.5	5.7	7.1	6.8	[6.4] ^S	6.0	6.0	6.4	7.4	7.6	6.9	7.0	8.1	7.6	5.1	S	S		
14	4.9	S	S	5.0 ^P	4.4	3.5	4.2	5.5 ^P	6.8	7.3	T	T	6.7	[6.4] ^A	6.1	[7.0] ^A	7.8 ^P	8.3	8.5	7.3	6.6 ^J	6.0	5.1 ^P	4.5	
15	(4.5) ^P	4.4	(4.2) ^P	3.6	[3.6] ^C	3.6 ^J	4.4	(5.7) ^P	[6.2] ^C	6.7	A	T	6.2 ^P	6.0 ^J	[7.2] ^C	8.3 ^J	7.9 ^J	6.9	6.3	6.6	(7.3) ^S	6.4	5.5 ^S	[5.0] ^S	
16	4.4	4.3 ^F	3.4 ^F	3.4 ^F	3.4 ^F	3.4 ^F	4.5	[5.0] ^A	5.6	[5.8] ^P	6.0	[6.0] ^S	6.0	[7.0] ^T	9.2	[8.6] ^T	8.0	(7.6) ^P	[7.2] ^S	6.8 ^P	4.8	5.0	[4.8] ^S	4.5	
17	4.0	3.8	3.7	3.8	3.0	2.8	4.9	5.5	5.3 ^J	S	T	7.4	8.3	8.9	9.4	9.9	(9.4) ^P	7.7	(8.0) ^P	7.0	C	C	S	FH	
18	T	A	A	A	A	4.6	4.7	5.3	(5.9) ^P	[5.6] ^T	5.2	6.4	6.8	8.4 ^P	[8.4] ^C	8.4	T	T	6.7 ^P	S	S	(4.8) ^P	S	S	
19	S	FS	5.0 ^P	4.8	2.8	2.9	S	T	T	T	T	8.7	9.9	T	T	8.1	9.2	10.6	C	9.5 ^P	5.2	4.0	4.4	[4.2] ^S	
20	4.0	3.6 ^F	[3.6] ^A	3.7	3.5	3.7	3.9 ^P	[5.3] ^T	6.7	6.6	6.2	[6.8] ^C	7.3	4.0	4.5 ^P	10.1	(10.3) ^P	9.0	9.8	10.7	9.7	5.5 ^P	5.3 ^P	5.5 ^P	
21	4.7	4.3	4.6	4.3	4.4	3.4 ^H	3.9	5.4 ^T	7.0	(5.6) ^P	A	A	A	C	T	T	(8.3) ^P	8.5	8.6	7.0 ^Z	S	S	4.3	3.9	
22	3.8	[4.1] ^S	4.4 ^F	[3.8] ^F	3.3 ^F	3.1 ^F	3.9	5.4	(6.0) ^P	6.1	5.9	(6.4) ^P	A	C	7.7 ^J	T	T	T	T	S	S	(8.6) ^P	S	S	
23	6.2 ^J	5.1 ^P	[5.0] ^S	4.9	3.7	3.6	4.7	6.3 ^J	6.7	6.0	6.5 ^P	[6.2] ^T	6.0	T	T	7.0 ^J	8.2	9.9 ^J	10.3	C	S	S	5.8	[5.5] ^S	
24	5.2	5.0	4.5	3.8	3.7	3.6	C	C	C	C	A	6.3	7.0	8.1	6.2	7.4	7.3	6.9	7.4 ^S	8.2	[6.4] ^S	4.5 ^J	4.3 ^H	4.1	
25	4.3	4.1	3.9	3.9	3.7	3.7	4.5	C	C	C	(5.5) ^P	6.1	[6.2] ^T	6.3 ^J	7.3 ^P	8.6 ^J	8.6	8.7 ^J	9.0	(8.3) ^P	6.9	6.1	[5.5] ^S	4.9	
26	4.7	5.1	S	S	4.2	4.0	6.3	8.7	8.2	6.2	[6.2] ^A	6.2	6.2	6.0	6.1	T	T	9.9	S	S	5.4 ^H	5.1	S	A	
27	A	4.8 ^T	[4.6] ^A	4.4	3.9	3.2 ^F	4.4	[6.3] ^T	8.2 ^J	T	T	6.3 ^P	7.7	8.6	C	C	C	C	AS	AS	5.3 ^S	4.6	4.0		
28	4.0	3.9	4.0	3.9	4.0	3.6 ^H	4.3	6.0	6.3	[6.0] ^T	5.8 ^H	6.5 ^J	8.6	8.7	8.9	9.6	9.7	8.7 ^J	8.8	[8.1] ^S	7.4 ^S	4.9	[4.6] ^S	4.4	
29	S	S	S	S	S	S	3.7	[4.8] ^P	5.8 ^S	6.0	[6.8] ^P	7.6	8.3	7.8	8.4	9.3	9.1	8.5	C	C	S	5.2	4.3	[4.6] ^A	
30	4.9	4.1 ^T	3.7	3.7	3.6	4.0	4.6	T	T	5.5	T	T	8.2 ^P	9.2	10.1 ^J	(11.0) ^P	10.7	S	S	S	S	S	4.2	S	
31	S	5.5	[5.3] ^S	5.1	[5.0] ^S	4.8	4.9 ^J	6.5 ^J	5.4	T	T	T	6.7	6.9 ^J	[8.2] ^S	9.4 ^J	9.6 ^P	S	S	S	S	S	S	4.4	
Mean Value	4.7	4.3	4.1	4.1	3.7	3.4	4.3	5.7	6.4	6.1	5.9	6.5	6.9	7.1	7.7	7.9	8.0	7.8	7.4	7.5	6.7	5.6	4.8	4.7	
Median Value	4.7	4.3	4.2	3.8	3.7	3.4	4.2	5.7	6.1	6.0	5.8	6.2	6.5	7.0	7.7	7.8	7.9	7.6	7.1	7.2	6.6	5.3	4.8	4.5	
Count	24	23	23	24	25	26	25	24	22	18	14	16	22	22	23	25	27	27	26	23	20	18	21	23	23

Sweep 1.0 Mc to 22.0 Mc in 3 min

Manual

Automatic

Y 1

The Radio Research Laboratories
Koganei-machi, Kitakama-gun, Tokyo, Japan

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

IONOSPHERIC DATA

135° E Mean Time

RF2

Aug. 1952

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	300	C	C	C	C	C	C	C	300	350 ^A	A	T	A	340	[350 ^A]	360	300	280	250	200	260 ^A	250	250	250	
2	340 ^A	290	250	250	270	220 ^A	250 ^A	300	280	A	A	A	A	340	300	330	330	330	290	250	250	250	250	250 ^F	
3	290	290	250	C	C	C	C	C	C	C	C	C	C	340	300	350	370	350	290	250 ^A	C	C	350 ^A	320	
4	280	A	370 ^A	290	300	270 ^A	[280 ^A]	300	T	T	450	T	T	T	T	380 ^A	340	310	330	A	A	210	250 ^H	320	
5	220	300	290	300 ^F	240	210 ^A	300 ^A	300	260	360	340	[400 ^T]	460	400	300	290	330	360	310	[270 ^C]	230	[260 ^C]	300 ^A	300 ^F	
6	250	270	290	300	300 ^F	270	220	240	C	C	C	C	C	580	[380 ^T]	320	300	270	270	C	C	C	210	310 ^H	
7	300	300 ^A	310	320 ^A	250 ^H	260	240 ^F	250	C	C	B	320	500	430	380 ^T	320	340	340	300	[260 ^C]	270	270	300	300	
8	280	[290 ^F]	300 ^F	310 ^A	310 ^A	A	240	250	280	T	C	A	C	A	C	300	300	A	A	A	270 ^A	300 ^A	240 ^A	250	
9	250 ^H	290	300 ^F	270 ^F	250 ^H	250	250	260	A	A	A	A	A	350 ^A	[320 ^A]	300 ^A	330 ^A	330 ^A	250	280 ^A	300 ^A	300 ^A	250	350	
10	300 ^F	290	290 ^F	250	240	290 ^F	240	270	290	290	A	A	A	330	[360 ^B]	390	320	290 ^A	280	[290 ^A]	300 ^A	C	A	C	
11	300 ^A	M	M	M	M	M	M	M	M	M	A	C	300 ^F	C	C	300 ^A	[300 ^A]	300 ^A	280	330 ^A	210	[260 ^A]	300 ^A	370	
12	270	300 ^A	[290 ^F]	280	290	[260 ^A]	240	250	250	300	A	A	A	A	A	300	270	290	260	200 ^A	250	230	290	260	
13	260 ^A	290 ^F	290	240	210	250 ^F	240	260	250	260	[300 ^S]	340	370	370	320	300	300	300	300	300 ^A	250	220	210 ^A	340	300
14	300	300	280	250	210	250	250	260	280	300	[320 ^T]	340	300	[340 ^A]	390	[350 ^A]	310	280	250	240	230 ^A	240	230 ^A	290 ^A	
15	300 ^A	310 ^A	280	250	[260 ^C]	230 ^F	230 ^F	250	[260 ^C]	270	A	A	350	360	310	290	290	250	270	250	200 ^A	240	240	A	
16	A	250 ^F	300 ^F	270	250	270	220 ^A	[260 ^A]	290	290	310	[380 ^S]	450	[380 ^A]	320	[310 ^T]	300	320	270	250	240	270	250	240	
17	300	300	280	250	230	270	250	230	250	270	[300 ^T]	340	320	320	300	300	260	270	250	240	C	C	300	310 ^A	
18	290	A	A	A	A	240 ^F	250	250	290	[300 ^A]	320 ^A	330	330	300	300	250	290	[270 ^A]	250	[240 ^A]	220 ^A	280	[270 ^A]	260	
19	300	320	280	200 ^A	420 ^A	300	250	220	[260 ^A]	290	[300 ^A]	320	260	300	[320 ^T]	340	320	290	250	200	200	250	310 ^A	[300 ^F]	
20	290	300 ^F	350 ^F	290	290	210 ^A	220 ^A	250	290	280	300	[320 ^C]	350	320	320	320	[310 ^B]	300 ^A	300 ^A	250	200 ^A	220	300	300	
21	290	300	270	280 ^A	240	240 ^F	300	250	230	260	A	A	A	C	310	300	290	260	250	220 ^A	A	A	320 ^A	300	
22	310 ^A	300 ^A	280 ^F	250 ^F	250 ^F	250	230	250	250	250	300	350	A	A	A	290	270	270	240	240	250	220	250	250	
23	250	250	260	240	250	270	250	240	250	290	260	[300 ^T]	340	[370 ^T]	400	330	330	290	230	230	[240 ^A]	250 ^A	300 ^A	340	
24	250	250	250	260	310	C	C	C	C	C	A	350	300	300	300	320	300	290	270	250	210 ^A	200 ^A	290 ^H	300	
25	300	280	280	290	280	300 ^A	270	C	C	C	250	290	[320 ^T]	340	350	300	290	300	260	200 ^A	200 ^A	230	300	270	
26	300 ^A	280	A	A	250	350	260 ^F	260	250	250	[270 ^A]	290	300	300	350 ^B	330	[300 ^T]	280	240	210 ^A	210 ^A	250	300 ^A	A	
27	A	260	[260 ^F]	250	300 ^A	220	230 ^A	[240 ^F]	250	T	T	340	330	330	300	300	C	C	C	A	A	200 ^A	250	250	
28	300 ^A	350 ^A	300 ^A	250	250	250 ^A	250	230	250	270	280 ^H	350	300	290	340	290	280	280	250	200 ^A	220	220	290	300	
29	300	[300 ^A]	290	200 ^A	250	300 ^A	250	250	250	250	[290 ^C]	330	[320 ^T]	[310 ^B]	300	290	280	C	C	200 ^A	200 ^A	200 ^A	280	[260 ^F]	
30	240	290	310	300	300	260	250	240	240	250 ^A	T	T	T	340	320	330	300	250	240	240	240	240	300 ^A	[300 ^A]	
31	290	290	260	300	300	220	220	220	240	[260 ^T]	290	[300 ^T]	310	330	[320 ^S]	300	290	260	240	220	210	200 ^A	[250 ^A]	300	
Mean Value	290	290	290	270	260	250	250	250	260	280	300	330	350	340	330	310	300	290	270	240	230	240	280	290	
Minimum Value	300	290	290	260	250	250	250	250	250	280	300	330	340	320	310	300	290	290	260	240	220	240	290	300	
Count	29	27	27	26	27	26	27	26	23	21	16	17	22	24	28	31	31	29	28	26	25	26	30	28	

Sweep J. J. 0. Me to 22.0 Mc in 2 min Manual Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Aug. 1952

f_oF₁

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	3.9	[4.2] ^A	4.5	4.4	[4.4] ^A	4.5	[4.5] ^A	4.5	4.2	4.0	3.5					
2							Q	L	A	A	A	A	A	A	A	A	4.3	3.9	L					
3							C	C	C	C	C	C	C	C	C	[4.4] ^A	4.3	4.0	3.6					
4							A	3.5	3.7	4.0	[4.2] ^B	4.3	[4.4] ^B	4.4	A	A	A	3.9	3.5					
5							A	3.7	4.0	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.3	4.3	3.7					
6							Q	L	C	C	C	C	4.7	4.5	4.5	4.4	4.4	4.0	3.5					
7							Q	3.9	C	C	B	4.7	[4.6] ^B	4.5	A	A	A	4.5	A					
8							L	3.5	4.0	4.5	C	C	4.5	A	C	4.4	A	A	A					
9							Q	3.5	A	A	A	C	A	A	A	A	A	A	Q					
10							Q	3.7	[4.0] ^A	4.4	A	A	A	4.5	B	B	A	A	A					
11							M	M	A	A	A	C	A	C	C	A	A	A	A					
12							Q	3.5	L	B	A	A	A	A	A	4.4	4.5	4.5 ^H	L					
13							Q	L	A	4.5	S	B	4.5	[4.5] ^A	4.5	4.6	4.4	4.1	A					
14							Q	L	4.2	[4.4] ^A	4.5	A	B	A	A	A	A	4.0 ^J	3.5					
15							Q	3.7	[4.0] ^C	4.4	A	A	4.4	4.5	[4.5] ^A	4.5	[4.2] ^B	4.0	L					
16							Q	A	A	4.4	L	S	A	A	A	4.4	4.3	3.6						
17							Q	L	3.8	[4.1] ^L	4.4 ^J	4.4	B	A	B	A	4.2	4.1	3.4					
18							Q	A	B	A	A	A	4.5 ^V	B	B	B	B	A	L					
19							Q	L	A	A	A	4.7	4.7	4.5	4.5	4.4	4.4	4.1	3.4					
20							Q	L	A	4.5	4.4	C	B	4.5	4.4	[4.4] ^A	4.4	A						
21							L	3.5	4.0	4.2	A	A	A	C	B	4.6	4.3 ^H	4.0	A					
22							Q	L	3.9	[4.2] ^A	4.4	A	A	A	A	A	A	4.0	3.2					
23							Q	Q	4.0	4.3	4.6	[4.6] ^B	4.6	4.9	4.4	4.5	4.4	4.0	3.5					
24							C	C	C	C	A	A	4.7	4.6	4.7	4.8	4.4	4.2	3.5					
25							L	C	C	C	4.4	4.5	4.7	4.6	4.6	4.5	4.5	4.2	A					
26							Q	3.7	4.4	A	A	4.7	5.0	4.9	B	A	T	4.2	3.7					
27							A	A	A	T	T	T	S	A	A	A	4.6	C						
28							Q	L	4.2	4.3	4.5	[4.6] ^B	4.7	[4.8] ^A	5.0	4.9	4.6	4.2	3.5					
29							Q	L	L	4.5	C	A	A	A	A	A	4.5	A	C					
30							3.5	3.7	L	A	A	A	S	4.9	4.8	4.7	4.5	4.0	Q					
31							Q	3.0	3.7	[4.2] ^V	4.7	4.7	4.7	4.7	[4.0] ^S	4.7	4.5	4.0	3.5					
Mean Value							3.5	3.6	4.0	4.3	4.5	4.6	4.6	4.6	4.6	4.5	4.4	4.1	3.5					
Median Value							3.5	3.6	4.0	4.4	4.5	4.6	4.6	4.5	4.5	4.4	4.4	4.0	3.5					
Count							1	12	14	17	11	11	16	17	15	18	21	22	15					

f_oF₁

Sweep 1.0 Mc to 2.2.0 Mc in 2 min

Manual

Automatic

Y4

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

R'F1

Aug. 1952

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

Sweep 1.0 Mc to 22.0 Mc in 2 min Manual Automatic

Y 5

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

IONOSPHERIC DATA

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

Aug. 1952

f_oE

135° E Mean Time

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

f_oE

Sweep 1.0... Mc to 22.0... Mc in 2... min

Manual Automatic

Y6

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

f_oF₂

Aug. 1952

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

Sweep 1.0 Mc to 22.0 Mc in 2 min Manual Automatic

Y7

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Aug. 1952

fEs

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	3.1	C	C	C	C	C	C	C	4.6	5.0	5.0	5.0 ^Y	6.0 ^Y	6.0 ^Y	9.0 ^Y	4.9	3.4	3.4	G	G	G	2.3	4.0	1.8	E	
2	3.0	3.0	2.5	E	2.5	4.0	3.6	3.7	6.0 ^Y	9.0 ^Y	9.0 ^Y	6.0	5.0	4.4	4.6	5.0	3.8	3.8	3.9	E	2.5	2.5	2.4	E		
3	3.1	3.5	2.5	C	C	C	C	C	C	C	C	C	C	6.0 ^Y	4.5	4.9	3.8	4.5	3.0	5.0	C	C	3.5	2.5		
4	3.5	3.8	3.5	2.7	2.3	3.5	6.0	4.0	3.8	3.8	3.8	3.8	3.7	G	4.5	5.1	5.0	4.5	5.0	5.0	3.2	2.7	3.0	3.8		
5	3.8	6.0 ^Y	4.5	3.0	3.5	3.0	3.5	3.6	3.8	3.8	4.5	3.8	G	G	G	3.6	3.6	3.8	3.8	C	C	C	3.1	3.7		
6	4.5	3.5	3.0	2.7	2.9	2.7 ^F	2.5	3.7 ^F	C	C	C	C	3.8	G	G	G	G	G	4.9	C	C	C	3.1	3.7		
7	4.3 ^Y	7.7	3.5	3.8	3.5	3.4 ^Y	2.4	4.0	C	C	3.7	4.5	G	4.0	4.5	6.6 ^Y	6.1	3.8	6.0	C	3.8	3.8	6.3	6.0		
8	3.5 ^F	6.0 ^Y	3.2	4.0	3.5	4.1	3.8	2.5	3.8	G	C	C	G	7.2	C	9.0	6.3	9.0	9.0	8.2	4.5	7.5	3.0	3.0		
9	3.0	2.5 ^F	3.8 ^F	3.8 ^F	3.5 ^F	2.9	3.0	3.6	3.3 ^Y	9.0	6.4	9.0	C	9.0 ^Y	9.0	8.6	6.2	6.3	4.5	3.8	5.0	7.5	3.6	7.0		
10	3.8	3.8 ^F	3.8 ^F	3.0 ^F	3.1 ^F	2.0	G	3.8	5.0	4.0	6.0	7.7	5.0 ^Y	G	G	G	8.7 ^F	9.0	6.3	8.7 ^Y	6.0	C	6.0	C		
11	8.0 ^Y	M	M	M	M	M	M	M	M	6.0	9.0 ^Y	C	8.0 ^Y	C	C	6.5	9.0	8.0	5.0	8.0	6.0	8.0	7.0	3.5		
12	3.8	3.8	4.5	3.8	4.5	4.5	3.5	G	3.8	G	9.2	9.2	7.0 ^Y	9.5 ^Y	4.4	G	G	G	G	2.7	3.0	3.0	4.5	3.5		
13	3.0	3.0	2.5	2.4	2.4	2.5	3.0	3.5	4.5	G	3.5	3.8	4.0	6.7 ^Y	4.3	4.5	G	3.8 ^F	7.8	4.5	4.4	3.8	4.5	3.4		
14	2.5	2.5	2.3	2.5	2.5	E	2.7 [*]	3.3	3.7	6.0	G	4.5	4.3	7.6	4.5	7.5	5.0	5.0	4.0	3.7	3.8	3.8	4.0	3.7		
15	4.1	3.5	2.5	3.8	C	3.8	3.5	3.8	C	4.9	7.0	6.2	G	G	4.5	4.4	3.7	4.0	3.5	3.0	3.2	3.5	3.1	4.3		
16	3.8	3.0	3.8	3.8	3.9	3.6	3.7	6.2	5.0	G	4.7	3.8	6.0 ^Y	6.1	5.0	4.5	5.0	4.5	2.8 ^F	3.8	2.7	2.4	3.4	2.5		
17	E	E	E	E	E	2.5	B	3.4	3.8	3.8	4.9	G	G	5.0	4.2	6.2	3.8	3.4	3.4	2.7	C	C	2.4	3.8		
18	5.0 ^F	6.0 ^Y	5.0	6.0 ^Y	6.0 ^Y	4.4	3.7	4.3	3.8	6.2 ^Y	5.0	4.8	6.2	G	G	3.8	3.8	6.0 ^Y	5.0	6.0	3.8	3.2 ^S	3.8	3.8		
19	2.7	3.5	3.5	3.8	3.8	2.8	2.5	3.5	4.5	4.8	5.0	G	G	G	G	G	4.5	3.6	3.0	3.0	2.7	2.1	4.0	6.0 ^Y		
20	2.5	2.5	4.0 ^F	3.5	3.1 ^F	4.5	6.0 ^Y	4.5	5.8 ^Y	4.5	3.7	C	4.5	G	4.5	7.4	4.5	4.5	5.0	6.0	4.4	3.5	4.5	4.4		
21	3.5	3.5	3.2	4.5	2.9	2.7	3.8	3.6	3.6	3.8	6.3 ^Y	7.4 ^Y	8.5 ^Y	C	G	G	G	4.2	6.0 ^Y	4.4	4.5	4.5	3.2			
22	3.0	3.8	3.8 ^F	3.0 ^F	3.0	2.4	2.4	3.6	4.5	6.0	4.5	5.9 ^Y	12.9 ^Y	7.0 ^Y	6.0	6.0 ^Y	6.9	4.5	3.0	3.2	4.0	3.0	3.0 ^F	2.9		
23	3.5	3.8	2.7	2.5	2.1	2.3 ^F	2.4	3.5	3.8	4.3	4.3 ^Y	G	G	G	G	3.8	4.5	3.8 ^F	4.9 ^F	7.0	5.5	3.5	3.3	4.2		
24	3.5	3.3	3.0	3.5	3.5	C	C	C	C	C	6.8 ^Y	4.7	4.8	G	G	G	4.9	4.8 ^Y	5.0	4.0	3.5	3.5	3.5	2.3		
25	3.5	2.9	3.0	2.9	3.0	2.7	G	C	C	C	G	G	G	G	G	3.8	4.9	4.4 ^Y	4.6	3.4	4.3 ^F	3.5	3.7	2.3		
26	4.2 ^Y	3.5	4.2	4.3	3.5	4.1	3.8	3.8	4.9	6.0 ^Y	8.0 ^Y	4.8	G	G	4.2	4.9	3.6	4.5	7.0	4.0	2.7	3.6	3.5	4.7		
27	6.0 ^F	3.8 ^F	4.0 ^F	3.8	3.5	3.0	3.3	4.0	4.0	3.8	3.8	3.8	3.6	5.2	5.0	5.0	G	C	C	6.0	6.0	3.5	3.6	2.7		
28	3.4	3.7	3.7	3.5	E	2.5	3.2	3.4	3.8	4.8 ^Y	4.7	3.8	6.1 ^Y	5.8 ^Y	5.5 ^Y	5.2	3.6	G	3.5	3.4	2.7	2.5	2.4	2.0		
29	3.2	2.7	3.5	3.5	2.5	3.6	3.0	G	3.7	4.9	C	4.7	8.0	6.0 ^Y	6.0	5.2	5.0	5.0	C	C	3.0	3.8	3.3	4.7		
30	2.1	E	E	E	E	1.9	2.5	3.3	3.8	5.0	5.0	6.1	4.5	4.6	3.9	4.9	4.7	3.6	3.5	2.6	3.0	2.6	3.0	3.9		
31	2.8	2.5	E	E	2.1	2.1	2.1	3.0	3.7	G	3.8	3.6	G	4.9	3.8	4.9	3.8	G	3.0	2.7	E	3.0	3.6	2.4		
Mean Value	3.7	3.7	3.5	3.5	3.2	3.1	3.3	3.7	4.4	5.2	5.6	5.4	5.9	6.2	5.1	5.4	5.0	5.0	4.6	4.6	3.9	3.8	3.8	3.8	3.8	
Median Value	3.5	3.5	3.5	3.5	3.0	2.9	3.0	3.6	3.8	4.6	4.9	4.6	4.3	4.4	4.4	4.9	4.5	4.2	4.2	3.8	3.8	3.8	3.5	3.5	3.6	
Count	31	29	29	28	27	27	26	26	24	26	27	26	29	29	29	31	31	30	29	27	28	26	31	30	30	

fEs

Y 8

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Aug. 1952

(M3000)F2

Table with 32 columns (Day 00 to 31) and multiple rows of data. Includes fields for time, frequency, and ionospheric parameters like f2, h'p, and MUF. The table contains data for the month of August 1952.

Sweep J... Mc to 2.2.0. Mc in ... min

Manual

Automatic

Y9

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Aug. 1952

fminF

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.8	C	C	C	C	C	C	C	3.8	4.8A	4.2A	4.2	[4.1]A	4.0	[4.0]A	4.1A	3.6	2.7	2.4	1.6	1.5	2.3A	1.5	1.5
2	2.0A	1.8	1.6	1.6	1.3	A	2.2	2.5	4.7A	A	A	A	A	4.8	4.5A	4.3	3.0	[2.8]A	2.5	1.7	2.0A	1.5	1.5	1.5F
3	1.5	1.8	1.5	C	C	C	C	C	C	C	C	C	C	4.8A	4.2A	5.6	[4.2]A	2.8	2.5	3.0A	C	1.6	2.8A	1.6
4	1.7	2.9A	2.2A	1.9	1.3	C	2.1A	3.2A	2.9	3.3	3.4	3.5	4.1	3.7	[4.0]A	4.4A	4.4A	A	A	A	1.6	1.6	1.6	
5	1.9	1.8	1.8	1.5F	1.6	[2.2]A	2.8A	2.7	2.8	3.4	4.1A	4.0	4.2	4.0	3.7	3.8	3.0	3.0	A	C	2.2A	[2.6]C	2.9A	1.5F
6	1.7	1.7	1.7	1.3	1.5F	1.3	1.7	A	C	C	C	C	4.0	4.2	4.3	3.6	3.4	2.8	A	C	C	C	1.5	1.7
7	1.6	2.3A	1.5	[1.6]A	1.7	1.6	1.7	A	C	C	3.5	4.1A	3.7	4.0	4.5A	6.0A	5.5A	4.3	5.5A	[3.9]C	2.3A	A	A	1.9
8	1.9	[1.7]A	1.5	A	A	3.2A	[2.8]A	2.5	3.1	4.1	C	C	4.1	A	C	4.2A	5.5A	A	A	A	3.6A	4.1A	[3.0]A	1.9
9	1.6	1.3	2.0F	1.9	1.6	1.3	1.7	2.3	5.7A	A	A	A	C	A	5.5A	[5.5]A	5.5A	5.5A	3.2A	2.0	4.3A	4.6A	1.9	1.8
10	1.6F	1.4	1.7	1.6	1.4	1.4	1.6	2.5	5.4	4.0A	6.0A	[5.4]A	4.8A	3.6	3.4	3.6	5.5A	[5.4]A	5.3A	[5.4]A	5.4A	C	A	C
11	6.4A	M	M	M	M	M	M	M	M	5.5A	A	C	6.4A	C	C	6.6A	[5.8]A	5.5A	3.6A	6.6A	1.9	[2.0]A	2.0A	2.0A
12	1.5	2.0A	[1.6]A	1.3	1.6	[1.8]A	2.0	2.4	3.0	3.2	A	A	6.5A	[5.2]A	4.0	3.6	3.0	2.7	2.5	[2.1]A	1.7	1.8	2.0A	2.2A
13	2.3A	1.6	E	1.6	E	1.7F	1.7	2.5	2.5	3.3	[4.0]S	4.8	4.0	4.5A	4.0	4.5A	3.0	3.0	5.5A	3.5A	1.6	A	A	1.8
14	1.6	1.5	1.5	1.3	1.3	2.0	2.6	3.5	3.5	5.5A	3.6	5.5	[5.5]A	5.5	[5.1]A	4.7A	4.7A	4.4A	[3.0]A	1.6	1.6	1.5	[3.2]A	2.8A
15	3.0A	[2.2]A	1.5	1.6	[1.6]C	1.6	[1.9]A	2.2	[3.3]C	4.0A	A	A	4.0	4.0	4.6	4.3	4.2	3.2	3.2	2.0	[1.8]A	1.6	1.6	A
16	1.6	1.6F	1.6F	1.6	1.9	1.5	A	A	4.7A	3.2	4.2A	[4.8]A	5.5A	[5.6]A	5.7	4.3A	4.2A	4.2A	[3.2]A	2.1	[1.8]A	1.6	1.5	1.6
17	1.6	1.5	1.3	1.4	1.0	1.0	1.6	2.2	2.9	3.8	4.7A	4.0	4.8	5.6	4.8	5.9A	3.6	3.8	2.2	1.6	C	C	2.0	[2.4]A
18	2.8A	A	A	A	A	2.8A	2.9A	3.8A	4.7	[4.8]A	4.9A	4.5A	4.4A	5.7	4.8	4.8	5.6	A	A	A	A	1.6	[1.6]A	1.6
19	1.6	1.6	1.5	A	A	1.5	1.6	2.9	A	5.5	[4.8]A	4.0	4.2	4.3	3.6	3.7	4.0	2.8	2.2	2.0	1.7	1.5	2.5A	[2.0]A
20	1.6	1.4	1.8F	2.0	1.6	A	A	A	5.5A	3.9A	4.0	[4.4]C	4.8	4.2	3.7	8.2	4.0	4.1A	[3.6]A	3.2A	[2.6]A	1.9	2.0A	2.0A
21	1.6	1.5	1.7	3.2A	2.0A	1.8	1.6	2.5	2.8	3.5	A	A	A	C	4.7	3.5	3.4	3.1	3.6A	A	A	A	A	1.9
22	A	1.6F	1.5	1.4	1.7	2.3	1.7	2.3	3.0	4.9A	4.0	5.6A	A	A	8.3	5.7	8.2	3.5	2.2	1.8	2.8A	1.9	1.6	
23	1.7	1.6	1.7	1.5	1.6	1.5	1.7	2.5	2.8	4.1A	4.0	3.8	4.2	4.2	3.6	3.3	3.3	2.8	[2.8]A	2.7A	[2.6]A	2.5A	[3.2]A	3.8A
24	1.9	1.6	1.5	2.4A	2.5A	C	C	C	C	C	C	C	4.5A	4.0	4.1	4.2A	A	A	3.0A	1.6	A	A	1.5	1.7
25	2.0A	1.5	1.6	1.5	1.6	[1.6]A	1.6	C	C	C	4.1	3.5	4.0	4.0	3.6	3.7	4.0	3.7A	4.0A	A	1.6	1.6	1.9	1.5
26	[1.6]A	1.7	A	A	2.5A	3.2A	2.7A	2.3	4.2A	5.5	[5.0]A	4.6A	4.2	4.5	5.9	4.7A	[3.9]A	3.1	A	A	A	1.7	2.5A	A
27	A	1.6	[2.2]A	2.9A	[2.2]A	1.5	A	A	4.4	A	A	A	5.0	4.6A	5.5	5.5	3.3	C	C	A	A	A	1.8	1.6
28	[2.3]A	3.0A	2.5A	1.6	1.6	1.6	1.6	2.1	3.2	3.9A	4.1A	5.0	4.6A	4.5A	4.8	3.8	3.8	2.9	2.4	[2.0]A	1.5	1.5	1.6	1.6
29	1.6	[1.8]A	2.0A	[1.8]A	1.6	[1.6]A	1.7	2.5	3.0	4.0	[4.4]C	4.7A	7.8A	5.7A	7.9	5.7	4.3A	4.5A	C	C	A	A	1.9	[1.8]A
30	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.5	3.3	4.5A	A	A	4.5A	4.1	4.5A	3.9	2.7	2.5	2.5A	1.7	1.6	A	A	A
31	1.7	1.7	1.5	1.6	1.6	1.6	1.6	2.5	3.3	[3.8]A	4.3	4.0	4.5	4.1	[4.2]S	4.2	4.0	2.7	2.3	1.6	A	A	A	2.2A
Mean Value	2.0	1.8	1.7	1.8	1.7	1.7	1.9	2.5	3.7	4.1	4.3	4.5	4.7	4.5	4.7	4.7	4.3	3.5	3.1	2.6	2.3	2.0	2.1	1.9
Median Value	1.7	1.6	1.6	1.6	1.6	1.6	1.7	2.5	3.3	4.0	4.1	4.4	4.4	4.4	4.3	4.3	4.0	3.0	2.8	2.0	1.8	1.6	1.9	1.8
Count	28	27	27	24	25	25	24	21	24	23	19	20	25	26	29	31	30	26	23	21	20	20	25	27

fminF

Sweep 1.0 Mc to 2.2.0 Mc in 2 min

Manual

Automatic

The Radio Research Laboratories
Koganei-machi, Kitatama-gun, Tokyo, Japan

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time

Aug. 1952

f_{minE}

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

Sweep 1.0 Mc to 22.0 Mc in 2 min

Manual

Automatic

Y11

IONOSPHERIC DATA IN JAPAN FOR AUGUST 1952

電波觀測報告 第4卷 第8号

1952年9月25日 印刷
1952年9月30日 發行

(不許複製非売品)

編集兼
發行 人

好 川 得 太 郎
東京都北多摩郡小金井町小金井新田一之久保573

發行所

郵 政 省 電 波 研 究 所
東京都北多摩郡小金井町小金井新田一之久保573
電 話 国分寺 138, 139, 151

印刷所

今 井 印 刷 所
東京都新宿区筑土八幡町8番地