F — 61

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IONOSPHERIC DATA IN JAPAN

FOR JANUARY 1954

Vol. 6 No. 1

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PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

F—61

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR JANUARY 1954

CONTENTS

PREFACE

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 purpose 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 prevides 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

Aug. 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 Data Standards, Symbols and Conventions (Recommendation No. 6 of Stockholm) at VIth Plenary Assembly C.C.I.R. Geneva, 1951" 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.

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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jan. 1954

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	3.3	3.2	2.8	3.0	4.3	2.8	2.7	3.5	5.1	5.9	6.1	6.1	5.3	5.6	5.1	5.0	4.8	3.8	3.1	3.0	3.5	3.5	F	F
2	F	F	3.3	3.5	3.3	2.8	2.4	3.1	5.4	5.5	5.8	6.2	5.2	6.2	5.1	4.5	4.6	3.6	3.1	3.5	2.6	2.8	3.0	3.4
3	3.2	3.5	3.3	2.9	3.7	2.3	S	3.0	5.4	8.7	9.2	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	5.8	5.6	5.0	5.0	4.7	[4.4]	4.0	3.5	3.4	2.7	A	A	2.7	2.8
5	F	F	2.7	2.8	2.8	(2.7)	(2.0)	C	C	C	6.1	6.3	5.5	5.7	5.2	4.5	4.0	2.8	2.5	2.6	2.7	2.9	3.2	[3.2]
6	3.2	2.8	[2.8]	2.8	3.0	3.3	2.5	2.9	4.7	5.6	7.0	5.5	5.1	5.0	5.5	5.0	3.7	4.3	4.6	4.1	4.3	4.6	F	F
7	F	F	4.3	4.8	4.9	4.1	3.2	3.0	4.7	5.8	7.6	7.8	5.7	4.7	5.2	4.7	3.4	3.6	3.4	3.0	2.8	2.8	3.0	[3.1]
8	3.2	3.3	(2.9)	2.7	[2.9]	3.1	[3.3]	3.5	4.9	6.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	[2.6]	2.9	F
10	C	C	C	C	C	C	C	C	C	C	C	C	5.4	5.0	5.3	4.8	3.7	3.1	2.7	2.7	2.4	3.1	3.1	3.1
11	F	3.1	2.8	3.1	F	F	2.1	2.9	4.8	4.6	6.0	6.8	5.7	5.1	5.3	4.8	4.2	3.8	3.0	2.4	[2.8]	2.7	3.2	3.5
12	F	F	F	F	F	3.0	1.8	3.0	4.2	6.3	7.1	8.7	6.1	5.5	4.9	4.5	4.0	3.2	2.5	2.5	2.4	2.8	3.3	3.5
13	3.4	3.3	2.8	3.0	3.0	3.3	F	2.8	4.6	5.3	6.9	7.3	5.8	5.8	5.6	5.0	4.7	3.3	2.7	2.8	2.5	2.8	3.3	3.5
14	3.5	3.8	3.3	2.6	2.6	2.8	2.5	3.0	5.0	6.3	6.0	4.8	[5.2]	5.6	5.5	4.5	4.3	2.8	2.6	2.7	2.6	2.8	2.8	2.8
15	2.8	2.8	2.7	2.6	3.1	3.8	3.0	3.2	4.3	5.6	5.9	5.8	5.7	5.5	5.6	4.7	3.6	3.5	3.5	3.5	3.0	3.5	3.5	3.5
16	3.4	3.6	3.5	3.2	2.7	2.5	2.6	3.0	4.7	5.7	6.2	5.9	6.0	6.0	5.6	4.5	3.6	2.7	3.2	2.6	2.5	2.8	3.6	3.1
17	(3.6)	3.5	3.5	3.7	3.7	2.8	2.7	2.9	4.1	6.0	6.0	5.8	5.3	5.6	6.3	4.9	4.0	3.2	3.2	2.8	A	(3.2)	3.0	[3.0]
18	2.9	3.2	3.2	2.7	2.4	2.8	(2.5)	C	C	6.5	6.6	6.0	5.4	5.4	5.5	5.5	3.8	2.9	3.4	3.3	2.5	2.8	3.2	3.3
19	3.2	3.3	3.3	3.5	2.8	2.4	2.6	3.3	4.8	C	C	7.3	5.6	5.9	5.6	4.6	3.7	3.0	3.4	3.5	3.4	3.5	3.5	3.5
20	3.3	2.9	2.3	2.5	2.7	2.8	2.3	3.3	5.6	4.7	6.8	7.3	5.8	7.8	6.0	6.1	4.8	3.3	4.0	4.7	(3.8)	5	5	5
21	3.2	5	5	5	4.3	3.5	2.8	3.5	4.5	5.6	7.4	7.8	6.6	6.6	6.7	5.7	4.2	3.5	3.3	3.3	2.6	3.3	4.0	5
22	5	(3.5)	3.5	(3.4)	(2.7)	(3.0)	2.8	3.5	5.0	5.7	6.0	6.3	6.3	5.9	6.2	5.5	5.1	3.8	2.6	3.3	3.1	(3.5)	3.8	3.6
23	3.5	3.5	3.3	3.3	3.3	3.2	2.5	3.6	4.5	6.0	6.5	8.5	7.8	5.8	5.9	6.0	4.7	3.0	2.5	2.8	2.8	3.1	3.2	3.6
24	3.5	3.5	3.2	3.0	3.5	2.5	2.1	3.0	4.4	C	C	C	C	C	C	C	C	3.6	[3.3]	3.0	2.8	3.1	C	C
25	C	2.8	3.3	3.5	3.3	[2.9]	2.5	3.3	4.7	5.3	6.4	7.3	7.3	5.6	5.6	5.3	[4.4]	3.5	2.4	2.8	[3.0]	3.3	F	F
26	F	F	2.3	F	3.0	F	F	3.3	4.2	[4.9]	5.6	5.4	2	C	5.5	C	C	C	C	2.5	2.6	C	C	C
27	C	3.4	F	F	F	F	2.3	3.5	5.0	5.3	6.4	6.2	6.1	5.8	5.8	6.3	5.7	3.4	2.8	2.8	3.0	3.3	3.3	3.3
28	3.3	3.3	3.5	3.5	3.1	2.8	2.5	3.6	5.0	5.1	6.0	6.4	6.1	5.0	5.3	4.8	4.8	3.4	3.2	3.5	3.6	3.9	3.5	3.9
29	F	F	F	F	F	3.0	(2.2)	[3.2]	4.3	4.7	6.6	6.5	6.2	6.0	5.3	5.6	4.5	3.5	[3.6]	3.6	3.0	3.0	F	F
30	F	3.0	(2.8)	(3.0)	3.3	3.8	3.0	3.8	4.3	5.3	6.2	6.0	5.8	5.5	4.9	6.4	4.4	3.3	3.3	2.8	3.0	3.0	3.1	3.3
31	3.1	(3.4)	C	C	3.6	3.5	(3.5)	3.5	4.6	C	C	C	6.7	5.6	6.2	6.0	4.5	3.9	3.5	3.7	3.4	(3.6)	(4.0)	(3.9)
Mean Value	3.2	3.3	3.1	3.1	3.2	3.0	2.6	3.2	4.7	5.7	6.5	6.4	5.9	5.7	5.5	5.1	4.3	3.4	3.1	3.1	2.9	3.1	3.3	3.3
Median Value	3.3	3.3	3.2	3.0	3.0	2.9	2.5	3.2	4.7	5.6	6.2	6.2	5.8	5.6	5.5	5.0	4.2	3.4	3.2	3.0	2.8	3.1	3.2	3.3
Count	17	21	23	22	24	25	25	26	26	24	25	25	26	26	27	26	26	27	27	28	26	25	21	19

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 1

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

IONOSPHERIC DATA

Jan. 1954 | h_pF2 | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(350)^{JF}	(350)^{JF}	(350)^{JF}	280	(260)^{JF}	(230)^{JF}	330^{SF}	320^{SF}	270	270	270	240	250	250	240	250	250	240	280^{F}	250^{V}	260^{Z}	(320)^{JF}	FS	FS
2	FS	FS	(330)^{JF}	300^{F}	270^{F}	280^{F}	250^{F}	290	250	250	250	240	260	260	250	270	260	260	320	280	290	330	290^{F}	350
3	370^{F}	320	350^{F}	250	250^{P}	(250)^{JFS}	S	310	310	(270)^{J}	240	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	270	230	250	260	250	[250]^{A}	250	280	250	A	A	A	310^{F}	(320)^{JF}
5	SF	SF	330^{F}	310^{F}	(270)^{JF}	(260)^{PF}	(270)^{JF}	C	C	C	270	250	250^{P}	250	240	240	260^{VH}	290^{F}	260	280	350^{SF}	350^{SF}	310^{SF}	[300]^{SF}
6	300^{SF}	310^{SF}	[320]^{A}	320^{F}	280^{F}	270^{VF}	260	A	260	270	240	240	(250)^{J}	280	260	A	250	290	270	290	300^{F}	300	F	F
7	F	F	340	310	250	260^{F}	300^{F}	280	270	280	280	250	240	240	240	230	260	300	300^{V}	260^{F}	330^{F}	(350)^{JF}	350^{F}	[350]^{F}
8	350^{F}	(360)^{JF}	(360)^{JF}	300^{F}	[290]^{SF}	280^{VF}	[280]^{SF}	(270)^{J}	260	260	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	260	250	250	240	250	270	250	250	330^{F}	[320]^{FS}	310^{F}	F
11	F	260^{F}	310^{F}	(310)^{JFP}	F	F	300^{F}	260	250^{P}	230	270	250	250	270	250	(240)^{J}	280	270	260	250	[300]^{A}	350^{F}	[340]^{SF}	330
12	SF	SF	SF	SF	SF	260^{SF}	(250)^{JF}	260	280	270	250	260	260	250	250	240	(240)^{J}	260	290	250	250	340^{F}	320^{F}	(320)^{JF}
13	300^{F}	310^{F}	350^{F}	310^{F}	350^{F}	(310)^{JF}	SF	270^{F}	250	270	280	260	240	260	250	240	270	280	290	260	330	350	330^{F}	290^{F}
14	330^{F}	300^{FP}	270^{F}	270	330^{F}	250^{F}	300^{F}	290^{F}	270	260^{P}	250	230	(240)^{C}	260	250	230	240	270	260	250^{P}	310	350^{F}	330^{F}	320
15	(330)^{JF}	310^{F}	320^{F}	300^{F}	280^{FV}	(260)^{JF}	(250)^{JF}	260^{V}	230	260	270	250	280	240	(260)^{J}	230	240	280	320^{F}	270	300^{F}	280^{F}	300^{F}	280^{F}
16	290^{F}	340^{F}	340^{FP}	290^{F}	310^{F}	270^{F}	280^{F}	270	300	250	280	260	270	260	240	240	240	320	290	280	340	350^{F}	340	340^{F}
17	(330)^{JF}	(300)^{JF}	330^{F}	340^{F}	240^{FP}	300^{F}	280	260	240	250	260	250	240	280	250	240	240	270	A	230	A	(360)^{F}	350^{F}	[340]^{FA}
18	320^{FS}	330^{F}	320^{F}	250^{F}	280^{F}	270^{F}	(300)^{F}	C	C	260	(250)^{J}	250	230	250	260	250	220	300	270	250	310	320^{F}	300	320^{F}
19	320^{F}	350^{F}	320^{F}	260	270^{F}	(310)^{JF}	310^{F}	270	240^{P}	C	C	240	240	250	250	230	240	330	320	310	280	370^{F}	330^{F}	320^{F}
20	320	260	360^{F}	290^{F}	310^{F}	(380)^{JF}	300^{F}	300	240	250	(280)^{J}	250	260	260	270	250	250	290	300	290	(310)^{VF}	SF	SF	SF
21	290^{PF}	SF	SF	SF	290^{F}	250^{F}	290^{ZF}	260^{F}	250	360	270	240	250	260	240	250	240	320	290	260	330	350	(280)^{J}	SF
22	SF	(350)^{SF}	(360)^{F}	(330)^{F}	(350)^{JF}	(310)^{JF}	310^{F}	240	(240)^{J}	260	260	250	240	250	250	250^{P}	250	270	300	290^{P}	310^{F}	(360)^{JF}	300^{P}	(340)^{JFP}
23	(310)^{JF}	(360)^{JF}	340^{P}	340^{PF}	310^{P}	290^{PF}	290^{PF}	260^{F}	250^{P}	260	(260)^{J}	260	250	260	260	250	260	280	330	260^{F}	330^{F}	330^{V}	340	330^{F}
24	350^{F}	320^{F}	350^{PF}	350^{F}	280^{F}	270^{F}	270^{F}	270	250	C	C	C	C	C	C	C	C	270	[260]^{C}	250	270	290	C	C
25	C	290^{F}	330^{F}	330^{F}	320^{F}	[290]^{C}	260^{F}	270	290	270	270	260	240	240	250	250	[240]^{C}	240	300	270^{V}	[320]^{C}	(370)^{JF}	F	F
26	F	F	(330)^{JF}	F	260^{F}	F	SF	270^{P}	230	C	C	260	C	C	250	C	C	C	C	300^{VF}	(270)^{J}	C	C	C
27	C	(310)^{JF}	F	F	F	F	250^{F}	240	230	260	270	270	240	240	270	260	230^{P}	280	250	270	330^{F}	340^{F}	(330)^{JF}	(340)^{JF}
28	(350)^{JF}	320^{F}	350^{F}	300^{F}	280	250^{F}	260^{F}	250	240	250	260	260	240	250	250	250	240	250	(300)^{PJ}	(300)^{JP}	320	280	310	300^{F}
29	F	F	F	F	F	250^{F}	(260)^{PJF}	[250]^{C}	240	260	260	270	250	250	240	260	240	260^{F}	[280]^{C}	300	340^{F}	350^{F}	F	F
30	F	300^{F}	(350)^{F}	(330)^{F}	300^{F}	(250)^{JF}	270^{F}	250	240	270^{P}	290	240	250	250^{P}	230	(260)^{J}	240	300	280	290	280^{F}	300^{F}	300^{F}	(360)^{JF}
31	300^{F}	(350)^{JF}	C	C	(310)^{JF}	320^{F}	(280)^{F}	250	260	C	C	C	240	280	250	250	230	270	300	290	320	(330)^{F}	(320)^{FJ}	(330)^{JF}
Mean Value	320	320	340	300	290	280	280	270	260	260	260	250	250	260	250	250	250	280	290	270	310	330	320	330
Median Value	320	320	340	300	280	270	280	270	250	260	270	250	250	250	250	250	240	280	290	270	310	340	320	330
Count	27	21	23	22	24	25	25	25	26	23	24	25	26	26	27	25	26	27	26	27	26	25	21	19

h_pF2 | Sweep 1.0 Mc to 22.0 Mc in 1 min | ☐ Manual ☒ Automatic | W2

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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jan. 1954

h'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	300	300	290	240	210	180	270	260	250	250	250	240	240	250	240	240	230	220	240	250	230	280	[290]^{5F}	300
2	270	280	270	250	250^{A}	210	240	250	230	230	240	240	250	250	240	230	230	230	280	250	250	290	290	290
3	310	260	300	230	220	190	A	300	260	250	230	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	240	230	230	240	240	[240]^{A}	230	240	240^{A}	250^{A}	A	A	280^{F}	270^{F}
5	260	260	300	280	220	220	260	C	C	C	260	250^{A}	250	250	230	230	230^{H}	250	250	280	320	310	260	240
6	260	290	[280]^{A}	280	250	230	250^{A}	300	240	250	230	230	240	220	240	260^{A}	220	240	220	240	250	250	230	300
7	250^{F}	260	260	250	210	210	260	250	250	260	260	240	240	240	240	220	220	250	250	240	280	310^{F}	300^{F}	250^{F}
8	280^{F}	270^{F}	280^{F}	260	250	230	230	230	250	240	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	250	240	240	230	230	240	240	230	300	300^{F}	280^{F}	290^{F}
11	250^{F}	240^{F}	260	250^{F}	250	220	280^{F}	240	240	220	260	240	240	240	240	230	230	230	240	240	[280]^{A}	330	310	310
12	260	210	260	250	270	220	240	230	240	260	240	240	260	240	250	230	230	230	250	240	240	310	290	280
13	250	250	280	260	280	250	250	260	230	250	260	250	230	240	250	230	210	230	260	250	300	300	300	250
14	280	250	220	240	230	230	260	240	240	250	240	220	[240]^{Q}	250	240	220	220	250	240	240	280	300	300	280
15	280^{F}	280^{F}	270	250	240	230	220	240	220	240	260	250	280	230	250	230	220	240	250	240	260	260	270	240
16	280	280	270^{F}	240	240	230	270^{F}	240	250	230	270	250	270	250	230	230	210	310	250	250	300	310	300	290
17	260	240	280	250	200	230	250	240^{Q}	230	250	260	250	240	260	250	230	220	230	A	230	A	360^{A}	330^{F}	[320]^{AF}
18	310^{5F}	300^{F}	280^{F}	210	250	250	260^{F}	250	[250]^{C}	250	250	250	230	240	250	230	210	250	230	230	290	300	280	270
19	260	300	270	220	220	270	270	230	230	C	C	230	240	240	240	220	210	280	270	280^{S}	230	310^{F}	290	270
20	260	230	270	250	250	300^{F}	250	260	220	230	270	240	250	240	240^{A}	230	230	270	280^{A}	250^{A}	260	310^{F}	280	250
21	250	290	280	280	250	210^{F}	250	230	220	300	260	230	240	260	240	230	220	250	260	240	280	270	250	250
22	230	250	280	260	290	250	250	210	220	240	240	250	240	240	240	230	220	230	250	250	260^{F}	310^{F}	250	280
23	260^{F}	300	270	280	260	230	250	240	220	240	250	250	240	240	250	230	220	220	300	250	300	280	300	270^{F}
24	300	300	300	270	230	210	250	250	230	C	C	C	C	C	C	C	C	220	[220]^{C}	230	250	260	C	C
25	C	250	260	260	240	[220]^{C}	210	240	240	250	260	240	230	230	240	240	[230]^{C}	220	270	<260^{M}	C	310^{F}	300^{F}	320^{F}
26	310^{F}	250	280	270	230	220	270	220	220	250	250	250	270	250	230	C	C	C	C	280	240	C	C	C
27	C	250	280	250	220	230	240	230	230	250	260	270	240	240	230	250	220	220	230	260	280	260	280	280
28	280^{F}	270	280	250^{F}	230	210	250	230	220	230	250	260	240	240	240	230	230	<210^{C}	260	<260^{C}	260	240	260	250
29	300^{F}	250	260	260	230	220	230	[230]^{S}	230	230	260	260	250	250	240	240	220	220	[240]^{C}	250	270	310	290	290
30	290^{F}	240^{F}	230	270	240	200	230	230	230	240	290	240	250	240	230	260	220	230	250	250	250	250	250	300^{F}
31	250	270	250	250	250	240	230	220	230	C	250	<240^{C}	230	230	240	240	220	210	260	240	250	290	290	280^{F}
Mean Value	270	260	270	250	240	230	250	250	230	250	250	250	240	240	240	230	220	240	250	250	270	290	280	280
Median Value	260	260	280	250	240	220	250	240	230	250	260	240	240	240	240	230	220	230	250	250	260	300	290	280
Count	26	28	28	28	28	28	27	27	27	24	26	26	27	27	27	26	26	27	26	26	25	26	26	26

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 3

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

IONOSPHERIC DATA

Jan. 1954 | f_oF1 | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									Q	Q	L	3.6	3.4	Q	Q	Q								
2									Q	L	3.5^{LH}	3.5^{H}	3.4	3.4	2.9	Q								
3									A	3.5^{L}	3.6	C	C	C	C	C								
4									C	C	Q	3.4	3.2	Q	Q	A								
5									C	C	A	A	3.6	3.5	3.1	Q								
6									Q	Q	3.5	L	3.5	Q	A	A								
7									Q	3.5^{L}	3.6	3.7	3.5	L	2.6	2.4								
8									Q	Q	C	C	C	C	C	C								
9									C	C	C	C	C	C	C	C								
10									C	C	C	C	3.5	Q	Q	Q								
11									Q	Q	3.6^{L}	3.7^{LH}	3.6	L	L	L								
12									2.4	L	3.6	3.6	3.5^{H}	3.5^{L}	L	L								
13									Q	Q	3.6^{L}	3.6	3.6	3.5	LH	Q								
14									Q	Q	3.5	Q	C	3.5^{H}	3.3^{L}	Q								
15									Q	Q	L	3.6	L	3.5	LH	Q								
16									Q	Q	3.6	3.6	3.6	3.5	L	Q								
17									Q	Q	3.6^{L}	3.7	3.6	3.6^{L}	3.2^{L}	Q								
18									C	Q	3.7	3.5	3.6	3.5	Q	Q								
19									Q	C	C	C	3.5^{L}	L	L	Q								
20									Q	Q	3.7^{L}	3.7	3.6^{L}	3.6	Q	Q								
21									Q	4.1^{L}	3.8^{L}	3.9	3.8	3.6^{L}	3.5^{L}	Q								
22									Q	Q	3.6	3.8	A	3.6	3.5	Q								
23									Q	Q	3.7	3.9	3.7	3.5	3.0	L								
24									Q	C	C	C	C	C	C	C								
25									Q	Q	3.7	3.8	3.7	3.2	L	L								
26									Q	C	C	3.7	C	C	Q	C								
27									Q	3.0	3.7	3.9	3.8	3.7	3.0	L								
28									Q	Q	3.3^{L}	3.7	3.7	3.5	3.4^{L}	Q								
29									2.5	Q	3.7	3.8	3.5	3.8	3.5^{L}	Q								
30									Q	Q	3.7	3.9	3.8	3.7	3.2	3.0								
31									Q	C	C	C	3.9	3.7	3.4	3.3^{L}								
Mean Value									2.5	3.5	3.6	3.7	3.6	3.5	3.2	2.9								
Median Value									2.4	3.5	3.6	3.7	3.6	3.5	3.2	3.0								
Count									2	4	20	21	23	19	13	3								

f_oF1 | Sweep 1.0 Mc to 22.0 Mc in 1 min | ☐ Manual ☒ Automatic | W 4

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

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IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jan. 1954

h'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									Q	Q	240	240	230	Q	Q	Q								
2									Q	220	220^{H}	220^{H}	200	250	220	Q								
3									A	250	230	C	C	C	C	C								
4									C	C	Q	220	220	Q	Q	A								
5									C	C	A	A	250^{A}	250^{A}	240	Q								
6									Q	Q	240	240	250	Q	A	A								
7									Q	250	250	240	230	230	220	230								
8									Q	Q	C	C	C	C	C	C								
9									C	C	C	C	C	C	C	C								
10									C	C	C	C	240	Q	Q	Q								
11									Q	Q	260	220^{H}	230	220	240	240								
12									190	250	240	220	220^{H}	250	230	230								
13									Q	Q	230	240	230	230	200^{H}	Q								
14									Q	Q	240	Q	C	230^{H}	240	Q								
15									Q	Q	250	240	230	230	240^{H}	Q								
16									Q	Q	250	230	220	250	230	Q								
17									Q	Q	240	240	230	220	230	Q								
18									C	Q	240	250	220	240	Q	Q								
19									Q	C	C	C	230	250	240	Q								
20									Q	Q	260	250	230	240	Q	Q								
21									Q	260	250	240	240	240	240	Q								
22									Q	Q	250	250	A	270	250	Q								
23									Q	Q	230	240	230	220	210	240								
24									Q	C	C	C	C	C	C	C								
25									Q	Q	230	240	230	200	220	230								
26									Q	C	C	230	240	C	Q	C								
27									Q	230	250	240	230	230	220	240								
28									Q	Q	230	<240^{C}	240	220	230	Q								
29									220	Q	260	240	230	250	240	Q								
30									Q	Q	240	240	230	240	240	270								
31									Q	C	<250^{C}	C	240	210	220	230								
Mean Value									210	240	240	240	230	240	230	240								
Median Value									200	250	240	240	230	240	230	240								
Count									2	6	22	22	25	22	20	8								

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 5

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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jan. 1954

foE

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	2.6	2.6	2.4	2.4	S								
2									A	2.1	2.5	2.6	2.6	2.4	2.2	1.9								
3							1.7	A	A	FA	2.4	C	C	C	C	C								
4									C	C	A	2.4	[2.4]A	2.4	A	A								
5									C	C	A	A	A	A	A	A								
6									A	2.4	2.4	2.6	2.6	2.5	2.3	A								
7									A	2.2F	2.4	[2.5]A	2.6	2.4	2.3	B								
8									A	2.3	C	C	C	C	C	C								
9									C	C	C	C	C	C	C	C								
10									C	C	C	C	2.5	2.4	2.4	2.1P								
11									AF	A	2.5	2.7	2.6	2.5	2.3H	B								
12									B	2.4	A	A	A	2.5	2.2	B								
13									A	A	2.6	2.6	2.6	2.5	2.3	1.8								
14									B	2.3	2.5	2.6	[2.6]C	2.5	2.4	S								
15									A	2.3	2.5	2.7	2.6	2.5	A	A								
16									2.1P	2.4	2.5	2.5	2.6	2.5	2.3	1.8								
17									B	2.3	2.4	2.6	2.7	2.6	2.4	2.2								
18									C	2.3	2.5	2.6	2.6	2.5	2.4	2.0								
19									A	C	C	C	2.6	2.6	2.5	2.0								
20									2.1	2.4	2.5	2.6	2.6	2.6	2.3	1.7								
21									2.1H	A	FA	2.6	2.6	2.6	2.4	2.1J								
22									B	2.3	2.5	[2.6]A	2.6	2.5	2.4	2.1								
23									A	2.3	(2.5)A	2.7	2.6	2.6	2.3	S								
24								1.7	1.9B	C	C	C	C	C	C	C								
25									B	2.3H	2.5	2.5	2.6	2.6	2.5	A								
26									B	B	C	C	B	C	B	C								
27									A	2.4S	B	B	B	B	B	2.3								
28									2.0F	2.5	A	C	B	2.6	B	B								
29									1.9	2.4H	2.6	2.6	2.6	2.5	[2.2]A	2.0								
30									1.9	2.5	2.7	2.8	2.7	2.5	2.4	S								
31									B	C	2.6	2.5	2.7	2.6	2.3	2.3								
Mean Value							1.7	1.7	2.0	2.3	2.5	2.6	2.6	2.5	2.3	2.0								
Median Value							1.7	1.7	2.0	2.3	2.5	2.6	2.6	2.5	2.3	2.0								
Count							1	1	7	18	18	20	22	24	21	13								

foE

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 6

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

IONOSPHERIC DATA

Jan. 1954 | R'E | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									A	A	110	130	130	130	130	150								
2									A	130	130	100	120	120	130	130								
3							160	A	A	A^F	130	C	C	C	C	C								
4									C	C	A	130	[120]^A	110	A	A								
5									C	C	A	A	A	A	A	A								
6									A	120	120	130	130	120	120	A								
7									A	110^F	130	110	120	120	120	B								
8									A	120	C	C	C	C	C	C								
9									C	C	C	C	C	C	C	C								
10									C	C	C	C	130	130	130	140								
11									A	A	120	130	130	130	120^H	150								
12									B	130	A	A	A	120	130	B								
13									A	A	120	120	120	120	130	130								
14									B	130	130	120	[120]^C	130	130	140								
15									A	120	110	130^A	130^A	120	A	A								
16									130	130	110	110	110	130^A	120	150								
17									B	130	120	130	110	120	120	130								
18									C	130	120	110	110	120	110	130								
19									A	C	C	C	120	120	130	130								
20									120	130	120	120	130	120	120	120								
21									150^H	A	A^F	120	130	130	130	130								
22									A	150^A	130^A	[130]^A	130	120	120	130								
23									A	110	110	130	130	110	120	S								
24								170	130	C	C	C	C	C	C	C								
25									B	100^H	120	120	120	120	120	A								
26									B	150	C	C	B	C	B	C								
27									A	130	B	B	B	B	B	140								
28									130^F	120	A	C	B	130	B	B								
29									150	130^H	130	120	120	120	[120]^A	130								
30									140	130	130	130	130	130	140	S								
31									B	C	<140^C	<130^C	<120^C	120	130	130								
Mean Value							160	170	140	130	120	120	120	120	120	140								
Median Value							160	170	130	130	120	120	120	120	120	130								
Count							1	1	7	19	18	19	22	24	21	16								

Sweep 1.0 Mc to 22.0 Mc in 1.0 min ☐ Manual ☒ Automatic

W 7

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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jan. 1954 | **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	E	2.3	E	E	E	E	E	2.5	7.2	5.3	3.5^{Y}	G	G	G	3.5	G	3.5	E	E	2.5	1.8	2.2	4.4	2.5
2	2.6	2.3	1.7	2.2^{Y}	2.8	E	1.9	E	2.9	G	G	3.5^{Y}	G	G	G	3.5	3.5	6.1^{Y}	3.5	3.0	2.3	2.7	E	E
3	1.9	E	2.5	2.6	2.3	E	2.5	2.8	4.6^{Y}	5.0^{FY}	4.3^{Y}	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	4.2	G	4.0^{Y}	G	6.5^{Y}	5.8	10.3^{F}	2.6^{Y}	6.0	4.2	5.3^{Y}	5.3	2.7	2.8
5	3.0	2.8	3.5	4.3	E	2.3^{Y}	4.2^{Y}	C	C	C	7.6	6.6	6.3	4.3^{Y}	2.6	2.4	2.5^{Y}	E	1.8	9.5^{Y}	5.8	4.0	2.7	E
6	3.5^{Y}	3.0	4.5	3.5^{Y}	E	2.3^{Y}	4.0^{Y}	4.3	4.3	G	G	G	G	G	4.2	6.1	4.3	1.7	3.5^{Y}	5.9^{Y}	5.0	3.5	3.2	4.5
7	2.5	3.0	2.5	1.8	1.5	2.0	3.4	2.5	3.0^{Y}	G	G	4.0^{Y}	G	G	G	2.0	E	E	2.7^{Y}	4.5	3.6	3.7	2.6^{F}	2.6^{F}
8	3.0	3.0	7.7^{Y}	E	E	E	E	>2.5^{C}	2.6	G	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	G	G	3.4	G	1.8	E	E	4.4	4.7	3.5^{F}	3.5	E
11	3.5	3.0	2.4^{Y}	2.4^{Y}	2.4	2.6	1.9	2.6	2.9	3.5	G	G	G	4.3^{Y}	3.5^{Y}	G	E	E	3.5	3.5^{Y}	4.7	4.3	4.5^{Y}	4.2
12	3.5	2.8^{Y}	E	3.5	2.5^{sF}	E	2.1	E	B	G	4.7	5.2^{F}	3.4	G	G	2.2	1.8	1.8	2.2	E	3.0^{Y}	2.3^{sF}	2.5^{F}	2.5^{F}
13	E	E	2.3^{Y}	E	E	E	E	2.2	3.1	4.7	3.5	G	G	G	G	G	E	E	E	E	E	E	1.8	2.5
14	2.5	2.5^{Y}	(2.3)^{s}	E	E	E	E	E	B	G	G	G	C	G	2.8^{Y}	G	E	E	E	E	E	E	E	E
15	2.3	2.5^{Y}	2.5^{Y}	2.3	2.3^{Y}	1.8	1.8	2.1	5.5^{Y}	3.5^{Y}	G	3.6	3.5	3.5^{Y}	4.3^{Y}	2.7	2.0	2.9^{Y}	E	E	2.6	3.5	4.8	2.9
16	4.3^{sF}	2.5^{Y}	2.8^{Y}	3.5^{Y}	E	E	E	E	3.2	G	3.4^{Y}	G	G	2.7	G	G	E	E	E	E	E	E	E	E
17	2.3	1.8	2.4^{Y}	2.0^{Y}	E	E	E	E	2.6	G	G	G	3.5^{Y}	G	3.5	G	E	E	6.0^{Y}	5.4^{Y}	6.3	4.0^{Y}	3.5	3.9
18	3.5^{F}	2.6^{F}	2.5^{Y}	2.4	2.3^{Y}	2.9	2.5^{Y}	>2.3^{Y}	C	G	G	G	G	3.3	G	G	E	E	4.2^{Y}	3.5^{Y}	7.0	4.7	3.5^{Y}	2.0
19	E	2.5^{Y}	E	E	E	4.3^{Y}	2.0	2.5	3.0^{Y}	C	C	C	G	3.2	3.5	G	2.5	3.5^{Y}	4.3^{Y}	3.5	2.4	3.5^{s}	2.5^{Fs}	2.9
20	2.3	2.0	E	E	E	E	E	2.5	2.4	4.2^{Y}	4.3^{Y}	G	G	4.2^{Y}	4.1	3.9	2.4^{Y}	6.5^{Y}	5.5^{Y}	2.9	2.9	2.4	E	E
21	E	2.2^{Y}	2.3^{Y}	2.4^{Y}	E	E	2.0	2.4	G	6.3	4.8^{FY}	3.5^{Y}	2.7	2.7^{Y}	4.3^{Y}	3.4	3.4	E	2.7	2.6	2.3^{Y}	2.5	2.5	2.2
22	2.3^{Y}	E	2.3	E	2.3	E	3.4	2.3^{Y}	2.4	2.6^{Y}	2.7	4.5	4.7^{Y}	4.4	3.5	4.0^{Y}	3.7^{Y}	4.3	2.6^{Y}	3.7^{Y}	2.8^{Y}	3.9^{Y}	E	2.7^{Y}
23	3.0	2.4^{Y}	2.6^{Y}	2.4^{Y}	2.6	E	E	E	3.8	4.4^{Y}	4.2	3.5	4.2^{Y}	3.5	3.5^{Y}	S	E	E	2.5	2.1	2.0	1.8	2.5^{Y}	2.5^{Y}
24	2.5	2.3^{Y}	2.5^{Y}	E	E	E	E	G	3.8^{Y}	C	C	C	C	C	C	C	C	2.5^{Y}	C	1.8	E	2.7	C	C
25	C	2.6	2.3	2.3	3.5^{Y}	C	E	2.3	B	G	3.3^{Y}	3.3^{Y}	G	G	G	4.0^{Y}	C	E	2.0	3.6	C	E	E	2.4^{Y}
26	2.3	1.7	2.3^{F}	2.5^{Y}	E	E	E	E	B	G	C	G	B	C	B	C	C	C	C	E	E	C	C	C
27	C	E	E	E	E	C	C	1.6	2.4	G	2.8	3.0	B	B	B	G	E	2.5	S	2.9^{Y}	1.9	E	E	E
28	E	2.0	2.3	2.3^{Y}	2.3	1.8	E	E	G	G	4.3^{Y}	C	B	G	B	B	2.0	C	E	E	E	E	2.6	2.0^{Y}
29	E	2.3	2.2	E	1.9^{Y}	2.4	1.7	C	G	G	G	G	G	G	3.5^{FY}	G	E	E	C	E	E	2.1^{Y}	E	E
30	1.8	E	1.9	E	E	E	E	E	4.2	G	G	G	G	G	G	G	2.8	2.0	2.0	2.0^{Y}	1.8	E	E	E
31	E	2.3^{Y}	E	E	E	2.3^{Y}	E	E	B	C	>2.8^{C}	>2.8^{C}	G	G	3.4^{Y}	G	E	1.8	E	E	2.1^{Y}	E	E	2.5^{F}
Mean Value	2.8	2.5	2.8	2.7	2.4	2.5	2.6	2.5	3.6	4.4	4.1	4.1	4.0	3.6	3.8	3.6	3.3	3.2	3.4	3.8	3.5	3.3	3.1	2.8
Median Value	2.3	2.3	2.3	2.1	E	E	E	2.2	3.0	G	3.0	G	G	G	3.4	G	1.8	E	2.4	2.8	2.3	2.5	2.5	2.5
Count	26	28	28	28	28	26	27	26	21	24	24	24	23	25	24	24	25	26	24	28	27	27	26	26

fEs

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 8

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

IONOSPHERIC DATA

Jan. 1954 | **(M3000)F2** | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N, Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(2.8)JF	(2.7)JF	(2.9)JF	3.3	(3.4)JF	(3.5)JF	2.9 SF	3.2 SF	3.1	3.3	3.4	3.6	3.4	3.5	3.5	3.5	3.3	3.5	3.2 F	3.2 V	3.3 Z	(3.0)JF	FS	FS
2	FS	FS	(3.0)JF	3.1 F	3.3 F	3.3 F	3.3 F	3.2	3.6	3.5	3.4	3.6	3.2	3.3	3.4	3.3	3.3	3.3	2.9	3.3	3.0	2.9	2.8 F	2.9
3	2.6 F	3.0	2.9 F	3.4	3.5 P	(3.4)JFS	S	3.0	2.9	(3.4)J	3.7	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	3.2	3.6	3.5	3.3	3.5	[3.5]A	3.5	3.4	3.5	3.7	A	A	3.0 F	(3.0)JF
5	FS	FS	2.9 F	2.8 F	(3.2)JF	(3.3)PF	(3.2)JF	C	C	C	3.4	3.6	3.6 P	3.5	3.6	3.5	3.4 VH	3.2 F	3.2	3.2	2.7 SF	2.9 SF	3.1 SF	[3.0]SF
6	3.0 SF	2.8 SF	[2.9]A	3.0 F	3.1 F	3.2 VF	3.6	3.3 F	3.4	3.3	3.7	3.8	(3.4)J	3.2	3.6	3.4	3.5	3.2	3.3	3.2	3.2 F	3.0	F	F
7	F	F	2.9	3.0	3.5	3.4 F	3.0 F	3.3	3.2	3.3	3.3	3.5	3.5	3.6	3.5	3.6	3.3	3.3	3.2 V	3.4 F	2.8 F	(2.7)JF	2.9 F	[2.8]F
8	2.8 F	(2.7)JF	(2.7)JF	2.9 F	[3.0]SF	3.2 VF	[3.2]SF	(3.2)J	3.4	3.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	3.5	3.4	3.4	3.5	3.5	3.0	3.4	3.6	2.9 F	[3.0]SF	3.0 F	F
11	F	3.3 F	3.1 F	(2.9)JF	F	F	3.1 F	3.4	3.5 P	3.6	3.4	3.6	3.5	3.4	3.5	(3.5)J	3.1	3.4	3.4	3.5	[3.2]A	3.0 F	[2.9]SF	2.8
12	SF	SF	SF	SF	SF	3.6 SF	(3.5)JF	3.3	3.2	3.3	3.5	3.4	3.6	3.6	3.4	3.6	(3.6)J	3.2	3.2	3.4	3.5	2.9 F	3.1 F	(3.0)JF
13	3.2 F	3.1 F	2.8 F	3.1 F	2.8 F	(3.1)JF	SF	3.5 F	3.3	3.3	3.2	3.4	3.7	3.3	3.5	3.5	3.1	3.1	3.0	3.3	3.0	2.9	3.0 F	3.2 F
14	3.1 F	3.2 FP	3.2 F	3.2	3.0 F	3.5 F	3.2 F	3.2 F	3.2	3.4 P	3.6	3.6	[3.6]C	3.5	3.6	3.6	3.5	3.3	3.3	3.4 P	3.0	2.9 F	3.0 F	3.0
15	(3.0)JF	2.9 F	3.0 F	3.1 F	3.2 FV	(3.3)JF	(3.3)JF	3.4 V	3.7	3.5	3.4	3.5	3.3	3.6	(3.5)J	3.7	3.6	3.4	3.0 F	3.5	3.1 F	3.0 F	3.2 F	3.4 F
16	2.9 F	3.0 F	3.0 VF	3.2 F	3.0 F	3.3 F	3.3 F	3.4	3.0	3.5	3.3	3.3	3.4	3.5	3.7	3.6	3.6	2.9	3.1	3.2	2.9	2.7 F	2.5	2.9 F
17	(2.9)JF	(3.0)FJ	3.0 F	3.0 F	3.6 PF	3.2 F	3.3	3.4	3.6	3.5	3.5	3.5	3.6	3.3	3.5	3.6	3.6	3.2	3.2	3.7	A	(2.8)F	2.9 F	[3.0]FA
18	3.1 FS	2.9 F	3.1 F	3.4 F	3.3 F	3.3 F	(2.9)F	C	C	3.5	(3.6)J	3.5	3.7	3.5	3.5	3.6	3.8	3.1	3.3	3.4	3.0	3.0 F	3.1	3.0 F
19	2.9 F	3.0 F	3.0 F	3.5	3.3 F	(3.1)JF	2.6 F	3.3	3.4 P	C	C	3.4	3.5	3.5	3.6	3.6	3.5	2.8	3.0	3.1	3.2	2.8 F	3.0 F	3.0 F
20	3.0	3.4	2.9 F	3.0 F	2.9 F	(2.8)JF	3.0 F	3.1	3.6	3.4	(3.4)J	3.5	3.4	3.5	3.3	3.6	3.0	3.1	3.1	3.1	(3.1)VF	SF	SF	SF
21	3.1 PF	SF	SF	SF	3.0 F	3.4 F	3.2 ZF	3.2 F	3.4	3.1	3.3	3.5	3.5	3.4	3.5	3.6	3.5	3.0	3.2	3.4	2.9	3.0	(3.2)J	SF
22	SF	(3.0)SF	(2.9)F	(2.9)F	(2.8)JF	(3.1)JF	3.1 F	3.5	(3.7)J	3.4	3.5	3.6	3.6	3.5	3.5	3.5 P	3.3	3.3	3.0	3.1 P	3.0 F	(2.8)JF	3.1 P	(2.9)JFP
23	(3.0)JF	(2.9)JF	2.8 P	2.7 PF	3.0 P	3.0 PF	3.2 PF	3.3 F	3.4 P	3.5	(3.5)J	3.4	3.5	3.4	3.4	3.5	3.3	3.2	2.9	3.3 F	3.0 F	2.9 V	2.8	2.9 F
24	2.8 F	3.0 F	2.8 PF	2.9 F	3.1 F	3.2 F	3.2 F	3.3	3.5	C	C	C	C	C	C	C	C	3.4	[3.4]C	3.3	3.2	3.0	C	C
25	C	3.1 F	2.9 F	2.8 F	3.0 F	[3.1]C	3.2 F	3.2	3.6	3.4	3.4	3.5	3.7	3.6	3.5	3.4	[3.6]C	3.7	3.0	3.2 V	[3.0]C	(2.7)JF	F	F
26	F	F	(2.8)JF	F	3.3 F	F	SF	3.3 P	3.7	C	C	3.4	C	C	3.4	C	C	C	C	3.1 VF	(3.3)J	C	C	C
27	C	(3.0)JF	F	F	F	F	3.4 F	3.6	3.6	3.2	3.3	3.3	3.5	3.6	3.2	3.3	3.6 P	3.5	3.2	3.3	3.0 F	2.8 F	(2.9)JF	(2.7)JF
28	(2.8)JF	2.9 F	2.8 F	3.0 F	3.3	3.4 F	3.3 F	3.5	3.5	3.3	3.4	3.4	3.5	3.4	3.6	3.3	3.5	3.4	(3.0)JP	(3.1)PJ	3.1	3.2	2.9	3.1 F
29	F	F	F	F	F	3.4 F	(3.4)PJF	[3.5]C	3.6	3.2	3.4	3.3	3.4	3.4	3.5	3.5	3.5	3.4 F	[3.3]C	3.2	3.0 F	2.9 F	F	F
30	F	3.0 F	(2.8)F	(2.9)F	3.1 F	(3.6)JF	3.3 F	3.5	3.7	3.3 P	3.2	3.6	3.5	3.6 P	3.5	(3.5)J	3.7	3.0	3.2	3.2	3.2 F	3.0 F	3.1 F	(2.7)JF
31	3.1 F	(2.9)JF	C	C	(2.9)JF	3.0 F	(3.1)F	3.5	3.3	C	C	C	3.5	3.1	3.5	3.4	3.6	3.3	3.2	3.2	2.9	(3.0)F	(2.8)FJ	(2.8)FJ
Mean Value	2.9	3.0	2.9	3.0	3.1	3.3	3.2	3.3	3.4	3.4	3.4	3.5	3.5	3.4	3.5	3.5	3.5	3.2	3.2	3.3	3.1	2.9	3.0	3.0
Median Value	3.0	3.0	2.9	3.0	3.1	3.3	3.2	3.3	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.3	3.2	3.3	3.0	2.9	3.0	3.0
Count	17	21	23	22	24	25	25	26	26	23	24	25	26	26	27	26	26	27	27	28	26	25	21	19

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 9

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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Jan. 1954

fminF

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	1.5	1.3	E	E	E	E	E	1.6	2.5[A]	2.6[A]	2.7	2.7	2.8	2.8	2.7	2.0	2.7[A]	1.6	1.7	1.7	1.6	1.6	[1.6][AS]	1.6
2	1.5	1.1	E	E	A	E	1.6	1.6	2.2	2.4	2.7	2.7	2.6	2.7	2.3	2.8[A]	2.7[A]	1.6	1.7	2.3[A]	1.7	1.7	1.5	1.5
3	1.4	1.1	1.3	1.3	1.1	E	A	2.3[A]	3.2[A]	2.4	2.5	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	2.7	2.8	2.9	2.8	2.6	[2.1][A]	1.6	1.7	A	2.3[A]	A	A	1.6	1.6
5	1.5	E	1.5	1.2	E	1.2	1.6	C	C	C	3.4[A]	5.0[A]	3.3	3.2	2.4	2.4	1.6	1.7	1.5	1.7	1.7	1.5	1.7	1.5
6	1.5	2.0[SA]	[1.7][A]	1.4	E	1.2	1.9[A]	2.5[A]	2.3	2.7	2.7	2.9	2.9	2.7	3.5[A]	4.4[A]	1.7	1.6	1.7	1.6	2.4[A]	1.7	2.2[A]	1.7
7	1.5	1.7	1.3	1.3	1.3	E	1.9	1.6	2.2	2.5	2.6	2.6	2.6	2.6	2.4	2.0	1.6	1.7	1.6	1.7	1.6	1.6F	1.6F	1.6
8	1.6	1.3	1.1	E	E	E	1.6	1.6	2.0	2.5	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	2.9	3.0	2.6	2.4	1.9	1.6	1.6	1.6	1.6	1.6F	1.6	1.6F
11	1.6F	1.5	1.3	1.1	E	1.0	1.6F	1.6	2.1	2.6	2.7	2.8	2.6	2.6	2.5	2.1	1.6	1.6	1.6	1.6	[1.6][A]	1.6	1.6	1.9
12	1.6	1.4	E	1.5	E	E	1.4	1.6	1.7	2.5	2.9	2.7	2.7	2.6	2.4	2.2	1.8	1.6	1.6	1.5	1.6	1.7	1.6	1.6
13	1.4	1..	E	E	E	E	1.6	1.6	2.1	2.6	2.6	2.7	2.7	2.7	2.3	2.4	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
14	1.4	1.1	1.1	E	E	E	1.6	1.6	2.2	2.4	2.6	2.7	[2.8][C]	2.8	2.6	2.2	1.7	1.5	1.5	1.5	1.6	1.6	1.7	1.6
15	1.5	1.4	E	E	E	E	1.6	1.6	2.5[A]	2.8	2.9	2.7	2.6	2.7	2.4	2.7	2.6	1.7	1.4	1.6	1.6	1.6	1.6	1.7
16	1.5	1.3	1.3	E	E	E	2.0	1.6	2.5	2.5	2.8	2.7	2.7	2.7	2.5	2.4	1.7	1.7	1.4	1.6	1.6	1.6	1.6	1.6
17	1.5	E	E	E	E	E	1.5	1.7	2.3	2.6	2.7	2.7	2.7	2.7	2.5	2.3	1.8	1.6	3.1[A]	1.7	A	A	1.6	[1.6][FA]
18	1.7[FS]	1.5	1.4	1.0	E	1.8	1.6	1.7	[2.2][C]	2.6	2.7	2.8	2.7	2.9	2.7	2.3	1.7	1.6	1.6	1.6	1.6	1.7	1.7	1.6
19	1.3	1.4	E	E	E	1.0	1.6	1.7	2.3	C	C	<4.7[C]	2.9	2.8	2.7	2.3	1.8	1.6	1.6	1.7	1.6	1.6	1.6	1.6
20	1.2	1.7	E	E	E	E	1.5	1.6	2.4	2.9	2.8	3.1	2.9	2.8	[2.7][A]	2.6	2.1[A]	2.2[A]	2.4[A]	2.3[A]	1.6	1.6F	1.6	1.6
21	1.4	1.3	1.2	1.4	E	E	1.6	1.6	2.2	2.5[A]	2.8	3.0	3.1	3.0	2.7	[2.5][A]	2.3[A]	1.6	1.7	1.6	1.6	1.6	1.9	2.0[A]
22	1.5	E	E	E	E	E	1.6	1.6	2.5	2.8	2.9	3.2	3.9[A]	2.7	2.7	2.4	2.9[A]	1.6	1.6	1.7	1.6F	1.6	1.6	1.6
23	1.8F	1.3	1.3	1.0	1.5	E	1.6	1.7	2.5	2.7	2.8	3.0	2.8	2.6	2.4	2.2	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6
24	1.6	1.5	1.4	E	E	E	1.6	1.7	3.0[A]	C	C	C	C	C	C	C	C	1.6	[1.6][C]	1.6	1.6	1.6	C	C
25	C	1.2	E	E	E	C	1.5	1.7	2.4	2.7	2.7	2.8	2.8	2.7	2.5	2.4	[2.0][C]	1.6	1.5	<2.1[M]	C	1.6F	1.6F	1.5F
26	1.5F	1.2	E	E	E	E	1.6	1.6	2.4	2.9	<3.6[C]	3.1	3.3	<3.3[C]	2.8	C	C	C	C	1.6	1.6	C	C	C
27	C	E	1.2	E	1.5	1.0	1.3	1.6	2.2	2.7	3.2	3.2	3.2	3.2	2.6	2.4	1.9	1.6	1.6	1.6	1.6	1.6	1.6	1.6
28	1.5	E	E	E	E	E	1.6	1.6	2.4	2.8	2.8	<3.1[C]	3.2	2.9	2.8	2.6	2.1	<1.7[C]	1.6	<2.0[C]	1.6	1.6	1.6	1.6
29	1.5	E	E	E	E	E	1.7	[2.0][C]	2.2	2.7	3.0	2.8	2.8	3.1	3.0	2.5	1.7	1.6	[1.6][C]	1.6	1.6	1.6	1.5	1.5
30	1.3	1.2F	E	E	E	E	1.6	1.6	2.4	2.9	3.1	2.9	2.8	2.9	2.8	2.6	1.7	1.6	1.7	1.7	1.6	1.6	1.6	1.6F
31	1.4	E	E	E	E	E	1.5	1.5	2.3	C	<3.4[C]	<5.3[C]	2.9	3.1	2.8	2.4	2.0	1.7	1.6	1.6	1.6	1.6	1.6	1.6F
Mean Value	1.5	1.4	1.3	1.2	1.4	1.2	1.7	1.7	2.3	2.6	2.8	2.9	2.9	2.8	2.6	2.4	1.9	1.6	1.7	1.7	1.6	1.6	1.6	1.6
Median Value	1.5	1.3	E	E	E	E	1.6	1.6	2.3	2.6	2.8	2.8	2.8	2.8	2.6	2.4	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Count	26	28	28	28	27	27	27	27	27	24	24	23	27	26	27	26	26	26	26	26	25	25	26	26

fminF

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 10

13

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

IONOSPHERIC DATA

Jan. 1954 | **fminE** | **Wakkanai** | Lat. 45° 23.6' N, Long. 141° 41.1' E | 135° E Mean Time

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

Sweep 1.0 Mc to 22.0 Mc in 1 min ☐ Manual ☒ Automatic

W 11

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

IONOSPHERIC DATA

Jan. 1954 | foF2 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.8F	3.0F	2.8F	3.0F	3.0JF	2.3F	2.7F	3.4F	4.3	5.8	6.2	(6.0)P	5.6	5.0	5.5	5.2	4.7	3.5	3.2	3.0	2.7	2.5	3.2F	2.9F
2	2.9F	2.7F	2.5F	2.5F	3.5	2.9HF	2.0F	3.5	5.5	5.7	7.6	5.5	5.2	5.4	5.8	5.1	4.3	3.9P	[3.8]A	3.7	2.8F	2.8VF	3.0	3.1F
3	3.2F	3.3	3.1F	3.3	2.7	1.9F	2.2	3.2	6.3	7.3	10.0	10.5	5.5	5.0	5.7	5.3	4.0	3.3	3.0	2.9	2.5	2.6F	2.7F	3.0F
4	3.2	3.1	3.0F	3.0F	3.1F	2.9F	2.7F	4.1	5.1	5.6	6.8	6.3	4.9	4.7	4.7	4.7	4.6	[4.2]AF	3.7	3.6	[3.0]A	2.4F	2.6P	2.7F
5	2.3F	2.6F	2.7F	2.7F	2.9JF	2.3F	2.2F	3.5	4.2	4.7	6.0	6.7	5.6	5.8	4.6	4.7	3.7	3.2	3.4	3.0	3.0JF	3.1JF	3.2JF	3.2JF
6	2.8F	2.9JF	2.9JF	2.9JF	3.1F	2.5F	2.4F	3.0	5.1	(6.0)M	7.0	6.2PJ	5.0	5.0	5.3	5.5	4.2	3.3	4.1	4.0F	A F	3.0JF	3.0JF	3.0F
7	3.0F	3.1F	3.2F	3.2F	3.2JF	3.0JF	3.3F	3.3F	(4.4]A	5.5	7.5	7.8	6.0	5.4	4.9	4.5	3.9P	[3.9]A	3.9P	3.4F	2.9JF	[3.0]A	3.0F	2.9F
8	2.9F	3.0F	2.9F	2.7F	2.6	2.5	2.3F	3.3	4.7	6.6	5.6	5.7	5.3	M	M	4.5	3.6	2.8	2.4	3.0	2.7	A	A F	3.1F
9	2.5F	2.8F	2.8F	2.8F	2.8F	2.8F	2.3F	3.5	4.9	5.4	5.1	6.4	5.7	5.3	5.2	4.7	4.3	3.8	3.8	3.2	2.7PF	2.7F	3.2VF	2.9F
10	2.9F	2.9JF	2.8F	2.7F	2.9F	F	C	3.0	4.3	5.9	6.9	6.7	5.4	5.7	4.9	5.2	3.9	3.0	3.1	3.0F	2.7F	2.5F	2.9F	(2.5)F
11	2.9F	3.0F	3.6F	2.8F	2.5F	2.3F	[2.6]A	3.0	4.0	5.2	5.6	6.9	5.7	5.2	5.2	5.1	3.6	4.1	3.6	3.1	2.5	2.8	2.9F	3.0F
12	3.3F	3.3	C	C	C	C	C	C	C	C	6.7	5.9	5.2	5.4	5.2	4.6	3.9	3.2	3.4	2.6	2.7	2.4	2.8	3.1
13	3.0	3.0	3.0F	2.8F	2.8F	2.7F	2.5F	2.9	4.4H	4.9P	6.5	7.7	6.3	5.4	5.5	5.0	4.3	3.8P	3.5	3.0	2.6F	2.9JF	3.3F	2.8F
14	2.9F	3.2F	3.2F	2.6F	2.5F	2.6F	2.8F	3.4	4.4	5.5	6.6	5.6	5.5	5.5	5.4	4.6	4.0	3.1	2.6	2.6	2.6	2.3	2.7	2.8
15	2.6	2.8F	2.9F	2.9F	2.4F	2.6F	2.9F	3.4	4.3	4.3	5.5	6.5	6.4	5.5	5.0	5.3	4.0	3.1	3.7	4.0	2.7	3.2F	3.2	2.8F
16	2.8F	2.9F	3.1F	3.3	2.3HF	2.4JF	2.5	3.1	4.3	5.0	6.0	9.3	5.6	5.5	5.5	4.5	4.2	3.2	2.7	3.0	2.5	2.5	2.9F	3.0F
17	2.9	3.1	3.2	2.9	3.0F	2.3F	2.7F	3.3	4.2	4.6	5.7	6.5	6.2	5.5	5.5	5.5	4.1	3.5	3.2	3.5	2.4	3.0	3.4F	3.4JF
18	3.4F	3.2F	3.5F	3.0F	2.2F	2.3F	2.2F	3.3	4.7	6.1	7.4	6.9	7.4P	5.9	5.0	5.4	4.7	2.8	2.9	3.2	2.3	2.2	2.5	2.7
19	2.7F	2.7F	2.7	3.0	1.9F	2.5F	2.5F	4.0	4.8	4.7	7.0	8.1	5.9	5.5	5.8	4.8	4.1	2.9	3.3	3.6	3.5	3.4F	3.7F	2.9F
20	3.1	2.8	2.6	2.1F	2.1F	2.4F	2.1F	3.2	5.6	5.7	6.4	8.0	6.0	6.5	5.8	5.8	5.0P	3.3	3.6	3.7	3.4	3.3	4.2F	4.1F
21	(3.4)F	3.0F	3.0F	3.3F	3.1F	2.8F	2.3F	4.0	4.5	4.8	6.4	8.3	6.3	6.4	6.5	6.5	4.5	3.3	4.5	3.8	2.8	3.0	3.5JF	3.6JF
22	3.3F	C	C	3.9JF	3.2JF	2.9JF	3.2F	4.8ZP	5.0	5.6	6.6	7.5	6.2	6.2	5.1	5.6	5.2	3.8	[3.4]A	3.1	3.2	3.2F	3.6JF	3.3F
23	3.2F	3.1F	3.6F	2.9F	3.1F	2.9F	2.9F	3.6	[4.1]M	4.6	7.7	9.0	7.5	5.9	5.7	5.5	5.1	3.5	2.6	3.3	3.2	3.3F	3.0JF	3.3
24	3.0	3.0F	3.0F	3.5F	3.3F	2.3F	2.3F	3.7	4.4	4.9	5.6	7.5	6.6	6.0	5.5	5.1	4.1	3.3	3.3	3.0	3.0	2.7	3.0F	3.0F
25	3.2F	2.8F	3.1F	3.1F	4.0	2.8F	2.7F	3.6	5.0	5.7	6.5	7.5	7.4	5.5	4.9H	5.6	4.7	3.2	3.0V	2.8F	2.7F	3.0F	2.8F	2.6JF
26	2.6JF	2.7F	2.3F	2.3F	2.8F	1.8F	1.8F	3.4	4.6	4.4	5.2	5.9	6.4	6.1	5.2	5.2	5.4	3.7	2.8	2.5	2.9	2.8F	3.0F	2.9F
27	3.6F	3.0F	3.5F	C	C	C	C	C	C	5.0	6.1	7.5	6.7	5.9	5.4	5.4	6.0	3.7	2.6	2.8	3.1	3.6	3.1F	3.1F
28	3.5JF	3.6	3.6	3.6F	3.4F	2.8F	2.4	3.7	C	C	C	C	C	C	C	C	4.8	3.8	3.0	3.3	3.3	3.3	3.4F	3.0F
29	3.1F	3.0F	2.8F	3.5F	3.8F	3.2F	1.8F	3.3	4.5	4.7	5.4	6.7	6.1	6.0	5.2	M	M	3.4	2.6	3.0	3.2F	2.7F	3.1F	3.3JF
30	3.5JF	3.4JF	3.4JF	2.9JF	3.5F	3.3JF	2.1F	3.8	5.2	4.7	4.6	6.5	6.2	6.0	5.2	4.7	6.1	3.7	3.0	3.3	3.2	3.2F	3.0	3.0F
31	2.9F	3.0F	3.0F	3.2F	3.3F	2.9F	3.5F	4.0	4.6	5.2	6.2	7.9	7.4	6.1	5.5	5.8	5.0	4.0	3.2	3.9	3.9	3.5F	3.6	3.3
Mean Value	3.0	3.0	3.0	3.0	2.9	2.6	2.5	3.5	4.7	5.3	6.4	7.1	6.0	5.6	5.3	5.2	4.5	3.4	3.3	3.2	2.9	2.9	3.1	3.0
Median Value	3.0	3.0	3.0	2.9	3.0	2.6	2.4	3.4	4.6	5.2	6.4	6.8	6.0	5.5	5.3	5.2	4.3	3.4	3.2	3.1	2.8	3.0	3.0	3.0
Count	31	30	29	29	29	28	28	29	28	29	30	30	30	29	29	29	30	31	31	31	30	30	30	31

foF2

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

A 1

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

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Jan. 1954 | **hpF2** | 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	310F	360F	350F	250F	(220)JF	340F	290F	280F	280	280	250	(250)P	250	250	260	240	230	260	270	290	300	320	350F	350F
2	330F	340F	310F	310F	250	240HF	220F	250	250	270	250	230	240	280	260	250	240	280P	(270)A	260	300F	290VF	310	360F
3	320F	340	340F	280	260	260F	340	310	270	300	280	240	250	250	260	260	240	300	270	250	280	300F	280F	300F
4	300	310	350F	350F	300F	280F	300F	240	250	250	250	220	230	230	250	230	230	(240)AF	240	250	(280)A	310F	310P	290F
5	300F	320F	340F	300F	(250)JF	250F	280F	250	270	270	270	250	260	240	240	230	230	300	240	270	(290)JF	(320)JF	270F	(320)JF
6	320F	(310)JF	(320)JF	(330)JF	280F	280F	290F	270	250	(260)M	260	(230)BJ	240	250	260	230	220	310	270	260F	AF	(340)JF	(330)JF	370F
7	320F	340F	290F	260F	220JF	320JF	290F	260F	(280)A	310	270	250	240	230	240	230	240P	(260)A	280P	290F	(270)JF	(280)A	300F	260F
8	320F	340F	350F	310F	270	260	270F	270	270	270	240	250	260	M	M	230	230	260	300	300	270	A	AF	270F
9	260F	330F	350F	330F	300F	300F	260F	260	250	250	280	250	260	270	250	240	240	280	270	250	300PF	300F	270VF	270F
10	370F	(310)JF	310F	270F	290F	F	C	250	250	280	240	240	260	250	240	240	230	260	270	240F	270F	360F	330F	(310)F
11	250F	260F	320F	310F	260F	270F	(270)A	270	240	270	280	240	280	240	240	230	230	280	270	230	250	300	310F	300F
12	340F	300	C	C	C	C	C	C	C	C	280	250	260	260	240	250	230	300	270	270	250	300	320	300
13	300	300	320F	320F	330F	350F	220F	280	290H	270P	280	250	240	250	250	250	240	260P	270	260	270F	(360)JF	360F	300F
14	350F	260F	270F	220F	310F	260F	240F	250	250	290	250	240	270	260	240	240	240	250	270	270	250	330	310	320
15	320	330F	330F	280F	250F	330F	290F	260	240	240	280	260	240	270	240	240	220	320	300	280	240	310F	280	280F
16	350F	340F	310F	230	300HF	(320)JF	260	250	260	290	290	250	230	270	240	230	230	250	300	260	280	330	350F	360F
17	350	320	320	300	240F	330F	320F	250	230	260	270	260	250	250	270	230	220	270	260	230	300	330	370F	(310)JF
18	360F	330F	300F	230F	240F	330F	280F	240	270	270	260	270	250P	250	230	250	220	270	310	260	250	370	350	340
19	330F	340F	330	240	280F	290F	330F	270	250	260	290	250	250	250	250	240	230	280	330	290	320	320F	290F	300F
20	300	270	260	250F	320F	340F	300F	260	250	250	290	250	270	260	240	260	250P	300	300	260	310	370	350F	330F
21	(330)F	350F	310F	300F	300F	310F	300F	250	250	260	300	270	260	240	260	240	220	290	280	260	250	340	(360)JF	(280)JF
22	320F	C	C	(320)JF	(320)JF	330JF	310F	260Fz	210	260	270	250	250	250	240	270	240	240	(260)A	280	260	330F	300JF	370F
23	360F	360F	350F	300F	300F	280F	300F	250	(260)M	270	270	270	250	250	250	270	240	260	290	280	270	310F	(370)JF	300
24	350	360F	350F	310F	230F	320F	300F	260	250	260	300	270	250	240	250	260	230	280	260	260	270	320	360F	320F
25	300F	310F	310F	300F	240	270F	330F	250	250	270	260	260	240	240	280H	250	240	240	260V	280F	260F	280F	360F	(400)JF
26	(370)JF	370F	300F	300F	230F	260F	320F	260	240	230	260	250	260	250	270	230	250	250	240	260	280	280F	330F	350F
27	340F	320F	360F	C	C	C	C	C	C	240	270	250	260	230	260	260	240	230	320	280	310	310	350F	350F
28	(330)JF	330	330	320F	280F	270F	300	240	C	C	C	C	C	C	C.	C	260	260	300	280	300	300	300F	370F
29	320F	360F	330F	290F	260F	250F	320F	260	250	240	300	270	250	240	240	M	M	250	270	300	270F	300F	340F	(350)JF
30	(330)JF	(340)JF	(380)JF	(340)JF	300F	(250)JF	360F	250	220	240	250	270	250	240	240	250	260	250	310	280	290	280F	290	260F
31	320F	320F	320F	310F	300F	310F	280F	230	260	260	290	250	240	250	240	250	240	250	310	290	270	310F	290	300
Mean Value	320	330	320	290	270	290	300	260	250	260	270	250	250	250	250	240	240	270	280	270	280	320	320	320
Median Value	320	330	320	300	280	280	300	260	250	260	270	250	250	250	250	240	240	260	270	270	270	310	320	310
Count	31	30	29	29	29	28	28	29	28	29	30	30	30	29	29	29	30	31	31	31	30	30	30	31

Sweep 0.85 Mc to 18.0 Mc in 2 min ☐ Manual ☒ Automatic

A2

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

IONOSPHERIC DATA

Jan. 1954 | h'F2 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	270	300F	300	230F	200	260	260	240	230	270	250	250	250	250	250	230	230A	220	230	250	280A	300	310F	300
2	300	300	280	250	220	190H	210	230	240	250A	250	220	240	260	260	240	220	250F	[240]A	220A	250A	240	280	310
3	300A	320	290	230	200	220	(300)B	270	260	270	270	220	230	230	250	240	220	230	270A	230	250	270	250	250F
4	250	250	280	290	240	200	250	220	230	240	240	220	230	220	220	220	220	[220]AF	220A	220A	A	A	300A	240
5	270	270	270	240F	200	220F	270	230	240	250	270	250	260	230	230	230	220	270A	230	230	230	280F	220F	250F
6	270	250	270F	260F	200	200	260	270	(240)A	[240]M	240	230	240	240	250	220	210	250	230	240	290A	270F	270F	320
7	270	270	240	220	200	250	230	220A	[240]A	280	260	250	240	230	240	220	220	[240]A	250	250	220	[240]A	250F	220
8	290F	270	260	250	220	210	250F	[240]M	240	260	230	250	260	240	[230]M	220	210	240	250	250	240	A	AF	260F
9	240	270	270	270	260	230	250	230	230	250	280	240	260	250	240	230	220	230	240	220	270A	260	250	230
10	330	270F	240	220	230	220F	[220]C	230	230	270	270	240	260	230	230	240	220	230	A	220	220A	360AF	280	(310)AF
11	230	240	280	260	230	220	[240]A	250	230	250	280	240	270	240	240	220	200	240	230	200	240	280	290	270
12	290F	250	C	C	C	C	C	C	C	C	260	240	250	250	240	240	210	250	230	230	200	260	290	260
13	260	260	260	260	250	290	200	230	250H	230	280	250	240	240	240	240	220	230	240	230	240	320F	300F	260
14	300F	250	230	200	270	240	240	230	230	L	250	240	260	250	230	230	220	230	250	250	240	280	270	260
15	250	290	260	230	210	250	250	220	220	230	280	260	240	240	240	230	210	260	250	240	210	290	250	240
16	310	300	270	210A	180H	260	240	230	230	280	280	240	230	270	230	220	220	230	250	240	250	300	300	300
17	300	260	260	250	200	240	260	230	220	230	270	260	250	250	250	230	210	230	230	220	230	290	300F	260F
18	280F	280F	240	200	220	270	250	220	250	260	250	260	240	250	230	240	210	200	270	230	220	320	320	320A
19	300	310	290	210	210	250	300	250A	230	260	280	240	250	250	250	230A	220	230	280	250	250	260	250	260
20	250	240	260A	200	250	290	270F	230	230	250	280	240	270	250	230	230	230	250	250	250	250	300	270F	260F
21	(250)F	250	270	240F	230	250	260	230	250	230	300	250	240	240	250	230	210	250	240	220	220	270	290F	220F
22	250F	C	C	230F	240F	270	240	220	210	240	260	250	250	250	240	250	230	230	(240)A	250	230	280	250F	300
23	300	290	270	230	250	210	250	240	230	230	260	260	240	250	250	240	230	200	270	250	230	240	320F	250
24	290	300	290	250	200	270	250	230	220	250	290	260	240	240	240	220	220	270	240A	230	250	260	300F	270
25	250	250	250	230	220	200	260	230	250	260	260	250	230	230	240H	240	220	200	230	250	240	240F	320F	350F
26	310F	300	250	250	210	200	320F	220	230	220	250	250	250	250	250	230	220	220	220	240	240	240	280	300
27	260	270	260	C	C	C	C	C	C	240	270	250	260	230	250	250	230	210	270	260	250	250	280	290
28	240	260	250	250	230	220	250	230	C	C	C	C	C	C	C	C	240	250A	250	250	250	230A	270	300
29	250	290	260	240	220	200	B	240	240	240	300	260	250	240	240	M	M	200	240	260	240	250	290F	280F
30	250F	250F	250F	280F	250F	200F	330F	230	220	230	240	260	250	240	240	230	250	210	250	260	250	240	250	240
31	280F	270	250	250	240	250	240	220	230	240	280	240	240	240	230	250	230	220	240	250	240	250	250	230
Mean Value	270	270	260	240	220	230	260	230	230	250	270	250	250	240	240	230	220	230	240	240	240	270	280	270
Median Value	270	270	260	240	220	230	250	230	230	250	270	250	250	240	240	230	220	230	240	240	240	270	280	260
Count	31	30	29	29	29	29	28	29	28	28	30	30	30	30	30	29	30	31	30	31	30	29	30	31

h'F2 | Sweep 0.85 Mc to 22.0 Mc in 2 min | ☐ Manual ☒ Automatic | A3

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

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Jan. 1954

foF1

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									Q	L	3.6	3.7	3.7	L	L	L								
2									Q	A	3.7	3.7	3.6	L	L	Q								
3									L	L	3.8^{L}	3.8	3.7	L	L	Q								
4									(2.6)^{L}	L	3.6	3.7	L	Q	Q	Q								
5									Q	A	3.6	3.6	3.7	3.6	(3.5)^{L}	2.6^{L}								
6									A	M	3.5	3.6	3.5^{L}	L	L	Q								
7									A	L	3.7	3.7	3.7	3.5^{L}	[3.1]^{L}	2.7^{L}								
8									Q	3.5	3.6	3.7	3.7	3.6	M	L								
9									Q	3.5^{L}	(3.6)^{L}	3.7	3.7^{L}	3.5^{L}	L	Q								
10									Q	3.5	3.7	3.7	3.7	3.6	Q	Q								
11									Q	Q	3.7	(3.7)^{L}	L	(3.6)^{L}	3.5^{L}	Q								
12									C	C	3.8	(3.8)^{L}	[3.7]^{L}	(3.6)^{L}	(3.5)^{L}	(3.0)^{L}	Z.4							
13								Q	(2.7)^{L}	Q	3.9	3.8	3.8^{L}	3.6	3.4^{L}	(2.7)^{L}	Q							
14								Q	Q	L	(3.7)^{L}	3.8^{L}	(3.9)^{L}	[3.7]^{L}	3.5^{L}	L	Q							
15								Q	Q	Q	3.6^{L}	3.8	3.9	3.6^{L}	L	Q								
16								Q	Q	L	3.8^{L}	3.8	3.9	3.8	3.5	L	Q							
17								Q	Q	Q	3.7^{L}	4.0	3.8	3.7	L	L	Q							
18								Q	Q	(3.7)^{L}	3.9	4.0	4.0	3.7	3.5	3.0^{L}	Q							
19								A	Q	L	4.0	3.9	[3.8]^{L}	(3.6)^{L}	L	A	Q							
20								Q	Q	Q	(4.0)^{L}	3.8	4.0	(3.8)^{L}	(3.5)^{L}	Q								
21								Q	M	Q	4.0^{L}	4.0^{L}	3.9^{L}	3.8^{L}	3.6	3.2^{L}								
22								Q	2.7	L	L	3.8^{L}	[3.8]^{L}	3.8^{L}	A	A	Q							
23								Q	Q	C	3.7^{L}	3.9	4.0^{L}	3.9	3.7^{L}	Q								
24								Q	Q	A	L	4.0	4.0	3.9	3.5^{L}	2.8	Q							
25								Q	2.5	L	4.0	4.0	4.0	3.8^{L}	3.4^{L}	2.8	Q							
26								Q	Q	L	3.5	4.0	4.0	3.9	L	Q	Q							
27								C	C	Q	3.5	3.7^{L}	4.0	L	L	Q	Q							
28								Q	C	C	C	C	C	C	C	C								
29								Q	L	L	(4.1)^{L}	4.0	3.9	3.8	3.6	M	M							
30								Q	L	L	3.3	4.1	4.0	3.9	3.7^{L}	3.3^{H}	Q							
31								Q	L	Q	3.7	4.0	3.6	4.0	3.5	3.1	Q							
Mean Value								—	2.6	3.6	3.7	3.8	3.8	3.7	3.5	2.9	2.4							
Median Value								—	2.6	3.5	3.7	3.8	3.8	3.7	3.5	2.8	2.4							
Count								—	4	4	28	30	28	24	16	10	1							

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

A4

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

IONOSPHERIC DATA

Jan. 1954 | h'F1 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

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

h'F1

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

A5

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

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Jan. 1954

foE

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									1.9	2.5	2.6	2.7	2.7	2.7	2.5	2.2								
2									1.7	2.5	2.5	2.8	2.8	2.7	2.5	2.0	A							
3									2.0	A	A F	2.7	2.8	2.6	A	A								
4									1.8	[2.2] AF	2.5	[2.6] A	2.6	2.6	[2.4] AF	2.3								
5									1.9	[2.2] A	2.6	2.6 A	2.7 A	A	A	2.2	B							
6									A	M	2.6	2.7	2.8	2.7	2.5	2.3								
7									A	2.4 A	2.6	2.8	2.8	2.7	2.5	2.2								
8									2.1	2.5	2.7	2.7	2.8	2.7	[2.4] M	2.0	B							
9									1.9	[2.2] A	2.5 F	2.7	2.7	2.6	2.5	2.2								
10									1.8 A	2.4	2.5	2.7	2.7	[2.6] A	2.5 F	2.3								
11									A	2.4	2.6	2.8	2.8	2.7	2.4	A								
12									C	C	2.7 H	2.8	2.8	2.7	2.5	2.1	A							
13								B	1.7	2.4	2.6	[2.7] A	2.8	A	A	2.3	1.6 B							
14								B	1.8	2.5	2.6	2.7	2.8	2.7	2.5	2.1	1.7							
15								B	1.8	2.5	2.6	2.7	2.8	2.7	2.3	2.2								
16								B	2.0	2.5	2.6	2.7	2.8	2.7	2.5	2.2	1.8							
17								B	1.9	2.4	2.6	2.7	2.8	2.7	2.5	[2.2] A	1.9							
18								B	2.0	2.5	2.7	2.8	2.8	2.6	2.5	2.3	1.8							
19								B	A	A	A	A	2.7	2.7	2.5	2.2	1.9							
20								B	A	2.4	2.6	2.8	[2.7] A	2.6	2.5	2.3								
21								A	M	2.3	2.8	2.8	2.8	2.8	2.7	2.2	A							
22								B	1.8	[2.2] A	2.6	2.7	2.7	2.6	2.6	2.4	1.8							
23								B	2.0	[2.4] C	2.8	2.7	2.8	2.7	2.5	2.3	A							
24								1.5	1.9	2.4	2.7	2.8	2.8 A	2.7	2.5	2.3	1.8							
25								B	2.0	2.4	2.6	2.7	2.8	2.7	2.6	2.3	1.7							
26								B	2.0	2.5	2.7	2.8	2.8	2.8	[2.6] A	2.3	B							
27								C	C	2.5	2.8	2.8	2.8	2.8	2.6	[2.3] A	1.9							
28								B	C	C	C	C	C	C	C	C								
29								A	2.0	2.4	2.7 A	2.8	2.9	2.9	2.7	2.5	M							
30								B	2.0 A	[2.4] A	2.8	2.8	2.9	2.8	2.7	2.3	2.0							
31								B	2.0	2.3	2.8	2.8	2.9	2.9	2.7	2.5	1.8							
Mean Value								1.5	1.9	2.4	2.6	2.7	2.8	2.7	2.5	2.3	1.8							
Median Value								1.5	1.9	2.4	2.6	2.7	2.8	2.7	2.5	2.3	1.8							
Count								1	22	26	28	29	30	28	27	28	12							

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

A6

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

IONOSPHERIC DATA

Jan. 1954 | h'E | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

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

h'E

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

A7

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

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Jan. 1954 | **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	2.3Y	2.8	2.3	2.1FY	1.8FY	2.1Y	E	2.1	3.1	3.5	3.5	4.3	4.1	3.5	G	3.5Y	5.5	2.6	2.0	5.5Y	7.0	2.9	4.1	2.0
2	1.8	2.2	1.8Y	E	2.4	2.3Y	1.9	G	3.0	3.8	4.6	4.1	G	G	3.2	2.9Y	2.9	3.5	7.2Y	4.3	3.7	3.2F	3.1	2.8
3	4.0	3.1	2.2	2.3	1.8Y	E	E	2.4	2.9	6.3	4.2	4.2	3.5	3.5	3.5	3.2	3.1	4.5	6.0	3.5F	2.4	2.5	2.5F	3.0
4	3.0F	2.3F	3.0Y	2.3	2.2F	4.2	3.0	3.2	2.1	3.5F	4.5	4.4	G	4.2	3.5F	G	6.5	8.0	4.5	4.5	3.3	5.5F	3.8	2.4F
5	2.7	2.3YF	2.3Y	2.3Y	E	2.5Y	E	2.5Y	G	4.4	4.6	5.5	4.5	3.5	3.3Y	2.8	2.8Y	3.0	3.1	2.2	E	E	3.0F	2.4
6	E	2.3Y	2.4	2.5	3.4	2.4	2.4	3.5	5.5	M	G	G	G	3.1	2.0	2.8	1.9	2.9	3.1	4.5	7.2	2.6	2.5	2.3
7	2.3F	2.3Y	2.3Y	2.3Y	2.3	2.3F	3.5	3.5	9.2	3.6	3.5	4.5	3.5	3.5	2.9	2.9	2.8Y	3.6	2.8	3.1	3.0	4.2F	3.0F	3.0F
8	3.1F	3.1F	2.3F	2.2F	2.5Y	2.7	2.2Y	3.5	3.4	4.1	4.0	3.5	4.0Y	4.0	M	2.7	G	2.3Y	2.2	1.9	3.0	4.2	5.2	4.2
9	4.1YE	2.4YF	2.2YF	2.8Y	4.1	2.3	2.4	2.3	2.7	6.5F	4.2	4.2	4.1F	3.8Y	4.0	3.4F	3.2F	3.3	3.0	3.5	5.7	6.5	4.5	3.2
10	4.3	2.4	E	2.3	2.3	3.1	C	3.5F	3.1	G	G	G	4.0	4.2	4.2	4.2	2.5F	2.9F	4.5	3.5	4.5	3.5	3.0	3.5
11	2.8	2.9	2.3	1.8	3.0Y	2.3	2.8	2.8	3.5	3.5	3.4	3.8	3.2	G	4.4	3.5	3.3	E	E	2.3	3.1	4.0	3.1	3.4
12	2.6	>3.5C	C	C	C	C	C	C	C	C	3.5	3.5	G	3.2	3.2	3.0	3.5	3.0F	2.2	2.0	E	2.2	2.2	2.4
13	2.8	2.2	2.3	2.2F	2.2	2.3Y	2.2	B	2.7	G	G	4.5	4.5	4.1	4.2	3.3	2.3	2.3	E	1.7	1.8	1.7	1.8	E
14	1.8	2.2	2.3	2.2Y	E	2.4Y	E	2.0	2.5	3.1	3.2	4.2	4.2	3.4	3.5	3.5	3.0	E	E	E	E	E	1.7	E
15	2.2	2.2	2.2Y	1.8	2.3	2.3	2.3	2.3Y	2.4	G	3.5	4.0	4.2	4.5	3.5	2.9	2.9	2.8	1.8	1.8	1.8	2.2	2.8	3.3
16	2.5	3.5	3.0	2.3	2.2	2.3	2.3	B	4.2	3.1Y	G	3.5	G	G	3.5	3.5	2.8Y	1.8	2.2	1.8	2.3	2.3F	1.9F	E
17	2.6Y	2.3	1.8	2.3F	1.8Y	2.2Y	2.1Y	B	G	G	G	G	3.5	G	3.5Y	3.2	2.5	2.3	E	2.7	3.1	3.2	2.3	E
18	2.3F	2.2F	2.2	2.2Y	1.7	2.3Y	2.3	2.3	G	3.8	3.5	3.5	G	G	3.9	3.2	2.3	2.3	2.2	2.3Y	2.2	2.3	3.2	3.7
19	3.2	3.5F	2.9	2.3	2.8Y	2.2	3.7	4.4	4.2	4.4	4.1	4.4	4.5	G	4.0	3.5	3.1	2.4	2.0	2.3	2.8	2.7	2.3	2.3F
20	2.2	E	3.0	2.3	E	E	2.2Y	2.4	2.5	3.5	3.3	3.4	4.2	4.3	3.8	3.5	2.6	3.0	3.4	4.5	2.8	2.7	2.3	E
21	2.2	2.0	2.7	2.2	2.3	M	E	3.2	M	G	3.5	4.0	2.8	3.5	4.3	3.3	3.2	3.2	2.5	1.9	1.8	E	2.0	E
22	2.4	C	C	2.0	E	2.3	1.8	3.2Y	G	3.1	3.3	3.4	4.0	4.1	4.5	4.1	2.6	2.2	10.0	2.3F	2.6	2.0Y	E	3.1
23	E	E	2.5	1.7F	2.3	2.4	E	2.5	G	3.1	4.5	4.5	4.5	3.9	3.5	3.5	3.4	4.3	3.0	2.8	2.0	2.2	2.3	2.2
24	2.3	2.0	2.3	2.2Y	2.2Y	E	2.0	2.3	4.2	4.5	4.5	4.5	4.5	6.5	3.5	3.5	G	3.5	2.9	4.2	4.4	2.6	2.7Y	2.2
25	2.3	2.3Y	2.2	2.3	3.3Y	2.2Y	2.3	2.3	3.0	6.5	G	3.5	G	G	G	4.1	G	2.1	2.3F	E	E	1.8	E	E
26	1.9	2.3	2.2	2.3	2.2Y	1.8	E	2.7Y	3.1	G	G	G	G	G	2.5	G	G	3.1	2.4	2.3	1.8	2.1	2.0Y	2.3
27	2.1	2.8Y	1.6	C	C	C	C	C	C	3.5	G	4.4	4.4	4.4	3.2	3.1	G	2.1	E	E	E	E	2.0	2.3
28	2.3	2.3	2.3Y	2.2	2.4	1.7	2.2	2.3Y	C	C	C	C	C	C	C	C	2.4	4.3	2.6	3.3	4.2	3.1	3.5	3.1
29	2.6Y	2.2Y	3.0	2.2	2.2Y	2.0	2.3	2.3	2.7	4.1	3.5	3.5	G	4.1Y	G	M	M	2.4	2.1	2.2	2.3Y	1.8	3.0	E
30	2.2	2.2Y	2.1Y	2.1	2.3	E	E	2.3	3.0	3.6	G	G	G	G	G	G	3.0	2.8	2.2	3.1	2.2Y	2.1Y	1.8	E
31	2.2	2.3	2.2	E	1.8	2.2Y	2.1	2.2	G	G	3.6	3.7	G	G	G	3.4	2.8	3.0	E	2.0	E	E	1.8	E
Mean Value	2.6	2.5	2.3	2.2	2.4	2.4	2.4	2.7	3.5	4.1	3.8	4.0	4.0	4.0	3.6	3.4	3.1	3.1	3.3	2.9	3.2	2.9	2.7	2.8
Median Value	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.4	3.0	3.5	3.5	3.9	3.5	3.5	3.5	3.3	2.8	2.9	2.3	2.3	2.4	2.3	2.5	2.3
Count	31	30	29	29	29	28	28	26	26	28	30	30	30	30	29	29	30	31	31	31	31	31	31	31

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

A8

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

IONOSPHERIC DATA

Jan. 1954 | **(M3000)F2** | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0F	2.8F	2.8F	3.2F	(3.7)3F	2.9F	3.0F	3.1F	3.2	3.5	3.5	(3.6)P	3.7	3.6	3.4	3.7	3.6	3.3	3.3	3.1	3.2	3.0	2.8F	2.8F
2	2.9F	2.9F.	3.1F	3.1F	3.4	3.3HF	3.5F	3.4	3.5	3.3	3.6	3.7	3.6	3.3	3.5	3.6	3.5	3.2P	[3.3]A	3.4	3.0F	3.1VF	3.0	2.8F
3	3.1F	3.0	2.9F	3.2	3.3	3.2F	2.8	2.9	3.4	3.1	3.3	3.6	3.5	3.4	3.5	3.3	3.6	3.1	3.3	3.3	3.2	3.0F	3.1F	3.0F
4	3.1	2.9	2.8F	2.8F	3.0F	3.1F	3.0F	3.5	3.5	3.5	3.6	3.8	3.7	3.6	3.6	3.6	3.5	[3.6]AF	3.7	3.4	[3.2]A	3.0F	3.0P	3.1F
5	3.1F	3.0F	2.9F	3.1F	(3.4)3F	3.4F	3.1F	3.4	3.2	3.2	3.4	3.8	3.7	3.8	3.6	3.7	3.7	3.1	3.5	3.3	(3.2)3F	(3.0)3F	3.4F	(3.1)3F
6	2.9F	(3.2)3F	(3.0)3F	(3.1)3F	3.2F	3.3F	3.3F	3.3	3.7	[3.6]M	3.4	(3.6)P3	3.7	3.5	3.4	3.8	3.7	3.0	3.3	3.4F	AF	(2.9)3F	(2.9)3F	2.8F
7	3.0F	2.9F	3.1F	3.4F	3.7ZF	2.9ZF	3.2F	3.3F	[3.2]A	3.1	3.3	3.6	3.6	3.8	3.6	3.6	3.5P	[3.4]A	3.3P	3.0F	(3.3)3F	[3.2]A	3.0F	3.2F
8	2.9F	2.8F	2.8F	3.0F	3.4	3.3	3.2F	3.3	3.3	3.4	3.7	3.6	3.3	M	M	3.7	3.8	3.2	3.1	3.1	3.3	A	AF	3.3F
9	3.4F	2.9F	2.8F	2.9F	3.2F	3.0F	3.4F	3.4	3.5	3.7	3.3	3.6	3.5	3.2	3.6	3.6	3.5	3.3	3.4	3.4	3.1PF	3.0F	3.4VF	3.2F
10	2.8F	(3.1)3F	3.0F	3.2F	3.1F	F	C	3.5	3.6	3.4	3.6	3.7	3.6	3.5	3.5	3.5	3.7	3.3	3.2	3.5F	3.2F	2.8F	2.8F	(3.0)F
11	3.4F	3.3F	2.8F	2.8F	3.3F	3.0F	[3.2]A	3.4	3.5	3.2	3.3	3.7	3.3	3.6	3.5	3.7	3.8	3.2	3.3	3.8	3.3	2.9	3.0F	3.0F
12	2.8F	3.0	C	C	C	C	C	C	C	C	3.0	3.6	3.4	3.5	3.7	3.6	3.7	3.1	3.3	3.2	3.4	3.0	3.0	3.1
13	3.0	3.0	2.9F	2.9F	2.9F	2.7F	3.6F	3.1	3.3	3.2	3.3	3.6	3.8	3.7	3.5	3.6	3.6	3.2P	3.3	3.3	3.1F	(2.8)3F	2.7F	3.1F
14	2.8F	3.2F	3.3F	3.7F	3.0F	3.2F	3.3F	3.5	3.4	3.1	3.6	3.7	3.2	3.2	3.7	3.6	3.5	3.5	3.2	3.2	3.4	2.8	3.1	3.0
15	3.0	2.8F	2.9F	3.1F	3.5F	2.8F	3.1F	3.5	3.6	3.7	3.4	3.8	3.7	3.3	3.6	3.7	3.8	2.9	3.1	3.3	3.5	2.9F	3.3	3.3F
16	2.7F	2.9F	3.1F	3.8	3.0HF	(2.9)3F	3.4	3.5	3.4	3.2	3.0	3.6	3.7	3.4	3.6	3.7	3.7	3.4	3.1	3.4	3.2	3.0	2.8F	2.7F
17	2.9	2.9	2.9	3.2	3.6F	2.9F	2.9F	3.6	3.8	3.4	3.3	3.5	3.5	3.5	3.4	3.8	3.7	3.3	3.2	3.5	3.0	2.9	2.6F	(3.0)3F
18	2.7F	2.8F	3.1F	3.6F	3.6F	3.0F	3.4F	3.5	3.4	3.4	3.5	3.4	3.6P	3.6	3.8	3.5	3.8	3.3	3.0	3.4	3.4	2.7	3.0	2.9
19	3.0F	3.0F	3.0	3.6	3.2F	3.2F	3.0F	3.4	3.5	3.4	3.3	3.5	3.5	3.6	3.6	3.5	3.6	3.0	2.9	3.2	2.9	2.9F	3.3F	3.1F
20	3.2	3.3	3.4	3.3F	2.9F	2.9F	3.0F	3.4	3.5	3.5	3.2	3.6	3.4	3.5	3.6	3.3	3.4P	3.0	3.2	3.3	3.0	2.7	2.8F	2.9F
21	(2.8)F	2.7F	3.0F	3.0F	2.9F	3.1F	3.0F	3.5	3.5	3.3	3.1	3.4	3.4	3.6	3.5	3.7	3.7	3.1	3.3	3.5	3.5	2.8	(2.7)3F	(3.1)3F
22	2.9F	C	C	(2.9)3F	(2.8)3F	(2.9)3F	2.9F	3.5FZ	3.8	3.3	3.4	3.6	3.5	3.7	3.6	3.5	3.6	3.5	[3.3]A	3.1	3.4	2.8F	(2.9)3F	2.7F
23	2.8F	2.8F	3.7F	3.1F	3.1F	3.1F	3.1F	3.4	[3.4]M	3.4	3.4	3.3	3.6	3.5	3.5	3.3	3.6	3.3	3.1	3.3	3.4	3.0F	(2.7)3F	3.2
24	2.8	2.8F	2.9F	3.0F	3.7F	2.9F	3.0F	3.4	3.4	3.4	3.2	3.3	3.6	3.6	3.4	3.3	3.7	3.1	3.3	3.4	3.3	2.9	2.7F	2.9F
25	3.1F	3.0F	2.9F	3.0F	3.6	3.4F	2.9F	3.4	3.6	3.5	3.4	3.4	3.7	3.8	3.2H	3.5	3.6	3.4	3.4V	3.1F	3.3F	3.2F	2.8F	(2.6)3F
26	(2.7)3F	2.7F	3.0F	3.0F	3.6F	3.2F	3.0F	3.3	3.6	3.7	3.4	3.5	3.4	3.6	3.2	3.6	3.5	3.5	3.6	3.4	3.1	3.1F	2.8F	2.8F
27	2.8F	2.9F	2.7F	C	C	C	C	C	C	3.7	3.5	3.6	3.5	3.7	3.5	3.4	3.6	3.7	3.0	3.2	2.8	3.1	2.8F	2.9F
28	(3.0)3F	3.0	3.0	3.0F	3.2F	3.2F	3.1	3.5	C	C	C	C	C	C	C	C	3.3	3.3	3.0	3.1	3.0	3.0	3.0F	2.6F
29	2.9F	2.7F	3.0F	3.2F	3.3F	3.3F	3.0F	3.3	3.6	3.6	3.1	3.4	3.6	3.6	3.6	M	M	3.5	3.1	3.0	3.4F	3.1F	2.9F	(2.7)3F
30	(2.8)3F	(2.7)3F	(2.6)3F	(2.8)3F	3.0F	(3.3)3F	2.8F	3.5	3.8	3.5	3.4	3.4	3.6	3.6	3.6	3.5	3.6	3.4	3.0	3.3	3.1	3.1F	3.2	3.4F
31	3.0F	3.0F	3.0F	2.8F	3.0F	2.9F	3.4F	3.7	3.2	3.2	3.2	3.7	3.7	3.6	3.6	3.6	3.8	3.3	2.9	3.3	3.3	3.0F	3.2	3.1
Mean Value	3.0	2.9	3.0	3.1	3.2	3.1	3.1	3.4	3.5	3.4	3.4	3.6	3.6	3.5	3.5	3.6	3.6	3.3	3.2	3.3	3.2	3.0	3.0	3.0
Median Value	2.9	2.9	3.0	3.1	3.2	3.1	3.0	3.4	3.5	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.3	3.3	3.3	3.2	3.0	3.0	3.0
Count	31	30	29	29	29	28	28	29	28	29	30	30	30	29	29	29	30	31	31	31	30	30	30	31

(M3000)F2

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

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

IONOSPHERIC DATA

Jan. 1954 | fminF | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.5	1.5^{F}	1.4	1.0^{F}	E	1.3	1.5	1.5	2.4	2.5	2.7	2.7	[2.8]^{A}	2.8	2.7	2.5	[2.0]^{A}	1.5	1.5	1.7	2.0^{A}	1.5	1.5^{F}	1.5
2	1.4	1.0	E	E	1.0	E	1.5	1.5	2.4	[2.6]^{A}	2.8	2.8	2.8	3.0	2.9	2.5	2.3	1.7^{F}	A	A	1.5	1.5	1.9	1.8
3	[2.0]^{A}	2.1^{A}	1.0	E	1.0	E	1.5	1.5	2.4	[2.6]^{A}	2.7	2.8	2.8	2.6	2.7	2.2	2.0^{A}	1.5	2.5^{A}	1.5	1.5	1.5	1.5	1.5
4	1.5	1.3	E	1.0	E	E	1.5	1.5	1.9	3.0	3.0	2.8	2.8	2.8	2.5	2.4	1.8	A^{F}	A	A	A	2.0^{AF}	2.0^{AF}	1.5
5	1.5	1.0	E	1.0^{F}	1.0	1.0	1.5	1.7	2.4	3.2	3.1	3.1	2.8	2.7	2.4	2.4	2.1	[1.8]^{A}	1.5	1.5	1.5	1.5^{F}	1.5^{F}	1.5^{F}
6	1.3	E	1.3^{F}	1.3	E	E	1.5	2.4^{A}	4.0^{A}	[3.3]^{M}	2.6	2.7	2.8	2.8	2.5	2.3	1.9	1.7	1.6	2.5^{A}	2.5^{A}	1.5^{F}	1.5^{F}	1.5
7	1.3	E	E	E	E	E	1.5	A	A	2.8	2.9	2.8	2.8	2.7	2.4	2.2	2.0^{A}	[1.9]^{A}	1.8	1.8^{F}	1.5	[1.6]^{A}	1.7^{F}	1.5
8	1.3	E	1.0	E	E	E	1.5	[1.8]^{M}	2.2	2.5	2.7	2.7	2.8	2.7	[2.6]^{M}	2.4	2.1	1.5	1.5	1.5	1.5	A	A	2.5^{AF}
9	1.5	1.0	E	E	1.3	E	1.5	1.5	2.4	2.5	2.8	3.2	3.0	2.7	2.6	2.4	1.9	1.5	1.5	1.5	1.9	1.7	1.7	1.9
10	1.5	1.1	1.0	1.0	1.0	1.0^{F}	[1.4]^{C}	1.7	2.5	2.9	2.9	3.0	2.9	2.8	2.9	2.3	1.8	1.5	2.5^{A}	1.5	[1.8]^{A}	2.0^{AF}	1.5	2.1^{AF}
11	1.5	1.3	1.1	E	1.0	1.0	[1.2]^{A}	1.5	2.2	2.9	3.0	3.0	2.8	2.8	2.6	2.5	1.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5
12	1.4	1.5	C	C	C	C	C	C	C	C	2.8	3.0	3.1	3.0	2.8	2.3	1.8	1.5	1.5	1.5	1.4	1.4	1.4	1.5
13	1.4	1.3	E	E	E	E	1.5	1.7	2.1	2.6	2.7	3.0	3.0	2.8	2.5	2.3	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
14	1.3^{F}	E	E	E	E	E	1.5	1.5	2.3	2.7	2.7	2.7	3.0	2.9	2.6	2.4	1.7	1.5	1.5	1.4	1.4	1.5	1.5	1.5
15	1.5	E	E	E	E	E	1.5	1.5	2.4	2.9	2.7	2.7	2.8	2.8	2.9	2.5	1.8	1.7	1.5	1.5	1.5	1.5	1.5	1.5
16	1.6	1.3	1.4	A	E	E	1.5	1.5	2.3	2.7	2.8	3.0	2.9	2.8	2.8	2.6	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5
17	1.3	E	E	1.3	E	E	1.5	1.5	2.4	2.7	2.9	2.8	2.9	2.8	2.9	2.4	2.2	1.5	1.5	1.5	1.5	1.5	1.5^{F}	1.5^{F}
18	1.3	E	E	E	E	E	1.5	1.5	2.5	2.7	2.8	2.8	3.0	2.9	2.5	2.4	1.9	1.5	1.5	1.5	1.5	1.5	1.5	(1.6)^{A}
19	1.7	1.7	1.4	1.0	E	E	1.6	2.8^{A}	2.4	2.8	2.9	3.0	3.0	3.0	2.5	[2.3]^{A}	2.1	1.5	1.5	1.5	1.5	1.6	1.5	1.5
20	1.3	1.0	2.0^{A}	E	E	E	1.5^{F}	1.5	2.5	2.6	2.9	3.0	3.3	3.2	2.5	2.5	2.1^{A}	1.8	2.4^{A}	2.7^{A}	1.7	1.5	1.5^{F}	1.5^{F}
21	1.3^{F}	E	E	E	E	E	1.5	1.9	[2.3]^{M}	2.7	2.8	3.0	3.2	3.1	3.0	2.5	2.1	1.7	1.5	1.5	1.5	1.5	1.4	1.5^{F}
22	1.3	C	C	E	E	E	1.5	1.5	2.2	3.0	3.0	3.3	3.2	3.3^{A}	3.6^{A}	[2.8]^{A}	1.9	1.5	[1.5]^{A}	1.5	1.5	1.5	1.5^{F}	1.5
23	1.4	E	E	E	1.3	E	1.5	1.7	2.3	[2.6]^{C}	2.8	3.1	2.8	2.8	2.6	2.6	2.0	1.5	1.7	1.5	1.5	1.5	1.5	1.5
24	1.3	E	E	E	E	E	1.5	1.8	2.3	3.8^{A}	[3.7]^{A}	3.9^{A}	3.5	3.7^{A}	2.7	2.3	2.4	2.5^{A}	[2.0]^{A}	1.6	1.6	1.5	1.5^{F}	1.5
25	1.0	E	E	E	E	E	1.5	1.5	2.3	2.8	2.8	2.8	2.8	2.7	2.7	2.3	2.2	1.5	1.5	1.5	1.5	1.5^{F}	1.5^{F}	1.5^{F}
26	1.0	E	E	E	E	E	1.5^{F}	1.7	2.3	2.6	3.3	3.2	3.4	3.0	2.7	2.6	2.1	1.6	1.5	1.5	1.5	1.5	1.5	1.5
27	1.4	2.3	E	C	C	C	C	C	C	2.5	3.4	[3.2]^{A}	3.1	[3.0]^{A}	3.0	2.9	2.2	1.5	1.5	1.5	1.5	1.5	1.5^{F}	1.5
28	1.0	E	E	E	E	E	1.0	1.5	C	C	C	C	C	C	C	C	2.5	2.6^{A}	1.7	1.5	1.7	[1.6]^{A}	1.5	1.5
29	1.5	E	E	E	E	E	1.5	1.8	2.4	2.8	3.2	3.1	3.0	2.9	2.7	M	M	1.5	1.5	1.5	1.5	1.5	1.5	1.5^{F}
30	1.3^{F}	E	E	E	E	E	1.5	1.8	2.4	2.7	2.8	3.2	3.0	3.0	2.7	2.5	2.4	1.5	1.5	1.9	1.5	1.5	1.5	1.5
31	1.3	E	E	E	E	E	1.5	1.5	2.4	2.7	2.9	3.3	3.0	2.9	2.7	2.4	2.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Mean Value	1.4	1.4	1.3	1.1	1.1	1.1	1.5	1.7	2.4	2.8	2.9	3.0	3.0	2.9	2.7	2.4	2.1	1.6	1.6	1.6	1.6	1.5	1.5	1.6
Median Value	1.4	E	E	E	E	E	1.5	1.5	2.4	2.7	2.8	3.0	3.0	2.8	2.7	2.4	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Count	31	30	29	28	29	29	29	28	27	29	30	30	30	30	30	29	30	30	29	29	30	30	30	31

Sweep 0.85 Mc to 22.0 Mc in 2 min ☐ Manual ☒ Automatic

A10

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

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Jan. 1954 | **fminE** | 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	1.7	1.5	E	1.8 F	1.6 F	1.7	E	1.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.5	1.5	1.5	1.5	1.7
2	1.7	1.5	1.5	E	1.5	1.5	1.8	1.7	1.5	1.5	1.5.	1.5	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
3	1.4	E	E	1.3	1.4	E	E	1.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5 F	1.5	1.6	1.6	1.5 F
4	1.5 F	1.5 F	1.5	1.0	E	E	1.5	1.5	1.5	1.7	1.5	1.5	1.7	1.7	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5 F	1.5 F	1.5 F
5	1.0	1.7	1.6	1.7	E	1.7	E	1.7	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.5	1.6	E	E	1.5	1.5
6	E	E	E	E	E	E	1.5	1.5	1.5	(1.5) M	1.5	1.5	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.7
7	1.3 F	E	E	E	1.5	E	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.3	1.5
8	1.3	E	1.0	1.5	1.5	E	1.5	[1.5] M	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8	1.7	1.7	1.5	1.5	1.5	1.5
9	1.0	1.0 F	1.0	E	E	E	2.0	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5
10	1.3 F	1.0	E	1.0	1.0	1.0	1.7	1.5 F	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5 F	1.7 F	1.5	1.5	1.5	1.5	1.5	1.5
11	1.0	E	1.0	1.5	E	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E	E	1.5	1.5	1.5	1.5	1.5
12	1.0	1.0	C	C	C	C	C	C	C	C	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E	1.5	1.7	E	1.5	1.4	1.5
13	1.3	E	E	E	1.3	1.7	1.7	[1.6] B	1.4	1.5	1.5	1.5	1.3	1.5	1.5	1.5	1.6	1.6	E	1.6	1.6	1.6	1.5	E
14	1.7	1.3	E	E	E	1.5	E	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E	E	E	E	E	1.6	E
15	1.5	1.5	1.5	1.5	1.5	1.5	2.0	1.7	1.5	1.5	1.5	1.5	1.7	1.5	1.5	1.5	1.5	1.7	1.7	1.5	1.5	1.6	1.5	1.5
16	E	E	E	E	E	1.7	1.7	[1.6] B	1.5	1.5	1.6	1.5	1.6	1.5	1.5	1.5	1.5	1.7	1.8	1.7	1.5	1.7 F	1.6 F	E
17	1.4	E	1.4	E	1.4	1.4	1.5	[1.5] B	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	E	1.5	1.5	1.5	1.5	E
18	1.5	1.5	E	E	1.5	E	1.7	1.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.6	1.5	1.8	1.7	1.5	1.5
19	E	E	E	E	1.4	E	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.7	1.7	1.5	1.5	1.5	1.7	1.6 F
20	1.0	E	E	E	E	E	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E
21	1.5	E	E	E	E	M	E	1.5	(1.5) M	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E	1.5	E
22	1.6	C	C	1.5	E	E	1.7	1.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5 F	1.5	1.6	E	1.5
23	E	E	1.9	1.4	E	E	E	1.5	1.5	(1.5) C	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.7
24	1.4	1.5	E	E	1.7	E	1.7	1.5	1.5	1.5	1.5	1.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.7
25	1.5	E	E	E	E	E	1.5	1.7	1.5	1.5	1.5	1.5	1.7	1.6	1.5	1.7	1.5	1.7	1.5 F	E	E	1.7	E	E
26	1.0	1.0	E	E	E	1.5	E	1.5	1.5	1.6	1.8	2.5	2.5	2.0	2.2	2.0	1.7	1.5	1.7	1.7	1.6	1.7	1.6	1.5
27	1.6	1.0	1.5	C	C	C	C	C	C	1.5	1.6	1.6	2.0	1.6	1.6	1.6	1.5	E	E	E	E	E	1.6	1.6
28	1.4	1.0	1.5	1.5	1.4	1.5	1.7	1.5	C	C	C	C	C	C	C	C	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5
29	1.0	1.0	E	E	E	1.0	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.5	1.5	(1.5) M	1.5	1.7	1.7	1.7	1.7	1.5	E
30	1.5	E	1.6	1.5	1.5	E	E	1.5	1.5	1.5	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.7	1.7	1.5	1.5	1.7	1.7	E
31	1.7	E	1.6	E	1.7	1.6	1.9	1.8	1.5	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.5	E	1.7	E	E	1.6	E
Mean Value	1.4	1.3	1.4	1.4	1.5	1.5	1.7	1.6	1.5	1.5	1.5	1.6	1.6	1.5	1.6	1.5	1.5	1.6	1.6	1.6	1.5	1.6	1.5	1.5
Median Value	1.4	E	E	E	1.0	E	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Count	31	30	29	29	29	28	29	29	28	29	30	30	30	30	30	30	31	31	31	31	31	31	31	31

fminE

Sweep 0.85 Mc to 22 Mc in 2 min ☐ Manual ☒ Automatic

All

25

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

IONOSPHERIC DATA

Jan. 1954 | **foF2** | **135° E Mean Time**

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

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.5 JF	3.0	2.9 P	B	2.0 P	2.4 F	2.1 F	[3.4] B	4.6	5.7	6.8	6.1	5.6	5.2	5.5	5.6	5.0	4.0	3.4	3.0	3.0	2.3	[2.4] F	2.6 F
2	2.7 F	3.0 F	2.9 JF	2.8 JF	2.7	1.8 F	2.6	(4.2) P	4.7	5.2	7.5	6.6	5.2	5.0	6.4	5.6	4.3	3.7	[3.6] A	3.6 J	A	AF	2.6 F	2.7
3	3.0	3.0	(2.8) JF	3.7	2.0 HF	2.1	2.1	3.7 P	6.0	6.6	10.0	B	7.4 P	5.3	5.7	5.6	4.7	3.5	3.3	2.8	2.5	2.5	2.9	2.9
4	3.0 V	3.1	3.3	3.2	3.0 F	3.0 F	2.7 F	4.5	4.9 P	5.7	6.6	6.6	5.3	4.8	5.3	5.1	4.2	3.7	3.7	2.5	[2.4] A	2.3 F	2.5	2.6
5	2.5	2.5	2.7	2.9 F	F	F	2.2 F	3.6	4.5	5.2	6.6	7.0	6.7	6.0	5.3	4.7	4.1	3.5	3.7 F	(3.6) JF	F	F	F	A
6	2.7 F	2.7 F	2.8 F	2.8 F	2.5 F	2.3 F	2.6 F	3.4 J	4.8	6.1	6.8	6.2	5.2	5.1	5.2	5.7	4.7	3.3	3.6	3.4 P	2.6 F	F	AF	2.6 F
7	2.6 F	2.6 F	3.7	3.4 P	2.2 H	2.1	2.3	3.5	4.1	5.4	8.3 P	9.2	7.7	5.5	5.1	4.8	4.2	3.2	3.6	3.6 F	3.7 P	3.0 F	F	(3.0) F
8	2.7 F	2.7 F	2.7 F	2.5 F	2.7 F	2.3 F	1.9	3.2	4.4	6.1	8.0 P	6.0	5.6	5.5	5.5	5.1	4.1	2.7	2.9	2.9	2.7	2.5 F	2.8	2.8
9	2.2 H	2.3	2.5	2.7	2.5	2.5	2.2	3.4	4.4	5.5	5.7	6.0	5.9	5.6	5.1	5.0 P	4.3 P	3.5	4.3 P	3.7	2.7	2.6	3.0	3.0
10	2.7 F	[2.6] F	2.6 F	2.6	2.2 F	2.5 F	2.1	3.5	5.3 P	5.0 H	7.0	7.0	6.5	5.2 P	5.3 J	5.0	4.8 P	3.1	3.0	3.2	3.8	2.8 F	2.6 F	2.6 F
11	A	A	2.8	2.6 F	2.5	2.3 F	1.9	3.2	5.0 P	5.1	5.5	6.9	5.7	6.5	6.6	5.2	4.0	3.7	4.1 P	(3.5) P	2.4	2.7	3.0 F	3.1 F
12	3.0 F	3.0	3.7 P	2.0	2.0 F	2.2 F	2.2	3.7 J	4.7	4.5	6.3	6.6	5.7	5.5	5.6	4.9	4.2	3.0	3.4	3.4	2.3 H	2.2	2.6	3.0
13	2.9	2.7	2.8	2.7	3.0	2.5	2.4	3.2	4.1	4.8	6.5	(8.3) P	5.7	6.3 P	5.5	5.0	4.2	3.7	4.0	3.8 P	2.4	2.7 F	2.7 TF	2.6 F
14	2.7 F	3.1	B	2.1	1.9 F	1.8	2.2	3.5 P	4.3	5.2	7.0	7.2	5.4 T	5.6	4.8	5.1	4.6	3.7 P	2.9	2.7	2.7	2.3	2.5	3.2
15	2.5	2.6	2.7	2.9	2.6	1.9	2.2	3.9 T	4.3	4.6	5.1	6.7	7.0	5.5	5.0	5.5	4.5	2.7	3.6	3.7	3.5	2.5	2.8	2.7
16	2.5	2.7	3.4 P	2.7	1.8	2.2	2.2	3.4	4.3	5.5	6.5	7.9	7.3	5.3	5.3	5.2	4.3	3.6	2.6	3.1	2.5	2.6	2.6	2.9
17	2.8	2.8	3.1 F	3.1	3.5 P	2.0 F	2.2	3.8	4.6	4.4	5.6	7.2 P	6.9	5.2	5.1	5.3	4.3	3.2	3.4	3.2	2.3	2.5	(3.2) Z	3.4
18	3.0	3.2 F	3.7	2.9	1.9 F	1.9 F	1.9 F	3.7	5.0 T	4.8	6.7	8.0 P	7.6	6.5	5.4 T	4.9	5.2 P	3.4	2.5	3.3 P	2.9	2.2	2.4	2.7 F
19	2.6	2.6	2.7	2.8	1.7 M	2.3 P	2.3	3.9	5.4	5.7	6.5 P	8.5	6.6	5.6	5.2	5.2	4.6	3.6	3.0	3.5 P	3.5	3.4 TF	3.5	2.7
20	2.8	2.9	2.6	1.8 HF	1.9	2.3 F	2.5 F	3.5	5.2	6.0	6.1	7.9	6.6	6.2	5.8	5.2	5.2 T	3.8	A	A	3.6 T	3.3	F	F
21	F	(3.2) TF	3.5 PF	3.2 F	2.8 F	F	3.0 F	4.0	5.4 P	5.3	5.6	7.0	7.5	6.2	6.0	[5.3] A	4.6	4.0	3.8 P	(3.8) P	2.8	2.5	[2.8] F	3.0
22	2.9 F	2.9 TF	3.3 F	F	F	F	4.2	B	4.9	5.6	6.2	7.2	6.6	5.9	5.6	6.2	5.5	[4.5] A	3.5	3.0	(3.5) P	2.7	3.0	3.0
23	3.0	2.9	3.1	3.0	2.9	2.5	2.8	4.3	5.6	5.4	6.6	9.4 P	9.0	6.6	5.9	5.7	5.4	3.9	2.5	3.2	(3.9) F	2.5	2.5	2.9 P
24	[3.0] C	3.0	3.0	3.3	2.6	(2.3) F	2.3 P	4.1	(5.0) P	[5.2] C	5.5	7.5	7.9	[6.7] B	5.5	5.1	4.5	3.8	[3.6] A	3.5	2.5	2.2	2.5 F	2.9
25	2.8	3.0	3.0	3.1	4.5 P	2.4 F	2.4	4.0	5.2	6.6	6.6	7.4	7.0	5.7	5.2	5.7	[4.6] B	3.6	3.0	2.5	2.6	2.7	2.7	2.7
26	[2.6] F	2.5 F	2.5	C	C	C	C	4.2	5.2	5.0	4.6	5.6	5.3	6.2 P	6.2	5.4	5.0	4.4	2.9	2.6	2.9	2.7	2.4	2.6
27	2.7 F	2.7 F	[2.8] C	3.0 F	3.1	2.5 F	2.4 F	4.4 T	5.2	5.1	4.6	C	B	6.0	6.0	5.4	5.4	4.5	3.2	2.8	3.3 P	4.0	[3.4] F	(2.8) F
28	3.1	3.1	4.0	3.6	[2.9] C	2.2 F	2.4	4.5	5.6	6.0	5.8	6.0	6.6	[6.3] C	6.0	5.2	4.9	4.2	[3.6] A	3.0	2.8	3.5	2.7	2.7 F
29	(2.9) F	2.8 F	2.7	2.7	2.9	2.4	[3.4] C	4.3	4.7	5.5	4.9	6.5	7.0	6.0	5.5	5.2	4.9	4.0	2.6	2.6	3.2 P	2.5	2.6	2.9
30	(3.0) F	2.9 TF	3.1 F	3.6	3.6 T	C	C	C	4.9	(5.2) P	6.1	5.9 T	6.9 T	6.2	5.6	4.9	4.7	6.1	3.1	(3.4) P	(3.2) P	[3.2] C	3.1	2.7
31	2.7	[2.8] C	3.0	3.0	[3.0] C	3.0 F	2.8	[4.0] C	5.1 T	5.2	5.4 H	6.5	6.6	6.9	5.5	5.0	5.5	4.0	3.3	3.5 P	B	3.1	F	F
Mean Value	2.8	2.8	3.0	2.9	2.6	2.3	2.4	3.8	4.9	5.4	6.4	7.0	6.5	5.8	5.5	5.3	4.7	3.7	3.3	3.2	2.9	2.7	2.8	2.8
Median Value	2.7	2.8	2.9	2.9	2.6	2.3	2.3	3.7	4.9	5.3	6.5	7.0	6.6	5.7	5.5	5.2	4.6	3.7	3.4	3.2	2.8	2.6	2.7	2.8
Count	29	30	30	28	28	26	29	29	31	31	31	29	30	31	31	31	31	31	30	30	28	28	26	28

Sweep 1.0 Mc to 19.2 Mc in 2 min ☐ Manual ☒ Automatic

K 1

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Jan. 1954

h_pF2

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)^{JF}	320	300^{P}	B	180^{P}	330^{F}	300^{F}	[280]^{B}	250	290	270	240	250	260	260	240	230	270	290	260	240	320	[330]^{F}	340^{F}
2	340^{F}	350^{F}	(330)^{JF}	(300)^{JF}	220	230^{F}	270	(270)^{P}	240	270	270	250	250	280	270	240	260	250	[250]^{A}	(250)^{J}	A	AF	350^{F}	360
3	330	340	(340)^{JF}	260	400^{HF}	310	330	320^{P}	250	270	310	B	240^{P}	240	280	240	240	240	280	240	350	300	320	290
4	280^{V}	320	330	320	270^{F}	310^{F}	270^{F}	250	260^{P}	250	270	240	240	250	250	250	250	250	260	250	[280]^{A}	310^{F}	300	320
5	270	320	310	270^{F}	F	F	310^{F}	250	260	280	270	270	240	240	240	230	240	270	330^{F}	(260)^{JF}	F	F	F	A
6	340^{F}	320^{F}	320^{F}	300^{F}	230^{F}	350^{F}	300^{F}	(240)^{J}	250	260	290	240	260	250	260	240	230	250	290	250^{P}	310^{F}	F	AF	380^{F}
7	330^{F}	330^{F}	260	230^{P}	300^{H}	350	260	250	250	300	290^{P}	250	240	240	230	230	240	270	290	300^{F}	280^{P}	300^{F}	F	(260)^{F}
8	370^{F}	310^{F}	340^{F}	290^{F}	280^{F}	310^{F}	320	270	250	280	250^{P}	240	270	270	250	230	230	270	250	280	260	320^{F}	280	250
9	300^{H}	350	330	280	260	280	270	240	230	240	270	260	280	270	250	230^{P}	240^{P}	280	270^{P}	240	240	260	260	360
10	350^{F}	[320]^{F}	290^{F}	240	290^{F}	300^{F}	280	240	270^{P}	300^{H}	290	240	240	260^{P}	(260)^{J}	240	240^{P}	250	300	250	220	350^{F}	380^{F}	250^{F}
11	A	A	290	260^{F}	260	290^{F}	250	280	250^{P}	240	290	240	270	260	240	230	230	290	270^{P}	(250)^{P}	270	290	330^{F}	300^{F}
12	280^{F}	300	260^{P}	200	320^{F}	340^{F}	270	(230)^{J}	240	250	280	240	270	250	250	230	220	250	280	230	340^{H}	270	320	290
13	320	320	290	330	240	350	260	230	240	270	290	(250)^{P}	240	250^{P}	260	240	230	290	270	220^{P}	320	370^{F}	(360)^{F}	360^{F}
14	380^{F}	290	B	220	340^{F}	310	270	260^{P}	230	270	260	250	(250)^{J}	250	250	240	240	250^{P}	270	260	260	260	330	320
15	290	340	320	250	220	340	290	(220)^{J}	220	250	310	260	250	240	240	240	220	240	320	290	250	270	280	310
16	360	330	270^{P}	260	320	340	280	260	280	290	270	270	230	240	280	240	250	230	330	300	260	300	320	330
17	340	340	310^{F}	280	220^{P}	330^{F}	310	240	230	220	290	260^{P}	250	250	260	230	230	250	280	270	240	320	(320)^{F}	290
18	290	320^{F}	270	210	250^{F}	370^{F}	300^{F}	260	(230)^{J}	260	300	250^{P}	240	250	(230)^{J}	260	240^{P}	250	330	270^{P}	270	320	350	390^{F}
19	330	320	280	200	340^{H}	340^{P}	330	280	240	270	300^{P}	260	230	250	250	240	230	250	320	300^{P}	310	(280)^{JF}	280	250
20	310	280	240	260^{HF}	430	370^{F}	290^{F}	230	290	270	280	260	250	270	260	260	(240)^{J}	250	A	A	(260)^{J}	350	F	F
21	F	(290)^{JF}	310^{PF}	300^{F}	260^{F}	F	320^{F}	250	250^{P}	250	300	260	250	240	260	[240]^{A}	230	270	310^{P}	(270)^{P}	240	320	[290]^{F}	260
22	300^{F}	(310)^{JF}	300^{F}	F	F	F	310	B	230	260	290	250	240	250	240	260	230	[240]^{A}	260	300	(370)^{P}	280	300	350
23	370	360	340	240	260	260	280	250	250	240	300	260^{P}	260	250	250	250	250	230	280	300	(240)^{P}	290	330	330^{P}
24	[340]^{C}	350	300	270	250	(330)^{F}	280^{P}	230	(230)^{P}	[260]^{C}	290	280	250	[240]^{B}	240	230	230	250	[260]^{A}	270	280	250	350^{F}	330
25	320	300	280	280	230^{P}	330^{F}	320	250	260	260	270	260	250	250	270	250	[250]^{B}	250	270	250	280	290	330	390
26	[360]^{F}	340^{F}	280	C	C	C	C	230	250	260	240	260	270	280^{P}	260	250	250	220	270	290	290	250	300	330
27	330^{F}	330^{F}	[320]^{C}	300^{F}	250	320^{F}	270^{F}	(230)^{J}	230	240	260	C	B	250	250	240	240	220	260	300	310^{P}	290	[310]^{F}	(330)^{F}
28	310	310	280	260	[290]^{C}	320^{F}	300	230	260	240	240	260	280	[270]^{C}	260	240	230	250	[260]^{A}	280	270	290	270	370^{F}
29	(320)^{F}	360^{F}	330	270	260	230	[250]^{C}	270	250	250	260	300	270	250	250	240	240	230	270	310	280^{P}	270	330	330
30	(330)^{F}	(300)^{JF}	300^{F}	300	(250)^{J}	C	C	C	250	(270)^{P}	250	(300)^{J}	(260)^{J}	260	250	240	260	240	250	(280)^{P}	(260)^{P}	[280]^{C}	290	300
31	310	[320]^{C}	330	300	[300]^{C}	300^{F}	350	[300]^{C}	(240)^{J}	250	320^{H}	290	250	240	230	250	270	230	270	300^{P}	B	260	F	F
Mean Value	320	320	300	270	280	320	290	250	250	260	280	260	250	250	250	240	240	250	280	270	280	300	320	320
Median Value	330	320	300	270	260	320	290	250	250	260	280	260	250	250	250	240	240	250	270	270	270	290	320	330
Count	29	30	30	28	28	26	29	29	31	31	31	29	30	31	31	31	31	31	30	30	28	28	26	28

h_pF2

Sweep 1.0 Mc to 17.2 Mc in 2 min ☐ Manual ☒ Automatic

K 2

27

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

IONOSPHERIC DATA

Jan. 1954 | h'F2 | 135° E Mean Time

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

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	270F	290	260	210	180	280	300	240	240	280	260	240	250	260	250	230	210	220	230	220	210	280	300F	310F
2	300F	300F	260	250	200	190	250	220	220	250A	270	250	250	270	260	230	230	240A	[240]A	230	A	AF	340	330
3	290	270	270	230	190H F	280	290	250	240	250	280	230	240	240	270	240	230	240	240	210	290	250	270	250
4	240	260	260	260	230	240	250	230	210	250	260	240	240	250	250	240	220	210	230	210	[260]A	300	260	280
5	240	280	250	220F	240F	240F	260	230	240	280	270	250	240	240	240	230	220	230	240F	230F	240F	280F	250F	[280]A
6	300F	260	230F	260	200	260	260	240	230	250	280	230	250	250	250	240	220	250A	240	220	250	230F	320A	330F
7	270	300	240	210	210H	300	250	220	230	240	270	240	240	240	230	230	220A	230	240	250F	220	250F	280F	220
8	300	260	280F	250	230	240	290	250	230	270	240	240	270	270	240	230	220	220	230	250	230	280	250	230
9	240H	300	280	250	220	250	250	220	220	240	270	260	270	270	250	230	210A	240A	230	220	220	230	220	290
10	300	300F	240	210	230	250	260	220	240A	250H	280	240	240	260	250	240	220	220	250	220	210A	270F	350	220
11	A	A	270	240	210	250	250	260	240	240	290	240	270	260	240	230	210	240	240	210	230	250	260F	240
12	270	250	230	190	240	270	240	220	230	230	280	240	260	250	250	230	210	210	230	210	300H	230	280	250
13	260	270	260	280	210	290	230	220	220	240	290	240	240	250	250	230	220	230	230	200	280	330F	320F	330F
14	320F	260	210	200	300	280	250	230	220	250	250	250	250	250	240	240	220	220	240	230	230	240	290	270
15	<260C	290	260	220	200	320	250	210	220	250	310	260	250	240	240	240	220	220	270	240	210	240	250	260
16	310	300	240	200	200	280	250	210	L	240	260	260	230	240	240	230	230	200	270	250	230	270	270	290
17	290	290	260	230	200	300	270	220	220	220	290	250	240	250	250	230	210	210	230	240	210	270	270	250
18	260F	250F	220	200	200	320	270	230	220	230	280	250	230	240	230	230	230	210	300	230	220	250	310	310F
19	280	280	250	190	180H	250	290	240	230	260	270	240	230	240	240	230	230	230	270	250	250	250	250	230
20	250	240	200	200H	350	300	260	230	250	240	270	260	250	260	250	230	230	230	A	A	250A	270	270F	280A
21	260	250	250	240	200	280F	240	220	230	250	300	260	250	240	250	[240]A	220A	220	240	220	220	270	270F	230
22	240	250F	250	230F	240F	250F	250	220	210	250	290	250	240	240	240A	250	220	[240]A	250	300A	330	240	260F	280
23	300	300	270	210	220	220	240	220	230	240	300	250	250	250	250	240	240	210	220	250	220	250	280	300
24	[290]C	280	260	220	200	260F	260	220	220	[240]C	270	270	240	240	240	220	210	230	[240]A	240A	200	230	310	280
25	270	240	230	230	210A	230	280	230	230	250	270	250	250	250	250	250	220	220	250	230	250	260	280	350F
26	320F	310	240	C	C	C	C	220	250	260	240	260	250	270	240	250	230	210	220	230	250	230	260	300
27	280F	270	[240]C	220	210	240	260	220	220	240	260	[260]C	250	250	250	240	240	210	230	260	260	250	290F	300F
28	260	260	250	220	[260]C	300	260	230	240	240	240	260	280	[260]C	250	240	220	250A	[260]A	270A	260	250	240	330F
29	270F	310F	270	240	220	200	[220]C	230	230	250	260	300	270	250	250	240	220	220	240	300	250	260	300	290
30	260	250	260	240	250	C	C	C	220	270	250	300	250	250	250	240	250	230	220	230	230	[230]C	230	250
31	260	[260]C	270	250	[240]C	230	260	[240]C	230	250	LH	250	250	240	230	250	230	200	240	260	230	200	250F	280F
Mean Value	280	270	250	230	220	260	260	230	230	250	270	250	250	250	250	240	220	220	240	240	240	250	270	280
Median Value	270	270	250	220	210	260	260	220	230	250	270	250	250	250	250	240	220	220	240	230	230	250	270	280
Count	30	30	31	30	30	29	29	30	30	31	30	31	31	31	31	31	31	31	30	30	30	30	31	31

Sweep 1.0 Mc to 19.2 Mc in 2 min ☐ Manual ☒ Automatic

K 3

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

IONOSPHERIC DATA

Jan. 1954 | **foF1** | 135° E Mean Time | **Kokubunji Tokyo** | Lat. 35° 42.4' N | Long. 139° 29.3' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	Q	4.0L	4.0	4.0	4.0	3.7	3.5	L	L							
2								Q	Q	A	4.0	4.0H	4.0	3.9HL	3.7	Q	2.7L							
3								Q	L	L	4.0	4.0	4.0	3.8	3.5L	L	Q							
4								Q	2.7	L	4.0	4.0	4.0	3.8L	3.5L	3.3L	Q							
5								Q	Q	3.8L	3.8	3.9	3.9	4.0	3.7L	3.2L	Q							
6								L	Q	3.7L	4.0	4.0	3.9L	L	L	A	Q							
7								Q	Q	3.8L	3.9	4.0	3.9	3.9	3.6	2.8	A							
8								Q	A	3.7L	3.8	4.0	4.0	3.9	[3.2]L	2.6	Q							
9								Q	Q	3.6	3.7	3.8	4.0L	4.0L	3.5L	3.0L	A							
10								Q	A	L	4.0	4.0	4.0	4.0	3.7	3.2	Q							
11								A	Q	L	3.9	4.0	4.0	4.0	3.8	3.4	2.4							
12								Q	Q	Q	3.9	4.0	3.8	3.8L	3.7L	3.3L	Q							
13								Q	Q	Q	4.0	4.0	4.0	4.0	3.6L	3.1L	Q							
14								Q	L	L	4.0	4.0	4.0	3.8	3.7L	L	Q							
15								Q	Q	L	3.7	3.8	[3.8]A	3.8L	3.6L	L	Q							
16								L	L	3.8	4.0	3.9	4.0	3.9	3.5L	Q	Q							
17								Q	Q	Q	4.0	4.0	4.0	4.0L	3.6L	3.2L	Q							
18								Q	Q	L	4.0	4.0	4.1H	4.0	3.7L	3.1B	Q							
19								Q	3.2	L	3.9	4.0	4.0	3.9L	Q	A	Q							
20								L	L	Q	3.9L	4.0	4.0	3.9L	3.6	Q	A							
21								Q	Q	L	4.2L	4.0	4.0	4.0	3.9L	A	A							
22								Q	3.0	3.4	4.1	4.0	4.0	4.0	A	Q	Q							
23								Q	Q	A	4.0	3.9	4.1	4.0	3.8	L	A							
24								Q	Q	C	Q	4.1	4.2	4.0	3.7	2.8L	Q							
25								Q	Q	3.8L	4.0	4.1	4.0	4.0	3.5L	L	Q							
26								Q	Q	L	L	4.0	L	B	B	L	Q							
27								Q	L	3.3L	3.6L	[3.8]C	4.1	4.0	3.8	3.3L	Q							
28								Q	L	L	4.0	4.0	4.1L	C	L	3.4L	Q							
29								Q	Q	L	L	4.0	4.0	4.0	3.8	3.4L	L							
30								C	Q	4.0L	4.0	4.1	4.0	4.0	3.7L	3.4	L							
31								C	Q	L	L	4.1	4.1	4.0	3.8L	3.3L	Q							
Mean Value								—	3.0	3.7	4.0	4.0	4.0	3.9	3.6	3.2	2.6							
Median Value								—	3.0	3.8	4.0	4.0	4.0	4.0	3.7	3.2	2.6							
Count								—	3	11	27	31	30	28	26	17	2							

foF1

Sweep 1.0 Mc to 17.2 Mc in 2 min ☐ Manual ☒ Automatic

K 4

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

IONOSPHERIC DATA

Jan. 1954 | F1 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3' E

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

Sweep 1.0 Mc to 19.2 Mc in 2 min ☐ Manual ☒ Automatic

K 5

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Jan. 1954 | **foE** | 135° E Mean Time

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

foE

Sweep 1.0 Mc to 17.2 Mc in 2 min ☐ Manual ☒ Automatic

K 6

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

IONOSPHERIC DATA

Jan. 1954 | E

135° E Mean Time

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								B	120^{H}	120	120	120	110	110	120	A	A							
2								160	130	120	120^{F}	[120]^{A}	110	A	A	110^{H}	A							
3								B	A	A	AF	AF	120	A	A	A	A							
4								B	120	110	110	110	110	110	110	A	A							
5								B	120	110	A	A	A	A	A	A	120							
6								B	A	120^{F}	110	110	[110]^{A}	110	AF	A	A							
7								B	120	AF	AF	A	110	110	120	A	A							
8								120	[120]^{A}	120	[120]^{A}	110^{F}	110	120	110	[130]^{AF}	150							
9								B	120	120	A	A	A	A	A	A	A							
10								A	A	110	110	120	120	[120]^{AF}	120	120	130							
11								A	A	AF	AF	120	110	110^{F}	110^{F}	120	120							
12								A	130	110^{F}	110	110	110	110	110	120	A							
13								170	120	[120]^{A}	110^{F}	100	110	110^{A}	[120]^{A}	120	A							
14								B	A	120	110	110	110	110	110	110	120							
15								B	120	120	110	110	110	110	110	[120]^{A}	120							
16								B	130	110^{F}	110	110	110	110	110	120^{A}	130^{H}							
17								B	130	110^{H}	110	100	110	[110]^{A}	110	A	A							
18								180	120	110	[110]^{AF}	110^{F}	110	110	110	120	120							
19								B	A	120	AF	AF	A	110^{F}	110	120	A							
20								160	120	150^{A}	110^{F}	[120]^{A}	120^{A}	120^{A}	120^{A}	110	120							
21								150	120^{A}	110	120^{A}	110	120	110	120	A	A							
22								B	120	120	110	110	110	110	110	110	120							
23								170	120	120	A	A	A	A	A	A	A							
24								160	130	[120]^{C}	110	110	100	110	110	110	A							
25								B	A	110	A	A	110	110	120	120	120							
26								A	140	120	120	120	120	120	120	110	A							
27								160	120	130	120	[120]^{C}	120	120	120	120	130							
28								B	120	120	[120]^{A}	120	120	[120]^{C}	120	A	A							
29								160	[140]^{AF}	110^{F}	120	110	120	110	110	120	A							
30								C	A	110	A	A	120	110	120	110	A							
31								C	110	110	110	110	[110]^{A}	110	110	A	A							
Mean Value								160	120	120	110	110	110	110	110	120	130							
Median Value								160	120	120	110	110	110	110	110	120	120							
Count								10	23	28	22	23	27	26	25	19	172							

Sweep 1.0 Mc to 17.2 Mc in 2 min ☐ Manual ☒ Automatic

K 7

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

IONOSPHERIC DATA

Jan. 1954 | **fEs** | 135° E Mean Time | **Kokubunji Tokyo** | Lat. 35° 42.4' N | Long. 139° 29.3' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.8	2.8	2.9	E	E	2.0^{Y}	E	B	3.3	3.6	4.5	4.5	4.5	3.7	3.5	3.0	4.5	3.0	2.2	3.0	2.5	2.0	E	2.7
2	2.0^{F}	E	E	E	E	E	1.8	G	3.0	4.2	3.2^{F}	3.3^{F}	3.2	3.5	3.3	2.8	2.8	3.7	4.7	4.3^{Y}	6.5^{Y}	5.5	3.5	3.0
3	2.4	E	1.7	E	1.8	2.0^{Y}	E	B	3.0	3.3	4.5	3.5^{F}	4.5	4.5	4.5	3.3	2.8^{F}	2.8	2.5	2.0	E	E	E	E
4	1.8	2.7	2.7	2.5	2.8	2.8^{Y}	2.6	2.8^{Y}	2.7	2.8	2.8	2.9	2.9	2.9	3.0	2.9	3.5^{Y}	2.8	2.9	4.5	4.9	2.9	3.0	E
5	2.7	2.9	2.5	2.4	2.5	2.5^{Y}	E	2.5	G	3.0	4.4	3.7	4.0	4.3	3.4	3.0	2.6	2.8	2.4	2.3	E	E	2.4	4.2
6	3.3	2.9	2.9	2.8	2.0^{Y}	2.5^{Y}	1.8	2.5^{Y}	3.0	3.3	3.4	2.9	4.4	3.0	4.5	4.5	4.0	6.7	3.2	2.5	2.5	3.5	3.9	2.5
7	2.4	1.8	2.5	2.2	2.5^{Y}	1.8	2.0	2.7	3.0	3.3^{F}	6.5^{F}	4.5	G	3.0	3.0	2.9	3.0	2.6	2.5^{Y}	2.7	2.9	4.8	3.0	2.4
8	2.5	2.9	2.0	2.0^{Y}	2.6^{Y}	E	1.8	2.5	4.5	4.0	3.6	3.7	2.9	2.9	3.0	3.0	2.7^{F}	E	E	E	1.9	3.0	3.4	2.5
9	1.8	2.0	1.9	1.8	E	2.8^{Y}	E	2.0	G	3.0	4.0^{F}	4.5^{F}	4.5^{F}	4.5^{F}	4.0^{F}	3.5^{F}	3.6	3.0	3.0^{Y}	2.8	2.5	E	2.7^{Y}	3.2
10	3.3	2.7	E	E	2.2^{Y}	2.5^{Y}	2.6	2.8	4.0	3.0	3.0	3.2	3.0	3.2	2.9	3.0	3.0	3.2	2.8	2.5	2.5	2.3	2.8	2.5
11	3.5	3.0	3.0	2.5	2.8	2.7	2.5	3.3	3.8	4.3	4.0	3.5	3.6	3.4	3.0	2.9	2.7	2.5^{Y}	2.9	3.0	2.5	2.5	3.0^{F}	2.9
12	2.7	2.7^{Y}	2.7	2.5	2.7	1.8	2.0	2.9	2.7	3.0	3.3	G	3.0	G	2.9	2.7	2.8	2.9	2.1	2.5^{Y}	2.5	1.8	1.8	2.4
13	2.5	2.6	2.7	2.2	E	1.9	E	1.8	G	4.0	3.0	3.5	3.5	3.6	3.4	3.0	3.3	2.8	E	E	2.9	2.0	E	1.7
14	E	1.8	1.9	1.8	2.4^{Y}	E	E	1.7	2.9	3.3	3.2	G	G	G	3.0	2.7	2.7	E	2.1	E	E	E	E	E
15	C	2.4	E	2.5^{Y}	1.8	E	2.9	B	2.7	2.5	3.0	4.0	4.7	4.0	3.8	3.0	2.7	2.7	2.5	1.8	E	E	E	E
16	2.7	2.5	2.7	2.0^{Y}	1.8^{Y}	1.8	E	B	2.8	3.7	3.2	G	G	G	2.9	2.9	2.7	2.6	2.7	E	E	E	E	2.5
17	E	E	2.5	2.5^{Y}	2.9	2.0^{Y}	2.5^{Y}	2.5^{Y}	3.0	2.9	G	G	4.0	4.4	3.3	3.1	2.8	2.4	E	E	E	2.4	E	E
18	E	1.8	2.0	1.8^{Y}	1.8	2.7	E	2.5^{Y}	2.8	G	4.5	3.3	3.3	3.0	3.3	3.0	2.7	E	2.6	E	1.9	2.5	2.0	2.5
19	2.7	2.9	2.8	2.5^{Y}	2.5	2.7	2.5	1.8	3.0	2.9	3.3	4.0	3.4	4.5	4.5	4.0	3.0	2.9	2.3	2.0	E	E	E	E
20	E	1.9	1.7	1.8	1.9^{Y}	1.9	E	2.8	3.0	3.2	3.3	3.3	4.2	3.5	4.0	3.7	3.3	2.5	3.5	4.5	3.2	2.4	3.0	3.6
21	3.7	2.6^{Y}	2.8^{Y}	2.7^{Y}	2.0	1.8	1.8	2.5	2.6	4.0	4.3	4.5	4.2	4.2	4.3	7.3	4.0	2.9	1.9	E	1.7	2.5	E	1.9
22	E	E	E	1.9	2.5	1.8	E	2.5^{Y}	G	3.0	2.9	G	4.5	4.5	4.5	2.8	2.5	4.7	3.2	3.7	3.2	3.0	E	E
23	3.0	2.3	1.8	E	1.9	1.8	1.9	G	2.9	4.0	4.5	4.2	5.1	4.5	3.9	3.7	4.3	2.5	2.6	2.5	1.8	2.0	2.5^{Y}	1.8
24	C	2.7	1.8^{Y}	1.8^{Y}	E	2.9	2.0	G	2.7	C	4.5	4.5	3.8	G	3.2	3.0	3.0	2.7	5.7	3.0	3.0	2.5	5.5	2.5
25	1.8	2.5	2.5	2.7	3.0	2.7	2.5^{Y}	3.0	6.0	4.1	4.7	4.5	G	G	2.8	2.7	2.7	2.6	2.7	1.8	1.8	E	2.8	E
26	1.8	E	E	C	C	C	C	2.5	G	3.0	3.4	G	G	G	G	2.7	2.7	3.0	2.7	2.3	1.9	2.5^{Y}	E	E
27	E	E	C	1.9	2.4^{Y}	2.5^{Y}	E	1.8	2.5	3.1	2.7	C	2.7	G	G	3.0	2.5	E	E	E	E	2.4	2.5	1.8
28	2.2	2.3	2.7	2.5^{Y}	C	1.9	E	G	2.7	2.8	3.5	3.3	G	C	G	3.0	3.4	4.5	5.5	3.3	3.0	3.0	3.1	3.0
29	2.3	3.0	2.7	2.5	2.0^{Y}	1.8	C	2.5	3.0^{F}	3.0	2.9	3.5	G	3.0	3.0	3.0	3.0	2.8	2.5	2.9	2.6	2.6	E	E
30	2.4^{Y}	2.5	2.5^{Y}	E	E	C	C	C	3.5	3.8	3.5	3.0	3.5	G	4.0	3.3	2.9	2.6	2.6	2.5^{Y}	2.0	C	3.0	2.5
31	E	C	E	2.5^{Y}	C	2.5	2.6	C	2.8	2.7	3.5	4.5	3.5	G	G	3.0	2.9	E	2.5^{Y}	2.9	2.5	E	E	E
Mean Value	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.5	3.2	3.3	3.7	3.8	3.8	3.7	3.5	3.2	3.1	3.1	2.9	2.8	2.7	2.8	3.0	2.6
Median Value	2.3	2.5	2.5	2.1	2.0	2.0	1.8	2.5	2.9	3.2	3.4	3.5	3.5	3.1	3.3	3.0	2.9	2.8	2.6	2.5	2.5	2.4	2.4	2.4
Count	29	30	30	30	28	29	28	25	31	30	31	30	31	30	31	31	31	31	31	31	31	30	31	31

fEs

Sweep 1.0 Mc 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

Jan. 1954

(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	(3.1)^{JF}	3.0	3.1^{P}	B	3.9^{P}	2.9^{F}	3.0^{F}	[3.2]^{B}	3.5	3.1	3.3	3.5	3.4	3.4	3.4	3.6	3.6	3.2	3.1	3.2	3.4	2.9	[2.8]^{F}	2.8^{F}
2	2.8^{F}	2.7^{F}	(2.9)^{F}	(3.0)^{F}	3.5	3.4^{F}	3.1	(3.1)^{P}	3.4	3.3	3.4	3.4	3.5	3.2	3.3	3.5	3.4	3.3	[3.3]^{A}	(3.3)^{J}	A	AF	2.9^{F}	2.8
3	3.0	3.0	(2.9)^{F}	3.4	2.6^{HF}	3.0	3.0	3.0^{P}	3.4	3.3	3.1	B	3.6^{P}	3.6	3.4	3.6	3.4	3.5	3.3	3.4	2.9	3.1	3.0	3.1
4	3.2^{V}	3.1	3.0	3.1	3.3^{F}	3.0^{F}	3.2^{F}	3.4	3.3^{P}	3.5	3.3	3.4	3.6	3.5	3.5	3.5	3.5	3.5	3.3	3.3	[3.2]^{A}	3.0^{F}	3.1	3.0
5	3.2	3.0	3.0	3.1^{F}	F	F	3.0^{F}	3.3	3.4	3.3	3.3	3.3	3.6	3.6	3.5	3.6	3.5	3.4	3.0^{F}	(3.3)^{F}	F	F	F	A
6	2.9^{F}	3.0^{F}	2.9^{F}	3.1^{F}	3.6^{F}	2.8^{F}	3.1^{F}	(3.5)^{J}	3.5	3.4	3.1	3.6	3.4	3.5	3.4	3.5	3.6	3.4	3.2	3.5^{P}	3.0^{F}	F	AF	2.7^{F}
7	2.8^{F}	2.9^{F}	3.4	3.5^{P}	3.0^{H}	3.0	3.3	3.5	3.3	3.2	3.2^{P}	3.4	3.6	3.5	3.6	3.6	3.6	3.2	3.2	3.2^{F}	3.3^{P}	3.0^{F}	F	(3.3)^{F}
8	2.7^{F}	3.0^{F}	2.9^{F}	3.1^{F}	3.2^{F}	3.0^{F}	3.0	3.3	3.4	3.3	3.7^{P}	3.5	3.3	3.3	3.5	3.6	3.7	3.1	3.5	3.2	3.3	3.1^{F}	3.2	3.5
9	3.1^{H}	2.9	3.0	3.2	3.4	3.2	3.3	3.5	3.6	3.6	3.4	3.3	3.2	3.4	3.6	3.6^{P}	3.6^{P}	3.3	3.3^{P}	3.4	3.4	3.1	3.5	2.7
10	2.8^{F}	[2.9]^{F}	3.0^{F}	3.5	3.1^{F}	3.1^{F}	3.2	3.6	3.4^{P}	3.0^{H}	3.2	3.5	3.5	3.5^{P}	(3.3)^{J}	3.6	3.5^{P}	3.4	3.1	3.4	3.5	2.7^{F}	2.8^{F}	3.4^{F}
11	A	A	3.2	3.4^{F}	3.3	3.2^{F}	3.5	3.2	3.5^{P}	3.5	3.3	3.6	3.4	3.3	3.6	3.6	3.5	3.2	3.3^{P}	(3.4)^{P}	3.2	3.1	3.0^{F}	3.1^{F}
12	3.0^{F}	3.1	3.4^{P}	3.9	3.1^{F}	2.9^{F}	3.2	(3.4)^{J}	3.3	3.4	3.3	3.5	3.5	3.5	3.5	3.6	3.7	3.3	3.2	3.7	3.0^{H}	3.1	3.0	3.1
13	2.9	3.0	3.2	3.0	3.6	2.8	3.4	3.6	3.6	3.2	3.2	(3.5)^{P}	3.5	3.5^{P}	3.4	3.6	3.6	3.2	3.3	3.5^{P}	2.9	2.7^{F}	(3.0)^{F}	2.8^{F}
14	2.7^{F}	3.2	B	3.5	2.9^{F}	3.1	3.2	3.4^{P}	3.6	3.1	3.4	3.5	(3.5)^{J}	3.6	3.4	3.5	3.3	3.5^{P}	3.3	3.3	3.4	3.4	3.0	3.1
15	3.2	3.0	3.0	3.5	3.6	2.9	3.1	(3.8)^{J}	3.7	3.5	3.2	3.4	3.4	3.6	3.7	3.5	3.7	3.4	3.0	3.0	3.4	3.1	3.3	3.0
16	2.8	2.9	3.5^{P}	3.6	3.0	2.8	3.1	3.4	3.1	3.2	3.3	3.3	3.8	3.5	3.1	3.4	3.4	3.6	2.8	3.2	3.3	3.0	2.9	2.9
17	2.9	3.0	3.1^{F}	3.2	3.6^{P}	2.9^{F}	3.0	3.5	3.6	3.6	3.2	3.5^{P}	3.6	3.5	3.3	3.5	3.6	3.3	3.2	3.2	3.5	3.0	(3.0)^{Z}	3.1
18	3.1	3.0^{F}	3.3	3.7	3.5^{F}	2.8^{F}	3.2^{F}	3.4	(3.7)^{J}	3.3	3.2	3.5^{P}	3.6	3.4	(3.7)^{J}	3.3	3.5^{P}	3.4	2.9	3.3^{P}	3.2	2.9	2.9	2.8^{F}
19	3.0	2.9	3.1	3.8	3.0^{H}	2.8^{P}	2.9	3.2	3.5	3.4	3.2^{P}	3.4	3.5	3.4	3.4	3.5	3.5	3.4	3.0	3.1^{P}	3.0	(3.2)^{F}	3.1	3.3
20	3.1	3.2	3.4	3.2^{HF}	2.6	2.7^{F}	3.1^{F}	3.5	3.2	3.4	3.2	3.5	3.5	3.3	3.4	3.4	(3.6)^{J}	3.4	A	A	(3.3)^{J}	2.8	F	F
21	F	(3.2)^{F}	3.0^{PF}	3.0^{F}	3.3^{F}	F	2.9^{F}	3.3	3.5^{P}	3.5	3.2	3.3	3.6	3.5	3.6	[3.6]^{A}	3.6	3.2	3.0^{P}	(3.3)^{P}	3.5	3.0	[3.2]^{F}	3.3
22	3.1^{F}	(3.0)^{F}	3.1^{F}	F	F	F	3.0	B	3.6	3.1	3.1	3.5	3.4	3.5	3.5	3.4	3.5	[3.5]^{A}	3.5	3.1	(2.7)^{P}	3.1	3.0	3.0
23	2.8	2.8	2.9	3.5	3.4	3.4	3.2	3.4	3.5	3.5	3.1	3.4^{P}	3.3	3.4	3.5	3.4	3.5	3.5	3.1	3.1	(3.5)^{P}	3.2	3.0	3.0^{P}
24	(3.0)^{C}	2.9	3.1	3.3	3.4	(2.9)^{F}	3.2^{P}	3.6	(3.6)^{P}	[3.4]^{C}	3.2	3.3	3.6	(3.6)^{B}	3.5	3.6	3.5	3.4	[3.4]^{A}	3.3	3.3	3.4	3.0^{F}	3.0
25	3.0	3.1	3.2	3.2	3.5^{P}	3.0^{F}	3.1	3.4	3.3	3.3	3.3	3.5	3.4	3.5	3.4	3.4	(3.4)^{B}	3.5	3.3	3.4	3.3	3.2	2.9	2.7
26	[2.8]^{F}	3.0^{F}	3.2	C	C	C	C	3.6	3.5	3.5	3.6	3.4	3.3	3.3^{P}	3.4	3.6	3.5	3.6	3.2	3.1	3.1	3.4	3.0	2.8
27	3.1^{F}	3.1^{F}	[3.2]^{C}	3.2^{F}	3.4	3.0^{F}	3.2^{F}	(3.5)^{J}	3.6	3.6	3.4	C	B	3.5	3.3	3.5	3.5	3.5	3.3	3.1	3.1^{P}	3.2	[3.1]^{F}	(3.0)^{F}
28	3.0	3.1	3.3	3.5	[3.2]^{C}	3.0^{F}	3.2	3.7	3.4	3.6	3.6	3.4	3.3	[3.4]^{C}	3.5	3.4	3.6	3.4	(3.4)^{A}	3.3	3.2	3.2	3.3	2.8^{F}
29	(3.1)^{F}	2.8^{F}	2.9	3.3	3.4	3.6	[3.5]^{C}	3.4	3.5	3.5	3.4	3.2	3.4	3.5	3.5	3.5	3.5	3.6	3.3	3.3	3.3^{P}	3.3	3.3	3.1
30	(3.0)^{F}	(3.2)^{JF}	3.1^{F}	3.1	(3.4)^{J}	C	C	C	3.5	(3.4)^{P}	3.5	(3.3)^{J}	(3.5)^{J}	3.4	3.4	3.6	3.4	3.5	3.4	(3.2)^{P}	(3.3)^{P}	[3.2]^{C}	3.2	3.1
31	3.1	[3.0]^{C}	3.0	3.1	[3.1]^{C}	3.1^{F}	2.9	[3.2]^{C}	(3.6)^{J}	3.4	3.0^{H}	3.3	3.4	3.6	3.6	3.5	3.4	3.6	3.2	3.1^{P}	B	3.3	F	F
Mean Value	3.0	3.0	3.1	3.3	3.3	3.0	3.1	3.4	3.5	3.4	3.3	3.4	3.5	3.5	3.5	3.5	3.5	3.4	3.2	3.3	3.2	3.1	3.1	3.0
Median Value	3.0	3.0	3.1	3.2	3.4	3.0	3.1	3.4	3.5	3.4	3.3	3.4	3.5	3.5	3.5	3.5	3.5	3.4	3.2	3.3	3.3	3.1	3.0	3.0
Count	29	30	30	28	28	26	29	29	31	31	31	29	30	31	31	31	31	31	30	30	28	28	26	28

Sweep 1.0 Mc to 17.2 Mc in 2 min ☐ Manual ☒ Automatic

K 9

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

IONOSPHERIC DATA

Jan. 1954 | **fminF** | 135° E Mean Time | **Kokubunji Tokyo** | Lat. 35° 42.4' N | Long. 139° 29.3' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.4	1.7	1.3	1.4	1.0	1.2	1.5	1.5	2.4	2.8	3.5[A]	3.1	3.5	3.0	2.7	2.5	2.0	1.5	1.5	1.5	1.4	1.5	1.4	1.5
2	1.4	1.0	E	E	E	1.0	1.5	1.5	2.4	[2.6][A]	2.8	2.9	3.0	2.9	2.9	2.8	2.1	2.3[A]	[1.9][A]	1.5	A	AF	2.1[A]	1.5
3	1.4	1.0	1.0	1.1	E	1.2	1.4	1.5	2.3	2.6	[2.8][A]	2.9	3.0	2.8	2.6	2.4	2.2	2.2[A]	1.5	1.4	1.4	1.5	1.4	1.6
4	1.5	1.0	E	1.0	1.0	1.3	1.4	1.5	2.1	3.0	3.0	3.0	3.0	3.0	3.0	1.4	2.0	1.4	1.5	1.5	[1.5][A]	1.5	1.5	1.4
5	1.4	1.3	1.0	E	E	E	1.4	1.5	2.3	3.0	3.5[A]	3.4	A	A	2.7	2.3	2.1	1.5	1.3	1.3	1.4	1.4	1.5	[1.6][A]
6	1.7	1.5	1.3	1.4	1.0	1.3	1.6	1.5	2.5	2.6	2.7	2.9	3.2[A]	2.9	3.5	3.0[A]	2.1	2.8[A]	1.5	1.5	1.5	1.4	2.1[A]	1.4
7	1.4	1.0	1.3	1.0	E	1.3	1.5	1.5	2.3	2.7	2.9	3.0	3.0	2.9	2.6	2.2	[1.8][A]	1.5	1.4	1.5	1.4	1.5	1.5	1.5
8	1.4	1.2	E	E	E	E	1.3	1.5	2.2	2.6	2.8	2.9	2.8	2.8	2.6	2.3	2.2	1.5	1.4	1.5	1.5	1.4	1.5	1.4
9	1.4	1.3	1.0	1.0	E	1.0	1.4	1.5	2.4	3.2	3.0	3.0	3.0	3.0	2.7	2.3	[2.2][A]	2.2[A]	1.5	1.5	1.5	1.3	1.5	1.5
10	1.5	1.4	1.0	E	1.0	E	1.5	1.5	[2.2][A]	2.8	2.8	3.4	3.2	3.0	3.0	2.5	2.2	1.5	1.5	1.5	[1.5][A]	1.5	1.5	1.5
11	A	A	1.7	1.2	E	1.0	1.4	2.4	3.0	2.8	3.2	3.5	3.2	3.2	3.0	2.6	2.0	1.4	1.5	1.5	1.5	1.5	1.5	1.5
12	1.5	1.3	1.0	1.5	1.0	1.0	1.4	1.5	2.4	2.8	3.1	3.4	3.2	3.2	2.9	2.5	2.2	1.6	1.4	1.4	1.5	1.5	1.5	1.5
13	1.4	1.4	1.2	1.0	E	1.0	1.5	1.7	2.4	2.6	2.9	3.4	3.3	3.4	2.7	2.4	2.2	1.5	1.5	1.5	1.4	1.4	1.5	1.5
14	1.4	1.2	1.2	1.0	1.4	E	1.5	1.5	2.2	2.9	2.9	2.9	3.2	2.9	2.6	2.8	2.3	1.5	1.4	1.4	1.5	1.5	1.5	1.5
15	<2.3[C]	1.4	1.0	1.0	E	1.3	1.4	1.5	2.4	2.9	3.1	3.2	4.0[A]	3.4[A]	2.5	2.7	2.2	1.7	1.5	1.5	1.4	1.5	1.5	1.4
16	1.4	1.5	1.5	1.0	1.0	1.0	1.5	1.4	2.0	2.8	3.2	3.0	3.0	2.9	2.9	2.7	2.4	1.7	1.4	1.4	1.4	1.5	1.5	1.4
17	1.4	1.3	E	E	E	E	1.4	1.4	2.5	2.8	2.9	3.0	3.2	[2.9][A]	2.6	2.6	2.3	1.5	1.5	1.5	1.4	1.3	1.5	1.5
18	1.4	1.3	1.0	E	1.1	E	1.4	1.7	2.4	2.6	3.0	3.0	2.9	2.9	2.7	2.5	2.2	1.5	1.5	1.4	1.5	1.4	1.4	1.5
19	1.4	1.3	1.3	E	E	1.2	1.5	1.5	2.3	2.8	2.7	3.0	2.9	3.5[A]	2.6	[2.4][A]	2.1	2.0	1.5	1.5	1.5	1.5	1.5	1.5
20	1.5	1.3	E	E	1.1	E	1.5	1.7	2.5	2.7	3.0	3.4	3.4	3.0	2.9	2.3	2.3	1.7	A	A	2.1[A]	1.5	1.5	2.1[A]
21	1.4	1.3	1.0	1.0	E	E	1.5	1.7	2.8	2.9	3.5[A]	3.2	3.5	3.5	3.5	A	A	1.8	1.5	1.5	1.4	1.5	1.5	1.4
22	1.4	1.4	1.0	E	E	E	1.5	1.5	2.0	3.1	3.4	3.4	3.6	3.7[A]	[3.5][A]	3.1[A]	2.4	[2.4][A]	2.4[A]	2.3[A]	1.5	1.7	1.5	1.4
23	1.4	1.3	E	E	E	1.0	1.5	1.7	2.5	3.4[A]	3.4	3.8[A]	2.5	3.8[A]	[3.1][A]	2.4	[2.0] AF	1.5	1.5	1.5	1.5	1.5	1.5	1.5
24	[1.4][C]	1.3	E	E	E	1.3	1.5	1.8	2.7	[2.8][C]	2.8	4.0[A]	3.1	2.9	2.9	2.5	2.2	2.0	[2.0][A]	2.0[A]	1.5	1.4	1.6	1.3
25	1.3	1.5	1.3	1.5	1.3	1.3	1.5	1.5	2.5	2.8	3.5[A]	3.5	3.1	2.9	2.7	2.8	2.3	1.6	1.6	1.4	1.5	1.4	1.6	1.5
26	1.4	1.4	E	C	C	C	C	2.1	2.9	2.7	3.5	3.5	3.2	3.9	3.7	2.6	2.3	2.2	1.5	1.5	1.5	1.5	1.5	1.5
27	1.4	1.4	C	E	E	E	1.4	1.8	2.4	2.9	3.4	[3.4][C]	3.5	3.5	3.0	2.6	2.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5
28	1.4	1.3	1.4	E	C	1.4	1.4	2.0	2.6	2.8	3.0	3.2	3.4	[3.4][C]	3.5[A]	2.7	2.3	3.4[A]	[2.8][A]	2.2[A]	2.0[A]	1.5	1.5	1.5
29	1.4	1.4	1.3	1.3	E	1.0	[1.4][C]	1.8	2.4	3.5[A]	3.2	3.1	3.5	3.2	3.2	2.7	2.1	1.8	1.5	2.0	1.5	1.6	1.5	1.5
30	1.4	1.3	E	1.0	E	C	C	C	2.5	2.9	2.9	3.5	3.4	3.2	3.2	2.6	2.3	1.6	1.5	1.5	1.5	[1.5][C]	1.5	1.5
31	1.4	[1.4][C]	1.3	1.5	C	E	1.5	[2.0][C]	2.5	2.9	3.0	3.2	3.4	3.2	3.1	2.5	2.3	1.5	1.6	1.5	1.5	1.5	1.5	1.5
Mean Value	1.4	1.3	1.2	1.2	1.1	1.2	1.5	1.6	2.4	2.9	3.1	3.2	3.2	3.2	2.9	2.5	2.2	1.8	1.6	1.6	1.5	1.5	1.5	1.5
Median Value	1.4	1.3	1.0	1.0	E	1.0	1.5	1.5	2.4	2.8	3.0	3.2	3.2	3.0	2.9	2.5	2.2	1.6	1.5	1.5	1.5	1.5	1.5	1.5
Count	29	30	30	30	28	29	29	30	31	31	31	31	30	30	31	30	30	31	30	30	30	30	31	31

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

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Jan. 1954

fminE

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	1.5	1.4	1.2	E	E	1.0	E	B	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.5	E	1.5
2	1.5	E	E	E	E	E	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.4	1.4	1.5	1.5	1.5
3	1.5	E	1.4	E	1.4	E	E	B	1.4	1.5	1.4	1.5	1.4	1.4	1.4	1.4	1.3	1.5	1.5	1.6	E	E	E	E
4	1.6	1.5	1.3	1.3	1.4	1.5	1.7	1.7	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.3	1.3	1.2	1.4	1.5	E
5	1.4	1.5	1.3	1.3	1.4	1.5	E	1.7	1.3	1.4	1.4	1.5	1.5	1.4	1.5	1.4	1.3	1.4	1.7	1.6	E	E	1.8	1.5
6	1.4	1.0	E	E	E	1.4	1.7	1.7	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.5	1.4	1.4	1.4	1.7	1.3	1.4	1.5
7	1.4	1.5	E	E	1.3	E	1.5	1.7	1.3	1.4	1.4	1.4	1.5	1.4	1.4	1.5	1.4	1.4	1.4	1.3	1.4	1.4	1.5	1.4
8	1.5	1.4	1.5	E	1.5	E	1.5	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	E	E	E	1.6	1.5	1.5	1.4
9	1.5	1.4	1.5	1.5	E	E	E	1.7	1.3	1.4	1.4	1.4	1.4	1.3	1.4	1.5	1.5	1.4	1.5	1.3	1.5	E	1.5	1.5
10	1.5	1.4	E	E	E	E	1.6	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.5	1.4	1.7	1.7	1.6	1.5	1.5	1.5
11	1.2	1.3	E	1.0	E	E	1.5	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.3	1.5	1.5	1.4	1.4	1.5	1.5	1.4
12	1.5	1.5	1.0	1.0	1.4	1.5	1.6	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.5	1.4	1.5	1.6	1.6	1.6	1.6	1.5	1.5
13	1.5	1.4	1.4	1.4	E	1.5	E	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.5	E	E	1.5	1.5	E	1.5
14	E	1.4	1.4	1.4	1.5	E	E	1.6	1.4	1.3	1.4	1.4	1.4	1.4	1.3	1.4	1.4	E	1.8	E	E	E	E	E
15	C	1.4	E	1.3	1.4	E	1.5	B	1.5	1.4	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.5	E	E	E	E
16	1.5	1.3	E	E	E	1.4	E	B	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.6	E	E	E	E	1.5
17	E	E	1.4	1.3	E	E	1.5	1.7	1.4	1.3	1.5	1.4	1.5	1.4	1.4	1.4	1.3	1.5	E	E	E	1.5	E	E
18	E	1.4	1.5	E	1.5	E	E	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	E	1.5	E	1.6	1.5	1.4	1.4
19	1.4	1.0	E	E	1.4	E	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.5	1.4	1.4	1.4	1.5	1.5	E	E	E	E
20	E	1.4	1.5	1.4	E	1.3	E	1.4	1.4	1.4	1.5	1.5	1.4	1.5	1.4	1.4	1.3	1.4	1.4	1.5	1.4	1.5	1.5	1.4
21	1.4	1.0	E	E	1.4	1.3	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.2	1.3	1.4	1.5	E	1.5	1.5	E	1.5
22	E	E	E	1.5	1.0	1.4	E	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	E	E
23	1.4	1.4	1.5	E	1.6	1.4	1.5	1.4	1.5	[1.5]C	1.5	1.4	1.5	1.5	1.4	1.5	1.4	1.4	1.5	1.5	1.5	1.6	1.5	1.5
24	[1.4]C	1.4	1.4	1.5	E	1.4	1.6	1.6	1.5	[1.4]C	1.4	1.4	1.4	1.4	1.5	1.3	1.3	1.5	1.5	1.4	1.5	1.8	1.5	1.5
25	1.6	1.4	E	E	1.0	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	E	1.6	E
26	1.7	E	E	C	C	C	C	1.3	1.6	1.5	1.6	2.0	2.2	2.3	2.0	2.2	1.5	1.4	1.4	1.5	1.6	1.7	E	E
27	E	E	C	1.8	1.7	1.6	E	1.4	1.4	1.4	1.5	[1.5]C	1.5	1.5	1.5	1.6	1.5	E	E	E	E	1.5	1.5	1.5
28	1.5	1.0	E	1.6	[1.6]C	1.5	E	1.5	1.5	1.5	1.6	2.1	2.0	[1.8]C	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5
29	1.6	1.4	E	E	E	1.6	[1.6]C	1.5	1.5	1.5	1.4	1.4	1.5	1.4	1.5	1.4	1.4	1.5	1.4	1.5	1.5	1.5	E	E
30	1.7	1.8	1.5	E	E	C	C	C	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.6	[1.6]C	1.5	1.5
31	E	C	E	E	C	1.7	2.3	[1.9]C	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	E	1.5	1.5	1.5	E	E	E
Mean Value	1.5	1.3	1.4	1.4	1.4	1.4	1.6	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5
Median Value	1.4	1.4	E	E	1.0	1.3	1.5	1.5	1.4	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4
Count	30	30	30	30	29	29	29	26	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

Sweep 1.0 Mc to 17.2 Mc in 2 min ☐ Manual ☒ Automatic

K 11

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

IONOSPHERIC DATA

Jan. 1954 | **ypF2** | **Kokubunji Tokyo** | Lat. 35° 42.4' N | Long. 139° 29.3' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(70)^{JF}	60	80^{P}	B	50^{P}	60^{F}	80^{F}	[60]^{B}	40	80	60	60	50	60	70	50	50	90	70	90	90	80	[70]^{F}	60^{F}
2	60^{F}	70^{F}	(70)^{JF}	(80)^{JF}	80	90^{F}	90	(90)^{P}	90	60	50	50	50	70	50	50	50	80	[80]^{A}	(70)^{J}	A	AF	70^{F}	70
3	70	60	(70)^{JF}	70	120^{HF}	110	90	80^{P}	70	60	50	B	70^{P}	40	70	40	70	80	60	80	70	80	80	60
4	80^{V}	50	60	60	80^{F}	80^{F}	60^{F}	60	90^{P}	50	60	40	40	50	50	60	60	60	50	80	[80]^{A}	90^{F}	80	80
5	60	80	90	90^{F}	F	F	80^{F}	70	70	70	50	70	40	60	60	70	60	70	60^{F}	(60)^{JF}	F	F	F	A
6	60^{F}	80^{F}	80^{F}	100^{F}	70^{F}	100^{F}	100^{F}	(60)^{J}	50	60	60	50	60	60	80	60	80	80	60	60^{P}	90^{F}	F	AF	80^{F}
7	80^{F}	70^{F}	50	70^{P}	50^{H}	70	60	60	90	50	60^{P}	50	60	70	50	40	60	90	50	50^{F}	70^{P}	90^{F}	F	(80)^{F}
8	80^{F}	70^{F}	60^{F}	60^{F}	80^{F}	80^{F}	100	50	80	40	60^{P}	60	60	50	30	50	50	100	50	70	60	50^{F}	60	40
9	60^{H}	70	70	60	60	60	80	60	50	40	50	70	90	50	40	50^{P}	60^{P}	50	50^{P}	60	60	80	50	80
10	80^{F}	[70]^{F}	60^{F}	70	90^{F}	90^{F}	80	50	60^{P}	90^{H}	60	50	60	40^{P}	(60)^{J}	50	60^{P}	70	70	60	60	80^{F}	50^{F}	50^{F}
11	A	A	60	50^{F}	80	60^{F}	50	70	50^{P}	50	40	50	40	60	40	50	70	70	70^{P}	(70)^{P}	80	70	60^{F}	50^{F}
12	60^{F}	70	70^{P}	60	50^{F}	70^{F}	60	(50)^{J}	60	80	50	60	40	50	40	60	70	100	70	50	50^{H}	80	70	80
13	80	80	60	50	50	80	60	70	50	70	60	(50)^{P}	60	40^{P}	70	60	70	80	80	60^{P}	100	70^{F}	(70)^{F}	90^{F}
14	80^{F}	60	B	90	110^{F}	70	60	50^{P}	60	60	40	40	(40)^{J}	20	50	40	80	50^{P}	70	60	60	60	70	70
15	60	50	60	40	70	60	50	(40)^{J}	50	40	60	50	50	40	30	60	60	80	60	60	60	80	40	70
16	90	70	40^{P}	30	80	90	100	50	70	60	70	70	40	60	80	80	70	70	80	50	60	80	70	80
17	60	60	40^{F}	70	80^{P}	90^{F}	50	60	40	50	40	50^{P}	50	70	60	40	40	90	60	70	70	70	(60)^{2}	70
18	60	60^{F}	60	60	70^{F}	90^{F}	70^{F}	90	(40)^{J}	70	50	70^{P}	60	60	(60)^{J}	60	60^{P}	60	100	70^{P}	80	80	110	100^{F}
19	70	90	70	50	110^{H}	120^{P}	80	70	70	50	70^{P}	60	60	50	60	60	60	60	90	50^{P}	70	(70)^{JF}	70	60
20	70	70	70	80^{HF}	90	90^{F}	70^{F}	70	70	60	70	60	50	60	50	60	(40)^{J}	60	A	A	(50)^{J}	70	F	F
21	F	(80)^{JF}	60^{PF}	90^{F}	80^{F}	F	100^{F}	60	50^{P}	50	50	50	60	40	70	[60]^{A}	50	80	80^{P}	(70)^{P}	60	60	[60]^{F}	70
22	70^{F}	(70)^{JF}	60^{F}	F	F	F	90	B	50	60	70	50	60	50	50	60	60	[60]^{A}	50	60	(80)^{P}	80	100	80
23	70	90	100	70	60	90	80	70	40	40	80	50^{P}	60	50	70	70	40	90	100	80	(100)^{P}	80	70	70^{P}
24	[70]^{C}	70	70	60	80	(70)^{F}	60^{P}	70	(60)^{P}	[60]^{C}	70	50	50	[60]^{B}	60	50	50	70	[70]^{A}	70	100	70	70^{F}	70
25	60	70	90	70	50^{P}	60^{F}	80	70	50	60	50	60	80	60	40	50	[50]^{B}	50	60	70	70	60	70	60
26	[60]^{F}	50^{F}	70	C	C	C	C	50	60	50	60	50	70	50^{P}	60	40	50	80	80	70	70	50	100	80
27	50^{F}	50^{F}	[60]^{C}	70^{F}	60	50^{F}	80^{F}	(60)^{J}	50	40	50	C	B	50	70	60	60	70	70	80	60^{P}	50	[60]^{F}	(60)^{F}
28	60	60	60	50	[60]^{C}	70^{F}	60	50	40	40	40	60	50	[50]^{C}	50	60	60	60	[60]^{A}	50	60	50	70	60^{F}
29	(60)^{F}	60^{F}	60	50	40	50	[50]^{C}	50	50	50	60	50	50	50	50	50	40	40	60	70	50^{P}	70	50	50
30	(60)^{F}	(60)^{JF}	60^{F}	50	(60)^{J}	C	C	C	50	(40)^{P}	50	(50)^{J}	(40)^{J}	50	50	50	50	50	60	(70)^{P}	(60)^{P}	[60]^{C}	60	100
31	80	[80]^{C}	70	60	[80]^{C}	90^{F}	50	[50]^{C}	(50)^{J}	50	80^{H}	60	40	60	60	60	70	60	80	70^{P}	B	80	F	F
Mean Value	70	70	70	60	70	80	70	60	60	60	60	50	50	50	60	50	60	70	70	70	70	70	70	70
Median Value	70	70	60	60	80	80	80	60	50	50	60	50	50	50	60	60	60	70	70	70	70	70	70	70
Count	29	30	30	28	28	26	29	29	31	31	31	29	30	31	31	31	31	31	30	30	28	28	26	28

ypF2

Sweep 1.0 Mc to 17.2 Mc in 2 min ☐ Manual ☒ Automatic

K 12

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

IONOSPHERIC DATA

Yamagawa

Lat. 31° 12.5' N
Long. 130° 37.7' E

Jan. 1954 | **f_0F2** | 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	2.6F	2.6F	3.1JF	S	2.4F	1.7F	2.1F	2.7	4.4P	4.4	6.5	8.5	7.3	6.5	5.6	5.9	5.7	[4.4]C	3.1	3.3	3.6	2.6	2.3	2.5
2	2.7	2.7	2.6	2.7	3.9JP	[3.2]S	2.5	2.2	4.4	5.3	5.8	(8.2)P	7.0	5.6	5.0	7.1	4.7	4.6	3.8	3.8	3.3	2.4	2.6	2.6
3	2.6	2.7	3.0	3.0	1.9	2.1	2.4F	2.3	5.2	(6.0)P	7.6P	11.4	10.8	SH	6.1	6.4	5.0	(4.8)P	3.1	3.3	3.2	2.6	[2.6]A	2.7
4	2.8	2.8	2.9	3.4	3.5	2.5	2.4	2.4	4.7	5.0	6.6	9.0P	7.1	5.4	5.6	6.4	5.6	4.5	3.5	2.9F	3.3F	2.8F	2.1F	2.5F
5	2.9F	3.4	2.7F	2.6F	2.1	1.6	1.8F	2.5F	4.4	5.0	6.7	7.2	8.4	8.1	6.6	5.1	4.8	4.1	3.0	2.8	2.9	2.8	2.8F	2.8F
6	2.7JF	2.8JF	2.8F	2.6F	2.8JF	2.6	2.4	2.7	4.3	5.4	6.3	7.9JP	5.8	5.5	5.8	6.5	6.2	5.1	3.2	3.3	2.6	2.2	2.4F	2.5F
7	FS	FS	5.2H	3.0JF	2.2F	2.1	2.1	2.3F	5.1	5.1	6.4	7.6	9.6J	(7.9)P	5.8	4.9	4.6	4.4	3.3	3.0	3.3	3.4	2.2	2.3JF
8	[2.4]A	2.6JF	2.5	2.5F	2.5F_H	2.0F	2.2	2.3	4.0	(5.3)JP	7.4	8.0J	6.8	6.2	6.2	5.9	5.0	3.9	2.6	2.7H	3.0	2.7	2.5	2.6F
9	2.5	2.5	2.5	2.6	2.7	1.9	1.9	2.8	5.3	4.5	5.7	6.4	7.8	7.1	6.3	5.3	4.6	4.0	3.6	4.0	3.3	2.3	2.3	2.3
10	2.5	2.5	3.0JF	2.8JF	1.9	1.9	2.3	2.8	4.8	5.7	6.2	7.4	7.4	6.9	5.5	6.0	5.4	4.2	3.0	3.0	3.4	2.2	2.0F	2.4
11	2.8FZ	2.0F	2.4	2.6	2.5F	[2.4]A	2.2	[3.4]A	4.6	4.9	4.9	5.7	6.7	8.0P	6.0J	5.5	4.9	3.7	3.8	3.3JP	(3.0)P	2.4	2.4	2.9
12	2.4	2.1	2.2	2.1	2.4J	2.5	2.2	3.2	4.9	5.6	5.5	6.4	5.5	6.1	5.9	5.5	4.9	4.2	3.5	2.6	2.8	2.7	2.6	2.8
13	2.5	2.5	2.6	2.5	3.9	1.9	2.3H	3.1	4.3J	4.2	5.7	(7.2)JP	7.9J	5.9	5.8	5.6	5.4	3.9	3.9	4.9	2.5H	2.5	2.3	2.7
14	3.1	2.7	3.2	2.6	1.9	2.0	2.2	2.8	4.5	5.4	5.7	7.6	7.3	5.8	5.5	5.3	5.1	4.9	3.9P	2.7	2.8	3.1	2.4	2.3
15	2.6	2.4	2.4	2.9	3.1H	[2.8]S	2.4	2.5	4.9	4.7	4.8	5.5	7.0	6.6	5.6	5.7	6.2	4.4	2.7	3.2	3.5J	4.2	3.4	2.1
16	2.1	2.5	2.7	3.0	2.9	1.7	2.3	2.6	S	5.5	(7.1)P	7.0	9.3P	6.5	5.2	4.7	5.2	4.8J	3.1	2.5	3.1	2.6	2.5	2.5
17	2.7	2.8	2.7	2.7	3.7	3.0	2.3	2.2	4.8	5.0	4.5	7.4	7.7	6.6	5.7	5.2H	5.2	4.0	3.0	2.9	3.6	2.2	2.4	2.6
18	2.7	2.8	2.9	3.0	2.9	2.0JF	2.1F	3.1F	5.4	4.7	5.0	6.4	7.9	8.1	7.3	5.8	4.6	5.3	3.3	2.8	3.3	2.9H	2.6	3.4
19	2.7	3.1	3.4	3.0	1.9	1.9	1.9	1.9	5.6	6.1	6.2	9.1	7.1	5.8	5.7	5.7J	5.1	5.2	3.3	3.2	(3.2)P	3.7	3.8	3.0
20	2.5	2.7H	3.2	2.9	2.4	2.3	1.9	3.3	4.1	5.7	6.6	7.5	7.3	6.5	6.3	6.9	5.3H	5.1	4.3	3.0	3.2	2.8J	3.4Z	3.2P
21	2.9	3.1	(3.0)F_E^{sp}	2.7F	3.4F	2.0F	[2.6]C	3.1F	C	C	C	C	C	C	C	C	C	5.3P	[4.2]S	3.1	[3.2]A	3.4	3.1	[3.1]F
22	3.1F	2.9JF	2.6J	2.5F	2.9JF	2.8F	2.3F	4.4JF	5.2	5.3J	4.6	S	7.5	6.5	6.9	6.5	6.1J	5.3J	4.2	3.1	[2.8]A	2.6	[2.6]A	2.5
23	2.6H	2.6	2.6F	2.7JF	2.1	2.2	2.3	2.8	5.7	5.5	5.8	8.0PS	(9.6)PS	[10.4]S	(11.3)F_E^s	7.6	5.4	5.5	4.1	2.4	3.5	3.5	2.4	2.4
24	2.6	2.9	2.8	3.1	3.1	2.2	2.4	3.1	5.6	5.4	5.5	7.6	9.3	7.5	5.5	6.4	5.0	4.8	3.8	2.8H	2.6	2.5	2.3F	2.7JF
25	[2.7]F_S^s	2.7F	(4.0)F_E^{sp}	(3.0)PF	4.2F	2.3	2.4F	2.4F	4.6	5.5	7.1P	7.9	8.6	7.7	6.1	5.5	5.0	4.4	3.3	2.6	2.4	2.4	2.6	2.6
26	3.0	3.2JF	3.2JF	3.1F	2.8	2.0	2.3F	3.2	4.2	4.9	5.2	5.9	6.6	6.8	7.3	6.8	6.2	5.6	5.3	2.7	2.4H	2.6	2.9	2.4
27	2.4	2.6H	2.7	2.8	3.2	2.6	2.3	2.7	5.1	5.8	5.2	5.8	7.9	8.7	8.4	6.6	5.3	5.0	4.2	3.0H	2.9	3.3	2.9	3.2H
28	2.7JH	2.7	2.5	2.9	3.0	2.7	2.5F	2.5	4.4	5.4	5.9	7.3	6.0	6.1	6.4	5.8	5.7	4.7	3.6	3.1	2.7	2.4P	2.5	2.2F
29	2.4	F	2.6F	2.8	2.9	2.7	2.2	2.2F	4.3	5.5	5.8	5.6	6.6	7.5	6.2	5.4	5.0	4.3	3.8	2.9	2.7J	2.8	2.5	2.6F
30	2.7	2.8	2.6	2.8	3.1	2.8	1.9	2.4	5.1	5.4	6.8	5.6	7.4	7.8	6.0	6.4	4.7	5.5	4.6	3.1	3.3	3.3	2.1	2.3
31	2.4	2.4	2.6	2.6	3.1	2.4	2.0	2.7	5.0	6.7	6.3	4.9	6.1	6.8	5.4	5.0	5.0	5.7	4.3	3.2	3.8	2.8	2.4	2.4
Mean Value	2.6	2.7	2.9	2.8	2.8	2.3	2.2	2.8	4.8	5.3	6.0	7.3	7.6	6.9	6.2	5.9	5.2	4.7	3.6	3.1	3.1	2.8	2.6	2.6
Median Value	2.6	2.7	2.7	2.8	2.9	2.2	2.3	2.7	4.8	5.4	5.8	7.4	7.4	6.6	6.0	5.8	5.1	4.7	3.6	3.0	3.2	2.7	2.5	2.6
Count	30	29	31	30	31	31	31	31	29	30	30	29	30	29	30	30	30	31	31	31	31	31	31	31

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y1

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

IONOSPHERIC DATA

Yamagawa

Lat. 31° 12.5' N
Long. 130° 37.7' E

Jan. 1954

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	350F	380F	(330)JF	S	210F	330F	360F	330	260P	290	310	290	270	270	290	290	270	[290]c	310	310	270	260	350	360
2	320	340	350	320	(210)$_P^J$	S	U	340	250	290	330	(290)P	280	280	320	260	250	260	270	290	270	300	360	350
3	380	390	320	250	260	B	310F	330	270	(410)P	340P	300	250	SH	260	300	250	(260)P	290	320	290	310	[330]A	350
4	330	310	310	270	270	310	300	270	250	250	320	260P	270	280	290	270	250	250	250	320F	310F	300F	320F	320F
5	320F	350	310F	230F	280	B	360F	340F	270	320	310	270	270	290	250	260	240	250	290	300	320	280	340F	330F
6	(360)JF	(400)JF	330F	280F	(280)JF	400	300	280	270	310	300	(250)JP	270	300	290	300	250	250	230	320	250	290	360F	420F
7	FS	FS	320H	(270)JF	260F	380	B	350F	300	290	320	300	(280)J	(250)P	270	260	260	250	280	280	260	260	250	(310)JF
8	[340]A	(360)JF	320	260F	300FH	250F	270	300	260	(320)$_P^J$	290	(260)J	290	290	270	250	250	240	250	310H	290	270	290	330F
9	330	350	360	320	250	310	310	300	260	250	260	320	310	280	290	260	250	250	270	310	300	240	(280)B	360
10	330	350	(320)JF	(290)JF	230	340	280	260	250	270	270	290	280	260	260	250	260	240	250	310	260	220	390F	350
11	390FZ	320F	310	320	260F	[310]A	360	[320]A	290	250	280	340	330	280P	(270)J	260	250	240	300	(270)$_P^J$	(280)P	250	320	300
12	250	310	320	300	(240)J	300	310	270	260	280	300	280	310	290	290	270	270	250	280	330	320	290	310	310
13	360	350	370	390	260	430	350H	250	(240)J	250	340	(290)$_P^J$	(270)J	280	290	270	250	240	320	270	310H	270	320	370
14	310	350	310	250	(350)A	370	340	(300)A	260	250	310	290	260	270	260	250	290	260	250P	290	340	290	300	360
15	350	330	370	310	250H	[310]S	370	250	250	260	U	U	280	260	300	340	260	250	290	340	(280)J	270	270	(340)B
16	A	370	320	260	210	360	350	300	S	280	(290)P	310	250P	250	260	270	280	(250)J	260	390	300	260	290	330
17	390	340	310	270	290	290	410	320	240	250	U	300	290	250	250	290H	270	240	270	330	280	300	360	(370)B
18	350	330	290	270	240	(390)$_F^J$	(360)F	310F	250	250	240	290	270	260	260	260	250	280	240	340	290	310H	340	380
19	390	340	300	230	260	350	370	[320]S	260	260	290	280	250	260	A	A	260	250	240	340	(310)$_P^J$	300	290	260
20	350	310H	250	260	280	290	B	250	240	250	310	300	280	300	300	260	290H	260	260	330	290	(350)J	350Z	(300)FB
21	330	330	(370)$_F^{JP}$	(340)F	260F	410F	[360]C	310F	C	C	C	C	C	C	C	C	C	260P	[280]S	310	[310]A	310	300	[300]F
22	300F	(300)JF	(320)J	300F	(270)JF	320F	300F	(280)$_F^J$	240	(250)J	240	S	260	280	280	280	(280)J	(260)J	270	330	A	A	A	420
23	400H	390	360F	(260)$_F^J$	(270)B	260	330	300	270	270	250	300PS	(300)PS	[300]S	(300)PS	250	290	290	250	300	320	290	270	430
24	380	350	350	310	270	330	320	310	280	270	310	330	300	250	270	280	270	250	280	290H	250	300	370F	(330)$_F^J$
25	[360]FS	400F	(370)$_F^{JP}$	(320)PF	270F	250	400F	330F	280	300	300P	300	280	280	280	280	260	280	250	290	300	330	330	360
26	370	(410)JF	(320)JF	350F	300	300	400F	330	250	290	300	350	270	300	290	280	270	270	260	280	310H	310	320	300
27	370	340H	340	330	290	300	350	290	270	270	290	330	300	280	280	260	270	250	250	300H	290	310	270	UH
28	(350)JH	330	300	300	280	250	370F	300	250	270	270	270	280	270	270	290	260	260	260	290	290	320P	280	[320]A
29	350	F	360F	330	300	270	U	330F	260	280	300	290	320	240	270	250	250	250	270	270	(340)J	310	300	410F
30	380	370	330	360	280	250	B	330	290	280	290	290	330	290	300	270	250	260	250	270	300	280	250	380
31	380	350	350	370	270	280	360	310	260	280	250	U	290	270	270	290	270	280	260	300	280	260	(290)B	350
Mean Value	350	350	330	300	270	320	340	300	260	280	290	300	280	280	280	270	260	260	270	310	290	290	310	350
Median Value	350	350	320	300	270	310	350	310	260	270	300	290	280	280	280	270	260	250	260	310	290	290	320	350
Count	29	29	31	30	31	28	26	31	29	30	28	27	30	29	29	29	30	31	31	31	30	30	30	30

foF2

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y2

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

IONOSPHERIC DATA

Jan. 1954 | h'F2 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	340F	350	310	240F	200F	320	340	300	250	290	300	280	260	270	290	290	250	[250]C	250	260	250	250	340	320
2	300	320	320	290	200	[350]A	500	300	250	280	310	270	270	280	320	260	240	240	240A	270	250	280	330	340
3	350	350	270	230	260	B	280	300	250	410	300	290	250	250H	250	270	250	240	220	270	280	270A	[300]A	340A
4	300	290	280	230	260	290	280	240	220	210	300	260	270	270	290	270	240	230	240	260	290	260	310	310
5	300	280	280	210	250	B	B	300	260	310	310	260	260	270	250	260	240	240	220	270	260	260	270F	260
6	320F	330F	280	240	250F	400	270	250	240	300	300	250	260	290	290	280	240	240	220	300	250	280	350F	400F
7	330F	310F	220H	240	220	380	(420)B	B	290	290	310	300	270	250	270	260	240A	250	240	240	220	240	230	280
8	[300]A	330	300	250	260H	240	270	300	250	310	280	260	290	290	270	250	250	240	240	260H	250	250	260	260
9	290	320	310	270	240	230	300	250	250	250	260	310	300	270	290	260	250	250	230	250	260	230	260	340
10	310	320	260	260	200	310	250	240	220	240	220	290	270	260	260	240	240	240	240	280	230	210	390EB	300
11	340	270	300	280	(240)A	[300]A	(350)B	[320]A	280	250	280	340	320	280	270	260	250	240	290A	270	240	250	300	260
12	250	310	310	290	240	290	300	240	240	280	300	270	210	290	290	270	240	250	250	300	280	260	280	270
13	290	320	350	350	240	410	310H	240	240	240	340	280	270	280	290	270	250	240	280	250	290H	250	300	330
14	280	310	270	230A	350	350	320	(300)A	250	250	310	260	250	270	260	250	290	250	240	250	280	260	260	350
15	300	260	330	250	230H	[300]A	360	240	240	250	300	410	280	250	300	340	250	240	(260)A	300	260	250	240	290
16	B	350	300	240	210	(350)B	350	280	250	280	270	300	250	250	260	260	260	240	210	370	250	250	280	300
17	350	310	260	250	260	250	400	300	240	250	300	300	290	250	250	250H	250	230	230	260	250	290	320	320
18	310	300	250	230	220	350	320F	270	240	230	220	290	260	260	250	250	250	250	220	270	250	270H	290	310
19	340	300	270	210	250	300	350	[300]B	250	250	290	270	250	260	300	250A	260	250	230	290	290	260	260	240
20	350	290H	230	250	260	270	B	230	230	250	300	290	260	290	290	260	260H	240	240	270	250	300	300	280
21	280	300	330F	290	250	410	[330]C	250	C	C	C	C	C	C	C	C	C	250	240	300	[300]A	300A	300A	270
22	250	280	300	270	230	290	260F	250	240	250	240	280	260	260	240	250	250	260	230	260	250	240A	[300]A	370
23	360H	350	350	250	250	220	(300)B	260	250	250	250	290	270	280	270	250	280	260	250	270	(320)A	250	250	400
24	330	310	320	270	250	300	300	280	250	250	270	310	290	250	270	280	250	240	270	240A	250	280	320F	300F
25	350F	350	330F	280	250	240	(400)AF	320	270	300	300	290	270	270	270	280	250	250	240	270	270	280	290	330
26	310	350	300	290	250	230	390	290	250	290	300	340	270	300	290	270	260	260	240	270	300H	270	290	260
27	(350)A	300H	300	260	250	260	(330)B	260	250	270	250	330	280	270	260	260	250	250	230	270H	250	280	250	300H
28	320H	300	270	290	260	240	340	290	240	260	270	280	280	290	290	290A	260	250A	2 FoA	260	250	290	260	[300]A
29	330	360F	310F	290	260	240	400	330	250	280	300	290	320	240	270	250	240	240	240A	240	300	280	260	370
30	340	300	310	300	250	220	370B	300	260	250	280	290	300	290	300	270	250	250	230	230	250	260	250	350
31	350	330	330	310	250	240	B	290	250	280	250	L	280	260	270	280	240	250	230	250	250	250	250	340
Mean Value	320	310	300	260	240	300	340	280	250	270	280	290	270	270	280	270	250	250	240	270	260	260	290	310
Median Value	320	310	300	260	250	290	330	280	250	260	300	290	270	270	270	260	250	250	240	270	250	260	240	310
Count	30	31	31	31	31	29	28	30	30	30	30	29	30	30	30	30	30	31	31	31	31	31	31	31

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y 3

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

IONOSPHERIC DATA

Yamagawa

Lat. 31° 12.5' N
Long. 130° 37.7' E

Jan. 1954 | **foF1** | 135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								Q	Q	L	3.7	4.0	4.0	3.9	4.0	3.9	3.4	C						
2								Q	Q	L	L	4.1	4.1[J]	4.0	4.0[L]	L	Q	Q						
3								Q	Q	4.1	4.0	4.5	4.0	4.1	L	L	L	Q						
4								Q	Q	Q	4.1	3.9[H]	4.1[H]	3.7	A	3.8	Q	Q						
5								Q	Q	3.5	3.8	4.0	4.0	4.0	4.0	3.8	2.8	Q						
6								Q	Q	L	L	4.0	4.1	4.0	3.8[L]	L	L	Q						
7								Q	A	3.7	4.1[H]	4.0	4.0	4.1	3.8	3.7	A	Q						
8								Q	Q	3.2	3.8	4.0	4.0	[4.0][B]	3.9	3.7	3.0	2.2						
9								Q	Q	Q	3.8	3.8	[3.9][L]	4.0	3.9	3.7	3.0	A						
10								Q	Q	Q	Q	3.9	4.1	4.1	4.0	L	2.8	A						
11								A	A	A	3.8	4.0	4.2	4.0	[3.8][A]	(3.6)[L]	A	A						
12								Q	Q	B	3.9	4.0	Q	4.2	4.0	3.8	Q	Q						
13								Q	Q	Q	4.0[H]	4.0	4.1	4.1	3.9	[3.4][A]	2.9	2.4						
14								A	Q	Q	L	4.0[L]	4.1	4.0	4.0	3.7	L	Q						
15								Q	Q	Q	4.1	4.2	4.1	4.0	4.0	4.1[H]	3.4	Q						
16								Q	Q	(3.6)[L]	3.9	3.9	4.2[H]	4.0	3.9	(3.3)[L]	Q	Q						
17								Q	Q	Q	3.9	4.0	4.1	3.9	4.0	3.3	L	Q						
18								Q	Q	Q	Q	3.9	4.1	3.8	3.7	3.5	3.0	Q						
19								Q	Q	L	3.9	4.1	4.0	4.0	A	A	A	Q						
20								Q	Q	Q	3.8	4.1[L]	4.0	4.3	4.0	3.6	Q	Q						
21								Q	C	C	C	C	C	C	C	C	C	Q						
22								Q	Q	3.2	3.4	L	4.1	3.9	3.7	3.1	A	A						
23								Q	Q	Q	3.8	[4.0][A]	4.2	4.1	4.1	3.9	3.9	Q						
24								Q	Q	3.2	3.8	4.3	4.3	4.1	4.1	[3.6][A]	3.1	Q						
25								Q	Q	L	3.6	4.0	4.0	4.2[H]	4.0	3.7	(3.0)[L]	Q						
26								Q	Q	L	L	4.1	4.1	4.1	4.0	L	L	Q						
27								Q	Q	L	Q	3.9[A]	4.1	4.2[H]	4.0	3.9	L	Q						
28								Q	Q	L	3.8	4.0	4.0	4.2	4.2	A	A	A						
29								Q	Q	L	L	4.0	4.4	3.6	L	3.8	Q	Q						
30								Q	Q	Q	Q	4.0	3.9	4.0	L	3.8	Q	Q						
31								Q	Q	L	3.9	L	4.2	4.1	4.0	L	Q	Q						
Mean Value								—	—	3.5	3.9	4.0	4.1	4.0	4.0	3.7	3.1	2.3						
Median Value								—	—	3.5	3.8	4.0	4.1	4.0	4.0	3.7	3.0	2.3						
Count								—	—	7	21	28	29	30	25	22	11	2						

foF1

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y4

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

IONOSPHERIC DATA

Jan. 1954 | h'F1 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

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

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y5

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

IONOSPHERIC DATA

Yamagawa

Lat. 31° 12.5' N
Long. 130° 37.7' E

Jan. 1954 | **foE** | 135° E Mean Time

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

foE

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y6

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

IONOSPHERIC DATA

Jan. 1954 | h'E | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

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

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y 7

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

IONOSPHERIC DATA

Jan. 1954 | **fEs** | 135° E Mean Time | **Yamagawa** | Lat. 31° 12.5' N, Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	2.5	E	2.5	2.1	E	E	B	B	G	4.2	5.0	4.5Y	G	G	G	2.8	C	2.2	2.3	E	E	E	2.2
2	2.6	E	E	1.6	E	2.2	2.0	B	G	G	4.2	4.0	4.1	4.0	4.4	3.8	3.2F	2.6	3.0	4.0	3.0	2.4	3.4	3.8
3	2.2	2.0	2.0	E	E	E	E	B	2.6	3.4	3.8	3.9	3.7	3.8	5.9	2.4	1.8	G	1.8	2.2	3.2	2.6	4.6	2.8
4	2.3	2.3	E	E	E	E	E	B	2.0	2.2	3.2	4.0Y	3.5	G	3.8	G	G	2.6	3.0	2.8	2.3	2.0F	2.7	2.5
5	E	E	E	2.8	2.2	E	E	B	G	G	4.1	4.0	4.9	4.4	3.6	3.4	3.0	B	2.4	2.4	E	2.3	2.0	E
6	E	E	E	E	E	E	E	B	G	G	G	3.4	3.9	4.0	2.4	2.6	2.8	B	2.2	2.8	2.4	2.6Y	E	E
7	E	E	E	1.4	E	E	E	B	3.8	3.7F	3.8	4.2	3.5	5.4	5.8	4.2	4.4	3.6	3.5	2.0	E	E	E	E
8	4.6	3.2F	2.4	2.4	1.8	E	E	2.1	G	3.2	3.6	3.6	5.0	3.4	3.4	3.0	3.0	3.2	2.0	E	E	E	E	E
9	E	E	E	E	1.9Y	1.9Y	E	1.9	3.5	3.7	5.9	3.5	4.0	4.6	3.4	3.4	2.8	5.8	3.1	2.3	E	E	1.8	E
10	E	E	E	E	E	1.2	E	B	G	G	2.8	2.8	2.8	2.8	2.8	2.6	2.8	2.8	2.8	2.4	E	E	E	2.0
11	3.1	1.9	4.8F	3.6	2.8	3.4	2.4	3.6	4.0	6.0	5.0YF	3.7Y	4.8	3.4	4.6	4.6	4.4	3.6F	3.8	3.2	E	E	E	E
12	E	E	E	E	E	E	E	B	2.1	3.2	3.4	3.4	3.4	3.2	3.0	G	G	G	E	E	E	E	E	2.3
13	2.0	2.7	2.0	2.4	1.8	E	E	B	G	G	3.8	4.0	3.4	3.3F	3.4	3.8	3.0	B	2.6	2.0	E	E	2.2	2.2
14	2.4	2.4	2.8	1.8	1.8	2.5	E	3.4	G	3.2	3.5	3.4	4.2	4.1	3.8	3.9	2.9	3.3	3.1	E	E	E	E	2.1
15	E	E	E	E	E	2.4	2.4	B	B	G	G	4.2F	3.4	G	3.4	3.5	2.9	G	2.8	2.8	2.7	2.8	2.3	1.8
16	2.2	2.2	1.9	E	E	2.0	E	B	G	3.2	4.6	G	3.6	3.6	3.4	3.0	2.7Y	G	1.9	E	E	E	E	2.4
17	1.8	3.0	2.5Y	E	E	E	E	B	3.4	G	G	3.8	3.9	3.8	4.0	3.8	3.2	G	E	E	E	2.0	E	E
18	E	E	E	E	1.0	E	E	B	2.4	2.4	G	G	G	G	G	G	G	2.4	2.3	E	E	2.0	E	E
19	2.0	2.3	2.0	2.3	E	E	E	B	S	G	G	4.2Y	4.1	4.2	5.8	5.1	3.8	G	2.2	2.4	E	E	E	E
20	E	E	E	E	E	E	E	2.0	2.8	G	G	G	3.6	G	G	G	3.8	3.5	3.0	2.5	E	E	1.8	2.2
21	2.8	2.5	2.4	2.2	2.2	2.2	C	2.0	G	C	C	C	C	C	C	C	C	2.6	2.4	3.6	4.3	3.4	3.5	2.3
22	E	E	2.8	2.4	1.0	3.2	2.0	2.6	2.4	G	G	G	G	G	3.3	3.0	4.0	4.0	E	2.9	6.0	3.5	3.6	E
23	2.5	2.3	E	E	E	2.4	E	B	2.2	G	3.8F	4.8	3.8	3.7	3.6	4.2	G	2.1	2.1	2.6	2.9	3.0	E	E
24	E	E	E	E	E	E	E	B	G	G	4.2	3.8	3.7	3.9	3.5	4.2	3.5	2.8	3.4	3.1	3.1	1.9	2.9	2.8
25	2.5F	4.6F	3.8F	3.1	3.5	1.9	2.1	2.4	3.5	3.2F	4.5	5.6F	5.1F	4.1	G	G	G	G	2.2	2.1	E	E	E	E
26	E	2.0	E	1.1	1.0	E	2.0	B	G	G	G	G	G	G	G	G	G	B	E	2.4	2.1	2.3	E	E
27	2.2	1.9	E	E	2.4	E	E	B	2.2	G	4.2Y	4.2	G	G	3.0F	3.6	2.8	B	E	E	E	E	E	E
28	E	2.0	E	E	E	E	E	B	G	3.0	G	4.2	4.2	4.2	4.4	5.5	4.9	3.8	3.5	3.2	2.2	2.5	E	2.6
29	1.9	4.2	E	E	2.5	2.2	2.5	B	G	3.6F	3.4	3.6	4.2	4.0	3.6	G	3.0	1.8	2.6	2.5	2.5	2.0	2.0	2.2
30	E	E	E	E	2.2Y	1.2	E	B	G	2.6	3.2	3.2	G	G	G	G	3.1	G	2.1	1.9	2.0	3.2	2.6	2.4
31	2.1	2.6	2.8	1.8	E	E	2.0	2.2	3.2	3.3	3.6	4.2	4.2	G	G	3.3	3.5	G	1.9	E	E	2.0	E	E
Mean Value	2.5	2.6	2.7	2.2	2.0	2.2	2.2	2.5	2.9	3.3	3.9	3.9	4.0	3.9	3.8	3.7	3.3	3.2	2.6	2.6	3.0	2.5	2.7	2.4
Median Value	1.8	2.0	E	E	E	E	E	2.2	2.0	G	3.6	3.8	3.8	3.5	3.4	3.2	3.0	2.6	2.3	2.4	E	2.0	E	1.8
Count	31	31	31	31	31	31	30	9	29	30	30	30	30	30	30	30	30	25	31	31	31	31	31	31

fEs | Sweep 0.8 Mc to 20.0 Mc in 15 min | ☒ Manual ☐ Automatic | Y8

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

IONOSPHERIC DATA

Jan. 1954 | (M3000)F2 | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.8F	2.8F	(3.1)F	S	3.8F	3.1F	3.0F	2.9	3.4P	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.4	[3.3]C	3.2	3.1	3.3	3.3	3.0	2.8
2	3.0	2.9	2.8	3.1	(3.8)F	[3.2]S	2.5	2.9	3.6	3.3	3.4	(3.2)P	3.3	3.4	3.0	3.5	3.4	3.3	3.4	3.1	3.3	3.0	2.8	2.9
3	2.8	2.7	3.0	3.6	3.5	3.0	3.1F	2.9	3.4	(2.6)P	3.1P	3.4	3.6	SH	3.6	3.3	3.6	(3.4)P	3.2	3.0	3.2	3.2	[3.0]A	2.9
4	3.0	3.2	3.1	3.2	3.4	3.0	3.2	3.4	3.5	3.4	3.1	3.4P	3.5	3.3	3.3	3.6	3.5	3.6	3.4	3.0F	3.0F	3.1F	3.0F	3.0F
5	3.0F	2.9	3.1F	3.6F	3.2	2.8	2.8F	2.9F	3.4	3.0	3.1	3.4	3.4	3.1	3.5	3.5	3.5	3.5	3.1	3.1	3.0	3.2	2.9F	2.8F
6	(2.9)F	(2.9)F	2.9F	3.2F	(3.2)F	2.8	3.2	3.3	3.3	3.2	3.4	(3.7)P	3.5	3.3	3.2	3.3	3.5	3.5	3.6	3.0	3.4	3.2	2.9F	2.6F
7	FS	FS	3.0H	(3.3)F	3.4F	2.9	2.7	2.9F	3.2	3.2	3.1	3.3	(3.3)J	(3.5)P	3.5	3.4	3.4	3.5	3.3	3.3	3.4	3.3	3.5	(3.1)F
8	[3.0]A	(2.9)F	3.1	3.5F	3.2F	3.5F	3.3	3.1	3.4	(3.1)P	3.3	(3.6)J	3.3	3.2	3.4	3.6	3.6	3.6	3.4	3.1H	3.2	3.3	3.3	2.9F
9	3.0	2.9	2.9	3.0	3.6	3.0	3.1	3.1	3.4	3.6	3.6	3.1	3.2	3.3	3.4	3.5	3.4	3.7	3.3	3.2	3.1	3.6	3.3	2.9
10	2.9	2.9	(3.0)F	(3.3)F	3.7	2.8	3.3	3.5	3.4	3.4	3.2	3.4	3.3	3.4	3.4	3.4	3.4	3.5	3.6	3.0	3.5	3.8	2.7F	2.9
11	2.7F	3.0F	3.0	3.0	3.3F	[3.0]A	2.8	[3.0]A	3.2	3.6	3.4	3.0	3.1	3.3P	(3.5)J	3.6	3.6	3.7	3.2	(3.3)F	(3.3)P	3.5	3.0	3.1
12	3.6	3.2	3.1	3.3	(3.5)J	3.4	3.3	3.4	3.4	3.5	3.2	3.4	2.9	3.3	3.4	3.4	3.2	3.4	3.4	3.0	3.0	3.3	3.0	3.1
13	2.8	3.0	2.8	2.8	3.4	2.6	2.9H	3.5	(3.6)J	3.7	2.9	(3.4)P	(3.6)J	3.4	3.3	3.4	3.6	3.5	3.0	3.2	3.1H	3.4	3.0	2.8
14	3.1	2.9	3.2	3.6	3.0	2.9	2.9	3.2	3.4	3.5	3.1	3.4	3.4	3.5	3.6	3.7	3.2	3.5	3.5P	3.1	2.8	3.2	3.1	2.9
15	2.8	3.0	2.8	3.1	3.5H	[3.2]S	2.9	3.5	3.6	3.6	3.3	2.7	3.4	3.4	3.3	3.0	3.5	3.5	3.1	3.0	(3.2)J	3.4	3.4	3.0
16	3.0	2.8	3.0	3.6	4.1	2.8	3.0	3.2	S	3.3	(3.2)P	3.1	3.5P	3.8	3.4	3.4	3.3	(3.7)J	3.4	2.7	3.2	3.4	3.2	3.0
17	2.7	2.8	3.1	3.3	3.4	3.3	2.7	3.0	3.6	3.7	3.3	3.2	3.2	3.6	3.6	3.3H	3.4	3.7	3.4	2.9	3.4	3.1	2.9	2.8
18	2.9	2.9	3.2	3.3	3.6	(2.7)F	2.9F	3.0F	3.6	3.5	3.6	3.3	3.4	3.5	3.6	3.5	3.5	3.3	3.5	2.8	3.4	3.1H	2.8	2.7
19	2.7	2.9	3.1	3.8	3.4	2.8	2.8	2.8	3.4	3.5	3.3	3.4	3.6	3.6	3.3	(3.6)J	3.4	3.5	3.7	2.9	(3.1)F	3.2	3.2	3.5
20	3.0	2.7H	3.4	3.5	3.3	3.2	2.7	3.6	3.6	3.8	3.2	3.3	3.4	3.2	3.3	3.4	3.2H	3.4	3.4	2.9	3.2	(2.8)J	2.9	3.1P
21	3.0	3.0	(2.8)F	2.9F	3.5F	2.7F	[2.8]C	3.0F	C	C	C	C	C	C	C	C	C	3.4P	[3.2]S	3.0	[3.0]A	3.0	3.2	[3.2]F
22	3.1F	(3.2)F	(3.0)J	3.2F	(3.3)F	3.0F	3.0F	(3.4)F	3.7	(3.7)J	3.7	S	3.4	3.3	3.4	3.3	(3.4)J	(3.5)J	3.5	2.9	[3.2]A	3.4	[3.0]A	2.6
23	2.6H	2.8	2.8F	(3.3)F	3.4	3.3	3.0	3.1	3.4	3.4	3.6	3.3F	(3.2)F	[3.2]S	(3.2)F	3.5	3.2	3.3	3.6	3.1	3.0	3.2	3.3	2.5
24	2.8	2.8	2.9	3.0	3.4	3.0	3.1	3.2	3.2	3.3	3.0	2.9	3.2	3.6	3.5	3.4	3.4	3.6	3.3	3.1H	3.4	3.2	2.8F	(3.0)F
25	[2.8]F	2.7F	(2.8)F	(3.0)F	3.3F	3.4	2.7F	3.0F	3.2	3.2	3.1P	3.3	3.4	3.3	3.2	3.4	3.6	3.2	3.6	3.2	3.2	3.0	2.9	2.8
26	2.7	(2.6)F	(3.0)F	2.8F	3.1	3.0	2.7F	2.9	3.5	3.5	3.4	3.1	3.6	3.3	3.4	3.3	3.5	3.3	3.4	3.2	3.2H	3.0	3.1	3.0
27	2.8	3.0H	3.0	3.0	3.3	3.1	2.8	3.3	3.5	3.6	3.2	3.1	3.1	3.4	3.4	3.5	3.4	3.5	3.4	3.1H	3.2	3.0	3.4	3.0H
28	(2.7)H	2.9	3.2	3.2	3.4	3.5	2.9F	3.1	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.4	3.3	3.3	3.1	3.2	3.0P	3.3	2.8F
29	2.9	F	2.8F	3.0	3.1	3.4	2.9	3.0F	3.4	3.3	3.2	3.2	3.1	3.8	3.5	3.6	3.5	3.4	3.3	3.4	(2.9)J	3.2	3.0	2.6F
30	2.7	2.7	3.0	2.8	3.3	3.4	3.0	3.0	3.2	3.3	3.3	3.3	3.1	3.3	3.2	3.5	3.6	3.4	3.6	3.3	3.1	3.5	3.4	2.7
31	2.8	3.0	2.8	2.7	3.5	3.2	2.8	3.0	3.5	3.4	3.6	3.2	3.2	3.5	3.5	3.3	3.3	3.3	3.5	3.1	3.2	3.5	3.2	3.0
Mean Value	2.9	2.9	3.0	3.2	3.4	3.1	2.9	3.1	3.4	3.4	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.5	3.4	3.1	3.2	3.2	3.1	2.9
Median Value	2.8	2.9	3.0	3.2	3.4	3.0	2.9	3.1	3.4	3.4	3.2	3.3	3.4	3.3	3.4	3.4	3.4	3.5	3.4	3.1	3.2	3.2	3.0	2.9
Count	30	29	31	30	31	31	31	31	29	30	30	29	30	29	30	30	30	31	31	31	31	31	31	31

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

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

IONOSPHERIC DATA

Jan. 1954 | fminF | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.6	1.5	1.5	1.4F	1.6	1.3	1.5	1.7	2.1	2.9	3.3	2.9	3.2	3.3	2.9	2.8	2.4	[2.0]C	1.5	1.7	1.6	1.6	1.6	1.6
2	1.7	1.5	1.3	1.4	1.4	[1.8]A	2.1	1.5	2.2	2.8	3.0	3.3	3.3	A	3.8A	2.9	2.8	1.9	[2.2]A	2.4A	2.0A	1.6	1.6	1.6
3	1.6	1.6	1.3	1.4	1.4	1.8	1.6	1.5	2.0	N	N	A	3.1	2.4	2.2	1.8	1.8	2.0	1.4	1.7	2.0A	1.8	[1.9]A	2.0A
4	1.8	1.7	1.5	1.6	1.5	1.4	1.3	1.6	1.6	2.1	2.8	2.8	3.1	2.9	3.6	3.2	2.8	2.2	1.9	1.7	1.7	1.6	1.6	1.8
5	1.4	1.4	1.3	1.6	1.4	1.4	1.5	1.5	1.8	2.8	3.2	2.8	3.2	[3.1]A	3.0	2.6	2.2	2.0	1.6	1.6	1.6	1.6	1.6	1.6
6	1.4	1.0	0.9	E	E	2.1	1.6	1.6	2.2	2.5	2.7	2.4	3.2	3.0	2.4	2.4	2.5	2.0	1.6	2.2A	1.8	1.6	1.5	1.6F
7	1.6F	0.9F	E	1.4	E	1.7	1.8	1.8	3.1	2.8	3.1	3.1	3.1	3.1	[3.0]A	3.0	A	2.4A	2.0A	1.6	1.6	1.4	1.3	1.5
8	[1.6]A	1.6	1.6	1.8	1.8	1.4	1.8	1.7	2.3	2.7	3.0	3.2	3.4	3.2	3.0	2.8	2.4	1.8	1.6	1.6	1.5	1.6	1.6	1.5
9	1.4	1.4	1.3	1.0	E	1.0	1.5	1.5	2.3	2.3	3.6A	2.9	3B	[3.4]A	2.9	2.9	2.4	3.0A	1.8	1.8	1.6	1.6	1.6	1.6
10	1.1	1.1	1.4	E	E	1.2	1.5	1.4	2.4	2.4	2.4	3.2	3.2	3.3	2.6	2.8	2.5	2.4	1.7	1.6	1.6	1.6	1.6F	1.5
11	1.7	1.9	1.8	1.8	2.0A	[1.9]A	1.8	[2.6]A	3.4A	3.2A	3.4	3.1	3.5	3.3	4.2A	3.0	3.0	2.8	2.9A	2.5A	1.5	1.5	1.6	1.4
12	1.5	1.6	1.4	1.4	1.7	1.6	1.6	1.7	2.1	2.8	3.5	2.8	3.0	3.6	3.2	2.9	2.4	2.1	1.6	1.5	1.5	1.5	1.5	1.6
13	1.4	1.6	1.7	1.5	1.4	1.4	1.5	1.6	2.3	2.8	3.0	2.9	3.0	3.0	3.0	3.6A	2.6	1.9	1.8	1.6	1.6	1.6	1.6	1.6
14	1.5	1.5	1.5	[1.6]A	1.6	1.4	1.6	2.4A	2.4	2.9	2.7	3.4	3.3	3.0	2.8	[2.8]A	2.9	2.1	1.6	1.6	1.6	1.6	1.6	1.6
15	1.5	0.9	1.4	E	1.0	[1.4]A	1.8	1.8	1.9	2.5	2.8	3.0	3.2	3.1	2.8	2.7	2.7	2.0	2.0A	1.8	1.6	1.7	1.8	1.3
16	1.8	1.7	1.4	1.8	1.3	1.4	1.5	1.6	1.6	2.6	3.4	3.0	3.1	3.0	2.8	3.1	2.4	2.3	1.6	1.6	1.6	1.7	1.6	1.6
17	1.7	1.7	0.8	E	E	E	1.6	1.5	2.5	2.7	2.9	3.1	3.1	3.0	3.2	2.7	2.6	1.8	1.6	1.5	1.7	1.7	1.5	1.6
18	1.6	1.6	1.0	E	0.9	1.1	1.6F	1.6	2.0	2.6	2.2	3.0	3.4	2.8	3.0	3.0	2.4	2.0	1.6	1.7	1.6	1.6	1.6	1.6
19	1.5	1.6	1.6	1.3	1.3	1.2	1.3	1.7	1.9	2.5	2.8	3.2	3.5	3.4	5.0A	[4.4]A	3.8A	2.1	1.6	1.6	1.6	1.6	1.8	1.7
20	1.7	1.6	1.6	2.0	1.6	1.5	1.8	1.7	2.4	2.6	3.0	3.1	2.9	3.4	3.1	3.0	2.7	2.4	1.8	1.6	1.5	1.6	1.6	1.6
21	1.6	1.6	1.7F	E	1.4	1.6	[1.6]C	1.6	2.1	C	C	C	C	C	C	C	C	2.0	2.1A	1.7	[2.0]A	2.4A	2.6A	1.6
22	1.5	1.6	1.6	1.2	1.0	1.8	1.5	1.7	2.0	2.7	3.0	3.3	3.4	3.0	3.0	2.8	2.9	2.4	1.8	1.8	1.7	2.2A	[1.9]A	1.6
23	1.6	1.7	1.8	1.8	1.6	1.0	1.8	1.8	2.2	2.7	3.2	4.1A	3.2	3.0	3.1	A	3.2	2.4	2.5	1.7	2.9A	2.2A	1.6	1.7
24	1.1	1.6	1.8	1.6	1.6	1.5	1.6	1.6	2.0	2.3	3.2	3.4	3.4	3.3	3.2	4.2A	2.8	2.2	1.8	[1.8]A	1.7	1.6	1.6F	1.7F
25	1.7F	1.7	2.0AF	1.6	2.7A	1.9	2.0AF	1.8	2.7	2.7	3.0	3.1	3.1	3.1	2.9	2.8	2.4	2.3	1.7	1.6	1.6	1.6	1.6	1.6
26	1.3	1.0	0.9	0.9	E	0.9	1.4	1.6	2.2	2.8	3.0	3.1	3.4	3.1	3.2	3.0	2.2	2.3	1.7	1.8	1.6	1.6	1.7	1.6
27	1.8	1.5	1.6	1.0	1.6	1.0	1.8	1.6	2.3	2.7	3.0	3.4	3.1	3.2	3.1	2.8	2.4	1.9	1.7	1.7	1.7	1.6	1.6	1.8
28	1.5	E	1.3	1.6	1.6	1.6	1.4	1.6	2.2	2.9	3.0	3.4	3.4	3.0	3.7	4.7A	4.1A	3.5A	2.8A	2.2A	1.6	1.6	1.6	2.0A
29	1.6	1.5F	1.5F	0.9	1.5	1.0	1.7	1.7	2.2	2.7	2.9	3.4	3.6	3.3	3.6	2.8	2.5	2.2	[1.9]A	1.6	1.7	1.5	1.8	1.6
30	1.2	1.0	1.4	1.1	1.0	0.9	1.7	1.5	2.2	2.3	3.1	3.5	3.0	3.2	3.0	2.3	2.5	2.6	1.8	1.6	1.6	2.1A	1.6	1.6
31	1.7	1.7	1.6	1.6	1.4	1.2	1.6	1.8	2.4	2.9	3.3	3.4	3.3	3.1	3.0	2.8	3.1	2.2	1.7	1.4	1.4	1.8	1.6	1.6
Mean Value	1.5	1.5	1.5	1.5	1.5	1.4	1.6	1.7	2.2	2.7	3.0	3.1	3.3	3.1	3.1	3.0	2.7	2.2	1.8	1.7	1.7	1.7	1.7	1.6
Median Value	1.6	1.6	1.5	1.4	1.4	1.4	1.6	1.6	2.2	2.7	3.0	3.1	3.2	3.1	3.0	2.8	2.5	2.2	1.7	1.7	1.6	1.6	1.6	1.6
Count	31	31	31	31	31	31	31	31	31	29	29	29	30	29	30	29	29	31	31	31	31	31	31	31

fminF

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y 10

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

IONOSPHERIC DATA

Jan. 1954 | fminE | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	1.5	E	1.7	1.6	E	E	B	B	1.7	1.4	1.6	1.5	1.5	1.5	1.4	1.4	[1.6]C	1.7	1.7	E	E	E	1.4
2	1.4	E	E	1.4	E	E	1.7	[1.6]B	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5F	1.6	1.5	1.5	1.4	1.6	1.4	1.5
3	1.4	1.6	1.7	E	E	E	E	B	1.5	1.4	1.5	1.6	1.5	1.5	1.5	1.4	1.4	1.6	1.5	1.6	1.6	1.6	1.6	1.6
4	1.4	1.7	E	E	E	E	E	B	1.4	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.6F	1.6	1.6
5	E	E	E	1.6	1.4	E	E	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	[1.6]B	1.6	1.6	E	1.6	1.7	E
6	E	E	E	E	E	E	E	B	1.6	1.5	1.5	1.6	1.5	1.7	1.6	1.8	1.5	[1.4]B	1.4	1.5	1.6	1.7	E	E
7	E	E	E	E	E	E	E	B	1.8	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.5	1.5	E	E	E	E
8	1.4	1.6	1.5	1.5	1.6	E	E	1.7	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.2	1.5	1.5	1.8	E	E	E	E	E
9	E	E	E	E	E	E	E	1.7	1.5	1.4	1.6	1.4	1.5	1.6	1.5	1.5	1.4	1.6	1.6	1.5	E	E	1.6	E
10	E	E	E	E	E	0.9	E	B	1.5	1.4	1.8	1.6	1.6	1.7	1.6	1.6	1.5	1.8	1.4	1.6	E	E	E	1.8
11	1.4	1.7	E	E	E	E	1.8	1.6	1.6	1.4	1.5	1.4	1.5	1.6	1.5	1.5	1.5	1.6	1.6	1.5	E	E	E	E
12	E	E	E	E	E	E	E	B	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5	E	E	E	E	E	1.6
13	1.6	L 1.7	1.7	1.4	1.4	E	E	B	1.6	1.7	1.6	1.6	1.8	1.7	1.6	1.6	1.6	[1.6]B	1.6	1.8	E	E	1.8	1.7
14	1.5	1.0	1.0	0.9	1.5	1.6	E	1.5	1.5	1.4	1.5	1.5	1.5	1.8	1.5	1.5	1.5	1.4	1.6	E	E	E	E	1.6
15	E	E	E	E	E	0.9	1.8	B	B	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.4	1.6	1.4
16	1.6	1.6	1.4	E	E	1.7	E	B	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	E	E	E	E	1.6
17	1.6	1.7	0.8	E	E	E	E	B	1.5	1.5	1.5	1.6	1.6	1.6	1.5	1.5	1.5	1.4	E	E	E	1.7	E	E
18	E	E	E	E	E	E	E	B	1.7	1.9	1.7	1.6	1.8	1.7	1.8	1.8	1.6	1.4	1.6	E	E	1.7	E	E
19	1.5	1.6	E	E	E	E	E	B	S	1.6	1.5	1.6	1.5	1.5	1.6	1.6	1.5	1.6	1.8	Z.1	E	E	E	E
20	E	E	E	E	E	E	E	1.5	1.7	1.6	1.6	1.6	1.7	1.7F	1.7	1.6	1.4	1.7S	1.6	1.6	E	E	1.6	1.6
21	1.6	1.0	E	E	E	E	C	1.6	1.7	C	C	C	C	C	C	C	C	1.6	1.6	1.6	1.6	1.5	1.6	1.7
22	E	E	E	E	E	0.9	1.7	1.6	1.7	1.7	1.6	1.6	1.8	Z.0	1.8	1.8	1.8	1.8	E	1.6	1.5	1.5	1.5	E
23	1.8	1.6	E	E	E	Z.0	E	B	B	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.6	1.5	1.7	1.6	1.6	1.5	E	E
24	E	E	E	E	E	E	E	B	1.7	1.6	1.6	1.1	1.5	1.7	1.6	1.0	1.4	1.4	1.6	1.6	1.6	1.7	1.6	1.7
25	1.6	1.3	E	1.4	E	E	1.7	1.8	1.7	1.6	1.5	1.5	1.5	1.6	1.5	1.6	1.5	1.6	1.8	1.6	E	E	E	E
26	E	E	E	E	E	E	1.8	[1.6]B	1.5	1.6	1.6	1.6	1.8	1.8	1.8	1.8	1.8	B	E	1.6	1.6	1.7	E	E
27	1.6	1.6	E	E	E	E	E	B	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.7	1.6	B	E	E	E	E	E	E
28	E	E	E	E	E	E	E	B	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.6	1.6	E	1.6
29	1.6	1.7	E	E	0.9	E	1.7	[1.6]B	1.5	1.6	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.5	1.6	1.4	1.6	A7	1.6	1.8
30	E	E	E	E	E	E	E	B	1.6	1.7	1.6	1.8	1.6	1.8	1.5	1.4	1.5	1.5	1.6	1.7	1.8	1.6	1.8	1.6
31	1.7	1.0	1.0	1.0	E	E	1.8	1.6	1.6	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.5	1.6	1.7	E	E	E	1.6	E
Mean Value	1.5	1.5	1.3	1.4	1.4	1.3	1.8	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.6	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Median Value	1.4	1.0	E	E	E	E	E	1.6	1.6	1.6	1.5	1.6	1.5	1.6	1.5	1.6	1.5	1.6	1.6	1.6	E	1.5	E	1.4
Count	31	31	31	31	31	31	30	13	29	30	30	30	30	30	30	30	30	29	31	31	31	31	31	31

Sweep 0.8 Mc to 20.0 Mc in 15 min ☒ Manual ☐ Automatic

Y 11

IONOSPHERIC DATA IN JAPAN FOR JANUARY 1954

電波觀測報告　第6卷　第1号

1954年2月25日　印　刷
1954年2月30日　発　行

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