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

IONOSPHERIC DATA IN JAPAN

FOR OCTOBER 1956

Vol. 8 No. 10

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Prepared by

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

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

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THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

CONTENTS

SYMBOLS AND TERMINOLOGY

The following symbols and terminology have been used in accordance with the recommendation of the International Scientific Radio Union (U.R.S.I.), Zürich, 1950 and at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.), Geneva, 1951.

f_0E, f_0F1, f_0F2	ordinary-wave critical frequency for the E, $F1$ and $F2$ layers respectively
fE_s	highest frequency on which echoes of the sporadic type are observed from the lower part of the E layer
$h'E$, $h'F1$, $h'F2$	minimum virtual height on the ordinary-wave branch for the E, $F1$ and $F2$ layers respectively
$hpF2$	virtual height of the $F2$ layer measured on the ordinary-wave branch at a frequency equal to 0.834 f_0F2
$ypF2$	semi-thickness of the $F2$ layer deduced from a parabolic fit to the " nose " of the electron density distribution with height and based on the observed $h'f$ trace. (The difference between $hpF2$ and the virtual height at 0.969 f_0F2)
$(M3000)F2$	maximum usable frequency factor for a path of 3000 km for transmission by $F2$ layer
$f_{\min}E$, $f_{\min}F$	frequency below which no echoes are observed for the E and F regions respectively
( )	doubtful value
[ ]	interpolated value
A	characteristic not measurable because of blanking by E_s
B	characteristic not measurable because of absorption either partial or complete, and probably non-deviative in type
C	characteristic not observed because of equipment or power failure
D	before a number (or>): greater than alone: characteristic at a frequency higher than the normal upper frequency limit of the equipment
E	before a number (or<): less than alone: characteristic at a frequency lower than the normal lower frequency limit of the equipment
F	spread echoes present
G	a) $F2$-layer critical frequency equal to or less than $F1$-layer critical frequency b) no E_s (or $E2_s$) echoes observed though regular E (or $E2$) layer echoes are present (i.e., a symbol for daytime usage)
H	stratification observed within the layer

J	ordinary wave characteristic deduced from measured extraordinary-wave characteristic
K	ionospheric disturbance in progress (this is always applied to a series of hourly values, never to an isolated value)
L	a) E1-layer characteristic emitted or doubtful because no definite or abrupt change in slope of the $h'f$ curve is observed either for the first reflection or any of the multiples b) $h'F2$ omitted because the $F2$-layer trace is continuous with the $F1$-layer trace and without a point of zero slope
M	characteristic not observed because of some failure or emission on the part of the operater, rather than owing to any mechanical or electrical fault in the equipment or its power supply
N	nature of the record is such that the characteristic cannot readily be interpreted
P	trace extrapolated to critical frequency (it is unnecessary to use this letter for small extrapolations of one or two percent, but use should be made of symbol of ( ) if the extrapolation leads to a critical frequency which exceeds the last observed point on the trace by more than five percent)
Q	distinct layer not present
S	characteristic observed by interference or by atmospherics
T	loss or destruction of successful observations
U	hp or yp not measurable, for instance, because ordinary-wave trace has horizontal tangent at or above the frequency 0.834 f_0F_2
V	trace forked near critical frequency
W	characteristic at a virtual height greater than the normal upper height limit of the equipment
Y	E_s trace intermittent in frequency range very short pieces of trace at the high frequency and should be ignored since they may be presumed to be due to short-lived echoes
Z	third magnet-ionic component of the $h'f$ trace is observed

SITES OF THE RADIO WAVE OBSERVATORIES

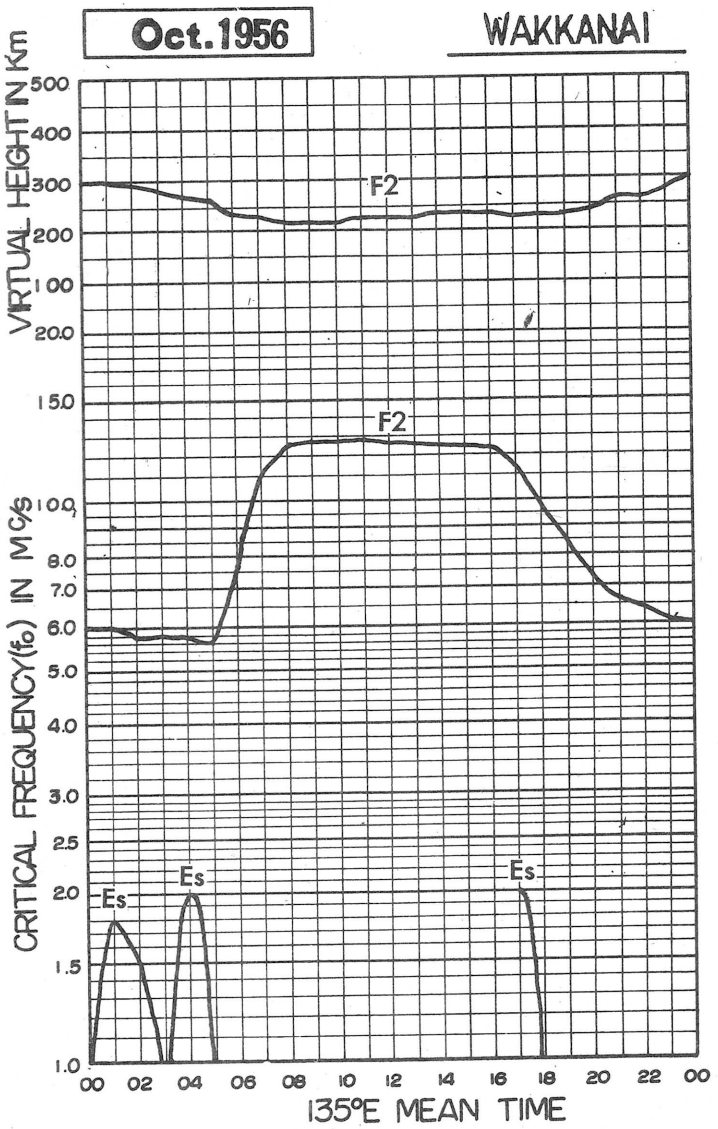
Ionospheric observation is carried out at the following four observatories in Japan.

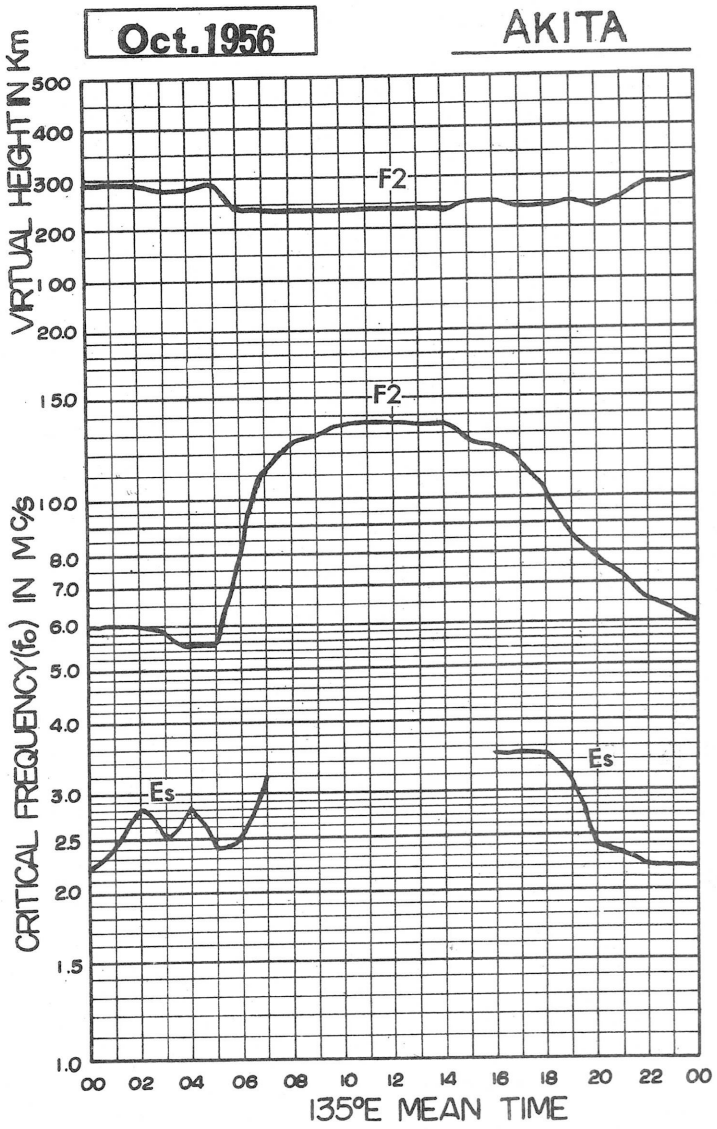
	Latitude	Longitude	Site
Wakkanai	45°23.6′N.	141°41.1′E.	Wakkanai-shi, Hokkaido
Akita	39°43.5′N.	140°03.2′E.	Tegata Nishishin-machi, Akita-shi, Akita-ken
Kokubunji	35°42.4′N.	139°29.3′E.	Koganei-machi, Kitatama-gun, Tokyo-to
Yamagawa	31°12.5′N.	130°37.7′E.	Yamagawa-machi, Ibusuki-gun, Kagoshima-ken

Solar radio emission is observed at Hiraiso Radio Wave Observatory.

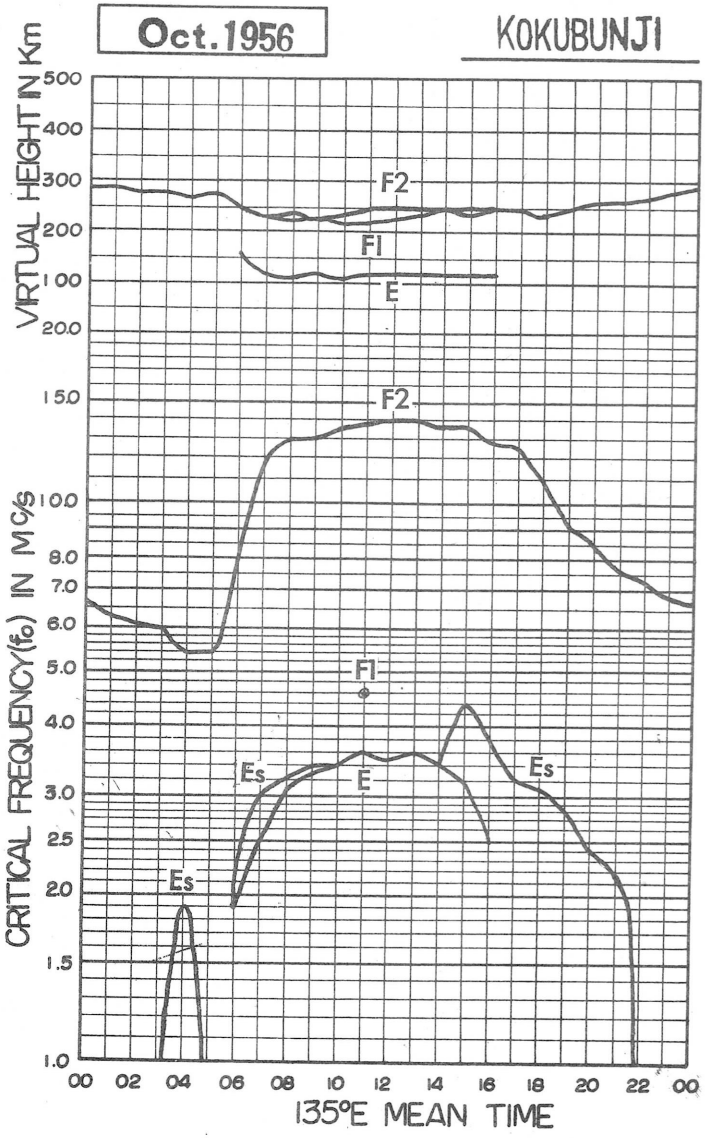
	Latitude	Longitude	Site
Hiraiso	36°22.0′N.	140°37.5′E.	Hiraiso-machi, Nakaminato-shi, Ibaragi-ken

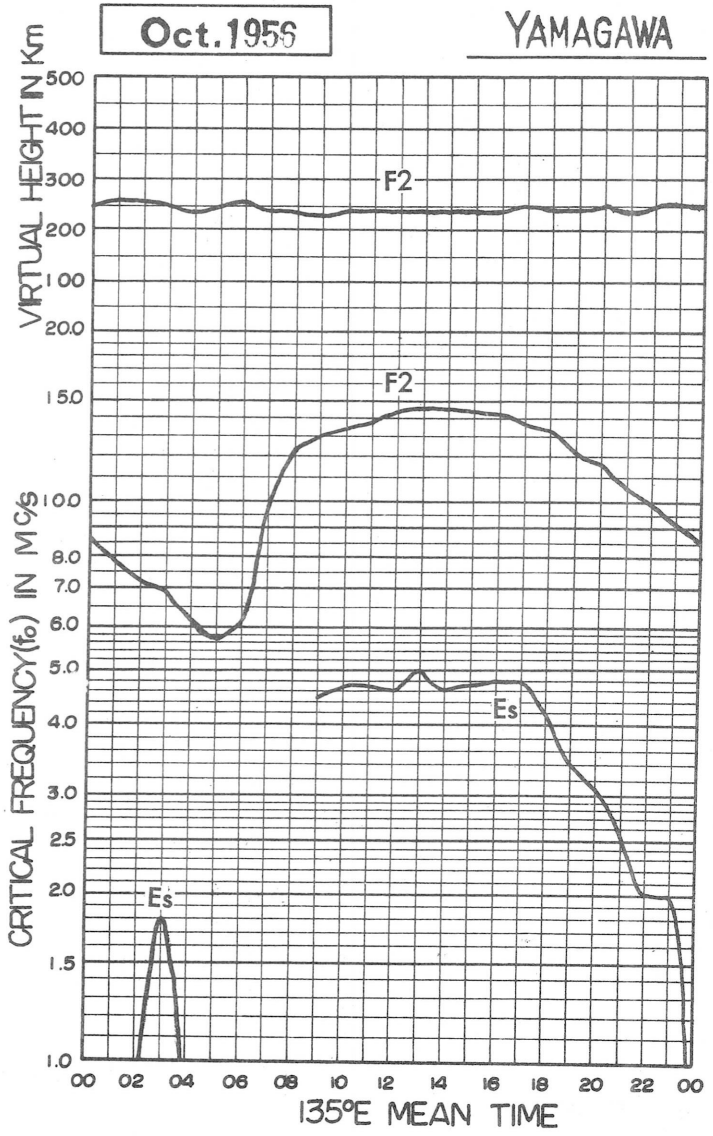
IONOSPHERIC DATA
MONTHLY MEDIAN CHARACTERISTICS





IONOSPHERIC DATA
MONTHLY MEDIAN CHARACTERISTICS





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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Oct. 1956

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	6.7	6.4	6.3	6.0	5.8	6.0	8.3	11.0	12.5	C	C	C	C	C	11.6	11.8	12.0	11.7	11.3	9.8J	8.0P	7.3J	6.8	6.4
2	6.6	6.0	5.8	5.8	6.2	6.4	8.0	11.0	13.5J	13.7J	12.8	12.6	12.8	12.5	12.1	11.3	10.8	10.3J	9.5	9.6	[8.0]S	6.5	6.3	5.7
3	5.3	5.5J	5.5	5.5	4.0	4.8	6.3	8.3	9.5	11.5	12.1	11.8	12.3	12.3	11.6	11.0	10.6	11.0	9.5	7.8P	6.6	6.3	5.8	5.3
4	5.4	5.5	5.2	5.0	4.5	4.3	7.3	9.1	11.6	11.8	11.8	12.7	13.0P	13.3J	12.5	12.3	12.2	10.8J	9.0	8.3J	7.3	6.6	6.4	6.0
5	5.8	5.7	5.6	5.5	5.1	5.0	8.0	10.8	13.0P	12.7	C	C	12.6	12.7	12.5	12.2	12.0	11.5	10.0	9.1	7.5	7.0	6.3	5.2J
6	5.3	5.3J	5.3	5.3J	5.3	5.0	8.0	11.3	13.0P	12.6	12.8	12.3	12.3	12.7	12.5	12.5	12.5	12.0	9.8J	8.8J	8.0P	6.6	7.0	7.0
7	6.8	6.7	6.3	6.5	6.2	6.3	7.8	10.8J	12.2	12.8P	12.8P	13.0P	12.6	12.7	12.6	12.5	12.3	11.2	10.3J	9.0	8.0	8.0	6.8	7.6
8	6.1	6.3	6.5	6.0	5.8	5.8	8.0	10.3	12.8P	12.8P	12.8P	(13.3)PJ	(13.0)P	12.8P	12.7P	12.5	12.3	11.6	10.0J	9.0J	8.5P	7.5	7.3	6.5
9	6.3	6.3	6.2	6.0	6.0	5.8	7.8PJ	10.3P	12.3	(13.3)PJ	13.3P	13.3J	12.6P	12.5	13.0PJ	12.7	12.5	11.5	9.5	8.3PJS	7.5	7.3P	7.0	6.6P
10	6.5	6.5	[6.4]C	6.4P	5.8	6.1	C	C	C	C	C	C	C	12.8P	C	C	12.3	11.7	10.6J	9.2	8.0	(7.3)PJS	6.7	6.5
11	6.7	6.3J	6.6	6.3	6.0	6.4	[9.2]C	12.0	13.0P	(13.3)PJ	12.8	13.0PJ	12.8P	12.5	12.3	[12.4]C	12.5	11.8	10.0	8.7J	8.1	7.2	7.0	6.6
12	6.6	6.7	6.6	6.3	6.1	6.0	8.0	11.3	12.3	12.8	13.0P	12.8	12.5	12.5H	12.5	12.5	12.5	12.0	10.0	8.3J	8.0J	7.0	6.7	7.0P
13	6.7	7.0	6.5	6.0	6.1	6.1	8.0	11.3	12.5	(13.3)PJ	(13.3)PJ	12.8	12.7	12.6	12.5H	12.3	12.3	11.3J	9.8J	8.3J	7.3PJ	7.0	6.7	6.7
14	6.5	6.6	6.5	6.5	6.5	6.0	8.0	11.5	C	C	C	C	C	C	C	C	C	11.7	11.6	9.0	7.7	7.3P	7.3	7.0
15	6.5	6.3	6.3	6.4	6.2	6.1	8.0	11.3J	12.1	12.6	12.8	12.8J	12.7	12.5H	12.4H	12.5H	12.5	12.0	10.0J	[8.5]S	7.0	6.5	6.3	6.3
16	5.8	6.0	5.9	6.1	6.2	5.7	8.2	11.0	11.5	12.2	12.8	12.7	12.3	11.8	12.0	12.0	12.0	10.3J	8.8J	8.0	7.0	6.8	6.6	6.5
17	6.2	6.2	6.3	6.3	6.2	6.0	8.0	11.1	12.1	12.2	12.5	12.5	12.8P	12.5	12.3	12.2	11.8	11.6	10.0	8.5	8.0	6.5	6.4	6.5
18	6.3	6.5	6.5	6.7	6.5	6.2	8.0	10.3J	12.3	12.7	12.8PJ	12.8PJ	12.7PJ	12.5	12.5	12.3	12.3	10.8	8.7	8.5	7.0	6.4	6.1	6.2
19	6.0	6.1	5.8	5.8	5.7	5.6	7.5	11.5	12.5	12.5	12.5	12.8J	12.7J	12.7P	12.7	12.5	12.3	11.0	10.3J	8.5	7.0	6.2	5.8	5.8
20	6.0	6.0	5.6F	5.5	5.9	5.6	7.6	11.2	12.7	12.8P	13.0PJ	13.0P	12.8P	12.7H	12.8P	12.6	12.0	11.8	11.5	9.7P	7.0	6.2	6.0	6.1
21	5.9	5.7	5.8	5.0	5.0	5.2	5.9	7.8	9.3	9.5	9.0	9.0	8.8H	8.5H	9.1	9.0	9.2	8.3	7.3J	7.0	6.0	5.5	5.0	5.0
22	5.0	4.8	5.0	4.7	4.5	4.6	5.5	8.5	9.7	10.5	11.3	12.2	12.0	11.5	10.8H	11.6	10.5	9.0	7.3	6.7	5.8	5.0	4.8	4.0
23	4.0	4.0	3.8	4.3F	4.2F	(4.8)F	6.0	9.7	11.5	12.3	12.8PJ	13.0P	12.5	12.5H	12.5	12.5	12.3	11.0	9.5	8.0	6.7	6.0	5.3J	5.3J
24	5.3	(5.3)JF	(5.2)F	5.3J	5.5	5.3	7.5	11.3	12.5	13.0P	(13.0)P	(13.0)P	12.8	(12.6)PJ	12.5	12.8	12.5	11.1	10.0	8.6	7.0	6.3	6.0	5.8
25	5.5	6.0	5.8	5.8	5.8	5.3	6.6	11.3	(12.8)P	(13.0)P	(13.0)PJ	(12.8)PJ	12.7	12.7	12.5	12.8	12.6	11.3	10.0	9.0	7.5	6.8	6.4	6.1
26	6.1	6.0	5.9	5.8F	5.8F	5.5	7.0	11.0	12.6	12.7	12.8	13.0P	13.0P	12.6	12.5	12.5	12.2	11.5	10.3	8.5	(7.2)S	7.0	6.4	6.0
27	5.5	5.0	(5.0)F	5.3JF	4.8	4.8	6.8	12.2	(13.0)PJ	12.5	(13.3)PH	(13.1)PJ	(13.0)PH	(13.0)PJ	12.8	12.8	12.8	11.5	8.5	8.3J	8.0	7.5	6.0	5.8
28	5.6	5.5	5.2	5.0	4.8	4.3	5.2	9.0	12.0	12.8	13.0P	13.0J	13.8PJ	12.5	12.5H	12.5	12.0	11.0	8.5	7.3	6.0	5.2	A	A
29	5.0	5.0	5.2	5.5	4.8	4.8	6.2	10.6	(13.3)P	(13.3)PJ	(13.3)PJ	(13.0)PJ	(13.0)PJ	12.8	12.8	12.8	12.6	11.5	9.8	7.8	6.4	6.0	5.9	5.8
30	5.7	5.0	5.0	5.0	5.0	4.8	6.5	11.0	12.8	13.0	13.1	13.3PJ	13.5PJ	13.3PJ	12.8PJ	12.8	12.7	11.8	9.5	8.6	7.0	6.3	6.0	5.8
31	5.6	5.7	5.8	5.2	5.4	5.8	6.7	10.0	12.8	13.3PJ	[13.2]C	13.2P	12.8	12.8	12.8	12.7	12.3	11.0	9.0	7.3P	7.3J	6.5	6.0	6.0
Mean Value	5.8	5.9	5.8	5.6	5.7	5.5	7.3	10.6	12.2	12.6	12.7	12.7	12.6	12.5	12.5	12.5	12.0	11.2	10.0	8.5	7.3	6.9	6.3	6.1
Median Value	6.0	6.0	5.8	5.8	5.8	5.6	7.7	11.0	12.5	12.8	12.8	12.8	12.7	12.6	12.5	12.5	12.3	11.5	9.8	8.5	7.3	6.6	6.4	6.1
Count	31	31	31	31	31	31	30	30	29	28	27	27	25	29	29	29	30	31	31	31	31	31	30	30

foF2

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

W1

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

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

Oct. 1956

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	260	260	260	250	260	280	220	220	230	C	C	C	C	C	L	L	240	230	230	230	220	260	280	280
2	270	280	300	310	310	260	240	230	240	(240)L	(240)L	(240)L	240	(250)S	240	230	250	240	230	250	220	250	260	240
3	340	310	280	240	240	300	240	250	250	L	L	240L	L	L	240	240	240	240	220	220	240	230	270	360
4	340	300	270	270	320	380	240	230	250	240	L	L	L	L	L	L	240	220	240	240	220	260	260	270
5	280	280	280	260	260	330	240	220	220	220	C	C	L	L	L	240	240	240	240	(280)A	(270)A	260	280	(300)A
6	310	300	310	310	280	270	230	230	220	240	220	230	(260)L	(280)L	(260)L	240	240	220	210	250	240	260	300	280
7	300	310	310	270	240	260	240	220	220	220	L	L	L	L	240	230	240	220	220	(260)A	270	270	300	280
8	300	320	310	280	280	320	230	220	240	220	220	L	L	240	240	240	240	230	220	230	250	260	270	270
9	270	300	300	280	260	230	240	240	240	230	220	260L	240	270L	(260)L	240	240	230	230	220	260	260	260	300
10	280	280	(280)C	280	300	320	C	C	C	C	C	C	C	230	C	C	240	230	230	230	240	240	260	280
11	320	310	280	270	260	260	(250)C	240	220	220	220	220	220H	220H	240H	(240)C	240	230	220	230	250	270	280	260
12	300	270	260	260	240	250	230	220	220	220	220	220	220	230H	230	240	240	220	220	250	240	260	280	270
13	270	270	250	300	280	270	220	220	220	220	220	220	230	230	230H	240	240	230	230	230	250	240	250	300
14	270	280	270	260	240	240	240	220	C	C	C	C	C	C	C	C	C	240	230	240	240	250	240	240
15	250	260	260	260	240	240	220	220	220	220	220	220	240	(240)LH	230H	230H	240	230	220	240	220	240	250	270
16	270	280	280	270	260	240	220	220	220	220	220	(230)L	240	280L	230	240	240	220	230	230	240	260	260	270
17	270	280	280	270	250	250	230	230	220	(220)L	220	(250)L	250	230	230	250	230	230	230	220	220	250	260	270
18	280	280	280	270	250	230	230	220	220	220	230	230	230	230	230	230	230	220	230	220	230	260	270	270
19	270	260	260	260	250	240	220	230	220	220	220	220L	230	240	240	240	220	220	230	220	220	240	260	300
20	300	270	270	320	300	260	230	220	220	220	230	230	230	230H	240	230	230	250	240	220	230	260	350	300
21	300	360	300	410	390	400	360	270	320	(270)L	(300)A	320	260H	270H	270	250	250	230	230	260	240	260	330	370
22	350	320	310	280	370	370	320	270	250	250	L	L	(240)L	240	240H	230	220	220	220	250	250	260	260	310A
23	400	450	380	350	300	310	240	230	230	220	220H	230	250	220H	240	240	230	220	240	240	250	260	280	330
24	370	350	380	330	340	370	250	230	220	220	230	220	230	230	250	250	220	220	230	220	240	250	260	280
25	320	300	290	280	270	240	230	230	220	220	220	220	230	230	230	240	220	220	230	220	240	250	250	270
26	270	290	290	290	250	230	230	220	220	220	220	220	220	220	230	230	230	240	230	220	250	250	250	280
27	290	350	360	350	280	310	240	230	230	220	230H	230	230H	230	250H	240	240	220	240	260	270	240	250	300
28	350	300	290	290	330	370	330	250	220	240	220	220	230	220	220H	240	230	240	240	240	230	310	A	A
29	350	300	320	280	260	310	270	240	230	220	230	230	220	230	230	230	230	220	220	250	320	310	290	270
30	280	270	330	360	320	300	250	220	210	210	220	220	220H	230	230	230	220	210	220	230	240	250	290	310
31	350	310	310	280	300	300	230	220	220	220	(220)C	220	226	230	230	230	220	220	230	250	270	260	260	270
Mean Value	300	300	300	290	280	290	250	230	230	230	230	230	230	240	240	240	240	230	230	240	240	260	270	290
Median Value	300	300	290	280	270	270	240	230	220	220	220	230	230	230	240	240	240	230	230	230	240	260	260	280
Count	31	31	31	31	31	31	30	30	29	27	23	23	23	25	26	27	30	31	31	31	31	31	30	30

h'F2

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

Oct.1956 | fEs | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	F	E	E	E	2.2	G	G	4.6	C	C	C	C	C	G	G	G	G	E	E	E	E	E	E
2	E	E	E	E	2.2Y	2.3	2.9Y	G	G	G	G	G	G	S	G	G	G	G	E	E	E	E	E	E
3	E	E	E	E	E	E	G	G	G	5.0	G	G	G	G	G	G	G	G	E	E	E	E	E	E
4	E	E	E	E	E	E	G	G	G	5.5	5.0	G	G	G	G	G	G	3.5	3.7	2.0	E	E	E	E
5	E	E	E	E	E	E	G	G	G	G	C	C	G	G	G	G	G	G	4.3	11.0	6.0	4.3	7.0	7.5
6	7.0	E	E	2.1	2.5	E	G	3.8	G	5.0	G	5.3	G	G	4.2	G	G	G	E	2.9	2.3	E	E	E
7	E	E	E	E	E	E	G	3.5	G	G	G	G	G	G	G	5.0Y	G	G	E	5.5	5.7	6.5	4.0	3.1
8	2.2	E	3.1	3.0Y	2.2	3.0	G	G	G	5.3	G	5.0Y	G	G	G	G	3.6	3.0	3.0	E	3.5	E	E	E
9	E	E	3.5	E	2.0	2.3	G	G	G	5.3	G	G	6.0Y	G	G	G	G	G	E	2.0	E	3.0	3.2	3.2Y
10	E	1.8	C	1.5Y	2.1Y	E	C	C	C	C	C	C	C	G	C	C	G	G	E	E	E	E	E	E
11	4.0	3.5	4.0	E	E	3.5Y	C	G	G	5.0	4.3	G	4.6	G	G	C	G	G	E	E	4.0	7.0	5.9	3.7
12	3.0	2.1	3.0	3.5	2.0	E	G	G	G	4.6Y	6.4	4.9Y	5.8	G	G	G	G	4.2	2.5	5.5	9.0Y	5.5Y	4.0	E
13	E	4.5	2.0	3.0Y	2.0Y	G	G	3.5	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	5.0
14	E	3.0	1.5	E	E	6.0Y	G	G	C	C	C	C	C	C	C	C	C	3.2Y	3.3	3.2Y	E	E	E	E
15	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	3.5	4.0	2.2	E	E	E	E
16	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E	2.2
17	2.1	E	2.3	E	2.3	E	G	G	G	G	G	G	G	G	G	G	G	3.0	E	E	E	3.0	E	E
18	2.3	2.1	2.2	2.2	2.0	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	2.3	2.3	2.3
19	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	4.0	E	E	E	E	E
20	E	E	E	E	4.5	E	G	5.7Y	G	G	4.1	G	G	G	G	G	G	4.0	2.5	E	E	E	3.1	2.9
21	2.9	2.9	3.0	2.5	3.0	5.6	4.5	4.0	5.2	4.4	11.2	5.2	5.2	4.0	5.0	4.3	4.0	2.0	2.0	3.5	E	E	E	E
22	E	2.0	E	2.3	3.0	2.3	3.6	4.8	4.2	G	G	G	G	G	4.1	G	G	3.0	E	E	E	4.1	5.0	4.5
23	3.5	5.0	2.0	3.0	2.0	2.2	G	G	5.2	4.5	G	G	4.6	G	4.0	3.5	3.7	4.2	3.8	3.3	E	E	E	E
24	3.0Y	3.5	3.5	E	3.5	5.0	4.3	3.5	4.0	5.0	5.9	4.2	7.2	9.4	7.5	6.0	G	3.5	E	E	2.0	3.6	3.5	E
25	3.5	4.2	4.0	3.5	3.5	2.2	2.3	G	G	G	G	5.0	5.2	G	G	G	5.0	3.5	E	E	E	E	E	E
26	E	3.5	4.0	5.5	2.3	2.3	G	G	G	G	G	4.0	G	G	G	G	G	E	E	4.0	3.5	3.5	4.0	4.2
27	2.3	2.3	E	E	2.0	2.3	G	G	5.0	G	4.2	G	G	G	G	G	3.5	3.0	3.0	E	E	E	3.0	4.2
28	3.5	2.3	1.5	2.3	2.2	E	G	G	4.0	6.0	6.0	6.0	G	G	4.5	5.2	5.0	4.8	4.0	E	E	4.2	7.0	7.0
29	4.3	3.5	2.0	3.5Y	2.3	2.3	3.5	G	6.5Y	4.0	3.9	G	4.0	4.5	5.5	4.0	G	3.5	E	4.2	7.0	5.0	E	E
30	2.2	2.2F	2.2F	2.5	2.2	E	G	G	G	6.0Y	5.0	G	G	G	G	G	G	E	E	E	E	E	E	E
31	E	E	E	E	E	E	2.1	G	G	G	C	G	G	G	G	G	G	2.0	E	2.0	3.8	3.5	E	2.5
Mean Value	3.3	3.0	2.7	2.9	2.5	3.1	3.9	4.1	4.3	5.0	5.6	5.0	5.3	6.0	5.0	4.7	4.1	3.4	3.3	3.9	4.7	4.3	4.3	4.0
Median Value	E	1.8	1.5	E	2.0	E	G	G	G	G	G	G	G	G	G	G	G	2.0	E	E	E	E	E	E
Count	31	31	30	31	31	31	29	30	29	28	26	27	28	28	29	29	30	31	31	31	31	31	31	31

fEs

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

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Oct. 1956

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	7.1	6.9	6.5	6.2	6.0	6.4	(9.4)^{P}	11.4	11.8	(12.0)^{P}	11.9	12.0	12.3^{H}	12.0^{JH}	11.9	12.0^{H}	12.1	11.9	10.7	9.6	8.3^{F}	7.6	7.3	6.9
2	6.7	6.3	6.0	6.1	6.5	6.8	9.0	11.6	13.5	13.4	13.1	13.0	13.0	13.0	12.0^{H}	11.5	11.0	10.8	10.5	9.6	8.8	6.9	6.3	6.0
3	5.3	5.5	5.8	6.0	4.7	5.0	8.1	11.0	12.5	13.5	13.6	13.5	13.6^{H}	13.7^{H}	12.6	11.9	11.6	11.7	11.0	8.0	6.6	6.9	6.1	5.5
4	5.6	6.0	5.6	5.4	5.0	4.7	7.8	11.1	12.1	12.5	13.6	14.5	14.0	14.5^{H}	13.6	13.5	13.5	12.0	9.9	8.5	8.1	7.3	7.1	6.7
5	6.3	6.0	5.8	6.0	5.5	5.3	8.2	11.6	13.0	13.1	13.2	13.5	13.5^{H}	13.5^{H}	13.5	12.9	12.2	12.0^{P}	10.6	9.5	8.2	7.0^{P}	6.3	5.0
6	5.2	5.4	5.3	5.4	5.3	5.3	8.0	11.3	13.0	13.7	12.9	12.4	12.6^{H}	12.9^{H}	13.5	12.6^{H}	12.5	11.9	10.4	8.6	8.4^{J}	7.3	7.4^{P}	7.5
7	7.3^{P}	6.8	6.5	6.7	6.2	6.6	9.4	11.6	12.6	13.0	13.5^{H}	13.7^{H}	13.4^{H}	13.1^{H}	13.5^{H}	12.9	12.3	(11.9)^{P}	10.6	9.0	8.2	8.3^{P}	7.6	7.5
8	6.5	6.5	6.5	6.5	6.1	6.0	8.6	11.5	13.5	13.9	13.7^{H}	14.5^{H}	13.7^{H}	13.6^{H}	13.5^{H}	13.5	12.8	(12.2)^{P}	10.8^{P}	9.6	7.9^{P}	7.3	7.4	7.0
9	6.7	6.6	6.5	6.4	6.1	5.9	8.4	10.7	12.4	13.7	13.5	13.5^{H}	13.6^{H}	13.6	13.6^{H}	14.0^{H}	13.3	11.8	10.2	9.1	8.1	7.6	7.5	7.0
10	6.9	6.8	6.6	6.5	5.8	6.3	9.0	12.4	13.4	13.5	13.6^{H}	14.5^{H}	13.7^{H}	13.1^{H}	13.1	13.4^{H}	13.0	12.1	(10.7)^{P}	9.0	8.0	7.7	7.6	7.1
11	7.0	6.8	6.8	6.1	5.9	6.3	9.2	12.0	12.8	13.5	12.8^{H}	13.4^{H}	13.5^{H}	13.5^{H}	13.4^{H}	13.0^{H}	13.0	12.0^{P}	10.4	8.6	8.1	7.8^{H}	7.7	7.5
12	7.0	7.0	6.6	6.4	5.9	5.6	8.1	11.0	12.6	[12.8]^{M}	13.1^{H}	12.9^{H}	12.7^{H}	12.1^{PH}	12.6^{H}	12.7	12.7	12.7	10.6	9.0	8.4^{P}	8.0	7.3^{P}	7.3
13	7.4	7.1	6.0	5.7	5.5	5.6	8.1	11.6	12.4	13.5	12.9^{H}	13.0^{H}	13.4^{H}	13.5^{H}	12.7^{H}	12.5^{H}	12.1^{P}	11.8	9.6^{P}	8.6	7.6	7.4	7.0	7.2
14	7.0	7.0	6.6	6.7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	7.7	7.5	7.2
15	6.8	6.5	6.2	6.1	5.6	5.5	8.0	10.8^{P}	(12.5)^{P}	(11.9)^{P}	C^{H}	C^{H}	C^{H}	C^{H}	(12.4)^{P}	12.3^{H}	12.1	12.3	10.2	8.1	6.9	6.7	6.6	6.5
16	6.0	5.9	6.0	6.1	5.6	5.7	8.0	10.2	12.0	11.8^{P}	11.7	(12.0)^{P}	(11.9)^{HP}	11.8^{P}	(11.9)^{HP}	12.5	11.6	10.5	8.3^{P}	7.8^{P}	7.0	7.0	6.9	6.5
17	6.0	6.1	6.0	6.2	5.9	5.8	8.1	11.1^{P}	(12.1)^{P}	11.6	[12.6]^{CH}	13.5	13.2^{P}	12.7	12.8^{H}	12.4	12.0^{P}	11.3^{P}	10.2	9.3^{P}	8.2	6.6	6.5	6.5^{P}
18	6.5	6.5	6.5	6.6	6.8	6.0	7.5	10.9	12.1	12.7	13.5	14.0	13.6^{H}	13.1^{H}	13.5	12.8	(11.9)^{P}	11.5	9.3	(8.4)^{P}	7.0	6.5	6.5	6.5
19	(6.4)^{P}	6.7	5.8	5.8	5.9	5.2	7.1	(10.1)^{P}	12.1	11.8^{P}	12.6	13.6^{H}	14.0^{H}	13.4^{H}	13.5	13.0	(12.0)^{P}	11.0	9.8^{P}	8.5	6.8	6.4	6.0	5.5
20	5.9	6.2	5.6	5.5	5.6	5.7	7.7	11.2	12.8	12.5	13.1^{H}	14.3^{H}	13.9^{H}	13.4^{H}	13.5^{H}	12.6	11.7	11.7	11.5	9.6^{P}	6.9	6.4	6.4	6.3
21	6.3	5.5	6.1	5.2	5.3	5.5	6.5	8.5	9.7^{H}	12.0^{H}	11.6^{H}	11.8^{H}	11.2^{H}	10.7^{H}	11.2^{H}	11.0	10.6	10.0	7.6	6.9	6.7	5.8	5.4	5.2
22	5.1	4.8	5.1	4.7	4.4	4.5	5.8	10.4	11.6	12.2^{H}	13.6	13.6^{H}	13.6	13.0^{H}	12.1^{H}	12.1	12.0	10.3^{P}	8.5	6.8	6.3	5.9	(5.2)^{P}	4.9
23	4.2^{V}	C	C	4.7^{F}	4.3^{F}	4.3	6.6	10.1	12.7	12.7^{H}	13.5	14.5^{H}	14.0^{H}	13.5^{H}	13.5^{H}	13.5	12.7	11.6	9.6	8.5	7.3	6.1	5.6	5.3
24	5.2	5.3	5.2	5.1	5.4	5.4	7.6	11.6	13.5	13.6^{H}	15.0	14.6	14.1^{H}	13.5^{H}	13.6^{H}	13.6	13.5	11.7	10.3	8.3	6.9	6.5	5.9	5.6
25	5.8	5.9	5.8	5.8	5.3	5.0	7.5	11.7	13.6	12.7	12.6	13.5	13.5	13.0^{H}	13.0	13.5	13.1	C	9.6	8.7	7.6	7.4	6.6	5.6
26	5.8	5.8	5.9	5.6	5.2	5.0	6.6	11.0	12.6	12.4	12.5^{H}	13.5	12.9^{H}	12.7^{H}	12.5	12.6	12.0	11.5	10.5	8.6	7.2	7.2	6.6	5.9
27	5.4	5.0	5.0	5.0	4.9	5.1	7.1	10.6	13.0	12.6^{H}	14.1	13.9^{H}	14.4^{H}	14.6^{H}	13.9^{H}	13.5	12.9	12.1	10.5^{P}	9.0	8.6	9.2	7.4	5.8
28	5.5	5.7	5.4	5.6^{F}	5.2^{F}	5.2	5.9	12.6	14.4	[14.9]^{C}	15.4^{H}	14.5	15.3^{H}	14.4^{H}	13.1	13.3	12.4^{J}	11.5	9.1	7.5	7.0	5.8	5.6	5.2
29	5.2	4.9	5.1	5.3	5.0	5.1	7.1	11.7	15.5	(15.1)^{PH}	15.6	15.7^{PH}	14.5	14.5^{H}	14.0	[13.4]^{C}	12.8	11.5	10.0	8.5	7.0	6.5	6.1	6.0
30	6.0	5.1	5.2	5.0	5.0	5.1^{P}	7.5	(11.9)^{P}	13.6	14.6	15.2^{P}	(15.0)^{P}	14.5^{H}	14.5	14.1^{H}	13.7	13.4	11.9^{P}	10.0^{P}	8.9	8.1	7.2^{P}	6.2	5.8
31	5.7	6.0	5.9	5.7	5.4	5.8	7.9^{P}	11.6	14.1	14.5	14.4^{H}	14.5	13.5^{H}	13.4^{H}	13.4^{H}	12.7	12.2	11.0	9.2	8.2	8.0^{P}	7.8^{P}	6.9	6.1
Mean Value	6.1	6.1	5.9	5.8	5.5	5.5	7.8	11.2	12.8	13.0	13.4	13.7	13.5	13.3	13.1	12.8	12.4	11.6	10.0	8.6	7.6	7.1	6.7	6.3
Median Value	6.0	6.0	6.0	5.8	5.5	5.5	8.0	11.2	12.6	12.9	13.5	13.6	13.6	13.4	13.4	12.8	12.2	11.7	10.2	8.6	7.8	7.2	6.6	6.3
Count	31	30	30	31	30	30	30	30	30	30	29	29	29	29	30	30	30	29	30	30	30	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 – 15th, 1200.

foF2

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

A1

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

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Oct.1956 | **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	270	250	250	250	280	290	240	240	240	L	240	L	L^H	L^H	240^L	250^H	250	240	230	240	230	250	290	290
2	280	290	300	310	300	270	260	240	240	240	230	240	240	240	240^H	240	250	250	250	270	240	240	260	270
3	320	320	300	270	220	330	250	250	250	240	250	250	250^H	240^H	240	240	250	250	240	220	240	260	280	340
4	340	300	270	270	320	400	240	230	240	240	250	250	250	240^H	250	250	250	240	250	260	[270]^A	280	270	260
5	260	290	280	280	250	320	250	240	230	230	240	250	240^H	250^H	250	250	250	240	240	260	250	250	230	250
6	340	350	300	330^A	300^A	290	240	240	230^A	250	240	240	240^H	250^H	L	250^H	250	250	250^A	280	280^A	270	300	290
7	300	310	330^A	290	240	260	250	240	240	240	240^H	240^H	240^H	250^H	250^H	250	240	250	250	250	260	260	260	[280]^A
8	290	380	300	290	270	310	250	240	240	240	240^H	250^H	240^H	250^H	240^H	250	250	250	240	250	240	280	300	280
9	280	290	270	280	250	240	240	230	240	230	240	240^H	240^H	250	240^H	240^H	240	240	250	240	270	270	270	280
10	300	270	300	300	310	340	240	230	240	250	240^H	250^H	240^H	240^H	250	240^H	250	240	240	240	240	260	260	290
11	290	290	260	250	260	290	240	240	240	240	240^H	[240]^LH	250^H	[240]^LH	240^H	250^H	250	240	230	240	240	270^H	280	260
12	290	280	250	250	240	260	240	230	240	[240]^M	250^H	230^H	240^H	240^H	250^H	250	250	250	240	250	250	250	280	290
13	290	250	250	290	290	280	240	240	240	240	240^H	240^H	240^H	240^H	240^H	240^H	250	240	230	250	250	250	280	290
14	270	280	280	280	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	260	260	250
15	250	250	250	250	240	270	240	240	230	230	230^H	230^H	[240]^LH	240^H	250	250^H	260	250^A	240	250	230	250	280	270
16	270	290	290	280	250	250	230	240	240	240	250	240	240^H	260^L	250^LH	250	240	240	240	250	250	270	280	260
17	260	290	290	280	250	260	240	240	240	240	240^H	250	250	240	240^H	250	250	240	240	240	240	240	290	290
18	280	280	280	270	250	240	230	230	240	240	250	240	240^H	240^H	250	250	240	240	220	240	230	260	280	270
19	270	250	250	260	250	240	240	220	230	230	240	240^LH	240^H	240^H	250	240	230	240	240	230	240	260	280	290
20	300	270	250	320	300	290	240	230	240	240	230^H	240^H	250^H	240^H	240^H	250	240	260	270	220	230	300	300	340
21	310	290	360^A	A	430^A	400	290	300	250^H	230^H	260^H	270^H	250^H	230^H	260^H	240	240	250	220	250	270	250	320	370
22	370	320	300	300^F	350	390	290	260	240	220^H	250	240^H	260	240^H	240^H	240	250	240	270^A	240	250	260	270	270
23	390	C	C	320^F	320^AF	340	250	240	240	230^H	240	220^H	240^H	240^H	240^H	250	250	220	250	260	240	250	290	330
24	350	340	340	360	350	330	250	220	230	230^H	240	250	230^H	230^H	240^H	250	250	230	250	240	260	270	260	280
25	300	270	280	270	250	250	250	240	230	230	230	240	240	230^H	240	250	250	230	240	250	240	260	240	250
26	280	290	270	250	240	250	240	240	240	230	230^H	240	240^H	250^H	250	250	250	240	250	230	240	250	250	250
27	300^A	400^A	390	350	300	350	250	240	240	220^H	(300)^A	250^H	240^H	240^H	250^AH	A	A	A	300^A	290	300	260	250	230
28	350	370	350^A	320	[360]^A	400	310	240	240	[240]^C	240^H	240	240^H	240^H	240	240	240	230	240	240	250	280	310	300
29	340^A	A	360^A	330^A	290	300	290	240	250	240^H	240	240^H	240	240^H	240	[240]^C	240	240	230	230	230	300	340^A	290
30	290	250	340	350	330	300	260	230	230	240	240	240	240^H	250^A	240^H	250	240	230	240	250	250	250	250	300
31	330	300	300	260	280	330	250	240	240	240	230^H	240	240^H	240^H	240^H	240	240	240	240	250	260	270	290	290
Mean Value	300	300	290	290	290	300	250	240	240	240	240	240	240	240	240	250	250	240	240	250	250	260	280	280
Median Value	290	290	290	280	280	290	240	240	240	240	240	240	240	240	240	250	250	240	240	250	240	260	280	280
Count	31	29	30	30	30	30	30	30	30	29	30	29	29	29	29	29	29	29	30	30	30	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

h'F2

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

A 2

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

IONOSPHERIC DATA

Akita

Lat. 39° 43.5' N
Long. 140° 08.2' E

Oct. 1956

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	2.0	E	2.2^{Y}	E	3.0^{Y}	E	3.1^{Y}	G	G	G	G	G	G	G	G	G	G	2.9^{Y}	3.0^{Y}	E	E	E	E	E
2	3.5^{Y}	E	E	2.0^{YF}	2.2	3.1	G	3.5	G	G	G	G	G	G	G	3.5	G	4.2	4.1	3.5	2.2	E	E	E
3	E	E	E	2.0^{YF}	E	E	3.5	G	G	G	4.9	G	G	G	4.1	3.5	G	3.8^{F}	4.0^{F}	3.0^{F}	2.2^{YF}	2.3	1.8	E
4	E	E	E	E	2.2^{Y}	2.2^{F}	3.1^{Y}	3.1	G	5.4	5.5	5.7	4.9	4.5	4.5	5.5	4.0	4.1	8.7	3.8	6.0	3.8	2.2	2.3
5	2.0	3.2	2.3	E	2.2^{F}	2.1^{F}	G	3.4	G	G	G	G	G	6.3^{Y}	G	5.7	4.2	3.2	3.5	4.4^{F}	3.5^{F}	3.0	2.5	2.6
6	2.8	3.0	3.1	4.6	3.5	4.0	3.1	6.5	5.7	5.5	4.7	4.0	4.7	4.5	4.3	4.1	4.3	4.3	6.6	4.7	4.2	3.7	3.0	3.0
7	E	2.0^{Y}	4.5	2.4^{Y}	2.3^{Y}	2.0^{Y}	G	G	3.5	G	G	G	G	G	G	G	G	G	3.5	3.5	3.0	3.0	3.5	8.9
8	5.0	4.5	3.5	4.5	2.2	2.5^{Y}	3.1^{Y}	G	G	4.7	4.6	4.7	4.7	4.3	4.1	G	G	4.3	3.5	4.2	3.0	3.6	3.0^{Y}	2.4
9	2.1^{Y}	2.0^{Y}	2.2^{Y}	3.0^{Y}	2.1	2.5^{Y}	3.5	G	G	G	G	G	G	G	G	G	G	1.7	4.1^{Y}	2.6	2.2^{Y}	2.4^{Y}	E	2.2
10	2.7	2.7	3.5	3.0^{F}	3.4^{F}	3.5^{F}	2.5^{YF}	3.5	G	G	G	G	G	G	G	G	3.5^{Y}	3.1^{Y}	3.1	3.8	2.4	E	E	E
11	2.2	2.1	3.0^{Y}	3.0^{Y}	2.2^{Y}	E	G	G	G	G	G	G	G	G	G	G	3.3	E	2.5^{Y}	2.0^{Y}	2.4^{Y}	3.5^{Y}	E	E
12	E	2.0^{YF}	2.0^{YF}	2.3^{Y}	2.5^{YF}	3.0^{F}	2.9	3.5	G	M	G	G	G	G	G	G	4.1	3.5	3.1	4.1	3.5	3.5	2.5^{Y}	E
13	2.6	3.0	3.0	3.1	3.1	2.4	3.5	G	4.3	G	4.1^{Y}	4.2	4.4	G	2.3	G	G	E	E	3.2	2.1^{F}	2.5	2.2	3.0^{Y}
14	3.0^{YF}	2.5^{F}	3.5^{F}	2.7^{F}	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	E	2.3	E
15	E	2.4^{Y}	2.2^{Y}	2.0^{Y}	2.0^{Y}	2.0^{Y}	3.1^{Y}	3.5	G	G	G	G	G	G	G	G	4.3	4.2	3.5	3.4	E	E	E	E
16	E	2.3^{Y}	2.4^{Y}	2.5^{Y}	3.2	E	G	G	3.5	4.3	4.2	G	G	G	G	G	G	G	2.5	E	E	E	E	2.3^{Y}
17	2.0	2.0^{Y}	2.0	2.1^{Y}	2.1^{Y}	3.0^{Y}	2.2^{Y}	3.4^{Y}	G	G	G	G	G	G	G	5.0	4.3	3.5	3.1	3.0	E	2.2	3.0	2.2
18	2.1	2.0	2.1^{Y}	2.3	2.3^{Y}	3.0^{Y}	3.3	3.5	4.0	4.5	G	G	G	G	G	G	3.5	3.5^{Y}	2.3	3.0	E	E	2.2	3.0^{Y}
19	2.0	2.4^{Y}	2.0	E	3.1^{Y}	2.0	2.4^{Y}	3.4^{Y}	3.5	G	G	G	G	G	G	G	G	E	E	E	3.0	3.0^{Y}	2.0^{Y}	E
20	2.0^{Y}	E	2.0^{Y}	2.5^{Y}	3.4^{Y}	2.6^{Y}	E	G	3.9	4.1	G	G	G	G	G	G	3.5	3.2	3.0	2.4	E	E	E	1.2^{Y}
21	4.2	2.6^{Y}	4.2	4.1^{F}	3.5^{F}	3.0	2.7	3.5	G	4.5	4.6	4.3^{Y}	G	G	5.0	5.1	4.4	4.5	4.1^{Y}	3.1^{Y}	3.1	2.3	3.5	E
22	2.1	2.2	2.2^{Y}	E	E	E	2.4^{F}	3.2	4.0	4.7	4.3	G	4.1	4.4	4.3	G	4.6	5.9	7.1	4.5	2.5	3.2	3.5	2.5
23	2.7	C	C	2.5^{F}	3.0^{F}	2.5^{F}	3.0^{YF}	3.2	3.9	3.2	4.4^{Y}	4.2	4.2	6.5	4.5	5.3^{Y}	5.6	3.0	4.2	3.5	4.2^{F}	4.2^{F}	2.2	3.0^{F}
24	3.5^{F}	3.0^{F}	3.5^{F}	6.6^{F}	3.5^{F}	E	2.2	3.5	5.6	4.4	4.4	9.1	4.0	G	G	3.5	4.1	4.5	6.2	4.5^{F}	6.5	3.2^{F}	3.1^{F}	2.5^{F}
25	3.1	2.6^{F}	3.5^{F}	3.5^{F}	3.5^{F}	3.1^{YF}	3.5^{YF}	G	3.5	3.5	C	3.5	G	G	G	4.0	4.5	3.5	3.5	3.1	E	2.2^{Y}	E	E
26	3.0^{Y}	3.5^{F}	3.5^{F}	3.1^{F}	3.5^{F}	3.1	E	G	G	G	4.1	G	4.6	G	G	5.6	3.5	3.5	3.1	2.4	2.1	E	E	3.5
27	4.4	5.6^{F}	3.0^{F}	2.9	2.1	2.1	2.5	3.4	G	4.5	8.7	6.7	6.5	4.1	6.2	11.1	10.7	9.0	7.0	5.5	4.2	3.7	2.4	2.2
28	2.6^{Y}	4.3	4.5^{F}	3.5^{F}	4.5^{F}	3.4	4.1	4.3	4.8	C	4.8	4.8	4.0	5.5	3.5	3.3	3.8	3.5	E	E	E	E	E	4.1
29	7.0	6.5^{F}	4.2^{F}	4.1^{F}	3.0	3.0^{Y}	E	3.5	4.4	G	G	4.6	5.0	4.9	G	C	3.1	3.0	E	E	E	7.0	6.4	3.5
30	3.0	2.5^{YF}	3.4^{F}	3.0	3.5^{F}	2.0	E	G	G	G	4.6	4.7	G	7.3	4.3	5.4	3.5	3.1	3.1	3.1^{Y}	2.4^{Y}	2.1	2.1^{Y}	E
31	2.1^{Y}	2.3^{YF}	2.5^{YF}	2.4^{Y}	2.1^{F}	E	2.1	3.1	3.5	G	G	G	G	G	G	G	G	3.4^{Y}	3.5^{Y}	2.7	3.0	2.1^{Y}	4.9	4.1
Mean Value	2.9	2.9	3.0	3.1	2.8	2.7	2.9	3.6	4.2	4.4	4.9	5.0	4.6	5.2	4.3	5.0	4.3	3.9	4.1	3.5	3.2	3.2	2.9	3.1
Median Value	2.2	2.4	2.8	2.5	2.8	2.4	2.5	3.2	G	G	G	G	G	G	G	G	3.5	3.5	3.5	3.1	2.4	2.3	2.2	2.2
Count	31	30	30	31	30	30	30	30	30	28	29	30	30	30	30	29	30	30	30	30	30	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

fEs

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

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Oct.1956

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	7.7	6.9	6.5	6.0	5.8	6.3	9.7	10.9	11.4	11.3	11.7^{H}	12.4	12.7	12.5^{H}	12.5$^{H}_{P}$	12.7	12.9	12.8	11.3	10.4	10.3	8.5	7.7	7.3
2	6.8	6.5	6.4	6.3	6.5	7.1	9.5	12.4	13.5	13.3	13.4	13.5	13.7	13.2^{H}	12.6^{H}	12.5	11.9	12.0	11.3^{P}	10.0	9.7	7.4	6.8	6.8
3	5.5	5.7	6.1	5.9	5.2	5.1	9.2	11.7	12.4	13.8^{H}	13.9^{P}	14.1^{H}	14.3	14.0	13.8^{H}	12.8^{H}	12.5	12.7	11.6	8.9	7.2	7.2	6.6	6.0
4	6.0	6.3	6.3	5.6	5.1	5.0	8.2	11.9	11.3	12.5	(14.2)$^{H}_{P}$	13.8^{P}	14.1	14.2^{H}	14.0^{H}	13.8^{P}	13.8	12.8	11.1	9.2	9.2	8.5^{P}	8.2	(7.7)^{P}
5	7.2	6.6	6.6	6.5	5.9	5.8	8.2	12.0	13.2	12.7	13.5	13.9	14.1^{H}	14.1^{H}	[13.9]^{H}	13.7	C	>11.0^{C}	11.1	9.5	8.6	7.4	6.6	5.3
6	5.4	5.5	5.6	5.4	5.3	5.6	8.3^{P}	C	C	12.7	12.4	13.0^{H}	13.7^{H}	14.0	14.1^{H}	14.0^{H}	13.0	12.9	11.3^{P}	9.0	9.0	8.4	8.0	7.9
7	7.7	7.2	7.1	6.9	6.6	6.8	9.4	12.1	13.2	13.0	13.5	13.5	13.4	13.7^{H}	C	C	12.8	12.6	11.4	9.3	8.5	8.4	7.8	7.8
8	6.8	6.5	6.8	6.8	6.2	5.8	8.0	12.2	13.5	14.0	14.3^{P}	14.0^{H}	14.0	13.8^{H}	14.1	13.8	13.5	12.9	11.2	8.7	7.9	7.4	7.6^{P}	7.4
9	7.5	7.4	6.9	6.4	6.0	5.7	C	C	12.7	13.5	14.0^{P}	C	C	C	C	14.3^{H}	14.0^{H}	12.9	11.5	10.0	8.8	8.4	8.1	7.8
10	7.1	7.0	6.7	6.5	5.8	6.2	9.0	12.4	13.0	13.0	13.6	14.0^{H}	14.5	14.0^{H}	13.8^{H}	13.6	13.5	13.5	10.8	8.5	8.2	8.2	7.9	7.7
11	7.2	7.1	7.1	6.2	5.7	5.8	8.8	12.0	13.0	12.6	12.5	13.5^{H}	14.0^{H}	14.1^{H}	14.0	13.6	13.7	13.3	11.0	9.1	9.3	8.8	8.7	8.7
12	7.6^{P}	C	C	C	C	C	C	(11.5)^{B}	[12.2]^{C}	13.0	(13.1)^{S}	12.5	12.6^{H}	13.0^{H}	13.2	13.5	13.5	13.0	11.3	9.3	9.3	9.2	8.5	8.4
13	8.6^{J}	7.3	6.7	5.7	5.1	5.2	8.0	11.5	13.3	13.0	13.8^{H}	13.5^{H}	13.6^{H}	13.5^{H}	13.5^{H}	13.4^{H}	12.9	12.6	10.3^{P}	8.9	8.5^{J}	9.1	7.7^{P}	7.4
14	7.3	6.7	6.2	6.5	5.9	4.8	7.7^{P}	11.0	12.7	12.8	13.2	13.7^{H}	13.5	13.3^{H}	13.6	13.1	12.5	12.1	10.2	8.7	8.9	8.5	8.0	8.1^{P}
15	7.5	6.8	6.5	6.3	5.4	5.1	8.3^{P}	C	C	12.0	12.7^{H}	[13.2]^{C}	13.7^{H}	13.5^{H}	13.0^{H}	12.6	12.4	12.4	11.0	8.2	7.6	7.5	7.5	7.5
16	6.8	6.2	6.2	6.1	5.6	5.6	8.0	11.0	11.6	12.3	12.3	12.7	12.9	13.1	13.0	12.9	12.3	11.0^{P}	8.7	7.9^{P}	7.7^{P}	7.4	6.9	6.6
17	6.1	6.0	5.8	6.0	5.9	5.8	7.9^{P}	11.2^{P}	12.2	12.1	13.0^{H}	13.3^{H}	13.2	13.0^{H}	13.3	13.0	12.3	(11.3)^{P}	10.3	9.3	8.2	7.3	6.8	6.9
18	6.7	6.7	6.4	6.6	6.6	5.7	7.4	9.7	12.9	13.0	13.8	14.0	14.4	14.5^{H}	14.2^{H}	13.4	12.4	12.0	9.5	8.2	7.2	7.0	7.0	7.0
19	6.8	6.3	5.8	5.9	5.8	4.5	7.0	10.5	11.4	12.1	13.0^{H}	13.9	14.2	14.5	14.5	13.6	12.4	11.1	9.4	8.8	7.6	7.0	6.4	5.9
20	6.1	6.5	5.4	5.3	5.3	5.4	7.8	11.8	12.6	13.0^{H}	13.2	14.3	13.9^{H}	13.8	13.5	13.0	12.0^{H}	11.8	11.5	10.0	7.2	6.6	6.8	6.7
21	6.7	5.8	6.1	5.2	5.5	5.9	7.4	10.3^{P}	12.9	[13.3]^{C}	13.7	13.7	13.5^{H}	12.1^{H}	12.5	12.5	11.9	[10.4]^{A}	8.8	7.1	7.2	6.8	5.8	5.4
22	5.4	5.3	5.3	5.1	4.8	4.9	7.0	11.5	13.3	13.5	14.7^{H}	14.6	14.7^{H}	14.6	14.0	13.8	13.0	12.3	9.3	8.1	6.9	6.5	5.7	5.0
23	4.3	4.2	4.3	4.4	4.3	4.3	6.9	10.3^{P}	13.1	13.5	14.5^{H}	14.6	14.7	14.5^{H}	14.1	13.9	13.4	12.2	10.2	8.8^{P}	8.5	7.0	6.2	5.9
24	5.8	5.7	5.4	5.3	5.5	5.7	8.2	11.9	13.6	14.2	14.9^{H}	15.5	14.9	14.9^{H}	14.8	14.5	13.9	12.8	10.9	9.4	7.4	7.6	6.7	6.1
25	6.1	6.3	6.0	6.0	5.1	4.9	7.9	12.4	13.5	12.7	12.6^{H}	13.0	13.6	13.6^{H}	13.8	13.6	13.7	12.5	10.0	9.8	9.2	8.3	7.5	5.8
26	5.7	6.0	5.9	[5.2]^{C}	4.6	4.3	7.1	10.4	12.6^{J}	12.1	12.5^{H}	13.4^{H}	13.1^{H}	13.4	13.1^{H}	12.7	12.0	11.6	10.8	9.2	8.1	7.4	7.2	6.5
27	5.9	5.2	5.0	5.2	5.0	5.0	7.7^{P}	10.2	13.1	13.5	13.9	14.4	14.8^{H}	14.8^{H}	14.0^{H}	13.5	12.8	12.8	11.0	9.7	9.3	10.1^{P}	8.5	5.7
28	5.1	5.4	5.3	5.5	5.2	5.0	6.2	12.8	14.7	15.2	14.9^{H}	15.0	15.5^{H}	14.7^{H}	14.2^{H}	13.9	13.1	11.8	9.5	8.9	8.4	6.9	6.1	5.9
29	5.7	5.4	5.4	5.4	5.4	5.3	7.9	12.6	14.6	15.2	15.5^{P}	15.3	15.4^{H}	15.1	14.8	13.9	13.4	12.6	11.1	10.2	9.4	8.3	7.3	6.7
30	6.3	5.8	5.4	5.2	5.1	5.2	7.8	12.7	14.1	14.6^{H}	15.4	15.2^{P}	15.3$^{H}_{P}$	15.3^{H}	14.6	14.3	13.7	12.5	11.1	9.5	9.2	8.8	7.2	6.2
31	6.1	6.3	6.0	6.2	5.2	5.4	8.4	12.1	13.7	14.3	14.3	14.5^{H}	14.5^{H}	14.0	13.5	12.6	12.4	11.5	9.2	9.0	8.5	8.8	8.2^{P}	6.9
Mean Value	6.5	6.2	6.0	5.9	5.5	5.4	8.0	11.5	12.9	13.2	13.6	13.9	14.0	13.9	13.7	13.4	12.9	12.3	10.6	9.1	8.4	7.9	7.3	6.8
Median Value	6.7	6.3	6.1	6.0	5.4	5.4	8.0	11.8	13.0	13.0	13.6	13.8	14.0	14.0	13.8	13.6	12.9	12.5	11.0	9.1	8.5	7.6	7.3	6.8
Count	31	30	30	30	30	30	29	28	29	31	31	30	30	30	29	30	30	30	31	31	31	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

foF2

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

K1

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

IONOSPHERIC DATA

Oct.1956 | h_pF2 | 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	350	340	360	390	400	380	300	280	300	320	360^{H}	370	380	390^{H}	380^{HP}	380	350	330	320	360	340	350	380	380
2	400	420	450	460	430	360	320	320	320	320	350	370	370	390^{H}	380^{H}	360	360	340	320^{P}	330	310	350	410	380
3	490	460	420	360	350	460	320	300	320	350^{H}	360^{P}	370^{H}	370	360	380^{H}	360^{H}	360	330	300	320	400	370	390	450
4	470	410	390	380	480	510	330	300	330	360	(360)^{HP}	350^{P}	360	390^{H}	370^{H}	360^{P}	340	330	320	340	350	360^{P}	360	(350)^{P}
5	360	400	410	380	380	420	330	310	300	350	370	370	390^{H}	400^{H}	[400]^{C}	390	C	C	330	360	320	350	330	410
6	440	430	430	380	380	370	320^{P}	C	C	340	380	390^{H}	390^{H}	380	390^{H}	380^{H}	370	340	330^{P}	360	380	430	420	400
7	420	440	410	420	400	390	330	310	310	330	350	360	390	390^{H}	C	C	370	350	340	350	370	370	380	390
8	400	440	410	370	330	440	340	320	310	330	340^{P}	360^{H}	370	390^{H}	380	370	370	350	330	350	360	390	390^{P}	380
9	360	370	360	360	380	400	C	C	300	330	350^{P}	C	C	C	C	370^{H}	360^{H}	350	330	380	380	370	370	400
10	390	370	380	390	430	440	330	310	320	320	350	400^{H}	380	400^{H}	390^{H}	370	360	330	340	370	380	380	360	380
11	380	380	360	370	380	380	310	290	290	310	350	380^{H}	390^{H}	390^{H}	390	370	360	330	330	380	360	370	370	350
12	380^{P}	C	C	C	C	C	C	(300)^{B}	[320]^{C}	330	(340)^{S}	370	380^{H}	410^{H}	390	370	360	330	340	360	370	350	380	380
13	(390)^{J}	320	360	370	390	390	300	290	310	340	350^{H}	380^{H}	370^{H}	390^{H}	380^{H}	390^{H}	360	330	340^{P}	390	(380)^{J}	380	380^{P}	380
14	360	340	350	350	310	380	320^{P}	280	300	320	360	350^{H}	370	400^{H}	390	380	350	340	330	380	380	360	350	350^{P}
15	340	340	340	340	310	350	300^{P}	C	C	310	340^{H}	[360]^{C}	380^{H}	380^{H}	380^{H}	360	350	340	300	340	360	380	370	350
16	350	380	370	350	330	320	280	300	300	310	320	340	390	370	370	360	320	320^{P}	370	380^{P}	360^{P}	370	350	350
17	380	380	390	360	350	330	290^{P}	280^{P}	300	310	340^{H}	360^{H}	360	390^{H}	370	360	330	(330)^{P}	340	350	350	360	380	380
18	360	350	370	350	310	300	280	280	300	320	340	350	380	380^{H}	370^{H}	360	340	330	290	350	350	380	370	350
19	350	340	330	330	290	300	290	280	310	300	350^{H}	350	370	370	360	340	340	320	350	330	350	350	370	410
20	400	330	350	400	430	380	320	270	290	330^{H}	360	360	370^{H}	360	380	360	370^{H}	360	330	310	410	460	430	440
21	420	420	460	410	530	510	400	330^{P}	320	[350]^{C}	380	360	380^{H}	400^{H}	360	320	350	[330]^{A}	310	A	380	360	460	490
22	510	450	450	430	490	510	390	310	320	340	340^{H}	350	370^{H}	370	360	350	330	310	340	340	360	340	330	360
23	460	540	500	450	480	450	340	310^{P}	300	320	350^{H}	370	340	380^{H}	380	360	340	330	350	350^{P}	350	340	400	440
24	460	460	440	460	460	430	330	300	320	330	360^{H}	340	360	380^{H}	370	360	340	320	340	320	370	380	370	390
25	390	370	360	330	370	350	310	270	280	310	340^{H}	350	360	380^{H}	360	360	330	320	370	360	340	350	320	360
26	390	370	350	[340]^{C}	320	350	300	270	(290)^{J}	310	340^{H}	350^{H}	360^{H}	370	360^{H}	360	350	340	350	310	360	360	350	350
27	360	450	490	460	420	470	280^{P}	290	310	350	380	380	400^{H}	400^{H}	410^{H}	390	370	360	350	360	370	340^{P}	280	360
28	480	450	440	420	470	500	440	290	300	320	350^{H}	350	370^{H}	370^{H}	370^{H}	350	340	340	350	360	340	400	450	410
29	450	410	450	400	400	400	350	310	310	320	350^{P}	360	370^{H}	370	360	360	340	340	330	330	330	370	370	360
30	350	370	430	450	440	400	340	280	290	330^{H}	350	350^{P}	360^{HP}	380^{H}	370	370	340	340	350	370	350	330	370	420
31	440	420	420	350	470	450	330	280	300	320	330	360^{H}	370^{H}	360	360	360	350	340	350	360	370	360	350^{P}	360
Mean Value	400	400	400	390	400	400	320	300	310	330	350	360	370	380	380	360	350	340	330	350	360	370	370	390
Median Value	390	400	400	380	400	400	320	300	300	320	350	360	370	380	380	360	350	330	340	360	360	360	370	380
Count	31	30	30	30	30	30	29	28	29	31	31	30	30	30	29	30	30	30	31	30	31	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

h_pF2

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

K2

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

IONOSPHERIC DATA

Oct. 1956 | 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	270	250	250	250	280	290	240	230	230	230	230^{H}	270	250	250^{H}	250^{H}	260	260	250	240	250	250	250	280	280
2	280	290	300	330	310	280	260	250	240	230	250	250	270	250^{H}	250^{H}	250	280	270	250	270^{A}	250	250	270	280
3	310	350	310	260	250	330	270	250	230	230^{H}	260	230^{H}	260	250	250^{H}	250^{H}	260	270	250^{A}	250^{A}	280^{A}	320^{A}	270	310
4	350	310	280	250	310	400	250	230	230	250^{A}	250^{H}	260	250	250^{H}	250^{H}	270^{A}	260	240	230	250	290^{A}	260^{A}	290^{A}	300^{A}
5	270	300	310	290	270	300	250	240	230	230	240	250	250^{H}	240^{H}	250^{H}	280	260	250	250^{A}	250	250	240	250	270
6	350	390^{A}	350^{A}	290	270	280	230	[240]^{C}	240	260	250	250^{H}	270^{H}	280	250^{H}	250^{H}	260	250	250^{A}	260^{A}	280^{A}	280^{A}	300	300
7	300	310	290	280	270	340^{A}	250	240	230	230	260	260	250	260^{H}	C	C	260	260	250	250^{A}	280	270	280	280
8	290^{A}	380^{A}	330^{A}	280	260	380	240	240	240	240	250	240^{H}	240	260^{H}	270	250	250	250	230	230	250	270	300	280
9	270	300	270	260	250	260	C	C	250	230	250	C	C	C	C	240^{H}	250^{H}	250	250	240	270	280	280	280
10	290	270	280	270	280	350	260	230	240	240	240	230^{H}	260	240^{H}	240^{H}	260	260	260	230	240	260	280	270	280
11	290	280	260	250	260	270	250	240	240	230	250	250^{H}	260^{H}	260^{H}	250	270	260	250	230	250	260	270	280	270
12	280	C	C	C	C	C	C	240	[240]^{C}	230	(250)^{S}	250	260^{H}	260^{H}	250	270	270	260	250^{A}	250	260	260	280	280
13	260	250	260	280	280	280	240	250	240	230	230^{H}	240^{H}	230^{H}	250^{H}	240^{H}	250^{H}	250	250	230	250	260	260	280	290
14	280	260	250	270	250	230	260	240	240	240	250	250^{H}	260	230^{H}	280	250	260	260	240	250	270	260	260	260
15	260	250	260	260	230	270	240	C	C	230	240^{H}	[240]^{C}	250^{H}	250^{H}	240^{H}	270	260	260	230^{A}	230	240	260	270	270
16	260	280	280	270	250	250	240	230	230	250	240	250	340	310	280	250	270	250	230	250	260	270	260	260
17	280	280	260	280	260	250	240	230	230	230	240^{H}	230^{H}	250	230^{H}	270	310^{A}	250	230^{A}	240	240	240	260^{A}	280	290
18	280	270	280	280	250	250	240	230	240	230	250	240	250	240^{H}	250^{H}	250	240	240^{A}	230	250^{A}	260	270	280	270
19	260	250	250	260	250	230	240	230	230	250	220^{H}	250	250	260	270	250	230	230	250	250	230	270	270	300
20	320	270	250	300	300	280	240	230	230	230^{H}	240	240	250^{H}	270	250	250	230^{H}	260	270	220	240	320	290	330
21	320	280	340	270	400	400	300	260	260	[260]^{C}	260	260	240^{H}	250^{H}	260	260	240^{A}	[230]^{A}	220^{A}	A	A	280^{A}	300	390
22	390	320	310	310	340	390	270	250	240	250	240^{H}	260^{A}	230^{H}	250	250	250	240	250	230	240	260^{A}	270^{A}	250	300^{A}
23	350	430	370	330	310	330	270	230	250	230	220^{H}	240	290	250^{H}	250	250	250	230	250^{A}	260^{A}	280^{A}	250	320^{A}	330
24	330	350	330	330	350	330	250	220	220	230	220^{H}	250	240	250^{H}	260	250	260	250^{A}	250^{A}	250^{A}	260^{A}	270	260	280
25	300	290	260	250	230	270	250	230	230	230	220^{H}	230	260	230^{H}	240	250	260	230	220	260	260^{A}	260^{A}	250	240
26	300	300	270	[240]^{C}	220	260	250	230	230	230	220^{H}	230^{H}	240^{H}	250	260^{H}	250	250	250	260^{A}	230	250	250	260	260
27	270	330	410^{A}	340	280	370	230	220	250	240	230	260	240^{H}	240^{H}	250^{H}	270	250	260	240	260	280	260	230	220
28	330	340	320	300	300	380	300	240	230	230	230^{H}	250	240^{H}	240^{H}	230^{H}	250	240	250	230	250	250	250	300	290
29	340	290	300	290	300	300	290	250	240	230	240	230	230^{H}	250	240	250	250	240	240	230	250	250	270	280^{A}
30	[280]^{A}	280^{A}	350	350	300	280	270	230	230	230^{H}	240	230	230^{H}	240^{H}	240	240	250	250	240	250	270	250	260	270
31	320	320	280	250	250	350	280	230	230	230	230	230^{H}	240^{H}	240	250	240	250	240	250	270	250	250	270	250
Mean Value	300	300	300	280	280	310	260	240	240	240	240	250	250	250	250	260	250	250	240	250	260	270	270	280
Median Value	290	290	280	280	270	280	250	230	240	230	240	250	250	250	250	250	250	250	240	250	260	260	270	280
Count	31	30	30	30	30	30	29	29	30	31	31	30	30	30	29	30	31	31	31	30	30	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

h'F2

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

K 3

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

IONOSPHERIC DATA

Oct.1956 | 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	L	Q	Q	5.4L	L	Q	Q	4.0	Q	Q						
2							Q	Q	L	Q	L	4.7	A	L	Q	Q	L	A						
3							Q	Q	L	Q	L	Q	L	L	L	Q	Q	2.9						
4							Q	Q	Q	A	Q	A	L	L	Q	A	Q	Q						
5							Q	Q	L	Q	4.5	L	Q	Q	Q	A	Q	Q						
6							Q	C	A	A	A	Q	Q	L	Q	Q	A	A						
7							Q	Q	Q	Q	L	L	Q	Q	C	C	Q	Q						
8							Q	Q	Q	Q	L	Q	Q	L	L	Q	Q	Q						
9							C	C	Q	Q	B	C	C	C	C	Q	Q	Q						
10							Q	Q	Q	Q	Q	Q	L	Q	Q	Q	Q	Q						
11							Q	Q	Q	Q	5.0L	L	L	L	Q	L	Q	Q						
12							C	Q	C	Q	L	L	L	L	Q	L	A	Q						
13							Q	Q	Q	L	L	L	L	Q	Q	Q	Q	Q						
14							Q	Q	Q	Q	Q	L	L	Q	L	Q	Q	Q						
15							Q	C	C	Q	L	C	L	Q	Q	L	Q	Q						
16							Q	Q	Q	L	4.9L	L	6.1	6.3	4.9	L	Q	Q						
17							Q	L	Q	L	L	4.5	Q	Q	L	A	A	A						
18							Q	Q	Q	Q	L	4.3	L	Q	Q	Q	Q	A						
19							Q	Q	Q	L	Q	4.6L	Q	L	L	L	Q	Q						
20							Q	L	Q	L	4.5	L	L	L	Q	Q	A	Q						
21							Q	Q	Q	C	L	L	Q	Q	A	A	A	A						
22							Q	Q	L	5.5	Q	A	Q	4.9L	Q	Q	Q	A						
23							Q	Q	L	Q	Q	Q	L	Q	Q	Q	Q	Q						
24							Q	Q	Q	Q	Q	L	Q	Q	Q	Q	A	A						
25							Q	Q	Q	Q	L	4.4	L	Q	Q	Q	Q	Q						
26							Q	Q	Q	Q	L	Q	Q	Q	L	Q	Q	Q						
27							Q	Q	L	4.8L	Q	L	Q	Q	Q	Q	Q	Q						
28							Q	Q	4.0	Q	Q	5.0L	Q	Q	Q	A	Q	A						
29							Q	Q	A	L	L	L	Q	L	Q	Q	Q	Q						
30							Q	Q	Q	L	L	Q	Q	Q	Q	Q	Q	A						
31							Q	Q	Q	Q	Q	Q	Q	O	L	Q	Q	Q						
Mean Value									4.0	5.2	4.7	4.7	6.1	5.6	4.9	4.0		2.9						
Median Value									4.0	5.2	4.7	4.6	6.1	5.6	4.9	4.0		2.9						
Count									1	2	4	7	1	2	1	1		1						

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

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

Oct.1956 | h'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	Q	Q	230	230	Q	Q	240	Q	Q						
2							Q	Q	240	Q	230	220	[230]A	240	Q	Q	260	A						
3							Q	Q	240	Q	230	Q	240	230	230	Q	Q	250						
4							Q	Q	Q	A	Q	A	230	230	Q	A	Q	Q						
5							Q	Q	230	Q	200	240	Q	Q	Q	A	Q	Q						
6							Q	C	A	A	A	Q	Q	250	Q	Q	A	A						
7							Q	Q	Q	Q	220	220	Q	Q	C	C	Q	Q						
8							Q	Q	Q	Q	230	Q	Q	240	250	Q	Q	Q						
9							C	C	Q	Q	B	C	C	C	C	Q	Q	Q						
10							Q	Q	Q	Q	Q	Q	240	Q	Q	Q	Q	Q						
11							Q	Q	Q	Q	210	220	230	250	Q	250	Q	Q						
12							C	Q	C	Q	230	220	240	250	Q	250	A	Q						
13							Q	Q	Q	230	230	230	230	Q	Q	Q	Q	Q						
14							Q	Q	Q	Q	Q	220	240	Q	250	Q	Q	Q						
15							Q	C	C	Q	220	[220]f	230	Q	Q	250	Q	Q						
16							Q	Q	Q	230	220	230	230	240	250	240	Q	Q						
17							Q	260	Q	230	220	210	Q	Q	250	A	A	A						
18							Q	Q	Q	Q	230	230	230	Q	Q	Q	Q	A						
19							Q	Q	Q	230	Q	200	Q	240	250	240	Q	Q						
20							Q	230	Q	230	220	220	230	250	Q	Q	A	Q						
21							Q	Q	Q	C	240	240	Q	Q	A	A	A	A						
22							Q	Q	230	220	Q	A	Q	230	Q	Q	Q	A						
23							Q	Q	230	Q	Q	Q	220	Q	Q	Q	Q	Q						
24							Q	Q	Q	Q	Q	220	Q	Q	Q	Q	A	A						
25							Q	Q	Q	Q	220	200	230	Q	Q	Q	Q	Q						
26							Q	Q	Q	Q	220	Q	Q	Q	240	Q	Q	Q						
27							Q	Q	240	230	Q	240	Q	Q	Q	Q	Q	Q						
28							Q	Q	230	Q	Q	230	Q	Q	Q	A	Q	A						
29							Q	Q	A	230	230	230	Q	230	Q	Q	Q	Q						
30							Q	Q	Q	230	230	Q	Q	Q	Q	Q	Q	A						
31							Q	Q	Q	Q	Q	Q	Q	Q	240	Q	Q	Q						
Mean Value								250	230	230	220	220	230	240	250	250	260	250						
Median Value								240	230	230	220	220	230	240	250	240	260	250						
Count								2	8	9	18	20	15	12	8	6	1	1						

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

h'F1

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

K5

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

IONOSPHERIC DATA

Oct. 1956 | **foE** | 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							1.7^{B}	2.8	3.3	(3.5)^{B}	3.8	3.8	[3.7]^{B}	(3.6)^{B}	[3.4]^{B}	3.2^{B}	2.5	2.1						
2							2.2	2.9	3.3	3.6	3.8	[3.8]^{B}	(3.8)^{B}	[3.8]^{B}	3.7^{H}	3.4	2.8	1.9^{B}						
3							A	2.5	3.3	3.5	3.6	3.6	A	A	A	A	2.2	A						
4							2.0	2.7	3.4	3.5	3.5	3.7	3.7	[3.5]^{A}	3.3	(3.0)^{A}	2.4	A						
5							2.0	2.5	3.2	3.5	(3.4)^{B}	B	B	B	B	3.4^{B}	2.5	A						
6							1.7	[2.5]^{C}	3.3^{B}	3.3^{B}	(3.5)^{B}	3.6^{B}	3.6^{B}	A	B	B	A	A						
7							2.1	2.8^{H}	3.1	B	3.4^{B}	B	B	B	C	C	2.9	A						
8							B	2.7	3.3	A	3.6^{B}	[3.6]^{B}	3.5	A	A	A	2.7	A						
9							C	C	3.2	3.2^{B}	B	C	C	C	C	3.2	2.7	A						
10							1.9	2.6	3.2	3.3	B	A	B	B	B	B	A	A						
11							2.0	2.7	3.3^{B}	B	B	B	B	B	3.2^{B}	3.2^{B}	(2.8)^{A}	1.9^{B}						
12							C	2.9	[3.1]^{B}	3.3^{B}	B	B	B	B	B	3.4	2.6	A						
13							B	2.6	(3.3)^{B}	3.5	B	B	B	3.2	[3.2]^{B}	3.3	2.7	A						
14							B	2.7	(3.1)^{A}	B	B	B	B	B	3.2	3.0	2.7^{H}	A						
15							B	C	C	B	B	C	3.4^{B}	[3.6]^{B}	3.7	3.2	2.6	A						
16							1.8	2.5	3.0	3.3	B	B	B	B	3.4	3.0	2.5	A						
17							1.9^{H}	2.5^{H}	3.0	3.2	B	B	B	B	3.4	3.0	2.5	A						
18							B	(2.4)^{A}	A	(3.3)^{A}	(3.4)^{A}	B	B	B	3.3	3.0^{H}	2.6^{H}	A						
19							1.8^{H}	2.2	(2.8)^{A}	(3.0)^{A}	3.3^{B}	3.3	3.3	3.3	3.3	3.0	2.5^{H}	2.0						
20							1.9^{H}	2.3	2.9	3.3^{B}	3.3^{B}	[3.4]^{B}	3.4^{B}	(3.6)^{B}	[3.4]^{B}	3.1	2.5	A						
21							B	(2.5)^{A}	(3.0)^{A}	[3.2]^{C}	3.4^{B}	B	B	B	(3.4)^{B}	3.1	2.5	A						
22							A	A	A	3.0	A	A	A	B	B	3.2	2.3	A						
23							B	A	3.1	B	B	3.3	A	A	3.4^{B}	3.2	2.5	A						
24							B	2.5	A	A	A	A	3.3	B	B	3.2	A	A						
25							B	2.5	3.0^{H}	3.0	A	A	B	B	(3.5)^{B}	B	A	A						
26							B	(2.6)^{B}	3.1	B	3.3^{B}	A	B	B	B	3.1	2.4	B						
27							B	2.5	A	A	A	B	A	A	B	3.1	A	A						
28							B	2.3	3.2^{H}	3.4	[3.4]^{A}	3.4^{B}	B	B	B	A	2.5	A						
29							B	A	2.9	(3.0)^{A}	3.3^{B}	B	B	3.6	3.4	2.9	A	A						
30							B	2.4^{H}	2.6	A	A	A	A	A	A	A	A	A						
31							B	2.2	(2.7)^{A}	(3.0)^{A}	A	B	A	B	B	3.2	2.3	A						
Mean Value							1.9	2.6	3.1	3.3	3.5	3.6	3.5	3.5	3.4	3.1	2.6	2.0						
Median Value							1.9	2.5	3.1	3.3	3.4	3.6	3.5	3.6	3.4	3.2	2.5	2.0						
Count							12	26	26	21	15	10	9	8	16	23	24	4						

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

foE

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

K6

17

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

IONOSPHERIC DATA

Oct. 1956 | h'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	110	110	[120	120	120	120	120	[120	120	160						
2							150	A	110	110	110	110	110	110	110^{H}	110	120	B						
3							A	120	110	110	110	110	A	A	A	A	120	A						
4							160	130	120	110	120	120	120	[120]^{A}	110	120	120	A						
5							150	120	120	120	120	B	B	B	B	120	120	A						
6							130	[120]^{C}	110	110	130^{B}	120	120	[120]^{A}	120	120	A	A						
7							160	110^{H}	110	120	110	110	110	110	C	C	120	A						
8							B	120	130	A	120	[120]^{B}	120^{B}	A	A	A	120	A						
9							C	C	120	120	110	C	C	C	C	130	130	A						
10							170	120	120	110	120	[120]^{A}	120	120	120	120	A	A						
11							160	120	120	120	120	120	120	120	120^{A}	120^{A}	130	B						
12							C	120	120	120	120	120	[120]^{B}	120	120	110	130	A						
13							B	120	120	120	120	120	120	120	120	120	130	A						
14							B	120	120	120	110	120	120	110	110	110	110^{H}	A						
15							B	C	C	120	110	[110]^{C}	110	120	110	110	120	A						
16							160	120	110	110	110	110	110	110	110	110	120	A						
17							BH	120^{H}	110	120	120	120	120	120	120	120	120	A						
18							B	120	A	120	120	110	110	110	110	110^{H}	120^{H}	A						
19							BH	130	110	110	110	110	110	110	110	110	120^{H}	130						
20							BH	120	110	110	110	110	120	110	110	110	120	A						
21							B	120	120	[120]^{C}	110	110	120	120	120	120	120	A						
22							A	A	A	120	A	A	A	110	120	120	120	A						
23							B	A	120	110	110	120^{A}	A	A	130^{A}	120	120	A						
24							B	120	A	A	A	A	120	120	110	130	A	A						
25							B	120	110^{H}	120	A	A	120	120	120	130^{A}	A	A						
26							B	120	120	110	110	[110]^{A}	110	120	120	120	120	B						
27							B	120	A	A	A	110	A	A	120	120	A	A						
28							B	110	110^{H}	A	A	120^{A}	110	120	120	A	130	A						
29							B	A	110	110	110	120	120	120	120	120	A	A						
30							B	120^{H}	110	A	A	A	A	A	A	A	A	A						
31							B	130	110	110	[110]^{A}	110	[120]^{A}	120	120	120	110	A						
Mean Value							160	120	120	120	110	120	120	120	120	120	120	150						
Median Value							160	120	110	120	110	120	120	120	120	120	120	140						
Count							8	25	26	26	25	25	24	24	25	26	24	2						

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

h'E

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

K7

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

IONOSPHERIC DATA

Oct.1956 | 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	E	E	E	E	E	E	G	3.0	G	3.6	G	G	G	G	G	G	2.8	2.4Y	E	2.8Y	E	E	E	E
2	E	E	E	1.5Y	E	E	G	3.3	G	4.4	4.3	G	6.1	G	4.3	5.0	4.8	4.9	3.5	4.7	3.2	3.2	E	E
3	1.9	E	E	E	2.0Y	E	2.8	3.9	4.8	4.9	4.8	4.9	4.9Y	4.8	4.6	4.7	4.9	3.8	6.5	7.0	5.7S	5.7	2.4	E
4	E	E	E	2.1Y	2.1	E	G	G	4.4	6.1	5.4	5.7	4.7	4.7	5.0	7.2	4.2	2.8	2.4Y	3.2	6.4	6.8	4.7	7.0
5	2.9	3.1	2.4	3.7	3.0Y	2.1Y	3.0	3.7	G	3.8	5.0	B	4.8Y	B	B	6.1	4.4	4.8	7.1	C	4.4	2.2	E	2.3Y
6	3.2	4.2	3.2	2.5Y	1.9	2.1	G	C	7.2	6.7	7.2	5.6	4.8	4.4Y	G	G	6.0	4.3	4.8	3.2	3.2	2.8	E	E
7	E	E	2.0	2.1Y	3.2Y	3.0	G	G	G	G	G	G	G	G	C	C	3.2	3.2	3.3	3.2	E	E	3.0Y	2.8Y
8	4.7	4.8	4.7	3.0	2.4Y	E	B	2.9	G	4.8	4.8	B	4.0	4.8Y	4.7Y	3.2	3.2	3.0Y	3.0	3.2	E	E	E	E
9	E	E	E	E	E	E	C	C	G	G	G	C	C	C	C	G	G	2.1	E	E	E	E	E	E
10	E	E	E	E	E	E	G	2.9	G	G	G	4.3Y	G	G	G	G	3.2Y	3.3	E	2.7	E	E	E	E
11	E	E	E	E	E	E	G	2.9	G	G	G	G	G	G	2.1	1.7	3.0	2.1	E	E	2.1	2.9	2.8	E
12	E	C	C	C	C	C	C	G	G	G	G	G	B	G	G	4.4	5.0	2.0	4.3	E	E	E	E	E
13	E	E	E	E	E	E	B	G	4.4Y	G	G	G	G	G	G	G	4.8	3.2	E	E	E	E	E	E
14	E	E	E	E	E	E	B	3.2	3.3	G	G	G	G	G	G	G	3.2	3.1	E	2.9	2.4	E	E	E
15	E	E	E	E	E	E	B	C	C	G	G	C	G	G	4.9	5.6	4.3	3.6	3.5	2.7Y	2.2	3.2	E	E
16	E	E	E	E	E	E	2.3	2.8	4.2	4.4	G	G	G	G	G	4.4	3.8	3.0	2.7	E	E	E	E	E
17	E	E	E	E	2.5	E	G	G	3.2	G	G	G	G	G	4.9	7.5	4.8	5.5	2.5	2.5	2.2	3.2	2.5	E
18	E	E	E	E	1.9Y	2.4F	B	3.4	3.2	4.2	4.4	G	G	G	G	G	G	3.2	2.7	4.5	3.2	E	E	E
19	E	E	E	E	E	E	G	3.2	3.7	3.2	G	G	G	G	G	3.3	3.1	2.7	3.2	2.1	E	2.9	2.5	E
20	E	E	E	4.6Y	E	2.3Y	G	3.0	3.2	G	G	G	G	G	G	3.2	4.7	3.2	2.1	E	3.1	E	E	3.0
21	E	2.0	1.8Y	E	E	2.4	B	3.2	4.5	C	G	G	G	5.5	5.7	5.3	6.0	12.7	7.1	6.8	6.8	6.7	2.4	2.1
22	2.5	2.2	2.1Y	2.3	2.0Y	E	2.4Y	3.2	6.5	5.4	6.5	9.5	6.7	G	G	4.5	4.8	6.9	6.4Y	6.8Y	5.8	4.2Y	2.7	4.4
23	2.8	2.4	2.0Y	2.3	2.2Y	E	B	3.2	3.2	G	G	3.2	4.9	4.9	3.3	4.4	3.6	3.0	3.8	6.5	6.8	3.0	3.9	3.2
24	E	E	E	E	E	E	B	G	3.5Y	4.9	4.4	3.2	3.0	G	G	4.5	6.6	6.8	7.2	6.8	3.8	3.0	3.2	2.7
25	2.2	2.5	2.1	2.3	E	E	B	2.8	3.2	3.3	4.3	4.5Y	G	G	2.3	3.2	4.3	3.5	2.8	2.8	4.4	3.0	E	2.4
26	2.5	2.1	3.2	C	2.4	2.2	B	3.0	3.3	G	G	3.2	G	G	G	3.2	3.0	B	3.4	3.0	2.4	2.0	2.4	2.1
27	2.1	2.4	5.7Y	3.3	2.2	E	B	G	4.2	4.5Y	5.5Y	G	6.0	3.7	G	5.2	3.2	2.7	E	2.5	E	E	E	E
28	E	E	E	E	2.5	E	G	G	3.2	3.6	3.2	3.0	G	G	2.0	4.7	3.0	4.4	E	E	E	E	E	E
29	3.1	2.2	2.2Y	E	2.3Y	3.2Y	2.5	3.0	6.8	4.5	4.8	G	G	G	4.5	4.8	3.5	3.2	3.4	E	2.4	E	2.3	6.8
30	7.2	5.0	4.5Y	3.0	2.0Y	E	B	3.0	3.3	3.2	3.2	6.7	4.8	6.7	3.6	4.4	4.9	4.0	3.2	3.0Y	3.0	3.0	3.2	2.2
31	E	E	2.2	E	2.0Y	E	B	2.5	3.2	3.5	4.2Y	G	4.5Y	G	G	G	2.8	1.9	3.1	2.8	2.8	2.3	2.2	2.5
Mean Value	3.2	3.0	2.9	2.7	2.3	2.5	2.6	3.1	4.1	4.4	4.8	4.9	4.9	4.9	4.0	4.6	4.1	3.8	4.0	3.9	3.8	3.5	2.9	3.3
Median Value	E	E	E	E	1.9	E	G	3.0	3.2	3.4	G	G	G	G	G	4.4	3.8	3.2	3.1	2.8	2.4	2.2	E	E
Count	31	30	30	29	30	30	16	28	30	30	31	27	29	29	28	30	31	30	31	30	31	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

fEs | Sweep 1.0 Mc to 17.2 Mc in 2 min | ☐ Manual ☒ Automatic | K 8

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

IONOSPHERIC DATA

Oct.1956 | (M3000)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	2.7	2.9	2.7	2.6	2.5	2.6	3.1	3.3	3.2	2.9	2.8^{H}	2.8	2.7	2.7^{H}	2.7$^{H}_{P}$	2.7	2.8	2.9	3.0	2.8	2.9	2.8	2.7	2.6
2	2.6	2.5	2.4	2.3	2.4	2.8	3.0	3.0	3.0	2.9	2.9	2.7	2.7	2.6^{H}	2.6^{H}	2.8	2.8	2.9	3.1^{P}	2.9	2.9	2.8	2.5	2.6
3	2.2	2.3	2.5	2.7	2.7	2.3	3.0	3.1	3.0	2.8^{H}	2.7^{P}	2.7^{H}	2.7	2.7	2.7^{H}	2.8^{H}	2.8	2.9	3.1	2.9	2.6	2.8	2.6	2.4
4	2.3	2.5	2.6	2.6	2.3	2.2	2.9	3.1	3.0	2.8	(2.8)$^{H}_{P}$	2.9^{P}	2.8	2.7^{H}	2.8^{H}	2.8^{P}	2.8	2.9	3.0	2.9	2.8	2.8^{P}	2.8	(2.9)^{P}
5	2.7	2.6	2.5	2.6	2.6	2.5	2.9	3.1	3.1	2.9	2.7	2.7	2.6^{H}	2.6^{H}	[2.6]$^{C}_{H}$	2.7	C	C	2.9	2.7	2.9	2.8	2.9	2.5
6	2.4	2.5	2.5	2.6	2.7	2.7	3.0^{P}	C	C	3.0	2.7	2.6^{H}	2.6^{H}	2.7	2.7^{H}	2.7^{H}	2.8	2.9	3.0^{P}	2.8	2.7	2.7	2.6	2.7
7	2.6	2.5	2.5	2.5	2.5	2.6	2.9	3.1	3.1	2.9	2.8	2.8	2.6	2.7^{H}	C	C	2.7	2.8	2.8	2.9	2.8	2.7	2.8	2.7
8	2.6	2.4	2.6	2.7	2.9	2.5	3.0	3.0	3.0	2.9	2.9^{P}	2.8^{H}	2.8	2.6^{H}	2.6	2.7	2.7	2.9	3.0	2.8	2.7	2.7	2.7^{P}	2.7
9	2.8	2.7	2.8	2.7	2.7	2.6	C	C	3.1	2.9	2.9^{P}	C	C	C	C	2.7^{H}	2.7^{H}	2.8	3.0	2.7	2.6	2.7	2.7	2.6
10	2.6	2.7	2.7	2.6	2.5	2.4	3.0	3.1	3.0	2.9	2.8	2.7^{H}	2.7	2.5^{H}	2.6^{H}	2.7	2.7	2.9	2.9	2.7	2.7	2.7	2.8	2.7
11	2.7	2.7	2.8	2.7	2.7	2.6	3.0	3.2	3.1	3.0	2.8	2.7^{H}	2.7^{H}	2.7^{H}	2.6	2.7	2.7	2.9	3.0	2.7	2.7	2.7	2.8	2.8
12	2.8^{P}	C	C	C	C	C	C	(3.1)^{B}	[3.0]^{C}	3.0	(2.9)^{S}	2.7	2.6^{H}	2.6^{H}	2.6	2.7	2.8	2.9	2.9	2.8	2.7	2.8	2.7	2.7
13	(2.7)^{J}	3.0	2.8	2.7	2.6	2.6	3.2	3.2	3.1	2.9	2.8^{H}	2.7^{H}	2.7^{H}	2.6^{H}	2.6^{H}	2.6^{H}	2.7	2.9	2.8^{P}	2.5	(2.7)^{J}	2.7	2.7^{P}	2.7
14	2.8	2.8	2.8	2.9	3.1	2.7	3.0^{P}	3.3	3.1	2.9	2.7	2.8^{H}	2.7	2.6^{H}	2.6	2.6	2.8	2.8	2.9	2.7	2.6	2.7	2.8	2.9^{P}
15	2.9	2.9	2.9	2.9	3.0	2.8	3.1^{P}	C	C	3.0	2.9^{H}	[2.8]^{C}	2.7^{H}	2.7^{H}	2.7^{H}	2.8	2.8	2.9	3.1	2.9	2.8	2.7	2.7	2.8
16	2.9	2.6	2.7	2.9	2.8	2.9	3.3	3.2	3.2	3.0	3.0	2.9	2.7	2.7	2.7	2.7	3.0	3.0^{P}	2.6	2.7^{P}	2.8^{P}	2.7	2.8	2.8
17	2.6	2.6	2.6	2.7	2.8	2.9	3.2^{P}	3.2^{P}	3.1	3.0	2.9^{H}	2.8^{H}	2.8	2.6^{H}	2.7	2.8	2.9	(3.0)^{P}	2.9	2.9	2.8	2.7	2.7	2.7
18	2.8	2.9	2.8	2.8	3.0	3.1	3.2	3.2	3.1	2.9	2.8	2.8	2.6	2.6^{H}	2.6^{H}	2.7	2.9	3.0	3.1	2.8	2.9	2.7	2.7	2.8
19	2.9	2.9	2.9	3.0	3.2	3.1	3.2	3.3	3.1	3.1	2.8^{H}	2.8	2.7	2.7	2.7	2.8	2.9	3.0	2.8	3.0	2.8	2.8	2.7	2.5
20	2.6	2.9	2.8	2.6	2.5	2.7	3.0	3.3	3.1	2.9^{H}	2.8	2.7	2.7^{H}	2.7	2.7	2.8	2.8^{H}	2.8	3.0	3.0	2.5	2.4	2.4	2.4
21	2.5	2.5	2.4	2.5	2.2	2.3	2.5	2.9^{P}	2.9	[2.8]^{C}	2.7	2.7	2.6^{H}	2.6^{H}	2.8	2.9	2.9	[2.9]^{A}	2.9	2.6	2.7	2.7	2.3	2.3
22	2.2	2.4	2.4	2.4	2.2	2.2	2.6	3.0	3.0	2.8	2.9^{H}	2.8	2.7^{H}	2.7	2.7	2.8	2.9	3.0	2.9	2.9	2.8	2.9	2.8	2.8
23	2.3	2.2	2.3	2.4	2.3	2.4	2.8	3.1^{P}	3.1	3.0	2.8^{H}	2.7	2.8	2.7^{H}	2.7	2.7	2.8	2.9	2.8	2.8^{P}	2.8	2.8	2.5	2.5
24	2.4	2.4	2.5	2.4	2.4	2.5	2.9	3.1	2.9	2.9	2.8^{H}	2.9	2.7	2.7^{H}	2.7	2.7	2.8	3.0	2.9	3.0	2.8	2.7	2.7	2.6
25	2.7	2.7	2.8	3.0	2.7	2.8	3.1	3.3	3.2	3.0	2.9^{H}	2.8	2.7	2.7^{H}	2.7	2.7	2.9	3.0	2.7	2.7	2.9	2.8	2.9	2.7
26	2.6	2.8	2.9	[3.0]^{C}	2.9	2.8	3.2	3.3	(3.2)^{J}	3.0	2.8^{H}	2.8^{H}	2.8^{H}	2.7	2.7^{H}	2.8	2.9	3.0	2.8	3.0	2.8	2.8	2.9	2.8
27	2.7	2.4	2.3	2.4	2.5	2.4	3.2^{P}	3.1	3.0	2.8	2.7	2.6	2.6^{H}	2.6^{H}	2.7^{H}	2.6	2.7	2.7	2.8	2.7	2.7	2.9^{P}	3.2	2.7
28	2.2	2.4	2.4	2.5	2.3	2.3	2.5	3.2	3.1	3.0	2.8^{H}	2.8	2.7^{H}	2.7^{H}	2.6^{H}	2.8	2.9	2.9	2.8	2.7	2.8	2.6	2.4	2.5
29	2.6	2.5	2.4	2.6	2.6	2.6	2.9	3.0	3.0	3.0	2.9^{P}	2.8	2.7^{H}	2.7	2.7	2.7	2.8	2.9	2.9	2.9	2.9	2.7	2.7	2.7
30	2.8	2.7	2.5	2.5	2.5	2.6	2.9	3.2	3.1	2.9^{H}	2.9	2.9^{P}	2.9$^{H}_{P}$	2.7^{H}	2.7	2.6	2.8	2.8	2.8	2.7	2.9	2.9	2.7	2.5
31	2.4	2.5	2.5	2.8	2.3	2.4	2.9	3.2	3.0	2.9	2.8	2.7^{H}	2.7^{H}	2.7	2.7	2.8	2.8	2.9	2.8	2.8	2.7	2.7	2.9^{P}	2.7
Mean Value	2.6	2.6	2.6	2.7	2.6	2.6	3.0	3.2	3.1	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.8	2.9	2.9	2.8	2.8	2.7	2.7	2.7
Median Value	2.6	2.6	2.6	2.6	2.6	2.6	3.0	3.2	3.1	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.8	2.9	2.9	2.8	2.8	2.7	2.7	2.7
Count	31	30	30	30	30	30	29	28	29	31	31	30	30	30	29	30	30	30	31	31	31	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

(M3000)F2 | Sweep 1.0 Mc to 17.2 Mc in 2 min | ☐ Manual ☒ Automatic

K9

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

IONOSPHERIC DATA

Oct. 1956 | **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	1.4	E	E	1.0	1.4	2.3	3.1	3.5	3.9	4.0	4.2	4.2	4.2	4.4	3.5	2.9	2.1	1.6	1.6	1.6	1.6	1.7	1.6
2	1.5	1.4	E	E	1.0	1.3	2.2	2.9	3.4	4.1	4.3	4.1	5.6^{A}	4.1	4.1	4.5	4.0	4.1^{A}	2.8	3.6^{A}	2.0	1.9	1.6	1.6
3	1.6	1.4	1.0	E	1.4	1.4	2.1	2.8	4.1	4.0	4.1	4.2	4.3	4.1	3.5	3.4	4.1	2.5	4.0^{A}	4.7^{A}	2.5^{A}	[2.0]^{A}	1.5	1.6
4	1.7	1.7	E	E	E	1.4	2.1	2.9	3.8	5.4^{A}	4.8	5.0^{A}	4.3	4.3	4.2	5.2^{A}	3.6	2.3	1.6	2.3	5.0^{A}	2.8^{A}	3.6^{A}	4.9^{A}
5	1.8	1.8	1.7	2.1	1.8	1.4	2.1	3.1	3.6	4.0	4.3	4.7	4.7	4.2	4.1	5.5^{A}	4.0	3.7	4.1^{A}	1.8	2.0	1.7	1.7	1.7
6	2.2	3.6^{A}	2.5^{A}	1.7	1.6	1.6	2.2	[3.8]^{C}	5.5^{A}	6.1^{A}	5.5^{A}	5.5^{A}	5.6	4.5	4.1	4.1	4.4^{A}	3.5^{A}	4.1^{A}	2.6^{A}	2.5^{A}	2.5^{A}	2.3	1.9
7	1.9	1.8	1.7	1.4	1.7	2.1^{A}	2.2	2.9	3.5	4.1	4.0	4.1	4.4	5.2	C	C	3.0	2.7	2.8	2.9^{A}	2.7	2.3	1.8	1.9
8	2.8^{A}	3.7^{A}	2.8^{A}	1.8	1.6	1.7	2.2	2.9	3.5	4.1	4.3	4.3	4.5	4.5	4.2	3.7	2.8	2.7	1.9	1.8	1.5	1.7	1.6	1.5
9	1.8	1.6	1.3	1.4	1.3	1.4	C	C	4.1	4.0	5.2	C	C	C	C	4.0	2.8	2.1	1.8	1.7	1.5	1.7	1.7	1.9
10	1.7	1.6	1.2	1.3	1.4	1.8	2.0	2.9	3.8	4.1	4.2	4.2	4.2	4.3	4.1	4.1	2.8	2.5	1.7	1.6	1.7	1.6	1.7	1.7
11	1.7	1.7	1.2	1.7	1.3	1.4	2.1	2.7	3.5	4.0	4.1	4.2	4.1	4.2	4.1	3.4	2.8	2.2	1.7	2.1	1.8	1.7	1.8	2.0
12	1.7	C	C	C	C	C	C	3.1	[3.6]^{C}	4.0	4.1	4.2	4.1	4.1	4.2	4.1	4.4^{A}	2.6	4.1^{A}	1.8	1.8	2.1	1.6	1.6
13	1.6	1.6	1.4	1.3	1.4	1.7	2.2	3.7	4.0	4.0	4.1	4.1	4.1	4.1	4.0	4.0	4.0	2.7	1.6	2.0	1.7	1.7	1.7	2.0
14	1.7	1.6	1.3	1.3	1.3	1.4	2.0	2.9	4.0	4.1	4.1	4.2	4.2	4.3	4.1	3.6	3.3	2.3	1.8	1.9	1.6	1.8	2.0	1.7
15	1.8	1.4	1.3	1.3	1.2	1.4	2.1	C	C	4.0	4.1	[4.0]^{C}	4.0	4.2	4.3	4.0	3.4	2.7	[2.1]^{A}	1.5	1.5	1.6	1.5	1.5
16	1.4	1.4	E	1.0	E	1.3	1.8	2.8	3.5	4.0	4.1	4.0	4.0	4.0	4.0	3.5	2.6	2.5	1.9	1.5	1.6	1.6	1.6	1.6
17	1.6	1.4	E	E	E	1.4	1.9	2.7	4.0	4.0	4.1	4.0	4.1	4.1	4.1	7.5^{A}	4.0^{A}	[2.8]^{A}	1.6	1.6	1.6	2.5^{A}	1.8	1.7
18	1.6	1.4	E	E	1.4	1.4	1.9	2.7	3.4	3.7	4.0	4.0	4.0	4.0	4.0	3.3	2.7	[2.2]^{A}	1.6	2.5^{A}	2.2	1.6	1.6	1.6
19	1.6	1.4	1.3	E	E	1.3	1.8	2.6	3.5	4.0	4.0	4.0	4.1	4.0	3.5	3.4	3.0	2.0	2.5	1.6	1.5	1.6	1.6	1.6
20	1.6	1.4	1.2	E	E	1.4	1.9	2.8	3.4	4.0	4.0	4.1	4.0	4.1	4.0	3.5	4.0^{A}	2.6	1.6	1.7	1.8	1.6	1.7	1.7
21	1.4	1.7	1.4	1.3	1.0	1.7	1.8	2.7	3.5	[3.8]^{C}	4.0	4.0	4.0	4.6	5.0^{A}	4.5^{A}	A	A	A	6.2^{A}	5.5^{A}	2.7^{A}	1.7	2.3
22	1.7	1.6	1.4	1.4	1.3	1.4	2.0	2.6	2.6	4.6	4.5	5.7^{A}	4.6	4.0	4.0	4.0	4.0	4.1^{A}	1.6	1.8	2.7^{A}	2.6^{A}	1.8	2.5^{A}
23	1.6	1.8	1.2	1.3	1.3	1.4	1.8	2.6	3.4	4.2	4.1	4.2	4.1	4.1	4.0	4.1	2.8	2.1	2.8^{A}	2.7^{A}	4.0^{A}	2.2	2.9^{A}	2.0
24	1.6	1.7	1.4	1.4	1.4	1.4	1.8	2.5	3.4	4.1	4.1	4.0	4.1	4.5	3.5	4.0	4.0	4.5^{A}	4.1^{A}	4.0^{A}	3.3^{A}	2.1	1.6	2.1
25	1.8	1.8	1.3	1.4	E	1.4	1.7	2.7	3.3	4.0	4.1	4.0	4.1	4.1	4.0	4.1	2.7	2.8	2.1	2.0	3.6^{A}	2.2^{A}	1.6	1.6
26	1.6	1.8	1.7	[1.9]^{C}	2.1	1.4	1.8	2.6	3.1	4.0	4.0	4.2	4.1	4.1	4.1	4.0	2.7	1.7	3.1^{A}	1.9	1.8	1.7	1.6	1.6
27	1.6	1.4	2.3^{A}	1.9	E	1.4	1.8	2.7	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.5	2.8	1.7	1.8	1.6	1.6	1.6	1.6	1.6
28	1.6	1.6	1.2	E	1.4	1.4	1.7	2.7	3.4	4.0	4.1	4.0	4.1	4.0	3.5	4.0^{A}	2.8	3.6^{A}	1.6	1.6	1.6	1.6	1.7	1.6
29	1.8	1.5	1.5	1.3	E	1.4	1.7	2.6	4.6^{A}	4.0	4.1	4.0	4.1	4.1	4.0	4.0	3.7	2.5	2.7	1.8	1.9	1.6	1.6	2.3^{A}
30	5.2^{A}	2.2^{A}	1.8	1.4	1.3	1.4	1.8	2.7	3.3	4.1	4.0	4.1	4.1	4.1	4.1	4.0	4.1	4.0^{A}	2.3	2.0	2.1	1.7	2.1	1.6
31	1.6	1.3	1.2	1.1	1.3	1.4	1.7	2.7	3.3	4.1	4.1	4.2	4.2	4.0	4.0	3.5	2.8	1.9	2.5^{A}	1.8	2.0	1.6	1.7	1.6
Mean Value	1.8	1.7	1.5	1.5	1.4	1.5	2.0	2.8	3.6	4.1	4.2	4.2	4.3	4.2	4.0	4.1	3.4	2.7	2.4	2.3	2.3	1.9	1.8	1.9
Median Value	1.6	1.6	1.3	1.3	1.3	1.4	1.9	2.7	3.5	4.0	4.1	4.1	4.1	4.1	4.1	4.0	3.2	2.6	2.0	1.8	1.8	1.7	1.7	1.7
Count	31	30	30	30	30	30	29	29	30	31	31	30	30	30	29	30	30	30	30	31	31	31	31	31

Note: Observation was carried out every 15 minutes during 5t., 0[illegible] - 15th, 1100.

fminF

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

K10

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

IONOSPHERIC DATA

Oct.1956 | fminE | 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	E	E	E	E	E	E	1.7	1.6	1.5	2.1	2.4	2.6	2.9	2.2	2.3	2.5	1.8	1.8	E	2.0	E	E	E	E
2	E	E	E	E	E	E	1.6	1.5	1.6	1.8	2.0	2.4	2.3	2.2	1.4	1.5	1.8	1.9	1.6	1.7	1.6	1.5	E	E
3	1.6	E	E	E	E	E	1.8	1.6	1.8	2.0	1.9	2.2	2.2	2.6	2.0	2.0	1.8	1.6	1.6	1.6	1.6	1.7	1.7	E
4	E	E	E	1.4	1.7	E	1.7	1.9	1.8	1.9	2.5	2.4	2.8	2.5	2.3	2.0	1.9	1.6	1.6	1.6	1.7	1.5	1.6	1.6
5	1.4	1.6	E	E	E	E	1.7	1.6	2.3	2.2	2.7	[3.0]^{B}	3.6	B	B'	2.5	1.8	1.6	1.6	[1.6]^{C}	1.7	1.6	E	1.6
6	1.5	1.6	1.5	1.7	1.7	1.7	1.6	[1.6]^{C}	1.6	2.3	2.9	2.4	2.5	2.8	2.8	2.6	1.6	1.7	1.7	1.7	1.6	1.7	E	E
7	E	E	1.7	E	1.0	1.4	1.8	1.7	1.8	2.5	2.5	2.3	2.4	2.6	C	C	1.7	1.6	1.7	1.8	E	E	1.9	1.7
8	1.7	1.9	1.4	1.6	E	E	B	1.8	2.6	2.2	2.3	[2.6]^{B}	3.1	2.7	2.3	2.2	1.6	1.6	1.6	1.6	E	E	E	E
9	E	E	E	E	E	E	C	C	2.2	2.5	2.7	C	C	-C	C	2.4	1.7	1.7	E	E	E	E	E	E
10	E	E	E	E	E	E	1.7	1.6	1.8	1.8	2.5	2.2	2.8	2.8	2.8	2.3	1.7	1.6	E	1.7	E	E	E	E
11	E	E	E	E	E	E	1.6	1.7	1.8	2.2	2.9	2.9	2.7	2.6	1.6	1.4	1.8	1.9	E	E	1.7	1.9	1.8	E
12	E	C	C	C	C	C	C	1.7	2.4	2.6	2.5	2.6	[2.6]^{B}	2.6	2.7	1.7	1.6	1.6	1.8	E	E	E	E	E
13	E	E	E	E	E	E	B	1.8	2.0	2.2	2.5	2.7	2.7	2.7	2.5	2.4	2.0	1.6	E	E	E	E	E	E
14	E	E	E	E	E	E	B	1.8	2.2	2.1	2.0	2.7	2.9	2.6	2.2	2.1	1.7	1.8	E	1.7	1.9	E	E	E
15	E	E	E	E	E	E	B	C	C	2.0	2.7	[2.4]^{C}	2.1	2.5	1.7	1.7	1.6	1.6	1.6	1.8	1.7	1.9	E	E
16	E	E	E	E	E	E	1.6	1.6	1.6	1.6	1.9	1.6	2.0	1.8	1.8	1.6	1.6	1.6	1.6	E	E	E	E	E
17	E	E	E	E	1.7	E	1.6	1.6	1.5	2.0	2.3	2.2	2.1	2.1	2.0	1.8	1.6	1.6	1.5	1.8	1.9	1.6	1.7	E
18	E	E	E	E	E	1.8	[1.7]^{B}	1.6	1.9	1.8	2.1	2.1	2.0	2.4	2.1	1.6	1.4	1.5	1.6	1.5	1.5	E	E	E
19	E	E	E	E	E	E	1.6	1.6	1.6	1.7	2.0	2.3	2.1	2.1	1.7	1.6	1.6	1.6	1.5	1.6	E	1.6	1.6	E
20	E	E	E	1.3	E	1.4	1.7	1.6	1.6	1.5	2.2	2.5	2.4	2.1	1.7	1.4	1.6	1.6	1.9	E	1.7	E	E	2.0
21	E	1.6	E	E	E	1.4	[1.6]^{B}	1.7	2.0	[2.2]^{C}	2.4	2.0	2.3	2.3	2.3	1.7	1.7	1.7	1.6	1.6	1.6	1.7	1.6	1.7
22	1.4	1.4	E	E	E	E	1.6	1.6	1.6	2.5	2.1	2.4	2.1	2.3	2.2	1.8	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.5
23	1.6	1.6	E	E	E	E	B	1.6	1.9	2.1	2.2	2.2	2.2	1.8	1.8	1.6	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.7
24	E	E	E	E	E	E	B	1.6	1.8	1.8	1.8	1.8	2.0	2.2	1.8	1.4	1.4	1.6	1.6	1.7	1.6	1.6	1.6	1.6
25	1.9	1.8	E	1.7	E	E	B·	1.6	1.6	2.1	2.2	2.1	2.7	2.1	1.4	1.4	1.7	1.6	1.6	1.7	1.9	1.6	E	1.9
26	1.7	1.7	1.3	[1.4]^{C}	1.4	1.8	[1.7]^{B}	1.6	1.7	1.9	2.1	2.1	2.0	2.3	2.4	1.7	1.8	[1.7]^{B}	1.6	1.6	1.9	1.8	1.7	1.6
27	1.8	1.9	1.4	E	1.3	E	B	1.6	1.6	1.7	1.8	1.8	2.1	2.1	2.0	2.0	1.6	1.6	E	1.7	E	E	E	E
28	E	E	E	E	1.9	E	2.1	1.6	1.6	1.5	1.7	1.7	1.9	2.2	1.5	1.6	1.8	1.6	E	E	E	E	E	E
29	1.7	1.7	1.4	E	1.4	1.7	1.8	1.6	1.7	1.6	2.1	2.6	2.6	2.5	2.1	1.7	2.0	1.6	1.6	E	1.6	E	1.9	1.6
30	1.4	1.4	1.2	E	1.4	E	B	1.6	1.5	1.9	2.1	2.1	2.2	1.9	1.8	1.5	1.5	1.5	1.5	1.7	1.6	1.6	1.6	1.8
31	E	E	1.4	E	E	E	B	1.7	1.5	1.5	1.6	1.7	2.5	2.7	2.1	2.1	1.6	1.6	1.5	1.6	1.6	1.9	1.8	1.7
Mean Value	1.6	1.7	1.4	1.5	1.5	1.6	1.7	1.6	1.8	2.0	2.2	2.3	2.4	2.4	2.0	1.9	1.7	1.6	1.6	1.7	1.7	1.7	1.7	1.7
Median Value	E	E	E	E	E	E	1.7	1.6	1.8	2.0	2.2	2.3	2.4	2.3	2.0	1.7	1.7	1.6	1.6	1.6	1.6	1.5	E	E
Count	31	30	30	30	30	30	19	29	30	31	31	30	30	29	28	30	31	31	31	31	31	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

fminE

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

Oct. 1956 | **ypF2** | 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	70	70	90	110	120	100	50	50	50	80	60^{H}	80	70	60^{H}	70^{HP}	80	100	70	70	90	80	100	80	80
2	80	90	150	100	110	80	80	80	80	90	60	80	70	80^{H}	80^{H}	80	90	90	40^{P}	80	100	90	130	100
3	160	120	100	130	140	140	90	90	100	70^{H}	70^{P}	70^{H}	70	70	50^{H}	80^{H}	90	70	90	120	90	60	120	140
4	130	90	110	170	120	140	120	70	100	90	(60)^{HP}	60^{P}	60	60^{H}	60^{H}	60^{P}	60	70	50	90	100	80^{P}	110	(60)^{P}
5	100	110	100	100	130	160	130	70	80	80	90	60	70^{H}	90^{H}	[80]^{CH}	70	C	C	80	110	110	80	100	160
6	140	120	100	80	120	100	80^{P}	C	C	70	80	100^{H}	80^{H}	70	80^{H}	80^{H}	80	110	80^{P}	110	60	90	100	90
7	80	110	130	110	130	100	80	70	90	90	100	80	100	80^{H}	C	C	90	80	100	100	110	90	60	60
8	110	110	90	100	130	120	90	70	100	80	70^{P}	40^{H}	70	50^{H}	70	70	100	70	60	60	80	70	60^{P}	80
9	70	90	70	90	130	120	C	C	70	80	70^{P}	C	C	C	C	60^{H}	90^{H}	110	80	90	110	90	80	90
10	90	120	90	110	120	110	100	70	90	100	70	70^{H}	70	100^{H}	110^{H}	90	90	100	80	70	110	100	100	70
11	80	110	90	110	110	110	100	70	80	70	100	100^{H}	80^{H}	70^{H}	90	80	90	100	90	120	120	90	80	90
12	60^{P}	C	C	C	C	C	C	(70)^{B}	[80]^{C}	90	(90)^{S}	90	80^{H}	100^{H}	100	90	100	100	80	100	80	90	100	130
13	(110)^{J}	80	140	110	100	90	100	70	70	110	70^{H}	80^{H}	80^{H}	70^{H}	100^{H}	90^{H}	90	100	80^{P}	100	(60)^{J}	80	50^{P}	60
14	80	90	100	80	90	100	60^{P}	50	50	90	100	80^{H}	80	100^{H}	70	90	100	80	70	70	100	80	90	60^{P}
15	70	130	70	70	100	80	70^{P}	C	C	70	70^{H}	[80]^{C}	80^{H}	90^{H}	110^{H}	90	100	110	60	100	90	90	80	70
16	80	110	90	80	100	90	70	60	60	70	80	90	90	90	90	100	80	80^{P}	90	80^{P}	80^{P}	90	80	100
17	120	110	110	110	100	80	70^{P}	70^{P}	50	90	90^{H}	90^{H}	90	100^{H}	90	100	100	(70)^{P}	70	90	80	80	70	80
18	80	70	80	80	90	90	50	70	70	90	60	90	90	120^{H}	90^{H}	100	110	90	80	100	80	110	90	80
19	90	70	90	70	60	100	80	80	90	90	90^{H}	80	90	90	90	90	80	90	70	80	100	80	100	110
20	100	80	90	100	110	80	70	60	80	100^{H}	90	90	80^{H}	100	90	110	110^{H}	110	70	90	110	120	130	110
21	130	140	100	170	120	100	130	70^{P}	120	[110]^{C}	100	80	130^{H}	100^{H}	100	90	110	[120]^{A}	140	A	80	140	140	110
22	140	110	150	120	120	140	130	110	90	90	70^{H}	80	70^{H}	70	90	80	80	70	110	100	90	110	100	90
23	120	110	110	120	130	100	110	70^{P}	80	90	70^{H}	90	90	90^{H}	80	100	100	100	70	90^{P}	110	120	120	110
24	110	140	120	110	130	110	120	90	90	80	90^{H}	80	120	90^{H}	100	100	80	100	90	90	80	90	120	110
25	90	120	90	80	110	80	90	80	70	80	70^{H}	100	90	80^{H}	100	90	100	90	130	100	90	100	90	120
26	100	80	90	[110]^{C}	130	100	80	80	(60)^{J}	90	110^{H}	90^{H}	100^{H}	120	90^{H}	100	90	80	100	100	100	100	90	100
27	100	100	90	110	100	110	70^{P}	100	100	90	80	110	70^{H}	80^{H}	90^{H}	110	110	90	90	90	90	60^{P}	100	130
28	120	120	130	90	140	100	100	60	70	80	70^{H}	80	80^{H}	80^{H}	100^{H}	90	80	90	90	130	110	110	140	140
29	150	140	120	100	100	100	70	90	70	70	60^{P}	90	80^{H}	80	90	90	100	100	70	80	80	90	100	100
30	70	130	130	90	100	110	70	80	70	80^{H}	70	50^{P}	50^{HP}	70^{H}	80	100	90	110	100	100	60	90	90	100
31	100	110	100	140	140	100	90	80	70	80	100	80^{H}	80^{H}	90	100	100	100	80	90	70	110	120	70^{P}	100
Mean Value	100	110	100	110	110	100	90	70	80	80	80	80	80	80	90	90	90	90	80	90	90	90	100	100
Median Value	100	110	100	100	120	100	80	70	80	90	70	80	80	80	90	90	90	90	80	90	90	90	100	100
Count	31	30	30	30	30	30	29	28	29	31	31	30	30	30	29	30	30	30	31	30	31	31	31	31

Note: Observation was carried out every 15 minutes during 5th, 0900 - 15th, 1200.

ypF2

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

K 12

23

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

IONOSPHERIC DATA

Oct. 1956 | foF2 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	9.8	9.0	7.8	7.1	6.2	5.7	6.7	S	10.9^{H}	11.2^{H}	11.4^{H}	13.3^{H}	13.8^{H}	13.8^{H}	14.4$^{P}_{H}$	13.8	14.2^{H}	13.7^{H}	13.1	13.0	13.1	13.0	9.9$^{S}_{H}$	S
2	SF	SF	10.0^{H}	6.8	6.5	6.5	7.6	11.1	13.7	13.0^{H}	13.0^{H}	13.5^{H}	SH	13.7^{H}	13.5^{H}	SH	13.0^{H}	13.1^{H}	13.8	12.4	[10.3]^{S}	8.2	7.3	7.8
3	7.0	6.5	7.1	6.7	5.7	4.8	6.4	9.9	12.4^{H}	14.5$^{P}_{H}$	13.2^{H}	SH	14.6$^{J}_{H}$	SH	SH	SH	13.7^{H}	13.8^{H}	13.5	11.3	10.0^{S}	10.5	9.9	9.0
4	8.1^{J}	7.8^{H}	7.6	6.4	5.4	5.4	5.8	11.2	10.7	11.5^{H}	SH	(15.1)$^{J}_{H}$	15.0^{H}	15.2^{H}	SH	SH	14.5^{H}	14.4^{J}	13.8^{P}	12.3	11.9	[10.6]^{S}	9.3	9.0
5	8.6	7.7	7.0^{H}	6.9	6.7	6.0	6.0	10.5	13.2	12.6	12.5^{H}	14.7$^{J}_{H}$	SH	SH	SH	SH	SH	S	13.5^{H}	9.6	9.6	8.7	7.0	6.3
6	6.2	6.3	6.6	6.8	6.2	5.7	6.3	9.5	12.5	13.0	12.1	13.8^{H}	14.6^{H}	SH	SH	SH	SH	14.0	13.6	12.6$^{J}_{H}$	12.3	12.7	12.2^{S}	[12.1]^{S}
7	12.0$^{S}_{H}$	[11.0]^{S}	9.9^{H}	8.7	8.1	6.7	7.2	[9.8]^{S}	12.4^{H}	13.0	12.9	13.7^{H}	14.6^{H}	14.4^{H}	14.6$^{S}_{H}$	[14.6]$^{S}_{H}$	14.6^{H}	14.5^{H}	13.5	12.4^{J}	[11.2]^{S}	10.1$^{J}_{S}$	9.8	8.6
8	8.0	6.7	7.0	7.1	6.7	5.4	5.9	[9.2]^{S}	12.6	13.4	14.4^{H}	SH	SH	SH	14.5^{H}	SH	SH	C	C	C	C	C	C	C
9	C	C	C	C	5.5	5.1	5.9	9.3	12.2	14.2	13.7	13.3	13.8^{H}	[14.2]$^{S}_{H}$	14.6^{H}	SH	SH	SH	14.5	13.5	12.2	11.5^{H}	11.0^{H}	10.1^{J}
10	9.5	9.0^{H}	8.5^{H}	7.9	7.4	5.9^{H}	6.7	10.7	12.3	13.5^{H}	13.5^{H}	13.9^{H}	14.7^{H}	[15.0]$^{S}_{H}$	15.2^{H}	14.5$^{J}_{H}$	SH	S	15.7	12.3^{H}	13.8	S	S	12.8
11	11.3^{H}	12.2	[11.4]^{S}	10.6^{J}	8.7	6.6	6.3	9.8	11.9	13.0	12.9	13.5^{H}	14.0^{H}	SH	SH	SH	SH	S	13.6	13.0^{H}	14.6$^{P}_{H}$	14.8	13.2	12.4^{J}
12	[11.4]^{S}	10.5	9.6^{V}	8.6	7.0	4.8	4.8	8.7	11.4	12.8	12.4^{H}	13.0^{H}	13.5^{H}	14.5^{H}	15.1$^{S}_{H}$	[14.8]^{S}	14.5^{H}	14.5^{J}	S	C	12.1	12.6	12.3	12.0
13	12.0	9.8	9.5	(8.0)^{P}	5.9	5.0	5.4	9.0	12.4	13.1	14.4^{H}	14.0^{H}	14.0^{H}	14.7^{H}	[14.5]$^{S}_{H}$	14.3^{H}	[14.4]$^{S}_{H}$	14.5	13.2	11.8	11.8	12.0	11.7	[10.8]^{S}
14	10.0	9.0	7.9	6.9	6.1	4.2	4.5	9.5	12.3^{H}	13.5^{H}	13.1^{H}	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	5.4	9.4	10.5	13.0^{H}	14.0^{H}	14.3	13.8^{H}	14.5^{H}	14.9^{H}	14.5^{H}	(14.8)$^{VP}_{SH}$	13.6^{H}	12.4	S	S	11.5	11.1	(10.1)^{S}
16	8.6	7.6	7.1^{H}	7.0	6.4	5.9	5.8	9.5	12.0	12.7	12.7	13.1^{H}	14.4^{H}	SH	SH	14.9^{H}	13.1^{H}	12.5	11.8	10.9$^{J}_{S}$	9.8	8.9	7.9^{J}	7.0
17	7.0	7.1	6.9	6.3^{J}	6.6	6.2	5.1	9.1	[10.7]^{S}	12.3^{H}	13.0	13.7^{H}	13.5^{H}	14.5$^{P}_{H}$	14.7^{H}	14.0^{H}	13.1	12.2^{H}	12.0	10.8$^{J}_{H}$	10.6	10.4^{J}	9.7	8.1
18	8.0^{J}	7.8	7.2	7.0	6.6	5.1	5.4	8.9	11.8$^{J}_{S}$	12.6^{H}	14.5^{H}	SH	SH	SH	SH	SH	SH	13.6^{H}	12.1$^{J}_{H}$	[10.8]^{S}	9.6^{H}	9.5	10.1	9.9
19	9.7	7.9^{J}	7.0	6.7	6.4	3.7	4.2	8.7	11.2	12.5^{H}	14.0^{H}	14.5^{H}	15.0$^{P}_{H}$	15.0^{H}	SH	SH	14.3	13.2	11.9^{H}	10.5	10.1	10.0	8.8	8.6
20	8.0	7.9	7.3	6.5	5.9	5.7	5.4	10.0	11.7	12.5^{H}	14.4^{H}	13.8^{H}	14.4^{H}	14.9^{H}	14.5^{H}	14.3^{H}	13.5^{H}	13.0^{H}	12.4	[10.8]^{S}	9.2	9.1	9.4^{H}	8.4
21	7.9	7.3	6.4	6.1	5.6	6.1	6.8	10.7^{J}	15.0$^{J}_{P}$	S	SH	SH	SH	14.7^{H}	14.5^{H}	14.2^{H}	[14.1]$^{S}_{H}$	14.0	12.5	9.5	9.8	8.5	8.0	7.1
22	6.9	7.6	6.7	6.6	6.0	5.6	6.4	C	C	(14.6)$^{P}_{H}$	14.0	SH	SH	SH	14.9^{H}	SH	S	14.2	13.6	S	S	9.7^{J}	9.0	8.2^{P}
23	6.5	6.3	6.2	6.3	5.7	5.4	6.2	9.9	12.7	14.0^{H}	14.7^{H}	14.6^{H}	SH	SH	SH	SH	SH	13.5	13.5	11.0	11.2	10.7	10.1	9.2
24	9.2	8.5	7.4	6.9	7.0	7.3	8.1	12.0^{J}	13.1	13.8^{H}	SH	SH	SH	SH	SH	SH	SH	S	13.2	12.0^{S}	11.4	11.8^{S}	11.3^{J}	10.1
25	9.7	9.3^{P}	9.0	9.4	8.3^{J}	6.5	6.3	10.6	11.8	12.5	13.0^{H}	13.6^{H}	SH	SH	15.0^{H}	[14.8]$^{S}_{H}$	14.5^{H}	14.5^{P}	14.5^{P}	13.0	[13.0]^{S}	12.9	10.9	9.2
26	9.4^{P}	8.5	7.7	8.1	6.1	5.1	4.7	8.9	10.6	11.6	13.1^{H}	13.5^{H}	13.5^{H}	(14.6)$^{P}_{H}$	SH	13.5^{H}	13.0^{H}	13.2	13.0	11.5	S	S	S	9.8
27	8.1	6.5	5.9^{H}	6.1	5.6	5.1	6.6	8.7	10.4^{J}	14.8	13.8^{H}	14.5^{H}	SH	SH	SH	14.5^{H}	14.5^{H}	14.1	13.7	12.2	12.3	13.7	11.1	8.1
28	6.2	6.1	6.1	5.9	5.0	5.0	5.3	10.5	14.0	13.8	SH	SH	SH	SH	SH	SH	SH	14.4^{H}	13.3	12.2	12.5	10.3	8.1	8.1^{H}
29	7.6	7.4	7.0	6.4	5.7^{H}	5.7^{H}	6.3	11.5	14.5^{P}	S	SH	SH	SH	SH	SH	SH	SH	SH	13.5	13.1	(13.1)$^{J}_{P}$	C	C	C
30	C	C	C	C	C	C	C	C	C	SH	14.3^{H}	(15.2)$^{J}_{H}$	[15.0]$^{S}_{H}$	14.7^{H}	SH	SH	13.7^{H}	13.8^{H}	13.2^{H}	13.2	13.5	13.7	12.2	11.5$^{J}_{S}$
31	9.8	9.5	9.4	(10.0)^{S}	7.2	6.2	7.7^{J}	11.2	13.7	13.6	14.5$^{J}_{H}$	14.5^{H}	(14.8)$^{J}_{H}$	14.4^{H}	14.5$^{P}_{H}$	14.3^{H}	13.6^{H}	13.4^{H}	12.5	11.2^{S}	12.0	12.0^{H}	10.2	9.2
Mean Value	8.8	8.2	7.8	7.3	6.4	5.6	6.0	9.9	12.2	13.1	13.4	14.0	14.3	14.6	14.6	14.4	14.0	13.7	13.2	11.8	11.6	11.1	10.1	9.4
Median Value	8.6	7.8	7.2	6.9	6.2	5.7	6.1	9.8	12.3	13.0	13.4	13.8	14.4	14.6	14.6	14.4	14.2	13.8	13.4	12.1	11.8	10.6	10.0	9.2
Count	27	27	28	28	29	29	30	28	29	28	26	22	18	16	15	14	18	23	28	26	26	26	26	27

foF2

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

Y1

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

IONOSPHERIC DATA

Oct. 1956 | 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	250	240	240	240	220	260	250	230	220^{H}	220^{H}	230^{H}	240^{H}	250^{H}	240^{H}	240^{H}	270	250^{H}	250^{H}	240	250	240	240	230^{H}	250
2	240	240^{F}	290^{H}	290	290	290	290	240	240	220^{H}	240^{H}	240^{H}	240^{H}	240^{H}	250^{H}	250^{H}	240^{H}	240^{H}	250	240	240	220	260	260
3	260	340	280	240	240	280	300	240	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	250^{H}	[250]$^{A}_{H}$	250^{H}	250^{H}	250	250^{A}	220	290	250	250
4	290	290^{H}	250	220	270	360	320	220	220	230^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	250^{H}	240^{H}	250	240	240	250	250	260	290
5	250	240	260^{H}	250	250	250	320	240	220	230^{A}	230^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240	240^{H}	240	280	240	250	(290)^{A}
6	300	300	300	260	240	240	260	240	240	240	[240]^{A}	230^{H}	240^{H}	250^{H}	250^{H}	250^{H}	240^{H}	250	240	250^{H}	260	250	250	240
7	250^{H}	270	250^{H}	250	240	230	240	240	230^{H}	240	230	240^{H}	240^{H}	240^{H}	250^{H}	240^{H}	240^{H}	250^{H}	240	240	240	250	240	250
8	260	(340)^{A}	330^{A}	270	240	300	330	240	240	240	230^{H}	240^{H}	240^{H}	240^{H}	250^{H}	240^{H}	250^{H}	C	C	C	C	C	C	C
9	C	C	C	C	230	240	240	240	240	240	240	240	240^{H}	240^{H}	250^{H}	240^{H}	240^{H}	240^{H}	240	230	240	260^{H}	250^{H}	240
10	260	240^{H}	240^{H}	240	250	290^{H}	300	230	230	230^{H}	230^{H}	230^{H}	240^{H}	240^{H}	240^{H}	240^{H}	250^{H}	250	240	200^{H}	240	240	240	240
11	250^{H}	240	230	230	240	240	240	240	230	230	230	230^{H}	230^{H}	240^{H}	230^{H}	240^{H}	240^{H}	240	240	240^{H}	250^{H}	250	250	260
12	250	250	240	220	220	220	240	230	240	240	240^{H}	240^{H}	240^{H}	240^{H}	260^{H}	290	280^{H}	270^{A}	250^{A}	[240]^{C}	240	240	250	260
13	250	230	240	240	240	250	240	240	240	240	240^{H}	230^{H}	230^{H}	240^{H}	240^{H}	250^{H}	240^{H}	240	240	250	240	250	240	240
14	250	240	240	230	220	240	290	250	240^{H}	240^{H}	240^{H}	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	260	240	220	240^{H}	240^{H}	240	240^{H}	240^{H}	250^{H}	250^{H}	240^{H}	250^{H}	240	240^{A}	270^{A}	240	250	240
16	250	250	260^{H}	260	240	240	240	240	230	230	240	230^{H}	250^{H}	240^{H}	240^{H}	250^{H}	250^{H}	240^{A}	230	240	250	250	240	250
17	260	260	240	240	240	230	240	230	230	240^{H}	240	240^{H}	240^{H}	240^{H}	250^{H}	240^{H}	240	260^{H}	240	240^{H}	250	240	240	260
18	260	250	250	250	230	220	240	240	230	230^{H}	240^{H}	240^{H}	240^{H}	240^{H}	250^{H}	250^{H}	250^{H}	240^{H}	240^{H}	240	290^{H}	260	260	250
19	240	240	240	250	220	220	270	240	220	230^{H}	240^{H}	240^{H}	240^{H}	250^{H}	250^{H}	240^{H}	240	240	240^{H}	240	240	240	250	270
20	290	250	240	270	280	240	230	240	240	230^{H}	240^{H}	240^{H}	240^{H}	250^{H}	250^{H}	240^{H}	250^{H}	250^{H}	250	250	(310)^{A}	(350)^{A}	290$^{A}_{H}$	290
21	290	270	290	250	390	360	340	250	240	240	230^{H}	240^{H}	240^{H}	230^{H}	240^{H}	250^{H}	240^{H}	240	230^{A}	200	250	300^{A}	300^{A}	300^{A}
22	380	320	290	270	290	350	300	240	[240]^{C}	240^{H}	240	220^{H}	230^{H}	220^{H}	240^{H}	240^{H}	240	250	240	240	250	240	250	240
23	250	360	350	290	260	260	290	240	240	230^{H}	230^{H}	220^{H}	240^{H}	240^{H}	250^{H}	240^{H}	240$^{A}_{H}$	260	270^{A}	260^{A}	280^{A}	240	240	280^{A}
24	300	320^{A}	290	340	310	290	250	230	220	210^{H}	240^{H}	240^{H}	230^{H}	250^{H}	240^{H}	240^{H}	240^{H}	240^{A}	220^{A}	250	240	240	240	260
25	240	250	240	240	220	220	240	240	220	220	230^{H}	240^{H}	240^{H}	250^{H}	240^{H}	250^{H}	250^{H}	240	210^{A}	250	250	240	240	240
26	240	250	240	240	220	240	240	240	220	220	230^{H}	240^{H}	240^{H}	240^{H}	250^{H}	250^{H}	250^{H}	250	240	240	270^{A}	240^{A}	250	240
27	240	290	380^{H}	330	240	350	260	220	240	240	220^{H}	250^{H}	250^{H}	240^{H}	240^{H}	240^{H}	250^{H}	250	250	240	270	250	220	230
28	240	320	290	290	250	340	350	250	220	220	230^{H}	240^{H}	230^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240	240	240	230	270	290^{H}
29	250	260	260	250	260^{H}	290^{H}	300	250	240	240	240^{H}	240^{H}	240^{H}	250^{H}	240^{H}	240^{H}	240^{H}	250^{H}	240	240	230	C	C	C
30	C	C	C	C	C	C	C	C	C	240^{H}	240^{H}	240^{H}	220^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240^{H}	240	250	240	250	240
31	250	280	260	240	200	290	290	240	240	230	230^{H}	240^{H}	220^{H}	240^{H}	230^{H}	240^{H}	240^{H}	260$^{A}_{H}$	(280)^{A}	260^{A}	250	240^{H}	240	240
Mean Value	260	270	270	260	250	270	270	240	230	230	240	240	240	240	240	250	240	250	240	240	250	250	250	260
Median Value	250	260	260	250	240	250	260	240	240	230	240	240	240	240	240	240	240	250	240	240	250	240	250	250
Count	28	28	28	28	29	29	30	30	30	31	31	30	30	30	30	30	30	29	29	29	29	28	28	28

h'F2

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

Y2

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

IONOSPHERIC DATA

Oct. 1956 | fEs | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

135° E Mean Time

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	E	E	E	E	E	E	3.5	5.4Y	4.9	4.7	G	G	6.5	G	B	G	3.5	3.0	E	E	E	E	E
2	E	E	E	E	E	E	E	3.3	G	4.4	4.4	4.6	4.2	G	G	G	4.3	4.4	3.1	2.6	E	E	E	E
3	E	E	E	E	E	1.9	1.9	3.4	4.6	5.9	5.0	4.9	5.4	5.9	8.5	8.9	5.9	5.9	5.1	9.2	2.4	6.8	2.0	E
4	E	E	E	1.9	E	E	E	B	G	4.7	5.1	8.9	6.5	6.4	G	G	G	G	G	5.0	5.9	4.7	3.7	3.5
5	2.4	1.9	E	E	E	E	E	3.4	G	8.5	5.2	G	G	4.9	4.9	5.8	5.5	6.2	4.6	5.9	5.9	4.8	3.4	3.4
6	1.9	1.9	2.1	2.3	E	E	E	G	G	5.8	7.7	5.0	5.5	6.5	5.1	3.8	6.2	4.5	9.6	7.3	3.5	3.4	2.0	2.0
7	E	2.4	2.9	2.2	2.4	2.2	2.4	G	G	6.5Y	G	4.7	4.6	G	4.8	4.9	4.3	5.0	5.4	3.8	4.9	3.0	E	2.0
8	2.3	5.1	3.5	5.0	2.4	1.9	2.0	G	G	G	4.8	5.6	5.6	5.9	6.3	5.3	6.5	C	C	C	C	C	C	C
9	C	C	C	C	E	E	1.9	G	4.9	5.7	6.7Y	4.8	4.7	G	G	G	4.5	4.8	4.3	3.1	3.5	3.7	3.4	2.4
10	1.9	E	1.9	2.2	2.4	2.0	2.1	G	G	G	4.9	5.4	5.0	5.9	5.0	G	G	3.4	3.4	3.5	2.4	2.4	E	2.1
11	E	E	E	E	E	E	E	G	G	4.5	5.2	4.7	4.8	B	G	G	4.8	G	3.5	3.0	3.5	3.3	3.5	4.8
12	2.2	2.3	2.0	1.9	E	E	1.9	G	G	G	G	6.7	9.0Y	5.4	8.9	6.4	6.2	7.5	7.5	C	2.3	2.1	2.0	2.0
13	E	E	E	E	E	E	E	G	G	5.0	4.8	G	G	G	G	G	4.5	G	3.5	3.4	3.1	2.0	E	E
14	E	2.0	1.9	1.8	E	E	E	G	4.0	G	G	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	E	G	4.9	G	G	G	G	G	G	G	G	5.4	4.3	4.9	4.2	1.9	2.9	2.4
16	E	E	E	E	1.9	2.0	1.9	G	G	8.5	7.5Y	6.5	G	G	5.0	5.1	5.2	5.1	3.5	2.7	2.3	2.0	2.4	E
17	E	E	E	E	E	E	E	G	G	4.3	G	G	G	6.8Y	G	5.2	5.4	8.2	5.6	3.6	3.0	2.4	E	2.0
18	2.0	2.3F	2.0	1.8	1.9	2.0	1.9	G	G	G	5.2	G	G	G	5.8	4.9	5.9	6.8	3.9	2.7	5.9	4.0	3.5	2.3
19	E	E	E	E	E	E	2.0	2.9	G	5.4	4.4	G	G	G	G	G	G	3.4	2.4	2.4	E	E	E	E
20	E	E	E	E	E	E	1.8	G	3.8	4.8	4.7	4.8	5.2	G	6.7	4.6	5.8	3.6	4.2	8.9	8.9	6.9	5.4F	1.9
21	E	1.9	2.0	1.9	1.9	E	1.9	G	G	4.4	G	5.1	6.6	5.2	5.5	6.7	5.9	4.9	3.7	2.3	5.9	7.0	5.9	3.8
22	3.6	3.3	3.2	2.0	2.0	2.0	2.0	G	C	G	4.4	4.7	4.6	B	G	G	4.9	6.8	4.6	5.9	5.9	2.6	3.0	2.4
23	2.0	2.3	E	2.0	2.2	1.9	E	G	G	4.7	4.3	G	G	4.9	G	5.9	7.2	7.5	8.9	8.9	8.9	4.4	E	5.0
24	3.0	3.2	2.4	2.1	2.0	2.0	E	G	G	4.6	7.0	7.0	4.2	4.3	4.5	4.7	4.9	5.2	5.3	7.0	2.1	2.0	2.3	2.3
25	2.0	2.0	E	1.8	1.9	E	E	G	G	4.9	5.7	4.5	5.3	5.2	4.6	5.7	5.0	4.1	8.9	5.9	4.9	3.3	2.1	2.9
26	2.0	E	E	2.0	1.9	E	E	3.3	G	G	5.0	4.6	4.8	G	5.3	5.9	5.5	5.9	4.9	3.0	5.2	3.4	2.2	2.0
27	2.0	E	E	E	2.0	1.9	2.0	G	B	6.7Y	4.2	4.9	5.2	5.1	G	G	4.2	3.5	2.0	E	1.9	2.0	2.0	2.0
28	2.0	E	E	1.9	E	1.9	2.0	G	4.9Y	G	G	G	G	5.1	4.7	G	G	G	B	E	2.2	2.4	2.2	2.2
29	2.0	E	E	2.0	1.9	E	E	G	G	G	5.2	5.7	5.0	7.0	4.7	5.6	4.7	3.4	2.1	3.0	2.0	C	C	C
30	C	C	C	C	C	C	C	C	C	4.4	G	G	G	G	G	5.0	G	3.2	2.3	2.0	2.0	E	2.0	E
31	E	E	1.9	2.0	1.9	E	2.0	G	G	G	G	G	G	6.6	G	G	4.8	5.9	8.5	6.7	2.1	E	E	E
Mean Value	2.2	2.6	2.3	2.2	2.1	2.0	2.0	3.3	4.6	5.4	5.3	5.4	5.3	5.7	5.6	5.6	5.3	5.1	4.7	4.7	4.0	3.5	2.9	2.7
Median Value	E	E	E	1.8	E	E	E	G	G	4.5	4.7	4.7	4.6	5.0	4.6	4.7	4.8	4.8	4.2	3.4	3.1	2.5	2.0	2.0
Count	28	28	28	28	29	29	30	29	28	31	31	30	30	28	30	29	30	29	28	28	29	28	28	28

fEs

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

Y 3

SOLAR RADIO EMISSION

OCT. 1956

Observing Station: HIRAISO

Frequency: 200 Mc/s

Flux in 10^{-22} w.m.$^{-2}$(c/s)$^{-1}$, 2 polarizations

Time in U.T.

Daily Data

Date	Steady Flux		
	00-03	03-06	Daily Averages
1	7	6	7
2	10	11	11
3	14	-	(14)
4	9	10	9
5	11	12	12
6	16	16	16
7	20	62	41
8	41	31	36
9	44	35	40
10	21	15	18
11	12	14	13
12	14	14	14
13	19	12	16
14	11	10	11
15	11	a) 8	9
16	11	9	10
17	13	15	14
18	9	12	11
19	13	11	12
20	12	14	13
21	9	11	10
22	16	12	14
23	11	14	12
24	13	26	19
25	13	12	12
26	11	13	12
27	15	14	15
28	11	13	12
29	b) 15	14	14
30	10	7	9
31	12	13	13

Power failure: a) 0530-sunset

Outstanding Occurrences

Date	Starting Time	Duration	Type	Peak Flux	Time
11	2356	3m	SD	160	2357
12	0401-30s	30s	SD	360	-
	0639	1m	SD	350	-
	0640-30s	1m	SD	370	-
19	0243-30s	30s	SD	170	-
	0403-20s	1m	CD	198	-
	0513-30s	1m	SD	726	-
	0515-50s	3m	CD	490	0516
				275	0516-50s
22	0704-50s	50s	SD	210	-
	0710	ca 13m	SD	※ 150	0713
24	0621	1m30s	SD	800	-
26	0515-30s	30s	SD	670	-
28	2100~2102, 2107~2112, 2145~2148, 2153~2157: Groups of burst appeared intermittently, median value of flux is about 200 ~ 300.				
	0541	2m	SD+M	260	-

※ ... not precise

IONOSPHERIC DATA IN JAPAN FOR OCTOBER 1956
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発行人　藤　木　栄
東京都北多摩郡小金井町小金井新田一之久保573

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東京都北多摩郡小金井町小金井新田一之久保573
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印刷所　今井印刷所
東京都新宿区筑土八幡町8番地
電話 九段 (33) 2304