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IONOSPHERIC DATA IN JAPAN

FOR AUGUST 1958

Vol. 10 No. 8

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Prepared by

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

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CONTENTS

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 and radio propagation conditions are observed at Hiraiso Radio Wave Observatory.

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

SYMBOLS AND TERMINOLOGY

A. IONOSPHERE

All symbols and terminology in the table of ionospheric data are used in accordance with the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, September 2, 1956, and the Second Report of the Committee, May, 1957, supplementary to the First Report.

Terminology

f_0F2, f_0F1, f_0E — The ordinary-wave critical frequency for the $F2$, $F1$ and E layers respectively.

f_0E_s — The ordinary wave top frequency corresponding to highest frequency at which a mainly continuous trace is observed.

f_bE_s — The ordinary wave frequency at which the highest blanketing E_s layer becomes effectively transparent. This is usually determined from the minimum frequency at which reflections from layers at greater heights are observed.

f-min — That frequency below which no echoes are observed.

(M 3000)$F2$ — The maximum usable frequency factor for a path of 3000 km for transmission by $F2$ layer.

(M 3000)$F1$ — The maximum usable frequency factor for a path of 3000 km for transmission by $F1$ layer.

$h'F2$ — The minimum virtual height, $h'F2$, refers to the highest, most stable stratification observed in the F region and can only be scaled when such stratification is present.

$h'F$ — The natural and most significant F region virtual height parameter is that for lowest F region stratification. This will be denoted by $h'F$. Thus $h'F$ is identical with the current $h'F2$ when F region stratification is absent, e. g., at night, and with the current $h'F1$ when $F1$ stratification is present.

$h'E_s$ The lowest virtual height of the trace used to give the f_0E_s.

$hpF2$ The virtual height of the $F2$ layer measured on the ordinary-wave branch at a frequency equal to 0.834 f_0F2.

$ypF2$ The 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).

a. Descriptive Symbols

Used following the numerical value on monthly tabulation sheets.

A Measurement influenced by, or impossible because of, the presence of a lower thin layer, for example E_s.

B Measurement influenced by, or impossible because of, absorption in the vicinity of f-min.

C Measurement influenced by, or impossible because of, any non-ionospheric reason.

D Measurement influenced by, or impossible because of, the upper limit of the nomal frequency range. Used in a qualifying sense, see below.

E Measurement influenced by, or impossible because of, the lower limit of the normal frequency range. Used in a qualifying sense, see below.

F Measurement influenced by, or impossible because of, the presence of spread echoes.

G Measurement influenced or impossible because the ionization density is too small compared with that of a lower thick layer.

H Measurement influenced by, or impossible because of, the presence of a stratification.

L Measurement influenced by or impossible because the trace has no sufficiently definite cusp between layers.

M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

N Conditions are such that the measurement cannot readily be interpreted, for example, in the presence of oblique echoes.

O Measurement refers to the ordinary component.

R Measurement influenced by, or impossible because of, absorption in the vicinity of a critical frequency.

S Measurement influenced by, or impossible because of, interference or atmospherics.

V Forked trace which may influence the measurement.

W Measurement influenced or impossible because the echo lies outside the height range recorded.

X Measurement refers to the extraordinary component.

Y Intermittent trace.

Z Third magneto-ionic component present.

b. Qualifying Symbols

Used as a preceeding symbol on monthly tabulation sheets.

D *greater than.....*

E *less than.....*

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

T Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.

U Uncertain or doubtful numerical value.

Z Measurement deduced from the third magnetoionic component.

c. Description of Standard Types of E_s

The nine standard types of E_s are identified by small (lower case) letters: *l*, *c*, *h*, *q*, *r*, *a*, *s*, *f*, *n*. These letters are suggestive of the names low, cusp, high, equatorial, retardation, auroral, slant, flat and unclassified, respectively; it is strongly emphasized that these names are suggestive, not restrictive. The standard types are:

l At flat E_s trace at or below the normal E layer minimum virtual height. Use in daytime only.

c An E_s trace showing a relatively symmetrical cusp at or below f_0E. This is usually continuous with the normal E trace though, when the deviative absorption is large, part or all of the cusp may be missing. Use in daytime only.

h An E_s trace showing a discontinuity *in height* with the normal E layer trace at or above f_0E. The cusp is not symmetrical, the low frequency end of the E_s trace lying clearly above the high frequency end of the normal E trace. Use in daytime only.

q An E_s trace which is diffuse and non-blanketing over a wide frequency range. The spread is most pronounced at the upper edge of the trace. (This type is common in daytime in the vicinity of the magnetic equator.)

r An E_s trace which is non-blanketing over part or all of its frequency range showing an increase in virtual height at the high frequency end similar to group retardation. This is distinguished at present from true group retardation (a blanketing thich layer included in the E layer tables: f_0E, $h'E$) by the lack of group retardation in the F traces at corresponding frequencies.

a An E_s pattern having a well defined flat or gradually rising lower edge with stratified and diffuse (spread) traces present above it. These sometimes exceed over several hundred kilometers of virtual height.

s A diffuse E_s trace which rises steadily with frequency. This usually emerges from another E_s trace which should be classified separately. At high latitudes the slant trace usually starts to rise from a horizontal E_s trace, *l*, *h* or *f*, and frequencies which greatly exceed the E layer critical frequency (e.g. about 6 Mc/s) whereas at low latitudes it usually rises from equatorial type E_s, *q*, at frequencies near the E region critical frequency.

f An E_s trace which shows no appreciable increase of height with

frequency. The trace is usually relatively solid at most latitudes. This classification may only be used at night; apparently flat E_s traces observed in the daytime are classified according to their virtual height: *h* or *l*.

n An *E* trace which cannot be classified into one of the standard types. This must not be used for intermediate cases between any two classes. A choice should always be made whenever possible, even if it is doubtful.

d. Multiple Reflections from E_s

When the ionogram shows the presence of multiple reflections from E_s, the number of traces seen should be recorded after the letter indicating the type.

B. SOLAR RADIO EMISSION

Solar radio emission is received on 200 Mc at Hiraiso Radio Wave Observatory using a 6×4 dipole broadside array and an ordinary superheterodyne receiver. The type of observation is of intensity recording of both steady flux and outstanding occurrences.

a. Daily Data

Steady flux The mean value of recorded base level. Outstanding occurrences are to be omitted except the phenomena with duration of hours or more.

Varialility Variability is expressed in four grades as follows:

0=no burst
1=a few bursts
2=many bursts
3=exceptionally many bursts

Number of bursts is determined relatively in comparison with the base level. If the number of bursts be fixed, the variability is greater, when bursts are widely distributed, than in the case of being concentrated in a short period.

b. Outstanding occurrences

Starting time When the start is not obvious, 20% rise time of smoothed flux is adopted and *x* is suffixed. (e.g. 0234*x*)

Maximum time When the instantaneous maximum can not be taken, the smoothed maximum is used and *x* is suffixed. (e.g. 0539*x*)

Time of end When the phenomena have ended obscurely the time of 20% of maximum smoothed flux is written.

Type Outstanding emissions are classified as follows: On another point of view, the classification in the URSI Interchange code is to be added.

S : simple rise and fall of intensity
C : complex variation of intensity
A : appears to be part of general activity
D : distinct from (i.e. apparently superposed upon) the general

activity

M : multiple peaks separated by relatively long period of quietness

F : multiple peaks separated by relatively short period of quietness

E : sudden commencement or rise of activity

Combined letters express one phenomenon (e.g. SD, ECD); letters joined by + express some phenomena occurring in parallel; the preceding term is more important (e.g. SD+F, SA+C).

Maximum intensity

Instantaneous: The highest value above the base level.

Smoothed: By multiplying the duration, the approximate total power of the phenomenon con be estimated.

C. RADIO PROPAGATION CONDITIONS

a. Radio Propagation Quality Figures

Radio propagation quality figures are usually expressed on the scale that ranges from one to five as follows:

1=good
2=normal
3=rather poor (unstable)
4=poor (disturbed)
5=very poor (very disturbed)

The tabulated circuits contain WWV (frequencies 10, 15, 20 Mc broadcast from Washington, D.C.), San Francisco (commercial circuit) and WWVH (frequencies 10, 15 Mc broadcast from Hawaii), which are received at Hiraiso Radio Wave Observatory near Tokyo.

Warnings of radio propagation broadcast from JJY station are expressed in three grades:

N=normal
U=unstable
W=disturbed

The letter W expresses disturbed condition expected to be during the following 12 hours after issue. The letter U and N means also unstable or normal conditions, respectively.

Whole day radio quality indices are the weighted averages of the 6-hourly indices of WWV and S.F., with half weight given to quality grade 2 (normal). This procedure is taken to avoid the concentration of the whole day indices to grade 2.

Start- and end-time of principal geomagnetic storms closely correlated to radio propagation conditions are tabulated from observations at Kakioka.

b. Sudden Ionospheric Disturbances (S. I. D.)

The data of short wave fade-out (SWF) are preparated from the field intensity records on following circuits received at Hiraiso. Characteristics of the phenomenon are classified as follows.

Circuits and Drop-out intensity

W S .....WWV 20 Mc, 15 Mc and 10 Mc (Washington)
S F .....WNA-27: 7.6550 Mc, WND-20: 10.4925 Mc, WNC-93: 13.7525 Mc, WMJ-30A2: 20.8173 Mc (San Francisco)
H A.....WWVH 15 Mc and 10 Mc (Hawaii)
T O.....JJY 15 Mc and 10 Mc (Tokyo)
M N.....DZM-28: 14.5850 Mc (Manila)
L N.....GIJ-34: 14.6702 Mc (London)

Start-time and Duration, Types and Importances are described from the data of a circuit whose Drop-out Intensity is underlined. Drop-out Intensities of 10 Mc, 15 Mc and 20 Mc for WWV, WWVH and JJY are marked; 10 Mc ('), 15 Mc (none) and 20 Mc (").

Start-times and Durations

Types

S : sudden drop-out and gradual recoverly
Slow: slow drop-out taking 5 to 15 minutes and gradual recoverly
G : gradual disturbances; fade irregular in both drop-out and recoverly

Importances

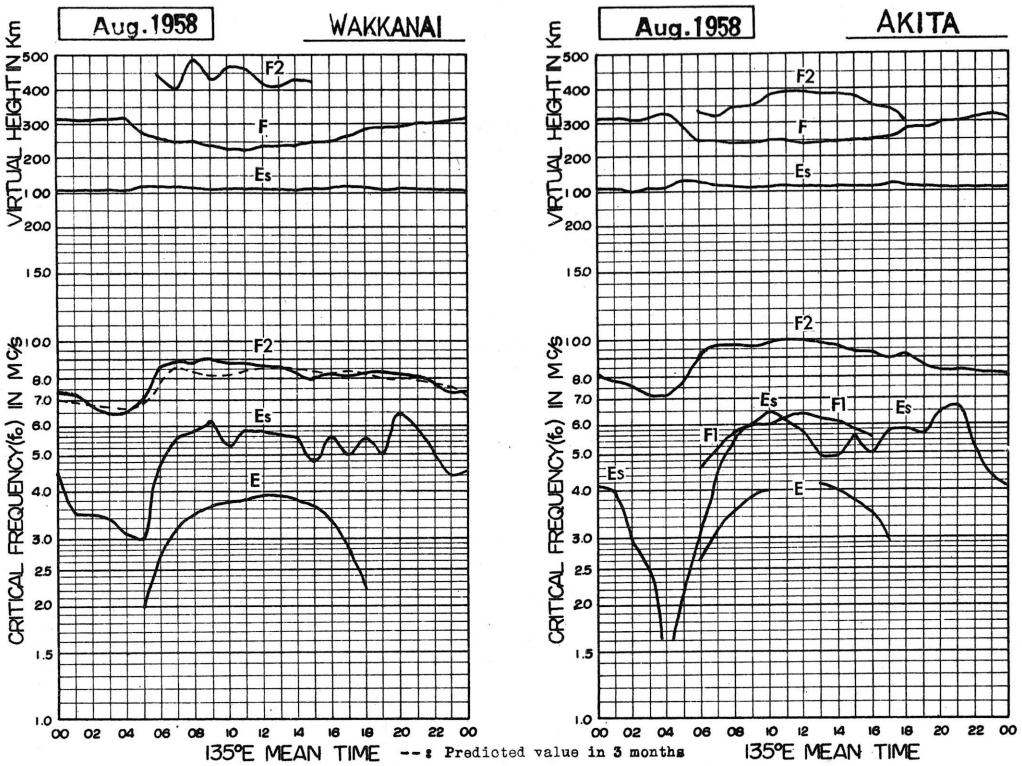
Degrees of SWF are classified into 9 grades according to the amplitude of fade-out;

1−	1	1+
2−	2	2+
3−	3	3+

The data of sudden enhancement of atmospheric (SEA) observed on 28 kc are tabulated on each *Start-time, Duration and Importance.*

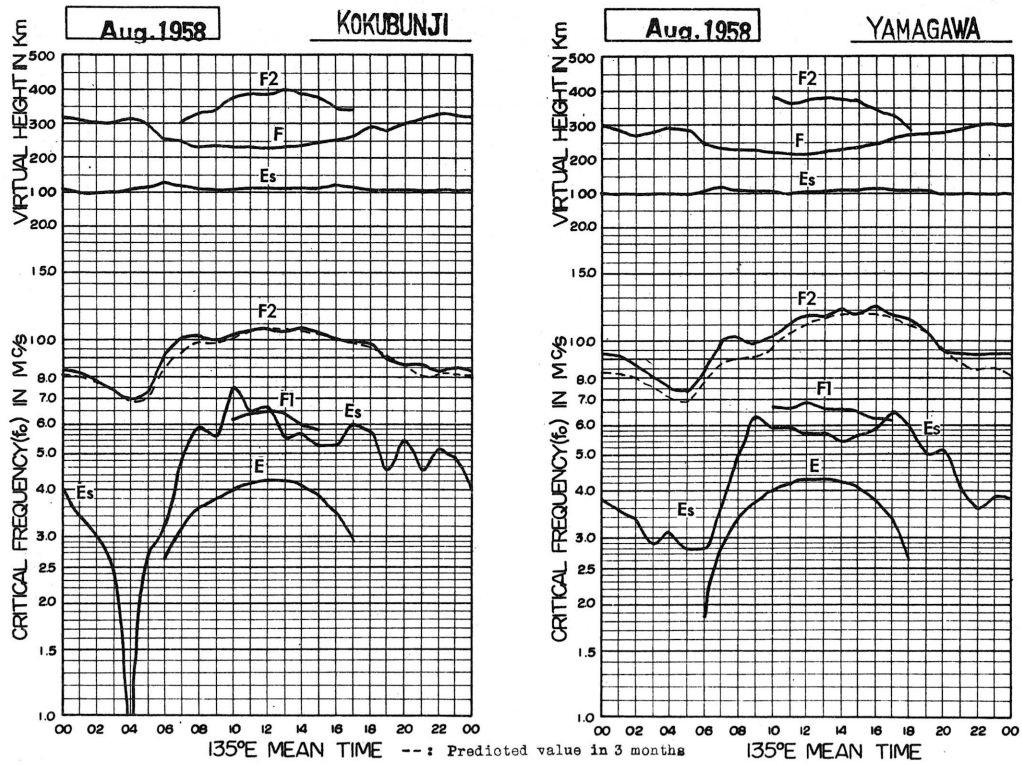
Besides, the time associated phenomena of SID's, that is, solar flare, solar radio noise outburst and crochet (solar flare effect in magnetic record) are given in this table from interchange messages or measurements at Hiraiso.

IONOSPHERIC DATA
MONTHLY MEDIAN CHARACTERISTICS



--: Predicted value in 3 months advance by R.R.L.

IONOSPHERIC DATA
MONTHLY MEDIAN CHARACTERISTICS



--: Predicted value in 3 months advance by R.R.L.

IONOSPHERIC DATA

Aug. 1958 | foF2 | 135° E Mean Time (G.M.T.+ 9h.) | **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	7.5	7.0	6.6	5.9	5.6	6.3	6.8	6.9	I6.4A	I6.4A	6.6	7.5	I7.4B	7.5	7.5	7.3	7.3	7.3	7.3	7.5	I7.4S	I7.3S	7.1	7.0
2	7.3	7.0	6.5	6.1	5.6	6.7	7.7	8.2	8.6	I9.0A	8.6	8.8	8.6	8.5	8.3	J8.4R	I8.4R	8.4	I8.3A	S	A	A	A	S
3	S	S	S	7.0	6.7	7.3	8.1	8.0	A	A	A	A	A	A	6.3	A	A	A	A	A	A	A	I7.2A	7.3
4	I6.5A	6.2	6.2	5.8	5.5	6.5	6.7	7.2	6.8	6.5	6.2	I6.4A	6.3	6.7	6.6	6.7	6.8	7.1	7.0	6.8	6.8	7.3	7.5	U7.3S
5	I7.4S	7.4	6.8	6.3	6.3	I7.7C	8.9	9.8	9.1	9.3	8.7	8.8	8.8	I8.4R	8.0	7.8	A	A	A	A	8.0	A	A	S
6	8.5	U8.0S	7.1	6.8	6.3	6.8	7.5	7.0	7.0	I7.4A	I7.6A	7.5	7.8	I8.0R	7.9	7.6	7.3	A	A	A	7.6	8.0	I8.0S	I8.0S
7	7.3	6.7	6.5	6.4	6.6	7.5	8.6	9.0	9.1	J9.0R	8.9	8.7	8.5	8.5	8.0	7.9	7.7	7.5	7.3	S	AS	A	I9.0S	I8.6S
8	7.3	7.3	6.8	6.5	6.6	7.5	8.3	8.3	8.3	8.3	7.8	8.2	8.4	I8.5R	8.2	7.9	7.9	7.8	7.9	8.0	7.7	U8.3S	U8.3S	I8.0S
9	7.8	7.5	7.3	7.3	7.3	8.0	9.7	I9.8R	I10.5R	10.1	9.5	9.1	8.3	I8.7B	8.5	8.0	I8.0A	I7.8A	7.8	7.8	AS	A	S	7.7
10	7.5	7.4	7.1	6.8	6.7	7.8	9.3	I9.5R	I9.1C	9.0H	9.1	9.3	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	7.9	7.0	I7.5A	8.0	7.8	8.0	I8.0A	8.1	I7.8A	I7.8A	8.0	I7.7AS	AS	S	S
12	U7.8S	7.3	7.3	6.9	6.8	7.4	8.9	8.2	7.0	6.5	W	6.3	6.3	6.2	C	C	C	7.1	7.4	I7.8S	8.2	8.0	I7.0C	6.9
13	6.6	6.4	6.2	6.2	6.1	6.8	8.5	8.9	7.8	7.8	7.9	8.0	7.8	8.1	8.1	I8.0C	8.3	8.7	9.0	8.8	I8.5S	I7.7S	I7.5S	7.3
14	7.3	7.2	7.2	7.1	7.0	7.8	9.5	I9.8R	9.7	9.7	U9.4R	9.3	I9.1C	9.3	9.6	9.1	9.0	8.6	8.8	9.0	8.7	I9.2C	I8.7S	8.4
15	8.3	C	C	C	C	C	C	C	C	C	C	J9.7R	J10.8R	J10.3R	9.4	9.0	I9.4A	9.3	9.3	9.0	9.0	9.3	9.2	I8.5S
16	I8.0A	7.3	7.2	7.5	7.2	8.1	9.3	9.8	J10.3R	J10.4R	9.9	10.0	9.6	9.1	I9.2B	9.0	8.6	8.1	8.0	I8.1S	I8.3S	8.8	I8.2S	7.9
17	7.4	7.1	6.7	6.5	I6.5S	7.2	8.3	9.0	U10.3R	10.3	9.6	8.8	9.0	9.2	8.8	8.3	8.0	8.1	8.3	9.3	9.1	8.7	7.8	7.3
18	6.5	6.2	5.5	4.6	4.1	I4.4A	5.6	5.2	6.3	I6.8A	7.3	I7.1C	7.3	7.3	I7.6R	7.4	7.5	7.7	7.5	7.8	7.3	7.4	I7.7S	7.6
19	7.5	7.3	7.0	6.7	6.3F	6.8F	7.8	8.3	7.8	8.3	8.6	8.7	8.8	8.9	9.0	8.7	8.5	I8.4C	8.3	8.6	U8.6S	I8.2S	7.7	7.4
20	7.4	7.1	7.0	6.6	6.5	7.5	8.6	8.9	9.3	9.5	9.4	9.1	9.3	9.5	9.3	9.4	8.9	8.2H	8.6	9.1	U8.7S	S	S	S
21	8.0	7.8	7.8	7.5	7.8	8.9	9.3	I10.0R	10.5H	J10.8R	10.7	U10.5R	I10.5R	10.3	10.2	9.8	I9.6A	9.1	9.1	9.4	I9.2A	9.0	I8.6S	8.3
22	J8.3S	S	S	S	S	I8.2S	7.8	8.3	8.5	8.7	8.8	9.4	9.8	9.5	9.3	10.0	9.3	9.4	9.0	8.0	A	A	A	S
23	U8.1S	7.3	6.8	6.5	6.5	6.8	I8.9R	J10.3R	10.0	10.6	10.3	10.0	U10.3R	10.0	9.8	9.0	9.5	9.3	9.2	9.3	9.0	I8.8S	C	C
24	C	I8.0C	I7.8C	7.1	7.0	7.8	9.5	11.3	C	C	C	C	C	C	C	C	C	10.0	I9.0A	U8.8S	I8.0S	8.5	I8.0S	7.0
25	U7.6S	7.4	6.9	6.2	6.1	6.5	8.9	10.8	11.5	11.8	I12.0R	U12.3R	I12.0R	11.2	J11.2R	11.3	11.1	10.3	9.8	8.8	U8.5S	I8.3S	S	S
26	S	7.3	7.0	5.9	5.1	5.3	6.0	6.3H	6.0	6.0	I6.3B	I6.6B	7.2	7.5	7.7	7.6	7.7	7.8	8.1	I7.8S	I7.6S	U7.3S	7.0	U7.3S
27	6.6	6.5	5.5	5.3	5.3	5.6	6.8	7.5	7.8	8.0	8.6	I8.6R	8.5	8.9	8.5	8.0	9.0	8.7	8.8	U9.1S	I8.2S	U7.3S	I7.3S	6.7
28	5.8	6.0	5.1	5.3	6.0	7.0	7.8	J10.5R	9.3	C	C	C	C	C	C	7.0	7.0	7.2H	7.3	7.8	I7.8S	I7.7S	I7.9S	7.4
29	I7.0C	6.7	6.5	5.8	5.1	5.8	6.8	7.7H	8.0	8.3	8.0	8.2	8.3	8.0	7.8	8.0	7.9	7.8	7.9	8.0	I8.0S	7.9	7.5	U7.6S
30	7.2	7.4	6.8	I6.6C	C	C	C	C	C	10.3	9.9	9.8	J10.2R	9.8	9.0	9.0	8.7	8.5	8.3	U8.6S	S	AS	S	7.2
31	6.5	7.0	6.8	6.8	7.0	9.0	9.8	11.0	11.3H	11.3H	11.5	C	C	C	C	C	C	C	C	C	C	C	C	C
No.	27	27	27	28	27	28	28	28	26	27	26	27	26	26	26	26	25	26	26	24	23	20	20	22
Median	7.4	7.3	6.8	6.5	6.5	7.2	8.6	8.9	8.8	9.0	8.8	8.8	8.6	8.6	8.4	8.0	8.3	8.2	8.3	8.4	8.2	8.1	7.8	7.4
U.Q	7.8	7.4	7.1	6.8	6.8	7.8	9.3	9.8	10.0	10.3	9.6	9.4	9.6	9.5	9.3	9.0	9.0	8.7	9.0	9.0	8.7	8.8	8.2	8.0
L.Q	7.0	6.7	6.5	5.9	5.6	6.6	7.6	7.8	7.8	7.8	7.8	7.5	7.8	8.0	7.9	7.8	7.7	7.8	7.8	7.8	7.7	7.6	7.4	7.3
Q.R	0.8	0.7	0.6	0.9	1.2	1.2	1.7	2.0	2.2	2.5	1.8	1.9	1.8	1.5	1.4	1.2	1.3	0.9	1.2	1.2	1.0	1.2	0.8	0.7

foF2

Sweep 1.0 Mc to 20.7 Mc in 1 min ~~sec~~ in automatic operation.

The Radio Research Laboratories, Japan.

W 1

IONOSPHERIC DATA

Aug. 1958 | foF1 | 135° E Mean Time (G.M.T.+ 9h.) | **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						L	I44A	I50A	5.4	A	A	A	I58B	5.8	L	L	L	L	L					
2							L	L	L	A	L	L	L	L	L	A	A	A	A					
3						L	I45A	A	A	A	A	A	A	A	A	A	A	A	A					
4						L	L	I48A	L	A	A	A	I55A	5.5	A	L	5.3	L	A					
5							L	L	A	A	L	L	L	L	L	L	A	A	A					
6						L	A	A	L	I57A	I59A	I60A	L	I60A	LH	L	L	A	A					
7							L	L	L	A	A	L	A	A	LH	L	LH	L						
8							L	L	L	L	L	L	A	L	L	L	L	L						
9						L	L		L	L	L	L	L	B	L	L	A	L	A					
10						L	A		C	L	L	L	C	C	C	C	C	C	C					
11						C	C	C	C	A	L	A	L	L	L	A	L							
12						L	L	LH	L	L	L	A	L	L	C	C	C	L						
13							L	L	L	L	L	L	L	L	LH	C	L	L						
14							L	L		L	L	L	C	LH	L	L	L							
15						C	C	C	C	C	C	L	L	A	L	L	A	A						
16								A	L	A	L	A	L	L	B	L	LH							
17							L	L	L	L	L	LH	L	LH	LH	L	L	L						
18							4.1	I49A	L	A	L	C	L	L	A	L	A	A						
19							L		L	LH	L	L	L	L	L	L	L							
20								L	L	L	L	L	LH	LH	LH	L	L							
21										L	L	L	L	LH	L	A	A							
22									L	L	L	L	L	LH	L	L	L							
23								A	A	L	LH	L	L	L	L	L	LH							
24									C	C	C	C	C	C	C	C	C							
25							C		L	A	L	LH	A	A	A	L	L							
26						L	L		5.1	5.3	I54B	I55B	5.7	L	L	LH	L	L						
27							L	L	L	LH	L	LH	LH	L	LH	LH	L	L						
28									LH	C	C	C	C	C	C	L	L							
29							L		L	L	LH	L	LH	L	L	L	L							
30						C	C	C	C	L	LH	L	LH	L	L	L	L							
31											L	C	C	C	C	C	C							
No.							3	3	2	2	2	2	3	3	—	—	1							
Median							44	49	5.2	5.5	5.6	5.8	5.7	5.8	--	---	5.3							

The Radio Research Laboratories, Japan.

foF1 | Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

W 2

IONOSPHERIC DATA

Aug. 1958 | foE | 135° E Mean Time (G.M.T. + 9h.) | **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	240	300	350	365	380	385	I380A	I395B	400	385	375	360	310	245					
2					150	235	290	340	350	360	A	A	A	A	A	A	A	A	235					
3					A	A	325	370	385	400	380	I385A	I380A	370	A	A	A	A	A					
4					A	220	280	340	360	370	375	390	375	A	A	A	A	A	A					
5							295	340	355	375	380	395	A	A	A	375	I370A	310	235					
6						200	290	335	360	375	380	375	A	A	A	A	A	325	250					
7					A	210	285	340	360	375	380	A	A	A	A	A	A	320	250					
8					135	200	290	335	365	370	375	370	A	A	A	A	360	305	235					
9						205	290	330	350	370	A	A	A	I375B	A	A	A	A	A					
10						200	275	310	I340C	360	375	380	C	C	C	C	C	C	C					
11						C	C	C	C	360	370	380	370	A	A	A	A	310	195					
12						A	270	310	335	375	380	370	370	U360R	C	C	C	295	A					
13						I205A	270	330	350	I370A	370	400	I400A	400	I390R	I365C	340	270	S					
14						175	275	325	350	370	375	I365A	I395C	395	400	375	340	290	220					
15						C	C	C	C	C	C	400	410	I390A	I370A	I355A	350	290	220					
16						200	270	325	350	360	370	A	A	A	B	B	R	310	200					
17						190	260	300	A	A	A	400	380	355	375	375	345	285	200					
18						170	275	335	355	380	375	C	A	A	A	375	355	295	205					
19						A	280	320	345	A	A	A	A	A	A	A	A	L	A					
20						175	270	325	375	380	I390B	I400A	370	I375A	380	U360R	340	285	200					
21						A	270	315	350	360	360	A	A	A	A	A	A	275	S					
22						A	250	325	350	I365C	370	I370A	385A	400	370	I350A	300	A	A					
23						200	255	I320A	335	A	A	R	R	A	A	A	350	275	S					
24						I160S	260	325	C	C	C	C	C	C	C	C	C	270						
25						A	I265C	320	350	380	395	380	400	395	390	355	I320A	I270A	A					
26						I160S	260	325	360H	370H	B	B	R	I380A	375	I375R	325	275	A					
27						165	I265A	325	360	390	375	I385A	405	400	I400R	375	340	285	U190S					
28						160	250	310	350	C	C	C	C	C	C	360	335	270	S					
29						U155S	250	315	350	360	370	385	I395R	390	350	I340A	I325A	280	S					
30						C	C	C	C	A	A	R	A	R	R	355	315	265						
31						200	270	315	350	355	A	C	C	C	C	C	C	C	C					
No.					2	21	28	28	26	24	20	18	14	14	11	15	17	23	14					
Median					140	200	270	325	350	370	375	380	390	390	380	365	340	285	220					

foE

Sweep 1.0 Mc to 20.7 Mc in 1 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

W 3

IONOSPHERIC DATA

Aug. 1958 | foEs | 135° E Mean Time (G.M.T.+ 9h.) | **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	3.5M	3.5M	3.0M	3.1M	3.5M	5.0M	6.7M	6.5M	7.0M	1.50M	6.3M	6.5M	B	G	G	G	4.2	4.3	3.5	4.9M	4.0M	3.0M	E	E
2	3.0M	E	2.4M	3.0M	G	3.5	3.5	6.0M	4.5	11.2M	5.2M	4.9M	7.6M	6.0M	5.5M	7.7M	8.0M	9.0M	12.0M	7.0M	10.7M	11.8M	9.5M	7.7M
3	7.8M	5.7M	5.2M	4.8M	7.5M	4.2	5.1M	6.2M	8.5M	11.7M	7.1M	9.8M	7.0M	7.7M	7.0M	9.0M	1.62M	1.44M	1.30M	8.3M	9.2M	9.5M	11.2M	6.0M
4	9.0M	3.5M	3.5M	3.3M	3.5M	2.9M	3.8	5.6M	4.6	7.7M	7.5M	7.7M	6.7M	5.3M	6.9M	6.7M	5.7M	5.6M	7.0M	8.3M	4.0M	E	4.5M	7.0M
5	5.6M	3.5M	5.0M	3.5M	4.0M	C	4.3	6.3M	8.5M	6.9M	5.3M	G	5.8M	5.5M	4.2M	4.5M	11.0M	1.52M	11.8M	1.50M	6.0M	10.0M	11.0M	4.8M
6	4.5M	2.3M	3.0M	2.9M	3.1M	2.4	5.6M	7.1M	5.8M	7.7M	10.0M	7.0M	6.0M	7.1M	7.6M	6.0M	6.0M	9.3M	14.0M	13.5M	8.0M	6.5M	6.0M	4.0M
7	4.6M	3.0M	3.2M	5.0M	3.1M	3.1M	4.9M	10.5M	5.7M	7.2M	7.5M	10.0M	8.2M	8.5M	5.2M	4.9M	5.0M	4.2M	6.0M	7.0M	1.50M	8.5M	6.5M	8.0M
8	2.6M	3.4M	2.6M	E	3.0M	2.7M	4.7M	8.0M	6.2M	7.7M	7.0M	6.5M	6.8M	7.0M	5.9M	4.7M	G	5.1M	5.3M	6.5M	7.5M	3.5M	5.0M	E
9	3.2M	2.7M	4.0M	3.1M	E	2.4	5.2M	5.3M	5.5M	5.3M	6.5M	6.0M	4.4M	B	5.7M	7.0M	1.20M	1.20M	8.2M	1.30M	9.0M	1.20M	4.5M	5.0M
10	7.0M	5.0M	3.5M	E	E	3.5M	10.0M	6.1M	C	5.2M	4.3	4.2	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	7.8M	5.1M	10.7M	6.1M	7.3M	6.5M	9.8M	6.5M	8.8M	13.5M	5.0M	11.0M	14.2M	7.0M	5.0M
12	4.7M	6.5M	6.0M	4.0M	4.1M	3.5M	7.0M	4.3	6.0	4.8	5.3M	6.6M	5.1M	G	C	C	C	4.9M	4.8M	4.1M	3.5M	6.0M	C	6.0M
13	5.0M	4.0M	3.5M	3.5M	E	2.2	3.6	3.8	4.1	5.6M	5.8M	4.6	7.1M	G	G	C	5.6M	4.0M	3.5M	5.0M	5.1M	4.0M	3.2M	3.5M
14	2.9M	4.2M	2.5M	E	2.4M	2.4	3.5	G	4.5	5.7M	6.1M	7.5M	C	G	G	G	3.7	3.8	3.5M	C	E	C	E	E
15	C	C	C	C	C	C	C	C	C	C	C	4.8	4.7	8.5M	6.8M	5.3M	9.5M	8.0M	7.3M	3.5M	6.5M	8.0M	6.6M	6.5M
16	8.0M	3.5M	4.0M	D1.3C	4.4M	3.0M	5.3M	6.6M	6.1M	8.5M	7.4M	8.6M	6.8M	7.6M	B	5.1	G	5.2M	5.7M	4.1M	6.5M	5.7M	7.0M	5.6M
17	4.7M	4.0M	3.5M	E	3.1M	G	3.8M	6.5M	6.0M	5.8M	10.2M	G	5.2M	G	5.6M	4.5	8.5M	5.0M	5.5M	5.0M	9.0M	8.0M	4.5M	5.0M
18	5.7M	6.0M	4.2M	3.2M	2.5M	6.0M	4.7M	6.0M	7.5M	9.5M	4.7	C	5.7M	6.0M	7.2M	G	6.1M	8.0M	6.1M	4.5M	4.2M	5.8M	3.1M	3.1M
19	3.4M	3.4M	3.1M	4.0M	3.1M	3.5M	3.5	3.6	4.0	5.5M	5.0M	5.6M	5.2M	5.6M	5.8M	6.2M	6.2M	C	3.5M	E	3.1M	4.5M	3.9M	E
20	3.0M	2.8M	2.4M	3.5M	E	G	4.2	3.9	6.0M	5.8M	B	4.1	4.3	4.0	G	G	G	3.5	3.6M	3.3M	4.5M	5.0M	6.5M	6.6M
21	3.5M	3.5M	3.1M	2.4M	3.0M	3.1M	G	5.6M	4.8	4.9	4.3	6.3M	6.1M	6.2M	6.0M	6.8M	1.20M	6.0M	6.0M	6.1M	12.5M	6.6M	5.0M	4.0M
22	4.7M	3.0M	8.0M	7.0M	4.0M	4.0M	3.9	6.0M	5.7M	6.2M	5.1M	5.5M	6.0M	G	10.0M	8.5M	6.2M	5.7M	5.5M	6.6M	9.5M	11.5M	7.5M	6.1M
23	5.1M	4.2M	3.5M	3.5M	3.1M	5.0M	4.2	6.9M	6.4M	5.0M	6.3M	G	G	5.0M	4.2M	4.6M	G	3.8	4.2M	3.5M	D7.6S	5.0M	C	C
24	C	C	C	3.5M	3.1M	G	G	4.0	C	C	C	C	C	C	C	C	C	5.0M	9.0M	6.0M	3.1M	E	E	E
25	E	E	1.5	1.3	1.3	2.0M	C	4.0	6.2M	6.7M	4.5	6.7M	9.6M	9.1M	7.8M	6.5M	4.2M	3.5M	3.2M	4.0M	6.5M	5.0M	6.5M	7.7M
26	5.2M	5.5M	4.7M	5.0M	4.8M	2.0	5.0M	G	G	G	B	B	5.7M	5.8M	G	G	G	G	3.5M	5.0M	3.0M	4.2M	E	E
27	E	E	E	2.1	2.2M	2.1	5.0M	3.5	4.2	4.3	G	4.8M	5.5M	5.8M	G	G	G	G	2.5	E	3.5M	E	E	2.7M
28	3.5M	4.8M	4.8M	7.5M	4.0M	3.5M	3.1	3.5	5.5M	C	C	C	C	C	C	G	4.0	4.0	5.7M	5.0M	6.5M	2.5	E	3.5M
29	C	2.5M	E	2.5M	4.2M	3.5M	6.0M	4.0	5.7M	6.2M	4.3	G	G	4.4	5.2M	4.6M	4.0M	3.5	2.3	4.8M	3.1M	10.5M	3.5M	3.5M
30	E	3.3M	5.0M	4.7M	C	C	C	C	C	4.0M	4.5M	G	4.8M	G	G	3.5	G	3.5	3.5M	4.8M	6.0M	9.0M	6.6M	2.5M
31	2.5M	3.1M	3.0M	4.0M	4.0M	2.3	5.0M	5.7M	5.8M	6.2M	4.8M	C	C	C	C	C	C	C	C	C	C	C	C	C
No.	27	28	28	28	28	27	27	28	26	28	26	26	25	26	25	26	27	28	29	28	29	28	27	28
Median	4.5M	3.5M	3.5M	3.4M	3.1M	3.0M	4.7M	5.6M	5.8M	6.2M	5.3M	5.8M	5.8M	5.7M	5.6M	4.8M	5.6M	5.0M	5.5M	5.0M	6.5M	5.9M	5.0M	1.4M
U.Q	5.2	4.2	4.5	4.0	4.0	3.5	5.2	6.4	6.2	7.7	7.0	7.0	6.8	7.1	6.8	6.7	8.0	8.0	7.8	6.8	9.0	9.2	6.6	6.0
L.Q	3.0	2.9	2.8	2.4	2.3	2.2	3.6	4.0	4.6	5.2	4.7	4.2	5.0	G	G	G	G	3.8	3.5	4.1	3.8	4.1	3.1	2.6
Q.R	2.2	1.3	1.7	1.6	1.7	1.3	1.6	2.4	1.6	2.5	2.3	2.8	1.8					4.2	4.3	2.7	5.2	5.1	3.5	3.4

foEs

Sweep 1.0 Mc to 20.7 Mc in 1 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

W 4

IONOSPHERIC DATA

Aug. 1958 | f_bE_s | 135° E Mean Time (G.M.T.+ 9h.) | **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	2.9	2.4	2.0	E	1.9	G	6.0	5.8	4.8	A	5.8	4.7	B				2.6	4.1	3.5	2.9	2.5	E		
2	E		E	E		G	G	5.0	G	A	4.2	4.4	5.5	4.3	4.5	7.5	A	6.0	A	5.5	A	A	A	A
3	A	2.6	2.6	3.0	5.5	2.5	4.6	5.5	A	A	A	A	A	A	5.6	A	A	A	A	A	A	A	A	4.5
4	A	E	E	E	1.9	1.9	G	4.7	4.5	5.5	5.5	A	5.7	4.7	6.0	4.5	4.8	4.5	3.8	5.0	3.3		3.5	5.0
5	4.0	E	E	E	2.2	C	G	5.0	7.8	6.0	4.3		4.8	4.7	4.1	G	A	A	A	A	4.7	A	A	3.8
6	2.1	E	E	E	E	G	4.6	6.0	5.0	A	A	6.1	5.0	A	4.7	4.5	4.0	2.8	A	A	4.7	4.0	2.5	2.6
7	2.4	E	E	E	1.5	G	4.0	2.4	4.8	6.5	7.0	4.6	6.0	7.0	4.1	4.0	3.9	G	3.4	2.4	A	A	A	6.0
8	E	E	E		E	G	G	G	4.7	4.7	4.9	5.5	5.8	4.6	4.7	3.9		3.8	3.9	5.5	4.5	2.4	E	
9	E	E	E	E		G	4.0	4.6	4.7	4.5	5.5	4.5	D 4.4 B	B	4.8	4.3	5.5	3.7	6.7	5.5	5.5	A	3.1	E
10	4.0	3.1	E			G	8.5	4.4	C	4.5	G	G	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	6.1	4.4	A	4.8	5.4	5.0	A	4.7	A	A	4.0	3.4	A5	3.0	A
12	E	3.5	4.5	3.0	2.1	2.8	G	G	5.2	G	G	5.0	4.7		C	C	C	3.8	2.7	2.1	2.6	3.0	C	2.4
13	3.0	2.2	E	E		2.1	G	G	G	4.0	4.7	4.5	4.5			C	G	G	2.5	2.9	4.0	E	E	E
14	E	E	E		E	G	G		G	4.8	G	5.0	C				G	G	G	C		C		
15	C	C	C	C	C	C	C	C	C	C	C	4.7	4.5	7.2	5.5	4.4	A	5.0	5.8	2.4	4.0	E	4.0	4.5
16	A	E	2.5	D 1.3 C	E	G	4.6	5.5	5.2	8.0	5.0	7.7	5.0	4.6	B	5.0		4.0	3.8	3.2	E	2.8	A	3.0
17	2.1	E	E		E		G	4.0	3.6	4.6	4.4		G		3.0	G	G	3.2	4.2	4.2	5.0	3.0	E	E
18	3.0	3.9	E	E	E	A	3.7	4.9	4.6	A	4.5	C	4.7	4.6	A		5.5	6.5	4.5	2.8	3.0	E	E	E
19	E	E	E	E	E	2.4	2.4	2.8	G	4.0	4.4	4.6	4.5	4.7	4.8	5.5	4.7	C	2.5		E	4.0	2.9	
20	E	E	E	E			G	G	5.2	5.0	B	D 4.1 B	G	4.1			G	G	2.8	E	E	2.1	2.9	E
21	E	E	E	E	E	2.0		4.9	4.6	4.7	G	5.5	4.5	4.4	4.3	5.5	A	4.4	5.1	2.8	A	3.0	E	E
22	3.7	E	2.5	A	E	2.6	G	5.3	5.0	E 5.5 C	D 5.1 B	4.7	4.7		4.7	4.5	4.5	5.0	4.0	6.5	A	A	A	4.6
23	2.8	3.0	2.5	E	E	3.6	3.0	6.0	5.2	4.1	4.3			4.2	4.1	3.7		3.7	3.0	E	P 7.6 S	2.6	C	C
24	C	C	C	E	E			G	C	C	C	C	C	C	C	C	C	4.0	A	E	E			
25			E	E	E	4.6	C	G	5.5	6.0	G	4.7	8.5	7.0	7.5	5.5	3.8	3.0	2.5	E	4.6	3.5	4.7	A
26	4.0	4.6	3.8	4.5	2.3	G	3.8				B	B	4.9	4.5					2.6	4.6	E	2.5		
27				E	E	G	3.0	G	G	G		4.2	G	G					G		E			E
28	2.9	3.7	3.3	E	2.2	2.6	3.0	G	G	C	C	C	C	C	C		G	3.8	4.5	E	2.5	E		2.4
29	C	E		E	2.2	G	4.0	G	G	G	G		C	G	G	4.0	3.7	2.4	G	3.0	2.4	E	2.4	E
30		E	E	3.7	C	C	C	C	C	3.8	4.1		4.2			2.8		G	2.6	3.5	A	A	4.5	E
31	E	E	E	2.2	2.5	G	4.1	4.8	4.9	5.2	4.0	C	C	C	C	C	C	C	C	C	C	C	C	C
No.	24	25	26	25	23	24	25	26	25	26	25	20	22	19	18	19	21	26	29	26	28	25	21	22
Median	2.6	E	E	E	E	G	3.0	4.6	4.7	4.9	4.4	4.8	4.8	4.6	4.7	4.5	4.5	3.8	3.8	3.1	4.0	3.0	3.1	2.5

f_bE_s

Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

W 5

IONOSPHERIC DATA

Aug. 1958 | f-min | 135° E Mean Time (G.M.T.+ 9h.) | **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	E1.70S	E	E	E	E	E1.60S	E200S	E200S	E200S	E200S	E240S	E240S	B	E250S	E240S	E240S	E200S	E200S	E185S	E170S	E160S	E175S	E175S	E185S
2	E1.85S	E1.25S	E	E	E	E1.50S	E200S	E240S	E205S	E250S	E245S	E250S	E280S	E240S	E240S	E240S	E200S	E200S	E185S	E160S	E165S	E170S	E175S	E180S
3	E1.60S	E1.20S	E	E	E	E1.60S	E200S	E240S	E245S	E240S	E265S	E250S	E260S	E240S	E250S	E240S	E240S	E240S	E240S	E200S	E180S	E190S	E170S	E190S
4	E1.75S	E	E	E	E	E1.60S	E185S	E240S	E200S	E240S	E240S	E250S	E240S	E245S	E275S	E250S	E200S	E200S	E190S	E190S	E165S	E175S	E170S	E160S
5	E1.75S	E	E	E	E	C	E200S	E200S	E200S	E200S	E240S	E250S	E240S	E250S	E240S	E240S	E200S	E200S	E200S	E200S	E165S	E160S	E170S	E160S
6	E1.60S	E	E	E	E	E1.60S	E200S	E200S	E200S	E240S	E240S	E245S	E250S	E240S	E240S	E240S	E200S	E200S	E195S	E175S	E185S	E200S	E170S	E160S
7	E1.65S	E	E	E	E	E1.60S	E200S	E200S	E240S	E240S	E250S	E280S	E260S	E240S	E240S	E200S	E240S	E200S	E190S	E190S	E200S	E170S	E200S	E190S
8	E1.90S	E1.15S	E	E	E	E1.60S	E180S	E200S	E200S	E290S	E255S	E240S	E240S	E300S	E250S	E200S	E200S	E200S	E185S	E175S	E175S	E175S	E160S	E180S
9	E1.60S	E	E	E	E	E1.60S	E200S	E200S	E200S	E240S	E240S	E250S	E300S	B	E250S	E240S	E200S	E195S	E175S	E160S	E165S	E170S	E170S	E180S
10	E1.75S	E1.20S	E	E	E	E1.50S	E170S	E190S	C	E250S	E245S	E240S	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	E245S	E250S	E250S	E200S	E250S	E205S	E240S	E200S	E200S	E180S	E175S	E160S	E165S	E160S	E175S
12	E1.60S	E1.20S	E	E	E	E1.60S	E180S	E180S	E200S	E200S	E200S	E240S	E240S	E240S	C	C	C	E190S	E170S	E175S	E175S	E170S	C	E160S
13	E1.80S	E1.40S	E1.60S	E140S	E	E1.60S	E195S	E200S	E200S	E240S	E250S	E260S	E260S	E240S	E240S	C	E200S	E190S	E185S	E170S	E170S	E175S	E160S	E160S
14	E1.80S	E1.20S	E	E	E	E1.50S	E200S	E200S	E200S	E250S	E240S	E260S	C	E250S	E240S	E240S	E200S	E200S	E180S	E550C	E180S	C	E180S	E185S
15	E350C	C	C	C	C	C	C	C	C	C	C	E250S	E260S	E240S	E240S	E240S	E200S	E200S	E200S	E190S	E185S	E170S	E170S	E180S
16	E1.60S	E	E	E	E	E1.60S	E200S	E200S	E200S	E240S	E250S	E250S	E240S	E240S	B	400	E300S	E200S	E180S	E170S	E170S	E170S	E160S	E160S
17	E1.80S	E	E	E	E	E1.60S	E190S	E200S	E200S	E210S	E240S	E240S	E240S	E240S	E240S	E200S	E200S	E200S	E180S	E160S	E160S	E160S	E160S	E170S
18	E1.60S	E1.20S	E	E	E	E	E180S	E190S	E200S	E240S	E245S	C	E240S	E250S	E240S	E240S	E180S	E200S	E200S	E175S	E160S	E170S	E170S	E185S
19	E1.60S	E	E	E	E	E1.60S	E195S	E200S	E200S	E200S	E240S	E250S	E250S	E245S	E240S	E250S	E200S	C	E200S	E200S	E165S	E160S	E170S	E190S
20	E1.60S	E	E	E	E	E1.60S	E160S	E200S	290	E260S	470	E250S	E250S	E245S	E200S	E240S	E200S	E200S	E195S	E190S	E190S	E175S	E185S	E175S
21	E1.65S	E	E	E	E	E1.40S	E200S	E200S	E205S	E240S	E250S	E240S	E240S	E240S	E200S	E200S	E200S	E200S	E200S	E180S	E180S	E170S	E170S	E160S
22	E1.85S	E	E	E	E	E1.40S	E180S	E200S	E200S	E55C	E240S	E240S	E250S	E250S	E240S	E240S	E240S	E200S	E200S	E200S	E160S	E190S	E170S	E190S
23	E1.60S	E	E	E	E	E1.60S	E190S	E200S	E200S	E200S	E240S	E240S	E240S	E240S	E250S	E210S	E200S	E200S	E180S	E160S	E160S	E165S	C	C
24	C	C	C	E	E	E1.60S	E170S	E200S	C	C	C	C	C	C	C	C	C	E200S	E175S	E160S	E180S	E195S	E180S	E200S
25	E1.90S	E1.50S	E	E	E	E1.20S	E550C	E200S	E200S	E240S	E260S	E250S	E270S	E260S	E240S	E200S	E200S	E200S	E170S	E170S	E175S	E170S	E175S	E170S
26	E1.85S	E1.20S	E	E	E	E1.60S	E200S	E200S	E200S	E240S	B	B	E240S	E270S	E240S	E250S	E200S	E200S	E200S	E175S	E200S	E170S	E190S	E180S
27	E1.90S	E1.40S	E	E	E	E1.40S	E200S	E200S	E200S	E240S	E240S	E250S	E250S	E250S	E260S	E240S	E210S	E200S	E190S	E175S	E165S	E180S	E190S	E175S
28	E1.65S	E1.20S	E	E	E	E1.40S	E200S	E200S	E200S	C	C	C	C	C	C	E200S	E200S	E190S	E185S	E170S	E165S	E190S	E190S	E180S
29	C	E1.25S	E	E	E	E1.55S	E185S	E200S	E200S	E200S	E240S	E240S	E300S	E240S	E240S	E240S	E200S	E200S	E200S	E185S	E170S	E180S	E170S	E195S
30	E200S	E	E	E	C	C	C	C	C	E240S	E240S	E250S	E240S	E240S	E200S	E200S	E200S	E200S	E180S	E180S	E200S	E170S	E175S	E180S
31	E1.20S	E1.20S	E	E	E	E1.70S	E200S	E200S	E240S	E240S	E240S	C	C	C	C	C	C	C	C	C	C	C	C	C
No.	28	28	28	29	28	27	28	28	26	28	28	27	26	27	26	26	27	28	29	29	29	28	27	28
Median	E1.70	E	E	E	E	E1.60	E200	E200	E200	E240	E240	E250	E250	E245	E240	E240	E200	E200	E185	E175	E170	E170	E170	E180

f-min

Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

W 6

IONOSPHERIC DATA

Aug. 1958 | (M3000)F2 | 135° E Mean Time (G.M.T.+ 9h.)

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	250	250	250	235	230	220	250	250	I_{230}^{A}	I_{225}^{A}	230	245	I_{240}^{B}	250	250	245	260	260	265	260	I_{260}^{S}	I_{260}^{S}	245	240
2	245	240	240	240	250	270	260	250	245	I_{250}^{A}	240	260	250	250	255	J_{250}^{R}	I_{255}^{R}	275	I_{265}^{A}	S	A	A	A	S
3	S	S	S	240	225	230	235	250	A	A	A	A	A	A	235	A	A	A	A	A	A	A	I_{245}^{A}	240
4	I_{245}^{A}	240	255	260	255	265	240	250	240	235	230	I_{235}^{A}	230	240	240	240	260	255	260	265	250	235	250	U_{240}^{S}
5	I_{245}^{S}	250	255	245	240	I_{265}^{C}	260	265	270	260	265	265	260	I_{265}^{R}	265	255	A	A	A	A	260	A	A	S
6	265	U_{250}^{S}	245	240	240	240	260	245	235	I_{245}^{A}	I_{255}^{A}	250	250	I_{260}^{R}	260	260	270	A	A	A	255	245	I_{255}^{S}	I_{250}^{S}
7	250	255	245	250	250	270	270	270	270	J_{260}^{R}	260	265	260	245	250	255	260	265	260	S	AS	A	I_{255}^{S}	I_{265}^{S}
8	260	255	255	245	245	250	265	270	265	270	245	260	265	I_{265}^{R}	260	265	270	270	275	280	260	U_{240}^{S}	U_{255}^{S}	I_{255}^{S}
9	245	240	245	245	250	265	255	I_{260}^{R}	I_{265}^{R}	260	265	265	255	I_{260}^{B}	265	255	I_{265}^{A}	I_{260}^{A}	270	255	AS	A	S	260
10	255	250	240	240	245	260	265	I_{280}^{R}	I_{275}^{C}	265^{H}	265	260	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	270	225	I_{255}^{A}	265	270	255	I_{265}^{A}	275	I_{265}^{A}	I_{265}^{A}	265	I_{255}^{AS}	AS	S	S
12	U_{245}^{S}	255	250	250	245	245	260	270	255	245	W	250	255	240	C	C	C	270	270	I_{260}^{S}	255	265	I_{260}^{C}	250
13	260	250	255	255	255	260	290	285	285	270	280	275	255	260	260	I_{260}^{C}	260	275	270	275	I_{265}^{S}	I_{255}^{S}	I_{250}^{S}	255
14	250	250	250	255	250	255	275	I_{280}^{R}	285	275	U_{275}^{R}	280	I_{260}^{C}	265	260	275	275	280	285	275	265	I_{265}^{C}	I_{270}^{S}	260
15	265	C	C	C	C	C	C	C	C	C	C	J_{250}^{R}	U_{265}^{R}	J_{265}^{R}	265	265	I_{270}^{A}	280	280	275	265	260	270	I_{270}^{S}
16	I_{260}^{A}	255	245	255	255	290	280	275	J_{270}^{R}	J_{265}^{R}	275	265	260	265	I_{265}^{B}	275	280	275	275	I_{265}^{S}	I_{270}^{S}	265	I_{265}^{S}	250
17	255	255	245	245	I_{245}^{S}	250	270	270	U_{270}^{R}	260	270	270	265	260	275	275	270	270	260	270	275	265	260	260
18	240	240	230	235	235	I_{225}^{A}	250	225	235	I_{250}^{A}	255	I_{240}^{C}	260	245	I_{260}^{R}	260	265	270	265	265	255	255	I_{245}^{S}	250
19	250	250	250	250	250^{F}	280^{F}	290	290	290	280	285	270	265	270	270	265	275	I_{280}^{C}	285	275	U_{265}^{S}	I_{270}^{S}	260	245
20	250	255	260	260	260	270	295	295	290	275	265	270	265	265	265	270	275	270^{H}	275	275	U_{270}^{S}	S	S	S
21	255	255	255	260	260	285	290	I_{285}^{R}	270^{H}	J_{275}^{R}	255	U_{260}^{R}	I_{265}^{R}	255	255	265	I_{270}^{A}	275	275	275	I_{265}^{A}	270	I_{265}^{S}	255
22	J_{255}^{S}	S	S	S	S	I_{285}^{S}	265	290	280	270	260	260	265	255	245	255	260	265	275	260	A	A	A	S
23	U_{255}^{S}	255	245	245	240	250	I_{275}^{R}	J_{290}^{R}	270	265	265	250	U_{255}^{R}	250	260	255	265	265	265	265	270	I_{260}^{S}	C	C
24	C	I_{255}^{C}	I_{260}^{C}	260	250	260	265	275	C	C	C	C	C	C	C	C	C	265	I_{265}^{A}	U_{255}^{S}	I_{245}^{S}	245	I_{255}^{S}	230
25	U_{235}^{S}	245	250	245	245	345	260	275	270	270	I_{260}^{R}	U_{260}^{R}	I_{255}^{R}	250	J_{255}^{R}	250	265	265	275	255	U_{260}^{S}	I_{255}^{S}	S	S
26	S	240	260	250	235	245	240	235^{H}	235	225	I_{235}^{B}	I_{240}^{B}	235	245	250	250	255	255	265	I_{265}^{S}	I_{255}^{S}	U_{245}^{S}	230	U_{250}^{S}
27	245	245	255	245	240	255	250	255	255	250	250	I_{250}^{R}	250	250	250	235	250	255	255	U_{265}^{S}	I_{250}^{S}	U_{245}^{S}	I_{255}^{S}	245
28	255	270	225	235	250	255	265	J_{265}^{R}	250	C	C	C	C	C	C	225	245	250^{H}	250	255	I_{250}^{S}	I_{245}^{S}	I_{240}^{S}	245
29	I_{230}^{C}	230	230	245	225	240	240	255^{H}	260	245	245	245	265	240	240	250	255	255	255	250	I_{250}^{S}	250	240	U_{240}^{S}
30	240	245	245	I_{240}^{C}	C	C	C	C	C	260	245	245	J_{255}^{R}	250	260	260	270	270	270	U_{255}^{S}	S	AS	S	245
31	240	230	235	250	245	275	285	265	260^{H}	255^{H}	255	C	C	C	C	C	C	C	C	C	C	C	C	C
No.	27	27	27	28	27	28	28	28	26	27	27	27	26	26	26	26	25	26	26	24	23	20	20	22
Median	250	250	250	245	245	260	265	270	270	260	255	260	260	255	260	260	265	270	270	265	250	255	255	250

(M3000)F2

Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

W 7

IONOSPHERIC DATA

Aug. 1958 | (M3000)F1 | 135° E Mean Time (G.M.T.+ 9h.) | **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						L	A	A	3.45	A	A	A	I 3.50 B	3.45	L	L	L	L	L					
2							L	L	L	A	L	L	L	L	L	A	A	A	A					
3						L	I 3.05 A	A	A	A	A	A	A	A	A	A	A	A	A					
4						L	L	A	L	A	A	A	I 3.50 A	3.50	A	L	A	L	A					
5							L	L	A	A	L	L	L	L	L	L	A	A	A					
6						L	A	A	L	I 3.40 A	I 3.35 A	I 3.35 A	L	I 3.40 A	LH	L	L	A	A					
7							L	L	L	A	A	L	A	A	LH	L	LH	L						
8							L	L	L	L	L	L	A	L	L	L	L	L						
9							L		L	L	L	L	L	B	L	L	A	L	A					
10						L	A		C	L	L	L	C	C	C	C	C	C	C					
11						C	C	C	C	A	L	A	L	L	L	A	L							
12						L	L	LH	L	L	L	A	L	L	C	C	C	L						
13							L	L	L	L	L	L	L	L	LH	C	L	L						
14							L	L		L	L	L	C	LH	L	L	L							
15						C	C	C	C	C	C	L	L	A	L	L	A	A						
16								A	L	A	L	A	L	L	B	L	LH							
17							L	L	L	L	L	LH	L	LH	LH	L	L	L						
18							3.30	I 3.20 A	L	A	L	C	L	L	A	L	A	A						
19							L		L	LH	L	L	L	L	L	L	L							
20								L	L	L	L	L	LH	LH	LH	L	L							
21										L	L	L	L	LH	L	A	A							
22									L	L	L	L	L	LH	L	L	L							
23								A	A	L	LH	L	L	L	L	L	LH							
24									C	C	C	C	C	C	C	C	C							
25							C		L	A	L	LH	A	A	A	L	L							
26						L	L		3.30	3.45	I 3.45 B	I 3.40 B	3.35	L	L	LH	L	L						
27							L	L	L	LH	L	LH	LH	L	LH	LH	L	L						
28									LH	C	C	C	C	C	C	L	L							
29							L		L	L	LH	L	LH	L	L	L	L							
30						C	C	C	C	L	LH	L	LH	L	L	L	L							
31											L	C	C	C	C	C	C							
No.							2	1	2	2	2	2	3	3										
Median							3.20	3.20	3.40	3.40	3.40	3.40	3.50	3.45										

(M3000)F1 Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

W 8

IONOSPHERIC DATA

Aug. 1958 | h'F2 | 135° E Mean Time (G.M.T.+ 9h.) | **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						L	I_{425}^{A}	I_{460}^{A}	I_{540}^{A}	I_{605}^{A}	610	495	I_{495}^{B}	490	470	470	L	L	L					
2							L	L	L	I_{400}^{A}	L	405	455	430	440	A	A	A	A					
3						L	455	400	A	A	A	A	A	A	575	A	A	A	A					
4						L	L	405	495	540	600	I_{580}^{A}	600	535	540	L	440	L	A					
5							L	L	A	I_{365}^{A}	400	430	405	410	405	430	A	A	A					
6						L	345	I_{400}^{A}	495	I_{465}^{A}	I_{440}^{A}	475	L	I_{425}^{A}	410	L	L	A	A					
7							L	L	L	I_{340}^{A}	I_{410}^{A}	420	410	I_{405}^{A}	460	405	L	L						
8							L	L	380	390	L	460	420	420	L	L	375	L						
9						L	L		L	L	L	L	420	I_{440}^{B}	410	L	A	L						
10						L	A		C	LH	L	390	C	C	C	C	C	C	C					
11						C	C	C	C	400	L	I_{465}^{A}	420	410	450	A	L							
12						L	L	L	L	500	W	530	480	570	C	C	C	L						
13							L	310	L	395	L	L	435	405	L	I_{380}^{C}	L	L						
14							L	L		L	340	L	I_{370}^{C}	385	L	L	L							
15						C	C	C	C	C	C	400	L	I_{350}^{A}	370	L	A	A						
16								A	L	A	L	A	370	410	I_{380}^{B}	340	L							
17							L	L	335	L	L	L	L	390	370	L	L	L						
18							460	680	L	I_{455}^{A}	455	I_{480}^{C}	425	490	I_{420}^{A}	430	A	A						
19							L		L	L	L	L	405	L	L	L	L							
20								L	L	L	L	L	390	360	L	L	L							
21										L	L	L	L	370	L	L	A							
22									L	L	L	L	360	400	430	L	L							
23								A	A	L	L	L	L	L	L	L	L							
24									C	C	C	C	C	C	C	C	C							
25							C		L	A	L	L	A	A	A	L	L							
26						L	L		575	645	I_{595}^{B}	I_{565}^{B}	520	470	450	L	L	L						
27							L	L	410	L	L	L	470	450	L	L	L	L						
28									L	C	C	C	C	C	C	540	L							
29							450		L	L	490	465	430	490	510	420	L							
30						C	C	C	C	L	L	410	395	405	L	L	L							
31											L	C	C	C	C	C	C							
No.							5	6	17	12	10	15	20	23	16	8	2							
Median							450	400	495	430	470	465	420	410	435	425	410							

h'F2 | Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

W 9

17

IONOSPHERIC DATA

Aug. 1958 | h'F | 135° E Mean Time (G.M.T.+ 9h.) | **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	335	325	325	360	365	295	A	A	A	A	A	250^{A}	I230^{B}	240	240	245	255	290	I290^{A}	310^{A}	325^{A}	310	295	355
2	320	300	310	310	310	265	240	I250^{A}	230	I250^{A}	225	215	I240^{A}	220	250	A	A	A	A	A	A	A	A	A
3	A	A	330^{A}	I345^{A}	I370^{A}	310	I270^{A}	A	A	A	A	A	A	I260^{A}	A	A	A	A	A	A	A	A	A	A
4	A	320	330	265	305	285	260	I255^{A}	I250^{A}	A	A	A	I260^{A}	I235^{A}	I255^{A}	290^{A}	A	A	A	A	A	320	A	A
5	A	295	300	305	355	I280^{C}	255	A	A	A	220	225	235^{A}	245	230	250	A	A	A	A	A	A	A	I295^{A}
6	305	270	260	300	340	270	A	A	A	I250^{A}	I245^{A}	I245^{A}	I235^{A}	I250^{A}	255^{H}	260	250	A	A	A	A	I320^{A}	315^{A}	305
7	300	300	310	310	315	260	I260^{A}	A	I250^{A}	I240^{A}	I230^{A}	220	I215^{A}	I230^{A}	230^{A}	240	250^{H}	260	300^{A}	305	A	A	A	A
8	270	270	275	300	345	290	280	255	I250^{A}	260	250^{A}	I240^{A}	I240^{A}	265	255	245	255	A	A	A	A	315	300	295
9	310	315	310	315	295	275	260	I260^{A}	260	240	I240^{A}	220	240	I230^{B}	I240^{A}	250	A	A	A	A	A	A	A	275
10	I310^{A}	I320^{A}	320	325	340	280	I270^{A}	250	I240^{C}	250	210	220	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	A	230	I220^{A}	240^{A}	I240^{A}	I260^{A}	I250^{A}	A	A	A	I290^{A}	305^{A}	I320^{AS}	330^{A}	I285^{A}
12	320	A	A	A	335	280	260	240^{H}	I250^{A}	210	230	I225^{A}	I240^{A}	250	C	C	C	I280^{A}	285^{A}	275	295	300^{A}	I310^{C}	310^{A}
13	320^{A}	315	320	320	305	260	270	240	225	220	260	210	230	245	235^{H}	I240^{C}	240	255	270	270	I275^{A}	290	310	310
14	310	310	300	290	290	260	260	240	255	260^{A}	230	I230^{A}	I230^{C}	220^{H}	240	240	250	250	270	I275^{C}	270	I290^{C}	275	290
15	I300^{C}	C	C	C	C	C	C	C	C	C	C	250	250	I250^{A}	I240^{A}	245	A	A	A	270	I290^{A}	310	I285^{A}	I295^{A}
16	I290^{A}	300	330^{A}	I305^{C}	295	260	A	A	A	A	A	A	A	250	I270^{B}	I260^{A}	250^{H}	275^{A}	I275^{A}	290^{A}	290	305	I280^{A}	I310^{A}
17	335	320	340	320	315	280	250	260	210	255	250	210^{H}	240	220^{H}	230^{H}	260	250	270	A	A	A	275^{A}	275	270
18	I345^{A}	I365^{A}	390	350	410	I335^{A}	A	A	A	A	225	I225^{C}	260^{A}	250	I265^{A}	240	A	A	A	A	I290^{A}	330	320	320
19	320	305	300	310	325^{A}	295	255	250	240	230^{H}	225	250	230	260	270^{A}	I270^{A}	I270^{A}	I270^{C}	270	275	275	I285^{A}	290^{A}	305
20	310	290	290	270	295	260	250	245	I265^{A}	270^{A}	245	225	210^{H}	210^{H}	245^{H}	250	250	255^{H}	275	285	270	275	310	300
21	300	305	290	280	295	245	245	265	250^{H}	240	240	I230^{A}	230	235^{H}	245	A	A	A	A	275^{A}	I270^{A}	I270^{A}	290	305
22	I315^{A}	305	300	I295^{A}	280	265	260	I270^{A}	I260^{A}	I260^{C}	I245^{A}	260	240	225^{H}	260	I270^{A}	270^{A}	I295^{A}	I300^{A}	I305^{A}	A	A	A	A
23	300	305	320	335	320	I320^{A}	255	I250^{A}	I250^{A}	240	220^{H}	215	215	245	240	250	250^{H}	270	285	275	I275^{A}	310^{A}	C	C
24	C	I315^{C}	I300^{C}	280	270	260	240	250	C	C	C	C	C	C	C	C	C	260^{A}	I280^{A}	300	340	340	305	320
25	345	305	270	270	300	325	I250^{C}	255	250^{A}	I250^{A}	230	235^{H}	A	A	A	A	260	260	260	250	I300^{A}	A	A	A
26	A	A	A	A	370^{A}	330	I300^{A}	265^{H}	240	240	I245^{B}	I240^{B}	290^{A}	260	240	250^{H}	250	260	285^{A}	I300^{A}	305	320	350	310
27	300	290	265	340	345	320	260	245	230	210^{H}	225	210^{H}	240^{H}	240	230^{H}	230^{H}	260	250	300	270	300	295	295	300
28	330^{A}	I355^{A}	I365^{A}	375	320	270	270	260	235^{H}	C	C	C	C	C	C	250	260	310^{AH}	I300^{A}	295	300	300	310	330
29	I340^{C}	360	340	340	410	330	270	260^{H}	235	230	250^{H}	220	225^{H}	230	250	245	250	270	290	315	310	300	310	310
30	335	320	300	I320^{A}	C	C	C	C	C	230	215^{H}	225	225^{H}	245	250	245	250	260	290	320^{A}	I310^{A}	I300^{A}	I295^{A}	305
31	340	340	345	340	340^{A}	270	240	I240^{A}	250^{HA}	260^{AH}	220	C	C	C	C	C	C	C	C	C	C	C	C	C
No.	25	26	27	27	28	28	24	21	21	21	24	25	24	26	24	23	18	18	17	20	19	22	20	22
Median	315	310	310	315	320	280	260	250	250	240	230	225	240	240	245	250	250	265	285	290	295	300	300	305

h'F

Sweep 1.0 Mc to 20.7 Mc in 1 min ~~sec~~ in automatic operation.

The Radio Research Laboratories, Japan.

W 10

IONOSPHERIC DATA

Aug. 1953 | h'Es | 135° E Mean Time (G.M.T.+ 9h.) | **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	105	105	105	105	105	110	125	115	110	110	110	105	B	G	G	G	130	130	120	110	110	110	E	E
2	110	E	100	105	G	140	120	110	110	110	110	105	105	110	105	105	105	100	110	105	110	110	110	105
3	105	100	100	100	100	105	125	125	115	110	110	110	110	110	105	105	110	105	105	110	110	110	110	120
4	105	105	105	105	110	110	135	125	125	110	110	110	105	105	105	105	110	105	110	110	115	E	105	110
5	105	105	100	105	100	C	150	120	115	120	110	G	105	105	105	115	125	115	115	110	110	110	110	105
6	105	100	105	100	100	130	115	115	110	115	110	110	110	105	105	105	105	125	110	110	115	110	110	110
7	110	105	105	105	110	140	120	105	115	110	110	110	105	105	105	110	110	140	130	115	110	110	110	110
8	100	115	105	E	115	130	120	110	110	110	110	110	110	110	105	105	G	125	120	110	110	105	110	E
9	110	110	110	105	E	130	120	110	110	110	105	105	110	B	110	110	105	105	110	110	110	115	110	110
10	110	105	105	E	E	120	120	110	C	115	115	120	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	110	120	110	110	105	110	105	105	110	110	115	110	110	110	105
12	105	105	105	105	105	110	105	120	105	120	120	110	115	G	C	C	C	135	105	110	110	110	C	110
13	105	100	100	100	E	130	125	125	120	110	115	120	100	G	G	C	100	125	120	115	110	110	110	105
14	105	105	105	E	100	140	140	G	125	115	110	105	C	G	G	G	140	125	125	C	E	C	E	E
15	C	C	C	C	C	C	C	C	C	C	C	145	140	125	110	110	115	115	120	110	110	110	105	110
16	110	105	105	105	100	100	120	110	115	110	110	105	105	105	B	110	G	120	120	110	110	110	105	105
17	105	100	100	E	110	G	120	110	110	105	105	G	120	G	120	130	115	115	120	110	110	105	105	105
18	105	100	100	100	110	125	125	120	110	110	110	C	105	110	105	G	125	110	115	110	110	110	110	105
19	105	100	105	105	105	105	110	110	115	110	105	110	110	110	110	110	110	C	110	E	115	110	110	E
20	110	110	110	105	E	G	105	130	115	110	B	105	110	105	G	G	G	130	125	120	115	110	110	110
21	110	105	105	105	105	110	G	115	115	110	110	105	110	110	105	105	115	100	110	115	110	105	105	105
22	105	105	105	105	105	105	140	125	115	120	110	110	110	G	115	110	110	110	110	110	115	110	110	105
23	105	105	105	130	120	115	110	115	110	110	105	G	G	110	110	110	G	120	120	110	105	105	C	C
24	C	C	C	100	105	G	G	125	C	C	C	C	C	C	C	C	C	115	110	115	110	E	E	E
25	E	E	125	120	125	120	C	135	115	115	120	110	115	110	110	110	110	110	110	110	110	110	110	105
26	105	105	105	125	120	130	130	G	G	G	B	B	110	110	G	G	G	G	125	110	110	110	E	E
27	E	E	E	135	130	130	110	135	125	125	G	110	140	135	G	G	G	G	120	E	110	E	E	140
28	135	125	120	120	120	120	120	125	130	C	C	C	C	C	C	G	135	120	120	120	110	110	E	110
29	C	105	E	125	120	125	120	120	115	110	110	G	G	125	110	110	110	135	130	105	105	110	110	110
30	E	100	105	100	C	C	C	C	C	110	105	G	105	G	G	105	G	130	125	110	110	110	105	105
31	105	105	105	105	105	135	120	115	110	110	110	C	C	C	C	C	C	C	C	C	C	C	C	C
No.	24	25	26	25	23	24	25	26	25	27	25	21	23	19	18	19	20	26	29	26	28	25	21	22
Median	105	105	105	105	105	120	120	120	115	110	110	110	110	110	105	110	110	120	120	110	110	110	110	110

h'Es

Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

W 11

IONOSPHERIC DATA

Aug. 1958

Types of Es

135° E Mean Time (G.M.T.+ 9h.)

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	f3	f3	f2	f2	l3	l,h	C	h2	C	C	C2	l2					h,l	h	C	f3	f2	f		
2	f		f	f,f		C	C	C	C	C2	l	l	l2	l	l	l3	l3	l3	C3	f3	f4	f5	f6	f4
3	f3	f3	f3	f4	l3	l,C	h	h	h	C2	C2	C2	C	C2	l	l2	l2	l2	l2	f3	f3	f3	f4	f3 f3
4	f3	f2	f2	f2	l2	l	h	h	h	C	C	C2	C	l	l	l2	l2	l3	l4	f3	f6		f4	f6
5	f3	f	f2	f2	f2		C	h	h2	h	C		l2	l	l	C	h2 l2	C2	C4	f3	f3	f4	f4	f3
6	f2	f	f	f	f	C	C	C	C	C2	C2	C2	l	l2	l2	l2	l2	C4 l2	C3	f3	f3	f3	f4	f4
7	f2	f2	f2	f2	l	h	C	l,h	C	C	C	l	l2	l2	l	l	l	h	h2	f3	f3	f6	f4	f3
8	f	f	f3		l	h	C	C	C2	C	C	C	l2	l	l	l		h	C3	f6	f3	f2	f2	
9	f	f	f	f		C	C	C	C	C	l	l	l		l	l	l2	l2	l4	f3	f3	f3	f3	f3
10	f4	f5	f2			C	C	C		C	C	h												
11										C3	h	C	C	l	l	l2	l2	C2	C3	f4	f2	f3	f4	f6
12	f2	f3	f5	f3	f4	l3	l,h	h	C	h	h	C2	C					h	l	f2	f3	f4		f2
13	f2	f	f2	f		l	h	h	h	l	C	h	l				l	h	C	f3	f5	f3	f2	f2
14	f	f2	f		f	h	h		h	C	C	l					h	h	C					
15												h	h	C,l	l2	l	C	C2	C3	f2	f3	f2	f2	f2
16	f4	f2	f4	f6	f2	l,C	C	C2	C	C2	C2	l	l2	l2		C		C	C3	f3	f	f	f3	f3
17	f2	f	f		f		C	C3	l	l2	l		h		C,l	h	C	C	C2	f4	f2	f2	f3	f2
18	f3	f3	f	f	f	h3	C	C	C2	C2	C		l	l	l2		h	C3	C3	f3	f3	f2	f	f
19	f	f	f	f	f2	l	l	l,C	h	l	l	l	l	l	l	l2	l2		l		f2	f5	f4	
20	f2	f	f	f			l,h	h	C	C		l	C	l				h	C	f2	f2	f3	f2	f2
21	f2	f2	f	f	f	l		C	C	C	C	l	l	l	l	l2	C,l	l,C	l2	f3	f3	f2	f	f2
22	f	f2	f3	f2	f2	l2	h	h	C	h	C	l	l		C	l	C	l2	l4	f3	f4	f5	f4	f4
23	f4	f5	f3	f3 f3	f	C3	C	l	C2	l	l			l	l	l		C	C2	f2	f4	f2		
24				f	f			h										C2	f4	f2	f			
25			f	f	f	l		h	C	C	h	C	C	C	C	C	l	l	l	f2	f2	f2	f5	f4
26	f3	f4	f5	f5 f2	f2	C	h						C	l					l	f3	f	f2		
27				f	f	f	l	h	h	h		l	h	h					C		f			f
28	f2	f5	f6	f3	f3	C2	C	h	h								h	h	C2	f2	f2	f		f2
29		f		f2	f3	C	C	C	C	C	C			h	C	l	l	C,l	C	f4	f	f2	f2	f
30		f	f2	f3						l	l		l			l		C	f	f6	f3	f4	f4	f
31	f	f	f2	f4	f4	C	C	C2	C	C	l													
No.																								
Median																								

Types of Es

Sweep 1.0 Mc to 20.7 Mc in 1 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

W 12

IONOSPHERIC DATA

Aug. 1958 | foF2 | 135° E Mean Time (G.M.T.+ 9h.) | 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	8.2	8.0	7.5	6.5	6.3	6.8	8.0	7.7	7.2	7.7	8.2	8.9	9.3	9.0	8.8	8.2	8.0	7.9	7.8	I 8.0A	8.2S	8.2F	7.4	7.8S
2	8.3S	7.6S	7.2	6.8	6.4F	7.1	7.9	8.7	8.9H	9.5	9.7	10.0	10.0	9.7	9.6	9.4	9.4	9.3	9.1	8.6	8.3	I 8.7A	I 9.0S	8.9
3	8.8	8.6F	8.0	7.5F	7.2F	7.4	9.1	9.3	7.8	7.4	I 6.8A	I 6.8A	I 6.9A	I 7.1A	7.3	A	A	A	7.6	I 7.2A	7.3	7.6	7.9	7.8
4	7.6	7.9	7.1	7.6	6.9	7.0	7.5	7.5	I 7.5A	I 7.0A	I 6.8A	7.3	7.8	8.1	8.1	8.1	8.1	8.0	7.7S	7.2	I 7.4A	I 7.8A	I 8.3AS	8.5
5	8.1	7.8F	7.8	7.5	7.2	7.8F	9.6	10.9	10.9	10.2	10.1	10.1	I 10.5A	I 9.8A	9.0	8.6	8.2	I 8.3A	8.4	7.9S	8.4F	I 8.6A	8.8F	8.7F
6	9.6F	8.4	7.7F	7.3F	7.1F	7.4F	8.9	8.7	8.4	8.4	9.2	9.3	9.9	10.1	9.3	8.6	7.8	7.7	I 8.0A	I 8.5A	I 8.2A	I 8.4A	I 9.2F	F
7	F	7.7	7.2F	7.1F	7.3F	8.1	9.1	9.6	9.6	9.7	9.4	9.2	9.6	9.5	9.1	8.8	8.6	8.0	7.8	7.9	I 8.4A	I 8.2S	8.3S	I 8.2F
8	7.7F	7.9	7.6	7.0	7.1F	8.2	9.3	J 9.6R	9.7	9.8	10.0	10.2	10.1	10.5	10.0	9.3	8.6	8.5	8.6	8.3	8.1	I 8.6A	I 9.2S	8.9S
9	8.6F	8.1F	7.8	7.8	7.6	8.1F	J 10.1R	10.9	11.1	11.1	10.1	10.0	U 9.8R	I 9.7B	9.4	9.3	I 8.6A	8.1	8.4	8.0	8.4	8.5	8.1	I 8.9FS
10	I 8.5F	F	F	F	7.6	8.1	9.8	9.5	9.2	9.5	9.6	9.8	10.1	9.9	9.6	9.7	9.2	8.9	I 9.4A	9.7	9.3	8.5	F	F
11	F	F	I 7.8F	7.5	7.7F	8.1	8.6	9.4	I 9.7A	9.1	9.1	9.4	9.6	9.6	9.7	9.5	9.1	9.0	8.8	8.5S	7.9F	8.0S	I 8.2A	I 8.0AS
12	7.4S	J 7.9F	7.2F	6.7F	6.9	7.6	8.9	10.6	9.0H	8.3H	7.7	7.9	8.0	U 7.5A	7.1	7.3	7.2	7.6	7.8	8.3	8.5S	8.3S	7.8S	7.6
13	7.1	7.0	6.7	6.5	6.5	7.1	9.3	J 9.9R	8.4	8.1	8.6H	8.8	8.7	9.2	9.3	9.3	9.6	9.8	10.4S	J 9.8S	8.2S	7.5	7.8S	7.8
14	7.9S	7.7	7.8	7.6	7.3	8.0	10.0	11.0	10.9	10.7	10.2	10.3	10.3	10.6	10.9	10.7	10.5	9.9	9.6	9.3S	I 9.4S	9.4S	9.2S	9.2
15	9.3	8.8	8.6	8.1	7.6	8.3	11.2	10.4	10.0	9.5	9.5	10.3	11.5	11.7	11.0	10.5	10.5	10.7	J 10.0R	9.3S	8.8S	I 9.6S	I 9.4S	8.9
16	8.5F	8.0F	8.1F	7.9	7.1F	7.8	9.4	10.1	11.4	11.5	11.0	11.4	11.4	11.0	I 11.0B	10.7	9.5	9.0	8.7	8.6	8.4S	8.9F	8.9S	8.6
17	8.4	7.9F	7.4	7.3F	7.2	7.9F	9.2	9.7	10.5	10.5	10.3H	U 10.2R	9.9	10.3	10.1	9.7	9.1	8.9	8.8	U 9.8S	9.6S	8.4	8.1	8.1
18	6.6	6.6F	6.4F	5.8F	4.6	4.9	5.8	6.4	6.9	7.5	8.6	8.1	8.1	8.1	8.5	8.4	8.2	8.4	8.6S	8.3S	7.7S	8.0S	8.0F	J 8.0S
19	8.4S	8.0	7.9F	7.4	7.2	7.5	9.1	9.6S	J 10.0R	9.6	J 10.2R	10.2	10.3	10.0	10.7	10.4	U 9.9R	9.7	9.3	9.3	8.6	8.1	8.1	8.0
20	8.0	7.9	7.6	7.2	7.0	7.7	9.6	10.9	11.0	10.6	11.0	10.5	10.0	10.3	10.6	10.4	10.1	9.7	J 9.9S	9.5S	8.5S	8.5S	8.5	8.7
21	8.2S	8.1	8.1	8.4	7.9	8.1	9.4	10.2H	11.6	11.9	11.9	11.2	11.3	11.4	11.4	11.6	11.1	10.5	10.0S	9.6S	9.7S	9.6S	9.1S	9.0F
22	8.6F	8.5F	8.2F	8.0F	7.4F	8.7S	9.1F	9.4	8.9	9.4	9.9	10.6	11.1	11.2	10.7	11.3	10.6	I 10.1C	9.8S	8.6S	7.9S	A	A	8.2S
23	8.8F	8.5	7.4	7.2F	7.2F	7.8F	9.6S	10.6	10.9	10.5	10.6	10.8	11.1	11.1	11.0	10.1	10.0	9.6	U 9.7S	U 9.5S	9.3	9.2	I 9.4S	U 9.6S
24	9.4	9.5	9.3	8.3	7.5	7.9	10.0R	11.7	12.2	12.3H	11.8	12.0H	12.1	10.3	11.9	12.2	12.3	10.9	J 9.9S	8.7S	8.6S	8.8	8.9S	7.5S
25	7.9	8.0	7.7	6.8	6.6	7.0	9.4	11.9	12.6	J 12.9R	13.1	12.9	13.4	12.8	12.4	12.4	11.9	10.9	10.3S	9.2S	8.7S	9.0S	8.5S	8.6S
26	7.9S	7.8S	7.5	6.9	6.3	6.2	6.9	7.2	7.1	7.3	I 7.8B	8.3	8.7	9.3	9.1	9.0	8.7	8.7	9.1S	8.8S	8.0S	7.8S	7.9	8.4S
27	8.0S	7.2	6.6	6.1	6.1	6.1	7.9	9.3	9.3	9.6	9.8	9.7	9.9	9.6	9.7	9.1	9.8	U 9.9R	9.3	I 9.2A	7.8	7.8S	8.0	7.2
28	6.8	6.4	5.3	5.7	5.6	7.2	9.1	J 10.8R	9.7H	7.8	7.1	6.8	6.8	6.7	6.8	7.0	7.1	7.1	7.4S	7.4S	7.8S	8.0S	I 8.2S	8.0S
29	7.6	7.4	7.4	6.7	5.7	5.9	7.4S	9.2S	9.6	9.6	9.5H	10.0	9.9	9.5	8.8	8.7	8.6	8.6	8.3S	8.3S	8.0S	J 8.3S	I 8.5A	I 8.4S
30	7.8S	7.9	7.6	6.9	6.9	7.5S	9.3S	10.5	11.7	11.3H	11.5	11.3	11.2	11.4	10.3	9.9	9.7	9.4	9.4	9.2S	8.6	8.1	7.7	7.7
31	7.5	7.1	7.1	7.1	7.1	7.9	10.3	11.5	12.0	12.0	12.3	12.2	12.3	12.2	11.5	11.1	10.4	10.2	10.0S	I 9.4S	I 9.0S	I 8.8S	9.0S	8.2S
No.	29	29	30	30	31	31	31	31	31	31	31	31	31	31	31	30	30	30	31	31	31	30	29	29
Median	8.1	7.9	7.6	7.2	7.1	7.7	9.2	9.7	9.7	9.6	9.8	10.0	10.0	9.9	9.7	9.4	9.3	9.0	9.1	8.6	8.4	8.4	8.3	8.2
U.Q	8.6	8.1	7.8	7.6	7.3	8.1	9.6	10.8	11.0	10.7	10.6	10.6	11.1	11.0	10.9	10.5	10.1	9.9	9.8	9.3	8.7	8.8	9.0	8.8
L.Q	7.6	7.6	7.2	6.8	6.5	7.1	8.6	9.3	8.9	8.3	8.6	8.9	9.3	9.3	9.0	8.7	8.6	8.3	8.3	8.3	8.0	8.0	8.0	7.9
Q.R	1.0	0.5	0.6	0.8	0.8	1.0	1.0	1.5	2.1	2.4	2.0	1.7	1.8	1.7	1.9	1.8	1.5	1.6	1.5	1.0	0.7	0.8	1.0	0.9

foF2

Sweep 1.6 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

A 1

IONOSPHERIC DATA

Aug. 1958 | foF1 | 135° E Mean Time (G.M.T.+ 9h.) | 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						L	4.6 L	I 5.2 A	I 5.7 L	6.1	I 6.0 A	6.2	6.2	6.2	6.0	6.0 L	5.9 L	A	A					
2						L	L	I 5.6 L	I 6.1 L	I 6.1 L	I 6.6 R	I 6.6 A	6.6	6.5 L	6.1	I 6.1 L	I 5.6 L	L	L					
3						L	4.8 LH	5.2	I 5.6 A	5.7	A	A	A	A	A	A	A	A	A					
4							L	A	A	A	I 5.8 A	I 5.7 A	I 5.7 A	6.0	I 6.2 A	5.8	5.5 L	A	L					
5						L	L	L	L	L	6.6 L	A	A	A	6.1 L	6.0 H	A	A	A					
6						L	L	A	A	I 6.3 A	6.2	I 6.1 A	I 6.0 A	6.0 L	I 5.9 A	L	A	A	A					
7								L	6.4 L	I 6.5 A	6.0 L	6.4	5.9	6.0	5.9	5.7 L	I 5.6 L	L	A					
8						L	L	L	L	I 6.1 L	6.9	6.3	6.2	6.0	I 6.2 L	6.2 L	A	A	A					
9						L	L	L	L	L	L	L	6.5 H	I 6.2 B	I 6.0 A	5.8	A	L	L					
10							L	A	A	L	6.6 L	6.1	6.5 L	I 6.2 L	6.1	5.8 L	L H	L	A					
11							L	L	A	L	6.4 LH	6.0	I 6.4 L	I 6.2 A	6.2 L	5.9	L H	A	L					
12						L	L	I 5.2 A	I 6.2 L	5.9	I 5.9 A	6.0	5.8	I 5.8 A	B	I 5.5 A	5.2 L	L	L					
13						L	L	L	L	L	I 6.0 L	I 6.2 L	6.2 L	6.0	I 5.8 LH	I 5.4 LH	5.4 L	L	L					
14						L	L	L	L	L	L	L	I 6.2 L	I 6.1 L	6.1 L	L	L	L	A					
15							L			5.9	I 6.1 L	6.5 L	I 6.4 L	I 6.6 A	5.9	5.5	L	L	L					
16						L	L	L	A	A	A	6.6 L	I 6.4 A	I 6.1 L	B	L	L	L	L					
17						L	L	L	L	5.6	A	I 6.3 LH	6.5 H	5.5	I 6.0 L	I 5.6 L	L	L						
18							4.2	I 5.0 A	I 5.6 L	5.6 L	I 5.8 A	6.2	6.4	6.3	6.1 L	I 5.8 A	L	A	A					
19							L	L	L	L	L	L	6.0 L	6.4	L	L	L	L						
20										L	L	A	A	6.2 L	6.0 L	L	L	L	L					
21									L	L	L	L	6.6 L	6.6	6.4 L	L	L	L						
22							L	L	L	L	L	I 6.3 R	7.0	6.8 L	I 6.4 A	A	L	C						
23						L	L	L	L	L	L	L	6.3	I 6.2 L	L	L	L							
24									L	L	I 6.2 L	I 6.6 L	I 6.7 A	6.4	6.5 L	6.5 L	L	A						
25								L	L	A	A	6.9 H	6.5 L	I 7.0 A	6.8 L	L	L	L						
26						L	4.5 L	5.0	5.3 H	5.6	I 5.9 B	6.5	6.7	6.5	I 6.6 L	L	L	L						
27							L	L	L	I 6.8 L	6.5 L	I 6.8 L	I 6.5 L	7.0	I 6.0 LH	6.0 L	L							
28								L	L	5.5	5.6	5.9	5.7	5.7	5.5 V	5.3	5.2	I 5.1 L						
29							L	L	I 5.7 L	6.6 LH	I 5.3 L	6.6	6.5 L	6.2	6.5 L	5.6	L	L						
30							L	L	L	L	L	7.0 L	I 6.6 L	6.4	L	L	L							
31									L	L	L	7.1 L	I 7.0 L	6.7 L	I 6.8 L	L	L	L						
No.							4	6	8	14	18	23	28	29	25	18	7	1						
Median							4.6	5.2	5.7	6.0	6.0	6.3	6.4	6.2	6.1	5.8	5.5	5.1						

foF1

Sweep 1.6 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

A 2

IONOSPHERIC DATA

Aug. 1958 | foE | 135° E Mean Time (G.M.T.+ 9h.) | 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						B	2.95	3.45	3.55	3.90	R	A	A	A	R	A	A	A	A					
2						B	2.75	3.20	3.60	I 3.85 A	I 4.00 A	B	A	A	A	A	3.70	3.15	A					
3						2.05	3.30	3.75	I 4.00 R	R	B	B	B	A	A	B	3.55	I 2.90 B	A					
4						A	2.95	I 3.40 B	3.75	B	R	B	B	B	B	A	3.60	A	A					
5						B	2.75	3.40	3.75	3.95	R	R	R	A	B	3.95	3.70	3.10	2.30					
6						B	2.90	3.30	I 3.70 R	3.95	R	B	B	A	A	A	A	3.05	B					
7							2.30	A	A	A	A	A	A	R	R	A	3.75	3.25	2.40					
8						R	2.75	3.40	3.70	3.95	4.05	R	A	R	A	A	A	3.30	B					
9						B	2.75	3.30	3.50	I 3.90 B	I 3.95 B	A	A	B	R	A	3.35	2.90	A					
10							2.55	3.05	3.50	3.85	3.90	R	A	A	A	A	3.55	2.95	A					
11						B	2.60	3.15	3.55	I 3.65 A	4.00	A	A	A	A	A	3.60	3.05	B					
12						B	2.75	3.25	3.50	R	A	A	B	B	B	R	3.60	3.00	A					
13						R	2.60 H	3.15	3.60	I 3.90 R	R	R	B	R	I 4.05 R	3.95	3.40	3.00	B					
14						B	2.55	3.15	3.50	B	B	B	A	R	A	A	A	3.00	2.05					
15						B	2.55	I 3.05 B	3.45	B	A	A	R	B	B	R	3.55	2.90	B					
16						B	2.55	3.20	3.55	3.80	B	B	B	B	B	B	B	I 3.05 R	R					
17						B	2.45	2.95	3.45	A	A	R	B	B	R	S	3.50	2.95	B					
18							2.60	3.10	3.55	3.90	3.95	A	R	R	A	A	3.50	2.95	B					
19							2.60	3.15	I 3.55 R	R	B	A	A	A	A	A	A	A	B					
20						B	2.50	3.30	B	B	B	B	A	A	R	I 3.70 R	I 3.40 A	A	A					
21							2.60	3.20	3.70	3.90	R	A	A	R	R	A	3.55	2.85						
22							2.70 H	3.05	3.50	R	B	B	B	B	B	R	3.35	C						
23						B	2.05	A	A	A	R	B	A	4.10	I 4.00 A	3.95	I 3.40 A	2.90	B					
24							2.50	3.10	I 3.40 A	A	A	A	A	A	A	3.75	3.45	2.60						
25							2.55	3.40	3.70	3.95	4.05	I 4.20 B	I 4.25 B	4.20	3.95	I 3.55 B	3.10	A						
26						B	2.45	3.10	3.80	4.00	B	B	B	B	R	R	R	B						
27							2.70	3.30	3.70	B	B	R	R	I 4.05 R	4.05	I 3.70 R	3.50	2.95						
28							2.45	3.00	3.50	I 3.65 R	3.90	I 4.00 A	I 4.00 S	I 4.00 A	3.90	3.65	3.40	I 2.70 B						
29							2.55	3.10	3.55	3.90	B	B	B	I 4.20 R	I 3.95 B	3.75	3.45	2.75						
30							B	3.00	3.35	A	R	A	A	A	A	3.80	3.50	A						
31							2.50	3.05	3.55	3.60	A	A	A	A	A	A	A	2.90						
No.						1	30	29	28	17	8	2	2	5	6	10	23	23	3					
Median						2.05	2.60	3.15	3.55	3.90	4.00	4.10	4.10	4.10	4.00	3.75	3.50	2.95	2.30					

foE

Sweep 1.6 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | foEs | 135° E Mean Time (G.M.T.+ 9h.) | 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	4.1	4.7	2.5	2.6	E	2.2	4.9	7.4	5.9	4.8	6.7	6.9	5.6	7.2	G	6.0	7.6	6.5	6.5	9.5	6.5	6.7	4.5	2.8
2	E	E	E	E	E	G	3.6	6.2	7.0	10.0	7.3	7.4	7.3	6.0	6.0	6.2	6.9	5.9	7.0	6.0	12.9	14.5	6.0	9.2
3	2.5	E	E	E	3.9	2.3	G	4.1	6.7	6.2	8.0	12.5	11.5	9.3	9.6	14.5	13.1	14.2	9.1	9.5	6.8	13.4	13.4	9.0
4	4.6	9.1	4.8	7.5	7.0	4.0	3.5	6.4	9.3	10.0	9.0	7.3	6.1	6.1	7.2	5.8	5.0	14.2	9.4	6.9	10.2	11.5	9.0	4.2
5	4.2	6.8	6.1	5.0	3.1	2.2	5.9	6.0	6.4	8.7	7.0	9.6	12.4	12.1	6.1	4.7	9.1	16.9	19.0	6.7	14.5	14.1	9.4	4.8
6	10.0	8.7	4.5	4.2	4.4	2.7	4.1	8.0	8.5	10.7	10.7	7.6	9.4	6.0	8.2	6.8	9.5	12.9	17.0	16.9	14.2	13.4	11.5	9.0
7	6.8	4.5	6.0	5.0	4.3	3.5	3.6	4.5	4.5	9.2	6.1	6.6	4.6	4.4	4.6	5.6	G	4.5	9.4	3.8	12.2	2.7	7.0	9.0
8	8.5	2.5	E	2.4	2.5	G	3.6	4.3	6.1	7.4	6.1	6.3	7.1	4.5	4.8	6.5	9.8	6.6	8.1	6.7	4.8	14.5	6.6	4.5
9	3.9	2.5	E	E	E	B	3.3	5.5	5.6	7.7	12.5	10.5	4.7	B	16.2	13.5	12.5	7.8	6.2	4.5	6.0	7.5	9.0	9.1
10	9.1	6.4	3.1	2.5	3.0	3.6	3.6	6.8	7.3	6.3	7.7	6.5	4.5	4.4	4.4	5.8	4.4	5.9	14.5	12.7	10.8	6.9	5.0	4.3
11	9.0	6.0	8.3	5.5	E	2.5	5.0	7.3	20.0	10.0	4.2	7.6	5.4	8.4	10.7	4.5	4.1	8.3	3.7	3.1	17.0	9.1	14.5	9.5
12	4.1	4.0	4.5	3.1	2.7	B	3.8	5.9	5.0	4.9	9.2	6.0	5.3	8.1	4.7	6.6	7.7	14.0	4.7	6.0	4.9	7.8	4.3	3.0
13	2.4	3.7	E	E	E	G	G	3.7	4.2	6.0	4.5	G	4.5	G	G	4.3	3.9	G	B	2.2	6.9	4.4	2.4	3.0
14	4.3	2.5	2.5	2.5	E	B	3.0	3.9	4.1	4.4	5.6	4.5	6.7	B	5.0	4.8	5.1	4.4	4.5	4.7	3.9	E	3.6	2.6
15	E	5.0	2.6	E	E	G	3.0	3.7	6.0	6.0	6.5	6.9	12.6	12.8	5.6	4.5	5.4	3.9	5.4	5.8	5.0	9.0	3.1	2.7
16	9.1	4.5	2.5	3.1	2.7	B	3.5	5.8	6.6	7.6	8.5	6.9	7.6	8.5	B	B	B	3.3	G	E	4.1	8.9	7.1	3.1
17	3.6	4.3	3.2	3.0	E	B	3.0	3.3	3.7	7.6	6.5	G	B	B	G	B	4.4	7.4	2.5	5.6	3.1	6.7	6.9	10.4
18	5.0	4.9	3.0	E	E	E	3.9	6.0	6.0	4.5	6.6	5.8	G	G	6.2	9.5	4.6	8.9	7.6	9.5	12.6	2.6	3.1	3.1
19	2.5	2.7	E	E	E	E	2.8	4.1	4.1	4.3	5.4	4.5	4.2	4.6	4.4	4.1	5.0	5.1	4.0	4.5	6.8	4.5	5.1	4.2
20	3.6	4.4	4.6	2.5	2.1	2.6	G	3.6	4.6	6.0	5.1	9.0	9.1	7.5	4.3	4.0	4.1	3.7	3.2	3.2	2.5	3.9	2.7	4.0
21	4.6	9.0	9.0	3.8	3.6	2.5	G	G	5.0	6.2	6.7	7.7	6.6	G	6.5	6.6	7.2	9.1	4.9	E	4.2	6.0	6.9	3.0
22	5.0	4.6	6.6	7.3	5.7	E	3.0	5.3	6.3	6.0	4.5	6.1	B	4.9	7.6	8.7	13.6	C	9.1	5.0	2.8	17.5	9.0	5.0
23	6.0	3.0	4.4	4.2	3.1	4.3	3.5	4.6	7.3	5.2	7.5	B	5.8	4.5	5.5	4.1	4.1	3.6	3.0	5.0	10.0	3.7	3.1	4.4
24	E	3.0	2.6	2.4	E	E	2.8	3.7	5.7	5.0	4.7	6.0	8.4	4.7	4.6	4.3	6.2	6.8	5.0	9.0	14.3	6.7	4.2	E
25	3.1	2.7	4.1	2.6	E	E	2.9	3.7	4.4	12.0	8.0	4.6	6.5	8.9	6.9	6.7	5.3	5.1	5.7	4.6	6.7	4.0	6.1	5.7
26	4.7	4.8	3.0	E	E	2.6	2.9	3.6	G	4.5	B	5.4	5.5	4.9	G	4.3	4.7	5.6	4.0	3.2	4.4	5.8	2.6	2.7
27	2.6	E	E	E	E	E	G	3.6	4.7	4.6	5.0	4.5	5.1	G	G	G	G	5.3	8.6	10.1	3.9	E	E	E
28	2.9	3.1	3.8	4.0	4.0	3.3	3.0	5.0	4.5	4.0	4.0	4.2	B	4.0	G	G	4.1	3.3	5.8	7.0	9.0	4.5	2.5	2.5
29	E	E	E	E	3.0	2.8	5.0	6.6	3.9	4.2	4.1	4.5	B	G	4.4	4.5	5.5	3.5	2.9	E	3.0	12.5	9.0	6.9
30	7.0	E	E	E	E	E	2.7	3.7	5.3	4.1	G	4.1	5.8	4.5	4.4	4.0	G	4.0	5.7	3.6	3.9	3.5	3.1	9.0
31	3.5	E	E	E	E	E	3.0	4.0	5.6	6.8	5.9	6.1	4.8	6.5	6.5	6.2	4.8	3.0	6.3	8.6	5.3	5.6	4.2	4.5
No.	31	31	31	31	31	26	31	31	31	31	30	30	27	28	30	29	30	30	30	31	31	31	31	31
Median	4.1	4.0	3.0	2.5	E	2.2	3.0	4.5	5.6	6.0	6.5	6.2	5.8	4.9	4.9	5.6	5.0	5.8	5.8	5.6	6.5	6.7	5.1	4.3
U. Q	6.0	4.9	4.5	4.0	3.1	2.7	3.6	6.0	6.6	7.7	7.7	7.4	7.6	7.8	6.5	6.6	7.6	8.3	8.6	8.6	10.2	11.5	9.0	9.0
L. Q	2.6	2.5	E	E	E	E	2.8	3.7	4.5	4.6	5.0	4.5	4.8	4.4	4.4	4.3	4.1	3.9	4.0	3.6	4.1	4.0	3.1	3.0
Q. R	3.4	2.4					0.8	2.3	2.1	3.1	2.7	2.9	2.8	3.4	2.1	2.3	3.5	4.4	4.6	5.0	6.1	7.5	5.9	6.0

foEs

Sweep 1.6 Mc to 20.0 Mc in 20 min sec in automatic operation.

The Radio Research Laboratories, Japan.

A 4

IONOSPHERIC DATA

Aug. 1958 | f_bE_s | 135° E Mean Time (G.M.T.+ 9h.) | **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	3.4	3.5	2.3	2.0		u 2.2 B	4.0	6.7	5.3	4.8	6.2	5.3	4.9	5.9		5.0	5.5	5.4	5.2	A	2.9	4.5	3.7	2.5
2							3.5	4.9	5.3	5.0	5.4	7.0	5.3	4.8	5.1	4.4	5.5	4.1	3.5	5.1	4.5	A	5.2	6.5
3	E				2.2	u 2.3 B		u 4.1 B	5.8	5.2	A	A	A	A	6.3	A	A	A	5.5	A	6.2	3.8	5.5	6.5
4	3.0	3.0	3.6	3.0	3.4	3.0	3.4	5.6	A	A	A	5.7	6.1	5.3	6.2	4.8	4.3	5.5	3.4	2.0	A	A	3.5	2.8
5	3.0	3.0	2.3	2.6	2.0	2.2	4.9	5.2	5.7	5.0	5.2	8.5	A	A	5.5	4.7	6.7	A	6.6	4.9	2.2	A	5.5	3.5
6	3.0	3.1	3.0	2.3	3.0	2.7	4.1	6.5	7.4	7.0	5.9	7.4	8.9	4.9	7.0	5.5	6.5	5.8	A	A	A	A	8.0 F	4.0
7	5.0	E	4.8	2.2	3.5	2.7	3.5	4.2	u 4.5 B	7.0	5.2	5.4	u 4.6 B	u 4.4 B	u 4.6 B	5.4		4.0	6.6	2.9	3.5	E	5.5	3.5
8	3.4	E		E	E		3.6	4.3	5.3	5.6	4.9	4.8	5.2	D 4.5 B	4.5	5.9	5.7	5.0	7.0	5.4	3.5	A	2.9	3.2
9	2.5	E				B	3.2	4.6	4.8	5.2	5.5	5.5	u 4.7 B	B	A	5.0	A	4.9	3.6	2.4	5.1	4.0	7.4	6.3
10	4.6	4.1	2.3	E	1.9	2.5	3.5	5.0	6.0	5.5	5.2	5.2	u 4.5 B	4.4	4.3	5.1	3.9	4.8	A	5.4	5.6	4.5	3.5	2.4
11	3.4	4.7	2.7	2.0		2.0	3.5	4.6	A	4.7	4.2	5.5	5.1	7.7	5.5	4.4	4.0	7.0	3.0	1.9	2.0	2.9	A	3.5
12	2.3	3.0	3.0	2.1	1.9	B	3.7	5.4	4.5	4.9	6.2	5.8	5.2	6.7	D 4.7 B	5.4	4.7	4.3	3.5	3.4	4.0	4.9	2.3	2.0
13	E	2.0						u 3.7 B	4.1	5.4	u 4.5 B		u 4.5 B			4.3	3.7		B	E	4.5	4.2	2.3	2.5
14	3.5	2.3	2.1	2.0		B	3.0	3.8	4.1	4.4	5.1	D 4.5 B	5.8	B	4.8	4.1	4.0	2.4	3.8	4.1	2.0		u 3.6 S	2.0
15		1.9	E				3.0	u 3.7 B	5.1	5.0	5.3	6.1	5.9	6.1	4.7	4.2	3.1	3.7	2.9	2.9	3.0	5.1	2.0	2.0
16	2.6	3.0	E	2.8	1.9	B	3.5	5.0	5.9	6.7	7.8	6.2	6.3	6.3	B	B	B	3.3			3.0	6.0	5.0	2.0
17	2.4	2.3	2.3	2.4		B	2.9	3.3	u 3.7 B	4.9	5.4		B	B		B	3.9	3.5	2.5	3.8	2.5	2.0	5.4	2.7
18	4.0	3.5	2.0				3.5	5.4	5.2	4.4	u 6.6 B	5.1			5.3	7.4	4.4	7.9	7.0	3.2	2.9	1.9	E	E
19	E	E					2.2	2.9	3.9	4.1	5.0	4.5	D 4.2 B	4.6	4.4	4.1	4.0	3.5	2.4	3.4	3.0	3.0	2.5	2.9
20	2.9	2.3	3.5	E	E	2.0		3.6	4.6	5.4	u 5.1 B	8.3	7.4	5.4	4.3	u 4.0 B	3.3	2.9	2.9	2.8	u 2.5 B	3.5	E	2.9
21	3.0	2.2	4.0	2.5	2.4	E			4.3	5.2	5.8	4.6	4.9		5.8	5.5	4.9	4.4	3.5		3.5	u 6.0 B	5.0	E
22	4.0	2.9	4.9	5.0	2.5		3.0	4.6	5.5	4.3	u 4.5 B	5.7	B	u 4.9 B	6.9	6.5	4.0	C	6.2	4.2	2.0	A	A	3.9
23	3.4	2.0	2.9	2.9	2.3	3.4	2.9	4.1	5.4	4.1	4.4	B	5.2	4.5	4.6	3.5	3.5	3.1	2.3	3.1 S	5.0	2.0	D 3.1 S	2.9
24		2.0	1.9	E			2.7	3.5	4.4	4.2	4.3	5.1	7.4	4.7	4.2	4.3	4.0	5.2	4.4	6.0	8.1	4.4	E	
25	2.0	2.0	2.5	E			G	3.7	4.2	10.4	7.1	u 4.6 B	6.0	8.0	6.0	6.0	4.6	4.4	4.8	4.0	5.9	3.0	5.5	3.9
26	4.1	3.5	1.9			1.9	2.9	3.6		4.5	B	u 5.4 B	5.5	4.9		4.3	4.2	4.9	3.3	2.5	4.0	2.2	1.9	2.2
27	2.2							G	4.6	4.6	5.0	u 4.5 B	5.0					4.0	7.8	A	3.0			
28	2.0	2.4	3.3	3.0	2.3	2.0	3.0	3.9	4.0	D 4.0 B	u 4.0 B	D 4.2 B	B	D 4.0 B			4.0	3.3	3.0	3.0	4.9	2.0	2.0	2.0
29					2.0	2.0	3.4	4.2	u 3.9 B	4.2	u 4.1 B	u 4.5 B	B		u 4.4 B	4.4	4.7	3.5	2.3		D 3.0 S	8.4	A	4.9
30	3.0						2.7	3.7	4.6	4.1		u 4.1 B	5.0	4.5	4.4	3.4		3.4	5.0	2.7	3.2	2.5	2.4	3.5
31	2.2						2.8	3.6	4.7	6.1	5.5	5.4	u 4.8 B	5.9	4.4	4.9	3.9	2.4	A	6.5	4.0	2.8	2.0	2.2
No.	27	25	21	19	15	14	26	30	30	30	29	26	25	21	23	27	27	29	29	28	30	29	29	29
Median	3.0	2.3	2.5	2.2	2.2	2.2	3.3	4.2	4.8	5.0	5.2	5.4	5.2	5.3	4.8	4.8	4.2	4.3	3.8	4.6	3.5	4.2	3.6	2.9

f_bE_s | Sweep 1.6 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | f-min | 135° E Mean Time (G.M.T.+ 9h.) | 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	1.90	E	1.70	1.95	1.75	2.05	1.90	2.00	2.10	2.90	3.10	3.45	3.45	3.60	3.30	3.40	2.20	2.00	2.00	1.90	1.90	1.90	2.00	2.00
2	1.70	2.00	1.90	1.90	1.90	1.75	1.95	2.05	2.95	3.05	3.20	4.00	3.20	3.50	3.40	2.85	2.05	2.00	1.75	1.70	1.90	E	E	1.75
3	1.70	E	E	1.95	1.70	1.95	2.50	2.95	2.95	3.00	3.50	4.60	4.10	3.50	3.40	5.50	2.85	3.00	2.00	2.00	1.80	1.80	E	1.80
4	1.80	1.90	1.80	1.80	1.90	1.90	2.00	3.55	3.00	3.95	3.95	4.05	4.00	4.10	4.10	3.00	2.05	2.45	1.95	1.90	1.90	1.70	1.80	1.85
5	1.90	1.80	1.90	1.90	1.90	2.00	2.10	2.05	3.50	2.90	3.50	3.55	4.10	2.95	3.90	3.10	2.20	2.10	2.00	1.80	1.70	1.85	1.70	E
6	1.75	1.90	1.80	1.70	1.90	2.10	2.10	2.45	2.90	2.70	3.60	4.10	4.05	3.20	3.00	2.80	2.10	2.05	2.05	2.05	1.70	E	1.70	1.70
7	1.80	2.00	1.80	1.70	1.70	1.90	2.05	2.20	2.45	2.90	3.45	3.20	3.25	2.50	3.10	3.50	3.10	2.05	1.95	1.90	1.85	2.00	1.80	1.80
8	E	1.70	1.90	1.90	1.75	1.80	1.90	2.05	2.55	2.50	2.75	3.30	3.30	3.40	3.50	2.90	2.20	2.00	2.10	1.90	E	E	E	E
9	E	1.80	1.90	1.70	1.70	1.90	1.90	2.05	2.05	3.95	3.95	3.60	3.50	I 4.80 B	3.40	3.40	2.05	2.00	1.80	1.75	1.75	E	E	E
10	E	E	1.70	1.95	E	2.00	1.95	2.00	2.50	3.00	3.55	3.00	3.50	3.30	3.55	2.70	2.80	2.00	1.70	E	1.70	E	1.75	1.85
11	E	E	E	1.90	1.80	1.90	1.90	1.95	2.05	2.95	3.50	3.80	3.60	3.75	3.25	3.00	2.40	2.00	1.90	E	E	1.80	1.70	1.75
12	E	1.90	1.75	E	1.75	1.90	2.00	2.05	3.10	2.75	3.75	3.80	4.00	4.05	4.50	2.50	2.25	2.00	1.90	1.70	1.70	1.80	1.70	1.90
13	E	1.90	2.00	2.00	1.90	1.80	1.90	2.10	2.10	2.90	3.55	3.55	4.40	3.30	3.40	2.40	2.10	1.95	2.50	E	1.90	1.80	2.00	1.80
14	1.90	1.90	2.00	1.80	1.90	2.00	2.10	2.00	2.10	3.90	3.90	3.80	3.50	3.20	2.80	2.80	2.00	2.05	1.90	1.95	1.75	1.80	1.70	E
15	1.90	1.75	1.90	1.90	1.90	2.00	2.00	3.45	2.05	3.70	3.30	3.50	3.30	4.25	4.00	3.55	2.05	2.10	2.10	1.90	1.70	1.80	1.80	1.80
16	1.90	1.95	1.90	1.80	1.70	1.90	1.90	2.10	2.45	2.90	3.95	3.95	3.85	3.95	I 70.5 B	5.60	4.10	2.40	2.00	1.95	E	E	1.90	1.90
17	1.80	1.80	1.90	1.80	1.80	1.95	1.95	2.05	2.05	2.55	3.00	2.50	4.80	4.50	3.55	4.15	2.05	2.00	1.90	1.80	E	E	1.70	1.75
18	1.70	E	E	2.00	E	2.00	2.00	2.00	2.05	3.05	3.10	3.80	3.30	3.50	3.00	3.20	2.40	2.00	2.00	2.00	1.90	E	E	1.90
19	1.90	1.90	1.90	2.20	1.70	1.90	1.90	2.05	2.00	2.45	4.00	3.55	3.55	3.05	2.50	3.00	2.10	2.00	2.00	1.75	E	1.85	E	1.75
20	E	1.80	E	1.70	1.80	1.75	1.90	2.50	4.00	3.95	4.50	3.95	3.25	3.00	2.95	2.20	2.00	1.80	1.90	1.90	2.10	1.90	1.95	2.00
21	1.80	E	1.80	1.80	1.90	2.00	2.00	2.00	2.00	3.00	2.80	3.10	3.40	3.00	3.40	2.35	2.05	1.90	1.80	1.70	1.80	1.70	E	1.90
22	2.00	1.90	1.85	1.90	1.80	1.90	1.95	2.25	2.15	2.80	4.30	4.50	5.10	4.50	4.05	3.00	2.70	I 2.60 C	1.95	E	1.75	1.70	1.70	1.80
23	1.80	1.80	1.90	1.90	1.80	1.90	1.80	1.95	2.05	2.30	3.00	4.60	2.30	2.75	3.05	2.60	2.00	1.90	1.95	1.75	E	E	E	E
24	1.95	1.90	1.70	E	1.90	2.10	2.00	1.95	2.00	2.50	2.80	2.50	2.90	2.75	2.45	2.05	1.95	2.00	1.90	E	1.90	1.75	1.80	2.00
25	1.80	1.90	1.80	1.70	1.90	1.90	2.00	2.25	2.00	3.00	3.50	4.30	4.40	3.60	3.30	3.50	2.00	1.95	2.00	1.80	1.90	1.75	1.75	1.90
26	1.90	1.70	1.70	1.70	1.70	1.80	2.00	2.00	2.95	3.55	I 5.00 B	5.20	5.20	4.25	2.95	2.50	2.40	2.25	1.80	1.70	1.70	E	1.75	1.95
27	1.90	1.90	1.90	1.90	1.90	1.95	2.00	2.40	1.85	4.00	4.40	3.70	3.00	3.00	3.05	2.90	2.10	2.00	1.90	1.80	2.00	1.70	2.00	E
28	E	1.70	1.75	1.75	1.80	1.75	1.95	1.90	2.00	2.95	3.30	3.40	5.00	3.00	2.90	2.00	2.00	2.80	1.90	1.90	1.90	1.70	E	1.80
29	1.90	1.90	2.00	E	1.80	1.80	2.05	2.00	2.05	3.50	4.00	4.25	4.50	3.40	4.00	3.50	2.00	1.90	1.90	2.00	1.75	E	1.80	1.90
30	1.90	2.00	1.80	2.00	1.90	2.00	2.30	2.05	2.05	2.75	3.05	2.95	3.00	2.80	2.40	2.20	2.00	2.00	1.80	E	E	1.70	E	1.75
31	1.75	2.00	E	1.90	2.00	1.90	2.00	2.00	2.80	2.75	2.95	3.90	3.50	3.20	3.00	2.75	2.00	1.80	1.90	1.75	E	E	E	2.00
No.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Median	1.80	1.90	1.80	1.90	1.80	1.90	2.00	2.05	2.10	2.95	3.50	3.80	3.50	3.40	3.30	2.90	2.10	2.00	1.90	1.80	1.75	1.70	1.70	1.80

f-min

Sweep 1.6 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | (M3000)F2 | 135° E Mean Time (G.M.T.+ 9h.) | 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	255	260	255	230	225	225	265	255	265	230	230	240	250	250	260	265	265	265	270	I 260 A	245 S	255 F	235	235 S
2	255 S	265 S	250	240	245 F	265	275	275	245 H	250	260	250	255	255	260	255	260	270	275	255	245	J 240 A	I 250 S	245
3	245	250 F	265	240 F	235 F	230	240	260	245	245	I 240 A	I 235 A	I 245 A	I 245 A	245	A	A	A	265	I 265 A	245	250	240	255
4	245	240	255	265	275	280	285	255	I 265 A	I 240 A	I 230 A	245	245	250	260	250	265	270	280 S	265	I 250 A	I 240 A	I 250 AS	255
5	260	250 F	255	255	255	255 F	265	270	270	255	255	255	I 260 A	I 260 A	255	265	270	I 275 A	275	280 S	250 F	I 255 A	240 F	245 F
6	260 F	270	260 F	250 F	250 F	245 F	270	270	255	255	255	270	260	270	270	280	255	275	A	A	A	I 240 A	I 240 F	F
7	F	270	250 F	255 F	250 F	280	285	295	260	260	265	250	260	265	260	255	270	280	270	265	I 255 A	I 260 S	250 S	I 265 F
8	255 F	260	265	260	250 F	260	270	J 265 R	250	265	260	255	255	260	270	270	280	275	280	280	245	I 250 A	I 255 S	260 S
9	260 F	255 F	245	255	250	260 F	J 280 R	275	270	280	260	255	U 260 R	I 260 B	I 260 A	260	I 275 A	275	280	265	255	260	255	I 250 S
10	I 250 F	F	F	F	250	270	300	295	285	275	260	265	255	260	260	265	275	260	I 270 A	275	270	255	F	F
11	F	F	I 230 F	240	250 F	260	235	250	I 280 A	270	260	260	260	270	265	270	265	275	280	280 S	255 F	265 S	I 255 A	I 270 AS
12	260 S	J 265 F	270 F	255 F	250	250	260	280	290 H	240 H	235	245	250	U 260 A	255	270	275	275	270	270 S	270 S	270 S	270 S	250
13	255	260	255	260	260	275	300	J 315 R	290	260	250 H	270	265	260	260	260	265	265	270 S	J 285 S	280 S	255	245 S	250
14	255 S	260	260	265	260	265	280	280	270	270	260	260	255	265	260	265	270	280	280	280 S	I 265 S	265 S	265 S	255
15	265	270	265	265	260	265	305	295	300	265	255	250	260	265	260	260	265	270	J 290 R	270 S	265 S	I 255 S	I 275 S	270
16	260 F	260 F	260 F	265	265 F	270	280	270	275	275	260	260	260	255	I 260 B	270	275	275	280	275	250 S	250 F	260 S	260
17	255	245 F	245	240 F	250	260 F	280	275	270	270	260 H	U 260 R	255	265	265	270	275	270	260	U 275 S	280 S	250	255	280
18	230	225 F	230 F	250 F	215	230	245	275	245	240	260	265	265	250	265	270	275	I 275 A	280 S	275 S	260 S	240 S	240 F	J 250 S
19	250 S	250	265 F	250	250	260	285	295 S	J 290 R	270	J 280 R	265	275	260	265	270	J 270 R	275	280	280	270	265	260	260
20	260	270	265	270	270	270	290	295	290	275	275	270	260	255	265	270	270	270	J 280 S	285 S	280 S	260 S	255	260
21	270 S	260	265	275	285	285	300	280 H	280	275	275	260	255	255	255	260	270	280	280 S	275 S	270 S	270 S	255 S	260 F
22	260 F	265 F	260 F	280 F	255 F	300 S	285 F	305	280	270	270	265	260	260	240	255	255	I 270 C	285 S	280 S	250 S	A	A	230 S
23	250 F	270	255 F	250 F	245 F	245 F	290 S	285	285	260	270	260	260	260	265	260	265	270	U 280 S	U 285 S	260	250	I 250 S	III 255 S
24	260	270	270	275	255	260	275 R	285	280	255 H	260	260 H	250	215	230	240	250	260	J 285 S	265 S	I 240 AS	235	260 S	240 S
25	230	250	260	250	240	240	285	280	270	J 270 R	260	255	255	255	250	255	265	270	275 S	260 S	245 S	260 S	250 S	255 S
26	245 S	250 S	255	260	235	225	245	250	240	245	I 250 B	250	250	260	265	270	275	270	275 S	275 S	250 S	245 S	230	250 S
27	265 S	250	245	235	240	240	265	280	270	270	275	255	255	250	250	245	250	U 260 R	255	I 260 A	230	235 S	250	255
28	260	240	225	240	250	260	260	J 250 R	230 H	235	230	210	215	215	220	235	245	250	260 S	260 S	240 S	245 S	I 250 S	250 S
29	240	230	235	250	230	230	245 S	260 S	275	250	240 H	250	245	255	255	255	260	265	265 S	255 S	260 S	J 255 S	I 240 A	I 250 S
30	250 S	255	265	245	240	255 S	280 S	265	270	260 H	255	255	255	260	255	255	270	260	265	265 S	250	260	250	250
31	250	235	245	250	250	250	290	285	280	260	255	250	245	255	250	255	260	265	270 S	I 260 S	I 250 S	I 250 S	255 S	260 S
No.	29	29	30	30	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	29	29
Median	255	260	255	255	250	260	280	275	270	260	260	255	255	260	260	260	270	270	275	270	250	255	250	255

(M3000)F2 Sweep 1.6 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | (M3000)F1 | 135° E Mean Time (G.M.T.+ 9h.) | 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						L	3.25	A	L	3.30	I 3.40 A	3.25	3.30	I 3.40 A	3.40	3.20 L	A	A	A					
2						L	L	I 3.35 L	I 3.30 L	I 3.40 L	I 3.30 R	I 3.40 A	3.30 H	3.15 L	3.45	I 3.25 L	I 3.40 L	L	L					
3						L	3.00 LH	3.30	A	A	A	A	A	A	A	A	A	A	A					
4							L	A	A	A	A	A	A	3.35	I 3.05 A	3.45	3.35 L	A	L					
5						L	L	L	L	L	3.20	A	A	A	A	3.15 H	A	A	A					
6						L	L	A	A	A	A	A	A	3.35 L	I 3.40 A	L	A	A	A					
7								L	3.60 L	I 3.30 A	3.40 L	3.30	3.60	3.40	3.40	I 3.30 AL	I 3.35 L	L	A					
8						L	L	L	L	I 3.40 L	3.10	3.40	3.50	3.40	I 3.30 L	I 3.45 AL	A	A	A					
9						L	L	L	L	L	L	L	3.25 H	I 3.30 B	I 3.20 A	3.35	A	L	L					
10							L	A	A	L	3.30 L	3.45	3.20 L	I 3.40 L	3.30	3.40 L	L H	L	A					
11							L	L	A	L	3.40 LH	I 3.40 A	I 3.20 L	A	A	3.30	L H	A	L					
12						L	L	I 3.50 A	I 3.20 L	3.40	A	A	3.50	A	B	I 3.30 A	3.30 L	L	L					
13						L	L	L	L	L	I 3.40 L	I 3.40 L	3.40 L	3.35	I 3.40 LH	I 3.70 LH	3.20 L	L	L					
14						L	L	L	L	L	L	L	I 3.30 L	I 3.30 L	3.30	L	L	L	A					
15							L			3.65	I 3.50 L	A	L	A	3.55	3.45	L	L	L					
16						L	L	L	A	A	A	A	I 3.30 A	I 3.35 L	B	L	L	L	L					
17						L	L	L	L	3.15	A	I 3.35 LH	3.35 H	3.10	I 3.30 L	I 3.45 L	L	L						
18							3.05	I 3.20 A	I 3.05 L	3.30	I 3.20 A	3.45	3.15	3.25	3.10	I 3.30 A	L	A	A					
19							L	L	L	L	L	L	3.40	3.40	L	L	L	L						
20										L	L	A	A	3.30	3.35	L	L	L	L					
21									L	L	L	L	3.35 L	3.30	I 3.25 AL	L	L	L						
22							L	L	L	L	L	I 3.40 R	3.40	3.20 L	A	A	L	C						
23						L	L	L	L	L	L	L	3.65	I 3.55 L	L	L	L							
24									L	L	I 3.60 L	I 3.40 L	I 3.25 A	3.20	3.10 L	3.10 L	L	A						
25								L	L	A	A	3.60 H	I 3.30 AL	I 3.30 A	3.25 L	L	L	L						
26						L	2.95 L	3.20	3.40 H	3.55	L 3.40 B	3.35	3.30	3.30	I 3.30 L	L	L	L						
27							L	L	L	I 3.40 L	3.40 L	I 3.40 L	I 3.40 L	3.20	I 3.40 LH	3.20 L	L							
28								L	L	3.30	3.55	I 3.70 B	3.60	3.55	3.45 V	3.40	3.20	I 3.05 L						
29							L	L	I 3.45 L	3.45 LH	I 3.45 L	3.30	3.25 L	3.40	3.20 L	3.55	L	L						
30							L	L	L	L	L	3.40 L	I 3.30 L	3.35	L	L	L							
31									L	L	L	3.40 L	I 3.30 L	I 3.30 AL	I 3.20 L	L	L	L						
No.							4	5	6	12	15	18	25	26	22	18	6	1						
Median							3.00	3.30	3.35	3.40	3.40	3.40	3.30	3.35	3.30	3.30	3.30	3.05						

(M3000)F1 Sweep 1.6 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | h'F2 | 135° E Mean Time (G.M.T.+ 9h.) | 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						L	350	I 405 A	I 480 L	545	505	455	420	440	405	395	395 L	A	A					
2						L	L	310 L	I 375 H	405	395	420	405	405	400	395	390	345	300					
3						460	400	395	470	495	I 520 A	I 555 A	A	A	500	A	A	A	350 A					
4							300	420	I 470 A	I 545 A	I 595 A	500	490	455	440	450	380	I 345 A	L					
5						L	L	L	320	I 360 L	385	I 400 A	I 385 A	I 390 A	410	395	A	A	A					
6						L	340	I 355 A	I 395 A	I 415 A	420	395	I 385 A	360	380	345	I 350 A	355	A					
7								295	390	I 350 A	345 L	440	395	375	400	390	I 360 L	L	A					
8						L	L	L	I 370 L	I 330 L	380	390	400	380	350 L	360	I 340 A	A	A					
9						L	L	260	310 L	305	395 L	395	400	I 400 B	I 400 A	395	I 350 A	345 L	300 L					
10							260	270	305	360	405	395	405	380 L	400	390	350	L	A					
11							395 L	350	I 330 A	I 350 L	410	400	I 370 L	I 370 A	390	370	L	A	L					
12						L	I 300 L	305	260 H	410 H	500	470	450	I 440 A	450 B	400	370	L	L					
13						L	280 L	255	255 L	I 310 L	I 370 H	I 350 L	390	400	I 360 L	380	345	I 290 L	L					
14						L	L	I 260 H	I 290 H	265	345	365	345 L	380	355	345	315 L	I 300 L	290					
15							265			340	I 370 L	410	360	345	355	355	L	L	L					
16						L	L	L	A	300 A	I 335 A	370	360	365	I 370 B	345 L	L	L	L					
17						L	L	L	I 320 L	345	295 H	I 365 L	400	385	345	345 L	345 L	I 325 L						
18							465	I 420 A	I 560 L	495	I 400 A	410	445	470	400	I 390 A	I 365 L	A	A					
19							L	L	L	255	330 L	355	345	400	350	350 H	I 320 L	L						
20										L	L	A	A	390	370	I 345 L	L	L	L					
21									L	I 305 L	330 L	I 335 L	355	370	365	I 350 L	L	L						
22							L	290	L	L	I 350 L	360	400	380	400	370	L	C						
23						L	L	L	L	I 300 L	345 L	I 350 L	390	I 375 L	350	355 L	350							
24									I 255 L	245 H	I 330 L	I 325 H	395	505	410 L	400	340 L	A						
25								260	L	A	A	370	360 L	I 355 A	380 L	L	L	L						
26						L	420 L	440	490	480	I 460 B	470	455	400	I 390 L	L	L	L						
27							L	330 L	I 365 L	370	360	385	I 405 L	450	I 410 L	445	400 L							
28								345 L	395 H	495	560	690	640	645	605	525	475	I 400 L						
29							L	360 L	330 L	410	I 385 H	435	420	410	405 L	410	370 L	L						
30							L	I 275 L	305 L	260 H	350	400	395	390	390	395	L							
31									L	L	L	390	395 L	400	380 L	375 L	L	L						
No.						1	11	20	22	27	28	30	29	30	31	28	19	8	4					
Median						460	340	320	350	350	380	395	395	390	390	380	350	345	300					

h'F2

Sweep 1.6 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

A 9

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IONOSPHERIC DATA

Aug. 1958 | h'F | 135° E Mean Time (G.M.T.+ 9h.) | 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	340	300	300	370	395	295	A	A	A	245	I 275 A	290 A	245	I 250 A	240	A	A	A	A	A	A	A	I 315 A	350
2	310	290	310	345	320	270	255	I 255 A	250	250	255	I 250 A	I 245 AH	240	250	245	I 255 A	255	I 265 A	300 A	A	A	355	I 350 A
3	345	310	290	305	355	300	305 H	295	A	A	A	A	A	A	A	A	A	A	A	I 315 A	I 340 A	350 A	I 355 A	I 355 A
4	350	345	I 300 A	300	285	290	260	A	A	A	A	A	A	290	I 270 A	260	245	A	A	275	A	A	A	340
5	335 A	340 A	305	305	305	290	I 275 A	A	A	A	260 A	A	A	A	A	A H	A	A	A	A	320	A	A	380 A
6	310	290	I 305 A	340	350 A	I 310 A	A	A	A	A	A	A	A	245	I 270 A	I 260 A	I 250 A	A	A	A	A	A	I 375 A	305
7	I 310 A	300	I 325 A	325	350 A	295	250	240	250	I 260 A	I 260 A	I 230 A	I 245 B	240 B	240 B	I 260 A	270	280	I 275 A	300 A	340 A	290	I 305 A	300 A
8	I 305 A	290	280	300	340	290	260	250	I 265 A	I 260 A	240	230 H	250	I 250 B	250	I 250 A	A	A	A	A	A	A	330 A	305
9	310	325	310	300	305	290	250	255	255	280	270 A	I 270 A	270 H	I 245 B	250 A	250	A	A	A	295	I 320 A	340 A	345 A	I 350 A
10	I 355 A	355	345	345	330	295	245	I 245 A	I 250 A	I 265 A	275	250	240	225	240	285	245 H	A	A	300	300	I 330 A	350	350
11	355	I 350 A	355	345	345	295	255	A	A	240	220 H	A	A	A	A	250	245 H	I 250 A	270 A	255	290	310 A	I 300 A	290 A
12	310	300	305	340	330	300	260	I 255 A	I 255 A	250	A	A	260	A	B	A	A	A	A	A	290 H	I 295 A	270	300
13	295	310	305	305	300	295	250	I 240 B	220	I 235 A	240 B	I 240 B	240 B	240	240 H	210 H	250	250	280	250	I 250 A	I 275 A	340 A	330 A
14	340 A	330	305	295	280	260	250	245	240	245	255	I 255 A	I 260 A	255	255	240	250	I 260 A	I 280 A	285	295	295	300 S	300
15	295	295	295	295	300	265	250	245	255	240	I 245 A	A	A	A	250	220	I 235 A	250 A	265	260	295	I 300 A	285	280
16	290	330 A	310	300	270	255	250	250 A	A	A	A	A	A	A	B	B	250 B	255	275	285	300 A	I 325 A	I 300 A	300
17	305	310	330	360	325	290	250	240	225	245	I 265 A	210 H	245 H	210	250	250	250	250	295	300	270	270	I 325 A	305
18	I 315 A	I 370 A	370	345	440	345	305	A	A	240	I 245 A	250	205 H	250	I 245 A	I 255 A	260 A	A	A	290 A	300 A	340	345	330
19	320	300	300	310	310	295	250	250	240	230	245	225	I 225 B	250	210	240	250 A	255	270	275	285	290	300	330
20	315	295	305	275	295	255	250	250	250	255	260 B	A	A	I 235 A	240	250 B	250	250	290	265	270	I 285 A	305	320
21	300	305	315	300	295	250	250	245 H	245	255	I 255 A	220	240	210 H	I 240 A	A	A	A	280	270	295	I 300 A	I 290 A	300
22	I 310 A	305	I 300 A	I 310 A	340	250	250	I 250 A	250	230	250	I 250 A	260	280	A	A	250	I 255 C	I 260 A	I 260 A	320	I 340 A	I 375 A	400 A
23	350 A	275	300	340 A	350	I 325 A	245	240	I 230 A	230	220	225	250	245	245	245	245	255	295	295	I 295 A	300	I 310 S	325
24	300	300	295	255	295	295	250	245	245	240	210	I 250 A	I 245 A	250	245	250	250	I 260 A	I 270 A	A	A	A	305	300
25	355	300	300	280	340	305	250	250	240	I 245 A	I 260 A	220 H	A	A	A	A	A	270	I 270 A	I 285 A	I 300 A	305 A	A	A
26	A	350 A	295	285	305	340	280	260	240 H	250	I 265 B	280 B	255	245	255	245	255	I 270 A	280 A	270	I 295 A	305	350	340
27	290	300	290	320	350	325	260	250	250	245	250	245	245	245	210 H	245	255	A	A	A	I 300 A	295	305	260
28	295	325	A	A	350	305	255	260	245	265	245	I 230 B	245	255	240	240	260	270	310	300 A	I 320 A	320	310	305
29	340	370	355	305	360	340	280	250	220	230 H	255	250	220 H	220	245	245	I 255 A	I 265 A	295	300	I 320 S	A	A	A
30	340 A	310	295	320	340	300	250	250	250	225	230	215	250	245	245	245	250	260	300	295	300	295	295	350 A
31	345	350	315	315	315	300	255	250	245	I 250 A	250	250	250	I 255 A	245	260	245	255	A	A	A	305 A	300 A	290
No.	30	31	30	30	31	31	29	25	23	26	26	22	22	24	24	23	23	19	19	23	24	23	27	29
Median	310	310	305	310	330	295	250	250	245	245	250	250	245	245	245	250	250	255	280	285	300	300	310	320

h'F | Sweep 1.6 Mc to 20.0 Mc in 20 min sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | h'Es | 135° E Mean Time (G.M.T. + 9h.) | 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	100	100	100	100	E	150	135	125	110	110	105	110	105	105	G	105	105	130	120	110	110	110	105	105
2	E	E	E	E	E	G	120	110	110	110	105	105	105	105	105	130	125	120	110	105	105	105	105	105
3	105	E	E	E	100	150	G	145	125	120	110	110	105	105	105	110	110	110	110	105	105	105	105	105
4	105	105	105	105	105	105	145	130	120	110	110	110	110	110	110	110	110	105	110	105	105	105	110	105
5	100	110	110	110	105	140	120	125	120	110	110	110	110	105	120	120	130	120	130	110	110	105	105	110
6	105	105	100	105	100	105	130	120	110	110	110	110	105	105	105	105	105	120	115	110	105	110	105	105
7	105	105	100	105	100	105	135	115	125	110	105	105	105	130	120	115	G	140	120	120	110	110	110	110
8	105	110	E	105	120	G	125	120	110	110	115	115	110	110	110	105	105	120	110	110	110	105	110	105
9	105	110	E	E	E	B	125	115	110	105	105	105	105	B	110	105	110	110	110	105	105	105	105	105
10	105	105	105	100	100	120	120	110	110	115	110	110	110	110	110	110	130	115	105	110	105	105	100	100
11	105	100	100	100	E	130	125	115	110	115	125	110	110	110	105	125	140	120	120	115	110	105	110	110
12	105	105	105	105	110	B	125	110	110	110	110	110	115	110	120	140	130	115	105	110	105	110	105	105
13	105	100	E	E	E	G	G	130	125	110	120	G	130	G	G	140	140	G	B	110	105	105	105	105
14	100	100	100	100	E	B	140	130	125	115	110	110	105	B	100	105	105	105	125	110	110	E	100	100
15	E	100	100	E	E	G	145	135	105	115	140	105	120	120	130	140	130	120	115	110	110	110	105	105
16	105	100	105	100	105	B	125	120	110	110	110	110	110	110	B	B	B	140	G	E	110	110	105	100
17	100	100	100	100	E	B	130	130	130	110	105	G	B	B	G	B	130	120	120	110	105	105	105	105
18	100	100	100	E	E	E	145	125	115	120	110	110	G	G	110	110	140	115	110	110	110	105	105	105
19	105	100	E	E	E	E	150	105	120	120	110	115	115	110	105	105	105	105	105	100	100	100	110	100
20	100	105	100	105	105	115	G	145	125	110	110	105	100	105	125	120	100	105	105	100	100	110	115	105
21	105	105	100	100	100	105	G	G	145	130	125	110	110	G	130	140	125	120	110	E	110	105	105	110
22	105	105	100	100	100	E	130	120	120	125	130	125	B	135	115	115	110	C	110	110	105	110	110	110
23	105	105	100	100	100	125	120	110	105	105	100	B	105	130	115	130	110	110	105	105	105	100	100	100
24	E	110	105	105	E	E	130	115	105	110	105	100	100	100	105	130	115	110	110	105	105	110	105	E
25	100	100	110	115	E	E	150	140	125	115	125	130	120	115	115	110	110	110	110	105	105	105	105	105
26	105	100	100	E	E	135	130	130	G	125	B	125	120	120	G	140	110	110	110	125	120	110	105	105
27	100	E	E	E	E	E	G	145	125	145	140	145	145	G	G	G	G	145	110	105	105	E	E	E
28	145	140	135	130	125	140	130	120	115	125	115	110	B	110	G	G	135	130	120	110	110	110	110	105
29	E	E	E	E	130	135	125	115	125	130	130	125	B	G	130	140	140	130	110	E	105	110	110	110
30	105	E	E	E	E	E	140	125	110	105	G	100	105	100	100	105	G	105	120	110	105	105	105	105
31	105	E	E	E	E	E	145	120	110	110	110	110	105	105	105	105	105	140	120	110	110	110	110	110
No.	27	25	21	19	15	14	26	30	30	31	29	28	26	23	24	27	27	29	29	28	31	29	30	29
Median	105	105	100	105	105	130	130	120	115	110	110	110	110	110	110	115	110	120	110	110	105	105	105	105

h'Es

Sweep 1.6 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

Aug. 1958

Types of Es

135° E Mean Time (G.M.T. + 9h.)

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	f2	f	f	f		h	h2	c2	c2	c	c2	l	l	l2		l2	l2	h2l	h2l	f3	f3	f	f2	f
2							c2	c2	c2	l2	l2	c2	l	l	l	h,l	c2	c2	l2	f2	f3	f2	f3	f4
3	f				f	h		h	c2	c2	c	c2	c	l	l	c	c2	c2	l3	f3	f2	f2	f2	f2
4	f3	f3	f2	f2	f2	l	h	h	c3	c	c2	c	c	c	c	l	c2	l2	l	f2	f4	f2	f2	f2
5	f	f2	f2	f2	f2	h	c2	c2	c2	c	c	c2	c2	l2	c	c	h2	h2	h,l	f4	f2	f2	f3	f2
6	f3	f2	f2	f2	f2	l	h	c3	c3	c2	c	c2	c2	l	l2	l	l2	c2	c2	f2	f6	f3	f5	f2
7	f2	f2	f2	f2	f3	f	h	c,l	c,l	l2	l	l	l	h	c	l		h	c3	f2	f2	f	f4	f2
8	f2	f		f	f		c2	h2	c2	c2	c	c	l	c	l	l2	l2	h2	c2	f4	f2	f2	f2	f2
9	f2	f					h2	c2	c2	c	c	l	l		c	l	c2	c3	l2	f2	f3	f3	f2	f2
10	f2	f2	f2	f	f	f	c2	c3	c2	c	c2	c	l	l	l	l2	h	c3	l2	f2	f2	f3	f	f
11	f2	f3	f3	f		h	c2	c2	c2	l	h	l	l	l	l	h,l	h	c3	c2	f	f2	f2	f3	f2
12	f2	f2	f2	f2	f2		c2	c2	c	c	l	l	c	c2	c	h2	h	c2	l2	f3	f2	f2	f2	f
13	f	f						h2	h	c	c		h			h,l	h			f	f2	f2	f	f
14	f	f	f	f2			h	h	h	c	c	c	l		l	l2	l,h	l,h	c2	f3	f		f	f
15		f	f				h	h	c	c	h,l	l	c	c	h	h	h,l	c	c2	f2	f2	f2	f2	f
16	f2	f	f	f2	f		c2	c2	c2	c2	c2	c2	c	c2				h			f2	f3	f2	f2
17	f	f	f	f2			h	h	h	l	l						h	c	c	f2	f2	f2	f2	f
18	f	f	f				h2	c2	c2	c	c2	l			l	l3	h	c2	c3	f2	f2	f	f2	f
19	f	f					h,l	l,h	h	h	c	l	l	l	l	l	l	l2	l2	f2	f2	f	f	f2
20	f	f	f2	f	f	c		h	c	c	c	c2	l2	l2	h	h	l,h	l,h	l,h	f	f	f	f	f
21	f2	f2	f2	f	f	f			h	h	h2	l	l		h	h,l	h2	c2	f2		f2	f3	f3	f
22	f2	f2	f2	f2	f2		h	c2	c2	h	h	h		h	c	c2	c2		f2	f3	f	f2	f2	f6
23	f3	f2	f	f2	f2	h2	c	l	l	l	l		l	h	l	c,l	l	c2	l	f2	f2	f	f	f
24		f	f	f			h	c2	l2	l	l	l	l2	l	l	h	l,l	c3	f2	f4	f5	f3	f	
25	f	f	f2	f			h	h	h	c2	c2	h	c	c2	c2	c3	c	l4	f2	f3	f4	f4	f2	f2
26	f2	f2	f2			h	h	h		c		c	c	c		h	c2	c3	f2	f2	f2	f2	f2	f
27	f							h	h	h2	h	h	h					h2	f3	f5	f2			
28	f2	f	f2	f3	f2	f	c2	c2	c	c	c	l		l			h	h	f2	f	f	f	f	f
29					f2	f	c2	c2	h	h	h	h			h	h2	h	h2	f		f	f2	f3	f
30	f						h	h2	c2	l		l	l	l	l	l		l	f2	f2	f2	f2	f2	f
31	f2						h	c2	c2	c2	l2	l2	l	l2	l	l2	l2	h,l	f2	f3	f2	f2	f2	f2
No.																								
Median																								

Types of Es

Sweep 1.6 Mc to 200 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | foF2 | 135° E Mean Time (G.M.T. + 9h.) | 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	I 3.3 R S	8.1	J 7.5 R	6.3	6.0	6.8	U 7.8 S	8.2 S	I 7.8 S	J 8.5 S	I 9.2 R	9.8	10.3 S	I 10.0 A	9.7 R	9.1	A	A	A	7.9 S	8.7 R	I 8.4 S	I 8.1 S	8.1 R
2	3.4 R S	8.9 R	U 7.2 R	6.9	I 6.8 C	6.9 R	8.0	U 8.6 R	9.0	9.5	10.2	10.4	10.2	10.1	10.2	9.9	9.7	9.8	9.4	8.7	J 8.4 S	8.7	9.0	9.0
3	8.3	8.7	U 8.1 R	7.3	7.2	7.3 R	9.2	9.1	8.5	7.7	A	A	7.9	8.2	8.2	A	I 5.4 A	I 8.1 A	A	7.6	7.7	7.7	8.1	8.8
4	8.7	9.3	8.9	8.4	7.4 R	8.0	8.3	7.3	A	A	I 7.6 A	8.2	9.1	9.0	9.0	I 9.2 A	I 9.0 A	I 8.6 A	7.9	7.6	U 7.7 S	I 8.3 S	I 8.8 S	9.8
5	8.6	8.4	8.1	8.1	7.6	7.8 F	9.4	11.0	10.1	I 10.2 A	I 10.4 A	10.7	11.1 R	10.5	I 9.7 A	9.2	9.0	9.0	8.8	I 7.9 A	7.9	J 8.2 R S	8.3	8.3 F
6	8.8	8.6	8.0	7.5	7.3	7.7	9.1	9.6	9.5	9.1	I 9.9 A	10.2	10.7	J 10.9 S	A	A	A	A	A	A	A	J 8.3 S	U 8.3 S	9.0
7	C	C	C	C	C	C	C	9.0	9.3	9.8	9.5	9.7	10.3	9.9	9.9	10.0 S	9.6	8.9	U 8.5 S	I 8.4 S	U 8.4 R	8.7	8.4	U 7.8 S
8	I 8.2 A S	8.5	J 8.0 S	7.3	6.8 F	8.4	9.7 S	10.2	10.8	10.5	11.1	11.1	11.1	11.3	11.3	10.6	9.1	9.1	I 8.8 A	8.1	8.3	I 8.8 R S	I 9.0 R	9.4
9	I 7.3 R S	9.0	I 8.4 R	8.1	U 7.6 S	8.0	9.7 R	J 11.0 R	11.6	10.7	10.0	10.2	10.6	U 10.0 R	10.0 R	9.9	9.2 R	I 8.9 R S	U 9.1 S	8.2 S	8.3 S	I 8.8 S	I 8.5 S	8.4
10	I 8.2 S	I 8.4 R S	I 8.3 R S	8.0 R	I 8.0 R	8.4	J 10.0 R	U 9.1 R	9.3	9.6 R	I 10.0 A	10.1 R	10.5	10.6	10.3	10.4 R	9.8 R	9.4	I 9.8 S	I 9.9 S	I 9.6 S	I 9.2 S	I 9.0 R	I 8.8 R
11	I 8.4 A S	8.0	I 7.5 R S	7.2 R	I 7.7 R S	8.3 R	9.0	10.2	10.9	I 9.8 A	I 10.0 A	10.6	10.8 S	10.5	10.8	10.4	10.0	10.5 S	I 9.8 S	8.9 S	8.1 R	8.3 R	8.0	J 8.0 R
12	7.6 R	7.8 R	7.0	6.7	J 6.8 R	7.3	9.0	I 10.8 R	10.1 R	9.6 R	8.8	8.7	I 8.5 A	8.6	I 8.1 A	8.0	7.6	A	A	8.8 R	8.5 R	8.1 R	7.9 R	J 7.9 R
13	7.7 R	7.6 R	7.3	6.5	6.4	6.8	9.2 R	9.4 R	8.0	7.9	8.8	9.6	9.7 R	9.7	10.2	10.3 S	10.3 S	10.7 R	11.0 S	S	S	7.4 R	J 7.8 R	I 7.8 R
14	7.7	U 7.8 R	U 8.1 R	7.7 R	7.3 R	7.7 R	9.4	10.4	J 10.3 R	10.5	9.9	10.6	10.8	11.1	11.4	11.5 R	11.2	I 10.8 R	I 10.1 R S	I 10.0 R S	R S	I 9.7 R	9.5 S	U 9.5 R
15	7.3	9.0	I 8.8 R S	8.3 S	I 7.8 R S	8.6	10.9 R	10.3	10.0	9.1	9.5	10.6	11.7	12.3	11.8	11.5 R	11.6	11.4 R	J 10.8 R S	I 10.0 R S	9.3	J 9.8 R	R	R
16	8.7	8.4	8.6	8.4	7.3	I 7.7 R S	9.0	10.7 R	11.3	11.5	11.1	11.9	12.1	12.2	B	11.5	J 10.3 R	9.9 S	9.5 S	9.0 S	8.3 R	I 8.6 S	R S	8.6
17	I 8.6 R	8.2	7.5	7.5	7.4 S	8.0 R	9.1	9.5 R	10.0 R	9.9	10.3	11.3	10.8	11.1	11.3	10.7 R	10.1	9.8	9.6	U 9.9 S	9.2	R S	8.1	8.1
18	6.7	6.6	6.5	5.8	5.1	5.0 S	6.2	7.3	6.8	7.4	9.2	9.1	8.8	9.0	9.7	9.2	8.7	9.1	9.2	8.6	7.3 R	J 7.9 R	8.3	8.5
19	8.4	8.3	8.1	7.8	7.3	I 7.9 R	9.5	10.2	J 10.3 R	10.8	10.8	11.3	11.2	11.0	11.8	12.1	11.2	10.9 S	S	S	8.6	I 8.2 R S	I 8.2 R S	8.3
20	U 8.0 S	8.0	U 7.6 S	7.1	6.9	U 7.4 R	9.5	11.2	10.6	10.3	10.9	10.5	10.2	10.4	10.8	11.1	11.1	11.3	J 10.9 S	U 10.0 S	8.9	8.9	I 9.0 S	8.8
21	8.5	J 8.0 R	R S	J 7.4 R	7.0	7.2 R	8.8	U 10.0 R	11.4	12.4	11.8	11.3	11.4	11.6	12.0	12.5	12.1	11.4	I 10.6 R S	10.3	I 10.2 R S	I 10.2 R S	I 9.8 R	9.4
22	J 9.7 R	I 9.6 R	U 9.8 R	7.9	I 8.0 R	9.0 R	I 9.9 S	9.9	9.4 H	10.4	10.9	11.3	12.1	12.5	12.0	12.1	J 11.6 S	10.6	S	9.1	U 7.7 S	R S	I 7.8 A S	7.7 R
23	U 8.3 S	7.7	7.5	7.1	I 7.1 C	I 7.5 C	9.1	10.6	10.5	10.7	10.5	11.4 R	11.4	11.6	11.6 H	10.9	10.4	10.1	U 10.3 S	I 9.9 A	9.1	9.1	9.4	9.5
24	9.9	J 10.2 R	9.6 R	8.2 S	J 7.8 S	8.2	J 10.0 R	11.9	11.8	11.7	12.0	12.1	12.4	10.9	12.4	12.5	12.5	11.5	10.5 R	I 9.0 R	J 8.8 R	I 9.0 A	9.0	8.1 R
25	I 8.0 R	8.7 R	I 7.7 R	7.1	6.7	6.9	9.6 R	11.6 R	12.6	13.3	13.3	13.3	C	C	13.2	13.1	12.6	11.7	11.2 R	R	I 9.2 R	R	9.2 R	I 9.0 R
26	I 8.6 R	8.0	7.8 R	7.4 R	6.5	6.5 R	7.6 R	8.2	8.5 R H	8.9	R	10.3	10.7 R	10.5	11.1 R	10.2 R	9.7 S	9.5	I 9.8 R S	R	R S	R	8.5	8.9 R
27	9.0 R	8.5 R	7.5 R	6.5	6.5	6.5 R	8.5	10.0 R	10.3 R	10.2	10.4 S	J 10.5 R	10.9 R	10.9	10.7	10.3 S	10.5	11.3	S	S	S	S	J 8.1 R	R
28	I 7.7 R	6.5	I 6.0 S	I 6.0 R	6.1 S	7.0 R	9.0	R	J 10.1 R	9.5 R H	I 6.8 A	6.7	7.0	6.9	6.9	6.9	6.9	I 7.2 A	7.4	7.1	I 7.3 S	U 7.3 S	I 8.2 S	U 8.2 S
29	R	I 7.6 S	7.4	7.1	J 6.2 R	J 6.2 S	U 7.8 S	I 9.2 S	10.1	9.8 R	10.7	11.0	11.1	10.5	9.6	9.3	9.1	9.0	9.0	I 8.8 R	I 8.8 R	I 8.8 R	8.7	8.5 R
30	8.5 R	I 8.1 R	J 7.7 R	7.1 R	6.8	7.3 R	9.4 R	10.5	11.4	11.5	11.6	11.9	11.8	J 11.7 R	11.0	10.5 R	10.3	10.1 S	U 10.0 S	9.3	8.7	I 8.2 S	J 8.2 R	U 8.0 R
31	U 7.7 R	7.2	7.4	7.1	6.8	7.3 R	10.4 R	11.7	11.7 H	12.1	12.5	12.5	12.9	12.8	12.4	11.6	10.8	10.4	J 10.2 S	U 9.8 S	9.0	I 8.9 A	9.0	I 8.6 R
No.	29	30	29	30	30	30	30	30	30	30	29	30	30	30	29	29	29	28	24	25	26	26	29	29
Median	8.4	8.2	7.7	7.3	7.0	7.4	9.2	10.1	10.1	10.0	10.3	10.6	10.8	10.6	10.8	10.4	10.1	10.0	9.8	8.9	8.6	8.6	8.4	8.5
U.Q.	8.8	8.7	8.2	7.9	7.4	8.0	9.6	10.7	10.9	10.7	11.0	11.3	11.4	11.3	11.7	11.5	11.2	10.8	10.4	9.9	9.0	8.9	9.0	9.0
L.Q.	8.0	7.8	7.4	7.1	6.7	6.9	8.8	9.1	9.3	9.5	9.5	10.1	10.2	10.0	9.7	9.6	9.1	9.0	9.0	8.2	8.1	8.2	8.1	8.1
Q.R.	0.8	0.9	0.8	0.8	0.7	1.1	0.8	1.6	1.6	1.2	1.5	1.2	1.2	1.3	2.0	1.9	2.1	1.8	1.4	1.7	0.9	0.7	0.9	0.9

foF2

Sweep 1.0 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

K 1

IONOSPHERIC DATA

Aug. 1958 | foF1 | 135° E Mean Time (G.M.T.+ 9h.)

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								L	L	A	A	A	A	A	A	A	A	A	A					
2										L	A	A	A	A	L	L	L	L	A					
3						L	4.7 L	4.8 L	A	5.8	A	A	A	A	A	A	A	A	A					
4								A	A	A	A	A	A	A	A	A	A	A						
5								A	A	A	A	A	A	A	A	5.8 L	L	A	A					
6								A	A	A	A	A	A	A	A	A	A	A	A					
7						C	C	A	L	A	A	6.4	6.2 L	6.5 L	6.0	6.0 L	A		A					
8									L	L	6.5 L	A	6.5	6.4	L	5.9 L	L	A	A					
9									L	L	A	A	A	L	A	I 5.8 L	L	L						
10									L	L	A	L	AS	I 6.2 L	L	L	L	A						
11								L	A	A	A	A	L	L	L	L	L	L						
12									A		L	I 5.8 L	A	A	A	5.5	A	A	A					
13										LH	L	L	L	L	L	S	L							
14									L	L		L	L	L	L	L	A	A						
15											6.3 L	L	L	L	L	A	A							
16												A	L	A	B	B	AS							
17								L	A	L	6.0 L	6.4 L	LH	L	6.0	L	A	A	A					
18							L	S	A	5.8	5.8 S	L	6.5 L	A	L	L	L							
19											L	L	L	L	5.9	L	L							
20									L		B	L	A	A	I 6.3 L	L	L	L						
21								LH		L	L	L	L	L	A	L	L							
22										L	A	L	L	L	L	L	L							
23						C				A		A	L	L	L	A	A	L						
24										L	LH	L	A	L	L	A	L							
25										L		L	C	C	A	L								
26									L	L	B	L	L	L	L	L	L							
27									L			L	L	L	L	L	L	L						
28								L	AS	5.5 S	A	S	A	I 5.9 S	5.7 S	A	5.3	A						
29									L		L	L	6.6 S	I 6.4 L	I 6.2 L	I 6.1 L	L							
30									L	L	L	6.5 L	L	A	L	L	A							
31										L	L	A	A	A	S	L	L							
No.							1	1		3	4	4	4	5	6	6	1							
Median							4.7	4.8		5.8	6.2	6.4	6.5	6.4	6.0	5.8	5.3							

foF1

Sweep 10 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | foE | 135° E Mean Time (G.M.T.+ 9h.) | 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	2.80^{A}	3.35^{A}	3.60	3.80^{R}	I3.80^{R}	3.95^{R}	A	A	A	A	A	3.25^{S}	A					
2						B	2.70^{A}	3.20^{A}	3.50	A	A	A	A	A	A	3.95	3.65	3.10	A					
3						B	3.10	3.70	3.95	I4.05^{A}	I4.10^{A}	A	A	A	A	4.00	I3.55^{A}	A	A					
4						B	2.80	I3.25^{B}	3.70	I3.95^{A}	I4.05^{A}	I4.20^{A}	I4.25^{A}	I4.20^{A}	A	A	A	A	A					
5						B	2.65^{R}	I3.20^{B}	3.65	3.80	I4.05^{A}	U4.45^{A}	A	S	A	3.90	3.60	3.10	A					
6						B	2.80	3.30	3.60	3.95	3.90	A	A	A	A	A	A	I3.10^{A}	A					
7						C	C	3.50	A	A	A	A	A	S	3.90	A	B	B	B					
8						B	2.80	I3.20^{A}	3.70	I3.90^{A}	A	A	A	A	A	A	A	A	B					
9						B	I2.60^{A}	I3.10^{A}	3.60	A	U3.80^{A}	I4.00^{R}	I4.20^{S}	I4.35^{B}	4.20	3.80^{A}	I3.40^{A}	I3.10^{A}	B					
10						B	2.50^{A}	3.00^{A}	3.55^{A}	3.70^{A}	3.80^{A}	I3.85^{A}	3.95^{R}	3.85^{A}	A	A	A	2.90^{A}	A					
11						R	A	I3.10^{A}	3.60^{A}	I3.60^{A}	U3.70^{R}	I4.10^{S}	I4.15^{A}	I3.90^{A}	I3.65^{A}	I3.75^{A}	I3.60$^{R}_{S}$	I3.10^{S}	B					
12						B	A	3.20	A	A	R	R	A	A	A	4.00^{R}	3.60^{A}	U2.90^{A}	B					
13						B	I2.75^{B}	3.20^{R}	I3.55^{A}	A	A	R	I4.30^{S}	I4.20^{R}	I4.05^{R}	I3.80^{R}	I3.50^{S}	2.50^{R}	A					
14						B	2.60^{R}	3.20	3.45	3.60^{R}	I3.70^{A}	A	A	I4.20^{R}	I4.20^{R}	3.95	3.50$^{A}_{S}$	A	A					
15						B	2.50^{R}	I3.25^{B}	I3.30^{A}	A	B	I4.20$^{R}_{S}$	4.20^{S}	I4.05^{R}	I4.10^{B}	3.90^{R}	3.60	2.90^{A}	B					
16						B	2.50	3.10	3.50	3.70	3.90^{R}	A	4.00^{R}	4.15^{R}	B	B	I3.70$^{B}_{S}$	3.15$^{R}_{S}$	B					
17						B	2.50^{R}	A	A	A	A	A	I4.10^{R}	I4.15^{R}	4.10	4.00	3.50	I2.80^{A}	B					
18						B	2.60	I3.10^{S}	3.60	3.90	I4.00^{A}	A	A	A	A	I3.75^{B}	3.50	3.00	A					
19						B	2.50	3.15	3.50	3.70	I3.95^{A}	U4.05^{A}	A	A	A	A	A	A	A					
20						B	2.45	B	B	A	B	A	A	A	A	A	A	A	A					
21						B	2.55	3.20	3.50	3.80^{A}	I4.05^{R}	I4.10^{A}	I4.10^{S}	I4.10^{A}	4.15^{S}	3.85	3.50	3.10	A					
22						B	2.60	3.10	3.60	U3.80^{S}	4.00	I4.20^{B}	4.15^{S}	I4.15^{S}	4.00^{S}	3.90	I3.40^{A}	A	A					
23						C	I2.65^{R}	I2.95^{A}	3.20	A	A	A	R	I4.30^{A}	U4.15^{A}	3.95	3.50	A	A					
24						B	A	3.30	3.70	A	I4.00^{R}	I4.15^{A}	I4.25^{R}	I4.30^{R}	4.10^{R}	3.80	3.50	2.70						
25						A	2.50^{R}	3.20	3.70	4.00	I4.15^{R}	I4.25^{B}	C	C	4.15^{A}	A	A	A	B					
26							B	A	A	R	B	B	B	R	I4.15^{A}	4.00	3.70^{S}	3.00^{A}						
27						B	2.70	3.25	3.65	3.95^{R}	I4.20^{B}	I4.25^{R}	4.35^{R}	4.35	4.20^{R}	3.90^{R}	3.50^{R}	2.90$^{R}_{S}$						
28						A	2.15^{A}	3.10	3.40	3.85	3.85	A	A	I4.25^{S}	4.05^{R}	3.90	I3.45^{S}	I2.65^{A}						
29						A	A	A	3.55	3.80^{S}	4.15^{R}	R	B	4.30	I4.10^{R}	3.80	3.50	2.90						
30						B	B	I3.10^{B}	3.35	I3.55^{A}	I3.75^{R}	A	A	A	A	A	A	2.90	B					
31						B	A	3.10	3.55	I3.60^{A}	A	A	A	A	A	A	3.50	2.90	A					
No.							23	27	26	20	20	13	12	16	16	19	21	21						
Median							2.60	3.20	3.60	3.80	4.00	4.15	4.20	4.20	4.10	3.90	3.50	2.90						

foE

Sweep 1.0 Mc to 20.0 Mc in 20 min/sec in automatic operation.

IONOSPHERIC DATA

Aug. 1958 | foEs | 135° E Mean Time (G.M.T.+ 9h.)

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	3.0 M	3.5 M	3.2 M	3.1 M	E	B	5.0 M	4.9 M	8.3 M	7.4 M	7.9 M	11.4 M	12.6 M	11.6 M	9.0 M	7.8 M	11.4 M	12.0 M	10.7 M	17.4 M	6.7 M	6.0 M	8.9 M	4.5 M
2	3.6 M	2.3 M	3.3 M	2.5 M	C	B	5.3 M	8.6 M	7.6 M	17.4 M	13.8 M	12.5 M	11.5 M	12.8 M	8.9 M	4.3	6.9 M	6.1 M	10.6 M	11.6 M	9.5 M	4.9 M	5.1 M	8.9 M
3	7.1 M	3.1 M	2.3 M	E	E	B	3.5	4.4	6.5 M	5.0 M	20.0 P	20.0 P	10.4 M	12.1 M	8.0 M	12.5 M	12.9 M	13.9 M	8.5 M	7.0 M	8.9 M	9.0 M	7.5 M	5.8 M
4	8.8 M	6.2 M	4.2 M	3.1 M	3.4 M	2.4 G	3.5	6.0 M	8.7 M	11.6 M	10.1 M	10.5 M	9.1 M	7.7 M	9.1 M	13.7 M	9.7 M	9.6 M	9.3 M	7.2 M	6.9 S	7.2 M	4.8 S	9.3 M
5	4.8 M	4.1 M	4.3 M	2.8 M	E	B	3.6	6.9 M	10.4 M	18.3 M	9.8 M	10.6 M	8.9 M	8.8 M	17.9 M	4.2	5.2 M	10.8 M	9.8 M	15.0 M	9.5 M	3.4 M	E	7.0 M
6	9.0 M	5.7 M	7.7 M	8.5 M	6.4 M	5.0 M	3.8	7.5 M	8.9 M	13.2 M	12.3 M	10.9 M	11.7 M	12.4 M	14.7 M	11.0 M	11.0 M	14.9 M	18.2 M	13.2 M	12.1 M	8.8 M	9.0 M	9.9 M
7	C	C	C	C	C	C	C	8.7 M	6.8 M	9.6 M	10.1 M	5.2 M	4.2 S	3.9 S	4.5	5.5 M	7.9 M	5.2 M	5.8 M	6.9 M	7.1 M	6.8 M	6.0 M	8.9 M
8	9.9 M	5.7 M	5.0 M	3.0 M	3.3 M	B	3.9	5.7 M	5.0	5.5 M	5.7 M	9.2 M	5.6 S	4.4	7.9 M	5.5 M	4.2 M	7.5 M	9.4 M	8.0 M	6.2 M	3.9 M	3.7 M	8.5 M
9	5.8 M	4.3 M	2.7 M	2.5 M	2.4 M	B	3.3	4.5 M	7.0 M	5.4 M	10.2 M	11.4 M	5.5 M	B	7.4 M	6.4 M	4.2 M	7.7 M	5.9 M	E	2.5 M	3.9 M	4.9 M	4.9 M
10	5.9 M	5.4 M	5.4 M	3.3 M	3.0 M	B	2.8	5.3 M	5.9 M	11.3 M	12.2 M	8.5 M	7.4 M	5.8 M	5.8 M	4.9 M	8.4 M	7.9 M	6.9 M	6.0 M	2.5 MS	2.5 M	E	3.3 M
11	3.3 M	2.5 M	2.3 M	E	E	G	4.3 M	4.7 M	7.5 M	20.0 P	19.6 M	6.7 M	4.6	5.1 M	5.4 M	5.4 M	4.3	G	2.7	E	2.4 M	2.3 M	6.7 M	8.9 M
12	9.0 M	5.7 M	3.3 M	3.1 M	3.6 M	2.9 M	5.4 M	7.6 M	9.4 M	5.5 M	G	G	10.7 M	9.1 M	14.4 M	4.8	7.1 M	13.1 M	12.7 M	3.6 M	4.2 MS	4.8 M	6.0 M	2.4
13	3.0 M	2.7 M	2.9 M	E	E	B	B	G	5.0 M	3.6 G	6.8 M	G	G	G	G	G	5.0 M	5.8 M	5.3 M	5.5 M	E	4.9	5.4 M	E
14	E	2.9 M	2.5 M	E	E	B	2.8	3.9	4.8 M	4.4	6.7 M	7.1 M	10.0 M	G	G	4.8	7.4 M	9.0 M	6.0 M	4.4 M	5.4 M	E	E	3.2 M
15	2.9 M	2.7 M	2.4 M	E	E	B	2.8	B	12.4 M	6.8 M	B	G	11.7 M	17.0 M	6.6 M	12.1 M	6.4 M	8.5 M	4.8 M	4.5 M	2.3 M	E	9.4 M	3.9 M
16	3.9 M	5.2 M	4.3 M	3.2 M	2.3 M	B	2.8	4.9 M	6.8 M	6.6 M	6.6 M	8.6 M	6.5 M	7.8 M	B	B	6.6 M	G	B	3.0 M	6.0 M	3.1 M	6.8 M	5.7 M
17	4.3 M	3.0 M	2.4 M	2.4 M	E	B	G	8.9 M	9.3 M	5.0	5.5 M	4.6 M	3.7 G	5.5 M	4.3	4.3	5.0 M	12.0 M	6.3 M	5.9 M	E	3.2 M	7.5 M	5.0 M
18	3.2 M	2.6 M	2.5 M	3.2 M	E	B	3.1	5.7 M	5.9 M	5.3 M	4.5 S	5.8 M	6.8 M	5.5	5.3 M	B	4.3	4.4	4.0 M	17.4 M	9.2 M	6.8 MY	5.4 M	3.1 M
19	E	E	E	E	E	B	2.7	3.6	4.2	4.3	5.3 M	4.5	4.5	4.4 M	4.2	4.1 M	5.0 M	4.8 M	5.0 M	3.0 M	3.1 M	E	3.5 M	8.5 M
20	6.0 M	5.0 M	3.3 M	E	E	B	G	B	4.5 M	6.0 M	B	4.4	6.9 M	7.3 M	4.8 S	4.9	5.0 M	3.6 M	2.6	3.2 M	6.0 M	4.5 M	3.1 M	2.5 M
21	3.0 M	2.5 M	E	E	1.7 M	B	2.7	G	G	4.5	3.9 G	4.9 M	4.5 S	5.1	9.4 M	3.4 G	5.8 M	4.8 M	3.5 M	2.8 M	3.0 M	5.0 M	3.4 M	7.0 M
22	5.7 M	4.0 M	4.3 M	3.9 M	E	B	3.0	3.9	4.3	10.5 M	8.7 M	6.5 M	5.2	S	4.7	6.0 M	5.0 M	4.2 M	4.3 M	3.0 M	3.5 M	2.5 M	9.5 M	4.8 M
23	4.0 M	3.2 M	4.2 M	4.5 M	C	C	2.4 G	6.0 M	5.0	9.4 M	9.8 M	8.9 M	4.4	5.5 M	8.7 M	9.3 M	12.2 M	9.4 M	3.6 M	13.4 M	6.9 M	9.3 M	5.4 M	E
24	E	2.7 M	E	E	2.5 M	B	3.7 M	3.6	4.5	4.9 M	G	4.4 M	8.8 M	G	G	11.3 M	5.0 M	5.0 M	9.6 M	4.3 M	7.1 M	10.3 M	6.8 M	3.9 M
25	4.2 M	4.3 M	4.0 M	2.8 M	3.1 M	2.5 M	2.9	3.6	4.5	5.5 M	6.9 M	6.5 M	C	C	9.2 M	5.2 M	5.0 M	4.2 M	3.8 M	3.1 M	2.5 M	3.3 M	5.7 M	6.4 M
26	4.0 M	4.3 M	3.1 M	2.3 M	2.5 M	E	7.6 M	5.5 M	3.6 M	5.0 M	B	B	B	5.0	4.4 M	4.4	4.3 M	3.6 M	5.6 M	5.7 M	5.4 M	3.2 M	3.9 M	3.2 M
27	E	2.4 M	2.4 M	2.3 M	E	B	G	3.7	G	4.3	B	G	4.7	5.4	G	G	3.9	4.8	5.1 M	5.0 M	7.8 MS	6.1 M	4.4 M	2.3 M
28	E	4.2 M	3.4 M	3.9 M	3.3 M	3.1 M	4.7 M	4.9 M	6.2 M	4.8	7.5 M	5.2 M	6.2 M	S	G	7.2 M	11.6 M	10.7 M	11.8 M	3.2 M	5.7 M	3.2 M	3.2 M	3.5 M
29	3.4 M	3.2 M	2.1 M	E	E	3.0 S	4.8 M	6.0 M	5.7	G	G	4.5	B	4.8	G	G	3.9	6.0 M	5.3 M	2.5 M	3.5 M	4.9 MS	3.9 M	2.5 M
30	3.0 M	E	E	E	E	B	B	B	3.6	4.0	G	5.2 M	4.8 S	6.8 M	4.9 M	4.8 M	6.7 M	3.3	4.0 M	3.7 M	5.4 M	4.2 M	2.5 M	5.0 M
31	5.4 M	3.6 M	E	E	2.3 M	B	2.7	3.6	4.0	4.2 M	8.6 M	9.5 M	9.2 M	9.1 M	6.8 M	6.6 M	4.1	3.9	5.9 M	3.8 M	2.5 M	11.8 M	5.0 M	5.4 M
No.	30	30	30	30	28	8	28	28	31	31	27	30	28	27	30	29	31	31	30	31	31	31	31	31
Median	4.0 M	3.4 M	3.0 M	2.4 M	E	2.7 M	3.2	4.9 M	5.9 M	5.5 M	7.5 M	6.5 M	6.6 M	5.5 M	5.6 M	5.2 M	5.2 M	6.0 M	5.8 M	4.5 M	5.4 M	4.5 M	5.1 M	4.9 M
U.Q.	5.8	4.3	4.2	3.1	2.8	3.0	4.1	6.0	7.6	9.6	10.1	9.5	9.6	9.1	8.9	7.5	7.9	9.6	9.4	7.2	7.1	6.8	6.8	7.0
L.Q.	3.0	2.7	2.3	E	E	E	2.8	3.8	4.5	4.5	5.3	4.5	4.6	4.8	4.3	4.3	4.3	4.2	4.3	3.1	2.5	3.2	3.5	3.2
Q.R.	2.8	1.6	1.9				1.3	2.2	3.1	5.1	4.8	5.0	5.0	4.3	4.6	3.2	3.6	5.4	5.1	4.1	4.6	3.6	3.3	3.8

foEs

Sweep 1.0 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

K 4

IONOSPHERIC DATA

Aug. 1958 | f_bE_s | 135° E Mean Time (G.M.T.+ 9h.) | **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	2.4	2.8	2.6	2.3		B	4.2	4.2	4.7	6.5	7.5	7.0	7.5	A	7.5	6.6	A	A	A	6.0	2.3	4.2	4.7	2.6
2	1.9	E	1.7	E	C	B	4.0	5.0	D7.6B	6.3	6.6	7.0	7.7	7.7	5.5	4.2	5.4S	3.7	6.0	7.5	5.9	3.3	3.8	6.0
3	4.3	1.9	2.0			B	3.5	4.0	6.1	4.5	A	A	6.3	6.5	6.6	A	A	A	A	6.4	5.3	5.0	2.8	2.6
4	4.5	4.8	2.5	2.4	2.5	B	3.4	5.8	A	A	A	6.3	7.7	7.6	7.0	A	A	A	3.4	3.9	2.9	U4.6S	4.1	6.1
5	2.6	2.8	2.5	2.2		B	3.4	6.1	7.4	A	A	9.8	8.1	7.6	A	4.3	4.2	5.2	7.8	A	5.0	E		2.2
6	7.0	2.9	4.3	4.4	5.0	3.5	3.6	6.8	7.4	8.5	A	7.4	6.1	8.0	A	A	A	A	A	A	A	3.0	3.8	7.4
7	C	C	C	C	C	C	C	5.9	4.7	8.6	5.9	5.0	D4.2S	S	4.5	4.6	6.2	3.6	5.1	S	6.4	2.6	U3.4A	5.7
8	6.5	3.5	U4.5A	2.1	2.5	B	3.5	4.5	4.7	4.5	4.8	6.7	4.6	4.4	5.0	4.5	4.0	6.2	A	3.5	4.0	3.0	2.7	3.0
9	3.0	E	2.1	2.2	E	B	3.2	3.7	5.1	4.5	8.0	6.2	5.5	B	6.7	5.1	3.9	5.0	5.0		E	2.6	2.7	2.8
10	4.2	2.8	2.6	2.0	2.0	B	G	4.4	5.3	4.5	A	6.4	6.5	5.5	5.0	4.1	4.0	7.2	D6.9S	3.4	E	2.0		E
11	2.0	1.7	2.0				3.2	4.0	6.4	A	A	6.1	4.5	4.8	4.7	4.5	4.2		2.7		E	E	3.7	4.1
12	2.9	3.6	2.1	2.1	2.5	2.2	4.9	6.1	8.0	D5.5S			A	7.4	A	4.6	6.1	A	A	2.9	2.2	2.6	2.1	2.2
13	2.1	2.2	2.2			B	B		U4.1A	3.4	6.0						4.0	5.0	D5.3B	3.9		2.5	3.0	
14		2.2	2.0			B	2.8	3.6	3.7	4.0	5.8	5.8	6.2			4.2	6.4	9.0	5.8	3.7	3.0			2.2
15	E	2.0	E			B	2.8	B	5.2	5.5			4.5	5.7	6.0	7.6	5.8	3.6	4.2	3.4	E		U4.5A	E
16	2.1	3.9S	2.6	2.1	1.6	B	2.8	4.3	6.1	6.0	5.6	7.2	5.9	7.7	B	B	5.7S		B	E	3.6	2.0	4.0	4.5
17	3.4	E	1.6	E		B		4.1	5.5	4.0	4.6	4.5	D3.7B	4.8	4.3	4.3	5.0	8.7	4.8	4.3		2.3	4.0	3.2
18	2.3	2.0	1.9	1.9		B	2.8	4.0	5.9	4.5	4.3	5.0	5.1	D5.5S	4.9	B	4.3	4.2	3.4	2.7	6.5	3.0	3.2	E
19						B	2.7	3.5	4.1	4.3	4.3	4.4	4.4	4.4	4.1	D4.1S	4.6	4.1	4.0	2.1	E		2.2	3.1
20	3.4	2.2	2.5			B		B	4.4	4.7	B	4.2	6.3	7.1	U4.8S	4.9	D5.0S	3.4	D2.6S	2.5	4.0	2.6	2.0	E
21	2.1	E			D1.7B	B	2.7			4.4	D3.9B	D4.9S	D4.5S	D5.1S	9.0	3.4	5.1	4.1	2.4	2.2	2.0	2.9	2.3	4.4
22	2.6	3.0	3.0	2.2		B	2.8	2.8	4.3	5.2	7.7	5.8	D5.2B	S	4.5	5.2	4.2	3.4	3.2	2.1	2.5	E	6.0	3.0
23	2.2	2.5	2.8	3.0	C	C	D2.4B	4.7	5.0	8.1	5.5	7.0	D4.4B	5.1	4.4	6.2	7.1	3.7	2.6	A	2.6	4.8	E	
24		2.1			1.4	B	3.0	3.6	3.9	4.7		D4.4S	8.2			8.8	4.3	4.0	6.0	2.6	3.4	A	4.1	U3.0A
25	2.9	2.3	2.6	D2.8S	2.3	2.1	2.8	G	4.4	4.7	6.3	5.9	C	C	8.3	4.5	4.1	3.7	3.0	2.3	E	2.0	4.1	5.7
26	3.4	3.5	2.5	2.2	2.0		4.0	4.7	D3.6B	4.8	B	B	B	5.0	4.4	3.5	4.3	3.4	4.4	3.4	5.1	E	2.2	2.4
27		2.0	E	E		B		3.5		4.3	B		D4.7B	5.0			G	4.1	4.3	4.5	S	S	3.8	E
28		3.6	2.2	2.7	2.4	2.3	3.5	4.1	5.8	4.5	A	5.1	6.1	S		5.9	G	A	3.6	E	4.0	3.0	2.3	2.7
29	2.8	2.8	1.7			3.0S	3.5	5.2	5.6			4.5	B	4.7			3.7	5.0	2.7	2.0	3.4	3.5	2.9	E
30	E					B	B	B	D3.6B	4.0		4.7	4.7	6.7	4.6	4.5	6.1	3.2	3.4	3.0	2.6	3.0	2.0	3.4
31	3.7	2.3			E	B	2.7	3.4	3.9	4.1	5.4	8.2	8.0	8.3	6.4S	4.5	3.8	3.9	4.5	2.9	2.0	A	2.8	2.2
No.	25	28	25	18	12	5	24	26	27	30	22	24	21	21	24	25	31	29	29	28	28	27	28	29
Median	2.8	2.3	2.2	2.2	2.2	2.3	3.2	4.2	5.2	4.7	6.4	6.2	6.2	6.5	5.2	4.6	4.6	4.2	4.5	3.4	3.0	2.9	3.1	2.8

f_bE_s

Sweep 1.0 Mc to 20.0 Mc in 30 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

K 5

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 29.3' E

Aug. 1958

f-min

135° E Mean Time (G.M.T. + 9h.)

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	1.30	1.80	1.40	1.40	1.80	2.30	2.30	2.50	3.10	2.90	3.25	3.20	3.80	3.50	3.10	2.50	2.70	2.10	2.00	1.80	1.60	1.30	1.80	1.20
2	1.20	1.85	1.40	2.20	I 1.45 C	2.30	2.30	2.30	2.45	2.70	2.80	3.30	3.00	2.90	2.80	2.25	2.60	2.30	1.90	2.00	2.00	1.40	1.60	1.30
3	1.60	1.20	1.30	1.40	1.30	2.20	2.60	2.30	3.10	3.20	3.30	2.90	3.35	3.40	3.10	2.90	2.90	3.30	2.20	2.00	1.70	1.60	1.70	1.40
4	1.70	1.80	1.40	2.05	1.40	2.10	2.60	3.50	2.70	2.80	3.25	3.50	3.15	2.60	3.30	2.80	3.30	2.80	2.00	1.60	1.50	2.00	1.90	1.90
5	1.90	1.90	1.50	1.50	1.90	2.00	2.25	3.25	2.50	2.90	2.80	2.90	2.80	3.00	3.50	3.00	2.90	2.60	2.20	1.80	1.90	1.70	1.70	1.70
6	1.90	1.80	1.30	1.40	1.50	2.00	2.60	2.40	2.40	2.90	2.95	2.90	3.35	2.90	3.10	3.00	3.00	2.60	2.00	1.80	1.50	1.70	1.70	2.20
7	C	C	C	C	E 3.00 C	C	C	2.80	2.80	2.90	2.80	2.50	2.70	2.90	2.60	2.40	3.30	2.50	2.50	2.00	2.00	1.70	1.50	1.90
8	1.90	1.30	1.60	1.20	1.10	2.20	2.20	2.50	2.50	2.20	2.90	2.95	3.00	3.15	2.80	2.60	2.50	1.90	2.50	1.90	1.70	1.20	1.90	1.80
9	1.80	1.60	1.40	1.20	1.70	2.10	2.20	2.00	2.20	1.60	2.80	2.60	3.20	5.70	2.85	2.40	2.70	2.20	2.00	2.10	1.40	1.70	1.50	1.40
10	1.60	1.20	1.40	1.20	1.15	2.20	1.30	2.10	2.30	2.40	2.60	2.80	3.35	2.80	3.00	2.40	2.60	1.80	2.10	1.90	1.20	1.60	2.00	1.50
11	1.40	1.30	1.30	2.00	1.50	1.60	2.10	2.60	2.40	2.40	3.10	2.70	3.05	2.90	2.90	2.60	2.80	2.10	2.10	1.60	1.50	2.00	1.40	1.70
12	1.50	1.30	1.35	1.40	1.35	2.00	2.00	2.45	2.35	2.40	2.50	2.60	2.45	3.00	3.20	2.60	2.90	1.80	2.00	1.90	1.60	1.20	1.70	2.00
13	1.80	1.70	1.70	1.70	1.70	2.10	2.90	2.50	2.00	2.00	2.80	2.75	2.50	3.40	2.80	2.80	2.70	2.00	1.80	2.00	1.80	1.80	1.20	2.00
14	2.00	1.70	1.30	1.80	1.30	2.10	2.00	2.10	2.00	2.40	2.80	2.70	3.00	3.40	2.90	2.80	2.90	2.40	2.20	1.80	1.70	2.20	1.20	2.00
15	1.60	1.60	1.70	1.30	1.40	2.20	1.70	3.60	2.20	3.00	4.40	2.70	3.50	3.20	3.50	3.30	3.00	2.10	2.00	1.60	1.40	2.20	2.00	1.50
16	1.40	1.40	1.30	1.30	1.40	2.10	2.40	2.00	2.10	2.70	2.80	2.90	3.30	3.20	B	7.60	4.60	2.70	2.70	1.90	1.60	1.80	1.40	1.70
17	1.40	1.50	1.30	1.70	1.70	2.40	2.00	2.20	2.60	2.35	2.50	2.65	2.75	2.60	3.00	2.60	2.40	2.60	2.00	1.90	1.90	1.80	1.80	1.90
18	1.70	1.80	1.40	1.30	2.00	1.30	2.30	2.60	2.50	2.90	3.50	3.00	3.50	3.40	3.00	4.40	2.50	2.10	1.90	1.90	1.50	1.70	1.90	1.90
19	2.00	1.90	1.95	1.70	1.20	2.10	2.05	2.00	2.40	2.20	2.40	2.30	2.50	2.30	2.50	2.50	2.20	2.40	2.00	1.60	1.70	1.65	1.95	1.90
20	1.80	1.80	1.40	1.60	1.50	1.95	2.05	3.40	3.50	3.15	7.30	3.20	2.80	3.10	2.80	2.30	2.00	2.00	1.90	1.90	1.90	1.80	1.60	1.50
21	1.60	1.90	1.90	1.80	1.30	2.00	2.20	2.20	2.20	2.35	2.40	2.50	3.00	2.60	2.60	2.30	2.60	2.40	1.95	1.80	1.80	1.70	1.80	1.70
22	1.90	2.00	1.30	1.20	2.00	1.90	2.40	2.20	2.40	2.40	2.95	4.20	2.90	2.90	3.25	2.70	2.90	1.90	1.80	1.60	1.70	1.80	1.60	1.80
23	1.50	1.50	1.40	1.30	I 1.20 C I 1.55 C	2.00	2.00	2.10	2.40	2.30	2.50	2.95	3.10	2.65	2.50	2.50	2.10	1.80	1.60	1.50	1.75	1.30	1.70
24	1.80	1.70	1.50	1.25	1.20	1.70	2.20	2.10	2.20	2.05	2.70	2.80	2.50	2.30	2.70	2.30	2.65	2.00	1.90	1.70	1.90	1.60	1.20	1.30
25	1.80	1.60	1.50	1.30	1.20	1.30	1.30	2.10	2.50	2.70	3.00	4.50	C	C	3.00	2.60	2.80	2.60	1.80	1.40	1.60	1.80	1.90	1.70
26	2.00	2.00	1.50	1.30	1.30	2.15	2.30	2.20	2.00	2.20	8.30	6.00	5.90	2.70	2.80	2.50	2.60	1.40	1.60	1.70	1.80	1.60	2.00	1.70
27	2.00	1.80	1.50	1.40	1.40	2.00	2.00	2.60	2.40	2.10	5.00	3.50	3.30	2.80	2.70	3.00	2.30	2.00	1.80	1.90	2.00	1.40	1.60	1.20
28	2.10	2.00	1.40	1.30	1.70	1.30	1.80	1.80	2.30	2.70	3.20	2.80	3.20	2.90	2.70	2.20	2.40	2.00	1.95	1.30	1.60	1.50	1.90	1.90
29	1.90	1.90	1.20	1.20	1.25	1.20	2.00	1.95	2.40	3.00	2.80	3.20	5.10	3.50	2.65	2.60	2.30	2.00	2.00	1.70	1.40	2.20	1.70	2.00
30	2.00	2.00	1.30	1.50	1.60	1.80	2.90	3.50	2.40	2.50	2.90	2.90	3.30	3.00	2.70	2.30	2.50	2.00	1.90	1.40	1.60	1.90	1.90	1.90
31	1.60	1.60	1.30	1.20	1.70	1.95	2.10	2.10	2.50	2.20	3.05	3.80	3.10	3.50	2.50	2.20	1.80	2.20	1.60	1.90	1.75	1.80	1.80	1.50
No.	30	30	30	30	30	30	30	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31
Median	1.80	1.75	1.40	1.40	1.40	2.00	2.20	2.30	2.40	2.40	2.90	2.90	3.10	3.00	2.80	2.60	2.65	2.10	2.00	1.80	1.70	1.70	1.70	1.70

f-min

Sweep 1.0 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

K 6

IONOSPHERIC DATA

Aug. 1958 | (M3000)F2 | 135° E Mean Time (G.M.T.+ 9h.)

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	I 2.55 R S	2.65	2.60 R	2.35	2.30	2.35	U 2.40 S	2.65 S	I 2.20 S	J 2.35 S	I 2.40 R	2.45	2.50 S	I 2.50 A	2.60 R	2.65	A	A	A	2.45 S	2.30 R	I 2.45 S	I 2.40 S	2.35 R
2	2.50 R S	2.65 R	U 2.45 R	2.45	I 2.40 C	2.85 R	2.80	U 2.65 R	2.55	2.55	2.50	2.55	2.50	2.55	2.55	2.55	2.55	2.65	2.65	2.60	J 2.50 S	2.40	2.45	2.50
3	2.50	2.65	U 2.60 R	2.40	2.35	2.25 R	2.60	2.40	2.45	2.40	A	A	2.45	2.45	2.45	A	I 2.60 A	I 2.65 A	A	2.60	2.45	2.45	2.35	2.45
4	2.45	2.60	2.60	2.65	2.65 R	2.60	2.65	3.00	A	A	I 2.55 A	2.45	2.65	2.60	2.55	I 2.50 A	I 2.65 A	I 2.70 A	2.70	2.55	U 2.40 S	I 2.45 S	I 2.50 S	2.55
5	2.55	2.60	2.45	2.55	2.50	2.30 F	2.55	2.75	2.60	I 2.55 A	I 2.55 A	2.55	2.50 R	2.65	I 2.50 A	2.60	2.60	2.70	2.85	I 2.60 A	2.40	J 2.35 R	2.40	2.40 F
6	2.50	2.45	2.45	2.40	2.35	2.40	2.75	2.70	2.95	2.50	I 2.60 A	2.55	2.60	J 2.65 S	A	A	A	A	A	A	A	J 2.40 S	U 2.40 S	2.45
7	C	C	C	C	C	C	C	2.45	2.60	2.60	2.45	2.45	2.50	2.50	2.55	2.50 S	2.70	2.65	U 2.70 S	I 2.55 S	U 2.55 R	2.55	2.50	U 2.45 S
8	I 2.45 A S	2.60	J 2.65 S	2.50	2.50 F	2.50	2.85 S	2.65	2.50	2.50	2.60	2.55	2.60	2.55	2.65	2.55	2.65	2.75	I 2.70 A	2.70	2.40	I 2.45 S	I 2.45 R	2.45
9	I 2.70 R S	2.55	I 2.40 R	2.65	U 2.55 S	2.45	2.80 R	J 2.80 R	2.65	2.70	2.50	2.45	2.60	U 2.50 R	2.50 R	2.65	2.65 R	I 2.65 R S	U 2.80 S	2.60 S	2.45 S	I 2.40 S	I 2.45 S	2.50
10	I 2.60 S	I 2.60 S R	I 2.50 S	2.55 R	I 2.50 R	2.75	J 2.90 R	U 2.95 R	2.70	2.70 R	I 2.65 A	2.50 R	2.55	2.55	2.50	2.60 R	2.70 R	2.60	I 2.70 S	I 2.60 S	I 2.55 S	I 2.50 S	I 2.50 R	I 2.45 R
11	I 2.50 R S	2.50	I 2.40 R S	2.40 R	I 2.50 R S	2.55 R	2.70	2.60	2.75	I 2.65 A	I 2.60 A	2.55	2.65 S	2.55	2.65	2.60	2.60	2.75 S	I 2.80 S	2.65 S	2.60 R	2.45 R	2.60	J 2.50 R
12	2.45 R	2.55 R	2.55	2.50	J 2.35 R	2.45	2.80	I 2.75 R	2.80 R	2.60 R	2.65	2.55	I 2.40 A	2.65	I 2.70 A	2.75	2.60	A	A	2.75 R	2.75 R	2.50 R	2.55 R	J 2.55 R
13	2.65 R	2.50 R	2.55	2.60	2.65	2.70	3.15 R	3.20 R	3.30	2.60	2.65	2.70	2.60 R	2.60	2.60	2.60 S	2.60 S	2.70 R	2.75 S	S	S	2.40 R	J 2.40 R	I 2.10 R
14	2.55	U 2.45 R	U 2.45 R	2.60 R	2.55 R	2.60 R	3.00	2.90	J 2.80 R	2.80	2.65	2.60	2.60	2.50	2.55	2.60 R	2.75	I 2.75 R	I 2.80 S R	I 2.70 S	R S	I 2.55 R	2.65 S	U 2.60 R
15	2.60	2.55	I 2.70 S R	2.70 S	I 2.55 S R	2.65	3.00 R	2.95	3.10	2.75	2.60	2.55	2.60	2.65	2.55	2.60 R	2.60	2.75 R	J 2.80 R	I 2.65 S R	2.60	J 2.50 R	R	R
16	2.60	2.50	2.50	2.75	2.65	I 2.70 R S	3.00	2.70 R	2.75	2.85	2.50	2.60	2.55	2.60	B	2.70	J 2.70 R	2.75 S	2.80 S	2.65 S	2.45 R	I 2.50 S	R S	2.60
17	I 2.55 R	2.50	2.45	2.40	2.45 S	2.65 R	2.80	2.90 R	2.80 R	2.75	2.50	2.65	2.50	2.50	2.65	2.60 R	2.65	2.65	2.60	U 2.75 S	2.80	R S	2.60	2.60
18	2.40	2.25	2.20	2.30	2.15	2.30 S	2.45	2.90	2.40	2.30	2.60	2.75	2.50	2.55	2.60	2.70	2.65	2.75	2.80	2.60	2.65 R	J 2.30 R	2.45	2.40
19	2.50	2.50	2.60	2.45	2.65	I 2.60 R	2.85	3.00	J 2.90 R	2.80	2.80	2.65	2.70	2.55	2.65	2.70	2.70	2.80 S	S	S	2.80	I 2.50 S R	I 2.60 R	2.55
20	U 2.60 S	2.65	U 2.70 S	2.70	2.60	U 2.75 R	2.95	3.15	2.90	2.90	2.75	2.70	2.55	2.50	2.55	2.60	2.60	2.75	J 2.85 S	U 2.90 S	3.15	3.10	I 2.50 S	2.55
21	2.70	J 2.55 R	R S	J 2.80 R	2.70	2.80 R	3.00	U 3.00 R	2.80	2.90	2.80	2.50	2.55	2.55	2.55	2.65	2.75	2.80	I 2.85 S R	2.70	I 2.70 S R	I 2.60 S R	I 2.65 R	2.55
22	J 2.65 R	I 2.70 R	U 2.85 R	2.80	I 2.65 R	2.80 R	I 3.05 S R	3.05	2.85 H	2.80	2.75	2.55	2.55	2.55	2.50	2.50	J 2.60 S	2.65	S	2.75	U 2.30 S	R S	I 2.40 A S	2.20 R
23	U 2.35 S	2.85	2.55	2.40	I 2.45 C	I 2.50 C	2.95	2.90	2.90	2.90	2.55	2.65 R	2.55	2.60	2.60 H	2.65	2.60	2.65	U 2.70 S	I 2.65 A	2.60	2.35	2.55	2.55
24	2.55	J 2.75 R	2.80 R	2.80 S	J 2.50 S	2.55	J 2.75 R	2.95	2.80	2.65	2.60	2.50	2.50	2.25	2.30	2.40	2.50	2.60	2.70 R	I 2.40 R	J 2.25 R	I 2.35 A	2.45	2.35 R
25	I 2.35 R	2.55 R	I 2.45 R	2.40	2.35	2.30	2.80 R	2.85 R	2.70	2.70	2.60	2.55	C	C	2.50	2.55	2.60	2.60	2.60 R	R	I 2.50 R	R	2.45 R	I 2.50 R
26	I 2.50 R	2.50	2.45 R	2.55 R	2.35	2.25 R	2.40 R	2.60	2.45 R H	2.60	R	2.60	2.55 R	2.55	2.65 R	2.65 R	2.65 S	2.70	I 2.75 S R	R	R S	R	2.35	2.45 R
27	2.65 R	2.45 R	2.55 R	2.40	2.30	2.30 R	2.60	2.85 R	2.75 R	2.65	2.65 S	J 2.50 R	2.55 R	2.50	2.50	2.40 S	2.40	2.70	S	S	S	S	J 2.45 R	R
28	I 2.40 R	2.45	I 2.30 S	I 2.25 R	2.45 S	2.45 R	2.60	R	J 2.15 R	2.85 R	I 2.10 A	2.15	2.15	2.20	2.25	2.30	2.45	I 2.50 A	2.55	2.55	I 2.45 S	U 2.55 S	I 2.50 S	U 2.55 S
29	R	I 2.35 S	2.35	2.55	J 2.40 R	J 2.25 S	U 2.60 S	I 2.80 S	2.50	2.45 R	2.45	2.50	2.45	2.50	2.50	2.55	2.55	2.60	2.65	I 2.50 R	I 2.40 R	I 2.40 R	2.45	2.45 R
30	2.50 R	I 2.50 R	J 2.50 R	2.45 R	2.40	2.50 R	2.95 R	2.85	2.70	2.75	2.60	2.55	2.55	J 2.50 R	2.55	2.55 R	2.60	2.65 S	U 2.85 S	2.70	2.60	I 2.45 S	J 2.45 R	U 2.45 R
31	U 2.45 R	2.35	2.55	2.45	2.45	2.55 R	2.90 R	3.00	2.75 H	2.55	2.55	2.45	2.50	2.45	2.50	2.50	2.60	2.70	J 2.70 S	U 2.60 S	2.55	I 2.40 A	2.60	I 2.60 R
No.	29	30	29	30	30	30	30	30	30	30	29	30	30	30	29	29	29	28	24	25	26	26	29	29
Median	2.50	2.55	2.50	2.50	2.50	2.50	2.80	2.85	2.75	2.65	2.60	2.55	2.55	2.55	2.55	2.60	2.60	2.70	2.70	2.60	2.50	2.45	2.45	2.50

(M3000)F2 Sweep 1.0 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

K 7

IONOSPHERIC DATA

Aug. 1958 | (M3000)F1 | 135° E Mean Time (G.M.T.+ 9h.) | 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								L	L	A	A	A	A	A	A	A	A	A	A					
2										L	A	A	A	A	L	L	L	L	A					
3						L	3.20L	3.35L	A	3.45	A	A	A	A	A	A	A	A	A					
4								A	A	A	A	A	A	A	A	A	A	A						
5								A	A	A	A	A	A	A	A	3.30L	L	A	A					
6								A	A	A	A	A	A	A	A	A	A	A	A					
7						C	C	A	L	A	A	3.30	3.25L	3.20L	3.35	3.35L	A		A					
8									L	L	3.25L	A	3.25	3.30	L	3.40L	L	A	A					
9									L	L	A	A	A	L	A	I 3.40L	L	L						
10									L	L	A	L	AS	I 3.35L	L	L	L	A						
11								L	A	A	A	A	L	L	L	L	L	L						
12									A		L	I 3.55L	A	A	A	3.45	A	A	A					
13										LH	L	L	L	L	L	S	L							
14									L	L		L	L	L	L	L	A	A						
15											3.35L	L	L	L	L	A	A							
16												A	L	A	B	B	AS							
17								L	A	L	3.50L	3.30L	LH	L	3.35	L	A	A	A					
18							L	S	A	3.30	3.45S	L	3.50L	A	L	L	L							
19											L	L	L	L	3.55	L	L							
20									L		B	L	A	A	I 3.20L	L	L	L						
21								LH		L	L	L	L	L	A	L	L							
22										L	A	L	L	L	L	L	L							
23						C				A		A	L	L	L	A	A	L						
24										L	LH	L	A	L	L	A	L							
25										L		L	C	C	A	L								
26									L	L	B	L	L	L	L	L	L							
27									L			L	L	L	L	L	L	L						
28								L	AS	3.45S	A	S	A	I 3.40S	3.35S	A	3.20	A						
29									L		L	L	3.50S	I 3.30L	I 3.35L	I 3.40L	L							
30									L	L	L	3.40L	L	A	L	L	A							
31										L	L	A	A	A	S	L	L							
No.							1	1		3	4	4	4	5	6	6	1							
Median							3.20	3.35		3.45	3.40	3.35	3.40	3.30	3.35	3.40	3.20							

(M3000)F1 Sweep 1.0 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

K 8

IONOSPHERIC DATA

Aug. 1958 | h'F2 | 135° E Mean Time (G.M.T. + 9h.) | 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	S	500	475[A]	450	410	I405[A]	400	400	A	A	A					
2										420	400	380	400	410	395	380	380	345	370[A]					
3						450	355	350	445	490	A	A	480	450	460	A	A	A	A					
4								300	A	A	A	470	425	445	445	I410[A]	A	A						
5								300	350	I400[A]	I395[A]	I390[A]	380	380	I390[A]	395	375	345	E385[A]					
6								345	325	E500[A]	I400[A]	400	395	370	A	A	A	A	A					
7						C	C	295[A]	400	E420[A]	320	450	400	440	405	405	350		320					
8									310	380	395	350	395	400	360	355	330	350	A					
9									325	260	400[A]	420	360	430	410	370	350	350						
10									360	310	I350[A]	410	400	390	360	370	350	370[A]						
11								300	305	A	I385[A]	365	370	340	350	340	365	320						
12									340[A]		350	420	A	405[A]	A	400	400	A	A					
13										450	355	355	390	400	370	370	325							
14									265	300		370	355	390	385	360	330	E360[A]						
15											400	355	370	355	370	390	350							
16												390	375	370	B	350	330							
17								300	310	310	350	370	390	395	360	390	350	E410[A]	320[A]					
18							440	340	490	550	400	350	425	400	400	360	380							
19											325	345	350	330	390	340	330							
20									300		350[B]	305	350	400[A]	380	360	355	310						
21								300		310	300	300	325	380	E400[A]	350	320							
22										315	345	390	385	380	390	400	310							
23										310		360	390	380	300[H]	360	360[A]	310						
24										340	375	390	E400[A]	490	455	410[A]	370							
25										340		390	C	C	385	355								
26									345[H]	400	400	355	390	400	350	355	340							
27									275			405	400	400	410	440	410	300						
28								380	405	460[H]	A	660	640	590	595	560	495	A						
29									355[L]		420	420	420	415	425	430	390							
30									305	325	355	360	390	405	400	400	350							
31										L	360	400[A]	395	395	380	380	350							
No.						1	2	11	18	19	23	30	28	30	27	29	26	9	3					
Median						450	400	300	330	340	375	390	390	400	390	380	350	345	320					

h'F2

Sweep 10 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | h'F | 135° E Mean Time (G.M.T. + 9h.) | 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	330	300	305	370	400	300	300^{A}	250	285	A	A	A	A	A	A	A	A	A	A	E405$^{A}_{S}$	330	355	400	365
2	315	275	300	350	I320^{C}	290	265	255	E450^{A}	A	A	A	A	A	E300^{A}	240	A	260	I270^{A}	E405^{A}	E395^{A}	360^{A}	360^{A}	E400^{A}
3	360^{A}	300	275	350	360	320	280	270^{A}	A	250	A	A	A	A	A	A	A	A	A	E410^{A}	E395^{A}	400^{A}	375	345
4	390^{A}	350^{A}	310	305	250	295	260	A	A	A	A	A	A	A	A	A	A	A	290	310^{A}	340	360^{S}	355^{A}	350^{A}
5	330	360	330	320	300	285	260	I280^{A}	I270^{A}	A	A	A	A	A	A	230	260	A	A	A	E405^{A}	350	345	360
6	E445^{A}	310^{A}	350	400^{A}	440^{A}	355	280	A	A	A	A	A	A	A	A	A	A	A	A	A	A	355	380	450^{A}
7	C	C	C	C	E350^{C}	C	C	A	260	A	A	240	225	270	240	245	A	260	A	S	E400^{A}	320	330^{A}	E400^{A}
8	E420^{A}	345	330^{A}	300	350^{A}	295	260	255	250	230	235	A	220	210	205	245	245	A	A	290^{A}	355	355	320	355
9	310	305	320	295	305	295	250	245	250^{A}	225	A	A	A	E300^{B}	A	E300^{A}	250	E315^{A}	300^{A}	280	305	305	330	305
10	355^{A}	365	350	350	320	300	240	230	250^{A}	215	I255^{A}	E375$^{A}_{S}$	As	E300^{A}	260^{A}	225	255	A	E350^{A}	300	255	290	320	305
11	330	305	350	350	325	300	255	250^{A}	A	A	A	A	230	230	230^{S}	260^{A}	250	250	280	255	270	305	350^{A}	355^{A}
12	310	320	290	305	350	300	280^{A}	300^{A}	A	305^{S}	E310$^{B}_{S}$	225	A	A	A	255	A	A	A	290	260	300	300	300
13	305	305	325	300	310	300	250	250	205^{A}	205^{H}	E300^{A}	230	255	250	215	250	250	330^{A}	300	255	220	305	355	330
14	305	325	300	300	275	295	250	245	230	210	275^{A}	E300^{A}	E300^{A}	250	250	250	A	A	300	290	300	300	300	305
15	300	300	I290$^{R}_{S}$	270	295	280	245	230	255	250^{A}	205	255	205	E300$^{A}_{S}$	E300$^{A}_{S}$	A	A	250	280	260	265	300	320	260
16	300	350	320	290	260	265	250	250	E275^{A}	290^{A}	260	A	E360^{A}	A	B	B	As	260	275	265	320^{A}	305	330	355^{A}
17	325	315	305	350	310	300	255	245	A	220	225	200	225^{H}	240	225	260	A	A	A	310^{A}	270	260	350^{A}	300
18	310	390	405	350	445	320	270	280^{A}	A	230	215	260^{A}	220	A	250	255	255	300	295	290	E420^{A}	370	350	340
19	310	310	300	300	300	295	255	240	230	230	220	210	220	220	210	260^{A}	270^{A}	270^{A}	270^{A}	260	250	255	320	320^{A}
20	345	300	300	275	295	295	250	245	230	250	I235^{B}	225	A	A	250^{S}	E300^{A}	As	260	280	260	300^{A}	305	310	300
21	305	310	300	280	250	260	240	220^{H}	220	250	235	260$^{A}_{S}$	250	E300$^{A}_{S}$	A	240	300^{A}	260	260	280	290	300	295	350^{A}
22	310	310	295	250	295	275	245	230	230^{H}	270^{A}	A	280^{A}	260	240	255	E300^{A}	250^{A}	260	255	250	345	325	E450^{A}	400
23	345	255	300	350	I340^{C}	I310^{C}	250	250	250	A	250	A	245	250	240	A	A	260^{A}	290	A	330	380^{A}	310	310
24	320	295	275	245	280	305	250	250	225	250	200^{H}	205	A	220	240	A	255	270^{S}	305^{A}	265	365	I395^{A}	355	310^{A}
25	385	305	300	305^{S}	350	350	255	250	240	240	260^{A}	255^{A}	C	C	A	255	255	255	255	255	280	305	350	360
26	330	345	305	295	300	340	350^{A}	325^{A}	235	255	B	E300^{B}	250	240	205	250	250	260	300^{A}	300	350^{A}	305	350	340
27	285	300	295	290	350	345	265	250	235	240	255	250	250	250	225	250	255	225	305	305	S	S	355	270
28	300	355	300	400	305	325	270	260	As	250	A	260	A	I250^{S}	245	A	255	A	325^{A}	280	350^{A}	355	325	310
29	345	400	355	295	310	360^{A}	270	270^{A}	270	220	210	225	250	220	240	215	250	E350^{A}	300	300	330	310	350	310
30	305	300	275	290	315	310	255	235	240	230	210	230	225	A	245	245	A	255	295	280	305	305	305	345
31	360	380	305	300	305	330	255	245	230^{H}	210	245	A	A	A	S	230	255	260^{A}	295^{A}	295	295	I330^{A}	330	295
No.	28	30	30	30	30	30	30	28	21	23	17	16	15	14	18	19	17	18	22	24	24	30	30	29
Median	320	310	300	300	310	300	255	250	240	240	235	235	230	240	240	250	255	260	290	280	300	310	335	330

h'F

Sweep 1.0 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

K 10

IONOSPHERIC DATA

Aug. 1958 | h'Es | 135° E Mean Time (G.M.T.+ 9h.) | 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	100	100	100	100	E	B	120	115	110	110	110	110	105	105	105	105	125	115	105	105	110	105	105	105
2	105	100	105	110	C	B	115	110	110	110	105	105	105	105	105	150	120	120	105	105	105	105	105	105
3	100	105	105	E	E	B	145	130	115	110	110	105	105	110	120	110	110	110	115	110	110	105	110	110
4	105	100	105	105	105	110	145	130	120	110	110	110	110	110	110	110	110	105	105	105	105	105	100	105
5	105	100	100	100	E	B	130	120	115	110	110	110	110	110	110	155	135	125	105	105	105	105	E	110
6	105	105	100	100	100	105	130	115	110	110	110	105	105	105	105	105	110	115	110	110	105	105	105	110
7	C	C	C	C	C	C	C	120	110	105	105	105	105	110	120	115	110	110	125	120	110	110	105	105
8	105	105	105	105	105	B	120	115	110	110	110	105	110	110	105	105	105	115	110	110	105	105	105	105
9	100	105	100	100	100	B	125	115	125	105	105	110	110	B	115	110	120	110	105	E	110	105	105	105
10	105	100	100	105	105	B	120	115	115	110	105	110	110	110	110	110	110	110	110	105	105	100	E	105
11	105	105	100	E	E	G	115	110	110	105	105	110	110	110	110	110	140	G	115	E	105	105	105	100
12	105	105	105	105	105	110	105	115	110	105	G	G	110	110	105	150	130	115	110	110	110	105	105	105
13	105	100	100	E	E	B	B	G	105	105	110	G	G	G	G	G	130	110	105	105	E	105	105	E
14	E	100	100	E	E	B	155	130	110	110	105	105	105	G	G	140	120	120	110	105	105	E	E	110
15	105	105	100	E	E	B	125	B	110	115	B	G	130	110	125	120	120	115	110	105	105	E	105	105
16	105	100	100	105	105	B	140	120	115	115	110	110	115	115	B	B	120	G	B	105	105	110	105	100
17	100	100	100	100	E	B	G	110	105	100	100	105	105	125	150	155	110	110	110	110	E	105	100	100
18	100	100	100	100	E	B	135	115	110	115	130	110	105	105	115	B	130	130	115	110	110	105	105	105
19	E	E	E	E	E	B	150	120	110	115	105	115	110	110	110	110	110	110	105	105	105	E	105	110
20	105	105	105	E	E	B	G	B	130	110	B	105	105	105	105	105	140	100	100	100	105	105	105	100
21	105	100	E	E	105	B	150	G	G	140	110	110	125	135	125	105	110	120	110	110	105	105	105	105
22	105	105	100	100	E	B	145	130	130	125	115	125	125	S	135	120	110	110	105	105	105	105	105	105
23	105	105	100	100	C	C	105	110	105	105	105	105	130	110	115	130	110	110	115	110	105	105	110	E
24	E	100	E	E	105	B	130	135	130	105	G	105	130	G	G	110	120	110	110	105	105	105	105	105
25	105	100	100	105	105	105	140	135	125	120	120	115	C	C	110	110	110	105	105	105	105	105	100	100
26	100	100	100	100	105	E	110	110	105	130	B	B	B	115	105	140	145	155	105	105	105	105	110	100
27	E	105	105	105	E	B	G	140	G	145	B	G	140	140	G	G	155	130	110	110	110	105	105	105
28	E	130	130	130	125	115	120	120	110	110	110	110	115	S	G	130	140	110	110	115	110	110	105	105
29	105	105	105	E	E	130	110	110	110	G	G	115	B	130	G	G	150	120	110	105	100	100	100	100
30	100	E	E	E	E	B	B	B	130	110	G	105	105	105	100	100	105	135	120	110	105	105	105	100
31	100	105	E	E	105	B	130	130	120	125	110	105	105	105	105	105	150	130	115	115	100	105	105	110
No.	25	28	25	18	13	6	25	26	29	30	23	26	27	24	24	26	31	29	30	29	29	28	28	29
Median	105	100	100	100	105	110	130	120	110	110	110	110	110	110	110	110	120	115	110	105	105	105	105	105

h'Es

Sweep 1.0 Mc to 30.0 Mc in 30 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

K 11

IONOSPHERIC DATA

Aug. 1958

Types of Es

135° E Mean Time (G.M.T. + 9h.)

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	f3	f2	f	f			c	c	c2	c	c	c2	l	l2	l	l	cl	c	l2	f	f2	f3	f2	f2
2	f2	f	f	f			c	c2	c	l2	l2	l2	l2	l2	l2	h	c	c	l2	f2	f3	f3	f3	f3
3	f3	f2	f				h	c	c	l	l2	l2	l	l	h2	c2	l2	l3	h3l	f3f	f5	f3	f3	f2
4	f3	f3	f2	f2	f2	l	h	h	c2	l2	l2	l	l2	l2	l2	l2	l2	l2	l2	f2	f3	f3	f3	f2
5	f2	f3	f	f			h	l2	c2	c2	l2	c2	l	l2	l2	h	h	h2	l2	f2	f3	f2		f2
6	f3	f3	f4	f3	f4	l2	c	c2	c2	c2	c2	l2	l2	l2	l3	l2	l2	l2	l3	f3	f3	f3	f3	f2
7								c2	l2	l2	l	l	l	l	h	l	l2	l	l	f2	f3	f2	f3	f3
8	f4	f3	f3	f2	f3		c	l2	c2	l	l	l2	l	l	l	l	l	l2	l2	f3	f3	f3	f2	f3
9	f2	f	f2	f2	f		l	l	c2l	l	c	c	c		c	c	l	l	l2		f	f	f2	f2
10	f3	f3	f3	f2	f2		c	c	c	c	c2	l	c	c	l	l	l	c3	l3	f2	f	f		f
11	f	f	f				l	l	c	l2	c2	c	l	l	l	l	h		l		f	f	f2	f2
12	f	f2	f	f2	f2	l	l	c2	l	l			l	l	l	h	h	c2	l2	f2	f2	f	f2	f
13	f	f	f2						l2	l	l						h	c2	l3	f		f2	f3	
14		f	f				h	h	c	c	l	l	l			h	c	cl	l	f	f			f
15	f	f	f				h		l	l			h	c	h	c	c	c	l	f	f		f3	f2
16	f	f	f	f	f		h	c	c	c	c	l	c	c			l			f	f2	f	f	f2
17	f	f	f	f				l	l	l	l	l	l	h	h	h	c2	l2	l2	f2		f2	f2	f2
18	f2	f	f	f			h	c	c2	c	h	l	l	l	l		h	h	l2	f2	f3	f2	f2	f
19							h	h	c	c	l	c	l	l	l	l	l2	l2	l2	f	f		f	f2
20	f3	f	f2						h	l		l	l	l2	l	l3	hl	l	l	f	f3	f2	f	f2
21	f	f			f		h			hl	l	l	h	hl	h2	l	c	c2	l2	f	f	f2	f2	f3
22	f2	f	f2	f			h	h	h	h	c	h	h		h	h	l2	l	l2	f2	f3	f	f2	f3
23	f4	f3	f2	f3			l	l2	c2	l2	l	l	h	l	c	h	c2	l2	l2	f3	f3	f3	f	
24		f			f		h	hl	h	l		l	h			c2	c	c	l2	f2	f2	f2	f3	f4
25	f2	f	f	f3	f2	l	h	h	c	c	c	l			c	l	l	l	l2	f	f	f2	f2	f2
26	f2	f2	f	f	f		l2	l	l	h				c	l	hl	h	lh	l3	f2	f2	f	f	f
27		f	f	f				h		h			h	h			h	c	l2	f2	f	f	f2	f
28		f2	f	f3	f	l	c	c	c	c	c	l	l			h	h2	l2	l3	f	f3	f	f2	f3
29	f3	f2	f			h	l2	l	c			c		h			h	c2	l2	f	f3	f2	f3	f
30	f								h	l		l	l	l	l2	l2	l2	h	l3	f5	f3	f3	f	f3
31	f3	f2			f		h	h	c	h	l	l2	l	l2	l2	l2	hl	c2	l3	f3	f	f3	f3	f2
No.																								
Median																								

Types of Es

Sweep 1.0 Mc to 20.0 Mc in 20 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

K 2

IONOSPHERIC DATA

Aug. 1958 | hpF2 | 135° E Mean Time (G.M.T.+ 9h.) | 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	I 420 R S	390	U 400 R	495	530	460	U 450 S	U 400 S	S	J 500 S	I 480 R	460	445 S	I 425 A	410 R	400	A	A	A	445 S	490 R	I 440 S	I 450 S	490 R
2	440 R S	400 R	U 450 R	450	I 450 C	365 R	355	U 400 S	A	450	450	425	430	420	425	410	410	400	385	A	J 450 S	450	455	450
3	440	405	U 405 R	450	490	500 R	400	445	460	490	A	A	A	455	460	A	A	A	A	A	430	450	470	450
4	455	410	410	400	400 R	400	395	320	A	A	I 420 A	460	I 435 A	A	445	I 435 A	I 405 A	I 375 A	370	405	U 445 S	I 455 S	I 440 S	430
5	420	430	440	435	420	450 F	400	355	400	I 445 A	I 420 A	I 425 A	415 R	400	I 415 A	410	400	395	A	I 400 A	455	J 455 R S	450	455 F
6	450	440	425	450	480	445	370	395	350	A	I 405 A	430	415	J 400 S	A	A	A	A	A	A	A	J 455 S	U 455 S	A
7	C	C	C	C	C	C	C	430	410	A	435	480	440	450	440	445 S	400	400	U 395 S	I 420 S	U 450 R	420	430	U 445 S
8	I 450 A S	430	J 400 S	405	445 F	445	350 S	395	405	420	400	410	400	415	400	395	395	395	I 365 A	355	455	I 455 R S	I 440 R	450
9	I 400 R S	410	I 430 R	395	U 415 S	425	355 R	J 360 R	395	370	410	450	400	U 445 R	445 R	400	400 R	I 400 R S	U 355 S	390 S	440 S	I 440 S	I 425 S	430
10	I 430 S	I 420 R S	I 445 R S	435 R	I 430 R	380	J 330 R	U 325 R	400	370 R I	395 A	430 R	420	420	420	405 R	400 R	405	I 390 S	I 385 S	I 425 S	I 430 S	I 425 R	I 430 R
11	I 440 R S	425	I 460 R S	465 R	I 440 R S	430 R	365	400	365	I 400 A	I 415 A	400	400 S	420	400	416	405	360 S	I 355 S	400 S	400 R	440 R	425	J 425 R
12	435 R	405 R	400	425	J 470 R	440	350	I 360 R	350 R	400 R	400	430	A	A	A	400	415	A	A	375 R	355 R	415 R	400 R	J 420 R
13	410 R	420 R	420	410	410	365	300 R	300 R	300	G	400	390	405 R	410	400	400 S	400 S	390 R	365 S	S	S	450 R	J 450 R	I 435 R
14	415	U 440 R	U 430 R	400 R	400 R	400 R	325	330	J 350 R	360	400	415	405	435	425	400 R	385	I 360 R S	I 360 R S	I 385 S	RS	I 410 R	420 R S	U 400 R
15	405	405	I 390 R S	400 S	I 410 R S	400	315 R	325	305	365	440	415	415	400	410	425 R	405	365 R	J 360 R	I 390 R S	405	J 420 R	R	R
16	400	420	425	390	395	I 370 R S	325	350 R	350	350	410	425	420	405	B	400	J 375 R	385 S	360 S	390 S	440 R	I 440 S	RS	420
17	I 420 R	435	455	460	450 S	395 R	325	345 R	355 R	360	400	400	430	445	400	400 R	395	A	400	U 395 S	370	RS	405	400
18	455	490	540	485	555	470 S	450	350	A	G	405	370	450	445	405	400	405	370	355	390	A	J 470 R	440	450
19	430	430	405	415	410	I 395 R	350	320	J 350 R	395	400	400	400	410	405	395	385	375 S	S	S	370	I 405 R S	I 420 R S	410
20	U 410 S	395	U 395 S	390	400	U 380 R	320	325	340	350	380	380	400	445	410	410	405	390	J 355 S	U 345 S	405	410	I 420 R S	410
21	400	J 410 R	RS	J 355 R	360	355 R	300	U 330 R	380	350	370	440	410	425	445	400	395	380	I 355 R S	390	I 395 R S	I 400 R S	I 400 R	420
22	J 405 R	I 400 R	U 360 R	350	I 400 R	355 R	I 320 R S	320	355 H	360	390	435	410	425	450	450	J 385 S	405	S	380	U 480 S	RS	I 470 S A	540 R
23	U 490 S	350	405	455	I 445 C	I 420 C	330	340	340	350	405	400 R	430	405	400 H	400	405	395	U 365 S	I 390 A	400	470	445	445
24	425	J 390 R	370 R	345 S	J 445 S	405	J 360 R	340	350	395	410	440	450	515	500	455	435	400	370 R	I 450 R	J 480 R	I 460 A	445	450 R
25	I 490 R	410 R	I 430 R	450	485	480	355 R	350 R	370	390	415	435	C	C	435	420	405	410	395 R	R	I 410 R	R	420 R	I 430 R
26	I 430 R	425	430 R	400 R	455	505 R	450 R	380	440 R H	425	R	400	415 R	435	400 R	400 R	400 S	385	I 380 R S	R	RS	R	480	450 R
27	400 R	440 R	405 R	455	480	485 R	400	340 R	355 R	400	400 S	J 445 R	435 R	450	450	465 S	460	400	S	S	S	S	J 450 R	R
28	I 440 R	450	I 470 R	I 500 R	425 S	450 R	400	R	J 550 R	960 R H	A	S	A	S	G	G	I 495 G	A	405	415	I 445 S	U 445 S	I 445 S	U 400 S
29	R	I 470 S	475	430	J 455 R	J 490 S	U 405 S	I 375 S	420	450 R	450	455	450	450	450	450	420	405	380	I 425 R	I 445 R	I 445 R	440	440 R
30	425 R	I 420 R	J 410 R	440 R	455	425 R	315 R	340	365	390	430	410	445	J 440 R	445	430 R	405	400 S	U 355 S	385	405	I 435 S	J 445 R	U 445 R
31	U 445 R	480	430	450	445	420 R	345 R	315	360 H	405	420	450	450	450	440	435	405	390	J 380 S	U 400 S	410	I 450 A	410	I 400 R
No.	29	30	29	30	30	30	30	30	27	26	28	29	27	27	27	28	28	26	23	23	25	26	29	28
Median	430	420	425	430	445	420	350	350	360	395	410	425	420	425	425	400	406	396	366	390	430	440	440	420

hpF2

Sweep 1.0 Mc to 20.0 Mc in 2.0 ~~min~~ sec in automatic operation.

The Radio Research Laboratories, Japan.

K 13

IONOSPHERIC DATA

Aug. 1958 | ypF2 | 135° E Mean Time (G.M.T.+ 9h.) | **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	I 120 S R	110	130 R	120	90	190	U 145 S	135 S	S	J 140 S	I 120 R	135	115 S	I 125 A	120 R	120	A	A	A	155 S	135 R	I 155 S	I 130 S	120 R
2	140 S R	115 R	U 140 R	130	I 145 C	140 R	145	U 110 R	A	100	130	125	130	125	125	95	135	105	115	A	J 105 S	135	140	100
3	110	110	U 140 R	145	155	145 R	150	155	140	105	A	A	A	95	145	A	A	A	A	A	105	145	130 S	135
4	140	115	135	120	195 R	150	150	130	A	A	I 125 A	I 135	I 95 A	A	65	I 100 A	I 100 A	I 120 A	130	145	U 130 S	I 135 S	I 120 S	120
5	110	120	135	115	120	190 F	145	145	150	I 125 A	I 150 A	I 140 A	155 R	145	I 160 A	135	100	100	A	I 110 A	145	J 145 R	145	105 F
6	95	110	130	120	130	150	130	105	110	A	I 120 A	120	130	J 105 S	A	A	A	A	A	A	A	J 135 S	U 140 S	A
7	C	C	C	C	C	C	C	165	140	A	165	120	115	120	110	105 S	95	110	U 110 S	I 170 S	U 100 R	125	120	U 105 S
8	I 135 A	120	J 90 S	190	110 F	160	110 S	145	185	130	110	145	145	135	150	110	110	95	I 120 A	140	150	I 130 R S	I 120 R	95
9	I 100 S R	95	I 120 R	140	U 130 S	125	120 R	J 125 R	150	140	190	115	150	U 115 R	140 R	120	140 K	I 130 S R	U 155 S	155 S	165 S	I 140 S	I 155 S	140
10	I 145 S	I 135 S R	I 130 S	95 R	I 110 R	140	J 125 R	U 185 R	130	190 R	I 195 A	140 R	130	130	155	145 R	125 R	145	I 160 S	I 130 S	I 140 S	I 135 S	I 145 R	I 145 R
11	I 150 S R	145	I 130 S	125 R	I 130 S	140 R	140	175	165	I 145 A	I 145 A	125	115 S	135	130	140	130	140 S	I 145 S	125 S	150 R	160 R	115	J 105 R
12	150 R	175 R	100	145	J 130 R	160	150	I 145 R	140 R	160 R	155	145	A	A	A	90	140	A	A	125 R	185 R	145 R	150 R S	J 130 R
13	140 R	170 R	180	140	115	130	100 R	120 R	85	G	150	140	165 R	130	140	150 S	140 S	120 R	130 S	S	S	175 R	J 150 R	I 125 R
14	135	U 135 R	U 170 R	150 R	175 R	170 R	125	125	J 150 R	125	130	125	125	120	130	145 R	115	I 100 R	I 120 S R	I 100 S R	R S	I 140	120 S R	U 130 R
15	140	135	I 120 S	105 S	I 130 S R	140	125 R	125	140	145	135	140	135	110	155	130 R	170	130 R	J 140 R	I 135 S R	120	J 180 R	R	R
16	120	135	130	110	120	I 160 S R	120	155 R	150	145	180	130	130	145	B	110	J 165 R	140 S	130 S	135 S	150 R	I 130 S	R S	120
17	I 130 R	160	145	130	125 S	155 R	175	145 R	145 R	135	170	150	165	115	145	125 R	105	A	140	U 100 S	90	R S	145	145
18	145	155	155	125	140	185 S	100	105	A	G	120	125	100	100	100	100	95	125	100	105	A	J 175 R	135	130
19	120	120	140	135	115	I 135 R	110	110	J 100 R	100	100	135	115	185	130	140	115	I 120 S	S	S	90	I 120 S R	I 100 S R	135
20	U 100 S	105	U 100 S	105	125	U 95 R	135	105	90	150	115	120	150	110	145	130	140	120	J 140 S	U 105 S	145	140	I 125 R S	140
21	100	J 105 R	R S	J 130 R	185	100 R	125	U 80 R	125	110	130	155	160	165	115	110	105	120	I 115 R S	100	I 100 S R	I 100 S R	I 105 R	105
22	J 95 R	I 110 R	U 90 R	145	I 100 R	100 R	I 120 S R	90	120 H	140	120	120	140	145	145	150	J 125 S	105	S	115	U 120 S	R S	I 130 S A	115 R
23	U 130 S	145	185	145	I 140 C	I 135 C	125	85	115	105	145	145 R	120	140	140 H	140	145	110	U 130 S	I 100 A	110	130	105	105
24	85	J 100 R	85 R	115 S	J 100 S	145	J 135 R	110	160	130	150	135	145	185	155	150	140	150	195 R	I 150 R	J 170 R	I 130 A	125	180 R
25	I 105 R	165 R	I 145 R	150	155	170	160 R	165 R	160	105	135	120	C	C	135	130	145	140	175 R	R	I 160 R	R	170	I 135 R
26	I 160 R	135	160 R	160 R	175	180 R	190 R	180	160 H	150	R	165	155 R	115	170 R	140 R	125 S	115	I 135 R S	R	R S	R	160	140 R
27	100 R	150 R	145 R	145	145	155 R	140	150 R	200 R	125	100 S	J 125 R	115 R	150	115	125 S	130	145	S	S	S	S	J 140 S	R
28	I 200 R	150	I 190 S	I 175 R	165 S	150 R	190	R	D 200 R	100 H R	A	S	A	S	G	G	I 100 G	A	120	100	I 145 S	U 95 S	I 140 S	U 110 S
29	R	I 140 S	120	160	J 145 R	J 120 S	U 100 S	I 125 S	135	125 R	150	135	160	175	140	110	130	135	180	I 175 R	I 175 R	I 160 R	140	135 R
30	175 R	I 130 R	J 150 R	140 R	145	175 R	135	150	165	155	130	150	150	J 145 R	120	125 R	150	105	U 100 S	160	125	I 160 S	115	U 120 R
31	U 110 R	115	110	145	150	125 R	125	135	185 H	150	135	140	135	135	145	145	145	110	J 115 S	U 105 S	140	I 150 A	95	I 110 R
No.	29	30	29	30	30	30	30	30	27	26	28	29	27	27	27	28	28	25	23	23	26	26	29	28
Median	130	135	135	140	130	150	130	130	145	130	135	135	135	130	140	130	130	120	130	125	140	140	130	120

ypF2

Sweep 1.0 Mc to 20.0 Mc in 20 min/sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | foF2 | 135° E Mean Time (G.M.T.+ 9h.) | 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	9.3	9.2	J8.0R	6.9	6.7	6.6	7.8	8.3	8.0H	9.0H	9.9	10.4	11.2	11.4	11.0	10.6	I10.1S	9.4	9.1	9.0	8.5	I8.0A	8.6	I8.8S
2	8.8	I8.8S	7.0	6.5H	6.4H	6.5	7.1	8.4	9.0H	9.3	9.9	11.0	11.0	11.0	11.0	11.4	10.8	10.7	10.5	9.8	9.1	9.0	9.3S	I9.5S
3	I9.5S	9.8S	8.8	J8.2R	7.8R	7.7	8.5R	9.3R	9.5RH	8.9	9.0	10.4	10.4	10.2	10.5	10.9	10.8	10.8	11.0	J10.2R	9.0	8.4	8.5	9.2
4	9.6S	9.9S	9.4S	9.4S	8.8	8.5	9.0	F	F	I9.6A	9.5	I10.0A	10.4	10.5	11.3	11.7	A	A	9.5S	I9.4A	J9.8S	10.7H	11.5S	U12.1S
5	I11.3S	J10.9S	8.9	8.0	U7.7S	7.5	8.7	11.0	I9.1A	9.9	10.3	11.2	12.4	11.6	11.1	11.4	11.1	10.4	8.9	U8.4R	8.2R	8.4	J7.8S	7.7S
6	8.6	I8.6S	F	F	F	F	8.8	9.6	9.7	J9.9S	I10.4A	11.0	11.7	11.3	10.9	10.5	9.9	9.7S	9.7S	9.4S	8.4	J8.2S	8.5	8.2S
7	J8.2S	8.5	8.5	7.3	I7.4S	7.5S	J8.1R	9.4	9.0H	8.8H	8.9H	9.6	9.9	10.3	10.3	10.5	10.0	9.5	I9.2RH	J9.6S	9.4	8.9	J8.4S	J8.1S
8	J8.3S	8.7	8.8	7.5	F	F	J8.2VR	10.0S	10.8	11.0	11.6H	I11.8A	11.9	12.0	12.0	11.6	11.3	10.8S	10.7S	8.9	8.9	9.5S	J10.2S	10.0S
9	U10.2S	I9.8S	I9.6S	J9.5S	8.6	J8.1S	8.3	10.6H	11.0H	9.9H	9.2H	10.0	10.6	11.0	11.2	11.5	11.7	11.0	10.5	U9.8S	9.0	9.0	9.2	9.3
10	9.2	9.3	9.2	8.9	8.9	9.0S	U9.5S	9.4	9.3	9.8	10.7	10.9	I10.8A	I11.2A	11.5	11.3	I11.3A	10.7	11.0	10.7S	10.7	10.5	9.3S	8.9
11	U8.8S	8.9	8.3	J8.1S	J8.0S	8.3	9.0	9.7S	10.4H	10.0H	10.1	10.9H	11.0	11.4	12.2	12.3	12.7S	13.2	12.5R	12.1	J11.4S	I10.6S	U9.9S	10.5S
12	I10.4S	9.8S	9.0	8.3	7.7S	7.4S	8.4	10.5	10.0H	9.9	9.9H	10.1	10.6	11.0	10.7	10.0	9.9	9.9S	U10.0S	I10.2S	U9.3S	J8.2S	U8.4S	8.9
13	J8.7S	8.1V	7.6V	I7.5F	7.4	7.4	8.8	9.0	8.5H	8.8H	10.0SH	11.0	11.4	11.4	11.8	11.9	12.0	11.8	12.0	11.3	U9.5S	J7.9S	U8.3S	I8.8S
14	9.0	8.8	8.6	J7.9R	7.3S	7.0	7.9	9.8S	10.3	10.2	10.0H	11.0	12.0	12.5	13.0S	I13.3S	13.0	12.2S	11.4S	11.0	I10.5S	I10.5S	I10.5S	10.0
15	9.5S	9.3S	8.9	J8.2S	U7.5S	7.3S	8.9	9.1	9.2	8.9	9.4H	11.2	12.4	12.6S	12.0	12.2	U12.9S	12.9S	12.4S	U11.4S	J10.0S	J10.4S	J10.4S	U9.6S
16	I9.8S	9.6S	8.7S	8.9	J7.9S	7.4S	J8.0S	10.9	11.0H	9.8	10.3H	11.8	12.7S	13.1	I13.1B	13.4	12.4	11.6S	10.9	J10.3S	9.3S	9.2S	9.0	8.8
17	J8.2S	7.7	7.5	I7.6F	I7.7F	7.4	8.0	9.9	10.0	9.8H	9.9	11.1	12.0	12.5	U13.2S	13.0	13.0	12.7S	12.0	11.0	I10.0S	8.2	7.9S	J8.0S
18	7.4S	6.6	6.4	6.2	5.5F	5.5	5.5	6.5	6.4H	7.8	8.9	10.2	8.7	10.4	12.1	11.6	11.0	10.4	10.0S	9.6S	U7.7S	U7.7S	8.5S	8.7
19	8.8	9.0	8.5	7.2	7.0	7.1	J8.4S	10.5	10.3	10.6H	10.9	11.3	11.6	12.3	13.1S	U13.6S	13.1	12.8	13.0	12.5	10.0S	J10.1S	S	S
20	8.9	8.8	9.0S	J8.3R	J7.8R	7.4S	8.8	10.1	9.7R	9.2	10.0H	10.5	10.6	10.9	11.2	11.6	I12.8S	13.1	12.6S	11.6S	I10.6S	I10.4S	J10.1S	J10.2S
21	I10.0S	9.5	9.4S	8.8	7.4	6.1	7.5	9.6	10.9H	11.4H	10.4H	10.6	10.9	11.6	12.5	13.3	13.0	12.6	12.5	I12.4S	12.0	12.3	I12.5S	I12.0S
22	I11.4S	I11.6S	I11.0S	I10.2S	9.0	J8.6S	9.6S	10.6	10.8S	10.9H	11.0H	11.9H	12.6	13.6S	13.2	13.6S	U13.2SH	11.7	12.0H	10.6	8.7	8.9H	8.8	9.0
23	U9.4S	9.6	U8.6S	7.4S	U7.3S	7.2	J8.1S	10.6	10.1	10.5H	11.2	12.3H	12.9	13.0	13.1	12.5	11.5	11.5	11.0	11.1S	I10.4S	U9.5S	U9.9S	J10.2S
24	10.5	11.1	J10.4S	9.1	7.9	U7.7S	8.9	10.6	10.8	11.2H	11.4H	12.4	13.5	12.5	U13.5R	13.6	13.1	12.4	11.4	10.5	J9.8S	9.7S	9.2	9.3
25	8.7	9.2	8.4	J7.9S	7.4	7.2	8.1	10.3	12.4H	12.7H	13.2H	13.8SH	14.3	14.5	U14.5S	J14.6SH	U14.3S	U13.9S	U13.5R	S	S	S	I11.3S	11.0
26	J10.5S	9.3S	D6.0C	D6.0C	D6.0C	D6.0C	D6.0C	D6.0C	I12.0C	12.0	U12.9R	I13.4RH	I13.8RH	13.6	13.5	13.1	12.4	12.2	11.9	11.5	I10.4S	I10.0S	9.4	J9.8S
27	J10.5S	9.0	8.9	J7.7S	7.0	6.9	7.2S	J10.4S	11.3	I10.6C	11.3H	12.3	12.6	12.8	13.1	12.5	12.5	13.0	11.4	10.9S	9.0H	9.0	9.5S	J9.9S
28	9.0	U8.2S	7.4	6.1H	6.0	5.8	7.0	11.7S	13.6	12.1	12.1H	12.1	11.8	I10.1R	9.0	8.4	8.3	8.5	8.8	9.1	9.2	I9.7S	10.5S	9.7S
29	I9.4S	9.3	8.7	8.5	7.5S	7.1	7.5	9.3	10.0H	10.4H	11.5H	12.6	13.3	13.2	12.7	12.5	12.3	11.7	11.5S	U11.4S	S	S	S	S
30	I11.3S	J10.4SH	9.3S	J8.3S	7.5S	7.0	8.0S	J10.2S	10.5	11.1H	12.0H	12.4H	13.4	13.0	12.5	11.9	11.5	11.9	11.6	10.9S	9.4S	9.3S	9.2S	J8.5S
31	8.8	I8.1S	8.1	7.8S	7.6	7.4	9.0	11.5	10.6	10.4	11.7H	12.7H	13.7	14.5	14.4R	13.7	13.0	12.4	12.1	11.7	J10.3S	9.4S	U9.7S	I9.6S
No.	31	31	29	29	28	28	30	29	30	31	31	31	31	31	31	31	30	30	31	30	29	29	29	29
Median	9.3	9.2	8.7	8.0	7.5	7.4	8.2	10.0	10.2	9.9	10.3	11.1	11.8	11.6	12.1	11.9	12.2	11.7	11.4	10.6	9.4	9.3	9.3	9.3
U.Q	10.2	9.8	9.1	8.6	7.8	7.6	8.8	10.6	10.8	10.9	11.4	12.3	12.7	13.0	13.1	13.3	13.0	12.6	12.0	11.4	10.4	10.2	10.2	10.0
L.Q	8.8	8.7	8.2	7.4	7.3	7.0	7.9	9.4	9.3	9.3	9.9	10.5	10.8	11.0	11.1	11.4	11.0	10.7	10.0	9.6	9.0	8.4	8.5	8.8
Q.R	1.4	1.1	0.9	1.2	0.5	0.6	0.9	1.2	1.5	1.6	1.5	1.8	1.9	2.0	2.0	1.9	2.0	1.9	2.0	1.8	1.4	1.8	1.7	1.2

foF2

Sweep 1.0 Mc to 20.0 Mc in 1 ~~sec~~ min in automatic operation.

The Radio Research Laboratories, Japan.

Y 1

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IONOSPHERIC DATA

Aug. 1958 | foF1 | 135° E Mean Time (G.M.T.+ 9h.) | 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											6.8	6.8	6.5	6.5	6.7	6.3	I 6.4 A	6.5	L					
2											6.6	6.5	7.0	6.5	6.7	6.4	6.5 H	A						
3										6.0	7.0 L	6.1	6.6	6.5	I 6.3 A	6.2	A	A						
4										A	A	I 6.3 A	I 6.4 A	6.2	A	A	A	A						
5											6.7	6.7	I 6.6 A	6.6	I 6.4 A	6.0	I 5.8 A	L						
6										A	A	6.4	U 6.5 R	6.7	6.7	6.5	6.5	5.7						
7												6.5	6.4	6.4	6.2	6.0	6.3	6.2						
8												A	A	6.5	6.6	6.2 L	6.3	L						
9												6.5	6.5	6.6	6.2	I 6.3 A	6.0	L	L					
10											A	A	A	A	A	A	A	L	L					
11											6.3		6.8	6.7 H	6.5 L	6.6	6.4	L						
12												6.3	7.0	6.2	6.5	6.7 H	5.8	L						
13												6.1	6.2	6.5	6.7	6.2	L	L						
14													L	7.0 L	6.7	6.6	L	A						
15												6.7 L	7.0	5.8	I 6.4 A	I 6.2 A	I 6.0 A	L						
16												6.8	7.0	6.3 H	I 6.6 B	I 6.5 R	I 6.2 L	L						
17											6.7 2	6.7 L	L	6.3	6.2	A	A	A						
18										A	A	6.2	6.9	6.3	6.0 H	6.6	5.9	L						
19											6.8 LH	6.6	6.6	6.5	6.7	6.7	L	L	L					
20												6.7 LH	7.2	6.6	6.6	6.3	I 6.0 A	L						
21												6.6	6.6	6.0	L	I 6.5 A	A	A						
22													7.1	6.9	6.7	6.7		A						
23													6.9	6.6	7.0 H	6.7	7.0	A						
24												7.1	7.1	6.8 H	6.3	6.9	7.0	6.2						
25													7.5 R	7.2	7.0 H		7.4	6.8 L						
26														7.5	6.8	7.1	I 7.1 LH	A						
27												7.2 H	7.5 R	I 7.0 A	7.0 H	6.5	6.1	L						
28												7.7	6.8	I 6.3 A	6.2	5.9	5.6	I 5.4 A						
29												7.3	7.0	7.2	6.5	6.5	6.2	L						
30													7.0	7.4 H	7.0	6.4	6.3	L						
31													6.9	6.8	7.2	6.8	6.9	L						
No.										1	7	21	26	30	28	27	22	6						
Median										6.0	6.7	6.6	6.9	6.6	6.6	6.5	6.3	6.2						

foF1

Sweep 1.0 Mc to 20.0 Mc in 1 min ~~sec~~ in automatic operation.

The Radio Research Laboratories, Japan.

Y 2

IONOSPHERIC DATA

Aug. 1953 | foE | 135° E Mean Time (G.M.T.+ 9h.) | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							2.20	2.90	3.40	3.65	3.85	A	A	R	4.20	4.10	3.85	3.55	2.85	S				
2							2.10	2.90	3.20	3.90	4.00	4.40	4.30	4.40	4.30	4.15^{R}	3.90	3.55	2.75	S				
3							A	3.30	3.75	4.00	4.10^{S}	4.40	S	S	$I4.30^{S}$	4.10^{S}	3.90	3.50	2.60	R				
4							2.20	3.00	3.50	3.90	4.10	4.10	4.00	4.00	$I4.10^{A}$	4.10	3.80	3.40	2.50	S				
5							2.20	2.90	3.30^{R}	3.85	$I4.05^{A}$	4.25	4.30	4.10^{R}	4.00^{R}	4.15	3.80	3.45	2.60	S				
6							A	2.90	R	3.85	3.95	4.00	$I3.95^{A}$	4.00	$I4.00^{R}$	3.90	3.90	3.55	2.65	A				
7							A	A	A	A	A	A	A	A	4.00	4.00	3.80	3.50	2.80	S				
8							A	$I2.85^{A}$	3.50	3.80	A	A	A	A	R	4.20	3.95	3.60	2.80	S				
9							2.30	2.85	3.50	$I3.80^{A}$	4.00	4.15	4.30	$I4.40^{B}$	4.25	4.20	4.00	A	A	A				
10							A	2.80	3.40^{R}	3.80	4.00	4.00	$I3.95^{A}$	$I4.10^{A}$	A	A	A	3.30	2.75	S				
11							1.85	2.90	3.45	A	A	4.10	4.00	4.30	4.20	4.05	3.80	3.10	A	A				
12							A	2.85	A	A	A	$I4.00^{A}$	$I4.10^{A}$	4.20	4.30	4.10	3.80	3.50	2.65	S				
13							S	2.80	3.40	3.60	3.90	4.20	4.30	4.35	4.30	4.05	3.60	3.30	2.60	S				
14							1.70	2.90	3.40	3.65^{S}	3.70	A	A	A	4.15^{H}	4.00	A	R	2.80	A				
15							S	2.90^{H}	3.40	3.80	4.00	4.20	4.20	4.30	4.20	4.00	3.75	3.20	A	A				
16							1.85	2.85	3.40	3.70	4.00	4.05	4.25	4.30	B	B	4.00^{R}	3.50	2.60	S				
17							1.70	2.70	3.15	A	A	A	4.30	4.35^{R}	4.20	4.10	3.80	3.40	A					
18							A	2.70	3.30	3.70	A	A	A	A	4.10	4.00	3.75	3.40	2.65	S				
19							1.75	2.75	3.35	3.65	3.80	4.10	4.20	4.20	4.00	3.85	3.60	A	A					
20							A	2.80	$I3.40^{A}$	$I3.75^{A}$	$I3.95^{R}$	4.20^{R}	4.30^{R}	4.10	3.95	3.70	A	A	2.50	S				
21							S	$I2.70^{A}$	$I3.30^{R}$	R	4.00	$I4.10^{A}$	4.20	4.20	4.10	4.00	3.65	3.25	2.50					
22							S	2.90	3.40	3.80	3.95	4.05	$I4.15^{R}$	4.20	4.20	4.10	3.80	3.40	2.55	S				
23							S	2.70	3.30	$I3.65^{A}$	3.80	A	A	4.10	4.30	4.10	3.60	3.30	2.55	S				
24							A	2.70	$I3.40^{A}$	3.75	4.05	4.20	4.35	4.30	4.20	4.05	3.80	3.30	2.20	S				
25							A	2.80	3.50	3.80	4.10	4.20	4.40	4.30	$I4.10^{A}$	4.00	A	A	A	S				
26							S	2.70	$I3.40^{C}$	A	B	B	4.40^{R}	4.40^{R}	4.40	4.00	3.80	A	A	A				
27							A	2.80	3.50^{H}	$I3.90^{C}$	4.15	4.30	4.40	4.40	4.25	4.10	3.80	3.20	2.40	S				
28							1.65	2.80	3.40	3.85	4.15	4.40	4.30	4.30	4.20	4.10	3.85	3.30	2.50	S				
29							1.70	2.70	3.40	3.70	3.90	4.00	4.10^{R}	4.20	4.10	4.10	3.90	3.20^{R}	A	A				
30							1.70	2.80	3.40	3.75	4.00	A	A	A	$I4.10^{A}$	$I3.90^{A}$	3.80	3.25	2.35					
31							S	2.70	3.30	3.60	A	A	A	A	A	3.90	3.70	3.30	2.40					
No.							13	30	28	25	23	21	22	23	27	29	27	25	23					
Median							1.85	2.80	3.40	3.80	4.00	4.15	4.30	4.30	4.20	4.05	3.80	3.40	2.60					

foF

Sweep 1.0 Mc to 20.0 Mc in 1 min ~~sec~~ in automatic operation.

The Radio Research Laboratories, Japan.

Y 3

IONOSPHERIC DATA

Aug. 1958 | foEs | 135° E Mean Time (G.M.T.+ 9h.) | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.8M	C	2.3M	E	E	E	5.8M	G	5.7M	8.2M	7.6M	9.7M	7.0M	5.0	7.2M	5.6	9.6M	6.4M	3.8	5.2M	2.3M	12.5M	9.2M	4.5M
2	4.3M	4.1M	3.5M	3.0M	3.1M	3.2M	2.4	6.0M	5.5M	9.2M	9.5M	6.4	7.6M	5.9	6.5	G	G	8.6M	6.5M	6.1M	5.9M	5.9M	3.0M	4.3M
3	4.5M	E	2.1M	2.8M	2.3M	3.1M	3.1M	3.7	4.9	7.0	7.4M	7.6M	5.0	5.2	8.6M	6.1M	7.5M	7.2M	7.7M	5.0M	9.2M	8.8M	6.9M	9.2M
4	7.5M	8.6M	6.7M	5.8M	6.1M	5.5M	3.1	7.0	8.0M	10.6M	9.5M	16.0M	12.4M	7.5M	14.6M	10.3M	15.8M	13.3M	11.7M	12.0M	9.2M	7.7M	7.2M	4.5M
5	4.4M	7.0M	5.4M	4.5M	3.9M	5.8M	5.9M	6.9M	10.6	9.1M	5.8M	5.9M	8.5M	9.3M	8.2	5.9	7.4M	7.2M	7.7M	3.9M	3.6M	2.7M	2.4M	2.2M
6	2.2M	2.0M	5.8M	6.5M	4.4M	7.5M	2.3	7.2M	8.4M	12.0M	12.2M	15.1M	14.6M	12.5M	8.2M	9.8M	4.3	5.7M	7.5M	5.7M	4.3M	7.4M	4.3M	5.9M
7	5.9M	5.9M	6.5M	4.5M	5.0M	4.2M	3.1M	5.2M	5.2M	5.5M	4.7M	5.9M	5.6M	5.8M	G	G	G	G	G	1.9	3.6M	3.2M	3.1M	3.2M
8	3.2M	6.5M	9.3M	6.5M	4.5M	3.8M	3.8M	4.7M	8.8M	7.9M	7.5M	12.5M	10.6M	12.5M	7.5M	4.8	5.6M	6.5M	7.7M	6.8M	5.0M	2.9M	S	2.1M
9	S	E	E	E	E	2.2M	2.9	4.4M	4.5	5.6M	5.3	6.5M	5.1	7.3M	6.4M	10.6M	6.2M	6.5M	3.9M	3.8M	4.3M	2.0M	S	2.1M
10	7.0M	5.9M	3.8M	2.9M	2.9M	2.8M	2.8M	5.2M	5.8M	4.9	9.6M	11.1M	15.0M	13.5M	13.6M	9.0M	15.0M	3.8	3.1	4.8M	3.7M	4.4M	5.5M	3.2M
11	5.8M	3.1M	2.3M	E	3.1M	E	G	G	G	9.5M	5.7	G	6.3M	G	4.6	5.8M	5.8M	5.3	5.7M	6.5M	6.8M	2.8M	S	S
12	8.8M	9.5M	9.6M	7.0M	6.5M	3.8M	3.8M	3.6M	5.5M	6.2M	4.7M	5.5M	4.4	G	5.9	5.5	5.0	5.8M	5.2M	10.1M	9.5M	4.6M	3.3M	2.1M
13	3.1M	3.6M	3.0M	6.3M	E	E	S	5.7M	4.7	5.8	4.2	G	5.0	5.0	4.8	4.5	6.4M	7.5M	4.8M	2.4	9.6M	3.1M	4.1M	2.9M
14	3.2M	3.8M	3.1M	E	E	E	2.5	3.4	6.5M	7.3M	5.9M	7.7M	4.6	5.7M	G	4.0G	5.7M	9.3M	10.6M	6.0M	3.6M	C	2.1M	S
15	S	S	1.4	E	E	E	G	3.5	4.3	4.8	5.1	G	4.8	5.6	9.7M	11.0M	11.5M	12.0M	9.7M	7.5M	5.7M	2.8M	3.2M	2.4M
16	S	E	3.1M	3.0M	3.1M	3.0M	2.1	3.3	6.0M	7.3M	5.1	4.6	G	G	B	B	5.1	7.5M	3.4	3.8M	6.8M	4.2M	3.2M	7.0M
17	5.9M	4.3M	3.6M	3.1M	1.3	E	3.1M	3.3	7.1M	5.9M	6.2M	5.9M	4.7	5.3	6.3	7.3M	7.4M	6.5	9.2M	7.5M	5.1M	5.8M	3.6	3.6M
18	3.2M	3.1M	3.1M	2.8M	3.1M	S	2.4	3.6	3.6	7.7M	11.2M	6.6M	6.5M	4.5M	G	5.9M	G	3.7	3.4	2.7M	5.5M	3.0M	10.0M	6.5M
19	4.4M	2.8M	3.1M	E	E	E	2.0	3.1	3.9	4.4	4.5	G	G	G	4.7	4.5	3.9	6.3M	4.5M	3.2M	3.2M	3.2M	4.0M	3.0M
20	2.8M	3.1M	3.4M	2.7M	2.6M	3.1M	2.7M	G	3.8	3.8	4.8	4.7	5.6	5.4	6.3	6.8M	12.4M	4.3M	3.9	5.2M	3.8M	3.4M	3.3M	2.2M
21	3.9M	3.6M	4.0M	2.4M	1.4	2.8M	2.3	3.6M	4.7	5.8M	7.0M	5.8M	6.2M	5.4	5.5	7.0	8.8M	11.0M	8.0M	11.0M	4.9M	4.6M	3.6M	3.8M
22	3.6M	3.3M	3.4M	E	E	E	3.2M	3.5	3.7	5.0	5.0	5.0	G	4.4	5.0	5.4	6.9M	7.0M	5.9M	4.9M	7.1M	3.6M	2.8M	5.9M
23	8.8M	5.6M	4.5M	3.1M	3.7M	3.1M	2.9M	3.1M	3.7	6.5M	7.7M	5.9M	9.5M	6.4	5.0	5.8M	5.8	8.3M	6.5M	3.9M	4.3M	4.0M	5.8M	8.8M
24	5.3M	3.5M	3.6M	3.3M	3.3M	2.6M	3.1M	G	5.0M	4.8	5.4	4.4M	4.7	5.9M	4.8	6.7	4.6	4.6	11.2M	3.8M	3.2M	2.4M	5.5M	5.8M
25	4.6M	5.9M	7.0M	5.0M	4.3M	3.6M	3.8M	3.6	6.2M	5.9	5.2	6.7	5.0	7.0M	5.1	4.5	4.5	4.5M	4.3M	3.8M	3.3M	2.2M	2.3M	3.9M
26	3.0M	3.1M	1.5	E	E	E	1.8	3.2	C	9.1M	B	5.9M	G	5.9M	5.9M	4.3	G	7.0M	3.5M	3.4M	4.4M	3.9M	3.2M	3.5M
27	3.1M	3.1M	E	E	E	2.9M	2.5M	3.1	G	C	6.1	5.3	6.6	9.4M	G	G	9.0M	4.9	6.0M	5.0M	5.3M	6.2M	3.2M	7.1M
28	3.5M	3.1M	2.9M	1.5	4.3M	4.4M	5.1M	4.4M	4.5	8.1M	12.3M	8.5M	8.4M	7.8M	G	5.1	4.9	6.7M	7.1M	6.5M	9.5M	4.8M	5.8M	6.5M
29	3.6M	3.6M	3.2M	3.6M	3.2M	2.4M	2.8M	5.7M	6.2M	7.0M	7.0M	6.5M	6.5M	5.2	4.6	5.6	5.9M	5.9M	6.8M	5.0M	6.1M	4.4M	2.4M	3.0M
30	2.6M	E	E	E	E	E	2.2	3.3	3.8	5.3	G	6.5M	5.7M	5.6M	4.7	4.2	4.5	4.4	5.2M	6.1M	5.9M	4.3M	5.9M	5.8M
31	3.7M	3.6M	4.2M	3.6M	3.1M	E	3.6M	2.9	4.0	4.3	5.9M	4.7	6.0M	8.5M	5.2M	G	4.8	3.8	6.5M	5.0M	5.9M	6.3M	4.3M	7.0M
No.	28	29	31	31	31	30	30	31	30	30	30	31	31	31	30	30	31	31	31	31	31	30	28	29
Median	3.8M	3.6M	3.4M	2.9M	3.1M	2.8M	2.8M	3.6	5.0	6.4M	5.9M	5.9M	5.7M	5.7M	5.4	5.6	5.8M	6.5M	6.0M	5.0M	5.1M	4.1M	3.6M	3.9M
U.Q	5.6	5.8	4.5	4.5	3.9	3.6	3.2	5.2	6.2	8.1	7.6	7.6	7.6	7.5	7.2	6.8	7.5	7.5	7.7	6.5	6.8	5.8	5.6	6.2
L.Q	3.2	3.1	2.3	E	E	E	2.3	3.1	3.9	5.3	5.1	4.7	4.7	5.0	4.7	4.5	4.5	4.6	3.9	3.8	3.7	3.0	3.2	3.0
Q.R	2.4	2.7	2.2				0.9	2.1	2.3	2.8	2.5	2.9	2.9	2.5	2.5	2.3	3.0	2.9	3.8	2.7	3.1	2.8	2.4	3.2

foEs

Sweep 1.0 Mc to 20.0 Mc in 1 ~~sec~~ min in automatic operation.

The Radio Research Laboratories, Japan.

Y 4

IONOSPHERIC DATA

Aug. 1958 | fbEs | 135° E Mean Time (G.M.T.+ 9h.) | **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	S	C	1.7				G		G	4.6	4.7	5.1	5.1	4.6	4.7	4.6	A	4.4	3.3	4.4	1.7	A	5.2	2.9
2	2.9	2.5	1.9	1.9	1.7	1.6	G	$^{U}3.4^{A}$	4.3	5.0	6.1	G	4.7	5.1	4.5			6.4	5.4	4.7	3.0	4.5	1.9	3.4
3	3.5		E	E	1.2	E	G	3.6	4.6	4.6	4.6	4.9	4.9	4.9	7.8	4.9	6.8	6.2	4.1	4.3	8.4	5.2	3.8	S
4	2.5	4.6	1.7	2.9	4.1	2.6	2.3	6.3	6.6	A	8.5	A	A	4.7	8.5	9.9	A	A	8.0	A	4.6	3.9	5.0	2.9
5	2.9	4.7	4.4	3.9	2.7	4.0	4.6	5.1	A	7.9	4.7	5.3	7.3	5.4	7.1	4.8	6.7	4.7	4.6	3.1	1.9	1.8	E	E
6	E	1.2	E	1.1	1.8	3.4	G	6.6	7.7	A	A	5.4	5.5	5.4	5.0	4.6	4.2	4.7	6.4	4.8	3.4	4.6	2.8	3.7
7	4.0	3.8	4.6	2.9	2.8	2.6	G	4.2	3.8	4.1	G	4.5	4.6	4.4						G	2.6	2.0	2.0	1.9
8	1.7	2.8	5.3	2.5	2.5	1.9	2.4	3.8	6.6	7.3	5.6	A	8.3	4.8	5.2	4.6	G	5.0	6.8	4.1	3.3	E	S	E
9	S					E	G	G	3.8	G	4.6	4.7	4.7	5.7	5.2	7.8	4.6	4.3	G	1.9	3.0	E	S	E
10	2.5	2.5	2.2	1.7	1.7	1.9	2.4	3.1	3.8	4.5	7.9	8.0	A	A	10.5	7.0	A	3.6	2.9	2.5	1.7	2.6	3.5	2.0
11	2.5	2.1	1.8		E					G	G		G		4.6	4.7	5.0	4.1	4.6	3.8	4.6	E	S	S
12	2.7	6.7	7.9	4.7	4.6	2.5	G	2.6	3.9	5.5	G	G	G		4.9	G	4.4	4.9	4.3	A	3.5	2.9	S	E
13	2.0	2.2	1.8	E			S	G	G	4.0	G		4.8	4.6	4.6	G	4.7	3.9	3.9	2.0	5.5	1.8	2.4	1.8
14	1.7	$^{E}3.4^{A}$	2.0				G	G	G	5.9	4.9	6.7	4.4	4.4		3.8	4.9	8.3	10.0	4.9	2.3	C	E	S
15	S	S	$^{D}1.4^{S}$					G	4.2	4.4	4.6		4.5	5.1	9.0	9.0	10.7	4.4	G	3.5	2.7	1.7	1.7	E
16	S		1.7	2.0	2.0	1.5	2.1	G	5.7	6.6	5.0	4.5			B	B	5.1	3.8	3.1	3.1	E	2.5	2.6	3.5
17	3.4	2.9	2.4	1.9	1.3		G	G	4.0	4.4	4.6	4.7	4.6	4.7	5.4	6.3	6.7	5.7	7.4	5.5	2.7	1.9	2.7	2.5
18	2.0	2.0	1.8	1.7	1.3	S	2.0	3.4	G	7.4	8.4	4.7	4.5	4.4		G		G	3.1	2.1	3.4	1.7	5.4	3.9
19	2.5	1.7	1.7				G	G	3.4	4.3	4.3				4.5	4.4	$^{D}3.9^{B}$	4.8	4.4	2.2	2.6	2.2	2.2	1.6
20	E	1.7	1.7	1.7	1.7	1.7	G		$^{D}3.8^{B}$	$^{D}3.8^{B}$	4.8	4.5	5.3	4.7	5.1	5.0	6.2	G	$^{U}3.3^{A}$	4.6	2.5	1.8	2.2	1.7
21	2.3	2.2	2.5	1.2	1.1	E	G	G	4.3	4.1	4.9	4.5	5.3	4.8	4.6	7.0	7.8	3.0	7.5	5.0	2.1	2.5	2.5	2.2
22	2.1	1.7	1.8				G	3.4	3.7	4.6	4.6	4.6		G	5.0	4.7	6.2	6.5	5.0	4.0	4.7	1.7	E	3.4
23	4.1	2.9	2.5	1.9	1.9	E	G	2.3	3.6	5.2	5.0	G	5.5	6.1	4.6	G	5.3	8.0	5.4	3.0	3.4	2.7	4.3	4.1
24	3.7	2.5	1.7	E	1.3	1.6	1.8		3.9	4.6	4.6	3.7	4.5	G	4.7	6.7	4.3	4.5	6.4	2.0	1.7	E	3.9	4.2
25	2.8	3.8	4.9	4.1	3.4	1.7	G	3.2	3.8	G	G	5.7	4.7	5.4	4.3	G	4.3	3.9	3.4	2.8	2.4	E	E	S
26	1.9	1.7	1.4				G	3.1	C	8.4	B	5.2		G	3.7	4.3		6.0	G	2.5	2.9	2.8	2.2	2.5
27	1.9	1.9				E	G	G		C	5.3	4.6	6.5	9.0			5.0	4.8	4.2	3.8	3.1	2.6	E	5.0
28	2.0	1.7	1.3	1.4	2.9	3.1	2.7	3.1	4.3	5.2	4.6	6.5	5.3	A		4.6	4.2	5.5	6.2	4.6	6.2	3.4	2.5	2.5
29	2.0	1.7	2.5	2.0	2.0	1.6	G	4.6	4.8	5.7	4.8	4.6	5.7	5.0	$^{D}4.6^{S}$	4.6	4.7	G	3.8	2.4	3.4	1.9	E	1.7
30	E						G	3.3	$^{D}3.8^{B}$	G		4.8	4.3	G	4.4	G	4.2	4.2	4.3	4.7	5.1	2.5	3.8	2.8
31	2.6	2.9	3.2	2.6	2.6		G	G	G	4.1	4.4	4.6	4.7	5.1	G		G	3.6	5.5	3.2	3.4	4.1	2.5	1.9
No.	27	24	27	21	21	19	28	27	26	29	29	27	27	27	24	26	26	30	30	31	31	30	27	27
Median	2.5	2.4	1.8	1.9	1.9	1.7	G	3.1	3.9	4.6	4.7	4.7	4.8	4.8	4.8	4.6	5.0	4.6	4.4	3.8	3.0	2.4	2.5	2.5

fbEs

Sweep 1.0 Mc to 20.0 Mc in 1 ~~sec~~ min in automatic operation.

The Radio Research Laboratories, Japan.

Y 5

IONOSPHERIC DATA

Aug. 1958 | f-min | 135° E Mean Time (G.M.T.+ 9h.) | **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	E1.60S	E3.80C	E	1.20	1.15	1.25	1.50	1.10	1.85	1.85	2.20	2.50	2.40	2.45	2.45	1.85	1.85	1.50	1.10	1.10	1.20	E1.60S	E1.60S	E1.60S
2	E1.60S	E	E	E	E	E	1.60	1.25	2.00	1.80	2.45	2.20	2.20	2.20	2.50	2.30	1.90	1.85	1.50	1.20	1.20	E1.55S	E1.50S	E1.60S
3	E1.50S	1.30	E	1.30	E	1.20	1.60	1.50	2.00	2.35	2.45	2.55	2.75	2.80	2.55	2.45	2.20	1.60	E1.60S	1.70	1.20	1.15	E1.60S	E1.50S
4	E1.50S	E	E	E	E	1.10	1.75	1.85	1.85	2.00	1.90	2.45	2.20	2.45	3.40	2.50	2.45	2.20	E1.55S	E1.50S	E1.55S	E1.60S	E1.50S	1.25
5	E1.60S	E	E	E	E	1.10	1.20	1.60	1.75	1.85	2.70	2.20	2.20	2.45	2.60	2.30	2.20	1.85	E1.50S	1.55	E1.60S	1.15	E1.60S	E1.60S
6	E1.60S	E	E	E	E	E	1.60	1.60	1.70	2.20	2.20	2.20	2.50	2.50	2.30	2.60	2.20	1.60	E1.50S	1.15	E1.60S	E1.60S	E1.60S	E1.60S
7	E1.60S	1.30	E	E	E	E	1.25	1.50	1.60	2.20	2.45	2.20	2.60	2.20	2.30	1.90	2.20	1.75	1.85	E1.65S	E1.60S	E1.50S	1.25	E1.50S
8	E1.60S	E	E	E	E	1.10	1.20	1.50	1.70	1.70	2.20	1.90	2.55	2.45	2.20	1.90	2.20	E1.55S	E1.50S	1.15	E1.55S	E1.60S	E1.60S	E1.60S
9	E1.70S	E1.70S	1.30	E	1.30	1.20	1.15	1.25	1.50	1.90	2.20	2.20	2.50	4.60	2.20	1.90	1.90	1.60	E1.50S	1.50	E1.60S	E1.60S	E1.70S	E1.60S
10	E1.50S	E1.70S	E	E	E	E	1.15	1.25	1.60	2.20	1.90	2.00	2.20	2.35	2.45	2.00	2.20	E1.50S	E1.60S	E1.60S	E1.50S	E1.60S	E1.70S	E1.70S
11	E1.70S	1.15	E	1.15	1.20	1.15	1.65	1.25	1.90	2.00	2.20	2.20	2.20	2.45	2.20	2.20	1.90	1.90	1.60	E1.50S	E1.60S	E1.55S	E1.70S	E1.60S
12	E1.60S	E	E	E	E	1.15	1.20	1.25	1.60	2.00	1.90	1.90	2.20	2.20	2.45	1.90	1.60	E1.70S	E1.50S	E1.50S	1.30	E1.60S	E1.70S	E1.50S
13	E1.50S	1.25	1.10	1.50	E	1.30	E2.30S	1.60	1.50	2.20	2.55	2.60	2.55	2.20	2.00	2.30	1.80	E1.50S	1.20	E1.50S	E1.60S	E1.60S	E1.60S	E1.60S
14	E1.60S	E	E	E1.70S	1.15	1.25	1.60	1.20	1.70	1.90	1.80	2.60	2.45	2.45	2.30	2.20	1.85	1.75	E1.50S	1.30	E1.55S	C	E1.60S	E1.50S
15	E1.60S	E1.70S	E	1.20	E	1.15	1.60	2.30	1.75	2.10	2.20	2.20	2.00	2.90	2.30	E2.45C	2.00	E1.50S	1.15	1.10	1.25	E1.55S	E1.50S	E1.60S
16	E1.70S	E	E	E	E	E	1.30	1.20	1.55	1.90	2.20	2.30	2.45	2.45	B	5.20	3.40	1.85	E1.50S	1.10	E1.60S	E1.50S	E1.60S	E1.60S
17	E1.65S	1.20	E	E	E	1.15	1.60	1.50	1.60	1.90	2.20	2.20	2.45	2.60	2.20	2.25	2.00	E1.60S	E1.50S	1.20	1.30	E1.50S	E1.50S	E1.50S
18	E1.60S	E	E	E	E	E1.70S	1.15	1.50	1.60	1.90	2.25	2.00	2.30	2.65	2.00	1.90	1.60	1.50	1.25	E	E1.60S	E1.60S	E1.50S	E1.60S
19	E1.60S	1.20	E	E	E	1.20	1.60	1.60	1.30	1.80	1.90	2.00	2.20	2.45	2.40	1.90	1.90	1.50	1.10	1.25	1.20	E1.70S	E1.70S	E1.50S
20	E1.65S	E	E	E	E	1.20	1.20	2.00	2.60	2.45	4.40	2.45	2.45	2.45	2.05	1.90	1.70	1.60	1.15	1.15	E1.60S	E1.55S	E1.70S	E1.60S
21	E1.70S	1.20	E	E	E	1.15	1.30	1.50	1.70	1.70	1.70	2.20	2.20	2.20	2.20	1.60	1.50	E1.65S	E1.50S	E1.50S	1.20	E1.60S	E1.60S	E1.60S
22	E1.50S	E	E	1.20	1.10	1.15	1.15	1.25	1.70	1.60	1.70	2.20	1.85	2.20	2.20	2.20	1.70	1.85	1.15	E	E1.60S	E1.55S	E1.55S	E1.60S
23	E1.60S	E	E	E	E	E1.60S	1.30	1.25	1.70	2.00	1.85	2.20	2.45	2.45	2.45	2.20	1.70	1.50	1.10	1.15	E1.70S	E1.60S	E1.70S	E1.65S
24	E1.60S	1.20	E	1.20	E	E	1.25	1.70	1.60	2.00	1.65	2.30	2.40	2.20	2.00	1.90	1.55	E1.50S	E1.65S	E1.60S	E1.60S	E1.65S	E1.60S	E1.70S
25	E1.60S	1.20	E	1.10	E	1.20	1.15	1.55	1.60	1.60	1.70	2.45	2.20	1.85	2.05	1.85	1.80	E1.60S	E1.65S	E1.60S	E1.60S	E1.65S	E1.60S	E1.70S
26	E1.70S	1.20	1.25	1.15	1.25	1.40	E1.70S	1.80	I2.00C	2.00	8.50	4.15	3.20	2.70	2.45	2.30	1.85	1.50	1.60	1.15	E1.60S	E1.60S	E1.50S	E1.60S
27	E1.60S	E	E	E	E	1.15	1.20	1.50	1.80	I1.70C	2.20	2.20	2.50	2.20	2.20	2.45	1.90	1.50	1.30	1.15	E1.50S	E1.50S	E1.50S	E1.60S
28	E1.50S	E	E	E	1.10	1.15	E1.60S	1.60	1.50	1.50	1.95	2.20	2.20	2.50	1.90	2.00	1.85	1.50	1.30	1.15	E1.55S	E1.50S	E1.60S	E1.60S
29	E1.60S	E	E	E	E	1.25	1.15	1.50	1.50	1.60	1.85	2.45	2.60	2.45	2.45	1.85	1.60	1.30	E1.60S	1.10	E1.60S	E1.60S	E1.70S	E1.50S
30	E1.60S	1.20	E	E	E	E1.50S	1.15	1.50	1.60	1.85	2.00	2.20	2.45	2.45	2.20	1.90	2.00	1.55	1.50	E1.55S	E1.60S	E1.50S	E1.60S	E1.50S
31	E1.60S	1.20	E	E	E	1.25	1.25	1.60	1.60	1.80	1.90	2.50	2.20	2.60	2.00	2.00	1.65	1.15	1.10	E1.70S	E1.70S	E1.60S	E1.60S	E1.60S
No.	31	27	31	30	31	28	28	31	31	31	31	31	31	31	30	30	31	26	25	20	31	30	31	31
Median	E1.60	E	E	E	E	1.15	1.25	1.50	1.70	1.90	2.20	2.20	2.40	2.45	2.25	2.00	1.90	1.50	E1.50	1.15	E1.60	E1.60	E1.60	E1.60

f-min

Sweep 1.0 Mc to 20.0 Mc in 1 min sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | (M3000)F2 | 135° E Mean Time (G.M.T.+ 9h.) | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.65	2.90	J2.80R	2.45	2.30	2.40	2.80	3.15	2.50H	2.55H	2.55	2.50	2.60	2.60	2.65	2.65	I2.75S	2.75	2.80	2.75	2.40	I2.40A	2.35	I2.55S
2	2.50	I2.90S	2.70	2.50H	2.45H	2.50	2.95	2.95	2.80H	2.70	2.60	2.70	2.65	2.65	2.55	2.65	2.70	2.75	2.75	2.65	2.65	2.55	2.60S	I2.50S
3	I2.50S	2.65S	2.75	J2.50R	2.55R	2.50	2.75R	2.80R	2.95RH	2.60	2.55	2.20	2.60	2.55	2.55	2.60	2.70	2.65	2.65	J2.75R	2.70	2.45	2.45	2.50
4	2.60S	2.65S	2.80S	2.75S	2.75	2.70	2.90	F	F	I2.80A	2.50	I2.55A	2.60	2.55	2.55	2.65	A	A	2.70S	I2.70A	J2.55S	2.60H	2.60S	U2.55S
5	I2.70S	J2.65S	2.60	2.70	U2.60S	2.45	2.60	3.00	I3.15A	2.60	2.55	2.55	2.75	2.65	2.55	2.55	2.65	2.80	2.95	U2.65R	2.45R	2.45	J2.50S	2.50S
6	2.55	I2.70S	F	F	F	F	2.90	3.20	2.80	A	I2.60A	2.60	2.75	2.70	2.75	2.75	2.60	2.70S	2.70S	2.85S	2.60	J2.50S	2.50	2.55S
7	J2.70S	2.65	2.70	2.70	I2.70S	2.80S	J2.95R	3.10	3.10H	2.90H	2.60H	2.65	2.60	2.55	2.55	2.70	2.70	2.75	I2.80RH	J2.70S	2.70	2.65	J2.50S	J2.50S
8	J2.60S	2.60	2.90	2.95	F	F	J2.80VR	2.95S	2.75	2.55	2.65H	I2.70A	2.60	2.60	2.70	2.70	2.75	2.75S	2.90S	2.85	2.60	2.65S	J2.65S	2.60S
9	U2.65S	I2.75S	I2.60S	J2.75S	2.70	J2.70S	2.80	2.95H	3.25H	2.80H	2.95H	2.60	2.55	2.55	2.60	2.60	2.65	2.75	2.85	U2.75S	2.65	2.60	2.65	2.65
10	2.65	2.65	2.70	2.65	2.70	2.75S	U3.30S	3.00	3.00	2.70	2.70	2.70	I2.55A	I2.60A	2.60	2.60	I2.70A	2.70	2.75	2.80S	2.65	2.60	2.60S	2.60
11	U2.55S	2.60	2.55	J2.55S	J2.55S	2.65	2.90	2.90S	3.05H	2.90H	2.65	CH	2.70	2.65	2.70	2.60	2.60S	2.80	2.90R	2.90	J2.65S	I2.50S	U2.50S	2.70S
12	I2.80S	2.75S	2.90	2.65	2.70S	2.70S	2.85	3.15	2.85H	3.05	2.75H	2.80	2.75	2.80	2.75	2.70	2.80	2.70S	U2.90S	I2.80S	U3.05S	J2.60S	U2.50S	2.60
13	J2.60S	2.55V	2.55V	I2.70F	2.70	2.85	3.30	3.35	3.10H	2.85H	2.50SH	2.70	2.70	2.65	2.65	2.70	2.75	2.75	2.90	3.00	U2.85S	J2.55S	U2.50S	I2.60S
14	2.75	2.75	2.70	J2.80R	2.75S	2.70	2.90	3.20S	3.20	2.95	2.75H	2.65	2.65	2.65	2.70S	I2.70S	2.80	2.80S	2.80S	2.80	I2.80S	I2.65C	I2.70S	2.70
15	2.65S	2.75S	2.85	J2.80S	U2.80S	2.70S	3.15	3.25	3.10	2.95	2.65H	2.60	2.60	2.70S	2.65	2.65	U2.70S	2.80S	2.85S	U2.80S	J2.60S	J2.60S	J2.80S	U2.75S
16	I2.65S	2.85S	2.65S	2.80	J2.80S	2.95S	J2.80S	3.20	3.05H	3.15	2.60H	2.55	2.60S	2.65	I2.70B	2.70	2.65	2.75S	2.85	J2.85S	2.60S	2.65S	2.75	2.70
17	J2.60S	2.50	2.55	I2.50F	I2.70F	2.85	2.90	3.05	3.15	3.00H	2.85	2.70	2.60	2.65	U2.65S	2.70	2.70	2.75S	2.75	2.80	I2.90S	2.55	2.55S	J2.75S
18	2.80S	2.40	2.25	2.40	2.10F	2.40	2.55	2.85	2.95H	2.40	A	2.95	2.50	2.60	2.65	2.75	2.75	2.80	2.85S	2.90S	U2.60S	U2.35S	2.45S	2.55
19	2.55	2.85	2.80	2.75	2.60	2.60	J2.85S	3.25	3.15	2.95H	2.85	2.75	2.70	2.60	2.70S	U2.70S	2.75	2.75	2.85	3.10	2.90S	J2.50S	S	S
20	2.65	2.75	2.75S	J2.65R	J2.75R	2.85S	3.20	3.30	3.10R	3.00	2.85H	2.80	2.65	2.55	2.50	2.50	I2.70S	2.90	2.95S	2.95S	I2.80S	I2.65S	J2.60S	J2.60S
21	I2.60S	2.75	2.85S	3.00	3.10	2.65	3.00	3.20	3.00H	3.00H	2.70H	2.75	2.60	2.50	2.55	2.65	2.75	2.70	2.80	I2.80S	2.85	2.60	I2.65S	J2.60S
22	I2.60S	I2.80S	I3.00S	I3.10S	2.75	J2.80S	2.90S	3.10	3.00S	2.90H	2.70H	2.70H	2.60	2.65S	2.65	2.55S	U2.70SH	2.55	2.70H	2.75	2.45	2.50H	2.50	2.55
23	U2.65S	2.85	U2.70S	2.55S	U2.60S	2.65	J2.85S	3.20	3.05	2.85H	2.70	2.65H	2.70	2.70	2.70	2.65	2.65	2.65	2.70	2.80S	I2.70S	U2.55S	U2.55S	J2.60S
24	2.75	2.80	J2.90S	2.85	2.70	U2.75S	2.95	3.10	3.25	2.95H	2.65H	2.60	2.60	2.40	U2.40R	2.50	2.60	2.60	2.70	2.60	J2.45S	2.60S	2.60	2.50
25	2.40	2.60	2.65	J2.65S	2.50	2.50	2.60	2.90	2.80H	2.85H	2.70H	2.70SH	2.70	2.65	U2.55S	J2.55SH	U2.60S	U2.60S	U2.75R	S	S	S	I2.60S	2.70
26	J2.80S	2.60S	C	C	C	C	C	C	I3.00C	2.85	U2.65R	I2.70RH	I2.70RH	2.65	2.70	2.70	2.65	2.70	2.75	2.80	I2.60S	I2.50S	2.55	J2.55S
27	J2.75S	2.80	2.80	J2.70S	2.50	2.45	2.85S	J3.00S	3.20	I2.90C	2.65H	2.70	2.60	2.60	2.60	2.50	2.50	2.70	2.65	2.65S	2.50H	2.55	2.55S	J2.65S
28	2.65	U2.60S	2.85	2.40H	2.55	2.40	2.50	2.90S	3.10	2.80	2.55H	2.45	2.30	I2.30R	2.30	2.40	2.40	2.55	2.65	2.65	2.55	I2.65S	2.75S	2.75S
29	I2.60S	2.50	2.55	2.70	2.45S	2.55	2.80	3.10	3.00H	2.60H	2.55H	2.60	2.60	2.60	2.55	2.55	2.55	2.65	2.60S	U2.70S	S	S	S	S
30	I2.60S	J2.60SH	2.85S	J2.80S	2.70S	2.60	2.90S	J3.05S	2.95	2.95H	2.65H	2.60H	2.60	2.65	2.60	2.60	2.60	2.70	2.80	2.85S	2.65S	2.60S	2.65S	J2.65S
31	2.60	I2.50S	2.70	2.65S	2.65	2.60	2.95	3.30	3.10	2.85	2.60H	2.55H	2.65	2.60	2.60R	2.65	2.60	2.65	2.70	2.75	J2.70S	2.60S	U2.60S	I2.80S
No.	31	31	29	29	28	28	30	29	30	30	30	30	31	31	31	31	30	30	31	30	29	29	29	29
Median	2.65	2.65	2.70	2.70	2.70	2.65	2.90	3.10	3.05	2.85	2.65	2.65	2.60	2.60	2.60	2.65	2.70	2.70	2.80	2.80	2.65	2.60	2.60	2.60

(M3000)F2 Sweep 1.0 Mc to 20.0 Mc in 1 min sec in automatic operation.

The Radio Research Laboratories, Japan.

Y

IONOSPHERIC DATA

Aug. 1958 | (M3000)F1 | 135° E Mean Time (G.M.T.+ 9h.) | 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											3.25	3.25	3.40	3.40	3.15	3.40	I3.25A	3.25	L					
2											A	3.55	3.25	3.45	3.45	3.45	3.20H	A						
3										3.65	3.15L	3.75	3.35	3.40	I3.50A	3.35	A	A						
4										A	A	I3.30A	I3.30A	3.65	A	A	A	A						
5											3.45	3.15	I3.20A	3.35	I3.40A	3.50	I3.40A	L						
6										A	A	3.45	U3.20R	3.30	3.25l	3.30	3.25	3.35						
7												3.40	3.50	3.45	3.40	3.55	3.15	3.20						
8												A	A	3.40	3.20	3.35L	3.35	L						
9												3.40	3.45	3.35	3.40	I3.30A	3.35	L	L					
10											A	A	A	A	A	A	A	L	L					
11											3.65		3.50	3.30H	3.25L	3.20	3.30	L						
12												3.50	3.30	3.50	3.30	3.30H	3.25	L						
13												3.60	3.55	3.45	3.30	3.50	L	L						
14													L	3.30L	3.15	3.20	L	A						
15												3.30L	3.30	3.80	I3.30A	I3.40A	I3.50A	L						
16												3.50	3.15	3.45H	I3.25B	I3.25R	I3.40L	L						
17											3.60Z	3.45L	L	3.70	3.20	A	A	A						
18										A	A	3.50	3.25	3.45	3.50H	3.20	3.45	L						
19											3.50LH	3.65	3.60	3.55	3.15	3.30	L	L	L					
20												3.45LH	3.25	3.35	3.25	3.25	I3.20A	L						
21												3.65	3.50	3.85	L	I3.25A	A	A						
22													3.35	3.25	3.35	3.15		A						
23													3.35	A	3.30H	3.35	3.35	A						
24												3.25	3.30	3.25H	3.50	A	3.30	3.45						
25													3.35R	3.20	3.40H		3.25	3.40L						
26														3.35	3.40	3.25	I3.30LH	A						
27												3.35H	3.20R	I3.50A	3.30H	3.60	3.25	L						
28												3.15	3.40	I3.65A	3.40	3.95	3.40	I3.20A						
29												3.25	3.40	3.35	3.60	3.40	3.25	L						
30													3.40	3.35H	3.25	3.45	3.35	L						
31													3.45	3.40	3.15	3.40	3.35	L						
No.										1	6	21	26	29	28	26	22	6						
Median										3.65	3.50	3.45	3.35	3.40	3.30	3.35	3.30	3.30						

(M3000)F1 Sweep 1.0 Mc to 20.0 Mc in 1 min ~~sec~~ in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1953 | h'F2 | 135° E Mean Time (G.M.T. + 9h.) | 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											400	405	395	390	380	395	I360A	350	300					
2											380	355	390	390	400	375	355	350						
3										405	415	390	395	410	405	395	380	355						
4										A	A	I400A	A	400	400	E400A	A	A						
5											390	360	350	380	400	385	355	310						
6										A	A	350	350	370	355	355	375	350						
7												380	385	405	400	370	365	350						
8												A	380	360	350	340	345	300						
9												400	400	400	395	390	350	325	280					
10											350	365	I400A	I380A	A	390	I355A	340	300					
11											390		375	380	350	350	350	305						
12												350	350	350	350	350	345	340						
13												300	300	350	360	350	320L	300						
14													350	350	350	350	300	320						
15												350	350	345	375	375	E390A	300						
16												395	370	350	I350B	355	310	305						
17											340	345	I350A	360	350	340	345	300						
18										A	A	340	440	400	350	345	345	300						
19											300	300	360	370	350	350	320	300	280					
20												320	365	375	400	395	355	300						
21												365	380	390	L	350	340	385						
22													350	370	375	390		345						
23													345	365	350	350	350	350						
24												390	380	425	450	390	350	340						
25													355	365	375		350	335						
26														350	350	355	340	300						
27												365	375	390	390	400	405	300						
28												420	445	I480A	490	490	455	390						
29												385	380	390	395	390	360	340						
30													350	375	390	350	375	340						
31													390	380	385	375	350	325						
No.										1	8	22	29	31	29	29	28	30	4					
Median										405	385	365	375	380	375	370	350	330	290					

h'F2

Sweep 1.0 Mc to 20.0 Mc in 1 min sec in automatic operation.

The Radio Research Laboratories, Japan.

Y 9

IONOSPHERIC DATA

Aug. 1958 | h'F | 135° E Mean Time (G.M.T.+ 9h.) | 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	300	280	250	300	375	350	250	240	220^{H}	230^{H}	220	240	240	215	225	235	I250^{A}	250	250	300	270	I350^{A}	425	325
2	345	245	245	290^{H}	315^{H}	300	250	230^{A}	240^{H}	245	I250^{A}	225	220	240	210	225	215^{H}	I270^{A}	295	285	300	350	320	345
3	345	285	245	300	300	330	270	250	250^{H}	205	205	220	245	240	I220^{A}	250	A	A	290	285	I305^{A}	355	350	340
4	315	320	290	295	300	265	250	290	350	A	A	A	A	225	A	A	A	A	E395^{A}	A	310	335^{H}	300	290
5	300	325	300	310	310	380	305	275	I240^{A}	E380^{A}	220	270	A	255	I245^{A}	240	I260^{A}	295	275	275	300	325	310	305
6	305	275	270	270	300	340	250	250	340	A	A	250	295	270	230	225	230	290	340	285	295	355	330	340
7	340	325	300	300	300	295	240	245	220^{H}	215^{H}	200^{H}	190	210	200	205	240	230	245	250^{H}	290	290	295	290	290
8	300	340	300	255	305	345	255	245	270	330	295^{H}	I255^{A}	I250^{A}	220	300	240	220	285	300	260	300	295	285	290
9	295	290	290	260	240	250	250	240^{H}	230^{H}	210^{H}	200^{H}	200	235	290	255	I270^{A}	240	255	250	255	290	290	290	295
10	300	300	300	300	295	255	250	225	230	240	I270^{A}	I250^{A}	A	A	A	A	A	230	250	280	250	270	320	320
11	325	300	325	300	300	250	250	240	220^{H}	210^{H}	200	235^{H}	210	200^{H}	205	250	270	250	285	255	280	255	300	295
12	255	320	A	300	340	300	250	225	220^{H}	250	205^{H}	205	210	210	250	250^{H}	240	290	280	I280^{A}	250	290	300	290
13	295	300	290	290	275	260	245	230	220^{H}	200^{H}	200^{H}	200	205	205	240	235	260	230	275	250	270	240	330	305
14	280	330^{A}	270	270	250	270	245	240	225	255	240^{H}	305	200	205	215	230	290	A	A	290	265	I280^{C}	270	275
15	300	300	255	250	260	290	240	220	220	220	210^{H}	220	230	230	A	A	I280^{A}	285	250	250	280	290	265	245
16	290	275	270	275	240	250	250	240	245^{H}	250	220^{H}	210	200	205^{H}	I230^{B}	275	275	250	255	250	290	300	300	300
17	310	345	330	340	290	250	250	225	240	205^{H}	225	205	195	225	290	A	A	A	300	295	265	250	300	300
18	260	350	400	345	400	340	280	250	225^{H}	A	A	225	220	210	205^{H}	240	230	240	250	260	280	335	400	350
19	325	275	250	240	260	280	255	240	225	225^{H}	200^{H}	205	200	200	205	235	225	290	255	250	240	255	295	280
20	290	285	260	250	255	270	240	240	240	230	235^{H}	210^{H}	250	245	255	250	I280^{A}	245	255	255	250	250	270	280
21	280	290	280	240	225	230	245	230	230^{H}	220^{H}	250^{H}	205	240	200	225	I240^{A}	A	I295^{A}	300	275	255	280	290	300
22	300	290	255	225	220	250	230	225	220	225^{H}	225^{H}	200^{H}	205	205	240	255	305^{H}	I295^{A}	270^{H}	250	340	325^{H}	300	350
23	325	250	245	290	300	290	260	240	220	240^{H}	250	205^{H}	250	I235^{A}	215^{H}	240	280	I295^{A}	290	290	280	290	340	350
24	310	280	250	235	240	265	260	220	230	225^{H}	220^{H}	200	205	220^{H}	235	I290^{A}	240	250	305	255	300	300	300	340
25	350	330	305	315	335	325	255	235	220^{H}	215^{H}	205^{H}	250^{H}	205	250	220^{H}	245^{H}	235	240	250	255	260	290	290	280
26	270	280	275	250	250	305	290	245	I240^{C}	300	E330^{B}	220^{H}	200^{H}	225	220	230	225^{H}	I270^{A}	250	260	280	300	325	320
27	265	270	255	250	275	330	275	245	235	I220^{C}	230^{H}	200^{H}	E300^{A}	I245^{A}	200^{H}	240	275	280	275	280	280^{H}	305	275	310
28	265	250	245	275^{H}	320	355	290	250	250	245	230^{H}	300	240	A	220	250	245	I300^{A}	E350^{A}	300	E350^{A}	325	295	255
29	290	330	325	280	275	320	285	240	230^{H}	250^{H}	240^{H}	220	255	250	230	245	270	240	275	280	295	290	290	280
30	270	250^{H}	255	240	250	290	265	240	235	210^{H}	205^{H}	210^{H}	205	205^{H}	205	230	230	255	280	280	315	290	315	295
31	300	345	310	300	300	290	275	240	220	225	200^{H}	200^{H}	200	245	225	240	255	255	300	270	285	325	300	280
No.	31	31	30	31	31	31	31	31	31	27	27	30	27	29	28	27	26	27	28	30	30	31	31	31
Median	300	290	270	280	295	290	250	240	230	225	220	215	210	225	225	240	250	255	275	275	280	295	300	300

h'F

Sweep 1.0 Mc to 20.0 Mc in 1 ~~sec~~ min in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Aug. 1958 | h'Es | 135° E Mean Time (G.M.T.+ 9h.) | 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	100	C	100	E	E	E	100	G	105	100	100	100	100	150	125	125	110	120	125	100	100	100	100	100
2	100	100	100	100	100	100	150	110	110	105	100	120	120	120	125	G	G	105	105	100	100	100	100	100
3	100	E	100	100	100	100	105	140	125	110	105	120	140	115	110	110	105	105	100	115	100	105	105	100
4	100	100	100	100	100	100	130	110	110	105	105	100	100	100	100	110	105	105	105	100	100	100	100	100
5	100	100	100	100	100	100	115	115	100	105	100	105	105	105	105	140	120	120	105	110	100	100	100	100
6	100	100	100	100	100	100	105	110	105	105	105	100	100	100	105	105	130	120	105	100	100	100	100	100
7	100	100	100	100	100	100	100	100	100	100	100	100	100	100	G	G	G	G	G	125	100	100	100	100
8	100	100	100	100	100	100	105	100	105	100	100	100	100	105	105	130	100	115	105	100	100	100	S	100
9	S	E	E	E	E	100	140	100	105	100	110	105	120	110	110	110	115	100	105	105	100	100	S	100
10	100	100	100	100	100	100	100	120	120	120	105	100	100	105	105	100	105	110	115	100	100	100	100	100
11	100	100	100	E	100	E	G	G	G	100	100	G	105	G	140	125	105	105	100	100	100	100	S	S
12	100	100	100	100	100	100	100	100	100	100	100	100	100	G	120	140	130	115	110	105	100	100	100	100
13	100	100	100	100	E	E	S	110	120	115	140	G	115	125	155	150	120	105	105	105	100	100	100	100
14	100	100	100	E	E	E	145	140	110	100	100	100	100	100	G	100	100	115	110	105	100	C	100	S
15	S	S	100	E	E	E	G	140	140	125	120	G	145	130	120	110	105	105	100	100	100	100	100	100
16	S	E	100	100	100	100	130	125	110	110	120	120	G	G	B	B	115	100	125	105	110	100	100	100
17	100	100	100	100	100	E	100	120	100	100	100	100	140	135	120	115	110	105	105	100	100	100	100	100
18	100	100	100	100	100	S	125	110	110	100	100	100	100	100	G	100	G	150	125	100	100	100	100	100
19	100	100	100	E	E	E	145	125	105	105	105	G	G	G	110	110	120	100	100	105	100	100	100	100
20	100	100	100	100	100	100	100	G	100	100	150	150	125	105	105	100	100	105	135	110	100	100	100	100
21	105	100	100	100	100	100	150	100	130	130	125	100	130	130	130	120	120	110	105	100	100	100	100	100
22	100	100	100	E	E	E	100	140	145	120	125	120	G	135	140	140	110	110	105	105	100	100	100	100
23	100	100	100	100	100	100	100	100	125	100	100	100	100	105	140	105	120	110	110	105	100	100	100	100
24	100	100	100	100	100	100	100	G	100	130	130	100	140	105	150	120	125	115	105	105	100	100	100	100
25	100	100	100	100	100	100	100	120	110	130	110	105	120	105	100	110	100	100	105	100	100	100	100	100
26	100	100	100	E	E	E	155	120	C	100	B	100	G	125	100	125	G	100	105	100	100	100	100	100
27	100	100	E	E	E	100	100	155	G	C	120	130	120	120	G	G	130	120	105	105	100	100	100	100
28	100	100	100	125	115	110	120	125	120	110	115	115	105	110	G	140	130	120	110	110	105	100	100	100
29	100	100	100	100	100	100	100	110	110	105	105	105	105	105	110	125	120	120	100	100	100	100	100	100
30	100	E	E	E	E	E	145	140	140	120	G	100	100	105	100	100	135	125	110	105	100	100	100	100
31	100	100	100	100	100	E	100	125	120	110	100	105	105	100	100	G	135	125	110	105	100	100	100	100
No.	28	25	28	21	21	19	28	27	28	30	29	27	27	27	25	26	27	30	30	31	31	30	28	29
Median	100	100	100	100	100	100	105	120	110	105	105	100	105	105	110	110	115	110	105	105	100	100	100	100

h'Es

Sweep 1.0 Mc to 20.0 Mc in 1 ~~sec~~ min in automatic operation.

The Radio Research Laboratories, Japan.

Y 11

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IONOSPHERIC DATA

Aug. 1958 | Types of Es | 135° E Mean Time (G.M.T. + 9h.) | 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	f2		f3				l		C2	C3	C2	l2	l2	h	h	h	h2	h4	h3	C4	f2	f3f3	f4	f4
2	f4	f2	f2	f4	f2	f2	h	C3	C2	C3	C4	h	h	h2	h			h3	C4	C7	f3	f6	f4	f4
3	f4		f	f	f3	f	l	h2	h2	C2	h2	h	h	h	h2	h2	h4	C5	C3	C2	f5f2	f3f2	f2f4	f3
4	f3	f3	f2	f3	f2	f2	h	h4	h4	h4	h2	h4	h2	h2	l2	h2	h2	C2	C5	C6	f4	f5	f7	f6
5	f7	f6	f5	f5	f4	f4	h3	h4	C4	C4	l	C	h3	C2	C4	h	h3	h2	C3	C4	f2	f	f	f
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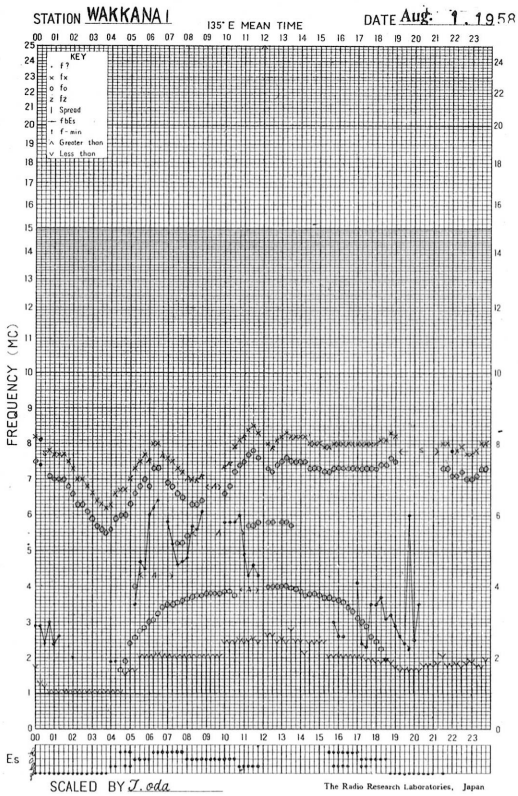

SCALED BY T. oda

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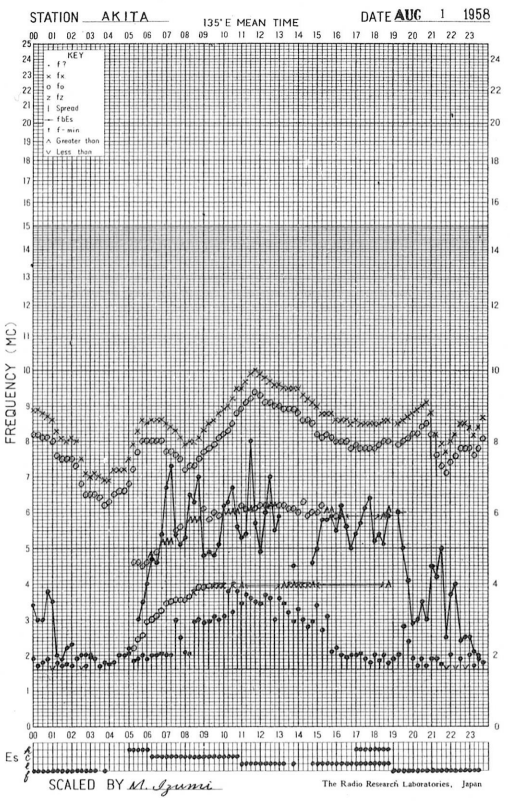

SCALED BY M. Izumi

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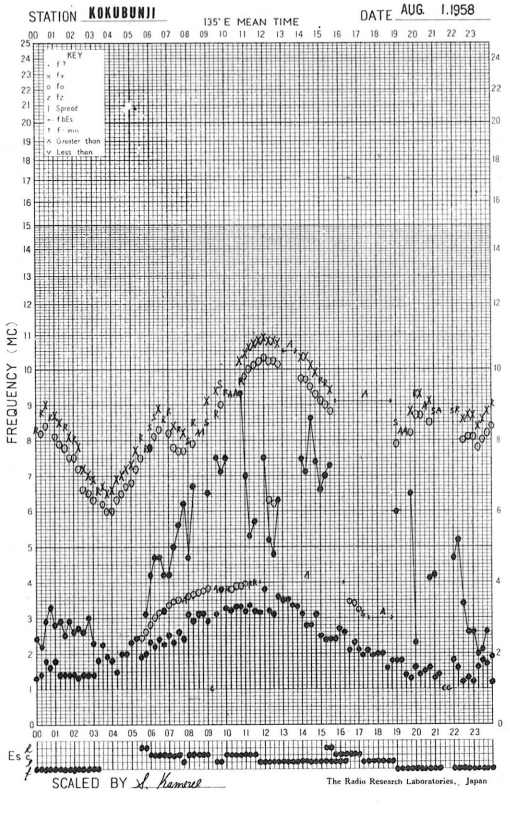

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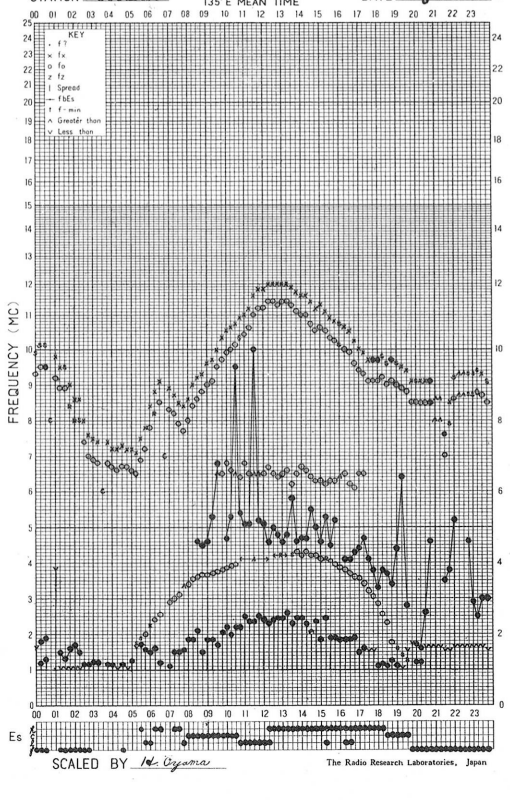

SCALED BY H. Ozawa

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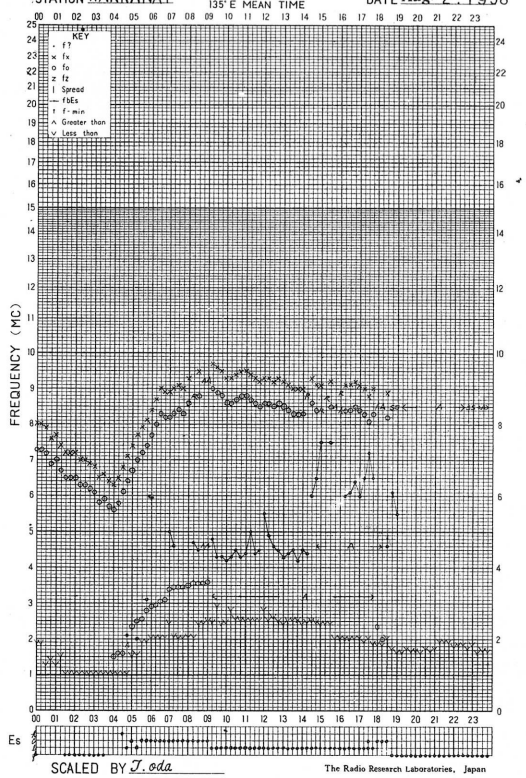

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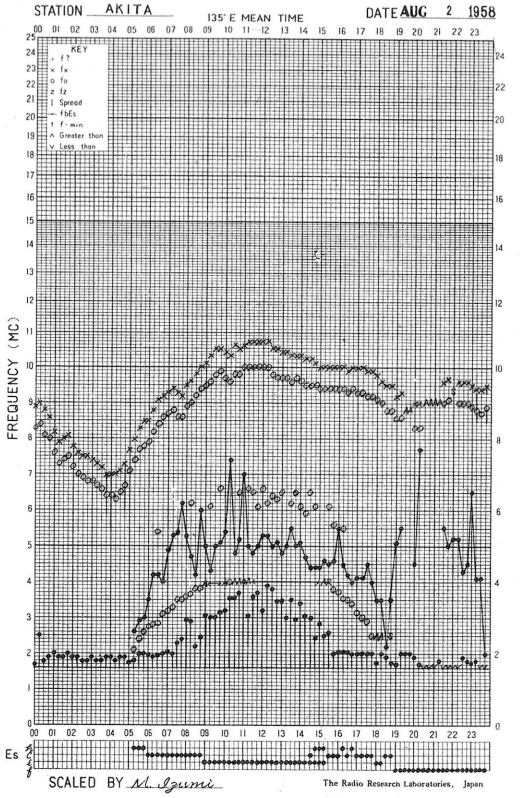

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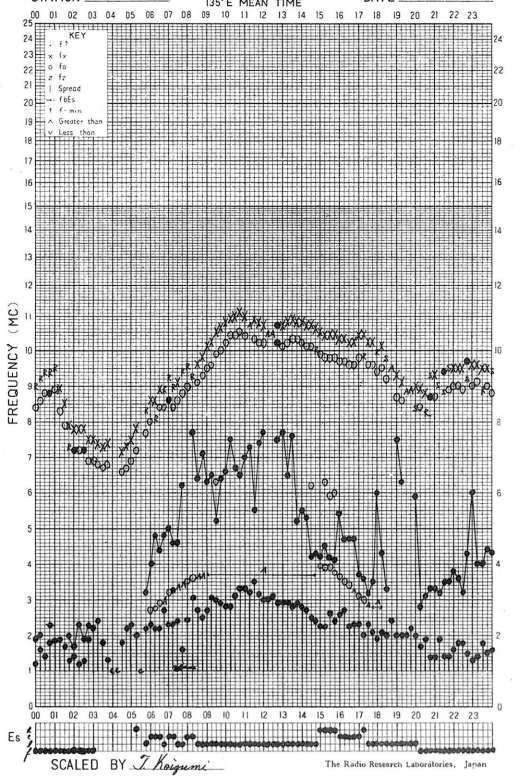

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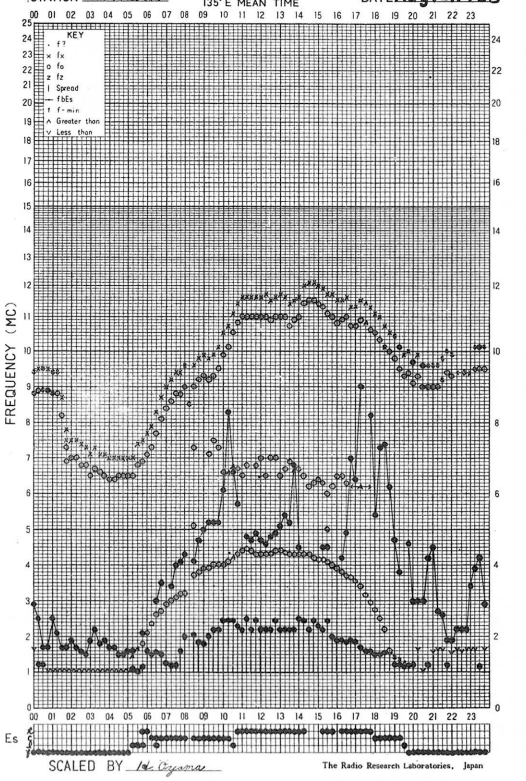

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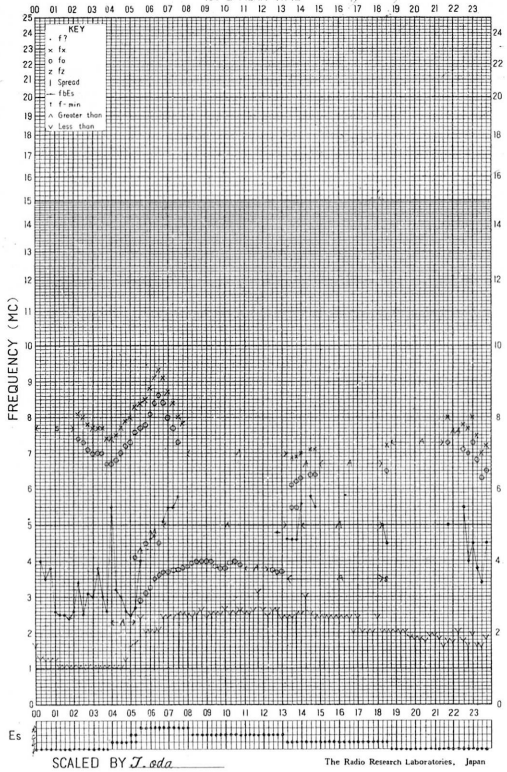

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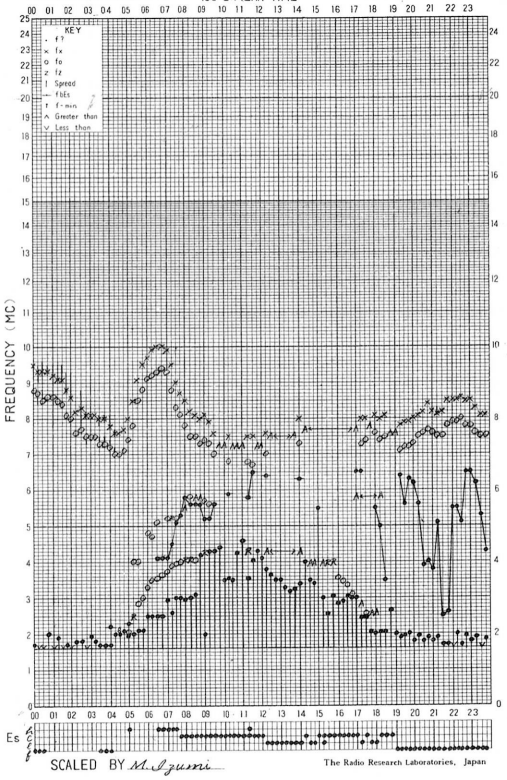

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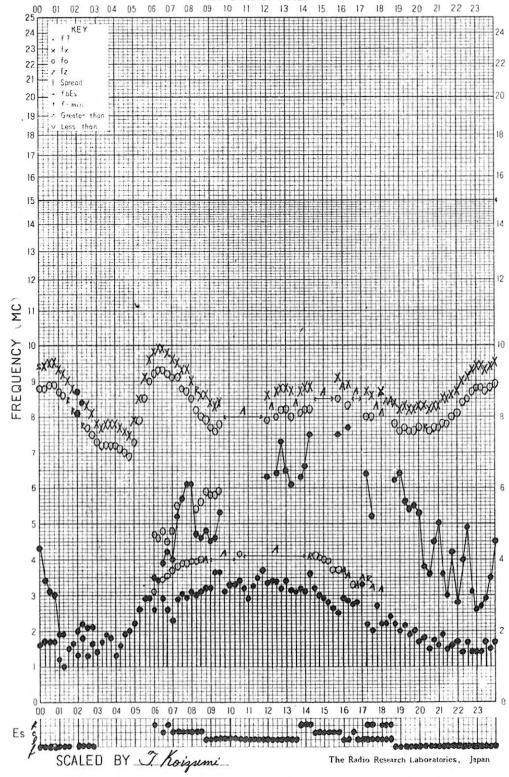

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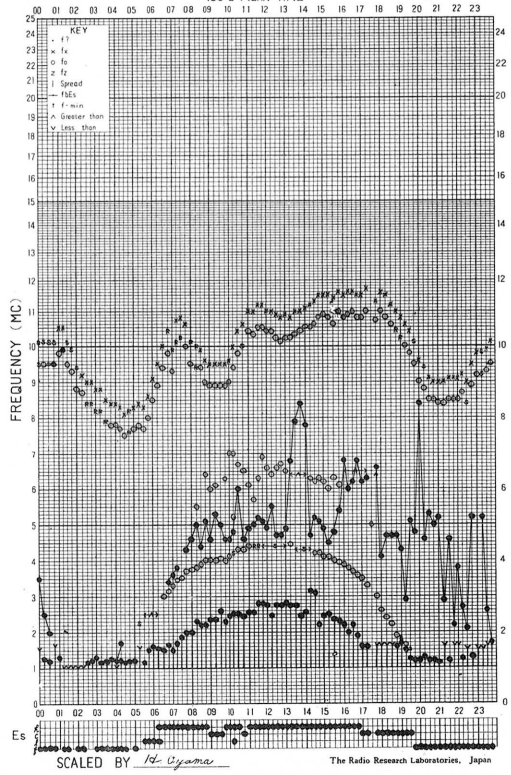

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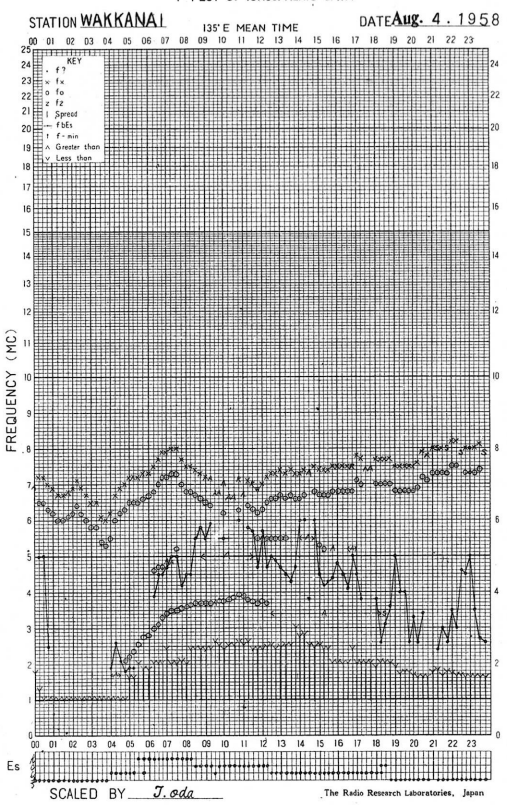
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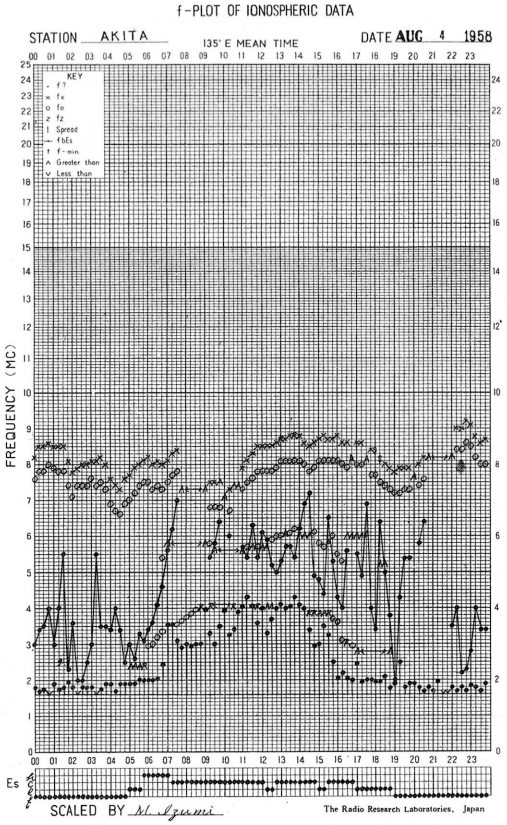
SCALED BY J. Oda
The Radio Research Laboratories, Japan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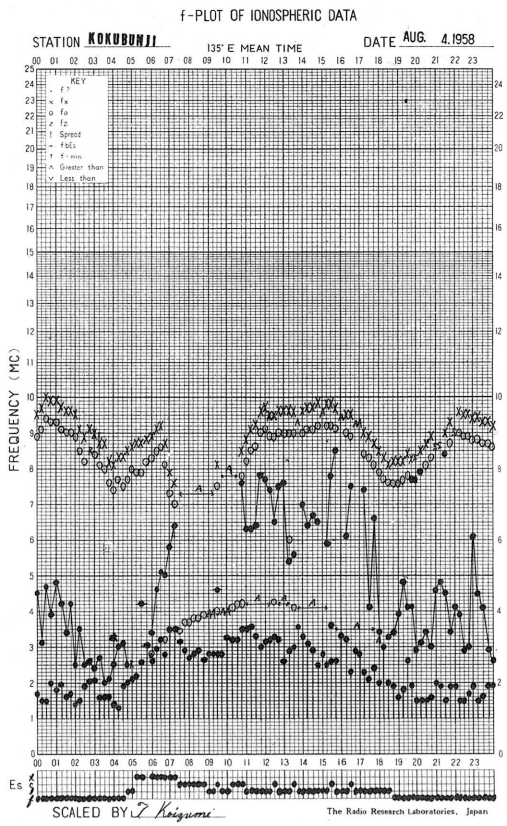
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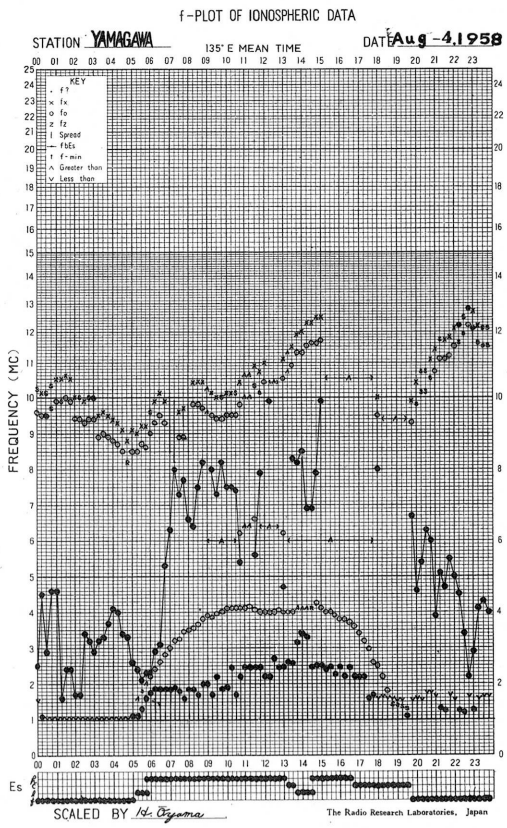
SCALED BY T. Koizumi
The Radio Research Laboratories, Japan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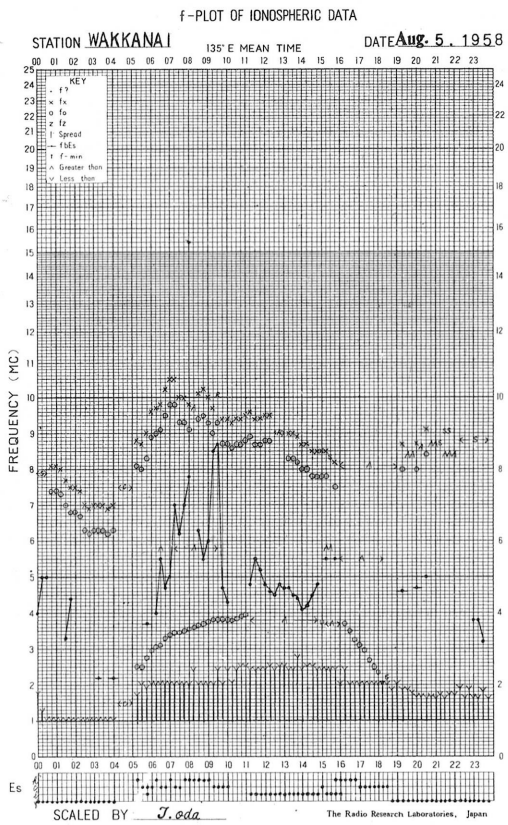
SCALED BY H. Oizumi
The Radio Research Laboratories, Japan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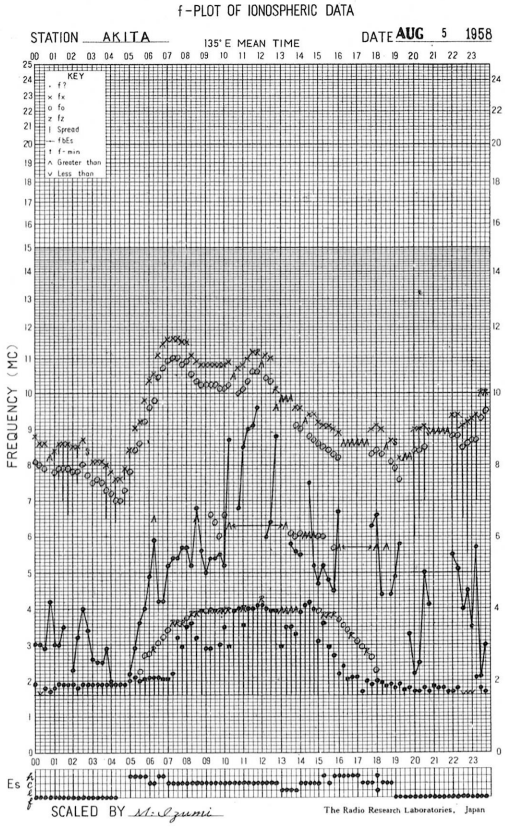
SCALED BY J. oda
The Radio Research Laboratories, Japan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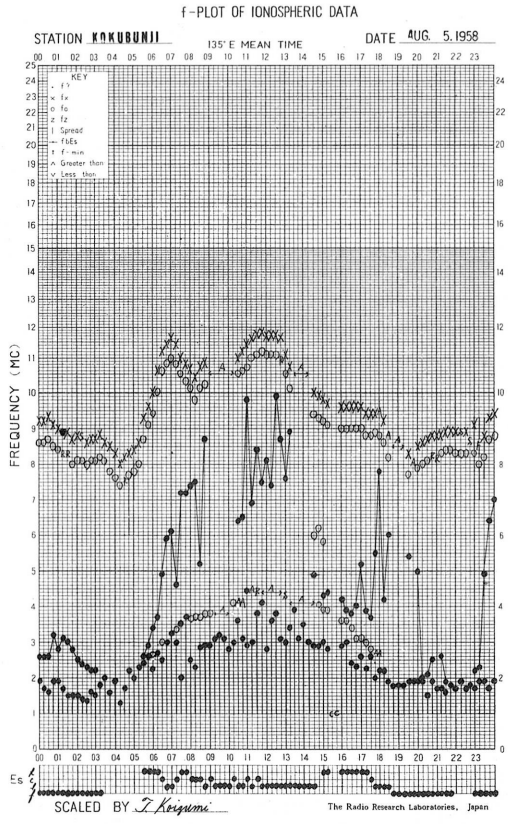
SCALED BY M. Izumi
The Radio Research Laboratories, Japan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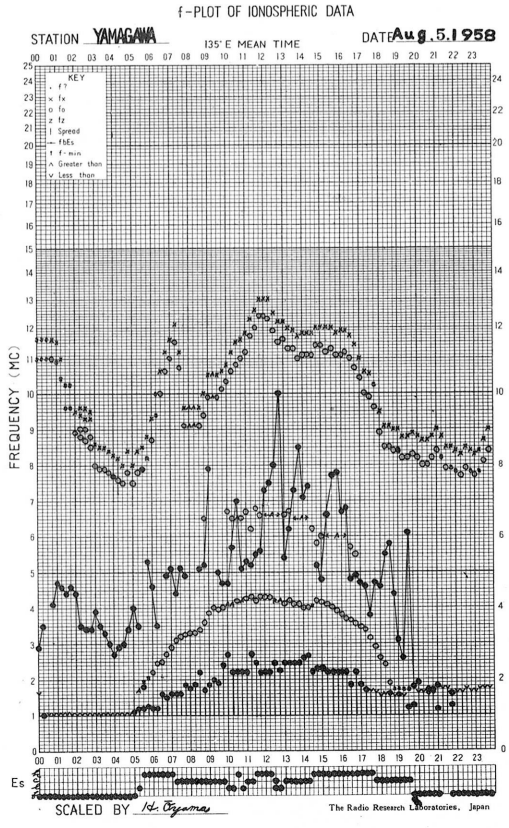
SCALED BY T. Koizumi
The Radio Research Laboratories, Japan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The Radio Research Laboratories, Japan

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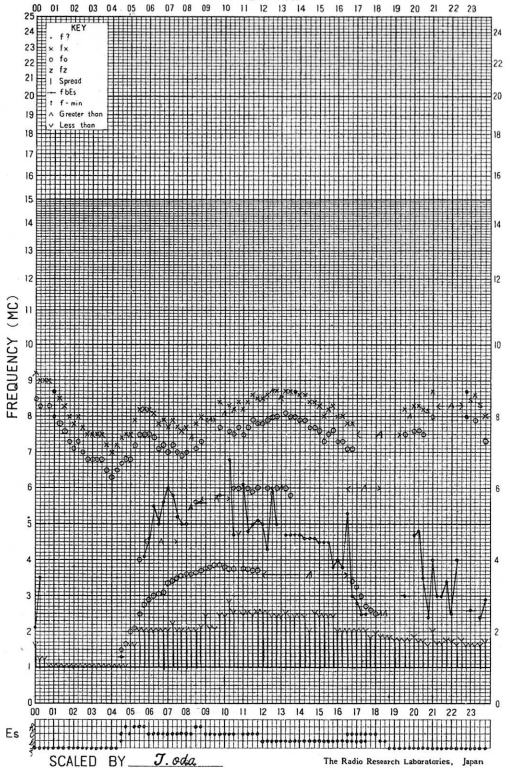

SCALED BY T. Oda The Radio Research Laboratories, Japan

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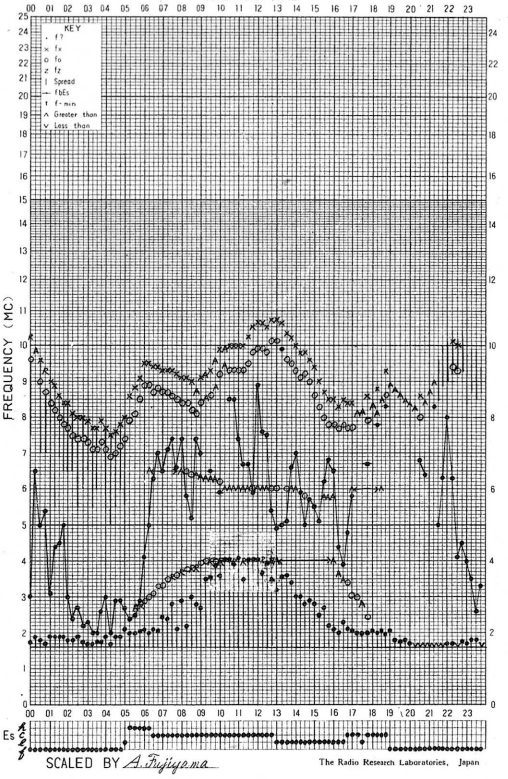

SCALED BY A. Fujiyama The Radio Research Laboratories, Japan

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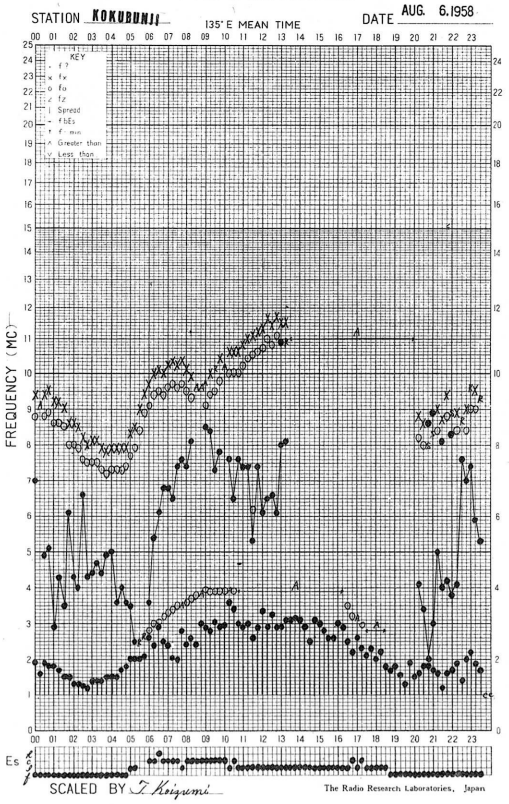

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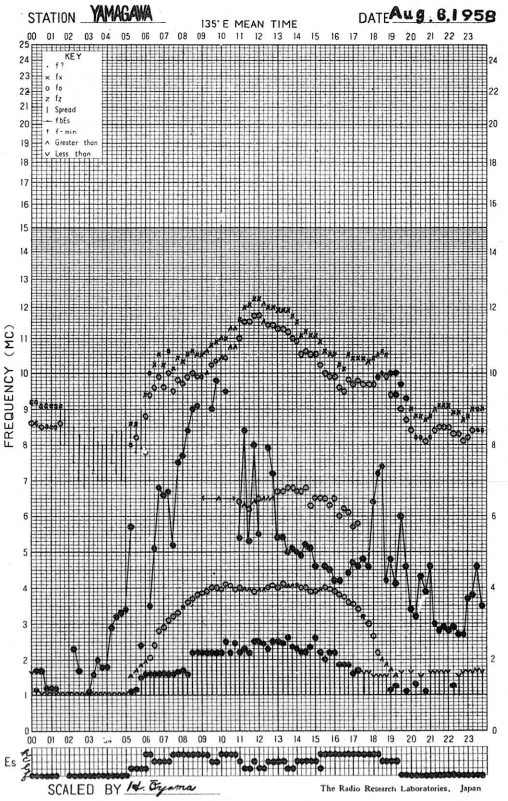

SCALED BY M. Egyama The Radio Research Laboratories, Japan

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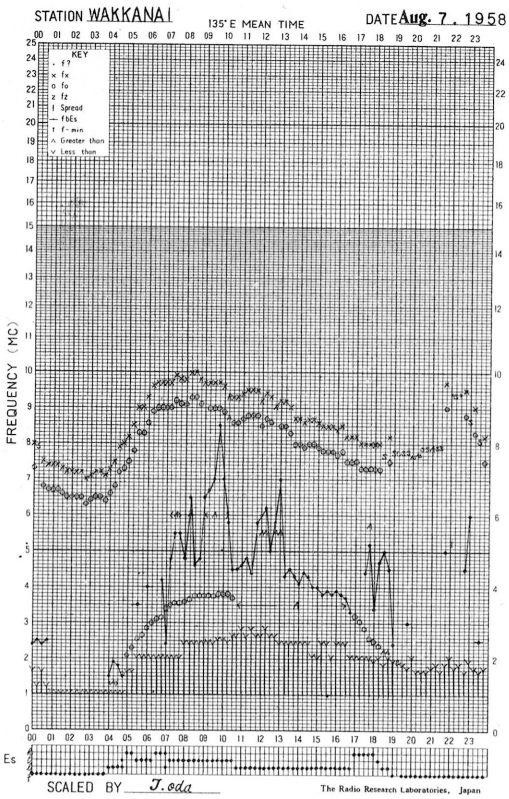

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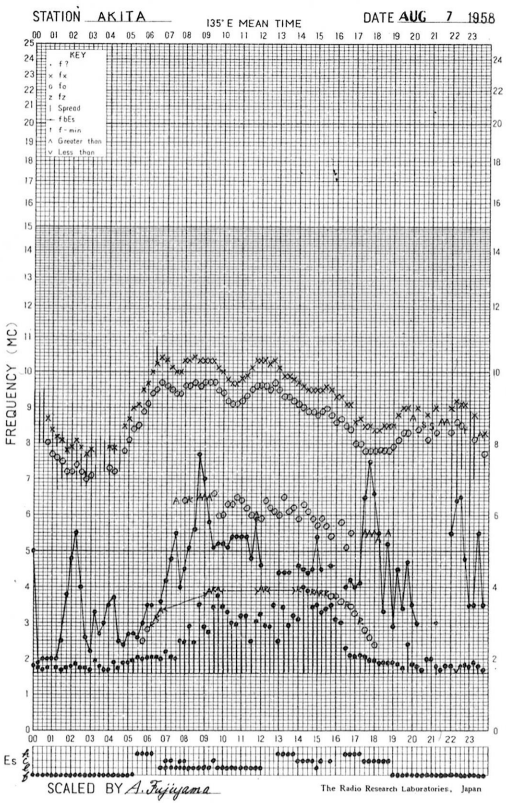

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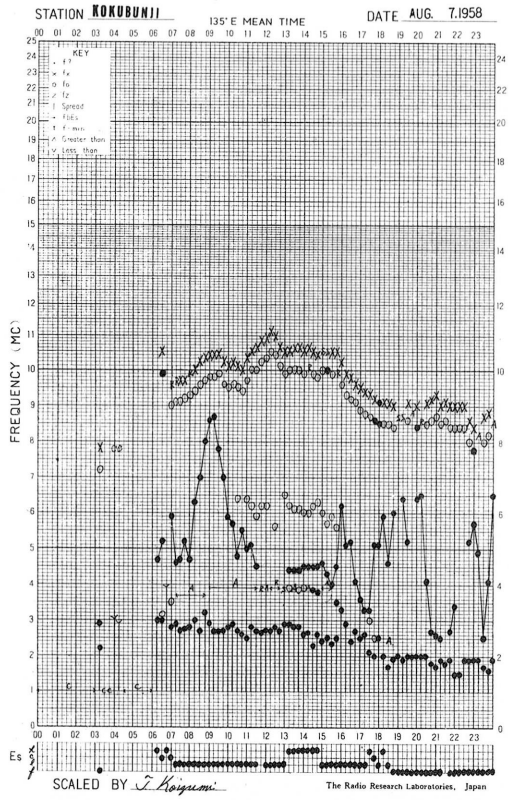

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The Radio Research Laboratories, Japan

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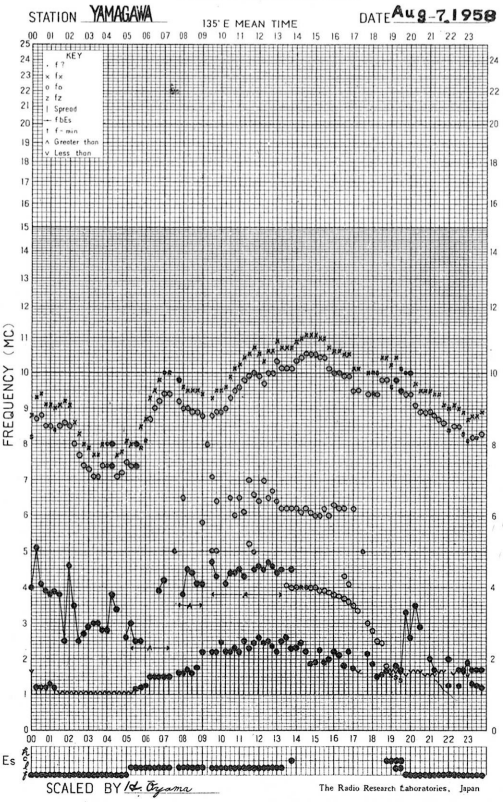

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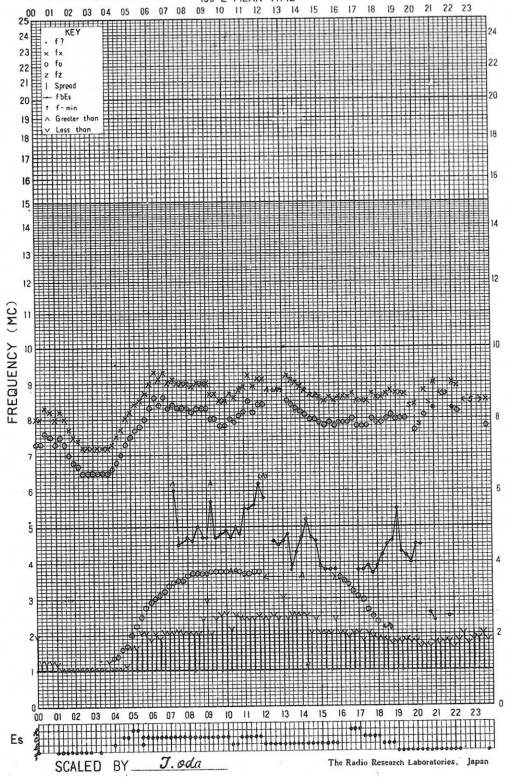

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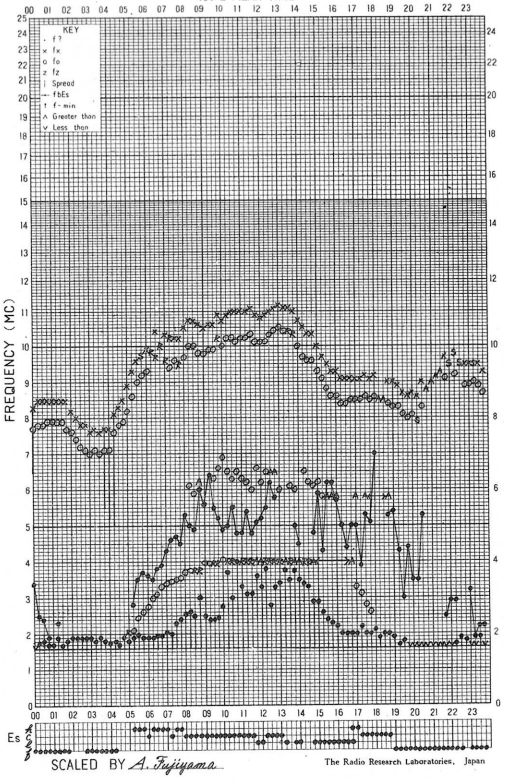

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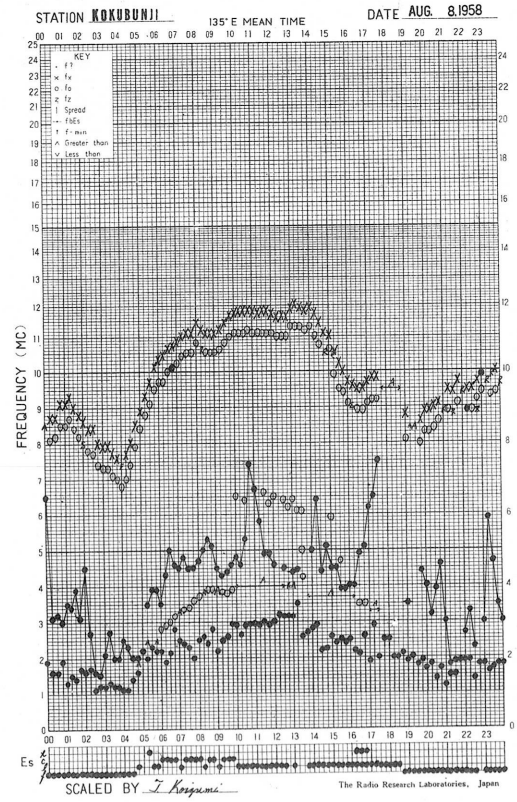

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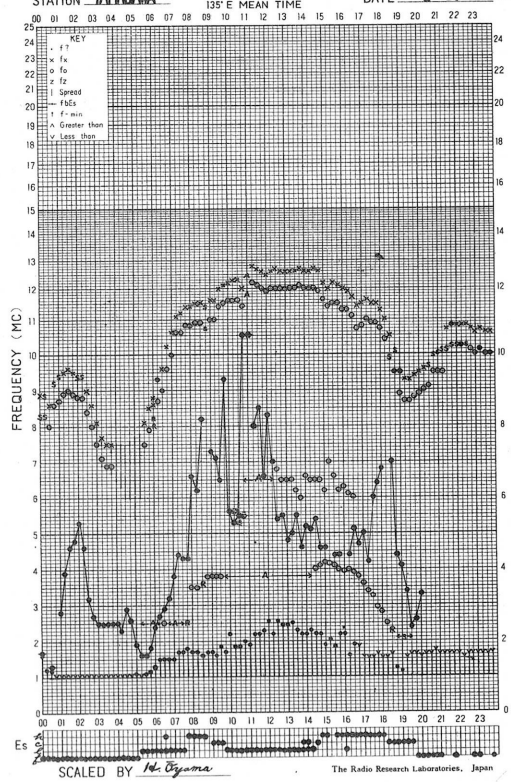

SCALED BY M. Ozyama

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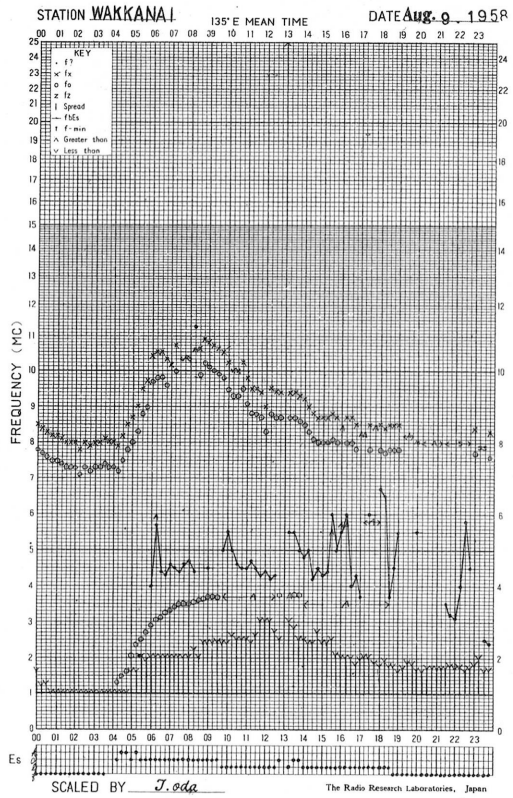
f-PLOT OF IONOSPHERIC DATA

STATION WAKKANAI 135° E MEAN TIME DATE Aug. 9, 1958



SCALED BY J. Oda

The Radio Research Laboratories, Japan

f-PLOT OF IONOSPHERIC DATA

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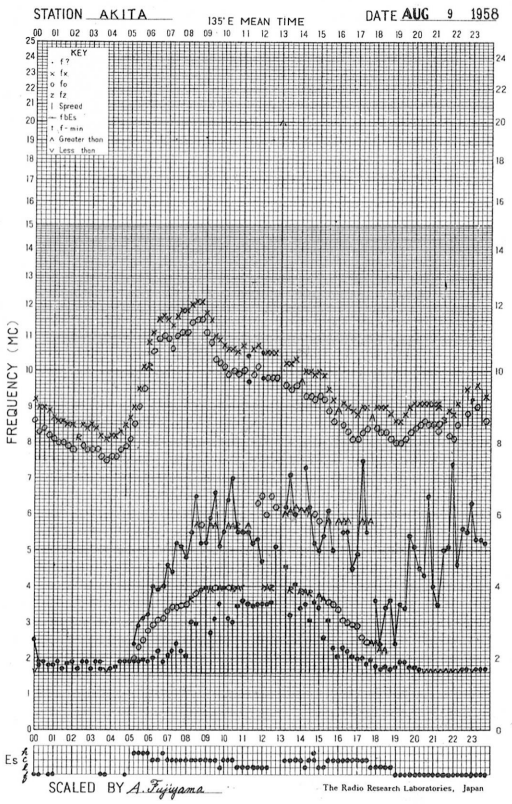

SCALED BY A. Fujiyama

The Radio Research Laboratories, Japan

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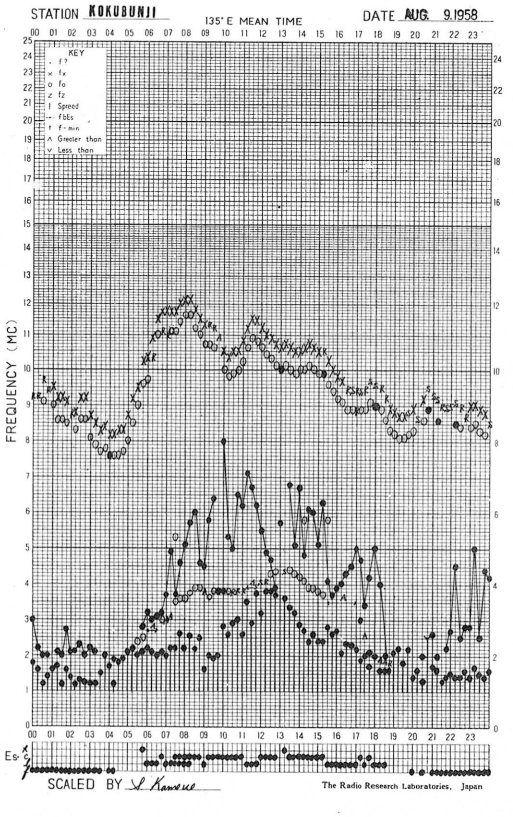
STATION KOKUBUNJI 135° E MEAN TIME DATE AUG. 9, 1958



SCALED BY S. Kaneue

The Radio Research Laboratories, Japan

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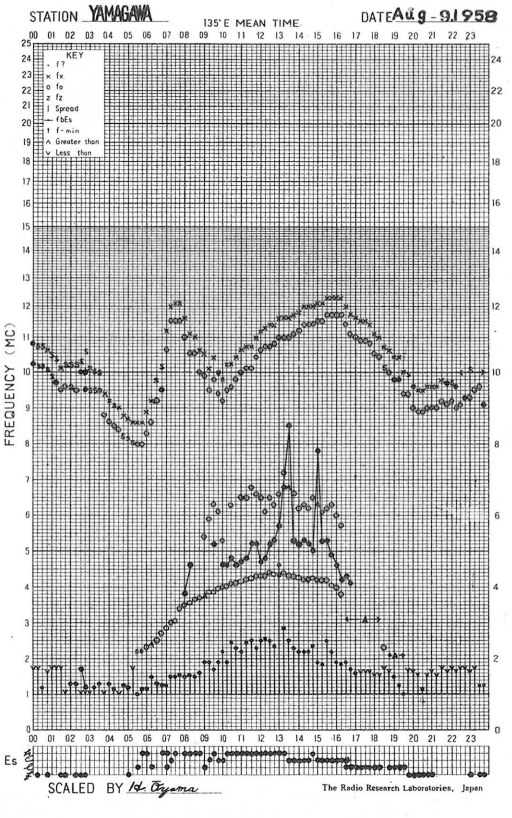

SCALED BY H. Oyama

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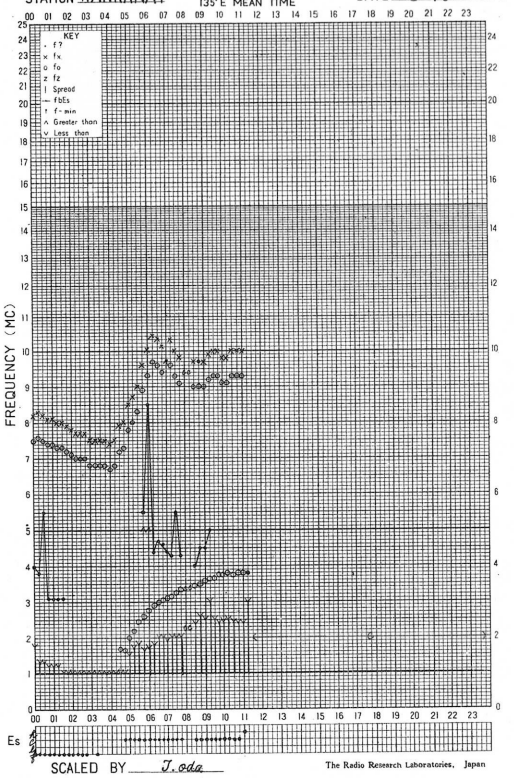

SCALED BY T. oda

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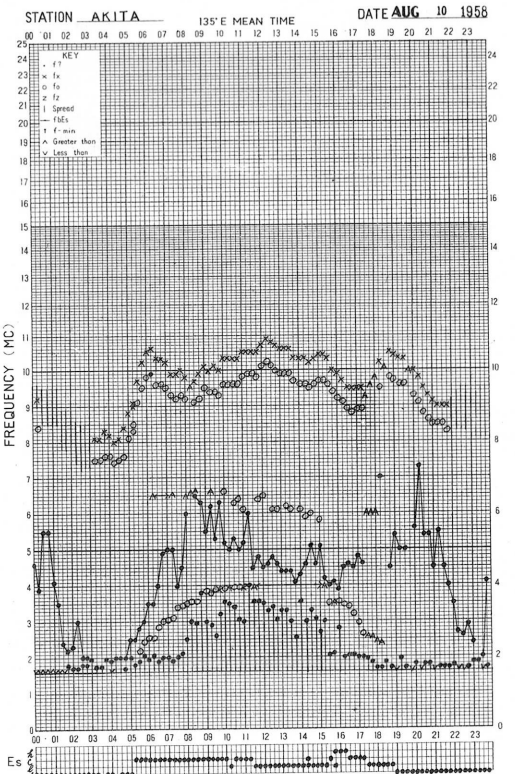

SCALED BY A. Fujiyama

The Radio Research Laboratories, Japan

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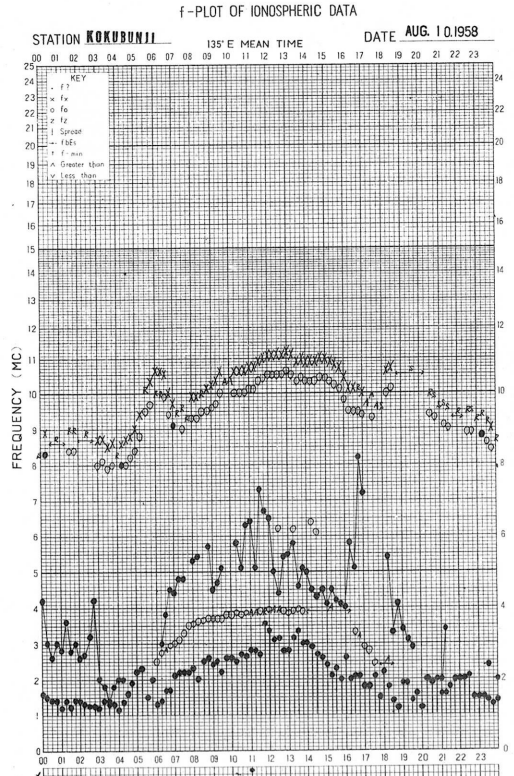

SCALED BY S. Kawauchi

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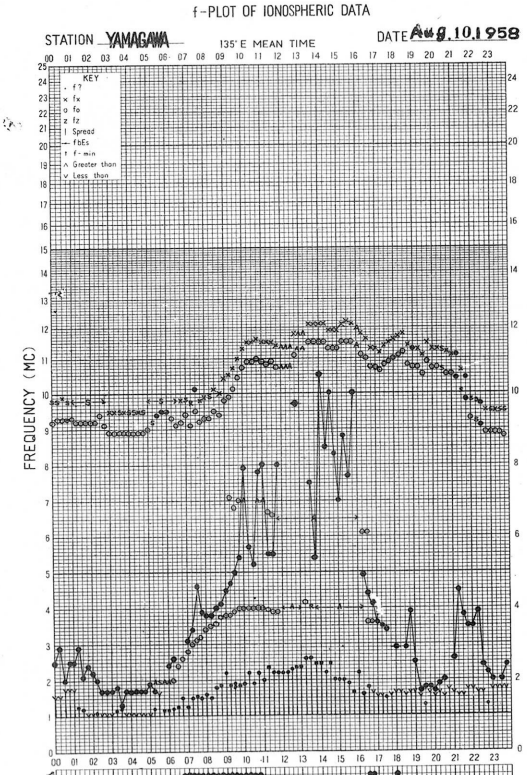

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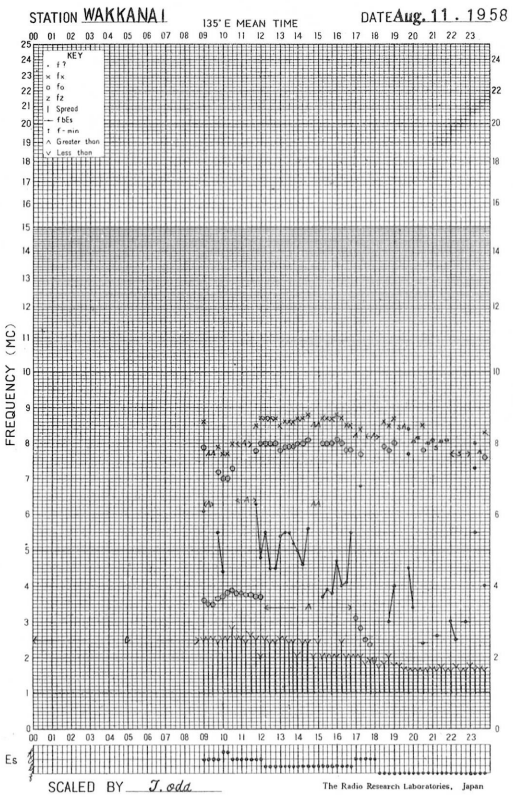

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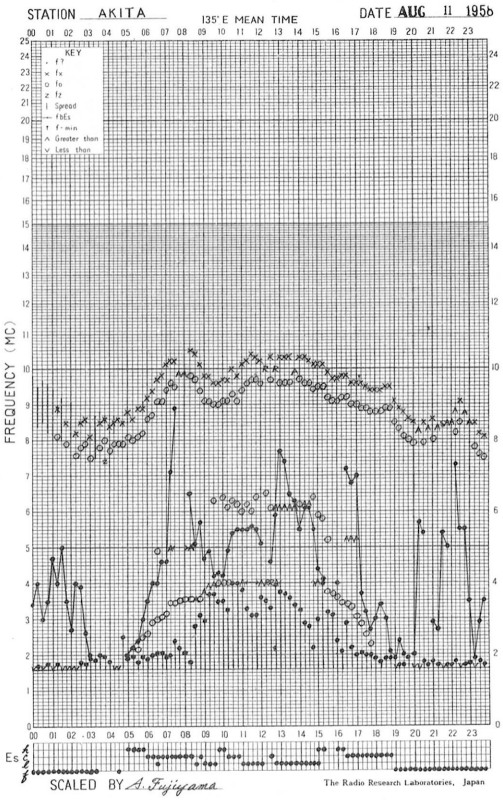

SCALED BY A. Fujiyama

The Radio Research Laboratories, Japan

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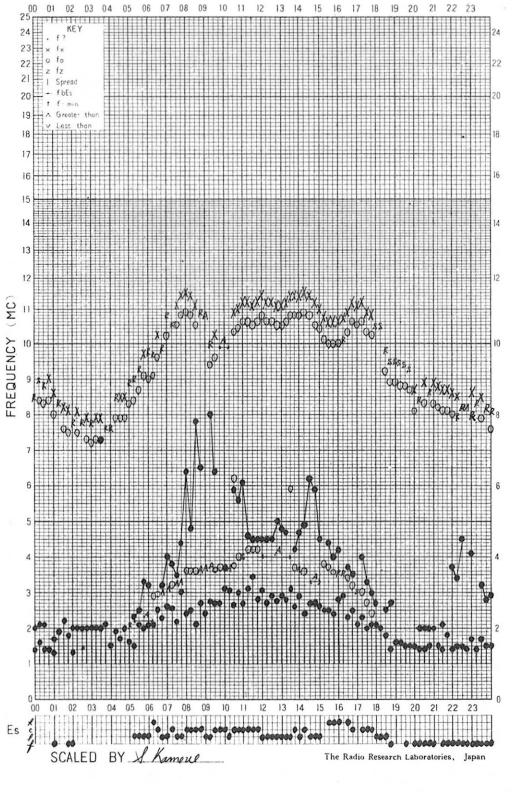

SCALED BY S. Kameue

The Radio Research Laboratories, Japan

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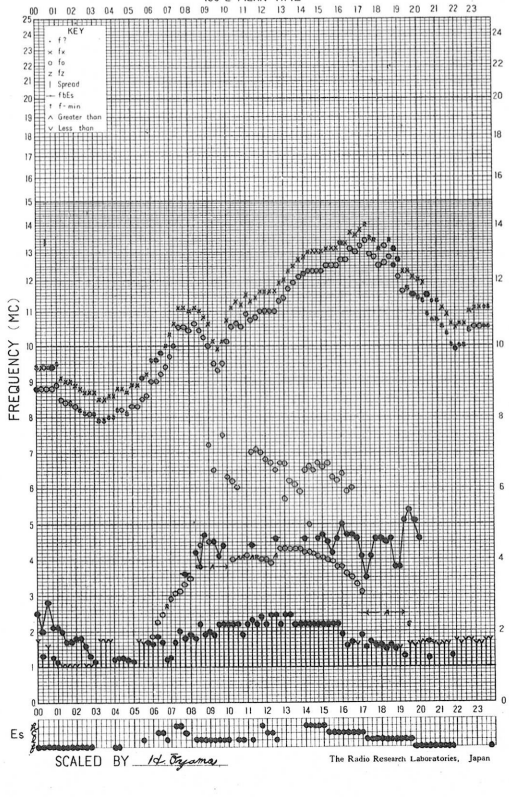

SCALED BY H. Tajima

The Radio Research Laboratories, Japan

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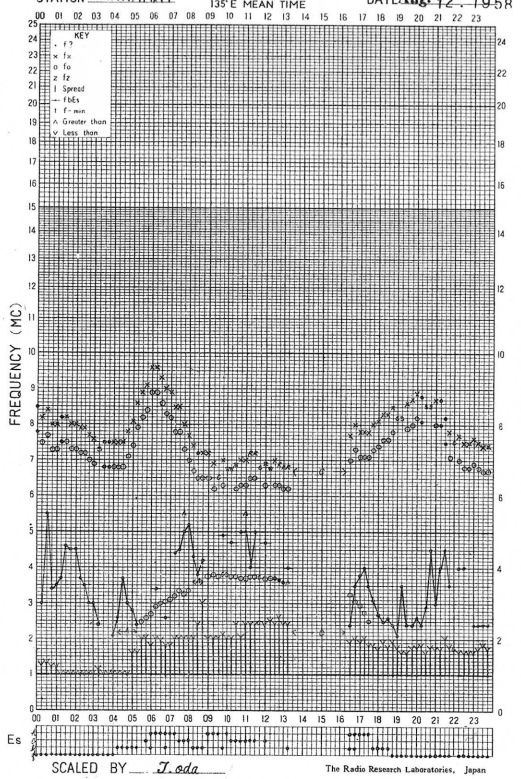

SCALED BY T. Oda The Radio Research Laboratories, Japan

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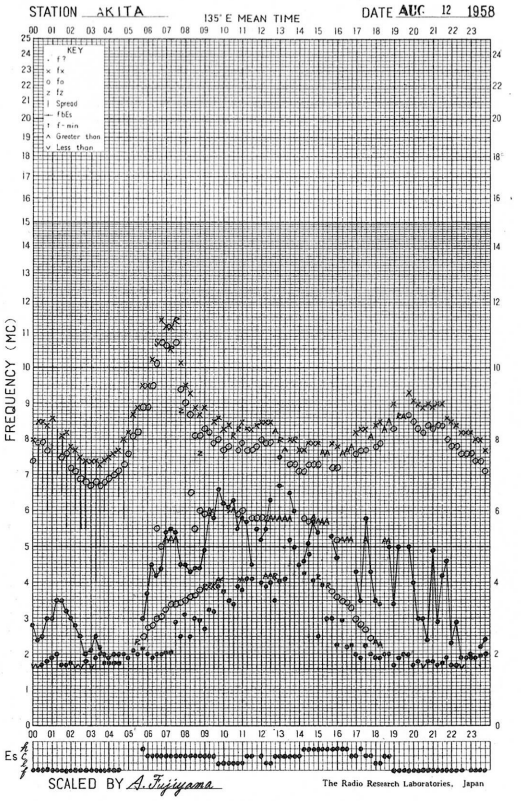

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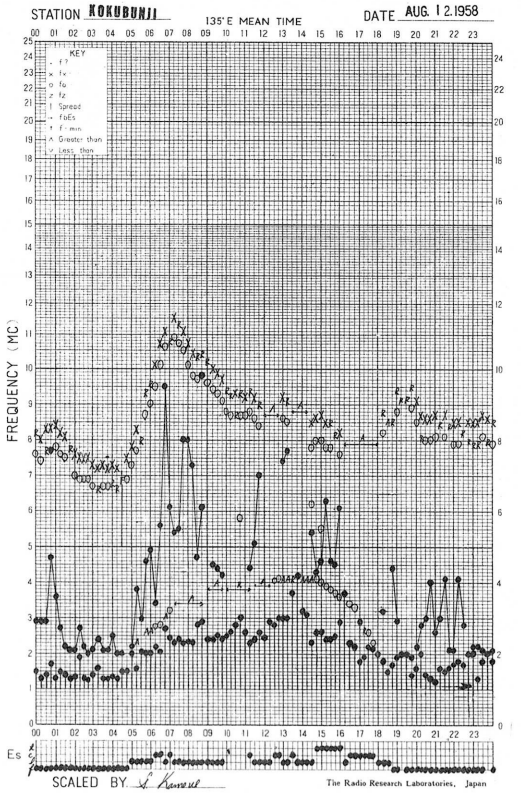

SCALED BY S. Konsui The Radio Research Laboratories, Japan

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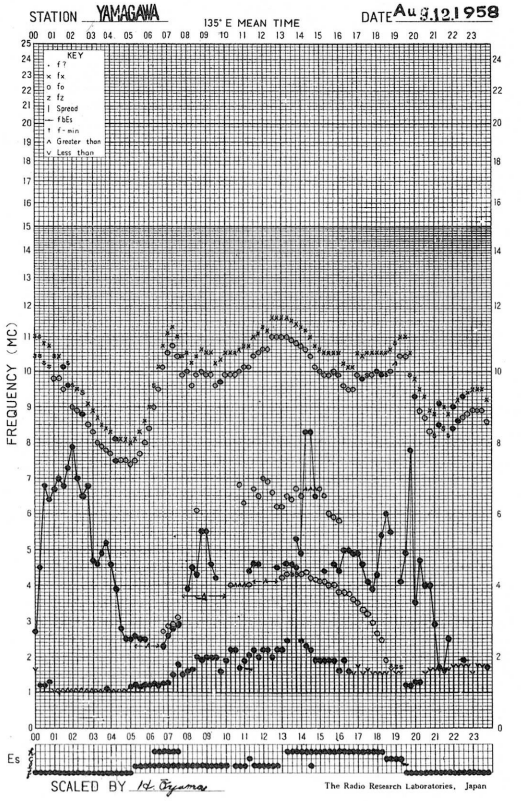

SCALED BY H. Iyama The Radio Research Laboratories, Japan

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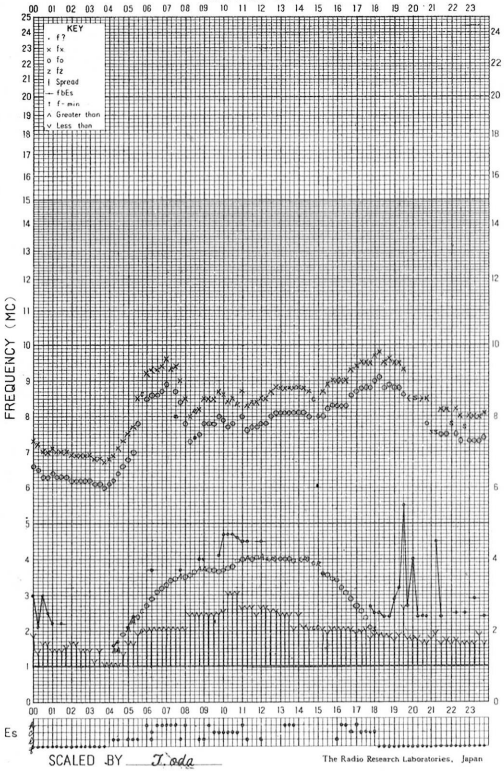

SCALED BY T. Oda

The Radio Research Laboratories, Japan

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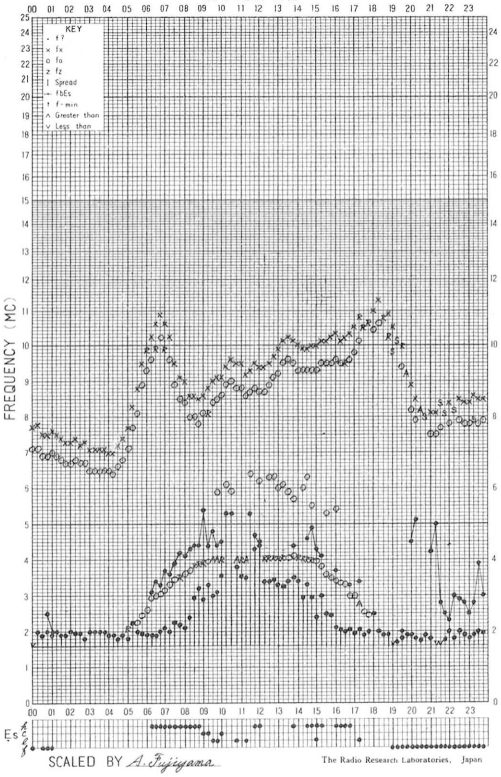

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The Radio Research Laboratories, Japan

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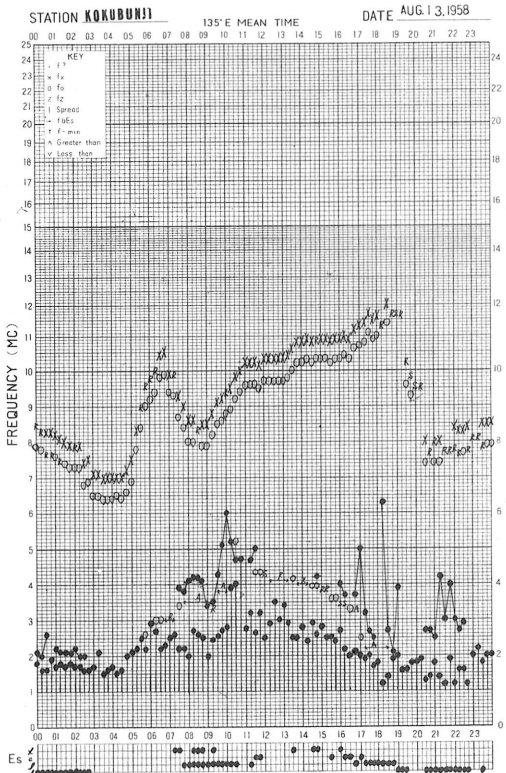

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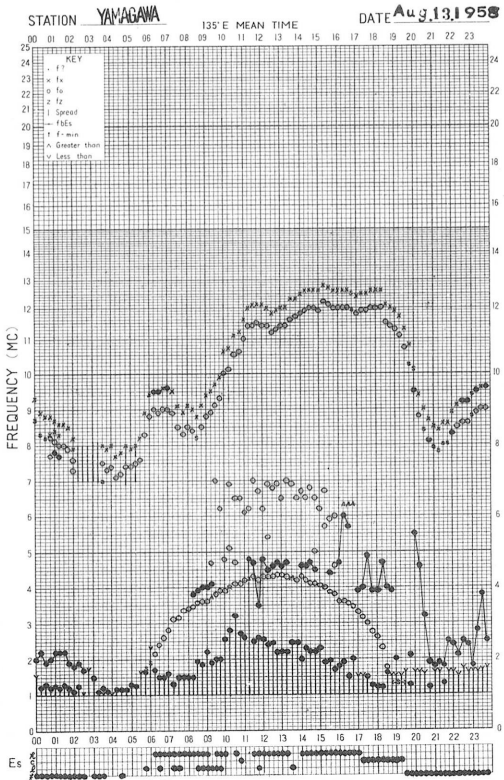

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The Radio Research Laboratories, Japan

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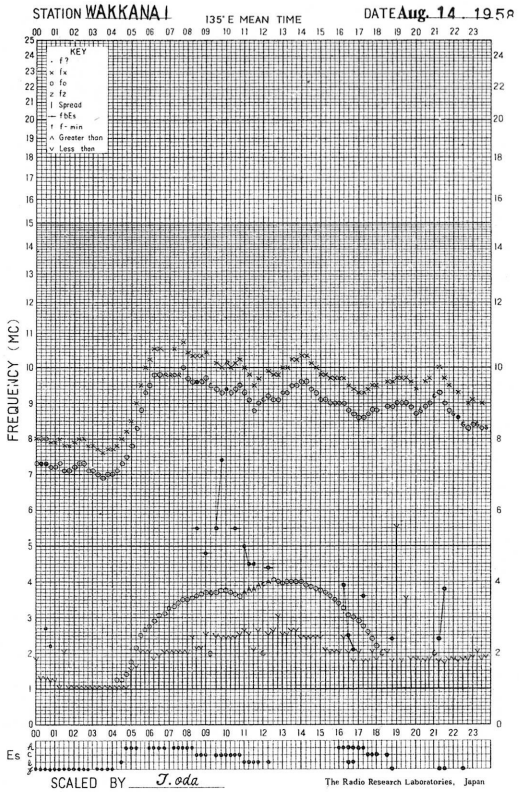

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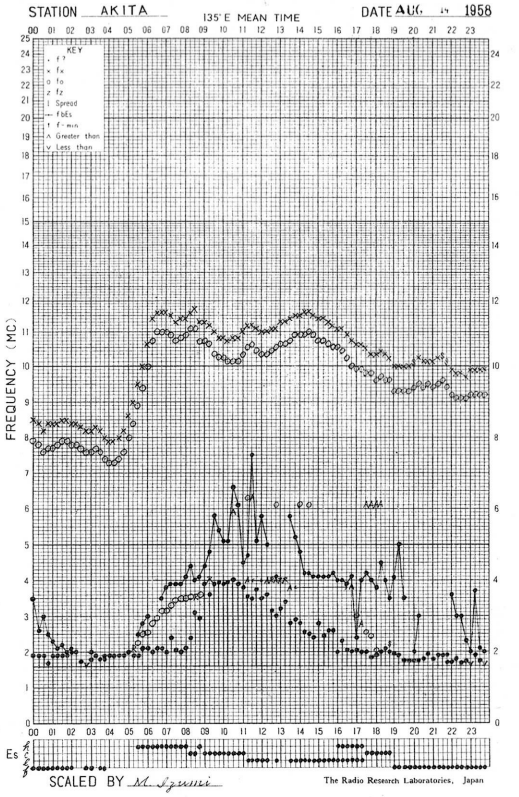

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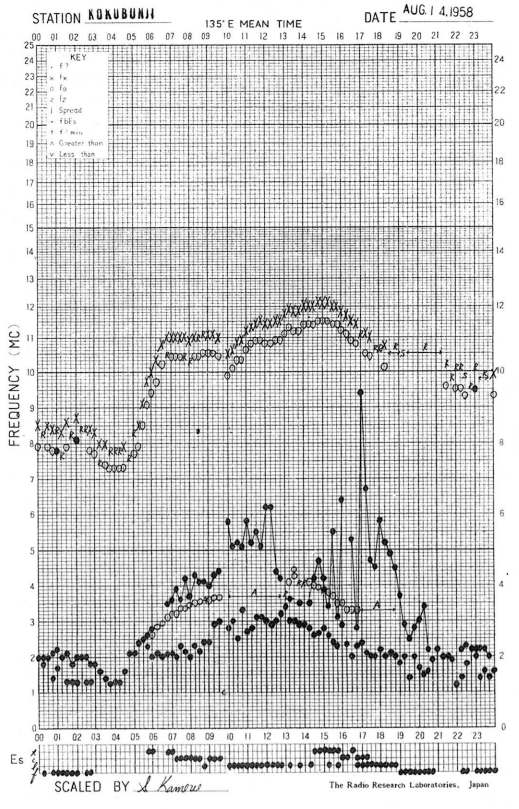

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The Radio Research Laboratories, Japan

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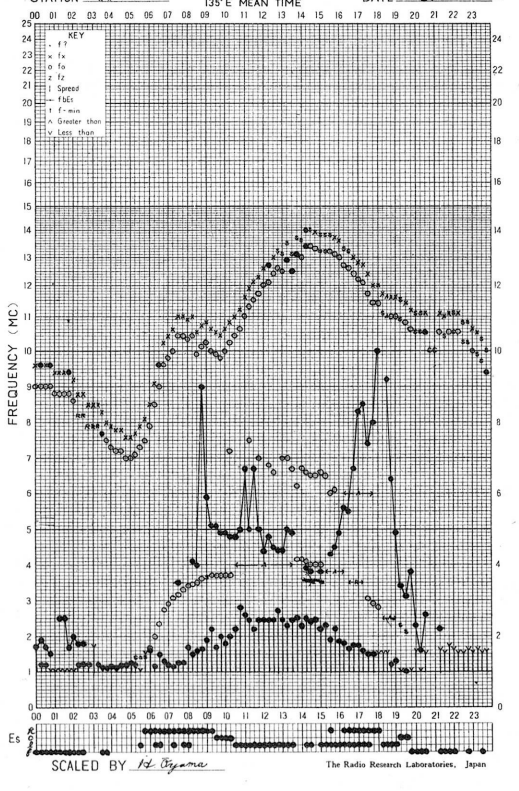
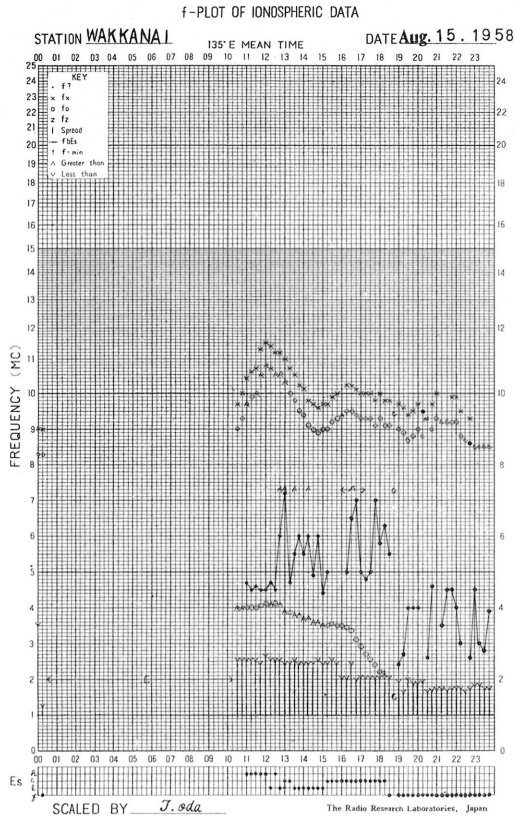


SCALED BY H. Ogawa

The Radio Research Laboratories, Japan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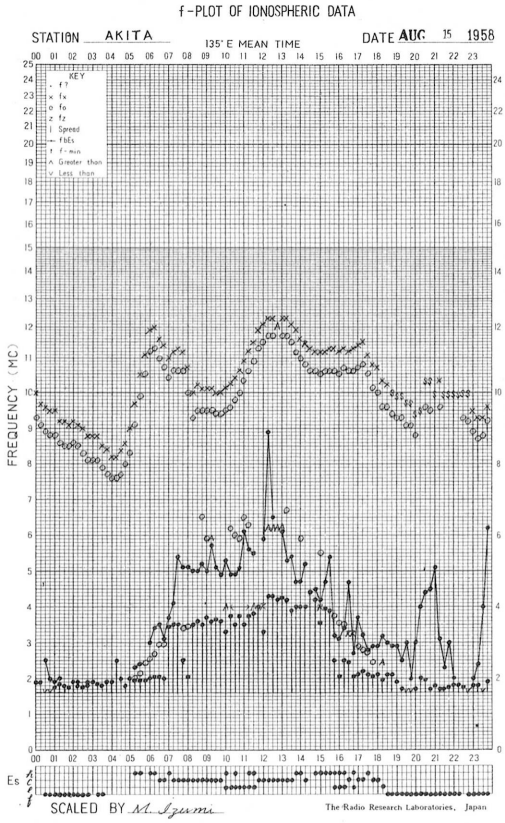
SCALED BY J. oda
The Radio Research Laboratories, Japan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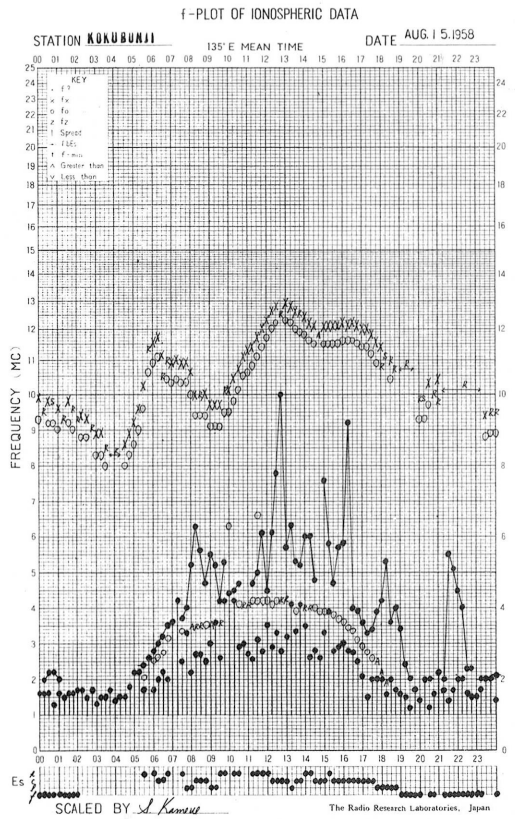
SCALED BY M. Izumi
The Radio Research Laboratories, Japan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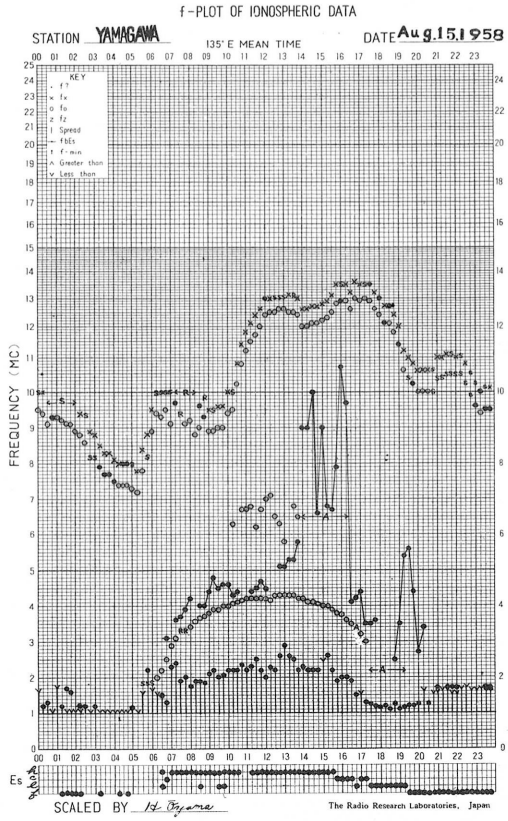
The Radio Research Laboratories, Japan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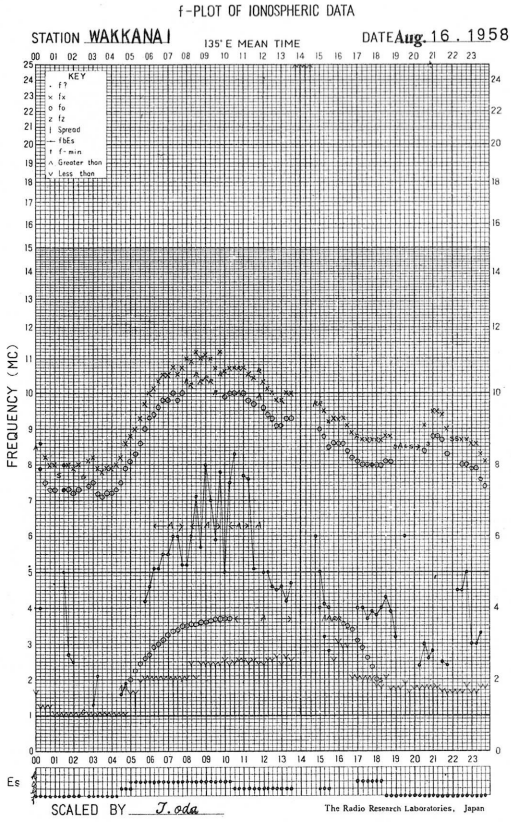
SCALED BY H. Oyama
The Radio Research Laboratories, Japan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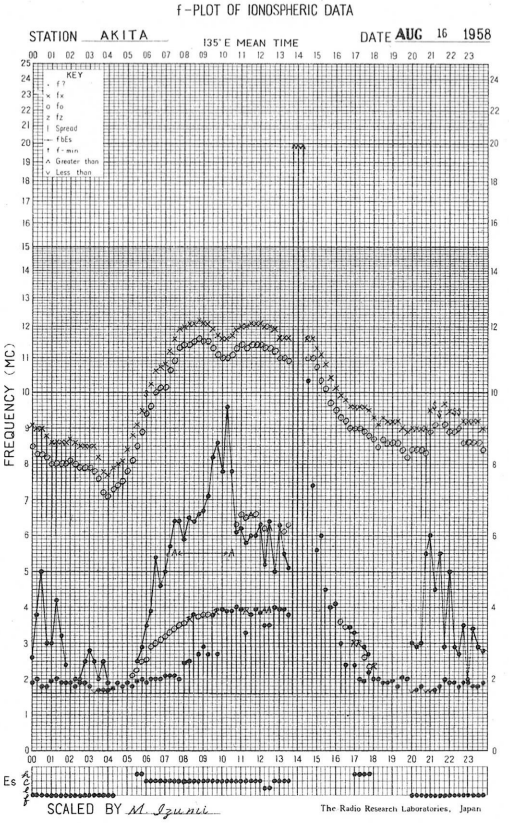
SCALED BY J. oda
The Radio Research Laboratories, Japan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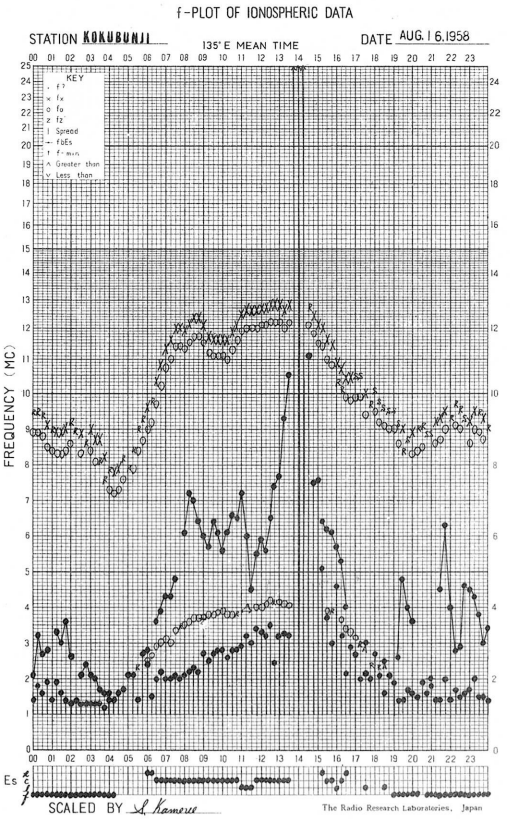
SCALED BY M. Izumi
The Radio Research Laboratories, Japan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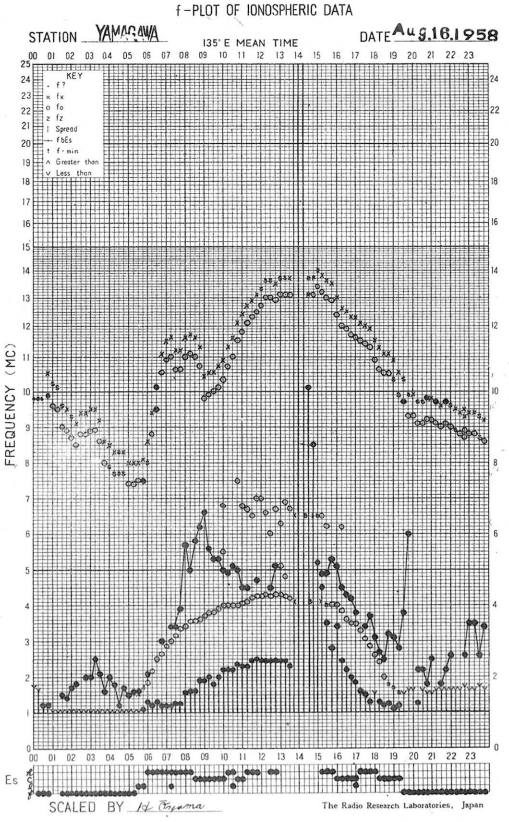
The Radio Research Laboratories, Japan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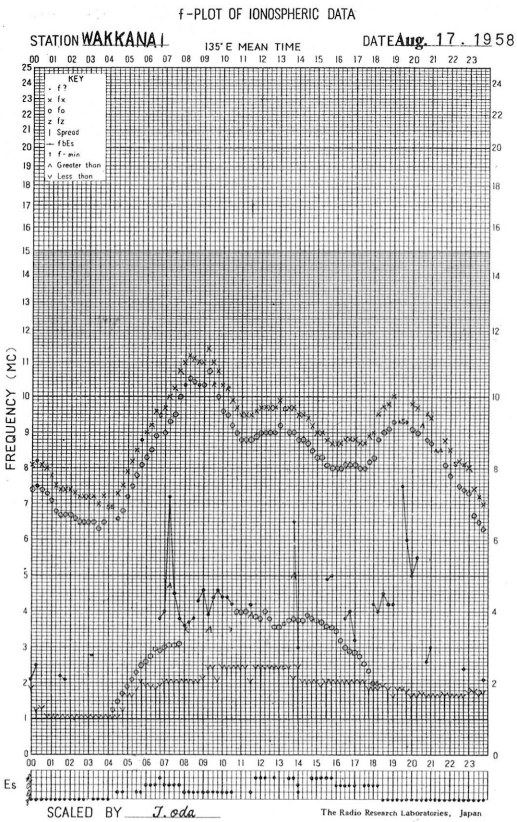
The Radio Research Laboratories, Japan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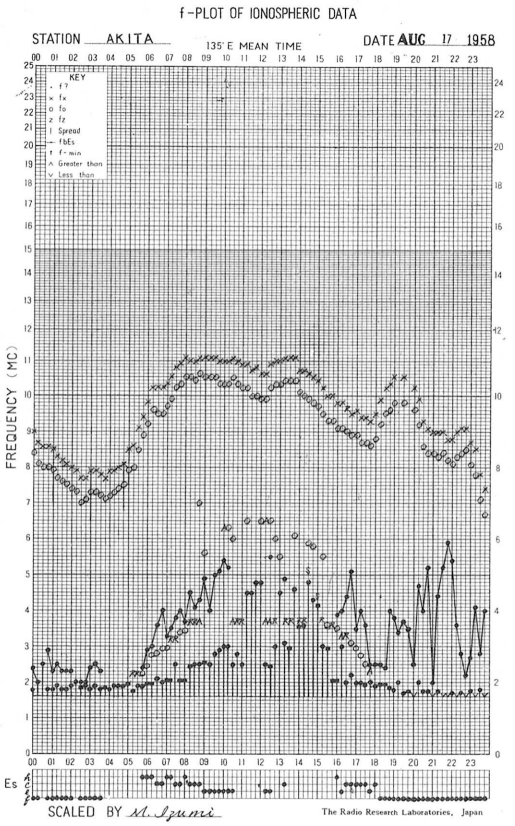
The Radio Research Laboratories, Japan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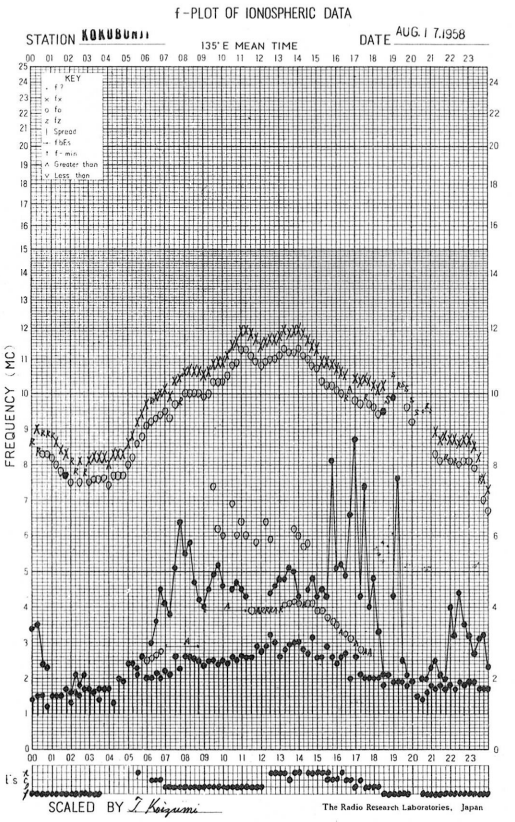
The Radio Research Laboratories, Japan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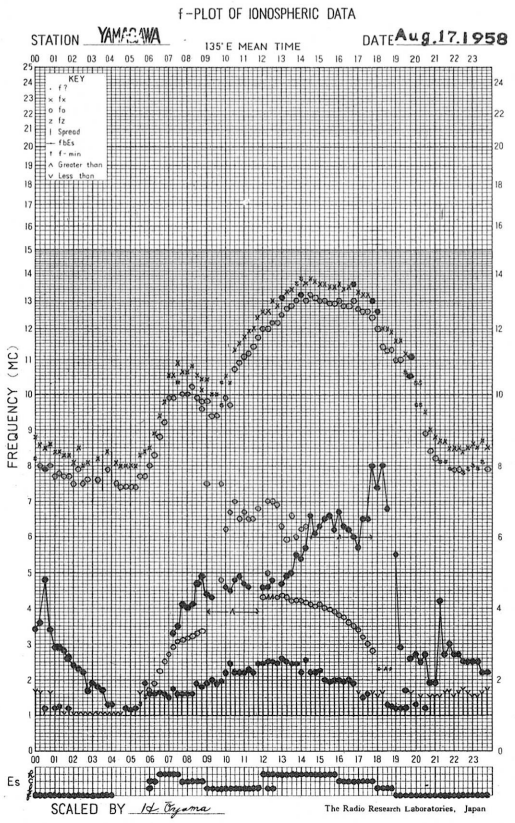
The Radio Research Laboratories, Japan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The Radio Research Laboratories, Japan

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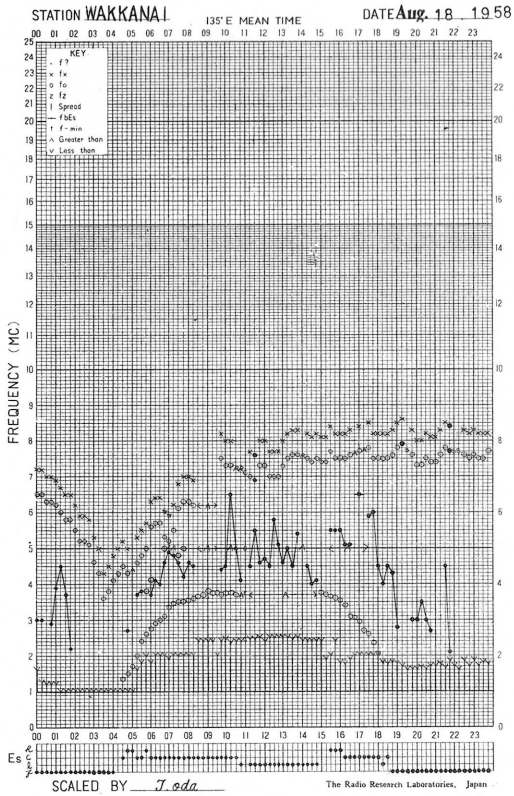

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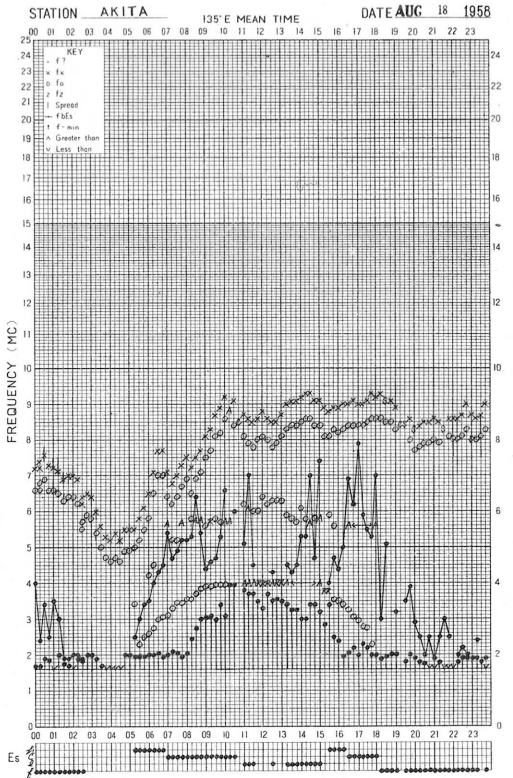

SCALED BY M. Izumi

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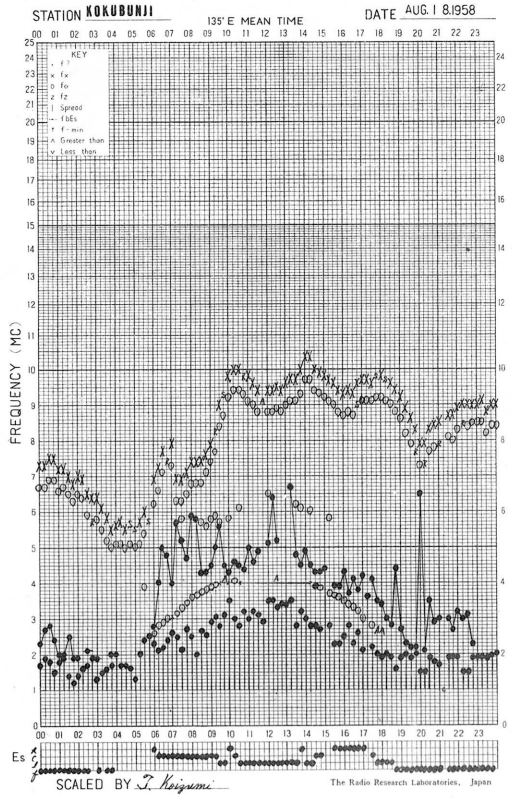

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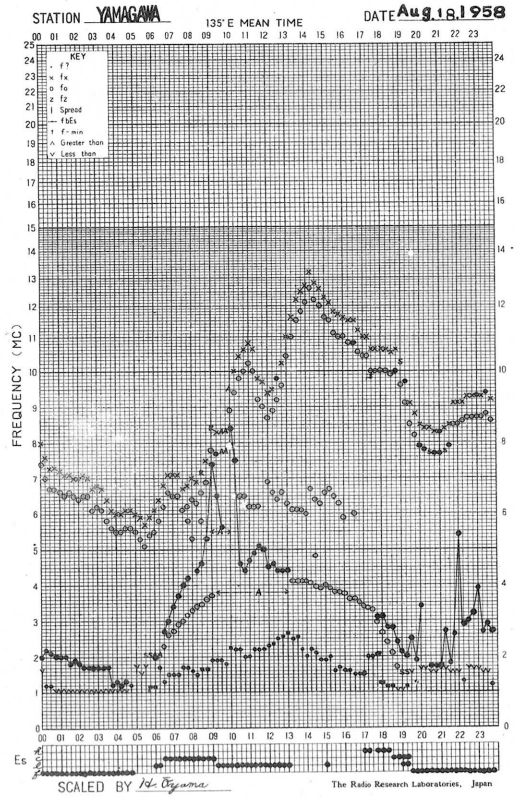

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The Radio Research Laboratories, Japan

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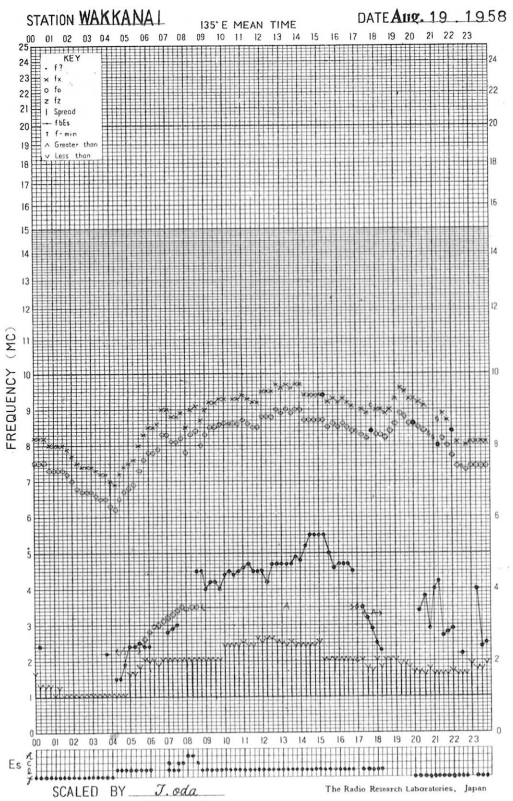

SCALED BY T. oda

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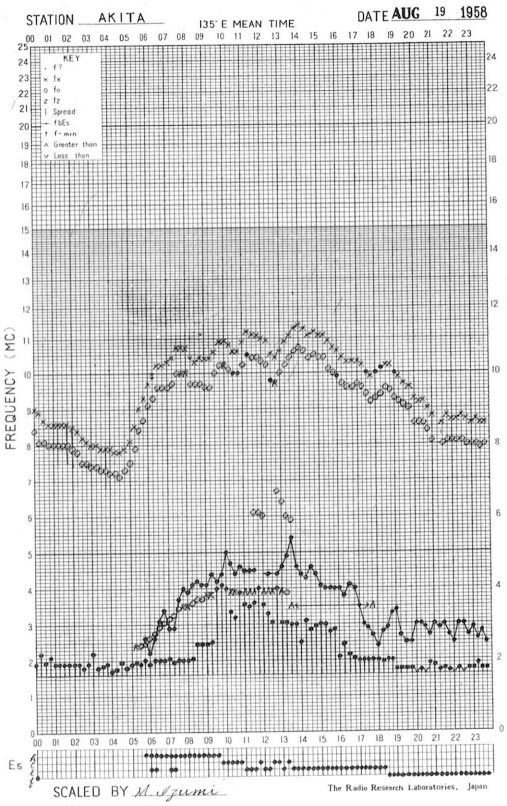

SCALED BY M. Ojumi

The Radio Research Laboratories, Japan

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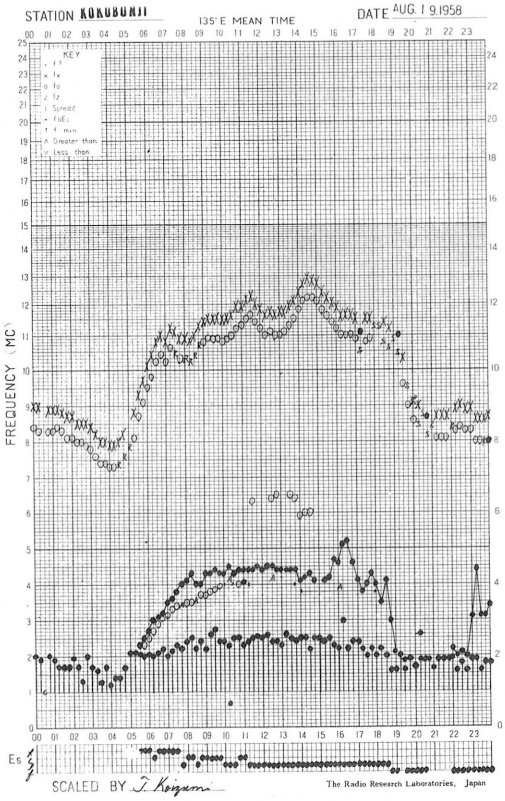

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The Radio Research Laboratories, Japan

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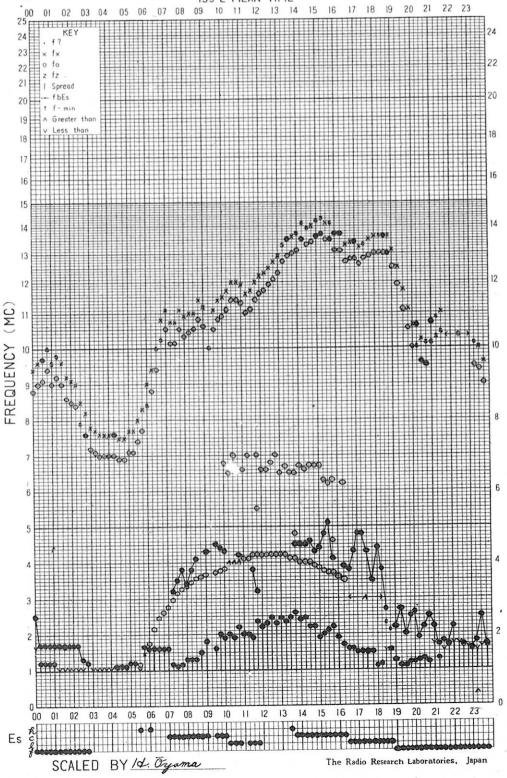

SCALED BY H. Ozyama

The Radio Research Laboratories, Japan

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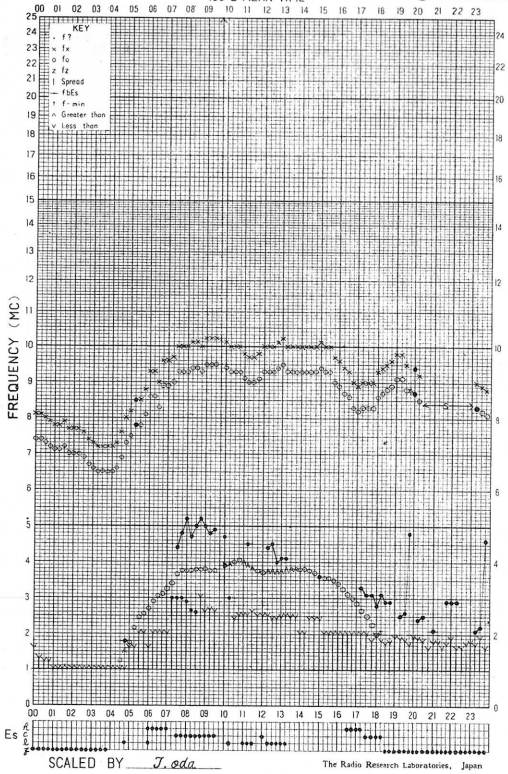

SCALED BY T. Oda

The Radio Research Laboratories, Japan

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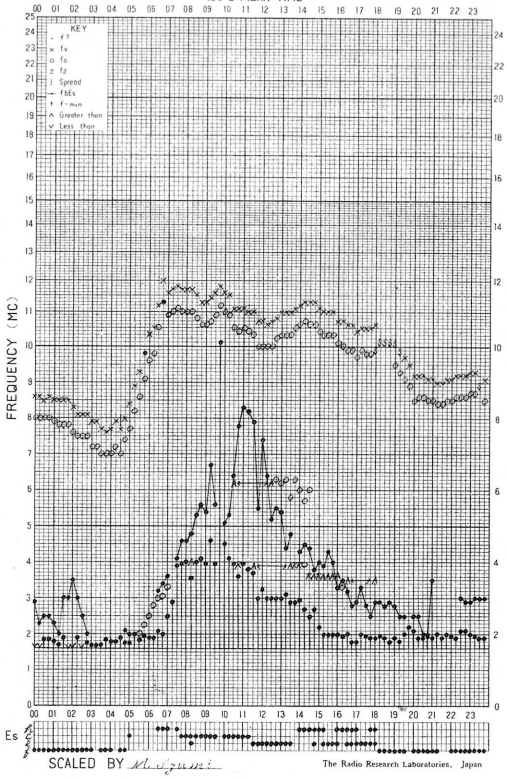

SCALED BY N. Izumi

The Radio Research Laboratories, Japan

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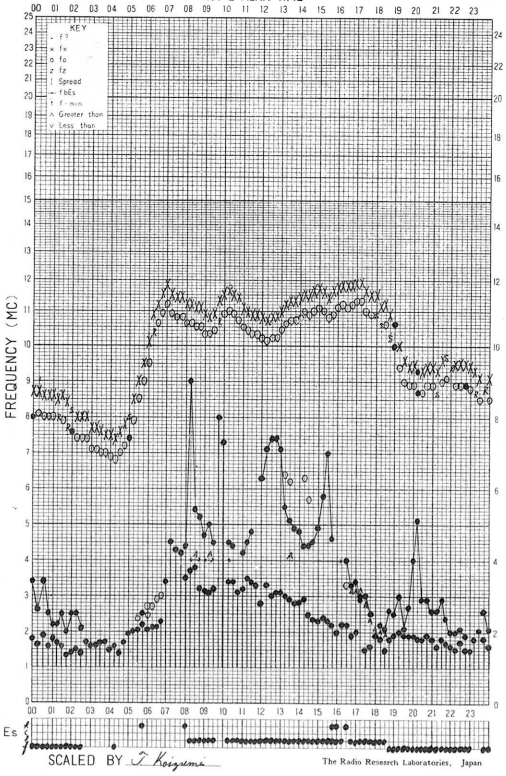

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The Radio Research Laboratories, Japan

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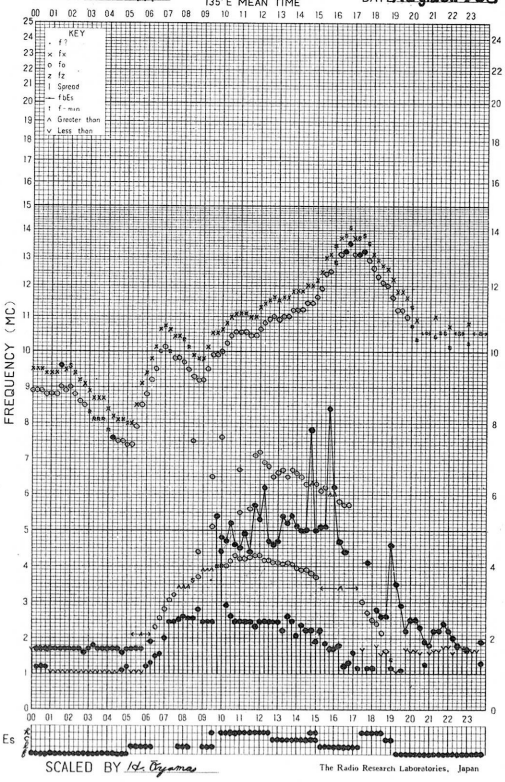

SCALED BY Ichi Ozawa

The Radio Research Laboratories, Japan

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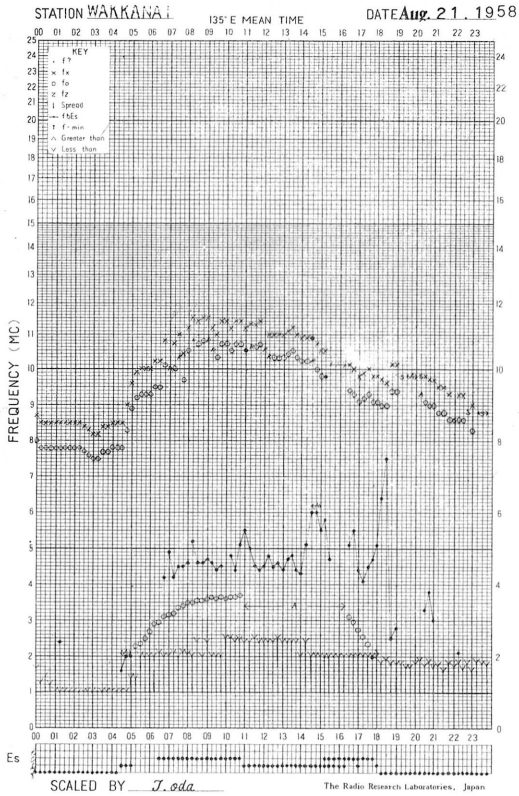

SCALED BY T. Oda

The Radio Research Laboratories, Japan

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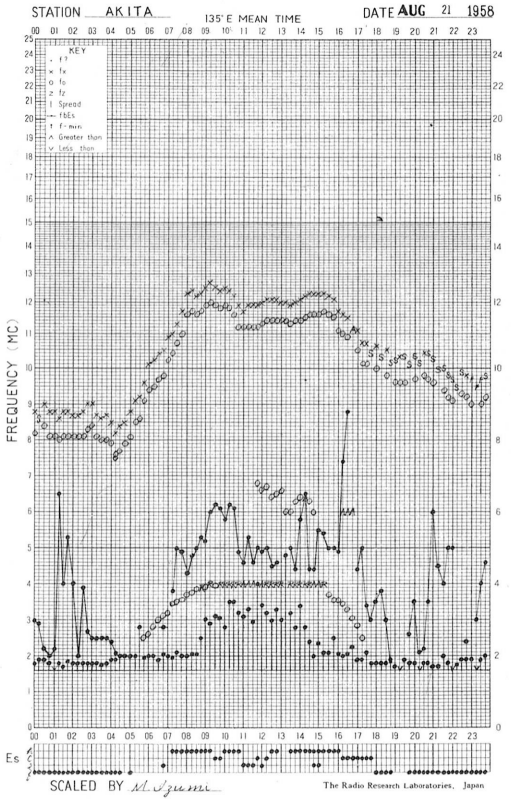

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The Radio Research Laboratories, Japan

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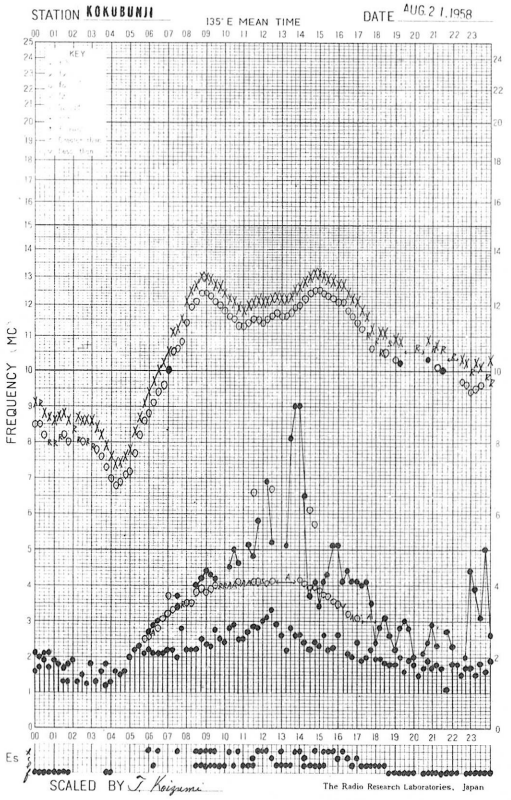

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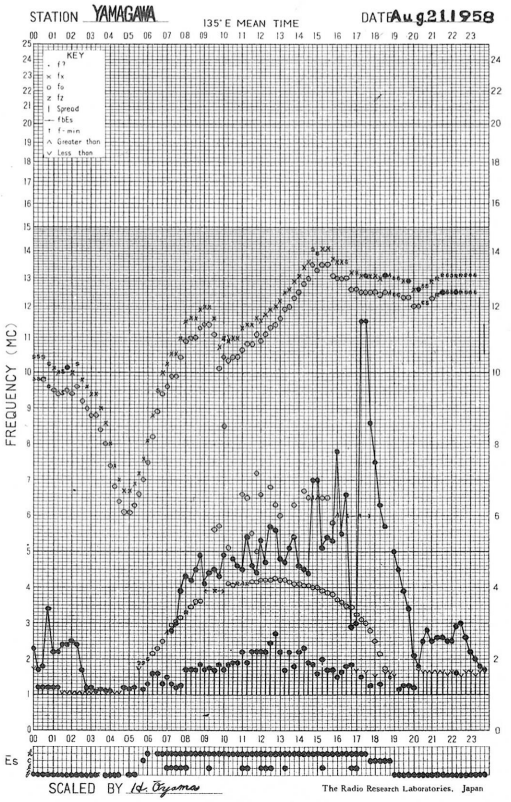
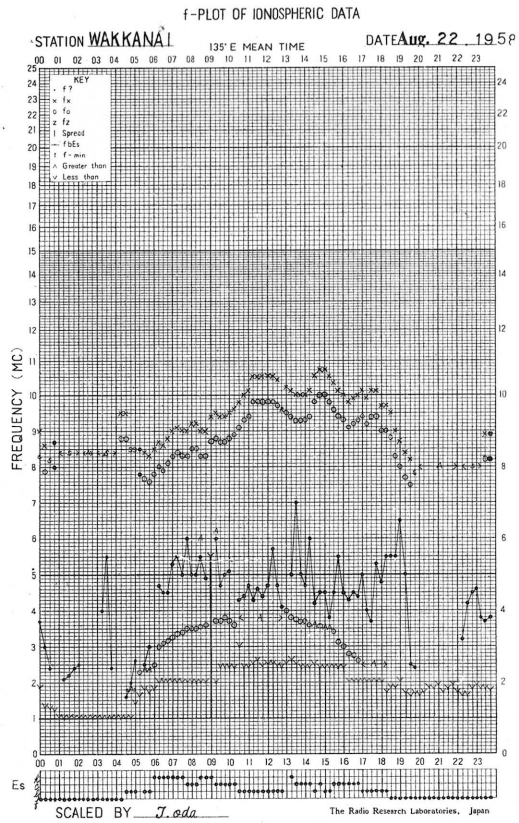


SCALED BY H. Ozawa

The Radio Research Laboratories, Japan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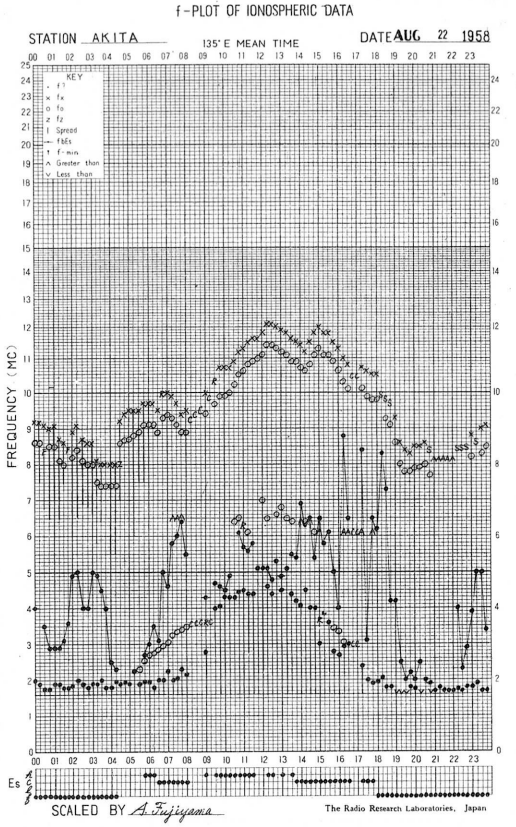
SCALED BY J. oda
The Radio Research Laboratories, Japan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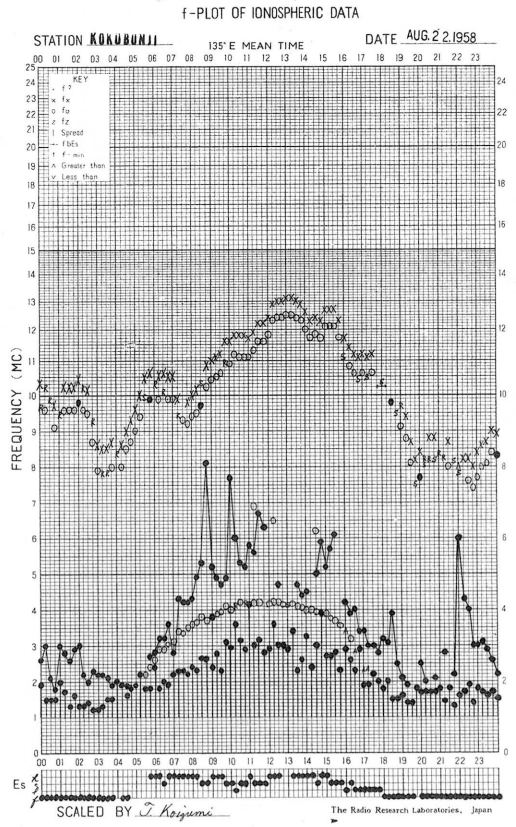
SCALED BY A. Fujiyama
The Radio Research Laboratories, Japan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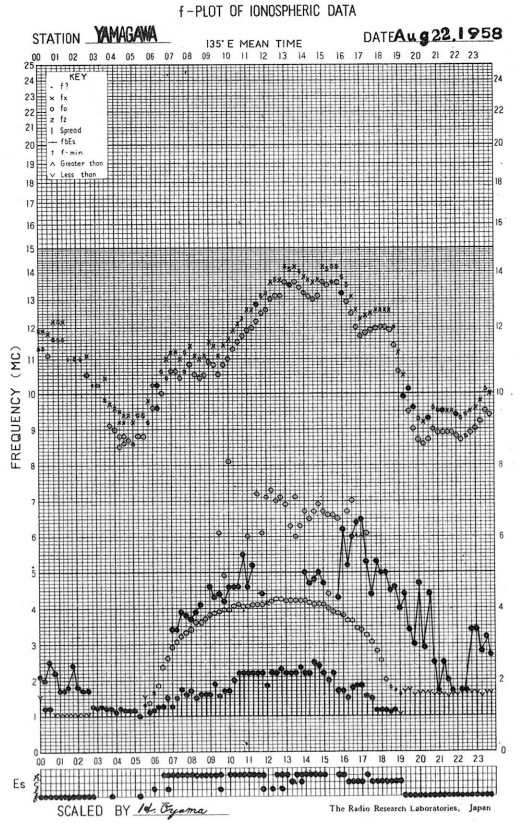
The Radio Research Laboratories, Japan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The Radio Research Laboratories, Japan

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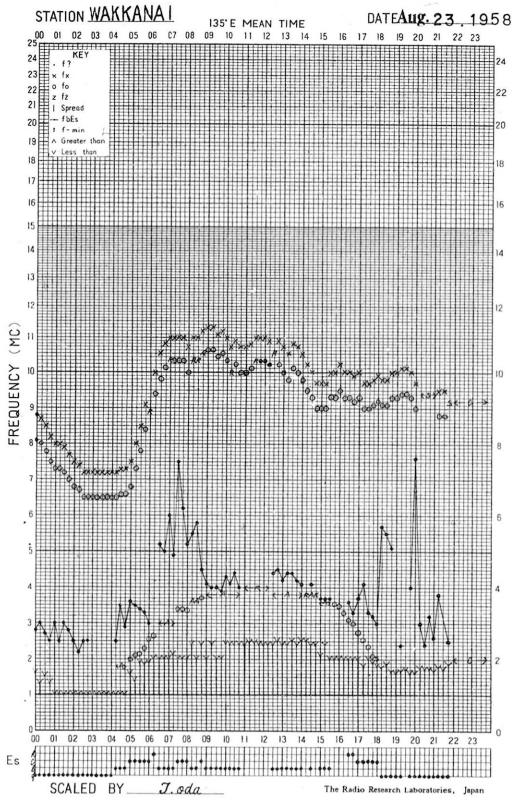

SCALED BY T. Oda

The Radio Research Laboratories, Japan

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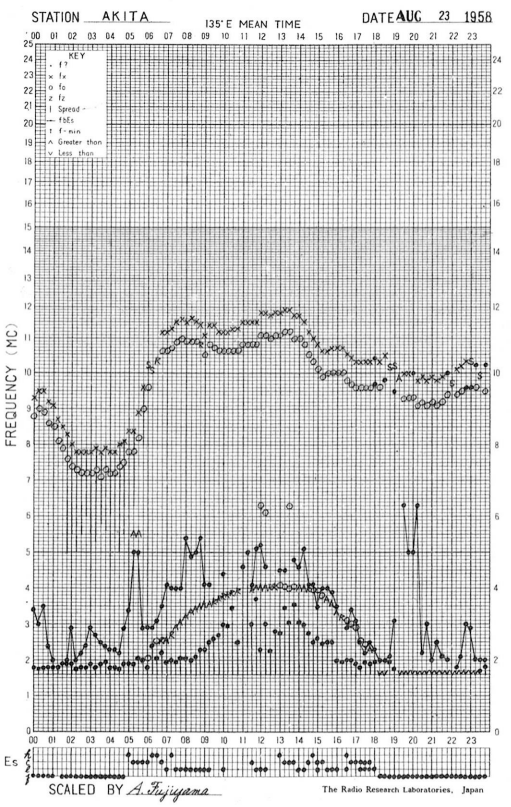

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The Radio Research Laboratories, Japan

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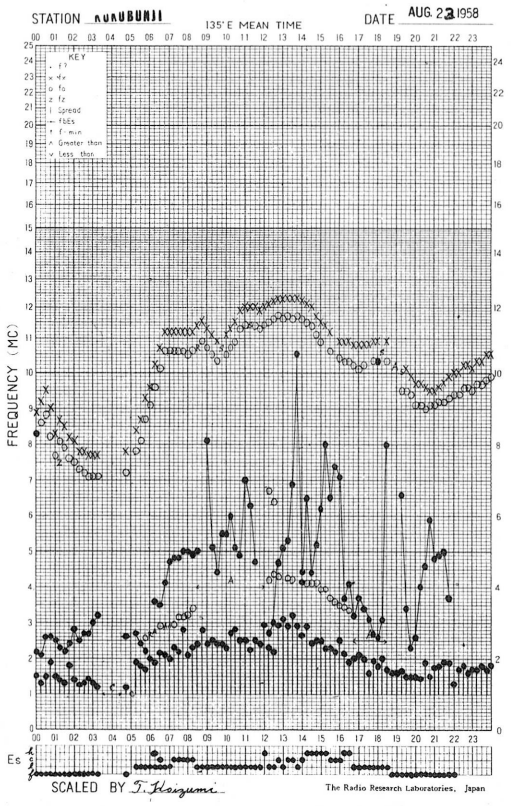

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The Radio Research Laboratories, Japan

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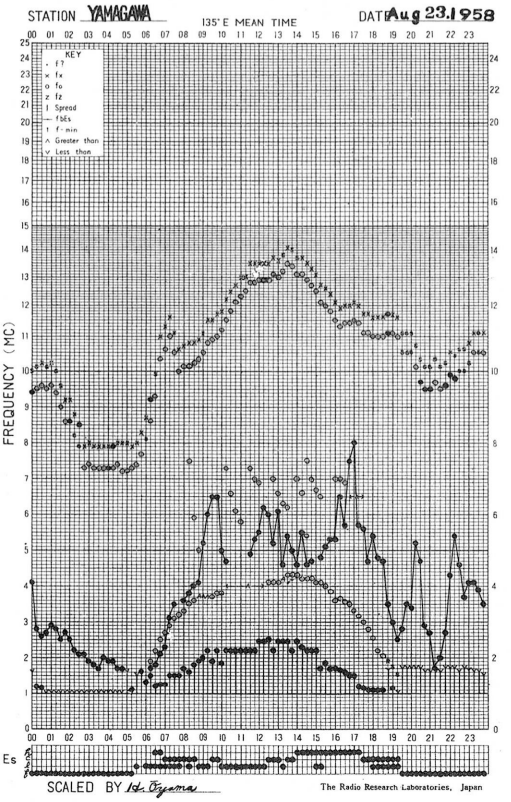

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The Radio Research Laboratories, Japan

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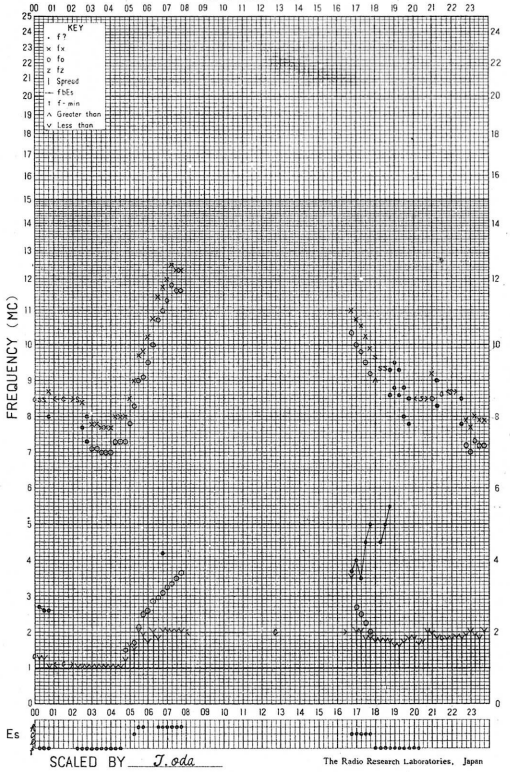

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The Radio Research Laboratories, Japan

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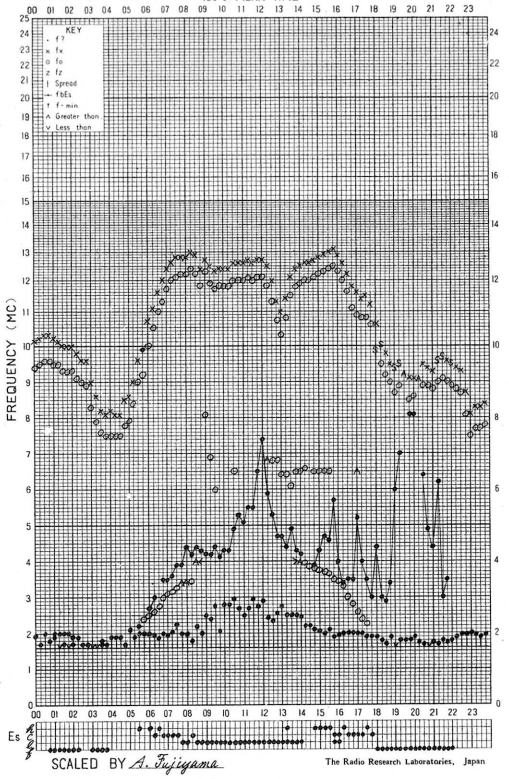

SCALED BY A. Fujiyama

The Radio Research Laboratories, Japan

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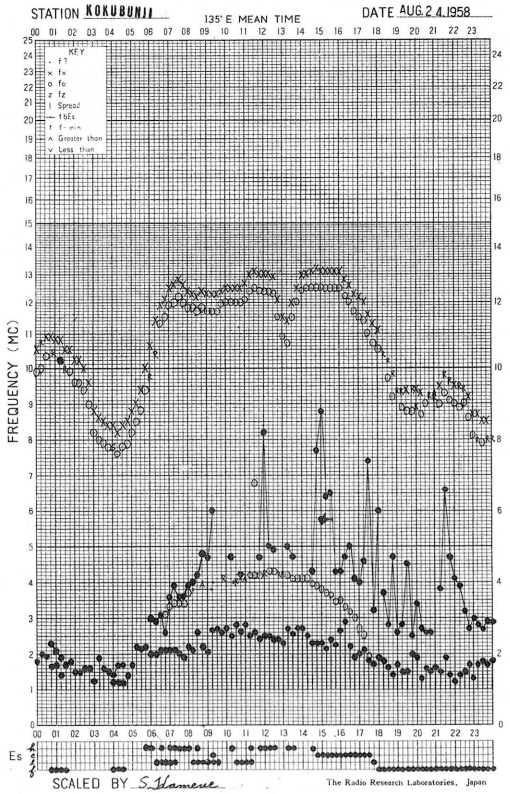

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The Radio Research Laboratories, Japan

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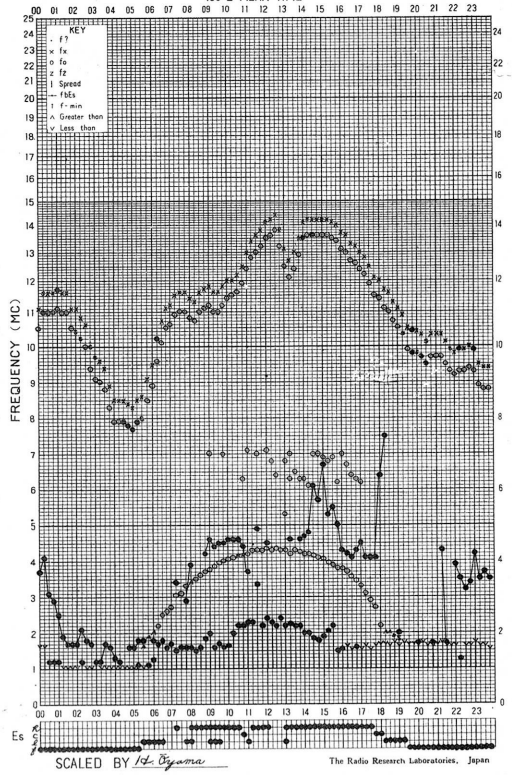

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The Radio Research Laboratories, Japan

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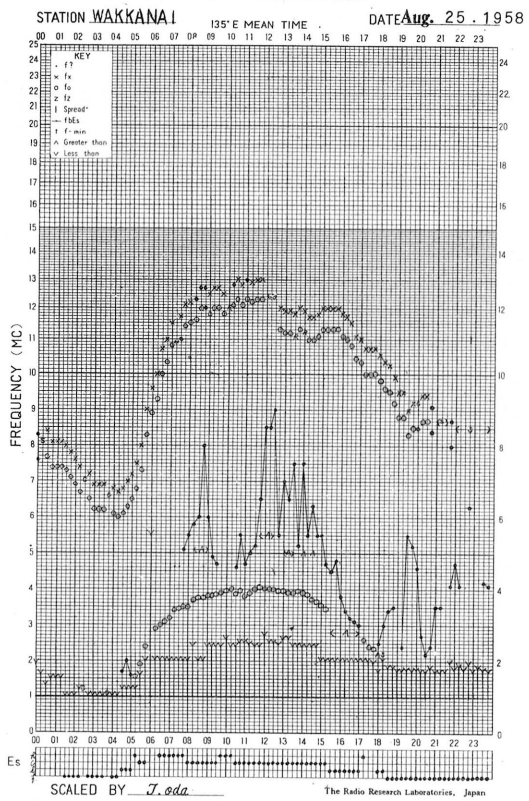

SCALED BY T. oda

The Radio Research Laboratories, Japan

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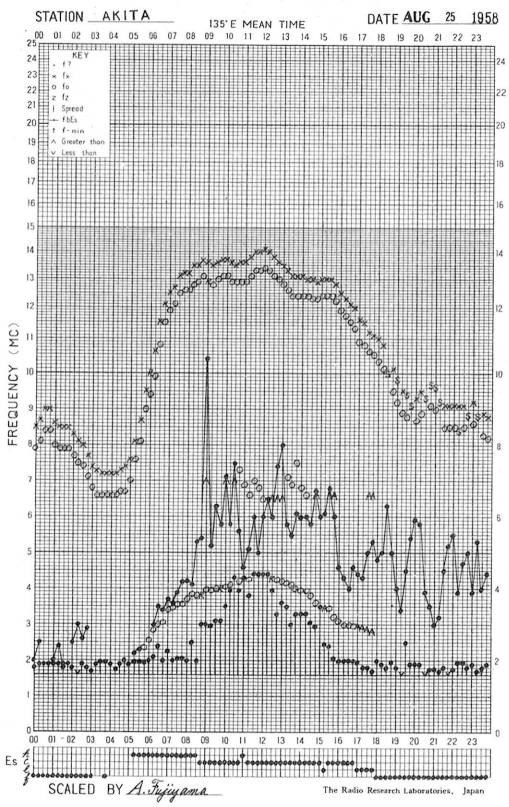

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The Radio Research Laboratories, Japan

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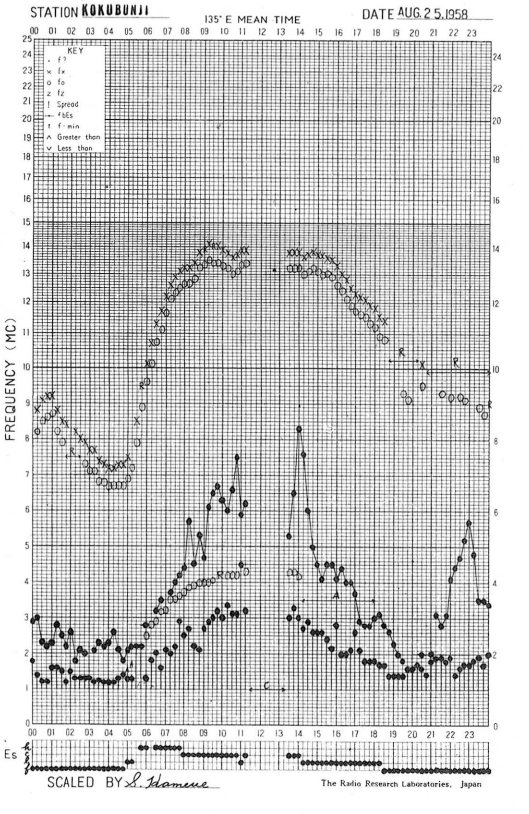

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The Radio Research Laboratories, Japan

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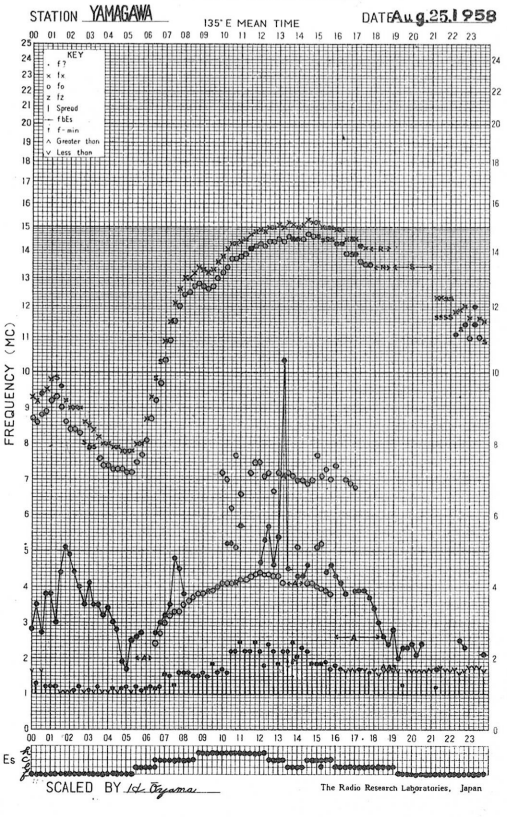

SCALED BY K. Toyama

The Radio Research Laboratories, Japan

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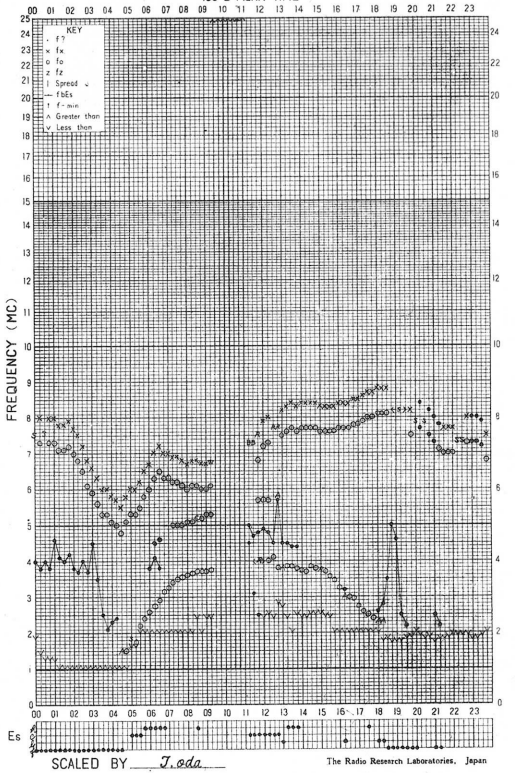

SCALED BY J. oda

The Radio Research Laboratories, Japan

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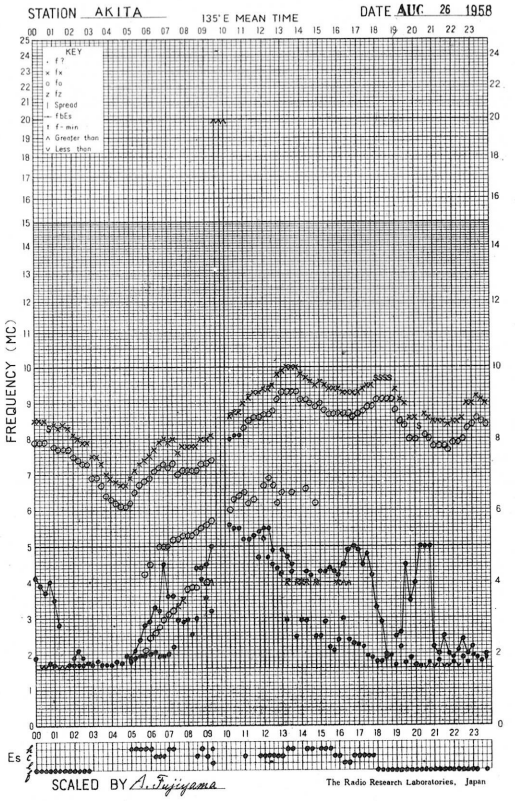

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The Radio Research Laboratories, Japan

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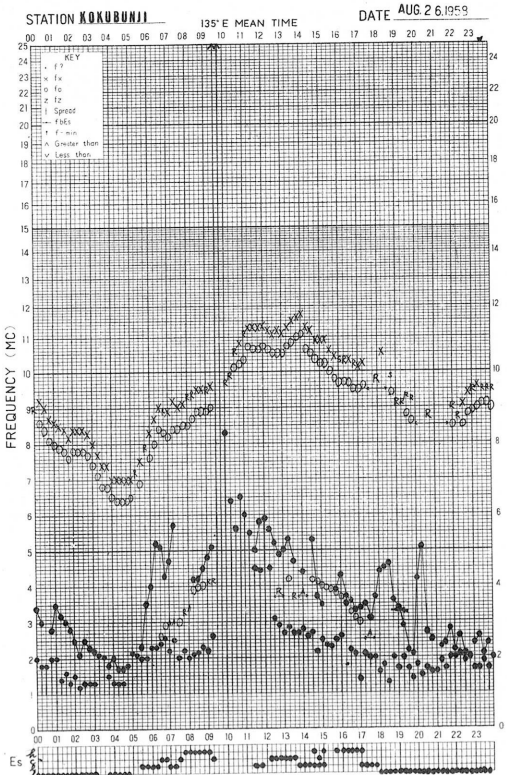

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The Radio Research Laboratories, Japan

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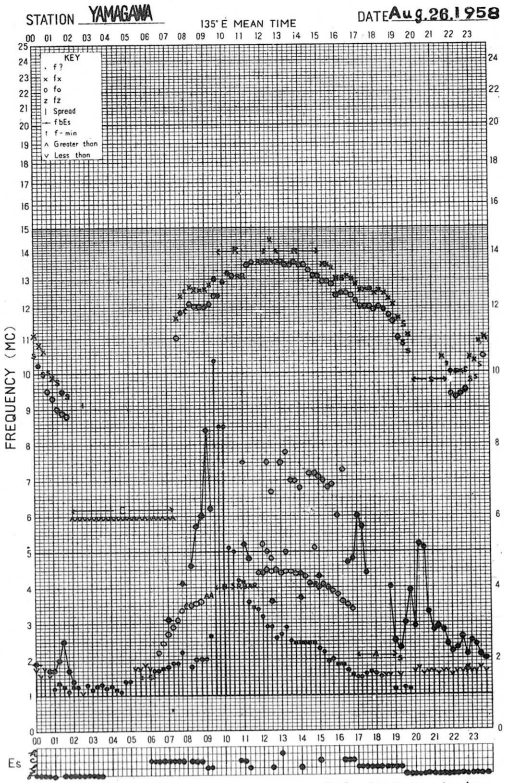

SCALED BY Ist Ozyama

The Radio Research Laboratories, Japan

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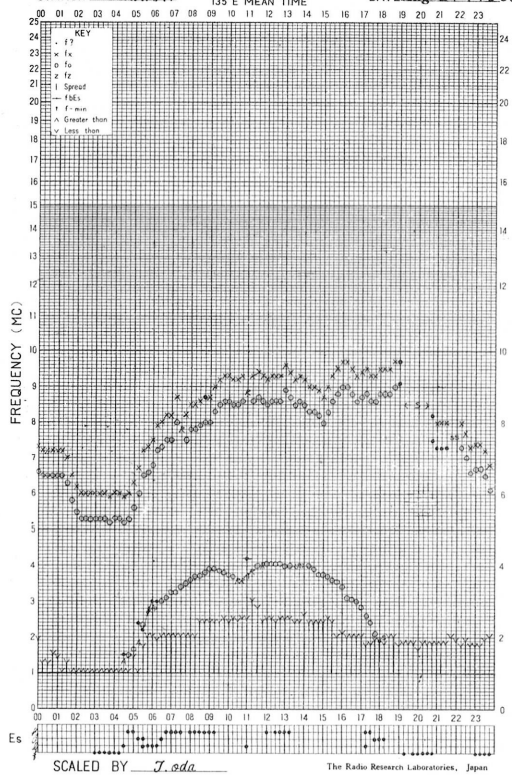

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The Radio Research Laboratories, Japan

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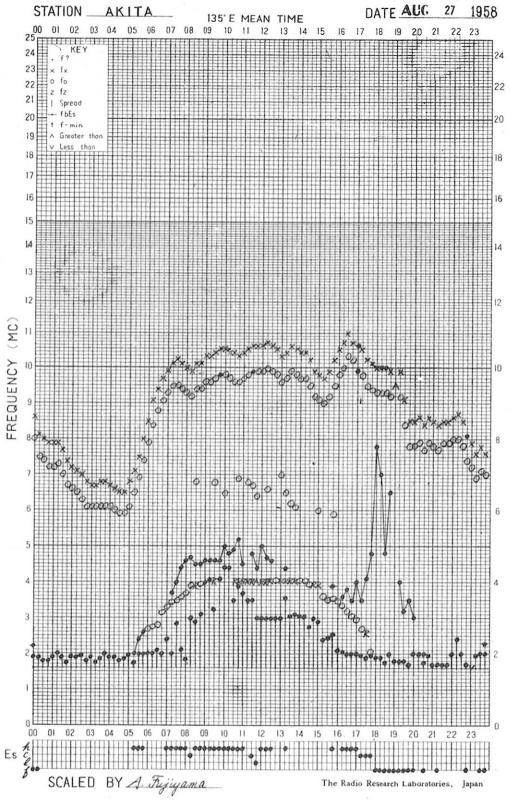

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The Radio Research Laboratories, Japan

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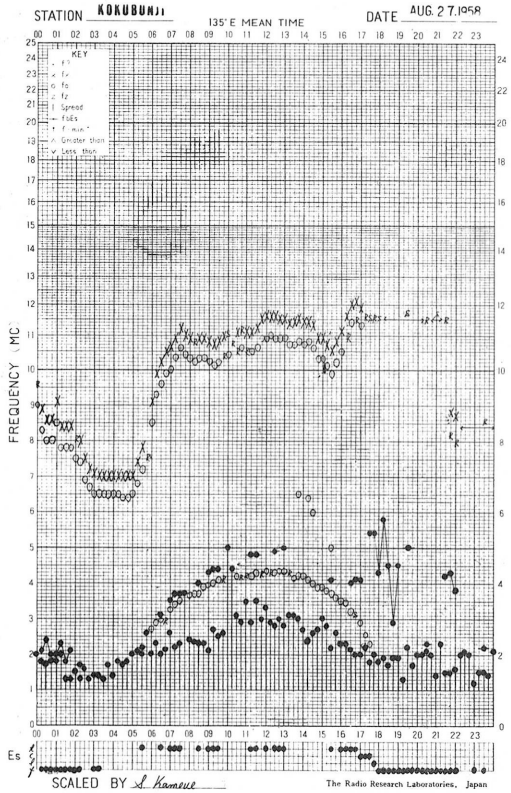

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The Radio Research Laboratories, Japan

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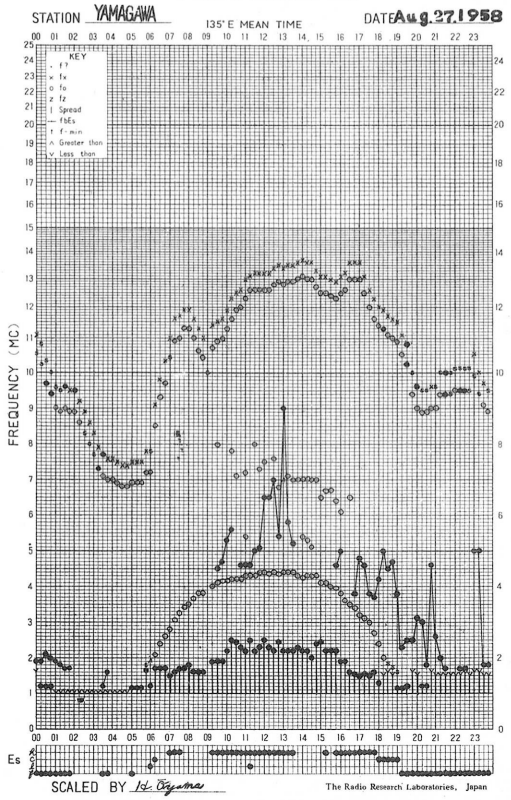

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The Radio Research Laboratories, Japan

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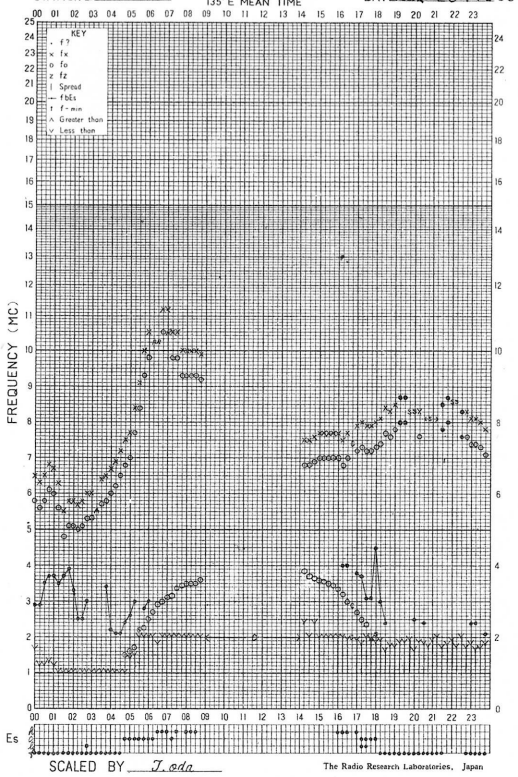

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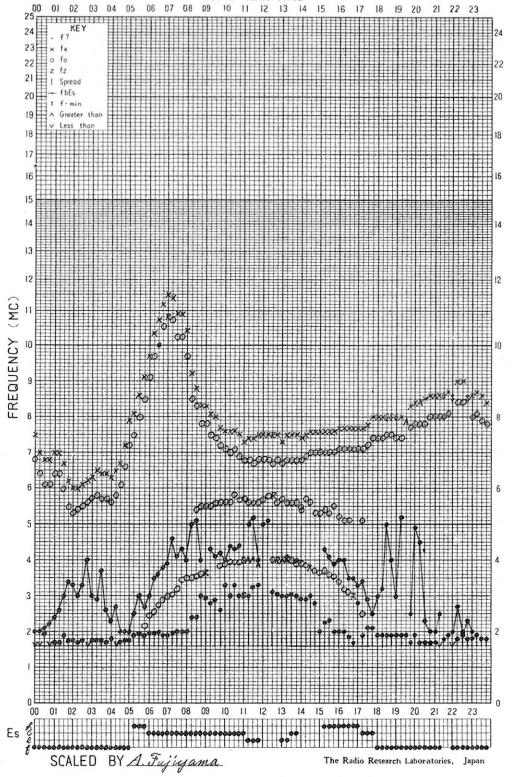

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The Radio Research Laboratories, Japan

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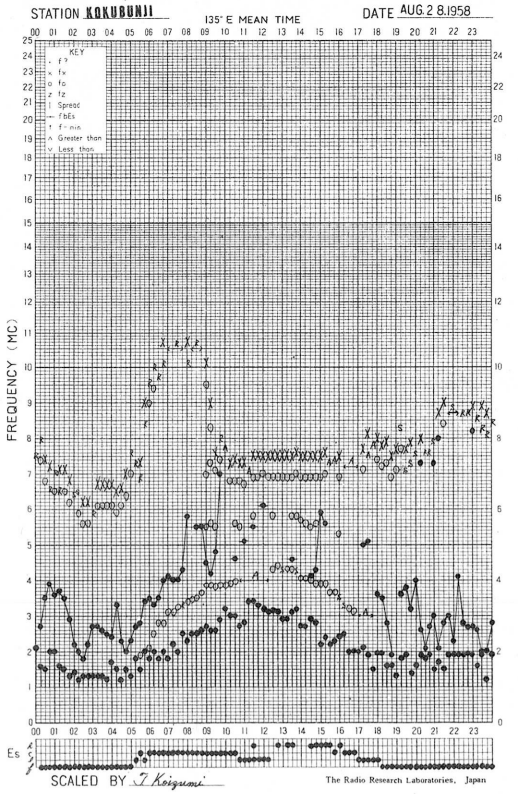

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The Radio Research Laboratories, Japan

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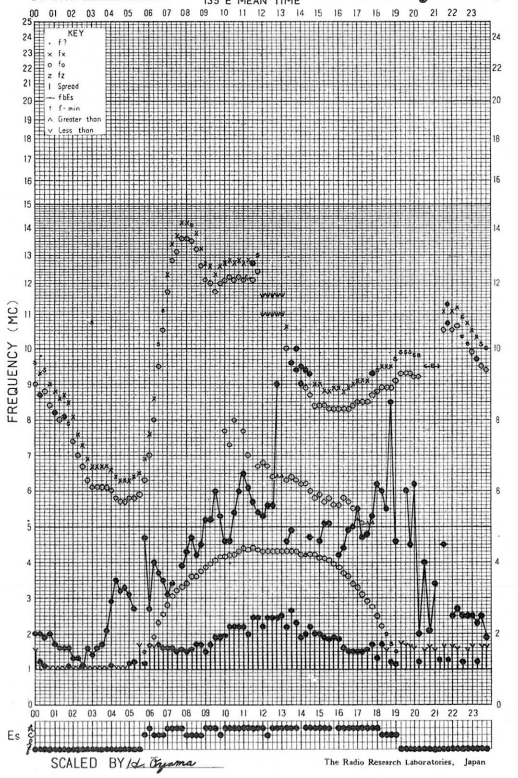

SCALED BY Ichi Ozyama

The Radio Research Laboratories, Japan

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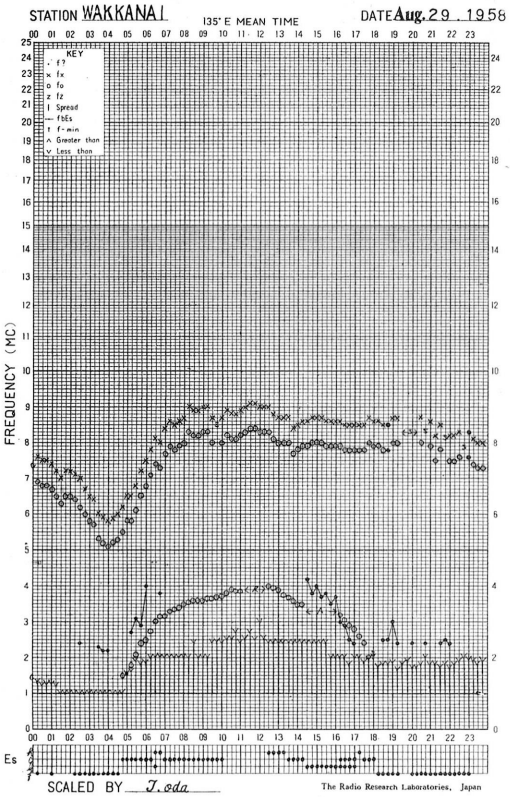

SCALED BY T. Oda The Radio Research Laboratories, Japan

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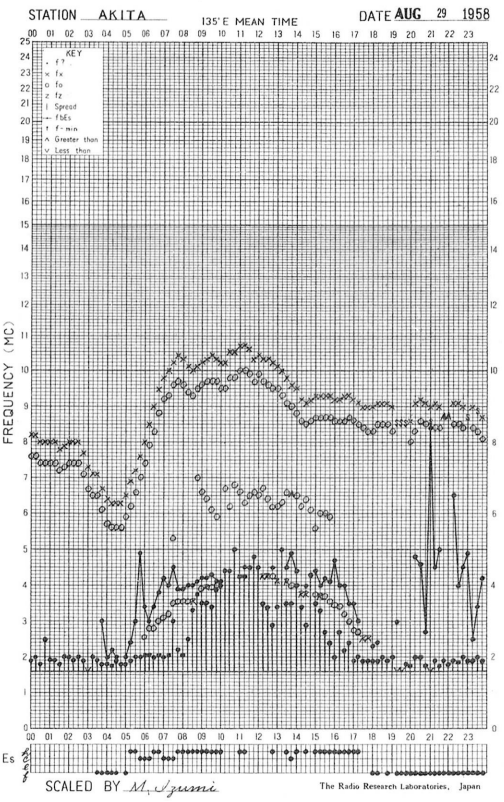

SCALED BY M. Izumi The Radio Research Laboratories, Japan

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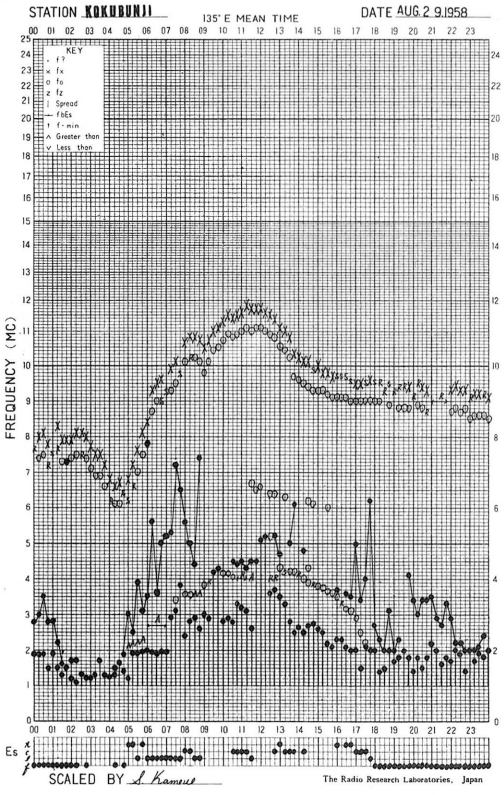

SCALED BY S. Kamesu The Radio Research Laboratories, Japan

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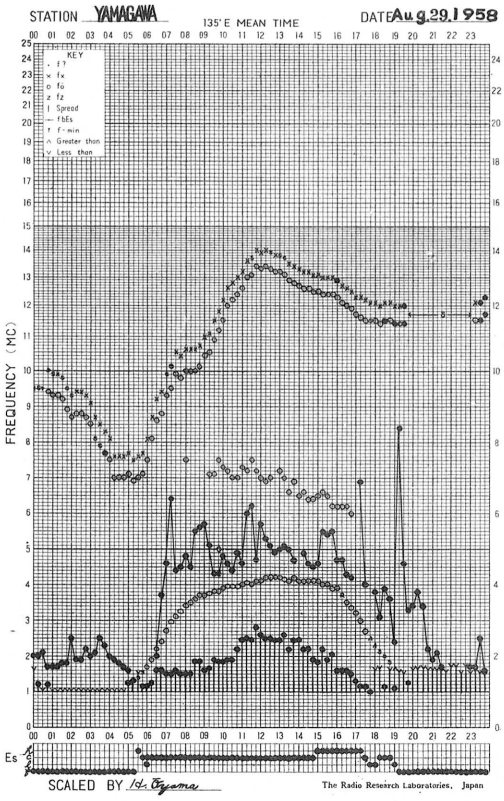
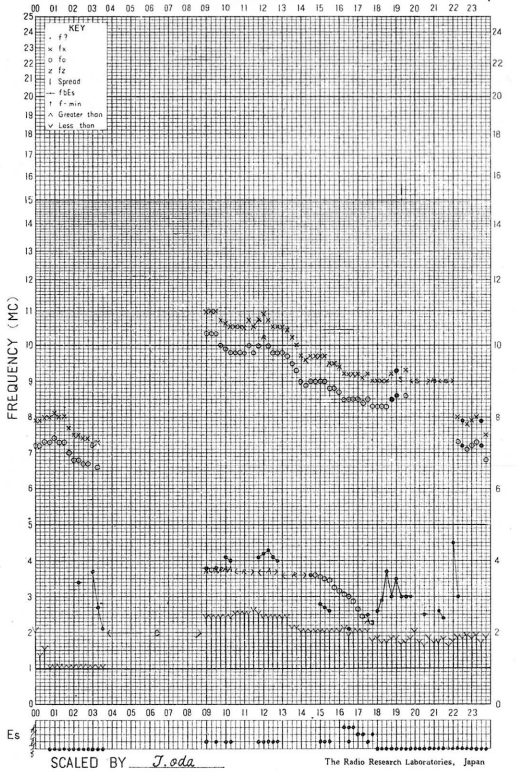


SCALED BY H. Eyama The Radio Research Laboratories, Japan

f-PLOT OF IONOSPHERIC DATA

STATION WAKKANAI 135° E MEAN TIME DATE Aug. 30, 1958

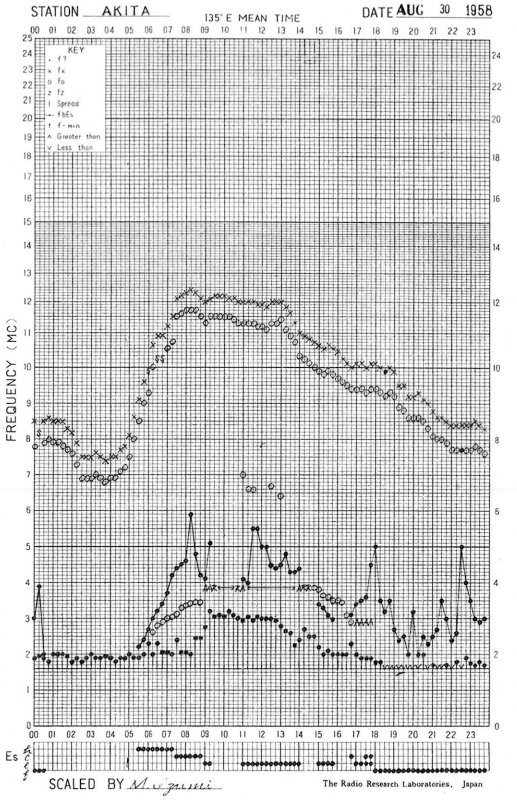


SCALED BY T. Oda

The Radio Research Laboratories, Japan

f-PLOT OF IONOSPHERIC DATA

STATION AKITA 135° E MEAN TIME DATE AUG 30 1958



SCALED BY M. Nagami

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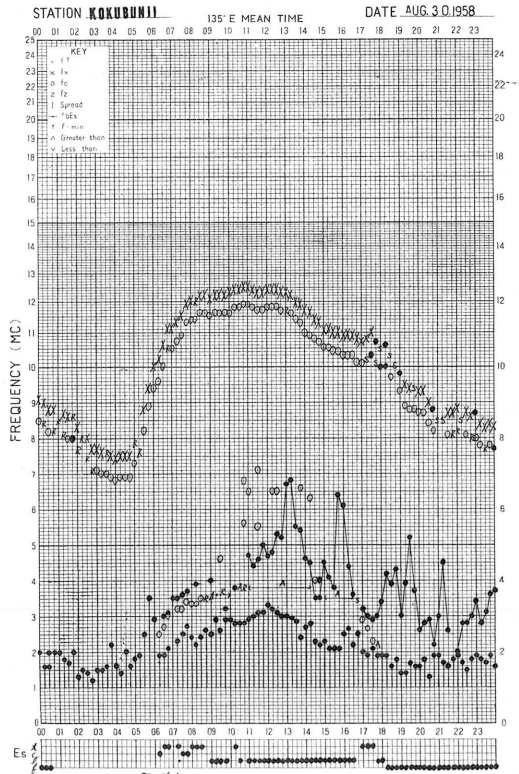
f-PLOT OF IONOSPHERIC DATA

STATION KOKUBUNJI 135° E MEAN TIME DATE AUG. 30 1958



SCALED BY T. Kitagumi

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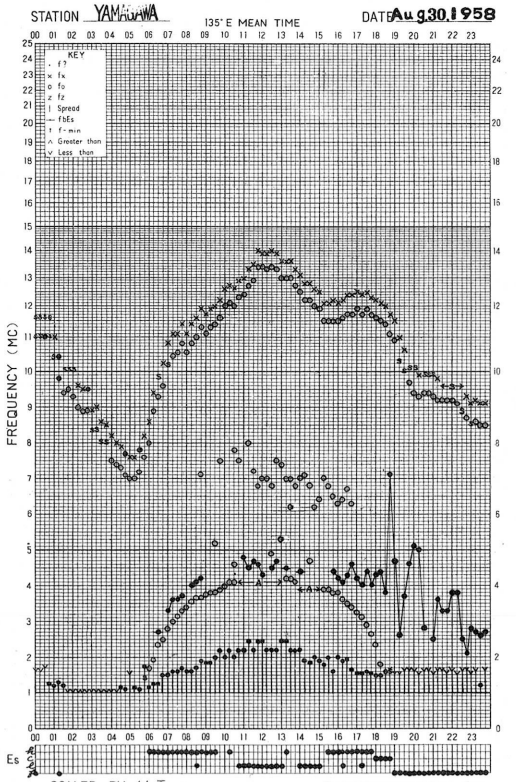
f-PLOT OF IONOSPHERIC DATA

STATION YAMAKAWA 135° E MEAN TIME DATE Aug 30 1958



SCALED BY H. Ozaima

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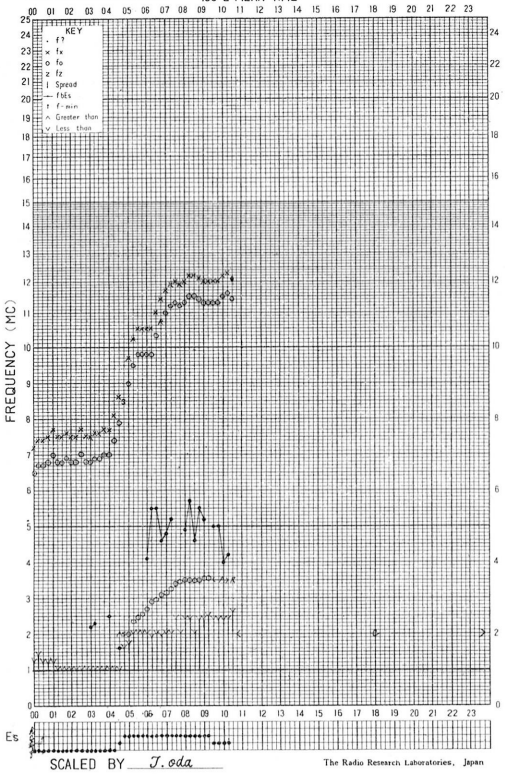
f-PLOT OF IONOSPHERIC DATA

STATION WAKKANAI 135° E MEAN TIME DATE Aug. 31. 1958

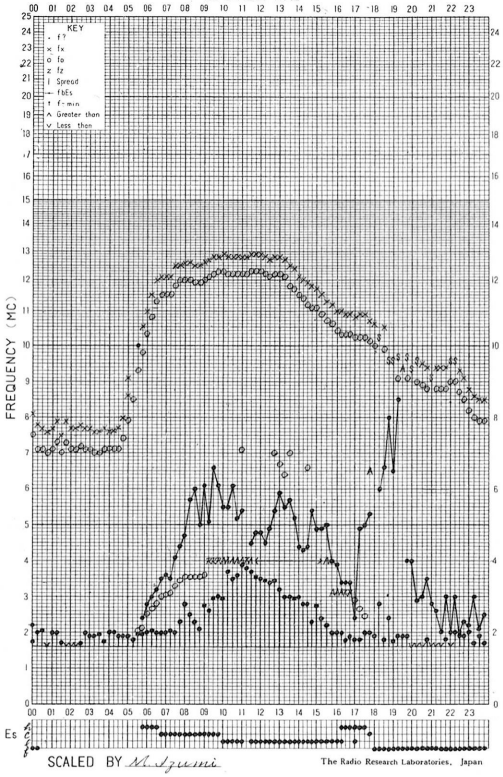


SCALED BY T. Oda

The Radio Research Laboratories, Japan

f-PLOT OF IONOSPHERIC DATA

STATION AKITA 135° E MEAN TIME DATE AUG 31 1958



SCALED BY M. Izumi

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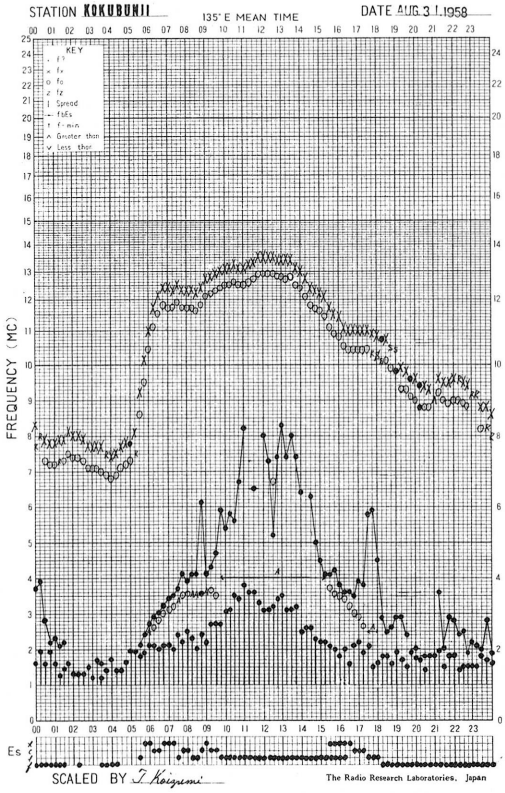
f-PLOT OF IONOSPHERIC DATA

STATION KOKUBUNJI 135° E MEAN TIME DATE AUG 31 1958



SCALED BY I. Koizumi

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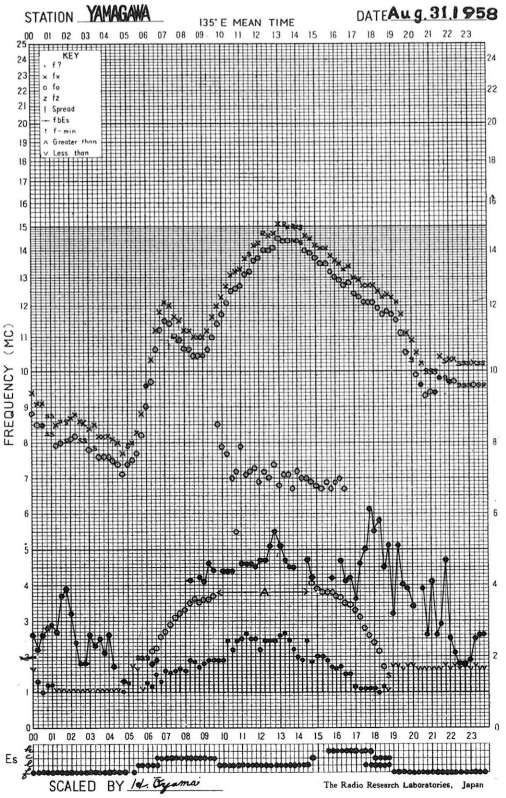
f-PLOT OF IONOSPHERIC DATA

STATION YAMAGAWA 135° E MEAN TIME DATE Aug. 31. 1958



SCALED BY H. Ozama

The Radio Research Laboratories, Japan

SOLAR RADIO EMISSION 200 Mc/s

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

HIRAISO

Time in U.T.

Aug. 1958	Steady Flux					Variability				
	00-03	03-06	06-09	21-24	Day	00-03	03-06	06-09	21-24	Day
1	39	32	45	27	39	2	2	-	1	2
2	30	31	30	21	30	2	1	-	1	2
3	30	28	27	21	26	1	1	1	1	1
4	30	27	20	22	25	1	1	1	1	1
5	24	23	21	21	23	1	1	1	1	1
6	23	18	19	33	20	1	1	1	2	1
7	33	44	46	26	39	2	2	2	2	2
8	29	31	28	30	29	2	1	2	2	2
9	29	31	26	37	42	1	1	1	2	1
10	41	64	52	69	48	2	2	2	2	2
11	64	39	34	-	52	3	2	1	-	2
12	-	-	-	-	-	-	-	-	-	-
13	-	-	-	38	-	-	-	-	2	-
14	45	43	(76)	43	45	2	2	2	2	2
15	37	33	35	-	36	2	1	1	2	1
16	56	36	75	18	56	2	3	2	1	2
17	23	23	24	-	23	1	1	1	1	1
18	23	26	33	-	24	1	1	1	1	1
19	27	26	21	63	25	1	1	2	2	1
20	(59)	30	25	-	43	1	1	1	-	1
21	20	24	36	39	25	1	2	1	1	1
22	47	51	52	121	47	1	2	2	2	2
23	171	146	110	41	139	2	2	2	2	2
24	46	44	37	-	43	2	2	2	1	2
25	18	24	26	-	23	1	1	1	-	1
26	*	*	54	-	*	3	3	1	1	2
27	23	28	28	18	26	1	2	2	1	1
28	23	24	24	-	22	1	1	1	1	1
29	20	21	22	93	21	1	1	1	2	1
30	110	111	67	39	92	2	2	2	1	2
31	62	116	75	47	77	2	2	2	2	2

No observations were made for the following periods:

August 11, 2100 - August 13, 0900.

* : Outburst; flux will be shown later.

Outstanding Occurrences

Aug. 1958	Start-time	Dura-tion	Type	Max. Inst.	Int. Smd.	Max. Time	Remarks
1	0319.5	0.2	SD	> 3000	-	-	
	2106.7	0.5	CD	150	90	-	
	2108.0	0.3	CD	370	110	-	
	2329.3	0.7	ECD	730	110	-	
2	0322.4	0.4	CD	430	110	-	
6	0214.0	0.6	CD	530	180	-	
	0623.0	3.5	CD	250	40	0624.5	
	0743.7	0.4	CD	330	60	-	
8	2140.2	0.5	CD	1690	720	-	
9	0113.0	0.6	CD	1050	90	-	
	0439.2	0.7	CD	440	130	-	
	0605.5	0.5	CD	390	60	-	
	0625.7	4	CD	380	140	0626.6	
	0911.9	0.9	CD	360	40	-	
10	0226.5	1.6	ECD	1590	190	-	
	0658.1	0.7	CD	2310	970	-	
11	0056.6	0.7	CD	1240	510	-	
	0121.7	0.2	ESD	780	460	-	
	0413.2	3.7	F	1760	180	0413.5	
16	0331.2	1.5	ECD	430	60	-	
	0439.7	} 33	ECD	> 3000	>3000	-	first peak off scale
				1800	900	0500.6	second peak
	0624.0	>140	CA	470	120	0652.4	
17	0506.2	1.5	CD	1140	220	-	
18	0249.2	0.9	CD	900	280	-	
19	0628.0	1.2	CD	840	190	0628.7	
	0632.2	0.8	CD	480	160	-	
21	0332	2.3	F	270	100	0332.8	
	0338	0.5	CD	240	110	-	
22	0109.4	0.5	CD	320	120	-	
	2032.2	0.6	CD	2130	1130	-	
23	0033 ?	0.8	CD	1380	230	-	
	0256.1	2.5	ECD	>3000	>3000	-	off scale
	0804.8	0.5	F	450	250	-	
	2159.2	1.5 ?	ECD	890	210	-	
24	0320.0	0.2	ECD	820	370	-	
	0617.0	0.5	ESD	750	440	-	
	0646.5	0.4	CD	510	160	-	
	0832	0.9	CD	610	330	-	
	2021	0.4 ?	CD	1020	590	-	
	2330 ?	1.2	F	1610	490	-	
26	0019	250	CD	>3000	>3000	-	
27	0212.7	1.1	CD	350	100	-	
31	0020.5	0.4	CD	410	160	-	

RADIO PROPAGATION QUALITY FIGURES

HIRAISO

Time in " T.

Aug. 1958	Whole Day Index	W W V 00 06 12 18 / 06 12 18 24	S. F. 00 06 12 18 / 06 12 18 24	W W V H 00 06 12 18 / 06 12 18 24	Warning 00 06 12 18 / 06 12 18 24	Principal magnetic storms Start	End	Δ H
1	3o	2 3 3 3	3 3 (4) 3	2 (3) S (3)	N N N N			
2	3+	(2) 3 4 4	2 2 3 4	3 (3) 4 3	N N N N			
3	3o	(3 2) 3 2	4 3 2 3	C (2) 3 S	N N N N			
4	2-	3 2 1 1	3 1 (1) 2	3 3 2 3	N N N N			
5	2-	1 2 2 2	3 1 2 2	2 2 2 S	N N N N			
6	1o	1 1 1 1	2 2 1 1	S 2 2 1	N N N N			
7	1+	1 2 2 1	1 1 2 2	2 2 2 1	N N N N			
8	2-	1 1 2 2	2 2 3 1	2 2 2 2	N N N N			
9	1o	1 1 2 1	1 1 1 1	2 2 2 2	N N N N			
10	1+	1 1 3 1	1 1 1 1	2 2 3 3	N N N N			
11	3-	2 4 3 2	2 2 3 2	2 2 3 1	N N N N			
[12]	2o	2 3 3 1	3 1 1 2	2 (3) S 3	N N N N			
13	2-	(1) 2 2 2	2 2 2 2	3 (2) 3 2	N N N N			
14	2o	1 2 (1) 3	3 2 1 2	3 2 2 2	N N N N			
15	2-	3 4 1 1	1 1 2 1	3 2 2 2	N N N N			
16	2+	2 3 3 3	3 1 1 2	3 2 2 2	N N N N			
17*	3+	3 3 4 4	2 3 3 3	2 2 3 3	N W W W	0622	---	190 γ
18*	3+	3 4 3 4	3 3 3 3	2 2 2 1	U U U U	---	1500	
19	2-	3 1 1 3	2 (1) 1 2	2 2 2 1	N N N N			
20	2-	3 1 1 1	3 (1) 1 2	2 2 1 1	N N N N			
21	2-	2 1 2 3	1 1 2 1	2 2 1 1	N N N N			
22	2+	3 (3) 3 3	2 (1) 1 3	3 2 1 3	U U N N			
23	2+	(3) 2 2 3	3 2 (2) 1	2 2 2 3	N N N N			
24*	3+	(3 4) 5 4	3 3 (3) 3	2 3 3 3	U U U U	0140	2000	120 γ
[25]	3+	(3 4) 4 3	4 3 3 3	3 3 3 3	U N N N			
[26]	3o	(3 3) 3 3	3 2 (2) 3	3 3 2 3	N N N N			
27*	3+	(3 3 4 3)	(3 4 4 4)	2 3 (2) C	N U U U	0306	2000	134 γ
28*	2+	(2) 1 2 1	(3 3 3 3)	1 2 3 2	N N N N			
29	1+	1 1 1 1	2 1 2 2	1 1 1 2	N N N N			
30	1+	1 1 1 1	2 1 2 2	1 2 1 2	N N N N			
31	1+	1 1 2 1	1 1 2 2	1 2 2 2	N N N N			

* = day of Special World Interval

[ ] = Regular World Day

( ) = inaccurate

--- = continuing magnetic storm

C = no observation due to artificial reason

S = no read due to interference

SUDDEN IONOSPHERIC DISTURBANCES

(S.I.D.)

HIRAISO

Time in U.T.

Aug. 1958	S W F									S E A			Correspondence		
	Drop-out Intensities (db)						Start-time	Dura-tion	Type	Imp.	Start-time	Dura-tion	Imp.	Flare	Solar noise	Mag.
	WS	SF	HA	TO	MN	LN										
3											18.33	47	1			
3	18"	24	-	-			21.15	25	S	2-						
9	-	20	17	15'	15		03.50	40	S	2-				x		
9		7					04.07	23	Slow	1-				x	x	
13					23		00.48	110	G	2-					x	
14	-	29	-	-			21.52	42	S	2	21.48	42	2	x	x	
16	-	70	-	>50'	>50	-	04.35	104	S	3+	04.35	120	3	x	x	x
18	-	-			17		21.52	40	S	1+						
19	-	22	-	14'	8		22.06	65	G	2-					x	
20	-	> 42	-	20'	43		00.42	33	S	3	00.43	32	1	x	x	
20		-		-	11		03.10	50	G	1						
20		-		-	11		04.35	25	G	1						
26	-	>45	-	-	>45	-	00.10	240	Slow	3+					x	x

NOTE

(1) Suffixes of Drop-out Intensities for WS, HA and TO
' : 10 Mc, no suffix : 15 Mc, " : 20 Mc.

(2) - : unreadable, ( ) : uncertain

ERRATA

Ionospheric Data in Japan, Vol.10 No.7 for July 1958,
Page 94. For index numbers put in parentheses as follows.

RADIO PROPAGATION QUALITY FIGURES

HIRAISO — Time in U.T.

July 1958		W W V 00 06 12 18 06 12 18 24	S. F. 00 06 12 18 06 12 18 24	W W V H 00 06 12 18 06 12 18 24	
2			(4)	(1)	
3			(3) (3)		
5		(2)			
13			(3)		
14				(2)	
18			(3)		
[26]				(3)	
30*				(2)	

IONOSPHERIC DATA IN JAPAN FOR AUGUST 1958
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