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IONOSPHERIC DATA IN JAPAN

FOR JULY 1957

Vol. 9 No. 7

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Prepared by

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

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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_hE_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. |
| (M3000) $F2$ | | The maximum usable frequency factor for a path of 3000 km for transmission by $F2$ layer. |
| (M3000) $F1$ | | 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 normal 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 preceding symbol on monthly tabulation sheets.

| | |
|---|--|
| D | <i>greater than.....</i> |
| E | <i>less than.....</i> |
| 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* A 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 thick 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*, at 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

3 = great
3+ = very great

Types

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

Circuits

WS.....WWV 20, 15 and 10 Mc (Washington, D.C.)
H A.....WWVH 15 and 10 Mc (Hawaii)
S F.....WNA-27 7.6550 Mc; WND-20 10.4925 Mc
 WNC-93 13.7525 Mc; WNC-37 17.4200 Mc (San Francisco)
L N.....GIJ-37 14.6702 Mc (London)
MN.....DZM-28 14.5850 Mc (Manila)

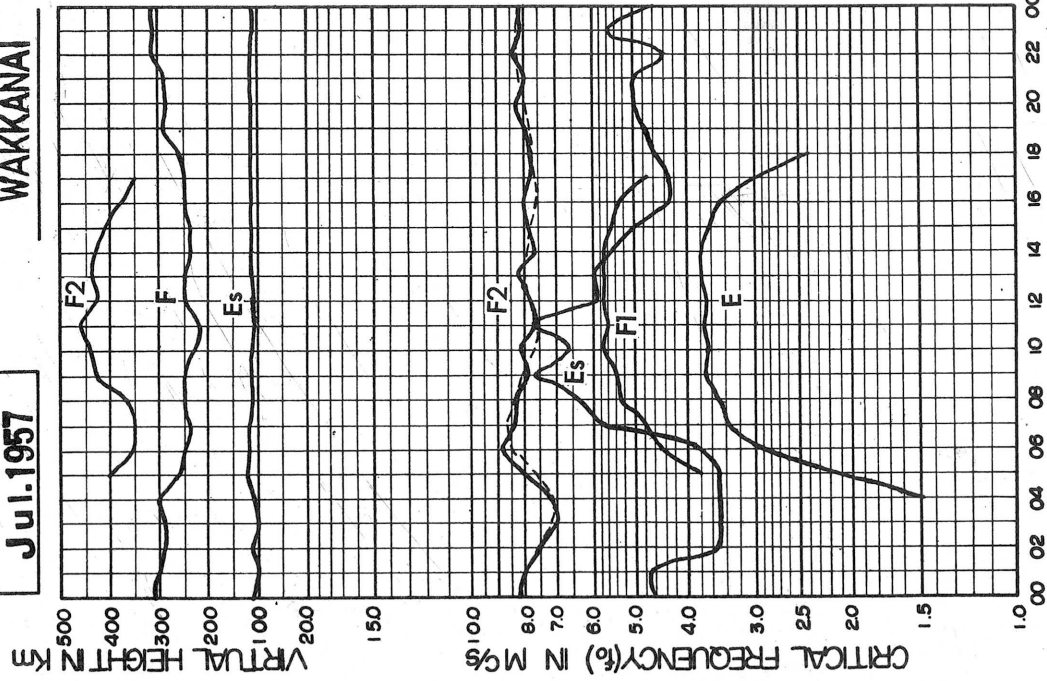
The data of sudden enhancement of atmospherics (SEA) observed on 28 kc are tabulated on each start-time, duration and importance.

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

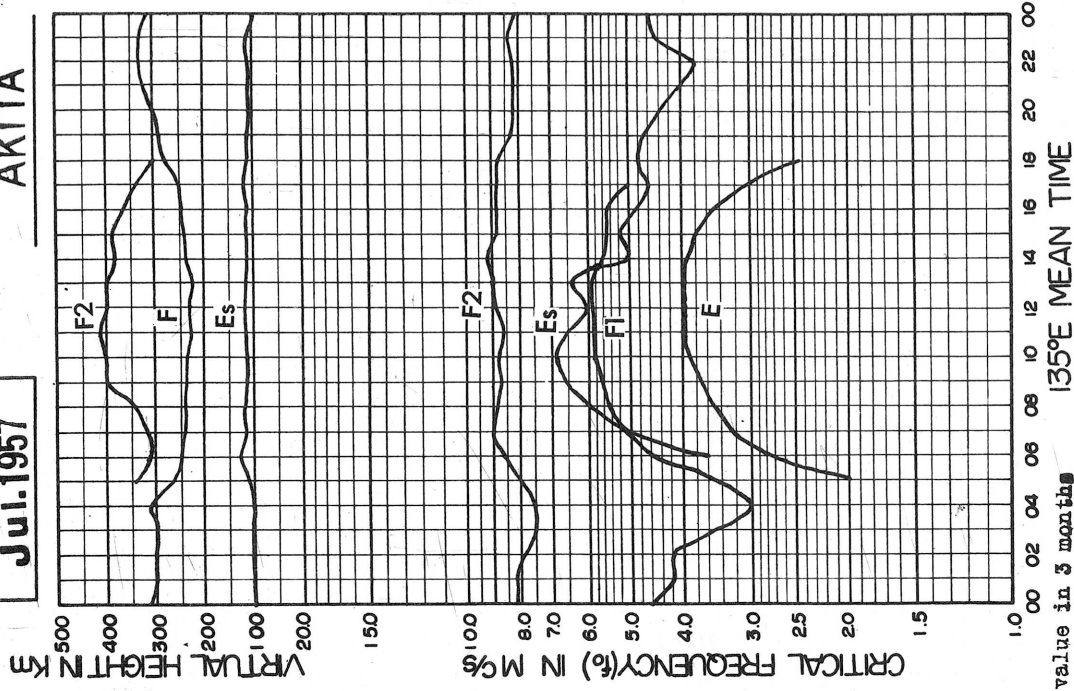
Jul. 1957

WAKKANAI



Jul. 1957

AKITA



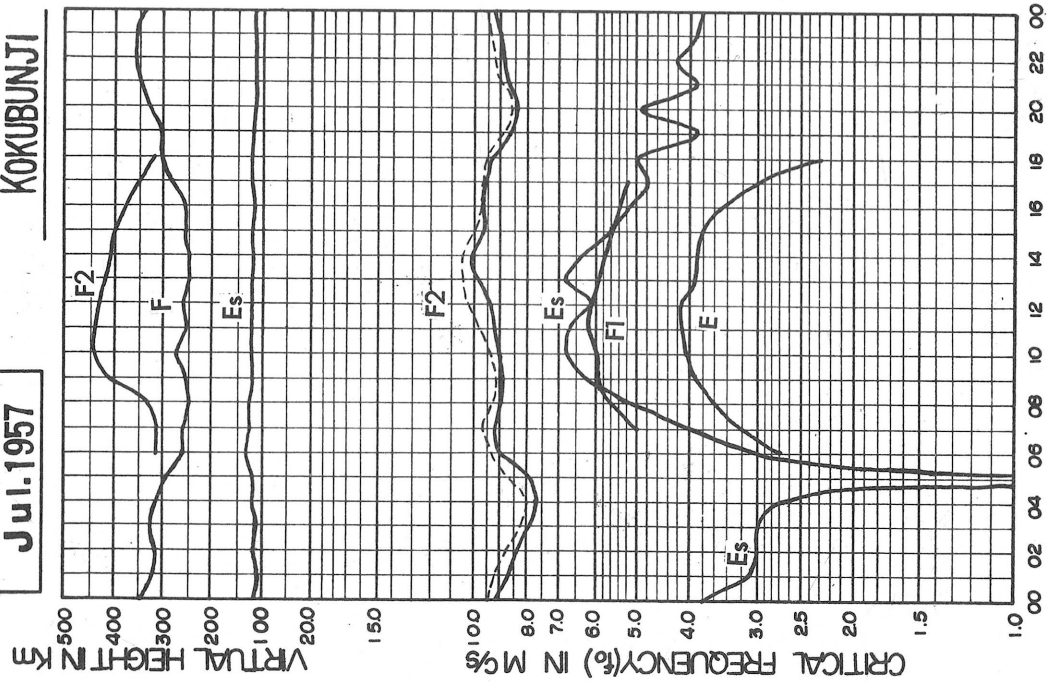
135°E MEAN TIME ---: Predicted value in 3 months

advance by R.R.4e

IONOSPHERIC DATA
MONTHLY MEDIAN CHARACTERISTICS

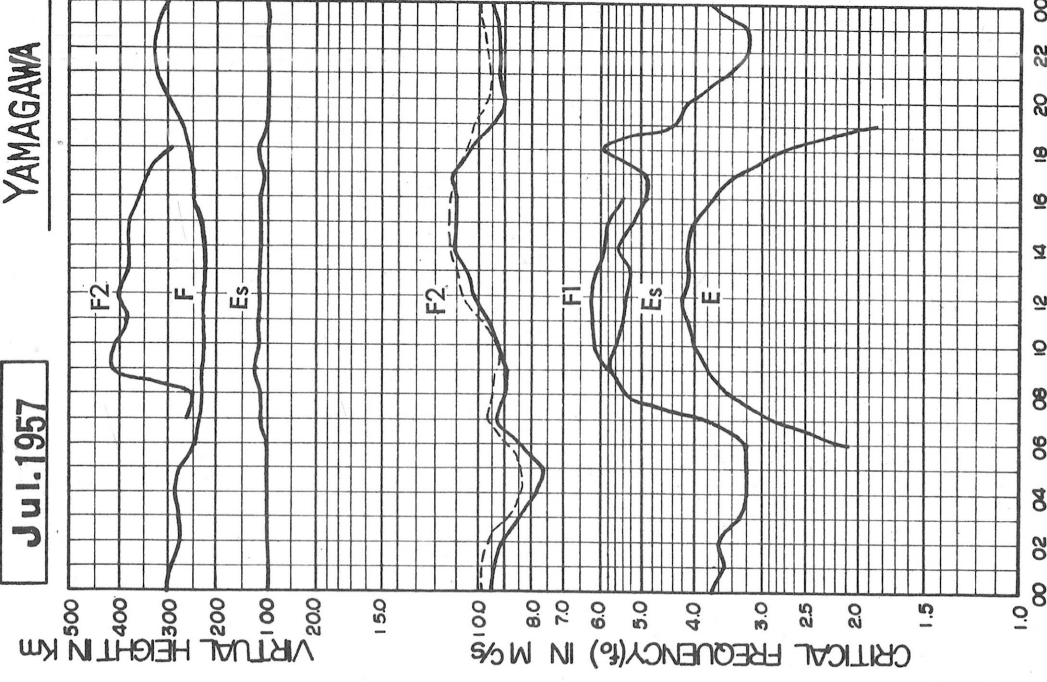
Jul. 1957

KOKUBUNJI



Jul. 1957

YAMAGAWA



135°E MEAN TIME ---: Predicted value in 3 months

advance by R.R.I.

135°E MEAN TIME

IONOSPHERIC DATA

Wakkanai

Lat. 45° 23.6' N
Long. 141° 41.1' E

135° E Mean Time (GMT.+9h.)

foF2

Jul. 1957

| 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 | 6.2 | 6.0 | 5.0 | 4.6 | 4.5 | 4.2 | A | 5.0 | R | A | A | 6.3 | 7.5 | 6.7 | 7.5 | 8.0 | 8.0 | 8.1 | 8.2 | 7.9 | A | 8.0 | 7.9 | 7.8 |
| 2 | SF | u 7.9 | 7.3 | 6.7 | 6.5 | 6.2 | F | A | 7.1 | A | A | R | 7.7 | A | 8.1 | C | C | C | C | C | 7.5 | I 8.0 | u 8.6 | 8.2 |
| 3 | 7.3 | 6.5 | 6.0 | 5.6 | 5.8 | 5.3 | 5.1 | 5.8 | 5.6 | 6.2 | 6.5 | A | 6.7 | R | 7.3 | 7.3 | A | 6.5 | 7.0 | 6.9 | 7.3 | u 7.8 | 7.8 | S |
| 4 | 8.3 | 7.0 | 6.1 | 6.0 | 6.1 | 6.2 | 6.3 | 6.5 | 6.3 | A | A | A | 7.4 | A | 7.6 | 7.4 | 7.5 | 7.8 | 7.8 | 7.8 | C | C | 8.0 | 8.2 |
| 5 | 8.2 | 8.0 | 7.6 | 7.7 | 7.6 | 7.8 | 8.6 | 8.4 | 8.7 | A | 8.3 | 9.0 | 8.0 | I 8.1 | 8.0 | 8.5 | 8.4 | 8.5 | 8.3 | 8.2 | 7.4 | 7.5 | 7.5 | C |
| 6 | 8.5 | 7.0 | 6.4 | 5.7 | C | C | C | C | C | C | A | 6.3 | 6.5 | 6.3 | 7.0 | 7.1 | 7.7 | 7.6 | 7.8 | 7.2 | 7.0 | 7.3 | 7.5 | 7.8 |
| 7 | S | u 7.3 | 6.8 | 6.9 | 7.1 | C | 8.4 | 8.8 | A | A | I 8.2 | A | 8.2 | 8.3 | 8.0 | 8.0 | 8.2 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | S | 8.2 |
| 8 | I 8.2 | S | 8.0 | 7.4 | 7.3 | 9.0 | 9.6 | 10.0 | 9.1 | 9.2 | 9.1 | 9.4 | 9.5 | 9.0 | C | 8.3 | 8.3 | 8.0 | 8.0 | 8.6 | AS | S | 8.5 | 8.8 |
| 9 | 8.7 | 8.3 | 8.0 | 8.0 | 8.0 | 8.3 | 9.1 | 8.9 | 9.1 | 9.5 | C | 8.7 | I 8.5 | I 8.7 | 8.3 | I 8.0 | 8.0 | 8.0 | 8.1 | 8.5 | 8.5 | 8.3 | 8.5 | 8.3 |
| 10 | 8.3 | 8.3 | 8.1 | 7.8 | 7.8 | 8.2 | 9.1 | 9.3 | 8.8 | A | 8.8 | 9.3 | 9.0 | R | 8.6 | 8.5 | 8.5 | 8.6 | 8.7 | 8.6 | 8.5 | S | 8.2 | I 8.5 |
| 11 | 8.5 | 8.4 | 8.0 | 7.8 | 8.0 | 9.0 | 9.8 | 9.5 | 9.5 | 9.3 | 9.5 | 9.0 | 9.0 | 8.7 | 8.9 | 8.3 | 8.0 | 8.0 | 8.3 | u 9.0 | 9.3 | 8.5 | 8.9 | I 8.8 |
| 12 | 8.7 | 8.7 | 8.0 | 7.7 | 7.7 | 8.8 | 9.0 | 9.3 | 8.6 | 8.5 | I 8.6 | A | 9.0 | 8.7 | 8.8 | 8.7 | 8.5 | 8.3 | 8.5 | A | 8.5 | SA | S | I 9.0 |
| 13 | 9.0 | 8.5 | 8.2 | 7.4 | 7.1 | 8.0 | u 8.9 | 9.1 | 8.3 | 8.1 | 8.3 | 8.3 | I 8.4 | R | 7.8 | 7.7 | 7.8 | 7.8 | 7.9 | 8.3 | I 8.8 | 9.0 | 8.6 | 8.5 |
| 14 | 8.5 | 8.3 | 8.3 | 7.9 | 8.1 | 9.0 | 10.0 | 10.8 | 11.0 | 9.8 | 9.1 | 8.8 | 9.3 | 9.1 | 8.5 | 8.2 | 8.0 | 7.8 | 8.0 | 8.8 | 9.1 | 9.2 | 9.0 | 8.8 |
| 15 | 8.7 | 8.2 | 8.0 | 7.6 | 8.0 | u 8.0 | 9.5 | 9.8 | 9.1 | 7.7 | 7.2 | 7.4 | 7.5 | 7.3 | 7.3 | 7.3 | 7.5 | 7.4 | 7.5 | u 8.0 | u 8.1 | S | S | 8.2 |
| 16 | 8.2 | 8.2 | 7.8 | 7.4 | 7.9 | 8.3 | 9.0 | 9.8 | 10.0 | 9.6 | 9.0 | 8.5 | 8.3 | 8.5 | 8.5 | 8.3 | 8.1 | 7.8 | 7.9 | I 8.3 | I 9.0 | 9.5 | 9.2 | u 8.8 |
| 17 | 8.6 | 8.3 | 8.0 | 7.0 | 7.0 | 8.0 | 8.0 | 7.3 | 6.5 | 5.9 | W | 5.9 | u 6.0 | S | 6.3 | 6.0 | 6.0 | 6.0 | 6.2 | 6.7 | 7.0 | u 7.3 | u 7.3 | 7.3 |
| 18 | 6.9 | 7.0 | 6.8 | 6.7 | 7.1 | u 7.8 | 8.3 | 7.6 | 7.5 | 7.1 | 6.6 | 6.7 | 6.8 | 6.5 | 6.5 | 6.5 | 6.3 | 7.0 | 6.8 | A | S | SA | S | S |
| 19 | 7.8 | 7.7 | 7.2 | 6.9 | 6.3 | 7.3 | 7.7 | 6.8 | 6.7 | 5.8 | 6.0 | 6.4 | 6.3 | 6.3 | 6.5 | 6.6 | 6.7 | 6.3 | 6.6 | A | S | SA | S | 7.3 |
| 20 | 7.3 | 7.0 | u 6.8 | 6.3 | 6.3 | 6.3 | 7.3 | 7.8 | 7.0 | A | A | 7.4 | 8.7 | 8.2 | 8.3 | 8.0 | 8.0 | 7.8 | 8.1 | 8.3 | 8.7 | S | S | 8.3 |
| 21 | 8.2 | 8.3 | F 8.3 | 8.3 | 8.0 | 7.5 | 8.1 | 8.3 | 7.8 | 7.7 | 7.5 | u 7.6 | 7.8 | 6.8 | 6.8 | A | A | 7.5 | 7.7 | A | A | A | S | 8.1 |
| 22 | 8.0 | 8.0 | u 7.5 | 7.3 | 7.5 | 8.3 | 9.3 | 9.0 | 9.0 | 8.8 | 8.6 | A | A | A | 7.6 | 7.9 | 8.0 | 8.3 | 8.8 | 8.6 | 8.7 | A | S | 9.0 |
| 23 | S | 8.3 | 7.9 | 7.2 | 6.7 | 7.0 | 7.1 | 7.0 | 7.2 | A | 6.8 | 6.7 | I 6.4 | R | 6.8 | 6.8 | 7.3 | 6.9 | 6.8 | I 6.9 | 7.3 | u 7.8 | S | 8.2 |
| 24 | 7.5 | 7.3 | 7.6 | 7.7 | 7.3 | 7.3 | A | A | A | A | 6.4 | 6.4 | 6.6 | 6.6 | 6.7 | 7.1 | 7.1 | 7.5 | 7.3 | 7.3 | 7.3 | 7.5 | S | S |
| 25 | S | u 7.1 | 6.7 | 6.3 | 6.0 | 6.5 | 7.3 | 7.5 | 6.7 | I 6.1 | 6.1 | 6.7 | 6.4 | A | 6.7 | A | 7.0 | 7.0 | 7.1 | 7.2 | S | S | S | S |
| 26 | S | S | 7.3 | 6.7 | 6.8 | 8.3 | 8.3 | 7.2 | A | 6.8 | 6.0 | 6.3 | 6.8 | 6.6 | 6.7 | 7.0 | 7.1 | 7.3 | 7.3 | 7.6 | S | I 7.8 | S | 7.3 |
| 27 | 7.3 | 7.3 | 7.0 | 6.5 | 7.0 | 8.6 | 9.0 | 8.4 | A | A | A | A | A | 6.5 | 6.5 | 6.6 | 6.6 | 6.7 | 7.0 | 7.0 | S | S | S | 8.0 |
| 28 | 8.1 | 7.5 | u 7.3 | 7.0 | 7.3 | 8.6 | 9.5 | C | C | C | C | C | C | C | C | C | C | 8.1 | 8.5 | 9.1 | S | S | S | S |
| 29 | S | S | S | 7.0 | 7.0 | FS | 8.1 | 9.1 | 10.6 | 9.8 | 9.0 | 9.0 | I 8.8 | A | 8.2 | 8.3 | 8.1 | 8.5 | 8.3 | 8.2 | SA | 9.3 | S | u 9.5 |
| 30 | 9.0 | 8.3 | FS | F | 7.1 | 7.0 | 7.5 | 8.1 | 7.9 | 7.3 | u 7.5 | 7.3 | 7.8 | 7.9 | 7.7 | 7.8 | 8.0 | 7.9 | 8.0 | u 7.9 | S | S | 7.3 | S |
| 31 | S | S | FS | FS | 7.3 | 8.0 | 9.0 | 9.6 | 10.0 | A | 8.2 | 8.1 | 8.5 | 8.7 | 8.5 | I 8.4 | 8.1 | 8.0 | 8.0 | u 7.9 | u 8.9 | AS | S | u 8.4 |
| No. | 24 | 27 | 28 | 29 | 29 | 29 | 28 | 27 | 24 | 1.8 | 2.3 | 2.3 | 2.8 | 2.4 | 2.9 | 2.7 | 2.7 | 2.9 | 2.9 | 2.6 | 2.0 | 1.7 | 1.4 | 2.4 |
| Median | 8.2 | 8.0 | 7.6 | 7.0 | 7.1 | 8.0 | 8.8 | 8.4 | 8.4 | 7.9 | 8.2 | 7.6 | 7.8 | 8.2 | 7.6 | 7.9 | 8.0 | 7.8 | 7.9 | 8.0 | 8.3 | 8.0 | 8.4 | 8.2 |
| U.Q | 8.6 | 8.3 | 8.0 | 7.7 | 7.8 | 8.3 | 9.1 | 9.5 | 9.1 | 9.3 | 8.8 | 8.6 | 8.6 | 8.3 | 8.3 | 8.3 | 8.1 | 8.0 | 8.2 | 8.5 | 8.8 | 8.8 | 8.6 | 8.8 |
| L.Q | 7.6 | 7.1 | 6.8 | 6.4 | 6.6 | 7.0 | 7.6 | 7.3 | 7.0 | 6.8 | 6.5 | 6.7 | 6.8 | 6.6 | 6.8 | 7.1 | 7.1 | 7.4 | 7.2 | 7.2 | 7.4 | 7.6 | 7.8 | 8.0 |
| Q.R | 1.0 | 1.2 | 1.2 | 1.3 | 1.2 | 1.3 | 1.5 | 2.2 | 2.1 | 2.5 | 2.3 | 2.1 | 1.8 | 2.0 | 1.5 | 1.2 | 1.0 | 0.6 | 1.0 | 1.3 | 1.4 | 1.2 | 0.8 | 0.8 |

Sweep 1.0 Mc to 2.0 Mc in 1 min in automatic operation.

The Radio Research Laboratories, Japan.

W 1

foF2

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time (GMT.+9h.)

foF1

Jul. 1957

| 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 | 4.5 | 4.9 | 5.3 | A | 5.6 | 5.5 | 5.8 | 5.9 | 5.5 | L | 4.5 | | | | | | | |
| 2 | | | | | L | L | L | A | 5.3 | A | 6.2 | 5.8 | 5.9 | A | 5.8 | C | C | C | | | | | | | |
| 3 | | | | | 3.7 | 4.3 | 4.7 ^H | 5.1 | 5.0 ^A | A | A | 5.3 | A | A | A | L | A | L | L | | | | | | |
| 4 | | | | | L | 4.4 ^H | 5.3 | 5.5 | A | A | A | 5.2 | A | 5.7 | L | L | L | L | L | | | | | | |
| 5 | | | | | A | L | 5.3 | A | A | 5.8 ^H | 5.9 | 6.0 | 5.6 ^R | 5.4 | 5.3 | L ^H | 5.2 | | | | | | | | |
| 6 | | | | | C | C | C | C | A | A | A | A | 5.6 | 5.7 ^A | 5.7 ^H | 5.5 ^H | 5.5 | L | L | | | | | | |
| 7 | | | | | C | L | L | L | A | A | A | A | A | 5.7 | 6.0 ^H | 5.7 ^H | L | L ^H | | | | | | | |
| 8 | | | | | L | L | L | L | 5.8 ^L | A | A | A | A | A | C | 5.5 | 5.5 ^H | L ^H | L | | | | | | |
| 9 | | | | | L | L | L | L | A | A | C | 6.1 | A | A | 5.6 | 5.7 | 5.3 ^L | A | | | | | | | |
| 10 | | | | | L | L | L | L | A | L | 5.8 ^L | 5.5 | 6.0 ^H | A | 5.3 ^H | 6.0 ^H | 5.2 ^H | L | | | | | | | |
| 11 | | | | | | | L | L | A | 5.8 ^L | A | A | 5.7 | 5.8 | 5.6 | 5.3 | L | L | | | | | | | |
| 12 | | | | | 3.6 | 4.4 | A | A | A | A | A | 6.0 | 6.2 ^H | 5.6 | 5.6 ^A | A | L | L | | | | | | | |
| 13 | | | | | 4.1 ^L | A | L | 5.4 ^A | A | A | 5.5 | 6.0 ^A | A | L | 5.8 | L | 4.7 ^L | L | | | | | | | |
| 14 | | | | | | L | 5.0 ^L | 5.3 ^L | 5.8 | 6.0 | 6.1 | 5.8 ^H | 5.8 | 5.7 ^H | 5.6 | L | L ^H | L | | | | | | | |
| 15 | | | | | | 4.7 | 5.0 | A | 5.5 | 5.7 ^H | 5.6 | 5.6 | 5.6 | 5.7 | 5.5 | 5.2 | L | L | | | | | | | |
| 16 | | | | | | 4.9 ^L | 5.1 ^A | 5.8 | A | 5.8 ^L | A | 5.7 | 5.7 | 6.0 ^H | 5.5 | 5.2 | L | L | | | | | | | |
| 17 | | | | | | 4.0 | 4.5 | 4.7 ^A | 5.3 | 5.0 | 5.3 | 5.3 | 5.3 | 5.3 | 5.1 | L | 4.7 ^L | L | | | | | | | |
| 18 | | | | | 3.5 | 4.5 | 4.5 | A | 5.2 ^H | 5.5 | 5.6 | 5.6 ^H | 5.6 | 5.6 | 5.3 | L | 4.8 ^L | L | | | | | | | |
| 19 | | | | | 4.1 | 4.5 | 4.8 | 5.2 | 5.5 | 5.3 | 5.4 | 5.5 ^H | 5.5 | 5.4 | 5.2 | A | A | | | | | | | | |
| 20 | | | | | | L | L | L | A | A | A | A | 5.8 | 5.8 | 5.8 ^H | 5.7 ^L | L ^H | L | | | | | | | |
| 21 | | | | | | L | L | L | A | A | 5.7 | 5.8 ^A | 5.6 | 5.8 ^H | 6.0 | A | A | A | | | | | | | |
| 22 | | | | | L | L | L | L | L | A | A | A | A | A | 5.8 | 5.7 ^H | 5.5 | A | | | | | | | |
| 23 | | | | | 3.8 | 4.4 ^L | 4.8 | 5.4 | A | 5.5 | 5.6 | 6.0 | 5.0 ^A | 5.4 | 5.5 | 5.5 | L | L | | | | | | | |
| 24 | | | | | | A | A | A | A | A | 5.5 | 5.7 | 5.7 | 5.7 | 5.6 | 5.5 | 5.3 | 4.6 ^L | L | | | | | | |
| 25 | | | | | 3.8 | 4.5 | 5.0 | 5.3 | A | 5.7 | A | 5.7 | A | 5.6 | A | 5.3 ^H | A | L | | | | | | | |
| 26 | | | | | L | 4.6 ^L | 4.7 | A | A | 5.5 | 5.6 ^R | 5.5 | 5.6 | 5.6 | 5.6 | 5.5 | 5.5 | 4.8 ^L | | | | | | | |
| 27 | | | | | L | 4.5 ^L | A | A | A | A | A | A | A | 5.5 | 5.4 | 5.2 | 5.3 | L | L | | | | | | |
| 28 | | | | | | C | C | C | C | C | C | C | C | C | C | C | C | 4.6 ^L | | | | | | | |
| 29 | | | | | L | A | A | A | A | A | 6.0 | A | A | L | 6.0 | 5.4 | L | L | L | | | | | | |
| 30 | | | | | L | A | 4.8 | 5.3 | L ^H | 5.8 | A | 5.6 | A | 5.7 ^H | 5.1 ^L | A | L | L | | | | | | | |
| 31 | | | | | L | L | 4.8 | A | A | A | L | 6.0 | 5.5 | 6.0 | A | A | A | A | | | | | | | |
| No. | | | | | 8 | 12 | 16 | 13 | 8 | 15 | 15 | 23 | 19 | 27 | 24 | 13 | 8 | | | | | | | | |
| Median | | | | | 3.8 | 4.5 ^L | 4.8 | 5.3 | 5.4 | 5.7 | 5.6 | 5.7 | 5.7 | 5.7 | 5.5 | 5.3 | 4.7 ^L | | | | | | | | |

foF1

W 2

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

foE

Jul. 1957

135° E Mean Time (GMT.+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 | A | 2.45 | 2.95 | 3.30 | 3.50 | 3.60 | 3.70 | 3.70 | 3.55 | R | 3.55 | 3.50 | A | 3.20 | H | | | | | |
| 2 | | | | | u 1.70 | 2.50 | 3.05 | 3.45 | u 3.60 | 3.70 | R | 3.70 | 4.00 | 4.05 | 3.80 | C | C | C | C | | | | | |
| 3 | | | | | 1.95 | 2.45 | 2.85 | 3.25 | 3.50 | 3.85 | 4.00 | 3.95 | 3.90 | u 3.90 | 3.50 | u 3.60 | A | A | A | A | | | | |
| 4 | | | | | A | 2.50 | 3.05 | 3.05 ^H | 3.05 | 3.90 | 4.00 | 4.00 | 3.70 | 3.40 ^A | 3.50 | 3.65 | 3.50 | 3.10 | 2.60 | A | | | | |
| 5 | | | | | A | A | 3.00 | 3.45 | 3.75 | 3.60 | 3.50 | 4.00 | 3.85 | u 4.00 | R | 3.50 | 3.40 | 3.00 | 2.55 | 1.95 | | | | |
| 6 | | | | | C | C | C | C | C | 3.80 | 3.95 | 4.00 | 3.80 | 3.90 | 3.80 | u 3.75 | 3.40 | 2.95 | 2.50 | A | | | | |
| 7 | | | | | 1.50 | A | 3.00 | 3.50 | 3.50 | 3.60 | 3.85 | 4.00 | 4.00 | 3.85 | 3.95 | 3.60 | 3.30 | 3.05 | 2.50 | | | | | |
| 8 | | | | | A | A | 3.00 | 3.40 | 3.50 | 3.55 | 3.60 | u 3.60 | u 3.60 | A | C | 3.70 | 3.45 | 3.05 | 2.35 | | | | | |
| 9 | | | | | A | 2.50 | 3.10 | 3.50 | 3.60 | 3.80 | C | 3.90 | 3.70 | 3.50 | 3.50 | 2.95 | A | u 3.10 | A | | | | | |
| 10 | | | | | A | 2.35 ^A | 3.00 | 3.35 | 3.45 | 3.50 ^A | 3.90 | R | R | 4.00 | 3.80 | 3.80 | 3.25 | 2.90 | A | | | | | |
| 11 | | | | | A | 2.35 | 3.00 ^F | 3.30 | 3.50 | 3.70 | 3.70 | 3.60 | 3.40 | A | A | A | A | A | A | | | | | |
| 12 | | | | | A | 2.35 | 3.00 ^F | 3.50 | 3.50 | 3.55 | 3.65 | 3.70 | A | 3.70 | 3.65 | 3.60 | A | A | A | | | | | |
| 13 | | | | | A | 2.35 | 2.90 | 3.35 | 3.55 | 3.65 | 3.80 | u 3.65 | A | A | A | A | 3.50 | 3.15 | 2.45 | | | | | |
| 14 | | | | | A | 2.50 ^F | 3.00 | 3.50 ^F | 3.55 | 3.80 | 3.80 | 3.70 | 3.65 | A | A | 3.60 | A | 3.10 | 2.45 | | | | | |
| 15 | | | | | A | 2.50 | 2.95 | 3.40 | 3.55 | 3.55 | 3.55 | R | 3.70 | 3.80 | 4.00 | 3.70 | 3.45 | 3.00 | 2.40 | | | | | |
| 16 | | | | | 1.30 | 2.50 | 3.20 | 3.55 | 3.75 | 3.90 | 3.80 | 3.80 | 3.70 | 3.55 | 3.80 | 3.65 | 3.50 | A | 2.50 | | | | | |
| 17 | | | | | SA | 2.30 | 3.00 ^F | 3.25 ^F | 3.45 | 3.50 | 3.70 | 3.60 | 3.50 | A | 3.70 | A | 3.45 | 3.00 | A | | | | | |
| 18 | | | | | A | A | 2.90 | 3.35 | 3.55 | 3.70 | 3.75 | 3.95 | 3.75 | 3.55 | 3.50 | 3.35 | 2.90 | 3.00 | 2.40 | | | | | |
| 19 | | | | | 1.40 | 2.30 | 3.00 | 3.40 ^F | 3.55 | 3.70 | 4.00 | 4.00 | 3.90 | 4.10 | 4.00 | 3.70 | 3.45 | 3.00 | 2.30 | | | | | |
| 20 | | | | | A | 2.30 | 3.00 | 3.30 | 3.50 | 3.60 | 3.70 | 3.75 | 3.60 | 3.60 | 3.30 | 2.95 | A | 2.95 | 2.35 | | | | | |
| 21 | | | | | A | 2.35 ^H | 2.95 | 3.20 | 3.50 | 3.80 | 4.05 | 3.80 | 3.80 | 3.80 | 4.00 | 3.75 | 3.50 | 3.15 | 2.55 | | | | | |
| 22 | | | | | | 2.35 | 2.90 | 3.45 | 3.50 | 3.70 | 3.80 | 3.70 | 3.50 | A | 3.60 | 3.80 | 3.60 | 3.05 | 2.30 | | | | | |
| 23 | | | | | 1.55 | 2.20 ^H | 2.95 | 3.35 | 3.80 | 3.95 | 4.00 | u 4.00 | 4.10 | 4.05 | 3.95 | 3.80 | 3.50 | 3.10 | 2.50 | | | | | |
| 24 | | | | | | 2.20 | 2.90 | 3.40 | 3.50 | 3.50 | 3.50 | A | 3.60 | 3.60 | 3.90 | 3.75 | 3.50 | 3.00 | 2.45 | | | | | |
| 25 | | | | | | 2.15 | A | 3.30 | 3.55 | 3.50 | 3.70 | 3.70 | 3.75 | 3.75 | 4.15 | 4.00 | 3.75 | 3.50 | 3.10 | 2.35 | | | | |
| 26 | | | | | A | 2.15 | 2.70 | 3.45 | 3.65 | 3.70 | 3.75 | 3.80 | 4.10 | 4.10 | 4.00 | 3.75 | 3.50 | 3.00 | 2.30 | | | | | |
| 27 | | | | | A | 2.20 | 2.95 | 3.45 | 3.60 | 3.70 | 3.55 | A | A | A | A | A | 3.50 | 3.15 | 2.35 | | | | | |
| 28 | | | | | 1.40 | 2.25 ^H | 3.00 | C | C | C | C | C | C | C | C | C | C | 3.00 | 2.25 | | | | | |
| 29 | | | | | | 2.15 | 2.85 | 3.20 | 3.35 | 3.50 | 3.50 | 3.50 | A | 3.45 | L | L | u 3.10 | 3.00 | 2.45 | | | | | |
| 30 | | | | | | 2.25 | 2.90 | 3.10 | 3.40 | 3.60 | 3.70 | 3.50 | 3.80 | 3.60 | 3.70 | 3.50 | 2.70 | 2.95 | 2.20 | | | | | |
| 31 | | | | | | 2.25 | 2.75 ^F | 3.20 | 3.45 | 3.50 | A | A | 3.50 | 3.10 | 3.80 | A | 3.50 | 2.90 | 2.00 | | | | | |
| No. | | | | 1 | 7 | 26 | 29 | 29 | 29 | 30 | 27 | 25 | 25 | 22 | 23 | 23 | 22 | 26 | 24 | | | | | |
| Median | | | | 1.30 | 1.50 | 2.35 | 3.00 | 3.40 | 3.50 | 3.70 | 3.70 | 3.75 | 3.70 | 3.80 | 3.80 | 3.65 | 3.50 | 3.00 | 2.40 | | | | | 1.95 |

Sweep 1.0 Mc to 2.6.7 Mc in _____ min in automatic operation.

foE

The Radio Research Laboratories, Japan.

W 3

IONOSPHERIC DATA

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakanai

foEs

135° E Mean Time (GMT.+ 9h.)

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|-------|------|------|------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|-------|
| 1 | 1.9 | 2.0 | 2.0M | 2.3M | 3.0M | 3.5M | 6.9M | 4.0 | 3.9 | 4.0 | 7.7M | 5.7M | 5.9M | 5.7M | 4.0 | 5.7M | 4.7M | 3.5 | 6.0M | 8.5M | 11.5M | 5.8M | 7.2M | 4.5M |
| 2 | 6.7M | 4.1M | 3.1M | 2.3M | 2.4 | 3.0 | 3.6 | 7.6M | 5.3M | 12.0M | 8.0M | 5.7M | 6.1M | 9.1M | 9.0M | C | C | C | C | C | 4.5M | 3.4M | 3.2M | E |
| 3 | E | E | E | 2.3M | 2.3 | 3.0 | 3.5 | 3.5 | 4.4 | 5.7M | 5.8M | 7.2M | 5.6M | 6.0M | 6.2M | 6.0M | 11.5M | 5.8M | 6.0M | 4.2M | 4.3M | 3.8M | 5.3M | 8.0M |
| 4 | 2.3 | 7.0M | 3.5M | 5.7M | 4.0M | 5.7M | 3.4 | 5.7M | 4.2 | 7.6M | 7.0M | 7.1M | 5.8M | 9.5M | 4.0 | 4.2 | 5.7M | 3.5 | 3.0M | 3.0M | C | 3.1M | 2.7M | 5.0M |
| 5 | 3.5M | 3.0M | 2.3V | 1.2 | 7.5M | 5.4M | 3.5 | 8.5M | 6.5M | 11.0M | 5.7M | 4.7 | 4.8 | 4.3 | 5.7M | 5.7M | 5.7M | 5.7M | 5.7M | 5.7M | 3.1M | 3.1M | 2.7M | C |
| 6 | 4.5M | 6.8M | 7.7M | 4.2M | C | C | C | C | C | 7.5M | 8.0M | 7.8M | 6.1M | 8.0 | 5.7M | 5.7M | 9.0M | 5.5M | 4.4 | 6.8M | 4.5M | 7.0M | 7.7M | 3.9M |
| 7 | 3.8M | 7.8M | 6.6M | 4.4M | 2.2 | C | 5.7M | 8.0M | 14.5M | 12.0M | 19.6M | 8.2M | 8.1M | 6.4M | 4.5 | 4.4 | 3.8 | 4.3 | 3.2 | 9.0M | 5.0M | 3.5M | 4.1M | 6.8M |
| 8 | 4.6M | 8.0M | 9.5M | 6.1M | 6.5M | 3.5M | 4.0 | 5.2M | 4.2 | 8.0M | 7.0M | 9.5M | 8.0M | 10.2M | C | 4.4 | 5.7M | 3.5 | 5.5M | 5.4M | 11.5M | 7.9M | 6.0M | 4.4M |
| 9 | 6.0M | 6.0M | 5.8M | 2.6M | 3.2M | 6.0M | 4.6 | 5.9M | 7.0M | 9.3M | C | 4.2 | 7.3M | 7.2M | 5.6 | 6.0M | 5.3M | 6.1M | 7.0M | 5.9M | 7.0M | 3.5M | 4.6M | 4.7M |
| 10 | 6.0M | 3.0M | 3.0M | E | 2.3 | 2.7 | 3.5 | 3.5 | 10.0M | 11.0M | 5.1 | 5.7M | 5.7M | 7.2M | 5.1M | 5.2M | 3.5 | 6.4M | 5.8M | 5.1M | 5.1M | 6.1M | 8.0M | 6.0M |
| 11 | 5.2M | 4.9M | 5.0M | 4.7M | 3.5M | 3.0 | 3.5F | 5.5M | 6.4M | 5.9M | 7.0M | 10.1M | 8.7M | 4.8M | 5.3M | 6.8M | 4.7M | 5.3M | 4.1M | 4.4M | 3.0M | 4.5M | 3.4M | 6.0M |
| 12 | 3.5M | 3.5M | 2.3 | 2.3 | 3.5M | 3.5M | 5.7M | 12.3M | 9.8M | 12.5M | 7.2M | 12.2M | 8.7M | 4.6 | 11.8M | 13.5M | 8.2M | 5.5M | 9.2M | 11.0M | 4.8M | 4.7M | 8.0M | 6.5M |
| 13 | 5.5M | 4.2M | 4.1M | 4.1M | 4.3M | 3.5M | 7.1 | 9.7 | 9.3M | 10.3M | 6.6M | 8.1M | 7.3M | 6.0M | 5.7M | 7.1M | 5.7M | 3.5 | 3.5 | 3.5M | 3.5M | 3.6M | 3.5M | 3.5M |
| 14 | 4.1M | 4.0M | 3.1M | 3.1M | 4.1M | 4.28F | 3.6 | 6.0M | 6.1M | 4.4 | 7.1M | 6.0M | 5.9M | 4.9M | 4.6M | 4.3 | 5.2M | 3.6 | 3.3 | 3.5M | 3.6M | 7.0M | 6.0M | 4.5M |
| 15 | 4.8M | 3.5M | 4.3M | 3.5M | 4.3M | 3.3 | 3.6 | 5.7M | 6.0M | 6.4M | 4.2 | 5.7M | 4.1 | 4.2 | 5.7M | 4.4 | 5.7M | 3.2 | 3.5 | 3.5M | 4.3M | E | E | 2.5M |
| 16 | 4.2M | 3.5M | 3.0M | 4.2M | 1.5 | 3.1 | 3.4 | 3.5.1 | 5.5M | 7.2M | 6.2M | 7.0M | 9.0M | 5.7M | 5.7M | 5.7M | 4.2 | 3.6 | 5.2M | 7.0M | 4.0M | 4.8M | 3.5M | 2.9M |
| 17 | 2.7M | 3.0M | 3.1M | 3.0M | 4.5M | 3.0M | 3.5F | 5.8M | 6.0M | 5.9M | 5.0 | 4.1 | 5.3 | 5.2M | 5.0M | 5.0M | 4.3 | 4.0 | 4.1M | 4.5M | 3.5M | 3.0M | E | 4.3M |
| 18 | 4.1M | 4.5M | 4.6M | 4.3M | 4.5M | 4.3M | 3.5 | 3.6 | 6.8M | 5.9M | 5.0 | 5.0 | 5.0M | 6.0M | 5.8M | 3.3M | 3.5 | 3.5 | 3.5 | 4.0M | 3.5M | 4.5M | 3.5M | E |
| 19 | 4.5M | 4.5M | 2.5M | 4.8M | 3.5M | 3.5 | 5.0M | 5.8M | 4.1 | 6.0M | 4.4 | 4.5 | 4.3 | 6.2M | 7.0M | 4.0 | 6.0M | 7.7M | 7.0M | 12.5M | 6.0M | 4.7M | 3.0M | 5.8M |
| 20 | 3.2M | 4.3M | 3.0M | 2.3 | 4.2M | 3.0M | 3.8 | 4.5 | 8.0M | 10.8M | 12.0M | 7.0M | 5.5M | 3.8 | 6.4M | 5.5M | 4.1M | 5.7M | 3.5 | E | 2.7M | 3.5M | 4.1M | 4.7M |
| 21 | 3.6M | 4.5M | 6.3M | 4.5M | 4.5M | 3.5M | 3.8 | 6.2M | 7.2M | 7.9M | 6.1M | 7.8M | 5.7M | 5.0 | 6.2M | 11.7M | 11.8M | 5.7M | 6.6M | 9.0M | 12.0M | 14.5M | 3.5M | 6.0M |
| 22 | 10.3M | 6.0M | 4.3M | 3.5M | 3.5M | 3.5M | 5.0M | 5.9M | 5.2 | 6.4M | 7.7M | 11.0M | 8.0M | 12.0M | 6.3M | 4.4 | 11.0M | 8.0M | 4.5M | 4.7M | 5.0M | 2.6M | 4.7M | 6.0M |
| 23 | 7.0M | 6.1M | 4.3M | 6.1M | 2.8M | 3.0 | 5.0M | 6.4M | 4.5 | 12.5M | 6.2M | 9.3M | 6.2M | 8.0M | 12.0M | 4.0 | 4.5 | 4.3 | 4.8M | 6.5M | 3.1M | 3.8M | 2.9M | 4.5M |
| 24 | 9.0M | 4.9M | 6.1M | 4.9M | 4.7M | 4.7M | 7.0M | 11.5M | 10.7M | 7.8M | 6.3M | 9.2M | 5.8M | 4.2 | 4.2 | 5.7M | 4.5 | 3.5 | 3.2 | 3.5M | 4.0M | 3.5M | 7.0M | 9.2M |
| 25 | 7.0M | 4.7M | 3.5M | 4.2M | 3.5M | 3.5M | 4.5M | 4.6 | 4.3 | 6.9M | 5.3M | 10.6M | 5.0M | 7.7M | 6.8M | 7.1M | 3.7 | 6.4M | 3.5M | 4.0M | 12.0M | 12.5M | 4.6M | 4.3M |
| 26 | 7.2M | 5.0M | 4.6M | 3.5M | 2.5M | 2.8 | 6.5M | 4.1 | 6.8M | 5.9M | 4.1 | 5.8M | 5.0 | 4.8 | 5.3 | 6.9M | 11.6M | 7.0M | 6.1M | 3.5M | 7.0M | 4.5M | 3.5M | 3.1M |
| 27 | E | 4.0M | 3.5M | 4.0M | 3.5M | 3.5M | 3.5 | 6.5M | 4.8M | 12.8M | 9.8 | 12.0M | 8.1M | 3.8 | 4.1 | 5.7M | 5.7M | 5.8M | 8.7M | 5.0M | 6.1M | 6.0M | 4.9M | 9.0M |
| 28 | 6.0M | 6.7M | 3.5M | 3.5M | 2.6M | 4.5M | 5.3M | C | C | C | C | C | C | C | C | C | 5.7M | 5.8M | 5.2M | 12.0M | 8.5M | 5.1M | 4.9M | 7.1M |
| 29 | 12.8M | 9.5M | 6.3M | 3.5M | 3.6M | 2.3 | 3.6 | 11.1M | 10.2M | 8.0M | 8.3M | 11.5M | 13.0M | 7.0M | 5.5M | 4.0 | 3.5 | 3.5 | 4.5 | 3.5M | 7.6M | 13.5M | 4.9M | 12.0M |
| 30 | 4.6M | 6.5M | 3.5M | 3.4M | 7.5M | 3.5M | 5.6M | 5.3M | 4.3 | 5.7M | 6.2M | 9.5M | 6.7M | 8.0M | 10.5M | 12.8M | 12.8M | 3.4 | 5.5M | 7.1M | 6.1M | 5.1M | 4.1 | 8.0M |
| 31 | 7.6M | 8.0M | 7.2M | 6.1M | 3.7M | 5.7M | 3.5 | 3.9 | 7.5M | 12.1M | 12.5M | 10.0M | 5.3M | 6.2M | 5.5M | 11.3M | 7.6M | 8.0M | 8.0M | 5.1M | 6.3M | 11.0M | 5.0M | 6.0M |
| No. | 31 | 31 | 31 | 31 | 30 | 29 | 30 | 29 | 29 | 30 | 29 | 30 | 30 | 30 | 29 | 29 | 29 | 30 | 30 | 30 | 30 | 30 | 31 | 30 |
| Median | 4.6M | 4.7M | 3.5M | 3.5M | 3.5M | 3.5M | 3.8 | 5.8M | 6.4M | 7.7M | 6.6M | 7.6M | 5.9M | 6.0M | 5.5M | 5.0M | 4.3 | 4.3 | 4.6M | 4.8M | 5.0M | 5.0M | 4.4M | 5.6M |
| U Q | 6.7 | 6.7 | 5.8 | 4.5 | 4.0 | 4.4 | 5.0 | 6.5 | 8.6 | 11.0 | 7.7 | 9.5 | 7.3 | 7.7 | 6.2 | 6.8 | 7.9 | 5.8 | 6.0 | 7.0 | 7.0 | 7.0 | 7.0 | 6.8 |
| L Q | 3.5 | 3.5 | 3.0 | 2.6 | 2.8 | 3.0 | 3.5 | 4.4 | 4.4 | 5.9 | 5.2 | 5.7 | 5.3 | 4.8 | 4.2 | 4.0 | 5.7 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.4 | 3.9 |
| Q R | 3.2 | 3.2 | 2.8 | 1.9 | 1.2 | 1.4 | 1.5 | 2.1 | 4.2 | 5.1 | 2.5 | 3.8 | 2.0 | 2.9 | 2.0 | 2.8 | 2.3 | 2.3 | 2.5 | 2.5 | 2.5 | 2.5 | 3.6 | 2.9 |

foEs

Sweep 1.0 Mc to 2.7 Mc in min in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Lat. $45^{\circ}23.6' N$
Long. $141^{\circ}41.1' E$

Wakkanai

135° E Mean Time (GMT.+9h.)

fbEs

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|---------|---------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|-----|---------|---------|---------|---------|
| 1 | E | E | E | E | E | E | A | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| 2 | AS | 3.4 | E | 1.6 | E | E | 3.7 | A | 4.6 | A | 5.0 | E | 5.0 | A | 4.6 | C | C | C | C | 6.0 | A | 4.7 | 4.7 | SA |
| 3 | E | E | E | E | E | E | 3.4 | E | 4.4 | 5.0 | 5.5 | A | 4.5 | A | 5.3 | 5.4 | A | 4.4 | 3.7 | E | 3.0 | 3.1 | 4.1 | 4.2.5 |
| 4 | E | E | E | E | E | E | 4.5 | E | 4.3 | A | A | A | 5.0 | 4.9 | 4.2 | E | E | E | E | E | C | C | E | E |
| 5 | E | E | E | E | E | E | 5.1 | E | 5.9 | A | E | 4.6 | 4.9 | 4.9 | E | E | E | E | E | E | 2.2 | E | E | C |
| 6 | 2.8 | 3.0 | 2.3 | E | C | C | C | C | C | A | A | 5.7 | 4.5 | 5.8 | E | E | 5.0 | 3.7 | 3.3 | 3.7 | 2.8 | 3.2 | 5.0 | 2.6 |
| 7 | E | 5.0 | 3.0 | E | E | E | 4.0 | 4.5 | 4.5 | A | A | 7.5 | 7.7 | 5.2 | 4.5 | E | E | E | 3.0 | 2.1 | 2.5 | E | E | 4.6 |
| 8 | E | 3.5 | 2.9 | 3.8 | E | E | 3.7 | 4.1 | E | 6.0 | 6.0 | 7.8 | 7.5 | A | C | 4.5 | E | E | 3.3 | 2.5 | AS | 5.0 | 3.1 | 2.5 |
| 9 | 3.5 | 4.0 | E | E | E | E | E | 5.5 | 6.0 | 8.6 | C | 4.3 | 4.3 | A | A | 5.2 | 4.4 | 5.0 | 6.5 | 4.4 | 4.0 | 2.4 | E | 3.0 |
| 10 | 3.4 | E | E | E | E | E | E | 4.7 | 5.3 | 4.7 | E | 4.6 | E | A | 4.1 | E | E | 3.7 | 4.7 | 3.9 | 5.5 | A | 4.5.5.5 | 3.5 |
| 11 | 3.4 | 3.0 | 2.5 | 2.0 | E | E | E | 4.6 | 5.4 | 5.2 | 6.7 | 7.5 | 6.0 | E | 4.5 | 4.7 | 3.7 | E | E | 2.4 | E | 2.5 | 2.4 | 5.5 |
| 12 | E | 2.5 | E | E | E | E | E | 7.0 | 5.8 | 7.3 | 6.0 | A | 5.0 | 4.5 | 4.7 | 4.5 | 5.5 | 3.9 | 5.9 | A | 4.5.4.5 | SA | 4.3.5.5 | 4.5 |
| 13 | 4.1 | E | 2.4 | E | E | E | E | 4.1 | 7.5 | 7.3 | 6.0 | 4.9 | 6.0 | 5.5 | 4.7 | 4.3 | E | E | 3.3 | 2.6 | 2.2 | E | 2.1 | E |
| 14 | 2.6 | E | E | E | E | E | E | 4.5 | 4.8 | E | 4.7 | 4.3 | 4.5 | 4.6 | 4.1 | E | 3.7 | E | 3.3 | 2.5 | 2.3 | 2.5 | E | 2.6 |
| 15 | E | 2.3 | 3.6 | E | E | E | E | 4.7 | 5.3 | 5.0 | E | 4.6 | E | E | E | E | E | E | E | 2.1 | E | E | E | E |
| 16 | E | E | E | E | E | E | E | 5.0 | 4.8 | 6.2 | 5.5 | 5.5 | 5.5 | E | E | E | E | 4.3.8 | 4.6 | 6.5 | 3.0 | 4.5 | E | E |
| 17 | E | E | E | E | E | E | E | 4.8 | 4.5 | 4.4 | 4.4 | E | E | E | E | E | E | 3.8 | 3.0 | 2.8 | E | E | E | E |
| 18 | E | E | E | E | E | E | E | 6.5 | 4.6 | 4.8 | 4.8 | 4.8 | E | E | 4.8 | 4.5 | 4.6 | E | 3.0 | 3.0 | E | 2.0 | E | E |
| 19 | E | E | E | E | E | E | E | 4.5 | 4.5 | E | E | E | E | 5.0 | E | E | 5.5 | A | 4.6 | A | SA | SA | E | 3.0 |
| 20 | E | E | E | E | E | E | E | 6.5 | 6.5 | A | 5.9 | 4.7 | 4.7 | E | E | 4.7 | 3.6 | E | E | E | E | 2.0 | 4.3.1.5 | 4.5 |
| 21 | 3.3 | 2.5 | E | 4.5 | E | E | E | 5.0 | 6.2 | 6.5 | 5.2 | 6.5 | 4.8 | 4.6 | 5.1 | A | A | 4.9 | 5.3 | A | A | A | 2.6 | 3.8 |
| 22 | 2.5 | 2.6 | E | E | E | E | E | 3.6 | 4.6 | 5.8 | 6.6 | A | A | A | 5.6 | E | E | 5.9 | 3.1 | 3.1 | 4.0 | E | 2.5.5 | 4.0 |
| 23 | A | 3.0 | 2.1 | 2.9 | E | E | E | 4.5 | 4.5 | A | 4.6 | 5.0 | 4.6 | A | 4.5 | E | 4.4 | E | 3.4 | A | E | E | E | 4.3.1.5 |
| 24 | 3.9 | 3.4 | 3.5 | 3.8 | E | E | E | A | 4.7 | 4.7 | A | E | E | 4.5 | E | E | E | E | E | E | E | 2.0 | 4.5.0.5 | 5.5 |
| 25 | 2.7 | 2.6 | E | E | E | E | E | 4.2 | 4.2 | A | 4.6 | 5.5 | 4.7 | A | 4.8 | A | 4.5 | E | E | 2.0 | E | E | E | 4.5 |
| 26 | 4.5.0.5 | E | E | E | E | E | E | 3.7 | 4.4 | 4.8 | 4.8 | 4.8 | 4.8 | 4.7 | 5.1 | 4.6 | 4.5 | 4.7 | 4.0 | 2.6 | 5.5 | 5.0 | E | E |
| 27 | E | E | E | E | E | E | E | 4.9 | A | A | A | A | 4.7 | 4.7 | E | E | E | E | 3.4 | 3.1 | 5.0 | 4.5.5 | 4.5.5 | 4.0.5 |
| 28 | 2.5 | 3.6 | E | E | E | E | E | C | C | C | C | C | C | C | C | C | C | C | 4.8 | 2.0 | 5.9 | 2.2 | E | 4.7 |
| 29 | 6.5 | 4.3.6.5 | 2.8 | E | E | E | E | 6.6 | 9.0 | 7.6 | 7.5 | 5.0 | A | 5.1 | 4.7 | E | E | E | 3.5 | 2.4 | SA | 4.5.5.5 | 4.2.0.5 | E |
| 30 | E | E | 2.0 | E | E | E | E | 4.5 | 4.9 | 4.9 | 4.9 | 6.0 | 4.7 | 6.0 | 4.7 | 4.1 | 5.5 | E | E | 5.0 | 5 | 4.5 | 2.5 | 4.5 |
| 31 | 4.4.0.5 | 4.2.9.5 | 2.3 | E | E | E | E | 6.0 | 6.0 | A | 4.8 | 4.8 | 4.5 | 4.9 | 4.7 | A | 6.4 | 4.5 | A | 4.6 | 3.8 | A | 4.0 | 3.9 |
| No. | 31 | 31 | 31 | 31 | 30 | 2.9 | 3.0 | 2.9 | 3.0 | 3.0 | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 3.0 | 3.0 | 3.0 | 2.9 | 3.0 | 3.1 | 3.0 |
| Median | 2.5 | 2.3 | E | E | E | 3.4 | 4.5 | 5.3 | 6.4 | 5.1 | 5.2 | 4.8 | 4.9 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.3 | 2.7 | 3.0 | 2.8 | 2.1 | 3.1 |

Sweep 1.0 Mc to 2.0.7 Mc in 1 min see in automatic operation.

fbEs

The Radio Research Laboratories, Japan.

W 5

IONOSPHERIC DATA

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakanai

135° E Mean Time (GMT.+9h.)

f-min

Jul. 1957

| 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 | 1.60 | 1.40 | E | E | E | 1.70 | 1.80 | 1.90 | 1.90 | 2.40 | 2.80 | 2.50 | 2.50 | 3.05 | 2.60 | 2.65 | 2.15 | 1.95 | 1.80 | 1.75 | 1.60 | 1.60 | 1.60 | 1.70 |
| 2 | E | E | E | E | 1.70 | 1.70 | 1.90 | 2.00 | 2.15 | 2.45 | 2.90 | 3.00 | 2.60 | 2.85 | 2.80 | C | C | C | C | C | 1.60 | 1.60 | E | 1.60 |
| 3 | E | 1.20 | E | E | 1.50 | 1.70 | 1.90 | 1.95 | 2.15 | 2.50 | 2.40 | 2.60 | 2.90 | 3.00 | 2.60 | 2.45 | 2.05 | 2.40 | 2.40 | 1.80 | 1.60 | 1.60 | 1.60 | 1.60 |
| 4 | 1.60 | E | E | E | E | 1.65 | 1.95 | 1.95 | 2.00 | 2.05 | 2.40 | 2.50 | 2.50 | 3.00 | 2.40 | 2.00 | 1.90 | 1.85 | 1.80 | 1.60 | C | C | 1.60 | E |
| 5 | E | E | E | E | 1.20 | 1.60 | 1.85 | 1.95 | 2.05 | 2.05 | 2.45 | 2.65 | 2.40 | 3.00 | 2.40 | 2.45 | 2.00 | 1.95 | 1.85 | 1.70 | 1.60 | 1.60 | 1.60 | C |
| 6 | E | E | E | E | C | C | C | C | C | 2.10 | 2.40 | 2.50 | 2.40 | 2.50 | 2.40 | 2.45 | 1.95 | 1.90 | 1.65 | 1.60 | 1.65 | 1.60 | 1.60 | 1.60 |
| 7 | E | 1.30 | E | E | E | C | 1.85 | 1.85 | 1.90 | 1.95 | 2.15 | 2.45 | 2.00 | 2.45 | 2.40 | 1.90 | 1.95 | 1.80 | 1.80 | 1.65 | 1.60 | 1.60 | 1.60 | 1.60 |
| 8 | 1.60 | E | E | E | E | 1.60 | 1.80 | 1.90 | 2.00 | 2.05 | 2.80 | 2.35 | 3.00 | 2.75 | C | 2.45 | 2.00 | 1.95 | 2.00 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 9 | E | 1.40 | E | E | E | 1.60 | 1.85 | 1.95 | 2.15 | 2.35 | C | 2.45 | 2.10 | 2.80 | 2.55 | 2.00 | 1.85 | 1.80 | 1.90 | 1.60 | E | E | 1.60 | 1.60 |
| 10 | E | 1.30 | E | E | E | 1.60 | 1.95 | 1.95 | 1.95 | 2.60 | 2.40 | 2.00 | 2.10 | 1.95 | 2.00 | 1.85 | 1.95 | 1.80 | 1.75 | 1.75 | 1.60 | 1.60 | 1.60 | 1.75 |
| 11 | E | E | E | E | E | 1.90 | 1.85 | 1.90 | 1.90 | 2.00 | 2.05 | 2.00 | 2.00 | 2.00 | 2.35 | 2.00 | 1.90 | 1.90 | 1.65 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 12 | 1.60 | E | E | E | E | 1.60 | 1.80 | 2.00 | 1.90 | 1.95 | 2.35 | 1.95 | 1.80 | 2.05 | 2.10 | 2.30 | 1.90 | 1.75 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 13 | 1.60 | 1.25 | E | E | E | 1.45 | 1.70 | 1.70 | 1.85 | 2.50 | 2.05 | 2.50 | 2.50 | 2.55 | 2.50 | 2.05 | 2.35 | 1.75 | 1.60 | 1.65 | 1.60 | 1.60 | 1.60 | 1.60 |
| 14 | E | E | E | E | E | 1.60 | 1.60 | 1.85 | 1.80 | 1.80 | 2.30 | 2.50 | 2.55 | 2.40 | 2.40 | 2.30 | 1.90 | 1.80 | 1.60 | 1.60 | E | E | E | E |
| 15 | E | E | E | E | E | 1.50 | 1.60 | 1.80 | 1.95 | 2.00 | 2.00 | 2.60 | 2.50 | 2.10 | 2.00 | 1.80 | 1.80 | 1.70 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 16 | E | 1.25 | 1.10 | E | E | 1.20 | 1.55 | 2.50 | 2.10 | 2.05 | 2.40 | 2.50 | 2.55 | 2.00 | 2.05 | 1.90 | 1.95 | 2.35 | 1.80 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 17 | E | 1.20 | E | E | E | 1.60 | 1.65 | 1.70 | 1.85 | 1.80 | 2.05 | 1.95 | 2.05 | 2.00 | 2.45 | 1.95 | 1.80 | 1.85 | 1.60 | 1.60 | 1.60 | 1.60 | 1.75 | 1.60 |
| 18 | 1.60 | 1.25 | E | E | E | 1.55 | 1.70 | 1.80 | 2.00 | 1.95 | 2.05 | 2.00 | 2.05 | 2.10 | 2.45 | 1.95 | 1.80 | 1.80 | 1.85 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 19 | E | E | E | E | E | 1.40 | 1.70 | 1.80 | 1.90 | 2.00 | 1.80 | 2.00 | 2.05 | 2.00 | 1.95 | 2.00 | 1.95 | 1.75 | 1.70 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 20 | E | E | E | E | E | 1.60 | 1.70 | 1.80 | 1.85 | 2.00 | 2.05 | 2.40 | 2.10 | 2.10 | 2.20 | 1.95 | 1.85 | 1.75 | 1.65 | 1.90 | 1.60 | 1.60 | 1.60 | 1.60 |
| 21 | E | E | E | E | E | 1.60 | 1.65 | 1.80 | 1.95 | 2.05 | 2.50 | 2.05 | 1.90 | 2.50 | 2.05 | 1.95 | 4.70 | 1.95 | 1.65 | 1.60 | 1.60 | 1.60 | 1.60 | E |
| 22 | 1.60 | E | E | E | E | 1.55 | 1.90 | 2.40 | 1.95 | 2.10 | 2.45 | 2.50 | 2.40 | 2.20 | 2.35 | 2.00 | 1.85 | 1.80 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 23 | 1.60 | 1.30 | E | E | E | 1.05 | 1.55 | 1.75 | 2.00 | 2.90 | 2.05 | 2.45 | 2.55 | 2.55 | 2.05 | 2.10 | 1.80 | 1.80 | 1.80 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 24 | E | 1.25 | E | E | E | 1.60 | 1.85 | 1.80 | 1.85 | 1.90 | 2.05 | 2.15 | 2.10 | 2.45 | 2.00 | 1.95 | 2.00 | 1.85 | 1.75 | 1.70 | E | E | 1.60 | 1.60 |
| 25 | E | 1.30 | 1.15 | 1.10 | 1.15 | 1.60 | 1.80 | 1.85 | 1.95 | 2.00 | 2.05 | 2.35 | 2.10 | 2.05 | 2.05 | 1.85 | 2.05 | 1.80 | 1.85 | 1.60 | 1.60 | 1.60 | 1.60 | E |
| 26 | E | E | E | E | E | 1.10 | 1.55 | 1.70 | 1.85 | 2.00 | 2.10 | 2.25 | 2.05 | 2.40 | 2.30 | 2.10 | 2.00 | 1.75 | 1.75 | 1.60 | 1.60 | 1.60 | 1.60 | 1.80 |
| 27 | 1.60 | 1.20 | E | E | E | 1.60 | 1.80 | 2.15 | 2.00 | 1.80 | 2.10 | 2.05 | 2.50 | 1.95 | 2.40 | 2.95 | 2.10 | 1.85 | 1.85 | 1.60 | E | E | 1.60 | E |
| 28 | E | E | E | E | E | 1.05 | 1.55 | 1.85 | C | C | C | C | C | C | C | C | C | 1.75 | 1.70 | 1.60 | 1.60 | E | E | 1.60 |
| 29 | E | 1.05 | 1.05 | E | E | 1.60 | 1.80 | 1.95 | 1.90 | 2.15 | 2.45 | 2.15 | 2.15 | 1.90 | 1.90 | 2.00 | 1.85 | 2.00 | 1.85 | 1.60 | E | E | 1.60 | E |
| 30 | E | 1.05 | E | E | E | 1.60 | 1.80 | 1.85 | 1.90 | 2.05 | 2.10 | 2.60 | 2.60 | 2.35 | 2.15 | 1.90 | 1.85 | 1.80 | 1.60 | 1.60 | 1.60 | 1.60 | E | E |
| 31 | E | E | E | E | E | 1.05 | 1.60 | 1.70 | 1.80 | 1.95 | 2.05 | 2.00 | 2.10 | 2.15 | 1.80 | 1.95 | 1.75 | 1.75 | 1.60 | 1.65 | 1.60 | 1.60 | 1.60 | 1.60 |
| No. | 31 | 31 | 31 | 31 | 31 | 30 | 29 | 30 | 29 | 30 | 29 | 30 | 30 | 30 | 29 | 29 | 29 | 30 | 30 | 30 | 30 | 30 | 31 | 30 |
| Median | E | E | E | E | E | 1.60 | 1.80 | 1.90 | 1.95 | 2.05 | 2.15 | 2.40 | 2.20 | 2.40 | 2.35 | 2.00 | 1.95 | 1.80 | 1.75 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |

Sweep 1.0 Mc to 20.7 Mc in 1 min see in automatic operation.

The Radio Research Laboratories, Japan.

W 6

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakanai

135° E Mean Time (GM.T.+9h.)

(M3000)F2

Jul. 1957

| 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 | 230 | 235 | 225 | 230F | 230 | 275 | A | 220F | R | R | A | 220 | 260 | 245 | 255 | 250 | 275 | 265 | 270 | 275 | A | 255 | 255 | 250 |
| 2 | SF | 235 ^s | 260 | 255 | 275 | 240 ^F | 255 | A | 255 | A | R | 255 | 255 | A | 290 | C | C | C | C | C | 265 | 245 ^S | 255 | 245 |
| 3 | 235 | 250 | 240 | 225 ^F | 245 | 225 | 215 | 230 | 250 | 250 | 255 | A | 255 | R | 260 | 275 | A | 250 | 275 | 260 | 250 | 250 ^S | 250 | S |
| 4 | 275 | 250 | 245 | 240 | 245 | 250 | 250 | 250 | 250 | A | A | A | 280 | A | 270 | 255 | 265 | 280 | 285 | 275 | C | C | 255 | 255 |
| 5 | 255 | 260 | 265 | 260 | 265 | 260 | 285 | 260 | 260 | A | 255 | 265 | 255 | 255 | 245 | 250 | 260 | 270 | 265 | 270 | 255 | 250 | 255 | C |
| 6 | 255 | 255 | 240 | 235 | C | C | C | C | C | A | A | 240 | 260 | 235 | 255 | 250 | 265 | 265 | 280 | 270 | 250 | 245 | S | 250 |
| 7 | S | 236 ^S | 245F | 255 | 255 | C | 265 | 260 | A | A | 260 ^A | 265 | 270 | 270 | 260 | 260 | 270 | 280 | 275 | 270 | 250 | 250 | S | 245 |
| 8 | 250 ^S | S | 260 | 260 | 255 | 265 | 270 | 270 | 265 | 255 | 260 | 260 | 255 | 260 | C | 265 | 250 | 270 | 280 | 265 | AS | S | 260 | 255 |
| 9 | 260 | 255 | 250 | 245 | 250 | 280 | 260 | 260 | 265 | 265 | C | 250 | 260 ^R | 275 | 270 ^R | 270 ^R | 265 | 270 | 280 | 275 | 265 | 265 | 260 | 250 |
| 10 | 245 | 255 | 260 | 255 | 255 | 280 | 260 | 270 | 250 | A | 265 | 270 | 255 | R | 270 | 265 | 270 | 280 | 280 | 275 | 275 | S | 255 | 260 ^S |
| 11 | 255 | 270 | 275 | 260 | 260 | 270 | 280 | 275 | 265 | 270 | 275 | 255 | 255 | 255 | 265 | 275 | 275 | 280 | 275 | 270 ^S | 270 | 260 | 260 | 260 ^S |
| 12 | 265 | 275 | 265 | 260 | 260 | 260 | 255 | 265 ^A | 285 ^V | 265 | 270 ^R | A | 265 | 260 | 265 | 270 | 270 ^H | 275 | 285 | 275 | A | 270 | 260 | 250 ^S |
| 13 | 255 | 270 | 260 ^S | 260 | 255 | 250 | 260 ^R | 265 | 255 | 270 | 275 | 275 | 270 ^R | 290 | 280 | 265 | 265 | 280 | 285 | 275 | 270 ^S | 275 | 265 | 260 |
| 14 | 265 | 265 | 280 | 270 | 280 | 275 | 270 | 270 | 265 | 270 | 260 | 255 | 260 | 265 | 270 | 270 | 275 | 275 | 275 | 265 | 265 | 265 | 265 | 260 |
| 15 | 265 | 270 | 265 | 265 | 255 | 250 ^R | 255 | 265 | 275 | 250 | 240 | 240 | 260 | 260 | 265 | 265 | 270 | 280 | 270 | 275 | 270 ^S | 270 | S | 255 |
| 16 | 260 | 255 | 255 | 265 | 265 | 260 ^H | 290 | 260 | 270 | 265 | 265 | 245 | 260 | 250 | 265 | 265 | 270 | 270 | 260 | 270 | 275 | 240 | 260 | 250 ^S |
| 17 | 265 | 265 | 250 | 230 | 240 | 235 | 235 | 245 | 240 | 240 | W | 235 | 235 ^S | W | 220 | 240 | 240 | 260 | 260 | 265 | 270 | 255 | 245 ^S | 250 |
| 18 | 245 | 250 | 255 | 255 | 250 | 295 ^S | 265 | 275 | 225 ^H | 255 | 245 | 245 | 250 | 245 | 230 | 250 | 240 | 260 | 265 | 265 | A | 255 | S | S |
| 19 | 250 | 255 | 250 | 245 | 235 | 240 | 260 | 280 | 255 | 235 | 235 | 235 | 235 | 235 | 245 | 250 | 275 | 260 | 275 | A | 255 | A | S | 245 |
| 20 | 245 | 235 | 240 ^S | 230F | 255 | 240 | 280 | 270 | 240 | A | A | 240 | 260 | 265 | 270 | 260 | 270 ^H | 260 | 270 | 275 | 270 | 270 | S | 250 |
| 21 | 245 | 240 ^F | 250 | 275 | 270 | 270 | 285 | 280 | 250 | 285 | 245 | 255 ^R | 280 | 250 | 240 | A | A | 270 | 270 | A | A | A | S | 250 |
| 22 | 250 ^F | 250 ^S | 265 | 260 ^F | 255 | 270 | 260 | 280 | 255 | 270 | A | A | A | A | 250 | 255 | 250 | 265 | 275 | 280 | 270 | A | S | 245 |
| 23 | S | 245 | 240 | 235 | 240 | 230 | 265 | 240 | 265 | A | 255 | 245 | 270 ^R | 240 ^A | 240 | 240 | 265 | 255 | 255 | 265 | 260 ^S | 240 | 245 ^S | 240 |
| 24 | 240 | 245 | 255 | 270 | 255 | 265 | A | A | A | A | 230 | A | 240 | 240 | 250 | 255 | 255 | 265 ^S | 265 | 275 | 245 | 250 | S | S |
| 25 | S | 245 ^S | 240 | 240 | 240 ^F | 235 | 255 | 255 | 225 | 230 ^A | 225 | 245 | 240 | A | 230 | A | 250 | 255 | 265 | 270 | S | S | S | S |
| 26 | S | S | 250 | 255 | 255 | 290 | 275 | 250 | 235 | 240 | 235 | 235 | 240 | 250 | 240 | 250 | 245 | 265 | 265 | 265 | 260 | S | 250 ^S | 245 |
| 27 | 255 | 250 | 250 | 255 | 255 | 270 | 280 | 265 | A | A | A | 245 | 245 | 245 | 245 | 245 | 255 | 260 | 270 | 270 | S | S | S | 250 ^S |
| 28 | 255 | 260 | 265 | 245 | 270 | 275 | 245 | C | C | C | C | C | C | C | C | C | C | 270 | 280 | 270 | S | S | S | S |
| 29 | S | S | S | 255 ^F | FS | 260 ^F | 275 | 280 | 270 | 280 | 275 | 255 | 260 ^A | 265 | 255 | 255 | 265 | 280 | 280 | 275 | SA | 245 | S | 260 ^S |
| 30 | 245 | 245 | FS | F | 245 | 245 | 265 | 285 | 270 | 250 ^F | 265 ^R | 255 | 265 | 270 | 260 | 280 | 275 | 280 | 285 | 275 ^S | S | S | 250 | S |
| 31 | S | S | FS | FS | 265 | 235 ^H | 285 | 290 | 290 | A | 285 | 270 | 270 | 265 | 270 | 230 ^A | 275 | 275 | S | S | 275 ^S | AS | S | 250 ^S |
| N.o. | 21 | 27 | 28 | 29 | 29 | 29 | 28 | 27 | 25 | 18 | 23 | 23 | 28 | 24 | 29 | 27 | 27 | 29 | 29 | 26 | 20 | 18 | 14 | 24 |
| Median | 255 | 255 | 250 | 255 | 255 | 260 | 265 | 265 | 255 | 260 | 260 | 260 | 260 | 265 | 270 | 275 | 270 | 275 | 270 | 275 | 265 | 250 | 255 | 250 |

Sweep 1.0 Mc to 2.0 Mc in _____ min in automatic operation.

(M3000)F2

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Lat. 45° 23.6' N
Long. 141° 41.1' E

Wakanai

135° E Mean Time (GMT.+9h.)

Types of Es

Jul. 1957

| 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 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 2 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 3 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 4 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 5 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 6 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 7 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 8 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 9 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 10 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 11 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 12 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 13 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 14 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 15 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 16 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 17 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 18 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 19 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 20 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 21 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 22 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 23 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 24 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 25 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 26 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 27 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 28 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 29 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 30 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| 31 | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | |
| No. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Median | | | | | | | | | | | | | | | | | | | | | | | | | |

Lat. 39° 43.5' N
Long. 140° 08.2 E

IONOSPHERIC DATA

Akita

135° E Mean Time (GMT.+ 9h.)

foF2

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|-----|------------------|------------------|------------------|------------------|------------------|------|------------------|------------------|------------------|------------------|------|------------------|------------------|------|------------------|------------------|------------------|-----|------------------|------------------|------------------|------------------|------------------|
| 1 | 6.7 | 6.2 | 5.6 | 5.3 | 5.0 | 4.6 ^H | 4.5 | 5.4 ^A | 6.4 | A | 7.0 | A | 8.1 | 8.5 | 9.0 | 9.3 | 9.6 | 8.9 | 9.5 | 8.8 | 8.1 | 8.4 | 8.2 | 8.2 |
| 2 | 8.1 | 7.6 | 8.2 | 7.1 | 6.5 | 6.7 | 7.0 | 8.1 | A | 8.8 | 8.7 | 8.8 | 8.7 | 8.5 | 9.3 | 8.8 | 8.8 ^R | 9.0 | 8.8 | 8.0 | 8.1 ^R | 8.3 | 9.1 | 8.8 |
| 3 | 7.8 | 7.5 | 6.8 | 6.2 | 6.4 | 6.2 | 6.2 | 6.8 | 6.5 | 6.3 | 6.7 | 7.4 | 7.4 | 6.9 | 7.4 | 8.1 | 7.1 | 6.9 | 7.3 | 7.0 | 7.5 | 7.8 | 8.1 | R |
| 4 | 8.7 | 8.1 | 6.5 | 6.3 | 6.2 | 6.6 | 7.2 | 7.5 | 7.1 | 7.1 | R | 7.8 | A | A | 8.4 | 8.4 | 8.2 | 8.2 | 8.5 | 8.1 | 8.0 | 8.0 ^R | 8.2 | 8.4 |
| 5 | 8.7 | 8.4 | 8.3 | 7.8 | 7.7 | 7.5 | 8.7 | 8.8 | 8.9 | 8.5 | 9.2 | 9.7 | 9.4 | 9.6 | 9.5 | 9.3 | 9.9 | 10.2 | 9.2 | 7.7 | 7.8 | 7.9 | 8.2 | 8.7 |
| 6 | 9.2 | 8.0 | 7.6 | 7.0 | 6.2 | 6.2 | 5.7 | R | R | A | A | A | 7.6 | 7.5 | 8.1 | 8.7 | 8.8 | 8.7 | 8.7 | 7.8 | 7.5 | 7.8 | 8.2 | 8.1 |
| 7 | 8.1 | 8.5 | 7.6 | 7.5 | 7.7 | 8.1 | 8.7 | 8.9 | 8.9 ^H | 9.0 | 9.2 | 8.6 | 9.5 | 9.6 | 9.4 | 8.3 | 8.9 | 8.9 | 8.3 | 8.1 | 8.2 | 8.1 | 9.1 | 8.2 |
| 8 | 8.1 | 8.1 | 7.7 | 7.5 | 7.6 | 8.8 | 7.3 | 9.5 | 8.8 | A | 9.3 | 9.5 | 1.01 | 1.02 | 9.9 | 9.5 | 9.4 | 9.1 | 9.1 | 8.8 | 8.5 | 8.3 | R | R |
| 9 | 8.5 | 8.9 | 8.2 | 8.1 | 7.7 | 8.1 | 8.9 | 8.7 | 9.4 | 10.0 | 9.9 | A | 9.2 | 9.5 | 10.0 | 9.5 | 9.0 | 8.6 | 8.8 | 8.2 | K | 8.3 | 8.7 | 9.0 |
| 10 | 8.9 | 8.6 | 8.7 | 8.1 | 8.0 | 8.7 | 10.1 | 9.5 | 8.3 | 9.5 | 9.5 | 9.9 | 10.2 | 10.0 | 9.5 | 9.9 | 9.6 | 9.4 | 9.6 | 8.2 | 8.7 | 8.4 | B | 9.0 ^R |
| 11 | 9.4 | 9.5 | 8.3 | 8.0 | 8.2 | 8.0 | 10.1 | 9.6 | 9.4 | 9.3 | 9.3 ^A | A | 9.6 | 9.9 | 9.9 | 9.6 | 9.4 | 9.5 | 9.5 | 9.6 | 8.7 | 8.4 | B | 9.0 ^R |
| 12 | 9.4 | 9.4 | 8.8 | 8.6 | 8.6 | 9.1 | 9.8 | 9.7 | 9.5 | 8.5 | 9.6 | 10.0 | 10.4 | 9.9 | 9.8 | 9.7 | 9.4 | 9.4 | 9.3 | 9.4 | 8.8 | 9.3 | R | 8.7 |
| 13 | 9.0 | 9.0 | R | 7.8 | 7.5 | 8.0 | 9.1 | 9.6 | 9.4 | 8.7 | 9.1 | 9.3 | 9.3 | 9.4 | 9.1 | 8.6 | 8.7 | 8.6 | 8.6 | 9.0 | 8.0 | 9.2 | 9.2 | 9.0 |
| 14 | 9.1 | 9.0 | 8.6 | 8.4 | 8.4 | 9.4 | 10.4 | 11.1 | 11.5 | 10.6 | 10.3 | 10.4 | 10.7 | 10.8 | 10.3 | 9.6 | A | 8.8 | 9.0 | 9.4 | 9.4 | R | R | C |
| 15 | 9.1 | 9.0 | 8.3 | 8.4 | 8.1 | 9.0 | 10.5 | 10.6 | 9.4 | 8.6 | 8.8 | 9.1 | 9.5 | 9.7 | 9.6 | 8.9 | 8.4 | 8.2 | 8.4 | 8.5 | 8.2 | 8.5 | 9.0 | 8.8 |
| 16 | 8.6 | 8.5 | 8.5 | 8.3 | 8.1 | 8.1 | 8.9 | 9.1 | 9.5 | 9.4 | 9.4 | 9.2 | 9.2 ^A | 9.5 | 9.5 | 9.1 | 8.9 | 8.9 | 9.0 | 8.3 | R | R | R | 9.1 |
| 17 | 9.4 | 9.4 | 8.1 | 7.6 | 8.0 | 8.1 | 8.9 | 8.5 | 7.5 | 6.7 | 6.5 | 6.8 | 6.1 | 6.0 | 6.0 | A | A | A | 6.9 | 7.0 | 7.0 | 7.1 | 7.2 | 7.3 |
| 18 | 7.2 | 7.4 | 7.0 | 6.8 | 6.7 | 7.5 | 8.7 | 8.2 | 8.2 | 7.3 | 7.4 | 7.7 | 7.8 | 7.4 | 7.4 | 7.0 | 7.0 | 7.5 | 7.6 | 7.6 | 7.5 | R | 8.1 | 8.1 |
| 19 | 8.1 | 8.1 | 7.9 | 6.9 | 6.9 | 7.4 | 7.9 | 7.7 | 6.7 | 6.7 | 6.6 | 6.6 | 6.5 | 6.8 | 7.0 | 7.6 ^A | 7.1 ^A | 7.0 | 6.9 | 7.2 | 7.5 | 7.3 | 8.0 | 7.6 |
| 20 | 7.6 | 7.4 | 7.3 | 6.8 | 6.7 | 6.8 | 7.3 | 8.0 | 7.8 | 8.2 | 7.8 | 8.2 | 7.4 | 7.3 | 7.3 | 7.3 | 8.4 | 8.6 | 8.8 | 9.0 | 8.5 | 8.4 | 7.7 | 7.8 |
| 21 | 8.3 | 8.7 | 9.0 | 8.4 ^R | 7.7 | 8.1 | 8.4 | 8.9 | 8.9 | 8.9 | 8.4 ^A | 8.7 | 8.4 | 8.9 | 9.1 | 8.0 | 8.2 | 8.4 | 8.4 | 8.2 | 8.1 | R | 8.4 | 8.4 |
| 22 | 8.7 | 8.2 ^F | 7.7 ^F | 7.5 | 7.3 | 8.0 | 9.3 | 10.3 | 9.9 | 9.6 | 9.5 | 8.6 | 8.9 | 8.9 ^M | 9.1 | 8.9 | 9.2 | 9.0 | 9.6 | 9.6 | 8.1 | R | R | A |
| 23 | A | R ^F | R | 7.5 ^F | 7.0 ^F | 6.8 ^V | 8.4 | A | A | A | 7.5 | 7.4 | 7.5 | 7.4 | 7.5 | 7.2 | 7.6 | 7.5 | 7.3 | 6.8 | 7.0 ^A | 7.6 | 7.8 | 8.0 |
| 24 | 8.1 | 8.1 | 8.0 | 7.4 | 6.9 | 7.6 | 8.1 | 7.2 | 7.0 | 7.0 | A | A | 8.1 | 8.5 | 8.0 | 8.2 | 8.4 | 7.8 | 8.1 | 7.0 ^R | 7.6 | 8.0 | 7.7 | 7.8 |
| 25 | 7.9 | 7.8 | 7.3 | 7.5 | 6.4 ^F | 6.6 | 7.9 | 7.6 | 7.7 | 7.1 ^Z | 6.4 | 6.8 | 7.4 | 7.3 | 7.5 | 7.1 | 7.5 | 7.4 ^H | 7.6 | 7.4 | 7.1 | 7.4 | 7.5 | 7.5 |
| 26 | 7.5 | 7.4 | 6.7 | 6.7 | 6.6 | 7.5 | R | 8.5 | 7.9 | 7.5 | 7.6 | C | A | 8.0 | 7.7 | A | A | A | A | A | A | R | 8.3 | 8.1 |
| 27 | 8.0 | 8.2 | 7.7 | 7.4 | 7.5 | 8.4 | R | 10.1 | 9.0 | 7.4 | 6.9 | 7.0 | 7.5 | 7.6 | 7.7 | 7.6 | 7.6 | 7.2 ^C | 7.3 | 7.5 | 7.3 | 7.6 | 8.1 | 8.5 |
| 28 | 8.5 | 8.4 | 8.2 | 8.0 | 7.8 | 8.2 | 9.5 | 10.5 | 10.7 | 10.2 | 9.6 ^A | 9.0 | 9.0 | 9.6 | 9.9 | 9.1 | 8.9 | 8.9 ^A | 9.2 | 8.9 | 8.1 | 8.2 | 8.4 ^R | 8.8 |
| 29 | 8.1 | 8.0 | 7.6 | 7.2 | 7.3 | 8.1 | 9.4 | 10.5 | 10.0 | 10.0 | 9.0 ^M | 9.4 | 9.2 | 9.7 | 9.6 | 9.5 ^H | 8.8 | 9.7 | 9.8 | 8.2 | 8.5 | 9.0 | 9.0 | 7.4 |
| 30 | 9.2 | 8.5 | 8.1 | 8.1 | 7.9 | 7.9 | 8.8 | 9.3 | 8.1 | 7.9 | 8.2 | 8.2 | 8.9 | 9.0 ^A | 9.0 | 8.7 ^H | 8.6 | 9.0 | 8.8 | 8.5 ^A | 8.2 | 8.3 | 8.0 | 8.0 |
| 31 | 7.8 | 7.6 ^F | 7.5 ^F | 7.6 | 7.5 | 8.5 | 9.0 | 10.2 | 9.9 | 9.1 | 8.7 | 8.2 | 8.3 ^H | 9.0 ^H | 9.4 | 9.1 ^M | 8.9 | 8.6 | 8.8 | 9.1 | 8.8 | 8.4 | 8.1 | 8.1 |
| No. | 30 | 30 | 29 | 31 | 31 | 31 | 30 | 28 | 27 | 27 | 27 | 26 | 29 | 29 | 31 | 29 | 28 | 29 | 30 | 30 | 25 | 25 | 24 | 27 |
| Median | 8.1 | 8.2 | 7.9 | 7.5 | 7.5 | 8.0 | 8.8 | 9.0 | 8.9 | 8.7 | 8.8 | 8.6 | 8.9 | 9.0 | 9.1 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.2 | 8.1 | 8.2 | 8.4 |
| U. Q | 8.0 | 8.7 | 8.3 | 8.1 | 8.0 | 8.4 | 7.3 | 10.0 | 9.5 | 9.4 | 9.3 | 9.4 | 9.6 | 9.6 | 9.6 | 9.4 | 9.3 | 9.0 | 9.2 | 9.0 | 8.6 | 8.4 | 8.4 | 8.8 |
| L. Q | 8.0 | 7.8 | 7.4 | 7.0 | 6.7 | 6.8 | 7.9 | 8.2 | 7.8 | 7.3 | 7.5 | 7.4 | 7.7 | 7.6 | 7.7 | 8.2 | 8.2 | 8.1 | 7.7 | 7.5 | 7.8 | 7.8 | 8.0 | 8.1 |
| Q. R | 1.0 | 0.9 | 0.9 | 1.1 | 1.3 | 1.6 | 1.4 | 1.8 | 1.7 | 2.2 | 1.9 | 1.9 | 1.7 | 2.0 | 1.9 | 1.2 | 1.1 | 0.8 | 1.1 | 1.3 | 1.1 | 0.6 | 0.4 | 0.7 |

foF2

Sweep 0.85 Mc to 22.0 Mc in 2 min in automatic operation.

The Radio Research Laboratories, Japan.

A 1

IONOSPHERIC DATA

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

foF1

135° E Mean Time (GMT.+9h.)

Jul. 1957

| 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 | A | A | L | L | 6.0 | 6.2 | L | A | 5.6 ^L | | | | | | | |
| 2 | | | | | | L | A | 5.0 | A | 6.0 ^A | 5.6 ^L | 6.3 | 6.1 | 6.0 | 5.5 | 5.5 | L | L | | | | | | |
| 3 | | | | | L | 3.6 | 4.1 | 4.8 | 5.1 | 5.4 ^A | 5.6 | 5.5 | A | A | R ^H | 5.4 ^H | 5.6 | 5.3 | L | | | | | |
| 4 | | | | | L | L | 5.8 | 5.7 ^A | 6.0 | 6.0 | A | A | A | A | A | A | 5.7 ^L | A | L | | | | | |
| 5 | | | | | L | L | 5.2 ^L | L ^H | 6.3 ^L | 5.8 | 5.9 | 6.0 | 5.9 ^H | 6.0 ^H | 6.0 ^H | 5.5 ^A | 5.5 ^H | 5.2 ^L | L | | | | | |
| 6 | | | | | L | 3.5 | 4.3 | B ^H | B | A | A | A | A | A | A | 6.0 | 5.5 | 5.6 | L | | | | | |
| 7 | | | | | L | L | 5.3 ^L | 5.4 ^L | 6.0 ^H | 6.2 | 6.0 | 6.1 | 5.8 | 5.8 | 5.8 | 5.5 | 5.5 ^L | L | L | | | | | |
| 8 | | | | | L | L | L | A | A | 5.5 | 6.5 | 5.1 | 5.8 | 5.3 | 5.7 ^H | 5.5 ^H | 5.5 ^H | L | L | | | | | |
| 9 | | | | | L | L | L | L | 5.5 | 5.5 | A | A | 6.0 | 6.6 | 5.5 | A | 5.5 | L | | | | | | |
| 10 | | | | | L | L | L | L | L | A | L | 6.3 | R | 5.9 | A | 5.8 | 5.5 | L | I ^A | 4.8 ^L | | | | |
| 11 | | | | | L | L | 4.5 ^A | L | L | 5.6 | A | A | A | A | 5.7 | 5.5 | 5.5 | 5.5 | A | | | | | |
| 12 | | | | | L | L | 4.8 ^L | L | 5.8 | 5.5 ^L | 6.2 | 5.5 | 5.8 ^A | A | A | 5.5 ^H | 5.5 | A | | | | | | |
| 13 | | | | | L | L | 4.5 | L | 5.1 | L | 5.8 ^H | 5.9 | A | 6.0 | 5.8 | 5.7 | C | C | | | | | | |
| 14 | | | | | L | L | L | L | L | C | A | A | 6.0 | 6.0 | 5.8 | 5.8 | A | L | A | | | | | |
| 15 | | | | | L | L | L | L | L | A | L | 6.0 | 5.8 | 5.7 | 5.8 | L | 5.5 | L | L | | | | | |
| 16 | | | | | L | L | L | 5.0 | B | A | 5.8 | 6.0 | A | 5.9 | A | 5.5 | 5.4 | A | A | | | | | |
| 17 | | | | | L | L | 4.5 ^L | A | 6.0 | A | 5.4 | 5.4 | L | 5.3 | A | A | 5.1 ^R | 4.9 | L | | | | | |
| 18 | | | | | L | L | L | L | 5.3 ^A | 5.3 | 5.8 | A | 5.5 | A | 5.6 | 5.5 | A | A | L | | | | | |
| 19 | | | | | L | L | L | 5.2 | 5.5 | A | 5.6 | 5.6 | A | A | 5.4 | A | A | A | 4.1 | | | | | |
| 20 | | | | | L | L | L | A | A | 6.0 | 6.1 ^A | 6.5 ^H | 5.9 | 6.2 | 5.5 | 5.6 | 5.5 | L | L | | | | | |
| 21 | | | | | L | L | L | 5.9 | 6.0 ^L | A | A | 6.2 | 5.8 | A | A | 5.7 | B | 5.0 ^L | A | | | | | |
| 22 | | | | | L | L | L | L | L | 5.5 | 6.2 | 6.5 | 5.9 | 6.2 ^H | 5.9 | A | 5.5 | 5.0 ^L | L | | | | | |
| 23 | | | | | L | L | L | L | A | A | A | 5.8 | 6.0 | 6.0 | 5.5 | A | 5.5 | L | L | | | | | |
| 24 | | | | | L | L | L | L | L | A | A | A | A | A | 6.1 | 6.2 | 5.5 | A | L | | | | | |
| 25 | | | | | L | L | L | L | L | A | 5.5 | 5.6 | 5.7 | A | 6.0 | 5.6 | 5.2 | L | L | | | | | |
| 26 | | | | | L | L | L | 4.6 | A | 5.5 | A | C | A | 5.6 ^H | 6.0 | A | A | A | A | | | | | |
| 27 | | | | | L | L | L | 5.3 | 5.2 | A | 5.6 | 5.6 | 5.6 | 5.5 | 5.3 | 5.3 | 5.4 | C | L | | | | | |
| 28 | | | | | L | L | L | L | A | L | 6.1 ^A | 5.6 ^H | 5.6 | 5.5 | 5.5 | 5.5 | L ^H | A | | | | | | |
| 29 | | | | | L | L | L | L | A | 5.6 ^A | L ^H | 6.0 | 5.9 | 5.7 | 5.7 | 5.8 ^H | 5.2 | L | L | | | | | |
| 30 | | | | | L | L | L | 4.5 | 4.7 | A | 5.8 | 6.0 | 6.0 | A | 5.3 | L | 4.6 | L | A | | | | | |
| 31 | | | | | L | L | L | L | L | 5.0 | L | 5.5 | 6.0 ^H | 5.9 ^H | 5.6 | 5.6 ^H | 5.5 ^H | L | L | | | | | |
| No. | | | | | 2 | 6 | 13 | 11 | 16 | 18 | 22 | 18 | 21 | 23 | 21 | 23 | 21 | 23 | 7 | 1 | | | | |
| Median | | | | | 3.6 | 4.5 | 5.1 | 5.5 | 5.6 | 5.8 | 5.9 | 5.9 | 5.9 | 5.6 | 5.5 | 5.5 | 5.5 | 5.5 | 5.0 | 4.1 | | | | |

Sweep 0.85 Mc to 22.0 Mc in 2 min in automatic operation.

The Radio Research Laboratories, Japan.

foF1

A 2

IONOSPHERIC DATA

Jul. 1957

foE

135° E Mean Time (GMT. + 9h.)

A k i t a

Lat. 39° 43.6' N
Long. 140° 08.2' E

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|----|----|----|----|----|------|------|------|-------------------|-------------------|-------------------|------|-------------------|------|-------------------|-------------------|-------------------|-------------------|-------------------|----|----|----|----|----|
| 1 | | | | | | 2.35 | 3.00 | 3.30 | 3.60 | 3.75 | 3.80 | 3.80 | 3.50 | 3.50 | 3.50 | 3.50 | 3.25 | 3.05 | 2.50 | | | | | |
| 2 | | | | | | 2.30 | 3.00 | 3.55 | 3.55 | 3.70 | 4.00 | R | 4.25 | 4.10 | 4.00 | 3.80 | 3.50 | 3.25 | 2.50 | | | | | |
| 3 | | | | | | 2.40 | 3.25 | 3.55 | 3.80 | 3.80 | 4.00 | 4.05 | 3.95 | 3.80 | 3.80 | 3.50 | 3.25 | 3.05 | | | | | | |
| 4 | | | | | | 2.15 | 3.00 | 3.30 | 3.70 | 4.00 | L | 4.00 | 3.90 | 4.00 | 3.50 | 3.00 | L | A | | | | | | |
| 5 | | | | | | | A | 3.10 | L | 3.50 | 4.05 | 4.10 | 4.15 | 4.00 | 3.90 | 3.80 | 3.50 | 3.05 | A | | | | | |
| 6 | | | | | | | 2.80 | 3.20 | 3.50 | 3.95 | 4.00 | 4.00 | 4.00 | 4.00 | 3.95 | 3.95 | 3.45 | 3.00 | 2.45 | B | | | | |
| 7 | | | | | | 1.55 | L | 3.30 | 3.50 | 3.75 | 3.70 | 4.00 | 4.05 | 4.00 | 3.70 | 3.90 | 3.50 | 3.00 | 2.45 | | | | | |
| 8 | | | | | | 1.45 | 2.75 | 3.30 | 3.50 | 3.70 | 3.85 | 4.00 | L | L | 3.95 | 3.75 | 3.55 | 3.15 | 2.55 | | | | | |
| 9 | | | | | | | L | 3.10 | 3.50 | 3.85 | 3.80 | 3.80 | 3.80 | 3.85 | 3.70 | L | L | 3.00 | 2.40 ^L | | | | | |
| 10 | | | | | | | L | L | L | 3.50 | A | 3.95 | 4.05 | 4.10 | 4.00 | 3.75 | 3.40 | 3.00 | A | | | | | |
| 11 | | | | | | | A | 2.45 | 3.20 | 3.50 | 3.75 | 3.80 | 3.65 | A | A | A | A | 3.05 | A | | | | | |
| 12 | | | | | | 2.00 | 2.80 | 3.30 | 3.65 ^A | 3.85 ^A | 3.95 | A | 3.90 | 3.80 | 3.70 | 3.40 | 3.05 | A | | | | | | |
| 13 | | | | | | 2.00 | 2.90 | 3.30 | 3.50 | A | A | 3.95 | R | C | C | A | A | A | | | | | | |
| 14 | | | | | | 2.00 | 3.00 | 3.30 | 3.65 | C | R | R | R | R | A | A | A | A | | | | | | |
| 15 | | | | | | 2.05 | 2.80 | 3.25 | 3.50 | 3.80 | 3.90 | A | A | 4.00 | 4.00 | 3.90 | 3.50 | 3.00 ^A | A | | | | | |
| 16 | | | | | | 2.10 | 3.00 | 3.55 | 3.75 | 3.95 | 4.00 | 3.95 | A | A | A | A | A | A | | | | | | |
| 17 | | | | | | | A | 2.80 | 3.20 | 3.50 | 3.55 | 3.60 | A | A | 4.00 ^A | 4.10 ^A | 3.90 | 3.55 | A | | | | | |
| 18 | | | | | | 2.05 | A | A | 3.55 | 3.60 | 3.90 | 4.00 | 3.80 ^R | 3.80 | 3.60 | 3.50 | 3.50 | 3.10 | A | | | | | |
| 19 | | | | | | 2.20 | 2.80 | 3.30 | 3.70 | 3.80 | 4.00 | 4.20 | 4.15 | 4.00 | 3.80 | 3.85 | 3.50 | 3.05 | 2.20 | | | | | |
| 20 | | | | | | 1.75 | 2.50 | 3.10 | 3.50 | 3.70 | R | 3.90 | 4.00 | A | A | A | A | 3.50 | 2.20 | | | | | |
| 21 | | | | | | 2.00 | 2.80 | 3.30 | 3.55 | 3.85 | 4.05 | 4.05 | 4.05 | 4.20 | 4.00 | 3.90 | 3.50 ^B | 3.20 | 2.50 | B | | | | |
| 22 | | | | | | A | 2.80 | 3.40 | 3.45 | 3.65 | 3.70 | 3.80 | A | A | A | 3.50 | 3.55 | 3.05 | A | | | | | |
| 23 | | | | | | B | 2.40 | 3.25 | 3.50 | 4.00 | 4.05 | 4.10 | 4.15 | 4.15 | 4.05 | 3.95 | 3.60 | 3.10 | 2.45 | | | | | |
| 24 | | | | | | A | 2.50 | 3.25 | 3.50 | 3.80 | 3.90 | A | A | A | A | A | A | A | A | | | | | |
| 25 | | | | | | A | 2.80 | A | A | 3.80 | 4.00 | 4.10 | 4.10 | 4.05 | 4.05 | 4.00 | 3.80 | 3.20 | 2.50 | | | | | |
| 26 | | | | | | A | 2.70 | 3.25 | 3.50 | A | C | A | A | 4.20 | 4.05 | 3.85 | 3.50 | 2.45 | A | | | | | |
| 27 | | | | | | A | 2.70 | 3.35 | 3.60 | 3.35 | A | 4.10 | 4.05 | 3.90 | 3.60 | 3.55 | 3.00 | C | | | | | | |
| 28 | | | | | | A | 2.90 | 3.30 | 3.55 | 3.50 | 3.65 | 3.60 | 3.50 | A | 4.00 | 3.90 | 3.50 | 3.05 | A | | | | | |
| 29 | | | | | | 2.00 | 2.70 | 3.20 | 3.50 | 3.55 | 3.60 ^A | 3.75 | 3.65 | 3.85 | 3.55 | 3.40 | 3.00 | 2.25 | | | | | | |
| 30 | | | | | | 1.80 | 2.50 | 3.00 | 3.50 | 3.55 | 3.80 | 4.00 | 4.00 | 3.95 | 3.90 | 3.70 | 3.30 | 3.00 | 2.00 | | | | | |
| 31 | | | | | | 1.90 | 2.55 | 3.05 | 3.50 | 3.80 | A | A | R | 4.05 | 4.00 ^A | 3.90 | 3.50 | 3.00 | 2.80 | | | | | |
| No. | | | | | | 17 | 26 | 28 | 28 | 29 | 23 | 24 | 20 | 22 | 24 | 25 | 24 | 24 | 14 | | | | | |
| Median | | | | | | 2.00 | 2.80 | 3.25 | 3.50 | 3.75 | 3.90 | 4.00 | 4.00 | 4.00 | 3.90 | 3.80 | 3.50 | 3.05 | 2.45 | | | | | |

foE

Sweep 0.5 Mc to 2.0 Mc in 2 min see in automatic operation.

The Radio Research Laboratories, Japan.

A 3

IONOSPHERIC DATA

Lat. 39° 48.6' N
Long. 140° 08.2' E

Akita

135° E Mean Time (GM.T.+ 9h.)

foEs

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|--------|------------------|------------------|-------------------|------------------|------------------|------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|----|
| 1 | 3.1 ^M | 2.5 ^M | 2.1 ^M | 3.1 ^M | 3.0 ^M | 3.5 ^M | 5.0 ^M | 5.5 ^M | 6.0 ^M | 7.5 ^M | 8.4 ^M | 6.8 ^M | 5.1 ^M | 6.7 ^M | 6.4 ^M | 6.6 ^M | 3.7 ^M | 4.2 ^M | 3.7 ^M | 5.9 ^M | 4.5 ^M | 4.0 ^M | 6.5 ^M | 2.7 ^M | |
| 2 | 8.0 ^M | 8.0 ^M | 7.5 ^M | 4.1 ^M | 2.9 ^M | 2.6 ^M | 6.5 ^M | 5.1 ^M | 8.0 ^M | 4.4 ^M | 6.5 ^M | 6.9 ^M | 5.0 ^M | 4.6 ^M | 4.5 ^M | 4.9 ^M | 4.5 ^M | 4.1 ^M | 6.0 ^M | 4.8 ^M | 7.2 ^M | 7.0 ^M | 4.0 ^M | 3.3 ^M | |
| 3 | 2.2 ^M | 2.3 ^M | 2.1 ^M | 2.1 ^M | 2.5 ^M | 3.4 ^M | 3.4 ^M | 4.1 ^M | 6.5 ^M | 6.4 ^M | 4.5 ^M | 4.6 ^M | 6.0 ^M | 7.5 ^M | 4.6 ^M | 5.2 ^M | 4.7 ^M | 4.4 ^M | 5.0 ^M | 4.2 ^M | 6.4 ^M | 3.2 ^M | 3.0 ^M | 6.5 ^M | |
| 4 | 6.0 ^M | 6.5 ^M | 3.5 ^M | 3.5 ^M | 3.0 ^M | 3.5 ^M | 3.8 ^M | 3.8 ^M | 6.7 ^M | 5.9 ^M | 7.0 ^M | 7.5 ^M | 16.5 ^M | 12.0 ^M | 7.5 ^M | 10.0 ^M | 6.0 ^M | 7.5 ^M | 3.8 ^M | 3.5 ^M | 3.0 ^M | 3.2 ^M | 3.7 ^M | 3.2 ^M | |
| 5 | 3.0 ^M | 4.2 ^M | 6.7 ^M | 4.0 ^M | 5.6 ^M | 4.4 ^M | 3.7 ^M | 4.5 ^M | 4.5 ^M | 4.1 ^M | 4.2 ^M | 4.5 ^M | 5.0 ^M | G | G | 6.5 ^M | 4.1 ^M | 3.5 ^M | G | B | 4.1 ^M | 3.5 ^M | 3.6 ^M | 3.0 ^M | |
| 6 | 3.5 ^M | 3.6 ^M | 6.5 ^M | 3.7 ^M | 3.1 ^M | 2.2 ^M | 3.0 ^M | 3.5 ^M | 4.1 ^M | 10.5 ^M | 15.0 ^M | 11.0 ^M | 6.6 ^M | 7.4 ^M | G | 4.6 ^M | 4.0 ^M | 3.6 ^M | 7.0 ^M | 3.4 ^M | 2.1 ^M | 4.1 ^M | E | 5.7 ^M | |
| 7 | 7.0 ^M | 4.0 ^M | 7.0 ^M | 6.4 ^M | 4.2 ^M | 3.9 ^M | 3.6 ^M | 5.6 ^M | 6.0 ^M | 4.2 ^M | 5.0 ^M | G | 4.9 ^M | 5.4 ^M | 6.9 ^M | 4.1 ^M | 6.5 ^M | 3.3 ^M | 5.6 ^M | 3.0 ^M | 4.4 ^M | 4.1 ^M | 3.9 ^M | 2.2 ^M | |
| 8 | 3.0 ^M | 2.6 ^M | 3.1 ^M | C | 2.2 ^M | 2.5 ^M | 3.5 ^M | 6.4 ^M | 6.8 ^M | 10.3 ^M | 7.2 ^M | 6.7 ^M | 4.6 ^M | G | G | G | G | 5.5 ^M | G | 4.8 ^M | 6.6 ^M | 6.0 ^M | 3.8 ^M | 3.3 ^M | |
| 9 | 4.5 ^M | 3.4 ^M | 3.5 ^M | 2.5 ^M | 2.2 ^M | 3.5 ^M | 4.0 ^M | 5.1 ^M | G | 4.3 ^M | 6.7 ^M | 8.0 ^M | 6.6 ^M | 4.5 ^M | G | 7.1 ^M | 5.0 ^M | 4.9 ^M | 7.1 ^M | 6.1 ^M | 6.9 ^M | 2.4 ^M | 6.6 ^M | 3.7 ^M | |
| 10 | 5.6 ^M | 4.5 ^M | 4.7 ^M | 2.0 ^M | 4.7 ^M | 4.5 ^M | 3.6 ^M | 3.7 ^M | 5.5 ^M | 6.8 ^M | 6.8 ^M | 4.8 ^M | 4.5 ^M | 4.5 ^M | 6.6 ^M | 5.9 ^M | 5.5 ^M | 6.8 ^M | 8.9 ^M | 4.1 ^M | 4.5 ^M | 2.3 ^M | 4.1 ^M | 4.4 ^M | |
| 11 | 4.7 ^M | 5.5 ^M | 4.2 ^M | 3.1 ^M | 2.3 ^M | 2.3 ^M | 3.2 ^M | 3.8 ^M | 5.1 ^M | 6.0 ^M | 8.5 ^M | 12.0 ^M | 10.0 ^M | 6.6 ^M | 5.0 ^M | G | 4.3 ^M | 3.8 ^M | 4.2 ^M | 3.2 ^M | 3.1 ^M | 2.6 ^M | 3.2 ^M | 9.6 ^M | |
| 12 | 5.6 ^M | 4.2 ^M | 4.2 ^M | 2.2 ^M | 1.1 ^M | 2.3 ^M | 3.5 ^M | 4.3 ^M | 4.5 ^M | 4.5 ^M | 4.4 ^M | 4.4 ^M | 6.1 ^M | 7.4 ^M | 7.7 ^M | 6.2 ^M | 3.5 ^M | 7.0 ^M | 5.6 ^M | 6.0 ^M | 5.0 ^M | 3.2 ^M | 2.9 ^M | 2.5 ^M | |
| 13 | 3.2 ^M | 3.5 ^M | 4.7 ^M | 2.2 ^M | 2.1 ^M | 3.4 ^M | 4.5 ^M | 6.6 ^M | 8.0 ^M | 7.2 ^M | 4.5 ^M | 6.1 ^M | 8.0 ^M | C | C | 6.2 ^M | 5.5 ^M | 4.3 ^M | 4.3 ^M | 5.5 ^M | 4.7 ^M | 3.7 ^M | 3.1 ^M | 3.2 ^M | |
| 14 | 4.9 ^M | 4.3 ^M | 4.4 ^M | 4.4 ^M | 2.2 ^M | 3.5 ^M | 3.5 ^M | 5.7 ^M | 5.4 ^M | C | 2.6 ^M | 8.0 ^M | 9.5 ^M | 6.5 ^M | 4.5 ^M | 5.1 ^M | 10.1 ^M | 8.0 ^M | 6.6 ^M | 5.5 ^M | 4.4 ^M | 4.2 ^M | 6.5 ^M | 4.5 ^M | |
| 15 | 3.7 ^M | 3.5 ^M | 4.5 ^M | 6.5 ^M | 2.4 ^M | 3.5 ^M | 6.5 ^M | 6.1 ^M | 7.0 ^M | 6.6 ^M | 6.5 ^M | 4.5 ^M | 4.3 ^M | G | G | G | 4.7 ^M | 3.8 ^M | 4.2 ^M | 3.1 ^M | 3.2 ^M | 3.1 ^M | 2.7 ^M | E | |
| 16 | 2.2 ^M | 2.1 ^M | 4.2 ^M | 3.0 ^M | 2.2 ^M | 3.5 ^M | G | G | 4.8 ^M | 8.8 ^M | 6.3 ^M | 9.8 ^M | 11.2 ^M | 8.0 ^M | 7.7 ^M | 6.5 ^M | 5.1 ^M | G | 4.2 ^M | 3.5 ^M | 5.5 ^M | 8.0 ^M | 4.6 ^M | 3.2 ^M | |
| 17 | 2.5 ^M | 2.5 ^M | 2.2 ^M | 2.5 ^M | 2.1 ^M | 4.3 ^M | 3.5 ^M | 6.0 ^M | 6.8 ^M | 6.5 ^M | 5.0 ^M | 5.0 ^M | 4.5 ^M | 4.4 ^M | 7.5 ^M | 4.1 ^M | 11.5 ^M | 11.9 ^M | 6.6 ^M | 10.0 ^M | 3.1 ^M | 3.0 ^M | 2.6 ^M | 2.1 ^M | |
| 18 | 2.1 ^M | 3.2 ^M | 3.3 ^M | 2.6 ^M | 3.0 ^M | 3.2 ^M | 4.4 ^M | 4.1 ^M | 8.0 ^M | 5.9 ^M | 6.8 ^M | 7.5 ^M | 6.5 ^M | 6.4 ^M | 5.0 ^M | 7.1 ^M | G | 3.4 ^M | 4.0 ^M | 4.5 ^M | 2.5 ^M | 3.2 ^M | 4.5 ^M | 4.0 ^M | |
| 19 | 3.3 ^M | 2.5 ^M | 2.7 ^M | 3.0 ^M | 2.1 ^M | 2.8 ^M | 5.5 ^M | 5.5 ^M | 4.9 ^M | 9.5 ^M | 7.7 ^M | 5.7 ^M | 7.0 ^M | 10.6 ^M | 5.9 ^M | 8.0 ^M | 14.5 ^M | 9.5 ^M | 5.0 ^M | 12.0 ^M | 8.0 ^M | 3.5 ^M | 4.0 ^M | 6.5 ^M | |
| 20 | 5.0 ^M | 4.6 ^M | 3.5 ^M | 4.0 ^M | 3.0 ^M | 4.7 ^M | 7.7 ^M | 7.6 ^M | 8.0 ^M | 7.1 ^M | 9.6 ^M | 4.5 ^M | 5.0 ^M | 6.8 ^M | 7.1 ^M | 4.9 ^M | G | 4.4 ^M | 3.5 ^M | 2.0 ^M | 2.2 ^M | 6.3 ^M | 3.7 ^M | 4.5 ^M | |
| 21 | 4.4 ^M | 4.5 ^M | 4.5 ^M | 4.7 ^M | 3.2 ^M | 2.9 ^M | 3.6 ^M | 6.6 ^M | 6.7 ^M | 7.5 ^M | 8.0 ^M | 6.9 ^M | 9.5 ^M | 11.8 ^M | 11.5 ^M | G | B | 5.7 ^M | 6.1 ^M | 5.4 ^M | 5.7 ^M | 9.5 ^M | 5.7 ^M | 6.8 ^M | |
| 22 | 6.8 ^M | 4.7 ^M | 4.1 ^M | 3.5 ^M | 3.5 ^M | 3.5 ^M | G | 5.0 ^M | 5.5 ^M | 5.3 ^M | 6.8 ^M | 5.5 ^M | 4.2 ^M | 6.5 ^M | 4.9 ^M | 6.2 ^M | 4.8 ^M | 3.5 ^M | 4.8 ^M | 4.1 ^M | 3.1 ^M | 3.5 ^M | 3.5 ^M | 10.5 ^M | |
| 23 | 8.0 ^M | 7.4 ^M | 5.2 ^M | 4.6 ^M | 4.1 ^M | 3.5 ^M | 10.7 ^M | 10.9 ^M | 8.0 ^M | 8.0 ^M | 6.0 ^M | 6.7 ^M | 6.5 ^M | 6.5 ^M | 6.5 ^M | 7.0 ^M | 6.5 ^M | 6.0 ^M | 4.8 ^M | 4.7 ^M | 4.9 ^M | 5.5 ^M | 3.0 ^M | 5.0 ^M | |
| 24 | 6.5 ^M | 4.7 ^M | 4.6 ^M | 3.5 ^M | 3.5 ^M | 4.0 ^M | 5.4 ^M | 5.4 ^M | 7.5 ^M | 7.3 ^M | 12.0 ^M | 11.5 ^M | 12.0 ^M | 7.2 ^M | 7.9 ^M | 6.5 ^M | G | 8.0 ^M | 4.7 ^M | 11.5 ^M | 4.9 ^M | 5.5 ^M | 3.0 ^M | 8.0 ^M | |
| 25 | 7.6 ^M | 4.5 ^M | 4.5 ^M | 3.5 ^M | 3.5 ^M | 3.5 ^M | G | 4.5 ^M | 6.0 ^M | 6.2 ^M | 5.5 ^M | G | 8.0 ^M | 8.0 ^M | 5.9 ^M | G | G | 5.3 ^M | 4.2 ^M | 3.5 ^M | 3.7 ^M | 7.6 ^M | 4.5 ^M | 8.0 ^M | |
| 26 | 8.0 ^M | 6.5 ^M | 11.6 ^M | 6.6 ^M | 4.3 ^M | 2.9 ^M | 5.7 ^M | 6.7 ^M | 9.2 ^M | 6.6 ^M | 7.7 ^M | C | 8.0 ^M | 4.4 ^M | 7.1 ^M | 16.5 ^M | 10.9 ^M | 12.0 ^M | 11.5 ^M | 11.1 ^M | 11.5 ^M | 4.1 ^M | 6.9 ^M | 6.6 ^M | |
| 27 | 4.6 ^M | 4.5 ^M | 3.5 ^M | 3.5 ^M | 3.4 ^M | 3.5 ^M | 3.5 ^M | 4.0 ^M | 4.8 ^M | 6.2 ^M | 8.0 ^M | G | G | 5.0 ^M | 5.0 ^M | 4.6 ^M | 4.9 ^M | C | 4.4 ^M | 5.4 ^M | 6.7 ^M | 3.6 ^M | 3.5 ^M | 6.8 ^M | |
| 28 | 5.8 ^M | 2.6 ^M | 3.0 ^M | 6.5 ^M | 6.5 ^M | 4.9 ^M | 4.9 ^M | 7.5 ^M | 7.5 ^M | 5.5 ^M | 12.0 ^M | 7.1 ^M | 4.5 ^M | 4.6 ^M | 4.5 ^M | 4.7 ^M | 6.7 ^M | 12.0 ^M | 5.5 ^M | 3.2 ^M | 3.1 ^M | 4.1 ^M | 4.2 ^M | 4.5 ^M | |
| 29 | 3.8 ^M | 3.5 ^M | 3.0 ^M | 3.5 ^M | 2.2 ^M | 3.0 ^M | 3.2 ^M | 4.1 ^M | 5.7 ^M | 6.6 ^M | 6.5 ^M | 6.5 ^M | 5.8 ^M | 4.2 ^M | G | 6.6 ^M | 4.9 ^M | 3.5 ^M | 5.5 ^M | 4.7 ^M | 3.5 ^M | 7.5 ^M | 3.1 ^M | 6.7 ^M | |
| 30 | 6.6 ^M | 7.9 ^M | 6.7 ^M | 6.6 ^M | 3.0 ^M | 3.2 ^M | 3.5 ^M | 3.8 ^M | 6.5 ^M | 5.8 ^M | 7.5 ^M | 6.7 ^M | 6.5 ^M | 8.0 ^M | 4.8 ^M | 4.3 ^M | G | 5.7 ^M | 4.8 ^M | 7.0 ^M | E | 3.0 ^M | 7.5 ^M | 4.9 ^M | |
| 31 | 4.3 ^M | 6.5 ^M | 6.5 ^M | 4.2 ^M | 4.8 ^M | 3.5 ^M | G | G | 4.5 ^M | 7.0 ^M | 6.3 ^M | 5.0 ^M | G | G | 4.7 ^M | G | G | 4.2 ^M | 3.0 ^M | 3.9 ^M | 2.6 ^M | 4.3 ^M | 2.1 ^M | 5.6 ^M | |
| No. | 31 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 30 | 31 | 30 | 31 | 30 | 30 | 31 | 30 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 |
| Median | 4.6 ^M | 4.2 ^M | 4.2 ^M | 3.5 ^M | 3.0 ^M | 3.5 ^M | 3.6 ^M | 5.1 ^M | 6.0 ^M | 6.6 ^M | 6.8 ^M | 6.5 ^M | 6.1 ^M | 6.4 ^M | 5.0 ^M | 5.2 ^M | 4.8 ^M | 4.6 ^M | 4.8 ^M | 4.7 ^M | 4.4 ^M | 4.0 ^M | 3.8 ^M | 4.5 ^M | |
| U.Q | 6.6 | 4.7 | 5.2 | 4.4 | 3.5 | 3.5 | 4.9 | 6.1 | 7.5 | 7.3 | 8.0 | 7.5 | 8.0 | 7.4 | 7.1 | 6.6 | 6.0 | 7.5 | 6.0 | 5.9 | 6.4 | 6.0 | 4.6 | 6.5 | |
| L.Q | 3.2 | 3.2 | 3.1 | 3.0 | 2.2 | 2.9 | 3.4 | 4.0 | 4.9 | 5.8 | 6.3 | 4.6 | 4.6 | 4.5 | 4.5 | 4.1 | 3.5 | 3.8 | 4.2 | 3.5 | 3.0 | 3.2 | 3.1 | 3.2 | |
| Q.R | 3.4 | 1.5 | 2.1 | 1.4 | 1.3 | 0.6 | 1.5 | 2.1 | 2.6 | 1.5 | 1.7 | 2.9 | 3.4 | 2.9 | 2.6 | 2.5 | 2.5 | 3.7 | 1.8 | 2.4 | 3.4 | 2.8 | 1.5 | 3.3 | |

Sweep 0.05 Mc to 22.0 Mc in 2 min in automatic operation.

foEs

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

IONOSPHERIC DATA

135° E Mean Time (GMT.+ 9h.)

fbEs

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 1 | E | E | E | E | E | G | 3.7 | A | 5.9 | A | A | 4.6 | 4.3 | 5.9 | 5.6 | 5.8 | 3.9 | G | 3.6 | 4.0 | 2.4 | 1.8 | A | A | |
| 2 | A | 3.0 | 4.1 | 2.8 | E | G | 5.5 | 4.5 | A | 4.4 | 4.5 | 5.8 | 4.4 | 4.6 | 4.9 | 4.4 | 4.4 | 4.1 | 5.4 | 3.1 | 4.0 | 1.6 | 1.6 | 1.8 | |
| 3 | E | E | E | E | E | 2.6 | 3.2 | 4.0 | 4.6 | 5.0 | 4.6 | 4.6 | 5.9 | 6.2 | 4.6 | 4.5 | 4.4 | 3.7 | 3.8 | A | 2.8 | E | 2.3 | 3.4 | |
| 4 | 1.5 | 4.0 | 1.7 | 2.0 | 1.8 | G | G | G | 5.9 | 5.0 | 6.4 | 6.0 | A | A | 7.0 | 7.0 | 5.0 | 6.0 | 2.9 | 2.6 | 2.0 | 1.6 | 2.0 | 1.9 | |
| 5 | 1.5 | 1.2 | 2.5 | 2.1 | 2.9 | 2.4 | 3.0 | 3.6 | 3.7 | 4.0 | G | 4.4 | B | G | G | 5.5 | 3.9 | G | G | B | 3.5 | 1.8 | 2.9 | 2.1 | |
| 6 | 2.6 | 1.6 | A | 2.6 | 2.0 | G | G | G | G | A | A | A | 6.2 | 6.6 | G | G | G | G | 4.5 | 2.6 | 1.6 | 2.0 | E | 1.6 | |
| 7 | 5.0 | 2.4 | A | 3.5 | 2.5 | 3.0 | G | 4.0 | 3.9 | G | G | A | G | 4.7 | G | G | G | G | G | G | 3.0 | 3.0 | 1.9 | E | |
| 8 | 1.5 | 1.6 | 1.6 | C | G | G | G | 5.4 | 5.3 | A | 5.3 | 5.5 | 4.4 | G | G | G | 3.5 | G | 1.9 | 2.7 | 1.9 | 2.0 | 2.0 | 2.5 | |
| 9 | 3.0 | A | 1.7 | A | 1.1 | 2.4 | 3.3 | 4.0 | G | G | 6.0 | A | 5.9 | 4.5 | G | 6.5 | 4.2 | 4.4 | 7.0 | 5.9 | 5.5 | E | 5.3 | 2.0 | |
| 10 | 4.0 | 2.0 | 2.0 | 1.0 | 1.9 | G | G | G | 4.7 | 6.0 | 4.5 | G | G | G | 6.0 | G | 4.3 | 6.5 | 7.0 | 3.4 | 3.4 | E | A | A | |
| 11 | A | 4.6 | 3.5 | 1.7 | 1.6 | G | G | G | 4.5 | 5.2 | A | A | 6.9 | 5.7 | G | G | G | 3.8 | 3.5 | 2.5 | 1.8 | E | 1.9 | E | |
| 12 | 3.1 | 2.8 | 1.3 | E | G | G | G | G | 3.9 | 4.2 | G | G | 5.9 | 6.1 | 1.4 | 4.0 | G | 5.7 | 5.3 | 4.6 | A | 1.3 | E | E | |
| 13 | 1.6 | 1.7 | 2.3 | 1.2 | 1.3 | 2.6 | 3.7 | 4.2 | G | 4.2 | 4.3 | 5.5 | 6.0 | C | C | 4.0 | 5.5 | 3.9 | 4.0 | 4.5 | 2.9 | 2.0 | E | E | |
| 14 | 4.2 | A | 3.4 | 2.5 | E | G | G | 4.5 | 4.5 | C | 8.5 | 7.5 | 6.0 | 4.7 | 4.5 | 4.0 | A | 4.5 | 5.5 | 3.0 | 3.4 | 3.0 | 5.3 | 2.9 | |
| 15 | 2.5 | A | 1.7 | A | E | G | 5.7 | 5.5 | 6.2 | 6.0 | 5.3 | 4.5 | G | G | G | 4.4 | 4.4 | G | 2.8 | 1.9 | 2.3 | 1.6 | 1.6 | 1.6 | |
| 16 | E | 1.1 | 1.0 | E | 1.2 | G | G | G | B | 8.5 | 5.4 | 5.5 | A | 4.4 | 6.2 | 4.5 | 4.4 | G | 3.3 | 2.9 | 3.5 | 4.9 | A | 2.3 | |
| 17 | 2.4 | 1.5 | 1.1 | 1.1 | E | G | G | 5.5 | 5.5 | 5.8 | 4.3 | 4.8 | 4.2 | 4.2 | 5.5 | A | A | A | 4.9 | 5.2 | 1.9 | 1.8 | 2.4 | E | |
| 18 | E | 1.4 | E | E | 1.2 | G | G | G | 6.4 | 4.8 | 5.1 | 1.8 | 4.6 | 5.9 | 4.2 | 4.0 | G | G | 3.0 | A | 1.7 | 2.5 | 1.4 | 1.9 | |
| 19 | A | 1.3 | E | E | E | G | 4.2 | 4.7 | 4.5 | 6.2 | 5.3 | 5.4 | 5.7 | 6.5 | 4.4 | A | A | 5.5 | 3.4 | 2.3 | 3.7 | 1.9 | 2.9 | 4.0 | |
| 20 | 2.2 | 3.3 | 1.7 | 1.9 | 2.3 | 3.0 | 6.0 | 7.5 | 7.2 | 4.8 | 6.0 | G | G | 5.5 | G | G | G | G | 2.1 | 1.6 | 1.6 | 3.5 | 1.9 | 2.0 | |
| 21 | A | 2.0 | 3.5 | 3.9 | 2.5 | G | 3.5 | G | 5.4 | 6.4 | A | 5.8 | 5.4 | A | 6.5 | G | B | 4.0 | 4.5 | 4.5 | 5.3 | 5.7 | 5.4 | 5.5 | |
| 22 | 1.6 | 1.7 | 1.7 | 2.5 | 1.8 | 2.4 | G | 4.4 | 4.7 | 4.7 | 4.9 | 5.0 | G | 4.5 | G | 5.5 | 4.1 | G | 2.4 | 2.5 | 2.2 | 2.5 | 2.5 | 2.0 | |
| 23 | A | A | 2.5 | 2.2 | 2.5 | G | 4.5 | A | A | A | 6.4 | 5.5 | 6.1 | 5.5 | 4.6 | 6.0 | 4.0 | 4.3 | 4.0 | 4.0 | A | 2.5 | 3.1 | 1.8 | |
| 24 | 3.5 | 3.0 | 1.7 | 1.9 | 1.8 | 2.0 | 3.6 | 4.7 | 5.3 | 5.5 | A | A | 6.3 | 5.8 | 4.5 | 4.0 | G | 8.0 | 3.6 | A | 3.6 | 4.8 | 1.4 | 3.3 | |
| 25 | 2.1 | 2.4 | 2.5 | 2.5 | 2.1 | G | G | 4.0 | 5.5 | 5.2 | 4.8 | G | 6.0 | 5.4 | 4.5 | G | G | G | 3.0 | 2.3 | 2.9 | 1.4 | 2.5 | 3.8 | |
| 26 | 1.6 | 2.2 | 3.4 | 3.6 | A | 2.3 | 4.7 | 4.5 | 5.5 | G | 5.6 | C | A | 4.4 | 5.8 | A | A | A | A | A | A | 2.5 | 5.4 | 5.5 | |
| 27 | 3.5 | 3.0 | 1.9 | 1.2 | 1.2 | G | G | G | 4.5 | 6.0 | 4.6 | G | G | 4.4 | 4.3 | 4.0 | 4.0 | C | 3.3 | 3.9 | A | 2.5 | 2.5 | A | |
| 28 | 2.7 | 1.3 | E | E | 2.5 | 4.3 | 4.3 | 6.5 | 6.5 | 4.7 | A | G | 4.4 | 4.5 | 4.5 | 4.6 | G | A | 4.3 | 1.8 | E | 2.5 | 2.0 | 2.2 | |
| 29 | 2.5 | 1.4 | 1.7 | 1.9 | 1.1 | G | G | 3.5 | 5.0 | 6.0 | 4.1 | 4.5 | 5.3 | G | G | G | 4.0 | G | 4.5 | 4.0 | 2.9 | 5.3 | 1.6 | 1.9 | |
| 30 | 3.0 | A | 4.0 | 1.3 | 1.3 | G | 3.4 | G | 5.5 | 5.4 | 6.0 | 5.5 | 5.8 | A | G | 4.4 | G | 3.9 | 4.3 | 4.0 | E | E | A | 1.7 | |
| 31 | 1.6 | A | A | 1.9 | 1.9 | G | G | G | G | G | G | G | G | G | 4.4 | G | G | G | G | 2.5 | 1.9 | 2.3 | 4.2 | 4.2 | |
| No. | 31 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 30 | 30 | 31 | 30 | 30 | 30 | 30 | 31 | 30 | 30 | 30 | 31 | 30 | 31 | 31 | 31 | 31 |
| Median | 2.5 | 2.2 | 1.7 | 1.9 | 1.7 | G | G | 4.0 | 4.8 | 5.2 | 5.3 | 4.9 | 5.4 | 4.7 | 4.4 | 4.0 | 4.0 | 3.8 | 3.6 | 3.2 | 2.9 | 2.0 | 2.3 | 2.0 | |

The Radio Research Laboratories, Japan.

Sweep 0.65 Mc to 22.0 Mc in 2 min in automatic operation.

fbEs

IONOSPHERIC DATA

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

135° E Mean Time (GMT.+ 9h.)

f-min

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|--------|------|----|------|----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|
| 1 | E | E | E | E | E | E | 1.60 | 1.60 | 2.00 | 2.35 | 2.35 | 2.55 | 2.60 | 2.90 | 2.60 | 2.40 | 2.05 | 1.60 | 1.60 | 1.60 | 1.55 | E | E | E | |
| 2 | E | E | E | E | E | 1.55 | 1.80 | 1.95 | 2.05 | 2.40 | 2.50 | 2.80 | 2.55 | 2.95 | 2.40 | 2.00 | 2.10 | 2.00 | 1.95 | E | 1.60 | 1.60 | E | E | |
| 3 | E | E | E | E | E | 1.60 | 1.90 | 2.00 | 2.10 | 2.35 | 2.10 | 2.45 | 3.05 | 2.90 | 2.55 | 2.55 | 2.05 | 2.20 | 2.30 | E | E | E | E | E | |
| 4 | E | E | E | E | E | E | 1.80 | 1.95 | 1.95 | 2.40 | 2.25 | 2.55 | 2.50 | 2.55 | 1.95 | 2.00 | 2.25 | 1.80 | E | E | E | E | 1.60 | 1.60 | |
| 5 | 1.30 | E | 1.00 | E | E | 1.60 | 1.60 | 2.00 | 1.90 | 1.95 | 2.05 | 2.10 | 2.55 | 2.50 | 2.00 | 2.10 | 2.05 | 1.90 | 1.55 | 2.30 | E | E | E | E | |
| 6 | E | E | E | E | E | E | E | 1.80 | 1.85 | 2.30 | 2.00 | 2.30 | 2.50 | 2.50 | 2.40 | 1.95 | 1.95 | 1.80 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | |
| 7 | E | E | E | E | E | 1.40 | 1.60 | 1.80 | 1.95 | 2.00 | 2.20 | 2.55 | 2.10 | 2.10 | 2.05 | 2.10 | 1.90 | 1.60 | E | 1.60 | E | E | E | E | |
| 8 | 1.50 | E | E | E | E | E | E | 1.65 | 1.90 | 1.95 | 2.00 | 2.50 | 2.55 | 2.00 | 2.50 | 2.05 | 1.90 | 1.55 | 1.80 | E | E | E | E | E | |
| 9 | E | E | E | E | E | E | 1.65 | 1.90 | 1.95 | 2.05 | 2.00 | 2.05 | 2.50 | 2.30 | 2.35 | 1.90 | 1.90 | 1.70 | 1.65 | E | E | E | E | E | |
| 10 | 1.50 | E | E | E | E | E | E | 1.60 | 1.90 | 2.00 | 2.05 | 2.00 | 2.40 | 2.35 | 2.05 | 2.00 | 1.85 | 1.60 | 1.60 | E | E | E | E | E | |
| 11 | E | E | E | E | E | E | E | 1.55 | 1.80 | 2.05 | 2.10 | 2.00 | 2.05 | 2.00 | 2.00 | 1.90 | 1.85 | 1.90 | E | E | E | E | E | E | |
| 12 | E | E | E | E | E | E | E | 2.00 | 1.70 | 1.85 | 2.05 | 1.90 | 2.50 | 2.45 | 2.00 | 1.95 | 1.90 | 1.60 | 1.80 | 1.60 | 1.60 | E | E | E | |
| 13 | E | E | E | E | E | E | 1.70 | 1.60 | 1.70 | 1.80 | 2.40 | 2.50 | 2.90 | 2.50 | 2.80 | 2.25 | 2.00 | 1.75 | 1.60 | E | E | E | E | E | |
| 14 | E | E | E | E | E | E | E | 1.60 | 1.90 | C | 2.90 | 2.50 | 2.40 | 2.50 | 2.00 | 2.05 | 2.30 | E | E | E | 1.60 | E | E | E | |
| 15 | E | E | E | E | E | E | E | 1.90 | 1.90 | 2.30 | 2.90 | 2.90 | 2.90 | 2.00 | 2.00 | 1.90 | 1.90 | 1.70 | 1.55 | 1.55 | E | E | E | 1.55 | |
| 16 | E | E | E | E | E | E | 1.60 | 2.40 | 2.50 | 2.50 | 2.50 | 2.45 | 2.25 | 2.25 | 2.20 | 1.90 | 2.00 | 2.30 | E | E | E | E | E | E | |
| 17 | E | E | E | E | E | E | E | 1.60 | 1.90 | 1.80 | 1.90 | 2.00 | 2.00 | 2.40 | 1.90 | 1.85 | 1.85 | 1.55 | E | E | E | E | E | E | |
| 18 | E | E | E | E | E | E | 1.55 | 1.60 | 1.60 | 1.80 | 2.00 | 2.05 | 2.30 | 2.40 | 2.10 | 2.40 | 1.80 | 1.60 | 1.60 | 1.60 | E | E | E | E | |
| 19 | E | E | E | E | E | E | E | 1.60 | 2.00 | 1.90 | 2.00 | 2.50 | 2.50 | 2.00 | 2.00 | 1.80 | 1.90 | 1.60 | E | E | E | E | E | E | |
| 20 | E | E | E | E | E | E | E | 1.60 | 1.80 | 1.90 | 2.00 | 2.60 | 2.60 | 2.30 | 2.30 | 2.10 | 1.90 | 1.60 | E | E | 1.60 | E | E | E | |
| 21 | E | E | E | E | E | E | E | 1.90 | 1.60 | E | 2.50 | 3.00 | 2.05 | 2.00 | 2.40 | 1.80 | 5.90 | 1.70 | 1.60 | E | E | E | E | 1.55 | |
| 22 | E | E | E | E | E | E | 1.60 | 1.90 | 1.90 | 2.00 | 2.05 | 2.30 | 2.50 | 2.50 | 2.05 | 2.00 | 1.90 | 1.90 | E | E | 1.60 | E | E | E | |
| 23 | E | E | E | E | E | E | E | 1.90 | 1.90 | 2.90 | 2.05 | 2.00 | 2.80 | 2.40 | 2.50 | 2.40 | 2.00 | 1.90 | E | E | E | E | E | E | |
| 24 | E | E | E | E | E | E | 1.60 | 1.60 | 1.80 | 1.90 | 2.00 | 2.30 | 2.50 | 2.40 | 1.90 | 2.00 | 1.90 | 1.70 | E | 1.60 | E | E | E | E | |
| 25 | E | E | E | E | E | E | E | 1.60 | 1.90 | 2.00 | 2.05 | 2.40 | 2.50 | 2.50 | 2.40 | 1.90 | 2.00 | 1.70 | 1.55 | E | 1.60 | 1.60 | 1.55 | E | |
| 26 | E | E | E | E | E | E | E | 1.55 | 1.90 | 1.90 | 2.30 | 2.10 | 2.90 | 2.90 | 2.00 | 1.95 | 1.95 | 1.90 | E | E | E | E | E | E | |
| 27 | E | E | E | E | E | E | 1.60 | 1.80 | 1.90 | 2.00 | 2.20 | 2.20 | 2.40 | 2.50 | 2.05 | 2.10 | 2.10 | C | E | E | E | E | E | E | |
| 28 | E | E | E | E | E | E | E | 1.65 | 1.90 | 1.80 | 1.90 | 2.10 | 2.00 | 2.05 | 2.05 | 2.00 | 1.90 | 1.90 | E | E | E | E | E | E | |
| 29 | E | E | E | E | E | E | E | 2.00 | 1.90 | 1.95 | 2.40 | 2.40 | 2.05 | 2.40 | 2.40 | 2.00 | 1.95 | 1.60 | 1.60 | E | E | E | E | E | |
| 30 | E | E | E | E | E | E | E | 1.70 | 1.90 | 1.95 | 2.00 | 2.30 | 2.50 | 2.50 | 2.50 | 2.30 | 2.00 | 1.90 | E | 1.60 | E | E | E | E | |
| 31 | E | E | E | E | E | E | E | 1.60 | 1.80 | 2.05 | 1.95 | 2.00 | 2.30 | 2.30 | 2.30 | 2.30 | 1.90 | 1.90 | E | E | E | E | E | E | |
| No. | 31 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 |
| Median | E | E | E | E | E | E | 1.60 | 1.80 | 1.90 | 2.00 | 2.05 | 2.30 | 2.50 | 2.40 | 2.10 | 2.00 | 1.95 | 1.70 | E | E | E | E | E | E | |

The Radio Research Laboratories, Japan.

Sweep 0.5 Mc to 22.0 Mc in 2 min in automatic operation.

Note: Lowest limit of observable frequency is 1.50 Mc/s due to radio interference

f-min

A 6

Lat. 39° 43.5' N
Long. 140° 08.2' E

Akita

135° E Mean Time (GMT.+ 9h.)

(M3000)F2

Jul. 1957

| 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 | 2.35 | 2.40 | 2.30 | 2.25 | 2.40 | 2.88 ^H | 3.10 | A | A | A | A | 2.35 | 2.60 | 2.80 | 2.65 | 2.60 | 2.80 | 2.70 | 2.75 | 2.85 | 2.55 | 2.50 | 2.55 | 2.50 |
| 2 | 2.50 ^H | 2.65 | 2.70 | 2.70 | 2.70 | 2.70 | 2.60 | 2.90 | A | 2.60 | 2.80 | 2.65 ^H | 2.75 | 2.70 | 2.55 | 2.60 | 2.75 ^F | 2.90 | 2.85 | 2.75 | 2.55 | 2.55 | 2.55 | 2.50 |
| 3 | 2.40 | 2.60 | 2.35 | 2.30 | 2.30 | 2.40 | 2.30 | 2.60 | 2.50 | 2.10 | 2.30 | 2.55 | 2.45 | 2.35 | 2.45 | 2.65 | 2.70 | 2.60 | 2.65 | 2.60 | 2.40 | 2.40 | 2.40 | R |
| 4 | 2.80 | 2.80 | 2.50 | 2.45 | 2.45 | 2.40 | 2.55 | 2.60 | 2.55 | 2.60 | R | 2.85 | A | A | 2.75 | 2.85 | 2.70 | 2.80 | 2.85 | 2.95 | 2.55 | 2.60 | 2.55 | 2.50 |
| 5 | 2.60 | 2.70 | 2.75 | 2.70 | 2.70 | 2.50 | 2.80 | 2.85 | 2.80 | 2.60 | 2.55 | 2.60 | 2.50 | 2.50 | 2.50 | 2.30 | 2.50 | 2.65 | 2.70 | 2.50 | 2.60 | 2.35 | 2.40 | 2.45 |
| 6 | 2.70 | 2.50 | 2.50 | 2.45 | 2.40 | 2.60 | 2.45 | R | A | A | A | A | 2.75 | 2.55 | 2.60 | 2.65 | 2.70 | 2.80 | 2.85 | 2.70 | 2.50 | 2.40 | 2.45 | 2.45 |
| 7 | 2.60 | 2.60 | 2.65 | 2.55 | 2.70 | 2.70 | 2.95 | 2.80 | 3.05 ^H | 2.70 | 2.65 | 2.55 | 2.65 | 2.65 | 2.65 | 2.70 | 2.70 | 2.80 | 2.85 | 2.70 | 2.50 | 2.40 | 2.35 | 2.45 |
| 8 | 2.50 | 2.60 | 2.65 | 2.55 | 2.50 | 2.80 | 2.70 | 2.90 | 2.50 | A | 2.70 | 2.55 | 2.50 | 2.55 | 2.50 | 2.55 | 2.70 | 2.75 ^H | 2.75 ^H | 2.65 | 2.75 | 2.55 | 2.50 | 2.55 |
| 9 | 2.55 | 2.75 | 2.65 | 2.70 | 2.60 | 2.70 | 2.70 | 2.85 | 2.70 | 2.80 | 2.50 | A | 2.50 | 2.55 | 2.70 | 2.65 | 2.70 | 2.80 | 2.75 | 3.10 | R | 2.75 | 2.50 | 2.45 |
| 10 | 2.55 | 2.60 | 2.70 | 2.70 | 2.60 | 2.80 | 2.85 | 2.75 | 2.55 | 2.50 | 2.55 | 2.50 | 2.55 | 2.70 | 2.60 | 2.65 | 2.65 | 2.60 | 2.80 | 2.75 | 2.70 | 2.75 | 2.50 | 2.45 |
| 11 | 2.65 | 2.75 | 2.80 | 2.55 | 2.70 | 2.80 | 2.95 | 2.80 | 2.70 | 2.70 | 2.50 ^A | A | 2.55 | 2.55 | 2.60 | 2.65 | 2.65 | 2.60 | 2.80 | 2.80 | 2.75 | 2.50 | 2.40 | 2.45 |
| 12 | 2.60 | 2.70 | 2.60 | 2.60 | 2.70 | 2.75 | 2.75 | 2.60 | 2.85 | 2.75 | 2.55 | 2.50 | 2.40 | 2.50 | 2.55 | 2.70 | 2.65 | 2.65 | 2.70 | 2.65 | 2.65 | 2.65 | 2.55 | 2.55 |
| 13 | 2.55 | 2.65 | R | 2.55 | 2.55 | 2.60 | 2.70 | 2.70 | 2.85 | 2.65 | 2.55 | 2.60 | 2.60 | 2.65 | 2.70 | 2.70 | 2.70 | 2.80 | 2.80 | 2.70 | 2.65 | 2.65 | 2.55 | 2.55 |
| 14 | 2.50 | 2.65 | 2.80 | 2.65 | 2.70 | 2.65 | 2.80 | 2.80 | 2.70 | 2.60 | 2.45 | 2.50 | 2.60 | 2.65 | 2.65 | 2.65 | A | 2.75 | 2.70 | 2.70 | 2.65 | 2.60 | 2.60 | 2.55 |
| 15 | 2.70 | 2.65 | 2.75 | 2.70 | 2.60 | 2.65 | 2.60 | 2.85 | 2.65 | 2.40 | 2.45 | 2.55 | 2.60 | 2.55 | 2.60 | 2.75 | 2.70 | 2.80 | 2.85 | 2.80 | 2.75 | 2.70 | 2.70 | 2.70 |
| 16 | 2.65 | 2.60 | 2.80 | 2.80 | 2.70 | 2.85 | 2.70 | 2.75 | 2.90 | 2.65 | 2.55 | 2.50 | 2.50 | 2.55 | 2.65 | 2.65 | 2.60 | 2.65 | 2.70 | 2.75 | 2.75 | 2.50 | 2.40 | 2.45 |
| 17 | 2.55 | 2.65 | 2.60 | 2.50 | 2.40 | 2.40 | 2.45 | 2.50 | 2.40 | 2.25 | 2.30 | 2.40 | 2.35 | 2.30 | 2.35 | A | A | A | 2.75 | 2.70 | 2.70 | 2.50 | 2.40 | 2.45 |
| 18 | 2.50 | 2.55 | 2.65 | 2.55 | 2.55 | 2.65 | 2.75 | 2.85 | 2.70 | 2.45 | 2.40 | 2.40 | 2.50 | 2.55 | 2.45 | 2.60 | 2.45 | 2.55 | 2.70 | 2.65 | 2.65 | 2.65 | 2.40 | 2.45 |
| 19 | 2.50 | 2.55 | 2.60 | 2.45 | 2.45 | 2.65 | 2.55 | 2.60 | 2.25 | 2.75 | 2.40 | 2.30 | 2.30 | 2.50 | 2.55 | 2.60 | 2.60 | 2.65 | 2.55 | 2.55 | 2.50 | 2.45 | 2.40 | 2.30 |
| 20 | 2.50 | 2.40 | 2.40 | 2.35 | 2.50 | 2.80 | 2.70 | 2.55 | 3.00 | 2.60 | 2.60 | 2.50 ^H | 2.65 | 2.60 | 2.70 | 2.75 | 2.65 | 2.70 | 2.70 | 2.70 | 2.70 | 2.50 | 2.55 | 2.50 |
| 21 | 2.50 | 2.55 | 2.65 | 2.80 ^R | 2.75 | 2.60 | 2.80 | 2.80 | 2.75 | 2.70 | 2.65 ^A | 2.55 | 2.75 | A | 2.45 | 2.50 | 2.70 | 2.75 | 2.85 | 2.80 | 2.60 | 2.60 | 2.60 | 2.60 |
| 22 | 2.65 | 2.70 ^F | 2.55 ^F | 2.60 | 2.50 | 2.60 | 2.70 | 2.75 | 2.60 | 2.60 | 2.50 | 2.60 | 2.55 | 2.50 | 2.60 | 2.60 | 2.55 | 2.60 | 2.70 | 2.80 | 2.80 | 2.60 | 2.60 | 2.60 |
| 23 | A | R | R | 2.35 ^F | 2.45 ^F | 2.26 | 2.70 | A | A | A | 2.40 | 2.45 | 2.65 | 2.40 | 2.50 | 2.40 | 2.60 | 2.70 | 2.70 | 2.80 | 2.80 | R | R | A |
| 24 | 2.45 | 2.55 | 2.60 | 2.65 | 2.60 | 2.65 | 2.70 | 2.45 | 2.55 | 2.30 | A | A | 2.45 | 2.40 | 2.50 | 2.40 | 2.60 | 2.70 | 2.75 | 2.60 | 2.50 ^C | 2.40 | 2.40 | 2.40 |
| 25 | 2.55 | 2.55 | 2.45 | 2.40 | 2.35 ^F | 2.40 | 2.45 | 2.65 | 2.55 | 2.50 ^F | 2.35 | 2.35 | 2.55 | 2.45 | 2.50 | 2.55 | 2.65 | 2.60 | 2.85 | 2.60 | 2.50 | 2.50 | 2.45 | 2.45 |
| 26 | 2.55 | 2.55 | 2.30 | 2.55 | 2.60 | 2.70 | R | 2.65 | 2.60 | 2.45 | 2.45 | C | A | 2.45 | 2.65 | 2.65 | 2.65 | 2.70 | 2.65 | 2.55 | 2.45 | 2.55 | 2.35 | 2.35 |
| 27 | 2.50 | 2.60 | 2.55 | 2.50 | 2.55 | 2.75 | 2.80 | 2.65 | 2.70 | 2.65 | 2.30 | 2.30 | 2.40 | 2.50 | 2.60 | 2.65 | 2.70 | 2.66 | 2.75 | 2.75 | A | A | 2.53 | 2.45 |
| 28 | 2.70 | 2.70 | 2.65 | 2.55 | 2.65 | 2.85 | 2.65 | 2.65 | 2.70 | 2.45 | 2.50 ^A | 2.45 | 2.55 | 2.50 | 2.55 | 2.65 | 2.65 | 2.70 ^A | 2.70 | 2.75 | 2.45 | 2.40 | 2.45 | 2.65 |
| 29 | 2.70 | 2.55 | 2.65 | 2.60 | 2.55 | 2.60 | 2.65 | 2.85 | 2.90 | 2.75 | 2.55 ^H | 2.55 | 2.55 | 2.60 | 2.60 | 2.50 ^H | 2.60 | 2.80 | 2.75 | 2.75 | 2.75 | 2.55 | 2.55 | 2.60 |
| 30 | 2.65 | 2.70 | 2.60 | 2.50 | 2.45 | 2.45 | 2.65 | 3.00 | 3.00 | 2.80 | 2.65 | 2.55 | 2.65 | 2.70 ^A | 2.80 | 2.70 ^H | 2.85 | 2.80 | 2.90 | 2.85 | 2.55 | 2.65 | 2.65 | 2.60 |
| 31 | 2.55 | 2.55 ^F | 2.55 ^F | 2.50 | 2.50 | 2.80 | 2.85 | 2.95 | 2.95 | 2.95 | 2.90 | 2.70 | 2.70 ^H | 2.65 ^H | 2.65 | 2.70 ^H | 2.75 | 2.80 | 2.85 | 2.75 | 2.80 | 2.70 | 2.65 | 2.60 |
| No. | 30 | 30 | 29 | 31 | 31 | 31 | 30 | 28 | 27 | 27 | 27 | 26 | 29 | 29 | 31 | 29 | 28 | 29 | 30 | 28 | 25 | 25 | 25 | 27 |
| Median | 2.55 | 2.60 | 2.60 | 2.55 | 2.65 | 2.70 | 2.80 | 2.80 | 2.70 | 2.60 | 2.50 | 2.50 | 2.55 | 2.55 | 2.60 | 2.65 | 2.70 | 2.70 | 2.75 | 2.70 | 2.60 | 2.50 | 2.55 | 2.50 |

The Radio Research Laboratories, Japan.

Sweep 0.85 Mc to 22.0 Mc in 2 min in automatic operation.

(M3000)F2

A 7

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

135° E Mean Time (GMT.+9h.)

foF2

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
|--------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 1 | 7.7 ^S | 6.5 | 5.8 | 5.7 | 5.2 | 5.0 | 4.7 | A | 7.7 | 6.9 | 7.6 ^A | 8.5 | 9.1 | 9.8 | 10.3 | 10.3 | 10.5 | 10.1 | 10.2 | 9.4 | 8.4 | 8.6 ^R | 8.9 | 8.9 | 8.9 |
| 2 | 8.2 ^S | 8.5 ^S | 8.6 | 7.5 | 6.6 | 7.2 | 7.1 | 8.1 | 8.2 | 8.8 | 9.3 | 9.7 ^R | 9.9 | 10.0 | 10.5 | 10.1 | 10.5 | 10.4 | 9.6 | 8.4 | 9.0 | 9.0 | 9.7 | 9.7 | 9.7 ^R |
| 3 | 8.1 | 8.1 | 7.3 | 7.2 | 6.8 | 6.7 | 6.9 | 7.1 | 7.1 ^H | 6.4 | 6.9 | 7.0 ^A | 8.4 | 7.7 | 7.7 ^R | 8.4 | 8.3 | 7.5 ^A | 7.6 | 7.3 | 7.4 | 7.8 | 8.1 | 8.9 | 9.2 |
| 4 | 9.1 | 7.8 ^A | 6.4 | 6.2 ^V | 6.1 | 7.1 | 8.0 | 8.4 | 8.0 | 8.0 | 8.7 | 9.0 | 9.5 | 9.5 | 9.5 | 9.2 | 9.2 | 9.3 | 9.6 | 9.1 | 8.2 | 8.3 ^S | 8.1 | 9.0 | 9.0 |
| 5 | 9.2 ^S | 9.0 | 8.8 | 8.0 | 7.8 ^S | 7.7 | 8.8 | 9.1 | 9.1 | 9.2 | 9.5 | 10.3 | 10.3 | 10.6 | 10.6 | 9.6 | 10.7 | 11.8 | 10.2 | 7.4 | 8.4 | 8.6 ^S | 8.7 | 9.0 | 9.0 |
| 6 | 9.8 | 8.1 | 7.7 | 7.4 | 6.8 | 6.4 | 6.2 | 6.4 ^R | 6.2 ^R | 6.7 ^A | 7.4 ^A | A | 8.5 | 8.8 | 9.4 ^H | 9.7 | 9.7 | 10.2 | 9.6 ^A | 9.6 | 8.2 ^R | 8.6 ^S | 8.7 | 9.0 | 9.0 |
| 7 | 9.0 | 9.2 | 8.7 | 8.5 | 8.3 | 8.5 | 9.2 | 8.9 | 8.7 | 9.3 ^H | 9.2 ^H | 9.2 | 10.2 | 10.3 | 9.9 | 9.2 | 9.3 | 9.5 | 9.1 | 8.4 | 8.3 | 8.4 | 8.5 | 8.6 | 8.6 |
| 8 | 8.4 ^R | 8.3 | 8.2 ^C | 8.0 | 7.7 | 9.0 | C | C | 9.0 ^H | 9.2 | 9.9 | 10.6 | 11.0 | 10.9 | 11.0 | 11.0 | 10.8 | 10.6 | 10.1 | 9.0 | 9.2 | 9.1 | 9.2 | 9.2 | 9.8 |
| 9 | 9.4 ^S | 9.5 | 9.2 ^R | 8.2 | 7.8 ^S | 8.1 | 9.0 | 9.2 | 9.6 ^H | 9.8 ^H | 10.0 | 9.4 | 9.4 | 10.3 | 11.0 | 11.0 | 10.5 | 10.1 | 9.5 | 9.0 | 8.6 | 8.8 | 9.3 | 9.7 | 10.1 ^S |
| 10 | 9.5 | 9.0 | 9.0 | 8.6 | 8.2 | 8.9 | 10.6 | 9.3 | 8.6 ^H | 9.5 | 10.3 | 10.0 ^H | 10.6 | 10.8 | 10.2 | 10.6 | 10.5 | 9.8 | 10.2 | 9.5 | 8.8 | 9.3 | 9.7 | 9.7 | 10.1 ^S |
| 11 | 10.1 ^S | 10.4 | 9.6 ^S | 8.8 | 8.6 | 9.5 | 10.3 | 9.7 | 9.3 | 9.4 | 9.2 ^H | 9.9 ^R | 10.3 | 10.5 | 10.3 | 10.5 | 10.3 | 10.7 | 10.8 | 9.5 | 8.8 | 9.3 | 9.8 | 9.8 | 9.8 |
| 12 | 9.9 | 10.1 | 9.3 | C | C | C | 9.8 | 10.3 | 10.1 | 9.7 | 10.4 | 10.8 | 11.1 | 10.8 | 10.6 | 10.6 | 10.2 | 10.1 | 9.4 | 9.4 | 10.0 | 9.5 ^S | 9.6 | 9.2 | 9.4 |
| 13 | 9.3 | 9.2 | 8.4 ^R | 7.9 | 7.8 | 8.3 ^R | 9.5 | 10.2 | 9.7 | 9.0 | 9.0 | 9.8 | 10.1 | 10.1 | 10.1 | 9.6 | 9.3 | 9.8 | 9.6 | 9.3 | 9.2 | 9.7 ^S | 9.5 | 9.5 | 9.4 |
| 14 | 9.5 | 9.2 | 9.2 ^S | 8.5 | 8.4 | 9.3 ^S | 10.7 | 11.3 | 10.8 | 10.5 | 10.7 | 11.1 | 11.5 | 11.3 | 11.0 | 10.5 | 10.2 | 10.1 | 10.1 | 9.9 | 9.1 | 9.8 | 9.9 | 9.8 | 9.8 |
| 15 | 9.4 ^S | 9.4 | 9.4 | 9.2 | 8.9 ^S | 10.3 | 10.8 | 10.9 | 9.4 | 9.7 | 10.3 | 10.7 | 11.0 | 11.5 | 11.1 | 10.2 | 10.2 | 9.2 | 9.2 | 8.9 | 9.1 | 8.8 | 9.2 | 9.0 | 9.4 |
| 16 | 9.6 | 9.4 | 9.5 | 8.9 | 8.4 | 8.6 | 9.1 | 9.8 | 9.9 | 8.9 | 9.1 | 9.5 | 9.4 | 9.8 ^A | 10.1 | 9.9 | 10.0 | 10.1 | 7.2 | 7.0 | 6.7 | 7.8 | 8.1 | 8.5 | 8.5 |
| 17 | 9.1 | 9.4 | 8.7 | 8.1 | 7.5 | 7.9 | 9.1 | 8.8 | 8.2 ^A | 7.6 | 7.4 | 7.4 | 6.5 ^A | 6.4 ^A | 6.4 ^A | 6.4 | 6.9 | 8.2 | 8.5 | 8.0 | 7.5 | 7.8 ^A | 7.5 | 7.9 | 8.1 |
| 18 | 7.6 | 7.6 | 7.6 | 7.0 | 6.7 | 7.2 | 8.4 | 9.2 | 8.4 | 7.8 | 8.7 | 8.3 | 8.1 | 8.4 ^A | 8.4 ^A | 7.5 | 7.5 | 8.0 | 7.6 | 7.9 | 8.0 | 8.7 | 8.7 | 8.6 | 8.1 |
| 19 | 8.6 | 8.6 | 7.7 | 7.2 | 6.8 | 7.4 | 8.0 | 7.5 | 7.0 ^A | 7.3 | 7.3 | 7.2 | 7.0 | 7.5 | 7.8 ^A | 7.6 | 7.9 | 8.0 | 9.4 | 9.6 | 9.2 | 8.8 | 8.7 | 8.6 | 7.0 |
| 20 | 8.0 | 7.7 | 7.1 | 7.1 | 7.3 | 7.6 | 7.3 | 8.4 | 8.4 | 7.8 ^H | 8.6 | 9.3 | 9.7 | 9.8 | 9.8 | 9.1 | 9.2 | 9.0 | 8.9 | 8.1 | 8.1 | 8.3 | 8.5 | 9.3 | 9.3 |
| 21 | 9.2 ^S | 9.0 | 9.2 | 8.3 | 7.3 | 7.8 | 8.5 | 9.3 | 9.5 | 9.4 | 9.0 | 9.5 | 9.0 | 9.0 | 8.6 | 9.0 | 9.2 | 10.0 | 10.3 | 10.5 | 10.3 | 8.9 | 9.0 | 9.2 | 9.2 |
| 22 | 8.9 ^F | 9.3 ^F | 9.0 ^S | 8.6 | 7.8 ^S | 8.4 | 9.4 | 10.1 | 10.2 | 9.8 | 9.6 | 9.2 | 9.4 | 10.0 | 10.2 | 10.2 | 8.0 | 8.1 | 7.2 | 6.8 | 7.0 | 7.7 | 8.1 | 8.3 | 8.3 |
| 23 | 8.8 | 8.4 ^R | 8.1 | 7.6 | 7.9 ^F | 7.9 | 8.8 | 8.7 | 8.7 | 8.9 | 8.5 | 8.3 | 8.7 | 8.3 | 7.8 | 7.5 | 8.0 | 8.0 | 9.5 | 9.0 | 8.3 | 7.9 | 8.6 | 8.4 | 8.5 |
| 24 | 8.6 | 8.8 | 8.5 | 7.8 | 7.3 | 7.5 | 8.7 | 8.5 | 8.5 | 8.3 | 8.8 | 9.3 | 9.5 | 9.9 | A | A | 9.7 | 9.5 | 9.0 | 8.3 | 7.5 | 7.5 ^S | 7.6 ^S | 8.1 | |
| 25 | 8.1 ^S | 8.2 | 7.6 ^V | 7.0 | 6.5 | 6.9 | 7.8 | 8.0 | 8.0 ^H | 7.8 | 7.2 ^A | 7.3 | 7.8 | 8.0 | 8.1 | 7.8 | 7.9 | 7.9 | 8.3 | 8.0 ^S | 7.8 | 8.0 | R | 7.9 | 7.9 ^R |
| 26 | AF | 8.4 | 7.9 | 7.2 | 6.4 | 7.2 | 8.3 | 8.3 ^R | 8.0 ^H | 8.4 | 8.6 | 8.7 | 8.6 | 8.7 | 8.6 | 8.5 | 8.8 | 8.5 | 8.4 ^R | 8.5 | 7.2 | 7.5 | 7.8 ^S | 8.5 | 9.1 |
| 27 | R | 8.6 ^R | 8.1 | 7.9 | 7.8 ^S | 8.2 | 9.4 | 7.0 ^R | 8.2 | 8.4 | 8.6 | 9.1 | 9.3 | 9.4 | 9.3 | 9.3 | 8.8 | 8.5 | 8.2 | 8.2 | 7.9 | 8.3 ^R | 8.8 | 8.7 ^R | 8.9 |
| 28 | 8.8 | 8.3 | 8.1 | 7.9 | 7.6 | 7.9 | 9.3 | 10.2 | 9.9 | 9.8 ^A | 9.2 ^A | 9.2 | 9.1 | 9.8 | 10.3 | 9.7 | 9.5 ^A | 9.4 ^A | 9.4 | 8.7 | 8.3 ^R | 8.8 | 9.1 | 9.1 | 10.0 ^R |
| 29 | 9.3 ^S | 8.9 | 8.5 | 8.2 ^R | 7.9 | 8.2 ^R | 9.9 ^R | 10.8 | 10.5 | 9.6 | 9.4 | 9.9 ^R | 10.4 | 10.7 | 10.7 | 10.3 | 11.2 | 10.9 | 9.3 ^S | 8.5 | 8.8 | 8.6 | 8.6 | 8.3 | |
| 30 | 9.9 ^S | C | C | C | C | C | C | 9.9 | 8.3 | 8.6 | 8.7 | 9.2 ^A | 9.8 ^R | 10.1 | 10.0 | 10.0 | 10.1 | 10.0 | 10.0 | 10.5 | 9.2 | 8.3 | 8.6 | 8.6 | |
| 31 | 7.9 ^R | 7.8 ^R | 7.6 | 7.7 | 8.0 | 9.1 | 9.4 | 10.5 | 10.1 | 9.1 | 8.7 ^H | 8.5 ^H | 9.1 | 9.9 | 10.5 | 10.5 | 9.9 ^R | 10.1 | 9.9 | 10.1 | 9.0 | 8.7 ^S | 8.8 | 8.8 | |
| No. | 2.9 | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 3.1 | 3.1 | 3.1 | 3.0 | 3.0 | 3.1 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 2.9 | 2.9 | 3.1 | 3.1 |
| Median | 9.1 | 8.7 | 8.4 | 7.9 | 7.9 | 9.0 | 9.2 | 9.0 | 9.2 | 9.4 | 9.9 | 10.1 | 9.7 | 9.5 | 9.4 | 8.6 | 8.4 | 8.9 | 9.2 | 9.2 | 9.2 | 8.8 | 8.4 | 9.2 | 9.4 |
| U.Q. | 9.4 | 9.2 | 9.0 | 8.4 | 8.0 | 8.6 | 9.4 | 10.2 | 9.9 | 10.3 | 10.5 | 10.3 | 10.2 | 10.1 | 10.1 | 9.4 | 8.9 | 9.2 | 9.2 | 9.2 | 9.2 | 8.3 | 8.4 | 8.5 | 8.5 |
| L.Q. | 8.3 | 8.2 | 7.7 | 7.2 | 6.8 | 7.2 | 8.0 | 8.4 | 8.3 | 7.8 | 8.5 | 8.5 | 8.8 | 8.5 | 8.5 | 8.0 | 8.8 | 8.5 | 8.5 | 8.5 | 8.0 | 7.9 | 8.3 | 8.4 | 8.5 |
| Q.R. | 1.1 | 1.0 | 1.3 | 1.2 | 1.2 | 1.4 | 1.4 | 1.4 | 1.6 | 1.7 | 1.0 | 1.4 | 1.4 | 1.6 | 1.7 | 1.9 | 1.3 | 1.4 | 1.6 | 1.6 | 1.4 | 1.0 | 0.9 | 0.8 | 0.8 |

The Radio Research Laboratories, Japan.

Sweep 1.0 Mc to 2.0 Mc in 2.0 sec in automatic operation.

K 1

foF2

IONOSPHERIC DATA

Lat. 39° 43.6' N
Long. 140° 08.2' E

Akita

135° E Mean Time (GMT. + 9h.)

Types of Es

Jul. 1957

| 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 | f | f | f | f | f | l | h | l | C | C | C | C | C | C | C | C | C | h | h | f | f | f | f | f |
| 2 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 3 | f | f | f | f | f | l | h | C | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 4 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 5 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 6 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 7 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 8 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 9 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 10 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 11 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 12 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 13 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 14 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 15 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 16 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 17 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 18 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 19 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 20 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 21 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 22 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 23 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 24 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 25 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 26 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 27 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 28 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 29 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 30 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| 31 | f | f | f | f | f | l | h | h | C | C | C | C | C | C | C | C | C | C | C | f | f | f | f | f |
| No. | | | | | | | | | | | | | | | | | | | | | | | | |
| Medien | | | | | | | | | | | | | | | | | | | | | | | | |

Types of Es

Swamp 0.85 Mc to 22.0 Mc in 2 min in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

135° E Mean Time (GMT.+ 9h.)

foF1

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|----|----|----|----|----|----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|----|----|----|----|----|----|
| 1 | | | | | | | A | A | A | L | A | L | 6.1 ^L | 6.4 | 6.0 ^L | 6.0 ^L | L | L | A | | | | | |
| 2 | | | | | | | L | 5.1 ^L | 5.6 ^A | 5.9 | 5.8 | 6.2 ^L | 6.0 | 6.0 | 5.7 | 5.6 ^L | L | L | L | | | | | |
| 3 | | | | | | L | 4.1 | 4.5 | L | A | A | A | A | 5.6 ^A | 5.3 | A | A | A | A | | | | | |
| 4 | | | | | | L | L | L | L | L | 5.8 ^L | 6.3 ^L | 6.1 ^A | 5.6 ^A | 5.5 ^L | 5.9 | A | A | A | | | | | |
| 5 | | | | | | L | L | L | L | 5.9 | 6.0 | 6.2 ^L | 5.8 | 5.9 ^B | 5.7 | 5.6 | L | L | L | | | | | |
| 6 | | | | | | L | 4.6 ^R | 5.4 ^A | 5.7 | A | 5.7 | A | 6.5 | 6.0 ^L | 6.2 ^L | 5.2 | A | A | A | | | | | |
| 7 | | | | | | L | L | L | L | A | A | 6.1 | 6.5 | 6.2 | 6.4 | 6.1 ^L | 5.6 | L | L | | | | | |
| 8 | | | | | | C | L | L | L | A | A | 6.0 | 6.1 | 5.9 | 5.9 | 5.5 ^H | L | L | L | | | | | |
| 9 | | | | | | L | 4.9 ^L | 6.7 ^L | 6.0 | 6.0 | 6.0 | 6.2 ^L | 5.7 | 5.7 | 6.3 | 5.4 | 5.4 ^L | L | L | | | | | |
| 10 | | | | | | L | L | L | L | 6.1 ^H | 6.0 | 6.2 ^L | 5.8 | A | A | A | 5.3 | L | L | | | | | |
| 11 | | | | | | L | L | L | L | 5.8 ^A | 6.1 ^L | 5.9 ^L | 5.8 | A | A | A | 5.6 ^L | 5.3 ^L | A | | | | | |
| 12 | | | | | | L | L | L | L | 5.9 ^H | 6.1 ^H | 6.2 ^L | 6.0 | 5.8 ^A | 5.8 ^H | 5.6 ^{LH} | 5.6 ^L | 5.3 ^L | A | | | | | |
| 13 | | | | | | L | L | L | L | A | 6.2 ^A | 5.8 | 6.2 ^A | 5.8 | A | L | 5.8 ^A | 4.8 ^L | A | | | | | |
| 14 | | | | | | L | L | L | L | L | L | A | A | A | A | 5.8 | L | L | A | | | | | |
| 15 | | | | | | L | L | L | L | A | A | 6.0 | 6.3 ^L | 5.9 | 5.5 ^L | 5.5 ^L | L | L | C | | | | | |
| 16 | | | | | | L | L | L | L | L | 6.0 ^L | 6.0 | 6.0 | 6.0 ^A | 6.0 | 5.8 ^A | 5.4 ^A | L | L | | | | | |
| 17 | | | | | | L | A | A | A | A | 5.4 ^A | A | A | A | A | 5.4 ^A | 5.1 ^A | L | L | | | | | |
| 18 | | | | | | L | L | L | L | 5.6 ^A | 6.1 ^B | A | 6.1 | 5.8 ^A | 5.7 | 5.6 ^A | 5.5 | A | L | | | | | |
| 19 | | | | | | L | L | L | L | A | A | 5.8 ^A | 5.7 | 5.7 | 5.6 ^A | 5.5 | A | A | L | | | | | |
| 20 | | | | | | L | L | L | L | L | 5.8 ^A | 6.1 ^R | 6.1 ^R | A | A | L | L | A | L | | | | | |
| 21 | | | | | | L | L | L | L | L | 6.4 ^A | 6.0 ^A | L | 6.0 | 6.2 | 5.6 | 5.6 ^B | L | L | | | | | |
| 22 | | | | | | L | L | L | L | 5.6 ^L | A | 6.2 ^A | A | A | 6.2 ^A | 5.8 | 5.4 ^L | 5.1 | L | | | | | |
| 23 | | | | | | L | L | L | L | 6.1 | 6.6 ^L | 6.2 ^A | A | 6.0 | A | 5.6 | 5.4 ^A | A | L | | | | | |
| 24 | | | | | | L | A | 6.1 ^L | 6.2 ^L | 5.9 | 6.3 | 6.2 | L | A | A | 5.9 | 5.2 | 5.2 ^L | A | | | | | |
| 25 | | | | | | L | 5.6 | 5.5 | 6.0 ^H | 6.0 ^A | 6.1 ^R | 6.0 ^A | 5.9 | 5.8 | 5.8 ^H | 5.8 | 5.5 ^L | 5.2 ^L | A | | | | | |
| 26 | | | | | | L | L | L | L | A | 6.5 | 6.2 | 6.5 | 5.9 | 5.8 | 5.8 ^H | 5.5 | 5.2 ^L | A | | | | | |
| 27 | | | | | | L | L | L | L | 5.3 ^L | 6.2 ^H | 5.9 | 6.0 | 5.9 | 5.8 | 5.7 ^R | 5.5 ^L | 5.2 ^L | A | | | | | |
| 28 | | | | | | L | L | L | L | 6.1 ^L | A | A | L | 5.7 | 5.6 | L | A | A | A | | | | | |
| 29 | | | | | | L | L | L | L | L | L | L | 6.1 | 5.7 | 5.5 | 5.2 ^L | 5.2 ^A | L | L | | | | | |
| 30 | | | | | | L | L | L | L | L | LH | A | A | L | 5.6 ^L | A | L | L | A | | | | | |
| 31 | | | | | | L | L | L | L | L | L | L | 6.0 | 5.8 | 5.6 ^L | L | L | L | L | | | | | |
| No. | | | | | | | 1 | 6 | 9 | 12 | 19 | 20 | 23 | 23 | 23 | 23 | 23 | 15 | 7 | | | | | |
| Median | | | | | | | 4.1 | 5.0 | 5.6 | 6.0 | 6.0 | 6.2 | 6.1 | 5.9 | 5.8 | 5.6 | 5.4 | 5.2 | | | | | | |

Sweep Mc to Mc in sec min in automatic operation.

foF1

The Radio Research Laboratories, Japan.

K 2

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time (GM.T.+9h.)

foE

Jul. 1957

| 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 | | | | | | | 2.85 | 3.20 ^B | 3.55 | R | B | B | A | B | A | 3.60 ^R | 3.60 ^R | 3.10 | 2.40 | | | | | |
| 2 | | | | | | | 2.70 | 3.40 ^B | 3.60 ^R | B | B | B | B | B | B | B | 3.65 ^B | 3.15 | 2.40 | | | | | |
| 3 | | | | | | B | 2.85 ^B | B | R | B | B | B | B | B | B | B | A | A | B | | | | | |
| 4 | | | | | | | 2.70 | 3.30 ^B | 3.70 ^A | 4.00 ^R | 4.10 ^B | 4.10 ^B | 4.00 ^A | 3.95 | 3.65 ^B | A | A | A | B | | | | | |
| 5 | | | | | | | R | 3.85 ^A | B | B | B | B | B | B | B | B | 3.60 ^B | 3.00 | 2.40 | | | | | |
| 6 | | | | | | | 3.20 | R | R | A | B | B | B | R | B | 3.75 ^B | 3.50 | 3.05 ^B | B | | | | | |
| 7 | | | | | | | R | A | 3.55 ^R | 3.85 ^B | 4.00 | B | B | 3.90 ^R | B | R | 3.45 | 3.15 ^R | B | | | | | |
| 8 | | | | | | B | C | C | 3.50 | B | A | A | A | B | B | B | 3.55 ^B | 3.10 | A | | | | | |
| 9 | | | | | | B | 2.80 | 3.00 ^R | 3.65 | B | B | B | B | B | B | B | 3.55 ^R | 3.20 | 2.30 | | | | | |
| 10 | | | | | | | A | A | A | 4.00 ^A | B | B | B | B | B | B | 3.30 ^B | 2.90 ^R | A | | | | | |
| 11 | | | | | | B | 2.65 | 3.05 ^B | 3.40 | B | B | B | A | A | A | A | B | A | 2.35 | | | | | |
| 12 | | | | | | | B | A | A | B | A | B | B | B | B | A | A | A | A | | | | | |
| 13 | | | | | | B | 2.65 | 3.25 | 3.55 | B | A | B | B | B | A | A | A | A | A | | | | | |
| 14 | | | | | | B | 2.60 ^B | 3.45 | 3.70 | 4.25 ^B | B | B | B | 3.90 ^B | A | B | A | A | A | | | | | |
| 15 | | | | | | | 1.90 ^B | B | 3.20 | B | B | B | B | B | R | 4.10 | A | A | C | | | | | |
| 16 | | | | | | | | | 3.90 ^R | B | B | B | B | B | A | A | A | A | A | | | | | |
| 17 | | | | | | | 2.80 | 3.20 | 3.55 ^A | B | B | B | A | 4.30 ^S | A | A | 3.40 ^A | 2.90 ^S | 2.30 | | | | | |
| 18 | | | | | | | R | 3.55 | 3.80 ^A | B | B | B | B | B | B | B | A | R | A | | | | | |
| 19 | | | | | | | R | R | B | B | B | B | B | B | B | B | 3.55 | 2.90 | B | | | | | |
| 20 | | | | | | | R | 3.20 | 3.50 | B | B | B | B | 3.90 ^R | A | A | A | A | B | | | | | |
| 21 | | | | | | | 2.65 | 3.10 | 3.60 | B | B | B | B | B | B | 3.70 ^R | B | 3.00 ^S | 2.25 | | | | | |
| 22 | | | | | | | A | B | A | B | B | B | B | R | B | B | 3.00 | 3.65 | 3.00 | | | | | |
| 23 | | | | | | | 2.70 | 3.25 | 3.70 | 4.20 ^B | B | B | B | B | B | 3.90 | 3.65 | 3.00 | 2.60 | | | | | |
| 24 | | | | | | | 2.65 | 3.15 | 3.65 | 3.95 ^A | R | 4.10 ^R | 4.20 ^R | 3.90 ^A | 3.60 ^A | A | A | 2.90 | 2.00 | | | | | |
| 25 | | | | | | | A | A | 3.75 | A | A | A | 4.30 ^B | B | R | B | 3.50 ^B | 3.15 | 2.25 | | | | | |
| 26 | | | | | | 1.80 | 2.70 | 3.20 | 3.65 ^A | 3.70 ^A | B | A | 4.15 ^A | 3.75 ^R | 4.05 | 3.80 | 3.50 ^S | B | B | | | | | |
| 27 | | | | | | B | 2.60 ^A | B | B | B | A | B | B | A | R | 3.10 | A | A | A | | | | | |
| 28 | | | | | | B | 2.50 | 3.30 | 3.35 | R | A | B | B | A | R | B | 3.60 | 3.05 | 2.05 ^A | | | | | |
| 29 | | | | | | | 2.65 | 3.05 | 3.50 ^B | B | B | B | A | B | R | R | 3.20 ^R | 3.00 | A | | | | | |
| 30 | | | | | | | C | 3.20 | 3.40 | R | A | 4.20 ^R | 4.15 ^A | 4.00 ^B | 3.90 ^B | 3.50 ^B | 3.00 | 2.15 | | | | | | |
| 31 | | | | | | | 2.60 | 3.20 | 3.70 ^R | B | B | B | B | B | B | B | 3.45 | 3.00 | 2.25 | | | | | |
| No. | | | | | | | 2 | 18 | 19 | 23 | 7 | 4 | 3 | 6 | 9 | 5 | 9 | 18 | 13 | | | | | |
| Median | | | | | | | 1.85 | 2.70 | 3.20 | 3.60 | 3.95 | 4.05 | 4.10 | 4.15 | 3.95 | 3.90 | 3.80 | 3.50 | 3.00 | 2.30 | | | | |

The Radio Research Laboratories, Japan.

Sweep 1.0 Mc to 2.4 Mc in 2.0 sec

foE

in automatic operation.

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

135° E Mean Time (GMT.+9h.)

foEs

Jul. 1957

| 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 | 4.2 ^M | E | 2.3 ^{MS} | E | B | 4.5 ^M | 3.6 | 6.4 ^M | 5.9 ^M | 6.2 ^M | 10.3 ^M | B | 4.7 | 5.3 | 5.9 ^M | 3.9 | 3.9 | 6.1 ^M | 5.2 ^M | 5.0 ^{MS} | 4.9 ^{MS} | 5.3 ^M | 5.2 ^M | 7.1 ^{MS} | |
| 2 | 6.3 ^M | 3.0 ^M | 2.3 ^{MS} | 4.0 | E | E | 3.5 | B | 5.6 ^M | 4.5 | 5.0 | B | B | B | B | 6.3 ^M | 7.6 ^M | 7.4 ^M | B | 4.6 ^{MS} | 2.8 ^M | 2.3 ^M | 3.8 ^M | 2.2 ^M | |
| 3 | E | 6.2 ^M | 3.7 ^M | 3.5 | 3.4 ^M | B | B | 3.8 | 4.5 | 6.6 ^M | 6.8 ^M | 9.1 ^M | 8.6 ^M | 6.7 | B | 5.7 ^M | 8.8 ^M | 7.3 ^M | 7.7 ^M | 7.2 ^M | 8.2 | 2.9 ^M | 3.1 ^M | 2.6 ^M | |
| 4 | 4.9 ^M | 11.9 | 3.9 | 3.2 | 2.8 ^M | E | 3.1 | 3.6 | 4.9 | 5.9 | 5.9 | 5.7 | 9.5 | 7.9 ^M | 5.1 ^M | 4.4 | 4.9 | 3.6 | G | E | 3.2 | 4.6 | 4.2 | 3.0 ^M | |
| 5 | 3.5 ^M | 3.9 ^M | E | 3.0 ^M | E | 2.2 | G | G | 4.2 | B | B | B | B | B | B | 4.9 | 9.0 ^M | 8.9 ^M | 10.1 ^M | 7.6 ^M | 5.3 ^M | 3.9 ^M | 6.7 ^M | 6.0 ^M | |
| 6 | 6.8 ^M | E | 5.5 | 3.0 ^M | 3.0 ^M | 3.0 ^M | G | G | G | 4.7 ^{MS} | 6.3 ^M | B | B | G | B | G | G | 3.9 | 4.8 ^S | 3.9 ^M | 3.8 ^M | 2.9 ^M | 2.4 | 3.4 ^M | |
| 7 | 4.9 ^M | 3.3 ^M | 3.9 ^M | 3.4 | 2.9 ^M | E | G | 4.9 | G | 4.7 | 6.3 ^M | B | B | G | B | B | B | 3.6 | 4.8 ^S | 6.9 ^M | 3.8 ^M | 2.9 ^M | 2.4 | 3.4 ^M | |
| 8 | E | E | C | E | E | B | C | C | 6.0 | 8.0 ^M | 11.5 ^M | 5.7 | 5.3 ^M | 6.8 | B | B | B | 3.9 | 4.9 ^M | 6.0 ^M | 7.3 ^M | 10.4 ^{MS} | 2.8 ^M | 5.3 ^M | |
| 9 | E | E | E | E | E | B | G | G | 3.9 | 4.8 ^M | B | B | 6.9 | 5.7 | B | B | 4.5 | 3.7 | 4.6 ^M | 3.9 ^M | 3.4 | 2.9 | E | 2.5 ^M | |
| 10 | 5.8 ^M | 5.4 ^M | 3.2 ^M | 3.7 ^M | 3.3 ^M | E | 3.6 ^M | 5.3 ^M | 3.9 | 7.8 | 4.6 | B | 6.0 | 6.8 ^M | 10.4 ^M | 7.5 ^M | 5.0 | 4.0 ^M | 3.3 | 3.1 ^M | 2.9 | 2.6 ^M | 3.0 ^M | E | |
| 11 | 3.8 ^{MS} | 4.0 ^M | 4.0 ^M | 3.2 | 2.9 ^M | B | 3.0 | 3.7 | 5.5 ^M | 7.8 | B | 6.3 ^M | B | 5.6 ^M | B | 5.5 ^M | 5.4 ^M | 4.8 ^{MS} | 6.5 | 3.9 ^M | 4.0 ^M | 4.8 ^S | 5.8 | 3.9 | |
| 12 | E | E | E | C | C | C | 3.0 | 3.9 | 4.0 | 7.3 | 10.9 | 8.9 ^M | 9.1 ^M | B | 6.8 ^M | 5.9 ^M | 6.6 ^M | 3.9 | 5.2 ^M | 7.1 | 6.0 ^M | 3.9 ^M | 3.0 | E | |
| 13 | 4.9 ^{MS} | 4.8 ^M | 4.2 | E | 3.0 ^M | B | B | 3.9 | 6.9 ^M | 6.9 ^M | 5.7 ^M | 13.2 ^M | 8.7 ^M | 8.3 ^M | 7.4 ^M | G | 6.1 ^M | 6.8 ^M | 8.7 ^M | 8.8 ^M | 5.6 ^M | 3.9 ^M | 4.9 ^M | 9.8 ^M | |
| 14 | E | E | E | E | E | B | B | 5.5 ^M | 7.1 ^M | 7.4 ^M | 9.0 ^M | 8.8 ^M | 5.8 ^M | B | G | G | 3.5 ^M | 3.7 | C | 3.8 ^M | 5.3 ^M | 3.9 ^M | 2.9 ^M | E | |
| 15 | 8.3 ^M | 9.3 ^M | 9.7 ^M | 7.0 ^M | 4.0 | 2.2 | B | B | 4.7 | 5.8 ^M | 5.8 ^M | 8.9 ^M | 6.1 ^M | 16.1 ^M | 7.3 ^M | 7.0 ^M | 7.0 ^M | 5.4 ^M | 3.7 ^M | 3.4 ^M | 3.2 ^M | 4.2 ^M | 8.8 ^M | 9.0 ^M | |
| 16 | E | E | E | E | E | E | B | B | 4.7 | 5.8 ^M | 5.8 ^M | 8.9 ^M | 6.8 ^M | 7.4 ^{MS} | 11.7 ^M | 5.9 ^M | 7.4 ^M | 5.5 ^M | 4.9 ^{MS} | 4.2 ^M | 5.0 ^{MS} | 13.1 ^M | 4.9 ^M | 3.5 ^M | |
| 17 | 3.2 ^M | 3.1 ^M | E | E | E | E | 3.8 | 9.9 | 11.9 ^M | 6.5 ^M | 6.8 | 5.7 ^M | 6.8 ^M | 7.4 ^{MS} | 11.7 ^M | 5.9 ^M | 7.4 ^M | 5.5 ^M | 3.0 ^M | 3.0 ^M | 2.4 ^M | E | 3.1 ^M | 5.4 ^M | |
| 18 | E | 3.9 ^M | E | E | 2.7 ^M | E | G | 4.2 | 6.4 ^{MS} | 6.0 ^M | 10.0 | 8.5 ^M | 6.7 ^M | 12.7 ^M | 9.5 ^M | 6.5 ^M | 6.0 ^M | G | 3.0 ^M | 9.0 ^M | 8.3 ^M | 3.0 ^M | 9.9 ^M | 7.5 ^M | |
| 19 | 3.5 ^M | 3.9 ^M | 2.2 ^M | E | 2.4 ^M | E | 3.0 | 4.2 | 14.2 ^M | 8.7 ^M | 6.8 ^M | 8.1 ^{MS} | 4.8 ^M | 4.8 ^M | 5.1 ^M | 11.7 ^M | B | 6.5 ^M | 10.8 ^M | 15.2 ^{MS} | 9.0 ^M | 8.3 ^M | 3.0 ^M | 4.6 ^M | |
| 20 | 6.8 ^M | 6.2 ^M | 5.4 ^M | 4.0 | E | E | G | 5.6 | 5.8 ^M | 5.8 ^M | 9.1 ^M | 6.2 | 5.7 ^M | 11.7 ^M | 9.8 ^M | 5.1 ^M | 8.6 ^M | 6.9 | 5.0 | 2.4 ^M | E | E | 4.2 | 4.6 ^M | |
| 21 | 3.0 | 5.3 ^{MS} | 8.7 ^M | 4.0 | E | E | 3.0 | G | 9.8 ^M | 6.1 | 9.4 ^M | 12.1 | 7.0 ^M | 9.0 ^{MS} | B | 4.5 | B | S | 2.7 | 3.7 | 5.5 ^M | 9.0 ^M | 6.9 ^M | 6.7 ^M | |
| 22 | 3.5 ^M | 5.0 ^M | 3.8 ^M | 3.8 ^M | 3.3 ^M | E | B | 3.0 | 4.2 ^S | 3.9 | 5.2 | 8.7 | 7.2 | 6.8 ^M | 7.5 ^M | G | 4.2 | 3.6 | G | 3.0 ^M | 3.2 ^M | 2.3 ^M | 2.7 ^M | 3.9 ^M | |
| 23 | E | 2.3 ^M | E | E | E | B | G | 3.9 | 3.9 | B | 7.0 ^M | 6.9 | 6.1 | 5.0 | 7.5 | 8.8 ^M | 6.5 ^M | 6.2 ^M | 8.6 ^M | 2.1 | 6.7 | 9.1 ^M | 6.8 ^M | 4.8 ^M | |
| 24 | 4.2 ^{MS} | 5.8 | 3.9 | 6.2 | 7.6 | 3.9 ^M | 3.2 | 5.4 | 7.4 ^M | 7.3 ^M | G | 4.6 | 5.0 | 8.6 | 15.0 ^M | 14.4 ^M | 5.0 | 5.8 ^M | 4.2 ^M | 4.7 ^S | 6.6 ^M | 9.5 ^M | 9.0 ^M | 3.9 | |
| 25 | 4.8 ^M | 2.8 | 2.7 ^M | 3.0 ^M | 3.3 ^M | 2.3 | 3.7 ^M | 3.8 | 4.4 ^S | 4.9 ^M | 8.5 ^M | 4.5 | 3.6 | 6.9 ^M | 5.2 | B | B | 3.9 | 6.6 | 2.5 | 2.8 ^M | 3.4 ^M | 13.5 ^M | 12.5 | |
| 26 | 12.1 | 7.1 ^M | 4.5 ^M | 3.9 ^M | 2.8 ^M | G | 3.9 | 4.9 ^M | 6.8 | 10.7 ^M | 7.8 ^{MS} | 6.7 | 4.9 ^S | 3.9 | 4.4 | G | G | 5.7 ^M | 2.6 | 2.8 ^M | 9.8 | 5.8 ^M | 2.9 ^M | 2.8 ^M | |
| 27 | 2.8 ^M | 2.9 ^M | 2.9 ^M | 2.1 | B | B | G | B | B | 4.3 | 4.3 | 4.4 | B | 5.5 | G | 5.7 ^M | 3.9 ^M | 4.5 ^M | 2.9 ^M | 3.9 ^M | 3.6 ^M | 3.2 ^M | 5.5 | 3.0 | |
| 28 | 4.3 ^{MS} | 3.1 ^M | 3.3 ^M | 3.1 ^M | E | B | 3.1 | 5.3 ^M | 12.4 ^M | 13.4 ^M | 19.4 ^{MS} | 7.3 | 6.6 ^M | 6.0 ^M | G | 5.7 ^M | 9.7 ^M | 10.0 ^M | 8.4 | 7.0 ^{MS} | 7.7 | 5.0 ^M | 4.3 | 4.9 ^M | |
| 29 | 2.8 ^M | 2.8 ^M | 3.0 ^M | 2.8 | E | E | 3.0 | 3.4 | 4.4 | 6.6 ^M | 5.0 ^{MS} | 4.3 | 4.5 | 5.3 | B | 7.1 ^M | 3.6 | 6.7 ^M | 5.8 ^M | 9.0 ^{MS} | 5.4 | 5.3 | 8.8 ^M | 2.9 ^M | |
| 30 | 7.2 ^M | C | C | C | C | C | C | 3.7 | 4.2 | 5.3 | 4.4 | 9.8 ^{MS} | 9.3 ^M | 9.3 ^M | B | 6.0 ^M | 3.9 | 4.7 | 6.4 ^M | 3.2 ^M | 5.4 | E | E | 4.9 ^M | |
| 31 | 3.9 | 2.7 ^M | 2.9 ^M | 3.0 ^M | 2.8 ^M | E | 2.4 | 3.7 | G | B | B | B | B | B | B | B | B | G | 2.4 | 3.6 | 3.0 ^M | E | E | 3.5 ^M | |
| No. | 3/ | 3/ | 2.9 | 2.7 | 2.7 | 2.1 | 2.5 | 2.7 | 3.0 | 2.8 | 2.7 | 2.3 | 2.4 | 2.3 | 2.2 | 2.2 | 2.4 | 3.0 | 2.9 | 3/ | 3/ | 3/ | 3/ | 3/ | 3/ |
| Median | 3.8 ^M | 3.1 ^M | 3.0 ^M | 3.0 ^M | 2.7 ^M | E | 3.0 | 3.9 ^M | 5.2 | 6.2 | 6.8 ^M | 6.7 | 6.1 | 6.8 ^M | 6.4 | 5.6 ^M | 5.2 | 4.8 ^M | 5.0 ^M | 3.9 ^M | 4.9 ^M | 4.9 ^M | 4.2 | 3.9 ^M | |
| U. Q. | 4.9 | 5.4 | 4.0 | 3.8 | 3.0 | E | 3.4 | 5.3 | 6.9 | 7.4 | 9.0 | 8.8 | 7.1 | 8.3 | 9.5 | 6.4 | 7.1 | 6.2 | 7.2 | 6.0 | 6.6 | 5.3 | 6.8 | 5.4 | |
| L. Q. | E | 2.3 | E | E | E | E | E | 3.7 | 4.2 | 5.2 | 5.0 | 5.7 | 5.5 | 5.3 | 4.8 | 4.2 | 3.9 | 3.7 | 3.2 | 3.0 | 3.2 | 2.8 | 2.9 | 2.8 | |
| Q. R. | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 1.6 | 1.6 | 2.7 | 2.2 | 4.0 | 3.1 | 1.6 | 3.0 | 3.0 | 4.7 | 2.2 | 2.5 | 4.0 | 3.0 | 3.4 | 2.5 | 3.9 | 2.6 | |

Sweep 4 sec to 22.5 Mc in 20 sec in automatic operation.

foEs

The Radio Research Laboratories, Japan.

K 4

IONOSPHERIC DATA

Jul. 1957

fbEs

135° E Mean Time (GM.T. + 9h.)

Kokubunji Tokyo

Lat. 36° 42.4' N
Long. 139° 38.3' E

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|-------------------------------|-----|-----|-----|-----|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----|-----|-------------------------------|-------------------------------|
| 1 | 2.7 | E | 1.8 | E | B | 3.5 | 3.6 | A | 5.3 | 5.2 | A | B | 4.8 | ^u 5.5 ^B | 5.1 | ^u 4.1 ^B | 3.9 | 4.4 | 5.0 ^S | 4.1 | 4.3 | 4.5 | 4.0 | 2.3 |
| 2 | 4.0 | 1.9 | 2.1 | 3.4 | E | E | 3.3 | B | 4.8 | 4.5 | ^u 5.3 ^B | B | B | B | B | B | B | ^u 3.8 ^B | 3.1 | 2.1 | 2.8 | 3.3 | 1.9 | 2.2 |
| 3 | E | 4.1 | 2.6 | 2.3 | 2.2 | B | B | 3.8 | 4.5 | 6.1 | 6.5 | A | 7.7 | 6.6 | B | 5.8 | 6.8 | A | B | 4.2 | 2.1 | 2.1 | 2.9 | E |
| 4 | 2.1 | A | 2.2 | 2.0 | E | ^u 2.8 ^B | 3.1 | ^u 3.7 ^B | 4.4 | 5.0 | 5.0 | 5.6 | 8.3 | 6.8 | 4.6 | 4.9 | 8.0 | 6.5 | 5.4 | 5.5 | 5.8 | 2.1 | 2.5 | 2.1 |
| 5 | 3.3 | 2.2 | E | E | E | 3.1 | 3.7 | 4.1 | 4.1 | B | B | B | B | B | B | 4.4 | 4.7 | 3.4 | G | E | 2.5 | 4.2 | 3.8 | 2.3 |
| 6 | 4.1 | E | 4.8 | 1.9 | 2.0 | 2.6 | G | G | G | A | 5.2 | A | 5.6 | G | B | 4.9 | 8.0 | 8.2 | A | 7.1 | 4.4 | 3.6 | 4.8 | 5.2 |
| 7 | 3.1 | 2.1 | 2.5 | 2.5 | 1.9 | E | G | 4.4 | G | 4.7 | 5.4 | B | B | G | B | G | G | 3.5 | 4.1 | 2.5 | E | S | 5.0 | E |
| 8 | E | E | C | E | E | B | C | C | 5.4 | 7.4 | 8.0 | 5.0 | 4.8 | B | B | B | B | 3.4 | 3.3 | 2.0 | 2.3 | E | 2.2 | 3.2 ^S |
| 9 | E | 3.4 | 3.4 | 2.3 | E | E | G | ^u 4.1 ^B | ^u 4.3 ^B | 4.7 | B | B | 6.2 | 6.2 | 5.0 | ^u 4.0 ^B | ^u 4.3 | 5.6 | 5.3 | 4.7 | 5.1 | 2.0 | 2.0 | 2.3 |
| 10 | 3.4 | 2.9 | 3.3 | 2.6 | 2.2 | E | 3.0 | 3.8 | ^u 4.1 ^B | ^u 4.5 ^S | 4.5 | B | B | 5.6 | 4.6 | B | 4.4 | ^u 4.1 ^B | 3.7 | 3.4 | 2.1 | 2.3 | E | E |
| 11 | 3.7 | 2.9 | 3.3 | 2.6 | 2.2 | B | 3.0 | 3.8 | 5.0 | 7.3 | B | 5.5 | 5.2 | 6.0 | 9.8 | 6.0 | 4.6 | S | ^u 3.5 ^B | 2.4 | E | E | 2.4 | E |
| 12 | E | E | E | C | C | C | 3.0 | 3.4 | ^u 4.3 ^B | ^u 4.5 ^B | B | B | B | ^u 5.9 ^B | B | 5.1 | 4.1 | 4.8 | 5.5 | ^u 4.5 ^S | 3.3 | 4.2 | 2.5 | 3.2 |
| 13 | 3.7 | 3.5 | 3.8 | E | 2.2 | ^u 2.2 ^B | ^u 3.1 ^B | 3.9 | 5.0 | 6.2 | 7.1 | 5.1 | 7.6 | B | B | 4.8 | 6.1 | ^u 4.1 ^B | 3.5 | 5.2 | 5.1 | 3.1 | 2.2 | E |
| 14 | E | E | E | E | E | B | B | 3.8 | 5.0 | 5.8 | 5.3 | 8.2 | 7.7 | 7.3 | 5.6 | G | 5.6 | 5.0 | 5.4 | 3.2 | 3.6 | 3.4 | 2.8 | 3.8 |
| 15 | 5.9 | 5.0 | A | 4.8 | 2.6 | 2.2 | B | 4.3 | 6.3 | 6.3 | 7.7 | 5.1 | 5.5 | B | G | G | ^u 3.8 ^B | 3.5 | C | C | 4.3 | 3.1 | 2.1 | E |
| 16 | E | E | E | E | E | E | B | B | 4.7 | 5.0 | 5.3 | 5.2 | 5.0 | A | 5.7 | 6.0 | 5.0 | 5.2 | 2.8 | 2.5 | 2.1 | 2.6 | 5.1 | 4.8 |
| 17 | 2.3 | 1.9 | E | E | E | E | 3.7 | 7.7 | A | 5.6 | 5.7 | 5.7 | 5.3 | A | A | 4.5 | 5.6 | 4.9 | 3.8 | 3.2 | 3.5 | A | 3.3 | 2.8 |
| 18 | E | 1.9 | E | E | 2.1 | E | G | S | 6.0 | 5.4 | 7.1 | 7.0 | 5.8 | A | A | 6.2 | 4.8 | G | 2.2 | 2.6 | E | E | 2.3 | 3.7 |
| 19 | 2.2 | 3.5 | 2.1 | E | 2.2 | E | ^u 3.3 ^B | 4.0 | A | 6.8 | 6.7 | 5.4 | 4.8 | 5.0 | A | B | 6.2 | 5.3 | 2.5 | E | A | B | 5.3 | 5.2 |
| 20 | 4.5 | 4.6 | 3.1 | 3.2 | E | E | G | 4.5 | 5.1 | 5.2 | 5.8 | 5.7 | 5.1 | 8.1 | 8.1 | 4.3 | 8.1 | 4.6 | 4.1 | E | E | E | 1.9 | 3.7 |
| 21 | 2.3 | 2.6 | 5.0 | 3.2 | E | E | 3.0 | G | 4.7 | 5.4 | 6.5 | 7.4 | 5.0 | 5.2 | B | 4.4 | B | S | 2.7 | 2.1 | E | E | 4.6 | 3.8 |
| 22 | ^u 3.2 ^C | 2.2 | 3.2 | 3.2 | 3.2 | B | ^u 3.5 ^B | 4.1 | ^u 4.2 ^B | ^u 5.6 ^B | 7.6 | ^u 6.5 ^B | 6.2 | 6.5 | 7.5 | G | 4.1 | 3.5 | G | 2.0 | 1.8 | 2.0 | 2.1 | 3.0 |
| 23 | E | 1.8 | E | E | E | G | G | 3.8 | 4.4 | B | 5.6 | 6.8 | 6.0 | 5.0 | 6.8 | 5.2 | 6.5 | 4.8 | 4.5 | 2.1 | 2.5 | 3.1 | 4.5 | 3.4 |
| 24 | 3.1 | E | 2.1 | 4.8 | 3.4 | 2.5 | 3.1 | 5.0 | 5.5 ^S | 5.4 | G | 4.6 | 5.0 | 5.0 | A | A | 4.4 | 4.6 | 3.3 | 3.4 | 3.3 | 3.7 | 3.5 | 2.3 |
| 25 | 1.8 | 2.1 | 1.9 | 2.0 | 2.1 | 2.1 | 3.1 | 3.3 | G | 4.6 | A | 5.4 | 6.0 | 5.2 | ^u 5.5 ^B | B | B | 3.7 | 5.1 | 2.4 | 2.0 | 2.1 | 1.5 | 2.2 |
| 26 | 5.1 | E | 2.5 | 2.2 | E | G | 3.6 | 4.1 | 5.5 | A | 5.0 | 5.3 | ^u 5.1 ^B | ^u 4.4 ^B | ^u 5.0 ^B | G | S | 4.3 | ^u 3.4 ^B | E | 2.4 | 4.8 | ^u 3.8 ^B | ^u 3.1 ^B |
| 27 | 2.2 | 2.3 | 2.2 | 2.1 | B | B | G | B | B | 4.3 | ^u 4.6 ^S | ^u 4.6 ^B | B | 4.9 | G | 4.7 | ^u 4.2 ^B | 4.0 | 3.4 | 3.0 | 2.7 | 2.5 | 2.2 | 2.2 |
| 28 | 3.8 | 2.4 | 2.2 | 2.3 | E | B | ^u 3.2 ^B | 5.5 | 4.2 | A | A | 7.0 | 5.8 | 4.8 | G | 4.8 | A | A | 7.0 | 5.0 | 4.1 | 3.4 | 4.0 | 3.2 |
| 29 | 3.3 | 2.2 | 2.3 | 2.1 | E | E | 3.0 | 3.4 | 4.3 | 4.5 ^S | 4.9 ^S | B | ^u 4.5 ^B | B | 4.5 | 4.0 ^S | 5.5 | 3.6 | 2.6 | 4.4 ^S | 2.2 | 1.9 | 2.8 | 2.2 |
| 30 | 3.8 | C | C | C | C | C | C | 3.7 | 3.8 | 4.5 | ^u 4.7 ^B | A | 8.6 | B | 4.9 | 5.8 | 3.9 | 3.3 | 5.7 | 2.4 | 2.6 | E | E | 4.5 |
| 31 | 2.1 | 1.7 | 1.6 | 2.3 | E | E | 2.4 | 3.5 | G | B | B | B | B | B | B | B | G | G | ^u 2.5 ^B | 2.0 | E | E | E | 3.5 |
| No. | 31 | 30 | 29 | 28 | 27 | 21 | 25 | 26 | 30 | 28 | 27 | 22 | 24 | 23 | 21 | 24 | 26 | 29 | 29 | 30 | 31 | 29 | 31 | 31 |
| Median | 2.3 | 2.1 | 2.2 | 2.0 | E | E | 3.0 | 3.8 | 4.6 | 5.4 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 4.8 | 4.8 | 4.1 | 3.5 | 2.8 | 2.5 | 3.1 | 2.5 | 2.8 |

fbEs

Sweep 1.0 Mc to 2.0 Mc in 20 ^{sec} sec in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

Jul. 1957

f - min

135° E Mean Time (GMT. + 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 | 1.50 | 1.40 | 1.75 | 2.70 | 2.40 | 2.20 | 3.50 | 2.50 | 2.80 | 4.20 | 4.80 | 4.10 | 4.30 | 4.15 | 3.60 | 3.60 | 2.25 | 1.90 | 1.90 | 1.65 | 1.80 | 1.70 | 1.60 | 1.60 |
| 2 | 1.40 | 1.40 | 1.80 | 1.10 | 1.60 | 2.30 | 3.80 | 2.30 | 4.10 | 4.50 | 4.60 | 4.30 | 4.60 | 4.75 | 4.50 | 4.10 | 2.50 | 2.00 | 1.65 | 1.50 | 1.80 | 1.80 | 1.80 | 1.80 |
| 3 | 2.15 | 1.80 | 1.75 | 1.80 | 1.70 | 2.40 | 3.40 | 3.40 | 2.80 | 4.10 | 4.15 | 4.20 | 4.40 | 4.50 | 3.75 | 3.50 | 4.10 | 3.60 | 2.10 | 1.60 | 1.80 | 1.55 | 1.65 | 1.65 |
| 4 | 2.00 | 1.60 | 1.40 | 1.80 | 1.60 | 3.00 | 2.10 | 3.30 | 3.30 | 3.60 | 4.10 | 4.15 | 3.60 | 3.50 | 3.65 | 3.30 | 2.40 | 2.60 | 2.15 | 1.80 | 1.65 | 1.80 | 1.80 | 1.70 |
| 5 | 1.80 | 2.00 | 2.05 | 1.80 | 1.80 | 1.70 | 2.20 | 2.20 | 3.10 | 4.20 | 5.10 | 5.00 | 4.45 | 5.90 | 5.00 | 4.05 | 4.10 | 2.20 | 2.15 | 1.90 | 1.70 | 1.80 | 1.60 | 1.70 |
| 6 | 1.90 | 1.80 | 1.85 | 1.40 | 1.40 | 1.70 | 1.80 | 2.20 | 2.60 | 2.25 | 4.25 | 4.60 | 4.70 | 2.90 | 4.60 | 2.30 | 3.15 | 2.15 | 2.10 | 2.00 | 1.90 | 1.60 | 1.60 | 2.10 |
| 7 | 1.80 | 1.60 | 1.90 | 1.60 | 1.80 | 2.20 | 2.40 | 2.20 | 3.30 | 3.80 | 3.30 | 5.00 | 4.30 | 5.10 | 5.50 | 2.90 | 2.20 | 2.50 | 1.80 | 1.60 | 2.10 | 2.00 | 2.00 | 2.10 |
| 8 | 2.00 | 2.00 | 1.80 ^c | 2.10 | 2.00 | 2.30 | C | C | 2.85 | 4.05 | 4.00 | 3.60 | 3.90 | 5.20 | 5.00 | 4.80 | 3.80 | 2.25 | 2.15 | 1.90 | 1.75 | 1.70 | 1.50 | 1.60 |
| 9 | 2.10 | 1.80 | 2.10 | 2.10 | 1.80 | 2.40 | 2.20 | 2.20 | 2.30 | 3.70 | 4.80 | 4.65 | 4.20 | 4.10 | 3.85 | 4.50 | 2.80 | 2.15 | 2.15 | 1.80 | 1.70 | 1.75 | 1.80 | 1.80 |
| 10 | 1.80 | 1.70 | 1.40 | 1.75 | 1.80 | 2.20 | 2.10 | 2.80 | 3.20 | 3.80 | 3.70 | 4.70 | 4.40 | 3.50 | 4.20 | 4.20 | 3.75 | 2.20 | 2.00 | 1.90 | 1.80 | 1.50 | 1.60 | 1.80 |
| 11 | 1.80 | 1.70 | 1.90 | 1.80 | 1.55 | 2.50 | 2.20 | 3.10 | 2.35 | 3.75 | 4.70 ^s | 3.80 | 3.80 | 3.35 | 3.00 | 3.00 | 2.90 | 2.20 | 2.00 | 2.00 | 1.75 | 1.50 | 1.70 | 1.90 |
| 12 | 1.80 | 1.80 | 1.70 | C | C | 2.15 | 2.25 | 2.20 | 2.55 | 3.75 | 3.80 | 5.00 | 4.65 | 4.60 | 5.10 | 3.70 | 3.20 | 2.60 | 2.20 | 1.90 | 2.00 | 1.80 | 2.00 | 1.80 |
| 13 | 1.30 | 1.60 | 1.60 | 1.75 | 1.40 | 1.80 | 2.10 | 2.40 | 3.10 | 3.85 | 3.50 | 4.30 | 4.65 | 5.20 | 3.65 | 3.65 | 2.65 | 2.10 | 2.15 | 1.90 | 1.85 | 2.20 | 1.60 | 1.80 |
| 14 | 2.10 ^s | 1.60 | 1.80 | 1.50 | 1.50 | 2.30 | 3.10 | 3.20 | 2.25 | 4.25 | 4.30 | 4.20 | 4.20 | 4.15 | 3.90 | 3.50 | 2.60 | 2.30 | 2.05 | 1.90 | 1.75 | 1.90 | 1.90 | 1.90 |
| 15 | 1.90 | 1.70 | 1.80 | 1.90 | 1.60 | 1.90 | 3.10 | 2.80 | 3.70 | 3.80 | 4.00 | 4.30 | 4.20 | 4.70 | 3.40 | 3.05 | 2.50 | 2.20 | 2.05 | 1.90 | 1.70 | 1.70 | 1.75 | 1.80 |
| 16 | 1.90 | 1.70 | 1.70 | 1.50 | 1.30 | 2.60 | 5.10 | 4.25 | 3.50 | 4.15 | 4.15 | 4.30 | 4.10 | 3.60 | 4.15 | 3.20 | 2.50 | 3.30 | 2.20 | 1.80 | 1.80 | 1.60 | 1.90 | 1.65 |
| 17 | 1.55 | 1.60 | 2.40 | 1.90 | 1.70 | 2.70 | 2.20 | 2.20 | 2.55 | 3.75 | 4.10 | 4.30 | 3.95 | 3.60 | 2.60 | 2.80 | 2.80 | 2.05 | 2.20 | 1.80 | 1.70 | 1.50 | 1.70 | 1.60 |
| 18 | 2.00 | 1.60 | 1.80 | 1.70 | 1.60 | 2.30 | 2.25 | 2.60 | 2.60 | 4.10 | 4.10 | 4.20 | 4.10 | 4.10 ^s | 4.20 ^s | 3.50 | 3.20 | 2.05 | 1.80 | 1.70 | 1.70 | 2.10 | 1.80 | 2.00 |
| 19 | 1.80 | 1.60 | 1.90 | 1.90 | 2.00 | 3.60 | 2.05 | 2.20 | 4.10 | 4.30 | 4.50 | 4.55 | 4.60 | 4.40 | 4.20 | 4.10 | 2.90 | 2.25 | 2.10 | 2.00 | 1.50 | 1.50 | 2.20 | 2.10 |
| 20 | 1.70 | 1.75 | 2.00 | 1.70 | 2.00 | 2.10 | 2.25 | 2.55 | 2.45 | 4.10 | 4.20 | 4.35 | 3.60 | 3.60 | 3.70 | 3.25 | 2.80 | 2.20 | 2.70 | 2.20 | 2.10 | 2.00 | 1.70 | 2.00 |
| 21 | 1.50 | 1.85 | 1.80 | 2.60 | 1.50 | 3.10 | 2.05 | 2.20 | 3.10 | 4.40 | 4.50 | 4.00 | 4.30 | 3.60 | 4.60 | 3.40 | 2.30 | 2.70 | 1.90 | 1.90 | 1.60 | 2.00 | 1.80 | 2.00 |
| 22 | 1.60 | 1.50 | 1.80 | 1.60 | 1.65 | 2.40 | 2.20 | 3.50 | 2.80 | 3.60 | 3.90 | 4.15 | 4.05 | 3.75 | 4.30 | 3.15 | 3.20 | 2.20 | 2.00 | 1.50 | 1.10 | 1.30 | 1.20 | 1.70 |
| 23 | 1.85 | 1.50 | 1.10 | 1.80 | 1.15 | 2.10 | 2.00 | 2.60 | 2.10 | 4.70 | 4.40 | 4.50 | 4.35 | 3.50 | 3.40 | 3.35 | 2.60 | 1.80 | 1.40 | 1.50 | 1.50 | 1.40 | 1.50 | 1.50 |
| 24 | 1.30 | 1.50 | 1.20 | 1.30 | 1.40 | 1.60 | 2.00 | 2.10 | 2.20 | 3.20 | 3.50 | 3.60 | 3.50 | 4.00 | 3.60 | 3.20 | 2.30 | 2.10 | 1.90 | 1.25 | 1.20 | 1.70 | 1.30 | 1.40 |
| 25 | 1.30 | 1.30 | 1.20 | 1.40 | 1.30 | 1.80 | 1.90 | 2.15 | 2.20 | 3.50 | 3.50 | 4.10 | 4.60 | 5.00 | 3.20 | 4.30 | 4.40 | 2.00 | 1.85 | 1.50 | 1.40 | 1.40 | 1.40 | 1.45 |
| 26 | 1.25 | 1.50 | 1.20 | 1.50 | 1.40 | 1.40 | 2.00 | 2.10 | 2.30 | 3.10 | 4.10 | 3.80 | 3.40 | 3.70 | 3.70 | 2.60 | 5.10 | 2.80 | 2.50 | 1.90 | 1.80 | 2.20 | 1.90 | 2.00 |
| 27 | 1.70 | 1.80 | 1.90 | 2.00 | 2.40 | 2.20 | 2.25 | 4.00 | 4.20 | 4.00 | 3.65 | 4.00 | 5.20 | 3.70 | 3.50 | 2.70 | 2.85 | 2.05 | 2.00 | 1.40 | 1.40 | 1.20 | 1.80 | 1.80 |
| 28 | 2.00 ^s | 1.70 | 1.50 | 1.40 | 1.40 | 2.10 | 2.20 | 2.65 | 2.20 | 2.40 | 3.60 | 4.15 | 4.10 | 3.60 | 3.70 | 4.50 | 2.20 | 2.00 | 1.80 | 1.85 | 1.50 | 1.60 | 1.60 | 1.50 |
| 29 | 2.00 | 1.70 | 1.50 | 1.20 | 1.50 | 2.15 | 2.20 | 2.20 | 3.60 | 3.80 | 3.70 | 3.90 | 3.60 | 4.60 | 3.70 | 2.80 | 2.20 | 1.80 | 1.80 | 1.50 | 1.50 | 1.60 | 1.30 | 1.30 |
| 30 | 1.50 | C | C | C | C | 2.00 | 2.25 | 2.50 | 3.70 | 3.60 | 3.70 | 3.60 | 3.70 | 5.10 | 3.45 | 4.10 | 3.50 | 2.00 | 1.80 | 1.50 | 1.60 | 1.60 | 1.30 | 1.30 |
| 31 | 1.30 | 1.40 | 1.40 | 1.60 | 1.60 | 2.15 | 1.90 | 2.10 | 2.25 | 4.50 ^s | 4.70 | 4.70 | 4.50 | 4.40 | 4.50 | 4.00 | 2.20 | 2.20 | 2.00 | 1.50 | 1.60 | 1.60 | 1.65 | 1.70 |
| No. | 31 | 30 | 30 | 29 | 29 | 29 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |
| Median | 1.80 | 1.60 | 1.80 | 1.75 | 1.60 | 2.20 | 2.20 | 2.50 | 2.60 | 3.80 | 4.10 | 4.30 | 4.20 | 4.00 | 3.85 | 3.50 | 2.90 | 2.20 | 2.05 | 1.90 | 1.70 | 1.70 | 1.70 | 1.70 |

f - min

Sweep 1.0 Mc to 2.2 Mc in 2.0 sec
in automatic operation.

The Radio Research Laboratories, Japan.

K 6

IONOSPHERIC DATA

Jul. 1957

(M3000)F2

135° E Mean Time (GMT.+ 9h.)

Kokubunji Tokyo

Lat. 35° 42.4' N
Long. 139° 39.3' E

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 08 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1 | 2.40 ^S | 2.20 | 2.15 | 2.25 | 2.30 | 3.00 | 3.20 | A | 2.85 | 2.40 | 2.45 ^A | 2.35 | 2.55 | 2.55 | 2.45 | 2.50 | 2.55 | 2.55 | 2.65 | 2.55 | 2.35 | 2.35 | 2.45 | 2.35 |
| 2 | 2.50 ^S | 2.40 ^R | 2.65 | 2.65 | 2.40 | 2.65 | 2.70 | 2.60 | 2.90 | 2.40 | 2.60 | 2.55 ^R | 2.75 | 2.60 | 2.65 | 2.65 | 2.80 | 2.80 | 2.50 | 2.40 | 2.35 | 2.40 | 2.50 | 2.50 ^R |
| 3 | 2.35 | 2.55 | 2.30 | 2.25 | 2.20 | 2.15 | 2.20 | 2.40 | 2.20 ^H | 2.30 | 2.25 ^A | 2.50 ^A | 2.55 | 2.40 | 2.45 | 2.55 | 2.75 | 2.65 ^A | 2.60 | 2.50 | 2.40 | 2.25 | 2.30 | 2.35 |
| 4 | 2.65 | 2.75 ^A | 2.45 | 2.30 | 2.35 | 2.45 | 2.75 | 2.75 | 2.65 | 2.70 | 2.75 | 2.65 | 2.55 | 2.55 | 2.60 | 2.55 | 2.70 | 2.70 | 2.75 | 2.65 | 2.60 | 2.40 | 2.40 | 2.40 |
| 5 | 2.60 ^S | 2.60 | 2.70 | 2.60 | 2.70 ^S | 2.60 | 2.75 | 2.75 | 2.60 | 2.45 | 2.50 | 2.45 | 2.45 | 2.35 | 2.40 | 2.20 | 2.25 | 2.50 | 2.80 | 2.25 | 2.40 | 2.20 ^S | 2.25 | 2.15 |
| 6 | 2.75 | 2.60 | 2.40 | 2.45 | 2.45 | 2.65 | 2.55 | 2.40 | 2.30 | 2.20 ^A | 2.60 | A | 2.80 | 2.75 | 2.55 ^H | 2.60 | 2.60 | 2.70 | 2.70 | 2.60 | 2.45 ^R | 2.35 | 2.35 | 2.45 |
| 7 | 2.45 | 2.55 | 2.55 | 2.35 | 2.65 | 2.80 | 3.00 | 2.80 | 2.65 | 2.50 ^H | 2.50 | 2.50 | 2.50 | 2.50 | 2.55 | 2.50 | 2.40 | 2.70 | 2.75 | 2.55 | 2.40 | 2.40 | 2.40 | 2.45 |
| 8 | 2.50 ^R | 2.50 | 2.55 ^C | 2.55 | 2.45 | 2.70 | C | C | 2.30 | 2.50 | 2.35 | 2.40 | 2.35 | 2.40 | 2.45 | 2.50 | 2.50 | 2.65 | 2.55 | 2.55 | 2.40 | 2.40 | 2.40 | 2.45 |
| 9 | 2.50 ^S | 2.60 | 2.60 ^R | 2.55 | 2.65 ^S | 2.55 | 2.80 | 2.60 | 2.55 ^H | 2.55 | 2.40 | 2.50 | 2.35 | 2.35 | 2.45 | 2.55 | 2.65 | 2.70 | 2.65 | 2.70 | 2.55 | 2.50 | 2.40 | 2.50 |
| 10 | 2.50 | 2.55 | 2.70 | 2.75 | 2.55 | 2.60 | 2.85 | 3.15 | 2.40 ^H | 2.35 | 2.50 | 2.40 ^H | 2.40 | 2.50 | 2.40 | 2.50 | 2.65 | 2.55 | 2.70 | 2.65 | 2.50 | 2.50 | 2.35 | 2.40 |
| 11 | 2.55 ^S | 2.60 | 2.65 ^S | 2.55 | 2.65 | 2.80 | 2.85 | 2.70 | 2.45 | 2.35 | 2.35 | 2.35 | 2.35 | 2.40 | 2.50 | 2.65 | 2.65 | 2.55 | 2.85 | 2.65 | 2.40 | 2.35 | 2.40 | 2.50 ^S |
| 12 | 2.50 | 2.65 | 2.70 | C | C | C | C | C | 2.70 | 2.50 | 2.35 ^H | 2.35 | 2.35 | 2.35 | 2.45 | 2.50 | 2.50 | 2.65 | 2.75 | 2.85 | 2.35 | 2.40 | 2.45 | 2.55 |
| 13 | 2.40 | 2.60 | 2.70 ^R | 2.55 | 2.50 | 2.50 ^R | 2.65 | 2.75 | 2.65 | 2.55 | 2.35 | 2.45 | 2.45 | 2.50 | 2.45 | 2.55 | 2.50 | 2.65 | 2.65 | 2.55 | 2.55 | 2.50 ^S | 2.45 | 2.50 |
| 14 | 2.55 | 2.60 | 2.70 ^S | 2.70 | 2.55 | 2.70 | 2.55 | 2.75 | 2.60 | 2.40 | 2.35 | 2.35 | 2.50 | 2.55 | 2.55 | 2.65 | 2.60 | 2.65 | 2.70 | 2.70 | 2.45 | 2.40 ^S | 2.45 | 2.45 |
| 15 | 2.45 ^S | 2.55 | 2.55 ^A | 2.45 | 2.60 ^S | 2.45 | 2.80 | 2.70 | 2.45 | 2.25 | 2.30 | 2.35 | 2.40 | 2.50 | 2.60 | 2.55 | 2.45 | 2.50 | 2.60 | 2.55 | 2.55 | 2.40 | 2.60 | 2.45 |
| 16 | 2.55 | 2.65 | 2.75 | 2.70 | 2.70 | 2.80 | 2.75 | 2.70 | 2.85 | 2.40 | 2.35 | 2.40 | 2.45 | 2.40 | 2.50 | 2.60 | 2.65 | 2.65 | 2.75 | 2.85 | 2.40 | 2.50 | 2.55 | 2.60 |
| 17 | 2.55 | 2.60 | 2.55 | 2.45 | 2.30 | 2.45 ^H | 2.35 | 2.50 | 2.45 ^A | 2.50 | 2.35 | 2.45 | 2.30 ^A | 2.30 ^A | 2.30 ^A | 2.55 | 2.40 | 2.65 | 2.70 | 2.65 | 2.35 | 2.35 | 2.45 | 2.40 |
| 18 | 2.45 | 2.60 | 2.50 | 2.55 | 2.50 | 2.50 | 2.65 | 2.70 | 2.60 | 2.20 | 2.30 | 2.50 | 2.35 | 2.50 ^H | 2.50 ^A | 2.35 | 2.45 | 2.50 | 2.75 | 2.65 | 2.35 | A | 2.35 | 2.40 ^S |
| 19 | 2.55 | 2.65 | 2.60 | 2.35 | 2.35 | 2.55 | 2.75 | 2.60 | 2.30 | 2.30 | 2.50 | 2.45 | 2.35 | 2.50 ^H | 2.50 ^A | 2.35 | 2.40 | 2.55 | 2.70 | 2.75 | 2.40 | 2.30 ^S | 2.35 | 2.35 |
| 20 | 2.40 | 2.35 | 2.30 | 2.30 | 2.35 | 2.80 | 2.65 | 2.75 | 2.30 | 2.35 | 2.45 | 2.45 | 2.25 | 2.45 | 2.45 | 2.45 | 2.55 | 2.60 | 2.55 | 2.55 | 2.40 ^V | 2.45 | 2.40 ^R | 2.35 |
| 21 | 2.40 ^S | 2.45 | 2.60 | 2.80 | 2.50 | 2.75 | 2.60 | 2.65 | 2.65 | 2.60 | 2.60 | 2.50 | 2.40 | 2.55 | 2.50 | 2.60 | 2.60 | 2.65 | 2.70 | 2.65 | 2.45 | 2.30 ^S | 2.40 | 2.30 |
| 22 | 2.45 ^F | 2.60 ^V | 2.60 ^S | 2.55 | 2.70 ^S | 2.65 | 2.85 | 2.50 | 2.55 | 2.50 | 2.45 | 2.40 | 2.35 | 2.35 | 2.40 | 2.45 | 2.45 | 2.45 | 2.55 | 2.60 | 2.60 | 2.35 | 2.40 | 2.45 |
| 23 | 2.50 | 2.55 | 2.40 | 2.50 | 2.30 ^F | 2.35 | 2.50 | 2.65 | 2.40 | 2.60 | 2.40 | 2.50 | 2.45 | 2.60 | 2.45 | 2.35 | 2.50 | 2.70 | 2.70 | 2.65 | 2.30 | 2.30 | 2.35 | 2.30 |
| 24 | 2.35 | 2.50 | 2.60 | 2.65 | 2.50 | 2.75 | 2.75 | 2.45 | 2.40 | 2.35 | 2.45 | 2.45 | 2.40 | 2.50 | A | A | 2.70 | 2.65 | 2.70 | 2.60 | 2.40 | 2.40 | 2.35 | |
| 25 | 2.35 ^S | 2.50 | 2.50 ^V | 2.45 | 2.25 | 2.30 | 2.45 | 2.85 | 2.50 ^V | 2.55 | 2.30 | 2.35 | 2.45 | 2.45 | 2.45 | 2.50 | 2.55 | 2.55 | 2.70 ^S | 2.60 | 2.40 | 2.35 ^S | 2.30 ^R | 2.25 |
| 26 | AF | 2.50 | 2.50 | 2.50 | 2.55 | 2.65 | 2.70 ^N | 2.55 ^H | 2.65 | 2.40 | 2.35 | 2.45 | 2.35 | 2.45 | 2.50 | 2.60 | 2.65 | 2.55 ^R | 2.60 | 2.55 | 2.35 | R | 2.35 | 2.40 ^R |
| 27 | R | 2.60 ^R | 2.50 | 2.55 | 2.55 ^S | 2.80 | 2.65 | 2.55 | 2.60 ^R | 2.40 | 2.20 | 2.30 | 2.40 | 2.45 | 2.55 | 2.55 | 2.60 | 2.70 | 2.80 | 2.70 | 2.40 | 2.35 ^S | 2.35 | 2.45 |
| 28 | 2.50 | 2.55 | 2.60 | 2.55 | 2.55 | 2.55 | 2.60 | 2.65 | 2.50 | 2.70 ^A | 2.50 ^A | 2.35 | 2.35 | 2.40 | 2.45 | 2.40 | 2.50 ^A | 2.55 ^A | 2.70 ^S | 2.65 | 2.40 ^R | 2.40 | 2.50 ^R | 2.45 |
| 29 | 2.60 ^S | 2.60 | 2.70 | 2.60 ^R | 2.50 | 2.55 ^N | 2.75 | 2.85 | 2.60 | 2.60 | 2.45 | 2.30 ^A | 2.40 | 2.35 | 2.40 | 2.45 | 2.60 | 2.70 | 2.90 ^S | 2.55 | 2.40 | 2.50 | 2.45 | 2.60 ^R |
| 30 | 2.65 ^R | C | C | C | C | C | C | C | 2.75 | 2.85 | 2.55 | 2.55 ^A | 2.55 ^R | 2.55 | 2.55 | 2.60 | 2.60 | 2.60 | 2.70 ^S | 2.85 | 2.45 | 2.50 | 2.55 | 2.65 ^R |
| 31 | 2.55 ^R | 2.65 ^R | 2.55 | 2.45 | 2.60 | 2.75 | 2.80 | 2.90 | 2.90 | 2.80 | 2.75 ^H | 2.60 | 2.55 | 2.60 | 2.55 | 2.60 | 2.55 ^R | 2.65 | 2.70 ^S | 2.70 ^S | 2.65 | 2.55 ^S | 2.60 | 2.55 |
| No. | 29 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 31 | 31 | 31 | 30 | 31 | 31 | 30 | 30 | 31 | 31 | 31 | 30 | 31 | 29 | 31 | 31 |
| Median | 2.50 | 2.60 | 2.60 | 2.55 | 2.50 | 2.65 | 2.75 | 2.65 | 2.60 | 2.45 | 2.40 | 2.45 | 2.45 | 2.50 | 2.50 | 2.50 | 2.55 | 2.65 | 2.70 | 2.60 | 2.40 | 2.40 | 2.40 | 2.45 |

Sweep 1.0 Mc to 2.0 Mc in 20 min in automatic operation.

The Radio Research Laboratories, Japan.

(M3000)F2

K 7

IONOSPHERIC DATA

Lat. $36^{\circ}42.4' N$
Long. $139^{\circ}29.8' E$

Kokubunji Tokyo

(M3000)F1

135° E Mean Time (GM.T.+9h.)

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|----|----|----|----|----|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|-------------------|-------------------|-------------------|-------------------|-------------------|----|----|----|----|----|----|
| 1 | | | | | | A | A | A | A | L | L | 3.20 | 3.15 | 3.20 | 3.10 ^L | L | L | L | A | | | | | |
| 2 | | | | | | L | 3.30 ^H | 3.30 ^A | 3.20 | 3.25 | 3.35 | 3.15 | 3.35 | 3.30 | L | A | A | A | L | | | | | |
| 3 | | | | | | L | 2.10 | 3.35 | A | A | A | A | A | 3.30 ^A | 3.60 | A | A | A | A | | | | | |
| 4 | | | | | | L | L | L | L | L | 3.35 | L | L | L | 3.45 | 3.20 | A | A | L | | | | | |
| 5 | | | | | | L | L | L | L | 3.40 | 3.20 | 3.15 | 3.60 | B | 3.15 | 3.40 | L | L | A | | | | | |
| 6 | | | | | | L | L | 3.60 ^R | R | 3.40 ^A | 3.15 | A | 3.10 | 3.30 | 3.20 | 3.65 | A | A | A | | | | | |
| 7 | | | | | | L | L | L | L | 3.30 | 3.30 | 3.15 | 3.35 | 3.45 | 3.15 | 3.05 ^H | 3.20 | L | L | | | | | |
| 8 | | | | | | C | C | C | A | A | 3.30 | 3.10 | 3.20 | 3.20 | 3.20 | 3.20 | 3.25 | L | L | | | | | |
| 9 | | | | | | L | L | 3.35 | 3.65 | 2.95 ^H | 3.30 | 3.20 | 3.50 | 3.30 | 3.10 | 3.15 | 3.25 | L | L | | | | | |
| 10 | | | | | | L | L | L | L | 3.10 ^H | 3.30 | 3.25 | 3.50 | 3.30 | 3.15 | 3.15 | 3.25 | L | L | | | | | |
| 11 | | | | | | L | L | L | L | 3.30 ^A | 3.25 | 3.15 | 3.30 | A | A | A | 3.15 | L | L | | | | | |
| 12 | | | | | | L | L | L | L | 3.25 ^H | 3.20 | 3.15 | 3.25 | 3.30 ^A | 3.10 ^H | 3.30 | 3.20 ^H | 3.30 | A | | | | | |
| 13 | | | | | | L | L | 3.55 | A | 3.20 ^A | 3.20 | 3.10 ^A | 3.35 | A | L | L | 3.05 ^A | 3.25 | L | | | | | |
| 14 | | | | | | L | L | L | L | L | A | A | A | A | A | L | L | A | A | | | | | |
| 15 | | | | | | L | L | L | A | A | A | 3.30 | 3.00 | 3.30 | 3.45 | 3.25 | L | L | C | | | | | |
| 16 | | | | | | L | L | L | L | L | 3.15 | 3.10 | 3.35 | A | A | A | A | L | L | | | | | |
| 17 | | | | | | L | L | A | A | A | A | A | A | A | A | 3.35 | 3.15 ^A | A | L | | | | | |
| 18 | | | | | | L | L | A | A | 3.10 ^R | A | A | A | A | A | 3.20 ^A | 3.15 | L | L | | | | | |
| 19 | | | | | | L | L | L | A | A | 3.10 ^A | 3.35 | 3.50 | 3.15 | 3.35 ^A | 3.30 | A | A | L | | | | | |
| 20 | | | | | | L | L | L | A | L | L | 3.40 | 3.45 | A | A | L | A | A | L | | | | | |
| 21 | | | | | | L | L | L | L | L | A | A | L | 3.35 | 3.15 | 3.20 | 3.05 ^B | L | L | | | | | |
| 22 | | | | | | L | L | L | L | 3.50 | A | 3.10 ^A | A | A | 3.00 ^A | 3.30 | 3.30 | 3.00 | L | | | | | |
| 23 | | | | | | L | L | A | A | 3.20 | 3.00 | 3.10 ^A | A | A | A | A | A | A | L | | | | | |
| 24 | | | | | | L | L | L | A | 3.10 ^L | 3.25 | 3.15 | 3.25 | L | A | A | 3.25 | L | L | | | | | |
| 25 | | | | | | L | L | 2.95 | 3.50 | 3.10 ^H | 3.00 ^A | 2.95 ^H | 3.20 | 3.20 | 3.10 ^A | 3.20 | 3.45 | 3.10 ^L | A | | | | | |
| 26 | | | | | | L | L | A | A | A | 3.10 | 3.15 | 3.25 | 3.40 | 3.80 | 3.50 | S | 3.05 | | | | | | |
| 27 | | | | | | L | L | 3.40 | 3.10 ^L | 3.25 | 3.20 | 3.30 | 3.40 | 3.30 | 3.65 | 3.15 | 3.10 | A | | | | | | |
| 28 | | | | | | L | L | L | L | A | A | L | L | 3.50 | 3.40 | L | A | A | L | | | | | |
| 29 | | | | | | L | L | L | L | L | L | L | 3.35 | 3.50 | 3.55 | 3.10 ^L | 3.20 ^A | L | L | | | | | |
| 30 | | | | | | L | L | L | L | L | L | A | A | L | 3.40 | A | L | L | A | | | | | |
| 31 | | | | | | L | L | L | L | L | L | L | 3.35 | 3.35 | 3.40 | L | L | L | L | | | | | |
| No. | | | | | | 1 | 6 | 6 | 11 | 16 | 19 | 21 | 19 | 22 | 20 | 15 | 6 | | | | | | | |
| Median | | | | | | 2.10 | 3.35 | 3.35 | 3.20 | 3.20 | 3.15 | 3.30 | 3.30 | 3.35 | 3.20 | 3.20 | 3.10 | | | | | | | |

Sweep \downarrow \uparrow Mc to \downarrow \uparrow Mc in \downarrow \uparrow sec min in automatic operation.

(M3000)F1

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

R'F2

Jul. 1957

135° E Mean Time (GM.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 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | 270 | A | 325 | 510 | A | 470 | 450 | 440 | 385 | 400 | 375 | 330 ^L | 300 | | | | | |
| 3 | | | | | | 455 | 340 | 400 | 300 | 455 | 395 | 380 | 370 | 400 | 390 | 360 | 350 | 320 | 300 | | | | | |
| 4 | | | | | | | 500 | 450 | | 600 ^A | 540 ^A | 490 ^A | 420 ^A | 495 | 470 | 430 | 390 | 370 ^A | 340 | | | | | |
| 5 | | | | | | | 350 | 330 | 360 | 395 | 360 | 390 | 450 ^A | 400 | 385 | 400 | 410 ^A | 355 | | | | | | |
| 6 | | | | | | | 310 | 290 | 350 | 400 | 420 | 430 | 405 | 440 | 405 | 500 | 450 | 365 | | | | | | |
| 7 | | | | | | | 430 | 470 | 560 ^R | 700 ^A | 440 | A | 400 | 400 | 330 ^H | 350 | 400 | 375 ^A | A | | | | | |
| 8 | | | | | | | 280 | 320 | 285 | | | 450 | 410 | 390 | 405 | 425 | 380 | 320 | | | | | | |
| 9 | | | | | | | C | C | | 405 | 450 | 410 | 400 | 400 | 400 | 390 | 375 | 350 | | | | | | |
| 10 | | | | | | | | 375 | 305 ^H | | 425 | 375 | 460 | 445 | 400 | 360 | 355 | 350 | | | | | | |
| 11 | | | | | | | 275 | 255 | | 430 | 380 | 325 ^H | 400 | 405 | 405 | 395 | 350 | 350 | | | | | | |
| 12 | | | | | | | 275 | | 350 | 410 | 310 ^H | 410 | 405 | 405 | 430 ^A | 395 | 380 | 350 | 310 | | | | | |
| 13 | | | | | | | 265 | 300 | 335 | 380 | 430 | 395 | 395 | 395 | 405 | 360 | 375 | 345 | 325 | | | | | |
| 14 | | | | | | | 320 | 305 | 345 | 480 | 395 | 400 | 400 | 400 | 410 | 385 | 380 | 355 | | | | | | |
| 15 | | | | | | | 300 | 300 | 305 | 375 | 430 | 430 | 400 | 390 | 370 | 365 | 390 | 340 | 330 | | | | | |
| 16 | | | | | | | 300 | 305 | 350 | 450 ^A | 455 ^A | 440 | 405 | 395 | 360 | 360 | 330 | 350 | C | | | | | |
| 17 | | | | | | | 310 | 320 | 430 | 450 | 445 | 445 | 445 | 430 ^A | 420 | 400 | 395 | 350 | 305 | | | | | |
| 18 | | | | | | | 400 | 440 ^A | 475 ^A | 450 | 500 | 470 | 546 ^A | 545 ^A | 575 ^A | 570 | 480 | 400 | | | | | | |
| 19 | | | | | | | 305 | 390 | 570 | 500 ^A | 500 ^A | 450 | 500 | 460 ^A | 440 ^A | 500 ^A | 470 | 400 | 320 | | | | | |
| 20 | | | | | | | 330 | 405 ^L | 525 ^A | 545 ^A | 570 ^A | 500 | 595 | 495 | 475 ^A | 480 | 430 | 370 | 360 | | | | | |
| 21 | | | | | | | 335 | 325 | 320 ^H | 500 | 480 | 440 | 440 | 420 ^A | 440 | 380 | 410 ^A | 350 | | | | | | |
| 22 | | | | | | | 305 | 320 | 355 | 350 | 430 | 410 | 410 | 430 | 460 | 405 | 390 ^B | 360 | 305 | | | | | |
| 23 | | | | | | | 300 | 380 | 440 | 400 | 485 | 455 | 480 | 450 | 445 | 410 | 405 | 395 | 325 | | | | | |
| 24 | | | | | | | 350 | 280 | 440 ^L | 400 | 485 | 450 | 430 | 470 | 480 ^A | 500 | 450 | 450 | | | | | | |
| 25 | | | | | | | 310 | 315 | 430 | 400 ^L | 440 | 435 | 445 | 405 | A | A | 375 | 355 | | | | | | |
| 26 | | | | | | | 300 | 340 | 430 | 455 | 540 ^A | 550 | 480 | 460 | 445 | 455 | 400 | 385 | 360 | | | | | |
| 27 | | | | | | | | | 355 | 450 ^A | 460 | 450 | 500 | 465 | 425 | 435 | 380 | 360 | | | | | | |
| 28 | | | | | | | 340 | 325 | 430 | 520 | 500 | 450 | 450 | 430 | 405 | 400 | 370 | 350 | 320 | | | | | |
| 29 | | | | | | | 300 | 300 | 345 | 390 ^A | 440 ^A | 470 | 460 | 450 | 405 | 400 | 400 ^A | 420 ^A | 355 ^A | | | | | |
| 30 | | | | | | | 310 | 300 | 300 | 320 | 400 | 420 ^L | 425 | 420 | 370 | 400 | 360 | 320 | 305 | | | | | |
| 31 | | | | | | | C | 300 | 320 | 430 | 410 | 410 ^A | 450 ^A | 375 | 390 | 370 | 355 | 315 | 305 | | | | | |
| No. | | | | | | | 2 | 20 | 26 | 27 | 29 | 30 | 31 | 31 | 30 | 30 | 31 | 31 | 17 | | | | | |
| Median | | | | | | | 385 | 310 | 310 | 335 | 410 | 440 | 430 | 420 | 405 | 400 | 380 | 350 | 320 | | | | | |

Sweep 1.0 Mc to 2.0 Mc in 20 sec in automatic operation.

The Radio Research Laboratories, Japan.

R'F2

K 9

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

135° E Mean Time (G.M.T. + 9h.)

R'F

Jul. 1957

| 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 | 355 | 400 | 400 | 400 | 305 | A | A | A | 305 ^A | 290 ^A | 255 | 250 | 320 | 300 ^A | 250 | 255 | 310 ^A | A | 300 | 340 ^A | 350 ^A | 385 ^A | 350 |
| 2 | 365 ^A | 335 | 300 | 300 | 335 | 260 | 280 | 250 | A | 250 | A | 240 | 250 | 250 | 250 | 255 | 255 | 275 | 285 | 280 | 350 | 400 ^A | 355 | 350 |
| 3 | 375 | 325 | 370 | 400 | 405 | 345 | 300 | 275 | 260 ^H | A | A | A | A | A | A | A | A | A | B | 250 ^A | 340 | 385 | 400 | 355 |
| 4 | 315 | A | 375 | 355 | 380 | 300 | 260 | 255 | 260 | 260 | 275 | A | A | A | 250 | 300 | 290 ^A | A | 320 | 310 ^A | 400 ^A | 350 | 355 | 350 |
| 5 | 345 | 305 | 300 | 380 | 280 | 265 | 250 | 265 | 250 | 220 | 295 | 285 | 225 | 250 ^A | 310 | 250 | 290 ^A | 265 | 270 | 310 | 350 | 450 | 425 ^A | 400 |
| 6 | 300 | 280 | 380 ^A | 350 | 350 ^A | 300 | 250 | 260 | 220 | A | A | A | 260 ^A | 250 | 255 | 300 | A | A | A | 375 ^A | 360 ^A | 355 ^A | 415 ^A | 400 ^A |
| 7 | 350 | 315 | 300 | 350 | 300 | 280 | 255 | 270 | 220 | 250 ^H | 295 | 270 | 260 | 250 | 310 | 250 | 250 | 255 | 300 ^A | 300 | 305 | 380 ^S | 400 ^A | 345 |
| 8 | 340 | 325 | 310 ^C | 320 | 350 | 275 | C | C | 305 ^H | A | A | 260 | 260 | 300 | 205 ^B | 255 ^B | 250 ^H | 265 | 290 | 300 | 320 | 310 | 350 | 340 |
| 9 | 325 | 300 | 300 | 300 | 300 | 280 | 265 | 255 | 250 | 255 | 260 | 255 | 290 ^A | A | 300 ^A | 255 | 255 | 300 ^A | 325 | 330 | 360 | 360 | 350 | 375 |
| 10 | 350 | 355 | 305 ^A | 300 ^B | 290 | 280 | 260 | 250 | 245 | 200 ^H | 250 | 250 | 240 | 260 ^A | 290 | 255 | 260 | 280 | 300 | 290 | 295 | 350 | 345 | 335 |
| 11 | 340 | 305 | 300 | 300 | 310 | 275 | 250 | 255 | 270 ^A | 250 ^A | 200 | A | E | 305 ^A | A | A | 275 ^A | 290 ^S | 300 ^A | 275 | 285 | 345 | 345 | 325 |
| 12 | 315 | 295 | 290 | C | C | C | 250 | 250 | 255 | 250 ^B | 230 | 250 | 250 | 250 ^A | 260 | 270 ^H | 260 | E | 300 ^A | 330 | 325 | 345 | 350 | 350 |
| 13 | 360 ^A | 325 | 310 ^A | 300 | 330 | 335 | 275 | 255 | 280 ^A | 265 ^A | 280 ^A | A | A | B | A | 310 | 300 ^A | 300 | 310 | 325 | 360 ^A | 345 | 330 | 330 |
| 14 | 340 | 295 | 285 | 275 | 310 | 280 | 270 | 250 | 280 | 320 | 300 | 340 ^A | 300 ^A | A | A | A | 260 | 315 ^A | A | 300 | 360 ^A | 340 | 310 | 350 |
| 15 | 410 ^A | 355 | 390 ^A | 410 ^A | 330 | 300 | 260 | 270 | A | A | A | 290 | 270 ^A | 250 | 250 | 290 | 240 | 255 | C | C | 355 ^A | 350 ^A | 320 | 300 |
| 16 | 300 | 300 | 295 | 270 | 275 | 260 | 300 | 280 | 270 | 280 | 300 | A | 260 | A | A | A | A | 290 | 270 | 290 | 330 | 300 | 360 ^A | 400 ^A |
| 17 | 345 | 310 | 305 | 300 | 370 | 270 ^H | 300 ^A | A | A | A | A | A | A | A | A | 290 ^A | 250 ^A | 260 | 320 | 320 | 350 | 400 | 400 | 395 |
| 18 | 355 | 320 | 305 | 320 | 315 | 270 | 275 | 260 ^B | A | 340 ^A | A | A | A | A | A | 290 ^A | 290 ^A | 260 | 215 | 300 | 270 | 350 | 355 | 400 ^A |
| 19 | 340 | 305 | 300 | 350 | 390 | 325 | 255 | 260 | A | A | A | A | 250 | 320 | 275 ^A | 250 | A | A | 290 | 320 | 330 ^A | 385 ^B | 450 ^A | 450 |
| 20 | 400 ^A | 410 ^A | 420 ^A | 410 ^A | 340 | 300 | 260 | 270 | 285 ^A | A | 275 ^A | 280 ^A | 300 | A | A | 225 | 300 ^A | 300 ^A | 320 | 300 | 300 | 305 | 350 | 390 |
| 21 | 355 | 350 | 350 ^A | 290 | 250 | 290 | 250 | 250 | 260 | 300 ^A | A | A | A | 300 | 250 | 255 | 260 ^B | 255 | 280 | 300 | 310 | 400 | 400 | 420 ^A |
| 22 | 355 ^C | 310 | 320 | 310 | 305 | 295 | 270 | 260 | 250 | A | A | A | A | A | A | 240 | 255 | 275 | 295 | 275 | 270 | 325 | 350 | 375 |
| 23 | 300 | 320 | 320 | 325 | 355 | 295 | 275 | 260 | 250 | 270 | 305 | 280 ^A | 280 ^A | 300 | 280 ^A | 280 ^A | A | A | A | 340 ^A | 305 | 355 | 400 ^A | 395 |
| 24 | 390 | 340 | 310 | 350 ^A | 350 | 300 | 260 | 280 ^A | 280 ^A | 260 | 225 | 250 | 260 | A | A | A | 260 | 305 | 295 | 300 | 350 | 375 | 390 | 360 |
| 25 | 345 | 325 | 325 | 330 | 400 | 310 | 265 | 230 | 245 | 240 ^H | A | A | A | 300 ^A | 260 ^B | 250 | 255 | 250 | 300 | 300 | 350 | 360 | 400 | 400 |
| 26 | 450 ^A | 315 | 330 | 325 | 300 | 280 | 275 | 255 ^H | A | A | 280 | 300 | 285 | 215 | 240 | 260 ^H | S | 300 ^A | 325 | 300 | 330 | 425 | 395 | 350 |
| 27 | 335 | 325 | 325 | 325 | 335 | 300 | 255 | 255 | 250 | 250 | 250 | 230 | 295 | 255 | 250 | 215 | 260 | 280 | A | 300 | 330 | 340 | 350 | 350 |
| 28 | 350 | 325 | 310 | 310 | 300 | 295 | 270 | 290 | 250 | A | A | A | A | A | 250 | 250 | 300 ^A | A | 290 ^A | 330 ^A | 330 | 360 ^A | 360 ^A | 355 ^A |
| 29 | 325 | 305 | 300 | 300 | 305 | 295 | 270 | 260 | 250 | 255 | 250 | 220 ^B | 235 | 230 | 230 | 255 | 255 | 280 | 290 ^A | 320 ^A | 320 | 325 | 400 ^A | 315 |
| 30 | 300 ^A | C | C | C | C | C | C | C | A | 255 ^B | 270 ^A | 270 ^A | A | 255 | 270 ^A | 270 ^A | 255 | 255 | 300 ^A | 260 | 310 ^A | 300 | 300 | 350 ^A |
| 31 | 330 ^A | 305 | 310 | 350 | 310 | 265 | 255 | 250 | 255 | 250 | 250 | 255 | 230 | 250 | 250 | 250 | 255 | 260 | 280 | 285 | 265 | 290 | 300 | 355 |
| No. | 31 | 29 | 30 | 29 | 29 | 29 | 28 | 28 | 24 | 21 | 19 | 17 | 22 | 19 | 22 | 27 | 23 | 23 | 24 | 30 | 31 | 30 | 31 | 31 |
| Median | 345 | 320 | 310 | 325 | 315 | 295 | 260 | 260 | 250 | 255 | 275 | 255 | 260 | 250 | 250 | 255 | 255 | 280 | 300 | 300 | 330 | 350 | 355 | 355 |

Sweep $\frac{1}{e}$ Mc to $z \cdot e$ Mc in $\frac{z}{e}$ sec in automatic operation.

R'F

The Radio Research Laboratories, Japan.

K 10

IONOSPHERIC DATA

Jul. 1957

R'ES

135° E Mean Time (GMT. + 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 | 105 | E | 110 | E | B | 140 | 140 | 125 | 120 | 130 | 110 | B | 120 | 115 | 120 | 120 | 150 | 140 | 130 | 125 | 130 | 120 | 120 | 120 |
| 2 | 115 | 110 | 120 | 105 | E | 150 | 150 | B | 140 | 135 | 130 | B | B | B | B | B | B | 130 | 130 | 120 | 120 | 115 | 125 | 120 |
| 3 | E | 125 | 110 | 105 | 110 | B | 140 | 130 | 120 | 120 | 120 | 120 | 115 | 120 | B | 120 | 110 | 105 | B | 105 | 105 | 105 | 105 | 110 |
| 4 | 115 | 105 | 105 | 110 | 100 | E | 135 | 130 | 120 | 120 | 120 | 120 | 110 | 110 | B | 110 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| 5 | 110 | 110 | E | 120 | E | 120 | G | G | 130 | B | B | B | B | B | B | 140 | 130 | 150 | G | E | 130 | 120 | 120 | 120 |
| 6 | 120 | E | 110 | 110 | 120 | 120 | G | G | G | 115 | 120 | 120 | 120 | G | B | 150 | 120 | 120 | 120 | 120 | 125 | 120 | 115 | 110 |
| 7 | 110 | 150 | 115 | 115 | 120 | E | G | 120 | G | 115 | 120 | B | B | G | B | G | G | 140 | 125 | 125 | E | 125 | 125 | E |
| 8 | E | E | C | E | E | B | C | C | 120 | 110 | 110 | 110 | 115 | B | B | B | B | 135 | 110 | 110 | 105 | 105 | 105 | 105 |
| 9 | E | E | E | E | E | B | G | G | 125 | 130 | 125 | B | 115 | 110 | B | B | 150 | 130 | 125 | 125 | 125 | 110 | 105 | 110 |
| 10 | 110 | 110 | 120 | 120 | 120 | E | 120 | 115 | 120 | 120 | 125 | B | B | B | B | B | 140 | 140 | 125 | 115 | 105 | 105 | 105 | 105 |
| 11 | 110 | 105 | 105 | 105 | 105 | B | 130 | 130 | 120 | 110 | B | 110 | 110 | 105 | 105 | 110 | 105 | 110 | 130 | 125 | 105 | 105 | 105 | E |
| 12 | E | E | E | C | E | C | 115 | 115 | 125 | 120 | 120 | B | B | 135 | B | 120 | 115 | 110 | 110 | 110 | 120 | 110 | 120 | 105 |
| 13 | 105 | 105 | 105 | E | 130 | 135 | 135 | 125 | 125 | 115 | 115 | 115 | 110 | B | 110 | 105 | 105 | 110 | 110 | 105 | 105 | 110 | 105 | E |
| 14 | E | E | E | E | E | B | B | B | 135 | 125 | 120 | 110 | 110 | 110 | 105 | G | 105 | 105 | 105 | 105 | 105 | 105 | 105 | E |
| 15 | 110 | 105 | 110 | 115 | 135 | 150 | B | 125 | 120 | 110 | 110 | 120 | 130 | B | G | G | 110 | 105 | C | 105 | 105 | 110 | 105 | 110 |
| 16 | E | E | E | E | E | E | B | B | 125 | 120 | 110 | 120 | 130 | B | B | G | 110 | 105 | C | 105 | 105 | 105 | 105 | E |
| 17 | 105 | 110 | E | E | E | E | 150 | 120 | 115 | 120 | 110 | 120 | 115 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 115 | 110 | 110 | 115 |
| 18 | E | 110 | E | E | 120 | E | G | 130 | 115 | 120 | 115 | 115 | 140 | 130 | 130 | 110 | 105 | 130 | 125 | 120 | 120 | 120 | 110 | 110 |
| 19 | 115 | 110 | 115 | E | 120 | E | 150 | 130 | 120 | 125 | 130 | 120 | 110 | 110 | 115 | 110 | 115 | G | 105 | 105 | 105 | E | 105 | 120 |
| 20 | 105 | 105 | 105 | 110 | E | E | G | 120 | 120 | 120 | 120 | 120 | 120 | 125 | 120 | B | 130 | 120 | 120 | 120 | 105 | 115 | 120 | 105 |
| 21 | 120 | 115 | 110 | 110 | E | E | 150 | G | 130 | 125 | 125 | 125 | 125 | 130 | B | 145 | B | S | 130 | 125 | 115 | E | 120 | 120 |
| 22 | 105 | 105 | 105 | 100 | 100 | B | 120 | 115 | 120 | 110 | 115 | 115 | 110 | 110 | 120 | G | 130 | 125 | G | 110 | 110 | 110 | 105 | 110 |
| 23 | E | 105 | E | E | E | E | G | 145 | 130 | B | 130 | 130 | 130 | 150 | 130 | 130 | 130 | 120 | 120 | 125 | 115 | 115 | 105 | 105 |
| 24 | 115 | 115 | 110 | 110 | 110 | 115 | 125 | 120 | 120 | 120 | G | 150 | 145 | 120 | 110 | 110 | 110 | 125 | 105 | 105 | 105 | 105 | 120 | 110 |
| 25 | 105 | 100 | 110 | 110 | 115 | 120 | 115 | 110 | 130 | 115 | 110 | 110 | 135 | 130 | 135 | B | B | 135 | 135 | 120 | 120 | 120 | 125 | 120 |
| 26 | 115 | 120 | 115 | 110 | 120 | G | 130 | 125 | 125 | 115 | 110 | 115 | 125 | 130 | 150 | G | S | 125 | 125 | 120 | 110 | 110 | 110 | 105 |
| 27 | 105 | 105 | 105 | 100 | B | B | G | B | B | 125 | 125 | 120 | B | 115 | G | 115 | 115 | 110 | 110 | 105 | 105 | 105 | 105 | 100 |
| 28 | 105 | 105 | 105 | 100 | E | B | 125 | 125 | 120 | 110 | 110 | 110 | 110 | 120 | G | 135 | 120 | 120 | 120 | 105 | 105 | 105 | 100 | 100 |
| 29 | 105 | 100 | 105 | 100 | E | E | 150 | 140 | 130 | 115 | 110 | 120 | 125 | B | 145 | 120 | 120 | 140 | 125 | 120 | 110 | 110 | 110 | 110 |
| 30 | 110 | C | C | C | C | C | C | C | 125 | 120 | 120 | 120 | 120 | B | 130 | 120 | 140 | 120 | 120 | 115 | 110 | 110 | 110 | 110 |
| 31 | 110 | 105 | 105 | 100 | 120 | E | 120 | 150 | G | B | B | B | B | B | B | B | G | G | 140 | 120 | 120 | E | E | 110 |
| No. | 23 | 23 | 21 | 19 | 15 | 7 | 17 | 24 | 27 | 28 | 26 | 23 | 24 | 21 | 19 | 19 | 24 | 28 | 27 | 30 | 29 | 27 | 28 | 27 |
| Median | 110 | 105 | 110 | 110 | 120 | 120 | 130 | 125 | 125 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 115 | 120 | 120 | 115 | 110 | 110 | 110 | 110 |

R'ES

Sweep 1.0 Mc to 24.0 Mc in 2.0 sec ^{min} in automatic operation.

The Radio Research Laboratories, Japan.

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 28.3' E

Kokubunji Tokyo

135° E Mean Time (GM.T. + 9h.)

Types of Es

Jul. 1957

| 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 | fz | fz | fz | fz | | f | h | l | l | h | h | h | l | l | l | l | h | h | l | h | h | h | h | h |
| 2 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 3 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 4 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 5 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 6 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 7 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 8 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 9 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 10 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 11 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 12 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 13 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 14 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 15 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 16 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 17 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 18 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 19 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 20 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 21 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 22 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 23 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 24 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 25 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 26 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 27 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 28 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 29 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 30 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| 31 | fz | fz | fz | fz | fz | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h | h |
| No. | | | | | | | | | | | | | | | | | | | | | | | | |
| Median | | | | | | | | | | | | | | | | | | | | | | | | |

IONOSPHERIC DATA

Jul. 1957

f_oF₂

135° E Mean Time (GMT.+ 9h.)

Kokubunji Tokyo

Lat. 36° 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 | 465 ^S | 525 ^S | 550 | 550 | 470 | 325 | 290 | A | 360 | 420 | 410 ^A | 550 | 450 | 450 | 410 | 450 | 440 | 420 | 405 | 400 | 470 | 420 | 465 | 420 |
| 2 | 450 ^S | 455 ^R | 395 | 390 | 460 | 400 | 385 | 410 | 350 | 470 | 400 | 405 ^S | 400 | 410 | 405 | 400 | 400 | 360 | 360 | 410 | 460 | 500 | 460 | 425 ^R |
| 3 | 450 | 430 | 490 | 510 | 550 | 540 | 540 | 590 ^H | A | A | A | A | 430 ^A | 490 ^A | 470 ^A | 440 | 395 | 1400 ^A | 415 | 420 | 460 | 515 | 500 | 440 |
| 4 | 400 | 370 ^A | 440 | 490 ^A | 490 | 440 | 385 | 360 | 400 | 400 | 375 | 400 | 425 ^A | 415 | 400 | 425 | 1400 ^A | 395 | 370 | 395 | 425 | 460 | 470 | 440 |
| 5 | 420 ^S | 410 | 395 | 405 | 400 ^S | 400 | 360 | 360 | 400 | 450 | 450 | 455 | 425 | 460 | 460 | 540 | 510 | 420 | 355 | 495 | 470 | 540 ^S | 530 | 520 |
| 6 | 380 | 405 | 460 | 470 | 450 | 375 | 440 | 420 ^R | R | A | G | A | 400 | 400 | 430 ^H | 400 | 400 | 395 | 370 ^A | B | 455 ^R | 500 ^S | 495 | 465 |
| 7 | 465 | 410 | 415 | 450 | 440 | 365 | 315 | 350 | 400 | 425 ^H | 450 ^H | 455 | 430 | 435 | 435 | 455 | 410 | 390 | 370 | 405 | 450 | 460 | 460 | 455 |
| 8 | 450 ^S | 445 | 430 ^C | 425 | 450 | 380 | C | C | 505 ^S | 425 | 455 | 450 | 450 | 450 | 450 | 445 | 420 | 400 | 400 ^S | 405 | 450 | 490 | 460 | 455 |
| 9 | 425 | 405 | 400 ^R | 425 | 400 ^S | 405 | 350 | 400 | 405 ^H | 410 ^H | 460 | 410 | 420 | 465 | 450 | 405 | 395 | 385 | 380 | 400 | 450 | 455 | 460 | 430 |
| 10 | 430 | 450 | 390 | 375 | 410 | 400 | 340 | 300 | 405 ^H | 460 | 430 | 450 ^H | 430 | 445 | 460 | 425 | 400 | 405 | 395 | 400 | 450 | 455 | 475 | 465 |
| 11 | 405 ^S | 400 | 390 ^S | 420 | 400 | 350 | 350 | 390 | 385 | 445 | 420 | 455 ^R | 455 | 470 | 450 ^A | 445 | 425 | 395 | 375 | 350 | 470 | 480 | 455 | 465 ^S |
| 12 | 415 | 395 | 395 | C | C | C | C | C | 400 | 445 | 465 | 445 | 445 | 430 | 450 | 445 | 425 | 395 | 375 | 350 | 460 | 475 | 450 | 430 |
| 13 | 450 | 405 | 390 ^S | 425 | 440 | 430 ^R | 385 | 355 | 380 | 405 | 495 | 410 | 425 | 420 | 450 | 420 | 420 | 390 | 390 | 410 ^S | 405 | 425 | 450 | 450 |
| 14 | 425 | 400 | 380 ^S | 390 | 420 | 395 | 365 | 375 | 395 | 450 | 460 | 460 | 435 | 430 | 420 | 420 | 430 | 410 | 370 | 385 | 450 | 450 ^S | 445 | 450 |
| 15 | 460 ^S | 420 | 430 ^A | 450 | 425 | 425 | 360 | 370 | 430 | 500 | 490 | 480 | 455 | 435 | 405 | 405 | 400 | 400 | 405 | 405 | 420 | 455 | 415 | 450 |
| 16 | 420 | 405 | 380 | 390 | 385 | 360 | 370 | 370 | 360 | 465 | 475 | 460 | 460 | 460 ^A | 450 | 430 | 400 | 400 | C | C | 450 | 440 | 420 | 400 |
| 17 | 445 | 405 | 430 | 430 | 490 | 560 ^H | 485 | 450 ^A | A | 450 | 500 | 470 | A | A | A | G | 450 | 400 | 380 | 400 | 490 | 445 | 450 | 470 |
| 18 | 450 | 415 | 420 | 425 | 440 | 430 | 375 | 360 | 400 | B | 500 | 450 | 500 | 470 ^A | 450 ^A | 500 | 480 | 425 | 400 | 400 | 455 | A | 490 ^S | 490 ^S |
| 19 | 440 | 400 | 410 | 470 | 500 | 400 | 370 | 400 | A | A | A | G | G | 495 | 475 ^A | 490 | 440 | 425 | 400 | 380 | 450 | 500 ^S | 465 | 500 |
| 20 | 470 | 460 | 520 | 510 | 455 | 355 | 370 | 365 | 350 | 450 ^A | 500 | 405 | 450 | 430 | 440 | 440 | 440 | 405 | 420 | 405 | 1450 ^A | 475 | 490 ^R | 500 |
| 21 | 475 ^S | 450 | 405 | 370 | 415 | 360 | 400 | 395 | 380 | 400 | 400 | 445 | 460 | 445 | 440 | 450 | 450 | 400 | 440 | 440 | 410 | 460 | 480 | 480 |
| 22 | 470 ^F | 405 | 405 ^S | 405 | 400 ^S | 400 | 350 | 390 | 405 | 410 | 450 | 460 | 445 | 445 | 460 | 420 | 410 ^B | 400 | 380 | 390 | 450 | 500 ^S | 480 | 480 |
| 23 | 430 | 420 ^R | 455 | 450 | 525 ^F | 475 | 430 | 390 | 460 | 405 | 450 | 460 | 495 | 475 | 465 | 450 | 450 | 445 | 405 | 380 | 400 | 475 | 470 | 455 |
| 24 | 490 | 450 | 400 | 400 | 405 | 365 | 370 | 435 | 450 | 465 | 500 | 450 | 435 | 450 | A | 500 | 450 | 400 | 390 | 410 | 500 | 500 | 495 | 500 |
| 25 | 490 ^S | 430 | 425 | 460 | 520 | 470 | 425 | 350 | 460 ^V | 460 | A | G | 480 | 445 | A | A | 400 | 395 | 380 | 400 | 460 | 475 | 480 | 480 |
| 26 | A F | 445 | 445 | 425 | 410 | 390 | 375 | 410 ^H | 390 | 465 ^A | 480 | 450 | 455 | 435 | 450 | 455 | 435 | 380 | 380 | 405 | 460 | 470 ^S | 500 ^A | 500 |
| 27 | R | 420 ^R | 430 | 430 | 425 | 365 | 390 | 400 | 455 ^R | 460 | 530 | 500 | 465 | 450 | 440 | 445 | 400 | 420 ^R | 400 | 405 | 470 | R | 450 | 450 ^R |
| 28 | 445 | 430 | 405 | 410 | 410 | 405 | 390 | 375 | 420 | 435 ^H | 460 ^A | 500 | 495 | 460 | 445 | 425 | 415 | 395 | 375 | 375 | 445 | 470 ^S | 480 | 460 |
| 29 | 400 ^S | 410 | 395 | 415 ^R | 435 | 410 ^R | 360 ^R | 340 | 390 | 400 | 455 | 495 | 460 | 445 | 445 | 425 | 1400 ^A | 400 | 395 | 390 | 470 ^R | 475 | 455 ^R | 460 |
| 30 | 390 ^R | C | C | C | C | C | C | C | 355 | 340 | 400 | 455 | 465 | 460 | 450 | 455 | 410 | 370 | 350 ^S | 410 | 460 | 440 | 470 | 410 ^R |
| 31 | 430 ^R | 405 ^R | 420 | 440 | 420 | 355 | 350 | 340 | 325 | 365 | 410 ^H | 425 ^A | 430 ^A | 405 | 410 | 405 | 400 | 400 | 380 ^S | 350 | 455 | 440 | 415 | 420 |
| No. | 29 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 28 | 27 | 27 | 27 | 29 | 30 | 28 | 29 | 31 | 31 | 30 | 29 | 31 | 29 | 31 | 31 |
| Median | 445 | 410 | 410 | 425 | 425 | 400 | 370 | 375 | 400 | 445 | 460 | 450 | 450 | 450 | 450 | 430 | 415 | 400 | 380 | 400 | 455 | 475 | 465 | 460 |

f_oF₂

Sweep \downarrow sec Mc to \downarrow sec Mc in \downarrow sec

The Radio Research Laboratories, Japan.

K 13

IONOSPHERIC DATA

Lat. 35° 42.4' N
Long. 139° 29.3' E

Kokubunji Tokyo

135° E Mean Time (GMT.+9h.)

yPF2

Jul. 1957

| 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 | 115 ^S | 175 | 120 | 175 | 180 | 100 | 110 | A | 100 | 160 | 180 ^A | 115 | 80 | 105 | 130 | 110 | 130 | 135 | 210 | 110 | 160 | 130 ^R | 130 | 130 | 130 |
| 2 | 120 ^S | 130 ^R | 115 | 160 | 140 | 150 | 140 | 115 | 130 | 130 | 160 | 145 ^R | 100 | 140 | 100 | 100 | 105 | 115 | 110 | 150 | 140 | 110 | 130 | 115 ^R | 135 |
| 3 | 150 | 120 | 135 | 140 | 160 | 165 | 180 | 140 | 160 ^H | A | A | A | 110 ^A | 85 ^A | 85 ^R | 90 | 105 | 120 ^A | 140 | 135 | 115 | 140 | 130 | 135 | 135 |
| 4 | 130 | 130 ^A | 135 | 110 ^V | 110 | 160 | 115 | 145 | 150 | 100 | 125 | 120 | 110 ^A | 85 | 120 | 125 | 105 ^A | 85 | 120 | 145 | 125 | 105 | 130 | 170 | 170 |
| 5 | 120 ^S | 100 | 115 | 145 | 100 ^S | 170 | 115 | 150 | 150 | 140 | 105 | 125 | 130 | 140 | 145 | 140 | 145 | 140 | 145 | 130 | 125 | 140 ^S | 90 | 130 | 135 |
| 6 | 130 | 145 | 145 | 100 | 110 | 105 | 110 | 130 ^R | R | A | G | A | 105 | 110 | 120 ^H | 125 | 115 | 105 | 130 ^A | B | 145 ^R | 130 ^S | 110 | 135 | 110 |
| 7 | 100 | 130 | 135 | 130 | 130 | 125 | 135 | 120 | 220 | 165 ^H | 120 ^H | 95 | 120 | 120 | 105 | 75 | 110 | 105 | 130 | 140 | 110 | 110 | 140 | 110 | 115 |
| 8 | 110 ^R | 105 | 110 ^C | 125 | 105 | 125 | C | 150 ^H | 170 | 145 | 170 | 145 | 130 | 130 | 145 | 125 | 125 | 105 | 150 ^S | 145 | 145 | 150 | 135 | 125 | 155 |
| 9 | 110 ^S | 120 | 95 ^R | 125 | 100 ^S | 130 | 170 | 145 | 145 ^H | 185 ^H | 145 | 190 | 120 | 135 | 125 | 115 | 105 | 125 | 120 | 130 | 105 | 135 | 125 | 125 | 110 ^S |
| 10 | 120 | 155 | 215 | 100 | 210 | 155 | 135 | 110 | 190 ^H | 165 | 165 | 140 ^H | 140 | 105 | 140 | 125 | 100 | 125 | 105 | 95 | 130 | 115 | 105 | 110 ^S | 110 |
| 11 | 120 ^S | 105 | 120 ^S | 110 | 110 | 125 | 100 | 150 | 150 | 150 | 160 ^H | 150 ^R | 155 | 155 | 140 ^A | 145 | 220 | 105 | 120 | 140 | 140 | 120 | 120 | 110 | 110 |
| 12 | 135 | 105 | 95 | C | C | C | C | 145 | 135 | 145 | 115 | 130 | 130 | 120 | 105 | 120 | 110 | 120 | 140 | 90 ^S | 115 | 120 | 115 | 120 | 120 |
| 13 | 150 | 110 | 95 ^R | 125 | 110 | 140 ^R | 115 | 125 | 165 | 190 | 165 | 150 | 135 | 110 | 130 | 105 | 135 | 100 | 115 | 125 | 135 | 125 | 115 | 150 | 150 |
| 14 | 105 | 110 | 90 ^S | 120 | 100 | 105 ^S | 105 | 115 | 155 | 150 | 140 | 140 | 135 | 160 | 130 | 150 | 135 | 170 | 140 | 175 | 130 | 145 | 115 | 150 | 150 |
| 15 | 105 ^S | 120 | 120 ^A | 140 | 85 ^S | 175 | 95 | 130 | 170 | 170 | 165 | 135 | 145 | 125 | 115 | 125 | 130 | 105 | C | C | 150 | 110 | 100 ^R | 110 | 110 |
| 16 | 105 | 105 | 85 | 100 | 115 | 110 | 145 | 160 | 110 | 195 | 175 | 140 | 120 | 140 ^A | 100 | 145 | 220 | 105 | 120 | 150 | 135 | 125 | 110 | 130 | 130 |
| 17 | 115 | 135 | 120 | 135 | 140 | 130 ^H | 165 | 140 ^A | A | B | 105 | 80 | A | A | A | G | 90 | 110 | 100 | 120 | 155 | A | 110 ^S | 110 ^S | 105 |
| 18 | 110 | 115 | 130 | 115 | 110 | 130 | 215 | 140 | 150 | 150 | 105 | 150 | 105 | 100 ^A | 130 ^A | 125 | 120 | 125 | 150 | 120 | 165 | 140 ^S | 135 | 105 | 105 |
| 19 | 110 | 100 | 140 | 130 | 110 | 170 | 210 | 150 | A | A | A | G | G | 65 | 195 ^A | 100 | 130 | 145 | 130 | 155 | 140 ^A | 85 ^S | 110 ^R | 90 | 90 |
| 20 | 90 | 120 | 110 | 140 | 155 | 135 | 160 | 125 | 110 | 150 ^H | 100 | 125 | 110 | 120 | 150 | 140 | 120 | 110 | 120 | 70 | 120 | 140 | 130 ^R | 125 | 125 |
| 21 | 125 ^S | 110 | 120 | 105 | 135 | 140 | 180 | 125 | 135 | 120 | 155 | 105 | 135 | 105 | 100 | 110 | 110 | 100 | 145 | 120 | 145 | 100 ^S | 120 | 130 | 130 |
| 22 | 100 ^F | 100 ^S | 100 ^S | 125 | 75 ^S | 120 | 140 | 120 | 170 | 165 | 125 | 135 | 110 | 135 | 135 | 125 | 130 | 145 | 105 | 145 | 180 | 175 | 125 | 120 | 120 |
| 23 | 100 | 120 ^R | 135 | 105 | 115 ^F | 135 | 125 | 180 | 140 | 115 | 90 | 100 | 85 | 100 | A | A | 90 | 95 | 110 | 185 | 145 | 105 | 105 | 135 | 135 |
| 24 | 115 | 125 | 105 | 100 | 135 | 130 | 130 | 155 | 150 | 185 | 145 | 140 | 140 | 155 | A | A | 100 | 105 | 120 | 140 | 130 | 125 | 110 | 120 | 120 |
| 25 | 110 ^S | 120 | 125 ^V | 110 | 130 | 205 | 165 | 145 | 90 ^V | 100 | A | G | 65 | 110 | 100 | 110 | 120 | 135 | 105 | 135 | 135 | 105 ^S | 100 ^S | 100 ^S | 100 ^S |
| 26 | A | F | 95 | 100 | 115 | 120 | 135 | 130 ^R | 155 ^H | 135 | 160 ^A | 140 | 105 | 110 | 105 | 95 | 110 | 110 | 130 | 140 | 130 | R | 150 | 150 ^R | 150 ^R |
| 27 | R | 190 ^R | 115 | 110 | 100 ^S | 120 | 120 | 100 | 170 ^R | 140 | 140 | 120 | 135 | 105 | 130 | 125 | 110 | 150 | 100 | 125 | 125 | 115 ^S | 120 | 135 | 135 |
| 28 | 125 | 120 | 95 | 120 | 115 | 140 | 150 | 125 | 130 | 140 ^A | 140 | 130 | 155 | 140 | 145 | 125 | 135 ^A | 110 ^A | 115 ^S | 120 | 120 ^R | 125 | 95 ^R | 100 | 100 |
| 29 | 110 ^S | 100 | 85 | 135 ^R | 130 | 130 ^R | 140 ^R | 115 | 135 | 140 | 145 | 155 ^R | 140 | 130 | 135 | 135 | 135 | 110 | 100 ^S | 140 | 140 | 90 | 90 | 120 ^R | 120 |
| 30 | 120 ^S | C | C | C | C | C | C | 95 | 130 | 90 | 150 | 125 ^A | 130 ^A | 145 | 140 | 115 | 105 | 140 | 130 ^S | 120 | 145 | 130 | 95 | 120 | 120 |
| 31 | 120 ^R | 125 ^F | 130 | 110 | 90 | 125 | 120 | 90 | 130 | 105 | 80 ^H | 95 ^H | 130 | 95 | 130 | 125 | 145 ^R | 160 | 130 ^S | 135 ^S | 140 | 105 ^S | 100 | 95 | 95 |
| No. | 29 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 28 | 27 | 27 | 27 | 27 | 29 | 30 | 28 | 29 | 31 | 31 | 30 | 29 | 31 | 29 | 31 | 31 |
| Median | 115 | 120 | 120 | 120 | 115 | 130 | 135 | 130 | 150 | 150 | 140 | 130 | 130 | 120 | 130 | 125 | 120 | 115 | 120 | 135 | 135 | 125 | 115 | 120 | 120 |

The Radio Research Laboratories, Japan.

K 14

Sweep 1.2 Mc to 2.4 Mc in 2.0 sec in automatic operation.

yPF2

IONOSPHERIC DATA

Jul. 1957

foF2

135° E Mean Time (GMT.+9h.)

Yamagawa

Lat. 31° 12.6' 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 | J 7.6 | 6.6 | 6.0 ^H | 5.8 | 5.2 | 5.3 | 5.6 ^A | 5.9 | 9.1 | G | 7.6 ^H | 10.2 | 9.3 ^H | 10.5 | 12.0 | 11.6 | 11.5 | 11.3 ^H | 11.2 ^H | 10.3 | 23.3 ^S | 23.3 ^S | 21.9 ^A | J 8.9 | |
| 2 | S | J 10.0 | 10.0 | 8.2 | 6.8 | 6.7 | 7.4 | 7.0 | 7.0 | A | 8.5 | 9.6 | 10.4 | 11.0 | 11.0 | 12.0 | 12.9 | 12.7 | 11.6 | 11.1 | 10.6 | 10.6 ^S | R | J 13.0 | |
| 3 | 4 | 2.5 | 2.4 ^S | 6.0 | 5.6 | 6.0 | 8.9 | J 2.8 | 8.5 | 8.3 ^H | 8.7 ^H | 9.9 | 10.3 | 10.7 | 11.4 | 11.8 | 11.8 | 8.9 ^H | J 8.7 ^H | 8.4 | 8.1 | J 7.9 | 8.6 | 8.9 | |
| 5 | J 10.1 | 9.9 | 9.1 ^S | C | C | C | 8.2 | 8.6 ^H | 9.0 ^H | I 9.3 ^C | 9.6 | 9.7 | 10.6 | 10.9 | 11.7 | 10.9 | 12.2 | 12.6 | 10.6 | J 7.5 | 24.4 ^C | C | C | 10.1 ^S | |
| 6 | J 10.2 ^S | 8.6 | 7.2 | 6.9 | 7.1 | 7.6 ^C | C | C | C | I 8.6 ^C | 9.7 ^S | 10.4 | 9.8 ^H | 10.7 | 11.3 | 11.3 | 10.9 | 10.4 ^H | J 10.1 ^H | J 9.9 | 9.5 ^S | C | C | 8.9 ^C | |
| 7 | C | C | C | C | C | C | C | C | C | 9.0 ^H | 9.3 ^H | 10.1 | 10.8 | 11.0 | 11.2 | 11.3 | 11.1 | 11.2 | 10.4 | 9.5 ^S | 8.4 | 8.6 | 8.9 | 9.4 | |
| 8 | 2.5 ^S | 9.5 | 9.2 ^S | 8.6 | J 8.0 ^H | J 8.0 | 8.8 | 8.4 ^H | 8.9 ^H | 8.9 ^H | 9.2 ^H | 10.3 | 11.0 | 10.9 | 11.3 | 12.0 | 11.9 | 12.0 | 11.0 | 9.2 ^S | 9.5 | J 10.3 | 10.4 | 10.6 | |
| 9 | 10.6 | 10.9 | 10.5 | 8.7 | 8.9 | 8.0 | J 8.5 | 9.2 | 9.1 ^{SH} | 9.7 ^H | 10.0 | 9.4 | 9.7 | 10.5 | 11.6 | 11.6 | 11.0 | 10.4 | 10.2 | 9.6 | 8.4 | 8.3 | 9.1 | 9.2 ^S | |
| 10 | 9.4 | 10.0 | 10.6 | 9.6 | 8.2 | 8.0 | 8.5 | 8.4 | 8.5 ^H | 9.5 ^H | 10.5 | 10.1 | 10.5 ^H | 10.6 | 11.4 | 10.9 | 11.6 | 12.4 | 11.5 | 9.5 | 9.4 | 10.1 | J 10.5 | 10.9 ^R | |
| 11 | 11.1 | 11.3 ^R | 11.5 | 10.3 | 9.5 | 9.3 | 9.5 | 9.6 | 9.0 | 8.9 ^H | 9.4 ^H | 9.7 | 10.3 | 11.2 | 11.3 | 11.3 | 11.6 | 12.4 | 11.5 | 9.5 | 9.4 | 10.1 | J 10.5 | 10.9 ^R | |
| 12 | 10.6 | 10.5 | 10.4 | 9.7 | 9.4 | 8.9 | 9.7 | 10.5 | 9.5 ^H | 9.4 ^H | 10.2 | 10.7 | 11.3 | 10.9 | 10.6 | 11.0 | 11.0 | 11.7 | 11.3 | 10.2 | 9.1 | 9.6 | I 10.0 | 10.2 | |
| 13 | 9.5 | 9.4 | 8.4 | 7.7 | 6.9 | 7.2 | 9.1 | 9.6 | 8.8 | 8.2 | 8.5 | 9.6 | 9.8 | 10.1 | 10.4 | 10.4 | 10.5 | 11.0 | 10.0 | 10.2 | 9.6 | 9.7 ^S | 9.8 ^S | 9.8 | 10.0 |
| 14 | 9.8 | 9.8 | 9.8 | 8.9 | 8.3 | 8.1 | J 9.1 | 10.6 | 9.7 ^H | 8.9 ^H | 9.6 | 10.6 | 10.8 | 11.1 | 11.0 | 10.9 | 11.1 | 11.7 | 11.5 | 10.5 ^H | 9.8 ^S | 9.7 | J 9.5 | 9.5 | |
| 15 | I 2.2 ^S | 9.1 | 9.0 | 9.0 | 9.5 | 9.0 | 10.2 | 9.8 | 8.9 ^H | 9.6 ^H | 10.0 | 10.5 | 11.0 | 12.1 | 11.8 | 11.1 | 11.4 | 11.1 | 10.6 | 11.1 | 11.1 | 11.1 | 11.3 | 12.2 ^{SH} | 14.0 ^S |
| 16 | 13.5 | 13.3 ^S | 12.6 | 10.3 ^S | 9.3 ^S | 8.8 | 9.0 | 9.6 | 9.8 | 8.6 ^H | 8.5 | 8.9 | 9.8 | 10.1 | 10.1 | 10.2 | 10.6 | 11.6 | 11.7 | 11.3 | 9.1 | 8.6 | 9.1 ^S | 9.5 | 8.7 |
| 17 | R | 10.8 ^S | 10.0 | 8.5 | 7.6 ^H | J 7.6 ^F | J 7.9 | 8.7 | 8.2 | 8.5 | A | I 8.4 ^C | C | J 7.8 | 9.0 | 8.5 | 8.9 | 9.4 ^H | 9.5 ^H | 8.0 | 7.6 | 7.6 | 7.8 | 8.0 | |
| 18 | 8.8 | 8.7 | 8.4 | 7.0 ^V | 6.5 | 6.6 | 8.5 | 8.7 ^H | 7.0 | 7.4 | 8.0 | 8.5 | 8.5 | 8.8 | 9.0 ^A | 8.9 | 8.9 | 9.4 ^H | 9.1 ^A | 8.6 ^H | 8.6 | 8.8 ^H | 9.2 ^S | 9.2 ^S | |
| 19 | 9.0 | 8.7 | I 8.0 ^R | 7.4 ^R | 7.2 | 7.3 | J 8.4 | J 7.9 | 7.2 ^H | 8.4 | 8.4 | 7.7 | 7.7 | 8.3 | 8.5 | 8.5 | 8.7 | 9.1 | 9.6 | 9.0 | 7.6 ^S | 7.2 ^S | J 7.9 | 8.3 | |
| 20 | 8.2 | I 8.4 ^C | 7.6 | 7.7 | 7.3 ^H | 7.2 | 7.5 | 8.5 | 9.0 | 7.3 ^H | 8.5 ^H | 10.1 | 9.1 | 9.1 | 9.6 | 10.1 | 10.4 | 10.3 | 10.1 ^{SH} | 9.5 ^S | 8.7 | 9.2 ^S | C | C | |
| 21 | C | C | C | C | C | C | C | C | J 10.0 ^H | 9.6 ^H | 10.5 ^H | 10.2 | I 10.1 ^A | 10.0 | 10.7 | 11.1 | 11.2 | 10.9 ^H | J 9.9 | 9.1 | 8.8 | I 9.0 ^R | 9.5 | J 9.9 | |
| 22 | J 10.0 | 10.4 | 10.8 | 9.6 | 8.2 | 7.9 | J 8.2 | 9.4 ^{SH} | 8.2 | 8.5 | A | I 8.4 ^C | C | J 7.8 | 9.0 | 8.5 | 8.9 | 9.4 ^H | 9.5 ^H | 8.0 | 7.6 | 7.6 | 7.8 | 8.0 | |
| 23 | S | FS | S | 8.8 | 7.8 ^H | 7.6 | 7.8 | 8.7 ^{SH} | 8.7 ^{SH} | 9.3 ^H | 9.3 ^H | 10.2 | 11.0 | 10.5 | 11.1 | 11.6 | 11.6 | 12.2 | 13.0 | 13.0 | C | R | R | S | |
| 24 | 8.9 | 8.9 | 8.7 | 7.7 ^F | 7.8 | 7.2 ^F | 7.7 | 8.4 ^H | 8.9 | 8.6 | 9.2 | J 9.9 ^S | 10.2 | 11.0 | 10.5 | 9.8 | 9.5 | 10.0 | 9.9 | 8.5 ^H | 7.7 | 8.0 ^S | 8.5 | 8.9 | |
| 25 | 9.0 | I 9.1 ^S | 9.2 ^S | 8.3 ^F | 7.5 ^F | F | 7.7 | 8.8 ^H | 8.9 | 8.6 | 9.2 | J 9.9 ^S | 10.2 | 10.8 | 11.1 | 11.1 | 10.9 | 10.4 | I 10.2 ^A | J 9.3 ^S | 8.0 ^U | 8.2 ^S | 8.7 | 9.0 ^S | |
| 26 | J 8.2 | 8.5 ^H | J 9.3 ^S | S | I 7.6 ^C | 6.8 | 7.0 | 8.6 | 8.2 ^S | 8.3 ^H | 8.9 | 9.5 | 8.8 ^S | 9.0 | 9.2 | 9.0 | 9.2 | 9.9 | J 9.8 | J 9.2 ^S | 8.9 | J 8.3 | 8.6 | 8.6 | |
| 27 | 9.1 | 9.2 ^S | 8.7 | J 8.3 | C | I 7.3 ^C | J 8.3 | I 9.7 ^S | 9.1 ^H | 8.7 ^{WH} | 8.7 ^{WH} | 9.4 | 10.5 | 11.0 | 11.0 | 10.9 | 10.3 | 10.2 | J 9.8 | A | 8.6 | 8.5 | 8.7 | 9.3 | |
| 28 | 8.7 | 8.7 | 8.6 | S | 7.6 | 7.1 | 8.0 | 9.3 | 8.5 ^H | 8.7 ^H | 8.6 ^H | 9.4 | 10.5 | 11.0 | 11.0 | 10.9 | 10.3 | 10.2 | J 9.8 | J 10.0 | 9.0 | 8.8 | 9.0 ^S | 8.6 | |
| 29 | J 10.4 | 10.3 | J 10.2 ^S | S | I 8.9 ^C | 8.5 | 9.2 | 10.9 | 10.4 | 8.7 ^{SH} | 8.8 | 9.8 | 10.2 | 10.5 | 10.4 | 10.7 | 11.6 | 11.6 | 10.4 | J 9.5 ^S | I 9.4 ^S | J 10.1 | J 10.7 ^S | 10.4 ^S | |
| 30 | I 9.7 ^S | I 9.4 ^S | 8.7 | 9.0 | I 9.4 ^S | 9.0 ^H | 10.2 | I 9.5 ^S | 8.8 | 9.1 | 8.9 | 10.0 | 10.9 | 12.0 | 11.1 | 11.0 | 10.9 | 11.2 | 11.2 | b 9.0 ^C | 8.7 | 9.1 ^{SH} | 9.0 ^C | 8.9 ^H | |
| 31 | P 20.0 ^D | 20.0 ^{CH} | 20.0 ^C | 8.5 | 8.4 ^H | 8.8 | 10.4 | 11.0 | I 9.5 ^C | 8.5 | 8.5 ^H | 8.7 | 9.0 ^S | 10.3 | 11.0 | 11.7 | 12.2 | 13.2 | 13.5 | 12.1 ^S | 12.1 ^S | 10.6 ^{SH} | 11.3 | 11.1 | |
| No. | 25 | 27 | 27 | 25 | 27 | 26 | 27 | 27 | 30 | 29 | 29 | 31 | 30 | 30 | 31 | 31 | 31 | 31 | 31 | 30 | 29 | 28 | 25 | 27 | |
| Median | 9.5 | 9.4 | 9.1 | 8.5 | 7.8 | 7.6 | 8.5 | 9.3 | 9.0 ^H | 8.9 ^H | 9.2 | 9.7 | 10.2 | 10.6 | 11.0 | 11.0 | 11.0 | 11.0 | 11.1 | 10.4 | 9.5 | 9.0 | 9.2 | 9.3 | |
| | 10.3 | 10.4 | 10.2 | 9.0 | 8.7 | 8.5 | 9.1 | 9.7 | 9.3 | 9.3 | 9.6 | 10.2 | 10.6 | 10.9 | 11.3 | 11.4 | 11.6 | 11.7 | 11.2 | 10.2 | 9.5 | 9.8 | 9.2 | 9.3 | |
| | 9.0 | 8.9 | 8.4 | 7.6 | 7.1 | 7.2 | 7.8 | 8.6 | 8.5 | 8.4 | 8.5 | 9.0 | 9.7 | 10.1 | 10.1 | 10.1 | 10.3 | 10.2 | 9.9 | 9.1 | 8.6 | 8.6 | 8.8 | 8.9 | |
| | 1.3 | 1.5 | 1.8 | 1.4 | 1.8 | 1.3 | 1.3 | 1.1 | 0.8 | 0.9 | 1.1 | 1.2 | 0.9 | 0.8 | 1.2 | 1.3 | 1.3 | 1.5 | 1.3 | 1.1 | 0.9 | 1.2 | 1.1 | 1.3 | |

foF2

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

The Radio Research Laboratories, Japan.

Y 1

IONOSPHERIC DATA

Lat. $31^{\circ} 12.6' N$
 Long. $130^{\circ} 37.7 E$

Yamagawa

foF1

135° E Mean Time (GMT.+ 9h.)

Jul. 1957

| 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 | | | | | | | | | | 7.2 | L | 6.1 | A | 6.5 | 6.3 | L | 5.9 | A | | | | | | | |
| 2 | | | | | | | | | | A | 6.1 | 6.1 | 6.2 | 6.2 ^M | 6.0 ^M | 5.7 | 5.6 ^M | L | | | | | | | |
| 3 | | | | | | 2.6 | 4.1 | 4.7 | L | 5.5 | 5.4 | 5.7 | 6.0 | 5.8 ^M | 5.9 | 5.6 | 5.6 ^M | | A | | | | | | |
| 4 | | | | | | | | L | L | | | L | 6.2 | 6.4 ^C | 6.7 ^M | 5.9 | 5.8 | 5.6 | A | | | | | | |
| 5 | | | | | | | | | | C | 6.2 ^M | 6.5 | 6.2 | 6.1 | 6.2 ^M | 5.6 | 5.5 | 5.1 | L | | | | | | |
| 6 | | | | | | | C | C | C | C | L | A | 6.4 | 6.4 | 6.2 | 6.5 ^M | 6.0 | 5.5 ^L | L | | | | | | |
| 7 | | | | | | | | C | | | 6.5 ^M | 6.5 | 6.5 | 6.5 ^M | 6.0 | 5.8 | 5.6 | L | 4.5 ^L | | | | | | |
| 8 | | | | | | | | | | | 6.1 | 6.3 | 6.1 ^M | C | 5.8 ^M | 6.1 ^M | 5.6 | L | L | | | | | | |
| 9 | | | | | | | | L | | | 6.4 ^M | 6.2 | 6.2 | 6.2 | 6.3 ^M | 6.2 | 5.8 | 5.2 | L | | | | | | |
| 10 | | | | | | | | L | | | 5.3 | 6.1 ^M | 6.5 ^M | 6.1 | A | A | A | L | A | | | | | | |
| 11 | | | | | | | | L | 5.3 | | 5.3 | 6.1 ^M | 6.2 | 6.1 | 6.1 | 5.9 ^M | 5.9 ^M | 5.1 ^M | L | | | | | | |
| 12 | | | | | | | | L | | | 6.5 | 5.9 | 6.2 | A | A | 5.9 | 5.8 | A | A | | | | | | |
| 13 | | | | | | | | L | L | L | 6.2 | 6.1 | 6.2 | A | A | 5.9 | 5.8 | A | A | | | | | | |
| 14 | | | | | | | | L | | L | 6.3 | 6.0 ^M | 6.5 ^M | 6.5 | 6.2 | 5.9 | 5.8 | A | A | | | | | | |
| 15 | | | | | | | | L | | | A | A | A | 6.5 | 5.7 | 6.5 ^M | 6.2 ^M | A | A | | | | | | |
| 16 | | | | | | | | L | L | 5.4 | L | 6.0 | A | 5.7 | 5.8 ^R | 6.1 | A | 5.3 | A | | | | | | |
| 17 | | | | | | | | L | | | A | C | C | A | A | 5.7 | 5.3 | 5.1 | A | | | | | | |
| 18 | | | | | | | | L | L | 5.9 ^M | 6.5 | 6.3 | 6.2 | A | A | 5.9 | A | 5.3 | A | | | | | | |
| 19 | | | | | | | | | | 5.7 | A | 5.7 | 6.0 | 5.7 | 5.7 | 5.6 | 5.7 | 5.3 | A | | | | | | |
| 20 | | | | | | | | | | 5.5 | A | 5.5 | 6.8 | 6.2 | 6.1 | 6.2 | 6.1 | 5.7 | A | | | | | | |
| 21 | | | | | | | | C | C | | A | A | 6.7 ^M | 6.3 ^M | 6.3 ^M | 6.3 | B | A | A | | | | | | |
| 22 | | | | | | | | | | | | 6.2 | 6.2 | 6.1 | 5.9 ^M | 6.0 ^M | 6.1 | 5.4 | 4.8 ^L | | | | | | |
| 23 | | | | | | | | | | | 6.3 | 6.0 | 6.3 | 6.3 | 6.3 | 5.7 | 5.8 | L | | | | | | | |
| 24 | | | | | | | | | | | 6.2 | 6.5 | 6.6 | 6.3 | 6.5 | 6.1 | 5.8 | 5.7 | | | | | | | |
| 25 | | | | | | | | | | | L ^M | A | A | A | A | 6.1 | 5.8 | 5.4 ^L | L | | | | | | |
| 26 | | | | | | | | | | | 6.5 ^M | 6.8 | A | 6.1 | 6.3 ^M | 5.8 | L | 5.5 ^L | A | | | | | | |
| 27 | | | | | | | | | | | 6.3 ^L | 6.3 | 6.2 | 6.2 | 5.7 ^M | 5.8 ^M | 6.3 | L | L | | | | | | |
| 28 | | | | | | | | | | | 6.4 | 6.2 | A | 5.8 | 6.2 | 5.8 | 5.3 | A | | | | | | | |
| 29 | | | | | | | | L | L | | L ^M | 5.9 | 6.1 | 5.8 | 5.4 | 5.8 | 5.4 | L ^M | | | | | | | |
| 30 | | | | | | | | | | | A | A | 6.1 | 6.1 | 5.6 ^M | 5.8 | 5.5 ^L | L | | | | | | | |
| 31 | | | | | | | | L | L | | 6.2 | 6.2 | 6.2 | A | 6.1 | 5.7 | L | 4.4 ^L | | | | | | | |
| No. | | | | | | | | | | 1 | 1 | 1 | 5 | 12 | 22 | 21 | 25 | 25 | 29 | 25 | 16 | 3 | | | |
| Medien | | | | | | | | | | 2.6 | 4.1 | 4.7 | 5.3 | 5.7 | 6.2 | 6.2 | 6.1 | 5.9 | 5.8 | 5.4 | 4.5 | | | | |

The Radio Research Laboratories, Japan.

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

foF1

Y 2

Lat. 31° 12.6' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time (GMT.+9h.)

foE

Jul. 1957

| 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 | | | | | | | 2.40 ^M | 3.05 | 3.60 | 3.85 | 4.00 | 4.00 | 4.10 | 4.05 ^R | 4.00 | 3.70 | A | A | A | | | | | | |
| 2 | | | | | | | C | 3.00 | 3.50 | 4.00 | 3.95 | 4.00 | A | A | 4.05 | 4.00 | C | 3.40 ^M | 2.90 | | | | | | |
| 3 | | | | | | 1.45 | 2.60 | 3.00 | 3.45 | 3.75 | 4.20 | 4.30 ^S | 4.50 | 4.00 ^C | 4.00 | 4.00 | 3.55 | 3.50 | 3.10 | 2.00 | | | | | |
| 4 | | | | | | S | 2.20 | 2.95 | 3.50 ^R | 4.00 | 3.95 | 4.10 | 4.20 | 4.10 | A | A | A | A | A | | | | | | |
| 5 | | | | | | | 2.25 | A | A | C | 4.00 | 4.10 | 4.25 | 4.30 | 4.20 | 4.30 ^R | 3.65 | 3.25 | 2.90 | R | | | | | |
| 6 | | | | | | | C | C | C | C | 4.20 | 4.10 | 4.10 | 4.00 | R | 3.90 | 3.60 | 3.20 ^R | 2.80 | 1.85 | | | | | |
| 7 | | | | | | | C | C | R | 3.25 | 4.10 | 4.20 | 4.30 | 4.30 | 4.05 | 4.00 | 3.65 ^R | 3.30 | 2.70 | 1.85 | | | | | |
| 8 | | | | | | | 2.10 | 2.75 ^R | 3.40 | 3.70 ^R | 4.00 | 4.00 ^R | A | 4.15 | 4.10 ^R | 4.05 | C | 3.35 | 2.70 | S | | | | | |
| 9 | | | | | | | 2.45 | 3.00 | R | A | 4.30 | 4.20 | 4.00 | C | C | 3.90 | A | 3.90 | A | 1.90 | | | | | |
| 10 | | | | | | | 1.75 | 2.85 | 3.40 | 3.55 ^A | 3.75 ^A | 4.25 | 4.30 | 4.30 | 4.15 | 4.15 ^R | 3.65 | 3.20 | 2.70 | R | | | | | |
| 11 | | | | | | | 1.90 | R | R | 3.55 | A | A | A | A | A | A | A | A | A | R | | | | | |
| 12 | | | | | | | 2.30 | 2.75 | R | A | R | 4.10 | 4.30 | 4.20 | 4.10 | 3.95 ^R | 3.45 | 3.25 | 2.75 | R | | | | | |
| 13 | | | | | | | 2.00 | 2.90 | 3.40 | 3.80 | 4.00 | 4.10 | 4.15 | 4.00 | R | A | A | A | A | A | | | | | |
| 14 | | | | | | | 2.20 | 2.80 | 3.35 | 3.65 ^S | 4.00 ^R | 4.20 ^S | 4.20 ^R | R | 4.10 | 4.00 ^S | R | A | A | A | | | | | |
| 15 | | | | | | | 2.25 | 2.80 | 3.30 | 3.55 | 3.80 | 4.00 ^R | 4.05 | R | A | A | R | A | A | A | | | | | |
| 16 | | | | | | | 2.30 | 3.00 | 3.55 | 3.85 | 4.10 | 4.25 | 4.15 | 4.00 | R | A | A | A | A | A | | | | | |
| 17 | | | | | | | 1.90 | 2.80 | 3.40 | 3.65 | 4.00 | 4.10 | 4.00 | 4.00 | C | R | R | 3.30 | 2.70 ^R | S | | | | | |
| 18 | | | | | | | A | 2.70 | 3.10 ^A | 3.50 | 3.90 | 4.00 | 4.20 ^R | 4.10 | 4.10 | 3.90 | 3.40 ^R | R | A | | | | | | |
| 19 | | | | | | | 2.00 | 2.95 | 3.50 | 3.85 ^R | 4.00 | 4.10 | 4.20 | 4.20 | 4.20 | 3.90 | 3.65 | 3.35 | 2.70 | 1.65 | | | | | |
| 20 | | | | | | | 2.05 | 2.80 | 3.30 | C | 3.95 | 4.15 | 4.25 | 4.10 ^R | 4.00 | A | 3.80 ^C | A | A | | | | | | |
| 21 | | | | | | | C | C | R | 3.85 | 4.15 | 4.20 | 4.25 | S | S | 4.00 | 3.70 ^R | 3.40 | 2.80 | S | | | | | |
| 22 | | | | | | | 1.85 | 2.85 ^R | 3.50 ^H | 3.80 ^S | 4.00 | 4.00 | 4.10 | 4.20 | 4.10 ^R | 4.05 | 3.90 | R | A | | | | | | |
| 23 | | | | | | | 1.80 | 3.10 | 3.50 | S | R | A | S | 4.40 | 4.25 | 4.10 | 3.90 ^H | 3.45 | 2.85 | | | | | | |
| 24 | | | | | | | A | A | R | 3.95 | 4.10 ^A | 4.30 | 4.30 ^S | 4.40 ^S | S | 4.10 | 3.90 | 3.50 ^H | 2.95 | S | | | | | |
| 25 | | | | | | | A | A | A | S | A | 4.10 | 4.25 ^R | 4.40 | 4.30 | 4.15 | 3.95 | 3.90 | 3.55 | 3.00 | S | | | | |
| 26 | | | | | | | S | R | 3.50 | 3.95 | 4.00 | 4.20 | 4.35 | 4.10 | 4.05 | 4.10 | 3.90 | 3.50 ^R | R | S | | | | | |
| 27 | | | | | | | 2.10 | 3.00 | 3.50 | R | A | 4.30 | 4.40 | 4.30 | 4.00 | 4.00 | A | A | A | | | | | | |
| 28 | | | | | | | 1.90 ^A | 2.85 | 3.35 ^R | 3.80 | 3.95 | 4.05 | 4.10 | 4.10 | 3.95 | A | A | A | A | 2.60 | | | | | |
| 29 | | | | | | | 2.15 | 2.80 | 3.30 | 3.60 | 3.90 | 4.20 | 4.10 | 4.10 | S | A | A | A | A | | | | | | |
| 30 | | | | | | | A | A | A | 3.60 | 3.95 | 4.05 | 4.10 ^R | 4.20 | 4.10 | 3.95 ^C | 3.70 | 3.25 | 2.65 | S | | | | | |
| 31 | | | | | | | A | 2.65 | R | R | 4.10 | 4.10 | 4.10 | 4.10 | 4.10 | 4.00 | 3.70 | 3.30 | 2.50 ^A | 1.70 | | | | | |
| No. | 1 | 21 | 22 | | | | | | 20 | 22 | 27 | 29 | 27 | 26 | 21 | 21 | 18 | 17 | 19 | 6 | | | | | |
| Median | 1.45 | 2.10 | 2.85 | | | | | | 3.40 | 3.80 | 4.00 | 4.10 | 4.20 | 4.10 | 4.10 | 4.00 | 3.70 | 3.35 | 2.75 | 1.85 | | | | | |

foE

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

The Radio Research Laboratories, Japan.

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

135° E Mean Time (GMT. + 9h.)

foEs

Jul. 1957

| 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 | 4.3 | 3.4 | 2.7 | 5.7 | 3.2 | 3.2 | 6.0 | 5.2 | 6.2 | 8.6 | 9.3 | 11.5 | 11.5 | 6.4 | 6.5 | 5.4 | 5.4 | 3.6 | 3.6 | 9.7 | 6.7 | 8.2 | 11.7 | 5.1 | |
| 2 | 3.2 | 5.9 | 5.8 | 4.8 | 5.1 | 5.7 | 3.4 | 4.5 | 3.6 | 8.2 | 5.7 | 5.7 | 8.5 | 3.2 | 4.8 | 4.6 | 3.8 | 3.8 | 4.1 | 3.7 | 2.5 | 2.3 | 2.3 | 2.4 | |
| 3 | 5.9 | 5.7 | C | 3.2 | E | E | 2.7 | 4.0 | 4.1 | 4.7 | 5.0 | 5.0 | 4.5 | 4.5 | 4.6 | 6.8 | 5.9 | 6.2 | 6.5 | 5.7 | C | C | C | S | |
| 4 | 3.8 | 3.0 | 2.7 | 4.3 | 3.3 | 2.3 | 3.7 | 3.8 | 4.8 | 4.9 | 6.8 | 7.3 | 3.3 | 5.8 | 6.1 | 6.8 | 4.4 | 3.4 | 3.4 | 5.7 | 2.1 | S | S | 3.1 | |
| 5 | 3.0 | 5.3 | 3.3 | 3.8 | C | 3.2 | 3.2 | 7.4 | 6.2 | C | 6.2 | 5.3 | 4.8 | 4.5 | 4.4 | 4.3 | 4.2 | 6.7 | 3.9 | 5.7 | 7.1 | C | C | C | |
| 6 | 3.2 | 3.1 | 6.2 | 5.8 | 5.2 | 3.7 | C | C | C | C | 5.3 | 7.7 | 4.4 | 4.5 | 4.4 | 4.4 | 4.8 | 3.7 | 3.3 | 2.4 | 2.6 | 5.7 | 5.8 | 3.0 | |
| 7 | C | C | C | C | C | C | C | C | 5.7 | 5.1 | 4.7 | 4.7 | 4.4 | 5.9 | 4.4 | 5.4 | 4.8 | 3.7 | 3.3 | 2.4 | 2.6 | 5.7 | 5.8 | 3.0 | |
| 8 | S | E | 3.0 | 3.2 | 2.8 | 2.8 | 2.7 | 3.8 | 3.6 | 4.3 | 5.3 | 5.7 | 6.3 | 5.9 | 5.9 | 4.4 | 4.4 | 3.5 | 3.2 | 2.7 | 2.7 | 5.4 | 3.2 | 3.8 | |
| 9 | 2.3 | E | 3.2 | 3.0 | 4.0 | 3.5 | 3.6 | 3.7 | 5.8 | 4.3 | 4.8 | 4.5 | 4.5 | 5.2 | 4.1 | 4.5 | 5.2 | 5.8 | 5.1 | 2.4 | 2.4 | 2.4 | 2.4 | 2.2 | |
| 10 | 2.1 | 2.7 | 6.5 | 3.5 | 3.1 | 2.6 | 3.8 | 3.4 | 4.2 | 6.6 | 6.4 | 5.0 | 4.9 | 4.9 | 4.7 | 4.8 | 4.3 | 5.6 | 2.8 | 1.8 | 2.7 | 2.3 | E | 3.4 | |
| 11 | 3.7 | 3.6 | 2.5 | 2.4 | 2.6 | 1.9 | 4.7 | 4.4 | 5.6 | 3.8 | 4.4 | 4.1 | 4.7 | 5.1 | 9.2 | 8.9 | 8.8 | 6.5 | 10.3 | 11.0 | 5.1 | 2.5 | 3.3 | 3.2 | |
| 12 | 2.2 | E | E | E | E | 2.4 | 3.4 | 3.4 | 5.9 | 5.8 | 5.6 | 4.9 | 4.7 | 4.7 | 4.7 | 4.2 | 6.6 | 4.5 | 5.1 | 3.1 | 4.2 | S | S | S | |
| 13 | 2.0 | E | E | E | E | E | 3.2 | 3.5 | 4.7 | 5.7 | 5.3 | 4.5 | 5.7 | 6.7 | 12.7 | 5.7 | 6.6 | 9.5 | 9.0 | 5.9 | 4.8 | 3.5 | 2.5 | 2.2 | |
| 14 | 2.2 | E | E | E | E | E | E | 3.1 | 3.6 | 4.2 | 4.7 | 4.7 | 4.7 | 4.9 | 5.7 | 4.7 | 5.6 | 7.2 | 10.6 | 7.0 | 7.0 | 5.9 | 3.3 | 2.4 | |
| 15 | 2.1 | 2.5 | 2.2 | 3.2 | 3.6 | E | 2.4 | 5.8 | 3.9 | 5.2 | 8.9 | 9.1 | 9.7 | 4.7 | 6.2 | 7.5 | 4.9 | 7.4 | 7.2 | 4.3 | 7.0 | 5.7 | 3.6 | 2.2 | |
| 16 | S | S | 2.4 | S | E | S | 2.2 | 3.3 | 4.7 | 4.1 | 5.2 | 5.0 | 6.2 | 5.6 | 11.9 | 8.5 | 8.9 | 6.8 | 8.3 | 7.5 | 4.3 | 3.1 | 2.8 | 3.2 | |
| 17 | 7.1 | 4.1 | 5.2 | 3.6 | 3.1 | 3.1 | 4.2 | 4.3 | 4.3 | 6.3 | 13.8 | 13.0 | 11.0 | 5.9 | 8.8 | 6.2 | 6.1 | 4.8 | 9.3 | 8.0 | 3.9 | 3.0 | 3.1 | 2.0 | |
| 18 | 8.7 | 7.0 | 5.9 | 5.4 | 4.2 | 3.5 | 3.6 | 3.4 | 5.2 | 5.6 | 5.0 | 5.0 | 5.0 | 12.9 | 12.2 | 6.1 | 12.6 | 8.5 | 9.7 | 5.8 | 5.5 | 3.0 | 5.8 | 7.2 | |
| 19 | 2.3 | 5.9 | 6.8 | 4.8 | 4.8 | 3.7 | 3.7 | 5.2 | 5.8 | 5.7 | 9.3 | 5.6 | 5.6 | 5.2 | 5.5 | 5.9 | 4.7 | 6.8 | 5.9 | 3.7 | 3.5 | 2.3 | C | C | |
| 20 | 8.9 | 5.9 | 4.3 | 3.6 | 8.8 | 3.7 | 3.3 | 4.8 | 7.2 | 5.9 | 5.6 | 5.1 | 4.6 | 4.9 | 4.4 | 5.9 | 5.9 | 4.6 | 7.5 | 10.5 | 9.4 | 7.0 | 5.3 | 5.9 | |
| 21 | C | C | C | C | C | C | C | C | 4.2 | 5.3 | 5.5 | 8.0 | 12.6 | 5.6 | 4.7 | 6.7 | 4.0 | 4.0 | 6.5 | 5.6 | 5.9 | 3.2 | 2.7 | 2.6 | |
| 22 | 3.8 | 2.8 | 2.3 | S | S | 2.4 | 3.5 | 3.5 | 5.4 | 9.2 | 7.5 | 6.4 | 5.3 | 5.7 | 4.4 | 4.2 | 4.2 | 4.0 | 3.2 | 3.0 | 3.2 | S | S | S | |
| 23 | 5.8 | 3.0 | 2.5 | 2.3 | E | S | 4.7 | 5.7 | 5.9 | 4.7 | 5.5 | 5.7 | 4.7 | 4.6 | 4.9 | 5.2 | 4.8 | 4.3 | 3.2 | 3.0 | 4.0 | 5.7 | 5.9 | 7.3 | |
| 24 | 3.2 | 6.6 | 5.4 | 2.7 | 3.1 | 5.2 | 5.8 | 7.1 | 8.7 | 5.7 | 5.0 | 5.4 | 5.1 | 4.7 | 5.7 | 5.3 | 4.9 | 4.3 | 11.5 | 5.6 | 4.0 | 4.0 | 4.3 | 3.3 | |
| 25 | 7.0 | 7.3 | 3.9 | 3.3 | 2.5 | 4.3 | 3.8 | 4.3 | 6.8 | 5.7 | 4.6 | 5.4 | 7.2 | 8.2 | 7.5 | 4.9 | 4.5 | 3.8 | 3.6 | 2.4 | 5.7 | 4.3 | 4.3 | 3.7 | |
| 26 | 5.5 | 7.0 | 9.2 | 11.3 | 5.8 | 3.9 | 2.5 | 3.8 | 4.6 | 7.5 | 6.1 | 9.2 | 7.7 | 7.4 | 7.4 | 8.6 | 4.9 | 4.9 | 12.2 | 12.0 | 5.7 | 4.3 | 2.3 | 3.6 | |
| 27 | 3.7 | 3.1 | 3.8 | 2.2 | 3.0 | 2.3 | 2.4 | 3.8 | 5.5 | 7.0 | 5.8 | 4.7 | 4.8 | 5.3 | 5.5 | 4.3 | 4.0 | 4.6 | 5.9 | 3.2 | 2.8 | 2.6 | S | S | |
| 28 | S | 3.2 | 4.3 | 3.1 | 3.5 | 4.8 | 3.8 | 3.0 | 4.0 | 5.3 | 7.5 | 4.8 | 4.8 | 11.6 | 12.5 | 7.8 | 5.3 | 5.8 | 5.9 | 6.2 | 3.6 | 3.0 | 3.8 | 3.2 | |
| 29 | S | S | S | E | E | 3.1 | 3.1 | 3.8 | 4.8 | 5.9 | C | 4.8 | 4.7 | 4.7 | 4.4 | 4.4 | 4.8 | 3.6 | 3.4 | 2.9 | 2.9 | 4.0 | 8.0 | 8.5 | |
| 30 | 9.4 | 7.0 | 5.5 | 7.7 | 6.2 | 5.3 | 6.2 | 5.7 | 6.2 | 6.5 | 6.1 | 9.1 | 6.5 | 4.9 | 4.4 | 4.4 | 4.8 | 3.6 | 3.4 | 2.9 | 5.2 | 8.0 | 8.5 | | |
| 31 | 5.5 | 3.7 | 3.6 | 3.8 | 4.7 | 3.8 | 5.3 | 3.7 | 4.1 | 5.6 | 9.0 | 6.1 | 5.4 | 7.2 | 7.6 | 6.5 | 5.1 | 4.0 | 4.0 | 3.5 | 3.2 | 3.1 | 4.3 | 2.5 | |
| No. | 25 | 26 | 27 | 27 | 26 | 25 | 28 | 28 | 30 | 29 | 30 | 31 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 25 | 24 | 23 |
| Median | 3.7 | 3.5 | 3.6 | 3.3 | 3.2 | 3.2 | 3.8 | 3.8 | 5.4 | 5.7 | 5.6 | 5.4 | 5.3 | 5.2 | 5.5 | 5.2 | 4.9 | 4.9 | 5.9 | 4.3 | 4.1 | 3.5 | 3.2 | 3.2 | |
| U.Q | 5.8 | 5.9 | 5.5 | 4.8 | 4.8 | 3.8 | 4.6 | 4.6 | 5.9 | 6.6 | 6.8 | 7.3 | 7.2 | 5.9 | 7.6 | 6.2 | 5.9 | 6.8 | 9.0 | 6.2 | 5.6 | 5.6 | 5.8 | 4.8 | |
| L.Q | 2.3 | 2.8 | 2.5 | 2.7 | E | 2.3 | 2.4 | 3.4 | 4.2 | 5.0 | 4.9 | 4.9 | 4.6 | 4.7 | 4.4 | 4.3 | 4.0 | 3.8 | 3.5 | 2.9 | 3.1 | 2.7 | 2.8 | 2.4 | |
| Q.R | 3.5 | 3.1 | 3.0 | 2.1 | | 1.5 | 1.4 | 1.2 | 1.7 | 1.6 | 1.8 | 2.4 | 2.6 | 1.2 | 3.2 | 1.9 | 1.9 | 3.0 | 5.5 | 3.3 | 2.5 | 2.9 | 3.0 | 2.4 | |

The Radio Research Laboratories, Japan.

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

foEs

Y 4

IONOSPHERIC DATA

Jul. 1957

f_oF₂

135° E Mean Time (GMT.+ 9h.)

Yamagawa

Lat. 31° 12.6' N
Long. 130° 37.7' E

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|-----|------------------|-----|-----|-----|-----|------------------|------------------|------------------|------------------|-----|------------------|-----|-----|------------------|------------------|-----|-------------------|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2.3 | 1.7 | 1.3 | 2.3 | 2.2 | 2.8 | 4.6 | 4.6 | 6.0 | 4.2 | 5.4 | 4.8 | 7.5 | 5.0 | 5.0 | 5.3 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
| 2 | 2.8 | A | 4.1 | 2.7 | 3.9 | 3.0 | A | 4.3 | 4.6 | A | 4.9 | 5.0 | 4.9 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 | 4.6 |
| 3 | 2.6 | 1.3 | C | E | E | 2.7 | 3.9 | 3.9 | 3.9 | 4.5 | 4.7 | 4.8 | 4.8 | 4.5 | 4.5 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 4 | 2.2 | 1.4 | E | 2.3 | 2.2 | S | 3.0 | 3.4 | 3.9 | 4.2 | 4.6 | 4.9 | A | A | 5.2 | 4.6 | 5.5 | 4.7 | 4.3 | A | 2.6 | C | C | C | S |
| 5 | 2.1 | 2.5 | 2.0 | 1.9 | C | C | G | G | A | C | 4.4 | 4.5 | 4.7 | G | G | G | 4.2 | 4.0 | G | G | G | E | S | S | 1.7 |
| 6 | 1.7 | C | C | 2.1 | 2.2 | 1.8 | C | C | C | C | 5.0 | A | 4.4 | 4.4 | G | G | G | 4.1 | 4.7 | A | 3.5 | 6.7 | C | C | C |
| 7 | C | C | C | C | C | C | C | C | 4.1 | 5.0 | G | G | G | G | 4.8 | 4.3 | 4.7 | 3.9 | 3.5 | 2.7 | 2.2 | 1.7 | 2.5 | 1.7 | A |
| 8 | S | E | 1.3 | 1.7 | 1.4 | S | 2.6 | A | A | 4.2 | 5.0 | 4.5 | 4.5 | 4.3 | 5.0 | 4.3 | 4.3 | G | G | A | 2.6 | 1.9 | A | A | 1.8 |
| 9 | S | E | 1.3 | 1.3 | 1.9 | 1.7 | G | G | 3.8 | 4.2 | 4.2 | G | 4.4 | 4.8 | 4.1 | A | A | G | G | A | 2.6 | 2.4 | S | 2.1 | S |
| 10 | S | 2.9 ^B | 3.0 | 2.4 | 1.9 | S | 3.0 | 3.3 | 4.2 | 4.7 | 4.3 | 4.7 | G | 4.8 | G | 4.5 | 4.5 | 4.3 ^B | 3.7 | 3.7 | 2.4 | S | S | 2.1 | S |
| 11 | 2.7 | A | 1.9 | 1.6 | 1.6 | S | G | G | 4.4 ^B | 3.9 ^B | 4.2 | 4.6 | 4.6 | 4.7 | 4.8 | G | 7.0 | 4.9 | 4.9 | 6.6 | 4.3 | A | 4.0 | 2.8 | S |
| 12 | S | E | E | E | E | S | G | 3.2 | 3.9 | 4.3 | G | 4.4 | G | 4.6 | 8.9 | 8.9 | 7.0 | 4.5 | 4.8 | 8.0 | A | 4.3 | 1.7 | 1.7 | 1.7 |
| 13 | S | E | E | E | S | E | G | 3.1 | G | 4.2 | 4.9 | 4.6 ^B | 4.7 | 4.7 | 4.4 | 4.2 | 4.2 | G | 3.9 | 3.7 | 3.0 | 2.5 | S | S | S |
| 14 | F | E | E | E | E | E | G | G | 3.6 | 4.2 | 4.6 | G | G | 5.5 | 6.1 | 6.3 ^B | 4.5 | A | 8.7 | A | 3.0 | 2.6 | A | S | S |
| 15 | S | 1.9 | 1.7 | 1.7 | 2.6 | E | 2.5 ^B | 3.5 ^B | 5.1 | 4.3 | 7.5 | 7.0 | 7.5 | 4.7 | 4.8 | G | G | 4.3 ^B | 6.6 | A | 4.8 | A | 4.9 | 1.7 | S |
| 16 | S | S | S | E | E | S | G | G | 3.9 | 4.4 ^B | 5.1 | 4.6 | 6.2 | 5.3 | 8.3 | 4.8 | 4.8 | 4.9 | 6.6 | 6.7 | 4.3 | A | 4.0 | 2.8 | S |
| 17 | A | 1.7 | 3.4 | 2.2 | 1.7 | S | G | 3.2 | 4.3 | 5.1 | A | C | C | C | C | 7.8 | 5.1 | 6.6 | 4.1 | 5.4 | 3.1 | A | 2.1 | S | 1.8 |
| 18 | 4.6 | A | 2.8 | 2.7 | 2.5 | 2.0 | 2.3 | 3.0 | 3.9 | 4.6 | 4.4 | 4.7 | 4.7 | 4.7 | 4.9 ^B | A | 5.6 | 7.9 | 4.8 | A | 2.5 | A | 1.8 | 2.3 | E |
| 19 | E | 1.3 | A | 2.5 | 1.7 | 1.4 | 2.7 | 4.2 | 4.5 | 4.5 | 6.8 | 5.2 | 5.2 | 5.2 | 4.8 | 5.0 | G | G | 5.5 | A | 2.9 | E | 1.7 | 2.0 | 3.9 |
| 20 | 4.3 | 4.6 | 2.6 | 1.9 | 2.2 | 2.3 | G | 4.7 | 6.3 | A | 5.6 | 5.0 | 4.6 | 4.6 | 4.7 | 4.4 | 4.2 | G | 3.9 | 5.3 | 2.2 | E | E | C | C |
| 21 | C | C | C | C | C | C | C | C | 4.1 | 5.1 | 5.2 | 7.2 | A | 4.8 | G | 5.5 | 4.2 | 4.2 | G | 3.9 | 5.3 | 2.2 | E | E | C |
| 22 | 2.3 | 1.8 | E | C | S | E | G | 3.3 | 4.1 | 5.6 | 4.5 | 4.5 | 5.1 | 4.6 | 4.4 | G | 5.5 | 10.0 ^B | 6.1 | 8.5 | 8.6 | 4.4 | 2.0 | 2.8 | |
| 23 | 2.0 | E | S | 1.5 | E | S | G | 3.2 | 3.9 ^B | 4.4 | 4.9 | 4.8 | 4.6 | 4.6 | 4.4 | G | G | G | 3.8 | 4.8 | 3.1 | 2.4 | E | 2.0 | S |
| 24 | E | A | A | E | 1.6 | 2.5 | 4.4 | 4.3 | 4.6 | 4.6 | 4.3 | 4.8 | 4.7 | G | 5.0 | 4.6 | 4.6 | 4.7 | G | 3.1 | 2.1 | 2.1 | S | S | S |
| 25 | 3.3 | 2.1 | 2.3 | 2.0 | 1.3 | 2.1 | 2.4 | 3.0 | 4.0 | 4.5 | 4.5 | 4.7 | 6.7 | G | 6.5 | 6.0 | 4.7 | 4.5 | 4.2 | A | 5.0 | 3.4 | 2.1 | A | 3.4 |
| 26 | 3.5 | 2.8 ^S | 5.1 | 3.9 | 2.4 | 1.6 | 2.4 | 3.4 | 4.1 | 4.1 | 4.2 | 5.1 | 6.7 | 4.6 | 5.2 | G | G | 4.6 | 4.2 | A | 4.9 | 1.9 | A | 2.4 | 2.4 |
| 27 | 1.9 | 2.1 | 2.0 | 1.7 | 1.7 | S | 2.3 | G | G | 4.1 ^B | 4.2 | G | 4.6 | 5.1 | 4.4 | 4.2 | 4.2 | 4.5 ^B | 3.5 | G | 2.1 | S | S | S | E |
| 28 | S | S | 2.0 | 1.7 | 1.7 | E | G | G | 3.9 | G | 5.2 | 4.5 | 5.3 | G | 5.2 | 5.1 | 4.4 | 4.4 | 3.9 | 4.1 | 2.6 | 2.4 | S | S | S |
| 29 | S | S | E | E | E | E | G | G | 4.1 | 4.1 | C | G | G | G | G | 4.5 | 4.1 | 4.4 | 3.4 | 3.2 | 2.2 | 3.0 | E | A | E |
| 30 | 4.0 | 2.5 | 1.8 | 3.5 | 4.7 | 2.6 | 4.0 | 3.3 | 4.1 | 5.2 | 5.7 | 8.4 | 6.5 | 4.8 | G | G | G | 4.7 | A | 3.2 | 2.6 | 4.3 | 5.6 | A | 2.1 |
| 31 | 2.0 | 1.7 | 2.2 | 1.9 | 2.5 | 2.2 | 2.3 | 3.3 | 3.9 | 5.4 | 4.2 | 4.6 | A | 4.4 | 5.2 | 5.5 | 4.3 | 4.3 | 3.6 | 2.8 | 2.2 | S | E | S | S |
| No. | 20 | 25 | 26 | 29 | 26 | 19 | 28 | 28 | 30 | 29 | 30 | 30 | 30 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 26 | 22 | 18 | 16 |
| Median | 2.3 | 1.8 | 2.0 | 1.7 | 1.7 | 1.7 | 2.3 | 3.2 | 4.1 | 4.4 | 4.6 | 4.7 | 4.7 | 4.7 | 4.7 | 4.5 | 4.3 | 4.3 | 3.9 | 5.2 | 2.6 | 2.8 | 2.3 | 2.2 | 2.0 |

The Radio Research Laboratories, Japan.

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

f_oF₂

Y 5

IONOSPHERIC DATA

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

135° E Mean Time (GMT.+ 9h.)

f - min

Jul. 1957

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|--------------------------------|--------------------------------|------|------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------|--------------------------------|-------------------|------|------|------|------|------|--------------------------------|--------------------------------|------|------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 1 | E | 1.05 | E | E | 1.00 | F _{1.30} ^S | F _{1.80} ^S | 1.80 | 2.00 | 2.00 | 2.50 | 2.40 | 2.50 | 3.60 | 2.20 | 2.20 | 1.95 | 1.65 | E | E | F _{1.65} ^S | E | E | E |
| 2 | E | 1.00 | E | 1.00 | 1.00 | 1.10 | 1.60 | E | 1.60 | 1.95 | 2.35 | 2.20 | 2.20 | 2.25 | 2.45 | 2.30 | 2.60 | 1.95 | E | E | F _{1.70} ^S | E | E | F _{1.65} ^S |
| 3 | E | E | C | 1.00 | 1.05 | 1.00 | 1.70 | 1.95 | 2.00 | 2.00 | 2.80 | 2.75 | 2.20 | 3.35 | 2.20 | 2.20 | 1.85 | 2.40 | 2.20 | E | E | E | E | E |
| 4 | E | E | 1.00 | 1.00 | E | 1.05 | E | 1.60 | 1.60 | 1.70 | 2.20 | 2.20 | 2.20 | 2.50 | 2.20 | 1.70 | E | E | E | C | C | E | E | E |
| 5 | E | E | E | E | C | C | E | 1.60 | 1.60 | 1.70 ^C | 2.20 | 2.20 | 2.60 | 2.65 | 2.50 | 2.40 | 2.25 | E | E | E | F _{1.65} ^S | F _{2.00} ^S | E | E |
| 6 | E | 1.10 | E | E | 1.20 | 1.15 | C | C | 1.95 ^C | 1.90 | 2.00 | 2.00 | 2.20 | 1.80 | 2.00 | 1.90 | 1.60 | E | E | 1.60 | E | C | C | C |
| 7 | C | C | C | E | C | C | C | C | 1.70 | 2.00 | 1.70 | 2.20 | 2.20 | 2.50 | 2.30 | 2.20 | 1.90 | 1.60 | E | E | F _{1.65} ^S | E | E | E |
| 8 | E | E | E | E | E | F _{1.40} ^S | E | E | 1.70 | 1.70 | 1.70 | 2.20 | 2.30 | 2.70 | 2.70 | 2.30 | 2.00 | 1.75 | E | E | F _{1.65} ^S | E | E | E |
| 9 | E | 1.00 | E | E | 1.00 | F _{1.30} ^S | E | E | 1.60 | 1.70 | 1.85 | 1.70 | 1.70 | 2.20 | 2.00 | 1.85 | 1.80 | 1.60 | E | 1.60 | F _{1.65} ^S | E | E | E |
| 10 | E | 1.35 | E | E | E | F _{1.60} ^S | 1.60 | 1.60 | 1.60 | 1.70 | 1.70 | 2.85 | 2.70 | 2.90 | 2.90 | 2.40 | 1.95 | 1.70 | 1.70 | 1.60 | E | E | E | 1.65 |
| 11 | E | 1.60 | 1.30 | E | 1.30 | F _{1.60} ^S | 1.60 | 1.60 | 1.70 | 1.60 | 1.90 | 1.60 | 2.70 | 2.80 | 2.90 | 2.70 | 1.65 | 1.80 | E | E | E | E | E | E |
| 12 | F _{1.70} ^S | 1.30 | 1.30 | 1.30 | 1.40 | F _{1.65} ^S | 1.70 | 1.65 | 1.70 | 1.70 | 2.20 | 2.40 | 2.70 | 3.00 | 2.90 | 2.80 | 1.60 | 1.70 | 1.60 | E | F _{1.65} ^S | E | E | F _{1.70} ^S |
| 13 | F _{1.65} ^S | F _{1.65} ^S | 1.30 | 1.30 | F _{1.70} ^S | 1.45 | 1.60 | 1.60 | 1.70 | E _{2.20} ^C | 1.85 | 3.10 | 2.70 | 3.00 | 2.90 | 2.80 | 2.80 | 2.80 | 1.60 | 1.60 | E | E | E | E |
| 14 | E | F _{1.35} ^S | 1.25 | E | 1.25 | 1.40 | 1.70 | 1.60 | 1.60 | 1.70 | 2.75 | 2.85 | 2.85 | 2.85 | 1.90 | 1.70 | 1.85 | 1.60 | E | E | E | E | E | E |
| 15 | F _{1.65} ^S | 1.40 | 1.25 | 1.35 | 1.25 | 1.45 | 1.65 | 1.60 | 1.60 | 1.70 | 1.80 | 2.70 | 2.70 | 2.40 | 1.85 | 1.85 | 1.75 | E | 1.60 | E | E | E | E | E |
| 16 | F _{1.70} ^S | 1.40 | 1.25 | 1.30 | 1.25 | F _{1.40} ^S | 1.60 | 1.90 | 2.00 | 2.40 | 2.80 | 2.40 | 2.40 | 2.20 | 2.20 | 2.20 | 1.90 | E _{2.70} ^B | E | E | E | E | E | E |
| 17 | E | E | E | E | 1.00 | F _{1.25} ^S | 1.60 | E | E | E | 1.60 | 1.70 | 1.90 | 1.75 | 2.20 | 1.90 | 2.65 | 1.60 | E | E | E | E | E | E |
| 18 | E | E | E | E | 1.00 | E | E | F _{1.65} ^S | 1.65 | 1.70 | 1.90 | 1.95 | 2.85 | 2.20 | 2.20 | 2.20 | 1.70 | 1.60 | E | E | F _{1.70} ^S | F _{1.70} ^S | E | E |
| 19 | F _{1.70} ^S | E | E | 1.00 | E | 1.00 | E | E | 1.65 | 1.60 | 1.90 | 1.95 | 2.85 | 2.20 | 2.20 | 1.90 | 1.65 | E | 1.60 | E | E | E | E | E |
| 20 | E | E | E | E | 1.00 | 1.20 | F _{1.65} ^S | 1.70 | 1.95 | 1.80 | 2.20 | 2.20 | 2.20 | 2.30 | 2.20 | 1.95 | 1.80 | E | E | E | F _{1.70} ^S | E | E | C |
| 21 | C | C | C | C | C | C | C | C | 1.60 | 2.20 | 2.60 | 2.20 | 2.20 | 2.20 | 2.20 | 1.95 | E _{5.20} ^B | 1.70 | 1.60 | E | E | F _{1.70} ^S | E | E |
| 22 | F _{1.70} ^S | 1.00 | 1.00 | 1.05 | F _{1.30} ^S | 1.15 | F _{1.70} ^S | 2.10 | 1.75 | 1.85 | 1.90 | 2.85 | 2.30 | 2.40 | 2.30 | 2.20 | 2.00 | 1.95 | E | E | E | E | F _{1.70} ^S | E |
| 23 | E | 1.30 | 1.00 | 1.00 | 1.05 | F _{1.25} ^S | E | E | 1.90 | 2.70 | 2.20 | 2.40 | 2.70 | 2.40 | 2.20 | 2.30 | 1.95 | 1.60 | 1.60 | E | F _{1.65} ^S | E | E | F _{1.70} ^S |
| 24 | E | E | 1.00 | E | 1.00 | 1.10 | E | E | 1.65 | 1.75 | 3.20 | 2.40 | 2.20 | 2.80 | 2.50 | 2.20 | 2.20 | 1.60 | E | E | F _{1.70} ^S | E | E | E |
| 25 | E | 1.00 | E | 1.05 | 1.10 | 1.15 | E | 1.60 | E | 1.70 | 2.00 | 2.50 | 2.40 | 2.20 | 2.20 | 2.00 | 2.20 | 1.85 | E | E | E | E | E | E |
| 26 | E | F _{1.60} ^S | E | 1.00 | 1.00 | 1.00 | E | E | 1.70 | 1.90 | 1.90 | 2.00 | 2.20 | 2.20 | 2.00 | 2.00 | 1.70 | E | E | E | E | F _{1.65} ^S | E | E |
| 27 | E | 1.00 | 1.00 | E | E | F _{1.40} ^S | E | 1.60 | 1.60 | 1.85 | 2.30 | 2.40 | 2.70 | 2.80 | 2.60 | 2.50 | 2.40 | 2.00 | E | E | F _{1.65} ^S | E | E | F _{1.65} ^S |
| 28 | E | F _{1.65} ^S | 1.00 | 1.05 | E | 1.10 | E | E | 1.70 | 1.70 | 1.90 | 1.60 | 2.20 | 2.40 | 2.20 | 2.60 | 1.70 | 1.60 | 1.60 | E | E | F _{1.70} ^S | E | E |
| 29 | F _{1.70} ^S | F _{1.30} ^S | 1.00 | 1.00 | 1.00 | 1.15 | F _{1.70} ^S | 1.70 | 1.60 | E | 2.25 ^C | 2.35 | 2.40 | 2.30 | 2.30 | 2.30 | 1.90 | 1.60 | 1.60 | E | E | F _{1.65} ^S | E | E |
| 30 | E | 1.00 | E | 1.00 | 1.00 | F _{1.20} ^S | E | E | 1.60 | 1.80 | 1.80 | 2.50 | 2.40 | 2.50 | 2.20 | 1.85 | 1.70 | E | E | E | F _{1.65} ^S | F _{1.70} ^S | E | E |
| 31 | E | E | 1.00 | 1.00 | 1.05 | 1.05 | E | 1.65 | 1.80 | 1.90 | 2.00 | 2.30 | 2.30 | 2.30 | 2.20 | 2.20 | 2.00 | 1.60 | E | E | F _{1.70} ^S | E | E | E |
| No. | 22 | 24 | 28 | 29 | 26 | 17 | 24 | 27 | 30 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 31 | 30 | 20 | 17 | 23 | 25 |
| Median | E | 1.00 | E | 1.00 | 1.00 | 1.10 | 1.30 | 1.60 | 1.60 | 1.80 | 2.00 | 2.20 | 2.30 | 2.40 | 2.20 | 2.20 | 1.90 | 1.60 | E | E | E | E | E | E |

Lat. 31° 12.5' N
Long. 130° 37.7' E

Yamagawa

135° E Mean Time (GMT.+ 9h.)

Jul. 1957

(M3000)F2

| 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 | J 2.40 | 2.30 | 2.30 ^H | 2.30 | 2.35 | 2.70 | I 2.90 ^A | 3.15 | 3.00 | G | 2.80 ^H | 2.85 | 2.55 ^H | 2.70 | 2.65 ^H | 2.65 | 2.65 | 2.65 | 2.80 ^H | 2.70 | 2.15 ^S | 2.50 ^S | 2.55 ^A | 2.60 | |
| 2 | S | J 2.65 | 2.95 | 3.15 | 2.65 | 2.75 | 2.75 | 2.90 | 3.00 | A | 2.70 | 2.65 | 2.75 | 2.70 | 2.65 | 2.80 | 2.85 | 2.85 | 2.70 | 2.60 | I 2.40 | 2.40 ^R | 2.45 | 2.55 ^K | |
| 3 | 2.25 | 2.40 | I 2.40 ^C | 2.45 | 2.30 | C | C | C | 2.65 | C | C | 2.60 | 2.70 | 2.55 ^R | 2.45 | 2.60 | 2.75 | 2.65 | 2.50 | J 2.35 | 2.35 | 2.40 | 2.45 | 2.50 | |
| 4 | 2.75 | 3.05 ^S | 3.25 | 2.40 | 2.40 | 2.45 | 3.05 | J 3.15 | 3.05 | 2.90 ^H | 2.70 | 2.55 | 2.75 | 2.70 | 2.60 | 2.70 | 2.65 | 2.70 | 2.90 | J 2.80 | C | C | C | 2.50 ^S | |
| 5 | J 2.70 | 2.85 | 2.95 ^C | C | C | C | 2.95 | 2.95 ^H | 2.85 ^I | I 2.80 ^C | 2.75 | 2.40 | 2.55 | 2.50 | 2.35 | 2.45 | 2.70 | 2.70 | 2.90 | J 2.30 | 2.45 ^C | 2.25 | 2.30 ^C | 2.30 ^C | |
| 6 | J 2.85 | 2.95 | 2.80 | 2.35 | 2.40 | 2.55 ^C | C ^H | C | C | I 2.65 ^C | 2.60 ^S | 2.80 | 2.55 ^H | 2.70 | 2.75 | 2.75 | 2.75 | 2.75 | J 2.70 | J 2.70 | 2.55 ^S | C | C | C | |
| 7 | C | C | C | C | C | C | C | C | 2.75 | 2.70 ^H | 2.55 | 2.60 | 2.70 | 2.60 | 2.65 | 2.65 | 2.65 | 2.75 | 2.85 | 2.75 | 2.45 | 2.40 | 2.40 | 2.50 | |
| 8 | 2.55 ^S | 2.50 | 2.65 ^S | 2.70 | J 2.65 ^H | J 2.75 ^H | 3.10 | 2.75 ^H | 2.75 ^H | 2.65 ^H | 2.45 | 2.40 | 2.60 | 2.45 | 2.55 | 2.60 | 2.70 | 2.85 | 2.85 | 2.50 ^S | 2.50 | J 2.55 | 2.50 | 2.60 | |
| 9 | 2.65 | 2.75 | 2.90 | 2.70 | 2.85 | 2.75 | 2.70 | 2.75 | 2.70 ^H | 2.60 ^H | 2.80 | 2.55 | 2.40 | 2.45 | 2.65 | 2.70 | 2.70 | 2.75 | 2.80 | 2.85 | 2.70 | 2.40 ^S | 2.40 | 2.55 ^S | |
| 10 | 2.55 | 2.50 | 2.85 | 3.05 | 2.85 | 2.80 | 2.95 | 3.10 | 2.60 | 2.55 ^H | 2.65 | 2.60 | 2.55 | 2.60 | 2.65 | 2.65 | 2.65 | 2.80 | 2.75 | 2.75 | 2.40 | 2.45 | 2.55 | 2.60 ^R | |
| 11 | 2.65 | I 2.75 ^R | 2.80 | 2.85 | 2.70 | 2.90 | 3.00 | 3.00 | 3.00 | 2.85 ^H | 2.50 | 2.50 | 2.45 | 2.60 | 2.55 | 2.60 | 2.65 | 2.80 | 2.75 | I 2.75 ^A | 2.55 | 2.55 | 2.60 | 2.70 | |
| 12 | 2.65 | 2.75 | 2.85 | 2.90 | 2.80 | 2.75 | 2.80 | 3.00 | 2.80 ^H | 2.50 ^H | 2.45 | 2.65 | 2.60 | 2.60 | 2.65 | 2.60 | 2.70 | 2.75 | 2.70 | 2.75 | 2.45 | 2.45 | 2.45 | 2.50 | |
| 13 | 2.65 | 2.70 | 2.80 | 2.70 | 2.70 | 2.65 | 3.05 | 3.20 | 2.95 | 2.80 | 2.50 | 2.60 | 2.55 | 2.65 | 2.70 | 2.70 | 2.70 | 2.90 | 2.90 | 2.75 | 2.60 | 2.55 | 2.50 | 2.60 | |
| 14 | 2.55 | 2.65 | 2.85 | 3.05 | 2.80 | 2.70 | 2.90 ^C | 3.10 | 2.95 ^H | 2.60 ^H | 2.40 | 2.55 | 2.60 | 2.65 | 2.70 | 2.70 | 2.70 | 2.70 | 2.85 | 2.75 ^H | 2.70 | 2.60 | J 2.65 | 2.55 | |
| 15 | I 2.65 ^S | 2.60 | 2.70 | 2.75 | 2.90 | 2.75 | 2.90 | 3.25 | 3.00 | 2.15 ^H | 2.35 | 2.40 | 2.55 | 2.65 | 2.75 | 2.60 | 2.70 | 2.80 | 2.85 | 2.75 | 2.70 | 2.60 | 2.70 | 2.65 ^S | |
| 16 | 2.75 | 2.95 | 2.85 | 2.75 | 2.90 | 2.75 | 2.90 | 2.90 | 2.95 | 2.90 ^H | 2.60 | 2.40 | 2.45 | 2.65 | 2.55 | 2.50 | 2.60 | 2.75 | 2.75 | 2.75 | 2.50 | 2.35 | 2.50 | 2.30 | |
| 17 | R | 2.80 | 2.90 | 2.70 | 2.40 | J 2.45 ^F | J 2.55 | 2.70 | 2.35 | 2.50 | A | I 2.60 ^C | C | C | J 2.65 | J 2.60 | 2.70 | 2.60 | 2.85 | J 2.70 | 2.50 | 2.45 | 2.35 | 2.45 | |
| 18 | 2.45 | 2.70 | 2.75 | 2.80 ^V | 2.60 | 2.55 | 2.95 | 3.25 | 3.20 | 2.60 | 2.50 | 2.55 | 2.50 | 2.55 | I 2.60 ^A | 2.55 | 2.60 | 2.70 | I 2.80 ^A | 2.75 ^M | 2.45 | 2.45 ^M | 2.45 | 2.55 ^S | |
| 19 | 2.60 | 2.75 | I 2.70 ^R | 2.60 ^R | 2.50 | 2.55 | J 3.00 | 3.30 | 2.55 ^H | 2.65 | 2.60 | 2.55 | 2.40 | 2.55 | 2.60 | 2.65 | 2.70 | 2.80 | 2.65 | 2.80 | 2.70 ^S | 2.35 | J 2.30 | 2.40 ^S | |
| 20 | 2.55 | I 2.70 ^C | 2.40 | 2.35 | 2.45 | 2.75 | 2.75 | 2.85 | 3.05 | 2.35 ^H | 2.35 | 2.40 | 2.55 | 2.65 | 2.70 | 2.70 | 2.70 | 2.70 | 2.85 | 2.75 ^H | 2.55 | 2.45 | 2.45 | C | |
| 21 | C | C | C | C | C | C | C | C | J 2.90 | 2.75 ^H | 2.55 | 2.50 | 2.55 | 2.60 | 2.65 | 2.65 | 2.75 | 2.75 | J 2.95 | A | 2.55 | I 2.50 ^R | 2.45 | 2.55 | |
| 22 | J 2.65 | 2.70 | 2.90 | 2.95 | 2.70 | 2.80 | J 3.40 | 2.85 ^M | 3.00 | 2.65 ^H | 2.70 | 2.55 | 2.45 | 2.50 | 2.50 | 2.55 | 2.55 | 2.70 | 2.70 | 2.90 | C | R | R | S | |
| 23 | S | FS | S | 2.50 | 2.35 | 2.70 | 2.60 | 2.35 | 2.85 | 2.70 ^H | 2.80 | 2.55 | 2.80 | 2.70 | 2.60 | 2.50 | 2.65 | 2.90 | 2.75 | 2.65 | 2.50 | 2.40 | 2.45 | 2.50 ^S | |
| 24 | 2.50 | 2.75 | 2.80 | 2.65 ^F | 2.70 | J 2.75 ^F | 2.90 | 2.95 ^H | 2.90 | 2.80 | 2.60 | 2.50 | 2.55 | 2.65 | 2.60 | 2.75 | 2.85 | 2.70 | I 2.75 ^A | J 2.80 ^S | 2.60 | 2.40 ^S | 2.60 | 2.50 | |
| 25 | 2.55 | I 2.70 ^S | 2.80 ^S | 2.65 ^F | 2.50 ^F | F | 2.60 | 2.85 ^M | 3.00 ^H | 3.00 ^H | 2.60 | 2.65 | 2.60 | 2.70 | 2.75 | 2.75 | 3.25 | 2.80 | J 2.80 ^S | 2.80 ^S | 2.70 | J 2.45 | 2.50 | 2.50 | |
| 26 | J 2.55 | I 2.50 ^S | J 3.10 ^S | S | I 2.70 ^C | 2.80 | 2.85 | 3.10 | 2.80 ^S | 2.85 ^H | 2.50 | 2.55 | 2.55 | 2.60 | 2.50 | 2.65 | 2.70 | 2.75 | A | A | 2.55 | 2.50 | 2.45 | 2.45 | |
| 27 | 2.60 | 2.65 | 2.75 | J 2.80 | C | I 2.70 ^C | J 2.95 | 3.10 ^S | 3.20 | 2.60 ^H | 2.80 | 2.35 | 2.55 | 2.60 | 2.65 | 2.75 | 2.70 | 2.75 | J 2.85 | J 2.85 | 2.65 | 2.60 | 2.60 | 2.55 | |
| 28 | 2.65 | 2.65 | 2.75 | S | 2.95 | 2.80 | 2.95 | 3.20 | 2.70 ^H | 3.10 ^M | 2.65 ^M | 2.50 | 2.45 | 2.55 | 2.65 | 2.80 | 2.65 | 2.80 | J 2.75 ^S | J 2.75 ^S | 2.60 | J 2.60 ^S | J 2.60 ^S | 2.55 | |
| 29 | J 2.65 | 2.65 | J 2.85 | S | I 2.80 ^C | 2.90 | 3.10 | 3.20 | 3.20 | 2.95 ^H | I 2.70 ^C | 2.50 | 2.50 | 2.50 | 2.60 | 2.65 | 2.80 | 2.85 | 2.80 ^H | 2.70 ^S | 2.50 ^S | J 2.65 | J 2.65 | 2.50 | |
| 30 | I 2.80 ^S | 3.00 ^S | 2.60 ^F | 2.55 | I 2.60 ^S | 2.80 ^H | 3.05 | I 2.95 ^S | 2.90 | 3.00 | 2.80 | 2.75 | 2.65 | 2.75 | 2.80 | 2.70 | 2.75 | 2.85 | 2.95 | C | 2.70 | 2.70 ^{SH} | C | 2.75 ^H | |
| 31 | C | C | C | 2.75 | 2.85 ^M | 2.90 | 3.15 | 3.35 | I 3.15 ^C | 3.00 | 2.70 ^H | 2.80 | 2.65 ^S | 2.60 | 2.70 | 2.65 | 2.65 | 2.80 ^S | 3.00 | 3.10 | 2.80 ^S | 2.75 | 2.75 | 2.65 | |
| No. | 25 | 2.7 | 2.7 | 2.5 | 2.7 | 2.6 | 2.7 | 2.7 | 3.0 | 2.9 | 2.9 | 3.1 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.0 | 2.8 | 2.9 | 2.8 | 2.5 | 2.7 | |
| Median | 2.65 | 2.70 | 2.80 | 2.70 | 2.75 | 2.95 | 3.00 | 2.90 | 2.70 | 2.60 | 2.55 | 2.55 | 2.60 | 2.65 | 2.65 | 2.70 | 2.75 | 2.80 | 2.75 | 2.80 | 2.75 | 2.55 | 2.45 | 2.50 | 2.55 |

Sweep 1.0 Mc to 2.0 Mc in _____ min _____ sec in automatic operation.

(M3000)F2

The Radio Research Laboratories, Japan.

Y 7

IONOSPHERIC DATA

Lat. 31° 12.6' N
Long. 130° 57.7' E

Yamagawa

135° E Mean Time (GMT.+9h.)

Types of Es

Jul. 1957

| 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 | f3 | f3 | f3 | f4 | c3l | c2 | c3 | c2 | c2 | c | c2 | c | c2 | l2 | l2 | l4 | l7 | f2 | f6 | f2 | f4 | f2 | |
| 2 | f5 | f3 | f3 | f4 | f4 | f6 | c3 | f2 | c3 | c3 | c2 | c2 | l2 | l | c | | | f | c2 | f4 | f | f | f | f | |
| 3 | f3 | f | f | f | f3 | lR | c | c | c | c | c | c | c | c | c | l | c | l2 | l2 | l2 | f3 | f2 | f2 | f | |
| 4 | f3 | f | f | f4 | f3 | lR | f2l | f2 | c4 | c | c2 | c2 | c | c2 | l2 | l | l3 | l3 | l4 | | | | | | |
| 5 | f2 | f3 | f4 | f2 | f4 | f2 | l | l | l2 | | c | c | c | c | | f | c | f3 | f3 | c5 | f6 | | | f3 | |
| 6 | f2 | f2 | f4 | f2 | f4 | f2 | lR | lR | c2 | c2 | c2 | c3 | c | c | c | l2l | lR | f3 | l4 | f2 | f2 | f3 | f4 | f4 | |
| 7 | | | | | | | | | c2 | c2 | c | lC | l | c | c | | | f | l4 | c3 | f2 | f3 | f4 | f2 | |
| 8 | | | | | | | | | c2 | c | c | lC | l | c | c | | | f | l2 | c2 | f2 | f4 | f4 | f2 | |
| 9 | f2 | | | | | | | | c2 | c2 | c | c | c | c | c | l | c | l3 | l4 | c | f2 | f4 | f3 | f | |
| 10 | f | f3 | f3 | f2 | f3 | f | c | c2 | c | l2 | c2 | c | c | f | | f | f | c | c | c | f | f | f3 | f3 | |
| 11 | f2 | f3 | f | f2 | f | f | | | l | l | l | l | l | l | l2 | l3 | l3 | l3 | c | c | f2 | f2 | f2 | f2 | |
| 12 | f | | | | | | | | c2 | c2 | c | c | c | c | | f | l4 | c | c2 | c2 | f4 | f | f | f | |
| 13 | f | | | | | | | | f | l4 | l | c | c2 | c3 | l | l3 | l3 | l4 | l3 | f | f | f2 | f2 | f | |
| 14 | f | | | | | | | | f | f | f | c | f | f | c2 | c | c | l4 | l3 | f2 | f3 | f3 | f2 | f | |
| 15 | f | | | | | | | | c3 | c | c4 | c2 | c3 | c | l2 | l2 | f | l4 | c6 | f3 | f3 | l2 | f2 | f | |
| 16 | | | | | | | | | c | c | c | c | c2 | c2 | l2 | l2 | l4 | l4 | l4 | f3 | f4 | f3 | f2 | f3 | |
| 17 | f4 | f2 | f5 | f3 | f2 | f | c | | c2 | c3 | c2 | c | c2 | c3 | l2 | l2 | l4 | l4 | l4 | f3 | f6 | f5 | f4 | f4 | |
| 18 | f4 | f4 | f4 | f3 | f3 | f2 | l | l | l3 | c2l | c | c | f | lC2 | c3 | c3 | c4 | c3 | l6 | f2 | f4 | f2 | f5 | f | |
| 19 | f2 | f2 | f4 | f5 | f | f2 | lR2 | f2 | f | lR | c3 | c2 | f2 | f | f | | | l | c3 | c3 | f2 | f | f3 | f4 | |
| 20 | f2 | f3 | f2 | f3 | f3 | f3 | lR | c2 | c4 | c2 | c3 | f | c | f | c | l | | l3 | l4 | f2 | f | f | f3 | f4 | |
| 21 | f3 | f2 | f | | | | | | lR | c2 | c2 | c2 | c2 | f | | f3 | c | c3 | c4 | c2 | f | f4 | f | f3 | |
| 22 | f2 | f | f2 | | | | | | lR | c3 | c | c | c | c | f | f | | c | l4 | f3 | f2 | f | f | f | |
| 23 | f2 | f3 | f3 | f2 | | | | | c | f | lR | lR | f | f | f | | | | l | f2 | f3 | f | f | f | |
| 24 | f3 | f2 | f4 | f2 | f3 | f2 | l3 | l2 | c3 | c2 | l | c | f | f | c | | | l2 | c2 | c4 | f4 | f2 | f3 | f4 | |
| 25 | f | f | f3 | f5 | f | f2 | l | lC | lR | lR | f | f | f2 | c3 | c2 | c | f | l | l | c2 | f3 | f5 | f6 | f3 | |
| 26 | f | f | f3 | f5 | f | f2 | l | lC | lR | lR | l | c | c2 | c | c2 | c | c2 | c2 | c3 | c4 | f5 | f4 | f | f | |
| 27 | f2 | f | f | f | f2 | f | l | l | lR | lR | l | c | c | c | c | l | l | l | l2 | f | f | f | f | f | |
| 28 | | | | | | | | | f | f | l | l | c2 | c2 | c2 | l3 | l2 | l3 | c3l3 | f7 | f4 | f | f | f | |
| 29 | | | | | | | | | lR | lR | lR | c | c2 | c | l2 | l2 | l2 | l2 | l2 | f3 | f3 | f2 | f4 | f2 | |
| 30 | f3 | f4 | f2 | f4 | f2 | f2 | l3 | l3 | l2 | c2 | c3 | c2 | c2 | f | f | l | c2 | l2 | c3 | c4 | f4 | f7 | f4 | f3 | |
| 31 | f2 | f2 | f | f | f2 | f2 | l2 | lR | lR | f4 | c2 | c | c2 | c | c2 | c3 | c | c | l2 | l2 | f | f2 | f4 | f2 | |
| No. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Median | | | | | | | | | | | | | | | | | | | | | | | | | |

SOLAR RADIO EMISSION · 200 Mc/s

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

HIRAISO

Time in U.T.

| July 1957 | Steady Flux | | | | | Variability | | | | |
|--------------|-------------|-------|-------|-------|-------|-------------|-------|-------|-------|-----|
| | 00-03 | 03-06 | 06-09 | 21-24 | Day | 00-03 | 03-06 | 06-09 | 21-24 | Day |
| 1 | 26 | 17 | 15 | 48 | 22 | 2 | 2 | 1 | 2 | 2 |
| 2 | 75 | 78 | 144 | 76 | 86 | 2 | 2 | 2 | 2 | 2 |
| 3 | 75 | 70 | 89 | 15 | 78 | 2 | 2 | 2 | 1 | 2 |
| 4 | 15 | 21 | 16 | 16 | 16 | 1 | 2 | 2 | 1 | 2 |
| 5 | 22 | 22 | 14 | - | 19 | 2 | 1 | 1 | - | 1 |
| 6 | 25 | 26 | 86 | 23 | 46 | 2 | 2 | 2 | 2 | 2 |
| 7 | 15 | 16 | 19 | - | 16 | 2 | 2 | 2 | 0 | 2 |
| 8 | 10 | 10 | 10 | - | 10 | 1 | 0 | 1 | 1 | 1 |
| 9 | 10 | 11 | 13 | - | 11 | 0 | 0 | 1 | 0 | 0 |
| 10 | 10 | 10 | 10 | - | 10 | 0 | 0 | 0 | 0 | 0 |
| 11 | 10 | 10 | 10 | - | 10 | 1 | 0 | 1 | 0 | 1 |
| 12 | 10 | 10 | 10 | - | 10 | 0 | 0 | 0 | 0 | 0 |
| 13 | 14 | 15 | 15 | - | 15 | 1 | 1 | 1 | 0 | 1 |
| 14 | 10 | 10 | 10 | - | 10 | 0 | 0 | 1 | 1 | 0 |
| 15 | 27 | 16 | - | - | 21 | 1 | 1 | 1 | 1 | 1 |
| 16 | 10 | 10 | 10 | - | 10 | 1 | 1 | 0 | 0 | 1 |
| 17 | 15 | 15 | - | - | 15 | 1 | 1 | 1 | 1 | 1 |
| 18 | 11 | 11 | - | - | 11 | 1 | 1 | 1 | 1 | 1 |
| 19 | 11 | 13 | - | - | 12 | (1) | - | 1 | 0 | 1 |
| 20 | 11 | 12 | - | - | 12 | 1 | 1 | 1 | 1 | 1 |
| 21 | 15 | 13 | - | - | 14 | 1 | 1 | 1 | 1 | 1 |
| 22 | 15 | 15 | - | - | 15 | 1 | 1 | 1 | 1 | 1 |
| 23 | 10 | 10 | - | 23 | 10 | 1 | 1 | 1 | 2 | 1 |
| 24 | 24 | 25 | - | 9 | 24 | 2 | 2 | 2 | 1 | 2 |
| 25 | 11 | 12 | 11 | - | 11 | 1 | 1 | 1 | 1 | 1 |
| 26 | 11 | 11 | - | - | 11 | 1 | 2 | 1 | 1 | 1 |
| 27 | | | | | (10)ж | (1) | (1) | (1) | (1) | (1) |
| 28 | | | | | (10)ж | (1) | (1) | (1) | (1) | (1) |
| 29 | | | | | (10)ж | (1) | (1) | (1) | 1 | (1) |
| 30 | 20 | 18 | 20 | 13 | 19 | 1 | 1 | 2 | - | 1 |
| 31 | 16 | 12 | 15 | - | 14 | 1 | 1 | 2 | 2 | 1 |

ж measurement impossible
owing to interferences

Outstanding Occurrences

| July 1957 | Start- time | Dura- tion | Type | Max. Int. | | Max. Time | Remarks |
|--------------|----------------|---------------|-------|--------------|----------|--------------------|-------------------------|
| | | | | Inst. | Smd. | | |
| 1 | 0732-30s | 30s | ESD/4 | 440 | 230 | - | first part plus part |
| 3 | 0835 | ca 30m | CD/9 | 550 x 240 | 260 - | 0837-30s 0902 x | |
| 4 | 0435 0811 | 2m30s 30s | CD/4 | 350 | 53 | 0436-30s | |
| | | | CD/4 | 720 | 120 | - | |
| 15 | 0511 | 1m | CD/4 | 330 | - | - | |
| 17 | 0118 | 2m | ECD/4 | 390 | 82 | - | |
| 18 | 0309 | 1m | ESD/4 | 1180 | 370 | - | |
| | 0511 | 2m | CD/4 | 790 | 77 | - | |
| | 0535 | 1m30s | CD/4 | 1060 | 175 | - | |
| | 0730 | 1m # | CD/4 | 1220 | 155 | - | |
| | 2248 | 9m | CD/1 | 84 | 35 | 2253 | |
| 22 | 0205-30s | 6m | CD/8 | 1500 | 250 | - | |
| | 2236 | 2m30s | F/4 | 350 | 71 | 2236 | |
| 23 | 0017-30s | 1m30s | CD/4 | 710 | 81 | - | |
| | 0041 | 2m | CD/4 | 610 | 112 | - | |
| | 0421 | 1m | ECD/4 | 800 | 115 | - | |
| 26 | 0242 | 2m # | CD/8 | 1500 | 230 # | - | |

x inaccurate owing to ground irregularity.

inaccurate.

RADIO PROPAGATION QUALITY FIGURES

HIRAISO

Time in U.T.

| July 1957 | Whole Day Index | W W V | | | | S. F. | | | | W W V H | | | | Warning | | | | Principal magnetic storms | | |
|--------------|-----------------------|-------|----|----|-----|-------|-----|-----|-----|---------|----|-----|----|---------|----|----|----|------------------------------|------|------|
| | | 00 | 06 | 12 | 18 | 00 | 06 | 12 | 18 | 00 | 06 | 12 | 18 | 00 | 06 | 12 | 18 | Start | End | ΔH |
| | | 06 | 12 | 18 | 24 | 06 | 12 | 18 | 24 | 06 | 12 | 18 | 24 | 06 | 12 | 18 | 24 | | | |
| 1* | 4o | 5 | 4 | 4 | 4 | (4) | 4 | (3) | 3 | (3) | 4 | 4 | 3 | W | W | U | U | --- | --- | 242γ |
| 2* | 4- | 4 | 4 | 4 | (5) | 3 | 1 | 3 | 4 | 2 | 1 | 3 | 3 | U | N | U | U | --- | --- | |
| 3* | 3o | 4 | 3 | 3 | 3 | 3 | 3 | 3 | (3) | 2 | 3 | 2 | 2 | U | U | U | U | --- | 1500 | |
| [4] | 2o | 4 | 3 | 3 | 1 | 2 | (1) | 1 | 2 | 1 | 1 | 2 | 1 | N | N | N | N | | | |
| 5 | 3o | 3 | 4 | C | C | 1 | (3) | 3 | 4 | 1 | 2 | 3 | 3 | U | W | W | W | 0042 | 2400 | 163γ |
| 6 | 3+ | 4 | 3 | 3 | 3 | 4 | 2 | (2) | C | 1 | 1 | 2 | 2 | U | N | N | N | | | |
| 7 | 2- | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | N | N | N | N | | | |
| 8 | 1+ | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | N | N | N | N | | | |
| 9 | 1+ | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | N | N | N | N | | | |
| 10 | 1+ | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | N | N | N | N | | | |
| 11 | 2- | 1 | 1 | 1 | 1 | 3 | (2) | 2 | 2 | 2 | 1 | 1 | 2 | N | N | N | N | | | |
| 12 | 2- | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | N | N | N | N | | | |
| 13 | 2o | 2 | 1 | 2 | 2 | 3 | (2) | 2 | 2 | 1 | 2 | (2) | 2 | N | N | N | N | | | |
| 14 | 1+ | 1 | 2 | 1 | 1 | 2 | (1) | 2 | (2) | 1 | 1 | 2 | 2 | N | N | N | N | | | |
| 15 | 2- | 1 | 2 | 1 | (3) | 1 | (1) | 2 | 2 | 1 | 2 | 2 | 2 | N | N | N | N | | | |
| 16 | 3o | 2 | 3 | 3 | (4) | 3 | (3) | 3 | (3) | 2 | 2 | 2 | 1 | N | U | U | U | | | |
| 17 | 3- | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | (3) | 3 | 3 | 3 | U | N | N | N | | | |
| 18 | 2o | 3 | 2 | 3 | 4 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | N | N | N | N | | | |
| 19 | 3+ | 4 | 3 | 4 | C | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | N | N | N | N | | | |
| 20 | 3o | 3 | 3 | 4 | 3 | 3 | 2 | 3 | C | 3 | 3 | 2 | 2 | N | N | N | N | | | |
| 21 | 2- | 2 | 2 | 1 | 1 | 2 | (3) | 2 | 2 | 2 | 3 | 2 | 2 | N | N | N | N | | | |
| 22 | 2+ | 1 | 3 | 3 | 3 | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | N | N | N | N | | | |
| 23 | 3- | 3 | 2 | 3 | 3 | C | 2 | 2 | 2 | 3 | 3 | 2 | 2 | N | U | U | N | | | |
| 24 | 3- | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | N | N | N | N | | | |
| 25 | 2o | 3 | 3 | 1 | 1 | 3 | 2 | 1 | 2 | 3 | 3 | 2 | 2 | N | N | N | N | | | |
| [26] | 2- | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | N | N | N | N | | | |
| [27] | 1+ | 2 | 1 | 1 | 1 | 3 | 1 | 1 | (2) | 2 | 2 | 2 | 2 | N | N | N | N | | | |
| 28 | 1+ | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | N | N | N | N | | | |
| 29 | 2- | 2 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | N | N | N | N | | | |
| 30 | 1+ | 1 | 1 | 2 | 1 | 2 | 1 | 1 | (2) | 2 | 2 | 2 | 2 | N | N | N | N | | | |
| 31 | 1o | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 3 | 2 | 2 | N | N | N | N | | | |

* = day of Special World Interval
 () = inaccurate

[] = Regular World Day
 --- = continuing magnetic storm

IONOSPHERIC DATA IN JAPAN FOR JULY 1957

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