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# IONOSPHERIC DATA IN JAPAN

FOR JANUARY 1955

Vol. 7 No. 1

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PREPARED BY THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

THE RADIO RESEARCH LABORATORIES

KOKUBUNJI, TOKYO, JAPAN

IONOSPHERIC DATA IN JAPAN FOR JANUARY, 1955

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## PREFACE

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

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

The First Division has the following three sections:

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

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

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

The Second Division has the following two sections:

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

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

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

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

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

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

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

Aug, 1952

## SITES OF THE IONOSPHERIC STATIONS

Ionospheric observation is carried out at the following four stations 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   |

## REMARKS ON SYMBOLS

All symbols in the table are used in accordance with "Production and Reduction of Ionospheric Data Standards. Symbols and Conventions (Recommendation No. 6 of Stockholm) at VIth Plenary Assembly C. C. I. R. Geneva, 1951" except  $f_{\min} E$  and  $f_{\min} F$  for E and F regions respectively instead of  $f_{\min}$ , taken as  $f_{\min} s$  in the above Resolution, in order to avoid the interruption of preceding form of data.

## SOLAR RADIO EMISSION

Data on solar radio emission observed at Hiraiso Radio Wave Observatory has appeared from Vol. 6 No. 8 (F-68).

The location of the Observatory is as follows:

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



# IONOSPHERIC DATA

## Wakkanai

Lat. 46° 2.8.6' N  
Long. 141° 41.1' E

135° E Mean Time

Jan. 1955

foF2

| Day          | 00                 | 01                 | 02                 | 03                 | 04                 | 05                 | 06                 | 07                 | 08               | 09               | 10               | 11                 | 12                 | 13               | 14               | 15                 | 16                 | 17                 | 18                 | 19                 | 20                 | 21                 | 22                 | 23                 |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|------------------|------------------|--------------------|--------------------|------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1            | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                | C                | C                | 6.5                | 5.8                | 6.0              | 5.3              | 4.4                | 4.0 <sup>c</sup>   | 3.5                | [3.1] <sup>d</sup> | 2.7 <sup>f</sup>   | 2.5 <sup>f</sup>   | C                  | C                  | (2.9) <sup>f</sup> |
| 2            | F                  | F                  | F                  | F                  | F                  | F                  | A                  | C                  | C                | 5.3              | 6.0              | 6.6                | C                  | C                | 5.3              | 4.6                | 4.2                | 3.0                | 2.9                | 2.7                | 3.0                | C                  | C                  | C                  |
| 3            | 2.1 <sup>f</sup>   | 2.8 <sup>f</sup>   | 3.0 <sup>f</sup>   | 3.2 <sup>f</sup>   | (3.1) <sup>f</sup> | (3.0) <sup>f</sup> | [3.3] <sup>c</sup> | 3.6                | 5.5              | 5.4              | 6.3              | [6.4] <sup>c</sup> | 6.5                | 6.3              | 5.2              | 4.2                | 3.9                | 2.9                | 2.7                | 2.3 <sup>f</sup>   | 2.7 <sup>f</sup>   | 2.8 <sup>f</sup>   | 2.9 <sup>f</sup>   | (2.7) <sup>f</sup> |
| 4            | F                  | F                  | F                  | (2.9) <sup>f</sup> | (2.0) <sup>f</sup> | (3.5) <sup>f</sup> | (2.8) <sup>f</sup> | 2.9                | 5.8              | 5.9              | 6.3              | 6.6                | 5.6                | 5.8              | 5.3              | 4.7                | 4.3                | 3.2                | (2.6) <sup>f</sup> | A                  | A                  | (3.0) <sup>f</sup> | F                  | F                  |
| 5            | (2.7) <sup>f</sup> | (2.9) <sup>f</sup> | (2.3) <sup>f</sup> | (3.2) <sup>f</sup> | 3.5 <sup>f</sup>   | (2.9) <sup>f</sup> | (2.3) <sup>f</sup> | (3.2) <sup>f</sup> | 4.8              | 5.0              | C                | C                  | C                  | C                | 4.5              | 4.3                | 4.3                | 3.9                | 3.5 <sup>f</sup>   | 3.0                | 2.8 <sup>f</sup>   | (3.2) <sup>f</sup> | (3.2) <sup>f</sup> | (3.3) <sup>f</sup> |
| 6            | 3.1 <sup>f</sup>   | (3.3) <sup>f</sup> | F                  | F                  | F                  | F                  | (2.7) <sup>f</sup> | 3.1                | 5.8              | 5.6              | 6.1              | 6.2                | 5.3                | 5.5              | 5.6              | 5.2                | 4.6                | 3.6                | 3.0                | C                  | C                  | C                  | C                  | C                  |
| 7            | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                | C                | 6.3              | 6.0                | 5.5                | 5.7              | 4.7              | 4.3                | 4.3                | 3.5                | [2.8] <sup>c</sup> | 2.0                | 2.5 <sup>s</sup>   | 2.7 <sup>f</sup>   | F                  | F                  |
| 8            | F                  | F                  | F                  | F                  | F                  | F                  | F                  | F                  | 5.8              | 6.2              | 6.8              | 6.7                | 6.0                | 5.5              | 5.3              | 5.3                | 5.2                | 3.6                | 3.0                | 2.3                | 2.6                | (3.2) <sup>f</sup> | (3.3) <sup>f</sup> | F                  |
| 9            | F                  | (3.5) <sup>f</sup> | 3.3 <sup>f</sup>   | 3.5 <sup>f</sup>   | (3.4) <sup>f</sup> | (2.5) <sup>f</sup> | 3.0                | C                  | C                | C                | C                | C                  | C                  | 6.3              | 5.1              | [5.0] <sup>c</sup> | 4.8                | 4.7                | 4.3                | 3.5                | 3.5                | A                  | F                  | F                  |
| 10           | A                  | F                  | 3.3 <sup>f</sup>   | F                  | F                  | F                  | C                  | C                  | C                | C                | C                | C                  | C                  | C                | C                | C                  | C                  | C                  | 3.2                | 3.0 <sup>f</sup>   | [3.1] <sup>c</sup> | 3.2                | F                  | A                  |
| 11           | 3.5 <sup>f</sup>   | 3.0 <sup>f</sup>   | (3.0) <sup>f</sup> | F                  | C                  | (3.0) <sup>f</sup> | A                  | C                  | C                | C                | 7.5              | 7.3                | 5.7                | C                | C                | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  |
| 12           | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                | C                | C                | 8.3 <sup>j</sup>   | [7.2] <sup>g</sup> | 6.1              | 5.3              | 4.7                | [4.0] <sup>g</sup> | 3.3                | A                  | A                  | F                  | C                  | C                  | C                  |
| 13           | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                | C                | 7.5              | 6.7                | 5.5                | 5.3              | 5.4              | 4.8                | 4.4                | [3.6] <sup>g</sup> | 2.7 <sup>f</sup>   | [2.7] <sup>g</sup> | 2.7 <sup>f</sup>   | 2.9 <sup>f</sup>   | 3.0 <sup>f</sup>   | F                  |
| 14           | F                  | F                  | (3.0) <sup>f</sup> | (2.6) <sup>f</sup> | (2.7) <sup>f</sup> | 2.7 <sup>f</sup>   | 2.3                | 2.2                | 5.2              | 6.0              | 6.2              | 6.0                | 5.8                | 5.2              | 5.3              | 4.9                | 4.5                | 4.7                | 3.1                | [2.8] <sup>g</sup> | 2.4 <sup>f</sup>   | (2.7) <sup>g</sup> | 2.8                | 2.8 <sup>f</sup>   |
| 15           | (3.1) <sup>f</sup> | 3.2 <sup>f</sup>   | 3.1 <sup>f</sup>   | 3.1 <sup>f</sup>   | F                  | F                  | (2.2) <sup>f</sup> | 3.3 <sup>f</sup>   | 5.3              | 5.8              | 5.3              | C                  | C                  | C                | C                | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  |
| 16           | C                  | C                  | C                  | C                  | F                  | C                  | C                  | C                  | 4.5 <sup>h</sup> | 5.8              | C                | C                  | 5.5                | 5.5              | 5.9              | 5.1                | 4.1 <sup>f</sup>   | 3.4                | (2.3) <sup>f</sup> | (2.4) <sup>f</sup> | 2.6 <sup>f</sup>   | (3.1) <sup>f</sup> | (3.3) <sup>f</sup> | (3.5) <sup>f</sup> |
| 17           | (3.2) <sup>f</sup> | [3.2] <sup>f</sup> | (3.3) <sup>f</sup> | [3.2] <sup>f</sup> | (3.0) <sup>f</sup> | 3.5 <sup>f</sup>   | A <sup>s</sup>     | 3.1                | 5.0              | 5.3              | 5.5 <sup>j</sup> | 6.4                | 6.0                | 6.3              | 5.2              | 5.2                | 4.2                | 3.7 <sup>j</sup>   | 3.5                | [3.1] <sup>g</sup> | 2.7                | 2.7 <sup>f</sup>   | 3.1 <sup>f</sup>   | 2.7                |
| 18           | 2.3                | 2.5                | 2.5                | F                  | A                  | A                  | A                  | 3.2                | 5.5              | 8.7 <sup>j</sup> | 7.5              | 10.2               | 8.7 <sup>j</sup>   | 7.1              | 6.4              | [5.2] <sup>g</sup> | 4.1                | [3.6] <sup>g</sup> | 3.0                | 3.6                | 5 <sup>f</sup>     | 5 <sup>f</sup>     | 5 <sup>f</sup>     | F                  |
| 19           | 2.8 <sup>f</sup>   | 2.7 <sup>f</sup>   | (2.8) <sup>f</sup> | [3.0] <sup>f</sup> | (3.2) <sup>f</sup> | F <sup>s</sup>     | F <sup>s</sup>     | (3.0) <sup>f</sup> | 5.0              | 6.0              | 7.2              | 6.5                | 8.0 <sup>j</sup>   | 8.0 <sup>f</sup> | 7.0              | 5.3                | 4.8                | 5.0 <sup>j</sup>   | 4.6                | 4.2                | 3.8 <sup>s</sup>   | 4.6                | 2.9                | 2.7                |
| 20           | 2.9 <sup>f</sup>   | 3.3 <sup>j</sup>   | 3.4 <sup>s</sup>   | 5 <sup>f</sup>     | A                  | 5 <sup>f</sup>     | A                  | (3.4) <sup>f</sup> | 5.6              | 7.3              | 6.5              | 6.8                | 6.2                | C                | C                | 5.9                | C                  | C                  | C                  | C                  | C                  | (2.4) <sup>f</sup> | (2.7) <sup>f</sup> | 3.0 <sup>f</sup>   |
| 21           | 2.9 <sup>f</sup>   | 3.0 <sup>f</sup>   | C                  | C                  | C                  | C                  | C                  | C                  | C                | 5.4              | 6.2              | 7.0                | 6.4                | 6.5              | 6.0              | 5.2                | 5.0                | 3.5                | 3.6                | [3.4] <sup>g</sup> | (3.3) <sup>s</sup> | (3.3) <sup>f</sup> | [3.2] <sup>g</sup> | 3.0                |
| 22           | 2.7 <sup>f</sup>   | 2.8 <sup>f</sup>   | 3.0 <sup>f</sup>   | 3.0 <sup>f</sup>   | 3.5 <sup>f</sup>   | [2.9] <sup>f</sup> | (2.3) <sup>f</sup> | 3.2                | 4.5              | 5.5              | 6.4              | 6.9                | 5.8                | 6.0              | 5.7              | 5.3                | 4.7                | (3.2) <sup>v</sup> | (3.4) <sup>f</sup> | 3.5 <sup>f</sup>   | 3.1                | (2.8) <sup>f</sup> | 3.2 <sup>f</sup>   | (3.5) <sup>f</sup> |
| 23           | (3.5) <sup>f</sup> | (3.5) <sup>f</sup> | (3.2) <sup>f</sup> | (3.0) <sup>f</sup> | 3.1 <sup>f</sup>   | (3.3) <sup>f</sup> | (2.3) <sup>f</sup> | 3.3                | 4.3              | C                | C                | C                  | C                  | C                | C                | C                  | 4.0                | 3.0                | 3.5                | 4.0 <sup>j</sup>   | 2.8                | 3.0                | (3.8) <sup>f</sup> | 3.0 <sup>f</sup>   |
| 24           | 3.1 <sup>f</sup>   | 3.2 <sup>f</sup>   | 3.0                | (3.3) <sup>f</sup> | (3.3) <sup>f</sup> | (3.3) <sup>f</sup> | 2.3 <sup>f</sup>   | [3.6] <sup>g</sup> | 4.8              | 5.5              | 6.3              | 6.8                | 6.5                | 6.0              | 5.8              | 6.7                | 4.8                | 3.5                | 3.4                | 3.3 <sup>f</sup>   | 3.2                | 3.3                | 3.5 <sup>f</sup>   | 3.5 <sup>f</sup>   |
| 25           | 2.7 <sup>f</sup>   | 3.5                | 3.7                | 3.7                | (3.6) <sup>f</sup> | [3.3] <sup>f</sup> | 3.0 <sup>f</sup>   | 3.7                | 4.8              | 6.5              | 7.1              | 4.0                | 6.2                | 5.8              | 6.0              | 6.2                | 4.0                | 3.5                | 3.2                | 2.9                | 3.0 <sup>f</sup>   | (3.0) <sup>f</sup> | 3.1                | 3.2 <sup>f</sup>   |
| 26           | (3.3) <sup>f</sup> | 3.0                | 3.0 <sup>f</sup>   | (2.9) <sup>f</sup> | [3.0] <sup>f</sup> | 3.0 <sup>f</sup>   | 2.3 <sup>f</sup>   | 3.4                | 4.7              | 5.7              | 5.3              | 6.4                | 6.7                | 5.9              | 5.3              | 6.0                | 5.2                | 3.3                | 2.9                | 2.7 <sup>f</sup>   | 3.0                | 3.0                | 3.0                | 3.3 <sup>j</sup>   |
| 27           | 3.3 <sup>f</sup>   | 3.3 <sup>f</sup>   | 3.2 <sup>f</sup>   | 3.2 <sup>f</sup>   | 3.0                | 3.0                | 2.7                | 3.3                | 5.0              | 5.6              | 5.8              | 6.0                | 6.5                | 5.6              | 5.3              | [5.0] <sup>c</sup> | 4.7                | 3.4                | 2.8 <sup>f</sup>   | (2.4) <sup>f</sup> | 5 <sup>f</sup>     | F                  | F                  | F                  |
| 28           | F                  | F                  | F                  | F                  | F                  | F                  | (2.7) <sup>f</sup> | 4.5                | 6.0              | 6.9              | 5.9              | 6.5                | 6.5                | 6.0              | 7.5              | 7.3                | 5.5                | 3.4                | 4.1                | 4.3                | 4.6                | 4.2                | [4.0] <sup>f</sup> | (4.1) <sup>f</sup> |
| 29           | (4.5) <sup>f</sup> | F                  | F                  | F                  | F                  | F                  | F                  | F                  | 5.4 <sup>f</sup> | 6.5              | 7.3              | 7.0 <sup>j</sup>   | 6.3                | 5.9 <sup>f</sup> | 6.0 <sup>f</sup> | 7.0                | 4.5                | 4.0 <sup>f</sup>   | [3.9] <sup>f</sup> | 3.8                | F                  | F                  | F                  | F                  |
| 30           | C                  | C                  | F                  | F                  | F                  | F                  | F                  | 4.0 <sup>f</sup>   | 5.1              | 5.5              | 6.9              | 7.3                | [7.0] <sup>c</sup> | 6.8 <sup>j</sup> | 6.0              | [5.8] <sup>c</sup> | 5.6 <sup>v</sup>   | 4.7                | 3.7                | 3.9                | 3.2                | 3.2 <sup>f</sup>   | 3.5                | 3.7                |
| 31           | 3.9                | (4.1) <sup>f</sup> | 4.5 <sup>f</sup>   | F                  | F                  | F                  | F                  | (3.5) <sup>f</sup> | 5.3              | 5.8 <sup>v</sup> | 6.7 <sup>j</sup> | 7.2                | 5.7 <sup>v</sup>   | 6.6              | 6.7              | 5.6                | 5.9 <sup>j</sup>   | 4.2                | 4.0                | 3.5                | 2.9                | 3.0                | F                  | C                  |
| Mean Value   | 3.2                | 3.1                | 3.2                | 3.1                | 3.2                | 3.1                | 2.6                | 3.4                | 5.2              | 6.0              | 6.5              | 6.9                | 6.3                | 6.1              | 5.7              | 5.3                | 4.6                | 3.7                | 3.3                | 3.2                | 3.1                | 3.1                | 3.2                | 3.2                |
| Median Value | 3.1                | 3.2                | 3.1                | 3.1                | 3.1                | 3.0                | 2.5                | 3.3                | 5.2              | 5.8              | 6.3              | 6.7                | 6.2                | 6.0              | 5.4              | 5.2                | 4.5                | 3.5                | 3.2                | 3.1                | 3.0                | 3.0                | 3.2                | 3.1                |
| Count        | 17                 | 18                 | 17                 | 13                 | 13                 | 14                 | 14                 | 20                 | 22               | 23               | 24               | 25                 | 25                 | 24               | 25               | 27                 | 27                 | 27                 | 27                 | 25                 | 22                 | 21                 | 17                 | 16                 |

foF2

Sweep 1.0 - Mc to 2.0 - Mc in \_\_\_\_\_ min

Manual

Automatic

W 1

Lat. 45° 23.6' N  
Long. 141° 41.1' E

# Wakkanai

## IONOSPHERIC DATA

135° E Mean Time

Jan. 1955

K'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            | C                 | C                  | C                 | C                 | C                 | C                 | C                 | C      | C                 | C    | C    | 24.0 | 24.0              | 25.0 | 23.0              | 23.0              | 23.0 <sup>F</sup> | 23.0              | 24.0 <sup>F</sup> | 25.0              | 26.0              | C                 | C                 | 28.0              |
| 2            | 27.0              | 28.0               | 29.0 <sup>F</sup> | 24.0 <sup>F</sup> | 24.0 <sup>F</sup> | 24.0              | A                 | C      | C                 | 23.0 | 24.0 | 24.0 | C                 | C    | 23.0              | 24.0              | 25.0 <sup>C</sup> | 25.0 <sup>S</sup> | 24.0              | 27.0              | 26.0 <sup>F</sup> | C                 | C                 | 26.0              |
| 3            | 25.0              | 29.0               | 28.0              | 29.0              | 28.0              | 23.0              | 22.0 <sup>C</sup> | 22.0   | 22.0              | 23.0 | 24.0 | 24.0 | 24.0              | 24.0 | 22.0              | 22.0              | 24.0              | 25.0              | 24.0              | 29.0              | 26.0 <sup>F</sup> | 24.0              | 27.0 <sup>F</sup> | 26.0 <sup>F</sup> |
| 4            | 28.0 <sup>F</sup> | 32.0 <sup>F</sup>  | 26.0 <sup>F</sup> | 25.0 <sup>F</sup> | 26.0              | 25.0              | 23.0              | 24.0   | 23.0              | 23.0 | 24.0 | 24.0 | 23.0              | 24.0 | 23.0              | 23.0              | 23.0              | 24.0              | 26.0              | (26.0)            | A                 | 25.0              | 28.0 <sup>F</sup> | 26.0              |
| 5            | 27.0 <sup>F</sup> | 27.0               | 29.0              | 27.0 <sup>F</sup> | 24.0              | 20.0              | 23.0              | 24.0   | 23.0              | 23.0 | C    | C    | C                 | C    | C                 | 23.0              | 24.0              | 24.0              | 24.0              | 23.0              | 30.0              | 28.0 <sup>F</sup> | 26.0              | 26.0              |
| 6            | 24.0              | 25.0               | 26.0              | 26.0              | 25.0 <sup>F</sup> | 23.0              | 24.0              | 24.0   | 22.0              | 23.0 | 23.0 | 23.0 | 24.0              | 26.0 | 25.0              | 24.0              | 24.0              | 23.0              | 25.0              | C                 | C                 | C                 | C                 | C                 |
| 7            | C                 | C                  | C                 | C                 | C                 | C                 | C                 | C      | C                 | C    | C    | C    | 24.0              | 24.0 | 23.0              | 23.0              | 23.0              | 24.0              | 24.0              | 28.0              | 32.0              | 34.0              | 33.0              | 27.0              |
| 8            | 26.0 <sup>F</sup> | 24.0 <sup>F</sup>  | 23.0              | 23.0              | 22.0 <sup>F</sup> | 25.0              | 25.0              | 23.0   | 23.0              | 24.0 | 25.0 | 23.0 | 24.0              | 24.0 | 24.0              | 23.0              | 23.0              | 23.0              | 24.0              | 28.0              | 33.0              | 28.0              | 27.0              | 28.0              |
| 9            | 27.0 <sup>F</sup> | 25.0               | 28.0              | 25.0              | 22.0              | 25.0 <sup>F</sup> | 25.0              | C      | C                 | C    | C    | C    | C                 | 24.0 | 25.0 <sup>A</sup> | 24.0 <sup>C</sup> | 23.0              | 26.0              | 24.0              | 26.0              | 30.0              | (31.0)            | 32.0              | 32.0              |
| 10           | (33.0)            | 34.0 <sup>A</sup>  | 24.0              | 32.0              | 28.0 <sup>F</sup> | 30.0 <sup>F</sup> | C                 | C      | C                 | C    | C    | C    | C                 | C    | C                 | C                 | C                 | C                 | 26.0              | 26.0              | (28.0)            | 30.0              | 28.0              | (28.0)            |
| 11           | 27.0 <sup>F</sup> | <30.0 <sup>C</sup> | 29.0              | 27.0              | (28.0)            | 30.0              | A                 | C      | C                 | C    | 24.0 | 24.0 | 24.0              | C    | C                 | C                 | C                 | C                 | C                 | C                 | C                 | C                 | C                 | C                 |
| 12           | C                 | C                  | C                 | C                 | C                 | C                 | C                 | C      | C                 | C    | C    | 23.0 | 24.0              | 24.0 | 23.0              | 22.0              | (27.0)            | 32.0 <sup>A</sup> | A                 | A                 | 30.0 <sup>F</sup> | C                 | C                 | C                 |
| 13           | C                 | C                  | C                 | C                 | C                 | C                 | C                 | C      | C                 | C    | 24.0 | 25.0 | 24.0              | 24.0 | 25.0              | 22.0              | 23.0              | (26.0)            | 28.0 <sup>F</sup> | (30.0)            | 32.0              | 32.0 <sup>F</sup> | 35.0 <sup>F</sup> | 27.0 <sup>F</sup> |
| 14           | 27.0              | 26.0               | 25.0              | 27.0              | 26.0              | 28.0              | 25.0              | 24.0   | 23.0              | 23.0 | 24.0 | 23.0 | 24.0              | 24.0 | 24.0              | 23.0              | 23.0              | 24.0              | 25.0              | (28.0)            | 30.0              | 30.0              | 30.0              | 30.0 <sup>F</sup> |
| 15           | 30.0 <sup>F</sup> | 27.0               | 26.0              | 24.0              | 24.0              | 25.0 <sup>F</sup> | 25.0              | 24.0   | 23.0              | 23.0 | 23.0 | C    | C                 | C    | C                 | C                 | C                 | C                 | C                 | C                 | C                 | C                 | C                 | C                 |
| 16           | C                 | C                  | C                 | C                 | 26.0 <sup>F</sup> | C                 | C                 | 21.0   | 23.0 <sup>H</sup> | 25.0 | C    | C    | 25.0              | 27.0 | 24.0              | 23.0              | 22.0              | 24.0              | (29.0)            | (27.0)            | 30.0 <sup>F</sup> | 30.0 <sup>F</sup> | 29.0              | 28.0              |
| 17           | 27.0              | 31.0               | 27.0              | 28.0 <sup>F</sup> | 26.0              | 23.0              | (23.0)            | 23.0   | 22.0              | 24.0 | 25.0 | 23.0 | 24.0              | 24.0 | 22.0              | 24.0              | 23.0              | 28.0 <sup>A</sup> | 24.0              | (27.0)            | 30.0 <sup>A</sup> | 32.0              | 29.0              | 26.0              |
| 18           | 32.0              | 36.0               | 31.0              | 24.0              | A                 | A                 | A                 | 27.0   | 26.0              | 25.0 | 28.0 | 25.0 | 26.0              | 26.0 | 27.0 <sup>A</sup> | (25.0)            | 23.0              | 23.0              | 27.0              | 25.0              | 25.0              | 35.0              | 31.0 <sup>F</sup> | 28.0              |
| 19           | 28.0              | (29.0)             | 31.0              | (27.0)            | (30.0)            | 22.0              | 23.0 <sup>F</sup> | 26.0   | 24.0              | 26.0 | 24.0 | 26.0 | 27.0 <sup>A</sup> | 25.0 | 24.0              | 24.0              | 22.0              | 24.0              | 25.0              | 26.0              | 26.0              | 27.0              | 29.0              | 31.0              |
| 20           | 31.0              | 31.0               | 30.0              | 27.0              | (28.0)            | (30.0)            | (28.0)            | 26.0   | 30.0 <sup>A</sup> | 24.0 | 23.0 | 25.0 | 25.0              | 25.0 | 25.0              | 24.0              | 23.0              | 24.0              | 25.0              | 26.0              | 26.0              | 27.0              | 29.0              | 31.0              |
| 21           | 31.0 <sup>F</sup> | 29.0               | C                 | C                 | C                 | C                 | C                 | C      | C                 | 24.0 | 26.0 | 25.0 | 24.0              | 24.0 | 25.0              | 24.0              | 23.0              | 24.0              | 27.0              | (26.0)            | 26.0              | 29.0              | 30.0              | 29.0              |
| 22           | 29.0              | 30.0               | 27.0              | 29.0              | 23.0              | 20.0 <sup>F</sup> | 22.0              | 24.0   | 22.0              | 25.0 | 24.0 | 25.0 | 24.0              | 26.0 | 25.0              | 23.0              | 23.0              | 30.0 <sup>A</sup> | 26.0              | 24.0              | 24.0              | 30.0 <sup>F</sup> | 31.0              | 28.0 <sup>F</sup> |
| 23           | 26.0              | 26.0               | 29.0              | 30.0              | 25.0              | 25.0 <sup>F</sup> | 25.0 <sup>F</sup> | 22.0   | 22.0              | C    | C    | C    | C                 | C    | C                 | C                 | 22.0              | 22.0              | 28.0              | 25.0              | 26.0              | 36.0              | 28.0 <sup>F</sup> | 31.0 <sup>F</sup> |
| 24           | 32.0 <sup>F</sup> | 26.0               | 31.0              | 28.0 <sup>F</sup> | 29.0              | 26.0 <sup>F</sup> | 35.0 <sup>F</sup> | (29.0) | 23.0              | 23.0 | 25.0 | 24.0 | 24.0              | 25.0 | 26.0              | 24.0              | 22.0              | 27.0              | 25.0              | 25.0              | 25.0              | 27.0              | 29.0              | 30.0              |
| 25           | 26.0              | 28.0               | 28.0              | 27.0              | 26.0              | 25.0 <sup>F</sup> | 23.0              | 24.0   | 23.0              | 26.0 | 25.0 | 24.0 | 22.0              | 25.0 | 26.0              | 23.0              | 21.0              | 21.0              | 25.0              | 25.0              | 25.0              | 27.0              | 29.0              | 25.0              |
| 26           | 27.0              | 27.0               | 28.0              | 27.0 <sup>F</sup> | 26.0              | 21.0              | 24.0              | 24.0   | 23.0              | 23.0 | 24.0 | 26.0 | 24.0              | 24.0 | 24.0              | 25.0              | 22.0              | 25.0              | 26.0              | 26.0              | 26.0              | 26.0              | 27.0              | 26.0              |
| 27           | 27.0              | 29.0               | 26.0              | 26.0              | 27.0              | 28.0              | 25.0 <sup>A</sup> | 22.0   | 22.0              | 24.0 | 24.0 | 25.0 | 26.0              | 24.0 | 23.0              | (22.0)            | 22.0              | 22.0              | 26.0              | 26.0              | 24.0              | 30.0 <sup>F</sup> | 25.0 <sup>F</sup> | 23.0 <sup>F</sup> |
| 28           | 27.0              | 24.0               | 26.0 <sup>F</sup> | 28.0 <sup>F</sup> | 31.0              | 30.0 <sup>F</sup> | 26.0 <sup>F</sup> | 22.0   | 24.0              | 23.0 | 21.0 | 22.0 | 26.0              | 25.0 | 26.0              | 24.0              | 21.0              | 23.0              | 25.0              | 25.0              | 24.0              | 25.0              | 28.0 <sup>F</sup> | 24.0              |
| 29           | 26.0              | 25.0 <sup>F</sup>  | 26.0 <sup>F</sup> | 26.0              | 27.0 <sup>F</sup> | 24.0 <sup>F</sup> | 21.0 <sup>F</sup> | 23.0   | 23.0              | 24.0 | 22.0 | 25.0 | 24.0              | 23.0 | 25.0              | 25.0              | 22.0              | 23.0              | 26.0 <sup>F</sup> | 25.0              | 26.0              | 25.0 <sup>F</sup> | 28.0 <sup>F</sup> | 27.0 <sup>F</sup> |
| 30           | C                 | <29.0 <sup>C</sup> | 27.0              | 26.0 <sup>F</sup> | 26.0              | 25.0 <sup>F</sup> | 30.0 <sup>F</sup> | 23.0   | 23.0              | 23.0 | 25.0 | 23.0 | (24.0)            | 25.0 | 25.0              | (24.0)            | 23.0              | 22.0              | 24.0              | 26.0              | 23.0              | 29.0              | 27.0              | 28.0              |
| 31           | 26.0              | 26.0 <sup>F</sup>  | 26.0 <sup>F</sup> | 24.0 <sup>F</sup> | 26.0 <sup>F</sup> | 22.0              | 26.0 <sup>F</sup> | 22.0   | 22.0              | 23.0 | 23.0 | 24.0 | 25.0              | 26.0 | 24.0              | 24.0              | 25.0              | 23.0              | 23.0              | 24.0 <sup>F</sup> | 23.0 <sup>F</sup> | 26.0              | 29.0              | 30.0 <sup>F</sup> |
| Mean Value   | 28.0              | 28.0               | 27.0              | 27.0              | 26.0              | 25.0              | 24.0              | 24.0   | 23.0              | 24.0 | 24.0 | 24.0 | 24.0              | 25.0 | 24.0              | 23.0              | 23.0              | 25.0              | 25.0              | 26.0              | 26.0              | 28.0              | 29.0              | 28.0              |
| Median Value | 27.0              | 28.0               | 27.0              | 27.0              | 26.0              | 25.0              | 24.0              | 24.0   | 23.0              | 23.0 | 24.0 | 24.0 | 24.0              | 25.0 | 24.0              | 23.0              | 23.0              | 24.0              | 25.0              | 26.0              | 26.0              | 27.0              | 29.0              | 28.0              |
| Count        | 25                | 24                 | 25                | 25                | 25                | 24                | 21                | 22     | 22                | 23   | 24   | 25   | 25                | 25   | 26                | 27                | 26                | 27                | 27                | 25                | 26                | 25                | 25                | 26                |

Sweep 1.0 Mc to 2.0 Mc in \_\_\_\_\_ min

Manual  Automatic

W 2

K'F2

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

Lat. 45° 23.6' N  
Long. 141° 41.1' E

Wakkanai

IONOSPHERIC DATA

135° E Mean Time

fEs

Jan. 1955

| Day          | 00   | 01   | 02   | 03   | 04    | 05    | 06   | 07   | 08   | 09   | 10   | 11   | 12   | 13   | 14  | 15  | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   |
|--------------|------|------|------|------|-------|-------|------|------|------|------|------|------|------|------|-----|-----|------|------|------|------|------|------|------|------|
| 1            | C    | C    | C    | C    | C     | C     | C    | C    | C    | C    | C    | C    | C    | C    | C   | C   | C    | C    | C    | C    | C    | C    | C    | C    |
| 2            | 2.3  | 2.3  | 2.3  | E    | 3.1   | E     | 6.5  | C    | C    | C    | C    | 4.1Y | C    | C    | C   | 3.9 | 4.4  | 6.0Y | 2.6  | 2.6  | 2.6  | C    | C    | 2.3  |
| 3            | 2.3  | E    | 2.3  | 2.3Y | 2.3   | 2.3   | C    | 2.5  | C    | C    | C    | C    | C    | C    | C   | C   | 2.3  | 3.5Y | 3.5Y | 2.6  | 2.6  | E    | 2.3  | E    |
| 4            | 2.3Y | 2.5  | 2.3  | 6.5  | 2.6   | 4.0F  | 3.5  | 3.5Y | C    | C    | 6.0Y | C    | C    | C    | C   | C   | 3.5F | 3.0F | 4.3F | 5.0  | E    | 2.3  | 2.6  |      |
| 5            | 2.4  | 2.5  | 2.4  | 2.3F | 2.3   | 2.3   | 2.3  | 2.4  | C    | C    | C    | C    | C    | C    | C   | C   | 2.5  | E    | 3.5  | 3.5  | 3.5  | 3.5Y | E    | E    |
| 6            | E    | E    | E    | E    | 2.3   | E     | 2.5  | 2.6  | C    | C    | C    | C    | C    | C    | C   | C   | C    | E    | E    | C    | C    | C    | C    | C    |
| 7            | C    | C    | C    | C    | C     | C     | C    | C    | C    | C    | C    | C    | C    | C    | C   | C   | C    | E    | E    | C    | C    | C    | C    | C    |
| 8            | 2.3F | 2.3F | 2.3F | 2.3  | 2.3   | E     | E    | 3.9  | C    | C    | C    | C    | C    | C    | C   | C   | 3.5  | 3.5Y | E    | 3.5Y | 3.5  | 2.3F | 2.5Y | E    |
| 9            | 2.0  | E    | 2.3  | E    | E     | E     | 3.5  | C    | C    | C    | C    | C    | C    | C    | C   | C   | C    | 4.0  | 2.2  | E    | 9.5  | 7.2  | 5.3  | 4.2  |
| 10           | 6.4F | 4.0  | 2.3  | 2.6  | 4.0F  | 4.0F  | C    | C    | C    | C    | C    | C    | C    | C    | C   | C   | C    | C    | 3.5  | 3.5  | C    | 6.0  | E    | 8.0  |
| 11           | 4.8F | 3.5Y | E    | E    | C     | 5.0   | 6.0  | C    | C    | C    | 3.5Y | C    | C    | C    | C   | C   | C    | C    | C    | C    | C    | C    | C    | C    |
| 12           | C    | C    | C    | C    | C     | C     | C    | C    | C    | C    | C    | C    | C    | C    | C   | C   | C    | C    | 6.4Y | 9.5Y | 9.0Y | 4.2  | C    | C    |
| 13           | C    | C    | C    | C    | C     | C     | C    | C    | C    | C    | C    | C    | C    | C    | C   | 5.3 | 5.2Y | 6.2  | 7.4F | 6.0Y | 4.0  | 3.4  | 4.0F | 3.5  |
| 14           | 2.3  | 2.3  | E    | E    | E     | 2.6   | E    | C    | C    | C    | C    | C    | C    | C    | C   | C   | C    | 2.5  | 4.5Y | 4.2  | 2.3  | 3.5Y | 3.5Y | E    |
| 15           | 2.5  | 2.5  | 2.3  | 2.3  | 2.3F  | 2.5   | 2.5  | 2.3  | 2.3  | C    | C    | C    | C    | C    | C   | C   | C    | C    | C    | C    | C    | C    | C    | C    |
| 16           | C    | C    | C    | C    | 2.3   | C     | C    | C    | C    | C    | C    | C    | C    | C    | C   | C   | 4.5  | 3.0  | 4.2  | 4.1  | 3.5F | 2.5F | 3.5F | 3.5F |
| 17           | 3.5  | 3.5F | 2.6  | 2.3  | E     | 2.5   | 2.6  | 3.0  | 3.5Y | C    | 4.6  | 3.5Y | C    | C    | 3.8 | C   | C    | 6.2  | 5.7  | 3.5  | 4.1  | 2.3  | 2.3  | 2.5  |
| 18           | E    | E    | E    | 2.4  | 2.6   | 3.5   | 2.7  | 2.6  | C    | C    | C    | C    | C    | C    | 5.9 | 8.8 | 9.6  | 6.0Y | 2.2  | 3.4  | 3.5  | 3.5  | 3.5  | 2.5  |
| 19           | 4.1  | 3.5  | 3.4Y | 3.4F | 4.1Y  | 6.0Y  | 3.5  | 4.5  | C    | 6.1  | 4.1F | 4.5Y | 6.0  | 4.7  | 6.1 | C   | C    | E    | E    | E    | E    | E    | E    | E    |
| 20           | 2.3  | 2.7  | 2.6  | 6.5F | 10.0F | 10.2F | 7.4F | 4.2Y | 6.0  | 6.0F | 4.3F | 4.9Y | 4.0F | C    | C   | 4.2 | C    | C    | C    | C    | C    | C    | C    | C    |
| 21           | 3.5  | 2.5  | C    | C    | C     | C     | C    | C    | C    | C    | C    | C    | 4.3  | 5.3  | 4.3 | 4.1 | 2.7Y | 2.3  | E    | 12.0 | 7.0F | 4.1  | 4.1  | 4.1  |
| 22           | 2.3  | 2.5  | 2.5F | 2.7F | 2.5   | 2.3   | 2.5  | 2.5  | C    | C    | C    | C    | C    | C    | C   | C   | 4.1  | 3.0  | 7.7F | 6.0F | 4.5F | 4.5F | 3.0F | 3.0F |
| 23           | 3.5F | 2.5F | E    | 2.5  | 4.2F  | 3.2   | 2.3  | 2.3  | C    | C    | C    | C    | C    | C    | C   | C   | 7.3  | E    | 4.1F | 3.4F | 2.9  | 6.2F | 6.0  | 4.5  |
| 24           | 3.5  | 2.5  | 3.0  | 3.5Y | 4.4   | 5.0F  | 4.0  | 5.3  | C    | C    | C    | 4.2Y | 4.6  | 4.2Y | 4.1 | 4.1 | 2.3  | 2.8  | 3.2  | 4.0  | 3.5  | 2.7F | 2.9  | 4.0  |
| 25           | 3.5F | 2.7F | 3.5  | 3.5F | 2.3   | 2.2F  | 2.3  | 2.5  | 4.9F | C    | C    | C    | C    | C    | C   | C   | C    | 2.3  | 2.3F | 2.7  | E    | 3.5  | 4.5  | 2.5F |
| 26           | 2.6  | 2.5  | 2.2  | 6.0Y | 2.4   | 2.7   | E    | 4.2  | C    | C    | C    | C    | C    | C    | C   | C   | 6.2  | 4.0  | 3.5  | 3.5  | E    | 3.5  | 2.6  | 2.5  |
| 27           | 2.5  | 2.5  | 2.3  | 2.3  | E     | 2.6   | 3.5  | 2.3  | C    | C    | B    | B    | B    | B    | C   | C   | 2.8  | 2.7  | 2.6Y | 2.6  | 2.5  | 2.5  | 2.3  | 2.3  |
| 28           | E    | E    | 2.9  | 2.6  | 2.4   | 2.2   | E    | C    | C    | C    | C    | C    | C    | C    | C   | C   | C    | 3.6  | 3.2  | 2.5  | E    | E    | 2.4  | 2.3  |
| 29           | 2.6  | 2.3F | 2.3F | E    | 2.3   | 2.3   | 2.2F | 2.5  | C    | C    | C    | C    | C    | C    | C   | 3.5 | 3.5  | 4.5  | 4.5  | 3.0F | 2.4  | 2.3  | 2.3  | E    |
| 30           | C    | >2.0 | E    | 2.3Y | E     | 2.2   | 2.6  | 2.3  | C    | C    | C    | C    | C    | C    | C   | C   | 3.5Y | E    | 2.3F | 4.3  | 2.3  | E    | E    | E    |
| 31           | 2.3  | 2.3Y | 2.3  | 2.3F | 2.3F  | 2.5Y  | 2.6F | 2.5F | C    | C    | C    | C    | C    | C    | C   | 4.1 | 3.5  | 2.6  | 2.6  | 2.6  | 3.0  | 2.5F | 2.6  | C    |
| Mean Value   | 3.0  | 2.6  | 2.5  | 3.2  | 3.2   | 3.4   | 3.4  | 3.0  | 4.0  | 6.1  | 4.5  | 4.2  | 4.7  | 4.7  | 4.9 | 4.8 | 4.2  | 3.9  | 4.0  | 4.1  | 3.9  | 3.6  | 3.3  | 3.3  |
| Median Value | 2.4  | 2.5  | 2.3  | 2.3  | 2.3   | 2.5   | 2.6  | 2.5  | C    | C    | C    | C    | C    | C    | C   | C   | 2.8  | 3.0  | 3.2  | 3.5  | 3.0  | 2.5  | 2.6  | 2.5  |
| Count        | 2.5  | 2.5  | 2.5  | 2.5  | 2.5   | 2.5   | 2.3  | 2.2  | 2.2  | 2.3  | 2.3  | 2.3  | 2.2  | 2.3  | 2.6 | 2.4 | 2.5  | 2.7  | 2.6  | 2.7  | 2.6  | 2.5  | 2.5  | 2.5  |

fEs

Manual  Automatic

Sweep 1.0 Mc to 2.0 Mc in \_\_\_\_\_ min

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

Lat. 39° 43.5' N  
Long. 140° 08.2' E

# Akita

## IONOSPHERIC DATA

foF2

Jan. 1955

135° E Mean Time

| Day          | 00   | 01   | 02     | 03     | 04     | 05   | 06     | 07     | 08     | 09     | 10     | 11     | 12     | 13   | 14   | 15   | 16     | 17     | 18     | 19   | 20     | 21     | 22     | 23     |
|--------------|------|------|--------|--------|--------|------|--------|--------|--------|--------|--------|--------|--------|------|------|------|--------|--------|--------|------|--------|--------|--------|--------|
| 1            | 2.8F | 3.0F | 2.9F   | 2.7F   | (2.6A) | 2.5F | 2.2F   | 3.3    | 5.1    | 5.7    | (7.6P) | 7.8P   | 6.6    | 5.8  | 5.3  | 4.6  | 4.2    | A      | A      | 2.6F | 2.8F   | 3.0F   | 2.8F   | 2.8F   |
| 2            | 2.9F | 3.1F | 2.7F   | 2.8F   | 2.8F   | 2.9F | 2.4F   | (4.0A) | 5.7    | 6.1    | 6.7    | 7.1    | 5.3    | 5.6  | 5.4  | 5.0P | 3.8    | A      | A      | 2.9F | (3.0A) | 3.0F   | 2.8F   | 2.9F   |
| 3            | 2.8F | 2.8F | 3.2F   | 3.1F   | 3.2F   | 2.8F | 2.3F   | 4.1F   | 6.3    | 6.2    | 6.6    | 6.1    | 6.5    | 6.1  | 5.4  | 4.4  | 3.8    | 3.2    | 2.7F   | 2.6F | (2.7A) | 2.8F   | 3.0F   | 2.9F   |
| 4            | 2.7F | 3.0F | 2.8F   | 2.8F   | 2.8F   | 2.8F | 2.6F   | (4.0A) | 6.1    | 6.6    | 7.2    | 6.3    | 6.1    | 5.3  | 5.2  | 4.6  | 4.3    | 4.0P   | 3.0F   | 2.8F | 3.0F   | 2.8F   | 3.4F   | 3.0F   |
| 5            | 2.9F | 3.2F | 2.8F   | 3.0F   | 3.7F   | 2.8F | 2.3F   | 4.0    | 6.8    | 6.6    | 5.9    | 5.9    | 5.4    | 5.5  | 5.3  | 5.1  | 3.9P   | 3.9    | 3.2    | 3.3  | 2.7    | 3.0F   | 3.0F   | 3.0F   |
| 6            | 3.3F | 3.0F | 3.2F   | 3.5F   | 3.3F   | 3.3F | 3.0F   | (4.0P) | 6.2J   | (6.5P) | 6.2    | 6.0P   | 5.5    | 5.1  | 5.6  | 5.1  | 4.8    | 4.0P   | 3.4    | 3.0  | 2.7F   | 3.1F   | 3.1F   | 3.0F   |
| 7            | 3.4F | 2.6F | 2.5F   | 2.9F   | 3.5F   | 3.0F | 2.3    | 3.4    | 5.4    | 7.0    | B      | 6.1    | (6.1P) | 5.5  | 5.5  | 4.8  | 3.9    | 3.5    | 3.1    | 3.0  | 2.4F   | 2.7F   | 3.0F   | (3.0A) |
| 8            | 3.1F | 2.5F | 2.5F   | 2.9F   | 2.9F   | 2.3F | 2.6F   | 4.0F   | 5.9P   | 6.8    | 6.5    | 6.4    | 6.2    | 6.1  | 5.4  | 4.8  | 5.1    | 3.9    | 3.5    | 2.8  | 2.8F   | 2.8F   | 2.9F   | 3.1F   |
| 9            | 3.1F | 3.0F | 3.0F   | 3.1F   | 3.5F   | 3.4F | 2.8F   | 3.8P   | 6.1    | (6.6P) | 6.1    | (6.4P) | 5.7    | 5.3P | 5.7  | 5.6  | 4.7    | 4.6    | 4.9    | 3.7  | 3.5    | 3.2F   | 3.2F   | 3.6F   |
| 10           | 3.6F | 3.4F | 2.8F   | 2.8F   | 3.1F   | 2.8F | 2.4F   | 4.4    | 6.0    | 6.2    | 8.7    | 8.1    | 6.2    | 5.2  | 5.3  | 5.0  | 4.1    | 4.7    | 4.3    | 3.1F | 2.8    | 3.0    | 2.9    | 3.0    |
| 11           | 2.9  | 2.8F | 2.9F   | 3.1F   | 3.5F   | 2.9F | 2.9F   | 3.8P   | 5.6    | 6.0    | 8.1    | 6.5    | 6.3    | 6.2  | 5.5  | 5.5  | 4.5    | 3.5    | 3.0    | 3.0  | 2.8F   | 3.0F   | 3.5F   | 3.2F   |
| 12           | 2.9F | 2.9F | 2.9F   | 2.9F   | 2.2F   | 2.1F | 2.1F   | 3.5    | 5.1    | 7.9    | 7.9    | 7.9    | 5.9    | 6.0  | 6.0  | 4.9  | 4.2    | 3.8    | 3.5    | 3.8  | 3.2F   | 3.7F   | 3.1    | 3.0    |
| 13           | 4.0F | 3.7F | 3.3F   | 3.5F   | 3.7F   | 3.4F | 3.8    | 3.8P   | 5.5    | 6.5    | 7.7    | 7.2    | 6.3P   | 5.8  | 5.5  | 5.9J | 4.2    | 3.9    | 2.6    | 2.8  | 2.9F   | 3.1    | 3.0    | 3.3F   |
| 14           | 3.3F | 3.5  | 3.4    | 2.7    | 2.6    | 2.5F | 2.0V   | 3.5    | 5.2    | 6.1    | 6.5    | 7.1    | 6.1    | 5.5  | 5.0  | 5.7  | 5.0    | 4.1    | 4.7    | 3.0  | (2.8A) | 2.5F   | 2.6F   | 2.6F   |
| 15           | 2.7F | 2.6F | 2.9F   | 2.6F   | 2.4P   | 2.0F | (2.6A) | 3.1    | 4.8P   | 6.0    | 6.6    | 6.0    | 5.6    | 5.9J | 5.1  | 5.0  | (4.5A) | 4.0    | 3.7    | 2.9  | 2.9    | 2.9    | 2.6F   | 3.0F   |
| 16           | 2.5F | 3.0F | 3.0F   | 2.8F   | 3.3P   | 2.1F | 2.1F   | 3.3    | 4.0    | 5.8H   | 6.2    | 7.1    | 6.0    | 5.7  | 5.3  | 5.3  | 4.6    | 3.5    | 3.8    | A    | A      | 2.8F   | 3.2F   | (3.1A) |
| 17           | 3.0F | 3.0  | 3.0F   | 2.7    | 2.8F   | 3.0F | 2.7    | 3.2    | 4.3    | 5.4    | 6.5    | 5.8    | 6.2P   | 5.6  | 5.6  | 5.0  | 4.4    | C      | C      | C    | C      | C      | C      | C      |
| 18           | C    | 2.3  | 2.6F   | 2.2F   | A      | A    | A      | 3.0    | (5.8A) | 8.6    | 7.6    | 9.6    | 8.2    | 7.7  | 6.5  | 7.2  | 5.0    | 4.8    | 4.6    | A    | A      | 3.6    | (3.0A) | 2.5    |
| 19           | 2.8F | 2.6F | (2.7A) | 2.8F   | 2.9F   | 3.2F | 1.9F   | 3.2    | 4.6    | 6.0    | 7.5    | 7.3    | (7.4A) | 7.4  | 6.5  | 6.1  | 5.0    | 4.8    | 4.6    | 4.5  | (4.2A) | 3.9    | 3.5    | 3.2    |
| 20           | 3.0  | 2.3  | 3.0    | (3.0A) | 3.0    | 2.6F | 2.6F   | 3.8    | 5.3    | 8.1    | 6.1    | 7.1    | 5.9    | 6.1  | 6.1  | 5.9  | 5.1    | 4.5    | 3.9    | 3.7F | 3.6F   | 2.4    | 2.6P   | 2.7    |
| 21           | 2.8  | 2.8  | 3.0    | 3.1    | 2.9F   | 2.4F | 2.0    | 3.8    | 5.4    | 5.3    | 5.7    | 7.6    | 6.9    | 5.9  | 5.9J | 5.1  | 4.6    | 4.5F   | 3.5    | 4.1  | 4.5    | 2.5    | 2.8P   | 3.0V   |
| 22           | 2.9V | 2.8  | 2.8    | 3.0    | 3.9    | 2.2F | 2.3    | 3.5    | 4.6    | 4.8    | 6.1    | 5.9J   | 6.3    | 5.6  | 5.7  | 5.3  | 4.8    | 3.7    | 3.5F   | 3.7F | 3.9    | 3.0F   | 3.4F   | 3.5F   |
| 23           | 3.9F | 3.7F | 3.5F   | 3.3F   | 3.5F   | 3.0F | 3.0F   | 3.5    | 4.6    | 5.0P   | 5.4    | 7.2    | 6.2P   | 5.0  | 5.4  | 6.0  | 5.0P   | 3.5    | 3.2    | 3.9  | 3.2    | 3.1    | 3.1    | 3.3F   |
| 24           | M    | M    | M      | M      | M      | M    | M      | M      | M      | M      | 6.0    | 6.5    | 6.5    | 6.4P | 5.9  | 6.5  | 5.6    | 3.7P   | A      | A    | 3.6    | 3.3    | 3.3F   | 3.2F   |
| 25           | 3.1F | 3.1F | 3.3F   | 3.3F   | 3.1F   | 3.4F | 3.0F   | 4.8P   | 5.0    | 6.0    | 7.5    | (7.6P) | 7.7    | 5.6  | 5.2  | 5.5  | 5.7    | 3.0    | 3.1    | 3.2  | 3.4    | 3.4    | 3.4F   | 3.1F   |
| 26           | 3.0  | 3.0F | 3.0F   | 3.0F   | 3.3F   | 2.8F | 2.6    | 3.9    | 4.7P   | 5.6    | 5.7    | 5.8P   | 6.1    | 5.2  | 5.2  | 5.0  | 5.6    | 3.5F   | 2.8F   | 2.8F | 3.3    | 3.1    | 2.9    | 3.0    |
| 27           | 3.0  | 3.2  | (3.2A) | 3.1    | (3.0A) | 2.9  | C      | C      | 5.6    | C      | C      | C      | C      | C    | C    | C    | 5.0    | 4.0    | 3.3    | 3.2  | (3.4A) | 3.5F   | 3.1P   | 3.0P   |
| 28           | C    | C    | C      | 2.7F   | 3.2F   | 3.3F | 3.2F   | 4.6    | (6.2A) | 7.7    | 5.8    | 6.5P   | 6.2    | 6.0  | 7.3  | 6.1  | 6.6    | 3.5F   | (3.6A) | 3.6  | 4.0    | 2.9    | 3.0    | 3.1F   |
| 29           | 3.2F | 3.2F | 3.2F   | 3.2F   | 3.1F   | 3.3F | 3.2F   | B      | 5.5    | 5.6    | 6.6    | 6.1    | 6.0    | 5.6  | 5.6  | 4.6  | 6.0    | 4.3    | 3.5F   | 3.8F | 4.0F   | (3.6A) | 3.3F   | F      |
| 30           | F    | F    | F      | F      | F      | F    | 2.6F   | 4.1    | 5.7    | 5.8    | 6.1    | 7.5    | 5.6P   | 5.9  | 5.8  | 5.8  | 5.8    | (5.8P) | (4.8F) | 3.4  | 3.5    | 2.9    | 3.1F   | 3.2F   |
| 31           | 3.2  | 3.5  | 3.6    | 3.6F   | 3.6    | 3.4  | 2.7    | 4.4    | 4.7    | (5.4A) | 6.1    | 5.9    | 6.2H   | 7.0  | 6.1  | 5.8  | 5.5    | 5.5F   | 3.6    | 3.8F | 3.5    | 3.2F   | 3.3F   | 3.1F   |
| Mean Value   | 3.1  | 3.0  | 3.0    | 3.0    | 3.1    | 2.9  | 2.6    | 3.8    | 5.4    | 6.2    | 6.7    | 6.8    | 6.3    | 5.9  | 5.6  | 5.4  | 4.8    | 3.8    | 3.6    | 3.3  | 3.2    | 3.0    | 3.1    | 3.1    |
| Median Value | 3.0  | 3.0  | 3.0    | 3.0    | 3.2    | 2.9  | 2.6    | 3.8    | 5.4    | 6.0    | 6.5    | 6.5    | 6.2    | 5.8  | 5.5  | 5.2  | 4.8    | 3.9    | 3.5    | 3.2  | 3.2    | 3.0    | 3.0    | 3.0    |
| Count        | 27   | 28   | 28     | 28     | 28     | 28   | 28     | 28     | 30     | 30     | 29     | 30     | 30     | 30   | 30   | 30   | 30     | 27     | 26     | 28   | 29     | 30     | 30     | 29     |

foF2

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual

Automatic



Lat. 39° 43.5' N  
Long. 140° 08.2' E

**Akita**

**IONOSPHERIC DATA**

135° E Mean Time

**Jan. 1955**

**f'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            | 250              | 260              | 290                | 230                | [220] <sup>A</sup> | 220                | 250                | 210                | 240                | 260                | 250              | 220              | 240                | 250              | 250 | 210 | 240                | A   | A                  | 260 <sup>F</sup> | [260] <sup>F</sup> | 250 <sup>F</sup> | 210 <sup>F</sup>   | 250 <sup>F</sup>   |
| 2            | 250 <sup>F</sup> | 280              | 270                | 230                | 270 <sup>F</sup>   | 240                | 240                | [220] <sup>A</sup> | 230                | 240                | 240              | 230              | 230                | 260              | 250 | 230 | 210                | A   | A                  | A                | AF                 | 250              | 270                | 290 <sup>F</sup>   |
| 3            | 250              | 250              | 280                | 250                | 230                | 240 <sup>F</sup>   | 230                | 260 <sup>F</sup>   | 230                | 240                | 240              | 250              | 240                | 240              | 240 | 220 | 230                | 230 | 230                | 250              | [250] <sup>A</sup> | 250 <sup>F</sup> | 250                | 250 <sup>F</sup>   |
| 4            | 290 <sup>F</sup> | 310 <sup>F</sup> | 270                | 250                | 240 <sup>F</sup>   | 250 <sup>F</sup>   | 260 <sup>F</sup>   | 220                | 230                | 250                | 240              | 240              | 240                | 240              | 230 | 230 | 220                | 220 | 240                | 270 <sup>F</sup> | 260                | 230              | 270 <sup>F</sup>   | 240 <sup>F</sup>   |
| 5            | 260              | 260              | 270 <sup>F</sup>   | 260 <sup>F</sup>   | 210                | 210 <sup>F</sup>   | 310 <sup>F</sup>   | 240                | 240                | 220                | 240              | 240              | 250                | 240              | 240 | 240 | 220                | 240 | 220                | 210              | 290                | 290              | 300 <sup>F</sup>   | 290                |
| 6            | 250              | 240              | 250                | 230                | 240 <sup>F</sup>   | 240                | 200                | 220                | 220                | 220                | 240              | 250              | 250                | 250              | 250 | 240 | 240                | 210 | 230                | 230              | 250 <sup>F</sup>   | 300 <sup>F</sup> | 250 <sup>F</sup>   | 290 <sup>F</sup>   |
| 7            | 240              | 200              | 240                | 270                | 240                | 210                | 210                | 240                | 230                | 250                | 240              | 240              | 280                | 260              | 240 | 240 | 220                | 220 | 240                | 230              | 300                | 300              | 300                | [280] <sup>A</sup> |
| 8            | 250              | 250 <sup>F</sup> | 270                | 240                | 240                | 250                | 260                | 220                | 240                | 230                | 250              | 240              | 250                | 260              | 240 | 230 | 240                | 220 | 240                | 240              | 290 <sup>F</sup>   | 290 <sup>F</sup> | 320 <sup>F</sup>   | 290 <sup>F</sup>   |
| 9            | 300 <sup>F</sup> | 250 <sup>F</sup> | 260 <sup>F</sup>   | 290 <sup>F</sup>   | 250                | 220                | 250                | 240                | 240 <sup>L</sup>   | 240                | 240              | 250              | 250                | 260              | 240 | 240 | 230                | 240 | 220                | 240              | 240                | 230              | 260                | 300 <sup>F</sup>   |
| 10           | 290              | 250 <sup>F</sup> | 250 <sup>F</sup>   | 290                | 310 <sup>F</sup>   | 310 <sup>F</sup>   | 300                | 240                | 230                | 250                | 260              | 240              | 240                | 250              | 240 | 240 | 230                | 240 | 220                | 240              | 300                | 260              | 300                | 260                |
| 11           | 250              | 260              | 260 <sup>F</sup>   | 280                | 250                | 250                | 250                | 240                | 240                | 250                | 250              | 240              | 240                | 240              | 240 | 240 | 230                | 240 | 240                | 240              | 340                | 330              | 260                | 260                |
| 12           | 300              | 290              | 270                | 240                | 210                | 300                | 340                | 240                | 250                | 250                | 260              | 230              | 230                | 250              | 240 | 240 | 240                | 240 | 270                | 260              | 300                | 300              | 250                | 260                |
| 13           | 250 <sup>F</sup> | 250              | 210                | 240                | 220                | 290                | [270] <sup>A</sup> | 290                | 250                | 270                | 250              | 250              | 250                | 250              | 240 | 250 | 210                | 230 | 250                | 270              | 330                | 290              | 250                | 270                |
| 14           | 290 <sup>F</sup> | 250              | 240                | 250                | 270                | 280                | 240                | 240                | 240                | 260                | 250              | 240              | 250                | 250              | 240 | 250 | 220                | 250 | 220                | 210              | [260] <sup>A</sup> | 300              | 260                | 300                |
| 15           | 300              | 290              | 250                | 210                | 250                | 290                | [260] <sup>A</sup> | 240                | 240                | 250                | 240              | 240              | 240                | 260              | 250 | 240 | [240] <sup>A</sup> | 240 | 240                | 240              | 240                | 250              | 250                | 280                |
| 16           | 290              | 300 <sup>F</sup> | 290 <sup>F</sup>   | 260 <sup>F</sup>   | 230 <sup>F</sup>   | 210 <sup>F</sup>   | 290 <sup>F</sup>   | 220                | 230                | 340 <sup>H</sup>   | 250              | 270              | 290                | 260              | 240 | 230 | 210                | 220 | 240                | A                | A                  | 350 <sup>A</sup> | 330 <sup>F</sup>   | [320] <sup>A</sup> |
| 17           | 300 <sup>F</sup> | 300              | 300                | 300 <sup>A</sup>   | 250 <sup>F</sup>   | 250                | 210                | 220                | 220                | 240                | 260              | 260              | 240                | 250              | 250 | 240 | C                  | C   | C                  | C                | C                  | C                | C                  | C                  |
| 18           | C                | 360              | 290 <sup>F</sup>   | 220 <sup>F</sup>   | A                  | A                  | A                  | 280                | [260] <sup>A</sup> | 240                | 240              | 260              | 250                | 270 <sup>A</sup> | A   | 250 | A                  | A   | A                  | A                | [260] <sup>A</sup> | 330              | 350                | 290 <sup>F</sup>   |
| 19           | 290              | 300              | A                  | A                  | 260 <sup>F</sup>   | 220                | A                  | 230                | 230                | 250                | 270              | 250              | [250] <sup>A</sup> | 250              | 240 | 270 | 230                | 260 | 250                | 240              | [270] <sup>A</sup> | 340              | 310                | 300                |
| 20           | 280              | 300              | 280                | [260] <sup>A</sup> | 240                | 280                | 320                | 250                | 240                | 250                | 250              | 250              | 250                | 250              | 260 | 230 | 210                | 240 | 240                | 260              | 210                | 260              | 300                | 300                |
| 21           | 300              | 270              | 260                | 240                | 210                | [260] <sup>H</sup> | 300                | 240                | 220                | 220                | 220              | 250              | 240                | 240              | 230 | 230 | 220                | 240 | 280                | 260              | 210                | 260              | 300                | 300                |
| 22           | 270              | 300              | 280                | 260                | 210                | A                  | 260                | 230                | 220                | 230                | 260              | 250              | 270                | 250              | 240 | 240 | 220                | 220 | 240                | 240              | 240                | 250              | 300 <sup>A</sup>   | 290                |
| 23           | 260 <sup>F</sup> | 250              | 280                | 300 <sup>F</sup>   | 250                | 260                | 240                | 210                | 230                | 240                | 250              | 240              | 250                | 250              | 250 | 240 | 230                | 240 | 260                | 240              | 250                | 300              | 290                | 290 <sup>F</sup>   |
| 24           | M                | M                | M                  | M                  | M                  | M                  | M                  | M                  | M                  | 240                | 240              | 270              | 250                | 240              | 240 | 250 | 240                | A   | A                  | A                | 250                | 240              | 250 <sup>F</sup>   | 260                |
| 25           | 250 <sup>F</sup> | 290 <sup>F</sup> | 290                | 250                | 220                | 250 <sup>F</sup>   | 250                | 230                | 220                | 250                | 250              | 250              | 250                | 250              | 240 | 240 | 220                | 200 | 250                | 250              | 250                | 230              | 240                | 270                |
| 26           | 290              | 300              | 290                | 260                | 240                | A                  | 210                | 210                | 210                | [240] <sup>A</sup> | 250 <sup>A</sup> | 250              | 250                | 250              | 240 | 240 | 220                | 200 | [250] <sup>C</sup> | 250              | [240] <sup>C</sup> | 240              | 250                | 290                |
| 27           | 280              | 280              | [270] <sup>C</sup> | 260                | [270] <sup>C</sup> | 280                | C                  | C                  | C                  | C                  | C                | C                | C                  | C                | C   | C   | 220                | 200 | [230] <sup>C</sup> | 260              | [240] <sup>C</sup> | 230              | 300 <sup>F</sup>   | 240 <sup>F</sup>   |
| 28           | 230              | 280 <sup>F</sup> | [240] <sup>C</sup> | 300 <sup>F</sup>   | 280 <sup>F</sup>   | 310 <sup>F</sup>   | C                  | 230                | [240] <sup>C</sup> | 240                | 220              | 230              | 260                | 280              | 260 | 230 | 210                | 210 | [240] <sup>H</sup> | 260              | 250                | 250              | [230] <sup>A</sup> | 310                |
| 29           | 260              | 280              | 250                | 260                | 260                | 240 <sup>F</sup>   | 210                | 240                | 230                | 230                | 230              | 250              | 250 <sup>L</sup>   | 250              | 230 | 240 | 240                | 220 | A                  | 240              | 250                | 250 <sup>F</sup> | 260                | 260                |
| 30           | 250 <sup>F</sup> | 300 <sup>F</sup> | 280 <sup>F</sup>   | 250 <sup>F</sup>   | 240                | 290 <sup>F</sup>   | 260                | 220                | 240                | 270                | 270              | 240              | 250                | 260              | 270 | 260 | 270                | 210 | 250                | 240              | 240                | 240              | 250                | 260                |
| 31           | 250              | 250              | 240                | 240                | 240                | 230                | 210                | 210                | [230] <sup>C</sup> | 250                | 250              | 250 <sup>H</sup> | 260                | 260              | 250 | 230 | 230                | 220 | [230] <sup>A</sup> | 240              | 240                | 250              | 280 <sup>F</sup>   | 280 <sup>F</sup>   |
| Mean Value   | 270              | 280              | 270                | 260                | 240                | 250                | 260                | 240                | 230                | 250                | 250              | 250              | 250                | 250              | 250 | 240 | 230                | 230 | 240                | 250              | 260                | 270              | 280                | 280                |
| Median Value | 260              | 280              | 270                | 250                | 240                | 250                | 260                | 230                | 230                | 240                | 250              | 250              | 250                | 250              | 240 | 240 | 230                | 230 | 240                | 240              | 240                | 250              | 260                | 270                |
| Count        | 29               | 30               | 29                 | 29                 | 29                 | 28                 | 25                 | 29                 | 30                 | 30                 | 30               | 30               | 30                 | 30               | 29  | 30  | 29                 | 26  | 25                 | 27               | 28                 | 30               | 30                 | 30                 |

**f'F2**

Sweep 0.05 Mc to 22.0 Mc in 2 min  Manual  Automatic

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

Lat. 39° 43.5' N  
Long. 140° 08.2' E

IONOSPHERIC DATA

Akita

Jan. 1955

fEs

135° E Mean Time

| Day          | 00               | 01               | 02               | 03               | 04               | 05               | 06               | 07               | 08               | 09               | 10               | 11               | 12               | 13               | 14               | 15               | 16               | 17               | 18               | 19  | 20               | 21               | 22               | 23               |
|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----|------------------|------------------|------------------|------------------|
| 1            | 2.4              | 2.4 <sup>Y</sup> | 3.0              | 2.5              | 3.9              | 2.2              | 2.3              | 3.0              | 3.5              | 3.5              | 4.5              | 4.0              | 4.3              | 3.5              | 3.5              | 3.3              | 3.6              | 4.1              | 4.1              | 3.9 | 4.3              | 3.1              | 2.5              | 2.8              |
| 2            | 3.0 <sup>F</sup> | 2.6              | 2.3              | 3.1 <sup>Y</sup> | 3.1              | 2.2              | 2.3              | 6.0              | 3.5              | 4.1              | 4.6              | 4.0              | 3.4              | 3.6              | 3.5              | 4.0              | 4.5              | 5.6              | 4.5              | 3.7 | 6.6 <sup>Y</sup> | 3.5 <sup>F</sup> | 3.5 <sup>F</sup> | 3.6              |
| 3            | 2.5              | 2.5              | 3.3 <sup>F</sup> | 3.5 <sup>Y</sup> | 3.5 <sup>Y</sup> | 4.5 <sup>F</sup> | 2.3 <sup>F</sup> | 4.1              | 3.3              | 3.5              | 3.0 <sup>Y</sup> | 3.5              | 3.2              | 3.4              | 3.0 <sup>Y</sup> | 3.1 <sup>Y</sup> | 3.4              | 2.9              | 3.1              | 4.6 | 4.5              | 3.5              | 3.5 <sup>F</sup> | 3.6              |
| 4            | 3.6 <sup>Y</sup> | 3.5              | 2.5              | 2.3              | 3.0              | 3.9 <sup>F</sup> | 4.4              | 2.5 <sup>F</sup> | 3.3              | 3.5              | 3.3              | 3.5              | 4.1              | 3.5              | 3.5              | 3.5              | 3.5              | 2.9              | 3.5              | 5.5 | 4.6              | 3.6              | 2.9 <sup>F</sup> | 4.0              |
| 5            | 3.5 <sup>Y</sup> | 2.3              | 7.1 <sup>Y</sup> | 3.2 <sup>F</sup> | 2.4 <sup>F</sup> | 2.7              | 2.6              | 2.3              | 3.5              | 4.0 <sup>Y</sup> | 4.2              | 3.5              | 2.9              | 3.5              | 3.4 <sup>Y</sup> | 3.4 <sup>Y</sup> | 4.0              | 3.3 <sup>Y</sup> | 3.5              | 4.0 | 4.0              | 3.5              | 3.5              | 2.5              |
| 6            | 2.3              | 2.3 <sup>Y</sup> | 2.4 <sup>Y</sup> | 3.0 <sup>Y</sup> | 2.6 <sup>Y</sup> | 2.5              | 3.0 <sup>Y</sup> | 3.0              | 2.5              | 3.5              | 3.5              | 3.5              | 3.1              | 3.0 <sup>Y</sup> | 3.4 <sup>Y</sup> | 3.4 <sup>Y</sup> | 3.0              | 2.9 <sup>Y</sup> | 2.4              | 2.5 | 2.0 <sup>Y</sup> | 5.6 <sup>Y</sup> | 3.5              | 2.8 <sup>Y</sup> |
| 7            | 2.5              | 2.4 <sup>F</sup> | 2.9 <sup>Y</sup> | 3.0              | 2.3              | 2.2              | 2.3              | 3.5              | 3.0              | 3.5              | 3.7              | 3.4              | 3.5              | 3.5              | 3.4              | 3.0              | 4.0              | 3.5 <sup>Y</sup> | 2.5              | 2.4 | 2.4 <sup>Y</sup> | 2.5              | 2.5              | 4.5              |
| 8            | 3.5 <sup>F</sup> | 2.9              | 3.0              | 3.0              | 3.0              | 3.0 <sup>Y</sup> | 3.0              | 3.0              | 3.0              | 5.0              | 4.6              | 4.1              | 5.5              | 4.5              | 4.5              | 4.2              | 4.0              | 3.4              | 3.1              | 2.5 | 3.5              | 2.7              | 4.7              | 4.4              |
| 9            | 3.1              | 2.3              | 2.9              | 2.5              | 2.3              | 2.2              | 2.3              | 3.4 <sup>Y</sup> | 2.1              | 2.1              | 2.7              | 2.7              | 3.4              | 4.1              | 4.6              | 3.2              | 2.1              | 1.8              | 2.8              | 2.3 | 2.3              | 2.5              | 2.8              | 3.0              |
| 10           | 4.5              | 3.0              | 2.5 <sup>F</sup> | 2.2 <sup>Y</sup> | 3.1              | 3.5              | 2.5              | 2.3              | 2.9              | 4.6              | 3.6              | 3.6              | 5.5 <sup>Y</sup> | 2.9              | 3.3 <sup>Y</sup> | 3.5              | 3.3              | 3.0              | 3.2              | 3.5 | 3.1              | 3.6              | 2.3              | 2.4              |
| 11           | 2.3 <sup>F</sup> | 2.3              | 2.4              | 2.1 <sup>Y</sup> | 2.2              | 2.3 <sup>F</sup> | 2.3              | 2.0              | 3.5              | 3.5              | 3.3              | 3.3              | 4.0              | 4.2              | 4.5              | 5.3              | 6.4              | 3.5              | 4.0              | 3.5 | 2.5              | 2.5              | 2.2              | 2.5              |
| 12           | 2.5              | 2.5              | 2.4 <sup>Y</sup> | 2.5 <sup>Y</sup> | 2.0              | 2.4              | 3.0              | 2.5              | 3.5              | 4.0              | 4.0              | 3.5              | 3.5              | 3.3 <sup>Y</sup> | 3.4              | 3.4              | 4.1 <sup>Y</sup> | 3.5              | 4.1              | 4.5 | 4.5              | 3.5 <sup>F</sup> | 4.5              | 5.0              |
| 13           | 2.5              | 3.0 <sup>Y</sup> | 2.2 <sup>Y</sup> | 2.2              | 2.1              | 4.5              | 4.5              | 6.4              | 7.0              | 5.5              | 6.8              | 4.5              | 3.5              | 3.5              | 5.5              | 6.5              | 3.5              | 3.5              | 3.0              | 3.5 | 3.5              | 3.0              | 3.0              | 3.3              |
| 14           | 3.0              | 3.0              | 2.5              | 2.5              | 3.8              | 1.8 <sup>Y</sup> | 2.5              | 3.5              | 3.0              | 3.3              | 4.0              | 4.0              | 4.3              | 3.5              | 3.5              | 3.5              | 2.5              | 2.2              | 3.5              | 2.6 | 4.7              | 2.5              | 2.5 <sup>Y</sup> | 2.5              |
| 15           | 2.9 <sup>Y</sup> | 2.7              | 2.4              | 2.2              | 2.2              | 2.4              | 4.5              | 3.0              | 3.5              | 3.5              | 3.3              | 4.0              | 4.3              | 4.2              | 4.5              | 5.3              | 6.4              | 3.5              | 4.0              | 3.5 | 2.5              | 2.5              | 2.2              | 2.5              |
| 16           | 2.2 <sup>Y</sup> | 2.0 <sup>Y</sup> | 2.0 <sup>Y</sup> | 2.3 <sup>Y</sup> | 2.9              | 3.0              | 2.1 <sup>Y</sup> | 2.5              | 3.3              | 4.1              | 4.9              | 3.5              | 3.5              | 4.5              | 3.4              | 3.4              | 4.1 <sup>Y</sup> | 3.5              | 5.1              | 4.1 | 4.5              | 3.5 <sup>F</sup> | 4.5              | 5.0              |
| 17           | 3.5              | 3.5              | 2.3              | 4.0              | 2.3 <sup>Y</sup> | 2.0 <sup>Y</sup> | 2.2 <sup>Y</sup> | 2.3              | 3.5              | 3.5              | 4.3              | 3.6              | 4.0              | 3.7              | 4.1              | 3.6              | 3.0              | 3.0              | 3.0              | 3.0 | 3.0              | 3.0              | 3.0              | 3.0              |
| 18           | 2.3              | 3.1              | 4.0              | 4.2              | 3.5              | 3.5              | 3.5              | 3.5              | 4.2              | 3.5              | 3.3 <sup>Y</sup> | 3.5              | 4.2              | 4.0              | 4.0              | 4.0              | 1.2 <sup>Y</sup> | 7.4              | 8.3              | 7.2 | 7.5              | 3.5              | 4.0 <sup>Y</sup> | 2.3              |
| 19           | 2.3              | 2.4              | 2.2 <sup>F</sup> | 3.5              | 3.5              | 3.0              | 2.2              | 2.5              | 2.6 <sup>Y</sup> | 3.0              | 4.0              | 5.2              | 8.0              | 4.7              | 4.8              | 3.4              | 3.2              | 2.5              | 2.4              | 2.5 | 3.8              | 3.0              | 4.2              | 2.8              |
| 20           | 2.3              | 2.4              | 2.2 <sup>F</sup> | 3.5              | 3.5              | 3.0              | 2.2              | 2.5              | 2.6 <sup>Y</sup> | 3.0              | 4.0              | 5.2              | 4.0              | 4.0              | 4.0              | 3.4              | 3.5              | 2.5 <sup>F</sup> | 2.9              | 4.0 | 2.8              | 2.7 <sup>F</sup> | 2.3 <sup>F</sup> | 2.5              |
| 21           | 2.4 <sup>F</sup> | 2.5 <sup>F</sup> | 3.0 <sup>F</sup> | 2.5 <sup>F</sup> | 2.7              | 3.5 <sup>F</sup> | 3.0              | 4.1 <sup>Y</sup> | 2.9 <sup>Y</sup> | 4.0              | 4.1              | 4.0              | 4.0              | 4.0              | 4.0 <sup>Y</sup> | 4.1              | 3.0              | 4.5              | 2.9              | 3.3 | 3.1              | 2.5              | 2.5              | 2.8              |
| 22           | 2.5              | 3.4              | 2.2 <sup>Y</sup> | 4.0              | 2.8              | 3.5              | 2.3              | 3.3 <sup>Y</sup> | 3.3 <sup>Y</sup> | 4.2              | 4.2              | 4.2              | 4.0 <sup>Y</sup> | 4.0 <sup>Y</sup> | 3.5              | 3.5              | 2.0              | 2.2              | 3.2              | 4.5 | 4.0              | 3.5              | 3.5              | 3.4              |
| 23           | 2.5              | 2.2              | 3.0              | 4.0              | 4.3              | 2.5              | 2.5              | 3.5              | 3.5              | 4.9 <sup>Y</sup> | 4.6 <sup>Y</sup> | 5.0 <sup>Y</sup> | 5.2              | 4.0              | 4.0              | 3.5              | 2.5              | 2.5              | 2.9 <sup>Y</sup> | 2.7 | 4.2              | 4.5              | 4.5              |                  |
| 24           | M                | M                | M                | M                | M                | M                | M                | M                | M                | M                | M                | M                | 5.0              | 4.6              | 5.0              | 6.5              | 4.5              | 7.0              | 5.7              | 5.8 | 3.5              | 2.9              | 3.0 <sup>Y</sup> | 2.5              |
| 25           | 2.4              | 2.6              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.4              | 2.7              | 3.5 <sup>Y</sup> | 3.5              | 3.0 <sup>Y</sup> | 4.0              | 4.0              | 4.0              | 4.0              | 3.3 <sup>Y</sup> | 2.2 <sup>Y</sup> | 2.6              | 2.6 | 2.5 <sup>Y</sup> | 2.5              | 3.5              | 3.1              |
| 26           | 2.5              | 2.0              | 2.3 <sup>Y</sup> | 2.1              | 3.0              | 3.4              | 4.5              | 4.2              | 3.0              | 4.4              | 6.7              | 5.6              | 4.0              | 4.0              | 4.1              | 4.0              | 3.5              | 5.8              | 4.1              | 4.0 | 3.0              | 2.5              | 2.5              | 2.5              |
| 27           | 2.3              | 2.3 <sup>Y</sup> | 2.3 <sup>Y</sup> | 2.5              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1              | 2.1 | 2.1              | 2.1              | 2.1              | 2.1              |
| 28           | C                | E                | C                | 3.0              | 2.3              | 2.3              | C                | C                | C                | C                | C                | C                | C                | C                | C                | C                | C                | C                | 3.5              | 6.0 | 3.5 <sup>F</sup> | 4.0              | 3.5              | 3.4              |
| 29           | 2.3              | 2.3              | 2.3              | 2.3 <sup>Y</sup> | 2.2              | 2.2              | 2.3              | 3.5              | 3.3 <sup>Y</sup> | 3.5              | 3.5              | 3.5              | 3.5              | 3.5              | 4.1              | 3.2              | 3.5              | 3.1              | 4.0              | 3.1 | 3.6              | 2.3 <sup>F</sup> | 2.4              | 2.4 <sup>F</sup> |
| 30           | 3.8              | 2.9              | 2.4              | 2.4              | 2.2              | 3.4 <sup>Y</sup> | 2.7 <sup>F</sup> | 2.4              | 3.5              | 3.5              | 3.5              | 3.5              | 3.5              | 4.1              | 4.1              | 4.1              | 3.8              | 4.1              | 3.9              | 3.0 | 2.9              | 2.5              | 2.4              | 2.5              |
| 31           | 2.5              | 2.5              | 2.4              | 2.3              | 2.5              | 2.5              | 2.0              | 4.0              | 4.2              | C                | 3.3 <sup>Y</sup> | 3.3 <sup>Y</sup> | 3.3 <sup>Y</sup> | 3.3              | 4.0              | 4.5              | 3.0 <sup>F</sup> | 4.2              | 4.0              | 4.0 | 2.6              | 4.1              | 3.1              |                  |
| Mean Value   | 2.8              | 2.6              | 2.8              | 2.8              | 2.8              | 2.9              | 2.8              | 3.2              | 3.6              | 3.8              | 4.2              | 3.9              | 4.2              | 3.9              | 4.0              | 4.3              | 3.8              | 3.5              | 3.9              | 3.7 | 3.9              | 3.1              | 3.2              | 3.1              |
| Median Value | 2.5              | 2.5              | 2.4              | 2.5              | 2.7              | 2.5              | 2.4              | 3.0              | 3.3              | 3.5              | 3.6              | 3.5              | 3.8              | 3.6              | 4.0              | 3.5              | 3.4              | 3.2              | 3.5              | 3.5 | 3.6              | 2.9              | 3.5              | 2.8              |
| Count        | 28               | 30               | 28               | 30               | 29               | 30               | 28               | 29               | 29               | 29               | 30               | 30               | 30               | 30               | 30               | 30               | 30               | 30               | 30               | 30  | 27               | 30               | 30               | 28               |

fEs

Sweep 0.85 Mc to 22.0 Mc in 2 min

Manual

Automatic

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

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

**IONOSPHERIC DATA**

135° E Mean Time

Jan. 1955

foF2

| Day          | 00                 | 01               | 02                 | 03               | 04               | 05                 | 06               | 07               | 08                | 09                 | 10                | 11                 | 12                 | 13                 | 14               | 15               | 16  | 17                  | 18               | 19               | 20                  | 21                  | 22                  | 23                 |                     |
|--------------|--------------------|------------------|--------------------|------------------|------------------|--------------------|------------------|------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|------------------|------------------|-----|---------------------|------------------|------------------|---------------------|---------------------|---------------------|--------------------|---------------------|
| 1            | 2.8 <sup>F</sup>   | 3.1              | 3.1 <sup>F</sup>   | 2.5 <sup>F</sup> | 2.6 <sup>F</sup> | 2.6 <sup>F</sup>   | 2.0              | 3.5              | 4.9               | 6.5                | 8.6               | 7.9 <sup>F</sup>   | 6.4                | C                  | C                | C                | C   | C                   | C                | C                | C                   | C                   | C                   | C                  | C                   |
| 2            | C                  | C                | C                  | C                | C                | C                  | C                | C                | 5.5 <sup>P</sup>  | 6.7                | 8.1               | 7.9                | 5.5                | 5.6                | 5.6              | 5.6              | 4.4 | [3.8 <sup>F</sup> ] | 3.1              | 3.2              | A                   | AF                  | A                   | A                  | A                   |
| 3            | 3.0 <sup>F</sup>   | 2.8 <sup>F</sup> | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup> | 3.1 <sup>F</sup> | 3.0 <sup>F</sup>   | 2.3              | 4.2              | 6.5 <sup>P</sup>  | 8.2                | 8.7               | 7.2                | 7.9                | 6.2                | 5.9              | 5.0              | 4.0 | 3.8                 | 3.1              | 2.8              | 2.6 <sup>F</sup>    | 2.9 <sup>F</sup>    | 2.7 <sup>F</sup>    | 2.8 <sup>F</sup>   | 2.8 <sup>F</sup>    |
| 4            | 2.9 <sup>F</sup>   | 2.7              | 3.2 <sup>F</sup>   | 3.3 <sup>F</sup> | 2.7 <sup>F</sup> | AF                 | AF               | 4.2              | 5.7               | 7.2                | 8.9               | 7.2                | 6.1                | 5.7                | 5.4              | 5.0              | 4.4 | 4.2                 | A                | A                | A                   | 3.0                 | 2.7                 | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup>    |
| 5            | 3.0 <sup>F</sup>   | 2.9              | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup> | 2.9 <sup>F</sup> | 2.2 <sup>F</sup>   | 2.0 <sup>F</sup> | 3.7              | 7.2               | 10.0               | 7.2               | 5.9                | 5.9                | 5.9                | 5.4              | 5.4              | 4.5 | 4.0                 | 3.7              | 2.0              | [2.8 <sup>M</sup> ] | 3.1 <sup>F</sup>    | [3.0 <sup>M</sup> ] | 2.8 <sup>F</sup>   | 2.8 <sup>F</sup>    |
| 6            | 2.9 <sup>F</sup>   | 3.0              | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup> | 2.8 <sup>F</sup> | 2.8 <sup>F</sup>   | 2.8 <sup>F</sup> | 4.4              | 7.5               | 7.2                | 6.5               | 6.0                | 5.7                | 5.5                | 5.7              | 5.3              | 4.8 | 4.8                 | 3.9              | 3.1              | 3.1                 | 2.6                 | 2.8 <sup>F</sup>    | 3.2 <sup>F</sup>   | [3.2 <sup>F</sup> ] |
| 7            | 3.1 <sup>F</sup>   | 2.6 <sup>F</sup> | 2.5 <sup>F</sup>   | 2.6 <sup>F</sup> | 3.5              | 3.0 <sup>F</sup>   | 2.5 <sup>F</sup> | 3.9              | 5.4               | 6.5                | 7.3               | 6.9                | 6.3                | 5.9                | 5.5              | 5.1              | 4.4 | 3.7                 | 3.7              | 3.6              | 3.0                 | 2.7 <sup>F</sup>    | 3.0                 | 3.0                | 3.0                 |
| 8            | 2.7 <sup>F</sup>   | 2.5              | 2.5 <sup>F</sup>   | 2.5 <sup>F</sup> | 2.6 <sup>F</sup> | 2.1 <sup>F</sup>   | 2.6 <sup>F</sup> | 4.2              | 6.2               | (7.2) <sup>P</sup> | 7.9 <sup>P</sup>  | 6.2                | 6.6                | 6.5                | 6.1              | 5.5              | 4.9 | 4.6                 | 3.7              | 3.4              | 3.0                 | 2.9 <sup>F</sup>    | 2.9 <sup>F</sup>    | 2.9 <sup>F</sup>   | 2.9 <sup>F</sup>    |
| 9            | (4.2) <sup>F</sup> | 3.4 <sup>F</sup> | 3.1 <sup>F</sup>   | 2.7 <sup>F</sup> | 3.6 <sup>F</sup> | 3.1 <sup>F</sup>   | 2.1 <sup>F</sup> | 3.8              | 5.5               | 6.4                | 6.4               | 6.1                | 6.2                | 6.0                | 6.1              | 5.1              | 4.8 | 4.4                 | 5.4              | 3.8              | 3.6                 | 3.0                 | 3.2                 | 3.2                | 3.2                 |
| 10           | 3.9                | 3.4              | 2.8                | 2.7              | 3.0 <sup>F</sup> | 3.2 <sup>F</sup>   | 2.9 <sup>F</sup> | 4.8 <sup>P</sup> | 6.7               | [7.2] <sup>C</sup> | 7.8               | 8.6                | 6.6                | 5.4                | 5.5              | 5.2 <sup>J</sup> | 4.8 | [4.6] <sup>M</sup>  | 5.0              | 3.2 <sup>Z</sup> | 3.3                 | 3.5                 | 2.8                 | 2.9                | 2.9                 |
| 11           | 3.0                | 2.7              | 2.6                | 2.6 <sup>F</sup> | 3.0              | 3.1                | 2.7              | 4.0              | 5.9               | 6.5                | 7.5               | 7.2                | 6.4                | 6.0                | 5.4              | 5.4              | 4.6 | 4.6                 | 3.5              | 3.4              | 2.6                 | [2.8 <sup>M</sup> ] | 3.1 <sup>F</sup>    | 3.0                | 3.0                 |
| 12           | 2.7 <sup>F</sup>   | 2.9 <sup>F</sup> | 2.7                | 2.3              | 2.0              | 2.4                | 2.3 <sup>F</sup> | 4.0              | 4.7               | >7.0 <sup>C</sup>  | >7.0 <sup>C</sup> | 7.5 <sup>B</sup>   | 6.0                | 5.9                | 6.1              | 5.4              | 4.6 | 4.3 <sup>P</sup>    | 3.3              | 3.9              | 3.0                 | 3.2                 | 2.7 <sup>F</sup>    | 3.2                | 3.2                 |
| 13           | 3.5 <sup>P</sup>   | 3.5 <sup>P</sup> | 3.1                | 3.3              | 2.7 <sup>F</sup> | >2.6 <sup>B</sup>  | 3.5              | 4.9              | 5.7 <sup>J</sup>  | 6.7                | 7.7               | 7.5                | 6.7                | 6.0                | 5.7              | 5.5              | 5.2 | 3.0 <sup>M</sup>    | 3.1              | 2.8              | 3.0                 | 3.3                 | 3.2                 | 3.2                | 3.2                 |
| 14           | 3.7 <sup>P</sup>   | 3.4              | 3.1                | 2.4              | 2.5              | 2.5                | 2.5              | 4.1              | 5.1               | 5.9                | 7.6               | 8.5                | 5.7                | 6.0                | 5.4 <sup>P</sup> | 5.7              | 5.7 | 3.9                 | 4.2              | 3.8 <sup>J</sup> | 2.5                 | (2.7) <sup>F</sup>  | C                   | 2.8 <sup>F</sup>   |                     |
| 15           | (2.8) <sup>F</sup> | 2.8 <sup>F</sup> | 3.1 <sup>F</sup>   | 3.3 <sup>F</sup> | 1.7 <sup>F</sup> | 2.0 <sup>F</sup>   | 2.6              | 3.5 <sup>T</sup> | 4.8               | 6.0                | >7.0 <sup>B</sup> | 6.8                | 5.0                | 5.5                | 6.0              | 5.4              | 4.9 | A                   | 4.2              | 3.6              | 3.6                 | 2.8 <sup>F</sup>    | (2.7) <sup>F</sup>  | (2.7) <sup>F</sup> | 3.1 <sup>F</sup>    |
| 16           | [2.7] <sup>F</sup> | 2.7 <sup>F</sup> | 2.7 <sup>F</sup>   | 3.0 <sup>F</sup> | 2.8 <sup>F</sup> | 2.2 <sup>F</sup>   | AF               | 3.7 <sup>P</sup> | 4.8               | 4.6                | 5.6               | 6.1                | (7.5) <sup>F</sup> | 5.8                | 6.0              | 5.2 <sup>P</sup> | 4.6 | 3.9                 | A                | A                | A                   | A                   | 3.0                 | 3.1 <sup>F</sup>   |                     |
| 17           | 3.1                | 3.0              | 3.1 <sup>F</sup>   | 3.0              | 2.9              | 3.1 <sup>F</sup>   | M                | M                | >5.1 <sup>O</sup> | 5.2                | 6.0               | 6.8                | 6.5                | 6.0                | 6.0              | 5.5              | 4.1 | 3.7                 | 4.3 <sup>P</sup> | 3.4              | 3.0                 | 2.9 <sup>P</sup>    | 2.9 <sup>F</sup>    | 2.9 <sup>F</sup>   |                     |
| 18           | 2.3                | 2.4 <sup>F</sup> | 3.0                | 1.6              | 2.2 <sup>F</sup> | A                  | A                | A                | 6.7               | (8.3) <sup>F</sup> | 7.4               | 9.1                | 8.8                | (8.0) <sup>J</sup> | 7.6              | 5.5              | 5.9 | 3.9                 | 3.8              | 2.9              | 2.5                 | 2.5                 | 2.6 <sup>F</sup>    | 2.9 <sup>F</sup>   |                     |
| 19           | 2.9 <sup>F</sup>   | 2.7 <sup>V</sup> | A                  | A                | 3.2              | 2.4 <sup>F</sup>   | 1.9 <sup>F</sup> | 3.7              | 5.3 <sup>P</sup>  | 5.2                | 7.1               | 8.6                | 6.5                | 7.3                | 7.6              | 6.0              | C   | C                   | C                | C                | C                   | C                   | C                   | C                  | A                   |
| 20           | A                  | 2.9              | 3.1                | 3.3              | 1.9              | (2.3) <sup>F</sup> | 2.2              | 4.0              | 6.0               | 7.0                | 8.0 <sup>J</sup>  | 6.9 <sup>T</sup>   | 8.4 <sup>F</sup>   | 6.1                | 6.3              | 7.4 <sup>P</sup> | 5.6 | 4.4                 | 3.9              | 3.9              | 4.0                 | 2.7 <sup>F</sup>    | 2.4 <sup>F</sup>    | 2.7 <sup>F</sup>   |                     |
| 21           | 2.8                | 3.0              | 3.0                | 3.0              | 3.0              | 1.9 <sup>H</sup>   | 2.0              | 4.0              | 6.3               | 5.7                | 6.5               | 7.1                | 8.3 <sup>P</sup>   | 6.2                | 6.2              | 5.3 <sup>P</sup> | 4.7 | 4.2                 | 3.8              | 4.3              | 4.9                 | 2.1                 | 2.6                 | 2.8                |                     |
| 22           | 2.7 <sup>F</sup>   | 2.8              | 2.6                | 3.2 <sup>F</sup> | 3.0              | 1.9                | 2.3              | 4.4              | 5.4               | 4.9                | 5.1               | 6.5                | 6.0                | 6.2                | 6.5              | 5.3              | 5.5 | 4.1                 | 3.0              | 3.2              | 3.3                 | 3.0                 | 2.7                 | 2.9                |                     |
| 23           | 3.0                | 3.4              | 3.2 <sup>F</sup>   | 3.0 <sup>F</sup> | 2.9 <sup>F</sup> | 2.6 <sup>F</sup>   | 2.4 <sup>F</sup> | 4.3              | 5.4 <sup>J</sup>  | 5.2                | 6.2               | (6.8) <sup>J</sup> | 6.2                | 5.7                | 5.7              | 6.2              | 5.6 | 3.6                 | 3.2              | 3.5              | 3.6                 | 2.6 <sup>F</sup>    | 2.9 <sup>F</sup>    | 2.8 <sup>F</sup>   |                     |
| 24           | 2.8 <sup>F</sup>   | 3.0 <sup>F</sup> | 3.2                | 2.8              | 2.7              | [2.6] <sup>M</sup> | 2.5              | 4.3              | 5.5               | 5.8                | 5.5               | 5.5                | 6.6                | [6.5] <sup>M</sup> | 6.4              | 6.2              | 6.5 | 4.0                 | 2.9              | 3.2              | 3.7                 | 3.7 <sup>P</sup>    | 3.0 <sup>F</sup>    | 3.1 <sup>F</sup>   |                     |
| 25           | 2.7 <sup>F</sup>   | 3.4              | 3.3 <sup>F</sup>   | 3.5 <sup>F</sup> | 3.6              | 2.9 <sup>F</sup>   | 2.9 <sup>F</sup> | 4.6              | 6.6 <sup>J</sup>  | 6.5                | 6.9               | 7.6 <sup>P</sup>   | 7.0                | 6.7                | 4.9              | 5.2              | 6.0 | 4.2                 | 2.7              | 3.3              | 3.3                 | 3.5 <sup>P</sup>    | >3.0 <sup>C</sup>   | 2.7                |                     |
| 26           | 2.7 <sup>F</sup>   | 2.9              | 2.8 <sup>F</sup>   | 2.9              | 3.5              | 2.6 <sup>F</sup>   | 2.6 <sup>F</sup> | 4.2              | 5.2 <sup>P</sup>  | 5.5                | 5.4               | 5.4                | 6.1                | 6.2                | 5.9              | 5.6              | 5.4 | A                   | A                | A                | 3.0                 | 3.0                 | 2.6                 | 2.5                |                     |
| 27           | 2.7                | 2.9              | 2.8                | 2.9              | 2.9              | 2.7                | 2.8              | 4.8 <sup>T</sup> | 6.0               | 6.0                | 6.1               | 7.0                | 6.1                | 5.6                | 5.8              | 5.4              | 5.8 | 4.2                 | 2.7              | 3.2              | 3.5                 | 3.7                 | 3.1 <sup>F</sup>    | (2.5) <sup>F</sup> |                     |
| 28           | 2.7 <sup>F</sup>   | 2.7 <sup>F</sup> | (2.6) <sup>F</sup> | 2.5 <sup>F</sup> | 3.0 <sup>F</sup> | 3.1 <sup>F</sup>   | 2.7 <sup>F</sup> | 4.6              | 6.0               | 7.1                | 7.0               | 5.5                | 7.1                | 6.1                | 8.3 <sup>J</sup> | 7.6              | 5.9 | 5.1                 | 3.6              | 3.0              | [3.2] <sup>C</sup>  | (3.3) <sup>J</sup>  | 2.6                 | 2.9 <sup>F</sup>   |                     |
| 29           | 2.9 <sup>F</sup>   | 3.0              | 3.1 <sup>F</sup>   | 3.0 <sup>F</sup> | 3.0 <sup>F</sup> | 2.8 <sup>F</sup>   | 2.6              | 4.5              | 5.7               | 6.0                | 5.7               | 6.3                | 6.6                | 6.0                | 5.7              | 5.7              | 6.3 | 4.9                 | 3.4              | 2.5              | 3.0 <sup>F</sup>    | 3.6 <sup>F</sup>    | 3.5 <sup>F</sup>    | 2.9 <sup>F</sup>   |                     |
| 30           | 2.5 <sup>F</sup>   | 3.0 <sup>F</sup> | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup> | 2.4 <sup>F</sup> | 2.5 <sup>F</sup>   | 2.7 <sup>F</sup> | 4.5              | 6.0               | 6.2                | 5.6               | 7.3 <sup>P</sup>   | 7.3                | 6.2                | 6.3              | 6.1              | 6.0 | [4.8] <sup>M</sup>  | 3.7              | 3.3              | 3.3                 | 3.5                 | 3.0                 | 3.0 <sup>F</sup>   |                     |
| 31           | 3.0 <sup>F</sup>   | 3.5              | 3.4 <sup>Z</sup>   | 3.5              | 3.5 <sup>F</sup> | 3.1 <sup>F</sup>   | 2.9              | 4.8              | 5.0 <sup>F</sup>  | 5.5                | 5.7               | 6.2                | 6.3                | 6.8                | 6.5              | 6.0              | 5.7 | 4.9 <sup>P</sup>    | 4.0              | 3.5              | 3.7 <sup>J</sup>    | 3.3                 | 2.7 <sup>F</sup>    | 2.7 <sup>F</sup>   |                     |
| MEAN Value   | 3.0                | 2.9              | 2.9                | 2.8              | 2.6              | 2.5                | 4.2              | 5.8              | 6.4               | 6.9                | 7.0               | 6.6                | 6.1                | 6.1                | 5.6              | 5.1              | 4.2 | 3.7                 | 3.3              | 3.2              | 3.0                 | 3.0                 | 2.9                 | 2.9                |                     |
| Median Value | 2.9                | 2.9              | 3.0                | 2.9              | 2.6              | 2.6                | 4.2              | 5.7              | 6.5               | 7.0                | 6.9               | 6.4                | 6.0                | 6.0                | 5.4              | 4.9              | 4.2 | 3.7                 | 3.3              | 3.2              | 3.0                 | 2.9                 | 2.9                 | 2.9                |                     |
| Count        | 29                 | 30               | 29                 | 29               | 30               | 28                 | 26               | 28               | 30                | 31                 | 31                | 31                 | 30                 | 30                 | 30               | 29               | 29  | 27                  | 26               | 27               | 26                  | 27                  | 27                  | 28                 |                     |

K 1

Automatic

Manual

SwEEP 1.0 Mc to 1.2 Mc in 2 min

foF2

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

Lat. 35° 42.4' N  
Long. 139° 28.3' E

**Kokubunji Tokyo**

**IONOSPHERIC DATA**

Jan. 1955

135° E Mean Time

h<sub>p</sub>F<sub>2</sub>

| Day          | 00                 | 01                 | 02                 | 03                 | 04                 | 05                 | 06                 | 07                 | 08                 | 09                 | 10                 | 11                 | 12                 | 13                 | 14                 | 15                 | 16  | 17                 | 18                 | 19  | 20                 | 21                 | 22                 | 23                 |                    |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----|--------------------|--------------------|-----|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1            | (340) <sup>F</sup> | 310                | 320 <sup>F</sup>   | 290 <sup>F</sup>   | 310 <sup>F</sup>   | 290 <sup>F</sup>   | 260                | 240                | 270                | 260                | 260                | (260) <sup>F</sup> | 230                | C                  | C                  | C                  | C   | C                  | C                  | C   | C                  | C                  | C                  | C                  | C                  |
| 2            | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | 260 <sup>F</sup>   | 270                | 260                | 240                | 260                | 260                | 250                | 240                | 220 | (260) <sup>A</sup> | 290                | 320 | A                  | AF                 | A                  | A                  | A                  |
| 3            | 290 <sup>F</sup>   | 310 <sup>F</sup>   | 300 <sup>F</sup>   | 330 <sup>F</sup>   | 270 <sup>F</sup>   | 330 <sup>F</sup>   | 250                | 250                | 270 <sup>F</sup>   | 250                | 260                | 260                | 260                | 240                | 250                | 240                | 230 | 270                | 240                | 300 | F                  | 310 <sup>F</sup>   | 430 <sup>F</sup>   | 340 <sup>F</sup>   | 340 <sup>F</sup>   |
| 4            | 310 <sup>F</sup>   | A                  | (340) <sup>F</sup> | (310) <sup>F</sup> | 270 <sup>F</sup>   | AF                 | AF                 | 260                | 270                | 260                | 240                | 240                | 250                | 250                | 260                | 260                | 250 | 240                | 260                | A   | A                  | 260                | 300                | 350 <sup>F</sup>   | 350 <sup>F</sup>   |
| 5            | 320 <sup>F</sup>   | 330                | 320 <sup>F</sup>   | 280 <sup>F</sup>   | 250 <sup>F</sup>   | 260 <sup>F</sup>   | 350 <sup>F</sup>   | 280                | 280                | 240                | 230                | 270                | 280                | 280                | 290                | 240                | 250 | 240                | 270                | 240 | 250                | (260) <sup>A</sup> | 270 <sup>F</sup>   | (300) <sup>A</sup> | 340 <sup>F</sup>   |
| 6            | 340 <sup>F</sup>   | 280                | 300 <sup>F</sup>   | 250 <sup>F</sup>   | 270 <sup>F</sup>   | 280 <sup>F</sup>   | 260 <sup>F</sup>   | 260                | 250                | 250                | 250                | 260                | 260                | 250                | 260                | 270                | 250 | 250                | 260                | 250 | 220                | 270                | 300 <sup>F</sup>   | 270 <sup>F</sup>   | (210) <sup>A</sup> |
| 7            | 310 <sup>F</sup>   | 250 <sup>F</sup>   | 260 <sup>F</sup>   | 310 <sup>F</sup>   | 260                | 270 <sup>F</sup>   | 280 <sup>F</sup>   | 250                | 240                | 270                | 260                | 260                | 260                | 260                | 270                | 240                | 230 | 290                | 290                | 280 | 260                | 340 <sup>F</sup>   | 310                | 330                | 330                |
| 8            | (260) <sup>F</sup> | A                  | 240 <sup>F</sup>   | 240 <sup>F</sup>   | 230 <sup>F</sup>   | 320 <sup>F</sup>   | 350 <sup>F</sup>   | 260                | 240                | (250) <sup>F</sup> | 230 <sup>F</sup>   | 260                | 260                | 260                | 250                | 240                | 250 | 240                | 240                | 260 | 260                | 280                | 330 <sup>F</sup>   | (340) <sup>F</sup> | (330) <sup>F</sup> |
| 9            | (320) <sup>F</sup> | 330 <sup>F</sup>   | 310 <sup>F</sup>   | 320 <sup>F</sup>   | 280 <sup>F</sup>   | 250 <sup>F</sup>   | 300 <sup>F</sup>   | 260                | 250                | 240                | 240                | 250                | 260                | 260                | 250                | 240                | 240 | 240                | 240                | 250 | 250                | 290                | 300                | 320                | 320                |
| 10           | 290                | 300                | 350                | 300                | 380 <sup>F</sup>   | 310 <sup>F</sup>   | 340 <sup>F</sup>   | 270 <sup>F</sup>   | 230                | (260) <sup>C</sup> | 280                | 270                | 260                | 260                | 270                | (250) <sup>F</sup> | 240 | (240) <sup>A</sup> | 250                | 250 | 250                | 320                | 280                | 290                | 320                |
| 11           | 300                | 300                | 310                | 340 <sup>F</sup>   | 300                | 300                | 300                | 270                | 250                | 280                | 260                | 260                | 270                | 270                | 250                | 230                | 250 | 260                | 260                | 270 | 280                | 270                | (300) <sup>A</sup> | 320 <sup>C</sup>   | 280                |
| 12           | 350 <sup>F</sup>   | 360 <sup>F</sup>   | 280                | 290                | 290                | 320                | 310 <sup>F</sup>   | 300                | 250                | C                  | C                  | B                  | 230                | 230                | 270                | 230                | 230 | 300 <sup>F</sup>   | 330                | 300 | 270                | 350                | 300 <sup>F</sup>   | 320 <sup>F</sup>   | 320 <sup>F</sup>   |
| 13           | 300 <sup>F</sup>   | 290 <sup>F</sup>   | 270                | 260                | 250 <sup>F</sup>   | B                  | 320                | 280                | (250) <sup>F</sup> | 260                | 260                | 260                | 260                | 260                | 270                | 240                | 240 | 240                | 310 <sup>H</sup>   | 270 | 300                | 360                | 310                | 330                | 330                |
| 14           | 280 <sup>F</sup>   | 270                | 270                | 320                | 330                | 320                | 320                | 260                | 260                | 260                | 260                | 260                | 260                | 260                | 270                | 240                | 260 | 240                | 260                | 290 | (230) <sup>F</sup> | 310                | (320) <sup>F</sup> | C                  | 320 <sup>F</sup>   |
| 15           | (330) <sup>F</sup> | 320 <sup>F</sup>   | 280 <sup>F</sup>   | 240 <sup>F</sup>   | 320 <sup>F</sup>   | 310 <sup>F</sup>   | 260                | (260) <sup>F</sup> | 270                | 280                | B                  | 250                | 240                | 240                | 270                | 260                | 250 | 240                | A                  | 270 | 270                | 270                | (320) <sup>F</sup> | (370) <sup>F</sup> | 370 <sup>F</sup>   |
| 16           | (370) <sup>A</sup> | 330 <sup>F</sup>   | (310) <sup>F</sup> | 290 <sup>F</sup>   | (230) <sup>F</sup> | 250 <sup>F</sup>   | AF                 | 260 <sup>F</sup>   | 230                | 240                | 290                | 270                | (250) <sup>B</sup> | 240                | 260                | 240                | 240 | 240                | 250                | A   | A                  | A                  | A                  | 370                | 340 <sup>F</sup>   |
| 17           | 310                | 360                | 340 <sup>F</sup>   | 330                | 310                | 280 <sup>F</sup>   | M                  | M                  | C                  | 250                | 250                | 240                | 260                | 240                | 260                | 240                | 230 | 230                | 260                | 270 | 270                | 280                | 330 <sup>F</sup>   | 370 <sup>F</sup>   | 350 <sup>F</sup>   |
| 18           | 360                | 370 <sup>F</sup>   | 330                | 170                | 350 <sup>F</sup>   | A                  | A                  | A                  | 300                | (280) <sup>F</sup> | 310                | 310                | 260                | 260                | (280) <sup>F</sup> | 260                | 240 | 270                | 270                | 250 | 270                | 280                | 330 <sup>F</sup>   | 370 <sup>F</sup>   | 350 <sup>F</sup>   |
| 19           | 310 <sup>F</sup>   | 330 <sup>F</sup>   | A                  | A                  | 250                | (260) <sup>F</sup> | (380) <sup>F</sup> | 250                | 250 <sup>F</sup>   | 260                | 310                | 240                | 260                | 260                | 260                | 240                | 240 | 240                | 260                | 270 | 270                | 280                | 330 <sup>F</sup>   | 370 <sup>F</sup>   | 350 <sup>F</sup>   |
| 20           | A                  | 360                | 320                | 270                | 370                | A                  | 350                | 290                | 250                | 290                | (260) <sup>F</sup> | (300) <sup>F</sup> | 240 <sup>F</sup>   | 250                | 290                | 270                | 250 | 240                | C                  | C   | C                  | C                  | C                  | C                  | A                  |
| 21           | 330                | 300                | 290                | 270                | 250                | 360 <sup>H</sup>   | 320                | 270                | 260                | 240                | 260                | 250                | 240 <sup>F</sup>   | 250                | 240                | 230 <sup>F</sup>   | 250 | 260                | 300                | 300 | 280                | 270                | (290) <sup>F</sup> | 320 <sup>F</sup>   | 350 <sup>F</sup>   |
| 22           | 340 <sup>F</sup>   | 330                | 320                | 260 <sup>F</sup>   | 210                | 350                | 320                | 240                | 240                | 220                | 250                | 250                | 270                | 270                | 260                | 230                | 230 | 230                | 270                | 280 | 260                | 270                | 270                | 320                | 320                |
| 23           | 280                | 300                | 290 <sup>F</sup>   | (290) <sup>F</sup> | 320 <sup>F</sup>   | 300 <sup>F</sup>   | 320 <sup>F</sup>   | 250                | (240) <sup>F</sup> | 250                | (300) <sup>F</sup> | 240                | (300) <sup>F</sup> | 240                | 250                | 270                | 250 | 230                | 230                | 260 | 280                | 230                | (320) <sup>F</sup> | (320) <sup>F</sup> | (320) <sup>F</sup> |
| 24           | 270 <sup>F</sup>   | 320 <sup>F</sup>   | 290                | 310                | 250                | (250) <sup>A</sup> | 250                | 240                | 230                | 230                | 240                | 240                | 300                | (280) <sup>A</sup> | 270                | 270                | 240 | 220                | 220                | 330 | 300                | 270                | 260 <sup>F</sup>   | 300 <sup>F</sup>   | 280 <sup>F</sup>   |
| 25           | 310 <sup>F</sup>   | 270                | 300 <sup>F</sup>   | 330 <sup>F</sup>   | 250                | 300 <sup>F</sup>   | 300 <sup>F</sup>   | 260                | (240) <sup>F</sup> | 250                | 270                | 240 <sup>F</sup>   | 280                | 240                | 240                | 230                | 260 | 250                | 220                | 330 | 300                | 290                | 270 <sup>F</sup>   | C                  | 350                |
| 26           | 330 <sup>F</sup>   | 320                | (300) <sup>F</sup> | 320                | 240                | 320 <sup>F</sup>   | 300 <sup>F</sup>   | 250                | 220 <sup>F</sup>   | 250                | 250                | 250                | 270                | 280                | 260                | 250                | 260 | 260                | A                  | A   | 250                | 260                | 260                | 320                | 330                |
| 27           | 360                | 350                | 310                | 320                | 300                | 330                | 270                | (240) <sup>F</sup> | 240                | 230                | 270                | 240                | 250                | 260                | 250                | 260                | 230 | 240                | 310                | 300 | 310                | 250                | (250) <sup>F</sup> | (390) <sup>F</sup> | 390 <sup>F</sup>   |
| 28           | 270 <sup>F</sup>   | 310 <sup>F</sup>   | (350) <sup>F</sup> | (340) <sup>F</sup> | (330) <sup>F</sup> | 320 <sup>F</sup>   | 300 <sup>F</sup>   | 250                | 240                | 260                | 260                | 240                | 310                | 310                | (290) <sup>F</sup> | 290                | 250 | 250                | 280                | 290 | (270) <sup>C</sup> | (250) <sup>F</sup> | 310                | 340 <sup>F</sup>   | 340 <sup>F</sup>   |
| 29           | 320 <sup>F</sup>   | 320                | 330 <sup>F</sup>   | (320) <sup>F</sup> | 320 <sup>F</sup>   | 290 <sup>F</sup>   | 270                | 250                | 260                | 250                | 250                | 260                | 260                | 260                | 260                | 270                | 260 | 240                | 240                | 240 | A                  | 320 <sup>F</sup>   | 290 <sup>F</sup>   | 310                | 270 <sup>F</sup>   |
| 30           | 350 <sup>F</sup>   | (310) <sup>F</sup> | (310) <sup>F</sup> | (310) <sup>F</sup> | 310 <sup>F</sup>   | 350 <sup>F</sup>   | 300 <sup>F</sup>   | 250                | 240                | 250                | 240                | 250 <sup>F</sup>   | 240                | 240                | 250                | 290                | 260 | 240                | (220) <sup>A</sup> | 210 | 300                | C                  | 280                | 310                | (310) <sup>F</sup> |
| 31           | 330 <sup>F</sup>   | 300                | 290 <sup>F</sup>   | 300                | 310 <sup>F</sup>   | 310 <sup>F</sup>   | 220                | 240                | 230 <sup>F</sup>   | 240                | 250                | 270                | 290                | 290                | 260                | 260                | 240 | 240                | 240                | 260 | 300                | (290) <sup>F</sup> | 290                | 270 <sup>F</sup>   | (320) <sup>F</sup> |
| Mean Value   | 320                | 320                | 310                | 300                | 290                | 300                | 300                | 260                | 250                | 250                | 260                | 260                | 260                | 260                | 260                | 250                | 240 | 240                | 260                | 270 | 280                | 270                | 290                | 320                | 330                |
| Median Value | 320                | 320                | 310                | 300                | 280                | 300                | 300                | 260                | 250                | 250                | 260                | 250                | 260                | 260                | 260                | 250                | 240 | 240                | 260                | 270 | 280                | 270                | 290                | 320                | 320                |
| Count        | 29                 | 28                 | 29                 | 29                 | 30                 | 26                 | 26                 | 28                 | 30                 | 30                 | 29                 | 30                 | 31                 | 30                 | 30                 | 30                 | 29  | 29                 | 27                 | 26  | 26                 | 24                 | 27                 | 26                 | 28                 |

K 2

Automatic

Manual

Energy 1.0 Mc to 1.72 Mc in 2 min

h<sub>p</sub>F<sub>2</sub>

K 2



Lat. 35° 42.4' N  
Long. 139° 28.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

135° E Mean Time

Jan. 1955

R'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            | 280              | 260              | 260              | 250 <sup>F</sup> | 250              | 250              | 260              | 220              | 230              | 260              | 250   | 250               | 230    | C   | C   | C   | C    | C                | C    | C   | C      | C                | C                | C                |
| 2            | C                | C                | C                | C                | C                | C                | C                | C                | C                | C                | C     | C                 | C      | C   | C   | C   | C    | C                | C    | C   | C      | C                | C                | C                |
| 3            | 250              | 270              | 260              | 220              | 230              | 280              | 220              | 240              | 250              | 240              | 240   | 250               | 250    | 240 | 250 | 230 | 220  | 260A             | 230  | 260 | 260    | 290 <sup>F</sup> | 240              | 320 <sup>H</sup> |
| 4            | 290A             | 370A             | 320              | 250              | 220              | AF               | AF               | 220              | 240              | 250              | 240   | 240               | 250    | 250 | 240 | 230 | 220  | 220              | A    | A   | A      | 240              | 270              | 300              |
| 5            | 270              | 300              | 290              | 230              | 200              | 230A             | 320A             | 250A             | 260              | 240              | 230   | 260               | 260    | 280 | 240 | 240 | 230  | 250              | 240  | 210 | [220]A | 240              | [370]A           | 300              |
| 6            | 300              | 240              | 270              | 230              | 220              | 240              | 230              | 240              | 230              | 230              | 240   | 260               | 250    | 260 | 270 | 240 | 230  | 220              | 220  | 210 | 260    | 260              | 240              | [260]A           |
| 7            | 280              | 230              | 230              | 260              | 230              | 220              | 250              | 220              | 230              | 260              | 250   | 250               | 260    | 270 | 240 | 230 | 220  | 240              | 250  | 240 | 230    | 300              | 270              | 300A             |
| 8            | 250              | 300A             | 270              | 240 <sup>F</sup> | 210              | 300              | 280 <sup>F</sup> | 240              | 230              | 240              | 230   | 250               | 250    | 250 | 250 | 240 | 230  | 220              | 230  | 220 | 260    | 280 <sup>F</sup> | 310 <sup>F</sup> | [290]            |
| 9            | 270 <sup>F</sup> | 290 <sup>F</sup> | 230              | 260              | 240 <sup>F</sup> | 220 <sup>F</sup> | 280 <sup>F</sup> | 240              | 230              | 240              | 240   | 250               | 240    | 250 | 250 | 230 | 220  | 240A             | 250  | 210 | 240    | 240              | 270              | 270              |
| 10           | 250              | 250              | 250              | 260              | 310              | 290              | 300              | 240              | 230              | C                | [270] | 250               | 250    | 250 | 250 | 250 | 220  | [220]A           | 220  | 200 | 270    | 230              | 250              | 280              |
| 11           | 250              | 250              | 250              | 270              | 250              | 250              | 240              | 230              | 240              | 240              | 250   | 250               | 260    | 250 | 230 | 230 | 220  | 220              | 240  | 240 | 240    | [260]A           | 270              | 230              |
| 12           | 300              | 300              | 220              | 240              | 250              | 280              | 260              | 260              | 240              | 280              | 250   | 230               | 230    | 270 | 260 | 230 | 220  | 230              | 250  | 250 | 230    | 270              | 280 <sup>A</sup> | 300A             |
| 13           | 260              | 240              | 230              | 220              | 210              | 310              | 260              | 250              | 250              | 250              | 250   | 260               | 260    | 250 | 240 | 240 | 220  | 200H             | 220  | 240 | 300    | 290              | 270              | 290              |
| 14           | 250              | 230              | 240              | 270              | 290              | 290              | 250              | 240              | 230 <sup>F</sup> | 260              | 250   | 250               | 240    | 250 | 240 | 240 | 230  | 240A             | 270  | A   | 300    | 300              | C                | 280 <sup>F</sup> |
| 15           | 290              | 270              | 240              | 200              | 300 <sup>F</sup> | 270              | 250              | 220 <sup>A</sup> | 250A             | 260              | 240   | 250               | 240    | 270 | 260 | 240 | 230  | 250 <sup>F</sup> | 270  | 240 | 230    | 260 <sup>F</sup> | 310 <sup>F</sup> | 300 <sup>F</sup> |
| 16           | [290]H           | 280              | 260              | 230              | 190 <sup>F</sup> | 230              | AF               | 230              | 230              | 240              | 290   | 270               | 250    | 240 | 250 | 240 | 220  | 230A             | A    | A   | A      | A                | 350 <sup>F</sup> | 330              |
| 17           | 270              | 300              | 280              | 240              | 220              | 230              | M                | M                | 210              | 240              | 250   | 240               | 260    | 240 | 260 | 240 | 230  | 220              | 230  | 230 | 250    | 280              | 320              | 230              |
| 18           | 310              | 320              | 270              | 160              | 300              | A                | A                | A                | 290              | 260              | 280   | 280               | 240    | 260 | 240 | 240 | 240  | C                | C    | C   | 250    | 270              | 300              | 310              |
| 19           | 250              | 290              | A                | A                | 210A             | 230              | 350              | 230              | 240              | 230              | 300   | 240               | 260    | 280 | 260 | 240 | C    | C                | C    | C   | C      | C                | C                | A                |
| 20           | A                | 300              | 290              | 230              | 350              | A                | 330              | 260              | 240              | 280 <sup>F</sup> | 250   | 270               | 240    | 250 | 280 | 240 | 230  | 220              | 220  | 230 | 210    | 240 <sup>F</sup> | 260              | 300              |
| 21           | 300              | 260              | 250              | 230              | 220              | 230H             | 300              | 250              | 240              | 240              | 260   | 250               | 240    | 240 | 240 | 230 | 230  | 230              | 250  | 260 | 210    | 200A             | 290              | 270              |
| 22           | 290              | 280              | 270              | 240              | 200              | 340              | 270              | 210              | 220              | 220              | 240   | 250               | 270    | 270 | 250 | 230 | 230  | 210              | 230  | 230 | 220    | 250              | 270              | 270              |
| 23           | 240              | 250              | 240              | 250              | 260              | 240              | 270              | 230              | 230              | 230              | 270   | 270               | 240    | 250 | 260 | 250 | 230  | 200A             | 240  | 230 | 210    | 260 <sup>F</sup> | 270 <sup>F</sup> | 270 <sup>F</sup> |
| 24           | 230 <sup>F</sup> | 260 <sup>F</sup> | 250              | 270              | 230              | [240]A           | 240              | 230              | 230              | 230              | 240   | 270               | [260]A | 260 | 250 | 230 | 230  | 220              | 250  | 250 | 250    | 220              | 250 <sup>F</sup> | 240              |
| 25           | 250 <sup>F</sup> | 240              | 250              | 250              | 210              | 240              | 290              | 240              | 230              | 250              | 270   | 240               | 260    | 240 | 230 | 240 | 240  | 240              | 200  | 300 | 250    | 240              | 200              | 270              |
| 26           | 300 <sup>F</sup> | 270              | 270 <sup>F</sup> | 250              | 200              | 250              | 250              | 220              | 220              | 240              | 240   | 250               | 270    | 280 | 250 | 240 | 250  | A                | A    | 240 | 230    | 230              | 250              | 290              |
| 27           | 290              | 300              | 270              | 270              | 250              | 270              | 230              | 230              | 230              | 230              | 270   | 240               | 250    | 260 | 250 | 240 | 220  | 210              | 230  | 280 | 250    | 230              | 250              | 270              |
| 28           | 250 <sup>H</sup> | 260              | 290 <sup>F</sup> | 280 <sup>F</sup> | 270 <sup>F</sup> | 260              | 250              | 220              | 240              | 160              | 250   | K230 <sup>F</sup> | 300    | 270 | 270 | 230 | 240  | 230              | 270A | 260 | [240]C | 210              | 270              | 280              |
| 29           | 260              | 270              | 250 <sup>F</sup> | 250 <sup>F</sup> | 250 <sup>F</sup> | 240              | 240              | 230              | 230              | 230              | 240   | 250               | 260    | 260 | 250 | 260 | 240  | 210              | 220A | A   | 280    | 250 <sup>F</sup> | 250 <sup>F</sup> | 230              |
| 30           | 300 <sup>F</sup> | 260 <sup>F</sup> | 280 <sup>F</sup> | 250 <sup>F</sup> | 260              | 310 <sup>F</sup> | 260              | 230              | 230              | 240              | 240   | 250               | 290    | 250 | 290 | 250 | 230A | [220]A           | 210  | 240 | 250    | 240              | 260              | 250              |
| 31           | 280              | 250              | 230              | 230              | 240 <sup>F</sup> | 250              | 210              | 230              | 220              | 240              | 240   | 260               | 290    | 250 | 250 | 230 | 230  | 210              | 230  | 260 | 250    | 250              | 230              | 280 <sup>F</sup> |
| Mean Value   | 270              | 270              | 260              | 240              | 240              | 260              | 270              | 230              | 230              | 250              | 250   | 250               | 250    | 260 | 250 | 240 | 230  | 220              | 240  | 240 | 240    | 250              | 270              | 280              |
| Median Value | 270              | 270              | 260              | 250              | 240              | 250              | 260              | 230              | 230              | 240              | 250   | 250               | 250    | 250 | 250 | 240 | 230  | 220              | 240  | 240 | 240    | 250              | 270              | 280              |
| Count        | 29               | 30               | 29               | 29               | 30               | 27               | 26               | 28               | 31               | 30               | 30    | 31                | 31     | 30  | 30  | 30  | 29   | 28               | 26   | 25  | 26     | 27               | 27               | 28               |

R'F2

Swing 1.0 Mc to 17.2 Mc in 2 min  
 Manual  Automatic

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

IONOSPHERIC DATA

Lat. 35° 42.4' N  
Long. 139° 29.3' E

Kokubunji Tokyo

135° E Mean Time

foF1

Jan. 1955

| 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  | Q                 | Q                | 3.8              | 4.0                | 4.0               | 4.0              | C                  | C                  | C                  | C                |    |    |    |    |    |    |    |  |
| 2            |    |    |    |    |    |    | C  | Q                 | Q                | 4.0 <sup>L</sup> | 3.9                | 4.0               | 3.9              | 4.0                | 3.6                | 3.2 <sup>L</sup>   | A                |    |    |    |    |    |    |    |  |
| 3            |    |    |    |    |    |    | Q  | L                 | L                | 4.0              | 4.0                | 4.1               | 4.0              | 4.0                | 3.4                | L                  | Q                |    |    |    |    |    |    |    |  |
| 4            |    |    |    |    |    |    | Q  | L                 | L                | 4.0 <sup>L</sup> | 4.0                | 4.0               | 4.0              | 4.0                | 3.4                | 2.8                | Q                |    |    |    |    |    |    |    |  |
| 5            |    |    |    |    |    |    | A  | 3.4 <sup>L</sup>  | 4.0              | 4.0              | 4.0                | 4.0               | 3.9              | 4.0                | 3.9 <sup>L</sup>   | 3.2 <sup>L</sup>   | 2.5 <sup>L</sup> |    |    |    |    |    |    |    |  |
| 6            |    |    |    |    |    |    | Q  | L                 | L                | 3.8 <sup>L</sup> | 4.0                | 4.2               | 4.0              | 4.0                | L                  | Q                  | Q                |    |    |    |    |    |    |    |  |
| 7            |    |    |    |    |    |    | Q  | Q                 | Q                | 4.0 <sup>L</sup> | 4.1                | 4.2               | 4.1              | 4.0                | 3.9                | 3.3                | 2.5 <sup>L</sup> |    |    |    |    |    |    |    |  |
| 8            |    |    |    |    |    |    | Q  | Q                 | Q                | 4.0              | 4.0                | 4.1               | 4.2              | 4.2                | 4.0                | 3.4                | Q                |    |    |    |    |    |    |    |  |
| 9            |    |    |    |    |    |    | Q  | Q                 | Q                | 3.5 <sup>L</sup> | 3.9                | 4.0               | 4.0              | 4.0                | 4.0                | 4.0                | Q                |    |    |    |    |    |    |    |  |
| 10           |    |    |    |    |    |    | Q  | A                 | A                | C                | C                  | 4.0               | 4.2              | 3.8                | 3.6 <sup>L</sup>   | L                  | Q                |    |    |    |    |    |    |    |  |
| 11           |    |    |    |    |    |    | Q  | L                 | L                | 3.5              | 4.0                | 4.2               | 4.0              | 4.0                | 3.7                | 3.1                | Q                |    |    |    |    |    |    |    |  |
| 12           |    |    |    |    |    |    | Q  | L                 | L                | L                | 4.0                | 4.1               | 4.2              | 4.4 <sup>L</sup>   | L                  | 3.2                | Q                |    |    |    |    |    |    |    |  |
| 13           |    |    |    |    |    |    | Q  | L                 | L                | 3.6              | 4.1                | 4.2 <sup>LH</sup> | 4.2              | 4.0                | L                  | 3.2 <sup>L</sup>   | 2.4              |    |    |    |    |    |    |    |  |
| 14           |    |    |    |    |    |    | Q  | L                 | L                | 3.6              | 4.0                | 4.1               | 4.1              | 4.0                | 4.0 <sup>L</sup>   | L                  | A                |    |    |    |    |    |    |    |  |
| 15           |    |    |    |    |    |    | Q  | A                 | A                | A                | A                  | 4.0               | 4.2 <sup>L</sup> | A                  | 4.0                | L                  | Q                |    |    |    |    |    |    |    |  |
| 16           |    |    |    |    |    |    | Q  | Q                 | Q                | Q                | 4.1                | 4.4               | 4.1              | 4.0                | 4.0                | A                  | A                |    |    |    |    |    |    |    |  |
| 17           |    |    |    |    |    |    | M  | Q                 | Q                | 3.2 <sup>L</sup> | 4.3                | 4.2               | 4.1              | 4.1                | 3.9 <sup>L</sup>   | 3.5 <sup>L</sup>   | Q                |    |    |    |    |    |    |    |  |
| 18           |    |    |    |    |    |    | A  | A                 | A                | A                | 4.1                | 4.5 <sup>L</sup>  | 4.0              | 4.2                | 3.9 <sup>L</sup>   | A                  | Q                |    |    |    |    |    |    |    |  |
| 19           |    |    |    |    |    |    | Q  | Q                 | Q                | Q                | 4.2                | 4.2               | 4.1              | 4.2 <sup>L</sup>   | 4.0 <sup>L</sup>   | 3.3                | C                |    |    |    |    |    |    |    |  |
| 20           |    |    |    |    |    |    | Q  | Q                 | Q                | L                | 4.0 <sup>H</sup>   | 4.0               | 4.1 <sup>L</sup> | 4.0                | 4.0 <sup>L</sup>   | 3.5 <sup>L</sup>   | L                |    |    |    |    |    |    |    |  |
| 21           |    |    |    |    |    |    | A  | L                 | L                | 3.5              | 4.0                | 4.1               | 4.1              | [4.0] <sup>L</sup> | 3.8                | Q                  | 2.7              |    |    |    |    |    |    |    |  |
| 22           |    |    |    |    |    |    | Q  | L                 | L                | 3.3              | 3.8 <sup>L</sup>   | 4.1               | 4.1              | 4.1                | 4.0                | [3.2] <sup>L</sup> | 2.4              |    |    |    |    |    |    |    |  |
| 23           |    |    |    |    |    |    | Q  | L                 | L                | 3.5 <sup>L</sup> | 4.1                | 4.3               | 4.0              | 4.0                | 4.0 <sup>H</sup>   | 3.6 <sup>L</sup>   | 3.0              |    |    |    |    |    |    |    |  |
| 24           |    |    |    |    |    |    | Q  | L                 | L                | 3.5 <sup>L</sup> | Q                  | 4.0               | 4.0              | [4.0] <sup>A</sup> | 4.0                | 3.5                | Q                |    |    |    |    |    |    |    |  |
| 25           |    |    |    |    |    |    | Q  | 3.2               | 4.0              | 4.0              | 4.2                | 4.1               | 4.2              | 4.0                | [3.6] <sup>L</sup> | 3.3                | Q                |    |    |    |    |    |    |    |  |
| 26           |    |    |    |    |    |    | Q  | L                 | L                | 3.5 <sup>L</sup> | 4.0                | 4.0               | 4.2              | 4.2                | 4.0                | 3.6 <sup>L</sup>   | A                |    |    |    |    |    |    |    |  |
| 27           |    |    |    |    |    |    | L  | 2.8 <sup>L</sup>  | 3.5 <sup>L</sup> | 4.2 <sup>H</sup> | 4.2 <sup>H</sup>   | 4.2               | 4.2              | 4.1                | 4.0                | Q                  | L                |    |    |    |    |    |    |    |  |
| 28           |    |    |    |    |    |    | L  | 3.3 <sup>LH</sup> | 4.2 <sup>H</sup> | 4.0              | [4.2] <sup>C</sup> | 4.5               | 4.3              | 4.0                | 4.0                | 3.6                | 3.4              |    |    |    |    |    |    |    |  |
| 29           |    |    |    |    |    |    | Q  | 3.0               | 3.5              | 4.0 <sup>L</sup> | 4.2                | 4.3               | 4.0              | 4.0                | 4.0                | 3.7 <sup>L</sup>   | L                | Q  |    |    |    |    |    |    |  |
| 30           |    |    |    |    |    |    | Q  | 3.3 <sup>L</sup>  | 3.9 <sup>L</sup> | 4.0              | 4.1                | 4.2 <sup>H</sup>  | 3.9              | A                  | A                  | A                  | A                |    |    |    |    |    |    |    |  |
| 31           |    |    |    |    |    |    | Q  | 3.0               | 4.0              | 4.1              | 4.0                | 4.4 <sup>L</sup>  | 4.1              | 4.0                | 4.0                | 3.8 <sup>L</sup>   | Q                |    |    |    |    |    |    |    |  |
| Mean Value   |    |    |    |    |    |    |    |                   |                  |                  |                    |                   |                  |                    |                    |                    |                  |    |    |    |    |    |    |    |  |
| Median Value |    |    |    |    |    |    |    |                   |                  |                  |                    |                   |                  |                    |                    |                    |                  |    |    |    |    |    |    |    |  |
| Count        |    |    |    |    |    |    |    |                   |                  |                  |                    |                   |                  |                    |                    |                    |                  |    |    |    |    |    |    |    |  |

foF1

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual  Automatic

K 4

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

IONOSPHERIC DATA

Lat.  $35^{\circ}42.4'N$   
Long.  $139^{\circ}29.3'E$

Kokubunji Tokyo

RF1

Jan. 1955

135° E Mean Time

| Day           | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07               | 08               | 09               | 10               | 11               | 12               | 13               | 14               | 15               | 16  | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |
|---------------|----|----|----|----|----|----|----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----|----|----|----|----|----|----|----|--|
| 1             |    |    |    |    |    |    |    | A                | Q                | 250              | 230              | 250              | 230              | C                | C                | C                | C   |    |    |    |    |    |    |    |  |
| 2             |    |    |    |    |    |    |    | C                | Q                | 230              | 210              | 230 <sup>A</sup> | 210              | 240              | 240              | 250              | A   |    |    |    |    |    |    |    |  |
| 3             |    |    |    |    |    |    |    | Q                | 240              | 230              | 230              | 210              | 210              | 230              | 200              | 230              | Q   |    |    |    |    |    |    |    |  |
| 4             |    |    |    |    |    |    |    | Q                | 220              | 260 <sup>A</sup> | 210              | 220              | 200              | 230              | 210              | 190              | Q   |    |    |    |    |    |    |    |  |
| 5             |    |    |    |    |    |    |    | A                | 240              | 240              | 210              | 200              | 200              | 230              | 230              | 230              | 220 |    |    |    |    |    |    |    |  |
| 6             |    |    |    |    |    |    |    | Q                | 230              | 210 <sup>A</sup> | 210              | 210              | 200              | 190              | 250              | Q                | Q   |    |    |    |    |    |    |    |  |
| 7             |    |    |    |    |    |    |    | Q                | Q                | 230              | 220              | 240              | 230              | 230              | 230              | 230              | 220 |    |    |    |    |    |    |    |  |
| 8             |    |    |    |    |    |    |    | Q                | Q                | 230              | 220              | 200              | 200              | 220              | 220              | 230              | Q   |    |    |    |    |    |    |    |  |
| 9             |    |    |    |    |    |    |    | Q                | Q                | 230              | 220              | 230              | 220              | 230              | 230              | Q                | Q   |    |    |    |    |    |    |    |  |
| 10            |    |    |    |    |    |    |    | Q                | A                | C                | C                | 230              | 220              | 220              | 250              | 240              | Q   |    |    |    |    |    |    |    |  |
| 11            |    |    |    |    |    |    |    | Q                | 240              | 230              | 240              | 220              | 210              | 230              | 210              | 210 <sup>A</sup> | Q   |    |    |    |    |    |    |    |  |
| 12            |    |    |    |    |    |    |    | Q                | 220              | 220              | 230              | 210              | 200              | 200              | 250              | 230              | Q   |    |    |    |    |    |    |    |  |
| 13            |    |    |    |    |    |    |    | Q                | 230              | 220              | 210              | 190 <sup>H</sup> | 230              | 190              | A                | 220              | 220 |    |    |    |    |    |    |    |  |
| 14            |    |    |    |    |    |    |    | Q                | 220              | 200              | 190              | 230              | 210              | 210              | 220 <sup>A</sup> | 200              | A   |    |    |    |    |    |    |    |  |
| 15            |    |    |    |    |    |    |    | Q                | A                | A                | A                | 210              | 210              | A                | A                | 240              | Q   |    |    |    |    |    |    |    |  |
| 16            |    |    |    |    |    |    |    | Q                | Q                | 270 <sup>A</sup> | 240              | 230 <sup>A</sup> | 220              | 220 <sup>A</sup> | A                | A                | A   |    |    |    |    |    |    |    |  |
| 17            |    |    |    |    |    |    |    | M                | Q                | 220              | 230              | 240              | 230              | 230              | 280              | 240              | Q   |    |    |    |    |    |    |    |  |
| 18            |    |    |    |    |    |    |    | A                | A                | A                | 230              | 220              | 230              | 260              | 230              | A                | Q   |    |    |    |    |    |    |    |  |
| 19            |    |    |    |    |    |    |    | Q                | Q                | Q                | A                | A                | 240              | 240              | 240              | 230              | C   |    |    |    |    |    |    |    |  |
| 20            |    |    |    |    |    |    |    | Q                | 230              | 200 <sup>H</sup> | 200              | 250              | 250              | 220              | 250 <sup>A</sup> | 240              | 230 |    |    |    |    |    |    |    |  |
| 21            |    |    |    |    |    |    |    | A                | 240              | 220              | 220              | 220              | 250              | A                | 200              | Q                | 220 |    |    |    |    |    |    |    |  |
| 22            |    |    |    |    |    |    |    | Q                | 220              | 220              | 220              | 230              | 250              | 250              | 250              | 240              | 230 |    |    |    |    |    |    |    |  |
| 23            |    |    |    |    |    |    |    | Q                | 230              | 220              | 190              | 190              | 240              | 220              | 180 <sup>H</sup> | 240              | 240 |    |    |    |    |    |    |    |  |
| 24            |    |    |    |    |    |    |    | Q                | 240              | 220              | Q                | 220              | 210              | 220 <sup>A</sup> | 230              | 230              | Q   |    |    |    |    |    |    |    |  |
| 25            |    |    |    |    |    |    |    | Q                | 230              | 200              | 180              | 220              | 190              | 230              | 220              | 210              | Q   |    |    |    |    |    |    |    |  |
| 26            |    |    |    |    |    |    |    | Q                | 230              | 230              | 220              | 250              | 230              | 230              | 230              | 240              | A   |    |    |    |    |    |    |    |  |
| 27            |    |    |    |    |    |    |    | 220 <sup>A</sup> | 210              | 190              | 180 <sup>H</sup> | 190 <sup>H</sup> | 220              | 200              | 230              | Q                | 230 |    |    |    |    |    |    |    |  |
| 28            |    |    |    |    |    |    |    | 230              | 210 <sup>H</sup> | 220 <sup>H</sup> | 220              | C                | C                | 240              | 230              | 230              | 220 |    |    |    |    |    |    |    |  |
| 29            |    |    |    |    |    |    |    | Q                | 240              | 210              | 230              | 230              | 240              | 240              | 240              | 250              | 250 | Q  |    |    |    |    |    |    |  |
| 30            |    |    |    |    |    |    |    | Q                | 240              | 240              | 210              | 200              | 200 <sup>H</sup> | 190              | A                | A                | A   |    |    |    |    |    |    |    |  |
| 31            |    |    |    |    |    |    |    | Q                | 220              | 230              | 210              | 240              | 250              | 260              | 240              | 230              | Q   |    |    |    |    |    |    |    |  |
| Mean Value    |    |    |    |    |    |    |    | 220              | 230              | 220              | 220              | 220              | 220              | 230              | 230              | 230              | 230 |    |    |    |    |    |    |    |  |
| Minimum Value |    |    |    |    |    |    |    | 220              | 230              | 220              | 220              | 220              | 220              | 230              | 230              | 230              | 230 |    |    |    |    |    |    |    |  |
| Count         |    |    |    |    |    |    |    | 2                | 19               | 26               | 27               | 29               | 30               | 28               | 27               | 23               | 10  |    |    |    |    |    |    |    |  |

RF1

Sweep 1.0 Mc to 17.2 Mc in 2 min  
 Manual  Automatic

K 5

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

# IONOSPHERIC DATA

**Kokubunji Tokyo**  
Lat. 35° 42.4' N  
Long. 139° 28.3' E

Jan. 1955

f<sub>o</sub>E

135° E Mean Time

| Day          | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08                 | 09                 | 10               | 11                 | 12                 | 13                 | 14                 | 15                 | 16  | 17               | 18 | 19 | 20 | 21 | 22 | 23 |  |
|--------------|----|----|----|----|----|----|----|-----|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----|------------------|----|----|----|----|----|----|--|
| 1            |    |    |    |    |    |    |    | A   | 2.3                | 2.5                | AF               | AF                 | A                  | C                  | C                  | C                  | C   |                  |    |    |    |    |    |    |  |
| 2            |    |    |    |    |    |    |    | C   | 2.1                | (2.5) <sup>F</sup> | 2.9              | (2.9) <sup>A</sup> | 2.9                | 2.9                | 2.9                | 2.8                | 2.5 | 1.7              |    |    |    |    |    |    |  |
| 3            |    |    |    |    |    |    |    | A   | 2.1                | 2.5                | 2.9              | 2.9                | 2.9                | 2.9                | 2.6                | 2.4                | 1.8 |                  |    |    |    |    |    |    |  |
| 4            |    |    |    |    |    |    |    | A   | (2.3) <sup>A</sup> | A                  | A                | 2.9                | 2.9                | (2.8) <sup>A</sup> | 2.7                | B                  | A   |                  |    |    |    |    |    |    |  |
| 5            |    |    |    |    |    |    |    | A   | AF                 | (2.4) <sup>A</sup> | 2.9              | 3.0                | 3.0                | 3.0                | 2.8                | 2.5 <sup>F</sup>   | A   |                  |    |    |    |    |    |    |  |
| 6            |    |    |    |    |    |    |    | B   | AF                 | A                  | 2.9              | 3.0                | 3.1                | 3.0                | 2.8                | 2.5                | 1.9 |                  |    |    |    |    |    |    |  |
| 7            |    |    |    |    |    |    |    | A   | AF                 | 2.4 <sup>F</sup>   | 2.9              | 3.0                | 3.0                | 3.0                | 2.8                | 2.4                | A   |                  |    |    |    |    |    |    |  |
| 8            |    |    |    |    |    |    |    | A   | 2.3 <sup>F</sup>   | (2.6) <sup>A</sup> | 3.0              | 3.2                | 3.0                | 3.0                | 3.0                | A                  | A   |                  |    |    |    |    |    |    |  |
| 9            |    |    |    |    |    |    |    | 1.6 | 2.3 <sup>F</sup>   | 2.6                | 2.9              | 3.0                | 3.1                | 3.0                | (2.8) <sup>A</sup> | 2.5                | 2.1 |                  |    |    |    |    |    |    |  |
| 10           |    |    |    |    |    |    |    | A   | A                  | C                  | C                | 3.0                | 3.0                | 2.9                | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 11           |    |    |    |    |    |    |    | B   | 2.5                | 2.6 <sup>F</sup>   | 2.8 <sup>F</sup> | 2.9                | A                  | A                  | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 12           |    |    |    |    |    |    |    | A   | A                  | A                  | A                | 3.0                | 3.0                | A                  | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 13           |    |    |    |    |    |    |    | A   | 2.2                | 2.7                | 3.0              | 3.1                | 3.1                | A                  | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 14           |    |    |    |    |    |    |    | B   | A                  | 2.5 <sup>F</sup>   | A                | 3.1                | A                  | A                  | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 15           |    |    |    |    |    |    |    | A   | A                  | A                  | A                | 3.0                | A                  | A                  | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 16           |    |    |    |    |    |    |    | 1.9 | 2.1                | 2.5 <sup>F</sup>   | 2.9              | A                  | A                  | A                  | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 17           |    |    |    |    |    |    |    | M   | 2.3                | 2.5                | 2.7              | (2.8) <sup>A</sup> | 3.0                | 3.0                | 2.7 <sup>A</sup>   | (2.5) <sup>A</sup> | A   |                  |    |    |    |    |    |    |  |
| 18           |    |    |    |    |    |    |    | A   | A                  | 2.4                | 2.7              | 2.9                | (3.0) <sup>A</sup> | 3.0                | 2.8                | 2.4 <sup>A</sup>   | 2.0 |                  |    |    |    |    |    |    |  |
| 19           |    |    |    |    |    |    |    | B   | (2.3) <sup>A</sup> | (2.5) <sup>A</sup> | A                | A                  | A                  | A                  | 2.8                | 2.7                | 2.5 | C                |    |    |    |    |    |    |  |
| 20           |    |    |    |    |    |    |    | A   | A                  | A                  | A                | A                  | A                  | A                  | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 21           |    |    |    |    |    |    |    | A   | AF                 | A                  | 2.6              | 2.7                | 2.9                | 2.8                | 2.7                | 2.4                | A   |                  |    |    |    |    |    |    |  |
| 22           |    |    |    |    |    |    |    | A   | B                  | 2.5                | 2.7              | 2.8                | 3.0                | 2.9                | 2.7                | 2.2                | 1.5 |                  |    |    |    |    |    |    |  |
| 23           |    |    |    |    |    |    |    | A   | 2.1                | 2.4                | 2.7              | 3.0                | 2.9                | 2.9                | 2.8                | 2.5                | A   |                  |    |    |    |    |    |    |  |
| 24           |    |    |    |    |    |    |    | 1.6 | 2.0                | 2.5                | 2.7              | 2.9                | 3.0                | 3.0                | A                  | A                  | A   |                  |    |    |    |    |    |    |  |
| 25           |    |    |    |    |    |    |    | B   | 2.1                | 2.5                | 2.6              | 2.9                | 3.0                | 3.0                | 2.9                | 2.5                | 2.1 |                  |    |    |    |    |    |    |  |
| 26           |    |    |    |    |    |    |    | 1.6 | (2.0) <sup>A</sup> | 2.5                | 2.8 <sup>H</sup> | 2.9 <sup>H</sup>   | 3.0                | 3.0                | 2.8                | 2.4                | A   |                  |    |    |    |    |    |    |  |
| 27           |    |    |    |    |    |    |    | A   | A                  | 2.6                | 2.7              | 3.0                | 2.9                | 2.9                | 2.8                | 2.6                | 2.1 |                  |    |    |    |    |    |    |  |
| 28           |    |    |    |    |    |    |    | A   | 2.1                | 2.6                | 2.9              | C                  | C                  | C                  | 3.0                | 2.5                | 2.1 |                  |    |    |    |    |    |    |  |
| 29           |    |    |    |    |    |    |    | B   | 2.1                | 2.6                | 2.8              | 2.9                | 3.0                | 3.0                | 2.9                | 2.7                | 2.2 | 1.4 <sup>J</sup> |    |    |    |    |    |    |  |
| 30           |    |    |    |    |    |    |    | A   | 2.3                | (2.6) <sup>A</sup> | 2.9              | 3.0                | 3.1                | 3.0                | 2.9                | 2.5                | 2.0 |                  |    |    |    |    |    |    |  |
| 31           |    |    |    |    |    |    |    | 1.8 | 2.2 <sup>F</sup>   | 2.6                | 2.8              | 3.0                | 3.1                | 2.9                | 2.8                | 2.6                | 2.2 |                  |    |    |    |    |    |    |  |
| Mean Value   |    |    |    |    |    |    |    | 1.7 | 2.2                | 2.5                | 2.7              | 3.0                | 3.0                | 2.9                | 2.8                | 2.5                | 2.0 | 1.4              |    |    |    |    |    |    |  |
| Median Value |    |    |    |    |    |    |    | 1.6 | 2.2                | 2.5                | 2.8              | 3.0                | 3.0                | 3.0                | 2.8                | 2.5                | 2.0 | 1.4              |    |    |    |    |    |    |  |
| Count        |    |    |    |    |    |    |    | 5   | 19                 | 24                 | 23               | 26                 | 23                 | 22                 | 21                 | 19                 | 12  | 1                |    |    |    |    |    |    |  |

f<sub>o</sub>E

Group 1.0 Mc to 1.72 Mc in 2 min

Manual

Automatic

K 6



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

Lat.  $35^{\circ}42.4' N$   
Long.  $139^{\circ}29.3' E$   
**Kokubunji Tokyo**

**IONOSPHERIC DATA**

135° E Mean Time

1'E

Jan. 1955

| 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   | 130                | 130                | AF               | AF                 | A                  | C                  | C                  | C                | C                |    |    |    |    |    |    |    |
| 2            |    |    |    |    |    |    |    | C   | 110                | (120) <sup>A</sup> | 120 <sup>A</sup> | (120) <sup>A</sup> | 120 <sup>A</sup>   | 120 <sup>A</sup>   | 130 <sup>A</sup>   | 130 <sup>A</sup> | 130 <sup>A</sup> |    |    |    |    |    |    |    |
| 3            |    |    |    |    |    |    |    | A   | 120 <sup>A</sup>   | 130 <sup>A</sup>   | 120              | 120                | 120                | 100                | 120                | 120              | 140              |    |    |    |    |    |    |    |
| 4            |    |    |    |    |    |    |    | A   | 130                | A                  | A                | 120                | 130                | (120) <sup>A</sup> | 120                | 120              | A                |    |    |    |    |    |    |    |
| 5            |    |    |    |    |    |    |    | A   | 130 <sup>F</sup>   | 120 <sup>A</sup>   | 130              | 130                | 130                | 130                | 130                | 130              | A                |    |    |    |    |    |    |    |
| 6            |    |    |    |    |    |    |    | B   | A                  | A                  | 130 <sup>A</sup> | 110                | 130 <sup>A</sup>   | 120                | 120                | 120              | 110              |    |    |    |    |    |    |    |
| 7            |    |    |    |    |    |    |    | A   | A                  | 110                | 130              | 130                | 110                | 120                | 120                | 130              | A                |    |    |    |    |    |    |    |
| 8            |    |    |    |    |    |    |    | A   | 120                | (120) <sup>A</sup> | 110              | 110                | 110                | 110                | 120                | A                | A                |    |    |    |    |    |    |    |
| 9            |    |    |    |    |    |    |    | 160 | 130                | 110                | 130              | 130 <sup>A</sup>   | 130                | 120                | (120) <sup>A</sup> | 130              | 120              |    |    |    |    |    |    |    |
| 10           |    |    |    |    |    |    |    | A   | A                  | C                  | C                | 110                | 120                | 120                | A                  | A                | A                |    |    |    |    |    |    |    |
| 11           |    |    |    |    |    |    |    | B   | 120                | 120                | 110              | 130 <sup>A</sup>   | A                  | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 12           |    |    |    |    |    |    |    | A   | A                  | A                  | A                | 110                | 110                | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 13           |    |    |    |    |    |    |    | A   | 130                | 120                | 120              | 110                | 110                | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 14           |    |    |    |    |    |    |    | B   | A                  | 110                | A                | 110                | A                  | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 15           |    |    |    |    |    |    |    | A   | A                  | A                  | A                | 110                | A                  | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 16           |    |    |    |    |    |    |    | 170 | 130                | 110                | 110              | A                  | A                  | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 17           |    |    |    |    |    |    |    | M   | 130                | 120                | 110              | A                  | A                  | 110                | (110) <sup>A</sup> | 110              | A                |    |    |    |    |    |    |    |
| 18           |    |    |    |    |    |    |    | A   | 130                | 120                | 120              | 120                | (120) <sup>A</sup> | 110                | 110                | 110              | 120              |    |    |    |    |    |    |    |
| 19           |    |    |    |    |    |    |    | B   | 130                | 120                | A                | A                  | A                  | 110                | 110                | 120              | C                |    |    |    |    |    |    |    |
| 20           |    |    |    |    |    |    |    | A   | A                  | A                  | A                | A                  | A                  | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 21           |    |    |    |    |    |    |    | A   | A                  | A                  | 120              | 120                | 110                | 110                | 130                | 120              | A                |    |    |    |    |    |    |    |
| 22           |    |    |    |    |    |    |    | A   | B                  | 120                | 120              | 110                | 110                | 120                | 110                | 120              | 120              |    |    |    |    |    |    |    |
| 23           |    |    |    |    |    |    |    | A   | 120                | 110                | 110              | 110                | 110                | 120 <sup>A</sup>   | 110                | 120              | A                |    |    |    |    |    |    |    |
| 24           |    |    |    |    |    |    |    | 150 | 120                | 120                | 110              | 110                | 110                | A                  | A                  | A                | A                |    |    |    |    |    |    |    |
| 25           |    |    |    |    |    |    |    | B   | 120                | 110                | 110              | 110                | 110                | 110                | 110                | 110              | 120              |    |    |    |    |    |    |    |
| 26           |    |    |    |    |    |    |    | 170 | (140) <sup>A</sup> | 120                | 120 <sup>H</sup> | 120 <sup>H</sup>   | 120                | 110                | 110                | 110              | A                |    |    |    |    |    |    |    |
| 27           |    |    |    |    |    |    |    | A   | A                  | 110                | 110              | 110                | 110                | 110                | 110                | 120              | 120              |    |    |    |    |    |    |    |
| 28           |    |    |    |    |    |    |    | A   | 120                | 120                | 120              | C                  | C                  | C                  | 110                | 120              | 120              |    |    |    |    |    |    |    |
| 29           |    |    |    |    |    |    |    | 120 | 120                | 110                | 130 <sup>A</sup> | 110                | 110                | 110                | 110                | 120              | 130              | B  |    |    |    |    |    |    |
| 30           |    |    |    |    |    |    |    | A   | 130                | (120) <sup>A</sup> | 110              | 120                | 120                | 120                | 120                | 110              | 120              |    |    |    |    |    |    |    |
| 31           |    |    |    |    |    |    |    | 110 | 120                | 130                | 120              | 120                | 120                | 120                | 110                | 110              | 110              |    |    |    |    |    |    |    |
| Mean Value   |    |    |    |    |    |    |    | 150 | 130                | 120                | 120              | 120                | 120                | 120                | 120                | 120              | 120              |    |    |    |    |    |    |    |
| Median Value |    |    |    |    |    |    |    | 160 | 120                | 120                | 120              | 120                | 120                | 120                | 110                | 120              | 120              |    |    |    |    |    |    |    |
| Count        |    |    |    |    |    |    |    | 6   | 20                 | 24                 | 23               | 25                 | 22                 | 22                 | 21                 | 20               | 12               |    |    |    |    |    |    |    |

1'E

Sweep  $\downarrow$  0 Mc to 17.2 Mc in 2 min  Manual  Automatic

K 7

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

Lat. 35° 42.4' N  
Long. 139° 28.8' E

### Kokubunji Tokyo

## IONOSPHERIC DATA

135° E Mean Time

fEs

Jan. 1955

| Day          | 00               | 01               | 02               | 03               | 04               | 05               | 06               | 07               | 08               | 09               | 10               | 11               | 12  | 13  | 14  | 15  | 16               | 17               | 18               | 19               | 20               | 21               | 22               | 23               |     |
|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----|-----|-----|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----|
| 1            | 2.5              | 2.5              | 3.0              | 3.0              | 3.6              | 2.9              | 2.8              | 2.7              | 2.7              | 4.4              | 4.8 <sup>F</sup> | 4.5 <sup>F</sup> | 3.2 | C   | C   | C   | C                | C                | C                | C                | C                | C                | C                | C                |     |
| 2            | C                | C                | C                | C                | C                | C                | C                | C                | 3.2 <sup>F</sup> | 4.2 <sup>F</sup> | 3.3              | 4.7              | 3.3 | 3.3 | 3.3 | 3.2 | 3.6 <sup>F</sup> | 7.0              | 7.4              | 5.0              | 5.1              | 5.5              | 4.1              | 4.5              |     |
| 3            | 2.7              | 2.5              | 2.5              | 2.5              | 2.5              | 1.9              | 1.8              | 3.2              | 2.7              | 3.2              | 2.9              | 2.7              | 3   | 3   | 2.9 | 2.6 | 2.6              | 5.0              | 4.0 <sup>Y</sup> | 4.0              | 5.0 <sup>F</sup> | 3.0 <sup>F</sup> | 3.2 <sup>F</sup> | 4.4              |     |
| 4            | 3.9 <sup>F</sup> | 4.9              | 3.5              | 2.5              | 2.5              | 4.0 <sup>F</sup> | 3.2              | 3.2              | 2.9              | 5.0              | 3.2              | 2.9              | 3.2 | 3.2 | 3.2 | 2.7 | 2.9              | 3.2              | 6.0              | 7.0              | 5.0              | 3.2              | 2.8              | 3.2              |     |
| 5            | 2.8              | 2.9              | 3.2              | 2.5              | 2.5              | 3.2              | 2.4              | 3.2              | 2.7 <sup>F</sup> | 4.4              | 3.2              | 2.9              | 3.0 | 3.1 | 2.6 | 2.9 | 3.2              | 3.9              | 5.0              | 7.0              | 6.5 <sup>F</sup> | 2.6              | 3.2              | 3.0 <sup>F</sup> |     |
| 6            | 2.7              | 2.7              | 3.2              | 2.9              | 2.6              | 2.5              | 2.5              | 2.6              | 3.0 <sup>F</sup> | 4.0              | 2.9              | 2.9              | 2.8 | 2.6 | 3   | 2.5 | 2.6 <sup>Y</sup> | E                | 2.4 <sup>Y</sup> | 2.5              | 3.0 <sup>F</sup> | 3.9 <sup>F</sup> | 4.3 <sup>F</sup> | 5.0              |     |
| 7            | 3.2              | 3.2              | 2.5              | 2.6              | 2.5 <sup>F</sup> | 2.5 <sup>F</sup> | 2.6              | 3.2              | 4.4              | 2.8              | 3.9              | 4.9              | 3   | 3   | 3   | 3.2 | 2.9              | 3.0              | 2.6              | 2.5 <sup>Y</sup> | 2.4              | E                | 2.5              | 3.2              |     |
| 8            | C                | 3.2              | 2.9              | 2.5              | 2.6              | 2.5              | E                | 3.0              | 2.9              | 3.0              | 3                | 3                | 3   | 3   | 3.0 | 4.4 | 3.3              | 2.7              | 2.6              | 3.2              | 2.4              | 2.5              | 3.0              | 3.9              |     |
| 9            | 2.5 <sup>Y</sup> | 4.4              | 2.9              | 2.6              | 2.5              | 2.5              | 2.5 <sup>Y</sup> | 2.5              | 3.0              | 3.0              | 3                | 3                | 3   | 3   | 3.2 | 3.2 | 2.4              | 3.0              | 3.6              | 3.2              | E                | E                | E                | E                |     |
| 10           | E                | 2.7              | 2.3              | 2.1              | 2.4              | 3.2              | 2.6              | 2.5              | 4.8              | C                | C                | 3                | 3   | 3   | 3.2 | 4.7 | 3.3              | 6.3              | 3.2              | 3.2              | 2.5              | 2.5              | 2.6              | 2.6              |     |
| 11           | 2.5 <sup>Y</sup> | 2.5              | 2.5 <sup>Y</sup> | 2.0              | 2.5              | 2.5              | 2.2              | 2.5              | 3                | 3.2              | 3.2              | 3.2              | 4.1 | 5.0 | 3.2 | 3.5 | 4.5              | 4.7              | 3.2              | 2.5 <sup>Y</sup> | 2.7 <sup>Y</sup> | 3.2              | 4.4              | 2.4              |     |
| 12           | E                | 1.8              | 2.5 <sup>Y</sup> | 2.0              | 2.5              | 1.8              | 1.9              | 2.4              | 3.2              | 3.0              | 3.2              | 3                | 3   | 3.0 | 3.2 | 3.2 | 3.2              | 3.0              | 2.5              | 2.6              | 4.4              | 5.7              | 4.7              | 2.9              |     |
| 13           | 2.7              | 1.9              | 2.0              | 2.4              | 2.5              | 2.2              | 2.5              | 3.0              | 2.3              | 2.9              | 2.9              | 3                | 3   | 3.2 | 4.0 | 3.5 | 3.2              | 2.5 <sup>Y</sup> | E                | E                | 3.2              | 3.0              | 2.6              | 2.5              |     |
| 14           | 2.5              | E                | 2.5              | 2.3              | E                | E                | E                | B                | 2.9              | 3.2              | 3.2              | 3.6              | 3.6 | 4.0 | 4.0 | 3.2 | 3.2              | 3.2              | 4.1 <sup>Y</sup> | 6.3              | 3.2              | 2.6              | C                | 2.5              |     |
| 15           | C                | 2.6              | 2.5 <sup>Y</sup> | 2.5              | 2.5 <sup>F</sup> | 2.1              | 2.4              | 3.0              | 4.0              | 4.3 <sup>Y</sup> | 5.7              | 3.2              | 4.3 | 4.7 | 3.8 | 5.0 | 3.0              | 6.7              | 5.0              | 4.0              | 3.0              | 2.5              | 2.5              | 2.5              |     |
| 16           | 2.7              | 2.3              | 2.0              | 2.4              | 2.6              | 2.2              | 2.7              | 3                | 2.6              | 3.0              | 4.7              | 3.2              | 4.5 | 3.9 | 4.3 | 5.6 | 3.9              | 7.0              | 7.0              | 7.2              | 5.0              | 4.5              | 4.3              | 3.2              |     |
| 17           | 3.5              | 3.2              | 2.5              | 2.5 <sup>F</sup> | 2.5              | 2.5              | M                | M                | 3                | 3.5              | 3.5              | 4.3              | 3.5 | 3.9 | 3.8 | 3.0 | 2.9              | 2.4              | 2.0              | 2.3              | 2.5              | 2.5              | 2.4              | E                |     |
| 18           | E                | 2.0              | E                | 2.5              | 2.0              | 4.7              | 5.0              | 4.2              | 4.9              | 6.8              | 3.3              | 3                | 4.0 | 3   | 3.2 | 3.2 | 2.6              | 2.6              | 3.0              | 2.7              | 2.5              | 2.5 <sup>Y</sup> | 3.0              | 3.0              |     |
| 19           | 2.5              | 2.6              | 5.0 <sup>F</sup> | 5.0 <sup>F</sup> | 3.0              | 2.5              | 2.5              | 3                | 3.2              | 4.2              | 5.0              | 5.0              | 5.0 | 3.2 | 3.2 | 2.6 | C                | C                | C                | C                | C                | C                | C                | 5.0              |     |
| 20           | 5.7              | 3.2              | 3.2              | 3.0              | 5.0              | 5.0              | 3.0              | 2.6 <sup>Y</sup> | 3.2              | 3.2              | 3.2              | 5.2              | 4.5 | 4.9 | 6.0 | 3.7 | 3.2              | 2.6              | 2.6              | 2.7              | E                | E                | E                | E                |     |
| 21           | 2.6              | 2.4              | 2.7              | 2.3              | 2.5              | 2.6              | 3.2 <sup>F</sup> | 3.2              | 3.2              | 4.2              | 3.2              | 3.0              | 3.2 | 4.3 | 3.2 | 3.0 | 2.6              | 2.5 <sup>Y</sup> | 1.9              | 2.4              | 2.7              | 2.6              | 2.9              | 2.5              |     |
| 22           | 2.5              | 2.5              | 2.4              | 2.9              | 2.5              | 3.0              | 2.6              | 3.0 <sup>Y</sup> | 2.5              | 3.0              | 2.5              | 4.2              | 4.6 | 4.4 | 3.2 | 4.0 | 2.6              | E                | 2.5              | 3.0              | 2.8              | 3.2              | 2.4 <sup>Y</sup> | 2.5 <sup>Y</sup> |     |
| 23           | 1.7              | 2.5              | 2.7              | 2.5              | 3.3              | 3.2              | 3.2              | 2.5              | 2.5              | 2.9              | 3.1              | 3.2              | 3.2 | 3.2 | 3.2 | 3.2 | 4.2              | 3.0              | 3.0              | 2.5              | 2.9              | 2.5              | 2.4 <sup>Y</sup> | 2.4 <sup>Y</sup> |     |
| 24           | E                | 3.2              | 2.9              | 3.0              | 3.2              | 4.8              | 2.5              | 3                | 2.6              | 2.6              | 2.5              | 3                | 4.5 | 7.5 | 6.0 | 4.5 | 4.9              | 4.9              | 3.3              | 3.2              | 3.3              | 3.0              | 3.0              | 5.0              |     |
| 25           | 2.6              | 2.5              | 2.6              | 2.4              | 2.5              | 2.5              | 2.5 <sup>Y</sup> | 2.5              | 2.6              | 2.6              | 3                | 3                | 3   | 3   | 3.2 | 3   | 3.5              | 2.5 <sup>Y</sup> | E                | 2.5              | 2.5              | E                | E                | E                |     |
| 26           | E                | E                | E                | 2.5 <sup>Y</sup> | 2.6              | 2.5              | 2.6              | 2.9              | 6.5              | 3.6              | 3.5              | 3.1              | 3   | 3   | 4.2 | 3.2 | 4.2              | 6.9              | 7.0              | 3.0              | 3.0              | 2.5              | 1.9              | 2.4 <sup>Y</sup> |     |
| 27           | 2.4              | 2.5              | 2.3 <sup>Y</sup> | E                | 2.4              | 2.2              | 2.3              | 3.7              | 3.0              | 3.2              | 2.8              | 3                | 3   | 3   | 3   | 2.6 | 2.7              | E                | E                | 4.3              | 3.5              | 2.7              | 2.6              | 3.8              |     |
| 28           | 3.3              | 2.9              | 2.6              | 1.9              | 2.5 <sup>Y</sup> | 2.9              | 2.5              | 2.9              | 2.7              | 3                | 3                | C                | C   | C   | 3   | 3   | 3                | E                | 3.5              | 4.5              | 3.0              | 3.0              | 2.8              | 2.5              |     |
| 29           | 2.3              | 2.2 <sup>Y</sup> | 2.5 <sup>Y</sup> | 2.0 <sup>Y</sup> | 1.8              | 2.4 <sup>Y</sup> | E                | 2.5              | 3                | 2.6              | 3.0              | 3                | 2.9 | 4.2 | 4.3 | 4.0 | 3.4              | 2.6              | 3.1              | 4.5              | 4.0              | 3.0              | 2.6              | 2.5 <sup>Y</sup> |     |
| 30           | 3.0              | 2.6              | 1.8              | 2.6              | 2.6              | 3.2              | 3.0              | 4.5              | 3.2              | 3.6              | 3.2              | 2.9              | 4.2 | 4.2 | 6.0 | 5.0 | 5.0              | 7.0              | 3.5              | 2.6              | 3.0              | 3.0              | 3.0 <sup>F</sup> | 2.6              |     |
| 31           | 2.6 <sup>F</sup> | 2.5              | 2.4              | 2.5              | 2.9 <sup>F</sup> | 2.5 <sup>Y</sup> | 2.0              | 2.5 <sup>Y</sup> | 3.2 <sup>F</sup> | 4.2              | 2.9              | 3.2              | 4.3 | 3.8 | 4.4 | 4.2 | 2.9              | E                | 2.4              | 3.2              | 3.2              | 3.0              | 3.2              | 2.5 <sup>Y</sup> |     |
| Mean Value   | 2.8              | 2.7              | 2.8              | 2.6              | 2.7              | 2.8              | 2.7              | 3.0              | 3.2              | 3.7              | 3.4              | 3.6              | 4.1 | 3.9 | 3.8 | 3.6 | 3.3              | 4.1              | 3.7              | 3.7              | 3.4              | 3.1              | 3.1              | 3.2              |     |
| Median Value | 2.6              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.5              | 2.7              | 2.9              | 3.2              | 3.2              | 2.9              | 3.2 | 3.2 | 3.2 | 3.2 | 3.2              | 3.0              | 3.1              | 3.0              | 3.0              | 2.7              | 2.8              | 2.6              |     |
| Count        | 2.8              | 3.0              | 3.0              | 3.0              | 3.0              | 2.9              | 2.8              | 2.8              | 3.1              | 3.0              | 3.0              | 3.0              | 3.0 | 2.9 | 3.0 | 3.0 | 2.9              | 2.9              | 2.9              | 2.9              | 2.9              | 2.9              | 2.9              | 2.8              | 3.0 |

fEs

Sweep 1.0 Mc to 1.7.2 Mc in 2 min

Manual

Automatic

K 8

IONOSPHERIC DATA

Kokubunji Tokyo

Lat. 35° 42.4' N  
Long. 139° 29.3' E

Jan. 1955

(M3000)F2

135° E Mean Time

| Day          | 00                 | 01                 | 02                 | 03                 | 04                 | 05                 | 06                 | 07                 | 08                 | 09                 | 10                 | 11                 | 12                 | 13                 | 14                 | 15                 | 16  | 17                 | 18               | 19                 | 20                 | 21                 | 22                 | 23                 |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1            | (2.9) <sup>F</sup> | 3.1                | 3.1 <sup>F</sup>   | 3.2 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.4                | 3.6                | 3.3                | 3.3                | 3.4                | (3.6) <sup>T</sup> | 3.6                | C                  | C                  | C                  | C   | C                  | C                | C                  | C                  | C                  | C                  | C                  |
| 2            | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | 3.6 <sup>P</sup>   | 3.2                | 3.5                | 3.6                | 3.3                | 3.3                | 3.5                | 3.5                | 3.6 | (3.4) <sup>A</sup> | 3.2              | 3.0                | A                  | AF                 | A                  | A                  |
| 3            | 3.0 <sup>FP</sup>  | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.3 <sup>F</sup>   | 2.8 <sup>FP</sup>  | 3.3                | 3.3                | 3.2 <sup>P</sup>   | 3.6                | 3.5                | 3.4                | 3.5                | 3.5                | 3.4                | 3.6                | 3.6 | 3.3                | 3.5              | 3.1                | 3.4 <sup>F</sup>   | 3.4 <sup>F</sup>   | 2.9 <sup>F</sup>   | 2.8 <sup>F</sup>   |
| 4            | 3.0 <sup>F</sup>   | 2.7                | (2.9) <sup>F</sup> | (3.0) <sup>F</sup> | 3.3 <sup>F</sup>   | AF                 | AF                 | 3.3                | 3.3                | 3.6                | 3.7                | 3.7                | 3.5                | 3.6                | 3.4                | 3.4                | 3.5 | 3.3                | A                | A                  | A                  | 3.4                | 3.1                | 2.9 <sup>F</sup>   |
| 5            | 3.1 <sup>F</sup>   | 3.0                | 3.1 <sup>F</sup>   | 3.2 <sup>F</sup>   | 3.4 <sup>F</sup>   | 3.5 <sup>F</sup>   | 2.9 <sup>F</sup>   | 3.2                | 3.5                | 3.5                | 3.2                | 3.3                | 3.3                | 3.3                | 3.6                | 3.5                | 3.5 | 3.3                | 3.6              | 3.4                | (3.4) <sup>A</sup> | 3.3 <sup>F</sup>   | (3.1) <sup>A</sup> | 2.9 <sup>F</sup>   |
| 6            | 2.9 <sup>F</sup>   | 3.3                | 3.1 <sup>F</sup>   | 3.3 <sup>F</sup>   | 3.2 <sup>F</sup>   | 3.2 <sup>F</sup>   | 3.3 <sup>F</sup>   | 3.4                | 3.5                | 3.6                | 3.4                | 3.4                | 3.5                | 3.4                | 3.3                | 3.4                | 3.3 | 3.3                | 3.4              | 3.6                | 3.2                | 3.2 <sup>F</sup>   | 3.3 <sup>F</sup>   | (3.2) <sup>A</sup> |
| 7            | 3.1 <sup>F</sup>   | 3.3 <sup>F</sup>   | 3.4 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.5                | 3.3 <sup>F</sup>   | 3.2 <sup>F</sup>   | 3.5                | 3.5                | 4.0                | 3.6                | 3.5                | 3.4                | 3.3                | 3.6                | 3.7                | 3.6 | 3.2                | 3.2              | 3.3                | 3.3                | 2.9 <sup>F</sup>   | 3.1                | 3.0                |
| 8            | (3.4) <sup>T</sup> | 3.2                | 3.3 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.4 <sup>F</sup>   | 2.9 <sup>F</sup>   | 2.8 <sup>F</sup>   | 3.1                | 3.4                | (3.5) <sup>P</sup> | 3.7 <sup>F</sup>   | 3.2                | 3.3                | 3.3                | 3.5                | 3.5                | 3.4 | 3.5                | 3.4              | 3.4                | 3.2                | 3.0 <sup>F</sup>   | (3.0) <sup>F</sup> | (3.0) <sup>F</sup> |
| 9            | (3.1) <sup>F</sup> | 2.8 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.6 <sup>F</sup>   | 3.3 <sup>F</sup>   | 3.3 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.4                | 3.4                | 3.5                | 3.4                | 3.5                | 3.3                | 3.5                | 3.5                | 3.6                | 3.3 | 3.1                | 3.2              | 3.4                | 3.2                | 3.1                | 3.1                | 2.9                |
| 10           | 3.3                | 3.1                | 2.9                | 3.1                | 2.8 <sup>F</sup>   | 2.8 <sup>F</sup>   | 2.9 <sup>F</sup>   | 3.3 <sup>P</sup>   | 3.6                | (3.5) <sup>C</sup> | 3.4                | 3.5                | 3.4                | 3.4                | 3.4                | (3.5) <sup>T</sup> | 3.5 | (3.5) <sup>A</sup> | 3.5              | 3.4 <sup>Z</sup>   | 3.0                | 3.1                | 3.1                | 2.9                |
| 11           | 3.1                | 3.0                | 3.0                | 2.8 <sup>F</sup>   | 3.2                | 3.1                | 3.2                | 3.2                | 3.4                | 3.0                | 3.4                | 3.5                | 3.3                | 3.5                | 3.6                | 3.4                | 3.3 | 3.6                | 3.2              | 3.2                | 3.2                | (3.1) <sup>A</sup> | 3.0 <sup>Z</sup>   | 3.1                |
| 12           | 2.8 <sup>F</sup>   | 2.8 <sup>F</sup>   | 3.1                | 3.0                | 3.1                | 3.0                | 3.0 <sup>F</sup>   | 3.2                | 3.3                | C                  | C                  | B                  | 3.5                | 3.3                | 3.3                | 3.6                | 3.4 | 3.1 <sup>P</sup>   | 2.8              | 3.4                | 3.3                | 2.8                | 3.1 <sup>P</sup>   | 3.1 <sup>P</sup>   |
| 13           | 3.2 <sup>P</sup>   | 3.2 <sup>P</sup>   | 3.3                | 3.3                | 3.4 <sup>F</sup>   | B                  | 3.0                | 3.2                | (3.5) <sup>T</sup> | 3.3                | 3.6                | 3.5                | 3.4                | 3.3                | 3.5                | 3.3                | 3.5 | 3.0 <sup>H</sup>   | 3.2              | 3.1                | 2.8                | 2.8                | 3.1                | 3.0                |
| 14           | 3.2 <sup>P</sup>   | 3.2                | 3.2                | 2.9                | 2.9                | 3.0                | 3.0                | 3.4                | 3.4                | 3.3                | 3.4                | 3.6                | 3.4                | 3.5                | 3.5 <sup>P</sup>   | (3.4) <sup>T</sup> | 3.6 | 3.2                | 3.2              | (3.5) <sup>T</sup> | 2.9                | (3.0) <sup>F</sup> | C                  | 3.0 <sup>F</sup>   |
| 15           | (3.0) <sup>F</sup> | 3.0 <sup>F</sup>   | 3.2 <sup>F</sup>   | 3.5 <sup>F</sup>   | 2.9 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.2                | (3.1) <sup>T</sup> | 3.2                | 3.3                | B                  | 3.6                | 3.6                | 3.4                | 3.4                | 3.4                | 3.5 | 3.4                | 3.3              | 3.3                | 3.3                | (2.9) <sup>F</sup> | (2.8) <sup>F</sup> | (2.7) <sup>F</sup> |
| 16           | (2.9) <sup>A</sup> | 3.1 <sup>F</sup>   | (3.1) <sup>F</sup> | 3.2 <sup>F</sup>   | (3.4) <sup>F</sup> | 3.4 <sup>F</sup>   | AF                 | 3.4 <sup>P</sup>   | 3.5                | 3.5                | 3.3                | 3.4                | (3.6) <sup>B</sup> | 3.6                | 3.5                | 3.6 <sup>P</sup>   | 3.4 | 3.3                | A                | A                  | A                  | A                  | 2.8                | 2.9 <sup>F</sup>   |
| 17           | 3.1                | 2.8                | 3.0 <sup>F</sup>   | 3.3                | 3.1                | 3.2 <sup>F</sup>   | M                  | M                  | C                  | 3.4                | 3.5                | 3.6                | 3.3                | 3.6                | 3.5                | 3.5                | 3.6 | 3.3                | 3.4 <sup>P</sup> | 3.5                | 3.2                | 3.1 <sup>P</sup>   | 2.8 <sup>F</sup>   | 3.6 <sup>P</sup>   |
| 18           | 2.8                | 2.7 <sup>F</sup>   | 3.0                | 4.3                | 2.8 <sup>F</sup>   | A                  | A                  | 3.1                | (3.3) <sup>A</sup> | 3.1                | 3.2                | 3.4                | (3.4) <sup>T</sup> | 3.4                | 3.5                | 3.5                | 3.2 | 3.2                | 3.4              | 3.3                | 3.0                | 2.9                | 3.0 <sup>F</sup>   | 2.8 <sup>F</sup>   |
| 19           | 3.1 <sup>F</sup>   | 3.0 <sup>V</sup>   | A                  | A                  | 3.3                | (3.4) <sup>F</sup> | (2.8) <sup>F</sup> | 3.4                | 3.4 <sup>P</sup>   | 3.3                | 3.1                | 3.6                | 3.3                | 3.0                | 3.5                | 3.5                | C   | C                  | C                | C                  | C                  | C                  | C                  | A                  |
| 20           | A                  | 2.7                | 3.0                | 3.3                | 2.8                | A                  | 2.8                | 3.2                | 3.4                | 3.2                | (3.5) <sup>T</sup> | (3.2) <sup>T</sup> | 3.6 <sup>P</sup>   | 3.5                | 3.2                | 3.6 <sup>P</sup>   | 3.5 | 3.4                | 3.3              | 3.1                | 3.2                | (3.1) <sup>F</sup> | 3.0 <sup>F</sup>   | 2.9 <sup>F</sup>   |
| 21           | 3.0                | 3.3                | 3.3                | 3.4                | 3.5                | 2.8 <sup>H</sup>   | 2.9                | 3.3                | 3.6                | 3.6                | 3.4                | 3.5                | 3.7 <sup>P</sup>   | 3.5                | 3.5                | 3.6 <sup>P</sup>   | 3.4 | 3.1                | 3.2              | 3.5                | 4.0                | 2.9                | 3.0                | 3.0                |
| 22           | 2.9 <sup>F</sup>   | 3.0                | 3.0                | 3.3 <sup>F</sup>   | 3.8                | 2.8                | 3.0                | 3.5                | 3.7                | 3.7                | 3.5                | 3.4                | 3.4                | 3.4                | 3.3                | 3.8                | 3.6 | 3.6                | 3.1              | 3.2                | 3.3                | 3.2                | 2.9                | 2.9                |
| 23           | 3.1                | 3.1                | 3.2 <sup>F</sup>   | (3.1) <sup>F</sup> | 2.9 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup>   | 2.8                | (3.5) <sup>T</sup> | 3.5                | 3.3                | (3.1) <sup>P</sup> | 3.5                | 3.6                | 3.4                | 3.4                | 3.4 | 3.6                | 3.2              | 3.1                | 3.6                | (2.9) <sup>F</sup> | (3.0) <sup>F</sup> | (3.1) <sup>F</sup> |
| 24           | 3.1 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.2                | 3.1                | 3.3                | (3.4) <sup>A</sup> | 3.4                | 3.5                | 3.6                | 3.6                | 3.4                | 3.6                | 3.0                | (3.1) <sup>A</sup> | 3.2                | 3.3                | 3.6 | 3.7                | 2.9              | 3.1                | 3.2                | 3.2 <sup>P</sup>   | 3.0 <sup>F</sup>   | 3.2 <sup>F</sup>   |
| 25           | 3.0 <sup>F</sup>   | 3.2                | 3.1 <sup>F</sup>   | 2.9 <sup>F</sup>   | 3.5                | 3.1 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.4                | (3.6) <sup>T</sup> | 3.3                | 3.4                | 3.6 <sup>P</sup>   | 3.2                | 3.7                | 3.6                | 3.4                | 3.5 | 3.6                | 2.9              | 3.1                | 3.1                | 3.1 <sup>P</sup>   | C                  | 2.9                |
| 26           | 2.8 <sup>F</sup>   | 2.9                | (3.0) <sup>F</sup> | 3.1                | 3.4                | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.6                | 3.7 <sup>F</sup>   | 3.6                | 3.4                | 3.5                | 3.4                | 3.3                | 3.3                | 3.7                | 3.4 | A                  | A                | 3.4                | 3.3                | 3.4                | 2.9                | 2.9                |
| 27           | 2.9                | 2.9                | 3.0                | 3.0                | 3.1                | 3.0                | 3.3                | (3.4) <sup>T</sup> | 3.5                | 3.6                | 3.3                | 3.7                | 3.5                | 3.5                | 3.5                | 3.4                | 3.6 | 3.5                | 3.0              | 3.1                | 3.0                | 3.5                | (3.4) <sup>F</sup> | (2.6) <sup>F</sup> |
| 28           | 3.1 <sup>F</sup>   | 3.0 <sup>F</sup>   | (2.8) <sup>F</sup> | (2.9) <sup>F</sup> | (2.9) <sup>F</sup> | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.4                | 3.5                | 3.5                | 3.3                | 3.6                | 3.0                | 3.3                | (3.2) <sup>T</sup> | 3.3                | 3.3 | 3.3                | 3.0              | 3.2                | (3.4) <sup>C</sup> | (3.6) <sup>F</sup> | 2.9                | 2.8 <sup>F</sup>   |
| 29           | 2.9 <sup>F</sup>   | 3.1                | 2.9 <sup>F</sup>   | (3.0) <sup>F</sup> | 3.0 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.2                | 3.4                | 3.3                | 3.4                | 3.3                | 3.3                | 3.3                | 3.3                | 3.5                | 3.3                | 3.3 | 3.5                | 3.6              | 3.3                | 2.9 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.0 <sup>F</sup>   | 3.4 <sup>F</sup>   |
| 30           | 2.9 <sup>F</sup>   | (3.0) <sup>F</sup> | (3.0) <sup>F</sup> | (3.0) <sup>F</sup> | 3.0 <sup>F</sup>   | 2.9 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.5                | 3.6                | 3.5                | 3.6                | 3.7 <sup>F</sup>   | 3.7                | 3.7                | 3.3                | 3.2                | 3.6 | (3.6) <sup>A</sup> | 3.6              | 3.0                | C                  | 3.2                | 3.0                | (3.0) <sup>F</sup> |
| 31           | 3.0 <sup>F</sup>   | 3.1                | 3.2 <sup>Z</sup>   | 3.1                | 3.1 <sup>F</sup>   | 3.1 <sup>F</sup>   | 3.7                | 3.5                | 3.7 <sup>P</sup>   | 3.7                | 3.5                | 3.3                | 3.3                | 3.3                | 3.3                | 3.2                | 3.4 | 3.5 <sup>P</sup>   | 3.2              | 3.1                | (3.2) <sup>T</sup> | 3.2                | 3.3 <sup>F</sup>   | (3.1) <sup>T</sup> |
| Mean Value   | 3.0                | 3.0                | 3.1                | 3.2                | 3.2                | 3.1                | 3.1                | 3.3                | 3.5                | 3.5                | 3.4                | 3.5                | 3.4                | 3.4                | 3.4                | 3.5                | 3.5 | 3.5                | 3.4              | 3.2                | 3.2                | 3.2                | 3.0                | 3.0                |
| Median Value | 3.0                | 3.0                | 3.1                | 3.1                | 3.2                | 3.0                | 3.0                | 3.4                | 3.5                | 3.5                | 3.4                | 3.5                | 3.4                | 3.4                | 3.5                | 3.5                | 3.5 | 3.5                | 3.4              | 3.2                | 3.2                | 3.1                | 3.0                | 3.0                |
| Count        | 29                 | 30                 | 29                 | 30                 | 30                 | 26                 | 26                 | 28                 | 30                 | 30                 | 29                 | 30                 | 31                 | 30                 | 30                 | 30                 | 29  | 27                 | 26               | 27                 | 25                 | 27                 | 26                 | 28                 |

(M3000)F2

Sweep ... i.o. ... Mc to 17.2 ... Mc in 2 ... min

Manual  Automatic

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

Lat. 35° 42.4' N  
Long. 139° 29.3' E

Kokubunji Tokyo

IONOSPHERIC DATA

Jan. 1955

fminF

135° E Mean Time

| Day          | 00                 | 01               | 02  | 03  | 04  | 05                 | 06                 | 07                 | 08                | 09                 | 10               | 11                 | 12                 | 13                 | 14                 | 15                 | 16               | 17                 | 18                 | 19                | 20                 | 21                 | 22                 | 23                 |
|--------------|--------------------|------------------|-----|-----|-----|--------------------|--------------------|--------------------|-------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| 1            | 1.5                | 1.5              | 2.4 | 1.5 | 1.0 | 1.4                | 1.5                | 1.9                | 2.5               | 3.5                | 3.4              | 3.6                | 3.4                | C                  | C                  | C                  | C                | C                  | C                  | C                 | C                  | C                  | C                  | C                  |
| 2            | C                  | C                | C   | C   | C   | C                  | C                  | C                  | 2.1               | 3.0                | 2.9              | 3.5 <sup>A</sup>   | 3.0                | 3.3                | 2.8                | 2.6                | 2.5 <sup>A</sup> | (2.4) <sup>A</sup> | 2.3 <sup>A</sup>   | 1.7               | A                  | AF                 | A                  | A                  |
| 3            | 1.6                | 1.5              | 1.4 | 1.3 | 1.3 | 1.4                | 1.3                | 2.3 <sup>A</sup>   | 2.5               | 2.8                | 3.0              | 2.9                | 3.0                | 3.1                | 2.6                | 2.7                | 2.2              | 3.0 <sup>A</sup>   | 1.7                | 2.1               | 2.2 <sup>A</sup>   | 1.5                | 1.6                | 2.2 <sup>AF</sup>  |
| 4            | 2.0 <sup>A</sup>   | 2.4 <sup>A</sup> | 1.5 | 1.0 | E   | AF                 | AF                 | 1.5                | 2.3               | 3.7 <sup>A</sup>   | 2.8              | 3.0                | 3.0                | 3.5                | 2.7                | 2.2                | 2.1              | 1.6                | A                  | A                 | A                  | 2.1                | 1.5                | 1.6                |
| 5            | 1.4                | 1.5              | 1.5 | E   | 1.0 | 1.5 <sup>A</sup>   | 1.5                | 2.1 <sup>A</sup>   | 2.2               | 2.6                | 2.9              | 3.0                | 3.0                | 3.2                | 3.0                | 2.6                | 2.3              | 2.8 <sup>A</sup>   | 2.7 <sup>A</sup>   | 1.6               | (1.6) <sup>A</sup> | 1.5                | (1.8) <sup>A</sup> | 2.1 <sup>A</sup>   |
| 6            | 1.5                | 1.4              | 1.7 | 1.5 | 1.4 | 1.3                | 1.3                | 1.5                | 2.2               | (2.6) <sup>A</sup> | 2.9              | 3.0                | 3.1                | 3.0                | 3.0                | 2.6                | 2.0              | 1.4                | 1.3                | 1.5               | 2.0                | 1.7                | 1.5                | (1.8) <sup>A</sup> |
| 7            | 2.1                | 1.5              | 1.4 | 1.0 | 1.3 | 1.4                | 1.5                | 1.4                | 2.4 <sup>AF</sup> | 2.8                | 3.0              | 3.5                | 3.3                | 3.0                | 2.8                | 2.4                | 2.1              | 2.0                | 1.7                | 1.5               | 1.5                | 1.5                | 1.4                | 2.1 <sup>A</sup>   |
| 8            | (2.1) <sup>C</sup> | 2.1 <sup>A</sup> | 1.5 | 1.3 | 1.3 | 1.2                | 1.3                | 1.7                | 2.3               | 2.8                | 3.0              | 3.3                | 3.4                | 3.4                | 3.0                | 3.0                | 2.3              | 1.9                | 1.5                | 1.5               | 2.0                | 2.1 <sup>A</sup>   | 1.5                | (1.4) <sup>A</sup> |
| 9            | 1.4                | 2.0              | 1.8 | 1.3 | 1.2 | 1.4                | 1.5                | 1.6                | 2.3               | 2.8                | 3.0              | 3.4                | 3.4                | 3.0                | 3.4                | 2.6                | 2.1              | 2.1 <sup>A</sup>   | 2.2                | 1.5               | 1.5                | 1.5                | 1.4                | 1.4                |
| 10           | 1.5                | 1.5              | 1.2 | 1.3 | 1.3 | 1.3                | 1.7                | 1.5                | 3.5 <sup>A</sup>  | C                  | C                | 3.3                | 3.3                | 3.0                | 3.3                | 2.6                | 2.2              | (2.0) <sup>A</sup> | 1.7                | 1.5               | 1.5                | 1.5                | 1.5                | 1.6                |
| 11           | 1.6                | 1.4              | 1.2 | E   | E   | 1.3                | 1.5                | 1.5                | 2.5               | 2.8                | 3.0              | 3.5                | 3.3                | 3.5                | 3.0                | (2.7) <sup>A</sup> | 2.4              | 1.4                | 1.6                | 1.4               | 1.5                | A                  | 1.4                | 1.4                |
| 12           | 1.4                | 1.3              | E   | E   | 1.0 | 1.4                | 1.5                | 1.7                | 2.2               | 2.4                | 2.9              | 3.0                | 3.0                | 3.0                | 3.1                | 2.8                | 2.5              | 1.8                | 1.5                | 1.5               | 1.6                | 1.4                | 2.0 <sup>A</sup>   | 2.1 <sup>A</sup>   |
| 13           | 1.8                | 1.4              | 1.0 | E   | 1.0 | 1.6                | 1.6                | 1.5                | 2.8               | 2.6                | 3.0              | 3.0                | 3.3                | 3.3                | 3.7 <sup>A</sup>   | (2.9) <sup>A</sup> | 2.1              | 1.5                | 1.5                | 1.4               | 1.6                | 1.5                | 1.5                | 1.5                |
| 14           | 1.4                | 1.4              | 1.3 | 1.3 | 1.3 | 1.3                | 1.4                | 2.5                | 2.1               | 2.6                | 2.8              | 3.0                | 3.1                | 3.0                | (2.8) <sup>A</sup> | 2.7                | 2.2              | 2.3 <sup>A</sup>   | 3.0 <sup>A</sup>   | 4.0 <sup>A</sup>  | 1.8                | 1.7                | (1.6) <sup>C</sup> | 1.5                |
| 15           | 1.5                | 1.3              | 1.2 | 1.0 | 1.2 | 1.4                | 1.8                | (2.6) <sup>A</sup> | 3.5 <sup>A</sup>  | 3.8 <sup>A</sup>   | 4.2 <sup>A</sup> | 3.4                | 3.6                | 4.0 <sup>A</sup>   | 3.8 <sup>A</sup>   | 2.8                | 2.2              | 2.1 <sup>A</sup>   | 3.5 <sup>A</sup>   | 2.1 <sup>AF</sup> | 2.1                | 1.5                | 1.5                | 1.5                |
| 16           | (1.5) <sup>A</sup> | 1.5              | 1.2 | 1.0 | 1.0 | 1.5                | (1.8) <sup>A</sup> | 2.0                | 2.6               | 3.5                | 3.9 <sup>A</sup> | 3.5                | 3.6 <sup>A</sup>   | 3.0                | (3.4) <sup>A</sup> | 3.9 <sup>A</sup>   | 3.0 <sup>A</sup> | A                  | A                  | A                 | A                  | A                  | 2.1 <sup>A</sup>   | 2.0                |
| 17           | 1.8                | 1.5              | E   | 1.0 | E   | 1.3                | M                  | M                  | 2.3               | 2.8                | 3.0              | 3.5                | 3.3                | 3.3                | 3.4                | 2.6                | 3.1              | 1.4                | 1.3                | 1.3               | 1.5                | 1.4                | 1.3                | 1.6                |
| 18           | 1.4                | 1.3              | E   | E   | 1.1 | A                  | A                  | A                  | 4.0 <sup>A</sup>  | 5.4 <sup>A</sup>   | 3.0              | 2.9                | 3.0                | 3.4                | 2.8                | 2.9 <sup>A</sup>   | 2.4              | 1.8                | 1.5                | 1.3               | 1.4                | 1.4                | 1.5                | 1.7                |
| 19           | 1.3                | 1.5              | A   | A   | A   | 1.5                | 1.5                | 1.7                | 2.3               | 2.5                | 4.0 <sup>A</sup> | 4.0 <sup>A</sup>   | 3.5 <sup>A</sup>   | 3.2                | 2.9                | 2.6                | C                | C                  | C                  | C                 | C                  | C                  | C                  | A                  |
| 20           | A                  | 1.4              | 1.7 | 1.2 | 1.2 | (1.4) <sup>A</sup> | 1.5                | 2.1                | 2.6               | 2.8                | 2.9              | 3.5                | 3.5                | 3.4                | 3.5 <sup>A</sup>   | 3.0                | 2.2              | 1.7                | 1.3                | 1.3               | 1.5                | 1.5                | 1.4                | 1.5                |
| 21           | 1.6                | 1.4              | 1.2 | 1.1 | 1.7 | 1.4                | 1.5                | 2.7 <sup>A</sup>   | 2.4 <sup>A</sup>  | 2.8                | 3.0              | 3.2                | 3.5                | 4.0 <sup>A</sup>   | 3.0                | 2.8                | 2.5              | 1.5                | 1.5                | 1.4               | 1.6                | (1.5) <sup>A</sup> | 1.4                | 1.5                |
| 22           | 1.3                | 1.1              | 1.0 | 1.4 | 1.0 | 1.5                | 1.4                | 1.6                | 2.3               | 2.8                | 3.4              | 3.5                | 3.7                | 3.5                | 3.4                | 3.3                | 2.1              | 1.4                | 1.6                | 1.6               | 1.6                | 2.0                | 1.4                | 1.4                |
| 23           | 1.4                | 1.2              | 1.2 | 1.1 | 1.6 | 1.4                | 1.6                | 1.6                | 2.2               | 2.7                | 2.8              | 3.0                | 3.4                | 3.3                | 2.8                | 2.8                | 2.1              | (1.8) <sup>A</sup> | 1.6                | 1.6               | 1.5                | 1.3                | 1.4                | 1.5                |
| 24           | 1.3                | 1.6              | 1.5 | 1.3 | 1.6 | (1.6) <sup>A</sup> | 1.5                | 1.7                | 2.5               | 3.0                | 3.5              | 3.2                | 3.5                | (3.2) <sup>A</sup> | 3.0                | 3.0                | 3.0              | 2.1                | 1.7                | 1.6               | 2.0                | 1.4                | 1.5                | 1.5                |
| 25           | 1.5                | 1.3              | 1.0 | E   | 1.0 | 1.3                | 1.4                | 1.5                | 2.3               | 2.6                | 2.8              | 3.0                | 3.0                | 3.0                | 3.0                | 2.7                | 2.6              | 1.6                | 1.5                | 1.4               | 1.4                | 1.5                | 1.5                | 1.4                |
| 26           | 1.3                | 1.5              | 1.2 | E   | 1.0 | 1.4                | 1.5                | 1.6                | 2.8               | 3.0                | 3.2              | 3.3                | 3.5                | 3.4                | 3.4                | 2.8                | 3.2 <sup>A</sup> | A                  | A                  | 2.0               | 1.5                | 1.5                | 1.5                | 1.5                |
| 27           | 1.5                | 1.5              | 1.2 | 1.0 | E   | 1.4                | 1.4                | (1.8) <sup>A</sup> | 2.1               | 2.6                | 2.7              | 3.0                | 3.4                | 3.4                | 3.2                | 2.8                | 2.3              | 1.5                | 1.4                | 2.1 <sup>A</sup>  | 1.4                | 1.6                | 1.5                | 1.5                |
| 28           | 2.1 <sup>A</sup>   | 1.5              | 1.3 | E   | E   | 1.4                | 1.3                | 1.6                | 2.1               | 3.0                | 2.9              | (4.4) <sup>C</sup> | (3.8) <sup>C</sup> | 3.5                | 3.0                | 2.8                | 2.3              | 1.9                | 2.7 <sup>A</sup>   | 1.5               | (1.6) <sup>C</sup> | 1.7                | 1.5                | 1.5                |
| 29           | 1.4                | 1.3              | E   | E   | 1.3 | 1.3                | 1.5                | 1.6                | 2.5               | 2.8                | 3.4              | 3.5                | 3.5                | 3.5                | 3.5                | 3.0                | 2.2              | 1.7                | (2.0) <sup>A</sup> | 2.2 <sup>A</sup>  | 1.7                | 1.5                | 1.6                | 1.5                |
| 30           | 1.4                | 1.3              | 1.2 | E   | 1.2 | 1.5                | 1.6                | 1.4                | 2.3               | 3.0 <sup>A</sup>   | 3.0              | 3.0                | 3.5                | 3.5                | 5.0 <sup>A</sup>   | 4.0 <sup>A</sup>   | A                | A                  | 1.6                | 1.4               | 1.5                | 1.6                | 1.7                | 1.5                |
| 31           | 1.4                | 1.4              | E   | E   | 1.0 | 1.3                | 1.5                | 1.8                | 2.3               | 3.0                | 3.1              | 3.6                | 3.8                | 3.5                | 3.5                | 2.9                | 2.4              | 1.5                | 1.8                | 1.6               | 1.7                | 2.0                | 1.5                | 1.6                |
| Mean Value   | 1.5                | 1.5              | 1.3 | 1.2 | 1.2 | 1.4                | 1.6                | 1.8                | 2.5               | 2.9                | 3.1              | 3.3                | 3.3                | 3.3                | 3.2                | 2.8                | 2.4              | 1.9                | 1.8                | 1.7               | 1.7                | 1.6                | 1.6                | 1.6                |
| Median Value | 1.5                | 1.5              | 1.2 | 1.0 | 1.1 | 1.4                | 1.5                | 1.6                | 2.3               | 2.8                | 3.0              | 3.3                | 3.4                | 3.4                | 3.0                | 2.8                | 2.3              | 1.8                | 1.6                | 1.5               | 1.6                | 1.5                | 1.5                | 1.5                |
| Count        | 28                 | 30               | 29  | 29  | 29  | 28                 | 27                 | 28                 | 31                | 30                 | 30               | 30                 | 30                 | 30                 | 30                 | 30                 | 28               | 26                 | 26                 | 27                | 26                 | 26                 | 28                 | 28                 |

fminF

Sweep  $\Delta$  0.2 Mc to 1.2.2 Mc in 2 min

Manual

Automatic



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

Lat. 35° 42.4' N  
Long. 139° 28.8' E

**Kokubunji Tokyo**

**IONOSPHERIC DATA**

135° E Mean Time

Jan. 1955

fminE

| Day          | 00                 | 01  | 02  | 03  | 04  | 05  | 06  | 07                 | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22                 | 23  |
|--------------|--------------------|-----|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------|-----|
| 1            | 1.4                | 1.5 | 1.4 | E   | E   | 1.2 | 1.4 | 1.4                | 1.4 | 1.2 | 1.4 | 1.3 | 1.4 | C   | C   | C   | C   | C   | C   | C   | C   | C   | C                  | C   |
| 2            | C                  | C   | C   | C   | C   | C   | C   | C                  | 1.5 | 1.3 | 1.3 | 1.5 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 | 1.5                | 1.4 |
| 3            | 1.4                | 1.4 | 1.3 | E   | 1.6 | 1.5 | 1.5 | 1.4                | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.4 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 | 1.3 | 1.6 | 1.4                | 1.5 |
| 4            | 1.3                | 1.3 | 1.0 | E   | 1.3 | 1.4 | 1.4 | 1.4                | 1.3 | 1.4 | 1.4 | 1.5 | 1.4 | 1.5 | 1.5 | 1.5 | 1.3 | 1.4 | 1.2 | 1.5 | 1.3 | 1.4 | 1.5                | 1.5 |
| 5            | 1.3                | 1.3 | 1.2 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3                | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.6 | 1.5 | 1.5 | 1.3 | 1.4 | 1.5 | 1.4 | 1.5 | 1.4                | 1.5 |
| 6            | 1.3                | 1.3 | 1.2 | 1.3 | 1.2 | 1.5 | 1.5 | 1.5                | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 2.2 | 2.1 | 1.5 | 1.5 | E   | 1.6 | 1.5 | 1.3 | 1.5 | 1.4                | 1.5 |
| 7            | 1.3                | 1.3 | E   | E   | E   | 1.4 | 1.6 | 1.3                | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.7 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.6 | 1.6 | E   | 1.6                | 1.4 |
| 8            | [1.4] <sup>c</sup> | 1.4 | 1.0 | 1.0 | E   | 1.5 | E   | 1.3                | 1.5 | 1.5 | 1.5 | 1.6 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.3                | 1.3 |
| 9            | 1.4                | 1.3 | 1.2 | E   | 1.0 | 1.4 | 1.6 | 1.4                | 1.5 | 1.4 | 1.7 | 1.6 | 1.8 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | E   | E   | E                  | E   |
| 10           | E                  | 1.3 | 1.4 | 1.5 | 1.0 | 1.4 | 1.4 | 1.4                | 1.4 | C   | 1.4 | 1.5 | 2.1 | 2.1 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3 | 1.6 | 1.6 | 1.5                | 1.6 |
| 11           | 1.5                | 1.5 | 1.3 | 1.0 | 1.4 | 1.7 | 1.5 | 1.5                | 1.5 | 1.5 | 1.5 | 1.5 | 2.1 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.5 | 1.6 | 1.3 | 1.3                | 2.0 |
| 12           | E                  | 1.6 | 1.3 | 1.1 | 1.3 | 1.5 | 1.6 | 1.5                | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.6 | 1.5 | 1.4 | 1.4 | 1.5                | 1.3 |
| 13           | 1.4                | 1.4 | 1.4 | E   | E   | 1.7 | 1.3 | 1.4                | 1.5 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.5 | E   | E   | 1.5 | 1.4 | 1.3                | 1.5 |
| 14           | 1.3                | E   | 1.5 | 1.5 | E   | E   | E   | B                  | 1.7 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3 | 1.6 | [1.6] <sup>c</sup> | 1.6 |
| 15           | [1.4] <sup>c</sup> | 1.3 | E   | E   | E   | 1.6 | 2.2 | 1.5                | 1.5 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 2.1 | 1.4 | 1.3 | 1.4 | 1.4 | 1.4 | 1.3 | 1.4 | 1.5                | 1.5 |
| 16           | 1.4                | 1.6 | 1.5 | E   | E   | 1.5 | 1.5 | 1.4                | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.5                | 1.4 |
| 17           | 1.4                | 1.4 | E   | E   | 1.3 | 1.3 | 1.4 | 1.5                | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.6 | 1.5 | 1.5 | 1.6 | 1.5 | 1.5                | E   |
| 18           | E                  | 1.5 | E   | 1.4 | 1.0 | 1.3 | 1.4 | 1.5                | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.4 | 1.6 | 1.3                | 1.5 |
| 19           | 1.6                | 1.4 | 1.0 | E   | E   | 1.5 | 1.5 | [1.4] <sup>b</sup> | 1.4 | 1.5 | 1.4 | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | C   | C   | C   | C   | C   | C   | C                  | 1.4 |
| 20           | 1.4                | 1.3 | E   | E   | E   | 1.3 | 1.3 | 1.5                | 1.4 | 1.5 | 1.4 | 1.5 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.5 | 1.6 | E   | E   | E                  | E   |
| 21           | 1.4                | 1.5 | E   | 1.0 | E   | 1.4 | 1.3 | 1.4                | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.7 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5                | 1.5 |
| 22           | 1.6                | 1.5 | 1.5 | 1.0 | 1.0 | 1.5 | 1.3 | 1.6                | 2.1 | 1.6 | 1.5 | 1.5 | 1.6 | 1.5 | 1.6 | 1.6 | 1.3 | E   | 1.3 | 1.5 | 1.3 | 1.5 | 1.6                | 1.6 |
| 23           | 1.5                | 1.5 | 1.3 | E   | E   | 1.4 | 1.4 | 1.5                | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5                | 1.5 |
| 24           | E                  | 1.4 | E   | E   | E   | 1.3 | 1.5 | 1.3                | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4                | 1.3 |
| 25           | 1.3                | 1.4 | 1.0 | E   | E   | 1.5 | 1.6 | 1.5                | 1.4 | 1.3 | 1.4 | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | E   | 1.5 | 1.5 | 1.5 | E                  | E   |
| 26           | E                  | E   | E   | 1.3 | E   | 1.5 | 1.5 | 1.3                | 1.5 | 1.4 | 1.4 | 1.5 | 2.1 | 1.5 | 1.5 | 1.4 | 1.5 | 1.5 | 1.3 | 1.3 | 1.3 | 1.5 | 1.6                | 1.6 |
| 27           | 1.4                | 1.5 | 1.0 | E   | 1.3 | 1.5 | 1.5 | 1.5                | 1.4 | 1.5 | 1.4 | 1.5 | 1.5 | 2.1 | 1.5 | 1.5 | 1.4 | E   | E   | 1.5 | 1.3 | 1.5 | 1.5                | 1.4 |
| 28           | 1.3                | 1.4 | E   | 1.3 | E   | 1.3 | 1.5 | 1.3                | 1.5 | 2.1 | 2.1 | C   | C   | C   | 2.1 | 2.1 | 1.5 | E   | 1.5 | 1.5 | 1.5 | 1.5 | 1.4                | 1.6 |
| 29           | 1.4                | 1.3 | E   | E   | 1.5 | 1.5 | E   | 1.4                | 1.4 | 1.3 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3                | 1.6 |
| 30           | 1.4                | 1.4 | 1.4 | E   | E   | 1.3 | 1.3 | 1.3                | 1.5 | 1.4 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.2 | 1.3 | 1.4 | 1.4                | 1.5 |
| 31           | 1.4                | 1.4 | 1.5 | E   | E   | 1.4 | 1.5 | 1.5                | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 | E   | 1.6 | 1.5 | 1.5 | 1.4 | 1.4                | 1.5 |
| Mean Value   | 1.4                | 1.4 | 1.3 | 1.2 | 1.2 | 1.4 | 1.5 | 1.4                | 1.5 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5                | 1.5 |
| Median Value | 1.4                | 1.4 | 1.1 | E   | E   | 1.4 | 1.5 | 1.4                | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5                | 1.4 |
| Count        | 30                 | 30  | 30  | 30  | 30  | 30  | 29  | 28                 | 31  | 29  | 30  | 30  | 30  | 29  | 30  | 30  | 29  | 29  | 29  | 29  | 29  | 29  | 29                 | 30  |

fminE

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

Lat. 35°42.4' N  
Long. 139°29.3' E

**Kokubunji Tokyo**

**IONOSPHERIC DATA**

Jan. 1955

YPF2

135° E Mean Time

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

Sweep 1.0 Mc to 17.2 Mc in 2 min

Manual

Automatic

YPF2

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

Lat. 31° 12.5' N  
Long. 130° 37.7' E

# Yamagawa

## IONOSPHERIC DATA

foF2

Jan. 1955

135° E Mean Time

| Day          | 00                 | 01               | 02               | 03               | 04               | 05                 | 06               | 07                 | 08                 | 09  | 10               | 11                | 12               | 13   | 14                 | 15                 | 16                 | 17               | 18                 | 19                 | 20                 | 21                 | 22               | 23                 |
|--------------|--------------------|------------------|------------------|------------------|------------------|--------------------|------------------|--------------------|--------------------|-----|------------------|-------------------|------------------|------|--------------------|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|------------------|--------------------|
| 1            | C                  | C                | C                | C                | C                | C                  | C                | 3.1                | 4.9                | 5.3 | 8.3              | 10.9 <sup>J</sup> | 7.4              | 7.0  | 6.4                | 4.9                | [4.3] <sup>A</sup> | 3.7              | A                  | A                  | A                  | A                  | A                | FS                 |
| 2            | FS                 | FS               | FS               | FS               | A                | A                  | A                | A                  | 4.7                | 5.9 | 8.4              | 9.9               | 9.0              | 10.0 | 6.5                | 5.7                | 5.4                | 4.3              | A                  | A                  | A                  | A                  | AS               | AS                 |
| 3            | AS                 | AS               | AS               | 2.4 <sup>S</sup> | FS               | FS                 | FS               | 3.2                | 5.6                | 6.9 | 9.9              | 9.3               | 9.4 <sup>P</sup> | 7.7  | 7.2                | 5.8                | 5.5                | 4.0              | A                  | A                  | A                  | A                  | A                | A                  |
| 4            | 2.6 <sup>J</sup>   | C                | FS               | 3.2 <sup>S</sup> | 2.2              | A                  | A                | 5.5                | 8.4                | 9.9 | 9.9              | 9.9               | 9.0              | 8.1  | 6.7                | 5.8                | 5.0                | 4.8              | 5.0                | 3.5                | 2.8                | [2.6] <sup>S</sup> | 2.5 <sup>S</sup> | 2.9                |
| 5            | [2.9] <sup>S</sup> | 2.9              | 3.2 <sup>F</sup> | 3.1 <sup>S</sup> | 2.4 <sup>F</sup> | 2.1 <sup>F</sup>   | 2.2 <sup>F</sup> | 2.8                | 5.6                | 8.5 | 10.0             | 8.3               | 6.3              | 6.5  | 6.9                | 6.3                | 5.8                | 4.8              | [4.0] <sup>A</sup> | 3.1                | A                  | A                  | AF               | AS                 |
| 6            | A                  | 2.9 <sup>S</sup> | 3.0 <sup>S</sup> | 3.2 <sup>S</sup> | 2.3 <sup>F</sup> | 2.3 <sup>F</sup>   | 2.4              | 3.0                | 6.0                | 8.1 | 7.5              | 7.1               | 6.6              | 6.7  | 6.6                | 6.8                | 6.1                | 5.3              | 4.6                | 3.1                | 2.9                | 3.0                | 3.0              | [3.2] <sup>F</sup> |
| 7            | 3.4                | A                | A                | 2.8 <sup>F</sup> | 2.7 <sup>F</sup> | 2.4 <sup>F</sup>   | 2.5 <sup>F</sup> | 3.1 <sup>V</sup>   | 5.5                | 6.5 | 8.3              | 8.5               | 7.7              | 8.3  | 9.0                | 6.5                | 5.5                | 4.4              | 3.6                | 4.3                | 3.4                | 2.3                | 2.6 <sup>J</sup> | [3.0] <sup>F</sup> |
| 8            | 3.3                | 3.0              | 3.1              | 2.9              | 2.3              | 1.9                | 1.8              | 2.7                | 5.5                | 6.0 | 7.7 <sup>J</sup> | 7.3               | 7.3              | 7.0  | 7.0                | 6.5                | 5.5                | 5.0              | 4.8                | 4.1 <sup>P</sup>   | 3.3                | 2.5                | 2.6              | 2.8                |
| 9            | 2.7 <sup>F</sup>   | 3.0 <sup>F</sup> | 3.0 <sup>F</sup> | 2.9              | 2.9 <sup>S</sup> | 2.6                | 2.4 <sup>F</sup> | 2.9                | 5.2                | 5.9 | 6.9              | 6.1               | 6.7              | 7.0  | 7.1                | 6.0                | 5.3                | 4.9              | 6.1                | 6.3 <sup>J</sup>   | 3.2                | 3.5                | 2.9              | 3.0                |
| 10           | 3.2                | 3.1              | 3.0              | 2.7              | 2.6              | 2.7                | 2.5              | 3.7                | 5.8                | 6.5 | 6.5              | 9.0               | 8.4              | 6.3  | 5.8                | 5.9                | 5.5                | 4.5              | 4.4                | 5.3                | 5.7                | 5.1 <sup>S</sup>   | 4.2              | 2.8 <sup>F</sup>   |
| 11           | 2.9                | 2.4              | 2.7 <sup>H</sup> | 2.8              | 2.9 <sup>F</sup> | 2.8                | 2.7              | 2.8                | 5.3                | 7.2 | 7.1              | 7.3               | 6.7              | 6.6  | [6.4] <sup>A</sup> | 6.2 <sup>P</sup>   | 5.4                | 4.6              | 3.4 <sup>H</sup>   | 3.5                | 3.6                | 2.9                | 2.8              | [3.1] <sup>S</sup> |
| 12           | 3.4 <sup>S</sup>   | 3.3              | 3.9              | 2.0              | 1.7 <sup>J</sup> | 1.7                | 1.5 <sup>J</sup> | 2.5                | 5.7                | 6.5 | 9.8              | 8.0               | 6.4              | 5.6  | 5.7                | 6.7 <sup>J</sup>   | 5.3                | 4.4              | 3.9                | 4.0 <sup>P</sup>   | 4.3                | 3.2                | 2.9              | 3.1                |
| 13           | 3.3                | 3.4              | 2.9              | 2.8              | 3.3              | F                  | F                | F                  | 5.3                | 6.4 | 7.9              | 7.1               | 6.7              | 7.0  | 6.3                | 6.2 <sup>P</sup>   | 5.9                | 4.5              | 3.9                | 4.9                | 3.2                | 3.4                | 3.3              | 3.6                |
| 14           | 4.0 <sup>J</sup>   | 3.0              | 1.9              | 2.0 <sup>F</sup> | 1.9              | 2.2 <sup>Z</sup>   | 1.8              | 2.8                | 5.5                | 5.6 | 6.5              | 7.7               | 6.5              | 6.7  | 6.4                | 6.0 <sup>J</sup>   | 5.8                | 5.3              | 4.0 <sup>P</sup>   | 3.9                | 3.3                | 2.7                | 2.8              | [2.8] <sup>A</sup> |
| 15           | 2.8                | 2.9              | 3.1              | 3.3              | 2.1              | 1.6 <sup>J</sup>   | 1.7 <sup>J</sup> | 2.6                | 4.7                | 5.5 | 7.1 <sup>J</sup> | 8.6               | 6.5 <sup>Z</sup> | 6.2  | 6.4                | 6.2 <sup>P</sup>   | 5.9                | 5.2              | 3.8                | C                  | C                  | C                  | F                | F                  |
| 16           | F                  | F                | F                | F                | F                | C                  | F                | 2.9                | 5.0                | 4.6 | 5.5              | 6.3               | 8.5              | 6.6  | 5.6                | 6.5                | 5.1                | 5.2              | 4.0 <sup>P</sup>   | 3.0                | 3.0                | 3.0                | 3.1              | 3.2                |
| 17           | 3.3                | 3.2              | 3.1              | 3.3              | 3.6              | 2.3 <sup>F</sup>   | 2.1              | 3.0                | 5.8                | 6.3 | 5.7              | 7.2               | 6.7              | 6.8  | 5.7                | 6.5                | 5.2                | 4.8              | 3.6 <sup>S</sup>   | 4.0                | 3.8                | 4.0 <sup>S</sup>   | 3.4              | 3.9                |
| 18           | 3.8                | 3.7              | 4.8 <sup>S</sup> | 2.2 <sup>J</sup> | A                | A                  | 2.8              | [4.4] <sup>A</sup> | 6.0                | 6.7 | 7.5              | 8.8               | 10.1             | 6.9  | 8.5                | 6.2 <sup>J</sup>   | 5.6                | 6.1              | 5.2 <sup>S</sup>   | A                  | A                  | A                  | A                | FS                 |
| 19           | FS                 | C                | C                | 3.1              | 3.1              | [2.4] <sup>C</sup> | 1.8 <sup>J</sup> | 2.9                | [4.4] <sup>C</sup> | 5.9 | 6.5              | 8.5               | C                | C    | C                  | C                  | C                  | C                | 5.2                | 6.3                | 5.0                | C                  | C                | C                  |
| 20           | C                  | C                | C                | C                | 2.5              | 2.2                | 2.3 <sup>F</sup> | 2.4                | C                  | C   | C                | C                 | C                | C    | C                  | C                  | C                  | C                | C                  | C                  | C                  | C                  | C                | C                  |
| 21           | C                  | C                | C                | C                | C                | C                  | 1.8              | 2.5                | 5.9                | 5.7 | 6.1              | 7.1               | 6.5              | 7.5  | 6.3                | 6.0                | 4.9                | 4.7              | 4.0 <sup>J</sup>   | 3.8                | 4.5 <sup>F</sup>   | 4.3 <sup>J</sup>   | 2.5              | 2.3                |
| 22           | 2.6                | 2.6 <sup>J</sup> | 2.6 <sup>J</sup> | 2.6 <sup>J</sup> | 2.7 <sup>F</sup> | 2.4                | 1.9              | 2.8                | 4.8                | 5.5 | 5.1              | 5.9               | 5.1              | 6.5  | 7.0                | 6.1                | 6.0                | 5.0              | 4.0 <sup>J</sup>   | [3.4] <sup>A</sup> | 2.7 <sup>J</sup>   | 2.9                | 2.7 <sup>J</sup> | 2.6                |
| 23           | 2.7                | 2.9              | 3.0              | 3.2              | 3.2              | 2.7                | 2.4              | 2.9                | 5.8                | 5.2 | 5.8              | 6.3               | 7.9              | 6.8  | 5.7                | [5.8] <sup>C</sup> | 5.8                | 5.2              | 3.5                | 3.4                | 3.8                | 2.7                | 2.6              | 2.6 <sup>S</sup>   |
| 24           | 2.7 <sup>S</sup>   | 2.7 <sup>S</sup> | 2.9 <sup>S</sup> | 2.7              | 3.0 <sup>S</sup> | 2.6 <sup>S</sup>   | 2.8 <sup>J</sup> | 3.1                | 5.5                | 5.8 | 5.8              | 6.0               | 7.4              | 6.0  | 5.9                | 7.8 <sup>J</sup>   | 7.3 <sup>P</sup>   | 6.5 <sup>S</sup> | 3.4                | 3.1                | [3.2] <sup>A</sup> | 3.4                | 2.8              | [3.0] <sup>A</sup> |
| 25           | 3.2                | 3.9              | 3.9              | 3.5              | 3.5 <sup>F</sup> | 2.9 <sup>F</sup>   | 3.0 <sup>F</sup> | 3.3                | 6.0                | 6.9 | 7.9              | 7.8               | 7.8              | 8.6  | 6.5                | 6.0                | 5.8                | 6.0 <sup>J</sup> | A                  | C                  | C                  | C                  | A                | 2.4 <sup>F</sup>   |
| 26           | 2.6 <sup>J</sup>   | 2.8              | 2.9              | 2.9              | 3.5              | 2.4                | 2.3              | 3.2                | 5.9                | 5.2 | 5.3              | 7.0 <sup>J</sup>  | 5.9              | 6.2  | 7.0                | 6.1                | 5.9                | 6.5              | 4.3                | 3.1                | 2.9                | 2.7                | 2.4              | 2.4                |
| 27           | 2.4 <sup>F</sup>   | 2.6 <sup>F</sup> | 2.8 <sup>J</sup> | 3.0 <sup>F</sup> | 3.4              | 2.8                | 2.7              | 3.4                | 5.4                | 6.6 | 7.3              | 7.3               | 5.5              | 5.8  | 5.9                | 6.2                | 6.2                | 5.2              | 4.5 <sup>J</sup>   | 2.5                | 3.2 <sup>V</sup>   | FS                 | FS               | FS                 |
| 28           | 3.2                | 2.7 <sup>F</sup> | 3.0 <sup>F</sup> | 2.9 <sup>J</sup> | 2.7 <sup>J</sup> | 2.4 <sup>F</sup>   | 2.4 <sup>F</sup> | 3.2                | 5.9                | 6.4 | 5.9              | 6.4               | 6.0 <sup>J</sup> | 7.4  | 8.9                | 9.4                | 6.4                | 5.7              | 4.6 <sup>J</sup>   | 3.6                | 3.0                | 3.1                | 2.4              | 2.5                |
| 29           | 2.8 <sup>J</sup>   | 2.9              | 2.8              | 2.8 <sup>J</sup> | M                | M                  | M                | M                  | 5.9                | 6.4 | 6.4              | 6.9               | 7.2              | 6.7  | 6.7                | 6.4                | 6.5                | 7.8 <sup>S</sup> | 4.7                | A                  | A                  | 2.9                | 3.2 <sup>F</sup> | 3.2 <sup>S</sup>   |
| 30           | FS                 | FS               | FS               | FS               | 2.8 <sup>S</sup> | [2.6] <sup>S</sup> | 2.3 <sup>F</sup> | 3.3                | 6.8                | 6.1 | 6.5              | 7.7 <sup>P</sup>  | 6.5              | 6.0  | 6.1                | 7.4                | 8.4                | 6.9              | C                  | A                  | A                  | 3.4                | 2.7 <sup>J</sup> | 2.6 <sup>J</sup>   |
| 31           | F                  | F                | F                | F                | 2.9              | 2.8                | 2.4 <sup>F</sup> | 3.5                | 5.5                | 5.4 | 5.7              | 5.8               | 6.3              | 6.5  | 7.3                | 7.0                | 5.8                | 6.1 <sup>J</sup> | 4.9                | 3.6                | A                  | A                  | 3.0 <sup>F</sup> | 3.1 <sup>Z</sup>   |
| Mean Value   | 3.0                | 3.0              | 3.1              | 2.8              | 2.8              | 2.4                | 2.3              | 3.0                | 5.5                | 6.2 | 7.2              | 7.7               | 7.3              | 6.9  | 6.7                | 6.4                | 5.8                | 5.2              | 4.3                | 3.8                | 3.4                | 3.2                | 2.9              | 2.9                |
| Median Value | 2.9                | 2.9              | 3.0              | 2.9              | 2.8              | 2.4                | 2.4              | 3.0                | 5.5                | 6.0 | 7.0              | 7.3               | 6.7              | 6.7  | 6.5                | 6.2                | 5.8                | 5.1              | 4.0                | 3.6                | 3.2                | 3.1                | 2.8              | 3.0                |
| Count        | 2.1                | 2.0              | 2.0              | 2.4              | 2.2              | 2.4                | 2.2              | 2.4                | 2.9                | 3.0 | 3.0              | 3.0               | 2.9              | 2.9  | 2.9                | 2.9                | 2.9                | 3.0              | 2.7                | 2.2                | 2.1                | 2.1                | 2.1              | 2.2                |

foF2

Sweep 1.0 Mc to 22.0 Mc in \_\_\_\_\_ min

Manual

Automatic

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

Lat. 31° 12.6' N  
Long. 130° 37.7' E

**Yamagawa**

**IONOSPHERIC DATA**

135° E Mean Time

Jan. 1955

R'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            | C                  | C                | C                | C                | C                | C                | C                  | C                  | C                  | 270 | 280 | 240              | 240 | 260 | 280                | 260                | A                  | A                  | 250 <sup>A</sup>   | A                  | A                  | A                  | A                  | 300 <sup>F</sup>   |
| 2            | 300 <sup>F</sup>   | 300 <sup>F</sup> | 250              | AS               | A                | A                | A                  | A                  | 240                | 300 | 290 | 250              | 250 | 250 | 250                | 290                | 240                | 220                | A                  | A                  | A                  | A                  | AS                 | AS                 |
| 3            | AS                 | AS               | AS               | 250              | 260              | 290 <sup>F</sup> | 300 <sup>F</sup>   | 250                | 250                | 280 | 240 | 250              | 250 | 260 | 260                | 260                | 250                | 230                | 240                | A                  | A                  | A                  | A                  | A                  |
| 4            | 350                | C                | C                | 240              | 230              | A                | A                  | A                  | 260                | 260 | 250 | 240              | 240 | 250 | 280                | 240                | 240                | 260 <sup>A</sup>   | 210 <sup>A</sup>   | 220 <sup>A</sup>   | 300 <sup>A</sup>   | [280] <sup>A</sup> | 270 <sup>F</sup>   | 300                |
| 5            | [310] <sup>A</sup> | 320              | 250              | 200 <sup>A</sup> | 250              | 270              | 300                | 290                | 250                | 260 | 240 | 240              | 290 | 290 | 280                | 280                | 260                | 230                | [230] <sup>A</sup> | 230 <sup>A</sup>   | A                  | A                  | AF                 | 300                |
| 6            | [320] <sup>A</sup> | 330              | 300              | 200              | 240              | 260              | 270                | 250                | 240                | 240 | 250 | 266 <sup>A</sup> | 280 | 290 | 290                | 280                | 240                | 240                | 210 <sup>A</sup>   | 250                | 250                | 280                | 270                | 310                |
| 7            | 250                | A                | A                | 280              | 230              | 260              | 280                | 260                | 240                | 280 | 250 | 260              | 280 | 280 | 250                | 260                | 250                | 220                | 250                | 260                | 220                | 260                | 300                | 340 <sup>F</sup>   |
| 8            | 290                | 350              | 270              | 250              | 290              | 320              | [300] <sup>B</sup> | 270                | 240                | 260 | 260 | 250              | 260 | 270 | 260                | 260                | 250                | 240                | 240                | 250                | 250                | 240                | 300                | 340                |
| 9            | 340 <sup>F</sup>   | 340              | 330 <sup>A</sup> | 300 <sup>A</sup> | 300 <sup>F</sup> | 250              | 280                | 260                | 240                | 250 | 260 | 260              | 270 | 270 | 260                | 260                | 250                | 250                | 240                | 210 <sup>A</sup>   | 260                | 240                | 300                | 260                |
| 10           | 250                | 290              | 250              | 260              | 320              | 320              | 240                | 240                | 240                | 260 | 270 | 270              | 250 | 280 | 290                | 290                | 260                | 220 <sup>A</sup>   | 250                | 290                | 240                | 240                | 240                | 250                |
| 11           | 260                | 270              | 270 <sup>H</sup> | 290              | 290              | 280              | 310                | 290                | 240                | 260 | 260 | 250              | 310 | 270 | [270] <sup>A</sup> | (270) <sup>A</sup> | 240                | [240] <sup>A</sup> | 250 <sup>H</sup>   | 280                | 210                | 270                | 330                | 320 <sup>F</sup>   |
| 12           | 290                | 320              | 240              | 200              | 360              | 350              | [320] <sup>B</sup> | 300                | 250                | 300 | 250 | 240              | 250 | 300 | 300                | 250                | 240                | 220                | 250                | 260                | 250                | 250                | 270                | 290                |
| 13           | 260                | 240              | 220              | 250              | 230              | 280              | 290 <sup>F</sup>   | 260                | 250                | 270 | 240 | 270              | 280 | 260 | 270                | 250                | 250                | 220                | 260                | 230                | 270                | 300                | 310                | 300                |
| 14           | 250                | 210              | 290              | 310              | 340              | 330              | [300] <sup>B</sup> | 280                | 240                | 260 | 290 | 260              | 270 | 300 | 270                | 260                | 250                | 230                | 240 <sup>A</sup>   | 250                | 220 <sup>A</sup>   | 350                | 350                | 310                |
| 15           | 290                | 260              | 240              | 230              | 200              | 340              | [300] <sup>B</sup> | 260                | 220                | 290 | 300 | 270              | 280 | 300 | 290                | 290                | 260                | 220                | 260 <sup>A</sup>   | C                  | C                  | C                  | 270 <sup>F</sup>   | 270                |
| 16           | 300 <sup>F</sup>   | 300 <sup>F</sup> | 250 <sup>F</sup> | 250 <sup>F</sup> | 230 <sup>F</sup> | C                | AF                 | 250                | 220                | 240 | 340 | 280              | 270 | 260 | 280 <sup>A</sup>   | 250                | 240                | 240                | 220 <sup>A</sup>   | 240                | 300                | 280                | 260                | 320                |
| 17           | 300                | 290              | 290              | 250              | 210              | 230              | 350                | 280                | 240                | 250 | 270 | 260              | 290 | 260 | 270                | 280                | 240                | 240                | 210                | 250                | 260                | 250                | 300                | 290                |
| 18           | 250                | 320              | 260              | 220              | A                | A                | 250                | [270] <sup>A</sup> | 270 <sup>A</sup>   | 270 | 290 | 300              | 250 | 280 | 270                | 260                | 280                | 270                | 250                | A                  | A                  | A                  | A                  | 330                |
| 19           | 290                | C                | C                | 260              | 230              | C                | BS                 | 250                | [260] <sup>C</sup> | 260 | 300 | 260              | C   | C   | C                  | C                  | C                  | 260                | 250 <sup>A</sup>   | 220 <sup>A</sup>   | 290 <sup>A</sup>   | C                  | C                  | C                  |
| 20           | C                  | C                | C                | C                | 270              | 290              | 340                | 330                | C                  | C   | C   | C                | C   | C   | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  | C                  |
| 21           | C                  | C                | C                | C                | C                | C                | 360                | 290                | 240                | 240 | 240 | 270              | 250 | 250 | 260                | 260                | 240                | 240                | 240                | 260                | 260                | 220                | 260                | 310                |
| 22           | 310                | 300              | 250              | 260              | 240              | 200              | [220] <sup>B</sup> | 250                | 230                | 240 | 260 | 260              | 250 | 280 | 270                | 250                | 260                | 230 <sup>A</sup>   | 260                | [300] <sup>A</sup> | 350                | 270                | 260                | 300                |
| 23           | 290                | 290              | 250              | 230              | 250              | 260              | 310                | 250                | 240                | 240 | 260 | 330              | 250 | 260 | 270                | [260] <sup>C</sup> | 260                | 230                | 240                | 290                | 240                | 300                | 260                | 300                |
| 24           | 260                | 300              | 280              | 280              | 240              | 330 <sup>A</sup> | 290                | 240                | 230                | 240 | 260 | 310              | 280 | 280 | [280] <sup>A</sup> | 280                | 240                | 240                | [250] <sup>A</sup> | 260                | [240] <sup>A</sup> | 230 <sup>A</sup>   | 260                | [280] <sup>A</sup> |
| 25           | 290                | 270              | 240              | 270              | 240              | 300              | 290                | 270                | 240                | 240 | 260 | 270              | 260 | 240 | 260                | 300                | 260                | 240                | A                  | C                  | C                  | 250                | [300] <sup>A</sup> | 360                |
| 26           | 340                | 290              | 260              | 260              | 200              | 230              | 320                | 250                | 210                | 240 | 240 | 250              | 250 | 300 | 280                | 300 <sup>A</sup>   | [270] <sup>A</sup> | 240                | (250) <sup>A</sup> | 220 <sup>A</sup>   | 250                | 260                | 270                | 300                |
| 27           | 300                | 300              | 290              | 260              | 240              | 230              | 300                | 240                | 230                | 260 | 250 | 250              | 250 | 280 | 290                | 260                | 240                | 240                | 220                | 230                | 290                | 240 <sup>F</sup>   | 240 <sup>F</sup>   | 250 <sup>F</sup>   |
| 28           | 240                | 270              | 300              | 290              | 290 <sup>F</sup> | 280              | 330 <sup>F</sup>   | 230                | 230                | 240 | 240 | 290              | 290 | 300 | 300                | 250                | 230                | 250 <sup>A</sup>   | 220 <sup>A</sup>   | 210 <sup>A</sup>   | 280                | 250                | 260                | 300                |
| 29           | 310                | 260              | 260              | 300              | M                | M                | M                  | M                  | M                  | 250 | 260 | 260              | 270 | 280 | 270                | 270                | 270                | 240                | 210                | [260] <sup>A</sup> | 300                | 300                | 300                | 250                |
| 30           | 300                | 290              | 250              | 290 <sup>F</sup> | 250              | 330              | [290] <sup>A</sup> | 250                | 220                | 250 | 250 | 260              | 260 | 250 | 270                | 310 <sup>A</sup>   | 280                | 250 <sup>A</sup>   | 230                | C                  | A                  | 210 <sup>A</sup>   | 230                | 360                |
| 31           | 310 <sup>F</sup>   | 320              | 250              | 230              | 240              | 240              | 290                | 230                | 210                | 240 | L   | 280              | 300 | 290 | 280                | 260                | 250                | 240                | 210                | 230                | A                  | A                  | 240                | 260 <sup>F</sup>   |
| Mean Value   | 290                | 290              | 260              | 260              | 260              | 280              | 300                | 260                | 240                | 260 | 260 | 260              | 270 | 270 | 280                | 270                | 250                | 240                | 240                | 250                | 260                | 260                | 280                | 300                |
| Median Value | 290                | 300              | 260              | 260              | 240              | 280              | 300                | 260                | 240                | 260 | 260 | 260              | 260 | 270 | 280                | 260                | 250                | 240                | 240                | 250                | 260                | 260                | 270                | 300                |
| Count        | 27                 | 24               | 24               | 27               | 26               | 23               | 25                 | 27                 | 28                 | 30  | 29  | 30               | 29  | 29  | 29                 | 29                 | 28                 | 29                 | 27                 | 23                 | 21                 | 22                 | 24                 | 27                 |

R'F2

Manual  Automatic

Sweep 1.0 Mc to 22.0 Mc in 1 min

Y 2



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

Lat. 31° 12.5' N  
Long. 130° 37.7' E

Yamagawa

IONOSPHERIC DATA

fEs

Jan. 1955

135° E Mean Time

| Day          | 00   | 01   | 02   | 03   | 04   | 05   | 06   | 07    | 08   | 09   | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   |      |
|--------------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1            | 3.2  | 4.4  | 7.0  | 5.9  | 5.9  | 4.8  | 3.5  | 2.3   | 3.1  | 6.6  | 3.8  | G    | G    | 3.8  | 3.8  | 4.7  | 5.9  | 7.0  | 5.9  | 7.0  | 8.9  | 3.5  | 5.9  | 2.3  | 3.0F |
| 2            | 2.3  | 2.3  | 3.1  | 5.0  | 8.9  | 5.9  | 8.9  | 5.8   | 5.3  | C    | 5.7F | 5.7F | 3.8F | 4.7  | 5.8  | 5.3  | 3.8  | 3.2  | 8.5Y | 8.9  | 8.9  | 5.9  | 3.8S | 4.3  | 4.3  |
| 3            | 3.8S | 5.5S | 5.9  | 3.0S | 2.3  | 2.3  | E    | 3.1   | 4.2  | 5.9  | 3.8  | 5.6  | G    | G    | G    | 3.8  | 4.1  | 3.3  | 5.9  | 8.7  | 5.9  | 4.5S | 3.4  | 3.2  | 3.2  |
| 4            | 3.1  | C    | 3.2  | 3.5  | 2.4  | 5.9  | 5.9  | 5.9   | 5.9  | 5.7F | 5.7F | 5.7F | 5.9Y | G    | 3.6  | 5.9Y | 3.5  | 3.8  | 3.6  | 3.4  | 12.5 | 3.8  | 2.4  | 3.8  | 3.8  |
| 5            | 3.8F | 3.1S | 2.3F | 2.4F | 2.3F | 2.4F | 2.7  | 2.7   | 3.2F | G    | 3.6F | 5.7F | 5.7F | 5.7F | 5.8F | 5.6F | G    | 5.0  | 8.5  | 5.0  | 6.5  | 6.6  | 3.0F | 4.1  | 4.1  |
| 6            | 5.8  | 3.8  | 3.0  | 2.3F | 2.3F | 2.3  | 2.3  | 3.0   | 3.2F | 6.0  | 6.0  | 8.7  | 6.3F | 5.8F | 5.8F | 5.9Y | 3.7  | 3.6  | 6.0  | 9.6Y | 6.0  | 6.0  | 6.0F | 3.8  | 3.8  |
| 7            | 3.7F | 3.8  | 6.0F | 3.0  | 2.4F | 2.3  | 2.3  | 2.3S  | 3.3  | 5.1F | 5.8  | 5.9  | G    | G    | G    | G    | G    | G    | 2.3  | 2.3F | E    | E    | 2.3  | E    | E    |
| 8            | 3.5  | 3.5F | 2.9  | 5.9Y | 2.4  | 2.3  | 2.3  | 2.3   | 3.0  | 3.7  | G    | G    | 5.9  | 5.9F | 5.9Y | 5.9F | 5.7F | 5.6F | 3.5F | 3.0F | 2.4F | 2.4F | 2.4F | 2.4  | 2.4  |
| 9            | 6.5  | 4.8  | 5.8  | 3.7  | 3.5F | 3.0  | 2.4F | 2.3   | 2.9S | 3.8  | G    | G    | G    | 5.2  | G    | G    | G    | 3.2  | 2.3  | 2.3  | 2.3F | 2.4  | 2.0  | 2.2  | 2.2  |
| 10           | 2.3  | 2.2  | E    | 2.4  | 2.9  | 2.3  | 2.3  | 2.3   | 2.3  | 3.1  | 3.8  | 3.8  | 4.3  | 5.8Y | 3.6  | 4.2  | 3.7  | 3.4  | 5.1  | 3.3  | 3.0F | 2.4F | 3.0F | 2.4  | 2.4  |
| 11           | 2.4F | 2.3  | 2.3  | 2.3  | 2.4  | 2.3F | 2.4F | 2.4F  | 2.9  | G    | 4.7  | 4.8  | 5.0  | 6.3  | 10.5 | 13.0 | 8.9Y | 5.9  | 5.7  | 5.0S | 3.5  | 3.1  | 3.4F | 3.6F | 3.6F |
| 12           | 3.0  | 3.0  | 2.9  | 2.3  | 2.3  | 2.3  | 2.3  | 2.1   | 3.0  | G    | 3.6  | 3.8  | 4.8  | 3.8  | 3.8  | 3.5  | 3.4  | 2.4  | 2.8  | 2.4  | 3.3S | 2.4  | 2.3  | 2.3  | 2.3  |
| 13           | 2.3  | 2.3  | E    | 2.3  | 2.3F | 3.0  | 2.3F | 3.1F  | 2.4F | G    | 3.6  | 3.6  | G    | 5.9Y | 5.9  | 4.5  | 4.8  | 3.1F | 2.3F | 2.3  | 2.4  | 2.4  | 2.3  | 2.3  | 2.3  |
| 14           | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | E    | 2.3  | E     | 2.8  | 3.6  | 4.4  | 5.8Y | 4.6Y | 6.0  | 6.1  | 5.7  | 3.4  | G    | 2.3  | 5.8  | 5.7  | 3.6  | 3.0  | 3.3F | 3.3F |
| 15           | 2.3  | 2.4  | 2.3  | 2.3  | 2.3  | 2.2  | 2.3  | 2.3   | 2.3  | G    | 5.0  | G    | 4.6  | 5.9  | 6.5  | 6.0  | 6.9  | 3.2  | 3.5  | C    | C    | C    | 3.0  | 3.0F | 3.0F |
| 16           | 3.1F | 3.0  | 2.3  | 2.3  | 2.3  | C    | 2.4F | 3.2   | 3.0F | 3.8  | 4.8  | 4.6  | 6.4  | 5.9  | 5.9  | 5.0  | G    | 2.4  | 2.4  | 3.4  | 3.2F | 3.0  | 2.3  | 2.4  | 2.4  |
| 17           | 2.3  | 2.1  | 2.2  | 2.3  | 2.3F | 2.3F | 3.3F | 3.6F  | 3.0  | 3.4  | 4.0  | 4.8  | 5.9  | 5.9  | 3.7  | 4.1  | 3.6  | 3.4  | 2.3  | 2.3  | 2.4  | 2.4  | 2.4  | 2.4  | 2.4F |
| 18           | 2.3  | 2.3  | E    | 2.3  | 5.8  | 5.3  | 2.4  | 1.2.3 | 5.1  | 5.8Y | G    | 3.8  | 5.0S | 6.2  | 5.0  | 6.0  | 3.5  | 5.8Y | 6.0  | 15.7 | 12.9 | 9.0  | 4.3  | 2.3  | 2.3  |
| 19           | 2.3F | C    | C    | 3.2  | 3.0  | C    | 2.3  | 2.5   | C    | 3.7  | 4.7  | G    | C    | C    | C    | C    | C    | 3.1  | 3.8  | 3.2  | 3.3  | C    | C    | C    | C    |
| 20           | C    | C    | C    | C    | 3.0  | 2.1  | 2.3  | 2.4   | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    |
| 21           | C    | C    | C    | C    | C    | C    | 2.4F | 2.4   | 2.9  | 3.0  | G    | 3.6  | G    | 5.0Y | 3.6  | G    | 3.0Y | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  |
| 22           | 2.3  | 2.4  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3   | 2.3  | G    | 5.9Y | G    | G    | 4.2  | 3.8  | 4.2  | 3.6  | 3.5  | 3.6  | 6.6  | 3.4  | 2.3  | 2.4  | 3.3  | 3.3  |
| 23           | 2.3  | 2.3  | 2.4  | 2.3  | 2.3  | 2.3  | E    | E     | G    | G    | G    | G    | G    | 3.7  | G    | C    | 3.4  | 3.5  | 3.5  | 3.4  | 2.3  | 3.7  | 2.4  | 2.3  | 2.3  |
| 24           | 2.3  | 2.3S | 2.3  | 2.3  | 2.3  | 3.2  | 2.3  | 2.3F  | 2.3  | G    | 3.8  | 3.8  | 3.8  | 6.2  | 6.2  | 6.7  | 4.8  | 3.2  | 13.1 | 6.0  | 6.0  | 3.5  | 3.2  | 6.5  | 6.5  |
| 25           | 3.4  | 3.7  | 3.7F | 3.1F | 3.2F | 2.4F | 2.9  | 2.3   | G    | G    | G    | G    | G    | 3.8  | 3.8  | 3.8  | 4.0  | 4.1  | 4.5  | C    | C    | 3.0  | 2.3  | 2.3  | 2.3  |
| 26           | E    | E    | 2.3  | E    | E    | E    | 2.3  | E     | G    | G    | G    | 4.8  | G    | 4.5Y | 4.9  | 5.9  | 5.9  | 6.4  | 5.2  | 4.0  | 4.1  | 2.9  | 2.4F | 2.3  | 2.3  |
| 27           | 2.3  | 2.3  | 2.2  | E    | 2.4  | 2.3  | E    | 2.3   | 3.0  | G    | 3.5  | 8.8Y | G    | G    | 3.6  | 3.6  | 3.6  | 3.3  | 2.3  | 2.3  | 3.2  | 2.3  | 2.1  | 2.3  | 2.3  |
| 28           | 2.4  | 2.3  | E    | E    | 2.3  | 2.3  | 2.3  | 2.3   | 2.8  | 3.4  | G    | G    | G    | G    | G    | G    | G    | 6.6  | 3.0  | 3.2  | 2.3  | 2.4  | 2.3  | 2.3  | 2.3  |
| 29           | E    | E    | E    | E    | M    | M    | M    | M     | M    | G    | G    | G    | G    | G    | 4.6  | G    | 3.7  | 3.4  | 2.9  | 3.6  | 3.0  | 3.4  | 3.0  | 2.4  | 2.4  |
| 30           | E    | 3.0  | E    | E    | 2.0  | 3.2  | 5.9Y | 5.9   | 5.2  | G    | 3.8  | 5.2  | 4.2  | 5.0  | 5.5  | 3.6  | 5.9  | 6.7  | C    | 8.9  | 6.6F | 2.5  | 2.4F | 3.1  | 3.1  |
| 31           | 2.3  | 2.3  | 2.3  | 2.3  | 2.4  | 2.3  | 2.3  | 2.4   | 3.3  | 3.5  | G    | G    | G    | G    | G    | G    | 3.8  | 3.0F | 2.3  | E    | 5.9F | 2.3F | 3.1F | 3.1F | 3.1F |
| Mean Value   | 3.0  | 2.9  | 3.2  | 3.0  | 2.9  | 2.9  | 2.9  | 3.3   | 3.3  | 4.4  | 4.5  | 5.2  | 5.1  | 5.3  | 5.1  | 5.3  | 4.4  | 4.1  | 4.3  | 5.0  | 4.9  | 3.6  | 2.9  | 2.9  | 2.9  |
| Median Value | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.3  | 2.4   | 3.0  | 3.1  | 3.7  | 3.8  | 3.8  | 5.0  | 3.8  | 4.4  | 3.7  | 3.4  | 3.5  | 3.4  | 3.4  | 3.0  | 2.4  | 2.4  | 2.4  |
| Count        | 29   | 27   | 28   | 29   | 29   | 27   | 30   | 30    | 28   | 29   | 30   | 29   | 29   | 29   | 29   | 28   | 29   | 30   | 29   | 28   | 28   | 28   | 28   | 29   | 29   |

fEs

Sweep 1.0... Mc to 22.0 Mc in \_\_\_ min

Manual  Automatic

Y 3

## SOLAR RADIO EMISSION

JAN., 1955

Observing Station: HIRAIISO,

Frequency: 200 Mc/s.

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

Time in U.T.

## Daily Data

| Date | Steady Flux |       | Daily Averages |
|------|-------------|-------|----------------|
|      | 00-03       | 03-06 |                |
| 1    | 21          | 20    | 20             |
| 2    | 8           | 7     | 8              |
| 3    | 6           | 4     | 6              |
| 4    | 5           | 6     | 7              |
| 5    | 12          | 10    | 11             |
| 6    | 16          | 20    | 19             |
| 7    | 41          | 30    | 32             |
| 8    | 9           | 8     | 10             |
| 9    | 8           | 6     | 7              |
| 10   | 7           | 8     | 8              |
| 11   | -           | -     | -              |
| 12   | 5           | 5     | 5              |
| 13   | 4           | 4     | 4              |
| 14   | 5           | 4     | 5              |
| 15   | 5           | 6     | 6              |
| 16   | 20          | 15    | 16             |
| 17   | 5           | 5     | 5              |
| 18   | 4           | 3     | 4              |
| 19   | 4           | 4     | 4              |
| 20   | 4           | 4     | 4              |
| 21   | 4           | 4     | 4              |
| 22   | 4           | 3     | 3              |
| 23   | 3           | 4     | 3              |
| 24   | 6           | 7     | 6              |
| 25   | 4           | 3     | 4              |
| 26   | 4           | 4     | 4              |
| 27   | 3           | 4     | 4              |
| 28   | 4           | 3     | 3              |
| 29   | 3           | 3     | 3              |
| 30   | 3           | 4     | 4              |
| 31   | 9           | 17    | 14             |

## Data for Active Day

## Steady Flux

| Date | 00-01 | 01-02 | 02-03 | 03-04 | 04-05 | 05-06 | 06-07 | Maximum level<br>Flux/Time. |
|------|-------|-------|-------|-------|-------|-------|-------|-----------------------------|
| 1    | 23    | 24    | 22    | 20    | 18    | 17    | 16    | 38/0140.                    |
| 5    | 14    | 13    | 10    | 10    | 9     | 9     | 9     | 11/0001.                    |
| 6    | 14    | 17    | 18    | 20    | 22    | 21    | 22    | 20/0630.                    |
| 7    | 40    | 35    | 33    | 33    | 30    | 30    | 25    | 48/0020.                    |
| 8    | 10    | 10    | 9     | 9     | 9     | 10    | -     | -                           |
| 15   | 5     | 4     | 5     | (45)  | (37)  | 8     | 8     | (182/0420).                 |
| 16   | 18    | 25    | 22    | 17    | 12    | 9     | 7     | 30/0120.                    |
| 31   | 13    | 15    | 14    | 12    | 11    | 10    | 22    | 41/1612.                    |

## Outstanding Occurrence

| Date | Starting Time | Duration     | Type | Maximum<br>Intensity | Time  |
|------|---------------|--------------|------|----------------------|-------|
| 15   | 0300          | about 2 hrs. | GD   | 182                  | 0420. |

IONOSPHERIC DATA IN JAPAN FOR JANUARY 1955

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