

# IONOSPHERIC DATA IN JAPAN

## FOR SEPTEMBER 2005

### VOL.57 NO.9

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NATIONAL INSTITUTE OF INFORMATION  
AND COMMUNICATIONS TECHNOLOGY

TOKYO, JAPAN

# INTRODUCTION

This Series contains data on ionosphere (I) and solar radio emission (S) obtained at the following stations under the

National Institute of Information and Communications Technology, Independent Administrative Institution in Japan.

| Station   | Geographic |            | Geomagnetic (IGRF2000) |           | Technical Method         |
|-----------|------------|------------|------------------------|-----------|--------------------------|
|           | Latitude   | Longitude  | Latitude               | Longitude |                          |
| Wakkanai  | 45°23.6'N  | 141°41.1'E | 36.4°N                 | 208.6°    | Vertical Sounding (I)    |
| Kokubunji | 35°42.4'N  | 139°29.3'E | 26.6°N                 | 207.9°    | Vertical Sounding (I)    |
| Yamagawa  | 31°12.1'N  | 130°37.1'E | 21.4°N                 | 199.8°    | Vertical Sounding (I)    |
| Okinawa   | 26°40.5'N  | 128°09.2'E | 16.8°N                 | 198.4°    | Vertical Sounding (I)    |
| Hiraiso   | 36°22.0'N  | 140°37.5'E | 27.4°N                 | 209.2°    | Solar Radio Emission (S) |

## A. IONOSPHERE

Ionospheric observations are carried out at the above four stations in Japan by means of vertical sounding using ionosondes. The ionosonde produces ionograms, which are recorded digitally on computer storage medium. The digitally-recorded ionograms are collected from each station by the central computer and reduced to numerical values and Summary Plots by the automatic processing system. The ionograms obtained at Kokubunji are manually scaled as well by experienced specialists to supplement automatically-scaled parameters.

### A1. Automatic Scaling

Digital ionograms are automatically scaled by the pattern recognition method. The following five factors of ionospheric characteristics are published for the present. The reliability of these factors has been ascertained by comparison of the automatically-scaled parameters with the manually-scaled values of large amounts of test ionograms.

The published data consist of tabulations of hourly values of three factors ( $f_oF2$ ,  $fEs$ ,  $fmin$ ) and monthly medians of two factors ( $h'Es$ ,  $h'F$ ), daily Summary Plots and monthly medians plot of  $f_oF2$ .

#### a. Characteristics of Ionosphere

|                 |   |
|-----------------|---|
| $f_oF2$         | Ordinary wave critical frequency for the $F2$ layer                                   |
| $fEs$           | Highest frequency of the $Es$ layer whether it may be ordinary or extraordinary       |
| $fmin$          | Lowest frequency which shows vertical ionospheric reflections                         |
| $h'Es$<br>$h'F$ | Minimum virtual height on the ordinary wave for the $Es$ and $F$ layers, respectively |

#### b. Descriptive Letters

The following descriptive letters are used in the tables.

- A Impossible measurement because of the presence of a lower thin layer, for example  $Es$  (for  $f_oF2$ ).
- C Impossible measurement because of any failure in observation.
- G Impossible automatic scaling because of too small ionization density of the layer (for  $fEs$ ).
- N Impossible automatic scaling because of complex echoes.
- Blank No digital record because of trouble in the automatic data processing system, but existence of film record.

#### c. Definitions of the CNT, MED, UQ and LQ

**Median count** (CNT) is the number of numerical values from which the median has been computed. In addition to numerical values, the count may include a descriptive letter G.

**Median** (MED) is defined as the middle value when the numerical values are arranged in order of magnitude, or the average of the two middle values if there is an even number

of values.

**Upper quartile** (UQ) is the median value of the upper half of the values when they are ranked according to magnitude; the **lower quartile** (LQ) is the median value of the lower half.

If CNT is less than 10, there are blank spaces left.

#### d. Reliability of Automatic Scaling

The results of the comparison between automatically-scaled values and manually-scaled ones showed that hourly values of  $f_oF2$ ,  $fEs$  and  $fmin$  were scaled within a difference of 1 MHz from about 90, 90 and 99%, respectively of the test ionograms.

#### e. Summary Plot

Daily Summary Plots which are made from quarter-hourly digital ionograms are published to present general ionosphere conditions. The upper and middle parts of a Summary Plot show the diurnal variation of the frequency range of the echoes reflected from the  $F$  and  $E$  regions, respectively. The two solid arcing lines indicate the predicted values of  $f_xE$  and  $f_oE$  calculated by the method described in the CCIR report 340. The lower part shows the diurnal variation of the virtual height where the echo traces become horizontal.

### A2. Manual Scaling

The published data consist of tabulations of hourly values of the ionospheric characteristics and figures of daily  $f$ -plot.

All symbols and terminology in the tables or figures of ionospheric data are used in accordance with the "URSI Hand-book of Ionogram Interpretation and Reduction (Second Edition) 1972" and its revision of chapters I-4, published in July 1978.

#### a. Characteristics of Ionosphere

|   |   |
|---|---|
| $fxI$                                   | Top frequency of spread $F$ trace   |
| $f_oF2$<br>$f_oF1$<br>$f_oE$<br>$f_oEs$ | Ordinary wave critical frequency for the $F2$ , $F1$ , $E$ and $Es$ including particle $E$ layers, respectively |
| $fbEs$                                  | Blanketing frequency of the $Es$ layer, e.g. the lowest ordinary wave frequency visible through $Es$            |
| $fmin$                                  | Lowest frequency which shows vertical ionospheric reflections   |
| $M(3000)F2$<br>$M(3000)F1$              | Maximum usable frequency factor for a path of 3000 km for transmission by $F2$ and $F1$ layers, respectively    |
| $h'F2$<br>$h'F$<br>$h'E$<br>$h'Es$      | Minimum virtual height on the ordinary wave for the $F2$ , whole $F$ , $E$ and $Es$ layers, respectively        |
| Types of $Es$                           | See below b. (iii)  |



## b. Symbols

## (i) Descriptive Letters

The following letters are entered after, or used to replace a numerical value on the monthly tabulation sheets, if necessary.

- A** Measurement influenced by, or impossible because of, the presence of a lower thin layer, for example *Es*.  
**B** Measurement influenced by, or impossible because of, absorption in the vicinity of *fmin*.  
**C** Measurement influenced by, or impossible because of, any non-ionospheric reason.  
**D** Measurement influenced by, or impossible because of, the upper limit of the normal frequency range in use.  
**E** Measurement influenced by, or impossible because of, the lower limit of the normal frequency range in use.  
**F** Measurement influenced by, or impossible because of, the presence of spread echoes.  
**G** Measurement influenced by, or impossible because the ionization density of the layer is too small to enable it to be made accurately.  
**H** Measurement influenced by, or impossible because of, the presence of a stratification.  
**K** Presence of particle *E* layer.  
**L** Measurement influenced or impossible because the trace has no sufficiently definite cusp between layers.  
**M** Interpretation of measurement questionable because the ordinary and extraordinary components are not distinguishable.  
**N** Conditions are such that the measurement cannot be interpreted.  
**O** Measurement refers to the ordinary component.  
**P** Man-made perturbations of the observed parameter; or spur type spread *F* present.  
**Q** Range spread present.  
**R** Measurement influenced by, or impossible because of, attenuation in the vicinity of a critical frequency.  
**S** Measurement influenced by, or impossible because of, interference or atmospheric.  
**T** Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.  
**V** Forked trace which may influence the measurement.  
**W** Measurement influenced or impossible because the echo lies outside the height range recorded.  
**X** Measurement refers to the extraordinary component.  
**Y** Lacuna phenomena, severe layer tilt.  
**Z** Third magneto-electronic component present.

## (ii) Qualifying Letters

The following letters are entered in the first column before a numerical value on the monthly tabulation sheets, if necessary.

- A** Less than. Used only when *fbEs* is deduced from *foEs* because total blanketing of higher layer is present.  
**D** Greater than.  
**E** Less than.  
**I** Missing value has been replaced by an interpolated value.  
**J** Ordinary component characteristic deduced from the

extraordinary component.

- M** Mode interpretation uncertain.  
**O** Extraordinary component characteristic deduced from the ordinary component. ( Used for x-characteristics only.)  
**T** Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.  
**U** Uncertain or doubtful numerical value.  
**X** Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

When more than one type of *Es* trace are present on the ionogram, the type for the trace used to determine *foEs* must be written first. The number of multiple trace is indicated after the type letter.

The types are:

- f** An *Es* trace which shows no appreciable increase of height with frequency.  
**l** A flat *Es* trace at or below the normal *E* layer minimum virtual height or below the part *E* layer minimum virtual height.  
**c** An *Es* trace showing a relatively symmetrical cusp at or below *foE*. ( Usually a daytime type. )  
**h** An *Es* trace showing a discontinuity in height with the normal *E* layer trace at or above *foE*. The cusp is not symmetrical, the low frequency end of the *Es* trace lying clearly above the high frequency end of the normal *E* trace. ( Usually a daytime type. )  
**q** An *Es* trace which is diffuse and non-blanketing over a wide frequency range.  
**r** An *Es* trace showing an increase in virtual height at the high frequency end similar to group retardation.  
**a** An *Es* trace having a well-defined flat or gradually rising lower edge with stratified and diffuse traces present above it.  
**s** A diffuse *Es* trace which rises steadily with frequency and usually emerges from another type *Es* trace.  
**d** A weak diffuse trace at heights below 95 km associated with high absorption and large *fmin*.  
**n** The designation 'n' is used to denote an *Es* trace which cannot be classified into one of the standard types.  
**k** The designation 'k' is used to show the presence of particle *E*. When *foEs* > *foE* ( particle *E* ) the *Es* type precedes k.

## c. Definitions of the CNT, MED, UQ and LQ

**Median count ( CND )** is the number of values from which the median has been computed. In addition to numerical values, the count may include certain descriptive letters.

**Median ( MED )** is the middle value when the numerical values are arranged in order of magnitude, or the average of the two middle values if there is an even number of values.

**Upper quartile ( UQ )** is the median value of the upper half of the values when they are ranked according to magnitude; the **lower quartile ( LQ )** is the median value of the lower half.

## B. SOLAR RADIO EMISSION

Solar radio observations at 200, 500 and 2800 MHz are carried out at Hiraiso. The observation equipment consists of three parabolic antennas, one with 10-meter diameter for 200 MHz Measurement, one with 6-meter diameter for 500 MHz measurements and one with 2-meter diameter for 2800 MHz measurements, each being equipped with a pair of crossed doublet antennas as a primary radiator, and three appropriate receivers. Each pair of the crossed doublet antennas is used as a polarimeter. Observations are continuously carried out almost from sunrise to sunset.

## B1. Daily Data at Hiraiso

The three-hourly mean and daily mean values of the solar radio emission intensities are tabulated for 500 MHz measurements. The intensities are expressed by the flux

density in  $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$  unit.

The following symbols are used in the tables, when interference or radio bursts prevented measuring the base-level flux densities or determining the variability indices:

\* Measurement impossible because of interference.

B Measurement impossible because of bursts.

Daily data within parentheses mean that the observation time does not exceed one third of the period.

## B2. Outstanding Occurrences at Hiraiso

The table is a list of outstanding occurrences of solar radio emission bursts observed at 200, 500 and 2800 MHz during a month.

Listed in the table are the date, frequencies, the type of event, the start time and the time of maximum, both in U.T.

expressed in hours, minutes and tenths of a minute, the duration in minutes, the peak and mean flux densities in  $10^{-22}$   $\text{Wm}^{-2} \text{Hz}^{-1}$  unit, and the polarization.

The type of event is expressed by a combination of a numerical code and a letter symbol in accordance with the "Descriptive Text of Solar Geophysical Data, NOAA" as defined by H. Tanaka in the "Instruction Manual for Monthly Report of Solar Radio Emission, WDC-C2" in January 1975:

| SGD Code | Letter Symbol | Morphological Classification |
|----------|---------------|------------------------------|
| 1        | S             | Simple 1                     |
| 2        | S/F           | Simple 1F                    |
| 3        | S             | Simple 2                     |
| 4        | S/F           | Simple 2F                    |
| 5        | S             | Simple                       |
| 6        | S             | Minor                        |
| 7        | C             | Minor+                       |
| 8        | S             | Spike                        |
| 20       | GRF           | Simple 3                     |
| 21       | GRF           | Simple 3A                    |
| 22       | GRF           | Simple 3F                    |
| 23       | GRF           | Simple 3AF                   |
| 24       | R             | Rise                         |
| 25       | R             | Rise A                       |
| 26       | FAL           | Fall                         |
| 27       | RF            | Rise and Fall                |
| 28       | PRE           | Precursor                    |
| 29       | PBI           | Post Burst Increase          |
| 30       | PBI           | Post Burst Increase A        |
| 31       | ABS           | Post Burst Decrease          |
| 32       | ABS           | Absorption                   |
| 40       | F             | Fluctuations                 |
| 41       | F             | Group of Bursts              |
| 42       | SER           | Series of Bursts             |

| SGD Code | Letter Symbol | Morphological Classification |
|----------|---------------|------------------------------|
| 43       | NS            | Onset of Noise Storm         |
| 44       | NS            | Noise Storm in progress      |
| 45       | C             | Complex                      |
| 46       | C             | Complex F                    |
| 47       | GB            | Great Burst                  |
| 48       | C             | Major                        |
| 49       | GB            | Major+                       |

The polarization is expressed by the polarization degree and sense as follows:

|           |   |
|-----------|---|
| R or L    | right or left-handed polarization,  |
| W, M or S | weak, moderate or strong polarization,                                      |
| 0         | almost zero or unable to detect polarization due to small increase of flux, |
| 00        | polarization degree of less than 1  |

One of the following symbols may be attached after numerical values, if necessary.

|   |                              |
|---|------------------------------|
| D | greater than, or later than, |
| E | less than or earlier than,   |
| U | approximate, or uncertain.   |

### B3. Summary Plots of F10.7 at Hiraiso

The 10.7 cm solar radio flux at Hiraiso is plotted over a one month period. The 10.7 cm flux ( $F_{10.7}$ ) is determined by adjusting the 10.7 cm radio flux measured at Hiraiso to the Pentincton 10.7 cm radio flux. The figure on the right-hand side shows the  $F_{10.7}$  index estimated at Hiraiso.

The following symbols are used in the  $F_{10.7}$  index:

|   |                                  |
|---|----------------------------------|
| * | Measurement made not at 3h U.T.. |
| B | Measurement affected by bursts.  |

HOURLY VALUES OF foF2 AT Wakkanai

SEP. 2005

LAT. 45° 23.5' N LON. 141° 41.2' E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

| D   | H  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|     | 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  | 42 | 38 | 32 | 30 |    | 56 |    |    |    | A  | A  | A  |    |    | 47 | 43 | 48 | 51 | 54 | 46 | 51 | 47 | 38 |    |    |
| 2   | 36 | 32 | 32 | A  | A  |    | A  |    | 57 | 58 | 70 |    | 60 |    | 40 | 53 | 60 | 63 | 63 | 61 | 62 | 44 | 45 | 42 |    |    |
| 3   |    | 42 | 36 | 32 |    |    | 36 |    | A  | A  |    |    |    | 39 | 58 | 51 | 47 | 50 | 45 | 45 | 43 | 32 |    |    |    |    |
| 4   | 37 | A  | 34 | 33 | 30 | A  | 44 |    | 49 | A  |    |    |    | 34 | 47 | 45 | 42 | 44 | 45 | 45 | 51 | 37 | 38 | 30 |    |    |
| 5   | 32 | 34 | 28 |    | 25 |    |    | 32 | 37 |    | A  |    |    |    | 44 |    | 45 | 46 | 56 | 54 | 52 | 44 |    | 34 |    |    |
| 6   |    | 32 | 32 | 32 | 34 |    | 41 |    |    | A  |    |    |    |    | 46 | 50 | 41 | 47 | 42 | 45 |    | A  | 36 | 29 |    |    |
| 7   |    | 30 |    | 34 |    |    | 46 | A  | A  |    |    |    | A  | A  |    |    | 50 | 45 | 35 |    | 55 | A  | 38 | A  |    |    |
| 8   | A  | A  | 34 |    |    | 40 |    | A  |    | A  |    | A  |    |    | 60 | 60 | 54 | 52 | 51 | 54 |    | 38 | 44 | 44 |    |    |
| 9   | 40 | 37 | 37 | 36 | 34 | 32 | 45 |    |    | A  | A  | A  |    | A  |    |    | 55 | 50 | 52 | 42 | 46 | 45 | 44 |    |    |    |
| 10  | A  |    |    | A  | 37 | A  |    |    |    |    |    |    |    |    | A  |    | 40 |    | 48 | 57 |    | 54 | 52 | A  |    |    |
| 11  |    | 34 | 34 | 35 | 35 | A  | 38 |    | A  |    |    |    |    |    |    | 55 | 63 | 72 | 70 | 63 | 67 | 51 | 38 | 36 |    |    |
| 12  | 32 |    | 30 | A  | A  | A  | 34 |    |    |    |    |    |    |    |    |    |    | 40 | 42 | 44 | 44 | 37 | 34 |    |    |    |
| 13  | 39 |    |    |    | A  | A  | A  |    |    |    |    |    |    |    |    |    | 46 | 41 | 40 | 44 | 44 | 36 | 34 | 34 |    |    |
| 14  | 30 |    | 31 |    | A  | A  | A  |    | 58 |    | 56 |    |    | 66 | 60 | 55 | 58 | 63 | 63 | 60 | 52 | 54 | 40 | 38 |    |    |
| 15  | 36 |    | 32 | 35 | 32 | 31 |    | A  | A  | 50 | 54 | 59 |    | 67 | 62 | 61 | 57 | 58 | 64 | 62 |    | 54 | 53 | 54 | 44 |    |
| 16  | 41 | 32 | 34 | 31 | 31 |    |    |    | 54 | 44 | 51 |    | 58 | 63 | 58 | 64 | 68 | 61 | 66 | 63 | 66 | 58 | 52 | 44 |    |    |
| 17  | 44 | 38 | 36 | 31 | 30 |    |    |    | 34 | 34 | 39 | 39 | 44 | 39 | 56 | 55 | 60 | 66 | 54 | 54 | 42 |    | 47 | 40 |    |    |
| 18  | 41 | 35 | 34 | 32 | 34 | 35 | 34 | 36 | 57 | 58 | 63 | 57 |    | 56 | 52 | 58 | 56 | 61 | 58 | 53 | 58 | 55 | 49 | 38 |    |    |
| 19  | 37 | 34 | 29 | 32 | 34 | 34 |    | 54 | 56 | 53 | 54 | 59 | 60 | 61 | 62 | 58 | 56 | 56 | 48 | 51 | 46 | 44 | 45 | 42 |    |    |
| 20  | 42 | 37 | 36 | 38 | 34 | 40 | 42 | 51 |    | 58 | 61 | 61 | 56 | 58 | 56 | 60 | 62 | 62 | 61 | 54 | 48 | 45 | 40 | 42 |    |    |
| 21  | 40 | 41 | 40 | 40 | 32 | 34 | 41 | A  |    | 48 | 54 |    | 58 | 62 | 68 | 58 | 60 | 61 | 55 | 55 | 42 | 42 | 44 | 37 |    |    |
| 22  |    |    | 36 | 38 | 34 |    | 35 | A  |    | 51 | 62 | 63 | 63 | 62 | 63 | 63 | 60 | 61 | 57 | 47 | 38 | A  | 44 | 47 | 44 |    |
| 23  | 32 | 34 | 37 | 34 | 37 | 40 | 52 | 53 | 60 | 66 | 70 | 66 | 68 | 77 | 68 | 62 | 61 | 56 | 62 |    |    | 53 | 44 | 44 |    |    |
| 24  | 40 | 43 | 40 | 45 |    | 41 | 54 | 68 | 66 | 63 | 70 | 66 | 65 | 76 | 70 | 68 | 62 | 62 | 54 | 51 | 44 | 52 | 39 | 28 |    |    |
| 25  | 43 | 36 | 42 | 41 | 38 | 40 | 55 | 61 | 66 | 66 | 69 | 71 | A  | 72 | 62 | 62 | 64 | 58 | 60 | 48 |    | 46 | 41 | 45 |    |    |
| 26  | 44 | 45 | 42 | 43 | 41 | 41 | 51 | 57 | 66 | 61 | 72 | 72 | 77 | 72 | 66 | 67 | 67 | 68 | 58 | 52 | 44 | 40 | 48 |    |    |    |
| 27  | 47 | 47 | 46 | 47 | A  |    | 50 | 54 | A  |    | 71 | 81 | 73 | A  | 68 | 72 | 74 | 62 | 72 | 66 | 61 | 49 | 46 | 42 | 41 | 44 |
| 28  | 34 |    | 42 | A  |    | 37 | 55 | 62 | 64 | 61 | 71 | 66 | 71 | 63 | 71 | 72 | 70 | 72 | 62 | 61 | 53 | 40 | A  | A  |    |    |
| 29  |    | 40 | 40 | 42 | 41 | 45 | 51 | 55 | 61 | 65 | 60 | 74 | 65 | 70 | 62 | 60 | 60 | 53 | 50 | 46 | 52 | 45 | 45 | 42 |    |    |
| 30  | 41 | 35 | 32 |    | 36 | 37 | 47 | 58 | 57 | 64 | 66 | 72 | 68 | 62 | 62 | 58 | 56 | 50 | 51 | 45 | 44 | 45 | 45 | 38 |    |    |
| 31  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |    |    |
| CNT | 21 | 21 | 27 | 21 | 20 | 15 | 20 | 13 | 19 | 18 | 16 | 12 | 15 | 19 | 23 | 25 | 28 | 30 | 30 | 26 | 26 | 27 | 26 | 23 |    |    |
| MEP | 40 | 36 | 36 | 35 | 34 | 40 | 46 | 55 | 57 | 61 | 63 | 66 | 65 | 63 | 61 | 58 | 59 | 56 | 54 | 52 | 47 | 45 | 44 | 40 |    |    |
| U Q | 41 | 41 | 40 | 40 | 36 | 41 | 53 | 59 | 64 | 65 | 70 | 71 | 68 | 72 | 66 | 62 | 62 | 63 | 61 | 54 | 54 | 52 | 47 | 44 |    |    |
| L Q | 35 | 34 | 32 | 32 | 31 | 34 | 39 | 50 | 51 | 55 | 55 | 60 | 58 | 58 | 56 | 54 | 52 | 48 | 48 | 45 | 44 | 40 | 39 | 36 |    |    |



HOURLY VALUES OF fEs AT Wakkanai

SEP. 2005

LAT. 45°23.5'N LON. 141°41.2'E SWEEP 1.0MHz to 30.0MHz AUTOMATIC SCALING

| D   | H  |    |    |    |    |    |    |    |    |    |    |     |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|-----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|     | 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   | 50 | 34 | G  | 29 | G  |    | G  | 36 | 41 | G  | 53 | 51  | 51 |     |    | G  | G  | G  | G  |    | 32 | 33 | 40 | 38 | 28 |    |    |
| 2   | 30 | 32 | 26 | 40 | 38 | 39 | 51 | 48 | 48 | 48 |    |     | 50 | 45  | G  | G  | G  |    | 33 | 30 | 33 | 58 | 38 | 29 | 29 |    |    |
| 3   | 46 | 26 | G  | G  | 30 |    | G  | 56 | 76 | G  | G  |     | G  | G   | G  |    | 40 | 42 | G  | G  |    | 28 | 34 | 36 | 46 | 39 |    |
| 4   | 25 | 33 | 34 | 29 | G  | 57 | 34 | 48 | 53 | 50 |    | G   | G  | G   | G  | G  |    | 41 | 38 | 31 | 40 |    | G  | G  | G  |    |    |
| 5   | G  | G  | G  |    | 26 | 30 | 27 | 31 | 34 | G  | 42 | 52  |    | G   | G  | G  | G  |    | G  |    | 32 | 47 | 35 | 32 | 39 | 31 | 28 |
| 6   | 26 | 25 | 26 | G  | G  |    | G  | 40 | 42 | 68 | 43 |     | 50 |     | G  | G  |    | G  |    | 38 | 32 | 28 | 29 | 68 | 38 | 40 |    |
| 7   | 33 | G  | 29 | G  | 30 | 33 | 36 | 68 | 73 | G  |    | G   |    | 46  | 72 | G  |    | G  |    | 42 | 40 | 40 | 52 | 71 | 49 | 71 |    |
| 8   | 68 | 67 | G  | 33 | 32 | 35 | 30 | 52 | 58 | 58 | 44 | 68  | 50 | 54  | G  | G  | G  |    | G  |    | 38 | 52 | 47 | 44 | G  | 34 |    |
| 9   | 39 | 33 | 33 | 29 | 28 | 25 | 29 | 41 | 43 | 68 | 54 | 100 |    | 108 |    |    |    | 45 | 62 | 35 | 45 | 32 | 32 | 39 | 57 |    |    |
| 10  | 59 | 50 |    | 48 | 28 | 53 | 39 | 42 |    |    |    | 42  |    |     | 45 | 36 | 44 | 36 | G  |    | 44 | 39 | 38 | 43 | 45 |    |    |
| 11  | 33 | 32 | G  | G  | G  |    | 39 |    | 62 | 46 |    |     |    | G   |    | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  |    |    |
| 12  | 27 | 33 | 29 | 36 | 40 | 46 |    | G  | G  | G  |    |     |    | G   |    | 46 |    | G  | G  |    |    | 27 | G  | G  | G  |    |    |
| 13  | 24 | G  |    | 33 | 60 | 46 | 40 | G  | 36 |    |    | G   | G  |     |    |    | G  | G  |    |    | 35 | 30 |    | 32 | 25 | 24 |    |
| 14  | G  | 33 | 26 | 28 | 28 | 44 | 51 |    | 44 | 48 |    | G   | G  |     | G  | G  | G  | G  | G  |    | 28 | 68 | 26 | 32 | G  |    |    |
| 15  | G  |    | G  | G  | G  |    | 32 | 51 | 37 |    |    |     | G  | G   | G  | G  | G  |    | G  |    |    | 29 | 33 | 28 | 27 |    |    |
| 16  | 27 | G  | G  | G  | 33 | 45 | 36 | 60 | 46 | G  | G  |     | G  |     | G  | G  | G  | G  | G  | G  |    | 28 | 27 | 25 | G  |    |    |
| 17  | G  | G  | G  |    | G  | 27 | 36 | 34 | 35 | G  | G  | G   | G  | G   | G  | G  |    | 32 | 42 | 36 | 42 | 27 | 39 | G  | 27 |    |    |
| 18  | G  | G  | G  | G  | G  | 26 | 28 | G  | 46 | G  | G  | G   | G  | G   | G  | G  | G  | G  | G  |    | 26 | 26 | 37 | 26 | 27 | 28 |    |
| 19  | 26 | G  | G  | G  | G  | G  |    | G  | G  | G  |    | G   | G  | G   | G  | G  | G  |    | G  |    | 35 | 29 | 26 | G  | G  | G  |    |
| 20  | 27 | G  | G  | G  | G  | G  | G  |    | G  | G  |    | G   | G  | G   | G  | G  | G  | G  |    | 35 | 29 | 26 | G  | G  | G  |    |    |
| 21  | G  | G  | G  | G  | G  |    | 38 |    | G  | G  |    | 41  | 40 |     | G  | G  | G  | G  | G  |    | 32 | G  | G  | G  | G  |    |    |
| 22  | 29 | 37 | G  | G  |    | 24 | 28 | 47 | 54 | 47 |    | 40  |    | G   | G  | G  | G  | G  | G  | G  |    | 39 |    | 30 | G  | G  | G  |
| 23  | 26 | 24 | G  | G  | G  | G  | G  | G  | G  |    |    | G   | G  | G   | G  | G  | G  | G  | G  |    |    | 26 | 26 | 37 | 26 | 27 | 28 |
| 24  | G  | G  | G  |    | 24 | 32 | 26 | G  | G  | G  | G  | G   | G  | G   | G  | G  | G  | G  | G  |    | 30 | 29 |    | 28 | 28 | 30 |    |
| 25  | G  |    | G  |    | 31 | 28 | G  | G  | G  | G  |    |     | 46 | 72  | 56 | 56 | 39 | 40 | 52 | G  |    | 26 |    | G  | 27 | G  |    |
| 26  | 31 | G  | G  |    | 33 |    | 24 | 32 | 39 | 50 | 44 | 46  | 58 | 45  | 40 |    |    | 40 | G  | G  |    | 33 | 30 | 28 | 37 | 38 |    |
| 27  | 24 | 38 | 50 | 31 | 83 | 69 | 35 | 70 | G  | 73 | 70 | 81  | 54 | G   |    | 38 | 54 | 45 | 37 | 26 | 44 | 32 | 25 | 32 | 28 |    |    |
| 28  | 28 | 60 |    | 69 | 52 | 35 | 40 | 38 | 54 | 51 |    | G   | G  | G   | G  | G  | 36 | 51 | 38 | 33 | 26 | 43 | 56 | 48 | G  |    |    |
| 29  | 45 | 39 | 32 | 24 | 29 | 36 | 44 | 46 | 45 | 40 | 39 | G   | G  | G   | G  | G  | G  | G  |    | 33 | 50 | 43 | 26 | G  | 26 |    |    |
| 30  | G  | G  | G  |    | 30 | 29 |    | 29 | G  | G  | G  | G   | G  | G   | N  | G  | G  | G  |    | 26 |    | 29 | G  | G  | G  | G  |    |
| 31  |    |    |    |    |    |    |    |    |    |    |    |     |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11  | 12 | 13  | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |    |    |    |
| CNT | 30 | 29 | 27 | 30 | 30 | 28 | 29 | 28 | 28 | 29 | 22 | 25  | 25 | 26  | 26 | 26 | 29 | 30 | 30 | 29 | 29 | 30 | 30 | 29 |    |    |    |
| MED | 26 | 25 | G  | 25 | 28 | 32 | 32 | 38 | 42 | G  | G  | G   | G  | G   | G  | G  | G  | 14 | G  | 32 | 29 | 31 | 27 | 27 |    |    |    |
| U Q | 33 | 33 | 26 | 31 | 32 | 41 | 40 | 48 | 51 | 48 | 44 | 44  | 48 | 40  | G  | G  | 38 | 37 | 33 | 41 | 38 | 38 | 37 | 36 |    |    |    |
| L Q | G  | G  | G  | G  | G  | 24 | G  | G  | G  | G  | G  | G   | G  | G   | G  | G  | G  | G  | G  | 27 | 13 | 25 | G  | G  |    |    |    |

## HOURLY VALUES OF fmin AT Wakkanai

SEP. 2005

LAT. 45°23.5'N LON. 141°41.2'E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

| $\begin{matrix} H \\ D \end{matrix}$ | 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                                    | 15 | 15 | 15 | 15 | 20 |    | 15 | 16 | 17 | 20 | 20 | 20 | 21 |    |    | 15 | 15 | 21 | 17 | 14 | 15 | 16 | 15 | 15 |
| 2                                    | 15 | 14 | 14 | 14 | 14 | 15 | 14 | 14 | 20 | 18 |    |    | 21 | 21 | 18 | 16 | 15 | 14 | 14 | 14 | 15 | 15 | 16 | 14 |
| 3                                    | 15 | 14 | 17 | 17 | 15 |    | 15 | 16 | 15 | 20 | 21 | 21 | 20 | 18 | 17 | 14 | 14 | 18 | 17 | 16 | 17 | 16 | 15 | 15 |
| 4                                    | 17 | 14 | 14 | 14 | 18 | 14 | 15 | 16 | 18 | 18 | 18 | 21 | 20 | 18 | 18 | 15 | 14 | 15 | 14 | 14 | 14 | 15 | 15 | 15 |
| 5                                    | 18 | 15 | 15 | 17 | 18 | 18 | 14 | 15 | 15 | 20 | 20 | 22 | 24 | 21 | 18 | 16 | 26 | 17 | 15 | 14 | 15 | 15 | 14 | 14 |
| 6                                    | 18 | 15 | 14 | 17 | 16 | 14 | 15 | 22 | 17 | 26 | 18 | 20 | 21 | 20 | 17 | 20 | 16 | 18 | 14 | 15 | 14 | 15 | 14 | 15 |
| 7                                    | 15 | 18 | 15 | 15 | 15 | 14 | 17 | 21 | 28 | 26 |    | 27 | 23 | 20 | 22 |    | 18 | 18 | 14 | 15 | 14 | 14 | 16 | 15 |
| 8                                    | 14 | 14 | 16 | 14 | 14 | 14 | 16 | 24 | 28 | 30 | 33 | 29 | 27 | 23 | 21 | 18 | 16 | 14 | 14 | 15 | 14 | 14 | 14 | 15 |
| 9                                    | 16 | 14 | 15 | 14 | 17 | 16 | 20 | 34 | 29 | 24 | 22 | 21 |    | 22 |    |    | 14 | 14 | 14 | 15 | 14 | 15 | 14 | 14 |
| 10                                   | 14 | 16 | 14 | 15 | 14 | 15 | 28 | 34 |    |    |    | 34 |    |    | 23 | 23 | 20 | 16 | 14 | 14 | 15 | 14 | 14 | 14 |
| 11                                   | 14 | 14 | 14 | 14 | 15 | 14 | 15 |    | 54 | 36 |    | 28 |    | 23 | 20 | 18 | 21 | 16 | 17 | 15 | 15 | 15 | 15 | 14 |
| 12                                   | 15 | 14 | 14 | 14 | 14 | 14 | 15 | 20 | 20 | 21 |    |    |    | 21 |    | 24 |    | 15 | 17 | 14 | 15 | 20 | 15 |    |
| 13                                   | 15 | 18 |    | 14 | 14 | 14 | 14 | 17 | 21 | 22 |    | 21 | 21 |    |    | 21 | 15 | 21 | 14 | 14 | 20 | 14 | 17 | 14 |
| 14                                   | 20 | 15 | 16 | 15 | 15 | 15 | 22 |    | 28 | 35 | 28 |    |    | 24 | 22 | 17 | 16 | 22 | 18 | 16 | 14 | 15 | 16 | 20 |
| 15                                   | 15 |    | 14 | 18 | 18 | 14 | 14 | 14 | 29 | 20 | 20 |    | 20 | 22 | 16 | 18 | 16 | 15 | 20 |    | 17 | 16 | 16 | 17 |
| 16                                   | 18 | 15 | 14 | 16 | 14 | 14 | 16 | 16 | 15 | 15 | 18 |    | 50 | 15 | 15 | 15 | 27 | 15 | 20 | 17 | 17 | 18 | 15 | 15 |
| 17                                   | 15 | 14 | 15 | 20 | 17 | 17 | 14 | 15 | 15 | 20 | 18 | 22 | 21 | 20 | 22 | 17 | 18 | 15 | 14 | 14 | 15 | 14 | 20 | 15 |
| 18                                   | 15 | 17 | 15 | 15 | 17 | 15 | 14 | 14 | 14 | 18 | 33 | 22 | 23 | 22 | 21 | 17 | 18 | 21 | 16 | 18 | 14 | 17 | 18 | 15 |
| 19                                   | 16 | 20 | 20 | 17 | 20 | 20 | 14 | 15 | 14 | 21 | 17 | 21 | 21 | 21 | 18 | 28 | 26 | 15 | 14 | 14 | 15 | 15 | 15 | 15 |
| 20                                   | 16 | 16 | 15 | 18 | 20 | 18 | 21 | 15 |    | 18 | 21 | 47 | 15 | 20 | 20 | 17 | 17 | 15 | 15 | 15 | 16 | 18 | 15 | 18 |
| 21                                   | 20 | 17 | 17 | 17 | 15 | 17 | 14 | 15 | 18 | 24 | 20 | 16 | 41 | 23 | 21 | 16 | 16 | 20 | 27 | 15 | 17 | 16 | 18 | 23 |
| 22                                   | 16 | 16 | 14 | 15 | 14 | 14 | 14 | 14 | 18 | 20 | 22 | 21 | 20 | 21 | 17 | 28 | 17 | 15 | 16 | 20 | 17 | 17 | 18 | 15 |
| 23                                   | 15 | 18 | 18 | 14 | 20 | 16 | 21 | 15 | 15 | 17 | 17 | 20 | 20 | 21 | 15 | 14 | 14 | 21 | 14 | 15 | 15 | 15 | 15 | 18 |
| 24                                   | 15 | 18 | 16 | 14 | 14 | 15 | 14 | 14 | 17 | 17 | 18 | 17 | 16 | 15 | 16 | 14 | 15 | 20 | 18 | 14 | 18 | 17 | 16 | 15 |
| 25                                   | 16 | 15 | 16 | 14 | 14 | 20 | 17 | 21 | 15 | 15 | 20 | 20 | 18 | 16 | 21 | 14 | 16 | 14 | 15 | 15 |    | 17 | 20 | 14 |
| 26                                   | 15 | 15 | 15 | 14 | 14 | 17 | 14 | 15 | 23 | 20 | 20 | 20 | 26 | 14 | 14 | 14 | 14 | 18 | 15 | 14 | 15 | 15 | 15 | 15 |
| 27                                   | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 16 | 14 | 16 | 21 | 18 | 15 | 17 | 18 | 17 | 15 | 14 | 15 | 15 | 14 | 18 | 15 | 16 |
| 28                                   | 15 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 21 | 20 | 21 | 20 | 15 | 18 | 15 | 14 | 14 | 16 | 14 | 14 | 15 | 15 | 15 |
| 29                                   | 14 | 14 | 14 | 17 | 14 | 15 | 14 | 14 | 14 | 17 | 18 | 20 | 17 | 18 | 18 | 18 | 14 | 17 | 16 | 18 | 16 | 15 | 16 | 18 |
| 30                                   | 15 | 15 | 15 | 15 | 15 | 14 | 15 | 14 | 18 | 14 | 15 | 22 | 22 | 20 | 15 | 15 | 14 | 16 | 14 | 16 | 15 | 16 | 14 | 15 |
| 31                                   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                                      | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| CNT                                  | 30 | 29 | 29 | 30 | 30 | 28 | 30 | 28 | 28 | 29 | 24 | 25 | 25 | 27 | 26 | 28 | 29 | 30 | 30 | 29 | 29 | 30 | 30 | 29 |
| MED                                  | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 18 | 20 | 20 | 21 | 21 | 20 | 18 | 17 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 15 |
| U Q                                  | 16 | 16 | 16 | 17 | 17 | 16 | 16 | 18 | 22 | 23 | 21 | 22 | 23 | 22 | 21 | 18 | 18 | 18 | 17 | 15 | 16 | 17 | 16 | 15 |
| L Q                                  | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 15 | 17 | 18 | 20 | 20 | 18 | 17 | 15 | 14 | 15 | 14 | 14 | 14 | 15 | 15 | 14 |

HOURLY VALUES OF fof2 AT Kokubunji

SEP. 2005

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHZ TO 30.0MHZ AUTOMATIC SCALING

| D   | H  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|     | 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   |    | 45 | 42 |    | A  | A  | 48 |    | A  | A  |    | A  |    |    | 55 | 54 | 52 | 54 | 55 | 54 |    |    |    | 48 |    |
| 2   | 44 | 47 | 44 | 41 |    | 36 | 46 | 61 | 77 | 68 | 66 |    | 58 |    | 65 | 68 | 62 | 59 | 55 | 66 | 52 | 48 | 47 | 52 |    |
| 3   |    | 46 |    |    | 31 |    |    |    | 47 |    |    | 60 | 67 | 62 | 48 | 60 | 60 | 58 |    | 53 | 47 |    | 44 | 43 |    |
| 4   |    |    | 36 |    | 36 | A  | A  | A  |    | 69 | A  | 53 |    | 55 | 54 |    | 52 | 54 | 55 | 55 | 60 | 59 | A  | A  | A  |
| 5   | A  |    | 36 | 32 | 27 | 28 |    | A  | 47 | 57 |    |    | 54 | 55 | 57 |    | 54 | 53 | 57 | 62 | A  | A  |    |    |    |
| 6   |    | A  | A  | A  |    |    | 42 |    | 59 | 59 |    | 55 | A  | 54 | 56 | 58 | 52 | 48 | 42 | 48 | 51 | 37 | 42 |    |    |
| 7   |    | 27 |    | 27 | 30 | 27 | 43 | 59 | 48 |    |    |    |    |    |    | 55 | 58 | 55 | 49 | 52 | 44 | A  |    | A  |    |
| 8   | A  |    | 36 | 34 | 34 | 37 | 50 | 53 | 58 |    | A  | A  | A  | 58 | A  | 72 | 75 | A  | 57 | 58 | 53 | 53 | 53 | 54 |    |
| 9   | 44 | 51 | 43 | 43 | 38 |    | 52 | 58 | 67 | 68 | 62 |    |    |    |    |    | 62 | 56 | 55 | 52 | 49 | 46 | 42 | 45 |    |
| 10  |    | 41 | 39 | 38 | 36 | 38 |    |    |    |    |    |    |    |    | A  |    |    |    |    | 63 | 77 | 78 | A  | A  |    |
| 11  | 25 | 32 | 36 | 32 | 35 | 35 | 54 |    | A  |    |    |    | A  |    |    |    | 77 | 80 | 58 | 88 | 77 | 62 | 53 | 54 | 44 |
| 12  | 43 | 43 | 34 |    | A  |    | A  | A  | A  | A  |    |    |    |    |    |    |    | 50 | 52 | 46 | 46 | 52 | 44 |    |    |
| 13  |    | A  |    | A  |    | 32 | 44 |    | 59 | A  | A  | A  |    |    |    | 54 | 53 | 55 | 55 | 49 | 47 | A  |    | 34 |    |
| 14  | 47 | 43 |    | A  | 30 |    | 54 | 71 | 78 | 67 |    | 62 | 72 | 62 | 64 | 67 | 64 | 72 | 78 | 66 | 53 | 53 |    |    |    |
| 15  | 41 |    |    |    | 37 | 35 | 45 | 69 | 74 | 67 | 62 |    | 68 | 80 | 69 | 68 | 71 | 64 | 68 | 64 | 66 | 61 | 54 |    |    |
| 16  | 43 |    | 34 | 37 | 40 |    | 42 | 59 | 66 | 75 | 68 |    | 59 | 66 | 80 | 81 | 81 | 77 | 77 | 74 | 65 | 54 | 53 | 50 |    |
| 17  | 53 | 43 |    |    | 38 |    | 52 | 62 | 69 | 57 | 62 |    | 62 | 68 | 65 | 58 | 64 | 66 | 69 | 52 | 65 | 52 | 54 | 53 |    |
| 18  |    |    | 34 |    | 36 |    | 48 | 61 | 69 | 66 |    | 68 | 68 | 63 | 60 | 66 | 69 | 62 | 57 | 54 | 54 | 53 | 48 | 38 |    |
| 19  |    |    | 34 | 34 | 32 | 34 | 53 | 72 | 59 | 74 | 66 | 65 | 62 |    | 64 | 65 | 61 | 59 | 58 | 55 | 53 | 51 | 53 | 49 |    |
| 20  |    | 38 |    | 34 | 36 | 37 | 54 | 66 | 62 | 75 | 71 | 66 | 62 | 63 | 66 | 67 | 65 | 75 | 71 | 59 | 47 | 44 | 44 |    |    |
| 21  | 44 | 38 | 39 | 39 | 36 | 36 | 57 |    | 83 | 66 | 62 |    | 66 | 72 | 74 | 67 | 71 | 62 | 61 | 47 | 44 | 44 |    | 43 |    |
| 22  | 43 | 43 | 44 | 30 | 32 | 32 | 50 | 61 | 64 | 59 | 64 | 70 | 66 | 61 | 64 | 66 | 65 | 64 | 62 | 52 | 42 |    | 44 | 52 |    |
| 23  | 32 | 39 | 37 | 36 | 36 | 35 | 46 | 57 | 63 | 63 | 69 | 87 | 90 | 80 | 68 | 64 | 65 | 64 | 68 | 65 | 53 | 43 | 42 | 42 |    |
| 24  | 37 | 41 | 41 | 38 | 37 | 36 | 52 |    | 68 | 72 | 66 | 74 | 72 | 72 | 76 | 76 | 69 | 69 | 68 | 54 | 52 | 46 | 42 | 46 |    |
| 25  | 44 | 38 |    |    | 25 | 30 | 53 | 74 | 74 | 63 | 65 | 68 | 84 | 75 | 74 | 65 | 62 | 67 | 73 | 65 | 43 | 42 | 39 | 42 |    |
| 26  | 39 | 42 | 42 |    |    | 30 | 49 | 66 | 57 | 82 | 85 | 85 | 80 | A  | A  | A  |    | 81 | 76 | 62 | 43 | 38 | 42 | 38 | 38 |
| 27  | 38 | 42 | 41 | 39 | 38 | 39 | 59 | 66 | 76 | 76 | 77 | 75 | 73 | 67 | 88 | 92 | 82 | 87 | 61 | A  |    | 39 | 38 | 39 |    |
| 28  | 42 | 39 | 41 | 36 | 36 | 36 | 54 | 73 | 76 | 78 | 74 | 62 | 72 | 80 | 77 | 84 | 91 | 90 | 76 | 37 |    |    |    |    |    |
| 29  | 37 | 37 | 36 | 35 | 37 | 36 | A  | 66 | 66 | 71 | 71 | 83 | 76 | 78 | 75 | 66 | 65 | 65 | 52 | 46 | 44 | 42 | 38 | 42 |    |
| 30  | 35 |    |    | 27 | 27 | 32 | 47 | 65 | 74 | 64 | 71 | 77 | 70 | 67 | 57 | 66 | 62 | 64 | 54 | 54 | 44 | 42 | 38 | 36 |    |
| 31  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |    |
| CNT | 18 | 21 | 20 | 19 | 23 | 19 | 24 | 20 | 26 | 20 | 18 | 16 | 21 | 20 | 21 | 26 | 30 | 28 | 29 | 28 | 25 | 23 | 21 | 20 |    |
| MED | 42 | 41 | 38 | 35 | 36 | 35 | 50 | 64 | 66 | 68 | 66 | 68 | 68 | 66 | 65 | 66 | 64 | 63 | 61 | 54 | 52 | 45 | 44 | 44 |    |
| U Q | 44 | 43 | 41 | 38 | 37 | 36 | 53 | 67 | 74 | 74 | 71 | 76 | 72 | 73 | 74 | 68 | 71 | 68 | 68 | 64 | 56 | 53 | 53 | 49 |    |
| L Q | 37 | 38 | 35 | 30 | 32 | 32 | 46 | 59 | 59 | 63 | 62 | 62 | 62 | 61 | 58 | 58 | 60 | 56 | 55 | 50 | 44 | 42 | 40 | 40 |    |



HOURLY VALUES OF fEs AT Kokubunji

SEP. 2005

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

| H<br>D | 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      | 60 | 26 | G  | 36 | 58 | 35 | 37 | 42 | 51 | 51 | 49 | 57 | G  | 42 | 42  | G  | 37 | 38 | G   | G  | 35 | 40 | 42 | 40 |    |
| 2      | 29 | G  | G  | G  |    | G  | G  | G  | 51 | 72 | 58 | 66 | G  | 52 | G   | G  | G  | G  | G   | G  | 24 | 24 | 26 | 57 |    |
| 3      | 39 | 33 | G  |    | 27 |    | G  | 43 | 79 |    |    | G  | G  | G  | G   |    |    | 34 |     |    |    |    | G  | G  |    |
| 4      | G  |    | G  | 37 | 40 | 37 | 53 | 70 | 69 | 69 | 45 |    | G  | G  |     | 41 | G  | 36 | 36  | 96 | 50 | 93 | 67 | 53 |    |
| 5      | 42 | 29 | G  | G  | G  |    | 43 | 65 | 34 | 39 |    | G  | G  | G  | 45  | G  | 43 | 38 | 35  | 89 | 67 | 28 | 34 | 48 |    |
| 6      | 50 | 71 | 59 | 46 | 34 | 34 | G  |    | 47 | 49 | 50 | 52 | 55 | G  | G   | G  | 41 | G  | G   | 36 | 35 |    | 27 | 37 |    |
| 7      |    | G  |    | G  | G  | G  | G  | G  | G  |    |    |    | G  |    |     | G  | G  |    | 36  | 33 | G  | 49 | 77 | 46 | 71 |
| 8      | 59 | 42 | 26 | 28 | G  | G  | G  | G  | 42 | 68 | 84 | 71 | 84 | 54 | 79  | G  |    | 82 | 108 | 33 | G  | G  | G  | G  |    |
| 9      | 60 | G  | G  | G  | G  |    | G  | G  | G  | 46 |    |    |    | 46 |     |    | 47 | 52 | 37  | 60 | 50 |    | 32 | 45 |    |
| 10     | 29 | G  | G  | G  | G  |    |    | 48 | 52 |    |    | 51 |    |    | 68  |    | 49 | 43 | 32  | 42 | 43 | 45 | 46 | 27 |    |
| 11     | 27 | 30 | 26 | G  | G  | G  | 34 |    | 67 | 52 |    |    | 71 | 54 | 77  | G  | G  | 40 | 33  | 26 | 31 | 32 | G  | G  |    |
| 12     | 23 | G  | G  |    | 81 | 67 | 94 | 59 | 67 | 60 | 52 |    | 51 |    |     | 43 |    | G  | G   | G  | G  | G  | G  |    |    |
| 13     |    | 31 |    | 32 | G  | G  | 34 | G  | 52 | 60 | 74 | 59 | 41 | G  | G   | G  | 40 | 33 | 34  | 29 | 37 | 40 | 33 | 24 |    |
| 14     | G  | G  |    | G  |    |    |    |    | G  | G  | G  | G  | G  | G  |     | G  | G  | G  |     |    |    |    | G  |    |    |
| 15     | 30 | 37 | 29 |    | G  | 34 |    | 39 | G  | 50 |    |    | G  | G  | G   | G  | 45 | G  | 42  | 33 | 37 | 29 | 29 |    |    |
| 16     | G  | 27 | G  | G  | G  |    | 25 | 33 | 39 | G  | G  | G  |    | G  | G   | G  | G  |    | 34  | G  | 28 | G  | 39 | 29 | 27 |
| 17     | G  | G  |    | G  | 33 |    | G  | 37 | G  | G  | G  |    | G  | G  | G   | G  | G  |    | 36  | 49 | 49 | 29 | 48 | 23 | G  |
| 18     |    |    | G  |    | G  | G  | 31 | G  | G  | G  |    | G  | G  | G  | G   | G  | 40 | 33 | 42  | 29 | G  | G  | G  | G  |    |
| 19     | 30 | G  | G  | G  | 24 | 23 | G  | G  | G  | G  | G  | G  | G  |    | G   | 37 | G  | 28 | 47  | 42 | G  | G  | G  | G  |    |
| 20     |    | G  | G  | G  | G  | G  |    | 32 | G  | G  |    | 50 | G  | G  | G   | G  | G  |    | 35  | 28 | 42 | G  | G  | G  | 29 |
| 21     | G  | G  | G  | G  | G  | G  | G  |    | G  | 43 | G  | 63 | G  | G  | G   | G  | G  |    | 33  | G  | G  | G  | G  | G  | G  |
| 22     | G  | G  | G  | G  | G  | G  |    | 43 | 53 | 43 | G  | G  | G  | 45 | G   | G  | G  | G  | G   | G  | G  | G  | G  | G  | G  |
| 23     | G  | G  | G  | G  | G  | G  | G  | G  | 43 | 55 | G  | G  | G  | G  | G   | G  |    | 33 |     | 29 | G  | 28 | 36 | G  | G  |
| 24     | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  |    | 51 | 52 | G  |     | 51 | 39 | 69 | 46  | 40 | 36 | 38 | 36 | 29 | 32 |
| 25     | G  | G  |    | 36 | 29 |    |    |    | G  | G  |    | 50 | 51 | 67 | 64  | 53 |    | 42 | 53  | 36 | 70 | 33 | 33 | G  | 29 |
| 26     | 23 | 24 | 27 | 26 |    | G  | G  | G  | G  | 57 | 55 | 68 | 60 | 78 | 108 | 79 | 56 | 60 | 55  | 50 | 34 | 46 | 26 | G  | G  |
| 27     | G  | G  | G  | G  | G  |    | 26 | 36 | 41 | 44 | 50 | 47 | G  | 47 | G   | G  | G  | G  | G   |    | 51 | G  | G  | G  | G  |
| 28     | 28 | 33 | G  | G  | G  | G  | G  | G  | 42 | G  | G  | G  | G  |    | 43  | 40 | 39 | G  | G   | 28 | 28 |    |    | 32 |    |
| 29     | G  | G  | G  | G  | G  |    | 35 | 83 | 37 | 41 |    | 45 | G  | G  | G   | G  | G  | G  | G   | G  |    | 24 | 29 | G  | G  |
| 30     | G  | G  |    | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G   | G  | G  | G  | G   | G  | G  | G  | G  | G  | G  |
| 31     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |    |    |    |     |    |    |    |    |    |    |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14  | 15 | 16 | 17 | 18  | 19 | 20 | 21 | 22 | 23 |    |
| CNT    | 26 | 28 | 26 | 27 | 28 | 28 | 29 | 27 | 30 | 26 | 23 | 23 | 27 | 26 | 26  | 28 | 29 | 30 | 30  | 30 | 29 | 27 | 29 | 27 |    |
| MED    | 23 | G  | G  | G  | G  | G  | G  | 32 | 40 | 44 | G  | 45 | G  | G  | G   | G  | G  | 34 | 30  | 31 | 29 | 29 | 23 | 24 |    |
| U Q    | 30 | 29 | 26 | 28 | 25 | 31 | 35 | 42 | 51 | 52 | 50 | 57 | 45 | 46 | 45  | G  | 41 | 38 | 37  | 42 | 37 | 40 | 32 | 40 |    |
| L Q    | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G   | G  | G  | G  | G   | G  | G  | G  | G  | G  | G  |

HOURLY VALUES OF fmin AT Kokubunji

SEP. 2005

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz to 30.0MHz AUTOMATIC SCALING

| D   | H  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
|     | 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   | 13 | 13 | 14 | 13 | 13 | 13 | 14 | 13 | 24 | 29 | 31 | 34 | 30 | 28 | 22 | 43 | 18 | 13 | 26 | 17 | 14 | 17 | 13 | 14 |  |
| 2   | 14 | 14 | 15 | 22 |    | 15 | 22 | 34 | 23 | 25 | 33 | 36 | 49 | 40 | 50 | 40 | 37 | 14 | 20 | 14 | 17 | 15 | 14 | 14 |  |
| 3   | 14 | 13 | 14 |    | 17 |    | 14 | 14 | 23 |    |    | 50 | 46 | 43 | 41 | 40 | 18 | 18 | 15 | 14 | 21 |    | 15 | 13 |  |
| 4   | 20 |    | 18 | 14 | 14 | 13 | 13 | 14 | 17 | 28 | 31 |    | 44 | 43 |    | 29 | 15 | 15 | 13 | 17 | 15 | 13 | 13 | 13 |  |
| 5   | 14 | 15 | 18 | 21 | 13 | 14 | 13 | 14 | 25 |    |    | 45 | 44 | 25 | 28 | 42 | 17 | 13 | 13 | 14 | 14 | 15 | 14 | 14 |  |
| 6   | 13 | 13 | 15 | 13 | 15 | 13 | 20 |    | 18 | 31 | 34 | 34 | 33 | 44 | 44 | 42 | 21 | 25 | 13 | 14 | 13 | 24 | 13 | 15 |  |
| 7   |    | 22 |    | 14 | 14 | 18 | 23 | 39 | 43 |    |    |    | 54 |    |    | 42 | 28 | 21 | 15 | 20 | 14 | 14 | 15 | 13 |  |
| 8   | 13 | 14 | 14 | 13 | 13 | 15 | 24 | 40 | 34 | 40 | 36 | 37 | 42 | 33 | 37 | 41 | 22 | 17 | 14 | 13 | 14 | 17 | 22 | 14 |  |
| 9   | 13 | 15 | 13 | 13 | 13 |    | 23 | 53 | 45 | 36 | 50 |    |    | 38 |    |    | 28 | 13 | 13 | 13 | 13 | 26 | 13 | 17 |  |
| 10  | 14 | 21 | 22 | 18 | 18 | 15 |    | 42 | 43 |    |    | 44 |    |    | 34 |    | 29 | 13 | 14 | 13 | 13 | 13 | 14 | 15 |  |
| 11  | 13 | 13 | 14 | 15 | 13 | 17 | 14 |    | 59 | 42 |    |    | 56 | 31 | 28 | 45 | 40 | 18 | 13 | 15 | 13 | 13 | 14 | 13 |  |
| 12  | 21 | 17 | 15 | 13 | 14 | 15 | 14 | 17 | 28 | 30 |    | 34 |    |    |    | 30 | 36 | 28 | 18 | 26 | 17 | 14 | 23 |    |  |
| 13  |    | 15 |    | 14 | 14 | 18 | 13 | 18 | 29 | 34 | 35 | 34 | 33 | 44 | 40 | 42 | 22 | 17 | 14 | 14 | 14 | 13 | 14 | 22 |  |
| 14  | 23 | 14 | 13 | 13 | 13 | 13 | 22 | 34 | 43 | 49 | 54 | 52 | 53 | 45 | 28 | 23 | 21 | 13 | 14 | 14 | 14 | 14 | 23 | 17 |  |
| 15  | 14 | 14 | 14 |    | 17 | 14 | 21 | 14 | 22 | 22 | 47 |    | 50 | 23 | 42 | 42 | 20 | 23 | 13 | 14 | 15 | 14 | 14 |    |  |
| 16  | 24 | 15 | 21 | 17 | 18 | 14 | 13 | 22 | 40 | 41 | 45 |    | 50 | 40 | 43 | 37 | 29 | 17 | 17 | 14 | 23 | 21 | 13 | 15 |  |
| 17  | 14 | 13 |    | 21 | 13 | 15 | 21 | 18 | 24 | 42 | 40 |    | 52 | 22 | 42 | 24 | 31 | 14 | 14 | 13 | 14 | 14 | 15 | 17 |  |
| 18  |    |    | 20 |    | 17 | 21 | 14 | 14 | 24 | 34 |    | 53 | 44 | 47 | 44 | 21 | 15 | 17 | 13 | 13 | 15 | 13 | 15 | 17 |  |
| 19  | 13 | 24 | 14 | 17 | 18 | 17 | 14 | 14 | 22 | 43 | 53 | 48 |    | 40 | 41 | 24 | 13 | 14 | 14 | 14 | 17 | 17 | 17 | 15 |  |
| 20  |    | 15 | 23 | 22 | 14 | 14 | 20 | 15 | 21 | 42 | 22 | 43 | 43 | 45 | 40 | 39 | 33 | 15 | 15 | 15 | 14 | 23 | 20 | 13 |  |
| 21  | 14 | 18 | 14 | 14 | 20 | 17 | 13 |    | 24 | 26 | 22 | 23 | 45 | 42 | 40 | 39 | 34 | 14 | 13 | 13 | 13 | 30 |    | 14 |  |
| 22  | 14 | 14 | 15 | 13 | 18 | 17 | 13 | 13 | 17 | 41 | 45 | 18 | 21 | 53 | 39 | 39 | 17 | 22 | 17 | 14 | 17 |    | 20 | 13 |  |
| 23  | 13 | 20 | 14 | 13 | 13 | 21 | 17 | 29 | 21 | 33 | 41 | 42 | 38 | 43 | 21 | 34 | 13 | 13 | 13 | 20 | 17 | 15 | 17 | 17 |  |
| 24  | 20 | 17 | 15 | 15 | 18 | 14 | 20 | 13 | 14 | 41 | 31 | 34 | 43 | 31 | 30 | 23 | 17 | 18 | 17 | 13 | 15 | 13 | 14 | 14 |  |
| 25  | 15 | 14 | 14 | 13 | 17 | 14 | 22 | 14 | 37 | 42 | 33 | 35 | 34 | 34 | 31 | 34 | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 13 |  |
| 26  | 18 | 13 | 13 | 13 |    | 14 | 21 | 13 | 31 | 29 | 31 | 33 | 34 | 34 | 30 | 21 | 15 | 13 | 14 | 14 | 14 | 14 | 14 | 15 |  |
| 27  | 18 | 14 | 14 | 14 | 17 | 17 | 13 | 14 | 14 | 24 | 28 | 42 | 24 | 49 | 38 | 33 | 26 | 21 | 14 | 14 |    | 15 | 14 | 15 |  |
| 28  | 18 | 14 | 15 | 18 | 14 | 14 | 21 | 18 | 22 | 21 | 24 | 40 | 49 | 26 | 22 | 18 | 25 | 20 | 13 | 15 | 28 |    | 14 |    |  |
| 29  | 14 | 20 | 14 | 15 | 17 | 15 | 14 | 13 | 17 | 23 | 39 | 21 | 42 | 40 | 39 | 35 | 14 | 20 | 14 | 14 | 15 | 14 | 15 | 15 |  |
| 30  | 14 | 15 |    | 13 | 17 | 14 | 22 | 25 | 20 | 25 | 41 | 42 | 40 | 24 | 39 | 14 | 28 | 20 | 21 | 14 | 14 | 14 | 20 | 14 |  |
| 31  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |
| CNT | 26 | 28 | 26 | 27 | 28 | 28 | 29 | 27 | 30 | 26 | 23 | 23 | 26 | 26 | 26 | 28 | 30 | 30 | 30 | 30 | 29 | 27 | 29 | 27 |  |
| MED | 14 | 14 | 14 | 14 | 14 | 15 | 17 | 15 | 24 | 34 | 35 | 37 | 44 | 40 | 39 | 38 | 22 | 17 | 14 | 14 | 14 | 14 | 14 | 14 |  |
| U Q | 18 | 17 | 15 | 17 | 17 | 17 | 21 | 29 | 34 | 41 | 45 | 44 | 49 | 44 | 41 | 41 | 29 | 20 | 15 | 15 | 17 | 17 | 17 | 15 |  |
| L Q | 13 | 14 | 14 | 13 | 13 | 14 | 13 | 14 | 21 | 26 | 31 | 34 | 34 | 31 | 30 | 26 | 17 | 13 | 13 | 14 | 14 | 14 | 14 | 13 |  |

HOURLY VALUES OF foF2 AT Yamagawa

SEP. 2005

LAT. 31° 12.1' N LON. 130° 37.1' E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

| D \ H | 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     |    | 34 | 32 | 37 | 36 |    |    | A  | A  | A  |    | 59 |    |    |    |    | 56 | A  | 56 | 52 | 36 |    |    | A  |    |
| 2     |    |    |    | 34 |    |    | 34 |    | 70 | 64 | A  |    |    |    |    | 77 | 59 | 55 | 54 | 61 |    |    | 34 |    |    |
| 3     | A  |    | 42 |    | 34 |    | 30 |    | 44 |    |    | 76 |    |    | 67 |    | 64 | 64 | 66 | 61 | 42 |    | A  | A  |    |
| 4     | 32 | 28 |    |    |    |    |    | 58 | 66 | 78 | 64 | A  | 54 |    | 49 |    | 61 | 60 | 66 |    | 65 | 42 | A  | A  |    |
| 5     | A  | A  |    | 28 | 26 | 32 | 30 | A  | A  |    |    |    |    |    |    |    | 54 | 62 | 49 |    | 48 | A  | 37 | 34 |    |
| 6     |    | 32 | 26 |    |    |    | 32 | 50 | 53 | A  | A  |    |    | A  | A  | A  | A  |    | 55 | A  | A  |    |    |    |    |
| 7     |    |    |    |    |    |    | 31 | 53 |    |    |    |    |    |    |    |    | 62 | 67 | 67 | 66 | 51 | 36 |    |    |    |
| 8     | A  |    | A  |    |    | 26 | 32 | 51 | 63 |    |    |    |    | A  |    | 76 | 83 | A  | 84 | 80 | 79 | 52 | 51 | 37 |    |
| 9     | 42 | 48 | 34 | 32 | 29 | 32 | 36 |    | 66 | 73 |    |    |    |    |    |    | A  | 63 | 64 | A  |    |    | 28 | 36 |    |
| 10    |    |    |    | 32 |    | 32 | 36 | 53 |    |    |    |    |    |    |    |    |    |    | 72 | 72 | 77 | A  |    | 26 |    |
| 11    |    |    | A  |    |    | 30 | 34 |    | A  |    |    |    |    |    |    | 73 | A  | A  |    | 81 | A  | A  | A  | A  |    |
| 12    | 37 | 34 |    | A  |    | A  | A  | A  |    | 67 | 86 | 78 |    | A  | A  |    | A  |    |    |    |    |    | A  | A  |    |
| 13    |    |    |    |    |    | A  |    |    | 75 |    |    | A  | A  |    |    |    |    | 63 | 72 |    | 49 |    | 37 | 38 |    |
| 14    |    |    | 34 | 36 |    |    | 32 | 56 | 67 |    |    |    |    |    | A  |    | 68 | 77 | 76 | 77 | 76 | 64 | 53 | 37 | 34 |
| 15    |    | 37 |    | 30 |    | 29 | 37 | 67 | 72 | 63 | 54 |    | 76 | 82 | 81 | 77 | 72 | 62 | 67 |    |    |    | 52 | 42 |    |
| 16    | 37 |    |    |    |    | 37 | 38 | 54 | 71 | 80 | 67 |    |    | 77 | 80 | 78 | 80 | 76 | 78 | 77 | 69 | 42 |    | 50 |    |
| 17    |    | 36 | 31 | 32 | 34 |    | 32 | 74 | 77 | 71 | 54 |    |    | 72 |    | 63 | 69 | 73 | 77 | 76 | 77 |    | 42 | 34 |    |
| 18    | 37 | 32 |    |    |    | 36 | 42 | 75 | 75 | 74 |    |    | 80 | 78 | 76 | 72 | 80 | 76 | 66 |    |    | 62 | 52 | 37 | 42 |
| 19    | 30 |    | 34 | 32 | 29 | 32 |    |    | 65 | 74 | 66 | 68 | 71 |    | 71 | 72 | 64 |    | 66 |    |    |    | 42 | 37 |    |
| 20    | 36 |    | 25 |    |    |    |    | 62 | 75 | 80 | 62 |    |    |    | 75 | 72 | 72 | 76 | 74 | 66 | A  | A  | A  | A  |    |
| 21    | 36 |    | 42 | 37 | 28 |    | 34 | 74 | 79 |    | 59 | 74 |    | 78 | 76 | 77 | 70 | 68 | 66 | A  |    | 34 | 37 | 32 | 34 |
| 22    | 36 | 36 | 36 | 29 | 31 | 28 | 36 | 62 | 66 | 66 | 66 | 73 | 66 | 64 | A  | 71 | 70 | 64 | 67 | 53 | 36 |    |    | 37 |    |
| 23    | 34 | 34 |    | 30 |    |    | 37 | 58 | 65 | 64 |    | 77 |    | 79 | 73 | 72 | 68 | 72 | 76 | 77 | 66 | 37 | 28 | 28 |    |
| 24    |    |    |    |    | 32 |    | 37 | 59 | 63 | 66 |    | 69 | 80 | 80 | 78 | 78 | 80 | 78 | 78 |    | 52 | 34 | 30 | 30 |    |
| 25    |    |    |    |    |    |    | 36 | 72 | 54 | 68 | 66 | 72 | 76 | 86 | 67 |    | 74 | 77 | 77 |    | A  | A  | A  | A  |    |
| 26    |    | 32 | 32 |    |    |    | 35 | 52 | 61 | 77 | 71 | 76 | 78 | 85 | 78 | 78 | 84 |    | 80 |    | A  | A  | A  | A  |    |
| 27    | A  |    | 36 | 37 | 32 | 28 | 34 | 47 | 51 | 72 | 72 | 71 | 78 | 80 | 78 | 82 | 79 | 86 |    | 67 | A  | A  | A  |    | 36 |
| 28    | 32 | 37 |    | 31 |    |    | 34 | 64 | 78 | 79 | 64 |    | 78 | 79 | 86 |    | 89 |    | 76 |    |    |    |    |    |    |
| 29    | 32 |    | 34 | 28 | 34 | 34 | 37 | 66 | 67 | 69 | 67 | 78 | 77 | 80 | 81 | 78 | 70 | 67 | 56 | 47 |    |    | 36 | 34 |    |
| 30    | 34 |    |    | 29 |    |    | 29 | 54 |    |    | 74 | 75 | 77 | 72 | 68 | 64 | 66 | 68 | 66 | 39 | 32 |    |    |    |    |
| 31    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|       | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |    |
| CNT   | 13 | 13 | 14 | 17 | 11 | 12 | 24 | 21 | 24 | 18 | 15 | 12 | 12 | 14 | 18 | 18 | 25 | 24 | 28 | 16 | 16 | 12 | 11 | 15 |    |
| MED   | 36 | 34 | 34 | 32 | 32 | 32 | 36 | 58 | 67 | 72 | 66 | 74 | 77 | 78 | 76 | 77 | 70 | 70 | 67 | 62 | 52 | 40 | 34 | 36 |    |
| U Q   | 37 | 36 | 36 | 33 | 34 | 34 | 37 | 66 | 73 | 78 | 71 | 76 | 79 | 80 | 80 | 78 | 78 | 76 | 76 | 76 | 63 | 46 | 37 | 38 |    |
| L Q   | 32 | 32 | 31 | 29 | 29 | 29 | 32 | 53 | 64 | 66 | 62 | 70 | 73 | 77 | 68 | 72 | 63 | 63 | 66 | 52 | 39 | 37 | 28 | 34 |    |



HOURLY VALUES OF fEs AT Yamagawa

SEP. 2005

LAT. 31°12.1'N LON. 130°37.1'E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

| H<br>D | 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      | 27 | G  | G  | G  | G  |    | 37 | 58 | 82 | 51 | 41 | 52  |    | G  | 49 | 61 | 41  | 72 | 33 | 40 | 28 | 39 | 33 | 43 |    |    |
| 2      | 33 | 36 | 33 | G  |    |    | G  | 33 | G  | 43 | 62 |     |    |    | G  | G  | G   | G  |    | 30 | 33 |    | G  | 26 |    |    |
| 3      | 39 | 28 | G  |    | G  |    | G  |    | G  |    |    | G   | G  |    | G  | G  | G   | G  | 34 | G  |    | G  | G  |    |    |    |
| 4      | 28 |    | G  | G  | G  | G  | 35 | 48 | 62 | 58 | 61 | 64  |    |    | 41 | 46 |     | G  | G  | 58 | 29 | 50 | 40 | 40 | 43 |    |
| 5      | 42 | 44 |    | G  | G  |    | 44 | 76 | 50 | 42 |    | G   | G  |    | 48 | G  | G   | G  |    | 54 | 81 | 66 | 58 | G  | 32 |    |
| 6      | 37 | 28 | G  |    |    |    | G  | G  | 40 | 54 | 54 | 52  |    | 66 | 68 | 73 | 88  | G  |    | 83 | 70 | 44 | 44 | 35 | 26 |    |
| 7      | 29 |    |    |    | G  |    | G  | G  |    |    |    |     |    |    | 43 |    | G   | G  |    | 41 | 38 | 33 | 40 |    | 27 |    |
| 8      | 40 | 30 | 31 |    | G  | G  | G  | G  | G  |    |    |     |    | 88 | 59 | 74 | 146 | 44 | 68 | 57 | 36 | 32 |    | G  | G  |    |
| 9      | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  |    |     |    | 44 |    |    | 45  | 42 | 37 | 44 | G  |    | G  |    | 33 |    |
| 10     | 32 | 34 | 30 | G  | G  | G  |    |    |    |    |    |     |    |    |    |    | G   |    |    | 34 | 36 | 36 | 60 | 30 | G  | 30 |
| 11     | 26 |    | 33 | G  | G  | G  |    |    | 70 |    |    |     |    |    | 65 | 53 | 76  | 66 | 34 | 88 | 86 | 80 | 34 | 39 |    |    |
| 12     | 27 | G  | 36 | 34 |    | 73 | 59 | 59 | 52 | 54 | 48 | 58  | 66 | 82 |    | 83 | G   | G  | G  |    | 26 | 35 | 56 | 70 | 34 | G  |
| 13     | 28 |    |    | 26 |    | 42 | G  | G  | G  |    |    | 135 | 78 | 49 |    | 43 | G   |    | 42 | 52 | 29 |    | 33 |    | G  |    |
| 14     | G  | G  | G  | G  |    |    | 32 | 44 | 38 |    |    |     | 65 |    | G  | G  | G   | G  |    | 34 | 29 |    | G  |    | G  |    |
| 15     | G  | G  |    | G  | G  | G  | G  | 40 | G  | G  | 42 |     |    | G  | G  | G  | G   |    | 32 | 28 | 33 | 56 | 33 |    | G  |    |
| 16     | G  |    |    |    | G  | G  | G  |    | 35 |    |    |     |    | G  | G  | G  | G   |    | 43 | 34 | 29 | 28 | 23 | G  | G  |    |
| 17     |    | 24 | G  | G  | G  |    | G  | 35 | G  | 38 |    |     |    | G  | G  | G  | G   |    | 33 | 31 | 38 | 41 | 38 | 34 | G  |    |
| 18     | G  | G  | G  | G  |    | G  | 27 | 34 | 36 | G  |    | G   | G  | G  | G  | G  | G   |    | 41 | 34 | 30 | 33 | 40 | G  | G  |    |
| 19     | 26 |    | G  | G  | G  | G  | 28 | 31 | G  | G  |    |     |    |    | G  | G  | G   |    | G  | G  | G  | G  | G  | G  |    |    |
| 20     | G  |    | G  |    |    |    |    | G  | 41 |    |    |     |    |    | G  | G  | G   |    | 52 | 60 | 49 | 58 | 72 | 36 | 40 |    |
| 21     | G  |    | G  | G  | G  |    | G  | 34 | 38 |    | 51 |     |    | G  | G  | G  | G   |    | G  | G  |    | G  | G  | G  | G  |    |
| 22     | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  |     |    | 43 |    | 43 | G   | G  | G  | G  | G  | G  | G  |    | G  |    |
| 23     | G  | G  | G  | G  |    |    | 24 | 36 | 42 |    |    |     |    | G  | G  | G  | G   |    | G  | G  | G  | G  | G  | G  | G  |    |
| 24     |    |    |    | G  | G  | G  | G  | G  | G  |    |    |     | 42 |    | G  | G  | G   |    | G  | 43 |    | 36 | 39 | 32 | G  | G  |
| 25     |    | 29 |    | G  |    | G  | G  | 33 |    | 43 |    |     |    |    | G  | G  | G   |    | 39 |    | 29 | 59 | 36 | 41 | 41 |    |
| 26     | 33 | G  | G  |    |    |    | G  | G  | 45 | 52 | 56 | 62  | 58 |    | G  | G  | 42  | 71 | 38 | G  | 84 | 42 | 44 | 60 | 28 |    |
| 27     | 43 |    | 27 | G  | G  | G  | G  | G  | 36 | 39 |    | 43  |    | G  | G  | G  | G   |    | 52 |    | 42 | 39 | 36 | 33 | G  |    |
| 28     | G  | 28 |    | G  | G  |    | G  | G  | G  | G  |    | G   | G  | G  | G  | G  |     | 38 | 30 | 38 | 28 |    |    | 32 | 25 |    |
| 29     | G  | 26 |    | G  | G  | G  | G  | 29 | 41 | 38 |    |     |    |    | G  | G  | G   |    | G  | G  | 33 | 28 | 36 | 24 | 25 |    |
| 30     | G  |    |    | G  |    | G  | G  | 30 |    | G  |    |     |    | G  | G  | G  |     | 42 | 40 | 33 | 32 | G  | G  |    |    |    |
| 31     |    |    |    |    |    |    |    |    |    |    |    |     |    |    |    |    |     |    |    |    |    |    |    |    |    |    |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11  | 12 | 13 | 14 | 15 | 16  | 17 | 18 | 19 | 20 | 21 | 22 | 23 |    |    |
| CNT    | 27 | 21 | 22 | 22 | 19 | 17 | 29 | 28 | 27 | 23 | 18 | 19  | 20 | 20 | 26 | 27 | 30  | 30 | 30 | 30 | 28 | 26 | 24 | 27 |    |    |
| MED    | 26 | G  | G  | G  | G  | G  | G  | 30 | 36 | G  | 20 | G   | G  | G  | G  | G  | G   | 31 | 34 | 34 | 36 | 35 | 13 | G  |    |    |
| U Q    | 33 | 28 | 27 | G  | G  | G  | 25 | 35 | 42 | 43 | 51 | 52  | 22 | 22 | 43 | 46 | 39  | 42 | 38 | 44 | 43 | 41 | 34 | 32 |    |    |
| L Q    | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G   | G  | G  | G  | G  | G   | G  | G  | G  | 28 | G  | 24 | G  | G  |    |

## HOURLY VALUES OF fmin AT Yamagawa

SEP. 2005

LAT. 31°12.1'N LON. 130°37.1'E SWEEP 1.0MHZ TO 30.0MHZ AUTOMATIC SCALING

| H<br>D | 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      | 17 | 20 | 21 | 20 | 21 |    | 15 | 17 | 20 | 24 | 29 | 34 |    | 30 | 28 | 24 | 22 | 20 | 17 | 18 | 17 | 18 | 23 | 15 |  |
| 2      | 21 | 18 | 18 | 17 |    |    | 23 | 16 | 16 | 21 | 18 |    |    |    | 55 | 53 | 20 | 28 | 27 | 15 | 15 |    | 21 | 23 |  |
| 3      | 16 | 16 | 18 |    | 18 |    | 18 |    | 28 |    |    | 56 | 26 |    | 20 | 48 | 42 | 32 | 18 | 17 | 17 |    | 20 | 21 |  |
| 4      | 20 | 23 | 21 |    | 18 |    | 17 | 20 | 20 | 28 | 30 | 33 | 48 |    | 29 | 26 | 21 | 16 | 17 | 15 | 18 | 17 | 16 | 17 |  |
| 5      | 16 | 17 | 18 | 18 | 17 | 20 | 15 | 15 | 18 | 27 |    | 29 | 29 |    | 34 | 46 | 44 | 15 | 16 | 18 | 16 | 17 | 20 | 17 |  |
| 6      | 17 | 17 | 15 |    |    |    |    | 15 | 20 | 27 | 21 | 30 |    | 32 | 30 | 29 | 28 | 34 | 17 | 17 | 18 | 20 | 15 | 16 |  |
| 7      | 15 |    |    |    | 18 |    | 20 | 28 |    |    |    |    |    |    | 34 |    | 44 | 18 | 17 | 15 | 20 | 18 |    | 18 |  |
| 8      | 17 | 17 | 17 |    | 21 | 18 | 17 | 28 | 45 |    |    |    |    | 48 | 39 | 29 | 24 | 18 | 17 | 17 | 18 | 18 | 28 | 23 |  |
| 9      | 17 | 22 | 21 | 18 | 18 | 21 | 18 | 36 | 46 | 52 |    |    |    | 35 |    |    | 18 | 17 | 16 | 18 | 20 | 18 | 21 | 15 |  |
| 10     | 17 | 17 | 15 | 20 | 15 | 17 | 21 | 46 |    |    |    |    |    |    |    |    | 66 | 21 | 18 | 15 | 15 | 15 | 17 | 17 |  |
| 11     | 21 |    | 17 | 18 | 20 | 18 | 21 |    | 62 |    |    |    |    |    | 28 | 29 | 23 | 16 | 15 | 20 | 17 | 18 | 16 | 17 |  |
| 12     | 17 | 18 | 16 | 16 |    | 15 | 17 | 18 | 27 | 30 | 34 | 44 | 38 | 44 |    | 32 |    | 27 | 32 | 17 | 17 | 15 | 20 | 16 |  |
| 13     | 20 |    |    | 16 |    | 16 | 22 | 24 | 37 |    |    | 45 | 35 | 40 |    | 28 | 45 | 22 | 16 | 17 |    | 16 |    | 22 |  |
| 14     | 23 | 17 | 22 | 17 |    |    | 17 | 23 | 30 |    |    |    | 46 |    | 50 | 58 | 23 | 18 | 17 | 16 | 18 | 18 |    | 24 |  |
| 15     | 23 | 20 |    | 16 | 18 | 17 | 17 | 20 | 38 | 44 | 28 |    | 36 | 50 | 46 |    | 38 | 23 | 21 | 17 | 18 | 15 |    | 18 |  |
| 16     | 21 |    |    |    | 21 | 18 | 20 | 20 | 18 | 45 | 50 |    |    | 55 | 52 | 44 | 42 | 23 | 16 | 16 | 15 | 17 | 26 | 16 |  |
| 17     |    | 30 | 20 | 20 | 18 |    | 21 | 18 | 29 | 27 | 46 |    |    | 54 | 64 | 50 | 44 | 17 | 17 | 15 | 18 | 17 | 17 | 23 |  |
| 18     | 21 | 18 | 20 | 23 |    | 18 | 16 | 17 | 18 | 22 |    | 60 | 62 | 60 | 59 | 44 | 41 | 22 | 15 | 18 | 17 | 17 | 17 | 17 |  |
| 19     | 18 |    | 18 | 18 | 18 | 18 | 17 | 17 | 22 | 50 | 49 | 50 | 62 |    | 44 | 46 | 21 | 28 | 18 | 20 | 18 | 18 | 22 |    |  |
| 20     | 28 |    | 22 |    |    |    |    | 17 | 20 | 48 | 24 |    |    |    | 50 | 46 | 38 | 21 | 20 | 18 | 17 | 17 | 17 | 16 |  |
| 21     | 18 |    | 18 | 20 | 17 |    | 17 | 16 | 23 | 23 | 26 | 52 | 50 | 52 | 48 | 18 | 17 | 21 | 22 | 18 | 22 | 17 | 17 | 20 |  |
| 22     | 21 | 18 | 18 | 17 | 18 | 20 | 20 | 23 | 18 | 24 | 45 | 50 | 24 | 45 | 20 | 48 | 41 | 26 | 27 | 17 | 18 | 20 |    | 18 |  |
| 23     | 16 | 17 | 21 | 20 |    |    | 17 | 17 | 26 | 44 |    | 52 | 32 | 49 | 60 | 44 | 21 | 20 | 18 | 17 | 18 | 21 | 18 | 20 |  |
| 24     |    |    |    | 21 | 18 | 21 | 17 | 18 | 22 | 21 |    | 35 | 49 |    |    | 23 | 36 | 18 | 23 | 18 | 16 | 18 | 20 | 18 |  |
| 25     |    | 17 |    | 15 |    | 18 | 16 | 20 | 28 | 22 |    |    | 54 | 54 | 49 | 22 | 18 | 28 | 17 | 16 | 18 | 17 | 20 |    |  |
| 26     | 20 | 17 | 18 |    |    |    | 18 | 23 | 20 | 29 | 33 | 33 | 34 | 36 |    | 27 | 21 | 16 | 21 | 20 | 16 | 17 | 15 | 18 |  |
| 27     | 17 | 18 | 18 | 18 | 17 | 17 | 18 | 27 | 21 | 24 | 53 | 27 | 53 | 44 | 46 | 44 | 17 | 21 | 21 | 16 | 17 | 17 | 17 | 20 |  |
| 28     | 20 | 17 |    | 17 | 18 |    | 17 | 24 | 18 | 22 | 23 | 27 |    | 49 |    | 22 | 22 | 21 | 18 | 17 |    |    | 17 | 17 |  |
| 29     | 20 | 17 | 20 | 18 | 18 | 17 | 18 | 16 | 17 | 18 | 20 |    | 18 | 20 | 20 | 44 | 34 | 17 | 17 | 22 | 21 | 17 | 21 | 18 |  |
| 30     | 20 |    |    | 15 |    | 18 | 18 | 16 |    | 39 | 29 | 47 |    | 44 | 26 | 18 | 20 | 18 | 16 | 17 | 20 |    |    |    |  |
| 31     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |
| CNT    | 27 | 21 | 22 | 22 | 19 | 17 | 28 | 28 | 27 | 23 | 17 | 17 | 17 | 19 | 23 | 26 | 29 | 30 | 30 | 30 | 28 | 26 | 24 | 27 |  |
| MED    | 20 | 17 | 18 | 18 | 18 | 18 | 18 | 19 | 22 | 27 | 29 | 44 | 38 | 45 | 44 | 38 | 24 | 21 | 17 | 17 | 18 | 17 | 19 | 18 |  |
| U Q    | 21 | 19 | 21 | 20 | 18 | 19 | 20 | 23 | 29 | 44 | 45 | 51 | 51 | 52 | 50 | 46 | 41 | 23 | 21 | 18 | 18 | 18 | 21 | 20 |  |
| L Q    | 17 | 17 | 18 | 17 | 18 | 17 | 17 | 17 | 18 | 22 | 23 | 31 | 30 | 36 | 28 | 26 | 21 | 18 | 17 | 16 | 17 | 17 | 17 | 17 |  |

HOURLY VALUES OF foF2 AT Okinawa

SEP. 2005

LAT. 26°40.5'N LON. 128°09.2'E SWEEP 1.0MHz to 30.0MHz AUTOMATIC SCALING

| D <sup>H</sup> | 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              | 40 | 32 | 34 | 30 | 30 | 34 |    | 55 | A  | A  | 72  | 76 |     | A   | 68  | 76  | 69  | 62  | 61  | 54  | 51 | 52 | 50 | 52 |    |
| 2              | 34 |    | 53 |    |    |    | 29 | 53 | 67 | 56 |     | 66 | 76  | 86  | 107 | 101 | 88  | 82  | 83  |     | 52 | A  | 47 | 42 |    |
| 3              | 44 | 42 | 32 | 32 | 37 |    |    | 54 | 50 | 54 | 67  | 87 | 88  | 87  | 88  | 90  | 70  | 68  | 92  | 65  | 42 |    | 42 | 45 |    |
| 4              | 45 | 34 | 31 | 30 | 28 |    | 29 | 52 | 68 | 92 | 69  | 61 | A   | 77  | 76  | 72  |     | 75  | 82  | 98  | 71 |    |    | 36 |    |
| 5              | 32 |    |    | 31 | 29 | 30 | 34 | 56 | 51 | A  | 64  | 67 | 68  | 67  | 68  | 74  | 77  | 87  | 92  | 91  | A  |    | A  | A  |    |
| 6              | 38 | A  | 29 | 30 | 28 | 26 | 36 | 56 | 61 | 54 | 57  | A  |     | 55  | 65  | 75  | 70  | 66  | 76  | 71  | 66 | 61 | 49 | A  | A  |
| 7              | 31 | 30 | 31 | 28 | 30 | 29 | 37 | 62 | 51 |    | 58  |    |     | 62  | 65  | 65  | 73  | 85  | 88  | 86  | 61 | A  |    | 32 |    |
| 8              | 30 |    | A  |    |    |    | 30 | 55 | 69 | 60 |     |    | 73  | 97  | 116 | 131 | 145 | 148 | 127 | 110 | 88 | 78 | 73 | 62 |    |
| 9              | 52 | 50 | 46 | 36 | 34 | 34 | 34 | 60 | 65 | 72 | 61  | 62 | B   | 66  | B   | B   |     | 68  | 87  | 87  | 66 | A  | A  | 43 | 44 |
| 10             | 34 | 36 |    |    | 29 | 32 | 41 | 65 | 62 | 66 | A   |    |     | 75  | 77  | 85  | 82  | 85  | 91  | 78  | 83 | A  | A  | A  |    |
| 11             | 28 |    | 30 |    |    | 30 | 35 |    | B  | A  |     | A  | A   |     | 88  | 85  | 86  | 78  | 88  | 88  | 50 | A  | A  | 48 |    |
| 12             | 45 | A  | A  |    | A  | C  | C  | C  | C  | C  | C   | C  |     | 62  | 70  | 82  | 94  | 100 | 98  | 66  | 63 | 54 |    | A  | 48 |
| 13             | A  | A  | A  | A  |    | 30 | A  |    |    | 47 | 90  | 56 |     | 100 | 74  | A   | 61  | 81  | 90  | 76  | A  | A  | 51 | A  | 61 |
| 14             | 52 | 51 | 49 | 34 |    |    | 26 | 57 | 68 | 62 |     | 60 | 71  | 90  | 91  | 93  | 90  | 81  | 90  | 88  | 64 | 38 | 43 |    |    |
| 15             | 42 | 43 | A  |    | 37 | 32 | 34 | 40 | 65 | 72 | 68  | 63 | 85  | 106 | 120 | 118 | 104 | 95  | 82  | 77  | 78 | 75 | 58 | 58 | 62 |
| 16             | 54 | 44 |    | 40 | 41 | 43 | 38 | 58 | 75 | 97 | 64  | B  |     | 71  | 96  | 97  | 94  | 98  | 88  | 86  | 88 | 76 | 52 | 53 | 52 |
| 17             | 50 | 52 | 43 | 36 | 34 | 32 | 37 | 77 | 82 | 75 | 76  | 87 | 88  | 85  | 84  | 92  | 78  | 85  | 98  | 88  |    | 65 |    |    |    |
| 18             | 44 | 44 |    | 34 | 40 | 44 | 44 | 75 | 94 | 75 | 67  | 80 | 108 | 128 | 126 | 126 | 122 | 88  | 80  | 54  |    | 54 | 52 | 47 |    |
| 19             | 36 |    | 30 | 30 | 34 |    | 32 | 66 | 90 | 83 | 66  | 71 | 90  | 90  | 88  | 86  | 85  | 81  | 82  | 63  | 50 |    | 41 | 46 |    |
| 20             | 44 | 42 |    | 36 | 30 | 34 | 37 | 75 | 88 | 74 | 71  | 87 | 91  | 101 | 105 | 97  | 90  | 88  | 81  | 63  | 50 | 40 | 41 | A  |    |
| 21             | A  | 41 | 39 | 36 | 30 | 30 | 36 | 72 | 76 | 69 | 72  | 98 | 110 | 118 | 118 | 111 | 90  | 76  | 70  | 66  | 43 | 43 | 44 | 44 |    |
| 22             | 44 | 44 | 38 | 32 | 30 | 30 | 40 | 62 | 70 | 77 | 65  | 74 | 77  | 81  | 85  | 75  | 76  | 78  | 72  | 64  | 51 | 51 | 53 | 44 |    |
| 23             | 34 | 31 | 30 |    | 32 | 28 | 36 | 60 | 68 | 66 | 70  | 83 | 111 | 124 | 130 | 124 | 111 | 107 | 85  | 82  | 59 | 37 | 28 |    |    |
| 24             | 31 | 34 | 31 | 31 | 30 | 32 | 34 | 60 | 65 | 68 | 71  | 71 | 87  | 98  | 101 | 112 | 111 | 124 | 100 | 81  | 62 |    | 31 | 34 |    |
| 25             | 30 | 31 | 36 | 34 | 31 |    | 32 | 55 | 56 | 68 | 76  | 93 | 101 | 105 | 88  | 97  | 106 | 110 | 109 | 102 | 64 | A  | A  | 31 |    |
| 26             |    | 37 | 50 | 22 |    |    | 30 | 28 | 66 | 80 | 75  | 76 | 94  | 104 | 105 | 102 | 118 | 131 | 108 | 64  | 50 | 37 | A  | A  |    |
| 27             | 44 | 53 |    |    | 36 | 34 | 32 | 57 | 70 | 81 | 74  | 84 | 82  | 90  | 106 | 118 | 111 | 112 | 86  | 42  |    | 36 | 37 | 41 |    |
| 28             | 43 |    | 41 | 29 |    |    | 30 |    | 80 | 75 | 66  | 72 | 88  | 106 | 118 | 121 | 121 | 118 | 86  | 36  | A  |    | 36 |    |    |
| 29             | 40 | 34 | 32 | 31 | 30 | 28 | 32 | 52 | 60 | 67 | 78  | 96 | 111 | 110 | 104 | 100 | 101 |     | 66  | 46  | 31 | 44 | 47 | 43 |    |
| 30             | 43 | 38 | 34 |    |    |    | 28 | 60 | 73 | 85 | 106 | 86 | 102 | 110 | 101 | 80  | 77  | 81  | 74  | 54  | 30 | 28 | 34 | 34 |    |
| 31             |    |    |    |    |    |    |    |    |    |    |     |    |     |     |     |     |     |     |     |     |    |    |    |    |    |
|                | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10  | 11 | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20 | 21 | 22 | 23 |    |
| CNT            | 27 | 21 | 20 | 21 | 22 | 18 | 26 | 27 | 27 | 25 | 23  | 22 | 25  | 28  | 28  | 29  | 29  | 29  | 30  | 28  | 22 | 18 | 19 | 21 |    |
| MED            | 42 | 41 | 34 | 32 | 30 | 32 | 34 | 58 | 68 | 69 | 69  | 78 | 88  | 90  | 94  | 94  | 90  | 87  | 84  | 66  | 53 | 46 | 43 | 44 |    |
| U Q            | 44 | 44 | 42 | 36 | 34 | 34 | 37 | 65 | 76 | 78 | 74  | 87 | 101 | 105 | 106 | 107 | 108 | 102 | 90  | 88  | 64 | 52 | 52 | 50 |    |
| L Q            | 34 | 34 | 31 | 30 | 30 | 30 | 30 | 55 | 62 | 64 | 64  | 71 | 74  | 77  | 84  | 78  | 77  | 79  | 76  | 63  | 50 | 38 | 37 | 38 |    |



HOURLY VALUES OF fEs AT Okinawa

SEP. 2005

LAT. 26°40.5'N LON. 128°09.2'E SWEEP 1.0MHZ TO 30.0MHZ AUTOMATIC SCALING

| H<br>D | 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      | 36 | 26 | G  | G  | G  | G  | 26 | 79 | 114 | 51  | 62 | 51  | 82 | 71 | 48 | G   | 46 | 48 | 40 | 32 | 47  | 28 | 32  | G  |
| 2      | G  | 24 | 29 | G  | B  | B  | 30 | 35 | 38  | G   | G  | G   | G  | G  | G  | 50  | G  | 36 | G  | 29 | 59  | 84 | 33  | 26 |
| 3      | 26 | G  | G  | G  | 26 | B  | G  | G  | 46  | 54  | 52 | G   | G  | G  | G  | G   | G  | 36 | 35 | 35 | 36  | 28 | G   | G  |
| 4      | G  | G  | G  | G  | G  | B  | G  | 35 | 57  | 52  | 63 | 84  | 78 | 68 | 61 | 42  | 89 | 60 | 36 | 37 | 30  | 29 | 26  | G  |
| 5      | 24 | 29 | 33 | 27 | G  | G  | 26 | 32 | 47  | 102 | G  | 66  | 65 | 50 | G  | 57  | G  | 42 | 33 | 28 | 60  | G  | 58  | 36 |
| 6      | 29 | 33 | 28 | G  | G  | G  | G  | 29 | G   | G   | 44 | 95  | 45 | 45 | 52 | 55  | 48 | G  | G  | 26 | 125 | 57 | 58  | 60 |
| 7      | 27 | 37 | G  | G  | G  | G  | G  | G  | G   | B   | G  | B   | 48 | 51 | 52 | 60  | 47 | 50 | 39 | 42 | 47  | 70 | 40  | 29 |
| 8      | G  | B  | 25 | B  | B  | G  | G  | 33 | 44  | 43  | G  | G   | 60 | 66 | 81 | 136 | 66 | 42 | 66 | 40 | 57  | G  | G   | 28 |
| 9      | 26 | 28 | 25 | G  | G  | G  | G  | G  | G   | G   | G  | G   | B  | G  | B  | B   | 43 | 44 | 36 | 29 | 60  | 58 | 25  | 36 |
| 10     | G  | 36 | 36 | 32 | 30 | 30 | 24 | 30 | 50  | 67  | 72 | 68  | G  | G  | 49 | G   | 55 | 69 | 85 | 89 | 85  | 84 | 71  | 48 |
| 11     | 26 | 39 | 25 | B  | B  | G  | G  | B  | B   | 78  | 67 | 144 | 72 | 55 | G  | 62  | 58 | 49 | 51 | 60 | 68  | 91 | 103 | 43 |
| 12     | 30 | 86 | 37 | 33 | 39 | C  | C  | C  | C   | C   | C  | C   | 56 | 60 | 74 | 74  | G  | 39 | 35 | 54 | 44  | 48 | 54  | 53 |
| 13     | 67 | 60 | 38 | 34 | 36 | 31 | 29 | 28 | G   | G   | 54 | 74  | 51 | 65 | 63 | 41  | 51 | 64 | 65 | 80 | 39  | 44 | 79  | 85 |
| 14     | 34 | 26 | G  | G  | B  | 24 | G  | 37 | 56  | G   | 44 | 50  | G  | 48 | 43 | 44  | G  | 36 | 28 | 43 | 40  | 33 | 32  | 47 |
| 15     | 25 | G  | 42 | 30 | G  | G  | G  | 36 | 49  | G   | G  | G   | G  | G  | G  | 53  | 46 | 45 | 30 | G  | 50  | 40 | 36  | 25 |
| 16     | 27 | G  | G  | G  | G  | G  | G  | 32 | 38  | 42  | G  | B   | G  | G  | G  | G   | 42 | 40 | 33 | 26 | G   | G  | 30  | G  |
| 17     | G  | G  | G  | G  | G  | G  | G  | G  | 37  | 43  | G  | 49  | 46 | G  | G  | G   | G  | G  | 36 | 39 | G   | 34 | 40  | 41 |
| 18     | 34 | 28 | 30 | G  | G  | G  | G  | 32 | 37  | G   | G  | G   | G  | G  | G  | 39  | G  | 91 | 58 | 54 | 58  | 43 | 36  | 28 |
| 19     | G  | G  | G  | G  | G  | G  | G  | 35 | 37  | 52  | 47 | G   | G  | G  | G  | G   | G  | 33 | G  | G  | G   | G  | G   | 36 |
| 20     | G  | 34 | G  | G  | G  | G  | G  | 29 | 39  | 48  | G  | G   | 48 | G  | 44 | G   | 51 | 70 | 56 | 58 | 41  | 32 | G   | 58 |
| 21     | 48 | G  | G  | G  | G  | G  | G  | G  | 35  | 40  | 50 | 42  | G  | G  | G  | G   | G  | 39 | 29 | 28 | 52  | G  | G   | G  |
| 22     | G  | G  | G  | G  | G  | G  | G  | G  | G   | G   | G  | G   | G  | G  | 51 | G   | G  | G  | G  | G  | G   | G  | G   | G  |
| 23     | G  | G  | G  | G  | G  | G  | G  | 36 | 45  | 47  | G  | G   | G  | G  | G  | G   | 38 | 34 | G  | 28 | 35  | 24 | G   | B  |
| 24     | G  | G  | G  | G  | G  | G  | G  | 29 | 39  | G   | G  | G   | 57 | 46 | 46 | G   | G  | 41 | 56 | 49 | 32  | 26 | 30  | 29 |
| 25     | 28 | G  | G  | G  | G  | G  | G  | 32 | 38  | 47  | 44 | G   | G  | G  | G  | G   | G  | 33 | 26 | 27 | 30  | 70 | 44  | 33 |
| 26     | 32 | 29 | 28 | G  | B  | B  | G  | G  | 41  | 50  | 54 | 47  | G  | G  | G  | 43  | 56 | 42 | 51 | 35 | G   | G  | 78  | 50 |
| 27     | 32 | 37 | 28 | G  | G  | G  | G  | 35 | 44  | 56  | G  | 59  | G  | G  | G  | G   | G  | 65 | 46 | 29 | 57  | G  | 30  | G  |
| 28     | 28 | 35 | G  | G  | G  | B  | G  | G  | G   | G   | G  | G   | G  | G  | G  | G   | G  | G  | 34 | 36 | 40  | 34 | 34  | G  |
| 29     | G  | G  | G  | G  | G  | G  | G  | 30 | G   | G   | G  | 49  | 51 | 56 | G  | 40  | 39 | G  | 44 | 44 | 26  | 29 | 39  | G  |
| 30     | 36 | G  | G  | G  | B  | B  | G  | 32 | 38  | 42  | G  | 46  | G  | G  | G  | G   | G  | 40 | 35 | 28 | G   | G  | G   | G  |
| 31     |    |    |    |    |    |    |    |    |     |     |    |     |    |    |    |     |    |    |    |    |     |    |     |    |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08  | 09  | 10 | 11  | 12 | 13 | 14 | 15  | 16 | 17 | 18 | 19 | 20  | 21 | 22  | 23 |
| CNT    | 30 | 29 | 30 | 28 | 24 | 23 | 29 | 27 | 28  | 28  | 28 | 27  | 29 | 30 | 29 | 29  | 30 | 29 | 30 | 29 | 30  | 28 | 29  | 29 |
| MED    | 26 | 26 | G  | G  | G  | G  | G  | 32 | 38  | 42  | G  | 42  | G  | G  | G  | G   | 20 | 41 | 36 | 35 | 40  | 32 | 33  | 29 |
| U Q    | 32 | 34 | 28 | G  | G  | G  | G  | 35 | 45  | 51  | 51 | 59  | 53 | 51 | 50 | 51  | 48 | 49 | 51 | 46 | 57  | 52 | 49  | 45 |
| L Q    | G  | G  | G  | G  | G  | G  | G  | G  | 18  | G   | G  | G   | G  | G  | G  | G   | G  | 35 | 29 | 28 | 30  | 12 | 13  | G  |

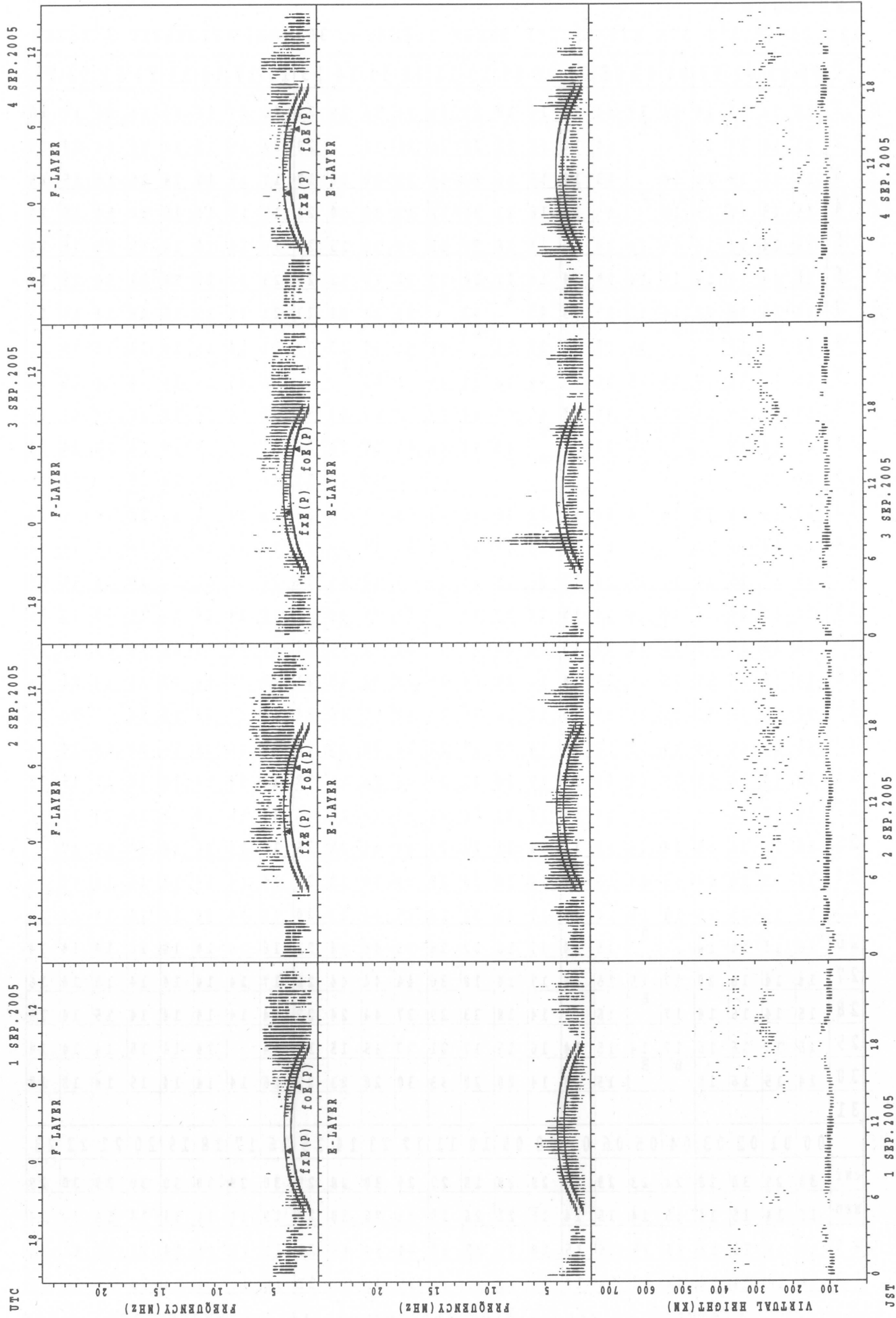
HOURLY VALUES OF fmin AT Okinawa

SEP. 2005

LAT. 26°40.5'N LON. 128°09.2'E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

| $\begin{matrix} H \\ D \end{matrix}$ | 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                                    | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 18 | 23 | 34 | 34 | 34 | 30 | 22 | 20 | 15 | 14 | 14 | 14 | 14 | 14 | 16 |
| 2                                    | 23 | 14 | 14 | 15 | B  | B  | 14 | 14 | 15 | 21 | 23 | 21 | 21 | 18 |    | 20 | 23 | 15 | 14 | 14 | 16 | 14 | 14 | 15 |
| 3                                    | 14 | 15 | 15 | 15 | 14 | B  | 15 | 14 | 15 | 16 | 27 | 46 | 22 | 20 | 20 | 17 | 17 | 15 | 16 | 14 | 14 | 14 | 15 | 15 |
| 4                                    | 15 | 15 | 15 | 15 | 15 | B  | 15 | 14 | 16 | 21 | 30 | 32 | 33 | 32 | 30 | 21 | 17 | 15 | 14 | 15 | 14 | 14 | 15 | 14 |
| 5                                    | 14 | 14 | 14 | 14 | 15 | 14 | 14 | 14 | 14 | 16 | 22 | 29 | 29 | 30 | 23 | 24 | 16 | 15 | 14 | 14 | 15 | 15 | 15 | 14 |
| 6                                    | 16 | 14 | 14 | 14 | 15 | 14 | 15 | 14 | 14 | 17 | 14 | 27 | 32 | 18 | 32 | 29 | 23 | 17 | 22 | 14 | 14 | 14 | 14 | 14 |
| 7                                    | 14 | 15 | 15 | 14 | 14 | 15 | 15 | 23 | 40 | B  |    | B  |    |    |    |    |    |    |    |    |    |    |    |    |
| 8                                    | 15 | B  | 15 | B  | B  | 15 | 15 | 15 | 27 | 32 | B  | 48 | 40 | 39 | 33 | 29 | 21 | 14 | 14 | 14 | 14 | 14 | 15 | 15 |
| 9                                    | 15 | 14 | 15 | 14 | 14 | 15 | 15 | 30 | 34 | 32 | 36 | 44 | B  | 53 | B  | B  | 26 | 28 | 14 | 15 | 14 | 14 | 15 | 14 |
| 10                                   | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 23 | 40 | 45 | 44 | 54 | 57 | 60 | 43 | 55 | 33 | 18 | 14 | 14 | 14 | 14 | 14 | 14 |
| 11                                   | 15 | 14 | 15 | B  | B  | 14 | 14 | B  | B  | 44 | 42 | 46 | 45 | 36 | 30 | 26 | 21 | 14 | 15 | 14 | 14 | 14 | 14 | 14 |
| 12                                   | 14 | 14 | 15 | 14 | 14 | C  | C  | C  | C  | C  | C  | C  |    |    |    |    |    |    |    |    |    |    |    |    |
| 13                                   | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 15 | 22 | 38 | 38 | 34 | 34 | 35 | 36 | 28 | 22 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 14                                   | 14 | 14 | 15 | 15 | B  | 14 | 17 | 21 | 28 | 42 | 38 | 38 | 53 | 36 | 29 | 22 | 23 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15                                   | 15 | 17 | 15 | 14 | 14 | 15 | 16 | 14 | 26 | 18 | 23 | 55 | 53 | 50 | 44 | 34 | 23 | 14 | 21 | 14 | 14 | 14 | 15 | 14 |
| 16                                   | 14 | 14 | 24 | 16 | 14 | 14 | 14 | 15 | 14 | 21 | 30 | B  | 49 | 46 | 44 | 39 | 18 | 14 | 14 | 14 | 15 | 15 | 14 | 14 |
| 17                                   | 15 | 14 | 15 | 15 | 18 | 15 | 15 | 15 | 18 | 21 | 27 | 33 | 30 | 32 | 45 | 23 | 26 | 15 | 15 | 14 | 14 | 15 | 14 | 14 |
| 18                                   | 14 | 15 | 15 | 15 | 15 | 14 | 15 | 14 | 16 | 26 | 24 | 29 | 29 | 32 | 45 | 21 | 20 | 14 | 14 | 14 | 14 | 14 | 14 | 15 |
| 19                                   | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 14 | 17 | 20 | 28 | 28 | 52 | 57 | 46 | 34 | 14 | 14 | 14 | 14 | 14 |    | 20 | 15 |
| 20                                   | 15 | 16 | 15 | 14 | 15 | 15 | 15 | 14 | 14 | 22 | 23 | 27 | 26 | 48 | 23 | 22 | 20 | 16 | 14 | 14 | 14 | 14 | 14 | 14 |
| 21                                   | 14 | 14 | 15 | 15 | 15 | 14 | 14 | 14 | 17 | 20 | 23 | 23 | 26 | 26 | 21 | 18 | 14 | 14 | 14 | 14 | 14 | 15 | 15 | 15 |
| 22                                   | 16 | 15 | 16 | 14 | 15 | 15 | 14 | 15 | 14 | 21 | 20 | 22 | 49 | 44 | 15 | 45 | 14 | 16 | 14 | 14 | 14 | 15 | 15 | 15 |
| 23                                   | 16 | 15 | 14 | 15 | 14 | 14 | 15 | 17 | 14 | 21 | 21 | 22 | 44 | 44 | 28 | 26 | 16 | 14 | 14 | 14 | 14 | 15 | 17 | B  |
| 24                                   | 16 | 15 | 14 | 14 | 15 | 14 | 15 | 14 | 14 | 18 | 28 | 29 | 29 | 30 | 18 | 22 | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 25                                   | 15 | 15 | 15 | 15 | 15 | 16 | 14 | 15 | 17 | 21 | 32 | 22 | 23 | 44 | 22 | 20 | 15 | 14 | 14 | 14 | 14 | 15 | 14 | 14 |
| 26                                   | 14 | 14 | 14 | 14 | B  | B  | 15 | 14 | 17 | 16 | 22 | 24 | 33 | 45 | 24 | 23 | 16 | 16 | 14 | 14 | 16 | 14 | 14 | 14 |
| 27                                   | 14 | 14 | 16 | 20 | 17 | 15 | 16 | 16 | 17 | 14 | 18 | 30 | 44 | 44 | 44 | 22 | 17 | 14 | 14 | 14 | 14 | 18 | 14 | 16 |
| 28                                   | 15 | 14 | 16 | 14 | 17 | B  | 16 |    | 14 | 18 | 33 | 29 | 27 | 44 | 24 | 22 | 14 | 14 | 14 | 14 | 14 | 15 | 14 | 15 |
| 29                                   | 15 | 15 | 16 | 16 | 17 | 14 | 15 | 14 | 16 | 15 | 17 | 21 | 20 | 15 | 15 | 14 | 14 |    | 14 | 14 | 15 | 14 | 14 | 14 |
| 30                                   | 14 | 15 | 16 | 15 | B  | B  | 15 | 14 | 14 | 20 | 20 | 33 | 30 | 28 | 23 | 22 | 16 | 14 | 14 | 14 | 15 | 14 | 18 | 15 |
| 31                                   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                                      | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| CNT                                  | 30 | 29 | 30 | 28 | 24 | 23 | 29 | 27 | 28 | 28 | 28 | 27 | 29 | 30 | 28 | 29 | 30 | 29 | 30 | 30 | 30 | 29 | 30 | 29 |
| MEP                                  | 15 | 14 | 15 | 14 | 15 | 14 | 15 | 14 | 16 | 21 | 26 | 29 | 33 | 36 | 30 | 23 | 19 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| U Q                                  | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 24 | 32 | 38 | 44 | 44 | 43 | 29 | 23 | 15 | 14 | 14 | 14 | 15 | 15 | 15 |
| L Q                                  | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 18 | 22 | 24 | 28 | 30 | 23 | 21 | 16 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |

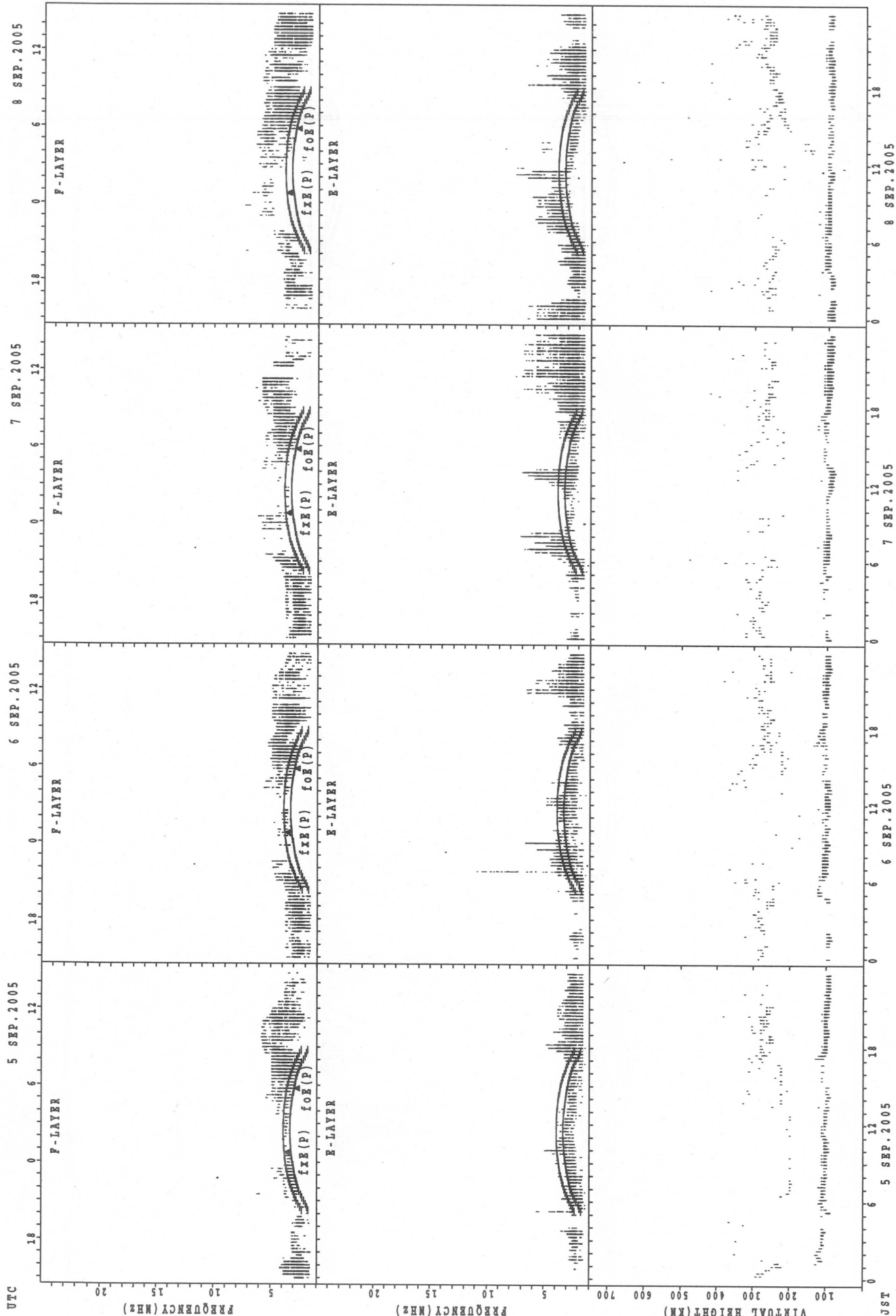
SUMMARY PLOTS AT Wakkanai



fxe(p); PREDICTED VALUE FOR fxe  
foE(p); PREDICTED VALUE FOR foE

JST

SUMMARY PLOTS AT Wakkanai

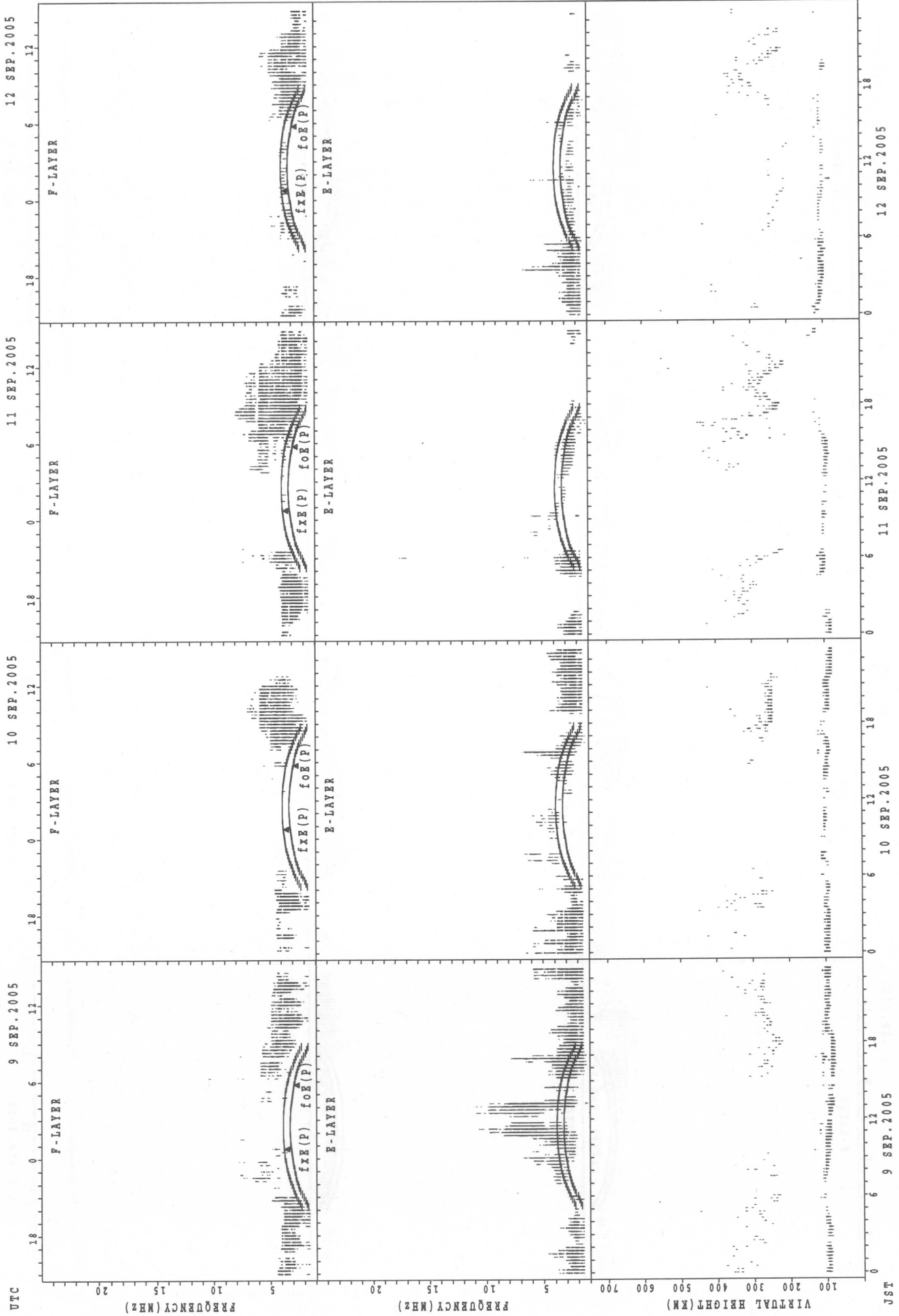


f2x(p); PREDICTED VALUE FOR f2x  
 f2o(p); PREDICTED VALUE FOR f2o

JST

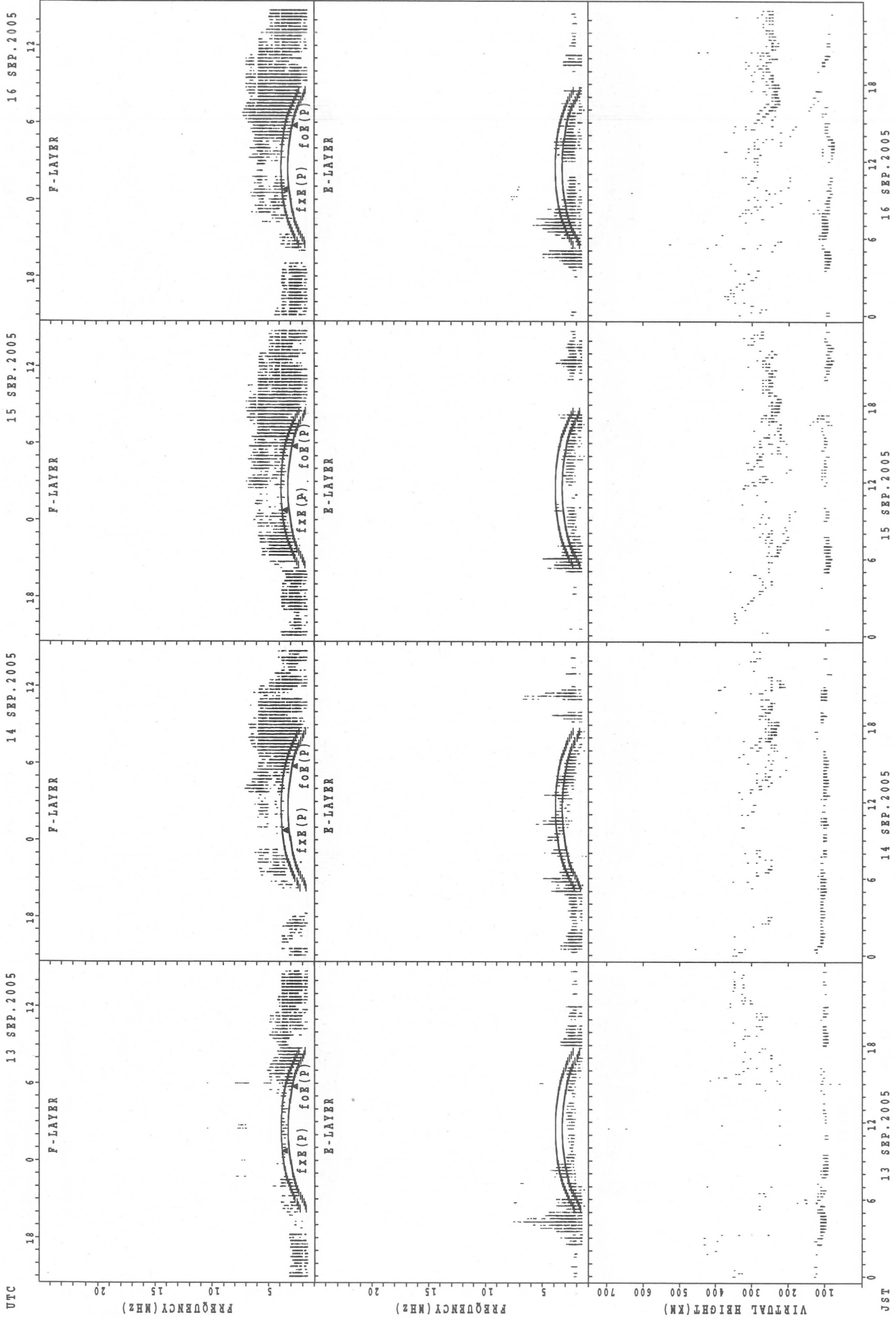


SUMMARY PLOTS AT Wakkanai



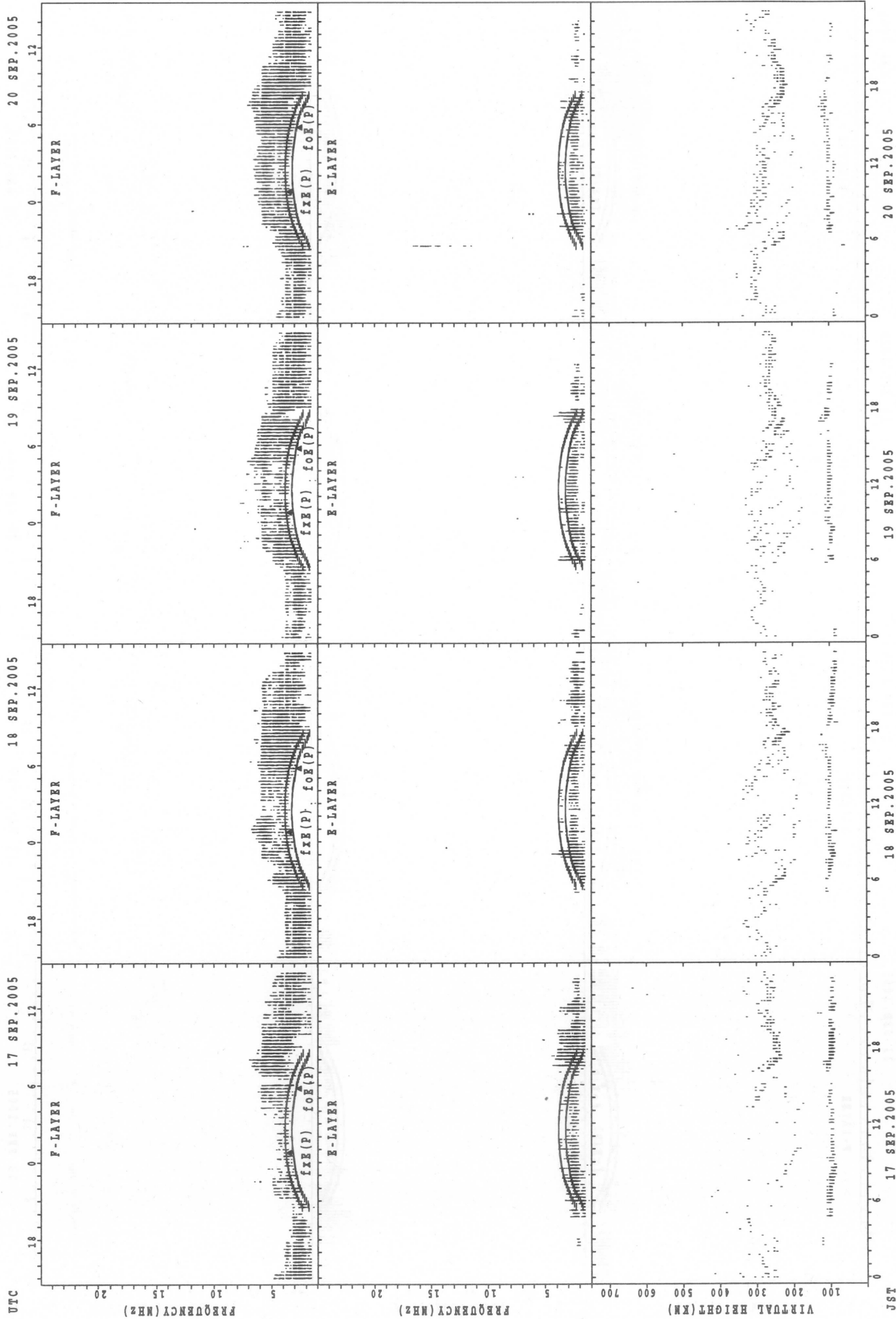
fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



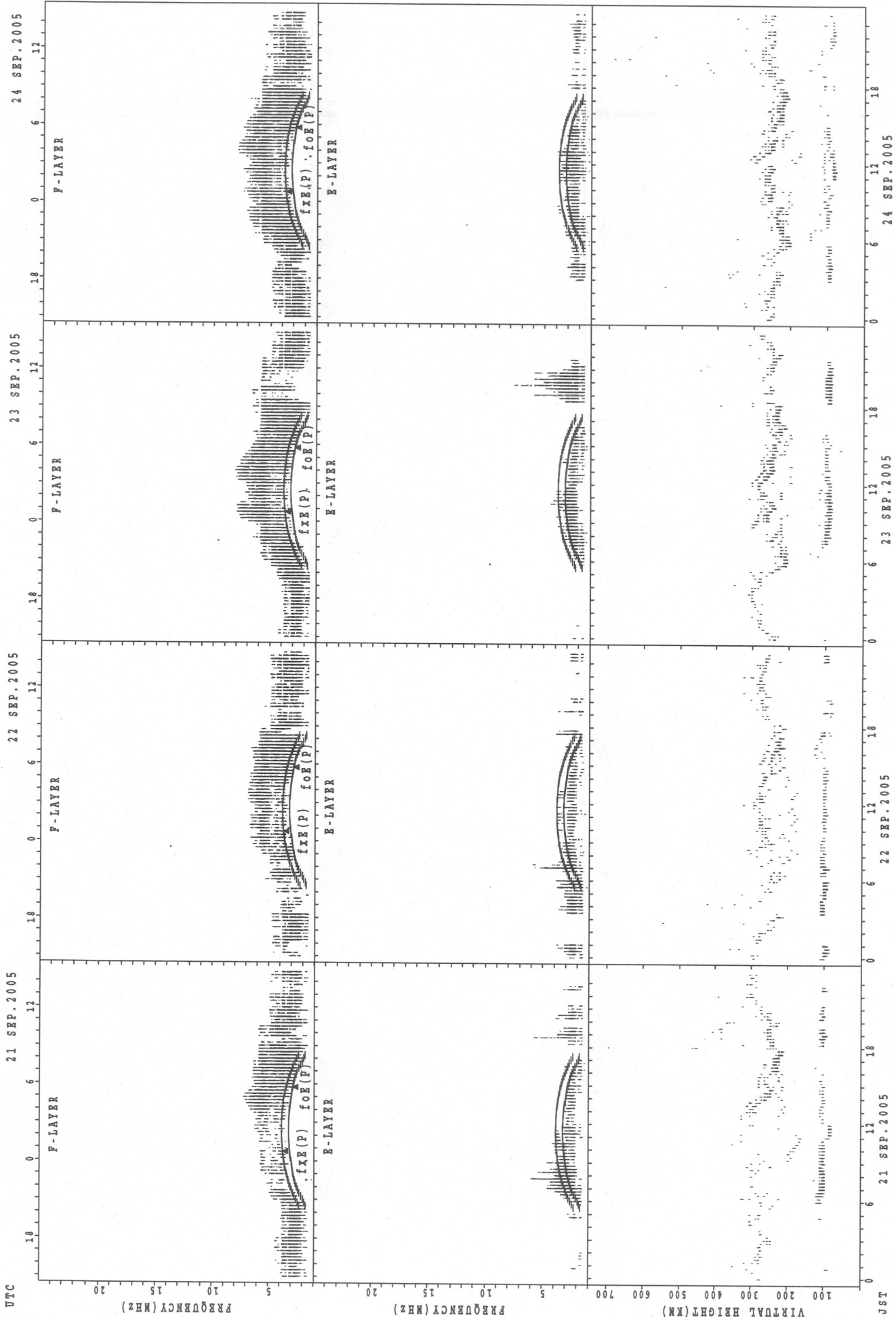
fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

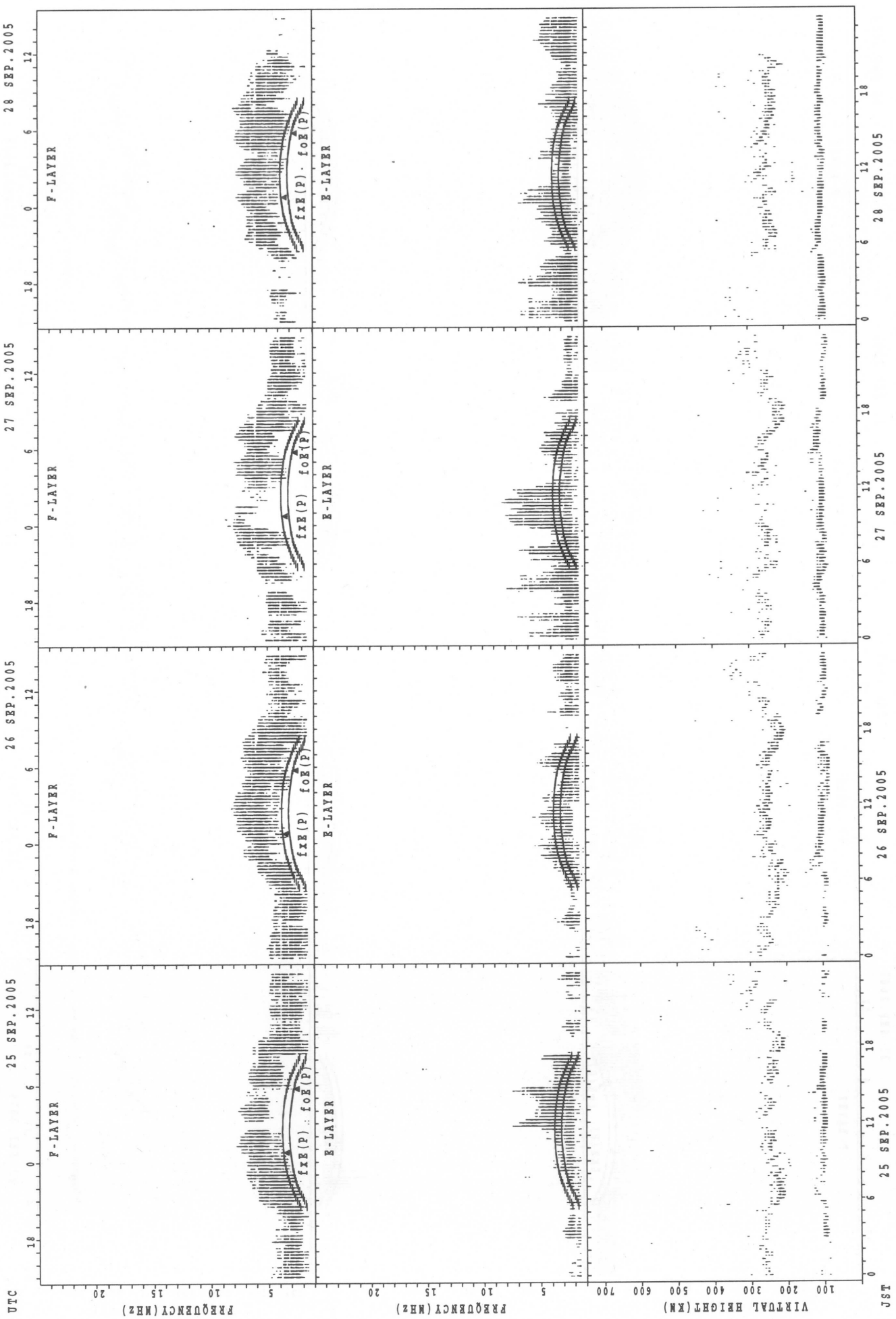
SUMMARY PLOTS AT Wakkanai



fxe(p); PREDICTED VALUE FOR fxe  
foE(p); PREDICTED VALUE FOR foE

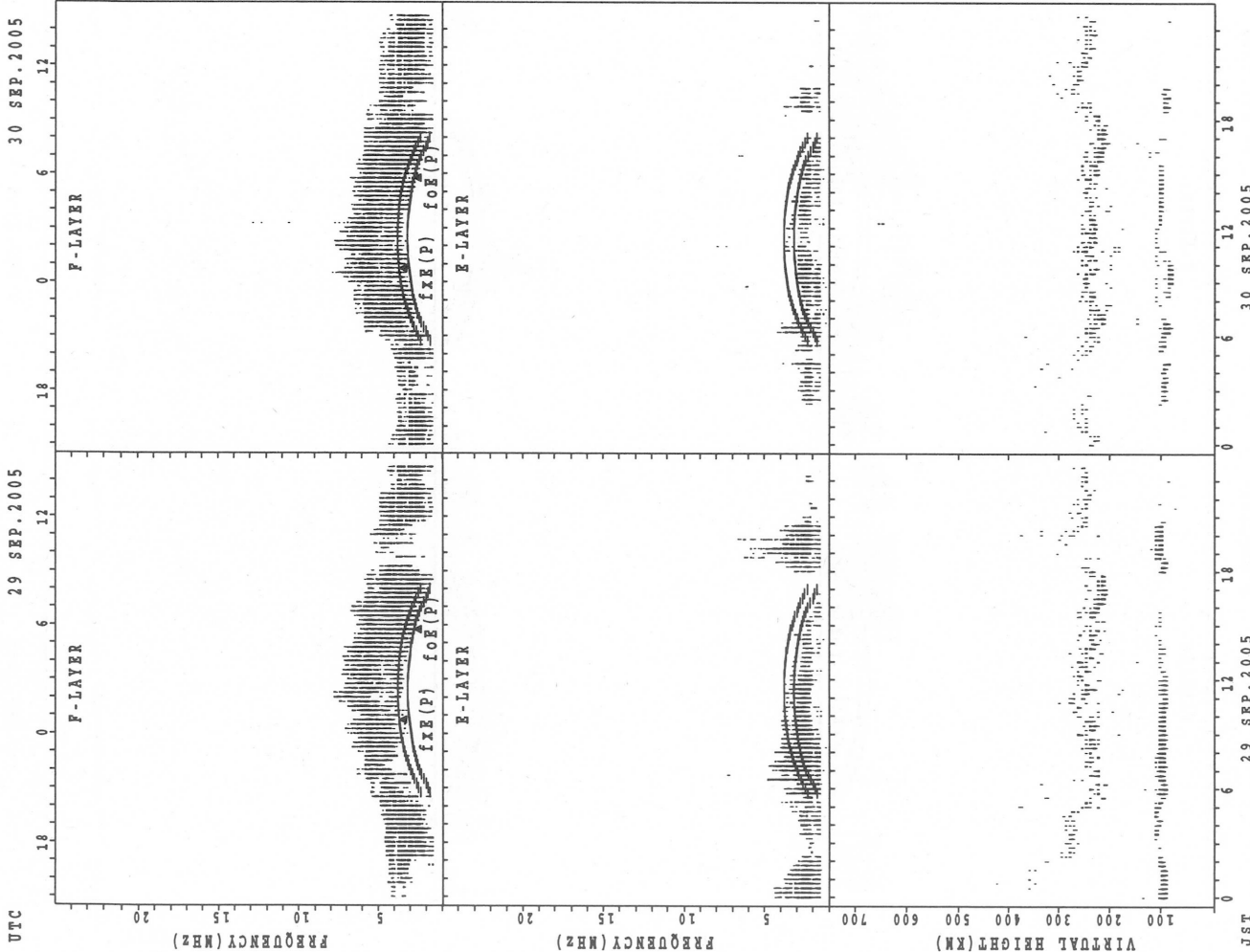


SUMMARY PLOTS AT Wakkanai



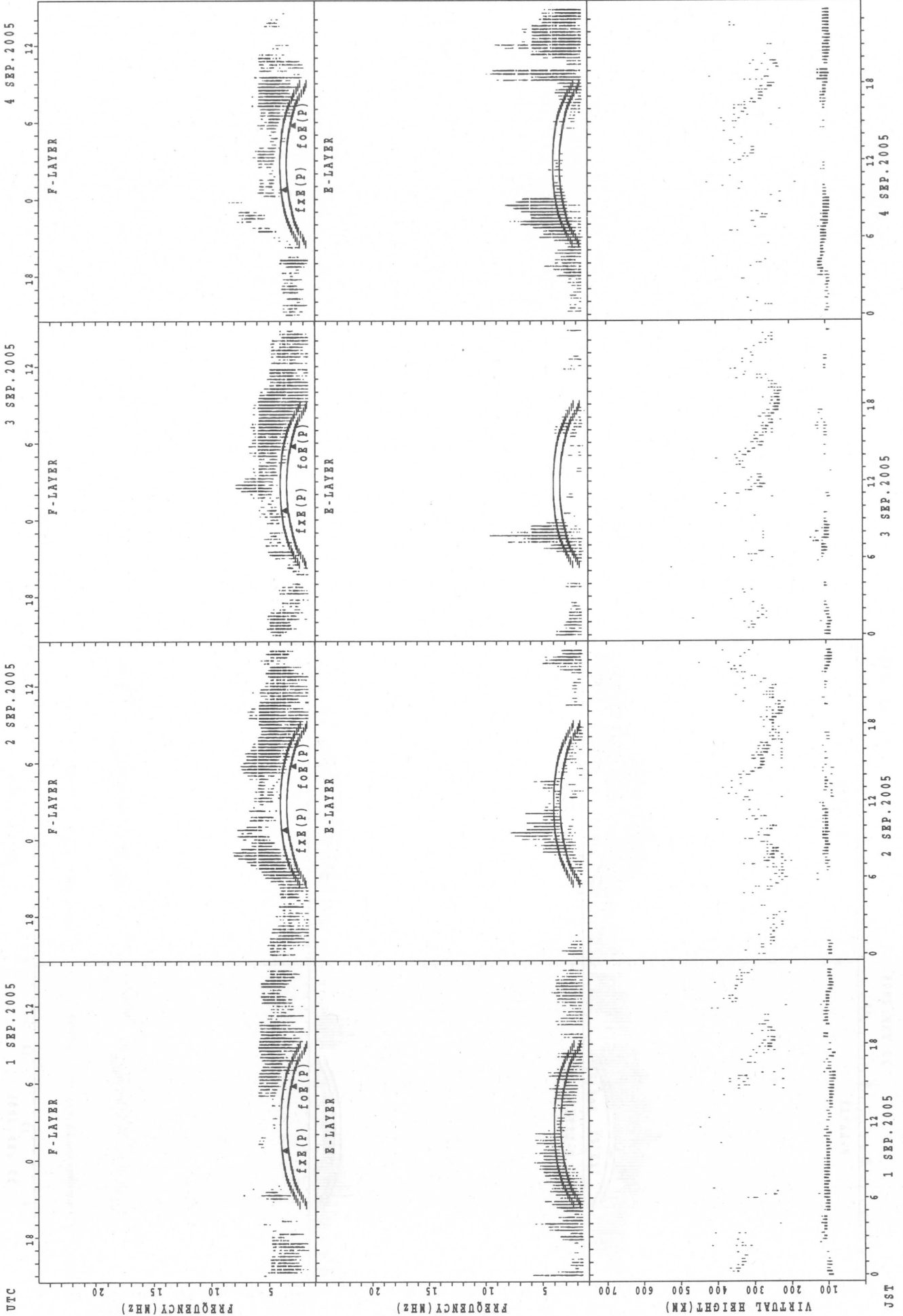
fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



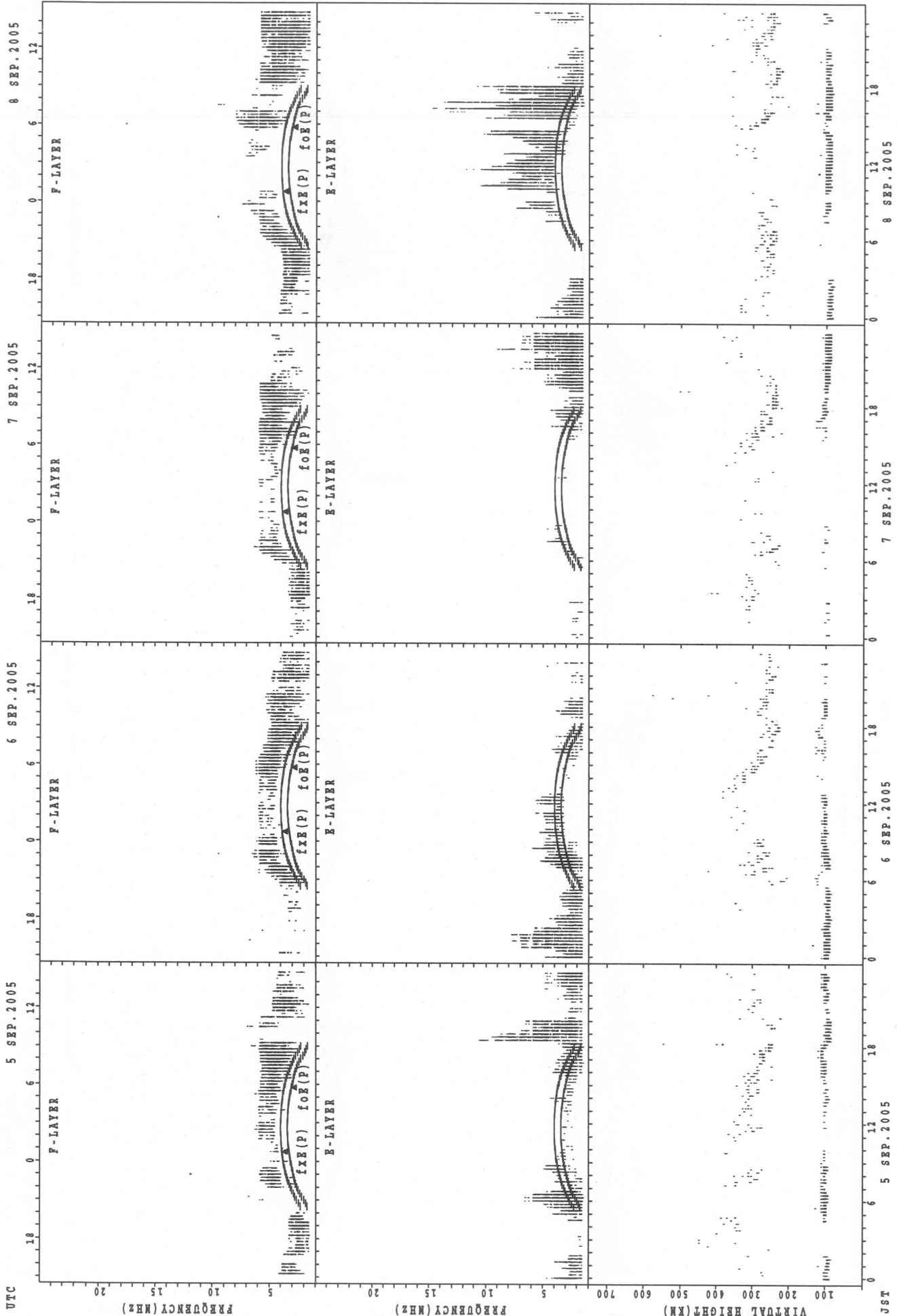
fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

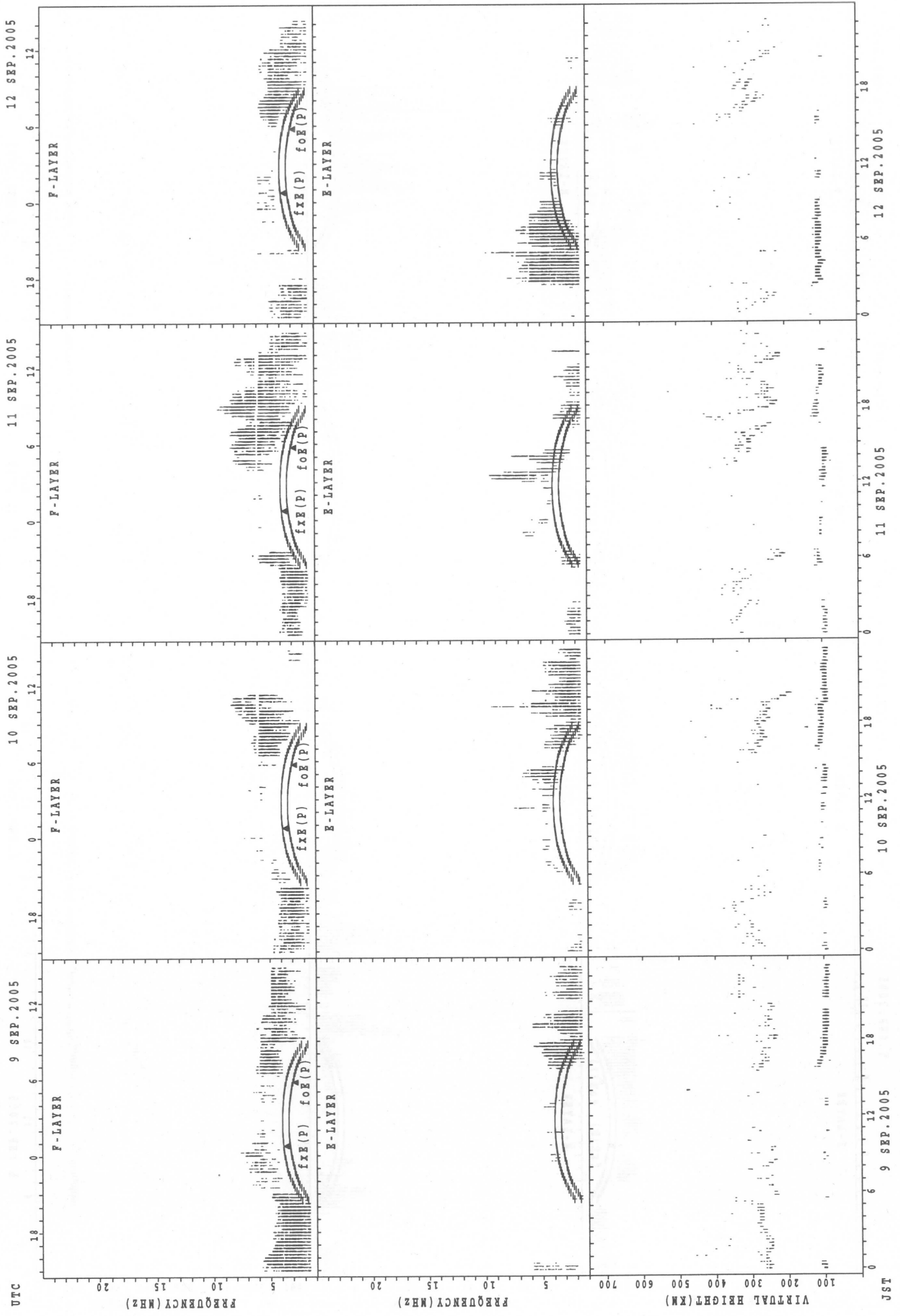


fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

JST



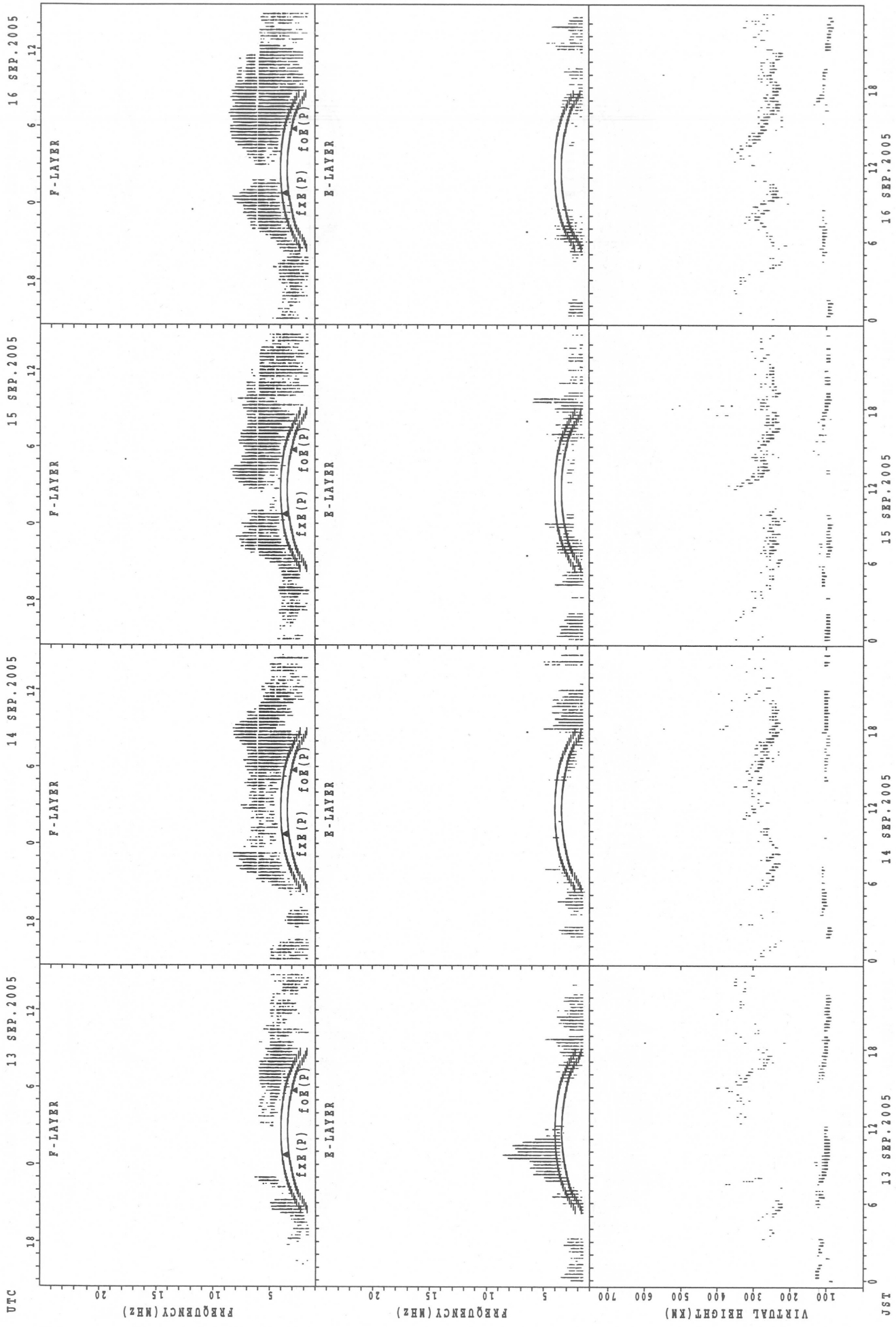
SUMMARY PLOTS AT Kokubunji



fXfE(P); PREDICTED VALUE FOR fXfE  
foE(P); PREDICTED VALUE FOR foE

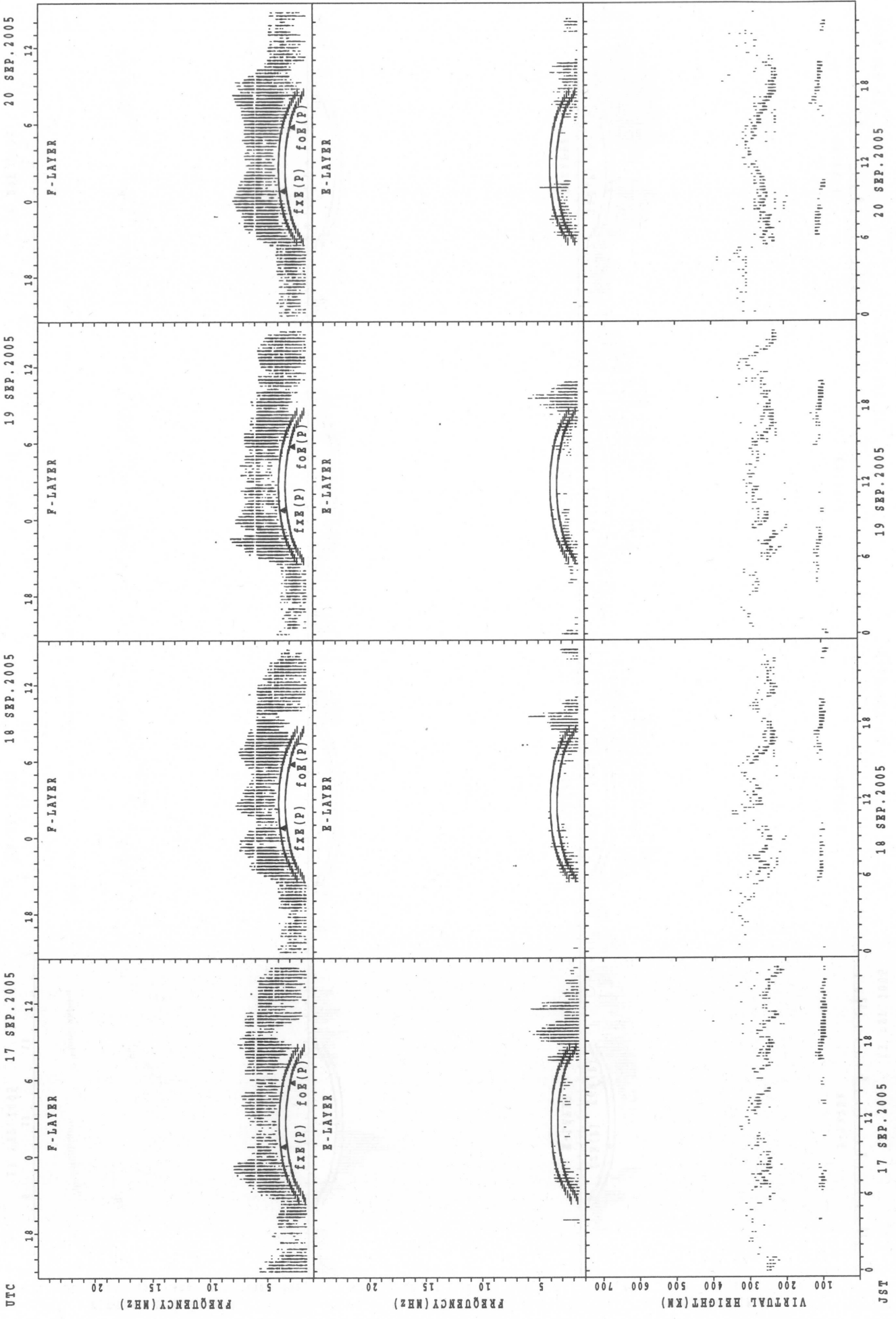
JST

SUMMARY PLOTS AT Kokubunji



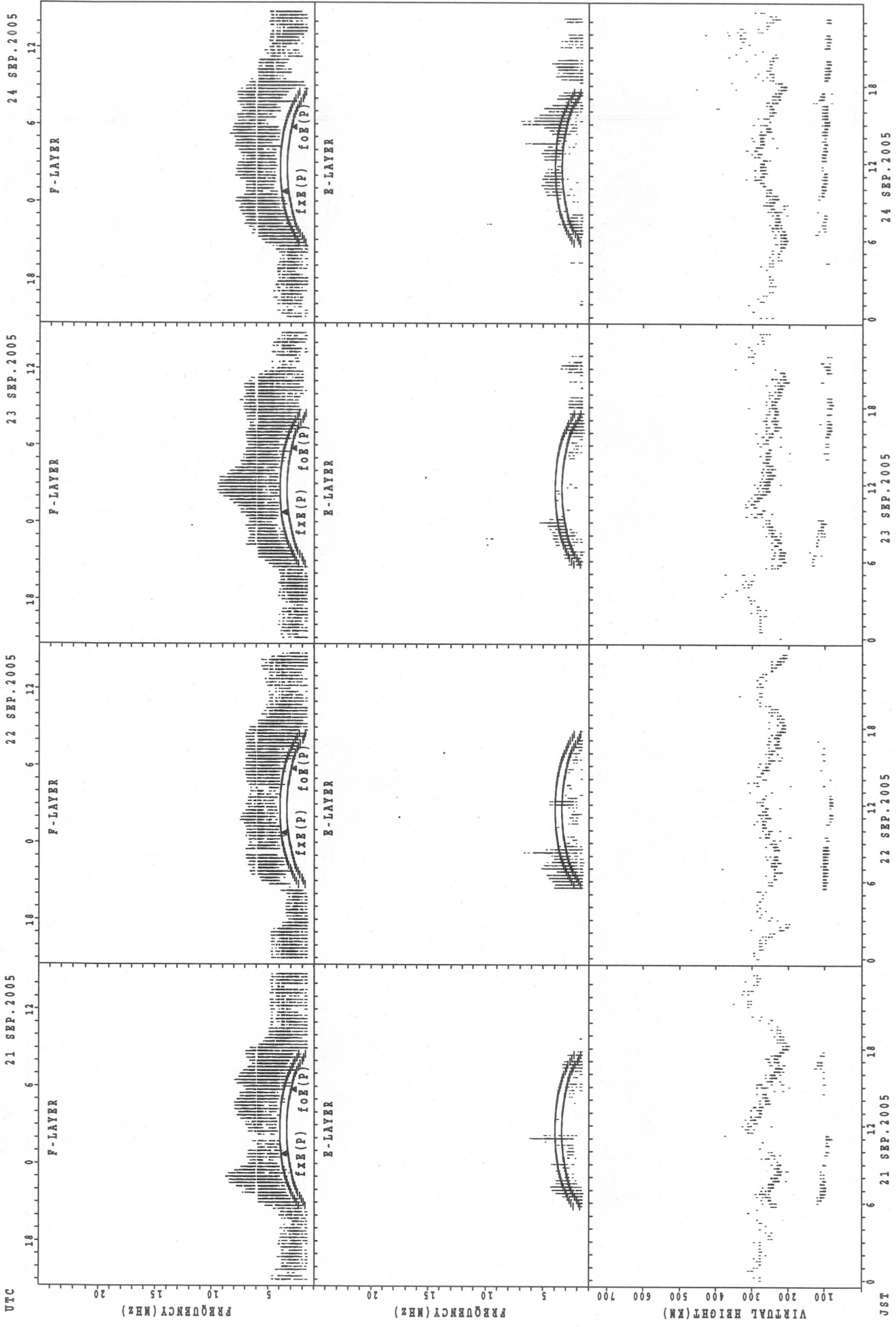
f<sub>x E(P)</sub>; PREDICTED VALUE FOR f<sub>x E</sub>  
 f<sub>o E(P)</sub>; PREDICTED VALUE FOR f<sub>o E</sub>

SUMMARY PLOTS AT Kokubunji



foF<sub>2</sub>(P); PREDICTED VALUE FOR foF<sub>2</sub>  
foF<sub>2</sub>(P) h<sub>p</sub>F<sub>2</sub>(P); PREDICTED VALUE FOR foF<sub>2</sub> h<sub>p</sub>F<sub>2</sub>

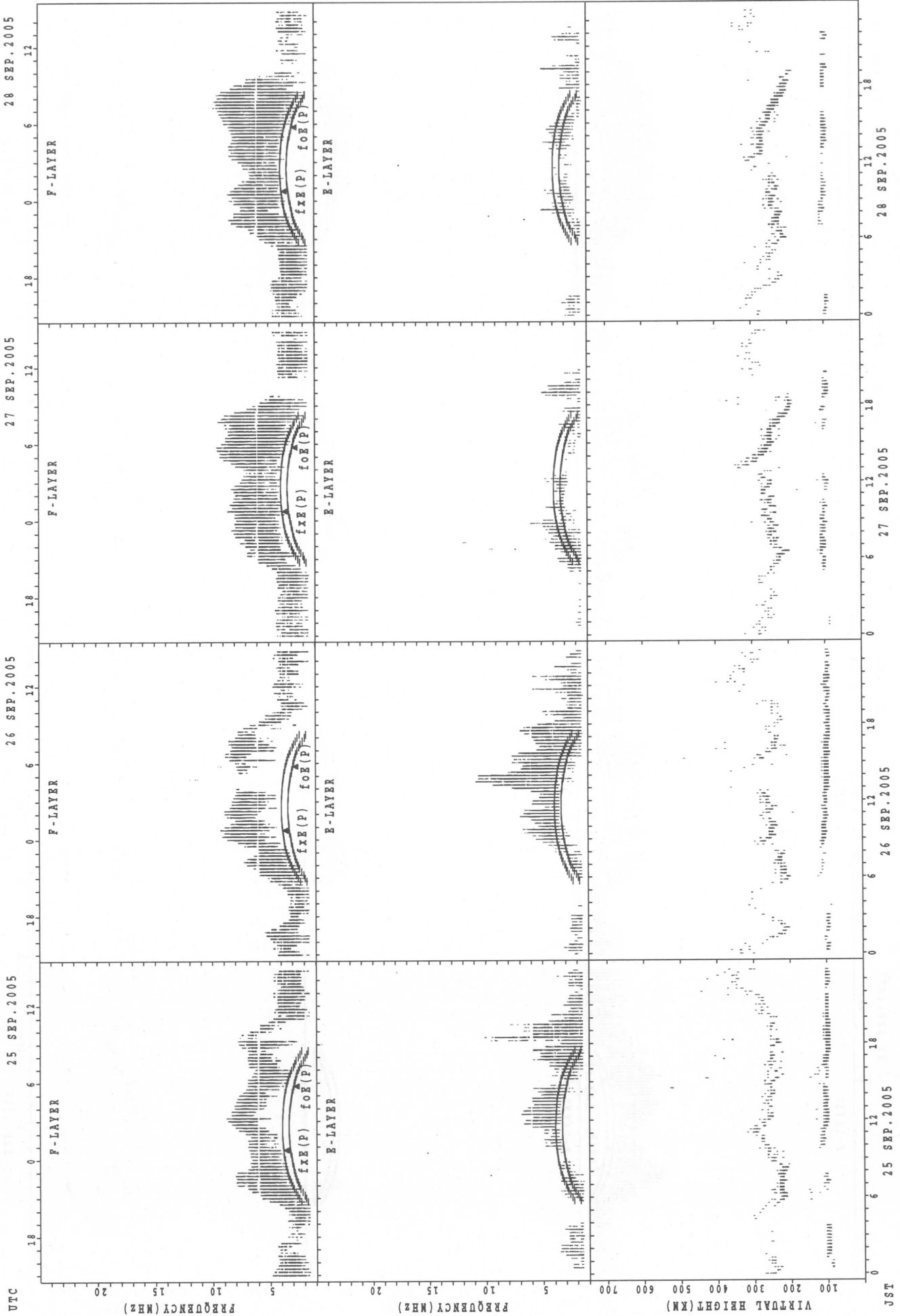
SUMMARY PLOTS AT Kokubunji



f<sub>xe</sub>(P); PREDICTED VALUE FOR f<sub>xe</sub>  
 f<sub>oe</sub>(P); PREDICTED VALUE FOR f<sub>oe</sub>

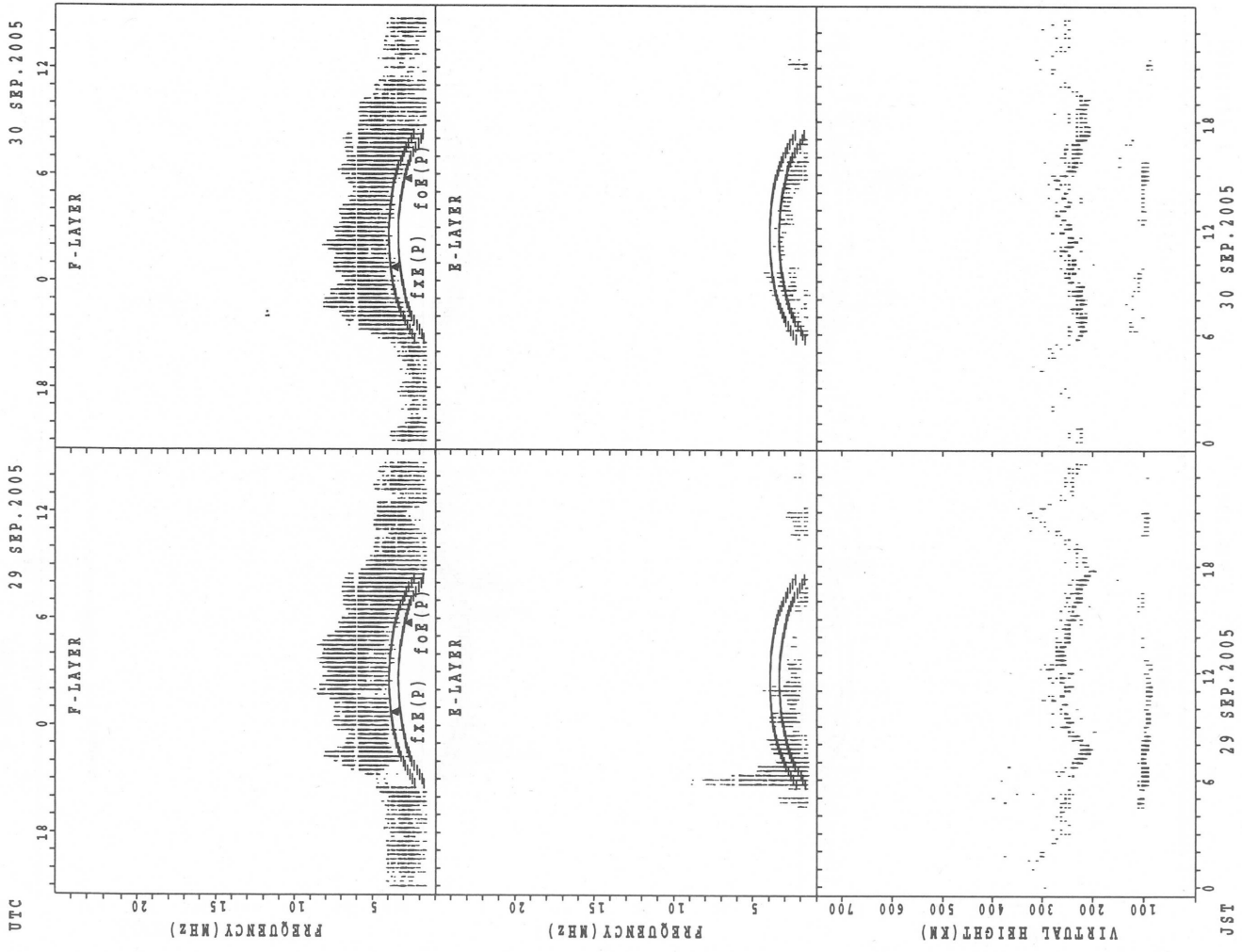


SUMMARY PLOTS AT Kokubunji



fxe(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

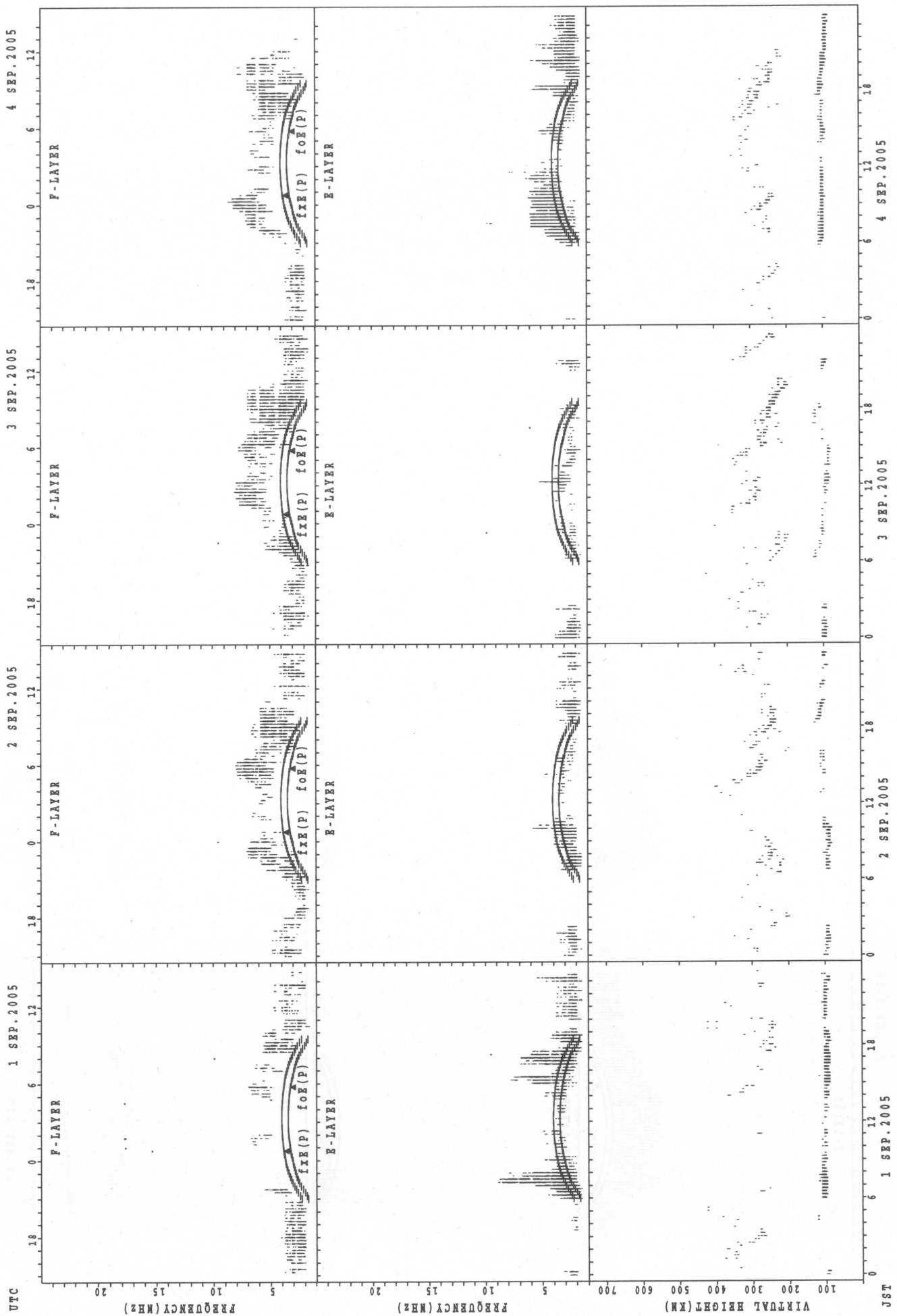
SUMMARY PLOTS AT Kokubunji



fXE(P); PREDICTED VALUE FOR fXE  
foE(P); PREDICTED VALUE FOR foE

JST

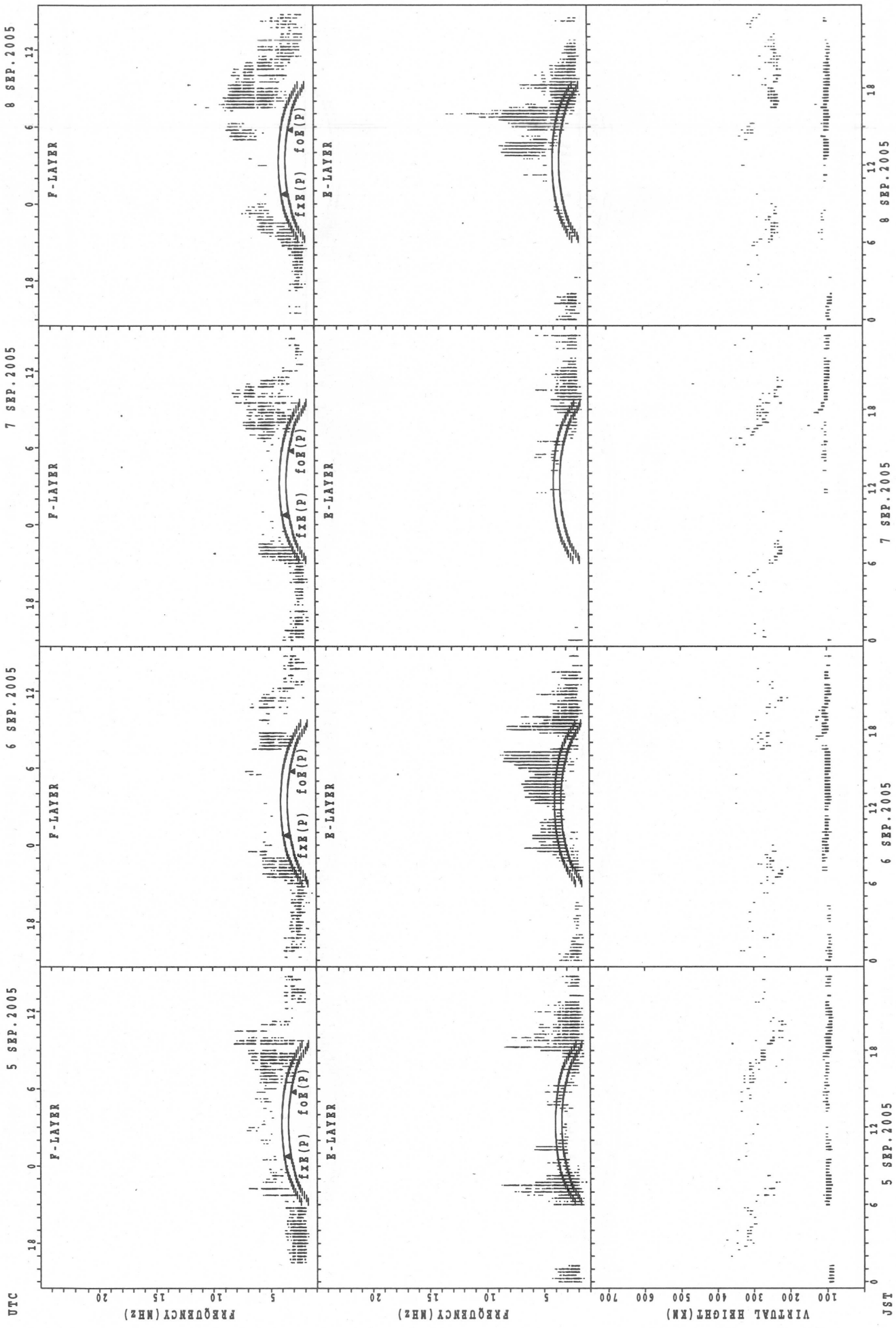
SUMMARY PLOTS AT Yamagawa



f\_xE(P); PREDICTED VALUE FOR f\_xE  
f\_oE(P); PREDICTED VALUE FOR f\_oE

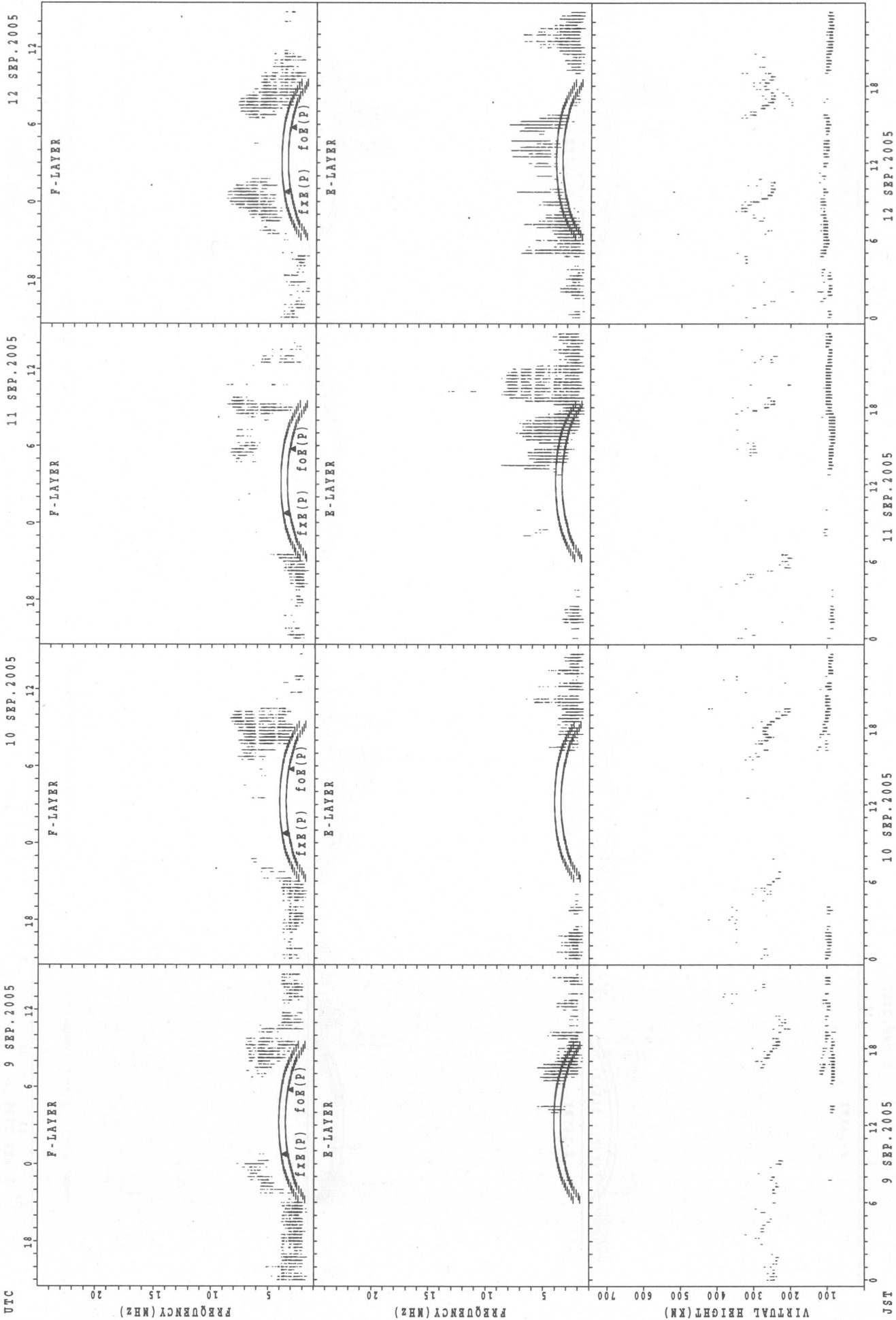
JST

**SUMMARY PLOTS AT Yamagawa**



fxE(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa





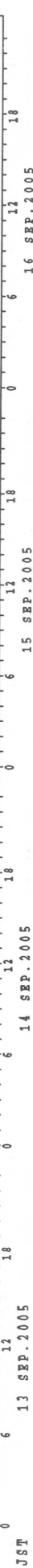
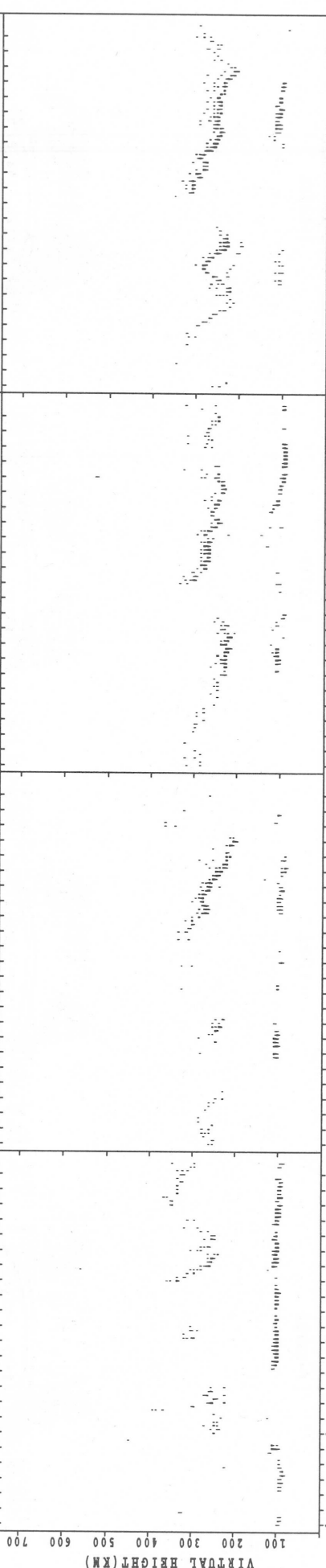
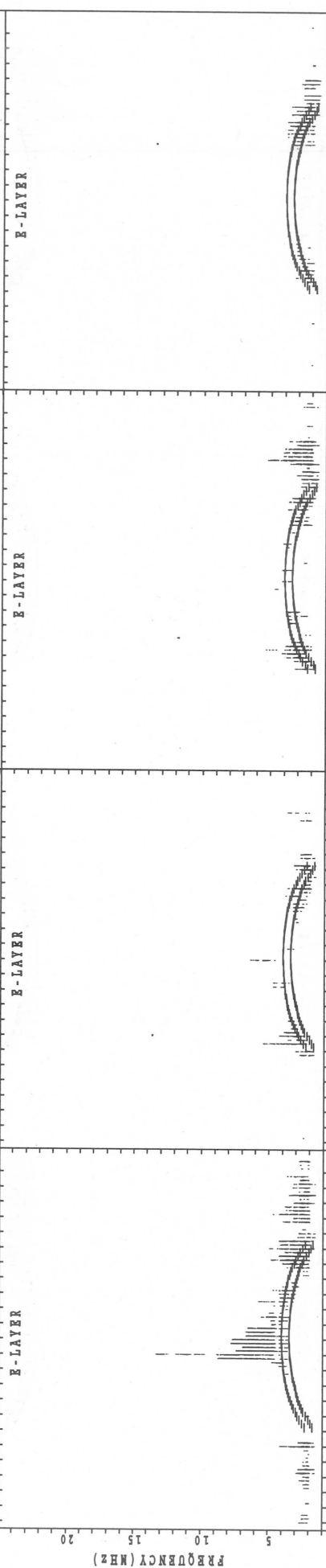
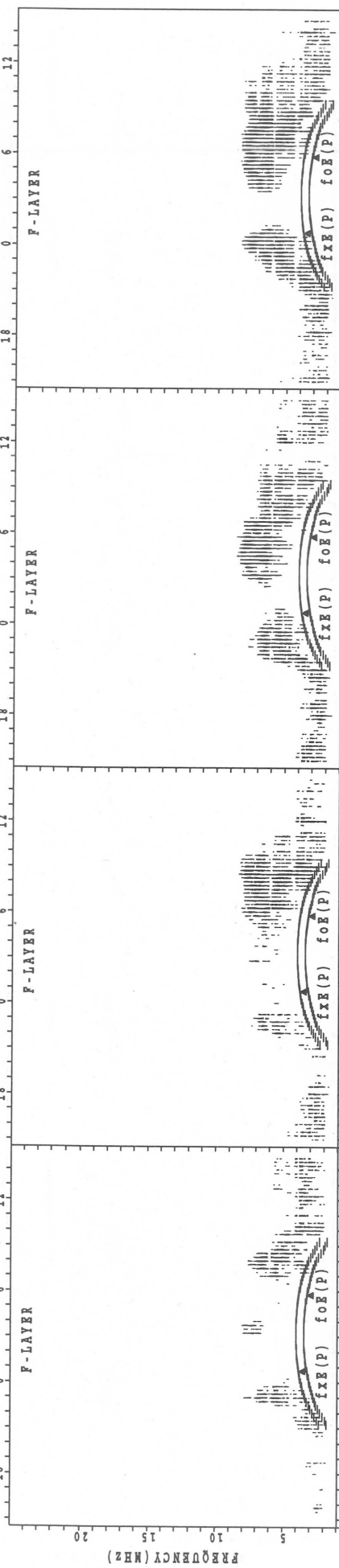
SUMMARY PLOTS AT Yamagawa

UTC 13 SEP. 2005

14 SEP. 2005

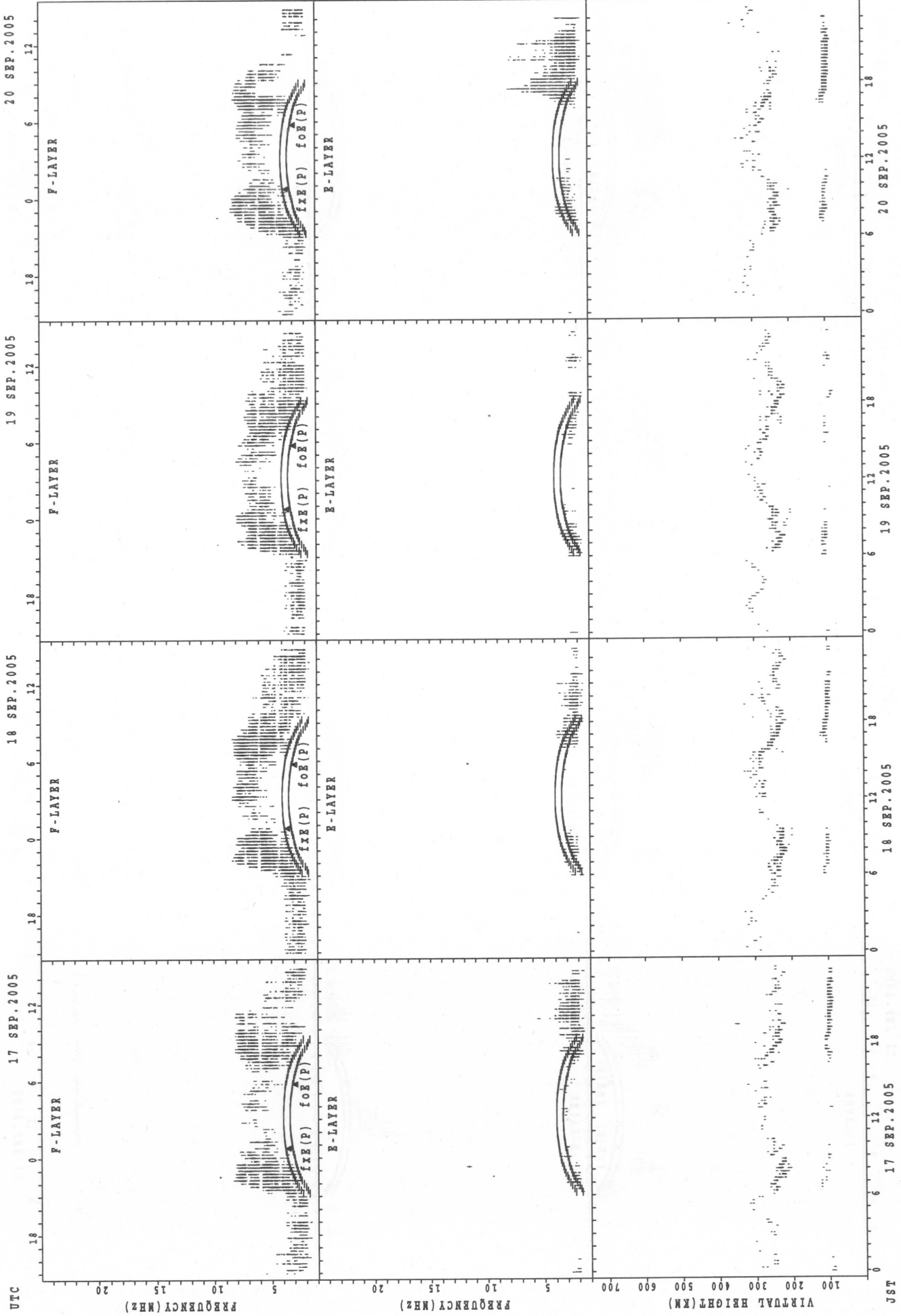
15 SEP. 2005

16 SEP. 2005



foF2(P); PREDICTED VALUE FOR foF2  
foE(P); PREDICTED VALUE FOR foE

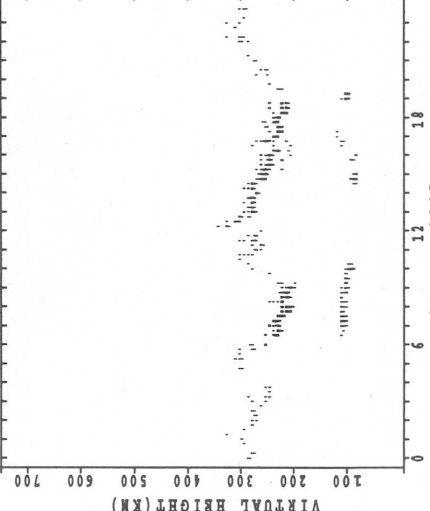
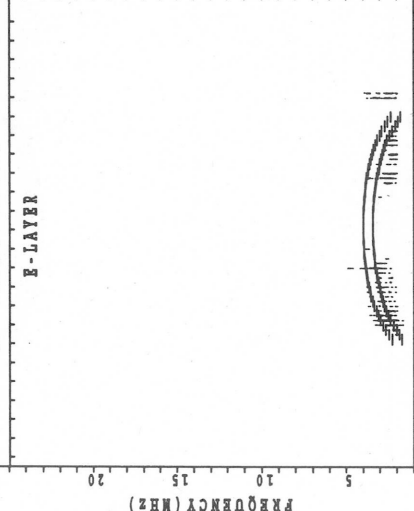
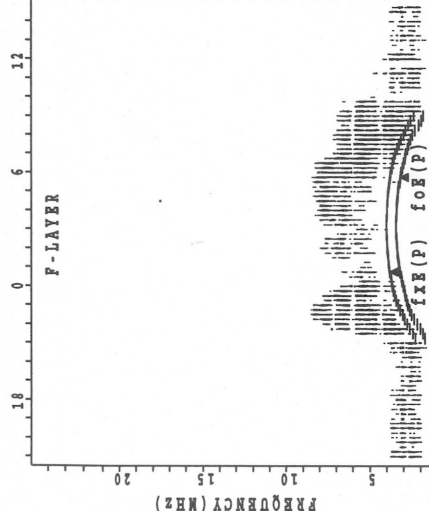
SUMMARY PLOTS AT Yamagawa



foF(P); PREDICTED VALUE FOR F<sub>2</sub>E  
foE(P); PREDICTED VALUE FOR E

SUMMARY PLOTS AT Yamagawa

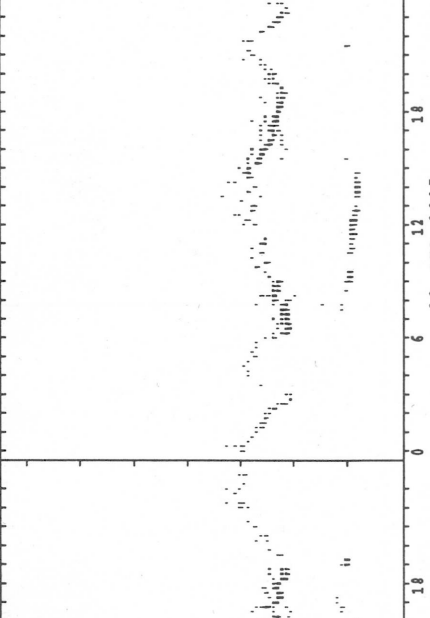
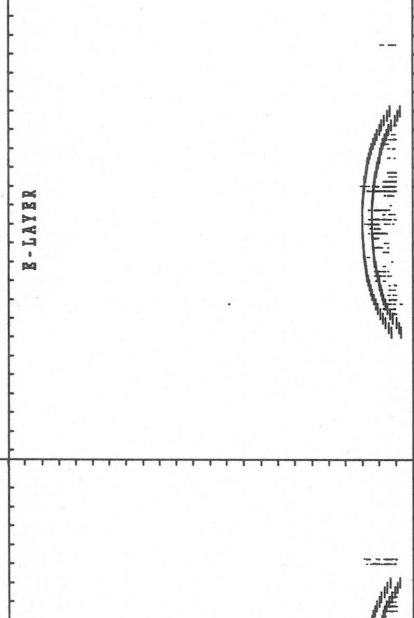
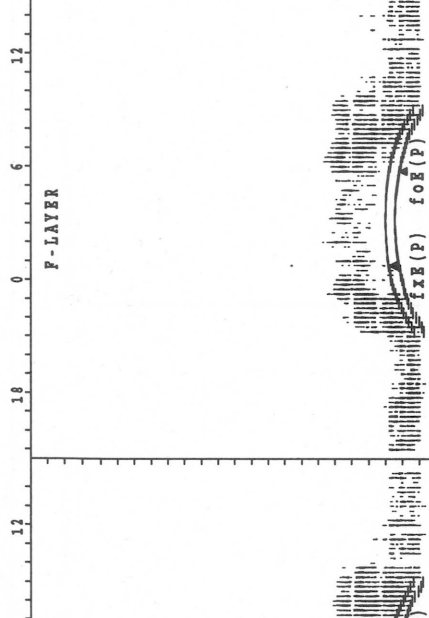
UTC 21 SEP.2005



JST 21 SEP.2005

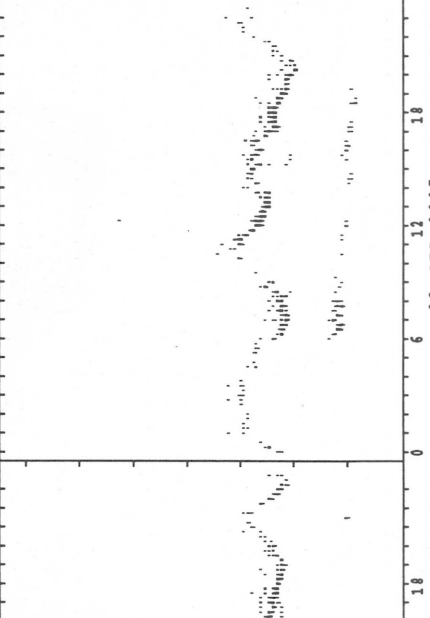
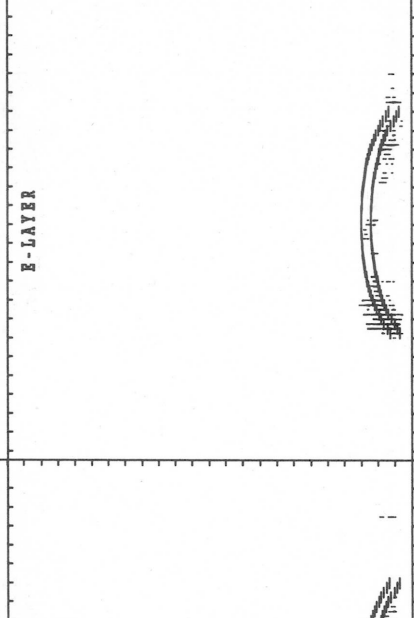
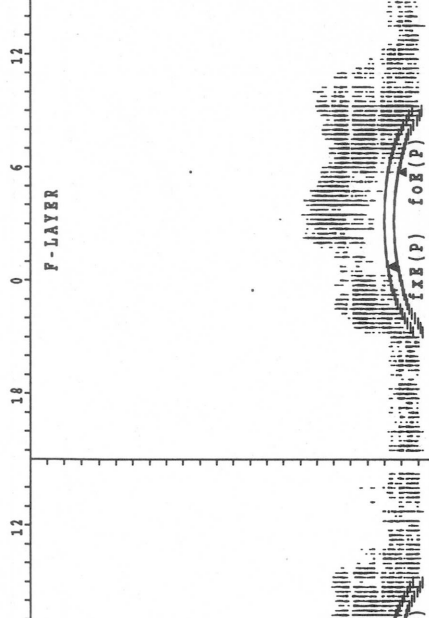
f<sub>x</sub>E(p); PREDICTED VALUE FOR f<sub>x</sub>E  
f<sub>o</sub>E(p); PREDICTED VALUE FOR f<sub>o</sub>E

UTC 22 SEP.2005



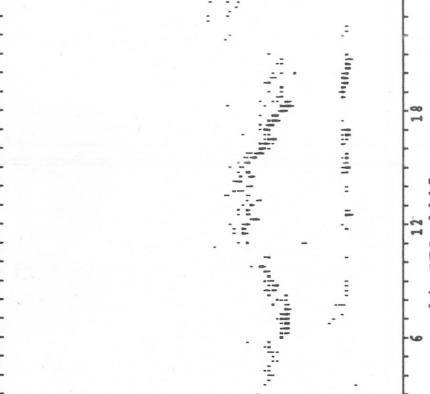
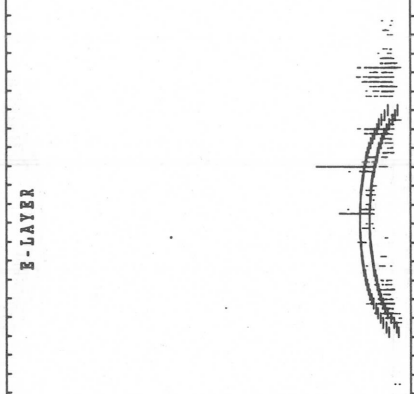
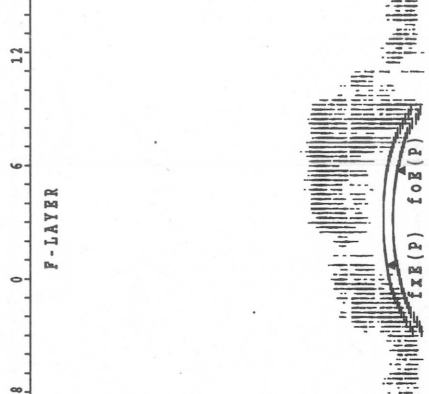
JST 22 SEP.2005

UTC 23 SEP.2005



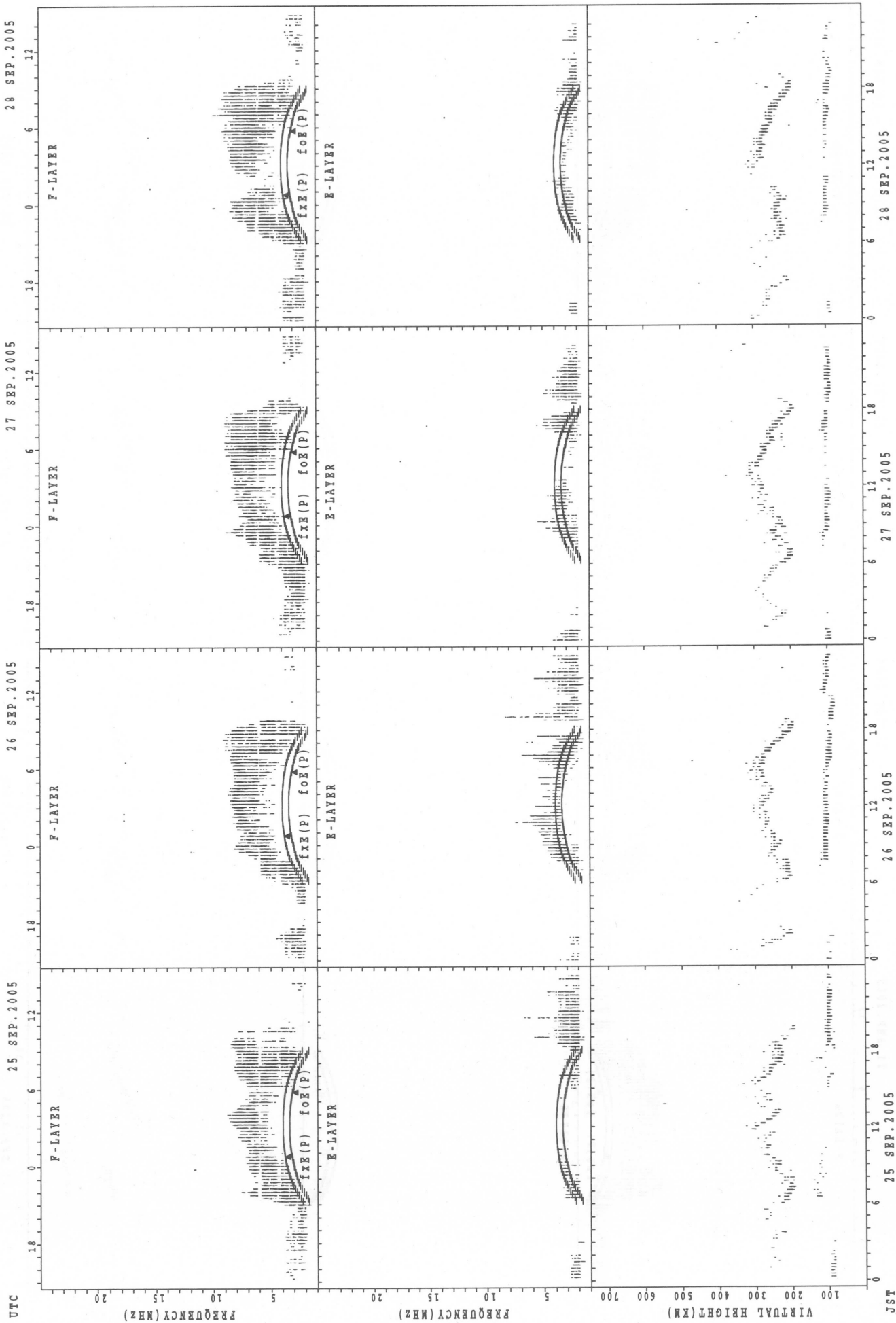
JST 23 SEP.2005

UTC 24 SEP.2005



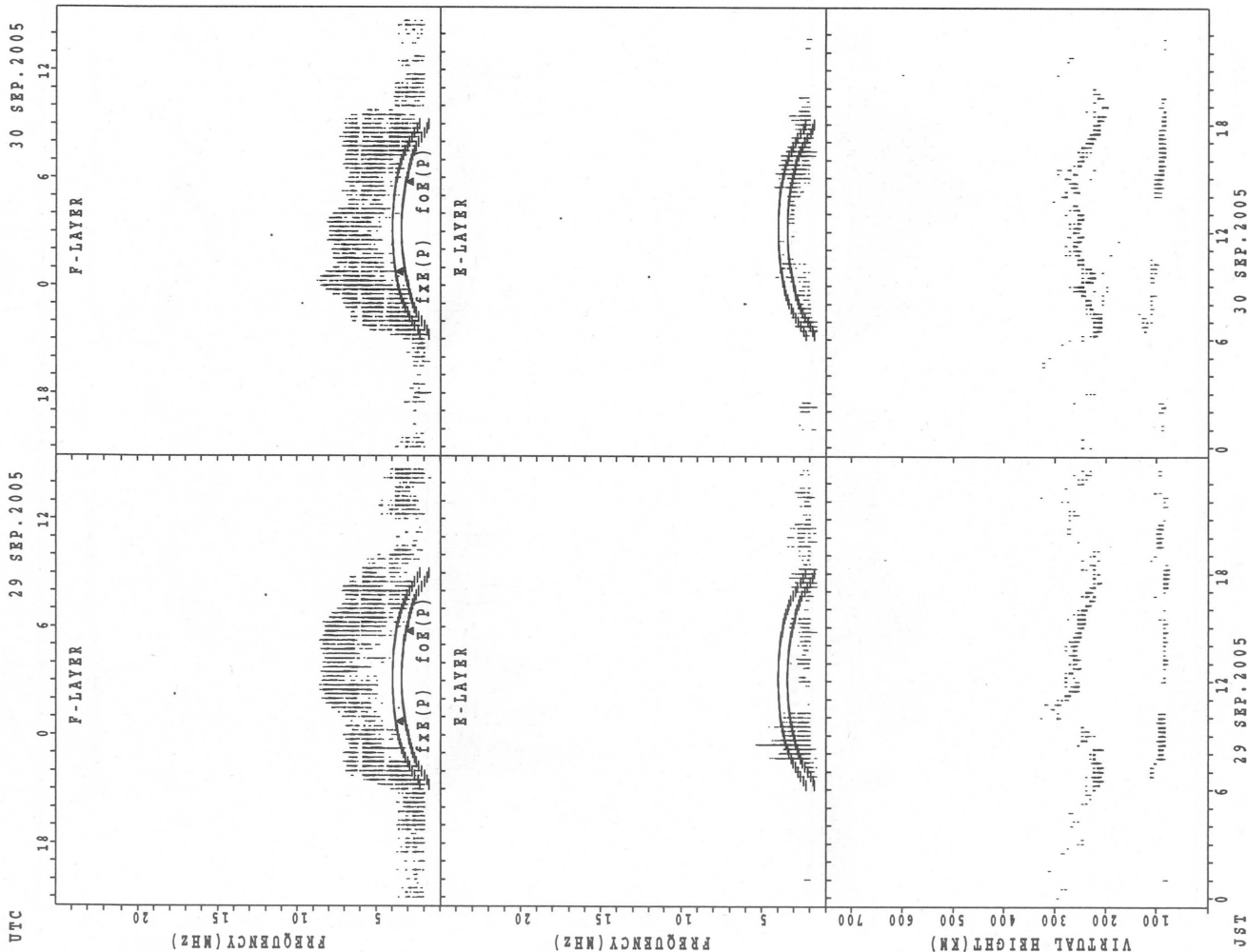
JST 24 SEP.2005

SUMMARY PLOTS AT Yamagawa



f\_xE(P); PREDICTED VALUE FOR f\_xE  
f\_oE(P); PREDICTED VALUE FOR f\_oE

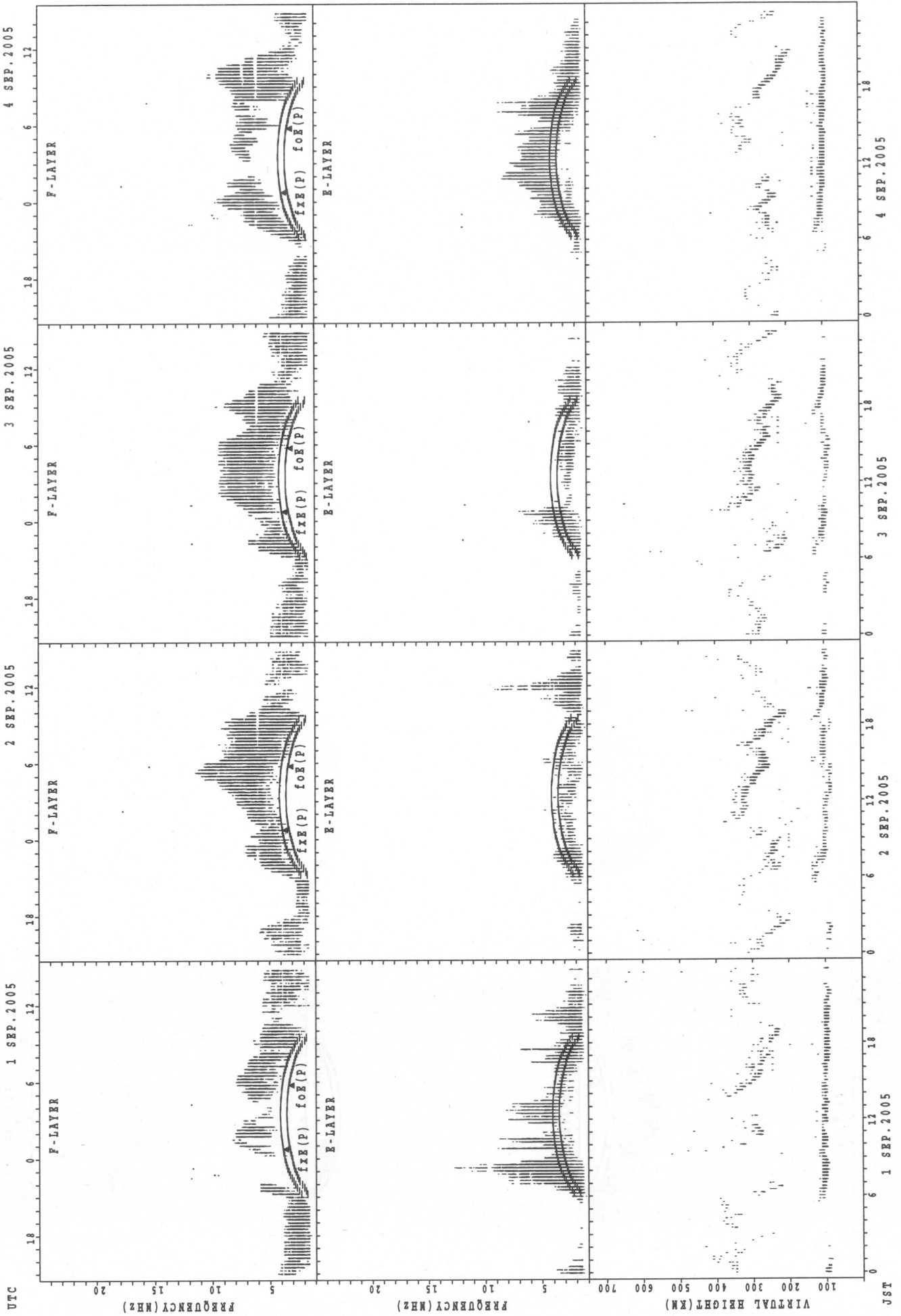
# SUMMARY PLOTS AT Yamagawa



$f_xE(P)$ ; PREDICTED VALUE FOR  $f_xE$   
 $f_oE(P)$ ; PREDICTED VALUE FOR  $f_oE$

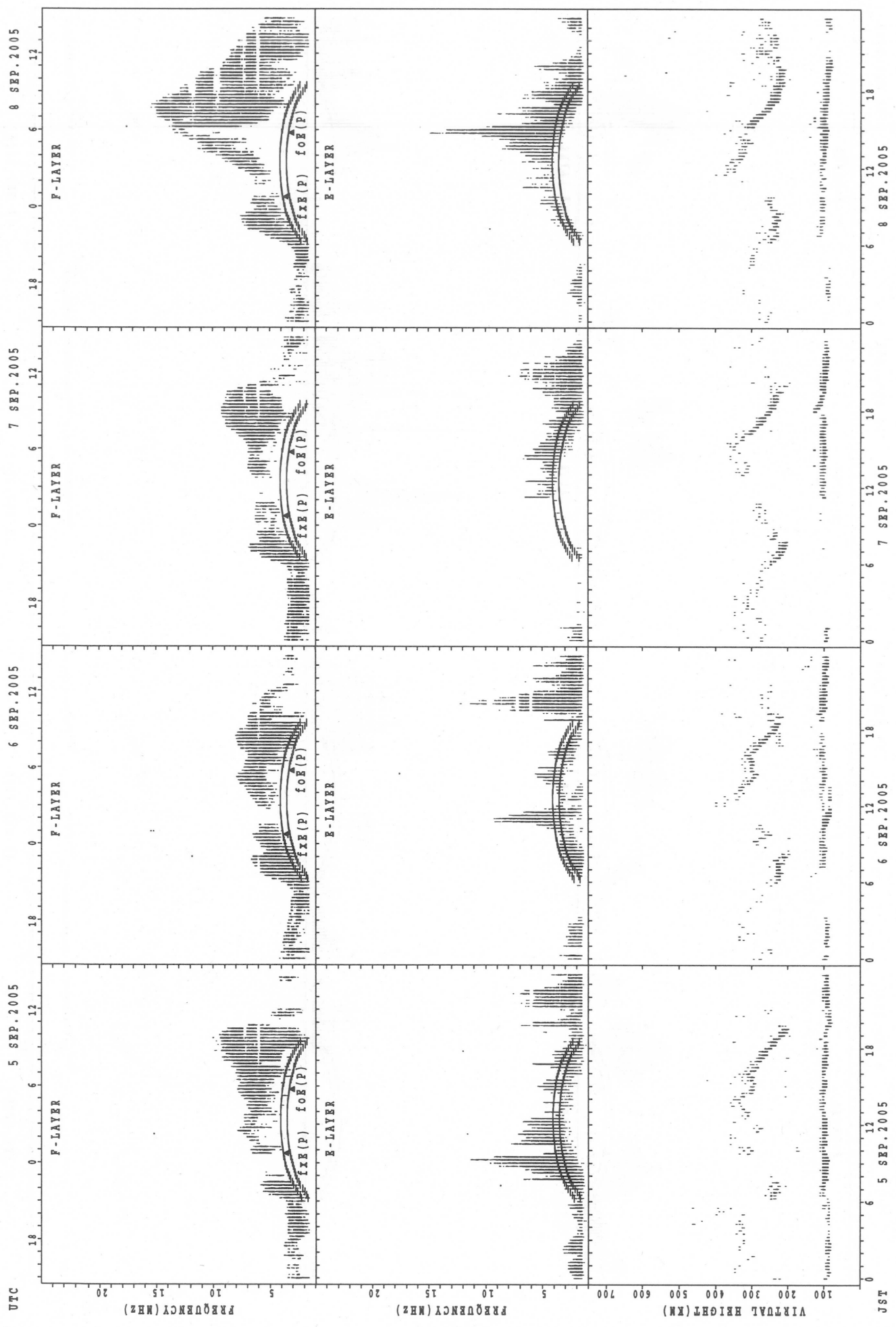


SUMMARY PLOTS AT Okinawa



$f_{xe}(p)$ ; PREDICTED VALUE FOR  $f_{xe}$   
 $foE(p)$ ; PREDICTED VALUE FOR  $foE$

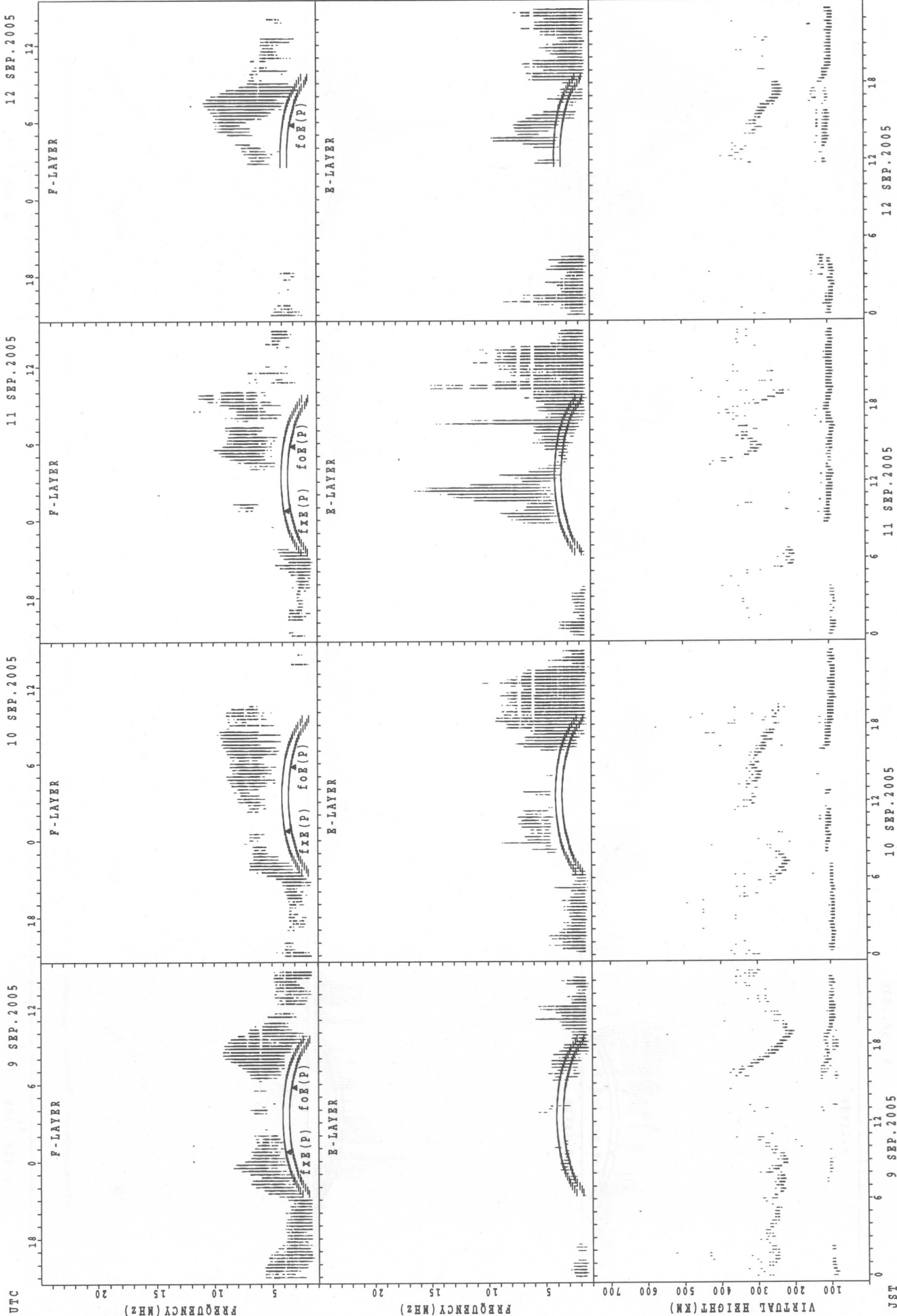
SUMMARY PLOTS AT Okinawa



$f_xE(P)$ ; PREDICTED VALUE FOR  $f_xE$   
 $f_oE(P)$ ; PREDICTED VALUE FOR  $f_oE$

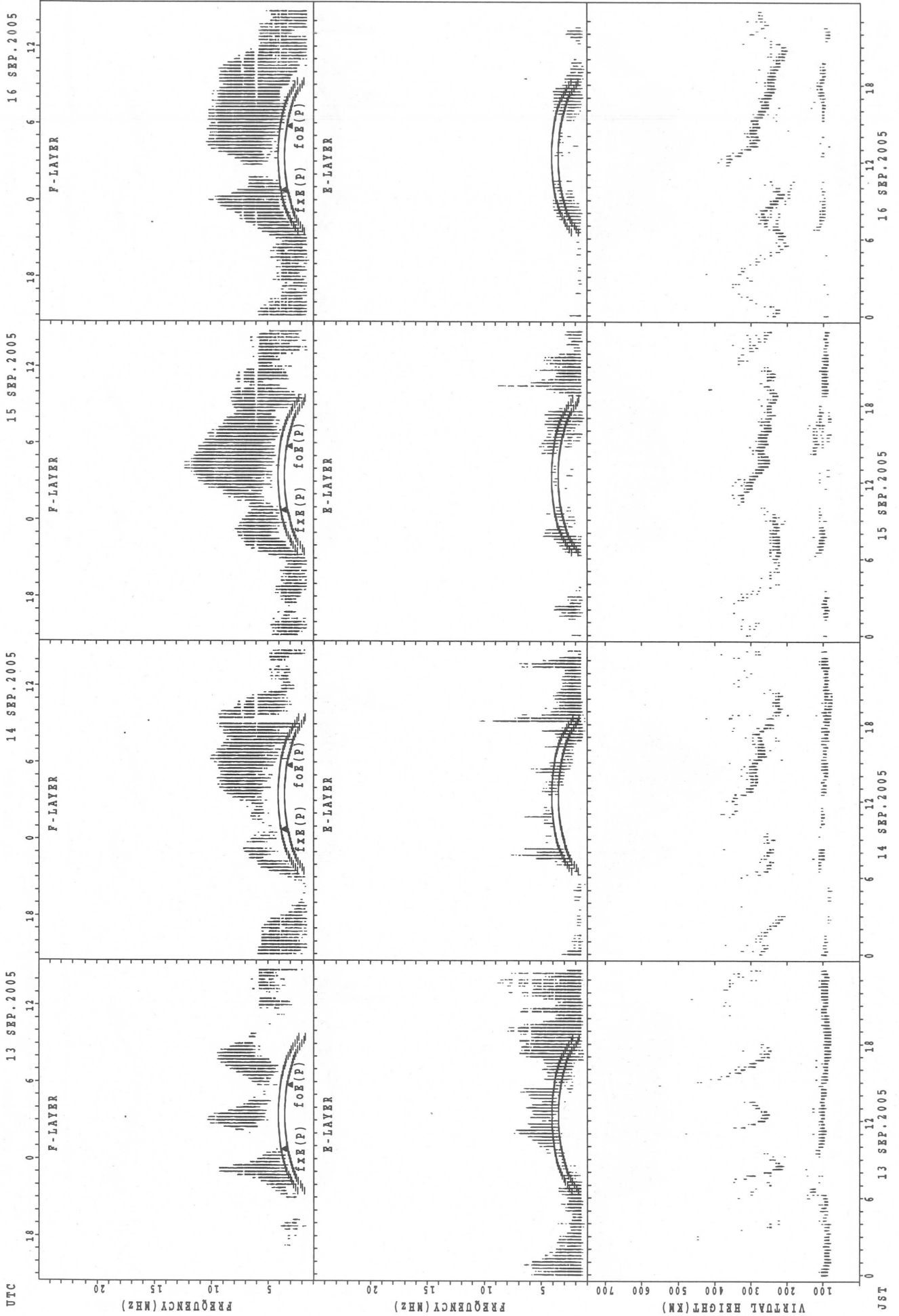
JST

SUMMARY PLOTS AT Okinawa



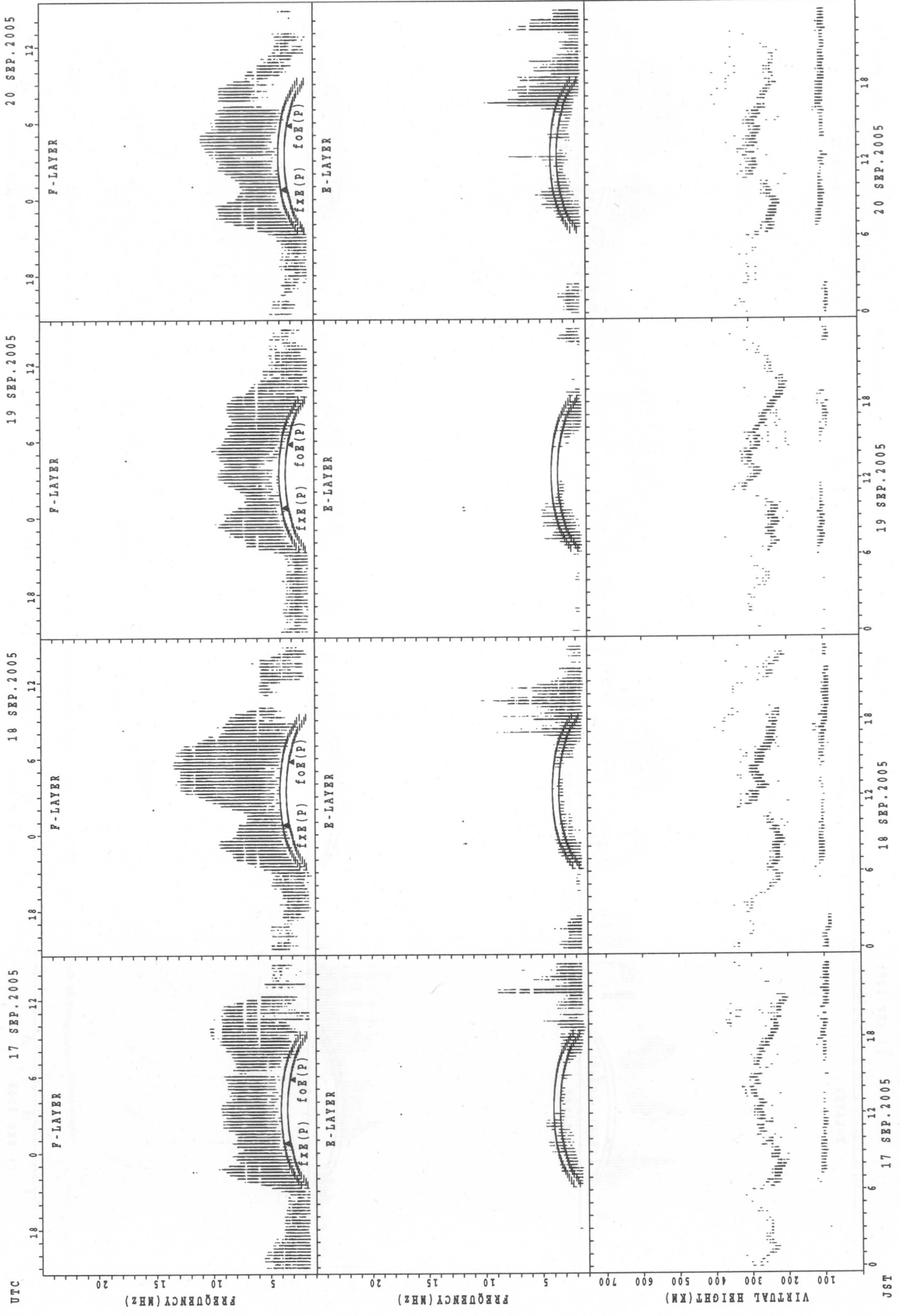
fxE(P); PREDICTED VALUE FOR fxe  
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



f<sub>x</sub>E(P); PREDICTED VALUE FOR f<sub>x</sub>E  
f<sub>o</sub>E(P); PREDICTED VALUE FOR f<sub>o</sub>E

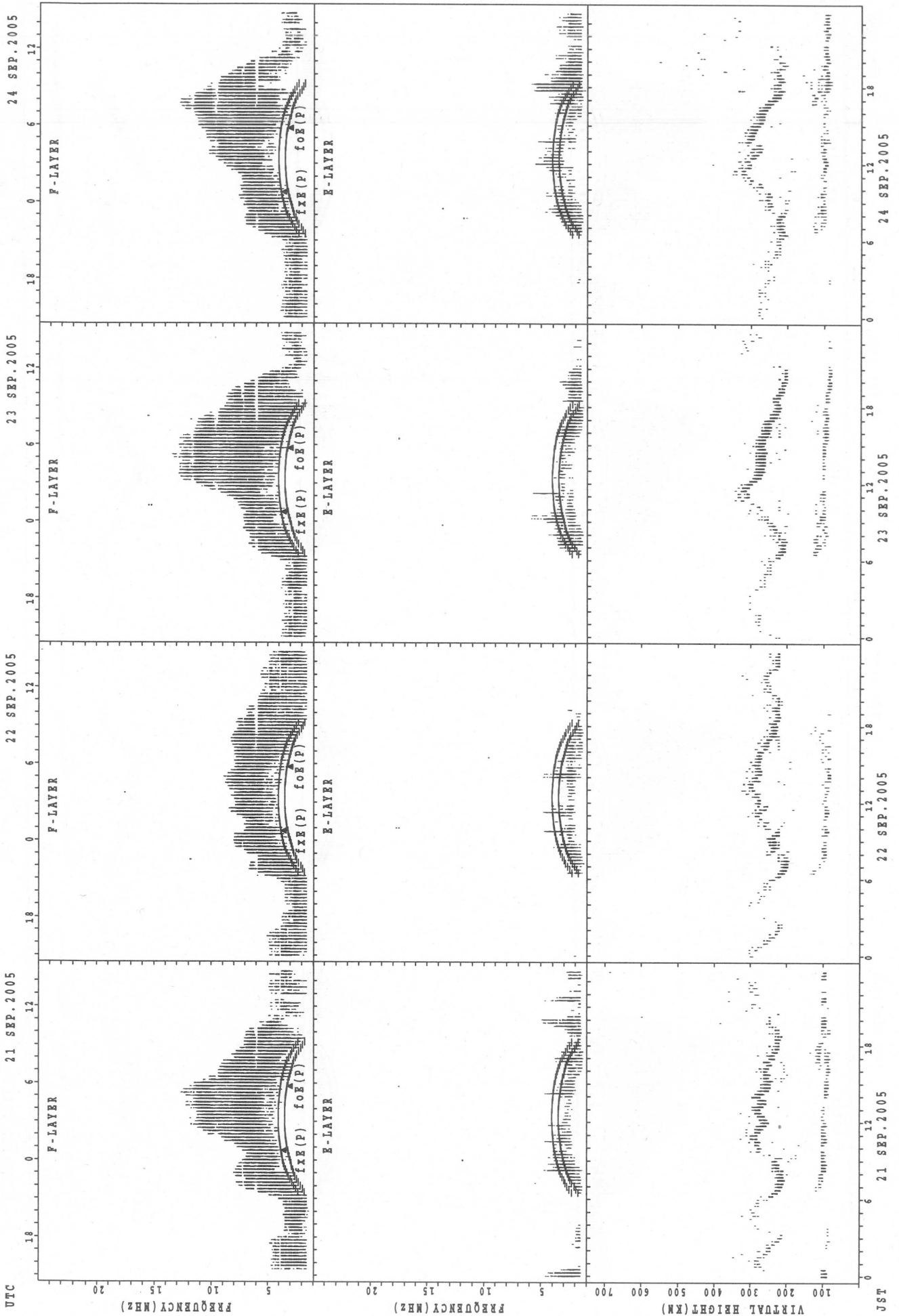
SUMMARY PLOTS AT Okinawa



$f_xE(P)$ ; PREDICTED VALUE FOR  $f_xE$   
 $f_oE(P)$ ; PREDICTED VALUE FOR  $f_oE$



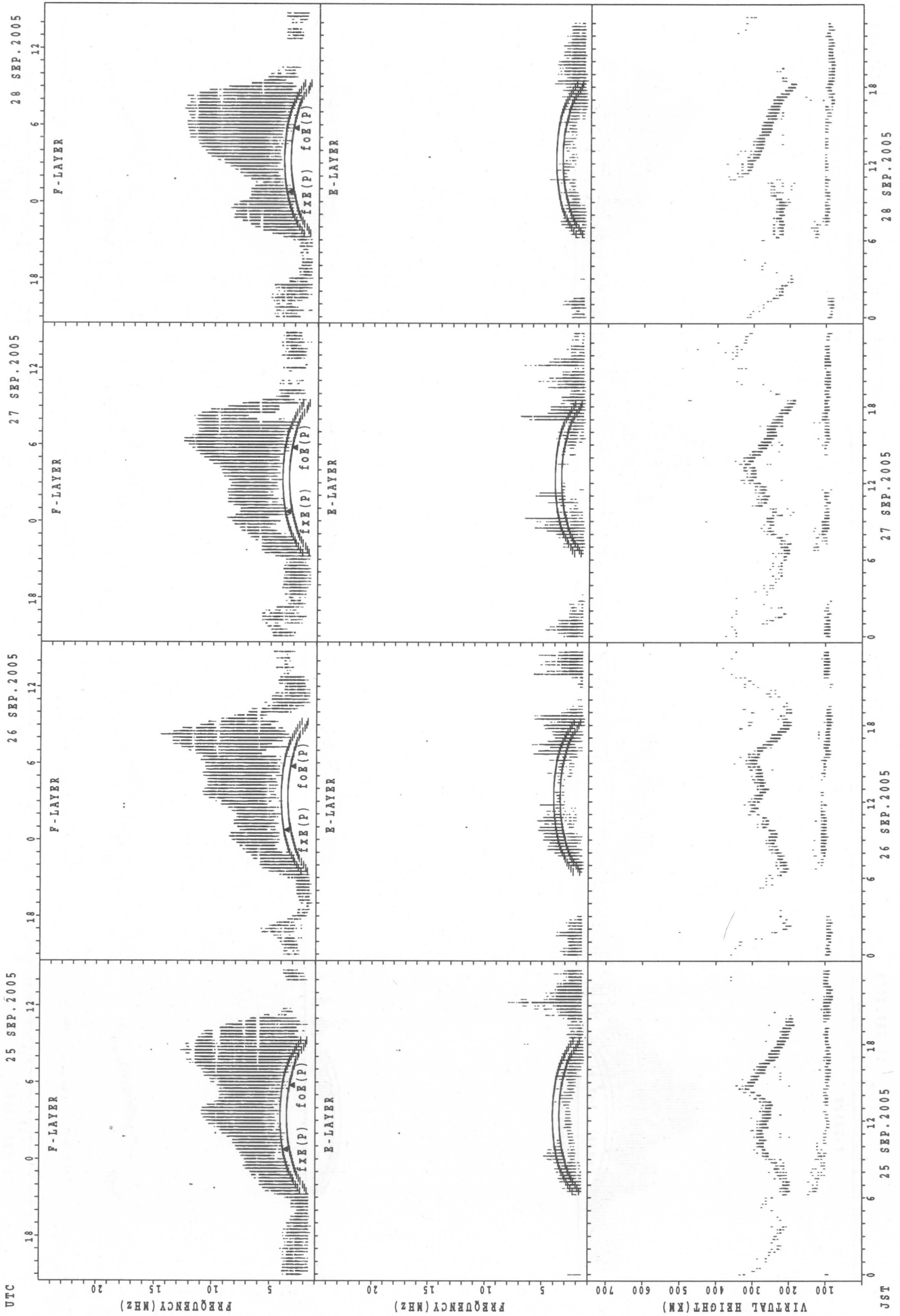
SUMMARY PLOTS AT Okinawa



fXf(P); PREDICTED VALUE FOR fXf  
foE(P); PREDICTED VALUE FOR foE

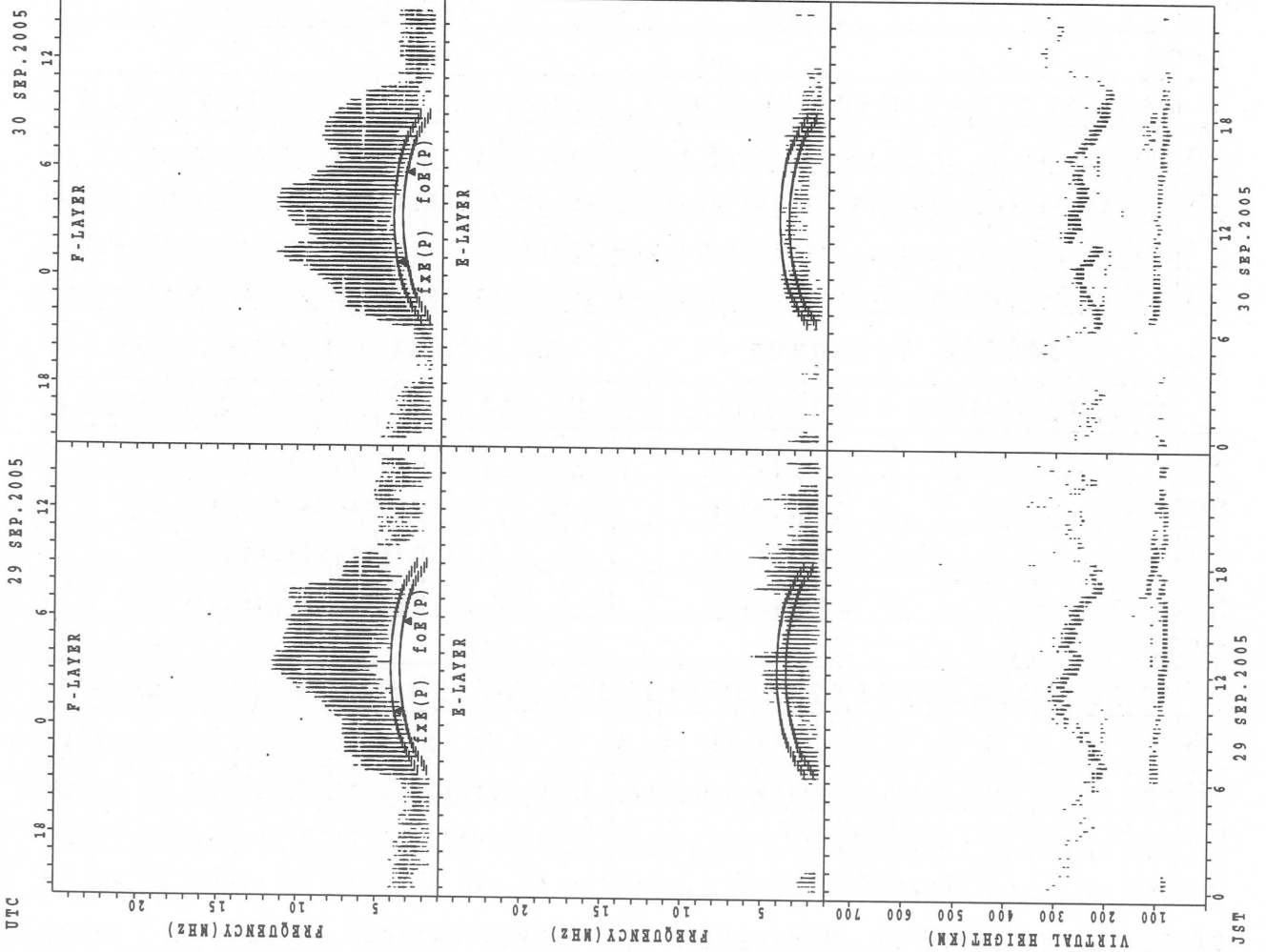
JST

SUMMARY PLOTS AT Okinawa



f<sub>xe</sub>(p); PREDICTED VALUE FOR f<sub>xe</sub>  
foE(p); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



foF2(P); PREDICTED VALUE FOR foF2  
foE(P); PREDICTED VALUE FOR foE

MONTHLY MEDIANS OF h'F AND h'Es  
 SEP. 2005 135E MEAN TIME (UTC+9H) AUTOMATIC SCALING

h'F STATION Wakkanai LAT. 45°23.5'N LON. 141°41.2'E

|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08  | 09 | 10 | 11 | 12 | 13 | 14 | 15  | 16  | 17  | 18 | 19 | 20  | 21 | 22 | 23 |
|-----|----|----|----|----|----|----|----|-----|-----|----|----|----|----|----|----|-----|-----|-----|----|----|-----|----|----|----|
| CNT |    |    |    |    |    |    |    | 5   | 9   |    |    |    |    |    |    | 9   | 9   | 8   |    |    | 1   |    |    |    |
| MED |    |    |    |    |    |    |    | 244 | 254 |    |    |    |    |    |    | 282 | 256 | 265 |    |    | 280 |    |    |    |
| U Q |    |    |    |    |    |    |    | 255 | 264 |    |    |    |    |    |    | 289 | 274 | 278 |    |    | 140 |    |    |    |
| L Q |    |    |    |    |    |    |    | 235 | 243 |    |    |    |    |    |    | 259 | 248 | 251 |    |    | 140 |    |    |    |

h'Es

|     | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22 | 23 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| CNT | 21  | 17  | 9   | 18  | 18  | 23  | 21  | 20  | 18  | 14  | 10  | 10  | 9   | 8   | 6   | 6   | 9   | 15  | 14  | 25  | 22  | 23  | 18 | 18 |
| MED | 97  | 97  | 105 | 101 | 105 | 105 | 103 | 103 | 103 | 103 | 102 | 101 | 99  | 94  | 100 | 109 | 103 | 107 | 103 | 101 | 102 | 99  | 96 | 96 |
| U Q | 101 | 105 | 110 | 111 | 107 | 111 | 108 | 106 | 105 | 105 | 103 | 107 | 133 | 100 | 101 | 113 | 110 | 113 | 107 | 109 | 105 | 103 | 97 | 99 |
| L Q | 95  | 95  | 98  | 97  | 97  | 99  | 97  | 99  | 99  | 97  | 99  | 95  | 95  | 89  | 99  | 103 | 97  | 101 | 99  | 97  | 95  | 95  | 95 | 95 |

h'F STATION Kokubunji LAT. 35°42.4'N LON. 139°29.3'E

|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08  | 09 | 10 | 11 | 12 | 13 | 14 | 15  | 16  | 17  | 18  | 19  | 20  | 21 | 22 | 23 |
|-----|----|----|----|----|----|----|----|-----|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|----|----|----|
| CNT |    |    |    |    |    |    |    | 15  | 17  |    |    |    |    |    |    | 14  | 18  | 11  | 9   | 6   | 4   |    |    |    |
| MED |    |    |    |    |    |    |    | 252 | 246 |    |    |    |    |    |    | 278 | 265 | 246 | 246 | 269 | 264 |    |    |    |
| U Q |    |    |    |    |    |    |    | 268 | 260 |    |    |    |    |    |    | 284 | 272 | 274 | 253 | 286 | 288 |    |    |    |
| L Q |    |    |    |    |    |    |    | 238 | 232 |    |    |    |    |    |    | 264 | 250 | 230 | 242 | 240 | 230 |    |    |    |

h'Es

|     | 00  | 01  | 02 | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22 | 23  |
|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| CNT | 14  | 11  | 7  | 8   | 8   | 11  | 12  | 14  | 16  | 14  | 11  | 12  | 8   | 9   | 10  | 6   | 12  | 19  | 18  | 20  | 18  | 17  | 15 | 14  |
| MED | 96  | 95  | 95 | 100 | 111 | 107 | 105 | 105 | 105 | 104 | 105 | 103 | 102 | 97  | 97  | 106 | 111 | 111 | 103 | 102 | 99  | 101 | 97 | 96  |
| U Q | 101 | 105 | 97 | 111 | 113 | 111 | 111 | 107 | 107 | 107 | 107 | 104 | 103 | 104 | 103 | 113 | 115 | 115 | 105 | 104 | 103 | 105 | 99 | 101 |
| L Q | 93  | 93  | 95 | 94  | 103 | 103 | 103 | 101 | 103 | 103 | 101 | 99  | 96  | 96  | 95  | 99  | 102 | 103 | 99  | 98  | 97  | 97  | 97 | 95  |

h'F STATION Yamagawa LAT. 31°12.1'N LON. 130°37.1'E

|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08  | 09  | 10 | 11 | 12 | 13 | 14 | 15 | 16  | 17  | 18  | 19  | 20  | 21 | 22 | 23 |
|-----|----|----|----|----|----|----|----|-----|-----|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|----|----|----|
| CNT |    |    |    |    |    |    |    | 9   | 15  | 7   |    |    |    |    |    |    | 16  | 20  | 15  | 6   | 5   |    |    |    |
| MED |    |    |    |    |    |    |    | 238 | 250 | 238 |    |    |    |    |    |    | 263 | 261 | 262 | 252 | 258 |    |    |    |
| U Q |    |    |    |    |    |    |    | 243 | 256 | 248 |    |    |    |    |    |    | 279 | 274 | 274 | 254 | 279 |    |    |    |
| L Q |    |    |    |    |    |    |    | 233 | 232 | 230 |    |    |    |    |    |    | 255 | 242 | 226 | 248 | 244 |    |    |    |

h'Es

|     | 00  | 01 | 02 | 03  | 04 | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
|-----|-----|----|----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| CNT | 15  | 10 | 6  | 2   | 1  | 2   | 8   | 16  | 14  | 11  | 9   | 8   | 5   | 5   | 8   | 10  | 9   | 16  | 21  | 25  | 20  | 21  | 12  | 13  |
| MED | 97  | 96 | 96 | 98  | 97 | 109 | 107 | 108 | 108 | 103 | 105 | 104 | 103 | 101 | 101 | 101 | 95  | 103 | 101 | 103 | 100 | 97  | 98  | 97  |
| U Q | 101 | 97 | 97 | 101 | 48 | 113 | 110 | 114 | 111 | 107 | 106 | 108 | 105 | 104 | 104 | 103 | 100 | 108 | 107 | 107 | 104 | 101 | 102 | 102 |
| L Q | 97  | 93 | 89 | 95  | 48 | 105 | 105 | 104 | 103 | 101 | 99  | 101 | 94  | 95  | 97  | 95  | 95  | 97  | 95  | 97  | 97  | 97  | 95  | 96  |

MONTHLY MEDIANS OF h'F AND h'Es  
 SEP. 2005 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

h'F STATION Okinawa LAT. 26°40.5'N LON. 128°09.2'E

|     | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08  | 09  | 10 | 11 | 12 | 13 | 14 | 15 | 16  | 17  | 18  | 19  | 20  | 21  | 22 | 23 |
|-----|----|----|----|----|----|----|----|-----|-----|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|----|----|
| CNT |    |    |    |    |    |    |    | 9   | 23  | 19  |    |    |    |    |    |    | 28  | 28  | 27  | 15  | 5   | 2   |    |    |
| MED |    |    |    |    |    |    |    | 232 | 240 | 238 |    |    |    |    |    |    | 270 | 248 | 238 | 230 | 238 | 257 |    |    |
| U Q |    |    |    |    |    |    |    | 239 | 256 | 256 |    |    |    |    |    |    | 294 | 274 | 252 | 240 | 268 | 290 |    |    |
| L Q |    |    |    |    |    |    |    | 226 | 224 | 230 |    |    |    |    |    |    | 258 | 232 | 224 | 224 | 226 | 224 |    |    |

h'Es

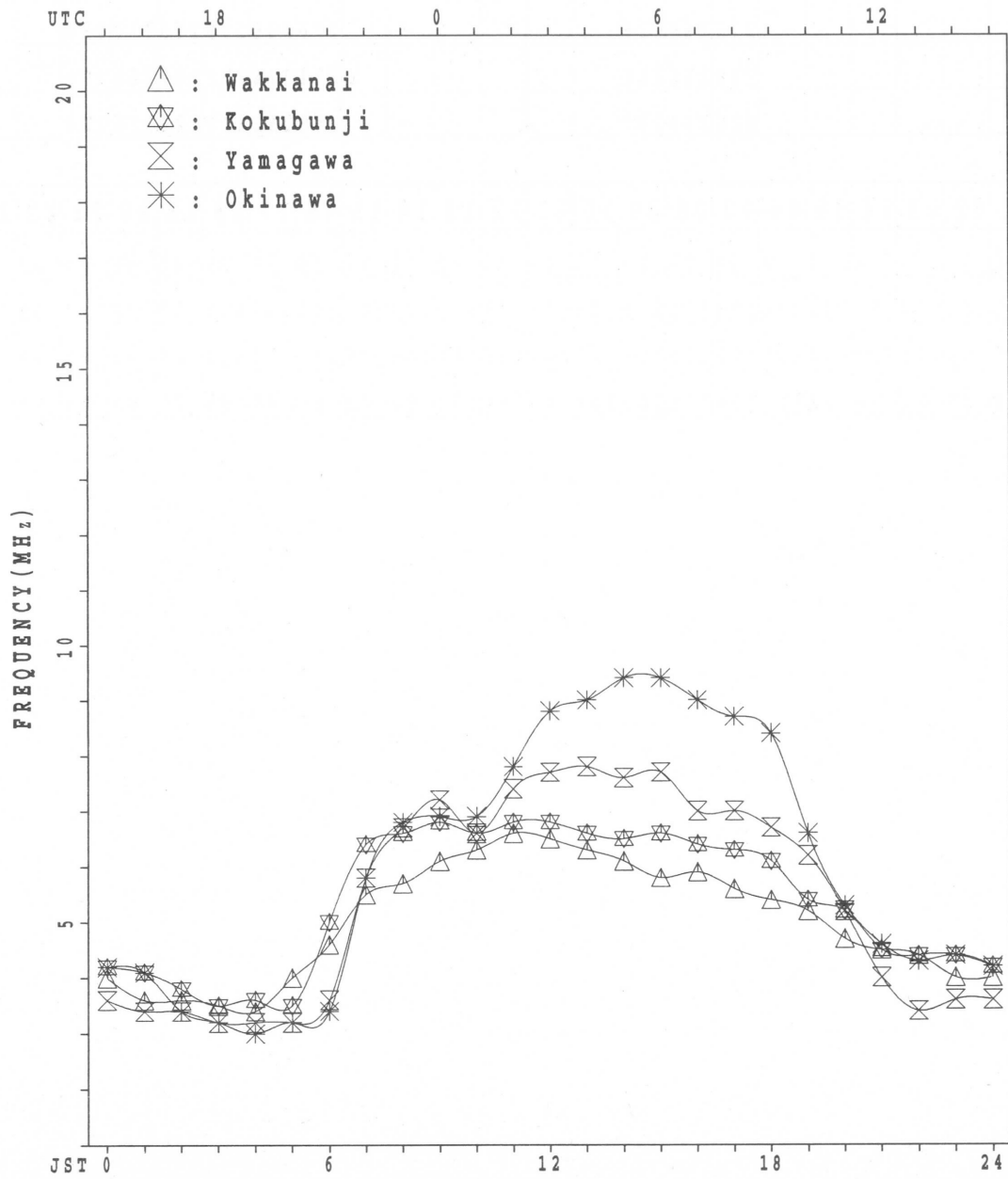
|     | 00 | 01 | 02 | 03  | 04  | 05 | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20 | 21  | 22 | 23 |
|-----|----|----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|----|
| CNT | 19 | 16 | 13 | 5   | 4   | 4  | 4   | 20  | 21  | 17  | 12  | 14  | 13  | 12  | 12  | 14  | 15  | 25  | 25  | 27  | 24 | 21  | 22 | 19 |
| MED | 95 | 93 | 91 | 93  | 93  | 92 | 120 | 111 | 107 | 105 | 105 | 103 | 99  | 103 | 100 | 100 | 105 | 103 | 101 | 97  | 96 | 97  | 95 | 97 |
| U Q | 97 | 95 | 95 | 101 | 101 | 94 | 135 | 119 | 110 | 109 | 108 | 109 | 106 | 106 | 105 | 105 | 113 | 113 | 110 | 103 | 99 | 103 | 99 | 97 |
| L Q | 95 | 90 | 89 | 91  | 90  | 88 | 103 | 106 | 105 | 101 | 104 | 99  | 97  | 101 | 98  | 99  | 95  | 97  | 95  | 95  | 90 | 95  | 95 | 95 |



## MONTHLY MEDIANS PLOT OF fOF2

SEP. 2005

AUTOMATIC SCALING



IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 f<sub>XI</sub> (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| D   | H  | 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   | X  | X  | X  | X  | A  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  |  |
|     | 56 | 52 | 47 | 48 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 63 | 58 | 55 | 59 | 56 |  |
| 2   | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 57 | 54 | 48 | 45 | 41 |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 62 | 71 | 58 | 60 | 53 | 60 |  |
| 3   | X  | X  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 52 | 52 | 50 | 41 | 38 | 33 | 40 |    |    |    |    |    |    |    |    |    |    |    |    | 66 | 60 | 54 | 49 | 51 | 50 |  |
| 4   | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | A  |    |  |
|     | 45 | 40 | 40 | 39 | 41 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 66 | 63 | 54 |    | 54 |  |
| 5   | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | A  | X  | X  | X  |  |
|     | 48 | 41 | 38 | 34 | 35 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 74 |    | 48 | 46 | 46 |  |
| 6   | X  | A  | X  | A  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  |  |
|     | 44 |    | 40 |    | 37 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 56 | 56 | 54 | 51 | 46 |  |
| 7   | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 40 | 35 | 36 | 36 | 35 |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 59 | 64 | 56 | 47 | 47 | 51 |  |
| 8   | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 44 | 43 | 42 | 40 | 40 |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 67 | 64 | 59 | 56 | 59 | 66 |  |
| 9   | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 63 | 60 | 50 | 51 | 50 | 46 |    |    |    |    |    |    |    |    |    |    |    |    |    | 62 | 63 | 58 | 53 | 52 | 52 |  |
| 10  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | A  | X  | X  |  |
|     | 50 | 47 | 46 | 44 | 46 |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 70 | 84 | 84 |    | 35 | 35 |  |
| 11  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 37 | 37 | 40 | 41 | 41 | 40 |    |    |    |    |    |    |    |    |    |    |    |    |    | 96 | 84 | 71 | 79 | 67 | 52 |  |
| 12  | X  | X  | X  | X  | A  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 48 | 53 | 41 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 54 | 59 | 58 | 50 | 43 | 39 |  |
| 13  | X  | A  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 32 |    | 33 | 38 | 34 | 38 |    |    |    |    |    |    |    |    |    |    |    |    |    | 56 | 55 | 56 | 50 | 52 | 48 |  |
| 14  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 52 | 50 | 39 | 36 | 33 | 34 |    |    |    |    |    |    |    |    |    |    |    |    |    | 84 | 72 | 58 | 58 | 51 | 51 |  |
| 15  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 48 | 46 | 44 | 43 | 43 | 39 |    |    |    |    |    |    |    |    |    |    |    |    |    | 75 | 77 | 72 | 66 | 61 | 56 |  |
| 16  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 50 | 47 | 44 | 44 | 49 | 38 |    |    |    |    |    |    |    |    |    |    |    |    |    | 84 | 81 | 77 | 66 | 62 | 60 |  |
| 17  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 59 | 50 | 48 | 47 | 42 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |    | 76 | 76 | 72 | 64 | 62 | 60 |  |
| 18  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 46 | 44 | 42 | 41 | 42 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |    | 64 | 63 | 67 | 62 | 55 | 47 |  |
| 19  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 43 | 41 | 40 | 41 | 40 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |    | 66 | 62 | 59 | 56 | 59 | 56 |  |
| 20  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 45 | 46 | 44 | 44 | 43 | 43 |    |    |    |    |    |    |    |    |    |    |    |    |    | 78 | 63 | 53 | 51 | 50 | 49 |  |
| 21  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 51 | 48 | 47 | 47 | 45 | 44 |    |    |    |    |    |    |    |    |    |    |    |    |    | 67 | 54 | 51 | 50 | 51 | 50 |  |
| 22  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 49 | 50 | 50 | 40 | 38 | 39 |    |    |    |    |    |    |    |    |    |    |    |    |    | 68 | 58 | 54 | 57 | 55 | 59 |  |
| 23  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 45 | 46 | 44 | 44 | 42 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |    | 75 | 76 | 69 | 50 | 47 | 47 |  |
| 24  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 45 | 45 | 46 | 45 | 44 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |    | 73 | 63 | 58 | 53 | 55 | 54 |  |
| 25  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 51 | 46 | 44 | 40 | 36 | 36 |    |    |    |    |    |    |    |    |    |    |    |    |    | 79 | 71 | 48 | 50 | 52 | 51 |  |
| 26  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 47 | 48 | 48 | 36 | 36 | 36 |    |    |    |    |    |    |    |    |    |    |    |    |    | 70 | 52 | 49 | 48 | 49 | 47 |  |
| 27  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | A  | X  | X  | X  | X  |  |
|     | 47 | 48 | 46 | 46 | 44 | 45 |    |    |    |    |    |    |    |    |    |    |    |    |    | 66 |    | 44 | 45 | 46 | 45 |  |
| 28  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 47 | 46 | 46 | 43 | 41 | 42 |    |    |    |    |    |    |    |    |    |    |    |    |    | 82 | 49 | 42 | 42 | 43 | 44 |  |
| 29  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 44 | 43 | 43 | 44 | 43 | 44 |    |    |    |    |    |    |    |    |    |    |    |    |    | 57 | 53 | 50 | 49 | 49 | 49 |  |
| 30  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     | 42 | 36 | 36 | 37 | 36 | 37 |    |    |    |    |    |    |    |    |    |    |    |    |    | 60 | 60 | 50 | 48 | 47 | 46 |  |
| 31  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|     |    | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |
| CNT |    | 30 | 28 | 30 | 29 | 28 | 21 | 1  |    |    |    |    |    |    |    |    |    |    |    | 26 | 29 | 29 | 29 | 29 | 30 |  |
| MED |    | X  | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     |    | 47 | 46 | 44 | 42 | 41 | 42 | 40 |    |    |    |    |    |    |    |    |    |    |    | 68 | 63 | 58 | 53 | 51 | 50 |  |
| U Q |    | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     |    | 51 | 50 | 47 | 44 | 43 | 42 |    |    |    |    |    |    |    |    |    |    |    |    | 76 | 73 | 65 | 58 | 57 | 56 |  |
| L Q |    | X  | X  | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  | X  | X  | X  | X  |  |
|     |    | 44 | 43 | 40 | 40 | 36 | 38 |    |    |    |    |    |    |    |    |    |    |    |    | 62 | 58 | 52 | 49 | 47 | 47 |  |

SEP. 2005 f<sub>XI</sub> (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 foF2 (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 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      | 50 | 46 | 41 | 42 | A  | A  | 49 | 47 | A  | A  | 54 | 54 | 48 | 46 | 55 | 56 | 53 | 54 | 57 | 57 | 52 | 49 | 53 | 50 |  |
| 2      | 51 | 48 | 42 | 39 | 35 | 36 | 51 | 63 | 77 | 69 | 67 | 60 | 61 | 58 | 65 | 67 | 63 | 57 | 56 | 65 | 52 | 54 | 47 | 54 |  |
| 3      | 45 | 46 | 44 | 36 | 32 | 26 | 39 | 47 | 46 | 56 | 54 | 64 | 68 | 62 | 62 | 61 | 60 | 58 | 60 | 54 | 48 | 45 | 45 | 44 |  |
| 4      | 39 | 34 | 34 | 33 | 35 | 32 | 44 | 64 | 72 | A  | 58 | 53 | 57 | 54 | 51 | 52 | 54 | 55 | 56 | 60 | 57 | 48 | A  | F  |  |
| 5      | F  | 35 | 32 | 28 | F  | 26 | A  | 47 | 54 | 49 | 50 | 55 | 55 | 56 | 56 | 55 | 54 | 55 | 61 | 68 | A  | 42 | 40 | 40 |  |
| 6      | 38 | A  | 34 | A  | 31 | 29 | 43 | 50 | 63 | 59 | 55 | 56 | 55 | 55 | 56 | 59 | 52 | 48 | 46 | 50 | 50 | 48 | 45 | 40 |  |
| 7      | 33 | 29 | 30 | 30 | 29 | 29 | 42 | 59 | 55 | 53 | 52 | 53 | 60 | 52 | 54 | 55 | 58 | 55 | 53 | 58 | 50 | 41 | 41 | F  |  |
| 8      | 38 | 37 | 36 | 34 | 34 | 37 | 50 | 54 | 60 | 65 | 61 | A  | A  | 65 | A  | 74 | 75 | A  | 60 | 58 | 53 | 50 | 52 | 58 |  |
| 9      | F  | F  | F  | F  | F  | F  | 52 | 62 | 67 | 65 | 61 | 55 | 55 | 60 | B  | 54 | 58 | 56 | 56 | 57 | 51 | 46 | 46 | 46 |  |
| 10     | 44 | 41 | 40 | 38 | 40 | 38 | 49 | 53 | 66 | 70 | 60 | 54 | 62 | 62 | A  | 60 | 60 | 61 | 64 | 77 | 78 | A  | 29 | 29 |  |
| 11     | 31 | 31 | 34 | F  | 35 | 34 | 58 | B  | A  | 54 | 60 | 66 | A  | 67 | 81 | 80 | 81 | 69 | 90 | 78 | 65 | 73 | 61 | 46 |  |
| 12     | 42 | 47 | 35 | 35 | A  | A  | A  | A  | A  | 56 | 52 | 56 | 51 | 48 | 52 | 47 | 52 | 52 | 48 | 52 | 52 | 44 | 37 | 32 |  |
| 13     | 26 | A  | 27 | 32 | 28 | 32 | 45 | 47 | 58 | A  | A  | A  | 54 | 55 | 55 | 52 | 55 | 55 | 50 | 49 | 50 | 44 | 46 | 42 |  |
| 14     | 46 | 44 | 32 | 30 | 27 | 28 | 54 | 72 | 79 | 67 | 65 | 64 | 72 | 63 | 65 | 66 | 64 | 71 | 78 | 66 | 52 | 52 | 45 | 45 |  |
| 15     | 42 | 40 | 37 | 37 | 37 | 33 | 46 | 68 | 74 | 70 | 62 | 59 | 69 | 80 | 69 | 69 | 72 | 65 | 68 | 71 | 66 | 60 | 55 | 50 |  |
| 16     | 44 | 41 | 38 | 38 | 43 | 32 | 42 | 58 | 66 | 74 | 69 | B  | 62 | 66 | 79 | 80 | 81 | 78 | 78 | 75 | 71 | 60 | 56 | 54 |  |
| 17     | 53 | 43 | 42 | 41 | 36 | 36 | 51 | 67 | 80 | 58 | 63 | 56 | 64 | 68 | 65 | 62 | 65 | 66 | 70 | 70 | 66 | 58 | 55 | 54 |  |
| 18     | 40 | 38 | 36 | 35 | 36 | 36 | 48 | 61 | 68 | 70 | 57 | 68 | 68 | 66 | 60 | 65 | 70 | 63 | 58 | 56 | 61 | 56 | 48 | 41 |  |
| 19     | 37 | 35 | 34 | 35 | 34 | 36 | 52 | 72 | 61 | 74 | 67 | 68 | 65 | 66 | 64 | 64 | 62 | 59 | 60 | 56 | 53 | 50 | 53 | 50 |  |
| 20     | 39 | 40 | 38 | 38 | 37 | 37 | 52 | 65 | 67 | 75 | 70 | 66 | 62 | 64 | 66 | 66 | 68 | 75 | 72 | 57 | 47 | 45 | 44 | 43 |  |
| 21     | 45 | 42 | 41 | 41 | 39 | 38 | 55 | 68 | 82 | 66 | 64 | 58 | 66 | 74 | 74 | 68 | 72 | 62 | 61 | 48 | 45 | 44 | 45 | 44 |  |
| 22     | 43 | 44 | 44 | 34 | 32 | 33 | 51 | 59 | 65 | 62 | 65 | 70 | 65 | 62 | 64 | 66 | 65 | 66 | 62 | 52 | 48 | 51 | 49 | 53 |  |
| 23     | 39 | 40 | 38 | 38 | 36 | 36 | 49 | 58 | 63 | 63 | 70 | 86 | 89 | 80 | 69 | 62 | 66 | 63 | 69 | 70 | 63 | 43 | 41 | 41 |  |
| 24     | 39 | 39 | 40 | 39 | 38 | 36 | 51 | 63 | 69 | 74 | 66 | 75 | 72 | 72 | 77 | 75 | 70 | 72 | 66 | 58 | 52 | 47 | F  | F  |  |
| 25     | F  | 40 | 38 | 34 | 30 | 30 | 51 | 73 | 75 | 64 | 65 | 68 | 84 | 78 | 74 | 66 | 61 | 66 | 73 | 65 | F  | F  | F  | F  |  |
| 26     | 41 | 42 | 42 | 30 | 30 | 30 | 49 | 65 | 57 | 83 | 85 | 84 | 79 | 75 | A  | 76 | 81 | 77 | 64 | 46 | 42 | F  | F  | 41 |  |
| 27     | 41 | 42 | 40 | 40 | 38 | 38 | 56 | 66 | 77 | 75 | 79 | 76 | 72 | 68 | 89 | 88 | 81 | 88 | 60 | A  | 37 | 39 | 40 | 39 |  |
| 28     | 41 | 40 | 40 | 37 | 35 | 36 | 54 | 72 | 76 | 78 | 74 | 63 | 72 | 80 | 77 | 84 | 91 | 90 | 76 | 43 | 36 | 36 | 36 | 37 |  |
| 29     | 38 | 37 | 37 | 38 | 37 | 37 | 50 | 71 | 64 | 71 | 70 | 83 | 76 | 78 | 75 | 66 | 65 | 66 | 51 | 47 | 44 | 43 | 43 | 43 |  |
| 30     | 36 | 30 | 30 | 31 | 30 | 31 | 48 | 64 | 77 | 66 | 71 | 78 | 70 | 68 | 58 | 66 | 62 | 65 | 54 | 53 | 44 | 42 | 41 | 40 |  |
| 31     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |  |
| CNT    | 28 | 27 | 29 | 27 | 26 | 27 | 28 | 28 | 27 | 27 | 29 | 27 | 28 | 30 | 26 | 30 | 30 | 29 | 30 | 29 | 28 | 27 | 26 | 26 |  |
| MED    | 40 | 40 | 38 | 36 | 35 | 34 | 50 | 63 | 67 | 66 | 64 | 64 | 65 | 66 | 65 | 66 | 64 | 63 | 60 | 57 | 52 | 47 | 45 | 44 |  |
| U Q    | 44 | 43 | 40 | 38 | 37 | 36 | 52 | 68 | 76 | 74 | 70 | 70 | 72 | 72 | 74 | 69 | 72 | 70 | 69 | 67 | 59 | 52 | 52 | 50 |  |
| L Q    | 38 | 37 | 34 | 33 | 31 | 30 | 47 | 56 | 61 | 59 | 58 | 56 | 58 | 58 | 56 | 59 | 58 | 56 | 56 | 52 | 48 | 43 | 41 | 40 |  |

SEP. 2005 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 foF1 (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|
| 1      |    |    |    |    |    | A  | A  | U L | A   | A   | A   | A   | U L | 436 | 436 | 440 | 436 | L   | L  | L  |    |    |    |    |
| 2      |    |    |    |    |    |    |    | L   | L   | L   | A   | A   | 456 | A   | 432 | 436 | L   | L   | L  |    |    |    |    |    |
| 3      |    |    |    |    |    |    |    | U L | A   | 424 | 440 | 460 | 452 | 452 | 448 | L   | L   | L   | L  |    |    |    |    |    |
| 4      |    |    |    |    |    |    | A  | A   | A   | A   | A   | 448 | 444 | 448 | 436 | 428 | 420 | 396 | L  | L  |    |    |    |    |
| 5      |    |    |    |    |    |    | A  | 384 | 396 | 428 | 436 | 444 | 432 | 444 | 448 | 420 | L   | L   | L  |    |    |    |    |    |
| 6      |    |    |    |    |    |    |    | L   | A   | 428 | A   | A   | A   | L   | 448 | 428 | 416 | L   | L  |    |    |    |    |    |
| 7      |    |    |    |    |    |    |    | L   | L   | L   | A   | U L | U L | U L | L   | L   | L   | L   | A  |    |    |    |    |    |
| 8      |    |    |    |    |    |    |    | L   | A   | A   | A   | A   | A   | A   | A   | A   | 432 | L   | A  |    |    |    |    |    |
| 9      |    |    |    |    |    |    |    | E B | A   | L   | L   | U L | E B | A   | B   | E B | A   | A   |    |    |    |    |    |    |
| 10     |    |    |    |    |    |    |    | A   | A   | A   | A   | A   | 484 | A   | A   | A   | A   | A   |    |    |    |    |    |    |
| 11     |    |    |    |    |    |    |    | B   | A   | A   | E B | A   | A   | A   | A   | 432 | 388 | L   |    |    |    |    |    |    |
| 12     |    |    |    |    |    | A  | A  | A   | A   | A   | 424 | A   | A   | U L | U L | U L | U L | L   | L  |    |    |    |    |    |
| 13     |    |    |    |    |    |    |    | L   | A   | A   | A   | A   | A   | 428 | 428 | 424 | L   | L   | L  |    |    |    |    |    |
| 14     |    |    |    |    |    |    | A  |     | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 15     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | A   |    |    |    |    |    |    |
| 16     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 17     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 18     |    |    |    |    |    |    | L  | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 19     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 20     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 21     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 22     |    |    |    |    |    |    |    | A   | L   | L   | L   | L   | A   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 23     |    |    |    |    |    |    |    | L   | A   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 24     |    |    |    |    |    |    |    | L   | L   | L   | A   | L   | L   | L   | L   | L   | A   | A   |    |    |    |    |    |    |
| 25     |    |    |    |    |    |    |    |     | L   | L   | A   | A   | A   | A   | A   | L   | L   | L   |    |    |    |    |    |    |
| 26     |    |    |    |    |    |    |    | L   | A   | A   | A   | A   | A   | A   | A   | A   | A   | A   |    |    |    |    |    |    |
| 27     |    |    |    |    |    |    |    | L   | L   | U L | L   | L   | A   | U L | L   | L   | L   | L   |    |    |    |    |    |    |
| 28     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 29     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 30     |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |    |    |    |    |    |    |
| 31     |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18 | 19 | 20 | 21 | 22 | 23 |
| CNT    |    |    |    |    |    |    |    | 4   | 3   | 14  | 15  | 18  | 17  | 18  | 14  | 10  | 4   |     |    |    |    |    |    |    |
| MED    |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |     |    |    |    |    |    |    |
| U Q    |    |    |    |    |    |    |    | 386 | 416 | 444 | 456 | 460 | 468 | 450 | 438 | 426 | 392 |     |    |    |    |    |    |    |
| L Q    |    |    |    |    |    |    |    | U L | L   | L   | L   | L   | L   | L   | L   | L   | L   |     |    |    |    |    |    |    |
|        |    |    |    |    |    |    |    | 406 | 428 | 456 | 464 | 476 | 476 | 464 | 448 | 432 | 396 |     |    |    |    |    |    |    |
|        |    |    |    |    |    |    |    | L   | L   | L   | L   | L   | L   | L   | L   | L   | L   |     |    |    |    |    |    |    |
|        |    |    |    |    |    |    |    | 380 | 396 | 436 | 444 | 448 | 450 | 436 | 428 | 420 | 388 |     |    |    |    |    |    |    |

SEP. 2005 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 foE (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 00 | 01 | 02 | 03 | 04 | 05 | 06  | 07  | 08  | 09  | 10  | 11 | 12 | 13 | 14 | 15  | 16  | 17  | 18  | 19  | 20  | 21 | 22 | 23 |  |
|--------|----|----|----|----|----|----|-----|-----|-----|-----|-----|----|----|----|----|-----|-----|-----|-----|-----|-----|----|----|----|--|
| 1      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A  | A  | A  | A  | 300 | A   | A   | B   |     |     |    |    |    |  |
| 2      |    |    |    |    |    | B  | U   | A   | A   | A   | A   | A  | A  | A  | A  | A   | A   | A   | U   | R   |     |    |    |    |  |
| 3      |    |    |    |    |    |    | 176 | 244 | A   | A   | A   | A  | R  | A  | A  | R   | U   | R   | A   | A   |     |    |    |    |  |
| 4      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A  | A  | A  | A  | U   | U   | U   | U   | A   | B   |    |    |    |  |
| 5      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | R  | R  | R  | R  | A   | U   | R   | A   | A   | B   |    |    |    |  |
| 6      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A  | A  | A  | A  | U   | U   | U   | A   | A   | B   |    |    |    |  |
| 7      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A  | R  | R  | R  | R   | R   | U   | R   | A   |     |    |    |    |  |
| 8      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A  | A  | A  | A  | A   | A   | A   | A   | A   |     |    |    |    |  |
| 9      |    |    |    |    |    |    | U   | R   | B   | A   | A   | A  | B  | A  | B  | B   | U   | A   | A   |     |     |    |    |    |  |
| 10     |    |    |    |    |    | B  | A   | A   | B   | B   | B   | B  | R  | A  | A  | A   | U   | A   | A   |     |     |    |    |    |  |
| 11     |    |    |    |    |    |    | A   | B   | B   | B   | B   | A  | A  | A  | A  | U   | A   | R   | U   | A   |     |    |    |    |  |
| 12     |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A  | A  | A  | B  | A   | U   | R   | U   | A   |     |    |    |    |  |
| 13     |    |    |    |    |    |    | U   | A   | A   | A   | A   | A  | A  | A  | R  | B   | U   | R   | U   | A   |     |    |    |    |  |
| 14     |    |    |    |    |    |    | 216 |     | A   | A   | B   | A  | A  | A  | A  | A   | U   | R   | U   | R   |     |    |    |    |  |
| 15     |    |    |    |    |    |    | A   | A   | U   | A   | A   | B  | B  | R  | R  |     | A   | A   | U   | A   |     |    |    |    |  |
| 16     |    |    |    |    |    |    | A   | A   | A   | R   | A   | B  | B  | U  | R  | R   |     | U   | A   |     |     |    |    |    |  |
| 17     |    |    |    |    |    |    | U   | A   | A   | A   | R   | U  | R  | R  | R  | R   | U   | U   | U   | A   |     |    |    |    |  |
| 18     |    |    |    |    |    |    | A   | A   | A   | A   | A   | R  | R  | R  | R  | R   | U   | A   | A   | A   |     |    |    |    |  |
| 19     |    |    |    |    |    |    | A   | A   | A   | R   | R   | R  | R  | B  | R  | R   | A   | U   | A   | A   |     |    |    |    |  |
| 20     |    |    |    |    |    |    | A   | A   | A   | A   | A   | R  | R  | U  | R  | R   | U   | R   | U   | A   | A   |    |    |    |  |
| 21     |    |    |    |    |    |    | U   | A   | A   | A   | A   | A  | R  | R  | U  | R   | U   | R   | A   | A   |     |    |    |    |  |
| 22     |    |    |    |    |    |    | A   | A   | A   | A   | U   | R  | R  | A  | R  | U   | R   | U   | R   | U   | R   |    |    |    |  |
| 23     |    |    |    |    |    |    | U   | A   | A   | A   | A   | R  |    | U  | U  | U   | U   | R   | A   | A   |     |    |    |    |  |
| 24     |    |    |    |    |    |    | U   | R   | U   | A   | U   | A  | A  | A  | A  | A   | A   | A   | U   | A   |     |    |    |    |  |
| 25     |    |    |    |    |    |    | 176 | 252 | U   | A   | U   | A  | A  | A  | A  | A   | U   | R   | A   | A   |     |    |    |    |  |
| 26     |    |    |    |    |    |    | U   | R   | U   | R   | A   | A  | A  | A  | A  | A   | A   | A   | A   | A   |     |    |    |    |  |
| 27     |    |    |    |    |    |    | A   | A   | A   | A   | A   | A  | A  | A  | R  | U   | R   | U   | A   | A   |     |    |    |    |  |
| 28     |    |    |    |    |    |    | U   | R   | A   | A   | R   | A  | R  | R  | A  | A   | A   | U   | R   |     |     |    |    |    |  |
| 29     |    |    |    |    |    |    | B   | A   | A   | A   | R   | A  | R  | R  | U  | R   | R   | U   | A   | B   |     |    |    |    |  |
| 30     |    |    |    |    |    |    | B   | A   | A   | A   | A   | A  | R  | A  | A  | U   | R   | A   | A   |     |     |    |    |    |  |
| 31     |    |    |    |    |    |    |     |     |     |     |     |    |    |    |    | 304 | 220 |     |     |     |     |    |    |    |  |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06  | 07  | 08  | 09  | 10  | 11 | 12 | 13 | 14 | 15  | 16  | 17  | 18  | 19  | 20  | 21 | 22 | 23 |  |
| CNT    |    |    |    |    |    |    | 10  | 4   | 4   | 2   | 2   |    | 1  | 3  | 7  | 17  | 17  | 10  |     |     |     |    |    |    |  |
| MED    |    |    |    |    |    |    | U   | U   | U   | A   | U   | A  | U  | R  |    | 352 | U   | R   | U   | R   | U   | R  | U  | A  |  |
| U Q    |    |    |    |    |    |    | 186 | 256 | 282 | 312 | 342 |    |    |    |    |     | 300 | 260 | 198 |     |     |    |    |    |  |
| L Q    |    |    |    |    |    |    | U   | A   | U   | A   |     |    |    |    |    |     | U   | R   | U   | R   | U   | A  | R  |    |  |
|        |    |    |    |    |    |    | 196 | 262 | 296 |     |     |    |    |    |    |     | 352 | 336 | 312 | 276 | 216 |    |    |    |  |
|        |    |    |    |    |    |    | U   | A   | U   | A   |     |    |    |    |    |     | U   | R   | U   | A   | R   |    |    |    |  |
|        |    |    |    |    |    |    | 176 | 248 | 274 |     |     |    |    |    |    |     | 336 | 316 | 292 | 254 | 192 |    |    |    |  |



IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 foEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1      | J A | J A | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |     | J A | J A | J A | E B | J A | J A | J A | J A |
| 2      | J A | J A | J A | J A | E B | E B |     |     | J A | J A | J A | J A |     | J A | J A |     | J A | E B | E B | E B | J A | J A | J A | J A |
| 3      | J A | J A | J A | J A | J A | E B | J A | J A | J A | J A |     |     | G   |     |     |     |     |     | E B |     | E B | J A | E B | E B |
| 4      | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 5      | J A | J A | J A | J A | E B | J A | J A |     |     | J A | J A | G   | G   |     | J A | G   | J A | J A | J A | J A | J A | J A | J A | J A |
| 6      | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 7      | J A | J A | J A | J A | E B | E B |     |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 8      | J A | J A | J A | J A | E B | E B |     |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 9      | J A | E B | E B | E B | E B | E B |     | G E | B   | J A | J A | J A | E B | J A | E B | J A | J A | J A | J A | J A | J A | E B | J A | J A |
| 10     | J A | J A | J A | J A | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 11     | J A | J A | J A | J A | E B | E B | J A |     | J A | J A | E B |     | J A | J A | J A |     | J A | J A | J A | J A | J A | J A | E B | E B |
| 12     | J A | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | E B | E B |
| 13     | J A | J A | J A | J A | E B | E B | J A |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 14     | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 15     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 16     | J A | J A | J A | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 17     | E B | E B | E B | J A | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 18     | J A | E B | J A | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | E B | E B |
| 19     | J A | J A | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | E B | E B |
| 20     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 21     | E B | E B | E B | E B | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 22     | E B | E B | E B | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 23     | E B | E B | E B | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 24     | E B | J A | J A | E B | J A | E B |     | G   |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 25     | J A | J A | J A | J A | J A | E B |     |     |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 26     | J A | J A | J A | J A | J A | E B | G   | G   |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| 27     | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | E B | E B |
| 28     | J A | J A | J A | E B | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | E B | E B |
| 29     | J A | E B | E B | E B | E B | E B | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | E B | E B |
| 30     | E B | E B | E B | E B | E B | E B |     |     |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | E B | E B |
| 31     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|        | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |
| CNT    | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 29  | 30  | 30  | 30  | 29  | 30  | 30  | 29  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| MED    | J A | J A | J A | J A | J A | E B |     |     | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| U Q    | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A | J A |
| L Q    | E B | E B | E B | E B | E B | E B |     |     |     |     |     |     | G   | G   | G   | G   | G   | G   | G   | E B | E B | E B | E B | E B |

SEP. 2005 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN



IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 fbEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| D   | H  | 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   | 37 | E  | B  | E  | B  | A  | A  | A  | A  | A  | A  | A  | A  | A  | A  | A  | A  | 28 | 24 | 19 | E  | B  | 27 | 26 | 29 | 27 |    |    |    |    |
| 2   | 22 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 29 | 18 | 16 | 15 | 17 | E  | B  | E  | B  | 21 |    |    |    |
| 3   | 26 | 24 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 30 | 26 | 17 | 15 | 15 | 15 | 15 | 15 | 14 |    |    |    |    |
| 4   | 15 | 16 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 22 | 27 | 30 | 19 | 36 | 21 | 62 | 30 |    |    |    |    |    |
| 5   | 26 | 15 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 31 | 24 | 28 | 26 | A  | A  | 16 | 18 | 24 |    |    |    |    |
| 6   | 20 | A  | A  | 66 | 27 | A  | A  | 22 | 25 | 20 | 28 | 37 | 38 | 42 | 46 | 43 | 37 | 34 | 32 | 34 | 24 | 21 | 27 | 18 | E  | B  | E  | B  | 18 |    |
| 7   | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 24 | 26 | 23 | 15 | 22 | 19 | 18 | 28 |    |    |    |    |    |
| 8   | 30 | 20 | 17 | 20 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 30 | A  | A  | 28 | 20 | 16 | E  | B  | E  | B  | E  | B  | 15 |
| 9   | 16 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 43 | 36 | 39 | 23 | 32 | 40 | E  | B  | 20 | 23 |    |    |    |
| 10  | 21 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 40 | 32 | 24 | 31 | 26 | A  | A  | 20 | 16 |    |    |    |    |
| 11  | 17 | 20 | 17 | 15 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 23 | 30 | 25 | 18 | 28 | 24 | E  | B  | E  | B  | E  | B  | 15 |
| 12  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 20 | 22 | 16 | 15 | 16 | 14 | 14 | 14 | 14 |    |    |    |    |
| 13  | 18 | A  | A  | 34 | 18 | 23 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 32 | 25 | 25 | 20 | 30 | 18 | 26 | 16 |    |    |    |    |    |
| 14  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 23 | 18 | 39 | 28 | 20 | 20 | E  | B  | 21 |    |    |    |    |
| 15  | 19 | 30 | 21 | 16 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 34 | 20 | 35 | 26 | 15 | 15 | 19 | 17 |    |    |    |    |    |
| 16  | E  | B  | 17 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 31 | 28 | 23 | 18 | 20 | 15 | 26 | 20 | 20 |    |    |    |    |
| 17  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 32 | 32 | 25 | 34 | 35 | 20 | E  | B  | E  | B  | E  | B  | 15 |
| 18  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 33 | 31 | 25 | 30 | 17 | 15 | 15 | 16 | 15 |    |    |    |    |
| 19  | 20 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 35 | 30 | 24 | 21 | 20 | E  | B  | E  | B  | E  | B  | 15 |    |
| 20  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 28 | 24 | 20 | 17 | 16 | 17 | 19 | 22 |    |    |    |    |    |
| 21  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 30 | 20 | 27 | 24 | E  | B  | E  | B  | E  | B  | E  | B  | 15 |
| 22  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 22 | 14 | 15 | 16 | 15 | 15 | 15 | 15 | 15 |    |    |    |    |
| 23  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 25 | 25 | 20 | 20 | 16 | 18 | 24 | 18 | 14 |    |    |    |    |
| 24  | E  | B  | 17 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 37 | 30 | 14 | 21 | 30 | 23 | E  | B  | 17 |    |    |    |    |
| 25  | 16 | E  | B  | 15 | 22 | 16 | E  | B  | 17 | 15 | 22 | 28 | 31 | 35 | 40 | 42 | 57 | 54 | 43 | 24 | 32 | 35 | 25 | 36 | 18 | 21 | 15 | 18 |    |    |
| 26  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 46 | 53 | 46 | 26 | 23 | 15 | 15 | 15 |    |    |    |    |    |
| 27  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 26 | 20 | E  | B  | A  | A  | E  | B  | E  | B  | E  | B  | 15 |
| 28  | E  | B  | 15 | 23 | 16 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 20 | 23 | 20 | 20 | 15 | 15 | 15 | 15 |    |    |    |    |    |
| 29  | 17 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 26 | 19 | E  | B  | E  | B  | E  | B  | E  | B  | 17 |    |    |
| 30  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 27 | 19 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 15 |
| 31  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|     |    | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |    |    |    |    |    |
| CNT |    | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 29 | 30 | 30 | 30 | 29 | 30 | 30 | 29 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |    |    |    |    |    |
| MED |    | 16 | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | 28 | 24 | 22 | 20 | 18 | 16 | E  | B  | 16 |    |    |    |    |
| U Q |    | 20 | 17 | 17 | 16 | 16 | 17 | 30 | 34 | 40 | 43 | 42 | 44 | 43 | 44 | 37 | 34 | 32 | 27 | 28 | 26 | 26 | 21 | 19 | 21 |    |    |    |    |    |
| L Q |    | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | E  | B  | 25 | 20 | 16 | 16 | 16 | 16 | 15 | 15 | 15 |    |    |    |    |

IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 fmin (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 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      | 14 | 15 | 15 | 15 | 16 | 14 | 15 | 15 | 15 | 17 | 18 | 19 | 21 | 22 | 18 | 14 | 14 | 14 | 15 | 16 | 15 | 16 | 15 | 15 |
| 2      | 15 | 16 | 15 | 15 | 16 | 15 | 13 | 15 | 15 | 15 | 16 | 25 | 26 | 18 | 17 | 16 | 15 | 14 | 16 | 15 | 14 | 16 | 16 | 16 |
| 3      | 15 | 15 | 16 | 15 | 15 | 16 | 17 | 14 | 13 | 15 | 21 | 18 | 24 | 20 | 13 | 15 | 14 | 16 | 17 | 15 | 15 | 15 | 15 | 14 |
| 4      | 14 | 16 | 15 | 15 | 15 | 15 | 13 | 13 | 16 | 17 | 17 | 20 | 18 | 22 | 14 | 18 | 15 | 14 | 14 | 16 | 15 | 16 | 15 | 15 |
| 5      | 15 | 14 | 16 | 15 | 15 | 15 | 14 | 12 | 16 | 16 | 18 | 18 | 21 | 20 | 20 | 19 | 15 | 14 | 14 | 15 | 15 | 15 | 15 | 15 |
| 6      | 15 | 15 | 14 | 14 | 14 | 16 | 14 | 13 | 16 | 14 | 18 | 17 | 21 | 22 | 18 | 16 | 12 | 13 | 16 | 15 | 14 | 15 | 15 | 14 |
| 7      | 15 | 15 | 15 | 16 | 16 | 16 | 14 | 22 | 23 | 27 | 26 | 29 | 25 | 24 | 24 | 20 | 19 | 13 | 16 | 15 | 15 | 15 | 14 | 15 |
| 8      | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 18 | 20 | 32 | 35 | 24 | 31 | 27 | 25 | 20 | 16 | 13 | 12 | 15 | 14 | 16 | 16 | 16 |
| 9      | 14 | 15 | 15 | 14 | 14 | 15 | 15 | 42 | 31 | 26 | 22 | 22 | 44 | 27 | B  | 43 | 18 | 12 | 15 | 15 | 15 | 16 | 15 | 14 |
| 10     | 15 | 15 | 15 | 15 | 15 | 15 | 21 | 31 | 41 | 40 | 39 | 40 | 34 | 35 | 26 | 26 | 17 | 13 | 15 | 14 | 15 | 14 | 15 | 14 |
| 11     | 16 | 14 | 15 | 15 | 15 | 16 | 14 | B  | 52 | 39 | 56 | 32 | 36 | 26 | 24 | 18 | 18 | 14 | 15 | 12 | 14 | 15 | 14 | 15 |
| 12     | 16 | 15 | 15 | 14 | 14 | 14 | 16 | 15 | 20 | 20 | 18 | 22 | 26 | 21 | 41 | 20 | 14 | 13 | 16 | 15 | 14 | 14 | 14 | 14 |
| 13     | 15 | 15 | 14 | 14 | 16 | 15 | 15 | 16 | 19 | 26 | 25 | 31 | 24 | 26 | 35 | 20 | 15 | 14 | 16 | 15 | 14 | 13 | 15 | 16 |
| 14     | 16 | 16 | 15 | 15 | 15 | 14 | 15 | 22 | 20 | 42 | 33 | 25 | 26 | 23 | 22 | 20 | 14 | 13 | 15 | 14 | 15 | 14 | 16 | 14 |
| 15     | 15 | 15 | 15 | 15 | 14 | 14 | 15 | 12 | 18 | 20 | 37 | 39 | 24 | 22 | 18 | 16 | 14 | 14 | 14 | 14 | 15 | 15 | 15 | 14 |
| 16     | 16 | 15 | 14 | 16 | 15 | 15 | 15 | 14 | 13 | 18 | 25 | B  | 46 | 18 | 22 | 14 | 15 | 15 | 15 | 14 | 15 | 15 | 14 | 15 |
| 17     | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 15 | 18 | 22 | 20 | 21 | 25 | 20 | 20 | 14 | 16 | 16 | 15 | 15 | 14 | 16 | 15 | 15 |
| 18     | 15 | 16 | 15 | 15 | 14 | 15 | 15 | 14 | 14 | 16 | 19 | 21 | 18 | 25 | 21 | 18 | 13 | 14 | 14 | 14 | 15 | 15 | 16 | 15 |
| 19     | 15 | 16 | 15 | 15 | 15 | 15 | 14 | 15 | 17 | 18 | 20 | 21 | 18 | 44 | 15 | 13 | 14 | 15 | 14 | 15 | 15 | 14 | 15 | 15 |
| 20     | 15 | 16 | 15 | 15 | 16 | 16 | 14 | 15 | 18 | 18 | 21 | 21 | 25 | 20 | 15 | 13 | 14 | 15 | 14 | 14 | 15 | 15 | 15 | 14 |
| 21     | 16 | 15 | 15 | 16 | 15 | 14 | 14 | 14 | 15 | 18 | 20 | 19 | 23 | 21 | 22 | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 16 | 15 |
| 22     | 16 | 16 | 15 | 14 | 15 | 15 | 13 | 14 | 14 | 15 | 16 | 15 | 16 | 13 | 15 | 18 | 15 | 15 | 14 | 15 | 16 | 15 | 15 | 15 |
| 23     | 15 | 16 | 16 | 14 | 16 | 15 | 15 | 14 | 12 | 14 | 16 | 18 | 14 | 20 | 16 | 15 | 13 | 12 | 15 | 14 | 14 | 14 | 14 | 14 |
| 24     | 16 | 15 | 15 | 15 | 13 | 14 | 15 | 14 | 14 | 13 | 17 | 16 | 20 | 14 | 16 | 14 | 14 | 15 | 14 | 15 | 15 | 15 | 15 | 14 |
| 25     | 15 | 15 | 16 | 14 | 14 | 15 | 14 | 15 | 15 | 13 | 16 | 20 | 18 | 17 | 16 | 16 | 14 | 14 | 13 | 15 | 15 | 15 | 15 | 15 |
| 26     | 15 | 15 | 15 | 14 | 16 | 15 | 14 | 15 | 12 | 14 | 16 | 22 | 21 | 18 | 17 | 15 | 15 | 14 | 15 | 15 | 15 | 15 | 15 | 15 |
| 27     | 16 | 15 | 15 | 15 | 15 | 16 | 14 | 14 | 14 | 16 | 16 | 17 | 16 | 17 | 16 | 17 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 |
| 28     | 15 | 14 | 14 | 14 | 14 | 15 | 14 | 13 | 17 | 15 | 18 | 18 | 20 | 19 | 16 | 15 | 14 | 16 | 14 | 14 | 15 | 15 | 15 | 15 |
| 29     | 14 | 15 | 15 | 14 | 15 | 14 | 15 | 13 | 14 | 14 | 18 | 15 | 15 | 14 | 15 | 14 | 14 | 13 | 16 | 16 | 16 | 15 | 16 | 15 |
| 30     | 15 | 15 | 15 | 14 | 15 | 15 | 15 | 14 | 14 | 16 | 18 | 22 | 18 | 20 | 17 | 14 | 13 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 31     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| CNT    | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| MED    | 15 | 15 | 15 | 15 | 15 | 15 | 14 | 14 | 16 | 17 | 18 | 21 | 22 | 20 | 18 | 16 | 14 | 14 | 15 | 15 | 15 | 15 | 15 | 15 |
| U Q    | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 19 | 22 | 25 | 25 | 26 | 24 | 22 | 19 | 15 | 15 | 16 | 15 | 15 | 15 | 15 | 15 |
| L Q    | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 15 | 17 | 18 | 18 | 18 | 16 | 14 | 14 | 13 | 14 | 14 | 14 | 15 | 15 | 14 |

SEP. 2005 fmin (0.1MHz)

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IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 M(3000)F2 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| D   | H | 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   |   | 279 | 275 | 270 | 285 | A   | A   | 321 | 266 | A   | A   | 262 | 303 | 275 | 307 | 292 | 310 | 299 | 308 | 322 | 306 | 300 | 275 | 278 | 279 |     |
| 2   |   | 299 | 307 | 327 | 346 | 329 | 322 | 330 | 325 | 358 | 313 | 376 | 303 | 334 | 311 | 326 | 338 | 339 | 338 | 315 | 335 | 304 | 314 | 278 | 277 |     |
| 3   |   | 309 | 302 | 305 | 262 | 318 | 264 | 301 | 337 | 363 | 326 | 307 | 301 | 330 | 308 | 315 | 333 | 340 | 341 | 347 | 319 | 294 | 269 | 289 | 307 |     |
| 4   |   | 296 | 319 | 300 | 291 | 310 | 315 | 302 | 340 | 338 | A   | 294 | 322 | 309 | 344 | 293 | 305 | 311 | 316 | 328 | 326 | 317 | 326 | A   | F   |     |
| 5   |   | F   | 305 | 324 | 291 | F   | 281 | A   | 305 | 317 | 330 | 297 | 323 | 323 | 318 | 319 | 319 | 334 | 320 | 333 | 344 | A   | 299 | 295 | 309 |     |
| 6   |   | 310 | A   | 337 | A   | 304 | 315 | 339 | 358 | 351 | 354 | 316 | 318 | 327 | 305 | 317 | 334 | 331 | 341 | 334 | 309 | 305 | 321 | 316 | 335 |     |
| 7   |   | 304 | 306 | 295 | 305 | 295 | 308 | 335 | 370 | 358 | 323 | 366 | 309 | R   | R   | 335 | 311 | 323 | 323 | 325 | 338 | 333 | 323 | 350 | 312 | 307 |
| 8   |   | 329 | 307 | 318 | 313 | 324 | 327 | 345 | 329 | 336 | 369 | 341 | A   | A   | 332 | A   | 318 | 337 | A   | 331 | 334 | 298 | 292 | 303 | 313 |     |
| 9   |   | F   | F   | F   | F   | F   | F   | 324 | 343 | 360 | 350 | 338 | 356 | 312 | 354 | B   | 330 | 341 | 343 | 339 | 323 | 329 | 313 | 305 | 308 |     |
| 10  |   | 314 | 295 | 293 | 275 | 285 | 319 | 342 | 305 | 343 | 362 | 350 | 350 | 322 | 349 | A   | 321 | 339 | 332 | 313 | 328 | 382 | A   | 276 | 298 |     |
| 11  |   | 296 | 297 | 306 | F   | 284 | 293 | 369 | B   | A   | 330 | 307 | 326 | A   | 269 | 296 | 306 | 317 | 257 | 331 | 311 | 281 | 287 | 342 | 289 |     |
| 12  |   | 272 | 313 | 282 | 275 | A   | A   | A   | A   | A   | 315 | 299 | 345 | 284 | 273 | 291 | 276 | 318 | 329 | 298 | 280 | 293 | 319 | 281 | 332 |     |
| 13  |   | 247 | A   | 283 | 312 | 346 | 335 | 378 | 226 | S   | 350 | A   | A   | A   | 275 | 307 | 333 | 302 | 315 | 325 | 313 | 282 | 293 | 265 | 283 | 277 |
| 14  |   | 298 | 318 | 282 | 305 | 328 | 317 | 338 | 357 | 350 | 358 | 353 | 310 | 344 | 332 | 330 | 335 | 323 | 332 | 343 | 326 | 319 | 303 | 296 | 301 |     |
| 15  |   | 300 | 280 | 289 | 312 | 332 | 344 | 345 | 353 | 369 | 375 | 373 | 314 | 307 | 335 | 339 | 328 | 345 | 328 | 325 | 323 | 316 | 317 | 298 | 294 |     |
| 16  |   | 304 | 292 | 268 | 276 | 328 | 319 | 341 | 329 | 325 | 336 | 369 | B   | 318 | 309 | 321 | 325 | 327 | 321 | 328 | 310 | 317 | 306 | 290 | 295 |     |
| 17  |   | 307 | 308 | 282 | 307 | 283 | 298 | 303 | 326 | 337 | 354 | 338 | 324 | 321 | 348 | 361 | 331 | 339 | 330 | 330 | 322 | 328 | 302 | 315 | 326 |     |
| 18  |   | 305 | 293 | 296 | 279 | 298 | 307 | 326 | 348 | 350 | 373 | 333 | 320 | 350 | 328 | 327 | 332 | 351 | 343 | 323 | 299 | 318 | 321 | 322 | 322 |     |
| 19  |   | 309 | 303 | 282 | 308 | 308 | 287 | 338 | 353 | 339 | 352 | 340 | 332 | 328 | 326 | 338 | 349 | 351 | 347 | 334 | 328 | 303 | 286 | 301 | 333 |     |
| 20  |   | 288 | 291 | 292 | 285 | 284 | 287 | 341 | 340 | 346 | 349 | 354 | 351 | 326 | 316 | 340 | 341 | 340 | 340 | 342 | 347 | 313 | 293 | 304 | 292 |     |
| 21  |   | 302 | 303 | 304 | 312 | 298 | 304 | 339 | 348 | 366 | 385 | 344 | 335 | 330 | 328 | 335 | 335 | 353 | 345 | 366 | 324 | 305 | 292 | 287 | 291 |     |
| 22  |   | 294 | 298 | 324 | 306 | 298 | 318 | 356 | 362 | 361 | 354 | 353 | 361 | 342 | 324 | 328 | 345 | 349 | 336 | 344 | 314 | 295 | 292 | 313 | 340 |     |
| 23  |   | 305 | 302 | 304 | 290 | 284 | 305 | 354 | 354 | 366 | 355 | 334 | 321 | 339 | 345 | 338 | 339 | 353 | 342 | 324 | 326 | 369 | 317 | 301 | 302 |     |
| 24  |   | 311 | 305 | 313 | 316 | 329 | 346 | 371 | 360 | 350 | 358 | 348 | 349 | 341 | 323 | 321 | 345 | 341 | 342 | 339 | 325 | 332 | 284 | F   | F   |     |
| 25  |   | F   | 324 | 316 | 323 | 315 | 312 | 310 | 372 | 372 | 383 | 366 | 349 | 324 | 338 | 341 | 346 | 349 | 327 | 346 | 342 | 357 | F   | F   | F   |     |
| 26  |   | 298 | 311 | 371 | 312 | 287 | 321 | 367 | 368 | 360 | 351 | 352 | 344 | 326 | 326 | A   | 324 | 354 | 360 | 364 | 342 | 297 | F   | F   | 291 |     |
| 27  |   | 318 | 305 | 314 | 332 | 319 | 333 | 368 | 333 | 350 | 344 | 345 | 335 | 330 | 303 | 332 | 346 | 341 | 368 | 366 | A   | 299 | 290 | 286 | 296 |     |
| 28  |   | 311 | 314 | 309 | 350 | 312 | 331 | 369 | 366 | 381 | 351 | 358 | 329 | 311 | 332 | 333 | 339 | 347 | 365 | 372 | 398 | 300 | 309 | 307 | 306 |     |
| 29  |   | 305 | 296 | 296 | 325 | 321 | 325 | 362 | 363 | 371 | 361 | 338 | 330 | 335 | 342 | 359 | 363 | 355 | 363 | 343 | 336 | 307 | 288 | 321 | 329 |     |
| 30  |   | 336 | 315 | 321 | 325 | 304 | 313 | 355 | 370 | 377 | 357 | 362 | 354 | 365 | 344 | 348 | 352 | 355 | 363 | 340 | 350 | 316 | 311 | 320 | 314 |     |
| 31  |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|     |   | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |
| CNT |   | 28  | 27  | 29  | 27  | 26  | 27  | 28  | 28  | 27  | 27  | 29  | 27  | 28  | 30  | 26  | 30  | 30  | 29  | 30  | 29  | 28  | 27  | 26  | 26  |     |
| MED |   | 304 | 305 | 304 | 307 | 309 | 315 | 342 | 348 | 351 | 354 | 344 | 326 | 328 | 326 | 329 | 332 | 340 | 340 | 334 | 325 | 306 | 302 | 301 | 304 |     |
| U Q |   | 310 | 311 | 320 | 315 | 324 | 325 | 364 | 361 | 366 | 361 | 354 | 345 | 336 | 341 | 338 | 341 | 349 | 346 | 343 | 336 | 318 | 314 | 313 | 322 |     |
| L Q |   | 297 | 296 | 286 | 285 | 295 | 304 | 332 | 329 | 343 | 336 | 324 | 318 | 315 | 309 | 319 | 321 | 327 | 328 | 325 | 312 | 298 | 288 | 287 | 292 |     |

IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 M(3000)F1 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07         | 08       | 09       | 10         | 11         | 12         | 13         | 14         | 15         | 16         | 17  | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|----|----|----|----|----|----|----|------------|----------|----------|------------|------------|------------|------------|------------|------------|------------|-----|----|----|----|----|----|----|
| 1      |    |    |    |    |    | A  | A  | U L<br>364 | A        | A        | A          | A          | U L<br>421 | 393        | 363        | 349        | L          | L   | L  |    |    |    |    |    |
| 2      |    |    |    |    |    |    |    | L          | L        | L        | A          | A          | 406        | A          | 395        | 367        | L          | L   | L  |    |    |    |    |    |
| 3      |    |    |    |    |    |    |    | U L<br>359 | A        | A        | A          | A          | 377        | 380        | 367        | L          | L          | L   | L  |    |    |    |    |    |
| 4      |    |    |    |    |    |    | A  | A          | A        | A        | A          | A          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 5      |    |    |    |    |    |    | A  | 354        | 379      | 396      | 395        | 396        | 393        | 370        | 357        | 369        | L          | L   | L  |    |    |    |    |    |
| 6      |    |    |    |    |    |    |    | L          | A        | A        | A          | A          | A          | L          | 364        | 379        | 381        | L   | L  | L  |    |    |    |    |
| 7      |    |    |    |    |    |    |    | L          | L        | L        | A          | U L<br>372 | U L<br>386 | U L<br>367 | U L<br>369 | L          | L          | L   | A  |    |    |    |    |    |
| 8      |    |    |    |    |    |    |    | L          | A        | A        | A          | A          | A          | A          | A          | A          | 344        | L   | L  | A  |    |    |    |    |
| 9      |    |    |    |    |    |    |    | E B        | A        | L        | L          | U L<br>421 | L<br>415   | E B        | A          | B          | E B        | A   | A  |    |    |    |    |    |
| 10     |    |    |    |    |    |    |    | A          | A        | A        | A          | A          | A          | A          | A          | A          | A          | A   | A  |    |    |    |    |    |
| 11     |    |    |    |    |    |    |    | B          | A        | A        | E B        | A          | A          | A          | A          | A          | 359        | 372 | L  |    |    |    |    |    |
| 12     |    |    |    |    |    |    | A  | A          | A        | A        | A          | A          | A          | U L<br>407 | U L<br>375 | U L<br>379 | U L<br>350 | L   | L  |    |    |    |    |    |
| 13     |    |    |    |    |    |    |    | L          | A        | A        | A          | A          | A          | A          | 389        | 374        | 355        | L   | L  |    |    |    |    |    |
| 14     |    |    |    |    |    |    | A  |            | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 15     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | A  |    |    |    |    |    |
| 16     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 17     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 18     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 19     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 20     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 21     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 22     |    |    |    |    |    |    |    | A          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 23     |    |    |    |    |    |    |    | L          | A        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 24     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | A  | A  |    |    |    |    |
| 25     |    |    |    |    |    |    |    |            | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 26     |    |    |    |    |    |    |    |            | L        | A        | A          | A          | A          | A          | A          | A          | A          | A   | A  |    |    |    |    |    |
| 27     |    |    |    |    |    |    |    |            | L        | L        | U L<br>390 | L<br>407   | L          | A          | U L<br>357 | L<br>365   | L          | L   | L  |    |    |    |    |    |
| 28     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 29     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | U L<br>398 | L<br>368   | L   | L  |    |    |    |    |    |
| 30     |    |    |    |    |    |    |    | L          | L        | L        | L          | L          | L          | L          | L          | L          | L          | L   | L  |    |    |    |    |    |
| 31     |    |    |    |    |    |    |    |            |          |          |            |            |            |            |            |            |            |     |    |    |    |    |    |    |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07         | 08       | 09       | 10         | 11         | 12         | 13         | 14         | 15         | 16         | 17  | 18 | 19 | 20 | 21 | 22 | 23 |
| CNT    |    |    |    |    |    |    |    | 4          | 3        | 14       | 15         | 18         | 17         | 18         | 14         | 10         | 4          |     |    |    |    |    |    |    |
| MED    |    |    |    |    |    |    |    | L<br>356   | L<br>379 | L<br>386 | L<br>402   | L<br>399   | L<br>386   | L<br>380   | L<br>370   | L<br>364   | L<br>362   |     |    |    |    |    |    |    |
| U Q    |    |    |    |    |    |    |    | U L<br>362 | L<br>390 | L<br>394 | L<br>410   | L<br>407   | L<br>397   | L<br>395   | L<br>375   | L<br>375   | L<br>368   |     |    |    |    |    |    |    |
| L Q    |    |    |    |    |    |    |    | L<br>354   | L<br>371 | L<br>383 | L<br>394   | L<br>388   | L<br>380   | L<br>367   | L<br>365   | L<br>355   | L<br>354   |     |    |    |    |    |    |    |

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NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN



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SEP. 2005 h'F2 (KM)

135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 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           | 292 | 434       |     | A   | A E A E A | 402     | 332   | 462   | 420   | 386 | 326 | 330 | 302 |    |    |    |    |    |  |
| 2      |    |    |    |    |    |             | 296 | 244       | 304 | 240 | 340       | E A     | 306   | 330   | 308   | 276 | 268 | 256 |     |    |    |    |    |    |  |
| 3      |    |    |    |    |    |             | 324 | 256       | 296 | 370 | 344       |         | 282   | 322   | 314   | 276 | 274 | 264 |     |    |    |    |    |    |  |
| 4      |    |    |    |    |    | E A E A E A | 348 | 284       | 288 |     | A         | 350     | 336   | 332   | 294   | 288 | 342 | 322 | 280 |    |    |    |    |    |  |
| 5      |    |    |    |    |    | A           | 360 | 300       | 306 | 356 | 338       | 314     | 320   | 314   | 310   | 294 | 288 |     |     |    |    |    |    |    |  |
| 6      |    |    |    |    |    |             | 264 | 258       | 280 | 304 | 324       | 312     | 352   | 316   | 292   | 282 | 266 |     |     |    |    |    |    |    |  |
| 7      |    |    |    |    |    |             | 236 | 258       | 300 | 262 | 356       | 314     | 336   | 316   | 308   | 294 | 256 |     |     |    |    |    |    |    |  |
| 8      |    |    |    |    |    |             | 276 | 268       | 248 | E A | 320       |         | A E A | 302   |       | 296 | 254 |     | A   |    |    |    |    |    |  |
| 9      |    |    |    |    |    |             | 252 | 254       | 280 | 300 | 284       | E B E A | 286   | 258   | B E B | 308 | 266 | 250 |     |    |    |    |    |    |  |
| 10     |    |    |    |    |    | E A         | 324 | 282       | 256 | 254 | 248       | 316     | 278   |       | A     | 306 | 276 | 264 |     |    |    |    |    |    |  |
| 11     |    |    |    |    |    | B           |     | A E A E B | 292 | 348 | 302       |         | A     | 396   | E A   | 332 | 300 | 270 | 386 |    |    |    |    |    |  |
| 12     |    |    |    |    | A  | A           | A   | A         |     | 328 | 364       | 286     | 412   | 446   | 366   | 444 | 314 | 284 |     |    |    |    |    |    |  |
| 13     |    |    |    |    |    |             | 580 | 280       |     | A   | A         | A       | 414   | 334   | 316   | 366 | 322 | 268 |     |    |    |    |    |    |  |
| 14     |    |    |    |    |    |             | 258 |           | 256 | 248 | 264       | 318     | 280   | 292   | 282   | 282 | 276 |     |     |    |    |    |    |    |  |
| 15     |    |    |    |    |    |             | 248 | 244       | 234 | 246 | 314       | 342     | 274   | 272   | 288   | 256 |     |     |     |    |    |    |    |    |  |
| 16     |    |    |    |    |    |             | 282 | 290       | 270 | 236 |           | B       | 288   | 330   | 290   | 278 | 272 |     |     |    |    |    |    |    |  |
| 17     |    |    |    |    |    |             | 264 | 246       | 256 | 256 | 272       | 302     | 274   | 250   | 292   | 270 |     |     |     |    |    |    |    |    |  |
| 18     |    |    |    |    |    |             | 284 | 260       | 254 | 242 | 282       | 308     | 266   | 278   | 312   | 290 | 254 |     |     |    |    |    |    |    |  |
| 19     |    |    |    |    |    |             | 252 | 234       | 252 | 274 | 286       | 300     | 274   | 282   | 282   | 264 |     |     |     |    |    |    |    |    |  |
| 20     |    |    |    |    |    |             | 264 | 256       | 258 | 256 | 264       | 284     | 294   | 284   | 270   | 256 |     |     |     |    |    |    |    |    |  |
| 21     |    |    |    |    |    |             | 256 | 236       | 228 | 254 | 282       | 304     | 280   | 262   | 268   | 244 |     |     |     |    |    |    |    |    |  |
| 22     |    |    |    |    |    |             | 232 | 244       | 238 | 254 | 256       | 268     | 280   | 278   | 262   |     |     |     |     |    |    |    |    |    |  |
| 23     |    |    |    |    |    |             | 248 | 248       | 272 | 282 | 264       | 258     | 268   |       |       |     |     |     |     |    |    |    |    |    |  |
| 24     |    |    |    |    |    |             | 246 | 246       | 254 | 256 | 268       | 274     | 294   | 282   | 260   | 244 |     |     |     |    |    |    |    |    |  |
| 25     |    |    |    |    |    |             | 248 | 264       | 290 | 264 | 250       | 252     | 252   |       |       |     |     |     |     |    |    |    |    |    |  |
| 26     |    |    |    |    |    |             | 242 | 254       | 244 | 254 | 256       | E A     | 314   | A E A | 288   | 236 | 228 |     |     |    |    |    |    |    |  |
| 27     |    |    |    |    |    |             | 256 | 258       | 244 | 272 | 246       | 332     | 276   |       | 256   |     |     |     |     |    |    |    |    |    |  |
| 28     |    |    |    |    |    |             | 248 |           | 248 | 234 | 246       | 304     | 274   | 274   | 262   |     |     |     |     |    |    |    |    |    |  |
| 29     |    |    |    |    |    |             | 242 |           | 258 | 258 | 248       | 248     | 262   | 246   | 254   | 238 |     |     |     |    |    |    |    |    |  |
| 30     |    |    |    |    |    |             | 226 | 240       | 240 | 242 | 242       | 260     | 256   | 258   |       |     |     |     |     |    |    |    |    |    |  |
| 31     |    |    |    |    |    |             |     |           |     |     |           |         |       |       |       |     |     |     |     |    |    |    |    |    |  |
|        | 00 | 01 | 02 | 03 | 04 | 05          | 06  | 07        | 08  | 09  | 10        | 11      | 12    | 13    | 14    | 15  | 16  | 17  | 18  | 19 | 20 | 21 | 22 | 23 |  |
| CNT    |    |    |    |    |    |             | 4   | 22        | 24  | 27  | 29        | 27      | 28    | 30    | 26    | 28  | 25  | 13  |     |    |    |    |    |    |  |
| MED    |    |    |    |    |    |             | 280 | 261       | 254 | 255 | 259       | 284     | 294   | 290   | 282   | 286 | 270 | 266 |     |    |    |    |    |    |  |
| U Q    |    |    |    |    |    |             | 320 | 296       | 263 | 280 | 312       | 324     | 314   | 330   | 314   | 307 | 288 | 286 |     |    |    |    |    |    |  |
| L Q    |    |    |    |    |    |             | 271 | 248       | 244 | 248 | 250       | 264     | 267   | 274   | 272   | 269 | 255 | 256 |     |    |    |    |    |    |  |

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SEP. 2005 h'F (KM)

135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H   | 00         | 01         | 02         | 03         | 04         | 05         | 06         | 07  | 08  | 09         | 10       | 11       | 12       | 13       | 14       | 15       | 16       | 17         | 18         | 19         | 20         | 21         | 22         | 23         |            |
|-----|------------|------------|------------|------------|------------|------------|------------|-----|-----|------------|----------|----------|----------|----------|----------|----------|----------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1   | E A<br>352 | A E<br>304 | B E<br>312 | B E<br>330 | A          | A          | A          | 222 | A   | A          | A        | A        | H<br>192 | A<br>218 | A<br>216 | A<br>226 | A<br>218 | A<br>222   | E A<br>254 | A E<br>246 | B E<br>264 | A E<br>340 | A E<br>322 | A E<br>328 |            |
| 2   | E A<br>276 | A E<br>236 | B E<br>228 | B E<br>224 | A<br>232   | B<br>252   | 212        | 212 | 214 | E A<br>246 | A        | A        | A        | A        | 202      | A<br>204 | A<br>184 | A<br>212   | A<br>210   | A<br>238   | A<br>218   | 222        | 236        | E B<br>298 | E A<br>312 |
| 3   | E A<br>294 | A E<br>282 | A E<br>254 | B E<br>336 | A<br>242   | B<br>378   | 236        | 226 | A   | 198        | 190      | 186      | 220      | 196      | 200      | 220      | 230      | 218        | 230        | 220        | E B<br>254 | B E<br>298 | B E<br>280 | B<br>242   |            |
| 4   | E A<br>280 | A E<br>254 | A E<br>290 | B E<br>338 | A<br>274   | B<br>262   | A          | A   | A   | A          | A        | H<br>196 | H<br>190 | H<br>184 | H<br>180 | 226      | 220      | 210        | A          | 240        | 236        | E A<br>274 | A<br>232   | A E<br>266 |            |
| 5   | E A<br>312 | A E<br>272 | A E<br>248 | B E<br>312 | A<br>316   | B<br>310   | A          | 208 | 202 | 202        | 186      | 192      | 196      | 220      | 214      | 218      | 228      | 224        | E A<br>244 | A<br>228   | A E<br>262 | A E<br>248 | A E<br>260 |            |            |
| 6   | E A<br>276 | A E<br>268 | A E<br>300 | A E<br>330 | 212        | 220        | A          | 222 | A   | A          | A        | A        | A        | 214      | 210      | 218      | 220      | 210        | 224        | E A<br>274 | A<br>260   | 234        | 232        | 232        |            |
| 7   | 228        | 280        | 316        | 284        | 288        | 276        | 230        | A   | 222 | 236        | A        | 234      | 208      | 232      | 220      | 238      | 222      | A          | 234        | 226        | 218        | E A<br>250 | A E<br>278 | A E<br>316 |            |
| 8   | E A<br>302 | A E<br>270 | A E<br>256 | A E<br>264 | A<br>240   | B<br>240   | 236        | 224 | A   | A          | A        | A        | A        | A        | A        | 216      | 222      | A          | 226        | 222        | 234        | 274        | 256        | 226        |            |
| 9   | 238        | 246        | 236        | 244        | 258        | 266        | 228        | B   | A   | 204        | 214      | 210      | A        | B        | A        | B        | A        | A          | E A<br>230 | A E<br>252 | A E<br>286 | 234        | 274        | 292        |            |
| 10  | E A<br>254 | A E<br>266 | B E<br>270 | B E<br>306 | B E<br>276 | B<br>228   | E A<br>250 | A   | A   | A          | A        | A        | 226      | A        | A        | A        | A        | A          | E A<br>258 | A<br>246   | 204        | A E<br>354 | A E<br>306 |            |            |
| 11  | E A<br>288 | A E<br>328 | A E<br>284 | A E<br>312 | A<br>312   | B<br>294   | 214        | B   | A   | A          | A        | A        | A        | A        | A        | 242      | 214      | E A<br>338 | A<br>232   | 236        | E A<br>292 | A E<br>288 | E B<br>218 | E B<br>254 |            |
| 12  | E B<br>304 | A<br>248   | E A<br>226 | A<br>270   | A          | A          | A          | A   | A   | A E<br>300 | A        | A        | A        | A        | 210      | 218      | 216      | 228        | 216        | 296        | E B<br>288 | E A<br>260 | E B<br>212 | E B<br>298 | 230        |
| 13  | E A<br>386 | A E<br>358 | A E<br>312 | A<br>224   | A<br>240   | 222        | 224        | A   | A   | A          | A        | A        | A        | 206      | 210      | 220      | 246      | 232        | 258        | E A<br>294 | A E<br>282 | A E<br>330 | A E<br>316 | E B<br>318 |            |
| 14  | E B<br>278 | 234        | E A<br>378 | B E<br>272 | A E<br>274 | A<br>284   | 242        | 222 | 218 | 200        | 202      | 206      | 204      | 204      | 210      | 228      | 242      | 230        | 230        | 224        | 280        | 238        | 266        |            |            |
| 15  | E A<br>272 | A E<br>338 | A E<br>314 | A<br>264   | 234        | 234        | 226        | 216 | 224 | 200        | 200      | 194      | 194      | 208      | 214      | 210      | A        | E A<br>230 | E A<br>248 | 232        | 234        | 236        | E A<br>262 | A<br>270   |            |
| 16  | 226        | E A<br>288 | B E<br>330 | B E<br>316 | B E<br>230 | A E<br>218 | 226        | 232 | 216 | 204        | 194      | B        | B        | H<br>186 | H<br>212 | H<br>214 | 228      | 234        | E A<br>230 | E A<br>248 | E A<br>234 | E A<br>248 | E A<br>270 | E A<br>272 |            |
| 17  | 238        | 220        | E B<br>266 | B E<br>266 | B E<br>260 | B<br>276   | 236        | 224 | 216 | 204        | 172      | 172      | 196      | 192      | 214      | 206      | 234      | E A<br>240 | E A<br>232 | E A<br>252 | 220        | 240        | 236        | 228        |            |
| 18  | 214        | 262        | E B<br>290 | B E<br>300 | B E<br>280 | B E<br>262 | 238        | 214 | 214 | 204        | 186      | 182      | 178      | 194      | 214      | 222      | 224      | 224        | 230        | E A<br>266 | 236        | 224        | 220        | 222        |            |
| 19  | E A<br>266 | A E<br>254 | B E<br>288 | B E<br>268 | B E<br>252 | B<br>272   | 234        | 212 | 198 | 184        | 190      | 200      | 192      | B        | 206      | 226      | 212      | 230        | 228        | 236        | 250        | E B<br>280 | B E<br>264 | 222        |            |
| 20  | 222        | E B<br>278 | B E<br>286 | B E<br>290 | B E<br>284 | B<br>296   | 226        | 220 | 214 | 194        | 194      | 176      | 192      | 192      | 222      | 218      | 218      | 234        | 226        | 212        | 232        | E A<br>270 | E A<br>280 | E A<br>298 |            |
| 21  | E B<br>262 | B E<br>266 | B E<br>260 | B E<br>254 | B<br>232   | B<br>262   | 230        | A   | 200 | 194        | 186      | 192      | H<br>186 | A<br>198 | 226      | 192      | 218      | 226        | 206        | 208        | 226        | E B<br>272 | B E<br>278 | B<br>284   |            |
| 22  | E B<br>274 | B E<br>258 | B E<br>238 | B E<br>222 | B<br>258   | B<br>244   | E A<br>246 | A   | 210 | 190        | 190      | 182      | H<br>202 | A<br>200 | 200      | 226      | 224      | 212        | 212        | 244        | E B<br>262 | B E<br>260 | B<br>224   |            |            |
| 23  | 214        | E B<br>260 | B E<br>258 | B E<br>286 | B E<br>292 | B<br>270   | 212        | 214 | 214 | A          | H<br>190 | H<br>172 | 220      | 202      | 202      | 208      | 202      | 224        | 234        | 224        | 210        | 228        | E A<br>288 | E B<br>262 |            |
| 24  | 244        | E A<br>262 | E A<br>242 | B E<br>226 | A<br>244   | A<br>224   | 208        | 202 | 202 | 208        | A        | 216      | 204      | A        | 206      | A        | A        | 228        | 214        | 228        | 244        | E A<br>284 | E A<br>292 | 242        |            |
| 25  | 238        | 242        | E A<br>282 | 230        | E A<br>268 | B<br>256   | 218        | 224 | 214 | 192        | 204      | A        | A        | A        | A        | H<br>204 | 222      | 228        | 228        | 220        | 232        | E A<br>264 | E A<br>284 | E A<br>320 |            |
| 26  | E B<br>282 | B E<br>246 | B E<br>206 | B E<br>250 | B E<br>272 | B<br>260   | 210        | 212 | 212 | A          | A        | A        | A        | A        | A        | A        | A        | A          | 228        | 220        | E A<br>268 | A E<br>296 | B E<br>290 | B E<br>266 |            |
| 27  | E B<br>260 | B E<br>260 | B E<br>244 | B E<br>226 | B<br>248   | B<br>228   | 212        | 212 | 216 | 206        | 194      | 186      | H<br>208 | A<br>202 | 230      | 210      | 214      | 196        | A          | 284        | E A<br>264 | B E<br>288 | B E<br>274 |            |            |
| 28  | E B<br>266 | B E<br>288 | B E<br>266 | 210        | E B<br>248 | B<br>224   | 206        | 218 | 216 | 200        | 206      | 176      | H<br>208 | H<br>208 | 220      | 222      | 232      | 220        | 206        | 194        | E A<br>270 | E A<br>238 | B E<br>260 | E B<br>264 |            |
| 29  | E A<br>274 | A E<br>280 | B E<br>282 | B E<br>248 | B E<br>248 | B<br>242   | E A<br>224 | 212 | 210 | 194        | 178      | 204      | H<br>190 | H<br>196 | H<br>184 | 218      | 196      | 220        | 206        | 216        | E B<br>252 | E B<br>294 | B E<br>236 | 230        |            |
| 30  | 216        | 222        | E B<br>252 | B E<br>234 | B E<br>272 | B<br>268   | 222        | 218 | 212 | 202        | 204      | 192      | 180      | 182      | 194      | 228      | 222      | 220        | 208        | 214        | 232        | E A<br>272 | E B<br>250 | E B<br>240 |            |
| 31  |            |            |            |            |            |            |            |     |     |            |          |          |          |          |          |          |          |            |            |            |            |            |            |            |            |
|     | 00         | 01         | 02         | 03         | 04         | 05         | 06         | 07  | 08  | 09         | 10       | 11       | 12       | 13       | 14       | 15       | 16       | 17         | 18         | 19         | 20         | 21         | 22         | 23         |            |
| CNT | 30         | 28         | 30         | 29         | 28         | 28         | 25         | 22  | 20  | 21         | 20       | 19       | 19       | 21       | 24       | 26       | 25       | 24         | 30         | 29         | 29         | 29         | 29         | 30         |            |
| MED | E<br>269   | E<br>262   | E<br>267   | E<br>268   | B E<br>259 | B<br>262   | 224        | 218 | 214 | 202        | 193      | 192      | 196      | 202      | 211      | 218      | 222      | 224        | 229        | 223        | U<br>231   | E<br>264   | E<br>274   | E<br>265   |            |
| U Q | E A<br>282 | A E<br>280 | A E<br>290 | B E<br>309 | B E<br>278 | B<br>276   | 235        | 224 | 216 | 207        | 202      | 202      | 208      | 209      | 217      | 222      | 228      | 231        | 238        | 247        | E A<br>266 | E A<br>282 | E A<br>289 | E A<br>292 |            |
| L Q | 238        | 247        | 248        | 239        | 243        | 240        | 212        | 212 | 210 | 194        | 188      | 182      | H<br>190 | H<br>193 | 203      | 210      | 213      | 220        | 224        | 219        | 229        | 236        | 249        | 232        |            |

SEP. 2005 h'F (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN



IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 h'E (KM)

135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| H<br>D | 00 | 01 | 02 | 03 | 04 | 05 | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19 | 20 | 21 | 22 | 23 |
|--------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|
| 1      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A   | A   | A   | A   | 112 | A   | A   | B   |    |    |    |    |    |
| 2      |    |    |    |    |    | B  | 116 | 114 | A   | A   | A   | A   | 116 | A   | A   | A   | 112 | 118 |     |    |    |    |    |    |
| 3      |    |    |    |    |    |    | A   | A   | A   | A   | A   | A   | 112 | 110 | 114 | 114 | 116 | 120 |     |    |    |    |    |    |
| 4      |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A   | A   | A   | 116 | 110 | 112 | 114 |     | B  |    |    |    |    |
| 5      |    |    |    |    |    | B  | A   | A   | A   | A   | A   |     |     |     | A   |     | 120 | 120 |     | A  | B  |    |    |    |
| 6      |    |    |    |    |    | B  |     | A   | A   | A   | A   | A   | A   | A   |     |     |     |     | B   |    |    |    |    |    |
| 7      |    |    |    |    |    | B  | 124 | A   | A   | A   | A   | A   |     |     | 118 | 118 | 122 | 122 |     |    |    |    |    |    |
| 8      |    |    |    |    |    | B  | A   | 114 | A   | A   | A   | A   | 114 | 114 | 116 | 118 | 118 | 118 |     |    |    |    |    |    |
| 9      |    |    |    |    |    |    | 118 | 116 | B   | A   | A   | A   | A   | B   | A   | B   | B   | A   |     |    |    |    |    |    |
| 10     |    |    |    |    |    | B  | 118 | A   | B   | B   | B   | B   | B   |     | A   | A   |     |     | A   |    |    |    |    |    |
| 11     |    |    |    |    |    |    | A   | B   | B   | B   | B   | A   | A   | A   | A   |     | 110 | 120 | 124 |    |    |    |    |    |
| 12     |    |    |    |    |    | B  | A   | A   | A   | A   | A   | A   |     |     | B   |     | 112 | 116 | 122 |    |    |    |    |    |
| 13     |    |    |    |    |    |    | 124 | 120 | 122 | A   | A   | A   | A   | 114 | B   |     | 116 | 114 |     |    |    |    |    |    |
| 14     |    |    |    |    |    |    | A   | A   | A   | B   | A   | A   | A   | A   | A   |     |     | 122 | 124 |    |    |    |    |    |
| 15     |    |    |    |    |    |    | A   | A   | 116 | A   | B   | B   | 112 | 112 | 110 | 116 | 118 | 120 |     |    |    |    |    |    |
| 16     |    |    |    |    |    |    | A   | A   | 116 | 116 | 118 | B   | B   |     | 122 | 118 | 114 | 120 | 124 |    |    |    |    |    |
| 17     |    |    |    |    |    |    | A   | A   |     |     |     |     |     |     |     |     |     | A   |     |    |    |    |    |    |
| 18     |    |    |    |    |    |    | 114 | A   | A   | 114 | 120 | 114 | 112 | 112 | 114 | 118 | 118 |     |     |    |    |    |    |    |
| 19     |    |    |    |    |    |    | A   | A   | A   | A   | A   | 118 | 112 | 114 | B   | 110 | 118 | 120 | 116 |    |    |    |    |    |
| 20     |    |    |    |    |    |    | A   | A   | A   | A   | A   | 118 | 118 | 114 | 116 | 114 | 116 | 126 |     |    |    |    |    |    |
| 21     |    |    |    |    |    |    | 118 | A   | A   | A   | A   | A   | 114 | 114 | 114 | 116 | 112 | 114 |     |    |    |    |    |    |
| 22     |    |    |    |    |    |    | 120 | A   | A   | A   | A   |     | 110 | 112 | 120 | 112 | 120 | 114 |     |    |    |    |    |    |
| 23     |    |    |    |    |    |    | A   | A   | A   | A   | A   | 112 | 110 | A   | 108 | 112 | 114 | 118 | 120 |    |    |    |    |    |
| 24     |    |    |    |    |    |    | 126 | 124 | 122 | A   | 116 | 118 | 116 | 108 | 114 | 118 |     |     |     |    |    |    |    |    |
| 25     |    |    |    |    |    |    | 120 | 122 | 112 | 118 | A   | A   | A   | A   | A   | A   | A   | A   | 114 |    |    |    |    |    |
| 26     |    |    |    |    |    |    | E   | B   | 112 | 120 | 118 | 120 |     |     |     | 120 | 126 |     |     |    |    |    |    |    |
| 27     |    |    |    |    |    |    | 112 | 114 | 114 | A   | A   | A   | A   | A   | A   | A   | A   | A   |     |    |    |    |    |    |
| 28     |    |    |    |    |    |    | A   | A   | A   | A   | A   | A   | A   |     | 118 | 114 | 114 | 116 |     |    |    |    |    |    |
| 29     |    |    |    |    |    |    | 116 | 114 | A   | 116 | A   | 122 | 120 |     | A   | A   | A   | 120 | 118 |    |    |    |    |    |
| 30     |    |    |    |    |    |    | B   | A   | A   | A   | 112 | A   | 110 | 110 | 110 | 114 | 114 |     |     |    |    |    |    |    |
| 31     |    |    |    |    |    |    | B   | 116 | 118 | 114 | 114 | A   | 112 |     | A   | A   | 120 | 120 | 124 |    |    |    |    |    |
|        | 00 | 01 | 02 | 03 | 04 | 05 | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19 | 20 | 21 | 22 | 23 |
| CNT    |    |    |    |    |    |    | 14  | 10  | 8   | 7   | 9   | 8   | 16  | 15  | 15  | 23  | 25  | 16  |     |    |    |    |    |    |
| MED    |    |    |    |    |    |    | 118 | 115 | 117 | 116 | 116 | 116 | 113 | 114 | 114 | 116 | 118 | 120 |     |    |    |    |    |    |
| U Q    |    |    |    |    |    |    | 124 | 120 | 121 | 118 | 119 | 119 | 116 | 114 | 116 | 118 | 120 | 123 |     |    |    |    |    |    |
| L Q    |    |    |    |    |    |    | 116 | 114 | 115 | 114 | 113 | 114 | 112 | 110 | 112 | 112 | 115 | 117 |     |    |    |    |    |    |

SEP. 2005 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 h'Es (KM)

135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| D   | H | 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   |   | 96  | 100 |     | B   | 114 | 110 | 106 | 106 | 104 | 104 | 104 | 102 | 102 | 102 | 96  | 92  | 128 | 94  | 90  | 96  |     | B   | 102 | 114 | 100 | 94  |     |    |
| 2   |   | 94  | 94  | 94  | 94  |     | B   | B   | 130 | 124 | 102 | 106 | 104 | 104 | 112 | 102 | 100 | 98  | 122 | 98  |     | B   | B   | 106 | 104 | 104 | 98  |     |    |
| 3   |   | 102 | 94  | 94  | 104 | 104 |     | B   | 114 | 102 | 98  | 100 | 100 | 102 |     | G   | 118 | 92  | 136 | 126 | 120 |     | B   | 114 |     | B   | B   |     |    |
| 4   |   | 96  | 96  | 94  | 110 | 116 | 114 | 104 | 104 | 100 | 98  | 104 | 106 | 106 | 106 | 114 | 118 | 104 | 112 | 100 | 112 |     | 98  | 98  | 94  | 98  |     |     |    |
| 5   |   | 98  | 98  | 96  | 110 |     | B   | 104 | 104 | 104 | 104 | 102 | 102 | 102 | 104 | 104 | 100 | 100 | 112 | 104 | 108 | 94  | 94  | 94  | 98  | 104 |     |     |    |
| 6   |   | 100 | 98  | 98  | 96  | 94  | 96  | 118 | 96  | 104 | 104 | 104 | 104 | 104 | 104 | 118 | 156 | 124 | 122 | 114 | 106 | 104 | 104 | 104 | 104 | 106 |     |     |    |
| 7   |   | 100 | 96  | 96  | 96  | 96  |     | B   | 106 | 112 | 104 | 102 | 100 | 106 |     | G   | G   | 102 | 120 | 104 | 106 | 104 | 100 | 96  | 98  |     |     |     |    |
| 8   |   | 90  | 90  | 94  | 94  |     | B   | B   | 114 | 118 | 102 | 100 | 104 | 100 | 100 | 100 | 100 | 106 | 100 | 98  | 98  | 102 | 104 | 98  | 98  | 104 |     |     |    |
| 9   |   | 102 |     | B   | B   | B   | B   | 100 |     | G   | B   | 102 | 100 | 100 | 100 |     | B   | 98  | B   | B   | 116 | 102 | 102 | 98  | 98  | 96  | 94  |     |    |
| 10  |   | 92  | 94  | 98  |     | B   | B   | 94  |     | B   | 116 | 104 | 102 | 104 | 104 | 104 |     | G   | 100 | 98  | 120 | 116 | 104 | 106 | 106 | 94  | 94  | 94  | 94 |
| 11  |   | 94  | 94  | 94  | 96  |     | B   | B   | 106 |     | B   | 102 | 104 |     | B   | 98  | 100 | 96  | 96  | 138 | 102 | 124 | 116 | 112 | 104 | 100 |     | B   | B  |
| 12  |   | 126 |     | B   | 108 | 102 | 100 | 106 | 108 | 108 | 106 | 106 | 110 | 106 | 116 | 116 |     | B   | 114 | 106 | 120 |     | B   | B   | 98  |     | B   | B   | B  |
| 13  |   | 94  | 120 | 120 | 116 |     | B   | B   | 120 | 120 | 114 | 104 | 104 | 102 | 102 |     | G   | B   | G   | 114 | 104 | 104 | 100 | 104 | 100 | 98  | 98  |     |    |
| 14  |   |     | B   | 98  | 114 | 112 | 108 | 106 | 106 | 108 |     | B   | 102 | 106 | 106 | 106 | 104 | 102 | 102 | 94  | 102 | 102 | 102 | 102 | 94  | 102 |     |     |    |
| 15  |   | 102 | 102 | 98  | 102 | 114 | 110 | 102 | 92  | 116 | 94  |     | B   | B   |     | B   | 94  | 96  | 136 | 130 | 120 | 118 | 104 | 100 | 98  | 102 | 98  | 100 |    |
| 16  |   | 96  | 94  | 94  |     | B   | 112 | 112 | 104 | 104 | 112 | 104 | 120 |     | B   | B   | 102 |     | G   | 154 | 138 | 120 | 116 | 110 |     | B   | 102 | 98  | 94 |
| 17  |   |     | B   | B   | B   | 90  | 108 |     | B   | 144 | 102 | 108 | 100 | 100 |     | G   | 94  | 100 | 98  | 126 | 122 | 100 | 104 | 102 | 100 | 98  | 98  | 94  |    |
| 18  |   | 94  |     | B   | 92  |     | B   | 104 | 102 | 98  | 104 | 102 | 100 | 100 | 96  |     | G   | 96  | 124 | 118 | 114 | 102 | 98  | 104 | 100 |     | B   | 96  | B  |
| 19  |   | 90  | 90  |     | B   | 110 | 110 | 108 | 106 | 106 | 100 | 100 | 98  | 98  | 104 |     | B   | 96  | 116 | 130 | 106 | 102 | 100 | 96  | 88  |     | B   | B   | B  |
| 20  |   | 92  | 94  |     | B   | B   | B   | B   | 116 | 104 | 104 | 102 | 94  | 98  | 106 | 104 | 96  | 92  | 128 | 108 | 104 | 102 | 108 | 100 | 96  | 92  |     |     |    |
| 21  |   |     | B   | B   | B   | B   | B   | B   | 126 | 102 | 102 | 100 | 96  | 94  |     | G   | G   | 100 | 98  | 130 | 110 |     | B   | B   | B   | B   | B   | 106 |    |
| 22  |   |     | B   | B   | B   | B   | B   | 112 | 102 | 102 | 104 | 100 | 100 | 92  | 90  | 90  | 94  | 100 | 102 |     | G   | 86  |     | B   | B   | B   | B   | B   |    |
| 23  |   |     | B   | B   | B   | B   | B   | B   | 132 | 132 | 122 | 104 | 118 | 100 | 150 | 96  | 96  | 96  | 96  | 92  | 94  | 92  | 96  | 92  | 94  | 94  | 94  |     |    |
| 24  |   |     | B   | 90  | 92  |     | B   | B   | G   | 124 | 116 | 118 | 106 | 106 | 104 | 104 | 106 | 106 | 106 | 118 | 114 | 96  | 96  | 96  | 96  | 96  | 96  |     |    |
| 25  |   | 96  | 92  | 98  | 98  | 104 |     | B   | 146 | 144 | 134 | 124 | 122 | 108 | 102 | 104 | 104 | 108 | 124 | 102 | 102 | 106 | 106 | 102 | 104 | 98  |     |     |    |
| 26  |   | 100 | 98  | 96  | 96  | 94  |     | B   | G   | G   | 120 | 102 | 108 | 108 | 106 | 104 | 100 | 106 | 100 | 98  | 98  | 98  | 98  | 102 | 98  | 96  | B   | B   |    |
| 27  |   |     | B   | 88  | 88  | 88  | 84  | 106 | 104 | 106 | 104 | 106 | 104 | 104 | 98  | 100 | 138 | 140 | 124 | 104 | 108 | 98  | 102 | 100 |     | B   | B   | B   |    |
| 28  |   | 100 | 92  | 92  |     | B   | B   | B   | G   | 110 | 106 | 106 | 104 | 104 | 104 | 104 | 104 | 102 | 102 |     | G   | 102 | 102 | 100 |     | B   | 98  | B   |    |
| 29  |   | 98  |     | B   | B   | B   | B   | 104 | 102 | 104 | 102 | 96  | 94  | 94  | 96  | 94  | 100 | 104 | 132 | 134 |     | B   | B   | 98  | 94  |     | B   | 94  | B  |
| 30  |   |     | B   | B   | B   | B   | B   | B   | 132 | 122 | 126 | 114 | 114 | 108 | 102 | 104 | 104 | 102 | 136 | 122 | 98  |     | B   | B   | 96  | 94  |     | B   | B  |
| 31  |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|     |   | 00  | 01  | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  |     |     |     |    |
| CNT |   | 22  | 20  | 20  | 18  | 16  | 14  | 26  | 27  | 30  | 29  | 28  | 27  | 24  | 25  | 25  | 27  | 30  | 28  | 25  | 23  | 25  | 25  | 21  | 22  |     |     |     |    |
| MED |   | 96  | 94  | 95  | 100 | 104 | 106 | 107 | 104 | 104 | 102 | 104 | 102 | 103 | 102 | 100 | 108 | 116 | 107 | 102 | 102 | 100 | 100 | 98  | 97  |     |     |     |    |
| U Q |   | 100 | 98  | 98  | 110 | 111 | 110 | 120 | 118 | 112 | 105 | 105 | 106 | 106 | 104 | 104 | 128 | 124 | 120 | 107 | 106 | 104 | 102 | 98  | 100 |     |     |     |    |
| L Q |   | 94  | 92  | 94  | 96  | 95  | 104 | 104 | 102 | 102 | 100 | 100 | 100 | 99  | 97  | 96  | 102 | 102 | 101 | 99  | 98  | 98  | 96  | 95  | 94  |     |     |     |    |

SEP. 2005 h'Es (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2005 TYPES OF Es

135°E MEAN TIME (G.M.T. + 9 H)

LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

| D   | H  | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1   | F  | F  |    | F  | F  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | CL | L  | L  | L  |    | F  | FF | F  | F  |    |
| 2   | F  | F  | F  | F  |    |    | C  | CL | L  | L  | L  | L  | CL | L  | L  | L  | CL | L  | L  |    | F  | F  | F  | F  |    |
| 3   | FF | F  | F  | F  | F  |    | C  | L  | L  | L  | L  | L  |    | CL | L  | CL | CL | CL |    | F  |    | F  |    |    |    |
| 4   | F  | F  | F  | FF | F  | C  | L  | L  | L  | L  | L  | L  | L  | L  | C  | CL | L  | CL | L  | FF | F  | F  | F  | F  |    |
| 5   | F  | F  | F  | F  |    | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | CL | L  | L  | F  | F  | F  | F  | F  |    |
| 6   | F  | F  | F  | F  | F  | L  | C  | L  | L  | L  | L  | L  | L  | L  | CL | HL | CL | CL | C  | F  | F  | F  | F  | F  |    |
| 7   | F  | F  | F  | F  | F  |    | L  | C  | L  | L  | L  | L  |    |    |    |    | L  | CL | F  | F  | F  | F  | F  | F  |    |
| 8   | F  | F  | F  | F  |    |    | C  | C  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | F  | F  | F  | F  | F  | F  |    |
| 9   | F  |    |    |    |    | F  |    |    | L  | L  | L  | L  |    | L  |    |    | C  | L  | F  | F  | F  | F  | F  | F  |    |
| 10  | F  | F  | F  |    | F  |    | C  | L  | L  | L  | L  | L  |    | L  | L  | C  | C  | L  | F  | F  | F  | F  | F  | F  |    |
| 11  | F  | F  | F  | F  |    |    | L  |    | L  | L  | L  | L  | L  | L  | L  | CL | L  | CL | F  | F  | F  | F  | F  | F  |    |
| 12  | F  |    | F  | F  | F  | L  | L  | L  | L  | L  | CL | L  | C  | C  |    | CL | L  | C  |    |    | F  |    |    |    |    |
| 13  | F  | F  | FF | F  |    |    | C  | C  | CL | L  | L  | L  | L  |    |    |    | C  | L  | F  | F  | F  | F  | F  | F  |    |
| 14  |    | F  | F  | F  | F  | F  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | F  | F  | F  | F  | F  | F  |    |
| 15  | F  | F  | F  | F  | F  | F  | L  | LC | CL | L  |    |    | L  | L  | CL | CL | CL | CL | F  | F  | F  | F  | F  | F  |    |
| 16  | F  | F  | F  |    | F  | F  | L  | L  | CL | L  | CL |    |    | L  |    | HL | HL | CL | F  | F  |    | F  | F  | F  |    |
| 17  |    |    | F  | F  |    | H  | L  | L  | L  | L  | L  | L  | L  | L  | L  | CL | CL | L  | F  | F  | F  | F  | F  | F  |    |
| 18  | F  |    | F  |    | F  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | CL | CL | CL | F  | F  | F  | F  | F  | F  |    |
| 19  | F  | F  |    | F  | F  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | CL | CL | L  | F  | F  | F  | F  | F  | F  |    |
| 20  | F  | F  |    |    |    | C  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | CL | L  | F  | F  | F  | F  | F  | F  |    |
| 21  |    |    |    |    |    | C  | L  | L  | L  | L  | L  | L  |    |    | L  | L  | CL | CL |    |    |    |    |    | F  |    |
| 22  |    |    |    |    | F  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | F  |    |    |    |    |    |    |
| 23  |    |    |    |    |    | C  | CL | CL | L  | L  | CL | L  | HL | L  | L  | L  | L  | L  | F  | F  | F  | F  | F  | F  |    |
| 24  |    | F  | F  |    | F  |    | C  | CL | CL | L  | L  | L  | L  | L  | L  | L  | L  | CL | F  | F  | F  | F  | F  | F  |    |
| 25  | F  | F  | F  | F  | F  | H  | H  | CL | CL | CL | L  | L  | L  | L  | L  | L  | CL | L  | F  | F  | F  | F  | F  | F  |    |
| 26  | F  | F  | F  | F  | F  |    |    | CL | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | F  | F  | F  | F  | F  | F  |    |
| 27  |    | F  | F  | F  | F  | F  | L  | L  | L  | L  | L  | L  | L  | L  | HL | HL | CL | L  | F  | F  | F  | F  | F  | F  |    |
| 28  | F  | F  | F  |    |    |    | CL | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | F  | F  | F  | F  | F  | F  |    |
| 29  | F  |    |    |    | F  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | L  | CL | C  |    |    | F  | F  | F  | F  |    |
| 30  |    |    |    |    |    | H  | C  | CL | CL | CL | L  | L  | L  | L  | L  | L  | HL | C  | F  |    |    | F  | F  | F  |    |
| 31  |    |    |    |    |    | 1  | 1  | 11 | 21 | 11 | 1  | 1  | 1  | 1  | 1  | 2  |    | 12 | 2  |    |    | 2  | 1  | 1  |    |
|     |    | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| CNT |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| MED |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| U Q |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| L Q |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

SEP. 2005 TYPES OF Es

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

## f - PLOTS OF IONOSPHERIC DATA

| KEY OF f - PLOT |   |
|-----------------|---|
|                 | SPREAD  |
| ◇               | f <sub>o</sub> F <sub>2</sub> , f <sub>o</sub> F <sub>1</sub> , f <sub>o</sub> E          |
| ×               | f <sub>x</sub> F <sub>2</sub>   |
| ✱               | DOUBTFUL f <sub>o</sub> F <sub>2</sub> , f <sub>o</sub> F <sub>1</sub> , f <sub>o</sub> E |
| ⊗               | f <sub>b</sub> E <sub>s</sub>   |
| └               | ESTIMATED f <sub>o</sub> F <sub>1</sub>   |
| †, ‡            | f <sub>min</sub>  |
| ^               | GREATER THAN  |
| v               | LESS THAN   |

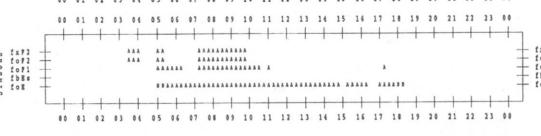
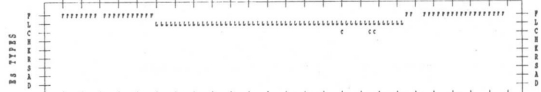
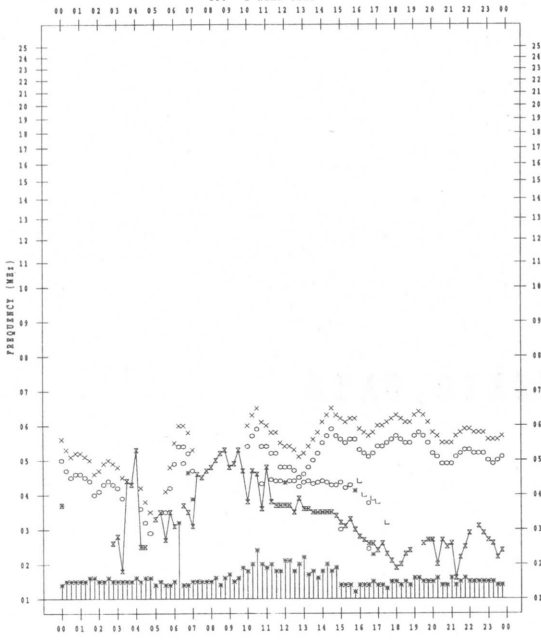
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/ 1

135 °E MEAN TIME



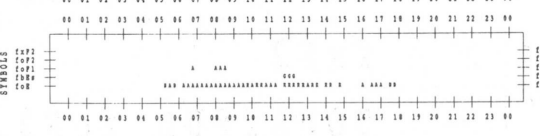
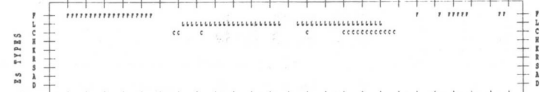
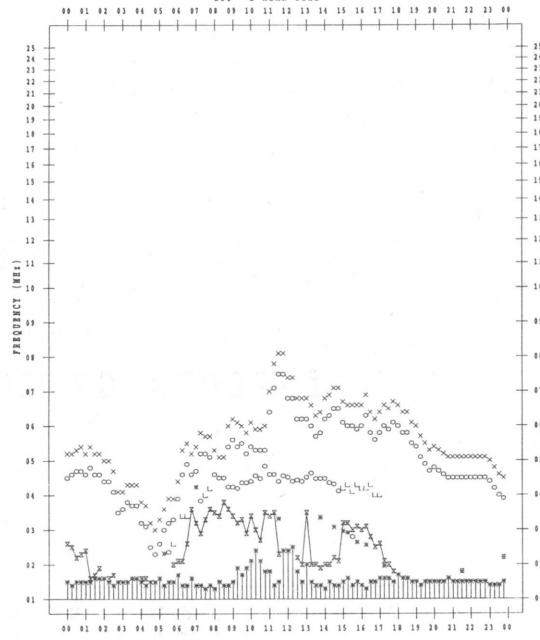
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/ 3

135 °E MEAN TIME



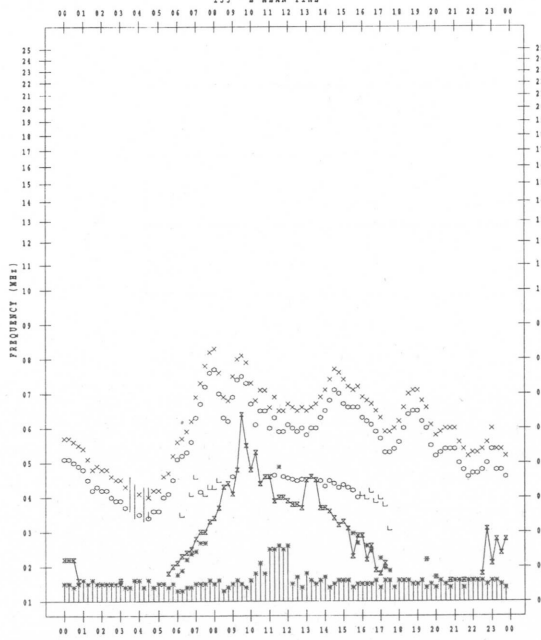
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/ 2

135 °E MEAN TIME



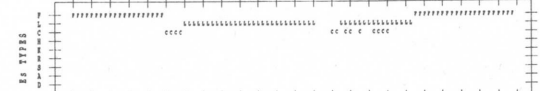
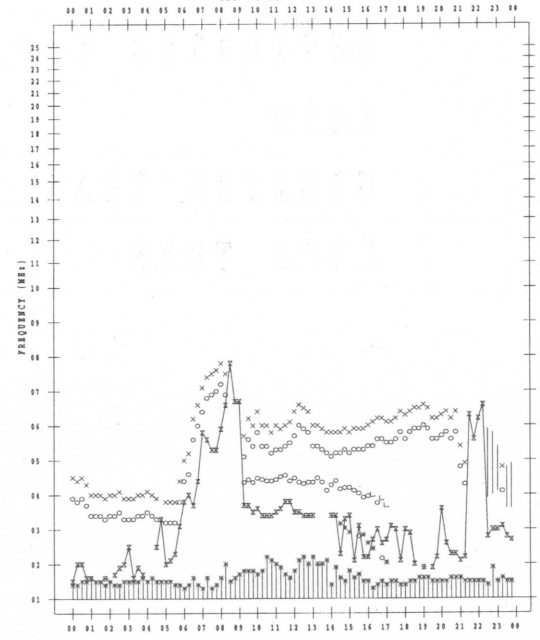
f-PLOT DATA

SCALER : I.WISHIMUTA

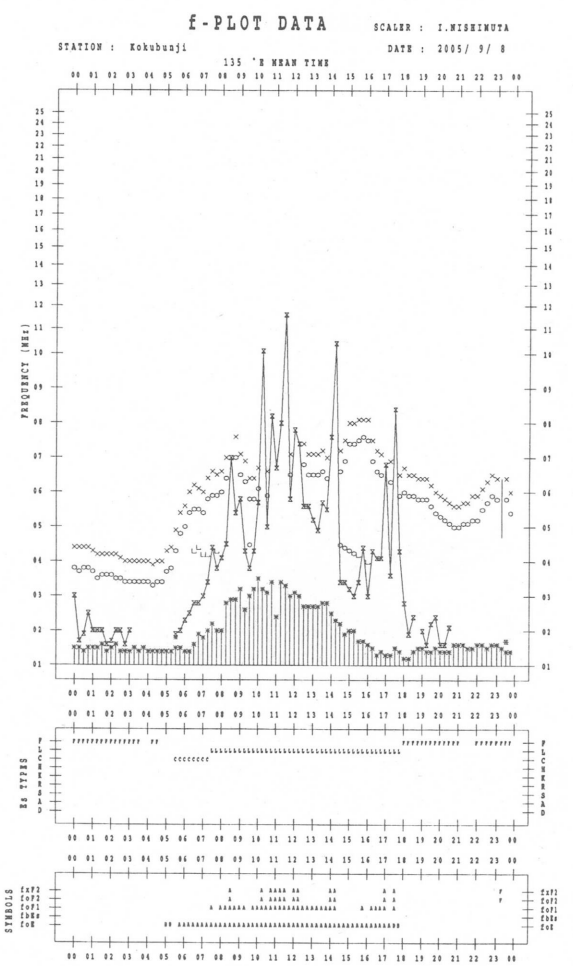
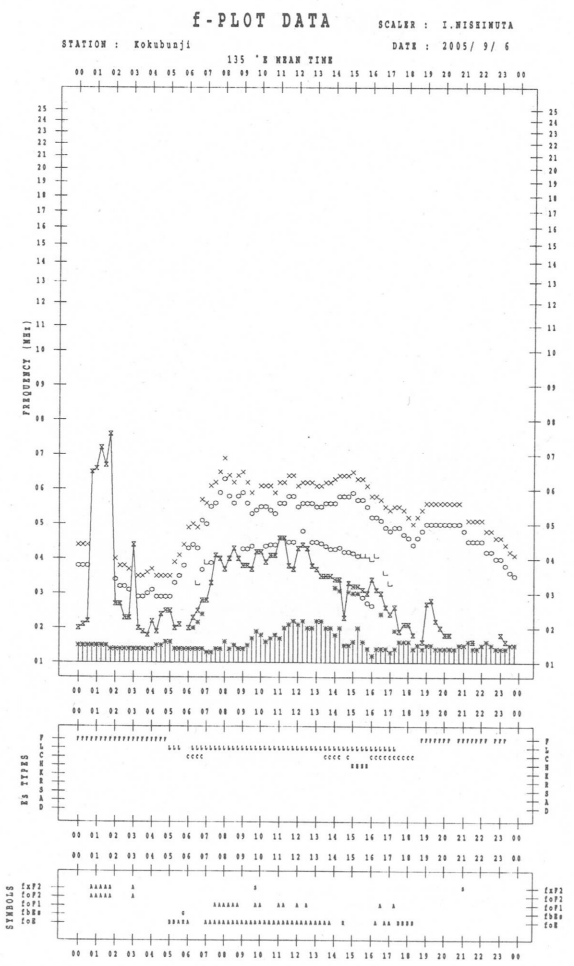
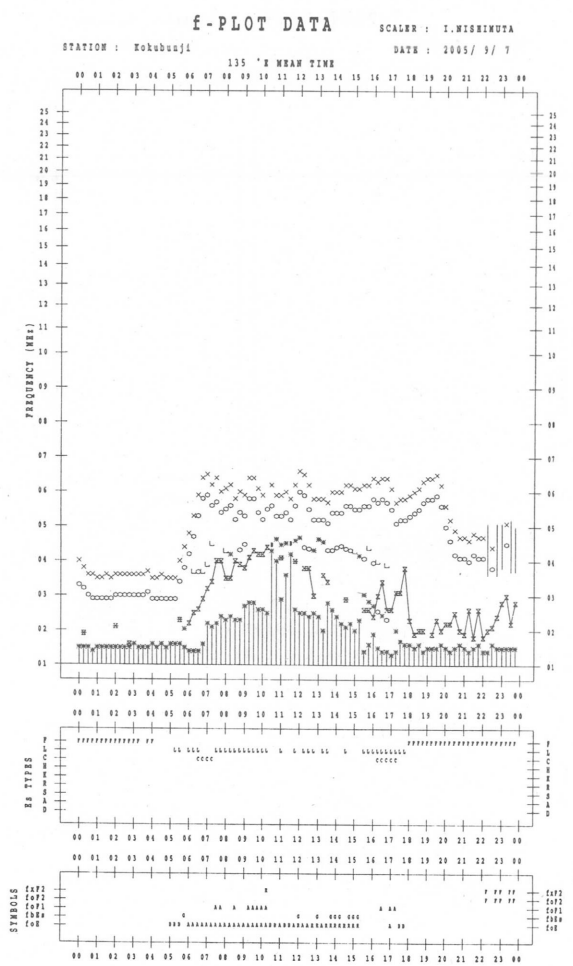
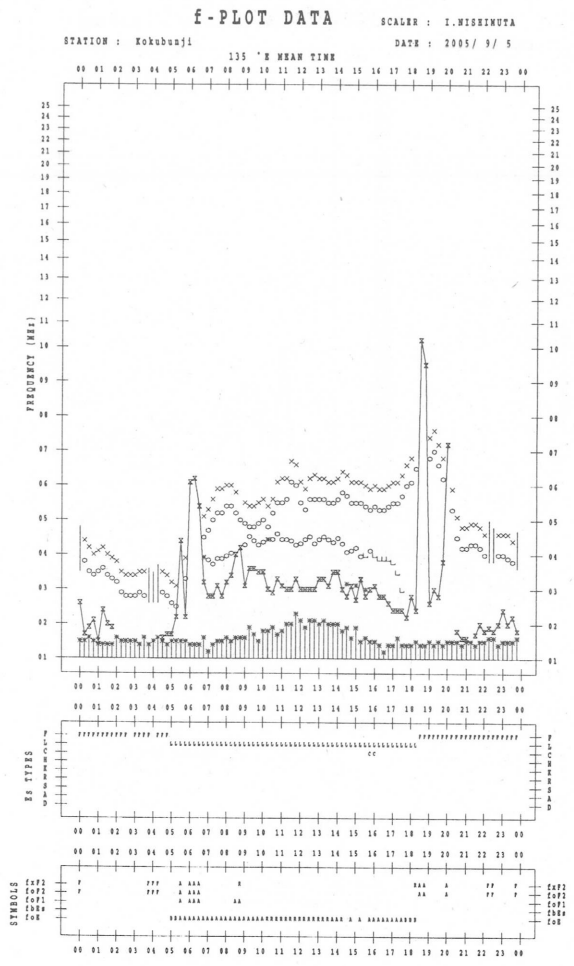
STATION : Kokubunji

DATE : 2005/ 9/ 4

135 °E MEAN TIME







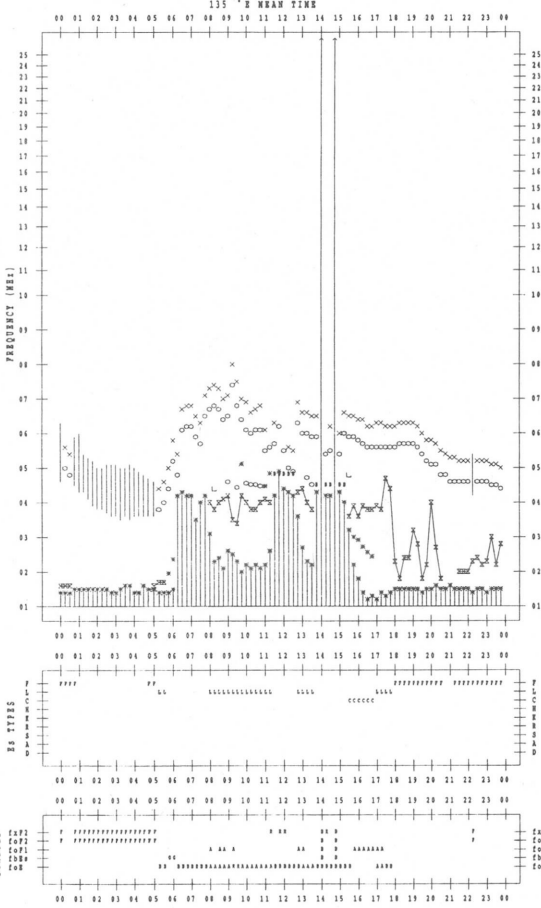


f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/ 9

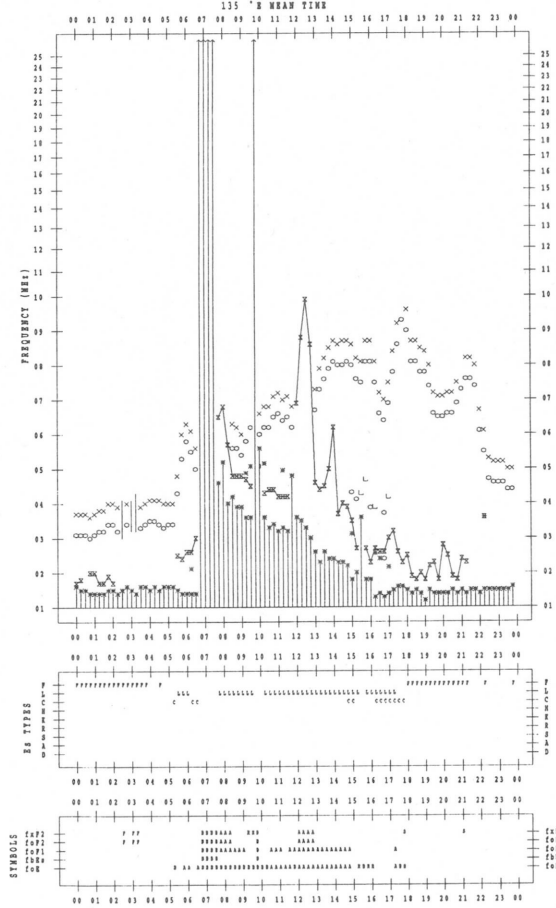


f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/11

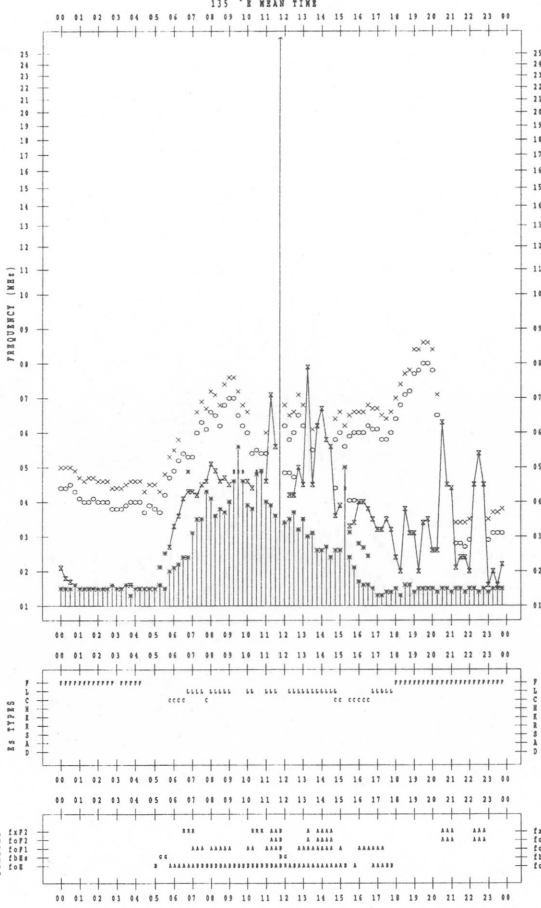


f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/10

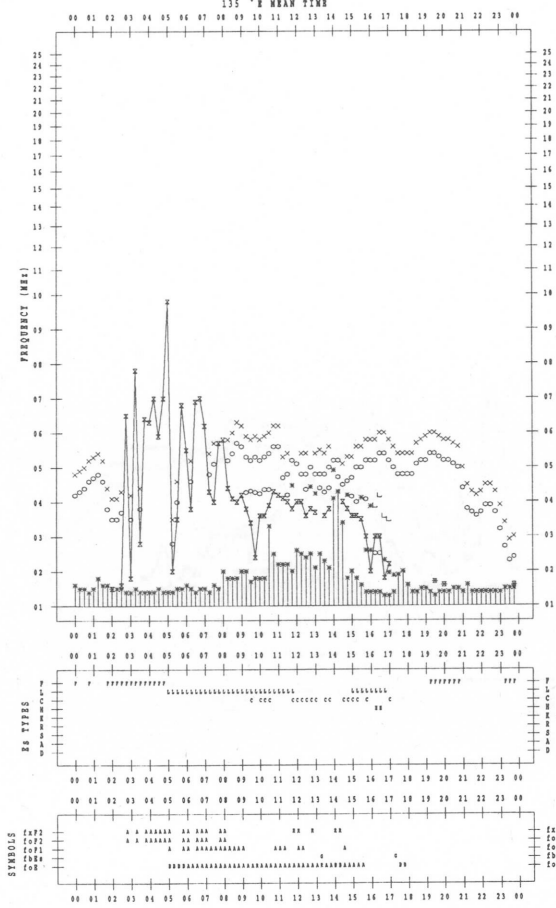


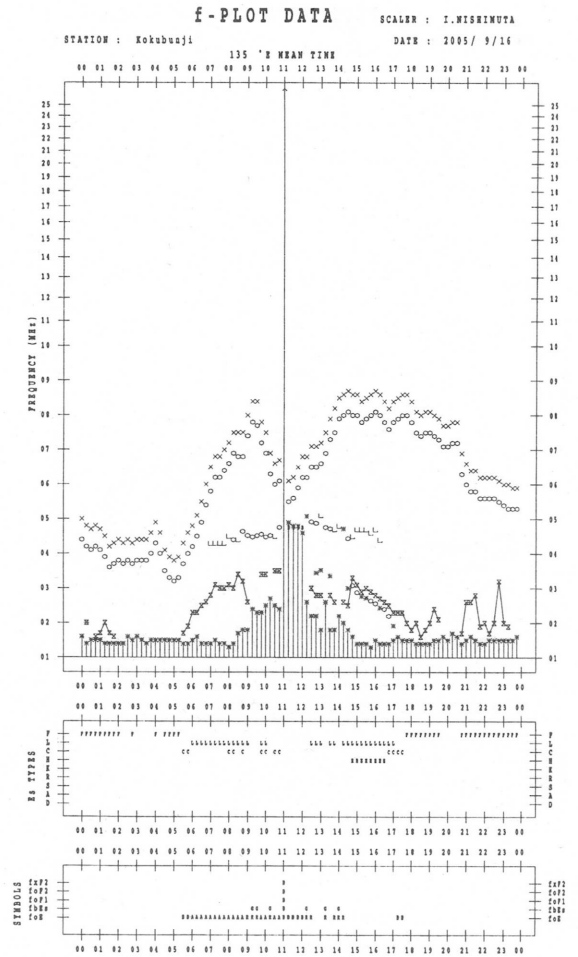
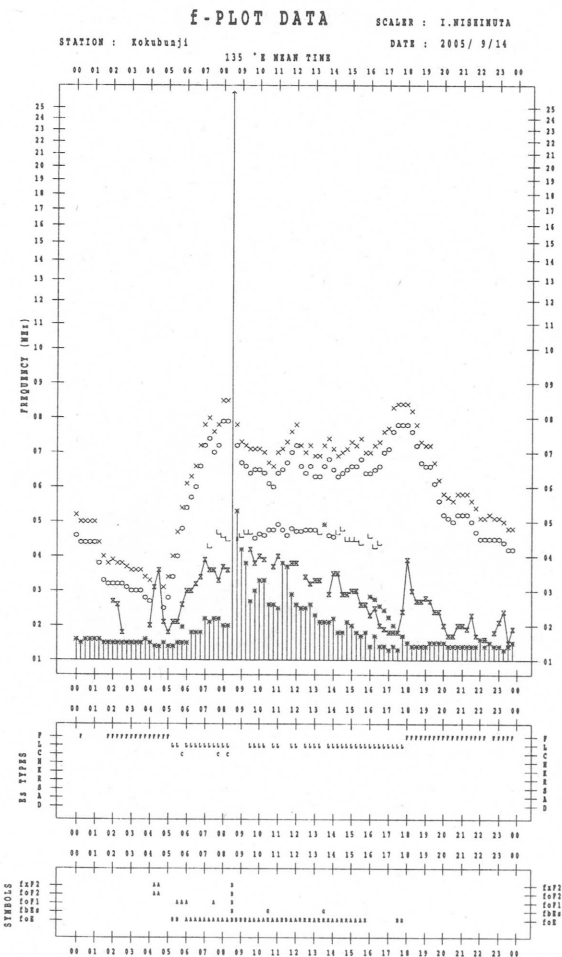
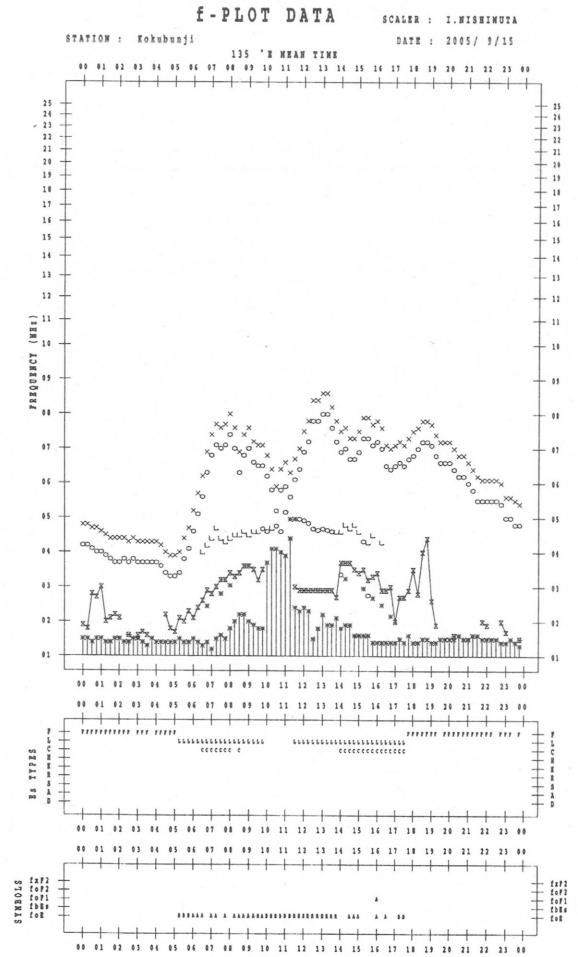
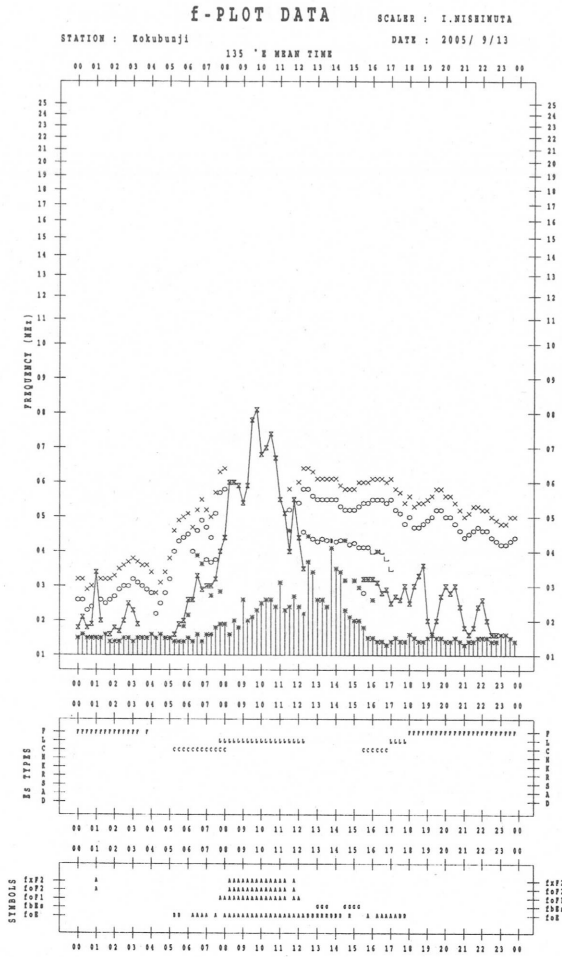
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/12





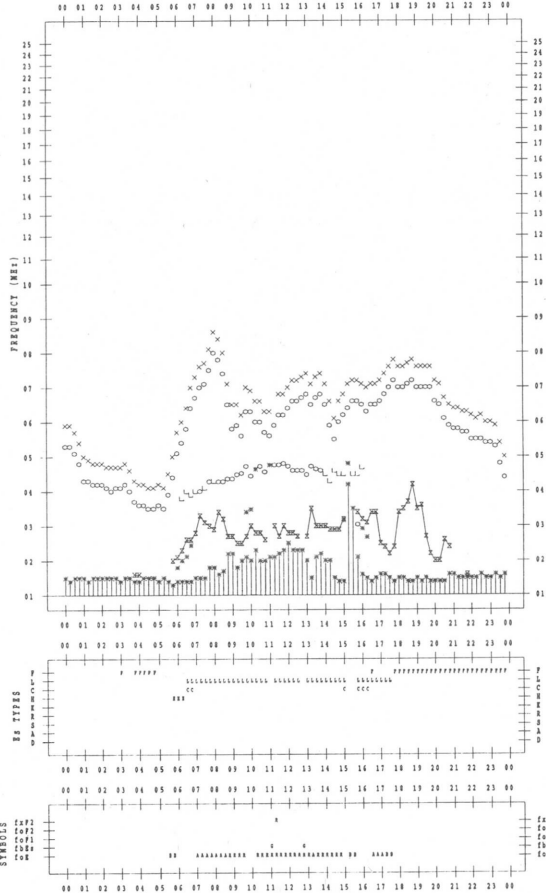
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/17

135 °E MEAN TIME



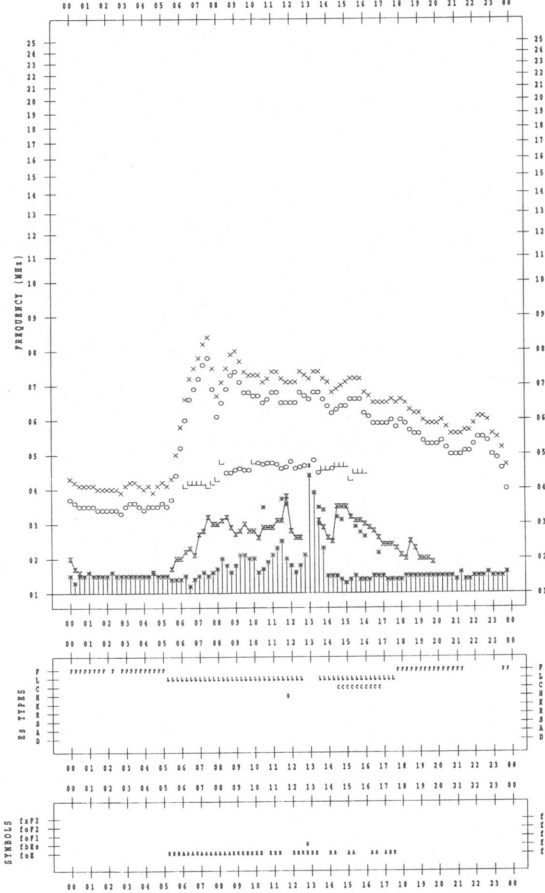
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/19

135 °E MEAN TIME



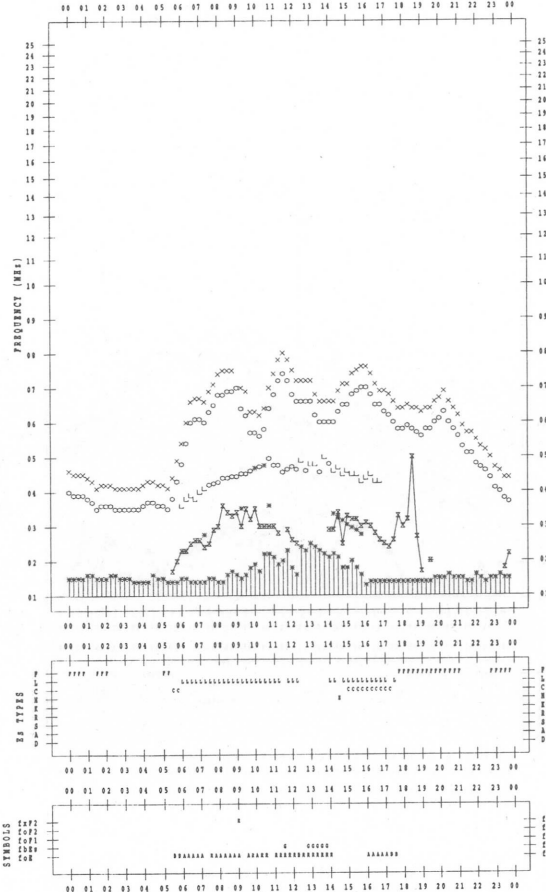
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/18

135 °E MEAN TIME



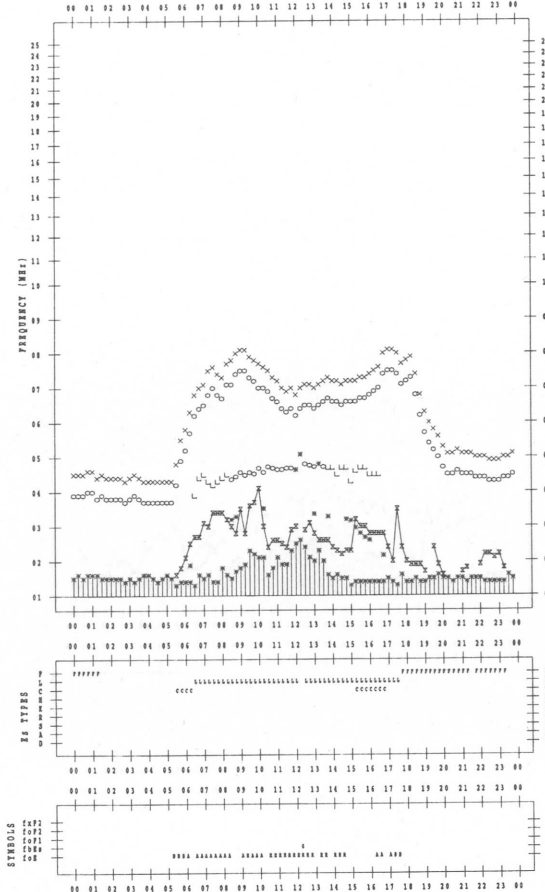
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/20

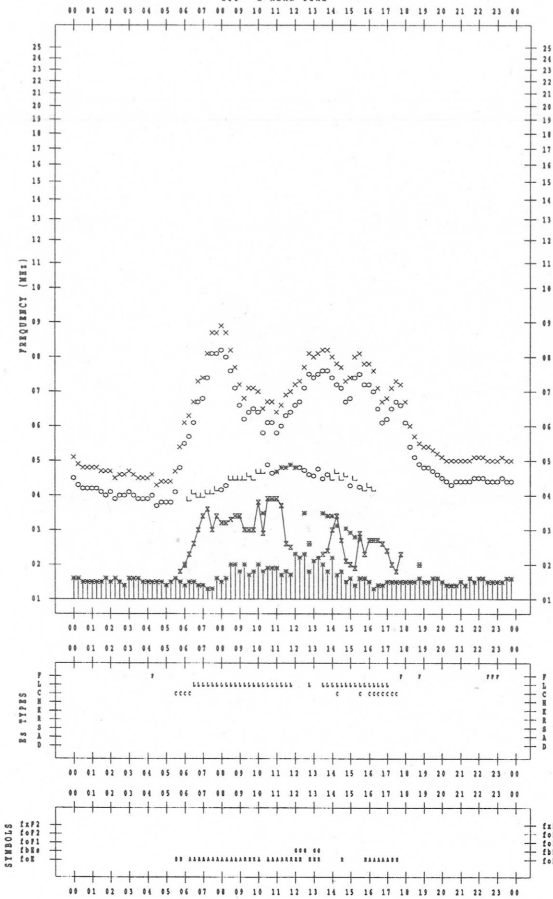
135 °E MEAN TIME



f-PLOT DATA

SCALER : I.WISHIMUTA

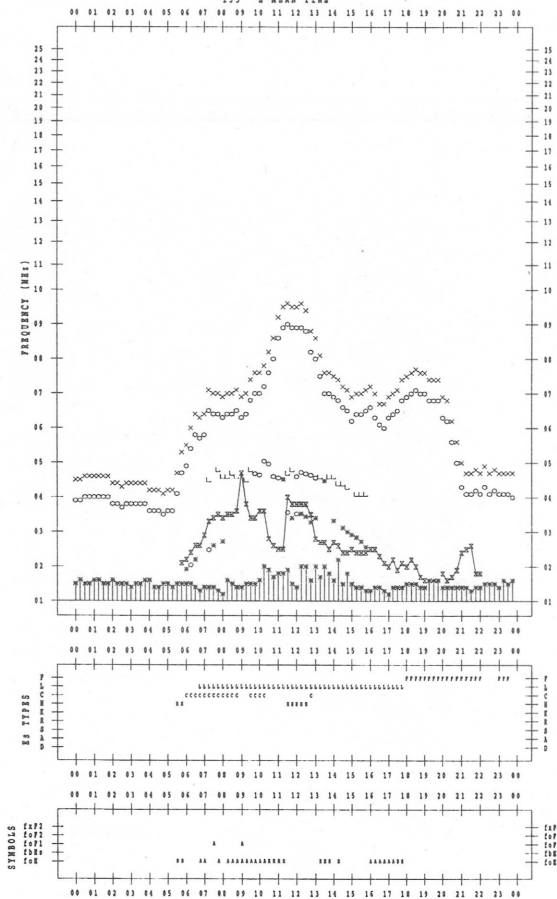
STATION : Kokubunji 135 'E MEAN TIME DATE : 2005/ 9/21



f-PLOT DATA

SCALER : I.WISHIMUTA

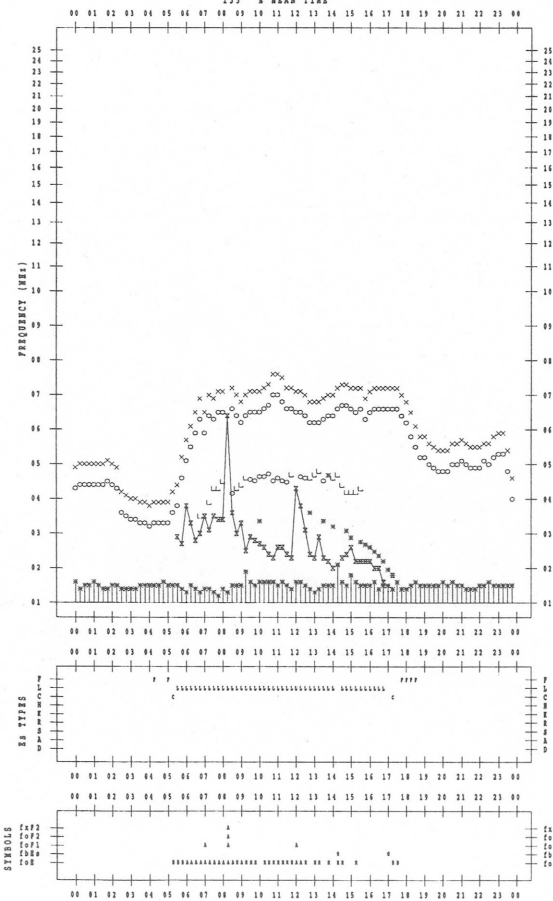
STATION : Kokubunji 135 'E MEAN TIME DATE : 2005/ 9/23



f-PLOT DATA

SCALER : I.WISHIMUTA

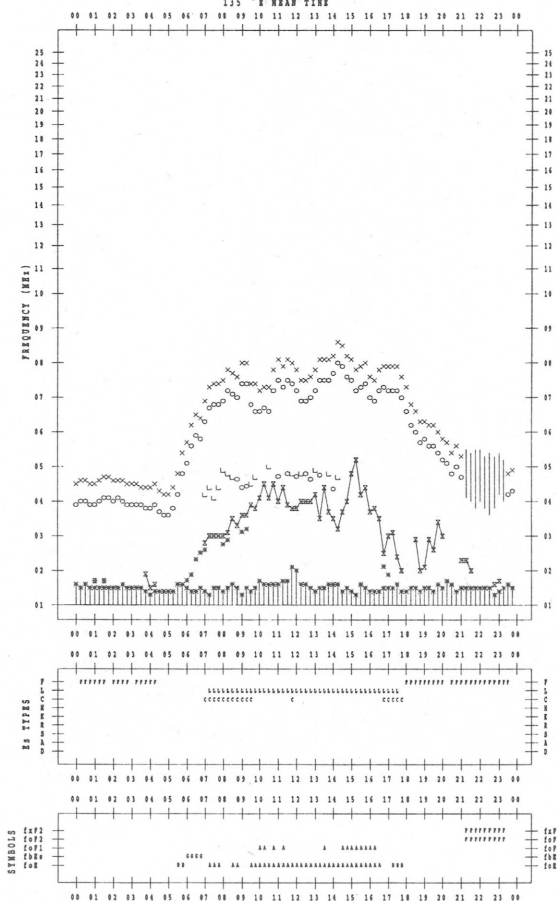
STATION : Kokubunji 135 'E MEAN TIME DATE : 2005/ 9/22



f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji 135 'E MEAN TIME DATE : 2005/ 9/24



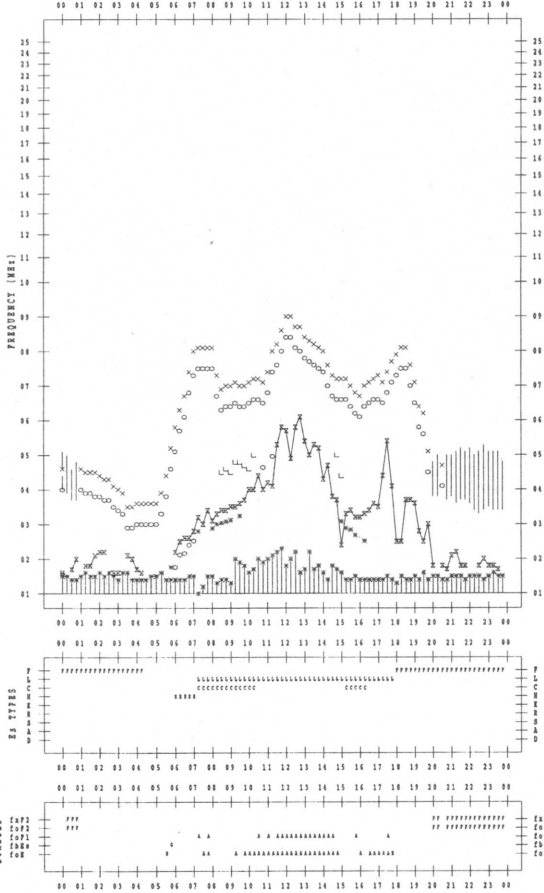
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/25

135 'N MEAN TIME



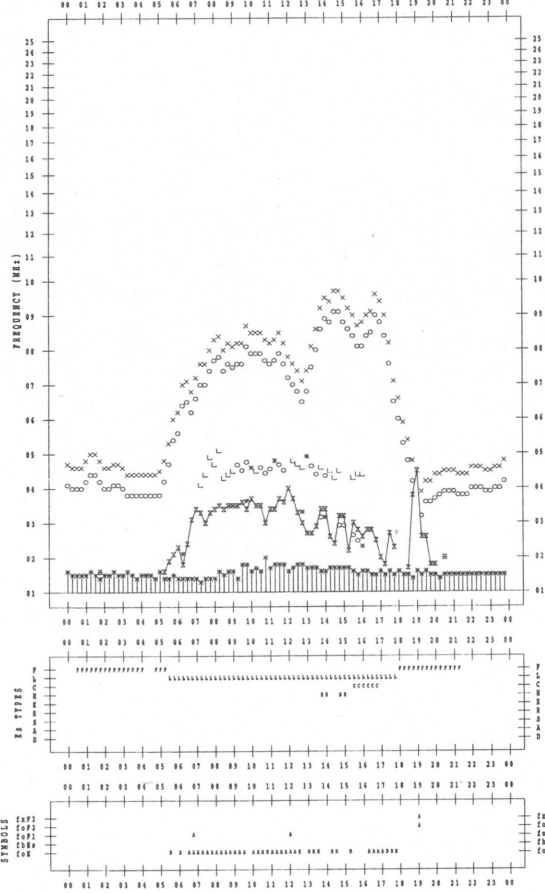
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/27

135 'N MEAN TIME



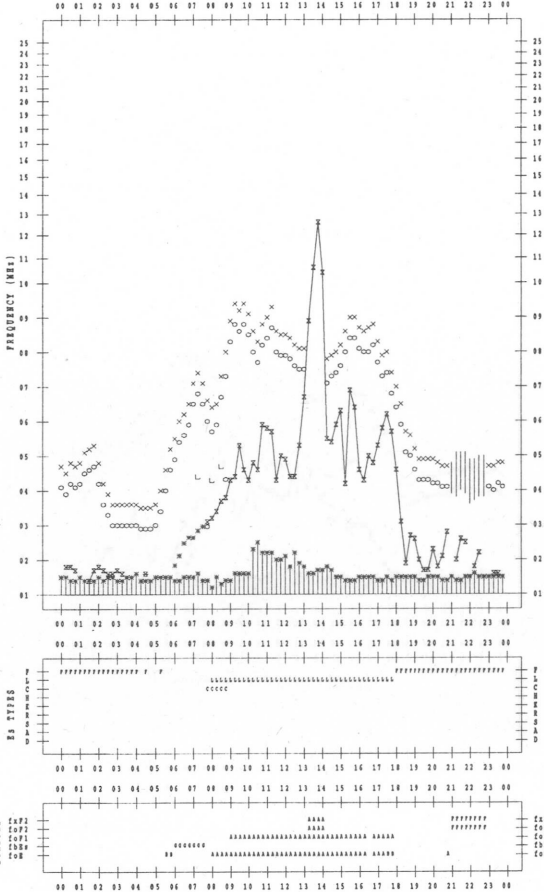
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/26

135 'N MEAN TIME



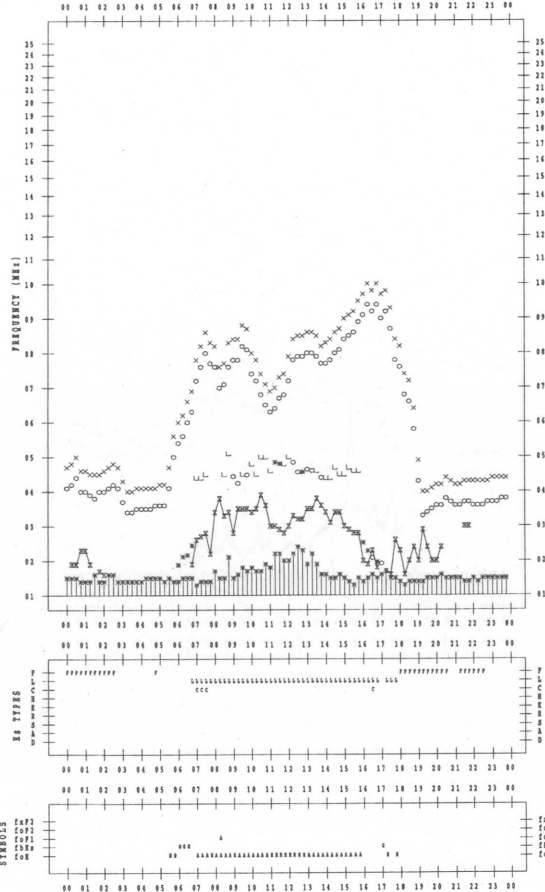
f-PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

DATE : 2005/ 9/28

135 'N MEAN TIME



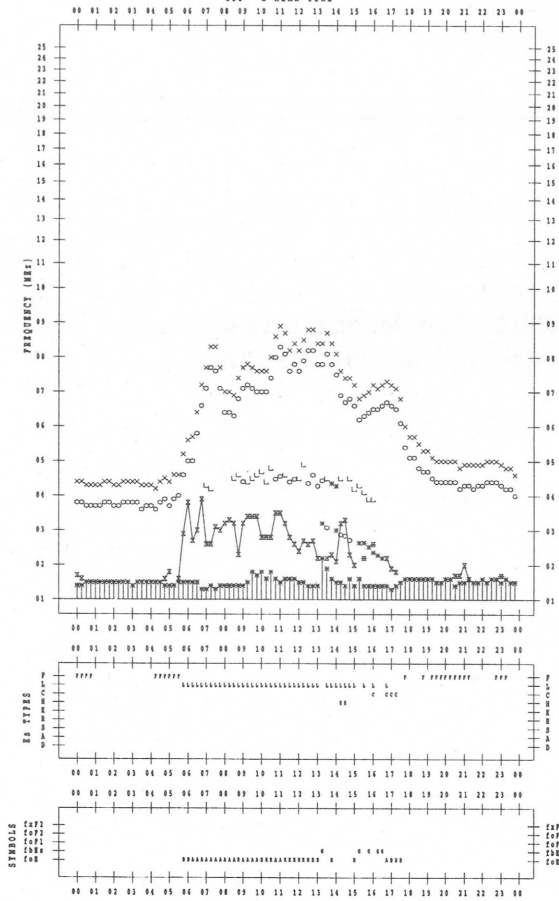
f- PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

135 'E MEAN TIME

DATE : 2005/ 9/29



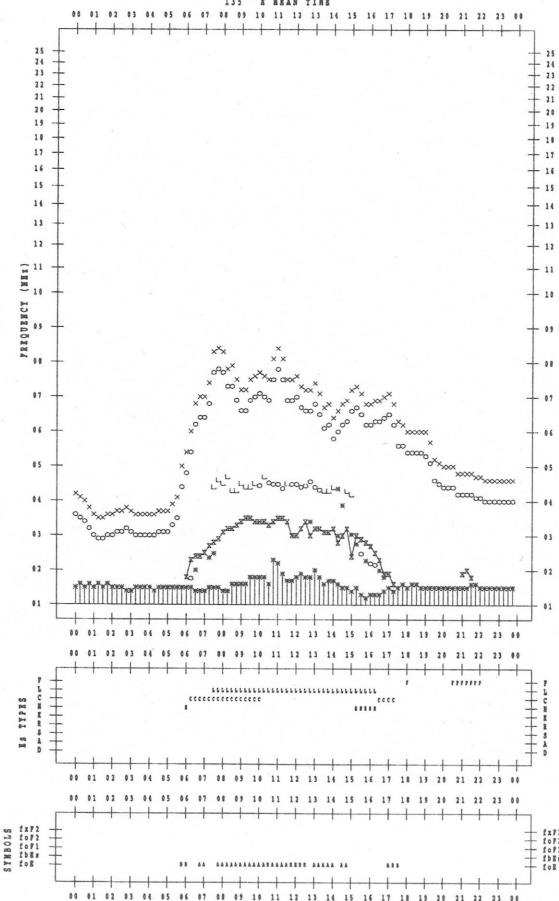
f- PLOT DATA

SCALER : I.WISHIMUTA

STATION : Kokubunji

135 'E MEAN TIME

DATE : 2005/ 9/30





B. Solar Radio Emission  
B1. Daily Data at Hiraiso  
500 MHz

Since 10th November 2004, offering of 500MHz observational data has been finished due to deterioration of the observational environment.

B. Solar Radio Emission  
B2.Outstanding Occurrences at Hiraiso

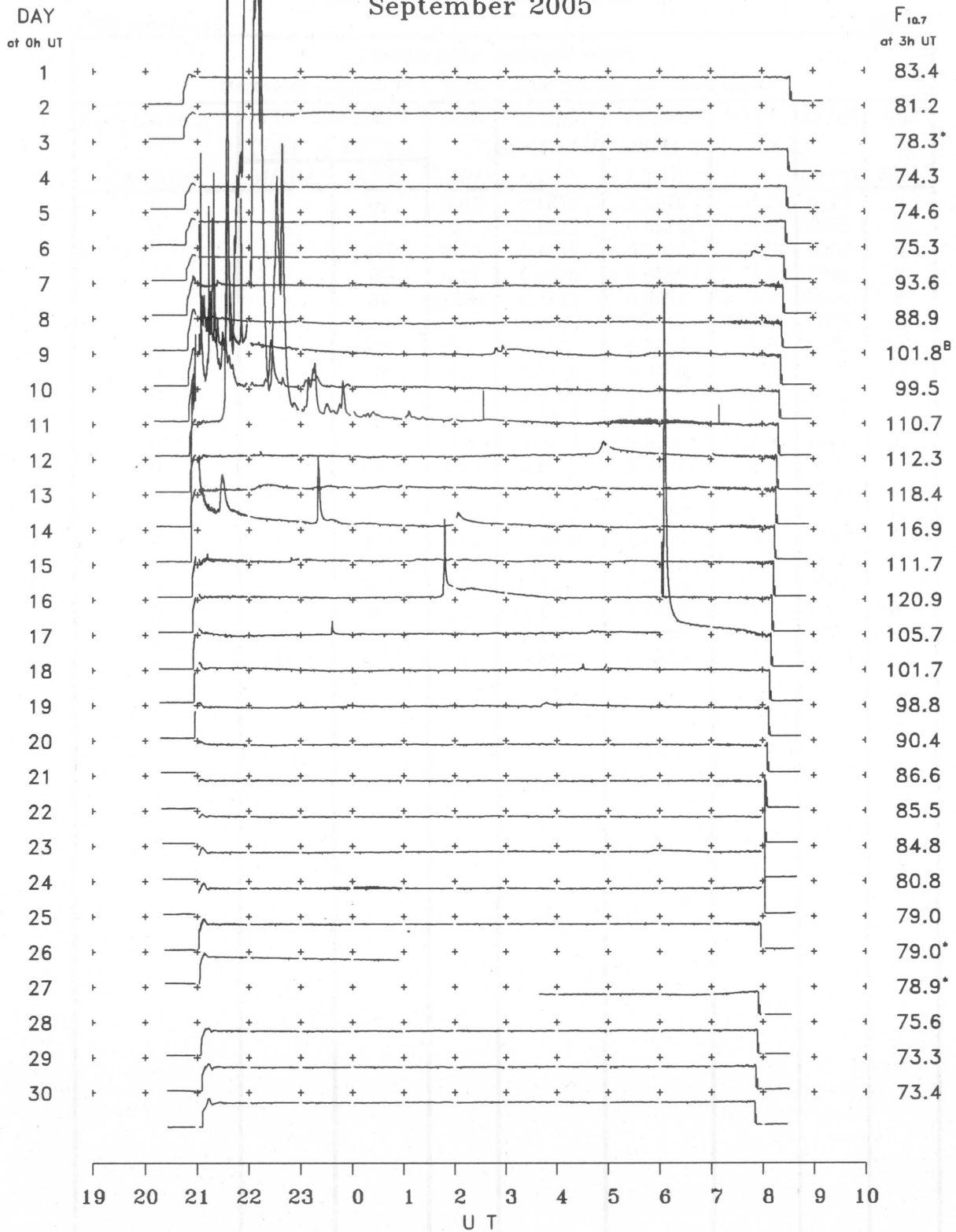
Hiraiso

September 2005

| Single-frequency observations                                 |                |       |                         |                              |                |   |      |                             |
|---|----------------|-------|-------------------------|------------------------------|----------------|---|------|-----------------------------|
| Normal observing period: 2015 - 0850 U.T. (sunrise to sunset) |                |       |                         |                              |                |   |      |                             |
| SEP.<br>2005  | FREQ.<br>(MHz) | TYPE  | START<br>TIME<br>(U.T.) | TIME OF<br>MAXIMUM<br>(U.T.) | DUR.<br>(MIN.) | FLUX DENSITY<br>( $10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$ ) |      | POLARIZATION<br><br>REMARKS |
|   |                |       |                         |                              |                | PEAK  | MEAN |                             |
| 6   | 2800           | 3 S   | 0747.0                  | 0752.0                       | 19.0           | 15  | -    | 0                           |
| 6   | 2800           | 3 S   | 2123.0                  | 2124.0                       | 7.0            | 15  | -    | 0                           |
| 8   | 2800           | 47 GB | 2102.0                  | 2104.0                       | 63.0           | 575   | -    |                             |
| 9   | 2800           | 7 C   | 0246.0                  | 0256.0                       | 12.0           | 20  | -    |                             |
| 9   | 2800           | 7 C   | 2056.0                  | 2101.0                       | 183.0          | 46  | -    |                             |
| 10  | 2800           | 47 GB | 2126.0                  | 2158.0                       | 239.0          | 1835  | -    | 0                           |
| 11  | 2800           | 8 S   | 0234.0                  | 0234.0                       | 1.0            | 80  | -    | 0                           |
| 11  | 2800           | 8 S   | 0710.0                  | 0710.0                       | 1.0            | 60  | -    | 0                           |
| 11  | 2800           | 1 S   | 2214.0                  | 2214.0                       | 2.0            | 10  | -    | 0                           |
| 12  | 2800           | 3 S   | 0445.0                  | 0455.0                       | 44.0           | 35  | -    | 0                           |
| 12  | 2800           | 4 S/F | 0658.0                  | 0700.0                       | 6.0            | 65  | -    | 0                           |
| 13  | 2800           | 3 S   | 2126.0                  | 2129.0                       | 14.0           | 100   | -    | 0                           |
| 13  | 2800           | 3 S   | 2318.0                  | 2321.0                       | 11.0           | 90  | -    | 0                           |
| 14  | 2800           | 3 S   | 0158.0                  | 0204.0                       | 19.0           | 40  | -    | 0                           |
| 16  | 2800           | 3 S   | 0145.0                  | 0148.0                       | 23.0           | 115   | -    | 0                           |
| 16  | 2800           | 3 S   | 2336.0                  | 2337.0                       | 4.0            | 40  | -    | 0                           |
| 17  | 2800           | 7 GB  | 0602.0                  | 0606.0                       | 34.0           | 975   | -    | 0                           |
| 18  | 2800           | 1 S   | 0430.0                  | 0431.0                       | 3.0            | 15  | -    | 0                           |
| 18  | 2800           | 7 C   | 0455.0                  | 0458.0                       | 6.0            | 15  | -    | 0                           |
| 19  | 2800           | 3 S   | 0341.0                  | 0348.0                       | 11.0           | 15  | -    | 0                           |

B. Solar Radio Emission  
 B3 Summary Plots of  $F_{10.7}$  at Hiraio

September 2005



Note: A vertical grid space corresponds to a 100 sfu.  
 Elevation angle range  $\geq 6^\circ$ .

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