ISSN 0021-0382

F－718

IONOSPHERIC DATA IN JAPAN

FOR OCTOBER 2008

VOL.60 NO.10

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《Real Time Ionograms on the Web .... *http://wdc.nict.go.jp/index_eng.html*》

NiCT

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 (*foF2, fEs, fmin*) and monthly medians of two factors (*h'Es ,h'F*), daily Summary Plots and monthly medians plot of *foF2*.

a. Characteristics of Ionosphere

foF2	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 ***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 *foF2*).

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 *foF2* , *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 *fxE* and *foE* 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 spred ***F*** trace
foF2 ***foF1*** ***foE*** ***foEs***	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 ***M(3000)F1***	Maximum usable frequency factor for a path of 3000 km for transmission by ***F2*** and ***F1*** layers, respectively
h'F2 ***h'F*** ***h'E*** ***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 replaced 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 atmospherics.

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 (**CNT**) 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} Wm^{-2} 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} $Wm^{-2} Hz^{-1}$ 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
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

OCT.2008

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	41	41	46	45	45	44	51	46	45	57	51	62	62	60	53	53	59	46	42	41	35	38	42	38
2	45	44	43	43	44	41	40		44	56	59	61	63	62	56	56	53	49	44	42	44	44	41	38
3	38	42	39	25		A	41	38	56	62	A	A	A	61	A	52	60	47		34	42	42	41	43
4	38	38	30	32	32	32	42	47	48	46	63	A	59	61		48	61	55	41	20	20	28	34	35
5		34	41	34	34	30		53	54	58	58		57	55	58	55	60	54	42	35	29	34	30	34
6	32	40	34	34	37	32	40	39	36	57	52	58	61	59	54	55	56	53		36	34	30	34	32
7	34	35	34	34	34	34	41	35	45	41	C	64	63	54	52	51	49	53	53	46	40	32	38	35
8	32	32	34	34	34	34	40	58	53	55	39	53	53	60	60	A	57	59	A	A	34	42	35	41
9	41	43	43	42	37	37	40	56	68	55		62	68	55	46	45	60	50	28		38	41	42	42
10	38	43	44	45	34	40	55	56	44	38	51	60		62	46	50	47	40	43	A	44	44	39	A
11	A	47	45		34		50	46	46	62	72	76	A	56	52	52	54	48	43	40	45	41	40	36
12	37	36	34	34	28		28	37	A	A	A	A	44	36	46	45	41	40	A	37			A	
13		37	40	40	40	38	42	30	52	65	A	70	58	54	52	46	54	52	41	41	38	A		A
14	A	32	32	39	26	39	37	47	59	A	60	60	58		41	54	52	44	A	41	41		38	37
15	40	36	34	34	34	36	47	57	58	60	60	58	63	49	49	56	50	47	40	41		42	51	52
16	40	37	37	34	38	37	40	57	67	71	74	62	60	52	55	50	60	54	40	38	34	40	38	37
17	37	38	31	34	34	36	44	47	62	56	64	58	64	54	56	53	67	54	40	42	34	34	32	37
18	38	37	37	37	32	34	37	40	49	60	64	64	56	54	55	58	56	45	40	43	40	34	40	42
19	41	42	44	40	26	37	45	51	52	55	68	62	59	58	54	55	56	46	36	42	41	41	42	43
20	44	44	42	38	38	35	38	47	50	58	60	65	64	60	53		57	40	46		44	41	45	45
21	47	38	54	53	52	51	42	46	56	55	61	A	67	C 53	55	57	58	42	A	A	44	A	A	A
22		39	42	46	42	40	41	54	63	53	47	66	71	58	57	56		46	A	A	44	38	42	46
23	44	45	46	47	47	54	45	54	74	46	61	58	67	67	58	60	53	A	A	51	52		45	47
24	51	52	52	53	51	44	40	52	58	59	57	62	66	60	53	57	54	55	38	42	45	42	39	42
25	40	38	40	41	41	45	47	56	65	44	76	62	53	60	34	50	36	A	A	36	40	38	37	40
26	40	40	40	40	34	34	38	50	61	52	60	62	67	40	A	56	47	45		A		30	32	
27	29	32	32	32	32	32	34	45	42	55	A	66	60	60	57	45	44	42		24		32	32	35
28	36	36	38	40	37	38	31	41	54	60	42	66	62	59	38	58	A	A	A		28		32	34
29	34	34	34	35	34	34	36	49	55	67	64	64	66	70	56	61	55	60	39	40	53	A	54	52
30	54	52	47	39	37	38	44	178	56	61	62	83	83	67	54	66	52	41	38	44	48	48	54	53
31	39	40	42	42	40	44	45	58	60	62	54	67	71	68	55	51	48	38	34	34	42	46	46	46
	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	31	31	30	30	28	30	30	30	29	25	26	28	30	28	29	29	28	19	23	27	24	28	26
MED	40	38	40	39	36	37	41	48	54	57	60	62	62	59	54	54	54	47	40	41	41	40	40	40
U Q	41	43	44	42	40	40	45	56	60	60	64	66	66	61	56	56	58	53	43	42	44	42	42	45
L Q	37	36	34	34	34	34	38	45	48	54	53	60	58	54	50	50	49	43	38	36	34	34	34	36

HOURLY VALUES OF fEs AT Wakkanai

OCT.2008

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	G	G	G	G	G	G	G	34	G	45	52	54	44	G	G	G	G	G	G	G	30	G	G	G
2	G	G	G	G	G	G	G		39	G	G	38	G	G	G	G	33	33	26	33	30	26	G	G
3	G	G	G	G	28	32	G	34	34	51	65	65	64	58	55	59	53	52	41	29	46	40	G	G
4	G	28	G	G	24	26	G	G	38	46	52	60	58	60	65	39	G	27	G	G	34	27	G	39
5	39	29	G	G	G	G		34	G	40	40	G	G	G	G	G	G	G	G	G	G	G	G	G
6	28	27	G	G	G	G	G	33	G	G	G	G	G	G	G	G	29	28	G	28	G	24	G	G
7	G	27	G	G	G	G	G	G	G	G	C	G	G	36	G	G	31	G	27	G	G	G	G	G
8	G	G	G	G	G	G	G	G	G	43	44	37	50	G	40	51	40	59	48	34	26	G	G	G
9	G	26	26	29	31	27	G	32	37	G		G	G	G	G	39	34	30	46	35	40	36	G	25
10	25	G	G	G	G	27	30	G	34	52	52	G		G	G	G	36	28	26	31	G	31	60	59
11	71	35	37	34	39	49	38	31	38	44	41	46	112	G	60	32	31	G	G	G	G	G	G	G
12	28	30	25	24	26	G	29	G	50	45	96	91	40	G	G	G	G	27	38	34	38	39	50	44
13	39	G	G	28	29	G	28	42	54	60	73	51		52	G	G	G	G	30	35	46	69	52	52
14	60	26	31	G	G	G	26	G	G	53	42	51	G		40	34	40	39	73	52	44	59	G	G
15	G	G	G	G	G	G	G	30	34	G	G	G	G	G	G	G	29	G	G	37	39	G	30	G
16	G	G	G	G	G	26	G	G	G	G	G	G	36		G	G	G	G	G	G	26	30	28	28
17	29	27	G	G	G	G	G	34	G	G	G	G	G	G	G	G	G	11	G	G	28	G	G	G
18	G	G	24	G	G	25	G	29	34	37	G	G	38	G	G	G	G	27	G	G	G	G	G	G
19	G	G	G	G	60	26	27	G	G	G	42	42	G	G	36	G	G	G	G	G	G	G	G	G
20	25	28	G	G	G	G	G		G	G	G	47	G	G	G		51	35	29	45	43	60	G	G
21	26	32	G	G	G	G	G		G	38	72	71	47	C 50	33	G	30	28	65	46	32	70	60	59
22	39	40	28	40	30	G			41	36	51	38	G	40	G	41		40	49	68	56	32	41	G
23	G	G	G	G	G	G	42	G	39	49	55	59	G	G	G	G	35	82	73	60	49	69	33	24
24	G	G	G	29	G	G	G	G	34	35	G	37	G	G	G	35	32	34	25	39	33	45	G	27
25	G	G	G	32	G	26	11	G		39	G	G	G	G	33	35	42	44	40	28	G	G	G	G
26	G	G	G	G	G	G	11	30		G	G	37	G	44	48	39	45	40	33	54	29	G	G	G
27	G	G	G	G	G	G	G	42	41	34	65	G	40	G	37	33	46	33	27	G	31	25	G	30
28	31	37	11	G	G	29	29		G	40	41	G	49		G	G	64		66	32	67	27	32	30
29	G	G	G	G	30	32	G		G	34	49	G	46	G	32		29	31	33	35	60	78	59	28
30	G	26	G	G	G	G	G		42	35	37	40	G		44	51	41	36	34	33	G	40	30	32
31	G	G	G	G	G	G	26		32	39	40	68	G	G	32	G	G	G	29	G	29	30	32	30
	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	31	31	31	31	31	31	29	23	29	31	29	31	29	27	31	29	30	30	31	31	31	31	31	31
MED	G	G	G	G	G	G	G	29	34	37	41	37	G	G	G	G	31	28	29	32	30	27	G	G
U Q	28	28	G	G	26	26	26	34	38	45	52	51	45	36	37	37	40	36	41	37	43	40	32	30
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

HOURLY VALUES OF fmin AT Wakkanai

OCT.2008

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	20	18	20	15	14	17	18	15	15	15	18	18	20	16	16	15	14	18	15	16	15	17	15	17
2	15	15	16	15	18	14	18		14	15	18	18	15	15	15	14	14	14	15	15	14	16	15	15
3	15	15	14	14	17	14	16	14	15	14	15	17	17	17	17	14	14	14	14	14	15	14	14	17
4	16	14	17	15	16	15	16	14	14	18	17	16	15	15	16	14	15	16	16	20	17	17	17	16
5	14	15	18	15	14	16		18	15	15	20	22	18	18	14	18	21	20	15	14	21	18	20	16
6	15	15	15	15	15	14	20	20	15	14	20	16	14	16	16	14	14	18	18	15	18	18	17	17
7	16	15	16	15	17	15	17	15	15	16	C	18	16	15	15	14	15	15	15	16	15	15	14	14
8	16	14	16	15	18	20	17	14	14	16	21	20	17	15	14	14	14	14	14	14	17	14	14	14
9	18	18	15	14	14	15	15	14	14	16		15	15	18	15	24	17	14	15	15	14	15	24	16
10	14	20	14	14	15	14	16	15	16	17	20	21		14	22	18	18	14	16	18	15	15	15	15
11	14	14	14	14	14	14	14	14	18	18	15	16	14	14	15	14	14	15	14	15	14	17	15	15
12	15	15	15	15	16	21	15	16	16	21	20	14	18	20	15	27	20	16	15	14	14	15	14	14
13	14	15	15	15	15	15	16	14	14	15	18	18	14	17	16	16	20	18	16	14	14	14	15	18
14	15	15	14	14	14	14	17	16	14	15	18	14	20		14	16	14	14	14	17	15	15	15	16
15	15	15	14	14	16	14	15	14	16	18	15	17	17	15	15	17	14	14	16	15	15	17	14	15
16	15	14	15	15	18	14	18	20	14	14	18	15	18	20	16	24	20	15	20	16	14	16	16	15
17	16	18	17	16	16	15	15	14	14	18	18	14	17	18	15	22	20	14	14	14	17	16	15	14
18	15	15	15	15	15	15	16	18	15	16	15	15	20	20	17	15	17	15	15	15	15	18	15	17
19	22	15	14	15	15	14	17	20	14	16	18	15	18	17	15	14	20	15	15	15	14	15	15	18
20	15	15	15	15	16	16	14	14	15	14	14	15	15	15	14		15	14	15	15	14	16	15	17
21	15	15	15	14	14	14	15	14	15	14	15	16	16	C 15	15	14	15	17	15	14	14	14	15	14
22	15	15	14	15	14	15	15	21	14	14	15	17	15	17	15	14		14	15	14	15	15	15	14
23	14	14	14	15	14	14	15	15	14	15	15	18	14	15	14	14	14	15	18	15	14	15	14	15
24	15	15	15	14	14	15	16	21	14	17	15	14	15	15	14	14	14	15	15	15	15	15	15	15
25	15	14	14	15	15	14	14	22	14	14	16	15	20	17	16	14	14	14	15	14	16	15	17	15
26	14	15	15	14	15	16	16	18	14	14	14	14	17	16	14	15	14	14	15	14	15	15	16	20
27	16	16	15	16	14	15	15	16	15	15	20	18	16	18	15	16	14	14	18	16	15	21	15	14
28	15	14	14	14	14	14	15	16	14	14	14	18	17	15	24	16	14	17	14	15	18	18	15	15
29	15	14	14	14	15	14	14	22	15	16	15	17	14	17	14	14	15	16	14	15	18	16	14	14
30	15	15	14	14	14	15	15	18	15	14	15	14	15	15	16	14	14	14	15	15	15	14	15	15
31	14	14	14	14	14	15	15	15	14	14	16	15	14	15	14	16	18	15	14	20	15	16	14	16
	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	31	31	31	31	31	31	30	30	31	31	29	31	30	30	31	30	30	31	31	31	31	31	31	31
MED	15	15	15	15	15	15	16	16	14	15	16	16	16	16	15	14	14	15	15	15	15	15	15	15
U Q	16	15	15	15	16	15	17	18	15	16	18	18	18	17	16	16	18	16	16	16	16	17	15	17
L Q	15	14	14	14	14	14	15	14	14	14	15	15	15	15	14	14	14	14	14	14	14	15	14	14

HOURLY VALUES OF foF2 AT Kokubunji

OCT.2008

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	34	32	37	30	27	28	35	51	54	44	61	73	66	54	56	51	55	49	44	39	A	38	37	39
2	36	36	31	34	32	30	42	44	52	48	64	58	58	65	64	51	51	49	52	35	36	32	32	26
3	31	34					39	60	72	52	57		68	64	61	49	49	54	49	44	38	41	30	32
4	43	27	26				42	58	69	61	61	68	70	54	52	52	58	66	55	30	28	30		30
5	30	32	32	27			39	51	66	64	62	69	61	62	62	64	59	52	49	42	28	32	30	30
6	36	37	37	32		28	44	57	44	54	56	61	52	43	60	66	66	70	44		A		30	32
7	32	30	30	28	A	27	42	48	55	56	59	69		55	53	62	57	61	43	41	36		27	26
8	34	32	32	30		31	41	37	56	54	57	58	54	53	58	72	71	65	53	28			32	36
9	34	34	28	30	30	23	45	A	54	56	47	58	58	57	52	58	52	58	52	28		32	32	30
10	27	32	30	30	27	26	39	48	55	48	54	52	59	51	48	49	49	48	39	32	27	A	A	36
11	37	36	36	34	31	28	46	47	55	52	44	61	63	65	53	56	57	58	46	38	39	43	39	38
12	36	39	34	34	30	28	32		81	66	56	78	80	67	57	52	54	52	45		30	A	30	A
13	32			30	27	28	41	45		59	66	74	51	56	53	53	53	62	43					28
14	28	26		31	30	30	20	44	57	57	52	59	61	60	54	58	55	59	38		28		32	32
15		58			28	27	39	51	62	58	65	66	61	67	71	59	48	41	35	39	32		41	42
16		39	39	41			42	61	82	83	84	83	63	59	49	57	54	44	47	37				30
17	32	38	34	34	34	34	44	51	66	62	64	66	59	58	66	57	55	55	51			34	27	34
18		38	34	36	34	31	42	59	62	58	62	58	74	62	58	49	48	56			28	34	30	34
19	36	37	36	36	30	30	39	49		69	59	54	67	53	56	52	A	47		A	A	32	34	36
20	34	37		41		28	46	54	59	59	58	59	68	72	61	63	59	53	32	A		34	32	A
21		32	30	34	30		39	51	47	54	54	60	A	C 67	66	57	56	47	37	A	A	A	32	23
22	23	34	34	30	32	27	38	55	59	58	A	68	59	66	65	65		47					31	30
23	A	31	27	32	31	31	52	61	58	62	62	62	65	62	72	58	51	51	43	46	42	39	36	
24	32	32		34	A	28		59	55	62	66	A	59	57	66	68	51	46	A	A	A	A	A	27
25	27	28	30	30	28	28	35	61	59	73	66	66	57	51	57	63	52	43			28	30	30	30
26	28	30	32	38	47	30	39	57	52	61	66	57	54	61	62	49	56	39	A	A	A		A	28
27	28	28	30	30	32		37	48	55		64	56	59	43	54	66	47	39	A	30	30			
28		30	28	31	34		36	47	50		66	58	52	58	51	60	57			A	A	A		28
29	32			30	27	26	42		58	63	57	A	64	72	82	43	56	46		42			27	44
30				42	44	30	45	53	55	64	71	78	100		76	66	55	45	34	A	A	A	C	34
31	A	35	30	30	32	30	36	54	56	58	78	76	75	60	64	57	47	46	34		34	28		27
	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	23	28	23	28	22	24	30	28	29	29	30	28	29	30	31	31	29	30	22	15	15	14	21	27
MED	32	33	32	32	30	28	40	51	56	58	62	62	61	60	58	57	55	50	44	38	30	33	32	30
U Q	36	37	34	34	32	30	42	57	62	62	66	69	67	65	65	63	57	58	49	42	36	38	33	36
L Q	28	30	30	30	28	27	38	48	54	54	57	58	58	54	53	52	51	46	38	30	28	32	30	28

HOURLY VALUES OF fEs AT Kokubunji

OCT.2008

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	G	26	G	G	G	G	29	35	43	45	43	G	G	G	G	G	G	26	37	33	36	28	23	23
2	G	G	G	G	G	G		36	G	G	G	G	G	G	G	G	G	28	G	G	G	G	G	G
3	G	G	G				30	38	45	44	G	G	G	G	G	G	G	G	G	G	G	G	G	G
4	G	G	G		G	G	G	33	G	G	39	G	G	G	G	G	G	28	24	G	G	G	37	23
5	33	G	G	G			32	34	43	G	G	G	G	G	G	34	G	33	26	29	28	G	G	G
6	27	G	G	G	G	G	27	35	G	G	G	G	G	G	G	G	40	30	31		26	G	48	31
7	29	G	G	G	31	G	G	G	G	G	G	39		G	G	G	34	26	11	G	33	33	29	23
8	G	G	G	G		G			50	37	47	59	G	G	G	G	37	G	41	27	44	28	G	G
9	G	G	G	G	G	G	32	86	61	59	G	40	G	G	G	49	34	30	11	11		27	G	22
10	G	G	G	G	G	G	24	30	G	G	G	G	G	G	G	G	36	31	11	G	G	35	33	26
11	G	G	G	G	G	G	26	34	50	50	49	43	G	G	G	34	33	34	39	33	G	G	G	G
12	G	G	29	G	G	G	G	G	G	44	51	61	G	G	G	G	G	33	G	G	G	35	29	57
13	29	29	27	23	25	G	G	34		G	N	G	G	G	G	G	G	30	24	24			29	G
14	G	G	36	G	G	G	G	G	G	37	G	G	G	G	G	G	34	G	28	34	28	43	G	G
15	G	G	29		G	G	G	48	40	45	40	40	G	G	G	G	G	G	G	25	30	G	29	28
16	G	26	G	G	G	G	G	34	G	G	G	40	G	G	G	G	G	G	G	G	30		G	G
17	29	G	29	31	G	23	23	G	G	G	G	G	G	G	G	G	31	G	27	28	34	30	G	G
18	G	33	G	G	G	G	G	36	G	G	G	G	G	G	G	34	36	34	29	26	G	G	G	G
19	G	G	G	G	G	G	G	39		G	49	46	G	38	52	G	56	24	35	32	35	G	G	G
20	G	G	G	G	G	G	24	34	G	G	47	44	49	G	G	G	41		25	31	35	47	70	49
21	41	25	26	G	27	26	G	38	56	39	53	57	85	C 59	60	51	50	33	G	44	52	49	31	40
22	G	29	G	28	G	G	27	34	43	45	53	50	43	G	G	48	35	34	35	39	40	29	G	G
23	29	G	G	G	G	G	25	33	G	G	G	38	G	G	35	36	36	29	26	45	30	33	31	26
24	G	26	29	29	39	G	G	32	36	G	G	80	99	58	51	47	46	28	63		78	81	43	28
25	G	G	G	G	G	G	G	29	35	38	G	38	G	G	G	41	32	26	G		G	G	G	30
26	G	G	G	G	G	33	G		49	36	G	G	40	G	37	43	34	43	32	45	40	33	36	25
27	24	G	G	G	G	G	G	41	G		52	G	G	G	G	G	G	29	52	G	G			29
28	G	G	G	37	34	33	G	G	G		G	42	G	52	46	55	40	35	34	69	79	35	31	34
29	24	34	29	G	G	G	G	33	G	43	45	73	66	58	37	G	33	G	29	29	35		26	G
30	G	31		30	28	28	G	50	G	G	G	59	50		45	37	G	30	27	70	50	55	C	G
31	33	24	G	G	G	G	G		41	42	45	G	G	G	G	G	G	G	26	22	G	G	G	G
	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	31	31	30	28	28	29	29	28	29	29	30	31	30	30	31	31	31	30	31	28	29	27	29	31
MED	G	G	G	G	G	G	G	34	G	G	G	38	G	G	G	G	33	28	26	28	30	28	23	22
U Q	27	26	26	G	G	G	25	37	43	43	47	46	G	G	35	37	36	33	34	33	38	35	31	28
L Q	G	G	G	G	G	G	G	31	G	G	G	G	G	G	G	G	G	G	11	G	G	G	G	G

HOURLY VALUES OF fmin AT Kokubunji

OCT.2008

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	14	17	13	14	18	30	21	22	40	17	13	13	13	13	13	13	13	13	13
2	14	14	14	13	14	13	13	13	13	14	17	17	14	13	13	17	28	14	14	14	13	14	14	14
3	18	18	14				13	14	13	14	40	20	17	21	17	13	13	17	14	14	13	13	14	15
4	17	17	15		15	14	14	13	14	15	18	23	41	33	40	14	14	13	13	14	15	13	13	14
5	14	13	14	13			15	13	13	13	30	43	40	18	38	17	14	13	15	13	13	13	13	13
6	14	14	14	13	14	13	14	13	13	18	17	20	21	41	38	13	13	14	14		14	17	14	13
7	14	13	13	14	13	14	15	13	14	13	40	20		15	21	13	13	14	13	14	13	13	13	14
8	15	13	14	14		13	13	18	13	14	21	31	20	17	15	13	13	17	13	14	13	13	15	13
9	13	14	13	14	14	13	14	13	13	13	13	25	37	23	18	13	13	13	13	13		13	14	14
10	14	13	14	13	13	14	14	13	14	14	21	39	14	18	15	30	13	13	14	21	14	14	13	14
11	20	13	14	13	13	13	14	13	13	14	18	17	14	15	17	13	13	13	15	13	13	14	13	13
12	15	14	13	13	17	14	15	13	15	15	17	22	30	18	18	14	14	14	29	21	18	13	14	14
13	14	13	13	13	14	14	14	13		14	17	43	20	14	17	14	13	13	14	13			15	23
14	14	14	14	18	15	13	15	14	14	13	14	40	40	39	21	14	13	13	14	14	13	14	13	13
15	14	14	13		13	14	15	20	13	14	13	13	14	13	13	33	13	15	15	14	13	18	13	13
16	13	14	13	13	13	13	20	14	14	14	18	44	42	17	18	18	14	14	14	13	14		21	14
17	13	14	13	13	13	13	14	13	13	13	17	18	38	22	13	13	13	17	14	13	14	14	13	13
18	21	13	13	14	13	14	15	13	13	20	15	20	13	13	13	13	13	13	13	14	14	18	14	13
19	14	14	13	14	13	14	14	13		17	26	20	17	13	18	18	14	15	14	14	13	14	15	15
20	13	14	18	13	15	17	15	13	13	14	15	20	17	14	15	13	13	14	13	13	13	14	13	13
21	13	13	13	14	13	13	17	13	13	13	17	15	17	C 13	13	13	13	13	14	13	13	13	14	14
22	13	13	13	13	13	13	13	18	14	15	18	20	20	15	18	17	15	13	13	14	13	13	14	13
23	13	14	13	17	13	13	14	14	13	17	20	14	17	17	14	13	15	14	15	14	14	13	13	14
24	21	13	13	13	13	14	14	13	14	15	14	14	14	22	20	14	13	13	13	13	14	13	14	14
25	14	13	13	15	13	14	13	13	14	14	15	17	14	13	13	13	13	13	17		14	14	13	13
26	14	14	13	13	13	14	13	13	17	20	39	20	21	18	13	14	13	13	13	14	14	14	13	13
27	13	15	13	14	14	15	14	14	13		21	42	39	35	20	17	13	13	15	17	14			13
28	15	14	13	13	14	14	20	22	18		13	13	13	14	13	29	13	14	14	13	14	13	13	13
29	14	13	13	13	13	14	14	13	15	15	13	22	17	14	22	13	13	20	13	14	14		14	13
30	13	13	13	13	13	13	14	17	13	17	22	31	17		13	13	20	13	14	13	13	14	C	13
31	13	14	14	14	14	14	14	13	13	14	18	21	17	17	13	13	22	14	14	17	14	13	14	13
	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	31	31	31	28	28	29	31	31	29	29	31	31	30	30	31	31	31	31	31	29	29	27	29	31
MED	14	14	13	13	13	14	14	13	13	14	18	20	17	17	17	13	13	13	14	14	14	13	14	13
U Q	15	14	14	14	14	14	15	14	14	16	21	31	30	22	20	17	14	14	14	14	14	14	14	14
L Q	13	13	13	13	13	13	14	13	13	14	15	17	14	14	13	13	13	13	13	13	13	13	13	13

HOURLY VALUES OF foF2 AT Yamagawa

OCT.2008

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	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	68	C		57	77	77	62	55	A	A				29
25	26	29	29	28	29			48	60	56	67	92	60	55	62	65	59	49		A	A			29
26	29	28	28	28	34			56	51	51	64	77	72	58	80	75	A	56	37	26	A	29		
27			30	31	30	28		47	55	50	62	56	52	56	66	92	64	49	40	34	28		28	
28	28	29	29	30	C			47	54	53	62	65	57	A	63	72	65	34		A	A	30	C	31
29	32	34	30	26	28	25		54	49	58	54	64	66	57	90	85	62	55	47	46	34	A		A
30	A	30	32	42	36	26	28	48	48		59	76	97	86	84	71	58	44	45	44	A	A	28	A
31	29			A	C	36		46	51	51	75	90	70	57	68	58	65	A	A	A		35	62	
	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	5	6	6	5	4	1	7	7	6	8	7	7	7	8	8	7	7	4	4	2	3	3	3
MED	29	29	30	29	30	27	28	48	51	52	63	76	66	57	72	74	62	49	42	39	31	30	28	29
U Q	30	32	30	31	35	32	14	54	55	56	67	90	72	58	82	81	65	55	46	45	34	35	62	31
L Q	27	28	29	28	28	25	14	47	49	51	60	64	57	56	64	68	59	44	38	30	28	29	28	29

HOURLY VALUES OF fEs AT Yamagawa

OCT.2008

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	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	50	C		G	G	46	46	36	52	48	47	34	41	33
25	G	28	25	G	G			26	35	38	48	G	49	43	37	40	34	28	30	33	50	38	33	23
26	G	G	G	G	G				32	40	G	G	G	G	44	51	80	33	32	24	44	G	59	33
27	40	34	25	G	G	G	G	29	G	40	G	G	G	40	41	73	34	G	26	32	G	29	29	29
28	26	27	G	G	C			G	G	G	G	44	50	51	52	46	48	33	49	43	41	33	C	G
29	G	G	G	G	25	G	39		G	G	G	45	48	G	G	44	38	G	24	G	25	46	27	33
30	30	G	G	G	G	G	G	28	40	40	51	54	48	G	50	G	32	58	28	27	56	56	34	39
31	27	37	40	38	C	G	G	25	33	39	46	47	47	43	48	59	62	57	42	43	32	26	G	
	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	7	7	7	7	5	4	4	5	7	7	8	7	7	8	8	8	8	8	8	8	8	8	7	7
MED	26	27	G	G	G	G	G	26	32	39	24	44	48	20	42	46	42	33	31	32	42	34	33	33
U Q	30	34	25	G	13	G	20	28	35	40	49	47	49	43	49	55	55	46	45	43	48	42	41	33
L Q	G	G	G	G	G	G	G	13	G	G	G	G	G	G	19	42	34	14	27	25	28	27	27	23

HOURLY VALUES OF fmin AT Yamagawa

OCT.2008

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	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	20	C		23	18	15	15	14	14	14	14	14	14	14
25	14	15	14	15	15			15	14	14	15	17	16	21	17	17	14	14	15	14	14	15	14	14
26	14	14	14	14	14			16	16	14	15	17	17	17	18	15	15	14	15	15	14	15	15	14
27	14	15	14	15	14	14	18	14	14	15	17	18	18	17	17	14	14	16	14	15	17	16	14	15
28	15	15	18	15	C			18	14	18	18	15	17	17	16	14	14	14	15	14	15	14	C	14
29	15	14	14	14	14	14	14	15	14	14	14	20	17	14	14	16	15	15	15	14	15	15	16	14
30	14	17	15	14	15	14	15	14	14	14	14	16	15	17	23	14	15	14	14	14	14	14	14	14
31	14	14	14	14	C	15	16	16	14	14	15	17	18	18	18	15	14	15	14	15	14	15	14	
	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	7	7	7	7	5	4	4	7	7	7	8	7	7	8	8	8	8	8	8	8	8	8	7	7
MED	14	15	14	14	14	14	16	15	14	14	15	17	17	17	18	15	14	14	14	14	14	15	14	14
U Q	15	15	15	15	15	14	17	16	14	15	17	18	18	19	18	15	15	15	15	15	15	15	15	14
L Q	14	14	14	14	14	14	14	14	14	14	14	16	16	17	16	14	14	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

OCT.2008

LAT.26°40.5'N LON.128°09.2'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						34	47	44	59	58	60	86	106	106	101	98	81	60	43	A		32
2			31	30	28			44	55	69	61	52	71	81	78	70	67	71	58	47			37	
3	32	30	44		A			47	75	62	58	59		70	64	65	56	58		55			31	34
4	34	32						54	68	68	82	68	60	70	71	65	61	74	66	51	34	A	32	
5	30	32	29					43	54	64	66	70	85	84	68	64	75	75	55	A		A		
6		A	29					49	53	56	66	60	60	69	76	90	94	90	A	43				28
7		30				26		44	56	60	70	64	58	68	90	78	76	66	46			28	A	
8	28		34		34			47	52	53	66	59	61	56	61	78	77	68	62	48	A	A	A	30
9		26						47	54	52	66	73	57		72	76	74	74	51	31				29
10	30	30			31			47	48	52	62	49		39	49	56	61	52	47	A	A	A	28	N
11		30	30					48	57	63	61	58	69	90	112	100	79	70	60	54		46	54	A
12	53	52	32	30		29		66	57	58	72	81	90	A	74	78	67	62	60	A	A	A	A	
13		30				26		54	52	66	70	77	81	85	98	101	84	78	65	45			30	
14	27							48	59	58	60	64	86	90	90	66	61	61	55	30	A	32		
15	28			30	30			48	62	65	66	84	101	117	128	102	68	48	A	36	32	34	34	
16	29	32		32				51	71	75	84	93	107	106	125	75	59	63	A	37	29			
17			29	28				49	55	60	68	67	65	83	78	72	64	42	58	31		A	A	29
18	A	32	31					51	56	56	61	82	88	94	106	75	A	49	46	A		A	30	22
19				26				53	56	54	55	70	68	66	90	85	65		48	34	A	A	A	25
20	A	A	A	28	A			57	56	48	55	68	61	78	84	72	65	62	55		A	A	A	A
21	A				26		28	47	62	57	57	68	57	C 57	78	88	72	52	53	29		34	35	28
22		30			N			47	52	A	63	72	71	57	75	90	84	67	53	29				A
23	A	A	A	A	30		30	42	51		62	76	87	64	70	95	75	A	45	A	A	33		28
24				28				A	56	61	71	75	66	63	72	76	74	61	40	37	A	A	A	32
25		34	29		30			48	61	60	62	88	72	75	66	67	72	55	A	A	A		A	
26	A	A		26	29			42	54	48	53	71	86	88	108	118	97	64	55	A	A	32	34	34
27	36	30	29		26			47	60	56	56	70	75	53	62	90	81	54	44	31		30	34	
28	36	37	34	43	37	29		46	55	60	64	68	68	A	66	84	92	65	46	A	A			24
29	28	32	32			A		50	63	56	60	67	68	66	81	110	90	61	55	60	32	A	A	A
30	A	A	A	32				40	52	55	62	76	96	90	100	104	78	64	55	54			A	A
31	A		30		32	42		42	60	59	76	96	91	84	88	91	90	58	48	A	A	31	28	
	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	12	16	14	11	11	5	2	30	31	29	31	31	29	28	31	31	30	29	26	20	5	9	12	13
MED	30	31	30	30	30	29	29	47	56	58	62	70	71	76	78	78	74	63	55	40	32	32	33	29
U Q	35	32	32	32	32	35	30	50	60	62	68	76	86	87	98	95	84	70	58	52	38	34	34	32
L Q	28	30	29	28	28	26	28	44	53	54	60	64	61	65	70	72	65	56	47	31	30	30	30	26

HOURLY VALUES OF fEs AT Okinawa

OCT. 2008

LAT. 26°40.5′N LON. 128°09.2′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	24	23						36	43	46	45	G	G	G	G	G	41	36	36	26	28	34		G
2			24	G	G		G	31	40	43	G	G	G	G	G	G	G	36	34	30	27		G	
3	G	G	28	G	25			32	G	G	47	G	G	G	G	G	G	35		28		27	G	G
4	G	G	G					G	G	G	G	48	G	G	G	G	G	35	G	G	G	27	G	G
5	G	G	G					28	G	G	G	G	G	48	G	G	42	58	86	68	34	45	28	25
6	26	26	G			24		31	32	G	G	G	G	52	51	G	61	34	45	G	G	24		G
7		G	33	G	25	G	G	G	G	43	48	50	G	G	47	42	52	39	32	29		G	32	G
8	G		G		G	28		31	37	50	G	48	46	50	50	54	43	54	29	34	38	49	32	G
9	29	G		G				G	G	G	G	G	G		G	G	G	G	G	G				G
10	G	G			11			38	G	G	G	G	G	G	G	G	43	61	35	40	31	32	24	G
11		G	G					30	36	G	46	G	41	G	56	40	48	37	28	36	24	35	35	49
12	49	44	G	G		G	G	29	G	42	38	48	56	96	G	G	34	32	30	44	49	57	31	36
13		G				G	G	G	34	56	51	40	G	G	G	G	G	G	G	G			G	
14	G	28			G			30	G	G	G	G	G	G	G	G	G	37	52	G	29	G	G	
15	G	G		G	G		G	29	G	G	G	49	G	G	42	46	52	44	77	28	28	G	G	
16	27	G	G	G				G	34	38	G	G	G	G	G	G	G	G	46	24	G	G		G
17	G	G	G	G					39	36	42	G	40	G	57	38	45	45	G	35	33	34	49	49
18	48	G	G					36	38	43	47	50	G	G	G	38	53	37	G	39		36	29	G
19		27	G	G	G	G	G	28	37	G	G	G	G	G	41	G	46	51	G	G	70	47	49	24
20	40	49	45	26	27			30	G	G	46	50	62	73	G	58	54	66	52	30	86	69	69	46
21	49	33	26		G	G	G	G	G	38	G	G	G	G	G	45	37	70	36	G	27	G	G	G
22	G	G			G	G		28	38	62	46	G	46	50	45	G	58	50	33	G	G		G	49
23	36	34	50	36	G	G	G		31		37	G	48	48	59	46	46	62	39	48	35	32	37	27
24	33	G		27	G			52	42	44	52	70	70	G	G	49	50	44	28	34	37	36	36	25
25	32	24	G	26	G			40	35	40	G	48	51	40	60	48	40	35	43	32	35	32	68	24
26	37	36	G	G	11			28	G	42	50	63	72	G	38	47	47	36	36	41	57	34	G	G
27	32	G	31		G	G		G	G	G	G	G	44	G	G	51	37	G	G	32		G	26	29
28	37	32	G	G	G	G		G	G	G	42	46	51	53	48	60	42	28	28	36	34			G
29	G	G	G	G	G	33		G	G	G	G	G	G	G	57	42	G	G	G	28	28	32	36	32
30	34	29	30	G				G	G	G	G	46	40	G	G	G	42	40	G	26	34	34	48	34
31	37	30	G		G	G		G	34	36	44	48	G	40	39	G	33	35	G	40	46	G	24	
	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	29	23	17	19	13	8	29	31	30	31	31	31	30	31	31	31	31	30	31	25	26	26	26
MED	28	G	G	G	G	G	G	28	G	18	G	G	G	G	G	G	42	37	31	30	33	32	28	12
U Q	37	29	28	13	11	12	G	31	37	43	46	48	46	48	48	46	48	50	39	36	37	36	36	32
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	34	G	G	27	G	G	G

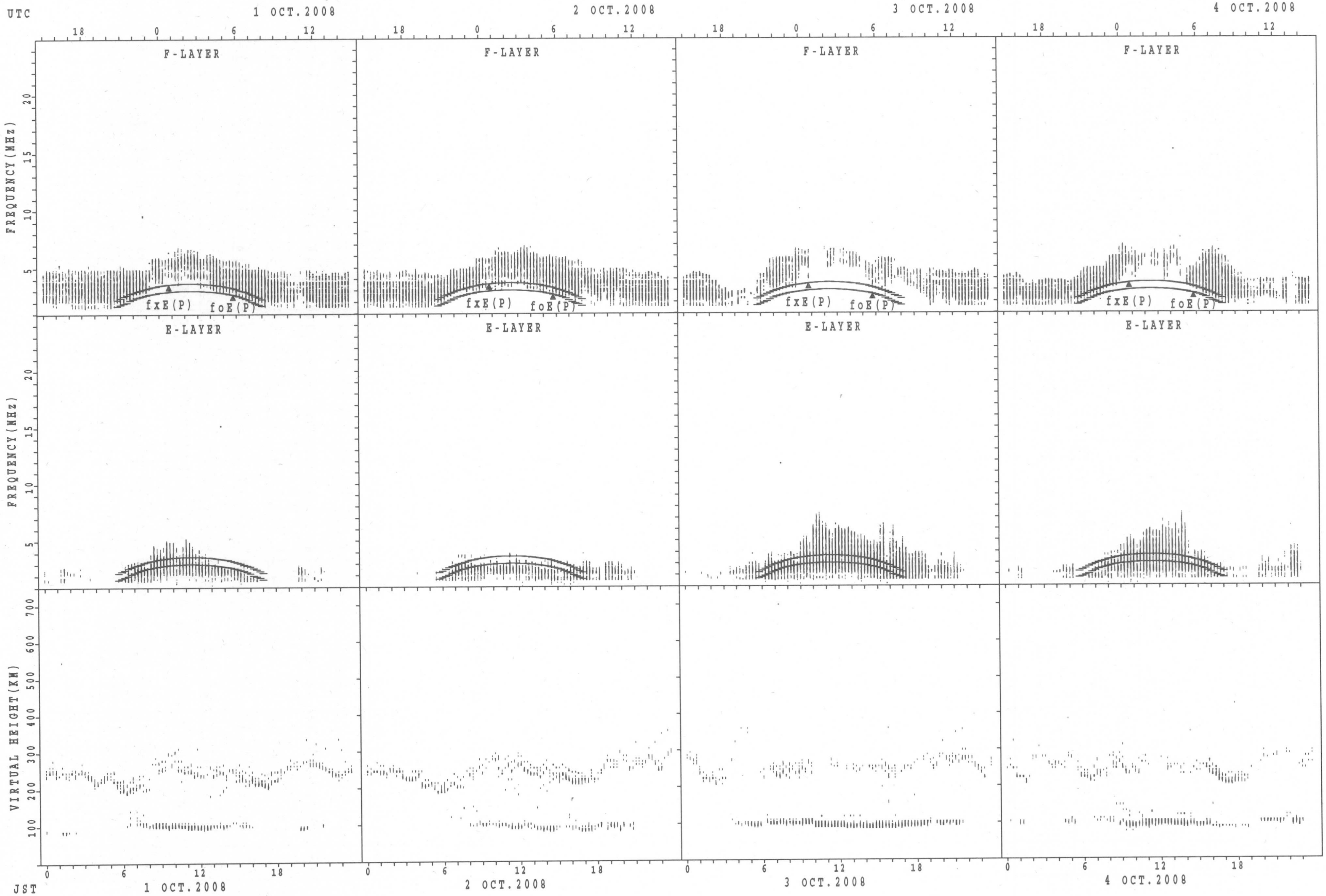
HOURLY VALUES OF fmin AT Okinawa

OCT.2008

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

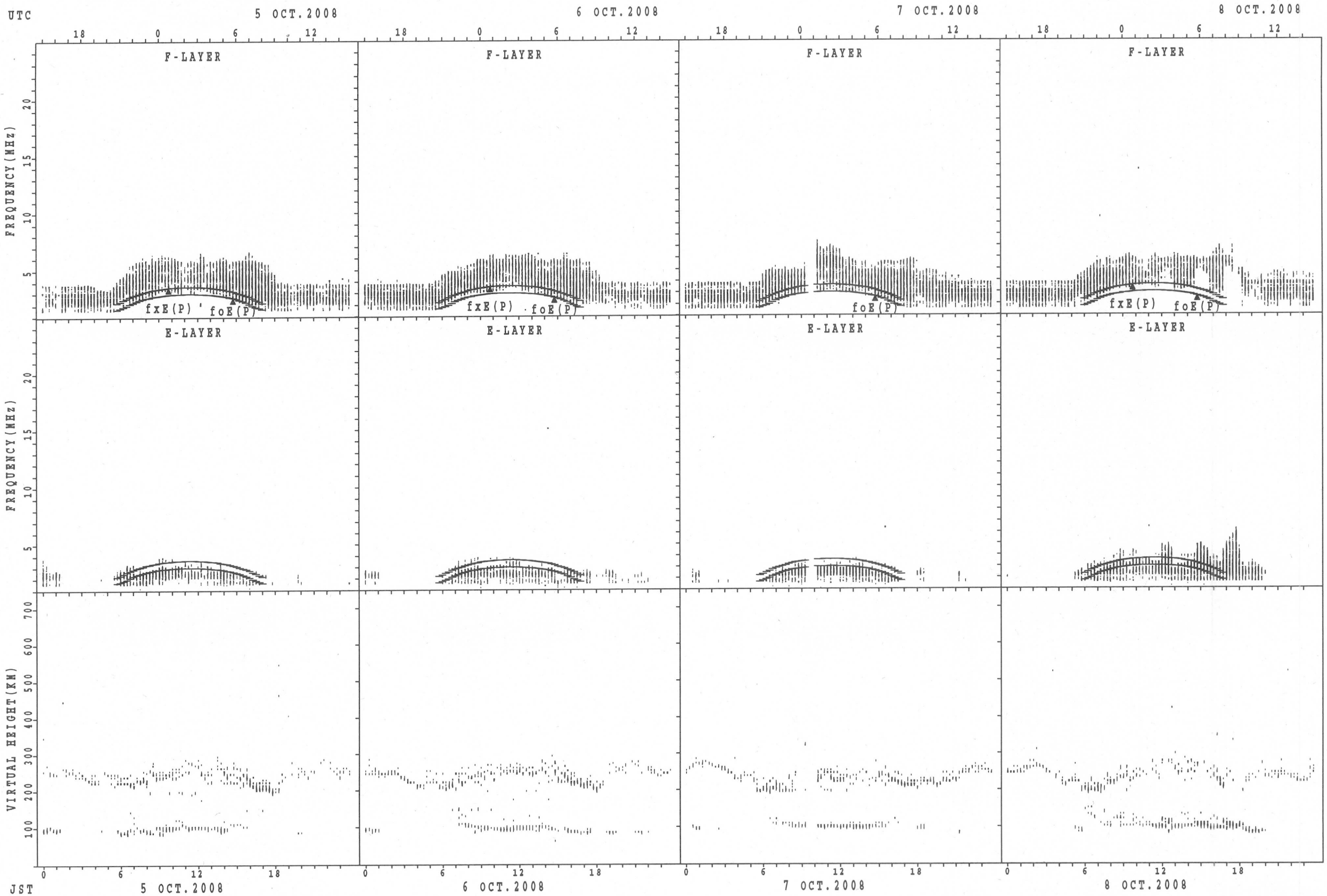
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	15	18						16	15	27	24	28	30	28	27	23	22	14	14	14	15	14		16
2			15	14	15		16	14	14	32	41	27	23	53	20	21	14	14	14	15	15		16	
3	16	22	17	16	14			14	15	27	29	43	46	45	42	39	30	27		14		20	15	16
4	16	15	17					22	14	16	44	20	44	14	43	39	29	26	22	15	17	16	16	15
5	15	20	18					14	18	39	43	44	45	34	18	18	15	14	14	15	17	15	15	17
6	17	17	16			15		14	14	16	18	45	45	36	27	24	22	20	14	27	23	17		17
7		15	15	15	14	17	15	14	18	28	17	32	44	45	14	29	24	17	15	14		16	15	17
8	16		16		14	15		15	15	24	29	30	33	30	30	27	16	17	14	15	14	15	14	18
9	14	22		16				22	14	38		45	45			43	17	14	21	15				16
10	20	20			14			20	14	39	16	44	18	44	39	44	22	14	14	14	16	14	16	14
11		17	21					16	15	36	28	27	27	28	24	22	17	15	15	14	16	14	14	14
12	15	16	18	15		14	15	15	28	29	28	27	28	30	46	26	18	14	14	14	16	15	16	16
13		21				18	17	20	14	15	26	28	44	22	44	46	14	14	20	21			15	
14	14	15			21			14	18	30	39	46	44	43	45	27	14	16	24	15	16	18	20	
15	16	15		16	16		17	15	28	18	40	24	53	47	21	24	15	14	14	15	15	15	21	
16	16	14	16	16				20	15	23	32	42	40		44	40	28	14	14	15	17	22		16
17	15	16	16	15				14	15	14	29	43	48	27	29	23	20	14	18	14	15	14	17	15
18	14	16	15					15	14	15	26	21	43	47	43	29	26	14	15	14	14	15	21	18
19		16	14	17	15	15	15	15	16	15	40	45	44	45	17	17	26	20	14	15	16	15	14	15
20	15	15	14	14	14			14	17	24	28	32	34	30	43	23	18	15	15	14	15	14	14	15
21	15	14	14		15	15	15	18	14	15	41	20	43	C43	44	24	15	14	15	15	14	15	15	15
22	17	15			17	14		15	14	27	28	28	30	28	27	33	14	14	14	26	21		15	15
23	14	15	15	14	16	20	15	17	14		15	28	30	28	29	24	18	14	14	14	16	14	15	15
24	17	15		14	15			15	14	14	17	27	30	28	44	28	15	14	14	14	15	15	15	15
25	14	14	15	14	15			14	14	15	28	30	33	33	27	18	14	14	17	18	15	15	14	15
26	14	14	14	15	18			15	14	14	22	26	29	27	28	20	16	14	14	15	14	14	16	15
27	15	18	15		15	17		20	15	30	40	40	30	29	28	21	20	23	21	14		20	14	14
28	14	15	15	16	16	18		20	14	17	27	30	30	26	28	20	16	14	14	15	15			17
29	17	15	16	14	15	14		20	15	26	39	43	42	40	28	14	16	22	26	15	14	14	14	14
30	14	14	15	18				20	14	30	32	29	30	45	41	23	23	18	15	14	14	15	14	15
31	15	15	15		15	18		18	15	17	20	22	28	42	39	39	27	21	22	14	15	20	20	
	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	29	23	17	19	13	8	31	31	30	30	31	31	29	30	31	31	31	30	31	26	26	26	26
MED	15	15	15	15	15	15	15	15	15	24	28	30	34	33	29	24	18	14	14	15	15	15	15	15
U Q	16	17	16	16	16	18	16	20	15	30	39	43	44	44	43	33	23	18	18	15	16	16	16	16
L Q	14	15	15	14	14	14	15	14	14	15	24	27	30	28	27	21	15	14	14	14	15	14	14	15

SUMMARY PLOTS AT Wakkanai



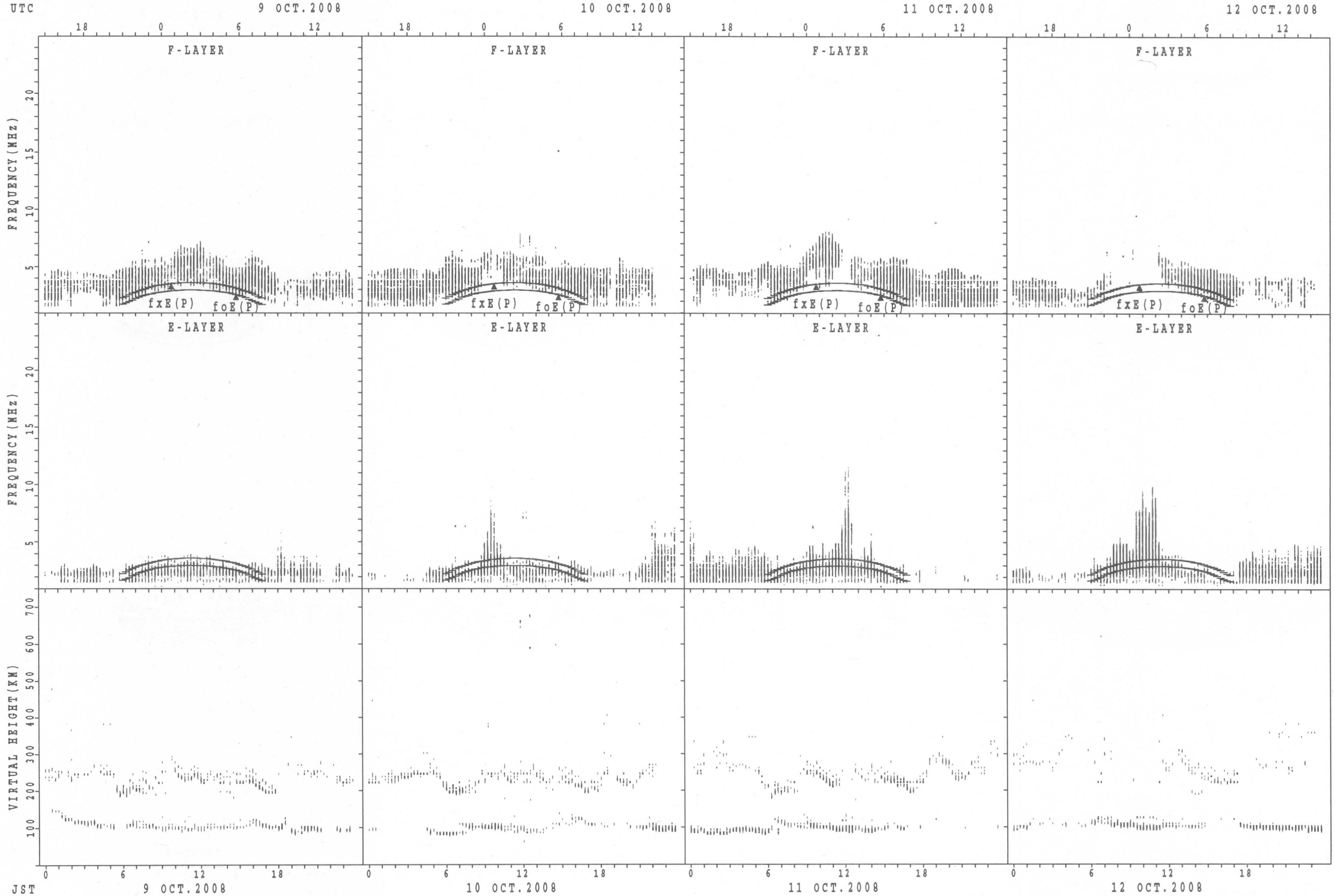
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



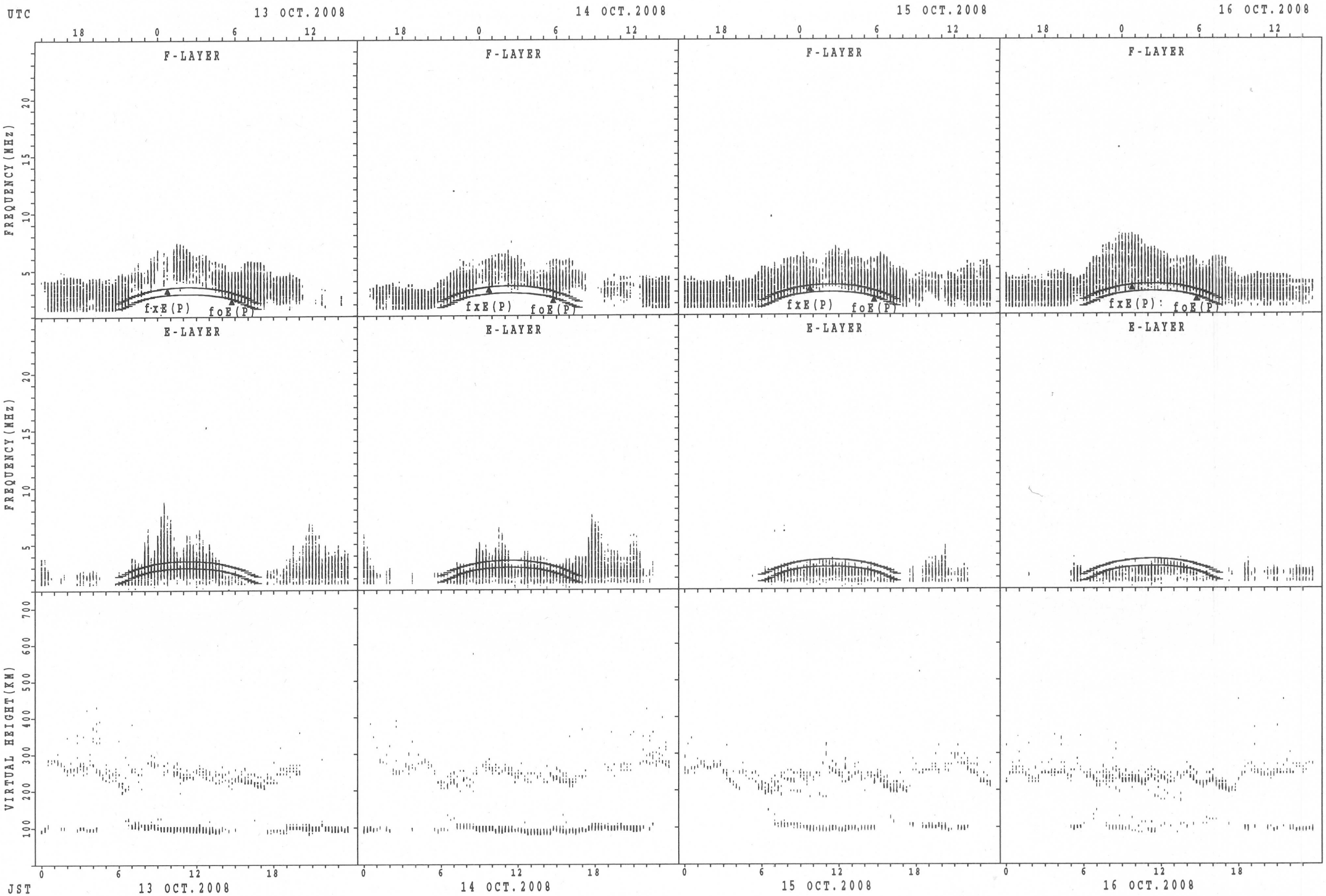
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



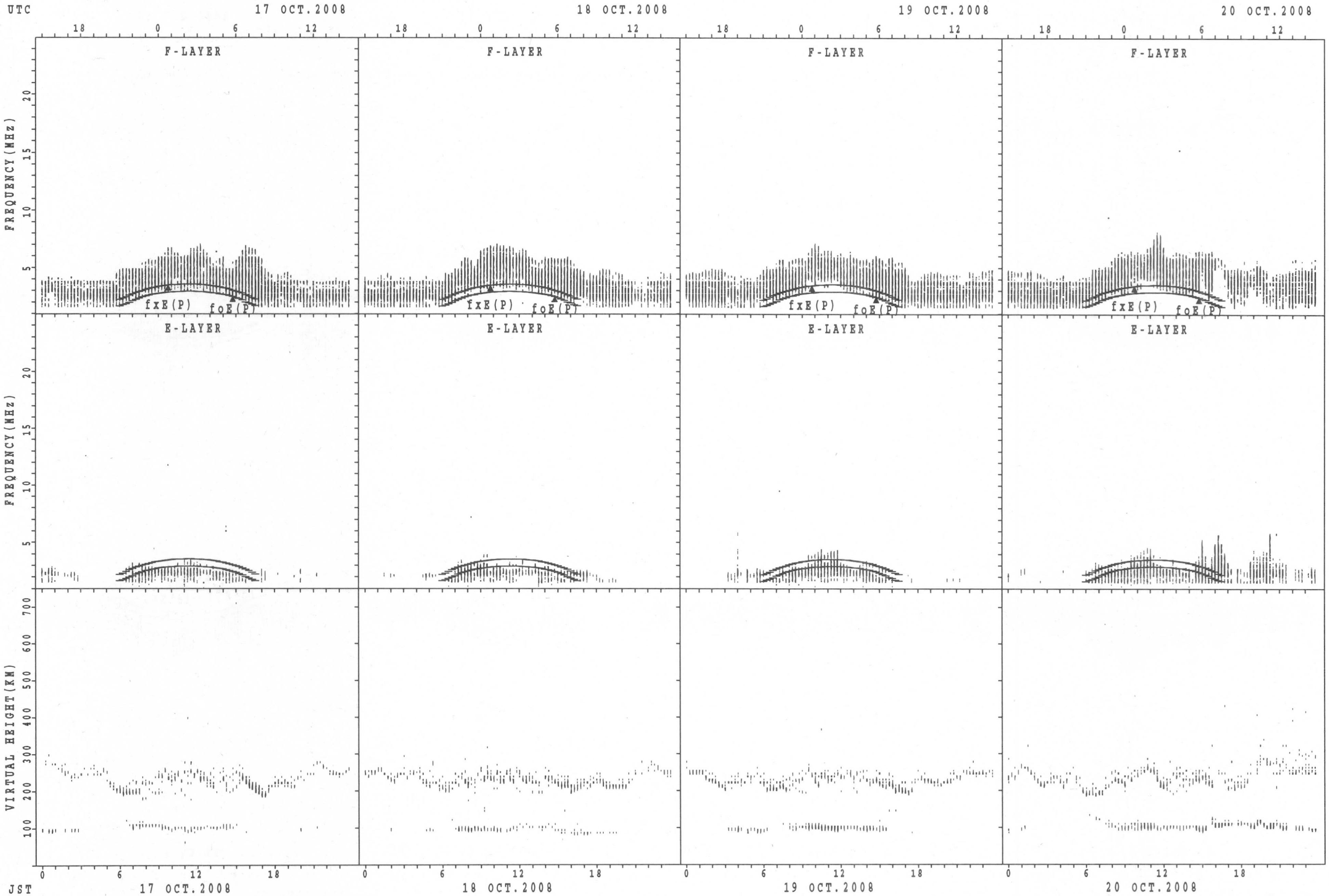
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



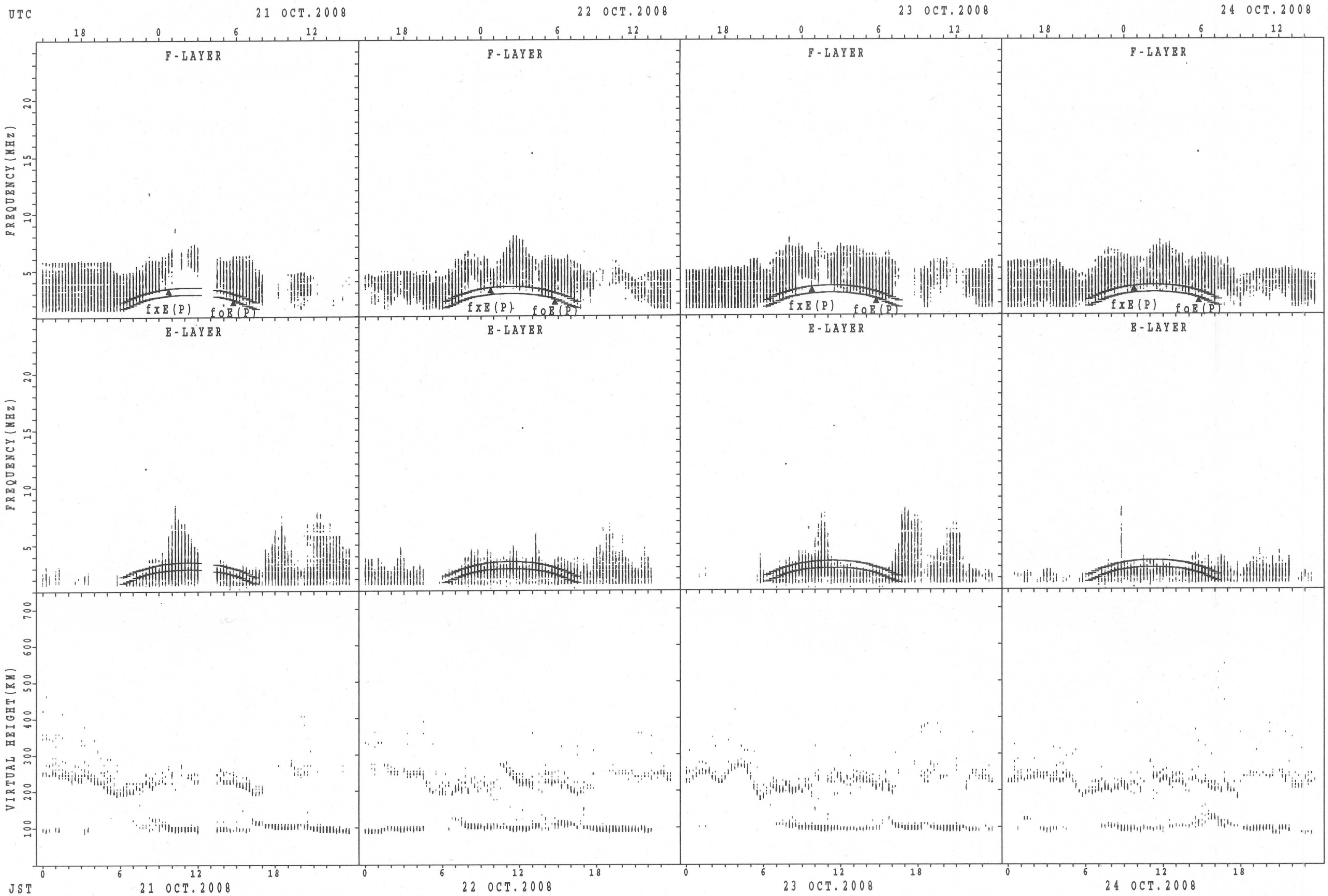
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



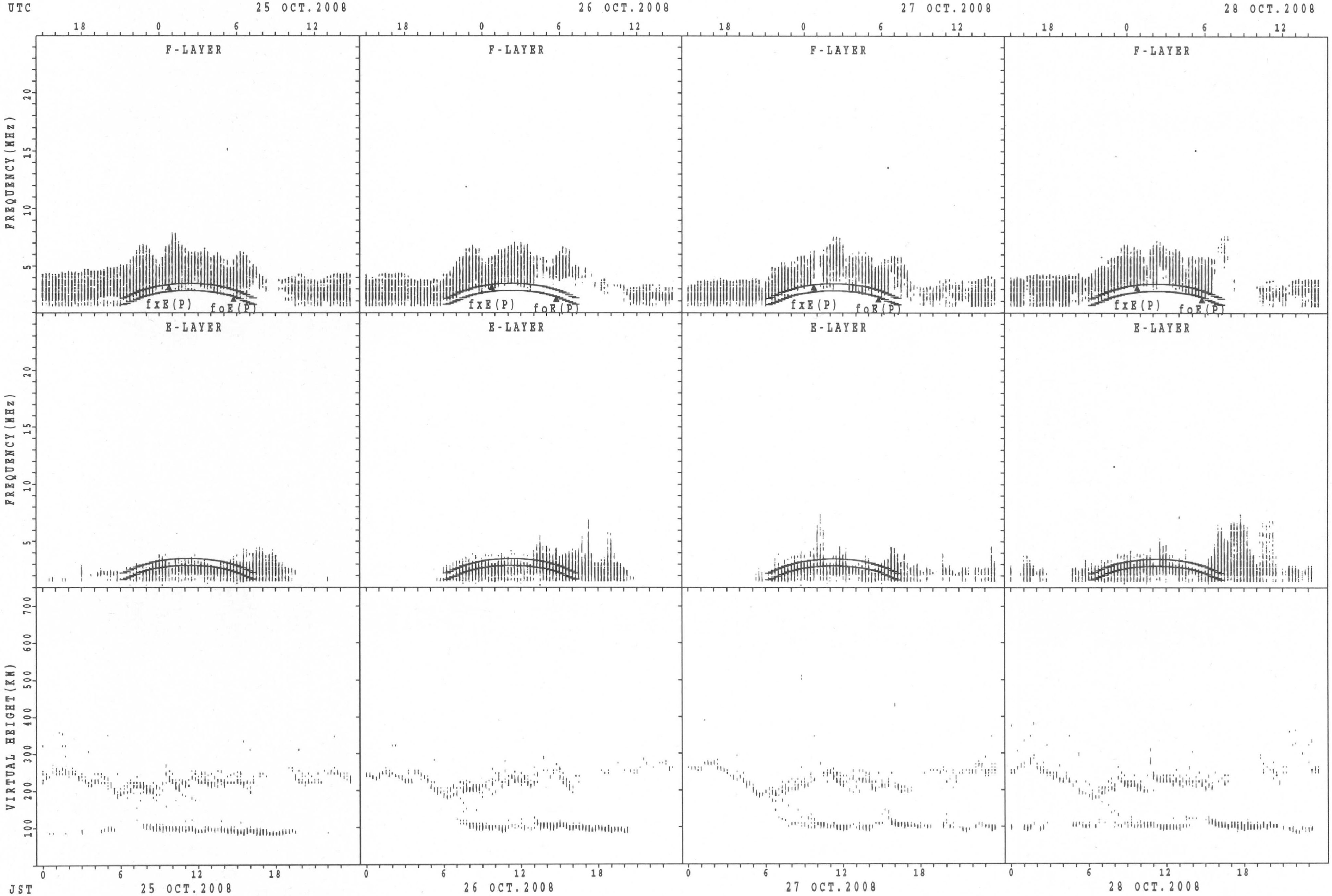
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



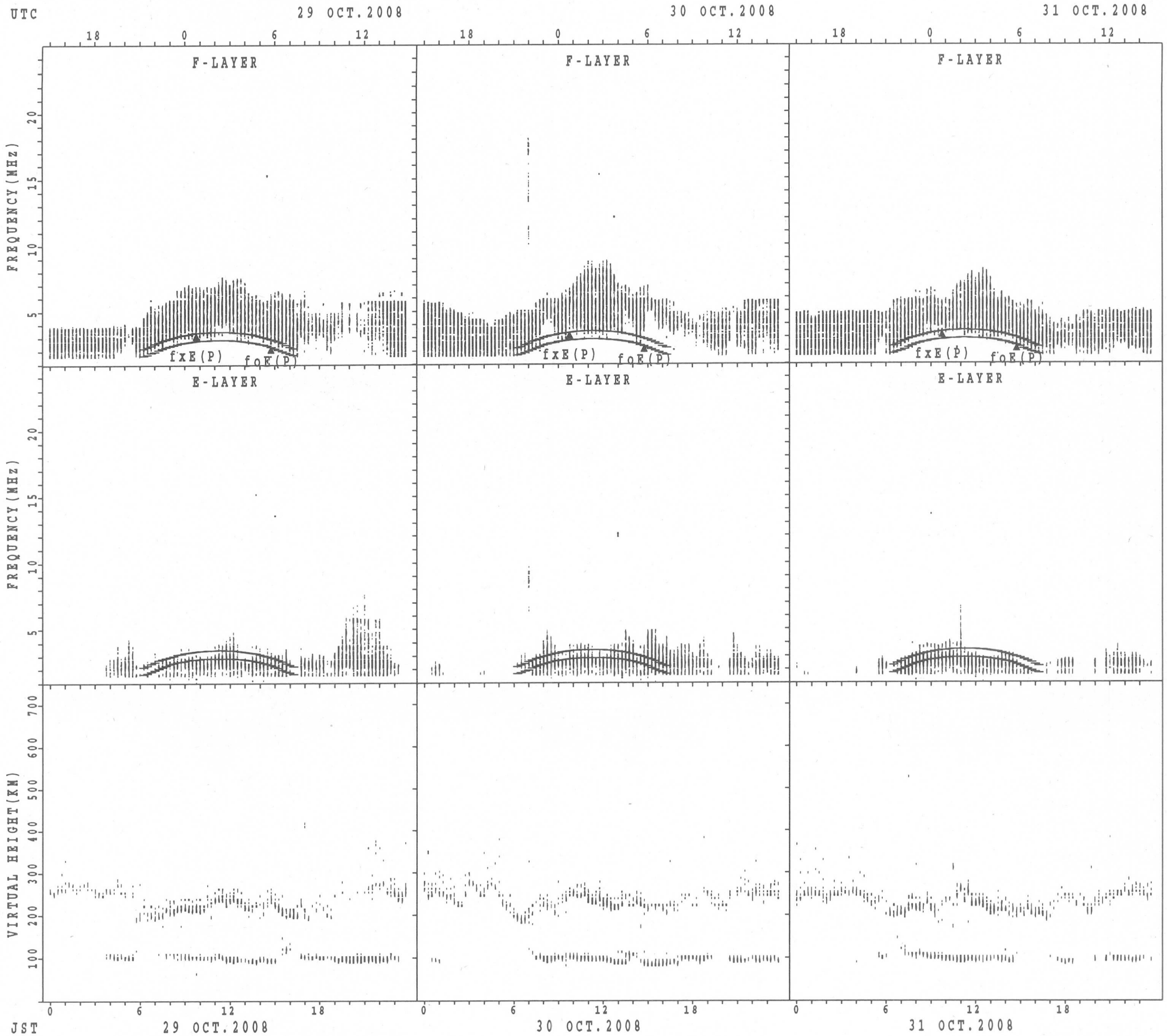
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



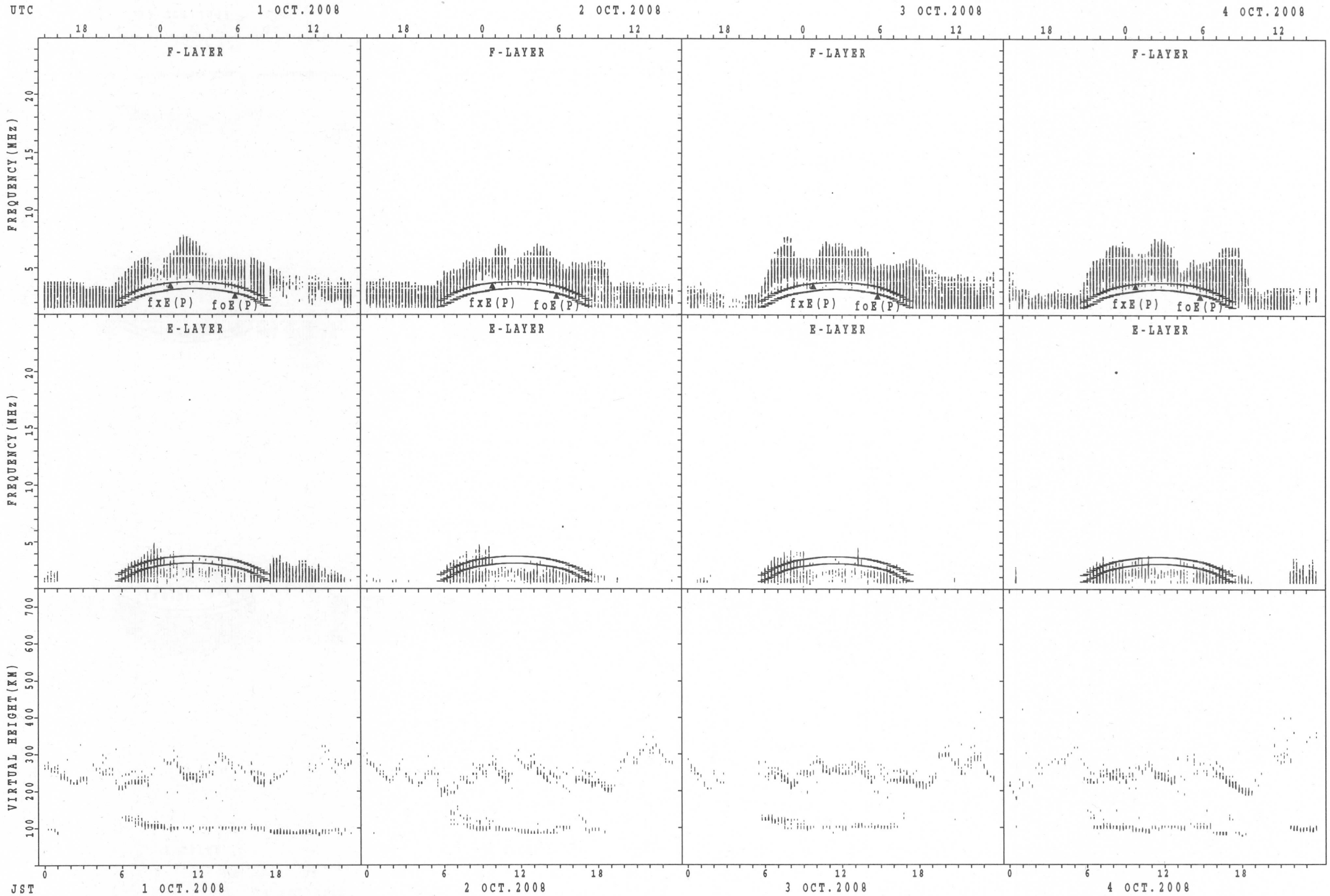
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



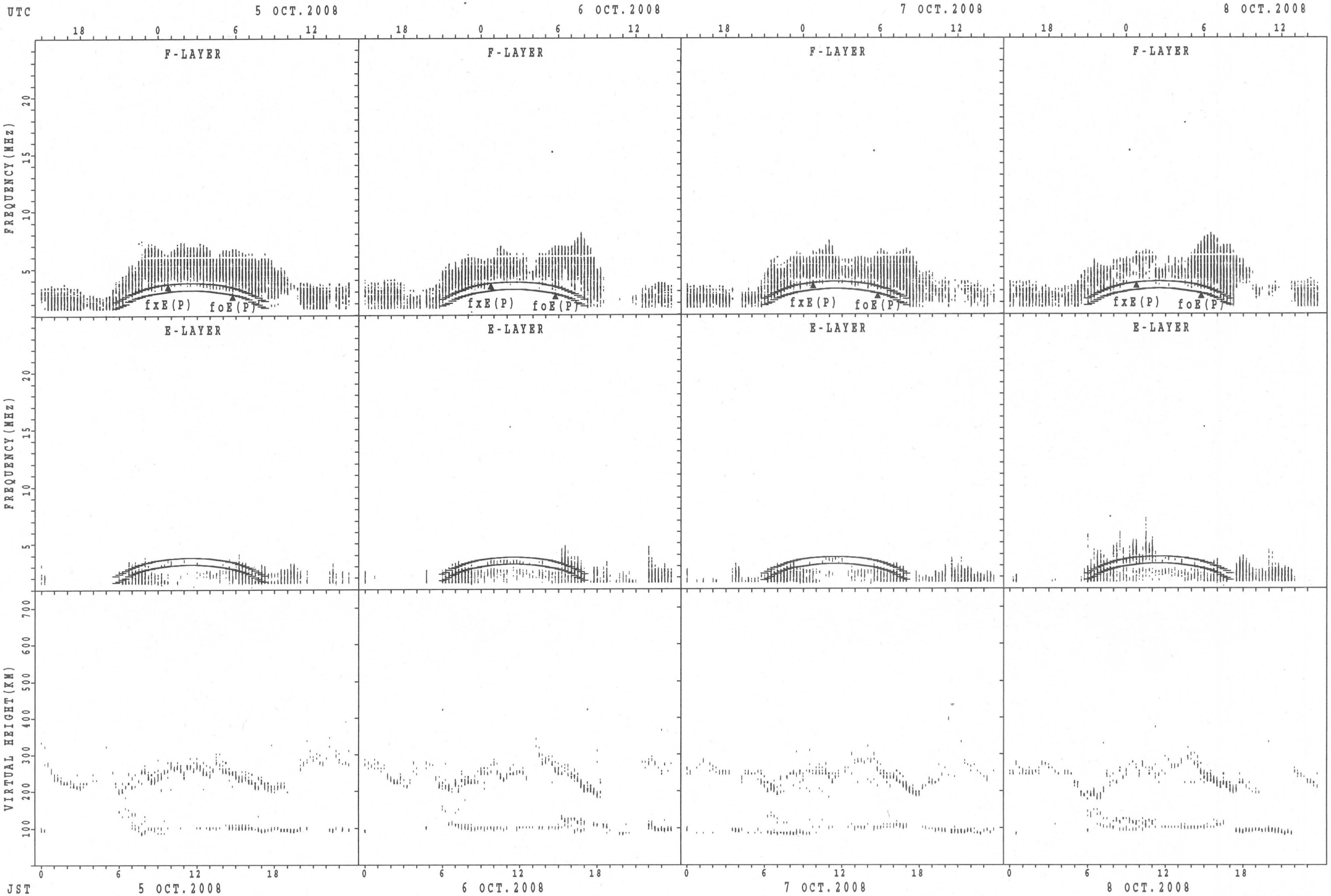
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



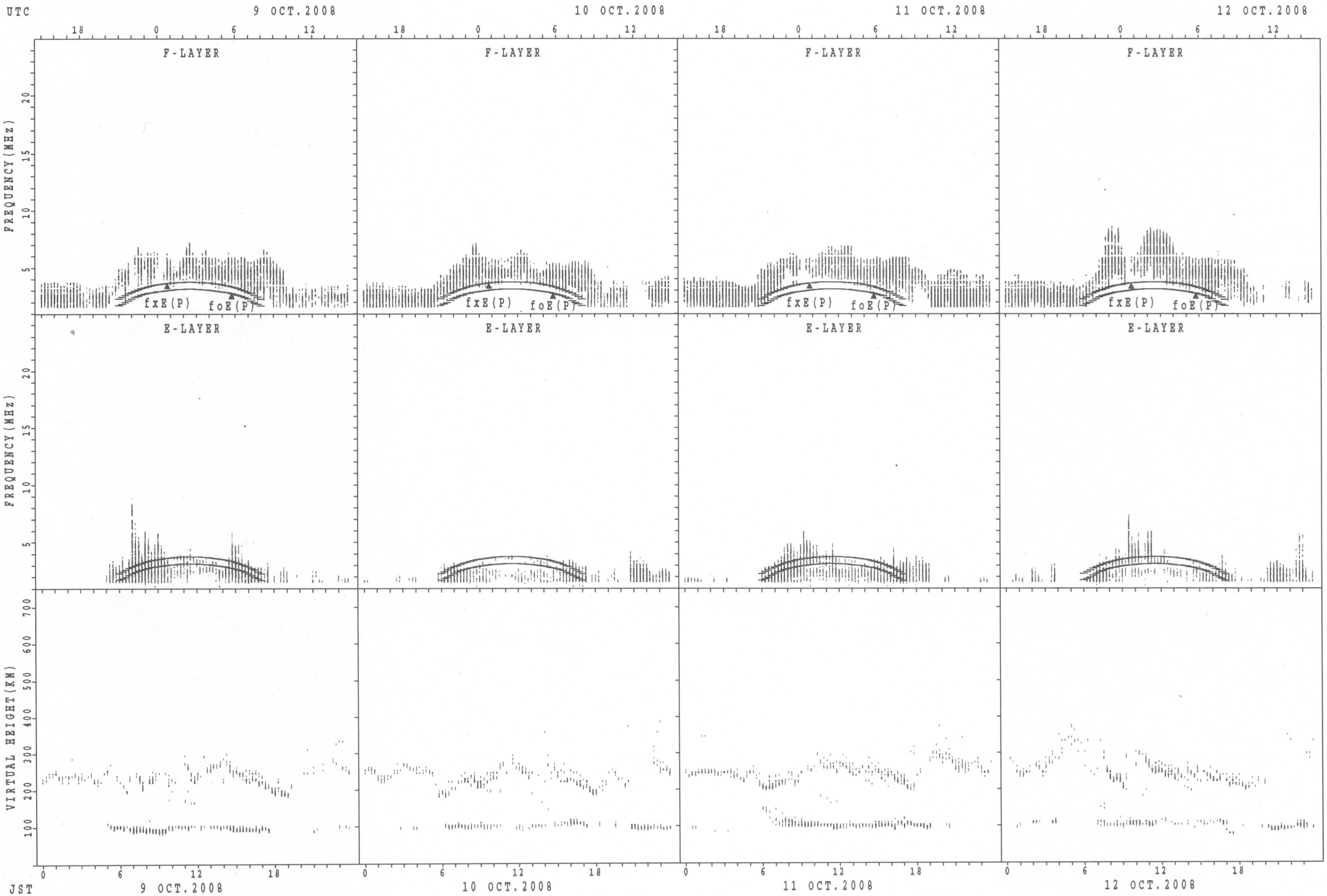
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



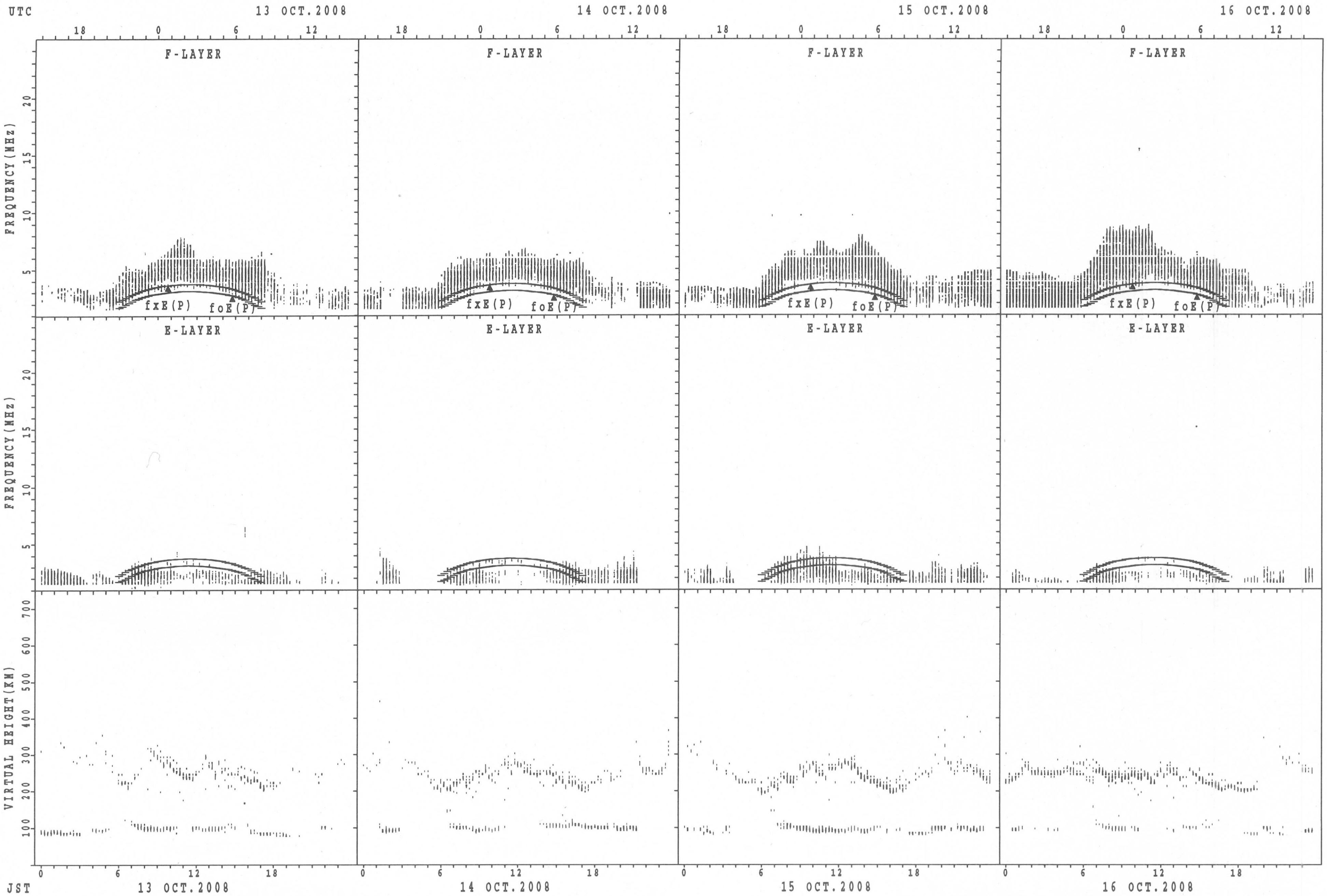
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



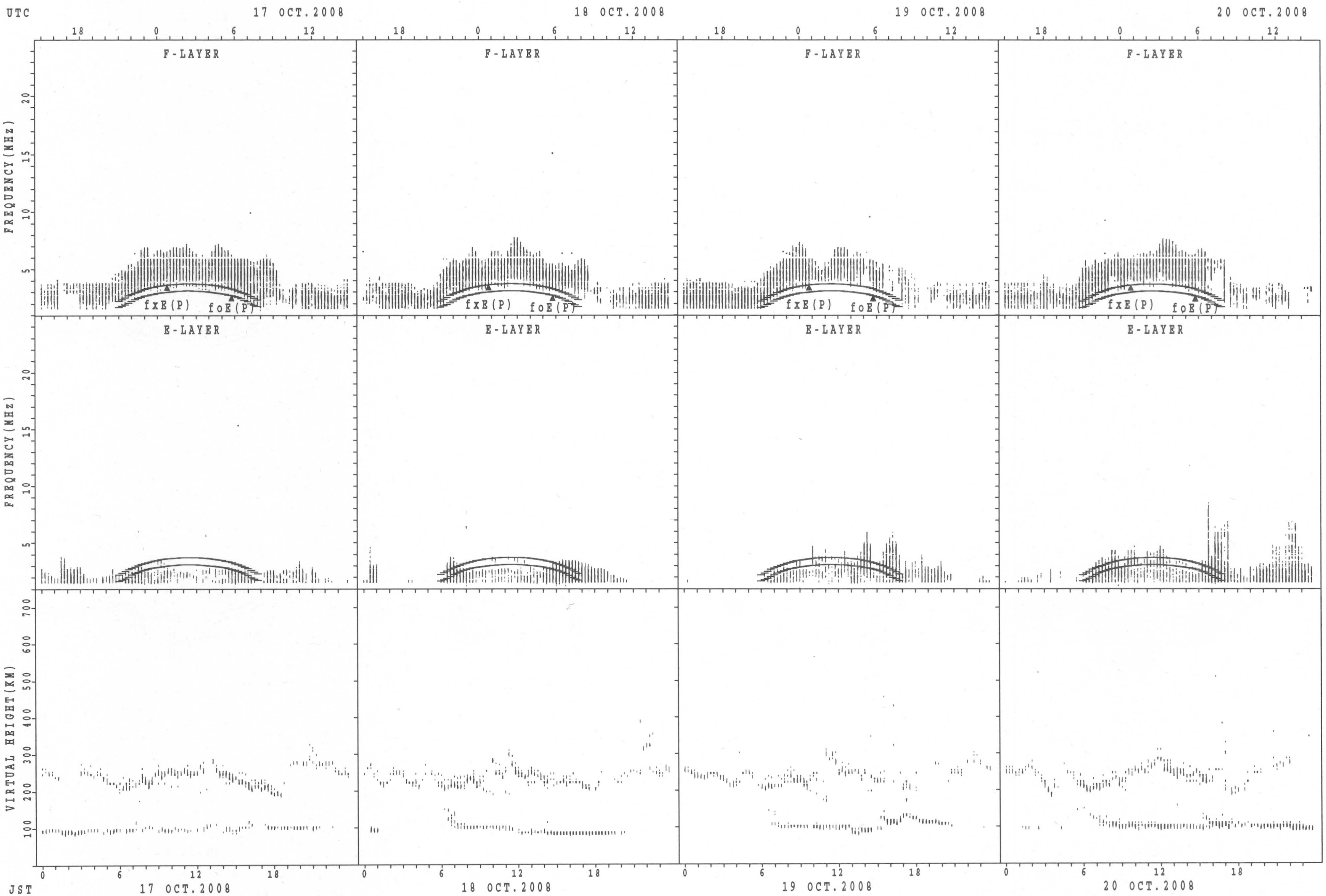
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



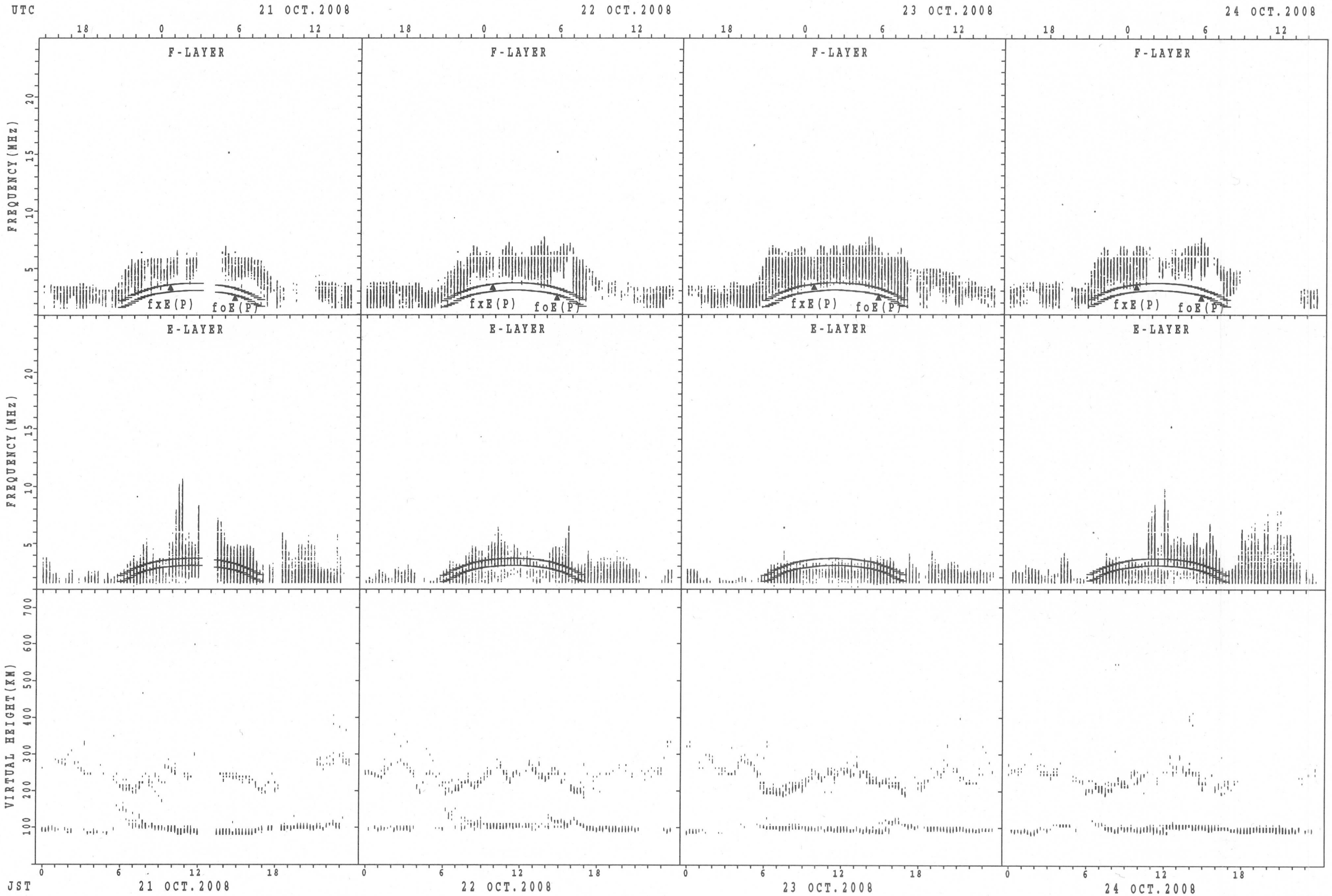
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



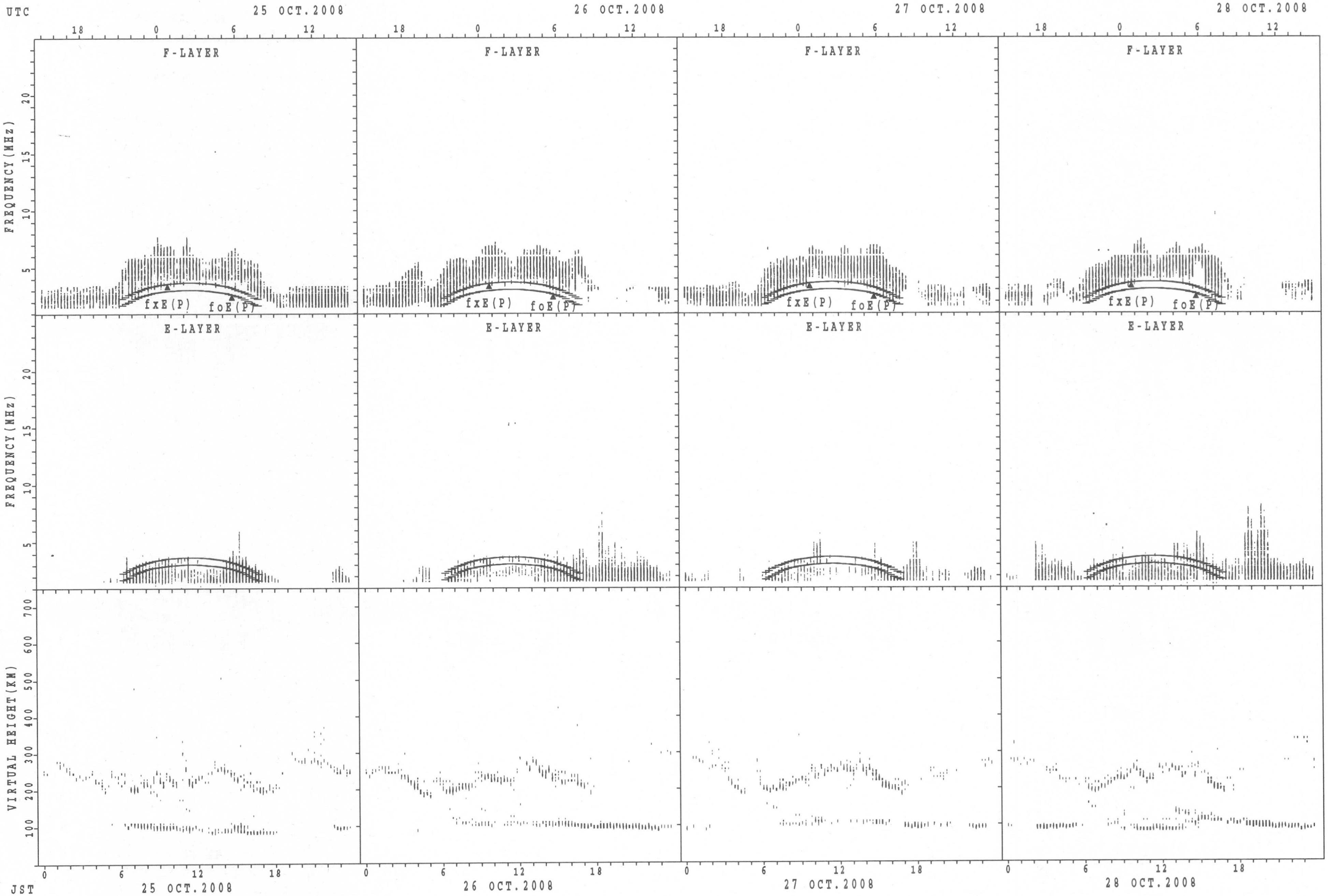
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



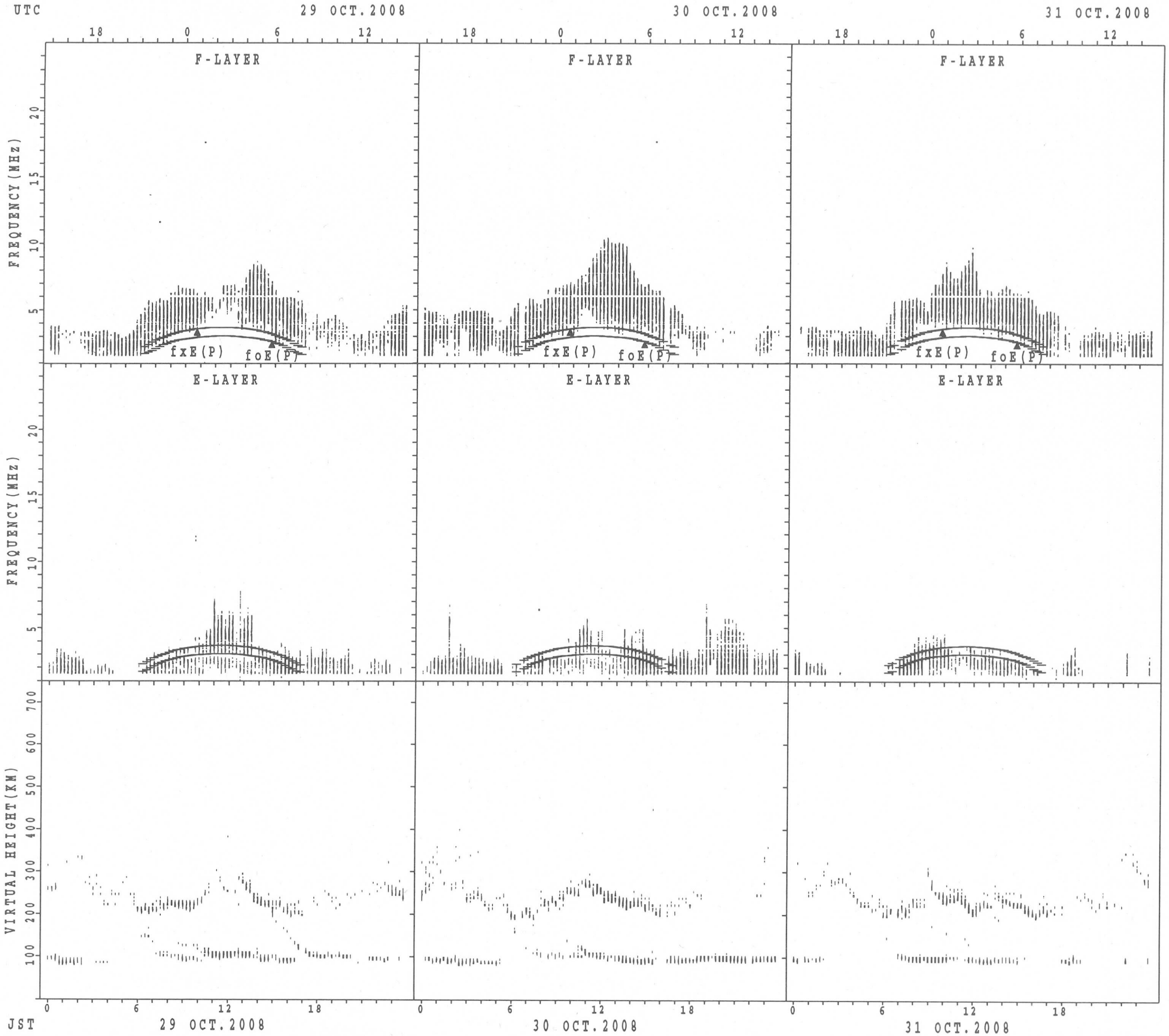
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



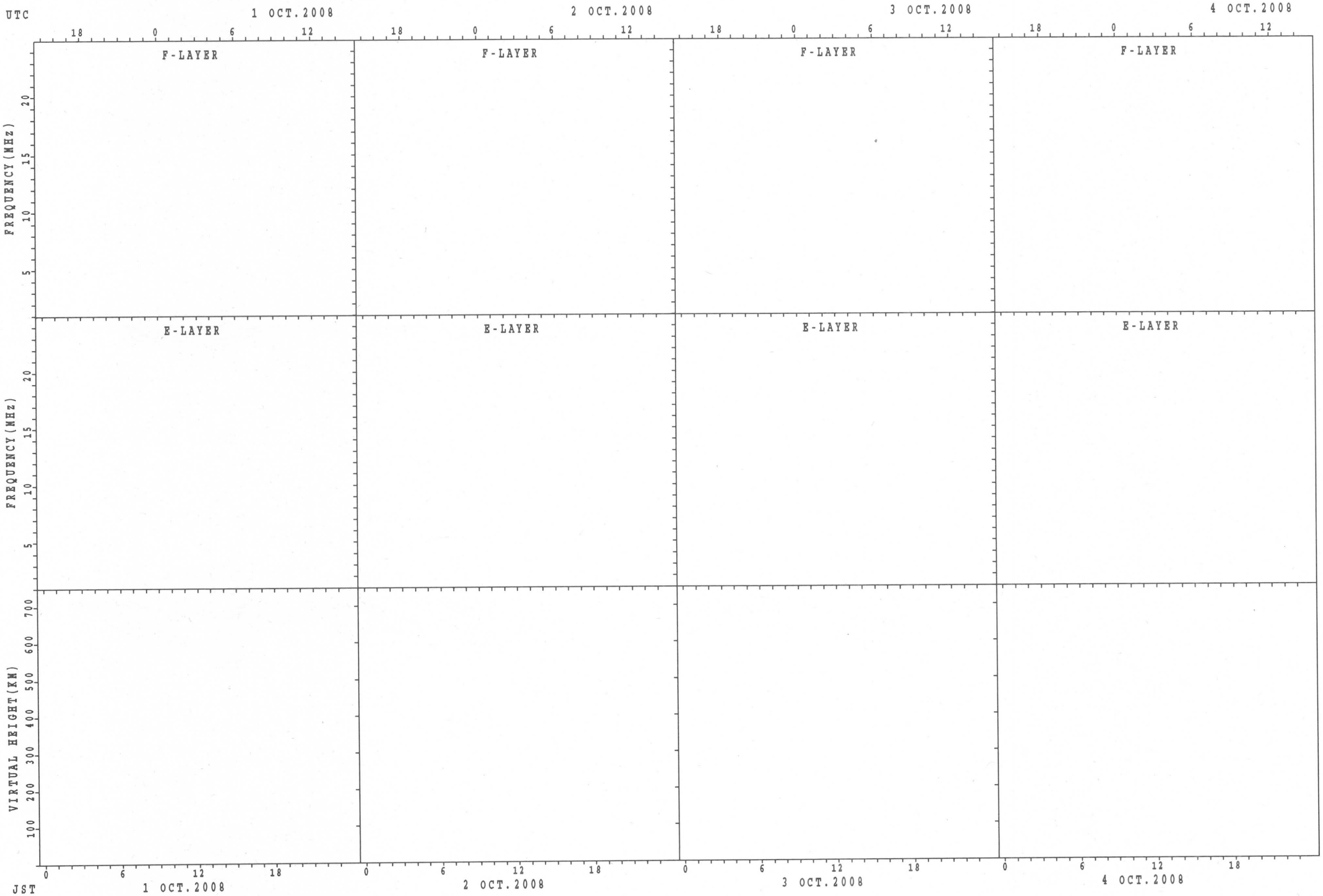
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



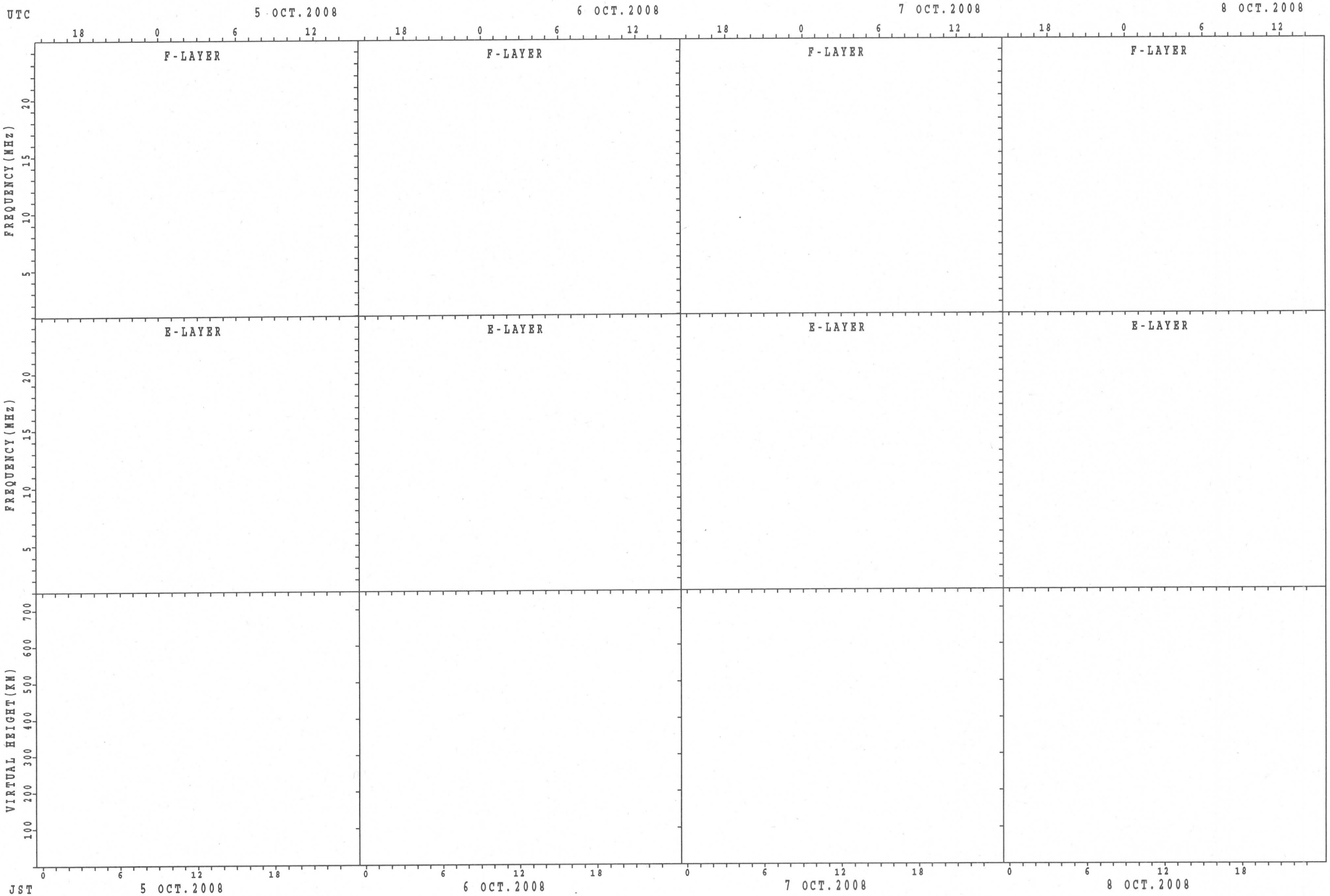
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



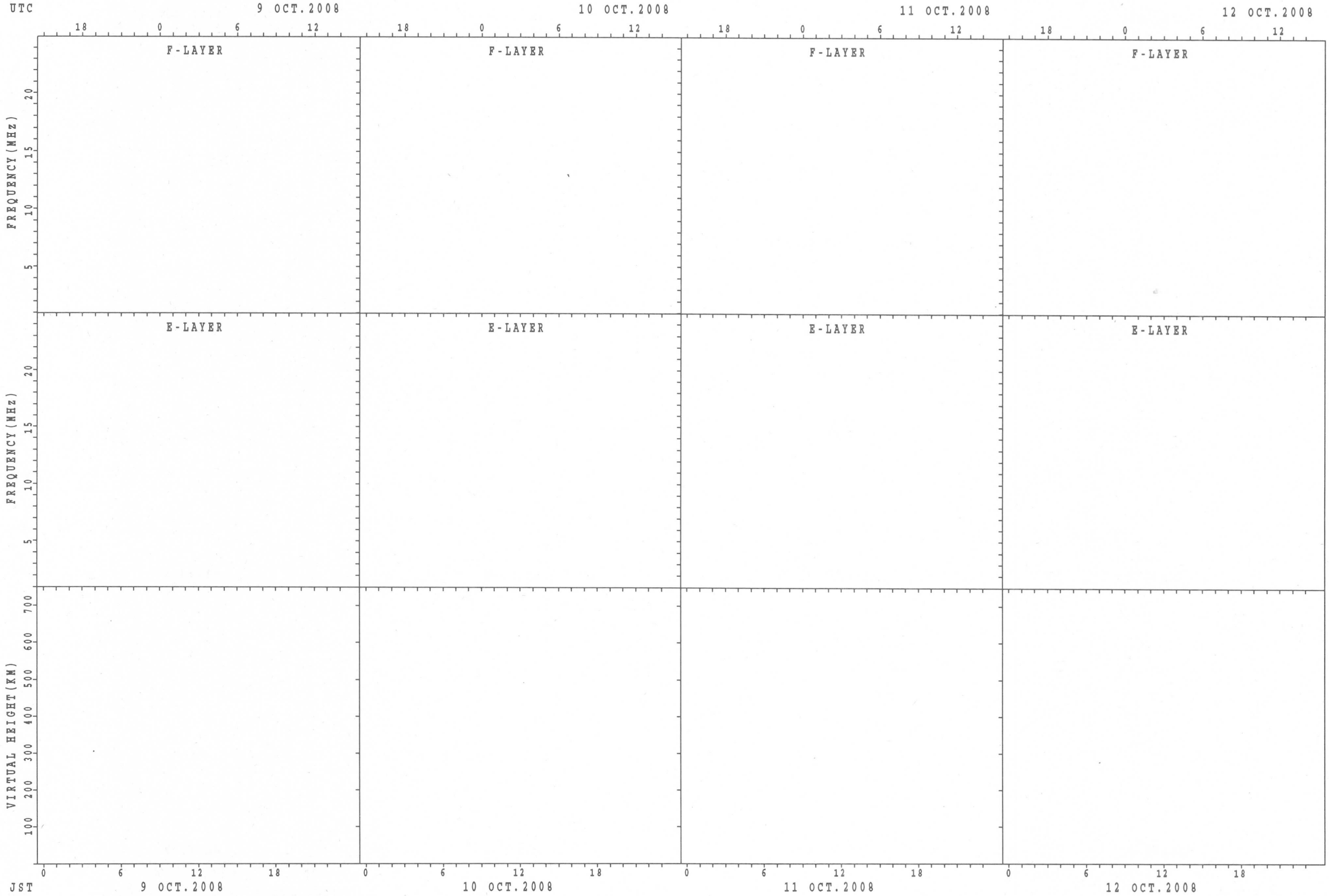
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



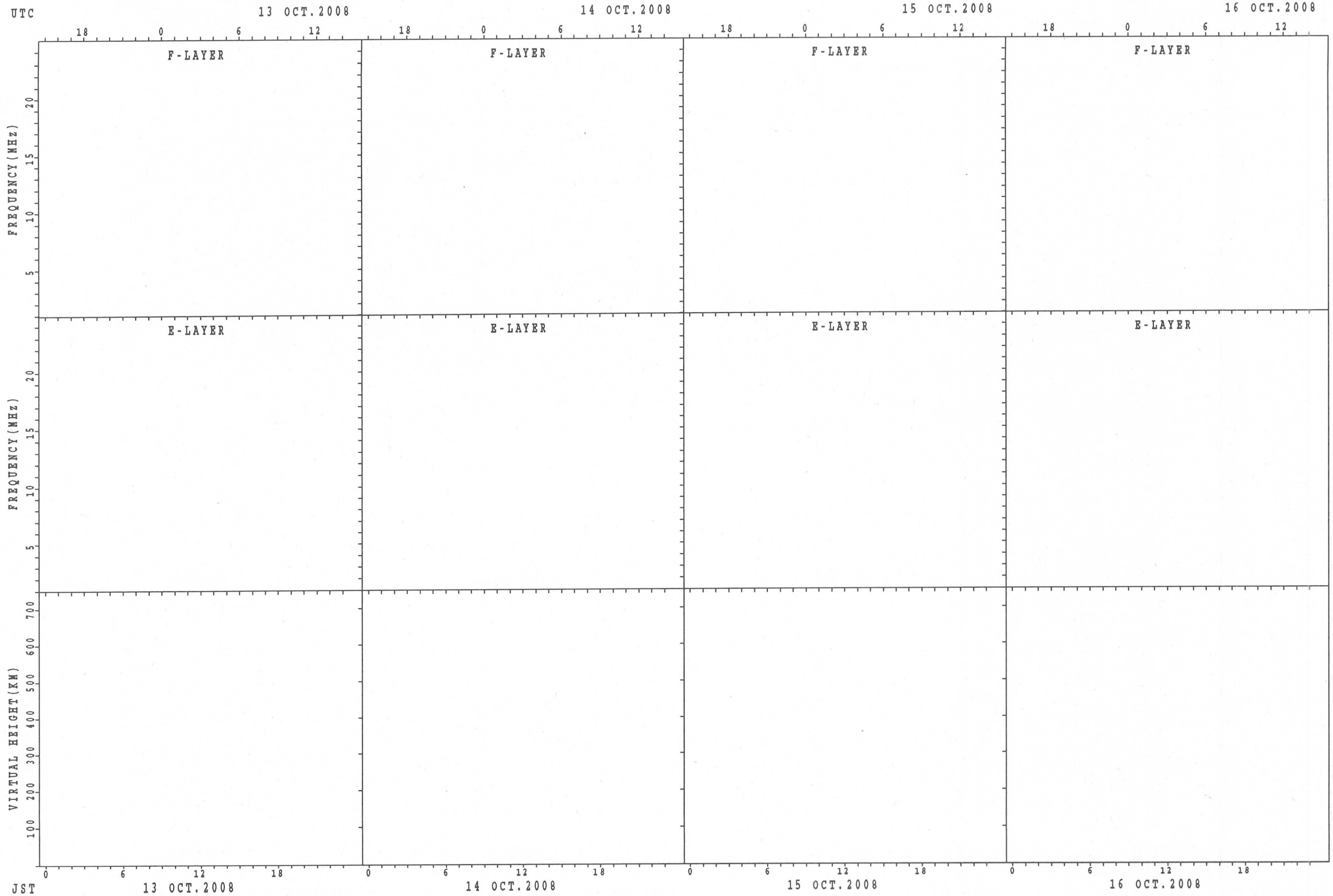
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



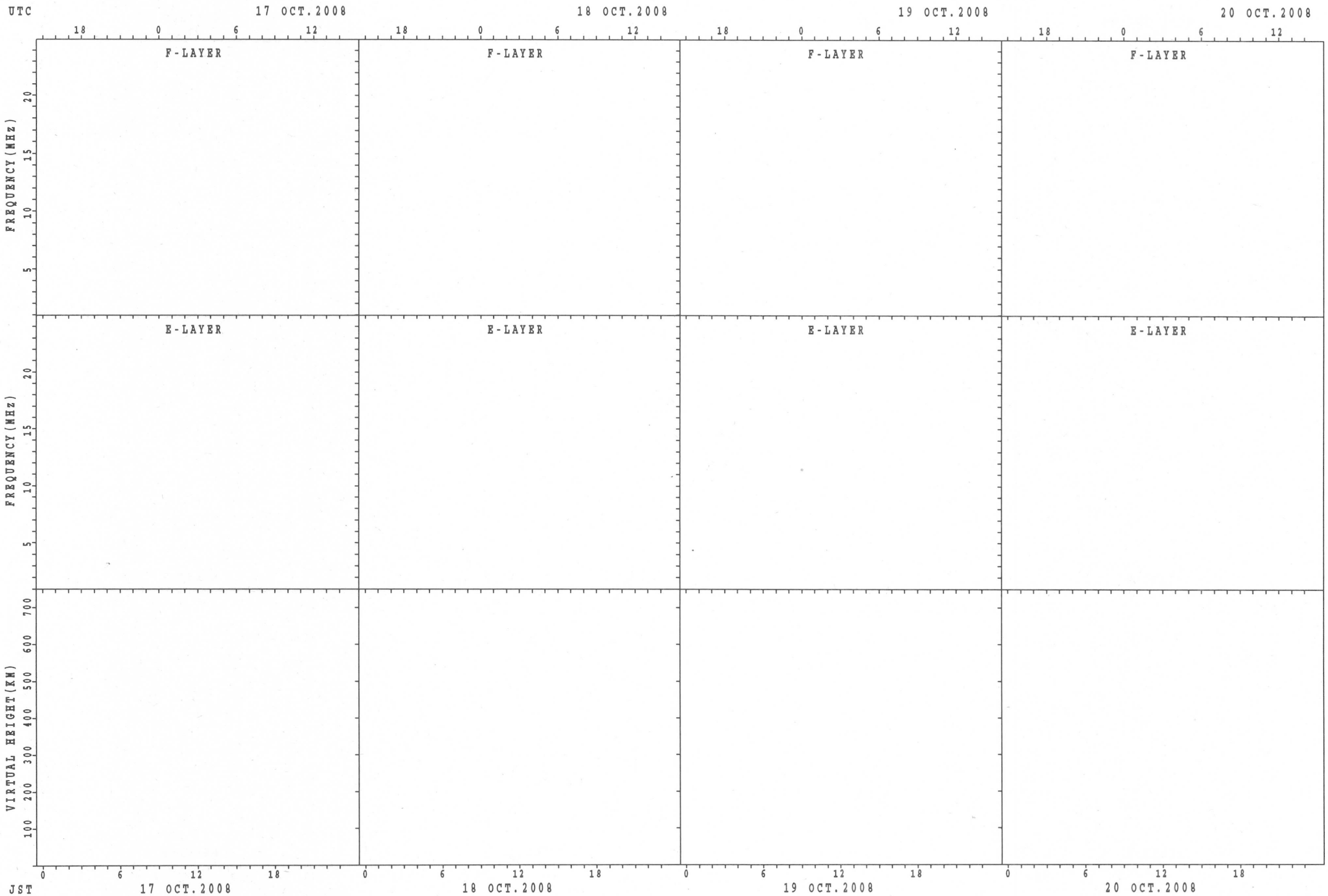
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



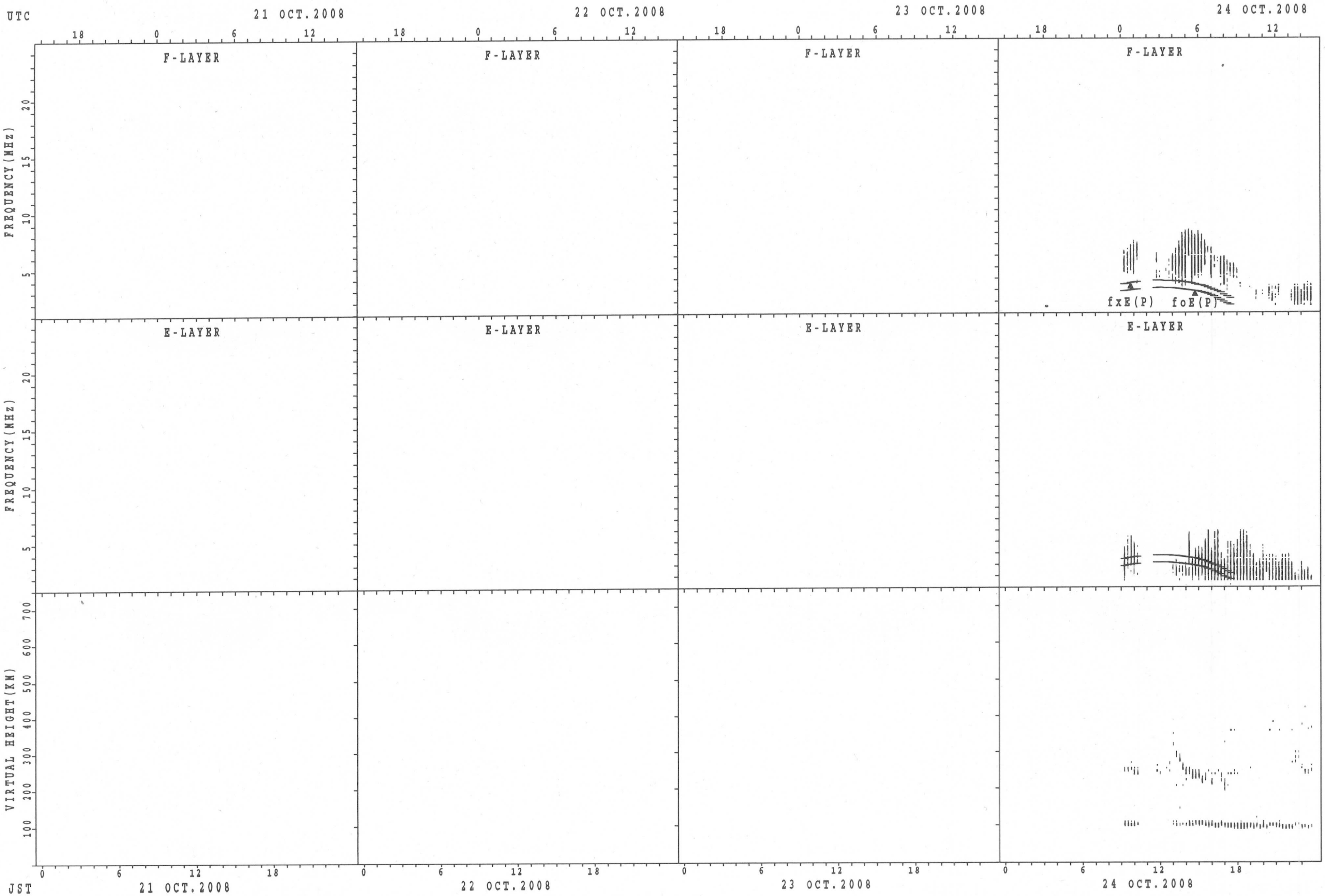
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



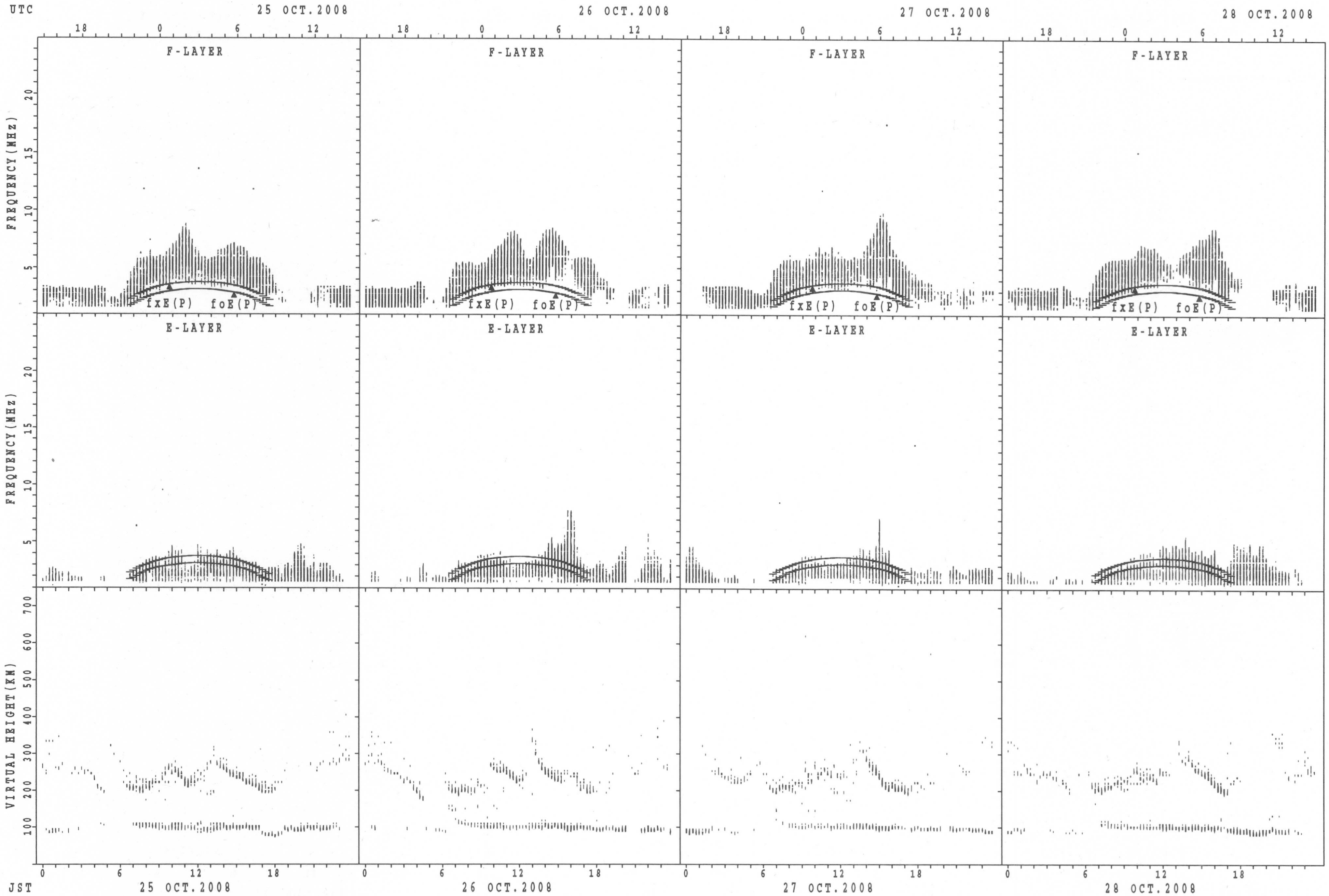
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

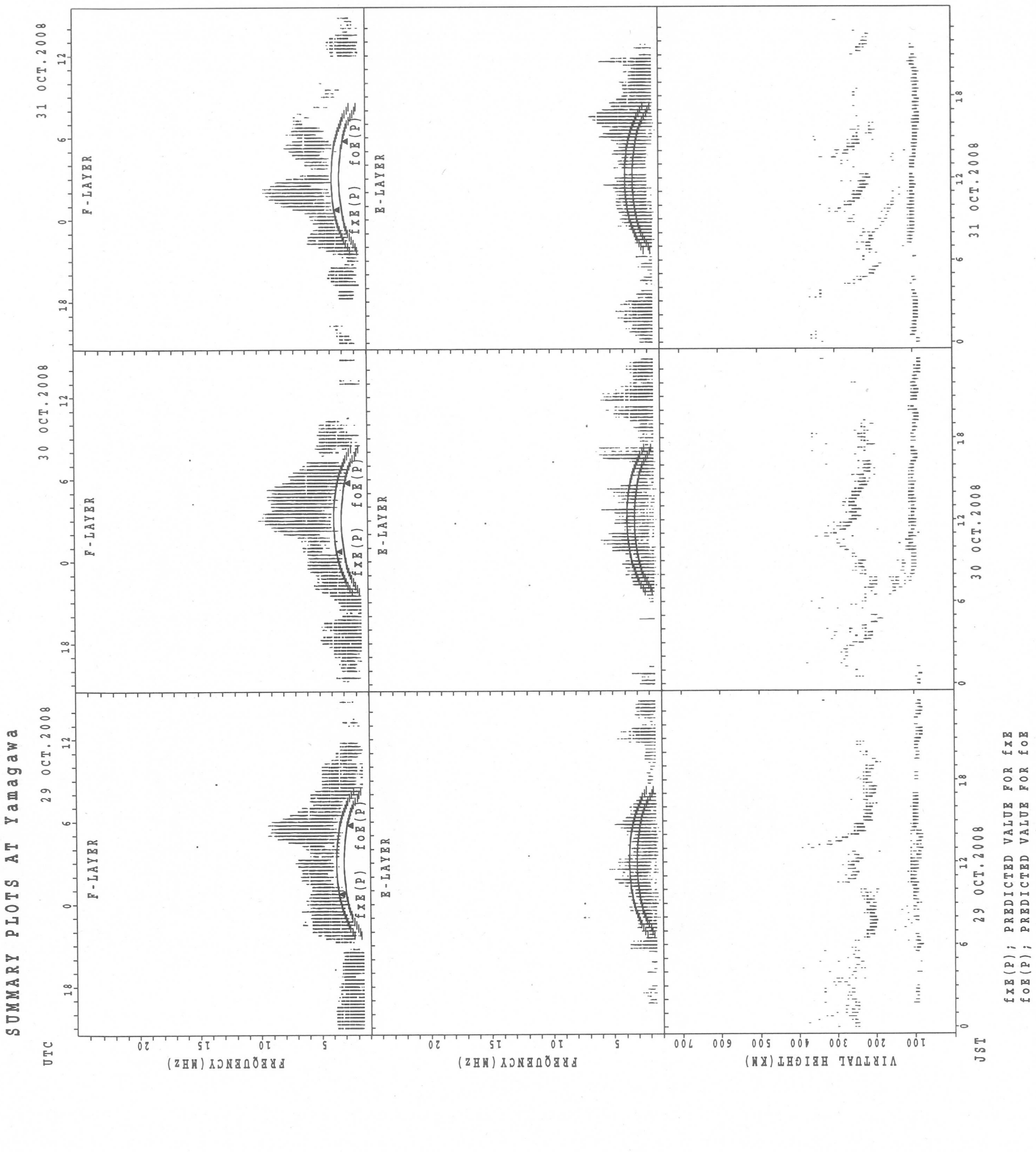


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

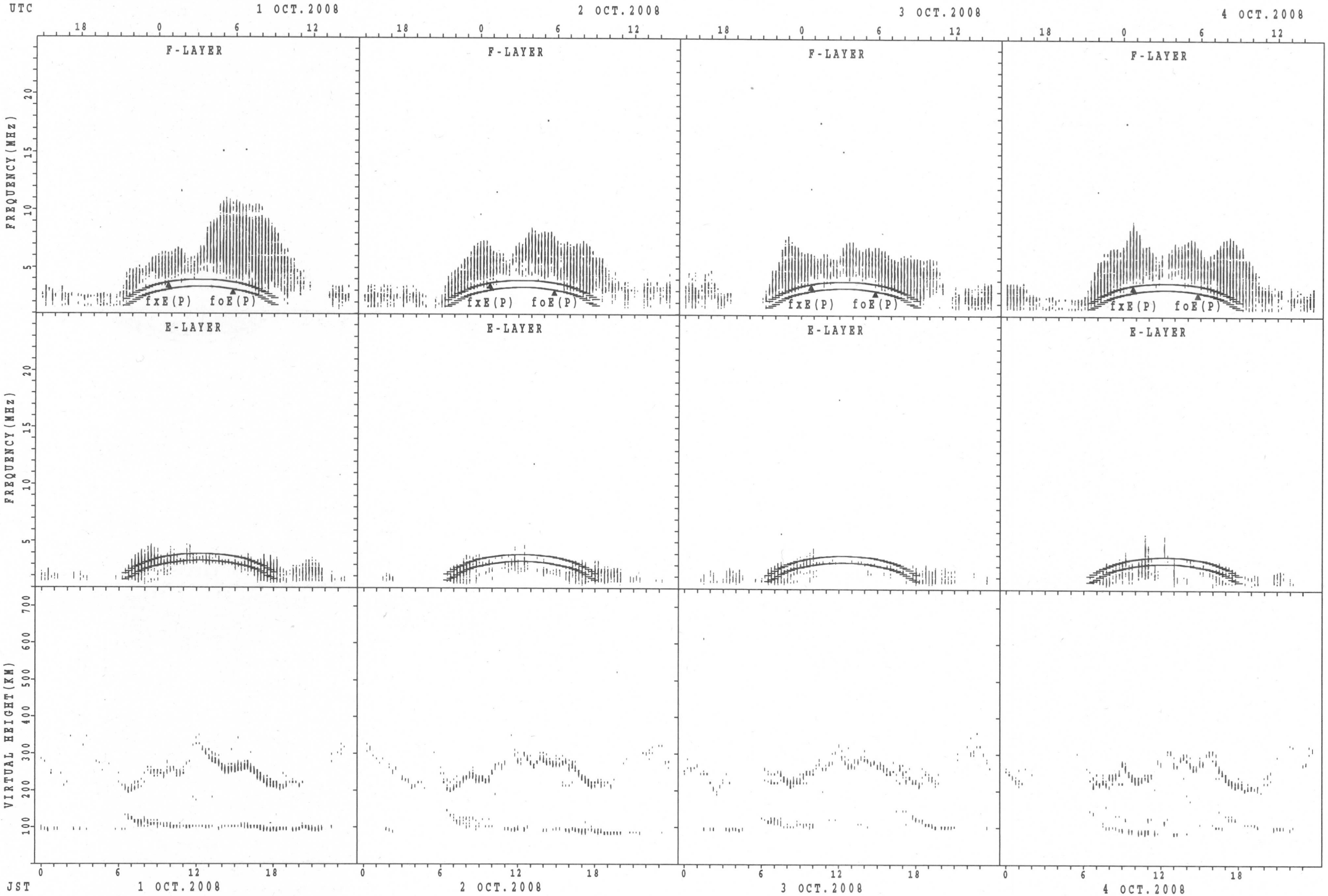
SUMMARY PLOTS AT Yamagawa



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

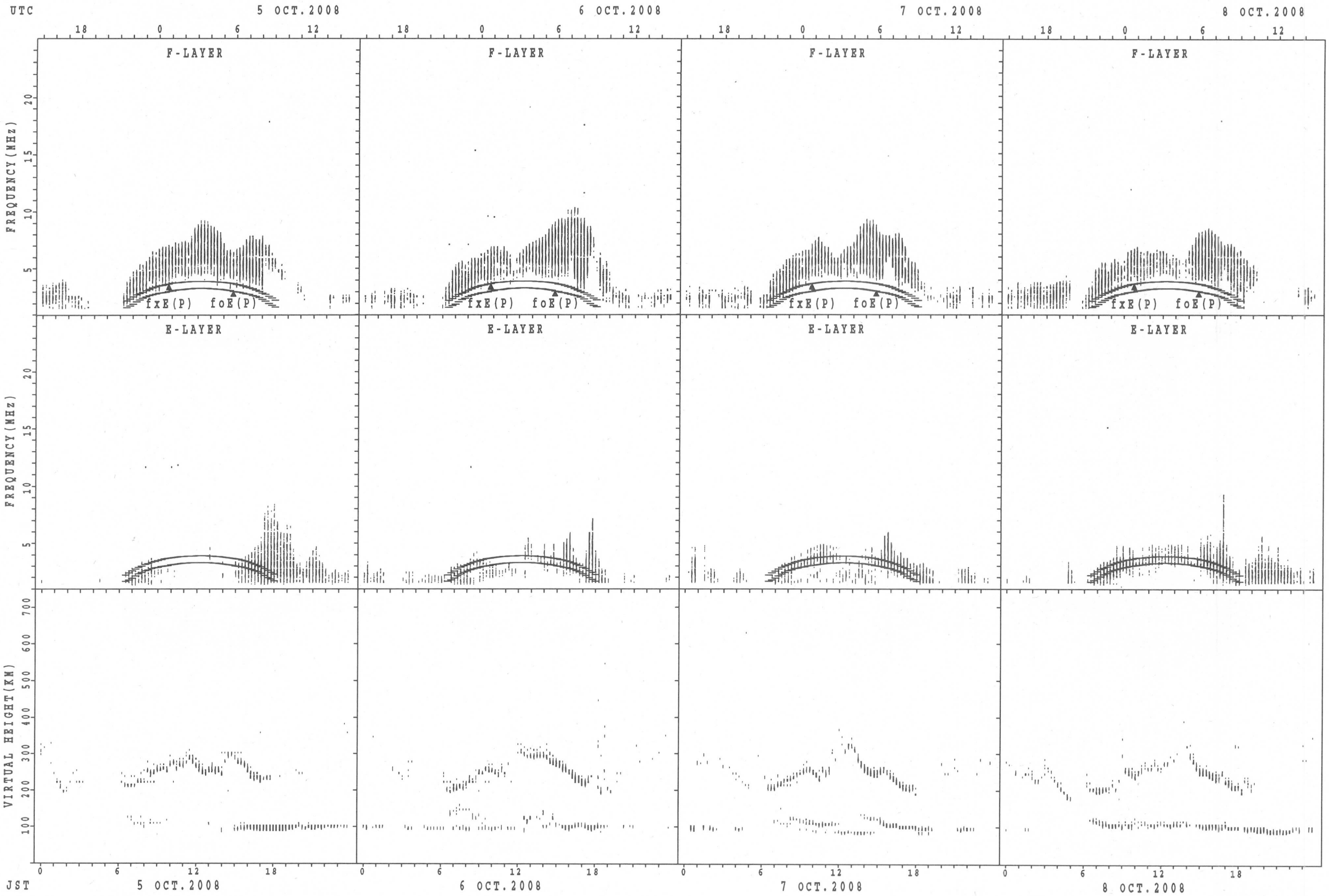

SUMMARY PLOTS AT Yamagawa
UTC
JST
29 OCT.2008
30 OCT.2008
31 OCT.2008
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



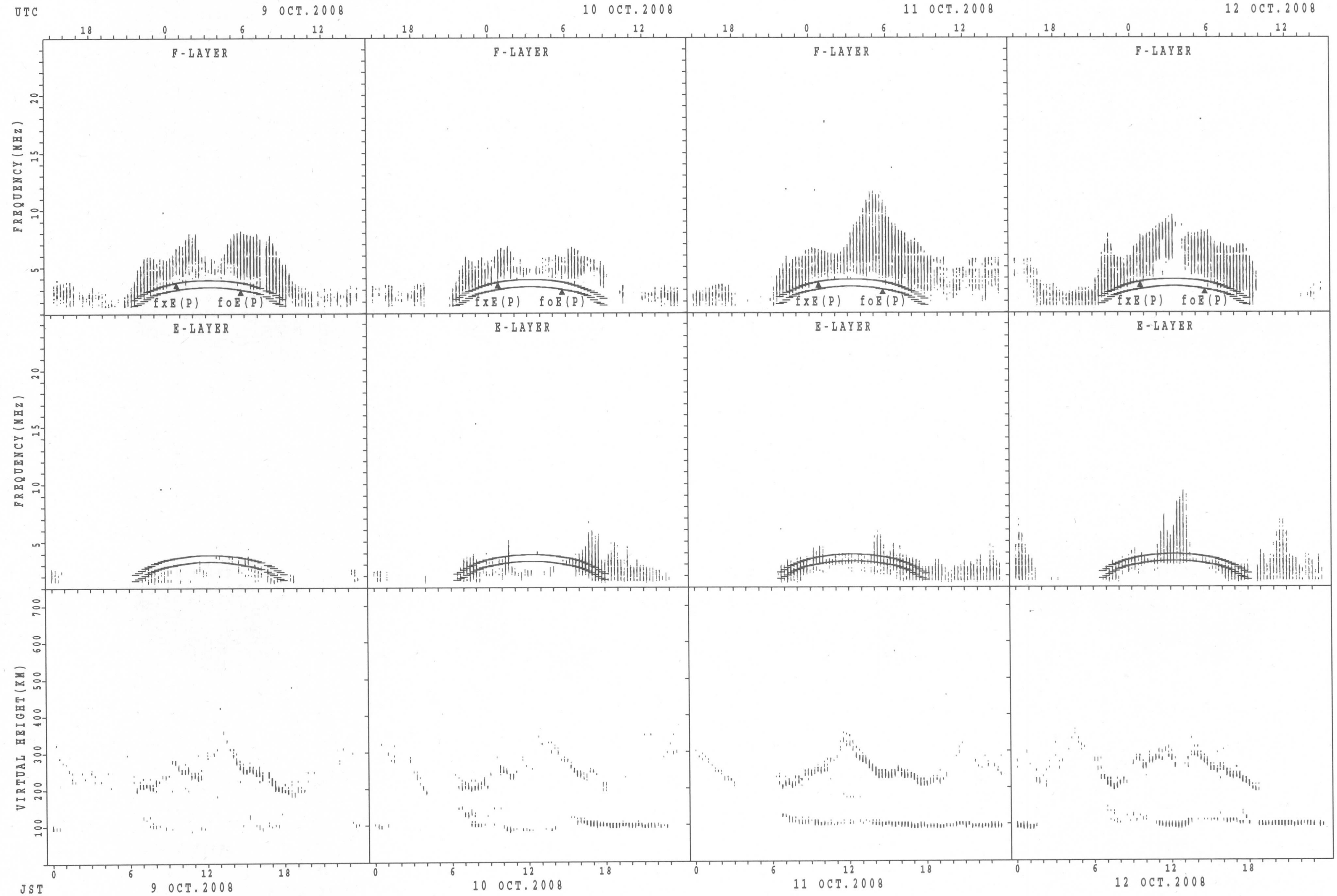
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



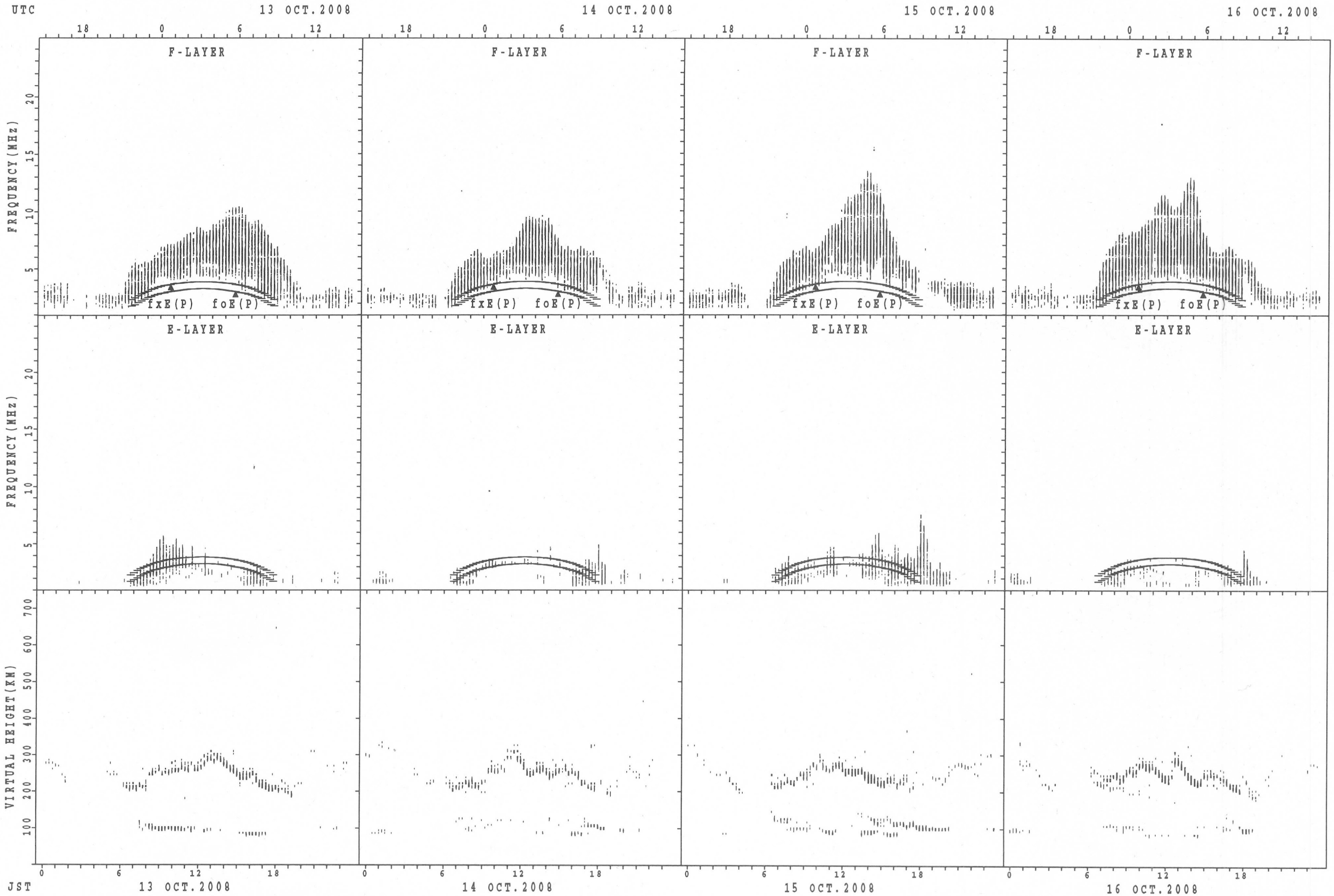
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



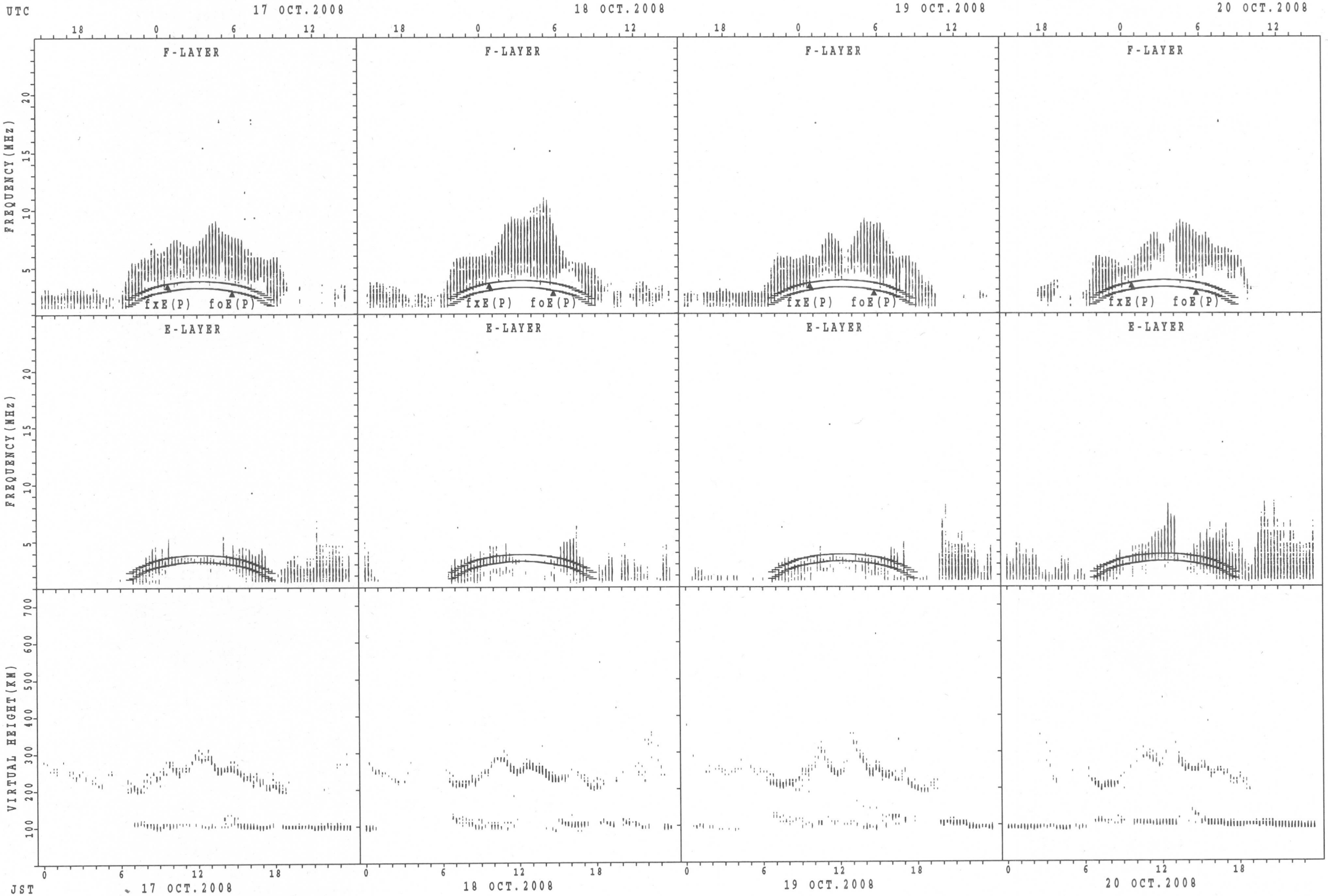
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



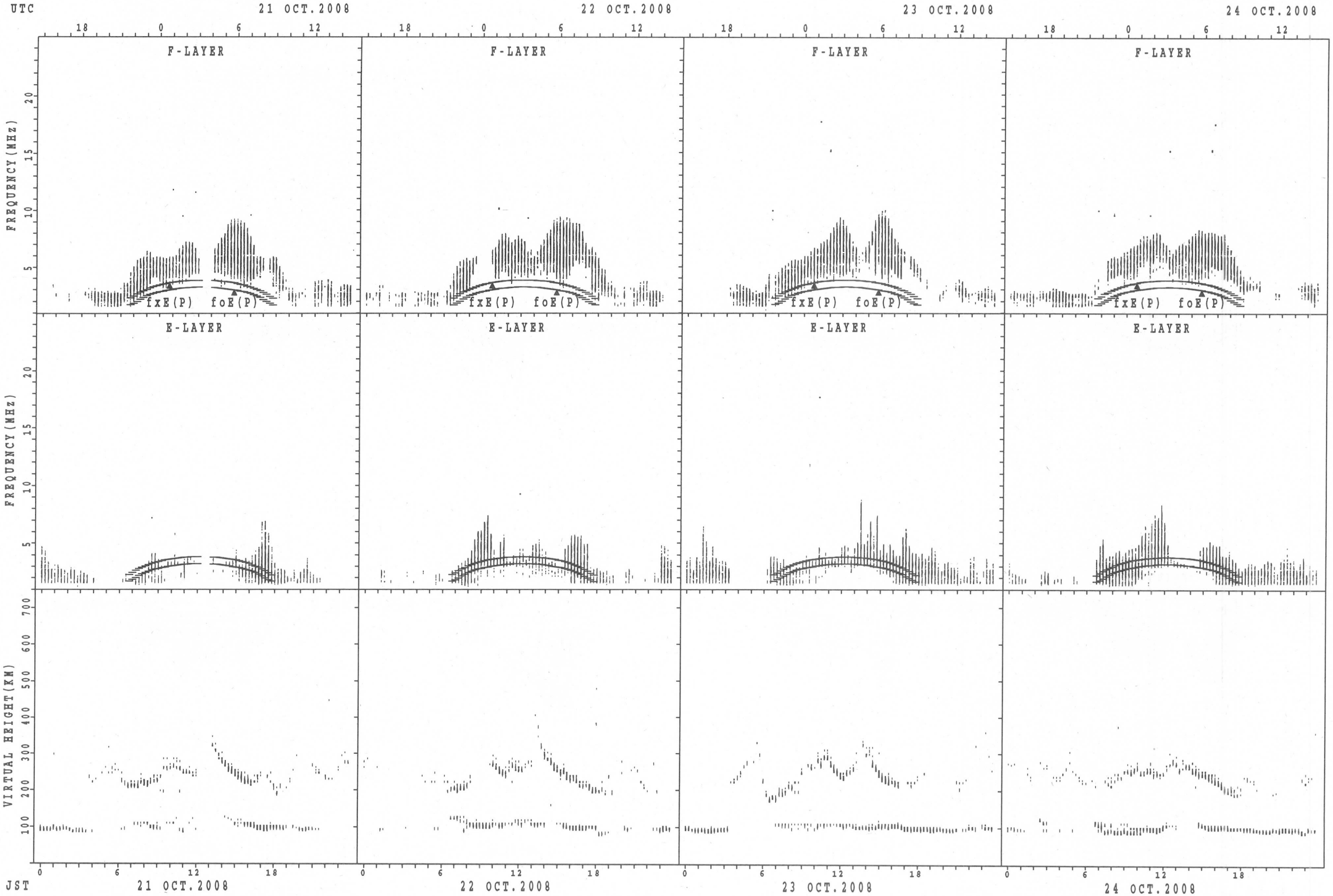
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



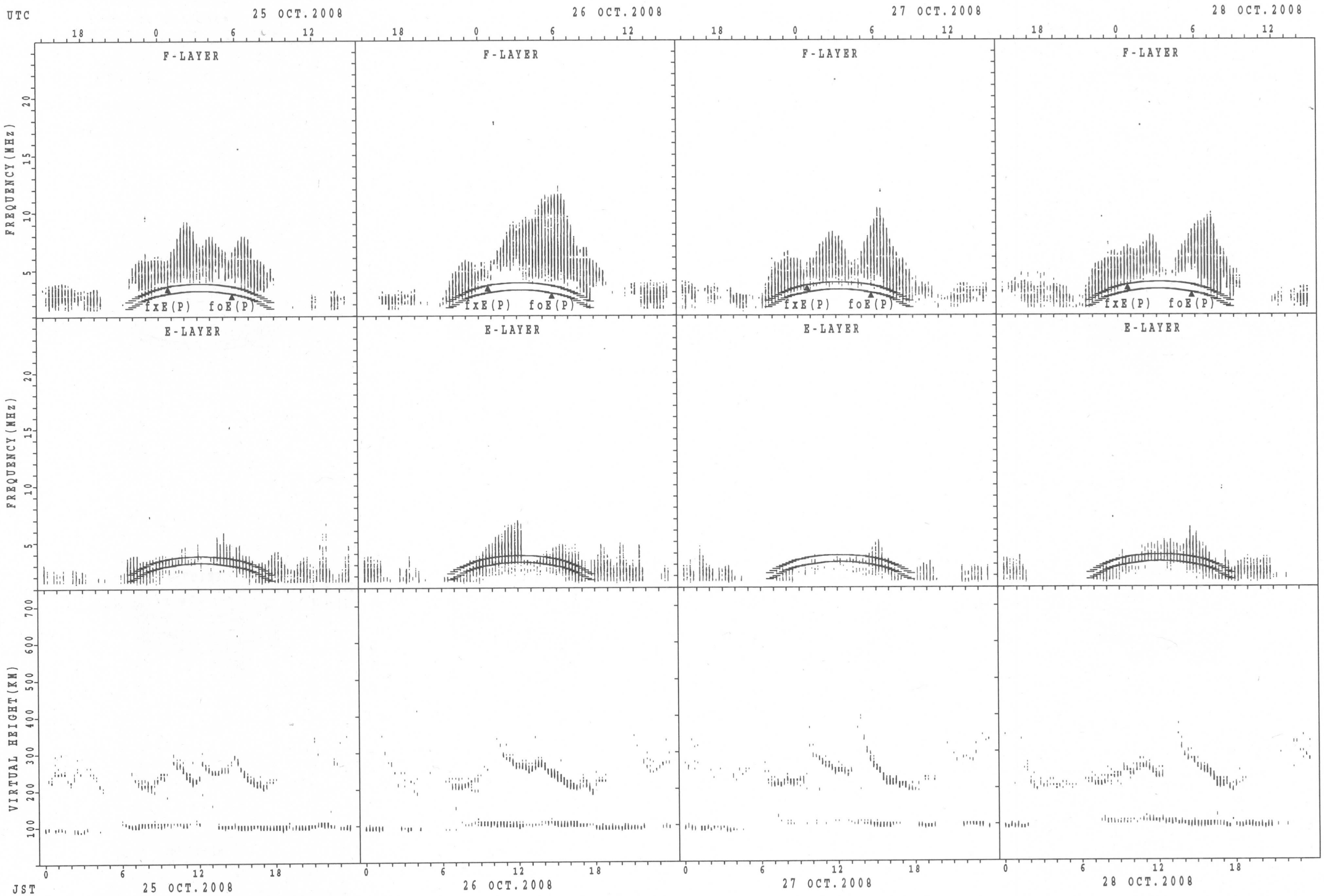
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



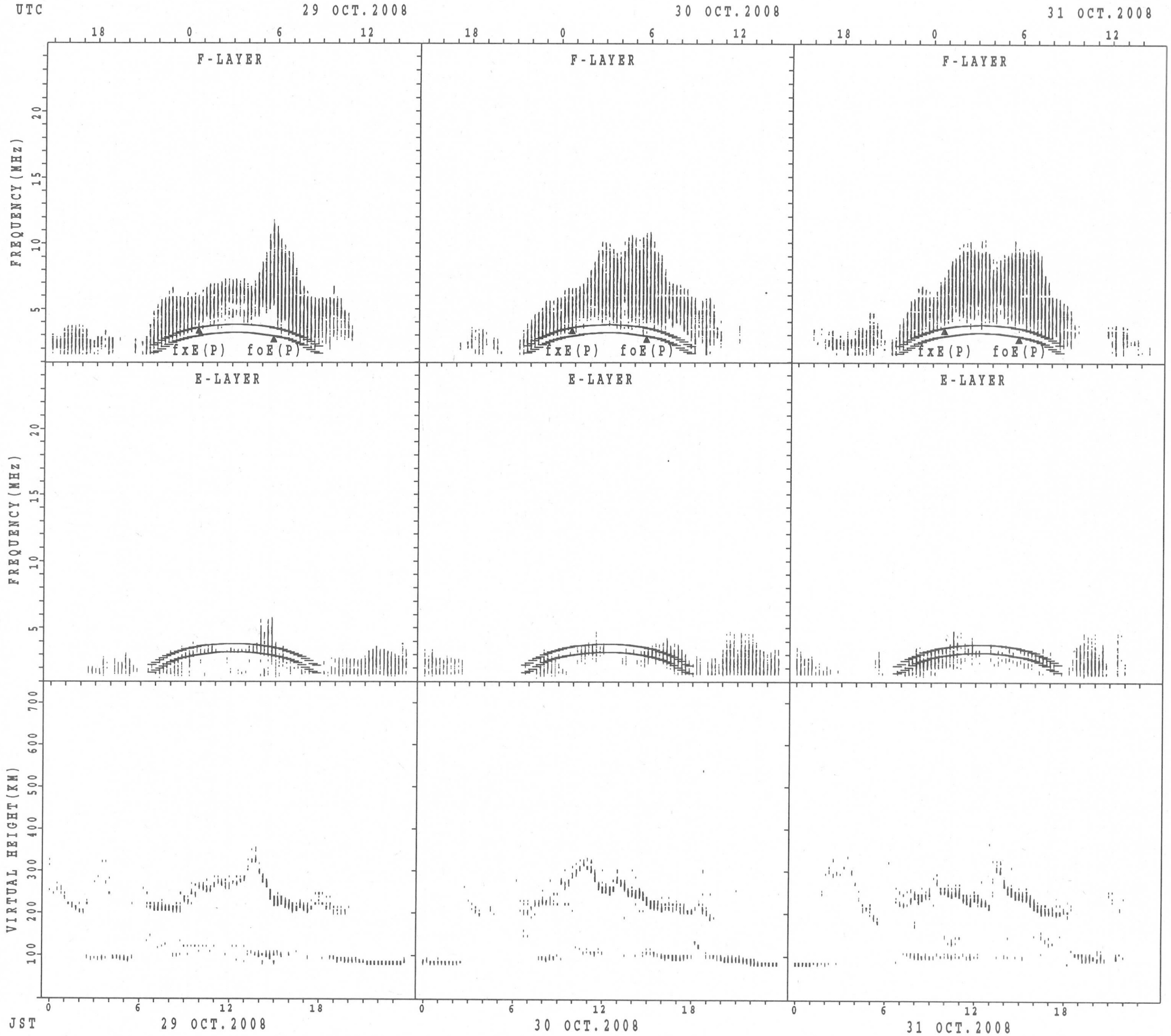
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

OCT.2008 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

h'F

	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								2	6	6				4	1	3	5	1						
MED								227	221	223				232	254	248	238	232						
U Q								228	238	234				235	127	262	262	116						
L Q								226	208	222				219	127	222	235	116						

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	12	14	6	7	9	11	9	12	16	21	19	18	12	7	13	12	20	20	21	20	22	20	12	14
MED	95	97	97	97	103	97	105	128	107	103	103	101	101	101	97	103	107	102	103	98	100	101	97	97
U Q	97	99	111	113	108	105	137	143	134	119	111	107	110	113	106	115	118	111	107	104	103	103	103	103
L Q	95	95	95	93	99	95	92	107	103	103	99	97	97	95	94	92	98	93	96	95	97	97	95	95

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

h'F

	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								2	12	4					6	12	3	5						
MED								236	236	245					251	238	232	222						
U Q								262	244	287					276	257	254	238						
L Q								210	230	227					230	231	216	215						

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	10	10	8	6	6	5	11	23	13	14	13	17	7	5	8	12	19	22	21	19	19	16	15	16
MED	95	94	91	95	94	95	123	131	113	108	105	105	105	107	100	100	109	100	99	101	101	97	97	97
U Q	97	97	94	97	103	140	155	143	118	113	113	165	107	123	115	108	113	107	106	103	103	101	103	99
L Q	93	93	89	91	91	89	103	115	102	101	102	100	97	89	93	91	103	95	93	95	95	91	95	95

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

h'F

	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										1						8	5							
MED										248						236	222							
U Q										124						247	223							
L Q										124						222	203							

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	4	4	3	1	1		1	4	4	5	4	4	5	4	6	7	8	6	8	7	7	7	6	6
MED	89	92	93	89	91		89	129	111	125	110	109	109	102	104	101	101	98	98	97	95	97	97	95
U Q	90	94	97	44	45		44	146	119	159	131	118	127	105	105	103	102	103	101	99	99	101	99	97
L Q	89	90	91	44	45		44	113	103	104	105	107	106	99	101	97	96	91	93	95	93	95	97	89

MONTHLY MEDIANS OF h'F AND h'Es

OCT.2008 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

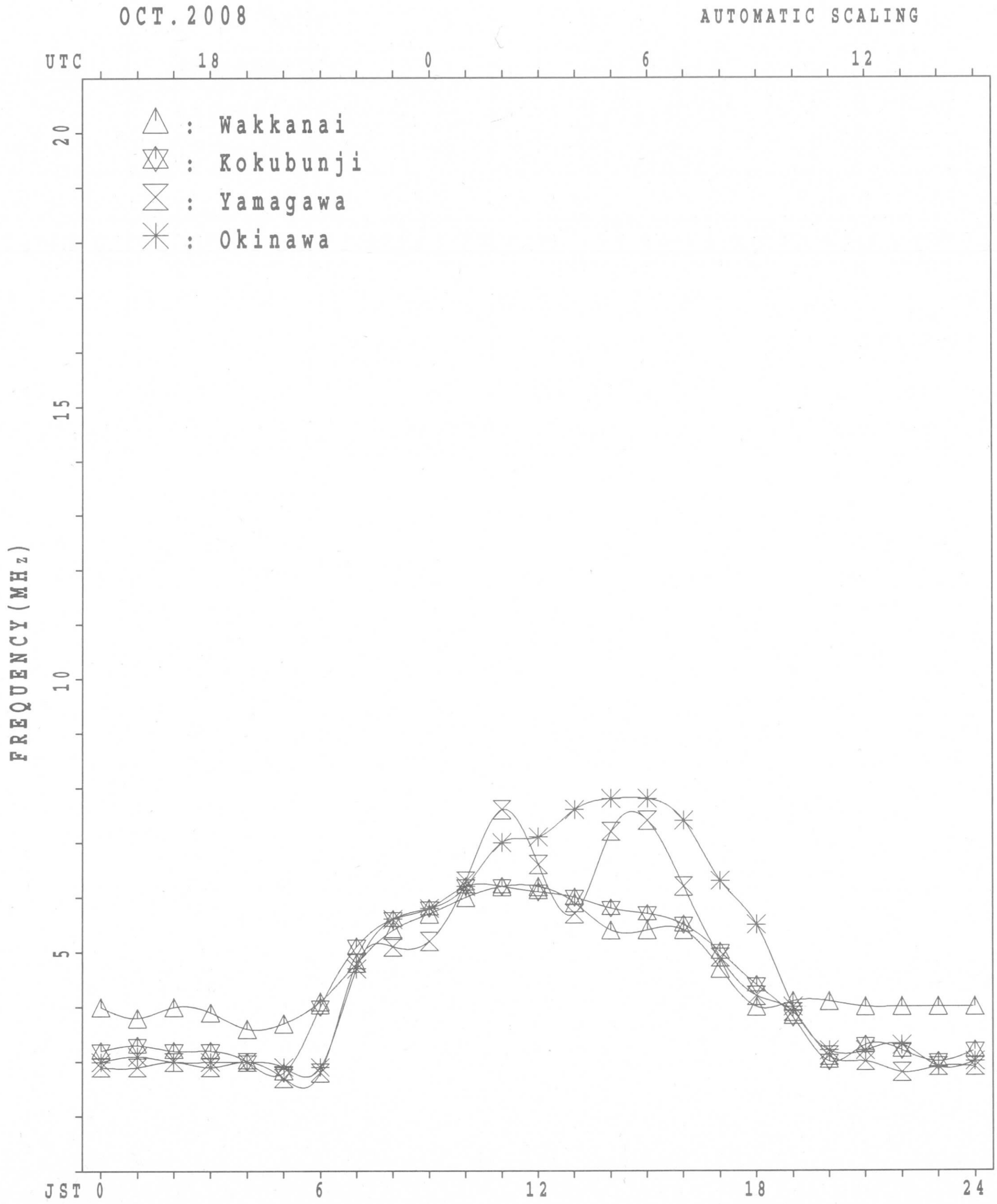
h'F STATION Okinawa LAT. 26°40.5'N LON. 128°09.2'E

	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								1	10	13						10	28	16	5					
MED								224	234	256						243	239	230	232					
U Q								112	246	265						254	247	238	238					
L Q								112	230	246						226	225	218	223					

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	16	13	8	4	3	3		18	15	15	15	14	13	10	14	15	23	26	20	23	21	19	17	13
MED	97	95	93	94	95	97		126	107	109	109	104	109	111	111	107	103	103	101	99	97	99	97	97
U Q	98	97	96	98	97	179		131	117	111	111	113	112	125	133	111	107	109	102	105	102	103	103	101
L Q	95	90	90	93	91	93		117	107	101	103	99	105	103	103	101	101	99	97	97	95	95	95	93

MONTHLY MEDIANS PLOT OF foF2



IONOSPHERIC DATA STATION Kokubunji

OCT.2008 fxI (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 38	X 40	X 41	40	X 34	X 33													X 51	X 45	X 46	X 45	X 42	X 44
2	X 41	X 42	X 40	X 40	X 39	X 36													X 59	X 47	X 42	X 40	X 39	X 39
3	X 39	X 40	X 32	X 25	X 26	X 28													X 58	X 52	47	X 45	46	X 46
4	X 50	X 34	X 33	X 32	X 32	X 30													X 62	X 39	X 35	X 37	X 36	38
5	X 36	X 38	X 37	X 33	X 28	X 28													X 56	X 49	X 41	38	42	43
6	X 42	X 42	X 42	X 39	X 33	X 33													X 58	X 32	X 35	X 37	X 37	X 38
7	X 38	X 36	X 36	X 35	X 34	X 32													X 51	X 47	X 44	X 40	X 40	X 40
8	X 41	X 41	X 40	X 38	X 37	X 39													X 59	X 39	X 37	X 39	X 40	X 43
9	X 40	X 39	X 39	X 40	X 44	X 37													X 58	X 41	X 37	X 38	X 38	X 40
10	X 40	X 39	X 39	X 36	X 34	X 32													X 47	X 39	X 42	X 41	X 39	45
11	X 43	46	45	42	42	X 34													X 54	X 44	X 46	53	X 45	X 46
12	X 42	X 46	X 40	X 39	X 36	X 35													X 56	X 44	X 38	X 39	X 42	47
13	X 41	X 37	X 38	X 36	X 33	X 33													X 49	X 44	X 44	X 45	X 36	X 36
14	X 38	X 34	X 37	X 37	X 37	X 37													X 46	X 42	X 40	48	44	X 40
15	X 37	X 37	X 35	X 34	X 34	X 32													X 44	X 46	X 43	X 46	52	54
16	51	46	50	48	47	46													X 53	X 44	X 36	X 40	X 41	X 41
17	X 41	X 44	X 41	X 41	X 41	X 42	X 51												X 57	X 37	X 39	X 40	X 41	X 42
18	X 43	X 46	X 40	X 40	X 39	X 37											X 55		X 44	X 39	X 39	X 40	X 39	X 42
19	45	X 43	X 42	X 42	X 39	X 35													X 46	X 36	X 42	X 41	X 42	X 42
20	X 42	X 43	X 43	X 48	X 36	X 40													X 41	X 38	X 36	X 39	X 40	A
21	X 38	X 38	X 38	X 39	X 36	X 34								C					X 43	A	X 40	46	42	41
22	38	43	X 40	42	X 39	X 32													X 46	X 42	X 43	X 38	X 36	X 36
23	X 36	X 37	X 37	X 39	X 37	41												X 57	X 50	X 51	X 47	X 44	X 43	X 35
24	43	45	42	X 39	X 41	X 34													A	A	A	X 38	A	X 33
25	X 34	X 34	X 36	X 36	X 38	X 34													X 33	X 33	X 35	X 37	X 36	X 35
26	X 36	X 36	41	X 42	X 53	X 33													X 37	X 29	X 34	X 34	X 35	X 35
27	X 34	X 35	X 35	X 35	X 38	X 28													A	X 36	X 38	X 35	X 34	X 38
28	X 36	X 37	X 37	X 36	X 41	X 31													X 35	A	A	X 38	39	41
29	41	X 39	X 35	X 34	37	X 34													X 46	X 47	X 39	X 37	X 42	X 50
30	56	51	50	58	52	X 35													X 40	X 41	X 40	A	C	X 38
31	40	X 40	X 38	X 36	X 39	X 36													X 41	X 37	X 40	X 36	X 39	37
	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	31	31	31	31	31	31	1										1	1	29	28	29	30	29	30
MED	X 40	X 40	X 39	X 39	X 37	X 34	X 51										X 55	X 57	X 49	X 42	X 40	X 40	X 40	X 40
U Q	42	43	41	41	X 41	X 37													X 56	X 46	X 43	X 44	X 42	X 43
L Q	X 38	X 37	X 37	X 36	X 34	X 32													X 44	X 38	X 37	X 38	X 38	X 38

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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	32	34	35	F	28	27	38	51	54	50	60	72	66	54	54	53	55	50	45	39	40	39	36	37
2	35	36	34	34	33	30	42	44	50	56	63	57	57	64	63	52	50	49	52	41	36	34	33	33
3	33	34	26	19	20	22	40	64	73	56	59	68	68	64	62	50	49	53	52	46	F	39	F	39
4	44	28	27	26	26	24	42	56	69	67	60	68	70	54	53	52	57	66	56	32	29	31	30	F
5	30	32	31	27	22	22	40	49	64	62	62	69	66	63	63	63	59	58	50	43	34	F	F	F
6	36	36	36	32	27	27	45	50	57	53	58	61	58	50	59	64	65	72	52	26	29	31	31	32
7	32	30	30	29	28	26	42	51	54	56	58	69	55	56	54	61	56	62	45	41	38	34	34	34
8	35	35	34	32	31	32	42	46	52	54	57	58	54	54	58	71	68	66	53	33	31	33	34	36
9	34	33	33	33	38	31	45	A	58	58	52	58	56	57	53	56	52	59	52	35	31	32	32	34
10	34	33	32	29	28	26	39	49	56	59	53	51	58	52	49	50	50	48	41	33	36	35	33	F
11	36	F	F	F	F	28	44	48	53	52	53	61	62	64	52	55	54	58	48	38	40	F	39	40
12	36	40	34	33	30	29	33	42	82	66	57	79	79	66	57	54	55	53	50	38	32	33	36	F
13	35	30	32	30	27	27	40	45	48	55	66	73	58	56	55	53	54	62	43	38	37	39	30	30
14	32	28	31	31	30	30	40	49	56	56	57	60	60	60	54	54	52	51	40	36	34	F	F	33
15	31	30	29	28	28	26	40	51	61	59	64	66	61	66	69	59	48	42	38	40	36	40	F	F
16	F	F	F	F	F	F	42	60	82	83	82	84	65	58	50	56	54	45	46	38	30	34	34	35
17	35	38	35	35	35	36	43	50	67	62	63	65	59	59	65	56	55	54	51	31	33	34	35	36
18	37	40	34	34	33	31	41	53	58	57	61	58	73	61	57	50	49	56	38	33	33	34	33	36
19	F	37	36	36	33	29	38	50	56	69	56	54	66	59	56	52	50	50	40	30	36	35	36	36
20	36	37	37	42	30	34	48	54	55	57	58	60	70	71	61	63	55	55	35	32	30	33	34	A
21	32	32	32	32	30	27	40	52	56	55	59	60	60	C	66	56	54	48	37	A	34	F	F	F
22	F	F	34	F	33	26	37	52	60	57	52	68	58	65	64	64	63	48	40	36	37	32	30	30
23	30	30	31	33	31	F	51	59	59	62	62	62	64	63	72	59	56	51	44	44	41	38	36	29
24	F	F	F	33	35	28	37	59	56	62	66	62	58	58	65	68	54	45	A	A	A	32	A	27
25	28	28	30	30	32	28	37	60	57	73	66	66	57	52	54	63	52	43	27	27	29	31	30	29
26	30	30	F	36	46	27	38	54	53	60	66	59	56	60	62	55	53	54	31	23	28	28	29	29
27	28	28	29	28	32	22	38	49	55	55	63	57	60	58	59	66	48	41	A	30	32	29	28	32
28	30	31	31	30	34	25	34	47	50	57	66	60	54	62	57	62	57	40	28	A	A	32	F	F
29	F	33	29	28	F	28	41	52	58	62	57	54	64	72	81	60	56	46	40	41	33	31	36	44
30	F	F	F	F	F	29	45	55	56	62	70	78	98	97	75	64	55	46	34	35	34	A	C	32
31	F	34	32	30	33	30	36	52	54	58	78	75	75	61	63	57	49	46	35	30	34	30	33	F
	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	24	26	26	26	27	29	31	30	31	31	31	31	31	30	31	31	31	31	29	28	28	26	23	22
MED	34	33	32	32	31	28	40	51	56	58	60	62	60	60	59	56	54	51	43	36	34	33	33	34
U Q	36	36	34	33	33	30	42	54	60	62	66	69	66	64	64	63	56	58	50	40	36	35	36	36
L Q	30	30	30	29	28	26	38	49	54	56	57	58	58	56	54	53	50	46	38	32	31	31	30	30

OCT.2008 foF2 (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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	U L 416	U L 416	U L 420	U L 420	L	U L 428	L	L							
2										U L 404	U L 408	428	424	424	L	L	L							
3								A	A	U L 412	U L 436	U L 416	U L 440	416	L	L								
4									A	L	U L 424	U L 412	L	L	U L 440	L								
5									A	U L 404	U L 428	420	U L 428	U L 412	U L 400	L								
6									L	L	U L 428	U L 424	U L 420	U L 416	U L 408	L	A							
7									L	L	420	412	U L 424	U L 420	L	L	L							
8									L	L	A	A	L	L	U L 436	U L 368								
9								A		A	L	436	U L 408	U L 400	L	A								
10									A		U L 416	U L 428	U L 428	U L 420	U L 428	A								
11										A	A	416	U L 428	U L 416	L	L								
12								U L 352	A	A	A	A	L	A	L									
13									L	400	412	416	U L 416	U L 408	L									
14								L	U L 364	L	U L 416	U L 424	U L 428	L										
15									L	A	A	416	432	U L 412	L	L								
16								L	U L 388	U L 416	U L 432	U L 428	U L 420	U L 404										
17									A	L	L	U L 436	L	L	L	L								
18									L	L	U L 424	U L 436	U L 412	L	L									
19										U L 408	A	U L 428	U L 420	U L 408	A	L								
20									L	L	L	L	U L 432	U L 408	L	L								
21										L	U L 412	A	A	C	L	A	A							
22										L	A	A	L	U L 412	A	A								
23										L	L	L	L	L	L									
24										L	U L 408	A	A	A	A	A	A							
25										U L 392	U L 420	416	A	L	U L 404	A	L							
26									A	A	L	L	L	U L 416	A									
27										L	A	L	U L 428	U L 392	L									
28										A	U L 404	L	U L 400	A	A	A								
29									L	A	A	A	A	A	A	L								
30											U L 440	L	U L 428											
31										U L 424	A			L										
	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								1	2	9	17	18	19	16	7	1								
MED								U L 352	U L 376	U L 408	U L 420	U L 422	U L 424	U L 412	U L 428	U L 368								
U Q										U L 416	U L 428	U L 428	U L 428	U L 416	U L 436									
L Q										U L 402	U L 412	416	U L 420	U L 408	U L 404									

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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							UA 172	A	A	A	A	288	R	320	R	UR 276	A	B						
2							B	224	UA 276	A	R	R	R	R	R	R	224	B						
3							B	A	A	A	A	R	A	A	A	R	216	B						
4							B	A	292	R	A	R	R	R	R	260	212	B						
5							B	232	A	R	A	A	A	A	A	A	R	B						
6							B	228	276	304	A	A	A	A	A	R	A	B						
7							B	UR 252	268	A	A	A	A	A	A	A	A	B						
8							B	224	A	A	A	A	A	A	A	A	A	B						
9							B	A	A	A	A	A	A	A	R	A	A	B						
10							B	236	276	A	A	A	A	A	296	UA 264	A	B						
11							B	224	A	A	A	A	R	R	292	A	R	B						
12							B	216	A	A	A	A	A	304	280	264	R	B						
13							B	216	A	A	A	R	R	304	R	R	UR 220	B						
14							B	A	260	R	R	R	R	316	284	A	A	B						
15							B	236	A	A	A	A	R	R	R	UA 240	UR 220	B						
16							B	220	A	R	R	R	R	R	R	UR 276	R	B						
17								216	A	UR 308	R	R	UR 336	R	R	A	A	B						
18							B	A	284	R	R	R	R	R	R	A		B						
19							B	200	R	A	A	R	R	A	A	A	A	B						
20							B	220	A	A	A	A	A	R	280	244	A	B						
21							B	228	A	A	A	A	A	C	A	A	A	B						
22							B	220	A	A	A	A	A	A	292	UA 256	A	B						
23							B	A	260	A	R	R	A	R	UA 284	A	A							
24							B	236	A	A	A	A	A	A	A	A	A	B						
25							B	UR 228	A	A	A	R	A	R	A	A	A	B						
26							B	A	268	UA 324	A	316	324	304	A	A	A	B						
27							B	204	260	A	A	A	A	R	A	UR 280	UR 208	B						
28							B	200	272	A	A	A	R	A	A	A	A	B						
29							B	200	252	UA 288	A	A	A	A	A	A	200	B						
30							B	204	252	A	320	A	A	R	A	A	UA 192	B						
31							B	204	A	A	A	A	A	UR 312	R	UR 248	196	B						
	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							1	23	13	4	1	2	2	6	7	10	9							
MED							UA 172	220	268	U 306	320	302	330	308	284	U 262	212							
U Q								228	276	U 316				316	292	UR 276	UR 220							
L Q								204	260	296				304	280	U 248	198							

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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	J A 24	J A 21	E B 15	E B 15	19	E B 15	20	30	37	J A 40	J A 39	34	G 24	36	G 23	G 25	J A 24	19	J A 37	J A 29	J A 33	J A 24	22	J A 22
2	19	19	18	18	E B 15	E B 15	20	30	34	37	G 26	G 26	G 26	G 26	G 24	G 19	26	21	J A 22	J A 19	E B 15	E B 16	E B 15	20
3	19	20	19	E B 15	19	E B 15	23	32	J A 39	38	35	G 24	36	35	38	G 24	28	19	E B 16	E B 15	E B 14	E B 16	E B 16	E B 14
4	E B 15	E B 16	E B 15	E B 14	E B 15	E B 14	22	29	33	G 26	39	G 31	G 26	G 23	G 25	31	26	20	J A 19	E B 15	E B 15	E B 16	J A 37	J A 18
5	J A 29	J A 16	E B 15	E B 14	E B 15	E B 14	22	28	37	G 18	37	34	36	34	32	G 26	G 22	J A 28	J A 20	J A 23	J A 23	E B 15	J A 20	J A 21
6	J A 21	J A 18	E B 15	E B 14	E B 14	J A 20	22	28	31	34	37	38	38	35	33	G 25	J A 35	30	J A 26	J A 24	J A 22	J A 22	J A 52	J A 25
7	J A 24	19	20	E B 14	J A 26	19	J A 18	J G 21	32	34	36	35	34	34	34	32	28	J A 21	E B 15	20	J A 34	J A 26	J A 28	J A 18
8	19	18	E B 15	18	E B 16	20	22	29	J A 47	38	J A 43	J A 55	38	38	35	30	J A 31	E B 14	J A 38	J A 22	J A 39	J A 29	22	20
9	E B 15	E B 15	E B 14	E B 16	E B 15	J A 24	J A 27	J A 84	J A 59	J A 54	37	35	36	J A 41	G 26	J A 42	J A 31	J A 29	20	E B 15	E B 15	J A 21	J A 22	22
10	18	E B 15	E B 16	J A 18	21	E B 15	J A 22	26	31	34	35	34	37	32	34	32	30	24	E B 15	20	22	J A 31	J A 37	J A 23
11	21	21	20	20	E B 14	E B 14	20	28	J A 45	J A 44	J A 43	J A 40	G 28	G 28	33	J A 32	G 23	J A 31	J A 36	J A 30	20	E B 15	E B 15	21
12	E B 15	20	J A 24	20	20	E B 15	J A 24	25	34	J A 40	J A 47	J A 56	39	36	31	32	G 20	J A 34	J A 22	20	J A 20	J A 34	J A 27	J A 66
13	J A 24	J A 28	J A 23	J A 19	J A 21	22	J A 19	29	30	34	37	G 25	G 26	34	G 22	G 20	G 20	J A 26	J A 22	J A 21	19	E B 16	J A 30	J A 25
14	E B 16	J A 22	J A 34	J A 21	E B 14	E B 13	E B 16	25	32	G 27	G 25	G 26	G 26	35	34	30	27	22	J A 23	J A 35	J A 23	J A 44	21	E B 16
15	J A 28	J A 19	J A 23	21	20	E B 15	E B 15	28	J A 34	40	42	J A 38	G 27	24	J G 26	29	J G 20	23	J A 22	J A 24	J A 24	E B 15	J A 26	J A 24
16	J A 17	J A 24	20	20	21	E B 16	18	28	30	G 23	G 24	G 23	G 28	G 25	G 25	G 22	G	J A 20	J A 20	20	J A 27	J A 22	E B 15	E B 16
17	J A 23	21	J A 30	J A 26	20	22	23	J G 20	32	G 22	G 27	G 26	G 24	G 28	G 21	30	24	J A 18	J A 22	J A 24	J A 32	J A 26	22	E B 15
18	19	J A 27	E B 15	E B 15	E B 14	E B 15	18	32	31	G 25	G 25	G 27	G 23	G 23	G 24	33	J A 30	J A 28	J A 24	J A 21	22	E B 15	E B 16	E B 15
19	E B 15	18	18	E B 14	E B 15	E B 14	E B 14	26	G 24	36	J A 45	G 30	G 28	J A 34	J A 47	34	J A 50	J A 28	J A 31	J A 27	J A 31	E B 15	E B 14	20
20	19	19	20	E B 14	J A 18	E B 14	J A 21	28	32	35	J A 44	J A 38	J A 43	G 28	34	30	J A 38	J A 99	J A 27	J A 26	J A 31	J A 42	J A 66	J A 38
21	J A 40	J A 22	J A 21	20	J A 23	J A 20	20	31	J A 50	J A 35	J A 51	J A 60	J A 78	C	J A 56	J A 45	J A 43	J A 29	E B 15	J A 44	J A 49	J A 44	J A 32	J A 47
22	19	J A 24	21	J A 27	J A 18	18	20	28	J A 38	J A 39	J A 55	J A 44	36	36	37	J A 44	30	J A 29	J A 29	J A 41	J A 39	J A 24	20	19
23	J A 24	J A 20	E B 14	18	21	19	J A 20	J A 28	28	34	G 27	G 30	J A 37	G 26	33	34	30	J A 24	J A 19	J A 42	J A 26	J A 29	J A 28	J A 22
24	22	J A 24	J A 26	J A 22	J A 34	22	20	28	J A 33	32	33	J A 75	J A 93	J A 54	J A 46	J A 42	45	J A 22	J A 58	J A 84	J A 76	J A 80	J A 43	J A 24
25	E B 16	E B 15	E B 15	E B 15	E B 15	18	21	G 19	30	J A 36	34	G 24	39	G 22	34	J A 38	J A 25	J A 20	20	J A 20	E B 15	E B 15	E B 15	J A 24
26	E B 16	E B 16	E B 15	19	20	E B 15	E B 15	22	31	37	37	35	39	35	36	J A 39	J A 30	J A 38	J A 28	J A 44	J A 42	J A 32	J A 38	J A 21
27	J A 20	20	19	E B 15	E B 15	E B 15	E B 15	24	32	36	J A 48	37	37	G 28	33	G 26	G	J A 23	J A 52	J A 19	J A 22	20	J A 18	J A 24
28	22	20	J A 22	J A 32	J A 29	J A 30	E B 18	24	32	40	37	J A 39	G 28	J A 46	J A 42	J A 50	J A 38	J A 31	J A 32	J A 75	J A 83	J A 37	J A 26	J A 29
29	J A 22	J A 29	J A 28	20	J A 20	E B 15	E B 14	27	34	38	40	J A 66	J A 61	J A 56	J A 40	28	27	18	J A 24	J A 25	J A 31	19	J A 20	J A 16
30	19	J A 26	J A 58	J A 28	J A 22	J A 22	E B 15	25	30	35	39	J A 53	J A 52	G 24	J A 40	36	22	J A 27	J A 23	J A 64	J A 46	J A 60	C	J A 23
31	J A 32	J A 20	20	18	E B 16	E B 15	E B 15	24	J A 39	J A 39	J A 42	36	35	J A 40	G 23	G 22	22	E B 15	J A 23	22	19	E B 15	E B 16	E B 15
	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	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	30	31
MED	19	20	20	18	19	E B 15	20	28	32	36	37	35	36	34	33	31	27	J A 24	J A 23	J A 24	J A 24	J A 22	J A 22	J A 21
U Q	J A 24	J A 22	J A 23	J A 20	J A 21	J A 20	22	29	J A 37	J A 39	J A 43	J A 40	J A 39	J A 36	J A 37	J A 36	J A 31	J A 29	J A 29	J A 35	J A 34	J A 32	J A 30	J A 24
L Q	E B 17	E B 18	E B 15	E B 15	E B 15	E B 15	E B 16	25	31	G 34	G 34	G 27	G 27	G 26	G 25	G 26	G	20	20	20	E B 20	E B 16	E B 16	E B 18

OCT.2008 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	18	26	34	36	34	33	G 24	35	G 22	G 24	20	17	28	22	29	17	E B 15	E B 15
2	E B 15	16	16	E B 15	E B 15	E B 15	20	27	30	34	G 24	G 25	G 26	G 24	G 22	G 19	25	20	E B 15	16	E B 15	E B 16	E B 15	E B 15
3	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	21	30	36	35	34	G 22	36	34	32	G 22	25	18	E B 16	E B 15	E B 14	E B 16	E B 16	E B 14
4	E B 15	E B 16	E B 15	E B 14	E B 15	E B 14	19	25	31	G 26	35	G 30	G 25	G 23	G 25	30	25	18	16	E B 15	E B 15	E B 16	19	16
5	E B 16	E B 15	E B 15	E B 14	E B 15	E B 14	19	27	34	G 18	34	34	33	32	32	G 25	G 22	22	16	18	18	E B 15	E B 15	E B 15
6	E B 14	E B 15	E B 15	E B 14	E B 14	E B 15	18	26	30	32	36	36	35	33	32	G 24	31	28	16	18	20	17	16	E B 15
7	E B 15	E B 15	E B 15	E B 14	20	E B 16	17	G 17	30	32	34	34	33	33	33	30	26	18	E B 15	E B 15	19	18	16	16
8	E B 16	E B 15	E B 15	E B 15	E B 16	E B 15	19	27	31	36	38	46	34	34	33	30	27	E B 14	30	18	16	19	18	E B 15
9	E B 15	E B 15	E B 14	E B 16	E B 15	E B 15	22	A A 84	48	50	35	33	32	30	G 25	36	23	18	E B 15	E B 15	E B 15	E B 16	17	E B 15
10	E B 16	E B 15	E B 16	E B 16	E B 15	E B 15	17	G 22	29	32	33	32	34	24	34	30	28	22	E B 15	E B 15	E B 15	18	19	16
11	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	18	25	38	37	40	33	G 22	G 26	32	29	G 21	19	22	18	E B 15	E B 15	E B 15	E B 16
12	E B 15	E B 15	18	E B 15	E B 16	E B 15	16	24	31	36	43	46	36	35	29	30	G 20	24	16	17	16	23	19	22
13	E B 15	19	18	16	16	E B 15	18	26	29	32	30	G 24	G 25	34	G 22	G 20	G 20	19	E B 16	18	16	E B 16	17	16
14	E B 16	E B 15	20	E B 14	E B 14	E B 13	E B 16	23	28	G 25	G 23	G 25	G 25	34	32	28	27	18	19	E B 15	19	17	E B 15	E B 16
15	E B 15	15	17	E B 15	E B 15	E B 15	E B 15	26	32	39	38	33	G 26	G 23	G 26	27	G 17	18	16	17	E B 15	E B 15	E B 15	E B 15
16	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16	17	26	29	G 21	G 22	G 23	G 25	G 24	G 24	G 22	G	E B 15	E B 15	E B 15	16	E B 15	E B 15	E B 16
17	16	E B 16	18	16	E B 15	E B 15	21	G 17	30	G 21	G 25	G 24	G 22	G 27	G 20	27	23	16	18	17	17	17	E B 15	E B 15
18	E B 16	16	E B 15	E B 15	E B 14	E B 15	17	27	30	G 25	G 24	G 27	G 22	G 23	G 24	27	27	20	19	18	15	E B 15	E B 16	E B 15
19	E B 15	E B 15	E B 15	E B 14	E B 15	E B 14	E B 14	24	G 24	34	39	G 30	G 28	31	43	30	32	22	17	22	18	E B 15	E B 14	E B 16
20	E B 14	E B 15	18	E B 14	E B 14	E B 14	17	25	30	31	34	36	38	G 27	32	28	30	28	E B 15	21	18	16	E B 15	A A 38
21	E B 14	E B 16	E B 15	E B 14	20	16	18	28	44	32	36	40	38	C	33	36	33	25	E B 15	A A 44	23	20	18	E B 15
22	16	16	E B 15	E B 15	E B 16	E B 15	19	26	33	36	39	41	34	34	34	39	26	20	24	20	20	19	E B 15	E B 15
23	18	E B 15	E B 14	E B 15	E B 15	E B 15	E B 16	23	28	33	G 26	G 29	33	G 25	32	32	28	E B 15	18	25	18	17	17	17
24	E B 15	17	21	E B 15	25	16	E B 15	26	30	30	33	44	46	43	39	35	41	E B 15	A A 58	A A 84	A A 76	24	A A 43	16
25	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	15	G 19	29	30	32	G 23	34	G 21	31	30	20	17	E B 15	E B 15	E B 15	E B 15	E B 15	17
26	E B 16	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	20	30	36	35	34	38	34	35	30	21	31	19	20	21	E B 15	E B 15	E B 16
27	16	E B 16	E B 16	E B 15	E B 15	E B 15	E B 15	23	30	32	41	34	34	G 28	31	G 22	G	16	A A 52	E B 16	E B 16	E B 15	E B 15	18
28	E B 16	E B 15	E B 16	17	21	17	E B 18	23	30	37	32	34	G 27	40	37	45	22	24	E B 14	A A 75	A A 83	19	17	17
29	E B 14	24	18	E B 15	16	E B 15	E B 14	23	30	34	39	43	44	37	32	27	24	17	18	E B 15	E B 16	E B 15	E B 15	E B 15
30	E B 16	E B 15	16	19	19	18	E B 15	23	29	32	36	41	33	G 23	33	32	20	20	16	22	21	A A 60	C	E B 16
31	21	E B 16	E B 15	E B 14	E B 16	E B 15	E B 15	G 20	34	34	36	36	34	G 27	G 22	G 19	21	E B 15	18	16	E B 16	E B 15	E B 16	E B 15
	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	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	30	31
MED	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	17	25	30	32	34	33	33	30	32	29	24	18	16	18	16	E B 16	E B 16	E B 16
U Q	16	16	17	15	16	15	19	26	33	36	38	36	35	34	33	30	27	22	19	21	20	18	17	16
L Q	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	E B 15	G 23	29	G 30	G 32	G 27	G 25	G 24	G 25	G 24	21	E B 17	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15

OCT.2008 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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	15	15	15	15	15	15	15	14	14	14	15	16	13	18	13	14	14	14	15	15	15	15	15	15
2	15	15	16	15	15	15	15	14	14	15	15	12	15	15	14	14	12	15	15	14	15	16	15	15
3	15	15	16	15	15	15	14	15	13	13	15	15	14	15	14	14	14	14	16	15	14	16	16	14
4	15	16	15	14	15	14	15	14	14	13	15	14	14	14	16	12	15	14	15	15	15	16	15	14
5	16	15	15	14	15	14	16	14	15	13	15	17	17	16	15	14	14	14	14	14	14	15	15	15
6	14	15	15	14	14	15	14	14	13	13	14	13	14	16	13	12	14	15	14	15	15	15	15	15
7	15	15	15	14	14	16	15	13	15	12	12	15	16	16	15	13	14	15	15	15	15	15	14	16
8	16	15	15	15	16	15	14	14	14	14	15	15	16	17	15	15	15	14	14	15	14	15	15	15
9	15	15	14	16	15	15	14	13	13	14	14	14	15	16	17	13	14	14	15	15	15	16	14	15
10	16	15	16	16	15	15	14	14	14	13	17	15	14	14	16	15	14	15	15	15	15	15	14	15
11	16	15	15	15	14	14	16	14	15	13	14	14	16	15	14	15	15	14	15	15	15	15	15	16
12	15	15	15	15	16	15	13	13	15	14	14	15	16	16	13	14	14	13	14	14	15	14	14	15
13	15	14	16	14	14	15	16	14	14	15	16	14	14	14	14	14	12	15	16	14	15	16	15	14
14	16	15	15	14	14	13	16	14	14	14	15	17	16	20	16	14	14	14	14	15	12	15	15	16
15	15	15	15	15	15	15	15	14	13	14	14	13	13	16	14	13	13	15	15	14	15	15	15	15
16	16	15	15	15	15	16	14	14	15	15	13	15	17	16	14	15	14	15	15	15	15	15	15	16
17	15	16	15	14	15	15	15	14	15	15	15	18	16	16	15	13	14	14	15	14	14	15	15	15
18	16	15	15	15	14	15	14	14	15	14	13	13	14	14	15	13	14	14	15	14	15	15	16	15
19	15	15	15	14	15	14	14	14	13	15	16	14	16	14	14	15	14	13	14	15	14	15	14	16
20	14	15	15	14	14	14	14	15	15	14	14	15	15	15	14	14	14	15	15	15	14	15	15	16
21	14	16	15	14	13	15	14	14	14	14	13	14	13	C	14	14	15	15	15	14	15	15	15	15
22	14	15	15	15	16	15	15	15	15	16	14	13	15	14	16	15	13	15	14	15	15	14	15	15
23	15	15	14	15	15	15	15	16	14	13	13	14	13	11	13	13	13	15	14	14	15	14	15	14
24	15	15	15	15	15	16	15	13	13	14	14	16	13	15	13	14	14	15	15	15	14	15	15	14
25	16	15	15	15	15	15	15	14	14	13	14	12	16	15	15	15	14	16	15	15	15	15	15	16
26	16	16	15	15	15	15	15	14	15	14	15	16	14	15	14	15	13	14	15	15	15	15	15	16
27	16	16	16	15	15	15	15	14	15	15	17	16	18	19	15	17	14	14	14	16	16	15	15	15
28	16	15	16	15	15	14	18	14	14	13	14	13	13	12	16	14	15	14	14	14	15	15	15	15
29	14	14	14	15	14	15	14	14	12	14	14	14	16	15	14	14	14	14	15	15	15	16	15	15
30	16	15	16	15	15	14	15	15	15	14	12	14	15	14	15	14	15	15	15	16	14	15	C	16
31	16	16	15	14	16	15	15	15	13	16	13	13	14	16	14	15	15	15	15	15	16	15	16	15
	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	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	31	31	30	31
MED	15	15	15	15	15	15	15	14	14	14	14	14	15	15	14	14	14	14	15	15	15	15	15	15
U Q	16	15	15	15	15	15	15	14	15	15	15	15	16	16	15	15	14	15	15	15	15	15	15	16
L Q	15	15	15	14	14	14	14	14	13	13	14	13	14	14	14	13	14	14	14	14	14	15	15	15

OCT.2008 fmin (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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	340	338	358	F	332	326	372	380	400	315	343	374	381	369	330	339	358	372	351	315	313	328	309	318
2	310	327	330	338	341	338	402	392	366	371	362	387	345	342	377	357	353	354	354	367	310	300	309	312
3	315	346	351	351	318	328	344	350	392	369	341	370	369	352	362	360	359	353	351	342	F	310	F	325
4	364	362	326	308	319	319	354	359	368	376	358	364	379	342	326	343	347	370	397	369	303	319	306	F
5	311	333	368	372	361	297	398	375	366	383	350	365	347	367	351	371	369	364	361	389	316	F	F	F
6	313	326	350	349	320	333	386	400	380	373	339	366	363	336	339	356	355	390	376	355	297	310	337	319
7	327	324	337	329	367	337	379	385	375	387	364	374	326	332	313	369	371	389	366	363	323	322	329	339
8	330	325	326	318	323	374	421	442	384	374	376	369	348	350	325	368	371	390	369	395	309	330	347	340
9	345	345	342	340	361	330	375	A	379	371	415	352	378	362	338	361	352	361	388	365	331	338	327	326
10	321	360	341	331	337	348	397	378	385	405	399	389	359	376	314	365	370	377	395	329	362	337	321	F
11	342	F	F	F	F	326	388	386	386	385	362	352	334	358	359	369	362	372	364	305	298	F	308	328
12	296	330	319	318	298	287	305	325	362	397	354	336	351	381	361	336	369	370	378	367	372	287	297	F
13	312	313	300	312	315	322	359	364	355	349	344	364	368	353	357	336	357	374	362	328	332	339	322	315
14	319	325	324	324	328	357	374	382	398	377	385	346	351	371	354	374	374	381	345	333	333	F	F	337
15	287	306	318	338	344	365	401	387	380	355	339	366	342	354	365	388	390	366	333	331	304	327	F	F
16	F	F	F	F	F	F	320	341	368	370	352	364	357	369	347	370	365	345	370	372	308	314	306	335
17	332	337	322	329	336	351	380	378	384	368	357	358	350	321	366	365	395	363	384	331	320	313	322	323
18	350	347	329	336	364	325	366	393	381	382	338	355	374	362	386	359	383	385	383	315	338	333	292	328
19	F	334	326	347	350	327	373	372	362	383	388	340	366	361	375	381	372	371	380	316	348	336	313	322
20	326	330	327	361	334	322	382	381	389	372	366	338	328	366	370	369	371	383	348	337	319	327	324	A
21	322	309	307	340	343	320	389	400	387	383	366	364	352	C	381	368	381	394	380	A	316	F	F	F
22	F	F	324	F	357	328	410	398	375	387	356	377	352	361	376	362	391	379	364	348	331	332	344	331
23	319	328	315	338	317	F	391	405	377	409	358	359	348	348	368	388	363	380	349	347	317	325	350	320
24	F	F	F	341	355	336	376	398	401	374	387	383	365	354	362	392	398	384	A	A	A	323	A	355
25	336	328	335	360	359	357	346	397	396	398	393	365	367	358	366	377	378	375	372	302	317	311	312	330
26	340	330	F	356	385	391	376	376	401	367	388	391	348	347	370	365	362	406	381	323	330	320	315	303
27	309	331	332	342	391	335	386	398	396	385	386	374	347	371	357	383	387	375	A	338	341	332	310	313
28	322	317	330	340	372	372	381	399	380	384	369	391	377	357	346	368	393	390	335	A	A	320	F	F
29	F	325	327	324	F	303	377	398	390	398	366	348	369	335	362	388	379	386	369	362	315	343	313	320
30	F	F	F	F	F	357	387	387	369	367	354	333	349	354	375	390	388	373	359	340	338	A	C	310
31	F	330	307	317	335	356	371	406	379	341	372	362	405	370	368	378	394	372	361	350	357	357	351	F
	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	24	26	26	26	27	29	31	30	31	31	31	31	31	30	31	31	31	31	29	28	28	26	23	22
MED	322	330	327	338	341	333	379	386	380	376	362	364	352	358	362	368	371	375	366	341	320	326	315	324
U Q	338	337	337	347	361	356	389	398	390	385	385	374	369	367	370	378	387	385	380	364	336	333	329	331
L Q	312	325	322	324	323	324	371	376	369	369	352	352	348	348	346	360	362	370	352	328	312	314	309	318

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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	U L 407	U L 396	U L 425	U L 428	L	U L 364	L	L							
2										U L 401	U L 393	400	408	385	L	L	L							
3								A	A	U L 410	U L 391	U L 372	U L 400	404	L	L								
4									A	L	U L 404	U L 414	L	L	U L 365	L								
5									A	U L 403	U L 398	401	U L 401	U L 393	U L 404	L								
6									L	L	U L 397	U L 408	U L 413	U L 406	U L 375	L	A							
7									L	L	404	440	U L 408	U L 392	L	L	L							
8									L	L	A	A	L	L	U L 358	U L 392								
9								A		A	L	425	U L 452	U L 417	L	A								
10									A		U L 425	U L 432	U L 408	U L 403	U L 378	A								
11										A	A	454	U L 425	U L 407	L	L								
12								U L 354	A	A	A	A	L	A	L									
13									L	387	401	416	U L 407	U L 390	L									
14								L	U L 402	L	U L 412	U L 410	U L 404	L										
15									L	A	A	415	391	U L 387	L	L								
16								L	U L 380	U L 369	U L 387	U L 427	U L 400	U L 408										
17									A	L	L	U L 403	L	L	L	L								
18									L	L	U L 427	U L 404	U L 425	L	L									
19										U L 389	A	U L 429	U L 418	U L 390	A	L								
20									L	L	L	L	U L 408	U L 383	L	L								
21										L	U L 457	A	A	C	L	A	A							
22										L	A	A	L	U L 402	A	A								
23										L	L	L	L	L	L									
24										L	U L 405	A	A	A	A	A	A							
25										U L 398	U L 398	423	A	L	U L 368	A	L							
26									A	A	L	L	L	U L 388	A									
27										L	A	L	U L 398	U L 411	L										
28										A	U L 409	L	U L 435	A	A	A								
29									L	A	A	A	A	A	A	L								
30											U L 386	L	U L 375											
31										U L 394	A			L										
	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								1	2	9	17	18	19	16	7	1								
MED								U L 354	U L 391	U L 398	U L 401	U L 416	U L 408	U L 398	U L 368	U L 392								
U Q										U L 405	U L 410	U L 427	U L 425	U L 406	U L 378									
L Q										U L 388	U L 394	U L 404	U L 400	U L 389	U L 364									

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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									222	334	280	234	232	250	290	274	258							
2										246	264	236	282	274	230	246	266							
3								248	220	246	282	248	242	254	240	262								
4									234	238	262	262	236	284	300	282								
5									258	234	264	242	262	244	256	238								
6									236	248	266	238	252	268	276	258	244							
7									244	234	244	240	256	286	314	250	242							
8									232	252	240	238	292	270	300	246								
9								A		232	216	274	232	252	278	244								
10									222		236	248	256	242	342	242								
11										234	248	264	264	244	258	254								
12								336	236	208	256	264	250	224	250									
13									260	292	274	240	242	268	256									
14								222	220	244	234	280	274	242										
15									242	254	274	240	270	262	238	220								
16								262	234	230	248	242	254	250										
17									232	246	252	254	252	302	246	244								
18									232	236	282	256	240	250	232									
19										228	236	298	246	246	240	230								
20									230	226	250	272	284	244	244	246								
21										234	260	244	264	C	234	234	214							
22										236	242	240	250	258	236	242								
23										214	246	244	262	242	246									
24										224	230	236	254	252	256	216	210							
25										222	220	258	234	252	260	230	226							
26									204	246	228	226	284	276	230									
27										230	232	246	266	240	246									
28										230	250	220	244	254	246	234								
29									226	222	226	244	248	278	234	218								
30											256	274	256											
31										296	238			240										
	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	18	29	31	30	30	29	27	21	7							
MED								255	232	234	248	244	254	252	246	244	242							
U Q								299	236	246	264	262	264	269	276	252	258							
L Q								235	222	229	236	240	244	244	238	232	214							

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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	E B 258	E B 248	220	216	E B 246	238	210	216	A	208	194	198	182	210	192	214	218	216	220	E A 254	E A 300	E A 254	E B 278	E B 256
2	E B 262	242	230	236	212	226	198	208	214	200	218	200	196	192	A	204	H 200	222	210	200	E B 268	E B 264	E B 292	E B 282
3	E B 268	220	E B 226	216	E B 284	E B 272	230	A	A	202	208	206	H 180	188	200	194	224	222	212	214	E B 284	E B 254	E B 254	E B 264
4	214	212	224	E B 246	E B 264	E B 278	220	220	A	216	190	200	210	198	190	228	236	210	198	204	E B 272	E B 266	E A 322	E A 282
5	E B 290	236	210	206	220	E B 288	192	208	A	200	206	188	188	194	188	200	222	214	204	198	E A 266	E B 270	E B 258	E B 280
6	E B 260	E B 256	226	214	236	E B 246	204	202	188	206	212	200	194	196	196	234	A	206	190	206	E A 308	E A 278	E A 260	E B 242
7	E B 248	E B 256	E B 254	238	E A 254	228	214	200	194	204	198	186	180	190	220	E A 234	206	210	186	210	228	E A 252	E A 252	224
8	E B 238	E B 242	E B 242	E B 266	E B 230	214	186	186	200	196	A	A	194	208	206	214	216	206	210	198	E A 274	E A 276	E A 248	224
9	220	224	218	222	220	224	206	A	228	A	192	180	158	184	212	A	210	214	190	190	E B 236	E B 236	E A 248	E B 252
10	E B 240	236	214	E B 252	E B 242	E B 236	188	204	A	206	194	194	184	180	212	A	222	206	190	212	212	224	E A 294	E A 242
11	230	228	E B 236	230	220	216	208	206	222	A	A	178	168	H 166	210	208	220	214	210	E A 248	E B 276	E B 256	E B 244	E B 250
12	E B 270	234	E A 266	E B 238	E B 264	E B 304	E A 242	224	A	A	A	A	212	A	196	214	210	216	210	206	214	E A 348	E A 296	E A 296
13	E B 276	E A 302	E A 280	E A 258	E A 266	E B 272	220	204	210	206	H 184	176	H 174	206	206	208	226	212	204	228	E A 238	224	E A 244	E A 262
14	E B 252	E B 260	E B 286	E B 258	E B 252	228	206	198	184	190	184	174	178	214	214	220	216	208	208	226	222	E A 294	E B 248	E B 236
15	E B 302	E A 280	E A 288	238	224	210	198	210	214	A	A	180	208	H 172	216	196	202	204	224	232	E B 282	E B 246	E B 248	E B 232
16	224	224	E B 248	E B 236	E B 240	E B 248	240	220	212	198	212	188	H 174	180	210	220	214	206	202	198	E A 258	E B 264	E B 266	E B 250
17	E A 250	224	E A 266	E A 248	230	224	208	200	A	194	204	190	202	196	200	206	214	204	188	222	E A 256	E A 264	E B 254	E B 240
18	E B 228	226	220	228	208	E B 244	212	212	206	204	192	194	180	212	208	198	216	212	198	232	208	220	E B 300	228
19	E B 242	234	E B 230	226	206	220	206	204	216	208	A	H 182	H 178	H 172	A	202	220	206	210	E A 292	E A 244	218	E B 258	E B 264
20	E B 244	E B 232	E A 254	212	202	232	212	212	200	198	204	220	206	H 182	214	208	216	208	190	E A 232	E A 234	E A 246	E B 258	A
21	E B 256	E B 270	E B 266	E B 246	234	E A 252	208	198	226	196	188	A	A	C	E A 216	A	A	202	206	A	E A 296	E A 250	E A 240	E B 284
22	E A 246	222	E B 258	E B 268	208	224	204	204	224	206	A	A	182	198	A	A	208	186	218	212	E A 242	E A 240	220	E B 244
23	E A 284	E B 260	E B 270	E B 244	E B 250	E B 268	200	198	198	194	184	196	H 186	202	210	220	212	194	208	E A 234	E A 238	E A 248	210	220
24	E B 244	E A 240	E A 266	E B 240	E A 244	220	196	210	204	196	194	A	A	A	A	A	A	206	A	A	A	E A 290	A	216
25	E B 238	E B 254	E B 246	220	214	198	214	198	208	184	174	188	A	182	198	A	196	196	192	E B 264	E B 264	E B 272	E B 270	236
26	236	E B 244	232	222	204	186	204	H 182	A	A	198	188	226	210	A	222	214	204	194	E A 340	E A 262	E B 258	E B 260	E B 282
27	E B 284	E B 264	E B 246	E B 236	202	E B 260	204	196	210	196	A	192	182	182	224	222	H 188	200	A	226	224	222	E B 272	E A 272
28	E B 246	E B 252	E B 252	E A 240	222	208	206	194	204	A	194	194	178	A	A	A	208	198	198	A	A	E A 270	E A 266	E A 302
29	E B 246	E A 290	E A 288	E B 250	212	236	210	208	206	A	A	A	A	A	A	194	210	200	212	212	208	E B 232	E B 242	E B 248
30	E B 240	E B 278	E A 260	E A 232	E A 230	220	194	196	196	216	220	218	202	222	216	H 214	H 184	200	204	230	E A 258	A	C	E B 264
31	E A 302	E B 246	E B 272	E B 268	E B 238	204	202	204	212	214	A	232	210	200	220	218	202	208	202	230	220	214	210	E B 302
	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	31	31	31	31	31	31	31	29	23	24	22	25	27	26	24	24	28	31	29	28	29	30	29	30
MED	E B 246	E 242	E 248	E 238	U 218	218	206	204	208	201	194	192	184	195	210	212	214	206	204	215	E 256	E 254	E B 258	E B 251
U Q	E B 268	E B 260	E 266	E B 248	E B 246	E B 252	212	210	214	206	206	200	202	206	215	220	219	212	210	E A 232	E 273	E A 270	E B 271	E B 280
L Q	238	228	226	222	212	220	200	198	200	196	190	184	178	182	199	203	207	202	193	206	226	236	E 246	236

OCT.2008 h'F (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT.2008 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

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							126	114	114	A	A	118	120	116	114	118	A	B						
2							B	118	110	114	116	118	116	112	112	112	112	B						
3							B	118	118	118	116	116	A	116	116	120	112	B						
4							B	118	118	118	116	116	116	112	114	118	116	B						
5							B	114	110	114	114	114	120	116	116	124	122	B						
6							B	114	114	114	114	114	114	112	118	118	114	B						
7							B	114	110	112	114	110	112	120	122	114	116	B						
8							B	116	126	116	118	118	120	122	120	120	A	B						
9							B	A	A	A	A	A	A	A	124	A	A	B						
10							B	122	122	A	116	116	118	118	118	120	A	B						
11							B	116	122	A	A	A	116	116	116	A	118	B						
12							B	118	120	114	A	A	114	122	122	122	122	B						
13							B	114	116	A	A	118	116	120	116	118	124	B						
14							B	A	118	116	114	116	116	126	124	126	128	B						
15							B	122	A	A	A	A	112	110	114	112	118	B						
16							B	120	120	114	114	112	118	116	122	120	116	B						
17								120	120	116	116	114	118	118	116	116	112	B						
18							B	122	118	118	118	116	112	116	114	A		B						
19							B	118	112	118	A	118	120	A	A	118	120	B						
20							B	118	110	A	A	A	A	122	118	118	A	B						
21							B	120	A	A	A	A	A	C	A	A	A	B						
22							B	118	120	A	A	A	A	A	116	122	120	B						
23							B	A	118	120	116	118	A	116	114	114	122							
24							B	122	A	120	116	A	A	A	A	A	A	B						
25							B	122	A	A	A	116	114	112	110	A	A	B						
26							B	110	126	130	122	122	118	118	122	A	A	B						
27							B	118	120	118	114	116	122	126	116	120	120	B						
28							B	118	118	118	114	A	114	112	112	116	A	B						
29							B	122	114	118	110	A	A	A	114	116	114	B						
30							B	118	122	122	122	116	A	118	A	A	114	B						
31							B	114	A	A	A	A	118	116	112	120	122	B						
	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							1	28	25	20	19	20	22	25	27	23	20							
MED							126	118	118	118	116	116	116	116	116	118	118							
U Q								120	120	118	116	118	118	120	120	120	122							
L Q								115	114	114	114	115	114	114	114	116	114							

OCT.2008 h'E (KM)

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OCT.2008 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	98	98	B	B	90	B	126	122	118	106	104	124	100	142	104	106	104	100	96	92	90	94	94	96
2	94	90	88	90	B	B	152	140	120	118	100	96	94	94	94	96	148	120	92	94	B	B	B	94
3	90	90	90	B	90	B	124	122	118	116	116	106	106	108	112	102	164	134	B	B	B	B	B	B
4	B	B	B	B	B	B	136	130	156	100	122	96	100	100	102	154	154	122	86	B	B	B	98	96
5	98	96	B	B	B	B	136	138	122	94	112	116	118	118	112	110	102	96	96	96	94	B	98	98
6	96	96	B	B	B	114	146	146	154	138	120	126	116	120	120	104	124	122	114	102	90	94	106	102
7	102	92	92	B	96	94	94	90	124	118	122	120	120	150	126	124	110	106	B	96	94	90	94	92
8	92	92	B	104	B	114	134	138	122	122	120	120	122	120	118	118	104	B	96	96	96	96	92	92
9	B	B	B	B	B	106	102	98	98	94	98	100	100	102	100	100	98	98	94	B	B	88	96	98
10	100	B	B	98	98	B	102	148	144	104	112	118	128	126	154	128	104	104	B	110	116	100	100	96
11	96	98	96	94	B	B	140	136	116	108	104	104	100	102	148	104	102	122	102	100	108	B	B	102
12	B	98	106	110	116	B	94	156	128	122	104	104	108	152	138	154	106	106	96	100	98	92	92	100
13	90	88	92	90	94	98	150	142	114	102	104	102	102	146	96	106	106	92	92	86	86	B	102	104
14	B	102	92	94	B	B	B	108	138	96	94	100	104	160	138	136	118	106	104	104	96	98	98	B
15	98	98	94	94	94	B	B	148	106	104	98	96	96	108	94	130	96	94	88	88	96	B	104	100
16	96	96	96	98	94	B	166	142	130	98	100	102	100	96	98	102	G	94	96	88	100	98	B	B
17	94	94	92	92	92	96	98	100	136	100	98	100	98	108	98	118	120	116	102	102	102	102	104	B
18	94	92	B	B	B	B	140	132	144	104	102	98	96	92	94	88	84	86	86	84	88	B	B	B
19	B	96	96	B	B	B	B	148	100	112	102	102	102	98	90	120	120	126	126	116	114	B	B	108
20	98	96	96	B	94	B	152	132	118	108	104	104	104	100	130	136	112	106	106	104	98	100	104	102
21	96	98	94	94	92	92	150	136	108	106	102	92	94	C	94	94	96	94	B	102	106	104	110	106
22	106	100	96	100	104	104	134	132	118	108	104	104	108	106	136	124	118	110	102	100	102	98	100	100
23	92	92	B	94	104	106	106	108	152	118	100	98	102	94	126	116	116	110	106	100	102	98	96	94
24	94	92	92	98	112	102	94	144	104	122	124	102	100	106	106	106	102	102	98	98	100	100	98	94
25	B	B	B	B	B	116	116	104	106	104	102	100	120	92	122	102	94	92	88	120	B	B	B	98
26	B	B	B	102	98	B	B	124	158	136	132	144	150	150	126	106	104	102	100	100	98	94	92	92
27	94	100	98	B	B	B	B	140	144	120	114	116	130	114	112	108	G	104	98	96	98	98	96	94
28	100	98	98	96	96	96	B	150	142	120	124	90	90	128	128	116	110	106	106	102	100	92	92	92
29	92	94	94	92	92	B	B	136	150	124	122	106	102	106	114	110	152	122	104	106	106	86	96	96
30	96	96	98	94	94	92	B	150	160	118	140	116	104	102	98	94	124	98	98	98	100	100	C	98
31	100	102	100	102	B	B	B	148	100	102	102	142	130	100	100	100	162	B	98	104	98	B	B	B
CNT	24	26	20	19	18	13	22	31	31	31	31	31	31	30	31	31	29	29	27	28	26	20	22	25
MED	96	96	95	94	94	102	134	136	122	108	104	104	102	107	112	108	110	106	98	100	98	98	98	98
U Q	98	98	97	100	98	110	146	146	144	120	120	116	118	126	126	124	122	118	104	103	102	100	102	101
L Q	94	92	92	94	92	95	102	122	114	102	102	100	100	100	98	102	102	97	94	96	96	93	94	94

IONOSPHERIC DATA STATION Kokubunji

OCT. 2008 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 2	F 2			F 1		C 2	C 3	C 3	L 2	L 2	CL 22	L 2	HL 12	L 2	L 2	L 2	L 3	F 4	F 4	F 7	F 3	F 2	F 3
2	F 1	F 1	F 2	F 1			H 2	H 2	C 2	CL 22	L 2	L 2	L 2	L 2	L 2	L 2	HL 11	CL 21	F 2	F 2				F 1
3	F 2	F 1	F 2		F 1		C 4	C 2	C 2	CL 11	CL 11	L 2	L 2	CL 12	CL 12	L 2	H 1	H 2						
4							H 2	CL 23	HL 12	L 2	CL 11	L 2	L 2	L 2	L 2	HL 11	HL 21	C 4	F 3				F 5	F 4
5	F 3	F 1					H 2	H 3	CL 22	L 2	CL 12	CL 12	CL 22	CL 22	CL 22	L 2	L 2	L 4	F 2	F 3	F 4		F 1	F 2
6	F 2	F 1				F 1	HL 21	H 2	HL 11	HL 11	CL 22	CL 12	CL 12	CL 22	CL 11	L 2	C 2	CL 32	F 4	F 2	F 2	F 2	F 2	F 2
7	F 2	F 1	F 1		F 5	F 2	L 3	L 2	CL 22	CL 22	CL 22	CL 22	CL 22	HL 22	CL 12	CL 12	C 2	C 3		F 2	F 4	F 4	F 4	F 3
8	F 2	F 2		F 1		F 2	H 3	H 2	C 2	C 2	CL 21	CL 21	CL 11	CL 11	CL 11	CL 11	L 2		F 5	F 2	F 3	F 5	F 3	F 1
9						F 2	L 4	L 3	L 3	L 3	L 2	L 2	L 2	L 2	L 2	L 2	L 3	L 2	F 2			F 2	F 2	F 2
10	F 1			F 1	F 2		L 2	HL 22	HL 12	L 2	CL 12	CL 22	CL 22	CL 12	HL 12	CL 12	L 2	L 2		F 2	F 1	F 2	F 3	F 2
11	F 2	F 2	F 2	F 2			H 4	H 3	CL 22	L 2	L 2	L 2	L 2	L 2	HL 11	L 2	L 3	CL 12	F 3	F 3	F 1			F 1
12		F 2	F 4	F 1	F 1		L 2	H 2	CL 12	CL 22	L 3	L 2	CL 11	HL 12	HL 12	HL 12	L 2	L 3	F 3	F 2	F 2	F 2	F 2	F 2
13	F 3	F 3	F 4	F 3	F 2	F 2	H 1	HL 22	CL 22	L 2	L 2	L 2	L 2	HL 12	L 2	L 2	L 2	L 2	F 2	F 2	F 1		F 1	F 2
14		F 2	F 3	F 2				L 3	HL 22	L 2	L 2	L 2	L 2	HL 22	HL 22	CL 22	CL 32	L 4	F 5	F 2	F 4	F 3	F 1	
15	F 1	F 2	F 3	F 2	F 1			H 2	L 2	L 2	L 2	L 2	L 2	L 2	L 2	CL 12	L 2	L 2	F 2	F 2	F 2		F 1	F 2
16	F 2	F 2	F 1	F 1	F 2		H 1	H 2	CL 12	L 2	L 2	L 2	L 2	L 2	L 2	L 2		L 1	F 2	F 2	F 2	FF 21		
17	F 3	F 2	F 3	F 5	F 2	F 3	F 2	L 2	HL 12	L 2	L 2	L 2	L 2	L 2	L 2	CL 12	C 2	C 1	F 3	F 3	F 3	F 4	F 2	
18	F 1	F 3					H 2	C 2	HL 11	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 4	L 5	F 4	F 3	F 2			
19		F 1	F 1					H 1	L 2	CL 12	L 3	L 2	L 2	L 3	L 3	CL 12	CL 22	C 2	F 3	F 5	F 3			F 2
20	F 2	F 2	F 2		F 1		H 2	H 2	C 1	L 1	L 2	L 2	L 2	L 2	HL 12	HL 12	CL 22	L 3	F 3	F 4	F 3	F 3	F 3	F 5
21	F 5	F 2	F 2	F 2	F 4	F 3	HL 22	H 3	L 2	L 2	L 2	L 3	L 2		L 2	L 3	L 2	L 3		F 5	F 5	F 3	F 3	F 2
22	F 2	F 3	F 2	F 2	F 3	F 1	CL 22	HL 22	CL 22	L 2	L 2	L 2	L 2	L 2	HL 12	CL 22	C 2	C 5	F 5	F 4	F 3	F 3	F 2	F 2
23	F 4	F 3		F 2	F 2	F 1	L 1	L 3	HL 13	CL 12	L 2	L 2	L 2	L 2	CL 12	CL 12	C 2	C 3	F 3	F 6	F 4	F 2	F 3	F 2
24	F 2	F 3	F 3	F 2	F 5	F 3	L 2	H 2	L 2	CL 12	CL 12	L 2	L 2	L 2	L 2	L 4	L 3	L 3	F 7	F 5	F 5	F 5	F 5	F 3
25						F 1	C 2	L 3	L 2	L 2	L 2	L 2	CL 22	L 3	CL 22	L 2	L 3	L 2	F 2	F 1				F 3
26				F 1	F 1			C 2	HL 12	CL 22	CL 22	HL 22	HL 12	HL 12	CL 22	L 2	L 3	L 7	F 4	F 3	F 3	F 3	F 3	F 2
27	F 2	F 1	F 1					H 2	HL 22	CL 22	CL 12	CL 22	CL 22	L 2	C 2	L 2		L 3	F 3	F 3	F 2	F 2	F 2	F 3
28	F 2	F 1	F 2	F 4	F 3	F 4		H 2	HL 12	CL 22	CL 12	L 3	L 2	CL 22	CL 22	CL 32	L 2	L 3	F 2	F 4	F 5	F 4	F 7	F 5
29	F 2	F 4	F 2	F 1	F 2			H 2	HC 22	CL 22	CL 22	L 2	L 3	L 2	CL 22	CL 22	HL 22	CL 22	F 2	F 2	F 3	F 2	F 3	F 2
30	F 1	F 3	F 3	F 3	F 3	F 4		H 2	HL 22	CL 12	HL 22	CL 22	L 2	L 2	L 3	L 2	CL 22	L 3	F 2	F 2	F 3	F 3		F 2
31	F 3	F 2	F 2	F 1				H 2	L 3	L 2	L 2	HL 12	CL 12	L 2	L 2	L 2	H 2		F 3	F 2	F 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																								

f-PLOTS OF IONOSPHERIC DATA

KEY OF f-PLOT	
|	SPREAD
⬡	foF2, foF1, foE
×	fxF2
✳	DOUBTFUL foF2, foF1, foE
⧖	fbEs
└	ESTIMATED foF1
⍏, Y	fmin
∧	GREATER THAN
∨	LESS THAN

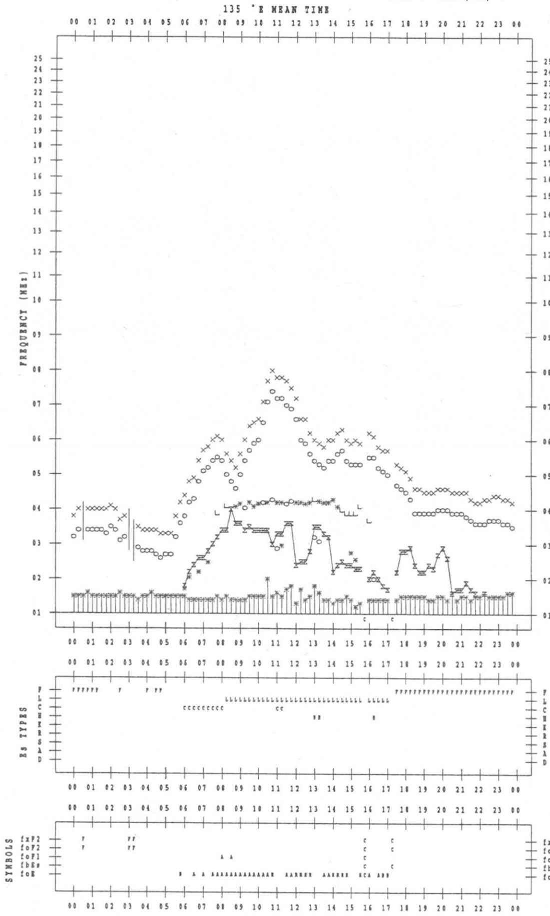
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2008/10/ 1

135 °E MEAN TIME



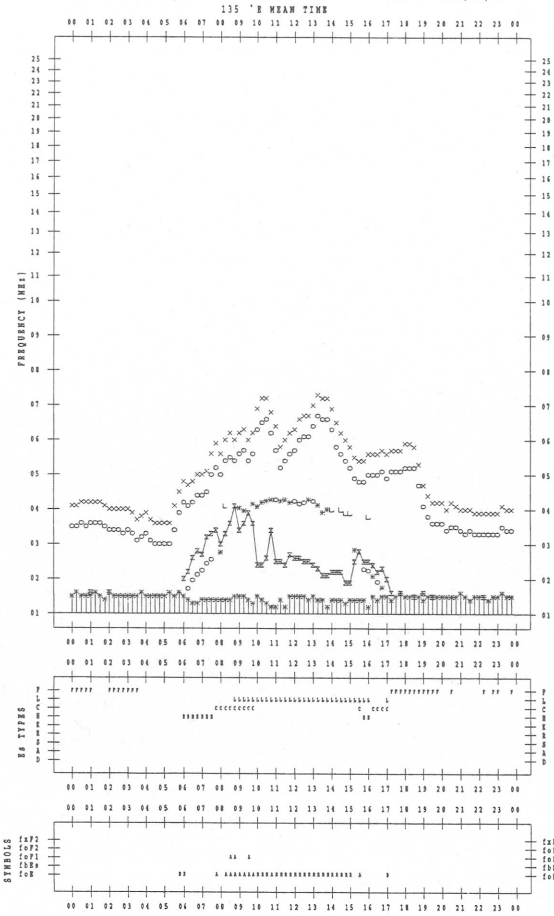
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2008/10/ 2

135 °E MEAN TIME



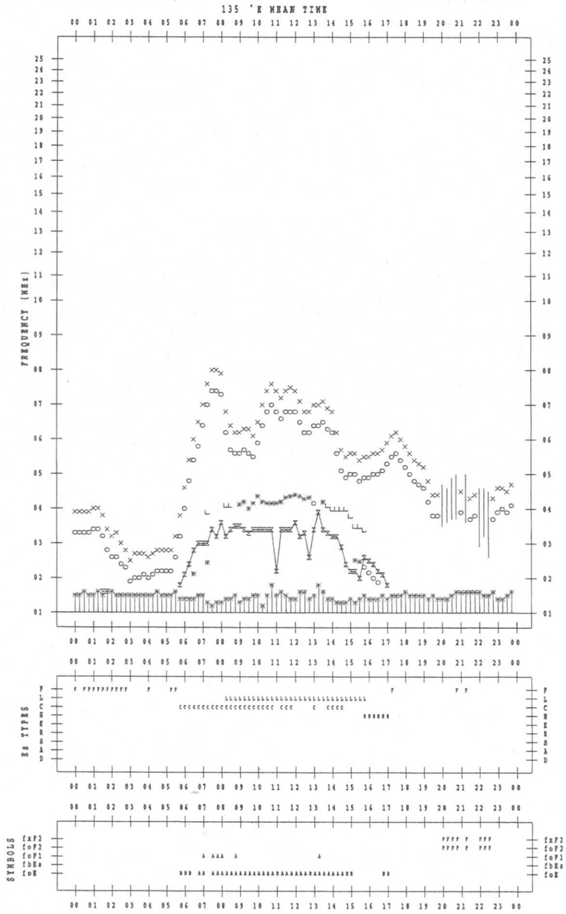
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2008/10/ 3

135 °E MEAN TIME



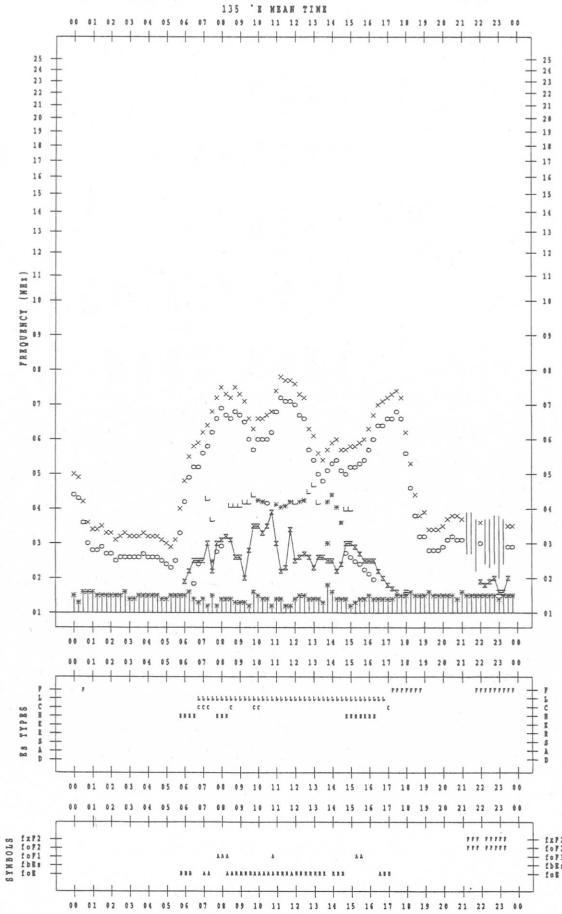
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2008/10/ 4

135 °E MEAN TIME



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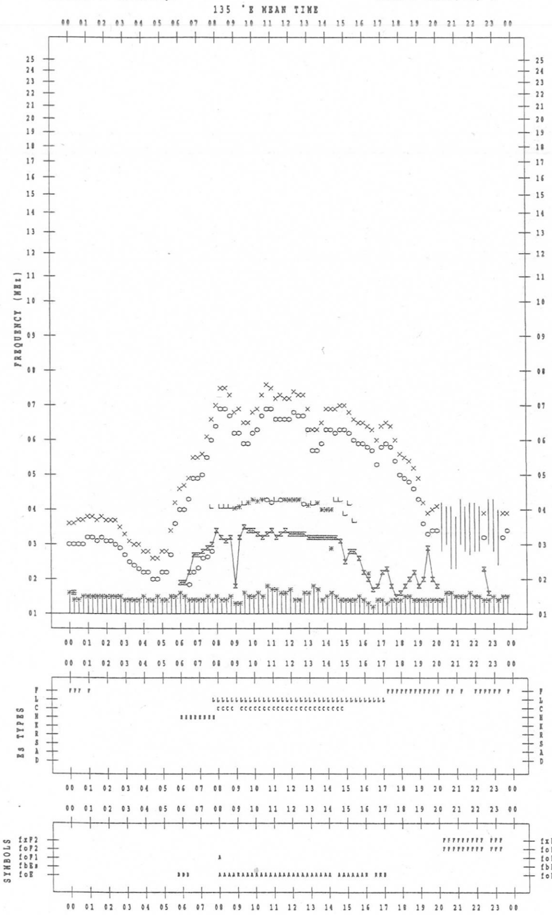
SCALER : I.NISHIMUTA

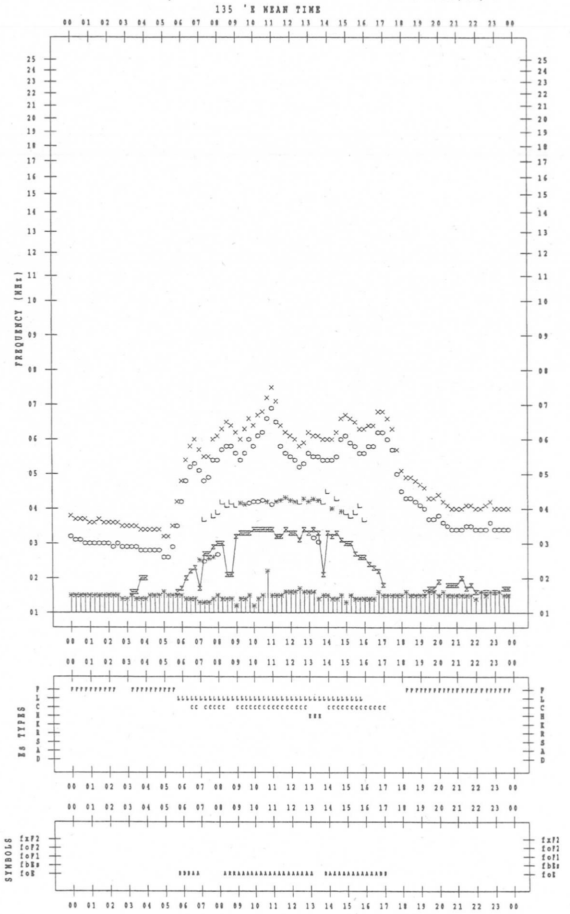
STATION : Kokubunji DATE : 2008/10/ 5



f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/ 7



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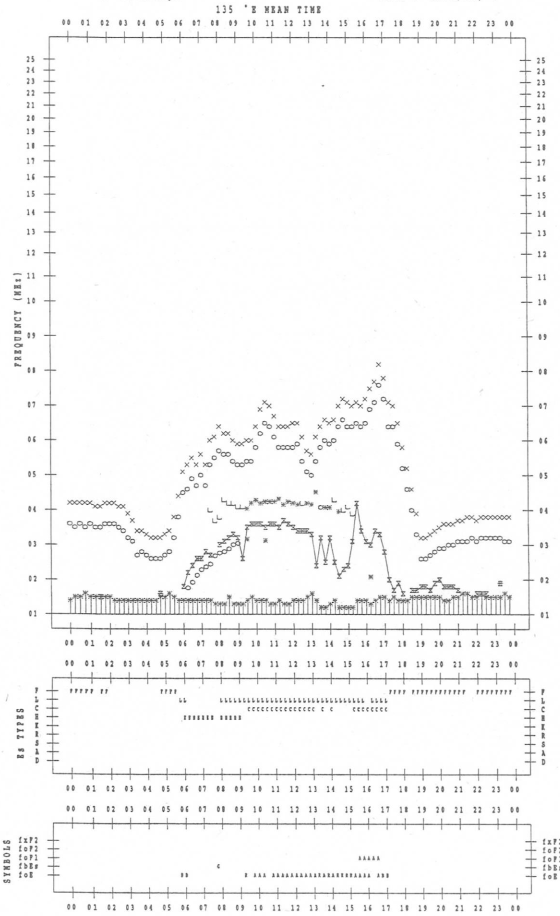
SCALER : I.NISHIMUTA

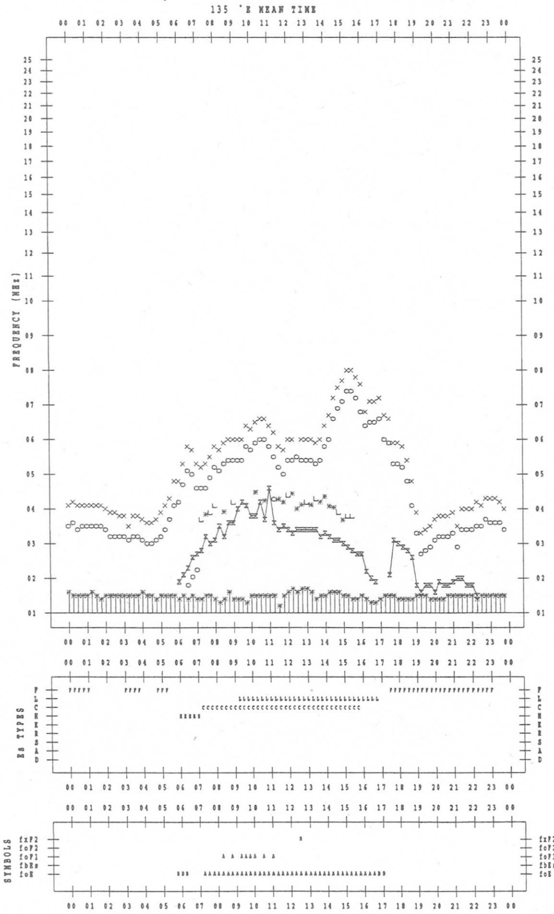
STATION : Kokubunji DATE : 2008/10/ 6

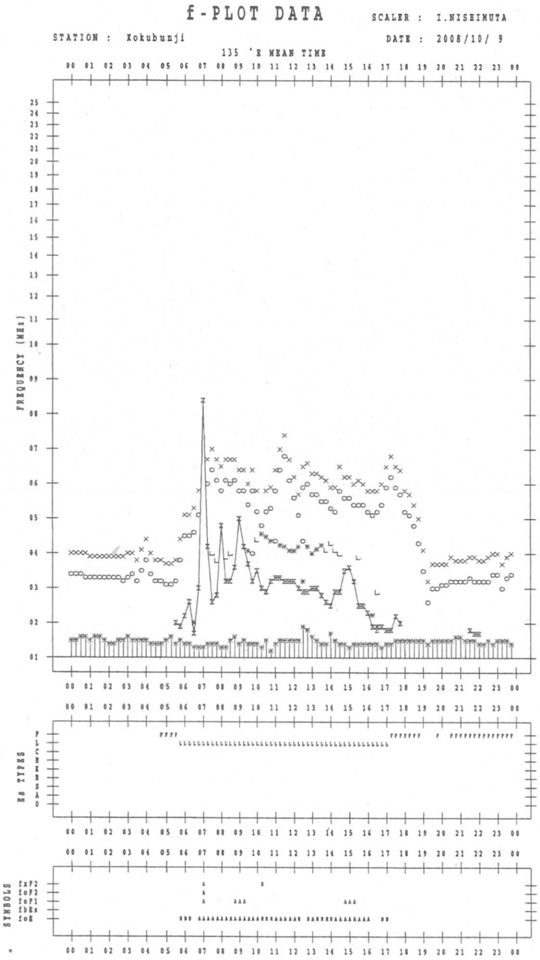


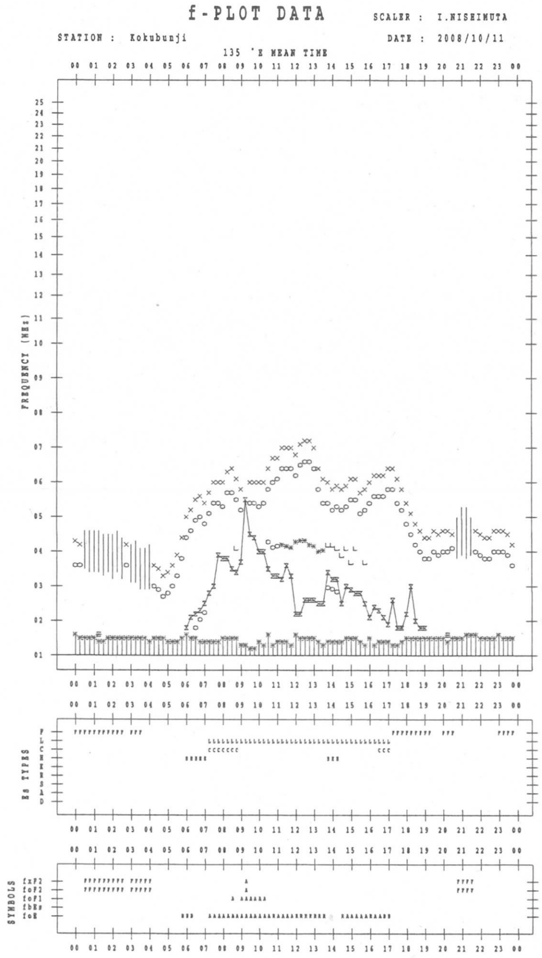
f-PLOT DATA

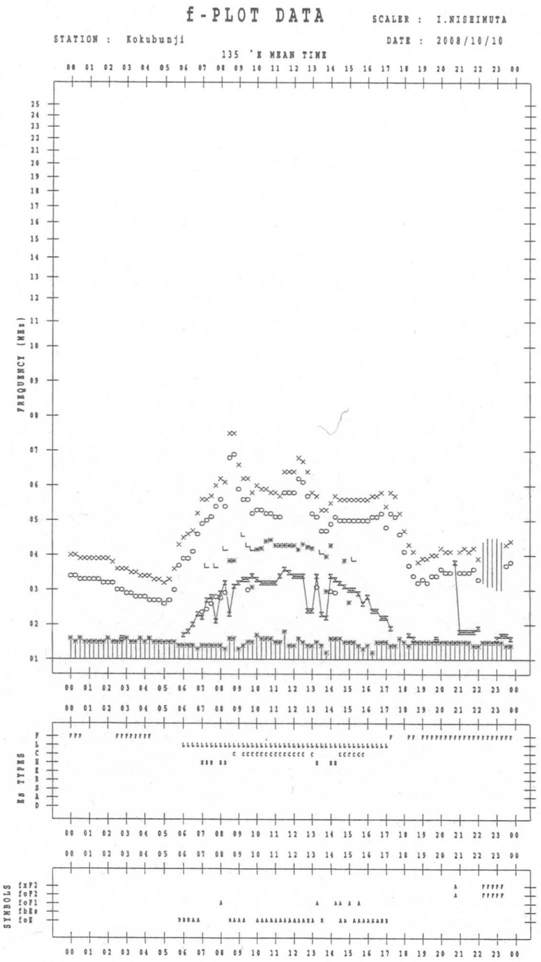
SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/ 8




f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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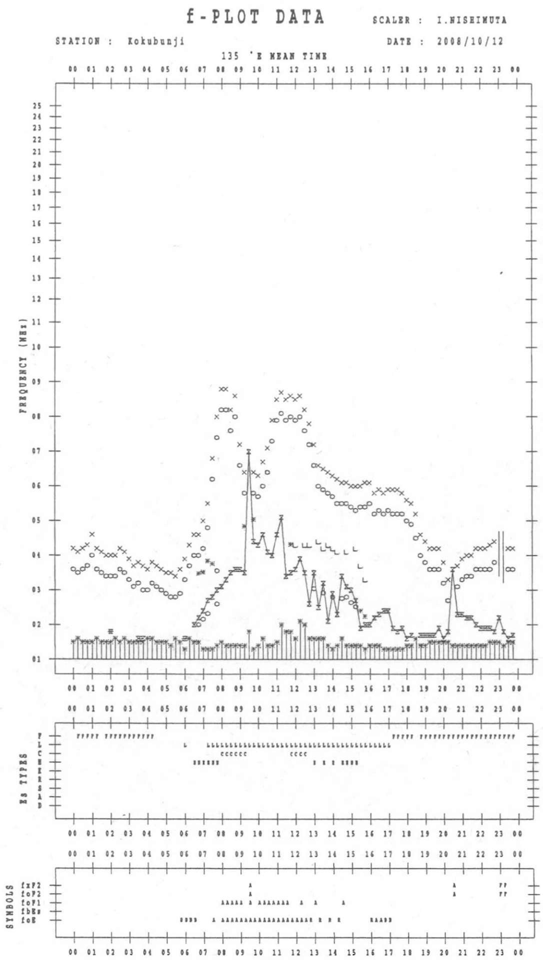
STATION : Kokubunji
DATE : 2008/10/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

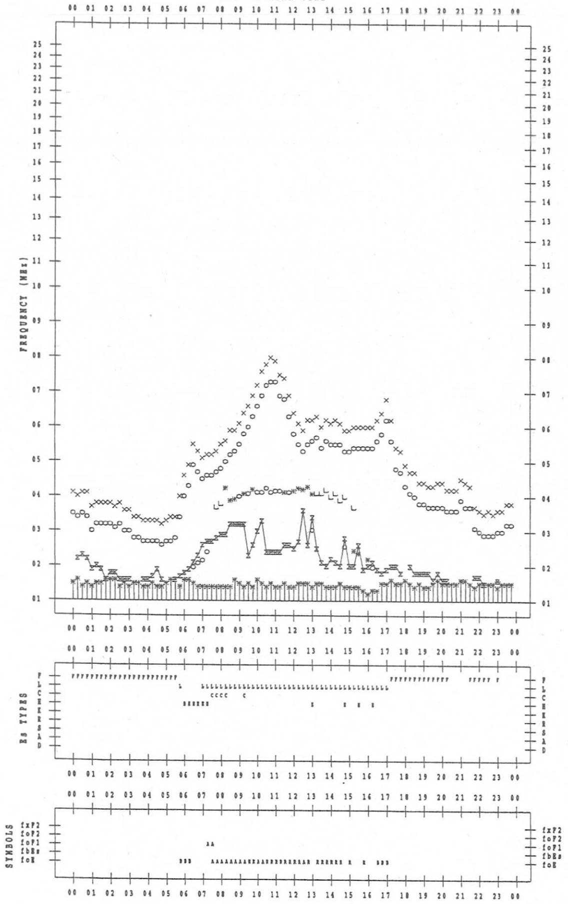

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/13

135 °E MEAN TIME

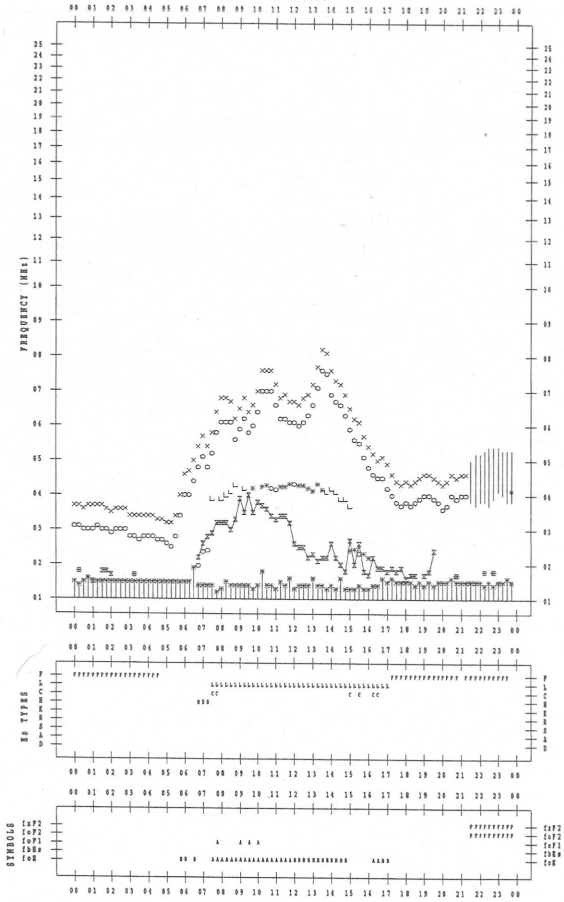


f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/15

135 °E MEAN TIME

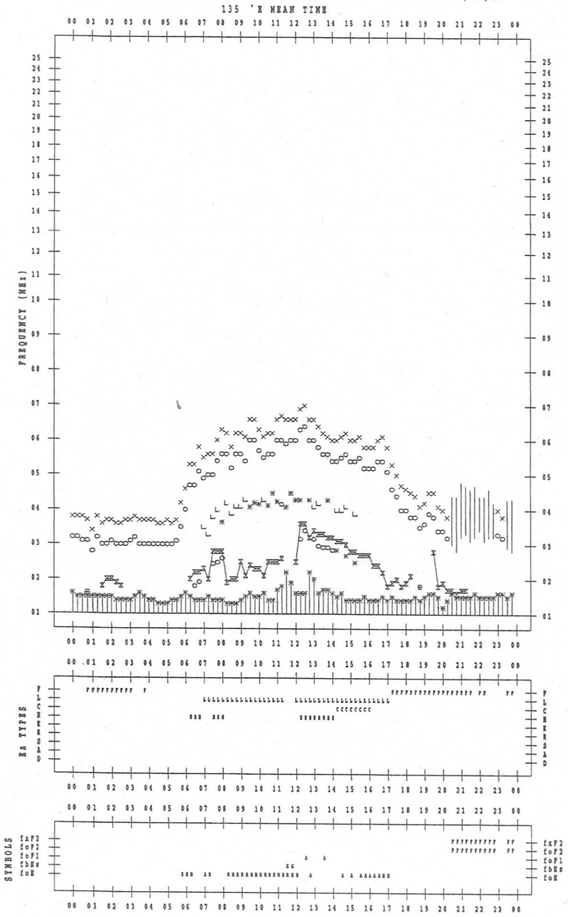


f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/14

135 °E MEAN TIME

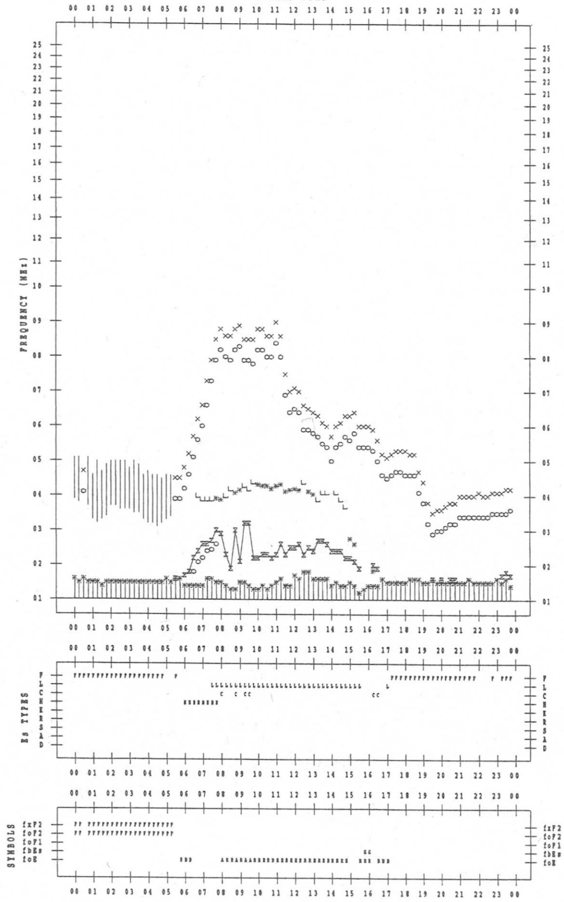


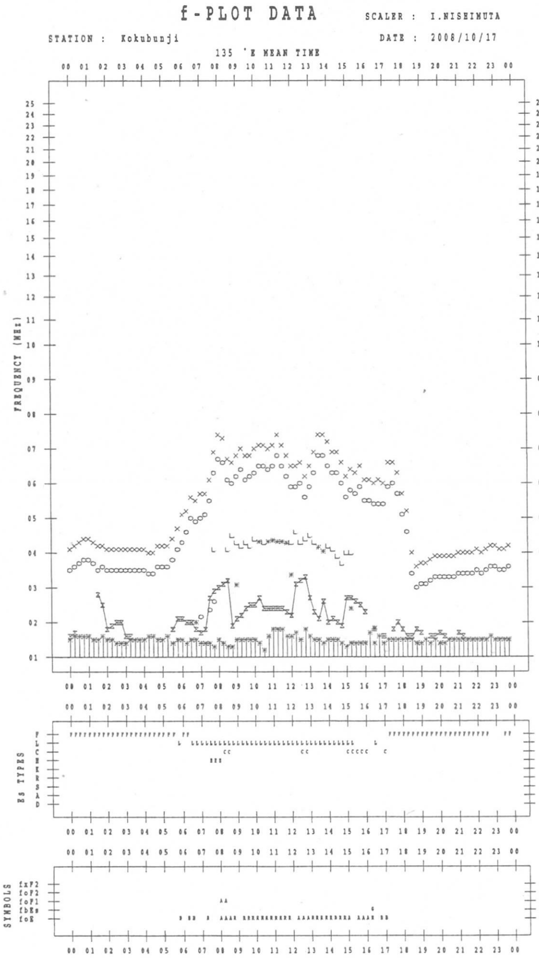
f-PLOT DATA

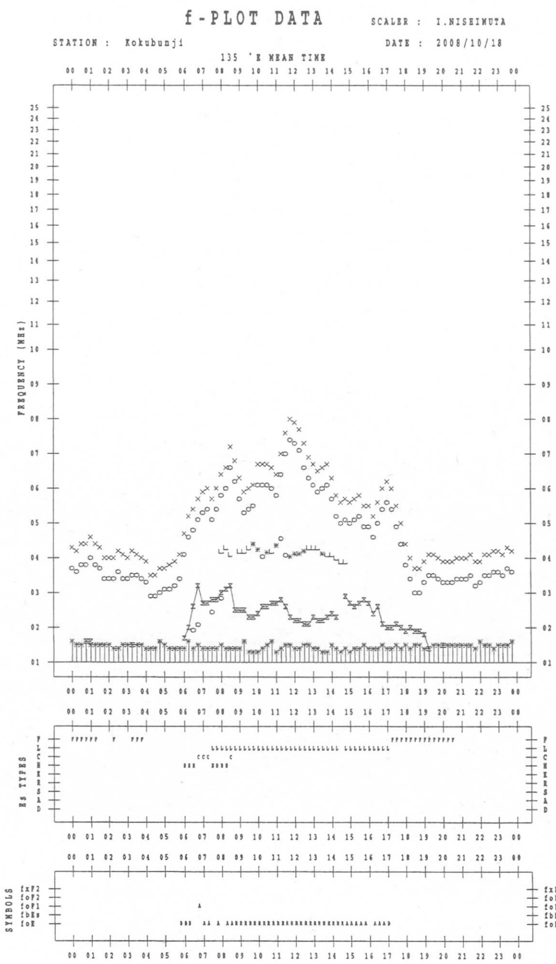
SCALER : I.NISHIMUTA

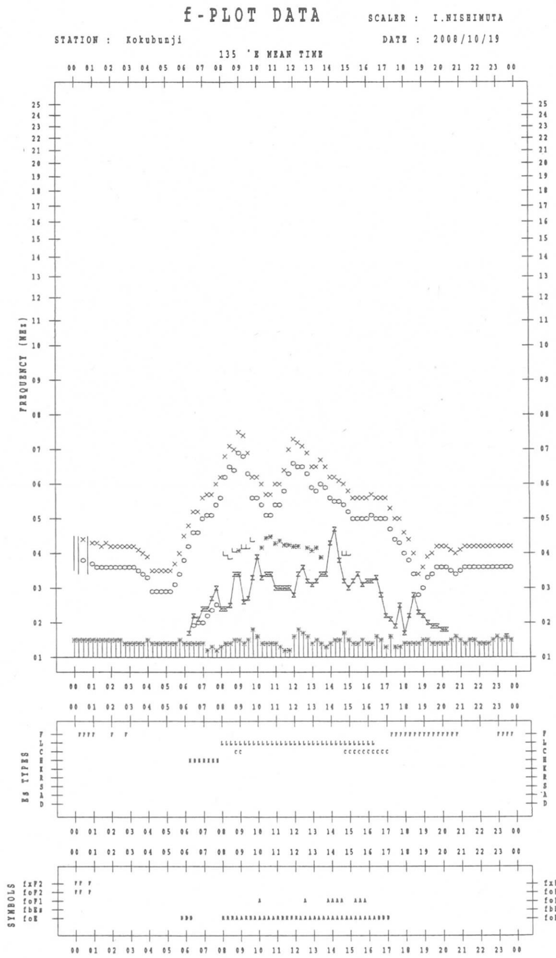
STATION : Kokubunji DATE : 2008/10/16

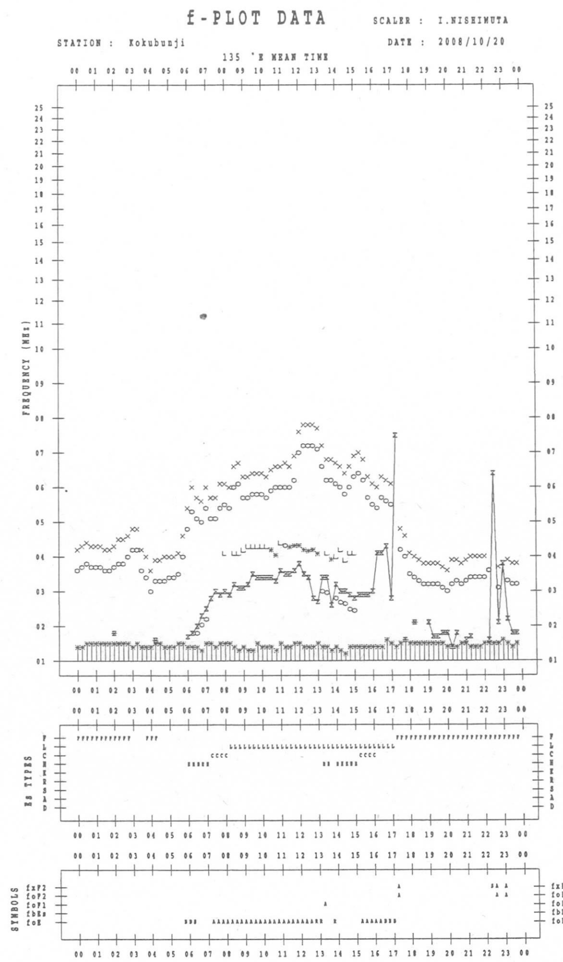
135 °E MEAN TIME




f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

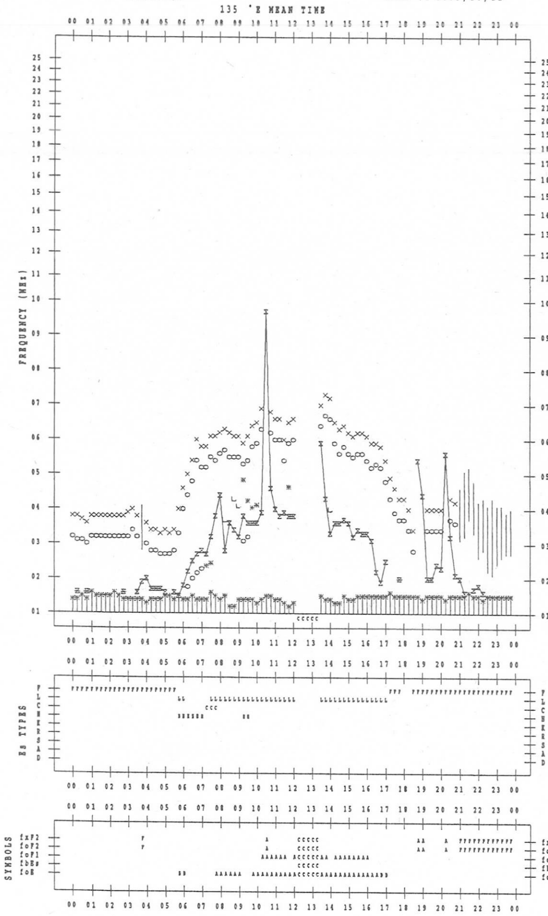

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/21

135 °E MEAN TIME

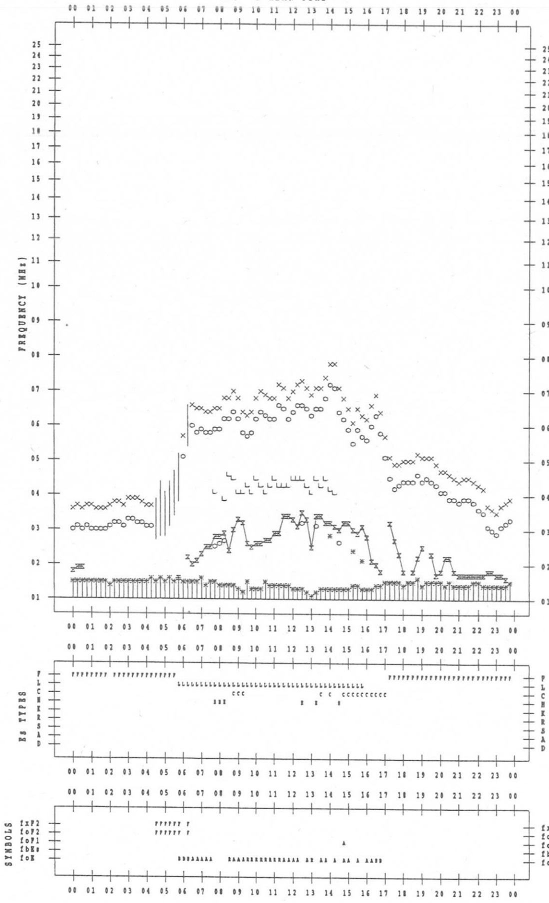


f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/23

135 °E MEAN TIME

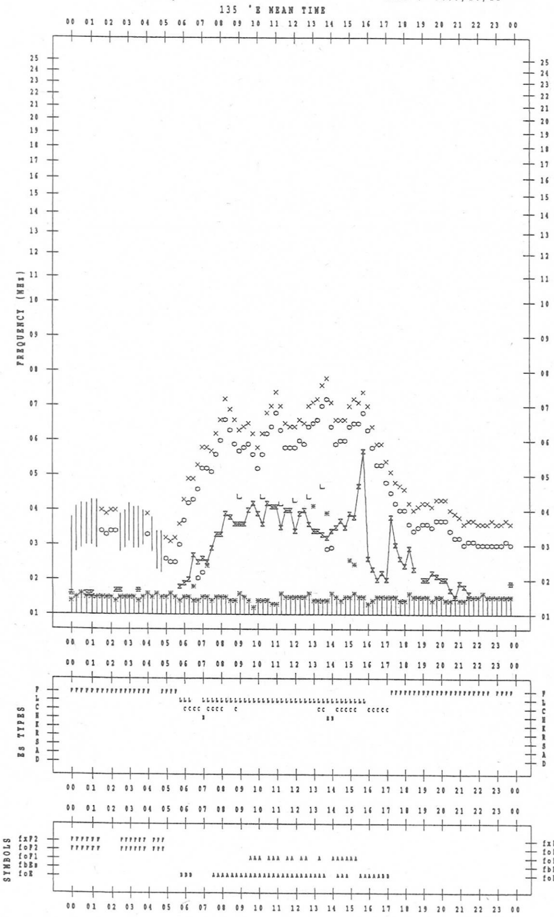


f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/22

135 °E MEAN TIME

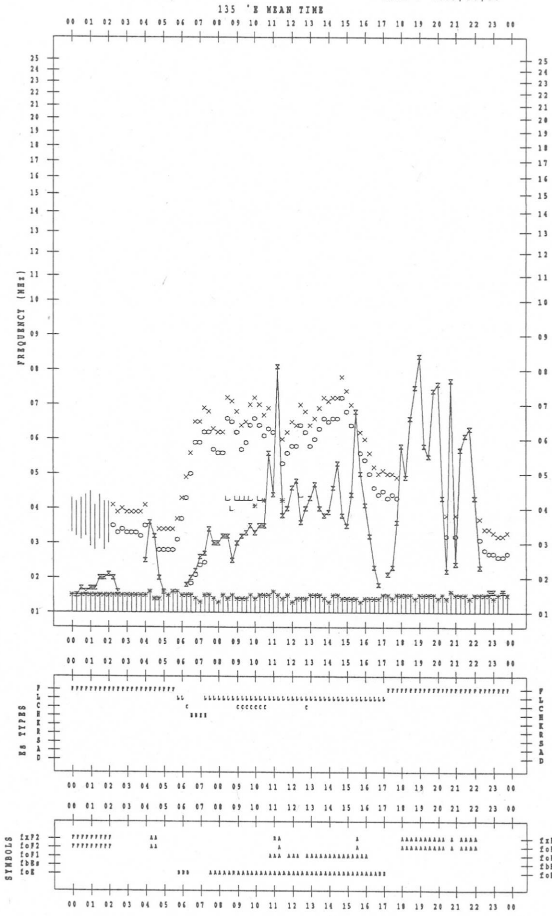


f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/24

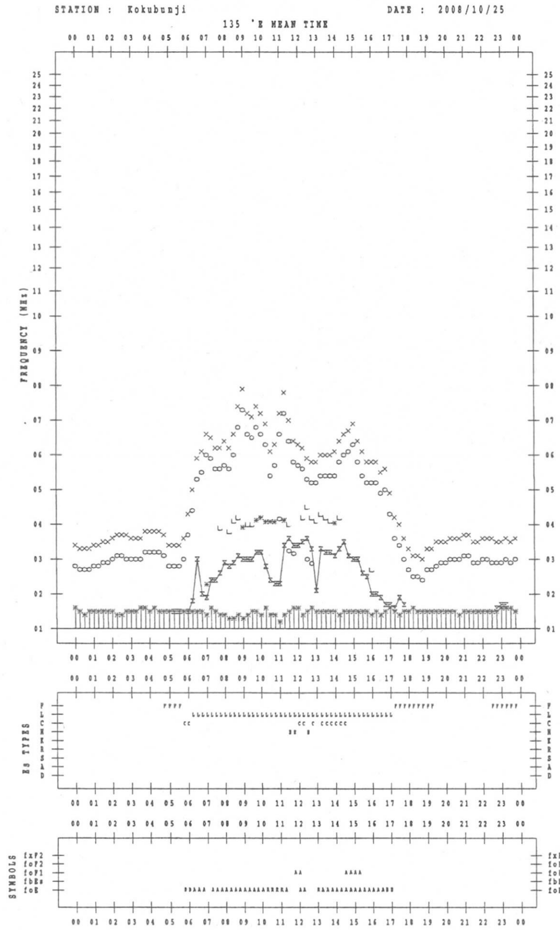
135 °E MEAN TIME



f-PLOT DATA

SCALER : I.NISHIMUTA

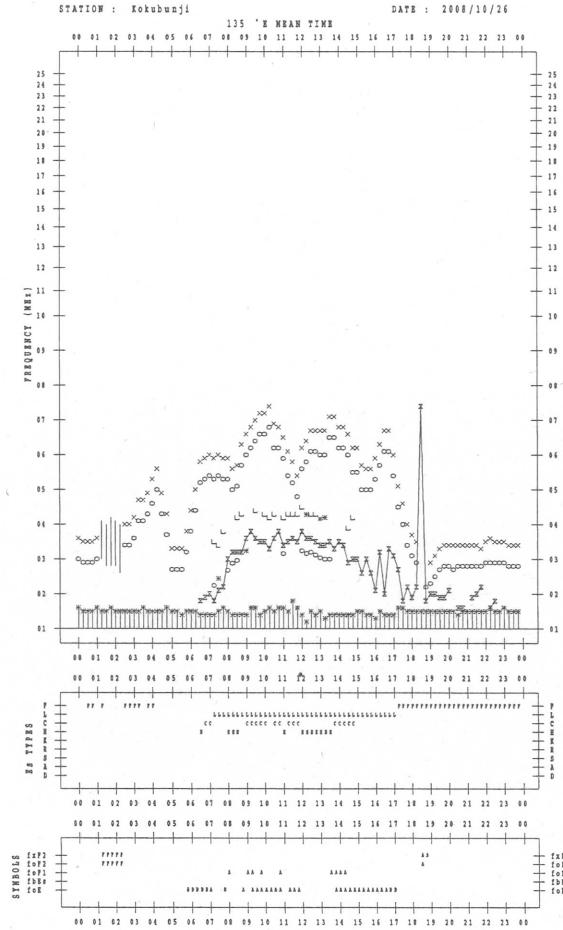
STATION : Kokubunji DATE : 2008/10/25



f-PLOT DATA

SCALER : I.NISHIMUTA

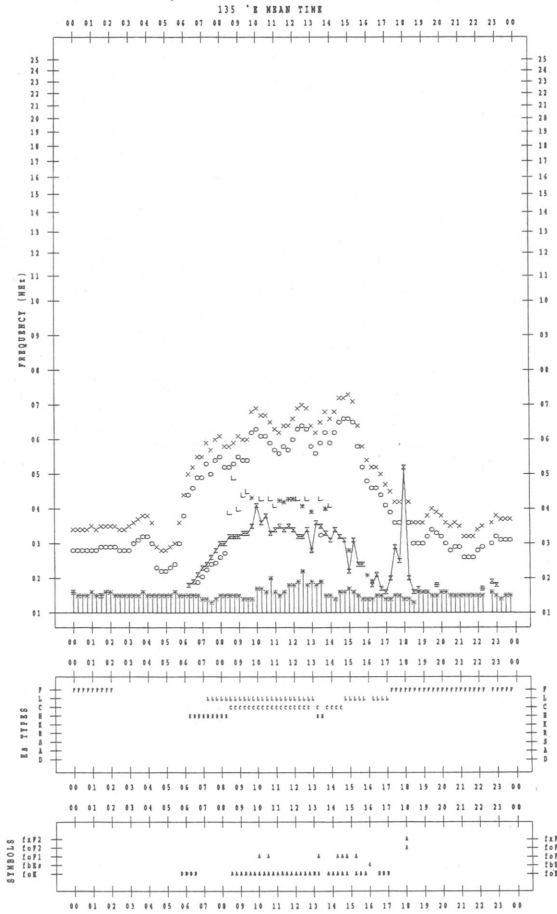
STATION : Kokubunji DATE : 2008/10/26



f-PLOT DATA

SCALER : I.NISHIMUTA

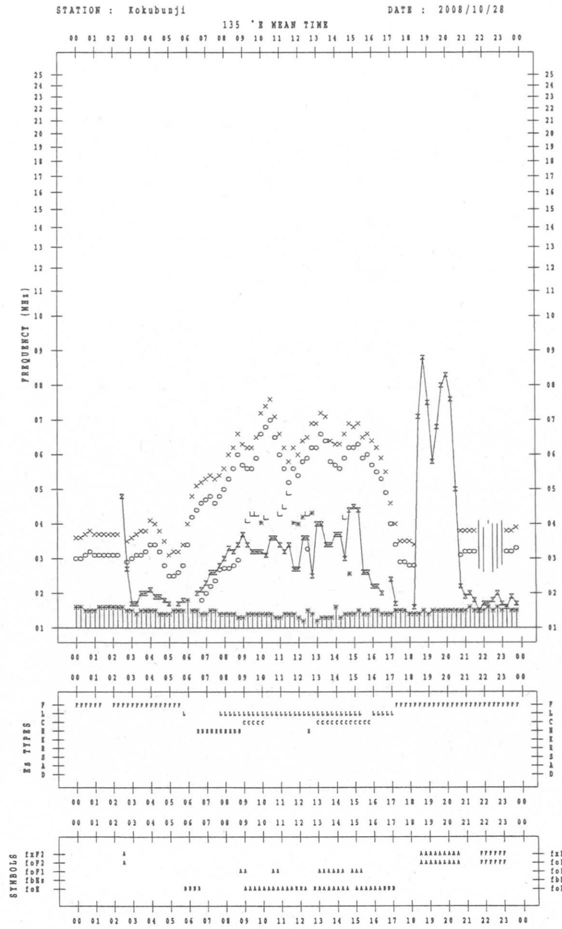
STATION : Kokubunji DATE : 2008/10/27

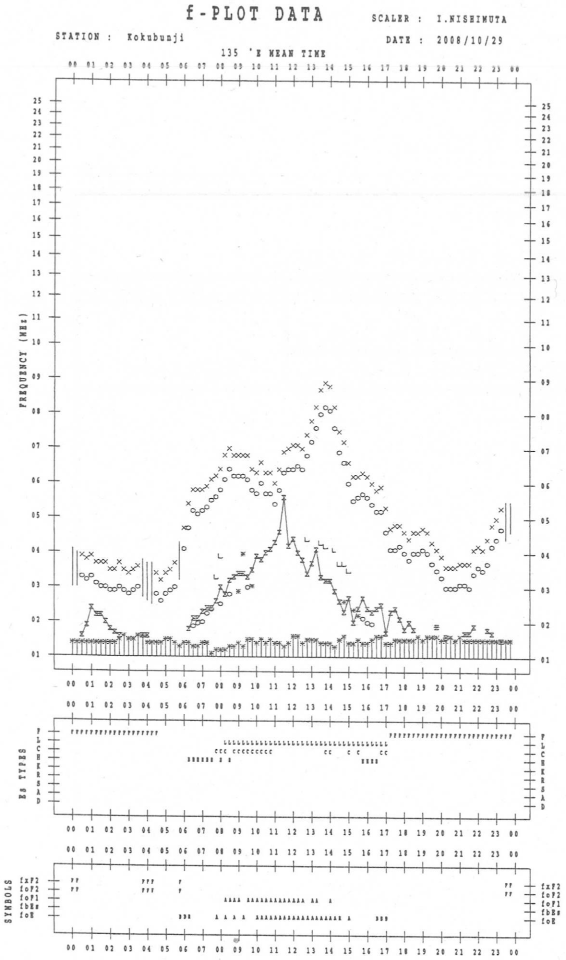


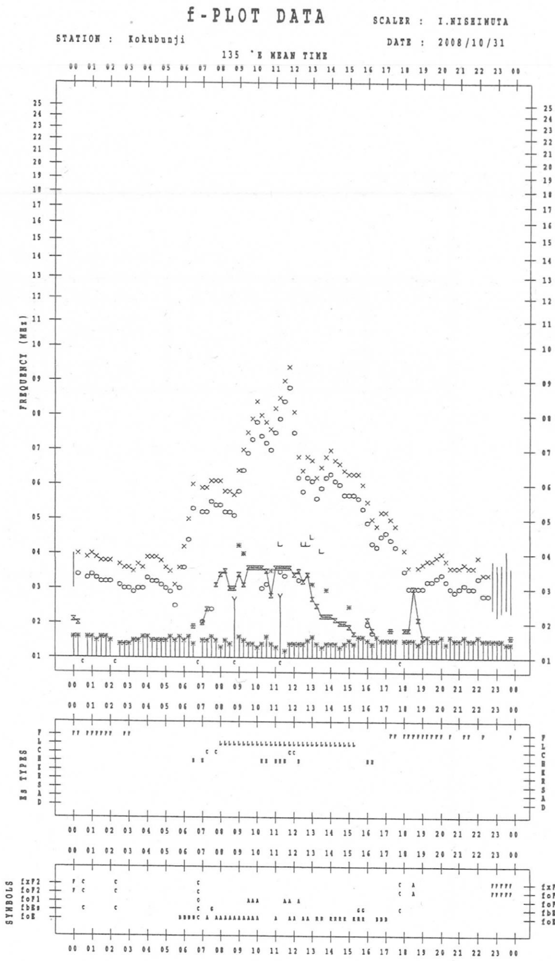
f-PLOT DATA

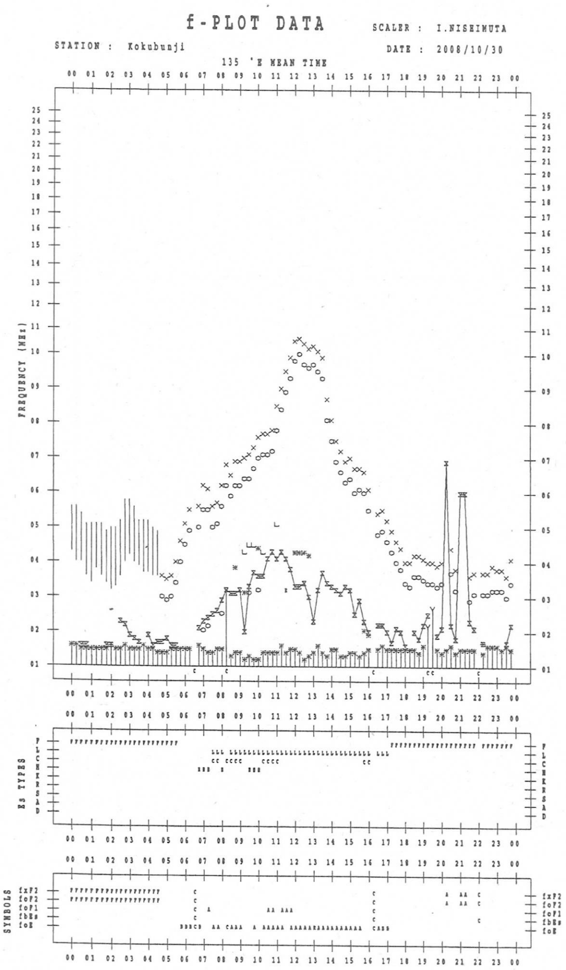
SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2008/10/28




f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/10/30
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

B. Solar Radio Emission
B1.Outstanding Occurrences at Hiraiso

Hiraiso October 2008

Single-frequency observations

Normal observing period: **** - **** U.T. (sunrise to sunset)

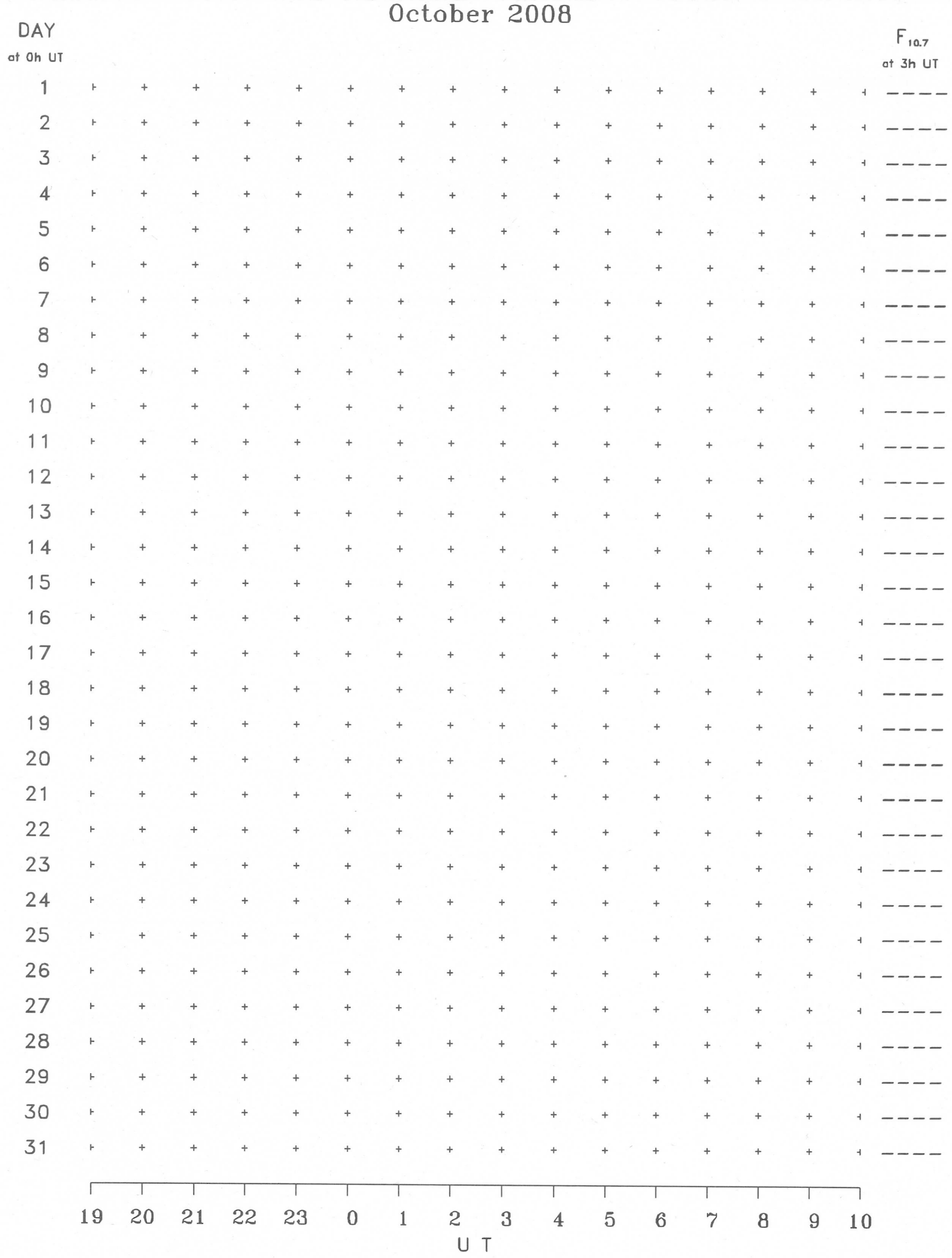
OCT. 2008	FREQ. (MHz)	TYPE	START TIME (U.T.)	TIME OF MAXIMUM (U.T.)	DUR. (MIN.)	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) PEAK	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) MEAN	POLARIZATION REMARKS

No data for the 2800MHz fixed-frequency observation are available due to system maintenance.

B. Solar Radio Emission

B2. Summary Plots of $F_{10.7}$ at Hiraiso

October 2008



Note: A vertical grid space corresponds to a 100 sfu.
Elevation angle range ≥ 6°.

IONOSPHERIC DATA IN JAPAN FOR OCTOBER 2008
F—718 Vol.60 No.10 (Not for Sale)

電離層月報（2008年10月）
第60巻 第10号（非売品）
2008年12月10日印刷
2008年12月15日発行

編集兼 独立行政法人 情報通信研究機構
発行所 〒184-8795 東京都小金井市貫井北町4丁目2-1
☎(042)(327)7540(直通)

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2-1 Nukui-Kitamachi 4-chome, Koganei-shi, Tokyo 184-8795 JAPAN