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IONOSPHERIC DATA IN JAPAN

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CONTENTS

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

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

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

B. SOLAR RADIO EMISSION

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

B1. Daily Data at Hiraiso

The three-hourly mean and daily mean values of the solar radio emission intensities are tabulated for 500 MHz measurements. The intensities are expressed by the flux density in 10^{-22} 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. 2006

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

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

HOURLY VALUES OF fEs AT Wakkanai

OCT. 2006

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	39	33	30	29	24	G	G	G	G	46	52	48	51	48	47	40	38	34	28	29	48	31	33	38
2	48	26	24	36	33	34	G	31	G	G	G	39		G	G	G	36	27	33	26	27	49	27	26
3	44	30	33	39	32	33	G	31	46	60	49	44	G	44	38	46	42	30	27	G	G	G	G	G
4	34	G	G	G	G	G	31	G	G	G	G		G	G	G	52	35	37	32	26	G	G	G	G
5	G	G	G	G	G	G	G	30	38	39	G	43	42	42	36	38	36	G	G	32	G	G	G	34
6	G	G	G	32	24	29	28	35	G	40	40	G	G	G	G	G	38	42	31	G	28	G	G	G
7	G	G	G	G	G	G	G		91	G	G	G	G	G	38	33	29	58	40	G	G	28	23	24
8	G	G	G	25	G	G	G	G	42	44	52	G	G	44	39	35	32	60	68	39	31	G	G	G
9	G	G	G	26	G	G	G	G	40	47	44	G	51	52	42	33	60	81	76	40	G	50	37	26
10	G	G	G	G	29	G	G	G		G	43	45	48	49	49	34	59	G	26	34	33	29	26	G
11	26	G	28	G	G	G	G	33	38	G	49	45	G	40	40	N	34	34	G	G	G	G	25	G
12	G	G	26	30	30	26	G	42	44	50	45	47	63	40	G	G	30	G	25	33	48	48	36	32
13	30	27	37	29	30	G	26	43	60	50	48	41	G	G	G	36	31	32	G	34	32	30	28	30
14	50	54	33	G	G	G	29	35	39	44	62	G	G	G	35	43	37	42	33	28	35	28	G	G
15	G	G	24	G	29	G	G	33	38	46	46	42	G	G	G	33	29	40	40	32	39	33	G	24
16	29	29	G	G	G	G	24		G	G	G	G	G	G	G	43	G	G	G	29	30	29	G	G
17	26	28	G	G	27	26	28	34	36	G	44	G	G	G	G		G	G	G	G	34	G	G	G
18	G	G	G	G	36	25	30	39	39	58	G	G	G	43	G	G	G	G	G	G	G	G	G	G
19	G	G	G	G	G	G	35	35	38	G	G	G	G	G	34	G	G	26	26	G	G	30	G	G
20	G	G	G	G	G	G	G	33	G	G	42	52	43	73	68	38	32	G	50	G	G	G	G	30
21	G	G	G	27	38	G	32	41	50	G	52	47	45	76	42	33	G	46	59	45	36	35	27	35
22	25	G	29	24	G	27	G		G	45	42	G	G	G	G	33	36	58	38	30	G	26	G	G
23	32	39	34	33	28	29	40		50	48	49	39	38	G	38	32	29		52	32	33	G	26	27
24	26	G	G	39	33	42	37	28	35	39	36		44	58	54	54	69	33	30	31	34	29	28	G
25	25	G	24	G	G	G	28	34	G	34	41	53	47	42	39	46	60	11	G	G	G	G	G	G
26	G	38	G	G	G	G	G	32	42	54	62	60	G	41	G	G	34	28	G	G	G	G	G	G
27	G	G	G	G	G	G	33	G	41	G	G	G	46		G	31	G	28	46	G	G	32	G	26
28	G	G	G	G	G	G	G	29	34	37	G	G	36	G	38	32	29	60	40	35	G	G	G	G
29	G	G	G	G	G	G	G	35	38	40	G	G	41	38	33	31	G	G	G	G	G	31	G	29
30	25	26	G	G	G	G	24	30	G	G	40	46	G	G	33	G	29	29	G	34	40	48	59	49
31	G	32	35	G	G	28	26	G	70	42	38	G	G	42	35	33	30	G	G	G	G	28	26	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	31	31	31	31	31	31	31	27	30	31	31	29	30	30	31	29	31	30	31	31	31	31	31	31
MED	G	G	G	G	G	G	G	32	38	39	42	39	G	39	35	33	32	30	28	28	G	28	G	G
U Q	29	28	28	29	29	26	29	35	42	46	49	45	44	44	39	39	37	42	40	33	34	31	27	29
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	16	29	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Wakkanai

OCT. 2006

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

HOURLY VALUES OF foF2 AT Kokubunji

OCT. 2006

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	38	37	38	41	36	32	47	66	66	67	60	70	78	76	74	75	66	66	64	62	51	46	44	44
2		34	32			34	54	75	71	47	62	62	62	61	61	68	62	69	69	62	54	53		36
3		36		38	36	36	49	62	64		61	67	64	66	66	62	68	64	42		39	34	35	36
4		36	36	37		31	48	55	67	57	65	66	65	67	66		62	64	54	63	54		36	32
5	32	30	30	30	30	30	51	62	71	64	57	64	68	59	58	42	61	65	66		48	46	41	36
6	36	35	36	37	39	28	54	38	67	62	63	68	78	66	57	53	58	69	76	54	49	41	34	34
7	34	34	32	34	27	32	49	54	67	69	62	66	68	59	55	54	42	54		54	54	52	42	
8		36	37	37			47	58	59	62	67	75	81	56	60	59	67	70	65	46	43	36	38	34
9	36	39	37	42	39	36	55	61	61	68	72	A	62	65	A	72		69	A	A	42	37	34	37
10				42	44	46	45	55	62	59	61	72	75	67	69	81	76	72	49	34	34		38	35
11	37	34			42	38	54	65	69	74	65	63	66	68	66	59	66	63	46	34	36		37	36
12	39	36	37	38	34	34	40	56	59	60	C	C	C	C	C	C	C	61	59	A	A	37	A	36
13	37		36		37	30	46	46	57	C				68	C	C	C	C	61	43	48			
14		34	37	26		36	44	65	71	78	104	76	A	63	67	75	67	64	51	A				
15	36	38	32	28		22	43	56	63	69	74	82	76	53	62	69	72	59	49	A	36	38	35	34
16	32			30	30	27	42	69	66	58	64	80	78	67	77	57	42	49	52	34		36		34
17	34	32		31	28		47	67	57	65	65	76	85	59	62	61	59	59	62		30			34
18	35	37	37	36			40	51	66		65	68	77	72	61	55	55	55	47	A		35	37	36
19	36	36	34	34		30	39	54	63	68	62	66	68	59	66	60	58	54	49				28	36
20	36	31	32	31	32	34		48	53	62	65	71	66	62	62	55	53	48	28	36	45	A	36	
21	43	42	45	39	36	34	43	73	67	65	85	105	A	74	67	66	58	52	42		43	43	A	39
22		A	A	39	36	35	42	55	54	56	72	88	49	55	54		62	69	A	A	A	A	36	36
23	A	38	41	36	35	32	41	61	65	74	67	65	80	63	59	54	59	66	48	36	34	A	A	A
24	A	A	34	34	34	28	45	54	57	72	62	73	59	64	C	64	61	51	37		30	34	44	44
25	44	48	47	47	39	30	46	49	56	64	70	76	79	72	68	62	60	64	48	36	38	36	36	34
26	36	45	41	36	36	28	39	54	69	63	82	78	76	71	63	61	59	49	47				27	
27	26	32			30	28	38	48	59	64	74	69	70	58	52	54	60	44	43		32	32	37	
28	30	A	30	A	26		36	59	69	65	74	66	60	51	62	59	51	50	49			A	34	38
29	34				24		42	57	58	86	87	86	71	66	61	72	68	51	36			31	38	36
30	31	A	30				36	66	88	78	72	85	78	84	73	67	62	55	46	44	A	A		31
31		34			27		41	57	54	65	61	74	64	87	65	66	61	51				34	32	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	23	22	23	23	24	30	31	31	28	29	28	27	30	27	27	28	30	27	14	20	18	22	23
MED	36	36	36	36	35	32	44	57	64	65	65	72	70	66	62	61	61	60	49	44	42	36	36	36
U Q	37	38	37	39	37	34	48	65	67	69	73	77	78	68	67	68	66	66	61	54	48	43	38	36
L Q	33	34	32	31	30	29	41	54	58	62	62	66	64	59	60	55	58	51	46	36	35	34	34	34

HOURLY VALUES OF fEs AT Kokubunji

OCT. 2006

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	27	G	G	G	G	G	G	G	42	43	47	49	G	G	G	G	G	G	G	G	G	G	G	G
2		G	G			G	G	G	G	G	40	G	G	G	G	G	33	34	G	29	33	35		G
3		G	G	G	G	G	G	50	49		G	G	G	G	G	G	34	32	G	G	G	G	G	G
4	G	G	G	G	G	G	G	G	48	44	G	52	G	43	G		G	40	41	51	32	26	G	G
5	G	G	G	G	G	G	G	G	G	G	G	G	G	G	41	G	G	G	G	34	G	40	G	G
6	G	G	G	G	G	G	G	32	42	46	G	42	44	G	G	G	40	37	35	27	G	G	G	G
7	G	G	G	G	G	G	G	G	G	G	50	G	G	G	G	G	37	33	40	48	35	23	51	34
8	40	34	24	G	G	G	29	35	45	47	47	52	50	50	43	G	33	55	60	34	31	G	G	G
9	G	G	26	G	G	G	G	G	34	G	47	62	60	G	107	39	57	55	60		G	G	G	G
10	28	G	33	27	G	G	G	G	40	G	43	50	G	G	G	G	G	G	G	G	G	28	G	G
11	G	G		35	27	G	G	42	43	43	G	60	G	G	G	G	45	G	G	66	G	G	27	G
12	23	G	G	G	G	G	G	G	G	45	C	C	C	C	C	C	C	42	59	44	50	28	50	G
13	30		G	G	G	G	G	33	40	C				47	C	C	C	C	G	G	G			
14		G	G	G	33	31	G	39	59	74		61	58	G	61	42	50	47	45	39				
15	G	G	G	G	G	26	G	G	37	47	52	50	G	G	G	G	30	35	31	57	29	33	G	G
16	G			G	G	G	G	G	G	42	45	G	G	G	G	41	45	G	G	G		G	G	G
17	G	G	G	G	G		G	34	G	45	48	G	G	G	G	G	33	40	G		G	G		G
18	G	G	G	G	27		30	43	G		46	45	41	G	G	G	G	36	34	43	32	28	G	28
19	28	G	G	G	G	G	27	37	G	42	46	43	G	G	38	G	G	29	G	33			G	G
20	G	G	G	G	G	G	G	G	G	G	47	G	G	G	G	G	G	29	31	42	50	40	33	G
21	G	G	G	G	G	G	G	36	55	59	69	91	76	G	G	60	61	60	43	41	29	G	40	34
22	44	51	60	34	27	30	G	G	67	68	42	45	49	48	51	56	38	48	43	49	59	43	26	G
23	43	33	27	G	G	G	G	38	49	40	43	45	45	G	G	G	G	G	G	30	G	42	48	49
24	80	36	G	32	29	G	G	G	39	G	43	48	G	G	C	G		G	G	G	G	24	28	39
25	35	G	G	G	G	G	24	G	34	47	46	90	40	G	G	G	G	G	31	27	G	G	G	G
26	G	G	G	G	G	G	G	G	35	43	G	43	54	G	40	46	36	42	58	27			G	
27	G	G	G		G	G	G	30	50	57	40	G	G	G	G	34	G	G	G	G	G	36	33	40
28	30	35	29	24	G	G	G	29	36	G	39	40	41	42	G	G	G	G	G		29	41	29	G
29	G		G		G		G	35	40	45	42	G	G	37	G	G	G	G	G			G	G	G
30	G	40	G		G		G	G	G	G	G	G	G	42	55	40	34	35	G	G	49	47		27
31	G	G	G	G	G	G	G	G	G	G	G	68	46	39	G	G	33	G				G	29	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	28	28	29	27	30	27	31	31	31	28	28	29	29	30	28	28	28	30	30	26	25	27	26	28
MED	G	G	G	G	G	G	G	G	37	43	43	45	G	G	G	G	33	32	G	32	G	24	G	G
U Q	29	G	G	G	G	G	G	35	45	46	47	52	45	37	39	36	37	40	41	43	32	36	29	27
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 Kokubunji

OCT. 2006

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	14	14	17	13	13	18	18	25	17	18	29	33	42	42	26	15	13	21	15	13	15	14	14	15
2		18	14			14	15	14	14	33	39	42	40	39	21	34	22	13	14	13	13	13		14
3		17	18	13	14	18	22	13	14		41	42	43	40	23	29	14	13	17	14	15	13	20	14
4	23	13	20	13	17	14	21	13	18	29	30	29	42	28	38		25	14	13	13	13	13	14	22
5	14	14	18	14	15	14	20	14	17	40	42	42	43	38	21	35	13	20	14	13	13	15	15	15
6	14	20	14	18	14	13	21	13	26	14	40	30	29	25	39	31	24	13	14	17	14	14	14	14
7	14	14	14	14	20	17	18	13	20	20	41	41	40	42	40	35	13	13	14	13	14	15	14	13
8	13	13	13	14	13	13	14	13	25	22	26	22	29	30	24	18	14	15	13	13	13	17	14	21
9	14	13	14	13	13	13	20	13	13	21	31	30	24	22	23	20	14	15	13	14	20	14	14	14
10	13	13	13	13	13	13	17	14	15	36	42	34	40	43	39	35	14	18	15	14	14	14	18	17
11	14	13		14	13	21	21	13	18	26	40	28	41	40	37	15	21	22	15	14	13	17	13	18
12	15	15	14	14	15	14	18	13	15	21	C	C	C	C	C	C	C	17	17	14	17	15	14	21
13	14		17	15	20	15	18	13	25	C				23	C	C	C	C	17	15	23			
14		17	14	18	14	13	17	13	13	23	23	23	23	17	15	13	14	13	13	14				
15	14	14	14	14	14	15	17	14	14	23	24	26	23	38	14	15	13	15	13	13	13	14	18	14
16	18			14	14	14	18	13	13	14	24	40	44	40	37	26	20	18	20	17		18	14	14
17	21	14	24	14	15		17	13	14	14	25	38	39	39	20	30	15	13	17		22	23		14
18	18	20	14	18	14		14	24	15		13	29	31	14	34	28	25	14	13	18	13	14	14	13
19	13	14	18	18	14	18	17	20	29	28	29	28	25	20	18	15	20	14	18	21			22	17
20	14	14	13	13	14	13	14	26	33	31	29	38	40	39	20	13	22	15	14	13	13	14	13	14
21	15	13	14	13	13	13	17	13	14	14	18	22	25	37	17	14	13	14	13	14	15	14	13	15
22	15	21	14	14	14	13	15	14	15	26	18	28	26	15	18	13	14	13	13	13	14	14	13	14
23	22	17	18	14	13	13	24	20	23	14	15	15	18	13	18	28	25	21	13	13	13	13	13	14
24	14	13	14	13	13	13	18	13	17	35	21	21	23	22	C	18	23	17	14	20	14	14	15	13
25	13	13	14	13	14	20	17	14	14	21	14	17	24	18	35	15	23	30	13	14	22	28	13	17
26	14	13	13	13	14	14	14	14	13	25	26	26	23	23	20	14	14	14	15	14			15	
27	22	15	22		13	14	13	14	14	17	21	37	39	18	18	15	13	18	14	14	15	14	14	13
28	14	13	14	13	18	14	14	13	14	18	22	23	23	14	18	13	14	18	14		14	14	13	15
29	14		26		18		14	14	14	14	25	23	38	13	33	13	15	21	17			21	18	14
30	17	14	15		15		15	13	15	15	24	23	23	21	15	15	14	14	20	17	15	14		15
31	23	18	15	18	14	20	14	17	18	15	18	25	26	21	14	14	13	13				24	18	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	28	28	29	27	30	27	31	31	31	28	29	29	29	30	28	28	29	30	30	27	25	27	26	28
MED	14	14	14	14	14	14	17	13	15	21	25	28	29	24	21	15	14	15	14	14	14	14	14	14
U Q	17	17	18	14	15	17	18	14	18	27	35	37	40	39	34	28	22	18	17	15	15	17	15	16
L Q	14	13	14	13	13	13	14	13	14	15	21	23	23	18	18	14	13	13	13	13	13	14	13	14

HOURLY VALUES OF foF2 AT Yamagawa

OCT. 2006

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	34	32	34	34	32	34	38	68	67	68	61	64	78	80	90	91	81	70	74	72	54	44	44	44
2	34	29	30	32	30	30	36	66	65	67	59	68	68	64	71	70	77	67	77	77	66	51		40
3	40	40	37	36	34	32	37		56	60	62	65	67	70	73	80	67	71	59	34	41	40	37	38
4	40	38	37	37	37	28	37	57	58	70	67	68	71	75	74	76	72	80	73	51	52	45		34
5	32			31	28		42		62	64	66	62	67	68	68	65	65	71	75	49	51	40	36	34
6	34	32	34	32	34	32	36	54	61	62	65	67	74	78	78	71	68	80	87	84			A	29
7	26	35	34	32	32	30	34	54	65	68	76	76	69	61	67	58	56	61	71	66	66	43	36	A
8	28	28	29		30	32	40	50	55	62	68	77	77	76	71	A	74	84	80	50	A	29		32
9	32	31	30	34	A	36	36	50	57	72		62	62	75	78	82	80	78	72	54	A	31	31	28
10	34	34	34		31		32	50		61	68	62	68	76	77	88	87	94	66	48	34	34	34	
11	30	34	32	32	34	32	A	54	76	68	67	61	69		91	86	81	71	65	52	A	A		A
12	A	A	A	34	34		34	50	55	58	60	64	74	80	82	82	78	72	75	58	30	A	32	
13	36	32	32	34	34		28	45	58	81		74	71	77	80	76	81	65	73	32	43	A	A	
14		34	36	36	34	34		59	71	96	80	68	A	77	88	92	83	62	48	A	36	37	36	36
15	38	44	32		28	28	29	54	55	75	81	82	96	71	81	91	86	72	51	37	37	39	A	40
16	40	38	34	32	31		29	54	70	69	57	70	101	97	78	71	63	54	57	51	31	34	37	33
17	32	34	34	30	29	26	31	53	60	66	66	70	87	74	62	67	68	66	71	52	A	A		32
18	34	35	36	32	34	31	28	50	61	77	72	65	74	80	66	61	67	64	55	37	30		34	34
19	32			31	30	28	28	50	60	67	68		68	72	74	78	70	64	52	41		30	31	34
20	34	32	34	32	34	34	28	46			62	74	76	71	71	67	64	58	47	A	A	A	34	
21	41	41	42	54	36	34	36	52	57	66	88	102	105	67	84	90	66	60	54	52	A	A	A	
22	36	A	A	37	34	34	36	51	62	66	72	96	85	A	64	61	62	71	51	A	A	34	A	
23	34	36	37	42	39	28	34	53	61	66	72	80	97	70	75	70	60	55	61	44	34	34	25	32
24	34	30	34	34	38		A	54	61	75	61	70	91	81	74	78	72		48	40	30	32	A	A
25	34	34	30	37	32		28	50	55	61	61	77	81	86	90	74	66	61	51	42	36	40	37	30
26	34	35	36		39	31	32	49	56	64	75	94	94	89	97	78	59	52	57		A		29	28
27	25	34	34	34	36	29	28	47	68	59	67	67	68	61	63	57	56	58	44	41	32	32	36	34
28	27		28	30	30			50	64	68	85	70	60	59	60	64	62	52	46	43	38	34	32	37
29	A	35			31		29	50	58	81	76	76	72	73	66	68	78	56	43		37	38	38	38
30	32			34	24	A		51	74	78	65		71	81	80	72	64	55	52	45	45	34	A	A
31	34	34	32	30	34	26		54	52	64	68	63	66	87	87	72	67	67	38	A	34	36		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	28	25	25	26	30	21	25	29	29	30	29	29	30	29	31	30	31	30	31	25	21	22	18	21
MED	34	34	34	34	34	31	34	51	61	67	67	70	73	75	75	73	68	66	57	49	37	35	35	34
U Q	35	35	36	36	34	34	36	54	65	72	73	76	85	80	82	82	78	71	73	53	48	40	37	37
L Q	32	32	32	32	30	28	28	50	56	64	62	64	68	70	68	67	64	58	51	41	33	34	32	31

HOURLY VALUES OF fEs AT Yamagawa

OCT. 2006

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	G	24	G	G	G	G	G	G	G	42	47	51	58	50	51	51	48	50	41	37	G	32	30	27
2	G	G	G	G	G	G	G	G	33	G	40	G	G	G	G	G	G	G	G	26	G	G	39	36
3	G	31	30	G	G	G	G	32	34	41	G	G	40	40	64	61	42	G	G	49	46	39	28	G
4	G	G	G	G	G	G	G	29	34	46	45	46	G	G	G	G	G	34	42	29	41	50	30	G
5	G	G	25	G	G	G	G	28	35	39	G	G		G	G	42	G	39	29	33	G	30	29	G
6	G	G	G	G	G	G	G	38	48	41	43	46	43	N	43	G	44	48	58	50	30	27	32	G
7	G	G	G	G	G	G	G		G	G	60	G	G		44	41	40	34	27	G	G	27	26	29
8	G	23	28	40	G	G	G	31	40	48	48	55	46	51	G	85	39	38	66	54	57	27	29	29
9	26	G	G	G	50	33	G	29	G	60		43	G	45	G	G	G	G	26	58	52	G	G	33
10	30	24	24	40	41	34	G	41		44	44	G	40	G	39	G	41	38	35	44	32	24	23	24
11	G	G	G	G	G	G	56	41	40	44	41	46	49	G	43	G	G	39		30	60	49	26	46
12	43	46	44	26	24	23	G		40	41	39	45	42	G	G	44	42	48	30	24	26	37	39	28
13	G	G	G	G	G		G	42	38	44	48	53	75	93	92	70	40	47	35	G	33	58	32	G
14		G	G	G	G	G			G	G	42	93	98	G	40	36	35	36	29	55	G	28	27	G
15	27	G	G		G	G	G	28	36	53	49	45	44	58	42	42	33	34	G	G	36	46	53	32
16	G	26	G	G	G		G	G	33	39	72	44	G	G	G	G	G	G	40	41	26	G	G	G
17	G	G	G	G	G	G	G	29	39	46	56	49	44	42	44	39	35	31	G	26	34	47	30	G
18	26	G	G	G	G	G	G		42	43	43	43	G	44	48	52	63	29	33	36	G	32	34	G
19	G	37	27	G	G	G	G	30	G	G	42	50	G	45			47	40	29	26	G	G	G	25
20	24	G	G	G	G	G	G	30		44	38	43	40	G	N	G	G	G	38	49	69	69	29	38
21	39	G	30	G	27	24	G	30	42	58	116	72	69	54	38	41	42	30	33	39	46	40	34	33
22	28	50	60	36	25	G	G		36	42	52	76	53	71	67	59	41	27	53	46	46	40	36	24
23	G	G	25	24	G	G	G		32	44	49	68	51	G	56	43	48	49	48	34	29	G	G	30
24	28	26	G	38	26	29	36	29	32	40	42	42	61	53	68	51	48	46	34	39	31	28	46	43
25	27	32	35	G	G	G	G	39	37	39	50	57	54	75	44	40	G	G	28	G	G	G	G	G
26	G	G	G		G	G	G	30	37	44	44	51	42	46	G	G	G	G	G	41	65	56	G	G
27	31	30	27	G	G	G	G	27	34	G	38	G	G	G	G	G	N	G	G	G	11	G	G	G
28	G	G	24	24	26	28	G	26	36	42	42	43	G	G	G	41	G	36	G	G	G	G	G	32
29	49	G	29	G	G		G	G	34	35	42	G	G	63	43	60	36	36	33	37	G	G	G	G
30	27		26	G	25	27	26	G	G	G	39		45	40	38	G	32	34	G	G	G	G	57	34
31	26	G	G	G	G	G	28	26	44	G	45	51	45	48	48	53	44	61	44	41	35	36		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	30	30	31	29	31	28	30	25	29	31	30	30	30	29	29	30	30	31	30	31	31	31	30	31
MED	G	G	G	G	G	G	G	29	35	42	44	46	42	42	42	41	38	34	32	36	30	28	29	24
U Q	27	26	27	12	24	12	G	31	39	44	49	51	51	52	48	51	42	40	40	44	46	40	34	32
L Q	G	G	G	G	G	G	G	26	32	35	41	42	G	G	G	G	G	G	G	24	G	G	G	G

HOURLY VALUES OF fmin AT Yamagawa

OCT. 2006

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

HD	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	14	14	15	14	14	15	16	17	14	14	20	23	23	21	20	18	17	14	14	14	15	15	15	15
2	15	17	14	17	16	15	15	15	14	18	20	22	21	24	21	20	15	15	15	15	14	15	14	14
3	15	15	14	16	15	15	14	15	14	16	18	18	22	21	20	14	14	14	16	14	14	15	14	15
4	15	14	16	14	15	16	14	14	15	17	20	26	22	23	23	18	16	15	14	14	14	14	14	15
5	15	15	15	15	16	15	15	14	14	16	17	24	21	43	39	18	14	16	14	15	14	14	14	15
6	21	18	17	14	15	15	15	14	14	17	14	20	18	17	14	18	15	14	14	15	15	15	15	16
7	15	16	15	15	15	14	15	15	14	18	16	20	21	21	18	17	14	14	15	14	15	14	14	15
8	15	15	15	14	15	14	15	14	15	15	27	20	20	27	21	17	16	14	14	14	14	14	14	15
9	14	15	15	16	15	14	15	14	14	15		21	26	20	17	17	15	14	16	14	14	15	15	15
10	15	14	15	14	14	14	15	14		17	18	18	41	18	17	17	15	14	14	14	14	15	15	17
11	16	15	15	15	16	15	14	14	14	14	18	27	26	23	20	17	15	14	20	15	15	14	14	14
12	14	14	14	15	14	14	14	14	14	14	16	20	32	38	21	20	15	14	14	15	14	15	14	14
13	14	15	17	17	18		16	14	14	15	18	30	17	28	29	18	14	14	14	14	14	15	16	17
14		15	15	15	16	14		16	14	14	18	20	26	21	21	18	14	14	15	15	14	15	15	14
15	14	14	15		15	17	16	14	14	17	18	21	21	21	18	17	15	15	15	16	14	14	14	14
16	15	15	15	14	15		14	18	14	15	18	20	21	34	15	18	15	17	15	15	15	15	16	16
17	15	15	15	15	15	15	15	16	14	17	20	20	24	21	22	18	14	14	17	16	14	14	14	15
18	14	16	15	16	15	15	17	16	14	14	17	20	21	21	18	16	17	14	15	15	17	14	14	15
19	15	14	15	17	16	14	14	16	14	15	17	17	18	18			14	14	14	15	17	14	14	15
20	15	15	14	14	14	15	15	14		15	17	18	21	21	18	16	14	16	14	15	15	14	14	15
21	14	14	14	14	15	15	15	14	16	16	14	15	22	21	17	17	14	14	14	14	15	15	14	14
22	14	14	14	15	15	15	14	14	14	15	17	21	18	20	20	17	14	14	14	15	14	15	14	15
23	14	14	14	14	15	16	15	21	14	14	15	20	18	14	14	14	14	15	15	14	14	14	15	15
24	14	15	15	14	14	14	14	15	14	16	17	17	14	16	18	17	14	14	14	15	14	15	14	14
25	15	14	14	14	15	20	18	14	14	14	14	17	15	17	14	14	14	14	15	15	14	15	15	17
26	15	15	14		14	14	14	14	14	16	16	17	18	17	17	14	15	21	17	14	14	14	14	15
27	14	14	15	16	20	15	16	16	14	14	14	22	20	16	14	14	16	20	15	17	14	16	15	15
28	17	15	15	14	15	14	15	15	14	14	15	15	17	18	14	18	18	15	15	16	14	15	17	16
29	14	15	15	20	16		16	14	14	14	15	18	14	16	14	14	14	14	14	15	17	17	15	15
30	15		15	15	14	15	14	18	14	15	16		16	23	17	14	16	14	14	14	15	15	14	14
31	15	15	17	15	15	15	17	16	14	14	17	17	22	18	17	17	14	15	14	14	14	14		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	30	30	31	29	31	28	30	31	29	31	30	30	31	31	30	30	31	31	31	31	31	31	30	31
MED	15	15	15	15	15	15	15	14	14	15	17	20	21	21	18	17	15	14	14	15	14	15	14	15
U Q	15	15	15	16	16	15	16	16	14	16	18	21	22	23	21	18	15	15	15	15	15	15	15	15
L Q	14	14	14	14	15	14	14	14	14	14	16	18	18	18	17	16	14	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

OCT. 2006

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	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A
2	30	30		31			35	65	64	70	65	65	76	76	75	70	C	C	C	85	64	30		
3	A	28	30	30	30		31	64	61	57	72	73	78	74	87	96	81	84	70	50	42	31		34
4	31			31	34			56	62	66	C	C	C	C	C	C	C	105	89	82	66	42	48	A
5		49	50	45	A			51	55	66	C	67	61	72	82	82	78	72	76	81	44		30	31
6	30	29	28	30	31	26	30	51	63	67	C	65	C	C	119	128	122	118	115	87	82	43		
7		34	32	30		26	29		66	C	82	90	91	86	101	86	69	73	87	88	61	34	30	A
8			28	29	30	29		49	57	58	76	78	86	83	96	91	97	85	90	65	32	30		
9	30	30	30	31	32	28		54	57	74	68	74	80	96	104	111	110	102	86	53	A	A		
10	30	32	30	30	28			50	55	64	80	67	70	77	95	100	105	110	100	66	49	30		30
11	30	30	29	30	32			54	A	74	74	71	77	108	143	148	141	127	119	90	51	A	42	
12	A	45	43	46	43	36	38	48	52	56	74	82	A	85	97	110	121	111	89	66	48	41	41	41
13		31	29	34				48	58	94	91	74	64	82	80	108	111	96	64	44	36	42		34
14			32		34			61	72		80	A		105	127	131	131	101	55		A	34	35	32
15	37	40	26					57	64	72	88	90	94	104	121	126	123	110	71	52	36	48	53	52
16	50	48	46	36	30		30	52	55	67	82	81	113	134	125	118	88	64	54	32	44		36	34
17	34	38	36	32				54	62	62	77	80	80	91	91	82	86	76	63	A		A	29	
18		31	30	34	31			47	60	67	87	76	75	82	90	86	78	69	66	50		29		A
19	A	31	34	30	30			46	60	65	67	82	74	71	96	87	83	78	68	34	30	30	28	30
20	28		29	29	32	28		47	60	67	86	72	85	98	107	112	88	A	A	A	A	A		
21	29	29	32	53				C	C	C	C	C	106	A	108	102	80	64	54	44	36	36	34	A
22			30	32	30	29	25	48	77	78	78	101	120	115	86	87	A	A	71	A	A		A	29
23		A	32	35	37			52	65	61	C	87	108	101	112	91	74	64	60	50	37	30	29	31
24	30			30	30			48	57	61	80	72	88	93	90	117	121	87	58		38	37	36	34
25		32	37	38				48		58	69	71	76	100	118	102	100	80	73	51	A			31
26	32				30			46	59	62	77	96	110	140	147	131	86	74	66	60	A			
27	A			38				42	54	68	76	75	71	69	68	60	57	59	50	44	30		34	
28	28							50	58	72	87	80	75	C	68	69	63	50	A	44	48	36		31
29	32	31	30					54	70	72	82	67	72	81	83	76	88	74	53		43	44		37
30	34		32	36				47	72	77	68	74	67	97	100	72	80	65	64	54	54	40	34	40
31	A				23			45	70	66	70	64	65	85	94	97	81	72	51	45	28	29	29	
	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	18	23	24	18	7	7	28	27	27	25	27	26	26	29	29	27	27	27	24	22	20	16	16
MED	30	31	30	32	30	28	30	50	60	67	77	74	78	88	96	97	88	78	68	52	44	35	34	33
U Q	33	38	34	36	32	29	35	54	65	72	82	82	91	101	115	114	111	102	87	73	51	41	38	35
L Q	30	30	29	30	30	26	29	47	57	62	71	71	72	81	86	84	80	69	58	44	36	30	29	31

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HOURLY VALUES OF fEs AT Okinawa

OCT. 2006

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	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	39
2	28	G		G	G		G	28	G	G	G	G	G	G	G	G	C	C	C	G	G	G	G	
3	37	G	G	G	G		G	29	37	G	G	G	G	G	G	51	46	46	26	G	G	26	30	28
4	G	G		G	G		G	30	G	36	C	C	C	C	C	C	C	40	49	30	40	34	33	34
5	27	G	G	26	38	29	29	39	40	G	C	G	G	G	G	G	53	43	48	59			G	G
6	G	G	G	G	G	G	G	36	60	44	C	G	C	C	51	40	G	36	42	35		26		30
7	G	G	G	G	G	G	G	G	G	C	G	G	40	G	41	39	43	36	G	G		G	G	49
8	27	28	G	G	G	G	G	G	38	41	42	G	G	G		G	G	34	34	29	G	G	G	34
9	G	G	G	G	G	G	G	32	38	40	G	G	G	G	42	G	G	34	29	35	38	35	39	36
10	28	32	G	G	G		G	30	38	43	43	G	53	60	39	37	35	34	35	G	29	G		G
11	G	G	G	G	G	G	28	34	84	66	43	G	40	40	G	G	G	33	42	36	45	42	39	34
12	67	28	G	25	G	G	G	27	37	46	50	63	74	46	G	44	G	G	33	37	G	G	G	29
13	46	28	G	26				28	39	42	50	54	61	50	85	71	43	37	G		G	G		G
14			G	28	26			G	42	36	67	66	91	G	G	G	G	38	35	34	58	G	G	29
15	26	G	G					G	G	40	48	70	82	G	67	42	36	G	30	G	26	G	G	48
16	39	G	G	G	G		G	G	36	G	51	48	49	41	G	43	G	33	G	37	G	28	33	G
17	G	26	G	G	G		G	30	36	47	49	51	56	G	G	38	G	49	55	58		41	26	28
18	28	G	24	G	G	G		26	38	55	48	48	44	G	44	41	43	34	G	29		G	32	37
19	32	24	G	G	G		G	G	G	46	50	50	49	44	46	41	86	36	28	G	G	28	26	G
20	G	27	G	G	G	G		G	G	G	57	48	47	46	40	43	51	70	70	54	58	29	26	25
21	28	G	G	24		G		C	C	C	C	C	77	132	62	40	52	G	32	32	G	25	26	32
22	32	33	G	G	25	G	G	G	G	G	G	54	64	81	67	95	86	72	38	48	38	37	59	26
23	33	31	G	G	18			28	G	41	C	48	50	56	46	42	G	30	G	G	G	G	G	26
24	G	36	36	G	G			32	G	41	47	G	46	G	62	87	34	G	G		G	G	36	39
25	36	29	G	G				28		47	50	50	48	42	58	G	G	G	G	G	50	34	34	G
26	34	G	G		G		G	30	38	42	43	57	68	49	G	G	G	G	30	51	34		27	27
27	38	28	G	G	G			28	37	38	G	G	G	G	G	G	36	33	G	G	G	33	G	26
28	G			G		G	G	G	34	39	42	49	G	C	G	40	G	109	86	88	32	G		G
29	G	G	G				G	28	43	G	G	43	40	55	55	60	58	47	40		G	G	26	28
30	28	27	G	G		G		G	G	40	43	59	G	G	45	36	G	G	G	36	40	27	G	G
31	45		G	G	G			G	G	G	G	47	G	52	53	49	54	39	29	27	29	24	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	29	27	27	27	23	13	18	29	28	28	25	28	28	27	28	29	28	29	29	27	25	28	26	29
MED	28	G	G	G	G	G	G	28	36	40	43	48	46	40	42	40	34	34	30	32	26	24	26	28
U Q	35	28	G	G	G	G	G	30	38	43	50	52	58	50	54	43	48	41	41	37	39	31	33	34
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	15	G	G	G	G	G	G

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

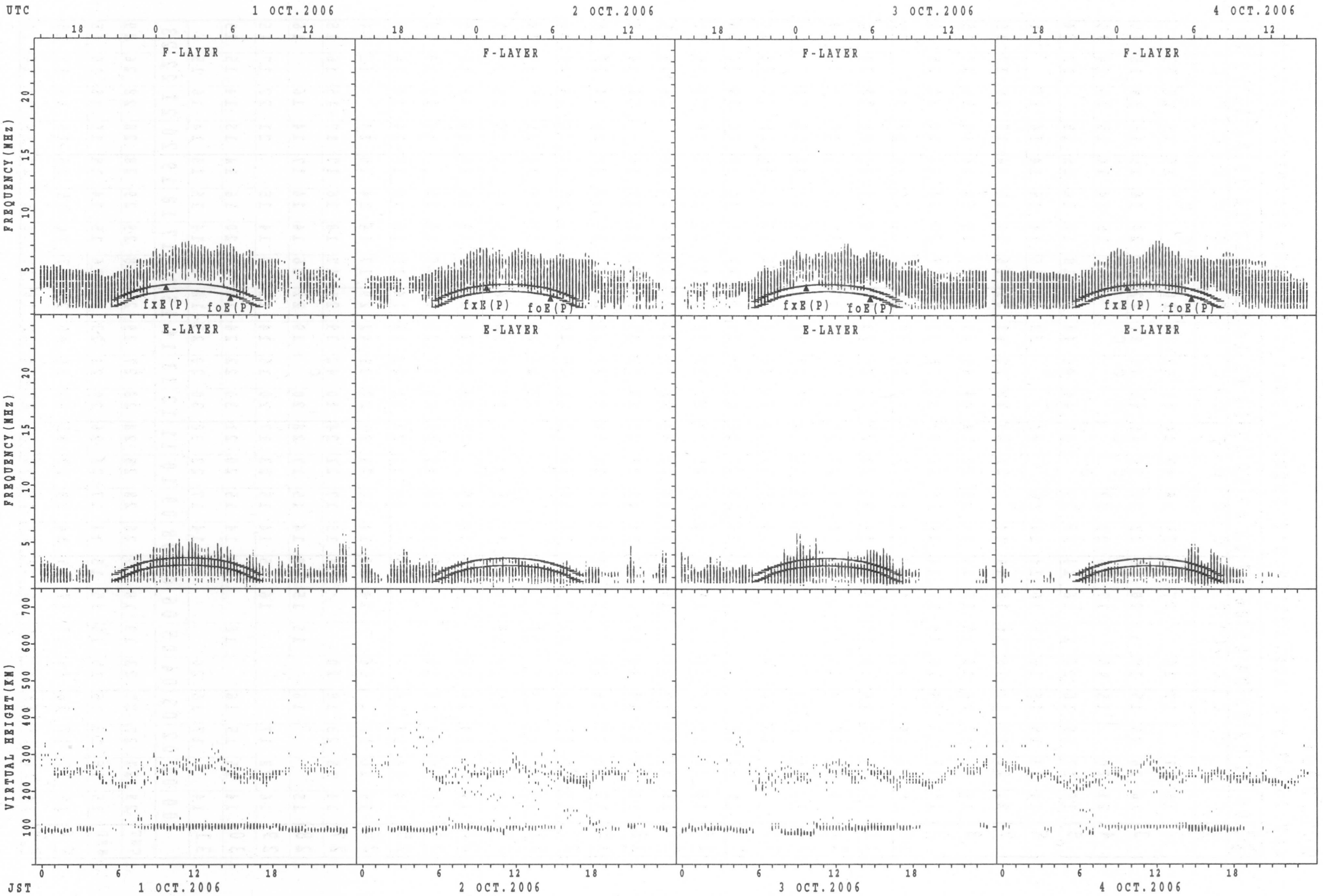
HOURLY VALUES OF fmin AT Okinawa

OCT. 2006

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

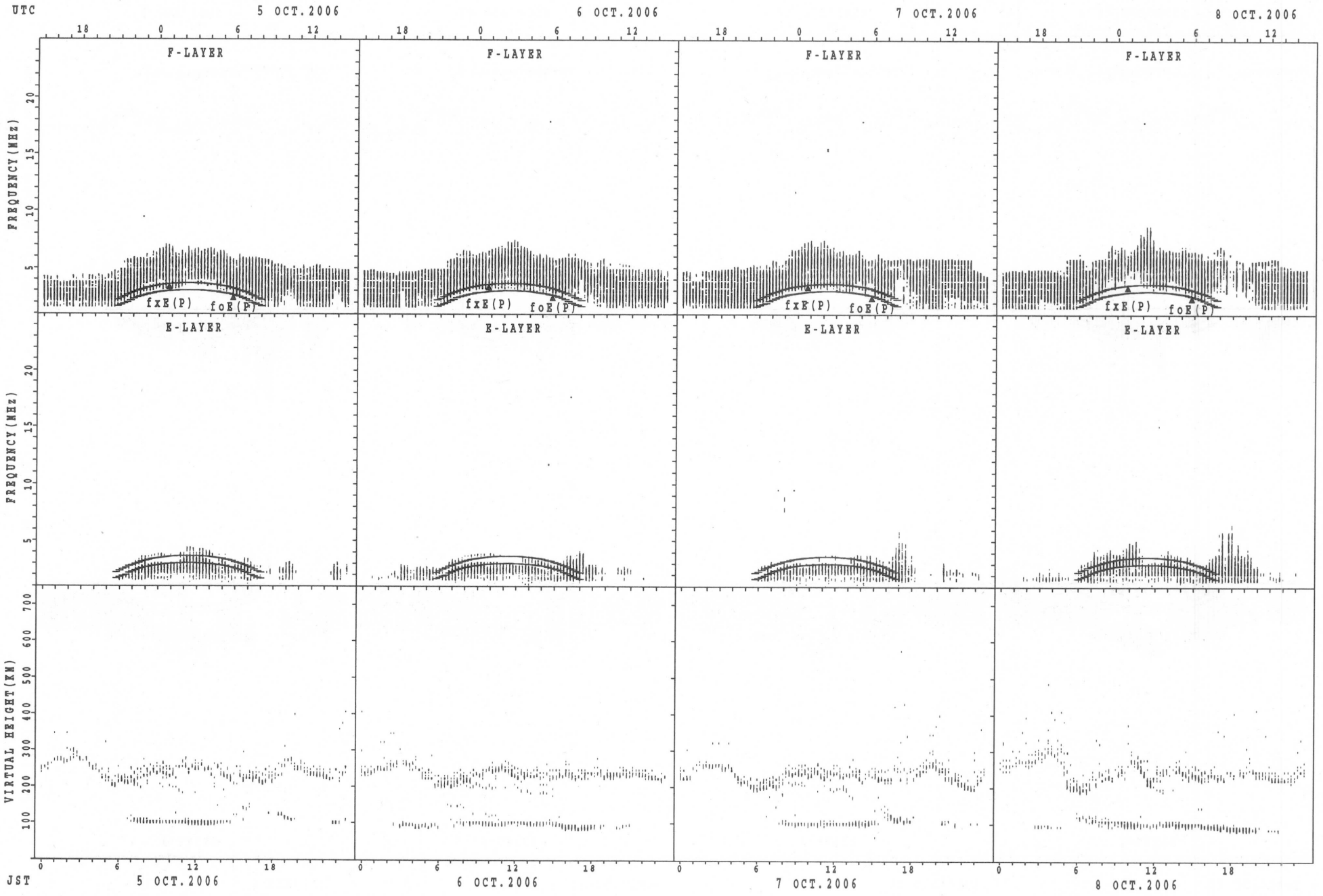
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	14
2	16	21		17	16		17	21	29	34	40	44	44	52	44	20	C	C	C	15	15	15	22	
3	16	16	20	15	15		20	16	23	27	39	45	45	49	27	22	20	20	16	15	16	18	15	15
4	21	20		15	15		17	16	23	29	C	C	C	C	C	C	C	15	14	14	15	15	14	15
5	15	17	16	16	14	17	16	14	15	23	C	49	44	44	44	20	18	18	14	15	15		18	24
6	14	14	15	15	16	15	16	14	14	16	C	44	C	C	22	20	16	14	14	14	14	16		14
7	21	20	15	14	16	16	15	14	14	C	21	23	22	22	41	21	16	14	15	14	15	15	17	15
8	14	15	15	20	15	15	15	14	15	20	22	24	44	41	47	39	20	15	14	14	14	15	17	15
9	15	15	17	14	16	15	17	14	14	15	21	42	29	26	22	20	17	20	14	16	14	14	15	14
10	15	16	16	15	14		15	17	14	18	22	42	33	20	42	20	15	16	15	14	14	18		15
11	15	15	16	16	14	15	14	14	14	15	21	22	30	28	23	40	17	14	14	14	15	15	14	15
12	14	14	15	14	14	14	15	14	14	15	20	20	33	34	47	32	17	15	14	14	18	15	18	14
13	14	14	16	14				14	14	15	22	20	32	15	22	14	14	15	16	16	18	16		21
14			18	16	14			15	14	18	21	29	28	46	24	22	20	16	14	15	15	15	15	14
15	15	21	15					21	14	20	27	28	28	23	23	22	17	14	14	18	14	14	20	14
16	14	20	14	16	16		15	20	14	18	20	27	27	23	23	20	17	15	18	14	14	14	15	17
17	16	14	15	15	14		15	15	14	18	22	32	28	29	21	21	15	14	14	14		14	15	15
18	14	15	14	15	14	17		17	14	18	26	23	28	21	27	23	21	17	17	14		16	14	14
19	15	16	20	14	18		18	14	14	17	21	21	30	23	22	21	14	14	14	20	14	14	15	15
20	15	15	15	16	14	18		22	14	16	18	22	21	20	20	18	14	14	15	14	14	14	14	16
21	15	14	14	15		16		C	C	C	C	C	22	24	23	21	15	17	14	14	15	15	15	14
22	14	15	22	15	14	14	14	20	14	29	20	33	33	32	28	16	17	15	14	15	15	15	14	17
23	14	15	15	16	14			15	14	16	C	29	29	20	20	14	15	14	15	16	15	14	15	15
24	16	14	14	14	15			15	18	16	17	18	23	22	23	20	16	14	15		14	15	14	15
25	14	14	14	15				14		15	17	22	21	22	18	14	15	15	18	15	14	14	14	15
26	15	16	16		14		14	14	14	15	21	21	20	21	42	29	17	14	14	15	14		15	14
27	14	15	23	18	20			14	15	17	21	24	40	42	39	21	17	18	16	17	17	15	16	15
28	15			16		15	15	20	14	15	17	28	20	C	39	22	26	14	14	17	14	16		16
29	16	22	17				16	15	14	15	23	17	20	16	14	15	14	14	15		21	22	17	15
30	14	15	15	16		18		18	14	15	20	21	30	22	24	18	15	20	16	14	15	14	15	15
31	14		17	16	20			20	14	17	22	30	30	20	23	18	15	14	15	15	14	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	29	27	27	27	23	13	18	29	28	28	25	28	28	27	29	29	28	29	29	28	28	28	26	29
MED	15	15	15	15	15	15	15	15	14	17	21	26	29	23	23	20	16	15	14	15	15	15	15	15
U Q	15	17	17	16	16	17	17	19	14	19	22	32	33	34	40	22	17	16	15	15	15	16	17	15
L Q	14	14	15	15	14	15	15	14	14	15	20	21	22	21	22	18	15	14	14	14	14	14	14	14

SUMMARY PLOTS AT Wakkanai

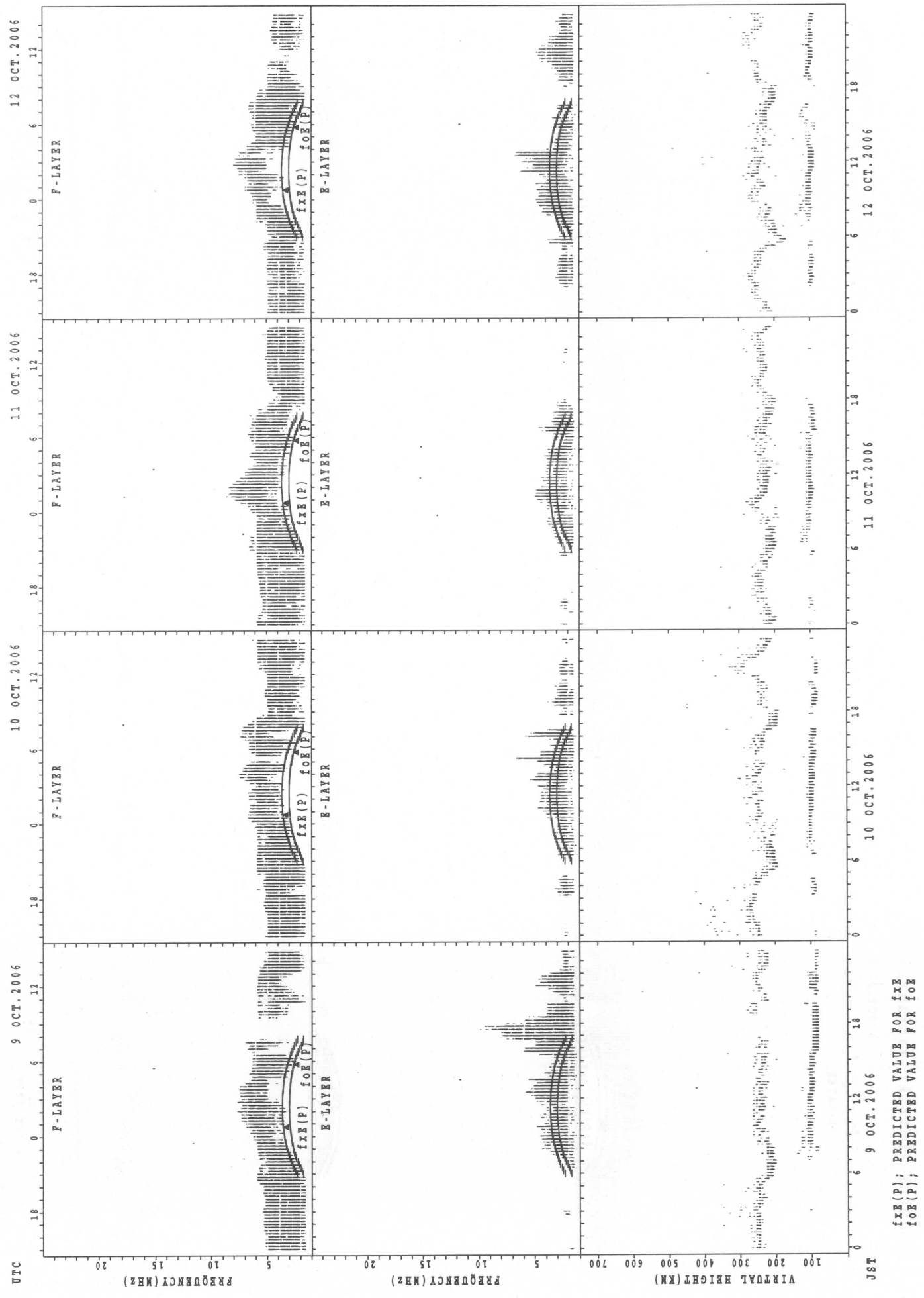


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

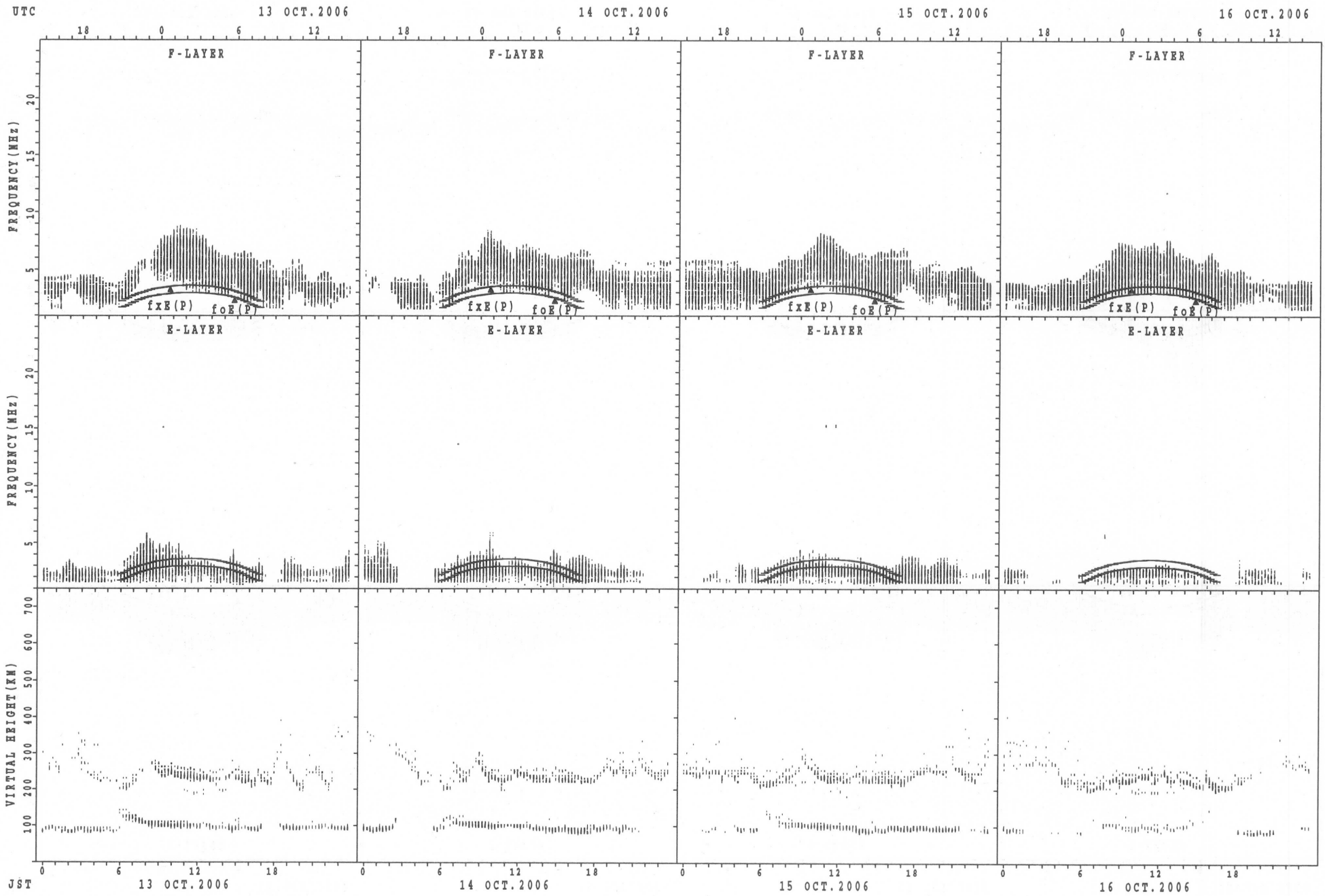
SUMMARY PLOTS AT Wakkanai



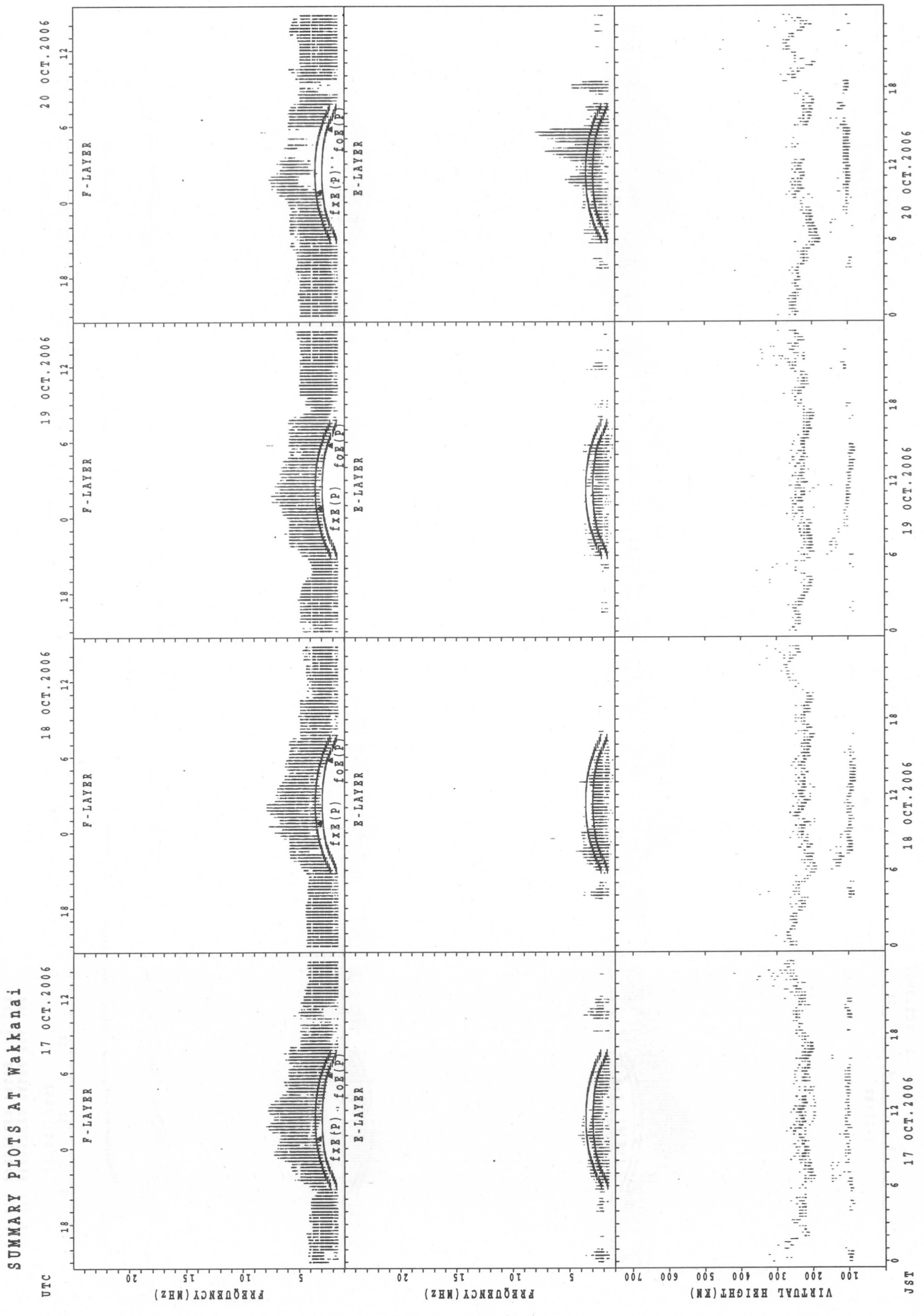
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE


SUMMARY PLOTS AT Wakkanai
UTC
JST
9 OCT.2006
10 OCT.2006
11 OCT.2006
12 OCT.2006
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

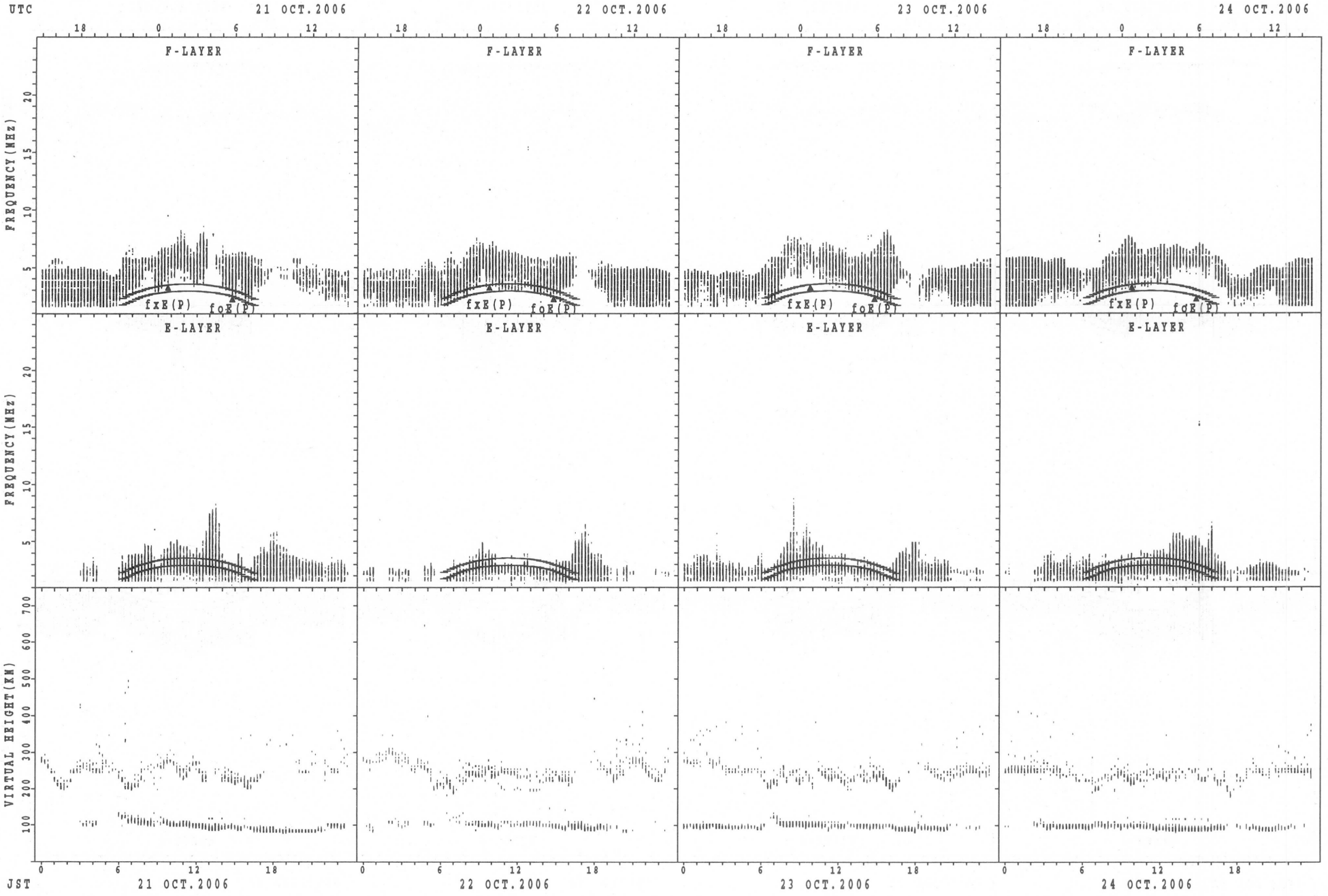
SUMMARY PLOTS AT Wakkanai



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

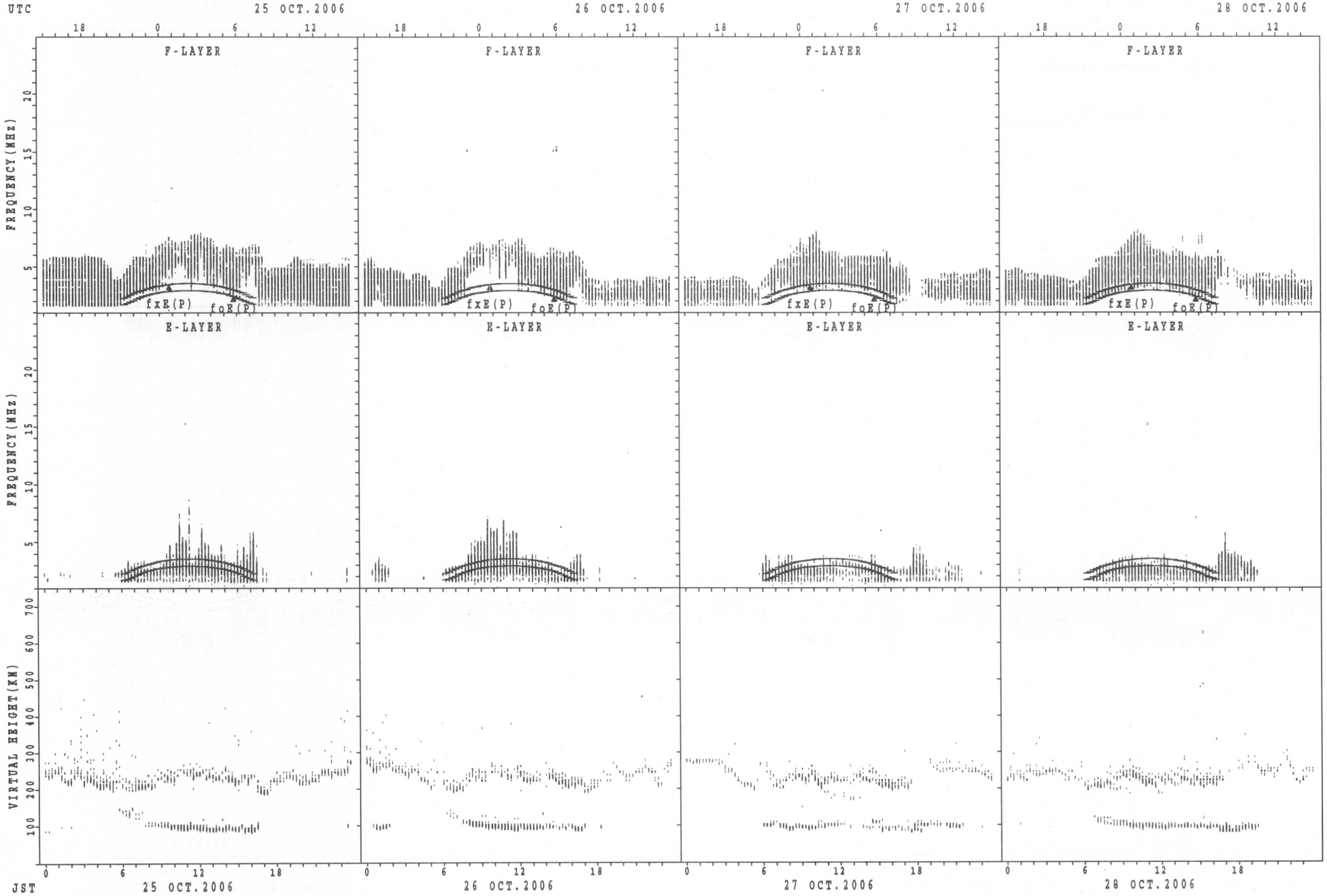

SUMMARY PLOTS AT Wakkanai
UTC
JST
17 OCT.2006
18 OCT.2006
19 OCT.2006
20 OCT.2006
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P)
foE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



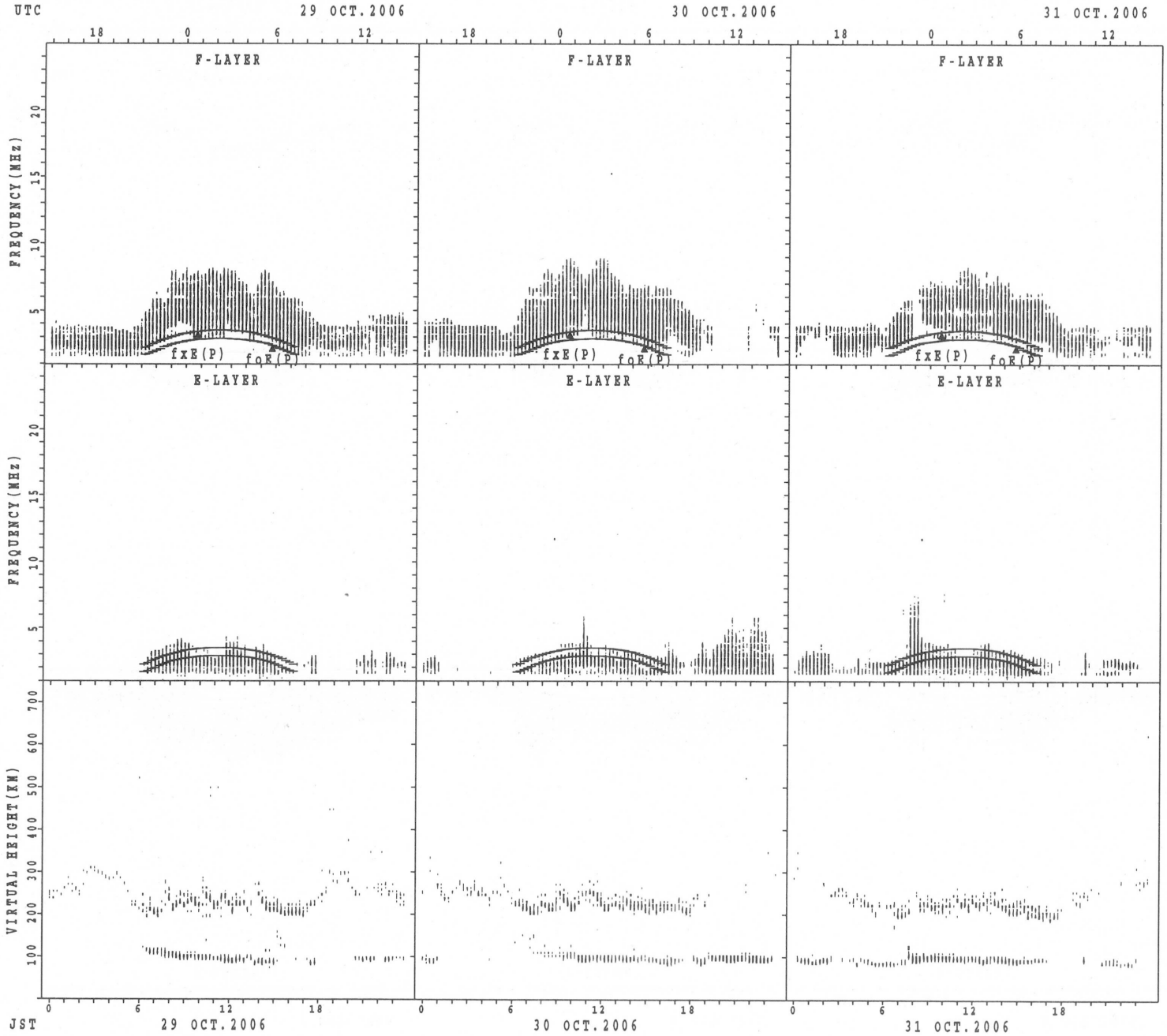
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai

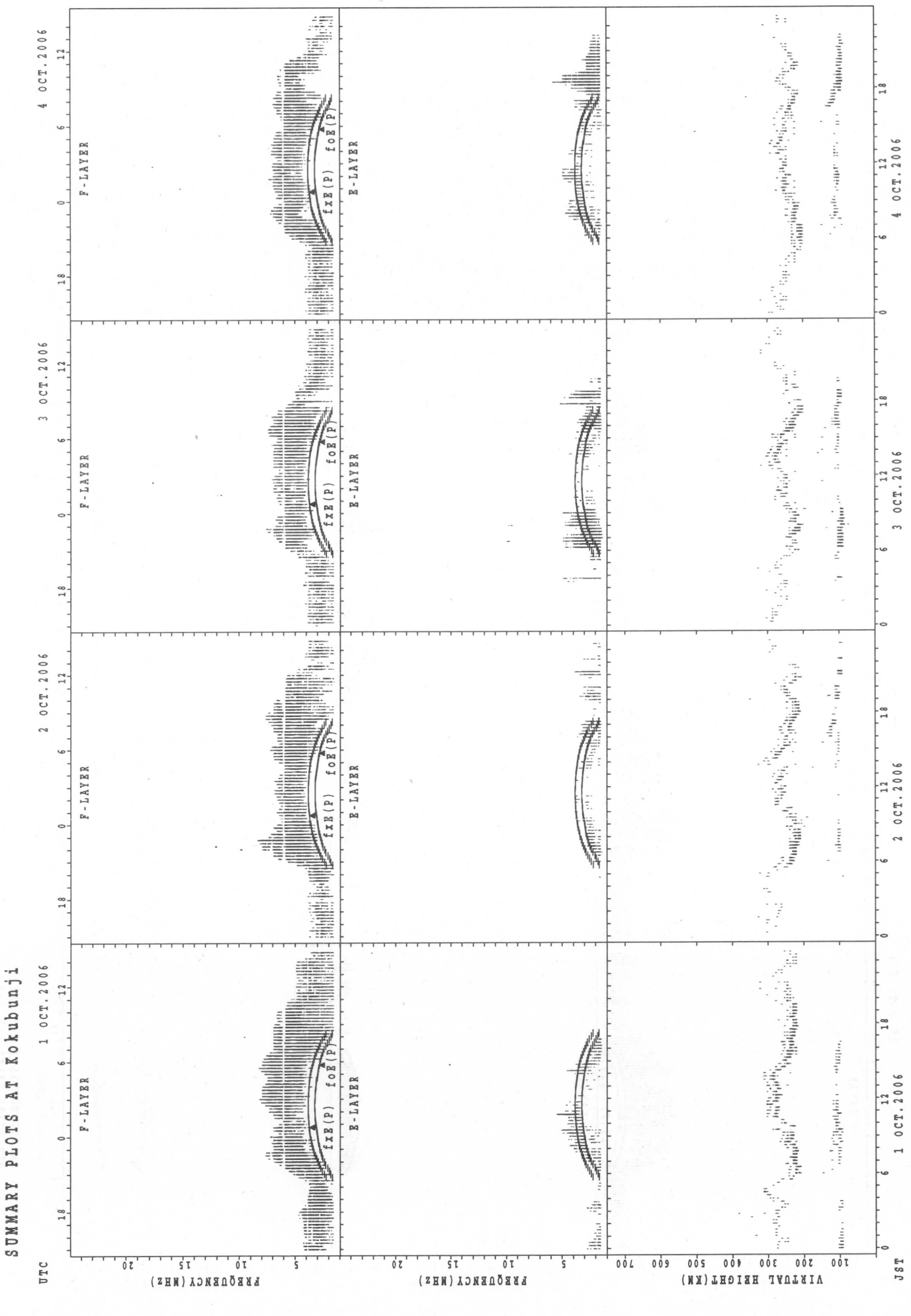


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

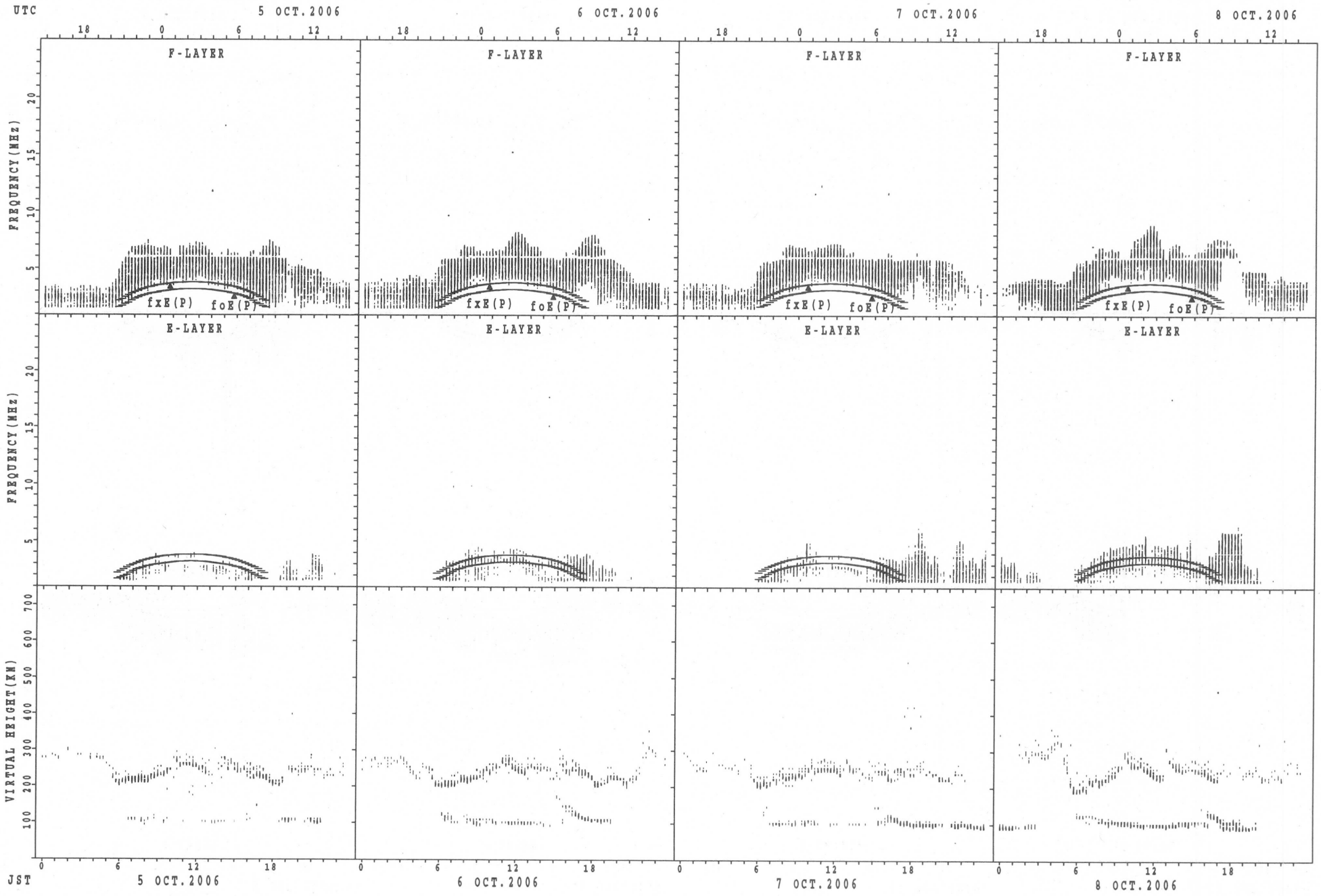
SUMMARY PLOTS AT Wakkanai



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

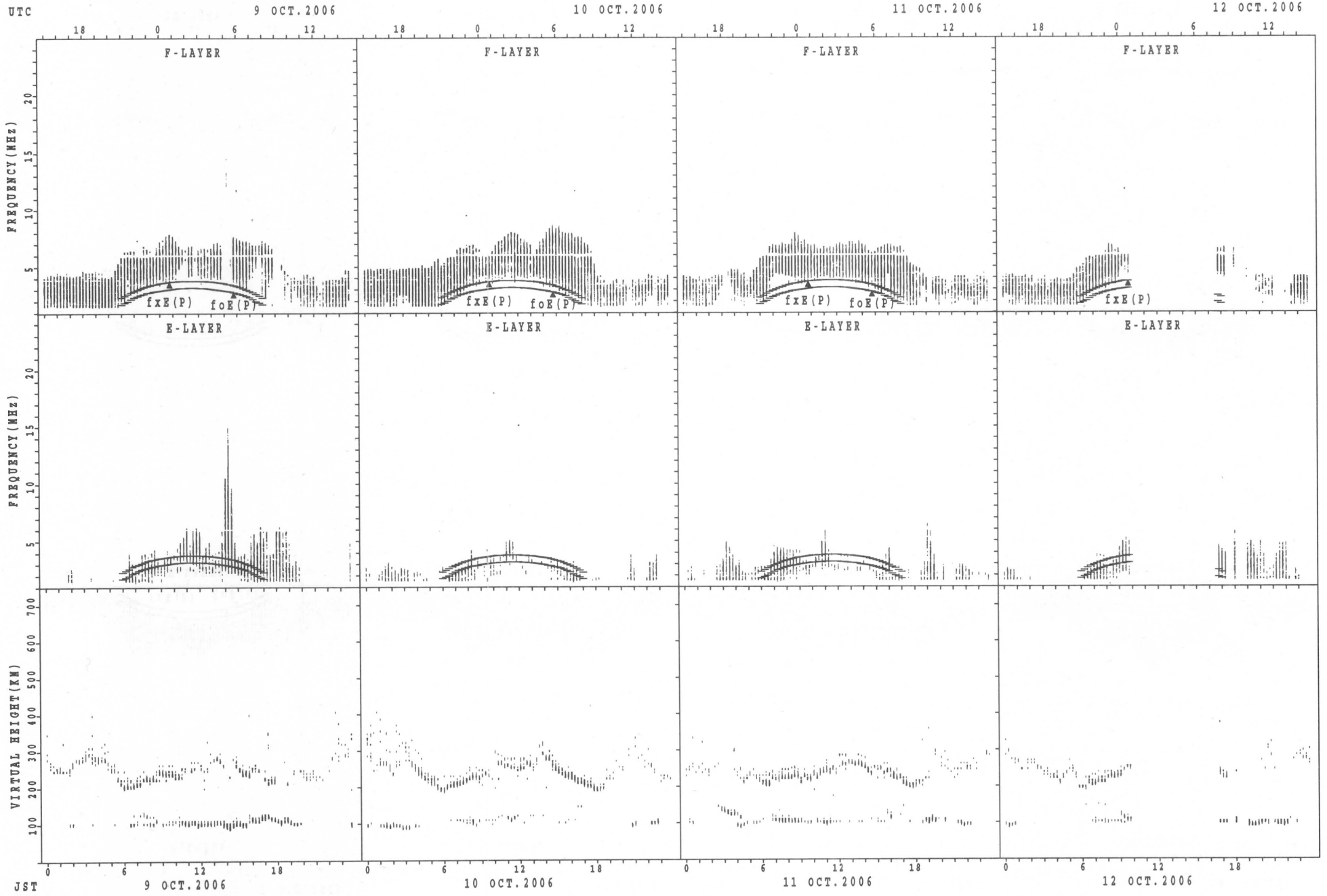

SUMMARY PLOTS AT Kokubunji
UTC
1 OCT.2006
2 OCT.2006
3 OCT.2006
4 OCT.2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

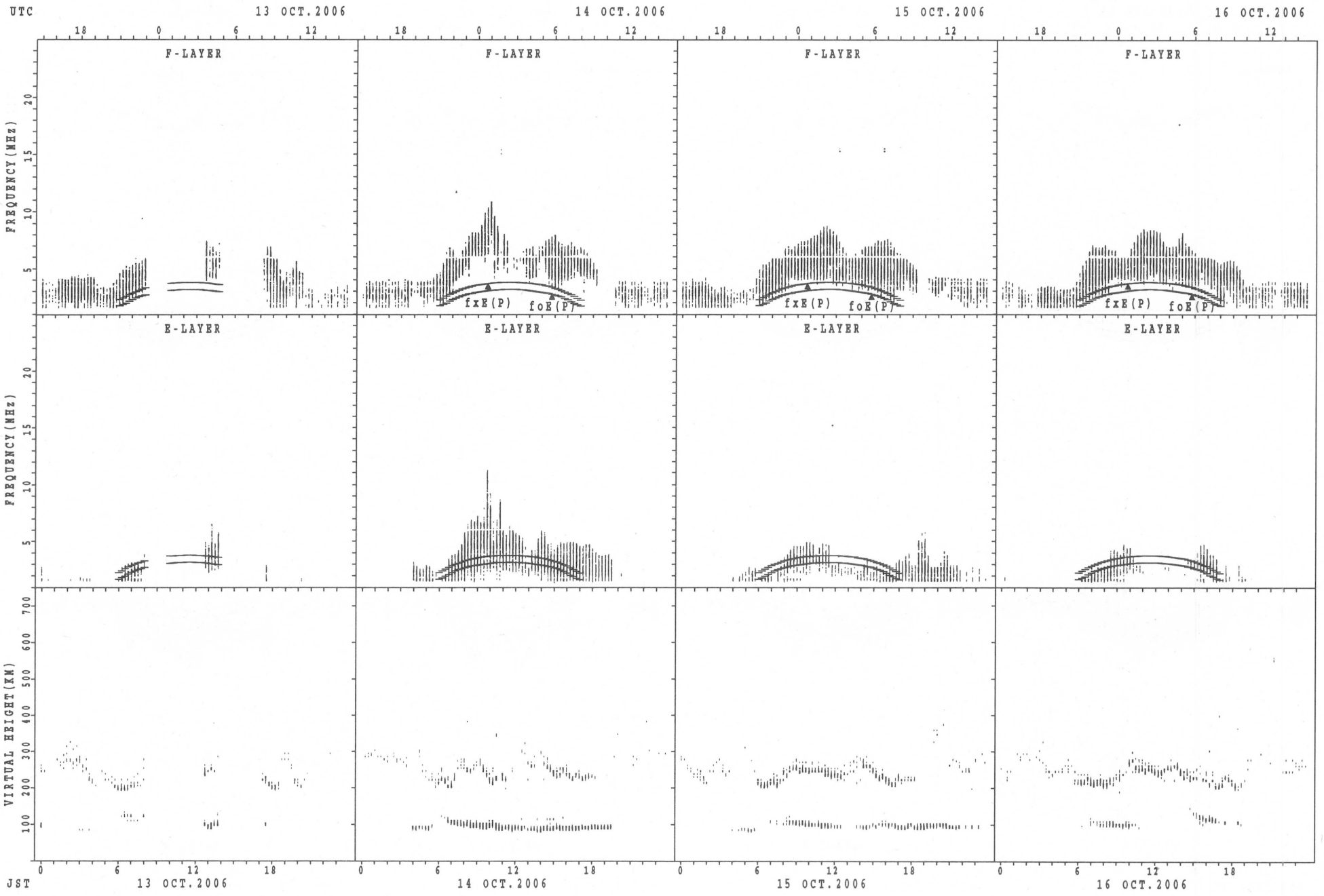


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

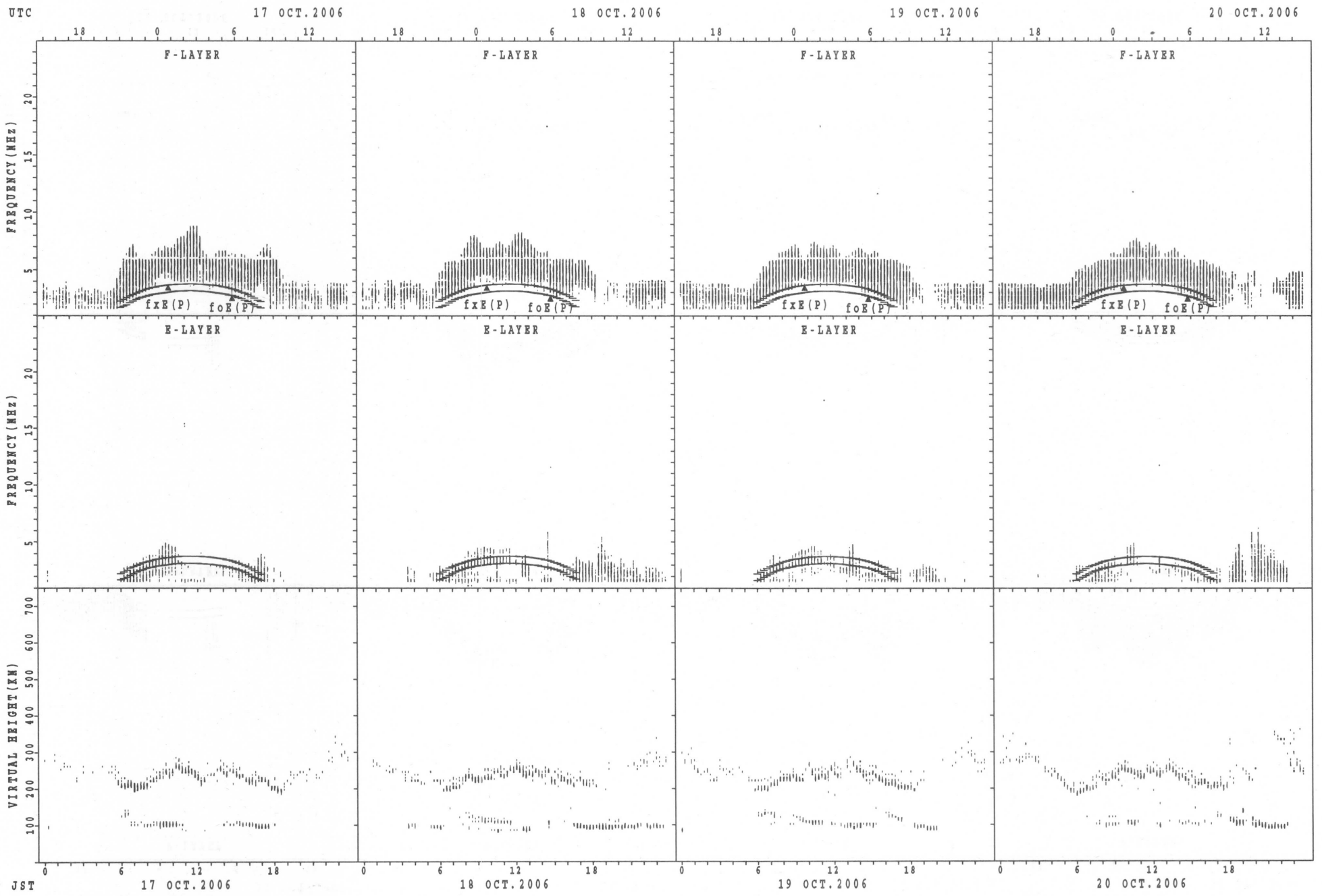


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE



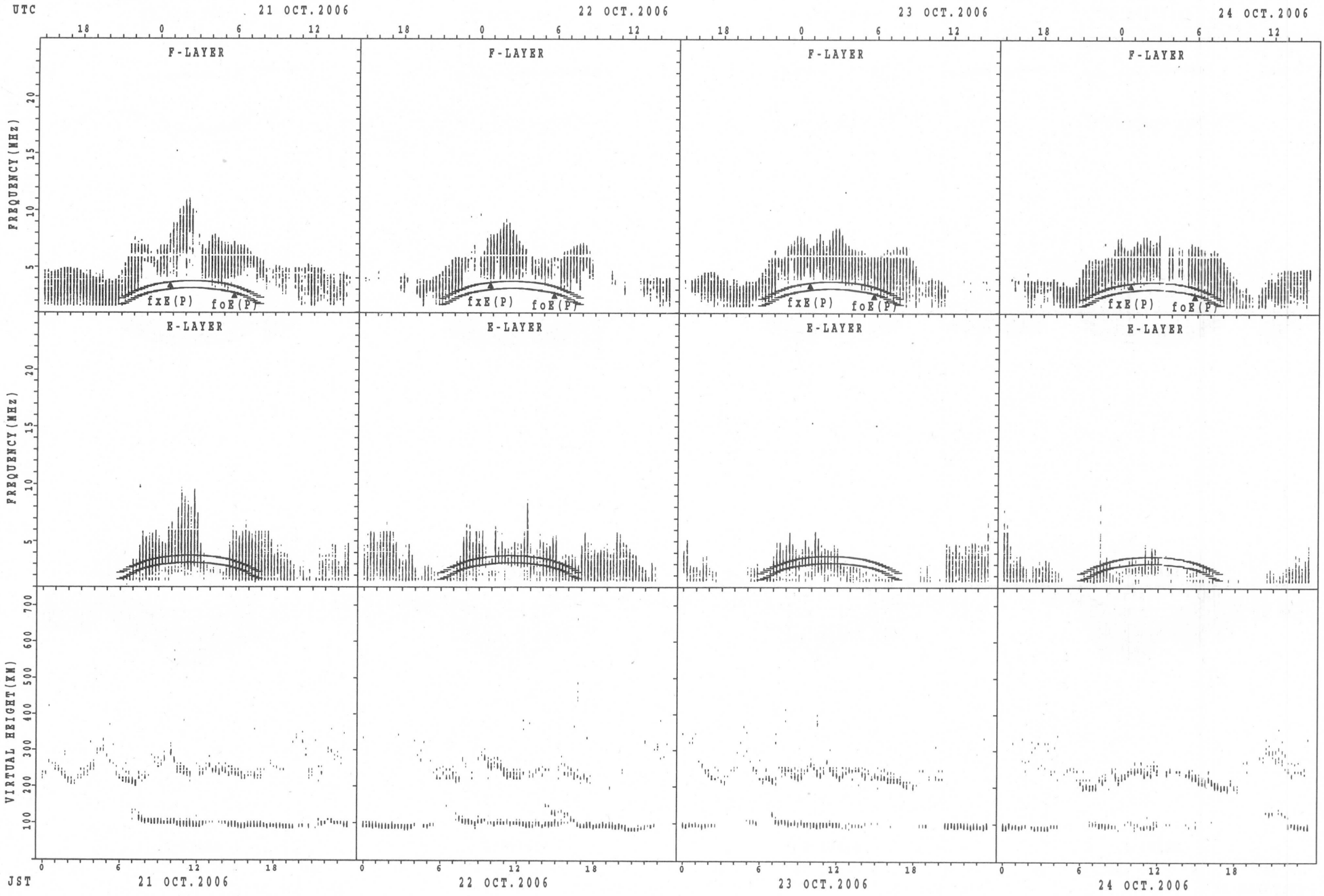
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



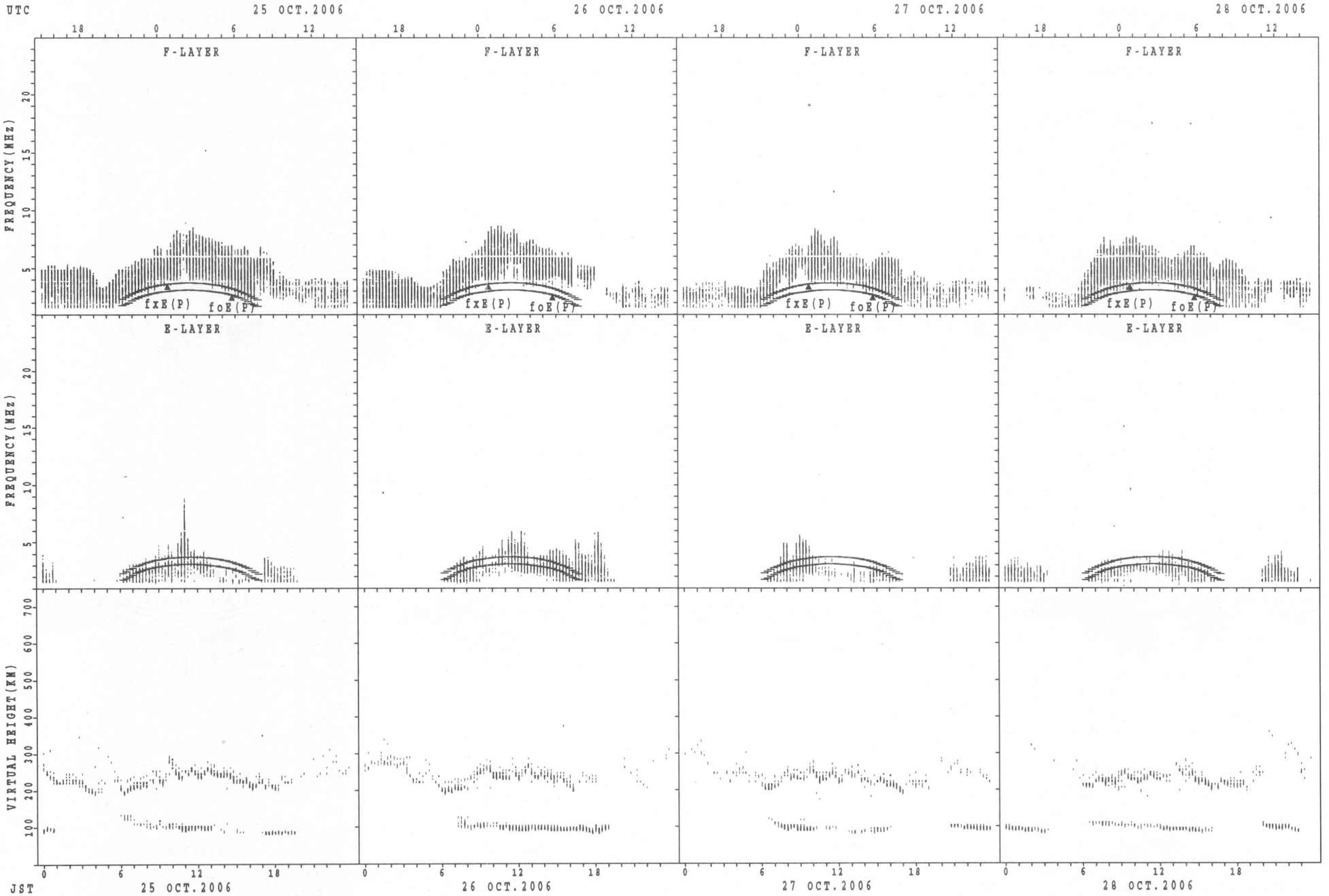
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



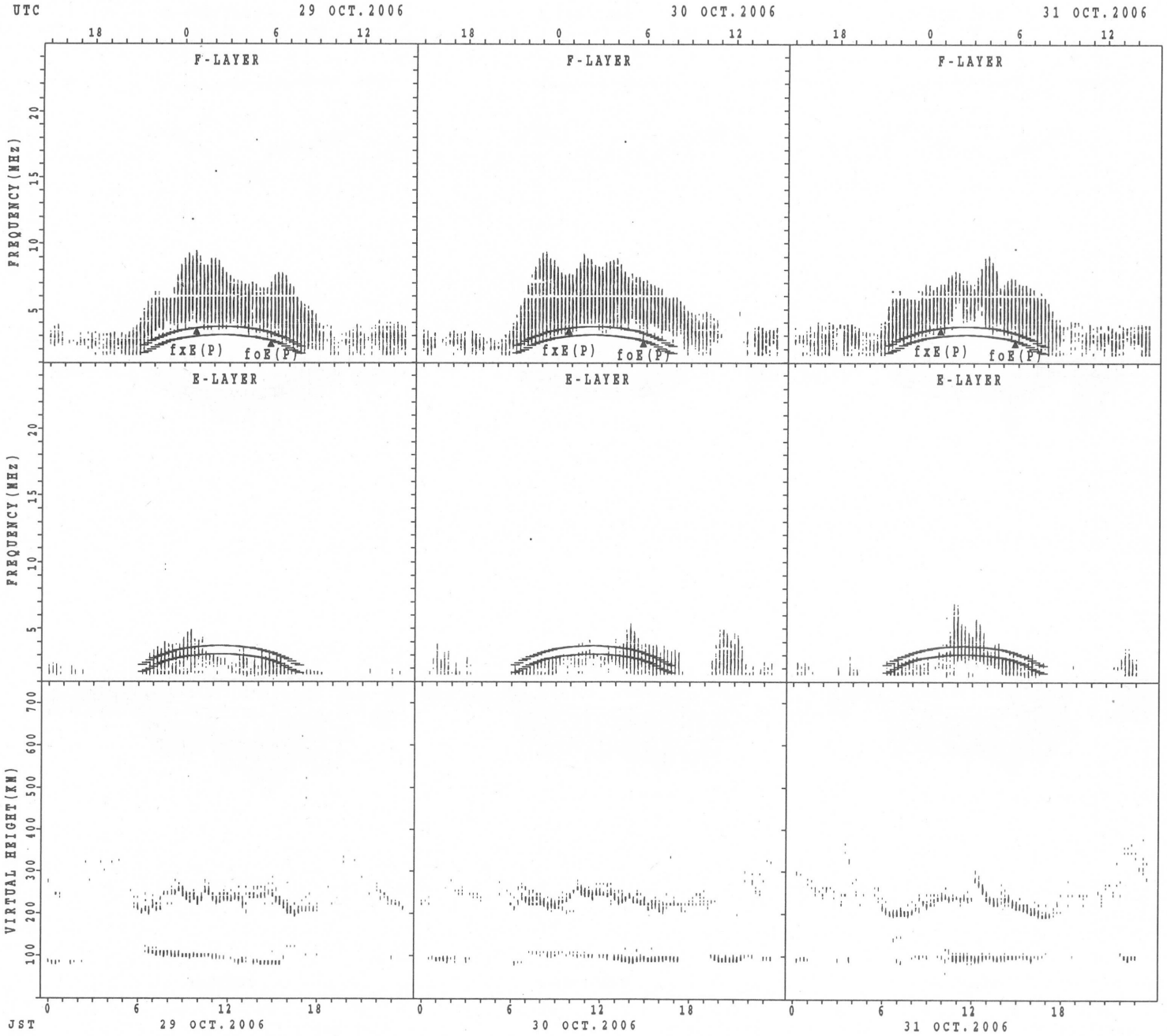
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



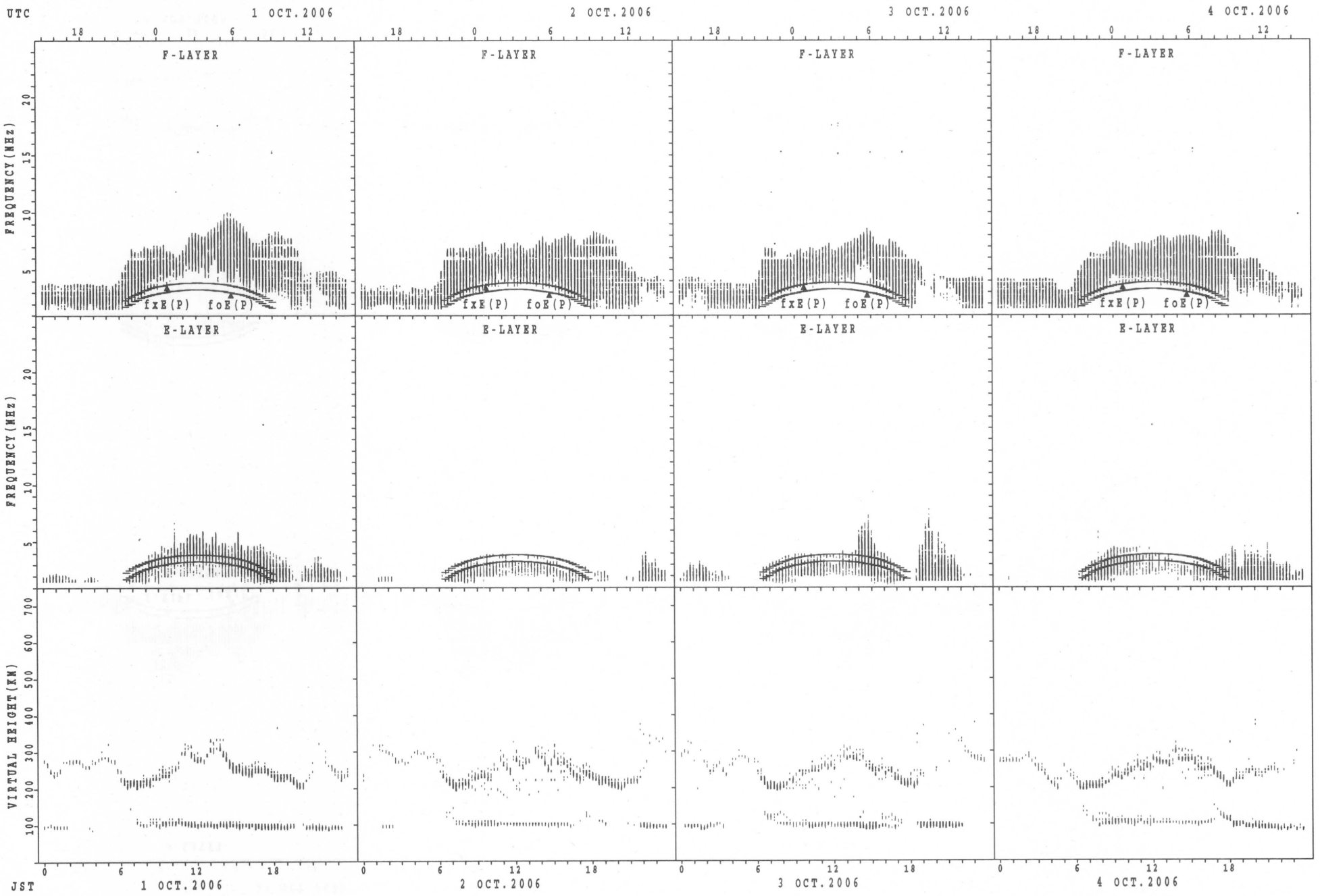
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



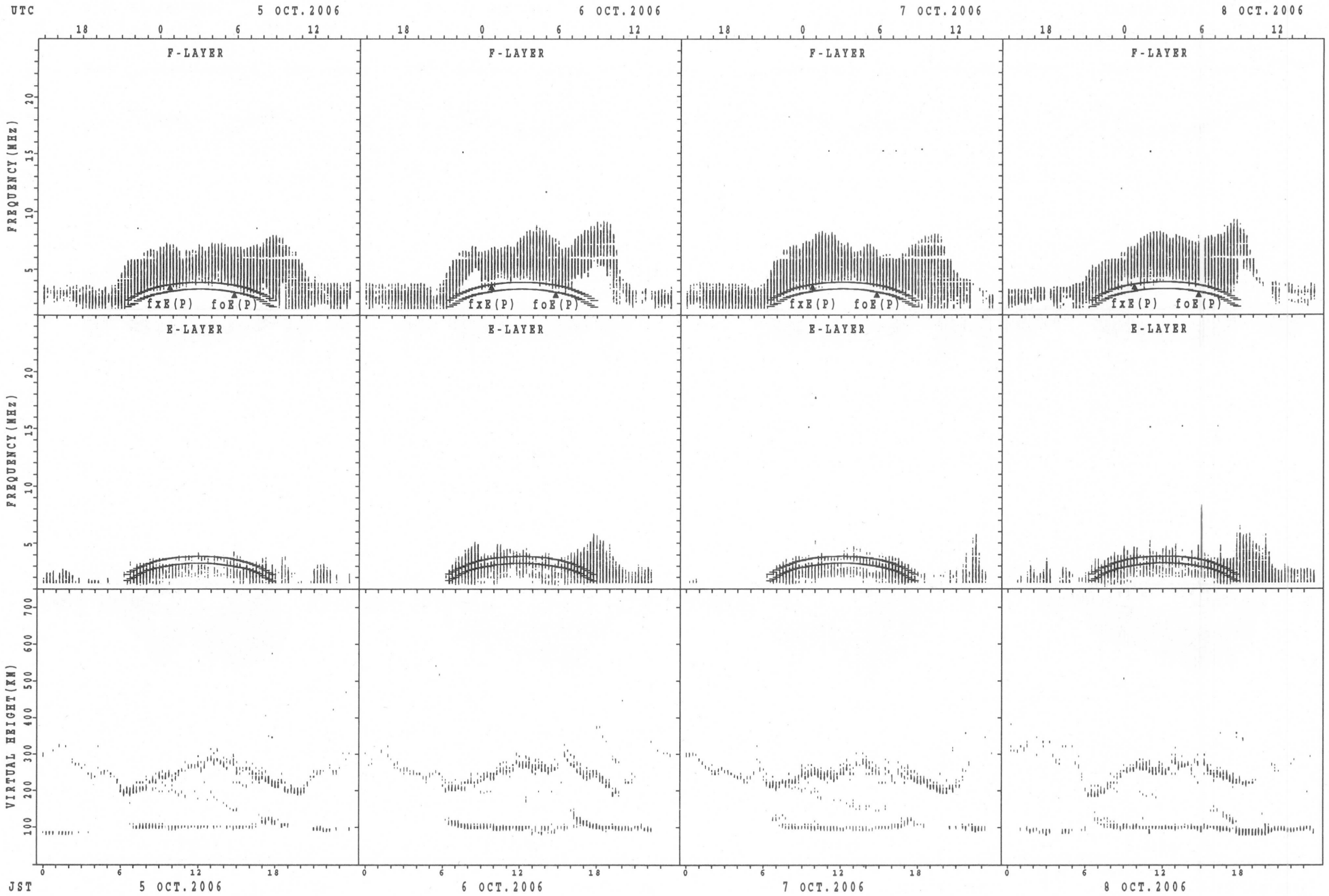
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



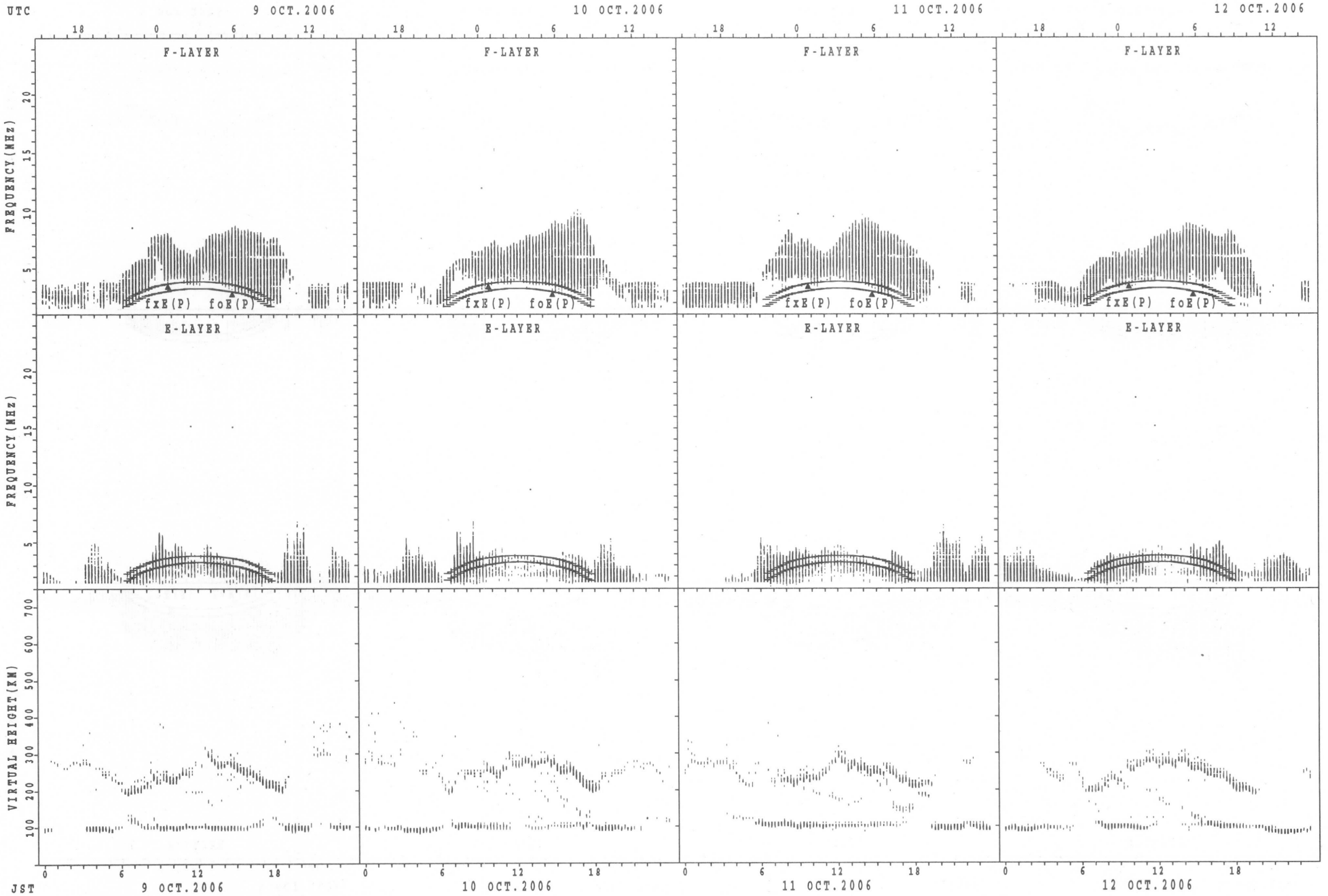
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



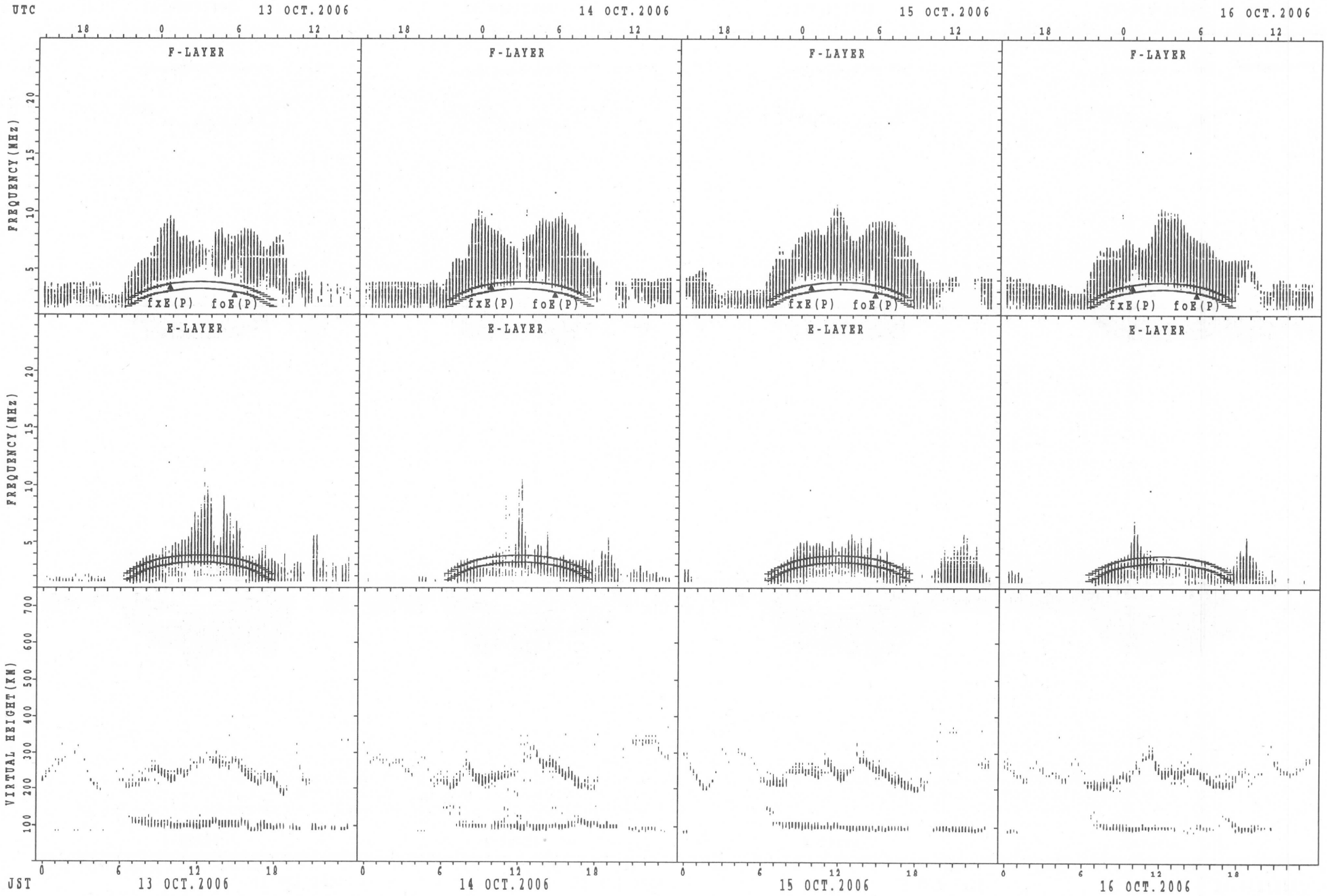
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



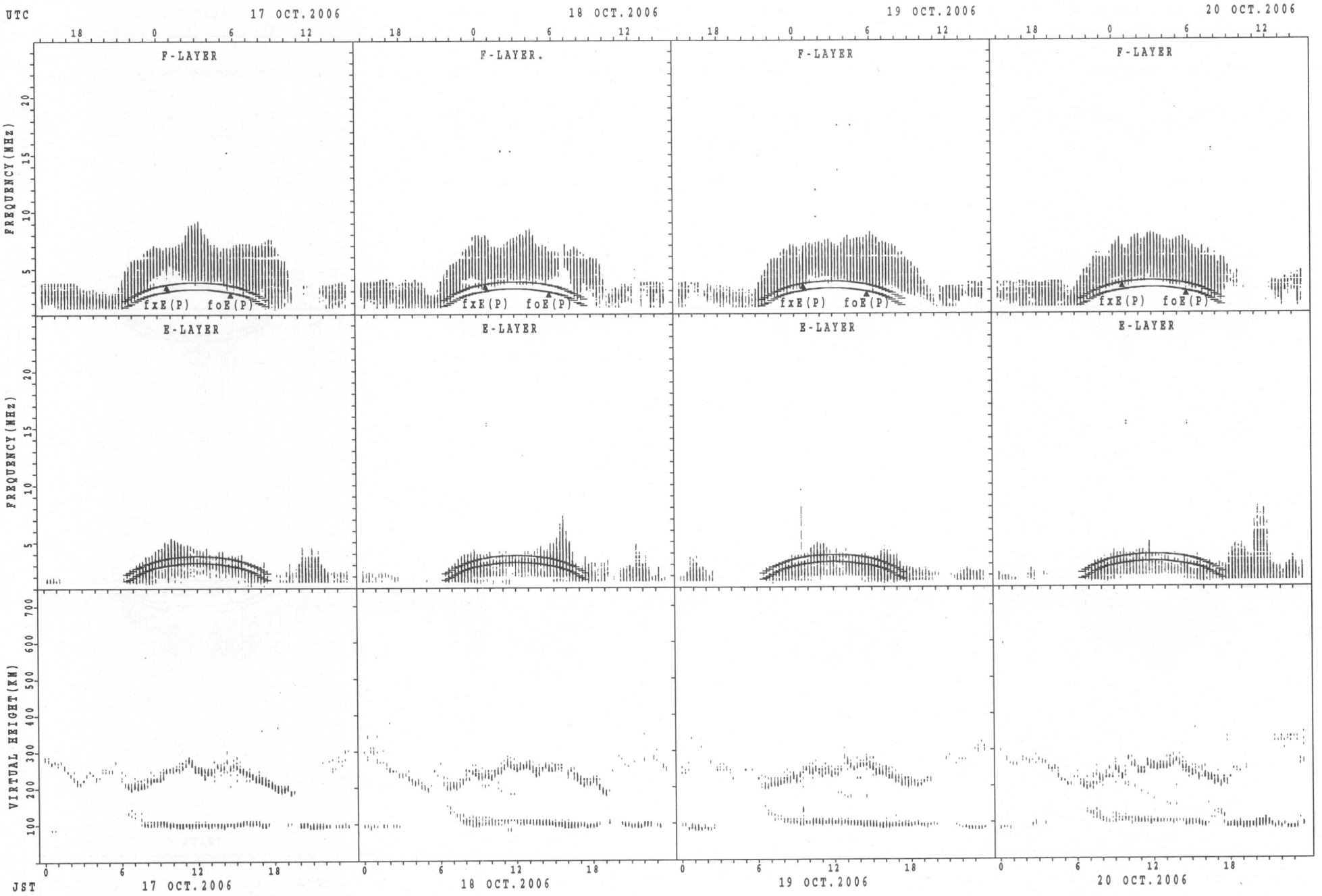
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



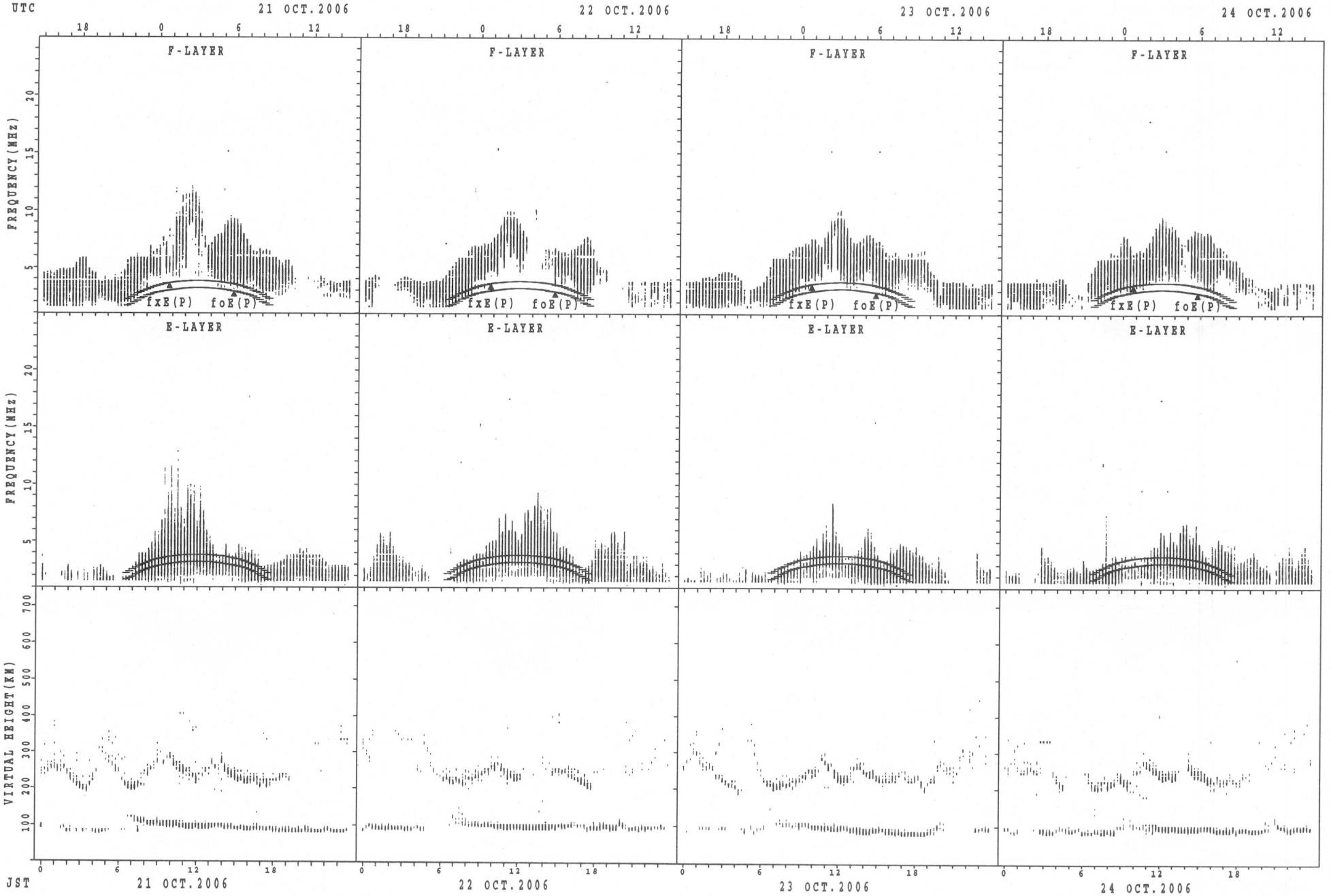
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



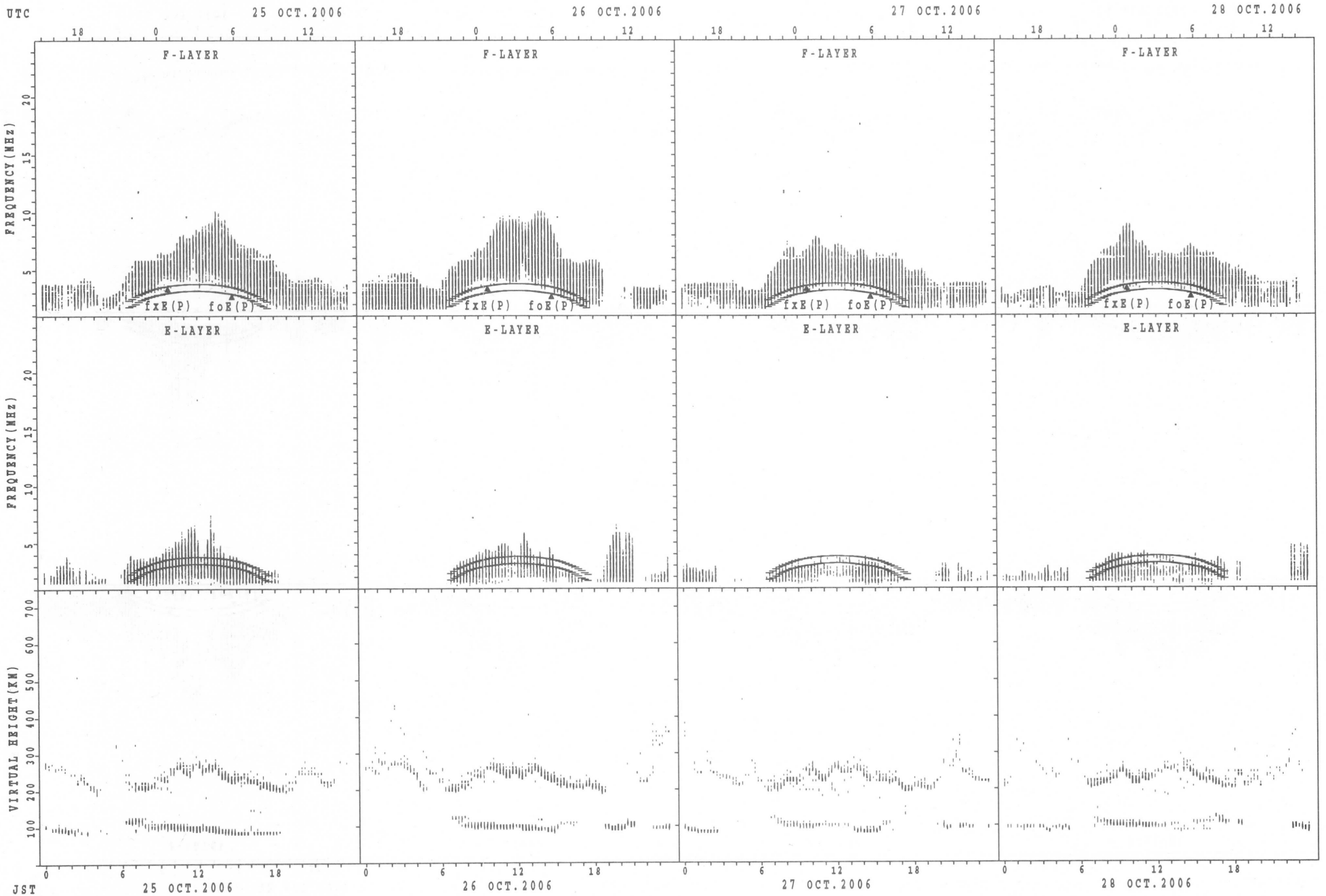
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



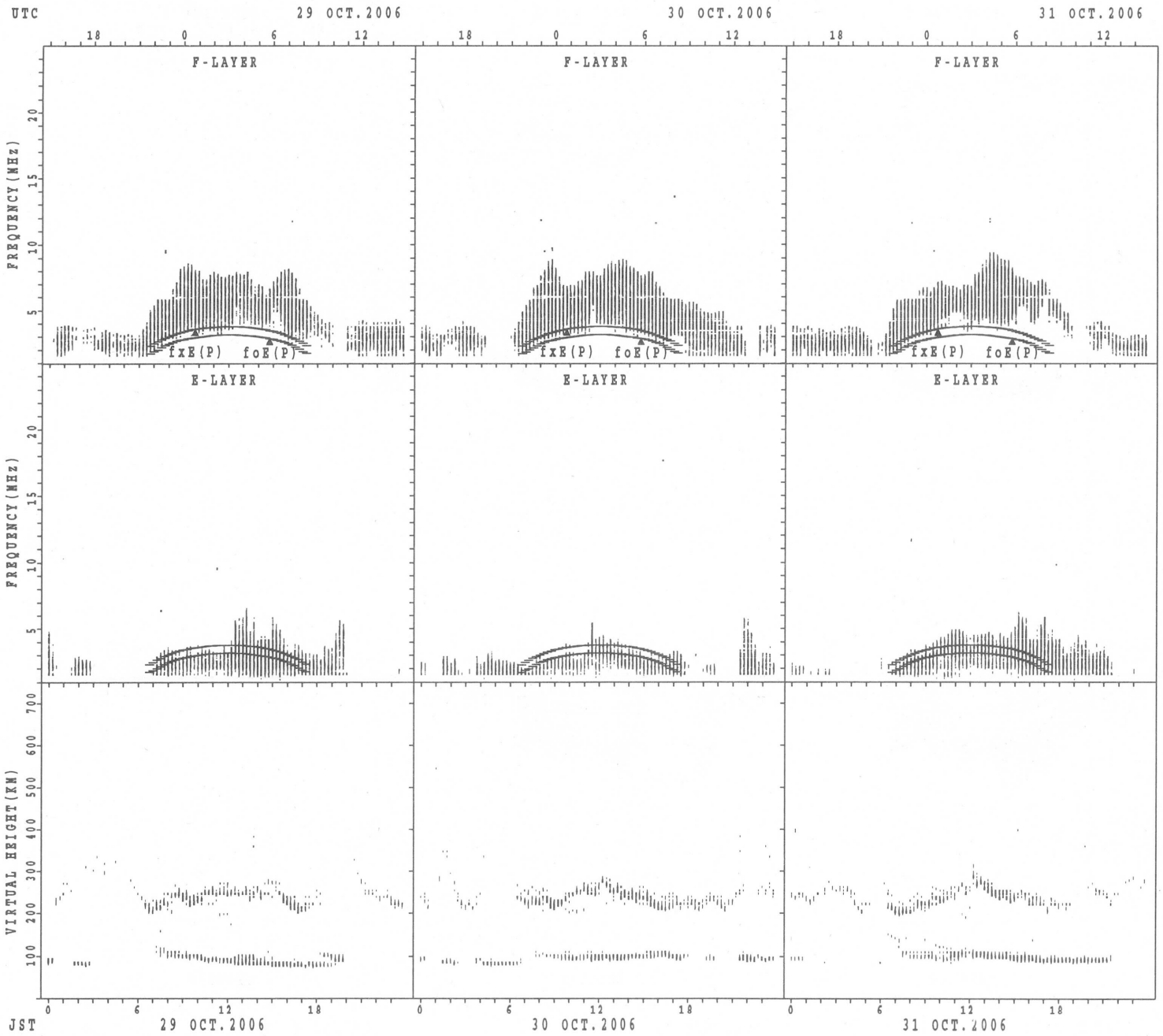
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



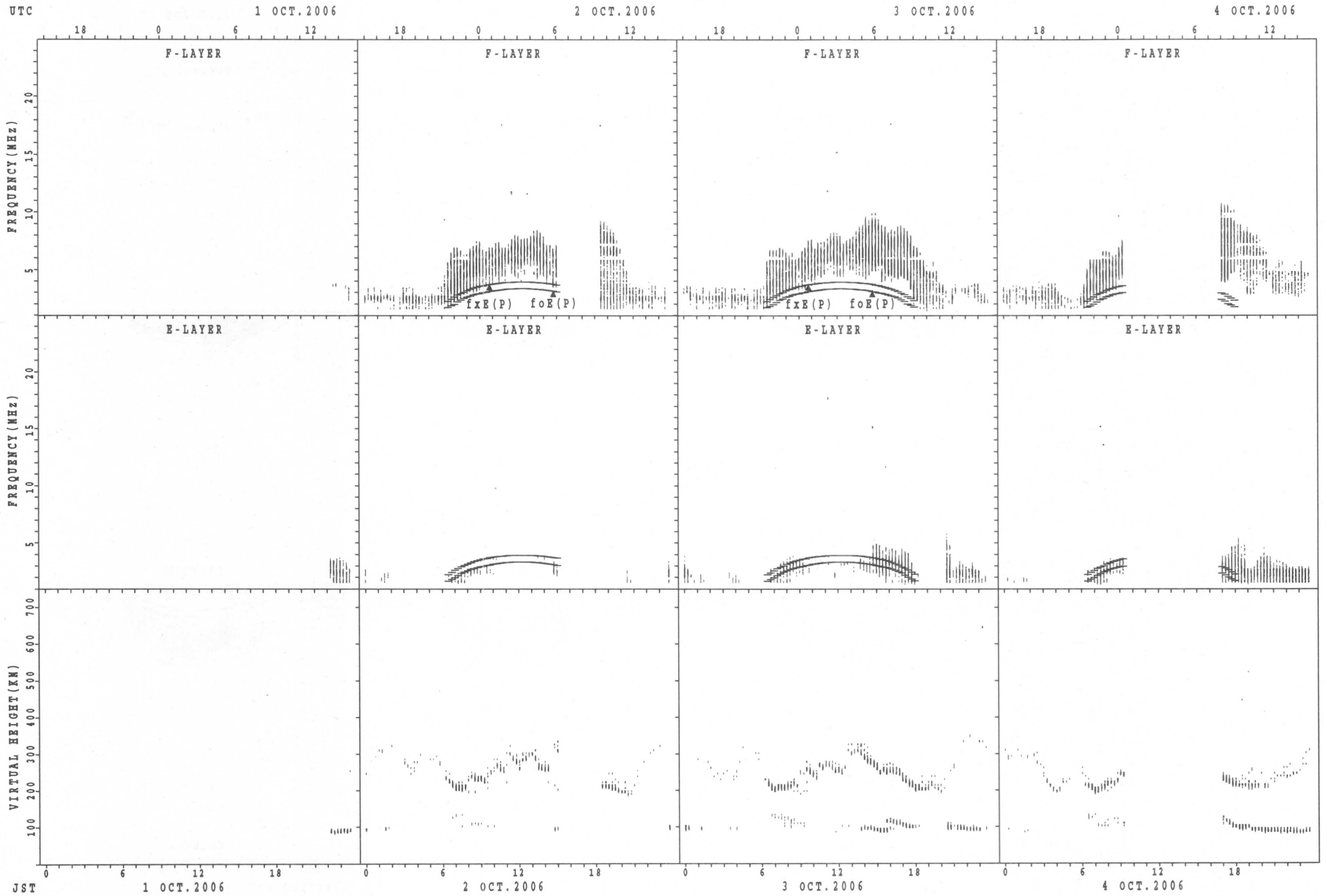
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



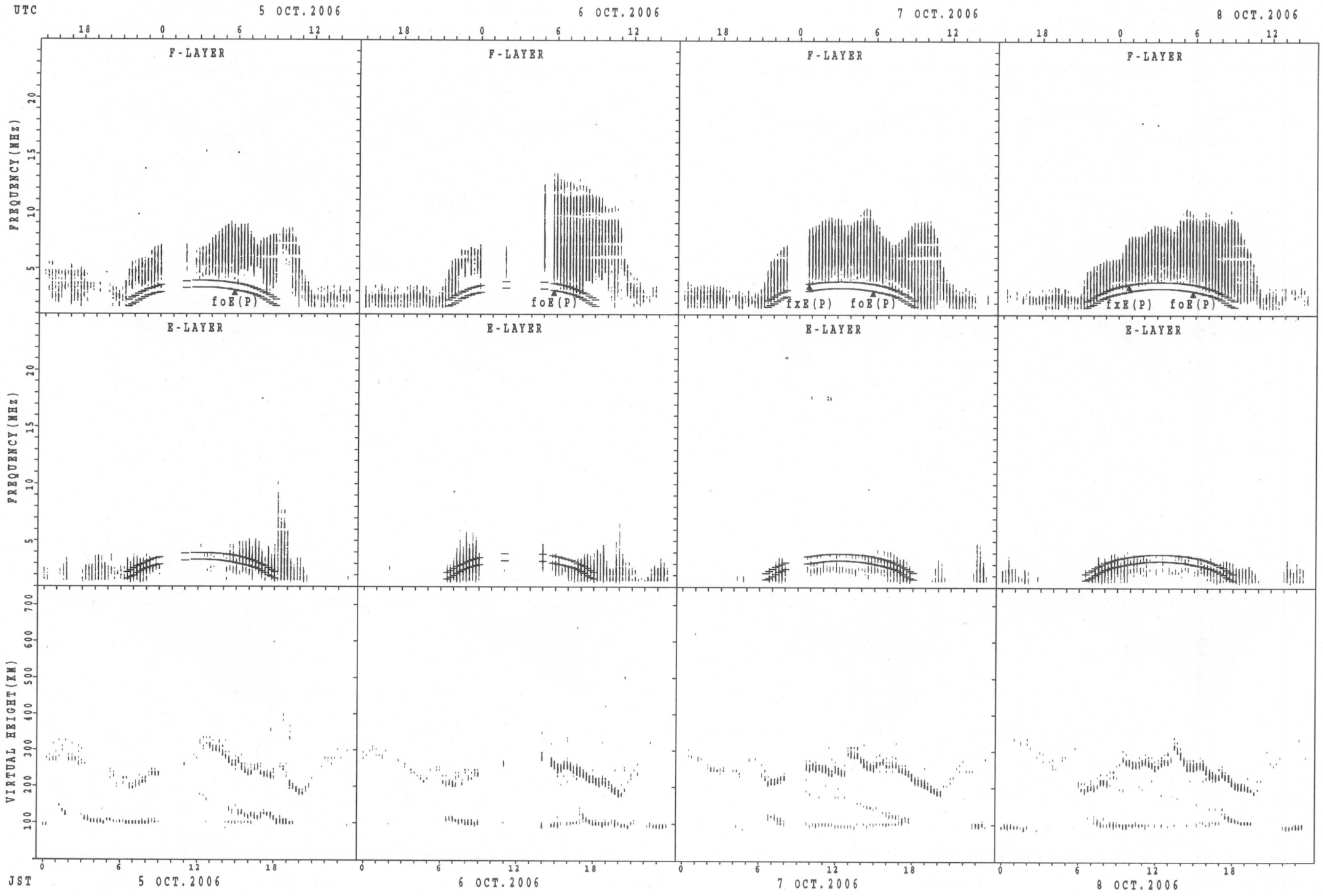
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



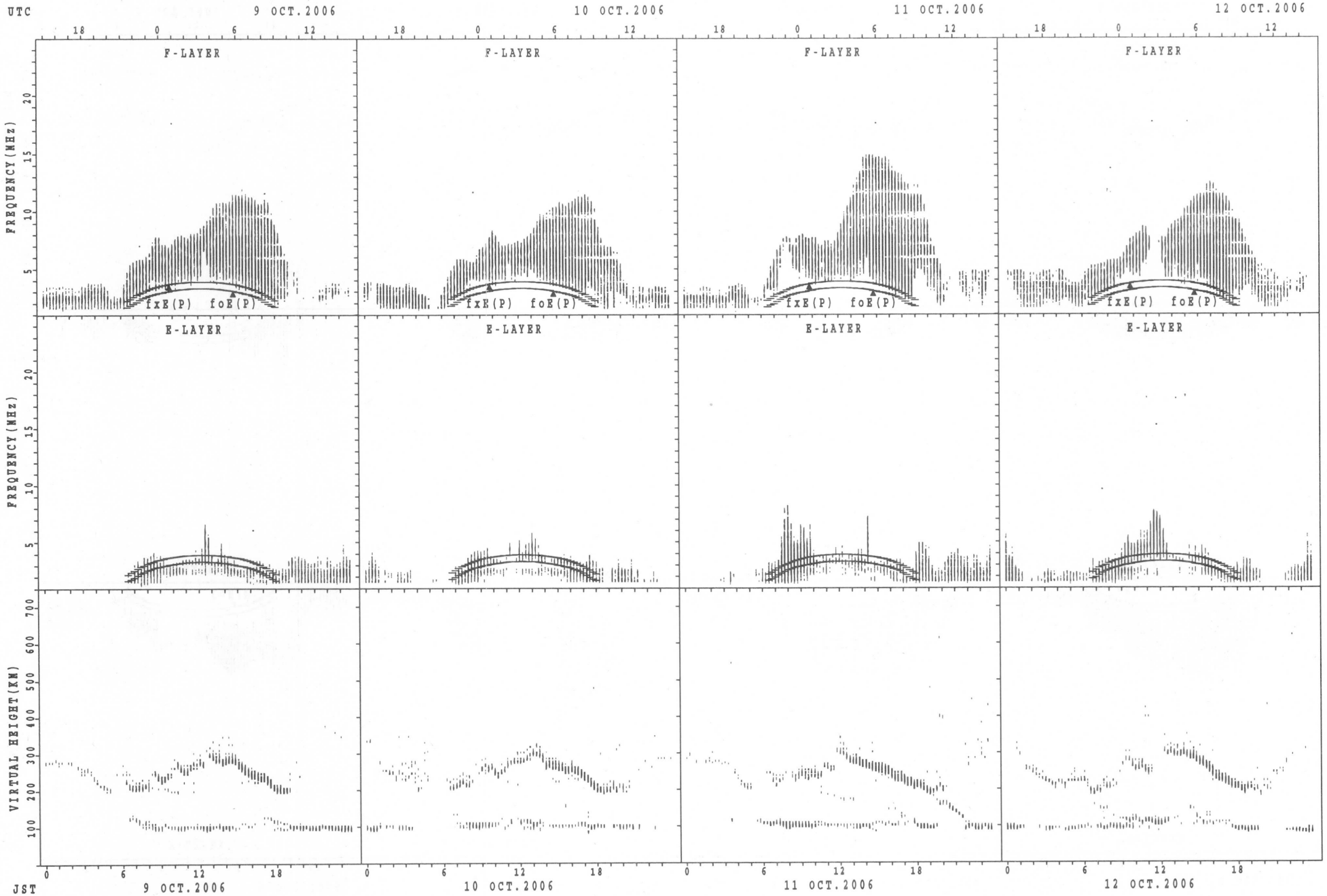
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



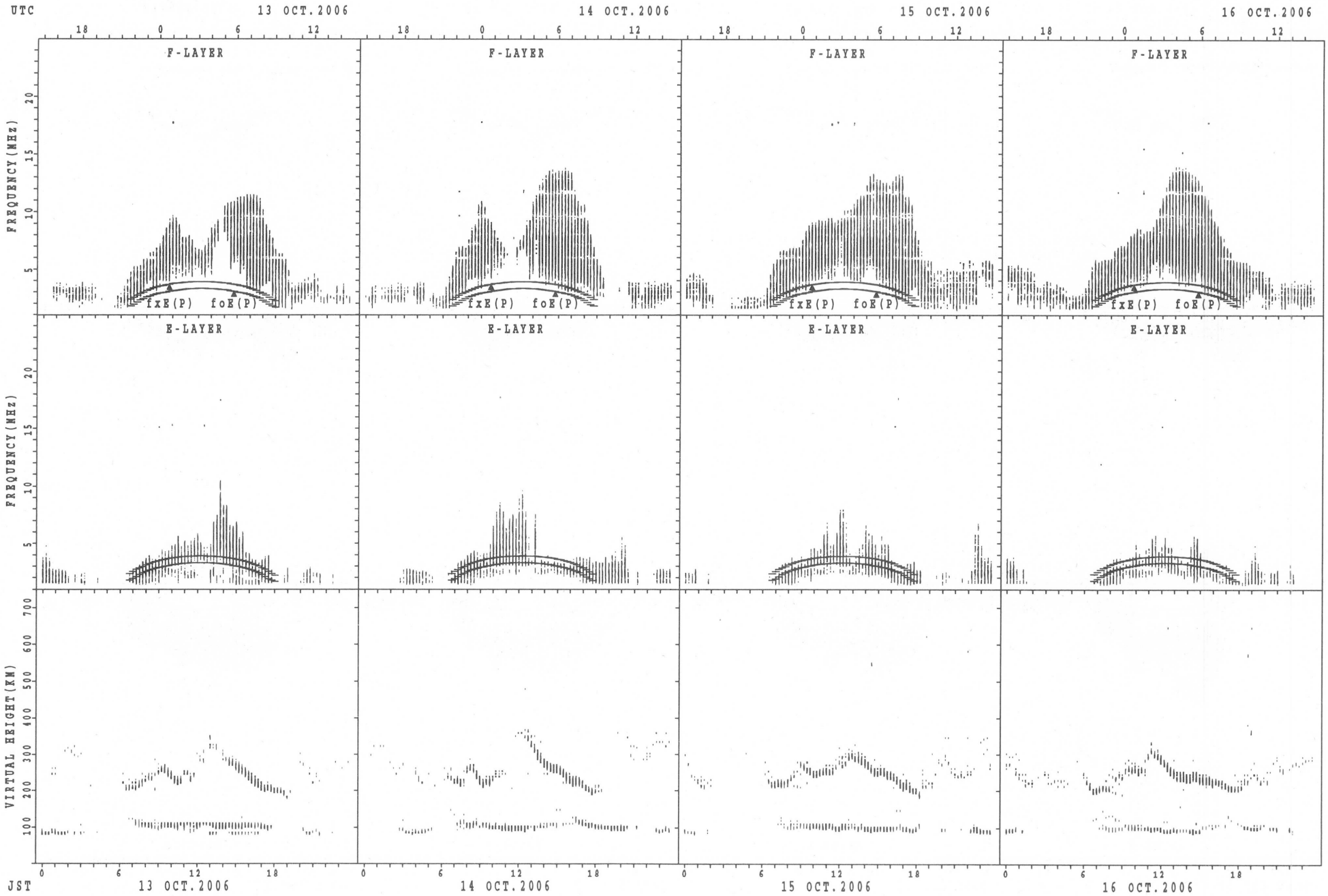
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



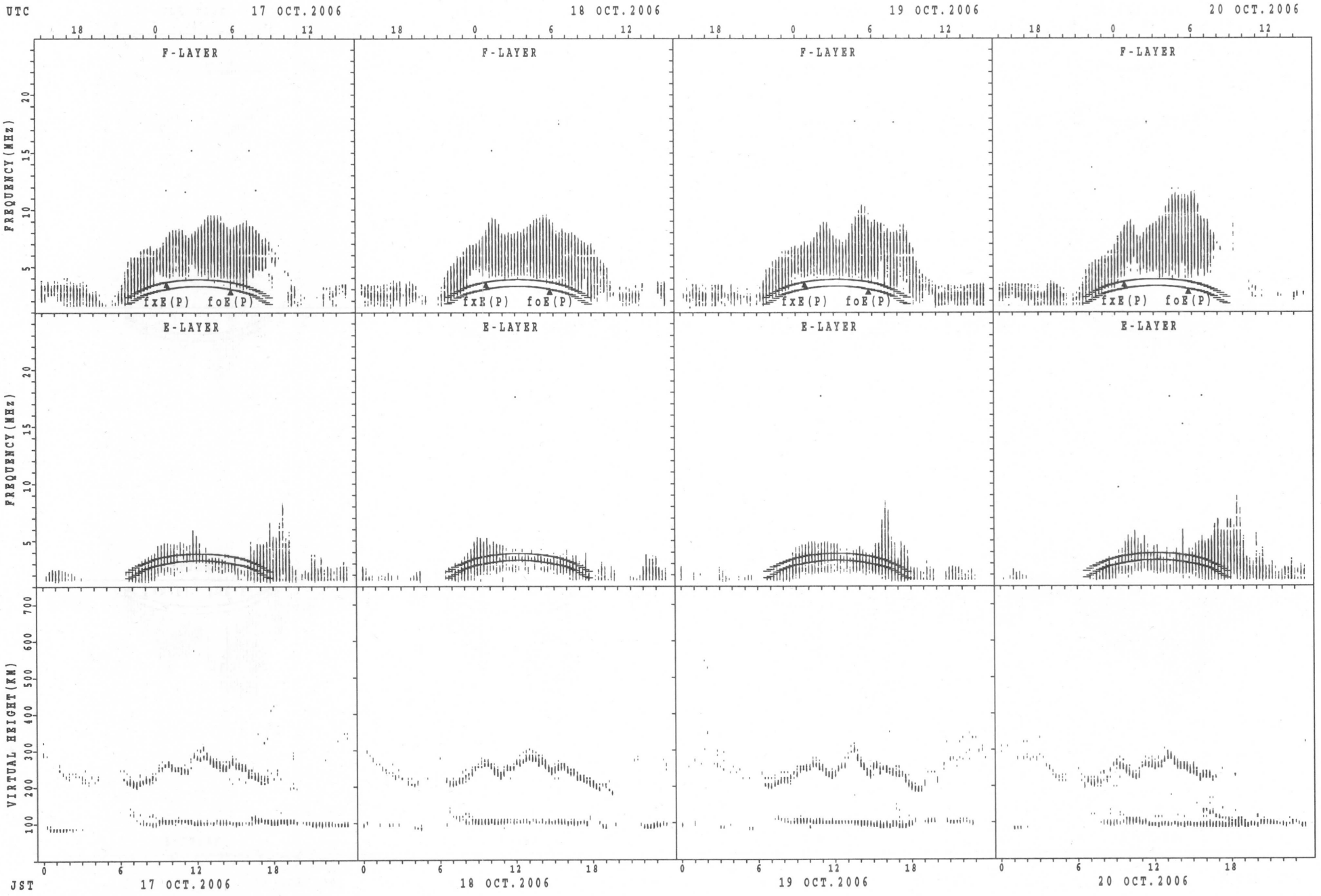
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



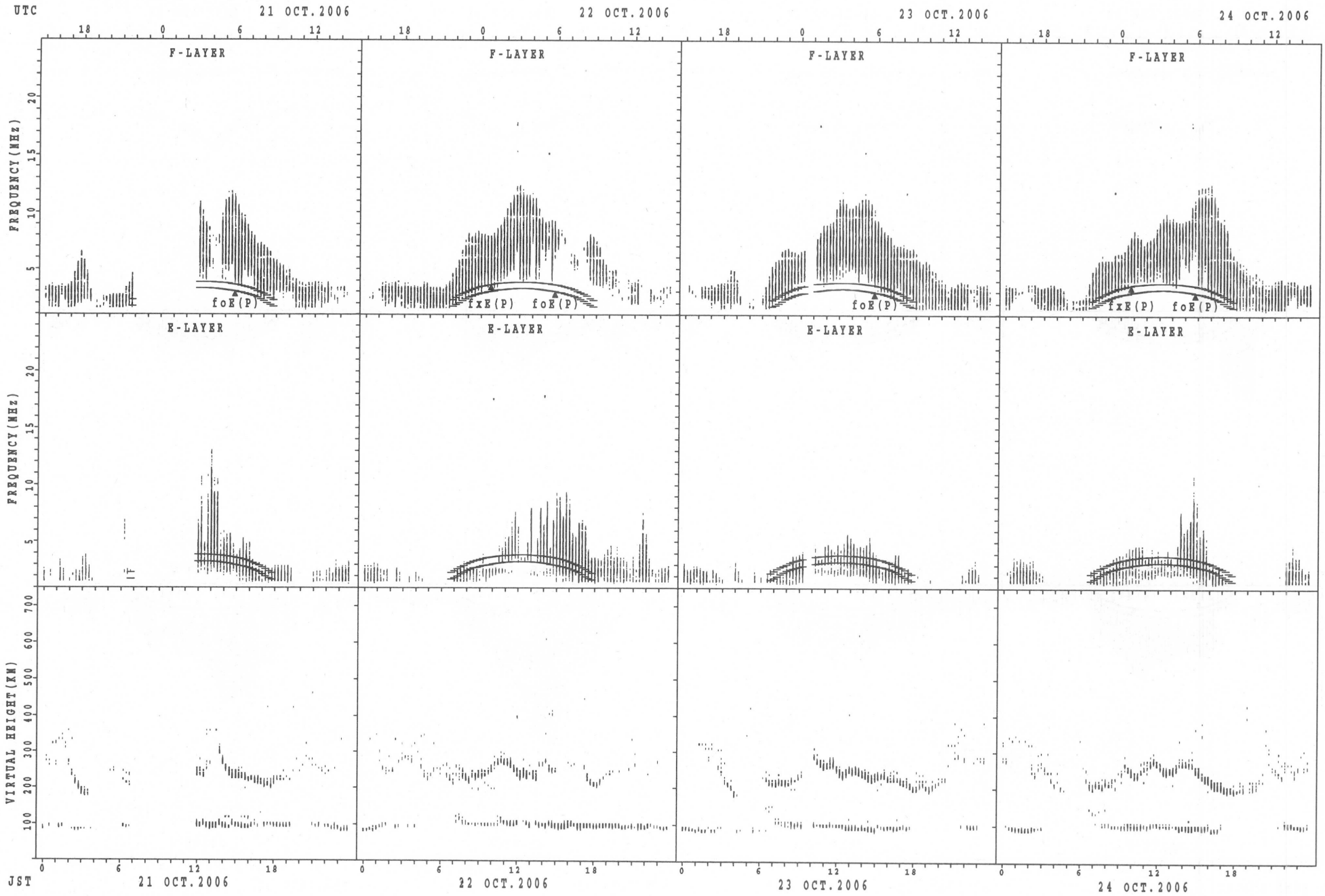
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



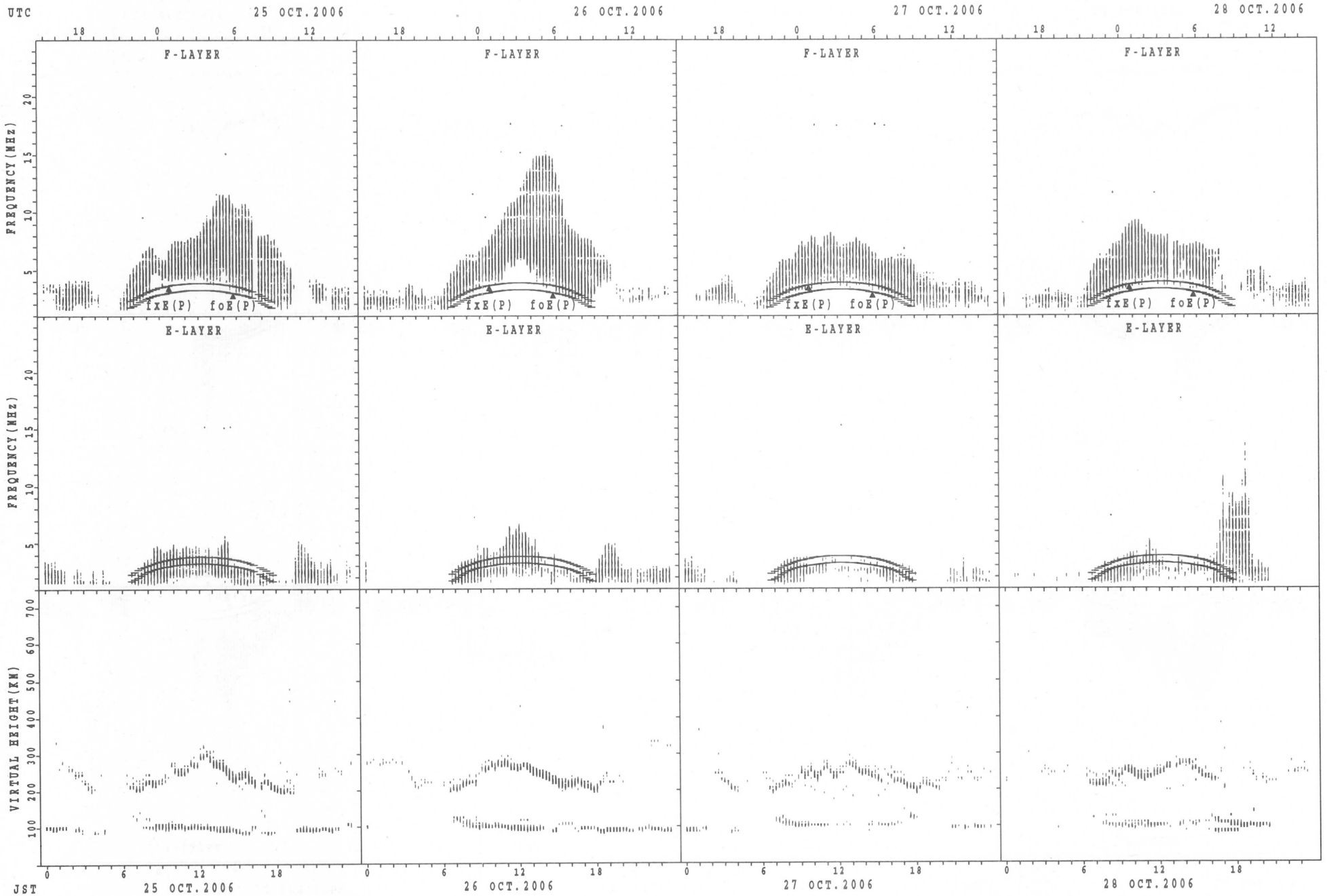
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



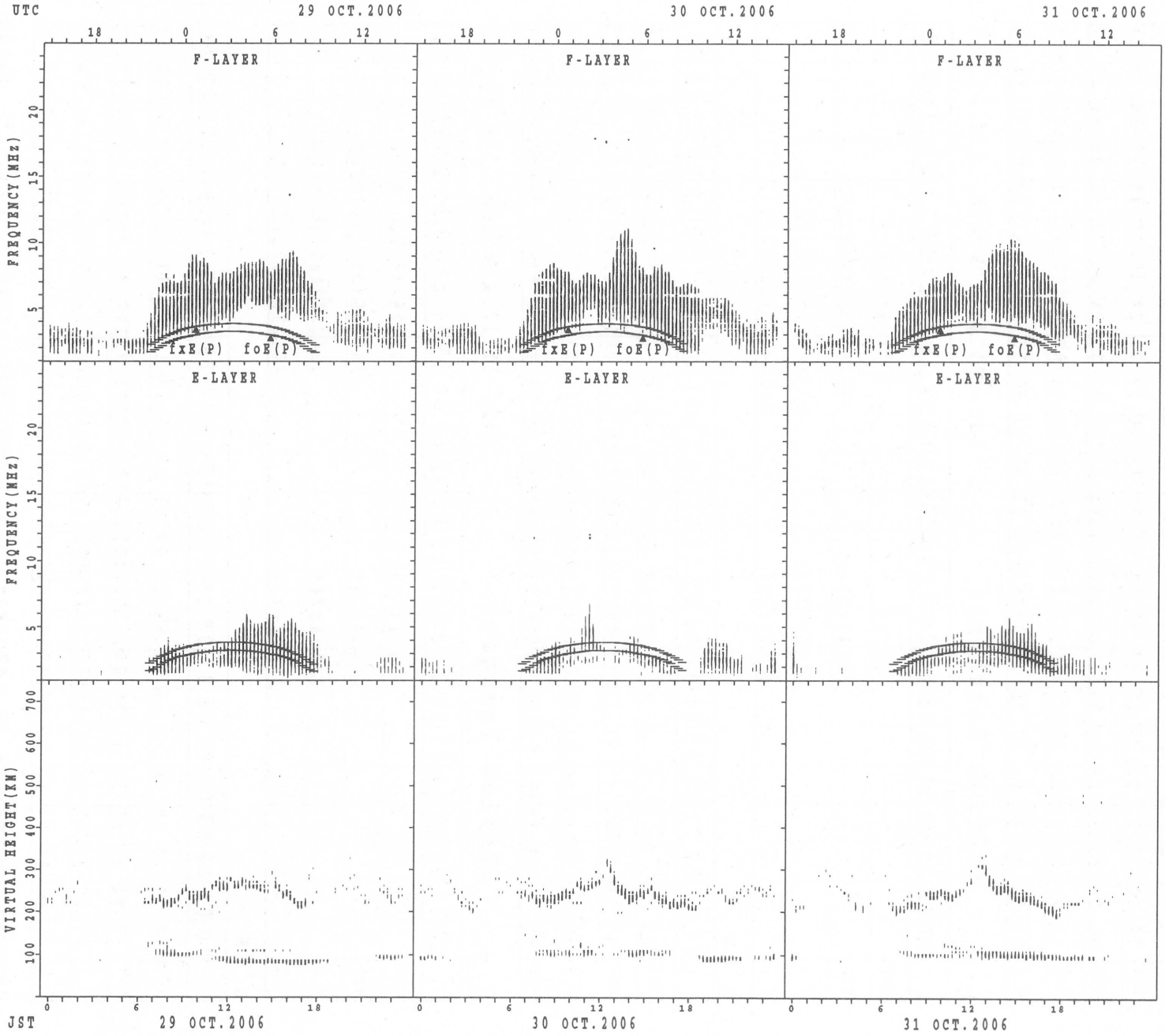
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

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. 2006 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT				1			2	3	11	13	1			4	8	10	9	2						
MED				466			235	226	248	238	230			238	256	257	252	238						
U Q				233			236	256	256	252	115			248	271	268	256	240						
L Q				233			234	224	238	226	115			230	245	240	247	236						

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	14	11	12	12	13	10	15	20	21	19	21	15	13	16	19	22	24	20	20	18	15	18	13	15
MED	95	95	98	98	97	96	99	117	109	105	103	101	97	97	97	99	96	96	96	95	95	96	97	97
U Q	99	99	100	102	102	99	141	136	116	107	107	105	103	102	103	107	104	102	102	99	97	101	102	103
L Q	93	93	95	95	93	93	93	109	104	103	102	95	95	93	95	93	93	91	91	89	89	91	92	95

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								12	19	9					7	18	13	11	4	1				
MED								227	230	236					258	251	238	242	240	270				
U Q								243	248	253					272	260	256	248	246	135				
L Q								221	224	222					242	244	231	236	234	135				

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	11	6	6	5	5	3	4	14	20	18	20	19	12	8	8	8	16	18	14	18	12	15	11	8
MED	97	95	96	93	97	93	130	119	108	109	107	103	100	97	98	96	105	105	103	97	101	99	99	97
U Q	97	97	99	114	114	93	135	127	113	113	112	109	103	102	103	113	118	117	111	107	103	103	105	101
L Q	95	95	91	90	94	91	112	111	104	105	103	99	95	95	95	93	96	97	95	95	97	97	97	96

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								3	10	24						21	26	18	12	4	2			
MED								214	236	244						250	245	234	231	237	224			
U Q								232	240	249						256	258	246	242	244	232			
L Q								208	224	232						234	230	230	222	225	216			

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	14	11	14	7	8	7	4	20	23	24	28	23	20	17	19	19	20	23	22	24	19	21	21	17
MED	95	95	93	95	94	91	90	120	113	107	105	103	105	99	101	99	102	99	96	100	99	97	97	97
U Q	97	97	95	97	96	91	100	137	119	109	107	107	122	104	105	105	111	115	107	105	103	100	99	99
L Q	91	91	89	89	92	87	88	113	107	103	103	101	100	95	95	95	96	95	89	93	95	95	92	91

MONTHLY MEDIANS OF h'F AND h'Es

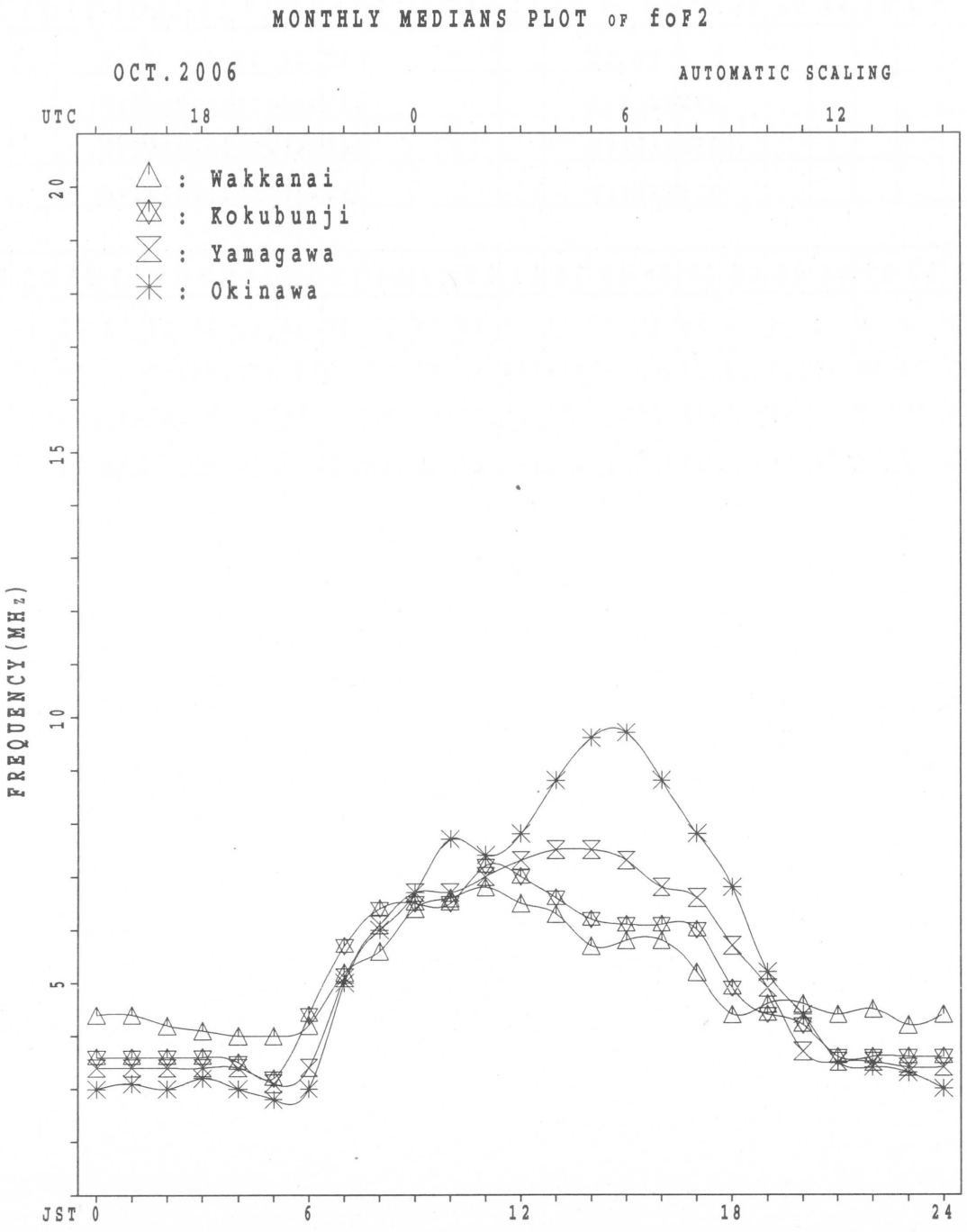
OCT.2006 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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								3	12	22						12	26	23	16	7	2			
MED								222	231	249						237	235	230	219	222	220			
U Q								252	243	260						247	246	232	223	230	250			
L Q								214	228	238						230	226	220	214	220	190			

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	19	13	2	5	3	1	2	18	17	20	17	17	19	14	17	20	15	22	20	18	13	15	15	21
MED	95	93	92	93	95	113	108	122	109	107	105	105	103	100	103	100	103	112	103	103	97	97	97	95
U Q	97	98	95	108	107	56	111	131	116	109	107	111	107	107	105	105	119	121	105	103	102	103	101	97
L Q	93	88	89	89	91	56	105	119	103	105	103	103	99	95	96	95	99	103	99	97	95	95	95	94


MONTHLY MEDIANS PLOT OF foF2
OCT.2006
AUTOMATIC SCALING
UTC
18
0
6
12
△ : Wakkanai
✡ : Kokubunji
⧖ : Yamagawa
✳ : Okinawa
FREQUENCY(MHz)
20
15
10
5
JST 0
6
12
18
24

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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	46	X 43	50	50	48	X 38													X 71	X 68	X 57	X 52	X 52	X 51
2	X 40	X 40	X 42	X 40	X 39	X 40													X 76	X 69	X 64	X 59	X 43	X 44
3	X 44	X 44	X 44	X 43	X 42	X 42													X 53	X 50	X 45	X 42	X 41	X 44
4	X 43	X 42	X 43	X 42	X 42	X 40													X 67	X 67	X 62	X 44	X 42	X 40
5	X 38	X 40	X 39	X 38	X 36	X 36													X 73	X 56	X 54	X 50	X 46	X 43
6	X 41	X 43	X 45	X 45	X 47	X 43													X 82	X 64	X 57	X 46	X 39	X 40
7	X 40	X 41	X 39	X 40	X 39	X 38													X 67	X 62	X 61	X 56	X 47	X 38
8	X 37	X 41	X 43	X 44	50	44													X 72	X 51	X 49	X 44	X 44	X 43
9	X 42	X 44	47	50	51	48													X 65	X 44	X 46	X 42	X 40	X 40
10	50	51	51	51	52	53													X 54	X 39	X 41	X 42	X 44	X 43
11	X 43	X 41	X 42	X 45	X 47	X 44													X 53	X 41	X 41	X 42	X 41	X 41
12	X 43	X 43	X 42	X 44	X 45	X 39					C	C	C	C	C	C	C		X 67	X 50	X 44	X 43	X 41	X 42
13	X 43	X 42	X 43	51	X 43	X 36				C	C	C	C		C	C	C	C	X 67	X 49	X 56	X 38	X 35	X 37
14	X 40	X 40	X 42	X 42	X 39	X 40													X 57	X 41	X 42	X 42	X 41	X 42
15	X 43	X 44	X 39	X 37	X 33	X 33													X 56	X 42	X 43	X 43	X 43	X 42
16	X 43	X 37	X 36	X 36	X 36	X 33													X 58	X 41	X 39	X 42	X 41	X 40
17	X 40	X 39	X 39	X 38	X 36	X 34													X 68	X 43	X 44	X 42	X 40	X 41
18	X 42	X 42	X 42	X 40	X 39	X 34													X 52	X 42	X 41	X 41	X 43	X 42
19	X 43	X 42	X 40	X 39	X 38	X 37													X 56	X 39	X 39	X 39	X 40	44
20	X 40	X 39	X 38	X 37	X 38	X 38													X 50	X 46	X 50	X 43	51	52
21	52	52	X 50	X 44	50	46													X 53	X 52	X 51	X 50	X 41	51
22	X 45	X 48	A	X 44	X 42	X 39													X 45	X 43	X 45	A	X 42	X 43
23	X 42	48	X 46	X 42	42	42													X 53	X 41	X 41	X 38	X 39	A
24	X 39	X 40	X 40	X 38	43	39									C			X 57	X 44	X 35	X 37	47	55	50
25	55	56	55	X 52	X 44	X 36												X 70	X 57	X 46	X 44	X 42	X 41	X 41
26	X 42	51	51	48	X 40	X 36										X 68		X 56	X 54	X 40	X 36	X 38	X 34	X 35
27	X 38	X 38	X 40	X 38	X 37	X 35												X 50	X 49	X 41	X 39	X 40	X 42	X 40
28	X 36	X 35	X 35	X 34	X 32	X 32												X 59	X 56	X 41	X 41		X 40	X 43
29	X 40	X 37	X 37	X 35	X 35	X 34												X 57	X 43	X 40	X 38	X 42	X 45	X 43
30	X 39	X 34	X 38	X 35	X 31	X 32												X 61	X 50	X 50	X 42	A	X 38	X 38
31	X 38	X 40	X 42	X 43	X 39	X 35												X 56	X 46	X 45	X 38	X 40	X 38	41
	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	31	31	31										1		8	31	31	31	28	31	30
MED	X 42	X 42	X 42	X 42	X 40	X 38										X 68		X 57	X 56	X 44	X 44	X 42	X 41	X 42
U Q	43	44	45	45	45	42												X 60	X 67	X 51	X 51	X 45	X 44	43
L Q	X 40	X 40	X 39	X 38	X 37	X 35												X 56	X 52	X 41	X 41	X 42	X 40	X 40

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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	F	37	F	F	F	32	47	64	66	66	62	69	78	75	73	75	66	67	64	62	50	46	46	45
2	34	34	36	34	33	34	52	74	68	64	63	61	63	59	60	68	63	69	70	63	58	53	37	38
3	38	38	38	37	36	36	49	62	64	59	61	65	64	66	66	62	68	64	47	43	39	36	35	38
4	36	36	36	36	36	34	48	55	67	58	65	67	65	68	65	58	61	65	61	60	56	38	36	34
5	32	34	32	32	30	30	50	68	71	64	58	66	68	59	58	59	60	64	67	50	48	44	40	36
6	35	37	38	39	41	37	54	57	66	62	64	68	78	65	57	54	58	70	76	57	51	40	33	34
7	34	35	33	34	33	32	50	52	65	66	63	67	68	60	56	53	60	54	61	56	55	50	41	32
8	31	35	37	37	F	F	49	56	63	61	66	78	80	64	64	60	70	72	66	45	43	37	37	37
9	36	38	F	F	F	F	52	60	62	67	74	63	62	65	66	72	68	69	59	38	40	36	33	34
10	F	F	F	F	F	F	44	54	62	60	60	70	74	65	71	81	75	72	48	33	35	36	37	37
11	37	35	36	38	40	38	51	65	69	74	64	63	66	67	66	59	66	64	47	35	35	36	35	35
12	37	37	36	38	39	33	44	53	58	60	C	C	C	C	C	C	C	61	61	44	37	37	35	36
13	37	36	37	F	37	30	41	48	57	C	C	C	C	68	C	C	C	C	61	43	50	32	29	31
14	34	34	35	36	32	34	43	63	69	77	104	77	55	63	67	74	66	64	51	35	36	36	34	36
15	37	38	33	31	27	27	44	54	62	68	71	82	75	58	62	69	72	58	50	36	37	37	37	36
16	36	31	30	30	30	27	41	69	68	58	64	80	78	66	76	59	58	51	52	35	33	36	35	34
17	34	33	33	32	30	28	48	68	57	64	65	75	85	60	62	60	58	64	61	37	38	36	34	35
18	36	36	36	34	33	28	43	53	66	74	65	68	78	70	60	54	56	56	46	36	35	35	37	36
19	37	36	34	32	32	30	38	54	62	68	62	66	68	59	65	60	57	55	50	33	32	33	34	F
20	34	33	32	31	32	32	42	48	58	60	66	72	68	60	63	55	54	48	44	40	44	37	F	F
21	F	F	44	37	F	F	43	72	67	65	84	104	75	74	68	66	62	52	47	46	44	44	34	F
22	39	42	A	38	36	33	41	55	52	57	75	88	69	54	53	53	62	68	38	37	38	A	36	37
23	36	F	39	35	F	F	39	58	64	74	66	66	80	62	61	57	60	64	47	35	35	32	33	A
24	33	34	33	32	F	F	42	52	56	72	66	73	74	65	C	66	62	51	38	28	30	F	F	F
25	F	F	F	46	38	30	44	50	55	67	68	74	78	71	67	62	63	64	51	40	38	36	35	35
26	35	F	F	F	34	30	39	54	54	61	82	78	76	70	63	62	58	50	47	34	30	32	28	29
27	32	32	34	32	31	29	36	49	60	66	74	70	70	58	53	56	56	44	43	35	33	34	36	34
28	30	29	29	28	26	26	36	54	68	65	73	66	59	52	61	59	50	53	50	35	35	35	34	37
29	34	31	31	29	29	28	43	62	58	86	86	87	72	65	64	72	68	51	36	34	32	36	39	38
30	33	28	32	29	25	25	37	66	90	78	73	85	82	84	73	68	62	55	44	44	36	A	32	32
31	32	34	36	37	32	29	40	58	53	65	67	74	67	86	66	66	61	50	40	39	32	34	32	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	27	26	25	26	24	25	31	31	31	30	29	29	29	30	28	29	29	30	31	31	31	28	29	25
MED	35	35	35	34	32	30	43	56	63	65	66	70	72	65	64	60	62	62	50	38	37	36	35	36
U Q	37	37	36	37	36	34	49	64	67	68	74	78	78	68	66	68	66	65	61	45	44	38	37	37
L Q	33	33	32	32	30	28	41	53	58	61	64	66	66	60	60	58	58	52	46	35	35	35	34	34

OCT. 2006 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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									L	L	U L 444	U L 460	U L 456	U L 456	L	L								
2								L	L	L	U L 448	U L 448	L 444	L	L	L	L							
3								L		L	U L 456	U L 448	U L 456	U L 448	L	L								
4									A	L	L	A	L	L	L									
5									L	L	L	L	L 464	L	L	A								
6									A	A	L	U L 464	U L 460	L	U L 424		A							
7									L	L	L	U L 444	U L 444	U L 456	L	L								
8								L	A	L	U L 440	U L 448	A	476	A	L	L							
9									L	L	L	A	A	U L 448	A	L	A							
10										L	U L 488	U L 436	U L 436	L	U L 412	L								
11									A	L	U L 444	U L 444	U L 432	428	U L 420									
12										L	C	C	C	C	C	C	C							
13									L	C	C	C	C	L	C	C	C	C						
14									A	A	A	A	A	L	A	L	A							
15									L	L	A	L	L	L	L	L								
16									L	L	U L 440	L 440	L	L	L	A								
17									L	A	A	L	U L 444	L	L	L								
18										A	A	L	U L 444	L	L									
19									L	L	L	L	U L 440	U L 412	L	L								
20									L	L	A	U L 428	U L 432	L	L									
21										L	L	L	A	L	L	L								
22									A	A	L 412	L	A	L	A	A								
23									A	L	L	L	L	L	L									
24											L	U L 444		L	C	L								
25										L	U L 420	A	U L 424	L	L	L								
26										L	U L 432	U L 432	A	L	L		A							
27										A	L	U L 416	L	L	L									
28									L	L	L	L	L	L	L									
29										A	L	U L 432	L	L	L	L								
30									L		L	U L 440	L	L	A	L								
31									L		L	A	A	L	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											10	15	13	7	3									
MED											U L 442	U L 444	U L 444	U L 448	U L 420									
U Q											U L 448	U L 448	U L 456	456	U L 424									
L Q											U L 432	U L 432	U L 434	428	U L 412									

OCT. 2006 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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							B	UA 244	A	A	A	A	A	R	A	UR 288	A	B						
2							B	236	276	R	A	R	R	UR 312	300	UR 272	232	B						
3							B	A	A	A	UA 320	R	340	344	304	264	A	B						
4							B	UA 240	A	A	A	A	A	A	R	280	232	B						
5							B	256	A	A	A	R	UR 340	R	R	268	UR 236	B						
6							B	UA 240	UA 284	A	A	A	A	A	A	260	228	B						
7							B	A	288	A	A	A	R	R	R	284	A	B						
8							B	UA 228	UA 280	A	A	A	A	A	A	A	236	B						
9							B	UA 224	UA 280	UA 308	A	A	A	A	A	A	A	B						
10							B	UR 244	A	A	A	A	R	A	A	276	UR 236	B						
11							B	A	A	A	A	A	R	R	UR 300	A	A	B						
12							B	220	276	A	C	C	C	C	C	C	C	B						
13							B	UA 244	A	C	C	C	C	A	C	C	C	C						
14							B	A	A	A	A	A	A	UR 308	A	A	A	B						
15							B	216	A	A	A	A	R	R	R	R	A	B						
16							B	224	A	A	A	R	R	R	284	256	UA 200	B						
17							B	UA 216	A	A	A	316	R	A	A	A	A	B						
18							B	220	268	A	A	A	A	A	R	A	208	B						
19							B	UA 236	UA 272	UA 288	A	A	A	308	A	252	196	B						
20							B	204	272	A	A	A	R	R	284	248	200	B						
21							B	UA 228	A	A	A	A	A	R	R	A	A	B						
22							B	232	A	A	A	A	A	A	304	UA 264	UA 216	B						
23							B	UA 236	A	A	A	A	A	A	R	UR 248	UR 204	B						
24							B	232	A	UA 296	A	A	A	R	C	UR 256	192							
25							B	UA 216	A	A	A	A	A	A	UR 296	248	184							
26							B	204	A	A	A	A	A	A	A		A							
27							B	A	A	A	A	UR 324	R	R	UR 292	A	UA 204							
28							B	A	A	A	A	A	A	A	UR 280	A	A					A		
29							B	A	A	A	A	R	R	A	UR 292	UR 256	200							
30							B	208	R	A	A	A	R	A	A	A	A							
31							B	212	260	UR 316	A	A	A	A	UR 292	UR 256	A							
	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	10	4	1	2	2	4	11	17	16							
MED								228	276	UA 302	UA 320	320	340	310	UR 292	260	206							
U Q								UA 238	UA 280	U 312				328	300	274	232							
L Q								216	272	UA 292				308	284	254	200							

OCT. 2006 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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 23	21	20	J A 22	21	21	19	28	36	J A 43	J A 41	J A 43	38	G 26	37	G 27	26	E B 18	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15
2	E B 15	E B 15	E B 15	E B 16	20	19	23	27	30	G 27	34	G 29	G 30	G 27	36	31	33	26	J A 17	J A 24	J A 36	J A 30	J A 24	22
3	19	E B 15	19	E B 15	J A 20	J A 17	20	J A 44	J A 42	J A 44	38	G 28	38	38	38	33	J A 33	J A 28	J A 31	J A 21	E B 15	E B 15	E B 15	E B 15
4	E B 15	E B 16	E B 16	E B 14	E B 13	E B 14	21	28	J A 43	38	39	J A 46	38	36	G 23	34	28	J A 35	J A 37	J A 48	J A 31	J A 23	J A 22	20
5	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	20	28	32	34	G 29	G 30	G 30	G 28	G 24	32	26	20	E B 15	35	J A 31	J A 52	J A 20	J A 18
6	E B 16	19	E B 16	E B 15	E B 16	E B 15	19	30	35	J A 41	37	38	J A 40	35	33	33	34	J A 32	J A 30	J A 22	19	J A 18	E B 14	E B 15
7	E B 14	E B 15	E B 16	E B 15	E B 14	E B J A 17	19	26	G 27	34	J A 54	38	G 30	G 29	G 27	32	30	J A 28	J A 41	J A 42	J A 33	J A 18	J A 45	J A 28
8	J A 39	J A 31	J A 20	20	22	J A 20	23	29	38	J A 40	J A 43	J A 47	J A 46	J A 44	J A 46	J A 39	29	J A 49	J A 56	J A 29	J A 25	19	19	E B 15
9	19	E B 15	J A 22	21	E B 15	E B 14	E B 17	27	34	34	39	J A 58	J A 56	J A 41	J A 100	J A 39	J A 52	J A 50	J A 55	J A 63	J A 18	E B 15	E B 15	E B 16
10	J A 23	22	J A 29	J A 21	J A 19	A E B 15	E B 15	G	33	36	38	J A 45	G 29	38	J A 45	35	G 20	21	E B 14	E B 15	19	J A 30	J A 21	J A 30
11	J A 25	J A 22	20	J A 32	J A 39	24	21	J A 37	J A 37	38	34	J A 56	G 29	G 26	G 27	32	J A 41	20	J A 17	J A 60	J A 21	E B 15	J A 23	J A 18
12	J A 18	J A 20	20	E B 16	E B 15	E B 15	E B 14	27	32	J A 41	C	C	C	C	C	C	C	J A 40	J A 72	J A 46	J A 58	J A 27	J A 57	J A 25
13	J A 28	21	19	22	20	E B 15	19	27	34	C	C	C	C	J A 49	C	C	C	C	E B 15	E B 15	J A 24	E B 15	E B 15	E B 14
14	E B 14	E B 15	E B 16	E B 15	J A 32	J A 28	E B 16	32	J A 54	J A 73	J A 142	J A 55	J A 55	G 28	J A 55	J A 42	J A 45	J A 41	J A 40	J A 34	21	E B 16	E B 15	E B 15
15	E B 15	E B 16	E B 16	E B 15	21	J A 22	J A 24	26	33	J A 43	J A 47	J A 45	G 30	G 28	G 24	G 24	J A 29	J A 29	J A 45	J A 56	A J A 31	J A 27	J A 22	20
16	J A 21	20	E B 16	E B 15	E B 14	E B 15	E B 14	26	30	36	J A 40	G 26	G 26	G 28	35	35	J A 40	J A 21	E B 14	J A 21	E B 15	E B 15	E B 15	E B 15
17	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	J A 21	27	32	J A 40	J A 42	36	G 28	33	31	29	J A 28	J A 36	J A 24	A E B 14	E B 15	E B 14	E B 15	E B 15
18	E B 16	19	E B 15	20	J A 23	18	J A 24	27	32	40	J A 42	38	35	38	G 21	28	28	J A 31	J A 29	J A 44	J A 30	J A 25	J A 20	J A 24
19	J A 22	E B 15	E B 15	E B 15	E B 15	E B 15	19	30	32	36	J A 40	J A 41	34	G 27	J A 33	29	26	22	J A 20	J A 31	J A 24	19	E B 15	19
20	E B 15	E B 15	E B 16	21	18	E B 15	E B 15	25	31	36	J A 46	35	G 27	G 26	33	31	25	J A 25	32	J A 40	J A 54	J A 45	J A 32	19
21	E B 15	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	29	J A 49	J A 52	J A 84	J A 104	J A 71	G 26	G 25	J A 56	J A 61	J A 53	J A 45	J A 36	J A 23	J A 23	J A 38	J A 34
22	J A 50	J A 53	J A 56	J A 42	J A 28	J A 24	21	28	J A 60	J A 67	J A 40	J A 48	J A 46	J A 54	34	J A 52	32	J A 43	J A 54	J A 44	J A 54	J A 38	J A 22	E B 15
23	J A 42	J A 37	J A 23	19	E B 14	E B J A 23	20	32	J A 43	34	37	J A 40	J A 40	J A 36	G 24	G 22	G 18	E B 15	E B 14	E B J A 25	20	J A 42	J A 51	J A 47
24	J A 76	J A 43	J A 21	J A 32	J A 23	19	E B 15	26	J A 34	33	38	J A 46	J A 40	G 28	C	G 22	G	E B 16	E B 15	E B 15	19	J A 19	J A 24	J A 39
25	J A 33	J A 20	21	19	E B 15	E B 15	J A 20	27	33	J A 42	J A 44	J A 86	36	35	G 22	30	22	J A 24	J A 28	J A 25	J A 20	E B 15	E B 15	E B 15
26	E B 16	E B 16	E B 15	E B 14	E B 15	E B 15	J A 17	24	31	J A 38	35	J A 40	J A 52	J A 40	J A 38	J A 41	J A 32	J A 44	J A 69	J A 26	21	E B 15	E B 15	19
27	20	21	E B 15	E B 15	19	E B 15	E B 14	J A 25	J A 44	J A 52	J A 41	G 25	G 25	G 23	G J A 25	J A 35	25	E B 15	E B 15	E B 15	E B 15	J A 35	J A 35	J A 41
28	J A 32	J A 34	J A 29	J A 19	J A E B 15	19	E B 15	25	30	33	34	33	J A 36	J A 39	J A 32	J A 28	27	E B 16	E B 14	E B 14	B J A 23	J A 44	J A 26	J A 19
29	J A 20	J A E 17	B E B 16	E B 15	E B 15	19	E B 15	J A 30	J A 34	J A 41	J A 37	G 31	G 23	J A 41	G 26	G 21	24	J A 20	J A 20	E B 15	E B 15	E B 16	19	21
30	18	J A 45	J A 20	J A 25	E B 15	18	19	G	G 19	31	32	35	G 29	J A 40	J A 48	J A 36	J A 30	J A 29	J A 20	E B 15	B J A 50	J A 45	J A 17	J A 22
31	J A 20	J A 19	E B 15	22	J A 21	E B 16	J A 18	26	30	G 26	34	J A 65	J A 42	J A 41	G 25	G 24	J A 27	J A 30	E B 15	E B 19	E B 15	E B 15	B J A 34	J A 23
	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	30	29	29	29	30	28	29	29	30	31	31	31	31	31	31
MED	19	19	E B 16	E B 16	E B 16	E B 16	19	27	33	38	J A 39	J A 40	36	35	32	32	28	J A 28	J A 24	J A 25	J A 21	J A 19	J A 20	19
U Q	J A 25	J A 22	J A 20	J A 21	J A 21	J A 19	21	29	J A 38	J A 42	J A 42	J A 48	J A 41	J A 40	J A 38	J A 36	J A 33	J A 36	J A 41	J A 42	J A 31	J A 30	J A 26	J A 24
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	26	31	34	36	G 34	G 29	G 28	G 25	G 28	26	E B 20	E B 15	E B 15	E B 18	E B 15	E B 15	E B 15

OCT. 2006 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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	17	E B 15	E B 15	E B 15	E B 15	18	18	26	33	34	37	40	37	G 26	34	G 22	24	E B 18	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15
2	E B 15	E B 15	E B 15	E B 16	E B 15	16	22	26	29	G 26	32	G 29	G 29	G 27	34	30	29	26	E B 16	E B 15	16	19	E B 14	E B 15
3	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	18	26	36	36	35	G 27	37	37	35	31	26	20	16	E B 16	E B 15	E B 15	E B 15	E B 15
4	E B 15	E B 16	E B 16	E B 14	E B 13	E B 14	20	26	39	35	35	41	37	35	G 21	32	27	30	22	34	20	17	16	E B 15
5	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	18	28	30	34	G 28	G 30	G 29	G 28	G 24	30	25	19	E B 15	34	E B 15	E B 14	E B 15	E B 16
6	E B 16	E B 16	E B 16	E B 15	E B 16	E B 15	17	27	34	38	35	37	37	33	30	32	32	30	27	18	E B 14	E B 16	E B 14	E B 15
7	E B 14	E B 15	E B 16	E B 15	E B 14	E B 15	18	26	G 26	33	37	36	G 30	G 29	G 26	30	28	23	23	23	16	E B 15	24	24
8	18	18	E B 15	E B 15	E B 16	E B 15	20	27	35	37	37	40	40	39	36	30	27	42	50	20	19	E B 15	E B 16	E B 15
9	E B 16	E B 15	E B 15	E B 16	E B 15	E B 14	E B 17	26	32	33	36	54	43	37	46	32	30	27	51	18	15	E B 15	E B 15	E B 16
10	E B 16	E B 15	E B 15	16	E B 15	E B 15	E B 15	G	31	33	35	37	G 29	34	32	31	G 18	18	E B 14	E B 15	E B 16	17	17	E B 15
11	E B 15	E B 15	15	26	19	17	19	34	34	34	33	36	G 28	G 26	G 27	29	35	18	E B 15	16	E B 15	E B 15	20	E B 15
12	E B 15	E B 15	E B 15	E B 16	E B 15	E B 15	E B 14	26	30	36	C	C	C	C	C	C	C	32	24	29	17	20	E B 15	16
13	15	E B 15	E B 16	E B 15	E B 15	E B 15	17	26	32	C	C	C	C	36	C	C	C	C	E B 15	E B 15	19	E B 15	E B 15	E B 14
14	E B 14	E B 15	E B 16	E B 15	21	18	E B 16	30	44	57	40	45	42	G 28	49	32	31	36	37	26	E B 16	E B 16	E B 15	E B 15
15	E B 15	E B 16	E B 16	E B 15	16	17	17	23	30	34	42	38	G 30	G 26	G 23	G 24	23	24	E B 15	20	18	E B 15	E B 15	E B 15
16	E B 16	E B 15	E B 16	E B 15	E B 14	E B 15	E B 14	23	28	34	35	G 26	G 26	G 28	33	33	35	18	E B 14	E B 15	E B 15	E B 15	E B 15	E B 15
17	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	18	25	30	37	37	34	G 28	31	30	27	23	28	E B 15	E B 14	E B 15	E B 14	E B 15	E B 15
18	E B 16	E B 15	E B 15	E B 15	17	E B 16	21	25	31	37	39	36	34	34	G 20	26	26	28	24	30	19	18	E B 15	17
19	19	E B 15	E B 15	E B 15	E B 15	E B 15	19	28	30	34	35	35	32	G 26	31	28	25	21	E B 15	17	20	16	E B 15	E B 14
20	E B 15	E B 15	E B 16	16	E B 14	E B 15	E B 15	23	30	33	42	35	G 26	G 26	31	29	23	20	29	19	22	20	17	E B 16
21	E B 15	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	27	41	38	36	36	67	G 25	G 25	28	35	24	33	26	17	E B 16	23	E B 15
22	26	32	A A 56	20	E B 14	22	17	25	43	41	34	35	39	36	33	39	30	31	33	29	30	A A 38	18	E B 15
23	26	E B 15	E B 16	E B 14	E B 14	E B 15	19	26	37	32	35	35	36	31	G 24	G 21	G 17	E B 15	E B 14	20	E B 15	25	17	A A 47
24	25	19	17	18	17	E B 15	E B 15	25	25	31	35	37	36	G 28	C	G 18	G	E B 16	E B 15	E B 15	16	E B 15	E B 15	16
25	20	E B 15	E B 15	E B 14	E B 15	E B 15	E B 17	25	30	32	34	44	35	32	G 20	26	22	20	22	19	17	E B 15	E B 15	E B 15
26	E B 16	E B 16	E B 15	E B 14	E B 15	E B 15	E B 15	22	29	34	32	36	40	31	33	38	27	26	26	21	E B 15	E B 15	E B 15	E B 15
27	E B 16	E B 16	E B 15	E B 15	E B 15	E B 15	E B 14	23	41	50	32	G 25	G 24	G 22	G 24	28	24	E B 15	E B 15	E B 15	E B 15	17	E B 16	22
28	17	18	E B 16	16	E B 15	E B 15	E B 15	23	28	31	32	32	32	34	G 25	27	24	E B 16	E B 14	E B 14	17	28	17	16
29	17	16	E B 16	E B 15	E B 15	16	E B 15	23	30	36	33	G 31	G 23	32	G 24	G 18	22	17	18	E B 15	E B 15	E B 16	18	E B 15
30	E B 15	20	E B 15	17	E B 15	E B 15	E B 16	G	G 19	30	31	34	G 29	33	40	26	26	28	17	E B 15	27	A A 45	17	E B 15
31	19	E B 15	E B 15	17	E B 15	E B 16	E B 15	26	28	G 26	32	43	36	33	G 24	G 24	22	E B 15	E B 15	E B 19	E B 15	E B 15	16	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	31	31	31	30	29	29	29	30	28	29	29	30	31	31	31	31	31	31
MED	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	17	26	30	34	35	36	34	31	30	29	26	22	16	18	16	E B 16	E B 15	E B 15
U Q	17	16	E B 16	16	15	16	18	26	35	37	37	39	37	34	34	32	30	28	26	23	19	18	17	16
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	23	29	33	32	G 33	G 29	G 27	G 24	G 26	23	E B 18	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15

OCT. 2006 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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	16	15	14	15	14	16	15	15	18	17	14	12	18	15	15	16	15	15	15
2	15	15	15	16	15	15	15	14	14	14	16	19	20	16	13	16	14	14	16	15	15	15	14	15
3	15	15	15	15	15	15	14	13	14	15	17	19	16	24	16	13	14	14	15	16	15	15	15	15
4	15	16	16	14	13	14	15	12	13	15	14	16	16	15	14	13	14	16	14	15	14	14	14	15
5	15	15	15	15	15	15	15	14	16	16	15	18	17	17	14	16	14	16	15	15	15	14	15	16
6	16	16	16	15	16	15	14	14	15	16	14	15	17	15	14	13	15	16	14	15	14	16	14	15
7	14	15	16	15	14	15	15	13	15	16	16	16	16	18	14	14	14	14	15	15	15	15	15	15
8	15	15	15	15	16	15	14	13	13	15	20	19	15	17	20	15	16	15	15	15	14	15	16	15
9	16	15	15	16	15	14	17	14	13	15	20	17	16	18	16	16	16	15	15	14	14	15	15	16
10	16	15	15	15	15	15	15	15	14	18	15	17	16	16	16	13	14	14	14	15	16	15	14	15
11	15	15	15	15	14	14	14	14	14	15	15	16	16	19	16	14	14	14	16	14	14	15	15	15
12	15	15	15	16	15	15	14	13	14	13	C	C	C	C	C	C	C	15	16	15	14	15	15	15
13	15	15	16	15	15	15	15	15	14	C	C	C	C	16	C	C	C	C	15	15	14	15	15	14
14	14	15	16	15	15	15	16	13	15	15	12	13	17	14	14	14	14	14	14	14	16	16	15	15
15	15	16	16	15	15	16	13	13	14	14	17	14	16	16	14	16	14	14	15	15	15	15	15	15
16	16	15	16	15	14	15	14	14	13	15	15	16	16	16	15	14	14	15	14	15	15	15	15	15
17	16	15	15	15	15	15	15	14	14	13	15	14	14	14	15	16	15	14	15	14	15	14	15	15
18	16	15	15	15	14	16	15	14	13	14	12	14	14	15	15	14	15	15	14	14	14	14	15	15
19	15	15	15	15	15	15	14	15	14	14	17	16	16	14	14	14	13	15	15	15	14	14	15	14
20	15	15	16	14	14	15	15	16	14	14	15	16	16	14	14	13	15	14	14	16	14	15	16	16
21	15	15	15	16	15	15	15	14	13	14	12	11	14	15	14	14	16	15	15	15	14	16	14	15
22	16	14	14	14	14	14	14	14	15	14	14	14	15	13	14	14	14	14	16	15	15	14	14	15
23	16	15	16	14	14	15	14	14	13	15	15	14	16	14	14	16	14	15	14	15	15	14	14	14
24	15	15	15	14	14	15	15	14	14	15	14	17	18	15	C	14	16	16	15	15	15	15	15	15
25	16	15	15	14	15	15	14	14	16	14	15	15	13	13	14	12	16	14	14	14	14	15	15	15
26	16	16	15	14	15	15	15	14	12	14	14	14	18	16	14	15	14	14	16	14	15	15	15	15
27	16	16	15	15	15	15	14	14	14	16	15	14	15	15	16	14	15	15	15	15	15	15	16	15
28	14	15	16	13	15	15	15	14	15	14	14	16	17	16	15	12	14	16	14	14	16	15	16	16
29	16	15	16	15	15	15	15	14	15	14	14	13	14	13	14	14	16	14	15	15	15	16	15	15
30	15	15	15	14	15	15	16	16	14	14	14	14	14	14	14	14	14	15	15	15	15	15	15	15
31	15	15	15	14	15	16	15	14	14	16	15	16	15	18	14	14	13	15	15	19	15	15	14	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	30	29	29	29	30	28	29	29	30	31	31	31	31	31	31
MED	15	15	15	15	15	15	15	14	14	14	15	16	16	16	14	14	14	15	15	15	15	15	15	15
U Q	16	15	16	15	15	15	15	14	15	15	16	16	16	17	16	15	15	15	15	15	15	15	15	15
L Q	15	15	15	14	14	15	14	14	13	14	14	14	15	14	14	14	14	14	14	14	14	15	14	15

OCT. 2006 fmin (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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	F	310	F	F	F	314	369	379	377	379	352	337	333	326	321	336	352	354	337	340	326	310	312	333
2	295	306	313	305	302	307	356	372	399	388	364	347	349	346	326	351	350	343	348	343	330	361	311	308
3	302	312	314	332	311	322	365	365	394	392	349	373	357	345	348	335	363	360	365	347	335	303	298	312
4	315	326	312	338	345	369	388	383	387	370	356	373	361	348	351	350	353	352	343	351	363	329	324	317
5	319	307	307	311	314	321	387	389	395	367	376	346	355	352	348	361	347	355	364	351	328	338	334	320
6	321	317	323	308	334	316	375	390	389	397	369	345	361	349	351	347	350	340	364	368	353	359	321	312
7	310	323	324	315	330	309	381	372	370	384	358	353	364	350	353	337	368	349	345	331	351	357	357	333
8	322	310	302	302	F	F	388	388	385	379	342	332	372	335	348	350	355	355	367	342	337	325	341	309
9	314	325	F	F	F	F	380	386	375	373	373	349	348	326	337	358	355	364	375	351	342	348	305	306
10	F	F	F	F	F	F	378	401	365	361	331	352	349	337	327	355	361	374	388	342	322	317	339	333
11	320	330	321	321	343	359	361	366	382	387	376	368	345	345	359	334	358	372	354	381	315	346	340	314
12	308	313	329	335	359	324	378	385	379	378	C	C	C	C	C	C	C	362	375	368	318	334	325	328
13	329	321	319	F	355	347	382	386	355	C	C	C	C	346	C	C	C	C	363	302	374	342	308	314
14	310	309	316	310	317	348	377	390	349	337	381	386	366	342	340	354	351	352	369	329	304	309	294	307
15	307	330	364	314	295	306	381	373	371	356	353	349	369	349	335	352	366	366	359	309	285	321	328	322
16	325	313	306	313	344	334	360	389	389	376	347	351	358	339	369	374	377	353	360	328	309	325	330	318
17	326	322	327	333	332	330	373	401	382	372	351	348	368	351	355	364	361	351	366	342	347	336	318	303
18	310	323	323	335	375	345	371	385	367	379	369	370	349	364	364	366	376	356	367	327	332	323	317	312
19	322	323	337	338	326	339	385	377	376	383	342	370	359	343	365	359	376	376	384	343	324	324	316	F
20	312	315	306	312	345	365	394	375	379	383	363	371	351	362	372	371	383	379	359	346	348	321	F	F
21	F	F	353	344	F	F	348	382	395	342	314	355	382	345	357	373	375	373	343	328	309	329	343	F
22	305	319	A	310	292	319	348	368	368	336	355	363	381	380	362	360	345	368	371	326	349	A	293	298
23	309	F	349	365	F	F	374	375	363	372	355	325	368	365	364	360	367	365	375	335	353	314	327	A
24	303	334	326	333	F	F	367	407	375	392	350	371	374	362	C	374	358	378	366	336	314	F	F	F
25	F	F	F	355	380	321	375	384	376	370	353	352	353	358	349	363	365	365	383	359	331	329	315	328
26	326	F	F	F	351	329	375	386	364	369	361	351	382	364	367	360	375	368	388	327	335	352	352	316
27	312	310	327	342	329	346	362	384	359	375	356	369	381	370	385	340	382	380	362	373	313	332	339	356
28	355	306	319	332	328	327	357	364	373	360	376	353	383	342	349	379	392	349	355	333	321	317	298	331
29	321	328	316	307	298	309	348	380	344	353	376	359	363	358	346	352	380	359	352	330	291	315	339	351
30	345	291	330	326	364	327	355	341	361	369	347	349	329	365	361	367	370	356	352	343	351	A	330	301
31	303	332	338	357	321	334	364	392	392	369	354	367	317	367	346	379	377	377	358	329	329	337	301	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	27	26	25	26	24	25	31	31	31	30	29	29	29	30	28	29	29	30	31	31	31	28	29	25
MED	314	318	323	329	331	327	374	384	376	372	355	353	361	349	351	359	365	361	364	342	330	329	324	316
U Q	322	325	330	338	348	346	381	389	387	383	369	370	370	362	363	366	376	372	371	351	348	340	339	330
L Q	308	310	314	311	316	318	361	373	365	367	350	348	349	343	346	350	354	353	354	329	315	319	310	308

OCT. 2006 M(3000)F2 (0.01)

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IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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									L	L	U L 403	U L 387	U L 371	U L 376	L	L								
2								L	L	L	U L 408	U L 401	L 391	L	L	L	L							
3								L		L	U L 407	U L 399	U L 390	U L 372	L	L								
4									A	L	L	A	L	L	L									
5									L	L	L	L	L 384	L	L	A								
6									A	A	L	U L 383	U L 385	L	U L 403		A							
7									L	L	L	U L 408	U L 409	U L 387	L	L								
8								L	A	L	U L 388	U L 398	A 382		A	L	L							
9									L	L	L	A	A	U L 393	A	L	A							
10										L	U L 365	U L 391	U L 398	L	U L 395	L								
11									A	L	U L 413	U L 423	U L 438	397	U L 380									
12										L	C	C	C	C	C	C	C							
13									L	C	C	C	C	L	C	C	C	C						
14									A	A	A	A	A	L	A	L	A							
15									L	L	A	L	L	L	L	L								
16									L	L	U L 391	L 389	L	L	L	A								
17									L	A	A	L	U L 372	L	L	L								
18										A	A	L	U L 389	L	L									
19									L	L	L	L	U L 396	U L 407	L	L								
20									L	L	A	U L 404	U L 401	L	L									
21										L	L	L	A	L	L	L								
22									A	A	L 395	L	A	L	A	A								
23									A	L	L	L	L	L	L									
24											L	U L 384		L	C	L								
25										L	U L 398	A	U L 404	L	L	L								
26										L	U L 384	U L 398	A	L	L		A							
27										A	L	U L 411	L	L	L									
28									L	L	L	L	L	L	L									
29										A	L	U L 378	L	L	L	L								
30									L		L	U L 369	L	L	A	L								
31									L		L	A	A	L	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											10	15	13	7	3									
MED											U L 396	U L 398	U L 391	U L 387	U L 395									
U Q											U L 407	U L 404	U L 402	397	U L 403									
L Q											U L 388	U L 384	U L 384	U L 376	U L 380									

OCT. 2006 M(3000)F1 (0.01)

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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									230	240	252	274	272	278	288	258								
2								238	216	226	250	266	252	264	304	262	264							
3								230		226	264	250	250	270	268	272								
4									226	244	256	238	250	258	260									
5									216	238	238	264	258	254	260	252								
6									224	224	248	264	252	254	252		244							
7									238	230	244	250	250	272	244	272								
8								228	220	242	284	264	232	306	256	260	252							
9									232	242	230	E A 274	256	280	282	258	234							
10										244	292	260	250	266	284	256								
11									232	222	230	240	256	264	250									
12										240	C	C	C	C	C	C	C							
13									254	C	C	C	C	244	C	C	C	C						
14									250	250	224	230	236	276	278	244	240							
15									244	258	246	248	238	248	278	256								
16									232	238	270	256	248	266	244	232								
17									232	240	244	250	234	246	254	244								
18										228	230	234	258	244	250									
19									236	238	274	236	246	258	258	252								
20									236	236	250	230	252	256	242									
21										262	296	238	232	264	250	232								
22									246	E A 274	254	240	226	244	234	248								
23									246	226	262	252	238	246	242									
24											246	240		254	C	234								
25										234	262	246	246	256	252	234								
26										252	242	240	232	250	242		214							
27										236	250	228	226	240	232									
28									232	242	230	234	228	252	256									
29										250	236	236	236	230	250	250								
30									244		250	248	250	244	240	234								
31									224		248	238	234	248	246									
	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								3	21	27	29	29	28	30	28	19	6							
MED								230	232	239	250	243	247	255	252	252	242							
U Q								238	244	244	262	258	252	266	264	258	252							
L Q								228	225	230	240	237	234	246	244	234	234							

OCT. 2006 h'F2 (KM)

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IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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 A 264	250	E B 264	E B 262	E B 266	E A 274	216	216	204	210	198	214	224	202	222	212	222	232	222	222	230	230	E B 256	218
2	E B 242	E B 266	E B 256	E B 256	E B 286	E A 282	228	214	192	200	184	176	200	H 188	208	218	222	232	212	214	238	210	214	E B 276
3	E B 264	E B 264	E B 250	E B 246	246	E B 256	214	200	208	202	H 190	H 176	204	216	234	222	220	208	210	214	218	E B 262	E B 296	E B 258
4	E B 256	244	E B 266	234	224	208	208	204	A	196	198	A	208	206	192	214	224	220	216	236	208	218	240	242
5	E B 252	E B 264	E B 270	E B 272	E B 264	E B 256	206	208	A	202	H 188	198	188	182	H 186	A	220	228	206	224	230	220	212	232
6	E B 240	E B 250	E B 254	E B 264	230	234	206	206	A	A	194	202	192	H 180	192	210	A	238	216	208	214	206	E B 242	E B 272
7	E B 262	E B 248	238	E B 244	232	E B 248	206	202	208	204	204	184	H 182	H 170	H 166	208	E A 238	224	228	220	224	214	222	E A 266
8	E A 268	E A 288	E B 272	E B 280	E B 286	E B 270	192	202	A	218	222	216	A	H 192	A	218	220	226	232	224	234	208	222	E B 252
9	E B 256	236	240	E B 274	E B 266	E B 246	202	208	210	210	206	A	A	192	A	226	A	220	E A 236	210	228	218	230	E B 284
10	E B 288	248	230	E A 266	232	210	194	202	204	202	H 194	210	202	222	H 186	228	226	212	192	206	232	E A 272	E A 246	214
11	224	222	230	E A 270	E A 236	208	208	218	A	202	192	182	H 178	H 172	H 172	216	236	212	202	206	E B 252	212	E A 246	E B 260
12	E B 262	E B 258	E B 246	226	220	226	194	202	214	216	C	C	C	C	C	C	C	220	214	214	236	242	238	E A 264
13	242	234	242	E B 256	210	214	202	202	208	C	C	C	C	196	C	C	C	C	202	E B 274	206	206	E B 262	E B 254
14	E B 260	E B 270	E B 258	E B 258	E A 262	230	210	208	A	A	A	A	A	H 194	A	A	A	216	222	E A 238	E B 274	E B 258	E B 274	E B 282
15	E B 268	230	214	246	E A 260	E A 302	218	216	216	220	A	216	198	200	208	228	216	208	206	E A 258	E A 326	236	242	E B 252
16	244	226	E B 270	E B 266	226	242	212	216	202	200	202	200	210	210	212	A	216	204	210	204	E B 264	E B 252	234	234
17	E B 250	E B 256	248	228	228	236	212	202	200	A	A	212	198	202	208	206	220	216	202	196	220	214	240	E B 280
18	E B 262	E B 250	234	212	210	210	202	200	218	A	A	202	196	210	198	218	216	216	208	E A 300	246	E A 256	248	E A 262
19	E A 264	E B 250	226	218	228	228	198	204	210	218	214	198	188	178	224	214	216	202	200	202	E A 254	E A 248	E B 278	E B 258
20	244	E B 260	E B 266	E A 268	226	208	184	200	202	202	A	H 180	200	H 166	214	210	214	204	212	222	220	E A 272	E A 294	234
21	218	238	210	206	234	E B 274	214	212	216	A	220	208	A	202	210	202	208	206	E A 248	E A 252	E A 258	214	226	E B 266
22	E A 306	E A 306	A	E A 282	E B 272	E A 266	218	224	A	A	202	220	A	202	A	A	224	214	228	E A 282	E A 256	A	E A 296	E B 266
23	E A 310	E B 262	226	210	232	E B 266	220	210	A	204	198	208	208	190	206	204	222	218	202	E A 246	218	E A 334	246	A
24	E A 312	E A 266	E A 254	244	218	220	208	202	202	214	198	206	236	208	C	H 194	H 176	200	198	230	E A 262	E B 266	244	228
25	E A 258	218	222	214	196	244	208	208	214	208	H 184	A	202	202	206	208	212	212	204	210	224	222	E B 248	E B 252
26	244	E B 266	E B 262	E B 254	216	222	204	206	206	206	194	196	A	H 174	214	220	A	212	212	E A 260	218	228	206	E B 262
27	E B 268	E B 270	238	228	230	214	212	206	238	A	196	H 186	H 176	192	H 184	222	212	194	214	202	E B 252	E A 246	230	232
28	212	E A 286	E B 276	E A 240	E B 246	242	214	H 206	206	202	194	186	190	202	H 186	222	204	218	210	206	236	E A 312	E A 278	242
29	E A 250	232	E B 264	E B 264	E B 300	E A 286	216	214	218	A	208	H 190	194	200	H 184	210	208	208	208	218	E B 300	E B 262	E A 246	218
30	212	E A 350	E B 264	E A 262	224	E B 260	218	234	214	218	204	198	206	208	A	208	212	212	216	216	E A 236	A	E A 268	E B 256
31	E A 278	E B 256	232	228	E B 260	228	218	200	192	212	196	A	A	228	H 196	220	210	196	206	222	222	218	E A 242	E A 298
	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	31	31	31	31	31	23	22	24	24	22	30	23	25	25	30	31	31	31	29	31	30
MED	E 258	E 256	E 249	E 254	224	U 225	208	206	208	205	198	199	199	200	206	214	216	213	210	214	226	U 219	U 229	E B 257
U Q	E A 268	E 266	E B 264	E 266	E B 262	E A 266	216	214	214	214	204	209	206	206	212	221	222	220	216	E A 238	E A 254	E 260	E 262	E B 266
L Q	244	238	232	228	224	220	202	202	202	202	194	186	190	H 188	H 186	208	212	208	204	208	220	214	230	234

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IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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							B	124	116	116	A	A	A	122	122	120	A	B						
2							B	124	120	120	116	116	116	116	112	120	122	B						
3							B	A	A	A	112	114	116	116	116	120	120	B						
4							B	122	120	A	A	A	118	A	116	116	122	B						
5							B	120	114	A	118	118	116	114	112	114	124	B						
6							B	120	120	A	114	A	A	A	A	114	126	B						
7							B	120	118	118	A	A	114	118	118	118	124	B						
8							B	118	122	A	A	A	A	A	A	118	128	B						
9							B	120	122	118	A	A	A	A	A	A	126	B						
10							B	120	116	116	116	116	116	118	120	126	128	B						
11							B	A	A	A	A	A	122	120	122	118	124	B						
12							B	126	126	120	C	C	C	C	C	C	C	B						
13							B	122	116	C	C	C	C	A	C	C	C	C						
14							B	A	A	A	A	A	A	110	A	A	A	B						
15							B	114	118	A	A	A	118	118	114	118	A	B						
16							B	120	122	A	A	114	116	118	116	126	124	B						
17							B	124	118	A	A	116	112	A	A	A	A	B						
18							B	114	118	116	114	112	114	A	112	112	114	B						
19							B	122	120	122	A	A	A	114	A	114	116	B						
20							B	120	120	120	118	116	118	118	122	112	122	B						
21							B	116	A	A	A	A	A	118	122	A	A	B						
22							B	116	A	A	A	A	A	A	128	122	124	B						
23							B	120	A	A	A	A	A	A	108	116	120	B						
24							B	122	A	116	116	A	A	116	C	116	114							
25							B	114	120	120	A	A	A	A	116	114	108							
26							B	116	116	A	A	A	A	A	A	A	A							
27							B	A	A	A	A	112	112	108	112	A	116							
28							B	120	A	A	A	A	A	A	112	A	A					A		
29							B	A	A	A	A	116	112	A	112	112	114							
30							B	110	116	A	A	A	120	A	A	A	A							
31							B	116	118	120	120	A	A	A	118	118	A							
	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	21	12	9	10	15	15	20	21	20							
MED								120	118	119	116	116	116	118	116	118	122							
U Q								122	120	120	118	116	118	118	121	120	124							
L Q								116	116	116	114	114	114	114	112	114	116							

OCT. 2006 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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	94	98	96	98	96	94	138	126	118	118	102	104	108	106	114	112	106	B	B	B	B	B	B	B
2	B	B	B	B	96	96	134	146	140	102	120	102	104	100	142	154	126	118	114	112	108	98	100	104
3	100	B	100	B	106	104	106	100	96	96	120	104	142	152	140	140	120	106	104	102	B	B	B	B
4	B	B	B	B	B	B	148	132	116	104	104	104	112	100	100	148	156	116	106	98	98	96	94	94
5	B	B	B	B	B	B	146	156	110	106	102	102	104	102	100	162	168	144	B	110	116	110	106	100
6	B	96	B	B	B	B	128	122	118	106	114	102	102	106	102	152	140	122	112	106	104	98	B	B
7	B	B	B	B	B	102	132	136	106	126	102	104	100	100	102	148	122	118	104	102	102	104	102	96
8	96	96	96	98	102	98	132	124	116	106	104	104	102	102	108	120	148	124	114	96	96	98	96	B
9	96	B	100	104	B	B	B	126	126	120	106	104	104	104	102	102	118	120	110	110	102	B	B	B
10	98	100	94	92	92	B	B	G	112	114	118	120	104	122	124	136	106	138	B	B	102	96	102	114
11	118	104	102	140	126	102	130	106	104	106	100	100	102	104	102	138	124	136	104	104	112	B	96	96
12	96	96	96	B	B	B	B	152	138	124	C	C	C	C	C	C	C	106	106	100	98	100	100	102
13	96	98	94	92	92	B	136	128	118	C	C	C	C	100	C	C	C	C	B	B	112	B	B	B
14	B	B	B	B	94	92	B	106	102	102	98	100	98	94	90	90	90	92	94	90	98	B	B	B
15	B	B	B	B	94	88	92	150	124	106	104	102	100	100	102	100	104	100	104	98	100	100	98	102
16	94	98	B	B	B	B	B	142	116	106	106	96	100	104	164	134	122	118	B	112	B	B	B	B
17	B	B	B	B	B	B	130	130	118	104	104	158	94	102	104	104	104	98	104	B	B	B	B	B
18	B	104	B	100	98	100	96	140	136	120	114	112	114	90	90	108	156	102	96	96	98	100	102	98
19	90	B	B	B	B	B	130	130	126	122	108	104	104	98	98	148	134	118	96	96	94	94	B	90
20	B	B	B	94	106	B	B	150	128	116	114	114	100	104	152	134	154	136	114	140	106	100	96	108
21	B	B	B	B	B	B	B	132	106	104	104	98	96	104	102	96	92	94	94	92	92	94	102	106
22	98	94	92	94	94	94	96	148	106	104	106	106	106	98	158	126	124	114	98	94	94	88	88	B
23	96	98	98	98	B	108	138	122	104	106	104	98	98	98	96	102	96	B	B	98	100	96	96	96
24	94	96	96	92	92	96	B	150	100	118	118	98	96	100	C	90	G	B	B	B	96	132	132	102
25	92	98	94	94	B	B	128	128	124	118	108	102	102	102	92	148	142	94	90	90	90	B	B	B
26	B	B	B	B	B	B	142	134	116	104	104	102	102	98	96	96	96	94	92	92	98	B	B	98
27	90	90	B	B	96	B	B	104	98	100	98	100	98	90	90	94	116	B	B	B	B	102	98	96
28	110	96	94	92	B	98	B	116	106	104	104	104	102	98	94	94	94	B	B	B	108	100	98	92
29	92	88	B	B	B	88	B	106	104	104	104	102	98	94	92	90	122	108	106	B	B	B	98	98
30	98	92	92	92	B	92	86	G	102	108	106	104	104	100	96	96	96	96	100	B	94	94	100	100
31	98	96	B	98	96	B	146	140	144	106	122	100	100	100	100	100	100	104	B	B	B	B	106	102
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	19	18	14	15	15	15	20	29	31	30	29	29	29	30	28	29	28	25	21	21	24	19	20	20
MED	96	96	96	94	96	96	131	130	116	106	104	102	102	100	102	112	121	114	104	98	99	98	99	99
U Q	98	98	98	98	102	102	138	144	124	118	114	104	104	104	111	144	137	121	108	108	105	100	102	102
L Q	94	96	94	92	94	92	117	122	104	104	104	100	99	98	96	96	102	99	96	95	96	96	96	96

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 2006 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

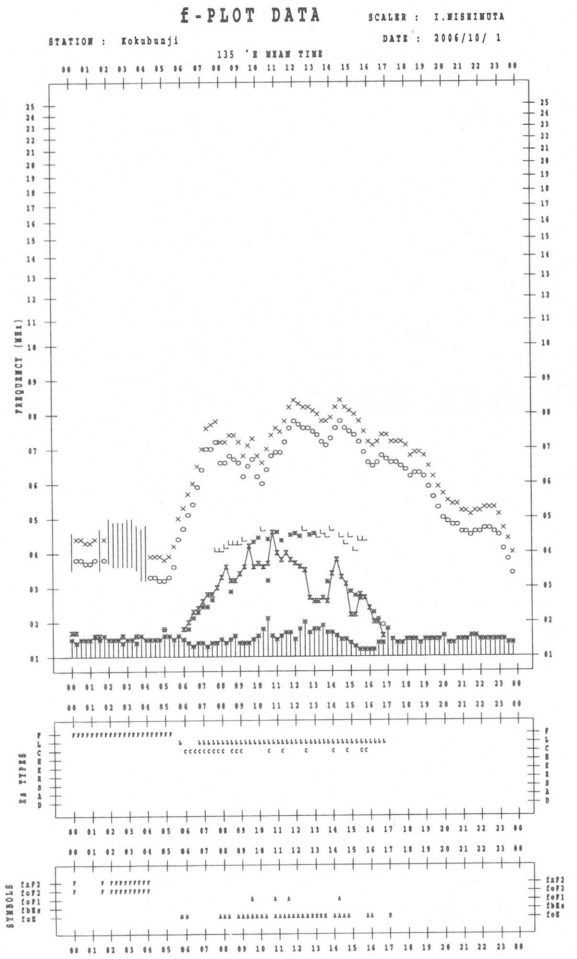
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F 3	F 2	F 2	F 3	F 2	F 2	C 2	CL 21	CL 11	CL 11	L 2	L 3	L 2	L 2	CL 12	L 2	L 2							
2					F 1	F 2	H 2	H 2	HL 11	L 2	CL 11	L 1	L 1	L 2	HL 11	HL 11	CL 32	C 3	F 1	F 2	F 2	F 2	F 2	F 1
3	F 3		F 1		F 1	F 1	L 2	L 2	L 2	L 2	CL 11	L 1	HL 11	HL 11	HL 11	HL 21	CL 22	L 3	F 2	F 2				
4							H 1	CL 12	CL 11	L 2	L 2	L 2	CL 11	L 1	L 1	HL 21	HL 21	C 4	F 2	F 3	F 2	F 2	F 2	F 1
5							H 2	HL 21	CL 11	L 2	L 2	L 1	L 1	L 1	L 2	HL 12	HL 21	H 2		F 3	F 2	F 2	F 2	F 1
6		F 1					C 1	C 2	CL 21	L 1	CL 21	L 2	L 2	L 2	L 2	HL 12	HL 22	C 3	F 3	F 3	F 3	F 1		
7						F 1	C 2	CL 11	L 2	CL 11	L 2	L 2	L 2	L 2	L 1	HL 11	CL 31	C 4	F 3	F 4	F 3	F 1	F 5	F 5
8	F 4	F 4	F 2	F 1	F 2	F 1	H 2	C 2	C 2	L 1	L 2	L 2	L 2	L 2	L 2	CL 22	HL 22	CL 32	FF 43	F 3	F 2	F 2	F 1	
9	F 1		F 2	F 1				CL 22	CL 11	CL 11	L 2	L 2	L 2	L 2	L 3	L 2	CL 21	C 2	F 5	F 2	F 2			
10	F 2	F 2	F 3	F 2	F 2				CL 21	CL 11	CL 11	CL 11	L 2	CL 11	CL 21	HL 21	L 1	H 2			F 1	F 2	F 3	F 3
11	F 1	F 1	F 1	FF 31	FF 32	F 2	CL 22	L 2	L 2	L 2	L 1	L 2	L 2	L 2	L 1	C 1	CL 21	C 2	F 2	F 3	F 3		F 3	F 2
12	F 2	F 2	F 2					HL 12	HL 11	CL 21								L 4	F 2	F 2	F 2	F 2	F 3	F 2
13	F 2	F 2	F 1	F 1	F 2		H 2	C 2	CL 11					L 2							F 3			
14					F 3	F 2		L 2	L 3	L 3	L 2	L 3	L 3	L 2	L 3	L 3	L 3	L 3	F 3	F 3	F 2			
15					F 2	F 2	L 2	H 2	CL 21	L 2	L 2	L 2	L 2	L 2	L 2	L 1	L 2	L 3	F 2	F 3	F 2	F 3	F 2	F 2
16	F 2	F 1						H 2	CL 11	L 2	L 2	L 2	L 2	L 1	HL 11	HL 21	CL 21	C 2		F 2				
17							C 3	C 2	CL 21	L 2	L 2	HL 11	L 2	L 2	L 2	L 2	L 3	L 5	F 3					
18		F 1		F 2	F 3	F 1	L 2	HL 21	HL 21	CL 22	CL 22	CL 22	CL 11	L 2	L 2	CL 12	H 2	L 3	F 3	F 4	F 4	F 3	F 2	F 2
19	F 4						C 2	CL 21	CL 21	CL 11	L 2	L 2	L 2	L 2	L 2	HL 22	HL 22	C 3	F 1	F 3	F 2	F 1		F 1
20				F 1	F 2			H 3	CL 11	CL 22	CL 32	CL 11	L 1	L 2	HL 11	H 2	HL 21	HL 21	F 3	FF 21	F 2	F 4	F 3	F 2
21								C 2	L 2	L 2	L 2	L 3	L 4	L 2	L 1	L 2	L 3	L 3	F 3	F 3	F 3	F 2	F 2	F 2
22	F 3	F 4	F 4	F 3	F 2	F 4	L 2	H 1	L 2	L 2	L 2	L 3	L 2	L 2	HL 12	CL 32	CL 32	CL 43	F 5	F 4	F 4	F 3	F 2	
23	F 3	F 2	F 2	F 1		F 1	H 1	CL 21	L 2	L 2	L 2	L 1	L 1	L 1	L 1	L 2	L 2			F 2	F 2	F 4	F 2	F 6
24	F 3	F 2	F 4	F 2	F 3	F 2		HL 12	L 2	CL 11	CL 21	L 3	L 2	L 2		L 2					F 1	F 3	F 3	F 3
25	F 3	F 2	F 1	F 1			C 1	C 2	CL 21	CL 11	L 1	L 2	L 2	L 2	L 2	HL 11	HL 21	F 3	F 2	F 2	F 1			
26							H 1	HL 11	CL 22	L 2	L 2	L 2	L 2	L 2	L 3	L 3	L 3	F 2	F 2	F 2	F 1			F 2
27	F 1	F 2			F 1			L 2	L 2	L 3	L 2	L 2	L 2	L 2	L 2	L 2	CL 12					F 2	F 3	F 3
28	FF 21	F 3	F 2	F 2		F 2		C 2	L 2	L 2	L 2	L 2	L 2	L 3	L 3	L 3	L 2				F 2	F 4	F 2	F 2
29	F 2	F 2				F 1		L 3	L 1	L 2	L 1	L 1	L 2	L 2	L 3	L 3	CL 22	F 3	F 2				F 2	F 3
30	F 1	F 3	F 3	F 3		F 2	L 2		L 2	L 1	L 2	L 2	L 2	L 2	L 3	L 3	L 3	F 3	F 3		F 4	F 5	F 2	F 3
31	F 2	F 3		F 3	F 2		H 2	HL 11	HL 11	L 2	CL 11	L 3	L 2	L 2	L 2	L 2	L 3	F 2					F 2	F 3
	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																								

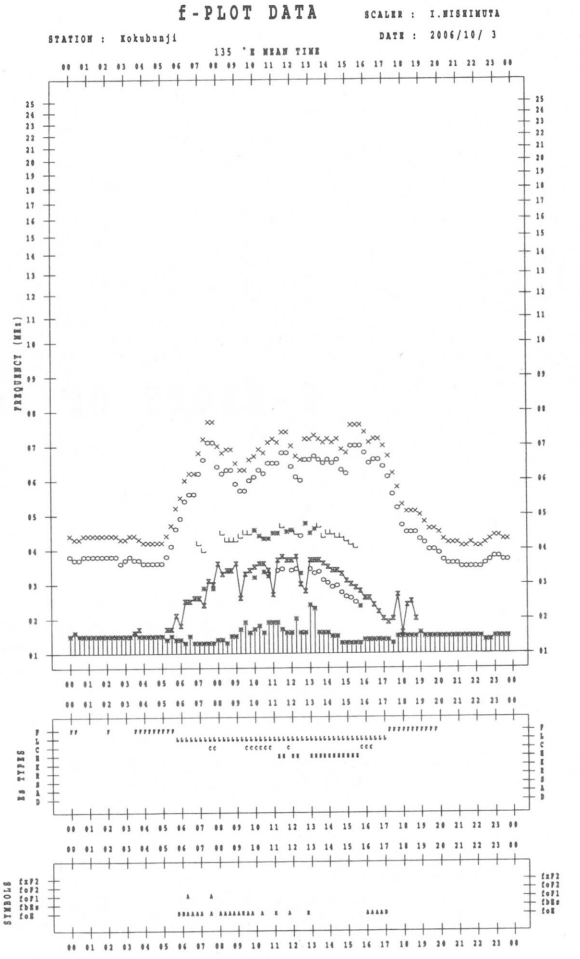
OCT. 2006 TYPES OF Es

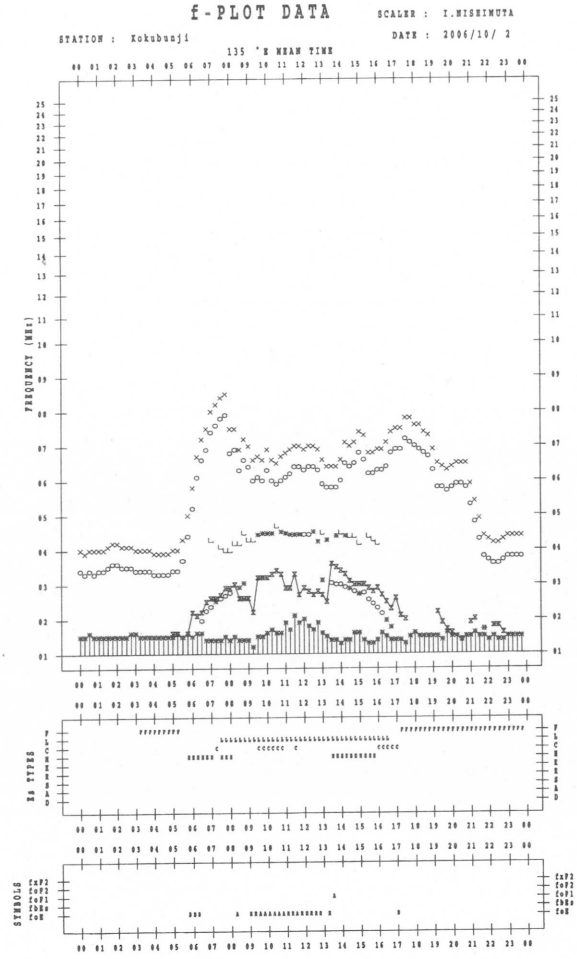
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

f-PLOTS OF IONOSPHERIC DATA

KEY OF f-PLOT	
	SPREAD
	foF2, foF1, foE
	fxF2
	DOUBTFUL foF2, foF1, foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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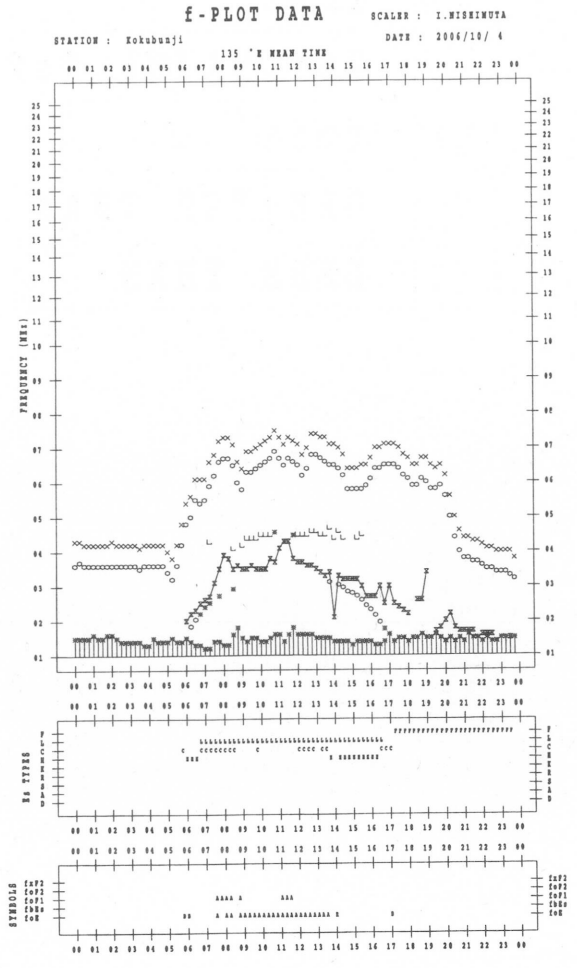
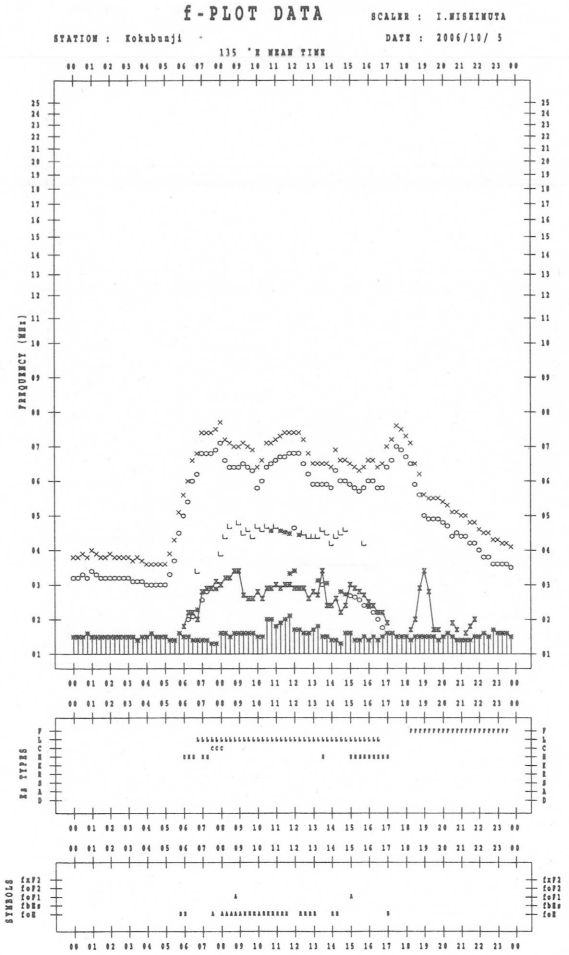
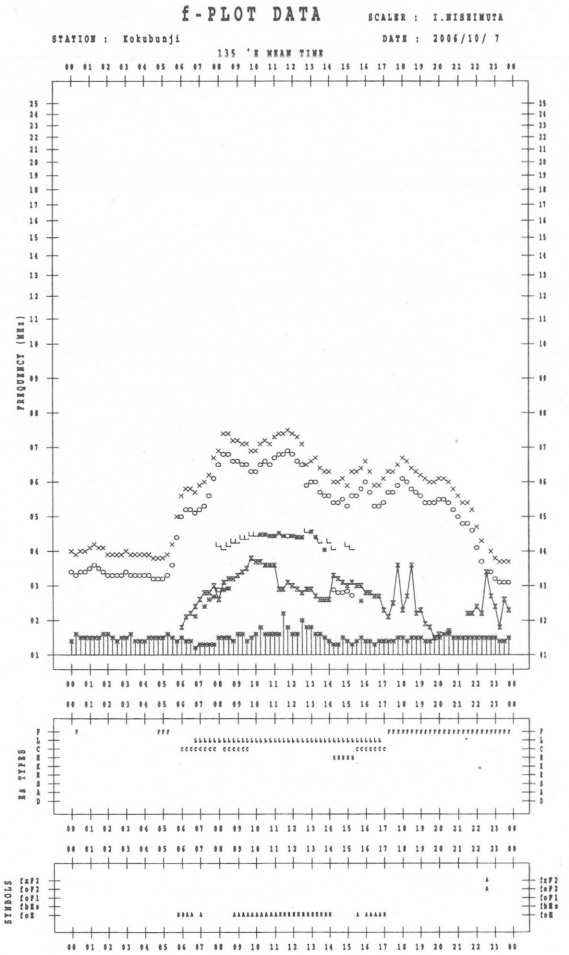
STATION : Kokubunji
DATE : 2006/10/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/ 5
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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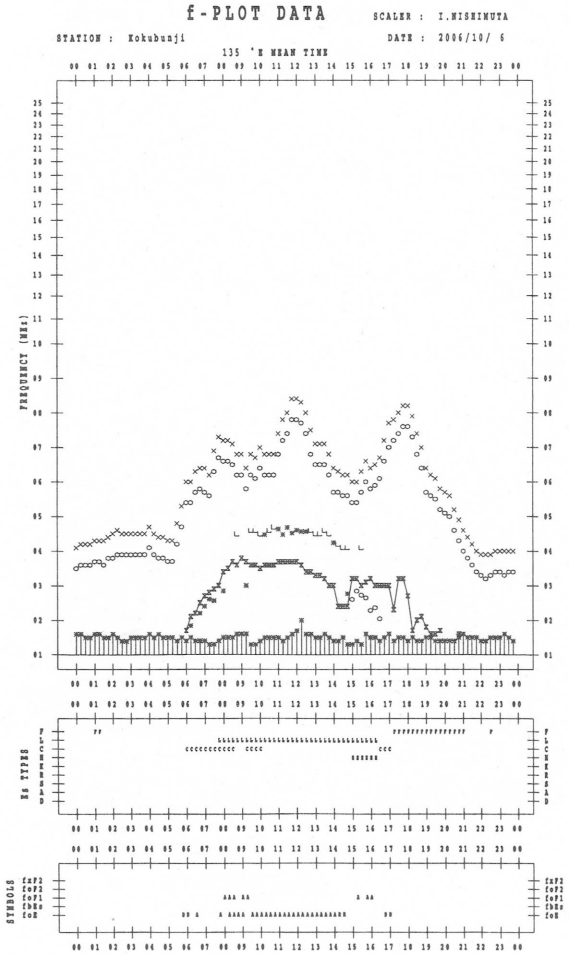
STATION : Kokubunji
DATE : 2006/10/ 7
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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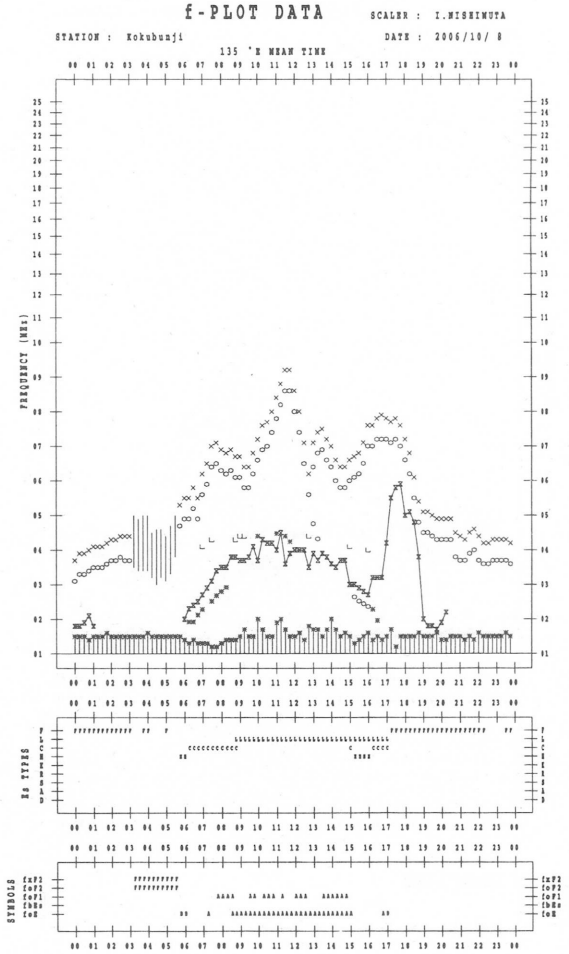
STATION : Kokubunji
DATE : 2006/10/ 6
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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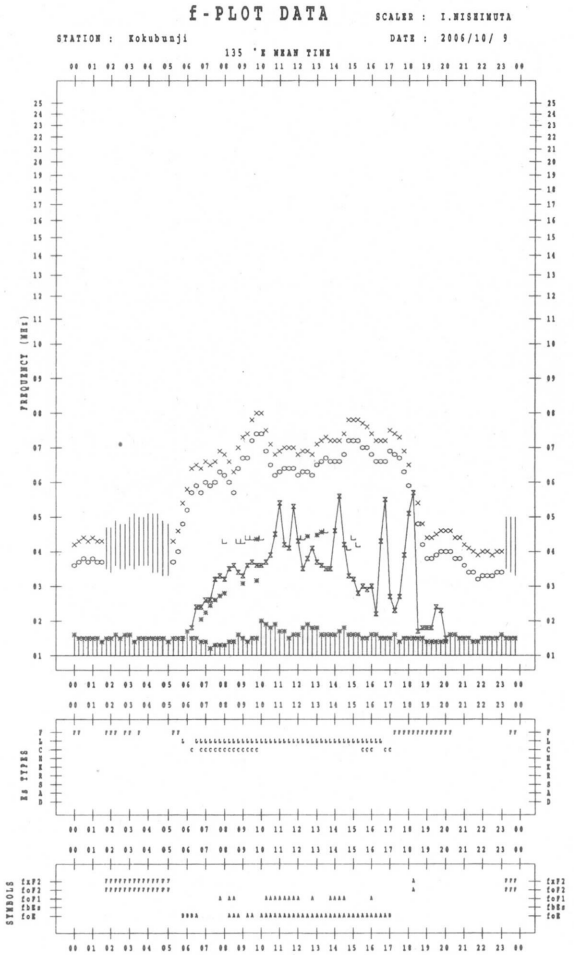
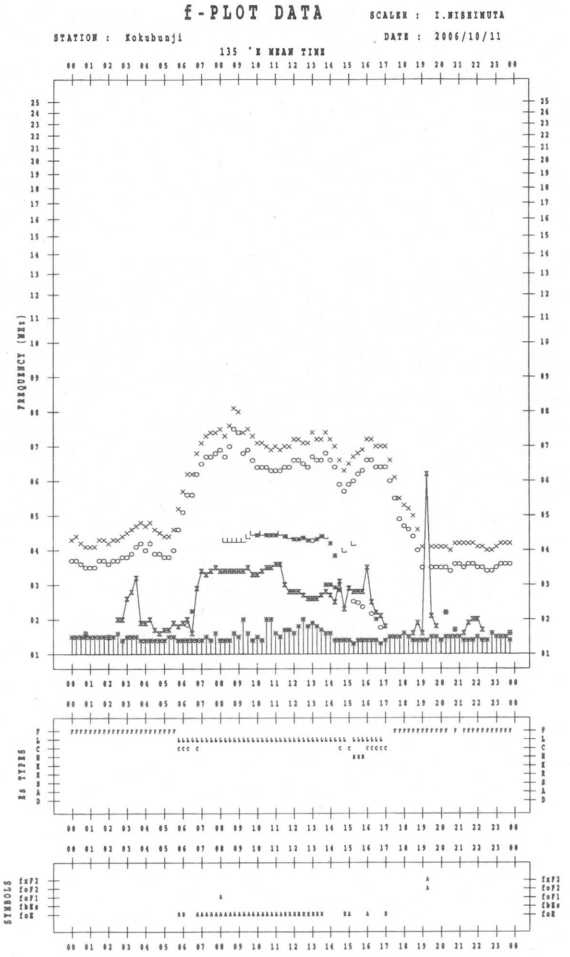
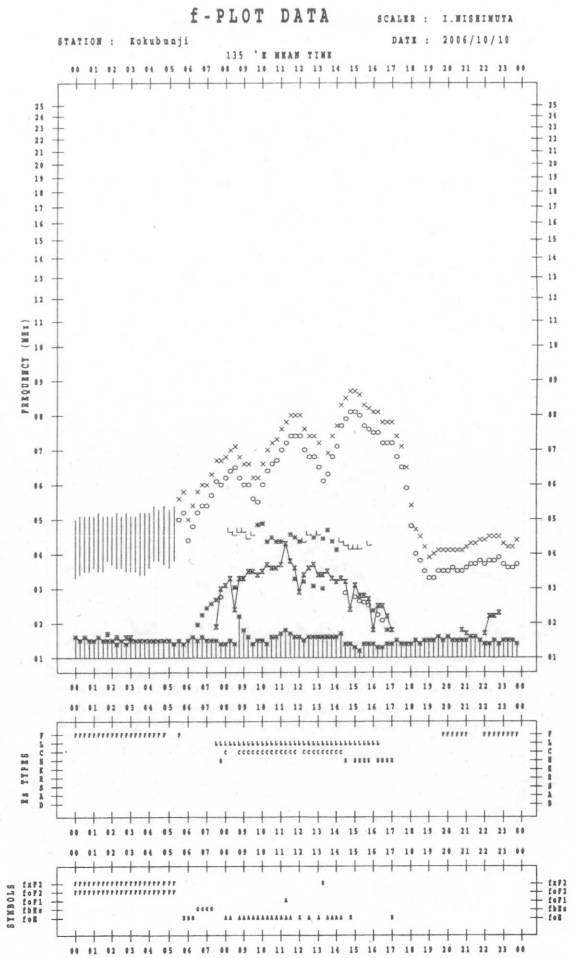
STATION : Kokubunji
DATE : 2006/10/ 8
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/ 9
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/11
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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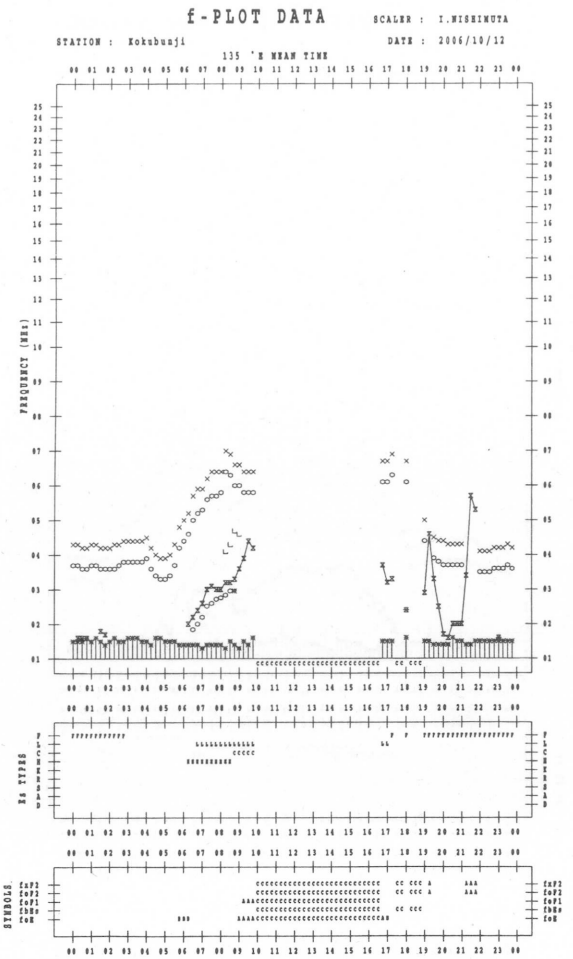
STATION : Kokubunji
DATE : 2006/10/10
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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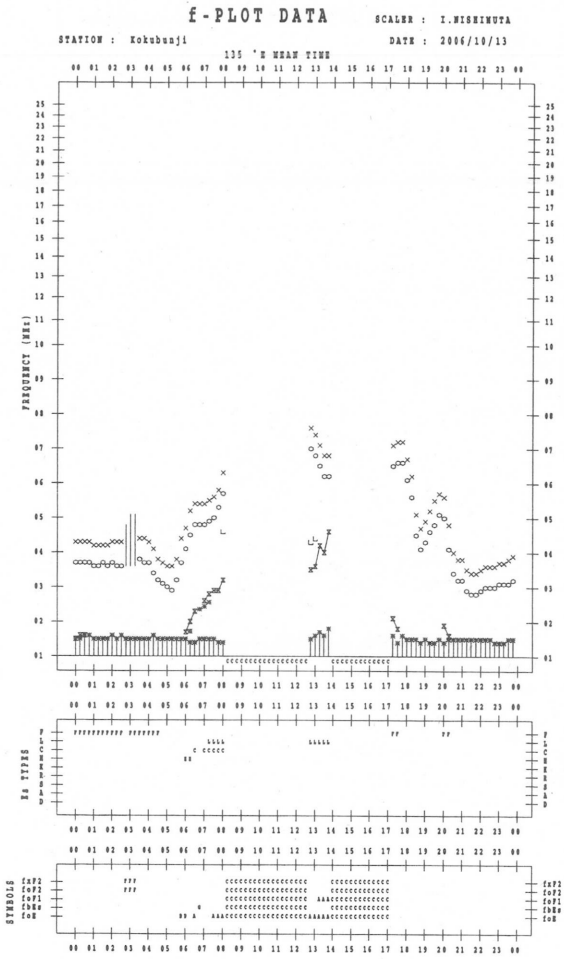
STATION : Kokubunji
DATE : 2006/10/12
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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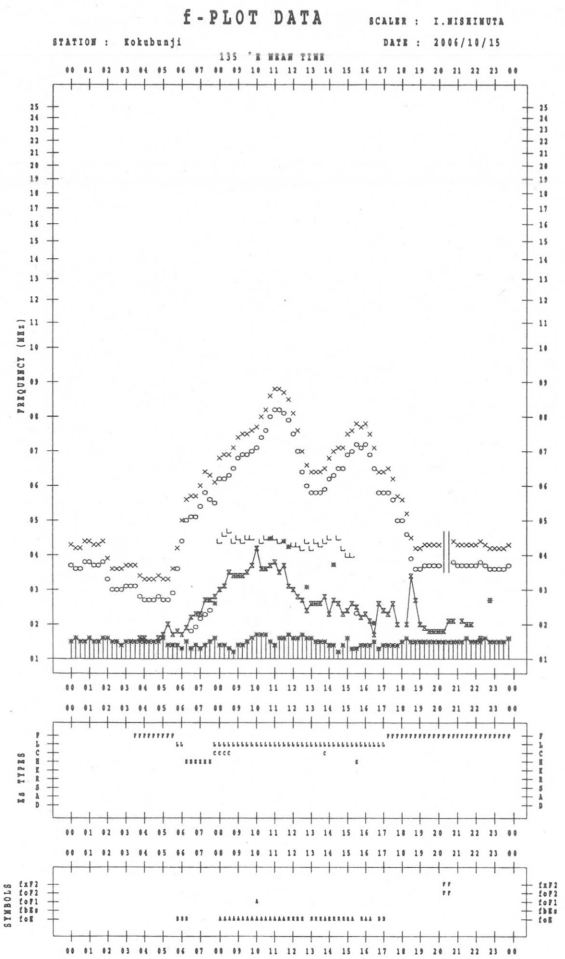
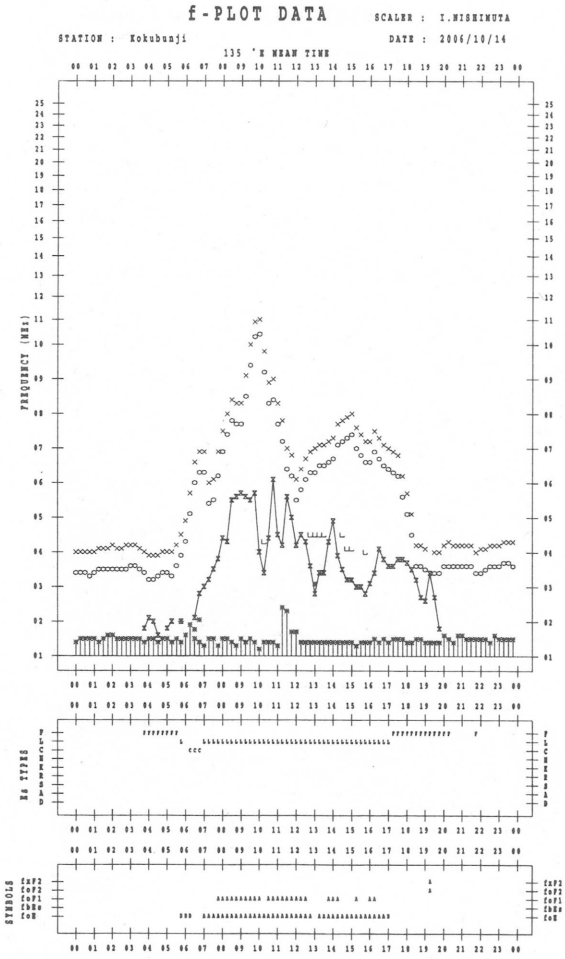
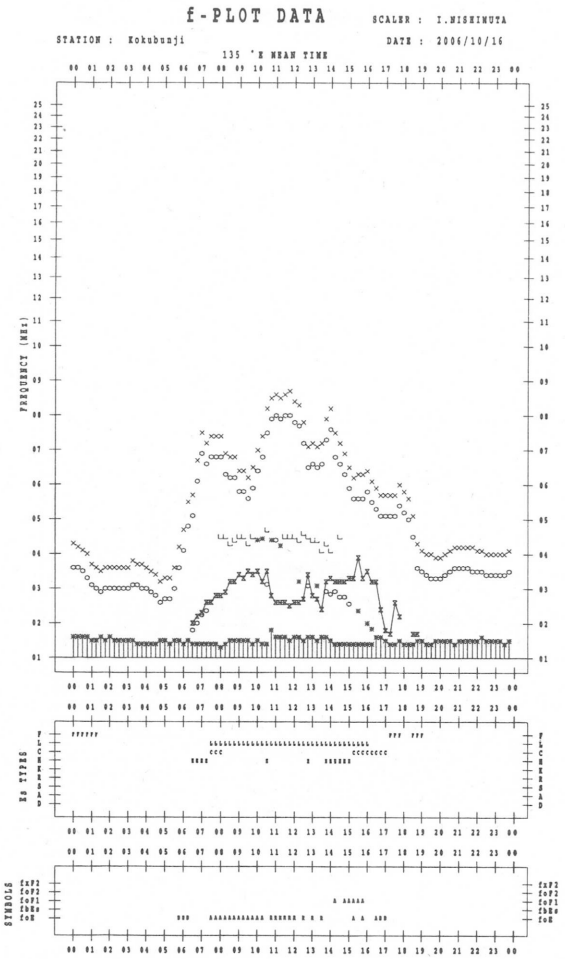
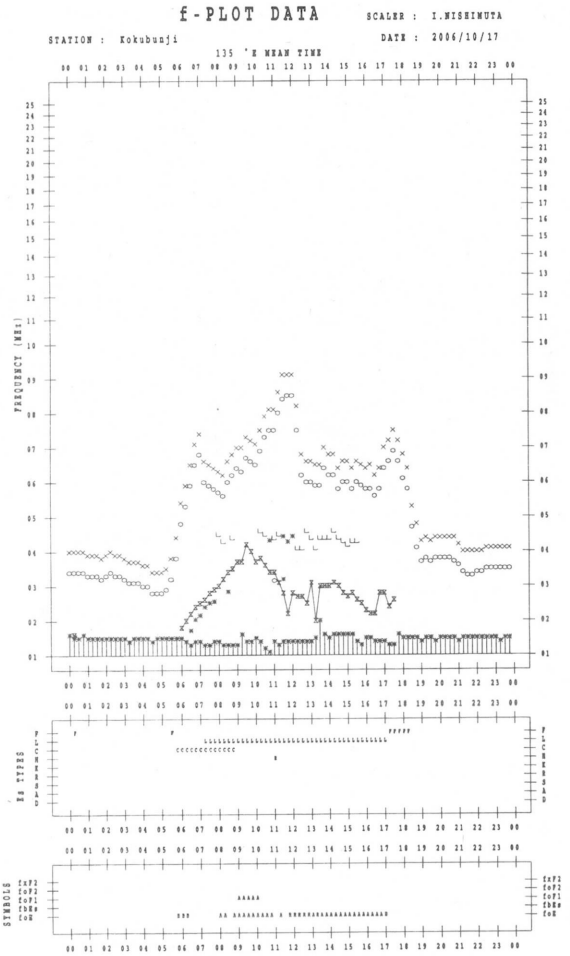
STATION : Kokubunji
DATE : 2006/10/13
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/15
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/14
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/16
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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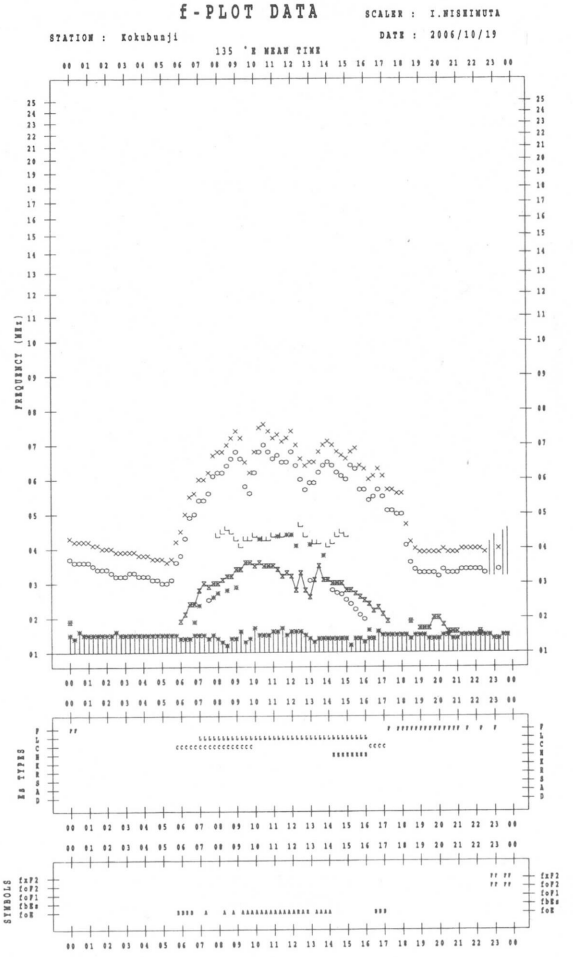
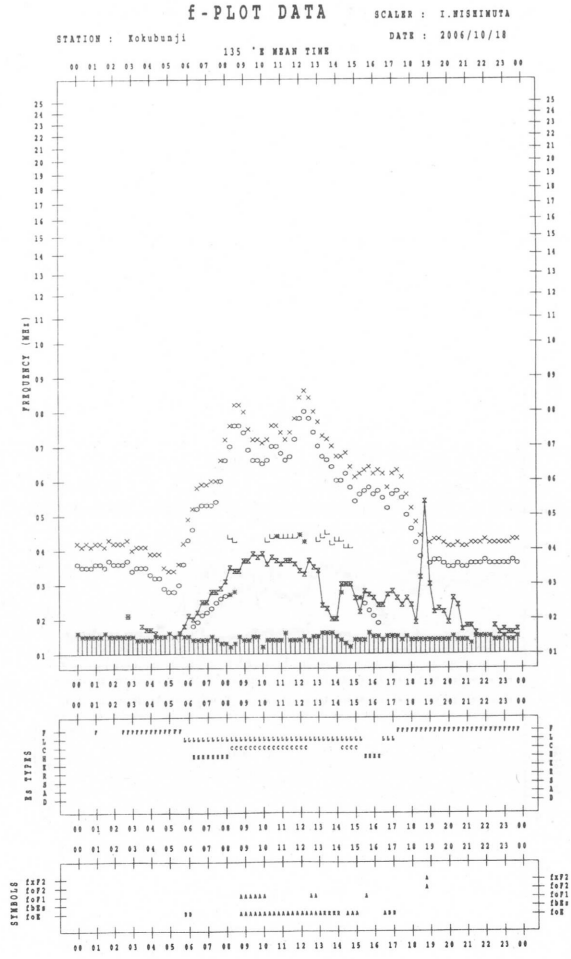
STATION : Kokubunji
DATE : 2006/10/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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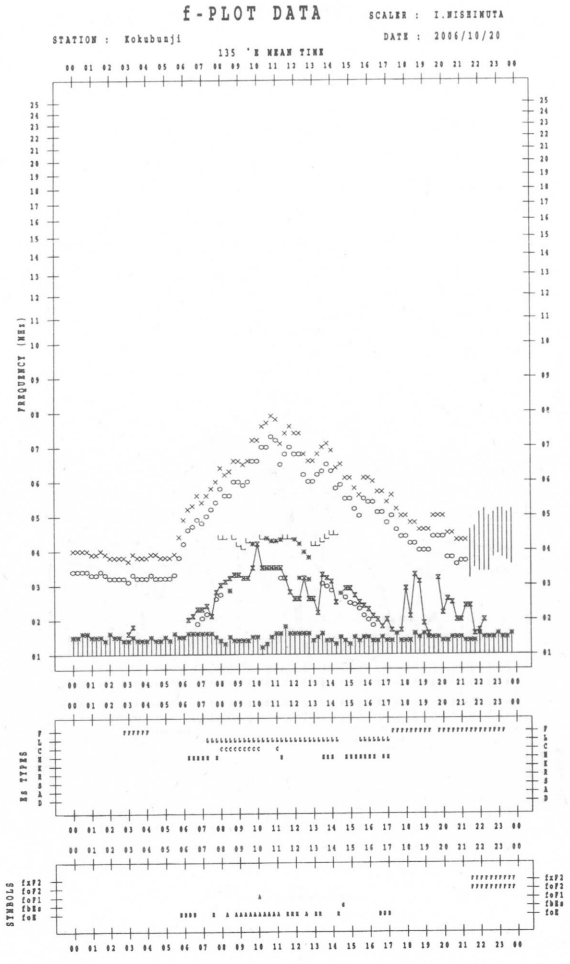
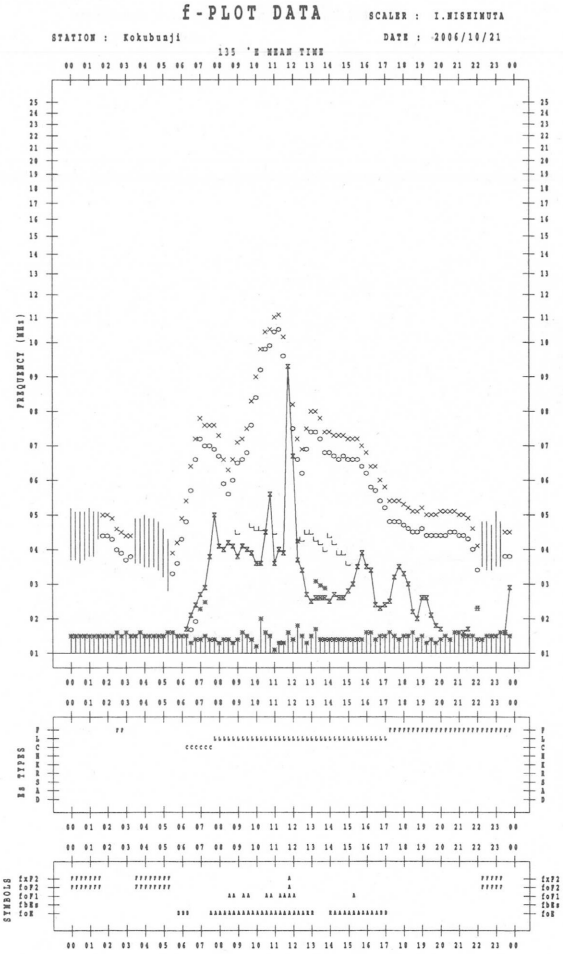
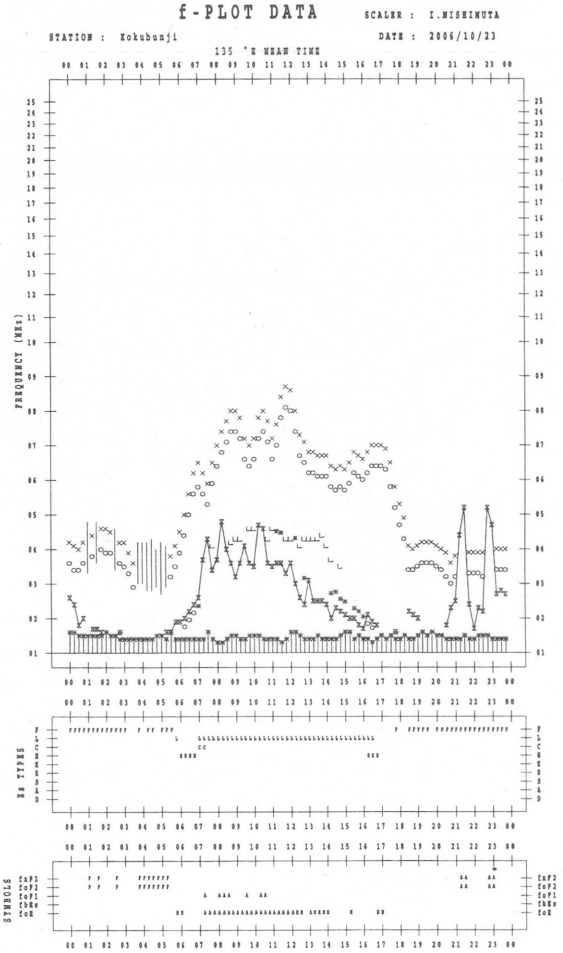
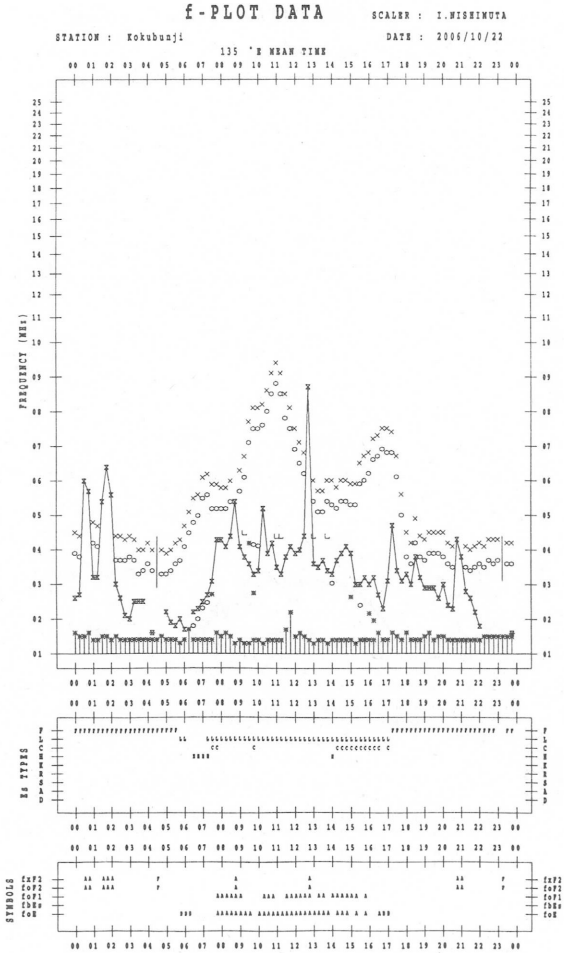
STATION : Kokubunji
DATE : 2006/10/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATA : 2006/10/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATA : 2006/10/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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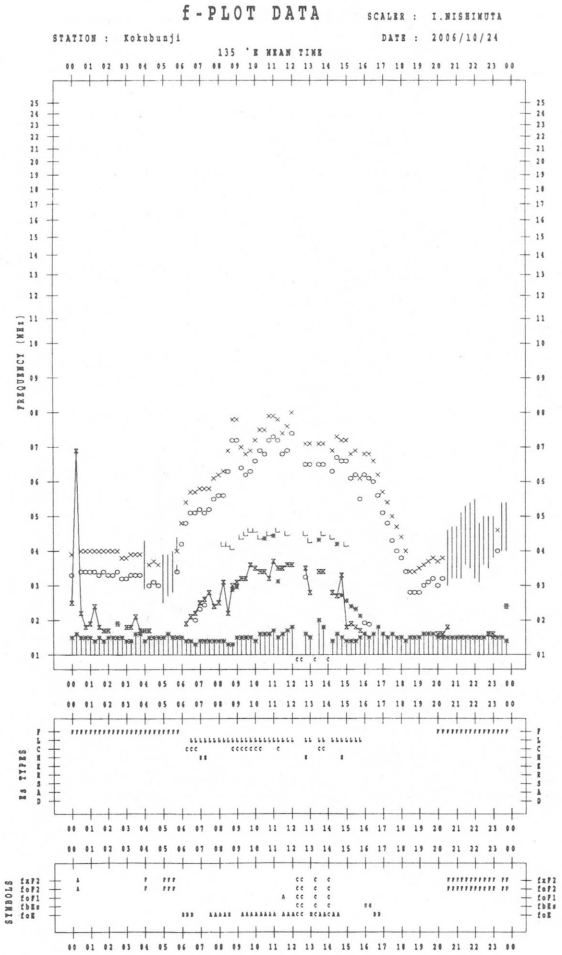
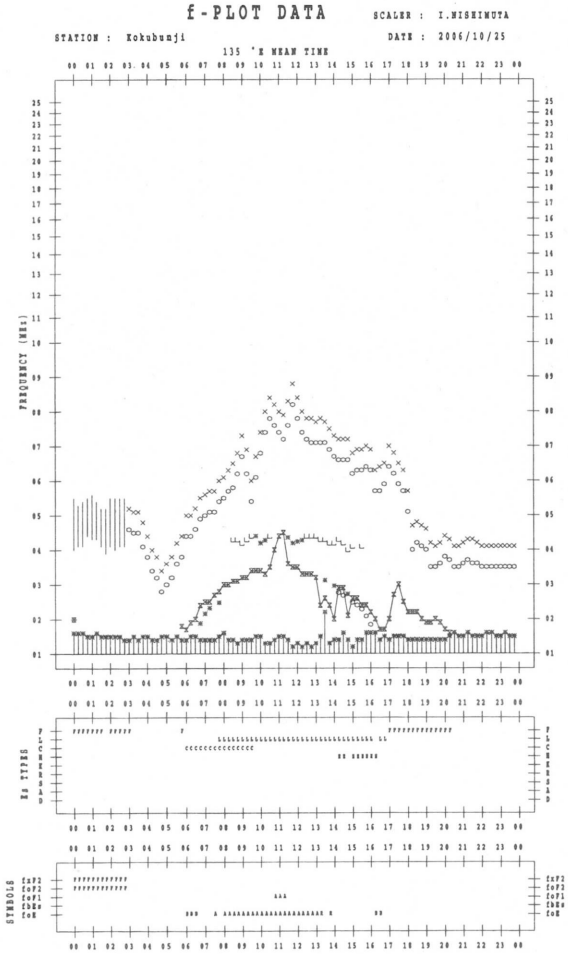
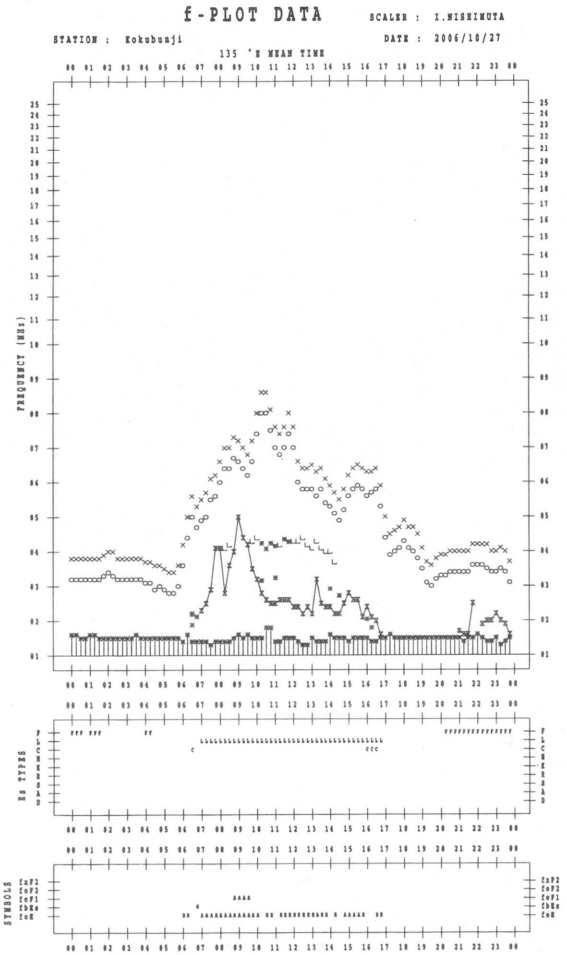
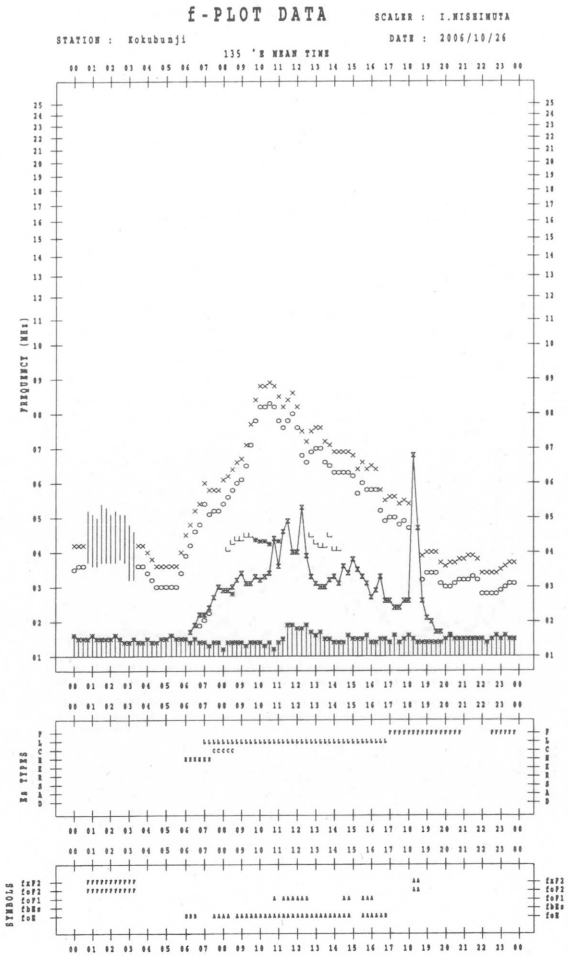
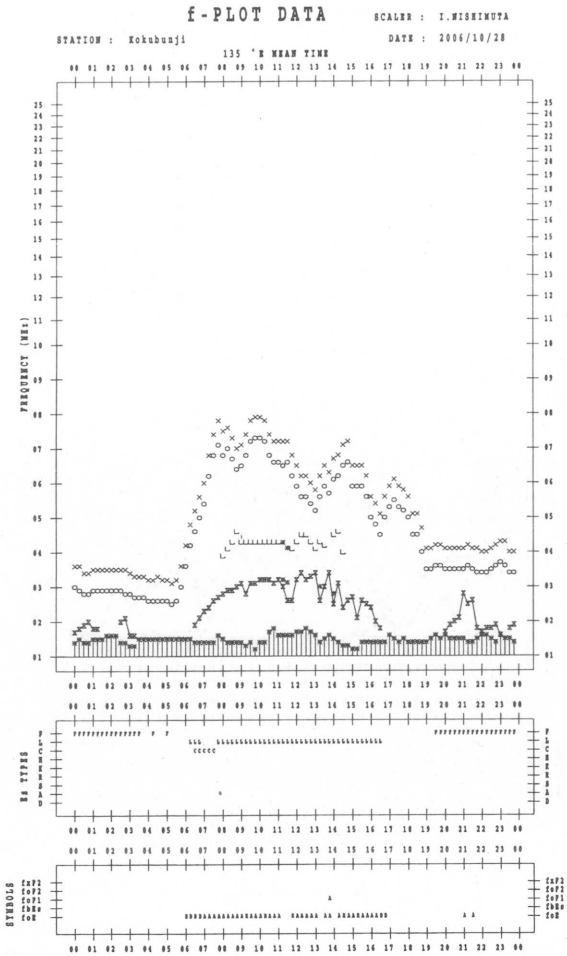
STATION : Kokubunji
DATA : 2006/10/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

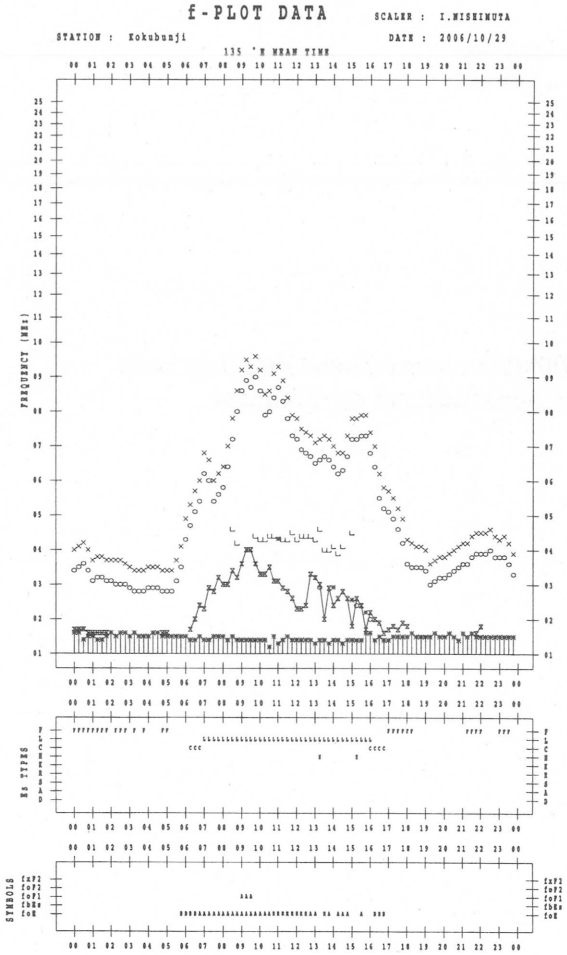

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATA : 2006/10/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

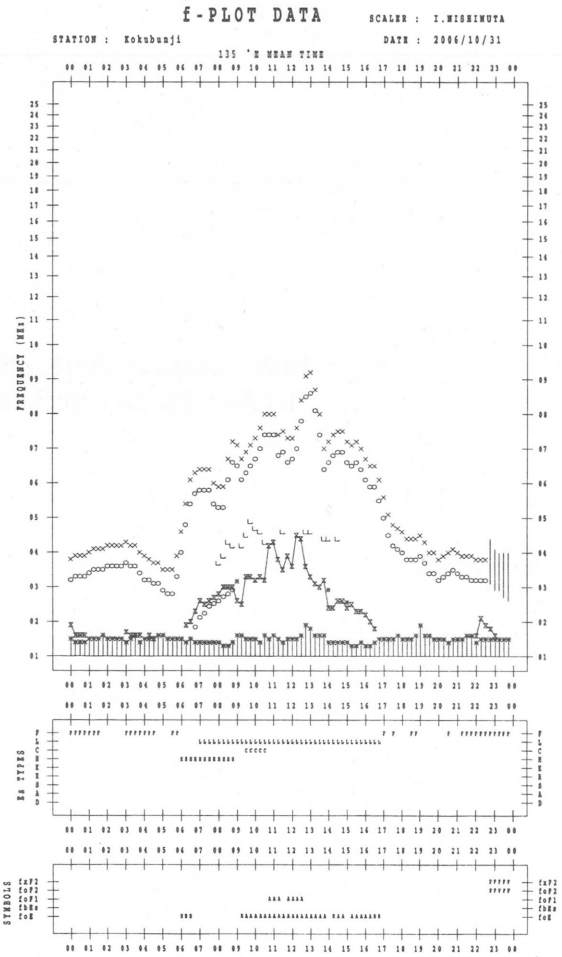

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

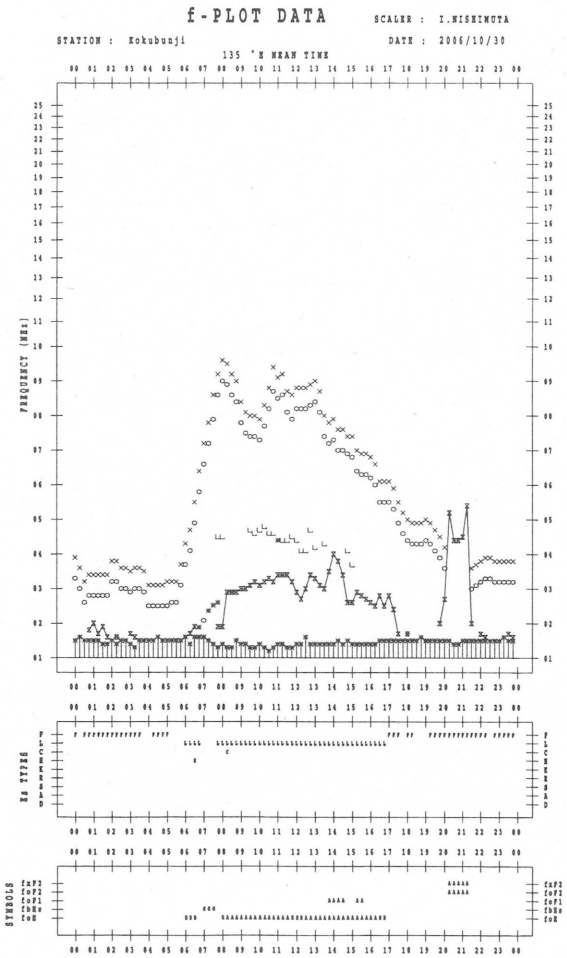

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/10/30
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

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

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

B. Solar Radio Emission
B2.Outstanding Occurrences at Hiraiso

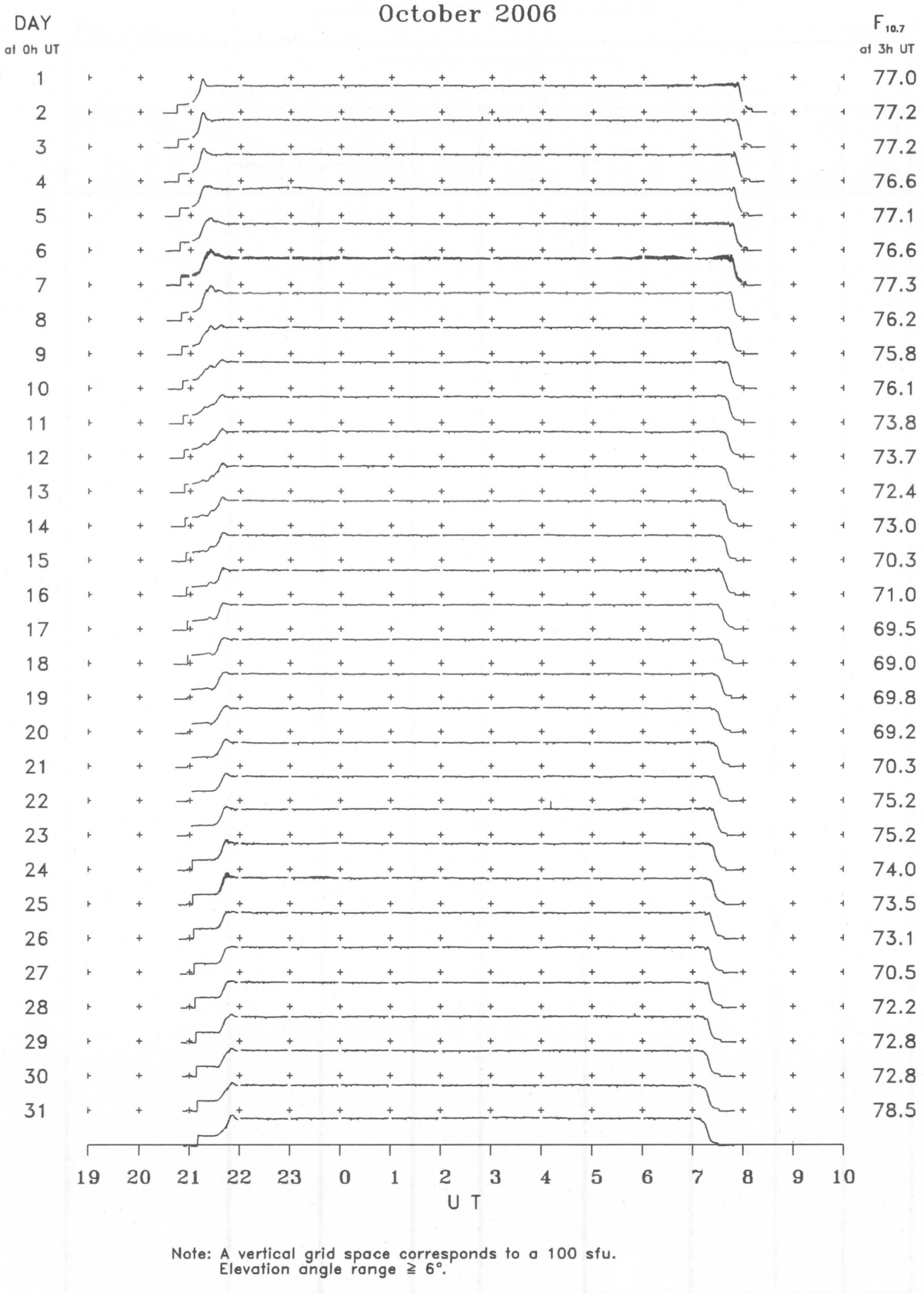
Hiraiso October 2006

Single-frequency observations
Normal observing period: 2040 - 0805 U.T. (sunrise to sunset)

OCT. 2006	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

B. Solar Radio Emission

B3. Summary Plots of $F_{10.7}$ at Hiraiso



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

IONOSPHERIC DATA IN JAPAN FOR OCTOBER 2006
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