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IONOSPHERIC DATA IN JAPAN

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

NiCT

NATIONAL INSTITUTE OF INFORMATION
AND COMMUNICATIONS TECHNOLOGY
TOKYO, JAPAN

INTRODUCTION

This Series contains data on ionosphere (I) and solar radio emission (S) obtained at the following stations under the National Institute of Information and Communications Technology, Independent Administrative Institution in Japan.

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

The published data consist of tabulations of hourly values of three factors (*foF2*, *fEs*, *fmin*) and monthly medians of two factors (*h'Es* ,*h'F*), daily Summary Plots and monthly medians plot of *foF2*.

a. Characteristics of Ionosphere

foF2	Ordinary wave critical frequency for the ***F2*** layer
fEs	Highest frequency of the ***Es*** layer whether it may be ordinary or extraordinary
fmin	Lowest frequency which shows vertical ionospheric reflections
h'Es ***h'F***	Minimum virtual height on the ordinary wave for the ***Es*** and ***F*** layers, respectively

b. Descriptive Letters

The following descriptive letters are used in the tables.

A Impossible measurement because of the presence of a lower thin layer, for example *Es* (for *foF2*).

C Impossible measurement because of any failure in observation.

G Impossible automatic scaling because of too small ionization density of the layer (for *fEs*).

N Impossible automatic scaling because of complex echoes.

Blank No digital record because of trouble in the automatic data processing system, but existence of film record.

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

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

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

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

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

d. Reliability of Automatic Scaling

The results of the comparison between automatically-scaled values and manually-scaled ones showed that hourly values of *foF2* , *fEs* and *fmin* were scaled within a difference of 1 MHz from about 90, 90 and 99%, respectively of the test ionograms.

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

fxI	Top frequency of spred ***F*** trace
foF2 ***foF1*** ***foE*** ***foEs***	Ordinary wave critical frequency for the ***F2***, ***F1***, ***E*** and ***Es*** including particle ***E*** layers, respectively
fbEs	Blanketing frequency of the ***Es*** layer, e.g. the lowest ordinary wave frequency visible through ***Es***
fmin	Lowest frequency which shows vertical ionospheric reflections
M(3000)F2 ***M(3000)F1***	Maximum usable frequency factor for a path of 3000 km for transmission by ***F2*** and ***F1*** layers, respectively
h'F2 ***h'F*** ***h'E*** ***h'Es***	Minimum virtual height on the ordinary wave for the ***F2***, whole ***F***, ***E*** and ***Es*** layers, respectively
Types of ***Es***	See below b. (iii)

b. Symbols

(i) Descriptive Letters

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

A Measurement influenced by, or impossible because of, the presence of a lower thin layer, for example *Es*.

B Measurement influenced by, or impossible because of, absorption in the vicinity of *fmin*.

C Measurement influenced by, or impossible because of, any non-ionospheric reason.

D Measurement influenced by, or impossible because of, the upper limit of the normal frequency range in use.

E Measurement influenced by, or impossible because of, the lower limit of the normal frequency range in use.

F Measurement influenced by, or impossible because of, the presence of spread echoes.

G Measurement influenced by, or impossible because the ionization density of the layer is too small to enable it to be made accurately.

H Measurement influenced by, or impossible because of, the presence of a stratification.

K Presence of particle *E* layer.

L Measurement influenced or impossible because the trace has no sufficiently definite cusp between layers.

M Interpretation of measurement questionable because the ordinary and extraordinary components are not distinguishable.

N Conditions are such that the measurement cannot be interpreted.

O Measurement refers to the ordinary component.

P Man-made perturbations of the observed parameter; or spur type spread *F* present.

Q Range spread present.

R Measurement influenced by, or impossible because of, attenuation in the vicinity of a critical frequency.

S Measurement influenced by, or impossible because of, interference or atmospherics.

T Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.

V Forked trace which may influence the measurement.

W Measurement influenced or impossible because the echo lies outside the height range recorded.

X Measurement refers to the extraordinary component.

Y Lacuna phenomena, severe layer tilt.

Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

A Less than. Used only when *fbEs* is deduced from *foEs* because total blanketing of higher layer is present.

D Greater than.

E Less than.

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

M Mode interpretation uncertain.

O Extraordinary component characteristic deduced from the ordinary component. (Used for x-characteristics only.)

T Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.

U Uncertain or doubtful numerical value.

X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

f An *Es* trace which shows no appreciable increase of height with frequency.

l A flat *Es* trace at or below the normal *E* layer minimum virtual height or below the part *E* layer minimum virtual height.

c An *Es* trace showing a relatively symmetrical cusp at or below *foE*. (Usually a daytime type.)

h An *Es* trace showing a discontinuity in height with the normal *E* layer trace at or above *foE*. The cusp is not symmetrical, the low frequency end of the *Es* trace lying clearly above the high frequency end of the normal *E* trace. (Usually a daytime type.)

q An *Es* trace which is diffuse and non-blanketing over a wide frequency range.

r An *Es* trace showing an increase in virtual height at the high frequency end similar to group retardation.

a An *Es* trace having a well-defined flat or gradually rising lower edge with stratified and diffuse traces present above it.

s A diffuse *Es* trace which rises steadily with frequency and usually emerges from another type *Es* trace.

d A weak diffuse trace at heights below 95 km associated with high absorption and large *fmin*.

n The designation 'n' is used to denote an *Es* trace which cannot be classified into one of the standard types.

k The designation 'k' is used to show the presence of particle *E*. When *foEs* > *foE* (particle *E*) the *Es* type precedes k.

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

Median count (**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

SEP. 2004

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

HOURLY VALUES OF fEs AT Wakkanai

SEP. 2004

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G				29	42	G		42	G	41	G	G	45	G	G	37	35	39	26	36	G	G
2	G	25	G	G	26	28	31	G	G	G	42	50	G	G	G	G	G	G	30	G	G	28	33	G
3	G	30	27	G	G	G	G	37	42	40	41	42	40	40	G	50	37	33	32	31	28	G		45
4		36	G	G	G	G	35	39	46	G	44	G		G	39	G	G	G	G	47	50	G	G	29
5	G	G	G	G	G	G	30	36	47	60	40	43	47	44	G	G	G	G	G	G	G	G	24	G
6	G	G	G	G	G	G		34	39	G	G	G	G	G	G	G	34	30	G	30	G	G	G	29
7	33	34		28	35	30		42	G	G	G	G	G	G	44	43	34	31	G	30	G	G	28	G
8	G	26	32	25	27	G	G	G	G	G	49	49	48	88	68	63	47	44	39	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	G	G	G	G	G	G	G	G	33	33	33	29	31	32
10	27	40	G	27	G	28	29	34	G	38	48	74	42	G	G	G	44	41	39	60	30	30	28	27
11	G	G	G	G	G	G	40	G	G	G	G	G	G	G	G	G		35	33	39	52	G	26	29
12	G	G	G	G	G	G	28	37	G	G			G	G	G	G	G	G	28	29	28	G	G	G
13	G	G	G	G	G	G		G	G	G	G	G	G	G	G	G	39	33	26	G	G	40	33	G
14	G	G	G	G	G	G	30	G	N	G	G	G	G	G	G	G	G		G	26	G	G	G	G
15	G	G	G	24	43	41	36	37	G	G		G	G	41	42	G	G	39	36	30	34	30	50	30
16	G	G	G	G	26	39	40	G	G	G	G	G	G	G	G	G	32	G	32	36	33	29	G	25
17	G	24	G	29	29	36	G	35	G	G	G	G	G	G	G	G	G	G	32	G	G	26	G	G
18	G	G	24	G	24	G	G	G	G	G	G	G	G	G	47	42	40	36	39	31	28	G	G	G
19	G	32	29	G	G	G	G	34	G	45	G	G	40	G	G	G	40	48	31	31	G	G	G	G
20	G	G	G	G	G	G	G	40	45	G	61	44	G	G	51	42	G	G	34	69	36	30	60	40
21	40	50	40	39	38	41	29	G	42	58	58	G	40	49	42	47	40	G	25	39	G	G	32	72
22	50	37	44	52	44	39	G	G	G	51	52	39	48	G	39	G	G	G	G	27	33	G	G	G
23	29	G	G	43	28	27	G	G	G	48	49	66	63			54	39	G	G	29	G	33	32	G
24	G	G	G	G	G	30	28	32	G	G	47	50	52	G	G	65	58	44	38	32	27	28	31	G
25	G	G	G	G	G	29		34	39	G	G	G		G	G	G	35	29	G	G	G	G	G	G
26	G	G	G	G	31	G	G	33	40	G	40	G	G	40	38	36	42	28	28	G	32	27	29	G
27	G	G	G	G	G	G	27	G	G	G	G	G		G	G	G	G	27	G	G	G	G	G	G
28	G	G	G	G	G	G	G	G	40	G	G	G	40	G	G	N	33	G	G	G	G	G	28	37
29	24	29	G	G	G	G	G	41	50	38	G	G	G	G	G	G	G	G	28	28	G	G	G	G
30	G	G	G	27	G	G	34	42	51	38	G	G	40	G	G	34	G	G	G	G	28	G	G	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	29	27	28	28	29	25	29	27	29	28	29	27	29	29	29	29	29	30	29	29	29	28	29
MED	G	G	G	G	G	G	28	33	G	G	G	G	G	G	G	G	32	27	28	30	26	G	12	G
U Q	G	29	G	26	27	29	32	37	42	39	45	42	40	G	40	42	39	35	33	34	32	29	31	29
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Wakkanai

SEP. 2004

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

HOURLY VALUES OF foF2 AT Kokubunji

SEP. 2004

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	44		37	37	34	37	69	61	65	52	71	61	59	59	61	66	62	56	57	54	55	48	42	42
2	45	49	45	39	34	35	54		61	70	72	72	70	71	76	77	68	62	66	66	51	54	44	51
3	42	44	43	42	42	42	60	68	65	59	72	77	64	62	63	66	64	71	72	58	55	54	53	51
4	51	44	47	44	43	42	55	65	70	71	58		69	A		70	69	69	78	87	54	46	45	45
5	48		51	46	41	41	56	62	64	64	72	74	73	75	68	64	63	59	59	69	64	54	55	55
6	59	54	53	46	42	43	71	59	69	68	64	61	69	76	74	68	69	72	78	72	62	53	53	53
7	53	51	51	49	38	41	51	78	66	63	65	57	72	74	76	67	67	70	82	81	66	47	46	44
8	44	44		43	34	34	56	71	80	69	75	73	72	77	75	83	80	82	84	64	49	52	43	
9		46	43	39	37	35	63	71	67	78	82	80	73	78	82	91	85	81	72	66	54	51	A	48
10	48	47	46	45	46	42	59		68	70	69	76	78	82	85	81	86	94	98	88	66	54	52	54
11	52	53	53	52	48	47	66	74	69	71	68	69	72	76	78	72	72	90	90	84	66	49	47	48
12	48	42	47	47	44	47	61	69	82	71			83	74	72	77	77	83	81	73	55	53	52	53
13	53	53	52	49		39	62	72	75	76	74	71	72	72	77	78	77	86	78	77	63	52	53	53
14	51	47	47	47	46	46	63	76	66	90	102	75	72	72	87	97	95	95	95	71	52	51	46	52
15	53	49	42	38		28	A									54	54	59	54	54		44	43	
16	42	43	39	39	32	38	49	62	66	67	46	72	86	73	63	64	65	65	76	61		36	37	
17	A	A	39		26		55	72	76	74	90	95	87	86	88	87	78	71	63	55	52	46	47	48
18	47	43	42	34	42	38	62	74	82	74	82	87	92	85	78	81	81	86	74	55	A	44		45
19	42	44	39	39	36	39	58	80	88	81	85	74	80	82	85	77	76	74	77	62	54	44	46	
20	44	43		39	41	39	61	81	76	67	64	69	80	91	81	78	81	90	84	57	47	52	51	48
21	44	43	43	44	44	44	69	66	71	88	95	78	80	78	75	75	82	91	90	61	48	49	48	44
22	38	43	43	43	45	43	54		66	75	74	90	77	75	80	75	84	78	76	65	66	54		46
23	46	43	46	42	34	35	46	62	74	66	71	76	76	80	76	77	72	75	80	71	52	48	48	48
24	44	44	42	43	34	35	48	61	66	83	88	80	76	72	76	80	78	90	84	54	44		43	
25	38	36	36	36	27		53	71	76	67	64	70	72	75	65	72	74	86	85	66	49	48	42	48
26	44	48	46	46	44	44	54	66		87	71	68	69	69	68	78	81	86	82	61	39	36	41	42
27	37	42	36	39	34	36	50	67	66	82	65	72	73	64	67	68	72	80	63				43	43
28	39	37	41	27		28	53	72	67	67	77	83	76	76	71	75	68	69	64	58	54	54	52	51
29	52	52	52	51	49	54		59	71	69	74	76	78	72	80	78	75	75	54	44	47	45		43
30	43	42	43	46	41	41	66	64	77	66	69	76	82	72	76	77	77	76	76	53	38	39	42	42
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	27	28	29	27	28	28	26	28	29	28	27	29	28	28	30	30	30	30	29	26	28	26	25
MED	44	44	43	43	41	40	57	68	69	70	72	74	73	75	76	77	76	77	78	64	54	49	46	48
U Q	51	49	47	46	44	43	62	72	76	77	79	78	80	78	80	78	81	86	84	71	62	53	52	51
L Q	42	43	41	39	34	35	53	62	66	67	66	70	72	72	69	68	68	70	66	56	49	45	43	44

HOURLY VALUES OF fEs AT Kokubunji

SEP. 2004

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G	G	G	23	24	G	37	42	G	48	G	G	G	G	G	G	31	25	29	G	G	G	G
2	G	G	G	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	42	30	48	49
3	38	44	31	G	26	26	G	G	G	G	G	G	G	G	G	G	G	G	G	G	47	31	39	G
4	33	G	G	G	G	G	G	36	54	G	65		50	110	82	40	G	G	G	28	35	28	G	G
5	G		G	G	G	G	G	G	G	G	43	43	G	G	G	G	39	37	G	G	G	G	G	G
6	G	G	G	G	G	G	G	34	G	G	G	G	G	G	G	G	G	G	28	31	G	27	G	G
7	G	G	G	G	G	G	G	43	57	G	G	44	G	G	G	G	G	48	39	34	G	G	G	31
8	G	G		G	G	G	G	G	43	60	53	G	G	G	G	G	43	36	32	G	26	33	G	
9		G	G	G	G	G	G	33	G	51	62	G	G	G	47	G	G	40	77	G	G	G	41	G
10	G	G	G	G	G	G	40		G	G	G	49	52	41	G	48	78	73	71	60	32	28	G	29
11	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	41	30	G	G	G	G	G	G
12	G	G	G	G	G	G	G	36	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G
13	G	G	G	G		G	G	40	G	G	G	G	G	G	G	43	42	39	30	G	29	G	G	G
14	G	G	G	G	G	G	G	40	G	G	G	G	G	G	G	G	G	32	33	40	G	G	27	G
15	G	G	G	G	G	26	34	42	G							G	G	44	32	60	G	27	G	
16	G	G	G	G	G	29	32	G	G	G	G	G	G	G	G	G	39	37	33	32	43	G	G	
17	40	54	G	34	26	46	G	G	G	G	G	43	G	G	57	38	37	34	G	G	G	29	G	G
18	G	G	G	G	23	G	G	G	G	G	G	G	G	50	47	43	53	51	41	53	58	40	36	39
19	25	26	25	30	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	30	30	31	28
20	G	G		G	G	G	G	G	G	G	G	G	44	G	G	43	51	33	26	43	G	39	G	G
21	G	G	G	29	34	26	37	45	39	G	G	G	G	G	43	45	40	32	G	36	36	G	G	G
22	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	26	G
23	G	G	G	G	G	G	G	G	47	G	G	G	G	G	G	G	G	35	50	34	G	G	G	G
24	G	G	G	G	G	G	G	G	41	52	G	G	G	G	G	38	G	G	26	G	30	29	G	
25	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	36	32	G	G	G	G	G	G
26	G	G	G	G	G	G	G	G		G	G	G	G	G	61	G	G	31	G	G	G	G	G	G
27	G	G	G	G	G	G	29	G	G	G	G	G	G	G	G	G	37	G	34		29		G	G
28	G	G	G	G		G	29	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
29	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
30	G	G	G	G	G	G	28	32	40	G	G	G	G	G	G	G	33	52	41	G	27	G	G	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	29	28	30	28	30	30	28	29	29	28	28	29	29	29	30	30	30	30	29	30	29	30	26
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	32	26	G	G	G	G	G
U Q	G	G	G	G	G	G	G	36	39	G	G	G	G	G	G	38	39	37	33	34	30	29	G	G
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

SEP. 2004

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	20	14	14	17	15	14	13	14	17	39	35	52	49		45	41	13	14	18	13	14	23	23	17
2	20	15	15	21	20	13	23		21	40	23	24	25	50	44	47	20	14	17	14	14	13	14	13
3	14	14	14	15	14	14	15	15	37	21	38	50	53	46	46	21	29	15	14	14	13	14	15	34
4	13	25	21	21	22	20	14	15	18	24	25		25	28	21	22	15	23	15	13	15	14	30	21
5	18		15	13	15	14	23	13	17	25	25	24		46	44	14	20	14	18	14	13	23	14	15
6	13	22	18	14	13	15	22	13	17	22	44	26	53			35	18	25	21	13	17	17	18	14
7	21	14	14	13	21	14	14	17	20	23	44	24	51	40	44	23	15	15	13	13	15	22	14	13
8	14	15		14	14	14	13	13	29	35	34	42	38	43	43	40	18	13	14	17	14	14	21	
9		22	14	14	17	15	22	13	22	31	31	30	48		24	23	18	14	13	18	14	14	22	17
10	13	14	14	22	17	14	26		35	40	46	47	34	28		22	21	18	13	14	13	14	24	20
11	14	17	13	21	14	14	25	29	21	42	49	44	50	45	44	36	17	14	17	14	14	14	14	18
12	20	18	23	18	20	14	23	17	23	36		68	53	38	39	22	15	24	15	14	14	17	17	21
13	13	14	15	14		14	24	18	20	21	43	49	45	45	44	40	17	14	14	14	13	14	15	14
14	14	17	14	13	14	15	22	17	24	42	42	42	46	51	46	41	20	13	13	15	14	25	14	14
15	14	21	20	23	18	14	18	20	21							39	15	18	13	14	13	14	13	
16	18	15	17	14	14	14	14	15	40	42	50	52	52	39	34	23	29	13	14	13	14	17	15	
17	14	14	15	13	13	13	22	17	23	22	47	26	24	38	20	13	14	14	15	18	15	14	23	18
18	14	14	14	23	14	15	22	14	34	40	43	44	43	37	36	29	14	13	14	14	13	14	13	14
19	14	14	13	13	14	15	22	29	20	21	25	53		47	41	17	22	13	15	15	13	14	14	17
20	15	14		20	22	15	21	28	25	42	28	44	46	43	42	37	22	14	14	14	17	15	18	21
21	18	15	18	14	14	13	14	13	14	37	24	36	43	42	29	18	17	15	15	14	14	17	15	14
22	14	17	15	13	14	15	22	13	22	21	42	42	40	43	40	18	29	14	18	13	17	15	15	22
23	15	15	14	20	21	14	22	18	17	36	40	46	44	44	39	33	14	14	13	13	14	17	17	23
24	23	14	14	13	17	14	22	20	26	23	22	42	42	23	42	23	14	14	17	26	14	14	24	
25	14	14	15	15	14	23	22	15	15	39	44	42	43	42	38	33	13	14	15	15	14	13	15	14
26	14	18	18	14	14	14	21	25		42	43	40	44	42	25	20	15	14	15	15	15	14	18	14
27	15	17	24	22	15	14	13	33	14	39	42	46	42	42	39	22	13	20	13		15		15	21
28	15	14	13	14		15	13	14	21	22	44	18	43	43	41	21	14	21	17	13	15	23	14	13
29	14	14	14	15	15	13	20	14	23	13	40	44	42	42	42	33	13	21	13	14	17	17	25	18
30	15	15	21	13	15	14	21	23	14	34	42	44	42	42	39	34	24	17	13	13	14	20	14	15
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	29	28	30	28	30	30	28	29	29	28	28	27	26	27	30	30	30	30	29	30	29	30	26
MED	14	15	15	14	15	14	22	16	21	35	42	43	43	42	41	23	17	14	14	14	14	14	15	17
U Q	18	17	18	20	17	15	22	20	24	40	44	46	49	45	44	36	20	18	17	15	15	17	21	21
L Q	14	14	14	13	14	14	14	14	17	22	29	33	42	39	36	21	14	14	13	13	14	14	14	14

HOURLY VALUES OF foF2 AT Yamagawa

SEP. 2004

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	37	36	34	30	32	35	51	51	51	55	52	66	69	77	71	66	66	58	65	61	54	52	42	38
2	50	53	50	46	38	28		54	58	66	70	72	68	67	76	85	81	72	72	70	42	50	47	42
3	48	36	42	45	41	37	48	62	62	62	59	72	63	66	75	80	72	63	66	66	61	51	43	47
4	43	36	46	36	36	34		66	64	61	60	70	76	76	70	72	78	80	78	80	64	A	49	53
5	53	52	39	37	36	38	42	54	62	65	71	70	75	77	74	69	67	66	68	74	77	65	51	53
6	54	55	53	47	44	41	50	64	66	62	59	A		78	73	71	70	76	79	78	66		53	51
7	43	48	53	52	36	38	51	78	54	72	47	66	74		74	67	74	77	80	81	62	42	51	43
8	51	36	37	43	32		41	77	80	66	68	78	78	81	82	78	81	81	81	76	66	61	53	53
9	50	35	37	41	37	37	52	66	71	80	75	73	78	A	69	106	86	88	92	84	A	A	51	51
10	51	51	51	48	51	43	52	65	72	72	72	80	79	85	85	82	88	99	107	86	65	52	A	52
11		52	53	52	53	49	52	66	74	67	70	74	77	81	80	80	82	90	105	86	78	47	48	50
12		48	49	47	44	41	57	65		80		80	77	81	81	82	80	80	85	80	78	50	54	37
13	52	52	51	53	37	31	41	66	82	78	72	64	77	77	81	80	75	82	85	76	75	47	38	37
14	53	51	42	50	47	40	45	71	80	82	87	75	66	75	85	99	88	104	86	64	A			53
15	51	37	37	37	42	36	41	54	45						66	66	62	60	66	66	52	A		36
16	41	38	34	37	34	32	38	51	67	70		80	87	86	78	76	68	72	81	65		36	36	34
17	37	38	37	34	28	A		70	72	67	76	81	86	86	85	86	75	68	72	76	50	38	36	37
18	37	42	37	36	37	36	42	66	72	68	74	82	90	88	80	82	79		89	64	36	36	A	
19	A	43		A	34	32	46	75	82		78	77	82	84	78	80	78	82		78	55	41	37	42
20	41	43	36	38	40	38	53	85	75	65	62	70	81	85	86	79		101	86	66	47	43	47	48
21	37	38	41	48	48	34	37	64	82	92	84	86	90	84	86	87	87	106	87	66	36		51	38
22	43	47	43	48	42	36	42	56	75	71	81	88	79	82	78	76	77	78	78	80	78	52	53	48
23	51	47	36	48	37	32	42	74	74	74	70	82	76	78	82	78	80	81	82	80	54	36	42	42
24	37	37	36	36	34	29	36	56	65	86	80	78	80	80	82	85	86	99	82	47	37	37	37	37
25	37	37	36	37	32		37	67	66	75	71	72	72	76	77	74	78	84	81	54	50	36	43	44
26	46	40	44	38	36	35	42	74	75	75	70	76	70	76	82	82	81		88	72	36	34	34	38
27	36	37	37	42			37	66	70	75	61	78	84	80	73	77	77	78	75	50	44	43	37	43
28	42	36	38	32			36	62	62		77	77	81	78	80	81	70	72	72		36	52	51	38
29	42	50	50	44	43	47	52	69	68	70	66	76	85	87	86	84	77	67	79	A	37	42	36	37
30	36	37	38	37	36	36	47	64	68	67	66	73	81	82	78	82	79	84	76	63	37	34	37	34
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	27	30	29	29	28	25	27	30	29	27	27	28	28	27	30	30	29	28	29	28	27	24	26	29
MED	43	41	39	42	37	36	42	66	70	70	70	76	78	80	79	80	78	80	81	73	54	43	45	42
U Q	51	50	49	48	42	39	51	70	75	75	76	80	81	84	82	82	81	86	86	80	66	51	51	50
L Q	37	37	37	37	35	33	41	62	63	66	62	72	74	77	74	76	73	72	73	64	37	36	37	37

HOURLY VALUES OF fEs AT Yamagawa

SEP. 2004

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	G	G	G	G	G	G	G	G	G	G	G	42	G	G	G	G	G	G	G	G	29	G	G
2	G	G	G	G	G	G		32	42	G	44	G	G	G	43	44	G	G	G	G	G	G	G	G
3	30	37	36	33	28	G	G	G	G	42	42	G	G	68	G	G	G	G	28	30	G	G	29	40
4	26	G	G	G	G	26	G		G	G	43	51	80	76	64	G	40	33	50	G	50	40	26	G
5	G	G	G	G	G	G	G	33	38	43	G	G	G	G	G	G			G	G	G	G	G	G
6	G	G	G	G	G	G	G	G	35	G	46	60	56	G	54	G	51	50	36	29	G	G	G	32
7	26	G	G	G	G	G	24	30	G	G	52	G	58	G	44	G	G	42	33	26	G	G	G	G
8	G	G	25	G	G	29	26	35	58	72	52	63	51	G	G	G	G	42	51	45	32	26	36	23
9	30	G	G	G	G	G	29	41	G	40	42	G	57	96	66	53	48	43	40	94	94	84	38	33
10	26	32	G	G	G	G	G	G	41	38	42	41	44	G	G	44	38	34	33	32	32	G	40	40
11	32	27	G	G	G	G	G	G	G	39	G	G	G	G	G	G	39	46	42	34	G	G	G	G
12	G	G	G	G	G	G	G	30	40	43		G	G	G	G	G	G	G	30	G	G	G	G	G
13	G	G	G	G	G	G	27	39	G	G	G	G	G	G	G	G	47	44	34	26	32	28	G	G
14	G	G	G	G	G	G	G	G	39	G	46	G	G	G	G	G	G	33	32	29	69	39	25	G
15	G	G	G	G	G	G	29	39	G		41			G	G	G	G	G	30	G	33	69	28	G
16	G	G	G	G	G	G	G	G	G	G	G	43	G	G	G	G	G	G	G	11		G	G	G
17	G	G	G	G	G	45	33	57	G	G		G	G	G	G	G	G	37	32	26	G	G	G	G
18	G	G	G	G	G	G	G	G	37	38	43	G	G	G	G	G	39		27	32	26	G	39	43
19	41	34	31	43	26	G	G	N	50	40	G	G	G	G	G	G	G	G		G	24	G	G	G
20	G	G	G	G	G	G	G	36	41	G	G	G	G	G	G	G		52	45	G	28	38	G	24
21	G	G	G	G	G	G	26	35	41	G	40	G	G	G	G	G	G	G	G	27	G	36	28	G
22	G	G	G	G	G	G	G	34		G	G	G	G	G	G	G	G	36	G	G	32	G	24	G
23	G	G	G	G	G	G	G	33	34	G	G	G	G	G	G	G	39	34	G	39	43	29	G	G
24	G	G	G	G	G	G	G	34	40	41	G	G	G	G	G	G	G	G	34	G	G	G	G	G
25	G	G	G	G	G	G	G	30	G	G	G	G	G	G	G	G	G	40	38	G	28	G	36	G
26	G	G	G	G	G	G	G	G	G	G	40	41	G	G	G	G	G	43	30	11	G	29	G	G
27	G	G	G	G		G	G	30	38	G	44	G	G	G	G	G	G	35	27	26	G	25	24	G
28	G	G	G	G	G		G	35	39	G	43	G	G	G	G	G	64	46	43	50	36	28	24	G
29	G	G	G	G	G	G	G	G	G	G	40	G	G	G	G	G	52	88	41	84	G	G	G	G
30	G	G	G	G	G	G	G	35	40	G	G	G	G	G	G	G	G	81	44	38	G	G	G	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	29	29	29	28	29	29	28	29	29	30	30	30	28	28	29	30	29	30	30	30
MED	G	G	G	G	G	G	G	31	35	G	40	G	G	G	G	G	G	36	32	26	G	G	G	G
U Q	G	G	G	G	G	G	12	35	40	39	43	G	21	G	G	G	39	43	40	32	32	29	28	G
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	14	G	G	G	G	G

HOURLY VALUES OF fmin AT Yamagawa

SEP. 2004

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	16	15	17	17	16	15	16	24	17	41		27	22	50	48	44	18	15	20	15	16	15	15	17
2	15	15	20	15	15	14		14	17	21	23	21	24	21	18	17	17	15	20	17	22	17	21	16
3	14	14	14	14	15	14	16	26	14	17	22	46	29	30	50	45	20	16	15	15	15	20	14	14
4	17	15	16	17	16	17	17	18	16	18	21	28	30	30	22	21	22	16	15	14	15	15	15	16
5	16	17	15	14	17	15	17	15	16	18	23			45	48	52	22	15	22	15	16	15	15	15
6	20	16	15	15	14	15	15	15	15	35	20	39	42	45	26	21	18	15	15	15	15	17	16	15
7	15	20	15	15	17	15	15	15	21	18	20	33	42	32	24	36	18	15	15	15	15	15	15	20
8	17	16	15	16	15	14	14	14	18	16	34	33	34	50	48	45	22	18	15	14	14	15	14	15
9	15	15	17	16	17	15	16	14	17	20	22	46	26	29	27	27	20	17	15	14	15	15	15	15
10	16	16	18	16	15	15	16	27	16	18	33	33	36	47	29	26	20	17	14	15	15	15	14	15
11	14	15	18	15	15	15	16	14	17	20	23	52	45	53	23	20	18	16	14	15	15	15	16	17
12	17	17	18	15	15	15	16	15	16	24		62	60	50	48	26	20	16	15	15	15	16	15	17
13	16	16	15	15	14	16	17	16	15	20	47	43	46		23	22	21	15	15	15	15	15	15	18
14	15	15	14	15	16	15	16	15	16	20	23	32		52	47	45	17	14	14	15	14	14	18	15
15	16	16	18	15	15	17	15	18	16		33					47	20	18	15	15	14	14	15	18
16	15	17	15	15	15	16	17	15	17	20	23	23	52	50	45	22	20	16	18	14		16	15	15
17	15	15	15	15	17	15	15	15	16	21	21	47	26	46	21	43	15	16	14	15	14	15	16	15
18	15	15	17	17	15	14	15	16	17	21	23	28	46	26	21	18	20		16	14	16	15	14	15
19	16	14	14	14	14	16	15	15	17	18	20	21	45	20	34	20	17	17		15	15	15	15	15
20	18	15	15	16	17	15	15	15	17	20	35	47	47	50	44	30		15	15	15	16	15	20	15
21	15	15	15	15	15	16	15	15	16	18	18	21	21	17	46	21	20	15	17	15	15	14	15	15
22	15	16	15	17	15	15	15	15	15	22	21		46	45	27	21	18	15	18	16	15	15	16	16
23	15	15	17	15	15	16	15	16	16	26	34	42	44	15	23	21	18	15	18	14	15	15	16	16
24	18	15	15	15	15	16	15	15	18	20	21		46	26	45	34	18	14	15	15	15	15	15	20
25	15	15	18	15	16	17	15	16	15	16	21	48			18	21	21	15	16	18	17	15	15	15
26	16	17	16	14	15	17	15	23	15	21	20	23	23	47	23	22	16	15	14	15	16	16	15	18
27	15	17	15	15		18	15	16	22	21	34	46	48	48	21	20	17	15	14	17	15	17	17	20
28	15	15	16	15	18		14	16	14	34	21	48	48	45	45	21	21	15	14	20	17	14	15	16
29	15	15	15	15	16	16	15	15	15	22		26	50	26		20	15	17	15	16	21	15	16	15
30	16	16	16	16	15	16	14	14	14	21	23		50	45	26	22	15	14	14	15	17	21	16	14
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	29	29	29	30	30	29	27	25	26	27	28	30	29	29	29	30	29	30	30	30
MED	15	15	15	15	15	15	15	15	16	20	23	33	44	45	27	22	18	15	15	15	15	15	15	15
U Q	16	16	17	16	16	16	16	16	17	21	33	46	47	50	45	36	20	16	16	15	16	16	16	17
L Q	15	15	15	15	15	15	15	15	15	18	21	26	29	26	23	21	17	15	14	15	15	15	15	15

HOURLY VALUES OF foF2 AT Okinawa

SEP. 2004

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	44	44	37	32	30	34	38	50	57	56	57	68	86	101	92	80	72	68	70	66	58	54	44	51
2	51	52	50	48	36		32	58	61	67	74	76	74	86	90	100	95	93	82	71		44	44	43
3	44	42	41	42	35	38	40	60	60	66	75	64	67	77	90	91	84	66	66	75	64	53	46	44
4	36	40	42	40	30	36	45	60	55	56	69	85	91	77	76	84	90	93	88	73	66	66	61	64
5	78	83	87	87	81	61	52	61	66	65	68	75	80	88	92	86	80	84	86	85	78	63	51	52
6	54	54	54	44	40	31	45	71	64	62	67	75	68	80	74		76	84	88	88	64	51	53	53
7	52	51	53	54	34	36	47		65	76	64	76	84	96	90	86	84	86	87	84	A	54	51	53
8	53	54	55	40	42	36	40	74	91	67	70	86	89	90	97	84	86	90	102	106	82	64	50	52
9	52	52	52	44	43	37	44	65	75	75	76	78	95	118	123	121	128	141	148	146	130	87	65	66
10	76	73	75	74	62	42	45	64	71	70	74	82	98	105	110	107	108	115	125	109	87	78	66	60
11	64	53	60	60	56	44	37	66	66	82	72	84	95	104	107	110	121	128	110	104	86	48	54	65
12	64	72		78	66	50	48	71	76	90	82	97	87	106	118	110	100	97	102	93	80	63	52	52
13	52	52	62	60	29	28	36	72	76	72	77	67	81	94	92	84	82	96	104	88	66	53	54	51
14	60	52	51	53	50	38	38	71	82	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	58		35	42	39
26	42	42	42	40	34	30	38	71	66	76	74	85	88	96	105	100	86	104	110	A	51		36	36
27	34	38	43	46			30	62	78	68	72	106	144	136	122	115	97	84	80	77	66	52		
28	64	54	48	37			32	60	61	78	81	87	91	82	87	91	81	88	76	A	A		52	48
29	50	48	47	40	43	42	42		61	70	75	85	108	117	116	104	84	79	84	71	A	A	45	43
30	46	44	42	38	37	34	41	66	62	64	77	84	98	106	108		100	94	90	47	45		42	43
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	19	19	18	19	17	16	19	17	19	18	18	18	18	18	18	16	18	18	18	17	14	15	18	18
MED	52	52	50	44	40	36	40	65	66	69	74	83	88	96	94	96	86	92	88	84	66	54	51	52
U Q	64	54	55	60	53	42	45	71	76	76	76	85	95	106	110	108	100	97	104	98	82	64	54	53
L Q	44	44	42	40	34	34	37	60	61	65	69	75	81	86	90	85	82	84	82	71	64	51	44	43

HOURLY VALUES OF fEs AT Okinawa

SEP. 2004

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	G	G	G	G	G	G	G	G	G	G	43	G	G	G	G	50	47	45	40	24	G	G	G	G
2	G	G	G	G	G		G	43	42	G	G	43	G	G	G	G	G	36	G	28		G	G	G
3	G	G	39	32	32	33	29	36	39	50	60	G	G	G	G	G	G		G	28	26	32	34	G
4	24	24	26	G	G	G	G		G	G	52	55	46	51	G	G	89	58	52	G	38	G	40	35
5	G	G	G	G	G	G	29	33	36	40	G	G	G	76	G	40	G	35	29	G	G	G	G	G
6	G	G	G	G	G	G	G	34	60	53	59	48	57	52	55	74	63	43	32	G	25	28	71	26
7	G	G	G	G	G	G	G		42	38	48	43	G	G	G	G	66	72	86	70	58	44	49	G
8	G	G	G	G	G	G	23	35	47	60	46	50	G	G	G	G	62	56	56	43	69	31	27	26
9	28	G	26	G	G	G	G	36	76	46	50	G	50	55	50	67	G	G	G	G	G	51	54	43
10	29	26	G	G	G	G	G	35	40	G	G	49	G	42	41	G	47	38	38	35	27	34	28	29
11	27	26	G	G	G	G	G		G	G	G	G	G	G	46	G	46	58	57	27	40	39	27	27
12	G	G		G	G	G	G	29	38	46	G	G	G	46	G	G	G	G	38	28	G	39	26	G
13	G	G	G	G	G	G	G	35	G	G	42	46	43	G	G	52	55	48	44	29	G	G	25	24
14	G	G	G	G	G	G	G	32	42	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	72		34	G	24
26	29	34	33	G	24	G	G	29	G	G	G	45	G	G	42	50	G	56	65	78	49	50	32	G
27	G	G	G	G	G		G	G	37	41	G	G	G	47	43	G		36	36	G	G	G		
28	G	G	G	G		G	G	32	37	G	52	44	42	50	48	51	46	78	42	82	50	57	56	24
29	G	25	G	G	G	G	G	G	48	G	G	G	44	G	52	52	94	74	65	70	60	58	G	G
30	G	G	G	G	G	G	G	30	37	45	G	G	54	G	47		42	90	41	70	50	29	32	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	19	19	18	19	18	17	19	16	19	18	18	18	18	18	18	17	17	17	18	19	17	19	18	18
MED	G	G	G	G	G	G	G	32	38	20	22	22	G	G	21	G	46	48	40	28	27	32	28	12
U Q	24	24	G	G	G	G	G	35	42	46	50	46	44	50	47	51	62	65	56	70	50	44	40	26
L Q	G	G	G	G	G	G	G	29	G	G	G	G	G	G	G	G	G	36	32	G	G	G	G	G

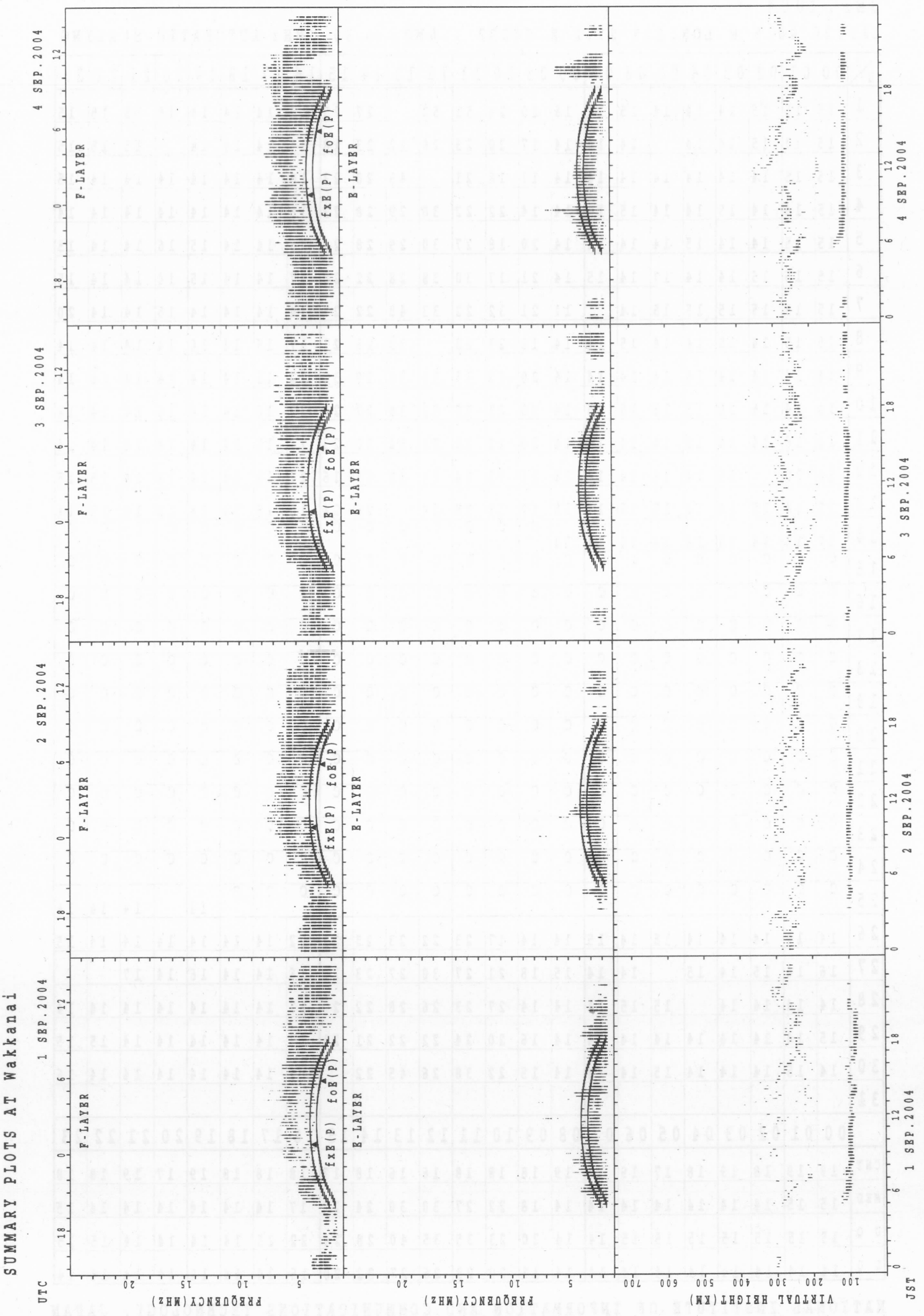
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

HOURLY VALUES OF fmin AT Okinawa

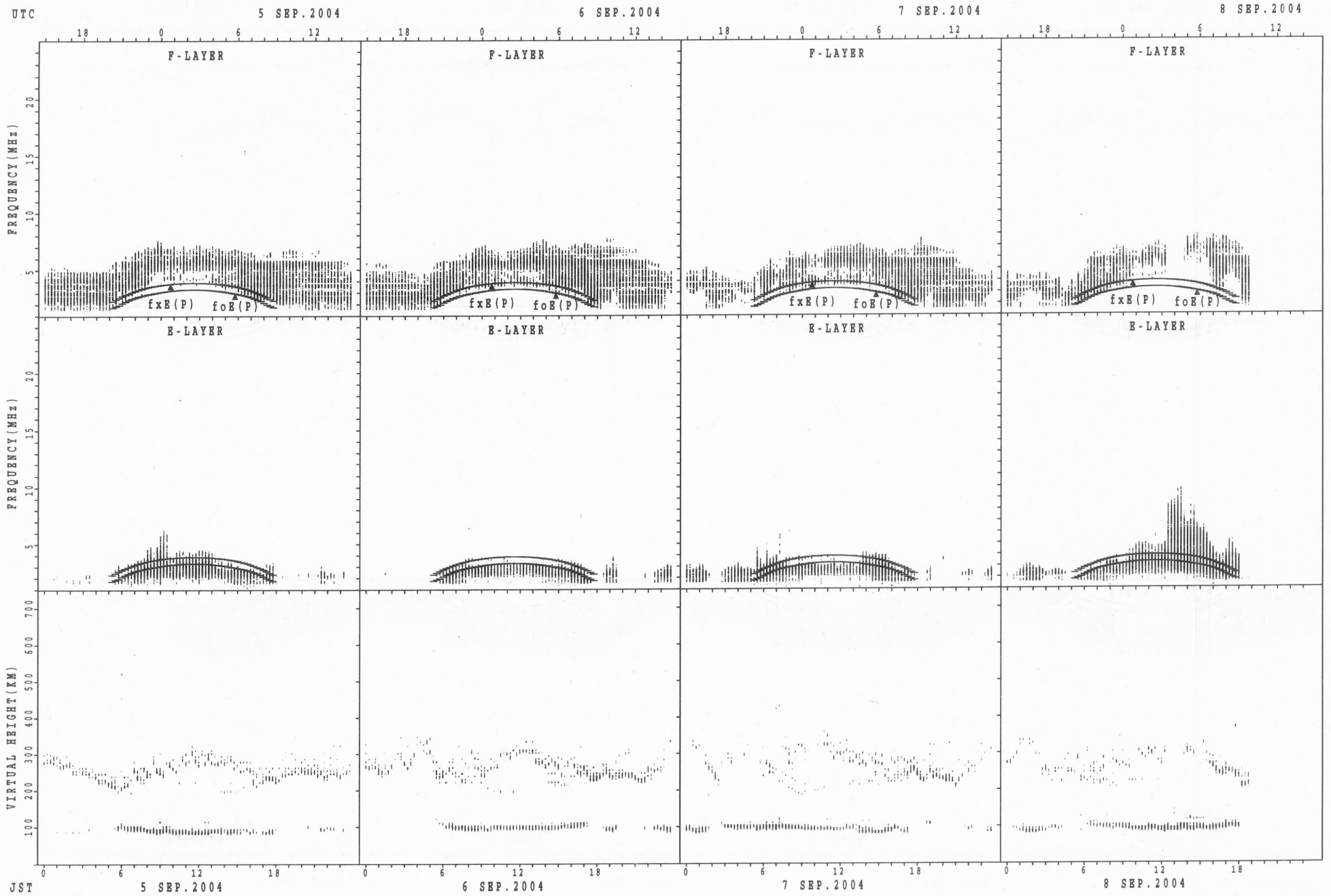
SEP. 2004

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

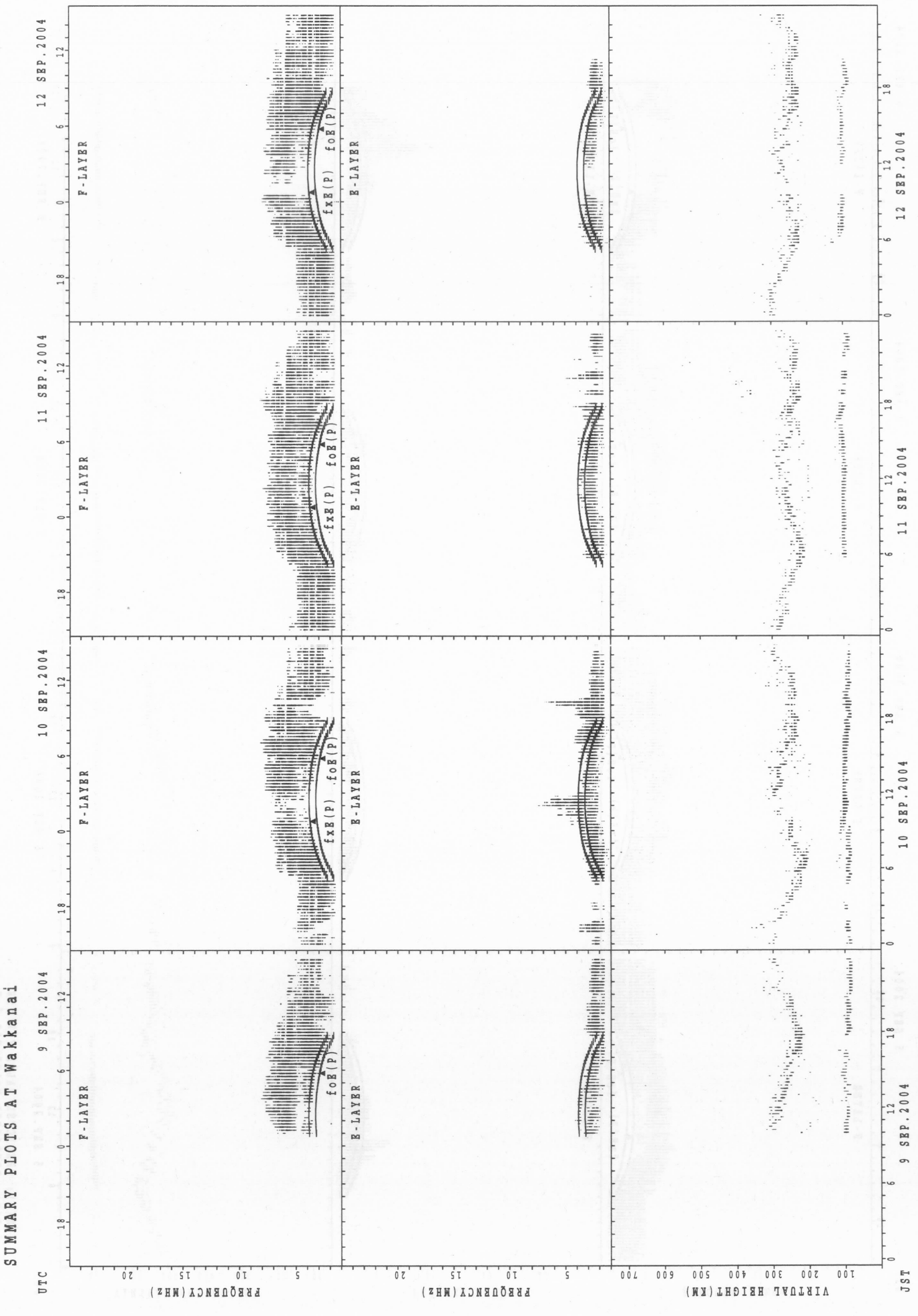
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	15	15	15	14	14	14	15	14	16	20	24	51	52		27	23	14	14	14	14	15	15	15	15
2	15	17	15	14	14		14	14	14	17	20	23	26	22	23	18	14	14	14	14		15	15	15
3	15	15	14	14	14	14	14	14	14	17	18	21		45	20	23	18	14	14	14	14	14	14	15
4	15	14	14	15	14	14	15	14	14	14	22	22	30	29	28	22	15	14	14	14	14	14	14	14
5	15	15	14	14	15	14	14	14	14	20	18	27	30	29	28	24	23	14	14	15	16	14	14	15
6	15	15	15	14	14	17	14	15	14	21	17	30	38	28	22	20	17	14	14	15	14	14	14	15
7	15	15	15	15	15	15	14		14	21	32	22	33	48	22	27	14	14	14	14	15	14	14	20
8	15	15	14	15	14	14	15	14	14	15	23	23		33	28	21	17	15	14	14	14	14	14	14
9	14	14	14	14	15	14	14	14	14	20	22	33	30	30	29	32	22	15	14	14	14	14	14	14
10	14	14	15	20	15	15	15	15	14	20	21	35	52	34	27	27	23	18	14	14	14	14	14	14
11	14	16	14	14	15	14	14	14	14	20	22	28	30	52	30	23	21	15	14	14	14	14	14	14
12	14	20		15	14	14	14	14	14	21	73	54	54	35	45	16	27	14	14	14	14	14	15	15
13	15	14	15	14	14	15	15	14	15	17	23	38	24		26	24	18	15	14	14	15	14	15	14
14	17	15	14	15	14	14	14	14	14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	14		14	14	14
26	14	14	14	14	14	15	14	15	14	14	17	23	22	23	23	21	22	14	14	14	14	14	14	15
27	16	14	15	14	15		14	14	15	18	21	27	30	27	23	20	16	14	14	16	14	17		
28	14	14	14	14		15	15	14	14	14	27	23	26	28	22	20	17	14	14	14	14	14	14	14
29	15	14	14	14	14	14	14	14	14	16	20	24	22	22	21	21	17	14	14	14	14	14	15	15
30	14	15	14	14	14	15	14	14	14	15	22	38	26	45	22		14	14	14	14	14	14	14	16
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	19	19	18	19	18	17	19	18	19	18	18	18	16	16	18	17	18	18	18	19	17	19	18	18
MED	15	15	14	14	14	14	14	14	14	18	22	27	30	30	24	22	17	14	14	14	14	14	14	15
U Q	15	15	15	15	15	15	15	14	14	20	23	35	35	40	28	24	22	15	14	14	14	14	15	15
L Q	14	14	14	14	14	14	14	14	14	15	20	23	26	27	22	20	15	14	14	14	14	14	14	14


SUMMARY PLOTS AT Wakkanai
UTC
1 SEP.2004
2 SEP.2004
3 SEP.2004
4 SEP.2004
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

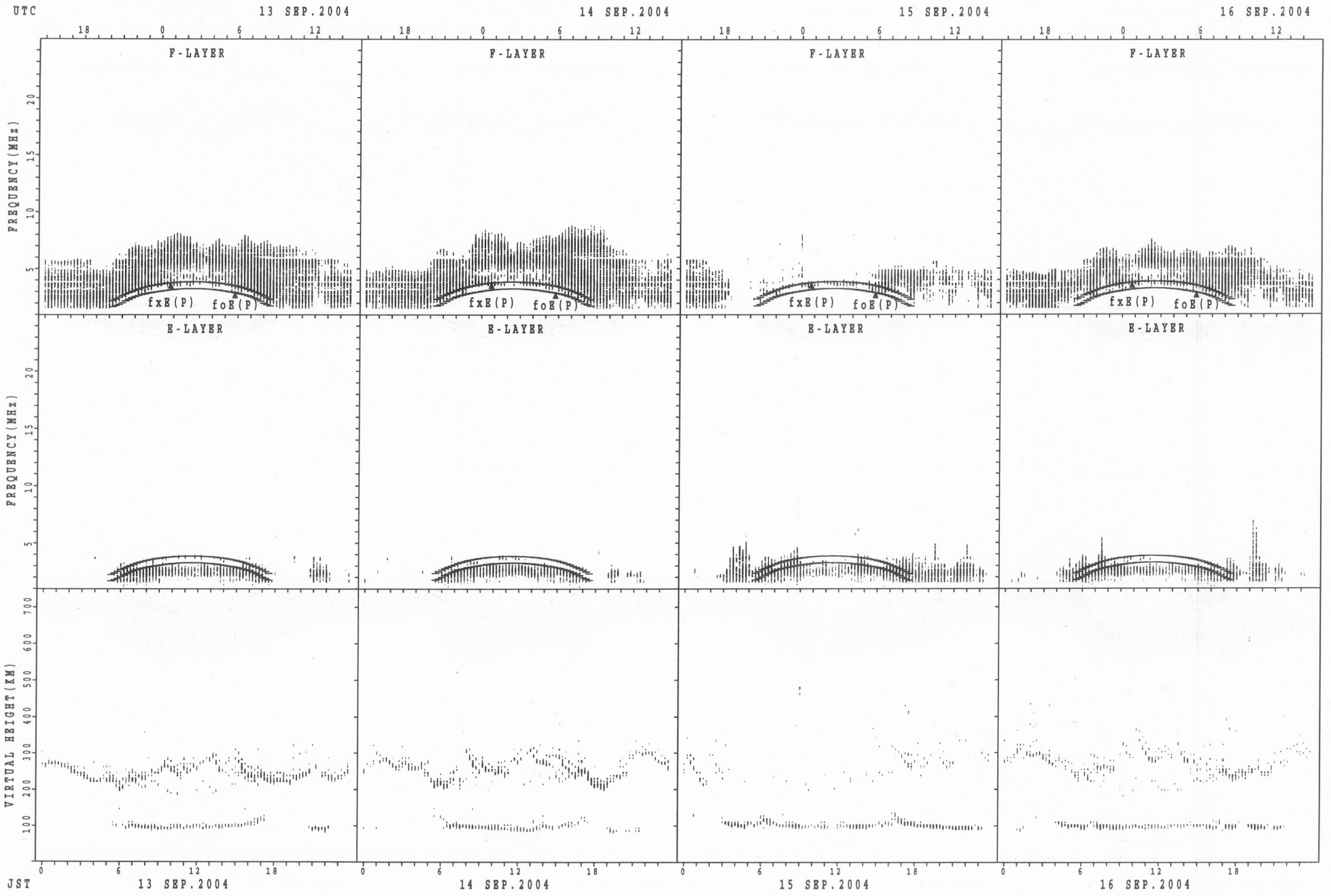
SUMMARY PLOTS AT Wakkanai



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

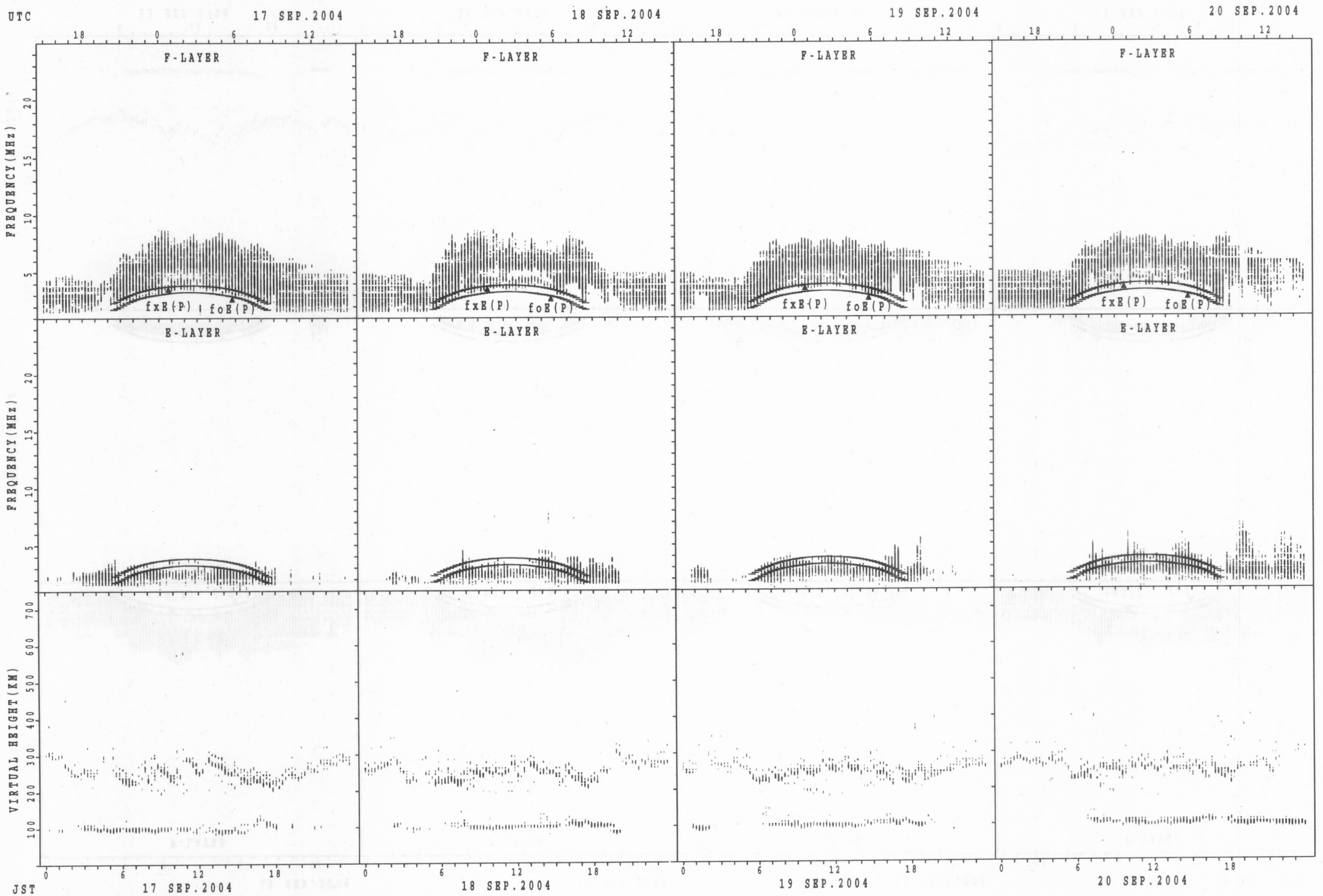

SUMMARY PLOTS AT Wakkanai
UTC
JST
9 SEP.2004
10 SEP.2004
11 SEP.2004
12 SEP.2004
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
foE(P)
fxE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



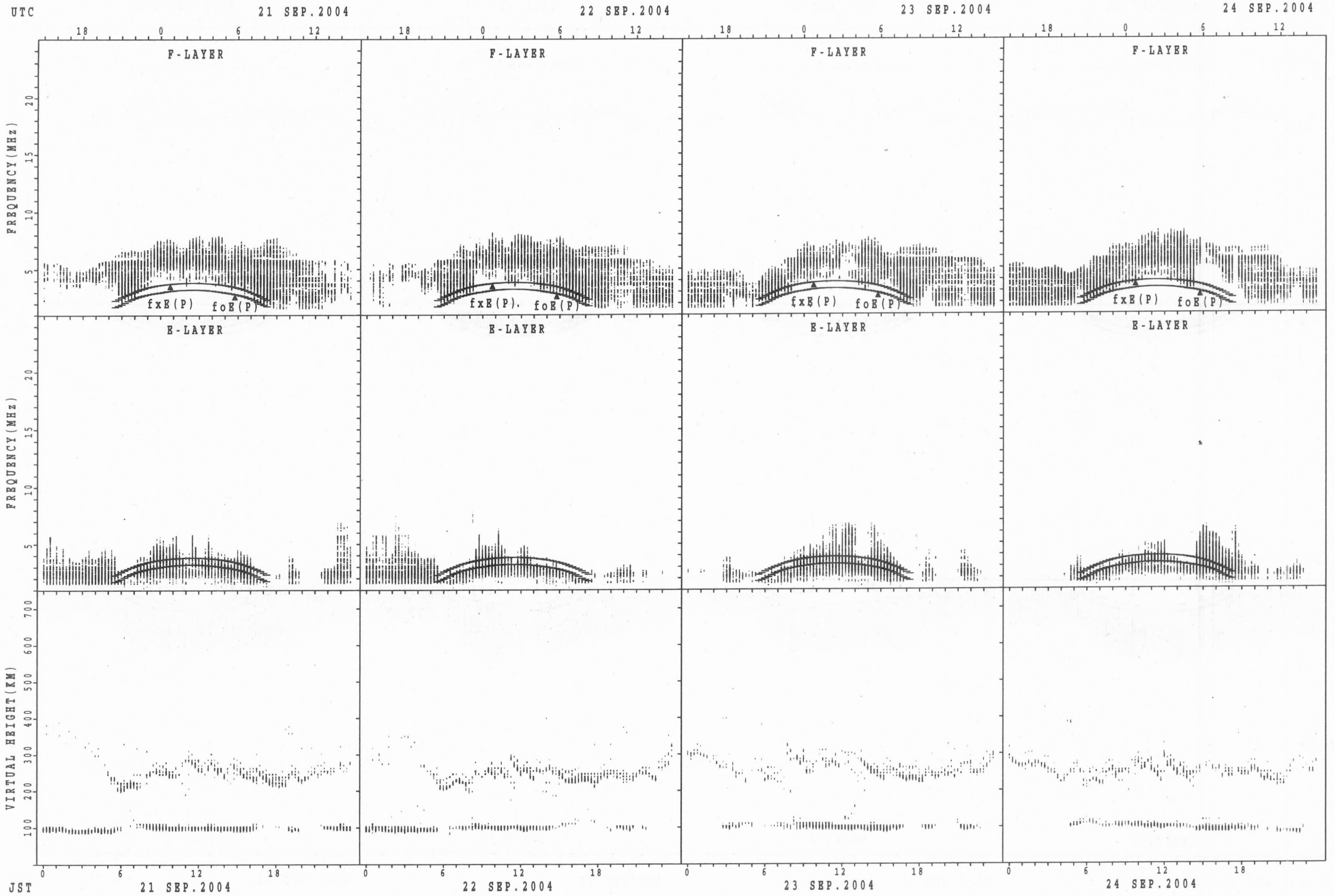
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



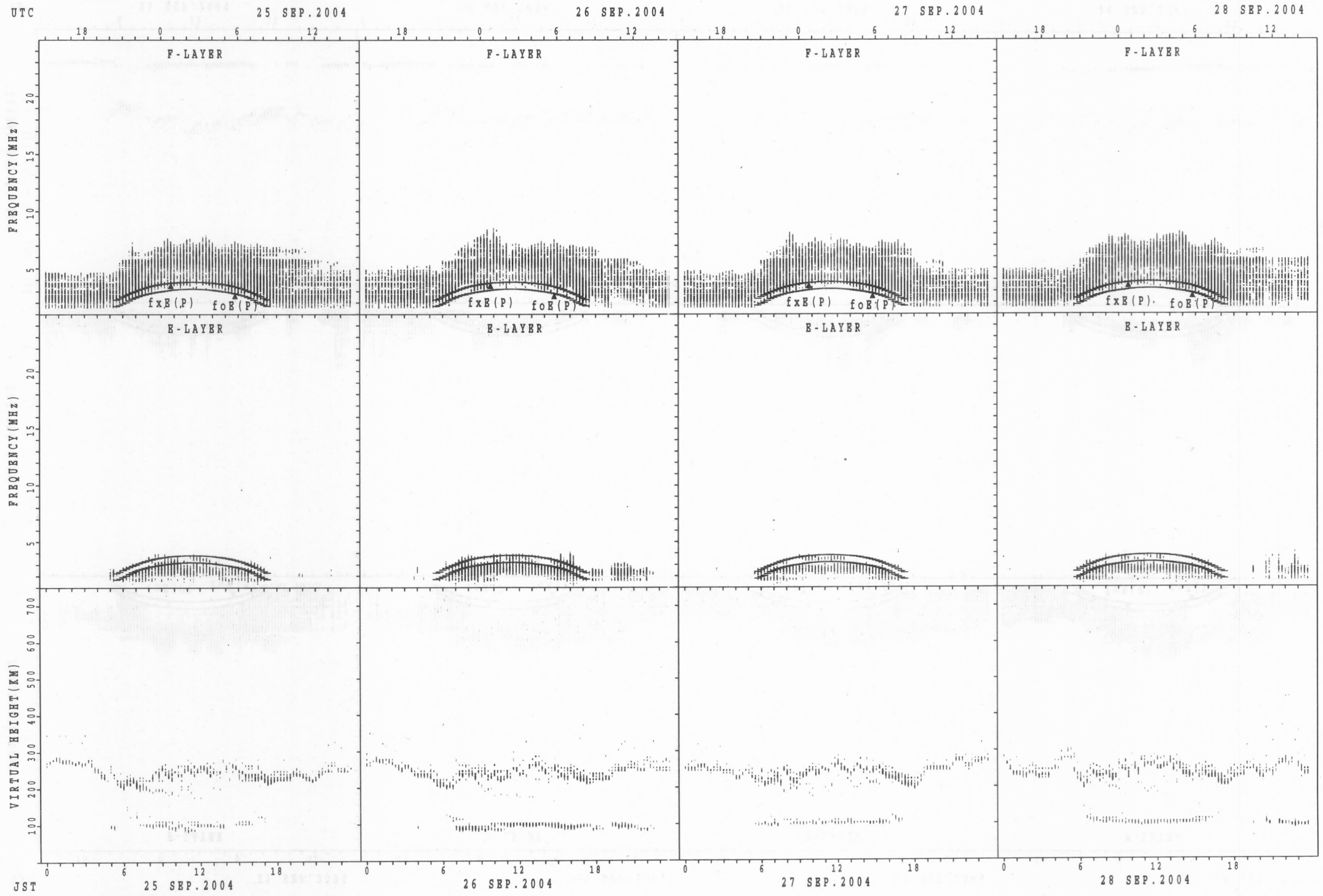
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



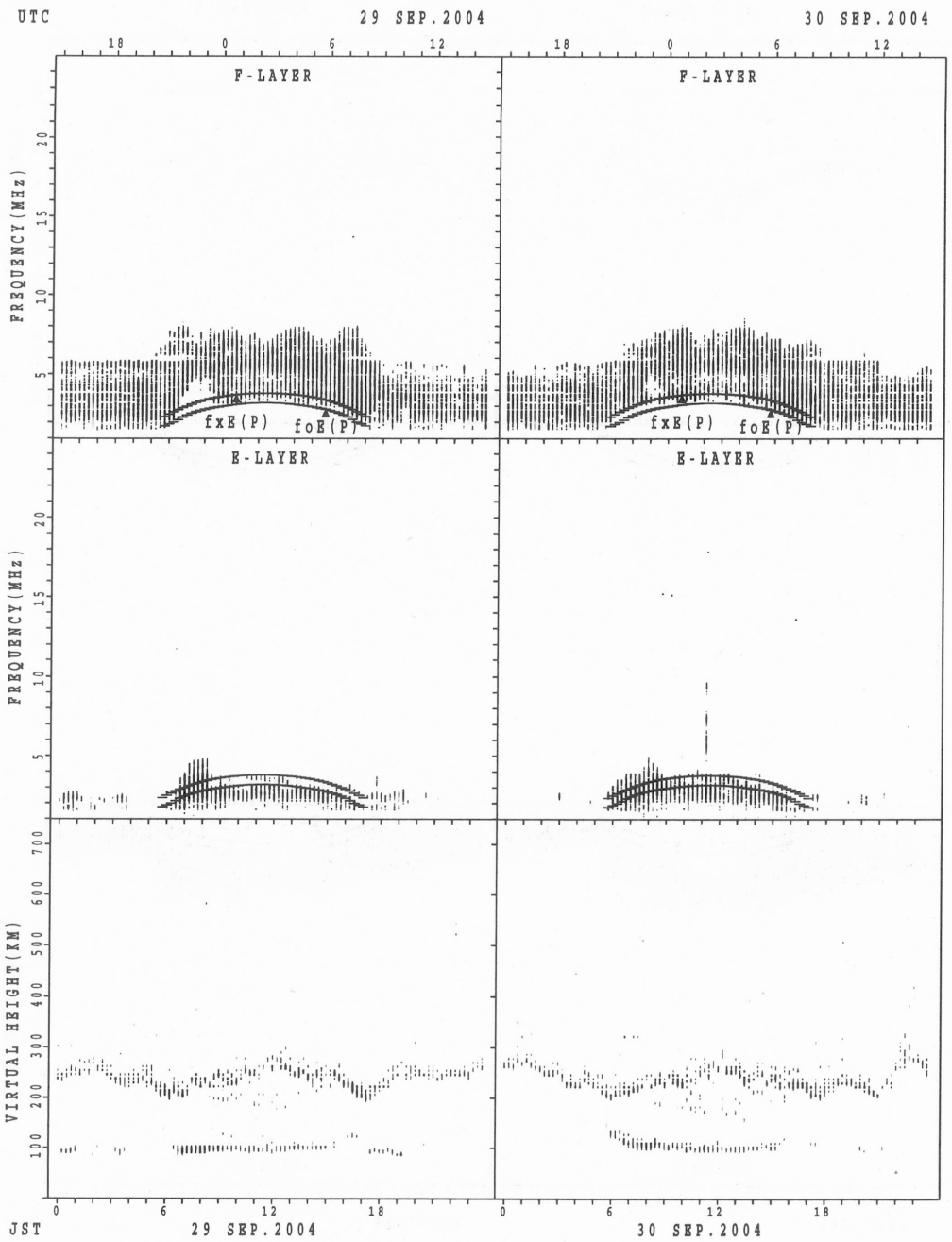
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai

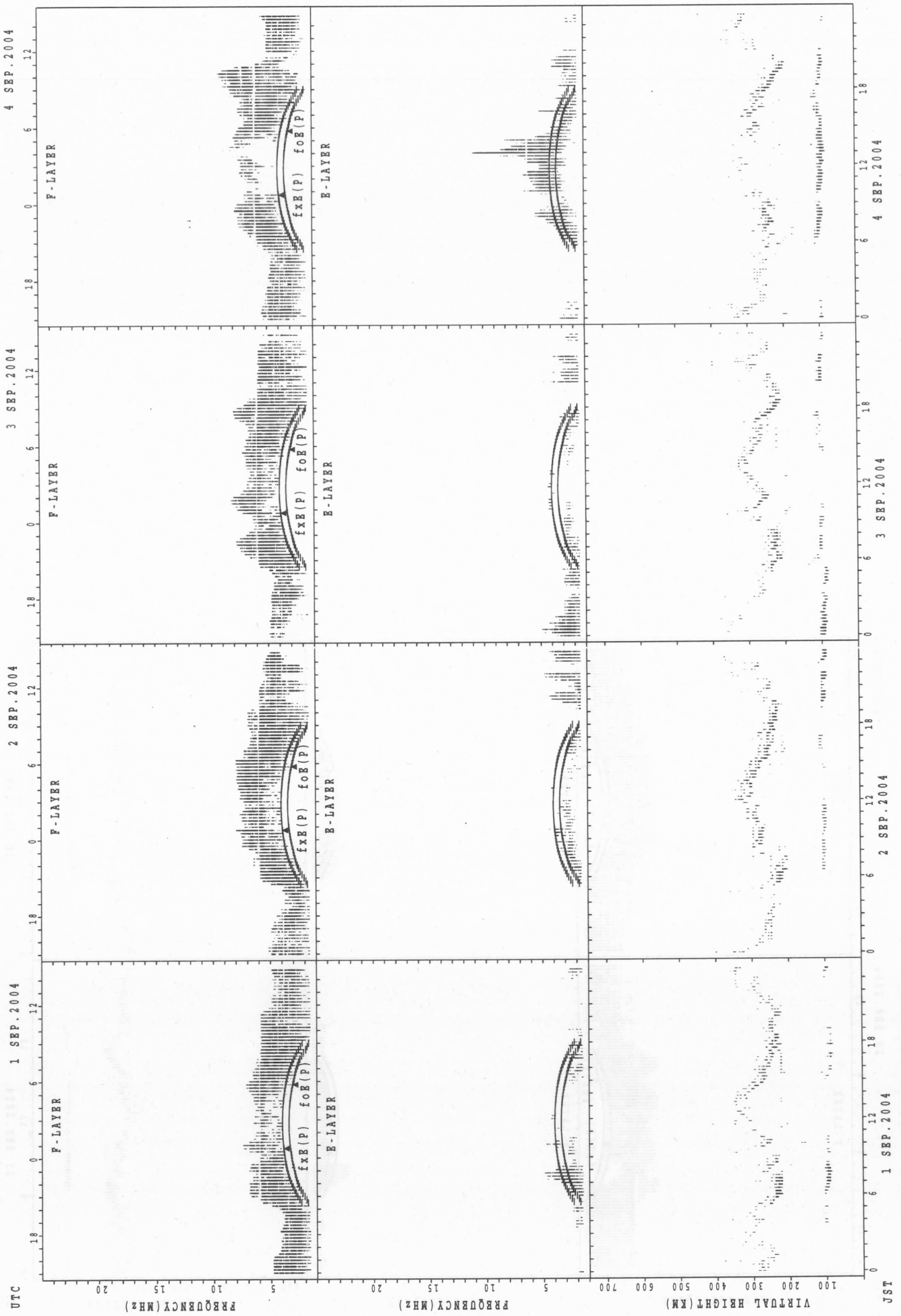


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

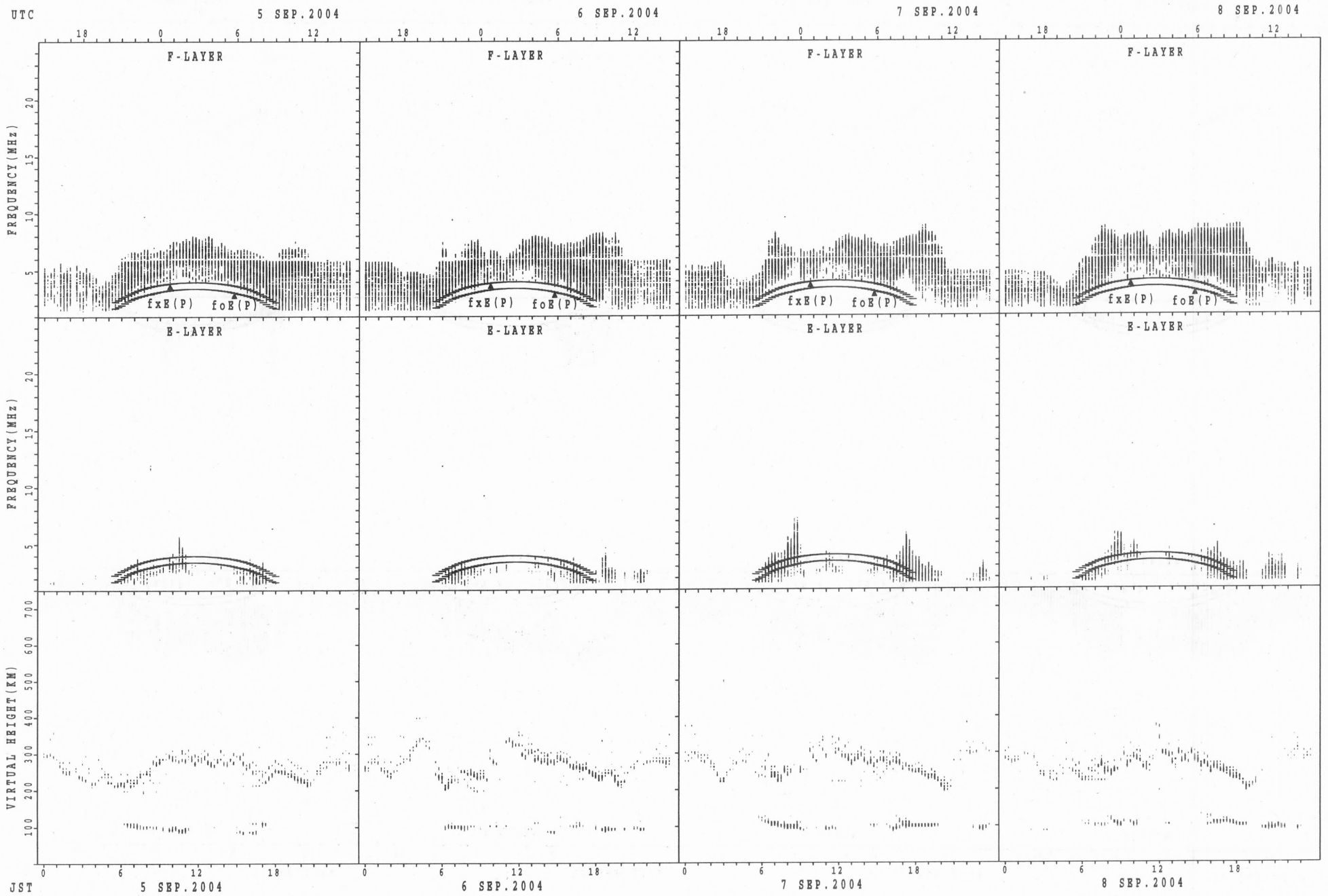
SUMMARY PLOTS AT Wakkanai



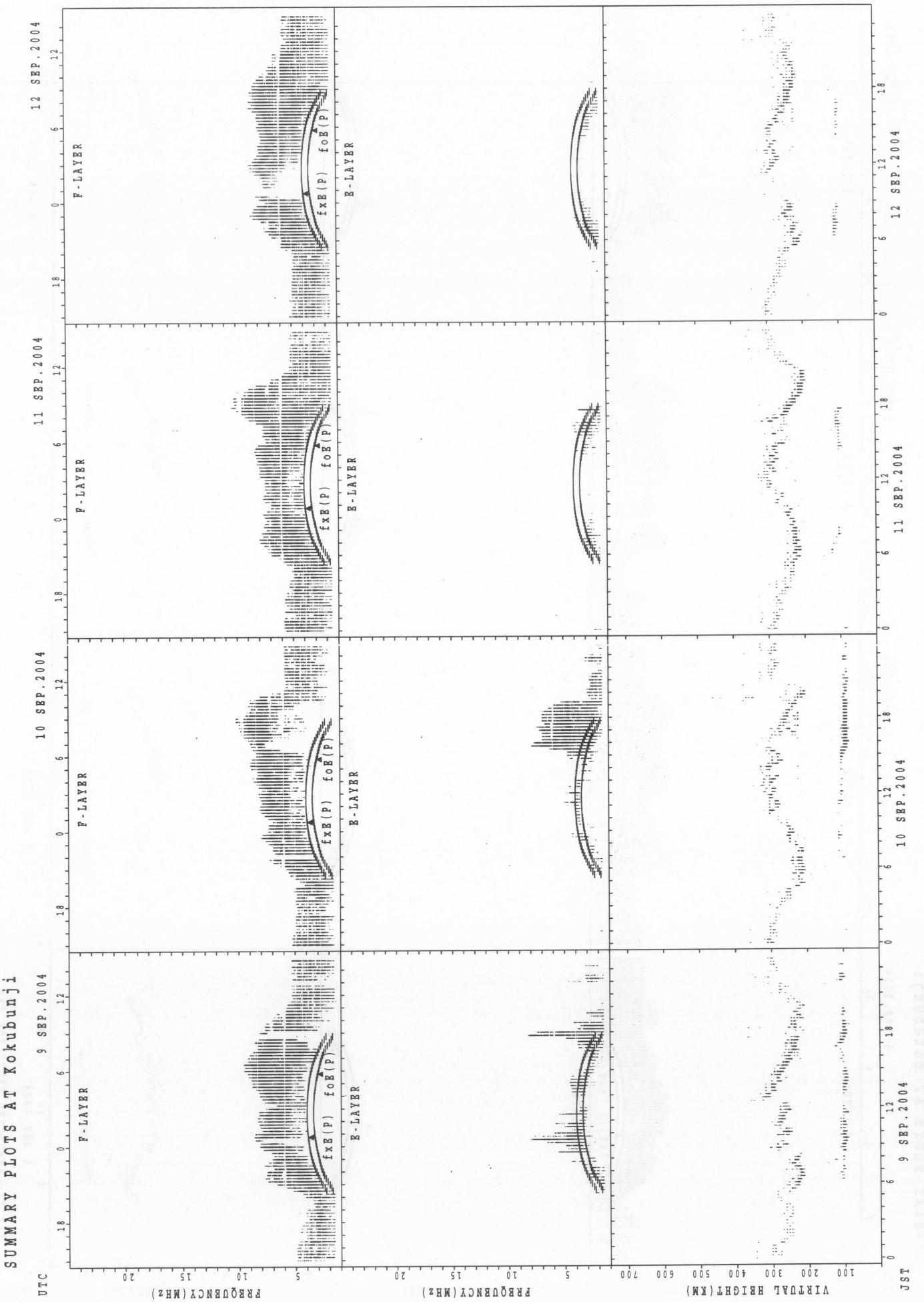
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE


SUMMARY PLOTS AT Kokubunji
UTC
JST
1 SEP.2004
2 SEP.2004
3 SEP.2004
4 SEP.2004
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

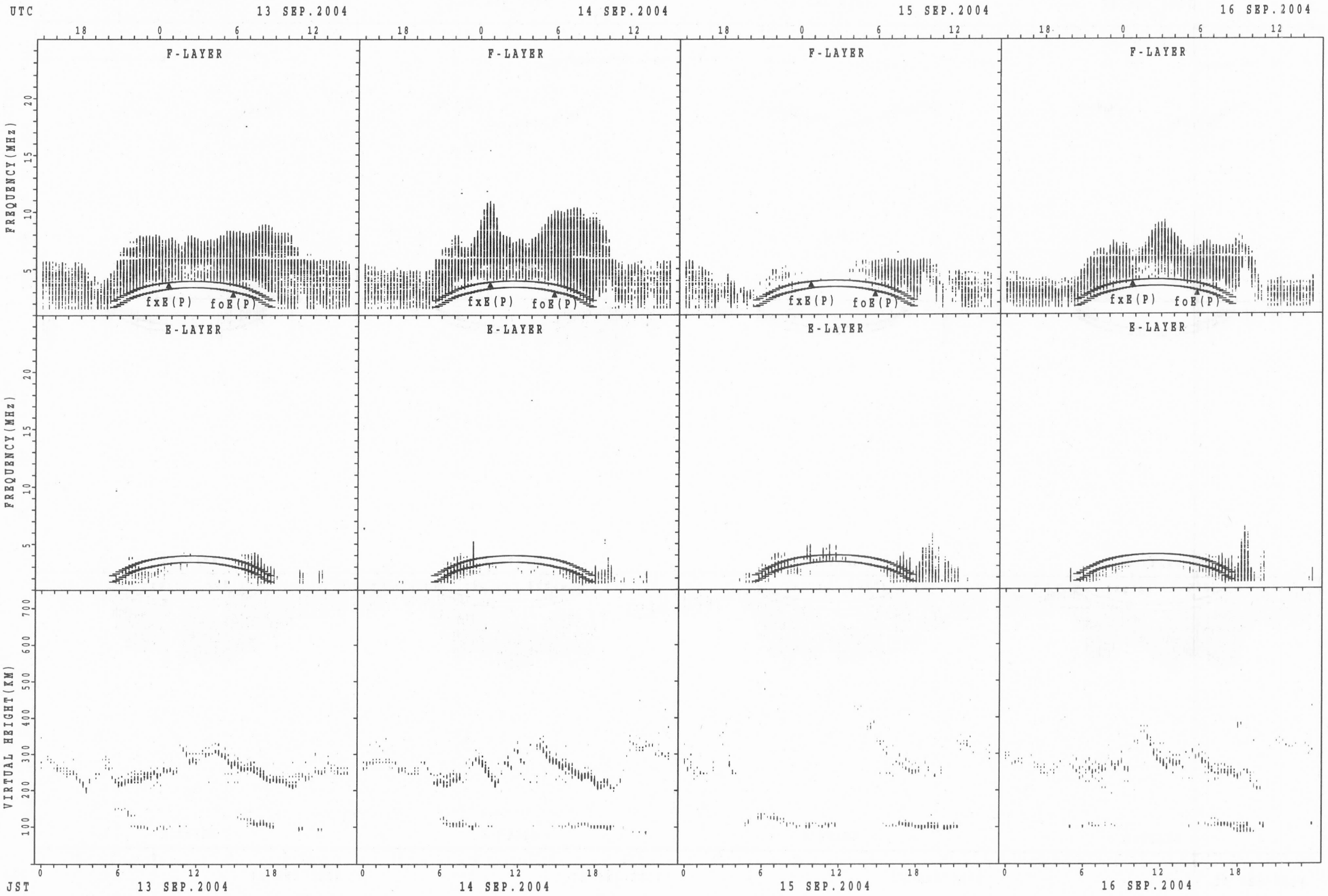
SUMMARY PLOTS AT Kokubunji



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

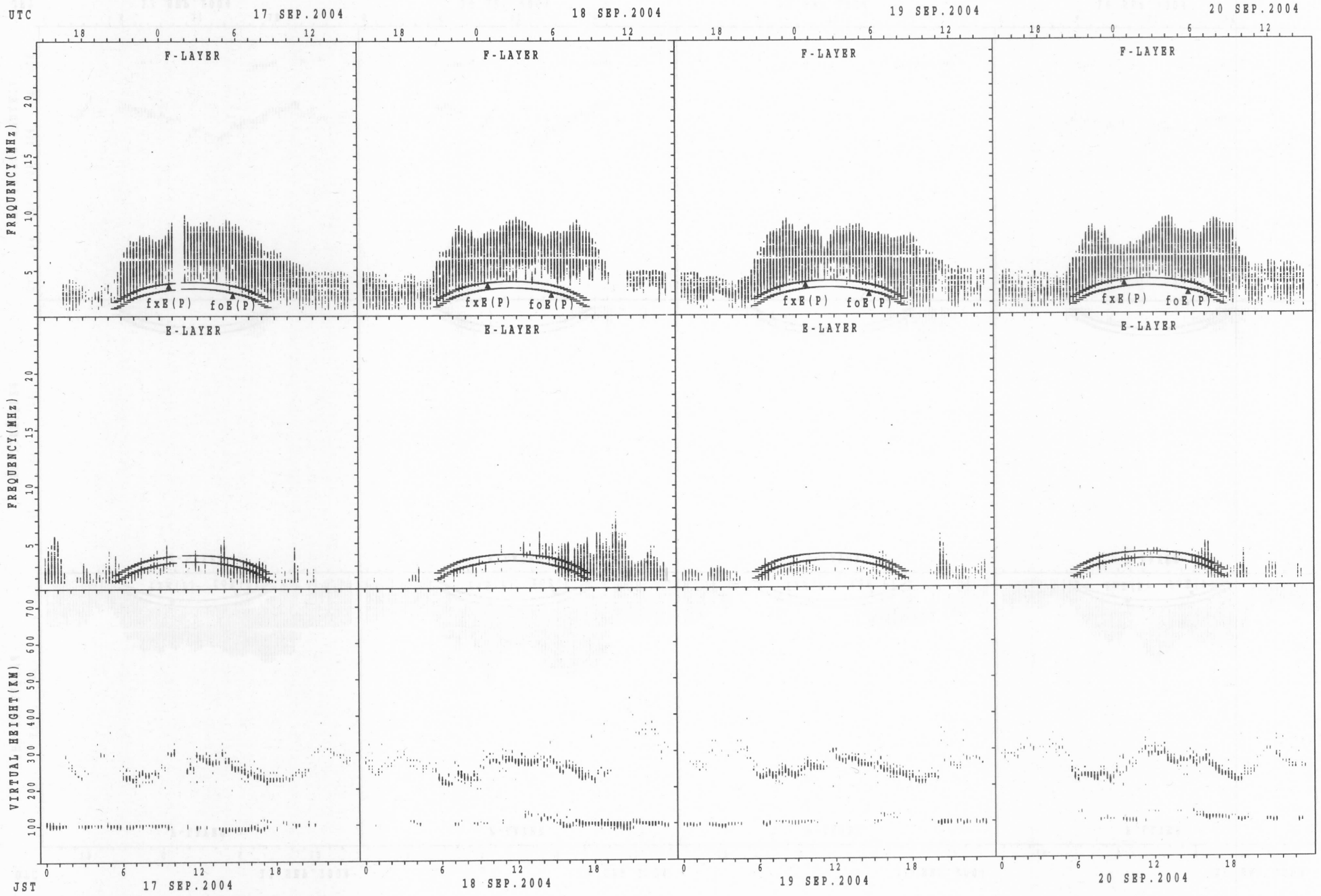

SUMMARY PLOTS AT Kokubunji
UTC
JST
9 SEP.2004
10 SEP.2004
11 SEP.2004
12 SEP.2004
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



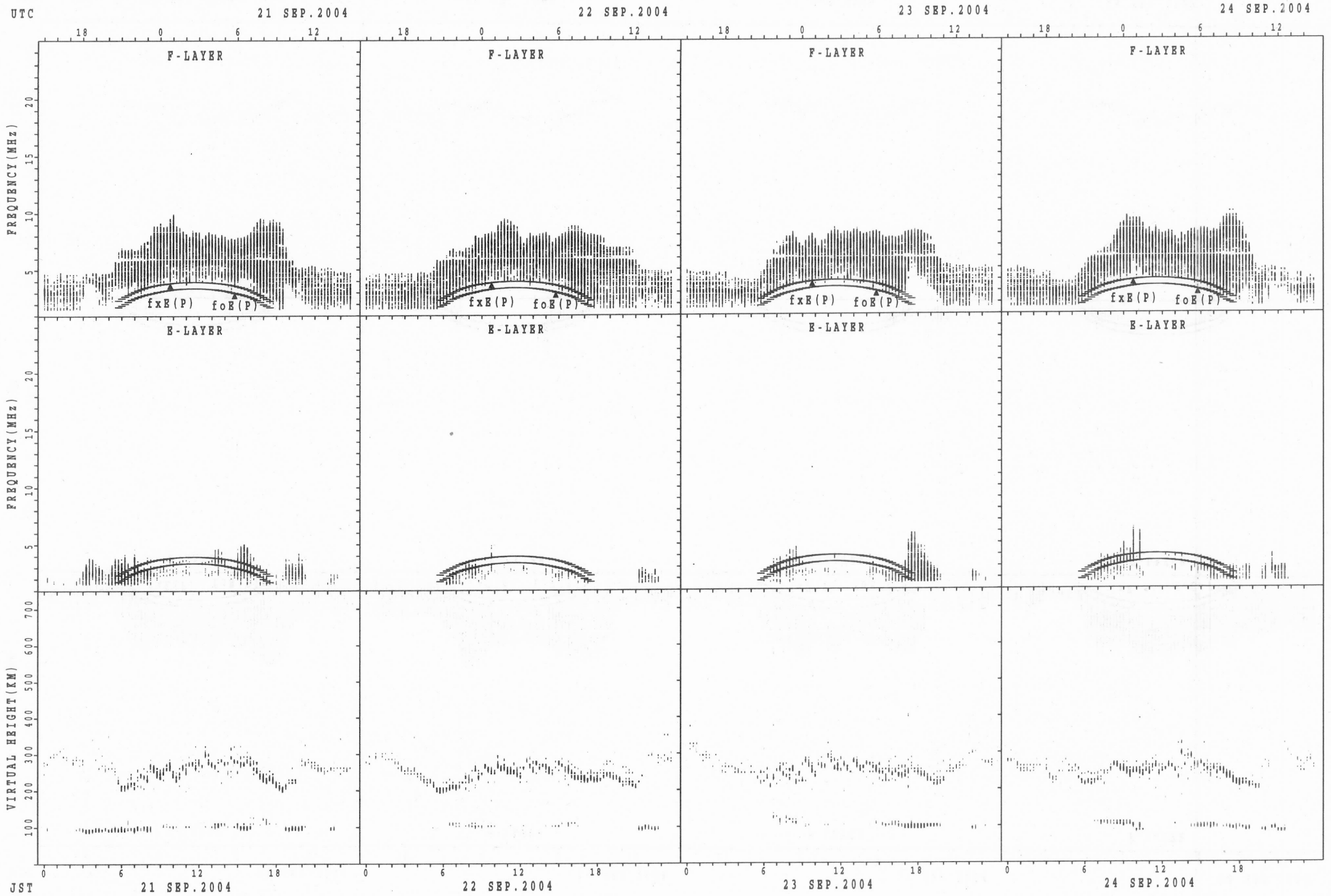
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



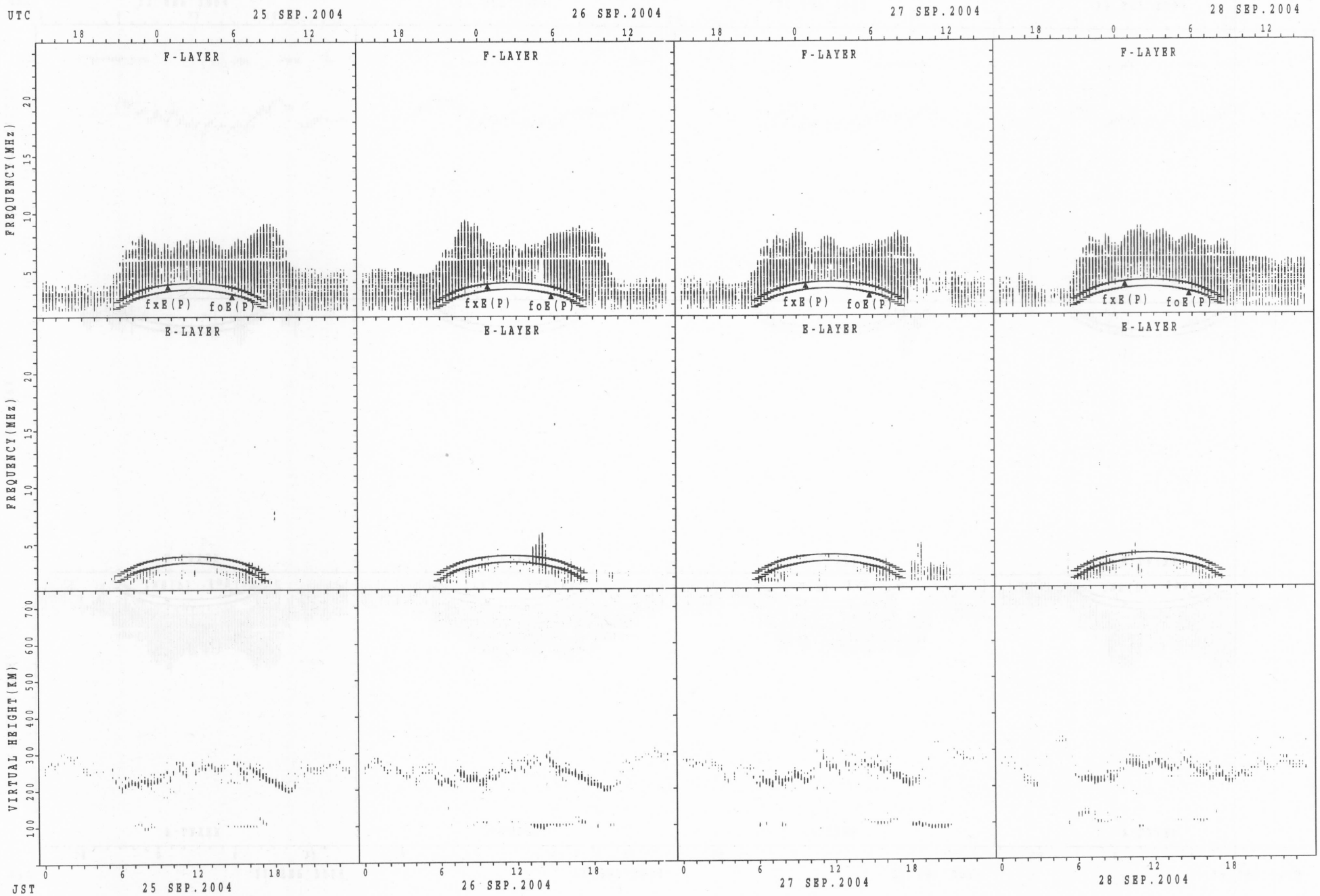
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



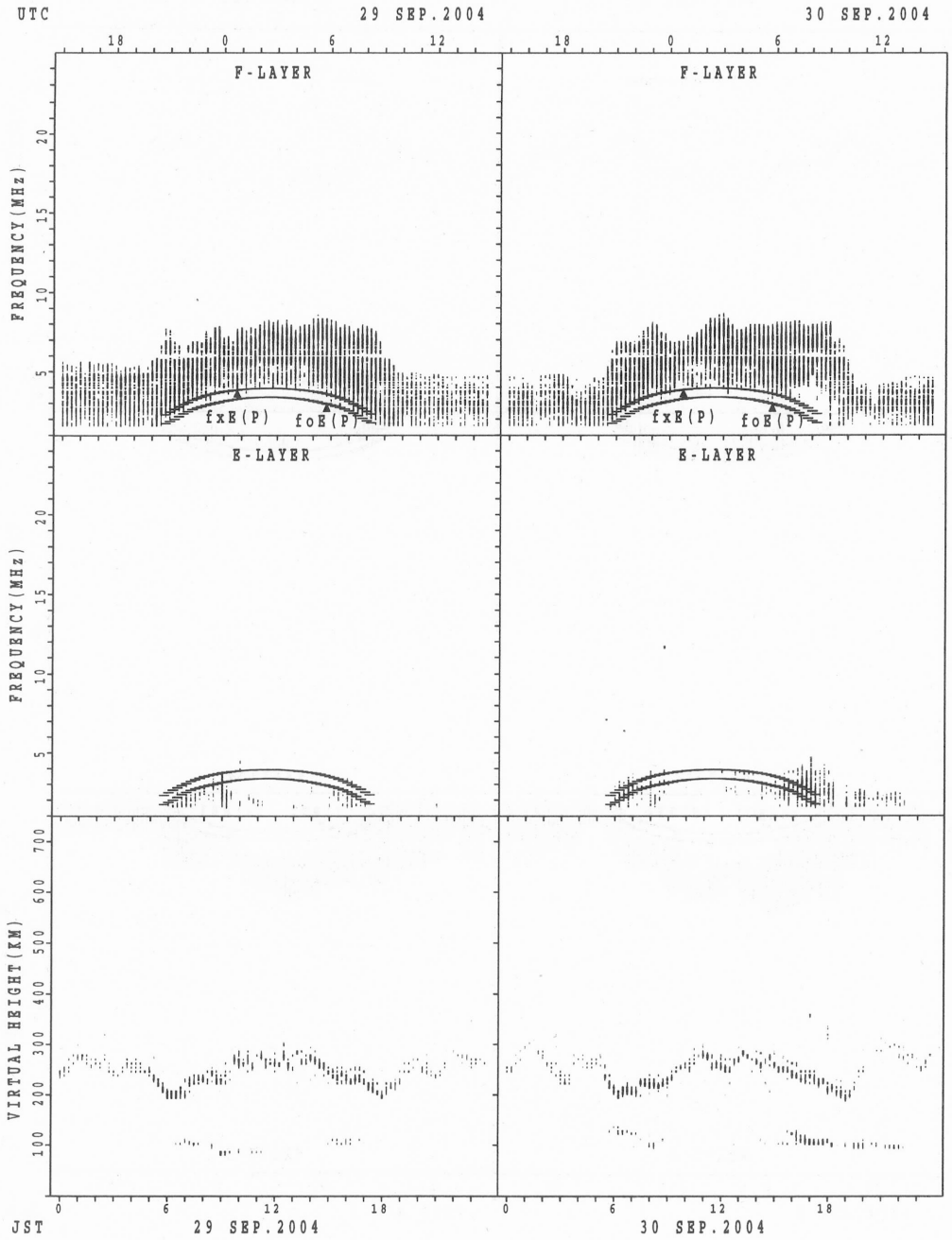
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



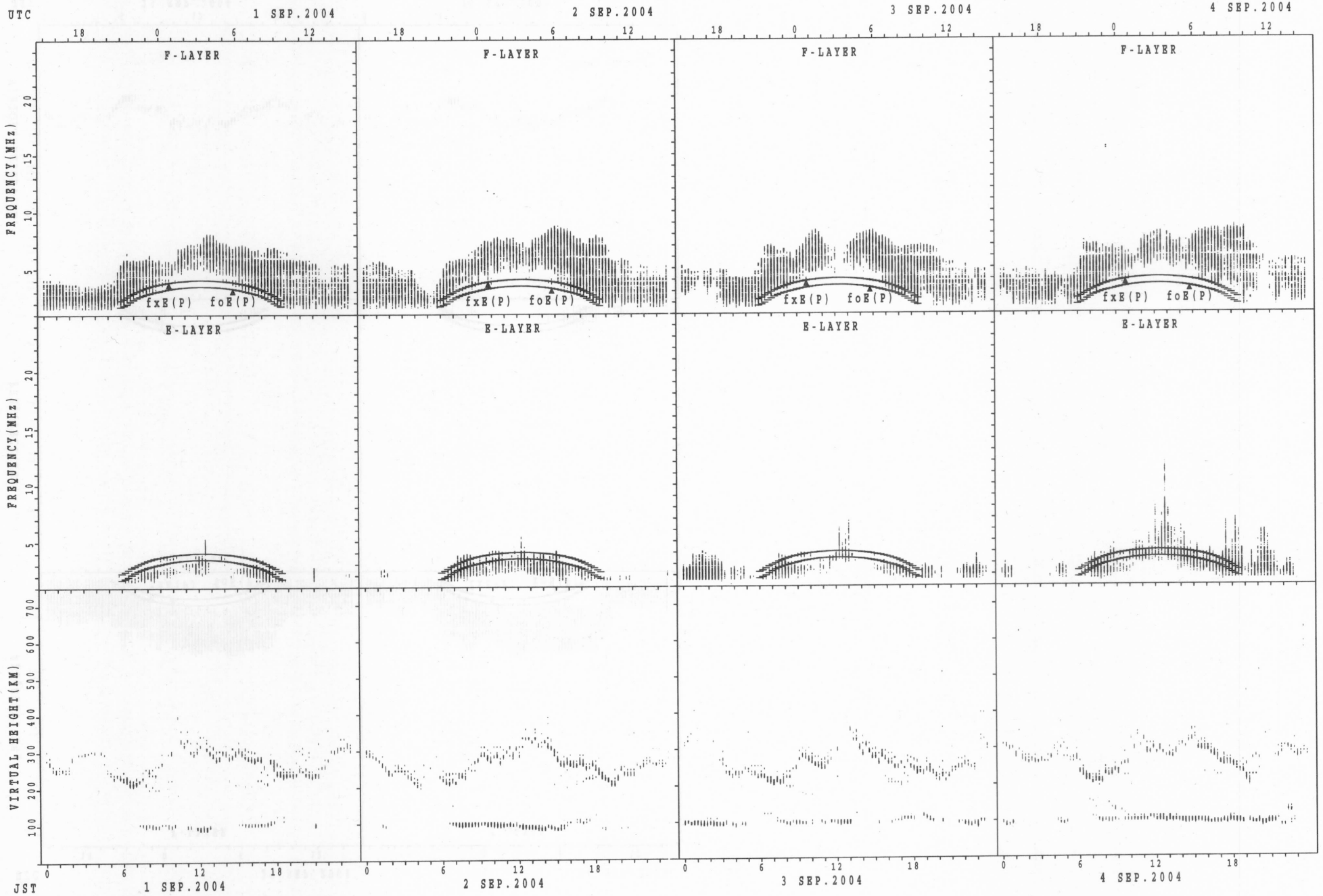
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



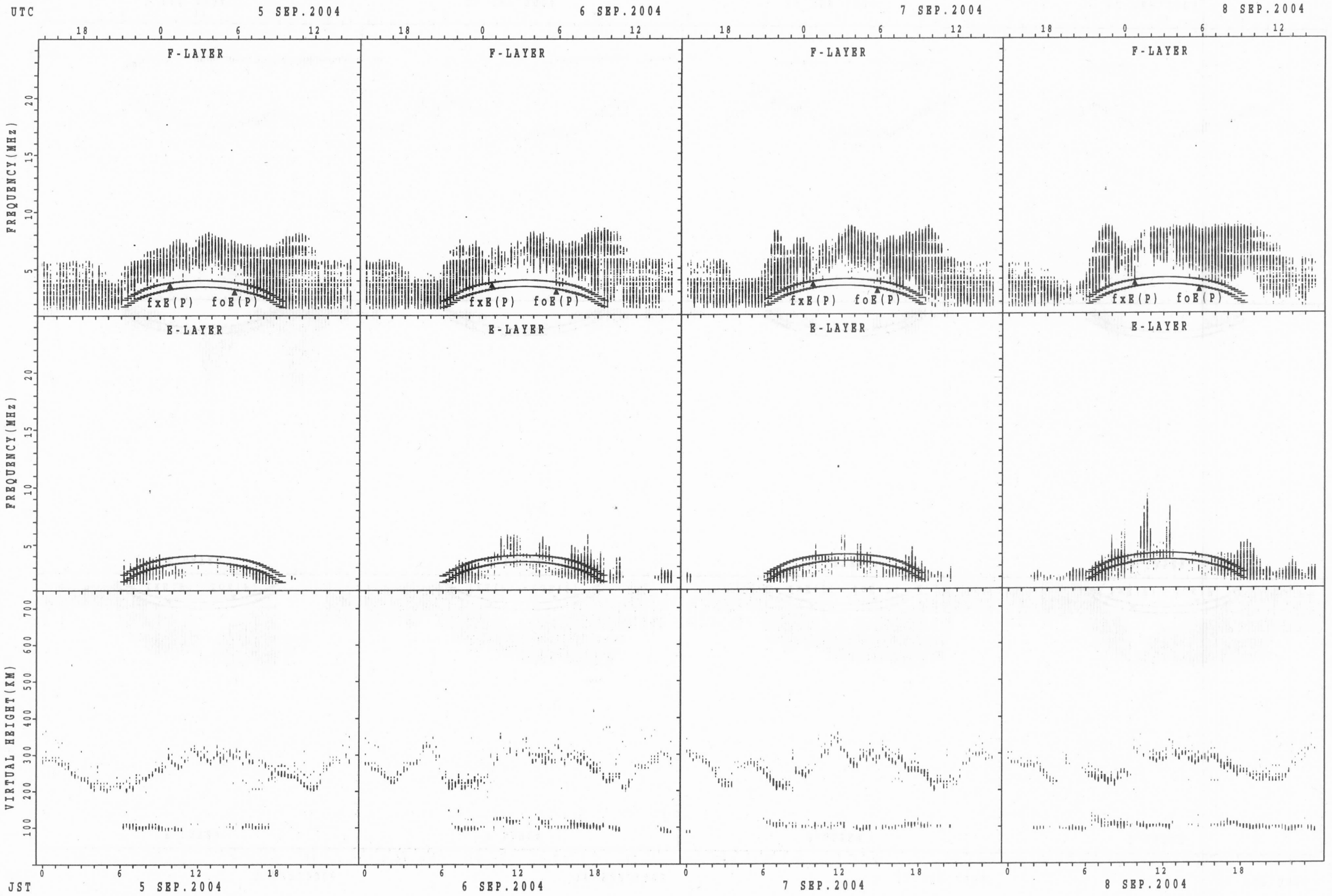
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



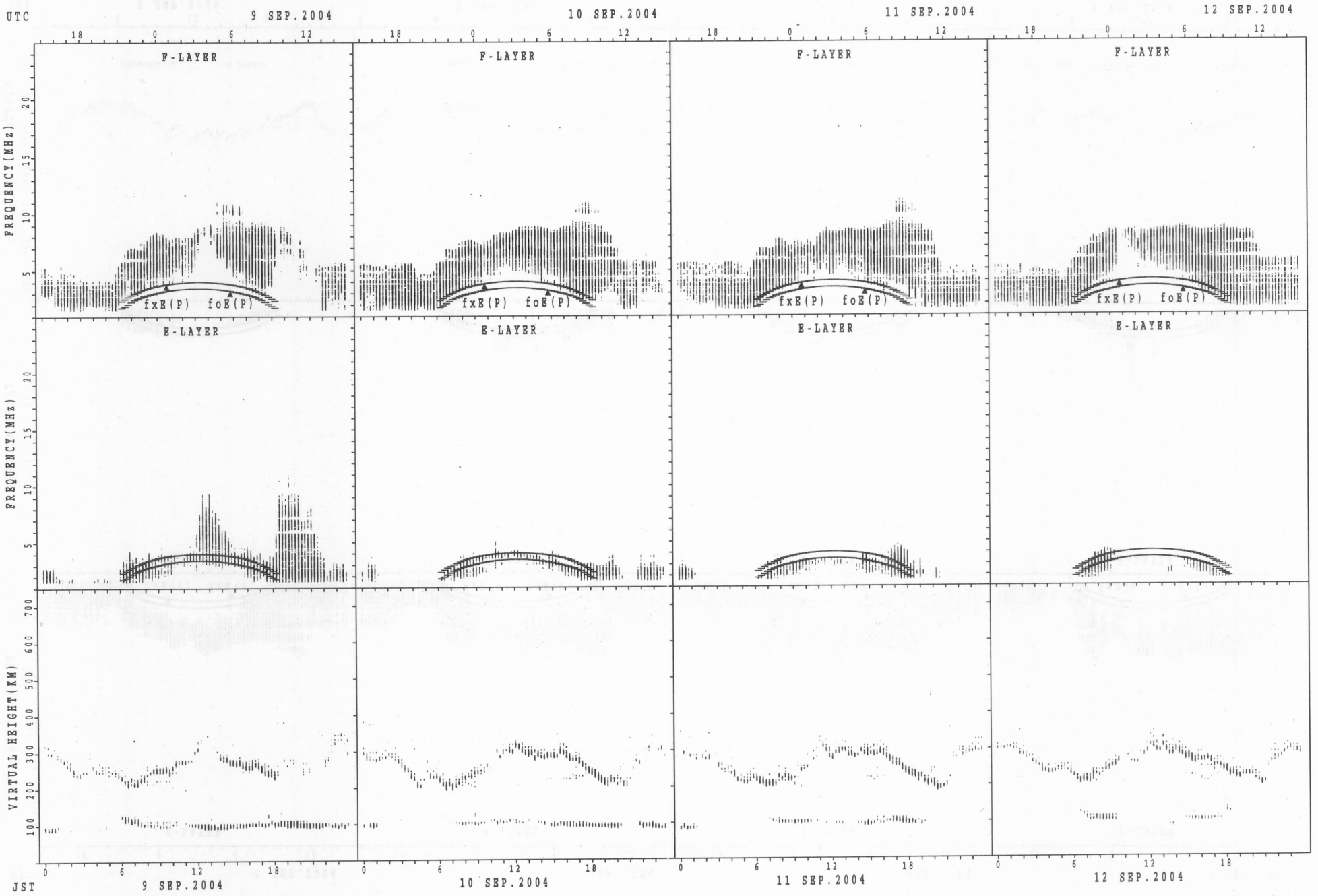
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



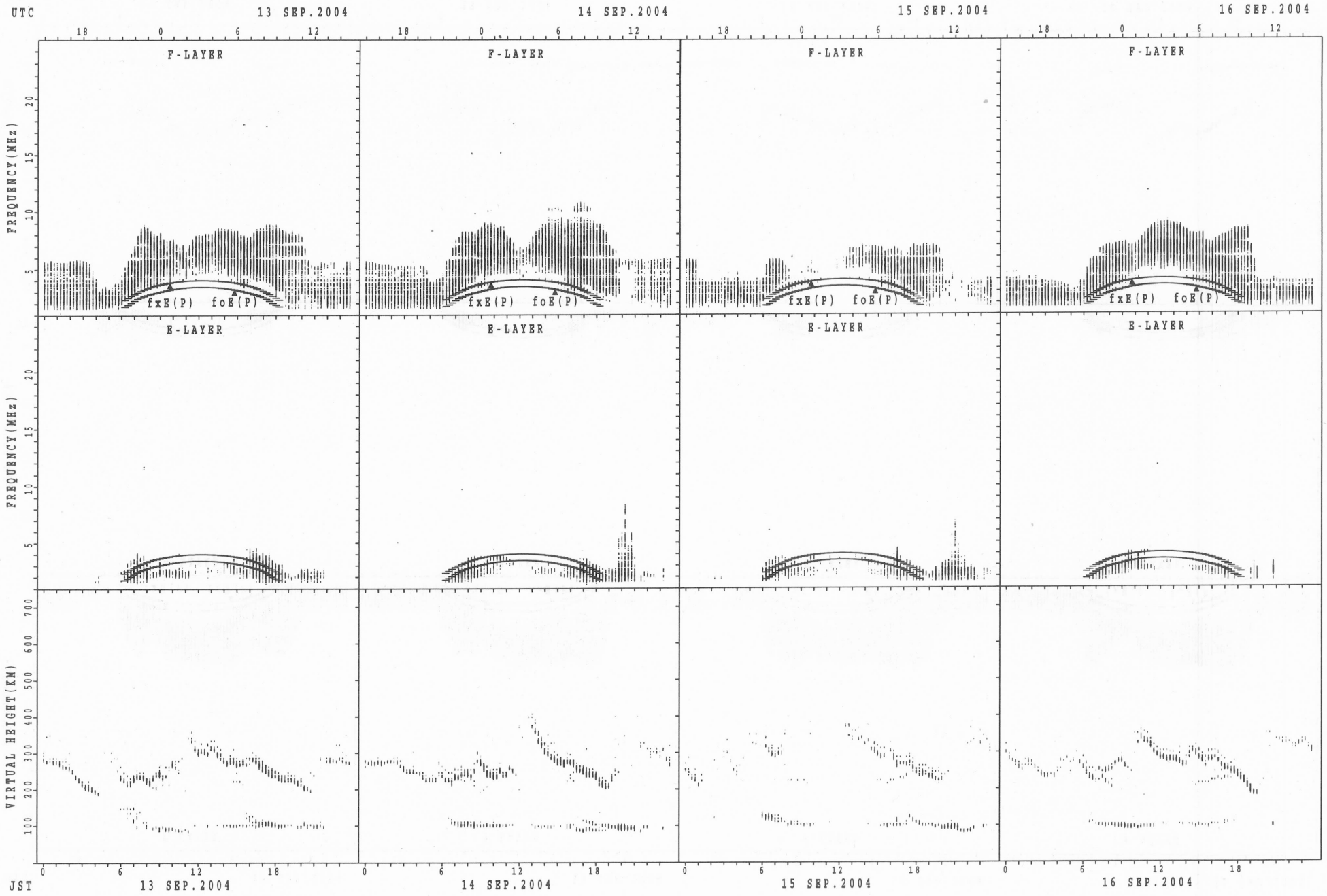
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



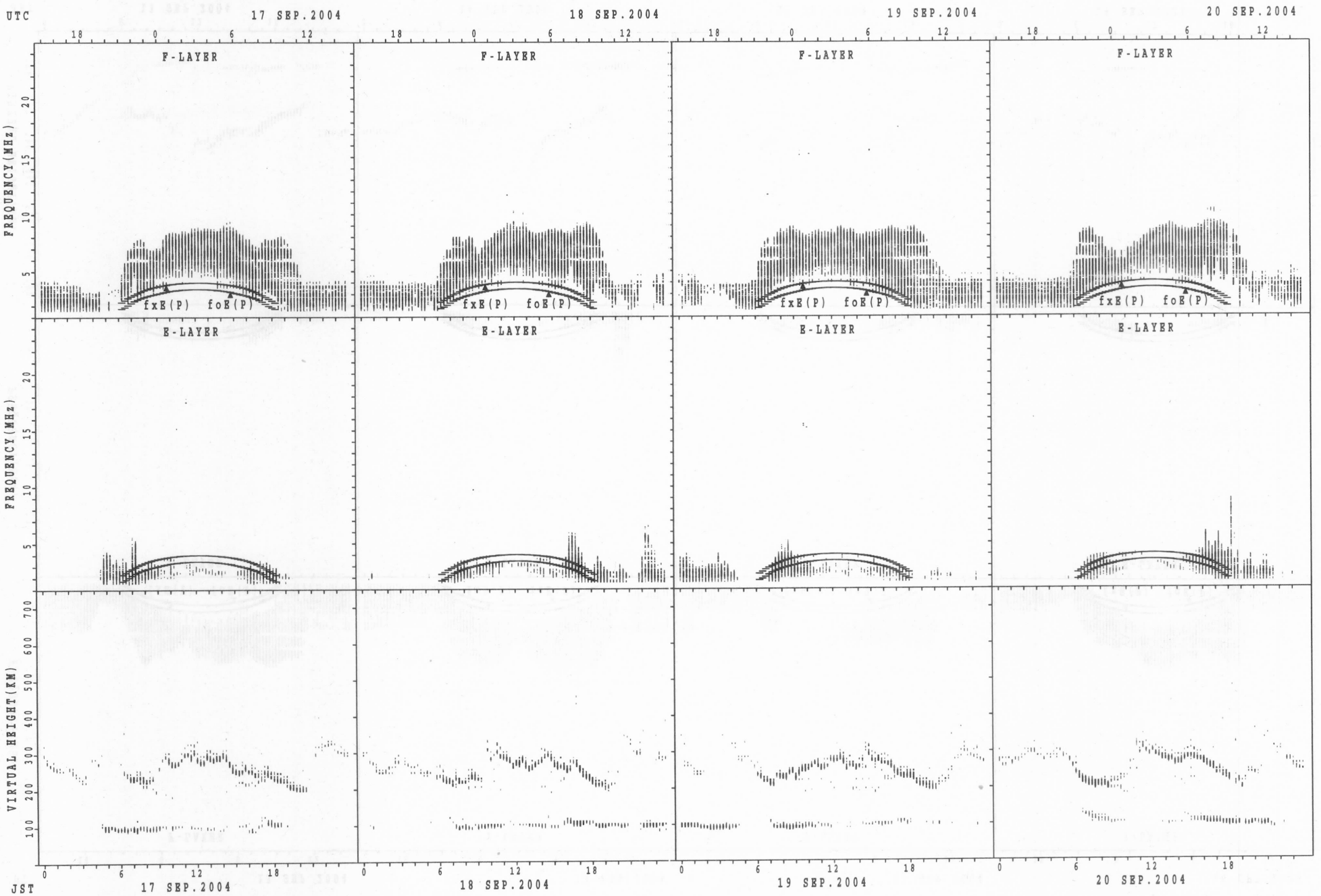
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



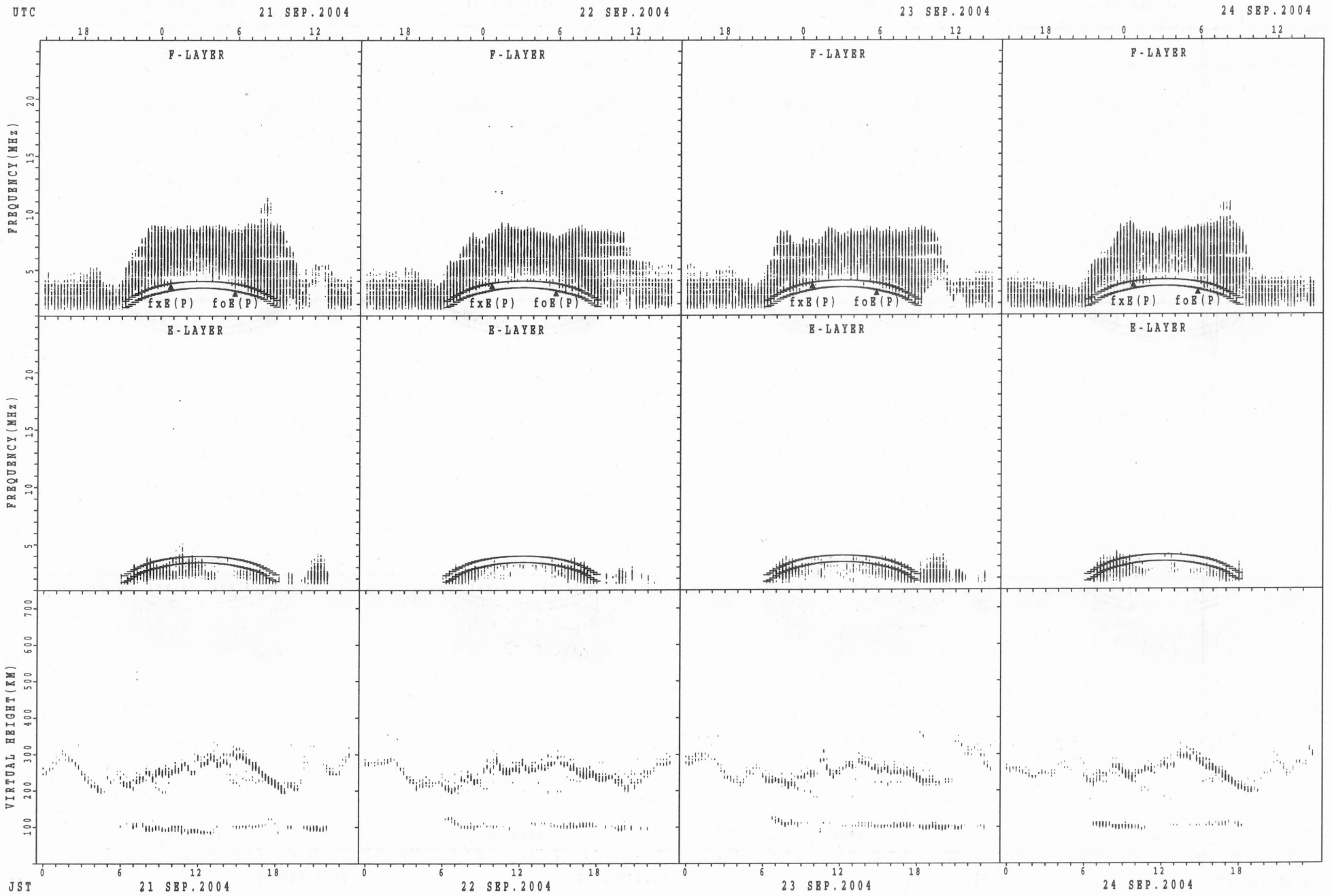
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



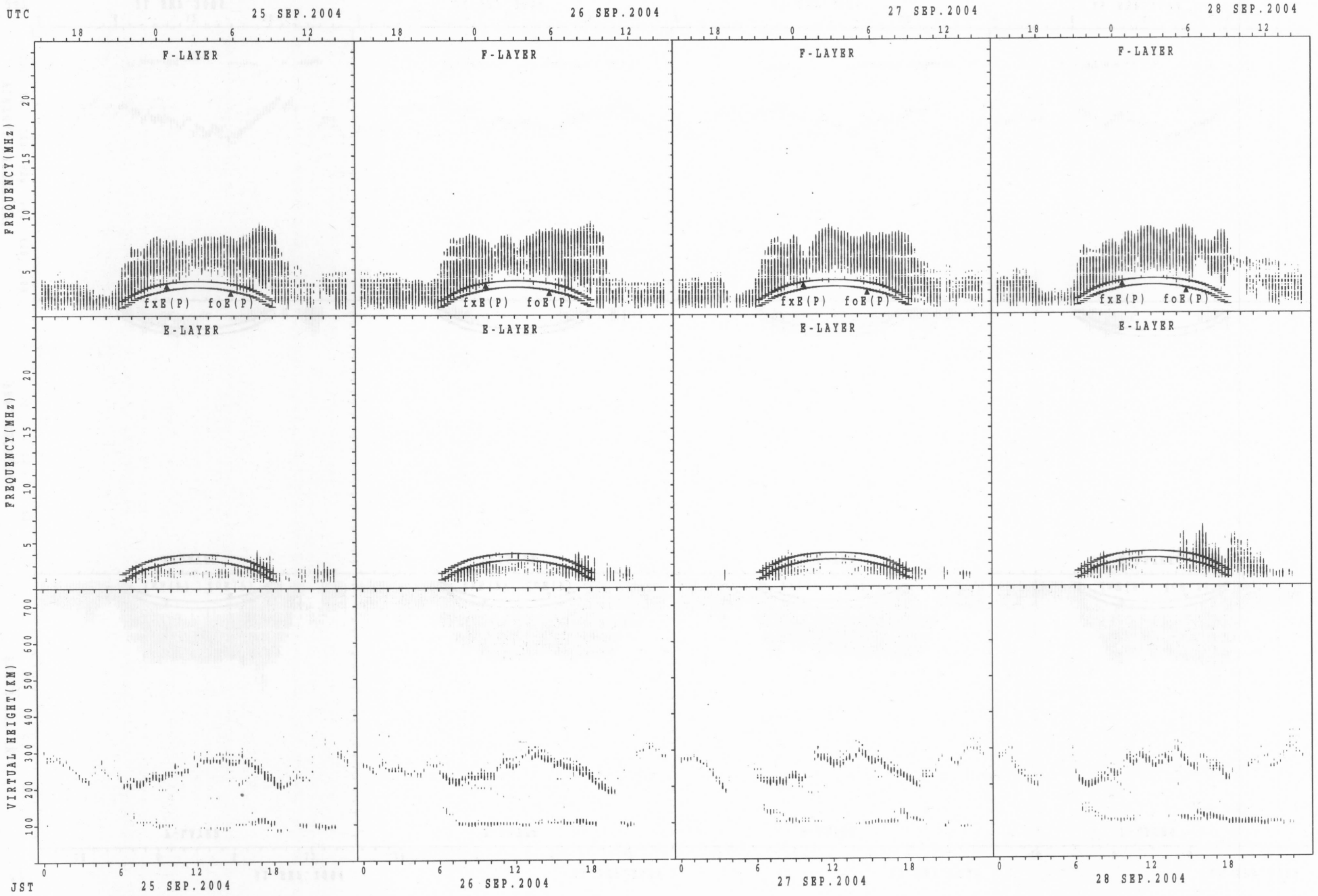
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



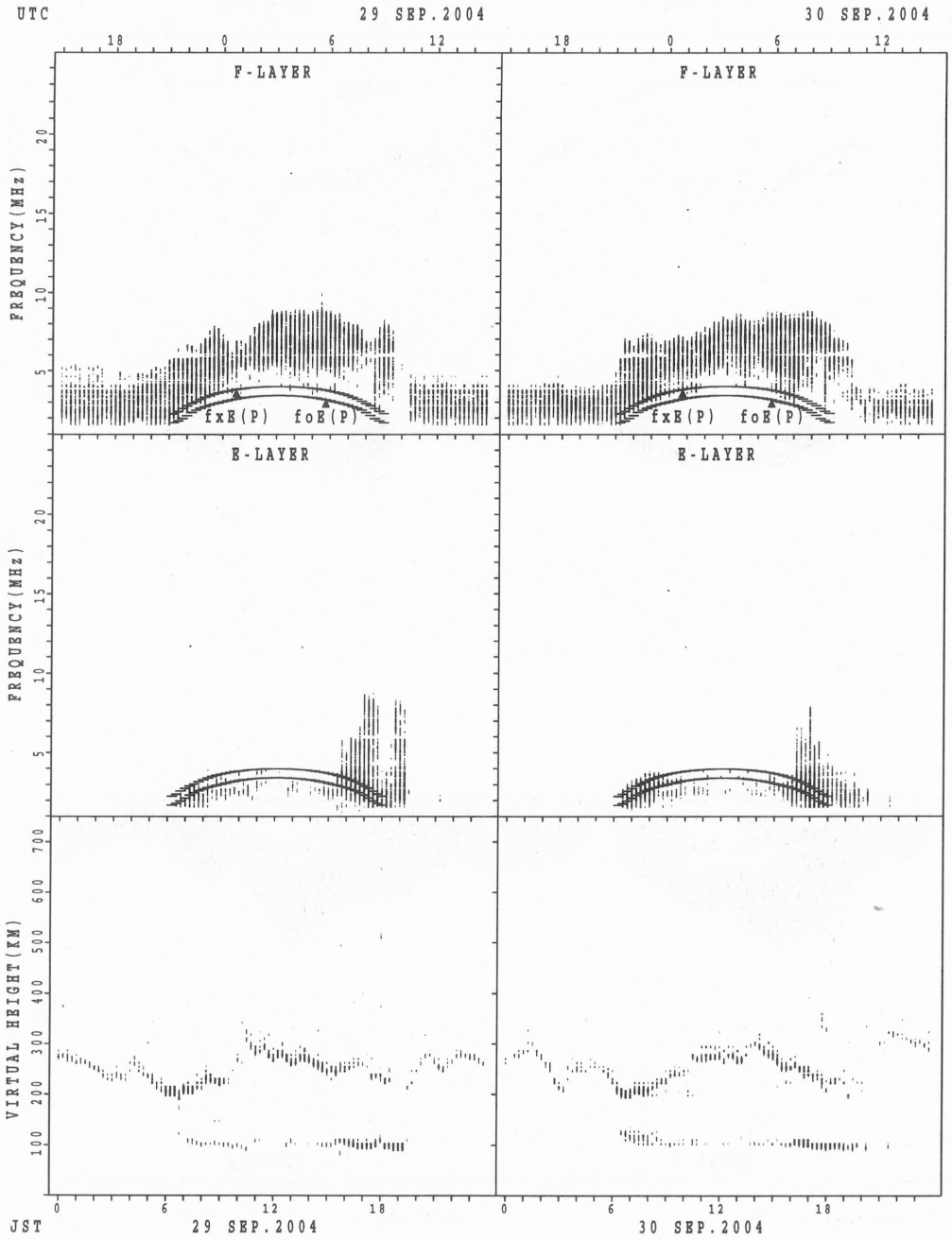
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



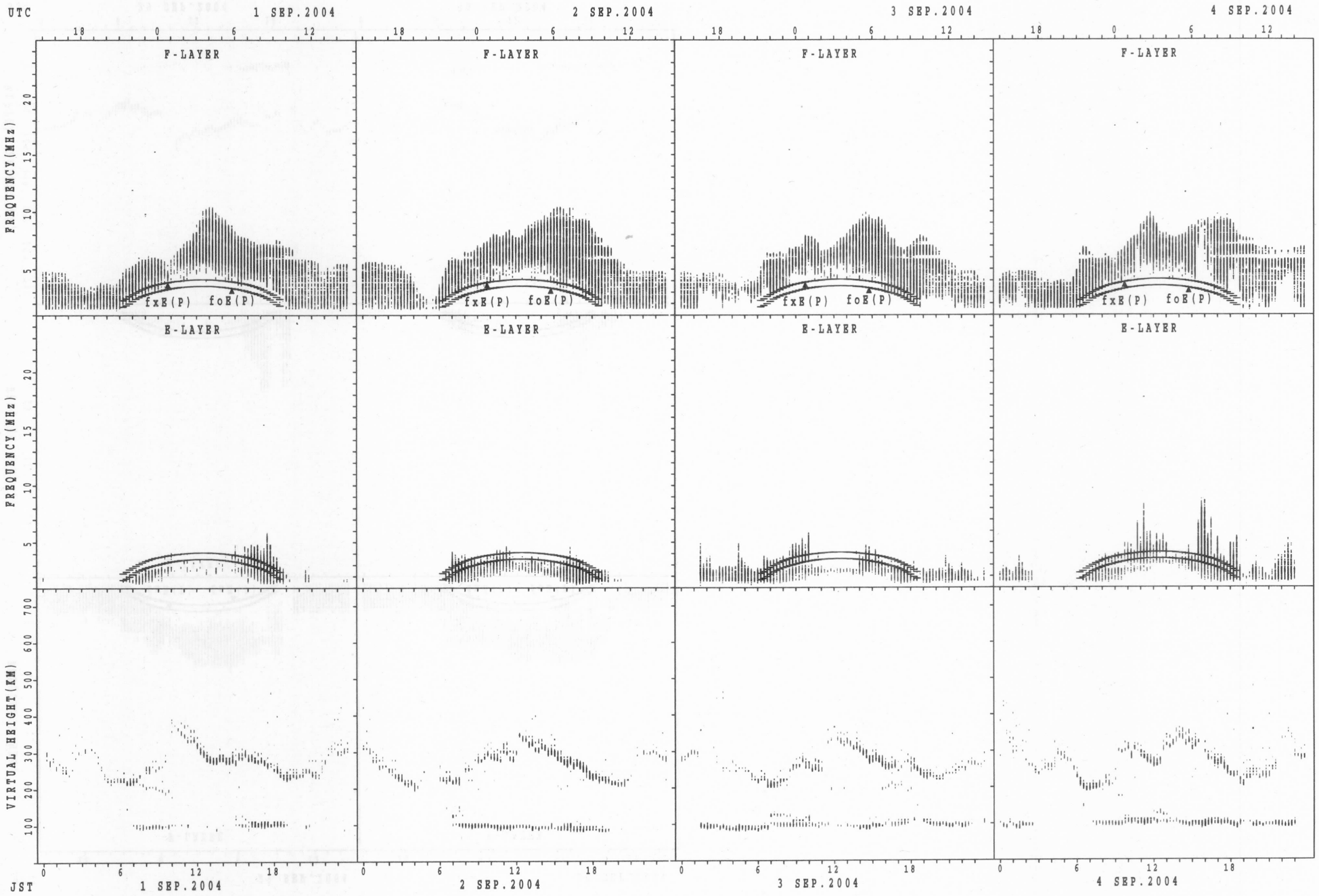
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



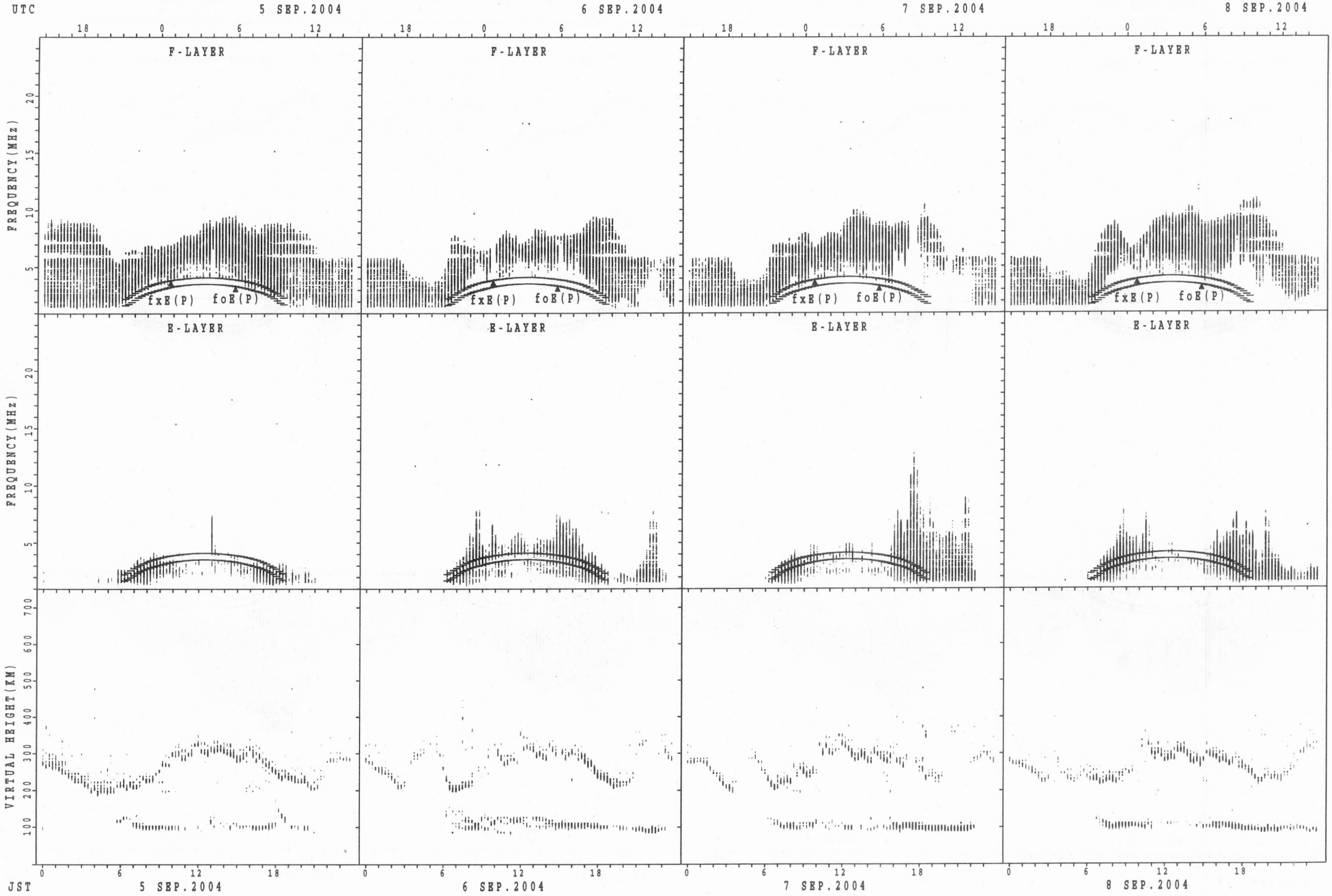
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



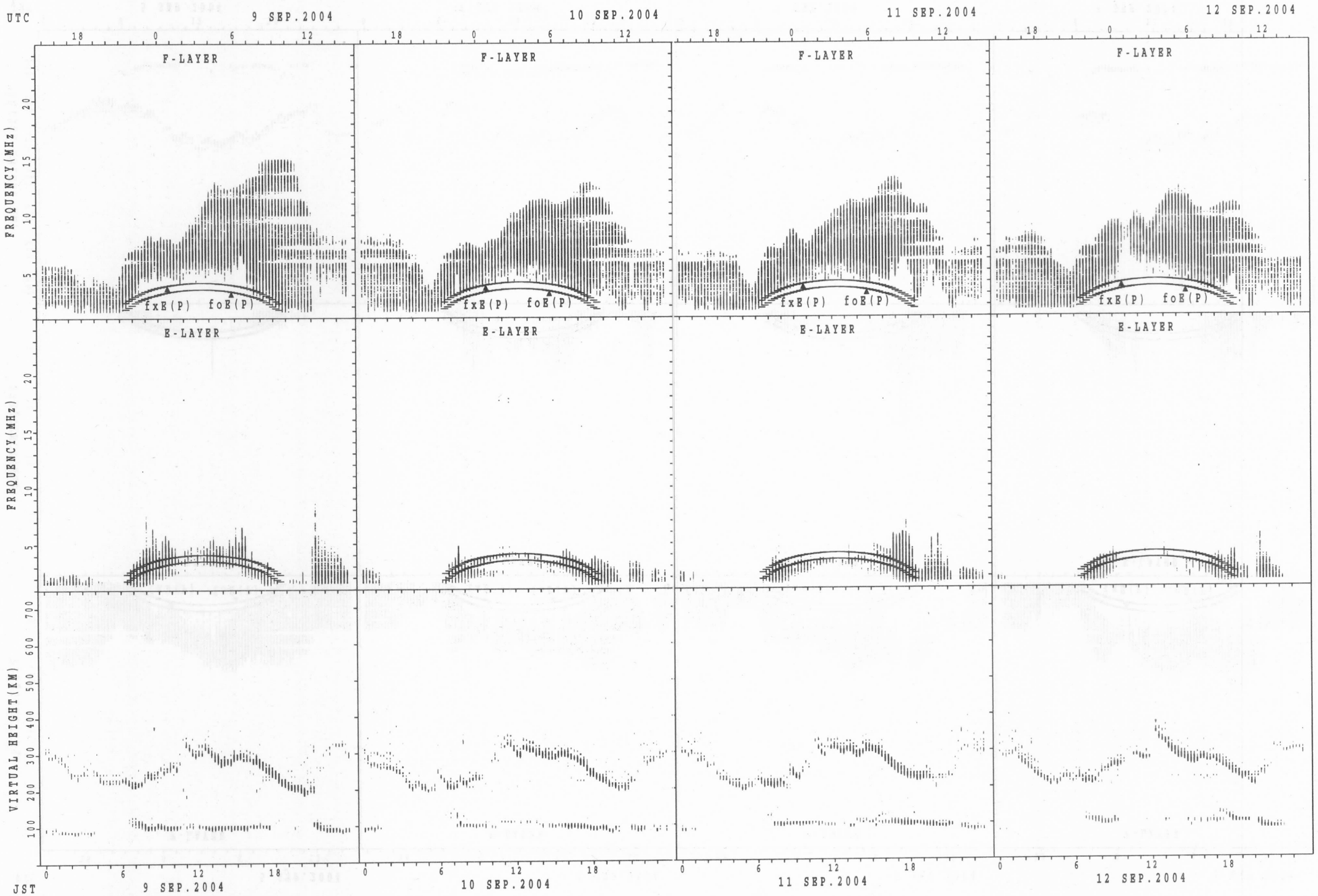
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



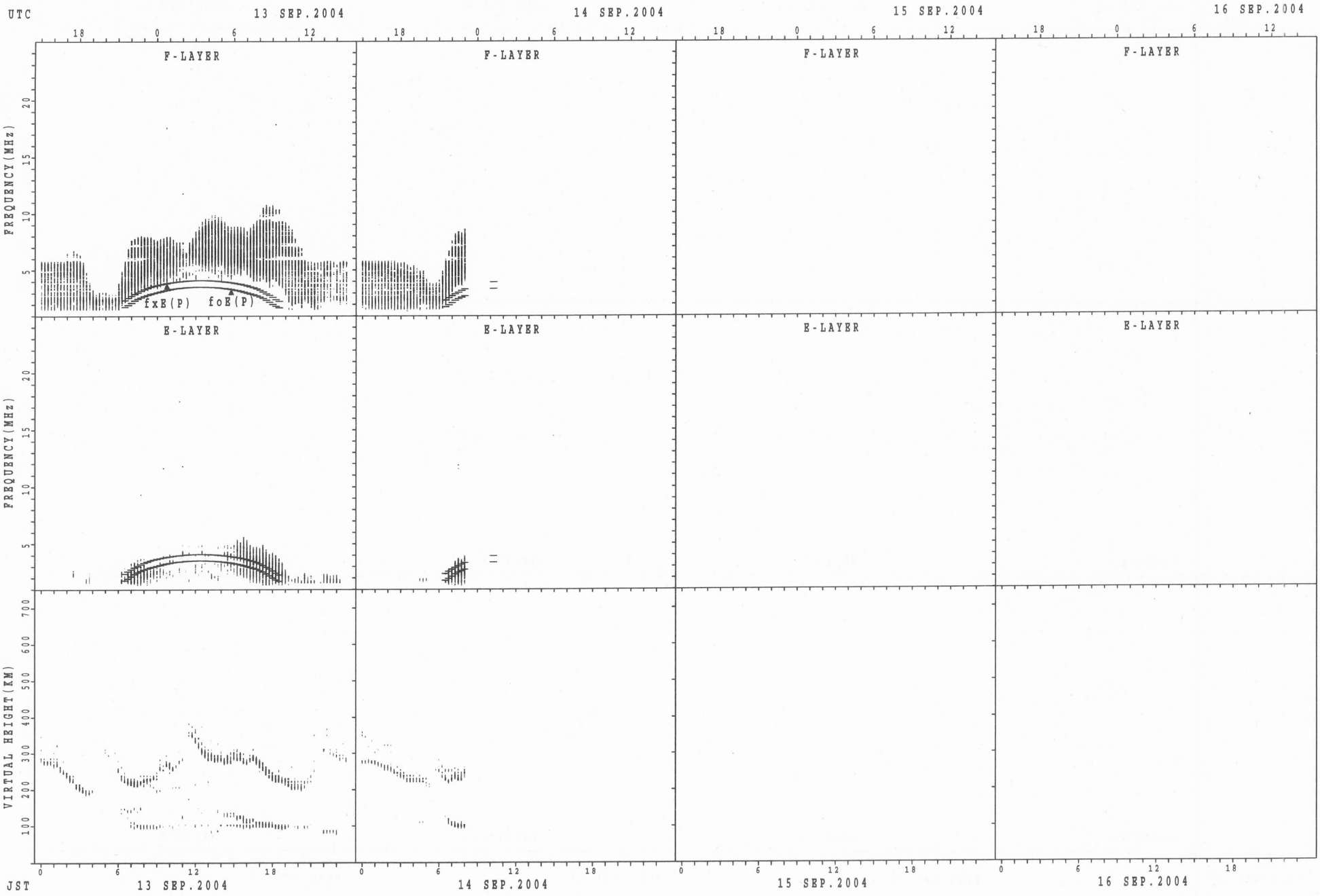
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



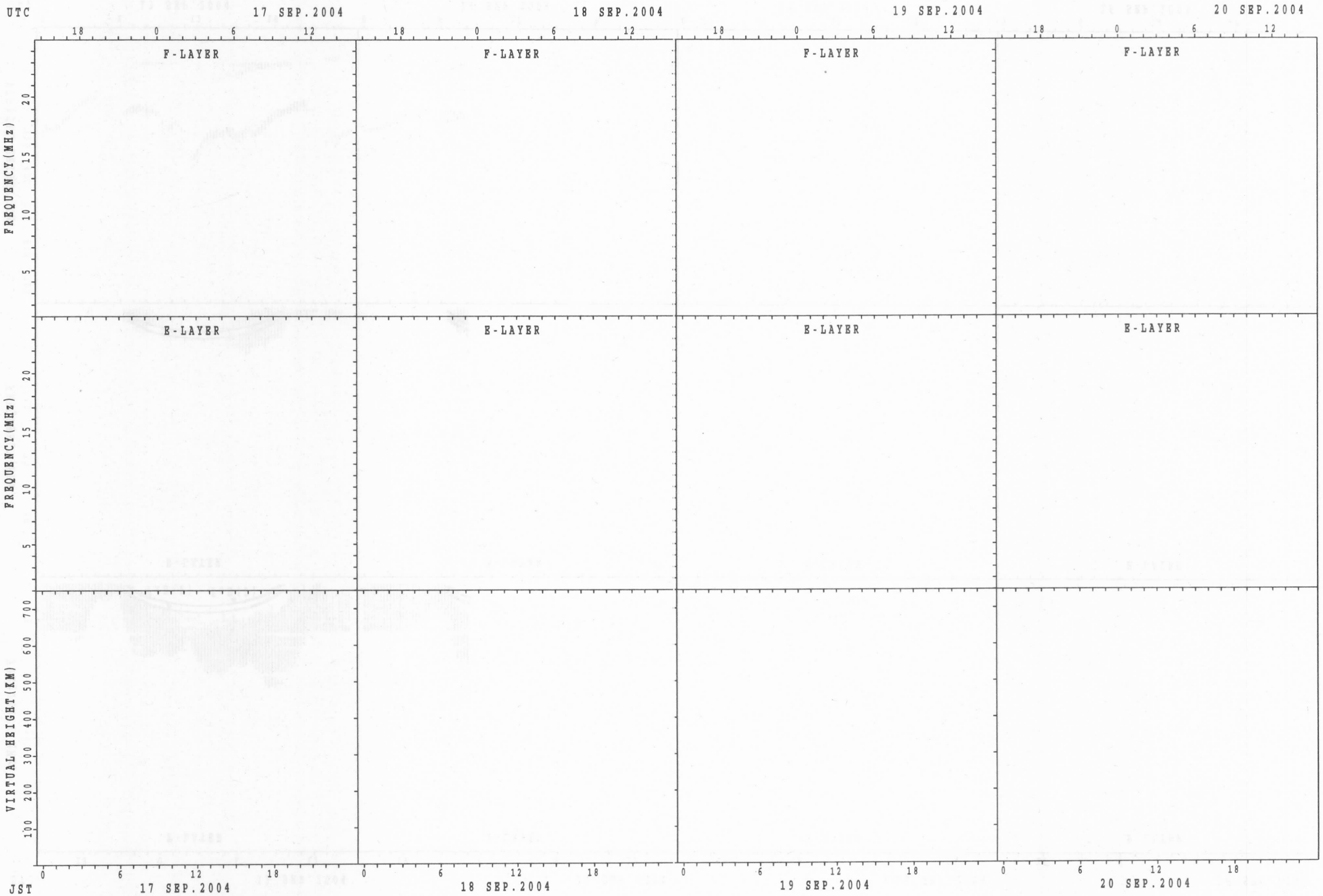
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



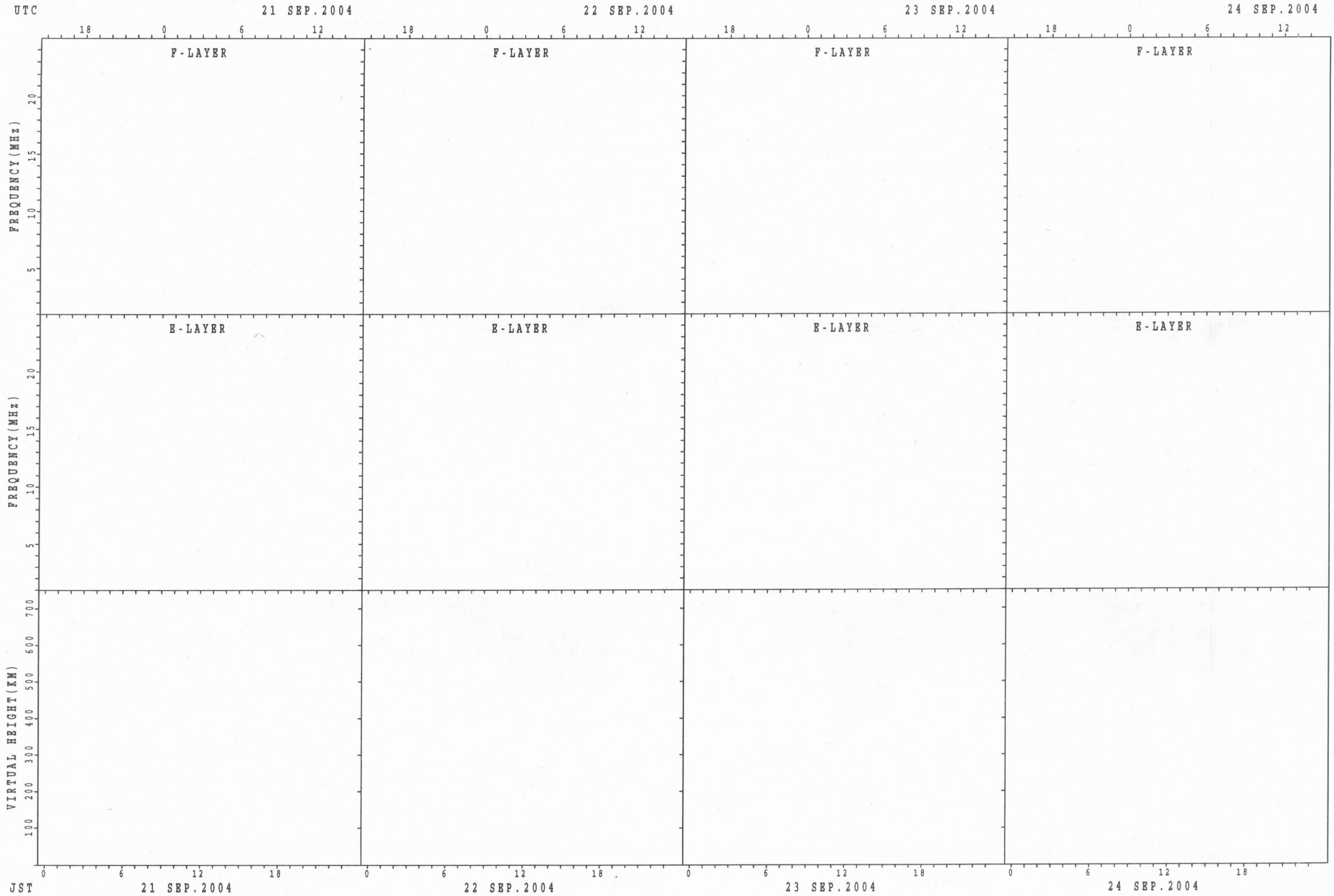
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



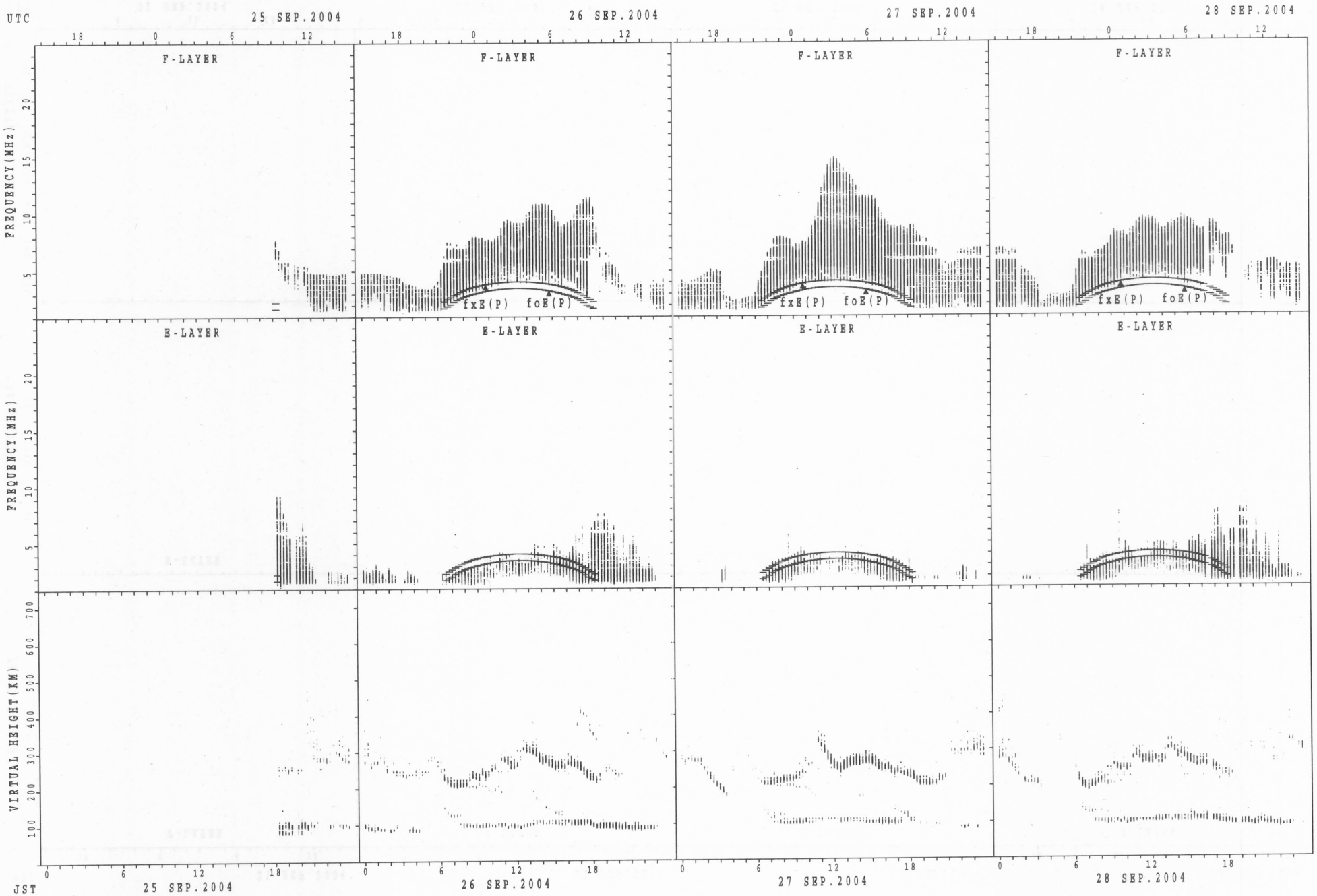
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



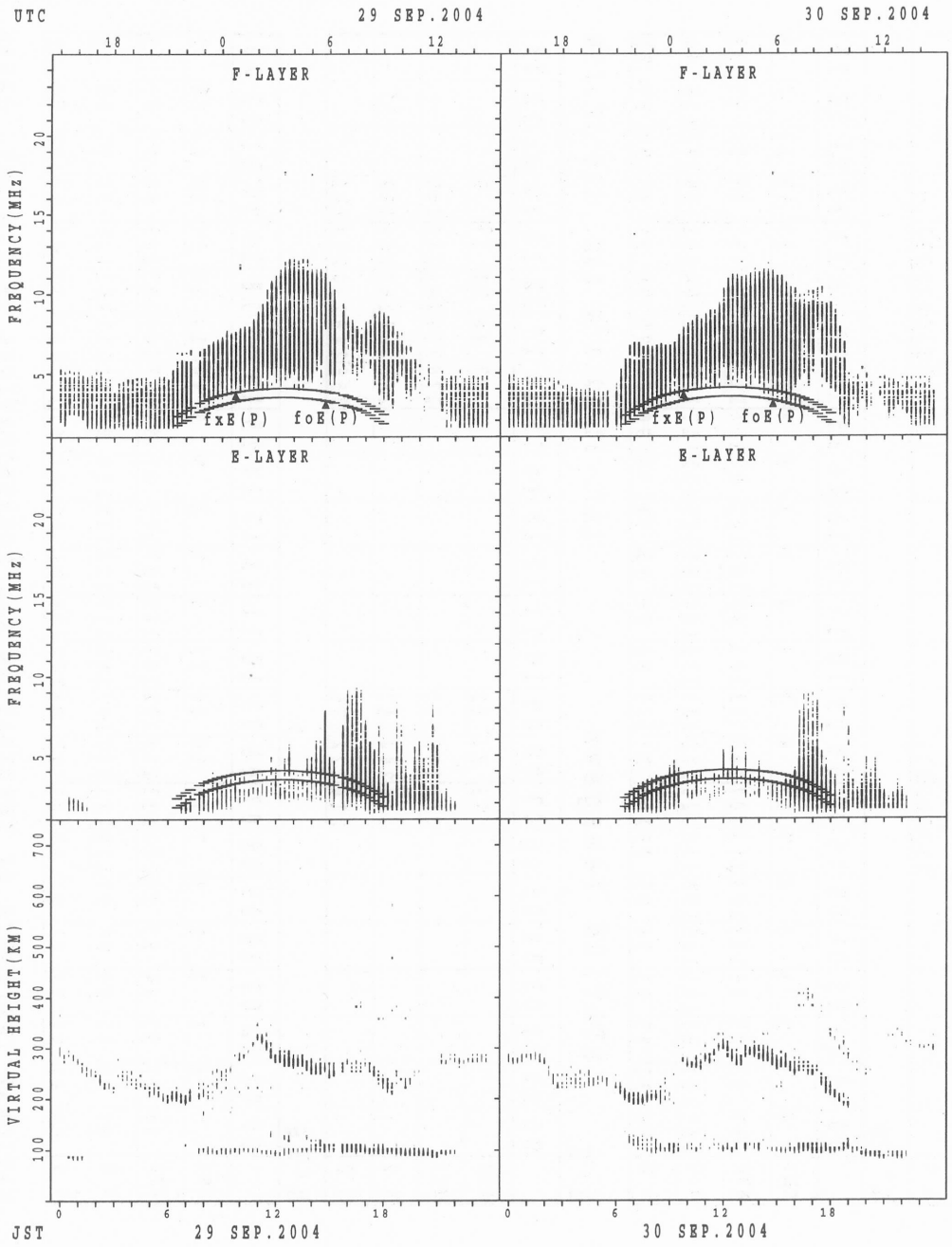
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

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

SEP.2004 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							5	15	15							16	20	21	8	7	4			
MED							240	242	252							268	264	262	255	264	273			
U Q							256	260	264							282	274	277	261	270	281			
L Q							227	236	244							251	253	244	246	262	262			

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	6	11	6	9	11	12	14	16	11	10	12	10	11	6	10	10	15	15	19	20	15	12	14	11
MED	96	97	96	97	95	99	108	107	103	103	103	98	99	101	98	95	99	105	99	97	97	96	96	97
U Q	99	97	97	105	105	107	119	109	111	107	107	103	183	101	103	103	119	113	105	101	99	104	99	99
L Q	95	91	91	93	95	95	97	97	95	97	96	95	97	91	97	95	95	91	93	94	93	93	87	89

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							9	22	24							16	27	27	24	12				
MED							240	237	242							262	262	246	239	245				
U Q							248	246	246							272	280	262	255	255				
L Q							219	222	230							257	248	238	229	231				

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	4	3	2	3	5	6	7	11	8	3	5	4	3	3	6	8	13	19	16	12	13	12	7	5
MED	97	95	95	95	103	103	119	107	103	103	101	97	103	101	97	106	113	107	102	97	97	96	99	99
U Q	101	103	95	101	105	103	135	123	110	103	132	104	185	129	111	117	118	111	104	102	100	104	103	104
L Q	96	91	95	93	94	95	99	101	95	103	96	94	95	91	95	96	102	105	98	94	93	92	97	95

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								19	21	12							27	26	26	17	5			
MED								230	232	230							270	257	244	246	240			
U Q								244	244	247							286	268	256	268	260			
L Q								214	222	225							256	246	230	230	231			

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	7	4	3	2	2	3	7	18	16	10	16	6	7	3	5	3	10	19	22	17	14	13	13	7
MED	97	97	95	94	93	97	123	113	106	102	107	113	107	103	97	97	107	107	103	105	98	97	93	95
U Q	97	98	97	95	95	97	129	121	112	107	146	177	113	113	110	97	111	111	111	106	103	97	99	99
L Q	89	93	95	93	91	97	97	105	101	99	102	103	101	95	92	87	101	103	97	97	97	97	90	91

MONTHLY MEDIANS OF h'F AND h'Es

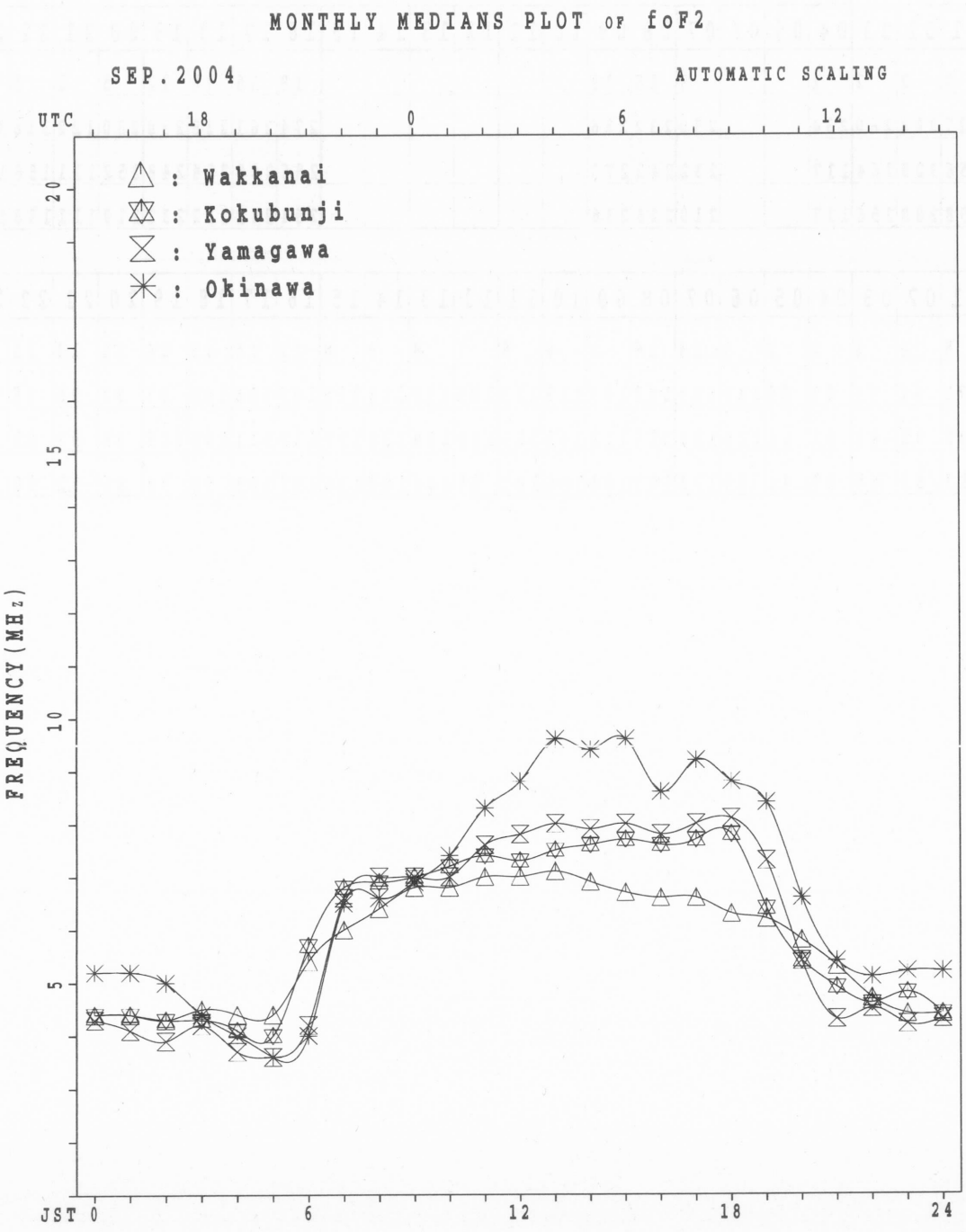
SEP.2004 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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	2	2	2	2	1			9	15	13							18	16	18	12	5	1	1	1
MED	364	327	308	260	234			230	232	256							274	261	238	238	230	222	316	390
U Q	406	356	328	264	117			232	242	270							286	268	254	248	252	111	158	195
L Q	322	298	288	256	117			210	226	236							254	242	232	232	219	111	158	195

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	5	5	4	1	2	1	3	13	14	9	9	9	7	8	9	8	11	15	15	14	11	13	13	9
MED	95	95	91	91	89	89	119	113	107	105	113	113	105	112	111	118	109	105	103	97	97	95	95	93
U Q	102	97	95	45	91	44	129	131	113	112	143	155	119	119	136	127	113	111	105	105	99	97	95	98
L Q	90	87	89	45	87	44	89	113	103	104	104	102	99	104	103	110	107	103	99	95	95	92	90	86


MONTHLY MEDIANS PLOT OF foF2
SEP. 2004
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

SEP.2004 fxI (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	X 49	49	43	X 43	X 40														X 62	X 64	X 63	X 55	X 53	X 52
2	X 53	X 55	X 53	X 46	X 40														X 72	X 73	X 63	X 62	X 56	X 57
3	X 52	X 50	X 49	X 48	X 46	X 48														X 66	X 64	X 60	X 61	X 59
4	X 56	X 56	X 52	X 50	X 49	X 48														X 93	X 69	X 52	X 52	X 53
5	X 56	X 58	X 58	X 59	X 46	X 46														X 75	X 76	X 64	X 63	X 64
6	X 62	X 62	X 60	X 54	X 52	X 48													X 85	X 79	X 73	X 66	X 63	X 63
7	X 59	X 57	X 57	X 57	X 46	X 46													X 81	X 88	X 74	X 52	X 52	X 52
8	X 52	X 51	X 49	X 50	X 40	X 41													X 90	X 71	X 57	X 59	X 56	X 56
9	X 55	X 52	X 49	X 47	X 44	X 43													X 79	X 75	X 63	X 57	X 51	X 56
10	X 55	X 53	X 52	X 53	X 52	X 50		C											X 105	X 98	X 72	X 64	X 65	X 62
11	X 62	X 60	X 58	X 57	X 56	X 55													X 105	X 97	X 72	X 58	X 56	X 56
12	X 56	X 54	X 55	X 53	X 51	X 52													X 88	X 80	X 70	X 66	X 59	X 60
13	X 60	X 59	X 58	X 60	X 47	X 46													X 85	X 84	X 70	X 65	X 62	X 62
14	X 58	X 56	X 54	X 54	X 52	X 51													X 101	X 79	X 59	X 58	X 60	X 60
15	X 62	X 56	X 48	X 45	X 37	X 36													X 60	X 62	X 51	X 50	X 48	X 48
16	X 49	X 47	X 46	X 46	X 45	X 44													X 82	X 67	X 42	X 43	X 44	X 43
17	X 44	A	X 46	X 43	X 38	X 40													X 70	X 64	X 59	X 52	X 54	X 55
18	X 52	X 51	X 48	X 46	X 48	X 46													X 80	X 60	A	X 51	53	X 50
19	X 47	X 47	48	X 44	X 44	X 45													X 83	X 69	X 62	X 55	X 53	X 53
20	X 52	X 51	X 49	X 48	X 48	X 47													X 90	X 65	X 56	X 58	X 57	X 56
21	X 51	X 50	X 50	X 50	X 50	X 49													X 96	X 69	X 56	X 56	X 54	X 52
22	X 48	X 50	X 49	X 50	X 51	X 50													X 82	X 77	X 74	X 63	X 54	X 54
23	X 52	X 51	X 50	X 49	X 46	X 42													X 85	X 78	X 57	X 56	X 54	X 55
24	X 52	X 52	X 48	X 48	X 42	X 42													X 91	X 64	X 52	X 48	X 48	X 47
25	X 46	X 45	X 44	X 43	X 42	X 42													X 92	X 71	X 57	X 56	X 54	X 55
26	X 55	X 54	X 52	X 52	X 49	X 49													X 89	X 68	X 46	X 46	X 46	X 47
27	X 48	X 48	X 46	X 47	X 41	X 40													X 72	X 48	X 50	X 50	X 49	X 50
28	X 48	X 47	X 46	X 36	X 36	X 36													X 72	X 66	X 61	X 63	X 58	X 60
29	X 59	X 59	X 59	X 58	X 57	X 59													X 61	X 52	X 54	X 52	X 50	X 51
30	X 50	X 48	X 50	X 51	X 47	X 48													X 82	X 60	X 46	X 46	X 47	X 49
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	30	30	30	28													27	30	29	30	30	30
MED	X 52	X 52	X 50	X 50	X 46	X 46													X 83	X 70	X 61	X 56	X 54	X 55
U Q	X 56	X 56	X 54	X 53	X 50	X 49													X 90	X 79	X 70	X 62	X 58	X 59
L Q	X 49	X 50	X 48	X 46	X 42	X 42													X 72	X 64	X 55	X 52	X 51	X 51

SEP.2004 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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	43	F	F 34	37	34	36	65	66	63	54	72	60	60	59	64	65	62	56	56	58	57	49	47	46
2	47	49	45	40	34	33	57	55	61	70	71	72	70	74	75	76	67	63	66	67	57	56	50	51
3	46	44	43	42	40	42	60	70	66	60	72	78	65	64	66	68	62	70	74	60	58	54	55	53
4	50	50	46	44	43	42	54	66	70	72	63	65	68	A	74	71	69	69	81	87	63	46	46	V 47
5	50	52	52	53	40	40	57	62	65	64	72	74	74	76	69	64	64	60	60	69	70	58	57	58
6	56	56	53	48	46	42	70	57	69	68	64	63	70	76	74	68	70	71	79	73	67	60	57	57
7	53	51	51	51	40	40	52	78	66	64	65	66	72	74	76	67	67	73	74	82	68	46	46	46
8	46	45	43	44	34	34	55	72	81	71	76	74	71	77	75	84	80	81	84	65	51	53	50	50
9	49	46	43	40	38	37	63	72	69	78	80	79	73	79	86	92	89	80	73	69	57	51	S 45	50
10	49	47	46	47	46	44	54	C	69	70	70	76	78	82	85	82	87	92	99	92	66	58	59	56
11	56	54	52	51	50	49	65	73	69	72	69	70	72	77	79	71	72	90	99	91	66	52	50	50
12	49	48	49	47	45	46	60	68	83	70	76	78	84	74	73	77	77	82	82	74	64	60	53	54
13	54	53	52	54	41	40	61	70	75	77	73	72	74	73	76	79	78	85	79	78	64	59	56	56
14	52	50	48	48	46	45	63	75	67	90	103	75	72	73	87	98	98	96	95	73	53	52	54	54
15	56	50	42	39	30	30	36	47	48	49	S 53	49	S 53	52	52	54	53	54	54	56	45	44	42	42
16	43	41	40	40	39	38	50	62	67	68	64	72	86	76	64	66	68	65	76	61	36	37	38	37
17	38	A	40	37	32	34	57	73	75	74	90	94	88	87	88	87	78	72	64	58	53	46	48	49
18	46	45	42	40	42	40	63	76	81	74	81	87	92	85	78	81	81	87	74	54	A	45	F	44
19	41	41	F 37	38	38	39	60	79	88	80	85	74	80	84	86	76	76	75	77	63	56	49	47	47
20	45	45	43	42	41	41	60	82	76	67	69	69	80	90	80	78	80	90	84	59	50	52	51	50
21	45	44	44	44	44	43	68	64	70	88	96	78	79	79	75	75	81	91	90	63	50	50	48	46
22	42	44	43	43	45	44	56	63	66	75	81	91	V 78	75	78	75	85	79	76	71	68	57	48	48
23	46	45	44	43	40	36	45	61	74	66	71	76	76	80	77	76	73	77	79	72	51	50	48	49
24	46	46	42	42	36	36	49	59	68	85	89	80	76	74	76	79	78	92	85	58	46	42	42	41
25	40	39	38	37	36	36	54	71	75	67	66	70	73	75	67	72	75	87	86	65	51	50	48	49
26	49	48	46	46	43	43	55	65	91	87	71	68	68	70	68	78	81	85	83	62	40	40	40	41
27	42	42	40	41	34	34	54	66	73	82	66	72	72	65	68	68	72	80	66	41	44	44	43	44
28	42	41	40	30	30	30	51	72	68	66	78	83	76	77	70	75	69	68	66	60	55	57	52	54
29	53	53	53	52	51	53	75	62	71	68	74	76	79	72	80	80	75	75	55	46	48	46	44	45
30	44	42	44	45	41	42	68	64	78	66	69	76	83	72	76	76	78	76	76	54	40	40	41	43
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	28	30	30	30	30	30	29	30	30	30	30	30	29	30	30	30	30	30	30	29	30	29	30
MED	46	46	44	43	40	40	57	66	70	70	72	74	74	75	76	76	76	78	76	64	55	50	48	49
U Q	50	50	48	47	44	43	63	72	75	77	80	78	79	79	79	79	80	87	84	73	64	56	52	53
L Q	43	44	42	40	36	36	54	62	67	66	69	70	71	72	69	68	69	70	66	58	49	46	44	45

SEP. 2004 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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	L 416	L 428	L 484	U L 468	L 480	448	L 448	L	L						
2									L	436	476	484	L 500	468	L 484	L 452	L	L						
3								L	L	L 476	472	468	476	L 484	L 480	L 448	L	L						
4							L	L	L 440	L 460	A	A	476	A	L 468	L 456	L 436	L						
5							L		L	L 460	472	L 472	L 488	464	L 472	L	L							
6								L	L	L 456	L 476	L 496	L 488	L 496	L 476	L	L	L						
7								L	L	L 452	L 496	L 480	L 488	L 484	L 468	L	L	A						
8								L	L	A	L	L 476	508	L 460	L 476	L 452	L	L						
9									L	L 488	L	L 496	L	L 536	L 476	L	L							
10								C	L	L	L	L 508	L 512	L 504	L 484	L	A	A						
11									L	L	L	L	L 504	L 496	L	L	L							
12								L	L	L	E	B E B	L 516	L	L	L	L							
13									L	L	L 488	L 512	L 484	L 508	L 488	L	L							
14									L	L 492	L 464	L	L 500	L	L 492	L	L							
15							L 300	L 380	L 412	L 424	U L 440	U L 436	U L 456	452	448	L 432	L	A						
16								L	L	L 456	L 480	488	L 476	L	L	L	L							
17								L	L	L 480	L 524	L 468	L 508	L	A	L	L							
18								L	L	L	L	L 500	L 480	L	L	L								
19								L	L	L	L 480	L	L 496	L 488	L 464	L	L							
20									L	L 468	L 496	L 504	L 492	L 484	L	L	A							
21									L	L	L 468	L 484	L 508	L 468	L	L	L							
22									L	L	L	L 480	L	L 460	L 464	L	L							
23								L	L	L	L 432	L 496	L 432	L 476	L	L								
24									L	L	L 472	L	L 448	L 428	L 484	L	L							
25									L	L	L 464	L 468	L 496	L 476	L	L	L							
26									L	L	L 456	L 460	L 492	L	A	L	L							
27									L	L 428	L	L 500	L 452	L 452	L	L	L							
28										L	L 484	L 420	L 464	L 468	L	L								
29									L	L	L 472	L	L	L	L	L	L							
30									L	L	L	L 472	L 484	L 464	L	L								
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							1	1	2	14	20	23	27	22	16	6	1							
MED							L 300	L 380	L 426	L 458	L 472	L 484	L 488	L 476	L 476	L 450	L 436							
U Q										L 476	L 482	L 496	L 500	L 488	L 484	L 452								
L Q										436	L 464	L 468	L 476	L 464	L 466	L 448								

SEP. 2004 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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	U A 196	A	A	R	R	R	U R 376	R	R	U R 316	U R 288	U A 228						
2						B	204	264	312	U A 336	A	A	R	R	R	U R 324	U R 288	U R 232						
3							U A 180	A	A	R	R	R	R	R	R	R	U R 284	240	B					
4							U R 196	A	A	A	A	A	A	A	A	A	U A 292	U A 216	B					
5							U R 208	R	A	R	A	A	R	R	R	U R 320	280	A	B					
6							196	U R 264	R	R	R	U R 372	R	364	U R 340	U A 312	U A 280	U R 236						
7							U A 208	U A 268	A	A	R	A	R	R	R	U A 320	U A 284	A						
8							U R 208	R	A	A	A	U R 380	R	A	A	U A 320	U A 280	U A 216						
9							U R 220	U R 280	324	A	A	A	A	A	A	R	U R 292	236						
10							208	C	A	A	A	A	A	A	A	A	A	A						
11							208	U A 284	U R 328	R	R	U A 364	R	R	U A 344	U R 316	U A 280	A						
12							U R 200	U R 296	R	U R 344	B	B	R	R	U R 340	U R 312	U R 276	212						
13							204	U A 272	U A 304	328	U R 368	R	R	R	U R 336	312	272	U A 216						
14							208	A	A	A	R	R	R	R	R	R	U R 284	A						
15							U A 188	U A 260	A	A	U A 320	A	R	A	R	U R 308	U A 272	U A 200						
16							A	U R 276	U R 308	R	R	R	R	356	R	U R 308	U A 256	U A 192						
17							A	A	A	R	R	A	R	R	A	U R 300	U R 276	U A 208						
18							U A 192	A	R	A	A	R	R	U A 340	A	U A 312	U A 264	A						
19							192	256	R	A	R	R	R	U R 340	R	U R 296	U A 256	A						
20							U R 196	268	U R 328	R	U R 368	R	A	R	A	U A 300	A	A						
21							A	A	A	U A 320	A	A	A	A	A	A	A	A						
22							168	U R 264	U A 304	A	U A 356	R	R	U R 340	R	A	A	B						
23							164	252	U A 292	A	R	R	R	U R 336	U R 316	R	A	A						
24							U R 184	U A 248	A	A	A	A	U R 352	R	R	A	R	A						
25							B	244	U R 296	R	R	R	B	R	U R 316	U R 288	240	176						
26							B	240	U A 288	R	R	R	R	A	A	292	248	B						
27							B	U R 256	U A 292	A	R	R	U R 356	R	U R 316	R	U A 248	B						
28							B	A	A	A	R	R	U R 352	U A 340	U R 320	U A 292	248	176						
29							B	244	A	A	U R 336	R	R	R	U R 324	U R 292	248	B						
30							B	260	A	A	R	U R 352	A	R	U R 332	U R 284	U A 248	B						
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							21	19	11	4	5	4	4	7	10	20	24	14						
MED							U 196	U 264	U 304	U 332	U R 356	U R 368	U R 354	U 340	U 328	U R 310	U 276	U 216						
U Q							U 208	U R 272	U R 324	U 340	U R 368	U R 376	U R 366	356	U 340	U R 316	U R 284	232						
L Q							190	252	U A 292	324	U 328	U 358	U R 352	U 340	U R 316	U R 294	252	200						

SEP. 2004 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP.2004 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	20	E B 16	E B 15	J A 17	J A 20	J A 23	23	J A 33	J A 36	G 28	G 29	G 30	G 31	G 31	G 30	G 25	G 23	26	J A 19	J A 24	E B 15	19	E B 15	J A 36
2	J A 16	E B 15	E B 15	E B 15	E B 15	E B 14	24	29	36	38	39	38	G 29	G 29	G 26	G 24	G 22	G 20	E B 16	E B 16	J A 40	J A 27	J A 46	J A 43
3	J A 36	J A 39	J A 27	J A 20	J A 23	J A 20	24	32	33	G 29	G 29	G 28	G 30	G 26	G 25	G 24	G 22	G 20	J A 18	E B 15	J A 44	J A 29	J A 36	J A 20
4	J A 28	J A 23	J A 19	E B 14	J A 18	J A 20	G	J A 33	J A 48	J A 47	J A 63	J A 54	J A 47	J A 105	J A 76	40	34	25	E B 16	J A 25	J A 35	J A 22	E B 15	J A 20
5	19	19	E B 15	J A 22	J A 21	20	G	G 23	33	G 31	J A 39	J A 43	G 27	G 26	G	G 23	31	J A 32	J A 20	E B 15	E B 16	E B 15	E B 16	E B 16
6	E B 15	E B 16	E B 14	E B 16	E B 14	19	G	G 23	G 26	G 27	G 29	G 24	G 32	42	38	38	32	G 20	J A 23	J A 31	J A 21	J A 25	J A 24	19
7	E B 14	E B 16	E B 16	18	E B 15	E B 15	24	J A 38	J A 50	J A 47	G	J A 46	G 32	41	G 24	37	32	J A 44	J A 37	J A 28	J A 21	E B 15	19	J A 26
8	J A 19	22	J A 18	20	E B 14	E B 16	G	G 23	36	J A 54	J A 47	G 28	G 31	38	40	36	36	29	J A 27	J A 18	J A 22	J A 33	J A 20	J A 24
9	E B 16	E B 15	E B 15	E B 15	E B 15	21	G	G 23	37	J A 46	J A 59	J A 46	J A 42	38	J A 43	G 33	G 22	33	J A 70	J A 21	21	E B 15	J A 58	E B 14
10	19	20	18	E B 15	J A 17	E B 16	26	C	34	36	J A 41	42	J A 47	J A 41	34	J A 42	J A 73	J A 67	J A 67	J A 54	J A 28	J A 24	J A 18	J A 31
11	J A 17	18	E B 15	E B 15	E B 16	E B 15	26	32	G 25	G 28	G 30	42	G 32	G 31	40	G 24	34	J A 26	19	E B 15	E B 15	E B 16	E B 16	E B 14
12	E B 15	E B 15	E B 16	E B 16	19	E B 16	G 19	J A 32	G 27	G 32	E B 60	E B 52	G	G 34	G 29	G 29	G 26	25	J A 18	E B 15	E B 15	E B 16	E B 16	E B 16
13	E B 16	E B 16	E B 15	19	19	E B 15	27	34	34	36	G 34	G 30	G 29	G 26	G 26	37	36	J A 34	J A 25	20	J A 24	E B 15	20	E B 15
14	E B 15	E B 16	E B 15	18	E B 15	E B 16	23	33	J A 36	36	G 34	G 31	G 30	G 28	G 29	G 26	G 20	26	J A 27	J A 36	20	21	J A 21	E B 15
15	E B 15	18	E B 15	19	19	J A 20	28	34	38	37	40	J A 41	G 28	37	G 28	G 23	30	J A 38	J A 26	J A 54	J A 20	24	J A 16	J A 18
16	19	E B 15	18	E B 15	20	J A 25	J A 30	G 23	G 27	G 30	G 28	G 30	G 28	39	G 28	G 24	32	J A 33	J A 33	J A 27	J A 37	E B 16	E B 15	19
17	J A 35	J A 48	20	J A 29	J A 20	J A 43	J A 22	28	33	G 30	G 33	J A 40	G 33	G 28	J A 54	J A 34	J A 36	28	J A 22	J A 22	J A 17	J A 23	E B 15	E B 15
18	E B 15	E B 16	E B 15	E B 15	J A 20	19	23	J A 34	G 26	37	37	G 31	G 29	44	J A 45	38	J A 49	J A 46	J A 36	J A 54	J A 63	J A 37	J A 33	J A 37
19	J A 19	J A 20	J A 20	J A 24	J A 19	18	G	30	G 23	37	G 33	G 29	G 28	G 29	G 26	33	33	24	J A 20	E B 15	J A 25	J A 26	J A 30	J A 29
20	J A 24	E B 16	E B 15	E B 15	18	18	G	29	G 32	G 33	G 35	G 30	41	G 30	40	36	J A 46	J A 31	J A 24	J A 39	E B 15	J A 42	J A 22	J A 18
21	J A 18	18	E B 16	J A 25	J A 31	J A 26	J A 35	J A 41	35	37	J A 40	40	J A 46	J A 42	38	J A 42	35	25	J A 22	J A 39	J A 36	E B 16	J A 21	J A 20
22	18	E B 15	E B 15	E B 15	E B 16	E B 15	22	E S 15	34	36	42	G 26	G 28	G 28	G 28	G 33	30	22	E B 15	E B 15	E B 15	J A 20	J A 23	E B 15
23	E B 15	E B 15	E B 16	19	E B 15	E B 15	21	32	J A 44	37	G 28	G 29	G 30	G 27	34	G 22	26	J A 30	J A 48	J A 34	20	E B 15	19	E B 19
24	E B 16	E B 15	E B 15	18	E B 15	E B 16	G	29	J A 38	J A 45	38	41	G 31	G 30	G 28	J A 33	G 24	22	J A 21	24	J A 25	J A 29	J A 20	18
25	E B 15	19	E B 15	E B 15	18	20	20	28	G 21	G 25	G 24	G 24	G 25	G 27	36	G 25	30	26	J A 18	E B 15	21	E B 15	20	E B 15
26	E B 15	E B 16	E B 16	E B 15	E B 14	18	21	27	32	G 27	G 34	G 32	G 30	J A 39	J A 55	32	30	24	E B 16	J A 21	E B 15	20	J A 21	E B 15
27	21	21	18	E B 15	E B 14	E B 15	J A 23	G 21	32	33	G 27	G 27	G	G 28	G 28	G 23	30	20	J A 30	J A 26	J A 32	J A 23	E B 15	22
28	E B 16	18	E B 15	E B 16	E B 15	E B 15	22	29	33	35	G 28	G 26	G 29	38	G 28	32	30	20	E B 15	E B 15	E B 15	E B 16	E B 15	E B 16
29	E B 15	E B 15	E B 15	E B 14	E B 16	E B 15	20	26	33	38	G 23	G 28	G	G 21	G	G 23	29	20	E B 15	15	18	20	E B 16	E B 15
30	E B 14	E B 14	E B 16	E B 15	E B 15	E B 16	22	32	34	36	G 27	G 25	39	G 28	G 26	34	34	J A 49	J A 42	J A 25	J A 23	J A 22	J A 20	20
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	16	E B 16	E B 15	E B 16	16	17	22	29	34	36	34	30	G 31	G 30	G	32	30	26	J A 22	J A 23	J A 21	20	J A 20	18
U Q	J A 19	19	18	J A 19	J A 19	J A 20	24	J A 33	J A 36	J A 37	J A 40	J A 41	G	39	J A 40	36	34	J A 33	J A 30	J A 31	J A 28	J A 25	J A 22	J A 22
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	G	G 24	G 32	G 30	G 29	G 28	G 29	G 28	G 28	G 24	G 26	22	E B 18	E B 15	E B 16	E B 16	E B 16	E B 15

SEP.2004 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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	16	E B 16	E B 15	E B 15	E B 15	17	22	27	34	G 26	G 25	G 28	U Y 30	G 28	G 30	G 25	G 21	25	16	E B 15	E B 15	16	E B 15	17
2	E B 16	E B 15	E B 15	E B 15	E B 15	E B 14	22	29	35	37	38	38	G 29	G 29	G 25	G 24	G 22	G 19	E B 16	E B 16	25	20	32	24
3	24	25	E B 15	16	18	E B 16	23	30	32	U Y 29	G 29	G 28	G 29	G 26	G 24	G 24	G 22	G 20	E B 15	E B 15	26	19	19	E B 15
4	17	18	16	E B 14	E B 16	16	G	28	35	38	50	48	41	A A 105	37	36	30	24	E B 16	20	27	18	E B 15	17
5	17	17	E B 15	16	16	E B 14	G	U Y 23	32	G 30	35	38	G 27	G 24	G	G 23	30	25	18	E B 15	E B 16	E B 15	E B 16	E B 16
6	E B 15	E B 16	E B 14	E B 16	E B 14	E B 15	G	G 22	G 26	G 27	G U Y 29	24	G 32	42	37	35	30	G 20	20	24	17	E B 15	E B 15	E B 16
7	E B 14	E B 16	E B 16	E B 15	E B 15	E B 15	24	35	37	36	G	39	G 32	39	G 24	35	31	38	30	21	16	E B 15	E B 15	21
8	E B 15	E B 16	E B 15	E B 15	E B 14	E B 16	G	G 23	35	50	43	G 27	G 30	37	38	34	34	28	23	E B 16	16	19	E B 15	22
9	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16	G	G 22	36	39	38	39	38	38	38	U Y 33	G 20	31	64	17	E B 16	E B 15	19	E B 14
10	E B 16	E B 15	E B 16	E B 15	E B 15	E B 16	26	C 32	36	38	41	42	39	34	39	68	61	64	38	22	19	E B 15	E B 15	
11	16	16	E B 15	E B 15	E B 16	E B 15	25	31	G 25	G 28	G 30	40	G 32	G 31	38	G 23	32	24	E B 15	E B 15	E B 15	E B 16	E B 16	E B 14
12	E B 15	E B 15	E B 16	E B 16	E B 15	E B 16	G 18	G 26	G 27	G 32	E B 60	E B 52	G	G 34	G 29	G 28	G 25	24	E B 15	E B 15	E B 15	E B 16	E B 16	E B 16
13	E B 16	E B 16	E B 15	E B 15	E B 16	E B 15	25	31	33	35	G U Y 30	30	G 28	G 25	G 26	35	34	30	23	E B 15	20	E B 15	E B 15	E B 15
14	E B 15	E B 16	E B 15	E B 15	E B 15	E B 16	22	30	34	34	U Y 34	G 31	G 30	G 28	G 28	G 25	G 20	24	24	30	E B 15	E B 16	17	E B 15
15	E B 15	E B 15	E B 15	E B 15	E B 16	E B 15	26	33	35	35	38	39	G 28	37	U Y 28	G 23	28	35	20	24	E B 16	17	E B 15	E B 16
16	E B 16	E B 15	E B 15	E B 15	E B 15	19	23	G 23	G 26	G 30	G 28	G 30	G 28	38	G 28	G 24	31	26	24	20	20	E B 16	E B 15	E B 15
17	26	A A 48	E B 16	24	16	17	20	26	30	G U Y 29	32	35	G 31	G 28	46	G 25	G 24	23	18	19	E B 16	E B 15	E B 15	E B 15
18	E B 15	E B 16	E B 15	E B 15	E B 15	E B 15	21	30	G 26	36	35	G 31	G 28	42	40	34	35	30	31	28	A A 63	25	24	25
19	19	17	16	18	E B 15	E B 15	G	29	G 23	36	U Y 33	G 29	G 28	G 29	G 26	33	30	22	17	E B 15	E B 16	18	23	16
20	E B 16	E B 16	E B 15	E B 15	16	E B 15	G	28	G U Y 30	33	G 35	G 30	39	G 30	38	34	38	23	E B 16	17	E B 15	19	18	E B 15
21	E B 15	E B 15	E B 16	20	26	19	25	30	34	34	37	37	38	37	37	35	34	22	20	26	19	E B 16	E B 15	E B 16
22	E B 15	E B 15	E B 15	E B 15	E B 16	E B 15	21	E S 15	32	35	40	G 26	G 28	G 28	G 28	32	28	20	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15
23	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	18	30	34	35	G 28	G 28	G 27	G 26	32	G 22	26	27	23	19	E B 16	E B 15	E B 16	E B 19
24	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16	G	27	35	42	38	38	G 28	G 30	G 28	30	G 24	21	19	23	22	E B 21	16	16
25	E B 15	E B 16	E B 15	E B 15	E B 15	E B 16	19	27	G 21	G 25	G 24	G 24	G 25	G 27	34	G 25	29	24	E B 15	E B 15	15	E B 15	E B 15	E B 15
26	E B 15	E B 16	E B 16	E B 15	E B 14	E B 15	20	26	31	G 27	U Y 34	U Y 32	G 30	35	51	31	29	22	E B 16	E B 16	E B 15	E B 15	E B 15	E B 15
27	E B 15	E B 16	E B 15	E B 15	E B 14	E B 15	18	G 20	31	32	G 26	G 27	G	G 28	G 28	G 23	29	20	22	23	19	E B 16	E B 15	E B 16
28	E B 16	E B 15	E B 15	E B 16	E B 15	E B 15	20	27	32	35	G 28	G 26	G 28	37	G 28	30	27	20	E B 15	E B 15	E B 15	E B 16	E B 15	E B 16
29	E B 15	E B 15	E B 15	E B 14	E B 16	E B 15	18	25	30	36	G 23	G 26	G	U Y 21	G	G 23	27	20	E B 15	E B 15	E B 15	E B 15	E B 16	E B 15
30	E B 14	E B 14	E B 16	E B 15	E B 15	E B 16	21	30	33	34	G 27	G 25	38	G U Y 27	26	33	34	44	E B 15	E B 16	E B 15	E B 16	E B 15	E B 15
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	E B 16	E B 16	E B 15	E B 15	E B 15	E B 15	20	27	32	34	34	30	G 30	G 30	G	30	29	24	18	16	E B 16	E B 16	E B 15	E B 16
U Q	16	16	E B 16	16	16	16	23	30	34	36	38	38	G	37	37	34	32	28	23	23	20	18	16	16
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	G	G 24	G 30	G 30	G 28	G 27	G 28	G 28	G 28	G 24	G 25	21	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15

SEP. 2004 fbEs (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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

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	15	16	15	15	15	16	14	12	15	20	18	21	24	23	24	16	14	14	14	15	15	15	15	16
2	16	15	15	15	15	14	16	16	16	18	23	20	23	24	17	16	16	15	16	16	14	15	15	14
3	16	16	15	15	15	16	14	13	14	15	21	21	24	19	17	14	14	15	16	15	15	14	16	15
4	14	12	14	14	16	13	14	12	14	15	25	20	17	16	20	17	14	14	16	14	16	15	15	13
5	13	14	15	14	14	14	14	14	14	16	17	19	18	19	20	14	14	13	15	15	16	15	16	16
6	15	16	14	16	14	15	14	14	15	19	18	16	23	15	14	20	15	15	13	15	14	15	14	16
7	14	16	16	15	15	15	14	16	15	21	23	20	24	19	17	16	15	15	14	15	14	15	15	14
8	15	16	15	15	14	16	14	13	16	16	21	20	20	23	21	19	14	14	15	16	15	15	15	15
9	16	15	15	15	15	16	14	13	17	20	21	22	25	20	20	18	15	15	15	15	16	15	16	14
10	16	15	16	15	15	16	15	C	23	23	22	25	26	18	19	19	17	14	14	14	14	15	15	15
11	15	15	15	15	16	15	14	15	16	20	21	22	26	26	20	19	15	14	15	15	15	16	16	14
12	15	15	16	16	15	16	15	15	15	20	60	52	28	25	19	19	13	15	15	15	15	16	16	16
13	16	16	15	15	16	15	14	14	16	15	20	21	22	19	16	14	14	16	14	15	14	15	15	15
14	15	16	15	15	15	16	15	16	20	17	18	24	20	21	24	20	15	14	13	14	15	16	15	15
15	15	15	15	15	16	15	13	17	17	19	17	18	20	18	21	14	14	15	14	16	16	14	15	16
16	16	15	15	15	15	14	14	16	18	21	23	23	24	30	22	16	15	14	15	15	15	16	15	15
17	16	15	16	14	14	16	14	14	17	17	21	22	18	20	18	14	14	14	15	16	16	15	15	15
18	15	16	15	15	15	15	15	16	16	19	23	21	19	23	16	17	14	13	16	16	15	15	15	15
19	14	14	15	14	15	15	15	15	18	20	20	24	18	18	17	14	13	16	16	15	16	15	15	14
20	16	16	15	15	14	15	15	14	18	19	24	22	22	21	20	16	14	15	16	15	15	15	14	14
21	15	15	16	16	14	14	15	14	15	18	20	21	20	22	21	17	14	16	14	15	15	16	15	16
22	15	15	15	15	16	15	14	15	14	15	18	17	20	18	15	17	13	16	15	15	15	15	15	15
23	15	15	16	15	15	15	14	14	15	15	18	18	18	17	16	16	13	14	15	15	15	15	16	19
24	16	15	15	15	15	16	15	15	14	20	19	14	24	21	18	16	15	16	14	14	14	16	16	14
25	15	16	15	15	15	16	16	15	15	16	18	17	14	20	18	16	15	15	15	15	15	15	15	15
26	15	16	16	15	14	15	16	15	14	19	20	20	22	19	18	16	14	16	16	16	15	15	15	15
27	15	16	15	15	14	15	15	15	15	18	17	18	24	20	21	17	14	14	15	15	14	16	15	16
28	16	15	15	16	15	15	16	15	16	19	18	15	21	24	18	16	14	16	15	15	15	16	15	16
29	15	15	15	14	16	15	15	15	16	14	14	15	23	16	22	16	13	15	15	15	15	15	16	15
30	14	14	16	15	15	16	16	16	14	15	16	15	18	18	20	16	17	15	15	16	15	16	15	15
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	15	15	15	15	15	15	14	15	16	18	20	20	22	20	19	16	14	15	15	15	15	15	15	15
U Q	16	16	16	15	15	16	15	16	17	20	22	22	24	23	21	17	15	15	15	15	15	16	16	16
L Q	15	15	15	15	14	15	14	14	15	16	18	18	19	18	17	16	14	14	14	15	15	15	15	14

SEP. 2004 fmin (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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	292	F	F 315	284	286	316	358	372	336	382	352	338	323	305	321	354	345	346	331	304	321	300	299	297
2	279	311	318	326	313	317	372	349	333	341	346	331	310	321	318	331	340	334	338	324	313	319	281	297
3	305	281	293	302	313	326	372	375	384	345	341	353	345	313	321	333	333	332	345	315	308	305	290	305
4	297	303	313	303	308	309	345	358	375	375	357	307	324	A	332	339	321	321	325	341	369	294	294	V 281
5	293	300	310	325	342	342	368	373	361	342	332	325	328	337	335	320	337	344	313	311	329	308	295	288
6	301	300	316	287	271	282	372	347	351	374	344	314	313	321	329	325	335	332	326	311	330	303	293	290
7	294	293	303	340	291	310	304	366	364	353	325	338	322	342	335	327	340	327	325	336	346	289	288	294
8	294	301	288	329	347	318	332	323	346	328	330	347	308	340	317	329	338	335	339	339	282	297	287	295
9	283	294	301	313	316	318	348	356	348	347	353	338	339	310	317	326	331	337	330	333	331	293	S 309	286
10	280	299	293	298	319	322	350	C	348	355	317	327	323	311	311	310	313	321	333	342	356	287	293	284
11	291	290	297	304	314	324	356	376	373	353	341	329	317	315	325	319	314	313	340	350	357	304	292	295
12	287	290	294	304	311	330	376	367	359	343	334	320	333	318	311	327	321	332	333	329	319	320	285	290
13	293	306	319	338	306	308	367	360	359	355	338	315	329	314	313	328	332	344	342	334	334	302	292	302
14	304	296	293	305	314	314	364	359	329	317	356	330	321	302	302	314	322	332	344	355	276	277	280	282
15	287	309	297	286	293	275	267	262	276	278	S 248	243	S 240	278	307	309	324	337	327	327	310	282	273	284
16	285	304	294	314	303	325	329	330	321	334	312	305	330	340	319	323	341	337	349	359	280	275	287	277
17	297	A	312	341	298	308	339	343	341	320	308	343	319	318	319	331	346	349	342	324	314	283	284	290
18	297	313	299	298	310	312	369	338	356	334	328	317	329	333	341	340	338	355	357	356	A	273	F	300
19	307	320	F 299	309	308	288	369	363	356	353	350	351	327	321	337	329	341	344	345	330	341	304	296	304
20	298	299	286	291	295	299	352	372	352	378	333	312	320	330	332	345	333	351	348	344	291	285	300	312
21	302	286	293	305	316	308	387	366	334	345	353	330	329	328	336	326	319	344	351	333	294	304	307	310
22	297	288	297	314	327	339	369	385	361	335	318	351	V 345	330	337	329	334	342	330	318	317	357	291	293
23	287	293	283	300	309	312	324	345	348	335	357	317	325	329	325	341	336	337	328	352	309	294	291	298
24	299	308	311	329	306	316	350	366	338	345	353	345	343	348	312	330	327	346	365	370	310	289	302	313
25	309	300	301	316	304	312	341	374	378	372	327	360	323	337	337	335	327	338	348	371	307	303	298	299
26	305	298	310	317	319	317	353	344	368	387	359	336	339	328	321	333	350	353	363	378	317	303	306	302
27	312	307	313	334	333	325	367	366	362	373	363	338	356	337	336	337	352	359	369	A 356	285	293	299	290
28	305	311	358	327	292	286	353	384	365	348	349	354	340	352	333	349	355	341	337	332	297	313	298	300
29	306	298	302	314	309	324	382	361	371	369	344	329	332	323	331	347	354	353	355	315	305	305	300	308
30	313	295	308	329	305	313	385	384	382	386	347	337	344	327	330	340	353	355	370	374	326	295	301	314
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	28	30	30	30	30	30	29	30	30	30	30	30	29	30	30	30	30	30	30	29	30	29	30
MED	297	300	301	314	309	315	357	363	356	348	342	330	328	327	325	330	336	340	341	335	314	298	293	296
U Q	305	306	312	327	316	324	369	372	365	372	353	343	339	337	335	339	341	346	349	355	330	304	300	302
L Q	291	294	294	302	303	308	345	346	341	335	328	317	321	314	317	326	327	332	330	324	301	289	288	290

SEP. 2004 M(3000)F2 (0.01)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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 438	L 438	L 482	L 392	U L 445	L 365	396	L 366	L	L						
2									L 407	387	397		L 383	416	L 352	L 366	L	L						
3								L	L 396	L 424	425		416	L 398	L 371	L 377	L	L						
4							L	L	L 382	L 415	A	A	397	A	L 380	L 365	L 351	L						
5							L		L	L 397	409	L 411	L 375	412	L 383	L	L							
6								L	L	L 411	L 391	L 388	L 392	L 355	L 364	L	L	L						
7								L	L	L 395	L 369	L 403	L 382	L 367	L 390	L	L	A						
8								L	L	A	L	L 396	393	L 401	L 370	L 374	L	L						
9									L	L 369	L	L 392	L	L 345	L 379	L	L							
10								C	L	L	L	L 381	L 362	L 365	L 378	L	A	A						
11									L	L	L	L	L 370	L 369	L	L	L							
12								L	L	L	E	B E B	L 357	L	L	L	L							
13									L	L	L 398	L 386	L 387	L 351	L 357	L	L							
14									L	L 362	L 394	L	L 366	L	L 360	L	L							
15							L 317	L 321	L 357	L 383	U L 400	U L 383	U L 368	L 371	369	L 369	L	A						
16								L	L	L 390	401	380	L 390	L	L	L	L							
17								L	L	L 380	L 353	L 388	L 361	L	A	L	L							
18								L	L	L	L	L 370	L 370	L	L	L								
19								L	L	L	L 390	L	L 378	L 382	L 371	L	L							
20									L	L 396	L 395	L 381	L 403	L 386	L	L	A							
21									L	L	L 382	L 388	L 376	L 379	L	L	L							
22									L	L	L	L 370	L	L 402	L 370	L	L							
23								L	L	L	L 402	L 375	L 427	L 375	L	L								
24									L	L	L 384	L	L 423	L 441	L 361	L	L							
25									L	L	L 412	L 407	L 380	L 379	L	L	L							
26									L	L	L 412	L 410	L 377	L	A	L	L							
27									L	L 425	L	L 382	L 412	L 395	L	L	L							
28										L	L 394	L 465	L 393	L 394	L	L								
29									L	L	L 403	L	L	L	L	L	L							
30									L	L	L	L 402	L 380	L 396	L	L								
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							1	1	2	14	20	23	27	22	16	6	1							
MED							L 317	L 321	L 370	L 396	L 396	L 388	L 382	L 380	L 370	L 368	L 351							
U Q										L 411	L 406	L 403	L 397	L 398	L 380	L 374								
L Q										L 383	L 388	L 381	L 370	L 367	L 362	L 366								

SEP. 2004 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP.2004 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								234	268	238	258	298	316	330	316	270	256	254						
2									276	274	266	290	324	300	292	278	262	260						
3								232	230	270	282	246	274	316	310	284	274	272						
4							252	244	248	236	262	318	300	A	292	270	286	280						
5							232		252	280	292	286	286	268	274	296	270							
6								238	256	236	278	328	320	304	282	300	268	268						
7								240	244	254	292	280	308	270	280	280	278	264						
8								274	248	268	288	258	342	274	282	274	258	256						
9									244	268	258	272	260	310	284	272	264							
10								C	248	244	272	280	290	296	302	288	E 294	A 270						
11									230	248	276	266	302	290	282	262	288							
12								228	250	248	264	276	280	280	278	284	266							
13									250	240	258	314	280	300	300	274	264							
14									282	280	236	274	308	322	312	280	266							
15							474	450	424	450	466	506	U R 560	434	368	332	304	266						
16								258	290	280	330	342	282	270	300	294	260							
17								240	248	270	302	254	286	270	282	260	250							
18								276	236	264	278	274	268	264	268	264								
19								240	246	236	250	250	280	282	264	264	250							
20									236	236	256	284	292	266	264	258	274							
21									250	244	244	254	276	272	280	286	280							
22									236	254	248	250	238	260	262	278	260							
23								264	242	268	242	296	270	276	274	256								
24									264	248	248	246	248	248	286	270	262							
25									228	230	250	244	266	264	268	276	270							
26									226	222	232	244	266	274	E 284	A 266	256							
27									224	234	234	278	254	266	274	266	256							
28										240	266	248	264	242	264	254								
29									236	232	264	276	264	266	272	250	236							
30									220	226	258	276	254	270	272	268								
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							3	13	29	30	30	30	30	29	30	30	26	9						
MED							252	240	248	248	263	276	280	274	282	273	264	266						
U Q							474	269	254	268	278	290	302	300	292	284	274	271						
L Q							232	236	236	236	250	254	266	266	272	264	258	258						

SEP.2004 h'F2 (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP.2004 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 260	242	252	E B 274	E B 258	E A 262	226	212	202	H 184	H 170	218	192	216	204	218	212	218	240	238	224	230	E B 270	E A 276
2	E B 308	E B 244	238	228	222	240	220	206	212	198	216	204	198	H 188	228	212	200	204	238	220	E A 244	242	E A 318	E A 296
3	E A 264	E A 316	E B 268	E A 266	E A 256	236	212	208	202	198	H 190	182	H 186	H 182	H 186	206	206	222	224	208	E A 246	E A 260	E A 266	236
4	284	E A 268	E A 252	240	242	E A 248	200	H 182	200	194	A	A	212	A	200	206	208	206	238	218	196	E A 262	E B 282	E A 298
5	E A 284	E A 270	244	234	212	224	198	210	198	190	196	H 184	208	H 188	212	202	208	220	250	236	218	210	E B 258	E B 270
6	E B 252	E B 260	228	E B 280	E B 316	E B 300	220	H 194	210	198	H 180	196	H E 194	A 240	218	228	206	222	236	238	210	E B 252	E B 258	272
7	E B 262	E B 280	E B 264	220	E B 246	E B 262	232	A	E A 222	194	H 184	H 188	202	204	206	218	222	A	246	228	214	218	E B 278	E A 290
8	E B 278	E B 260	E B 272	232	220	244	H 206	224	214	A	E A 238	196	196	206	210	206	228	228	230	200	218	E A 266	E B 268	E A 290
9	E B 284	E B 276	248	232	232	246	232	218	A	212	216	H 192	194	202	208	210	228	238	E A 294	218	212	246	E A 266	E B 268
10	E B 290	E B 274	E A 278	E B 266	242	214	204	C	202	194	H 190	196	210	214	212	216	A	A	248	224	200	E A 266	E B 276	E B 274
11	E A 268	E A 268	E B 266	248	234	228	224	222	210	200	208	204	H 184	H 188	218	212	224	240	224	206	200	224	E B 256	272
12	E B 280	E B 280	E B 272	258	240	238	208	H 198	216	204	B	B	206	224	216	210	212	230	222	216	222	228	E B 274	E B 266
13	E B 262	E B 260	236	222	208	E B 262	216	224	204	204	200	H 192	196	222	216	218	E A 238	E A 242	224	218	210	224	242	242
14	250	E B 260	260	248	240	254	224	220	212	206	H 186	H 190	204	208	212	230	222	232	224	210	202	E B 302	E A 304	E B 286
15	E B 270	232	228	E B 278	224	E B 360	E A 328	332	E A 256	222	214	228	232	218	220	216	236	A	246	246	242	E A 296	E B 304	E B 286
16	E B 278	254	E B 272	238	242	E A 252	226	224	206	194	194	194	192	236	212	206	220	246	230	212	E A 306	E B 300	E B 296	E B 322
17	E A 326	A	E B 254	230	E A 278	E A 274	230	210	210	196	H 188	H 184	206	202	A	206	220	224	224	222	232	E B 286	E B 290	E B 272
18	E B 266	230	E B 252	E B 260	E B 250	242	216	212	206	196	204	202	222	E A 248	E A 232	208	252	224	216	220	A	E A 344	E A 324	E A 302
19	E A 264	E A 252	E A 248	E A 270	E B 262	E B 278	228	216	206	204	202	H 186	196	198	204	200	218	226	216	210	212	E A 252	E A 272	E A 254
20	E B 258	E B 262	E B 286	E B 276	E A 282	278	214	220	200	194	H 188	190	H 186	H 178	222	220	A	232	216	208	218	E A 284	E A 256	234
21	236	E B 274	E B 278	E A 270	E A 272	E A 252	210	210	208	206	204	200	H 194	H 186	212	220	E A 252	234	212	210	E A 268	E B 256	242	242
22	E B 250	E B 282	E B 276	242	236	210	200	200	198	200	212	H 186	198	196	194	H 194	232	226	228	234	214	210	E B 262	E B 260
23	E B 284	E B 280	E B 268	242	234	234	H 192	212	212	214	H 194	202	H 184	H 178	218	222	228	234	232	218	212	240	E B 266	E B 264
24	E B 256	242	238	236	218	230	212	212	212	A	214	200	H 192	H 180	H 184	204	222	232	210	206	E A 258	E A 290	E B 268	244
25	242	E B 258	E B 270	248	226	242	198	218	208	194	H 194	H 174	200	H 178	212	214	226	236	216	196	228	236	244	246
26	E B 246	E B 268	240	232	214	240	216	212	206	198	H 182	H 170	H 166	E B 168	A	232	220	232	214	198	208	E B 256	E B 276	E B 282
27	E B 264	E B 260	E B 254	244	214	230	210	204	202	H 176	200	H 188	188	184	206	H 192	214	224	204	216	E A 294	E B 266	E B 274	E B 270
28	E B 256	244	214	204	E B 280	E B 300	220	218	210	198	H 188	H 168	H 184	206	198	218	226	228	208	220	236	224	E B 250	238
29	234	E B 258	246	232	246	236	200	H 186	192	202	H 182	H 170	206	204	206	214	208	226	198	212	246	220	E B 260	E B 254
30	240	E B 272	E B 264	222	232	252	210	208	200	196	H 188	198	H 184	184	222	208	E A 238	226	208	194	220	E B 260	E B 268	E B 250
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	30	30	30	30	30	28	29	28	28	28	30	29	28	30	28	27	30	30	29	30	30	30
MED	E B 264	E B 260	E 254	236	U 230	237	214	212	206	198	194	192	196	199	212	212	221	227	224	217	215	E 254	E B 268	E 270
U Q	E B 280	E B 274	E B 270	E B 266	E 256	E B 262	224	219	212	204	206	200	206	215	218	218	228	234	238	222	E A 243	E 266	E B 278	E A 286
L Q	252	253	244	232	224	236	206	207	202	194	H 188	H 185	H 188	H 184	205	206	212	224	216	208	211	228	E 258	250

SEP.2004 h'F (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 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 116	A	A	116	112	116	116	118	116	116	112	112						
2							B 114	114	118	118	114	A	110	114	120	116	114	122						
3							116	A	A	116	114	112	112	110	118	112	116	122	B					
4							120	A	A	A	A	A	A	A	A	A	116	124	B					
5							110	A	A	118	A	A	112	112	112	112	112	114	B					
6							116	118	116	112	116	110	114	116	114	118	116	122						
7							124	116	A	A	112	A	114	112	114	116	114	A						
8							116	116	116	A	A	114	114	114	116	116	116	118						
9							118	116	116	A	A	A	A	A	A	116	124	122						
10							120	C	120	116	A	A	A	A	A	A	A	A						
11							122	120	114	116	112	120	114	112	114	108	118	A						
12							126	124	118	120	B	B	112	114	116	116	120	112						
13							122	120	116	110	118	116	114	108	118	116	118	122						
14							116	A	A	A	118	114	112	112	114	114	116	120						
15							120	126	120	116	116	A	112	A	118	114	114	118						
16							A	120	118	114	116	114	112	112	116	110	116	114						
17							A	A	A	118	116	A	114	112	A	114	114	116						
18							116	A	118	A	A	116	114	116	118	118	122	118						
19							122	122	116	116	118	114	114	114	112	112	118	116						
20							130	118	128	A	116	116	118	120	116	116	A	A						
21							A	A	118	118	A	A	A	A	116	A	A	126						
22							122	126	120	122	120	114	114	114	114	120	120	B						
23							120	120	120	118	114	116	116	116	114	114	114	A						
24							118	118	A	A	A	110	112	116	114	A	118	118						
25							B	112	114	114	112	110	110	116	122	122	118	120						
26							B	116	116	116	120	120	118	A	A	120	116	B						
27							B	122	118	114	116	116	114	114	116	112	120	B						
28							B	128	116	114	116	110	114	114	116	114	116	120						
29							B	120	114	A	114	110	114	114	114	116	120	B						
30							B	120	120	A	118	114	112	118	116	118	126	B						
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							21	21	22	20	21	20	26	24	25	26	27	20						
MED							120	120	118	116	116	114	114	114	116	116	116	119						
U Q							122	122	120	118	118	116	114	116	117	116	120	122						
L Q							116	116	116	114	114	111	112	112	114	114	114	116						

SEP. 2004 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

SEP.2004 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	84	B	B	102	98	98	132	100	96	96	96	106	106	100	106	98	88	120	90	92	B	78	B	100
2	104	B	B	B	B	B	142	130	142	124	112	100	98	100	100	100	104	102	B	B	102	102	98	102
3	96	94	96	92	92	92	108	104	104	100	96	96	98	98	98	98	106	106	104	B	100	102	102	104
4	96	94	94	B	96	94	G	104	98	104	96	98	100	96	96	96	122	120	B	96	96	96	B	94
5	90	88	B	106	108	110	G	106	104	104	96	92	96	94	G	92	126	116	110	B	B	B	B	B
6	B	B	B	B	B	108	G	102	100	96	102	96	104	152	140	128	130	104	98	94	98	96	100	94
7	B	B	B	116	B	B	124	112	104	114	G	94	104	140	90	148	132	102	102	102	94	B	96	94
8	100	98	90	92	B	B	G	104	122	106	106	100	106	112	126	128	120	112	106	106	96	96	96	92
9	B	B	B	B	B	108	G	102	126	104	100	104	104	106	100	98	102	112	102	106	108	B	112	B
10	100	92	92	B	104	B	164	C	118	114	106	102	104	104	104	100	94	94	92	92	92	90	92	92
11	90	90	B	B	B	B	136	132	100	100	100	158	102	104	124	102	112	108	106	B	B	B	B	B
12	B	B	B	B	108	B	108	106	106	104	B	B	G	106	102	100	100	140	128	B	B	B	B	B
13	B	B	B	100	106	B	146	130	132	132	104	100	100	96	94	130	120	112	106	104	96	B	94	B
14	B	B	B	110	B	B	134	108	106	104	102	100	98	98	102	102	100	114	104	100	102	92	88	B
15	B	120	B	110	116	112	124	124	118	116	112	106	102	104	104	100	144	114	104	104	104	100	98	94
16	98	B	114	B	98	102	106	104	104	104	102	102	102	166	106	100	118	110	94	94	102	B	B	108
17	110	102	108	100	104	104	104	102	98	100	100	100	96	96	92	92	92	114	94	104	106	106	B	B
18	B	B	B	B	106	110	130	104	102	104	104	102	108	126	118	122	96	110	104	102	100	108	106	102
19	96	94	94	94	94	96	G	130	106	118	102	96	100	100	98	134	120	116	102	B	100	98	100	100
20	98	B	B	B	98	96	G	144	106	104	100	96	120	104	122	114	102	106	108	102	B	104	102	100
21	98	100	B	94	92	94	98	94	118	118	104	108	102	104	116	108	102	122	114	100	100	B	98	102
22	100	B	B	B	B	B	144	S	120	146	158	100	102	102	102	122	120	112	B	B	B	100	98	B
23	B	B	B	92	B	B	124	126	122	120	104	100	100	104	146	104	110	100	100	104	106	B	98	B
24	B	B	B	108	B	B	G	114	108	102	96	108	100	102	100	100	98	124	94	92	92	88	90	90
25	B	88	B	B	94	94	134	146	98	100	94	96	94	100	158	102	130	114	108	B	102	B	100	B
26	B	B	B	B	B	108	140	140	118	104	106	104	106	102	100	158	120	112	B	106	B	100	98	B
27	96	96	96	B	B	B	96	100	122	118	102	96	G	106	106	102	120	108	100	96	92	92	B	94
28	B	92	B	B	B	B	122	124	116	116	108	88	106	158	104	118	130	144	B	B	B	B	B	B
29	B	B	B	B	B	B	122	132	114	90	92	90	G	92	G	106	110	112	B	B	100	96	B	B
30	B	B	B	B	B	B	130	124	116	106	104	100	114	102	104	162	124	106	112	104	98	100	98	92
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	15	13	8	13	15	15	22	28	30	30	28	29	27	30	28	30	30	30	24	20	22	19	20	17
MED	98	94	95	100	98	102	127	110	107	104	102	100	102	103	104	102	115	112	104	102	100	98	98	94
U Q	100	99	102	109	106	108	136	130	118	116	105	103	106	106	117	122	122	116	107	104	102	102	100	102
L Q	96	91	93	93	94	94	108	104	104	102	98	96	100	100	100	100	102	106	99	95	96	92	96	93

SEP.2004 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2004 TYPES OF Es 135°E MEAN TIME (G.M.T. + 9 H)

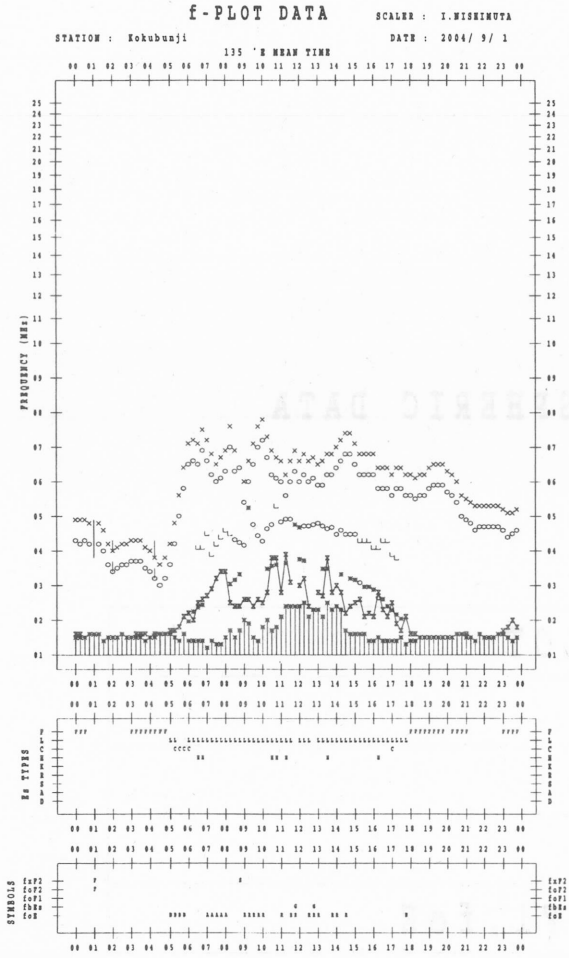
LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

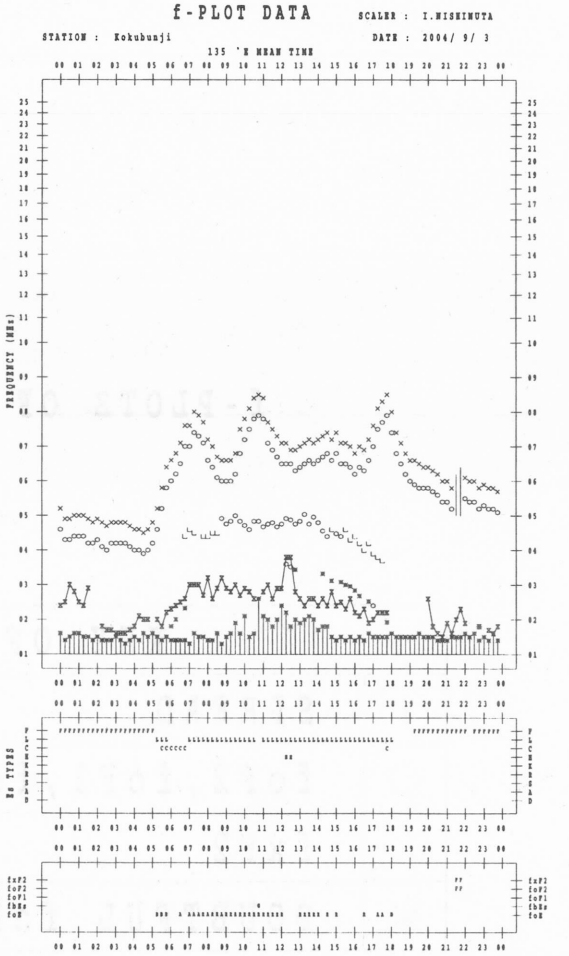
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F1			F1	F2	L1	CL11	L3	L2	L2	L1	L1	L1	L1	L1	L1	L2	CL22	F2	F1		F2		F2
2	F1						H1	HL21	HL11	CL11	CL11	L1	L1	L1	L1	L1	L1	L1			FF22	FF23	F3	F3
3	F3	F4	F2	F2	F4	F2	C2	L1	L1	L1	L1	L1	L1	L1	L1	L1	L1	L2	L1		F3	F2	F2	F1
4	F2	F2	F2		F1	F1		L2	L2	LC21	L2	L3	L2	L3	L2	L2	CL22	CL22		F3	F3	F2		F2
5	F1	F1		F1	F1	F1		L2	L1	L1	L2	L2	L1	L1		L2	CL11	CL12	L1					
6						L1		L2	L2	L1	L1	L1	L1	HL11	HL11	CL11	CL11	L1	F2	F2	F2	F2	F1	F1
7				F1			C1	CL31	L3	CL12		L2	L1	HL11	L1	HL11	CL11	L4	F3	F3	F2		F1	F3
8	F1	F1	F2	F1				L1	CL11	L2	L2	L1	L2	CL11	CL11	CL11	CL21	CL31	F2	F1	F3	F2	F1	F1
9						F1		L1	CL11	L2	L2	L1	L1	L1	L1	L2	L1	CL31	F4	F3	F1		F2	
10	F2	F2	F1		F1		H1		CL11	CL11	L1	L1	L1	L1	L1	L2	L3	L5	F5	F5	F2	F2	F2	F2
11	F2	F1					C1	C1	L1	L1	L1	HL11	L1	L1	CL11	L1	CL11	L2	F1					
12					F1		L1	L1	L1	L1				L1	L1	L1	L1	H1	F1					
13				F1	F1		H1	CL11	CL11	CL11	L1	L1	L1	L1	L1	HL11	CL21	CL41	F3	F2	F3		F1	
14				F1			H1	L2	L1	L1	L1	L1	L1	L1	L1	L1	L1	CL11	F4	F3	F1	F2	F2	
15		F1		F1	F1	F2	C2	CL11	CL11	CL11	CL21	L1	L1	L1	L1	L1	HL11	C3	F3	F4	F2	F2	F2	F1
16	F1		F1		F2	F3	L2	L1	L1	L1	L1	L1	L1	H1	L1	L1	CL31	CL41	F2	F2	F2			F1
17	F4	F5	F1	F3	F2	F4	F2	L2	L2	L1	L1	L1	L2	L1	L3	L2	L2	CL22	F1	F1	F2	F2		
18					F2	F1	C1	L2	L1	L1	L1	L1	L1	CL11	CL11	CL21	LC21	CL31	F3	F2	FF42	FF22	F6	F4
19	F4	F4	F2	F4	F2	F1		CL11	L1	CL11	L1	L1	L1	L2	L1	CL11	CL11	CL21	F2		F2	F3	F2	F2
20	F2				F1	F1		HL11	L1	L2	L1	L1	CL11	L1	CL11	CL11	L3	L2	F2	F1		F3	F3	F1
21	F2	F1		F5	F4	F3	L2	L2	CL11	CL11	L1	L1	L1	L1	CL11	L2	L2	C2	F3	F3	F2		F2	F1
22	F1						H1		CL11	HL11	HL11	L1	L1	L1	L1	CL11	CL11	C1				F1	F2	
23				F1			C1	CL21	CL21	CL11	L1	L1	L1	L1	HL11	L1	CL11	L3	F2	F1	F1		F1	
24				F1				CL11	L2	L2	L1	CL11	L1	L1	L1	L2	L3	CL23	F3	F2	F3	F2	F1	F1
25		F1			F1	F1	H1	HL11	L1	L1	L1	L1	L1	L1	HL11	L1	HL21	C3	F1		F1		F1	
26						F1	H1	HL11	CL11	L1	L1	L1	L1	L1	L2	HL21	CL21	CL41		F1		F1	F1	
27	F1	F1	F1				L2	L2	CL11	CL11	L1	L1		L1	L1	L2	CL21	L2	F1	F3	F2	F2		F1
28		F1					C2	CL11	CL11	CL11	L1	L2	L1	HL11	L1	CL11	CL11	H1						
29							C2	CL11	CL21	L2	L1	L1		L1		L1	CL21	C2			F1	F1		
30							C2	C2	CL21	L1	L1	L1	CL11	L1	L1	HL11	CL21	L2	F1	F1	F1	F1	F2	F1
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT																								
MED																								
U Q																								
L Q																								

SEP. 2004 TYPES OF Es

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 : 2004/ 9/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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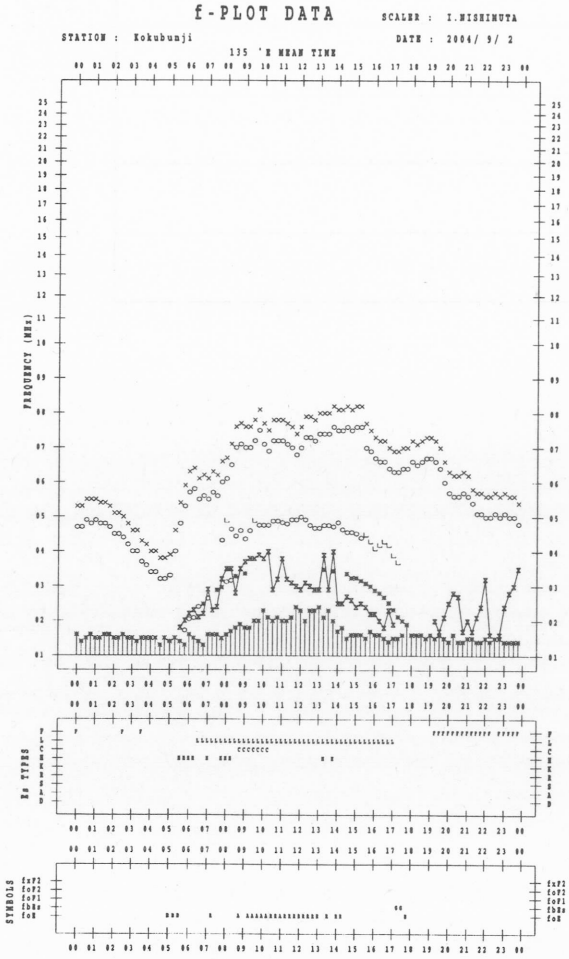
STATION : Kokubunji
DATE : 2004/ 9/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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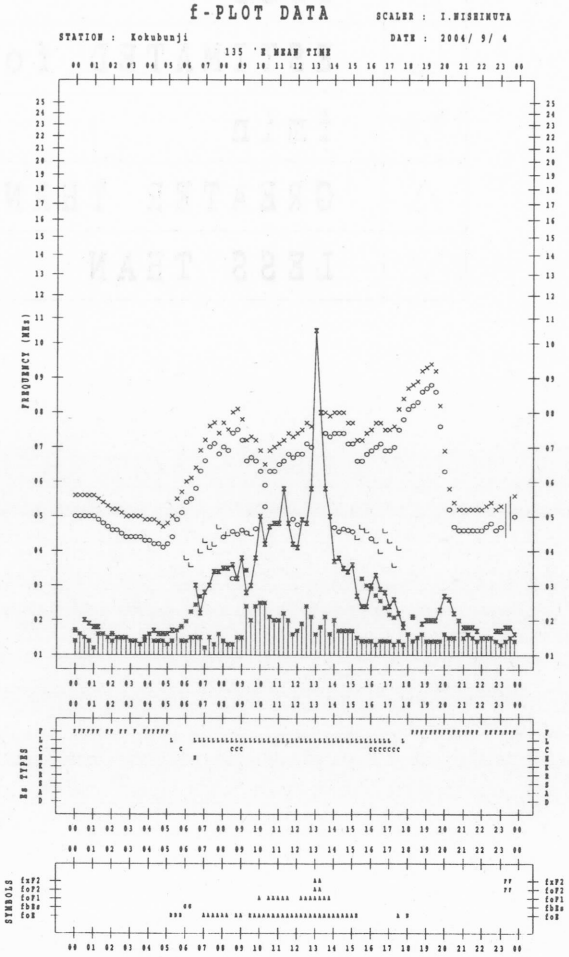
STATION : Kokubunji
DATE : 2004/ 9/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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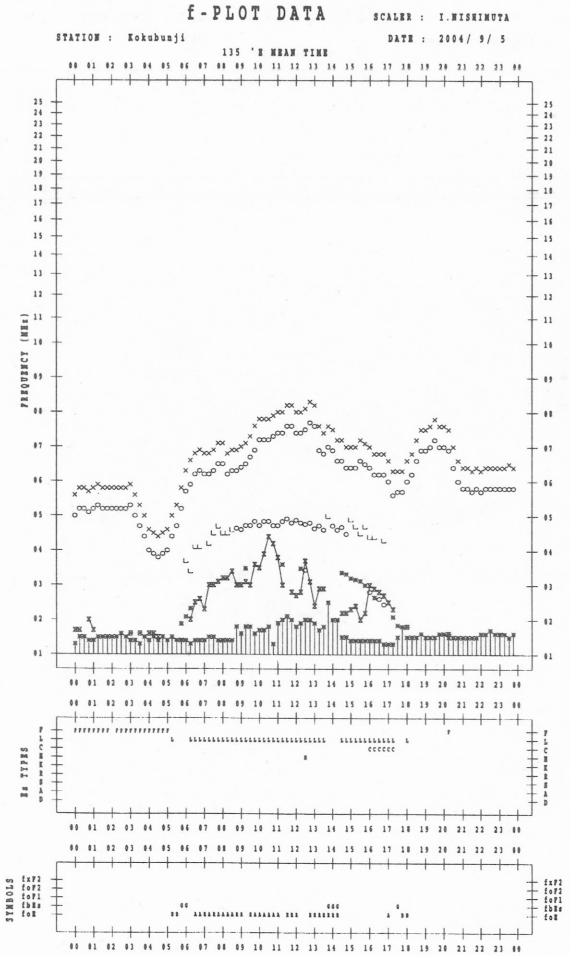
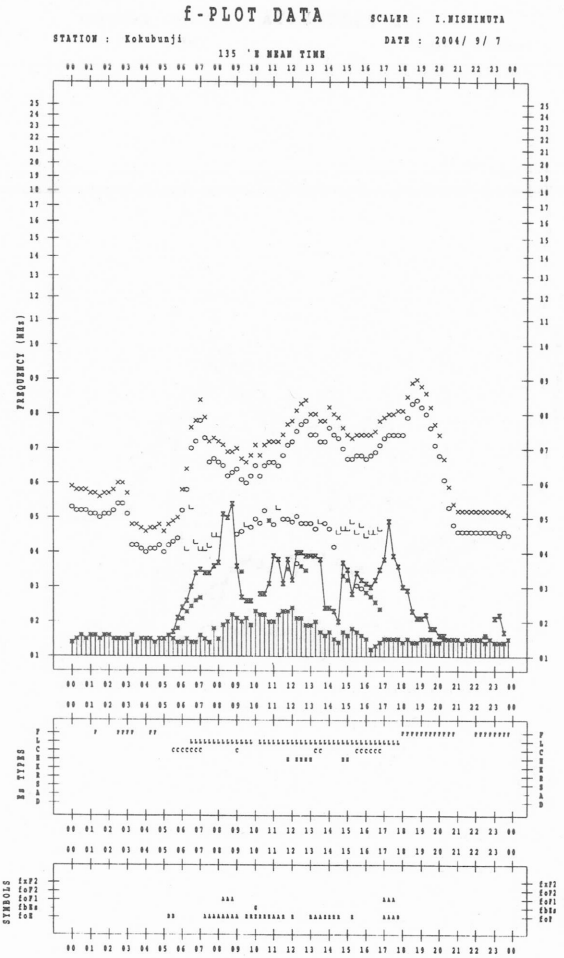
STATION : Kokubunji
DATE : 2004/ 9/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/ 5
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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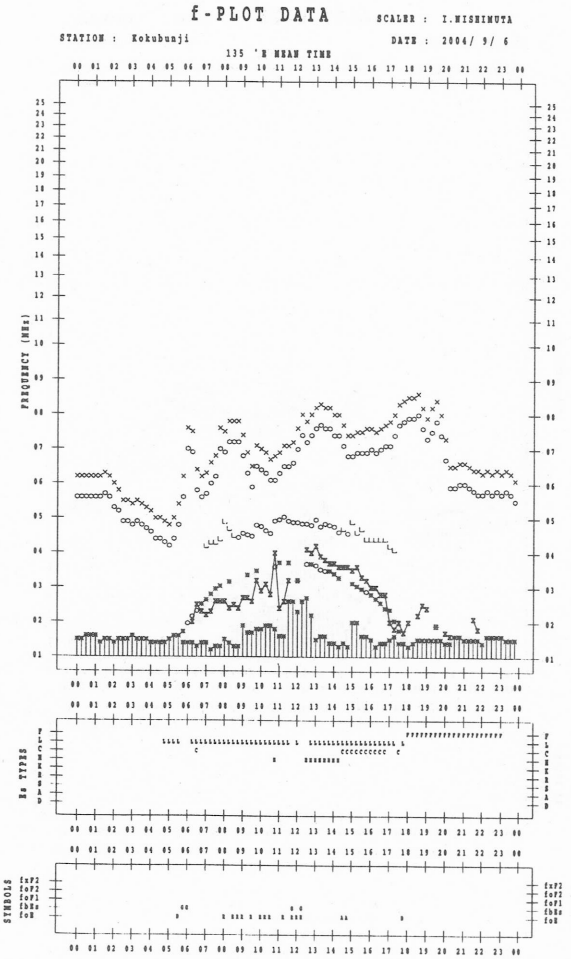
STATION : Kokubunji
DATE : 2004/ 9/ 7
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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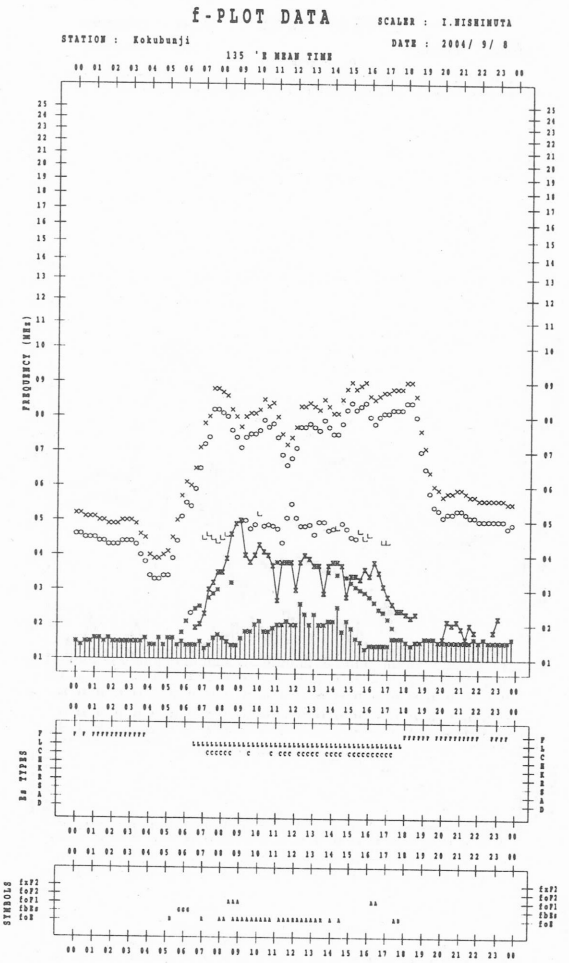
STATION : Kokubunji
DATE : 2004/ 9/ 6
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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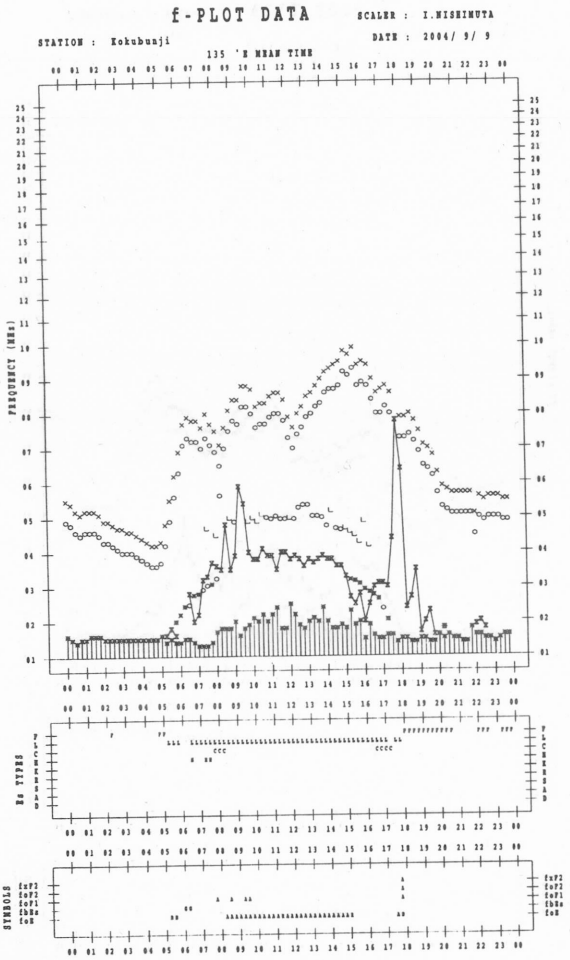
STATION : Kokubunji
DATE : 2004/ 9/ 8
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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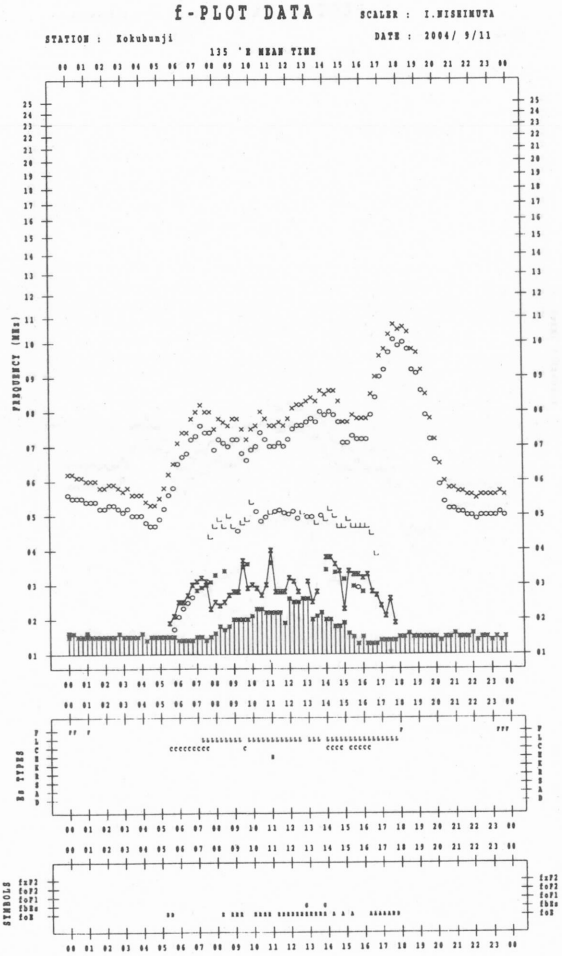
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/ 9
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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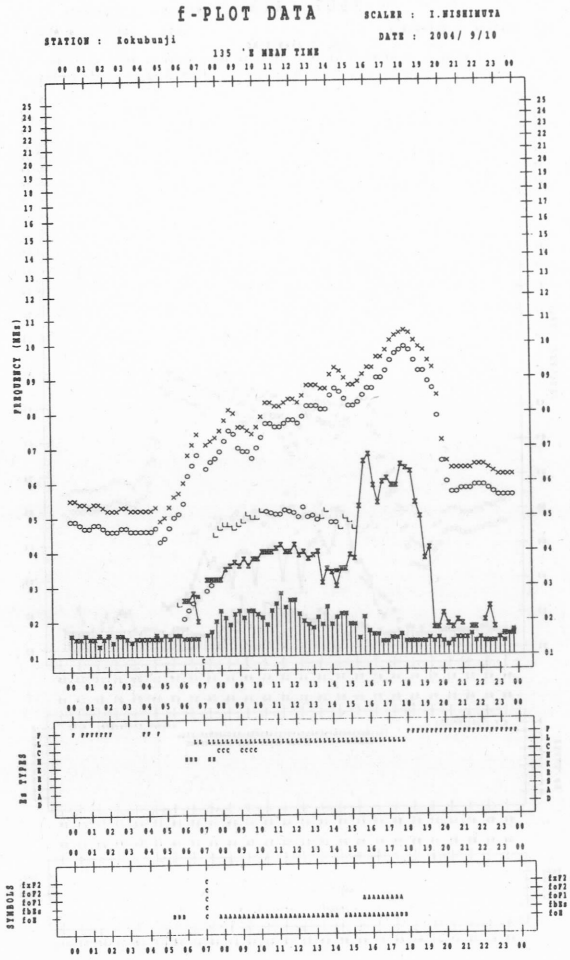
STATION : Kokubunji
DATE : 2004/ 9/11
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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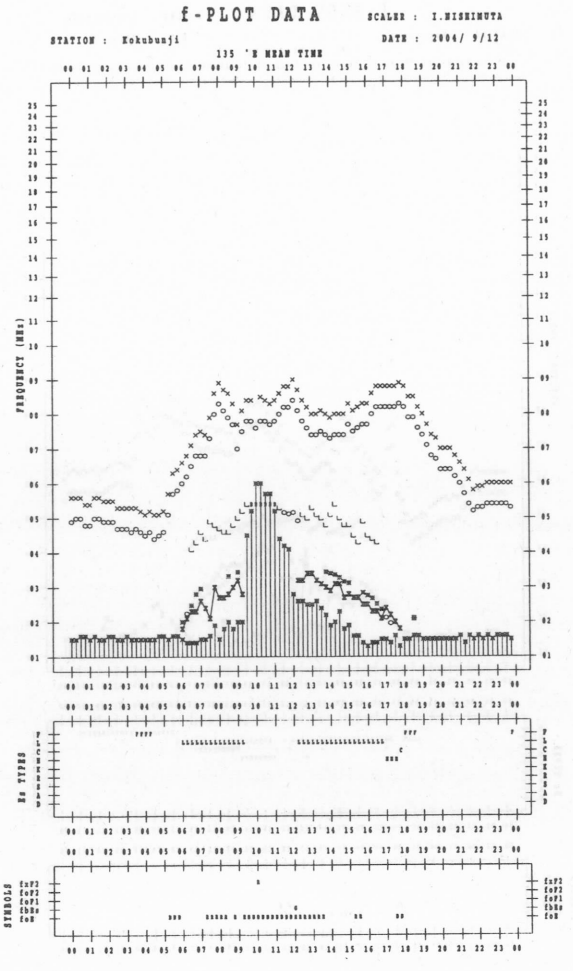
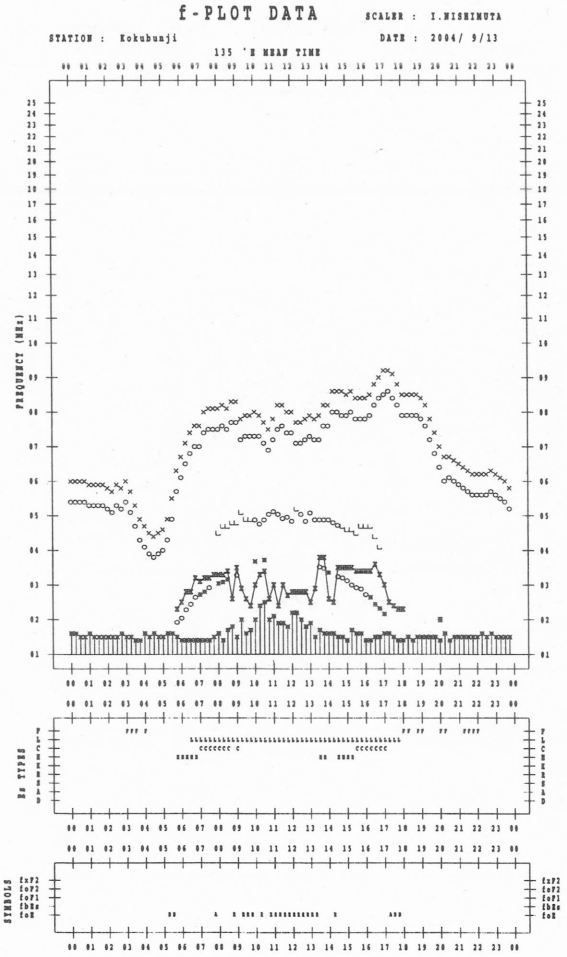
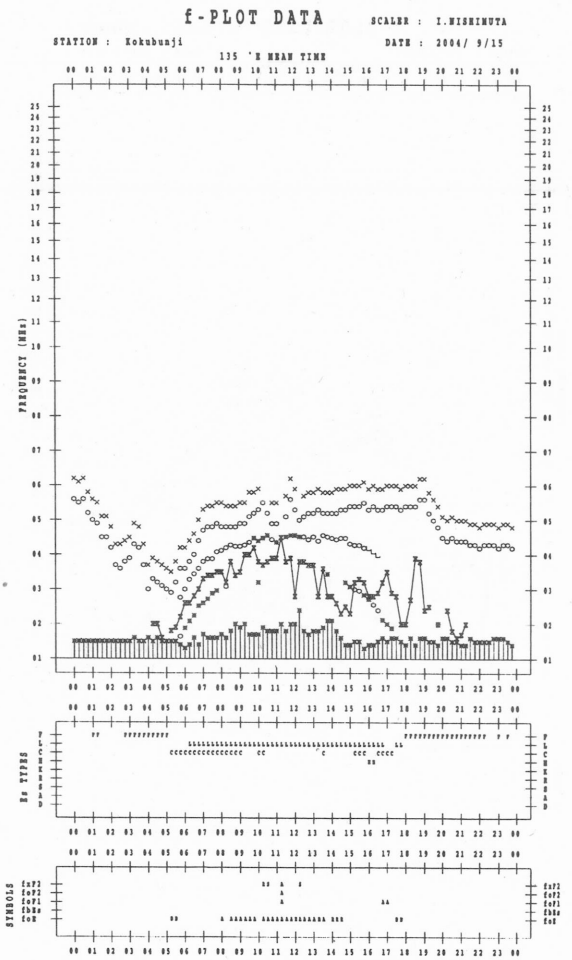
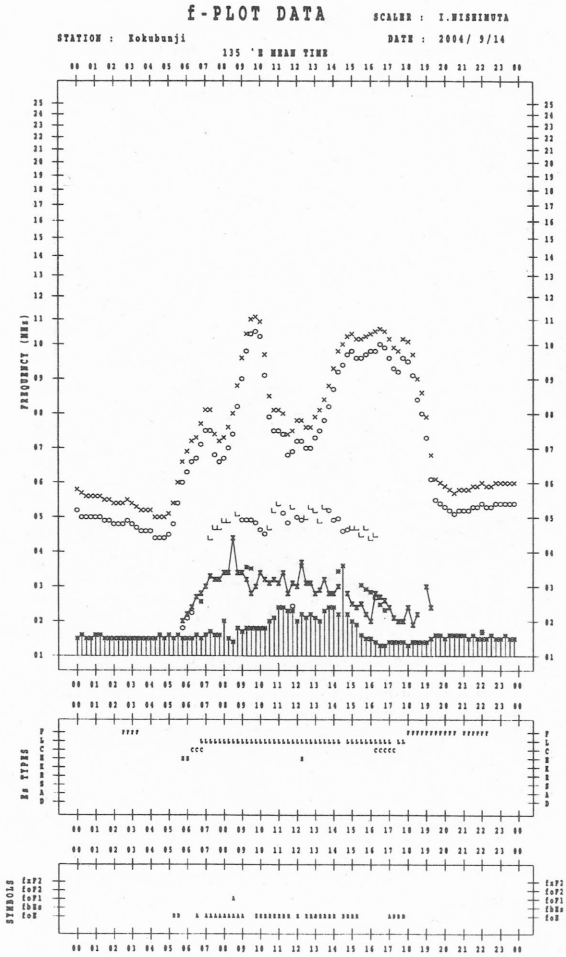
STATION : Kokubunji
DATE : 2004/ 9/10
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/12
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/13
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/15
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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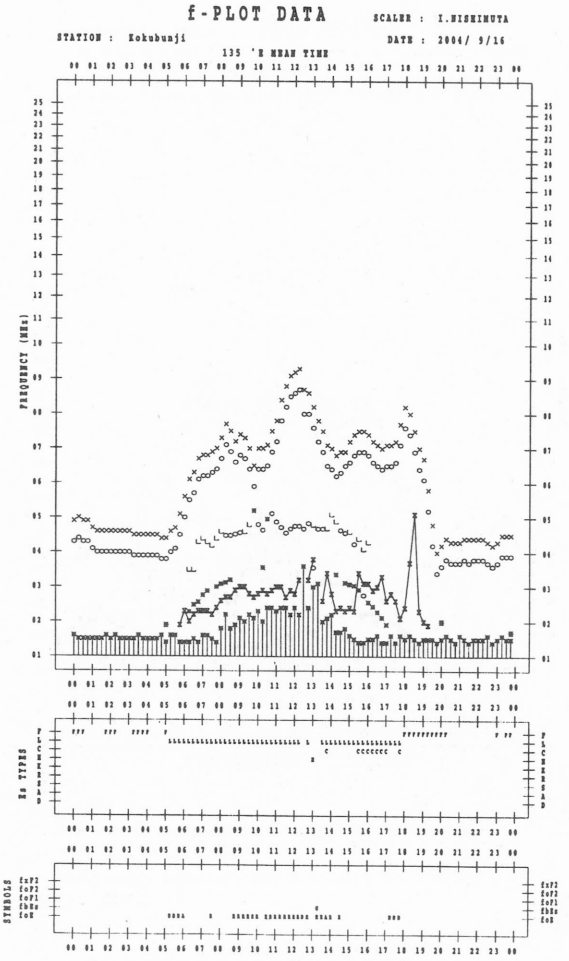
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/14
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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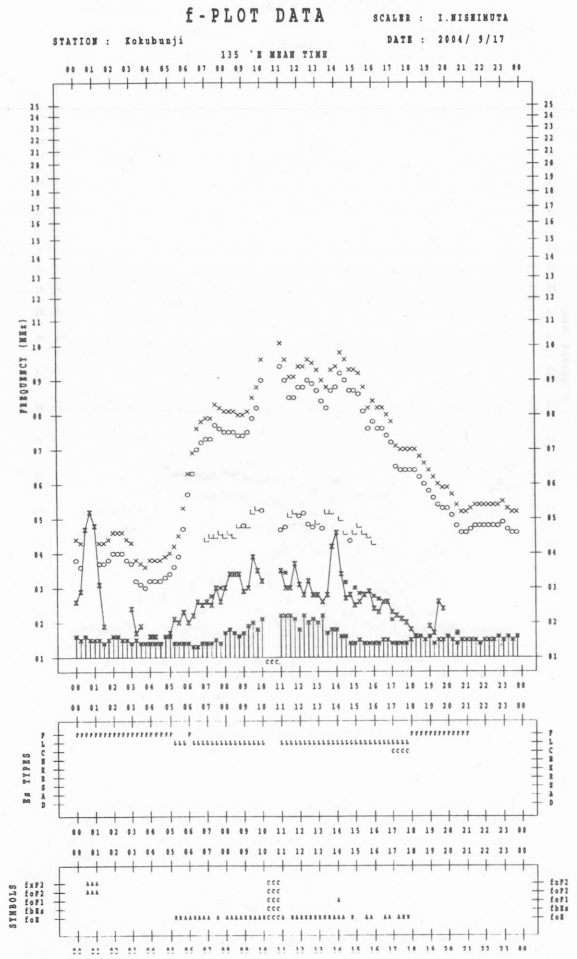
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/16
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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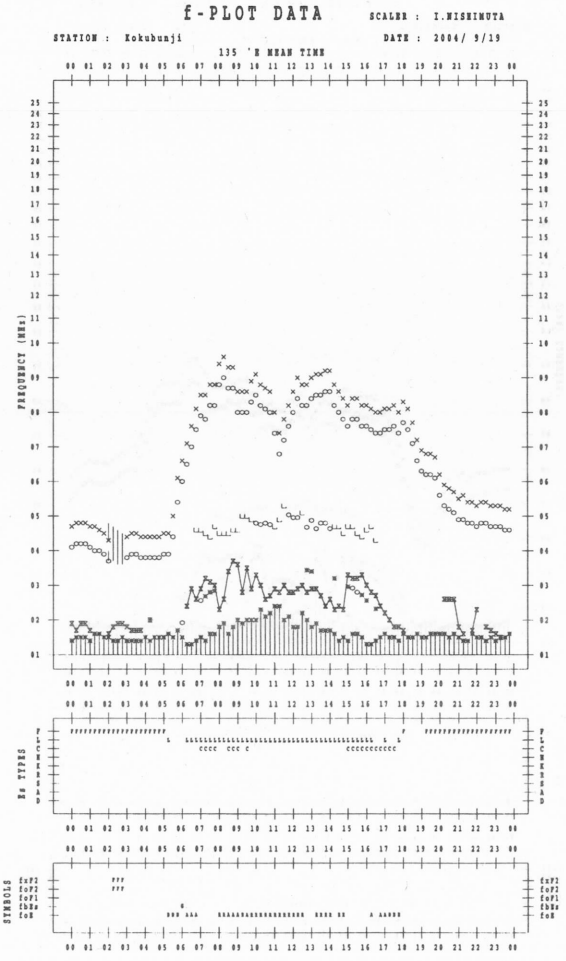
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/17
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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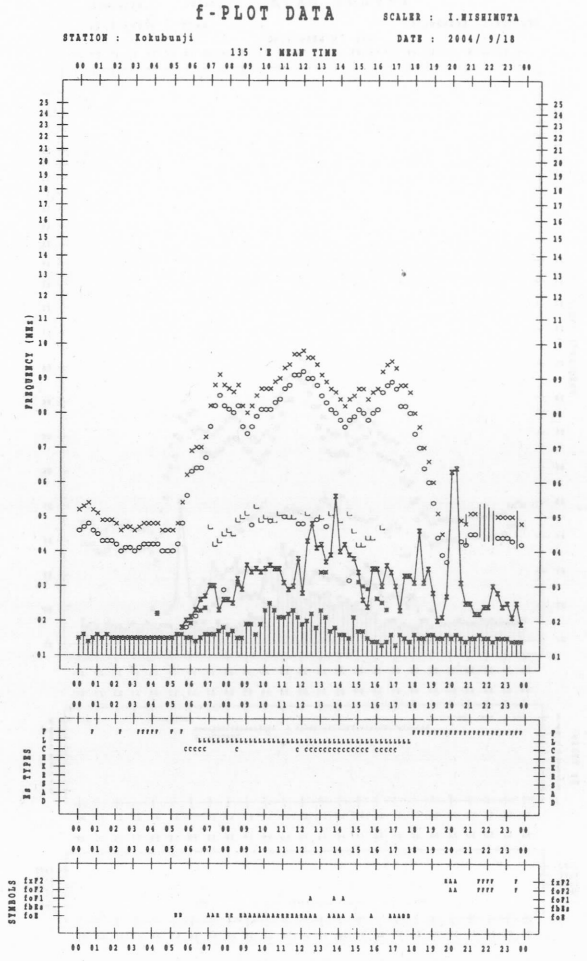
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/19
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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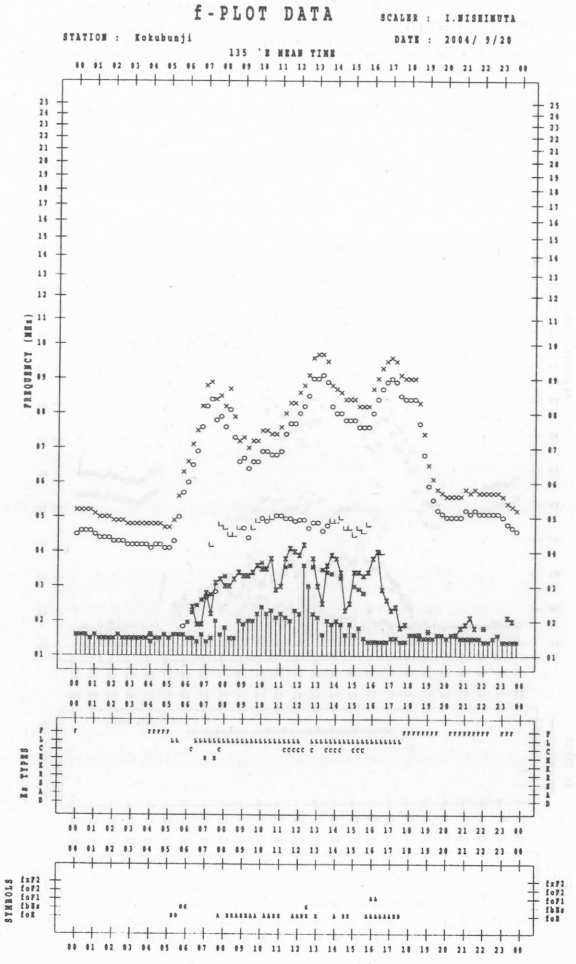
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/18
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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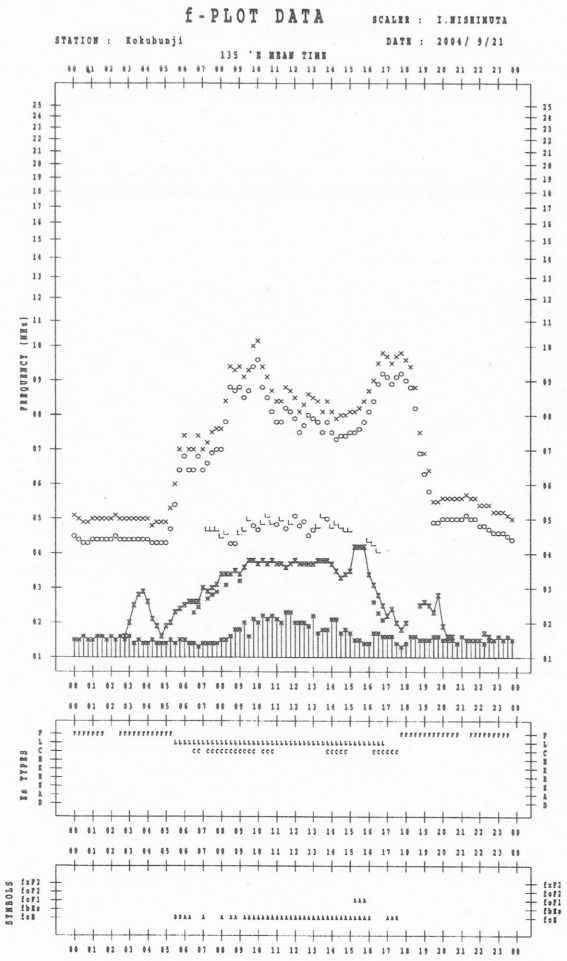
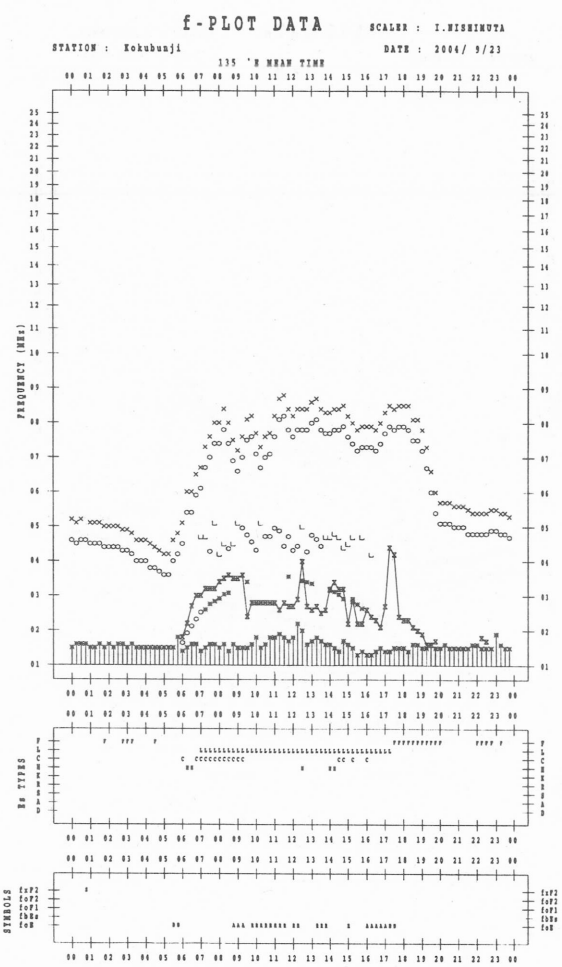
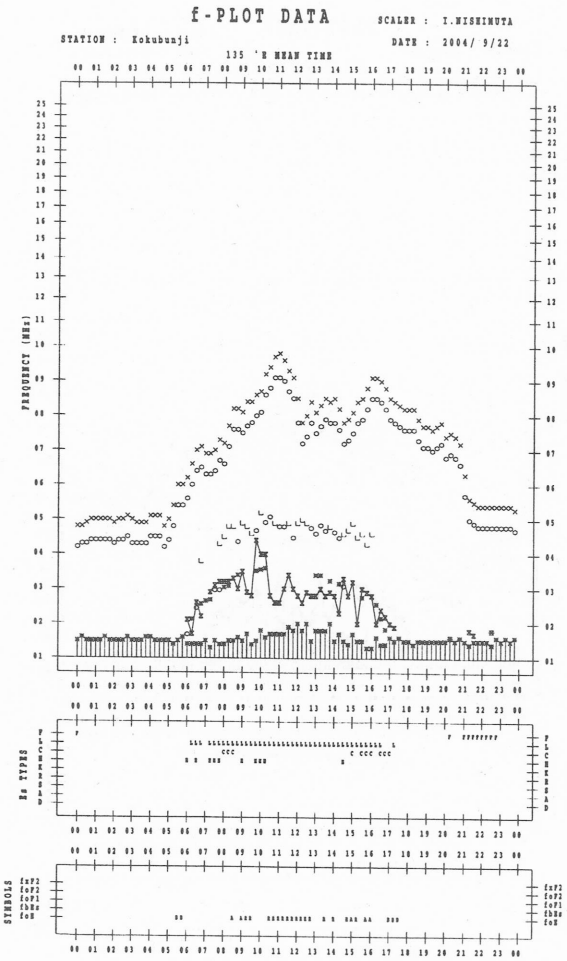
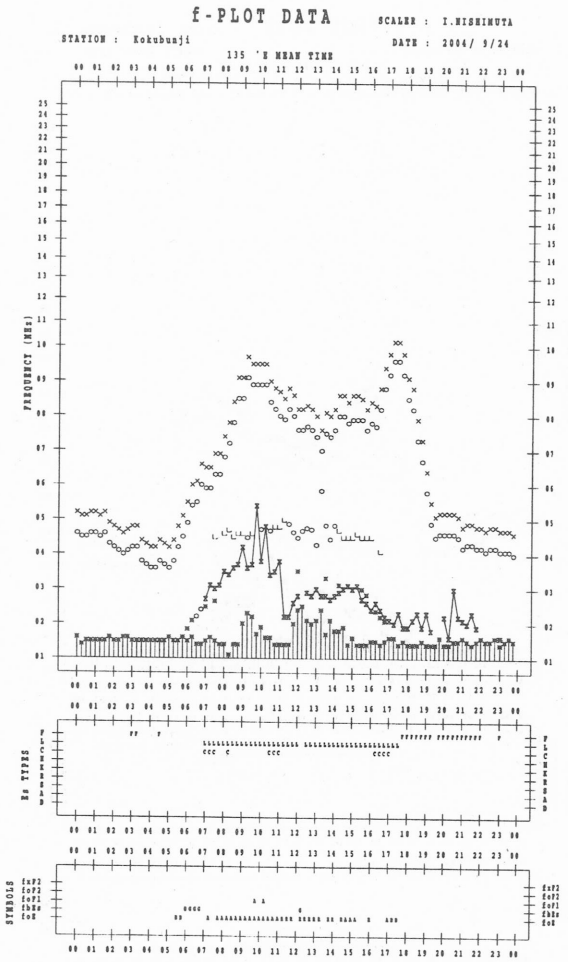
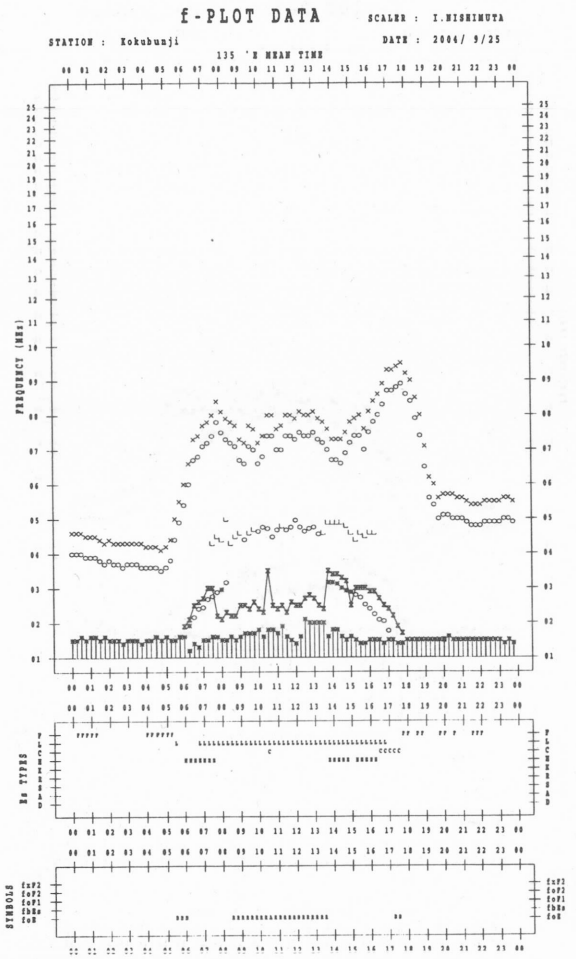
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/20
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

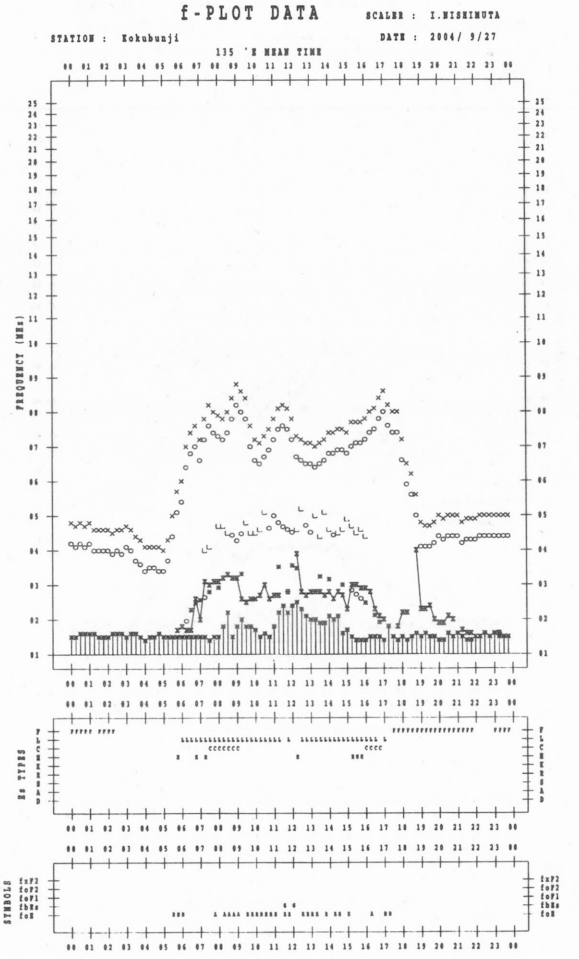

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/21
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

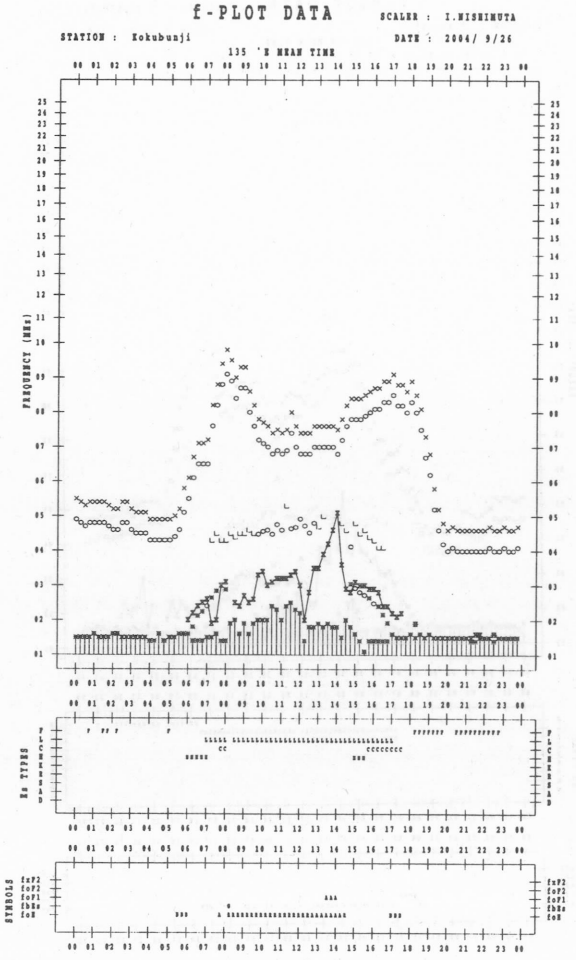

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/23
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

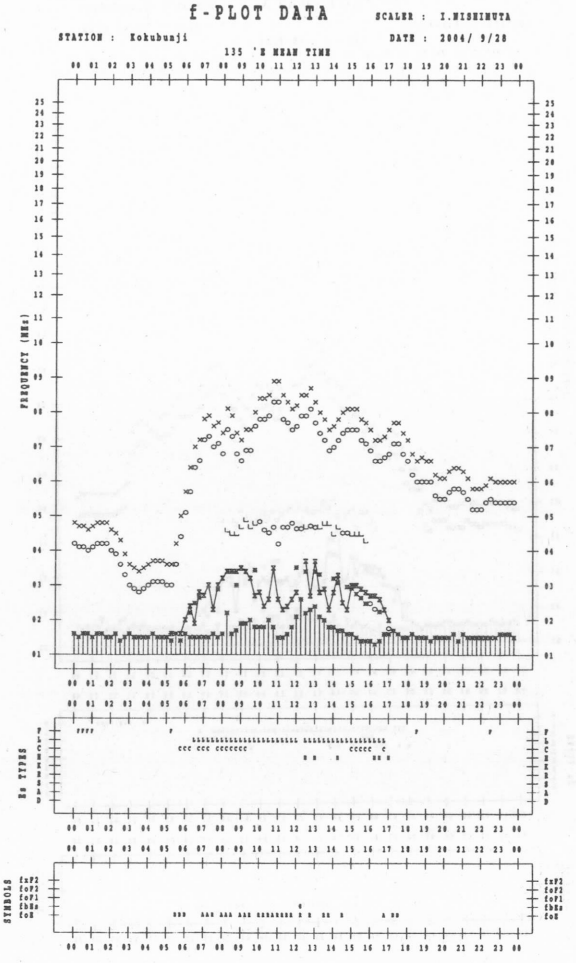

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/22
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

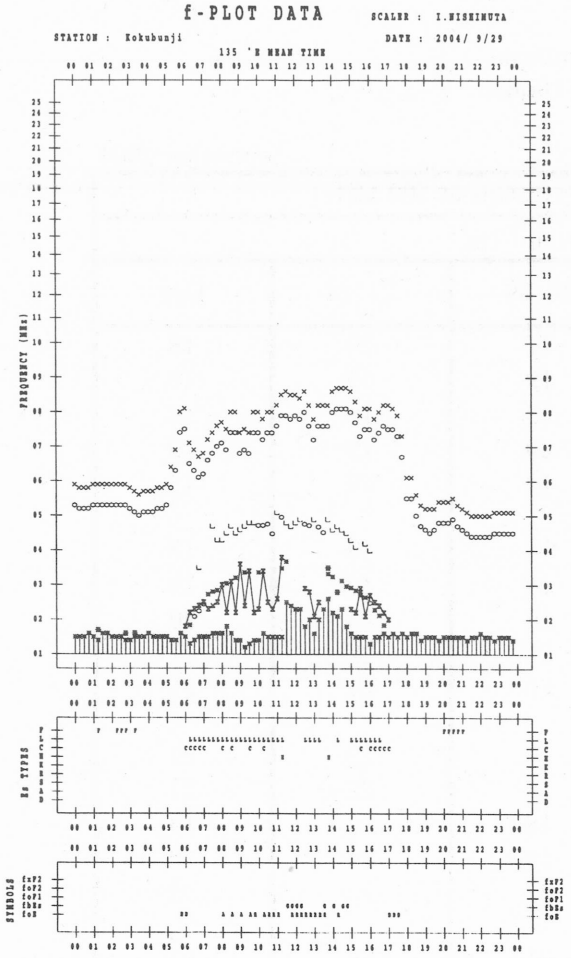

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/24
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

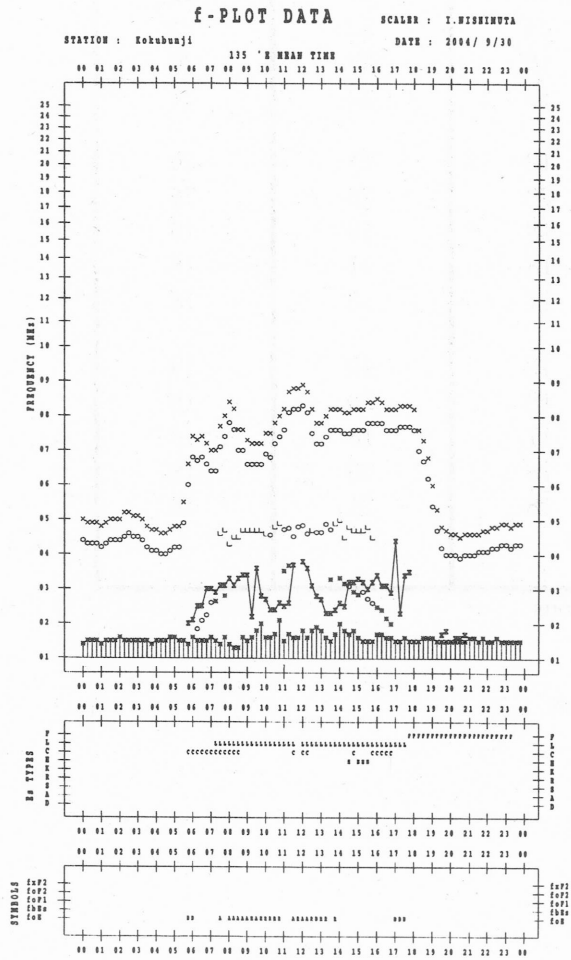

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/25
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/27
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/26
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/28
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/29
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2004/ 9/30
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

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

Hiraiso September 2004

Single-frequency total flux observations at 500 MHz					
Flux density: 10^{-22} W m^{-2} Hz^{-1}					
Date \ UT	00-03	03-06	06-09	21-24	Day
1	17	17	17	20	18
2	18	18	19	19	18
3	18	18	18	18	18
4	20	20	20	19	19
5	19	19	19	20	19
6	19	18	18	19	18
7	19	18	18	20	19
8	19	18	19	23	20
9	21	20	21	22	21
10	22	20	20	21	21
11	21	20	19	22	21
12	22	20	19	22	21
13	19	18	18	-	19
14	20	19	19	24	20
15	23	21	22	25	23
16	22	20	21	22	21
17	20	20	19	21	20
18	20	19	24	22	21
19	20	19	18	22	20
20	21	21	18	22	21
21	20	18	19	21	20
22	20	20	20	20	20
23	19	19	18	19	19
24	19	19	18	17	18
25	18	18	17	18	18
26	19	19	19	19	19
27	18	18	18	20	18
28	20	18	17	18	18
29	18	18	18	20	18
30	18	17	18	21	18
31					

Note: No data is available during the following periods.
13th 2015 - 14th 0050

A superscript * denotes to be superposed on a burst.

B. Solar Radio Emission

B2. Outstanding Occurrences at Hiraiso

Hiraiso September 2004

Single-frequency observations

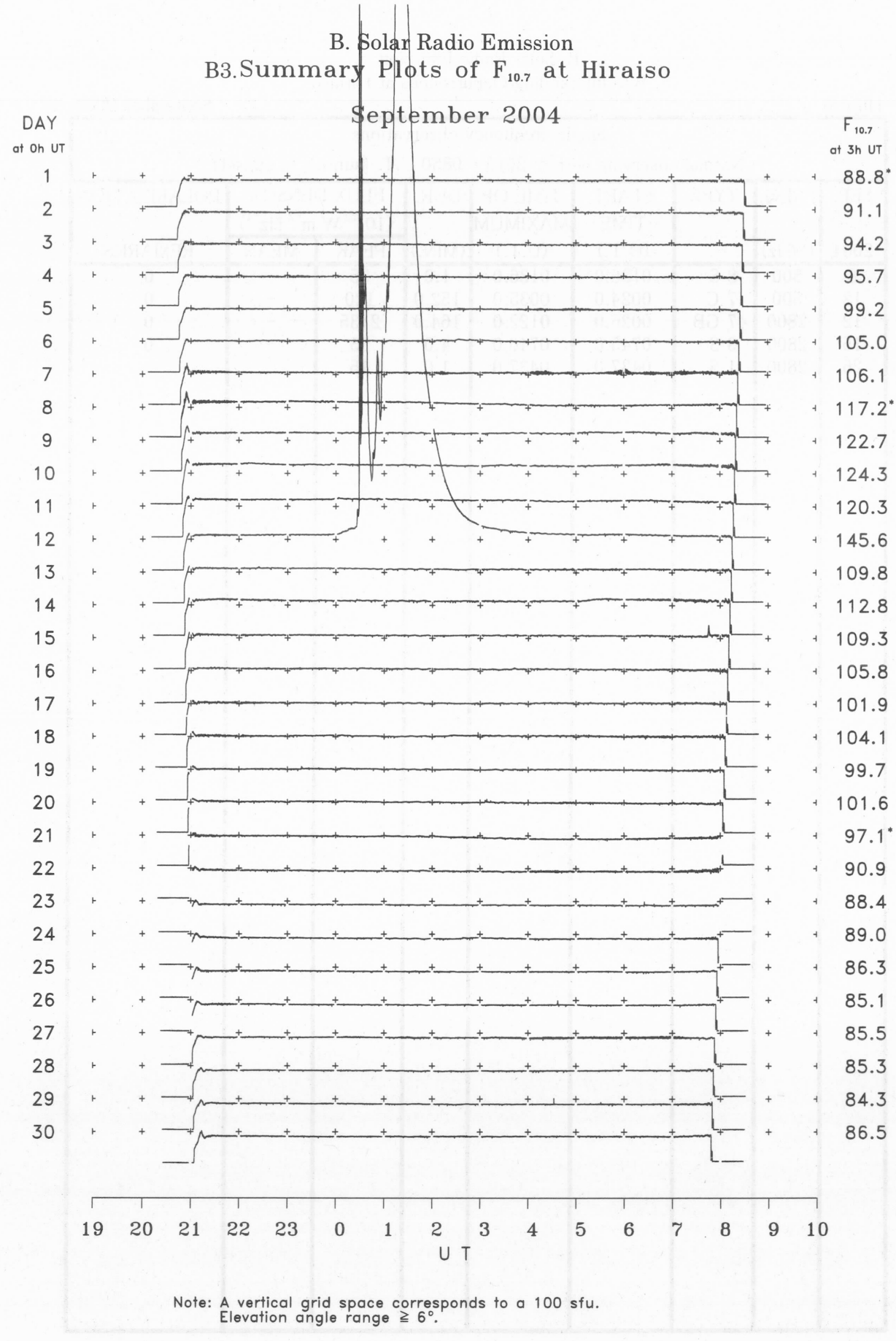
Normal observing period: 2015 - 0850 U.T. (sunrise to sunset)

SEP.	FREQ.	TYPE	START TIME	TIME OF MAXIMUM	DUR.	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1})		POLARIZATION
2004	(MHz)		(U.T.)	(U.T.)	(MIN.)	PEAK	MEAN	REMARKS
8	500	8 S	0136.0	0136.0	1.0	35	-	0
12	500	7 C	0024.0	0035.0	152.0	120	-	0
12	2800	47 GB	0026.0	0122.0	164.0	2135	-	0
15	2800	3 S	0745.0	0746.0	4.0	35	-	0
26	2800	1 S	0437.0	0437.0	1.0	15	-	

B. Solar Radio Emission

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

September 2004



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

IONOSPHERIC DATA IN JAPAN FOR SEPTEMBER 2004
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☎（042）（327）7478（直通）

Queries about "Ionospheric Data in Japan" should be forwarded to :
National Institute of Information and Commnications Technology, 2-1
Nukui-Kitamachi 4-chome, Koganei-shi, Tokyo 184-8795 JAPAN