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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
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TOKYO, JAPAN

INTRODUCTION

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

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

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

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

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

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

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

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

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

K Presence of particle *E* layer.

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

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

N Conditions are such that the measurement cannot be interpreted.

O Measurement refers to the ordinary component.

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

Q Range spread present.

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

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

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

V Forked trace which may influence the measurement.

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

X Measurement refers to the extraordinary component.

Y Lacuna phenomena, severe layer tilt.

Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

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

D Greater than.

E Less than.

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

M Mode interpretation uncertain.

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

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

U Uncertain or doubtful numerical value.

X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. SOLAR RADIO EMISSION

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

B1. Daily Data at Hiraiso

The three-hourly mean and daily mean values of the solar radio emission intensities are tabulated for 500 MHz measurements. The intensities are expressed by the flux density in 10^{-22} Wm^{-2} Hz^{-1} unit.

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

* Measurement impossible because of interference.

B Measurement impossible because of bursts.

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

B2. Outstanding Occurrences at Hiraiso

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

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

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

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

SGD Code	Letter Symbol	Morphological Classification
1	S	Simple 1
2	S/F	Simple 1F
3	S	Simple 2
4	S/F	Simple 2F
5	S	Simple
6	S	Minor
7	C	Minor+
8	S	Spike
20	GRF	Simple 3
21	GRF	Simple 3A
22	GRF	Simple 3F
23	GRF	Simple 3AF
24	R	Rise
25	R	Rise A
26	FAL	Fall
27	RF	Rise and Fall
28	PRE	Precursor
29	PBI	Post Burst Increase
30	PBI	Post Burst Increase A
31	ABS	Post Burst Decrease
32	ABS	Absorption
40	F	Fluctuations
41	F	Group of Bursts
42	SER	Series of Bursts
43	NS	Onset of Noise Storm
44	NS	Noise Storm in progress
45	C	Complex
46	C	Complex F
47	GB	Great Burst
48	C	Major
49	GB	Major+

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

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

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

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

B3. Summary Plots of F10.7 at Hiraiso

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

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

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

HOURLY VALUES OF foF2 AT Wakkanai

SEP. 2007

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

HOURLY VALUES OF fEs AT Wakkanai

SEP. 2007

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	32	29	30	G	G	G	G	G	43	G	G	G	G	G	G	G	39	40	34	28	40	46	29	28
2	29	33	34	30	48	30	35	53	52	G	G	G	G	G	G	G	G	35	G	G	G	G	G	G
3	28	27	G	28	45	46	47	35	42	G	46	G	41	63	G	39	G	33	31	24	G	34	35	39
4	29	34	34	25	G	G	33	42	42	42	45	72	G	61	G	54	G	38	52	39	56	47	40	58
5	60	42	28	33	34	G	32	35	41	48	68	87	53	40	58	40	49	32	68	52	52	40	60	46
6	59	58	34	39	41	36	32	36	53	65	51	G	G	47	46	53	47	54	39	37	70	51	48	46
7	27	42	33	41	34	29	29		G	54	70	69	46	73	43	G	40	53	52	60	35	35	28	G
8	32	38	26	34	26	35	67		52	G	44	G	G	G	G	40	39	52	42	62	G	39	32	34
9	27	G	29	29	30	31	57	G		G	G	G	G	G	G	G	G	G	G	26	30	42	37	32
10	G	G	G	G	28	39	35	34	G	42	52	G	G	G	G	G	G	G	27	24	G	30	30	G
11	28	29	23	G	26	25	G	G	G	46	40	53	53	46	38	G	G	28	G	29	26	G	26	G
12	G	G	G	G	G	G		34	41	40	G	G	G	G	G	G	G	G	34	40	35	29	27	G
13	G	G	G	G	G	G	59	G	G	44	G	G	G	G	G	43	46	47	44	33	30	29	G	G
14	G	G	G	G	G	G		G	39	43	42	46	G		G	G	44	G	30	39	G	34	32	27
15	G	G	26	26	G	G		35	36	G	G	G	G	G	39	G	G	32	G	27	28	32	34	29
16	28	G		G	G	29	32	G	G	G	G	G		G	G	G	G	30	G	G	G	G	G	G
17	G	G	G	G	G	G	30	G	40	G	40	40		G	44	G	43	31	27	G	G	34	G	32
18	G	33	28	33	28	30	34	42	40	44	41	39	G	G	39	G	G			65	65	38	41	59
19	33	34	32	37	33	26	40	64	111	62		40	50	72		65	40	62	65	46	40	77	59	45
20	26	G	G	26	49	42	54	35	38	G	G	46	39	51	47	42	59	36	27	41	40	43	34	82
21	34	23	G	G	G	26	38	33	40	G	46	61	58	40		G	33	55	32	37	G	G	G	G
22	G	G	G	G	G	36	28		G	G	G	G	G	38	41	G	G	G	66	58	50	58	46	34
23	32	32	31	31		31	G	G	G	G	G	G	48	64	68	64	81	68	50	60	34	29	27	G
24	29	G	31	32	36	28	36	33	40	40	46	G	46	45	40	48	51	30	29	24	G	G	G	30
25	G	G	G	G	G	G	G	38	45	40	G	43	40	G	65	40	36	46	32	28	27	25	25	G
26	G	G	G	G	G	37	43	36	39	43	G	G	39	G	G	G	38	27	G	G	32	G	25	G
27	25	G	G	G	G	G	29	G	G	G	G	G	G	G	G	G	G	G	G	G	G	33	G	G
28	G	G	G	G	G	G	34	37	36	G	G	G	G	G	G	G	G	G	26	G	G	G	G	G
29	28	G	25	25	G	G	32	33	35	G	G	G	G	G	G	61	46	71	47	42	32	30	G	G
30	G	G	G	27	24	31	40	41	36	G	G	G	G	G	G	G	33	38	25	39	44	32	G	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	29	30	29	30	27	27	29	30	29	30	28	29	28	30	30	29	29	30	30	30	30	30
MED	27	G	23	25	G	27	34	34	39	G	G	G	G	G	G	G	34	33	31	35	30	32	28	14
U Q	29	33	30	31	33	31	40	37	42	43	45	43	43	46	42	42	44	49	45	42	40	40	35	34
L Q	G	G	G	G	G	G	29	G	G	G	G	G	G	G	G	G	G	14	13	24	G	25	G	G

HOURLY VALUES OF fmin AT Wakkanai

SEP. 2007

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	14	15	14	16	15	14	14	16	18	18	24	15	17	21	22	14	14	14	14	16	15	15	14	15
2	16	14	14	14	15	15	14	14	15	17	18	15	18	18	14	16	15	14	15	14	15	15	15	15
3	17	14	16	15	15	15	16	15	18	15	16	21	20	17	15	14	15	14	14	18	18	15	14	14
4	14	14	14	14	14	15	16	14	15	15	17	20	20	18	18	18	15	18	14	14	14	14	15	14
5	14	14	14	14	15	14	15	14	14	14	15	15	18	16	15	14	14	14	14	15	14	15	14	15
6	15	15	14	14	15	14	14	14	15	15	15	18	15	20	15	15	15	14	15	14	14	14	14	15
7	15	14	14	17	14	14	14	14	15	21	20	15	14	17	15	15	15	15	14	16	14	15	15	15
8	14	14	15	14	15	14	14	14	18	18	18	14	18	15	15	18	14	14	15	14	15	14	15	15
9	16	15	14	14	16	14	14	14		20	20	21	15	17	14	20	15	21	15	20	14	18	14	14
10	14	16	15	14	15	14	14	14	14	14	14	14	14	14	15	15	14	21	15	15	15	15	14	18
11	15	14	14	15	15	15	20	22	14	17	16	15	14	14	16	14	14	14	16	14	15	15	17	14
12	15	15	16	18	15	18	14	14	22	22	20	20	20	17	18	16	15	20	14	14	14	14	17	18
13	15	15	14	15	22	16	14	20	15	17	20	21	18	21	18	18	16	14	14	14	17	16	14	18
14	14	15	15	17	14	15	18	15	14	18	16	20	20		18	15	15	14	15	15	17	14	15	20
15	15	16	15	16	16	14		14	17	18	18	18	14	18	15	14	14	15	14	16	15	14	15	14
16	15	14		15	14	14	14	14	14	15	18	16		20	18	28	23	15	15	15	18	14	15	15
17	14	14	14	15	17	15	14	14	15	14	17	16	14	15	15	14	14	14	16	15	15	16	15	14
18	14	15	14	14	14	14	14	16	14	20	17	20	17	18	18	15	14	14	14	15	14	15	15	15
19	15	15	14	14	14	14	14	14	14	16	20	18	22	18		15	14	14	14	14	14	15	15	15
20	14	14	14	14	14	15	18	14	14	18	17	21	15	18	14	14	14	14	15	15	14	14	14	15
21	14	15	14	15	14	16	15	14	14	14	15	16	18	16	18	15	14	14	14	15	15	14	14	14
22	15	15	15	16	16	16	14	14	15	14	17	16	21	17	18	15	14	20	14	17	17	15	14	14
23	15	14	14	14		14	20	14	14	14	15	15	21	17	15	18	14	14	14	14	14	15	16	17
24	15	20	14	14	14	14	14	14	14	16	16	20	18	18	15	14	15	14	15	15	22	16	15	15
25	14	21	15	20	16	14	27	22	17	14	15	18	18	15	16	15	14	14	14	15	18	16	17	17
26	15	16	18	15	15	14	14	14	15	14	16	16	18	40	18	15	15	16	20	15	15	20	17	23
27	18	21	14	15	15	15	16	14	16	16	16	18	14	17	16	14	14	22	15	14	15	14	16	15
28	15	15	16	15	17	15	14	14	15	15	16	15	18	17	18	26	23	20	16	18	15	17	16	17
29	18	16	15	14	14	15	14	14	15	17	18	20	39	17	15	18	17	14	14	15	17	15	14	14
30	15	16	16	14	16	15	14	14	16	16	16	17	20	20	17	15	14	14	15	15	14	14	18	17
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	29	30	29	30	29	30	29	30	30	30	29	29	29	30	30	30	30	30	30	30	30	30
MED	15	15	14	15	15	14	14	14	15	16	17	18	18	17	16	15	14	14	14	15	15	15	15	15
U Q	15	16	15	15	16	15	16	14	16	18	18	20	20	18	18	18	15	16	15	15	17	15	16	17
L Q	14	14	14	14	14	14	14	14	14	14	16	15	15	16	15	14	14	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Kokubunji

SEP. 2007

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

HOURLY VALUES OF fEs AT Kokubunji

SEP. 2007

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	40	31	29	29		G	G		G	G	G	G	44	G	G	G	G	G	G	G	G	G	23	30
2	28	G	24	G	G	G	G	35	56	39	72	60		G	G	61	71	61	95	61	33	27	25	33
3	52	51	25	33	47	35	30	41	58		G	G		41	G	G	40	36	68	39	G	G	28	47
4	G	G	27	G	G	G	G	G	40	46	67	G		G	G	50	41	36	31	48	30	49	37	33
5	26	33	36	31	G		G	G	45	46	60	56		57	G	45	53	52	52	71	33	33	55	55
6	54	37	37	42	58	84	43	43	49	53	54	60	81	72	103	42			58	58	40	28	33	28
7	27	26	28	54	27	G	G	55	58	45	57		G	41	G		G	35	49	82	35	G	26	G
8	22	24	G	G	G	G	32	37	130	123	71	47	51	G	G	37	G	G	G	G	G	28	G	33
9	24	27	24	26	23	G	G	35	58	G	62	50		49	49	41	36	32	30	35	31	29	G	G
10	G	G	G	G	43	28	32	G	G	50	G	44	G	G	G	G	G	31	26	G	G	G	26	G
11	G	G	G	23	26	26	33	G	G	G	44	G	G	G	G	47	40	37	G	G	59	25	G	G
12	G	G	G	G	G	G	G	38	45	49	G			G	G	43	G	37	35	61	31	29	30	G
13	G	G	30	26		G	31	37	50	G	44	G	G		G	46	G	G	60	52	29	27	G	31
14	28	29	29	29	26	G	39	50	59	53	G	47	46	55	G	42	40	50	G	G	G	G	34	34
15	G	G	G	G	G	G	33	33	G	G	G	48	G	G	51	57	42	G	G	23	28	G	G	G
16	G	G	G	G	G	G	30	37		40	G	G	G	G	39	68	54	36	40	42	G	27	G	G
17	G	G	G	G	29	G	29	G	G	G	G	G	47	G	48	45	38	36	48	53	29	39	40	48
18	27	G	G	G	G	G	26	55	51	69	50	62	G	G	55	40	43	34	52	61	34	33	34	60
19	28	29	36	41	G	G	29	34	40		52	68	113	45	52	43	34	35	G	G	G	G	G	G
20	26	G	24	24	G	35	50	39	G	40		G	G		G	G	G	33	G	33	34	31	G	34
21	30	28	24	27	23	24	G	51	48	52	63		50	44	G	37	49	34	29	29	37		G	G
22	G	G	G	G	G	29	G	35	G	39	G	G	G	G	G	G	G	35	27	G	G	G	28	25
23	23	G	G	G	G	G	G	35	47	40	G	G	G	G	G	47	56	57	30	G	G	G	G	G
24	G	G	G	G	G	G	29	48	48		49	50	44	G	46	52	60	26	29	39	40	24	G	G
25	G	G	G	G	G	G	G	G	G		G	46	G	G	G	G	G	36	32	29	G	G	G	
26	G	29	23	G	G	G	28	G	G	G	G	G	G	G	G	G	G	27	G	G	G	29	G	G
27	29	G	G	G	G	G	26	33	G	G	47	G	G	G	G	G	G	G		G		G	39	26
28	G	G				G	34	35	G	G	G	G	G	G	G	G	G	G	G	24	G	G		G
29	G	G	G	G	G	G	28	37	44	40	44		G	G	G	G	G	29	G	G	26	G	G	G
30	26	G	G	G	G	G	G	37	36	G	40	G	G	G	G	G	40	30	53	48	25	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	29	29	27	29	30	29	29	26	29	26	24	28	30	29	29	29	29	30	29	29	29	29
MED	22	G	G	G	G	G	28	35	44	40	44	G	G	G	G	41	36	34	30	31	28	24	G	G
U Q	28	28	27	28	26	12	32	40	50	49	55	50	45	41	39	46	42	36	50	52	33	29	31	33
L Q	G	G	G	G	G	G	G	17	G	G	G	G	G	G	G	G	G	26	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Kokubunji

SEP. 2007

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	13	13	13	14		17	13		18	21	45	45	29	41	18	24	14	33	15	13	17	18	14	13
2	15	14	15	14	15	17	14	17	20	22	36	33		18	20	30	15	15	17	17	13	15	14	14
3	13	13	18	14	13	15	15	13	17	18	20	25		28	15	17	20	15	14	13	14	18	15	14
4	13	14	15	14	20	13	21	14	13	18	30	18		17	41	17	20	14	13	13	14	14	14	13
5	15	13	13	13	15		22	20	13	29	30	29		28	25	20	14	13	15	14	13	13	13	13
6	13	14	13	13	13	14	13	14	17	21	18	21	18	26	17	17	18	13	13	14	14	13	13	14
7	14	13	14	13	14	14	21	14	18	18	21		21	18	14	42	37	17	14	14	14	14	14	14
8	14	15	18	15	17	14	13	13	21	21	20	26	21	21	17	15	17	21	14	14	15	14	15	13
9	17	13	14	13	13	14	22	17	18	22	20	21		20	18	17	14	14	13	13	13	13	15	15
10	15	15	17	14	14	13	13	26	15	15	13	15	15	40	20	17	13	15	14	14	20	14	13	14
11	20	14	13	13	13	14	14	14	21	34	18	20	18	18	18	15	15	17	14	17	14	17	20	15
12	14	15	14	13	14	15	13	14	15	22	21			43	43	20	14	13	13	14	13	13	14	14
13	18	14	13	15		18	15	14	17	28	28	29	45		20	14	15	13	13	13	14	14	14	15
14	14	13	14	14	15	14	15	14	17	21	48	25	24	22	21	20	18	13	14	17	14	14	13	13
15	15	14	17	14	21	15	15	14	14	17	43	26	28	22	20	14	13	13	15	17	13	17	17	14
16	21	20	15	14	13	13	14	13		20	20	22	20	43	31	14	15	13	13	13	13	13	13	14
17	18	15	18	13	13	13	14	13	17	18	18	21	20	18	30	29	21	14	13	15	13	14	13	15
18	14	14	13	14	14	13	13	13	14	26	29	30	44	29	23	20	13	13	14	17	14	14	14	14
19	13	14	13	13	13	14	14	14	15		28	28	22	23	28	17	14	13	14	18	15	15	18	18
20	15	14	14	17	15	13	13	13	15	17		15	44		30	41	13	14	18	17	14	13	14	13
21	14	14	14	13	14	14	20	14	15	22	33		30	29	22	15	14	13	13	13	14		15	17
22	15	13	17	18	18	14	21	13	14	17	44	21	43	18	40	39	18	13	17	21	15	15	14	14
23	14	15	20	17	17	14	18	13	17	21	44	40	43	20	31	17	15	13	13	17	14	14	18	15
24	15	13	15	14	18	14	13	13	14		20	30	40	24	18	17	13	18	14	14	14	14	18	14
25	13	14	14	20	14	14	13	13	17		43	21	21	21	20	13	13	13	14	14	14	15	18	
26	14	14	14	15	17	14	13	14	17	15	17	48	44	44	42	18	29	14	20	20	17	15	13	17
27	14	14	17	15	20	17	17	13	17	20	18	20	18	18	39	15	14	18		17		17	17	15
28	15	20				14	13	13	14	17	21	18	42		41	18	26	18	14	15	17	14		14
29	14	17	15	13	13	15	13	13	14	26	29		41	45	41	37	15	13	17	17	15	15	14	14
30	14	14	15	13	15	14	17	13	15	21	18	22	21	42	18	18	14	14	13	14	17	14	14	17
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	29	29	27	29	30	29	29	27	29	26	24	27	30	30	30	30	29	30	29	29	29	29
MED	14	14	14	14	14	14	14	14	17	21	21	24	26	23	22	17	15	14	14	14	14	14	14	14
U Q	15	15	17	15	17	15	17	14	17	22	34	29	42	40	31	20	18	15	15	17	15	15	16	15
L Q	14	13	13	13	13	14	13	13	14	18	19	21	20	18	18	15	14	13	13	14	13	14	13	14

HOURLY VALUES OF foF2 AT Yamagawa

SEP. 2007

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

HOURLY VALUES OF fEs AT Yamagawa

SEP. 2007

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	39	29	33	37	24	23	G	32		G	G	G	G	G	53	43	G	34	64	34	46	49	46	46
2	39	G	G	G		G	G	G	39	38	48	G	60	G	G	G	40	G	28	G	G	G	32	G
3	27	27	G	28	G	G	24	32	35	41	50	G	G	G	G	G	G	G	G	G	G	G	37	
4	G	G	G	G	G	G	26	34	G	G	G	G		52		64	37	35	28	26	92	54	41	27
5	29	G	24			G	28	34	56	G	G	71	50	43	78	62	54	48	36	46	46	59	40	57
6	58	92	32	36	41	48	27	36	69		51	117	104	52	61	49	45	62	93	85	31	25	32	69
7	G	28	G	G	G	G	G	50	44	56	85	78	93	61	42	G	42	52	37	27	29	44	29	55
8	33	40	44	56	40	36	31	56	52	72	55	49	43	G	G	41	G	G	27	G	34	30	30	32
9	28	G	G	G	G	G	31	38	37	G	41	56	G	49	47	G	G	G	49	70	29	27	G	G
10	G	G	G	G	G	G	G	41	39	G	G	46	G	G	G	G	G	G	G	G	G	G	28	28
11	28	G	G	G	G	G	24		41	G	42	G	G	43	41	40	48	51	50	49	58	58	G	G
12	34	44	46	46	33	80	40	42	48	46	59	61	69	73	40	48	40	45	43	40	44	54	28	33
13	29	26	26	26	G		29	34	42	40	73	52	G	G	56	G	39	46	28	G	33	G	59	40
14	34	40	40	34	28		G	34	45	55	51	G	G	43	G	G	G	40	G	G	28	24	G	G
15	G	G	27	G	G	G	G	35	G	39	G		G	G	G	G	G	33	29	G	G	26	27	G
16	G	G	G	G	11	G	24	G	35	G	G	G	G	44	G	G	36	35	52	29	36	32		60
17	41	51	24	31	25	24	29	43	56	48	58	67	42		48	46	92	70	61	56	60	70	54	39
18	48	48	28	G	G	G		38	45	56	57	60	70	51	54	62	40	40	36	46	43	40	43	27
19	49	46	32	24	G	29	26	30	G	G	44	52	49	93	G	40	50	48	44	60	39	38	32	33
20	G	G	G	G	G	29	42	44	50	49	G	53	44	G	G	G	50	41	34	54		59	34	32
21	32	G	23	G	G	G	G	38	41	40	49	C	C	58	44	49	42	32	26	27	40	36	34	G
22	27	G	G		G	G	26	G	G	G	G	G	46	C	G	G	G		G	26	G	G	31	30
23	25			G	G	G	G	35	G	G	47	C	C	C	C	C	C	40	34	55	78	28	26	G
24	G	G	G	G	G	G	G	30	39	40	C	C	C	G	41	52	54	40	36	35	32	41	32	39
25	27	24	G	G	G	G	G	31	G	40	C	C	C	C	C	G	38	46	G	G	G	G	G	G
26	G	G	G	G	G	G	G	30	G	G	C	C	C	C	C	C	G	G	G	G	23	24	G	
27	G	G	G				G	31	36	G	C	C	C	C	C	C	C	C	46	33	G	G	G	G
28	G		G		28	39	G	32	C	C	C	C	G	G	G	C	C	G	G	G		G	G	G
29	G	G	G	G	G	G	G	G	38	C	C	C	C	C	C	C	C	36	30	G	G	27	32	G
30	G	G	G	G	G	G	G	34	43	C	C	C	C	C	C	C	C	37	40	29	32	34	30	28
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	29	26	27	27	29	29	28	26	23	20	21	22	23	24	25	28	30	30	28	30	29	28
MED	27	G	G	G	G	G	G	34	39	38	47	50	42	43	40	20	39	38	34	28	32	29	31	28
U Q	34	34	27	28	24	24	27	38	45	46	55	60	55	52	48	48	46	46	44	46	43	44	35	39
L Q	G	G	G	G	G	G	G	30	18	G	G	G	G	G	G	G	G	16	26	G	G	G	13	G

HOURLY VALUES OF fmin AT Yamagawa

SEP.2007

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	14	15	14	14	14	14	14	14		18	22	23	26	22	23	18	18	14	14	14	14	14	14	15
2	16	18	20	15		15	14	14	17	20	20	26	20	26	22	21	16	14	14	15	15	15	14	15
3	14	15	15	15	14	15	17	14	14	14	17	18	17	22	16	15	20	14	16	15	15	15	17	
4	15	15	14	15	17	15	17	14	14	14	18	20		17		16	14	14	14	16	14	15	14	15
5	15	14	14			15	14	14	14	16	14	28	16	27	18	20	17	15	14	14	14	14	14	14
6	14	15	14	14	14	14	14	14	15	14	17	18	22	32	17	15	14	14	14	15	16	16	14	14
7	14	14	16	15	17	16	14	14	14	15	18	18	21	23	18	16	14	14	14	15	15	16	16	14
8	14	14	14	14	15	14	15	14	14	15	18	18	20	17	16	15	14	14	14	15	15	15	15	14
9	14	18	14	15	14	15	14	14	14	17	18	20	23	18	17	17	14	14	15	14	14	14	18	15
10	14	16	16	15	15	15	15	14	14	15	17	18	18	43	16	14	15	14	17	14	14	15	14	15
11	14	14	14	14	15	15	16		14	17	17	22	23	23	18	16	14	14	14	14	14	15	20	14
12	15	15	14	14	15	14	15	14	14	14	20	24	24	20	17	17	15	14	14	14	15	14	14	14
13	14	14	14	14	17		14	14	14	17	18	21	27	20	20	20	18	14	16	15	14	16	15	14
14	14	14	14	14	15		17	14	17	21	17	32	29	26	20	20	14	14	17	15	14	15	17	14
15	15	15	14	14	15	14	16	14	14	15	17		20	17	20	21	15	14	15	15	15	15	14	18
16	15	15	15	15	14	16	14	14	14	14	16	21	17	17	42	21	14	14	14	14	15	14	15	14
17	14	14	16	15	15	15	15	14	14	16	16	16	15		16	14	14	14	14	15	14	14	14	14
18	14	14	14	15	15	14		14	14	14	16	26	28	29	28	20	16	14	15	14	14	14	14	14
19	14	15	14	15	15	14	14	14	14	17	18	26	22	21	27	18	18	14	14	14	14	15	14	15
20	14	15	14	15	15	14	15	14	14	15	14	14	14	15	14	14	14	14	14	15	14	14	14	14
21	14	14	14	15	15	15	16	14	14	17	20	C	C	30	28	18	18	14	16	14	14	14	15	15
22	14	15	16		17	15	16	14	14	17	18	46	32	C	15	14	17		21	15	16	15	14	14
23	15			16	14	15	14	17	16	18	26	C	C	C	C	C	C	15	15	15	15	14	14	15
24	17	22	15	15	15	15	14	14	15	17	C	C	C	27	20	20	16	14	14	14	14	15	14	14
25	15	16	17	18	15	16	14	14	14	17	C	C	C	C	C	17	14	14	16	15	15	15	16	16
26	15	15	16	16	15	16	15	17	16	18	C	C	C	C	C	C	18	14	17	16	15	15	15	
27	21	15	17				16	14	15	17	C	C	C	C	C	C	C	C	14	14	20	21	17	18
28	18		17		15	16	15	14	C	C	C	C	44	43	48	C	C	23	16	16		17	18	18
29	17	20	17	17	16	16	15	14	15	C	C	C	C	C	C	C	C	14	14	16	16	15	15	17
30	15	18	17	17	18	18	16	14	17	C	C	C	C	C	C	C	C	16	16	15	14	16	16	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	28	29	26	27	27	29	29	28	27	23	20	21	22	23	24	25	28	30	30	29	30	30	28
MED	14	15	14	15	15	15	15	14	14	17	18	21	22	22	18	17	15	14	14	15	14	15	14	14
U Q	15	15	16	15	15	16	16	14	15	17	18	26	26	27	23	20	17	14	16	15	15	15	16	15
L Q	14	14	14	14	15	14	14	14	14	15	17	18	17	18	16	15	14	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

SEP. 2007

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1				A			28	44	45	72	60		57		66	68	76	84	97	100		43		
2	28						30	58	57	52	58			69	78	83	74	67	66	70	66	49	42	42
3					29	30		50	75	56	47		64	71	73	69	73	71	76	78	82	31		
4	28	30	30				30	48	68	61	A	57		60	64	57	60	60	60	44	A	47	A	28
5	A	A	A						53					58	A	66	62	61	72	85	78	A	A	A
6		28	26			A		57	42	48	57		A	A	76	67	67	71	72	82	108	A		
7		29	29		26			38	58	C	C	C	C	C	C	C	C	65	61	51	46	A		26
8			31	28		A	30	48	52	61	C	C	C	C	C	C	C	84	88	80	70	52		
9		37	30	30			30	51	56	58	47		61	68	65	62	65		76	76	72	44	32	
10								55	58	54		62	61	71	72	72	A	A	71	A	51	43	28	
11					23		30		55	51	52	61	81	78	76	68	67	78	106		A	A	A	
12		A	A	A	A		27	A	72	A	A	A	60		104	105	107	108	101	82	48	A	A	31
13	31		34			A		55	58	58		A	81	A	102	86	78	81	70	62	54	37	37	
14								45		61	56	57	62	70	70	56	64	72	81	76	70		A	
15								44	54	52	46		60	66	67	67	64	70	68	63	59		30	34
16	31			29				50	73	57		54	59	65	72	85	87	95	90	77	54			A
17		29	36	A	A	A		52	59				A	A		71	71	82	86	76	65		A	28
18	A	29	A		A			51	61	43	A	A	A		A	67	75	88	78	72	48			26
19	29	29	30	30			30	47	61	56	47			A	67	66	67	81	86	75	44	28		37
20	30	30					28	57	61	50			57	49	61	65	72	64	64		61		43	48
21	41	40	34	30	28			65	55	62	57		81	90	81	82	75	63	58	60	54	45	36	
22	34	28	28					56	51	47	62	67	74	58	62	64	67	80	72	52	53	40	34	30
23	28	34	30		29	29		47	50	61	62	63	61	71	88	74	71	63	76	58	54		A	34
24	32	34					30	61	57	C	C	C	C	C	C	C	C	C	89	78	51	31	30	
25	34		A					51	62	C	C	C	C	C	C	C	C	C	88	81	43	34		
26	31	29	30	30	28		29	45	54	57	C	C	C	C	C	C	C	C	C	61	32			29
27								64	70	C	C	C	C	C	C	C	98	71	60	55	46		32	
28	38							42	54	75	85	68	87	88	122	138	124	106	66			30	34	34
29	30	31	28	32	30	26		48	54	64	54	56	72	86	91	102	102	94	67	36	34	29	32	32
30	37	32	32	30	31	36	31	55	62	68	60	70	77	87	107	118	121	107	87	34	32			A
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	15	14	8	8	4	12	27	29	23	15	10	17	17	21	24	24	25	29	26	26	15	12	14
MED	31	30	30	30	28	30	30	51	57	57	57	62	62	70	73	68	72	78	76	74	54	40	33	32
U Q	34	34	32	30	29	33	30	56	61	61	60	67	79	82	89	84	82	86	87	78	66	45	36	34
L Q	29	29	29	29	27	27	28	47	54	52	47	57	60	62	66	66	67	66	66	58	46	31	31	28

HOURLY VALUES OF fEs AT Okinawa

SEP. 2007

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		32			G	32	G	40	G	G	G		G	G	G	G	32	49	38	48		
2	G					G	G	G	G	G	G			G	G	G	G	G	G	G	G	G	G	G
3	27				G	G		G	38	G	58	G	G	G	G	G	G	G	38	29	G	11	27	28
4	G	G	G		G		G	29	79	58	79	G		G	G	44	G	G	54		76	58	32	27
5	41	36	26				G		36	40	G		G	60	50	45	42	35	G	28	28	30	92	33
6	33	27	26	26	G	28	28	55	34	G	51	58	70	90	72	58	61	40	86	51	34	37	28	40
7		G	G		G	G		33	45	C	C	C	C	C	C	C	C	42	34	36	37	57		G
8	28	37	G	28		36	26	35	48	60	C	C	C	C	C	C	C	G	34	G	G	G	35	27
9	34	28	G	G			G	35	37	50	46	44	G	G	G	41	39		60	35	28	G	G	
10							G	30	36	G	G	G	G	G	G	G	81	96	72	108	G	G	G	
11			G	G	G		26	35	40	41	G	G	49	G	G	50	66	58	84	45	36	29	52	
12	29	38	39	48	27		G	77	108	104	76	112	58		G	G	G	G	G	G	G	36	48	28
13	32	39	31	28	27	26	32	40	39	G	43	70	58	102	G	G	G	34	G	25	G	G	G	29
14	28	30	32	25				G		44	58	50	G	G	G	G	G	35	36	81	33	28	36	
15		G					G	35	46	G	52	G	G	G	G	G	G	38	35	G	G		26	G
16	G			G			G	34	34	G	G	G	51	46	G	G	G	41	40	29	27	27	40	45
17	28	G	34	39	40	41	G	51	48	50	59	72	66	45	50	40	48	36	G	40	50			30
18	48	32	29	G	29		G	30	50	44	54	58	74	57	71	61	48	44	48	36	39	32	34	G
19	34	26	26	G	28	25	24	28	34	G	G	48	53	82	G	52	48	42	39	33	G	G		G
20	G	G	G				G	34	39	G		G	G	48	52	50	50	46	34		41	27	36	27
21	24	G	G	G	G			32	41	G	49	52	53	52	65	56	55	40	54	38	G	G	28	37
22	G	G	G					28	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	26
23	24	G	G	G	G	G	G	G	36	G	G	G	G	G	G	51	62	G	35	65	51	44	36	G
24	G	G					G	G	G	C	C	C	C	C	C	C	C	C	49	36	38	G	G	
25	G		30		G		G	G	G	C	C	C	C	C	C	C	C	C	G	28	11	G	G	G
26	G	G	G	G	G		G		G	G	C	C	C	C	C	C	C	C	C	G	G			G
27	G				G	G	G	35	57	C	C	C	C	C	C	C	48	38	32	25	G	G	G	G
28	G			25			G		G	G	G	G	G	G	G	G	G	G	29		G	G	G	G
29	G	G	G	G	G	G	G	31	G	G	G	G	50	53	G	G	G	37	G	24	G	G	25	G
30	G	G	G	G	G	G	G	48	38	43	G	G	G	G	G	G	74	49	G	24	G	G		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	25	22	21	18	17	12	25	27	29	26	23	22	22	22	24	24	25	26	29	27	30	27	24	24
MED	24	G	G	G	G	G	G	32	37	G	G	G	G	G	G	G	39	36	34	29	6	G	28	26
U Q	30	30	29	28	27	27	G	35	45	44	54	52	53	53	25	50	52	42	48	40	37	32	36	29
L Q	G	G	G	G	G	G	G	28	G	G	G	G	G	G	G	G	G	G	G	24	G	G	G	G

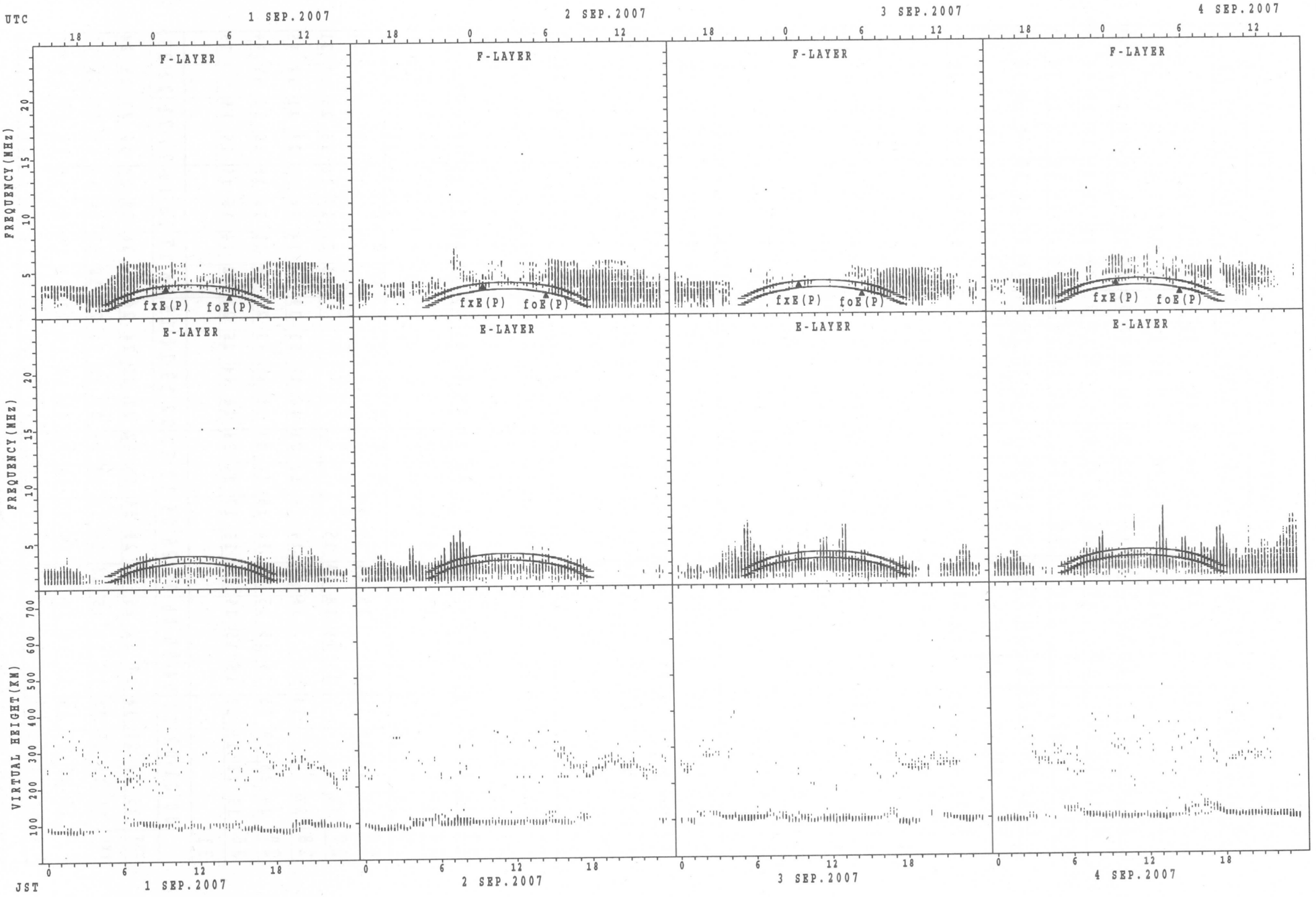
HOURLY VALUES OF fmin AT Okinawa

SEP. 2007

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

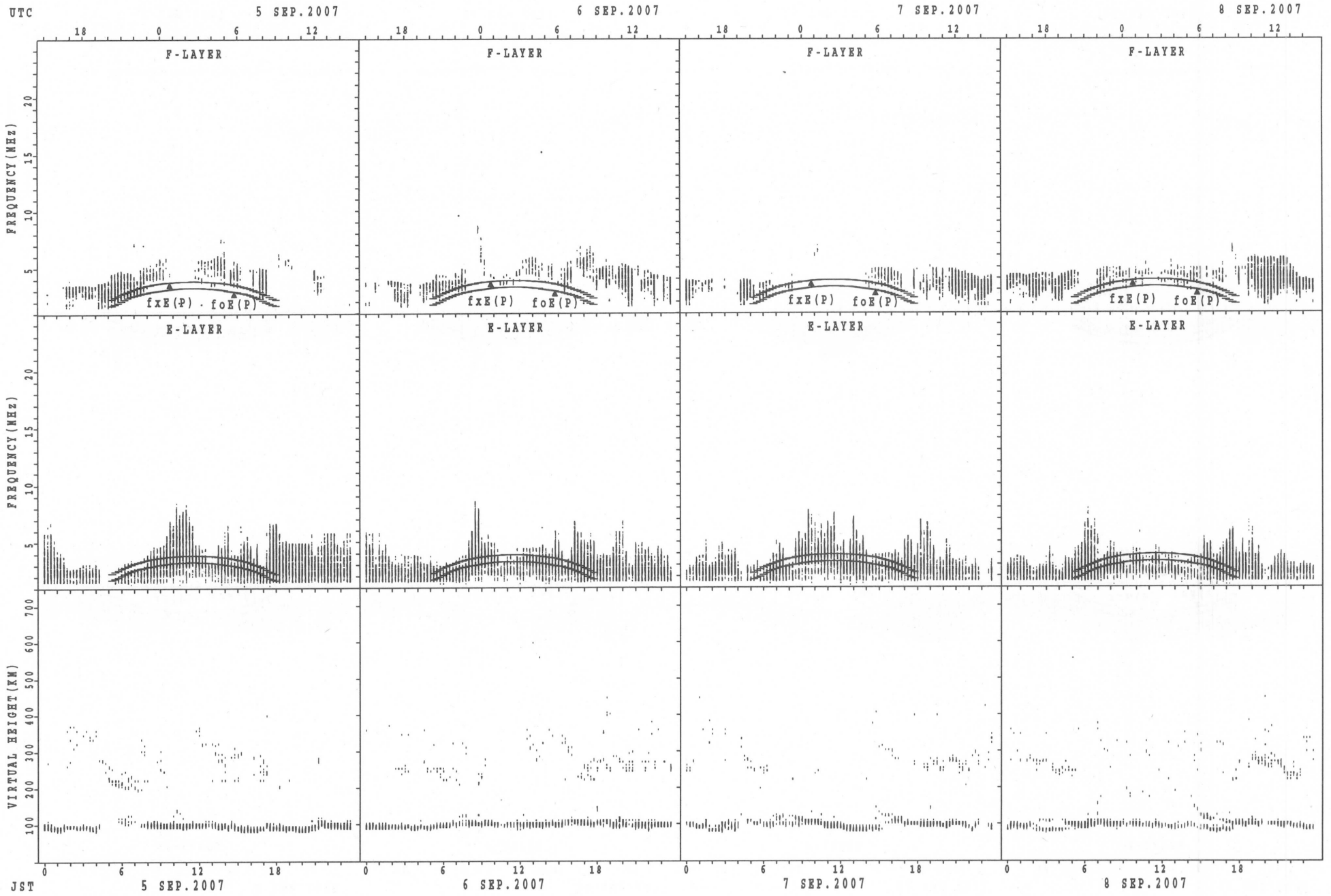
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		20		14			15	20	15	16	44	43	48		50	45	44	15	14	14	14	14		
2	15					15	14	14	17	16	48			48	47	45	17	14	15	15	15	16	30	15
3	14				15	15		16	14	17	23	21	21	23	50	22	20	16	16	14	15	14	14	15
4	14	14	14		14		17	15	22	15	21	20	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

SUMMARY PLOTS AT Wakkanai



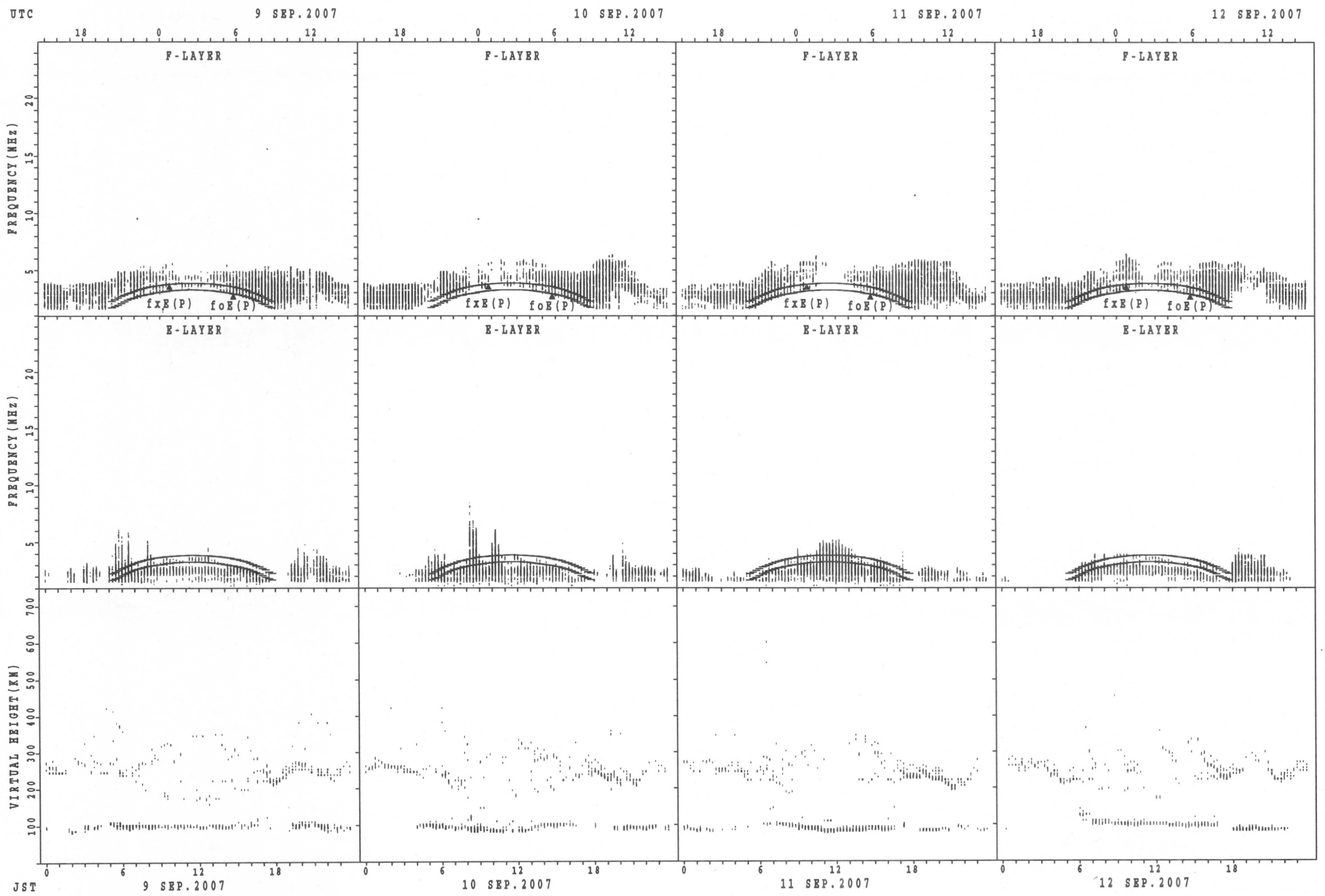
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



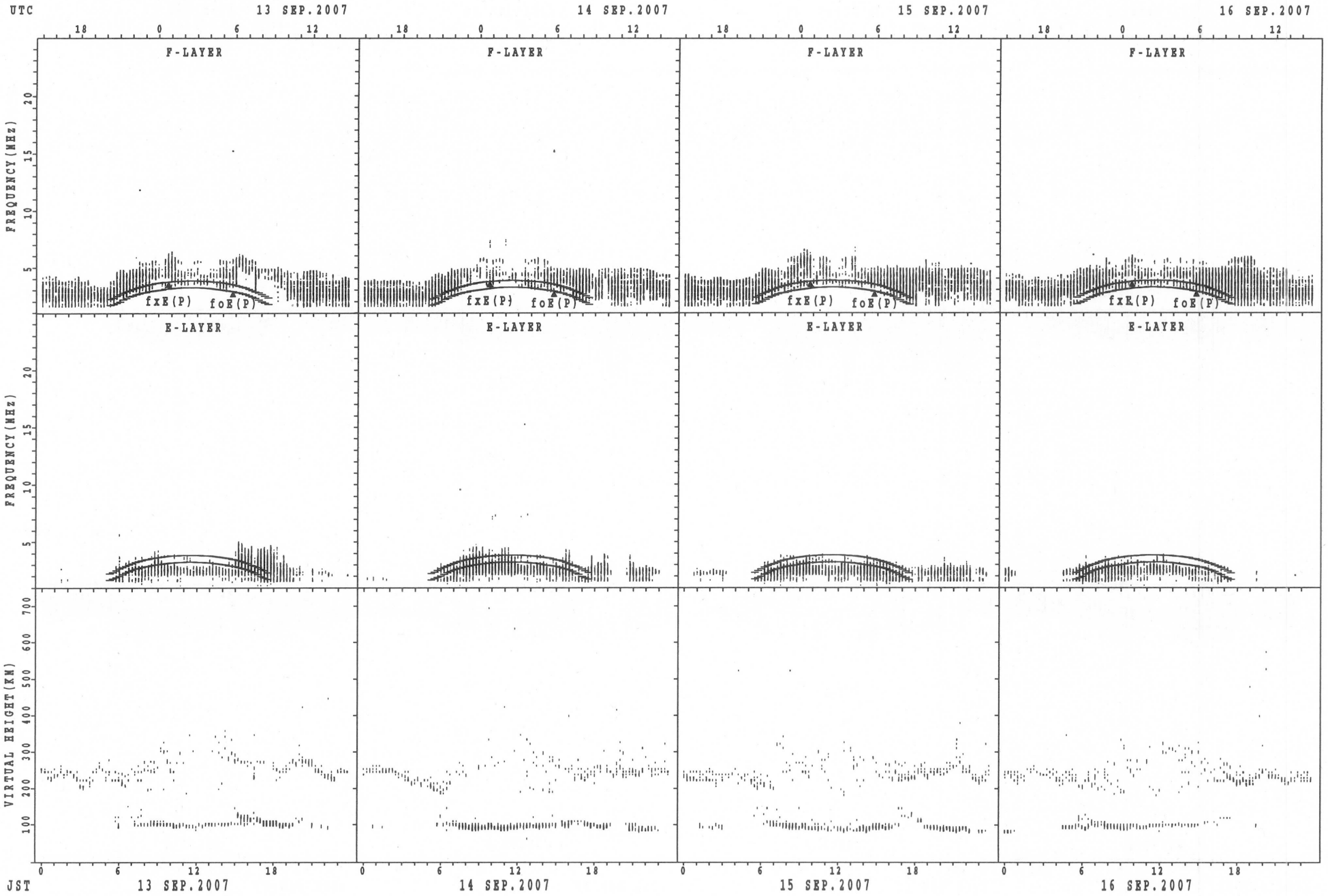
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



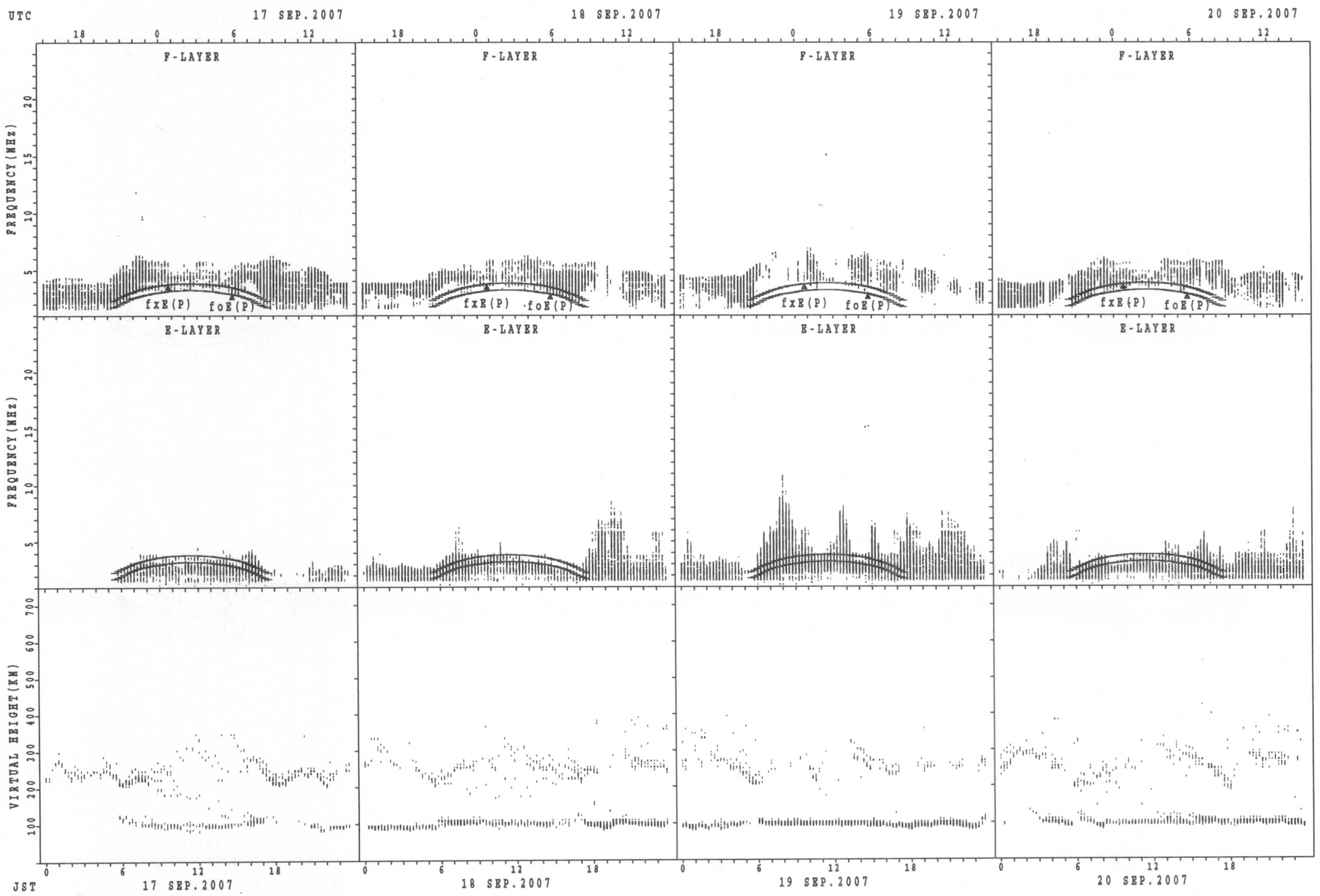
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



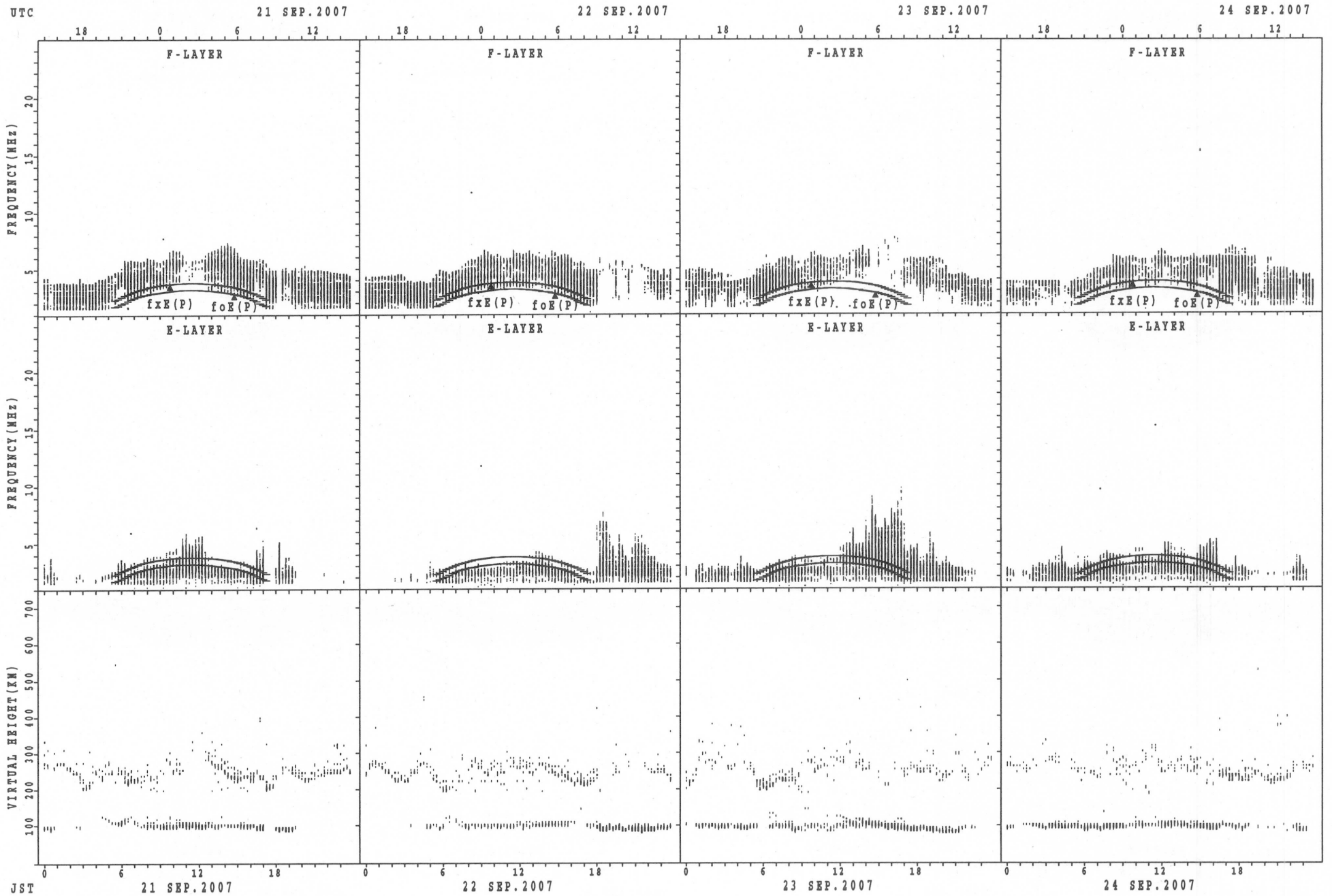
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



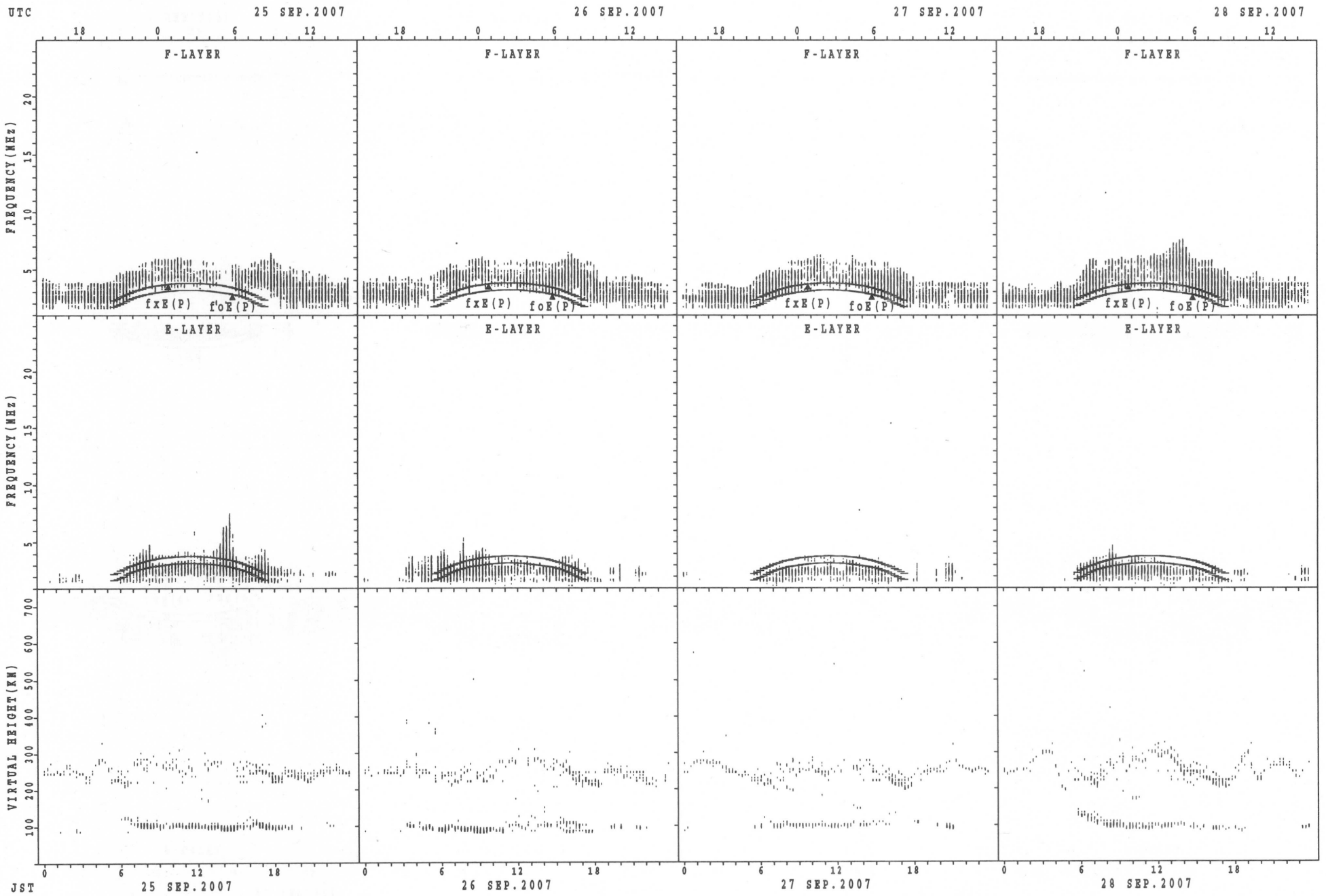
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



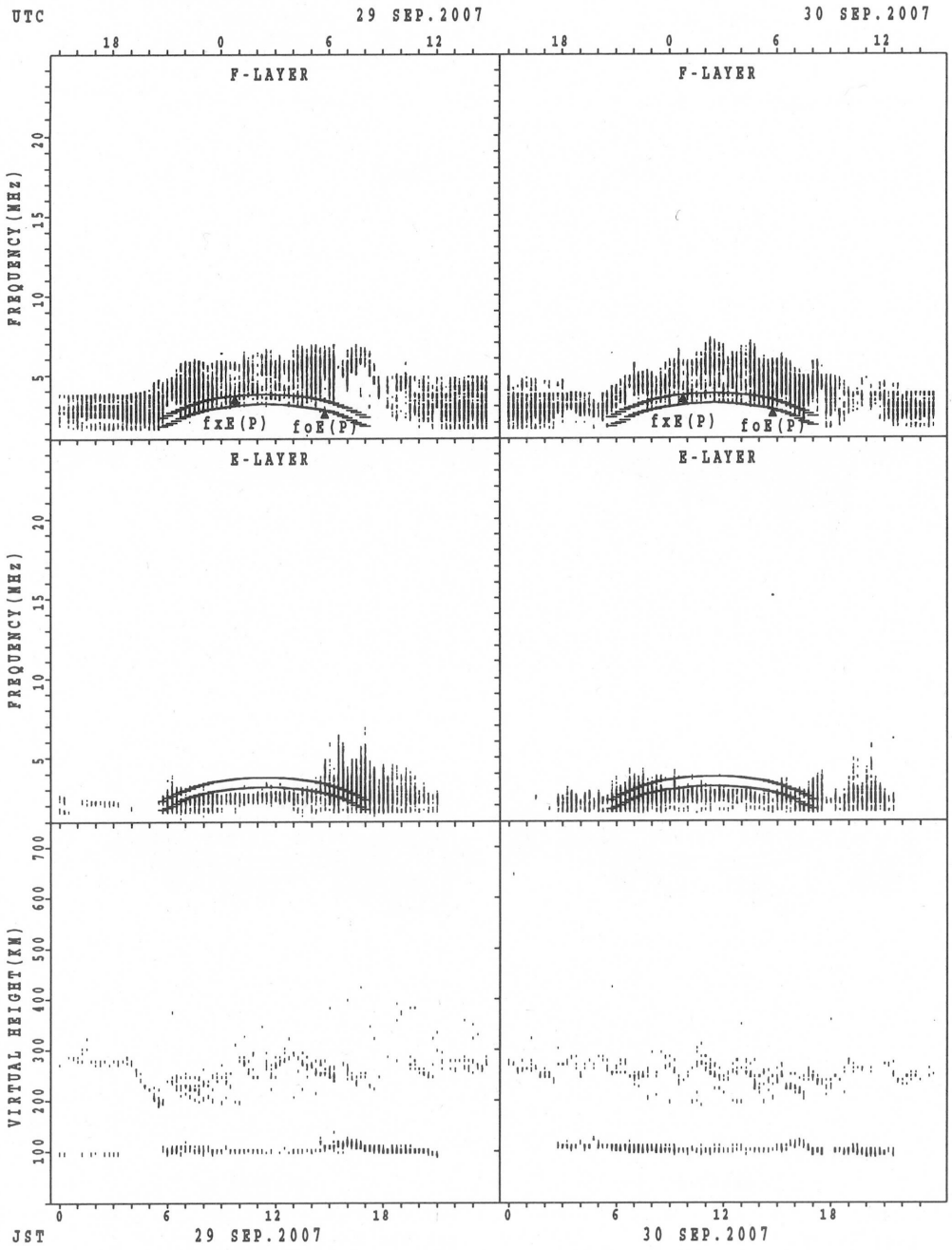
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



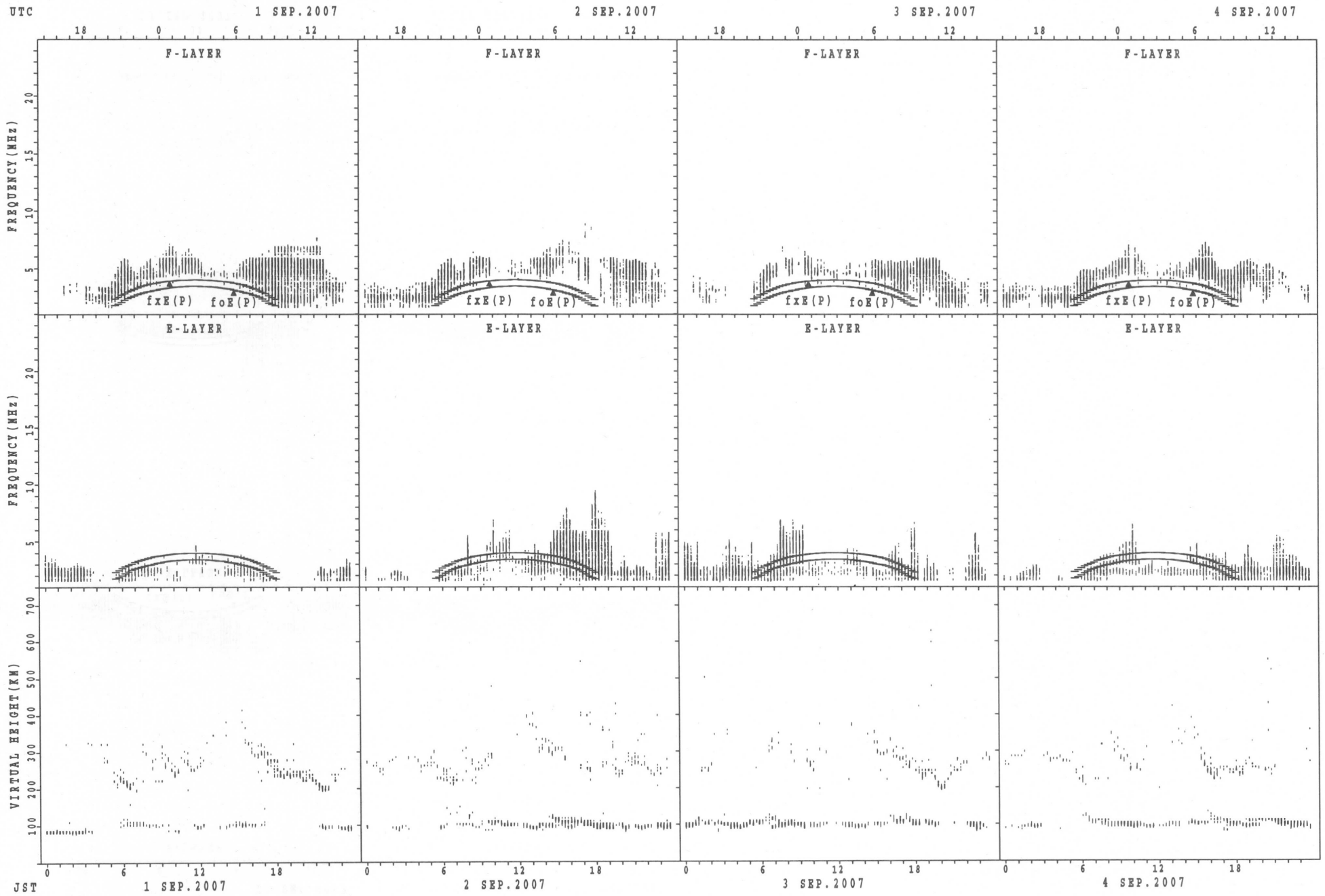
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



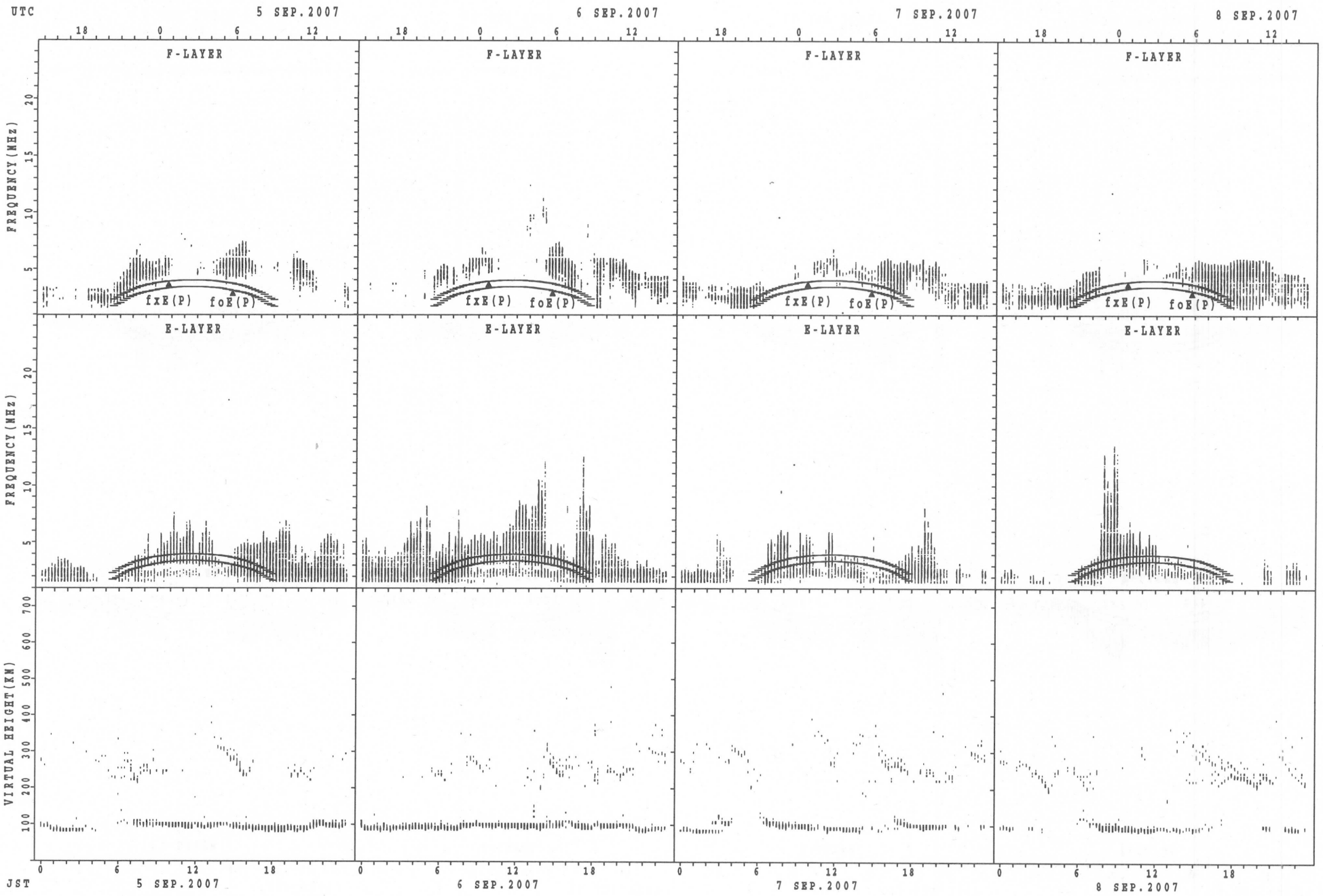
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



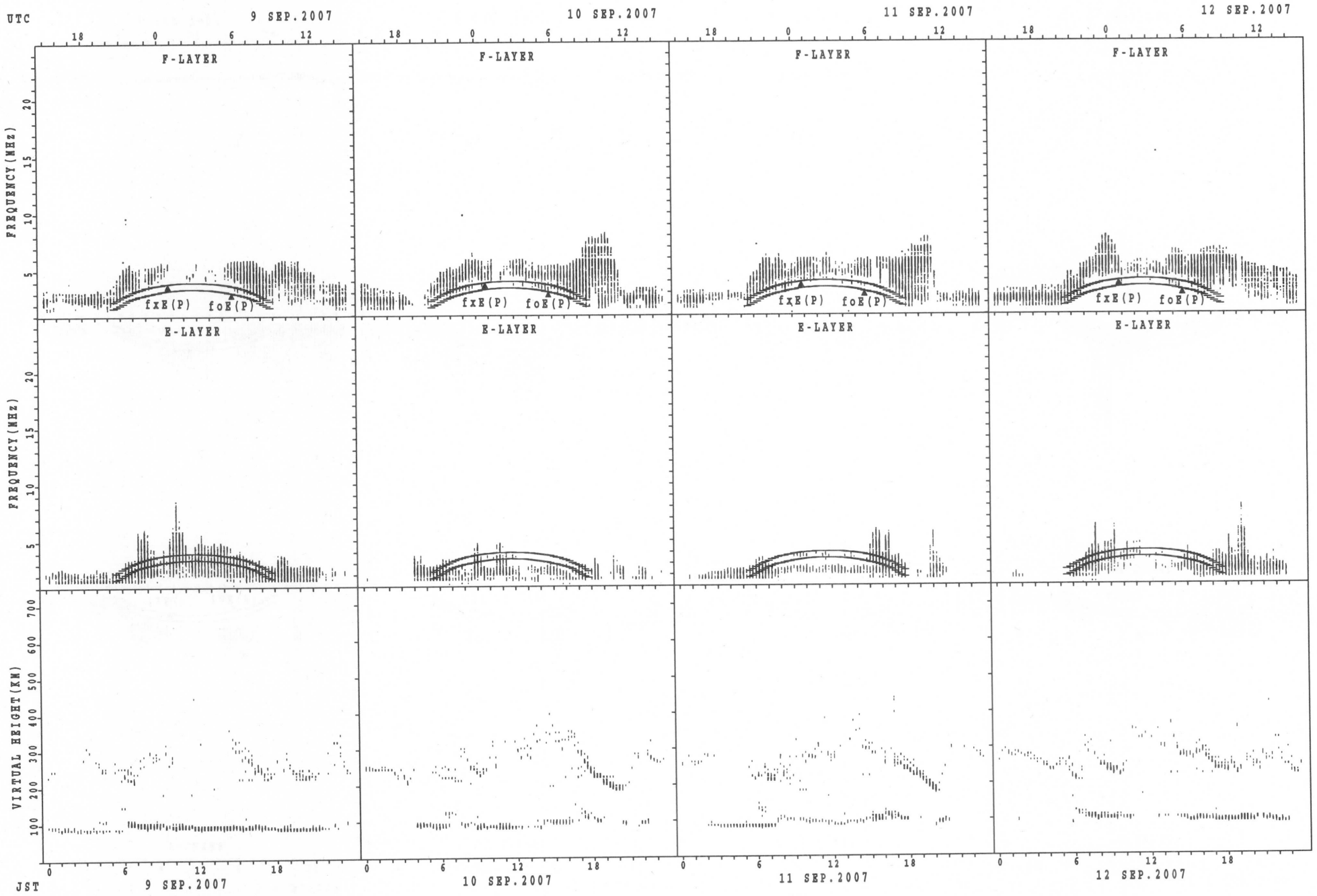
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



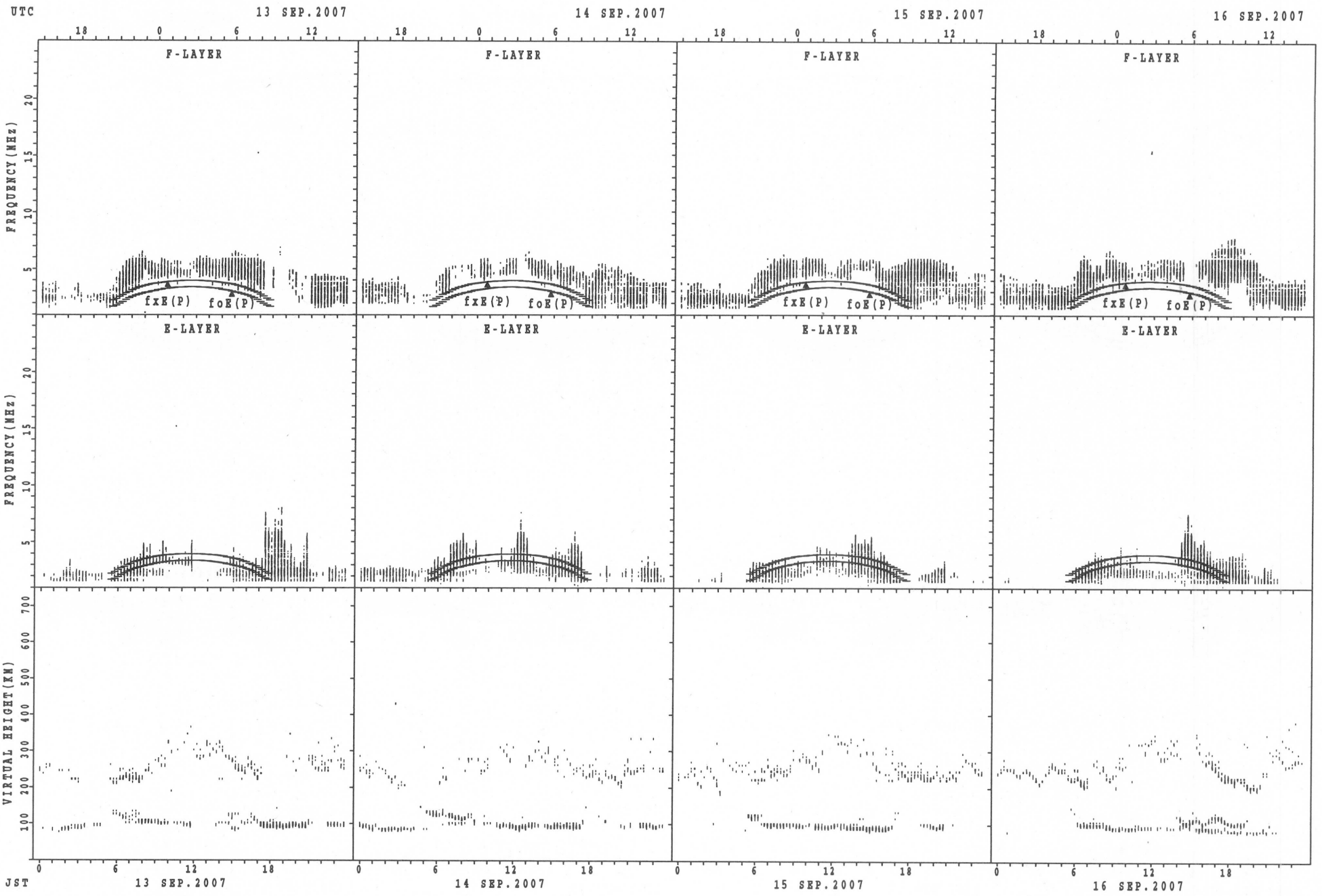
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



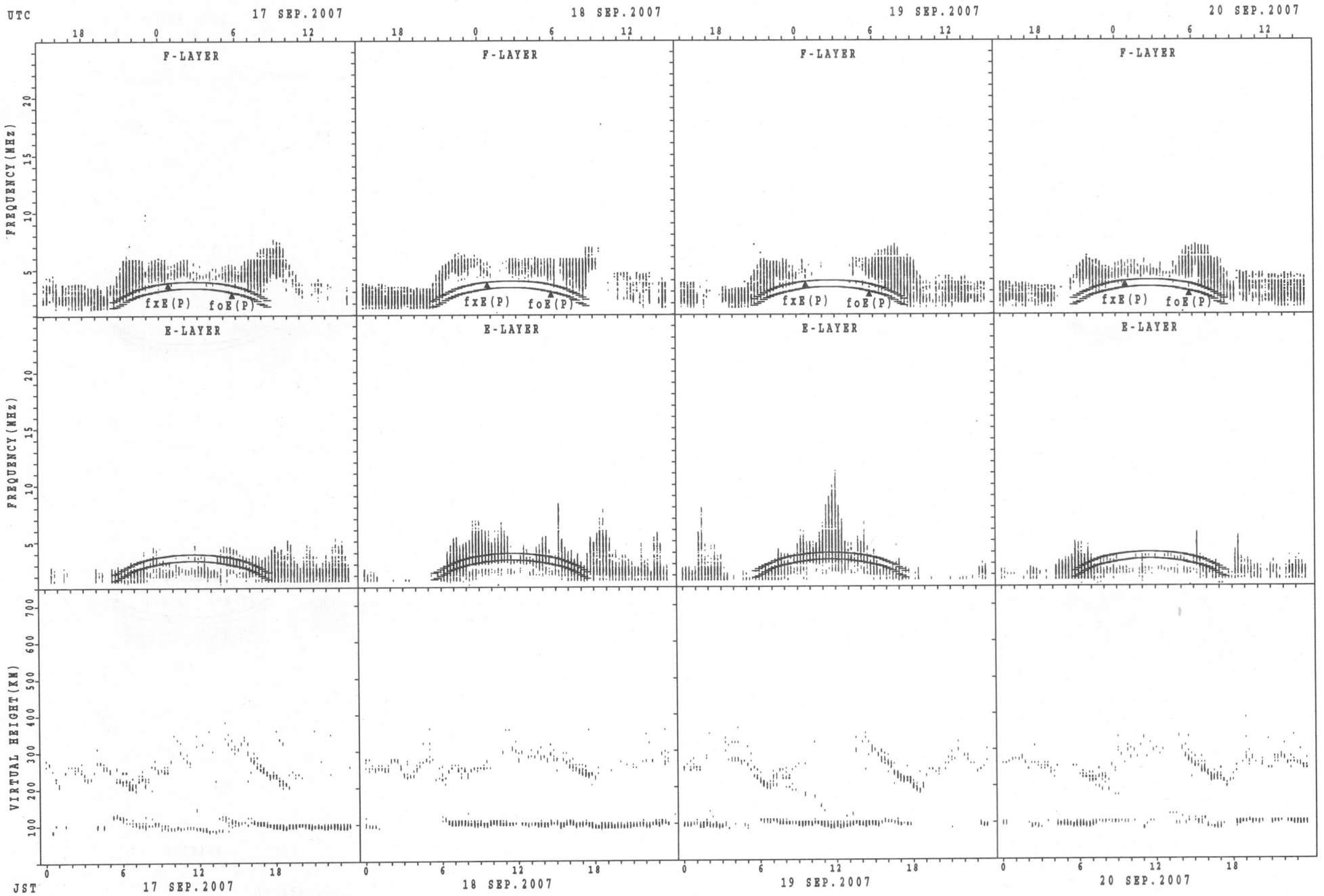
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



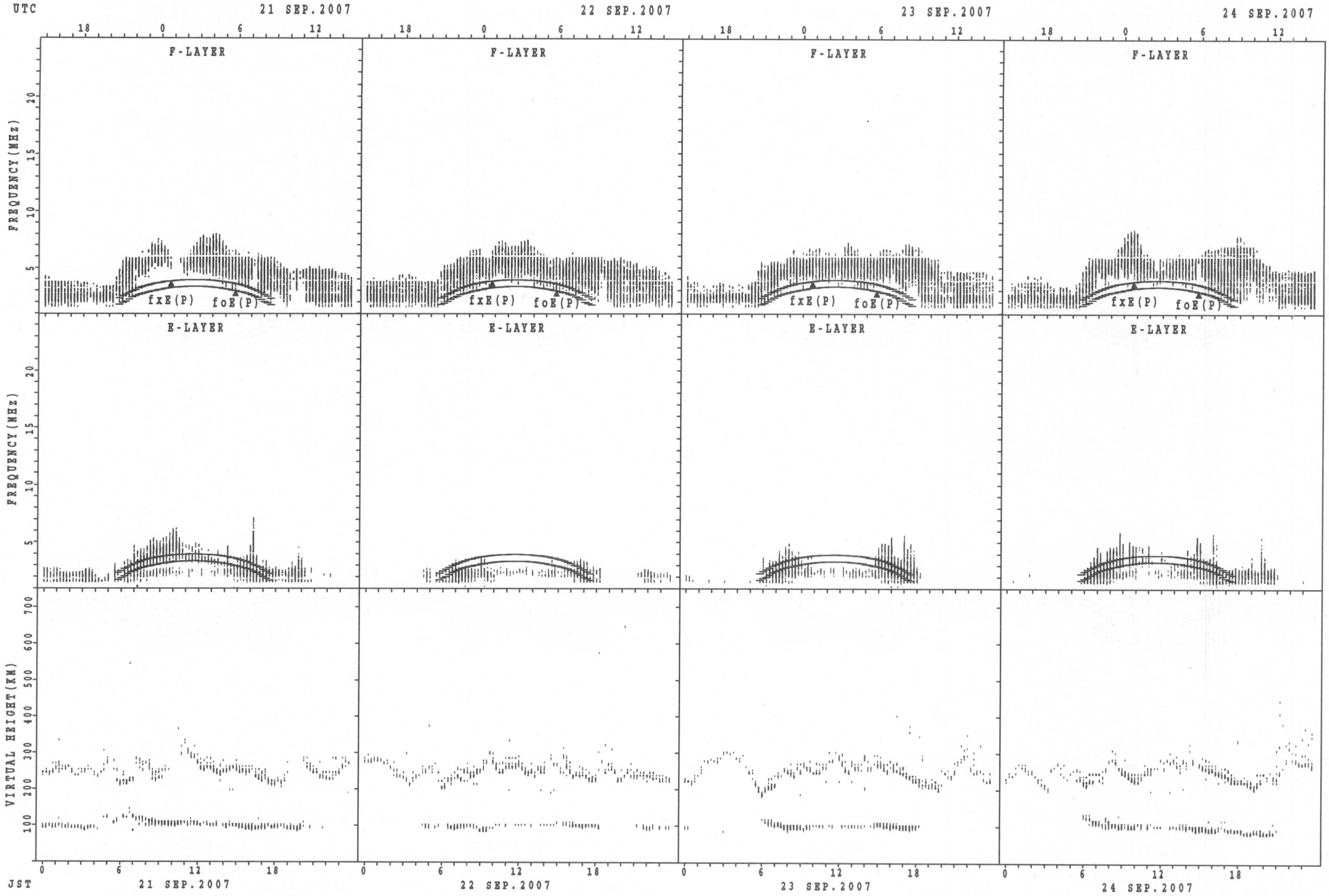
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

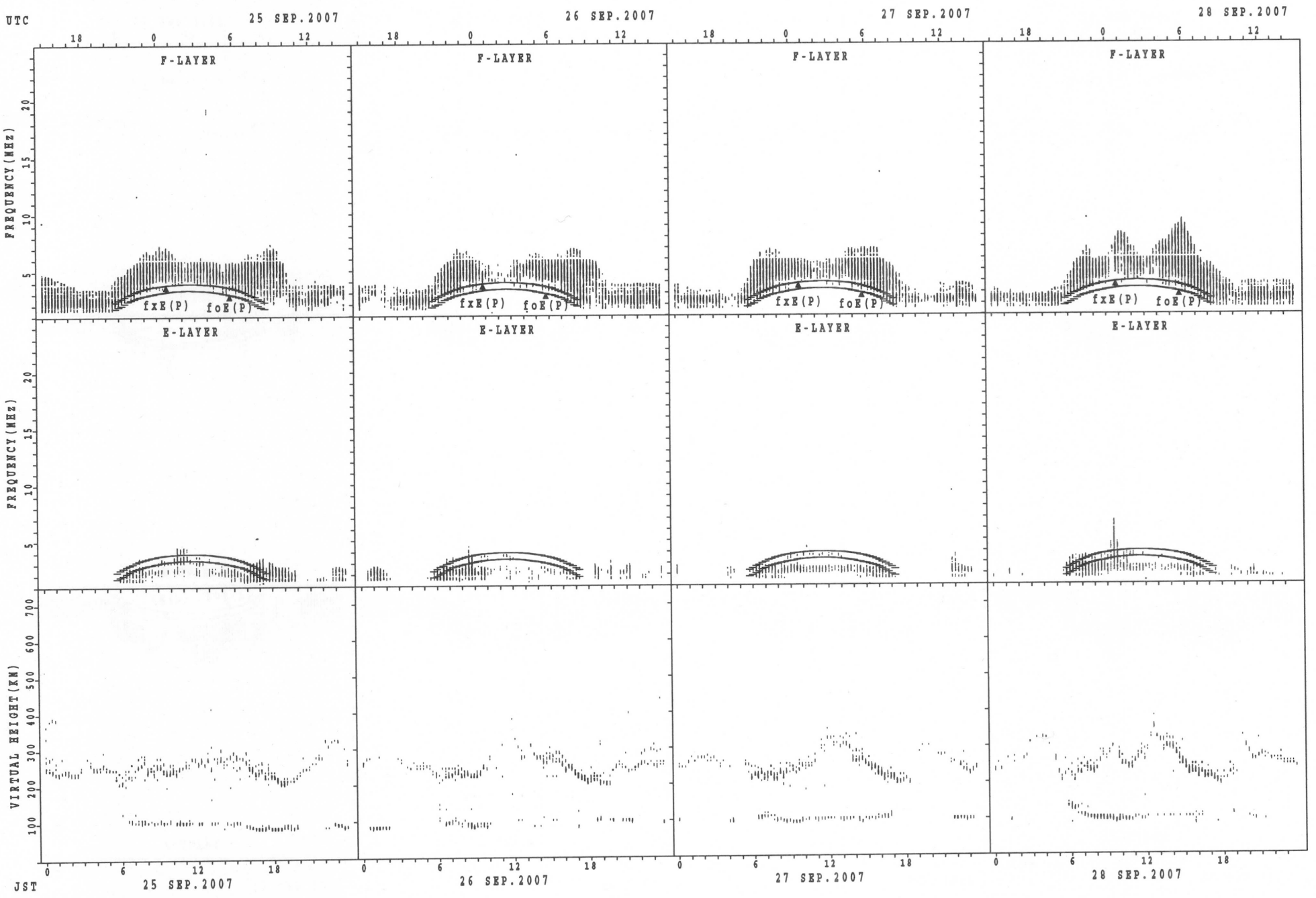


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

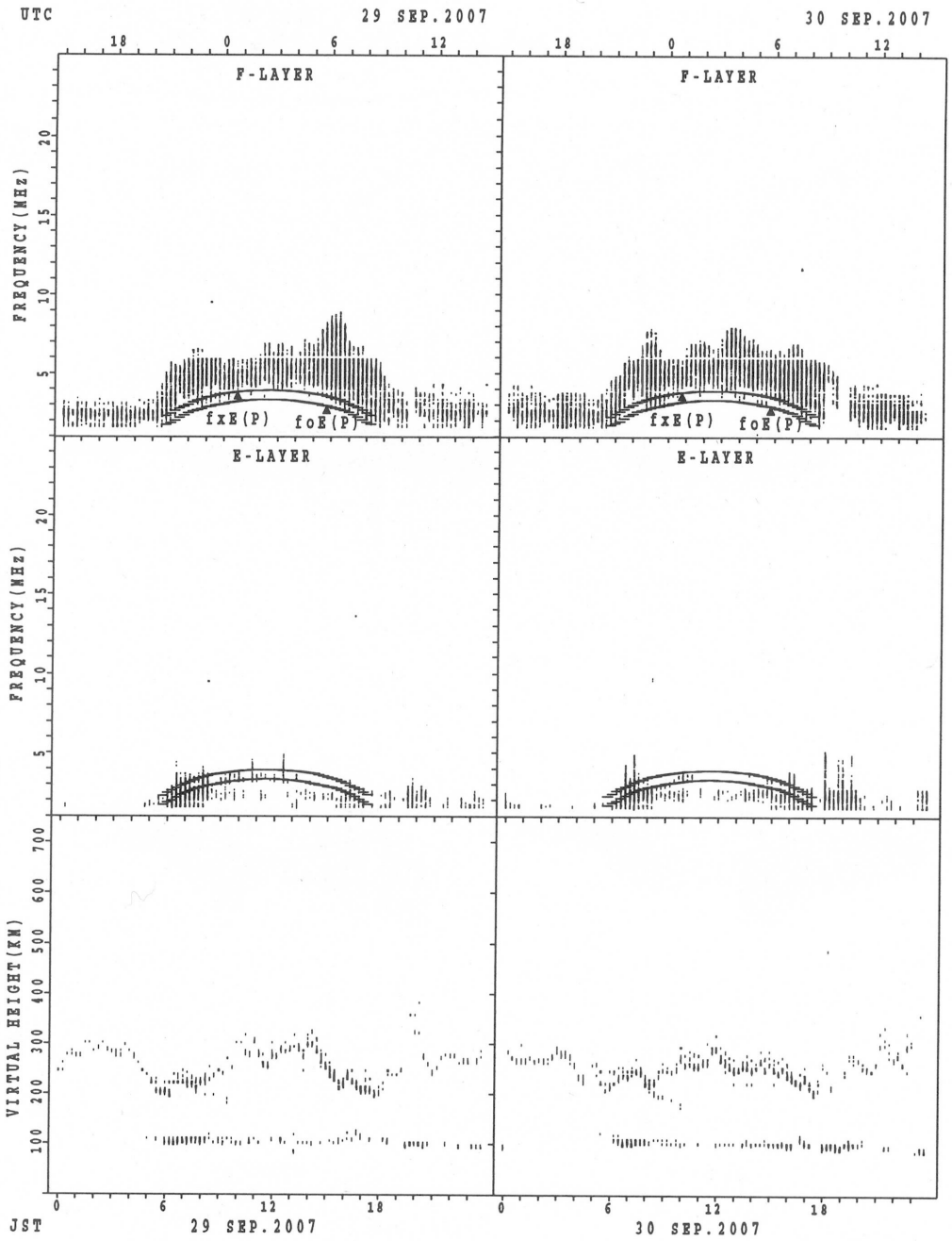
SUMMARY PLOTS AT Kokubunji



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

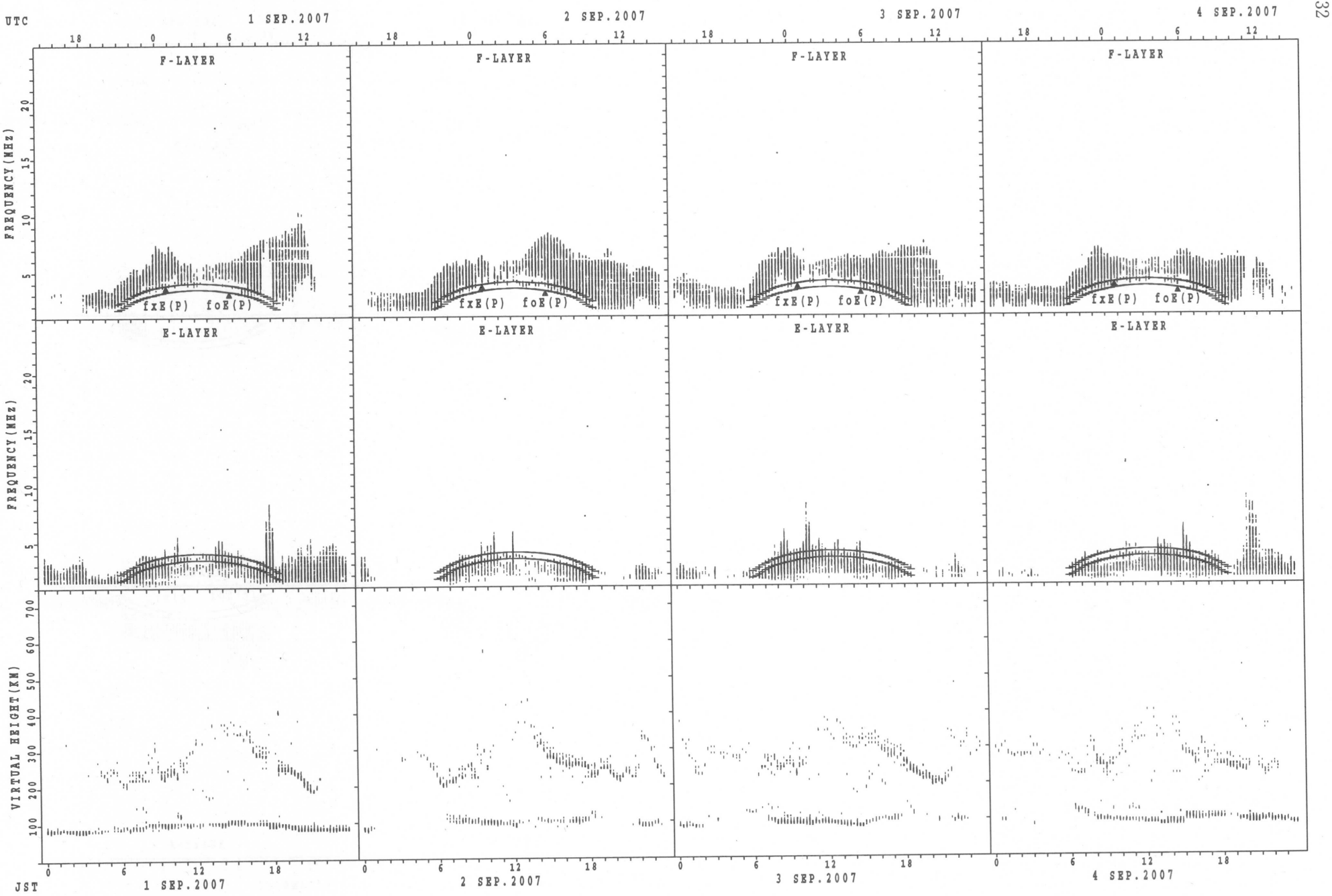

SUMMARY PLOTS AT Kokubunji
UTC
25 SEP.2007
26 SEP.2007
27 SEP.2007
28 SEP.2007
F-LAYER
fxE(P) foE(P)
FREQUENCY(MHz)
E-LAYER
VIRTUAL HEIGHT(KM)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

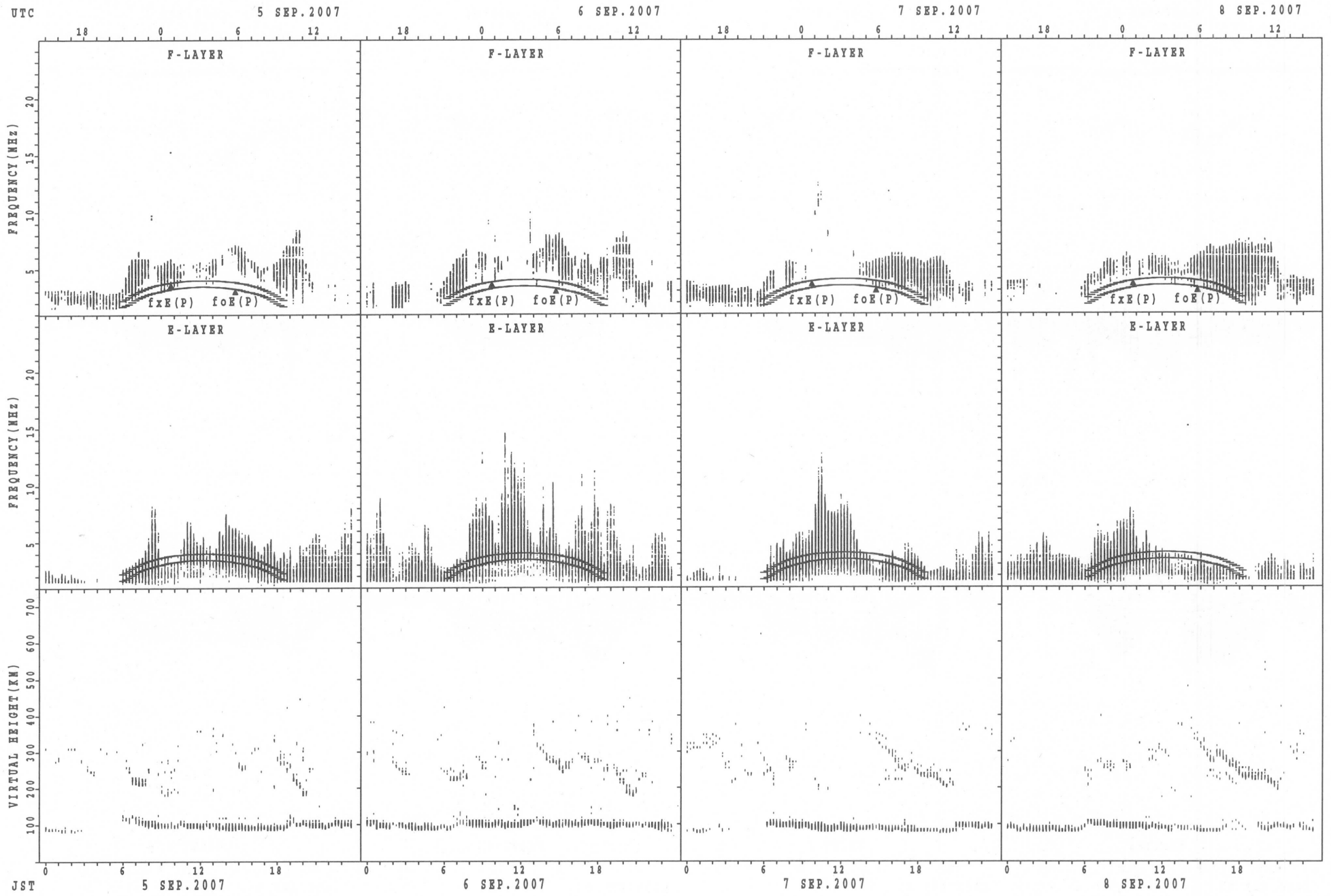


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

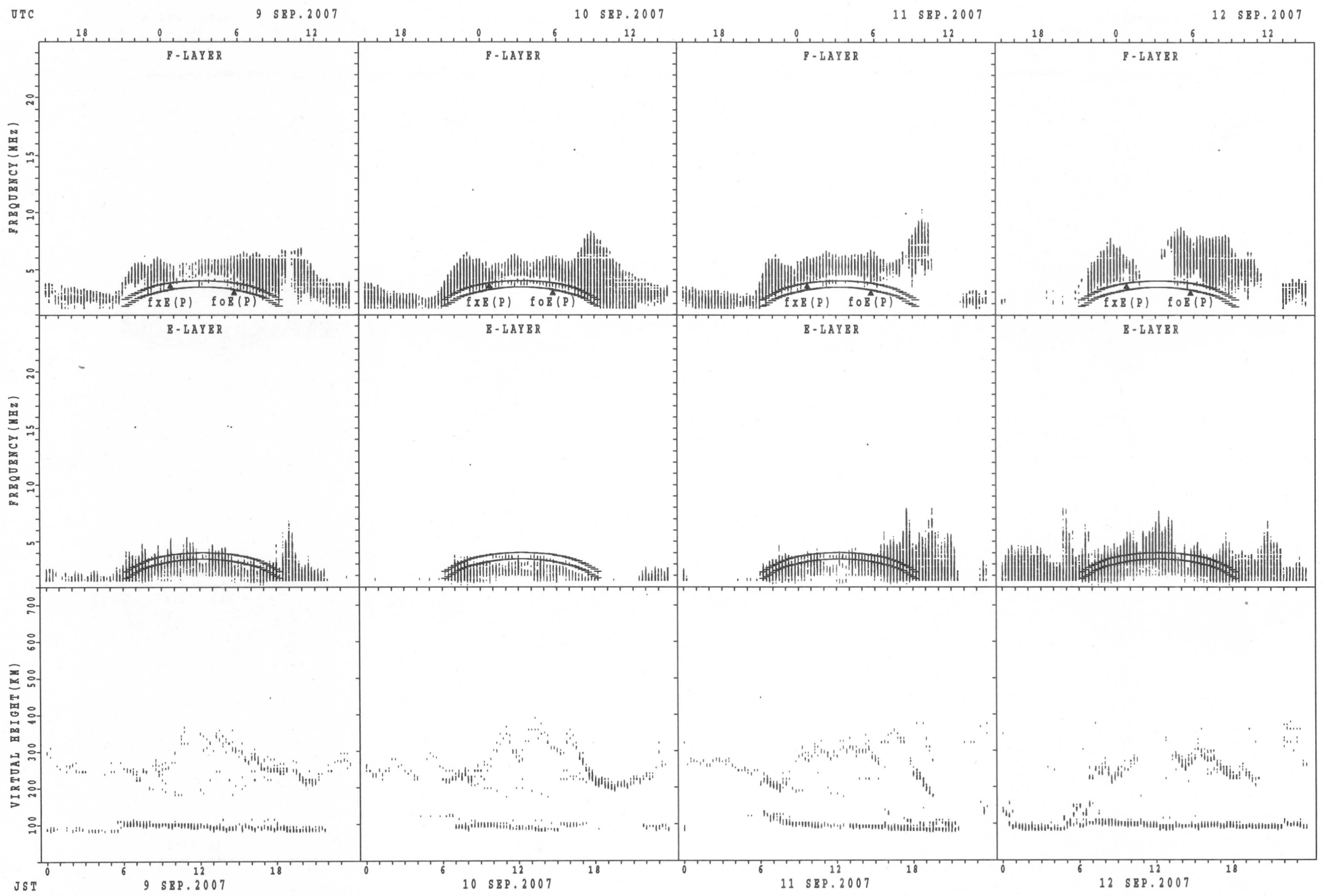
SUMMARY PLOTS AT Yamagawa



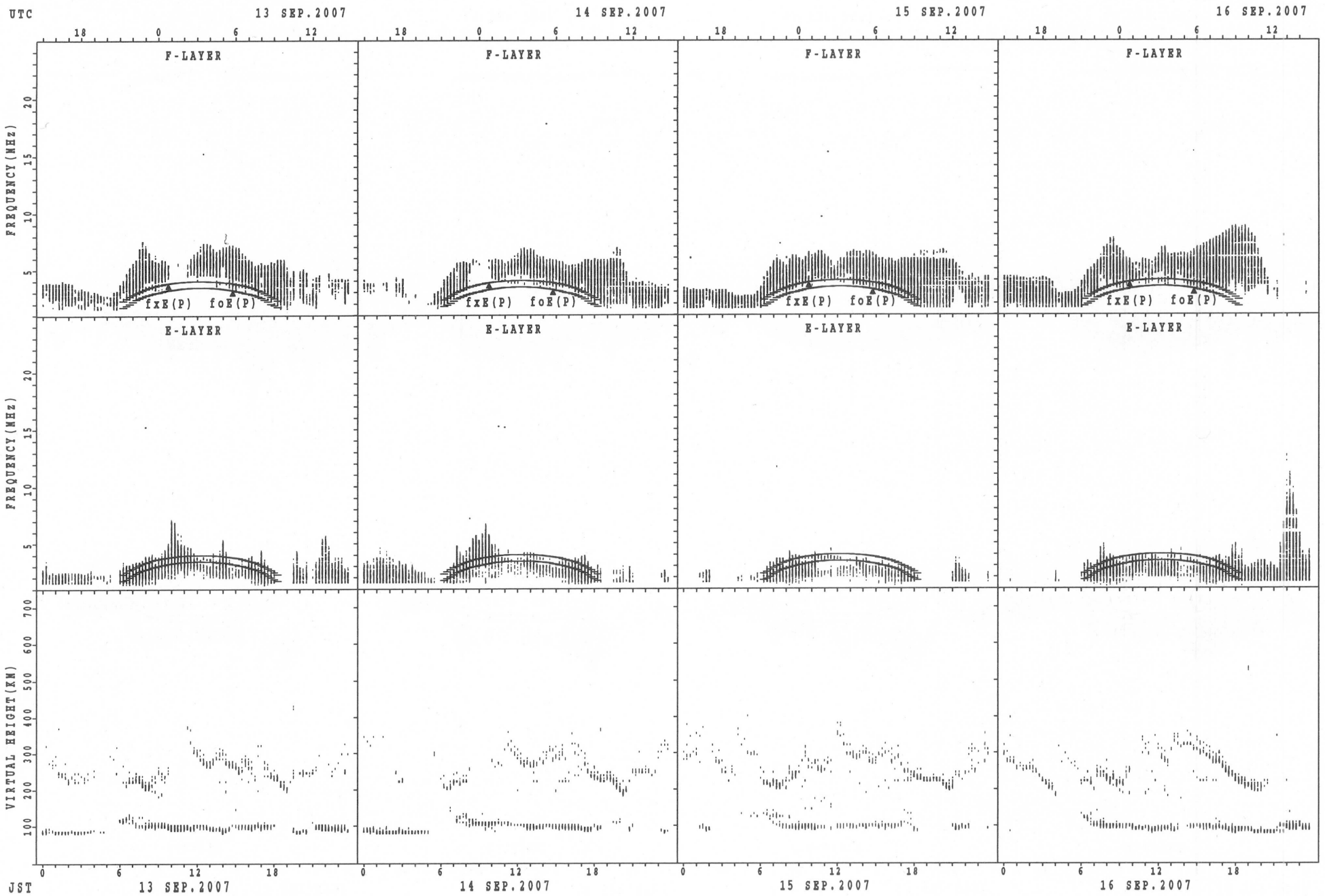
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE


SUMMARY PLOTS AT Yamagawa
UTC
5 SEP.2007
6 SEP.2007
7 SEP.2007
8 SEP.2007
F-LAYER
FREQUENCY(MHz)
fxE(P) foE(P)
E-LAYER
VIRTUAL HEIGHT(KM)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

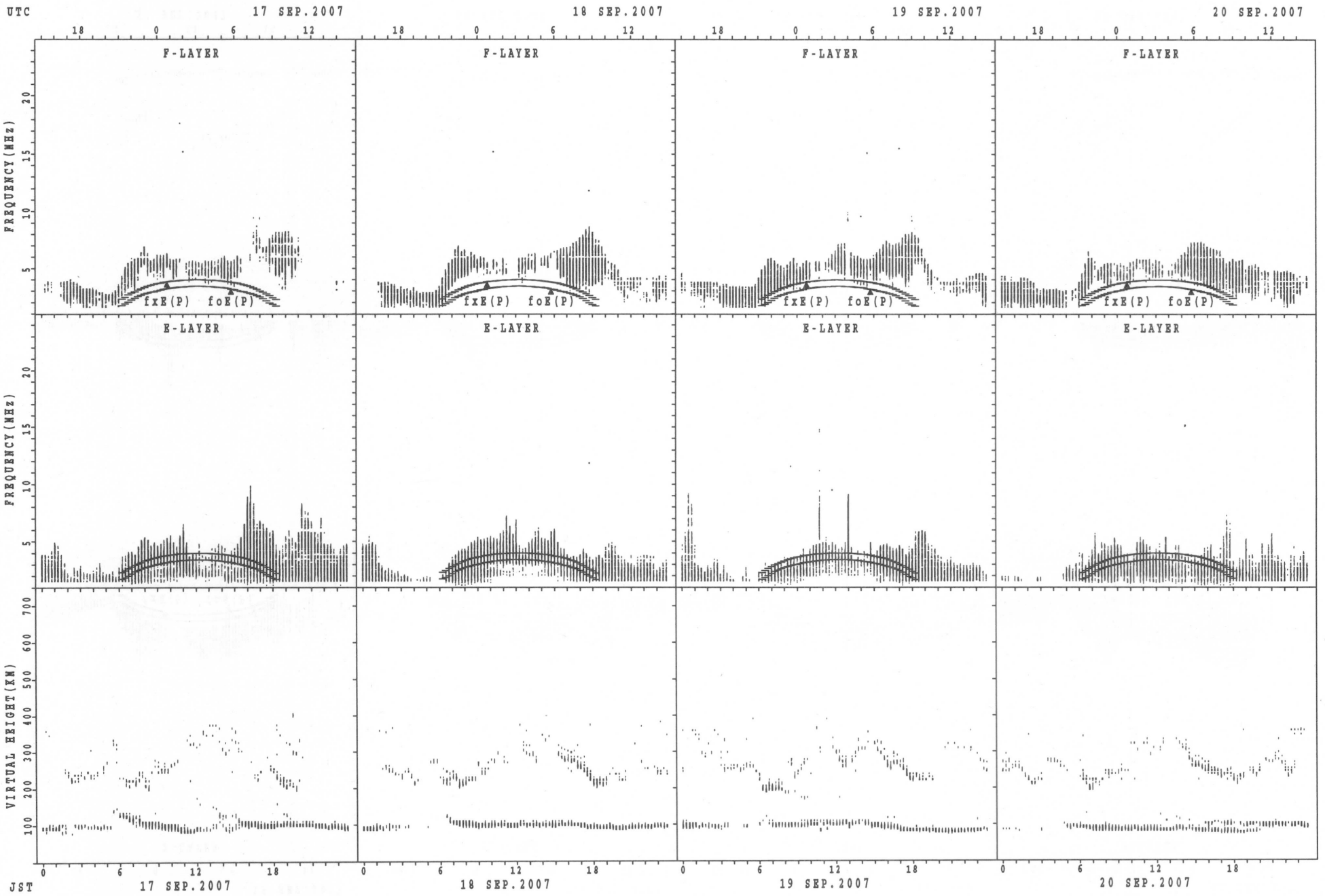


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE



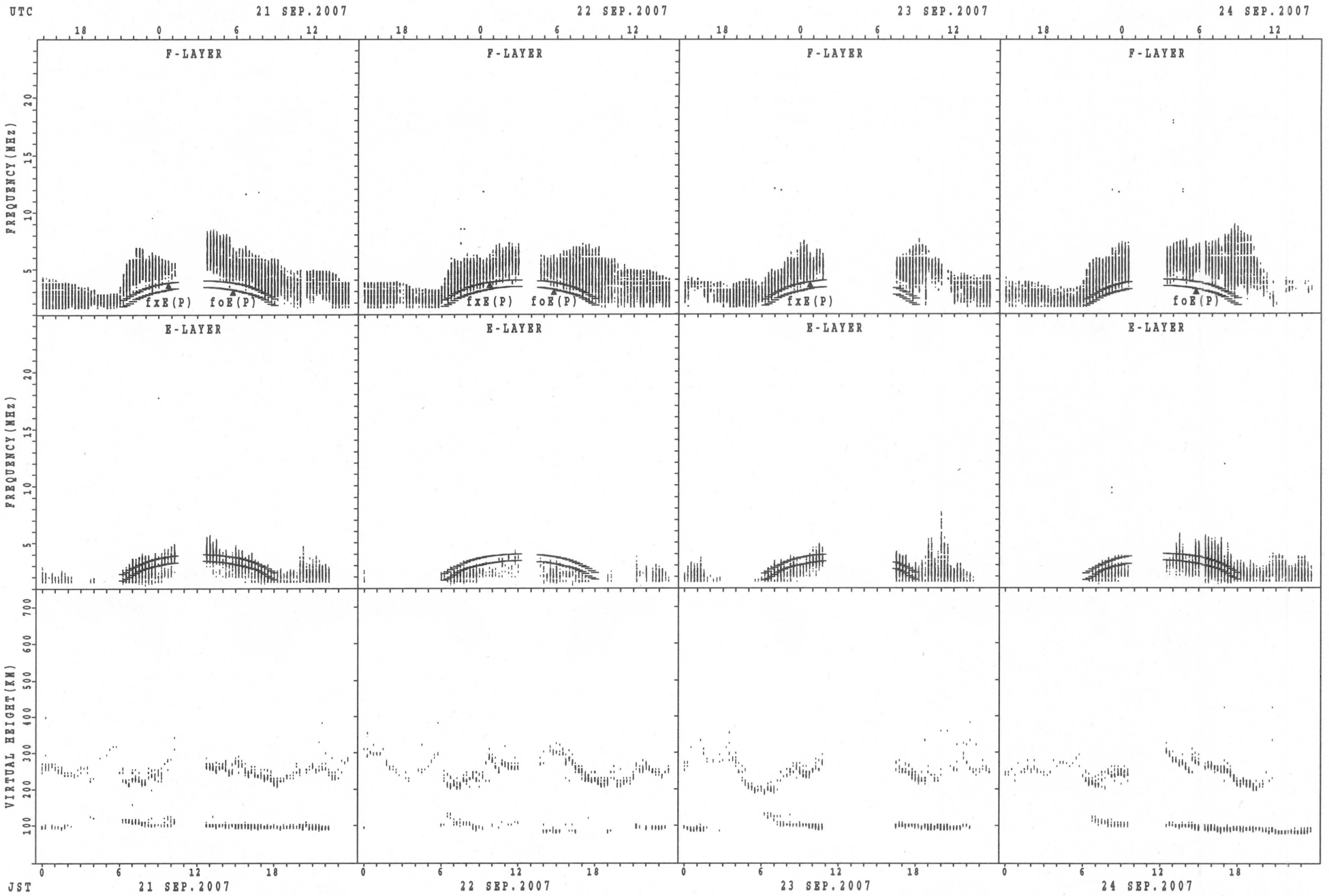
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



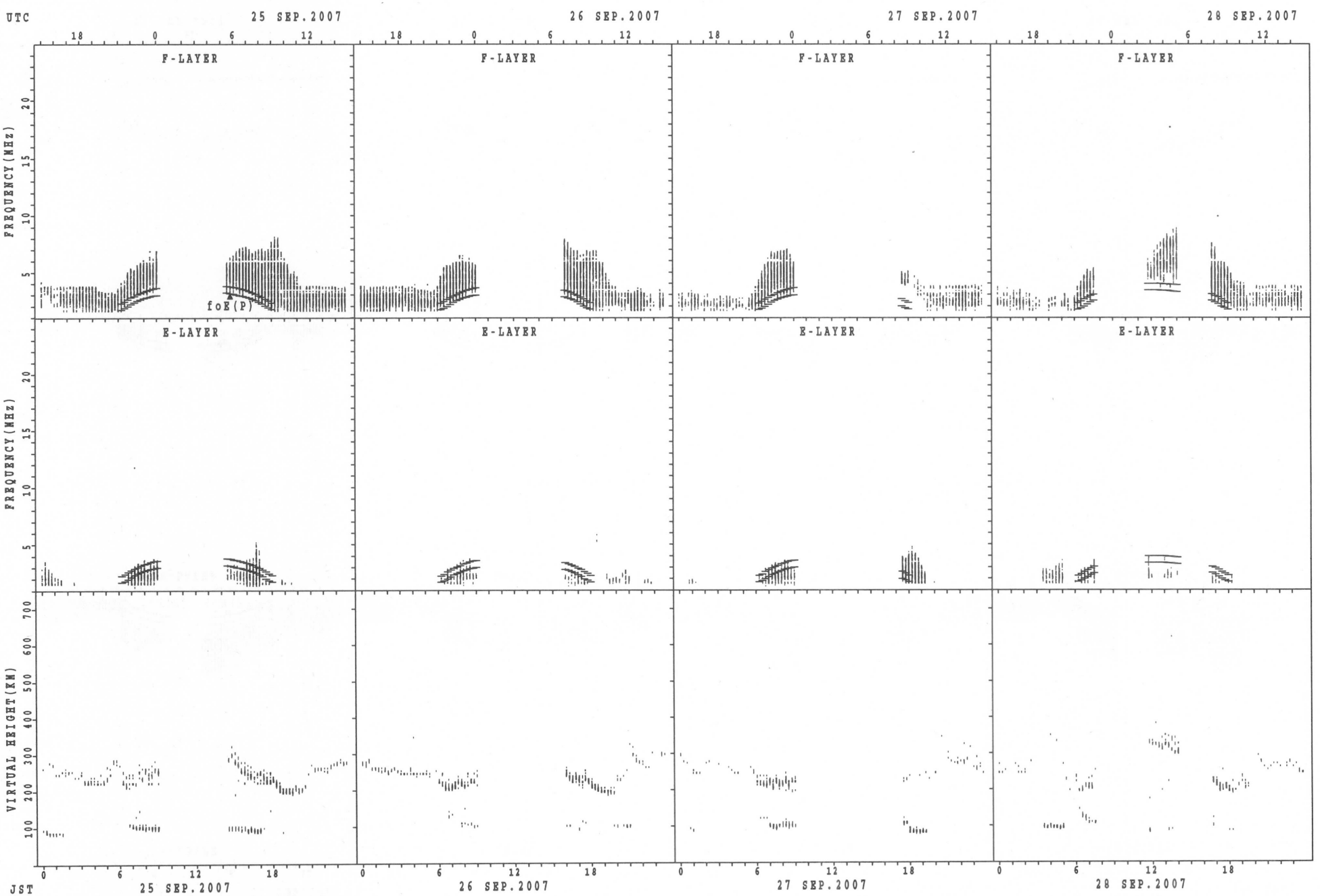
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



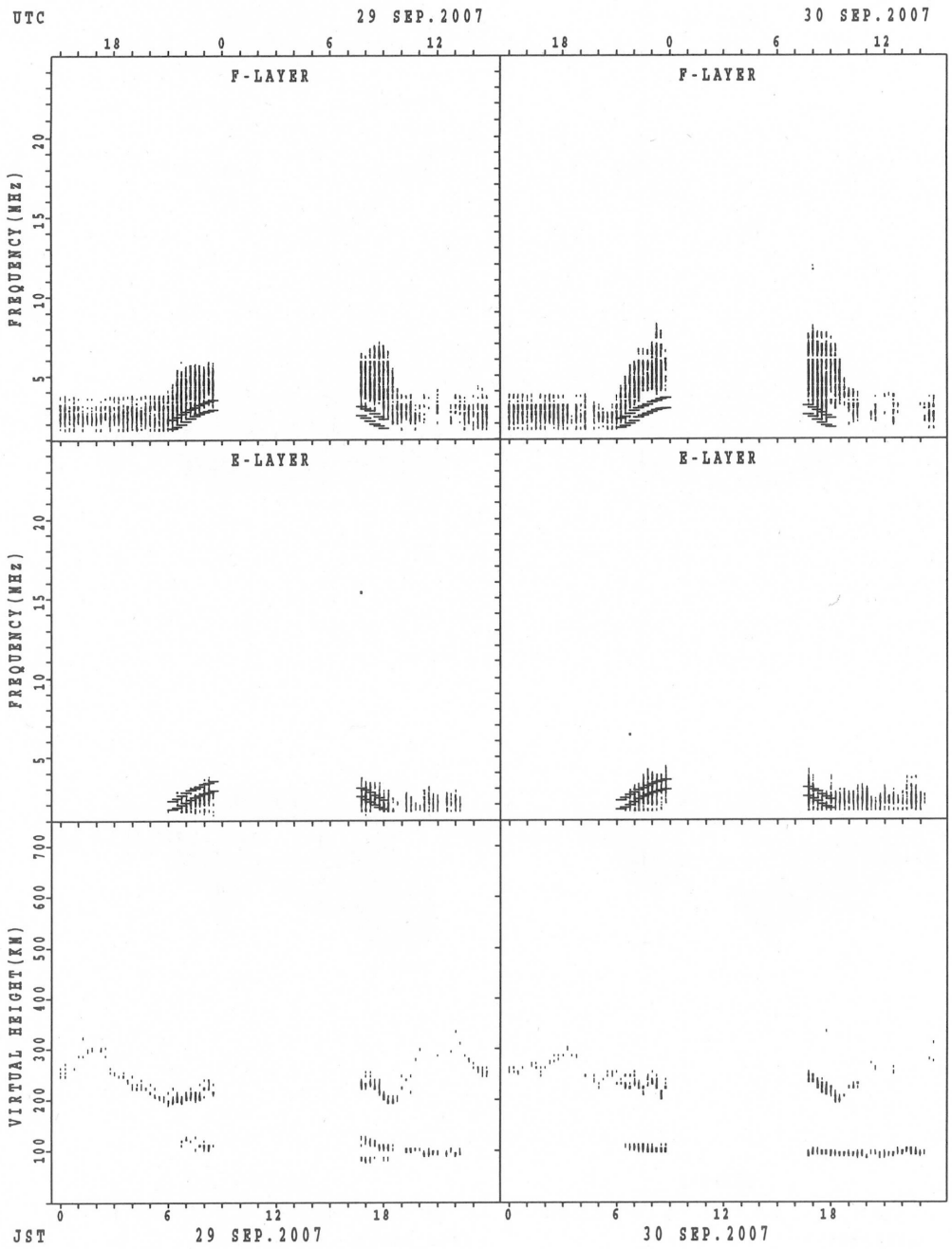
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

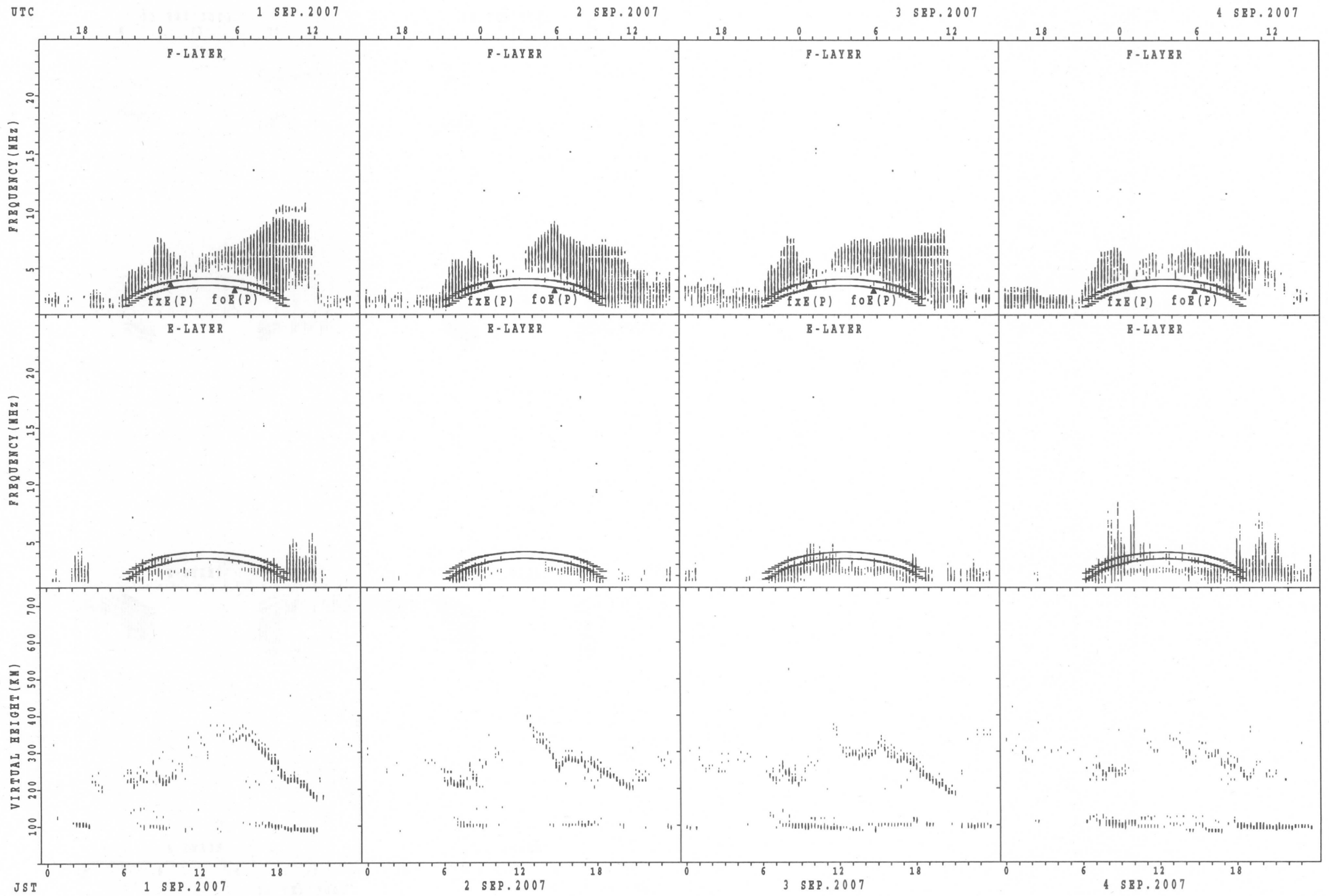


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

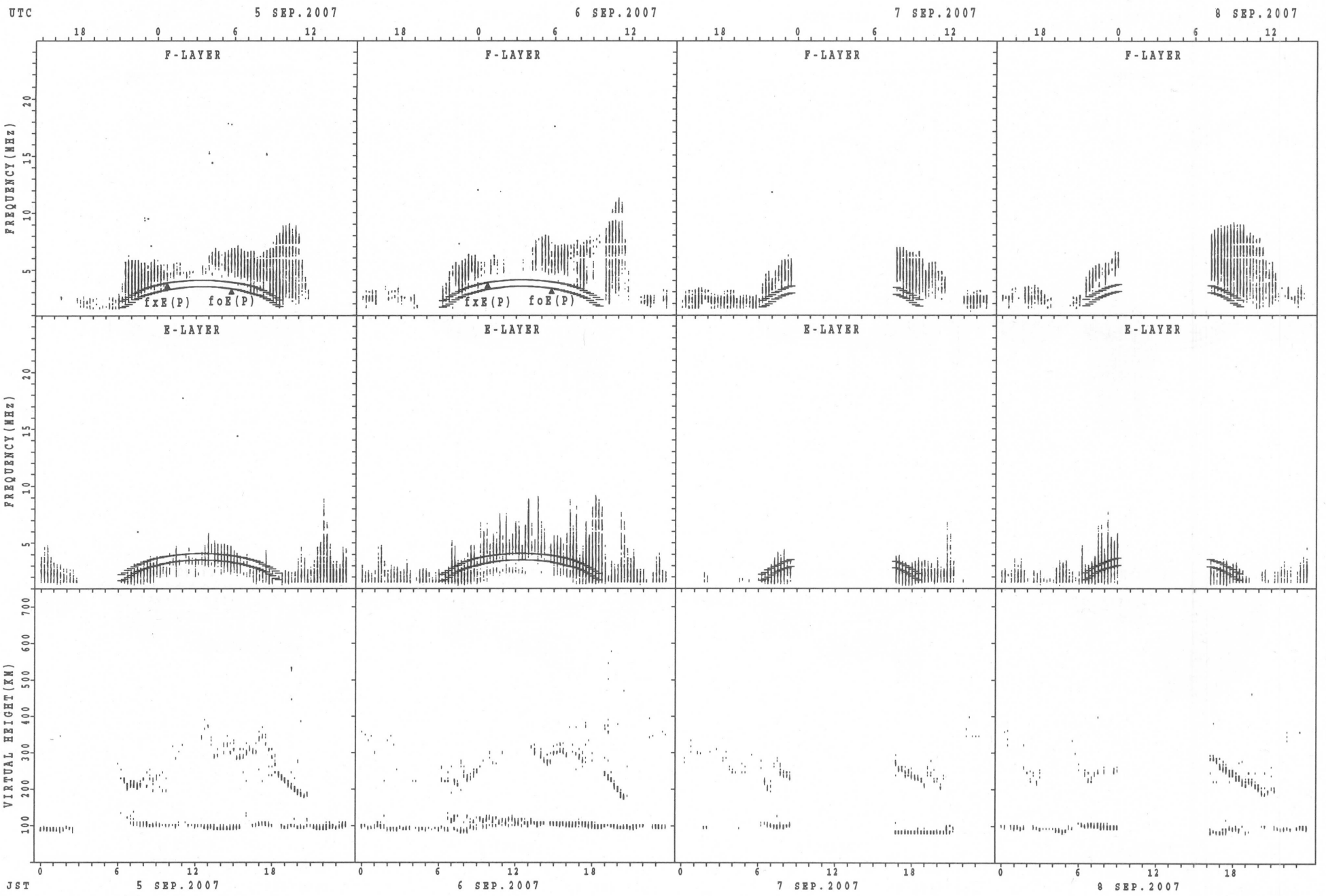
SUMMARY PLOTS AT Yamagawa



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

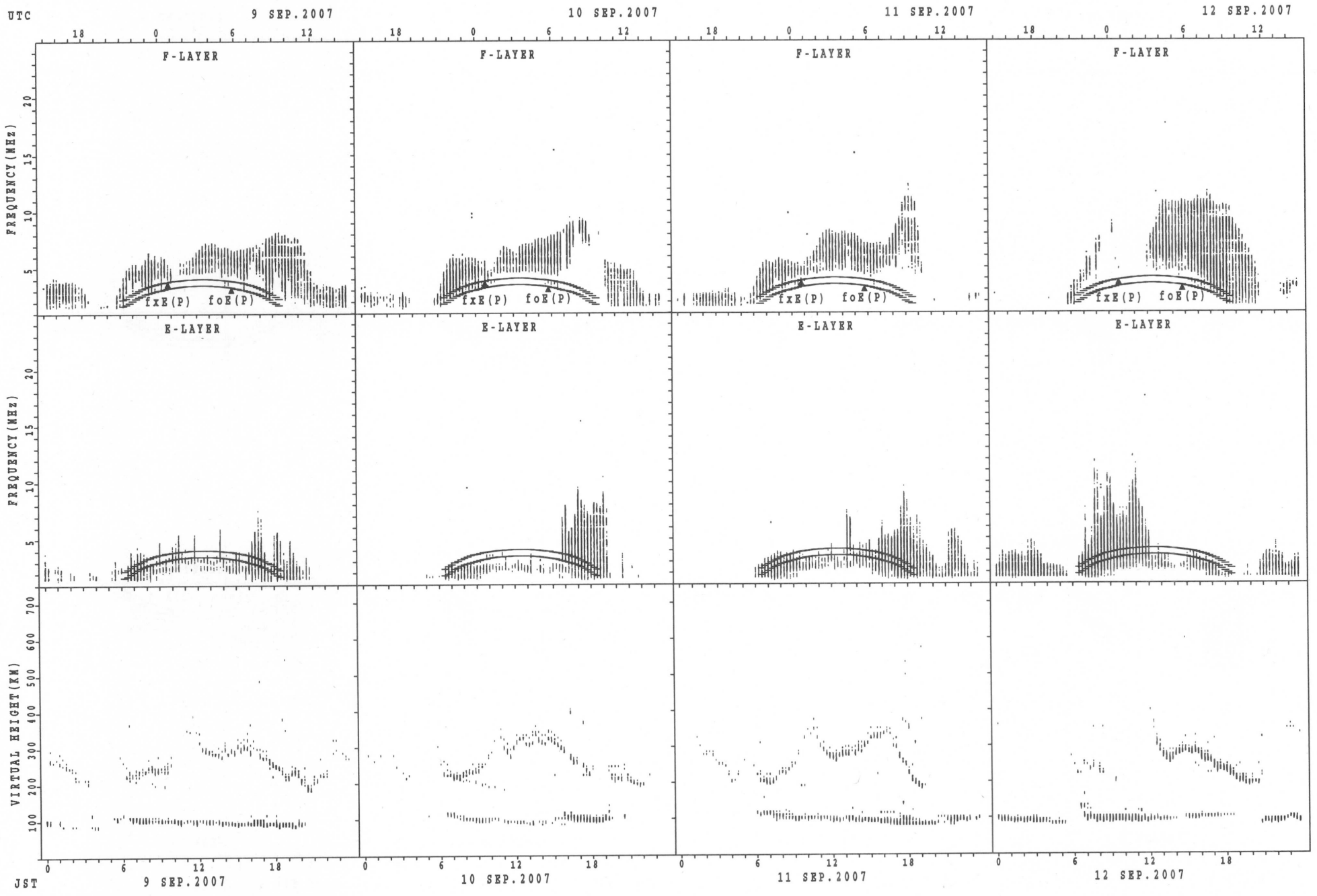

SUMMARY PLOTS AT Okinawa
UTC
1 SEP.2007
2 SEP.2007
3 SEP.2007
4 SEP.2007
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P)
foE(P)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



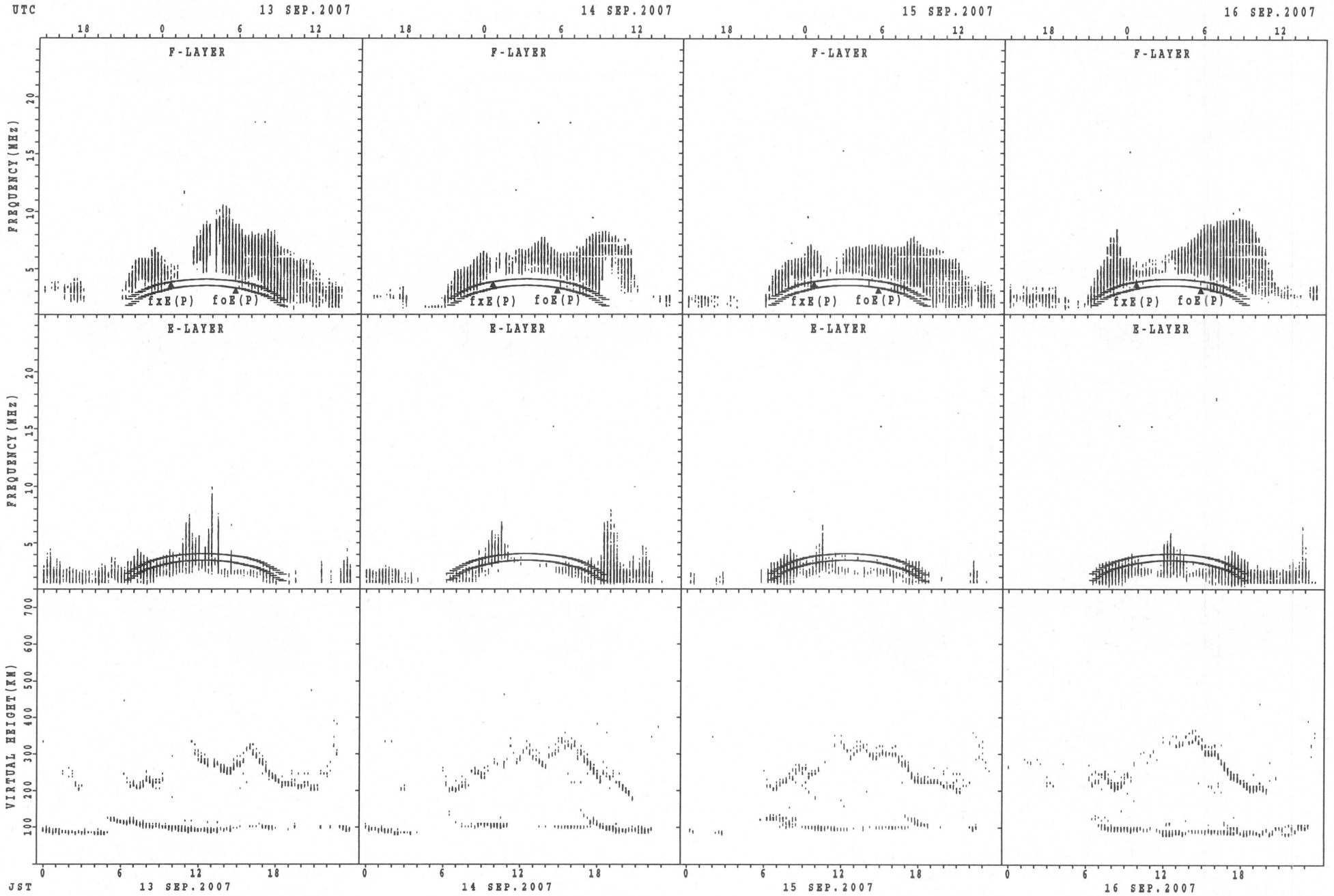
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



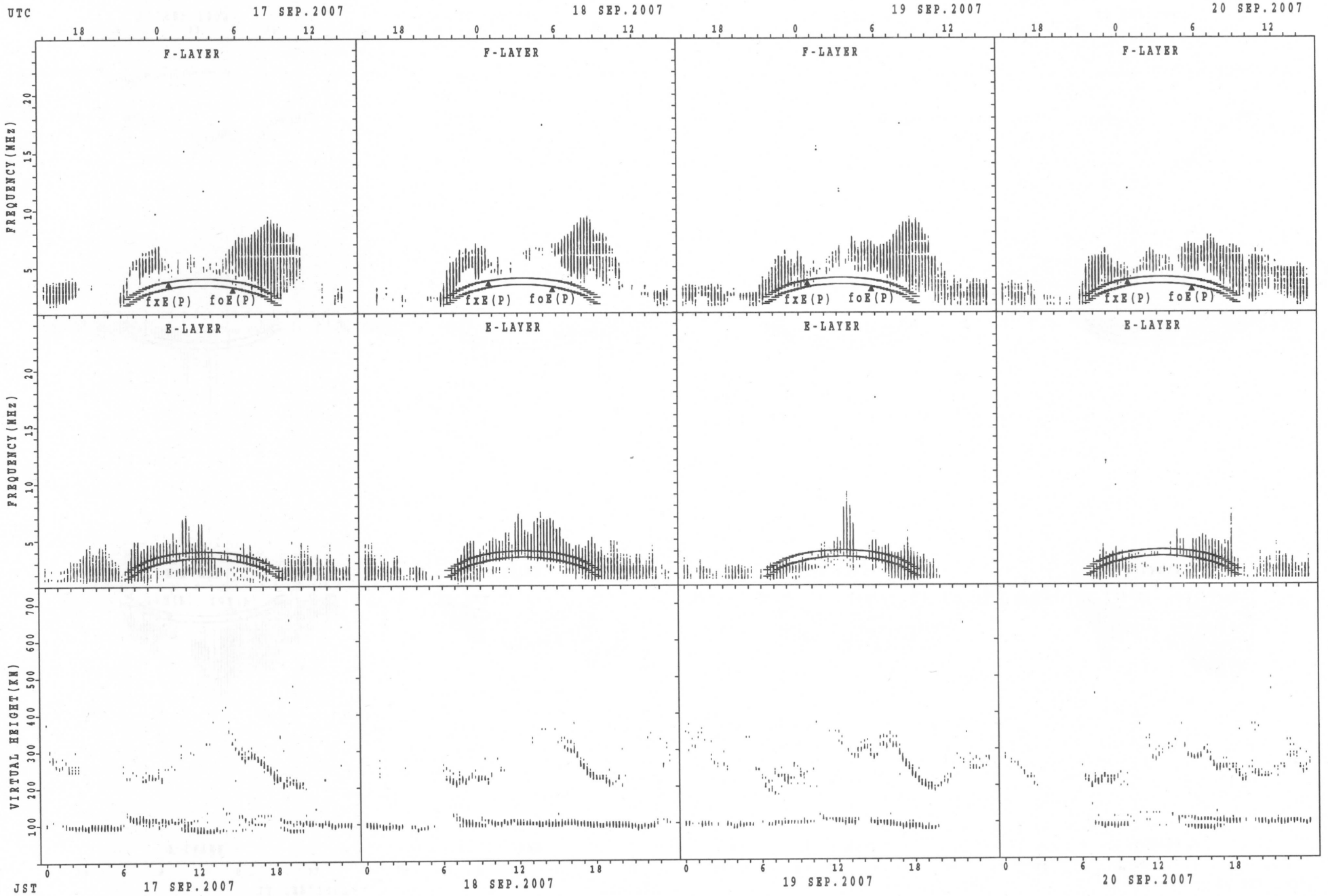
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



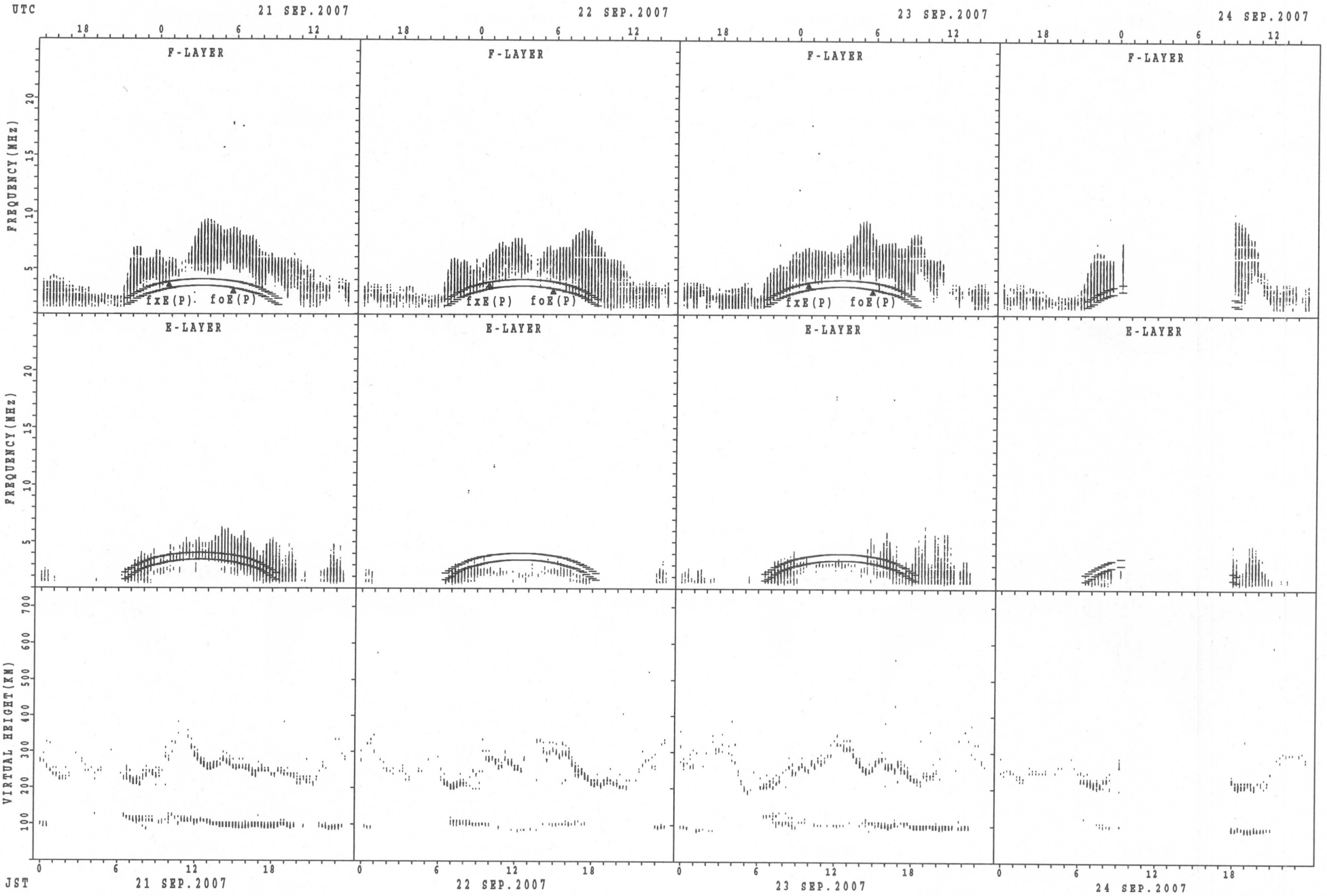
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



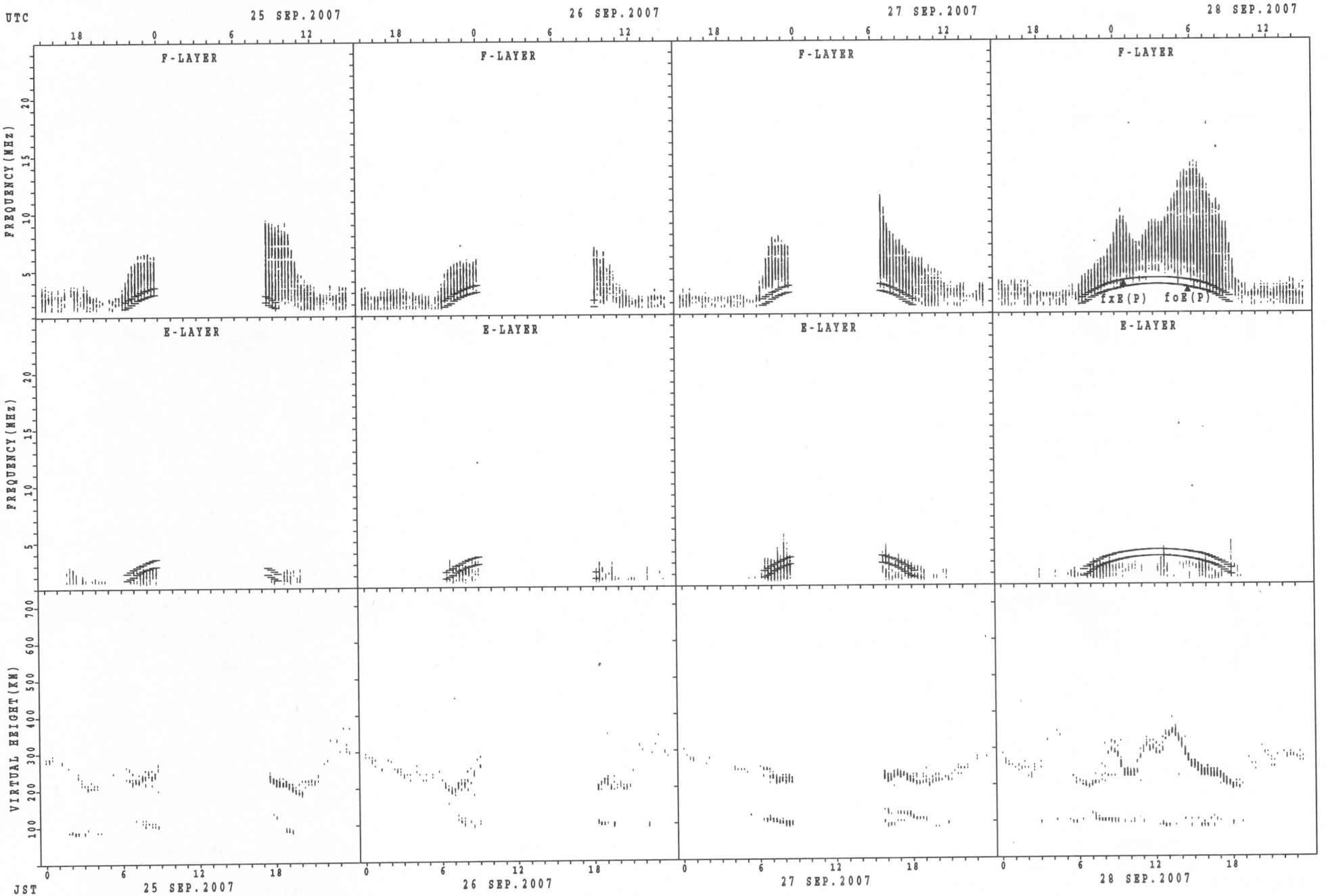
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



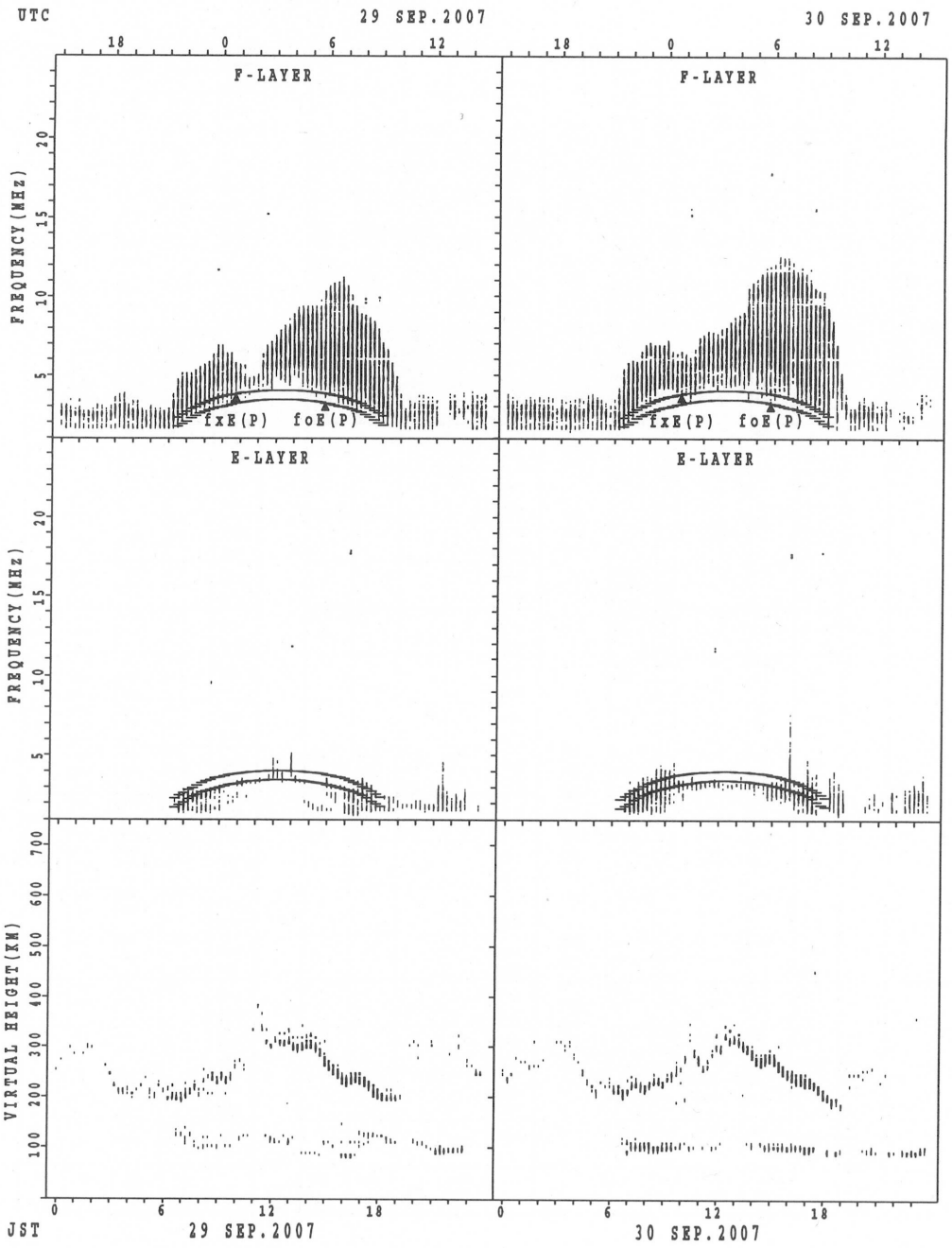
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

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.2007 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								1	2							3	1		1					
MED								242	256							268	262		266					
U Q								121	276							272	131		133					
L Q								121	236							248	131		133					

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	18	13	15	16	14	18	23	18	21	14	13	11	11	12	12	12	17	22	22	24	19	23	20	15
MED	97	93	95	97	98	100	103	110	103	104	105	101	103	102	101	104	103	109	100	97	99	99	96	95
U Q	99	96	97	101	105	107	113	119	107	105	112	105	119	106	106	114	115	113	103	101	107	103	100	99
L Q	93	89	87	95	93	97	99	103	98	91	98	97	97	98	93	99	96	103	95	93	93	95	91	91

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								3	11							4	9	4	5	3	1			
MED								240	240							259	252	267	244	240	190			
U Q								240	264							267	279	272	252	276	95			
L Q								232	234							246	231	264	237	226	95			

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	16	11	14	12	9	7	18	22	18	16	16	12	8	8	8	18	16	23	19	19	17	15	14	14
MED	99	89	91	92	97	97	124	106	105	105	104	97	97	96	99	103	103	101	97	97	97	97	97	97
U Q	100	99	97	95	107	107	131	111	111	107	109	103	102	98	111	111	110	107	103	103	102	101	103	101
L Q	97	89	87	89	95	95	111	101	101	99	98	95	95	91	95	95	97	95	95	95	95	95	95	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								2	11								11	13	14	7	6	1		
MED								218	232								280	264	236	222	227	204		
U Q								230	244								298	280	248	272	248	102		
L Q								206	224								260	240	226	214	214	102		

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	18	12	12	9	7	8	14	25	21	14	15	12	11	12	12	12	16	21	23	19	20	22	22	17
MED	93	89	91	91	89	96	111	113	105	102	101	97	99	96	98	98	97	97	95	95	91	97	95	95
U Q	95	95	95	99	97	98	131	125	108	105	105	103	105	103	105	107	104	103	101	99	105	103	97	101
L Q	89	87	88	88	87	90	97	103	102	97	95	94	95	92	93	94	95	93	89	89	89	91	95	91

MONTHLY MEDIANS OF h'F AND h'Es

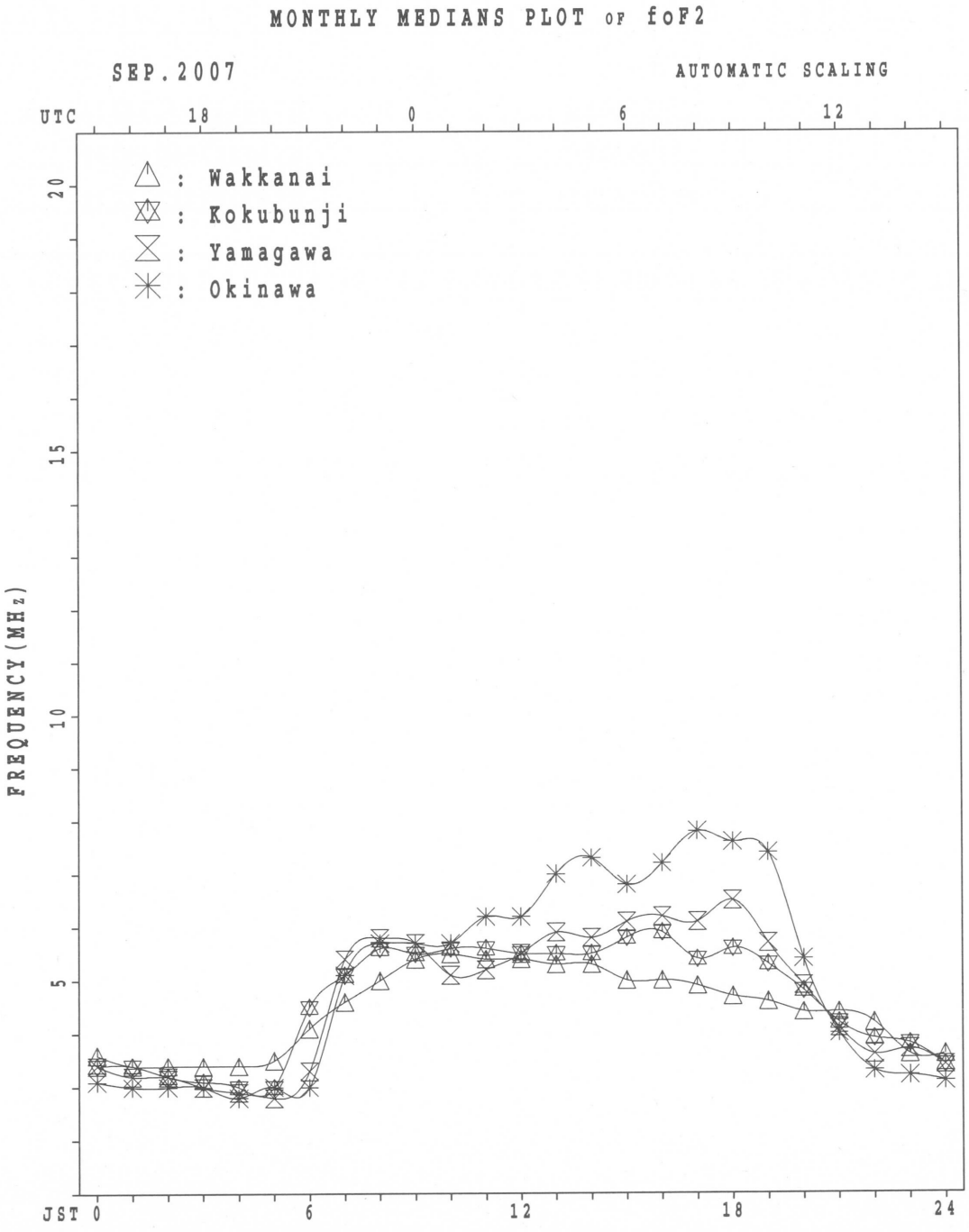
SEP.2007 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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	13	5							15	19	24	16	9			
MED								234	230	266							270	262	239	234	222			
U Q								238	251	280							318	288	256	245	230			
L Q								230	218	227							230	238	224	223	208			

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	13	9	9	8	5	5	5	21	21	11	11	9	10	10	6	11	13	17	20	21	14	12	15	13
MED	99	95	93	95	89	93	105	113	105	105	105	103	99	103	106	99	103	103	99	97	96	98	97	99
U Q	103	98	97	98	93	95	119	116	112	113	111	111	111	107	113	111	109	116	103	103	97	104	99	102
L Q	96	93	91	90	88	90	98	104	101	99	101	99	95	95	99	95	95	98	96	91	93	94	95	96


MONTHLY MEDIANS PLOT OF foF2
SEP. 2007
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. 2007 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 35	X 38	X 38	X 38	X 35														X 73	X 75	X 72	X 75	X 51	X 42
2	X 38	X 40	X 36	X 36	X 39	43													A	X 61	X 63	X 59	X 56	X 51
3	A	X 46	X 37	X 36	X 38					C									X 62	X 68	X 59	X 46	X 44	X 42
4	X 41	X 39	X 38	X 38	X 38														X 54	X 60	53	X 54	X 45	X 40
5	X 36	X 34	A	X 34	X 33														X 54	X 64	X 63	X 49	A	A
6	X 38	X 40	X 38	X 40	A														X 64	X 62	X 63	X 50	X 47	X 46
7	47	43	X 38	X 36	X 34	35													X 56	X 58	X 54	X 45	X 39	X 40
8	X 40	X 40	X 38	X 40	X 34														X 61	X 67	X 64	X 54	X 46	X 47
9	X 39	X 34	X 33	X 33	X 34														X 53	X 62	X 60	X 51	X 44	X 41
10	X 40	X 37	X 35	X 34	X 28														X 80	X 82	X 64	X 37	X 36	X 36
11	X 35	X 35	X 35	X 32	X 32														X 66	X 75	X 71	X 32	X 32	X 33
12	X 34	X 35	X 35	X 36	X 37														X 68	X 63	X 54	52	X 50	X 48
13	X 43	X 41	X 40	X 35	X 31														X 54	X 52	X 47	48	X 46	46
14	46	X 38	X 42	X 42	X 28														X 49	X 56	X 54	49	X 42	42
15	X 40	X 38	X 35	X 38	X 32														X 61	X 66	X 60	X 56	X 47	X 48
16	X 47	X 46	X 42	X 41	39														X 80	X 72	X 58	X 44	X 42	X 42
17	X 44	X 42	X 39	X 39	38														X 78	X 64	X 46	X 42	49	A
18	43	43	38	39	38	35													X 71	X 53	X 48	X 46	48	48
19	46	X 40	X 34	X 32	36	34													X 63	X 44	X 46	X 45	45	46
20	X 40	X 39	X 38	X 38	X 36														X 45	X 47	X 46	X 45	X 44	47
21	X 44	X 42	43	X 38	X 36														X 58	X 49	X 49	54	X 50	X 46
22	X 43	X 42	X 43	X 44	X 40														X 64	X 58	X 59	X 56	X 52	X 50
23	X 46	X 39	X 38	X 38	X 37														X 71	X 61	X 48	X 48	X 47	X 48
24	X 41	X 43	X 43	X 42	X 36														X 79	X 74	X 56	X 48	X 49	51
25	52	X 45	X 41	X 36	37														X 77	X 59	X 46	X 44	X 42	X 41
26	X 42	X 41	X 40	X 39	X 37														X 62	X 55	X 42	X 42	X 41	X 41
27	X 39	X 36	X 34	X 34	X 33														X 43	X 35	X 36	X 38	X 39	X 39
28	X 37	X 33	X 32	X 30	X 30														X 47	X 39	X 43	X 42	X 42	X 42
29	X 40	X 39	X 37	X 37	X 35														X 52	X 45	X 43	X 46	X 44	X 44
30	X 44	X 44	X 43	X 42	X 41														X 59	A	X 46	X 42	45	41
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	30	29	30	29	4													29	29	30	30	29	28
MED	X 41	X 40	X 38	X 38	X 36	35													X 62	X 61	X 54	X 47	X 45	X 43
U Q	44	X 42	X 40	X 39	X 38	39													X 71	X 66	X 60	X 52	X 48	X 48
L Q	X 38	X 38	X 35	X 35	X 33	34													X 54	X 52	X 46	X 44	X 42	X 41

SEP. 2007 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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	29	32	32	31	28	29	52	44	50	56	66	62	54	49	50	48	55	58	67	69	66	69	45	36
2	32	34	30	30	33	F	48	47	47	57	A	A	52	55	61	64	69	59	A	55	56	53	50	45
3	A	40	30	30	32	A	41	51	56	C	57	51	48	50	48	55	51	52	56	62	53	40	38	36
4	35	33	32	32	32	30	43	43	47	58	A	51	49	53	49	58	66	45	48	54	S	48	39	33
5	29	28	A	27	27	28	40	58	56	54	55	48	51	53	58	64	62	45	48	58	57	43	A	A
6	32	33	32	33	A	A	45	47	53	60	55	52	A	58	A	69	55	52	58	56	57	44	41	40
7	F	F	32	30	28	F	34	A	A	50	A	54	58	50	48	46	55	51	49	52	48	38	33	34
8	34	34	32	34	28	29	38	45	A	51	51	56	50	48	50	52	52	51	55	61	58	48	40	41
9	33	28	27	26	28	29	45	48	49	50	52	49	53	A	48	55	58	51	47	56	54	45	38	35
10	34	31	28	28	22	26	40	48	51	58	50	51	56	53	50	50	48	57	73	76	58	31	30	30
11	29	29	29	26	26	26	43	59	58	50	57	54	54	51	52	55	57	54	60	69	65	26	26	27
12	28	29	29	30	30	30	41	50	63	71	50	51	51	55	61	60	57	63	62	56	48	F	44	42
13	37	35	33	29	25	26	43	56	55	50	52	52	56	56	55	61	58	54	47	46	41	F	40	F
14	F	32	36	36	22	24	40	49	A	49	51	54	56	60	54	51	48	44	43	50	47	F	36	F
15	34	32	29	32	26	27	42	50	58	54	56	56	49	54	55	54	46	50	55	60	53	50	41	42
16	41	40	36	35	F	32	46	50	49	58	50	51	52	57	54	A	58	66	74	66	52	38	36	36
17	38	36	33	33	F	32	47	55	52	56	50	55	52	50	49	50	55	64	72	58	40	35	F	A
18	F	F	F	F	F	F	46	54	58	59	49	52	58	57	58	54	58	58	65	47	41	40	F	F
19	F	34	28	26	F	F	51	52	55	48	50	54	59	49	55	56	62	64	56	38	40	39	F	F
20	34	33	32	32	30	27	46	53	48	50	52	51	52	48	57	65	66	54	39	41	40	39	38	F
21	38	36	F	32	30	30	51	52	60	70	A	58	72	76	66	61	59	54	52	43	43	F	43	40
22	37	36	37	38	34	33	47	53	61	59	67	65	69	65	55	54	60	56	58	52	53	49	46	44
23	40	32	32	31	31	33	48	51	58	59	62	59	61	62	59	61	60	66	65	55	41	42	41	42
24	35	37	36	36	30	30	49	54	54	74	75	57	55	59	55	60	63	68	73	68	50	42	43	F
25	F	39	35	30	F	29	42	50	61	66	66	57	58	57	53	54	60	61	70	53	40	38	36	35
26	36	34	34	33	30	29	40	53	62	58	51	51	52	53	61	58	59	66	57	49	36	36	35	35
27	33	30	29	28	27	26	48	58	62	59	56	53	55	55	63	65	65	50	37	29	30	32	33	33
28	31	27	25	24	24	28	40	55	54	56	78	66	58	67	74	90	66	50	41	32	37	36	35	36
29	34	33	31	31	28	30	52	59	58	52	55	60	66	63	64	82	67	59	46	38	37	40	38	38
30	38	38	37	36	35	32	45	56	73	55	62	66	68	73	65	60	64	58	53	A	40	36	F	F
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	24	28	27	29	24	24	30	29	27	29	26	29	29	29	29	29	30	30	29	29	29	26	25	21
MED	34	33	32	31	28	29	45	52	56	56	55	54	55	55	55	58	58	55	56	55	48	40	38	36
U Q	37	36	34	33	30	30	48	55	60	59	62	58	58	60	61	62	63	61	65	60	55	45	42	42
L Q	32	32	29	28	26	27	41	48	51	50	51	51	52	50	50	54	55	51	48	46	40	36	36	34

SEP. 2007 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 foF1 (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							L	L	U L 408	424	420	U L 440	432	U L 436	424	U L 424	U L 384	U L 352						
2									U L 404	U L 420	A	A	U L 444	U L 432	E A	E A	E A	E A						
3						A	L	U L 428	E A	C	424	U L 428	U L 432	U L 436	U L 432	U L 392	U L 452	L						
4									U L 412	E A	A	U L 436	U L 424	U L 416	U L 424	E A	E A							
5								L	U L 408	U L 412	E A	E A	U L 428	E A	U L 416	U L 408	E A	E A						
6						A		L	404	E A	E A	E A	A	E A	A	U L 404	L							
7								A	A	E A	A	424	424	E A	408	U L 396	U L 372	L						
8								U L 400	A	E A	E A	E A	E A	U L 408	U L 420	U L 408	L	L						
9									U L 408	U L 408	E A	E A	E A	A	E A	U L 392	368	L						
10								L	396	U L 416	U L 416	U L 428	U L 424	428	424	408	384	L						
11								L	U L 396	U L 420	436	U L 432	428	424	428	E A	E A	L						
12								U L 376	E A	412	U L 428	U L 432	420	U L 420	U L 416	E A	L	E A						
13								L	E A	U L 412	U L 428	U L 436	U L 436	U L 436	U L 412	E A	L							
14									A	E A	L	E A	E A	E A	U L 424	U L 460	U L 396	E A						
15								L	U L 392	U L 424	U L 424	U L 432	U L 436	U L 424	E A	E A		L						
16									L	U L 408	U L 436	U L 416	U L 436	428	U L 412	A	E A	E A						
17								L	U L 460	L	U L 432	U L 428	E A	E A	E A	U L 428	U L 380	E A						
18								E A	E A	E A	U L 436	E A	U L 436	U L 412	E A	L	E A	L						
19								L	U L 388	E A	E A	E A	E A	E A	E A	404	L							
20									U L 388	U L 424	U L 424	U L 428	U L 428	U L 436	U L 408	U L 396	L							
21									E A	E A	A	U L 440	E A	U L 416	U L 420	L	E A							
22									L	L	U L 444	U L 432	U L 432	L	L	L	L							
23									E A	U L 416	U L 416	U L 432	U L 444	L	U L 440	L	E A							
24									E A	E A	E A	E A	U L 440	U L 436	L	E A	L							
25								L	L	U L 412	L	U L 436	L 428	U L 428	L	L	L							
26									L	U L 404	U L 440	U L 432	U L 420	U L 424	408	L	U L 332							
27								L	L 400	416	U L 420	U L 456	U L 432	U L 424	U L 404	L	L							
28								L	L	U L 440	U L 424	U L 428	U L 432	U L 436	412	L								
29									L	L	U L 428	U L 444	U L 436	U L 436	L	L								
30								L	L	L	U L 412	U L 428	L 440	L	L	L	E A							
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	16	18	21	23	20	18	12	8	1						
MED								U L 400	U L 404	U L 416	U L 426	U L 432	U L 432	U L 428	U L 418	U L 406	U L 382	U L 352						
U Q								U L 428	U L 408	U L 422	U L 436	U L 436	U L 436	U L 436	U L 424	U L 416	U L 390							
L Q								U L 376	U L 394	U L 412	U L 420	U L 428	428	U L 422	412	U L 396	U L 370							

SEP. 2007 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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 R 200	U R 252	300	312		R	R	A	U R 340	U R 324	U R 332	U R 288	U A 204						
2							B	U A 192	248	U A 296	A	A	A	A	A	A	A	A	A	A						
3							B	A	U A 248	A	C	A	R	A	A	A	U R 292	A	A							
4							B	B	U A 232	A	A	A	A	U A 288	R	R	A	A	U A 208							
5							B	B	A	A	A	A	A	A	A	A	A	A	A							
6							B	A	A	A	A	A	A	A	A	A	A	A	A							
7							B	U R 188	A	A	A	A	A	U R 352	A	A	R	252	U A 200							
8							B	204	A	A	A	A	A	A	A	A	A	U A 248	U A 196							
9							B	188	A	A	A	A	A	A	A	A	A	A	A							
10							B	A	U A 240	A	A	R	A	A	U A 316	A	A	R	U A 196							
11							B	A	U A 240	R	R	R	R	R	U R 332	U R 320	A	A	U A 184							
12							B	184	A	A	A	A	A	352	U A 336	320	A	A	A							
13							B	192	A	A	A	A	A	R	R	R	A	A	A							
14							B	U A 188	248	A	A	A	A	A	A	R	A	A	A							
15							B	B	U A 240	U R 300	R	A	A	A	A	A	A	A	U R 204							
16							B	176	A	A	A	R	R	R	316	312	A	U A 244	184							
17							B	U A 184	252	A	A	R	R	340	324	A	A	A	A							
18							B	A	A	A	A	A	A	A	A	A	A	A	A							
19							B	A	R	A	A	A	A	A	A	A	A	A	A							
20							B	A	A	A	R	R	A	A	A	A	A	A	A							
21							B	A	U A 248	A	A	A	A	A	A	A	A	A	B							
22							B	B	244	288	A	R	R	A	A	A	R	U R 300	A							
23							B	B	A	A	A	332	328	A	R	U A 304	A	A	A							
24							B	B	A	A	A	A	A	A	A	A	A	A	U R 188							
25							B	B	A	U R 292	A	A	A	A	R	R	U R 280	R	A							
26							B	B	252	R	R	R	A	U R 328	R	300	R	200	U A 176							
27							B	B	A	R	R	R	R	R	R	304	R	A	A							
28							B	A	U A 232	R	R	180	R	316	304	R	R	U R 224	B							
29							B	B	A	A	A	A	A	A	R	U A 288	R	U A 232	B							
30							B	B	A	A	A	A	R	R	R	A	R	A	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							10	13	5	1	2	1	6	7	8	3	8	10						
MED							188	U A 248	U 296	312	256	328	334	U 324	308	U R 292	U 246	U A 196						
U Q							U 192	250	300				352	U 336	U R 320	U R 332	U R 270	U A 204						
L Q							184	U A 240	290				316	316	302	U R 280	U 228	U A 184						

SEP. 2007 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 foEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	J A 34	J A 31	J A 23	J A 27	J A 20	J A 18	G 18	J A 26	34	36	G 24	G 34	J A 40	G 30	G 25	G 32	G 26	25	E B 15	E B 15	E B 14	J A 22	J A 19	J A 29
2	J A 24	J A 20	J A 21	J A 20	E B 15	E B 15	23	30	J A 56	40	J A 67	J A 54	J A 42	J A 46	40	J A 59	J A 75	J A 57	J A 91	J A 57	J A 32	J A 22	J A 24	J A 43
3	J A 48	J A 47	J A 20	J A 29	J A 44	J A 41	J A 24	J A 39	J A 56	C	38	G 30	38	J A 42	35	G 27	35	J A 30	J A 74	J A 34	E B 16	J A 24	J A 22	J A 48
4	22	22	J A 22	19	19	19	22	30	34	J A 41	J A 61	J A 42	35	G 30	G 25	J A 43	35	J A 33	J A 26	J A 42	J A 27	J A 48	J A 41	J A 31
5	J A 22	J A 27	J A 32	J A 27	J A 17	E B 15	20	32	J A 40	38	J A 56	J A 50	J A 46	J A 66	J A 38	J A 40	J A 48	J A 46	J A 50	J A 76	J A 38	J A 33	J A 51	J A 54
6	J A 51	J A 33	J A 46	J A 36	J A 65	J A 86	J A 38	J A 43	J A 43	J A 46	J A 53	J A 54	J A 75	J A 68	J A 106	J A 41	J A 48	J A 106	J A 53	J A 57	J A 39	J A 27	J A 31	J A 24
7	J A 22	J A 22	J A 23	J A 58	J A 26	E B 14	G	J A 50	J A 52	J A 44	J A 55	J A 36	G 33	47	34	G 22	29	29	J A 42	J A 76	J A 22	E B 15	J A 31	J A 22
8	J A 18	J A 22	19	19	19	E B 14	26	30	J A 123	J A 139	J A 76	J A 44	J A 48	39	J A 34	J A 34	30	23	E B 14	E B 15	E B 16	J A 24	J A 22	J A 36
9	J A 18	J A 21	J A 20	J A 20	J A 22	J A 18	23	J A 32	J A 57	J A 40	J A 61	J A 46	J A 52	J A 55	J A 44	J A 37	J A 32	J A 27	J A 27	J A 32	J A 29	J A 27	J A 20	20
10	18	E B 15	E B 15	E B 14	J A 42	J A 22	26	28	34	J A 43	G 28	J A 47	38	35	36	34	G 23	25	J A 22	E B 16	J A 18	E B 16	J A 24	E B 15
11	J A 18	18	20	J A 19	J A 22	J A 22	26	29	G 22	G	G 28	G 27	G 27	G 27	G 28	J A 42	J A 38	J A 32	J A 16	J A 16	J A 18	J A 21	E B 15	E B 15
12	E B 15	E B 15	19	18	E B 16	E B 15	21	30	J A 40	J A 46	35	35	41	38	36	J A 42	J A 33	J A 34	J A 28	J A 78	J A 26	J A 23	J A 25	J A 18
13	J A 20	J A 20	J A 28	J A 21	J A 18	J A 17	26	32	J A 44	37	38	37	G 28	G 28	G 26	J A 43	33	26	J A 58	J A 46	J A 28	J A 25	J A 21	J A 26
14	J A 23	J A 24	J A 24	29	J A 20	J A 21	J A 34	J A 44	J A 53	J A 48	38	J A 43	J A 41	J A 50	G 29	J A 37	J A 34	J A 45	J A 20	J A 17	E B 14	J A 20	J A 32	J A 29
15	18	20	20	19	18	19	J A 28	29	G 27	G 30	39	J A 48	J A 42	J A 43	J A 47	J A 52	J A 36	J A 23	E B 15	J A 17	J A 22	J A 16	E B 15	19
16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	26	J A 30	J A 36	J A 34	G 28	G 30	G 28	36	39	J A 62	J A 48	J A 33	J A 36	43	22	J A 23	E B 15	20
17	E B 15	J A 23	J A 21	E B 14	J A 28	E B 15	J A 25	28	38	J A 42	G 27	G 28	43	42	42	38	32	J A 32	J A 42	J A 48	J A 23	J A 36	J A 38	J A 50
18	J A 38	20	18	19	20	E B 15	J A 22	J A 49	J A 44	J A 77	J A 48	J A 59	38	37	J A 53	J A 41	J A 38	J A 28	J A 45	J A 74	J A 35	31	J A 30	J A 64
19	J A 24	J A 23	J A 43	J A 38	20	20	J A 23	G 24	34	J A 43	J A 50	J A 67	J A 116	J A 48	J A 47	J A 37	J A 28	J A 31	E B 16	J A 19	19	19	J A 22	J A 22
20	J A 23	J A 17	J A 20	J A 18	19	J A 35	J A 45	J A 33	32	G 26	G 26	40	40	41	38	J A 41	27	J A 27	J A 23	J A 32	J A 31	J A 26	J A 18	J A 30
21	J A 41	J A 23	J A 20	J A 21	J A 18	J A 18	22	J A 45	J A 42	J A 47	J A 57	J A 42	J A 46	39	34	J A 34	J A 43	J A 30	J A 27	J A 25	J A 34	E B 14	E B 15	20
22	E B 16	E B 15	E B 16	E B 15	E B 15	J A 24	20	28	32	40	G 26	G 29	37	36	35	G 26	G 28	J A 30	J A 22	J A 24	E B 15	J A 21	J A 23	J A 21
23	J A 17	18	18	18	E B 15	18	20	30	J A 44	33	38	39	37	G 28	34	J A 42	J A 50	J A 52	J A 24	E B 15	J A 20	18	E B 15	E B 15
24	E B 15	E B 16	E B 20	A E 14	E B 14	E B 15	22	J A 42	J A 42	J A 49	J A 43	J A 44	J A 42	36	J A 42	J A 47	J A 61	J A 21	J A 24	J A 45	J A 42	J A 24	E B 16	19
25	E B 15	E B 16	E B 15	E B 15	E B 14	E B 16	21	26	G 23	35	36	40	J A 42	G 27	G 26	G 21	G J 21	A 31	J A 31	J A 28	J A 20	18	J A 22	J A 30
26	J A 23	J A 24	J A 24	A E 15	E B 15	E B 15	22	29	G 20	G 25	G 25	38	G 27	G 27	35	G 21	25	22	E B 14	30	22	J A 24	E B 15	19
27	J A 29	E B 15	E B 15	E B 15	J A 22	J A 20	19	J A 27	G 22	G 28	G 28	G 28	G 28	G 25	34	G 23	28	J A 23	19	E B 15	E B 15	E B 15	J A 44	J A 23
28	20	20	18	18	E B 15	E B 15	26	30	G 27	G 28	36	G 28	40	35	G 27	G 24	26	E B 16	E B 15	J A 18	J A 16	17	20	E B 15
29	18	E B 15	E B 15	E B 14	E B 14	20	J A 22	J A 34	J A 40	J A 40	J A 40	39	39	G 21	34	G 22	29	21	J A 21	17	J A 23	19	E B 14	20
30	J A 22	18	19	E B 15	18	20	J A 19	J A 35	J A 32	34	35	G 29	G 28	G 26	34	G 27	J A 34	J A 24	J A 48	J A 46	J A 19	J A 22	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	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	J A 21	20	J A 20	19	18	18	22	30	J A 39	J A 40	38	40	40	36	35	J A 37	33	J A 30	J A 25	J A 31	J A 22	J A 22	J A 22	J A 22
U Q	J A 24	J A 23	J A 23	J A 21	J A 22	J A 20	26	J A 35	J A 44	J A 45	J A 53	J A 46	J A 42	J A 43	J A 40	J A 42	J A 38	J A 33	J A 42	J A 46	J A 29	J A 25	J A 30	J A 30
L Q	E B 18	E B 16	E B 18	E B 15	E B 15	E B 15	21	29	G 32	G 34	G 28	G 30	G 35	G 28	G 34	G 27	28	24	E B 19	E B 17	E B 18	18	E B 15	E B 19

SEP. 2007 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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	26	21	19	20	E B 16	E B 15	G 18	26	32	34	G 23	G 33	36	G 30	G 25	G 32	G 25	23	E B 15	E B 15	E B 14	15	E B 15	17
2	E B 15	E B 16	E B 15	E B 15	E B 15	E B 15	22	29	34	33	A A 67	A A 54	37	37	37	48	46	54	A A 91	36	16	17	18	18
3	A A 48	30	E B 15	20	20	A A 41	21	31	44	C	32	G 30	34	35	31	G 25	34	26	28	23	E B 16	18	17	26
4	E B 16	E B 15	16	E B 15	E B 14	E B 15	20	27	33	39	A A 61	37	34	G 28	G 24	40	33	26	23	38	22	32	30	22
5	E B 16	22	A A 32	18	E B 15	E B 15	18	28	34	37	49	44	36	42	32	32	46	42	39	50	23	18	A A 51	A A 54
6	20	20	24	31	A A 65	A A 86	28	28	34	42	46	47	A A 75	48	A A 106	33	31	31	42	22	23	20	20	18
7	17	E B 15	19	16	E B 15	E B 14	G	A A 50	A A 52	38	A A 55	34	G 33	44	32	G 22	27	27	40	30	E B 15	E B 15	E B 15	E B 14
8	E B 15	18	E B 15	E B 16	16	E B 14	24	28	A A 123	41	42	42	42	34	31	29	27	22	E B 14	E B 15	E B 16	19	E B 15	21
9	E B 15	18	16	E B 15	E B 15	16	22	27	32	33	43	42	41	A A 55	41	33	29	22	23	20	20	18	17	15
10	E B 15	E B 15	E B 15	E B 14	E B 16	16	24	27	32	37	G 27	37	34	34	32	31	G 23	23	17	E B 16	E B 15	E B 16	E B 15	E B 15
11	E B 16	E B 15	E B 16	17	17	17	25	28	G 20	G	G 28	G 27	G 26	G 26	G 27	38	34	27	E B 15	E B 15	E B 15	16	E B 15	E B 15
12	E B 15	E B 15	E B 15	E B 15	E B 16	E B 15	20	29	37	35	33	33	37	37	34	38	26	28	21	30	21	19	20	E B 16
13	16	E B 15	22	17	E B 15	E B 15	23	29	39	36	37	34	G 28	G 28	G 26	38	28	21	33	40	20	16	E B 16	19
14	20	17	19	27	17	18	31	39	A A 53	36	36	40	40	44	G 29	35	32	32	16	E B 14	E B 14	E B 16	E B 15	17
15	17	E B 15	E B 15	E B 15	E B 15	E B 15	25	26	G 27	G 29	34	36	36	32	41	44	30	G 17	E B 15	E B 15	16	E B 14	E B 15	E B 15
16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	22	28	31	32	G 28	G 29	G 27	35	36	A A 62	42	28	31	40	20	17	E B 15	E B 15
17	E B 15	E B 16	15	E B 14	E B 16	E B 15	21	28	32	33	G 27	G 28	40	40	40	36	30	29	35	41	19	28	29	A A 50
18	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	19	39	40	41	38	43	35	34	39	31	33	26	42	39	23	20	E B 16	20
19	16	E B 15	E B 15	18	E B 15	E B 15	18	G 23	33	39	42	36	52	41	44	34	26	20	E B 16	E B 16	E B 16	E B 15	17	18
20	E B 15	E B 15	E B 16	E B 16	E B 16	20	22	24	29	G 26	G 25	36	37	37	35	35	26	20	18	20	19	19	E B 16	16
21	E B 16	E B 15	E B 14	16	E B 15	E B 15	20	29	38	44	A A 57	38	42	37	32	30	38	20	18	17	20	E B 14	E B 15	E B 15
22	E B 16	E B 15	E B 16	E B 15	E B 15	E B 15	18	27	30	35	G 26	G 29	34	34	33	G 26	G 27	25	20	19	E B 15	E B 16	E B 15	17
23	E B 16	E B 16	E B 16	E B 15	E B 15	16	19	27	34	32	37	37	34	G 28	32	34	44	21	19	E B 15	E B 16	E B 14	E B 15	E B 15
24	E B 15	E B 16	E B 15	E B 14	E B 14	E B 15	20	36	38	42	40	42	35	34	33	43	26	G 16	19	37	20	E B 15	E B 16	E B 15
25	E B 15	E B 16	E B 15	E B 15	E B 14	E B 16	20	26	G 23	32	35	38	34	G 27	G 25	G 20	G 20	23	22	19	E B 15	E B 15	16	18
26	E B 15	18	E B 16	E B 15	E B 15	E B 15	21	28	G 19	G 24	G 24	33	G 27	G 26	34	G 21	24	20	E B 14	29	E B 15	17	E B 15	E B 14
27	16	E B 15	E B 15	E B 15	15	E B 16	18	24	G 22	G 28	G 28	G 28	G 28	G 25	33	G 23	27	20	E B 15	E B 15	E B 15	E B 15	20	E B 15
28	E B 15	E B 15	E B 14	E B 15	E B 15	E B 15	26	28	G 26	G 28	34	G 27	36	33	G 26	G 23	25	E B 16	E B 15	17	E B 14	E B 16	E B 16	E B 15
29	E B 15	E B 15	E B 15	E B 14	E B 14	E B 15	18	29	31	34	33	35	34	G 20	34	G 22	25	18	18	E B 15	16	E B 15	E B 14	E B 15
30	17	E B 15	E B 15	E B 15	16	E B 15	18	25	30	31	32	G 29	G 28	G 26	31	G 27	32	22	43	A A 46	E B 15	E B 15	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	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	20	28	32	34	34	36	35	34	32	32	28	23	20	20	16	16	E B 16	16
U Q	16	17	16	17	16	16	23	29	38	38	42	40	37	37	36	38	33	27	33	37	20	18	17	18
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	18	27	G 30	G 32	G 28	G 30	G 34	G 28	G 31	G 26	26	20	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15

SEP. 2007 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 fmin (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

SEP. 2007 fmin (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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	314	321	324	334	331	331	374	393	355	344	375	355	365	321	320	298	331	317	330	322	337	356	358	314
2	321	321	337	318	321	F	367	389	375	346	A	A	334	305	309	319	355	356	A	305	322	305	311	330
3	A	335	331	306	300	A	330	309	328	C	375	353	329	315	244	334	328	334	339	333	364	324	319	311
4	317	317	307	297	325	316	373	315	305	341	A	367	351	333	319	326	366	332	332	317	S	336	358	352
5	323	312	A	317	338	321	324	360	364	376	399	350	320	328	327	341	367	320	318	341	353	370	A	A
6	295	314	326	342	A	A	370	378	330	357	369	325	A	330	A	351	347	331	341	333	352	325	304	302
7	F	F	301	328	303	F	395	A	A	348	A	313	350	306	328	300	353	353	333	339	369	333	310	305
8	327	328	319	342	328	322	356	284	A	348	342	347	341	297	310	323	332	328	320	334	344	347	312	329
9	335	335	328	327	332	344	363	377	358	335	379	352	350	A	303	340	345	351	324	330	347	346	332	303
10	324	347	342	362	323	354	345	371	356	392	338	336	350	355	328	328	318	320	347	360	392	307	315	317
11	339	331	319	333	336	327	372	389	394	356	354	345	365	335	319	341	358	345	334	362	416	307	323	314
12	336	318	330	328	347	328	377	340	365	377	376	338	335	337	338	350	338	347	348	349	325	F	320	336
13	328	329	343	403	322	334	361	394	404	360	327	338	337	322	333	353	361	376	354	333	333	F	318	F
14	F	350	353	404	325	332	378	375	A	340	358	336	346	363	338	334	341	365	329	333	357	F	338	F
15	353	324	334	381	342	335	374	361	366	348	365	379	317	327	341	349	333	348	334	343	335	341	335	316
16	327	333	327	357	F	324	355	403	352	376	374	381	329	342	339	A	342	343	354	357	365	332	305	315
17	312	365	337	350	F	342	370	384	347	361	342	356	339	350	326	323	332	350	365	385	345	306	F	A
18	F	F	F	F	F	F	369	363	392	388	359	326	351	341	339	346	355	365	374	354	324	334	F	F
19	F	322	308	320	F	F	385	393	396	353	338	334	368	309	335	326	346	367	375	318	337	317	F	F
20	322	313	327	320	349	374	384	400	402	352	359	332	349	343	343	360	368	369	352	314	319	339	309	F
21	336	319	F	339	351	321	386	366	341	371	A	314	339	343	357	368	359	359	356	299	302	F	335	321
22	314	300	318	347	334	331	372	358	360	368	337	350	339	362	369	353	353	355	341	307	336	336	338	347
23	341	325	309	309	314	341	400	393	362	361	367	360	344	343	348	343	341	343	345	335	334	308	293	318
24	349	324	330	360	317	337	372	378	341	351	387	375	327	347	348	343	344	337	346	365	333	329	286	F
25	F	338	329	331	F	339	380	355	378	353	380	364	360	373	371	343	346	347	353	367	329	309	324	304
26	329	335	330	317	323	339	372	381	380	387	375	340	325	306	347	342	358	365	355	367	327	337	328	326
27	327	328	324	330	338	338	380	384	388	385	376	314	327	323	353	360	378	393	360	309	317	315	331	356
28	341	339	326	323	296	367	385	370	375	343	354	359	317	314	319	358	391	368	356	356	310	310	331	338
29	317	313	309	310	319	346	400	386	396	359	334	336	339	340	319	352	370	378	360	332	291	340	302	317
30	308	323	316	310	338	327	368	364	384	364	347	361	329	363	363	345	362	373	359	A	317	307	F	F
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	24	28	27	29	24	24	30	29	27	29	26	29	29	29	29	29	30	30	29	29	29	26	25	21
MED	327	324	327	330	326	334	372	377	365	357	362	347	339	335	335	343	350	350	347	334	335	330	320	317
U Q	336	335	331	348	338	342	380	389	388	374	375	360	350	345	348	352	361	365	356	356	352	339	334	333
L Q	317	318	318	318	320	327	367	360	352	348	342	335	329	318	319	327	341	337	334	320	323	309	310	312

SEP. 2007 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 M(3000)F1 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L L	U L 393	419	422	U L 433	428	U L 422	402	U L 365	U L 368	U L 359						
2									U L 383	U L 405	A	A	U L 411	U L 401	E A	E A	E A	E A						
3						A		L U L 336	E A	C	413	U L 392	U L 416	U L 388	U L 383	U L 403	U L 348	L						
4									U L 379	E A	A	U L 413	U L 416	U L 414	U L 389	E A	E A							
5								L	U L 398	U L 409	E A	E A	U L 441	E A	U L 380	U L 382	E A	E A						
6						A		L	402	E A	E A	E A	A	E A	A	U L 364	L							
7								A	A	E A	A	408	386	E A	410	U L 376	U L 368	L						
8								U L 369	A	E A	E A	E A	E A	U L 451	U L 396	U L 376	L	L						
9									U L 382	U L 417	E A	E A	E A	A	E A	U L 385	380	L						
10								L	390	U L 397	U L 430	U L 425	U L 414	400	385	362	353	L						
11								L	U L 404	U L 421	418	U L 421	415	405	379	E A	E A	L						
12								U L 367	E A	386	U L 424	U L 447	409	U L 362	U L 379	E A	L	E A						
13								L	E A	U L 429	U L 416	U L 404	U L 420	U L 381	U L 384	E A	L							
14									A	E A	L	E A	E A	E A	U L 398	U L 337	U L 378	E A						
15								L	U L 396	U L 402	U L 399	U L 393	U L 359	U L 397	E A	E A		L						
16									L	U L 403	U L 416	U L 457	U L 393	374	U L 426	A	E A	E A						
17								L	U L 377	L	U L 381	U L 402	E A	E A	E A	U L 365	U L 368	E A						
18								E A	E A	E A	U L 419	E A	U L 401	U L 438	E A	L	E A	L						
19								L	U L 416	E A	E A	E A	E A	E A	E A	376	L							
20									U L 412	U L 420	U L 420	U L 415	U L 407	U L 370	U L 411	U L 376	L							
21									E A	E A	A	U L 370	E A	U L 411	U L 389	L	E A							
22									L	L	U L 389	U L 403	U L 385	L	L	L	L							
23									E A	U L 394	U L 419	U L 388	U L 369	L	U L 378	L	E A							
24									E A	E A	E A	E A	U L 400	U L 392	L	E A	L							
25								L	L	U L 409	L	U L 405	L U L 418	U L 409	L	L	L							
26									L	U L 425	U L 405	U L 410	U L 440	U L 387	367	L	U L 369							
27								L	L 396	412	U L 432	U L 395	U L 407	U L 401	U L 364	L	L							
28								L	L	U L 380	U L 409	U L 410	U L 409	U L 376	376	L								
29									L	L	U L 400	U L 391	U L 391	U L 381	L	L								
30								L	L	L	U L 432	U L 415	L 360	L	L	L	E A							
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	16	18	21	23	20	18	12	8	1						
MED								U L 367	U L 396	U L 409	U L 417	U L 408	U L 409	U L 398	U L 384	U L 376	U L 368	U L 359						
U Q								U L 369	U L 403	U L 420	U L 422	U L 418	U L 416	U L 410	U L 398	U L 379	U L 374							
L Q								U L 336	U L 382	U L 400	U L 405	U L 394	U L 391	U L 381	379	U L 364	U L 360							

SEP. 2007 M(3000)F1 (0.01)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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							228	220	296	284	240	270	262	340	338	390	302	296						
2									280	260	A	A	330	362	326	306	246	E A 300						
3						A	318	326	E A 298	C	246	284	328	348	404	292	314	282						
4									328	284	A	270	296	316	346	306	236							
5								250	248	248	E A 240	E A 272	342	304	308	282	236	E A 354						
6						A		252	304	264	248	E A 326	A	312	A	264	258							
7								A	A	296	A	344	264	362	326	390	268	266						
8								426	A	286	284	288	298	388	314	324	288	274						
9									282	312	256	296	290	A	382	296	262	244						
10								256	272	230	312	318	290	278	324	320	336	280						
11								220	230	280	274	290	270	330	346	286	260	262						
12								282	250	230	254	312	318	296	294	274	288	240						
13								228	222	276	322	308	304	316	306	272	244							
14									A	E A 252	270	304	286	260	300	314	288	236						
15								262	248	278	270	252	342	324	298	272		262						
16									266	236	258	312	320	276	300	A	282	256						
17								228	292	252	318	276	290	298	338	306	286	252						
18								250	232	236	276	326	274	282	282	282	260	236						
19								226	228	E A 262	E A 278	302	262	E A 322	288	296	264							
20									224	294	278	328	302	302	298	252	236							
21									248	234	A	324	270	260	250	262	250							
22									248	248	276	258	268	248	248	274	258							
23									254	252	246	260	284	264	276	274	E A 266							
24									270	246	226	248	286	282	268	264	264							
25								252	248	254	240	256	260	246	256	274	256							
26									230	226	256	294	326	346	272	276	244							
27								230	230	236	246	350	310	306	260	248	230							
28								252	242	280	252	256	294	314	290	238								
29									226	252	270	302	270	286	292	260								
30								246	232	250	270	252	286	246	248	272	242							
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							2	17	27	29	26	29	29	29	29	29	27	15						
MED							273	250	248	252	260	292	290	303	298	276	260	259						
U Q								259	280	280	276	315	314	327	326	306	286	282						
L Q								228	230	241	246	265	270	277	274	268	244	244						

SEP. 2007 h'F2 (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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 374	E A 288	E A 278	E A 258	E B 250	E B 246	198	H 172	196	202	H 180	194	H 190	178	H 184	194	226	208	228	226	214	214	200	E A 242
2	242	244	E B 248	E B 258	E B 266	E B 246	222	212	206	204	A	A	200	216	A	A	A	A	A	E A 300	224	E A 262	246	238
3	A	E A 272	244	E A 328	E A 298	A	220	240	A 296	C	H 180	184	198	196	H 186	202	224	222	E A 244	230	198	E A 246	E A 254	E A 310
4	E B 256	E B 262	E A 276	E B 278	E B 260	E B 260	214	212	218	A	A	212	208	194	198	A	A	212	242	E A 270	E A 244	240	238	E A 280
5	242	E A 314	A	E A 288	E B 256	E B 256	H 166	222	212	206	A	A	H 178	A	196	214	A	A	E A 312	E A 294	224	204	A	A
6	E A 316	E A 294	E A 284	E A 318	A	A	218	214	212	A	A	A	A	A	A	228	216	E A 248	E A 248	238	222	E A 236	E A 258	E A 282
7	E A 260	E B 244	E A 296	E A 262	E B 290	E B 272	208	A	A	A	A	H 172	202	A	192	214	234	230	E A 286	E A 248	204	220	E B 274	E B 282
8	270	E A 260	E B 250	232	202	E B 252	234	214	A	A	A	A	A	H 176	H 184	216	220	210	232	230	208	220	230	236
9	214	E A 254	E A 252	E B 258	E B 246	E A 236	218	208	200	190	A	A	A	A	A	216	216	206	E A 250	248	218	216	224	E B 280
10	E B 234	232	226	216	E B 278	230	214	210	210	E A 226	190	190	184	192	206	204	220	222	226	208	192	224	E B 252	E B 254
11	240	E B 248	E B 264	E A 270	E A 264	E A 268	216	200	206	196	H 176	190	H 184	184	216	A	A	236	234	210	182	E A 250	E B 258	E B 260
12	E B 256	E B 270	E B 260	E B 256	228	240	206	216	A	204	196	182	202	E A 258	220	A	208	A	224	216	240	E A 258	E A 266	226
13	236	248	E A 252	206	E B 250	E B 250	208	A	A	198	204	194	176	218	216	A	212	216	E A 232	E A 312	E A 242	E A 266	E B 246	E A 272
14	E A 244	228	232	208	E A 290	E A 282	E A 232	234	A	A	200	A	A	A	206	E A 250	222	A	230	212	212	234	232	E A 252
15	230	238	212	206	226	232	218	H 198	210	196	216	218	E A 280	210	A	A	208	H 184	220	224	220	214	220	E B 258
16	224	E B 238	228	216	224	234	218	210	206	186	194	188	204	208	216	A	A	A	222	220	202	226	E B 276	E B 248
17	E B 248	210	236	224	E B 260	238	214	196	202	190	202	196	A	A	A	230	E A 238	A	224	218	218	E A 322	E A 308	A
18	236	E B 240	E B 264	234	E B 230	E B 258	220	A	A	A	198	A	196	192	A	198	A	A	218	E A 256	E A 254	E A 246	E B 270	E A 278
19	240	238	E B 274	E A 306	E B 258	E B 254	216	200	200	A	A	A	A	A	A	218	206	216	204	210	222	E B 258	E A 272	240
20	E B 248	E B 256	240	242	218	210	214	206	188	186	196	212	212	208	206	E A 234	206	208	206	E A 252	E A 254	E A 246	E B 266	E A 252
21	234	242	242	226	218	240	212	216	A	A	A	228	A	210	204	196	A	218	208	228	E A 282	238	218	228
22	E B 258	E B 266	E B 254	222	222	242	204	228	208	198	200	198	204	200	196	200	232	232	218	E A 250	218	232	222	220
23	216	218	E B 262	E B 272	E B 274	232	188	204	A	194	192	214	206	212	202	234	A	224	216	208	200	E B 250	E B 280	236
24	216	E B 240	238	208	E B 236	226	220	230	A	A	A	A	194	196	208	A	224	222	214	212	222	220	E B 296	E B 256
25	E B 250	228	226	226	230	234	208	198	226	208	212	214	H 182	H 174	194	204	222	236	224	206	224	E B 248	E A 256	E A 292
26	E B 250	E A 264	E B 246	E B 248	240	226	206	224	212	196	H 174	192	H 166	210	230	216	H 174	224	202	212	240	234	E B 236	236
27	242	E B 250	E B 250	E B 246	232	238	218	206	202	190	184	184	H 188	H 174	220	216	A	212	200	E B 250	E B 276	E B 252	E A 258	220
28	222	E B 238	E B 242	E B 294	E B 308	220	212	216	210	202	190	H 172	208	192	208	224	212	212	196	212	E B 266	E B 264	E B 254	228
29	230	E B 262	E B 280	E B 276	E B 272	226	204	218	198	192	190	184	200	200	220	224	216	212	200	222	E A 312	230	E B 258	E B 254
30	E A 286	E B 254	E B 254	E B 268	E A 254	236	212	220	208	194	186	H 182	226	210	214	212	A	226	E A 254	A	250	E B 248	E B 256	E B 276
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	30	29	30	29	28	30	27	21	20	20	21	23	23	23	22	20	23	29	29	30	30	29	28
MED	U 229	E 248	E 250	E 252	E B 250	232	214	212	208	196	193	192	199	198	206	215	217	217	219	219	216	U 224	E 256	E 253
U Q	E 256	E A 262	E 264	E 272	E B 269	E B 253	218	220	212	203	200	212	206	210	216	224	224	226	E A 238	E A 250	E A 244	E 250	E B 268	E A 277
L Q	232	238	239	224	229	232	208	204	201	191	H 185	184	H 184	192	196	204	210	212	211	212	212	224	234	236

SEP. 2007 h'F (KM)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 h'E (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						B	124	130	120	122	112	126	A	116	116	118	120	122						
2						B	120	120	116	116	A	A	A	A	114	118	A	A						
3						B	A	118	A	C	A	124	A	A	A	112	124	A						
4						B	B	112	A	A	A	A	116	118	120	A	116	120						
5						B	B	108	A	A	A	A	A	A	A	A	A	A						
6						B	A	A	A	A	A	A	A	A	A	118	A	A						
7						B	116	A	A	A	A	A	116	A	A	112	118	110						
8						B	126	120	A	A	A	A	A	A	A	A	114	112						
9						B	118	A	A	A	A	A	A	A	A	A	A	A						
10						B	A	116	112	A	118	A	112	112	A	A	116	122						
11						B	A	110	116	120	118	116	114	118	118	A	120	116						
12						B	116	A	A	A	A	A	118	122	120	A	A	A						
13						B	122	120	A	A	A	A	118	118	116	116	114	122						
14						B	122	124	120	120	120	A	A	A	120	A	A	A						
15						B	B	120	120	124	A	A	A	A	A	A	A	120						
16						B	122	A	A	A	116	120	120	120	114	A	120	112						
17						B	116	118	114	A	112	116	116	114	114	118	110	A						
18						B	118	A	A	A	A	A	A	A	A	A	A	A						
19						B	A	124	A	A	A	A	A	A	A	A	A	A						
20						B	A	A	124	120	122	A	116	116	110	A	A	A						
21						B	128	116	116	114	A	A	A	A	A	A	A	B						
22						B	B	130	124	A	116	118	116	114	112	120	124	A						
23						B	B	A	A	A	118	118	A	116	120	120	A	A						
24						B	B	116	120	A	A	A	A	A	A	A	A	116						
25						B	B	124	120	A	A	A	A	124	118	114	116	A						
26						B	B	118	114	112	112	A	116	120	118	122	116	132						
27						B	B	A	122	120	118	118	118	118	118	116	124	A						
28						B	134	122	122	120	A	122	124	118	118	118	120	B						
29						B	B	A	A	A	A	A	A	112	116	120	124	B						
30						B	B	A	A	A	A	118	116	118	A	118	A	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							13	19	15	10	11	10	14	17	17	15	16	11						
MED							122	120	120	120	118	118	116	118	118	118	119	120						
U Q							125	124	122	120	118	122	118	119	119	120	122	122						
L Q							117	116	116	116	112	118	116	115	114	116	116	112						

SEP. 2007 h'E (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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	90	88	88	92	92	94	106	104	152	150	92	106	102	102	98	106	106	128	B	B	B	118	98	92
2	94	100	94	92	B	B	126	126	128	116	108	104	100	96	124	118	104	106	100	98	96	94	94	98
3	100	114	108	108	100	108	106	118	102	C	104	96	102	98	96	106	120	104	104	104	B	102	106	104
4	92	92	94	96	100	98	126	118	104	102	100	94	118	100	102	106	122	116	104	112	110	110	108	100
5	96	96	88	88	90	B	108	126	106	104	102	98	100	98	102	100	96	92	92	92	90	92	106	104
6	104	98	96	94	94	94	94	98	100	104	104	100	100	100	98	116	106	102	98	98	98	100	94	94
7	94	90	90	124	110	B	G	106	104	104	102	98	94	94	90	96	154	112	104	102	102	B	104	116
8	98	98	98	94	94	B	156	114	98	96	96	96	96	98	96	96	132	118	B	B	B	98	106	96
9	96	88	92	90	110	84	140	102	100	100	98	96	92	92	92	92	92	92	90	92	90	88	88	92
10	94	B	B	B	94	92	122	124	130	94	94	94	118	124	100	102	98	120	112	B	104	B	96	B
11	94	92	90	88	88	90	130	136	98	G	100	98	96	96	102	106	120	114	110	106	94	98	B	B
12	B	B	96	96	B	B	162	104	104	102	104	108	148	146	128	94	100	98	98	102	98	98	94	96
13	94	86	88	90	94	98	134	120	106	108	106	104	104	100	96	122	124	118	98	94	100	102	104	100
14	100	90	90	94	92	140	132	122	122	118	130	96	98	94	100	98	98	96	130	118	B	100	98	96
15	92	112	114	104	100	94	122	128	102	102	100	98	94	102	98	94	96	96	B	104	102	96	B	86
16	B	B	B	B	B	B	126	104	104	98	92	92	100	148	124	106	110	120	116	108	90	96	B	96
17	B	106	98	B	98	B	124	138	120	104	98	92	140	144	120	118	116	106	102	100	100	96	100	100
18	118	94	94	96	92	B	112	104	104	104	106	104	106	106	100	104	104	104	96	96	96	96	102	104
19	104	102	104	98	96	94	106	106	106	106	102	100	98	98	98	100	106	98	B	98	90	88	94	92
20	96	96	96	92	94	96	96	96	118	104	104	94	122	128	118	106	98	90	104	104	102	102	102	104
21	102	102	102	96	96	122	126	126	122	116	106	106	104	102	102	100	96	96	96	96	98	B	B	94
22	B	B	B	B	B	104	126	160	148	92	94	98	124	116	122	108	102	102	102	100	B	98	98	96
23	90	104	94	90	B	90	114	102	102	102	144	144	106	100	114	116	104	102	102	B	96	96	B	B
24	B	B	98	B	B	B	134	120	120	106	104	106	106	106	104	100	100	96	94	90	88	94	B	94
25	B	B	B	B	B	B	128	122	106	102	104	104	102	100	102	96	92	90	88	88	92	92	92	92
26	92	88	88	B	B	B	134	146	100	92	96	104	102	100	150	102	126	126	B	106	106	104	B	102
27	102	B	B	B	96	96	138	106	102	94	96	102	102	98	142	98	120	108	90	B	B	B	102	100
28	88	88	90	130	B	B	130	120	100	100	102	98	158	124	104	100	132	B	B	112	108	104	98	B
29	96	B	B	B	B	112	106	106	106	114	104	104	104	96	116	102	118	116	116	110	104	102	B	102
30	96	110	116	B	110	112	114	104	106	106	106	102	102	102	108	104	102	106	98	94	102	104	B	B
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	22	24	20	20	18	29	30	30	28	30	30	30	30	30	30	30	29	24	25	24	26	21	25
MED	96	96	94	94	95	96	126	118	105	104	102	99	102	100	102	102	105	104	101	100	98	98	98	96
U Q	100	102	98	97	100	108	133	126	120	106	104	104	106	106	118	106	120	116	104	106	102	102	104	102
L Q	93	90	90	91	93	94	110	104	102	100	98	96	100	98	98	98	98	96	96	95	93	96	94	94

IONOSPHERIC DATA STATION Kokubunji

SEP. 2007 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

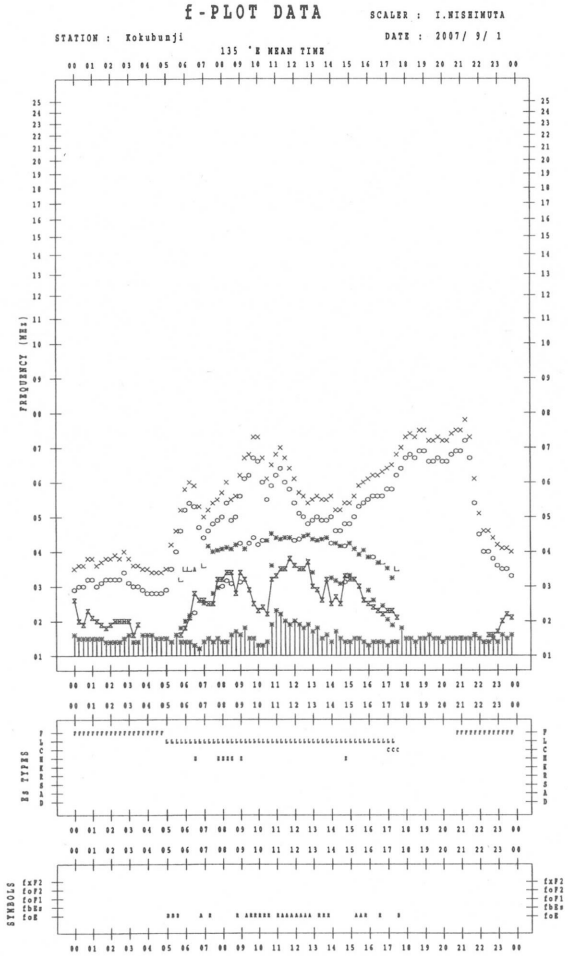
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F5	F3	F5	F3	F2	L2	L2	L2	HL12	HL11	L2	L2	L2	L2	L2	L2	L2	CL22				F2	F2	F2
2	F2	F1	F2	F2			CL22	CL22	CL22	CL22	L3	L3	L2	L2	CL22	CL32	L4	L3	F3	F3	F2	F2	F2	F3
3	F3	F3	F3	F3	F3	L3	L3	CL22	L3		L2	L2	L2	L2	L2	L2	CL22	L4	F3	F5		F2	F2	F5
4	F2	F3	F3	F2	F1	L1	C2	C2	L2	L2	L2	L2	CL12	L2	L2	L2	CL22	CL22	F3	FF35	F3	F5	F4	F4
5	F2	F5	F6	F3	F2		L2	CL22	L2	L2	L2	L3	L2	L2	L2	L2	L3	L3	F4	F4	F3	F2	F5	F5
6	F4	F3	F4	F5	F5	L5	L3	L2	L2	L2	L3	L2	L3	L3	L4	CL22	L2	L3	F3	F3	F5	F3	F3	F3
7	F3	F3	F3	FF22	F2			L3	L3	L2	L3	L2	L2	L2	L3	L2	HL11	C3	F4	F5	F2		F2	F1
8	F2	F3	F1	F2	F1		H2	CL21	L3	L3	L2	L3	L2	L2	L2	L2	CL11	CL11				F3	F1	F3
9	F2	F4	F4	F3	FF12	L2	HL11	L2	L3	L2	L2	L3	L2	L3	L3	L2	L2	L4	F4	F3	F3	F3	F3	F2
10	F1				F3	L2	CL22	CL11	CL12	L2	L2	L2	CL22	CL12	L2	L2	L1	C3	F2		F2		F4	
11	F2	F2	F2	F4	F5	L3	CL22	CL23	L2		L2	L1	L2	L2	L2	L3	CL22	CL52	F2	F2	F3	F2		
12			F3	F2			H2	L2	L3	L2	L2	L2	HL11	HL11	CL12	L2	L2	L3	F5	F4	F3	F3	F4	F3
13	F2	F2	F3	F2	F2	L2	H2	C2	L3	L2	L2	L2	L2	L2	L2	CL11	CL22	C2	F3	F5	F4	F2	F1	F2
14	F2	F2	F3	F3	F2	HL12	C3	CL22	CL32	CL22	CL11	L2	L2	L2	L2	L2	L3	L2	F2	F1		F2	F2	F2
15	F2	F2	F2	F1	F1	L2	C3	CL22	L2	L2	L2	L2	L2	L2	L2	L3	L3	L3		F1	F4	F2		F1
16							C2	L2	L2	L2	L2	L2	L2	HL22	CL22	L4	CL32	CL32	FF23	FF43	F3	FF22		F1
17		F3	F2		F2		C2	HL22	CL22	L2	L2	L2	HL12	HL12	CL22	CL22	C2	L3	F4	F5	F2	F7	F5	F4
18	FF22	F3	F1	F2	F1		C2	L3	L2	L2	L2	L2	L2	L2	L2	L2	L3	L3	F4	F4	F4	F3	F3	F2
19	F3	F3	F2	F3	F2	L2	L2	L2	L2	L2	L2	LH31	L2	L2	L3	L2	L2	L3		F1	F2	F2	F2	F1
20	F2	F2	F2	F2	F1	L4	L2	L2	CL12	L2	L2	L2	CL11	CL11	CL21	L2	L2	L2	FF21	F2	F2	F3	F1	F3
21	F2	F2	F2	F3	F2	C1	C2	CL21	CL21	CL21	L3	L2	L2	L2	L2	L2	L4	L3	F2	F2	F2			F1
22						L2	CL21	HL23	HL12	L2	L2	L2	CL12	CL12	CL22	L1	L2	L3	F4	F2		F2	F2	F2
23	F2	F1	F2	F2		L2	CL11	L2	L2	L2	HL12	HL11	L2	L2	CL11	CL21	L3	L3	F3		F2	F1		
24			F1				H3	C3	CL21	L2	L2	L1	L2	L2	L2	L3	L3	L2	F3	F5	F4	F3		F2
25							C2	CL21	L2	L2	L2	L2	L2	L2	L2	L2	L4	L3	F5	F3	F2	F1	F2	F2
26	F1	F2	F2				HL21	HL21	L2	L1	L2	L2	L2	L1	HL11	L2	CL11	CL21		F3	F1	F3		F2
27	F2				F2	L2	HL11	L2	L2	L2	L2	L2	L2	L2	HL12	L2	CL22	L2	F1				F2	F1
28	F2	F1	F2	F2			CL31	CL21	L2	L2	L2	L2	HL11	CL11	L2	L2	CL12			F2	F2	F1	F1	
29	F2					F1	L3	L3	L2	L2	L2	L2	L2	L2	CL22	L2	CL21	C2	F3	F1	F2	F2		F2
30	F3	F1	F2		F2	C1	C2	L2	L2	L2	L2	L1	L2	L2	L1	L2	L2	L2	F5	F3	F2	F2		
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																								

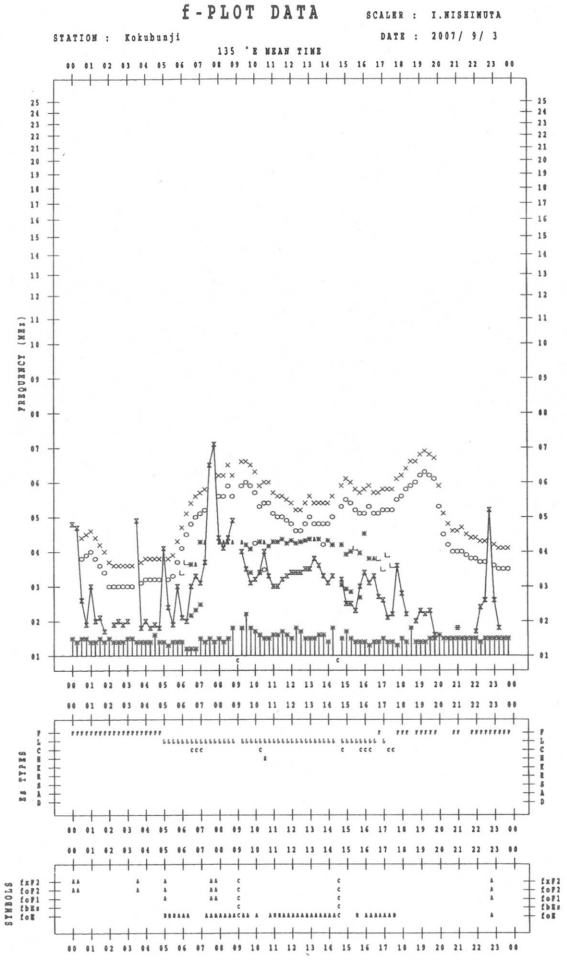
SEP. 2007 TYPES OF Es

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

f-PLOTS OF IONOSPHERIC DATA

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


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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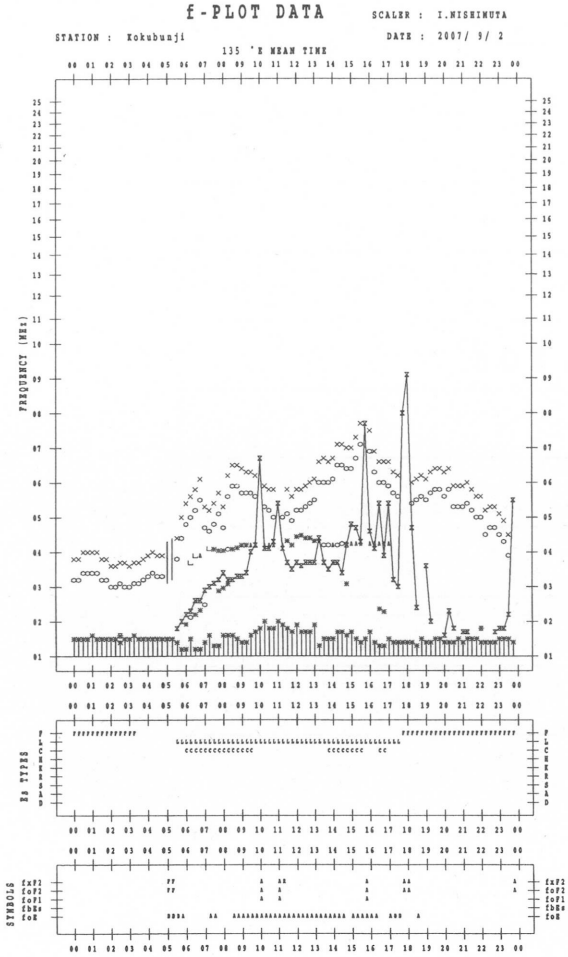
STATION : Kokubunji
DATE : 2007/ 9/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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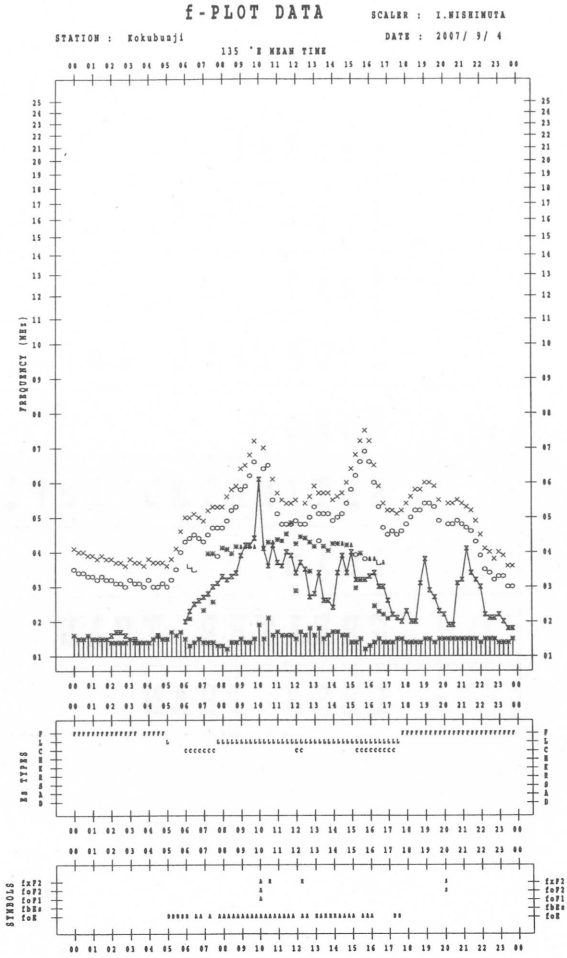
STATION : Kokubunji
DATE : 2007/ 9/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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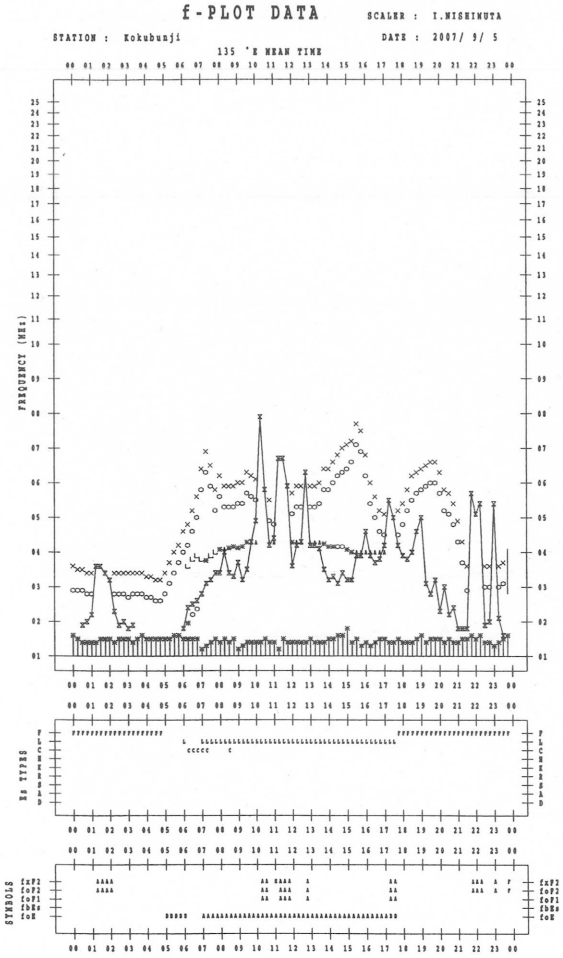
STATION : Kokubunji
DATE : 2007/ 9/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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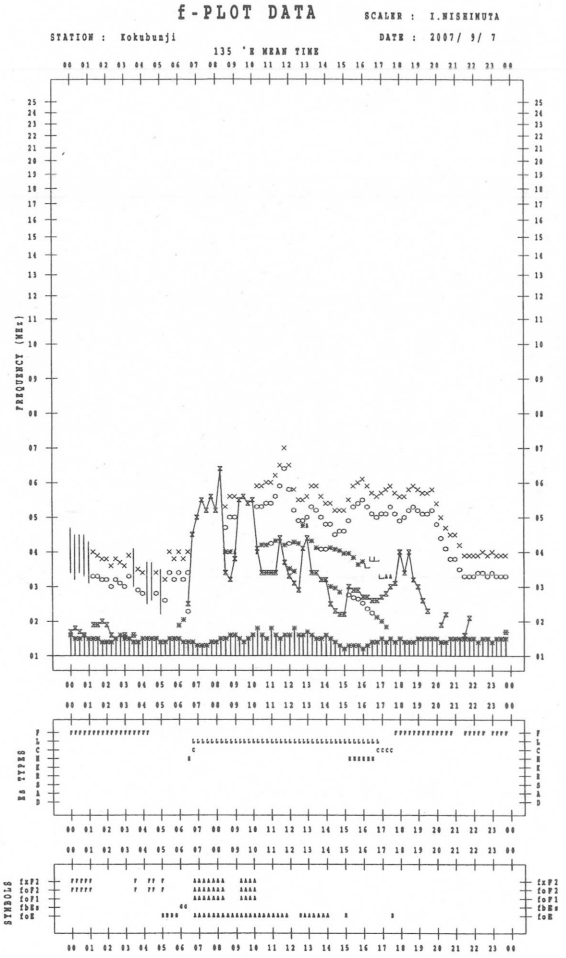
STATION : Kokubunji
DATE : 2007/ 9/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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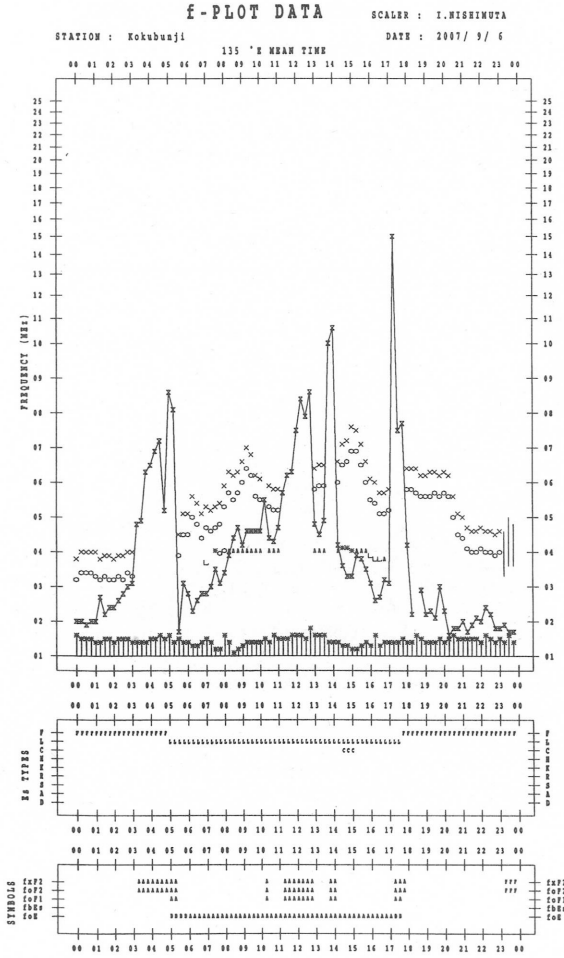
STATION : Kokubunji
DATE : 2007/ 9/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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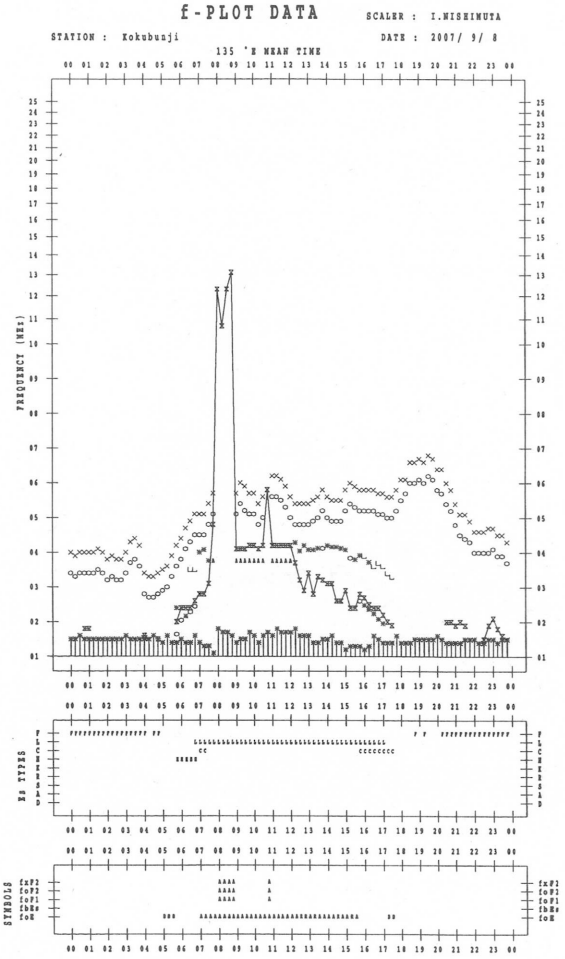
STATION : Kokubunji
DATE : 2007/ 9/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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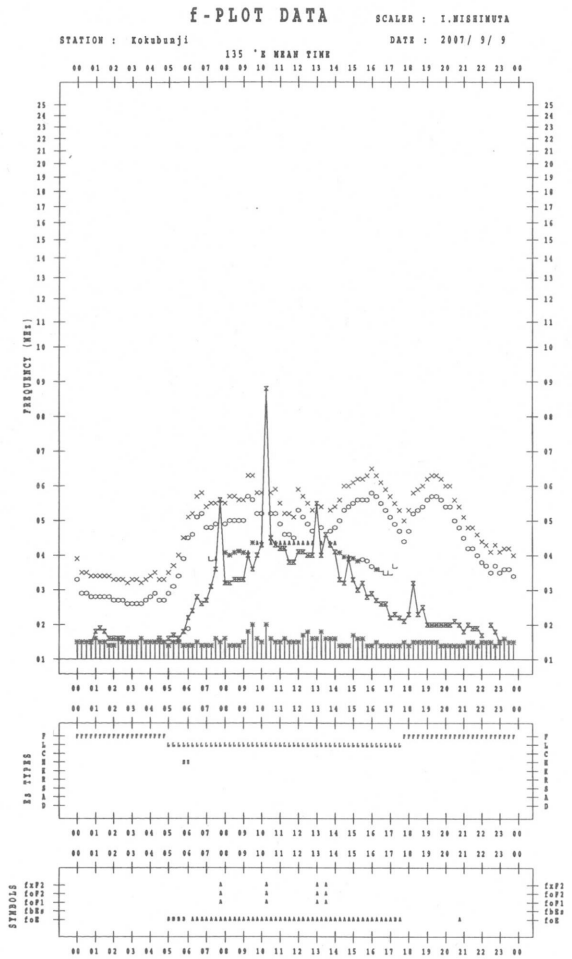
STATION : Kokubunji
DATE : 2007/ 9/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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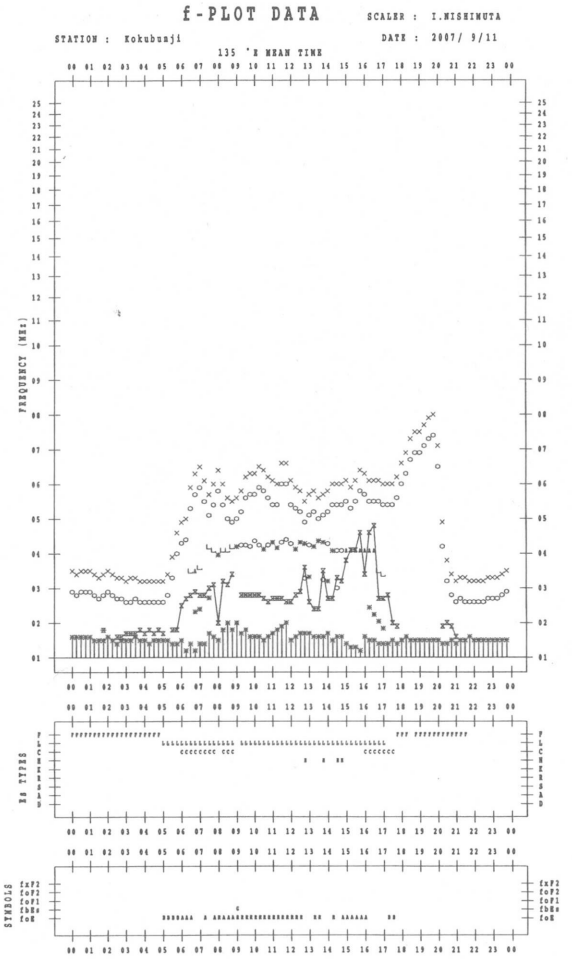
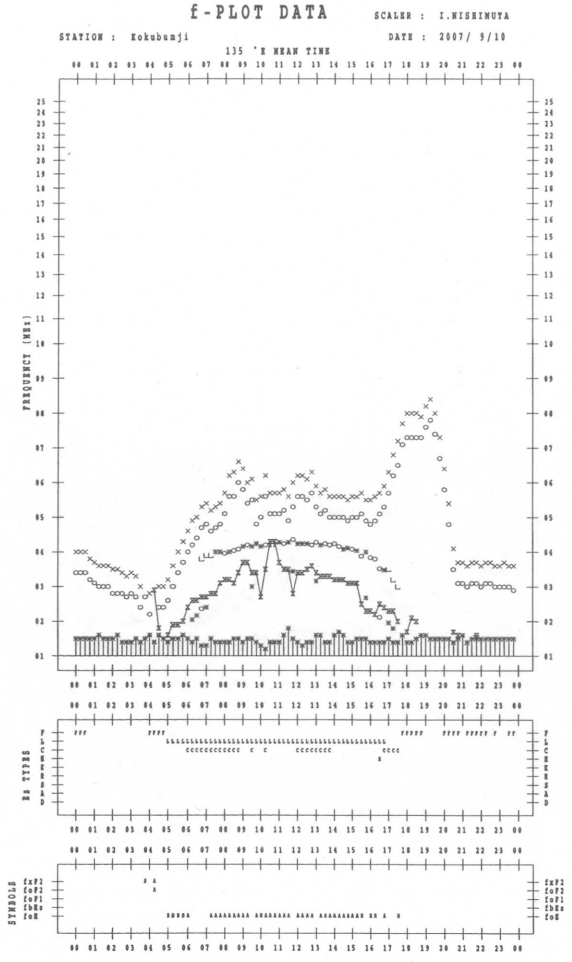
STATION : Kokubunji
DATE : 2007/ 9/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE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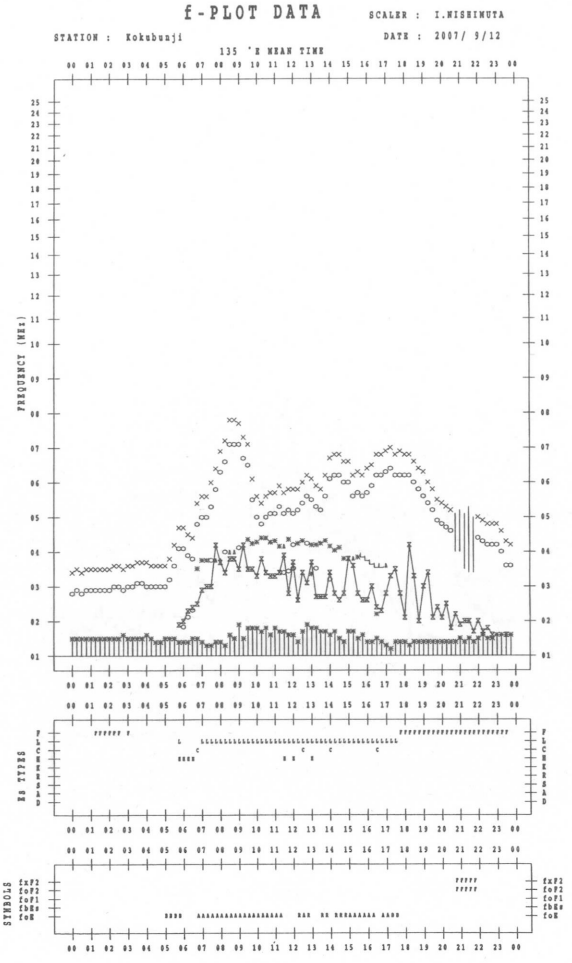
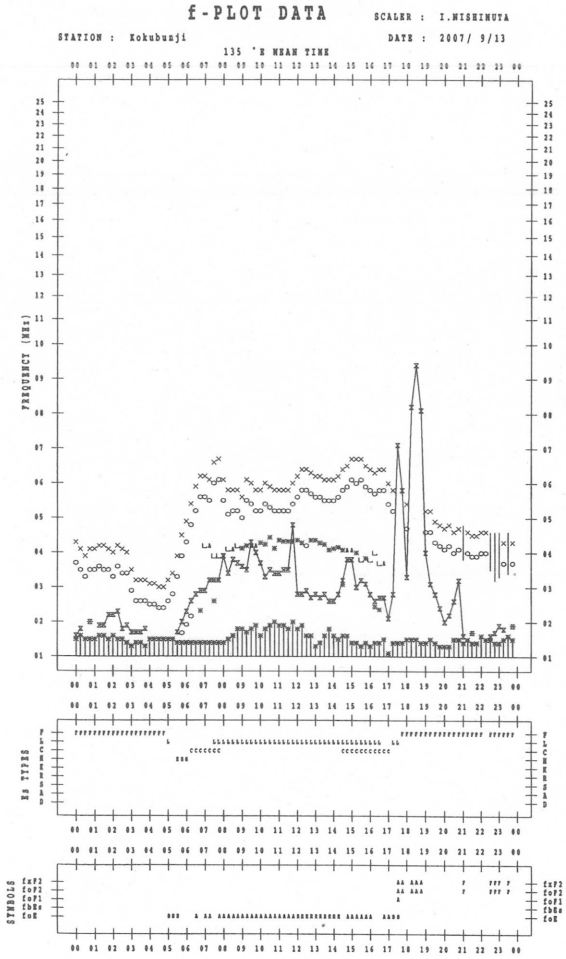
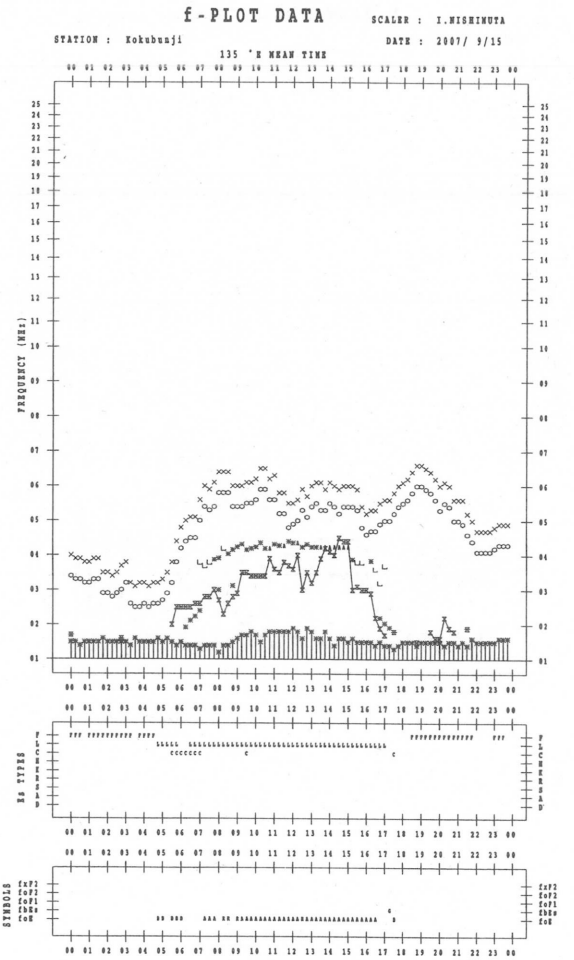
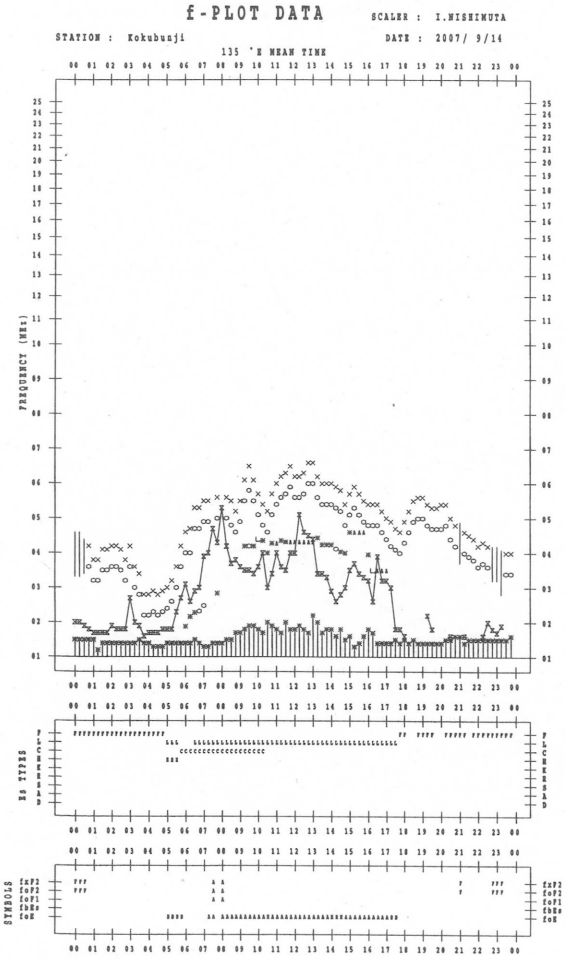
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/13
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/15
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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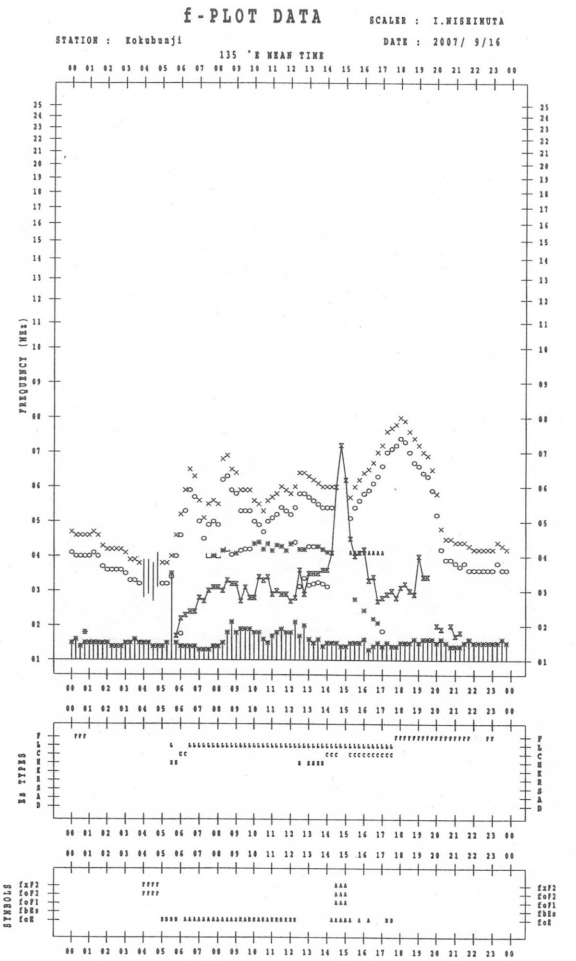
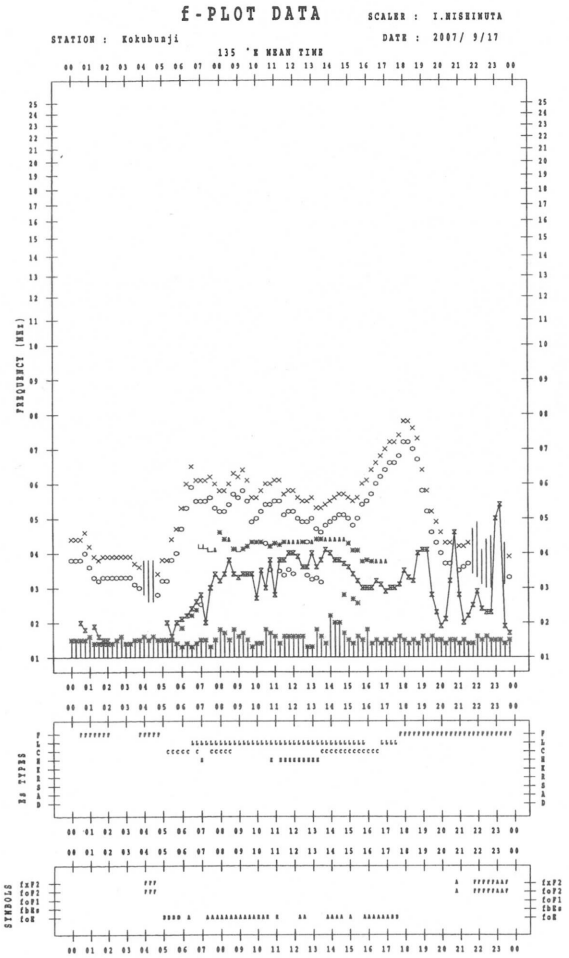
STATION : Kokubunji
DATE : 2007/ 9/14
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/16
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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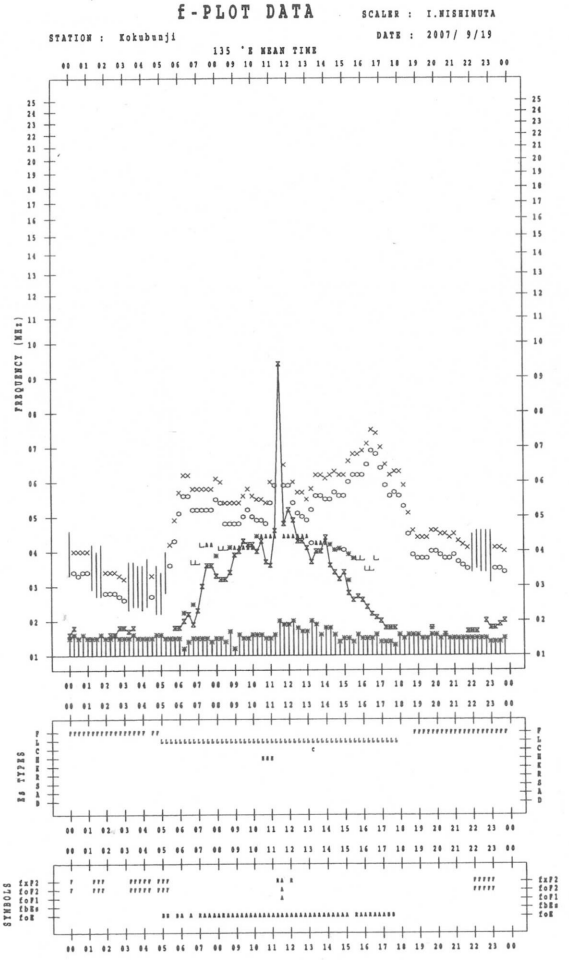
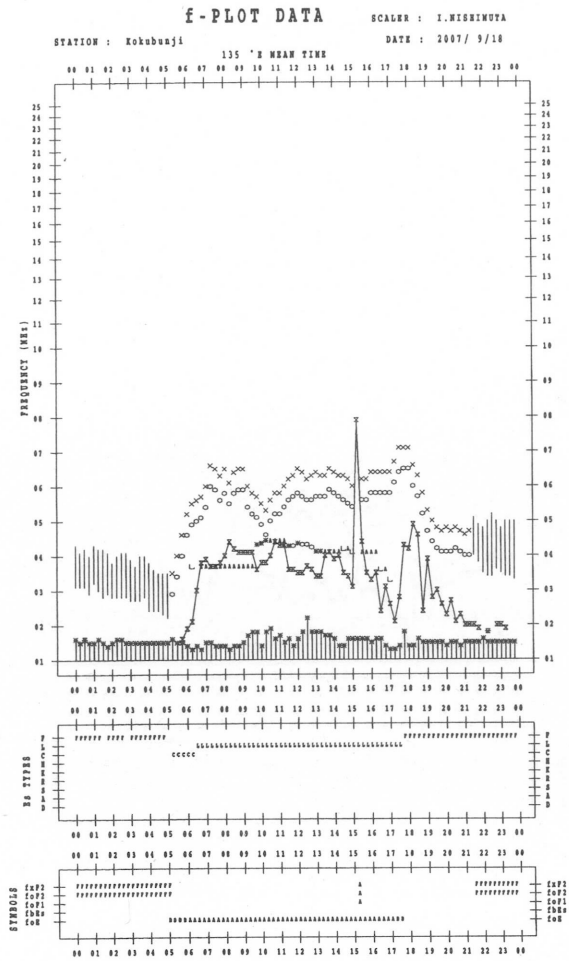
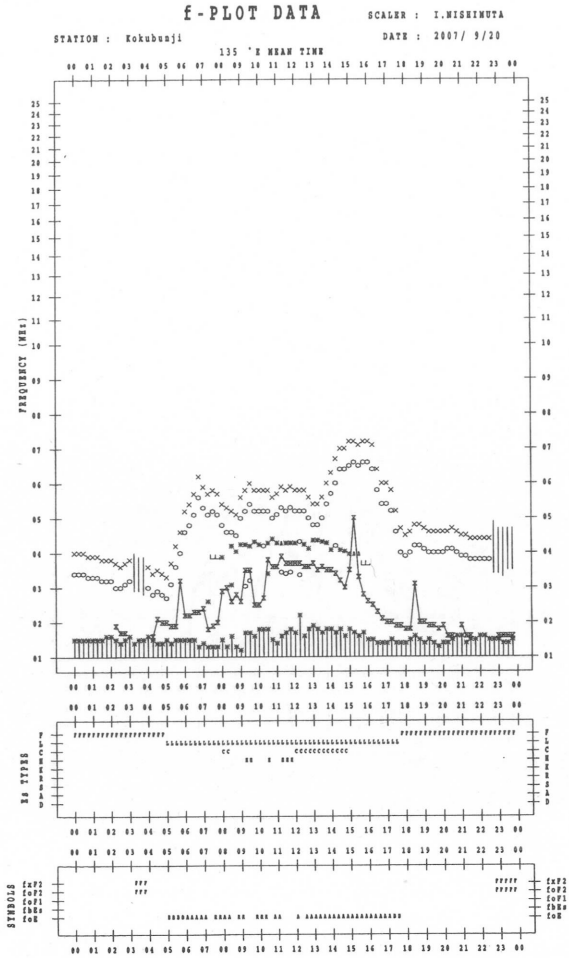
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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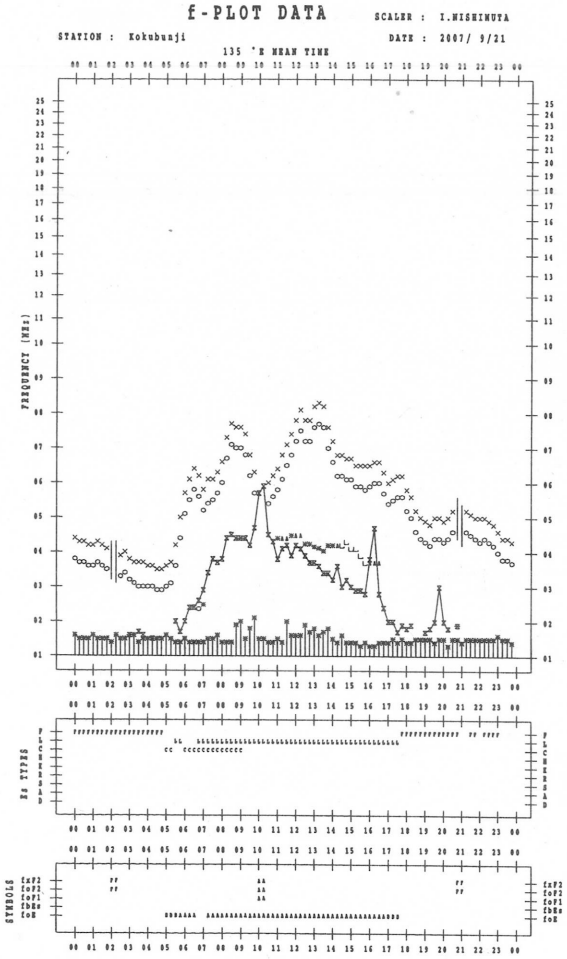
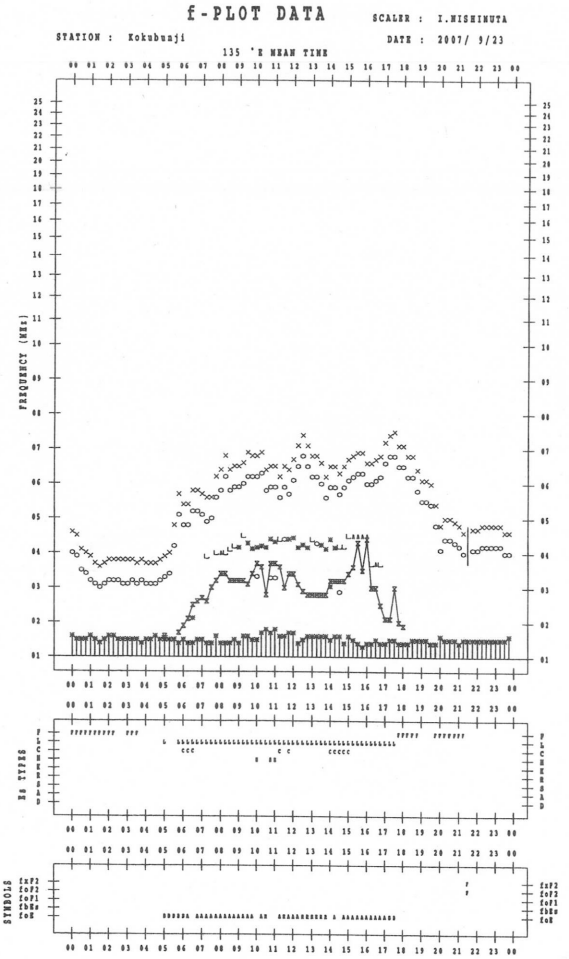
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHINUTA
STATION : Kokubunji
DATE : 2007/ 9/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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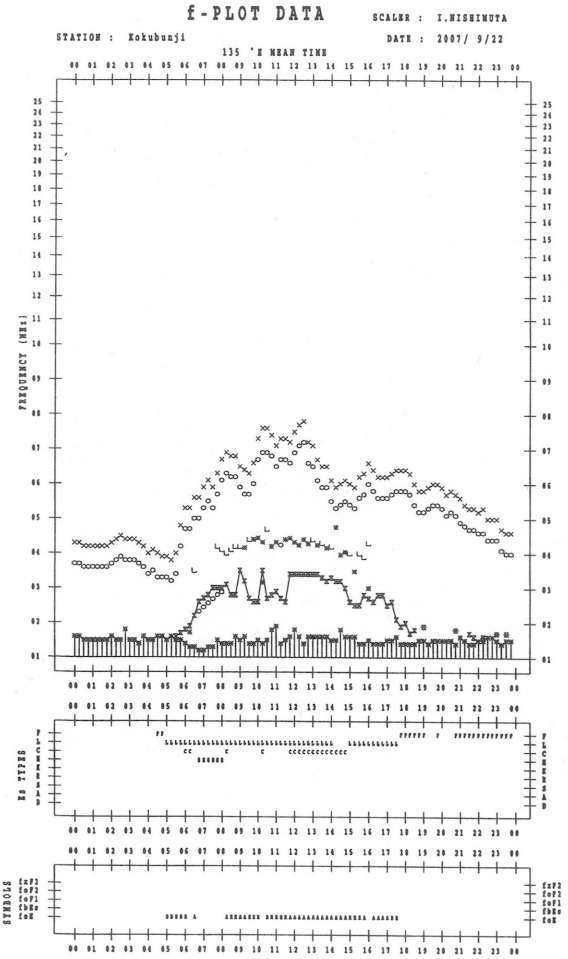
STATION : Kokubunji
DATE : 2007/ 9/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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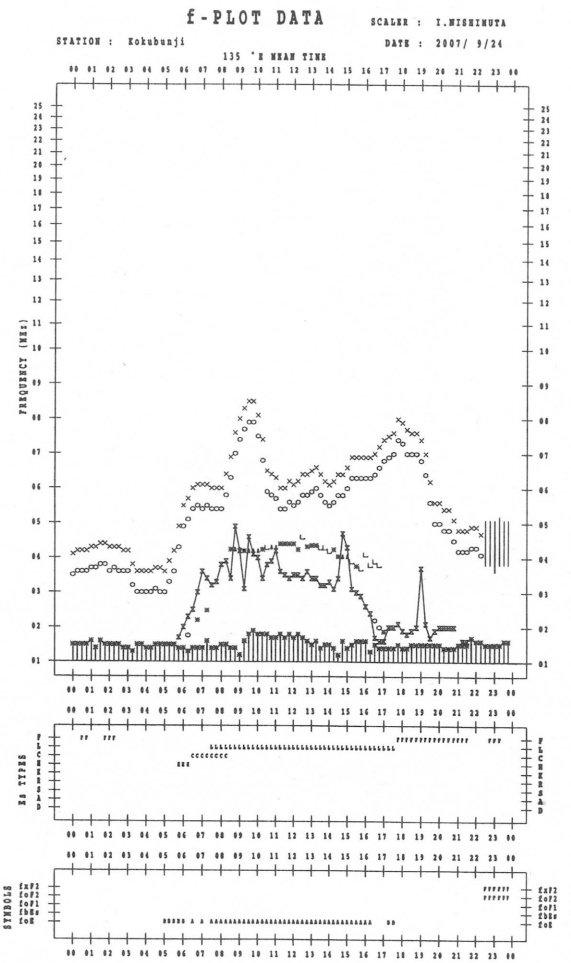
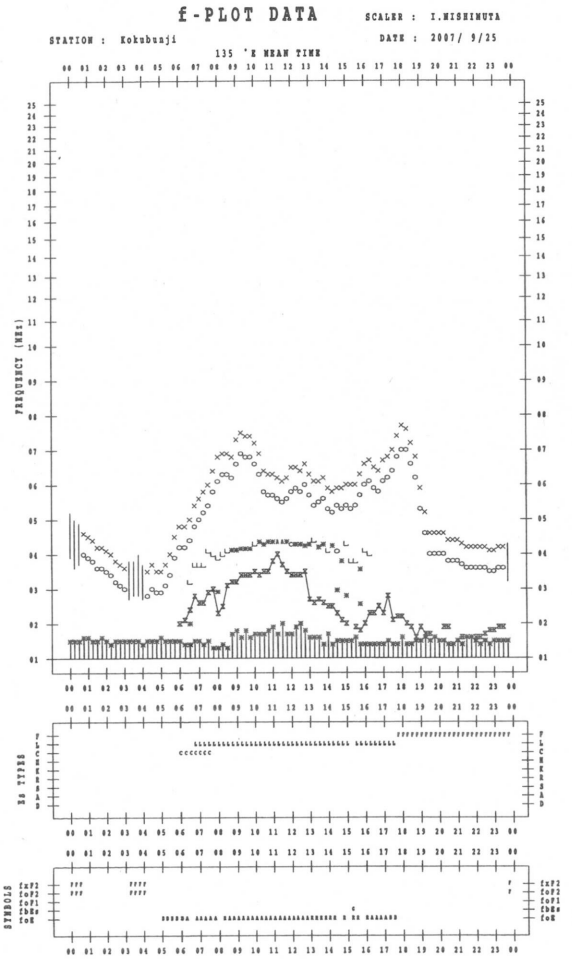
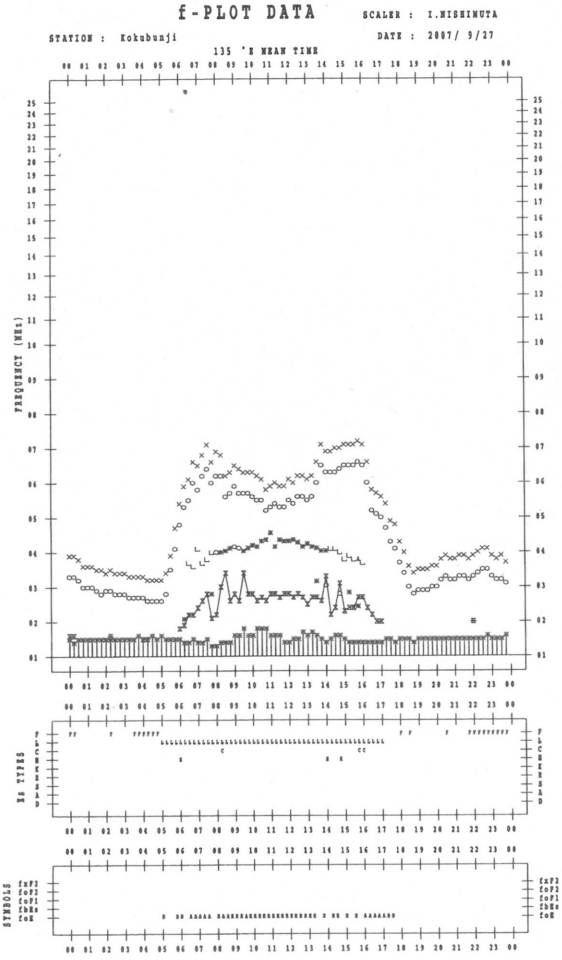
STATION : Kokubunji
DATE : 2007/ 9/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHINUTA
STATION : Kokubunji
DATE : 2007/ 9/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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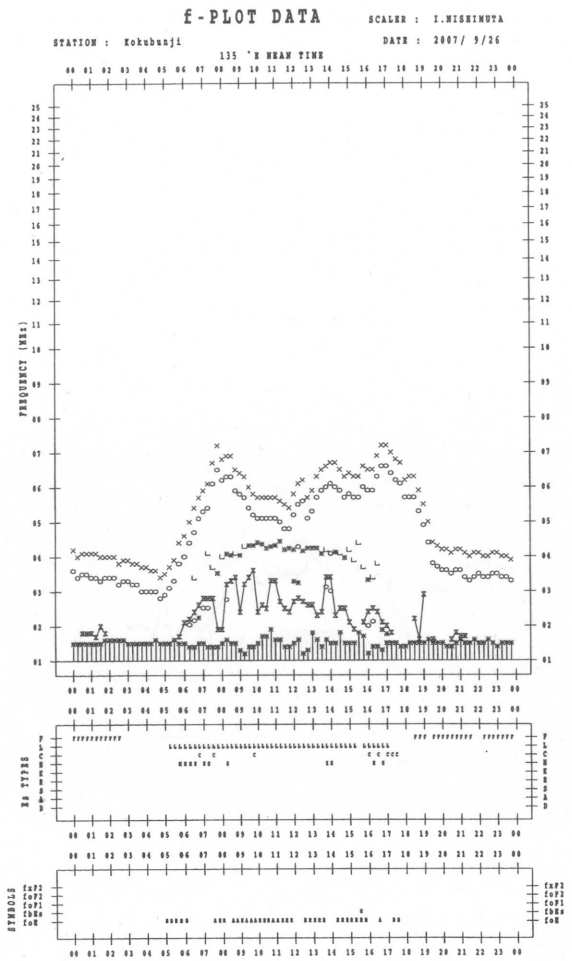
STATION : Kokubunji
DATE : 2007/ 9/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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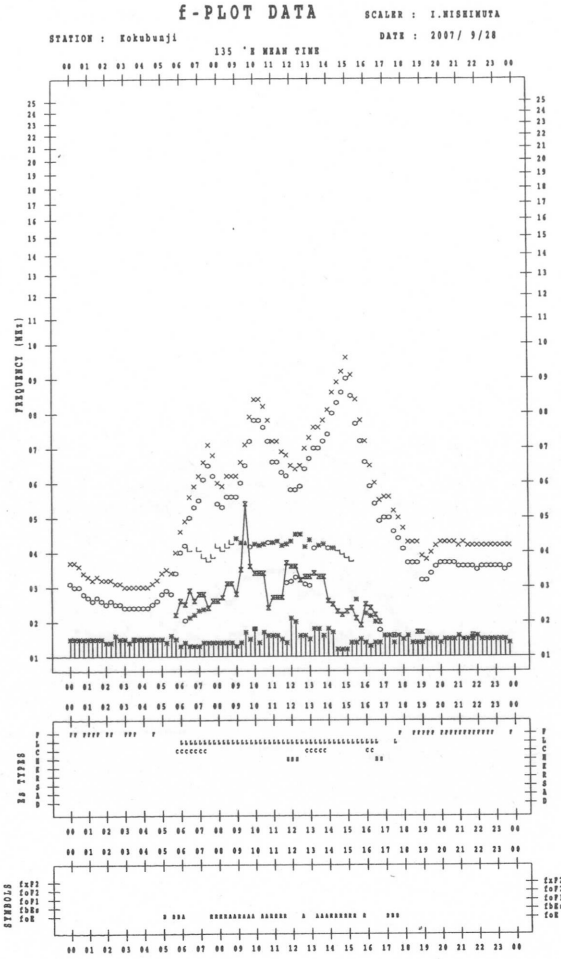
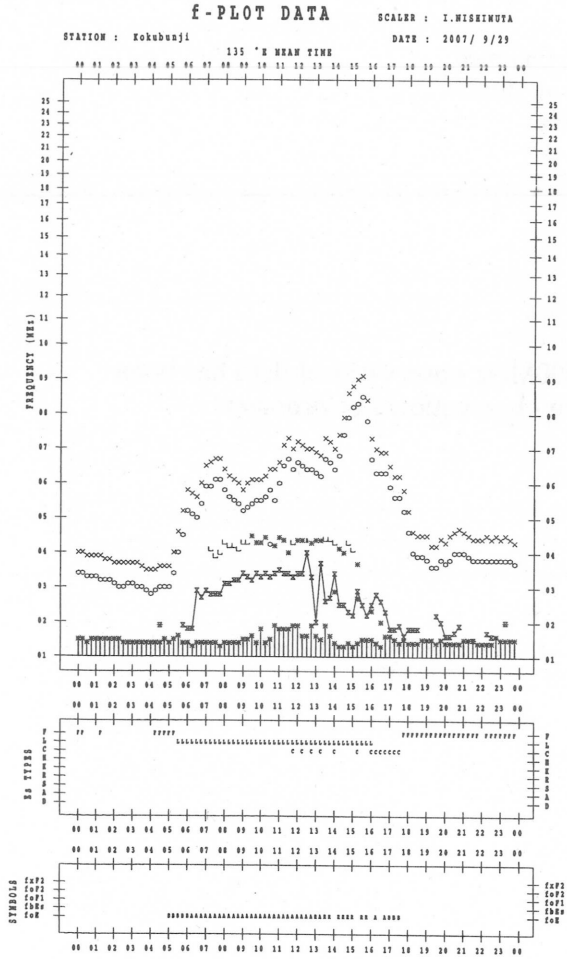
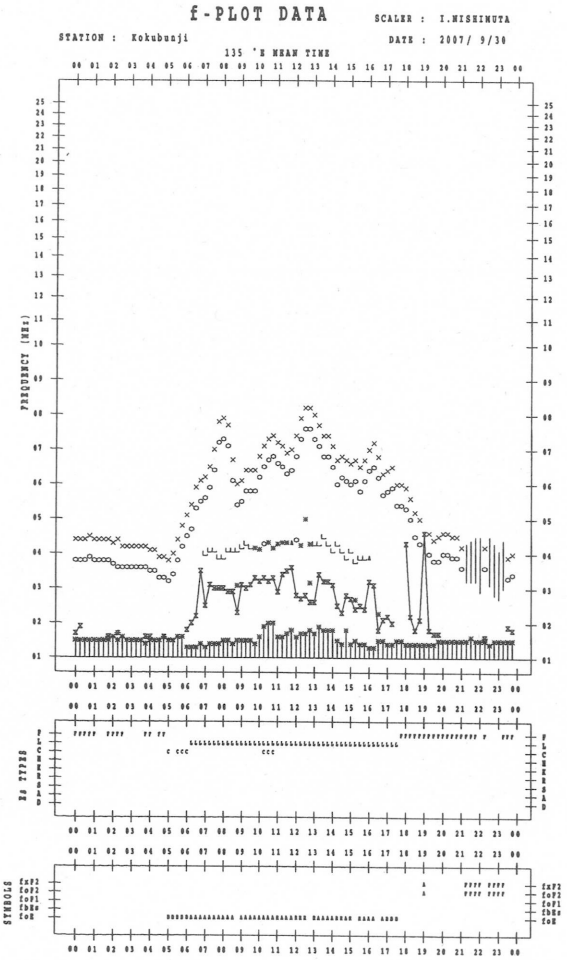
STATION : Kokubunji
DATE : 2007/ 9/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/29
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 9/30
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE

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

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

B. Solar Radio Emission

B2.Outstanding Occurrences at Hiraiso

Hiraiso September 2007

Single-frequency observations

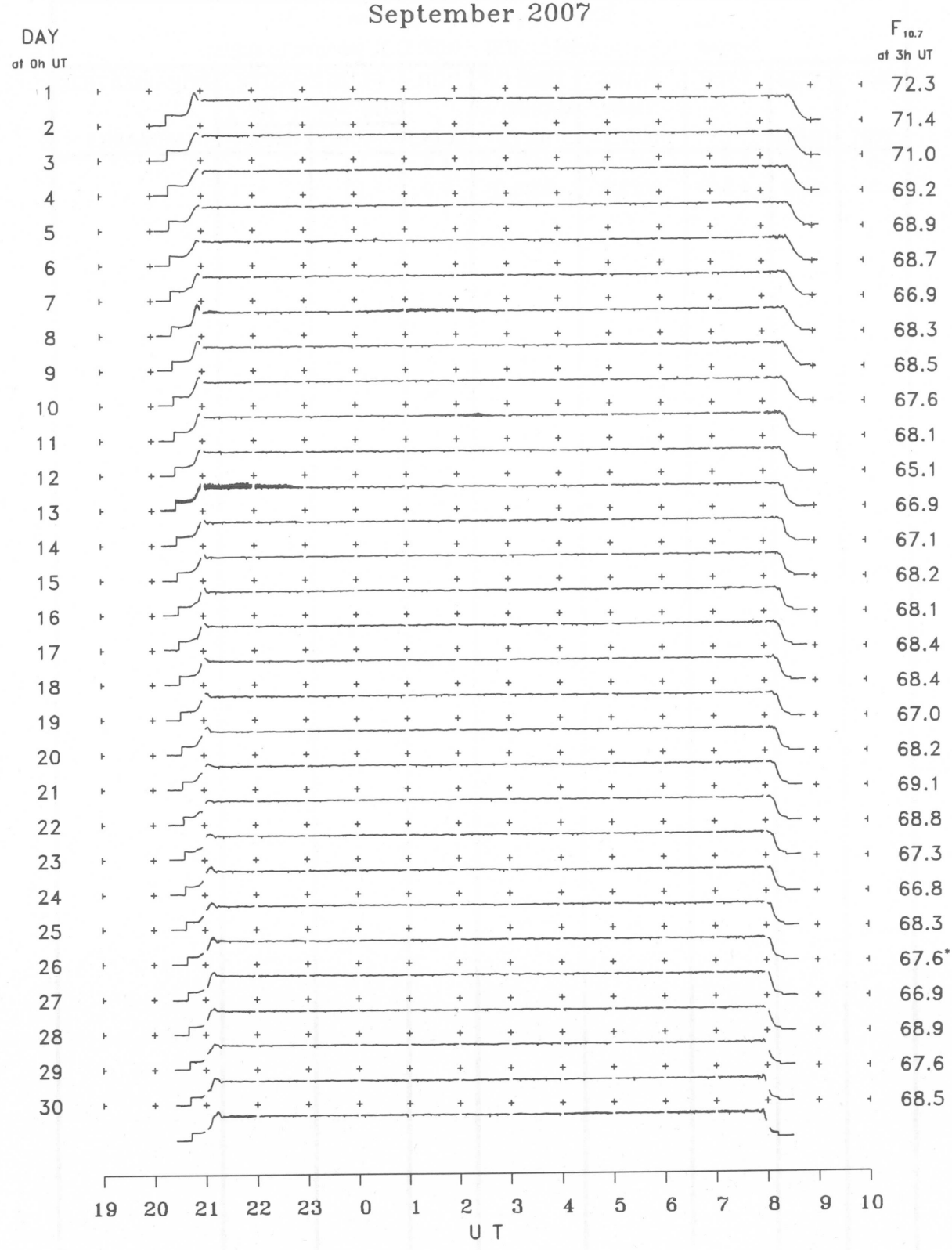
Normal observing period: 2030 - 0850 U.T. (sunrise to sunset)

SEP. 2007	FREQ. (MHz)	TYPE	START TIME (U.T.)	TIME OF MAXIMUM (U.T.)	DUR. (MIN.)	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) PEAK	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) MEAN	POLARIZATION REMARKS
5	2800	1 S	0009.0	0011.0	4.0	10	-	
5	2800	4 S/F	0023.0	0026.0	7.0	10	-	

B. Solar Radio Emission

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

September 2007



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

IONOSPHERIC DATA IN JAPAN FOR SEPTEMBER 2007
F—705 Vol.59 No.9 (Not for Sale)

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