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IONOSPHERIC DATA IN JAPAN

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CONTENTS

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INTRODUCTION

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

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

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

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

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

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

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

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

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

K Presence of particle *E* layer.

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

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

N Conditions are such that the measurement cannot be interpreted.

O Measurement refers to the ordinary component.

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

Q Range spread present.

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

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

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

V Forked trace which may influence the measurement.

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

X Measurement refers to the extraordinary component.

Y Lacuna phenomena, severe layer tilt.

Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

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

D Greater than.

E Less than.

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

M Mode interpretation uncertain.

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

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

U Uncertain or doubtful numerical value.

X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

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

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

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

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

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

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

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

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

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

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

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

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

Median count (**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

AUG. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	34	A	A	A	36	40	45	A	A	A	A	A	A	A	A	A	A	A		A	58	54	A	A
2	41	34	39	42	44		40	A	A	A	A				A	A	A	A		A	54	54	34	A
3	39	37	34	34	36		A	A	60	54	54	A	A	A	A	A	A		45	A	58	60	58	34
4	A	34	35	32	34	40	45	47	A		A	A	A	A			A	36	42	38	55	34	50	A
5	A		A	A	32	36	46	A	A	A		A	A	A				40	39	58	60	54	52	45
6	42	37	38	37	40	38			46	39			A		A	A	A	A	A	46	52	45	45	32
7	A	32	A	A	A	40	A	A	A	A		A		A		46	50	45	45	46		54	54	52
8	46	42	42	42	44	45	60	54	39	41	34	40			A	A	A	A	A	A	52	53	A	
9	A	A			35			44			A	A	A	A	A		46	59	A	62	66	50	54	48
10	47				34	35	A	A	A	A	A	A		A		A	A	A	42	46	A	47		
11	A	34	37	34	A	A	A	A	A	A	A	A	A	A		A	A	44	A	A	55	54	A	A
12	A	A	A	30	26	A	40	A	40	A	A	A	A			A	A	42	46	45	50	47	47	A
13	38	32	A	35	34		A	A	A	A	A	A	A	A	A	A	A	45	34	42	45	42	38	A
14	A		30	34	34	34	41		A	A	A	A	A	A	A	A	A	A	A	A	A	A		
15		35	35	34	36	44	52		55	57	A	A		A		A		47	A	54	52	A	44	44
16	42	A		31	30	A	44	53	57		A	A	A	A	A		A	A	A			33	45	40
17	36	A	34	35	32		44	A	A	A	A	64	A	A	A	A	42	A	A	57	58	54	53	41
18	34	41	36	32	40	46	A	46	A	58		A	A	A	A	A	A	A	44	55	52	52	43	
19	38		38	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	58	A	48	47	A	39
20			A	29	32	36	A	A	A	A	A	A				40	43	43	37	42	42	32	44	
21	A			26	30	35	45	A	48	A	A		A	A	A	A	A	A	30	A	28	42	A	A
22	A	A	A	A	A	37	A	A	A	A	A	A	A	A	A			47	42	A	48	45	45	41
23		34	34	34	34	34	40	A	A	A	A	A	A	A	A	A	A	A	A	A	53	A		42
24		A	34	34	34	37	42		49	55	41	A			35	44	45	45	40	43	43	43		40
25			A	A	31	36	41	A	A	40	A	A	A	A			45	44	A	46	45		47	44
26	34	35	34	36	34	38	36	42	A	A		A	A			44	50	44	43	51	44	38	42	39
27		41	40	44	34	41	46	57	53	52	56						45	44	45	60	54	42	40	40
28	38	38	40	32	34	37	42	52	54	55	46		A		39	46	50	43	35		A	44	A	46
29	36	A	34	35	32	37	42	A	A	59	58						46	A	A	59	61	61	62	34
30	29	34	38	37	36	37		A	61	A			A	A	A	A	A	A	A	58	59	46	44	36
31	32	34	36	35	40	37	40	47	53	60	52	39	A			44	44	42	44	51	45	39	43	34
	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	16	19	23	27	22	19	9	12	11	7	3			2	6	11	16	17	19	26	27	21	19
MED	38	34	36	34	34	37	42	47	53	55	52	40			37	44	45	44	42	51	52	47	45	40
U Q	41	37	38	36	36	40	45	53	56	58	56	64			39	46	50	45	45	58	58	54	52	44
L Q	34	34	34	32	32	36	40	45	47	41	41	39			35	44	44	42	38	45	45	42	43	36

HOURLY VALUES OF fEs AT Wakkanai

AUG. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	40	65	76	72	40	34	41	56	68	64	77	108		63	69	82	53	92	117	70	40	47	71	78
2	60		46	38	36	47	48	64	64	85	85	40	40	G	40	78	62	56	49	61	58	30	39	70
3	G	32	30	G	30	46	60	108	60	62	52	78	86	64	63	46	104	156	67	69	58	40	49	36
4	58	27	28	26	G	37	32	42	76	42	61	41	46	52	52	42	52	36	40	35	44	39	50	48
5	60	39	46	39	27	39	44	67	68	70	39	47	58	76	G	G	40	50	47	46	39	26	G	27
6	27	G	G	G	G	27	38	42	40	G	47	45	71	50	59	70	84	84	68		48	39	31	39
7	40	36	39	40	42	36	77	59	65	47	39	49	G	45	G	37	G	37	31	G	39	34	24	32
8	32	24	G	G	G	27	37	44	G	G	G	40	41	G	78	90	77	84		58	50	58	58	45
9	59	48	40	52	G	39	40	40	42	50	90	69	150	108	71	40	G	40	72	77	60	46	40	34
10	43	33	34	32	30	32	48	68	68	65	96	53	G	57	48	89	72	109	81	36	59	49	49	49
11	70	34	39	31	46	43	61	45	56	82	136	100	67	95	108	86	49	36	89	110	48	48	60	82
12	46	39	40	26	29	44	43	45	39	66	50	98		40	46	64	60	33	30	41	37	46	54	58
13	38	60	66	27	30	30	50	56	81	49	56	62	50	50	63	77	65	38	41	31	40	37	36	59
14	60	39	28	37	39	54	35	44	57	108	92	48	41	68	49	78	98		149	77	58	51	46	48
15	39	33	32	32	32	80	81	54	46	42	46	45	45	53	52	76	49	37	66	30	60	56	35	38
16	37	37	29	G	25	72	39	51	39	62	90	75	64	41	94	40	62	80	55	42	46	38	44	37
17	32	60	26	37	34	34	44	79	76	77	57	61	75	98	105	82	46	75	85	52	34	28	G	33
18	32	40	37	37	31	42	60	49	50	46	48	71	53	76	62	87		47	46	43	33	34	30	44
19	34	38	33	40	39	49	44	71	82	84	81	49	61	62	64	51	56	70	48	62	45	70	72	44
20	43	46	45	30	28	35	46	48	48	44	52	53	41	G	G	40	33	33	31	G	44	34	39	39
21	60	33	30	25	25	30	36	48	42	51	59	45	46	75	71	100	78	111	68	34	33	32		70
22	70	61	56	63	46	32	49	48	60	64	60	74	90	79	60	41	37	35	38	60	60	47	34	46
23	44	39	G	G	30	G	39	90	59	61	70	76	61	60	68	138	51	68	70	65	58	70	40	50
24	44	49	33	32	G	33	33	42	40	43	G	51	40	G	G	G	42	35	30	29	29	31	44	32
25	48	46	59	50	32	26	33	50	51		69	70	61	50	49	41	39	41	44	30	27	42	34	37
26	39	37	31	29	34	G	35	39	53	52	53	62	52	40	45	G	G	G	27	G	G	G	G	34
27	40	25	G	27	39	28	36	47		40	54	G	40	40		G	44	35	31	30	26	G	G	26
28	G	G	28	G	G	G	32	G	G	48	45	41	39	G	G	37	34	33	39	41	60	41	49	45
29	71	50	37	29	30	30	37	48	53	48	64	44	G	41		39	35	62	53	42	34	44	44	
30	26	27	34	26	G	32	39	51	51	72	39	51	50	51	53	55	72	70	72	40	33	G	24	27
31	G	G	G	G	G	G	30	39	41	G	40	39	44	G	38	G	G	32	G	27	G	27	28	29
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	30	31	31	31	31	31	31	30	30	31	31	29	31	29	31	30	30	30	30	31	31	30	30
MED	40	38	33	30	30	34	40	48	53	52	56	51	50	51	53	51	50	44	48	42	44	39	40	42
U Q	59	46	40	38	36	43	48	59	65	66	77	71	62	68	68	82	65	75	70	61	58	47	49	49
L Q	32	32	28	25	G	28	36	44	42	44	46	45	40	40	42	39	37	35	38	30	33	31	30	34

HOURLY VALUES OF fmin AT Wakkanai

AUG. 2008

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

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

HOURLY VALUES OF foF2 AT Kokubunji

AUG. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A		A	A	A	48		A	A	A		A					45	A	54	52	A	A	A
2	A	A		A	34	39	44	47	52	54			56		A	A	A			56	49		42	A
3	A	A	A	A			49	A	A	61	56	54		A	A	A		A	A	62	A	A	A	A
4	A	A	A		27	35	44	A	A	A		A	A	55	A	A	A	A	47	56	60	54	A	30
5	30	27	26	25	28	42	37	A	A	A	A	A		A	A	A	50	44	49	54	51	A	44	A
6	A	31	31	27	A	31	46	A	A	A	A		A	A	A	A	55	59	46	52	52	44	41	A
7	A	A	27	28	27	32	45		A		A	A	A			47	48	47	47	52	51	48	48	42
8	37	32	34	28	27	30		47	A				A		A	49	48	48	51	62	55	53	42	43
9	34	32	30	28	28	30	38	39	52	A		A	A		A	A	A	A	55	64	61	A		47
10	44	42	39	36	34	32	42	A		A	A		A	A	42	58	61	62	62	A	A	A	A	A
11	A	A	A		A	34	A	A	A	A			A	A	A	55	51	51	48	55	52	52	44	44
12	37	32	32	28	26		37	42	A	47	A	A	A	A		55	55	A	A	A		39	A	A
13	A	A	A	A	A		41	A	47			A		A		A	A		A	A	50		A	
14	34	31	32	30			A	A	A	A	56			A	A	A	A	64	62	80	54	49	30	39
15	39	32	37	30	31	34	42	44		51	A	A	A		A	52	51		52	63	59	45		41
16	30	A		28	A		A	60	57							53	51	59		55	61		45	32
17	A		28	34	30	30	34	A	52	62	62	48			55	50	55	45	47	54	51	42	44	A
18	A	A	32	31	A		A	A	66		A	A	A		48	49	48	42		58	54	51	42	39
19	39	36		A	A		A	A	A	A	A		A	A	A	A	40		A	46	46	42	A	A
20	A	A	A		A	A	A	A	A	A	A	A	A	A	51	55	43	39	44	48	47	42	39	A
21	A	A	A	A		27	38	44	A	A	A	A	A	A		A	A	46	39	51	48	47	48	38
22		30	30	28	27	28	44		46	A	A	A	A			A	A	A	A	55	51	46	A	A
23	A	A	32	A	30	31	47	A	42	A	A	A	55	48	38	52	47	47	46		44	51	50	37
24	32	A	A		26	30	43	47	52	51	38		38	A	51	46	47	50	47	46	52	45	42	42
25	38	38	36	30	28	28	39		65	52	40				48	52	47	47	41	44	44	A	39	28
26	A	A		28	21	28	38	45	51		A	A	A	A	A		A	A	A	55	53	39	37	30
27	30	30		27	28	30	38	45	59	62	55	A		A	49		A		A	66	66	47	34	
28	28	30	30	31	30		47	46	51	51	47	A	A	A	52	52	55	47	A	44	44	43	45	38
29	34	32	28	28	30		37	45	61	A	A	A			A		A	A	A	72		A	A	A
30	A	A	A	A	A	32	42	55	58	A	A		A	48	A	A	47	44	55	64	54	52	A	A
31	30	32	31	30	A	34	A	A	44	A	48	A	A	A	52	57	45	44	48	61	66	43	32	28
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	15	15	17	19	18	20	23	13	16	9	8	2	3	3	10	15	19	19	18	27	27	21	19	16
MED	34	32	31	28	28	31	42	45	52	52	52	51	55	48	50	52	48	47	48	55	52	46	42	38
U Q	38	32	33	30	30	34	45	47	58	61	56	54	56	55	52	55	55	51	52	62	55	51	45	42
L Q	30	30	29	28	27	30	38	44	49	51	43	48	38	48	48	49	47	44	46	52	49	42	39	31

HOURLY VALUES OF fEs AT Kokubunji

AUG. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	48	81	34	51	83	54	50	77	141	83	97	43	44		45		G	82	83	35	53	54	52	46
2	39	38	37	58	36	50	47	39	53	62	56	47	53	68	78	60	50		41	40	45	60	52	
3	67	85	83	40	31		43	68	70	69	G	50	112	53	60	56	54	85	135	78	80	90	72	70
4	58	46	34	G	36	G	45	62	73	84	44	83	55	48	55	44	44	49	37	41	38	G	59	50
5	43	25	32	26	G	29	33	37	70	83	92	51	49	50	70	76	38	39	40	28	43	58	50	59
6	59	31	29	30	39	29	34	80	92	54	61		56	53	70	167	48	52	32	36	32	36	37	48
7	65	34	29	G	G	G	36	48	78	123	112	71	48	41	G	G	46	36	33	29	22	G	43	34
8	G	G	G	G	23	24		46	57	40	45	51	48	50	51	45	47	40	40	58	60	31	G	30
9	27	G	G	G	G	G	37	33	45	95	62	75	70	51	59	72	51	62	72	41	77	82	58	83
10	48	40	35	G	G	G	39	70	90	144	93	45	58	52	50	G	57	59	50	57	43	60	59	59
11	82	33	59	33	52	26	47	51	78	115	91	101	87	80	69	52	G	37	50	26	42	26	24	30
12	29	G	35	27	29	26	34	35		G	50	56	72	68		46	35	70	76	72	52	59	50	49
13	38	50	46	51	40	37	33	60	50	38	50	134			175	138			78	60	40	35	43	37
14	27	23	G	39	39	36	71	132	62	79	42		47	53	60	64	80	44	45	40	54	34	29	43
15	28	24	26	G	G	26	34	54	65	56	79	81	54	G	43	51	46	48	37	45	33	39	46	G
16	68	37	39	30	37	39	47	43	G	40						51	40	62	50	34	24	60	33	30
17	45	29	25	29	33	27	32	43	37	40	40	G	42		G	45	G	43	40	32	30	36	33	40
18	42	43	32	29	39	40	57	60	53	61	70	52	47	G	G	G	43	43	46	68	77	36	32	36
19	35	33	36	40	48	28	43	58	70	54	60	G	58	50	69	60	39	44	72	60	30	34	54	81
20	55	44	49	34	60	33	46	59	70	58	67	51	80	74	39	G	35	33	29	25	G	37	G	46
21	47	49	35	34	32	35	29	33	58	57	50	54	71	57		102	63	64	69	32	36	28	33	30
22	24	29	G	G	G	G	32		62	72	62	62	83	40		106	81	70	58	34	37	71	73	60
23	58	60	34	47	23	29	34	65	106	78	104	51	42	G	G	44	41	36	35	22	29	36	39	35
24	25	39	69	33	29	30	29	34	38	39	41	45	50	52	G	G	40	49		29	29	39	25	24
25	34	49	47	27	G	G	34		42	42	46	G	G		G	G	38	35	33	29	G		50	40
26	52	39	31	25	G	G	29	36	44		62	53	53	47	52	61	72	62	59	36	37	G	G	G
27	26	G	34	G	23	G	31	40	44	60	57	54	48	50	G	52	61	64	75	33	29	32	26	26
28	G	G	G	23	24	33	29	34	40	43	50	52	48	50	41	G	G	43	52	23	G	G	26	81
29	G	25	G	G	G		G	37	55	94	80	46		106	90	90	85		89	72	116	84	79	34
30	51	59	51	57	52	36	37	42	52	60	63	59	48	46	60	63		65	52	68	41	58	44	48
31	29	27	33	G	50		69	73	69	126	45	61	55	46	40	49	G	G	26	22	32	29	29	27
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	28	30	29	30	30	30	28	28	26	27	30	29	28	30	31	31	30	31	30
MED	42	34	34	29	31	28	35	48	60	60	60	52	53	50	51	52	44	48	50	36	37	36	43	40
U Q	55	46	39	39	39	35	46	63	70	83	79	61	64	53	69	64	55	63	72	58	52	59	52	50
L Q	27	25	26	G	G	G	32	37	45	43	46	46	48	46	G	44	36	39	37	29	29	31	29	30

HOURLY VALUES OF fmin AT Kokubunji

AUG. 2008

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

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

HOURLY VALUES OF foF2 AT Yamagawa

AUG. 2008

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

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

HOURLY VALUES OF fEs AT Yamagawa

AUG. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	56	50		65	77	60	71	48	60	82	57	77	43	44	60	45	42	34	G	33	44	28	59	50
2	44	25	34	25	33	37	24	44	45	95	61	47	48	49	48	52	45	G	G	31	46		37	39
3	38	48	36	33	G	31	27	59	72	61	70	61	51	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	74	80	84	85	71	106	39	44	33	33	27	29	25	30
5	34	25	33	32	11	G	25	50	55	96	57	152		74	69	51	43	40	35	44	39	40	46	48
6	59	70	49	50	40	68	34	42	60	83	66	84	72	59	81	70	54	116	78	112	46	69	56	39
7	29	52	46	59		70	36	40	82	67	86	93	101	48	48	46	44	42	43	40	33	G	G	G
8	54	G	G	G	G	G	26	35	42	44	57	G	43	54	51	46	40	38	38	44	38	58	44	44
9	45	24	24	36	37	40	36	49	38	63	62	52	65	50		G	49	42	46	31	40	59	59	46
10	26	24	30	53	28	G	32	36		59	53	G	G	52	51	43	48	43	43	35	35	57	48	59
11	58	58	32	45	51	32	28	51	49	62	75	54	67	49	48	67	75		69	67	65	59	59	69
12	54	G	24	44	G	48	56	47	49	58	64	54	72	57	116	44	G	40	43	43	26	G	49	50
13	40	36	48	39	32	36	36	54	49	40	88	84	175	64	49	149	49	G	G	G	G	G	28	33
14	G	G	G	25	G	G	27	38		76	61	58	54	G	52	45	50	36	43	28	29	29	26	26
15	G	26	G	G	20	31	59	50	47	51	49	77	50	52	40	G	G	G	32	30	29	G	G	G
16	G	28	26	27	G	G	G	32	36	40	43	46	43	G	G	38	48	52	52	83	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
26	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
28	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
29	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
30	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	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	15	14	15	15	15	13	15	16	16	15	15	14	15	15	14	15	15	14	13	14	14
MED	40	26	31	36	24	32	32	47	49	62	62	60	54	52	51	46	45	40	43	35	36	29	45	42
U Q	54	50	36	50	37	48	36	50	60	82	72	82	72	59	69	67	49	43	46	44	44	58	56	50
L Q	26	24	24	25	G	G	26	38	43	51	57	49	43	48	48	43	40	34	32	31	29	G	26	30

HOURLY VALUES OF fmin AT Yamagawa

AUG. 2008

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

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

HOURLY VALUES OF foF2 AT Okinawa

AUG. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	28	A	A	A	A		A	47	A	A	A	A	A	A	54		A	64	54	A	47	39	A	A
2		A	A	A	A	A	A	44	53	45			A	67		57	56	58	62	66	54	A	A	A
3	29	28	29	28					A	61	39					53	70	75	82	85	82	A	65	31
4	31	30	30	29	28			69	54	A	A	A	A	A	A	A	55	56	A	74	47	43	37	32
5	30	30	A		A				54	A	A	A	A	A		A	A	A	45	46	64			A
6	A				A		30	42	A	A	A	A	A	A	A	A	A	A	A	71	66	66	31	29
7	A	A	A	A	A					A	A	A	A	A	A		A		51	60	50		30	29
8			A		A			41	45	54					A		53	62	66	66	58		40	42
9	34	32	30	A	A		30	41	51	A	A	A					A	56	62	66	62	43	41	A
10	A		29	A			A	A	49		A	A				77	92	75	70	66	60	51	30	A
11	A	A	A	A	A	A	31	45		44	A	A			66	80	71	65	A	66		52	A	A
12		28					31	A	A	A	A	A	A	A	A	A	70	78	84	92	52	50	30	44
13	40	32	A	A	A	A		44	45	49	52	52		59		62	72	83	88	86	61	41	36	
14		34	30	30				41	64	60	40	A		A			62	77	85	78	66	39	48	
15	40	34	36	30			A	47	56	52	A	A	A	A	A		55	46	52	55	54	40		
16	30	30	30				29	48	53	53	52						62	63	54	54	A	A	A	A
17					A	A		42	68	54	A	A			61	49	62	A	52	54	52	53		
18		29					A	A	68	A	A	A	A	A		53	61	67	81	66		54	44	
19	42		44	29		24		37	48	57	A	A	A	49		61	A	A	35	A	60	49		32
20	30	30	29				34	48	41	A	A	A		A	A	A	39	51	A	A	42	36	40	
21				A	A	A	A	46	48	48						60	58	56	47	58	60	52	42	
22		40	32	34	29		31	41	46	39		51	51					52		61	66	A	A	
23					A	A	30	45		A	A	A	A	A	47			48	46	48		34		35
24	30	34	32	A	A	A		51	A	A	56				A		46	44	61	61	58	52	49	41
25	42	43		32	28		26	34		50				A	A	A	A		A	A	55	42	30	
26							A	A	51	47	A	A	A	A	60	54	A	A	A	A	54	48	43	
27		A						36	58	57	57	A	A	A	A		61	54	59	66	74	A	A	A
28	A			A	25	A		45	54	47			A		39	A		58	51	45	58	54	32	
29			30				28	46	71	45	A	A	A	A	57		A	66	78	84	77	A		
30		A			A	A	A	A	62	53	A	A	A			51	55	A	64	66	66	A	A	A
31				29	29		A	52	41	45			A	A	A	53	60	69	85	77	47	41	A	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	12	14	12	8	5	1	10	23	22	19	6	2	1	3	7	12	19	23	24	26	27	21	17	9
MED	30	31	30	30	28	24	30	45	53	50	52	52	51	59	57	56	61	62	62	66	58	48	40	32
U Q	40	34	32	31	29	12	31	47	58	54	56	52	25	67	61	61	70	69	79	74	66	52	43	41
L Q	30	30	29	29	26	12	29	41	48	45	40	51	25	49	47	53	55	54	51	58	52	40	30	30

HOURLY VALUES OF fEs AT Okinawa

AUG. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	38	40	36	36		51	44	70	51	52	95	71	60	41	54	80	49	50	58	36	29	51	34
2		36	28	42	46	34	60	53	49	38	G		60	G		G	48	35	G	27	58	60	50	40
3	26	G	G	G			G	36	52	44	40		G			49	52	54	51	43	40	82	21	G
4	G	G	G	31	G	G	38	44	47	69	71	65	79	85	75	74	52	61	116	G	G	34	30	28
5	26	G	36		38		26	35	42	70	81	67	93	60	47	70	76	78	35	36	33	24		30
6	32				48		G	44	83	59	88		109	59	70	112	179	91	79	52	58	40	G	G
7	84	72	33	44	34		G	35		95	68	126	78	95	50	G	46	50	47	36	29	36	G	G
8		G	37		29		27	29	35	G		G			58	48	38	G	34	36	32	G	G	G
9	31	33	30	47	32		G	37	40	67	68	52					61	49	58	30	G	G	G	39
10	40	39	26	36	G	26	42	56	58	38	58	55	50			G	G	45	43	42	32	31	46	58
11	59	44	68	57	48	56	33	34		44	61	62		44	56	59	46	47	60	49	36	37	59	50
12	29	G					28	60	86	63	91	83	84	76	82	76	51	53	43	28	G	G	G	G
13	G	25	50	37	38	33	30	37	G	45	49	G	50	50	G	G	G	G	G	G	G	G	34	32
14	39	28	29	26	G		G	32	44	93	51	51	G	60		49	G	60	G	37	G	G	G	G
15	G	G	G	G	G	28	26	35	42	48	60	63	61	66	58	G	44	40	38	32	34	26	G	
16	G	G	G	G			G	29	38	G	G		G	G	G	G	56	68	91	81	59	58	36	29
17		G	G	27	32	38	28	32	49	58	41	49	41	41	G	G	46	57	32	36	G	25	32	31
18		28		G	G		38	68	49	88	96	69	68	91		G	38	36	G	38	34	32	47	39
19	37	36	35	G	26	G	25	30	36	43	82	85	71	G	49	61	55	67	34	72	52	34		G
20	G	G	G	G			G	36	G	77	66	92	55	46	89	73	44	50	55	69	60	G	G	
21			27	32	34	29	30	31	42	54	48				48	47	G	44	42	40	28	G	28	
22		G	G	G	G	G	24	36	35	G	G	G	G	G	G	G	G	42	50	33	30	47	46	
23		G	26	26	36	49	30	34	40	66	59	116	66	86	50	46	49	G	30	26	39	G		G
24	G	46	34	50	50	52	34	58	80	49	G		G	46	50	40	G	40	35	G	G	G	G	28
25	G	G		G	G	29	G	34	33	42			50	57	54	54	50	54	61	44	54	22	G	
26	36	34	G				34	59	47	40	75	88	60	96	49	48	87	56	60	49	34	40	29	25
27		37		29	G		G	36	36	G	G	77	65	62	50	62	45	47	52	37	39	33	34	36
28	29	G	34	33	30	48	35	47	G	G		48	55		52	53	50	40	30		G	32	30	G
29			G	G			G	30	G	G	54	51	96	68	56	56	64	54	57	71	60	57	36	
30	23	28			32	31	29	80	70	52	64	47	48	46	49	G	38	61	44	27	G	37	49	40
31	28			G	G	G	36	30	G	49	48	42	89	88	52	48	50	45	34	36	32	29	29	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	22	27	24	25	25	16	31	31	29	31	28	24	27	25	25	30	31	31	31	30	31	31	28	24
MED	27	25	28	27	32	30	28	36	42	49	58	62	60	60	50	48	48	49	43	36	33	31	30	28
U Q	36	36	34	36	37	43	34	47	50	66	69	84	78	80	57	59	55	57	57	49	40	37	41	37
L Q	G	G	G	G	G	13	G	32	35	38	44	48	48	45	47	G	38	40	34	30	G	G	G	G

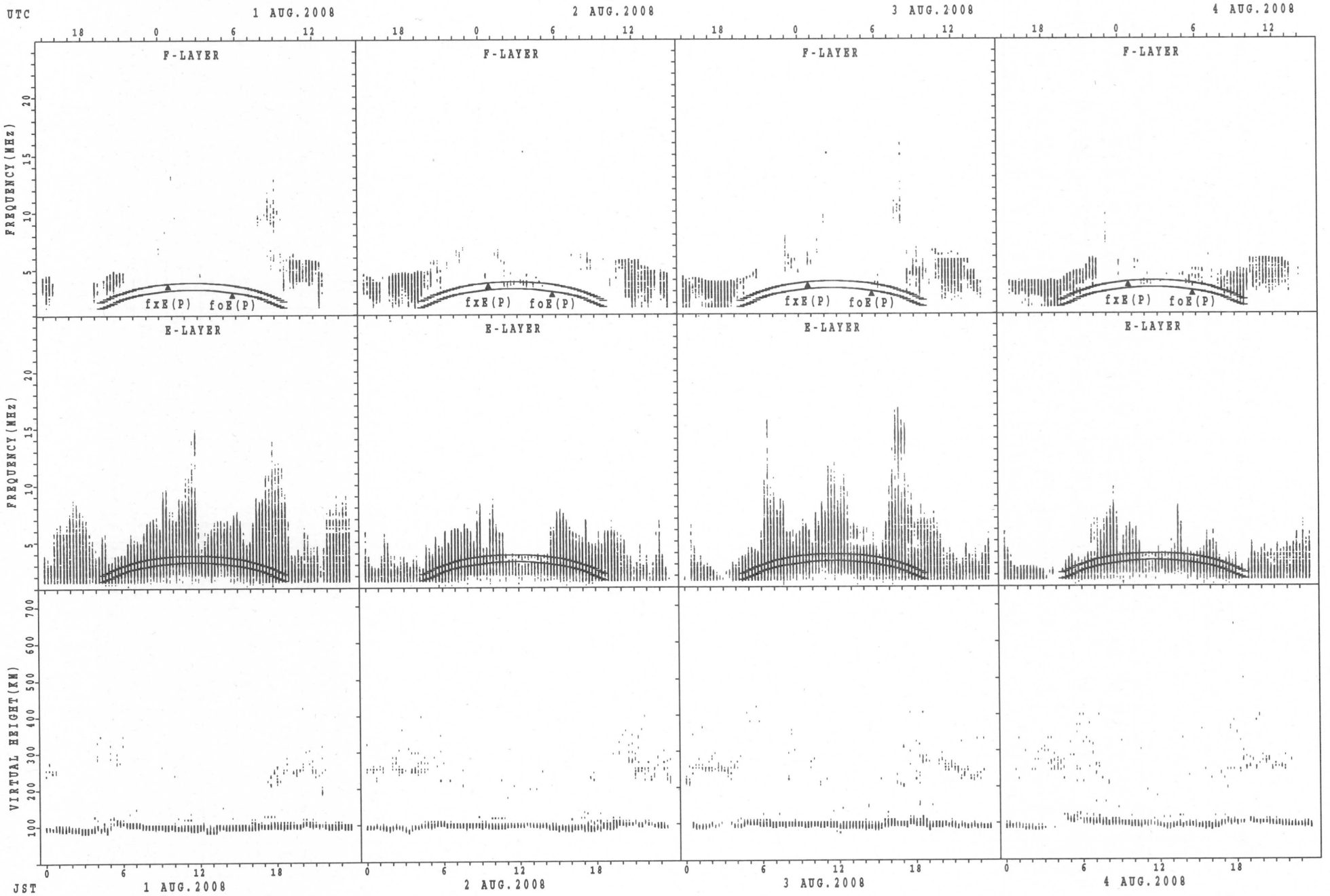
HOURLY VALUES OF fmin AT Okinawa

AUG. 2008

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

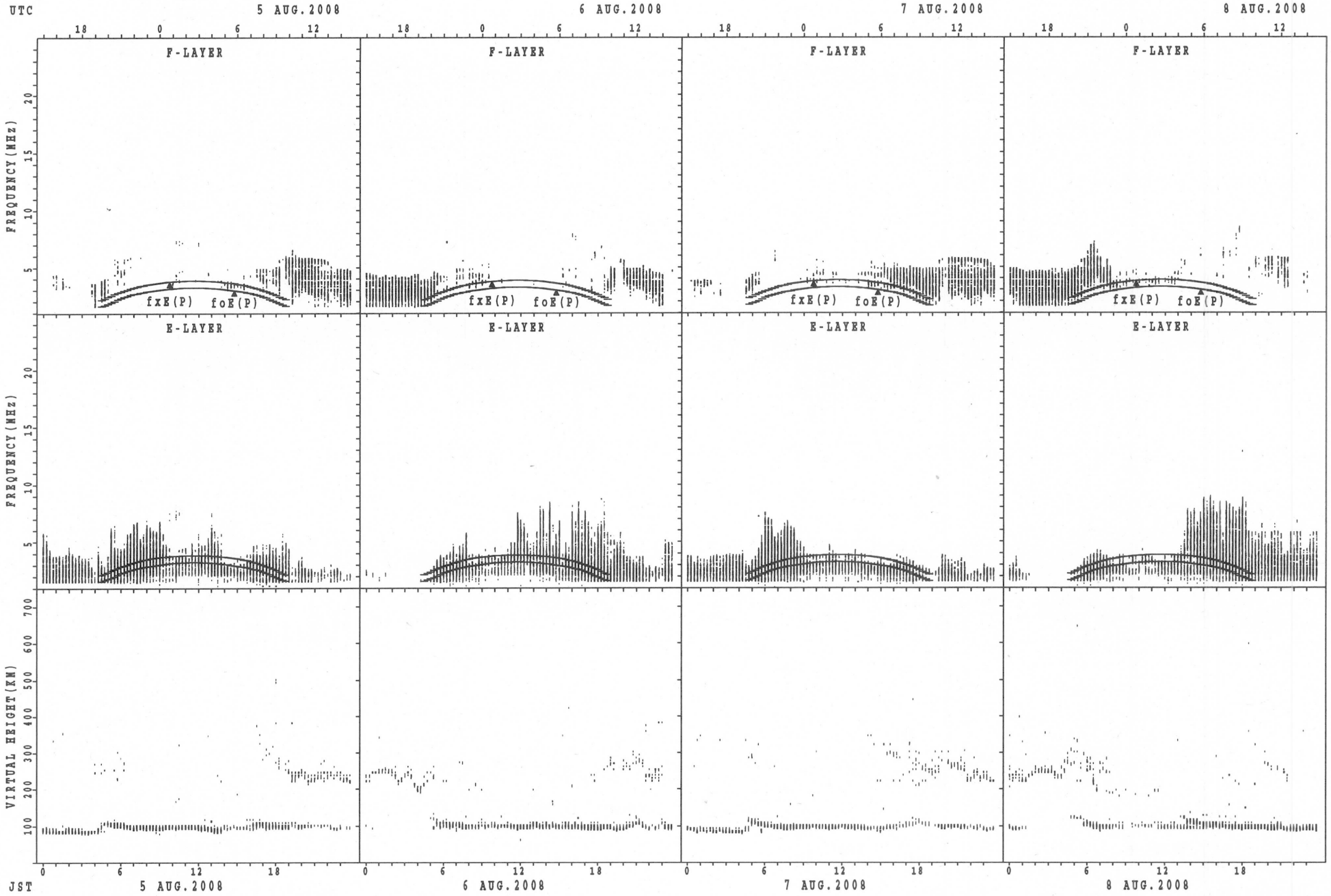
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	20	14	14	14	15		15	14	15	20	26	28	27	27	24	22	18	14	14	14	15	14	15	15
2		14	15	16	15	14	15	14	17	23	24		30	45		43	23	17	18	14	14	14	14	15
3	15	17	14	21			15	14	21	16	27		44			26	23	16	14	14	14	16	17	20
4	16	16	22	16	18	21	14	14	15	20	24	29	33	30	30	28	21	15	14	17	15	14	15	14
5	17	15	14		14		15	14	15	18	28	29	28	26	24	24	21	14	14	14	15	15		15
6	14				15		16	17	16	28	29	32	35	35	33	36	21	15	14	14	16	15	17	16
7	17	16	16	14	15		23	14		21	26	28	26	26	24	18	30	14	15	15	15	23	14	20
8		17	15		16		14	14	18	41		23			36	34	30	16	14	14	14	22	15	15
9	14	14	14	14	14		15	14	18	29	29	30					30	15	14	14	18	14	15	15
10	15	15	15	15	14	16	14	15	18	24	29	34	27			45	29	17	16	15	14	14	14	15
11	15	15	16	14	14	14	14	14		20	30	36		45	35	32	29	14	14	16	14	14	14	15
12	17	15					17	14	17	29	29	35	33	35	36	30	28	21	17	14	23	21	20	16
13	17	16	14	15	14	15	14	14	15	20	28	44	36	39	45	54	43	41	32	18	15	23	17	15
14	16	16	15	16	17		22	18	17	20	27	29	29	30		32	29	18	14	14	20	15	20	21
15	27	16	21	16	15	14	17	14	15	23	22	21	22	18	16	20	16	15	14	14	14	16	15	
16	15	20	17	17			16	15	15	21	42		24	27	23	22	29	22	14	14	15	14	15	14
17		23	20	14	17	14	14	14	14	20	21	24	27	24	53	24	22	14	14	15	24	15	14	14
18		16		16	18		14	14	16	21	28	28	28	26		44	22	14	14	17	15	15	15	15
19	14	15	14	15	15	16	15	14	16	20	27	29	29	28	28	23	20	14	14	14	15	15		20
20	17	15	16	17			14	15	28	30	34	33	38	23	24	21	15	15	15	14	17	21	22	
21			15	15	15	15	14	14	17	22	30				34	33	42	20	20	15	14	17	14	
22		17	15	15	15	15	14	15	15	18	22	44	27	27	28	22	27	17	14	14	14	15	15	
23		15	15	17	16	14	14	14	15	22	29	30	29	28	28	24	20	14	14	14	15	15		22
24	15	18	14	15	15	14	15	14	14	21	27		26	24	23	20	17	14	14	17	23	24	21	20
25	27	18		18	16	17	15	14	16	21			35	35	35	22	18	14	14	16	15	15	15	
26	14	14	16				14	14	14	15	22	28	29	30	26	27	20	14	14	14	14	15	15	15
27		18		14	16		16	14	15	21	27	29	30	29	27	22	15	14	14	14	15	15	15	15
28	14	17	15	14	16	14	14	14	14	17		38	36		35	33	22	14	14	14	20	14	15	15
29			22	21			15	14	14	21	27	29	26	30	35	32	28	14	14	15	16	16	17	
30	15	16			15	14	15	14	17	20	26	30	32	30	36	43	30	14	16	14	16	15	15	14
31	15			21	14	18	14	14	15	21	23	27	28	28	28	23	21	14	15	14	15	14	18	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	22	27	24	25	25	16	31	31	29	31	28	25	27	25	25	30	31	31	31	31	31	31	28	24
MED	15	16	15	15	15	14	15	14	15	21	27	29	29	28	28	26	22	14	14	14	15	15	15	15
U Q	17	17	16	17	16	16	15	14	17	23	29	33	33	32	35	33	29	17	15	15	16	16	17	18
L Q	15	15	14	14	14	14	14	14	15	20	25	28	27	26	24	22	20	14	14	14	14	14	15	15

SUMMARY PLOTS AT Wakkanai

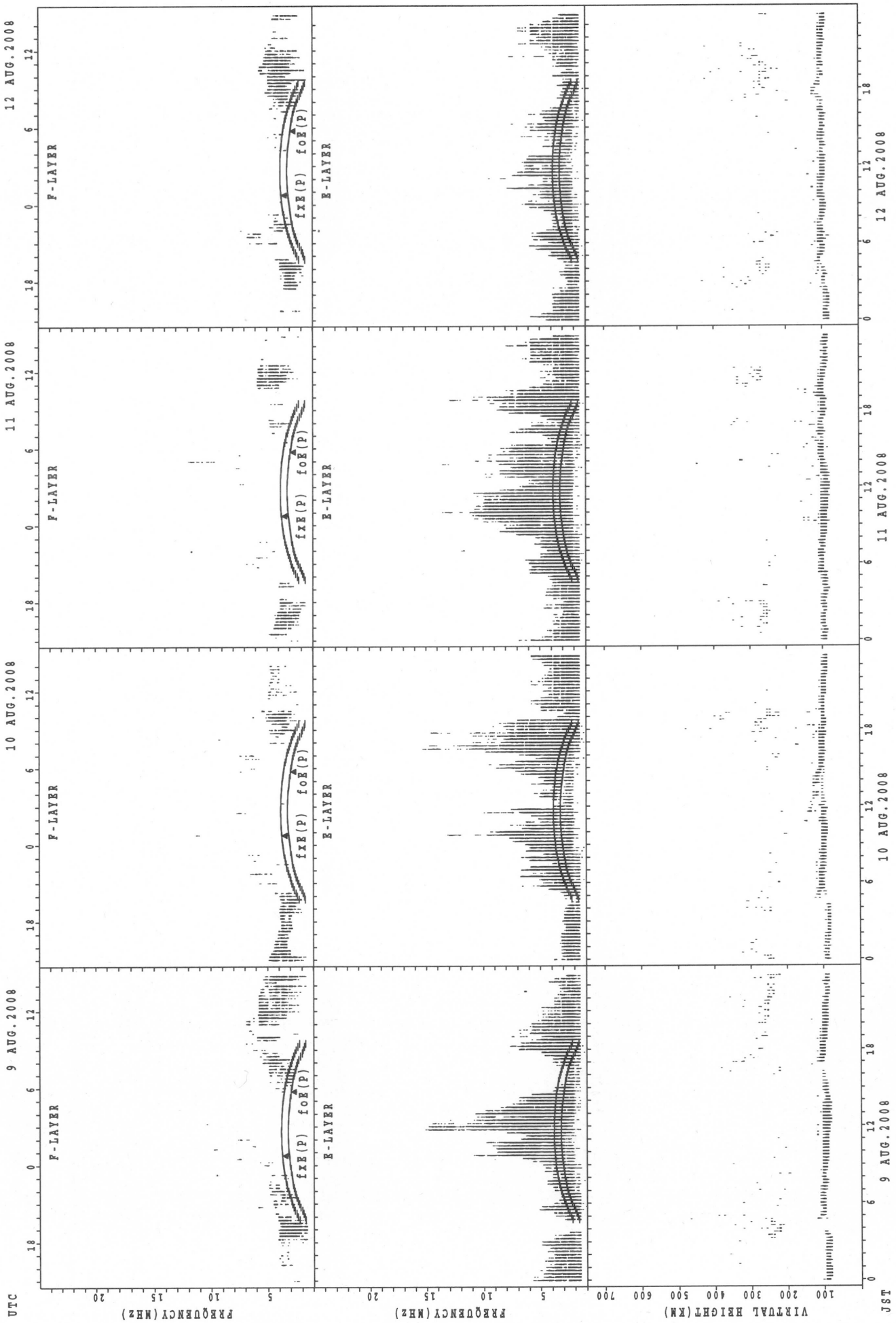


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

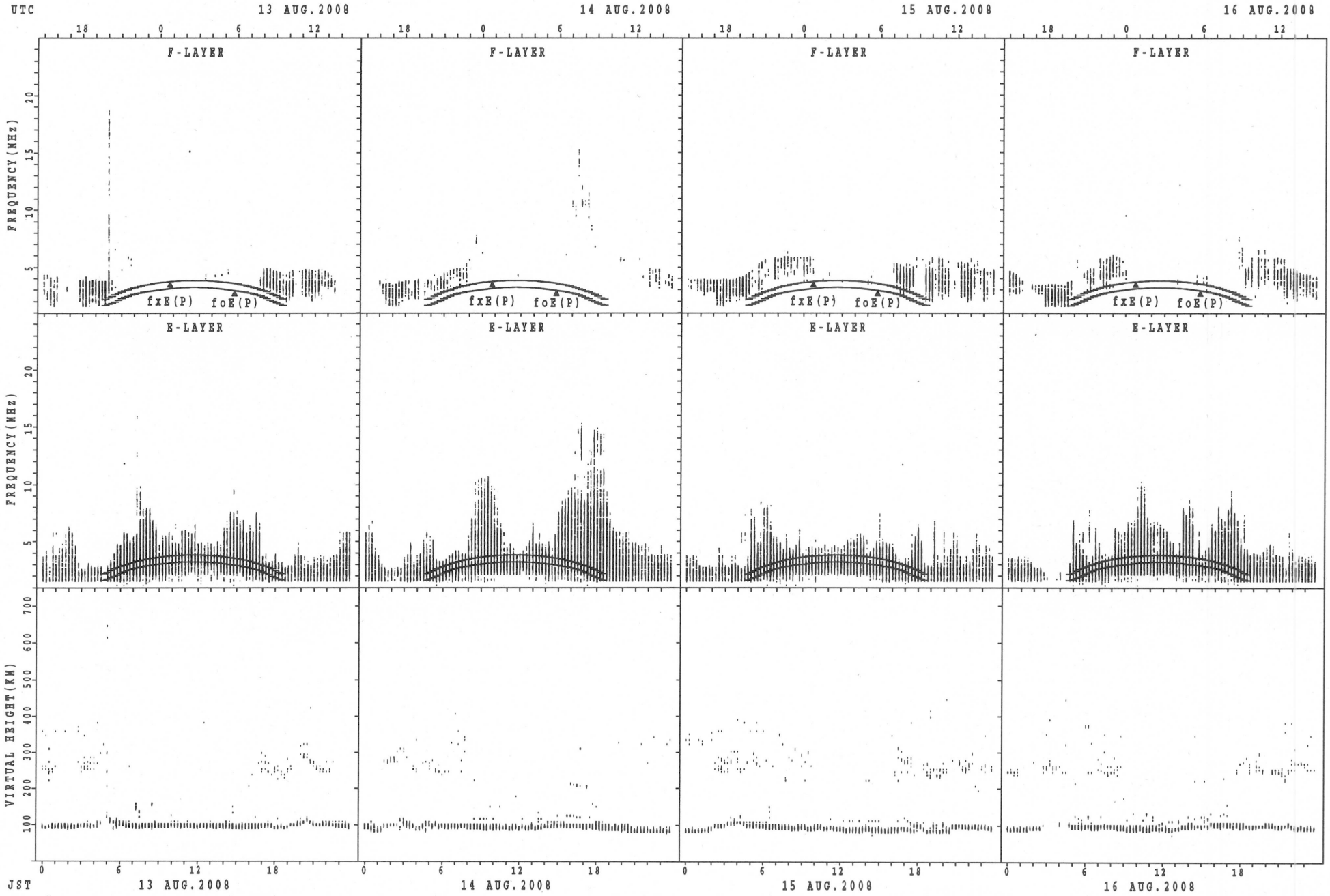
SUMMARY PLOTS AT Wakkanai



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

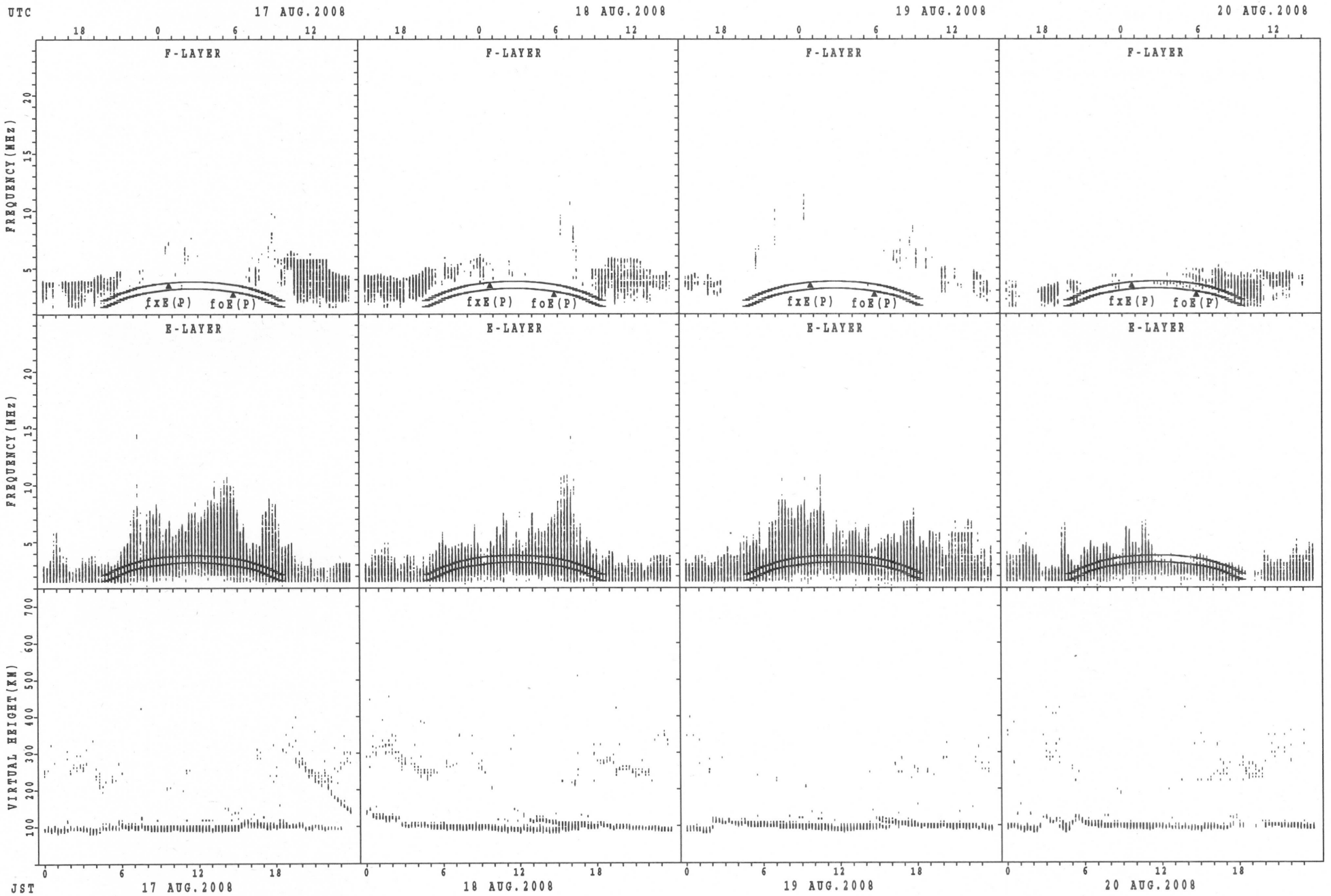

SUMMARY PLOTS AT Wakkanai
UTC
JST
9 AUG.2008
10 AUG.2008
11 AUG.2008
12 AUG.2008
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



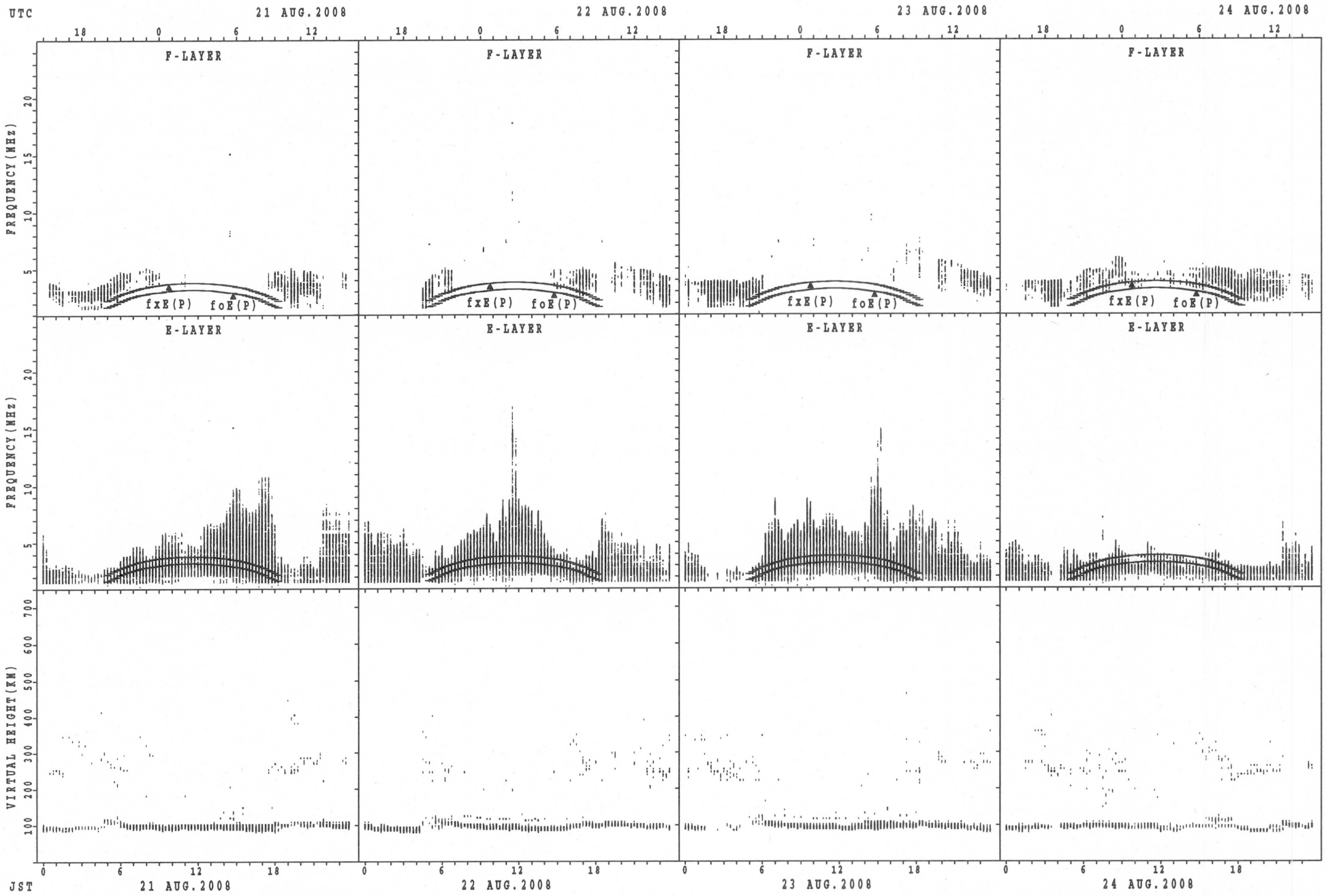
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



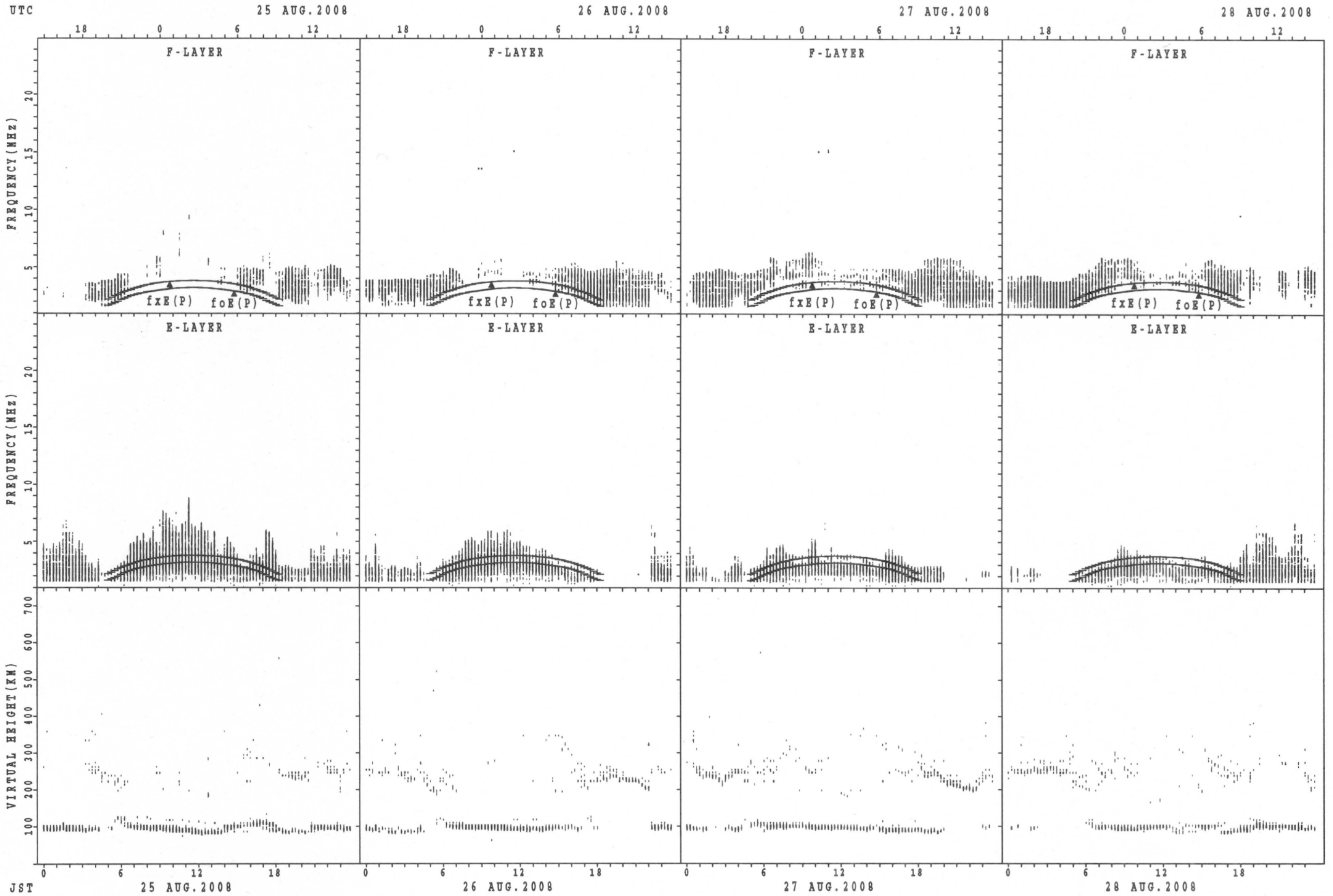
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



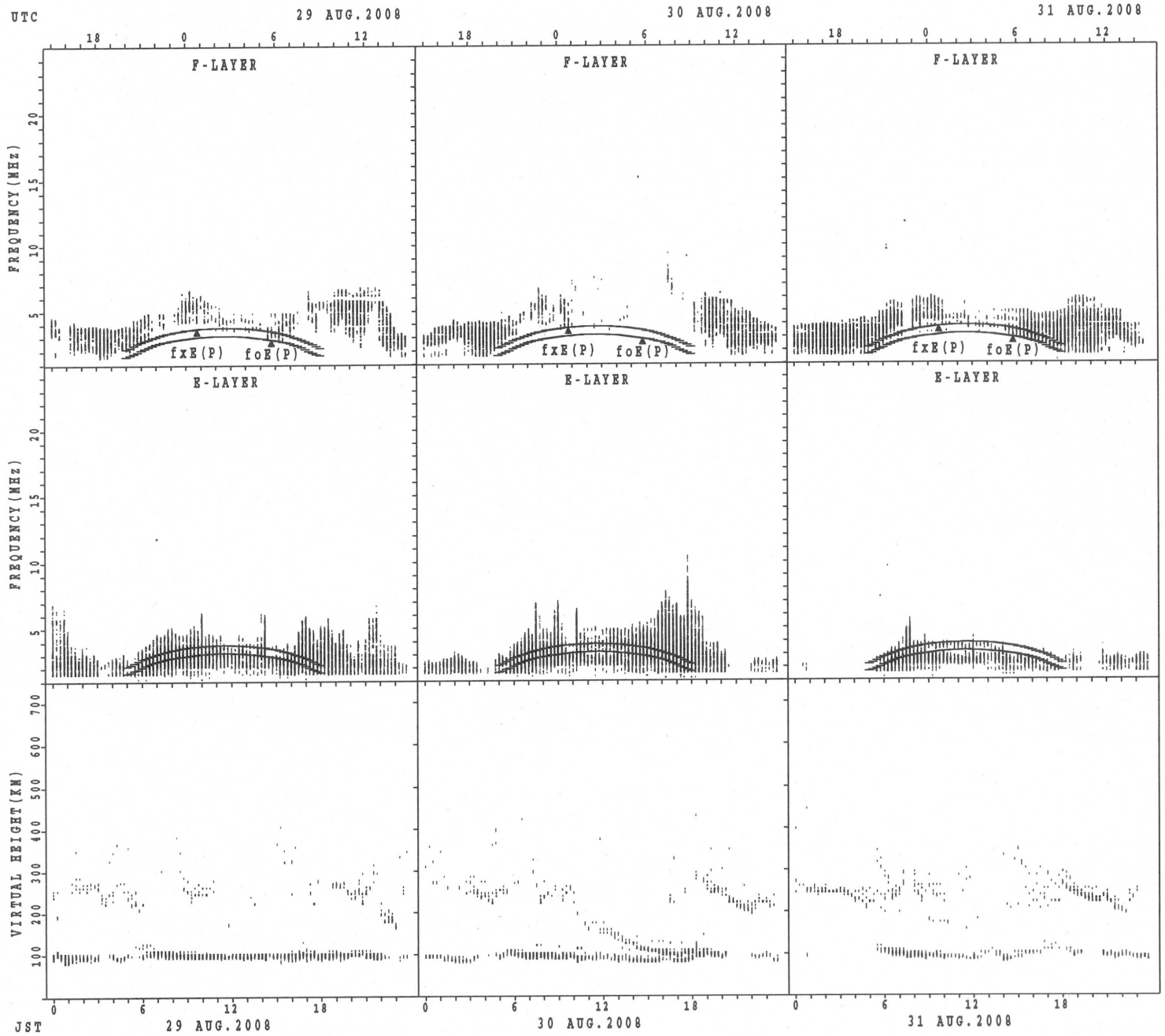
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



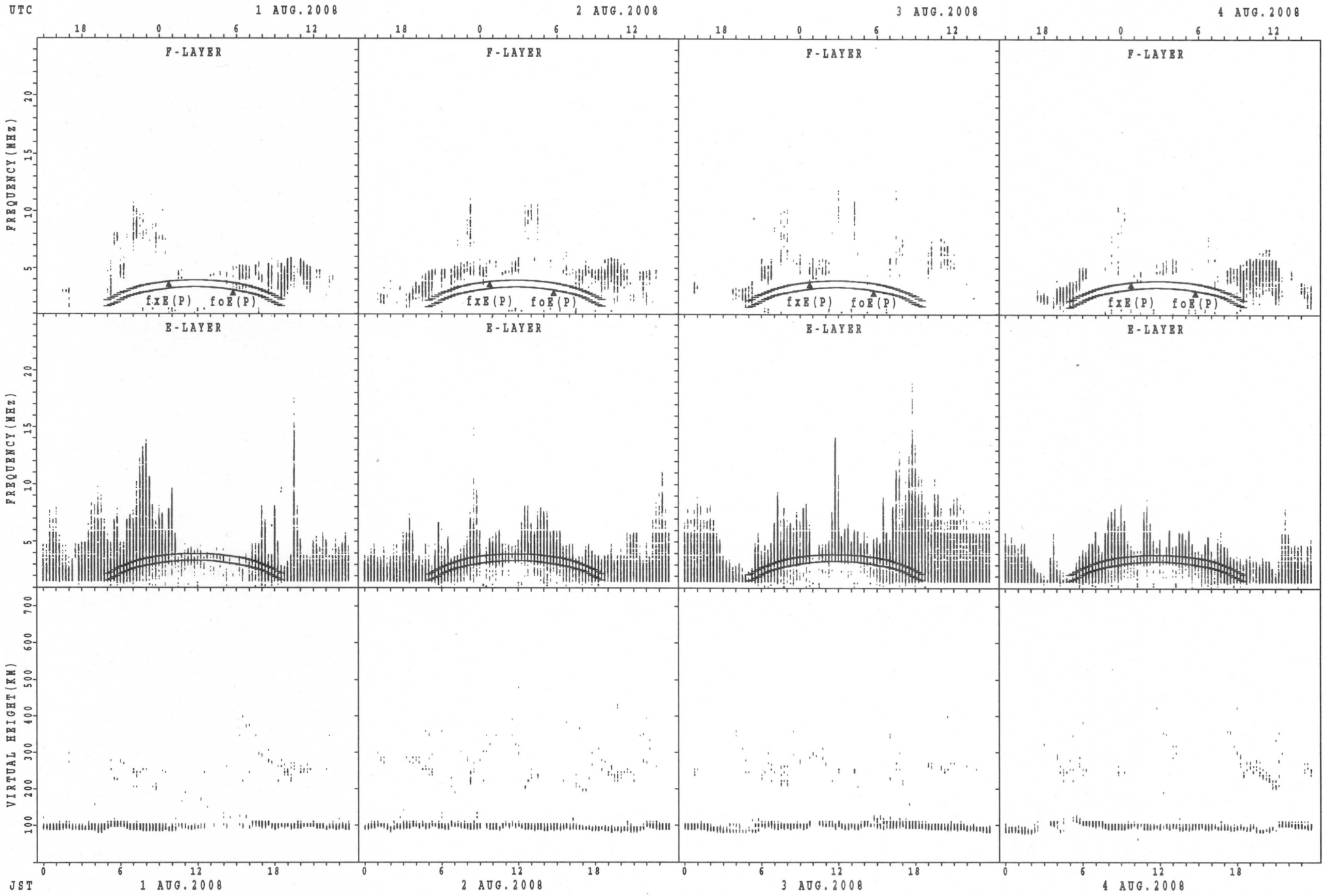
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



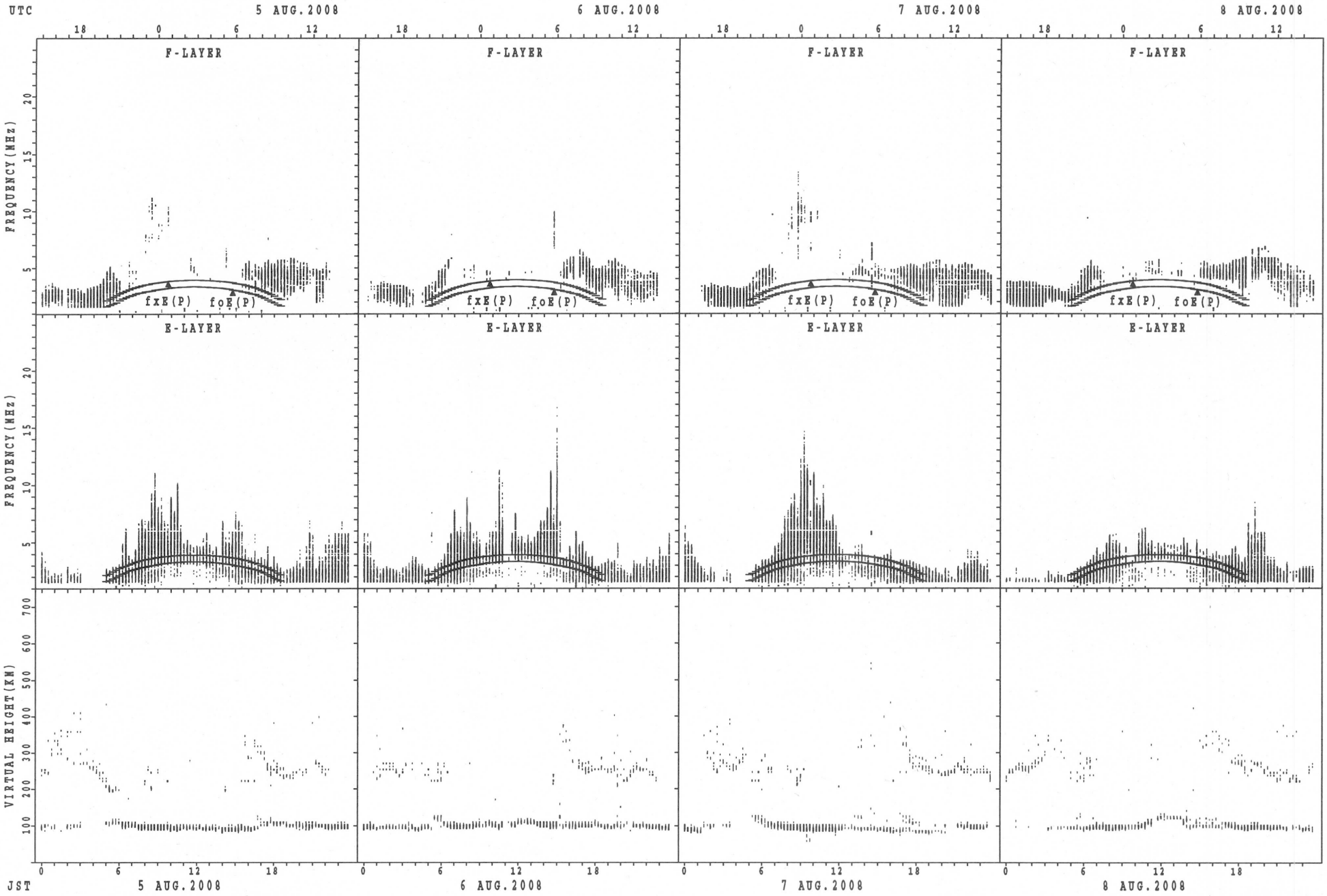
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



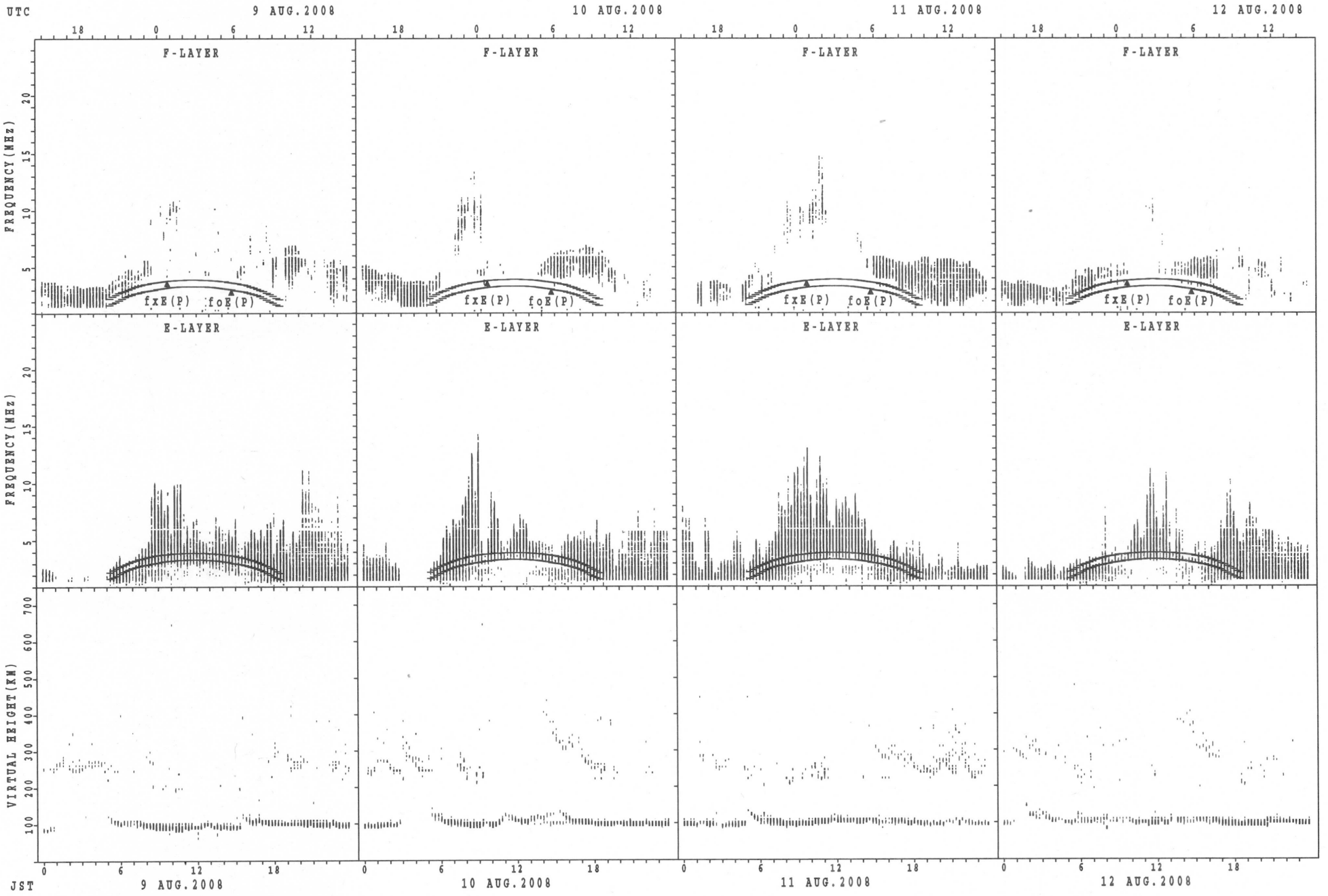
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



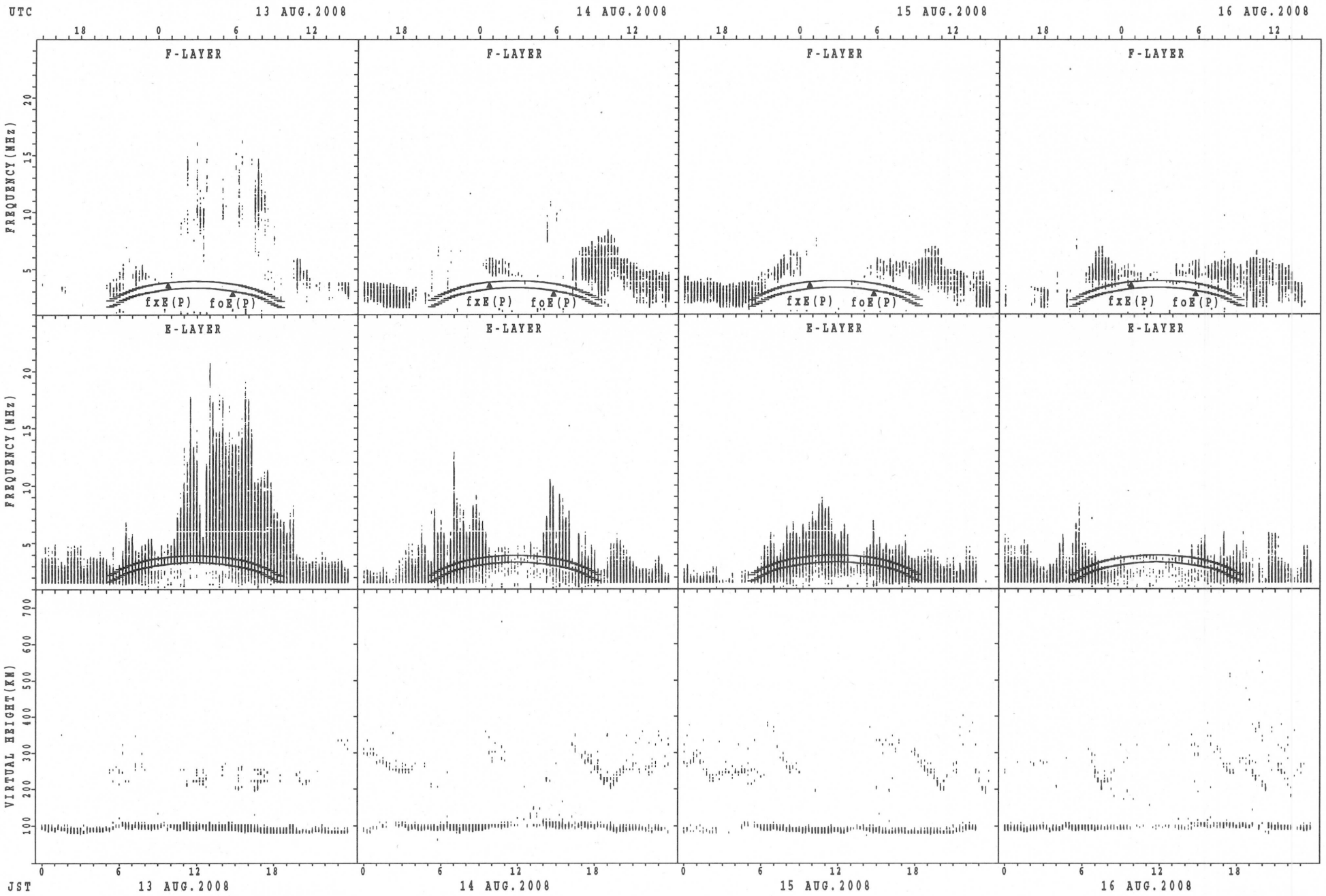
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



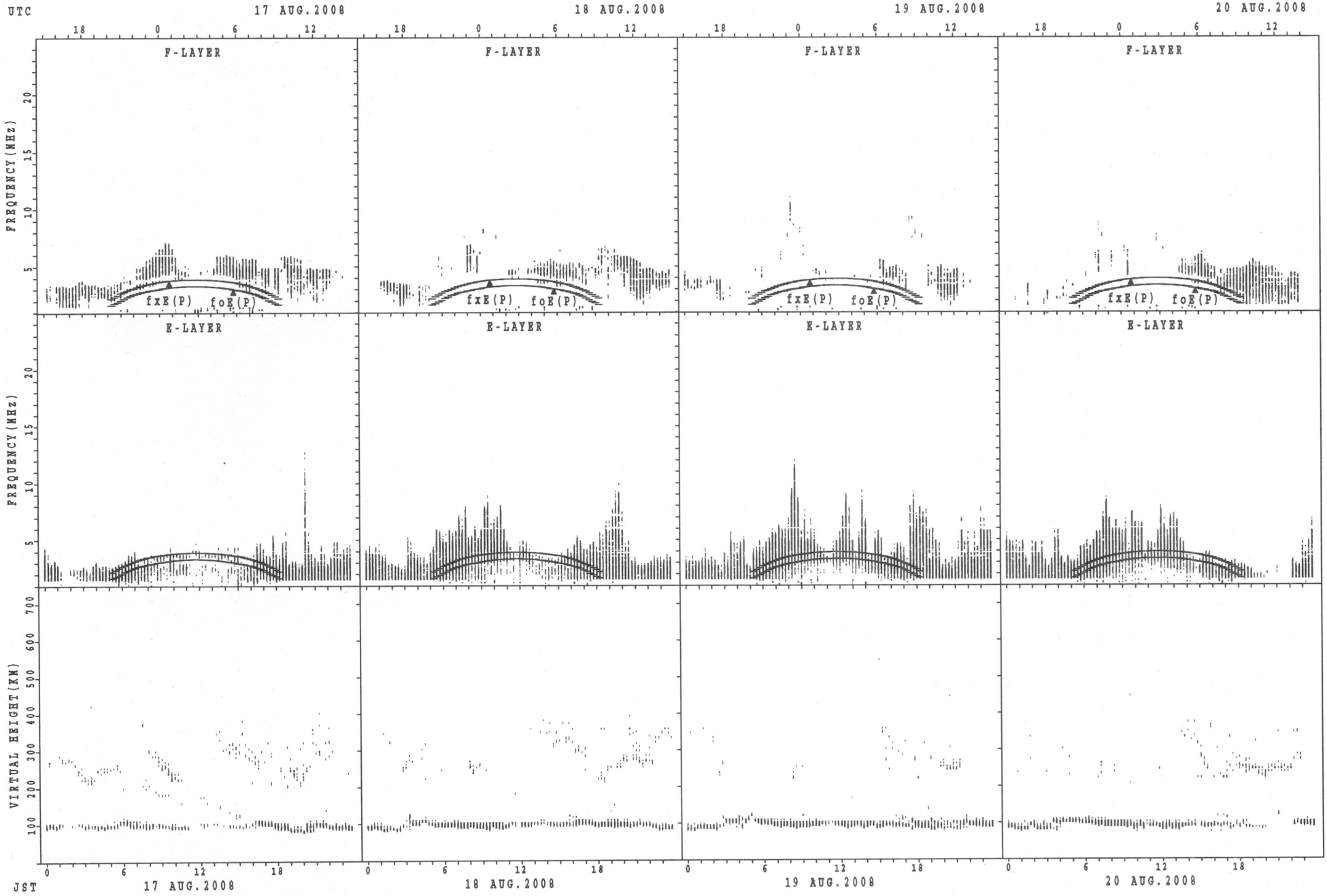
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



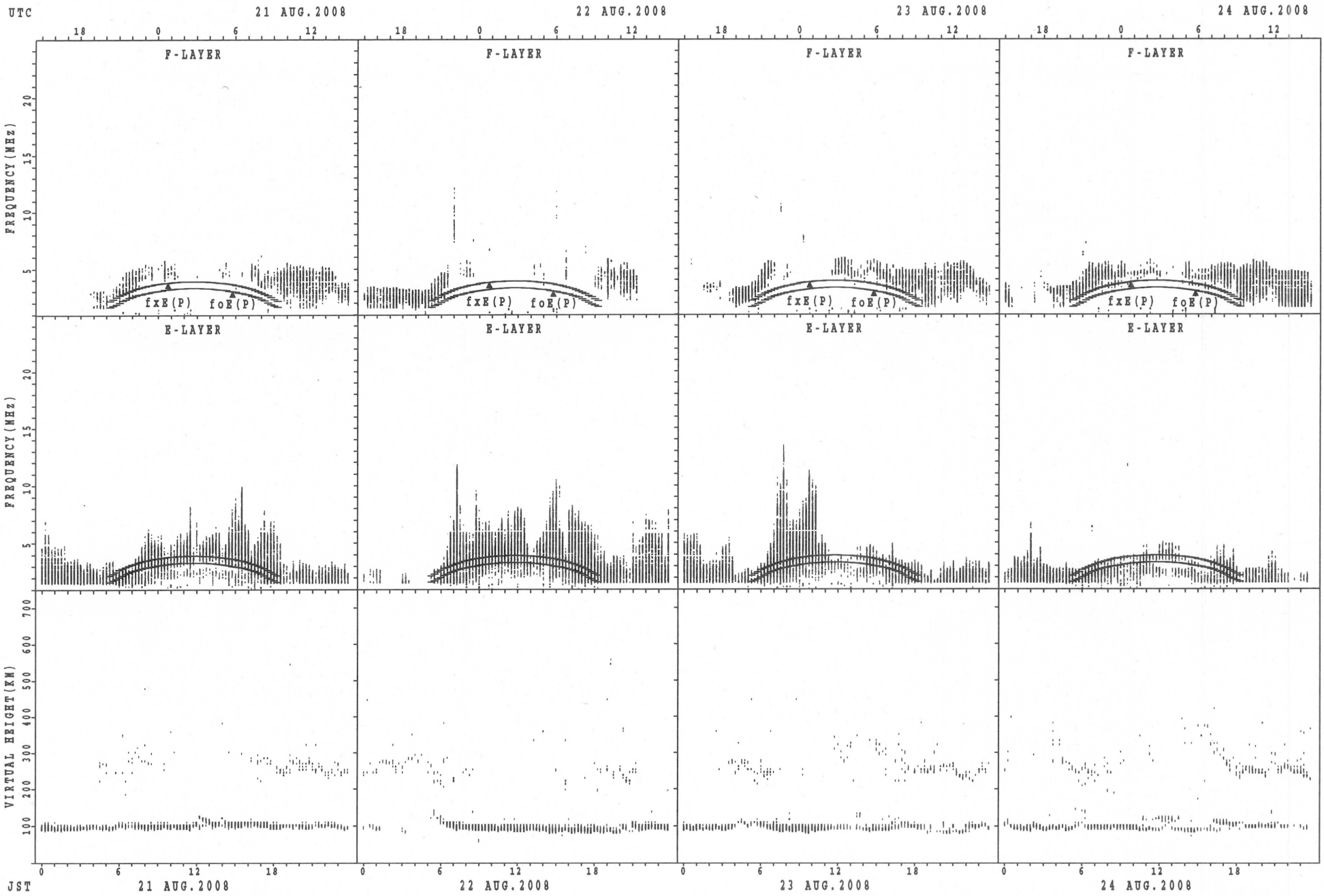
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



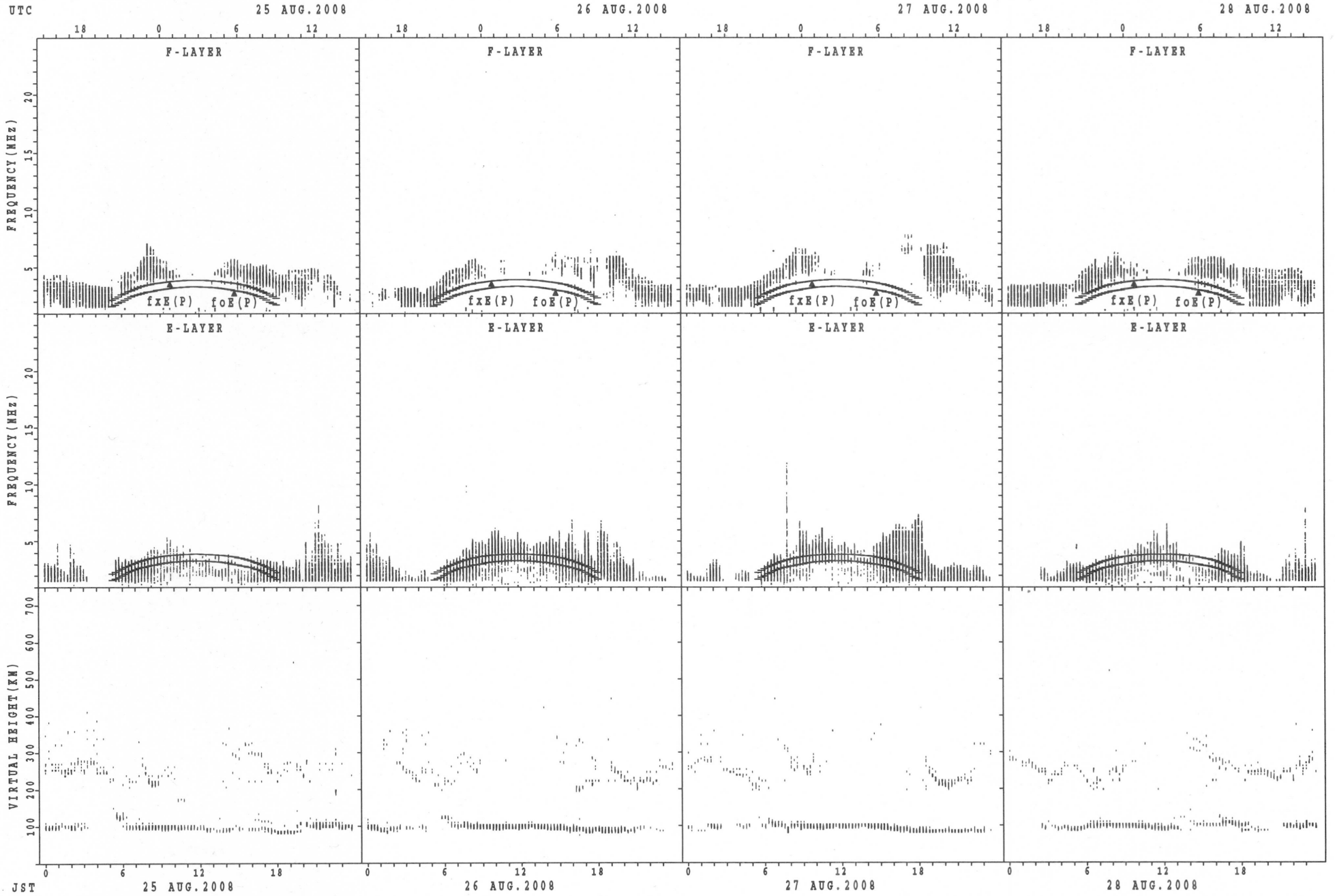
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

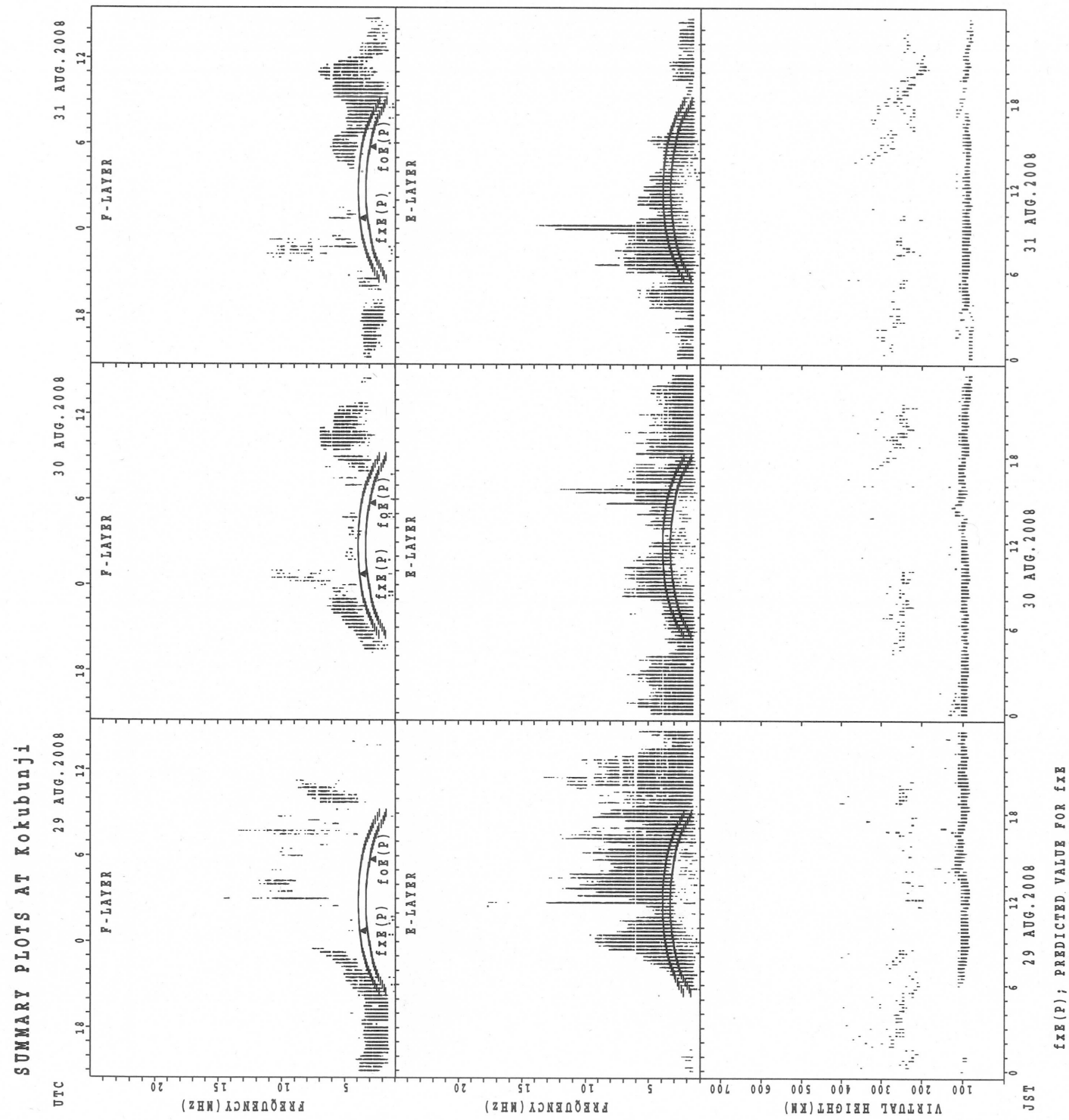


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

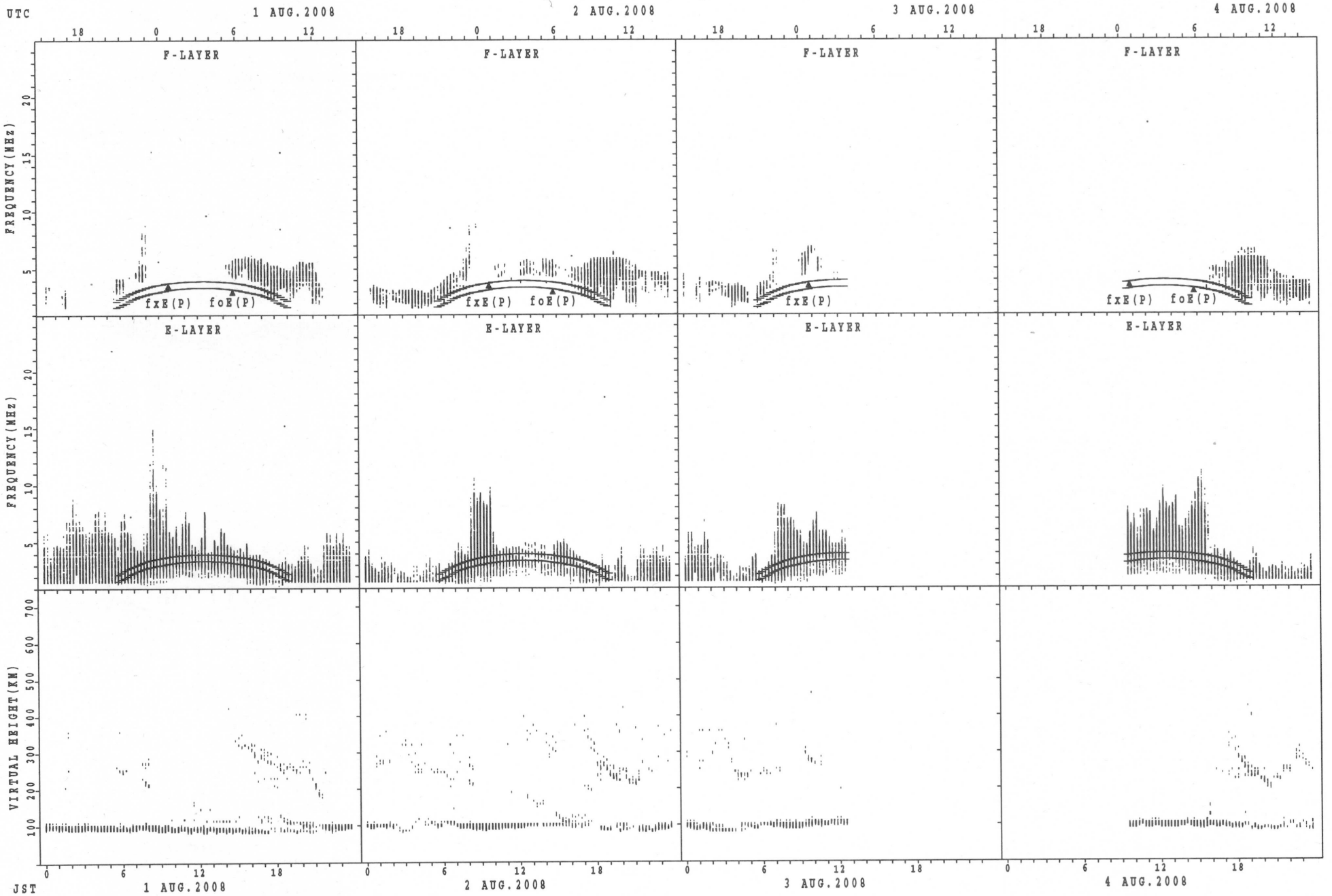
SUMMARY PLOTS AT Kokubunji



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

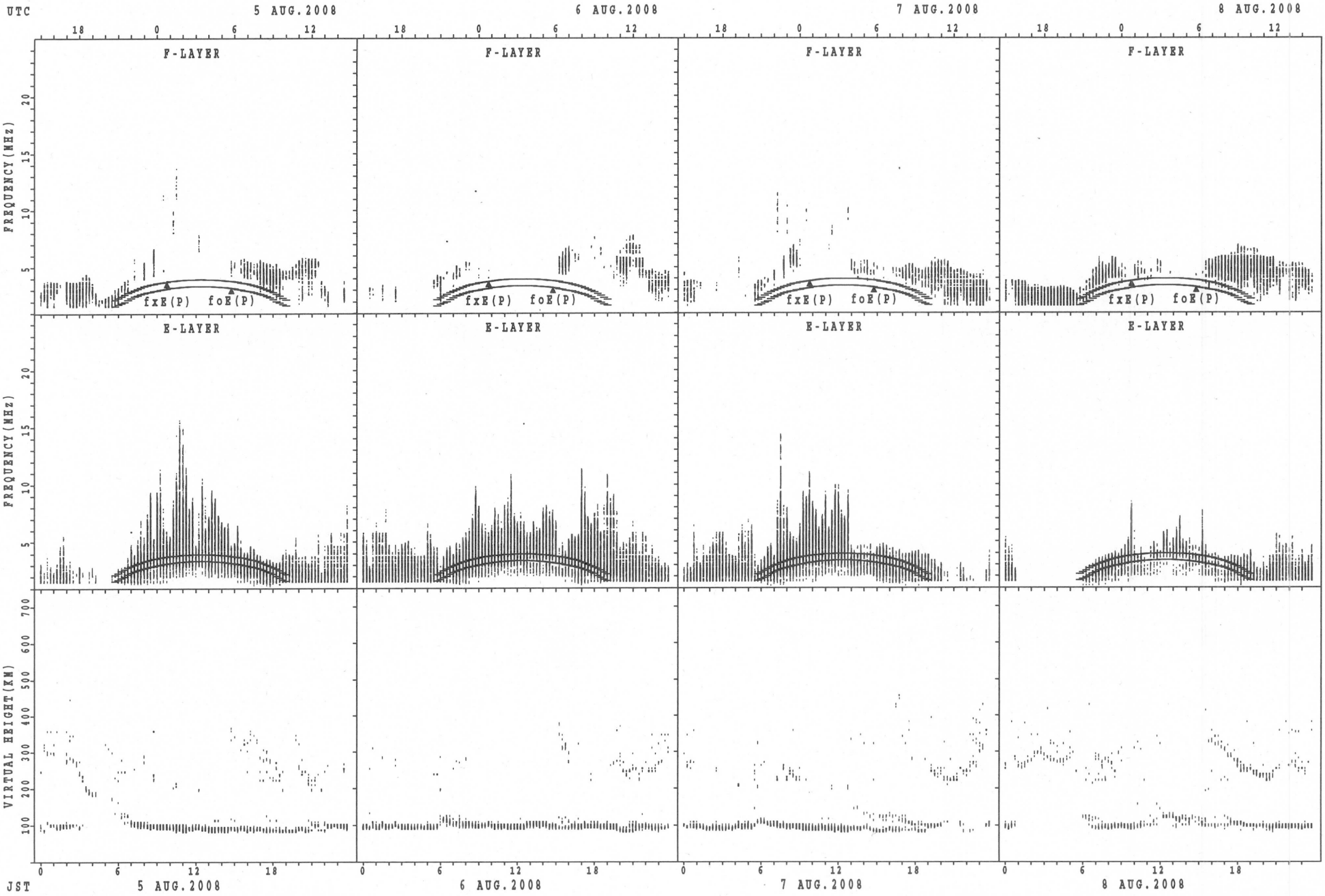

SUMMARY PLOTS AT Kokubunji
UTC
JST
29 AUG.2008
30 AUG.2008
31 AUG.2008
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P) foE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



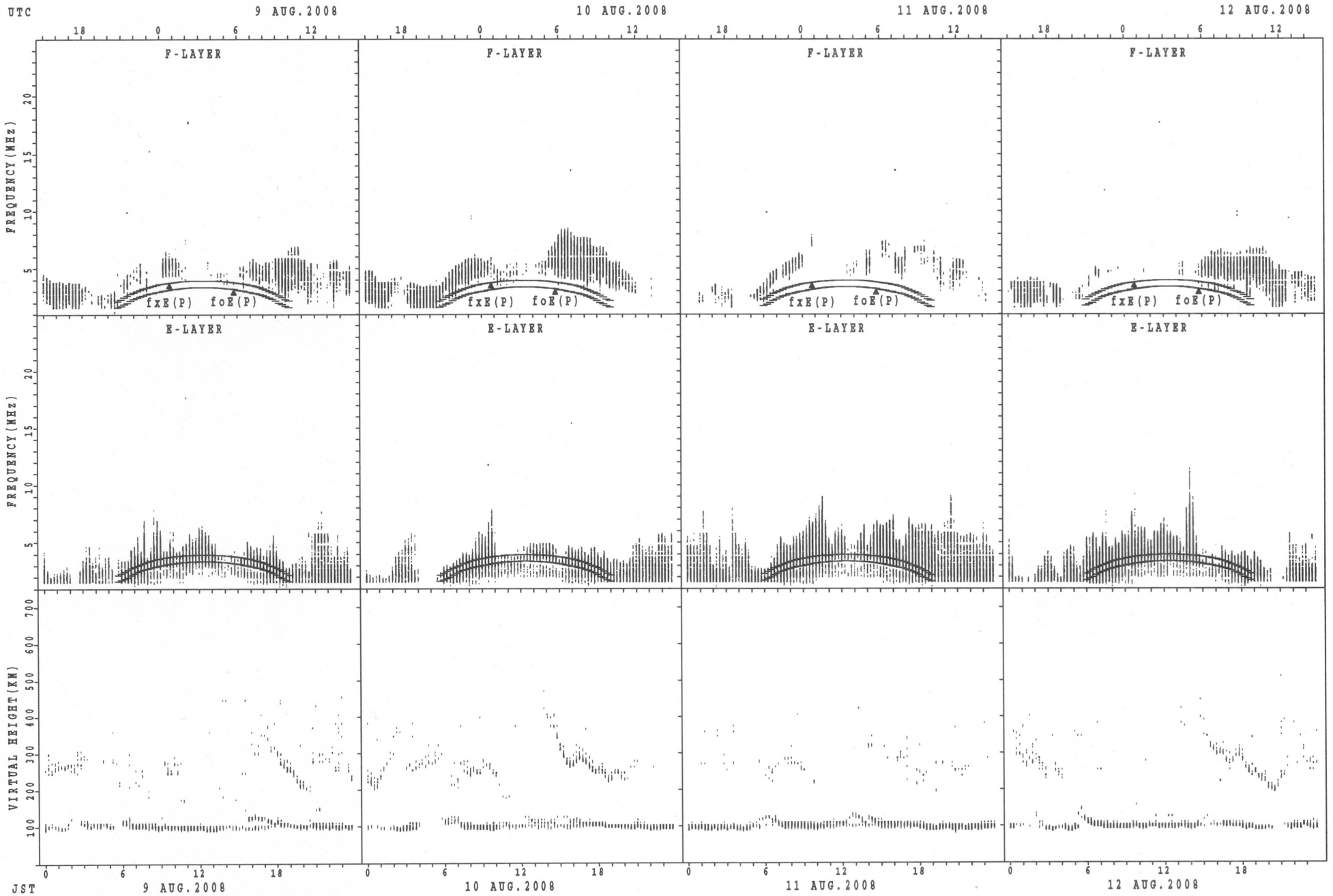
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



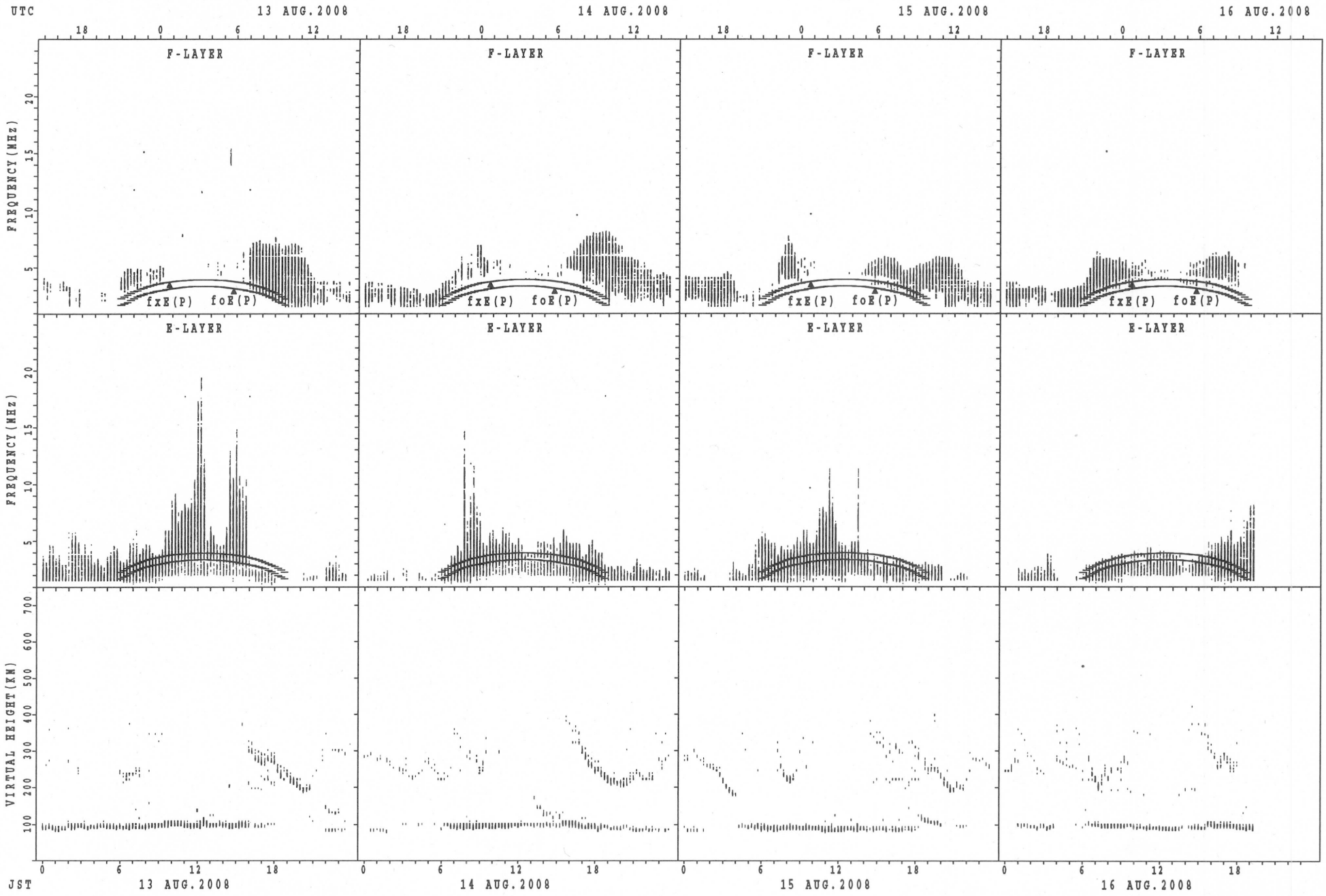
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



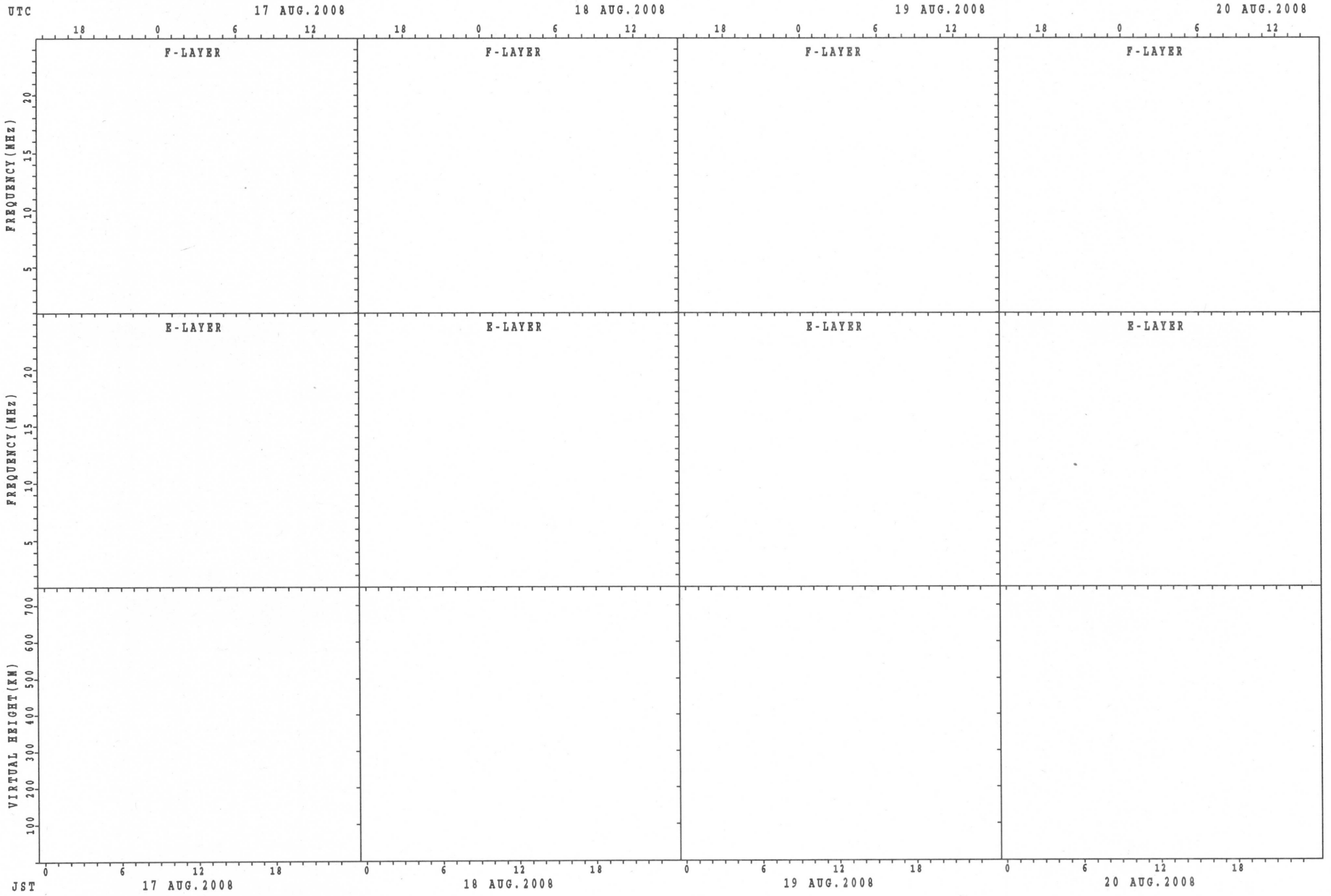
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



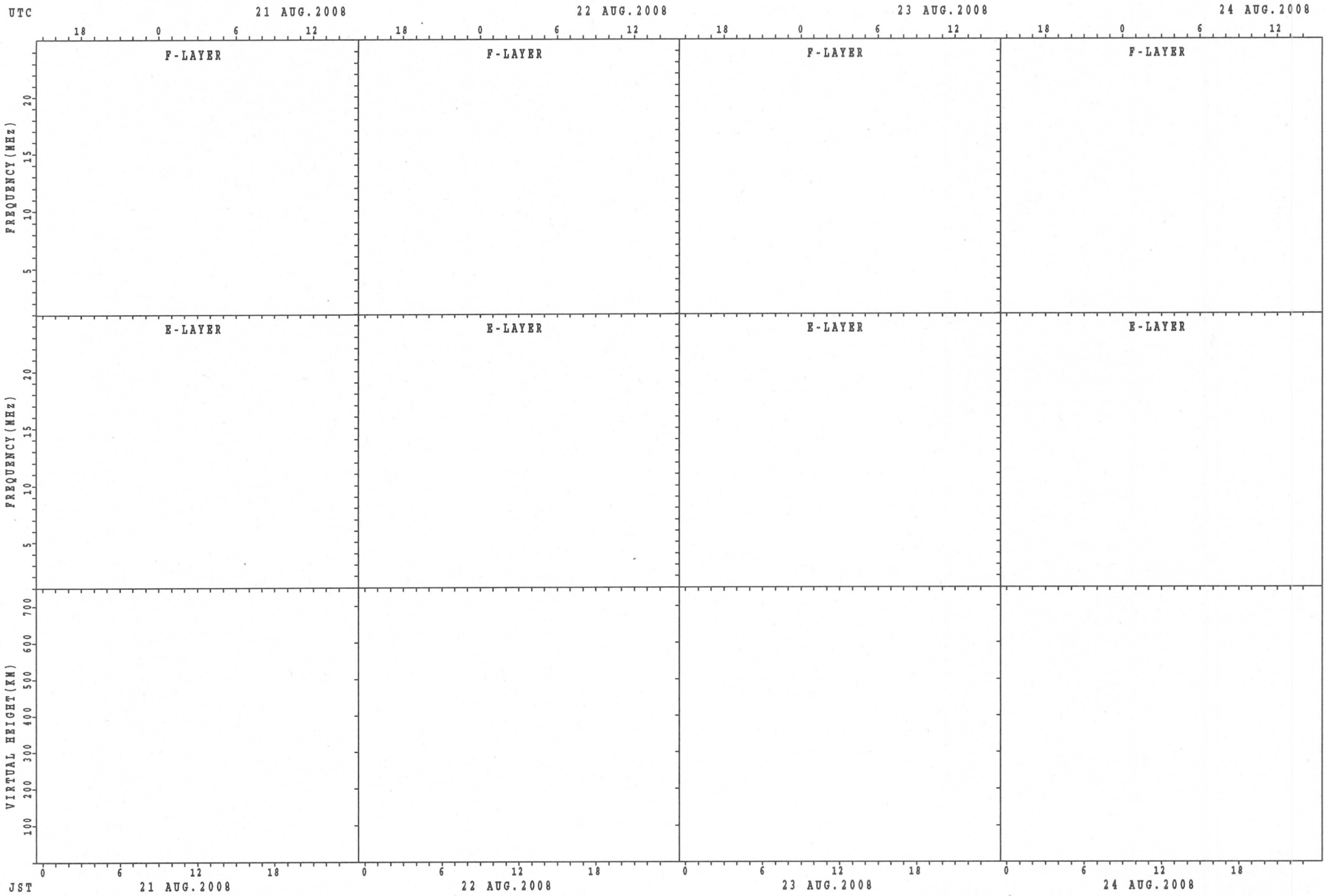
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



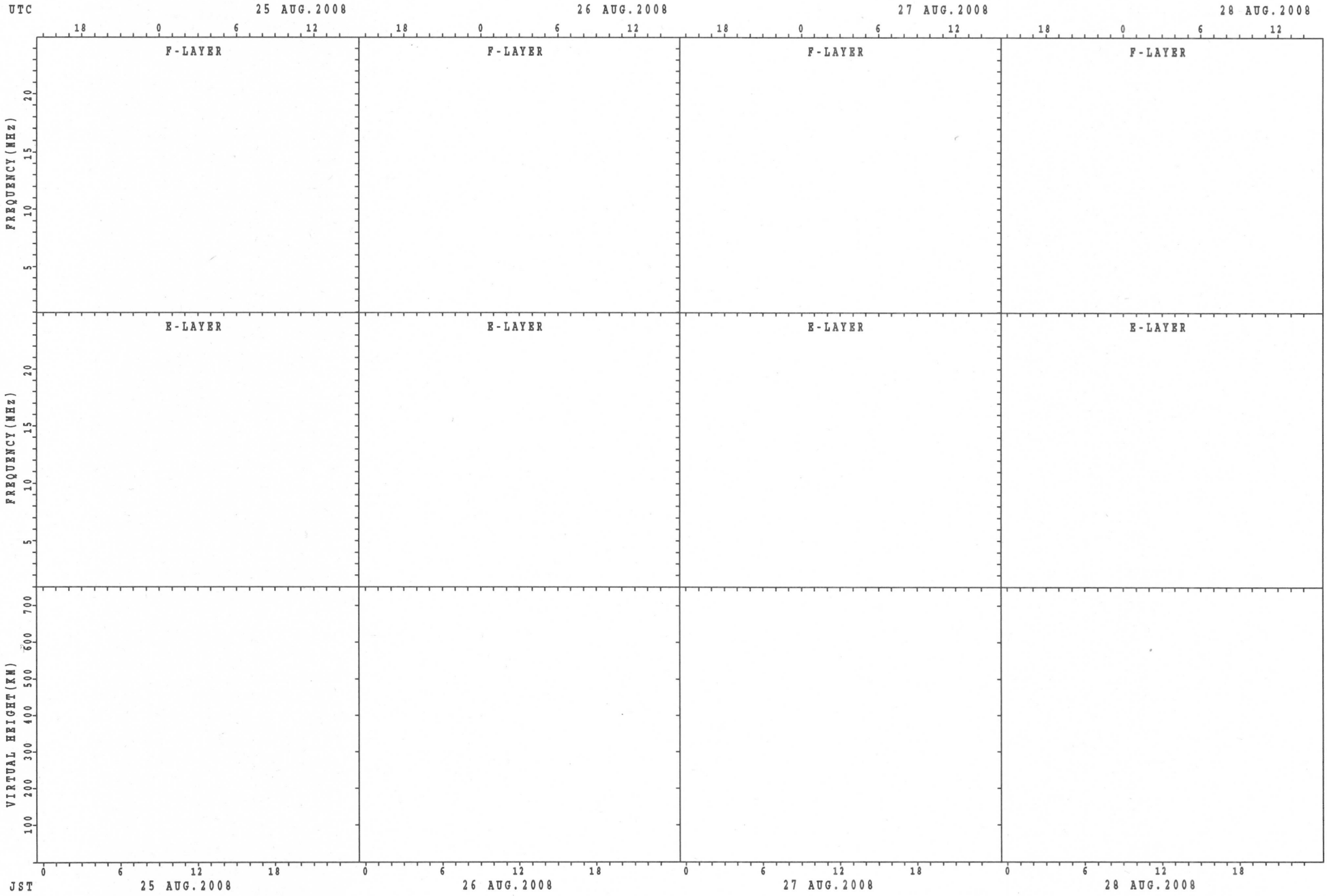
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



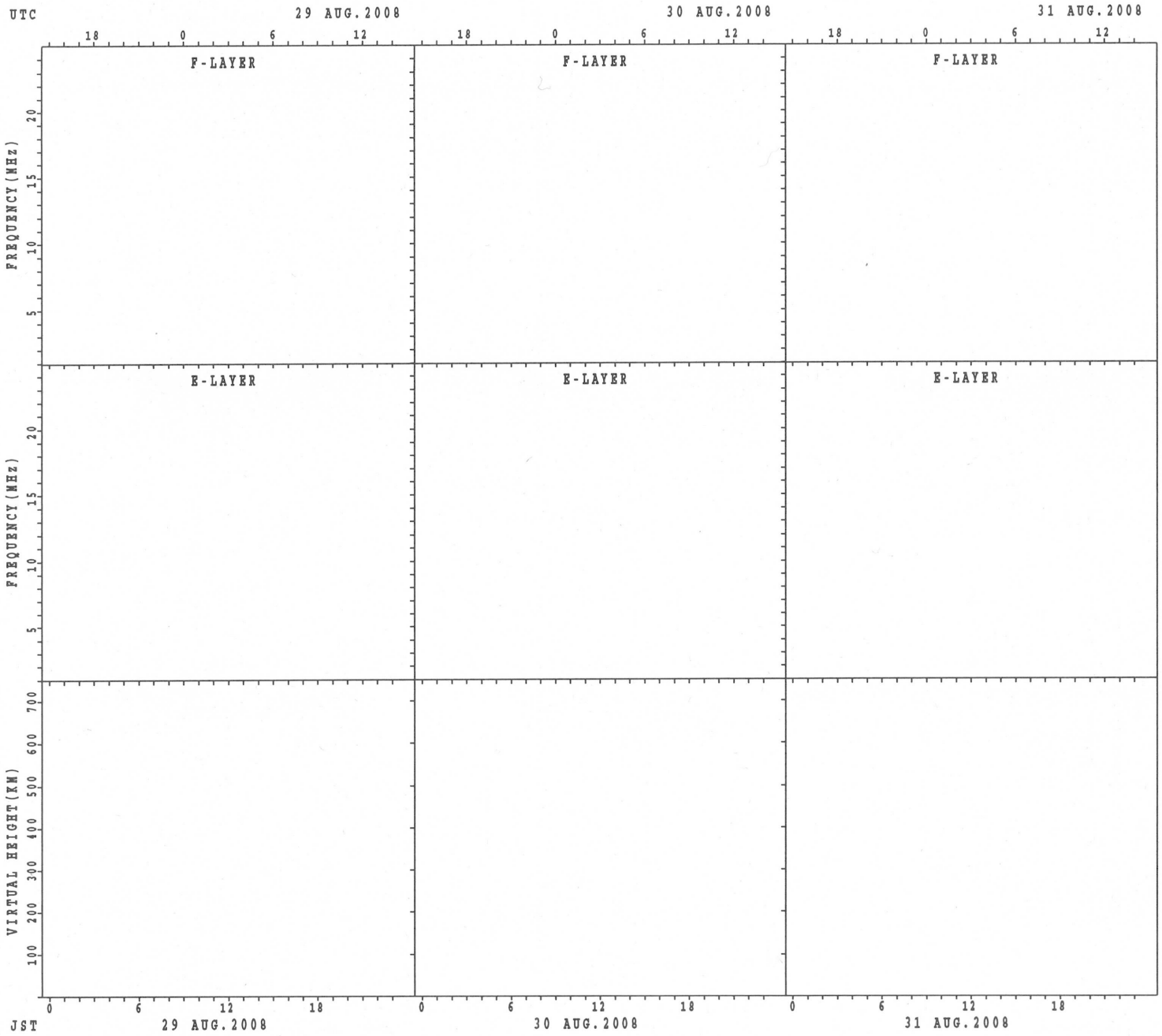
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



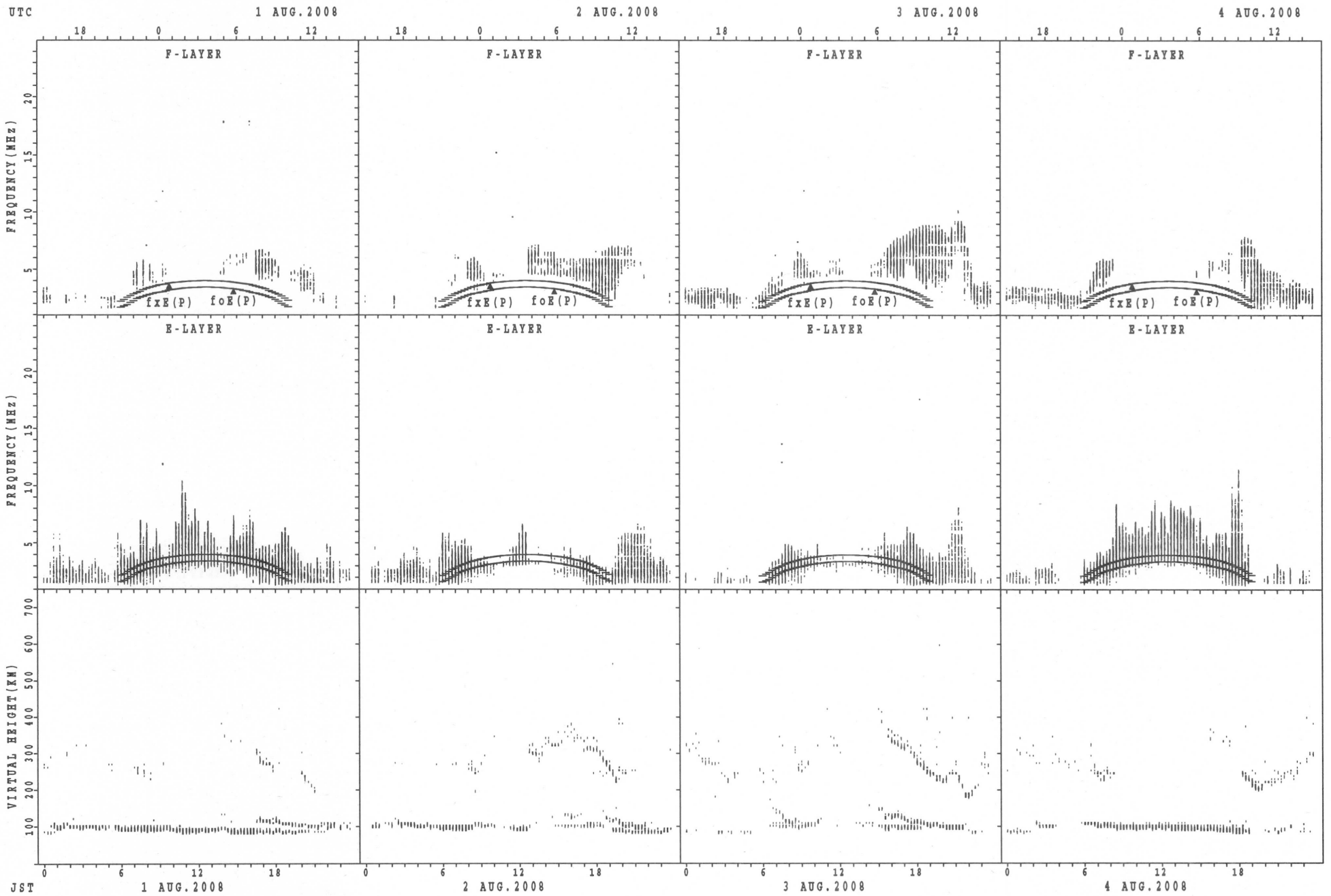
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



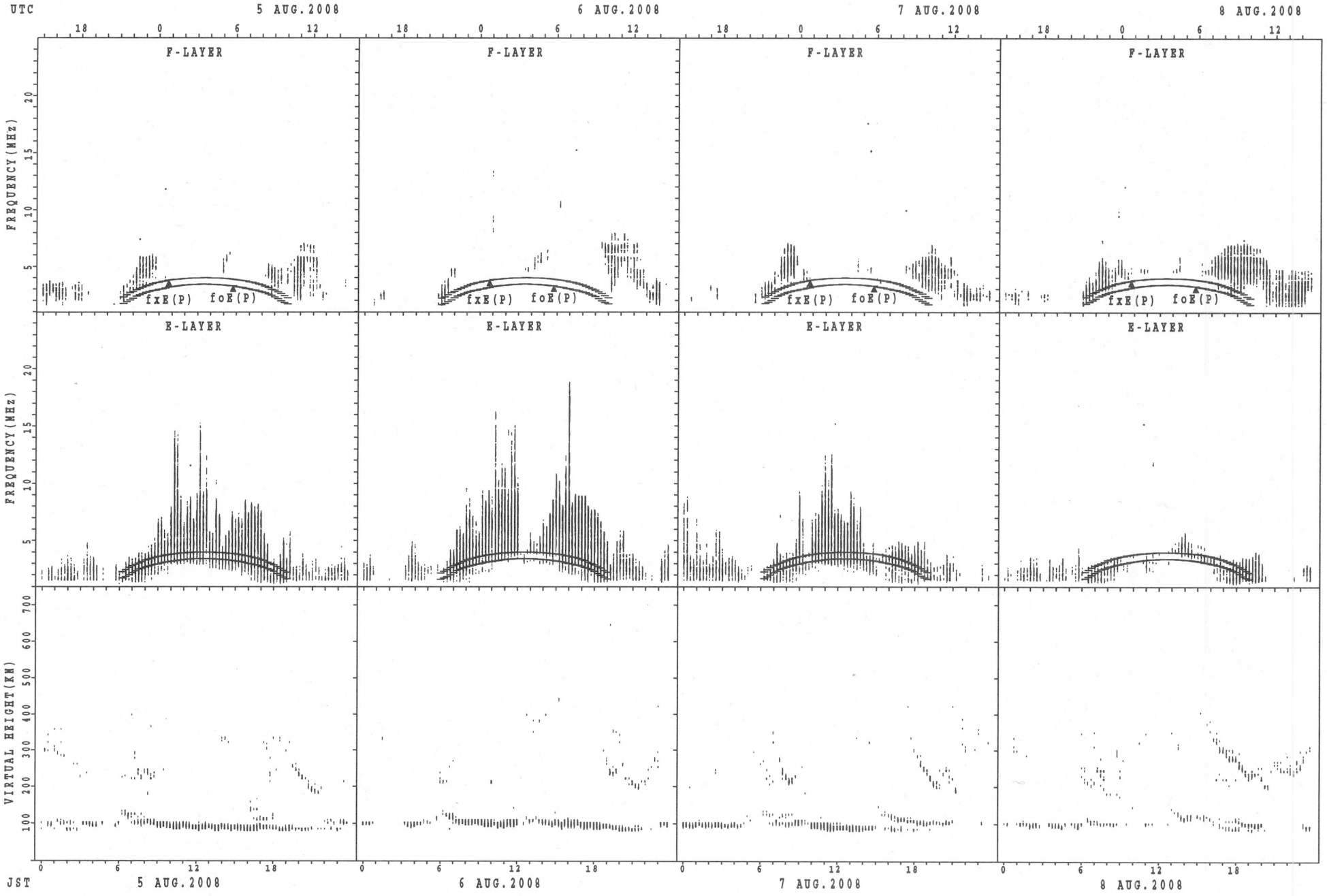
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



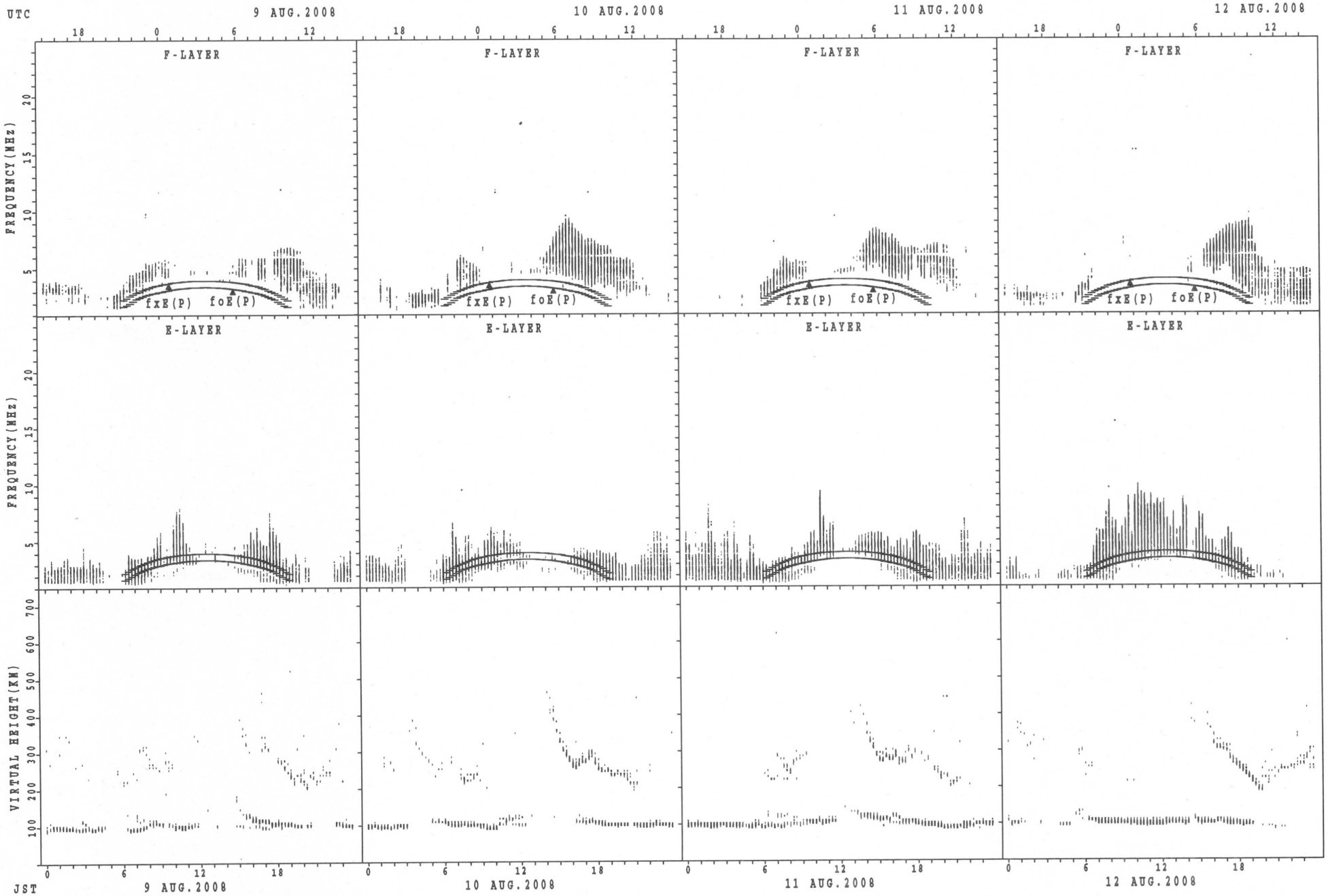
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



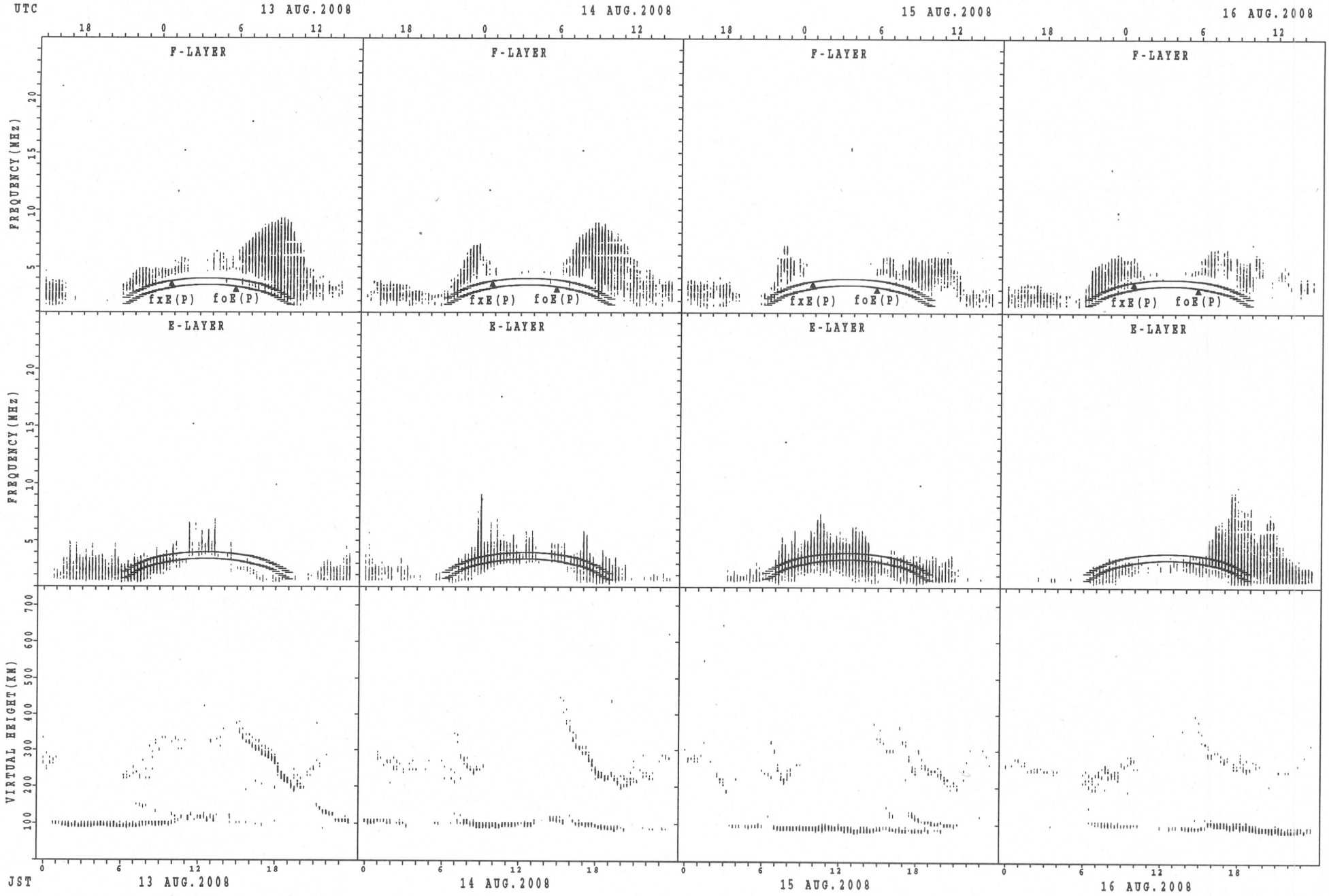
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



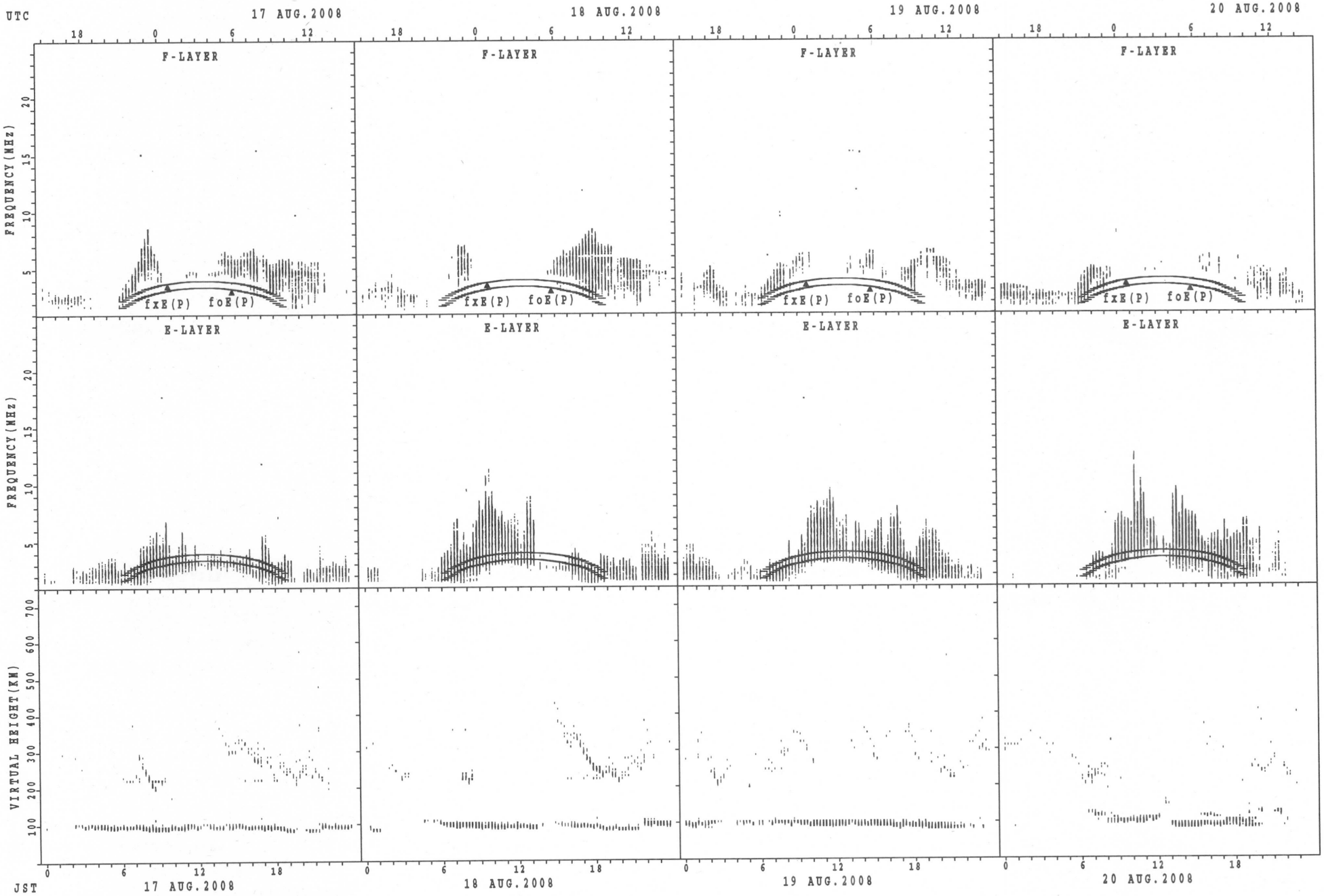
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



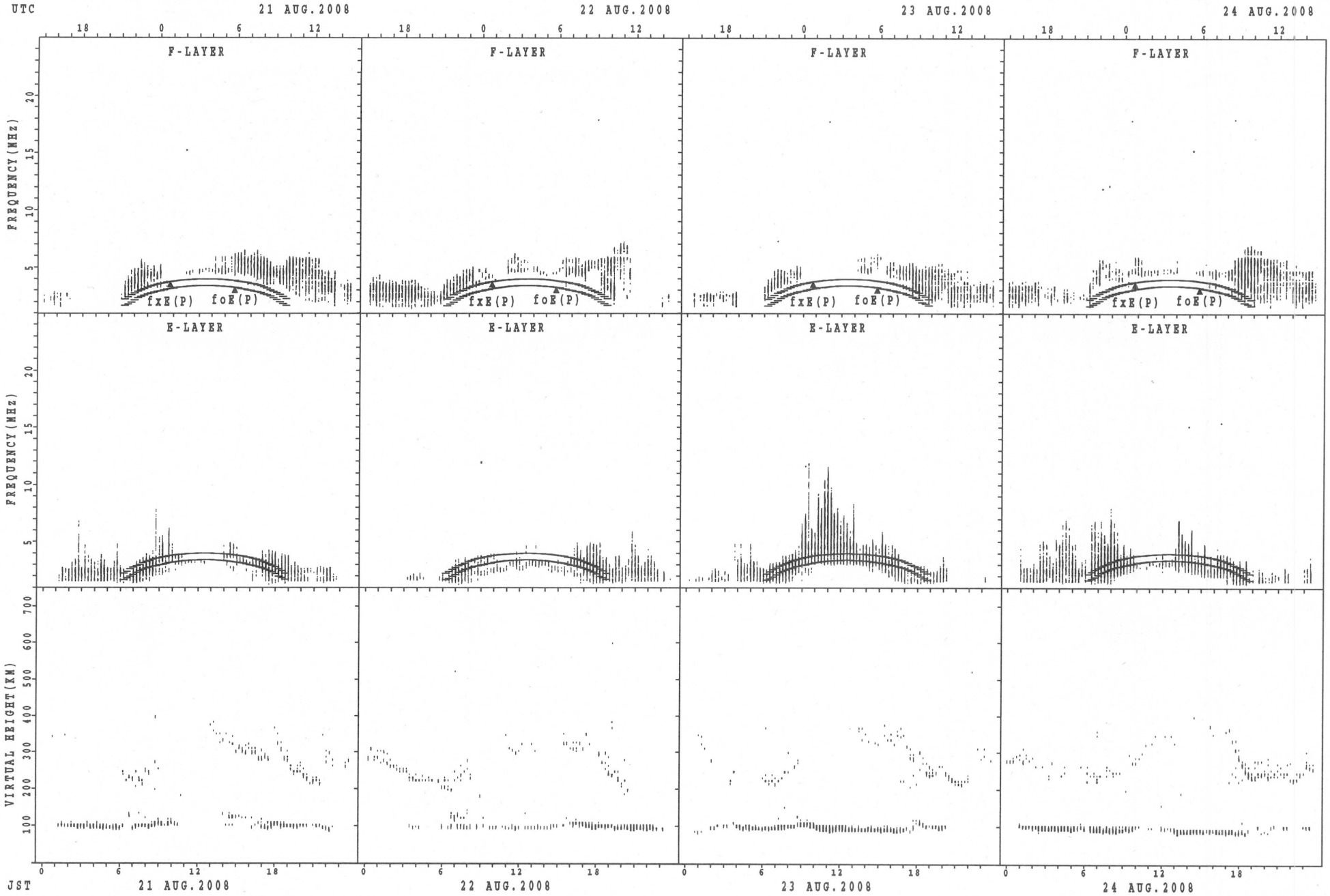
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



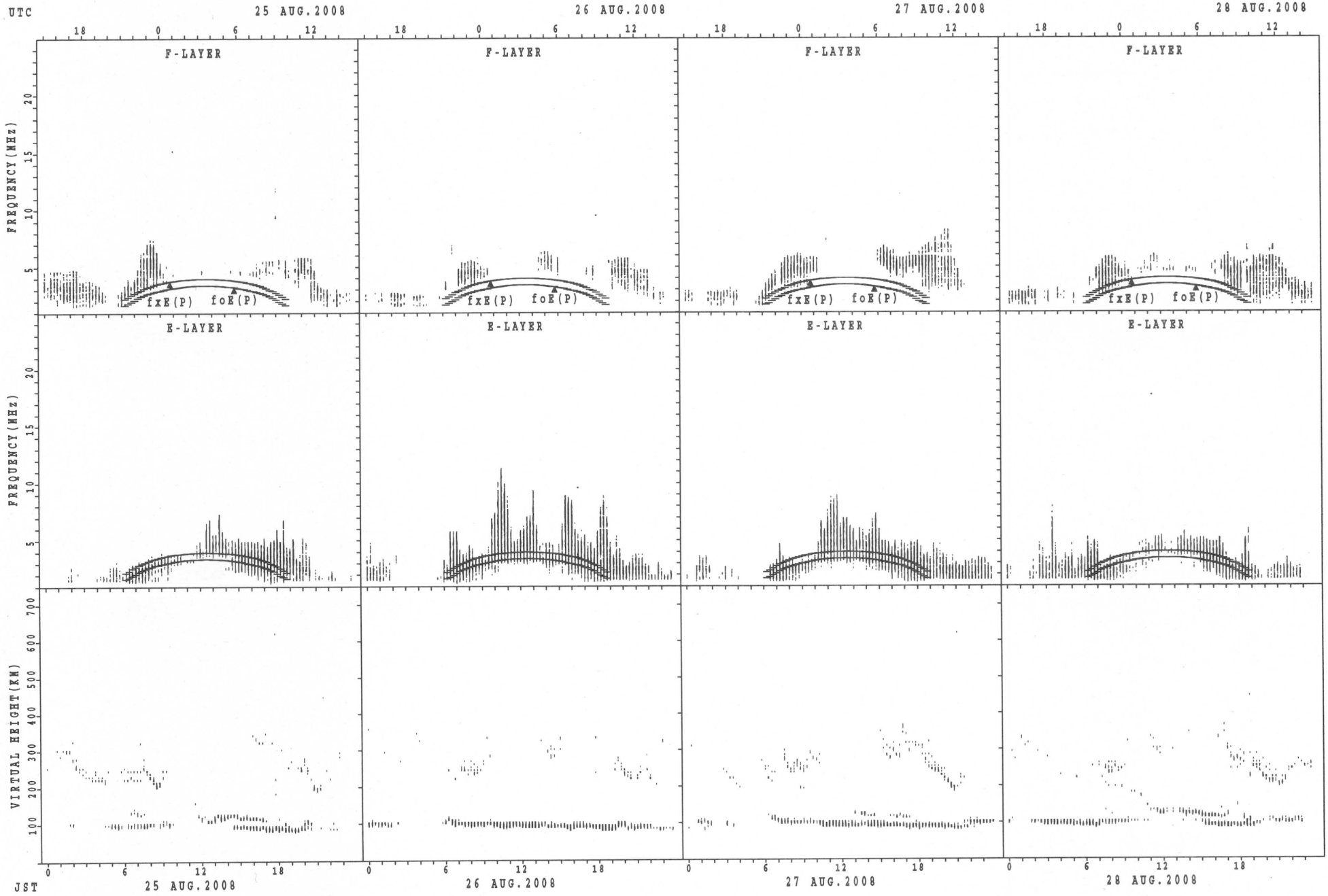
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



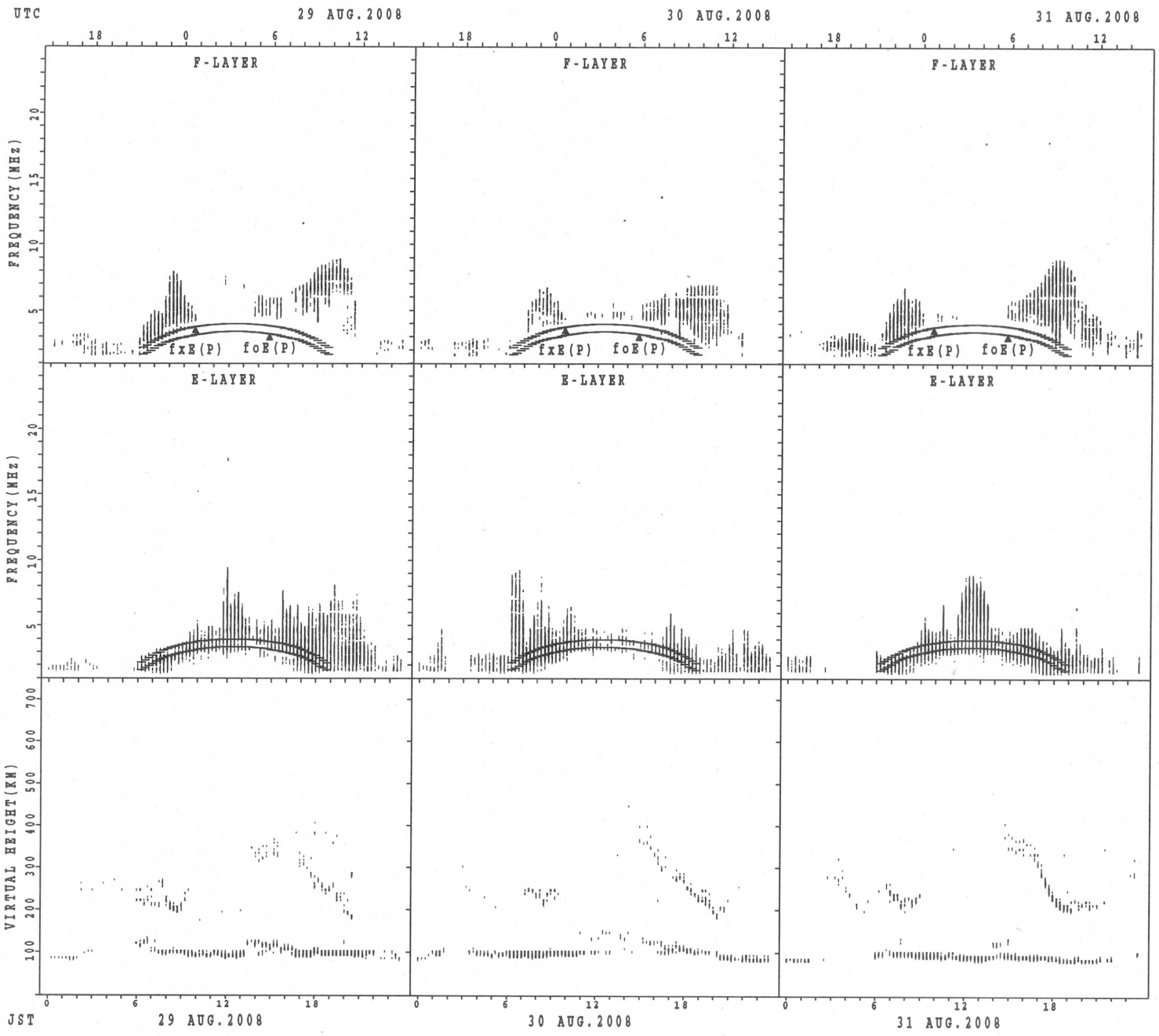
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

AUG. 2008 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						2	1	1										2	2			1		
MED						382	288	266										249	236			304		
U Q						426	144	133										292	258			152		
L Q						338	144	133										206	214			152		

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	28	27	26	24	23	27	31	30	28	27	29	30	25	24	24	26	26	29	29	27	29	28	26	30
MED	95	93	95	95	95	105	105	101	100	99	97	97	95	96	101	102	103	105	103	103	103	101	97	97
U Q	97	97	97	100	101	109	111	103	103	101	102	103	99	101	107	107	111	107	106	103	105	105	101	101
L Q	93	89	89	89	89	101	103	97	98	97	95	95	91	94	97	91	95	100	98	97	99	97	95	95

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								3									1	2	1	2	4			
MED								256									206	292	280	253	244			
U Q								282									103	312	140	262	260			
L Q								206									103	272	140	244	230			

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	26	25	21	22	20	29	29	29	29	29	25	27	23	20	23	24	27	30	31	28	26	28	28
MED	97	95	97	97	99	99	107	103	99	99	99	97	99	101	103	97	106	105	100	97	97	100	100	97
U Q	99	101	100	104	101	107	111	103	103	104	103	104	109	111	116	113	113	111	103	103	102	105	104	103
L Q	95	91	95	95	95	98	101	97	97	97	94	95	95	95	95	95	94	101	95	89	89	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								1	4									4	3	1				
MED								232	218									295	278	234				
U Q								116	222									311	438	117				
L Q								116	211									287	258	117				

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	12	12	11	13	8	10	14	15	13	15	16	14	14	13	13	13	13	11	12	14	13	9	12	12
MED	99	99	97	97	100	99	112	103	97	99	98	97	100	99	105	111	107	107	100	97	99	99	100	98
U Q	103	104	101	107	107	103	113	111	104	101	105	103	109	118	125	118	117	113	106	103	103	106	103	104
L Q	96	96	95	95	95	97	95	99	96	95	95	95	95	91	97	95	100	103	96	95	90	89	96	94

MONTHLY MEDIANS OF h'F AND h'Es

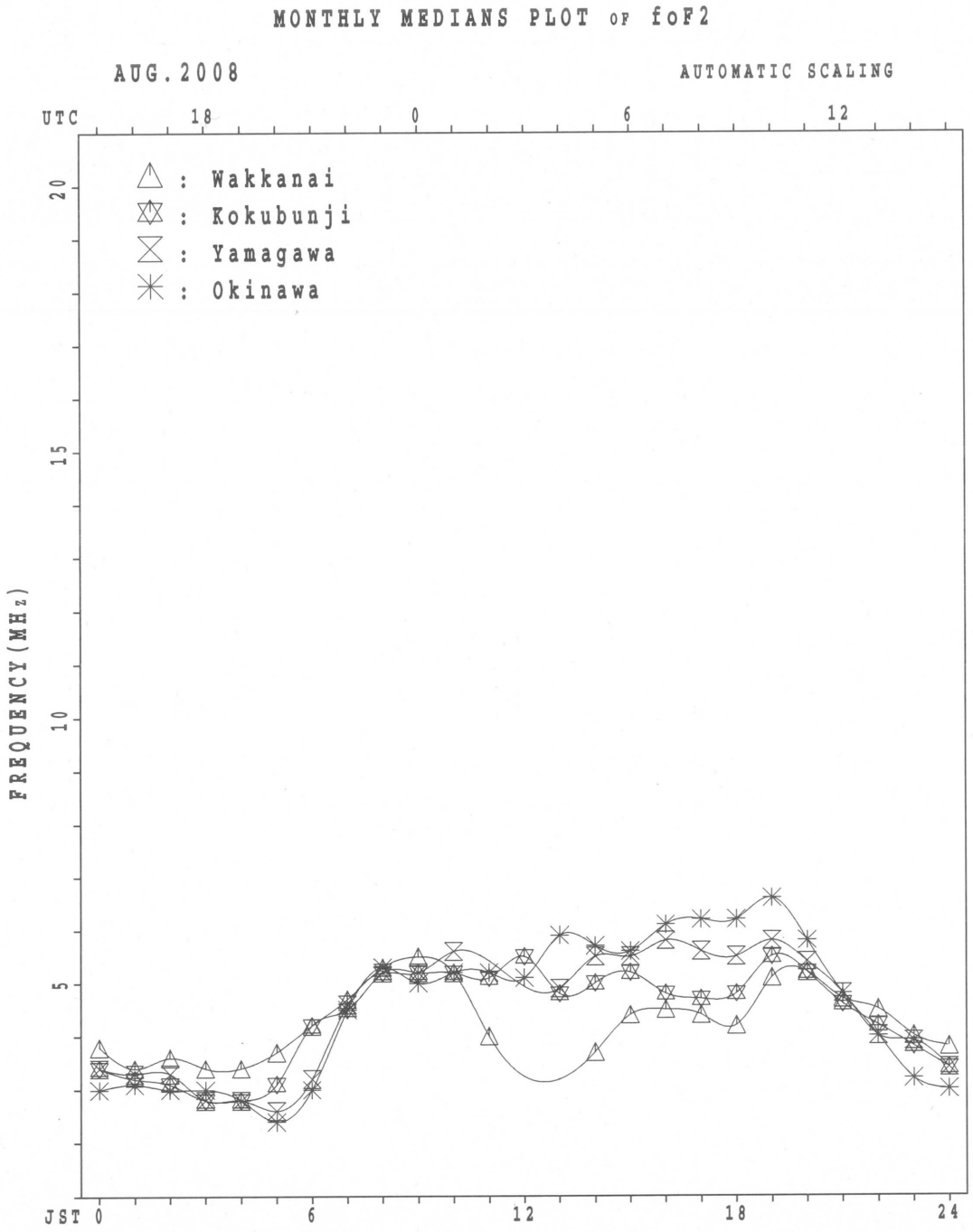
AUG. 2008 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT									9									8	8	11	4	2	1	
MED									232									306	263	244	235	214	234	
U Q									250									321	275	282	291	220	117	
L Q									225									293	250	224	226	208	117	

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	14	14	15	15	16	12	21	31	24	25	23	21	22	21	21	20	25	28	27	27	22	22	18	15
MED	98	102	101	101	99	97	99	105	104	101	97	97	97	97	105	103	107	102	101	97	95	90	97	99
U Q	103	105	103	105	101	99	105	115	109	108	103	103	113	110	121	119	120	111	107	103	105	99	103	105
L Q	91	99	97	99	97	95	97	99	97	97	95	95	95	95	94	94	95	95	95	89	89	89	95	89


MONTHLY MEDIANS PLOT OF foF2
AUG. 2008
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

AUG. 2008 fxI (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

AUG. 2008 fxI (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 foF2 (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 foF1 (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	A	A	A	A	UL 428	A	A	UL 412	UL 404	UL 372	360	A					
2							332	UL 404	A	A	A	UL 428	A	A	A	A	A	UL 388	A					
3							A	A	A	A	412	A	A	A	A	A	A	A	A					
4							A	A	A	A	UL 424	A	A	A	A	UL 404	A	UL 356	UL 312					
5								UL 360	A	UL 516	A	432	UL 428	UL 432	A	A	UL 388	UL 364	L					
6							L	A	A	A	UL 420	UL 420	A	A	A	A	A	A	L					A
7							L	A	A	A	A	A	A	416	A	UL 404	UL 404	UL 364	L					
8							L	L	A	UL 408	UL 420	A	UL 420	A	A	A	A	360	A					
9							UL 336	UL 400	UL 408	A	A	A	A	UL 420	A	A	A	A	A					
10							A	A	A	A	A	UL 424	A	A	A	408	A	A	A					
11									A	A	A	A	A	A	A	UL 408	376	UL 356	L					
12								UL 364	A	UL 420	A	A	A	UL 428	A	408	UL 372	A	A					
13								A	A	UL 408	UL 416	A	A	A	A	A	A	A	A					
14							A	A	A	A	416	A	UL 432	A	A	A	A	UL 352	A					
15							UL 352	UL 404	A	A	A	A	A	UL 408	UL 416	A	A	A	A					
16							332	372	392	UL 420	424	UL 424	UL 420	UL 424	420	400	388	UL 344						
17							UL 332	UL 392	UL 400	UL 412	416	432	UL 424	A	416	400	380	A	A					
18							A	A	A	A	A	UL 440	UL 424	424	416	UL 412	A	A	A					
19							A	A	A	A	416	UL 428	UL 408	A	A	A	372	A	A					
20							A	A	A	A	A	A	A	A	UL 408	396	UL 384							
21								L	A	UL 404	UL 432	A	420	A	A	396	A	A	A					
22								A	A	A	A	A	A	UL 412	412	A	A	A						
23							L	A	404	408	A	A	UL 428	428	428	408	UL 396	L						
24							L	L	396	412	432	432	A	A	412	UL 392	UL 380	A						
25								368	376	412	UL 420	UL 416	UL 388	UL 400	UL 400	396	UL 384	L						
26								UL 364	388		A	UL 428	A	A	A	A	A	A	A					
27								UL 384	388		A	A	UL 440	A	UL 416	A	A	A	A					
28								L	UL 396	UL 416	A	UL 444	A	A	UL 416	UL 408	UL 368	A	A					
29								UL 400	A	A	UL 500	UL 432	A	A	A	A	A	A	A					
30							L	UL 372	UL 396	416	A	UL 428	A	UL 416	A	A	UL 380	UL 344	A					
31							A	A	A	A	UL 432	UL 436	A	A	416	UL 400	L	L	L					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							5	12	10	12	14	16	11	11	13	16	14	10	1					
MED							UL 332	UL 378	396	UL 412	UL 420	UL 428	UL 424	UL 420	416	404	UL 380	UL 358	UL 312					
U Q							UL 344	UL 400	UL 400	UL 418	UL 432	UL 432	UL 428	UL 428	416	UL 408	UL 388	UL 364						
L Q							332	UL 366	388	UL 408	416	UL 426	UL 420	UL 412	412	398	UL 372	UL 352						

AUG. 2008 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 foE (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						B	A	A	A	A	A	A	A	372	320	A	A	A	B					
2						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
3						B	A	A	A	A	A	A	A	A	A	A	U A 276	A	A					
4						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
5						B	U A 188	A	A	A	A	A	A	A	A	A	A	U A 228	B					
6						B	A	A	A	A	A	A	A	A	A	A	A	A	A					A
7						B	A	A	A	A	A	A	A	320	A	A	A	U A 236	A					
8						B	A	A	A	A	A	A	U A 352	A	A	A	A	A	A					
9						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
10						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
11						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
12							A	A	A	A	A	A	A	A	A	A	A	A	A					
13						B	U A 200	A	A	A	A	A	A	A	A	A	A	A	A					
14						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
15						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
16						B	A	A	U R 312	A	R	R	U R 352	A	A	A	A	A	A					
17						B	A	A	A	R	A	R	R	328	316	A	A	A	A					
18						B	A	A	A	A	A	A	A	340	324	A	A	A	B					
19						B	A	A	A	A	A	A	A	A	A	A	U A 272	A	B					
20						B	A	A	A	A	A	A	A	A	A	R	A	U A 220	B					
21						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
22						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
23						B	A	A	A	A	A	A	A	324	A	A	A	A	B					
24						B	U A 180	A	A	A	A	A	A	A	R	R	A	A	B					
25						B	U A 208	A	A	A	A	A	A	A	R	A	A	U A 220	B					
26						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
27						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
28						B	A	A	A	A	A	A	A	A	324	R	U A 268	A	B					
29						B	196	A	A	A	A	A	A	A	A	A	A	A	A					
30						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
31							A	A	A	A	A	A	A	A	A	A	U R 276	A	B					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							5		1				2	5	4		4	4						
MED							U A 196		U R 312				U 352	328	322		U A 274	U A 224						
U Q							U A 204							356	324		U 276	U A 232						
L Q							U A 184							322	318		U A 270	U A 220						

AUG. 2008 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 foEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	JA 57	JA 87	JA 37	JA 58	JA 88	JA 58	JA 46	JA 76	JA 136	JA 78	JA 95	JA 40	JA 40	42	39	35	36	JA 77	JA 76	JA 32	JA 52	JA 56	JA 48	JA 46
2	JA 39	JA 44	JA 38	JA 68	JA 48	JA 45	JA 45	JA 33	JA 55	JA 56	JA 50	JA 45	JA 49	JA 72	JA 78	JA 56	JA 44	JA 44	JA 37	JA 35	JA 40	JA 54	JA 51	JA 128
3	JA 72	JA 84	JA 94	JA 40	JA 26	JA 21	JA 40	JA 62	JA 77	JA 63	JA 38	JA 47	JA 114	JA 47	JA 56	JA 52	JA 52	JA 66	JA 132	JA 75	JA 84	JA 101	JA 70	JA 75
4	JA 69	JA 44	JA 35	JA 21	JA 44	22	JA 40	JA 58	JA 68	JA 85	39	JA 83	JA 49	JA 43	JA 50	37	JA 39	JA 43	JA 34	JA 42	JA 33	20	JA 55	JA 50
5	JA 43	JA 20	JA 30	JA 24	EB 15	JA 23	26	30	JA 72	JA 86	JA 90	JA 49	JA 43	JA 46	JA 63	JA 72	JA 38	32	JA 38	JA 24	43	JA 60	JA 56	JA 72
6	JA 56	JA 26	JA 24	JA 25	JA 38	JA 22	28	JA 74	JA 86	JA 61	JA 64	37	JA 51	JA 50	JA 66	JA 166	JA 42	JA 46	26	JA 32	36	JA 32	JA 33	JA 44
7	JA 73	JA 30	JA 24	21	EB 14	EB 14	27	JA 42	JA 76	JA 117	JA 106	JA 67	JA 57	41	41	38	JA 46	30	26	JA 23	22	20	JA 40	JA 29
8	20	19	20	20	JA 22	JA 20	25	JA 41	JA 51	34	40	JA 47	JA 42	JA 45	45	42	JA 44	JA 34	JA 35	JA 56	JA 54	JA 27	JA 24	JA 26
9	JA 22	JA 19	20	EB 15	EB 14	BJA 18	JA 33	28	JA 39	JA 90	57	JA 77	JA 65	JA 48	JA 60	JA 68	JA 47	JA 57	JA 73	JA 35	JA 80	JA 95	JA 60	JA 94
10	JA 44	JA 34	JA 30	21	EB 15	22	JA 34	JA 64	JA 84	JA 139	JA 87	41	JA 56	JA 54	JA 47	42	JA 50	JA 52	JA 42	JA 51	JA 37	JA 58	JA 58	JA 64
11	JA 88	JA 40	JA 54	JA 31	JA 54	20	JA 44	JA 46	JA 74	JA 110	JA 85	JA 96	JA 82	JA 74	JA 73	JA 46	35	JA 33	JA 46	JA 20	JA 38	JA 28	JA 20	JA 25
12	JA 22	20	JA 30	JA 20	JA 26	JA 20	28	34	JA 43	37	JA 44	JA 67	JA 65	JA 73	JA 54	JA 44	JA 40	JA 68	JA 70	JA 65	JA 55	JA 58	JA 57	JA 45
13	JA 41	JA 47	JA 43	JA 59	JA 37	JA 32	27	JA 56	JA 47	38	JA 43	JA 144	JA 171	JA 203	JA 173	JA 132	JA 173	JA 104	JA 74	JA 59	JA 36	JA 43	JA 43	JA 35
14	JA 24	JA 19	21	JA 34	JA 46	JA 45	JA 80	JA 127	JA 60	JA 86	JA 39	JA 43	42	JA 48	JA 54	JA 75	JA 73	JA 43	JA 41	JA 38	JA 54	JA 30	JA 24	JA 41
15	JA 25	JA 22	JA 21	20	JA 18	JA 26	JA 32	JA 52	JA 59	JA 51	JA 81	JA 79	JA 49	38	39	JA 48	JA 45	JA 45	JA 32	JA 40	JA 29	JA 42	JA 45	EB 15
16	JA 72	JA 43	JA 44	JA 31	JA 45	JA 41	JA 40	JA 39	G 26	38	G 25	G 29	40	38	39	JA 48	JA 39	JA 56	JA 44	JA 28	JA 25	JA 52	JA 35	JA 27
17	JA 42	JA 30	JA 21	JA 26	JA 32	JA 22	JA 26	JA 40	JA 32	G 27	38	G 30	G 29	40	39	39	34	JA 38	JA 34	JA 27	JA 25	JA 36	JA 26	JA 40
18	JA 37	JA 45	JA 30	JA 25	JA 34	JA 34	JA 55	JA 54	JA 47	JA 55	JA 65	JA 46	JA 42	38	35	35	JA 38	JA 40	JA 43	JA 64	JA 77	JA 35	JA 29	JA 32
19	JA 32	JA 27	JA 31	JA 34	JA 45	JA 24	JA 39	JA 52	JA 68	JA 50	JA 58	36	JA 58	JA 55	JA 66	JA 56	35	JA 38	JA 74	JA 77	JA 26	JA 30	JA 57	JA 76
20	JA 60	JA 44	JA 46	JA 30	JA 56	JA 28	JA 42	JA 53	JA 64	JA 58	JA 61	JA 44	JA 76	JA 68	JA 40	G 26	JA 32	JA 26	JA 24	JA 21	20	JA 47	EB 15	JA 45
21	JA 53	JA 52	JA 35	JA 44	JA 28	JA 39	JA 24	28	JA 58	JA 57	JA 44	JA 52	JA 70	JA 51	JA 46	JA 97	JA 58	JA 60	JA 86	JA 25	JA 32	JA 24	JA 29	JA 26
22	JA 18	JA 27	JA 18	JA 20	EB 14	EB 15	27	JA 73	JA 58	JA 77	JA 59	JA 65	JA 76	JA 40	JA 58	JA 100	JA 76	JA 69	JA 57	JA 28	JA 37	JA 77	JA 77	JA 61
23	JA 55	JA 58	JA 30	JA 43	23	JA 24	JA 29	JA 61	JA 107	JA 76	JA 106	JA 58	38	39	39	JA 38	35	30	JA 32	20	JA 26	JA 31	JA 40	JA 30
24	JA 19	JA 36	JA 77	JA 26	JA 24	JA 27	22	29	34	38	JA 38	42	JA 45	JA 46	G 28	G 25	35	JA 46	JA 24	JA 23	JA 24	JA 37	JA 21	JA 19
25	JA 46	JA 45	JA 44	JA 23	EB 15	20	27	31	JA 37	JA 39	JA 40	38	JA 40	38	G 28	33	32	30	JA 28	JA 22	20	JA 105	JA 49	JA 50
26	JA 47	JA 44	JA 33	JA 19	22	EB 15	24	30	JA 39	JA 47	JA 59	JA 47	54	48	JA 45	JA 56	68	JA 58	JA 62	JA 32	44	22	20	20
27	JA 24	21	JA 33	EB 15	JA 23	JA 18	26	31	34	JA 55	JA 54	JA 48	JA 43	JA 45	36	JA 46	55	JA 59	JA 71	JA 27	25	29	20	23
28	EB 16	EB 15	EB 15	BJA 20	JA 19	JA 27	JA 24	28	34	JA 38	JA 44	JA 47	JA 42	JA 45	40	G 26	34	JA 38	JA 45	JA 18	21	18	JA 21	JA 84
29	JA 22	JA 21	EB 15	EB 15	EB 14	EB 15	22	31	JA 50	JA 95	JA 64	JA 49	JA 108	JA 107	JA 100	JA 86	JA 82	JA 64	JA 84	JA 66	JA 123	JA 94	JA 78	JA 39
30	JA 46	JA 72	JA 56	JA 57	JA 56	JA 31	JA 32	JA 36	JA 48	JA 54	JA 60	JA 53	JA 44	JA 42	JA 54	JA 57	JA 54	JA 60	JA 51	JA 86	JA 46	JA 55	JA 46	JA 55
31	JA 27	JA 22	JA 34	22	JA 45	JA 68	JA 63	JA 69	JA 68	JA 123	JA 41	JA 56	JA 49	JA 44	JA 37	JA 45	G 23	24	18	22	JA 30	JA 27	JA 23	JA 24
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	JA 42	JA 34	JA 31	JA 25	JA 26	JA 23	JA 29	JA 42	JA 58	JA 57	JA 57	JA 47	JA 49	JA 46	JA 46	JA 46	JA 42	JA 45	JA 43	JA 32	JA 36	JA 37	JA 40	JA 41
U Q	JA 56	JA 45	JA 43	JA 34	JA 45	JA 32	JA 40	JA 61	JA 72	JA 86	JA 65	JA 65	JA 65	JA 54	JA 60	JA 68	JA 54	JA 60	JA 71	JA 56	JA 52	JA 58	JA 56	JA 61
L Q	JA 24	21	21	20	EB 18	20	26	31	39	39	40	42	42	41	39	38	35	34	JA 32	JA 23	25	28	JA 24	JA 26

AUG. 2008 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 fbEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A A 57	A A 87	E B 14	A A 58	A A 88	18	36	A A 76	A A 136	A A 78	A A 95	35	A A 40	40	38	32	32	31	A A 76	16	38	36	37	A A 46
2	A A 39	E B 15	17	17	16	16	28	29	40	41	42	37	42	A A 72	A A 78	41	36	30	31	30	28	A A 54	E B 15	29
3	25	17	20	17	18	18	37	35	A A 77	41	35	41	A A 114	A A 47	A A 56	A A 52	A A 52	38	38	42	41	32	17	31
4	A A 69	A A 44	24	E B 15	E B 16	16	31	A A 58	48	A A 85	37	A A 83	45	41	44	36	A A 39	29	24	22	28	16	34	21
5	E B 15	E B 15	E B 14	16	E B 15	19	24	28	A A 72	46	A A 90	38	38	39	A A 63	41	30	30	22	16	E B 15	30	36	A A 72
6	32	E B 16	E B 15	17	18	16	26	A A 74	A A 86	41	38	37	A A 51	43	A A 66	A A 166	38	42	22	31	16	18	21	A A 44
7	A A 73	A A 30	E B 16	E B 15	E B 14	E B 14	25	37	A A 76	A A 117	A A 106	A A 67	A A 57	38	39	36	31	29	23	20	E B 16	E B 15	16	17
8	16	E B 15	E B 15	E B 15	15	16	23	36	A A 51	33	38	43	38	41	A A 45	40	40	30	31	30	36	18	15	17
9	16	E B 16	E B 15	E B 15	E B 14	16	27	27	36	A A 90	46	A A 77	A A 65	38	A A 60	A A 68	40	44	32	29	21	36	30	20
10	31	18	17	E B 15	E B 15	E B 16	31	A A 64	A A 84	43	A A 87	38	A A 56	A A 54	41	34	38	43	39	A A 51	33	A A 58	31	A A 64
11	20	19	17	18	A A 54	16	31	34	A A 74	A A 110	A A 85	A A 96	A A 82	A A 74	46	31	32	29	21	16	E B 15	E B 16	E B 15	16
12	E B 15	E B 15	18	16	16	18	22	32	38	34	A A 44	A A 67	44	36	41	33	30	A A 68	37	A A 65	39	21	A A 57	19
13	17	A A 47	22	A A 59	25	23	23	40	40	37	39	A A 144	A A 171	A A 203	A A 173	A A 132	A A 173	A A 104	A A 74	42	28	19	18	21
14	E B 15	E B 15	E B 15	E B 15	16	19	A A 80	A A 127	45	42	35	43	38	A A 48	A A 54	A A 75	A A 73	26	36	32	24	20	18	23
15	E B 16	E B 15	16	E B 15	16	17	22	28	41	41	A A 81	A A 79	A A 49	35	34	40	39	32	27	20	22	16	21	E B 15
16	E B 15	18	17	E B 15	17	17	26	30	G 24	33	G 25	G 28	39	36	36	33	31	29	32	26	E B 16	26	16	16
17	A A 42	E B 15	17	E B 15	16	16	22	33	30	G 27	34	G 28	G 28	38	37	36	30	34	29	19	19	19	16	30
18	32	24	20	E B 15	17	20	A A 55	46	44	48	43	40	37	36	34	32	36	34	30	30	18	E B 16	E B 15	18
19	19	19	21	18	17	17	A A 39	A A 52	A A 68	43	35	35	35	A A 55	A A 66	40	32	33	A A 74	25	16	19	24	25
20	A A 60	A A 44	17	16	E B 15	19	A A 42	46	A A 64	40	A A 61	A A 44	A A 76	A A 68	35	G 26	29	25	19	16	E B 15	E B 15	E B 15	23
21	18	A A 52	18	18	E B 15	16	19	26	40	35	38	A A 52	37	A A 51	42	32	42	32	26	18	E B 15	E B 15	16	E B 15
22	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15	22	A A 73	41	A A 77	A A 59	A A 65	A A 76	35	35	A A 100	A A 76	A A 69	22	16	21	16	A A 77	A A 61
23	A A 55	19	16	A A 43	E B 15	17	25	43	34	36	A A 106	A A 58	36	38	37	35	34	28	22	E B 15	18	23	17	E B 16
24	17	A A 36	22	19	E B 15	18	20	28	32	33	34	40	41	A A 46	G 26	G 24	31	32	21	19	E B 15	19	E B 15	E B 15
25	E B 15	18	E B 15	16	E B 15	16	25	27	32	33	34	35	35	34	G 27	32	31	26	25	20	16	E B 15	20	16
26	16	19	18	E B 15	17	E B 15	23	29	34	41	45	37	A A 54	A A 48	42	42	42	A A 58	37	23	23	E B 15	16	E B 15
27	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	22	28	32	41	45	45	37	43	35	39	A A 55	A A 59	A A 71	22	20	19	E B 16	19
28	E B 16	E B 15	E B 15	E B 15	E B 16	19	20	28	32	34	41	40	A A 42	A A 45	38	G 26	32	35	A A 45	E B 16	E B 14	16	18	16
29	16	E B 15	E B 15	E B 15	E B 14	E B 15	21	29	43	A A 95	43	38	A A 108	A A 107	40	A A 86	A A 82	A A 64	A A 84	18	34	A A 94	A A 78	A A 39
30	A A 46	A A 72	A A 56	A A 57	21	17	22	30	34	35	42	35	A A 44	38	A A 54	A A 57	29	26	34	18	21	18	23	22
31	17	17	16	E B 15	E B 16	16	41	A A 69	41	A A 123	38	38	A A 49	39	33	32	G 23	23	16	E B 15	E B 15	19	17	E B 15
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	17	18	17	E B 15	16	16	25	34	41	41	42	40	A A 44	41	41	36	36	32	31	20	20	19	18	20
U Q	A A 39	A A 30	18	18	17	18	31	A A 52	A A 68	A A 77	A A 61	A A 65	A A 57	A A 51	A A 54	A A 52	A A 42	A A 43	A A 38	30	28	26	30	A A 30
L Q	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16	22	28	34	35	37	37	38	38	35	32	31	29	22	16	E B 16	E B 16	E B 16	E B 16

AUG. 2008 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 fmin (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

AUG. 2008 fmin (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 M(3000)F2 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A	327	A	A	345	358	A	A	A	A	318	A	280	297	300	323	333	A	344	F	322	F	A
2	A	F	F	300	F	355	332	315	327	352	336	302	351	A	A	320	329	317	323	345	346	A	F	F
3	309	F	F	316	322	329	356	383	A	352	347	362	A	A	A	A	A	328	309	328	339	350	332	F
4	A	A	331	314	314	338	379	A	364	A	314	A	319	350	325	328	A	283	332	321	348	355	F	F
5	F	F	F	312	331	391	378	247	A	270	A	334	316	269	A	311	341	328	343	332	342	F	F	A
6	290	F	342	F	338	357	382	A	A	349	303	246	A	299	A	A	326	355	331	336	336	334	323	A
7	A	A	F	F	327	332	359	353	A	A	A	A	A	302	334	326	286	319	333	321	325	324	333	329
8	338	324	321	310	F	341	362	351	A	312	294	330	328	284	A	323	326	318	319	330	346	340	342	345
9	324	315	331	328	322	347	301	330	354	A	342	A	A	313	A	A	302	276	310	321	337	F	F	F
10	F	F	328	F	F	331	343	A	A	324	A	298	A	A	287	304	302	327	347	A	345	A	334	A
11	F	355	308	F	A	364	384	347	A	A	A	A	A	A	302	328	342	332	345	333	309	326	F	343
12	304	318	307	321	332	319	380	344	336	334	A	A	307	307	300	325	341	A	325	A	347	F	A	F
13	F	A	346	A	340	348	363	365	362	315	314	A	A	A	A	A	A	A	A	326	372	329	308	314
14	F	F	F	F	372	370	A	A	315	345	357	357	335	A	A	A	A	315	323	348	F	312	F	F
15	F	F	349	348	335	348	323	297	351	367	A	A	A	285	265	329	325	330	313	336	373	312	F	F
16	F	327	341	329	346	297	293	369	366	347	349	257	R 265	276	281	342	325	348	323	317	335	322	373	328
17	A	326	324	377	380	337	278	259	330	368	396	370	286	279	327	346	346	336	313	331	324	F	F	F
18	342	F	320	333	307	323	A	308	360	345	324	317	285	318	313	320	325	333	308	304	332	F	F	F
19	F	F	F	330	328	304	A	A	A	289	346	313	284	A	A	335	340	341	A	321	317	320	F	305
20	A	A	325	341	F	313	A	339	A	334	A	A	A	A	313	346	338	342	339	319	330	322	318	F
21	F	A	322	325	325	359	343	358	353	341	343	A	317	A	307	324	345	333	350	324	319	318	355	340
22	337	332	316	328	313	339	387	A	377	A	A	A	A	307	313	A	A	A	332	326	334	363	A	A
23	A	303	F	A	322	338	361	395	377	365	A	A	330	330	325	327	326	339	349	318	317	317	358	346
24	326	A	325	F	F	344	362	359	375	363	316	336	336	A	329	318	323	331	338	316	332	307	313	325
25	333	F	F	F	F	363	356	309	385	378	388	265	307	259	330	343	334	355	351	319	334	F	F	332
26	F	330	F	F	F	358	366	360	366	368	343	356	A	A	325	344	344	A	340	320	362	366	347	325
27	320	311	319	329	345	355	347	315	353	359	365	358	350	340	310	321	A	A	A	336	368	350	342	318
28	303	323	325	354	F	347	377	383	350	369	366	308	A	A	331	320	346	342	A	328	322	329	355	F
29	338	350	F	F	F	F	344	311	367	A	278	338	A	A	327	A	A	A	A	342	390	A	A	A
30	A	A	A	A	326	F	344	369	384	359	361	337	A	319	A	A	322	325	320	326	354	F	326	319
31	331	317	314	324	332	348	373	A	400	A	388	286	A	270	321	339	351	322	327	327	364	368	346	344
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	13	13	20	18	20	29	27	23	21	23	21	20	15	18	21	23	24	25	25	29	29	21	16	14
MED	326	324	325	328	330	345	359	347	362	349	343	324	317	300	313	326	328	331	331	326	337	326	338	328
U Q	338	331	331	333	339	356	377	365	376	365	363	347	335	318	327	339	342	340	342	334	351	350	351	343
L Q	306	316	320	316	322	332	343	311	350	334	315	300	286	279	301	320	324	320	320	320	328	319	324	319

AUG. 2008 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 M(3000)F1 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	A	A	A	A	UL 449	A	A	UL 378	UL 399	UL 395	364	A					
2							386	UL 385	A	A	A	UL 414	A	A	A	A	A	UL 359	A					
3							A	A	A	A	421	A	A	A	A	A	A	A	A					
4							A	A	A	A	UL 425	A	A	A	A	UL 412	A	UL 373	UL 372					
5								UL 412	A	UL 356	A	416	UL 403	UL 410	A	A	UL 384	UL 363	L					
6							L	A	A	A	UL 451	UL 447	A	A	A	A	A	A	L					A
7							L	A	A	A	A	A	A	422	A	UL 392	UL 362	UL 356	L					
8							L	L	A	UL 426	UL 436	A	UL 417	A	A	A	A	376	A					
9							UL 375	UL 378	UL 431	A	A	A	A	UL 429	A	A	A	A	A					
10							A	A	A	A	A	UL 415	A	A	A	394	A	A	A					
11									A	A	A	A	A	A	A	UL 379	395	UL 368	L					
12								UL 398	A	UL 403	A	A	A	UL 429	A	390	UL 381	A	A					
13								A	A	UL 458	UL 442	A	A	A	A	A	A	A	A					
14							A	A	A	A	427	A	UL 388	A	A	A	A	UL 349	A					
15							UL 359	UL 362	A	A	A	A	A	UL 436	UL 407	A	A	A	A					
16							380	396	427	UL 445	446	UL 442	UL 415	UL 417	410	415	383	UL 383						
17							UL 388	UL 364	UL 414	UL 425	440	427	UL 449	A	376	380	402	A	A					
18							A	A	A	A	A	UL 411	UL 454	401	398	UL 377	A	A	A					
19							A	A	A	A	398	UL 411	UL 416	A	A	A	391	A	A					
20							A	A	A	A	A	A	A	A	UL 421	379	UL 391							
21								L	A	UL 439	UL 423	A	420	A	A	389	A	A	A					
22								A	A	A	A	A	A	UL 436	379	A	A	A						
23							L	A	411	431	A	A	UL 418	374	392	377	UL 367	L						
24							L	L	418	419	410	465	A	A	417	UL 400	UL 365	A						
25								387	424	429	U L 423	U L 463	U L 402	U L 422	U L 414	391	U L 369	L						
26								UL 392	396	A	A	UL 384	A	A	A	A	A	A	A						
27								UL 361	406	A	A	A	UL 398	A	UL 385	A	A	A	A						
28								L	UL 407	UL 418	A	UL 418	A	A	UL 359	UL 376	UL 389	A	A						
29								UL 367	A	A	UL 377	UL 434	A	A	A	A	A	A	A						
30							L	UL 395	UL 410	438	A	UL 407	A	UL 430	A	A	UL 360	UL 354	A						
31							A	A	A	A	U L 406	U L 403	A	A	399	UL 374	L	L	L						
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							5	12	10	12	14	16	11	11	13	16	14	10	1					
MED							UL 380	UL 386	412	U L 428	U L 424	U L 417	U L 416	U L 422	398	390	U L 384	U L 364	U L 372					
U Q							387	UL 396	424	U L 438	440	U L 444	U L 420	U L 430	412	UL 396	391	U L 373						
L Q							U L 367	U L 366	407	U L 418	410	U L 411	U L 402	410	378	UL 378	U L 367	U L 356						

AUG. 2008 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 h'F2 (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							260	A	A	A	A	358	A	438	396	382	336	292	A					
2							322	336	304	276	296	394	286	A	A	E A 304	308	336	266					
3							252	240	A	270	286	264	A	A	A	A	A	304	E A 330					
4							234	A	280	A	368	A	338	284	E A 334	378	A	430	300					
5								528	A	462	A	308	350	402	A	350	286	294	262					
6							248	A	A	E A 314	368	446	A	386	A	A	302	250	272					A
7							256	242	A	A	A	A	A	384	300	330	418	316	272					
8							262	290	A	356	420	322	294	380	A	324	322	312	268					
9							360	318	284	A	E A 316	A	A	362	A	A	348	E A 396	288					
10							282	A	A	E A 330	A	400	A	A	398	330	320	286	244					
11									A	A	A	A	A	A	E A 382	306	282	282	256					
12								296	328	316	A	A	E A 370	364	366	310	282	A	E A 298					
13								268	256	372	356	A	A	A	A	A	A	A	A					
14							A	A	E A 342	294	276	280	322	A	A	A	A	292	252					
15							314	348	262	240	A	A	A	414	430	318	316	280	282					
16							402	244	234	312	310	450	474	454	420	292	320	266						
17							434	428	302	254	222	288	384	432	308	288	274	E A 280	262					
18							A	E A 390	256	E A 280	312	364	436	350	342	324	318	284	312					
19							A	A	A	E A 404	286	370	412	A	A	318	302	284	A					
20							A	E A 308	A	306	A	A	A	A	342	282	312							
21								268	276	326	318	A	360	A	364	322	286	276	252					
22								A	248	A	A	A	A	388	348	A	A	A						
23							272	230	258	274	A	A	314	314	342	314	318	284						
24							262	258	258	278	356	312	314	A	320	336	320	288						
25								380	226	244	258	492	396	468	320	282	296	264						
26								280	268	260	E A 318	298	A	A	338	272	E A 288	A	E A 270					
27								328	264	250	262	E A 278	308	324	348	326	A	A	A					
28								226	268	256	E A 248	378	A	A	308	310	276	248	A					
29								344	240	A	464	354	A	A	326	A	A	A	A					
30							292	256	232	250	286	322	A	358	A	A	322	302	E A 266					
31							E A 260	A	244	A	248	396	A	E A 410	322	282	286	320	272					
	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	22	21	23	21	20	15	18	21	23	24	24	19					
MED							267	284	260	277	U 298	356	344	384	342	318	310	286	268					
U Q							318	344	282	326	356	395	396	414	374	330	320	308	288					
L Q							258	256	246	256	269	303	314	358	321	292	286	280	262					

AUG. 2008 h'F2 (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 h'F (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A	E B 264	A	A	E A 250	A	A	A	A	A	164	A	A	E A 282	198	208	E A 252	A	226	224	E A 282	E A 314	A
2	A	E B 280	E A 276	E A 252	E A 246	210	214	190	A	A	A	210	A	A	A	A	A	220	A	234	224	A	E B 262	E A 230
3	E A 272	212	E A 292	E A 300	E A 260	E A 236	A	A	A	A	182	A	A	A	A	A	A	A	A	E A 264	E A 244	228	E A 246	218
4	A	A	E A 280	E B 276	E B 266	232	A	A	A	A	204	A	A	A	A	200	A	228	214	E A 248	228	204	E A 324	234
5	208	E B 264	E B 276	E A 264	E B 256	204	190	194	A	E A 270	A	208	212	212	A	A	210	E A 262	212	222	210	E A 270	230	A
6	E A 328	218	222	228	E A 272	216	212	A	A	A	184	182	A	A	A	A	A	A	216	E A 242	210	222	E A 246	A
7	A	A	E B 280	E B 258	E B 246	224	196	A	A	A	A	A	A	198	A	224	210	226	216	242	228	238	230	210
8	216	240	238	E B 268	E A 280	212	200	232	A	194	196	A	206	A	A	A	A	E A 242	A	E A 246	226	218	214	220
9	E A 246	E B 244	E B 248	E B 244	E B 254	218	224	204	202	A	A	A	A	200	A	A	A	A	A	E A 256	222	E A 274	E A 290	E A 250
10	E A 252	234	E A 240	212	E B 254	232	A	A	A	A	A	204	A	A	A	204	A	A	A	A	E A 282	A	E A 316	A
11	E A 306	232	E A 320	E A 240	A	218	212	E A 246	A	A	A	A	A	A	A	230	212	224	224	226	236	234	E B 246	210
12	E B 258	E B 278	E A 288	E A 274	E A 252	240	208	208	A	210	A	A	A	190	A	192	214	A	A	A	E A 240	E A 242	A	E A 244
13	E A 302	A	E B 262	A	E A 264	224	212	A	A	192	204	A	A	A	A	A	A	A	A	E A 300	210	218	226	E A 280
14	E B 280	E B 270	E B 260	E B 240	218	224	A	A	A	A	192	A	212	A	A	A	A	230	A	218	212	E A 244	E A 244	E A 290
15	E B 250	E B 272	216	222	E A 230	E A 236	212	198	A	A	A	A	A	198	204	A	A	A	A	228	196	E A 244	E A 322	220
16	222	E A 260	E A 262	E B 262	E A 270	E A 244	212	226	194	186	182	180	210	194	196	202	204	210	E A 242	E A 268	210	234	210	234
17	A	E B 254	E A 256	206	200	206	198	E A 232	196	180	178	176	176	A	E A 246	E A 246	210	A	A	234	214	E A 272	232	E A 262
18	E A 302	E A 302	E A 260	E B 240	E A 312	E A 284	A	A	A	A	A	220	188	200	198	218	A	A	A	E A 252	232	E B 258	E B 244	E A 302
19	E A 286	E A 298	E A 266	E A 262	E A 264	E A 304	A	A	A	A	216	198	202	A	A	A	208	A	A	E A 254	E A 240	E A 234	E A 330	E A 318
20	A	A	E A 258	234	E B 286	E A 322	A	A	A	A	A	A	A	A	188	214	206	206	218	E A 240	220	232	232	E A 310
21	E A 256	A	E A 286	E A 286	E B 266	228	196	H 184	A	186	210	A	196	A	A	204	A	A	A	E A 242	E B 246	E B 248	224	204
22	212	234	E B 260	E B 242	E B 270	E B 246	210	A	A	A	A	A	A	198	208	A	A	A	228	238	E A 246	214	A	A
23	A	E A 280	E A 280	A	220	232	210	A	192	186	A	A	174	E A 252	208	E A 236	230	216	220	236	E A 248	E A 250	212	214
24	E A 246	A	E A 306	E A 290	E B 272	E A 246	216	204	192	188	194	190	A	A	184	200	E A 242	A	234	E A 250	228	228	E B 260	E B 244
25	238	E A 246	234	E A 242	E B 242	222	206	214	204	186	190	176	206	196	204	218	218	212	220	E A 254	230	196	232	214
26	E A 278	E A 254	E A 270	E A 244	E B 212	232	208	226	222	A	A	E A 242	A	A	A	A	A	A	A	E A 248	206	200	214	242
27	E B 248	E B 266	E B 268	E B 248	222	200	198	208	206	A	A	A	204	A	220	A	A	A	A	226	204	206	208	E A 274
28	E B 272	E B 252	E B 248	210	226	E A 238	206	198	202	186	A	204	A	A	E A 266	206	210	A	A	232	234	222	214	E A 242
29	228	206	E B 250	E B 246	E B 248	236	212	210	A	A	E A 244	206	A	A	A	A	A	A	A	220	206	A	A	A
30	A	A	A	A	E A 310	238	208	208	198	190	A	190	A	208	A	A	214	230	A	228	212	232	E A 252	E A 284
31	E A 244	E A 252	E A 262	E A 250	E B 250	222	A	A	A	A	208	202	A	A	184	228	220	222	228	230	206	194	226	E B 238
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	23	23	30	27	29	31	22	17	10	12	14	16	11	11	13	16	15	14	12	29	31	28	28	25
MED	E A 252	E 254	E A 262	E A 246	E 254	224	209	206	200	186	194	197	204	198	200	207	210	222	220	230	217	U 218	238	E 242
U Q	E A 280	E 272	E A 280	E A 264	E A 270	E A 240	212	226	204	193	208	207	210	208	E A 233	226	218	E A 230	228	E A 251	E A 236	E A 246	E A 261	E A 277
L Q	238	234	250	240	236	218	200	198	194	186	184	181	188	196	192	201	208	216	216	228	210	218	225	219

AUG. 2008 h'F (KM)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 h'E (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

AUG. 2008 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 h'Es (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	96	96	104	96	102	102	112	98	98	98	92	100	98	144	128	124	120	104	100	102	102	104	98	102
2	100	102	92	98	104	102	100	104	102	104	102	96	104	100	96	98	98	102	96	92	92	94	100	100
3	100	98	96	92	92	92	102	106	102	104	110	108	104	100	102	118	114	106	106	100	102	96	96	96
4	92	96	92	92	108	108	114	102	104	102	100	100	102	98	96	100	100	102	100	96	90	96	102	100
5	98	98	100	108	B	108	112	110	104	104	102	102	102	98	94	94	96	116	118	110	110	104	104	102
6	100	96	104	98	96	106	120	104	104	104	108	106	106	106	106	100	104	100	104	100	100	102	102	100
7	96	90	96	108	B	B	114	106	100	102	96	100	102	126	124	128	92	116	110	88	88	90	102	104
8	104	100	98	96	96	98	120	104	100	102	104	108	126	124	122	116	116	114	100	98	100	98	98	96
9	90	92	118	B	B	112	102	104	102	98	94	94	96	100	100	94	118	104	104	104	102	102	102	98
10	98	96	98	114	B	134	118	104	102	98	104	120	106	106	118	122	122	106	106	104	102	102	100	102
11	100	98	100	100	100	120	118	112	102	102	100	108	106	108	106	106	124	104	104	102	100	100	108	106
12	102	102	126	124	114	106	116	112	106	118	106	100	100	100	106	104	118	106	100	100	100	102	102	102
13	102	94	98	90	92	96	118	104	104	130	102	100	98	102	100	100	98	94	90	90	90	92	92	90
14	90	94	100	106	100	100	102	102	96	100	98	102	122	128	116	108	106	104	104	102	94	94	100	96
15	90	92	90	92	92	106	104	102	100	98	94	94	98	94	98	96	92	92	92	92	88	86	98	B
16	96	96	94	102	98	106	102	102	102	102	96	104	140	128	124	122	122	104	106	102	104	102	102	102
17	102	104	102	98	96	100	104	104	102	100	100	100	92	148	128	116	120	104	100	96	86	102	100	98
18	96	92	88	92	108	108	102	102	102	98	102	98	100	142	152	98	116	104	100	100	100	102	102	96
19	96	94	94	110	108	114	106	104	100	96	98	100	100	98	98	98	116	120	100	94	94	94	100	100
20	94	90	94	90	102	110	106	102	98	98	94	98	94	94	96	96	96	122	98	96	92	116	B	96
21	96	96	94	96	100	100	100	118	102	106	104	104	104	114	120	106	104	104	104	102	102	102	106	104
22	98	96	96	96	B	B	122	104	102	100	100	96	96	96	94	92	94	94	94	92	92	100	100	100
23	100	100	98	96	100	108	102	102	96	98	96	96	98	128	122	96	118	114	104	96	96	96	94	100
24	106	102	100	98	98	98	130	124	112	102	100	126	120	120	98	98	122	114	112	106	106	106	106	106
25	104	104	102	104	B	142	128	124	106	102	104	104	102	90	92	120	126	118	92	90	90	108	104	106
26	98	92	92	94	94	B	126	112	104	102	102	102	100	102	102	100	96	94	94	92	92	88	90	90
27	98	96	100	B	108	104	114	106	106	102	102	98	96	96	96	96	92	90	90	92	92	88	90	90
28	B	B	B	96	94	92	100	102	100	102	102	102	98	98	142	102	126	112	104	92	88	94	98	98
29	100	98	B	B	B	B	152	116	104	100	98	98	98	98	116	114	104	106	100	100	104	104	98	106
30	102	120	102	100	98	100	100	98	104	100	100	100	104	106	120	108	120	106	106	100	104	100	100	96
31	90	90	116	88	98	104	102	102	100	100	100	100	100	98	94	94	100	124	112	104	104	96	94	92
	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	28	24	27	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30
MED	98	96	98	97	99	106	112	104	102	102	100	100	100	102	106	100	114	104	100	100	100	100	100	100
U Q	100	100	102	103	103	108	118	110	104	102	102	104	104	124	122	116	120	114	106	102	102	102	102	102
L Q	96	94	94	93	96	100	102	102	100	98	98	98	98	98	96	96	98	102	98	92	92	94	98	96

AUG. 2008 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2008 TYPES OF Es 135°E MEAN TIME (G.M.T. + 9 H)

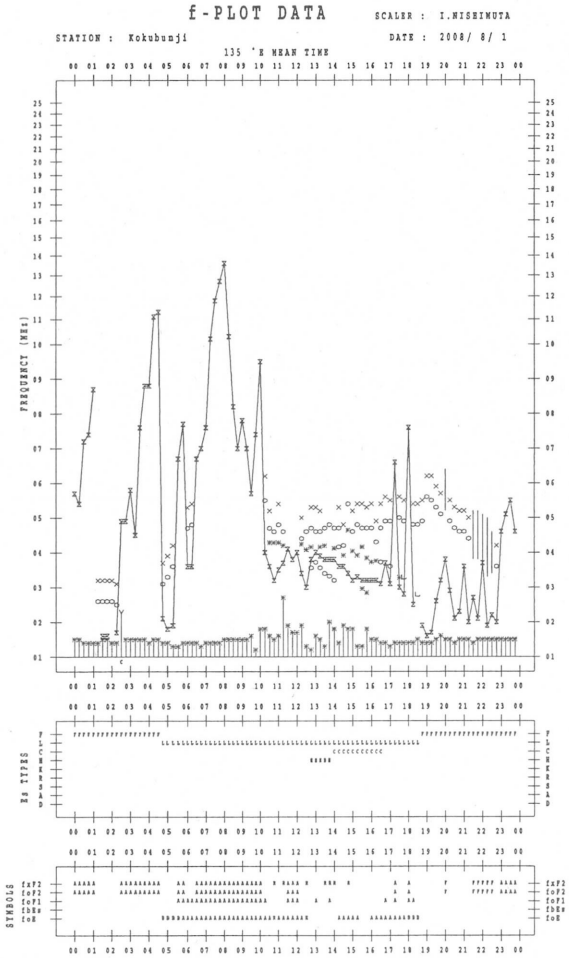
LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

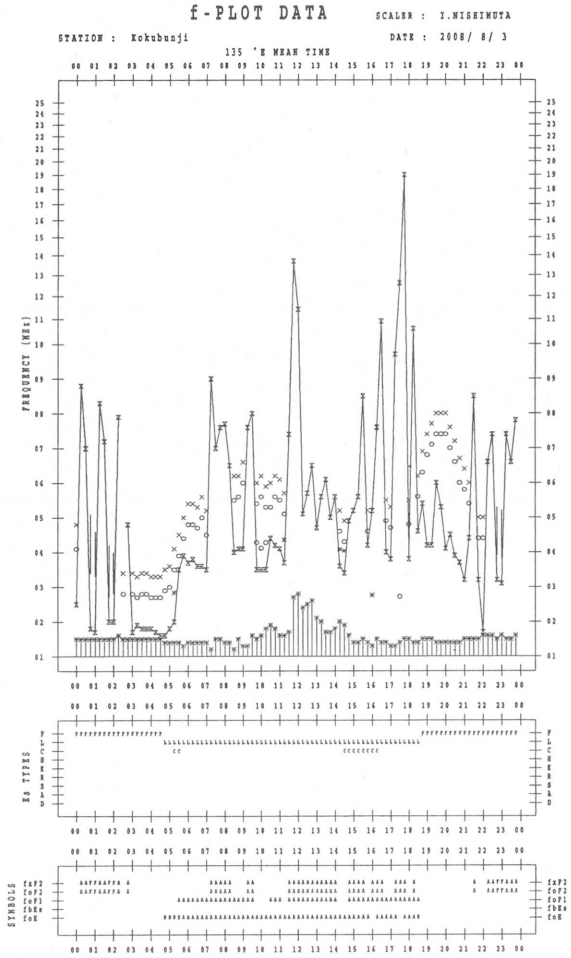
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F 6	F 5	F 3	F 5	F 4	L 3	L 3	L 4	L 4	L 4	L 4	L 2	L 2	HL 12	CL 22	CL 22	CL 22	L 3	L 3	F 4	F 7	F 5	F 6	F 5
2	F 4	F 2	F 3	F 3	F 3	L 2	L 4	L 3	L 2	L 3	L 2	L 2	L 3	L 3	L 4	L 3	L 2	L 3	L 4	F 6	F 4	F 5	F 4	F 3
3	F 3	F 4	F 4	F 4	F 4	L 3	L 4	L 4	L 4	L 3	L 2	L 3	L 4	L 4	L 3	CL 32	CL 32	L 3	L 4	F 5	F 6	F 4	F 4	F 4
4	F 4	F 4	F 3	F 2	F 2	L 3	C 3	L 4	L 4	L 4	L 2	L 3	L 2	L 3	L 3	L 2	L 3	L 3	L 3	F 4	F 4	F 3	F 5	F 5
5	F 4	F 4	F 4	F 5		C 3	C 4	CL 23	L 4	L 3	L 4	L 3	L 2	L 3	L 3	L 3	L 3	CL 23	C 2	F 4	F 2	F 5	F 6	F 4
6	F 5	F 4	F 3	F 4	F 3	F 3	CL 22	L 5	L 3	L 3	L 2	L 2	L 3	L 2	L 3	L 3	L 3	L 3	L 5	F 4	F 3	F 3	F 4	F 4
7	F 5	F 4	F 2	F 2			C 4	L 3	L 4	L 3	L 3	L 3	L 3	CL 22	CL 22	CL 22	L 2	CL 22	CL 32	F 4	F 4	F 2	F 3	F 3
8	F 2	F 2	F 2	F 2	F 2	L 2	CL 33	L 3	L 3	L 3	L 2	L 3	CL 22	CL 22	CL 22	CL 22	CL 22	CL 22	L 6	F 4	F 4	F 3	F 3	F 3
9	F 3	F 2	F 2			C 2	L 4	L 2	L 3	L 3	L 3	L 3	L 3	L 2	L 3	L 3	CL 22	L 3	L 6	F 6	F 3	F 4	F 4	F 4
10	F 5	F 5	F 5	F 1		C 1	C 2	L 3	L 4	L 3	L 3	CL 11	L 3	L 3	CL 22	CL 22	CL 22	L 3	L 4	F 4	F 5	F 5	F 6	F 4
11	F 4	F 3	F 3	F 6	F 6	C 3	C 3	C 3	L 3	L 3	L 3	L 4	L 3	L 3	L 3	L 2	CL 22	L 3	L 3	F 4	F 3	F 3	F 2	F 2
12	F 2	F 2	F 4	F 3	F 4	L 3	C 3	CL 22	L 2	CL 21	L 2	L 2	L 2	L 2	L 2	L 2	CL 22	L 5	L 4	F 5	F 4	F 7	F 7	F 5
13	F 5	F 5	F 5	F 4	F 3	L 3	C 3	L 3	L 2	CL 12	L 2	L 3	L 3	L 4	L 3	L 3	L 4	L 4	L 4	F 5	F 4	F 5	F 3	F 4
14	F 3	F 2	F 2	F 2	F 3	L 4	L 4	L 4	L 4	L 2	L 2	L 2	CL 12	C 2	C 2	L 3	L 3	L 3	L 2	F 3	F 3	F 4	F 3	F 4
15	F 2	F 2	F 3	F 3	F 2	L 2	L 3	L 2	L 2	L 3	L 4	L 3	L 3	L 2	L 2	L 3	L 3	L 3	L 4	F 4	F 4	F 3	F 2	
16	F 2	F 3	F 4	F 3	F 5	L 4	L 3	L 3	L 2	L 2	L 2	L 2	HL 12	CL 22	CL 22	CL 22	CL 22	L 2	L 3	F 3	F 2	F 3	F 2	F 2
17	F 4	F 2	F 2	F 2	F 2	L 3	L 3	L 3	L 2	L 2	L 2	L 2	L 2	HL 12	HL 12	CL 22	CL 12	L 3	L 4	F 5	F 5	F 3	F 4	F 5
18	F 5	F 4	F 4	F 2	F 4	L 5	L 4	L 3	L 4	L 3	L 2	L 2	L 2	HL 11	HL 12	L 2	CL 42	L 3	L 4	F 5	F 4	F 3	F 3	F 4
19	F 4	F 3	F 3	F 5	F 4	C 3	L 3	L 3	L 4	L 3	L 2	L 2	L 2	L 2	L 2	L 2	CL 22	CL 22	L 5	F 3	F 3	F 3	F 6	F 4
20	F 5	F 4	F 3	F 3	F 3	L 5	L 5	L 4	L 3	L 3	L 3	L 3	L 3	L 4	L 3	L 2	L 3	CL 22	L 3	F 3	F 2	F 3		F 4
21	F 3	F 4	F 3	F 4	F 3	L 3	L 2	CL 22	L 3	L 2	L 2	L 3	L 2	CL 22	CL 22	L 2	L 3	L 3	L 3	F 3	F 3	F 3	F 3	F 2
22	F 2	F 3	F 1	F 2			C 3	L 3	L 3	L 3	L 3	L 3	L 3	L 2	L 2	L 3	L 3	L 3	L 3	F 3	F 5	F 2	F 4	F 5
23	F 5	F 5	F 4	F 6	F 2	L 4	L 3	L 3	L 2	L 2	L 3	L 2	L 2	CL 12	CL 12	L 3	CL 22	CL 22	L 3	F 2	F 2	F 3	F 2	F 2
24	F 3	F 8	F 4	F 5	F 5	L 4	CL 22	CL 22	CL 22	L 2	L 2	CL 22	CL 22	CL 22	L 2	L 2	CL 22	CL 32	L 3	F 4	F 3	F 5	F 2	F 2
25	F 2	F 3	F 2	F 4		H 1	C 3	CL 22	L 2	L 2	L 2	L 2	L 2	L 2	L 2	CL 22	CL 22	CL 22	L 3	F 4	F 2	F 3	F 5	F 3
26	F 5	F 4	F 4	F 2	F 2		C 2	C 2	L 2	L 2	L 3	L 2	L 3	L 2	L 2	L 3	L 4	L 4	L 4	F 5	F 4	F 3	F 1	F 2
27	F 2	F 2	F 2		F 2	L 2	C 3	L 2	L 2	L 3	L 2	L 2	L 2	L 2	L 2	L 2	L 3	L 4	L 5	F 6	F 3	F 2	F 2	F 2
28				F 2	F 3	L 3	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 3	HL 12	L 2	CL 22	CL 32	L 6	F 2	F 2	F 1	F 3	F 3
29	F 2	F 3					H 2	CL 23	L 3	L 4	L 3	L 3	L 4	L 5	CL 32	CL 32	L 5	L 3	L 4	F 4	F 3	F 5	F 5	F 5
30	FF 43	FF 35	F 4	F 5	F 5	L 3	L 2	L 3	L 2	L 2	L 3	L 2	L 2	L 2	CL 22	L 2	CL 22	L 3	L 3	F 5	F 3	F 4	F 4	F 3
31	F 4	F 4	FF 24	F 3	F 3	L 3	L 3	L 5	L 3	L 3	L 2	L 2	L 3	L 2	L 2	L 2	L 2	CL 22	C 3	F 2	F 2	F 4	F 3	F 2
	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																								

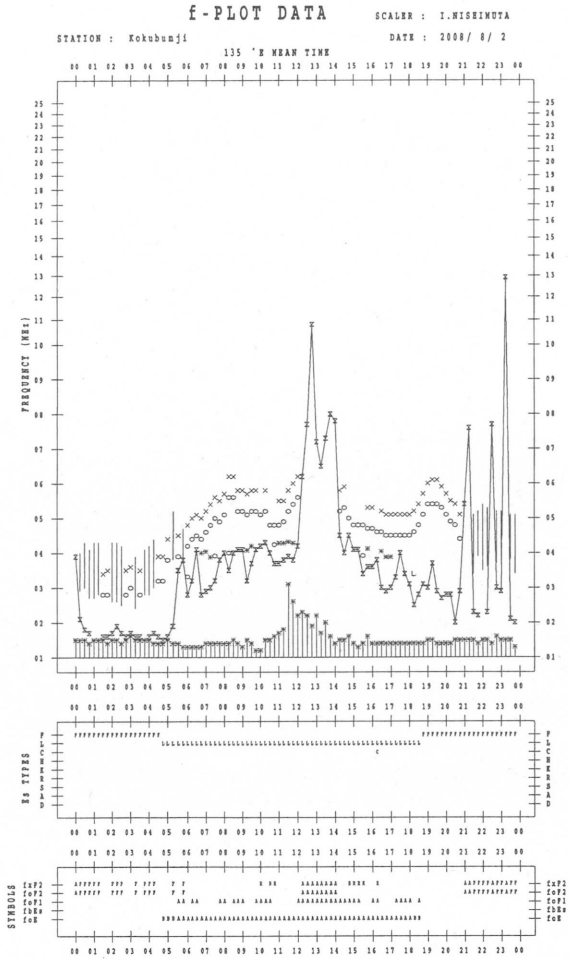
AUG. 2008 TYPES OF Es

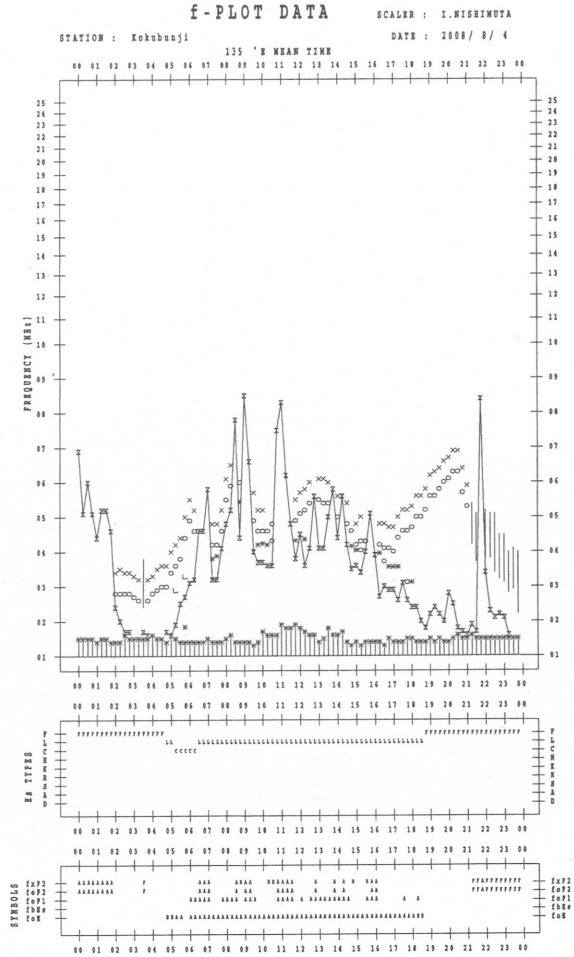
f-PLOTS OF IONOSPHERIC DATA

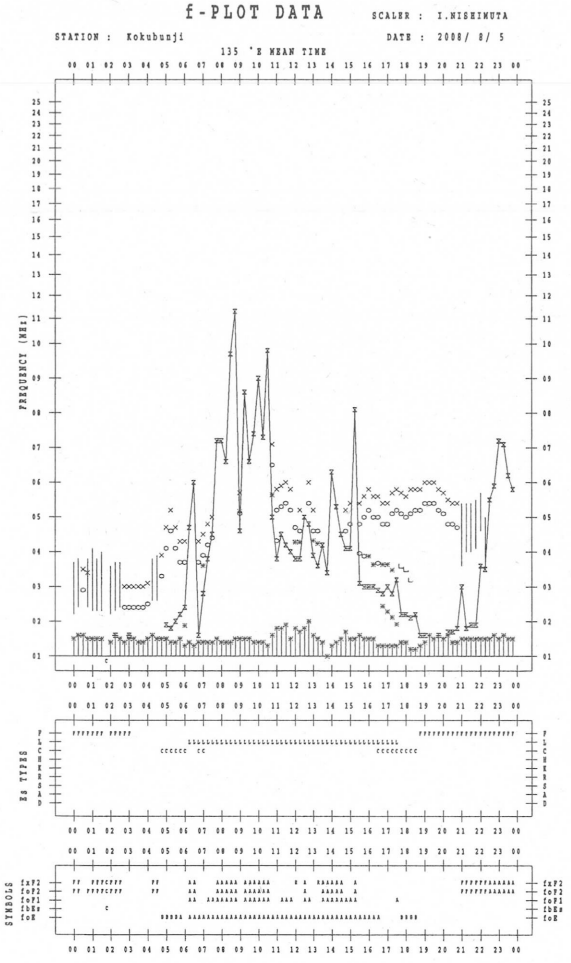
KEY OF f-PLOT	
	SPREAD
	foF2,foF1,foE
	fxF2
	DOUBTFUL foF2,foF1,foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN

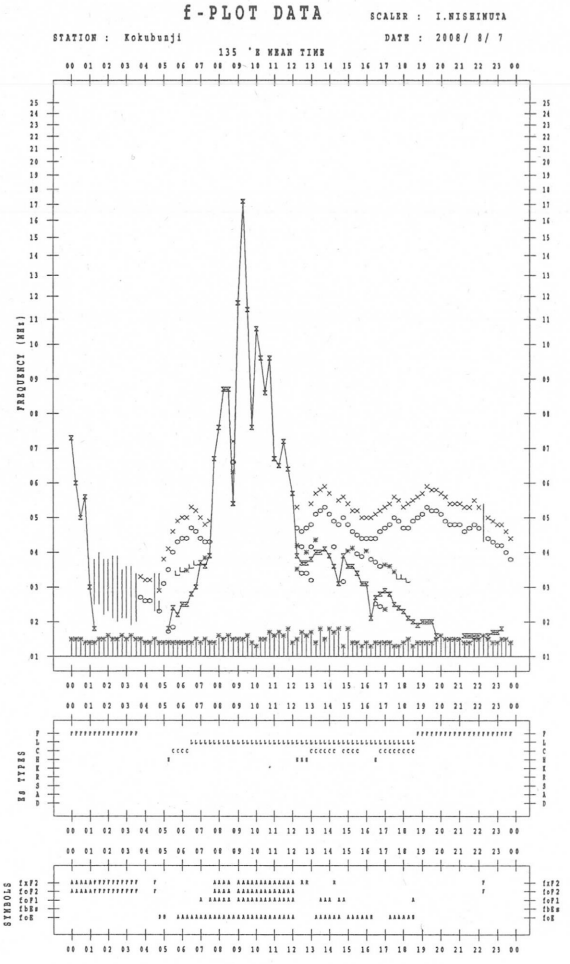

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

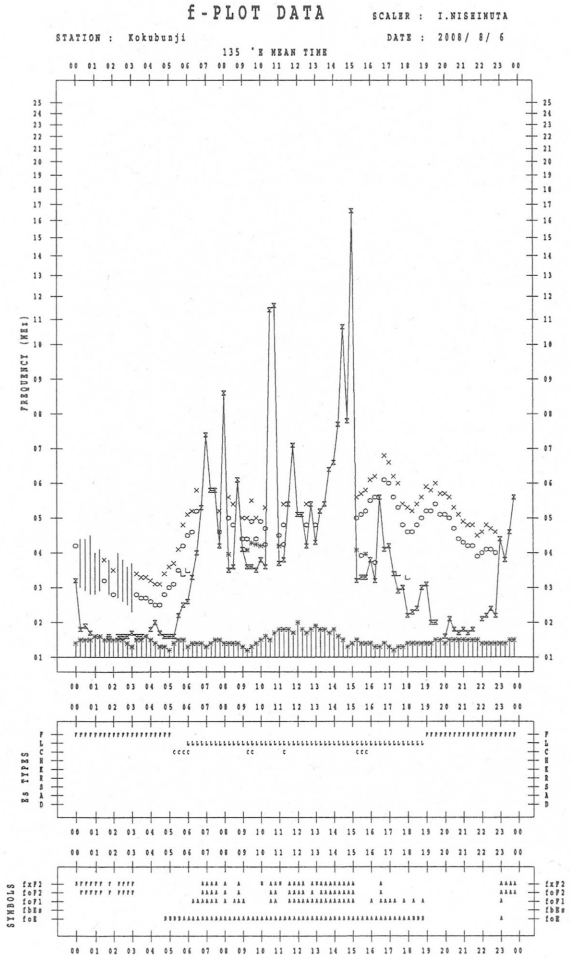

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

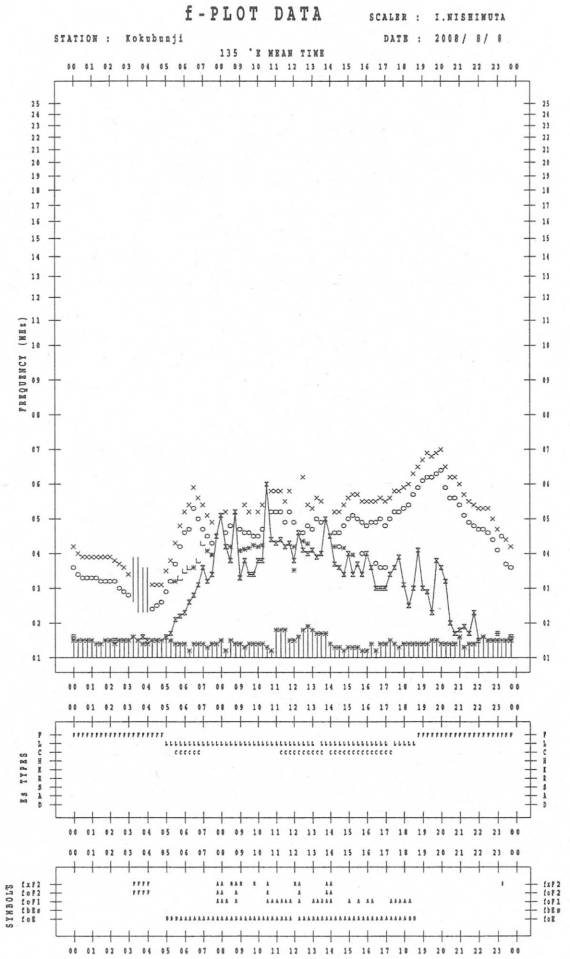

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 5
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 7
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 6
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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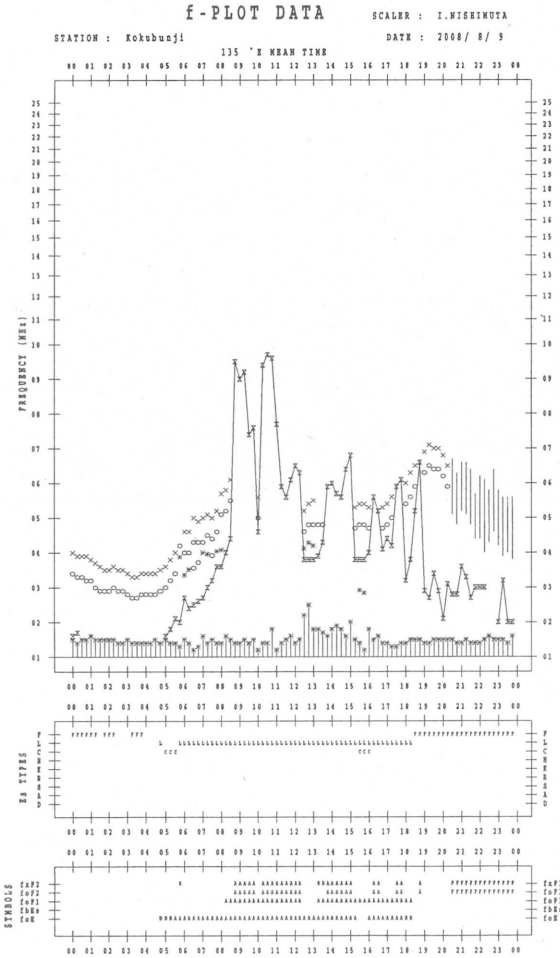
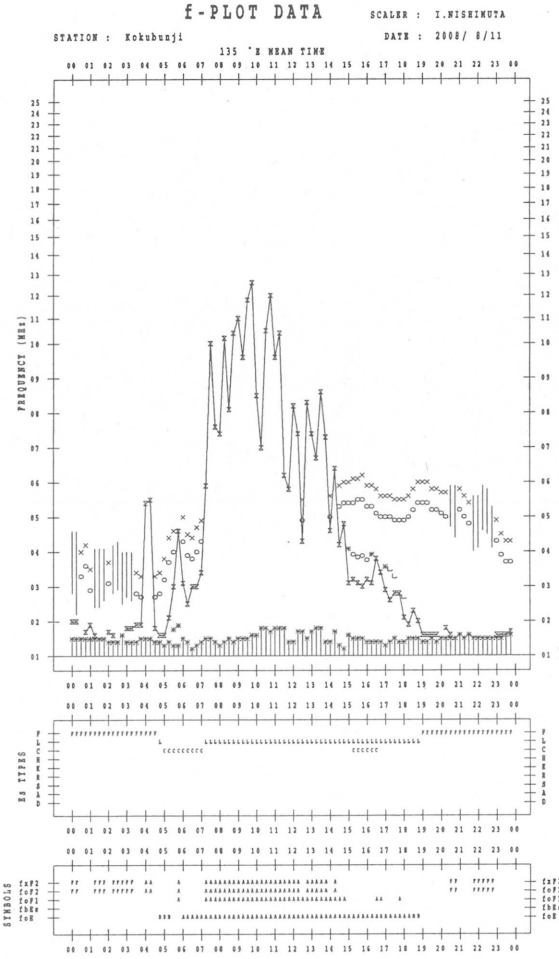
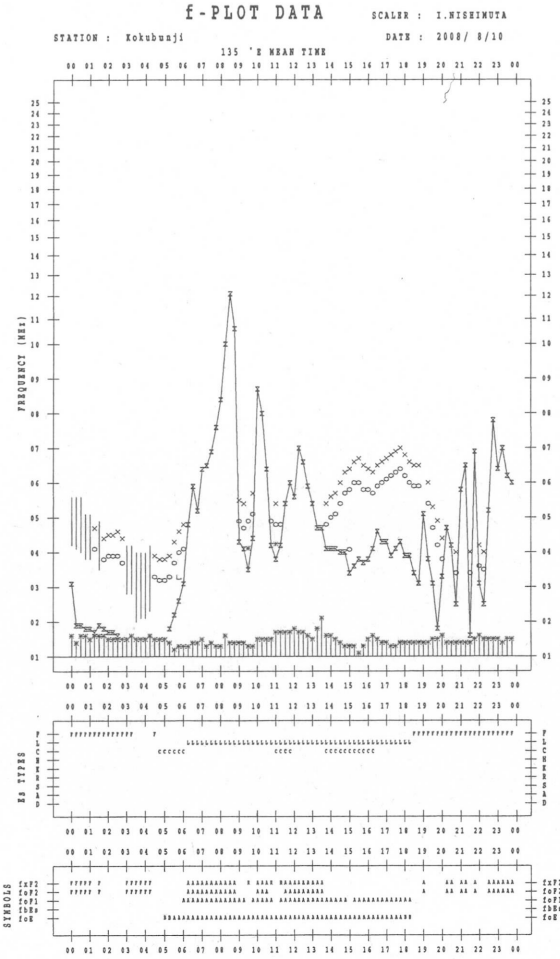
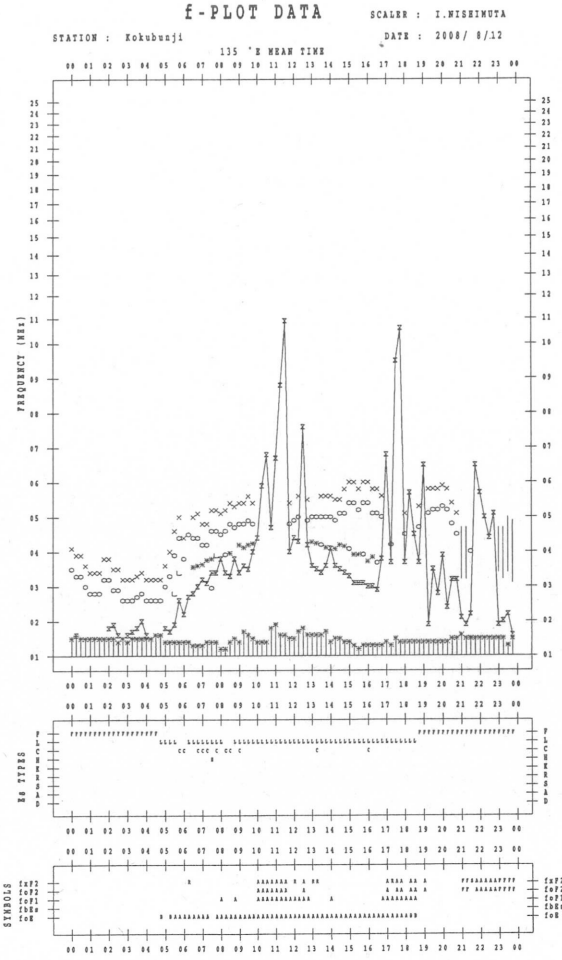
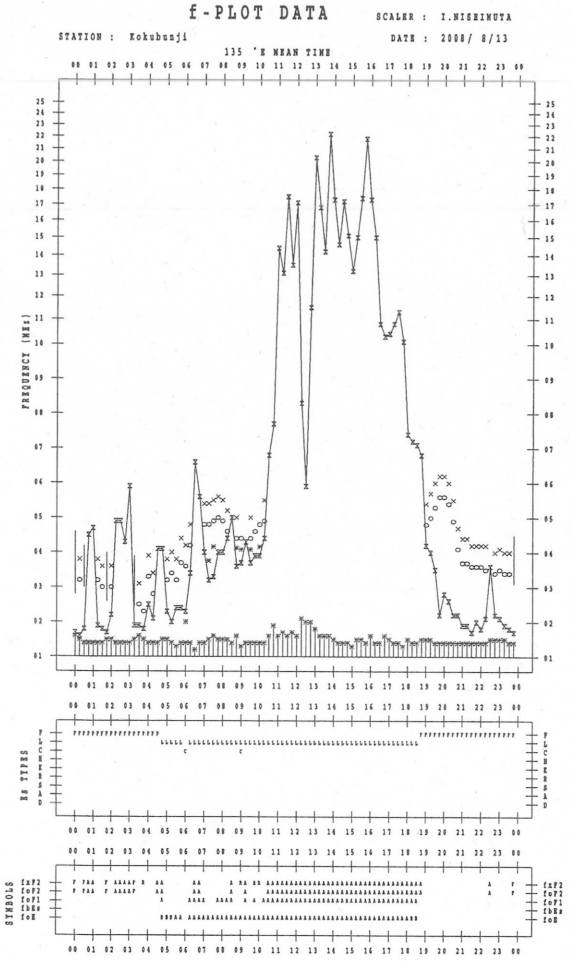
STATION : Kokubunji
DATE : 2008/ 8/ 8
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

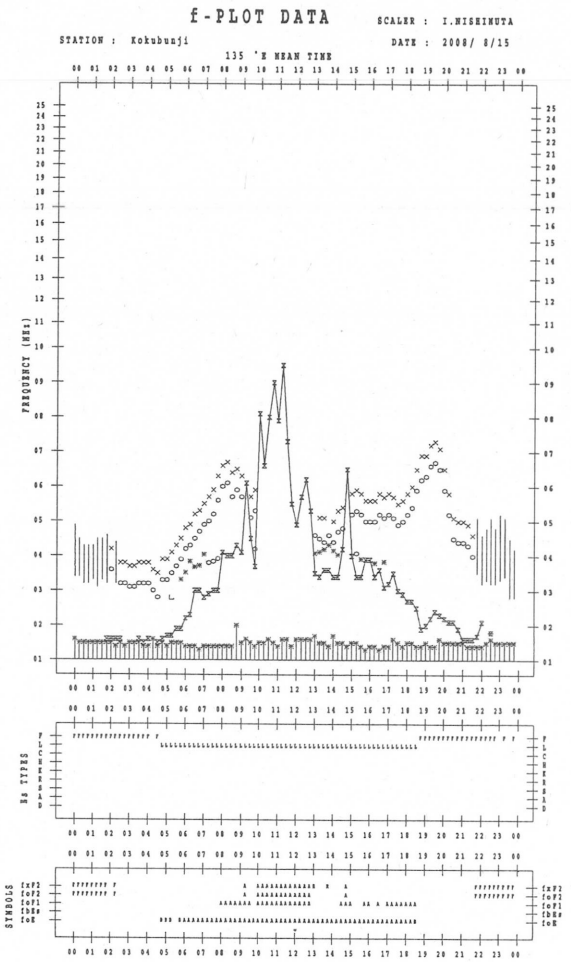

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

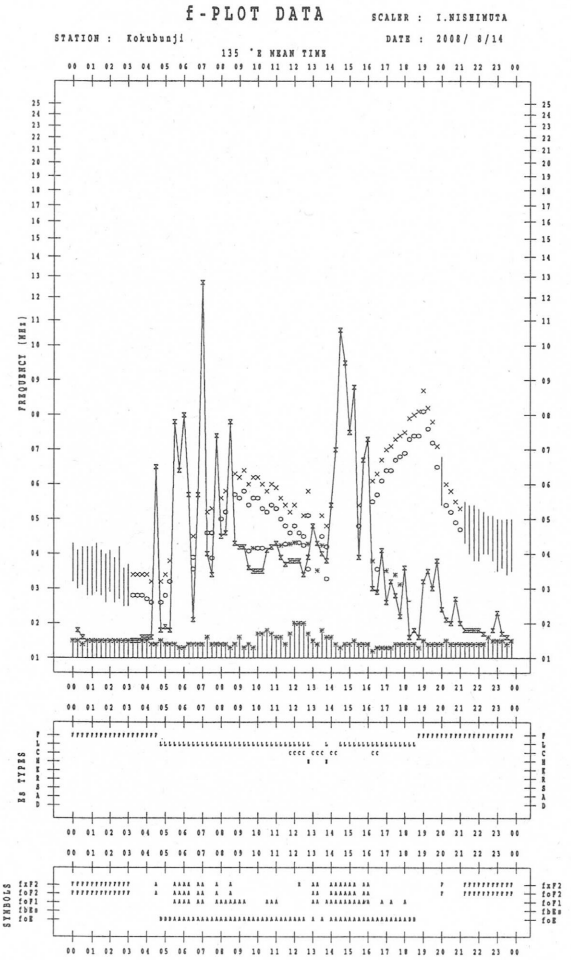

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

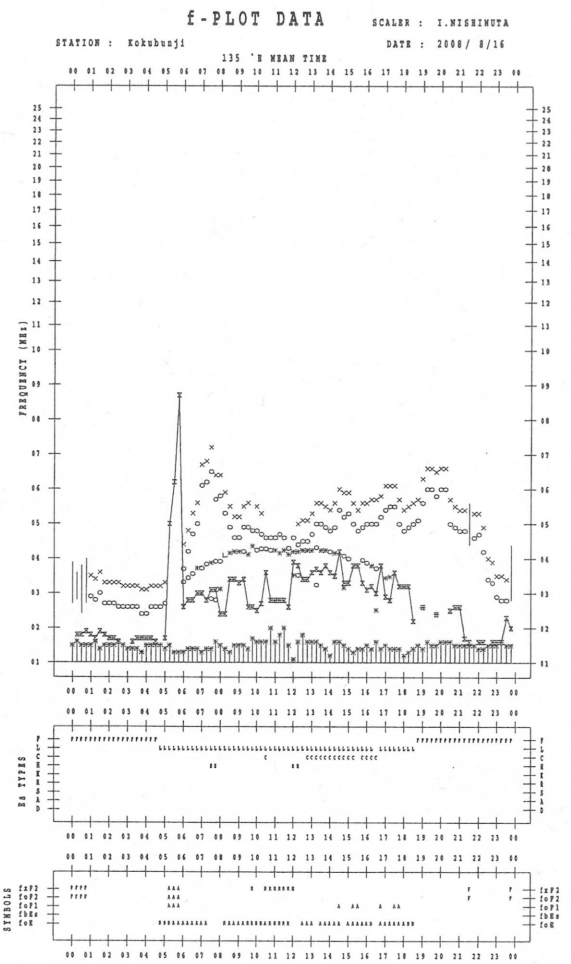

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/13
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/15
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/14
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE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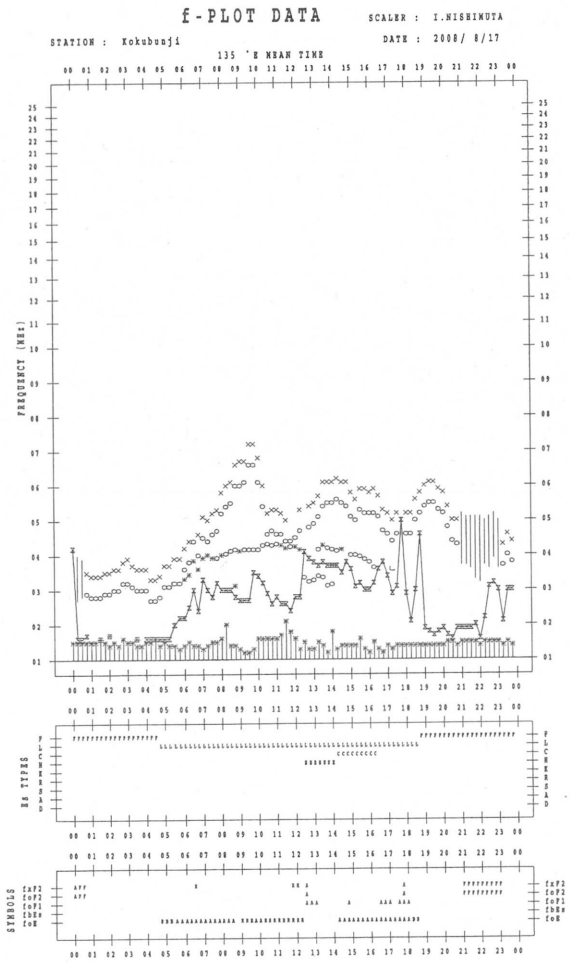
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/16
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE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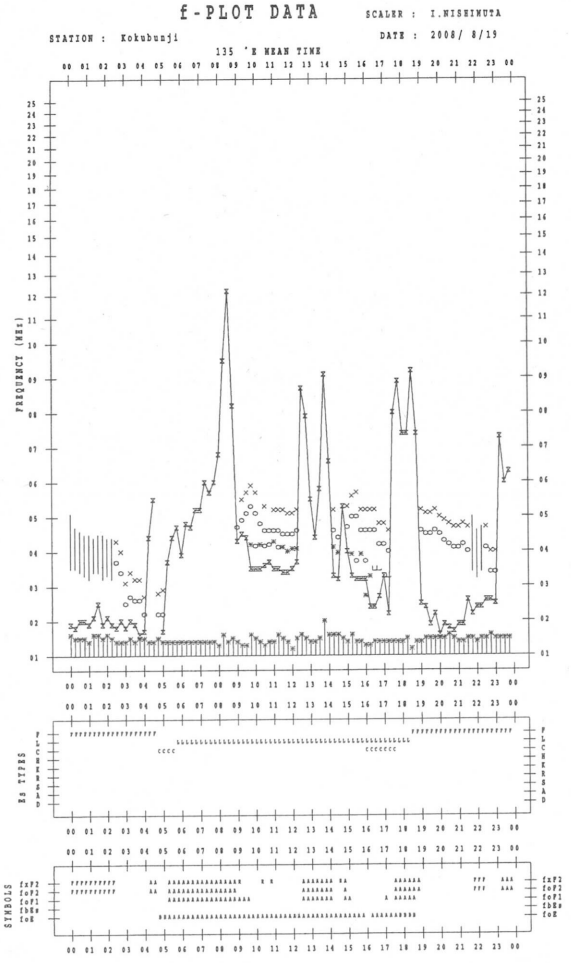
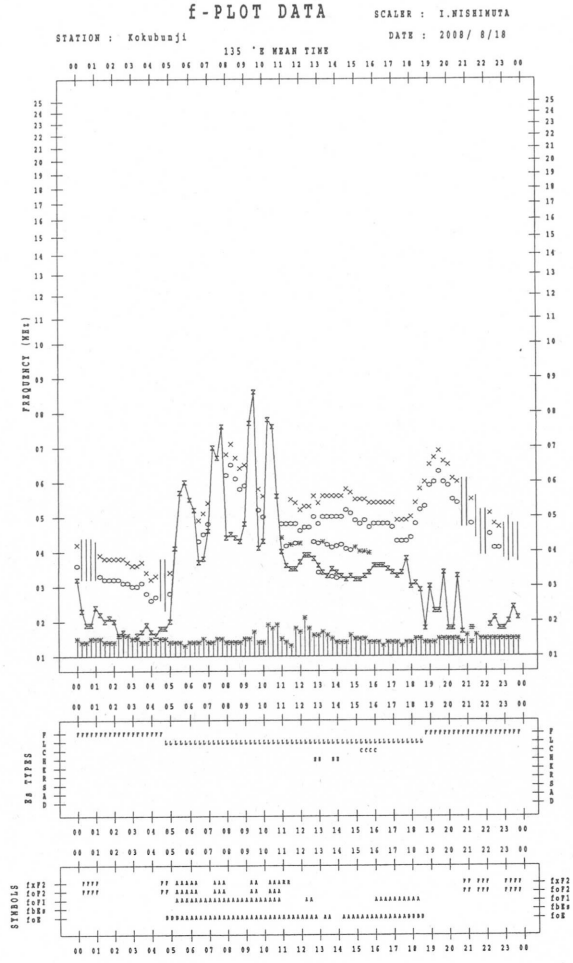
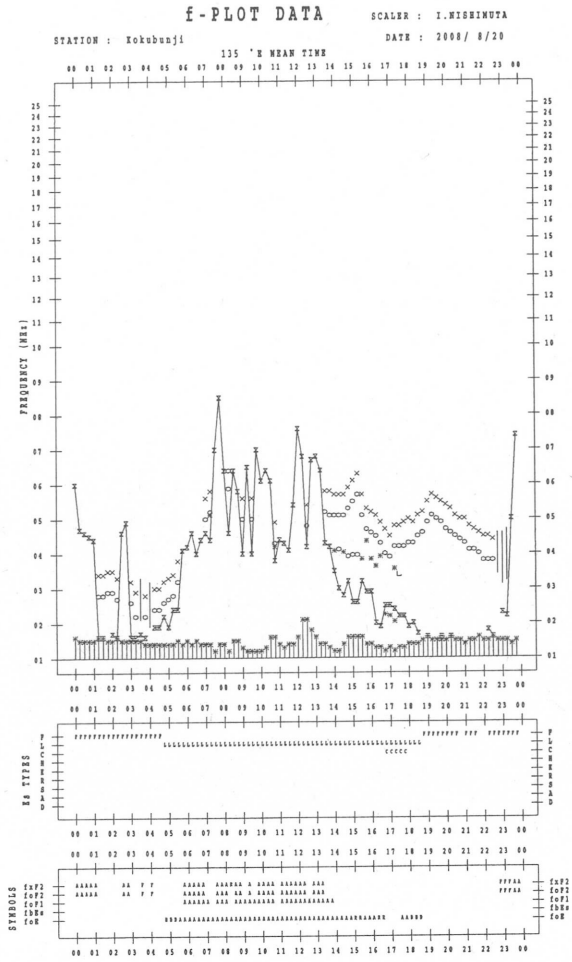
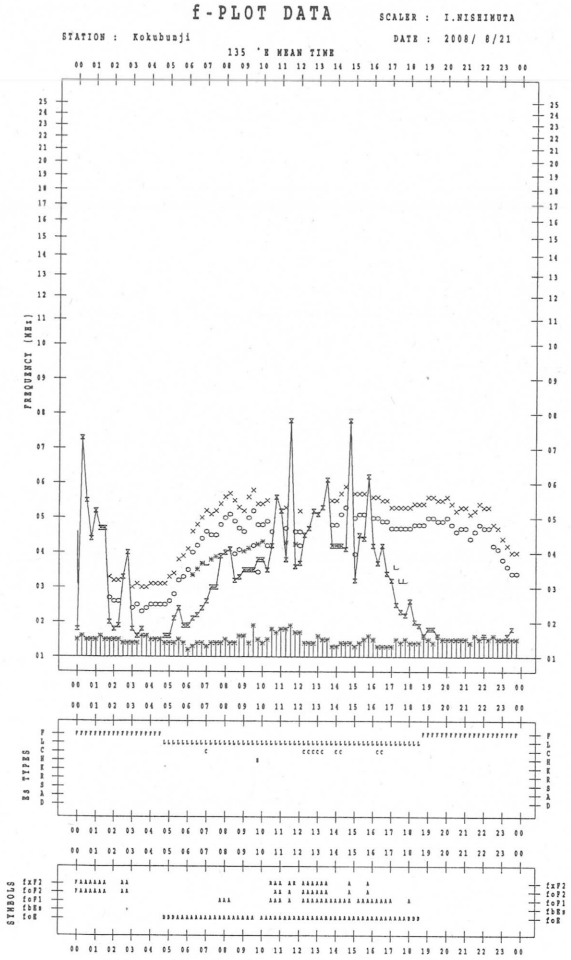
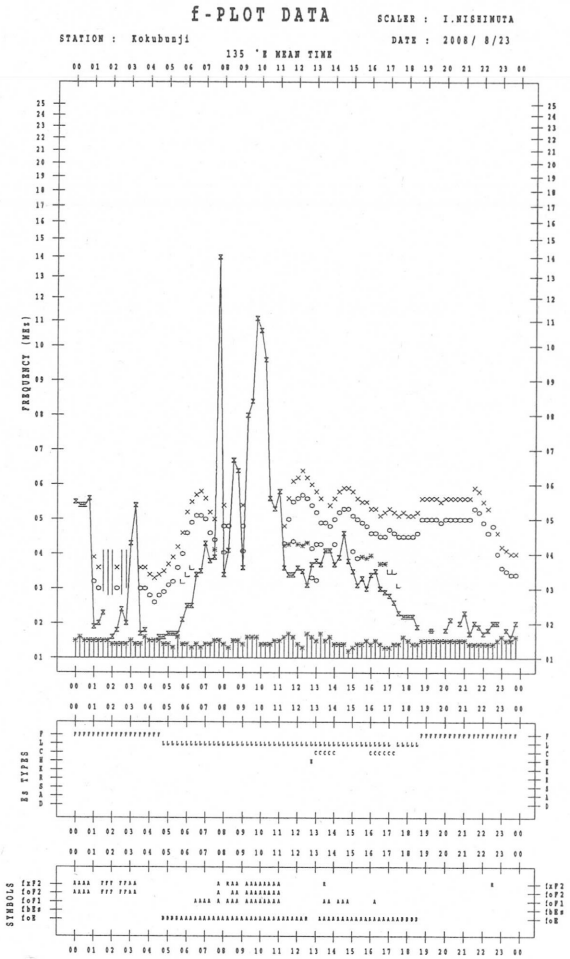
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

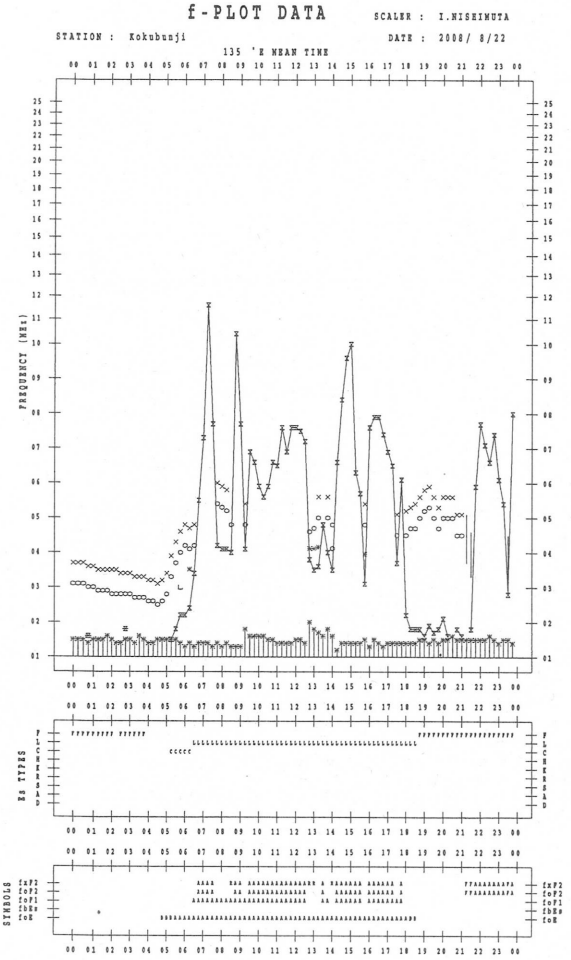

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

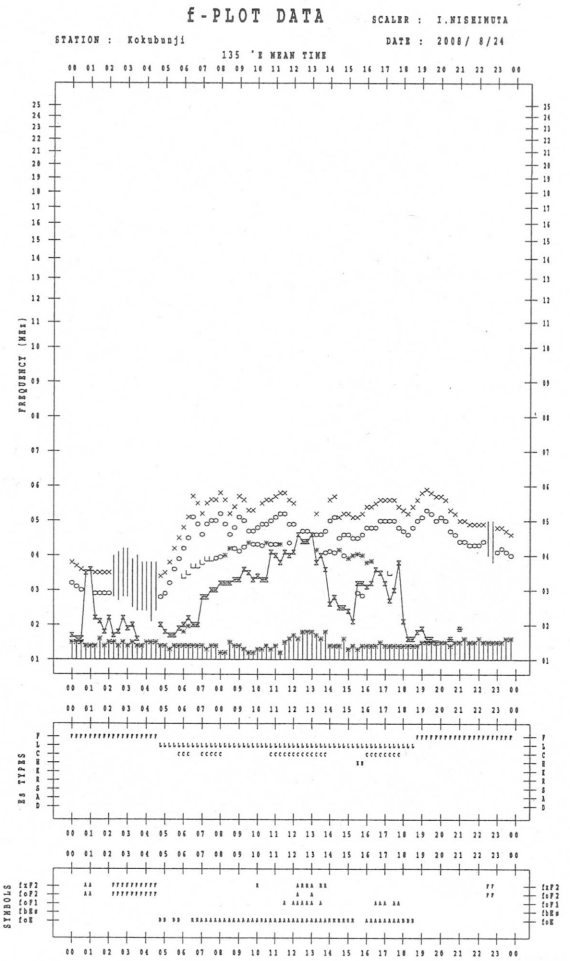

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/21
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/23
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/22
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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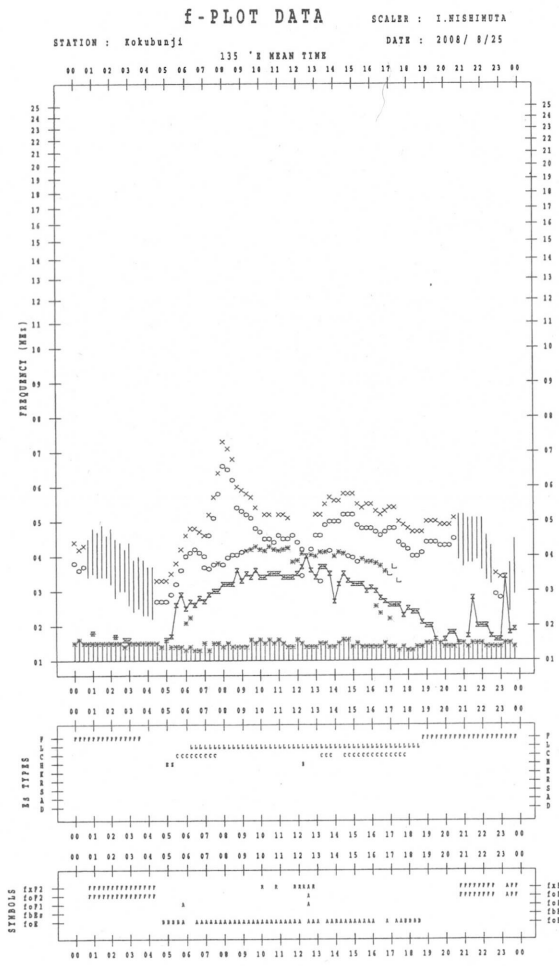
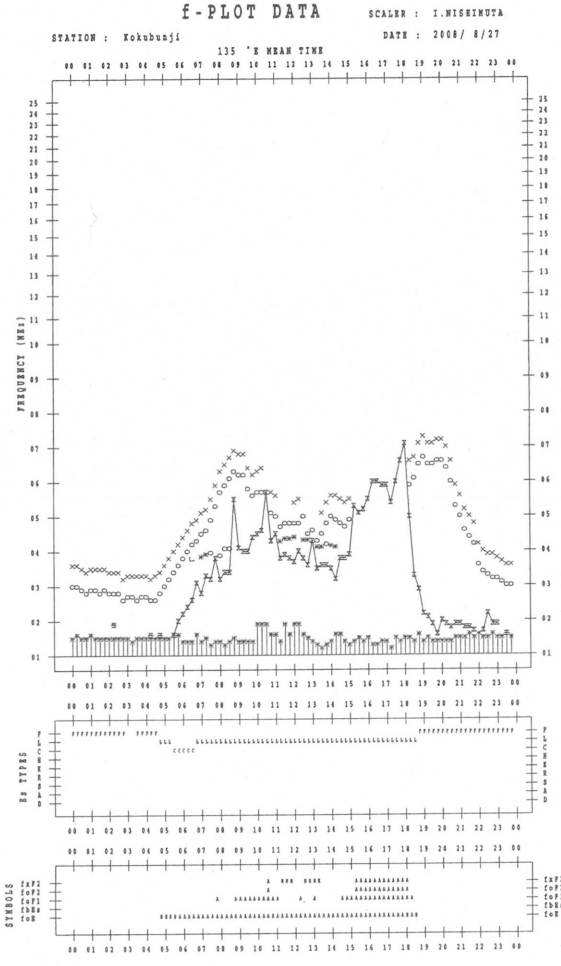
STATION : Kokubunji
DATE : 2008/ 8/24
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/25
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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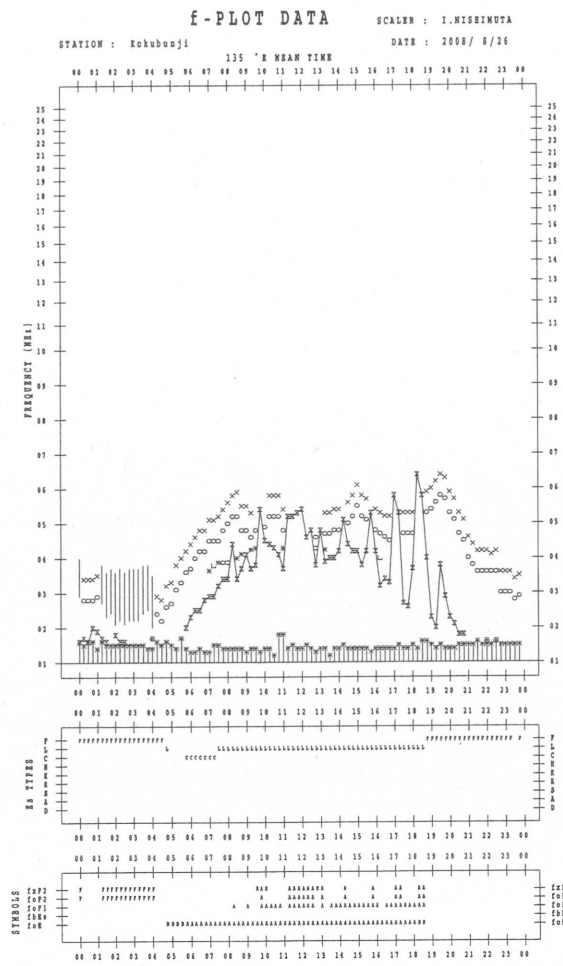
STATION : Kokubunji
DATE : 2008/ 8/27
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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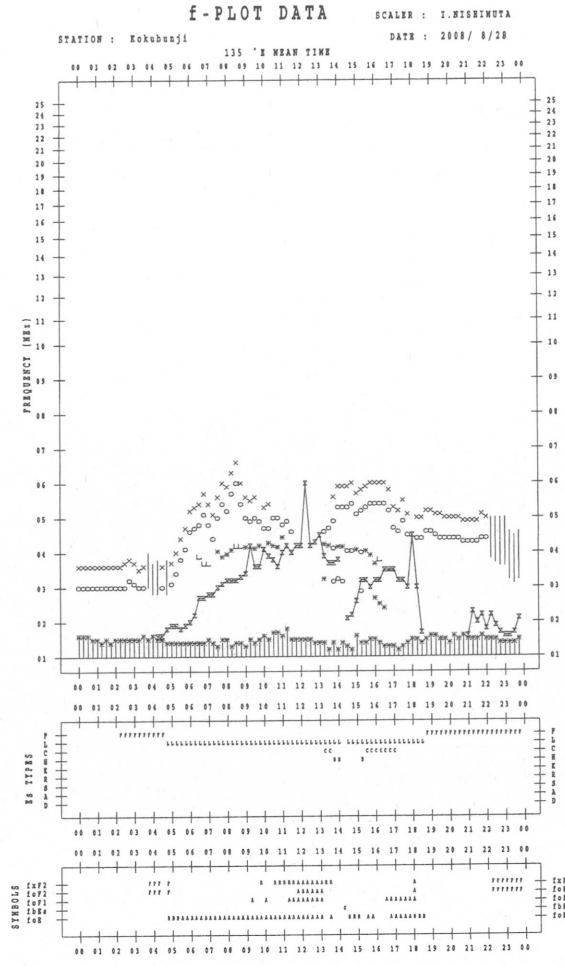
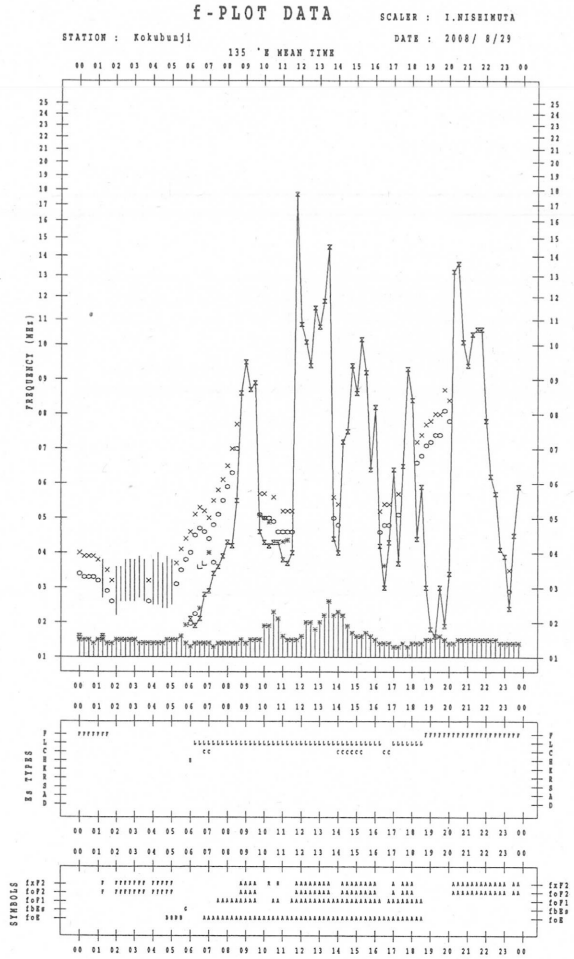
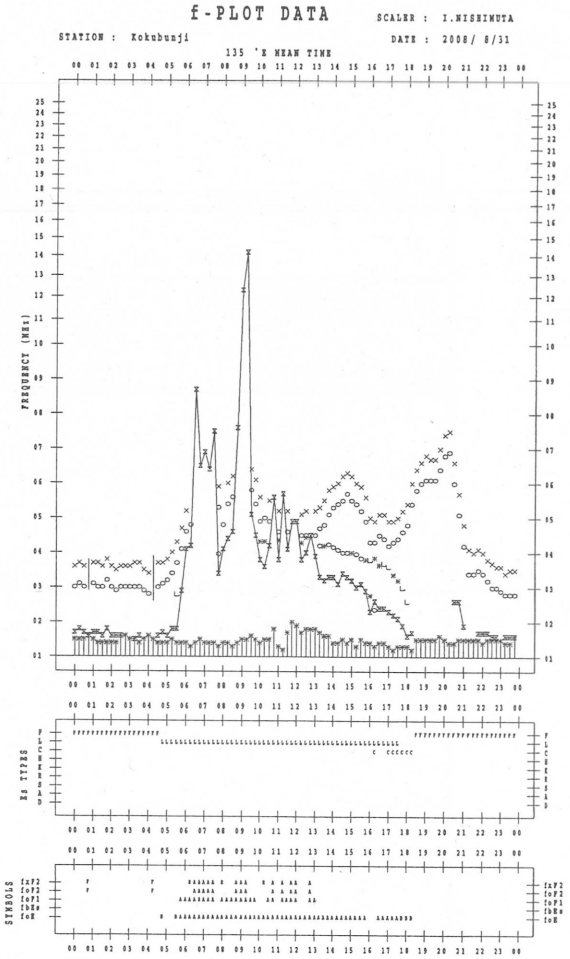
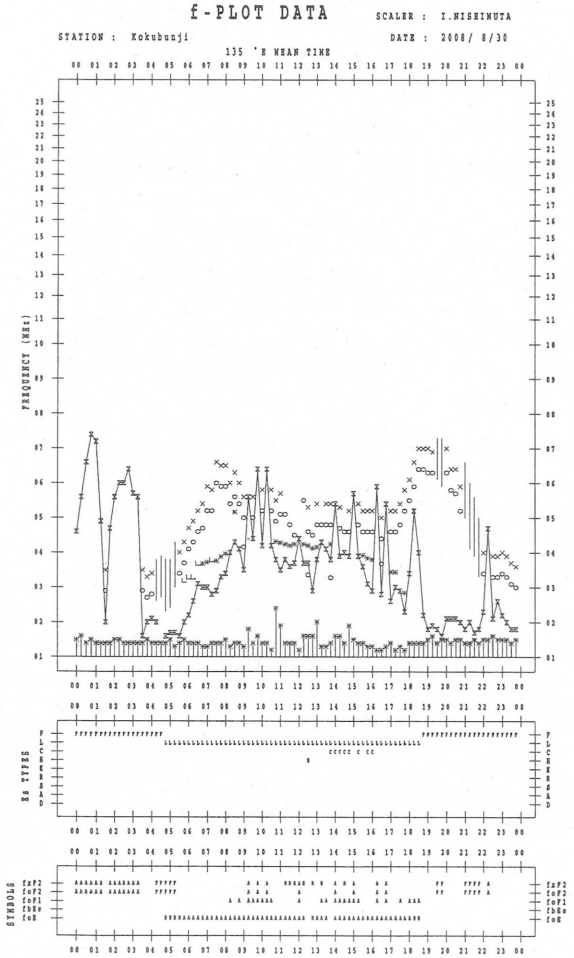
STATION : Kokubunji
DATE : 2008/ 8/26
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/28
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 8/30
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

B. Solar Radio Emission

B1. Outstanding Occurrences at Hiraiso

Hiraiso August 2008

Single-frequency observations

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

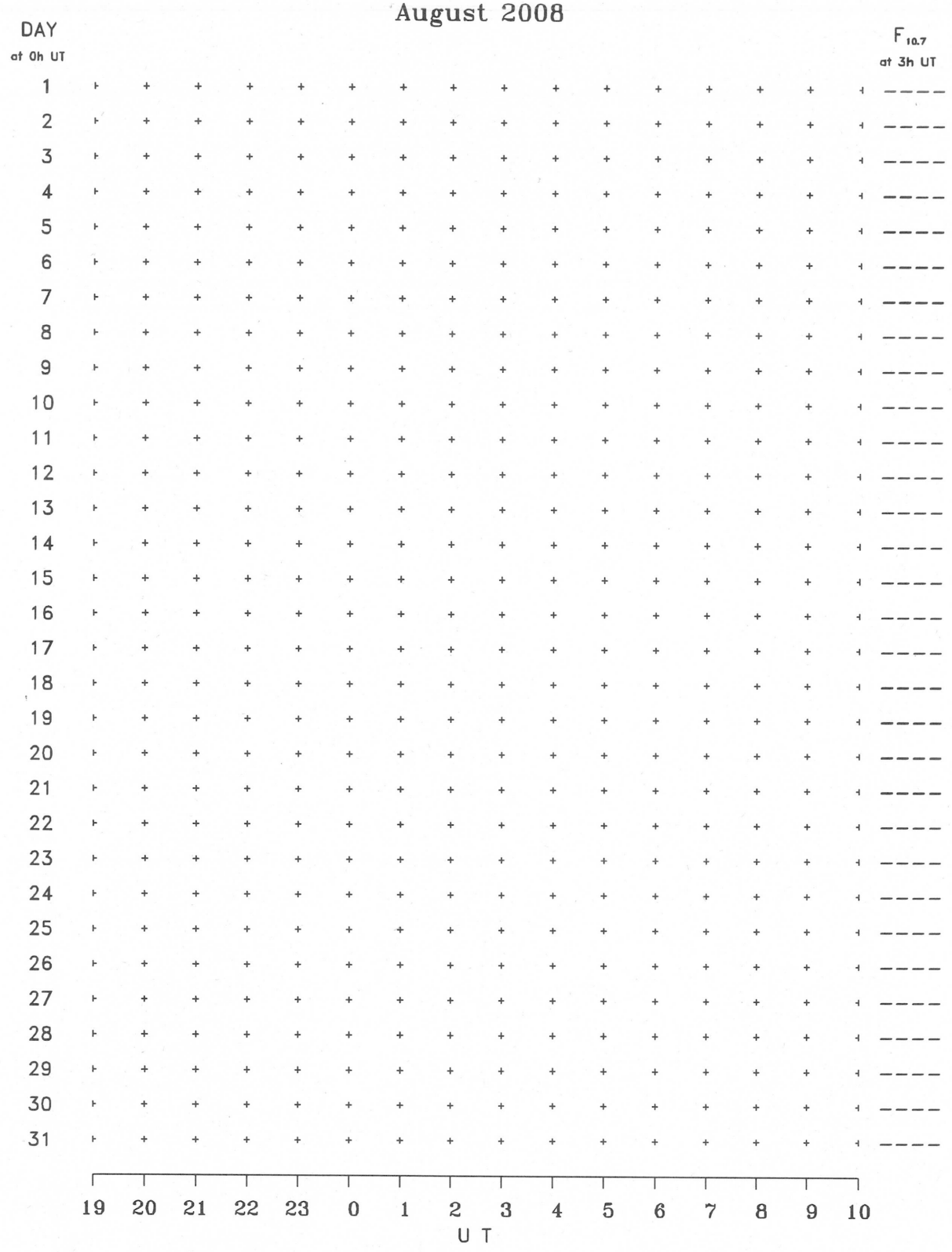
AUG. 2008	FREQ. (MHz)	TYPE	START TIME (U.T.)	TIME OF MAXIMUM (U.T.)	DUR. (MIN.)	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) PEAK	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) MEAN	POLARIZATION REMARKS

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

B. Solar Radio Emission

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

August 2008



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

IONOSPHERIC DATA IN JAPAN FOR AUGUST 2008
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