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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

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

HOURLY VALUES OF fEs AT Wakkanai

SEP. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	41	34	29	G	G	G	31	42	39	46	42	G	G	G	G	G	33	G	G	30	29	G	G	G
2	31	28	G	G	G	G	33	41	60	38	44	38	G	G	46	41	41	71	63	46	32	35	28	29
3	G	G	G	G	G	G	33	39	46	47	G	39	G	G	G	39	53	48	36	52	39	39	36	48
4	43	39	G	G	G	G	38	65	48	54	67	50	46	G	47	48	35	33	68	85	32	38	32	38
5	29	G	G	25	38	40	51	73	64	41	41	40	G	42	G	G	G	28	G	G	29	G	G	G
6	G	G	G	G	G	G	31	G	44	G	G	G	G	G	G	39	G	G	G	G	28	29	G	G
7	G	32	31	27	26	G	30	35	34	G	G	G	38	G	G	39	G	G	G	G	24	23	33	G
8	G	G	G	G	G	G		40	42	43	63	59	40	G	G	34	39	38	30	G	G	G	27	32
9	46	44	42	G	26	G	59	72		G	G	G	G	38	G	G	34	35	35	50	32	32	32	G
10	32	29	29	24	G	30	34	42		G	G	G		G	48	45	35	30	G	33	38	G	G	33
11	28	G	G	G	G	G	34	45	41	G	40	G	G	40	40	G		32	23	53	38	57	60	58
12	44	29	32		32	G	G	49	51	41	G	40	42	G	40	41	48	34	42	G	41	24	31	28
13	G	G	31	25	G	G	30	34	G	G	40	59	G	G	40	36	G	35	37	G	34	45	38	29
14	41	32	G	G	G	G	42	33	G	G	G		G	G	G	G	G	G	29	32	G	26	G	G
15	25	G	G	G	G	G	G	33	38	39	G	G	G	N	G		G	37	G	G	29	25	G	G
16	G	G	24	26	35	36	44	G	49	52	51	47	G	G	G	G	G	30	28	30	34	26	G	G
17	G	26	G	G	G	G	28	33	39	G	G	38	G	G	G	G	31		28	29	25	G	G	G
18	26	G	G	G	G	G		32	G	38	48	39	G	G	G	G	G	30	35	32	34	28	G	26
19	34	G	G	27	29	G	27	32	36	G	40	41	46	G	G	G	G	26	G	32	40	59	33	32
20	G	G	G	G	30	G	G	G	G	G	G	G	G	G	G	G	G	31	G	G	G	G	G	G
21	G	G	G	G	G	G		33	34	G	37	47	G	G	G	G	38	30	33	G	G	G	G	G
22	G	G	G	25	27	G		32	G		G	G	G	38	36	G	33	31	29	28	27	44	39	G
23	G	G	26	29	29	32		35	52	G	G	G	38	G	G	74	G	30	G	29	G	28	G	G
24	30	39	32	G	G	G	31	34	G	G	G	G	40	41	G	G	G	32	28	40	33	50	28	29
25	39	G	G	25	G	G	29	38	46	42	G	G	38	44	49		G	32	42	30	G	26	G	G
26	26	G	G	G	G	G	26	34	38	42	G		40	40	42	41	39	48	27	G	G	G	G	G
27	28	G	G	G	G	G	32	G	G				G	G	G	G	G	27	G	G		G	G	G
28	G	G	G	G	G	G		G	G	G		G	G	G	G		G	G	G	G	G	G	G	G
29	G	G	G	G	G	G	G	33		G	G	N	38	G	G	G	33	28	G	G	G	G	G	G
30	G	G	G	G	G	G	25	G	40	41	G	G	G	G	G	G	G	26	34	32	28	G	G	33
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	29	30	30	24	30	27	28	28	26	29	29	30	27	29	29	30	30	29	30	30	30
MED	26	G	G	G	G	G	31	34	39	G	G	G	G	G	G	G	G	30	28	29	29	26	G	G
U Q	32	29	26	25	26	G	34	41	46	41	40	40	38	19	40	39	35	34	35	32	34	35	32	29
L Q	G	G	G	G	G	G	26	32	G	G	G	G	G	G	G	G	G	26	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Wakkanai

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

HOURLY VALUES OF foF2 AT Kokubunji

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

HOURLY VALUES OF fEs AT Kokubunji

SEP. 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	26	24	G	G	30	23	30	37	49	64	61	52		G	48	40	34	34	47	35	33	25	33	25
2	23	G	G	G	G	G	30	47	40	G	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	97	128	50	36	58	50
4	33	43	30	23	33	31	33	42	83	105	86	52	40	42	47	45	83	87	56	70	70	58	41	33
5	G	29	26	26	40	23	52	71	67	92	68	135		132	51	36	40	73	70	50	27	27	G	G
6	40	23	27	G	G	G	29	G		G	51			G	G	G	35	34	G	G	G	33	40	25
7	G	G	G	G	G	G	35	39	G	G		G	G			43	G							
8													C	C	C	C	C	C	40	49	26	23		G
9	G	G	G	G	G	G	30	G	G	G	G	G	G	G	40	42	35	46	G	33	41	34	34	36
10	G	G	G	G	G	G	28	32	44	G	G	C					114	29	34	41	30	34	G	47
11	49	36	35	50	32	49	34	42	G	G		G	G	G	40	G	G	36	40	63	26	G	G	G
12		G	G	G	G	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	G		G	C	C	33	24	29	45	57	G	25
19	G	G	G	G	G	G	27	G	G	G		G	G		G	G	G	G	G	G	30	26	G	G
20	34	39	26	G	G	G	39	32	G	G	G	G	39	G	G	G	G	29	G	26	39	28	G	G
21	G	G	G	G	G	G	G	33	42	40	54	G	G	G	G	G	G	28	29	G	34	33	41	G
22	25	29	29	G	G	G	G	54	35	42	G	G	45	G	G	G	33	33	25	G	28	28	G	G
23	G	G	G	G	G	G	27	34	42	40	38	G	G	G	G	G	40	40	34	33	33	32	39	52
24	33	G	33	26	26	G	26	32	G	G	46	40	39	40	G	G	G	G	G	G	11		G	G
25	G	G	G	G	G	G	36		35	G		40	G	G	G	37	G	39	G	G		G	G	29
26	24	G	G	G	G	G	G	34	G	40	G	47	G	G	G	G	G	43	70	50	35	28	26	22
27	G	G	G	G	G	G	26	35	40	G	41	40	G	G		39	35	35	29	20	33	G	26	24
28	G	G	G	G	G	G	G		G	G	G	G	G	39	G	G	36	33	24	G	G	G	G	G
29	G	G	G	G	G	G	29	G	40	G	G	41	39		81		37	37	48	42	39	33	28	24
30	G	G	G	G	G	G	26	34	G	44	G	G	39	45	G	G	37	26	G	35	34	33	34	33
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	22	22	22	22	21	21	19	20	21	16	18	17	16	18	18	20	20	22	22	21	21	21	22
MED	G	G	G	G	G	G	29	34	35	G	20	G	G	G	G	G	34	34	29	33	33	28	26	24
U Q	29	24	26	G	G	G	33	42	42	41	52	41	39	39	40	39	37	39	47	49	39	33	36	33
L Q	G	G	G	G	G	G	26	32	G	G	G	G	G	G	G	G	G	29	G	G	26	24	G	G

HOURLY VALUES OF fmin AT Kokubunji

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

Ionospheric data of **Yamagawa** is not

Available due to the ionosonde trouble.

HOURLY VALUES OF foF2 AT Okinawa

SEP. 2008

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A	A	A		A		47		63		A	A	A	62	69	54	57	A	56	66	34		
2							29	44	48	47			66	84	67	64	55	53	64	81	76	A		A
3			A			A		44	55	A	A	A	A	A		63	68	70	A	62		52	A	A
4	A		A	A	A	A		46	59	61	A	A	A	72	78	A	80	72	61	56	60	54	A	28
5	A	A	32	29	34	A	A	52	54		64	66	58	70	69	68	67	70	56	54	48	43		30
6		30	30	34	A	A		52	50	47		56	52	59	64	60	57	58	66	63	28			
7								47	56	61	61			67	78	83	80	72	67	63	66			
8			A					55	49	48			62	78	49	53	39	56	72	86	62		A	A
9	30	28		28				47	55	64	55	A	67	80	76	64	A	54	60	66	61	48	40	36
10	29	31	29	31			29	52	80	57			71	A	90	87	82	66	66	80	79		A	41
11		34		28				52		53	56	49		62		A	61	67	75	84	62	A	A	
12		26						45	46	51		A			A	68		66	67	61				A
13	A							44	45	76	49			56	59	56	57	A	54	53	52	A		
14								50	56	51			66	70	71	62	62	56	64	54	44			
15			28	29				30		58	51		58	39			55	71	76	71	A	38	40	42
16	42	42					28	68	60	57				68	81	66	54	62	84	87	40	A	A	A
17	A	A	A		A	A	28	69	56	54		61	71	70	64		62	81	80	A	A	A	A	A
18	A							50	56	52	50				56	A	A	71	78	62	48	A	A	A
19	31	32	31	29	28		30	54	70	51		59	71	78	81	74	59	62	67	56			26	
20	28	31	28					52	55	55	58	67	72	72	78	68	58	62	71	76	64			
21								42	46	51	56	A	A	72	82	91	101	102	76	41	A			
22								42	A	45			64	72	73	81	66	67	78	76				
23			41	36					50	62	54	45		60			63	82	95	45				A
24							29	53	46	52	56	49		39	61	75	90	94	66	42	A	A		A
25	A	A						42	56	52			149	64	76	76	66	30	A	A	52			
26		30	A					52	51	56	66	59	64	80	85	96	88	92	88	50		A	A	A
27			29	26	28				46	49	42	60			A	60	66	82	80		42	A		
28								45	53	49	53	49		57	57	62	62	70	71	70	36			A
29		31	34	30	26			45	58			58		63	66	A	A	80	56	40	42	A		A
30	26	A	A	A	A	A		48	55	56	57		54		58	52	55	62	74	52	41	A	25	
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	6	10	9	10	4		6	28	26	27	15	12	15	23	24	23	26	29	27	27	20	6	4	5
MED	30	31	30	29	28		29	48	55	53	56	58	66	70	70	68	62	67	71	62	52	46	33	36
U Q	31	32	33	31	31		29	52	56	58	58	60	71	72	78	76	68	76	78	76	63	52	40	41
L Q	28	30	28	28	27		28	44	49	51	51	49	58	60	61	62	57	60	64	53	42	38	25	29

HOURLY VALUES OF fEs AT Okinawa

SEP. 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	49	39	30	58	30	36	G	34		45	42	71	71	62	51	56	48	39	55	56	11	G		
2	G		G	G		G	G	29	G	36		G	47	G	G	G	G	G	G	G		27		30
3	29	36	43	G		26	G	41	54	77	92	102	98	65	62	48	57	62	68	40	33	40	49	32
4	38	28	36	39	35	39	31	32	45	71	132	68	76	G	68	78	44	39	36	28	G	50	46	59
5	59	58	36	G	31	40	40	32	35	G	G	62	G	55	G	39	G	G	27	G	G	G	G	G
6	39	30	G	G	29	30	28	32	34	G	G	41	G	G	G	G	46	G	37	G	35			
7			G					28	G	46	40			55	G	G	G	G	42	68	32	28		G
8		28	35	30	28		26	36	42	G		G	46	53	54	38	38	50	61	35	G	24	35	37
9	G	G	G	G				30	38	46	52	62	58	G	G	61	59	51	46	34	48	26	28	G
10	G	G	G	G	G	G	35	30	36	36			G	82	55	47	40	G	35	36		34	36	G
11	G	G	30	26			28	30		G	46	G	G	G	51	52	42	48	43	50	59	35	34	30
12		G	G	29	G	G		G	G	39	45	67			70	G		G	G	G	30			27
13	48		G					29	49	90	G			G	G	39	48	51	39	45	50	46		33
14						23		28	41	36	G		G	G	G	49	48	56	53	34	G	G		
15	36	27	G	G	G		G	34		51	40		G	G		G	50	50	54	G	36	32	35	29
16	G	G		G	G		G	32	G	40	G	G	G	43	G	39	37	G	27	32	32	48	34	29
17	34	32	36		36	33	G	29	39	44	39	G	G	G	46		54	50	51	78	70	47	47	48
18	36			29	28			33	40	G	G	G		G	G	61	71	48	39	48	36	44	46	59
19	26	G	G	G	G		G	30	36	G		G	G	G	G	G	G	G	G	26	G		G	G
20	G	G	G	30			G	37	42	41	47	42	G	G	G	G	G	G	29	26	11			G
21	G	G	G	26			G	38	G	G	46	59	50	40	G	G	35	37	37	36	34			
22			G	G	G	G	G	28	71	G	G	G	45	G	G	G	38	33	33	G	11			G
23	28	32	26	G	G		G	36	36	G	G	G		G		G	G	G	35	30	28		28	34
24	24	G			G		G	G	37	G	G	G		G	G	G	G	48	G	36	41	34	28	37
25	36	52	29	G		G			36	G	G	G	G	47	G	G	49	90	136	71	36		28	28
26	28	28	34	26		G		32	G	37	G	G	G	G	G	G	36	34	29	23	23	30	34	36
27			G	G	G	G		G	G	G	G	G			55	52	50	52	52	42	38	33		
28		G					G	35	40	56	47	G		G	39	46	G	60	43	28	G	29	G	29
29	28	28	G	G	G			30	49	54	58	G	G	G	71	94	84	61	49	G	35	39	31	40
30	G	50	41	39	30	29	26	40	G	G	G	G	48		G	G	39	38	39	38	26	34	28	27
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	23	23	25	24	18	15	20	29	27	30	26	25	22	27	28	29	29	30	30	30	28	22	19	25
MED	28	28	G	G	G	23	G	32	36	36	20	G	G	G	G	38	40	39	39	34	32	34	34	29
U Q	36	32	34	29	30	33	27	34	42	46	46	60	48	47	52	50	49	51	51	42	36	40	36	36
L Q	G	G	G	G	G	G	G	29	G	G	G	G	G	G	G	G	G	G	29	23	11	27	28	G

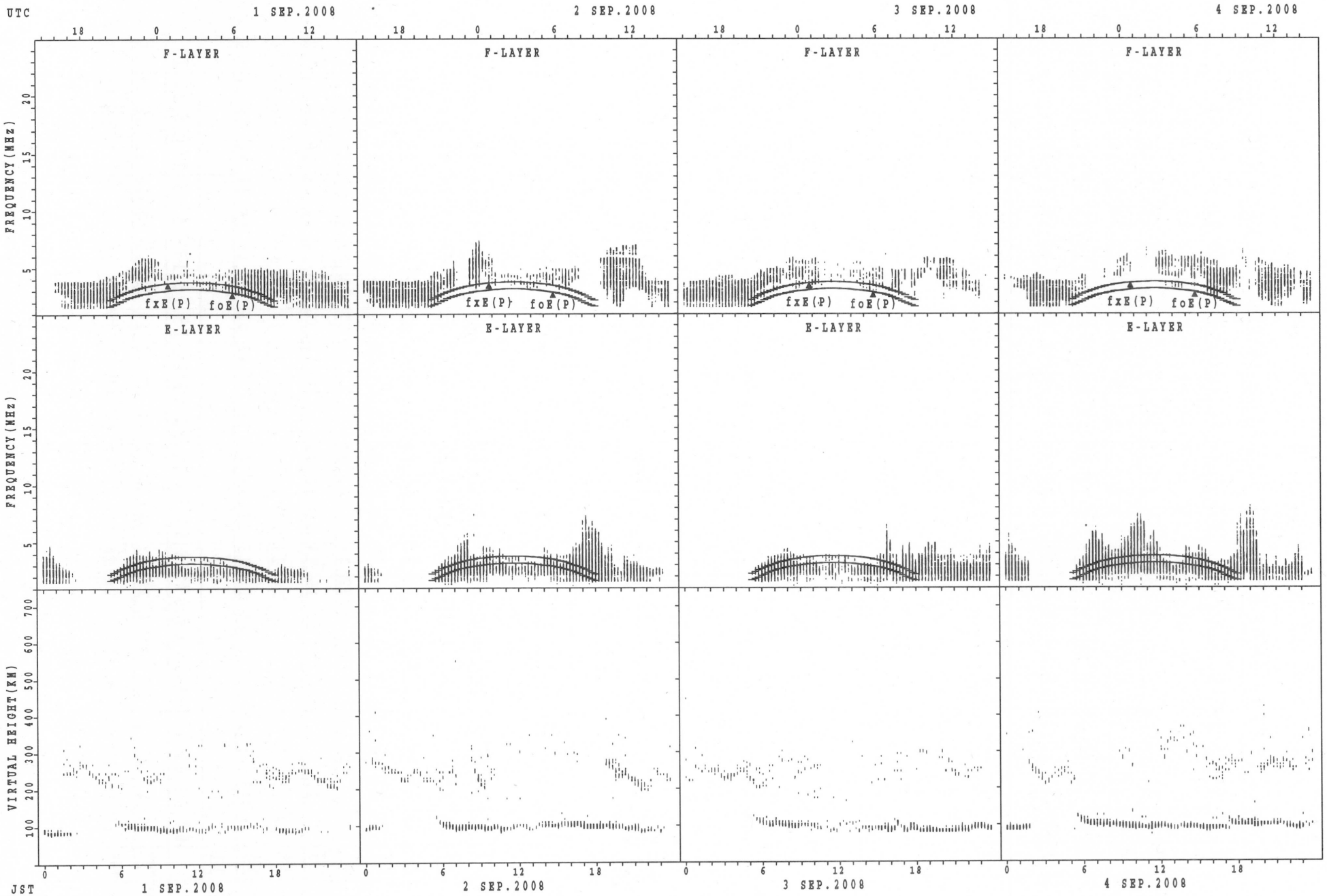
HOURLY VALUES OF fmin AT Okinawa

SEP. 2008

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

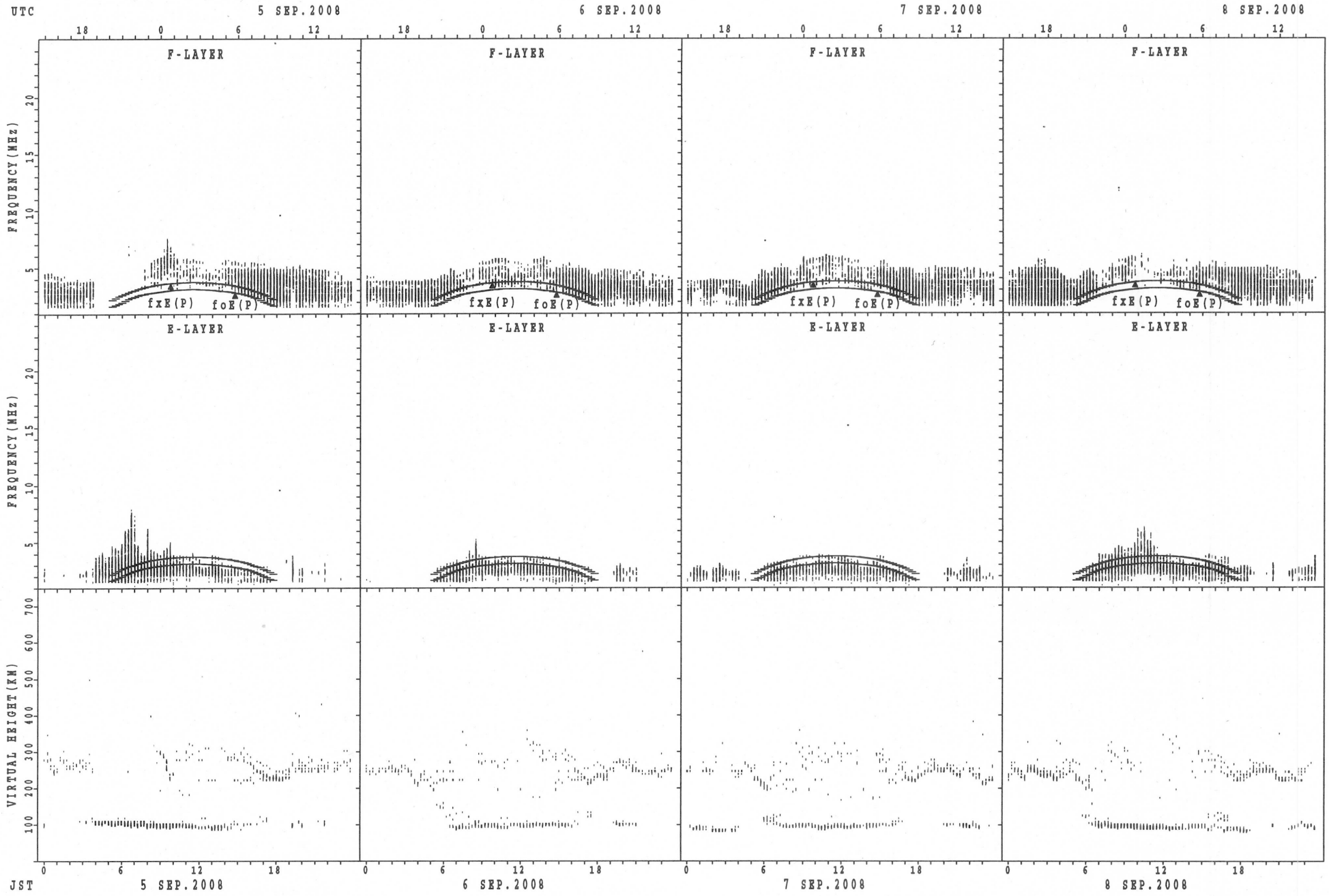
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	15	16	15	14	14	15	21	14		20	27	28	29	28	22	23	18	14	14	14	14	14		
2	15		15	15		15	18	17	17	21		30	29	29	45	44	18	14	20	21	15	15		14
3	14	15	16	14		15	14	14	15	17	27	28	29	27	26	22	18	17	14	14	14	15	14	15
4	15	15	15	14	14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

SUMMARY PLOTS AT Wakkanai



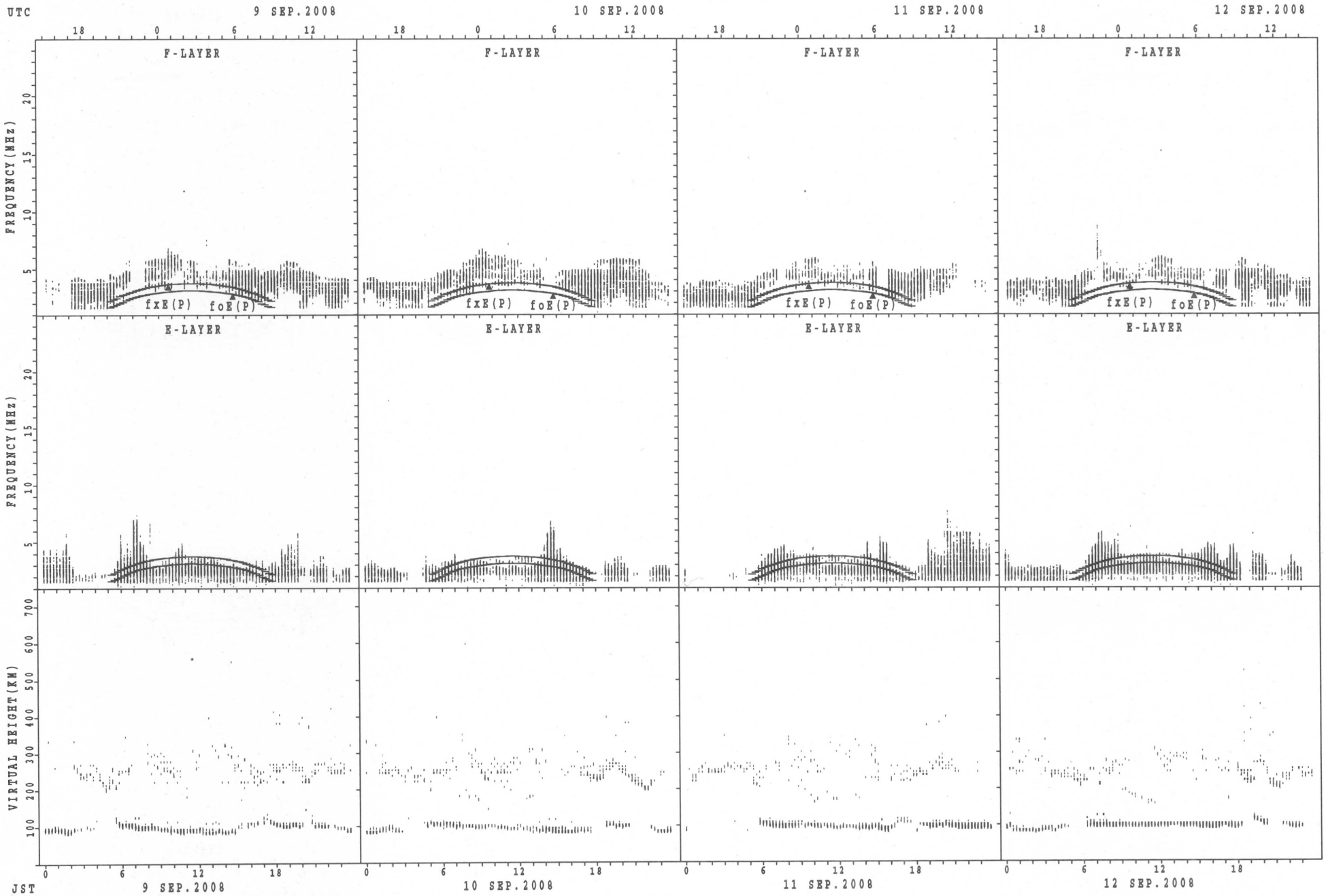
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



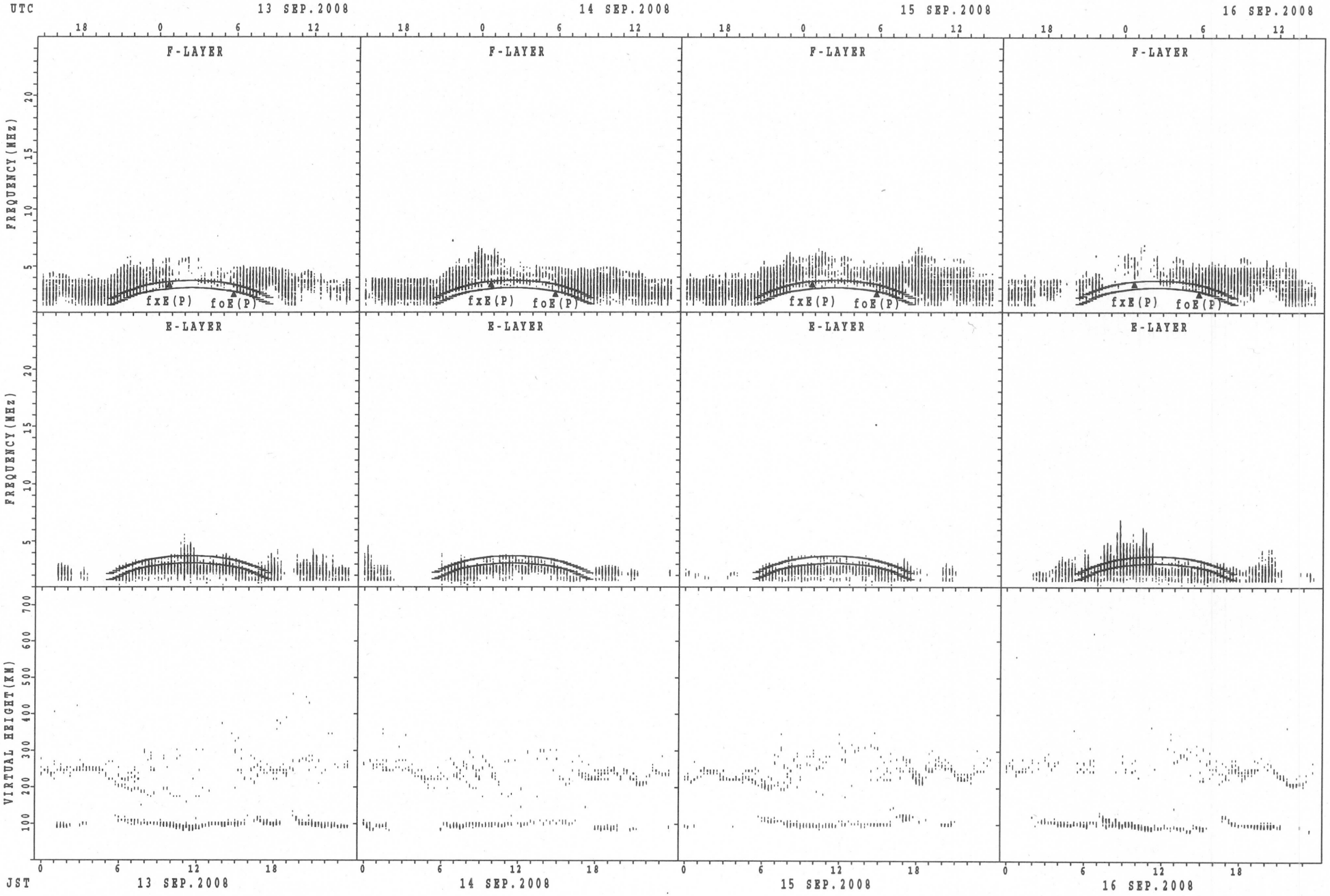
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



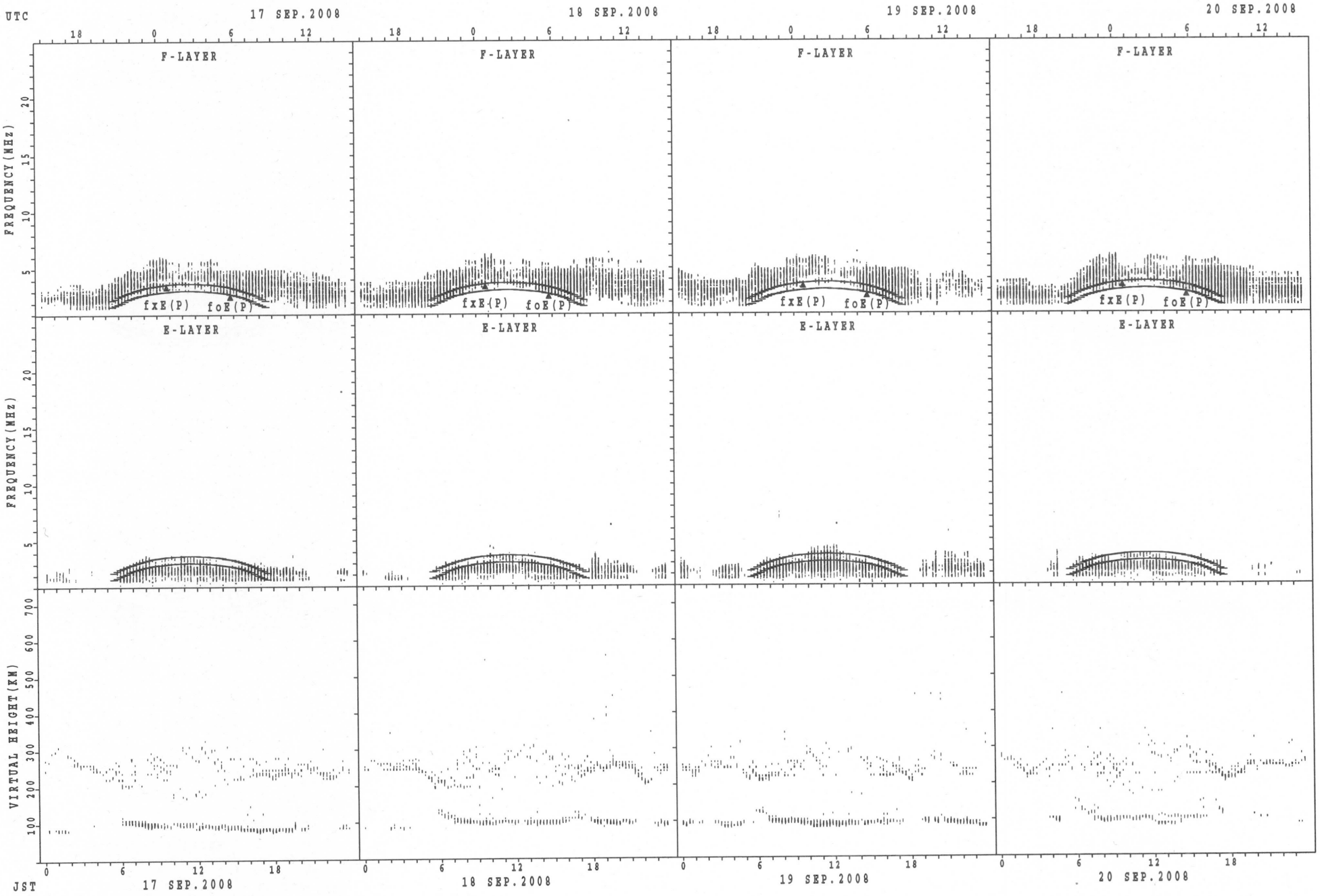
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



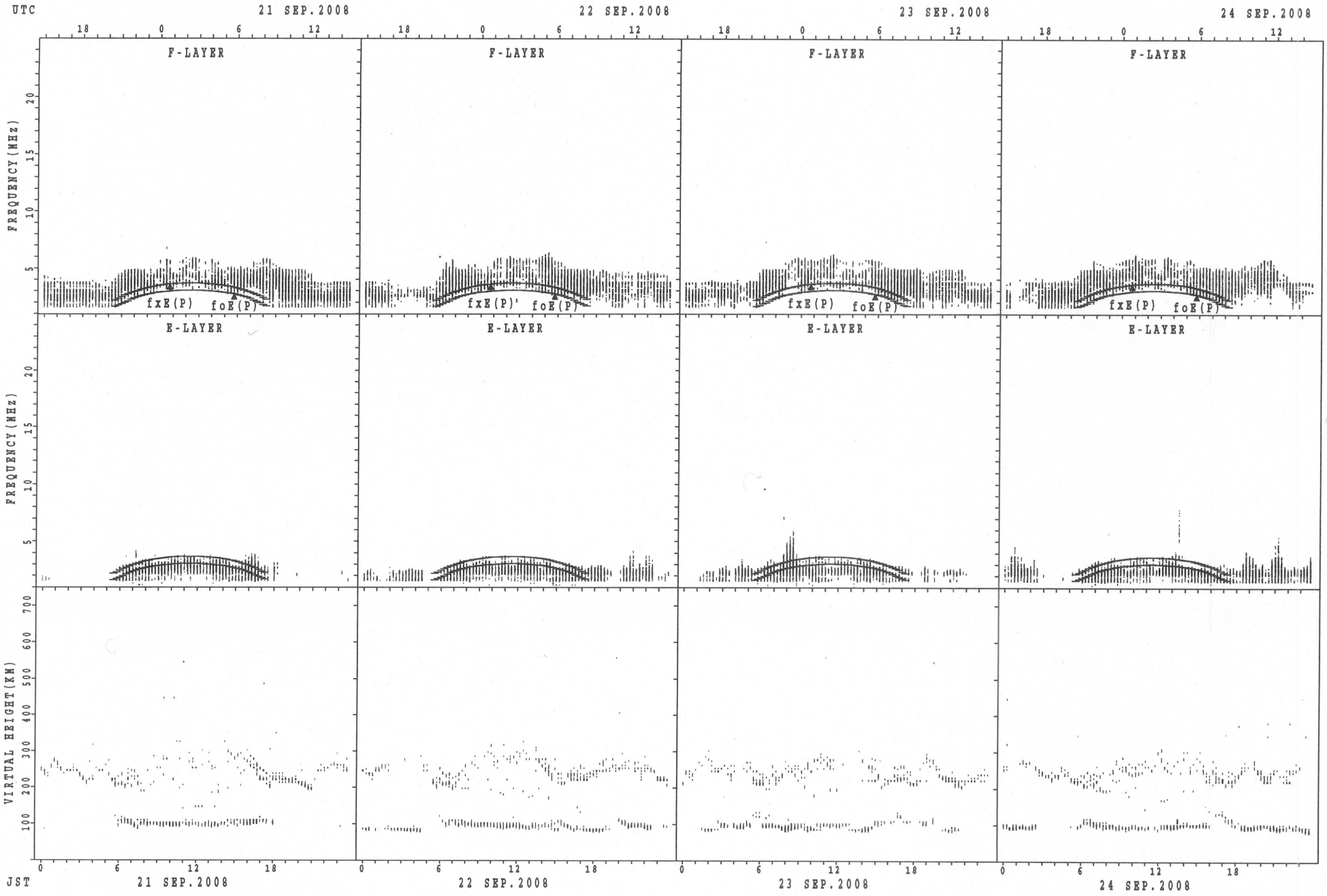
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



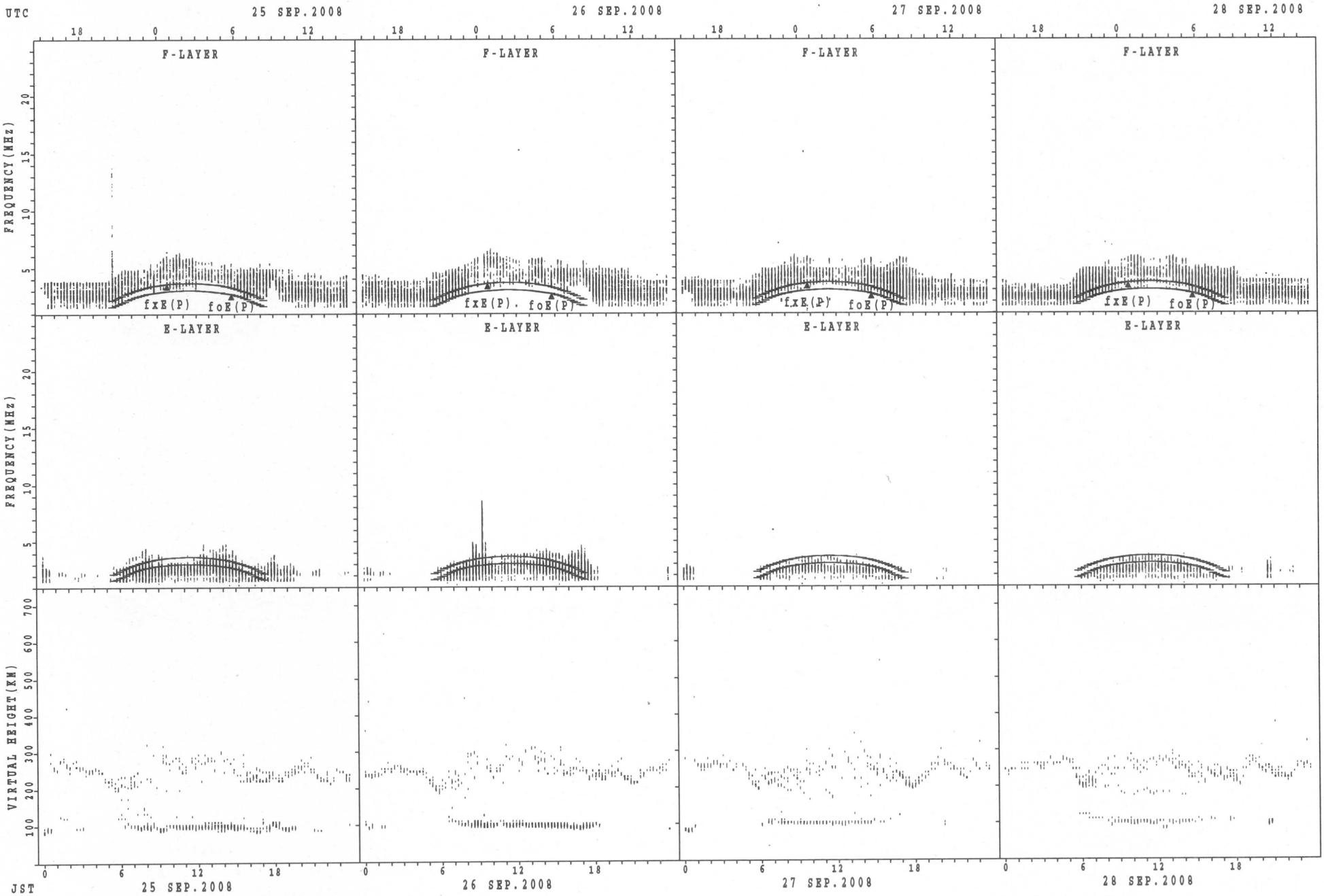
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



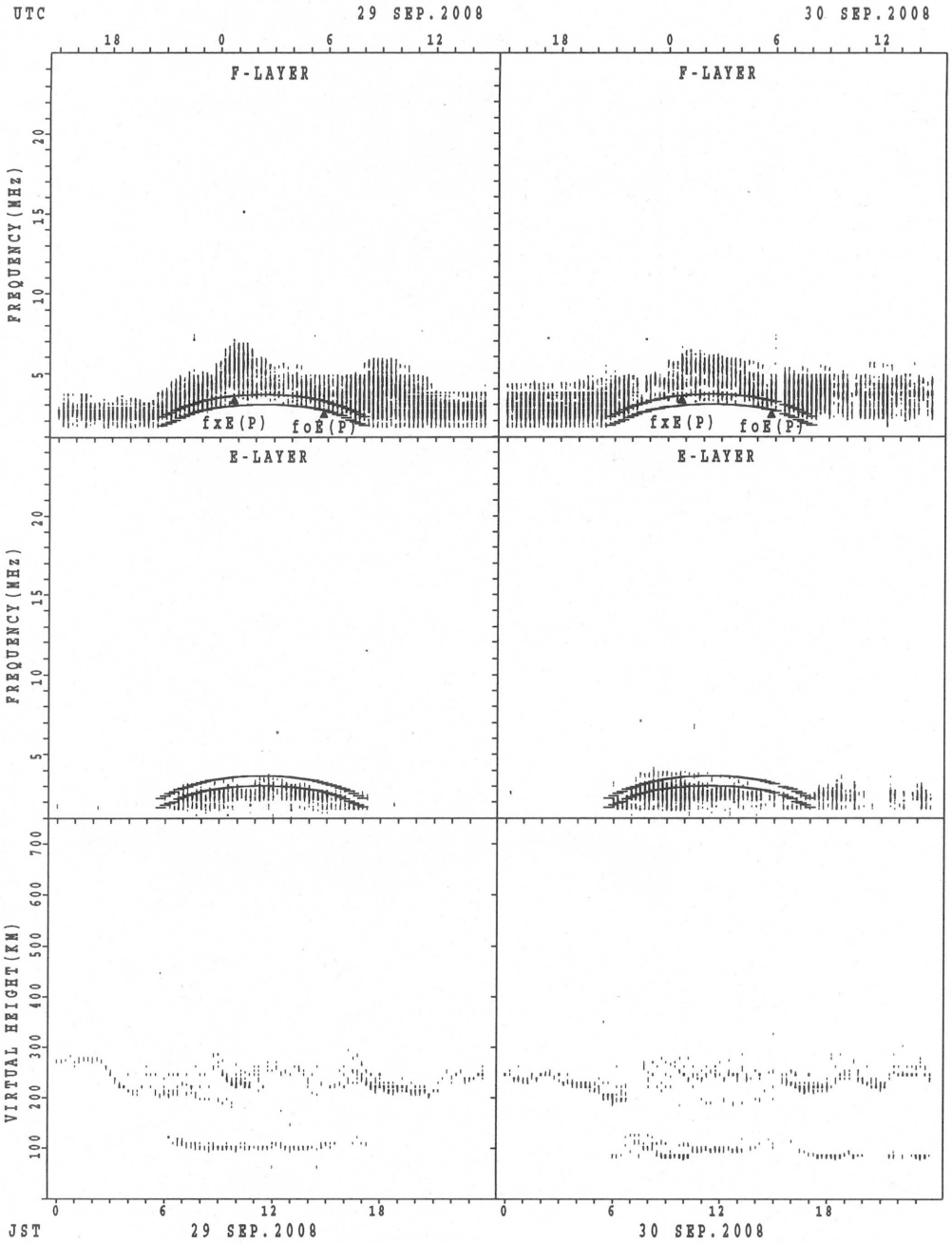
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



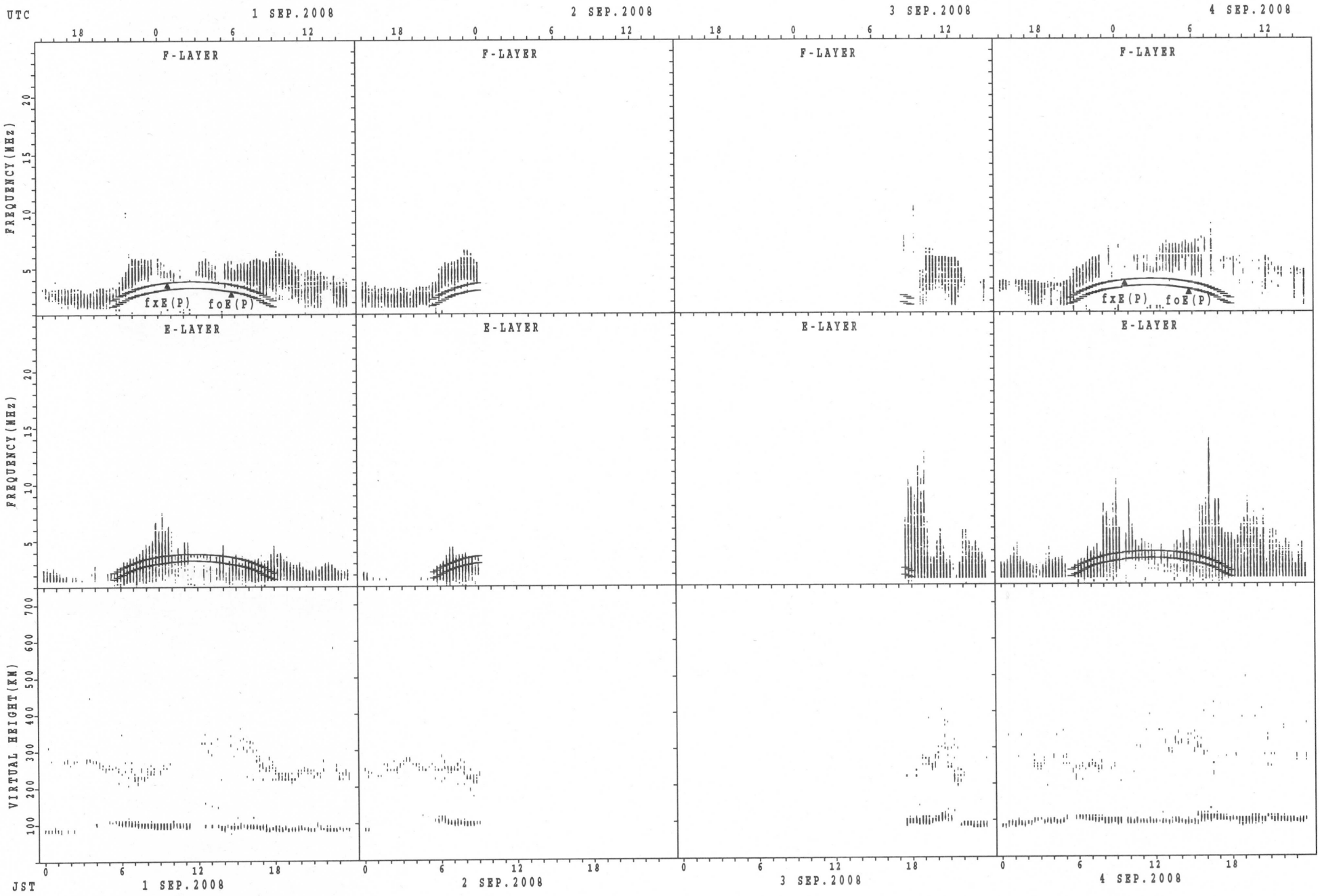
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



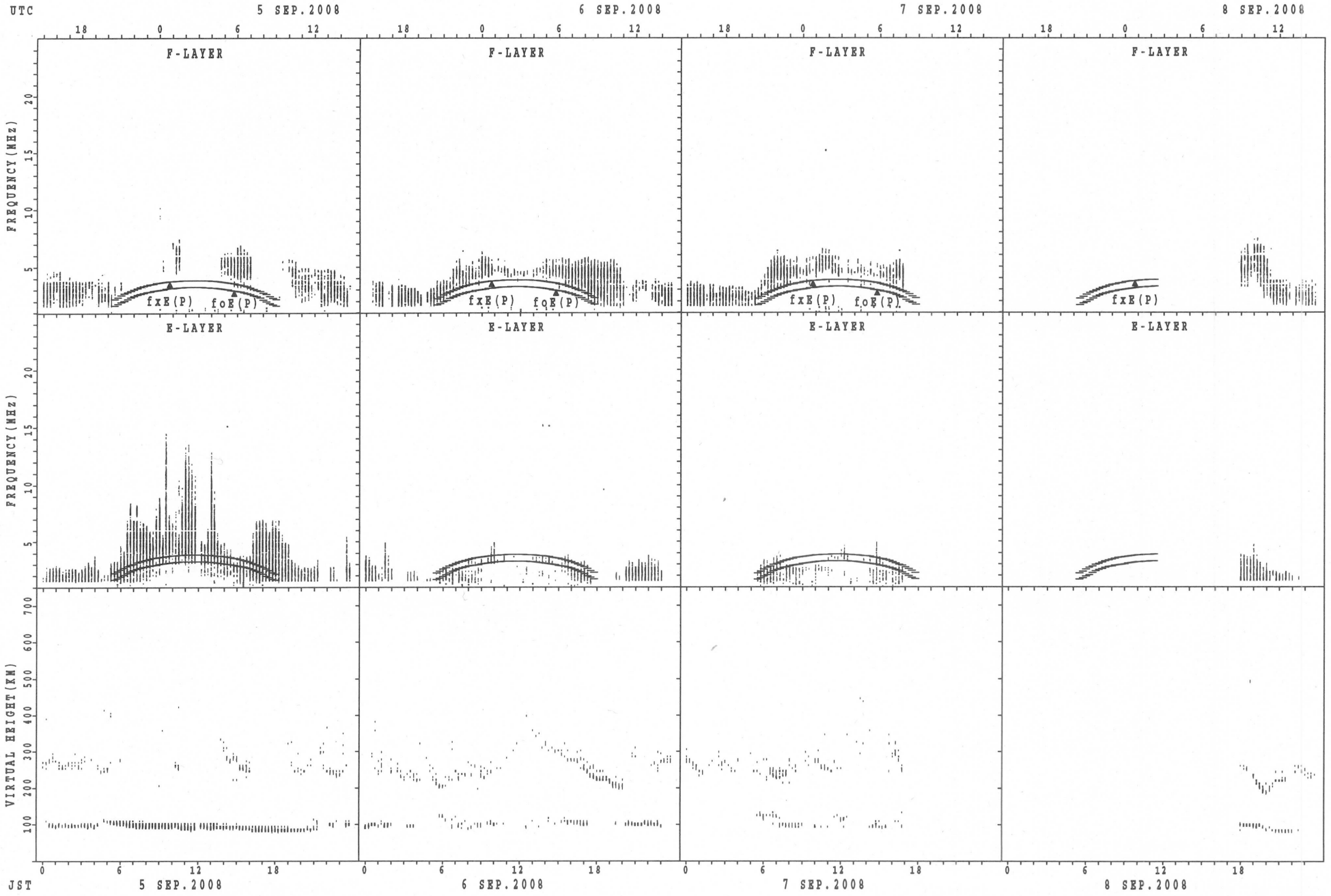
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



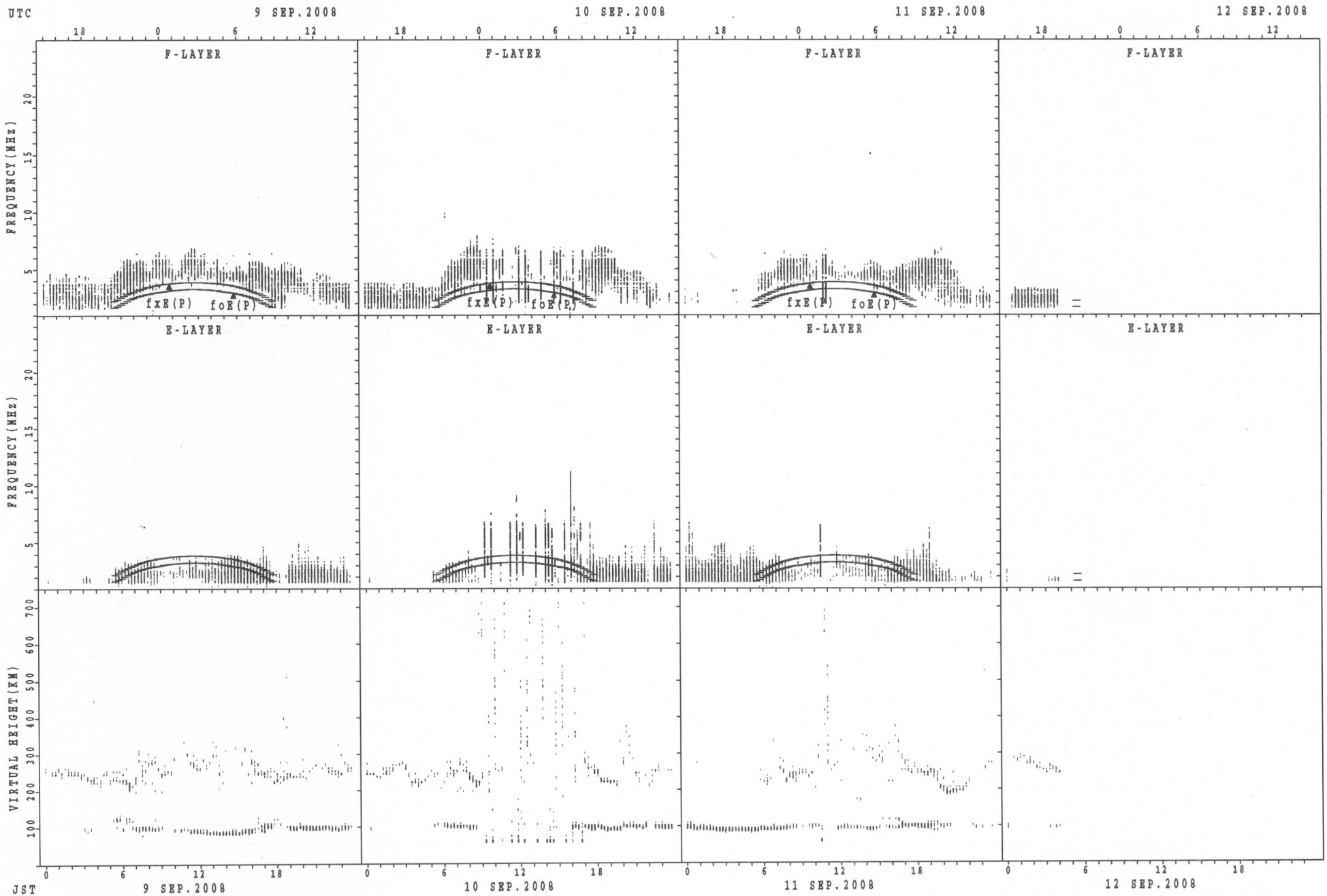
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



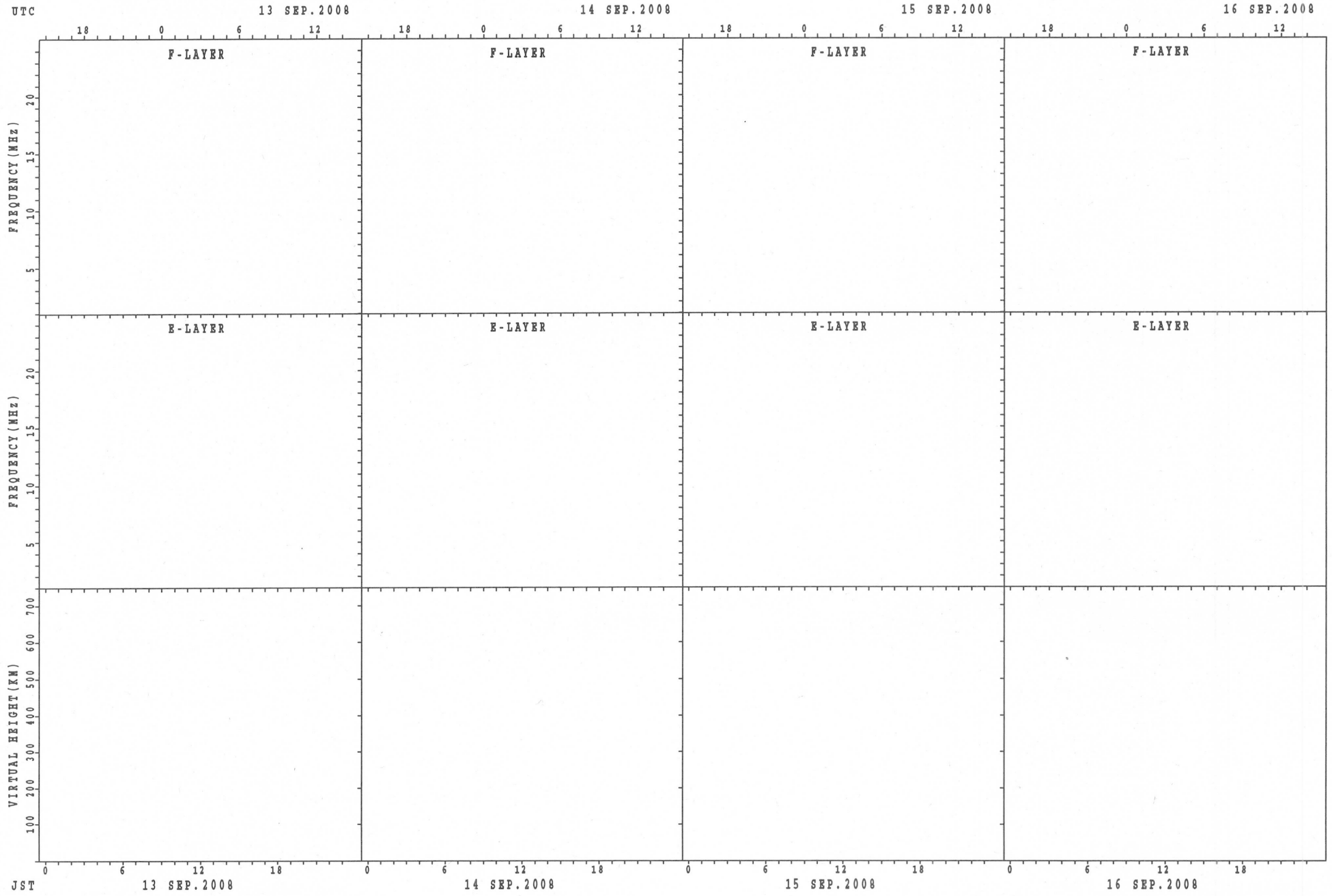
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

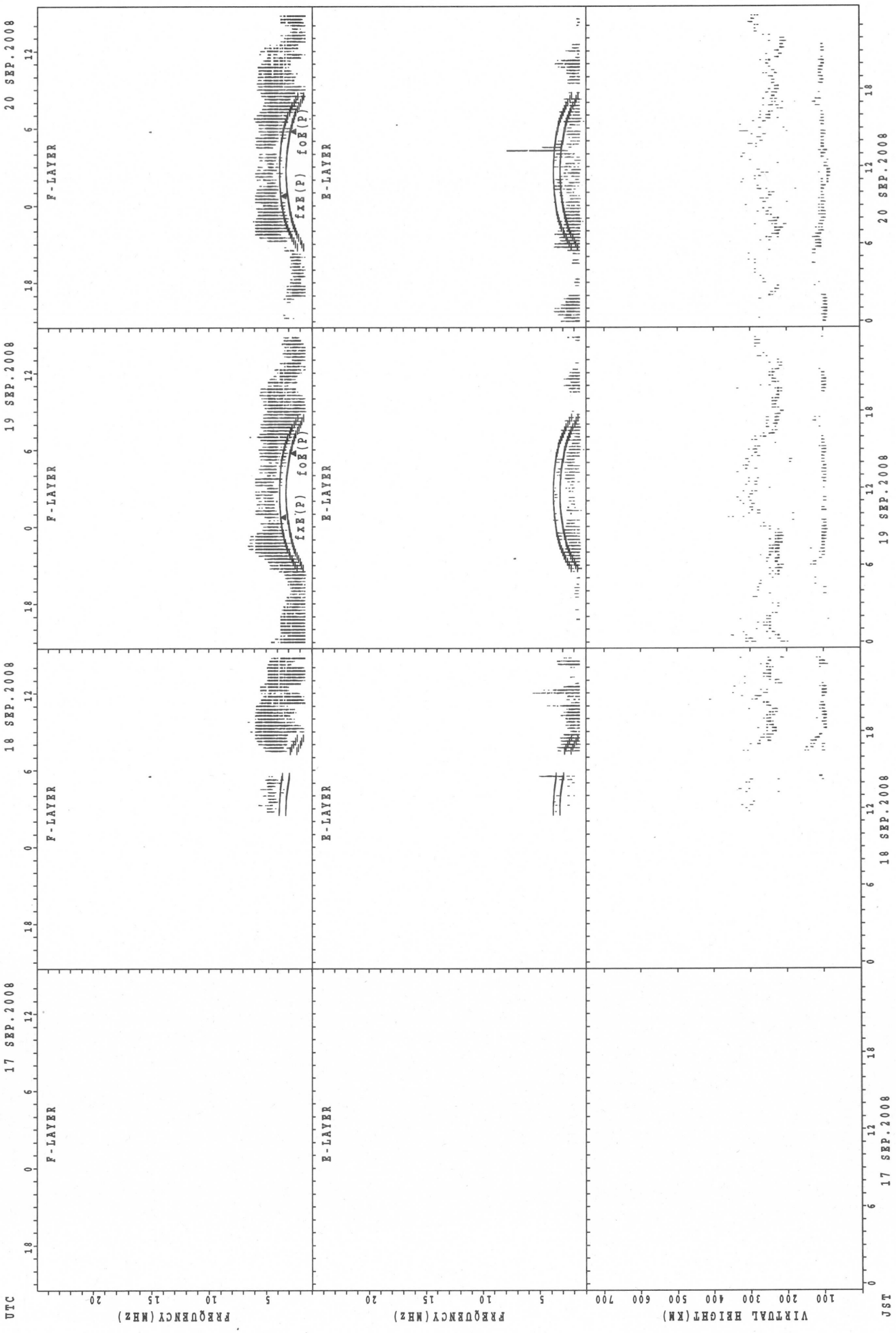


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

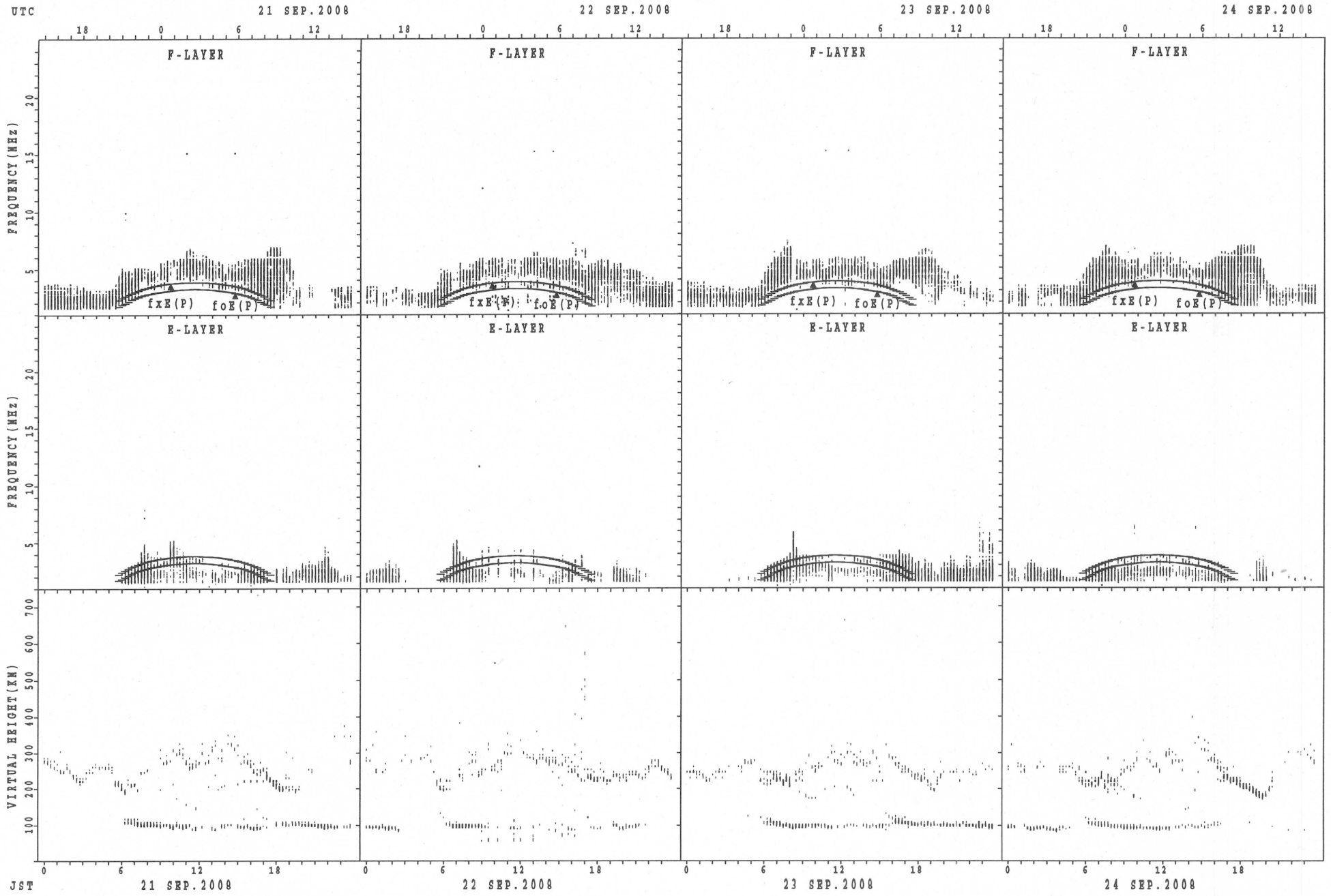
SUMMARY PLOTS AT Kokubunji



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

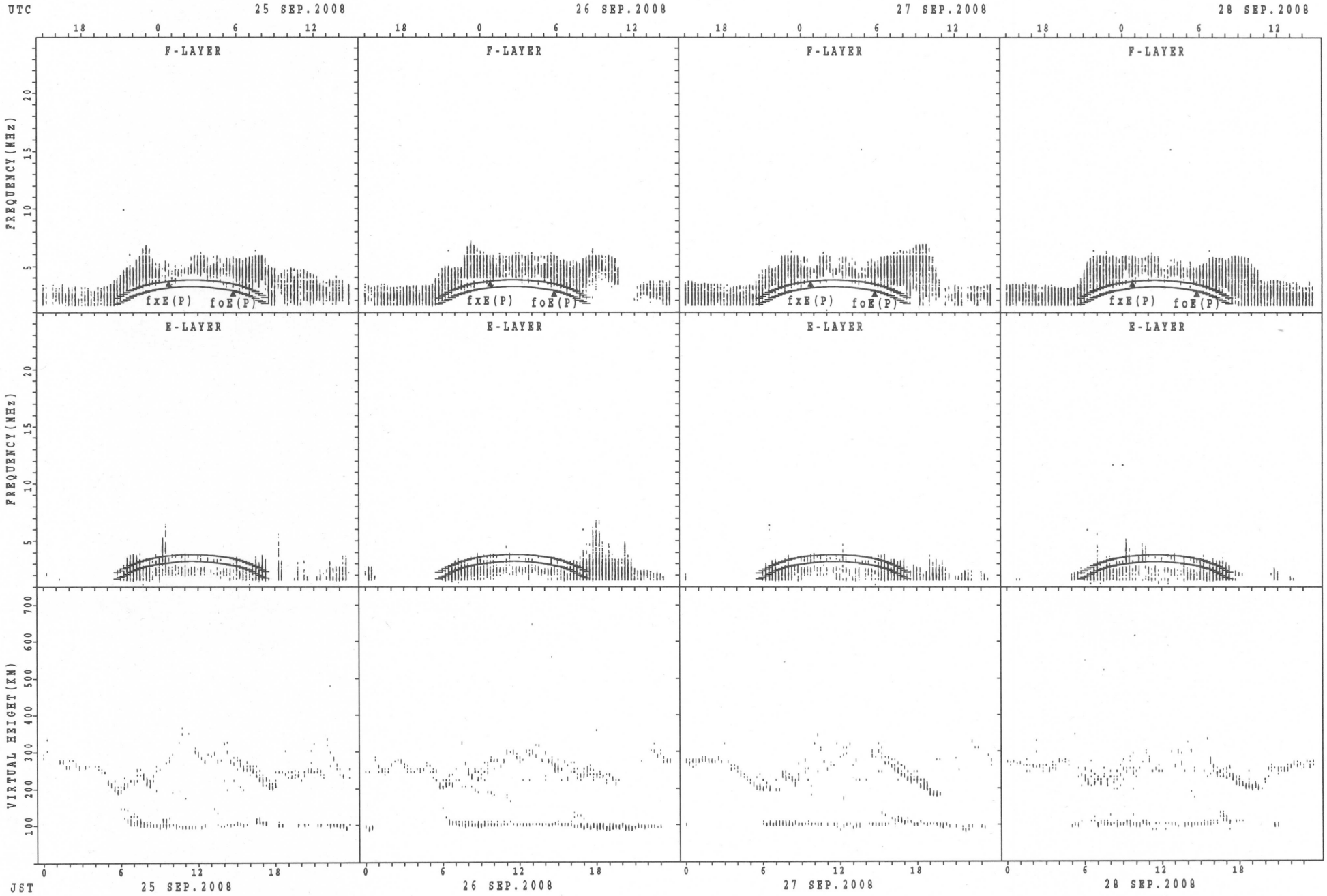

SUMMARY PLOTS AT Kokubunji
UTC
JST
17 SEP.2008
18 SEP.2008
19 SEP.2008
20 SEP.2008
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P)
foE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



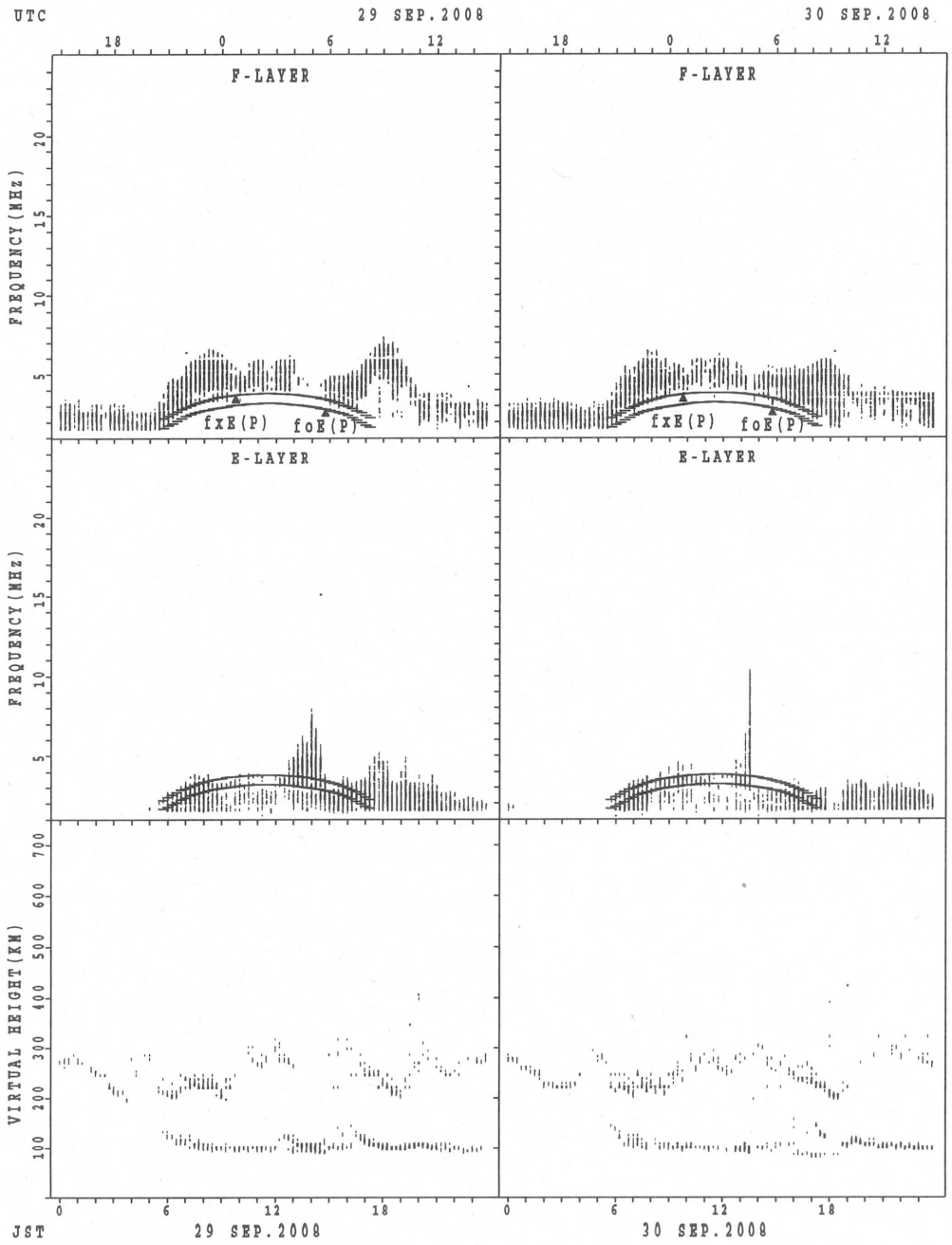
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



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

SUMMARY PLOTS AT Kokubunji

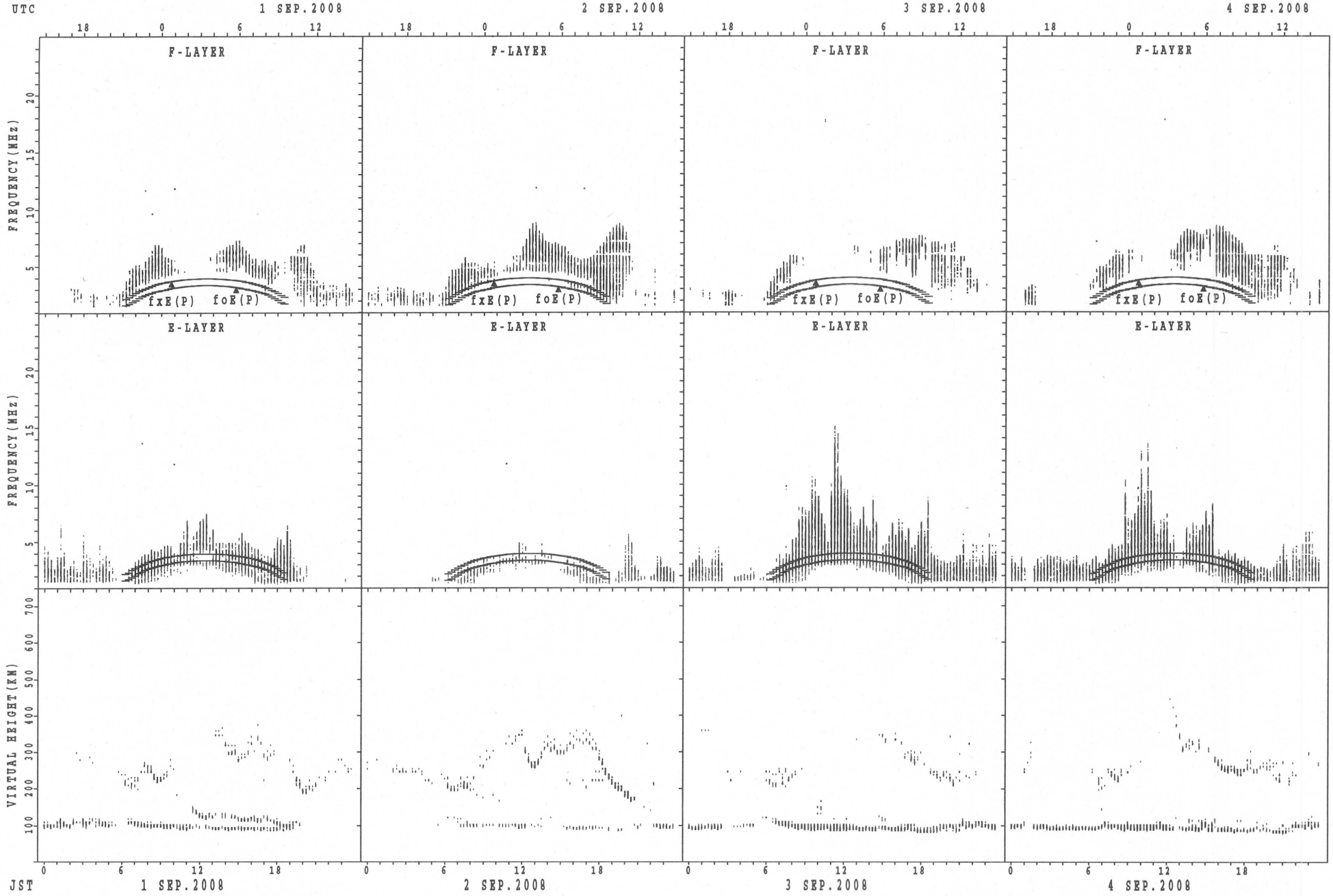


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

Ionospheric data of **Yamagawa** is not

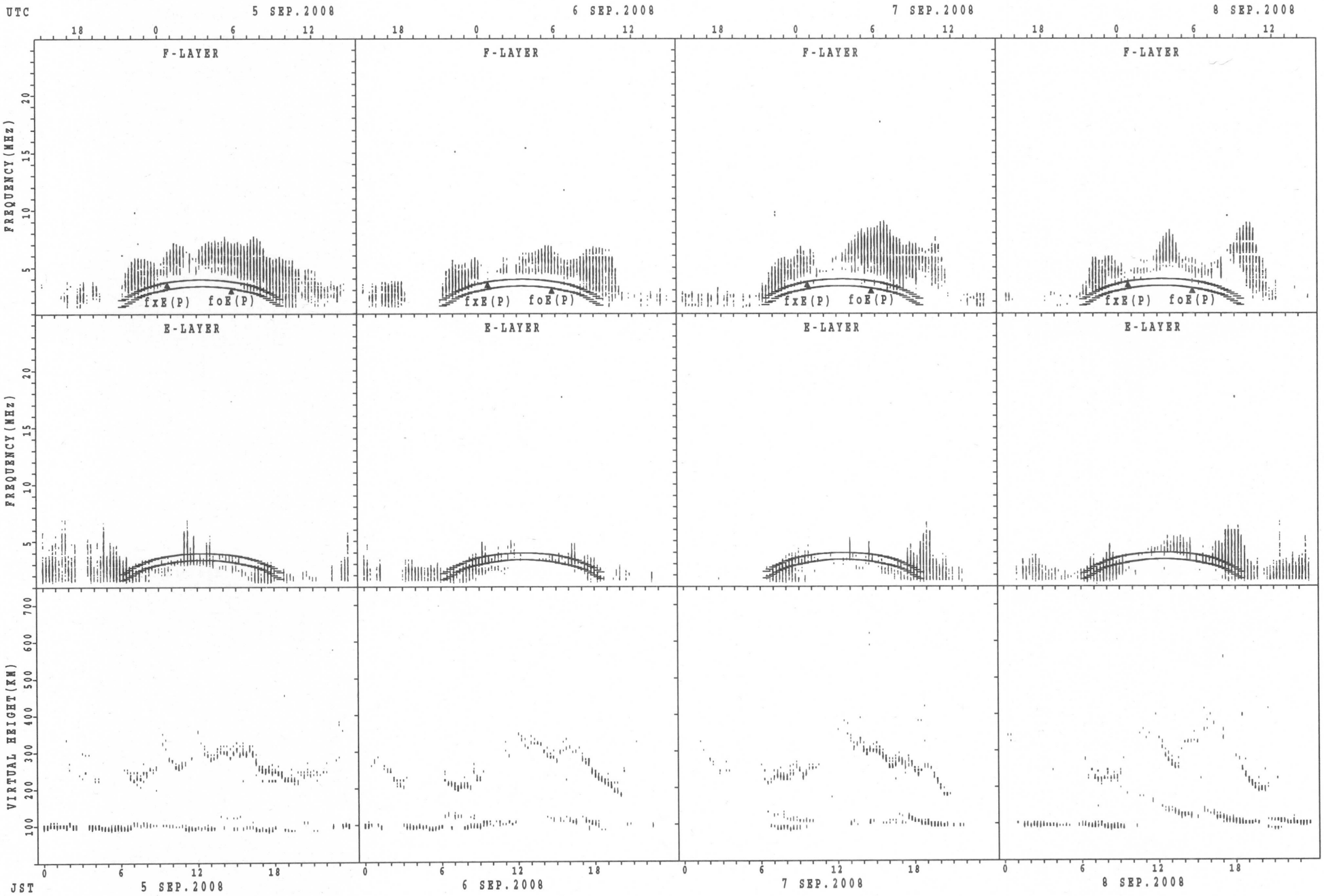
Available due to the ionosonde trouble.

SUMMARY PLOTS AT Okinawa



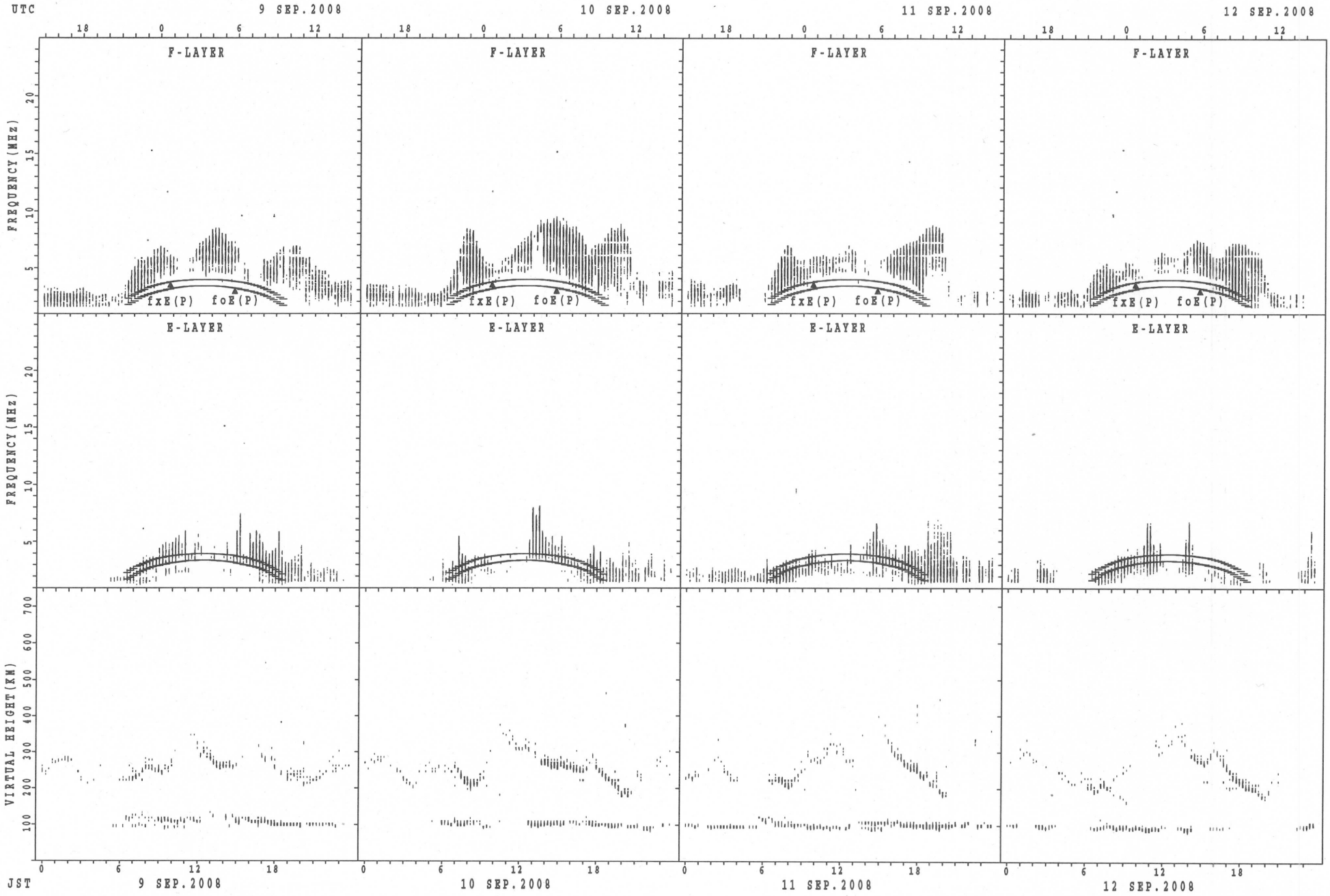
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



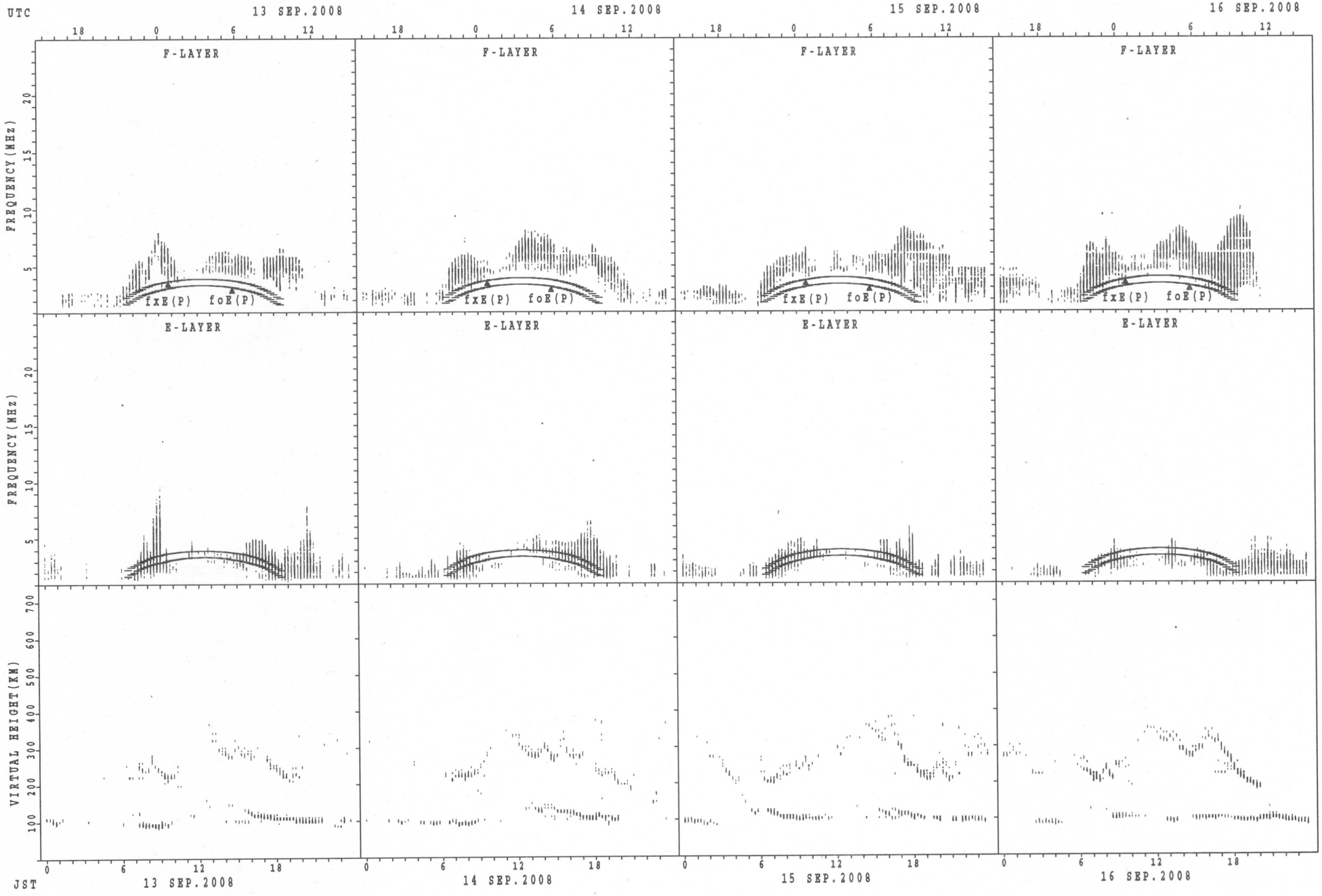
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



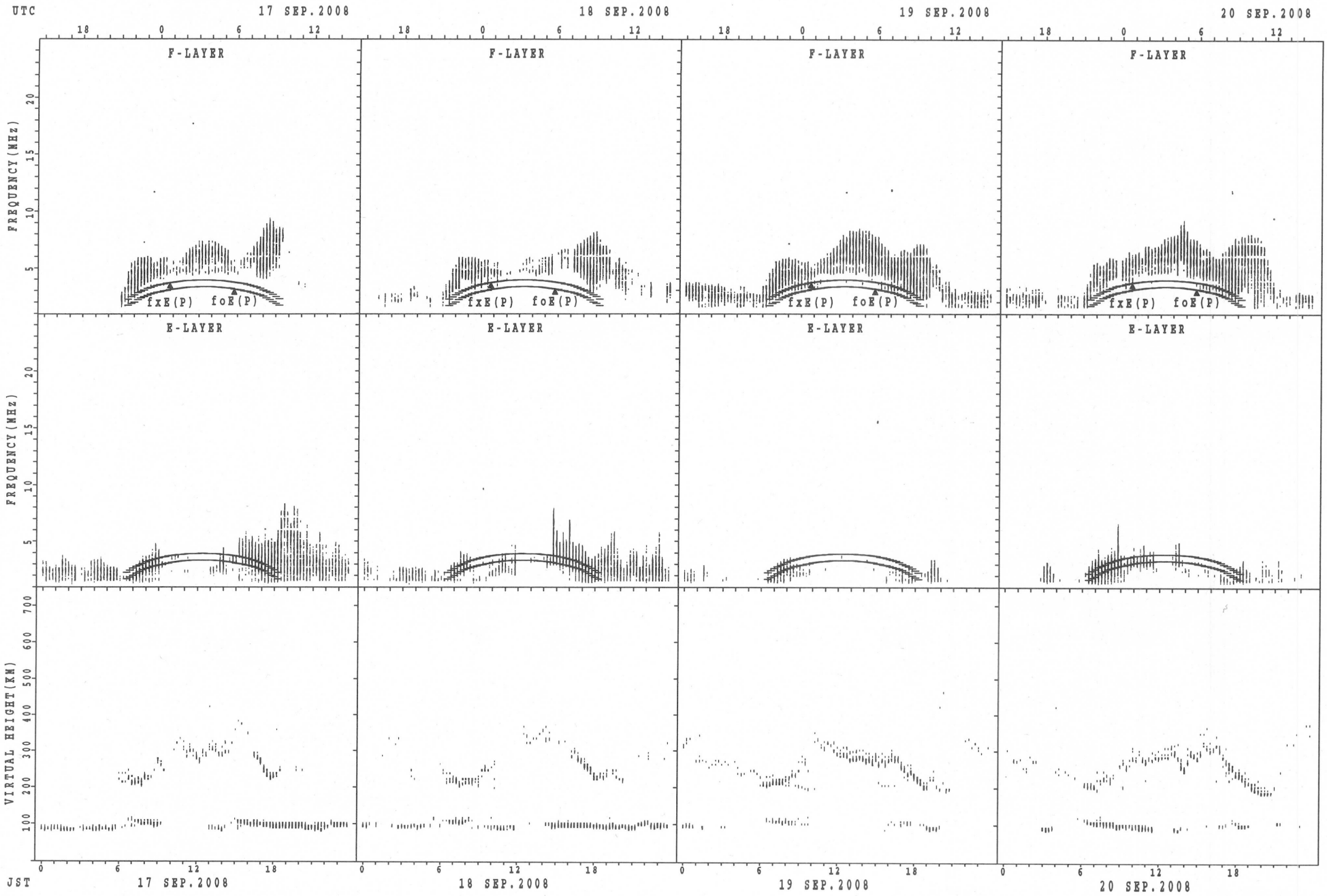
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



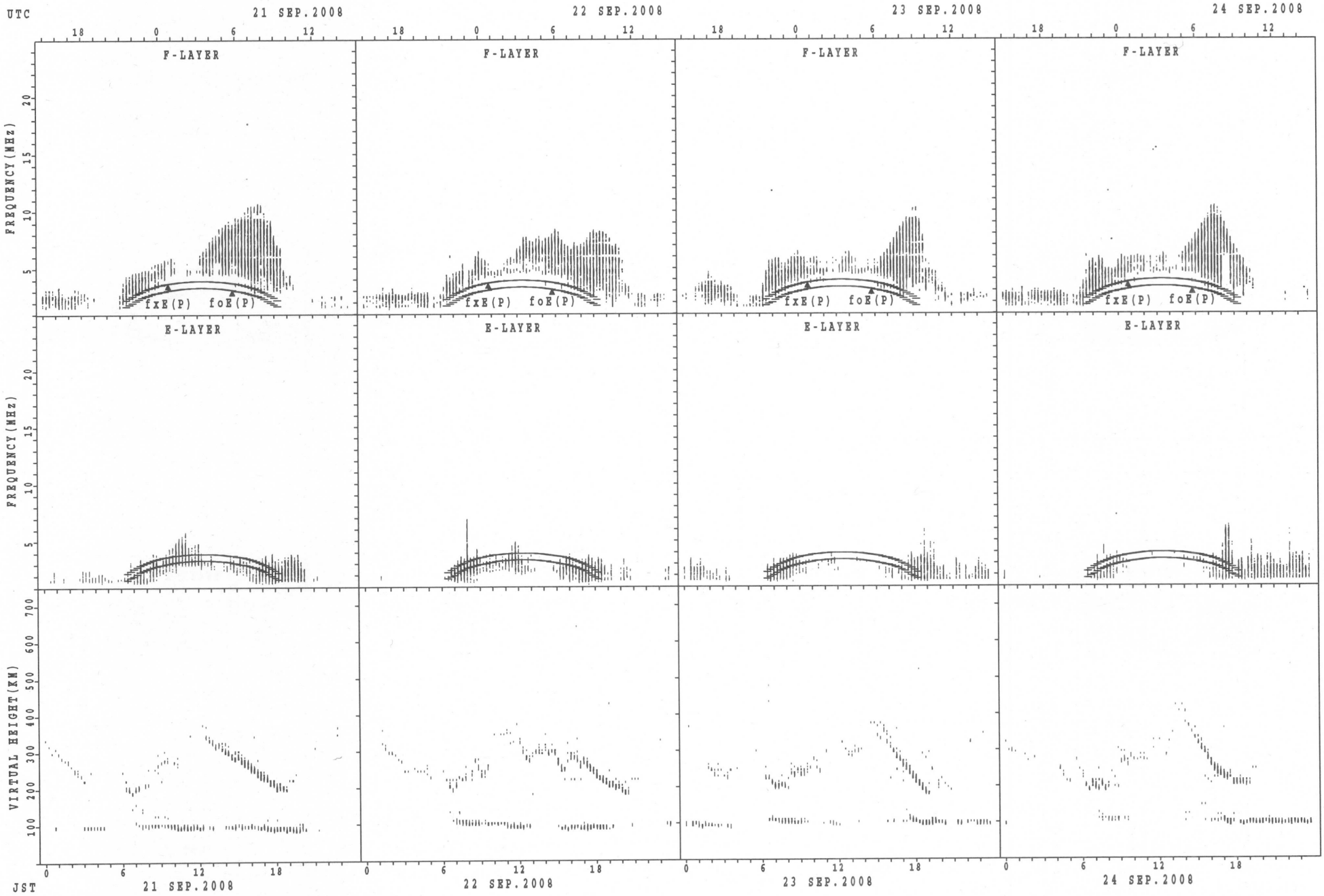
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



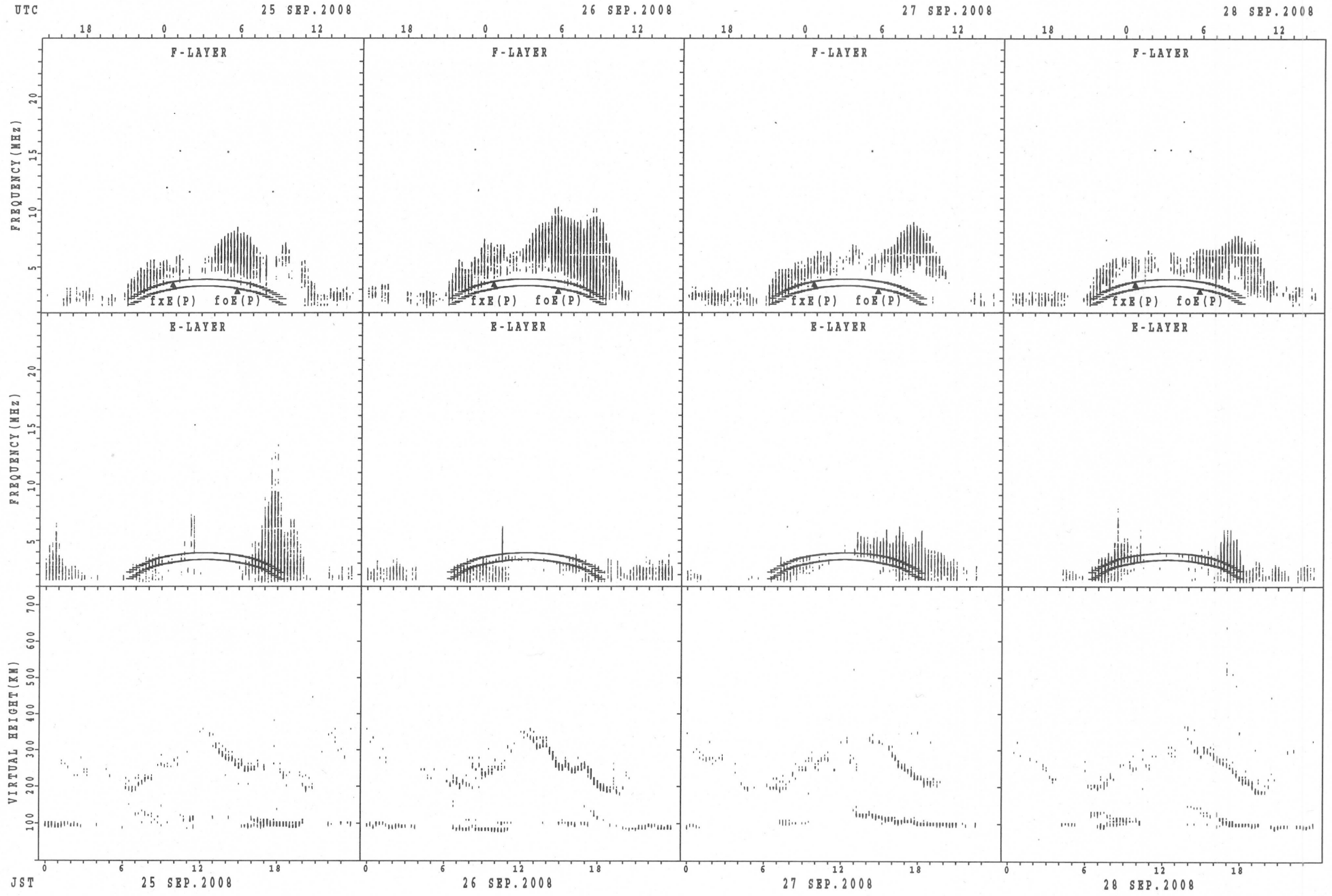
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



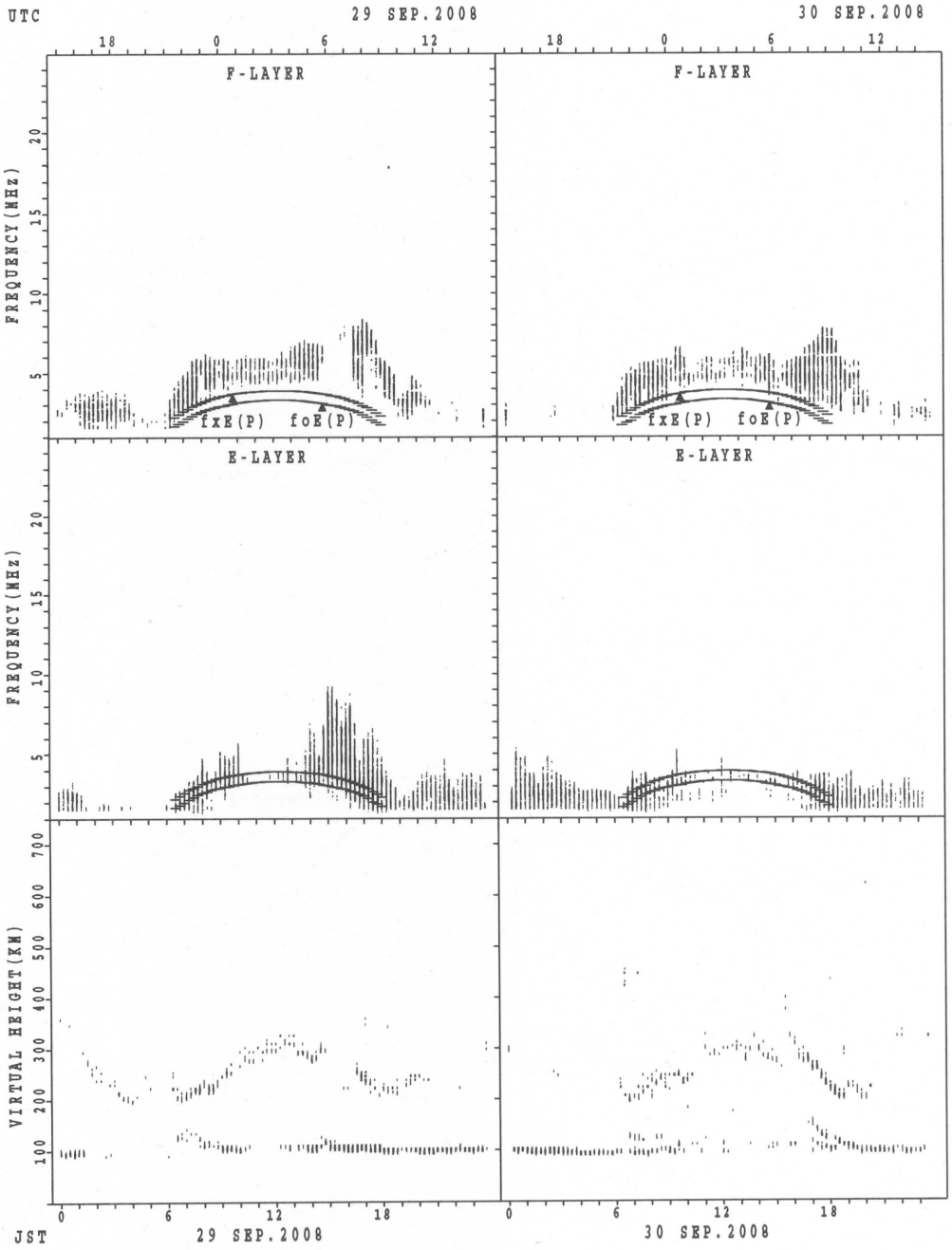
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

SEP. 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																								
MED																								
U Q																								
L Q																								

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	16	10	9	9	9	4	20	24	19	13	11	12	10	7	9	11	13	24	18	17	20	18	12	12
MED	95	92	89	97	97	104	107	106	103	103	97	99	167	101	97	97	95	112	102	99	99	102	95	95
U Q	99	95	95	106	105	109	114	110	107	106	99	170	179	169	103	101	110	118	105	104	105	105	98	97
L Q	89	89	89	90	91	103	103	101	99	97	93	94	99	97	95	95	89	104	91	90	96	93	94	91

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								2	6								2		4	4	1			
MED								246	233								257		244	223	232			
U Q								252	240								290		256	236	116			
L Q								240	220								224		240	211	116			

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	9	7	7	4	5	4	17	15	11	8	8	8	6	5	6	7	12	18	15	15	18	17	11	13
MED	99	95	97	95	95	108	111	105	99	99	103	128	134	99	94	95	109	104	103	103	102	103	99	99
U Q	141	97	99	102	102	110	127	113	103	103	140	179	179	181	95	111	123	117	105	107	105	104	103	105
L Q	93	89	93	92	91	98	107	101	97	95	95	96	95	95	87	91	93	101	97	97	95	99	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																								
MED																								
U Q																								
L Q																								

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																								
MED																								
U Q																								
L Q																								

MONTHLY MEDIANS OF h'F AND h'Es

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

h'F

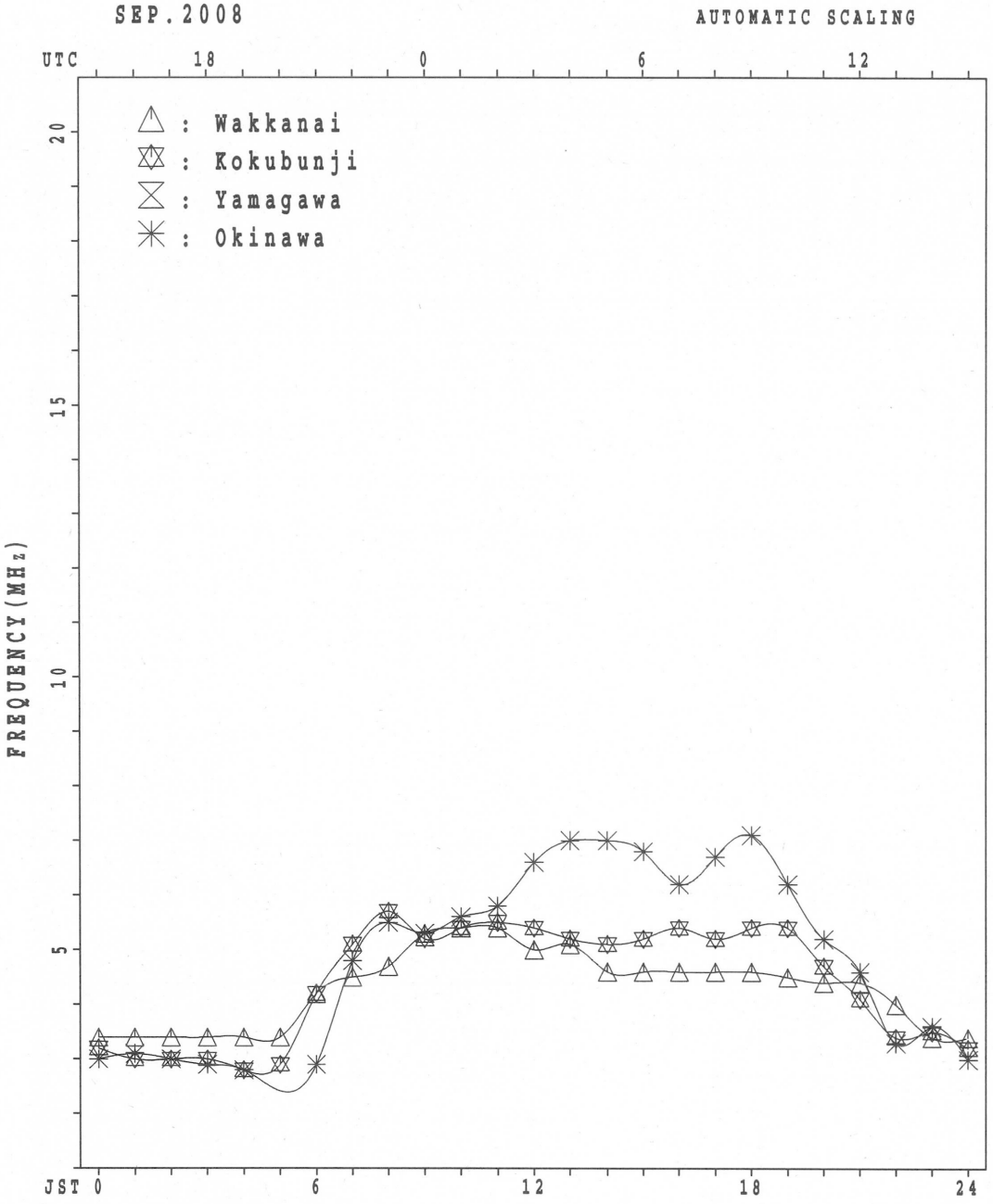
STATION Okinawa LAT. 26°40.5'N LON. 128°09.2'E

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								1	4	1							10	19	21	12	7			
MED								214	246	232							277	270	238	229	208			
U Q								107	255	116							304	282	258	236	216			
L Q								107	227	116							256	254	227	216	198			

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	15	13	11	10	8	8	7	26	19	17	13	9	9	9	11	15	21	20	26	23	19	19	16	18
MED	99	101	97	97	96	96	97	113	103	105	103	95	99	101	103	111	107	111	103	99	99	97	103	99
U Q	101	106	99	97	97	100	109	125	111	113	111	104	120	122	121	127	114	113	107	105	105	103	104	103
L Q	97	97	95	95	95	93	95	107	103	98	98	94	95	95	93	107	98	103	97	95	97	95	99	97

MONTHLY MEDIANS PLOT OF foF2



IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	X 35	X 35	X 35	X 33	X 34	X 35													X 65	X 65	X 52	X 50	X 46	X 44
2	X 41	X 38	X 35	X 35	X 35	X 35					C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	X 66	65	65	X 52	A
4	X 38	X 39	X 38	X 38	X 36	X 36													X 60	X 52	X 54	64	52	51
5	X 48	X 47	X 44	X 42	X 42	X 41							C						A	X 59	X 54	X 50	X 50	X 48
6	A	43	44	X 36	X 30	X 32													X 58	X 58	X 46	X 40	X 42	X 37
7	X 38	40	X 37	X 34	X 33	X 32												C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	X 64	X 78	X 58	X 48	X 46	X 45
9	X 45	X 47	X 47	X 47	X 44	X 42													X 55	X 59	X 53	X 48	X 46	X 44
10	X 44	X 41	X 40	X 39	X 38	X 36						C	C	C	C	C			X 72	X 70	54	54	X 40	X 39
11	X 34	X 34	A	A	X 33	A						C							X 60	X 64	X 70	X 58	X 35	X 35
12	X 36	X 35	X 34	X 33	X 34	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C				C	C		X 65	X 66	X 63	58	X 51	X 50
19	X 44	X 44	X 39	X 34	X 32	X 35													X 52	X 57	X 54	X 46	X 38	X 40
20	X 37	X 36	X 36	X 32	X 31	X 31													X 60	X 59	X 56	X 56	X 39	X 40
21	X 38	X 39	X 38	X 36	X 34	X 34													X 74	X 63	X 38	X 36	X 34	X 34
22	X 36	X 37	X 35	X 32	X 33	X 30													X 58	X 57	X 53	X 50	X 43	X 44
23	X 42	X 40	X 37	X 35	X 34	X 34													X 66	X 66	X 50	X 46	X 40	X 36
24	X 36	X 38	X 38	X 38	X 38	X 36													X 72	X 70	X 41	X 34	X 35	X 37
25	X 36	X 35	X 35	X 33	X 32	X 33													X 50	X 50	X 48	X 45	X 42	X 42
26	X 35	X 36	X 36	X 35	X 34	X 35													X 68	X 60	O X 50	X 39	X 38	X 39
27	X 39	X 39	X 38	X 34	X 34	X 35													X 70	X 69	O X 32	X 35	X 35	X 35
28	40	X 36	X 36	X 34	X 31	X 30													X 61	X 54	X 42	X 41	X 40	X 39
29	X 38	X 37	X 37	X 35	X 30	X 29													X 76	X 63	X 40	X 43	X 36	X 36
30	X 36	X 38	X 39	X 36	X 33	X 33													X 60	X 50	X 43	X 42	44	43
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	22	21	21	22	20													20	22	22	22	22	21
MED	X 38	X 38	X 37	X 35	X 34	X 34													X 62	X 62	X 52	X 47	X 41	X 40
U Q	X 42	X 40	X 39	X 37	X 35	X 36													X 69	X 66	X 54	54	X 46	X 44
L Q	X 36	X 36	X 36	X 34	X 32	X 32													X 59	X 57	X 43	X 41	X 38	X 36

SEP. 2008 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

IONOSPHERIC DATA STATION Kokubunji

SEP. 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							U L 320	U L 360	A	A	424	U L 424	412	A	A	404	U L 380	L						
2							U L 320	L	392	U L 388	C	C	C	C	C	C	C	C						
3							C	C	C	C	C	C	C	C	C	C	C	C						
4								L	A	A	A	U L 480	A	A	A	U L 396	A	A						
5								A	A	A	A	A	C	A	A	392	L	A						
6								U L 364	L	U L 404	A	U L 424	U L 432	U L 424	416	U L 400	L							
7								A	U L 400	U L 424	U L 408	U L 428	A	U L 424	U L 408	U L 404	U L 376	C						
8							C	C	C	C	C	C	C	C	C	C	C	C						
9								L	U L 376	U L 412	U L 428	U L 448	U L 428	A	U L 420	U L 388	360	L						
10								L	A	U L 416	C	C	C	C	C	C	A	L						
11								A	388	U L 408	L	C	U L 440	U L 416	U L 412	U L 396	U L 384	L						
12							C	C	C	C	C	C	C	C	C	C	C	C						
13							C	C	C	C	C	C	C	C	C	C	C	C						
14							C	C	C	C	C	C	C	C	C	C	C	C						
15							C	C	C	C	C	C	C	C	C	C	C	C						
16							C	C	C	C	C	C	C	C	C	C	C	C						
17							C	C	C	C	C	C	C	C	C	C	C	C						
18							C	C	C	C	C	C	U L 432	U L 416	U L 420	C	C	L						
19								L	L	U L 420	U L 412	432	440	U L 424	U L 404	U L 408	L							
20								L	L	U L 436	U L 408	412	428	U L 420	404	388	A							
21									L	404	A	420	404	U L 424	U L 424	U L 392	U L 368	L						
22								A	U L 404	U L 408	C	428	U L 424	U L 424	U L 416	L	L							
23									L	L	416	U L 432	424	424	L	A	L	A						
24								L	L	404	U L 420	424	420	U L 424	U L 428	U L 396	U L 364							
25								A		U L 428	U L 420	420	U L 412	U L 424	U L 424	A	L							
26									392	416	424	U L 428	U L 440	U L 440	U L 444	U L 408	L							
27									L	U L 420	U L 428	428	U L 432	U L 412	U L 432	U L 400	L							
28									L	U L 412	428	412	A	U L 404	U L 432	A	L							
29								L	L	A	U L 436	U L 424	U L 424	A	A	L	U L 376	A						
30									L	L	U L 440	U L 432	416	U L 420	U L 376		A							
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							2	2	6	15	13	17	16	15	15	13	7							
MED							U L 320	U L 362	392	U L 412	U L 424	U L 428	U L 426	U L 424	U L 420	U L 396	U L 376							
U Q									U L 400	U L 420	U L 428	U L 432	U L 432	U L 424	U L 428	U L 404	U L 380							
L Q									388	404	U L 414	422	418	U L 416	U L 408	392	364							

SEP. 2008 foF1 (0.01MHz)

IONOSPHERIC DATA STATION Kokubunji

SEP.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	R	312	A	A	A	A						
2							B	A	A	R	C	C	C	C	C	C	C	C						
3							C	C	C	C	C	C	C	C	C	C	C	C						
4							A	A	A	A	A	A	A	A	A	A	U A 252	A						
5							B	A	A	A	A	A	C	A	A	A	A	A						
6							B	240	A	A	A	R	A	A	A	A	A	A						
7							U A 180	U A 236	R	R	R	A	A	A	A	A	A	C						
8							C	C	C	C	C	C	C	C	C	C	C	C						
9							B	A	A	R	R	A	R	A	A	A	U R 276	A						
10							A	A	A	R	E C	C	C	C	C	C	A	A						
11							A	A	R	R	A	C	A	R	A	A	A	A						
12							C	C	C	C	C	C	C	C	C	C	C	C						
13							C	C	C	C	C	C	C	C	C	C	C	C						
14							C	C	C	C	C	C	C	C	C	C	C	C						
15							C	C	C	C	C	C	C	C	C	C	C	C						
16							C	C	C	C	C	C	C	C	C	C	C	C						
17							C	C	C	C	C	C	C	C	C	C	C	C						
18							C	C	C	C	C	C	360	A	R	C	C	192						
19							B	U A 240	R	R	R	R	328	R	R	R	240	U A 168						
20							B	A	U R 296	A	A	A	A	A	A	R	A	A						
21							B	A	A	A	A	A	312	308	A	U A 272	248	A						
22							B	A	A	R	C	R	R	R	R	R	R	A						
23							B	268	A	A	R	R	R	R	R	276	U A 232	B						
24							B	A	R	R	A	356	R	R	A	276	236	184						
25							B	A	U R 312	A	A	A	R	A	A	A	A	B						
26							B	236	A	A	A	A	336	U R 348	R	288	U A 232	B						
27							B	A	A	R	R	R	R	R	312	276	U A 236	B						
28							184	232	A	A	A	R	308	R	316	276	240	B						
29							B	A	A	A	A	R	R	A	A	A	U A 236	B						
30							B	A	A	A	A	A	A	A	R	R	244	B						
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							2	6	2			1	5	3	2	6	11	3						
MED							182	238	U R 304			356	328	312	314	276	U 240	184						
U Q								240					348	U R 348		276	U 248	192						
L Q								236					310	308		276	U A 236	U A 168						

SEP.2008 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	J A 24	J A 22	19	20	J A 26	J A 17	22	30	J A 44	J A 63	J A 57	J A 46	G 27	40	J A 43	J A 35	30	J A 29	J A 42	J A 33	J A 29	J A 20	J A 30	J A 23
2	J A 18	19	20	E B 15	E B 15	19	24	J A 43	J A 36	G 27	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	J A 90	J A 140	J A 50	J A 44	J A 54	J A 47
4	J A 28	J A 39	J A 31	J A 22	J A 37	J A 25	J A 28	J A 37	J A 82	J A 102	J A 81	J A 48	42	42	J A 41	J A 40	J A 81	J A 80	J A 50	J A 65	J A 72	J A 61	J A 53	J A 51
5	J A 24	J A 30	J A 22	J A 22	J A 46	J A 17	J A 47	J A 64	J A 61	J A 88	J A 64	J A 151	C	J A 132	J A 45	J A 32	J A 37	J A 70	J A 73	J A 46	J A 25	J A 22	E B 14	E B 14
6	J A 33	J A 17	J A 24	19	20	19	23	29	34	36	J A 45	G 31	37	37	39	33	J A 30	J A 29	E B 15	E B 15	E B 15	J A 29	J A 37	J A 20
7	E B 16	E B 15	E B 14	E B 14	J A 17	J A 16	J A 30	32	G 28	G 28	G 29	37	43	36	36	J A 40	32	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	J A 34	J A 44	J A 23	J A 20	22	19
9	E B 15	E B 15	E B 16	21	E B 15	19	24	27	34	G 25	G 26	38	G 28	40	40	J A 40	G 26	J A 52	J A 23	J A 36	J A 46	J A 34	J A 44	J A 34
10	19	E B 14	E B 15	E B 15	E B 15	20	J A 24	27	J A 39	G 29	E C 38	C	C	C	C	C	J A 108	J A 25	J A 29	J A 36	J A 27	J A 54	J A 48	J A 47
11	J A 59	J A 41	J A 45	J A 45	J A 29	J A 45	J A 31	J A 38	G 23	G 26	37	C	38	G 24	J A 37	32	34	J A 30	J A 36	J A 72	J A 26	J A 20	22	22
12	J A 21	E B 15	E B 15	20	20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	39	33	G 26	C	C	26	J A 20	J A 27	J A 43	J A 58	22	J A 25
19	J A 27	22	20	E B 16	20	18	21	28	G 26	28	G	G 26	38	G 26	G 26	G 24	28	22	22	E B 15	J A 27	J A 24	J A 23	E B 14
20	J A 33	J A 43	J A 21	21	E B 16	E B 15	J A 35	29	G 23	34	36	J A 37	J A 35	37	35	G 23	30	24	J A 16	J A 23	J A 39	J A 25	E B 15	19
21	E B 15	E B 15	E B 15	E B 14	E B 15	E B 14	21	28	J A 39	35	J A 48	37	39	36	35	31	J A 29	22	J A 24	J A 29	J A 30	J A 28	J A 44	J A 22
22	J A 20	J A 23	J A 27	20	18	E B 15	20	J A 47	31	G 27	E C 40	G 26	G 27	G 29	26	G 20	G 22	23	J A 20	E B 15	J A 23	J A 24	J A 17	E B 15
23	E B 15	E B 15	E B 14	E B 14	20	21	20	J A 29	J A 37	J A 34	G 31	G 31	G 27	G 27	G 25	33	34	J A 34	J A 30	J A 28	J A 28	J A 30	J A 36	J A 66
24	J A 30	19	J A 32	J A 21	J A 22	20	20	26	G 25	G 27	37	40	G 30	G 24	35	32	28	22	E B 15	E B 15	E B 15	21	19	20
25	19	20	E B 15	18	E B 15	E B 15	21	34	G 23	38	37	36	G 28	38	36	37	30	J A 34	E B 14	E B 15	22	J A 24	J A 22	J A 26
26	J A 19	J A 22	E B 15	E B 15	E B 15	E B 15	19	27	32	J A 39	35	34	39	G 30	G 26	32	29	J A 36	J A 78	J A 52	J A 46	J A 24	J A 22	J A 24
27	J A 21	E B 16	J A 21	E B 15	E B 15	E B 16	19	J A 30	33	G 27	G 24	G 28	G 22	G 21	36	32	29	J A 32	J A 24	21	J A 32	22	J A 21	J A 20
28	19	20	E B 15	E B 15	E B 14	22	22	28	34	36	37	G 28	37	G 25	36	35	29	J A 27	J A 19	E B 15	E B 15	J A 23	20	E B 16
29	E B 15	E B 15	E B 15	E B 14	E B 13	18	23	29	J A 36	35	36	G 30	G 29	J A 48	J A 76	34	32	J A 33	J A 42	J A 38	J A 36	J A 34	J A 22	J A 20
30	J A 17	E B 15	E B 15	J A 22	E B 15	E B 14	20	30	34	J A 40	J A 40	36	36	J A 40	G 22	G 20	30	24	J A 22	36	J A 32	J A 30	J A 29	J A 31
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	22	22	22	22	22	21	21	21	21	21	20	18	19	20	20	19	20	20	22	22	22	22	22	22
MED	J A 20	19	18	18	16	18	22	29	34	34	36	36	36	36	36	32	30	J A 29	J A 24	J A 31	J A 28	J A 24	J A 22	J A 22
U Q	J A 27	J A 22	J A 22	J A 21	J A 20	20	J A 26	J A 36	J A 38	J A 38	J A 42	J A 38	39	40	J A 40	J A 35	33	J A 34	J A 42	J A 44	J A 39	J A 34	J A 37	J A 31
L Q	E B 17	E B 15	E B 15	E B 15	E B 15	E B 15	20	28	G 27	G 27	G	G 30	G 28	G 26	G 26	G 31	29	24	20	E B 15	23	J A 22	21	E B 19

SEP. 2008 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 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	18	E B 15	E B 15	E B 14	E B 14	E B 15	20	28	38	43	34	39	G 26	40	39	31	28	26	29	28	E B 16	16	18	E B 15
2	16	E B 15	E B 15	E B 15	E B 15	E B 15	21	30	32	G 25	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A A 90	E B 16	18	E B 15	E B 15	A A 47
4	19	19	16	E B 15	E B 15	E B 15	20	30	A A 82	40	A A 81	41	41	42	39	34	54	A A 80	46	24	40	E B 15	29	E B 15
5	E B 15	E B 15	E B 15	16	28	E B 15	25	A A 64	A A 61	A A 88	56	A A 151	C	A A 132	40	31	29	A A 70	A A 73	33	17	18	E B 14	E B 14
6	A A 33	15	16	E B 15	17	E B 15	22	27	34	35	43	G 30	36	36	36	30	27	24	E B 15	E B 15	E B 15	17	28	E B 16
7	E B 16	E B 15	E B 14	E B 14	E B 15	E B 15	26	31	G 28	G 24	G 28	36	42	35	33	33	29	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	32	25	17	15	18	E B 15
9	E B 15	E B 15	E B 16	E B 16	E B 15	E B 16	23	26	33	G 25	G 26	36	G 27	38	34	32	G 23	23	E B 15	18	16	20	16	17
10	E B 14	E B 14	E B 15	E B 15	E B 15	E B 15	20	25	36	G E 29	C 38	C	C	C	C	C	36	21	17	28	17	18	E B 16	19
11	17	17	A A 45	A A 45	20	A A 45	24	33	G 23	G 25	35	C	35	G 24	32	30	30	23	32	20	E B 15	E B 15	E B 16	E B 15
12	16	E B 15	E B 15	E B 15	E B 15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	37	32	G 25	C	C	25	16	E B 16	16	19	E B 14	E B 15
19	E B 16	E B 14	E B 15	E B 16	E B 15	E B 15	19	26	G 25	G 28	G	G 26	38	G 25	G 24	G 23	27	20	E B 14	E B 15	17	16	E B 16	E B 14
20	20	24	E B 15	E B 14	E B 16	E B 15	30	27	G 23	33	35	35	34	36	31	G 22	28	20	E B 15	E B 15	21	17	E B 15	E B 16
21	E B 15	E B 15	E B 15	E B 14	E B 15	E B 14	18	27	34	33	46	35	37	34	32	29	G 22	21	18	18	19	19	20	E B 15
22	16	E B 15	E B 14	E B 14	E B 16	E B 15	17	39	30	G E 26	C 40	G 25	G 26	G 27	G 25	G 20	G 21	21	17	E B 15	17	17	16	E B 15
23	E B 15	E B 15	E B 14	E B 14	E B 15	E B 15	18	G 23	32	31	G 31	G 31	G 27	G 27	G 24	32	31	31	23	21	16	18	15	15
24	17	E B 15	18	E B 15	E B 15	E B 15	18	26	G 24	G 26	34	38	G 28	G 24	34	31	26	20	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15
25	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	20	33	G 22	36	34	34	G 27	36	35	35	28	29	E B 14	E B 15	E B 15	E B 15	17	19
26	16	E B 15	E B 15	E B 15	E B 15	E B 15	18	26	30	32	34	32	39	G 26	G 25	31	28	22	19	17	17	18	E B 15	16
27	E B 15	E B 16	E B 15	E B 15	E B 15	E B 16	18	26	32	G 26	G 22	G 27	G 22	G 20	34	31	28	24	19	E B 15	19	16	16	16
28	E B 15	E B 15	E B 15	E B 15	E B 14	E B 16	20	27	31	33	35	G 27	37	G 24	36	33	27	20	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16
29	E B 15	E B 15	E B 15	E B 14	E B 13	E B 16	20	28	33	34	32	G 29	G 27	40	A A 76	31	30	27	37	33	16	E B 15	17	17
30	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	E B 20	26	30	36	37	35	35	37	G 20	G 19	29	21	16	29	25	23	16	E B 15
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	22	22	22	22	22	21	21	21	21	21	20	18	19	20	20	19	20	20	22	22	22	22	22	22
MED	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	20	27	32	32	34	34	35	34	34	31	28	23	18	18	17	16	16	E B 15
U Q	17	15	15	E B 15	15	E B 16	22	30	34	36	39	36	37	38	36	32	30	26	32	25	18	18	17	16
L Q	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	18	26	G 26	G 26	G	G 29	G 27	G 26	G 25	G 29	27	21	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15

SEP. 2008 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

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

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

SEP.2008 fmin (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 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	324	319	320	342	324	338	321	400	379	393	369	338	316	348	309	323	316	351	340	349	326	337	314	355
2	337	350	332	323	327	336	346	377	382	390	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	317	F	F	381	A
4	326	326	302	331	316	322	358	363	A	331	A	S 317	305	322	306	315	334	A	334	313	314	F	F	F
5	311	306	321	331	329	332	319	A	A	A	347	A	C	A	330	334	366	A	A	328	316	343	330	328
6	A	F	F	351	383	342	380	373	373	388	364	343	321	307	329	320	340	349	352	354	367	315	323	325
7	309	F	320	327	334	323	344	381	362	355	359	369	376	300	307	324	337	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	315	354	389	338	314	333
9	313	327	329	328	336	349	363	386	354	373	345	339	355	336	333	344	347	366	354	337	344	322	340	342
10	343	340	328	325	356	350	318	349	374	377	367	C	C	C	C	C	326	329	350	357	F	F	360	314
11	326	343	A	A	351	A	375	344	377	374	334	C	334	336	337	338	313	338	334	337	377	373	339	326
12	336	301	328	347	329	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	333	340	331	C	C	333	335	334	339	F	332	332
19	347	317	342	341	329	348	372	380	394	370	355	340	337	335	342	345	356	364	339	347	357	336	320	298
20	330	321	338	341	309	323	359	388	379	336	379	348	356	328	360	355	360	348	337	339	337	370	339	297
21	313	320	333	339	335	322	403	397	379	348	347	350	363	317	299	339	339	330	369	392	326	342	338	324
22	320	341	317	336	311	334	402	356	356	373	365	339	322	339	346	342	362	359	352	339	355	331	319	330
23	336	327	341	328	333	333	360	369	399	394	380	350	362	350	359	355	338	345	351	383	328	354	346	332
24	340	329	322	318	328	334	373	386	391	379	354	350	351	352	364	324	341	354	370	387	385	321	311	313
25	312	329	334	335	327	370	396	385	402	362	335	330	343	346	328	362	372	378	355	349	344	324	328	333
26	343	350	330	326	353	338	383	368	370	384	365	335	360	344	326	360	350	362	366	368	342	323	302	316
27	325	313	316	327	342	358	401	396	386	366	343	388	349	369	322	339	345	362	360	406	392	328	311	316
28	F	338	318	332	328	351	369	391	381	355	393	351	388	363	328	329	357	360	359	370	319	321	334	317
29	315	319	339	377	353	352	387	375	382	410	375	359	342	377	A	347	326	350	362	387	339	321	332	325
30	321	324	347	350	343	323	369	394	394	388	340	352	367	354	336	340	361	353	356	374	323	305	F	F
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	20	20	20	21	22	20	21	20	19	20	19	17	19	19	19	19	20	18	20	22	20	18	20	19
MED	326	326	328	332	331	337	369	380	379	374	359	348	349	340	330	339	343	352	352	352	340	330	331	325
U Q	336	339	336	342	343	350	385	390	391	388	369	352	362	352	342	347	358	362	360	374	362	342	339	332
L Q	314	319	320	327	327	328	352	368	373	358	345	338	333	328	322	324	336	345	338	337	326	321	316	316

SEP. 2008 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 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							U L 373	U L 400	A	A	419	U L 434	451	A	A	382	U L 385	L						
2							U L 377	L	401	U L 448	C	C	C	C	C	C	C	C						
3							C	C	C	C	C	C	C	C	C	C	C	C						
4								L	A	A	A	U L 368	A	A	A	U L 378	A	A						
5								A	A	A	A	A	C	A	A	373	L	A						
6								U L 378	L	U L 397	A	U L 406	U L 401	U L 393	392	U L 378	L							
7								A	U L 400	U L 389	U L 394	U L 422	A	U L 417	U L 396	U L 370	U L 359	C						
8							C	C	C	C	C	C	C	C	C	C	C	C						
9								L	U L 426	U L 404	U L 421	U L 387	U L 393	A	U L 398	U L 411	384	L						
10								L	A	U L 438	C	C	C	C	C	C	A	L						
11								A	396	U L 394	L	C	U L 411	U L 427	U L 399	U L 381	U L 366	L						
12							C	C	C	C	C	C	C	C	C	C	C	C						
13							C	C	C	C	C	C	C	C	C	C	C	C						
14							C	C	C	C	C	C	C	C	C	C	C	C						
15							C	C	C	C	C	C	C	C	C	C	C	C						
16							C	C	C	C	C	C	C	C	C	C	C	C						
17							C	C	C	C	C	C	C	C	C	C	C	C						
18							C	C	C	C	C	C	U L 432	U L 442	U L 386	C	C	L						
19								L	L	U L 412	U L 436	411	392	U L 398	U L 407	U L 366	L							
20								L	L	U L 382	U L 417	426	407	U L 421	400	390	A							
21									L	416	A	432	452	U L 385	U L 380	U L 386	U L 374	L						
22								A	U L 371	U L 392	C	419	U L 406	U L 393	U L 386	L	L							
23									L	L	426	U L 404	404	412	L	A	L	A						
24								L	L	428	U L 429	407	429	U L 416	U L 396	U L 373	U L 364							
25								A		U L 405	U L 431	450	U L 447	U L 375	U L 386	A	L							
26									379	400	430	U L 438	U L 415	U L 384	U L 368	U L 371	L							
27									L	U L 423	U L 439	418	U L 402	U L 421	U L 360	U L 360	L							
28									L	U L 406	418	436	A	U L 449	U L 393	A	L							
29								L	L	A	U L 405	U L 433	U L 434	A	A	L	U L 371	A						
30									L	L	U L 422	U L 423	440	U L 418	U L 425		A							
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							2	2	6	15	13	17	16	15	15	13	7							
MED							U L 375	U L 389	398	U L 405	U L 422	U L 422	U L 413	U L 416	U L 393	U L 378	U L 371							
U Q									401	U L 423	U L 430	U L 434	437	U L 421	U L 399	384	384							
L Q									379	U L 394	U L 418	U L 406	U L 403	U L 393	U L 386	U L 370	U L 364							

SEP. 2008 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP.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							352	226	236	226	274	326	356	290	362	308	312	264						
2							284	248	228	234	C	C	C	C	C	C	C	C						
3							C	C	C	C	C	C	C	C	C	C	C	C						
4								258	A	310	A	314	334	288	312	290	E A 270	A						
5								A	A	A	274	A	C	A	298	278	252	A						
6								250	258	238	E A 262	284	356	358	318	302	272							
7								232	262	268	268	254	256	348	338	318	288	C						
8							C	C	C	C	C	C	C	C	C	C	C	C						
9								232	268	240	286	308	260	318	308	292	276	248						
10								254	238	234	258	C	C	C	C	C	E A 310	278						
11								286	238	246	254	C	328	310	304	290	330	274						
12							C	C	C	C	C	C	C	C	C	C	C	C						
13							C	C	C	C	C	C	C	C	C	C	C	C						
14							C	C	C	C	C	C	C	C	C	C	C	C						
15							C	C	C	C	C	C	C	C	C	C	C	C						
16							C	C	C	C	C	C	C	C	C	C	C	C						
17							C	C	C	C	C	C	C	C	C	C	C	C						
18							C	C	C	C	C	C	308	302	306	C	C	280						
19								236	228	258	278	294	290	288	308	286	264							
20								228	226	288	232	284	274	320	266	272	242							
21									256	284	284	270	270	304	372	294	268	260						
22								E A 266	272	244	252	294	330	282	276	276	256							
23									220	228	248	284	270	272	264	254	280	240						
24								222	220	248	282	274	262	280	276	312	280							
25								224		254	290	324	292	296	322	258	260							
26									244	234	256	292	270	290	294	254	274							
27									228	246	312	244	290	260	316	300	270							
28									242	252	236	274	240	260	314	250	274							
29								248	232	212	258	270	304	244	A	286	298	250						
30									226	228	314	278	258	280	296		248							
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							2	14	18	20	19	17	19	19	19	18	20	8						
MED							318	238	237	245	268	284	290	290	308	288	272	262						
U Q								254	256	256	284	301	328	310	318	300	284	276						
L Q								228	228	234	254	272	262	280	294	272	262	249						

SEP.2008 h'F2 (KM)

IONOSPHERIC DATA STATION Kokubunji

SEP. 2008 h'F (KM)

135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E A 262	E B 256	E B 256	E B 248	E B 260	236	212	204	A	A	182	198	168	A	A	226	210	214	E A 236	218	218	222	E A 256	222
2	226	214	228	E B 252	E B 254	E B 240	214	218	198	H 172	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	E B 244	234	212	198	A
4	E A 256	232	E A 274	E B 234	E B 264	E B 254	204	216	A	A	A	E A 242	A	A	A	210	A	A	E A 296	E A 244	E A 322	210	E A 304	E B 246
5	240	E B 266	E B 252	E A 240	E A 296	E B 242	216	A	A	A	A	A	C	A	A	216	218	A	A	E A 262	E A 234	E A 240	234	218
6	A	226	234	218	204	E B 248	204	204	204	E A 240	A	196	192	220	220	204	206	238	220	212	204	E A 270	E A 340	E B 254
7	E B 262	232	E B 246	E B 246	E B 248	E B 256	236	A	206	200	200	194	A	182	194	214	212	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	E A 258	224	190	212	E A 244	236
9	238	236	E B 240	232	214	218	218	200	198	208	192	200	198	A	194	192	212	220	224	224	214	E A 260	246	226
10	240	226	E B 244	E B 250	212	218	204	196	A	192	C	C	C	C	C	C	A	214	232	216	E A 262	214	204	E A 262
11	E A 236	E A 242	A	A	E A 244	A	214	A	196	194	196	C	188	184	200	206	218	218	E A 242	234	202	188	206	E B 252
12	E A 254	E B 260	E B 260	E B 242	238	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	182	H 170	198	C	C	E A 250	230	230	220	E A 258	216	230
19	204	220	224	216	E B 240	222	212	212	206	198	188	192	224	H 182	188	198	224	222	210	222	210	224	212	E B 268
20	E A 272	E A 308	230	236	E B 254	E B 270	232	210	198	202	192	172	204	188	186	206	A	208	222	218	222	216	204	E B 266
21	E B 272	E B 252	E B 236	208	E B 248	E B 250	200	198	222	200	A	H 166	210	198	206	212	218	214	210	200	E A 250	228	E A 260	E B 258
22	E A 272	E A 234	E B 256	E B 266	E B 264	E B 268	190	A	198	196	C	200	218	202	194	198	210	218	218	214	220	234	E A 238	E B 246
23	224	224	216	E B 234	E B 244	E B 256	212	208	202	192	174	194	192	186	186	A	E A 242	A	220	206	226	218	218	230
24	E A 242	E B 246	E A 276	E B 258	E B 244	E B 248	206	198	196	184	180	214	180	176	166	204	222	220	210	196	180	212	E B 268	E B 270
25	E B 264	E B 262	E B 250	E B 250	E B 250	214	192	A	212	192	192	176	164	238	192	A	194	216	202	228	218	E B 236	228	E A 236
26	E A 242	E B 244	E B 240	E B 250	E B 236	E B 244	206	210	210	H 186	186	184	190	206	206	186	212	230	212	212	206	E A 248	E B 276	E A 270
27	E B 262	E B 258	E B 268	E B 260	E B 252	214	196	196	198	184	H 170	180	200	H 176	206	240	224	230	212	192	200	E B 248	E A 294	E A 268
28	E B 254	E B 248	E B 238	E B 242	E B 256	E B 264	222	218	208	200	196	180	A	172	214	A	230	226	206	194	206	E B 240	E B 238	E B 240
29	E B 256	E B 264	E B 242	210	E B 250	E B 250	208	214	216	A	188	178	176	A	A	226	222	A	228	208	E A 238	E B 256	216	E A 262
30	E B 262	E B 258	216	212	220	E B 254	214	208	206	198	198	204	180	206	190	204	A	228	208	220	E A 274	E A 282	E A 274	E B 272
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	22	21	21	22	20	21	16	17	17	14	17	16	15	16	16	16	16	20	22	22	22	22	21
MED	E 254	E 245	E B 242	E B 242	E B 248	E B 248	212	208	204	195	190	193	191	186	194	206	216	220	216	216	212	U 215	U 221	E 252
U Q	E B 262	E B 258	E B 256	E B 250	E B 254	E B 255	215	213	209	200	196	200	202	206	206	215	223	229	E A 231	228	E A 234	E A 248	E A 268	E B 267
L Q	239	232	232	225	238	229	204	199	198	189	182	179	180	176	189	201	211	215	210	208	206	214	216	233

SEP. 2008 h'F (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

SEP. 2008 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

SEP. 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	92	92	88	94	102	114	106	102	102	100	100	100	102	146	90	94	128	94	90	90	90	88	92	90
2	90	88	90	B	B	122	112	102	104	100	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	100	102	104	106	94	94
4	94	94	98	104	100	106	108	106	96	100	100	102	98	94	96	96	110	102	102	102	102	106	104	102
5	106	102	102	102	100	110	106	104	104	102	98	96	C	98	96	98	96	92	88	88	90	90	B	B
6	100	98	102	96	94	102	122	140	128	114	104	102	112	108	116	100	106	106	B	B	B	104	106	100
7	B	B	B	B	90	92	126	124	102	102	110	120	118	118	112	112	116	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	108	108	96	92	90	88
9	B	B	B	102	B	102	126	136	120	100	98	110	94	86	90	90	94	110	114	104	106	102	102	100
10	94	B	B	B	B	112	106	104	100	102	C	C	C	C	C	C	102	104	100	98	106	106	104	106
11	106	104	100	96	98	92	96	98	98	110	100	C	96	98	94	114	124	98	100	100	96	104	98	96
12	96	B	B	96	96	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	158	110	102	C	C	132	108	98	104	98	104	106
19	118	148	94	B	96	116	116	132	104	100	G	100	148	102	104	102	154	134	110	B	104	100	114	B
20	94	96	98	114	B	B	118	110	108	104	106	100	90	98	120	102	116	112	114	106	106	104	B	98
21	B	B	B	B	B	B	120	118	102	104	102	104	146	142	114	126	98	114	112	106	108	104	102	102
22	98	96	94	92	90	B	118	102	104	100	C	94	94	94	100	94	98	132	96	B	94	96	104	B
23	B	B	B	B	94	100	112	108	102	98	96	102	96	96	96	142	116	110	110	108	110	112	104	106
24	100	96	98	96	96	98	106	106	102	102	96	146	96	98	112	144	142	128	B	B	B	94	96	90
25	90	90	B	88	B	B	140	126	100	120	122	112	96	134	136	120	122	106	B	B	104	104	106	100
26	102	92	B	B	B	B	136	144	120	106	102	102	150	104	102	150	126	92	96	96	100	98	98	98
27	100	B	112	B	B	B	110	108	104	104	102	100	96	94	142	126	120	110	104	102	102	92	88	94
28	94	92	B	B	B	102	134	142	124	108	102	102	144	104	156	148	136	116	112	B	B	100	98	B
29	B	B	B	B	B	138	124	124	104	100	98	102	102	116	104	120	126	122	108	106	106	106	100	96
30	96	B	B	98	B	B	142	118	118	102	102	100	106	102	100	102	142	130	126	108	116	112	108	104
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	17	13	11	12	11	14	21	21	21	21	17	18	19	20	20	19	20	20	19	16	19	22	20	18
MED	96	96	98	96	96	104	118	110	104	102	102	102	102	102	103	112	118	110	108	102	104	103	102	99
U Q	101	100	102	102	100	114	126	129	113	105	103	104	144	113	115	126	127	125	112	106	106	106	104	102
L Q	94	92	94	95	94	100	107	104	102	100	98	100	96	97	96	98	104	103	100	98	96	96	97	94

SEP. 2008 h'Es (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

SEP. 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

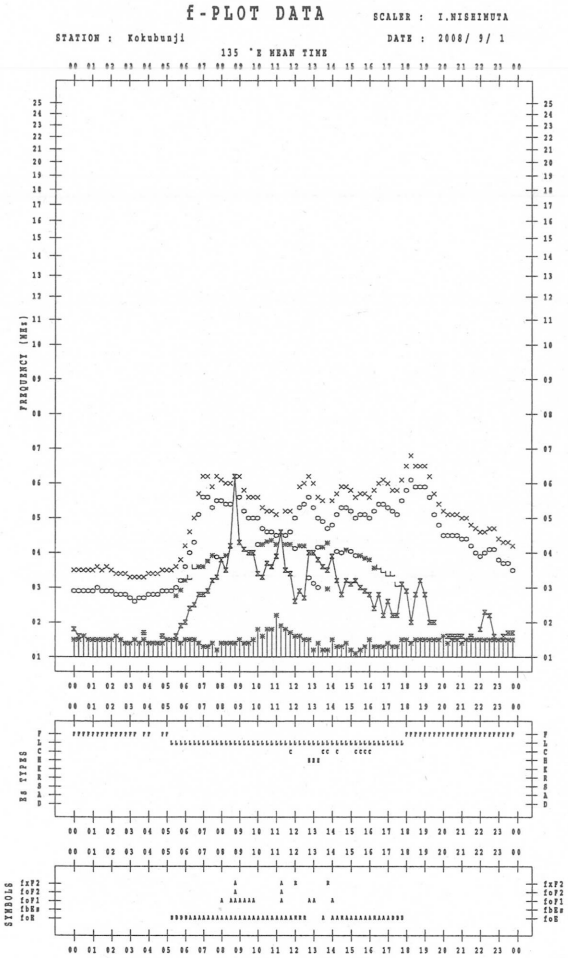
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F5	F2	F2	F1	F2	F2	L3	L2	L2	L3	L2	L2	L2	HL12	LL22	L2	CL12	L3	F5	F5	F3	F3	F3	F4
2	F3	F2	F2			F1	C3	L2	L2	L2														
3																			F4	F3	F4	F3	F3	F4
4	F3	F3	F3	F2	F2	F3	L3	L3	L3	L3	L3	L2	L2	L2	L2	L2	CL32	L3	F4	F4	F7	F3	F4	F3
5	F2	F2	F2	F2	F3	F2	L3	L4	L3	L3	L2	L2		L3	L2	L2	L3	L4	F4	F4	F2	F2		
6	F6	F3	F3	F2	F3	F2	C2	CL22	CL22	CL22	L2	L2	CL11	CL11	CL11	L2	L2	L2				F3	F6	F2
7					F1	F1	C3	CL21	L1	L2	L2	CL12	CL12	CL12	CL11	CL22	CL12							
8																			F4	F3	F3	F4	F2	F2
9				F3		F2	CL32	CL22	CL22	L2	L2	CL22	L3	L3	L3	L3	L3	CL22	F2	F4	F2	F5	F3	F3
10	F2					F1	L3	L3	L2	L2							L3	L2	F3	F4	F4	F3	F2	F4
11	F4	F3	F4	F4	F5	F5	L5	L3	L2	L2	L2		L2	L2	L3	CL12	CL12	L2	F3	F2	F2	F3	F2	F2
12	F2			F2	F4																			
13																								
14																								
15																								
16																								
17																								
18													HL11	CL12	L2			HL22	F3	F2	F3	F3	F1	F2
19	F2	F1	F2		F2	F1	C2	CL22	L2	L2		L2	HL12	L2	L2	L2	HL11	C2	F2		F3	F3	F2	
20	F3	F4	F3	F2			C3	L3	L2	L2	L2	L2	L2	L2	CL12	L2	CL12	CL12	F2	F3	F6	F2		F2
21							C2	C2	L2	L2	L3	L2	HL12	HL12	CL12	CL12	L3	CL22	F3	F3	F3	F4	F5	F2
22	F5	F4	F3	F2	F2		C2	L4	L2	L2		L2	L2	L2	L2	L2	L2	CL12	F3		F2	F3	F1	
23					F2	F2	C2	L2	L2	L2	L2	L2	L2	L2	L2	HL22	CL32	L5	F4	F3	F2	F2	F2	F3
24	F3	F2	F3	F2	F4	F1	L3	L2	L2	L2	L2	HL12	L2	L2	CL11	HL11	HL21	C2				F1	F1	F1
25	F2	F2		F1			H3	C2	L2	CL12	CL11	CL12	L2	CL11	CL11	CL21	CL21	L5			F1	F2	F2	F3
26	F3	F1					H2	H2	C2	L2	L2	L2	HL12	L2	L2	HL22	CL22	L3	F4	F3	F3	F3	F2	F2
27	F3		F1				C2	L3	L2	L2	L2	L2	L2	L2	HL12	CL22	CL22	C3	F5	F3	F2	F1	F2	F1
28	F1	F1				F2	H2	H2	CL21	L2	L2	L2	HL11	L2	HL11	HL21	HL21	C3	F3			F2	F2	
29						F1	C3	C2	L3	L2	L2	L2	L1	CL22	L3	CL22	CL22	C4	F6	F7	F4	F5	F3	F3
30	F2			F1			H2	C2	CL11	L2	L2	L2	L2	L2	L2	L2	HL32	CL32	FF21	F3	F7	F5	F5	F3
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT																								
MED																								
U Q																								
L Q																								

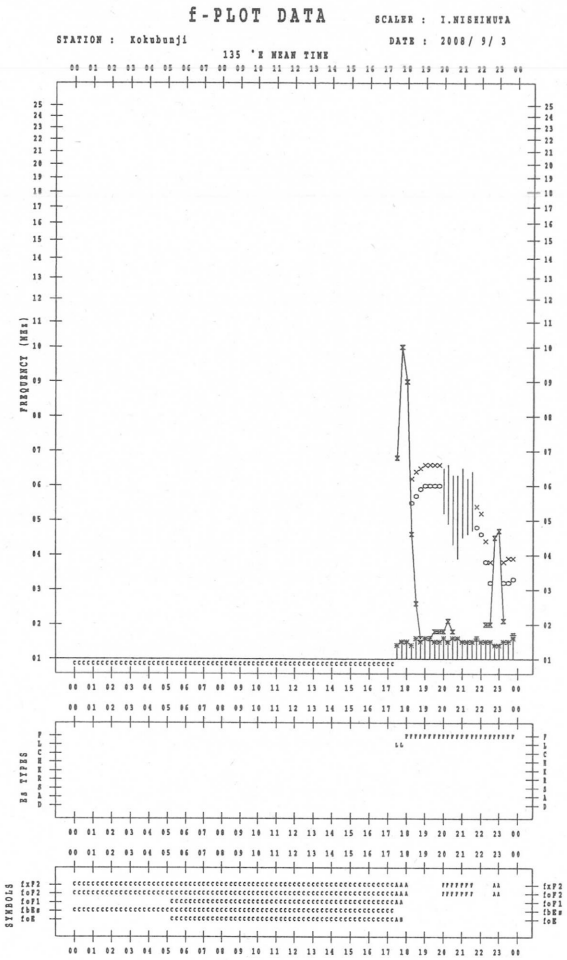
SEP. 2008 TYPES OF Es

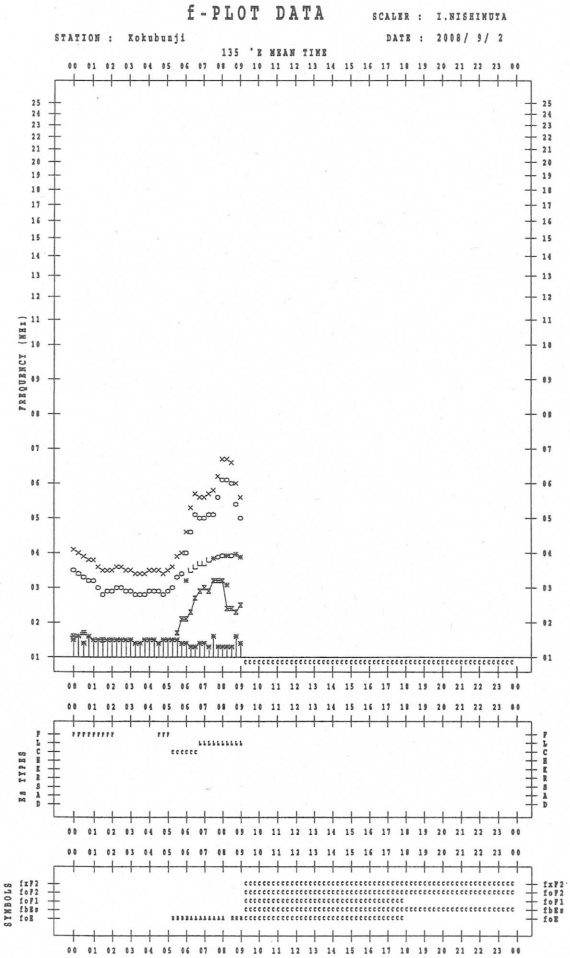
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

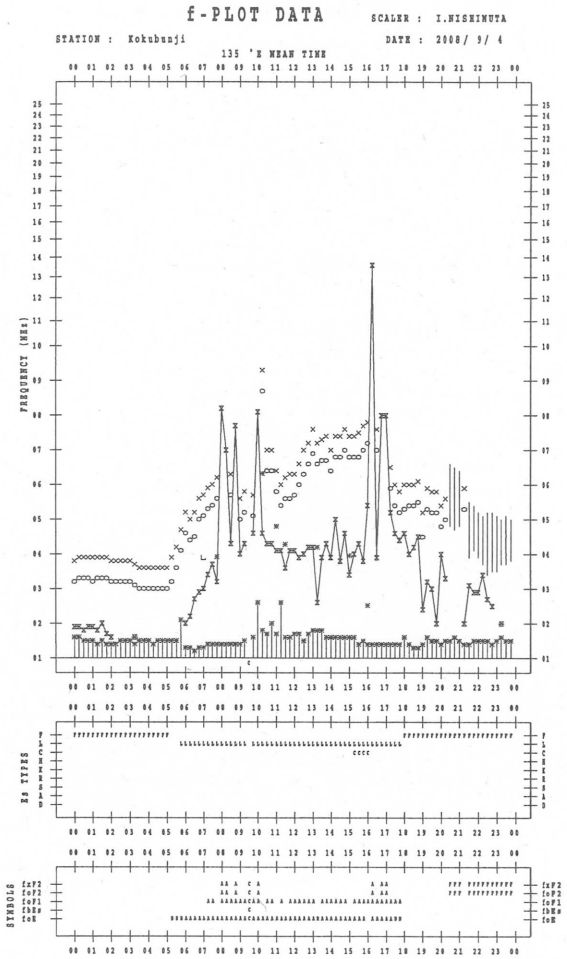
f-PLOTS OF IONOSPHERIC DATA

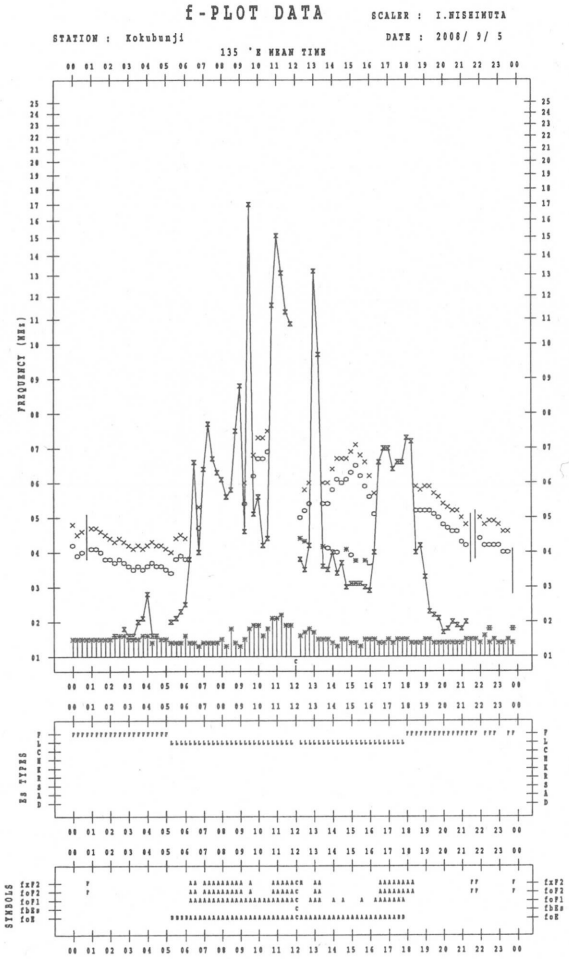
KEY OF f-PLOT	
	SPREAD
	foF2, foF1, foE
	fxF2
	DOUBTFUL foF2, foF1, foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN

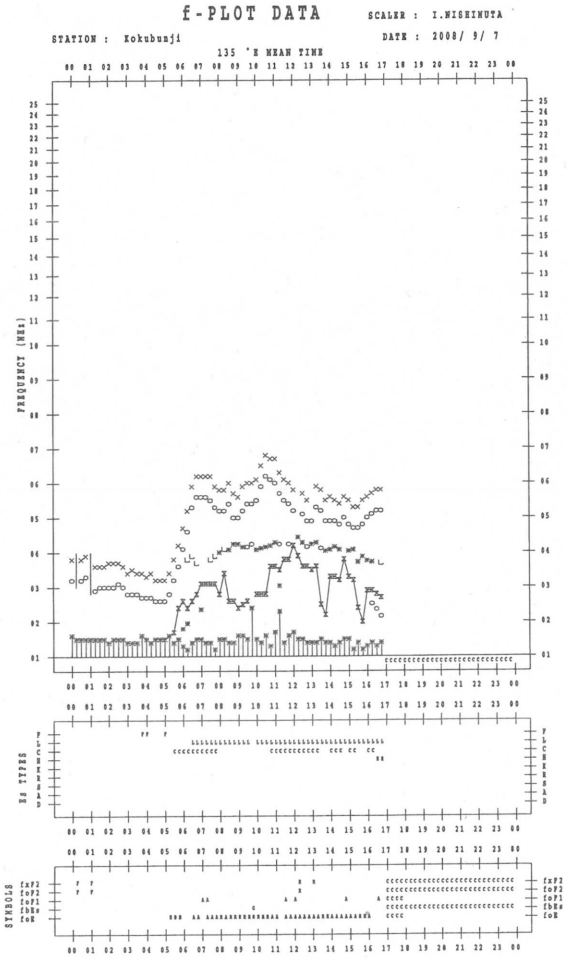

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

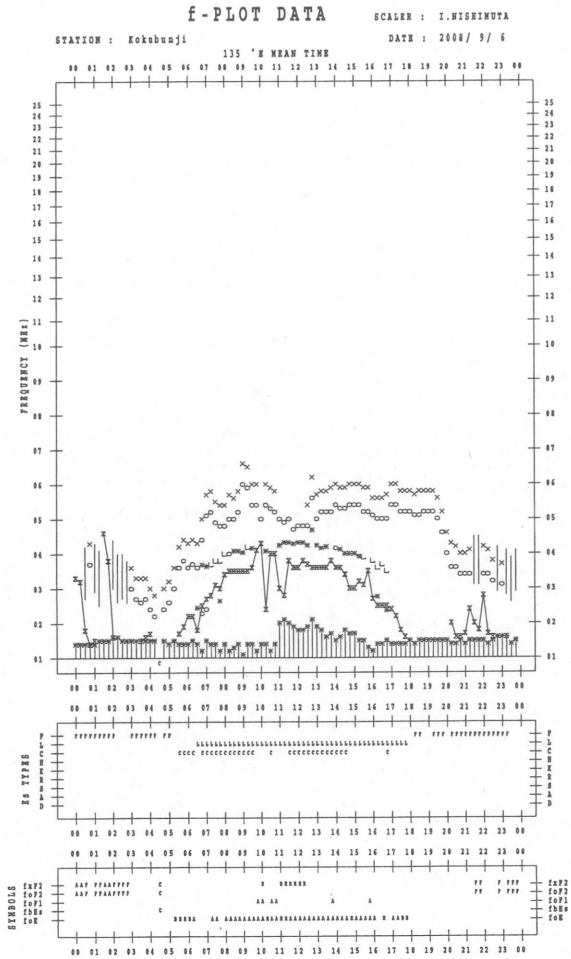

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

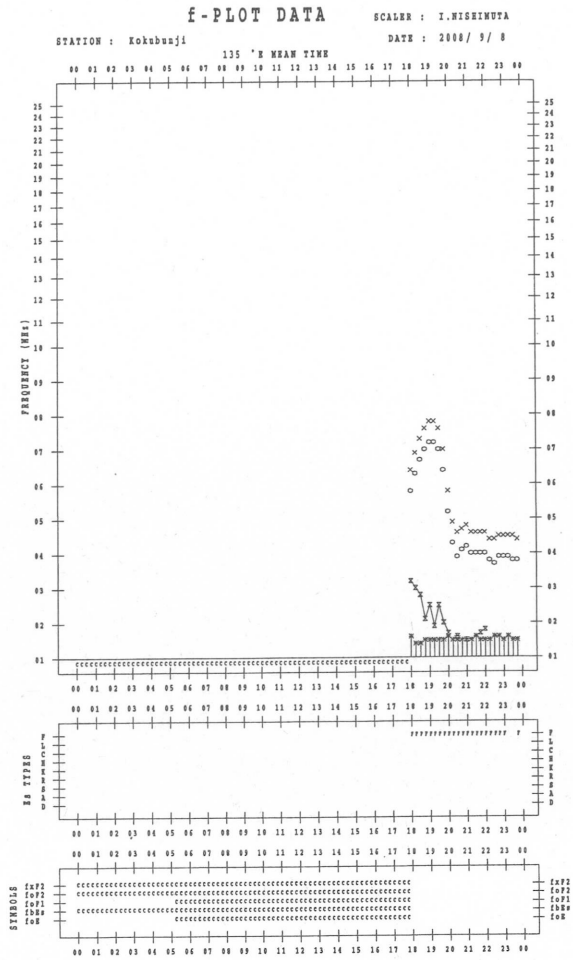

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

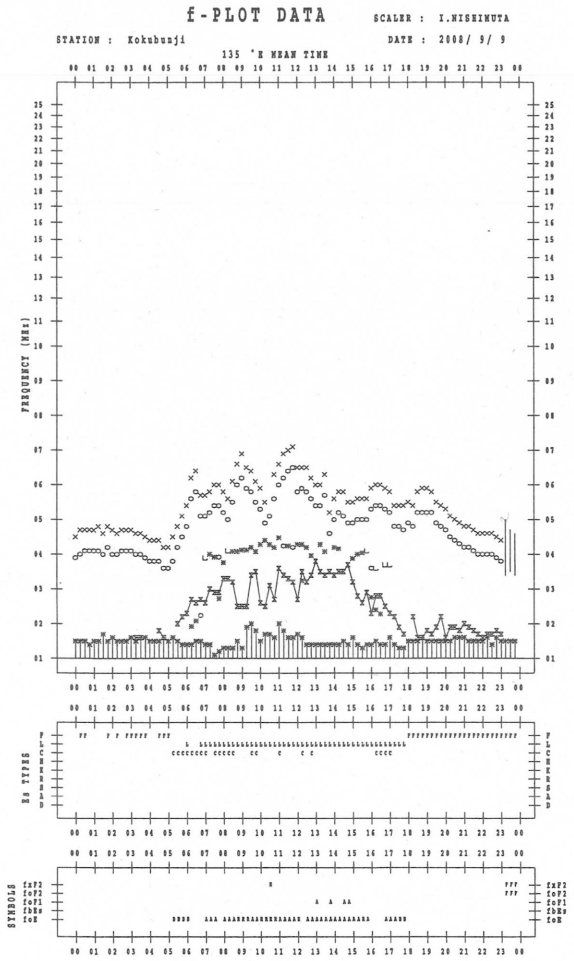

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

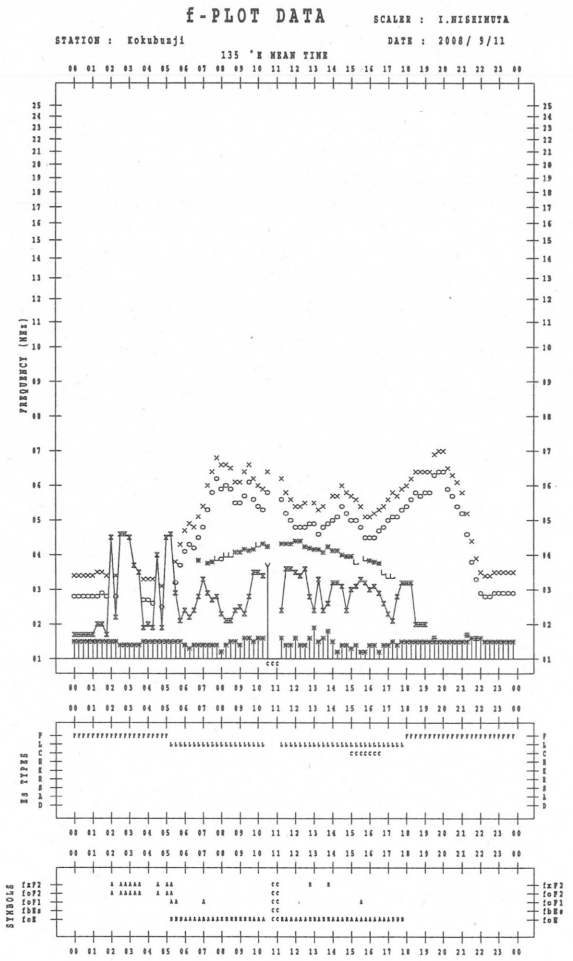

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

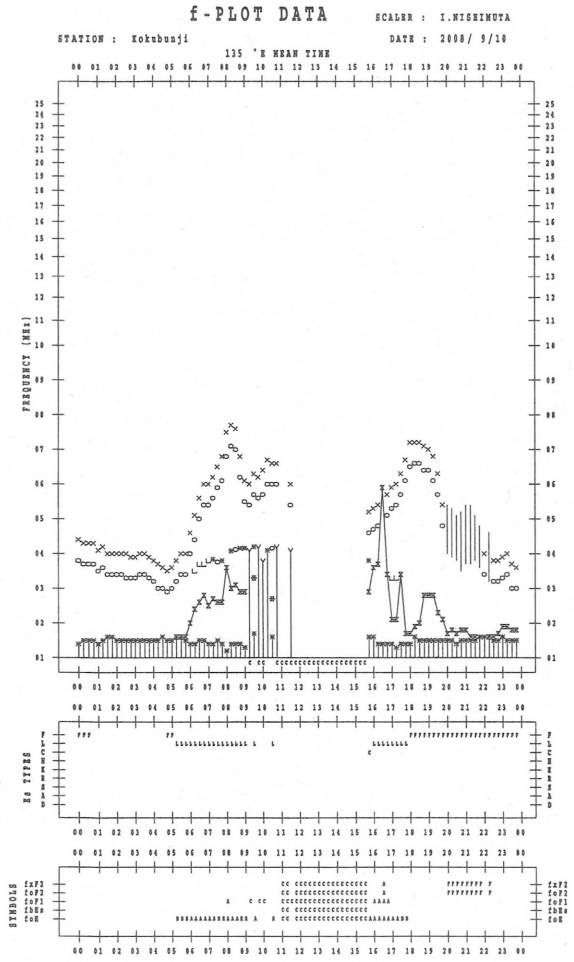

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

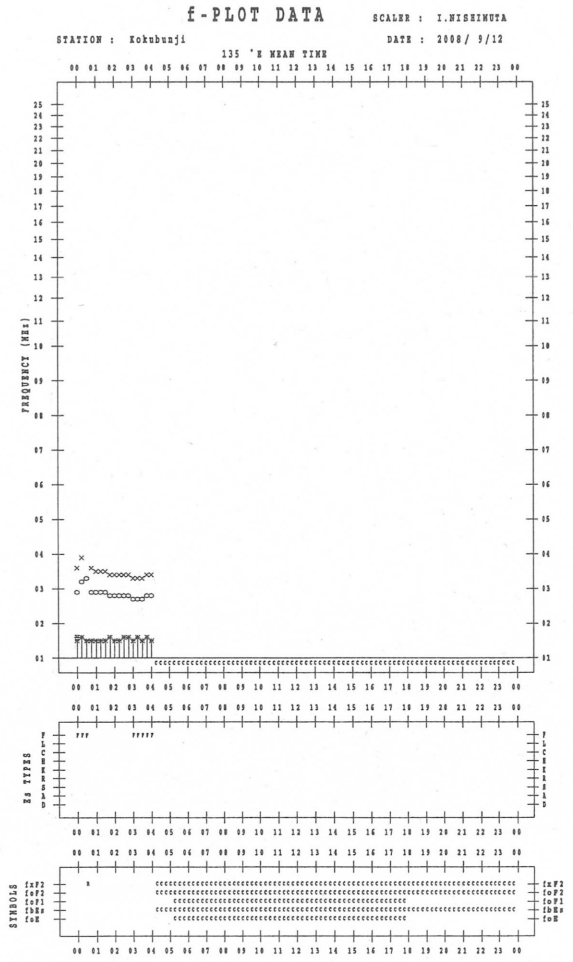

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

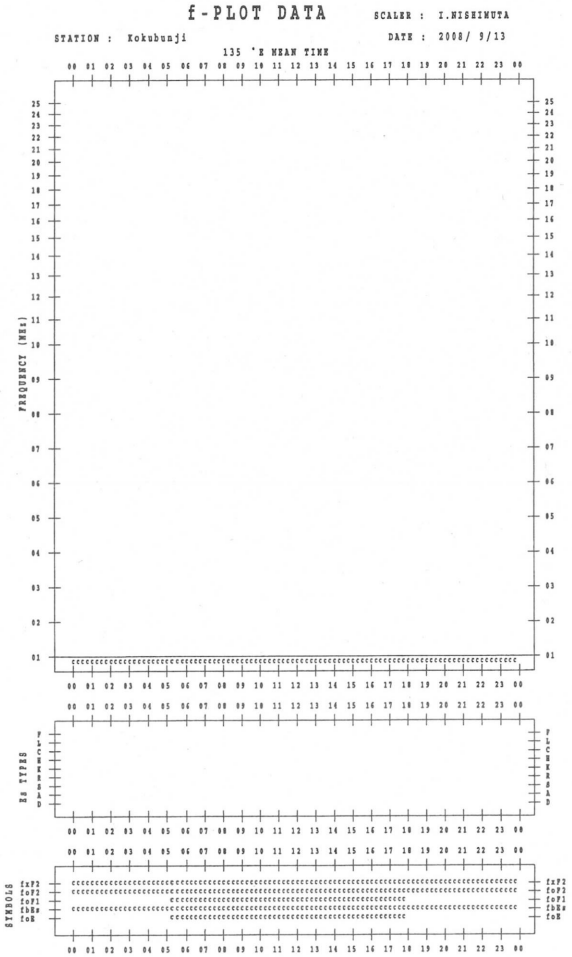

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

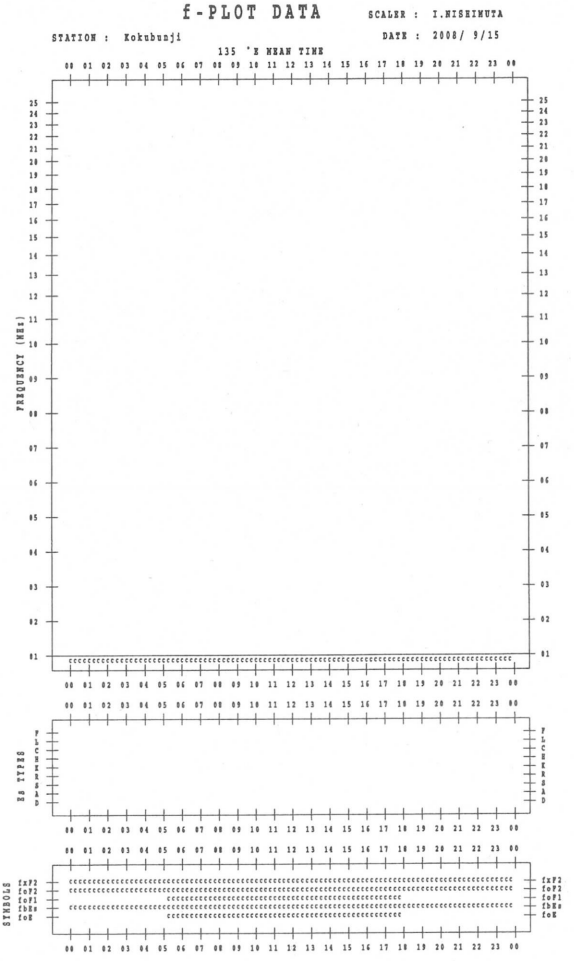

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

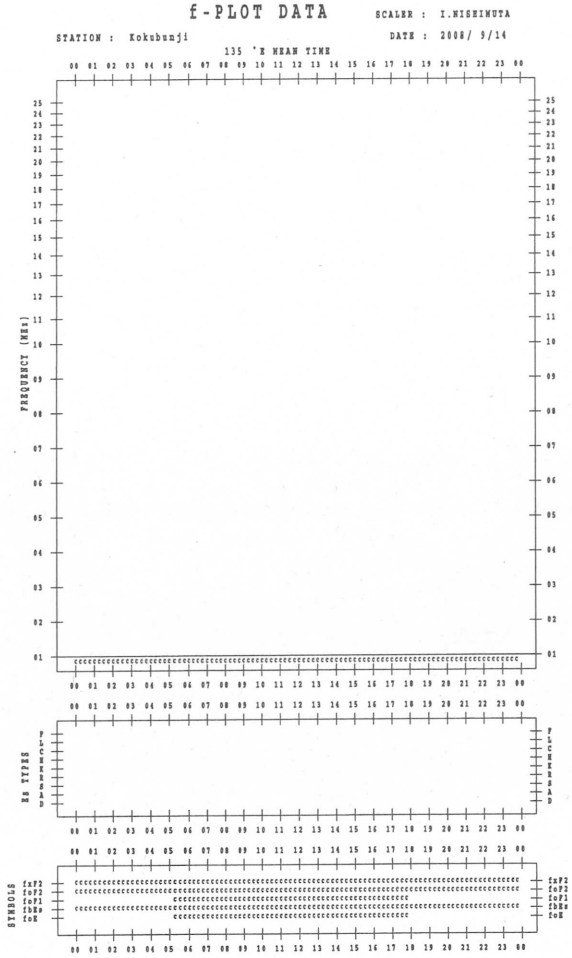

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

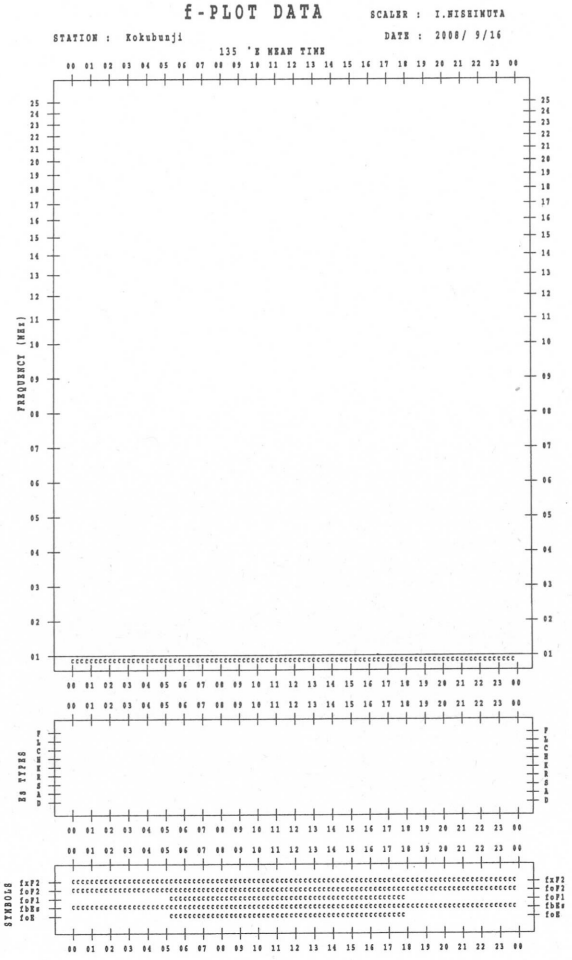

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

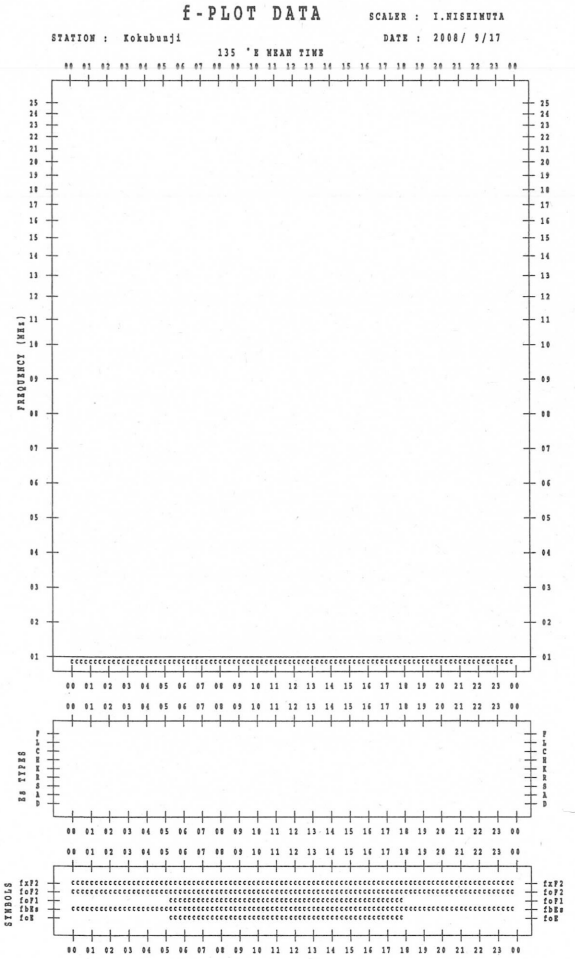

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

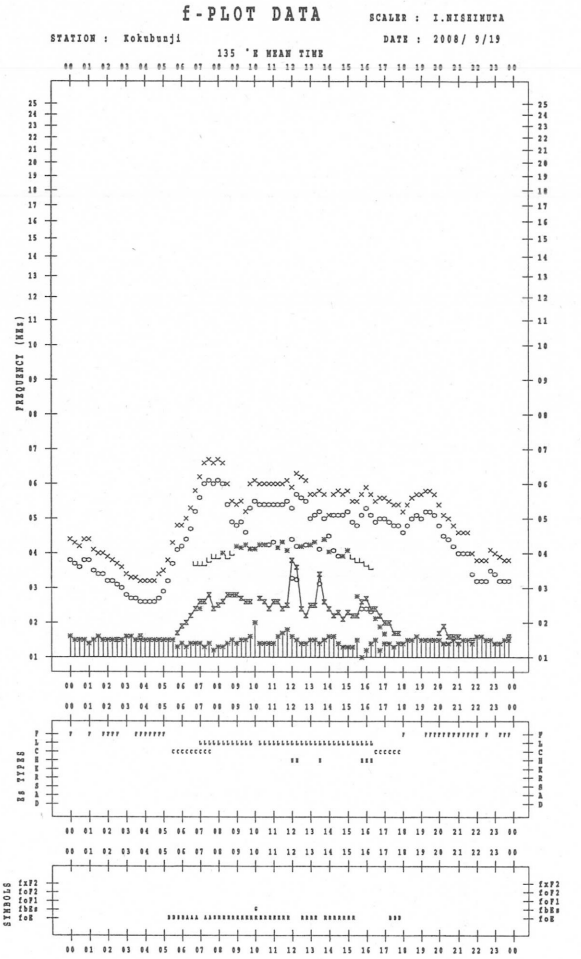

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/13
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

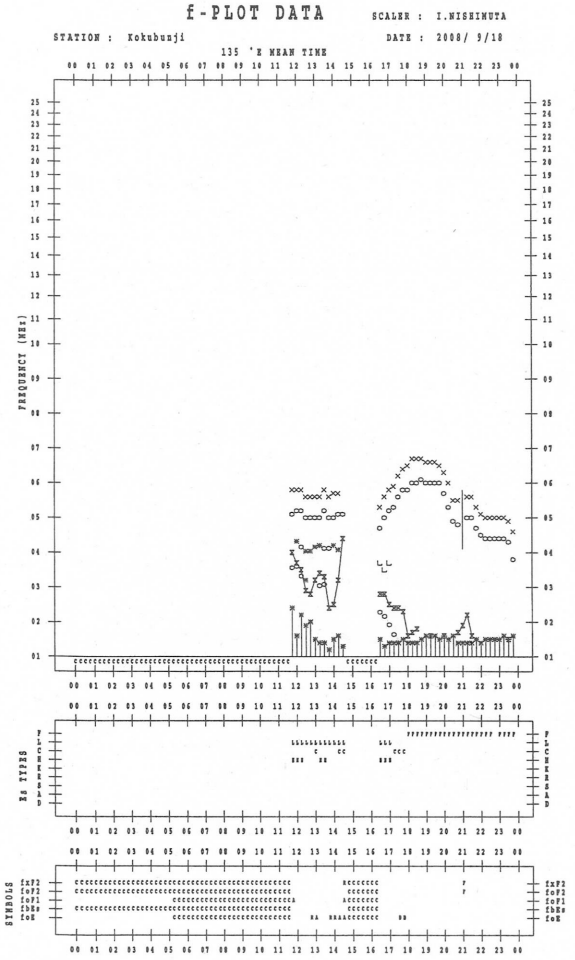

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/15
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

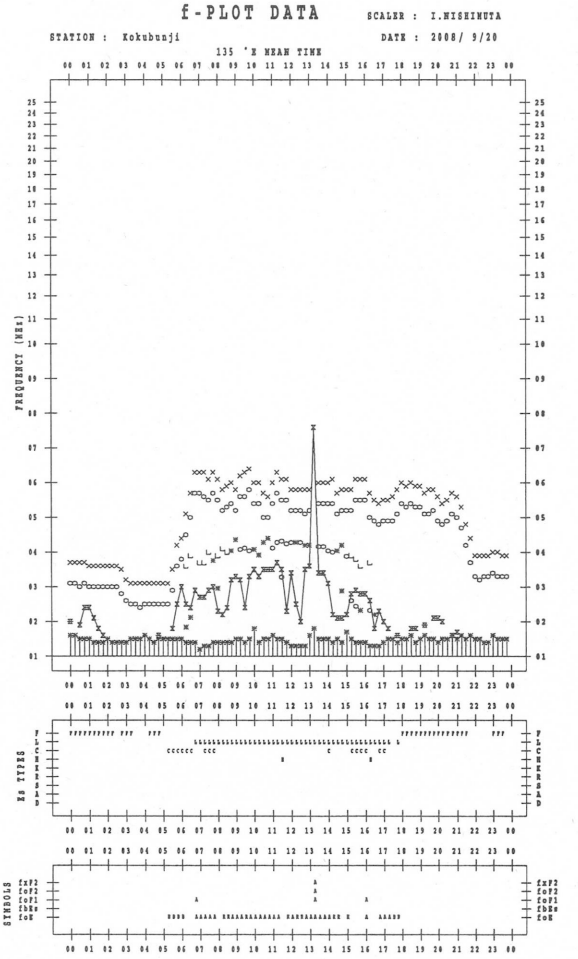

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/14
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

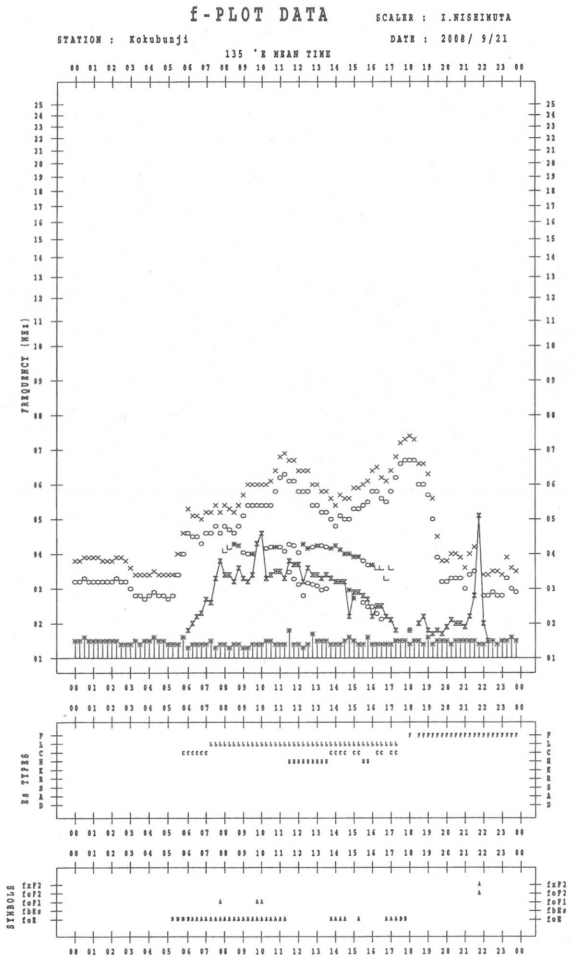

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/16
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

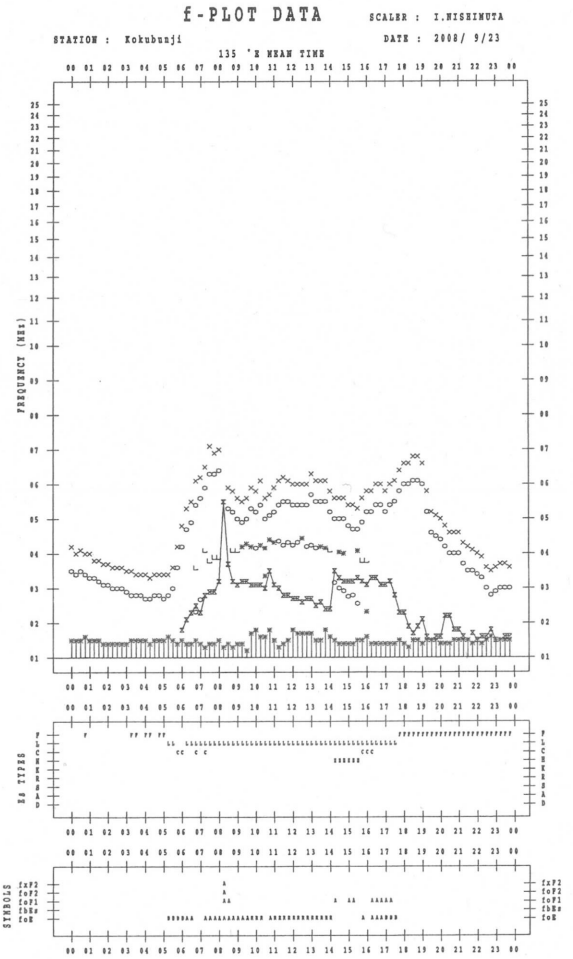

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/17
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/19
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/18
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/20
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE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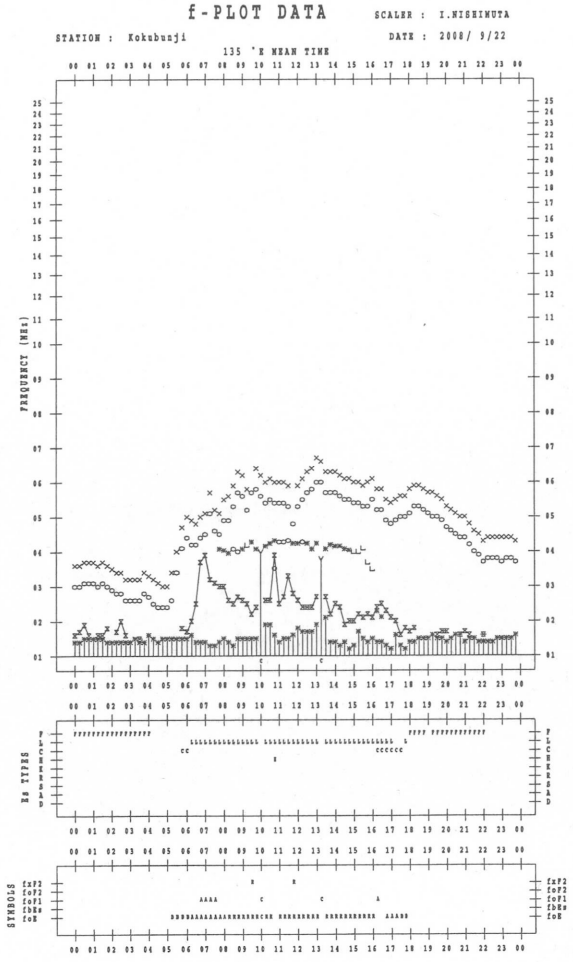
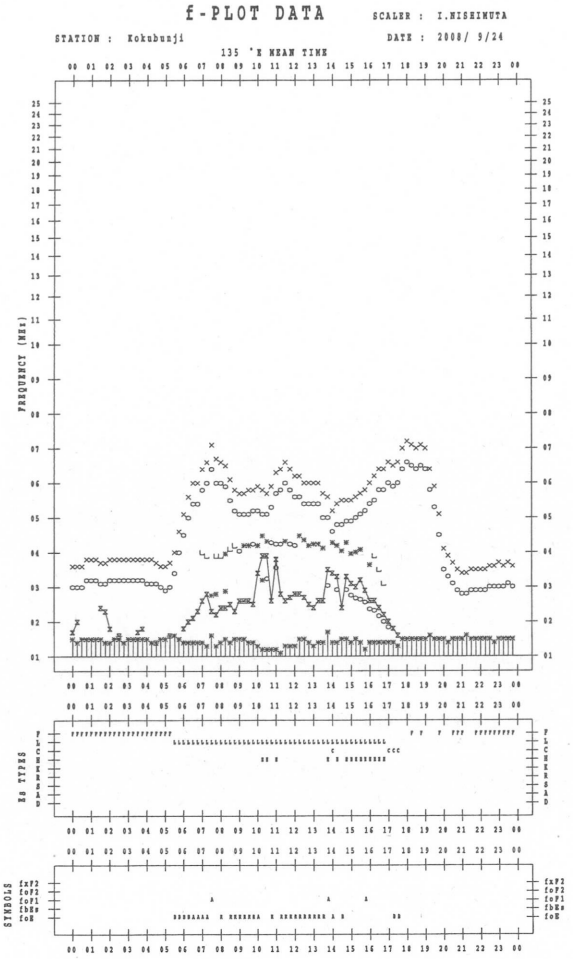
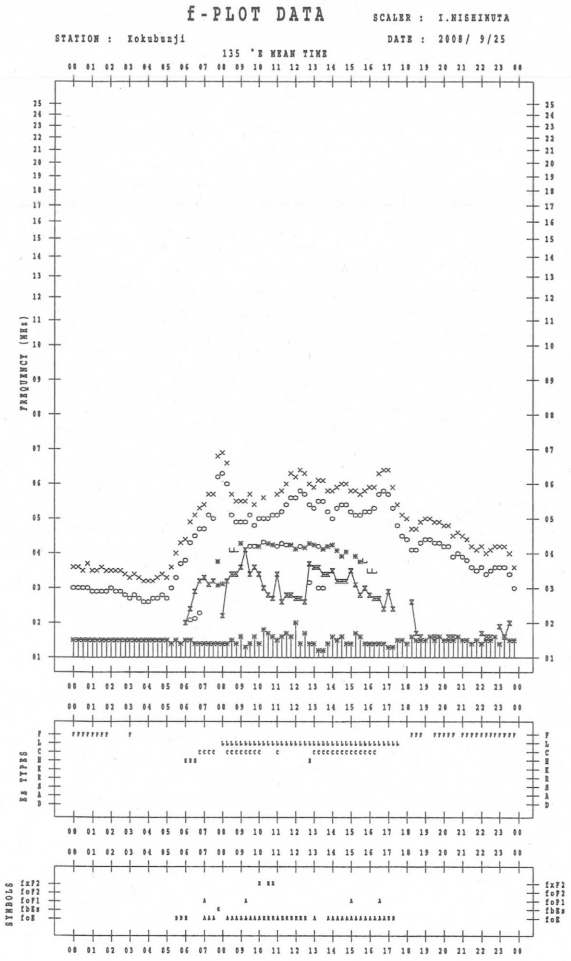
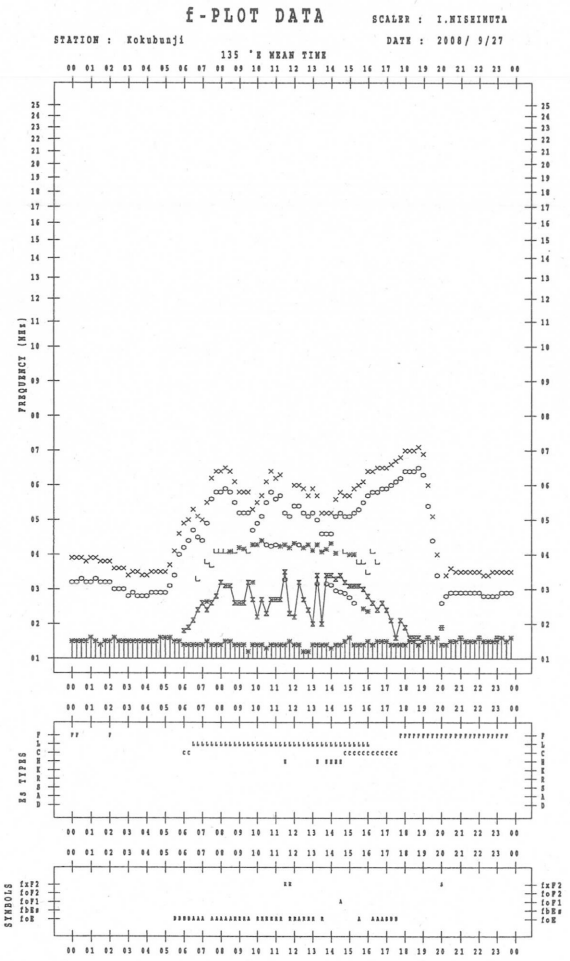
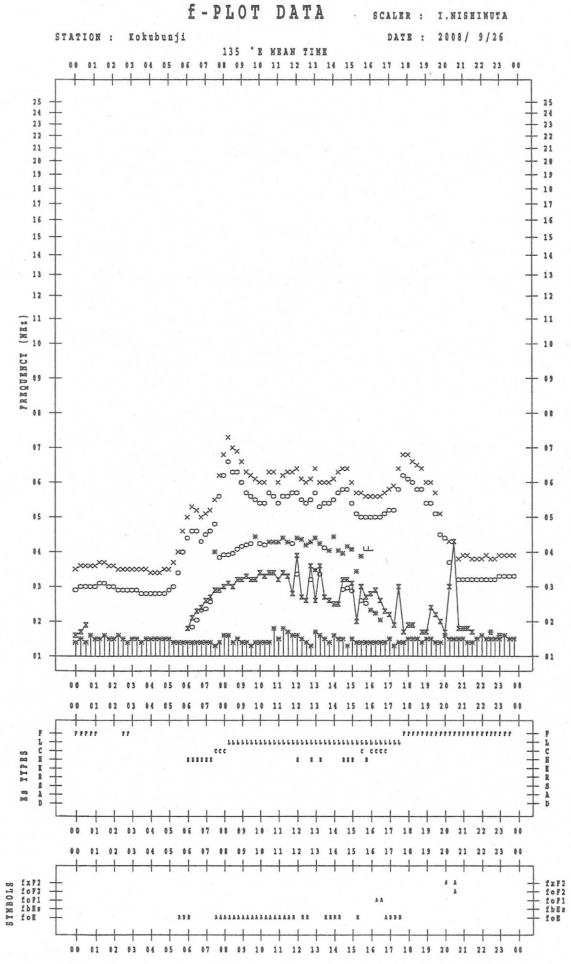
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE

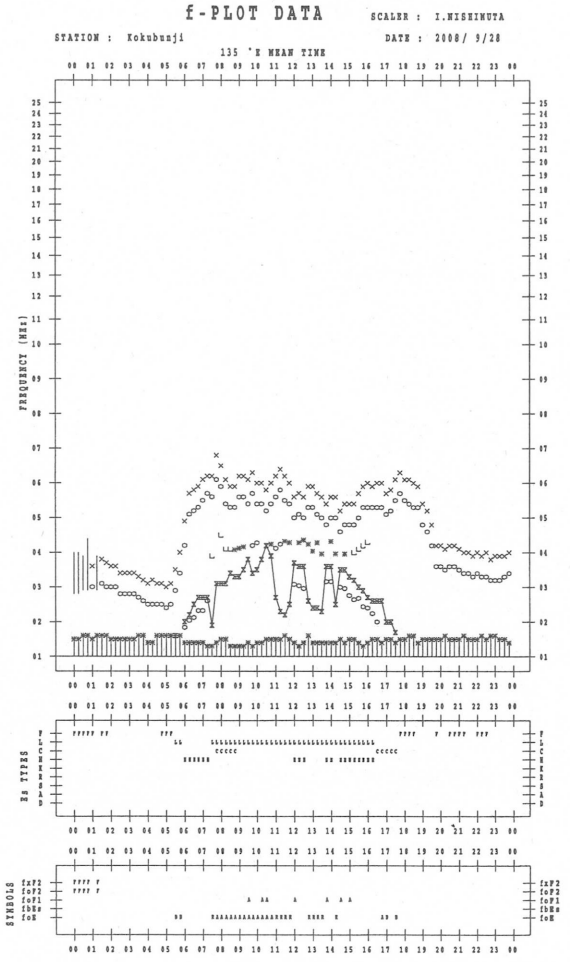

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE

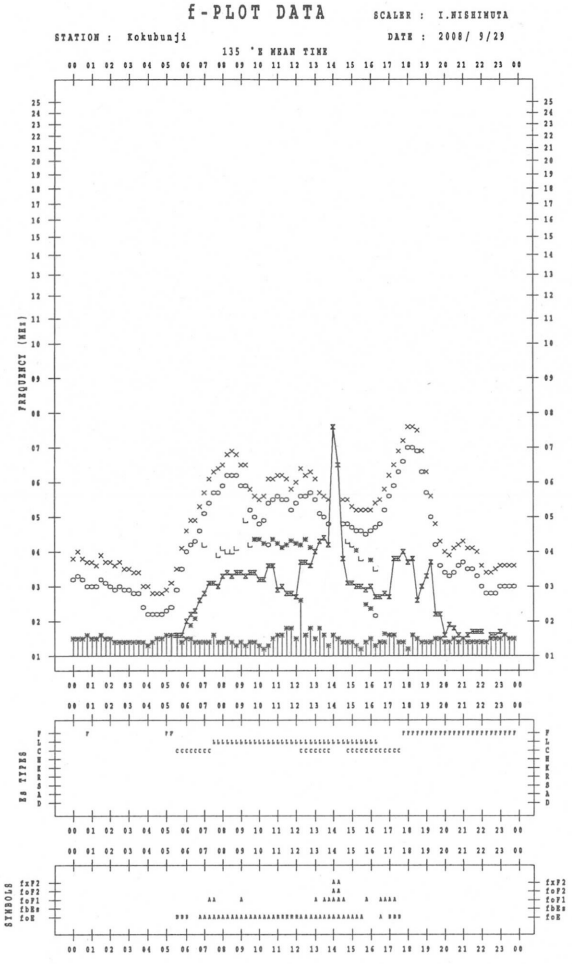

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS
fxF2
foF2
foF1
fbEs
foE

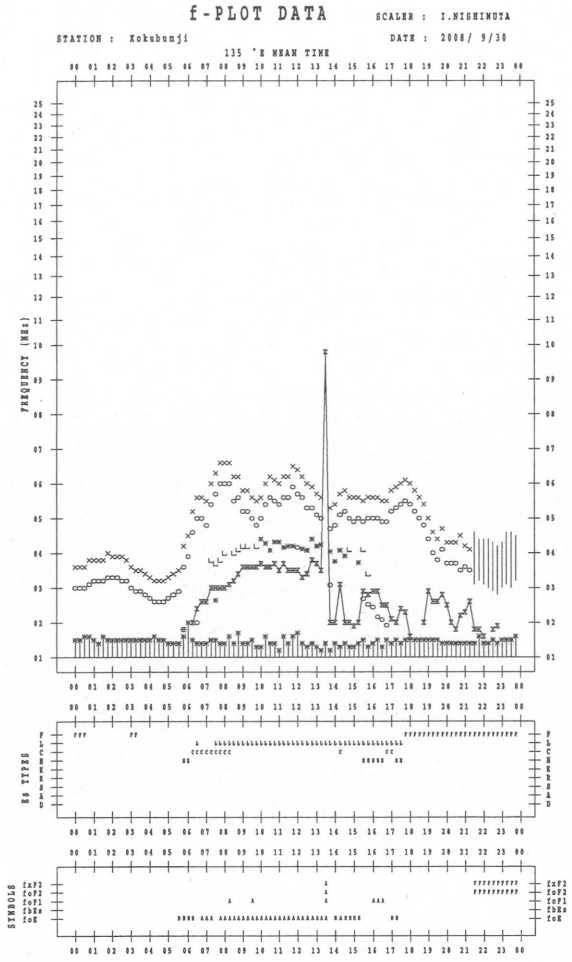

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2008/ 9/30
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

B. Solar Radio Emission

B1.Outstanding Occurrences at Hiraiso

Hiraiso September 2008

Single-frequency observations

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

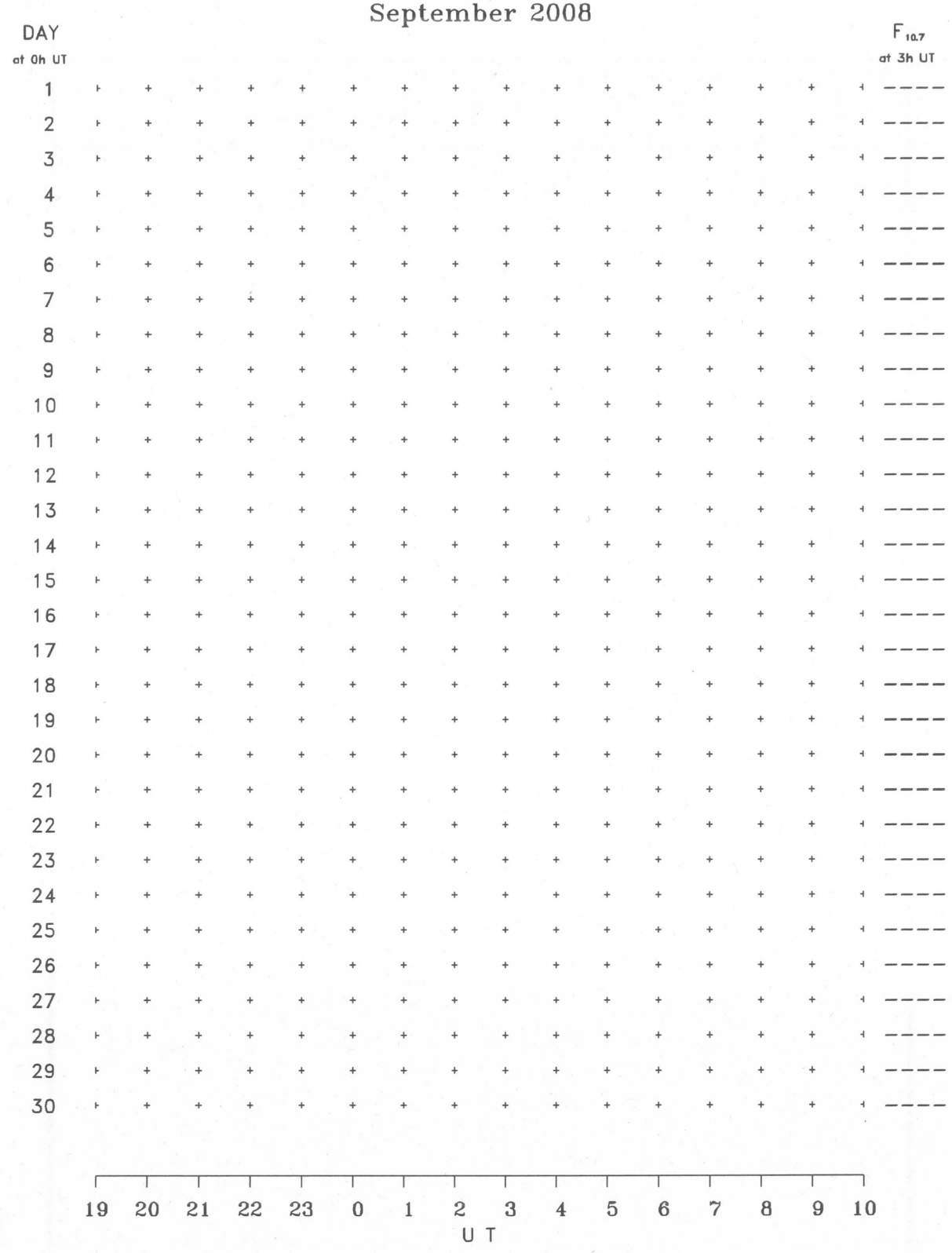
SEP.	FREQ.	TYPE	START TIME	TIME OF MAXIMUM	DUR.	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1})		POLARIZATION
2008	(MHz)		(U.T.)	(U.T.)	(MIN.)	PEAK	MEAN	REMARKS

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

September 2008



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

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