ISSN 0021-0382

F−680

IONOSPHERIC DATA IN JAPAN

FOR AUGUST 2005

VOL.57 NO.8

CONTENTS

NiCT

NATIONAL INSTITUTE OF INFORMATION
AND COMMUNICATIONS TECHNOLOGY
TOKYO, JAPAN

INTRODUCTION

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

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

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

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

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

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

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

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

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

K Presence of particle *E* layer.

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

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

N Conditions are such that the measurement cannot be interpreted.

O Measurement refers to the ordinary component.

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

Q Range spread present.

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

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

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

V Forked trace which may influence the measurement.

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

X Measurement refers to the extraordinary component.

Y Lacuna phenomena, severe layer tilt.

Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

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

D Greater than.

E Less than.

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

M Mode interpretation uncertain.

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

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

U Uncertain or doubtful numerical value.

X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. SOLAR RADIO EMISSION

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

B1. Daily Data at Hiraiso

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

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

* Measurement impossible because of interference.

B Measurement impossible because of bursts.

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

B2. Outstanding Occurrences at Hiraiso

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

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

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

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

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

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

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

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

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

B3. Summary Plots of F10.7 at Hiraiso

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

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

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

HOURLY VALUES OF foF2 AT Wakkanai

AUG. 2005

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

HOURLY VALUES OF fEs AT Wakkanai

AUG. 2005

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

HD	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		32	34	49	34	70	47	43	85	48	128		90	84	82	118	79	180		58	80	50	44	40
2	29	60	43	59	46	60	42	93	70	84	42		42	50	41	G	49	47	52	42	46	34	80	67
3	84	70	39	36	38	34	45	60	60	70	64	70	76	51	48	46	72	44	42	40	42	31	29	51
4	31	36	51	33	34	G	51	82	65	42	G	G	42	52	45	154	G	38	39	30	28	G	28	45
5	34	40	30	44	68	45	75	72	68	86	77	172		77	50	63	86	98	34	40	40	109	72	82
6		29	30	33	28	37	48	93	46	76	61	77	58	G	G	G	39	58	64	47	45	39	32	42
7	71	31	38	G	G	36	51	61	51	64	72	62	G	50	G	40	G	46	38	59	36	25	G	45
8	34	30	66	48	36	36	65	50	60	50	74	60	G	46	G	38	51	78	68	32	72	60	49	39
9	33	50	40	24	28	34	50	58	72	74	49	66	50	65	49	39	50	97	61	114	59	51	36	35
10	34	33	G	G	30	30	52	58	89	51	53	65	42	60	63	44		33	49	41	G	G	G	G
11	G	G	32	28	G	G	33	40	G	48	41	G	66	51	45	48	54	57	60	43	69	54	38	49
12	67	33	32	G	G	43	38	38	G	G	64	48	49	49	40	63	136	110	86	47	39	36	68	84
13	60	49	38	38	29	58	61	65	62	62	65	66	51	G	41	G	43	40	48	73	52	30	32	27
14	G	G	G	25	G	32	43	91	99	G	45	70	79	78	109	78	72	88		28	39	68	38	46
15	69	29	68	77	42	34	39	39	65	54	63	64	75	58	61	62	58	39	41	41	33	36	58	34
16	32	G	G	G	G	G	G	G	41	48	48	46	58	G	40	48	44	51	64	50	53	39	44	44
17	49	33	30	30	30	G	33	48	54	50	70	80	68	78	64	80	76	59	78	93	44	51	33	78
18	G	43	33	43	39	32	41	60	40	41	50	58	48	G	G	G	39	39	56	30	39	43	41	65
19	60	51	58	46	34	29	50	60	74	71	88	102	90	52	53	51	50	53	41	45	34	29	29	46
20	59	51	40	62	58	62	68	52	48	39	40	G	42		G	G	60	59	70	79	59	57	40	40
21	37	49	50	48	37	39	39	44	65	62	52	41	69	69	40	54	73	51	51	39	84	70	69	79
22	57	59	50	51	40	G	36	44	54	58	44		81	G	G	G	39	33	31	44	37	47	46	51
23	36	24	35	29	G	G	G	40	G	46	51	48	G	G	43	38	G	G	30	26	G	G	32	28
24	29	25	G	G	G	G	35	40	63	52	47	G	G	40	47	G	G	41	52	G	G	G		G
25	28	38	68	82	46	68	52	37	G	G	G	G		51		G	42	38	32	G	G	G	44	30
26	G	G	G	26	32	48	32	38	60	60	48	51	G	G	G	38	73	85	39	G		70	44	50
27	G	28	27	G	32	35	32	G	G	48	G	G	G	43	44	46	48	58	33	36	34	26	43	36
28	G	G	G	G	G	28	34	39	48	46	G	42	G	G	40	G	40	60	29	G	29	32	40	37
29	27	G	G	G	G	46	36	38	G		42	G	G	G	G	G	G	G	29	24	31	33	34	38
30	49	40	33	G	G	G	41	71	68	68	83	63	44	89	42	40	48	108	54	72	33	44	44	71
31	48	G	33	30	32	36	58	52	55	51	62	50	45	G	G	G	G	G	G	33	51	60	60	72
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	31	31	31	31	31	31	31	31	30	31	28	29	30	30	31	30	31	29	31	30	31	30	31
MED	34	33	33	30	32	34	42	50	60	51	51	54	48	50	42	40	48	51	48	41	39	39	40	45
UQ	58	49	43	48	38	45	51	61	68	64	65	66	68	60	49	54	72	78	60	50	52	54	46	65
LQ	27	24	27	G	G	G	35	39	41	46	42	21	G	G	G	G	39	39	33	30	33	29	32	36

HOURLY VALUES OF fmin AT Wakkanai

AUG. 2005

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

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

HOURLY VALUES OF foF2 AT Kokubunji

AUG. 2005

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	54	51	55	46	46	45	54	56	62		75	80	81	79	76	63	63	63	68	73	A	A	65	65
2	54	62	54	47	45		A		48				61		73	75	81	69	66		54	51	52	
3	A	A	49	45	45	47	56	67	81	73		A	A	91	90	72		A	78	77	71	66	A	
4	63	54	52	48	42	46	42	64	67	61	59		72		74		72	78	73	81	66	54	54	53
5	53	51		47	36	46	65	77	74	A	82	77	A	77			A	81	77	80	78	72	72	48
6	43	44	42		37		A	A	A	A	67			68	69	59	58	67	62	62		54	47	
7	44	46	46		A		51	A		A	A	A	A	A			52	49	59	44	58	54	48	42
8		A		38	37	38	48	54	A			99	A	58	58	59	58		A	64		51	53	54
9	52	48	46	43	43	42		56	74	A	77	74	A	A		76	64	64	62	62	55	53	52	54
10	54	47		42	44	37	52	73	A	A	A	A		A		54	A	A	57	54	61	63	54	52
11		53	36	32	A	A		46	A			A			A		A	A	48	53	A	A	37	36
12	37		34	31	28	34		51	A	A	79			A	A	55		90	A	A	A	A	52	A
13	A		36	34		A	40	A		A	A	A	A	72	78	48	75	41	42	45	48	A		47
14	A	A	38	37			47	51	A	A	A	A			A	65	66	A	52	54	61	53	45	42
15	42	A		28	32	32			A	A	A	61	61	A	A	A		55	41	57	48	47	44	A
16	44	39	38	36	32		A	55		62	68	A	A	A		A		A	A	88	44		42	A
17			A	A			47	62	67	A	67		54	A	A	73	67	66	63	61	54	51	54	54
18	52	42	44	41	38	36	56	60	46	53		58	63	A	67	61	63	61	86	87	43	43	43	41
19	34	42	41	40	36	30	46	A	A	A	A	A	A	A	68	A	60	58	66	76	65	46		
20	36		34	34	34	39	A	52		A		51				62	66	64	60	55		47	47	52
21	48	45	44	37	35	38	49	57	56	61	A	A	A	A	A	A	A	A	81	89	88	A	A	44
22	44	42		39			54	A	59	A			A			66	59	59	57	68		51	52	55
23	52	52	47			39	60	67	59	71	68	58		63	67	67	66	63	73	77	54	59	52	54
24	52	54	51	46	45		62	78	54				62	A	61		69	79	A	62		77		52
25	53	A	A	A	A	A	48						A	A	A		46	45	47	45	42	42	37	
26		37	37	38	42	37	49	63	66	62				68	67	69	65	55	55	54	44	A		47
27	44	45	49	45			48	56	67	65	61			72	67	67	64	57	39	54	52	54	54	A
28	53	51	45	45	44	46	68	71	61	64				74	75	84	71	A	A	54	55	52	53	53
29	54	48	47	46	42	46	69	59	60	62	67	72	77	76	81	75	75	62	78	79	64		A	A
30	54	51	47	46	44	41	52	65	66	58	A	88	97	104	108	104	A	66	64	A	A	A	54	54
31	54	55	46		45	45	51	75	A	80	77	64	72	77	68	69	68		69	82	78	58	45	52
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	22	24	25	22	19	23	23	17	12	12	11	10	13	17	21	22	22	26	28	22	22	24	21
MED	52	48	46	41	42	39	51	60	62	62	68	72	68	74	69	67	66	63	62	62	55	53	52	52
U Q	54	52	48	46	44	46	56	67	67	68	77	80	77	78	77	74	69	67	73	78	65	58	54	54
L Q	44	44	38	36	36	37	48	55	57	61	67	58	61	68	67	60	60	57	55	54	48	51	45	45

HOURLY VALUES OF fEs AT Kokubunji

AUG. 2005

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	58	G	25	G	24	G	39	59	G	88	G	G	44	G	G	52	42	78	72	149	113	94	59	69
2	46	60	28	43	38	40	60	50	G	45		G	46		49	G	G	G	52		G	G	29	57
3	79	82	40	26	39	G	34	40	55	61	66	90	117	80	72	48	68	89	86		69	107	108	68
4	42	G	35	G	G	G	G	50	G	61	60	50	G		67	68	54	80	34	G	24	28	32	26
5	G	G	60	31	33	43	60	51	55	92	61	82	107	71	84	94	83	41	33	G	26	25	G	32
6	25	31	G	30	G		90	108	83	55	52			G	G	G	G	G	G	23		28	G	60
7	50	G	35		58		35	46	46	61	53	80	62	140	61	50	49	41	36	23	G	31	25	36
8	50	53	45	29	26	G	41	59	65	66		87	69	57	G	44	42		92	57	70	72	40	50
9	47	40	27	26	G	34	61	37	51	155	61	67	111	150	96	62	50	42	40	43	34	G	30	G
10	40	28		31	28	G	40	66	82	58	70	76		59		53	114	96	60	G	G	G	27	25
11		G	G	G	38	51	32	38	53	60	50	43			56	49	96	104	62	60	82	49	33	41
12	26	35	G	G	G	G	32	47	60	72	67	59		76	69	51	57	80	72	67	70	59	48	72
13	62	43	27	G	27	50	39	73	50	131	114	112	65	84	57	49	43	44	34	31	29	68	43	41
14	60	58	26	26			G	49	59	61	93	128	75	50	72	45	49	124	29	G	40	25	30	G
15	27	43	34	31	G	G	G	49	84	82	78	G	57	65	42	57	51	41	50	60	45	24	39	69
16	33	G	G	G	G	27	53	42	52	G	48	78	92	118	164		160	119	86	60	59		31	58
17	60	41	60	70	33		43	40	81	107	51	52	50	83	103	47	41	61	60	50	48	27	49	53
18	50	30	G	G	G	G	31	44	49	G	42	G	G	106	75	39	39	59	43	42	24	G	G	G
19	G	G	G	G	G	27	42	64	81	124	112	68	69	112	49	81	50	39	31	G	30	G	G	
20	G	40	27	G	G	27	58	66	66	75	G	G			G	G	G	33	35	36	58	50	28	36
21	G	G	G	G	G	G	37	51	68	72	87	59	68	103	96	134	137	86	62	69	112	93	81	42
22	48	G	44	G	32	37	33	66	60	102	75		80			G	G	G	29	G		39	40	33
23	59	31	G	34	35	28	31	39	45	40	G	G		43	G	45	53	42	40	42	40	26	70	45
24	40	41	G	24	26	46		40	52	55	61	63	51	106	67	93	93	82	116	33		G		23
25	23	49	47	71	35	94	29		45				60	69	62	51	G	39	38	34	G	G	G	49
26	41	G	G	G	G	G	G	42	G	53	51	47	53	G	G	G	G	G	G	37	G	90	50	39
27	36	33	29	32			G	43	G	52	45		G	G	G	G	G	41	39	33	G	39	33	72
28	32	41	27	G	G	G	G	G	G	45	62	G		G	G	G	78	65	70	60	42	G	29	34
29	G	34	31	31	G	G	31	41	55	48	51	G	G	G	40	67	47	50	72	29	72	60	81	94
30	45	29	32	G	G	G	G	G	45	60	129		104	51	76	51	87	37	60	133	92	93		G
31	24	G	G	60	G	33	29	71	89	45	G	G	G	46	44	45	G		34	42		42	41	59
	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	31	30	30	29	26	30	30	31	30	28	26	24	26	29	30	31	29	31	29	27	30	29	30
MED	40	31	27	25	G	14	34	48	53	61	60	56	61	67	57	49	49	44	43	37	40	30	33	42
U Q	50	41	35	31	33	37	42	59	66	82	72	78	77	103	73	57	78	81	70	60	70	60	48	59
L Q	25	G	G	G	G	G	29	40	45	52	49	G	45	43	G	39	G	39	34	23	24	G	27	32

HOURLY VALUES OF fmin AT Kokubunji

JUL. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	13	13	14	13	13	23	15	22	23	24	33	35	37		35	24	21	14	14	14	14	13	14	13
2	17	21	13		13	21	13	28	31	38	38	38	38	53	35	53	22	18	15	13	14	14	14	13
3	14	14	13	14	13	13	13	21	28	34	34	38	33	31	29	22	22	17	17	14		14	17	14
4	13	14	13	13	18	14	14	21	33	34	38	35	36	53	35	50	46	20	21	14	14	14	14	18
5	14	14	13	13	13	13	13	18	23	53	37	42	38	37	37	34	30	14	17	13	24	13	14	14
6	14	14	14	13	22	13	15	22	42	31	37	36	37	34	30	24	24	21	13	20	14	14	14	13
7	15	14	14	13	15	14	14	17	21	29	35	37	36	36	33	30	33	20	17	14	17	14	13	13
8	17	15	17	17	13	13	13	21	24	44	39		54	40	40	34	22	17	24	13	13	13	15	13
9	17	13		13	13	13	23	28	33	33	34	38	35	40	28	25	30	18	14	14	14	13	14	14
10	21	14	15	13	14	14	15		26	31		53	53	38	50	35	40	15	15	13	13	15	17	15
11	13	14	20		13		13	25	20		34		38	36		34	28	21	15	23	15	13	14	14
12	14	15	13	13	14	17	13	29	31	31	35	34	35	37		33	34	25	14	14	14	14	25	18
13	14	14	14	13	13	13	13	21			37	39			36	37	30	25	20	13	21	15	14	14
14	14	14	14	22	13	34	23		34	23			34	42	37			42	30	20	26	14		
15	15		14	21		21	18	21		28	31			29	54	44	43	26	15	13	23	20	14	21
16	17	13	17	17	14	13	17	29		50				53	45	34	28	15	14	18	13	25	17	13
17		14	13	13	13	21	22	20	29	49	33	34	34	34	44	46	42	13	18	15	18	14	17	14
18	14	18	14	13	13		13	15	23	24	26		34		34	31	21	21	13	20	13	14	14	14
19	14	13	13	14	14	15	13	17	26	33	39		34	36		45	17	15	13	14	17	22	13	14
20	14	14	13	13	13	14	33	15	15	24			35	35	33	43	28	14	14	14	17	17	14	17
21	14	15	14	14	13		13	26	18	31	35			34	51	46	38	17	13	14	14	13	15	13
22	14	20	13	13	13	18	13	13	14	26			33	50	28	22	24	24	14	15		26	14	13
23	13	14		13	17	14	13	14	22	30	33	33	34	49	50	43	22	14	13	13	13	14	17	13
24	14	13	23	17	14		13	21	24	26			28		26	54	42		14	13	13	13	15	15
25	14	14	17	17	14		14	17	22	26	28	28		42		21	20	24	13	13	13	14	14	14
26	13	14	13	20	22		14	13	43	49	C	C	33	31	29	45	20	13	13	13	13	14	13	13
27		15	13	15	14	25	13	14	21	46	C	C	C	C	C	C	C	20	13	14	15	14	14	
28	15	13	18	13	13	18	13	14	33	34	38				34	29	24	15	13	15	14	14	13	14
29	13	14	13	15	13	28	25		33	34	25	35	38	40	40	24	21	14	14	13	15	13	13	14
30	18	15	15	17	14			18	41	25	37	36	38	54	51	38		29	13	17		13	17	14
31	14	17	17	14	21	13	14	18	23		34		50	53	39	49	21	18	14	17	13	14	13	14
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	30	29	29	30	24	30	28	28	28	23	16	24	25	26	29	28	30	31	31	28	31	30	29
MED	14	14	14	13	13	14	14	20	25	31	35	36	36	38	36	34	26	18	14	14	14	14	14	14
U Q	15	15	16	17	14	21	15	22	33	36	37	38	38	49	44	45	33	21	17	15	17	14	15	14
L Q	14	14	13	13	13	13	13	16	22	26	33	34	34	34	33	27	21	15	13	13	13	13	14	13

HOURLY VALUES OF foF2 AT Yamagawa

AUG. 2005

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

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

HOURLY VALUES OF fEs AT Yamagawa

AUG. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G	G	G	G	G	G	G	G	G	G				G		G	G	43	42	24	26	39	29
2	37	41	40	59	53	43	38	69	58	40	G					G	61	G	G	G	G		G	29
3	40	29	G	G		G	G	42	48	62			G	74	G	G	93	60	49	60	49	44	27	30
4	G	29	72	85	72	40	G	57	50	55		65	52		G		57	62	58	G		29	40	G
5		G	40	G	G	G	29	59	92	72		G	58	72	84	56	48	94	86	59	114	58	40	G
6	G		G	G	G	G	32		58	G	43			G	48		G	G	G	G	24		G	
7	G	G	G		G	26	32	45	38	53	62		58	82	90	64	105	38		51	42	49	36	59
8	36	37	G	33	27	39	G	35	59	62	102		48			G	G	G	G	G	36	30	28	40
9	53	40	57	79	38	68	43	42	41		G	49	G	87	G	G	G	G	33	50	42	40	29	34
10	G	G	28	G	G		G	G	G	44	48	112	87	73	71	51	48	G	33	G	26	29	G	G
11	36	G	G	G	G	G		G	G	G		G	46				41	34	38	G	G	43	43	28
12	G	39	34	28	G	34	32	39	G	44	42	55			57	91	67	51	50	38	40		G	
13			G	25		G	46	38	94	47	49	52	G	52	68	61	39	G	34	26	35	30		56
14	60	48	59	29	51	28	40	G	55	39	57	64	51		50	58	60	50	62	59	37	34	26	G
15					G	30	G	G	G	G	48	42	G		G	82	51	43	72	41				G
16		32	G	G				G	44	G					70	G	G	G	G	26	81	32	30	33
17	G	30	28	39	36	40	66	38	G	42	G	G	G	G	61	61	52	59	54	56	39	40	38	39
18	30	G	26	28	25	29	34	30	49	43	48	G	G	44	54	78	76	44	43	43	34	27	G	29
19		G	G	G	G		33	41	40	58		85	87	88	92	65	63	79	44	44	39		G	G
20	G			G	G		G	56	37	G		53	G		G		G	G	36	28	39	29	30	40
21	32	37	G	G			29	41	52	70	87	68	57		58	42	45	58	58		57	71	40	58
22	69	35	43	29	G	G	G	48	72	114		82		57	60		G	44	38	42	40	G	G	32
23		G	28	G	G	G	26	44	39	48	56	70	52	56	63	G	50	49	94		85	92	83	G
24	G	G	40	47		G	G	62	58	82	G		G	62	71	42	G	G						26
25	29		44	32	36	G	39	34	G	91	61							39	42	G	30	28	34	G
26	G	30	33	28		G		G	41	57	71	132	82	58	66	G	G	G	G	G	G	G	G	G
27	32	G	39	38	34	G	G	G	G	G	G	44	52	G	G	G	40	41	34	G		G		34
28	39	28	39	G	30	G	G	G	G		41			50	G	52	39	43	43	33	43	41	G	33
29	28	26	36	G	G	G	G	35	46	51		51	68	57	54	59	G	G	33	42	57	80	39	30
30	40	55	36	27	27	G	G	G	36	39	43	54	80	G	G	G	43	36	90	54	44	40	40	28
31	36	G	36	G	G	33		69	70	45	51	63	42	G	53	G		G	44	35	43	59	40	34
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	25	26	29	29	25	26	27	30	31	29	22	21	23	19	27	24	29	31	29	28	27	25	27	29
MED	30	28	33	25	G	G	26	38	41	45	48	54	51	57	54	46	43	38	43	36	39	34	30	29
U Q	38	37	40	32	35	33	34	45	58	60	57	69	58	73	68	61	58	50	56	47	44	46	40	34
L Q	G	G	G	G	G	G	G	G	G	20	G	43	G	G	G	G	G	G	33	G	30	28	G	G

HOURLY VALUES OF fmin AT Yamagawa

JUL. 2005

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

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

HOURLY VALUES OF foF2 AT Okinawa

AUG. 2005

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	54	53	48	51	44	40	45	54	55	65	61		70	87	91	92	91	102	88	86		65	52	51
2	51	55	51	48	54	57	62		60	64	62	62	66	80	101	C	C	C	103	81	42	48		
3	45	42	52	37		31	41		72	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C		72	78	80	84	87	87	A	106	90	77	63	53	52
5	54	54	53		43	40	46	68	60	70	72	82	101	112	127	130	127	118	109	108	90	87	81	64
6	80	73	64	70	61	54	61	80	95	77	56			82	104	97	100	104	118	86	66	66	52	43
7	40	42	42	30	32	32	42	53	52		65	71	75	68	A	75	72	71	76	83	62		38	37
8	37	A	30		30			54	55	59	71	70	67	61	61	64	70	78	82	81	A	44	41	37
9	38	37		29	A	30	38	58	62		60	72	86	110	108	111	116	106	101	86	72	66	58	
10	31	44		41	36	29	42	54	51	52		A	64	78		77	75	75	72	65	64	66	54	53
11	52	52	44	36	35	34	38	51	64	64	51	A				54	63	56	A	A	52			30
12			29	28	25		35	46	52	57	A		A	A	A		72	81	78	86	66	44	44	34
13	29	34	32		30		30	54	58	48	53	56		77	82	56	68	77	64	47	43	44	35	41
14	42	A	A	40	A	A	A	A	56	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	70	C	C	C	C	C	C	C	46	C	C	C
16	C	40	C	C	31	C	C	61	C	C	C	C	C	C	C	C	C	C	C	66	51	A	A	
17	C	31		C	A	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	42	51	47	56	57	62	77	76	72	72	82	77	85	C	65	44	42	C
19	C	42	C		C		C	C	74	61		60	63	85	90	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C		62		76	C	72	73	83	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	86	80	77	74		45	A
24			A		A	A	44	52	61	61	A	A	72	86	97	100	91	87	81	66	89			
25	84		32		42	43	41	52					66		63	66	62	65	61	52	52	51	27	44
26	42	50	44	44	40		34	52	65	56	C	A	87	102	110	107	107	101	105	87	83	58	51	42
27	50	52	75	60	36	28	32	57	62	62	62	A	A	77	87	74	71	71	70	A		63	54	60
28	54	52	52	46	44	40	42	59	67	64	62	69		88	94	88	81	72	66	A	A	52	51	53
29	52	54	50	46	50	34	41	63	62	62	67	78	83	96	102	96	88	105	118	101	87	A		
30		46	51	40	38	38	34	54	60	60	66	88	112	121	121	110	104	108	108	101	73	63	52	54
31	52	71	74	51	42	31	36	A	90	68	59	76	107	120	130	130	121	107	102	117		31	43	43
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	18	19	17	16	18	15	20	19	22	18	15	13	17	20	18	20	20	21	22	20	19	17	18	16
MED	50	50	50	42	39	34	41	54	60	62	62	71	75	84	96	88	84	81	84	84	66	58	51	44
U Q	54	54	52	49	44	40	43	59	65	64	66	77	86	99	108	103	102	104	105	88	77	65	53	53
L Q	40	42	37	36	32	31	35	52	55	57	57	62	66	77	84	73	71	72	73	71	52	44	42	39

HOURLY VALUES OF fEs AT Okinawa

AUG. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	27	G	G	G	G	37	G	35	G	G	G	G	46	G	G	G	G	G	G	46	27	40	44
2	30	36	32	35	32	45	25	58	43	44	49	46	G	G	G	C	C	C	G	G	G	G	36	37
3	33	G	33	G	26	G	G		62	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	66	44	G	G	46	G	46	94	81	38	55	28	44	G
5	36	39	G		G	G	G	G	42	58	69	92	59	69	70	84	76	38	33	G	G	G	G	33
6	37	35	25	31	35	32	G	32	35	40	41	G	G	47	G	G	G	G	40	29	G	G	G	G
7	G	G	24	G	G	G	26	G	37	50	46	G	52	50	88	64	46	36	58	82	46		G	G
8	59	68	G	39	27	32	50	G	G	G	47	50	G	G	G	G	40	43	45	83	77	G	G	G
9	29	33	35	26	110	28	39	40	35	38	43	G	44	45	G	58	53	46	39	41	28	28	27	G
10	G	G	28	G	G	G	29	35	G	G	46	89	58	66	82	85	65	70	55	G	34	34	G	29
11	G	28	G	G	G	G	G	G	G	G	68	59	G	G	G	G	53	78	75	113	50	47	36	36
12	50	28	G	23	50		26	34	G	50	96	48	83	91	64	64	61	59	37	29	24	G	G	G
13	G	G	G		G	29	G	G	40	42	G	G	G	53	50	G	G	35	31	29	G	G	G	25
14	36	79	44	34	93	69	93	80	40	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	G	C	C	C	C	C	C	C	89	C	C	C
16	C	G	C	C	G	C	C	35	C	C	C	C	C	C	C	C	C	C	C	G	G	43	69	49
17	C	32		C	37	C	57	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	29	34	44	39	G	44	50	52	51	48	54	48	83	C	24	37	36	C
19	C	G	C	36	C		C	C	50	64	G	G	G	G	77	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	G	44	51	55	C	39	38	32	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	84	82	60	38	70	44	72
24	57	54	65	37	61	46	50	36	45	50	75	89	57	57	50	66	67	44	37	25	G	G	38	43
25	26	33	G	29	36	28	50	36	49	40	58		52	50	G	G	G	G	G	G	G	G	G	27
26	34	36	37	38	33	28	28	G	G	45	C	68	G	45	G	G	G	G	G	G	G	40	G	G
27	G	G	G	G	G	G	G	G	G	G	49	87	106	55	68	48	45	44	47	71	26	43	G	G
28	26	50	31	G	G	G	36	36	35	45	49	G	51	G	50	70	42	52	65	133	69	38	40	G
29	28	29	24	G	G	G	G	35	44	58	67	66	60	70	61	70	65	34	41	48	38	77	49	58
30	43	33	28	32	34	26	G	G	40	58	45	42	G	44	G	44	G	40	38	30	36	G	G	28
31	46	26	28	G	G	29	44	104	108	51	44	G	54	62	G	G	G	35	G	G	36	G	36	G
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	24	21	20	23	20	23	22	23	21	21	21	24	23	23	21	20	22	23	23	24	22	23	22
MED	30	30	25	24	26	27	28	34	40	44	47	44	22	47	50	48	46	42	39	29	31	28	27	26
U Q	40	36	32	34	36	30	44	36	44	50	66	67	55	57	64	65	57	52	58	60	46	40	40	37
L Q	G	G	G	G	G	G	G	G	G	19	42	G	G	G	G	G	G	35	31	G	G	G	G	G

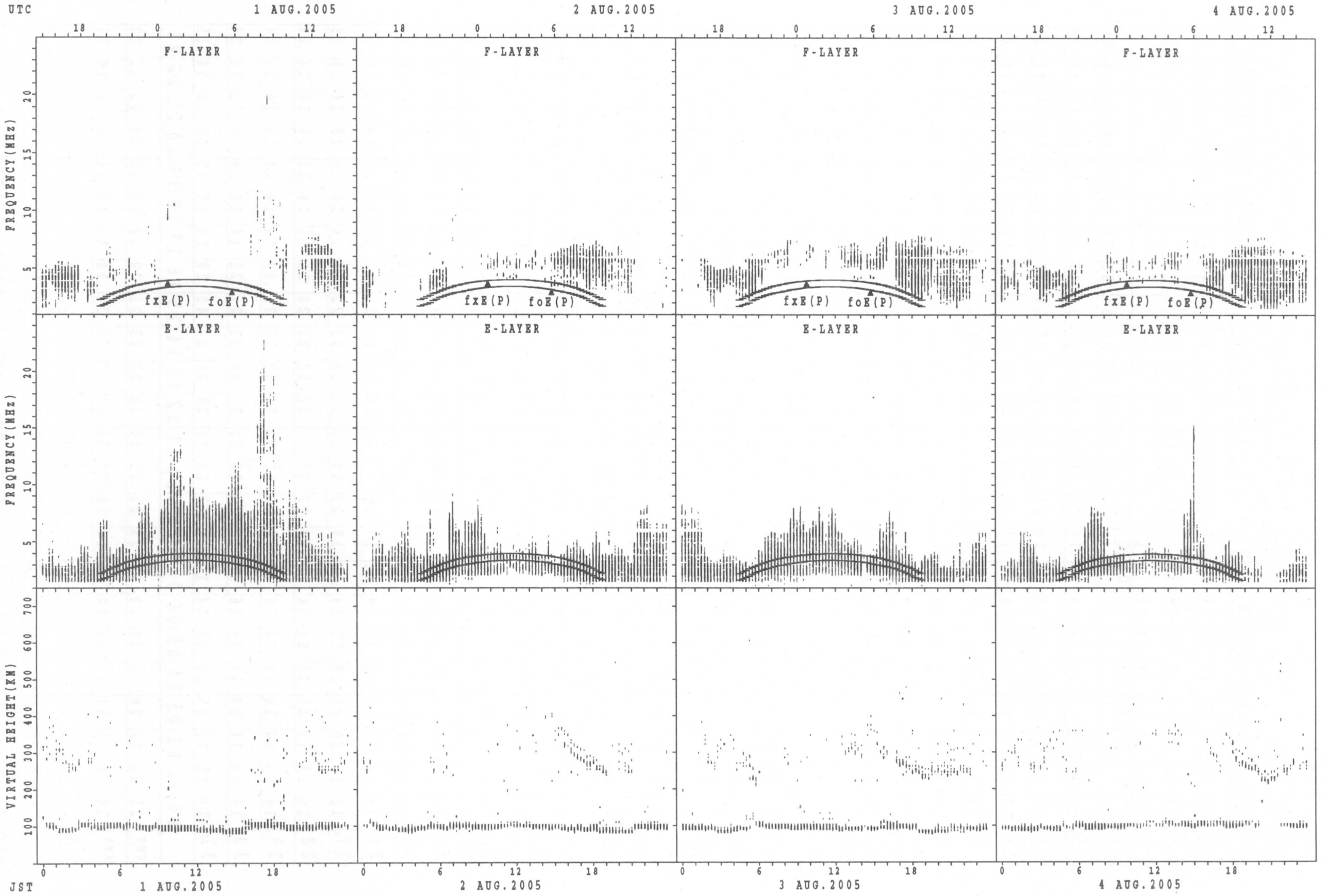
HOURLY VALUES OF fmin AT Okinawa

AUG. 2005

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

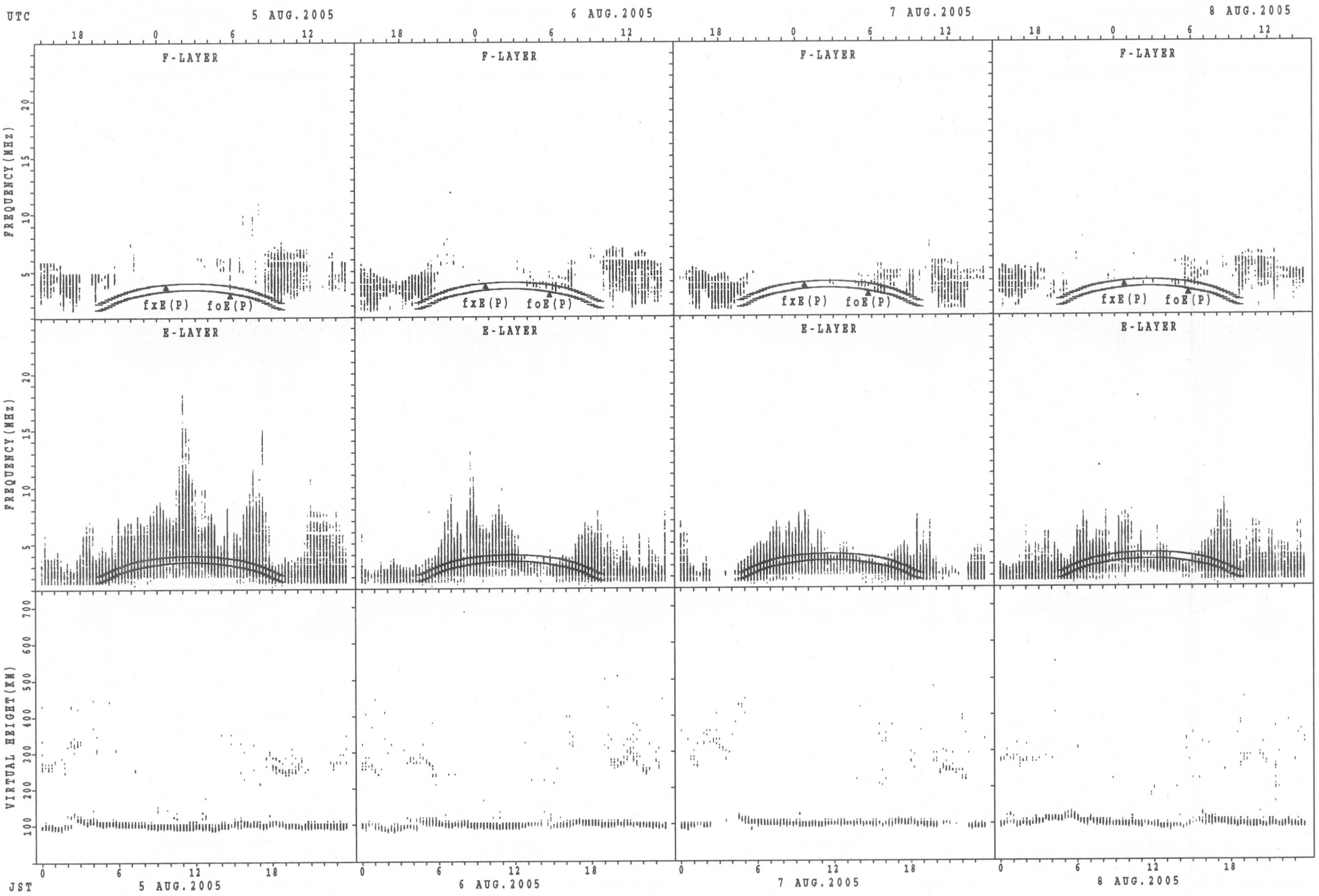
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	16	15	16	14	14	14	14	14	14	22	22	26	28	26	23	21	20	14	16	14	15	14	14	14
2	14	14	14	14	14	14	14	14	14	23	20	28	29	23	21	C	C	C	18	18	15	15	14	14
3	14	15	14	15	14	17	14		15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	21	27	22	27	28	54	21	15	14	14	14	14	14	16
5	14	14	15		15	14	15	14	15	20	24	27	30	36	22	23	17	20	14	18	15	15	15	14
6	14	14	17	14	14	14	15	14	14	14	20	28	26	27	22	18	17	14	14	14	15	14	15	15
7	17	15	15	15	15	14	14	14	14	15	24	49	24	35	21	22	20	15	14	14	14		14	15
8	14	14	15	14	14	15	14	14	14	15	22	22	27	48	38	22	20	14	14	14	14	15	15	15
9	14	14	15	14	14	14	14	14	14	15	18	20	22	21	22	18	20	14	14	14	14	15	14	18
10	15	14	15	14	14	15	14	14	14	14	22	21	24	35	24	21	17	14	14	15	14	15	16	15
11	15	14	16	14	14	15	15	14	14	21	22	32		23	46	22	20	14	14	14	14	14	15	14
12	14	14	14	14	14		14	14	14	15	21	24	26	24	21	21	16	14	14	14	16	15	15	20
13	17	14	15		14	14	18	14	14	18	20	21	20	22	21	16	14	14	14	14	15	14	14	15
14	14	14	14	14	14	14	14	14	15	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	24	C	C	C	C	C	C	C	14	C	C	C
16	C	15	C	C	14	C	C	14	C	C	C	C	C	C	C	C	C	C	C	15	15	14	14	14
17	C	16	14	C	14	C	14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	14	14	14	16	18	22	21	20	20	18	17	14	14	C	15	15	14	C
19	C	14	C	14	C		C	C	16	18	26	45	50	22	22	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	21	22	20	20	C	18	14	15	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	15	14	14	14	14	14	14
24	14	14	14	14	14	14	14	14	16	20	24	28	30	29	24	23	32	16	14	14	16	15	14	14
25	14	14	15	14	14	14	14	15	14	18	22		37	34	48	47	21	15	14	14	15	16	15	14
26	14	14	14	14	14	14	14	14	17	20	C	34	39	52	50	23	21	17	14	16	14	14	14	17
27	15	16	20	15	15	15	14	15	15	23	20	28	28	26	23	22	15	14	14	15	18	14	15	15
28	16	14	15	15	14	14	14	14	14	17	33		30	52	38	20	15	15	14	14	14	14	14	14
29	14	14	14	14	14	14	15	14	14	15	17	33	34	33	22	21	17	14	14	14	14	14	15	14
30	14	14	14	14	14	14	16	15	14	22	22	32	28	46	22	21	21	14	14	14	14	14	14	14
31	14	15	15	15	15	15	14	14	14	22	28	50	27	21	20	45	18	14	14	15	14	18	14	15
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	24	22	20	23	20	23	22	23	21	21	20	23	23	23	21	20	22	23	23	24	22	23	22
MED	14	14	15	14	14	14	14	14	14	18	22	28	27	27	22	21	19	14	14	14	14	14	14	14
U Q	15	15	15	14	14	15	15	14	15	21	24	32	30	35	28	23	20	15	14	15	15	15	15	15
L Q	14	14	14	14	14	14	14	14	14	15	20	23	24	22	21	20	17	14	14	14	14	14	14	14

SUMMARY PLOTS AT Wakkanai



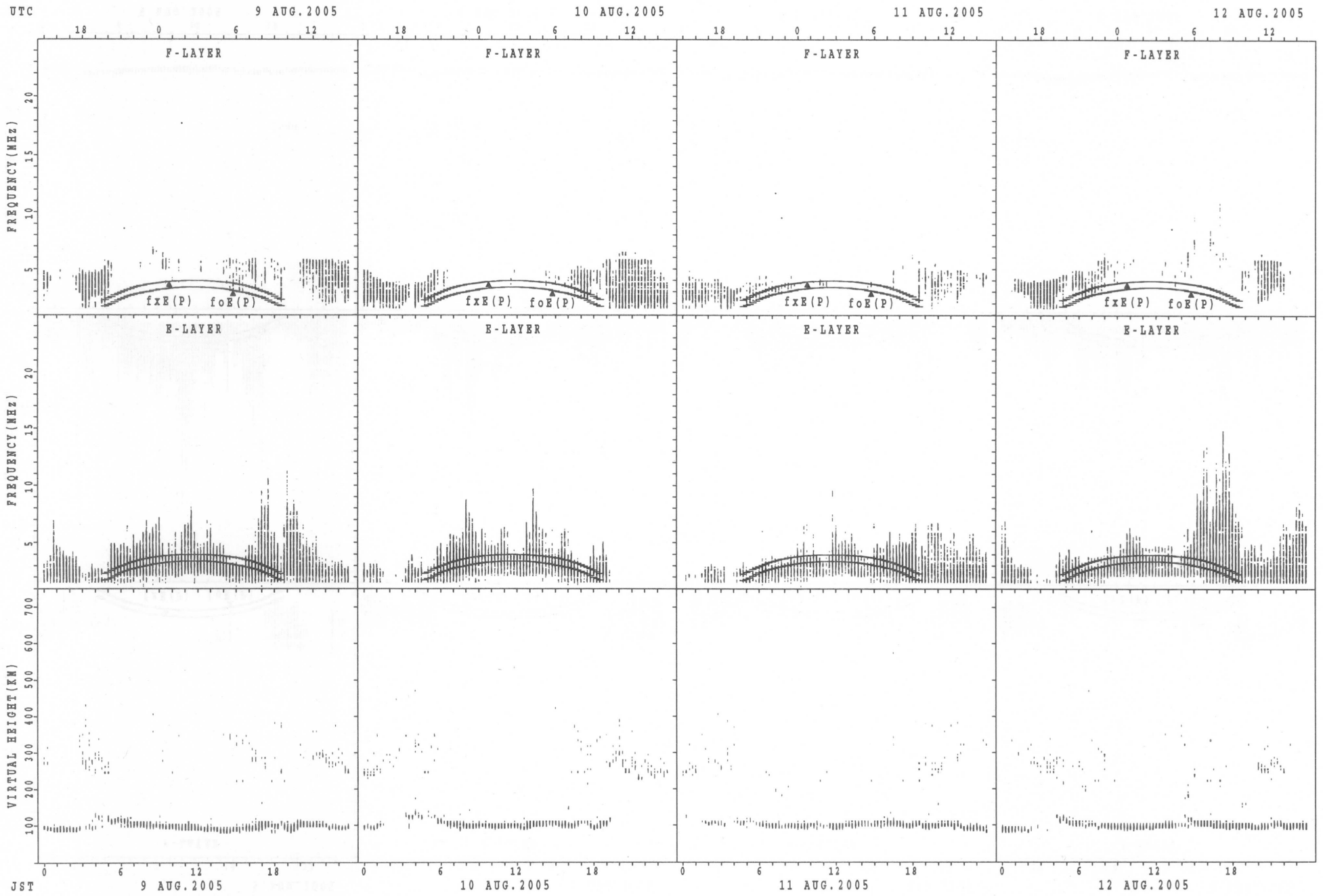
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



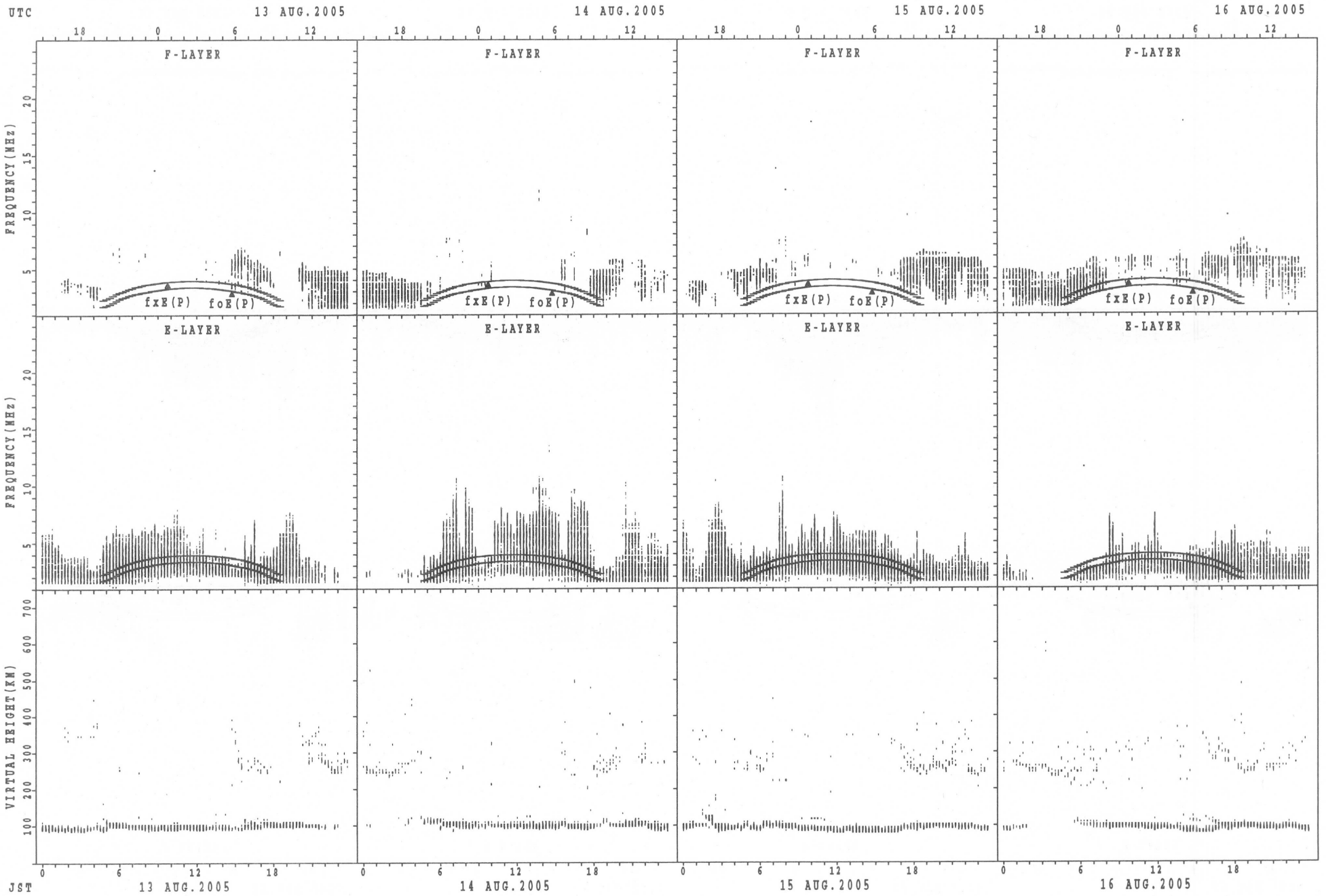
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



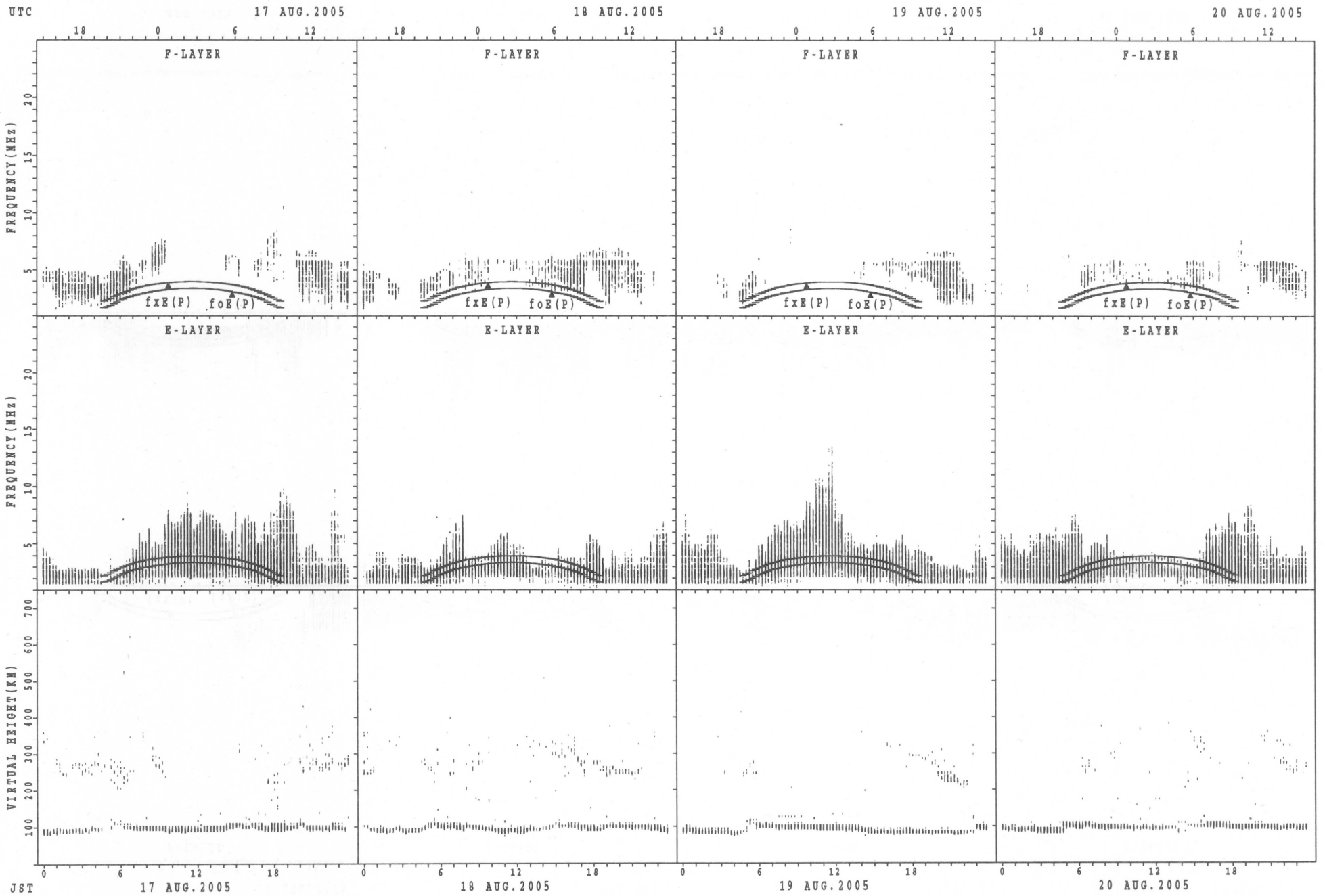
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



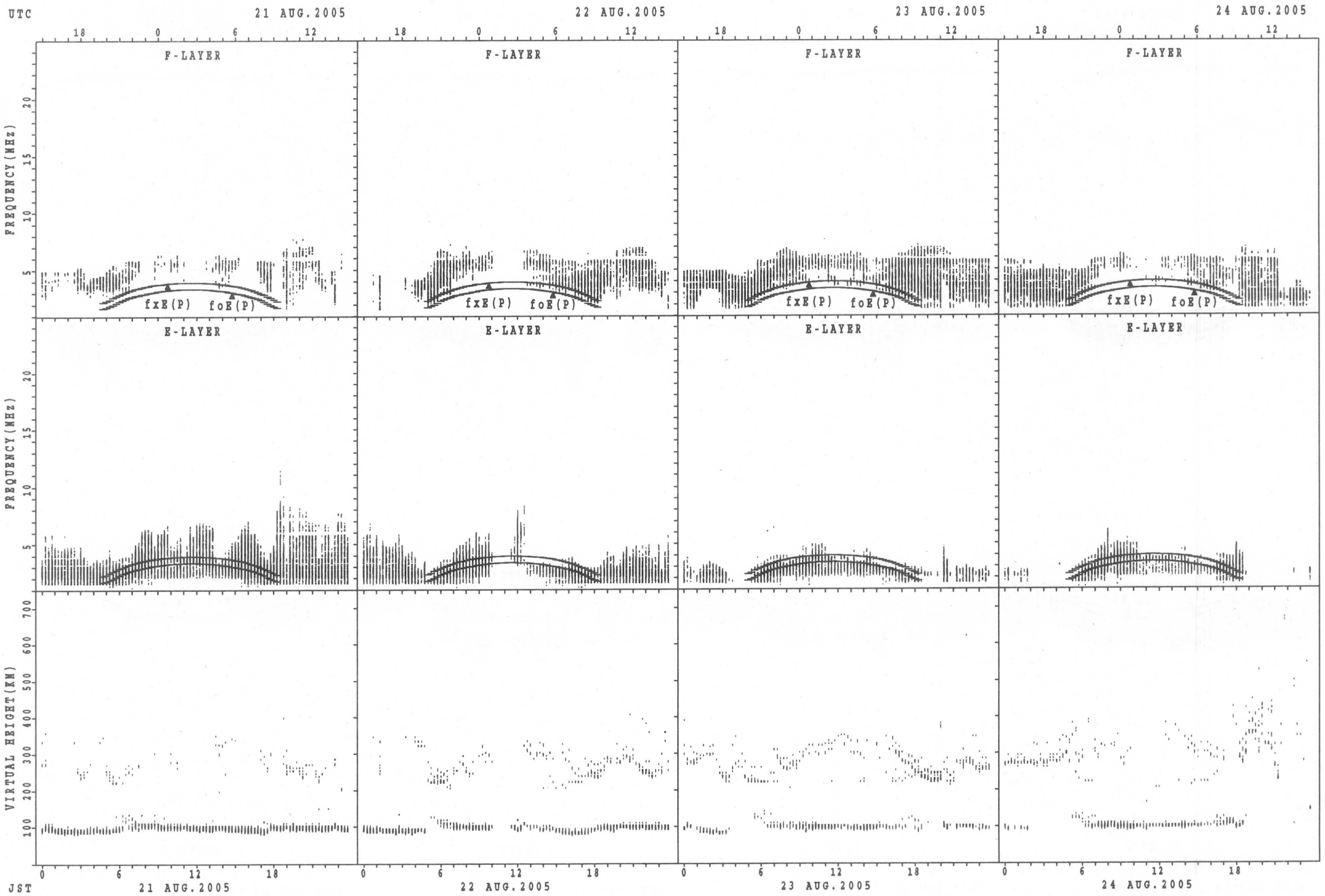
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



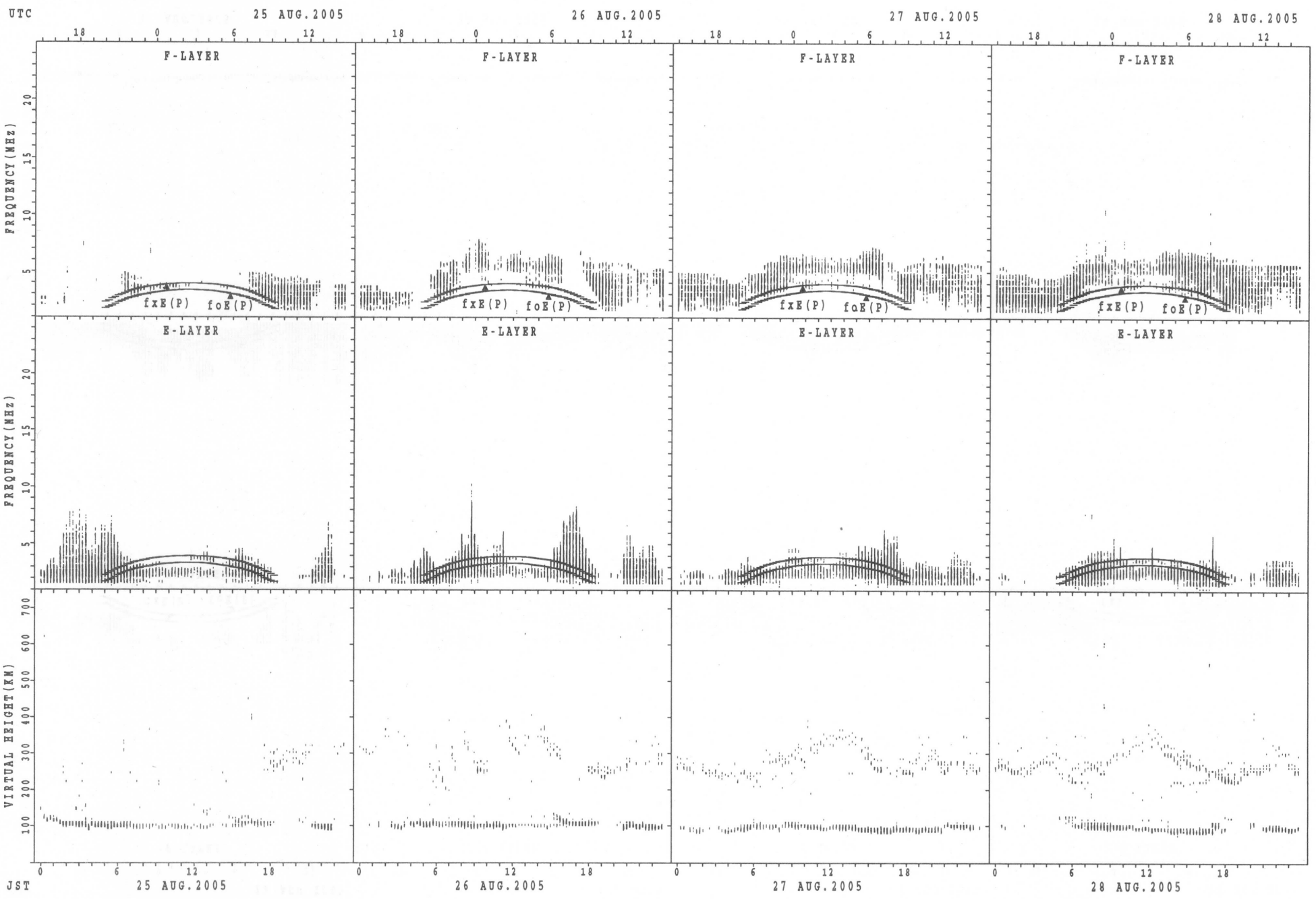
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



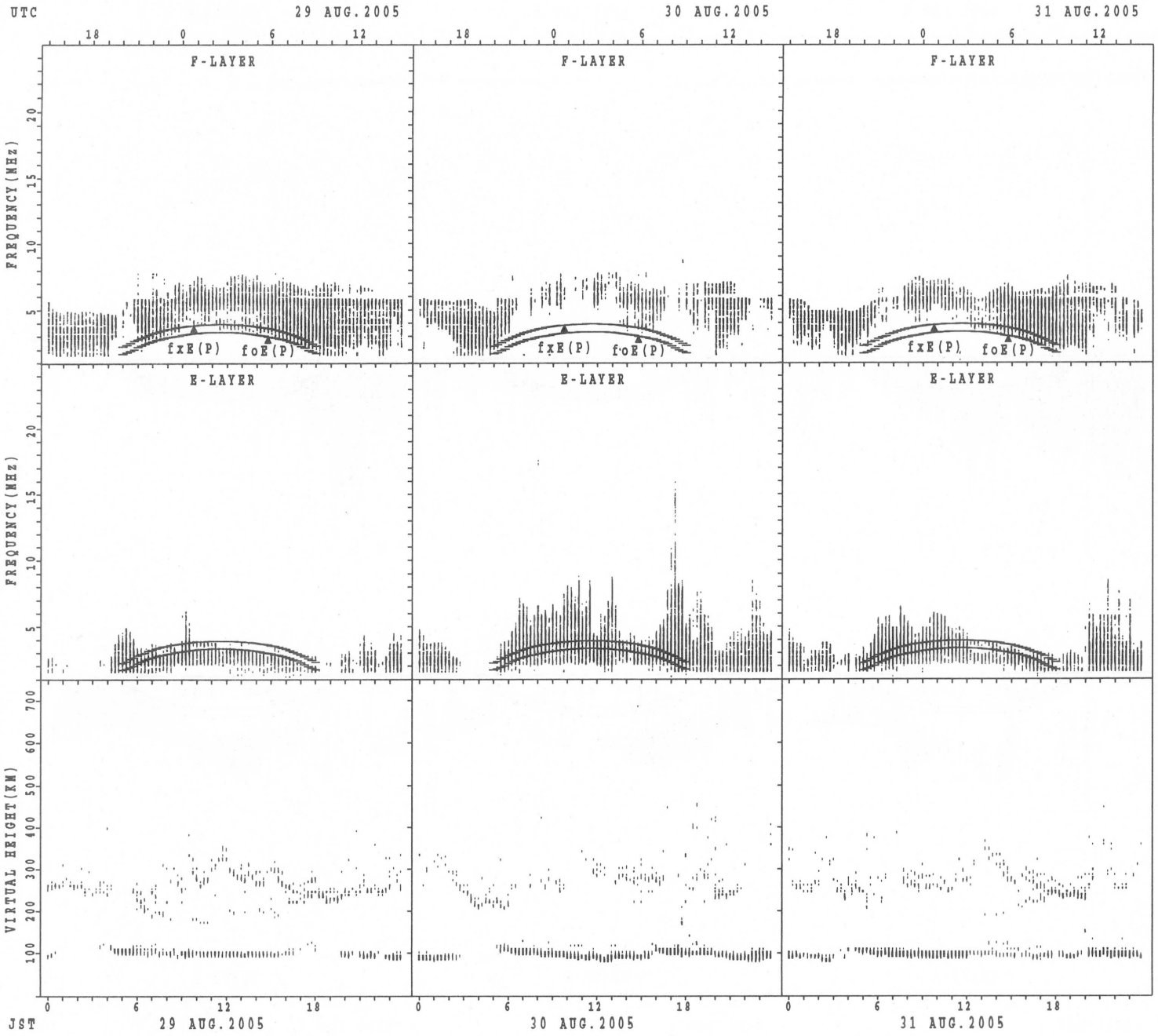
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



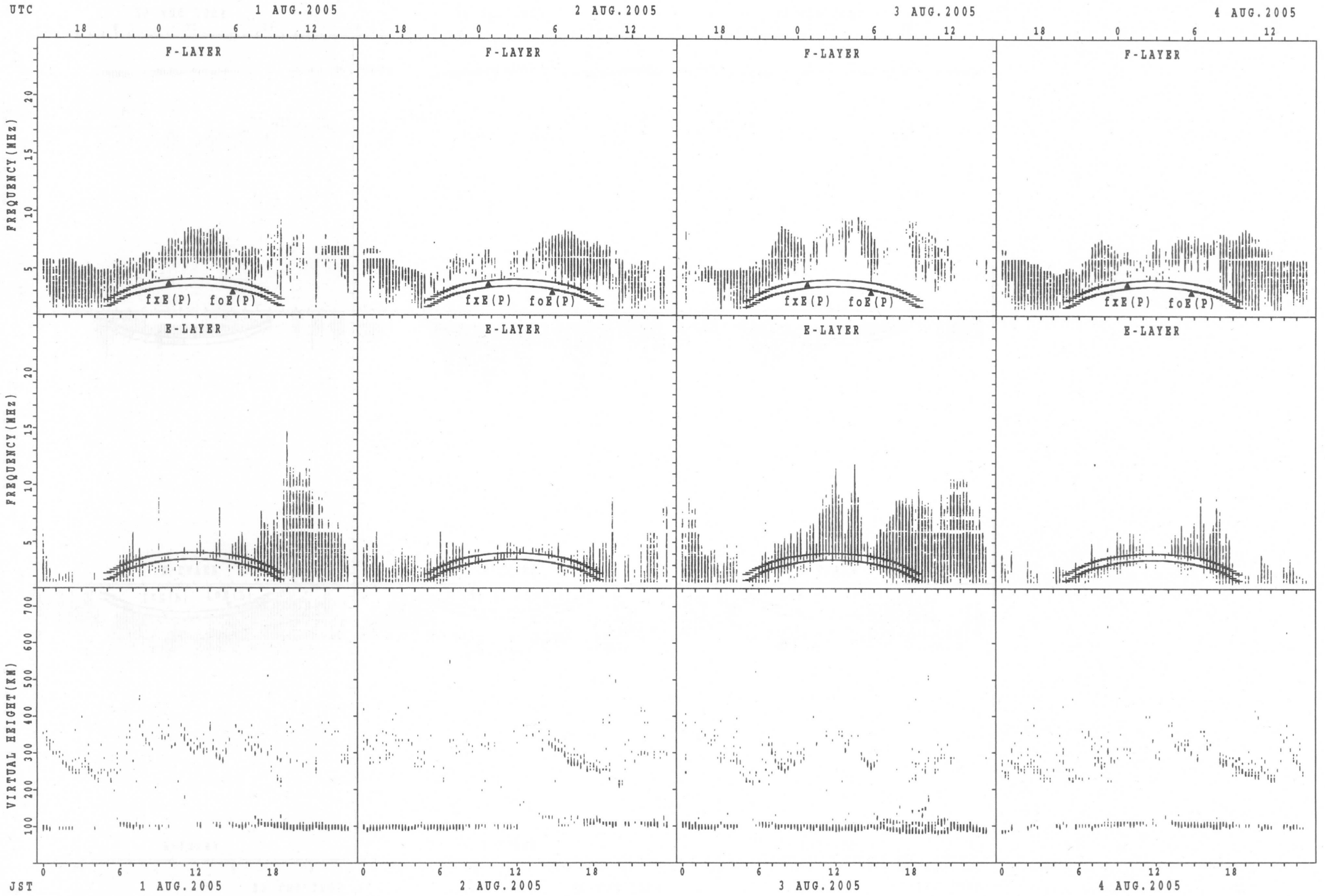
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai

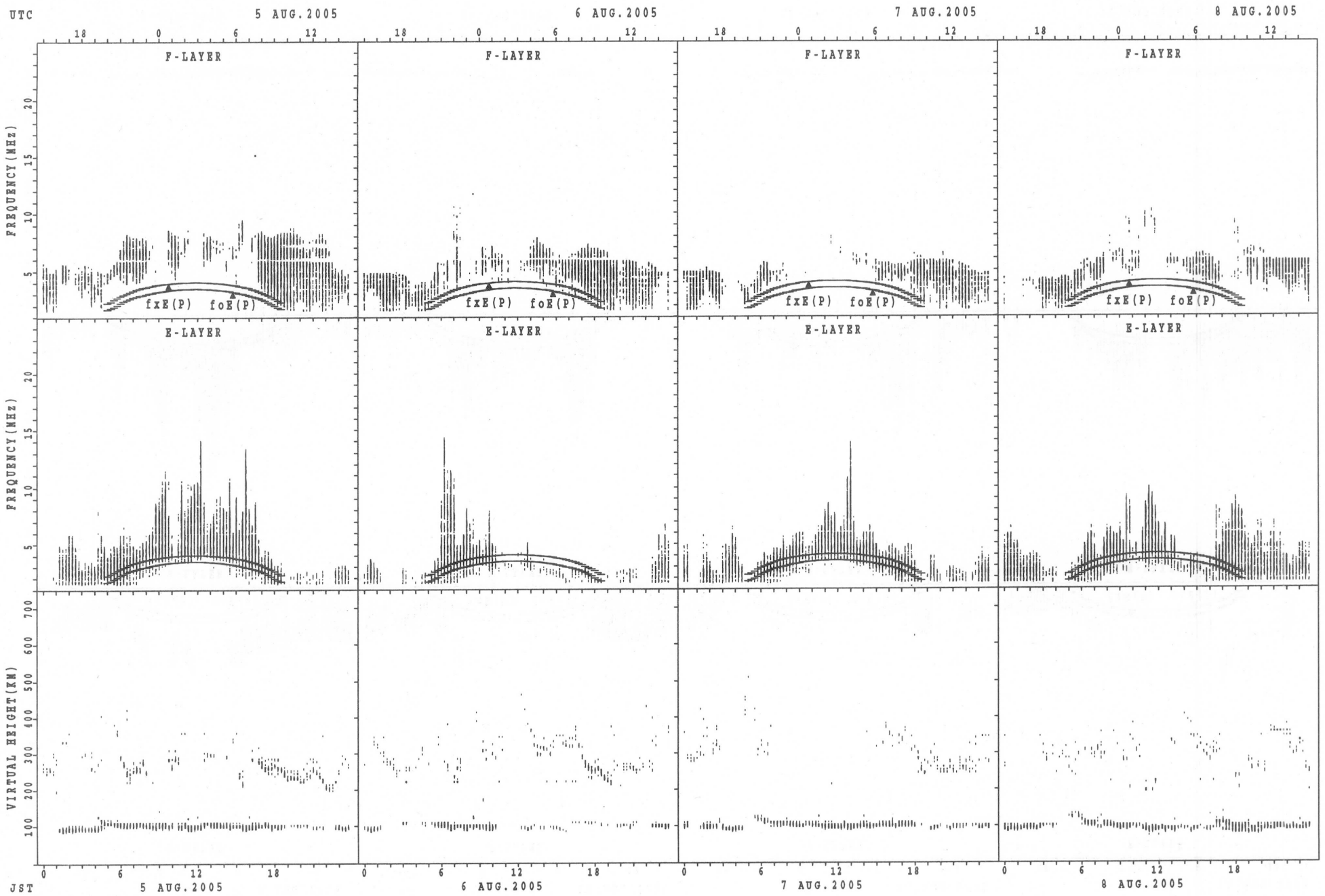


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

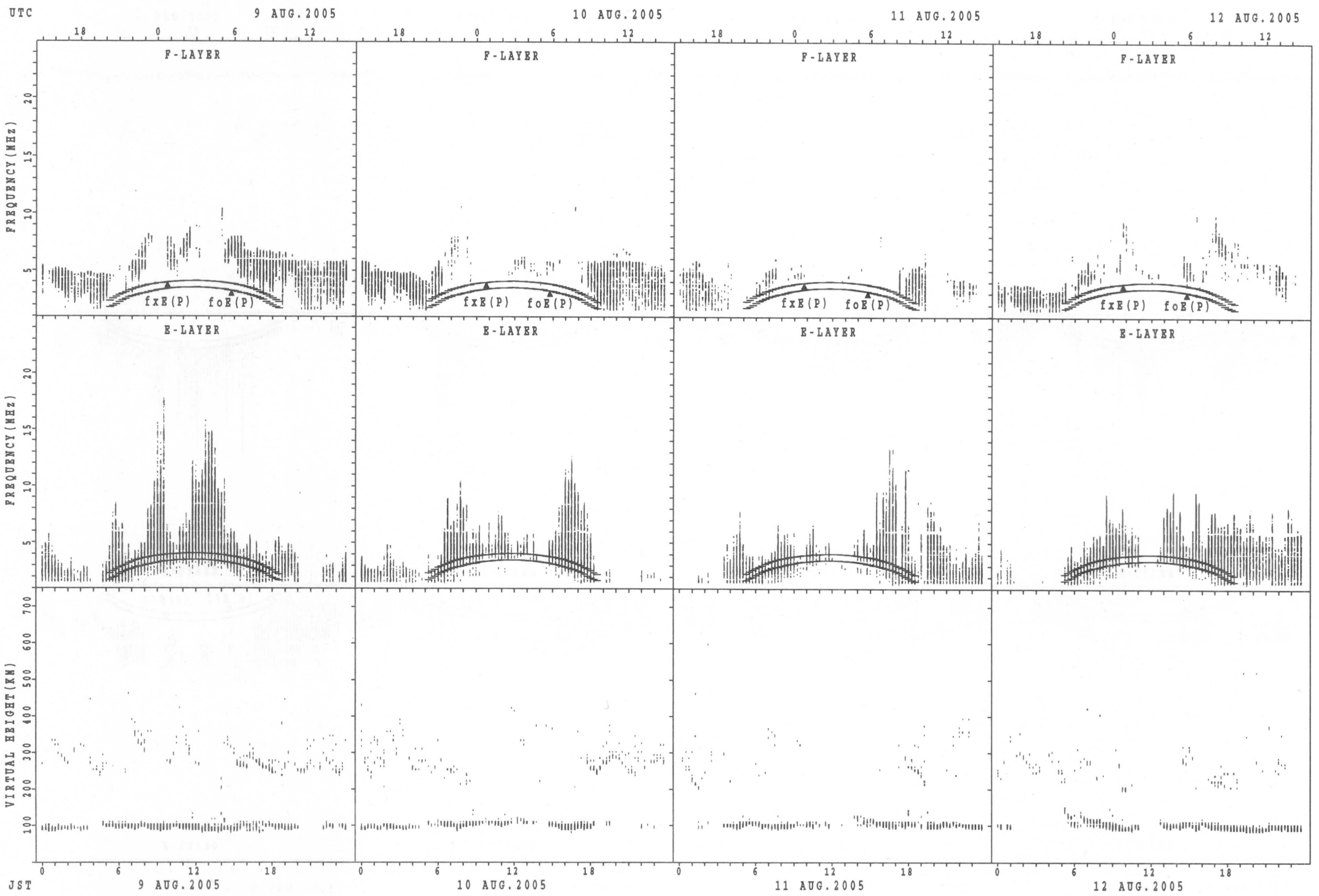
SUMMARY PLOTS AT Kokubunji



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

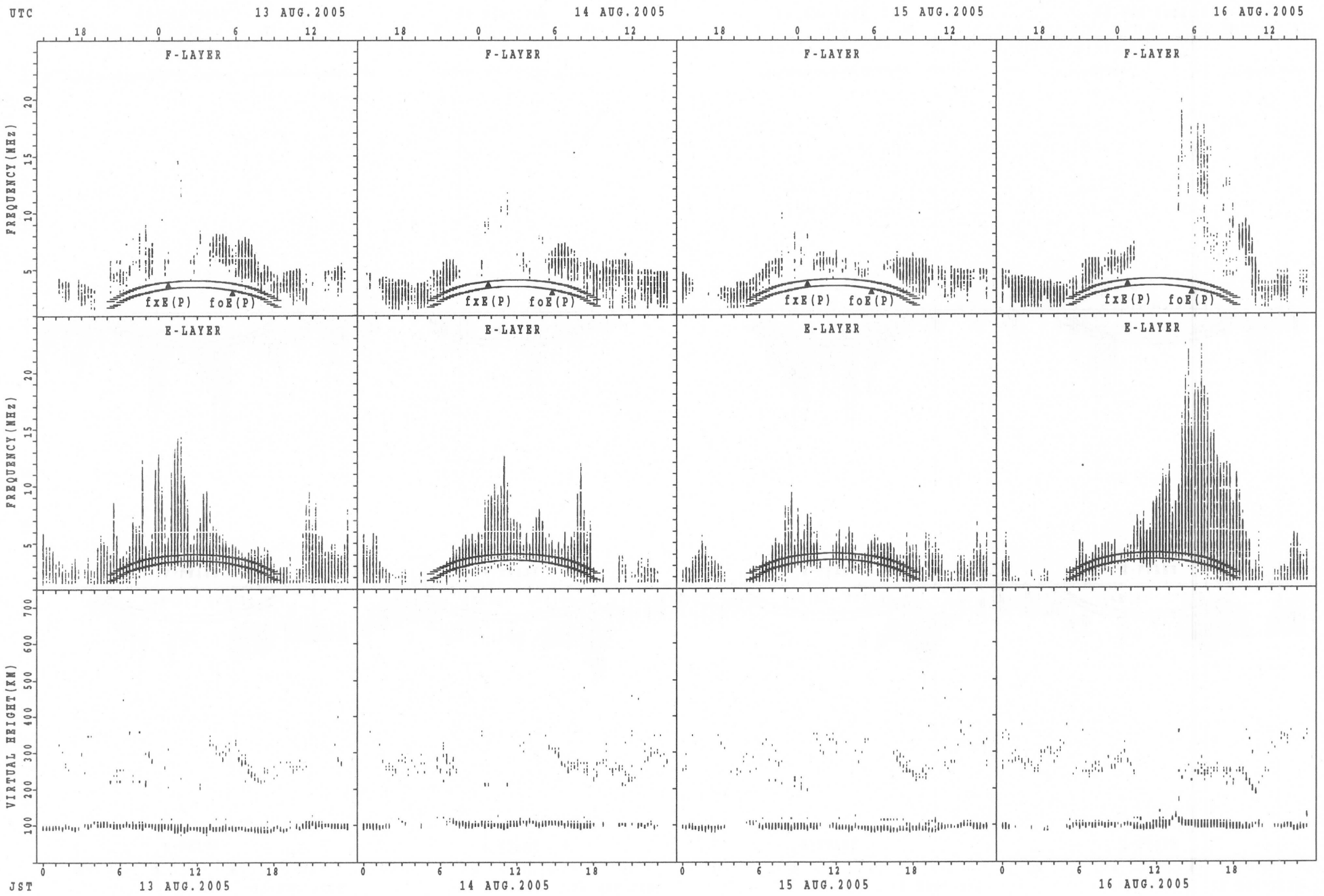

SUMMARY PLOTS AT Kokubunji
UTC
5 AUG.2005
6 AUG.2005
7 AUG.2005
8 AUG.2005
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P) foE(P)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



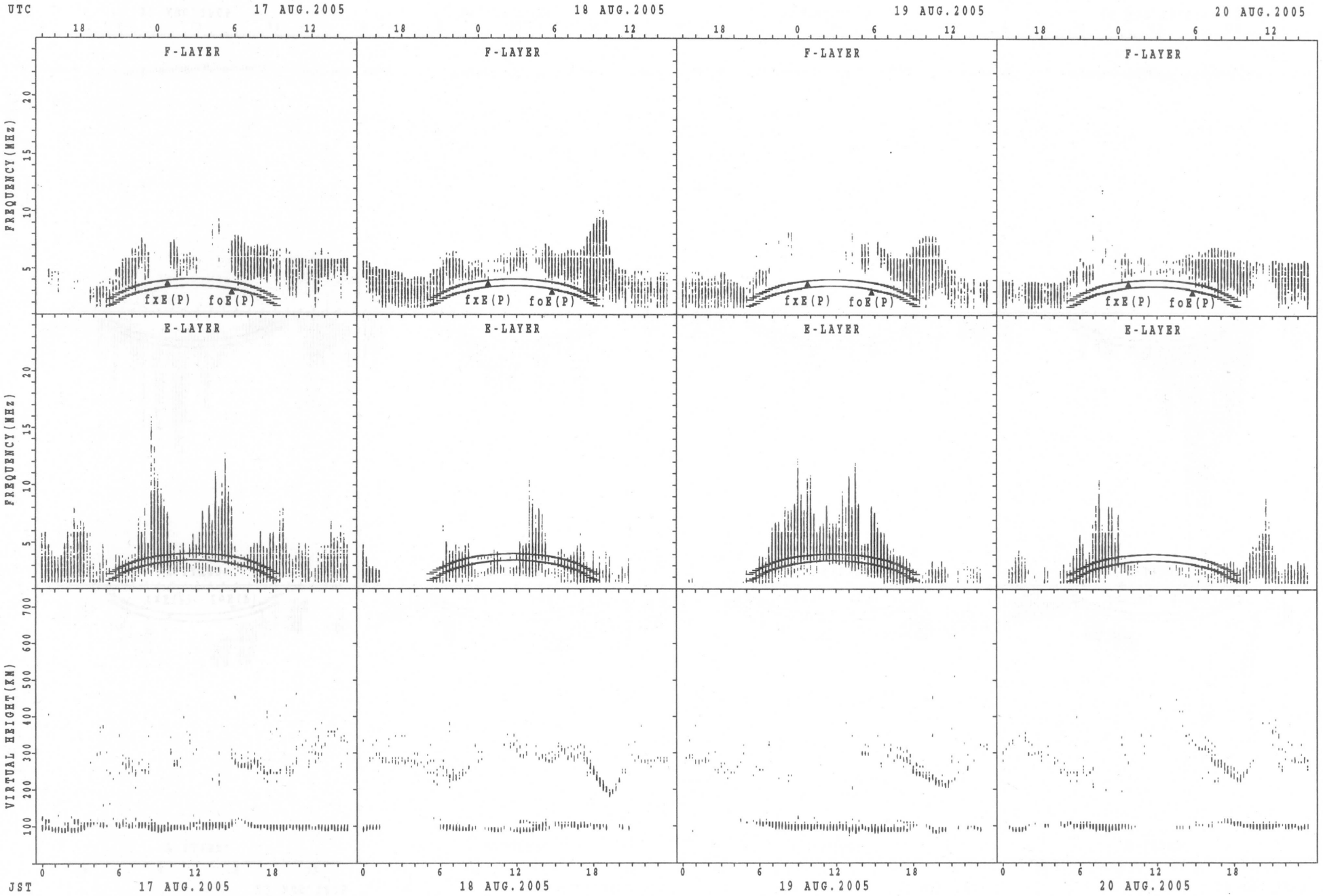
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



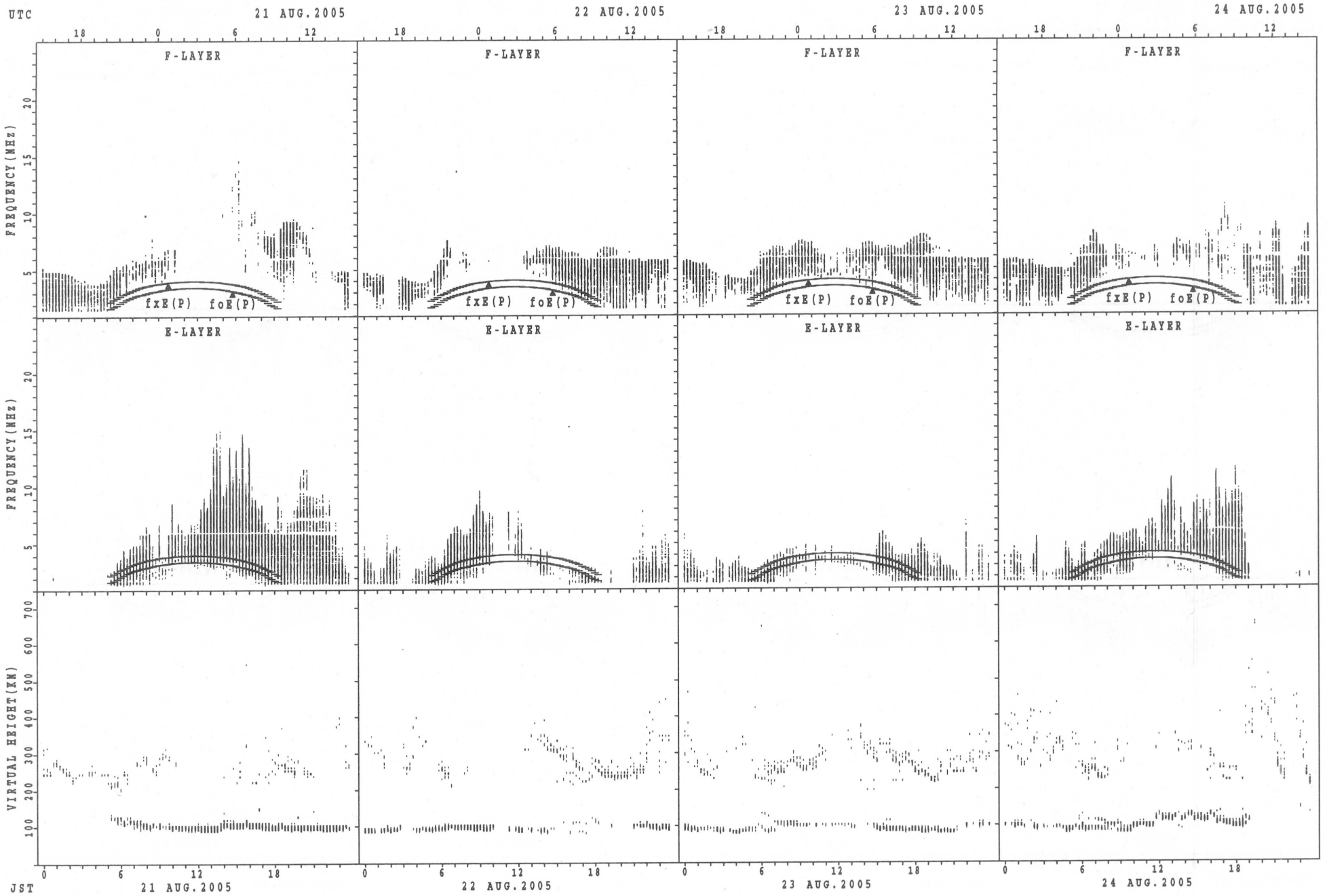
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



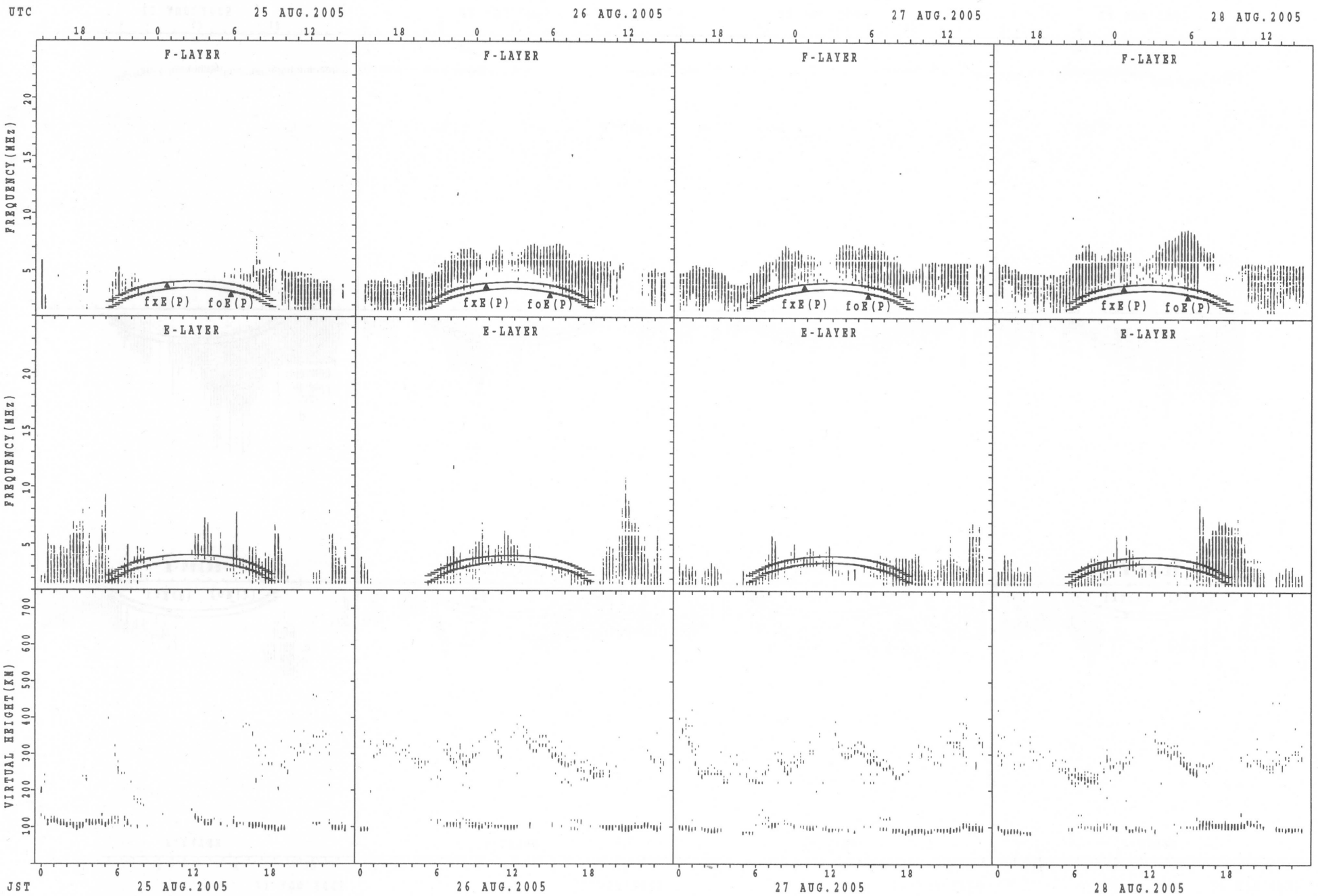
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



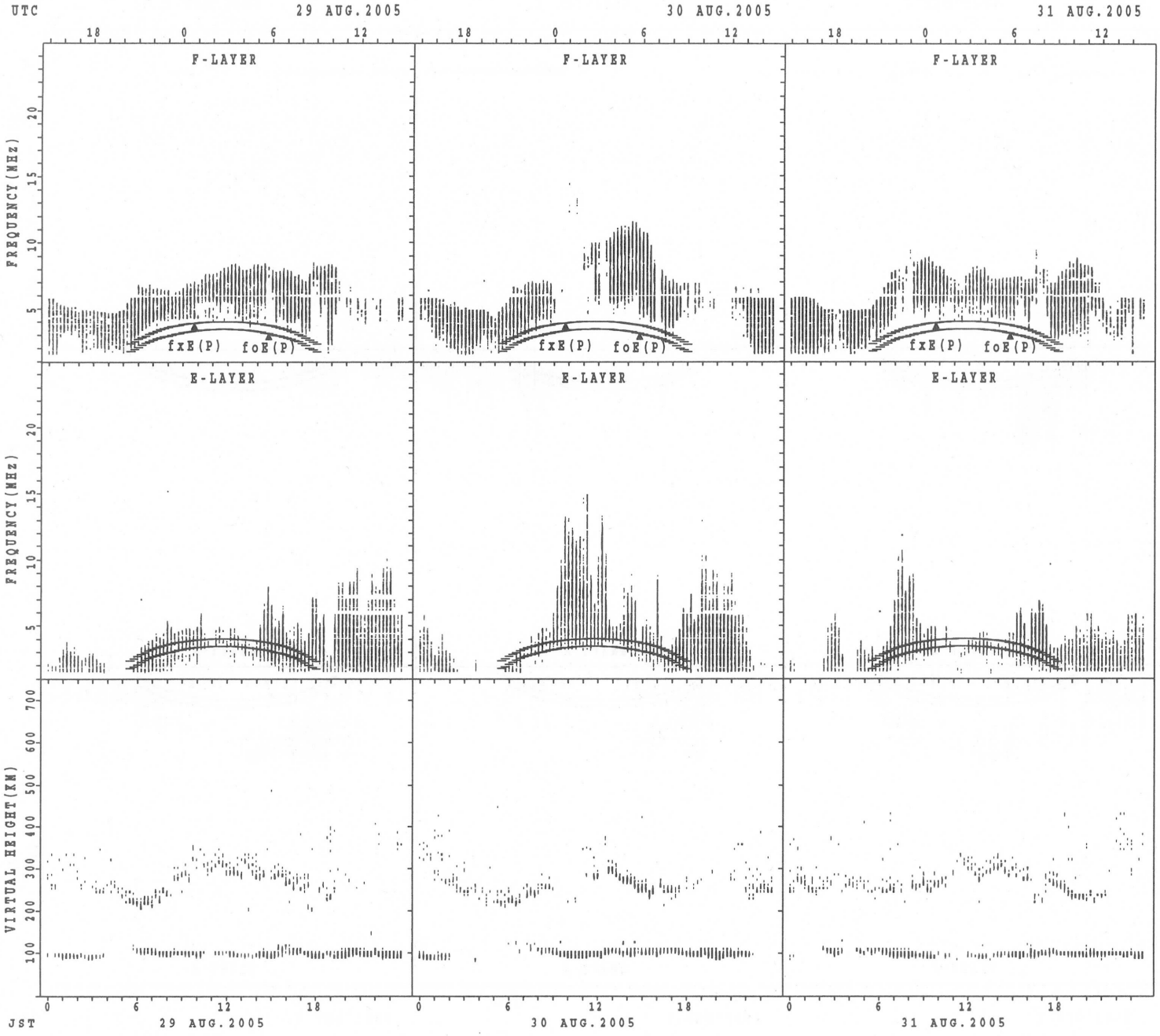
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



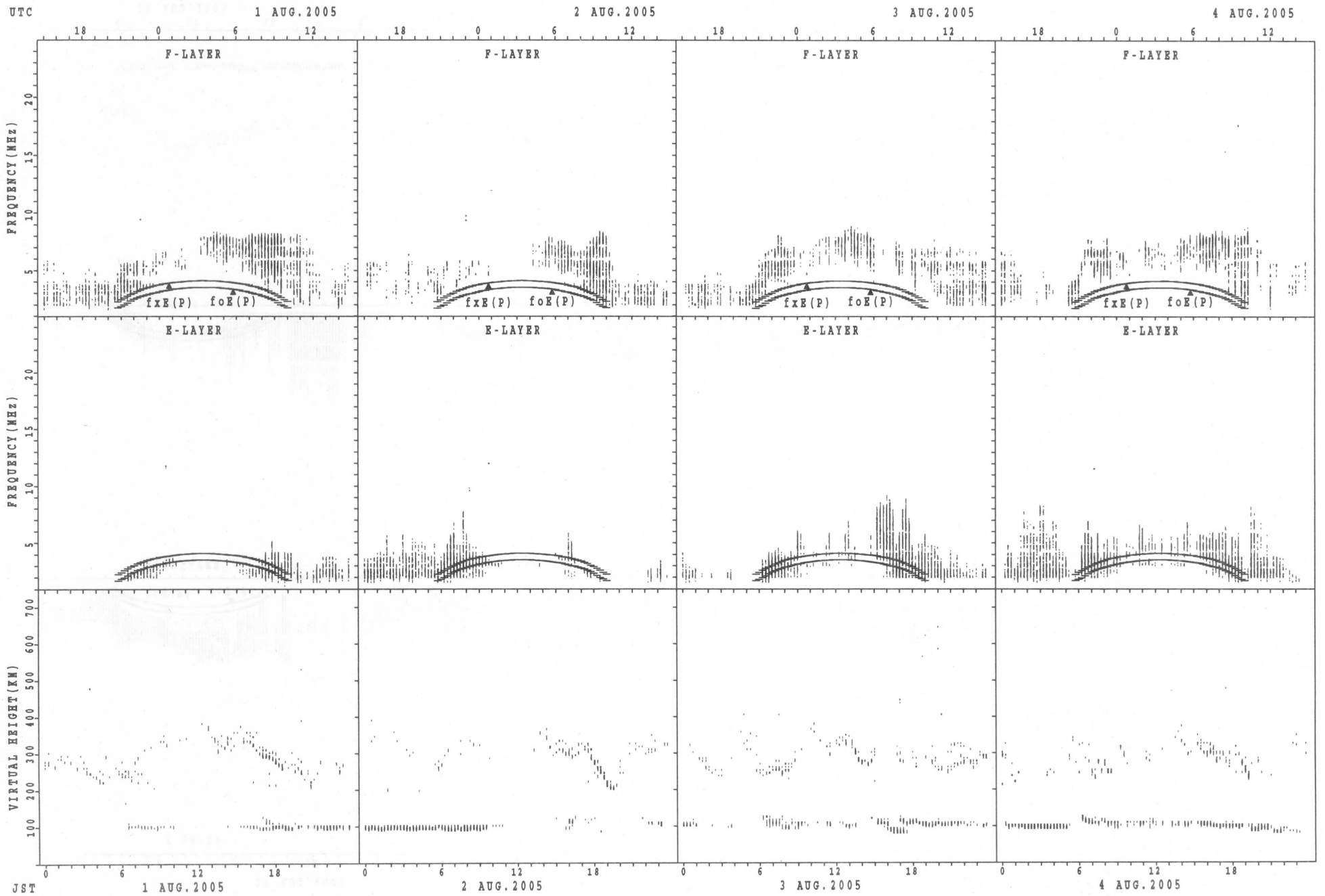
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

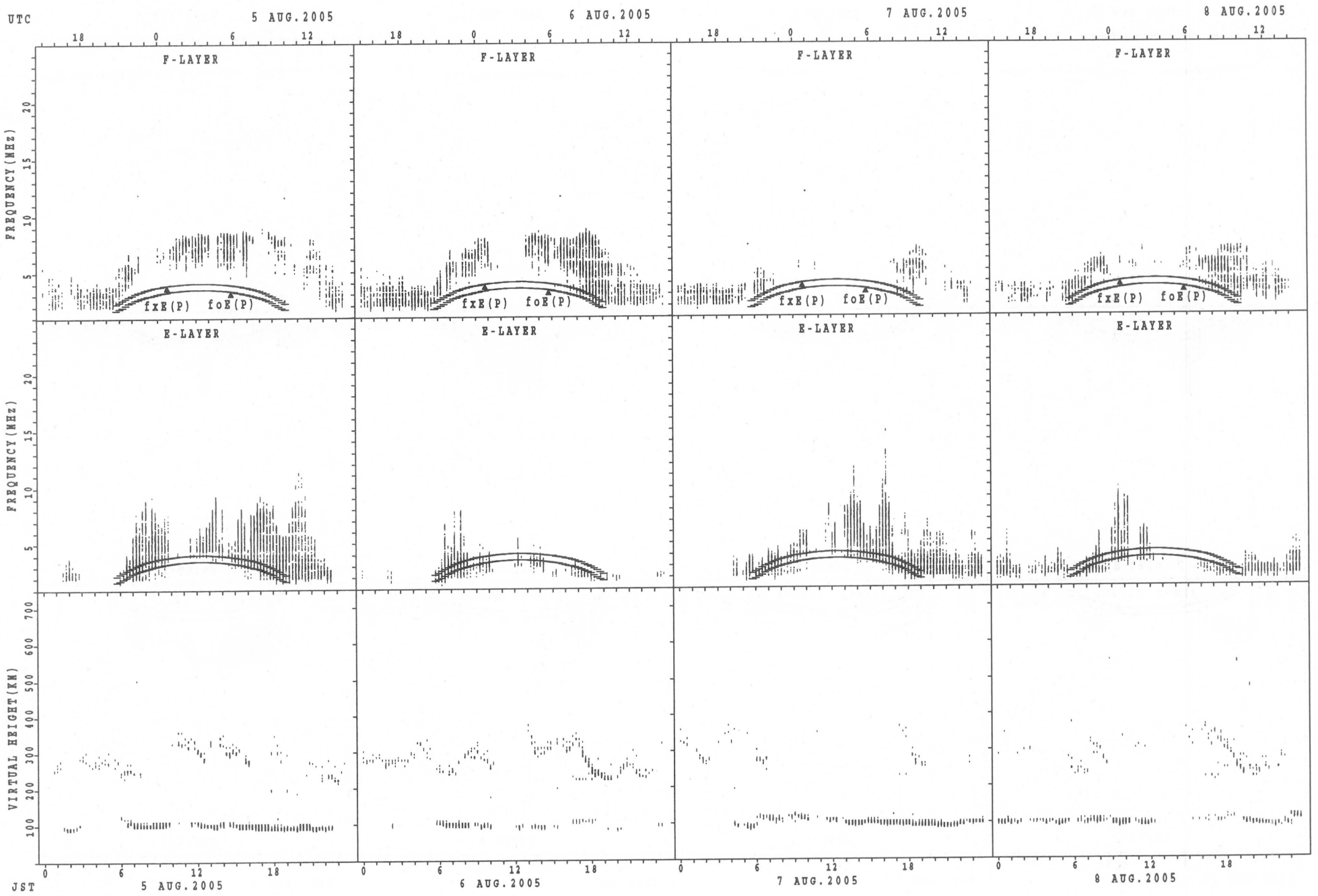


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

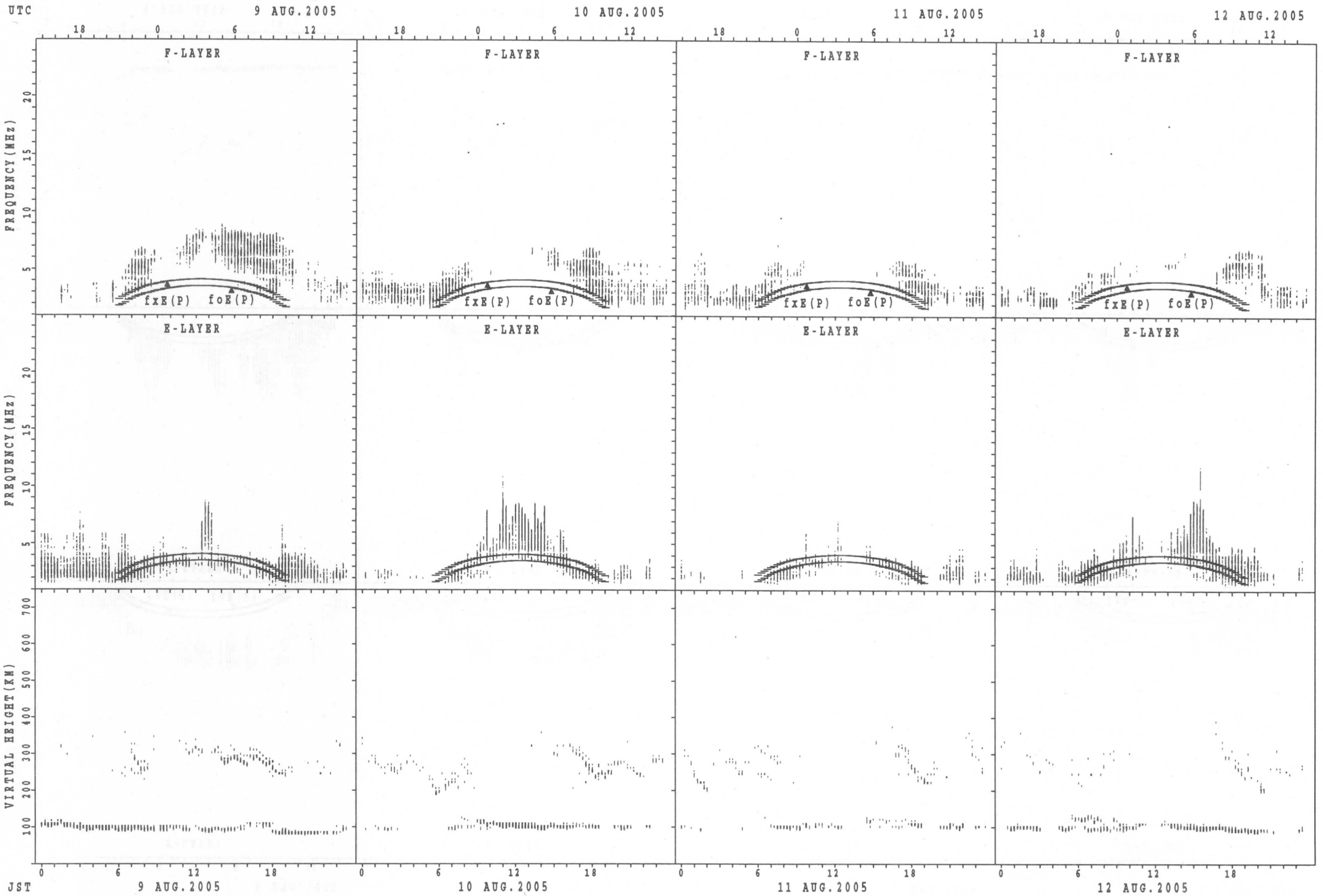


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE



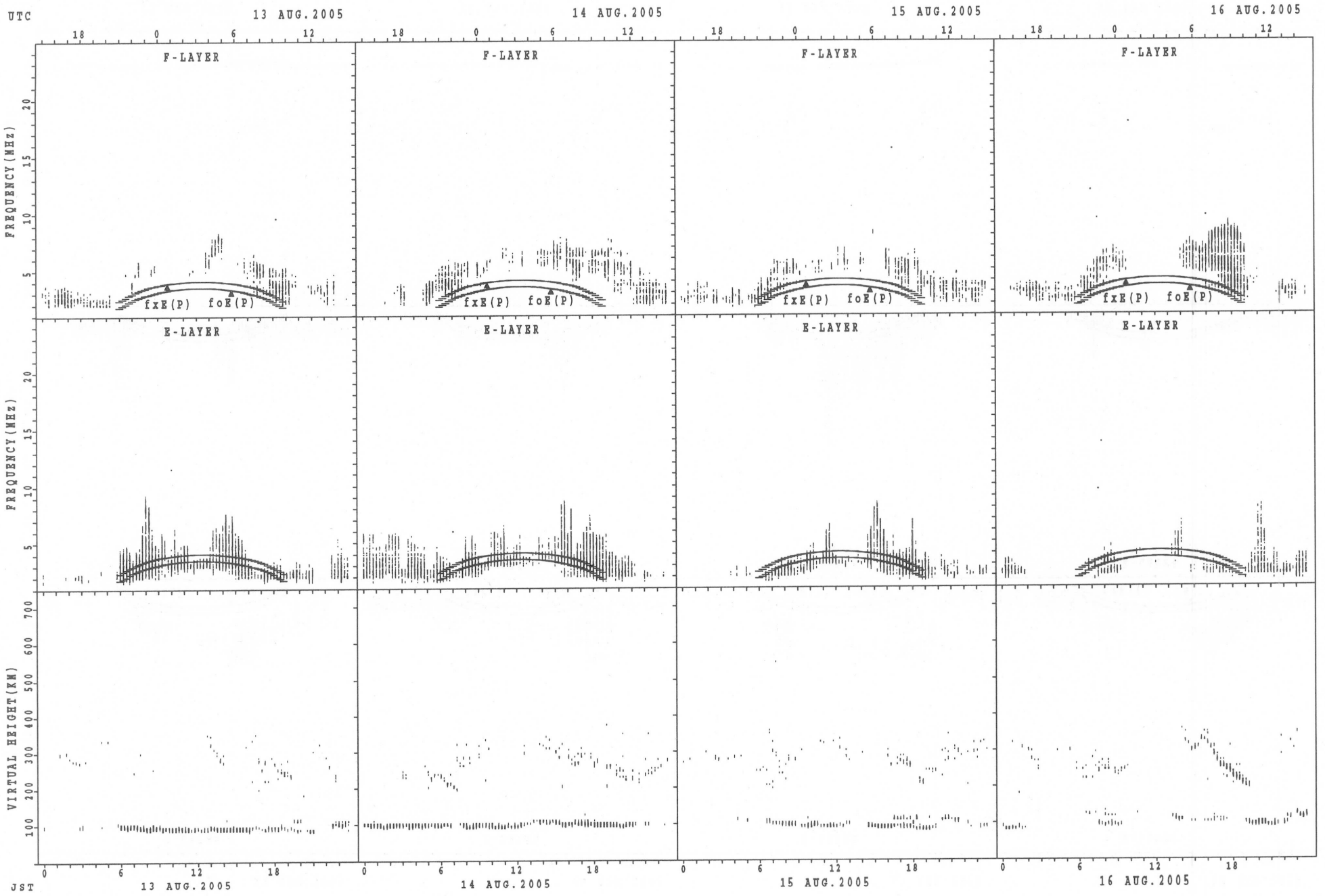
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

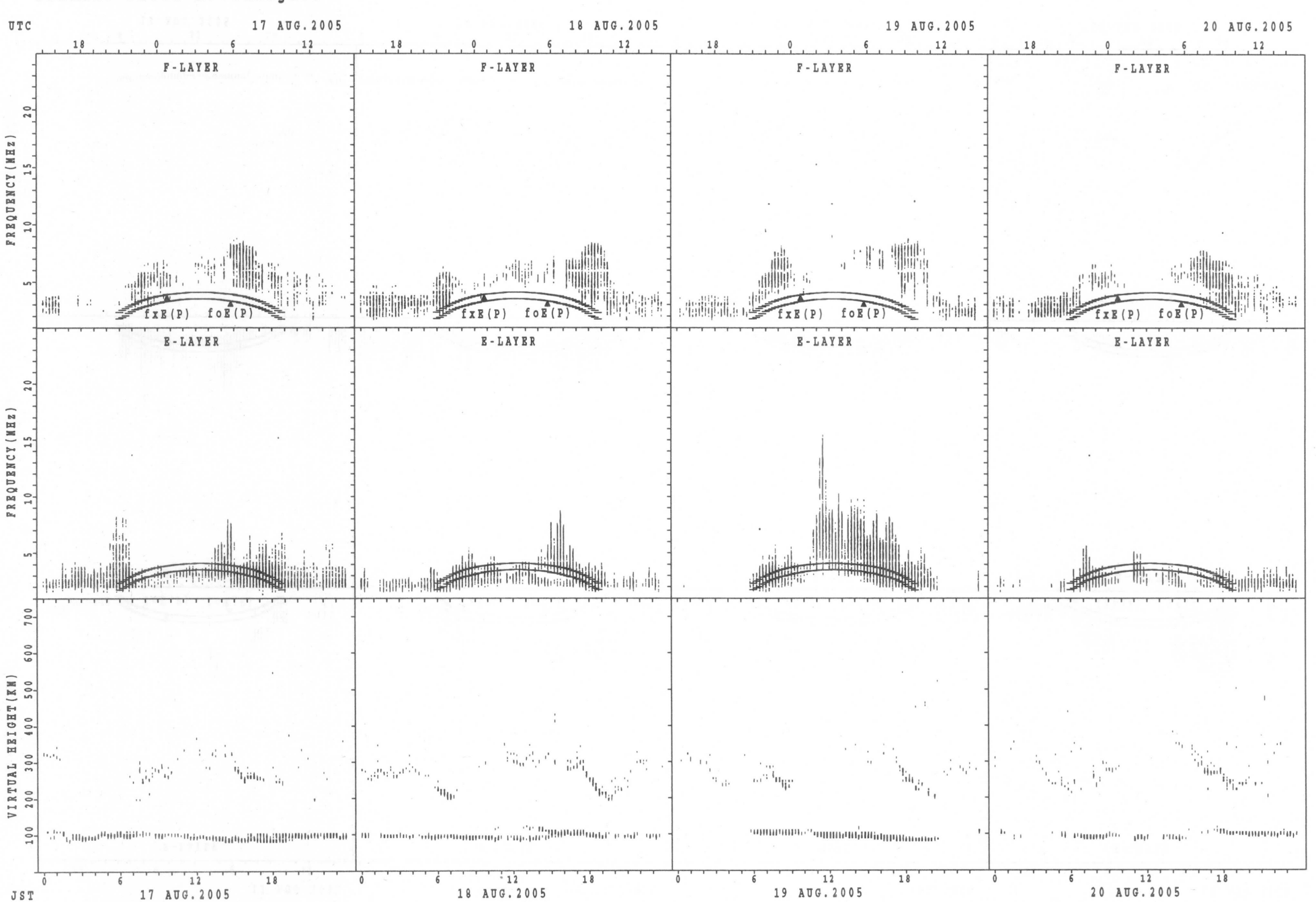


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

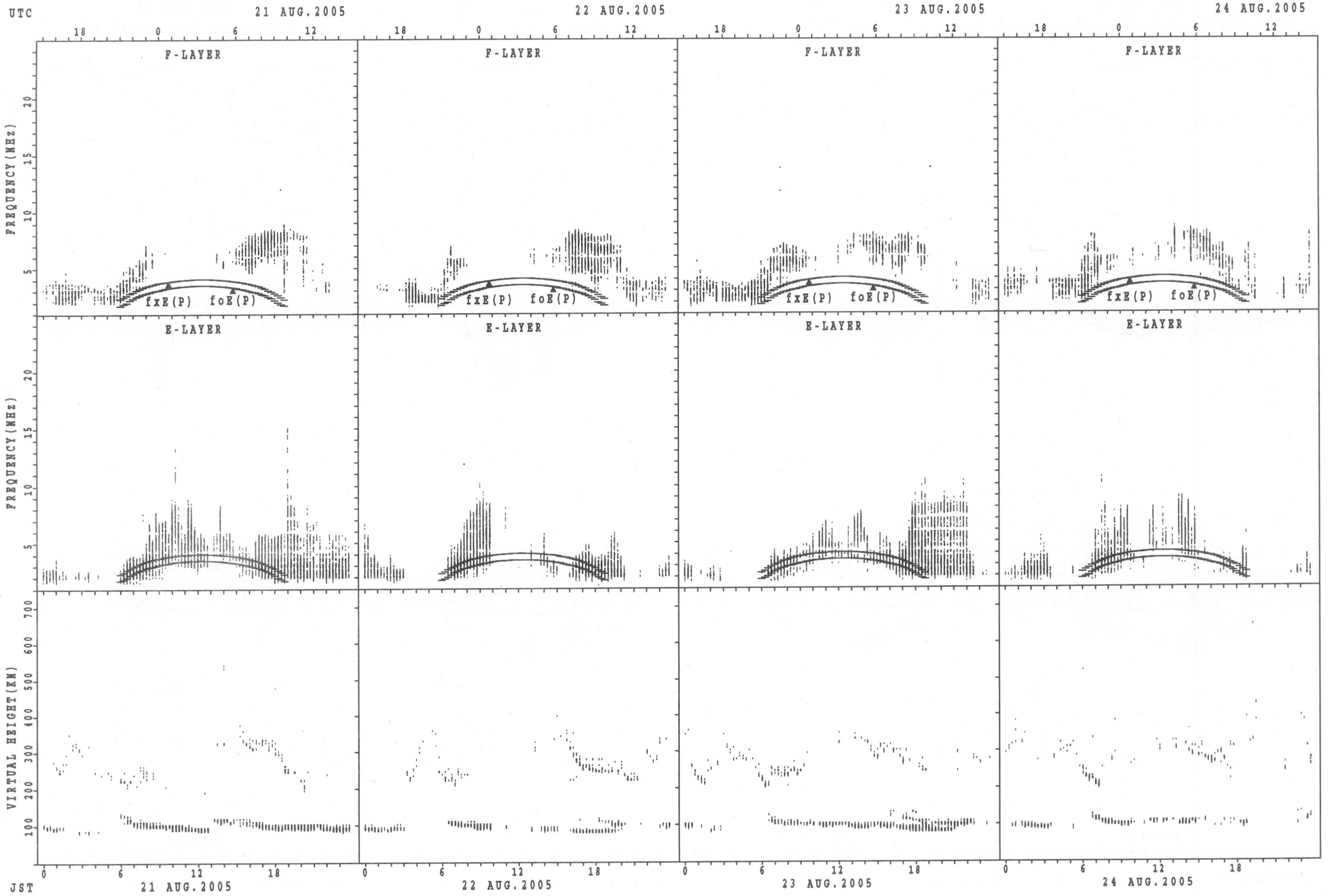
SUMMARY PLOTS AT Yamagawa



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

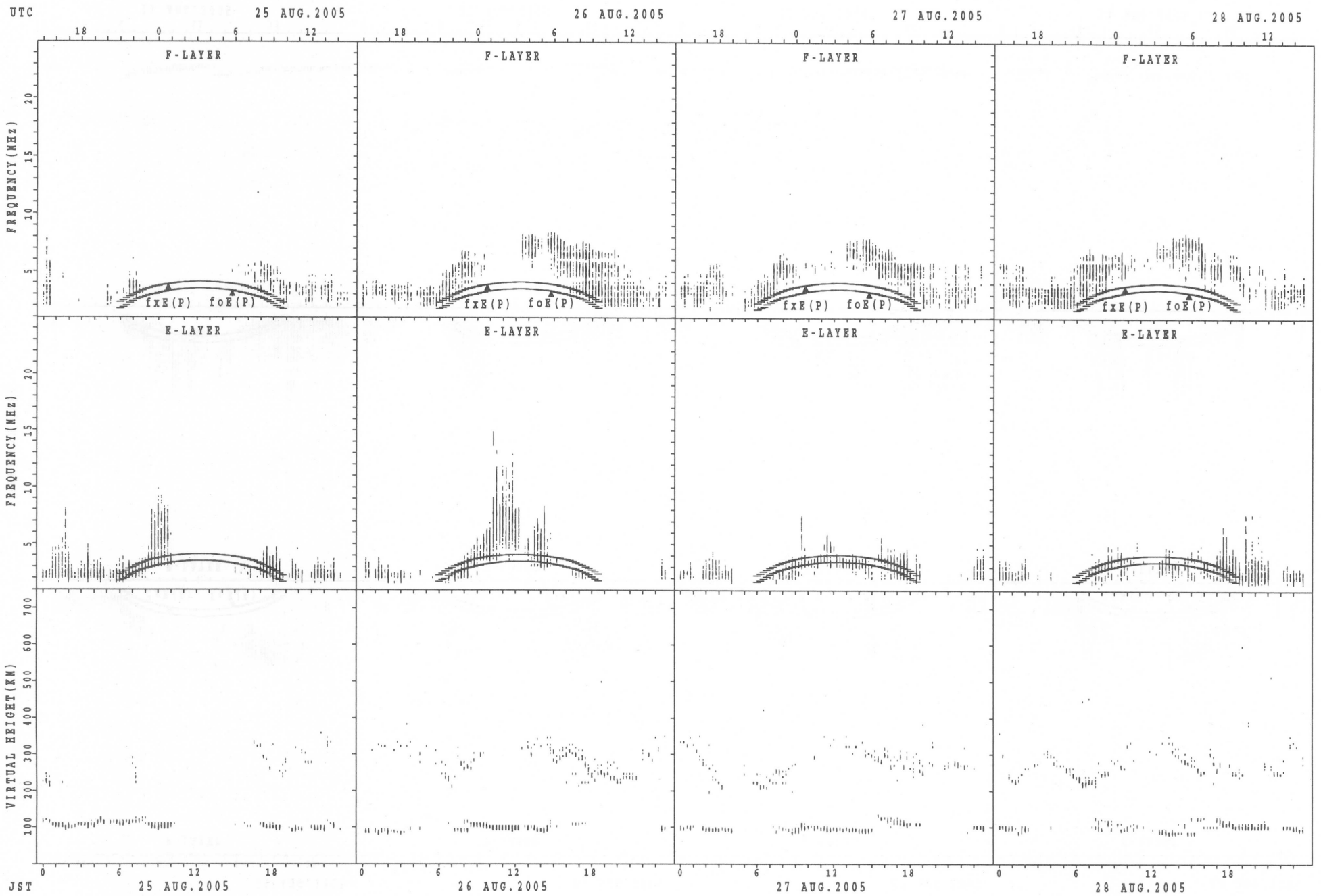

SUMMARY PLOTS AT Yamagawa
UTC
17 AUG.2005
18 AUG.2005
19 AUG.2005
20 AUG.2005
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P)
foE(P)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



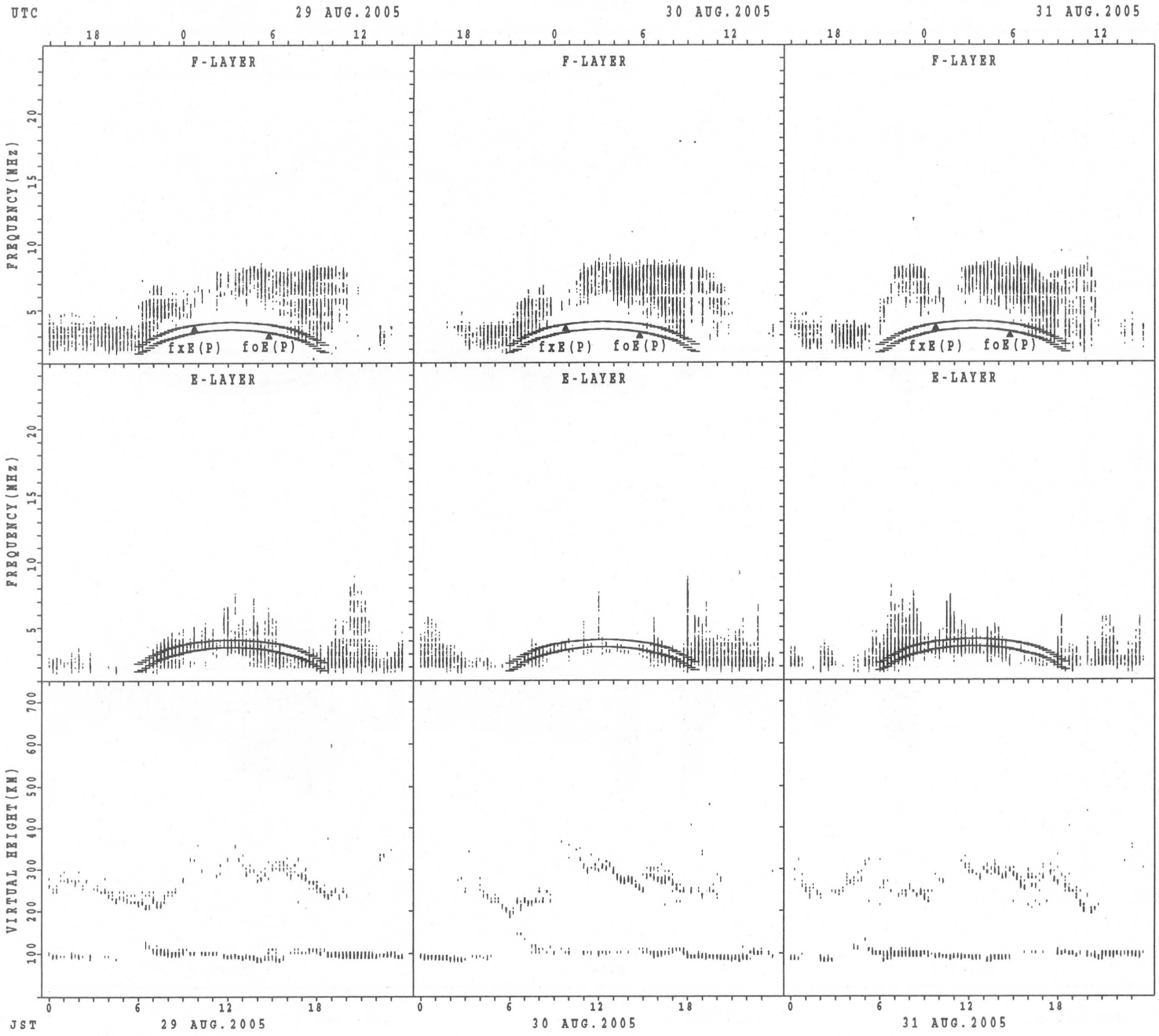
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



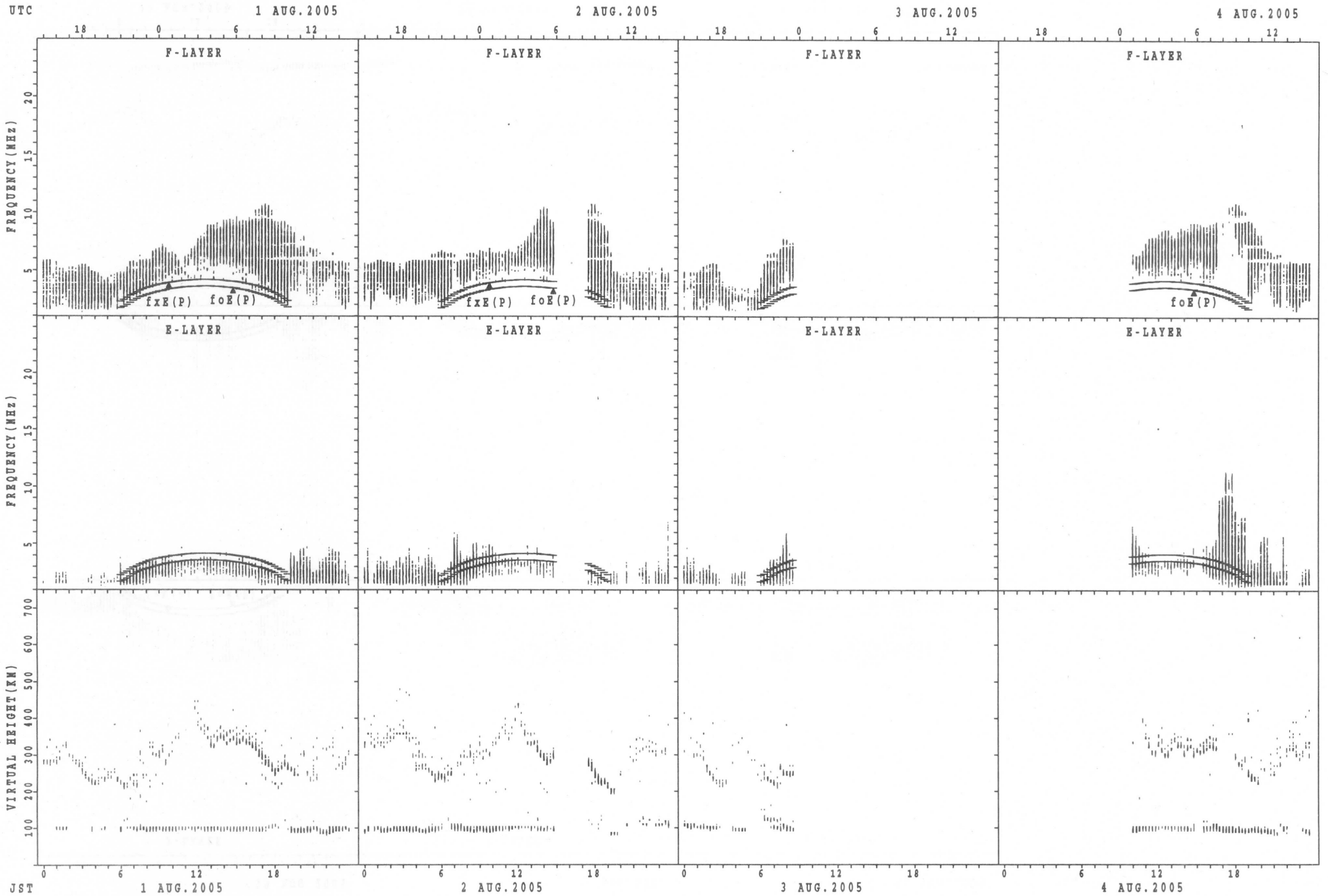
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



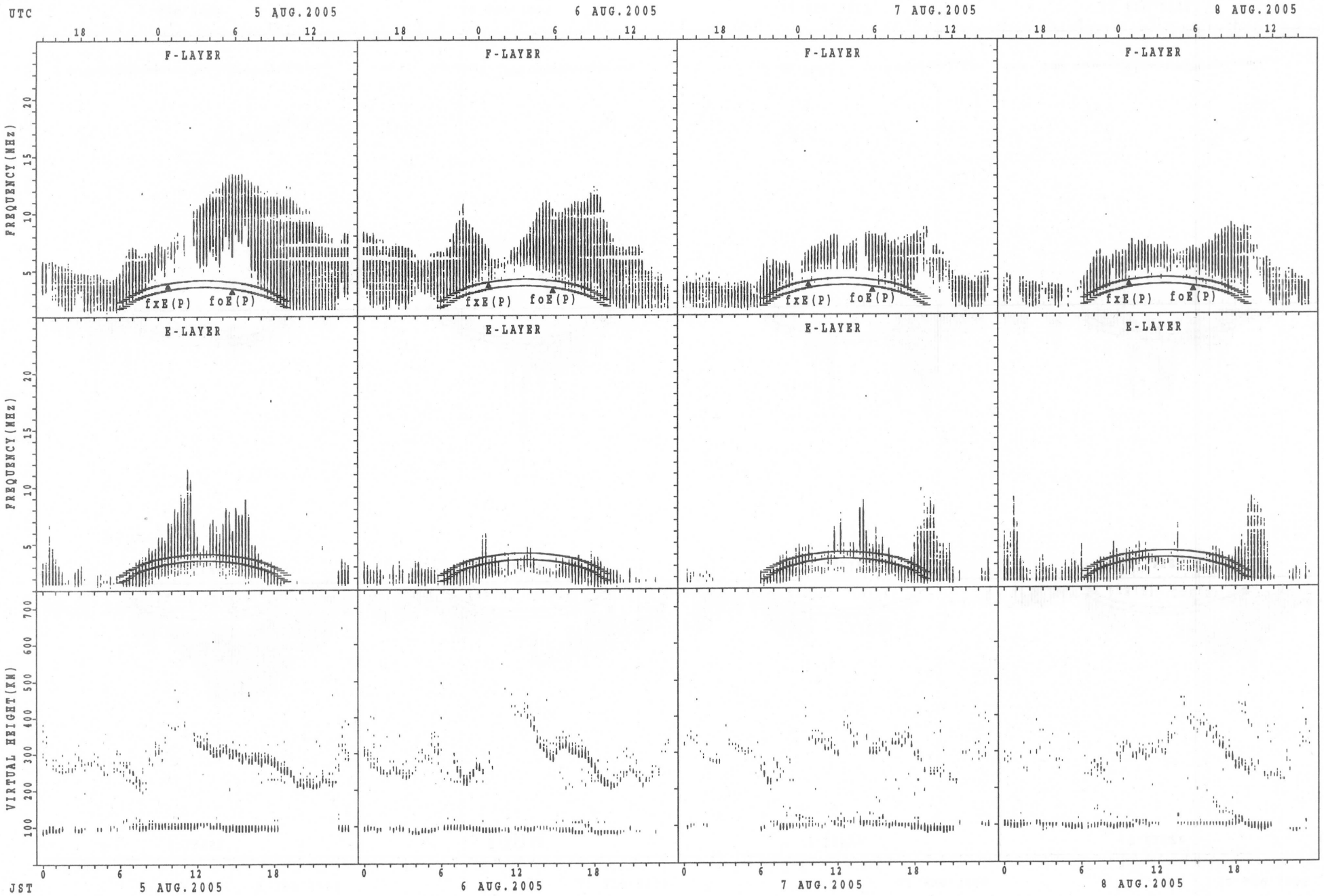
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa

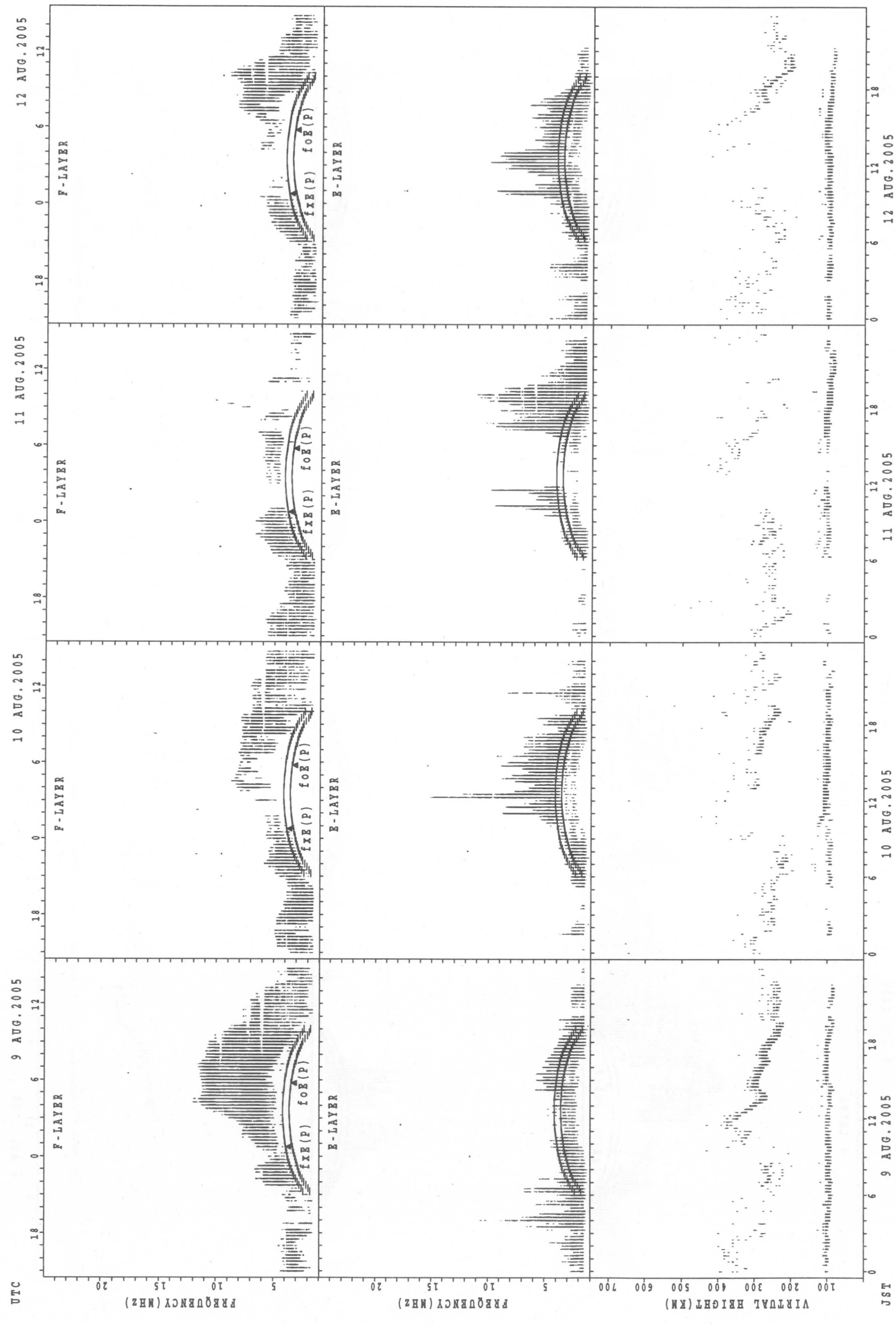


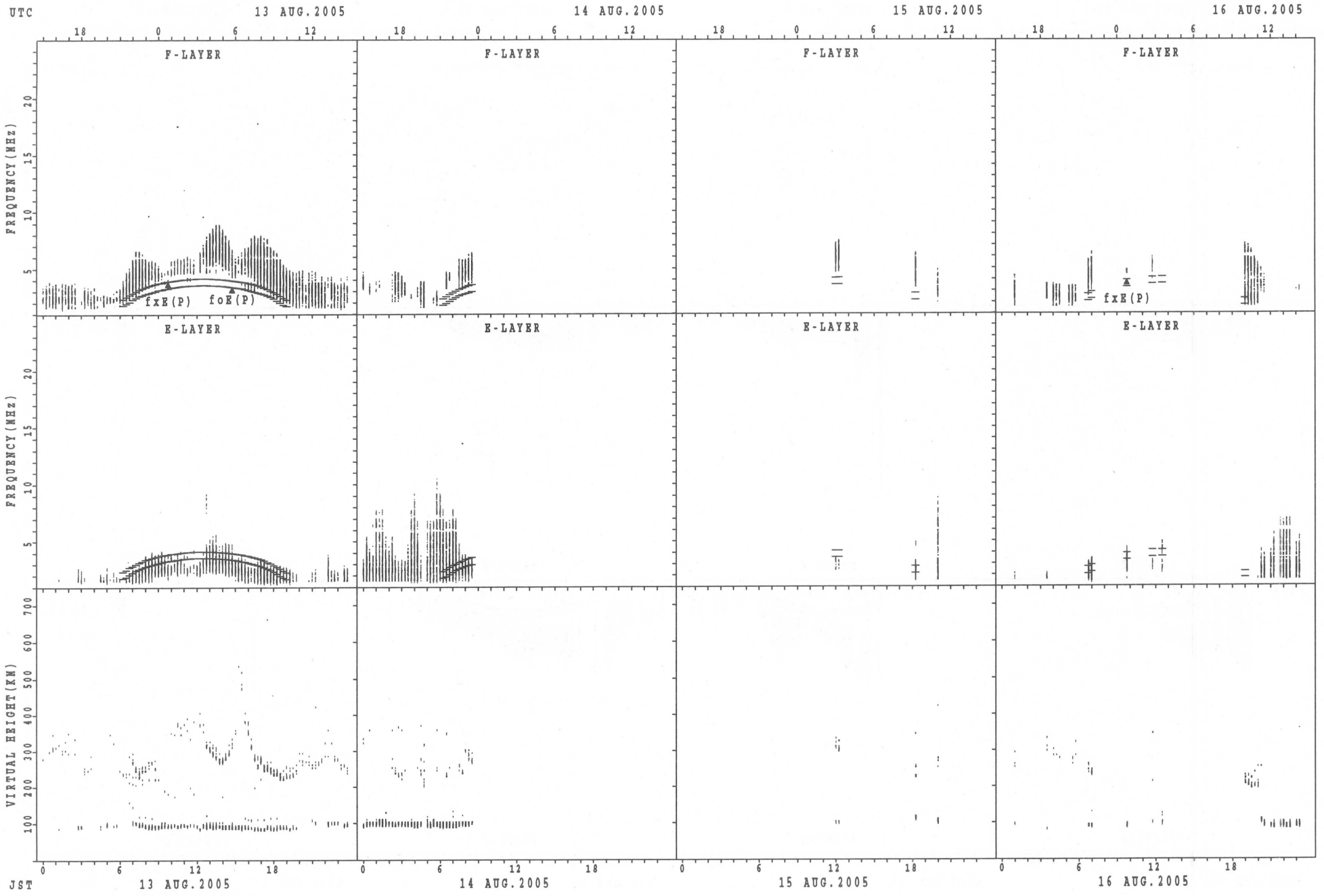
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa

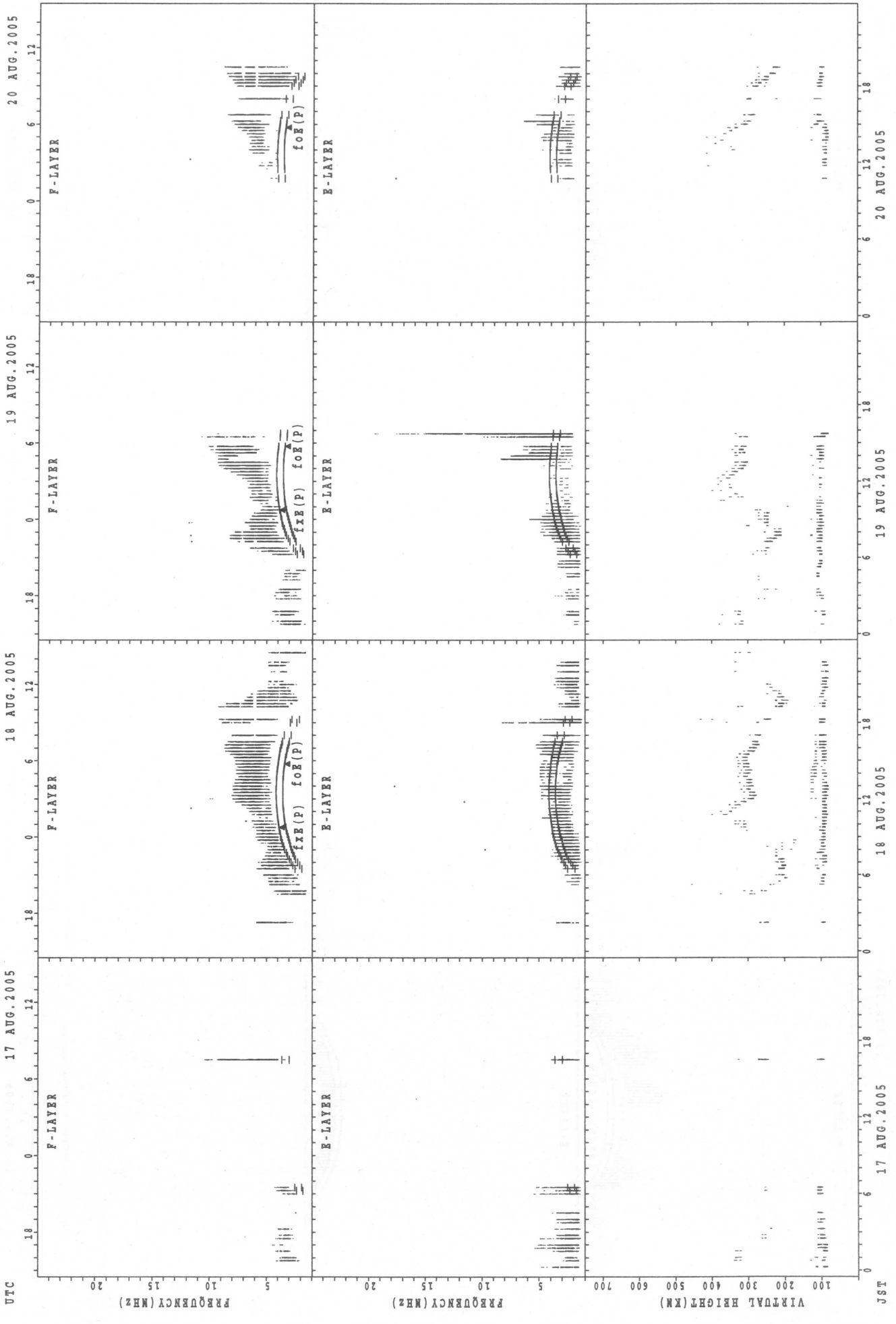


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

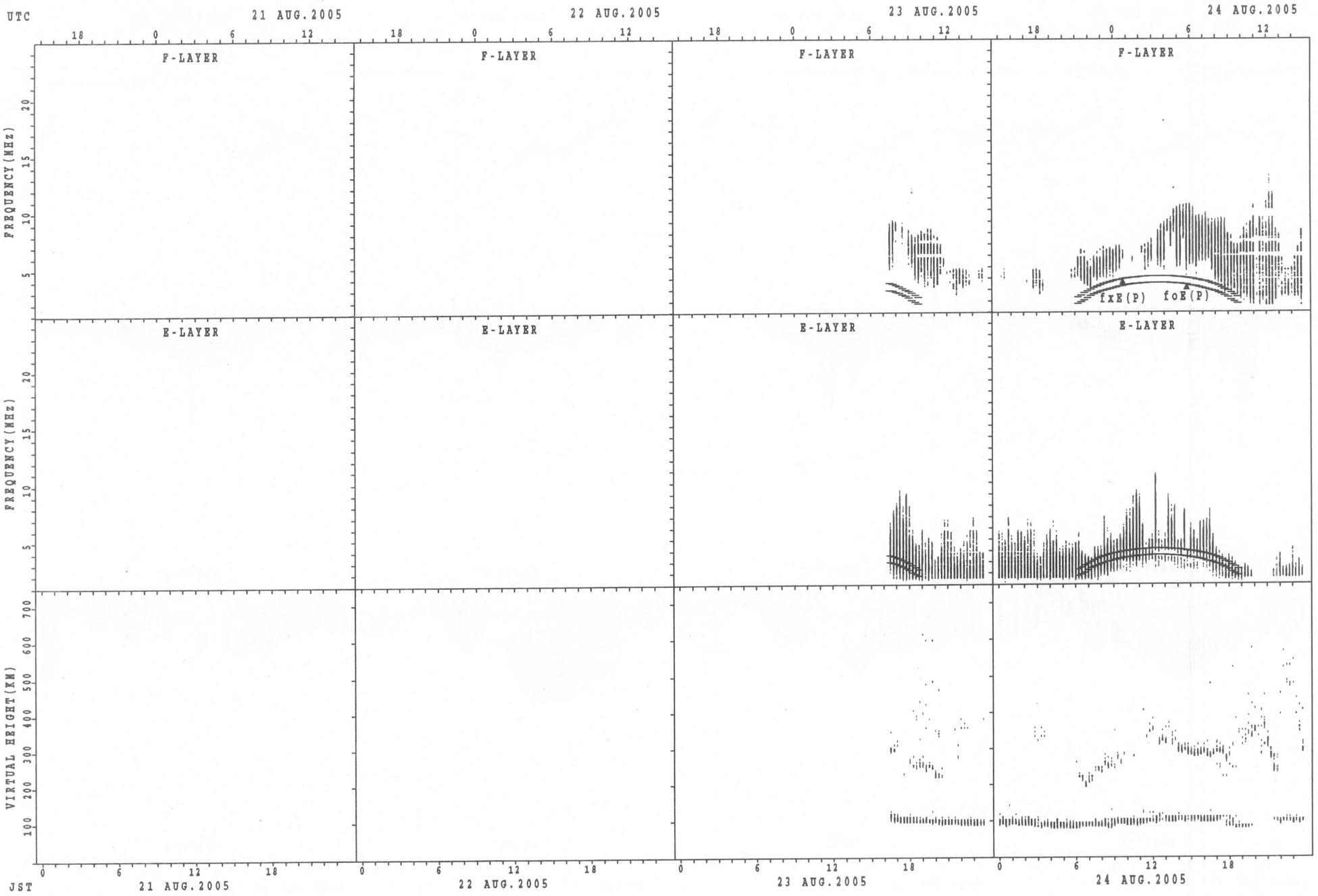

SUMMARY PLOTS AT Okinawa
UTC
JST
9 AUG.2005
10 AUG.2005
11 AUG.2005
12 AUG.2005
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P) foE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE



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

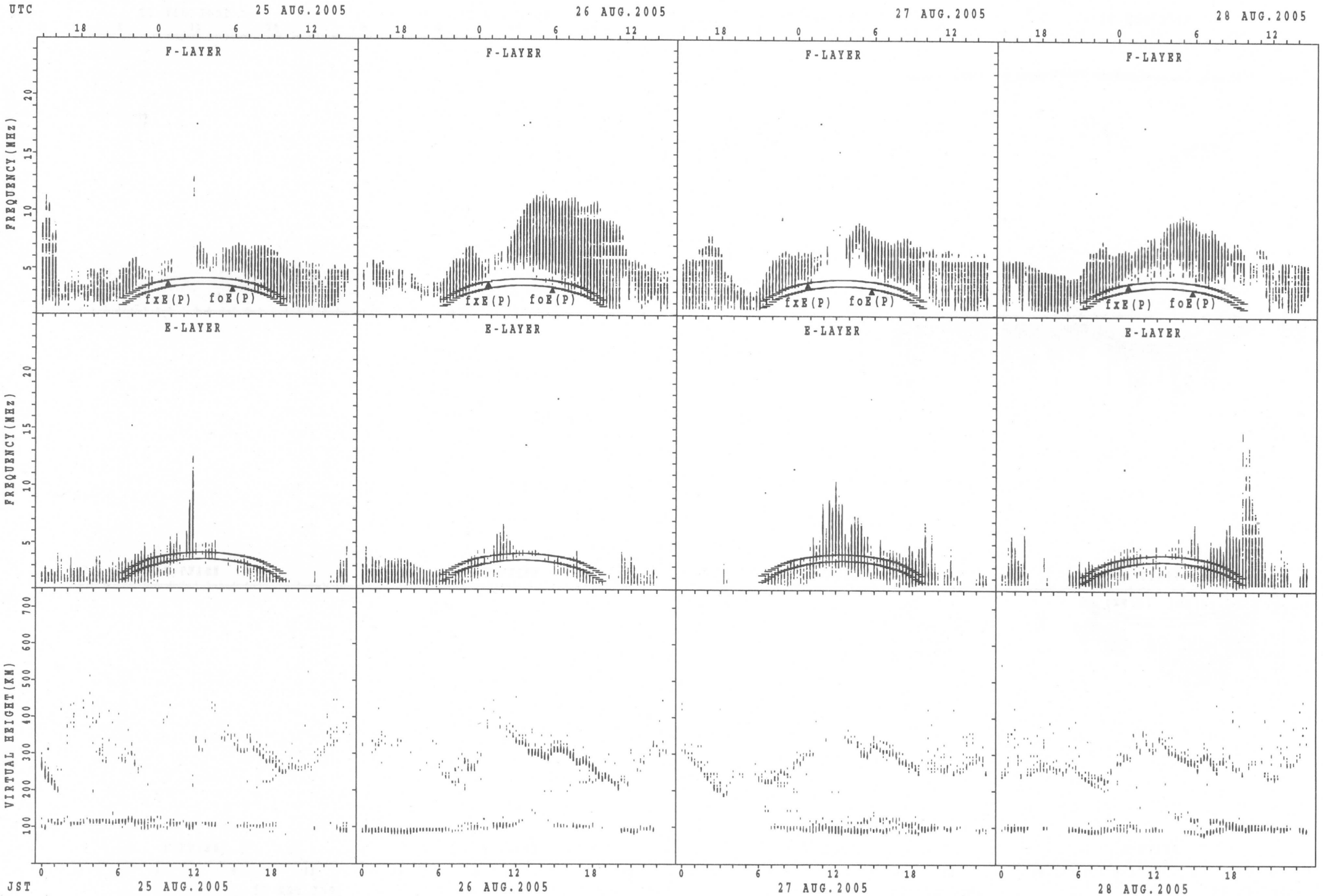

SUMMARY PLOTS AT Okinawa
UTC
JST
17 AUG.2005
18 AUG.2005
19 AUG.2005
20 AUG.2005
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P)
foE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



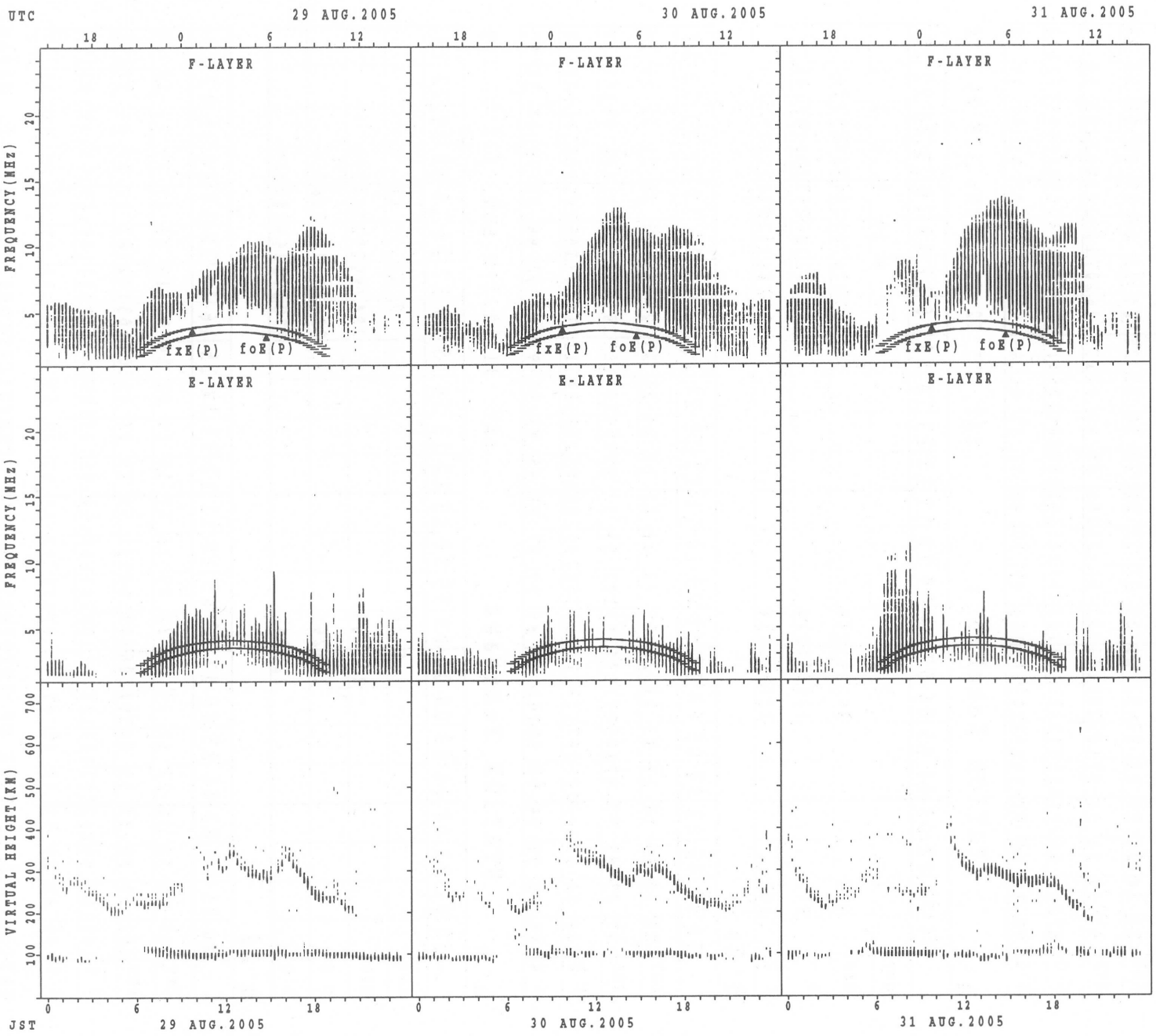
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

AUG. 2005 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	1						1	1									5	4	8	3	4	4	1	
MED	338						242	266									284	280	283	274	290	294	286	
U Q	169						121	133									312	288	287	284	320	316	143	
L Q	169						121	133									279	266	279	262	281	273	143	

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	23	24	24	22	21	23	28	29	25	27	27	21	21	20	21	20	24	28	28	27	26	26	28	29
MED	97	95	94	94	97	105	105	105	103	99	99	101	95	98	97	101	106	107	103	103	101	103	99	97
U Q	99	101	96	103	111	113	111	108	104	103	103	103	100	104	106	110	111	109	105	105	105	105	102	103
L Q	95	91	90	91	90	103	103	103	100	97	97	95	95	95	91	93	96	100	96	97	97	97	97	95

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT		1					3	12	1								16	9	10	9	4	2	2	
MED		330					262	259	248								289	274	269	256	256	293	287	
U Q		165					320	294	124								301	281	286	267	290	296	344	
L Q		165					238	240	124								274	244	242	235	218	290	230	

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	25	20	19	16	14	13	23	28	25	28	24	17	19	20	21	23	23	25	29	23	21	22	24	26
MED	97	97	97	97	97	105	107	104	103	102	99	97	97	104	103	105	105	103	101	101	101	99	102	99
U Q	104	98	99	109	109	107	113	111	107	105	105	105	105	108	111	111	111	107	105	105	106	105	105	103
L Q	95	93	95	94	95	95	101	99	99	97	97	97	95	95	97	97	103	98	96	97	96	97	98	97

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								6	10								2	15	17	11	3			
MED								239	256								284	294	272	262	290			
U Q								250	266								296	318	288	266	296			
L Q								226	242								272	272	265	240	260			

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	15	19	15	11	11	14	20	22	22	16	17	15	14	18	14	19	18	24	19	24	22	18	20
MED	101	97	95	99	99	99	107	106	103	104	101	99	99	97	97	103	103	102	102	97	97	99	97	102
U Q	105	105	99	103	103	103	123	111	105	107	108	104	105	103	105	107	111	107	105	103	103	103	103	105
L Q	99	93	89	93	95	97	99	99	97	101	97	95	97	93	93	99	97	99	95	95	95	95	93	97

MONTHLY MEDIANS OF h'F AND h'Es

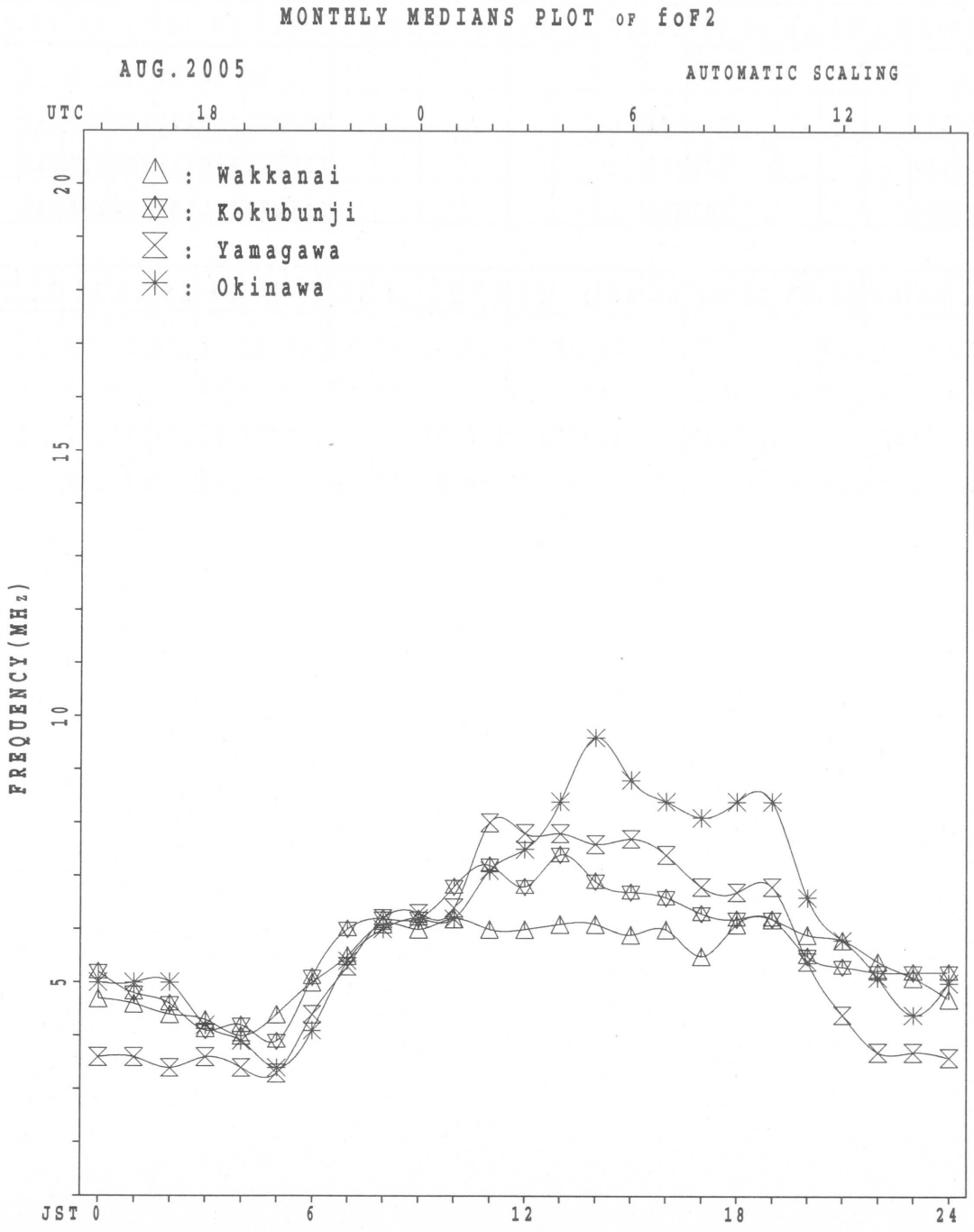
AUG.2005 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	2	1	2					4	7								1	17	20	14	6	2	1	
MED	302	216	279					250	240								270	282	260	250	239	279	272	
U Q	326	108	304					276	278								135	294	280	254	240	320	136	
L Q	278	108	254					247	218								135	270	251	238	224	238	136	

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	17	13	11	12	11	15	13	17	16	17	13	12	17	13	12	13	18	18	15	16	12	12	12
MED	95	101	97	97	97	97	95	97	105	106	101	103	104	103	103	105	103	106	98	95	98	93	95	99
U Q	103	104	101	103	102	105	103	110	113	113	108	105	110	124	111	110	112	109	103	103	101	99	98	102
L Q	93	94	93	95	90	91	95	92	97	97	97	99	96	96	99	103	99	99	95	89	95	89	89	96


MONTHLY MEDIANS PLOT OF foF2
AUG. 2005
AUTOMATIC SCALING
UTC
18
0
6
12
△ : Wakkanai
⛛ : Kokubunji
⧖ : Yamagawa
✳ : Okinawa
FREQUENCY(MHz)
20
15
10
5
JST 0
6
12
18
24

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 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	64	63	X 59	X 54	X 52															X 79	X 82	A	83	76
2	70	X 69	X 60	X 54	X 50															X 76	X 65	X 58	X 58	X 55
3	X 56	X 54	X 55	X 52	54															X 82	X 77	X 75	X 69	X 70
4	X 69	66	X 58	X 55	48															X 86	X 80	X 72	X 65	X 66
5	X 60	X 56	X 57	X 57	X 52															X 87	X 85	X 80	X 82	X 55
6	X 50	X 50	X 49	50	X 42															X 68	X 63	X 63	X 59	X 53
7	56	53	X 52	X 47	A															X 63	X 67	X 61	X 57	X 46
8	X 47	A	X 46	X 44	X 45															X 70	X 71	X 63	67	X 62
9	X 57	X 54	X 52	X 48	X 49															X 68	X 64	X 62	X 60	X 60
10	X 57	56	53	X 48	X 49															X 62	X 66	X 68	X 63	X 57
11	X 57	X 61	X 40	X 44	X 38															X 58	X 51	A	47	46
12	46	X 39	X 39	X 37	X 34															X 67	A	X 57	62	A
13	A	X 44	47	X 44	X 36															X 51	X 53	X 50	50	57
14	49	X 46	X 44	X 42	X 40	X 41														X 61	X 67	X 60	X 51	X 48
15	51	X 38	X 37	X 37	X 38															X 64	X 54	X 53	53	54
16	53	48	X 44	43	44															X 94	X 51	X 46	51	A
17	53	52	49	X 41	X 40															X 71	X 63	X 64	68	66
18	X 57	X 53	X 50	X 45	X 45															X 94	X 56	X 51	X 50	X 48
19	X 47	X 48	X 48	X 47	X 42															X 80	X 75	X 55	X 47	X 43
20	X 42	X 41	X 40	X 39	X 40															X 60	X 58	60	X 56	X 57
21	X 54	X 50	X 49	X 44	X 40															X 94	X 94	X 64	X 50	52
22	X 50	49	X 44	X 44	44															X 74	X 68	X 64	X 58	X 59
23	X 58	X 57	X 53	X 45	X 43																X 71	X 66	X 59	X 60
24	X 58	X 58	59	X 53	54															X 69	98	86	50	66
25	64	A	A	A	A															X 49	X 49	X 48	46	X 42
26	50	X 46	46	X 44	X 48															X 62	X 56	A	52	X 53
27	54	58	X 56	X 50	X 41	X 40														X 60	X 64	X 61	X 60	X 60
28	60	X 56	X 52	X 49	X 50															X 65	X 62	X 62	X 62	X 59
29	X 60	X 55	X 54	X 52	X 48															X 86	X 73	X 65	66	61
30	63	64	X 54	X 52	53															76	X 72	76	70	X 66
31	64	61	X 52	X 50	X 49															X 88	X 85	X 65	63	62
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	30	30	29	2														30	30	28	31	29
MED	X 56	X 54	X 51	X 47	X 45	X 40														X 70	X 66	X 62	X 59	X 57
U Q	60	58	X 54	X 52	X 50															X 82	X 75	X 66	65	62
L Q	X 50	X 48	X 46	X 44	X 40															X 62	X 58	X 58	51	X 52

AUG. 2005 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 foF2 (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F	F	53	47	46	43	53	59	61	60	74	79	81	81	76	64	64	63	67	73	76	A	F	F
2	F	63	54	48	43	40	40	56	62	56	63	R 59	62	65	74	75	79	71	67	70	58	52	52	49
3	50	48	49	46	F	46	52	67	80	74	65	76	A	90	91	73	68	A	77	76	71	68	63	64
4	62	F	52	49	F	45	47	66	66	62	58	58	72	65	73	76	72	78	74	80	74	66	58	60
5	54	50	51	51	46	45	65	74	74	A	82	77	A	77	72	66	75	80	78	81	79	74	75	49
6	44	44	43	F	36	37	58	A	54	A	65	53	54	68	69	60	59	66	66	62	57	57	52	47
7	F	F	46	41	A	31	49	44	47	A	A	A	A	A	59	54	52	52	54	56	61	55	51	40
8	41	A	40	38	39	42	47	54	A	63	61	A	A	61	54	60	58	52	A	64	65	56	F	56
9	51	47	46	41	43	42	50	56	74	82	74	73	87	A	71	76	65	65	62	62	58	55	54	53
10	51	F	F	42	43	36	49	A	A	A	A	51	58	55	52	54	A	54	57	56	60	62	56	51
11	51	55	34	38	32	29	32	48	45	48	49	A	54	R 48	A	48	A	A	50	52	45	A	F	F
12	F	32	33	30	28	33	40	56	48	A	A	52	52	A	60	55	48	A	A	61	A	51	F	A
13	A	38	F	38	30	32	36	53	61	A	55	A	53	72	78	68	74	46	41	45	47	44	F	F
14	F	40	38	36	34	35	48	58	A	55	A	A	59	55	A	64	67	60	50	55	60	54	44	42
15	F	32	31	31	32	33	43	53	56	A	53	60	62	59	54	A	52	57	59	58	48	47	F	F
16	F	F	38	F	F	31	47	54	54	60	67	A	A	A	A	A	A	A	83	88	45	40	F	A
17	F	F	F	35	34	30	46	63	67	A	67	59	59	A	69	75	66	66	62	65	57	57	F	F
18	51	47	44	39	39	38	48	60	52	53	52	58	64	61	66	60	62	62	86	88	50	45	44	42
19	41	42	41	40	36	31	45	A	A	A	A	A	A	61	68	66	60	57	67	74	68	49	40	36
20	36	35	34	33	34	39	A	52	58	57	56	58	52	54	57	60	65	66	60	54	52	F	50	51
21	48	44	43	38	34	38	49	49	62	61	A	A	A	A	A	A	A	A	80	88	88	58	44	F
22	44	F	38	38	F	34	58	60	58	66	53	R 53	54	63	66	66	60	56	58	68	62	58	52	53
23	51	51	46	39	37	38	52	64	62	70	70	59	59	65	68	67	64	64	72	76	65	60	53	54
24	52	52	F	47	F	44	60	76	59	64	59	60	63	A	68	66	70	A	A	63	F	F	F	F
25	F	A	A	A	A	A	48	42	50	50	50	52	A	A	A	48	49	50	46	43	42	42	F	36
26	F	40	F	38	42	41	48	61	66	64	61	66	63	68	67	69	64	57	57	56	50	A	F	47
27	F	F	49	44	35	34	49	56	66	65	59	59	59	71	66	68	64	57	49	54	58	55	54	54
28	F	50	46	43	44	44	63	71	62	65	63	54	64	74	80	83	71	63	A	59	56	56	56	53
29	54	49	48	46	42	45	64	63	61	61	67	72	79	77	81	76	76	69	79	80	67	59	F	F
30	F	F	48	46	F	40	56	66	66	60	A	89	98	103	108	104	76	68	67	F	66	F	F	59
31	F	F	46	44	43	43	55	73	76	84	78	68	75	77	68	69	68	A	71	82	79	59	F	F
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	16	19	25	28	23	30	30	28	27	22	24	23	23	23	26	28	27	24	27	30	29	25	17	20
MED	51	47	46	40	37	38	49	58	61	62	62	59	62	65	68	66	65	62	66	64	60	56	52	51
U Q	52	50	48	46	43	43	55	65	66	65	67	72	72	77	74	74	71	66	74	76	68	59	56	54
L Q	44	40	38	38	34	33	47	54	54	57	56	54	54	61	66	60	60	56	57	56	51	50	47	44

AUG. 2005 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 foF1 (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L 440	452	480	504		456	496	464	A	L 436	A	A					
2							A	U L 408	U L 480	U L 468	L 484	U L 524	A	492	A	448	436	L 404	A					
3								420	A	A	A	A	A	A	A	L 456	A	A	A					
4								428	L	444	A	484	464	476	A	A	A	L	L					
5							A	A	A	A	456	500	A	A	A	L 456	A	L 392	L					
6							A	A	A	A	456	U L 460	U L 448	U L 452	460	444	412	L 364	L					
7						L 236	L 340	412	408		A	A	A	A	A	L 440	A	L 388	L					
8							A	A	A	A	472	A	A	A	L 460	444	L 408	L	A					
9							L 348	U L 412	A	A	A	A	A	A	A	A	L	L	A					
10							L	A	A	A	A	A	440	A	440	A	A	A	A					
11								380	U L 412	424	A	A	U L 500	448	A	428	A	A	L					
12							L 348	A	L 408	A	A	448	U L 444	A	A	412	416	A	A					
13								A	A	A	A	A	A	A	A	A	A							
14							L	A	A	A	A	A	A	A	A	428	L 388	A						
15							L	A	A	A	A	452	456	A	424	A	A	A						
16							A	L	A	440	448	A	A	A	A	A	A	A	A					
17							L 372	L	A	A	448	468	A	A	A	420	A	A						
18							L	A	A	L 424	480	444	452	A	L 452	L 440	408	L 384						
19								A	A	A	A	A	A	A	436	A	L	L 380						
20							A	A	A	A	456	468	460	U L 452	452	436	416	L						
21									A	A	A	A	A	A	A	A	A	A	A					
22							L	A	A	A	A	E B	A	492	468	440	L	L						
23								L	L 440	460	452	468	480	480	468	436	L	L	A					
24						A	L	L	A	A	A	A	A	A	A	A	L	A	A					
25						A	A	344	U L 448	428	432	448	A	A	A	A	L 416	L						
26							L	L 408	L 440	L 452	464	A	A	464	464	436	L	L						
27								L	444	A	472	468	L 480	L 472	460	L 448	L							
28							L	L	L	460	468	488	496	468	464	L 448	A	A	A					
29								A	L	L 476	484	476	464	468	468	A	L	A						
30								L	L	A	A	A	A	A	A	A	A	L						
31							L	A	A	L 448	456	L	480	L 468	L 444	L	L	A						
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						1	4	8	9	12	16	15	14	13	15	17	9	6						
MED						L 236	L 348	410	L 440	450	460	468	462	468	460	440	416	L 386						
U Q							L 360	416	U L 446	460	476	488	480	486	464	L 448	L 426	L 392						
L Q							L 344	394	L 410	434	454	452	452	458	444	432	L 408	L 380						

AUG. 2005 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 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	A	A	A	A	A	A	A					
2						A	A	A	A	A	A	A	A	R	A	U A 328	U R 304	U A 268	A					
3						B	U A 232	A	A	A	A	A	A	A	A	A	A	A	A					
4						B	R	A	A	A	A	A	A	A	A	A	A	A	A					
5						B	A	A	A	A	A	A	A	B	A	A	A	A	A					
6						B	A	A	A	A	A	R	R	A	R	R	U R 300	U R 264	B					
7						B	220	A	A	A	A	A	A	A	A	A	A	A	A					
8						B	U A 228	A	A	A	A	A	A	A	A	U R 352	U A 304	A	A					
9						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
10						B	A	A	A	A	A	A	A	A	U R 344	A	A	A	A					
11						B	A	A	A	A	A	A	A	R	U A 332	A	A	A	B					
12						B	A	A	A	A	A	A	R	A	A	A	A	A	A					
13						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
14							A	A	A	A	A	A	A	A	A	A	A	A	A					
15						B	U A 216	A	A	A	A	R	A	A	A	A	A	A	B					
16						B	A	U A 304	A	A	A	A	A	A	U A 332	A	A	A	A					
17						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
18						B	U A 196	A	A	R	A	R	A	A	A	A	A	A	B					
19						B	A	A	A	A	A	A	A	A	A	A	A	A 240	B					
20						B	A	A	A	A	R	R	R	R	U A 336	U A 316	A	U R 264	A					
21						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
22						B	A	A	A	A	A	B	A	A	A	R	U R 292	U R 244	B					
23						B	A	A	A	A	A	A	A	A	U R 340	A	A	A	B	A				
24						A	A	U A 272	A	A	A	A	A	A	U A 344	328	A	U A 248	B				K 168	
25						B	U A 220	U R 276	312	U A 328	R	A	360	A	A	U A 316	276	A	B					
26						B	A	A	A	A	A	A	A	R	R	U R 344	R	U R 260	B					
27							U R 208	U A 280	A	A	A	R	A	R	R	U A 328	U A 284	A	B					
28						B	U A 200	A	A	A	A	A	R	R	A	U A 312	U A 276	U A 220	B					
29						B	A	A	A	A	A	A	A	A	A	A	U A 292	A	B					
30						B	U R 212	U A 272	A	A	A	A	A	A	A	A	A	A	B					
31						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							9	5	1	1			1		6	8	8	8					1	
MED							U A 216	U A 276	312	U A 328			360		U A 338	U A 328	U 292	U 254					K 168	
U Q							U A 224	U A 292							U 344	U R 336	U R 302	U R 264						
L Q							U A 204	U A 272							U A 332	U A 316	U A 280	U A 242						

AUG. 2005 foE (0.01MHz)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 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 52	J A 22	J A 20	21	J A 18	E B 19	J A 34	J A 53	35	38	42	G 28	44	41	40	J A 47	38	J A 75	J A 65	J A 144	J A 120	J A 99	J A 53	J A 66
2	J A 42	J A 56	J A 26	J A 43	J A 35	J A 34	J A 61	J A 45	J A 42	J A 40	38	42	J A 47	G 30	J A 53	38	G 28	34	J A 48	J A 44	J A 22	E B 16	J A 26	J A 57
3	J A 85	J A 93	J A 35	J A 30	J A 32	J A 23	29	36	J A 49	J A 55	J A 60	J A 91	J A 111	J A 78	J A 75	41	J A 63	J A 83	J A 83	J A 46	J A 79	J A 102	J A 110	J A 64
4	J A 36	J A 23	J A 29	E B 14	J A 22	J A 24	G 22	J A 45	38	J A 55	J A 55	J A 49	43	46	J A 62	J A 64	J A 54	J A 76	J A 28	J A 36	J A 27	J A 24	J A 29	J A 25
5	E B J A 16	J A 36	J A 62	J A 27	J A 27	J A 38	J A 57	J A 45	J A 50	J A 88	J A 57	J A 93	J A 106	J A 77	J A 78	J A 88	J A 86	J A 43	J A 28	22	J A 20	J A 21	E B 16	J A 28
6	J A 22	J A 27	E B J A 15	J A 24	J A 20	J A 21	J A 83	J A 104	J A 78	J A 51	J A 54	G 34	G 31	J A 48	G 31	J G 27	G 20	G J A 21	J A 24	J A 19	J A 24	J A 25	E B 15	J A 64
7	J A 48	E B 16	J A J A 32	J A 93	J A 53	18	29	J A 40	J A 41	J A 55	J A 52	J A 76	J A 62	J A 136	J A 71	J A 56	J A 42	J A 40	J A 32	24	J A 17	J A 28	J A 20	J A 33
8	J A 59	J A 46	J A 44	J A 26	J A 23	J A 23	J A 35	J A 54	J A 64	J A 62	J A 69	J A 82	J A 63	J A 52	38	J A 47	37	J A 88	J A 86	J A 53	J A 65	J A 66	J A 34	J A 44
9	J A 42	J A 33	J A 29	J A 23	J A 20	J A 28	J A 55	J A 35	J A 54	J A 152	J A 55	J A 64	J A 122	J A 167	J A 102	J A 63	J A 45	J A 37	J A 36	J A 38	J A 36	E B 15	J A 26	J A 20
10	J A 44	J A 26	J A 54	J A 25	J A 23	E B 16	J A 34	J A 62	J A 76	J A 53	J A 70	J A 73	J A 47	J A 53	G 30	J A 48	J A 123	J A 95	J A 56	J A 19	E B 15	J A 18	J A 21	J A 20
11	E B J A 16	J A 15	20	19	J A 44	J A 47	J A 28	J A 32	J A 51	J A 57	J A 48	J A 53	40	G 27	J A 52	J A 55	J A 92	J A 102	J A 63	J A 54	J A 80	J A 46	J A 28	J A 39
12	J A J A 22	J A 29	18	20	E B 14	E B 16	32	J A 46	J A 54	J A 66	J A 87	J A 52	G 28	J A 76	J A 63	J A 45	J A 55	J A 77	J A 71	J A 60	J A 73	J A 53	J A 47	J A 74
13	J A 55	J A 39	J A 34	20	J A 44	J A 45	J A 34	J A 70	J A 47	J A 126	J A 108	J A 115	J A 60	J A 82	J A 55	J A 44	J A 40	J A 42	J A 32	J A 26	J A 30	J A 86	J A 38	J A 36
14	J A 66	J A 54	J A 20	J A 22	E B 15	J A 24	27	J A 46	J A 54	J A 55	J A 86	J A 122	J A 73	J A 50	68	J A 43	J A 46	J A 120	J A 23	J A 20	J A 37	J A 23	J A 24	J A 23
15	J A 24	J A 38	J A 38	J A 24	E B 14	J A 21	27	J A 42	J A 78	J A 77	J A 76	G 32	J A 56	J A 60	41	J A 54	J A 43	J A 38	J A 46	J A 53	J A 42	J A 26	J A 36	J A 64
16	J A 33	20	20	J A 18	E B 16	J A 22	J A 47	J A 37	J A 45	36	J A 43	J A 75	J A 90	J A 112	J A 161	J A 191	J A 177	J A 115	J A 88	56	J A 53	J A 17	J A 29	J A 52
17	J A 54	J A 46	J A 64	J A 65	J A 42	J A 40	J A 36	J A 35	J A 75	J A 105	J A 52	J A 47	J A 48	J A 77	J A 98	J A 63	J A 43	J A 54	J A 56	J A 52	J A 42	J A 28	J A 44	J A 51
18	J A 46	J A 28	E B 15	E B 14	E B 15	E B 15	24	J A 39	J A 43	G 25	39	G 29	43	J A 124	J A 69	37	34	J A 54	J A 38	E B 36	E B 24	E B 15	E B 15	E B 16
19	E B 16	E B 16	E B 14	E B 15	J A 21	J A 22	J A 37	J A 59	J A 78	J A 119	J A 118	J A 62	J A 67	J A 112	J A 45	75	J A 46	J A 37	26	J A 22	J A 29	J A 18	J A 32	J A 28
20	E B 15	J A 33	J A 30	19	E B 15	J A 23	J A 52	J A 61	J A 60	J A 76	G 32	G 28	G 30	G 30	39	36	34	G J A 24	J A 30	J A 31	J A 62	J A 45	J A 24	J A 29
21	21	E B 14	E B 15	E B 15	E B 15	J A 19	J A 33	J A 45	J A 63	J A 66	J A 82	J A 53	J A 69	J A 98	J A 94	J A 142	J A 135	J A 79	J A 63	J A 70	J A 108	J A 87	J A 76	J A 52
22	J A 46	J A J A 24	44	20	J A 34	J A 36	J A 28	J A 60	J A 55	J A 96	J A 73	50	J A 75	J A 47	40	G 26	G 21	G 20	G 23	E B 14	E B 15	B J A 32	J A 53	J A 33
23	J A 61	J A 24	J A 24	J A 28	J A 30	J A 24	27	34	38	J A 46	J A 46	41	J A 43	J A 43	G 30	J A 44	J A 47	J A 40	J A 43	J A 42	J A 37	J A 25	66	J A 50
24	J A 42	J A 42	J A 35	J A 19	J A 26	J A 47	27	35	J A 46	J A 50	57	58	50	J A 105	J A 62	J A 91	J A 90	J A 85	J A 111	28	E B 17	19	K 20	22
25	J A 18	J A 46	J A 42	J A 74	J A 37	J A 88	29	G 22	40	38	G	42	J A 60	J A 68	56	J A 44	34	J A 46	J A 34	28	J A 18	J A 20	26	46
26	J A 38	E B 14	E B 14	E B 15	E B 15	E B 19	J A 25	35	34	J A 47	47	J A 48	J A 52	G	G 28	G 28	G	G 21	22	J A 36	J A 44	J A 84	J A 54	J A 52
27	J A 36	J A 28	J A 23	J A 28	E B 15	J A 22	G	37	36	J A 47	J A 41	G 33	J A 50	G	G 24	38	35	J A 34	J A 34	J A 36	J A 26	J A 34	J A 31	68
28	J A 28	J A 38	J A 30	J A 18	20	E B 15	25	32	37	J A 40	J A 64	J A 44	G 31	G 31	37	36	J A 76	J A 61	J A 63	J A 60	J A 40	27	25	28
29	J A 22	J A 28	J A 28	J A 26	19	E B 14	25	J A 40	J A 50	J A 42	J A 49	39	J A 45	J A 38	41	J A 62	J A 43	J A 46	J A 67	26	J A 79	78	J A 86	J A 104
30	J A 41	J A J A 27	29	20	23	21	G 17	32	J A 43	J A 57	J A 144	J A 144	J A 101	J A 47	J A 78	J A 45	J A 84	32	J A 54	J A 128	J A 99	J A 87	J A 74	J A 22
31	J A 22	E B 15	E B 15	J A 54	20	J A 29	J A 26	J A 64	J A 83	J A 41	37	J A 42	J A 42	J A 41	J A 42	42	34	J A 64	J A 28	J A 42	J A 33	36	J A 38	67
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	J A 38	J A 28	J A 29	J A 22	J A 21	J A 23	J A 29	J A 42	J A 50	J A 55	J A 55	J A 50	J A 50	J A 52	J A 53	J A 45	J A 43	J A 46	J A 43	J A 36	J A 37	J A 28	J A 31	J A 44
U Q	J A 48	J A 39	J A 35	J A 28	J A 32	J A 34	J A 36	J A 54	J A 63	J A 76	J A 73	J A 75	J A 69	J A 82	J A 71	J A 63	J A 76	J A 79	J A 63	J A 53	J A 65	J A 66	J A 53	J A 64
L Q	22	E B 22	E B 20	E B 19	E B 15	E B 19	26	35	41	42	43	G 41	43	G 41	G 39	38	34	37	J A 28	J A 26	J A 24	20	24	J A 28

AUG. 2005 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 fbEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	26	E B 15	17	E B 15	16	E B 19	30	35	33	35	41	G 27	41	40	37	43	37	41	58	39	41	A A 99	35	38
2	34	31	17	27	19	27	34	34	39	38	36	40	43	G 27	45	38	G 27	29	32	38	E B 16	E B 16	17	27
3	E B 16	20	28	E B 14	E B 15	E B 15	26	34	42	47	46	69	A A 111	51	48	39	57	A A 83	40	35	26	30	31	36
4	29	E B 16	17	E B 14	E B 16	20	U Y 22	36	35	38	41	41	40	43	56	60	42	28	24	E B 16	E B 15	18	23	22
5	E B 16	22	35	21	20	32	43	42	45	A A 88	39	42	A A 106	56	56	36	46	32	25	E B 17	17	19	E B 16	22
6	17	20	E B 15	23	16	18	35	A A 104	49	A A 51	41	U Y 34	G 31	39	U Y 31	G 26	G 20	G 21	22	E B 16	E B 16	E B 15	E B 15	26
7	18	E B 16	16	19	A A 53	17	27	34	35	A A 55	A A 52	A A 76	A A 62	A A 136	44	38	38	30	26	22	E B 15	19	E B 16	18
8	17	A A 46	28	16	17	E B 16	31	38	A A 64	48	40	A A 82	A A 63	46	36	G 29	34	30	A A 86	36	41	23	24	26
9	21	22	18	20	E B 16	20	26	29	41	60	43	48	58	A A 167	52	43	34	30	30	34	24	E B 15	20	E B 15
10	23	E B 16	27	21	16	E B 16	24	A A 62	A A 76	A A 53	A A 70	45	38	50	G 30	43	A A 123	41	30	E B 15	E B 15	E B 15	18	E B 16
11	E B 16	E B 15	E B 15	E B 15	23	17	26	28	36	38	41	A A 53	39	G 27	A A 52	36	A A 92	A A 102	23	E B 15	28	A A 46	20	24
12	E B 16	17	16	E B 14	E B 14	E B 16	27	38	36	A A 66	A A 87	40	U Y 28	A A 76	54	37	34	A A 77	A A 71	54	A A 73	43	24	A A 74
13	A A 55	24	21	18	16	28	29	48	41	A A 126	50	A A 115	50	46	45	42	38	27	24	22	20	20	30	26
14	27	28	15	E B 15	E B 15	16	24	37	A A 54	47	A A 86	A A 122	45	42	A A 68	35	30	38	19	E B 15	30	E B 14	20	17
15	E B 15	27	24	17	E B 14	18	26	40	45	A A 77	45	U Y 32	38	45	38	A A 54	39	33	24	26	28	20	24	26
16	E B 16	E B 15	E B 16	E B 15	E B 16	17	43	G 23	42	34	38	A A 75	A A 90	A A 112	A A 161	A A 191	A A 177	A A 115	74	44	20	E B 16	18	A A 52
17	21	23	24	24	E B 16	16	27	30	40	A A 105	39	40	44	A A 77	55	34	38	35	49	27	28	22	30	33
18	34	18	E B 15	E B 14	E B 15	E B 15	22	34	42	U Y 25	39	G 29	38	43	37	35	32	28	20	22	18	E B 15	E B 15	E B 16
19	E B 16	E B 16	E B 14	E B 15	E B 15	17	30	A A 59	A A 78	A A 119	A A 118	A A 62	A A 67	46	36	53	34	29	22	E B 15	20	E B 16	E B 15	23
20	E B 15	18	E B 15	E B 15	E B 15	16	A A 52	40	48	47	U Y 32	U Y 28	U Y 30	G 30	37	34	32	G 24	25	25	44	34	17	16
21	17	E B 14	E B 15	E B 15	E B 15	17	29	42	43	48	A A 82	A A 53	A A 69	A A 98	A A 94	A A 142	A A 135	A A 79	48	34	56	43	26	25
22	25	E B 15	30	E B 15	18	26	24	56	46	55	50	50	48	42	36	G 26	G 21	G 18	21	E B 14	E B 15	18	E B 15	18
23	20	20	20	26	24	20	23	32	37	37	38	38	39	37	G 30	31	34	27	26	25	26	20	17	22
24	16	E B 15	E B 15	E B 15	E B 15	28	25	34	41	46	46	54	44	A A 105	57	56	32	A A 85	A A 111	18	E B 17	E B 15	K 18	E B 15
25	E B 16	A A 46	A A 42	A A 74	A A 37	A A 88	24	G 22	38	35	G	38	A A 60	A A 68	A A 56	42	34	31	31	18	E B 15	E B 15	E B 15	27
26	25	E B 14	E B 14	E B 15	E B 15	16	23	33	33	39	42	44	46	G	G 28	G 28	G	G 18	20	16	E B 16	A A 84	24	20
27	E B 15	23	19	22	E B 15	20	G	36	35	42	38	G 33	42	G	G 24	35	33	28	29	21	20	25	24	40
28	20	22	16	E B 14	E B 15	E B 15	24	28	35	37	35	40	G 31	G 31	34	34	54	54	A A 63	38	20	E B 15	22	24
29	E B 16	23	20	21	16	E B 14	23	32	38	38	42	37	39	38	38	51	33	29	63	21	44	24	22	34
30	26	18	16	E B 14	16	16	G 16	31	36	45	A A 144	63	47	44	45	41	55	30	51	24	48	39	18	E B 15
31	E B 15	E B 15	E B 15	E B 15	E B 14	19	23	42	73	35	35	38	38	40	36	36	33	A A 64	26	25	25	29	22	E B 15
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	17	18	17	E B 15	E B 16	17	26	35	41	47	41	42	44	44	44	38	34	30	29	22	20	20	20	24
U Q	25	23	24	21	17	20	30	42	46	A A 55	A A 50	A A 62	A A 60	A A 68	55	43	46	A A 54	51	34	30	30	24	27
L Q	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16	23	32	36	38	38	38	38	G 38	36	34	32	28	24	E B 16	E B 16	E B 15	E B 17	E B 17

AUG. 2005 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 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	14	15	14	15	12	19	13	14	17	16	22	20	23	21	21	19	16	12	15	16	14	15	16	15
2	15	15	14	15	14	15	13	14	16	19	25	24	19	16	21	20	17	16	15	15	16	16	14	15
3	16	15	15	14	15	15	14	13	20	19	24	23	28	23	22	17	12	14	16	15	14	16	15	15
4	15	16	15	14	16	13	15	14	22	18	21	22	22	20	18	27	16	13	15	16	15	16	15	14
5	16	15	15	13	15	14	14	14	17	21	25	19	23	36	20	16	16	14	15	17	15	15	16	15
6	15	14	15	15	14	14	15	14	15	19	23	22	23	20	18	14	14	16	15	16	16	15	15	15
7	14	16	14	14	13	15	14	14	15	16	20	16	21	24	22	16	14	14	16	18	15	15	16	15
8	16	15	13	14	14	15	14	15	15	20	19	18	26	18	19	14	15	14	16	16	16	15	15	15
9	14	15	15	14	16	15	15	13	16	20	18	22	20	26	20	17	14	13	16	14	15	15	15	15
10	15	16	15	14	14	16	13	14	15	18	22	20	22	20	17	18	15	16	15	15	15	15	15	16
11	16	15	15	15	15	15	13	13	15	16	14	18	18	18	21	17	13	15	16	16	15	15	15	16
12	16	14	14	14	14	16	14	14	14	15	20	18	21	16	24	19	15	14	15	15	15	15	15	14
13	14	15	14	14	14	15	14	16	23	16	16	22	21	23	22	15	15	14	16	15	15	16	16	15
14	15	14	14	15	15	14	14	15	13	23	17	21	17	18	18	18	14	14	14	15	15	14	14	13
15	15	14	14	14	14	16	15	14	15	18	14	18	19	21	17	16	14	14	15	14	14	15	14	14
16	16	15	16	15	16	14	14	15	19	16	16	17	26	24	20	15	14	14	16	16	16	16	15	14
17	14	14	14	14	16	12	13	13	14	18	22	22	20	21	16	16	14	14	13	16	15	14	14	15
18	16	15	15	14	15	15	12	15	13	17	20	21	18	18	16	14	13	14	14	14	15	15	15	16
19	16	16	14	15	15	15	14	14	14	16	17	19	17	20	16	16	14	12	16	15	14	16	15	15
20	15	14	15	15	15	14	14	14	16	22	19	20	17	24	17	11	16	17	15	14	14	16	14	15
21	15	14	15	15	15	15	14	14	16	19	20	21	23	20	19	15	17	16	14	14	15	16	15	15
22	14	15	15	15	14	15	13	14	13	18	31	E 42 B	30	24	19	17	16	16	15	14	15	14	15	14
23	16	14	16	14	14	16	13	13	14	18	23	18	16	18	20	16	16	14	14	15	14	15	15	15
24	15	15	16	15	15	15	14	14	15	15	18	18	17	16	18	18	22	14	15	15	17	15	15	15
25	16	16	14	15	14	15	15	14	14	20	22	17	16	24	28	17	16	11	13	14	15	15	15	15
26	15	14	14	15	15	15	14	14	21	16	18	19	26	29	22	19	17	13	12	15	16	15	14	14
27	15	15	14	15	15	15	15	16	17	22	18	22	20	25	16	14	16	15	14	15	14	15	14	16
28	14	14	15	14	15	15	14	15	15	16	16	16	15	20	14	15	14	16	13	14	17	15	14	13
29	16	15	15	14	15	14	14	13	13	16	19	21	20	16	23	16	15	14	16	15	15	14	15	15
30	16	15	14	14	15	16	13	20	15	18	18	16	19	22	18	15	15	14	13	16	15	15	15	15
31	15	15	15	15	14	15	14	16	19	17	15	23	19	17	19	20	18	14	14	15	16	16	15	15
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	15	15	15	14	15	15	14	14	15	18	19	20	20	20	19	16	15	14	15	15	15	15	15	15
U Q	16	15	15	15	15	15	14	15	17	19	22	22	23	24	21	18	16	15	16	16	16	16	15	15
L Q	15	14	14	14	14	14	13	14	14	16	17	18	18	18	17	15	14	14	14	14	15	15	14	14

AUG. 2005 fmin (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 M(3000)F2 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F	F	310	299	328	332	334	336	312	304	307	292	300	278	326	287	306	309	302	285	306	A	F	F
2	F	294	293	296	299	311	342	319	305	289	319	R 222	316	296	321	309	326	320	319	326	343	280	276	280
3	280	287	303	284	F	335	310	313	338	321	288	267	A	306	313	338	308	A	312	306	301	306	290	296
4	309	F	302	315	F	331	316	305	336	336	341	282	333	287	318	317	302	320	303	311	302	311	282	304
5	301	299	294	298	302	284	326	327	349	A	335	297	A	321	319	318	310	328	301	309	319	307	348	301
6	288	295	298	F	305	304	320	A	317	A	331	R 312	261	291	308	311	317	326	327	323	302	310	310	286
7	F	F	295	276	A	269	309	243	310	A	A	A	A	A	327	331	312	300	314	308	306	305	295	301
8	309	A	304	293	308	321	319	323	A	331	318	A	A	321	298	327	332	285	A	313	317	289	F	298
9	312	295	312	296	316	314	315	278	311	312	323	295	329	A	296	321	340	332	331	318	311	298	286	305
10	293	F	F	303	329	318	349	A	A	A	A	282	283	320	305	306	A	316	335	298	281	301	302	293
11	288	337	319	313	303	281	371	311	298	287	337	A	289	R 264	A	305	A	A	333	333	327	A	F	F
12	F	297	303	339	312	370	309	354	290	A	A	289	277	A	309	334	300	A	A	329	A	310	F	A
13	A	306	F	315	293	312	333	314	322	A	351	A	312	300	325	300	338	343	342	314	316	281	F	F
14	F	307	311	310	325	325	349	325	A	279	A	A	327	327	A	320	352	346	338	307	329	330	304	286
15	F	309	316	309	327	324	318	343	347	A	309	333	337	338	338	A	316	341	357	336	314	303	F	F
16	F	F	319	F	F	297	340	341	328	347	351	A	A	A	A	A	A	A	334	361	348	295	F	A
17	F	F	F	331	294	292	314	347	357	A	326	305	322	A	317	335	340	340	328	322	291	304	F	F
18	298	297	297	307	307	320	341	376	350	356	329	328	322	322	340	334	332	322	337	387	311	289	301	297
19	301	307	307	322	314	328	359	A	A	A	A	A	A	325	325	326	341	326	338	332	367	322	308	302
20	293	302	310	307	316	360	A	362	341	314	324	346	267	295	298	317	317	329	340	312	313	F	300	295
21	317	303	328	320	327	341	371	354	345	342	A	A	A	A	A	A	A	A	311	314	351	355	306	F
22	307	F	312	321	F	305	342	361	357	336	335	R 337	318	304	316	325	317	334	323	323	320	319	281	306
23	300	311	344	310	308	304	337	357	336	345	358	348	308	326	319	342	326	320	335	332	317	312	302	292
24	280	293	F	294	F	298	340	348	375	356	336	314	308	A	331	334	333	A	A	249	F	F	F	F
25	F	A	A	A	A	A	365	357	282	321	284	321	A	A	A	285	293	321	326	300	279	269	F	286
26	F	287	F	299	294	294	302	329	346	322	296	333	300	304	305	321	339	336	335	326	293	A	F	305
27	F	F	316	337	305	320	349	351	341	348	311	317	296	325	324	327	337	340	326	292	299	295	278	291
28	F	313	309	301	298	314	351	373	340	353	328	304	299	315	311	343	340	348	A	316	295	303	303	288
29	296	301	312	316	315	344	365	375	374	333	324	325	321	313	322	328	334	316	315	323	326	315	F	F
30	F	F	303	304	F	341	369	343	344	354	A	302	307	310	320	337	326	346	332	F	327	F	F	313
31	F	F	311	326	317	326	333	356	329	340	337	320	315	321	313	320	326	A	301	330	342	340	F	F
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	16	19	25	28	23	30	30	28	27	22	24	23	23	23	26	28	27	24	27	30	29	25	17	20
MED	299	301	310	308	308	319	338	343	338	334	327	312	308	313	318	323	326	327	328	317	314	305	301	296
U Q	308	307	314	318	317	331	349	356	347	347	336	328	322	322	325	334	338	340	335	329	327	314	305	303
L Q	290	295	302	298	302	304	318	321	312	314	314	292	296	296	309	314	312	320	314	308	302	295	284	290

AUG. 2005 M(3000)F2 (0.01)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 M(3000)F1 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L 393	427	381	415		465	390	387	A	L 372	A	A					
2							A	U L 360	U L 382	U L 387	L 398	U L 373	A	402	A	394	365	L 365	A					
3								378	A	A	A	A	A	A	A	L 378	A	A	A					
4								362	L	417	A	406	423	386	A	A	A	L	L					
5							A	A	A	A	415	379	A	A	A	L 357	A	L 366	L					
6							A	A	A	A	431	U L 424	U L 445	U L 409	363	360	393	L 373	L					
7						L 303	L 349	339	383	A	A	A	A	A	A	L 367	A	L 353	L					
8							A	A	A	A	345	A	A	A	L 392	374	L 388	L	A					
9							L 353	U L 357	A	A	A	A	A	A	A	A	L	L	A					
10							L	A	A	A	A	A	389	A	382	A	A	A	A					
11								354	U L 384	377	A	A	U L 367	396	A	361	A	A	L					
12							L 364	A	L 387	A	A	417	U L 407	A	A	407	377	A	A					
13								A	A	A	A	A	A	A	A	A	A							
14							L	A	A	A	A	A	A	A	A	380	L 384	A						
15							L	A	A	A	A	373	397	A	402	A	A	A						
16							A	L	A	384	416	A	A	A	A	A	A	A	A					
17							L 342	L	A	A	420	381	A	A	A	377	A	A						
18							L	A	A	L 433	379	430	390	A	L 360	L 372	370	L 348						
19								A	A	A	A	A	A	A	399	A	L	L 365						
20							A	A	A	A	407	406	417	U L 411	380	370	367	L						
21									A	A	A	A	A	A	A	A	A	A	A					
22							L	A	A	A	A	E B	A	358	391	378	L	L						
23								L	L 400	389	433	429	407	377	373	392	L	L	A					
24						A	L	L	A	A	A	A	A	A	A	A	L	A	A					
25						A	A	426	U L 321	371	396	381	A	A	A	A	L 345	L						
26							L	L 355	L 362	L 395	388	A	A	391	371	361	L	L						
27								L	376	A	388	440	L 375	L 346	367	L 372	L							
28							L	L	L	405	392	388	389	386	387	L 383	A	A	A					
29								A	L	L 386	386	375	406	382	393	A	L	A						
30								L	L	A	A	A	A	A	A	A	A	L						
31							L	A	A	L 404	423	L	407	L 369	L 397	L	L	A						
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						1	4	8	9	12	16	15	14	13	15	17	9	6						
MED						L 303	L 351	358	L 383	392	397	406	406	386	387	374	372	L 365						
U Q							L 358	370	L 390	411	418	424	417	399	393	382	L 386	L 366						
L Q							L 346	354	L 369	385	387	379	389	373	371	364	366	L 353						

AUG. 2005 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 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								284	322	372	314	338	310	360	278	360	322	306	E A 320					
2							E A 282	338	376	388	290	U R 454	324	336	306	312	274	272	252					
3								306	252	294	E A 320	E A 376	A	292	278	266	E A 336	A	268					
4								314	268	284	282	406	294	372	298	284	316	280	268					
5							284	246	248	A	266	328	A	292	300	308	268	268	270					
6							304	A	E A 336	A	298	330	440	364	312	324	320	288	258					
7						452	312	520	354	A	A	A	A	A	312	300	340	340	298					
8							288	286	A	298	332	A	A	302	378	308	286	320	A					
9							318	386	308	288	274	340	268	A	E A 308	288	264	276	256					
10							268	A	A	A	A	E A 430	388	E A 338	366	340	A	306	258					
11								338	372	414	310	A	412	470	A	368	A	A	270					
12							358	260	396	A	A	380	420	A	E A 344	306	384	A	A					
13								E A 334	302	A	E A 288	A	E A 330	316	284	322	246							
14							262	264	A	E A 336	A	A	314	306	A	304	254	260						
15							298	282	272	A	360	288	296	298	296	A	320	264						
16							E A 316	264	330	266	262	A	A	A	A	A	A	A	E A 310					
17							324	258	234	A	300	352	304	A	304	274	262	258						
18							266	228	248	278	324	322	302	312	290	290	286	298						
19								A	A	A	A	A	A	322	294	286	284	288						
20							A	258	E A 286	E A 322	300	290	466	392	378	318	308	268						
21									278	E A 268	A	A	A	A	A	A	A	A	272					
22							260	E A 282	248	298	E A 302	E B 262	E A 302	340	328	302	304	272						
23								258	272	266	256	274	356	306	310	280	292	280	246					
24						E A 312	262	256	232	262	E A 290	348	334	A	E A 296	E A 290	280	A	A					
25						A	250	276	400	388	462	378	A	A	A	416	374	304						
26							328	286	276	298	370	290	350	336	324	298	268	276						
27								264	282	274	310	332	386	298	306	282	264							
28							246	238	268	266	274	350	352	312	300	258	258	258	A					
29								224	236	290	302	296	292	284	284	274	264	256						
30								266	252	254	A	E A 306	282	292	270	248	E A 274	252						
31							292	248	E A 342	268	266	290	302	288	304	300	276	A						
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						2	19	27	27	22	24	23	23	23	26	28	27	22	13					
MED						382	286	265	275	285	297	330	319	312	302	300	282	276	263					
U Q							316	306	336	322	317	376	386	340	312	315	320	298	285					
L Q							262	258	252	268	278	290	302	298	294	283	264	264	257					

AUG. 2005 h'F2 (KM)

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 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 292	E B 282	E A 254	244	224	238	E A 236	E A 240	H 190	194	208	H 188	H 178	202	210	A	E A 246	A	A	E A 288	E A 278	A	E A 324	E A 284
2	E A 294	E A 284	E A 280	E A 294	E A 264	E A 300	A	E A 266	208	202	H 188	206	A	192	A	212	216	214	A	246	218	E B 268	E A 282	E A 312
3	E B 286	E A 316	E A 292	E B 270	E B 264	226	H 206	218	A	A	A	A	A	A	A	224	A	A	A	240	240	E A 266	E A 298	E A 298
4	E A 250	E A 254	E A 258	234	224	E A 254	226	E A 242	206	202	A	208	188	212	A	A	A	220	232	238	228	222	E A 304	E A 266
5	E B 238	E A 266	E A 312	E A 284	E A 244	E A 378	A	A	A	A	H 188	208	A	A	A	220	A	226	224	232	216	E A 246	208	E A 236
6	E A 260	E A 294	E B 252	E A 250	238	E A 266	A	A	A	A	H 196	H 192	H 180	H 180	202	218	H 188	H 208	228	220	236	E B 252	240	E A 320
7	E A 302	E B 272	E A 274	E A 318	A	E B 308	E A 256	E A 236	224	A	A	A	A	A	A	E A 260	A	232	E A 240	244	244	242	E B 250	E A 248
8	E A 256	A	E A 300	E A 278	E A 248	262	A	A	A	A	220	A	A	A	H 192	206	H 216	230	A	E A 268	E A 270	E A 292	E A 314	E A 280
9	E A 252	E A 296	E A 272	E A 308	236	E A 258	222	208	A	A	A	A	A	A	A	A	E A 238	E A 240	A	E A 258	E A 248	E B 254	E A 294	234
10	E A 288	E B 242	E B 304	E A 272	E A 256	248	216	A	A	A	A	A	238	A	210	A	A	A	A	262	E B 282	234	248	E B 270
11	E B 268	218	218	E B 254	E A 304	E A 286	E A 244	216	222	E A 248	A	A	220	H 192	A	224	A	A	E A 238	230	E A 254	A	E A 314	E A 312
12	234	E A 296	E A 276	E B 242	E B 264	216	228	A	212	A	A	206	212	A	A	206	210	A	A	E A 300	A	E A 306	230	A
13	A	E A 296	E A 246	232	E A 270	E A 344	E A 268	A	A	A	A	A	A	A	A	A	A	208	224	E A 260	E A 254	E A 332	E A 356	E A 274
14	E A 344	E A 294	244	E B 264	226	232	222	A	A	A	A	A	A	A	A	218	218	A	218	250	240	214	E A 266	E A 282
15	234	E A 332	E A 298	E A 292	234	E A 246	214	A	A	A	A	242	214	A	220	A	A	A	234	226	E A 260	E A 256	E A 324	E A 262
16	246	E B 262	E B 256	E B 252	E B 268	E A 258	A	214	A	224	210	A	A	A	A	A	A	A	A	220	206	E B 268	E A 306	A
17	E A 318	E A 346	E A 294	E A 260	E B 258	E A 254	230	214	A	A	196	214	A	A	A	204	A	A	E A 262	E A 246	E A 302	E A 260	E A 284	E A 314
18	E A 296	E A 284	E B 260	E B 266	E B 252	244	206	A	A	H 170	208	H 174	212	A	220	218	214	214	240	194	204	E B 262	E B 256	E B 260
19	E B 268	E B 270	E B 258	E B 244	234	E A 260	240	A	A	A	A	A	A	A	H 190	A	220	218	242	230	216	204	236	E A 284
20	E B 276	E A 304	E B 278	E B 276	E B 264	230	A	A	A	A	H 186	H 186	H 186	198	214	216	226	224	232	238	E A 324	E A 314	E A 254	E A 274
21	242	E B 262	234	226	226	220	206	E A 268	A	A	A	A	A	A	A	A	A	A	A	244	226	226	E A 316	E A 304
22	E A 284	E B 278	E A 334	242	E A 276	E A 308	228	A	A	A	A	B	A	E A 246	212	210	218	218	E A 250	230	224	234	248	244
23	E A 274	E A 258	224	E A 284	E A 290	E A 274	222	214	212	210	H 190	188	H 182	200	210	198	238	218	A	230	236	242	240	E A 270
24	E A 282	E B 270	E B 270	E B 256	E B 278	A	234	222	A	A	A	A	A	A	A	A	218	A	A	E A 350	E B 314	E B 314	E A 506	E B 322
25	194	A	A	A	A	A	A	216	E A 316	210	204	212	A	A	A	A	E A 262	E A 262	E A 264	E A 258	E B 270	E B 280	E B 296	E A 340
26	E A 340	E B 270	E B 296	E B 280	E B 278	262	232	230	216	206	216	A	A	206	196	220	226	226	246	230	220	A	E A 374	E A 276
27	E B 272	E A 296	E A 240	E A 246	222	E A 260	222	228	210	A	208	H 174	E A 236	H 196	228	214	210	220	E A 244	272	E A 262	E A 288	E A 302	E A 336
28	E A 294	E A 252	242	E B 264	E B 260	244	216	210	206	H 186	H 178	200	H 182	208	218	200	A	A	A	E A 274	E A 264	E A 250	E A 270	E A 286
29	E B 264	E A 280	E A 270	E A 258	244	234	222	A	216	208	208	208	200	218	200	A	218	A	E A 288	228	E A 256	226	E A 250	E A 306
30	E A 310	E A 262	E A 254	228	220	216	222	208	206	A	A	A	A	A	A	A	A	226	E A 266	228	E A 262	E A 280	234	242
31	238	244	234	E B 260	242	E A 254	218	A	A	200	H 188	198	H 180	212	198	226	E A 242	A	E A 258	222	220	220	E A 336	E B 280
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	30	30	29	29	24	17	13	12	16	16	14	13	15	18	18	17	19	31	30	28	31	29
MED	E A 273	E A 278	E A 265	E 260	E 252	E A 254	222	216	211	203	200	203	190	201	210	216	217	219	232	234	246	E 255	E A 284	E A 280
U Q	E A 294	E A 296	E A 292	E A 278	E 266	E A 270	E A 233	E A 238	219	210	208	208	214	212	218	220	E A 238	228	E A 258	E A 260	E A 264	E A 280	E A 314	E A 309
L Q	250	E 262	246	244	234	236	217	214	206	197	H 188	H 188	H 182	H 194	198	206	216	216	232	230	224	234	248	E 264

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AUG. 2005 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	114	A	114	114	A	114	A	112	114	A	A	122	A					
2						A	A	A	A	A	A	A	A	116	120	120	120	124	124					
3						B	112	114	A	A	A	A	A	A	A	A	A	A	A					
4						B	A	A	116	A	A	A	116	118	A	A	A	A	A					
5						B	A	A	A	A	A	A	A	B	A	A	A	A	A					
6						B	A	A	A	A	A	114	114	A	114	112	112	120	B					
7						B	120	116	116	A	A	A	A		A	A	A	A	A					
8						B	124	A	A	A	A	A	A	A	116	118	118	A	A					
9						B	A	A	A	A	A	A	A	A	A	A	114	A	A					
10						B	120	A	A	A	A	A	116	A	118	A	A	A	A					
11						B	112	A	A	A	A	A	A	112	116	116	A	A	B					
12						B	124	122	120	A	A	A	114	A	A	A	A	A	A					
13						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
14							118	118	A	A	A	A	A	116	A	A	A	A	A					
15						B	112	A	A	A	A	122	A	A	120	A	A	A	B					
16						B	A	118	A	A	A	A	A	A	120	A	A	A	A					
17						B	A	A	A	A	A	A	A	A	A	114	A	A	B					
18						B	112	A	A	110	A	114	A	A	A	116	A	A	B					
19						B	A	A	A	A	A	A	A	A	A	A	A	114	B					
20						B	A	A	A	A	112	110	110	114	114	114	118	126	A					
21						B	118	110	A	A	A	A	A	A	A	A	A	A	A					
22						B	A	A	A	A	A	B	A	A	A	110	116	120	B					
23						B	116	112	112	A	A	A	A	A	116	A	A	A	B	A				
24						A	114	114	A	A	A	A	112	112	118	110	120	112	B				K 198	
25						B	120	122	116	110	116	114	120	112	A	114	114	A	B					
26						B	116	A	112	A	A	A	A	120	118	116	108	116	B					
27							108	110	116	A	A	108	A	112	112	118	118	A	B					
28						B	120	120	116	A	A	A	116	112	116	112	124	126	B					
29						B	A	A	A	A	A	A	A	A	A	A	116	A	B					
30						B	118	122	A	A	A	A	A	A	A	A	A	A	B					
31						B	A	A	A	A	A	A	A	A	A	A	A	A	B					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							18	12	9	3	2	7	8	11	14	13	12	9	1				1	
MED							117	117	116	110	114	114	115	112	116	114	117	120	124				K 198	
U Q							120	121	116	114		114	116	116	118	117	119	125						
L Q							112	113	113	110		110	113	112	114	112	114	115						

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IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 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	100	100	96	96	96	B	116	102	110	112	104	102	106	112	112	106	106	114	106	104	102	100	100	100
2	100	94	100	100	98	98	98	98	104	102	102	102	100	102	124	126	104	122	118	112	106	B	110	110
3	106	100	100	106	102	120	114	112	102	98	98	100	98	96	92	130	116	112	112	112	114	102	96	96
4	88	96	96	B	102	102	96	102	122	106	104	106	120	112	104	104	104	104	106	104	104	98	98	98
5	B	92	92	96	96	110	104	102	102	102	104	102	102	104	102	102	102	102	102	104	104	100	B	98
6	98	94	B	108	114	106	104	100	100	100	102	100	98	100	102	94	94	106	110	106	100	104	B	100
7	100	B	98	100	94	126	120	116	112	106	104	104	102	98	104	104	104	104	104	100	96	102	100	102
8	96	94	98	100	106	136	122	108	106	100	104	94	94	92	112	94	136	112	98	102	98	96	96	96
9	98	94	96	94	96	102	102	102	102	98	98	102	100	94	94	94	110	96	106	96	98	B	98	102
10	96	96	100	94	94	B	120	104	102	106	108	106	112	108	100	104	100	100	100	104	B	112	100	98
11	B	108	96	102	102	104	114	100	100	102	104	106	104	100	120	116	106	102	110	100	102	106	106	98
12	100	100	94	94	B	B	126	118	120	102	100	102	102	104	102	104	106	102	100	96	92	94	102	98
13	98	98	94	96	108	104	100	104	104	98	98	92	94	94	94	94	92	90	92	90	94	108	102	100
14	96	98	98	112	B	102	120	116	106	106	100	104	104	116	104	104	104	100	104	102	100	102	102	98
15	100	94	94	96	B	112	112	98	98	96	100	98	98	94	124	90	90	90	90	102	92	94	106	98
16	96	94	92	92	B	96	100	98	100	102	102	92	112	106	114	104	102	102	102	98	102	104	98	94
17	118	94	108	112	112	108	102	106	106	98	96	100	104	102	104	118	106	104	100	100	96	100	100	96
18	96	100	B	B	B	B	110	102	98	98	140	92	124	112	100	116	104	102	104	100	102	B	B	B
19	B	B	B	B	112	112	106	102	102	100	102	100	98	94	98	98	98	120	102	92	92	98	96	96
20	B	92	100	98	B	102	102	102	96	94	100	100	100	96	152	132	118	106	108	106	98	100	100	98
21	100	B	B	B	B	126	124	120	104	106	104	100	102	102	104	104	108	100	100	98	96	98	98	98
22	90	96	94	90	94	96	98	102	102	100	98	98	96	96	96	92	88	90	116	B	B	102	104	98
23	98	96	96	92	88	90	120	116	112	102	102	102	98	102	100	98	96	90	90	92	90	88	100	102
24	98	102	102	94	94	92	118	118	102	96	100	100	122	118	122	118	126	112	104	114	B	116	K 214	144
25	128	118	110	104	114	108	122	106	156	152	G	122	128	112	112	118	114	106	102	98	98	104	104	102
26	96	B	B	B	B	116	118	108	114	104	104	104	102	G	106	102	G	94	102	100	102	100	102	100
27	100	98	96	90	B	88	G	122	122	106	104	98	96	G	92	126	124	94	94	94	92	94	98	104
28	98	90	90	90	90	B	124	118	116	104	104	100	96	100	118	134	114	116	106	108	110	112	98	98
29	96	94	94	92	94	B	106	104	98	102	100	104	102	100	96	98	120	106	98	98	96	102	102	96
30	94	92	94	94	88	92	94	122	106	104	98	98	100	104	104	102	102	108	104	106	92	100	102	102
31	94	B	B	104	110	106	106	102	100	98	98	100	102	98	102	100	124	104	104	102	102	102	102	102
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	27	26	25	26	22	25	30	31	31	31	30	31	31	29	31	31	30	31	31	30	28	28	28	30
MED	98	96	96	96	97	104	111	104	104	102	102	100	102	102	104	104	105	104	104	101	98	101	100	98
U Q	100	100	100	102	108	112	120	116	112	106	104	104	104	107	112	118	114	108	106	104	102	104	102	102
L Q	96	94	94	94	94	97	102	102	100	98	100	98	98	96	100	98	102	100	100	98	95	98	98	98

AUG. 2005 h'Es (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

AUG. 2005 TYPES OF Es 135°E MEAN TIME (G.M.T. + 9 H)

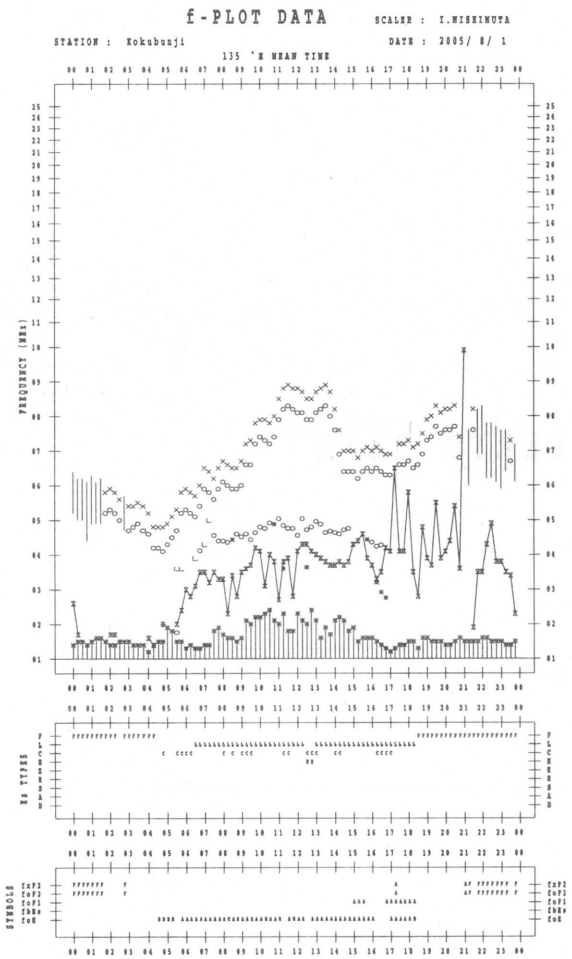
LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

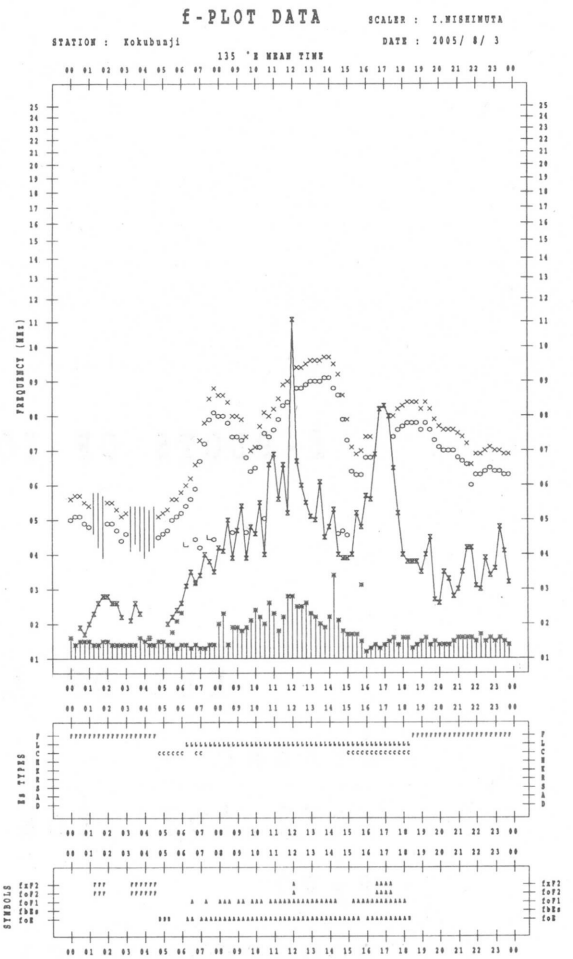
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F3	F2	F2	F2	F2		C2	L2	CL11	CL11	L1	L1	L1	CL11	CL11	L2	L2	CL31	L5	F3	F4	F5	F3	F4
2	F4	F3	F2	F4	F3	L3	L2	L2	L2	L2	L1	L1	L2	L1	CL11	CL11	L1	CL21	CL31	F2	F2		F3	F2
3	F2	F3	F4	F2	F3	C1	C2	CL21	L2	L2	L2	L3	L3	L2	L2	CL22	CL43	CL44	CL23	FF22	FF13	F2	F2	F2
4	F2	F1	F3		F2	L2	L1	L2	CL11	L1	L1	L1	CL11	CL11	L2	L2	L2	L2	L3	F1	F2	F2	F3	F2
5		F3	F3	F3	F3	L4	L3	L3	L2	L2	L1	L2	L3	L2	L2	L2	L3	L2	L3	F2	F3	F2		F3
6	F3	F2		F3	F2	L2	L2	L3	L3	L2	L2	L1	L1	L2	L1	L1	L1	L1	C2	F2	F2	F1		F3
7	F3		F2	F3	F3	C2	C2	CL21	CL11	L2	L2	L2	L2	L3	L2	L2	L2	L2	L2	F2	F2	F2	F2	F3
8	F2	F3	F3	F2	F2	H1	CL21	L2	L2	L3	L2	L4	L2	L2	CL11	L2	CL12	CL22	L5	FF32	FF32	F2	F4	F3
9	F3	F2	F2	F3	F2	L2	L2	L1	L2	L2	L2	L2	L2	L3	L3	L2	CL22	L3	L3	F6	F3		F2	F3
10	F2	F2	F3	F4	F3		CL11	L3	L3	L2	L2	L2	CL21	L2	L1	L2	L3	L3	L3	F2		F1	F1	F2
11		F1	F2	F1	F4	L2	C2	L2	L2	L2	L2	L2	L1	L1	CL31	CL21	L3	L3	L3	F2	F3	F4	F5	F3
12	F2	F2	F1	F1			CL22	CL21	CL21	L2	L3	L2	L1	L2	L2	L2	L2	L4	L5	F5	F4	F3	F3	F4
13	F4	F3	F2	F1	F2	L3	L3	L2	L2	L3	L3	L3	L3	L2	L2	L3	L3	L3	L2	F3	F2	F3	F5	F4
14	F4	F4	F2	F2		L1	C2	CL32	L3	L3	L3	L3	L2	CL21	L3	L2	L2	L2	L2	F1	F2	F1	F3	F2
15	F2	F3	F3	F3		C2	CL22	L2	L2	L3	L3	L2	L1	L3	CL12	L2	L3	L3	L3	FF22	F3	F3	F3	F3
16	F3	F2	F1	F2		L2	L4	L2	L3	L2	L2	L3	CL42	L3	CL31	L4	L4	L5	L6	F3	F2	F2	F2	F4
17	FF22	F3	FF22	FF22	F2	L2	L2	L1	L2	L2	L2	L1	L2	L2	L3	CL21	L2	L4	L4	F3	F3	F3	F5	F5
18	F3	F2					CL21	L2	L2	L1	HL12	L1	CL12	CL22	L2	CL11	L2	L2	L3	F2	F2			
19					F1	C2	L2	L3	L3	L2	L3	L2	L2	L2	L2	L2	L2	CL22	L3	F1	F3	F1	F3	F2
20		F3	F1	F1		L3	L4	L2	L3	L2	L1	L1	L1	L1	HL11	CL11	CL11	L2	L2	F5	F4	F4	F3	F3
21	F1					C2	C2	C2	L2	L2	L3	L3	L2	L3	L3	L4	L4	L4	L3	F4	F3	F3	F3	F3
22	F2	F2	F3	F2	F2	L3	L2	L3	L3	L2	L2	L1	L2	L1	L2	L1	L2	L2	C2			F2	F2	F2
23	F4	F4	F3	F3	F3	L2	CL11	CL11	CL21	L2	L1	L1	L1	L1	L1	L2	L2	L3	L2	F3	F3	F3	F2	F2
24	F2	F2	F2	F2	F2	L4	CL22	CL22	L2	L2	L2	L2	CL22	CL21	CL21	CL31	C2	C4	L5	F2		F1	K1	F2
25	F1	F5	F4	F3	F4	L4	C2	L1	HL11	HL11		CL11	C2	C3	C2	CL21	CL21	L3	L3	F3	F1	F1	F2	F3
26	F3					C1	C1	L2	CL11	L1	L1	L2	L2		L1	L1		L1	L2	F2	F2	F3	F3	F3
27	F2	F3	F3	F4		L3		CL21	CL11	L2	L1	L2	L2		L2	CL11	CL21	L3	L4	F2	F2	F3	F2	F3
28	F2	F3	F3	F2	F2		CL11	CL11	CL11	L2	L1	L2	L1	L1	CL11	CL11	CL31	CL41	L3	F5	F2	F2	F4	F3
29	F2	F4	F4	F4	F2		L2	L3	L2	L1	L2	L1	L1	L2	L2	L3	CL21	L3	L4	F4	F3	F4	F2	F4
30	F3	F3	F3	F1	F2	L1	L1	CL11	L2	L2	L3	L2	L2	L2	L2	L3	L3	L3	L4	F3	F3	F3	F3	F2
31	F2			F3	F2	L3	L2	L3	L3	L2	L2	L2	L1	L2	L2	L2	CL22	L4	L3	F3	F2	F3	F2	F2
	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																								

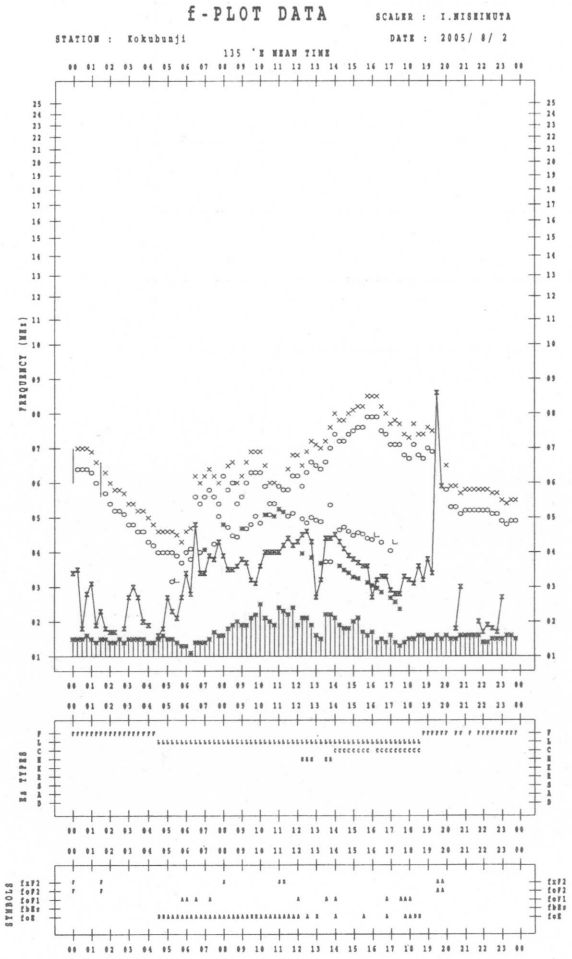
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

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 : 2005/ 8/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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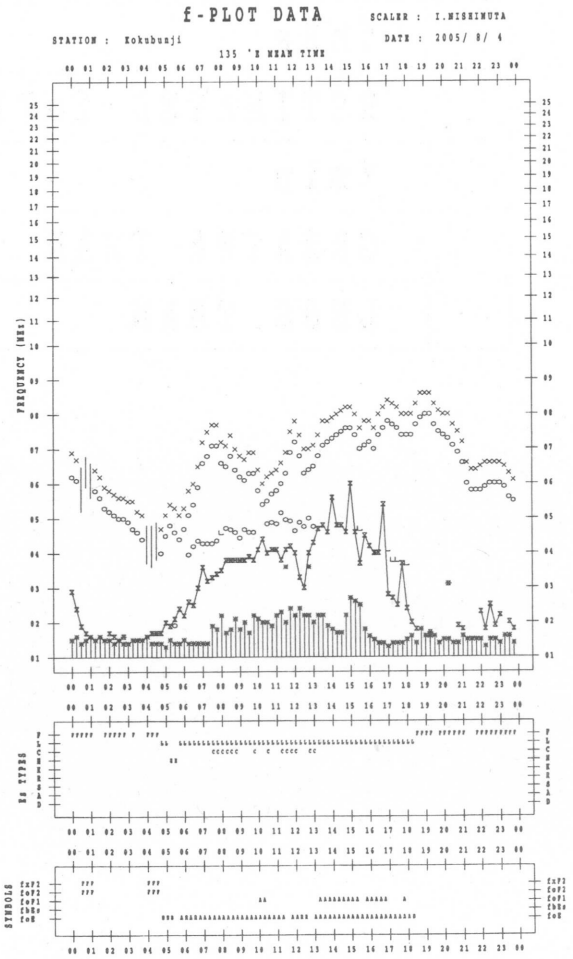
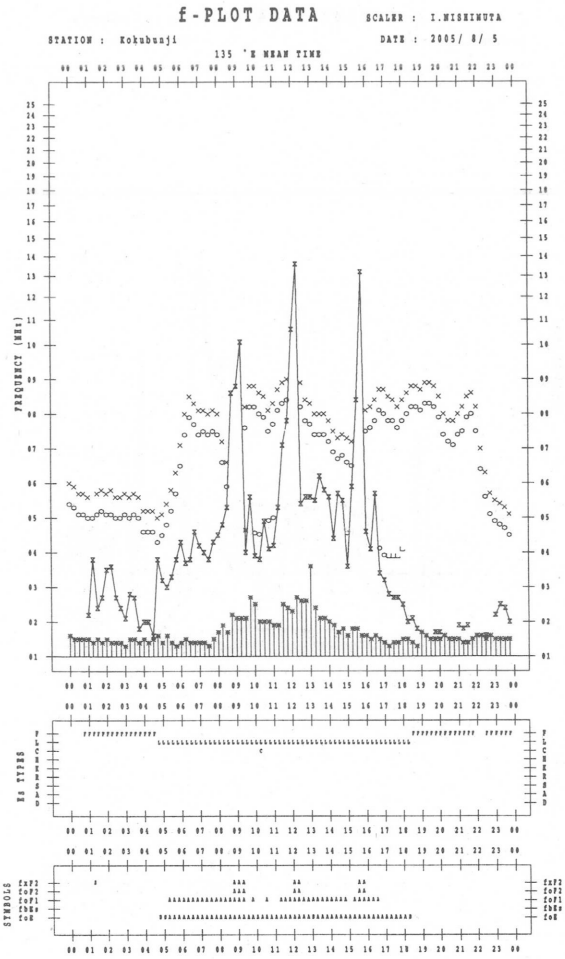
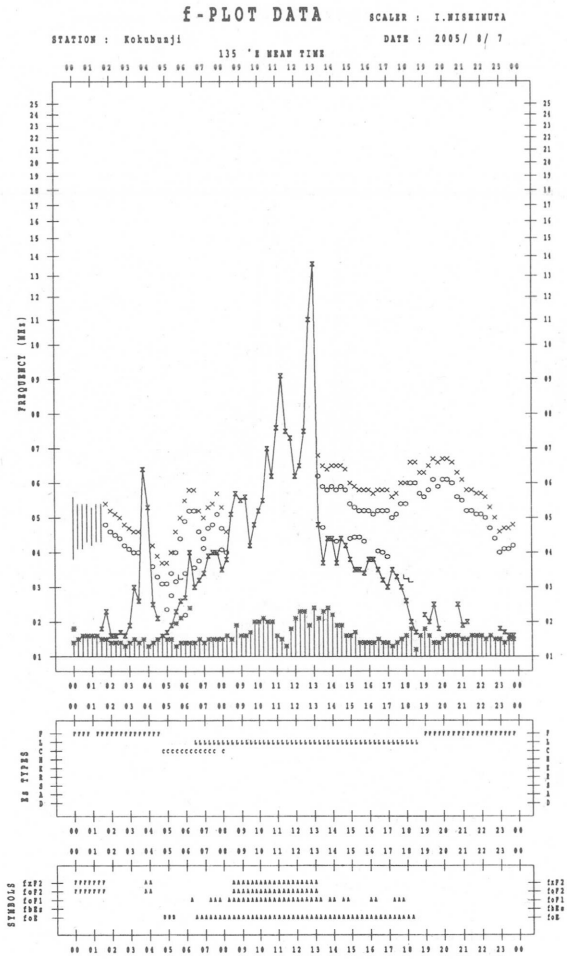
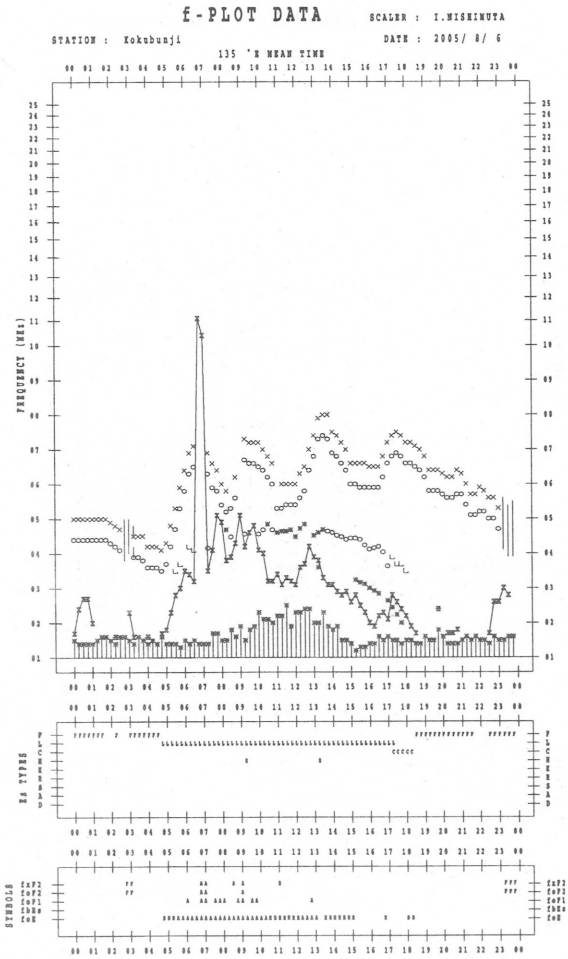
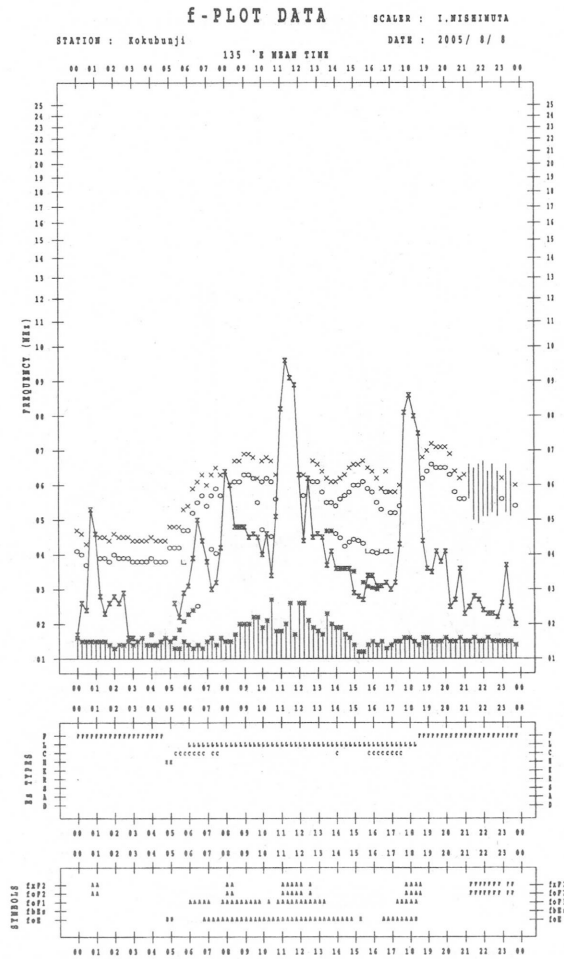
STATION : Kokubunji
DATE : 2005/ 8/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

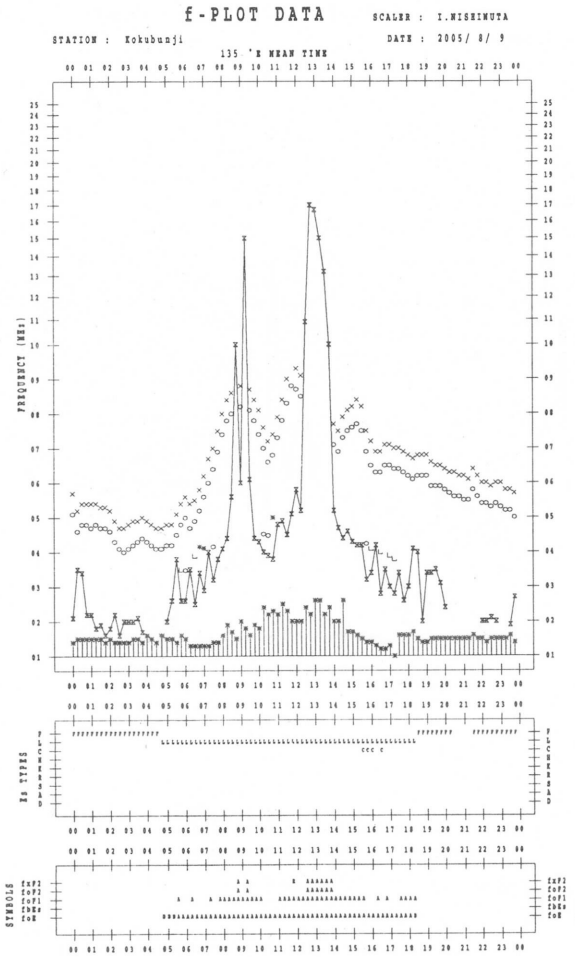

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

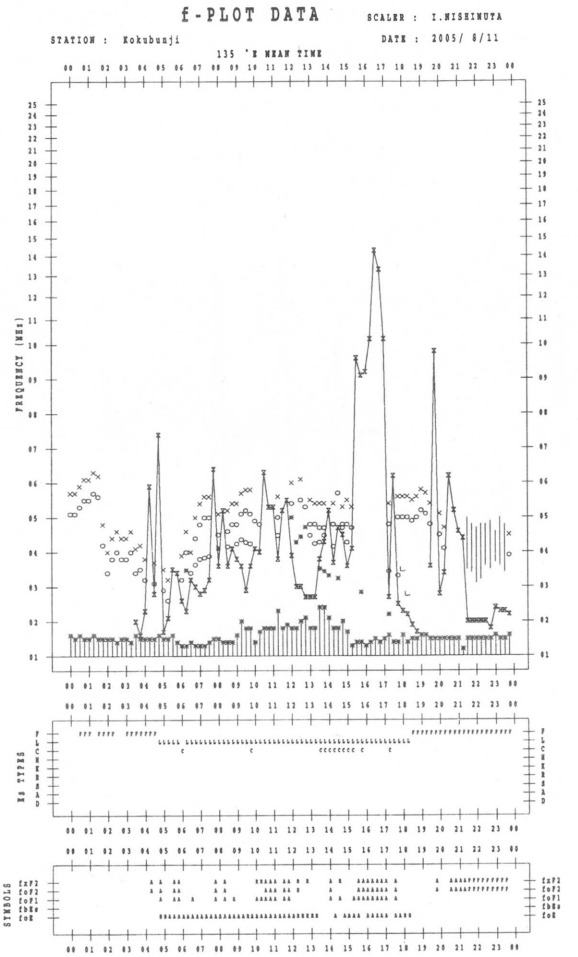

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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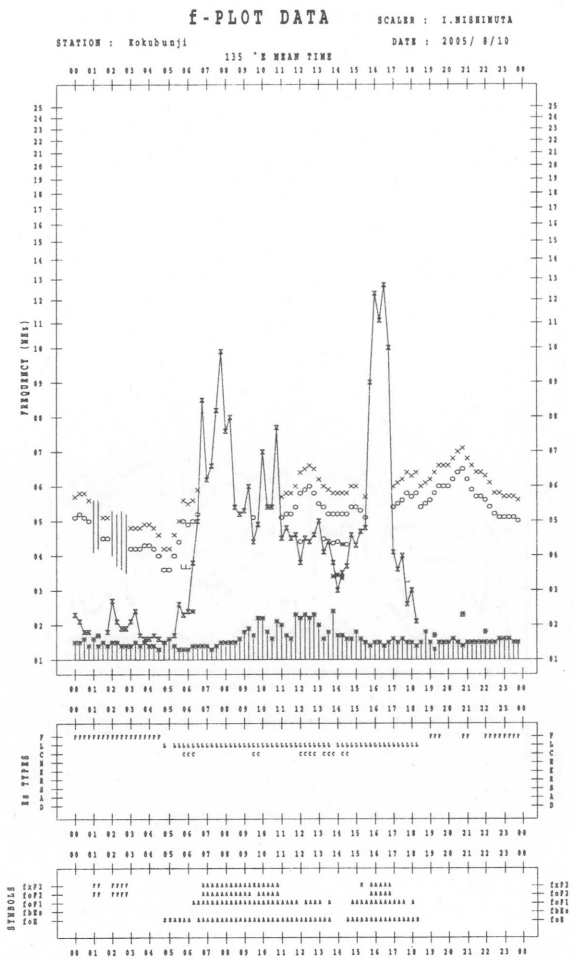
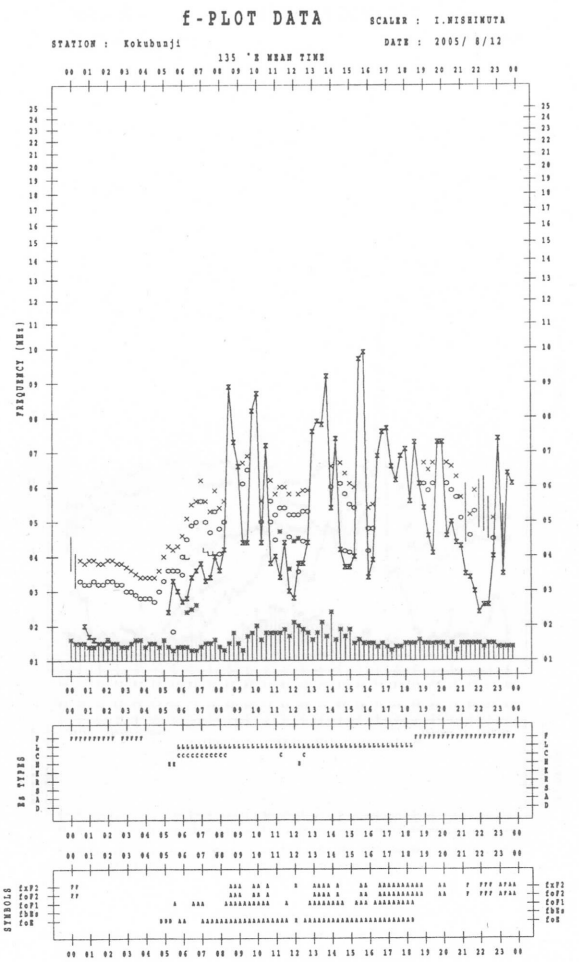
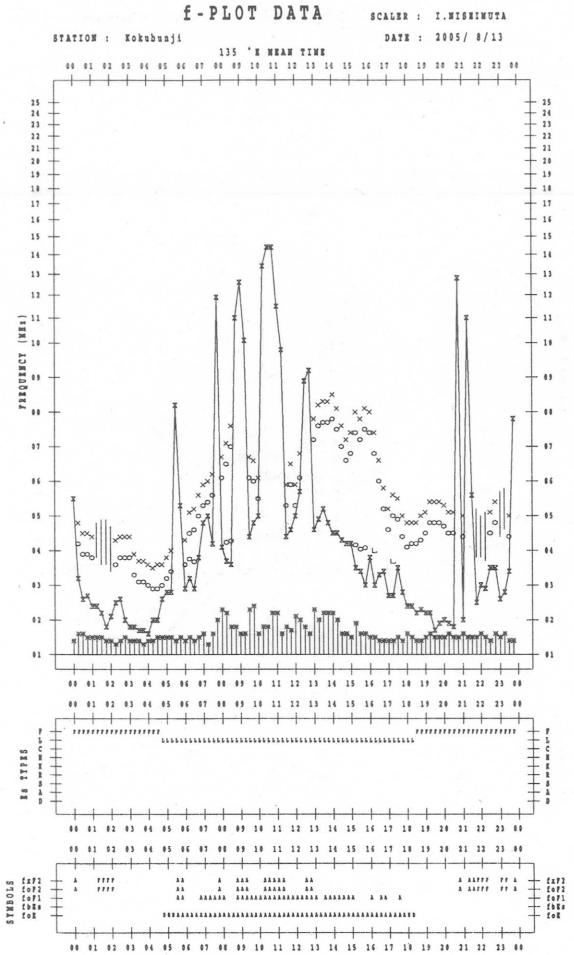
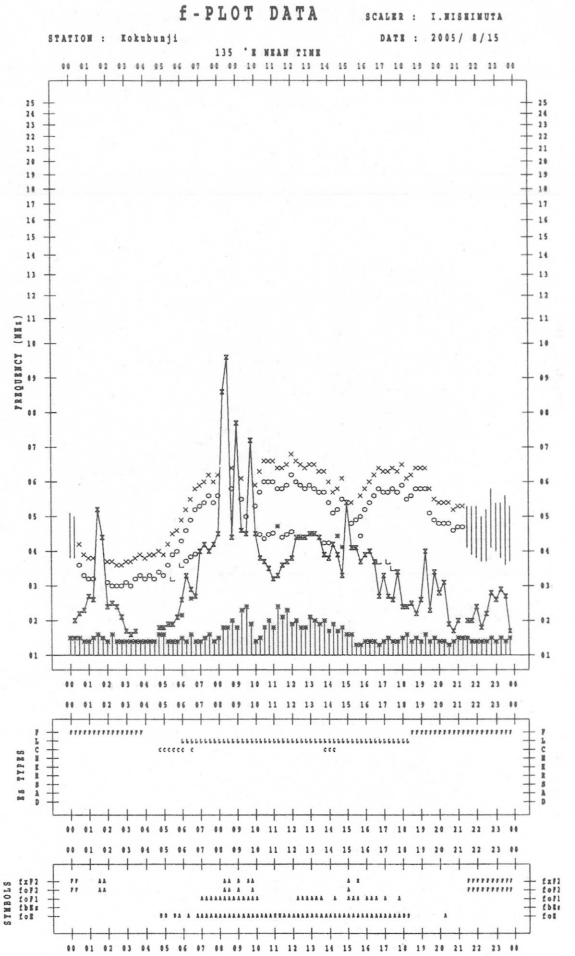
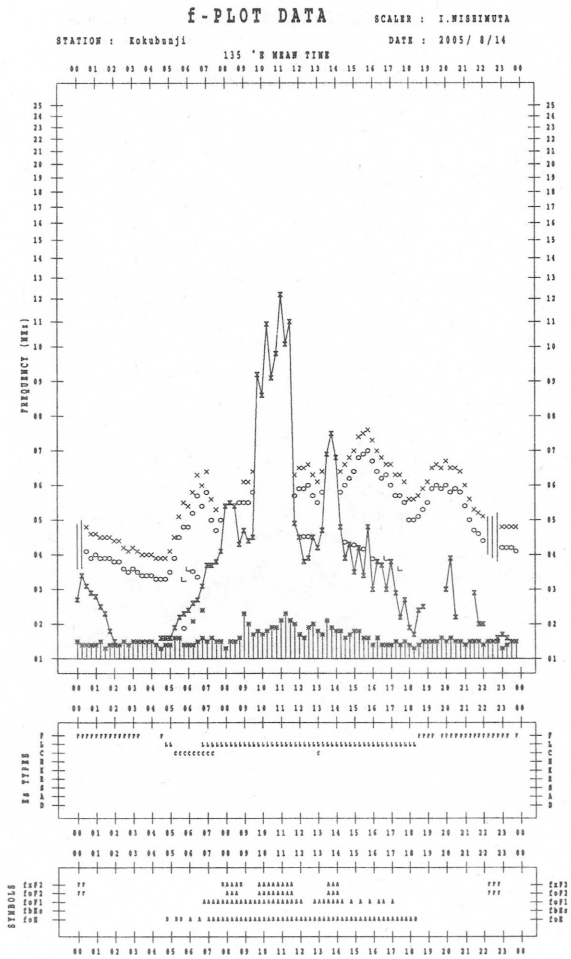
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

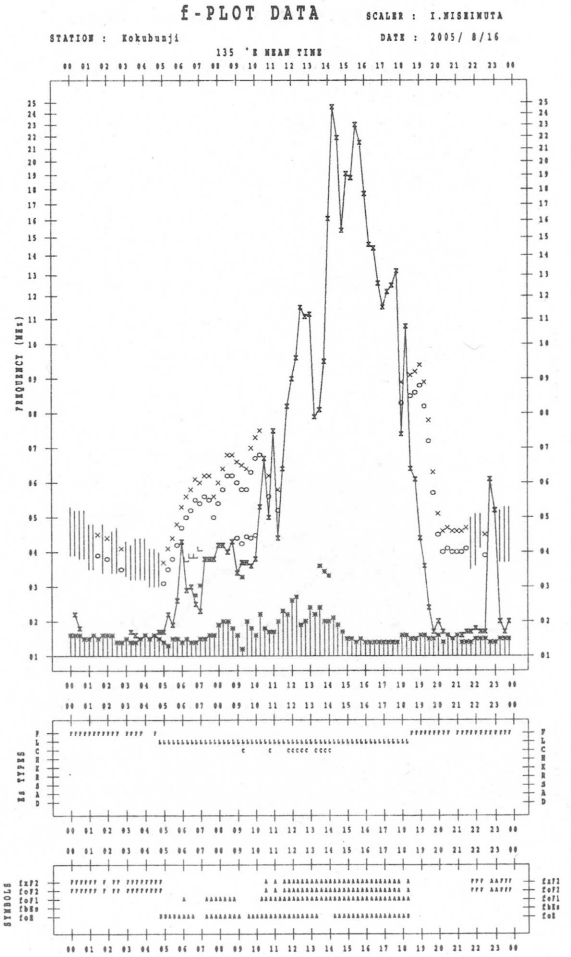

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

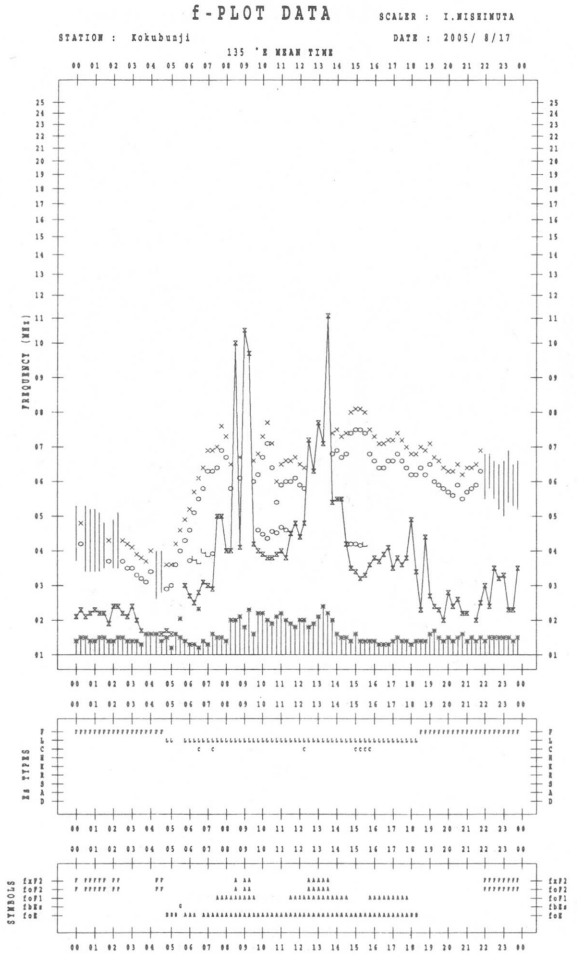

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

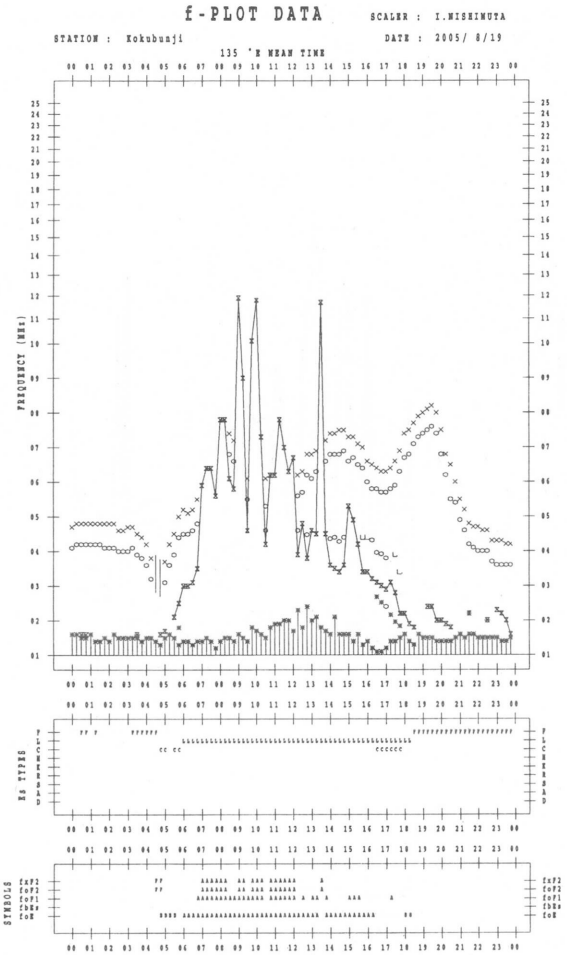

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/13
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

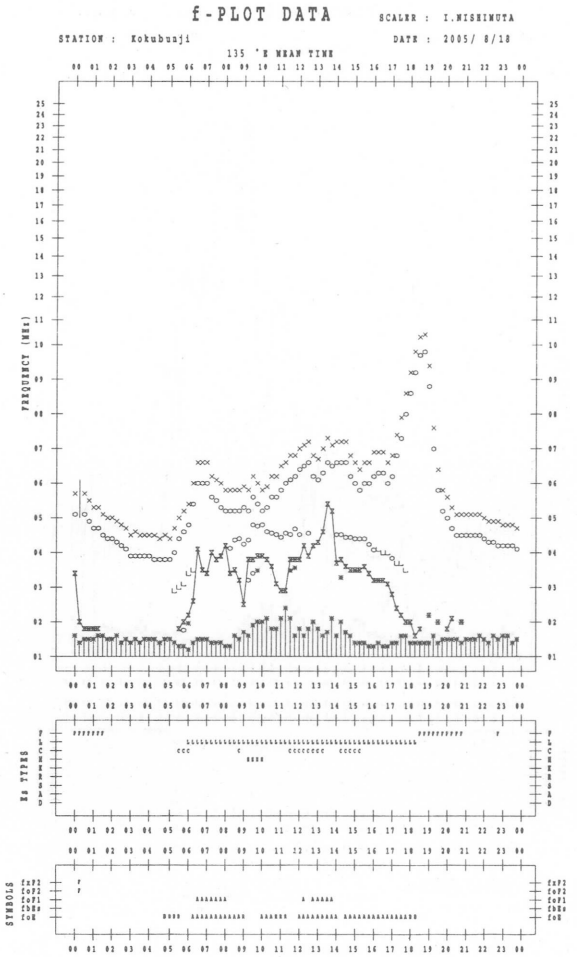

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/15
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/14
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/16
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/17
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/19
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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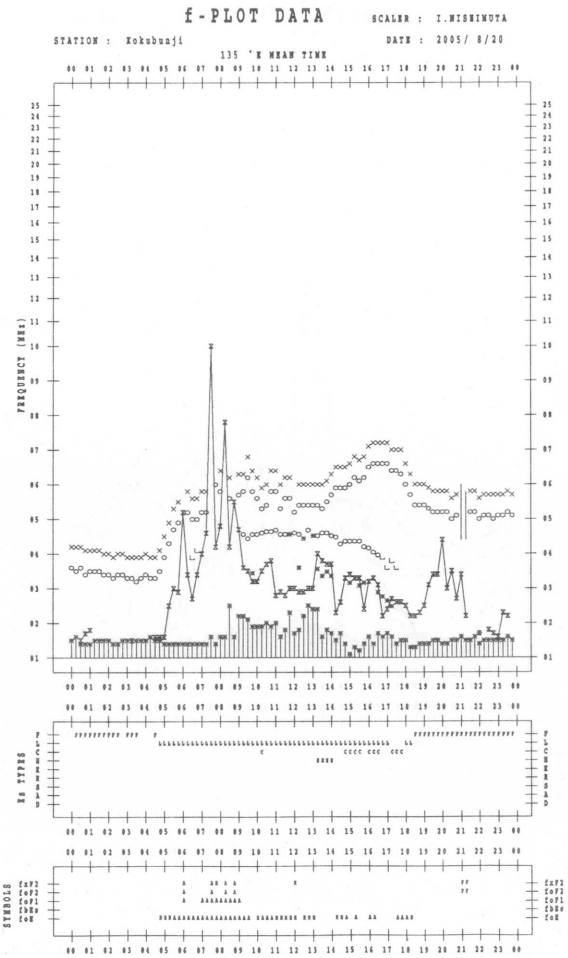
STATION : Kokubunji
DATE : 2005/ 8/18
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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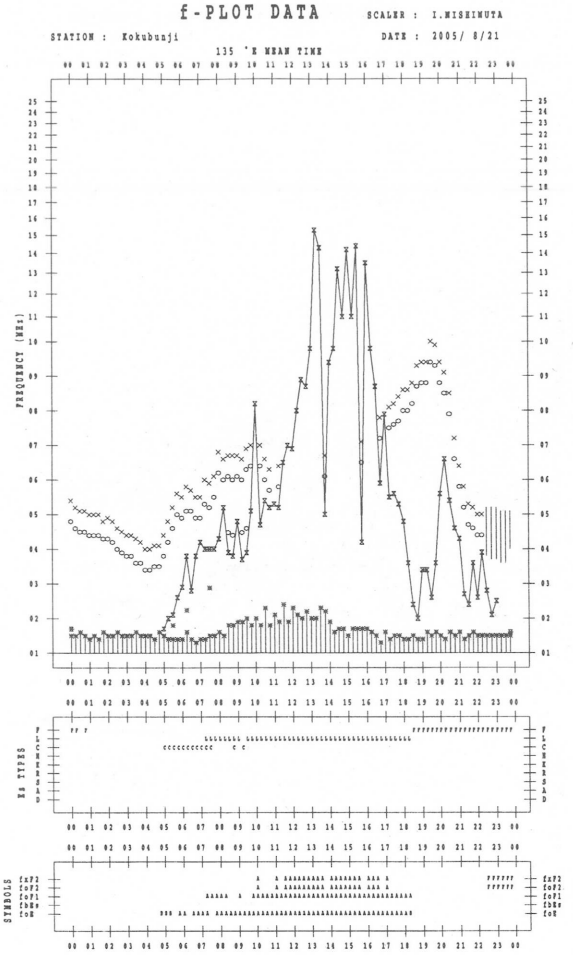
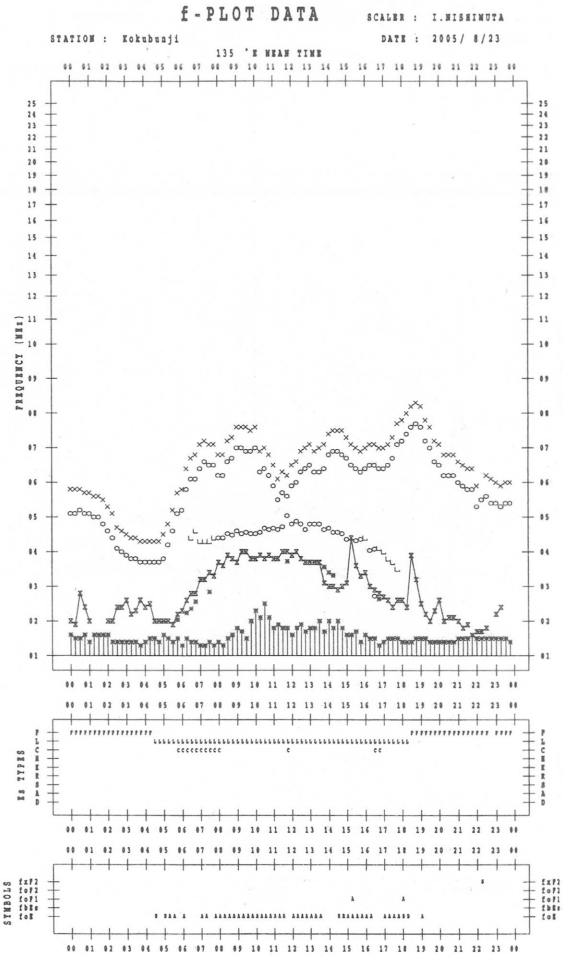
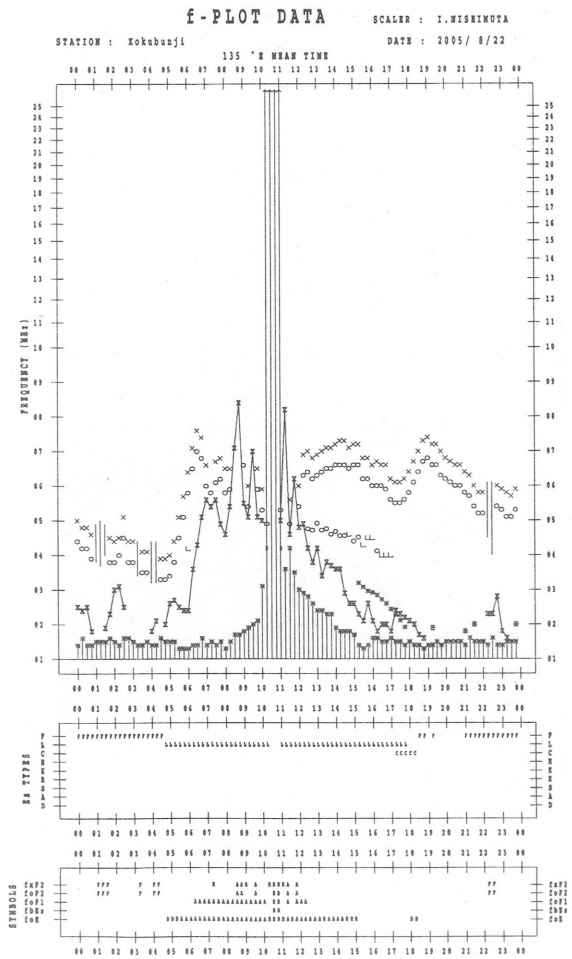
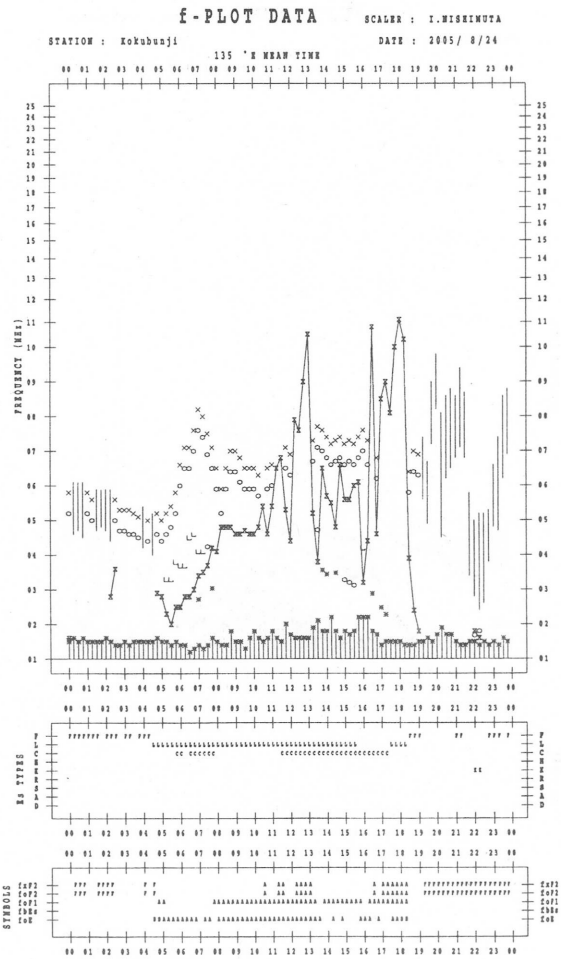
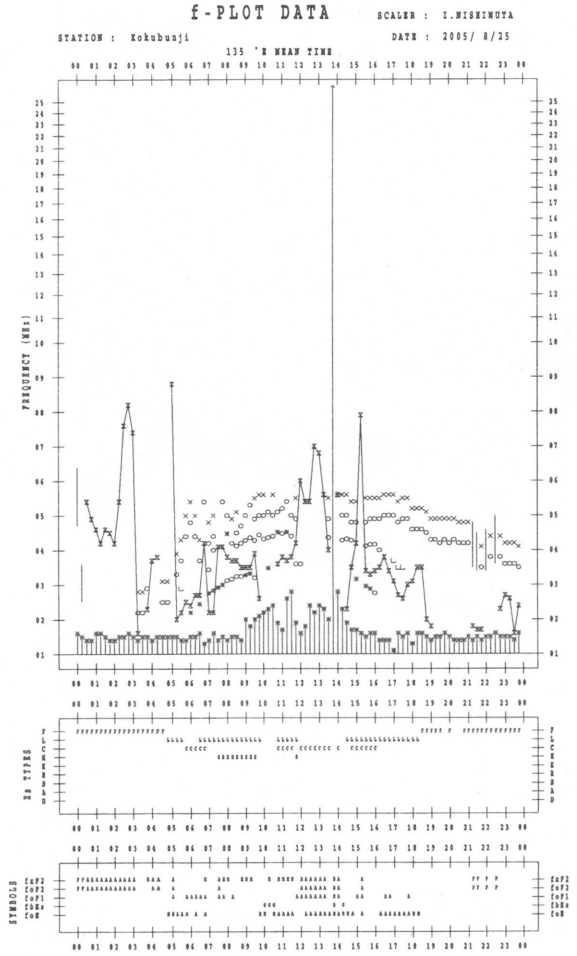
STATION : Kokubunji
DATE : 2005/ 8/20
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

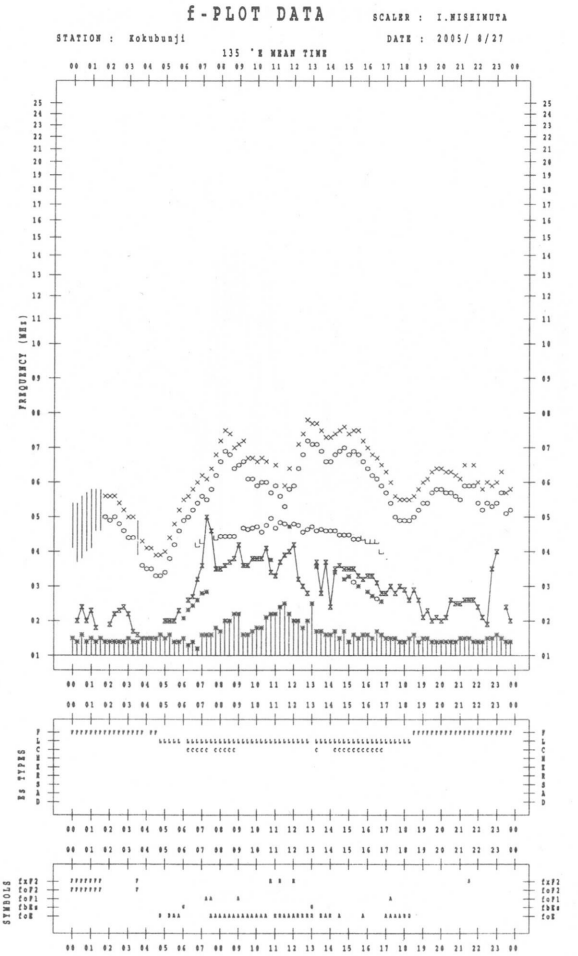

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

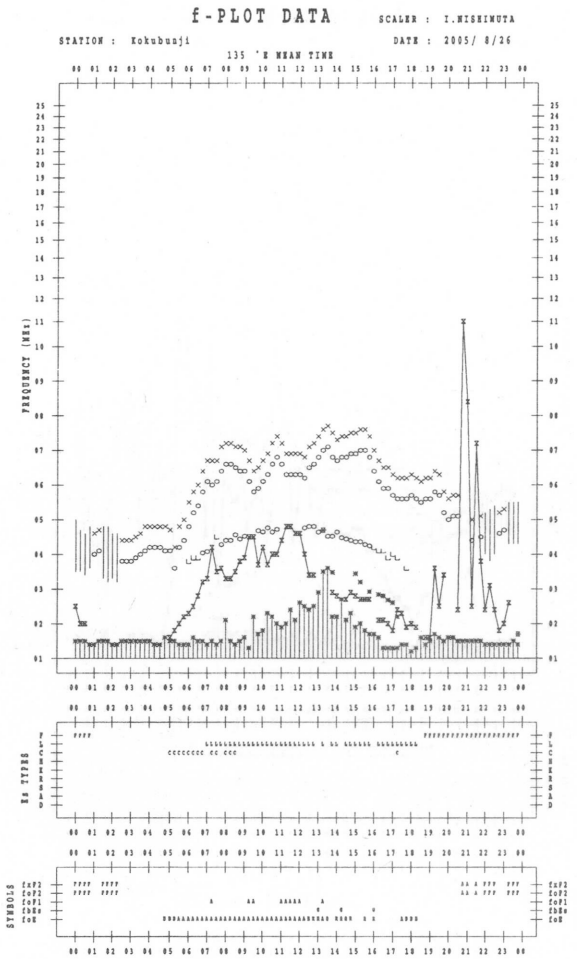

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

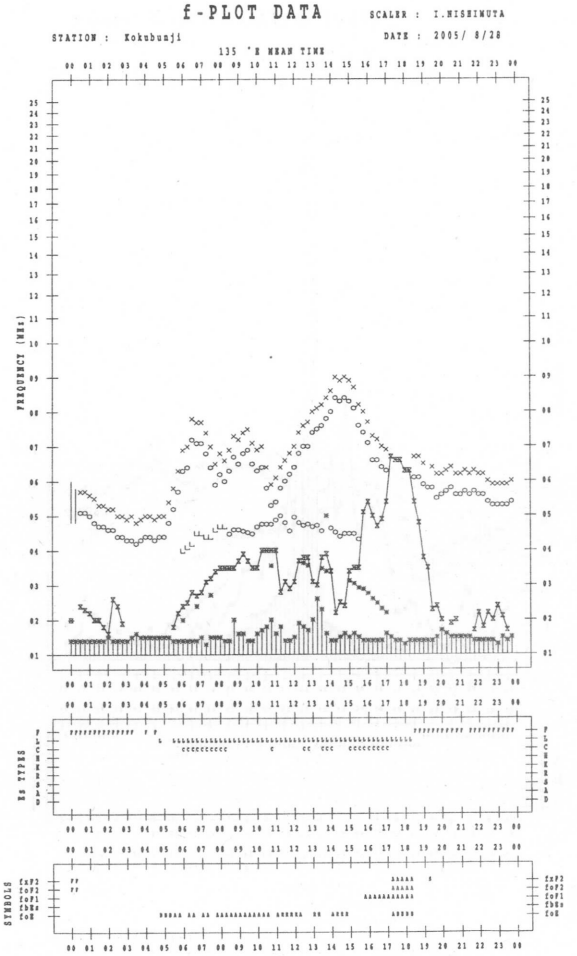

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

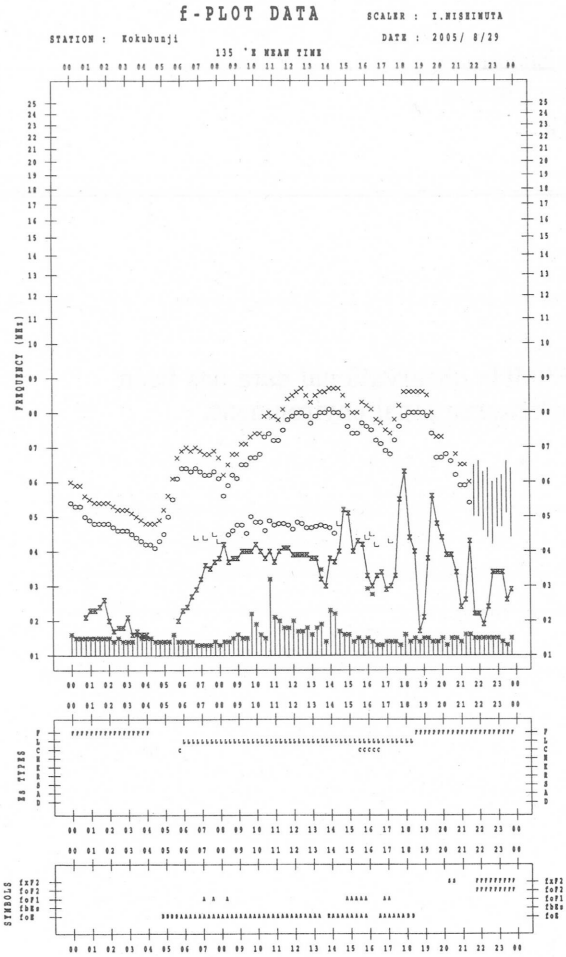

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

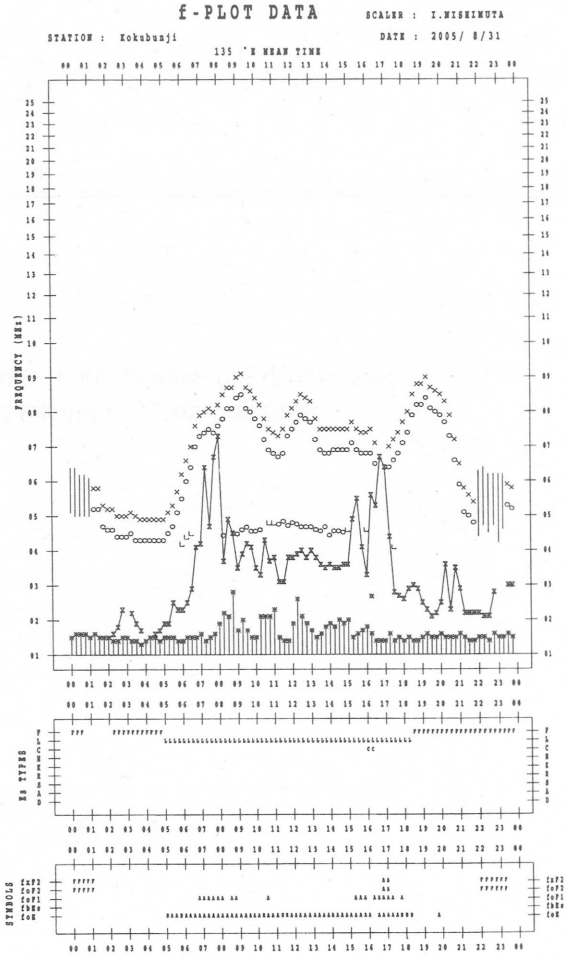

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

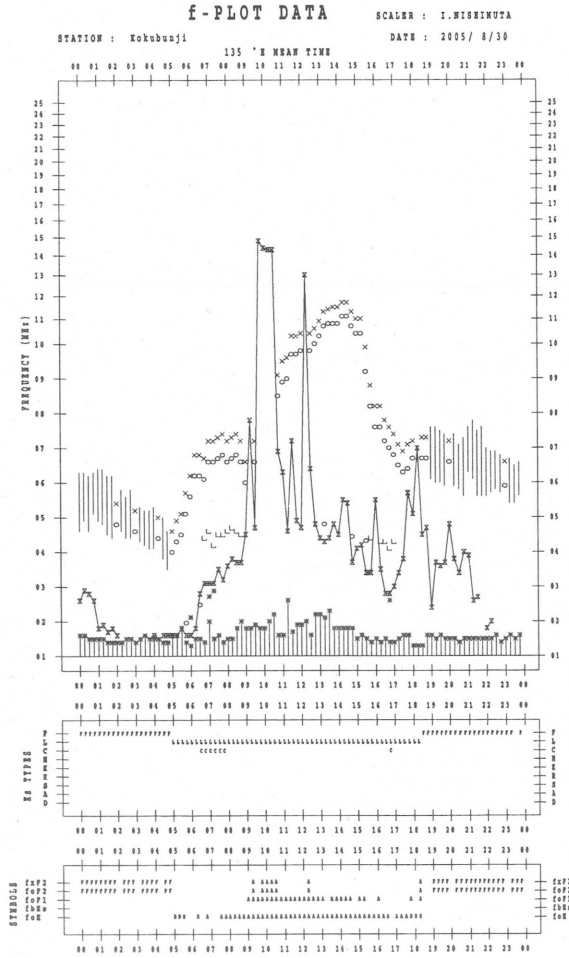

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 8/30
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

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

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

B. Solar Radio Emission

B2.Outstanding Occurrences at Hiraiso

Hiraiso August 2005

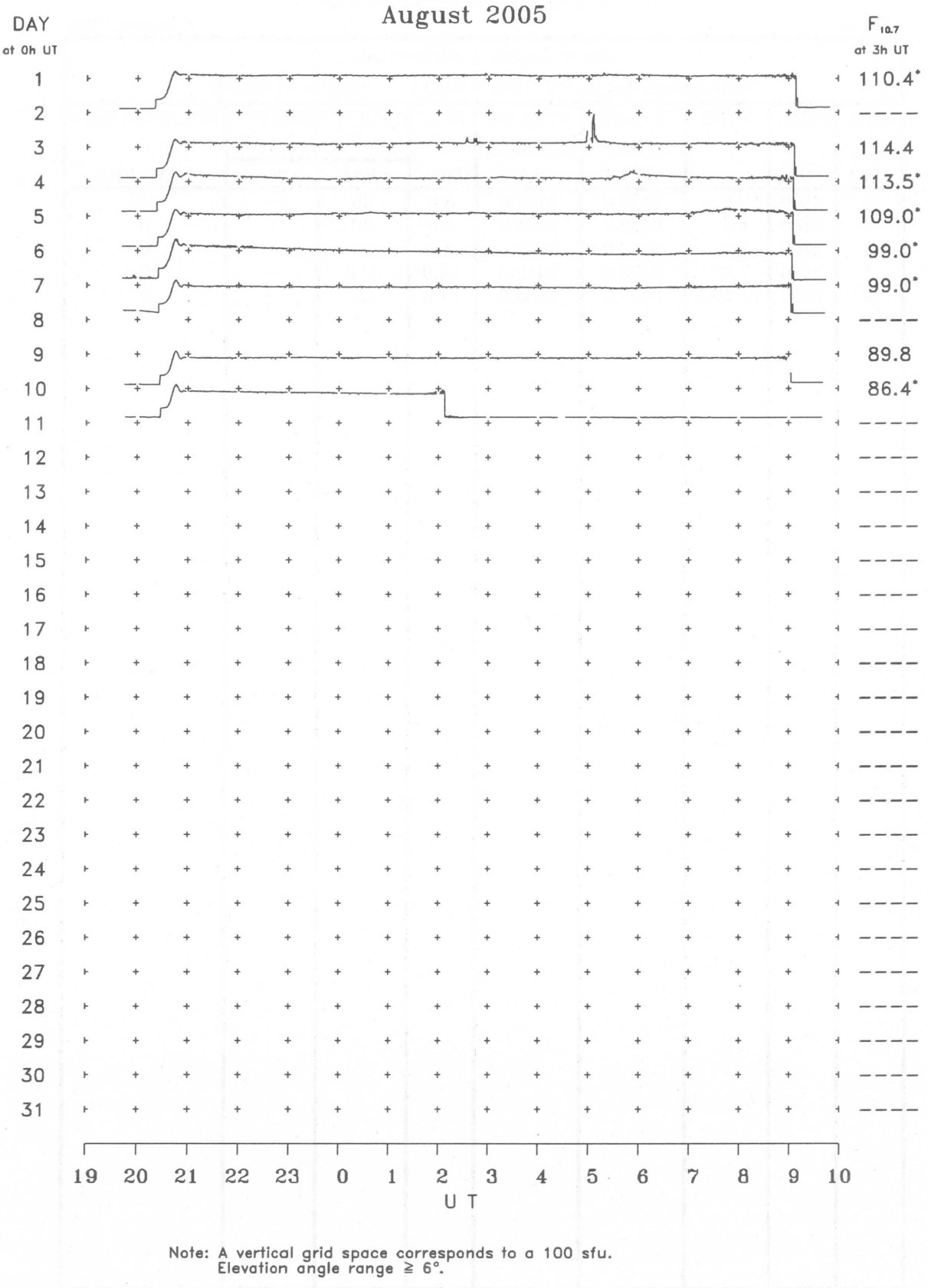
Single-frequency observations

Normal observing period: 1955 - 0930 U.T. (sunrise to sunset)

AUG. 2005	FREQ. (MHz)	TYPE	START TIME (U.T.)	TIME OF MAXIMUM (U.T.)	DUR. (MIN.)	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) PEAK	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) MEAN	POLARIZATION REMARKS
2	2800	7 C	0736.0	0737.0	6.0	35	-	WR
3	2800	1 S	0232.0	0234.0	4.0	20	-	0
3	2800	7 C	0242.0	0245.0	5.0	15	-	0
3	2800	7 C	0456.0	0459.0	16.0	115	-	0
4	2800	21 GRF	0527.0	0555.0	74.0	20	-	0

B. Solar Radio Emission

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



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

IONOSPHERIC DATA IN JAPAN FOR AUGUST 2005
F－680 Vol.57 No.8 (Not for Sale)

電離層月報(2005年8月)
第57巻 第8号 (非売品)
2005年11月15日 印刷
2005年11月21日 発行

編集兼 独立行政法人情報通信研究機構
発行所 〒184－8795 東京都小金井市貫井北町4丁目2－1
☎ (042) (327) 7478 (直通)

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Nukui-Kitamachi 4-chome, Koganei-shi, Tokyo 184-8795 JAPAN