ISSN 0021-0382

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IONOSPHERIC DATA IN JAPAN

FOR JUNE 2005

VOL.57 NO.6

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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

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

HOURLY VALUES OF fEs AT Wakkanai

JUN. 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	G	G	G	G		44	40	64	51	G	75	74	42	G	49	40	48	G	44	79	96	59	58	G
2	29	28	25	30	31	G	44	38	68	73	59	82		109	42	67		72	61	43	60	84	94	59
3	50	41	40	39	40	33	46	111	80	61	62	48	44	40	G	G	60	65	38	32	G	G	G	G
4	G	G	G	G	G	G	42	46	51	45	84	56	50	G	50	51	49	65	87	90	84	G	44	G
5	G	27	52	30	32	34	48	80	110	62	66	72	G	G	51	80	50	64	84	137	51	70	50	28
6	32	G	G	G	37	48	60	55	59	59	41		G	G	40	42	61	G	60	30	33	40	24	30
7	27	G	29	G	G	33	40	53	46	G	84	77	77		73	47	G	60	36	43	36	26	29	G
8	24	G	26	28	G	34	49	62	52	56	74	41	G	G	52	G	69	45	45	47	50	30	29	26
9	28	38	30	33	28	G	G	50	50	50		G	66	82	89	60	73	89	110	125	57	58	30	72
10	28	28	29	29	G	33	41	65		67	59	64	50	47	G	G	G	G	40	29	32	G	24	G
11	G	G	G	G	G	43	G	60	48	61	65	70		G	45	41	G	G	44	70	46	G	G	G
12	26	G	G	G	G	28	40	53	51	72	90	51			G	G	41	40	38	32	44	50	29	32
13	G	G	G	G	32	35	40	55	59	50	G	G	G	G	77	86	65	62	108	84	89	39	88	88
14	71	59	38	66	48	59	60	156	88	79	65	85	84	58	62	76	70	46	62	90	82	71	88	71
15	45	40	38	39	60	35	61	G	70	C	C	C	C	67	81	62	66	67	56	64	69	34	39	38
16	50	37	59	51	38	42	58	59	59	68	84	76	78	50	62	64	50	77	68	29	G	G	G	G
17	G	G	36	38	36	44	48	G	67	67	G	61	43	99	105	64	72	44	37	45	25	G	G	29
18	G	G	34	G	39	44	84	53	61	41	47	80	47	64	56	39	56	40	54	69	36	26	G	26
19	G	26	G	G	29	38	48	51	56	55	41	57	G	G	G	65	39	35	52	72	43	32	41	59
20	38	59	37	24	28	30	42	61	58	51	56	59	G	64	71		52	72	60	56	38	32	43	38
21	G	G	G	G	G		38	46	79	51	48	80	64	46		88	49	49	52	39	52	37	58	39
22	49	60	39	31	31	35	52	90	109	50	53	47	57	50	51	62	50	69	60	67	43	59	50	45
23	28	G	26	26	G	42	51	61	64	77	74	G	G	G	G	40	G		G	27	G	G	G	G
24	29	G	28	38	36	58	70	131	100	70	50	50	42		53	46	G	47	42	36	42	38	25	25
25	32	G	G	G	G	29	46	51	64	69	G	G	G	G	44	61	68	67	92		82	60	43	G
26	G	24	29	24	38	36	42	66	72	59	69	92	58	97	49	77	64		52	31	60	54	72	72
27	45		30	47	60	71	73	93	71	50	89	76	50	75	63	81	76	78	87	88	78	64	43	40
28	30	31	26	G	G	31	45	65	81	68	60	71	50	46	51	38	40	70	64	72	51	46		95
29	72	45	37	39	59		52	62	60	61	64	79	53	41	56	48	40	51	32	43	43	40	38	50
30	24	26	30	40	34	34	55	52	50	90	77	72	41	43	77	85	96	82	69	39	39	52	69	70
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	30	30	29	28	30	30	29	29	28	28	26	27	29	29	29	28	30	29	30	30	29	30
MED	28	24	29	27	31	35	47	60	61	61	63	67	46	46	51	60	50	61	55	47	45	38	39	31
U Q	38	37	37	38	38	43	55	65	75	68	74	76	57	64	67	71	67	69	68	75	60	58	54	59
L Q	G	G	G	G	G	32	41	51	51	50	49	49	G	G	43	40	40	42	42	34	36	26	24	G

HOURLY VALUES OF fmin AT Wakkanai

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

HOURLY VALUES OF foF2 AT Kokubunji

JUN. 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	45	38	34	37	37		46	66	61	A	A	A		65	66	A	A	69	73	76	59	54	53	44
2	46	46	43	41	41	55	57	58		A	A			62	71	78	75	61	A	A	76	74	74	62
3	54	52	54	55	52	54	A	A	A	A		A		61		67	69	73	A	76	76	A	54	54
4	54	55	51	46	45	51	64	A	56		A		63	61		64	66	68	76	80	73	A	A	52
5	52	48	A		41	59	64	A	65	A	A		A	A	65	A		A	A	72	A	A	A	76
6	73	55	A		54	62	80	68	A	A	A	A	64	69	71	81	86	91	87	87	65	64	64	64
7	A	54	53	54	42	51	67	75		63	66	A	81	84	A	A	85	83	78	87	82	77	75	75
8	66	62	55	55	51	44	49	56		A	68			61	61		67	72	78	81	A	66	A	62
9	A	59	A	55	54	61	68	74	A	A	63	63	66	66	75	77	78	83	83	A	82	76	66	A
10	A	A	45	A	A	53	66	A	90	79	A	A	A		69		62	66	76	87	82	A		65
11	54	66	54	45	44	54	62	80	A	A	A	A	A	A	A	81	83	A	75	80	A	A	52	A
12	A	54	44	44	44	48	59	80	66	59	A	A			A	66	A	78	78	76	75	A	A	
13	A	A	54	A	A	A	A	48	A	A	A	A	A			A	A	A	61	A	44	47	39	
14	45	44	44	42	34		42	A	A	A	A	A	A	A		63	62	55	62	62	61	49	A	54
15	A	44	42	42	39	A			66		48					55	66	72	69	71	76	63	54	54
16	54	45	54	57	54	45	47		A							A		A	47		51	52	54	53
17	52	45	37	32	28			A	A	A	A	A	A	A	A	57	A	45	A	49	A	51	A	A
18	42	42	37		37		62		A	A	A	A	A	A	A	64	74	74	67	59	45	47	48	47
19	41	45	41	45	35	39			49		58	A		A		A	64	71	72	76	52	54	50	A
20	53	A	44	44	44	47	56	54		A	A	A	A	A	A	57	A	A	77	A	A	A	53	51
21	A	A	44	38	36		46	61	71	46			A	A		A	A	A	70	59	62	A	A	A
22	A	A	A			34	56	A		A	59	A	A	A	60	61	59	A	58	61	A	66	54	51
23	A		A		42	47	58	67	A		A	A	A	A	76	77	91	97	91	102	86	69	52	54
24	A		52		38	48	61	76	69	66		A			92	91	72	74	65	62	59	64	A	54
25	54	48	45	45	44	44	44	51	58	A	A	A	A	A	A	76		74	86	104	A	A	52	47
26	A	45	42	45	39	46	53	65	58		A	A	A	59	71	80	81	81	76	65	54	54	54	54
27	54	47	46	46	45	47	59	71	60					65	76	62	60	A	A	A	66	A		61
28	54	A	47	45	44	47	54	A		68	59	A	A	A	A	A	81	77	68	54	51	A	A	52
29	A		A			51	47	A	72	A	A	A	131	142	128	A		67	61	64	63	52	54	54
30		51	41	47	45	48	63	81	62	A	A		A	58	A		A	A	A	66	66	54	A	A
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	17	21	24	21	26	23	25	17	14	6	7	1	5	12	13	18	19	21	24	24	23	19	18	22
MED	54	48	44	45	43	48	58	67	64	64	59	63	66	64	71	66	72	73	74	74	65	54	54	54
U Q	54	54	52	50	45	54	63	75	69	68	66	31	106	67	76	78	81	79	78	80	76	66	54	62
L Q	45	45	42	42	38	46	48	57	58	59	58	31	63	61	65	62	64	67	66	62	54	52	52	52

HOURLY VALUES OF fEs AT Kokubunji

JUN. 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	G	G	G	G	G	37	38	44	60	73	59	61	49	62	60	64	72	41	30	G	33	70	40	30
2	31	G	35	33	G	G	G	50	61	73	55	51	46	50	53	45	45	51	104	92	57	65	49	G
3	29	36	40	26	29	34	69	104	105	84	68	95	56	45	G	60	53	52	102	85	72	72	57	79
4	53	41	34	27	25	G	57	120	G	50	95		G	46		G	56	60	54	41	56	71	68	39
5	49	40	71	48	39	31	50	81	G	61	65	61	77	95	G	96	95	73	60		84	113	81	60
6	68	60	88	53	46	37	53	64	103	86	66	65	60	50	56	82	G	G	33	57	60	43	43	59
7	69	53	53	G	G	G	50	83	75	59	51	104	52	61	104	91	40	40	47	60	94	79	72	G
8	35	34	G	29	32	G	G	45	63	76	G	69	59	54	59	51	43	55	51	44		71	68	49
9	68	60	73	60	82	31	89	41	70	86	50	47	G	G	G	40	G	G	56	109	68	60	59	94
10	59	71	40	84	75	48	45	84	69	67	103	103	104	74	67	59	49	G	33	34	54	84	70	59
11	40	G	40	50	53	41		70	97	117		137	152	76	131	74	71	81	59	50	106	69	52	107
12	93	60	50	27	G	G	G	43	59	40	56	61	60	73	86	68	86	70		58	61	91	105	47
13	84	58	51	70	60	41	116		70	138	184	131	78	G	G	70	92	62	53	96	G	G	49	42
14	70	58	G	28	40		42	67	60	61	91	119	74	81	72	G	51	49	48	58	G	34	60	60
15	60	48	30	36	38	53	45	G	47	61	G		G		60	47	43	G	G	G	29	60	37	37
16	26	29	29	30	26	49	42	67	107	49					53	76	54	87	80	49	G	28	G	G
17	22	G	34	28	26	35		61	61	66	73	74	117	80	83	53	86	43	88		81	58	59	65
18	29	24	G	26	G		43		72	63	115	61	51	108	82	74	51	40	33	35	41	G	26	29
19	G	29	G	G	G	G		60	43	47	G	62		78	63	77	51	43	40	G	34	G	59	82
20	32	94	60	41	39	G	41	52	62	68	71	97	129	115	83	G	122	85	101	94	107	72	38	42
21	82	60	31	31	33	31	34	57	47	44	50	53	107	112	112	123	90	84	82	77	94	83	91	90
22	53	41	40	31		G	42	72	66	84	50	74	69	72	43	43	50	75	50	34	116		59	68
23	71	56	69	57	34	50	51	57	68	100	83	137	136	124	G	54	G	G	33	31	24	29	40	47
24	60	59	57	29	50	43	53	53	67	54	64	90	85	53	78	45	40	G	35	34	57	39	60	57
25	G	26	39	G	G	37	G	52	61	80	85	65	103	60	84	82	80	80	60	105	60	59	36	35
26	59	41	60	29	G	31	40	60	58	70	90	96		64		86	50	G	G	G	G	G	G	G
27	26	G	G	G	G	G	49	50	76	49	51	42	65	G	G	52	48		105	106	114	70	60	57
28	50	106	51	40	45	43	43	92	67	60	62	68	68	98	67	106	95	51	33	32	70	85	60	58
29	94	50	72	60	53	53	50	72	70	136	139	142	86	117	109	134	82	52	54	40	35	G	59	41
30	72	47	39	35	40	42	40	47	60	105	132		94	61	90	73	100	65	107	41	40	43	93	60
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	29	28	27	28	30	30	28	26	27	28	28	30	30	29	29	28	29	29	30	30
MED	53	44	40	30	33	34	43	60	64	68	66	72	69	68	65	66	52	51	53	46	57	60	59	53
U Q	69	59	57	48	45	42	51	72	70	84	90	103	103	88	83	82	86	71	81	81	82	72	68	60
L Q	29	29	30	27	G	G	40	50	60	59	51	61	52	51	48	47	45	20	33	34	33	31	40	37

HOURLY VALUES OF fmin AT Kokubunji

JUN. 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	14	14	14	13	21	14	14	22	30	34	36	36	43	37	36	29	29	24	14	14	15	14	14	13
2	14	15	13	13	14	23	13	22	33	34	35	35	37	35	33	28	28	23	17	13	14	13	13	13
3	15	14	13	14	14	14	14	23	25	34	34	33	33	31		25	23	23	14	20	13	14	13	14
4	14	14	13	13	21	20	15	23	29	42	35		57	39		47	29	24	13	13	14	14	13	13
5	13	14	13	13	14	14	22	20	41	34	36	36	36	33	50	34	33	25	14	13	14	15	14	18
6	14	15	14	13	13	13	14	22	28	34	34	34	33	34	37	38	43	34	15	18	17	13	14	14
7	14	14	15	14	14	21	14	17	22	30	34	36	36	34	34	25	26	22	17	14	13	14	13	15
8	13	14	14	14	14	21	22	17	34	34	33	39	34	30	26	25	24	25	15	13	14	14	17	13
9	13	14	17	14	13	13	14	21	33	30	34	34	50	59	52	31	22	18	15	14	13	15	15	14
10	13	17	15	13	13	13	18	17	31	34	35	35	35	33	30	23	18	13	13	13	13	14	13	14
11	13	13	13	13	13	13	13	18	22	31	35	33	31	30	26	25	21	18	17	14	20	20	14	13
12	13	14	13	13	14	18	33	28	22	28	33	36	39	42	38	37	29	15	14	13	20	17	13	14
13	13	13	13	14	14	13	13	17	35	30	33	34	35	30	36	33	24	23	13	13	23	23	14	13
14	15	14	17	14	14		13	25	33	34	36	35	37	34	35	40	29	20	17	13	14	15	13	13
15	14	13	13	13	13	13	14	18	31	33	45		31		35	47	30	18	22	17	17	14	13	14
16	15	18	13	14	13	13	13	17	20	30					37	31	24	23	15	17	14	13	14	13
17	15	17	13	13	13	13		29	34	36	36	35	36	36	29	29	23	14	13	14	14	13	13	14
18	14	14	18	13	13		14		36	36	33	37	40	38	35	30	22	20	13	15	14	14	15	14
19	14	14	13	13	15	26		17	29	31	53	35		35	43	31	28	14	14	18	14	15	14	14
20	14	13	13	13	13	30	14	14	30	33	34	33	36	28	29	26	18	15	13	23	14	21	14	14
21	14	13	13	14	13	13	15	15	26	34	33	33	36	37	33	28	23	20	13	13	14	14	14	15
22	13	14	14	14		13	13	18	26	30	34	34	30	30	25	24	21	15	18	13	13	13	14	14
23	14	14	15	14	13	14	13	15	22	33	33	35	34	34		34	44	15	14	13	15	13	14	14
24	14	14	13	17	13	13	13	20	30	31	34	34	34	34	33	30	24	39	15	14	13	17	13	14
25	20	17	14	13	13	13	14	18	29	33	33	29	29	30	26	29	17	13	15	17	17	13	14	15
26	14	14	14	14	15	13	13	14	29	31	34	34	29	30	40	33	40	26	14	17	14	33	24	14
27	14	18	15	20	14	25	13	17	25	22	34	35	29	49	50	24	23	15	13	18	14	14	13	14
28	14	14	14	13	13	13	14	15	21	33	31	36	35	31	33	28	21	25	17	13	14	13	13	14
29	14	13	14	13	13	13	14	20	21	24	36	34	40	33	39	24	23	17	13	18	13	13	13	14
30	13	13	13	14	13	14	13	20	18	33	42		36	38	35	34	24	23	13	13	17	14	13	13
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	29	28	28	29	30	30	29	26	28	28	27	30	30	30	30	30	30	30	30	30
MED	14	14	14	13	13	13	14	18	29	33	34	35	36	34	35	30	24	20	14	14	14	14	14	14
U Q	14	14	14	14	14	19	14	22	33	34	36	36	37	37	38	34	29	24	15	17	15	15	14	14
L Q	13	14	13	13	13	13	13	17	22	30	33	34	33	30	30	25	22	15	13	13	14	13	13	13

HOURLY VALUES OF foF2 AT Yamagawa

JUN. 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	36	54	54	55	50	46	64	A	A	A		A		A				72	77	78	66		50	
2			50	36	37	45	53	68						A	A	A		71	77	74	76	53	66	73
3	76	75	72	66	61	64	57	66	A	A	A	A	80	78	77	A	84	85	80	80	78	78	74	54
4	54	54	53		47	47	62	66			66	A		70	68	77	80	86	86	84	76	A		
5			A	45	41	42	56	61		54			73	84	75	81	75		69	69	76	65	66	66
6	A	A	A		44	51	75	A	A		A	67	A	81	81	79	88	94	91	76	66	66	65	
7			A	A		A	51	68	A	A	67	72	80	82	85	84	A	A	92	84		66		
8	71	66	60	54	37	36	51	64	69	67	72	64	A	67	72		71	78	A		78	53		A
9	A	A	A	A	A	52	A	66	66	62					78	84		96	80	81		66		A
10	A	65	65	51	A		51	67	85	A	61	A	A	A	75	72			78	80	82		66	66
11				53		45	58	81	60	65	59		A	76	80	84	87	94	87	78	A		66	52
12	54	72	54	50	36	42	66	75	64		A	A	A	68	73	71	80	81	82	84	77		54	52
13	50	53	54	53	A	A	A	A	A	A	A	A	A	A	A	A	63	63	62	A	A	A		36
14	48	42	34	48	32	A			A	A	67			A	A	A	80	77	81		55	A	A	
15	52	54		A	A	32	32	A	65	63		A					71	72	74	73	76	66	54	65
16	66	54	66	64	50	30		A	A	A	A	A				A		A	48	46	44	44		
17	52	52	25	26	32	30	37	39	A	A			A		A	61	A	A	58	A	54	52		A
18	A	A	A	36	32	34	64	54	37	A			A		64		82	83	80	62	54	A		41
19	51	50	37	43		29	40	62		60	A	A	A	A	A	A	A	78	77	75	A		53	53
20	52	38	34	30	A	A	56	61	A	A		A		A	A	A	A	78	A	A	64	A	A	A
21	42	A	37	A	A	A	A	45	A	A		A	A	53		66		76	80	83	78	38	38	38
22	34	36	36	36	37	34	38	67	A	A	A	A	A	A		A	66	A	148	54	70	54	53	42
23		A	A	A	A	34	51	62	66	A	A		A		76	76	85		84	87				59
24	A		66	34	A	A	A	A	A	72		A	A	A	81	98	98	80	79	76	A	A		54
25		62	54	52	36	36	40	55	60	A	A	A	A	A	A	A	72	A	107	85	33		54	
26	50	48	44	47	48	47		65	52		A	A	57		76		A	78	83	A	A		66	64
27	54	61		58	54	52	62	66	59	54		149				70	73	72	70	67	66	52	A	
28			51	44		32	A	64	A	A	A	A	A		72	72	80	80	A	73	A	38	51	
29	A	A			A				75		A	A	A	A		72	76	67	66	A	66	A	52	54
30	54	53			52	47	55	68	63				A	67	64	75	77	77	67	78	66	54	A	
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	17	18	19	21	17	22	21	22	13	8	6	4	4	10	16	16	19	22	27	23	21	15	16	16
MED	52	54	53	48	41	42	55	66	64	62	66	70	76	73	76	76	80	78	80	78	66	54	54	54
U Q	54	62	60	53	50	47	62	67	67	66	67	110	80	81	79	82	84	83	84	83	76	66	66	64
L Q	49	50	37	36	36	34	45	61	59	57	61	65	65	67	72	71	72	72	70	73	59	52	52	47

HOURLY VALUES OF fEs AT Yamagawa

JUN. 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	34	43	40	50	36	33	37	83	85	66	42	43	57	86	58	53		G	57	50	38	46	30	45
2	43	40	34	34	G	G	35	43	58	81	55	47	59	76	117	112	G	50	40	39	31	34	82	57
3	38	G	29	27	25	40	46	56	87	130	132	75	80	75	84	85	G	49	66	53	42	71	57	80
4	44	39	32	40	G	G	30	36	39	55	G	94	84	52	42	G	G	44	56	60	84	72	50	57
5	57	41	43	G	28	32	41	41	79	54	42	G	G	G	G	G	53	61	68	64	54	59	80	54
6	70	90	89	39	41	44	56	136	103	70	60	57	106	55	G	58	68	58	68	50	48	56	43	80
7	80	72	72	71	44	46	51	42	80	86	56	43	42	71	66	G	179	132	38	60	44	56	59	72
8	58	39	38	29	G	26		44	58	64	66	58	72	59	62		45	60	90	90	66	70	59	84
9	105	90	72	91	72	72	83	42	42	79	66	63	45	52	43	G	46	53	48	34	43	81	59	93
10	82	60	57	40	52	58	34	48	57	102	73	71	92	85	79	73	79	75	52	39	45	39	27	84
11		70	59	47	40	25	55	58	61	42	G	53	83	67	56	G	G	40	60	84	85	59	57	59
12	56	40	43	32	30	G	G	41	61	42	64	71	90	59	64	43	G	44	42	31	66	56	58	40
13	48	43	35	39	39	59		48	62		72	72	112	100	84	74	51	53	62	72	56	71	58	30
14	G	27	G	G	33	43	37	44	65	72	G	71	62		168	89	47	G	42	69	59	40	54	38
15	43	58	41	60	60	37	38	61	48	43	G	61	59			56	59	46	36	28	G	G	G	G
16	G	G	27	33	66	34	40	56	43	81	84	74				85	40	60	44	37	82	32	44	40
17	32	43	G	G	G	G	28	42	56	63		43	55	50	61	74	56	116	39	60	35	85	39	55
18	85	59	85	25	G	G	28	G	G	50	61	G	68	80	62	78	74	64	42	29	36	56	43	G
19	G	G	G	G		G	G	44		55	67	80	85	64	103	81	88	77	59	41	82	43	G	40
20	41	28	G	31	57	43	42	45	78	88	53	82		78	63	105	78	73	112	96	38	116	81	57
21	G	80	84	72	60	60	54	39	90	118	118	58	90	G		50	82	64		26	26	28	25	26
22	29	26	29	32	G	G	31	42	93	81	126	104	87	64	52	73	61	82	81	43	52	G	G	33
23	39	60		72	57	38	33	50	72	64	78	62	86		62	62	44	G	36	38	28	39	42	71
24	86	70	69	24	40	70	51	84	81	68	56	72	94	122	80	92	98	95	85	70	100	94	80	39
25	80	28	33	29	30	26	33	41	51	73	86	90	86	103	85	118	63	107	42	44	43	39	34	35
26	28	38	36	33	G	G	69	40	54	76	55	90	43	87	57	80	103	84	69	94	90	50	59	43
27	39	33	G	G	G	G	32	43	G	39	G	42	60	G	G	G	G	41	36	30	G	42	72	43
28	53	60	37	38	39	27	41	57	116	82	94	116	77	73	92	62	53	G	84	89	94	39	29	37
29	83	71	58	43	48	42	51	55	70	102	132	116	68	84	42	61	43	38	61	81	40	40	33	40
30	32	40	44	41	48	33	35	43	39	G	G	43	84	43	61	60	G	44	36	G	29	70	70	60
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	30	29	30	29	30	28	30	29	29	29	30	28	26	27	29	29	30	29	30	30	30	30	30
MED	43	42	38	34	39	33	38	44	61	70	61	67	78	69	62	62	53	56	56	50	44	53	52	44
U Q	75	60	58	43	50	43	51	56	80	81	81	80	86	84	84	83	76	75	68	70	66	70	59	60
L Q	32	33	29	27	G	G	32	42	49	54	42	47	59	52	52	46	20	44	41	37	36	39	33	38

HOURLY VALUES OF fmin AT Yamagawa

JUN. 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	15	15	15	14	15	14	17	16	20	23	27	34	40	34	34	34		44	17	14	15	15	15	14
2	14	14	14	15	18	18	16	18	20	26	27	34	32	35	34	29		18	15	15	16	16	15	15
3	14	15	15	15	15	14	16	16	21	18	23	22	32	34	29	23	23	18	15	15	15	14	14	14
4	15	15	15	14	15	15	14	15	21	33	53	32	33	32	27	24	23	18	15	15	16	17	15	14
5	15	15	15	14	15	15	14	15	21	22	24	29	52	52	27	24	21	18	17	14	20	15	14	15
6	16	15	15	15	14	14	15	15	16	18	27	29	27	33	51	35	18	18	17	14	15	14	14	15
7	14	14	15	14	14	14	14	16	18	21	20	29	29	34	38	50	32	21	17	16	15	15	15	15
8	14	15	15	15	14	16	15	15	18	21	29	28	34	39	28		24	18	15	14	17	15	15	14
9	15	15	15	15	15	15	14	14	18	20	26	34	33	35	29	28	22	17	15	14	15	16	15	14
10	15	15	14	14	14	14	15	15	17	18	21	23	33	39	29	24	20	17	14	14	15	15	16	15
11		14	15	16	14	15	16	14	20	23	21	40	44	41	38	50	23	16	16	14	16	15	15	16
12	15	14	14	14	14	18	17	17	17	18	30	30	33	32	28	23	22	18	17	16	18	15	15	14
13	15	15	14	15	15	14	17	15	16	20	21	33	32	26	35	33	21	26	17	16	14	15	15	15
14	15	15	15	15	14	14	15	14	15	21	50	37	37	38	30	27	22	21	16	14	14	15	15	14
15	14	14	14	14	14	15	15	14	18	21	21	36	43			30	22	16	17	20	15	16	20	18
16	18	15	15	14	14	15	15	15	20	20	21	35				22	20	18	16	14	15	15	14	15
17	14	15	21	17	17	22	15	26	20	24		35	23	34	32	32	21	17	17	14	15	15	15	15
18	14	14	15	14	16	15	15	15	17	21	21	26	44	42	20	34	20	20	15	15	15	15	14	16
19	15	20	21	15		16	23	15		22	35	32	24	36	26	24	18	18	18	14	14	15	16	15
20	14	14	15	15	14	15	14	15	17	20	20	24		34	34	21	26	18	15	15	15	14	15	14
21	14	14	14	14	14	14	14	16	18	18	24	30	34	34		21	21	16	15	20	15	15	14	15
22	16	15	15	15	17	14	15	17	17	22	33	33	33	29	26	20	21	15	15	14	17	21	16	14
23	15	15	15	14	14	14	14	16	18	21	33	29	21		36	21	20	17	15	15	17	15	14	15
24	14	14	15	16	15	15	14	16	17	22	32	33	34	30	32	18	28	17	15	14	15	14	14	14
25	15	15	15	14	15	14	20	15	16	17	22	24	28	34	23	20	18	16	14	14	15	15	15	15
26	15	14	15	15	15	15	14	14	15	18	28	21	30	21	32	34	18	18	14	16	15	16	15	14
27	15	15	16	15	18	14	17	17	17	21	23	24	34	27	22	22	18	15	15	14	14	14	14	15
28	15	14	14	15	14	14	15	14	15	24	21	22	24	27	26	22	20	17	15	15	15	15	14	15
29	15	15	14	14	15	14	14	15	18	20	30	29	27	28	30	20	21	17	14	15	15	16	15	16
30	14	15	15	15	15	15	14	14	17	22	21	29	24	35	21	34	21	26	17	20	16	14	15	15
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	30	30	30	29	30	30	30	29	30	29	30	28	27	27	29	28	30	30	30	30	30	30	30
MED	15	15	15	15	15	15	15	15	18	21	24	30	33	34	29	24	21	18	15	14	15	15	15	15
U Q	15	15	15	15	15	15	16	16	20	22	30	34	34	36	34	33	22	18	17	15	16	15	15	15
L Q	14	14	14	14	14	14	14	15	17	20	21	26	27	30	26	21	20	17	15	14	15	15	14	14

HOURLY VALUES OF foF2 AT Okinawa

JUN. 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	52	51	51	58	54	55	54	52		57	A 74	A 68	A 74	83	72	80	84	87	88	87	81	54	52	50
2	47	51	52	45	46	45	55	52			A 74	68	74	83	88	88		90	96	89	77	74	74	64
3	75	76	72	65	57	55	52		A 74	A 74	A 74	A 74		A 83	91	102	108	106	A 96	88	86		72	54
4	54	52	64	51	50	48	51	57	58	62	70	70	70	A 83	74	82	91	100	118	89	63	A 74	54	50
5			42		32	43	52	A 74	82	54			87	100	90	85	82	81	75	88	88	53	62	63
6		63	A 74	52	51	51	62	59	62	A 74	76		102	106	102	101	107	116	96		66	66	66	66
7	65	64	84	54		A 74	50	61	60	65	A 74	A 74	86	97	100	104	111	116	101	104	83	66	65	A 74
8	A 74	66	72	66	42	38	55	70	72	66	72	76	A 74	78	87	86	96	96	100	97	88	A 74	A 74	
9	A 74	A 74	A 74		44	45	55	62	55	A 74	65	64	63	76		100	110	102	98	88	81	71	61	63
10	62	64	61	52	52		54	75	86	78	64		65	77	85	87	90	92	87	87	85	A 74	76	73
11	66	65	66	55	54	47	70	A 74	65	54	61	64	78	A 74	90	95	98	105	110	98	66	64	64	64
12	66	64	61	54	50	45	66	65	54		66	61	71	72	76	81	86	96	88	87	71	66	52	A 74
13	54	49	52	61	A 74	A 74	A 74		A 74	A 74	A 74	A 74	A 74	A 74	A 74	A 74	71	67	55	A 74	A 74		44	
14	39	44	48	54		A 74	38	46			76	68	78	80	77	88	94	100	88	72	A 74	52	54	48
15	52	54	64	44	40	A 74		47	57	68	48			68	78	74	72	86	86	82	85	77	A 74	78
16	81	80	76	82	72	47	30	41			A 74	A 74	A 74	A 74	A 74		A 74	52	56	48	A 74			A 74
17	54	50	42	30	29	31	47	45	A 74	A 74	A 74	A 74	61	64		A 74	A 74	66	70	74	63	A 74	46	44
18	46	45	42	A 74	30	A 74	55	48		49			56		A 74	80	91	A 74	A 74	A 74	A 74	A 74		54
19	52	54	64	61	46	34	49	57	51	A 74	A 74	A 74	A 74		68	74	84	90	96	85	66	66	66	64
20	65	61	52	50	47	31	47	54	60	A 74	A 74	A 74	67	A 74	A 74	85	84	91	95	A 74	A 74	65	A 74	A 74
21	A 74		44	A 74	A 74	A 74	A 74	62	A 74	56				62	68	68	79	A 74		108	66			50
22	44	44	47	44	40	38	45	66	53		A 74	A 74	A 74		67	67	67		70	75	75	52	52	44
23	50	50	47	40	30		A 74	A 74	A 74	A 74	A 74	A 74		A 74		A 74	90	98	97	88	108	54	52	54
24	51	52	58	51	45	A 74	A 74	A 74	A 74	A 74	A 74	A 74	A 74	83	A 74	108	107	110	101	86	84	66	65	66
25	A 74	65	63	48	44	42	42	63	64	A 74	A 74	A 74	A 74	A 74	65	76	81	107	115	75	60	A 74	54	51
26	52	50	47	50	47	49	54	66	53	A 74	A 74		65		80	88	97	97	88	A 74	A 74	66	65	65
27	66	66	65	64	54	52	55	61	67	58			66			68	78	84	86	84	71	58	54	44
28	53	54	51	44	38	32	A 74	A 74	62	A 74				67	81	87	88	97	89	87	71	A 74		50
29	44	42		38	41	30	40	55	75	72	67	66		65	68	80	85	76	81	83	53	54	54	51
30	54	52	47	46	46	44	46	60	61	56	65		63	75	77	A 74	A 74	83	88	88		36	A 74	42
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	27	27	26	26	21	24	23	19	13	11	8	16	16	21	25	26	27	27	25	23	19	22	24
MED	54	54	52	52	46	45	52	59	61	58	66	67	68	76	78	85	89	96	88	87	75	65	58	54
U Q	65	64	64	58	51	48	55	63	67	67	72	69	78	83	89	91	97	102	98	88	85	66	65	64
L Q	50	50	47	45	40	36	46	52	55	55	64	64	64	67	70	78	82	84	86	82	66	54	52	50

HOURLY VALUES OF fEs AT Okinawa

JUN. 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	30	39	36	29	26	G	G	G	G	56	83	115	114	61	62	52	G	43	50	72	58		33	40
2	30	G	G	70	38	28	59	46	61	80	105	68	51	55	G	G		72	70	60	58	40	33	46
3	28		65	29	G	24	34	82	85	158	134	115	134	152	70	57	71	102		71	61	41	107	44
4	28	57	55	55	34	G	36	52	50	51	58	52	68	114	59	41	G	G	45	35	27	80	54	44
5	57	80	69	37	66	39	27	85	89	49	51	51	57	46	42	G	G	G	38	32	30	G	26	26
6	82		86	29	90	48	42	72	80	108	92	104	59	G	56	61	76	74	80	69	53	26	G	56
7	85		43	56	40	48	70	54	70		90	107		48	61	G	59	78	73	38	42	52	58	93
8	83	38	58	35	24	24	43	44	60	64	51		89	64	64	45	58	56	172	72	65	94	77	57
9	80	90	79	49	52	70	39	80	88	84	52	53	67	76	96	72	68	82	60	53	70	54	40	81
10	59	48	30	28	44	70	41	46	46	54	G	49	49	70	78	80	58	67	93	60	54	94	67	53
11	32	38	48	G	27	32	47	94		56	45	58	62	97	72	76	G	G	34	27	G	56	84	50
12	60	58	48	39	30	25	28	38	48	62	54	42	G	G	G	G	G	G	42	58	45	39	49	70
13	40	46	33	28	28	50	38	55	96	72	111	123	93	60	80	72	46	G	35	91	58	53	36	54
14	34	32	G	G	32	34	31	44	67	74	41	50	79	55	60	95	G	G	40	36	77	34	39	28
15	79	36	29	33	40	49	31	42	45	64	G	46	G	G	54	58	51	48	110		25	34	91	40
16	G	27	36	36	88	36	38	32	36	G	67	50	76	75	66	G	83	43	42	30	60	49	60	82
17	71	34	26	G	G	G	32	43	53	91	100	64	52	60	57	79	77	56	36	49	55	84	50	33
18	58	48	68	90	32	60	34	32	46	44	G	43	G	67	83	67	67	114	78	116	136	127	71	33
19	39	34	43	38	28	G	28	41	82	92	95	97	92		51	G	51	77			42	54	38	27
20	34	53	51	27	56	39	30	44	50	93	127	115	62	114	133	50	62	61	90	88	115	112	106	70
21	84	58	40	60	56	46	66	41	70	50	52	63	50	51	54	56	76	95	87	64	51	48	52	30
22	37	28	G	G	G	G	G	47	53	73	78	70	113	62	G	61	47	72	56	27	25	29	G	G
23	G	49	26	34	59	56	68	82	71	90	90	100	48	52	74	130	72	G	36	47	48	26	33	27
24	38	35	41	42	82		90	69	94	95	70	105		53	94	95	67	59	56	42	50	55	89	59
25	84	58	32	35	34	27	40	41	80	94	116	114	97	176		72	70	40	52	34	78	90	44	36
26	23	57	33	G	G	G	G	69	66	77	99	97	52	69	54	G	56	56	61	152	83	52	40	41
27	43	39	26	G	G	G	53		71	71	72	50	57	76	49	49	39	40	G	38	28	26	29	36
28	24	39	49	35	40	27	60	84	82	66	69	86	67	G	G	50	50	67	53		51	79	35	40
29	67	37	48	G	42	27	32	44	58	49	60	58	G	50	57	65	65	50	63	53	29	34	26	G
30	51	32	29	28	58	48	36	35	49	51	G	G	46	52	48	91	116	40	32	81		G	58	44
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	27	30	30	30	29	30	29	29	29	30	29	28	29	29	30	29	30	28	27	29	29	30	30
MED	42	39	40	34	36	32	37	46	66	71	70	64	60	60	59	58	58	56	54	53	53	52	46	42
U Q	71	57	51	39	56	48	47	70	81	90	95	104	84	75	73	72	70	72	75	72	63	79	67	56
L Q	30	34	29	27	27	12	31	41	49	52	51	50	49	50	50	41	42	40	39	36	36	34	33	33

HOURLY VALUES OF fmin AT Okinawa

JUN. 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	14	14	14	14	14	15	15	14	17	21	23	30	39	29	39	27	21	14	14	14	14	14	14	14
2	14	15	14	14	14	14	15	14	20	21	29	30	43	34	52	23		20	14	14	14	14	15	14
3	14	14	14	14	16	14	14	14	16	20	21	29	29	29	30	30	21	15	14	14	14	14	14	14
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10	14	14	14	14	14	14	14	14	15	18	28	30	23	30	20	23	17	15	14	14	14	14	14	14
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13	14	14	14	14	14	14	14	14	14	16	22	35	23	36	36	22	20	20	14	14	14	14	14	14
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22	14	14	14	15	15	15	17	14	14	16	22	29	32		52	23	21	17	14	14	15	14	20	15
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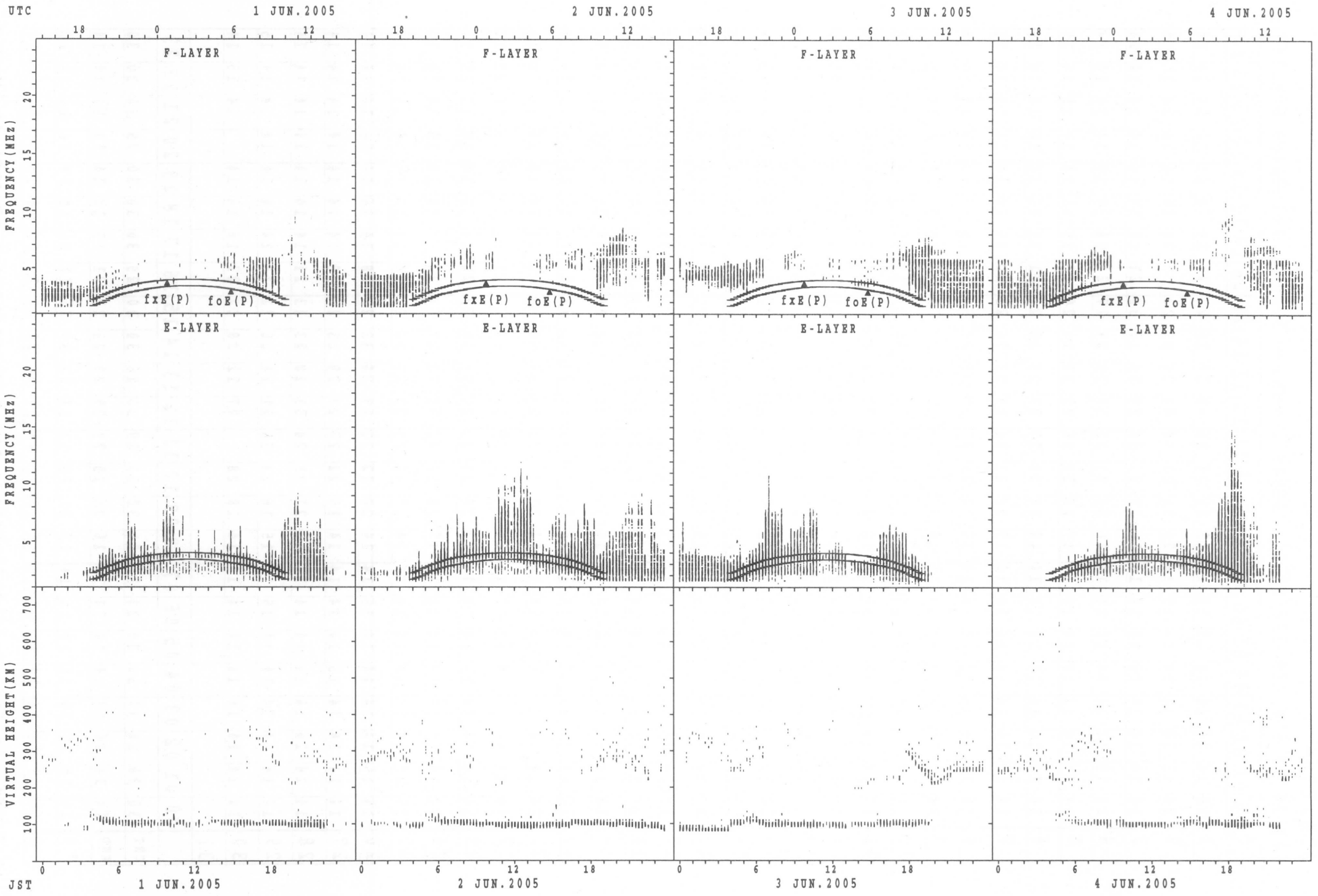
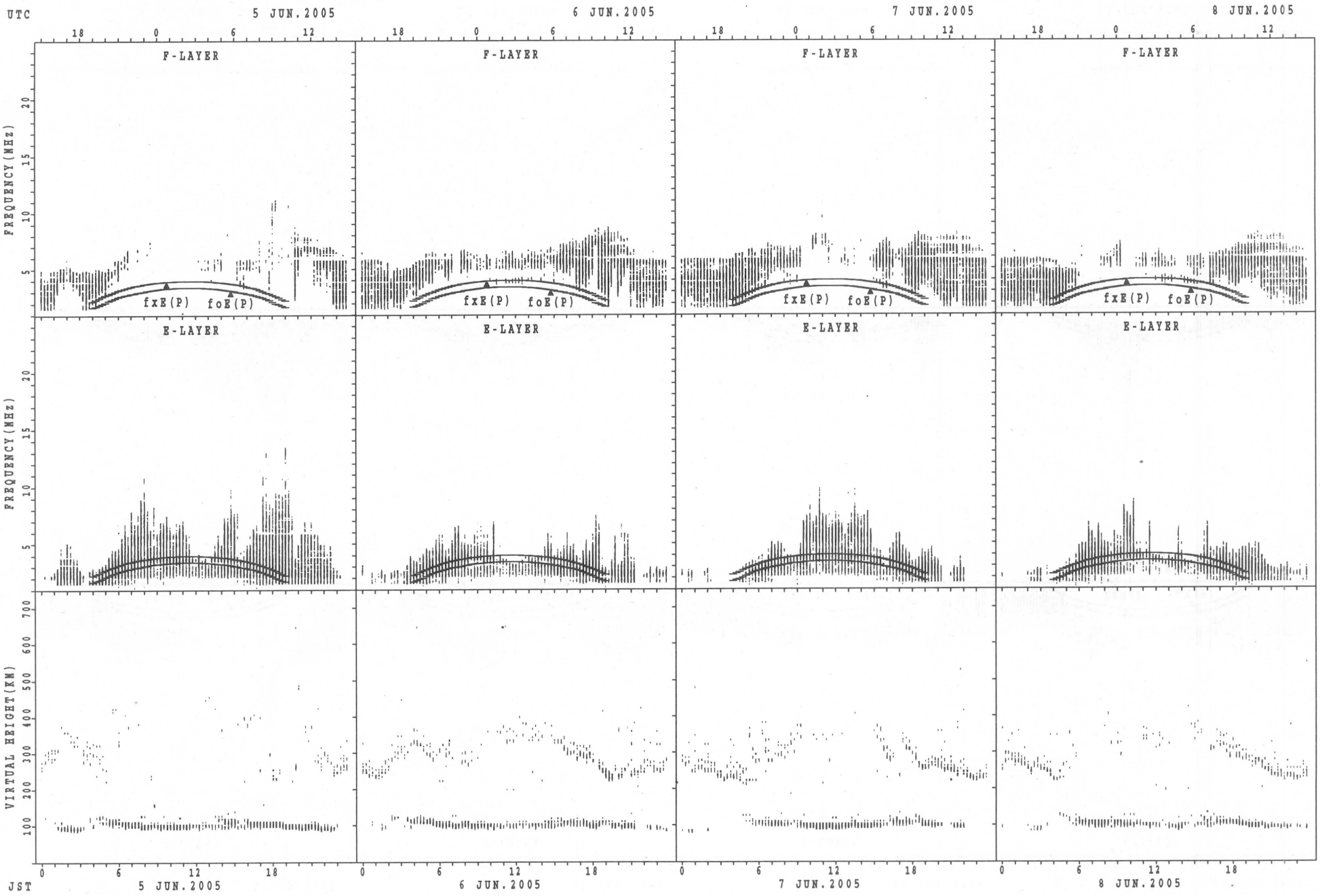
30	14	14	14	14	14	14	14	14	14	18	28		27	22	28	22	22	14	14	14		14	15	14
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	29	30	28	30	30	29	30	30	30	29	30	30	30
MED	14	14	14	14	14	14	14	14	16	20	23	29	29	29	29	22	21	15	14	14	14	14	14	14
U Q	14	14	14	14	14	14	14	14	17	21	28	32	33	32	35	26	22	16	14	14	14	14	14	14
L Q	14	14	14	14	14	14	14	14	14	18	22	23	23	24	26	22	20	14	14	14	14	14	14	14

SUMMARY PLOTS AT Wakkanai

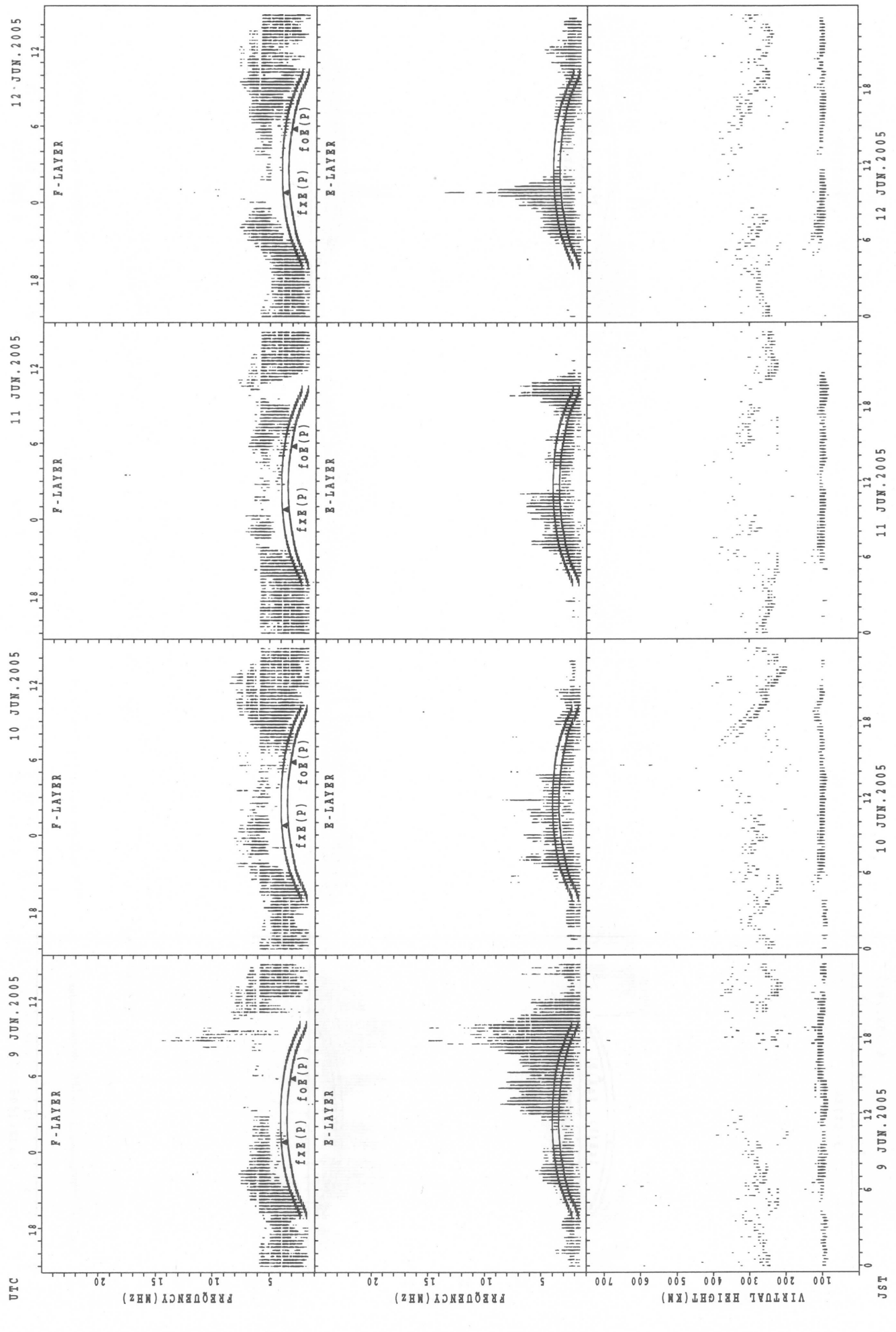


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

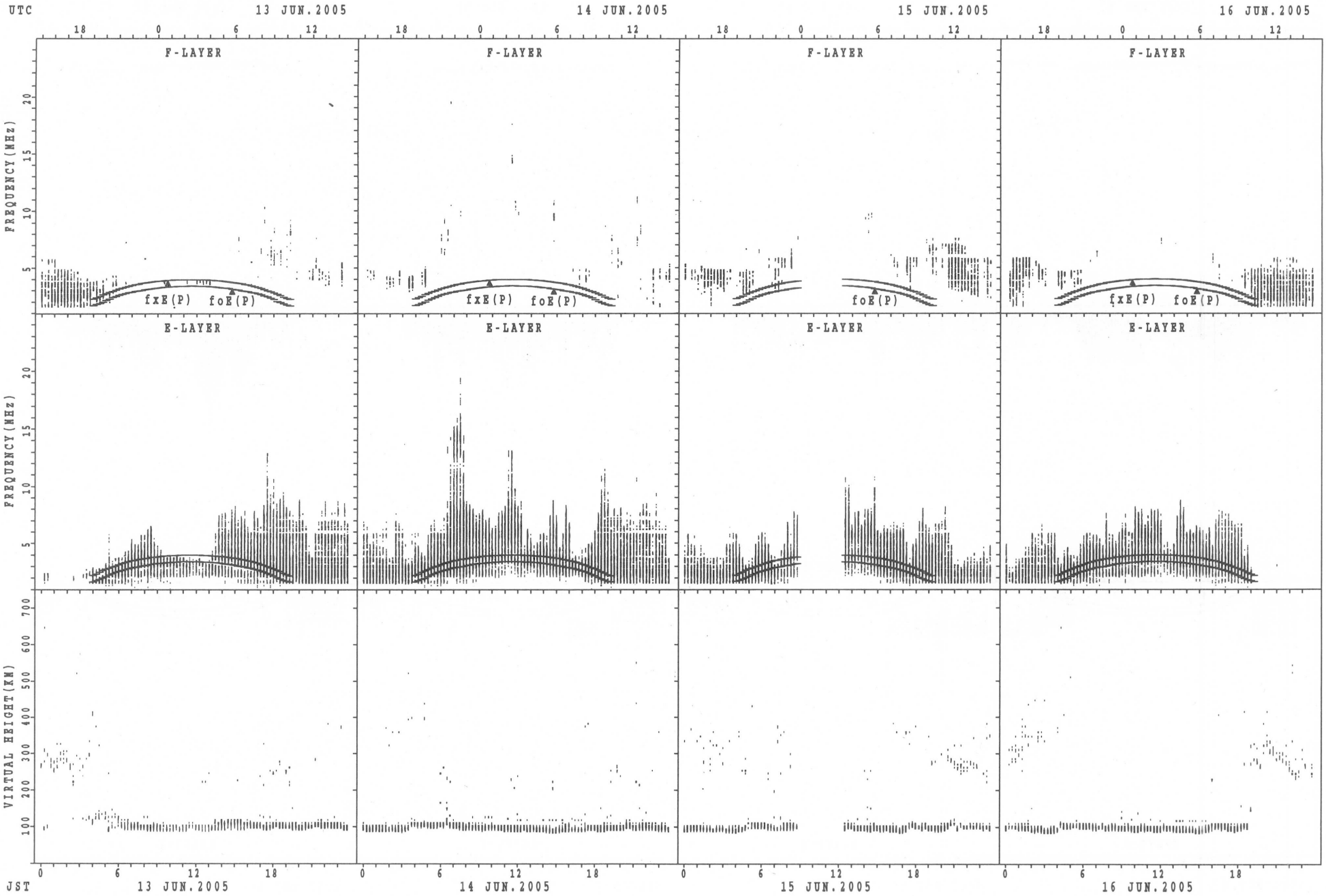
SUMMARY PLOTS AT Wakkanai



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

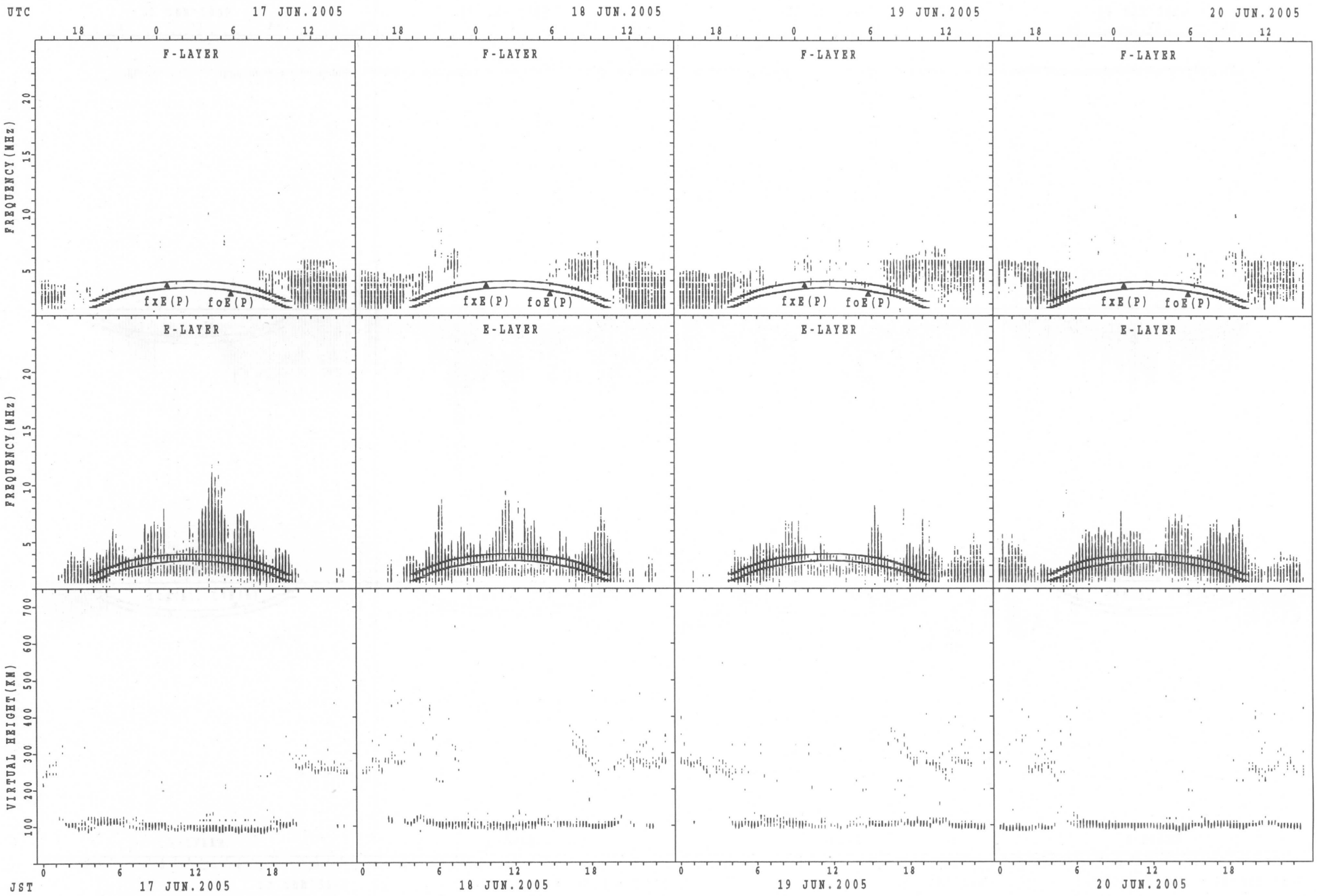

SUMMARY PLOTS AT Wakkanai
UTC
9 JUN.2005
10 JUN.2005
11 JUN.2005
12 JUN.2005
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



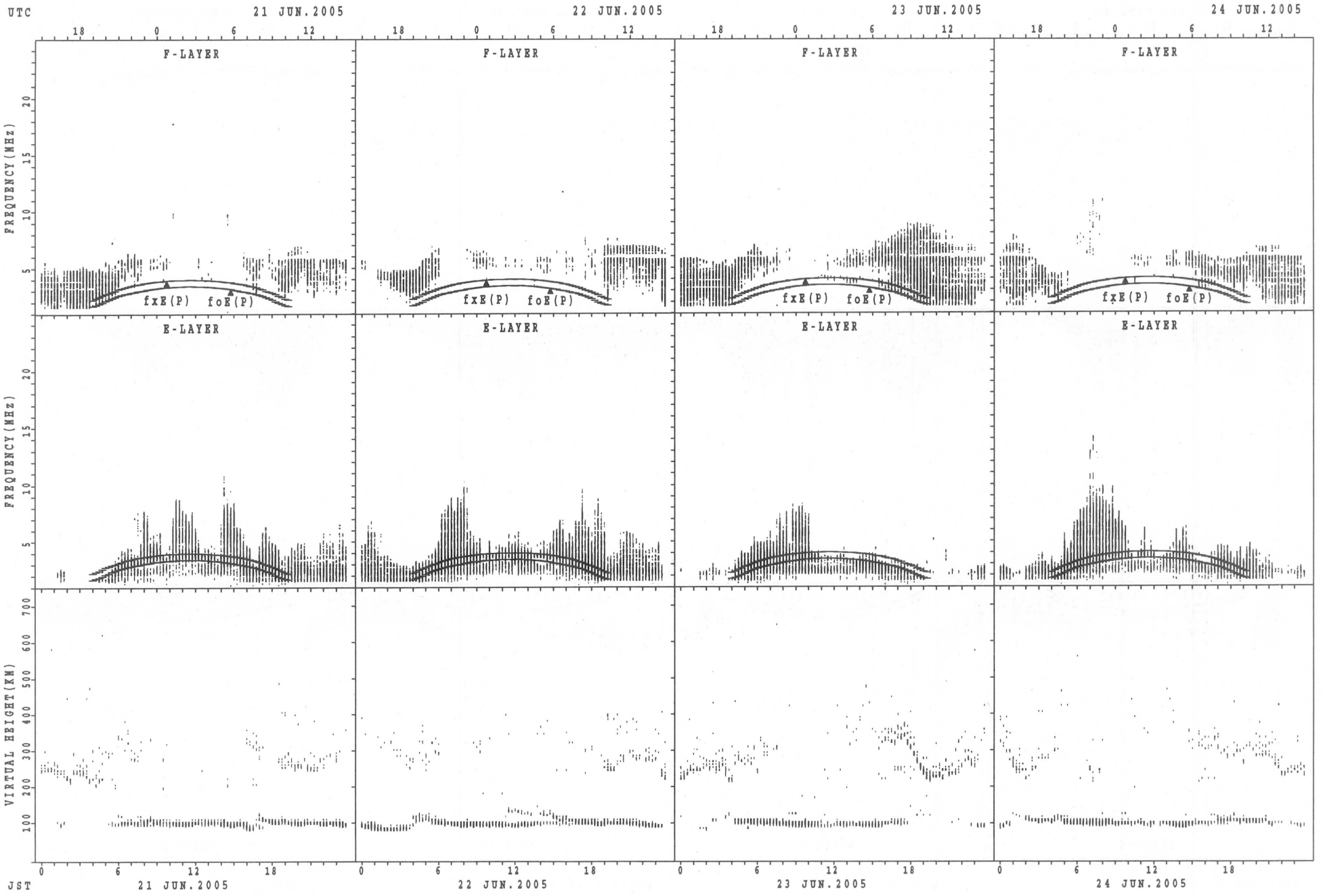
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



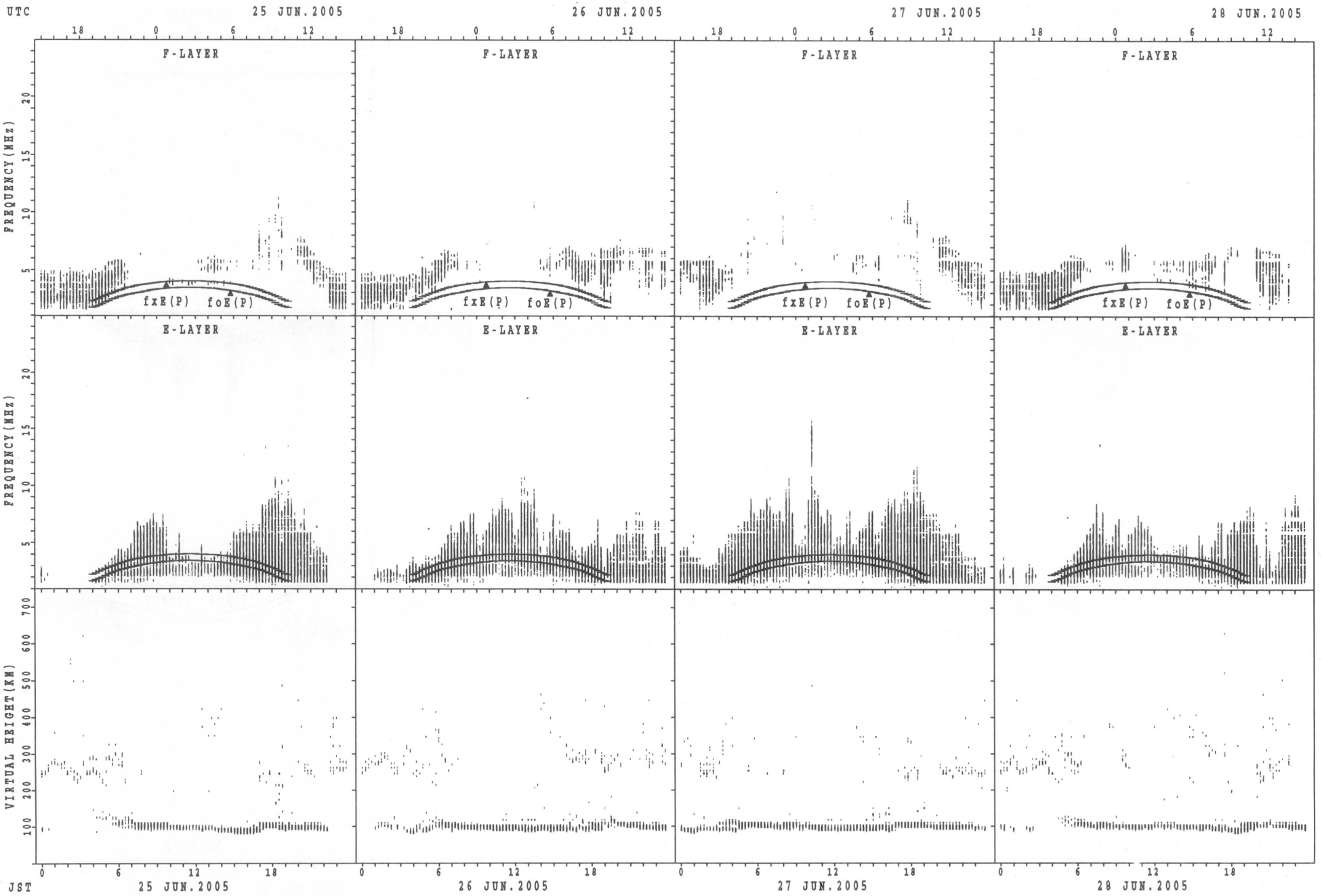
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



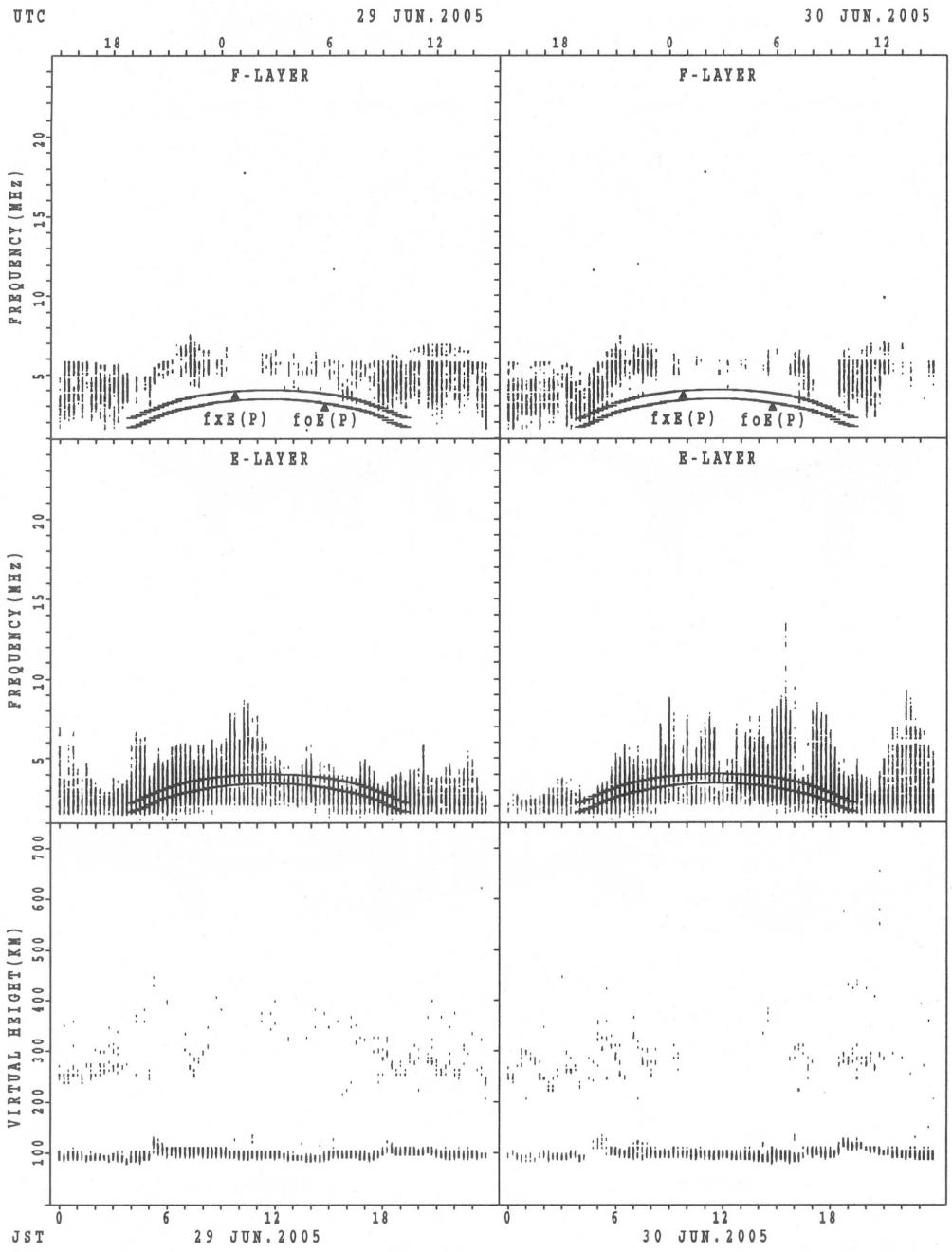
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



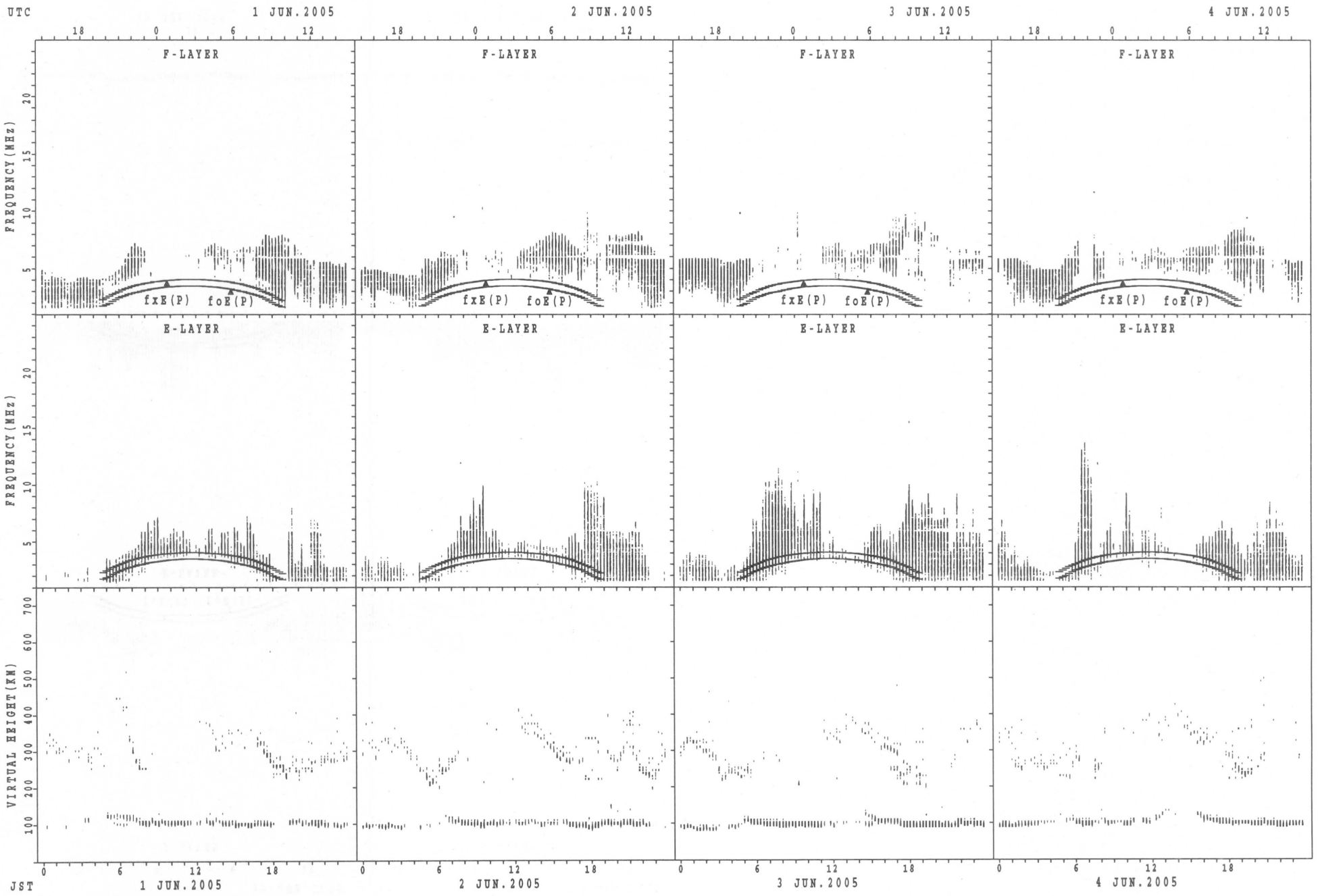
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



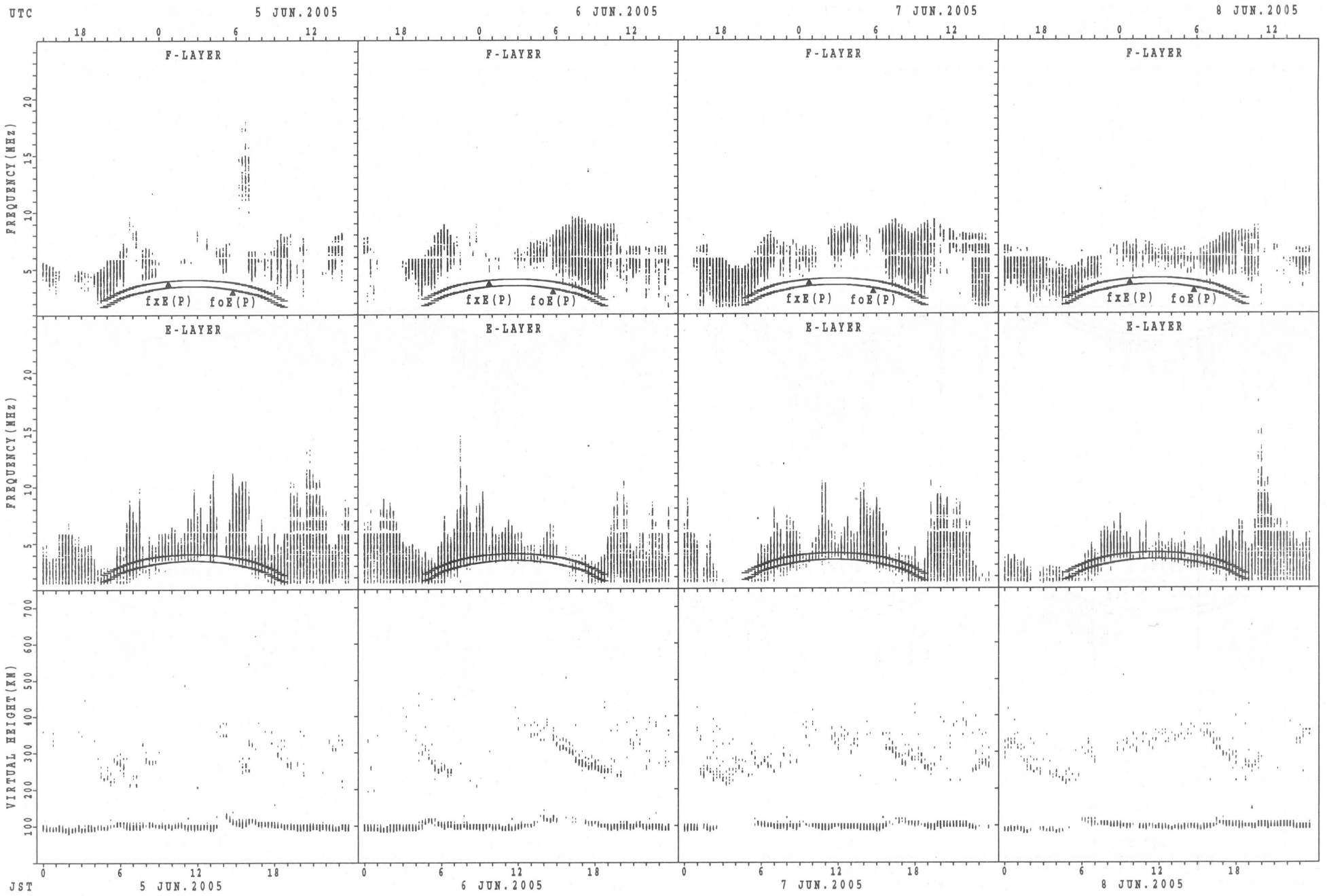
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



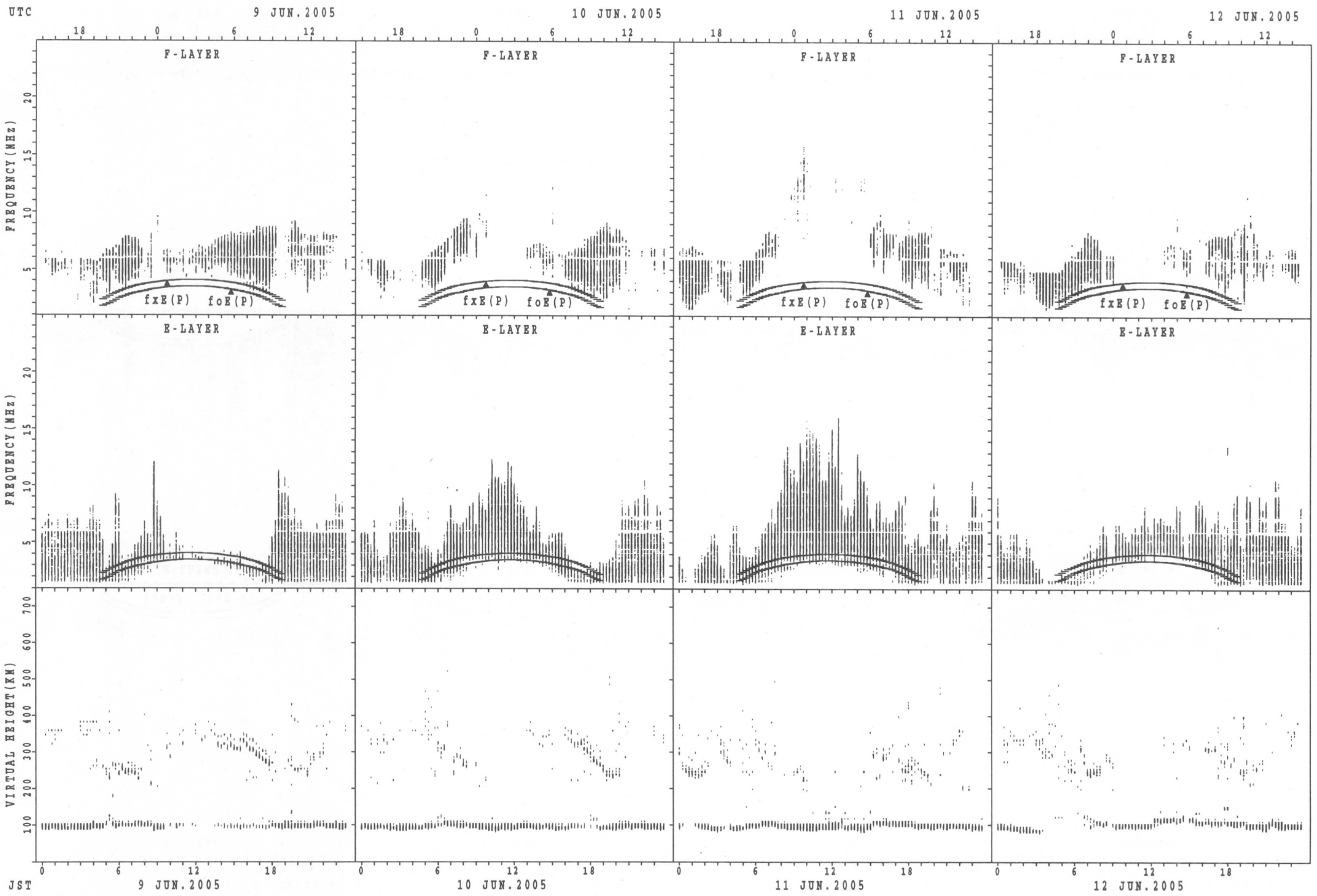
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



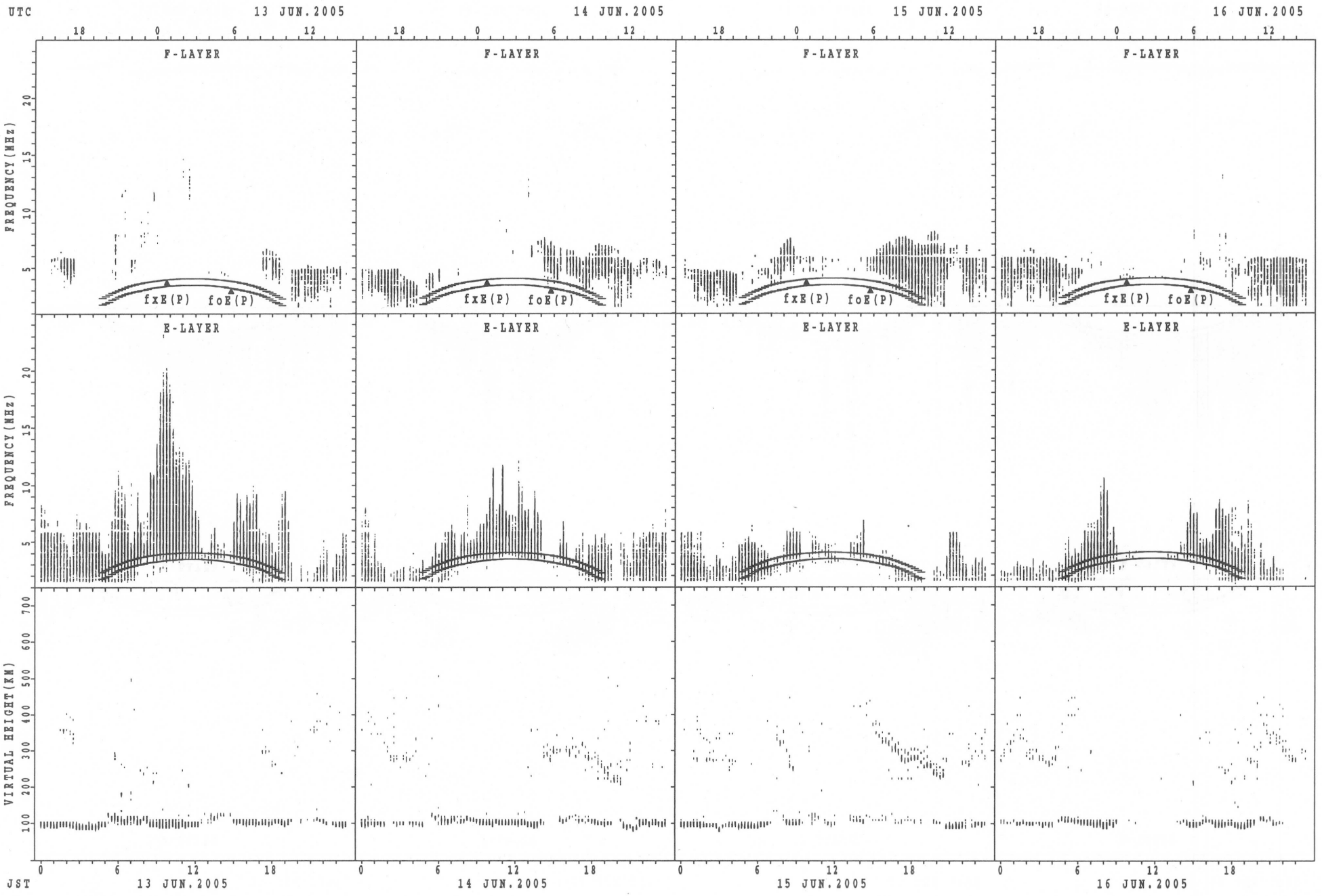
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



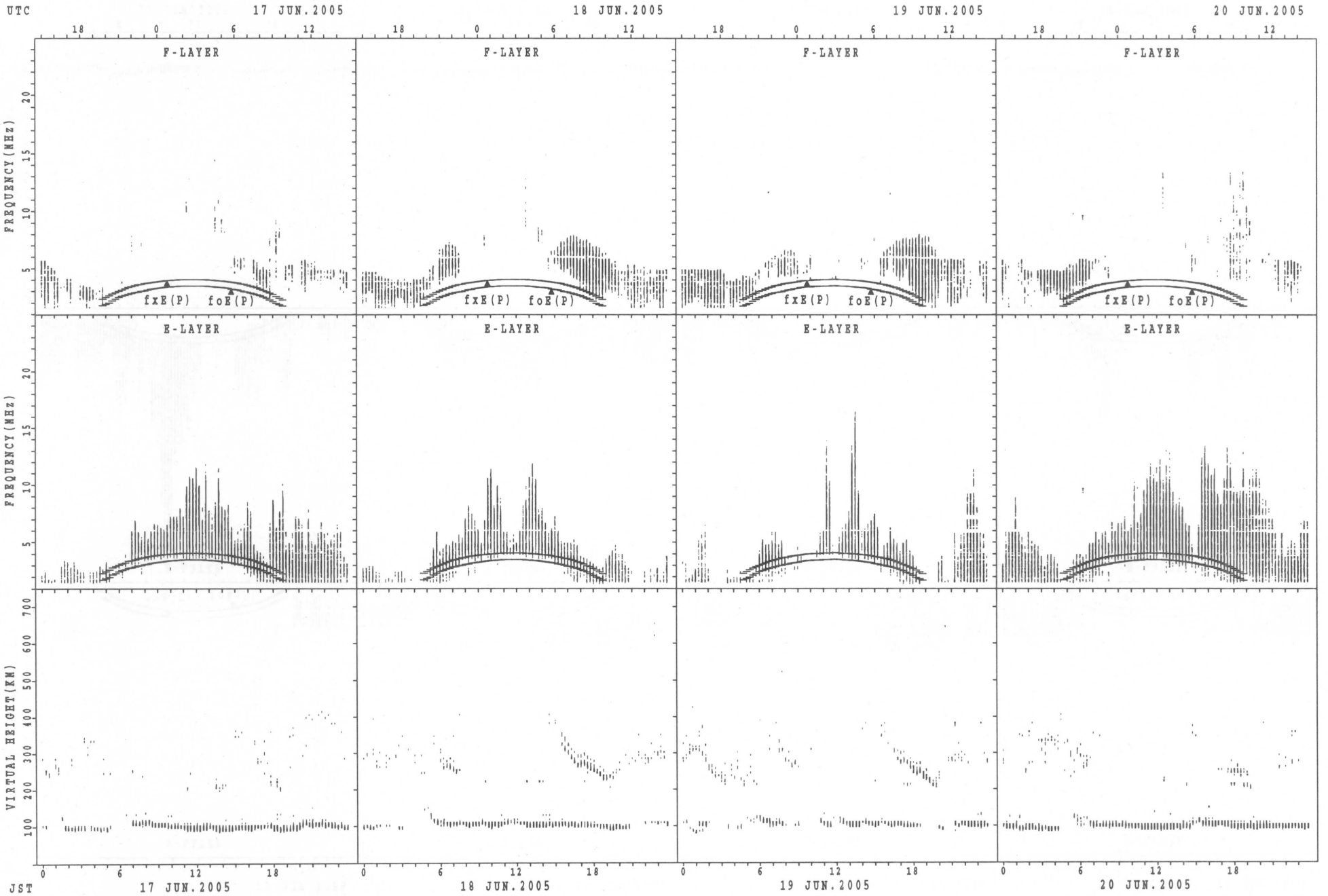
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



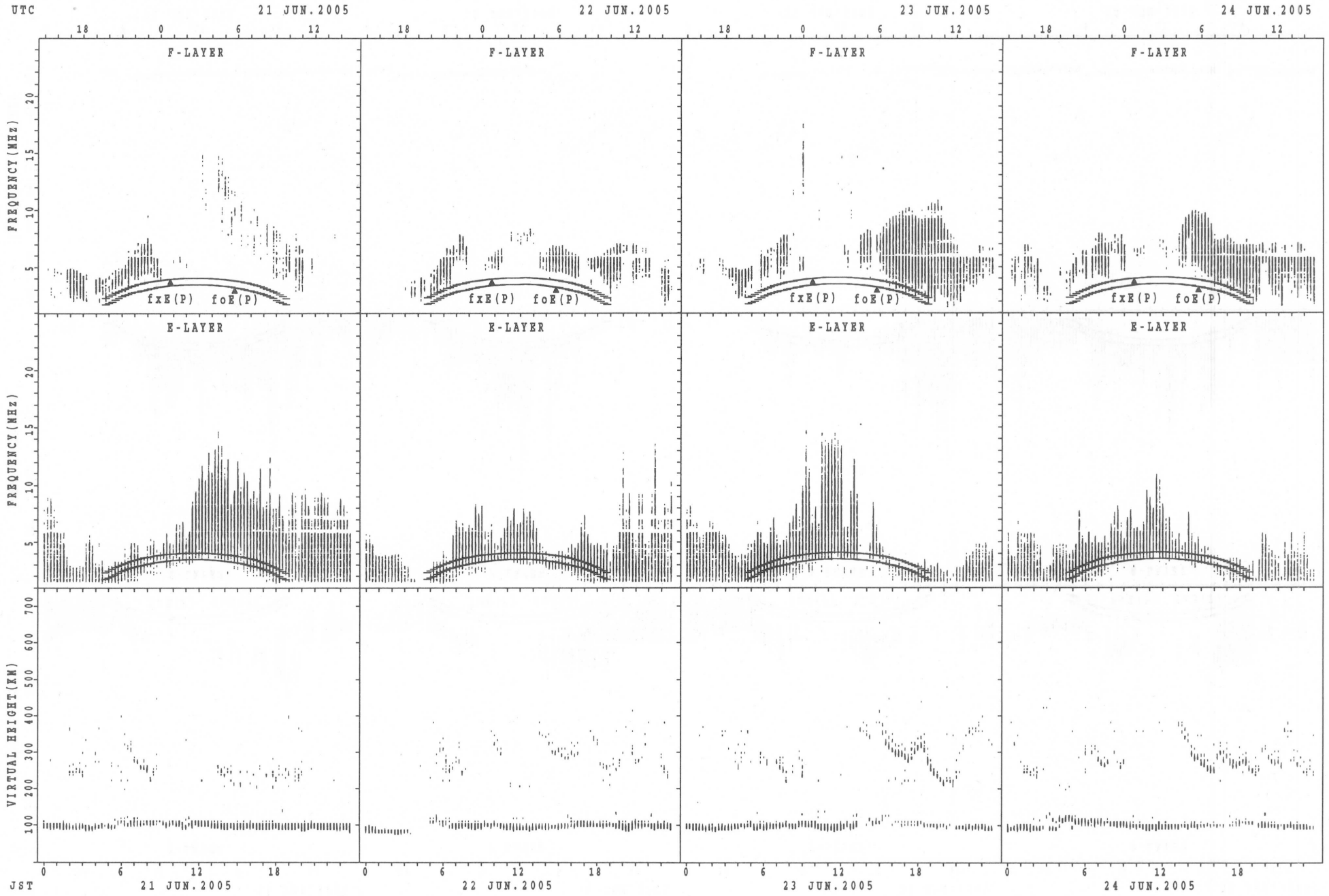
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

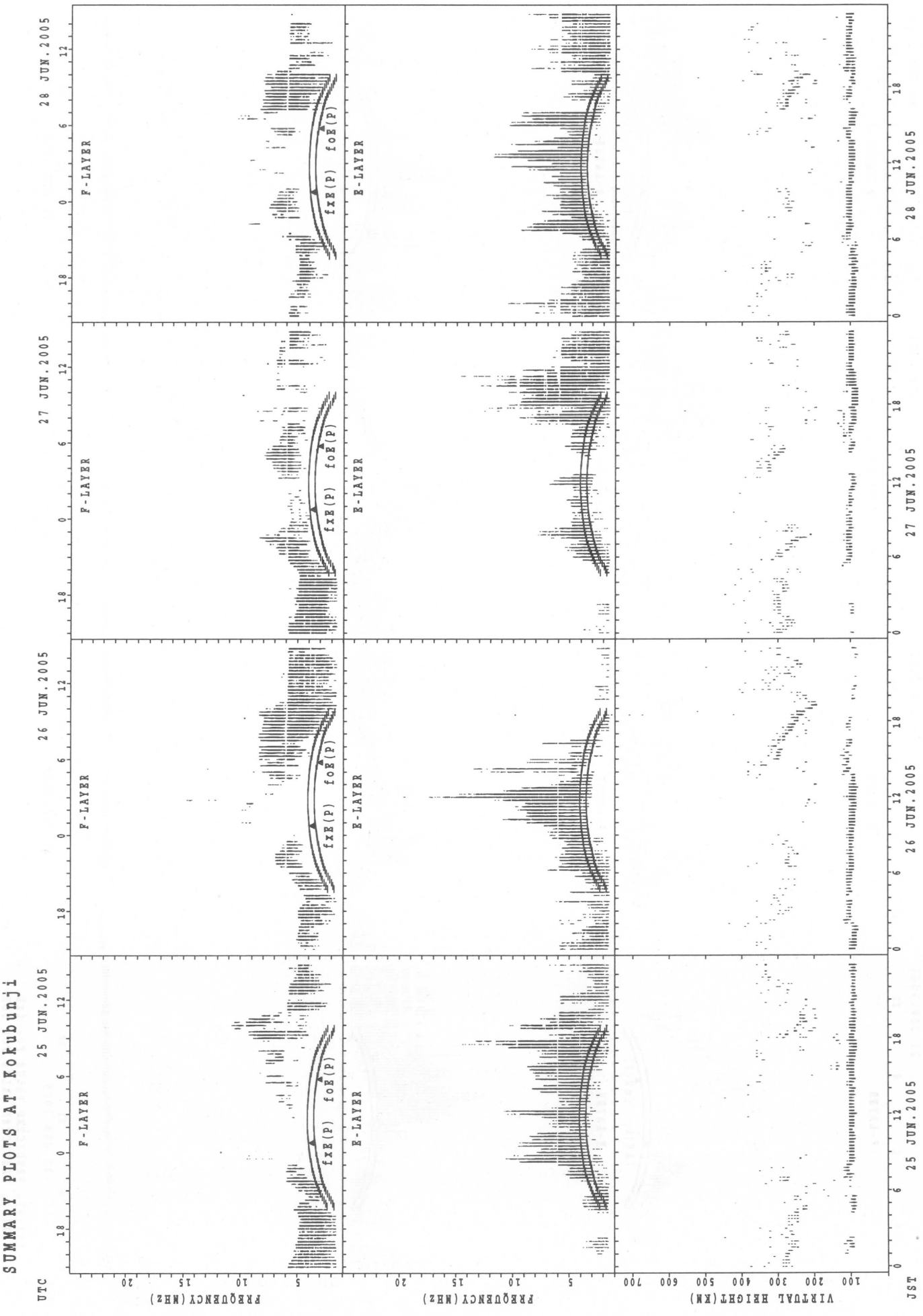


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

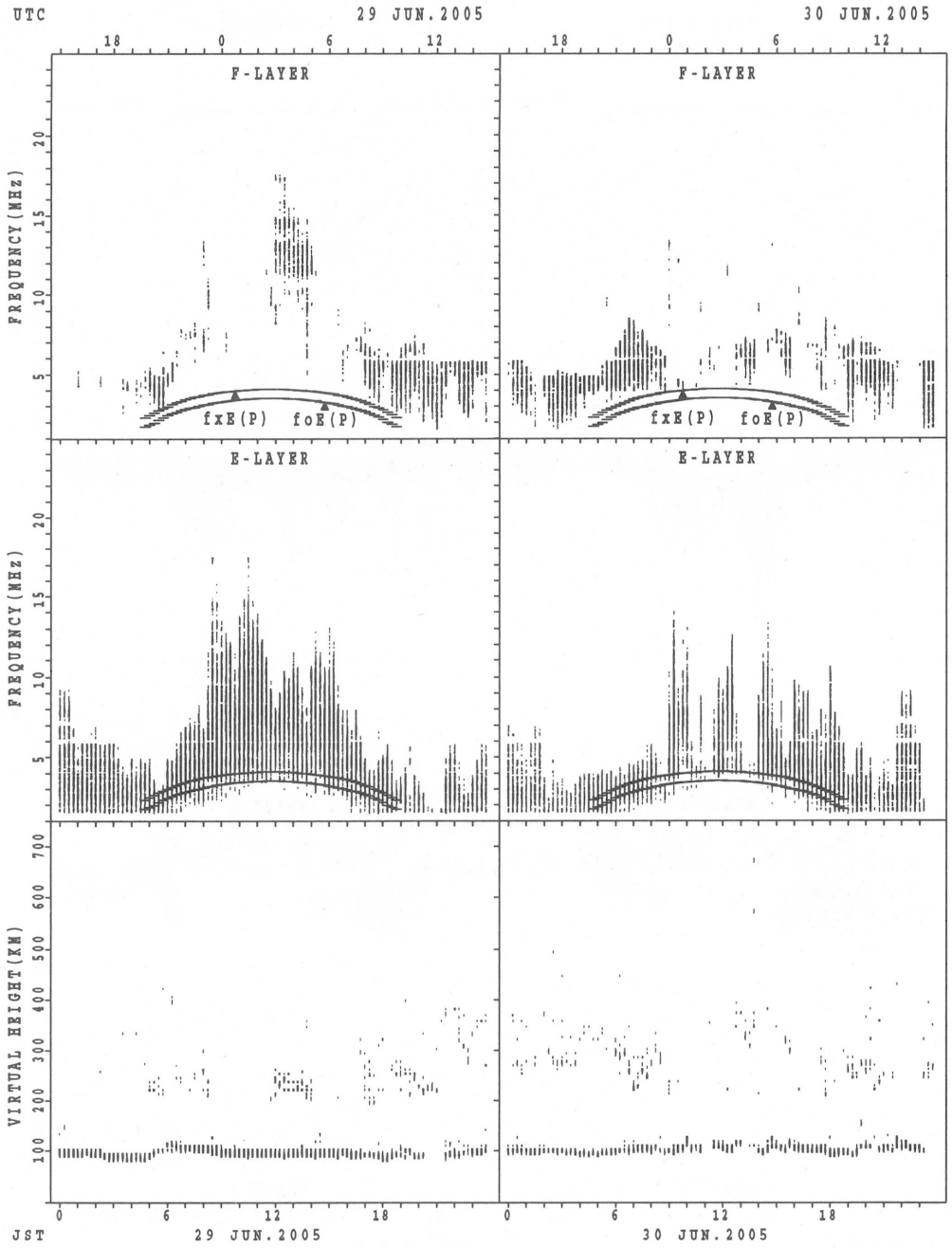
SUMMARY PLOTS AT Kokubunji



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

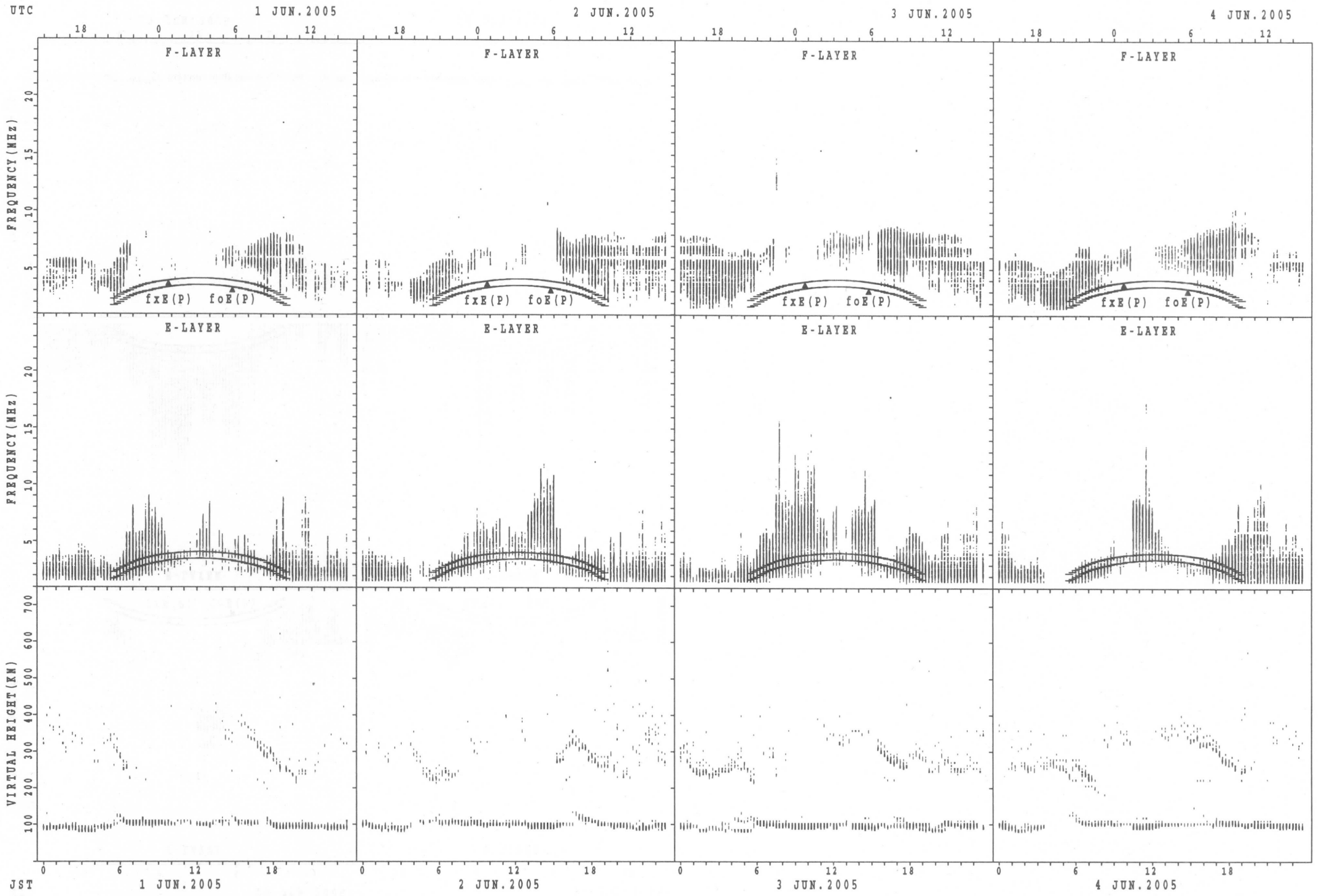

SUMMARY PLOTS AT Kokubunji
UTC
JST
25 JUN.2005
26 JUN.2005
27 JUN.2005
28 JUN.2005
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



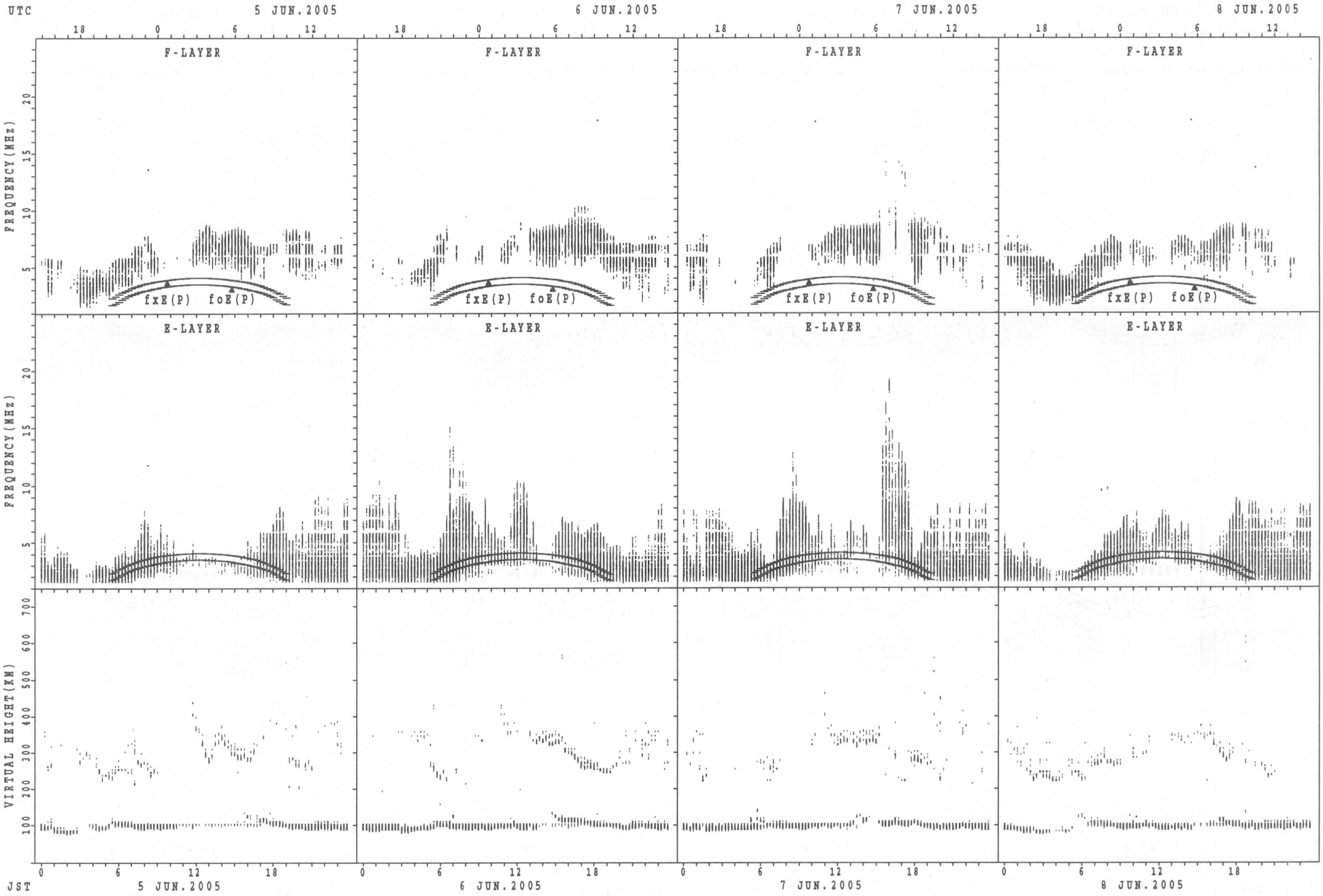
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



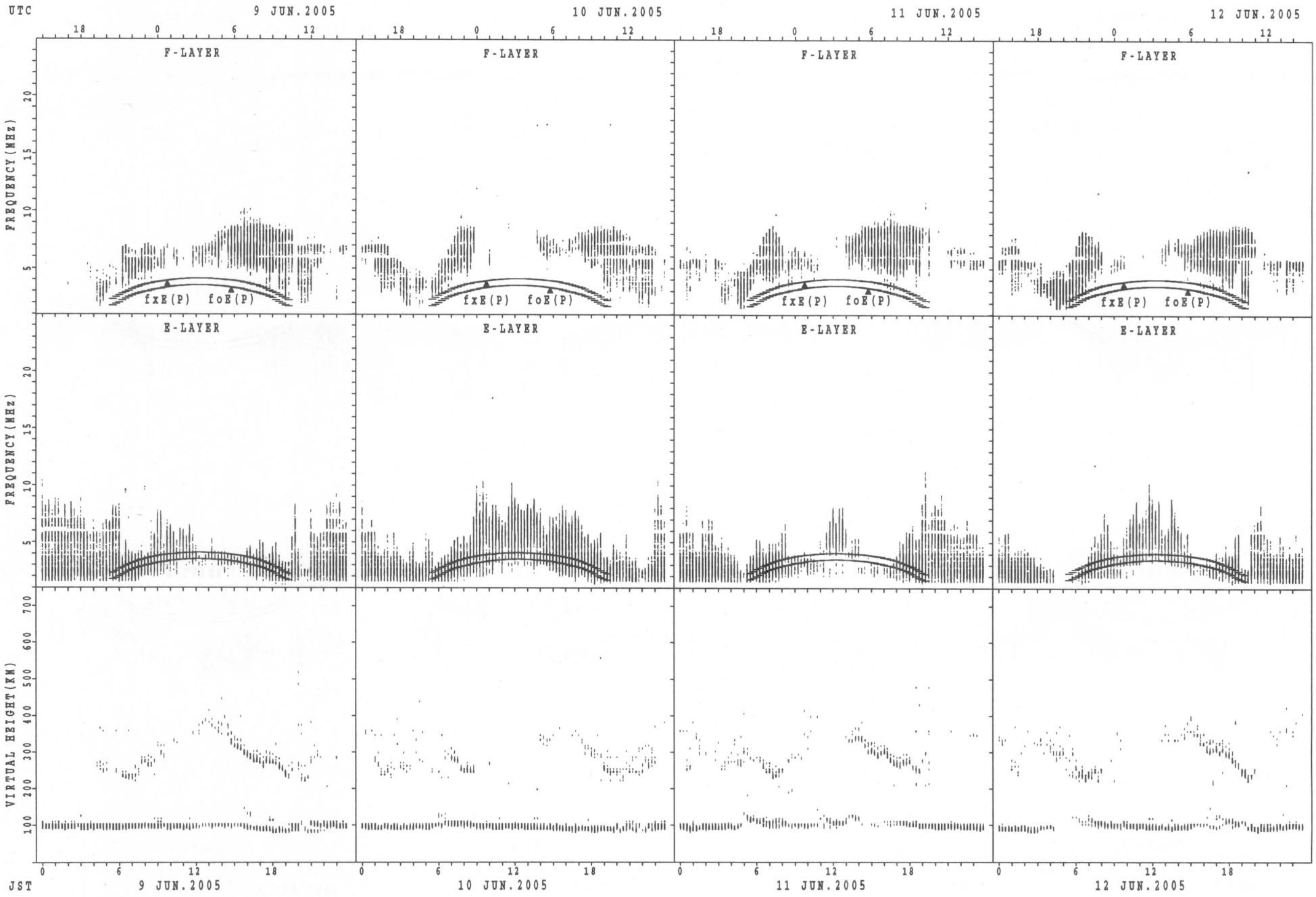
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



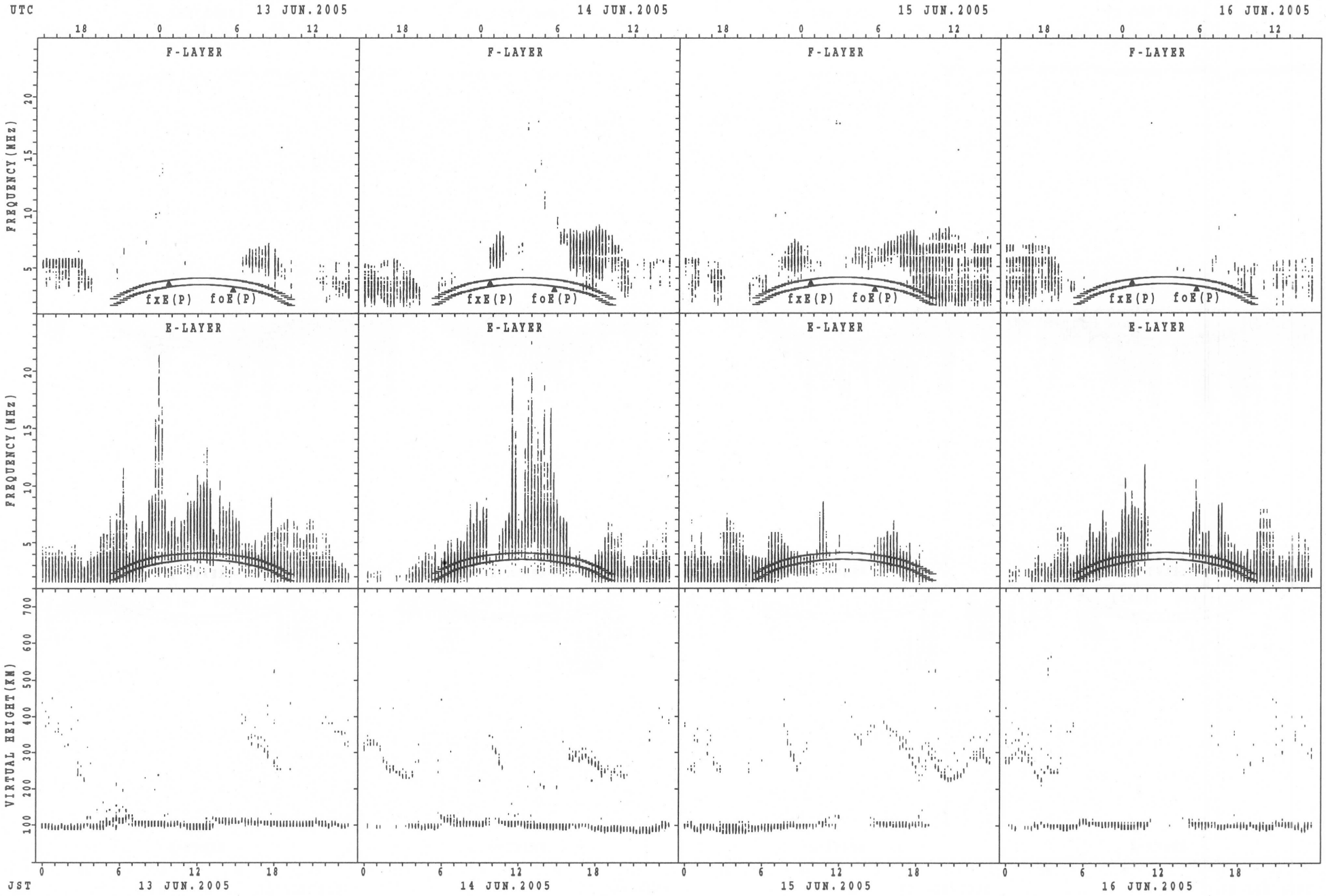
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

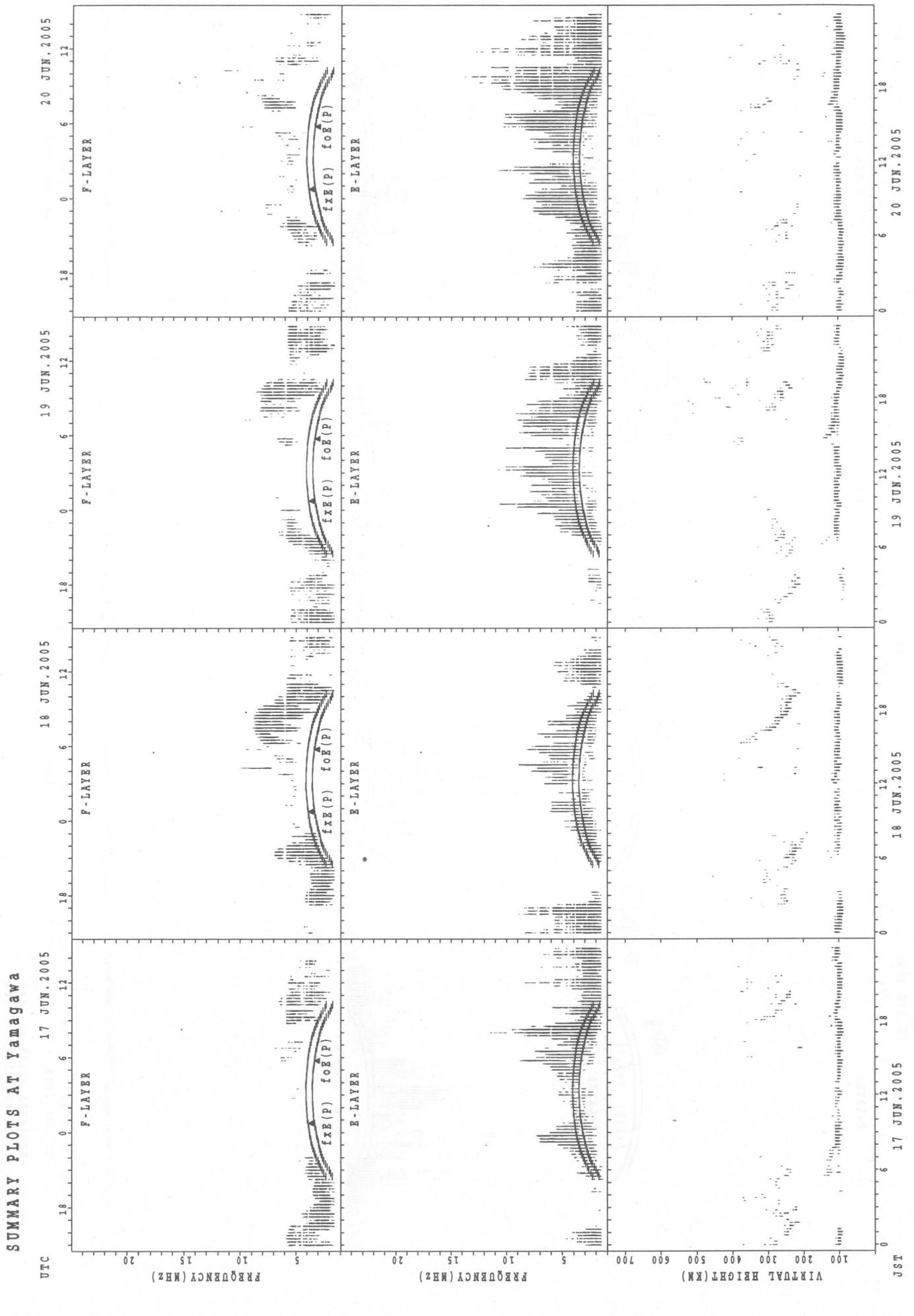


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

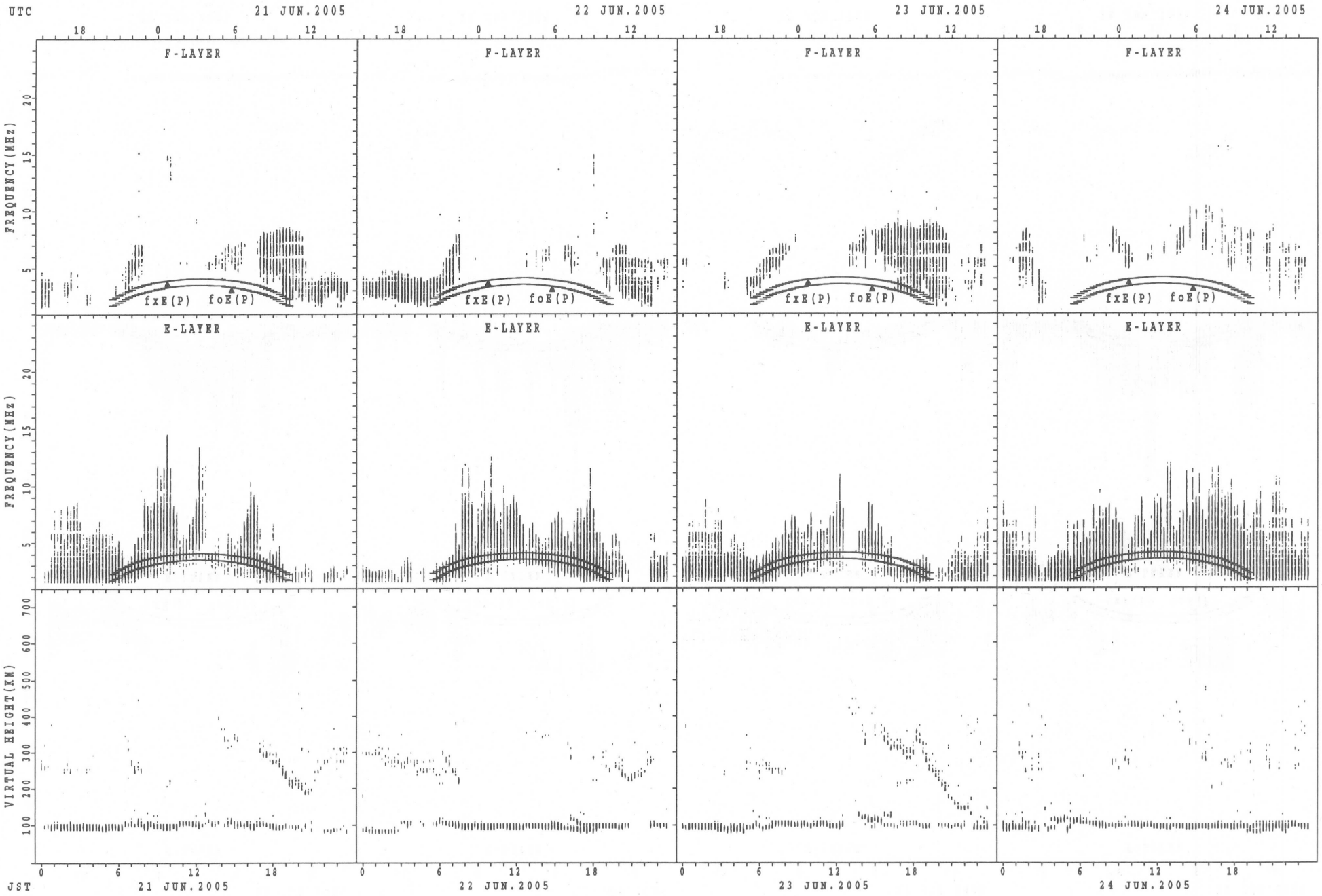
SUMMARY PLOTS AT Yamagawa



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

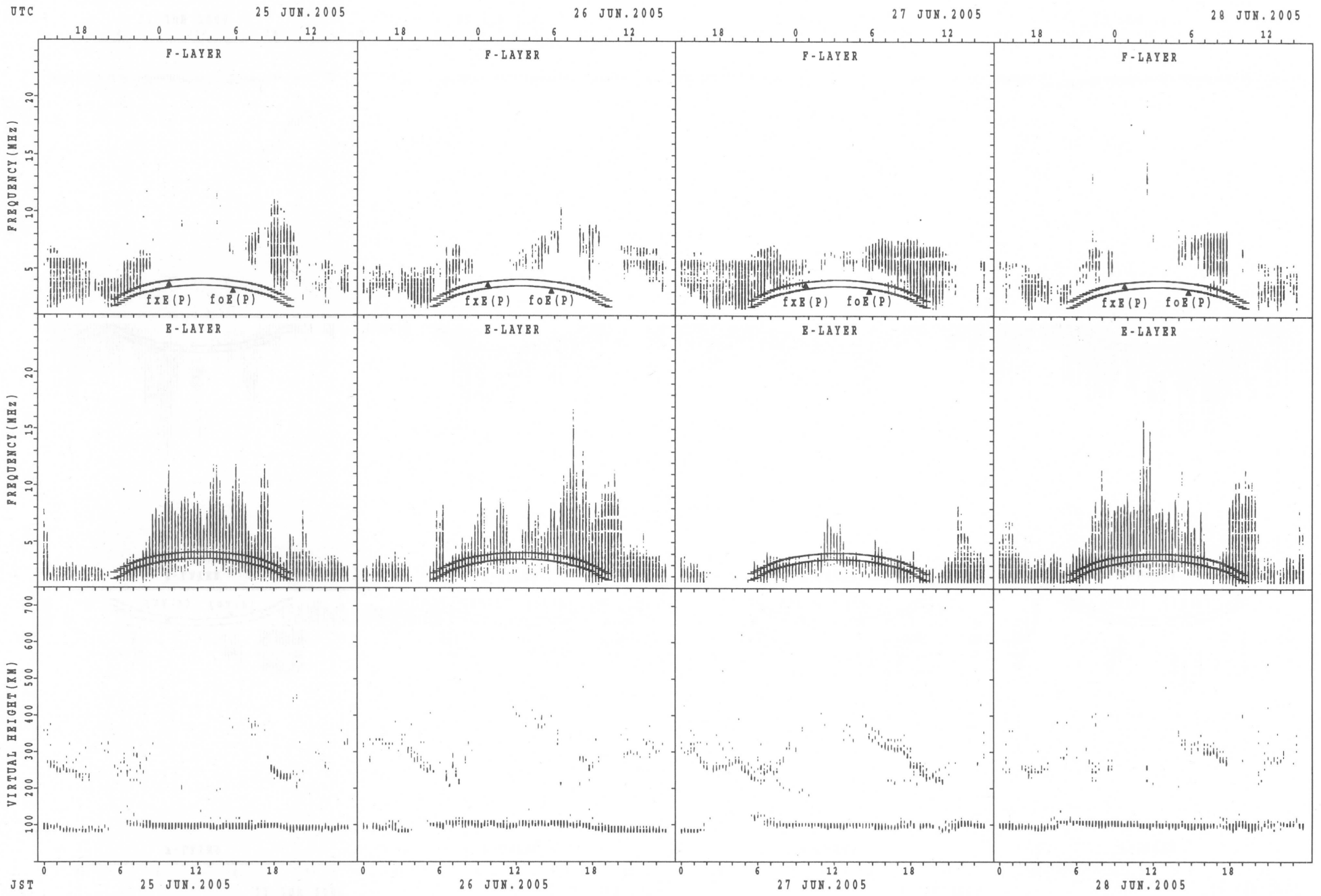

SUMMARY PLOTS AT Yamagawa
UTC
17 JUN.2005
18 JUN.2005
19 JUN.2005
20 JUN.2005
F-LAYER
E-LAYER
fxE(P) foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



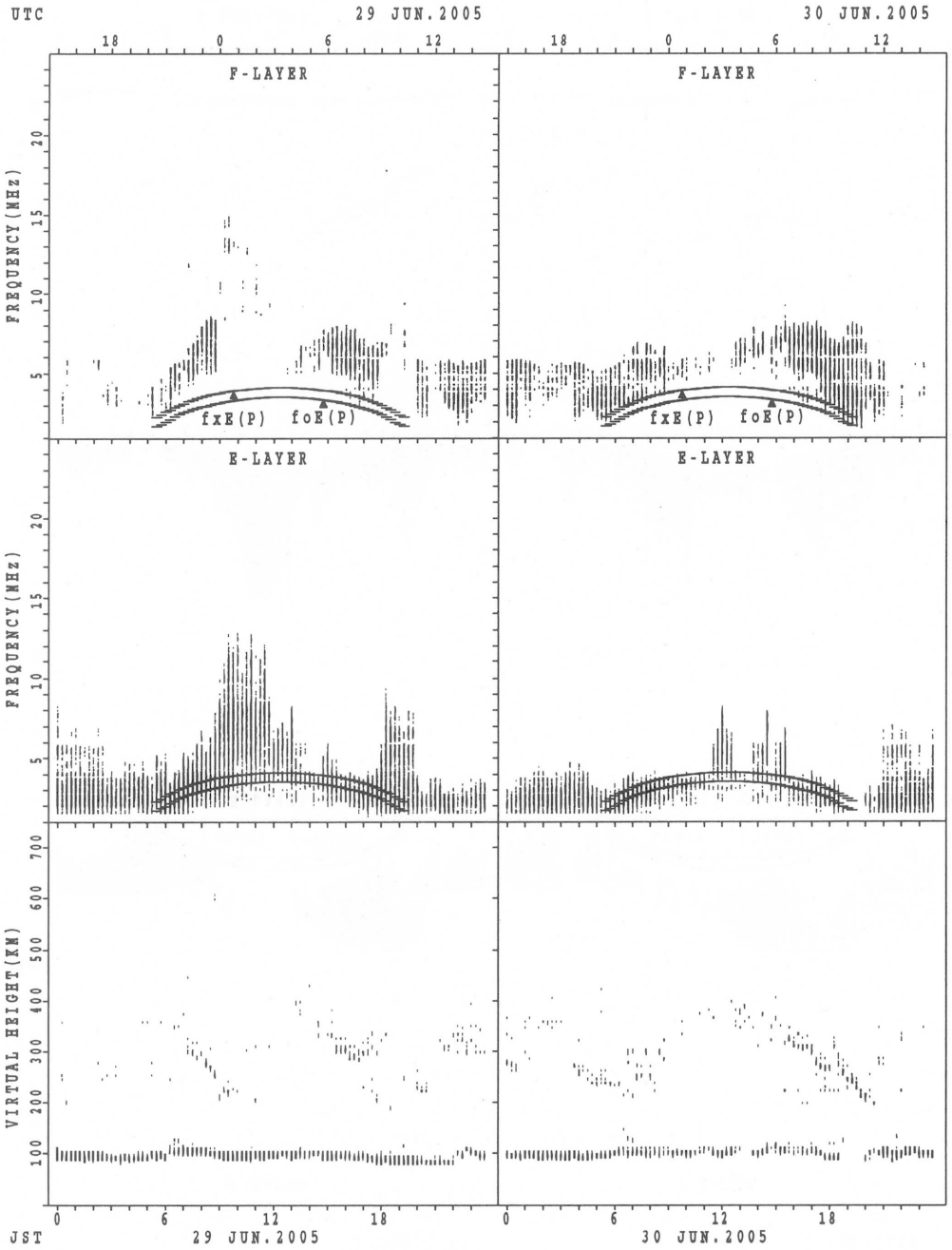
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

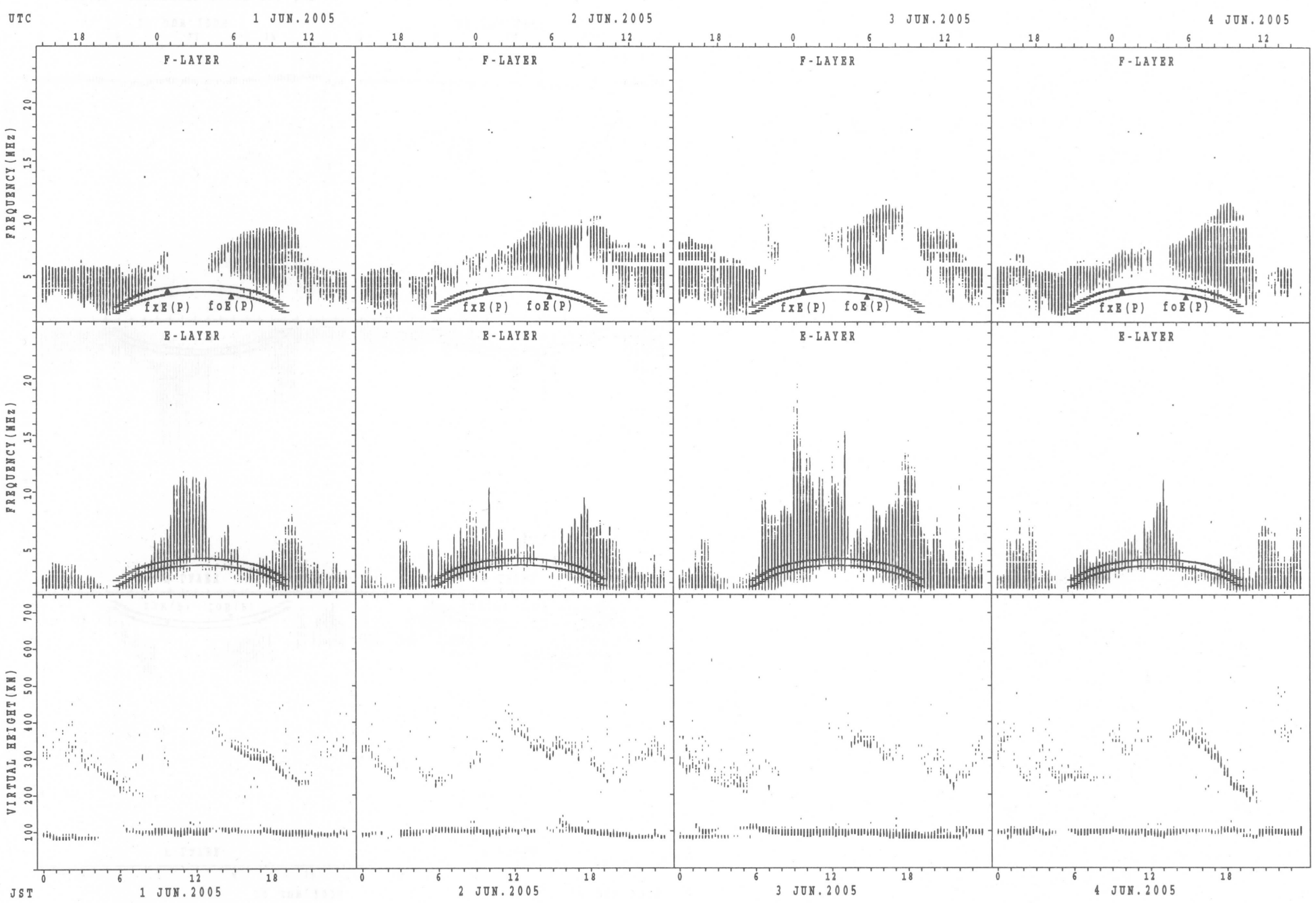


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

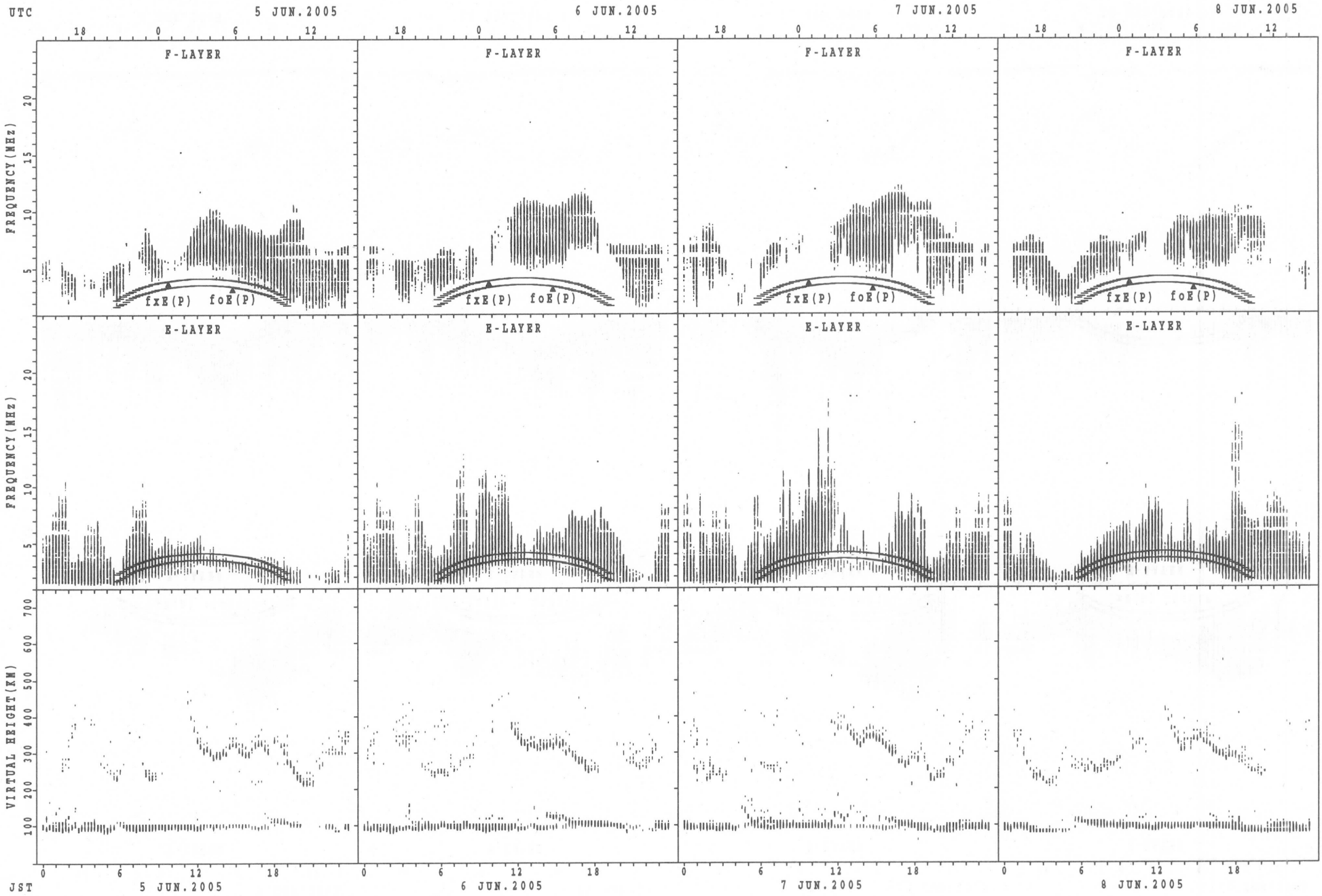
SUMMARY PLOTS AT Yamagawa



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

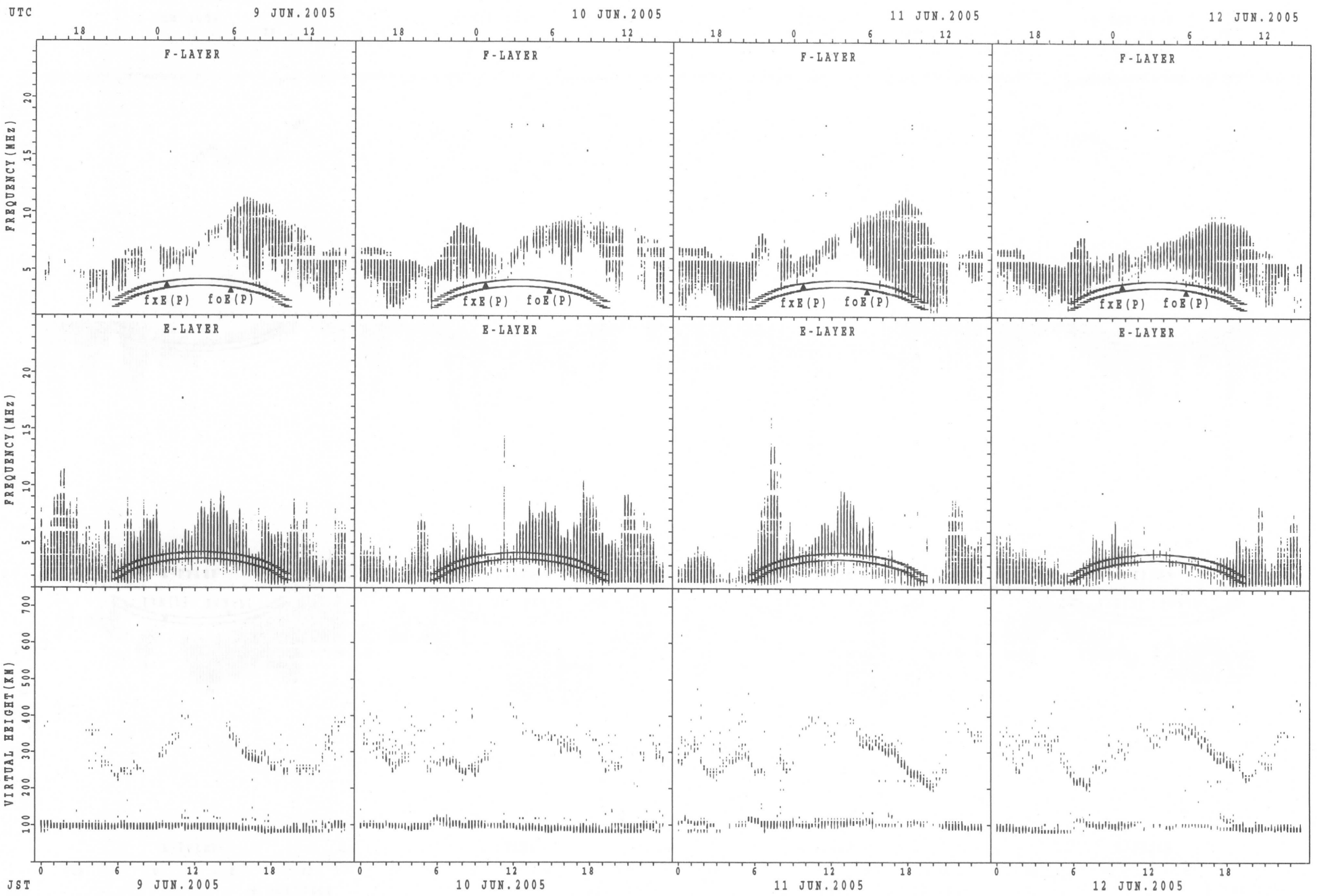

SUMMARY PLOTS AT Okinawa
UTC
1 JUN.2005
2 JUN.2005
3 JUN.2005
4 JUN.2005
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



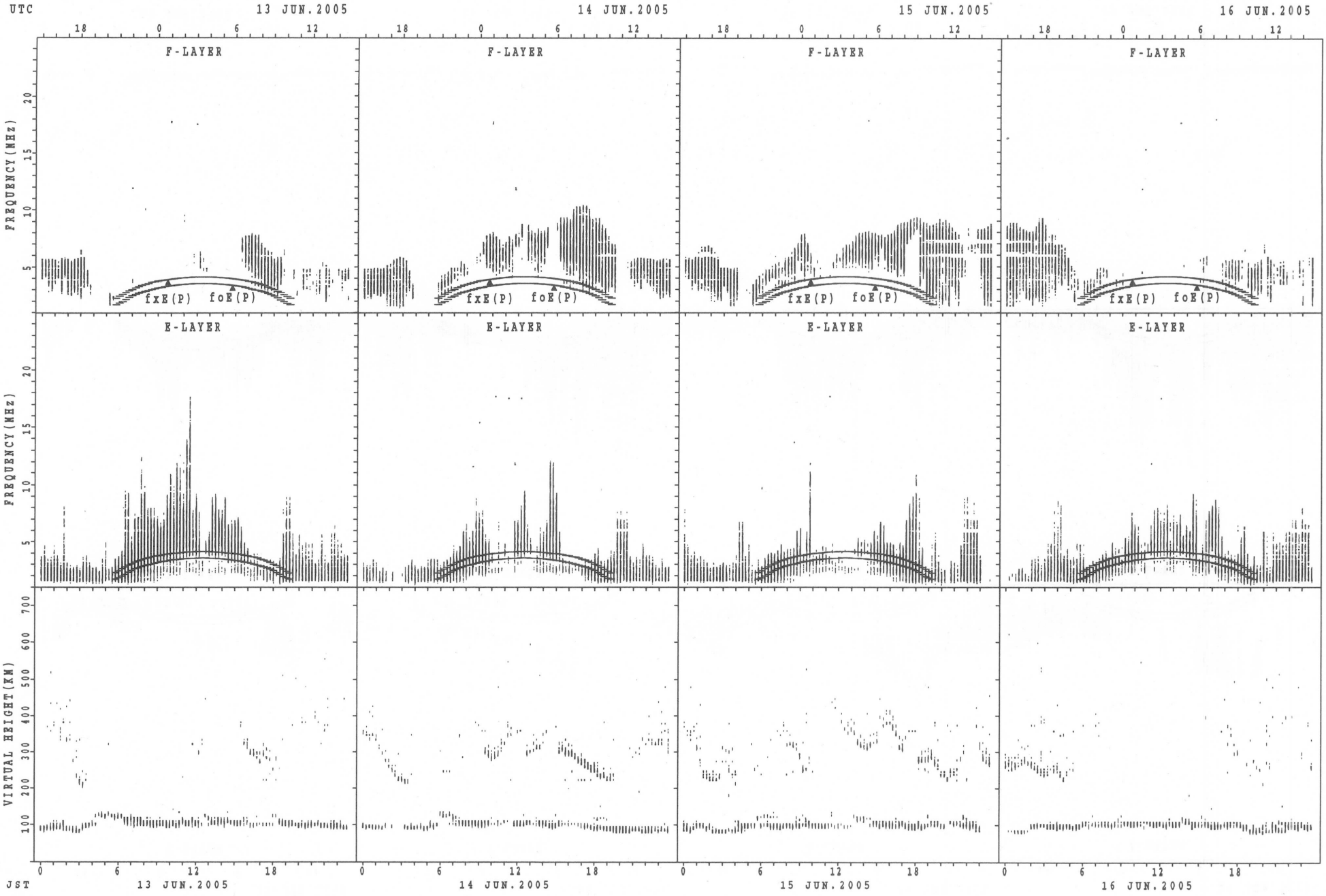
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



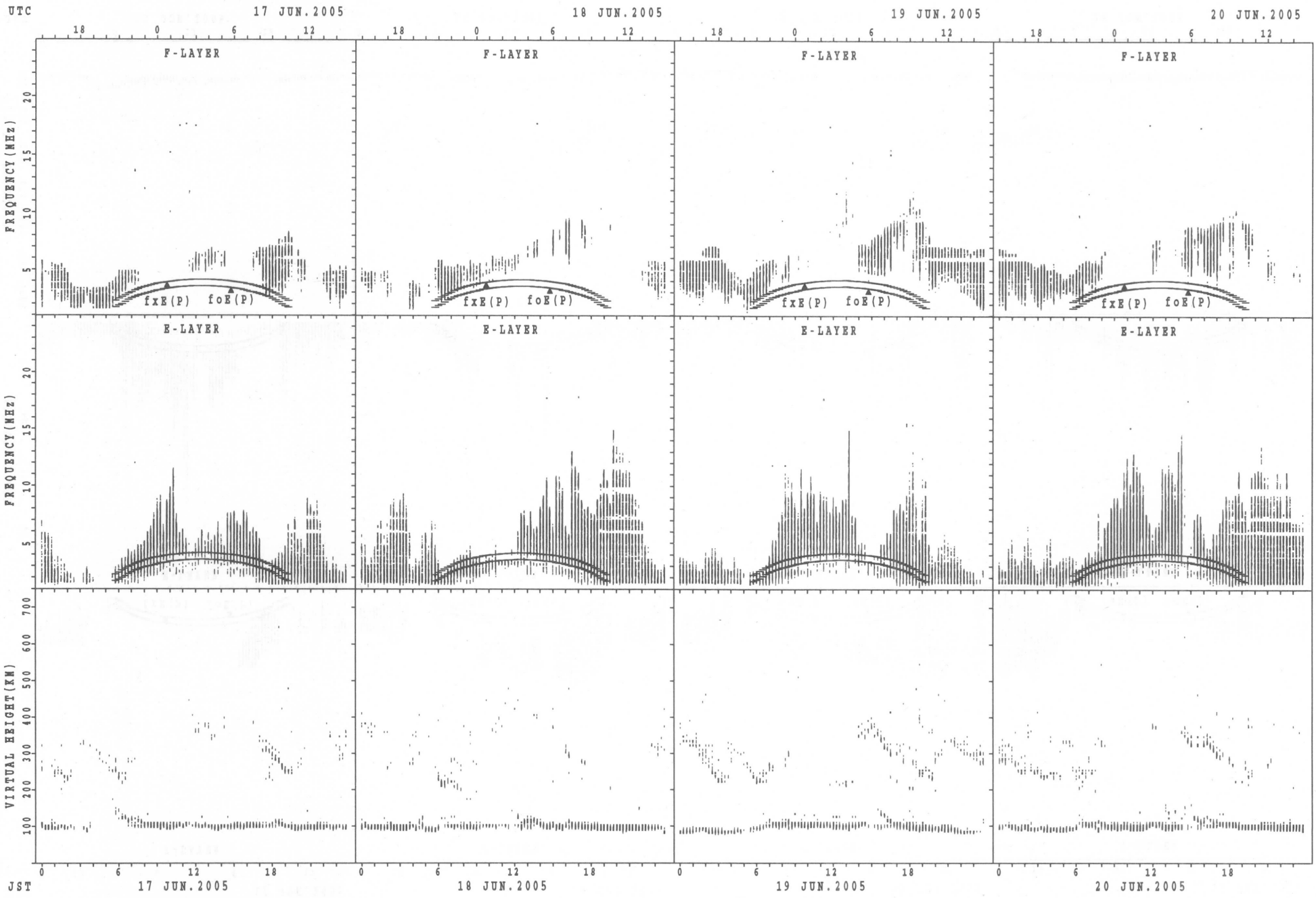
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



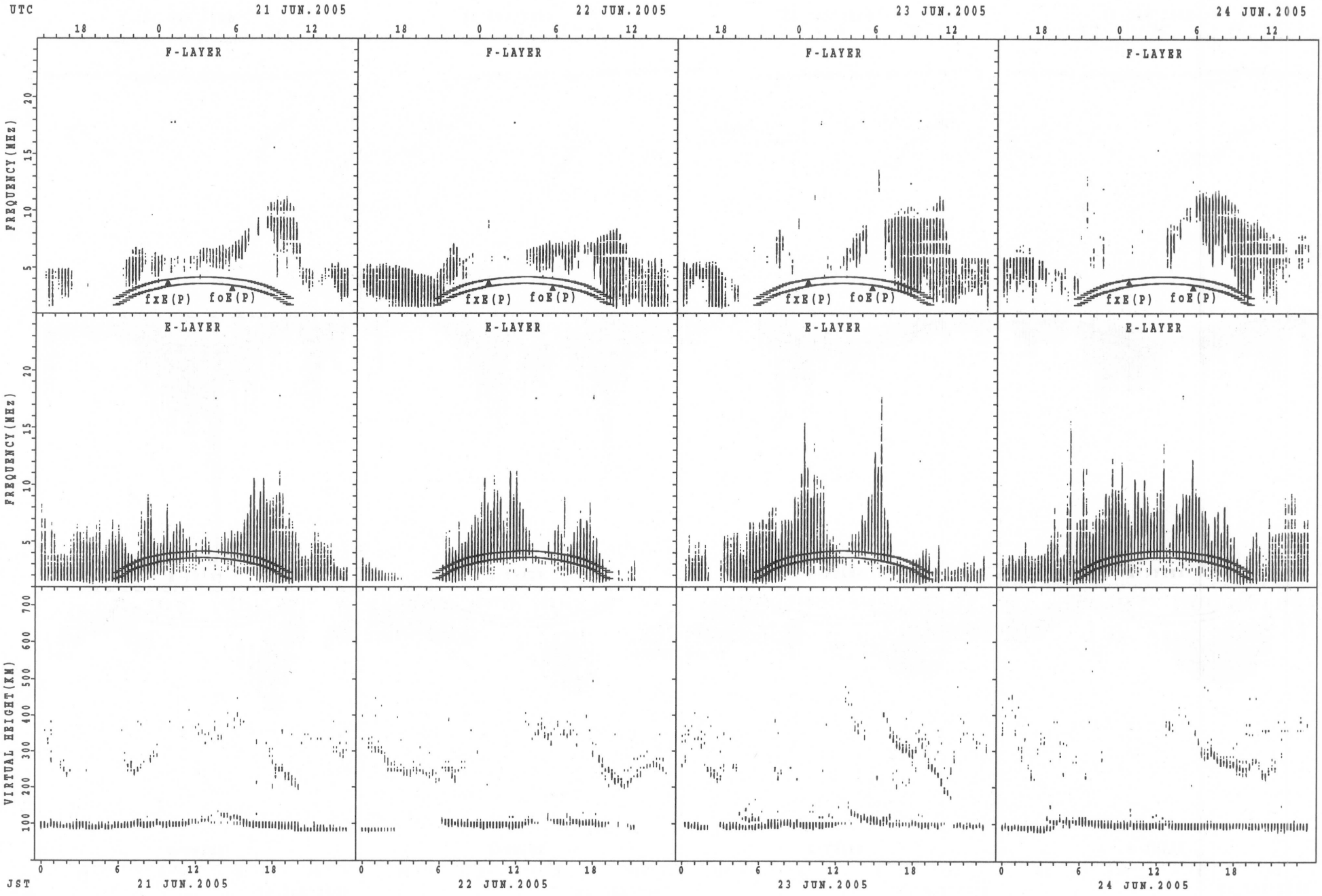
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



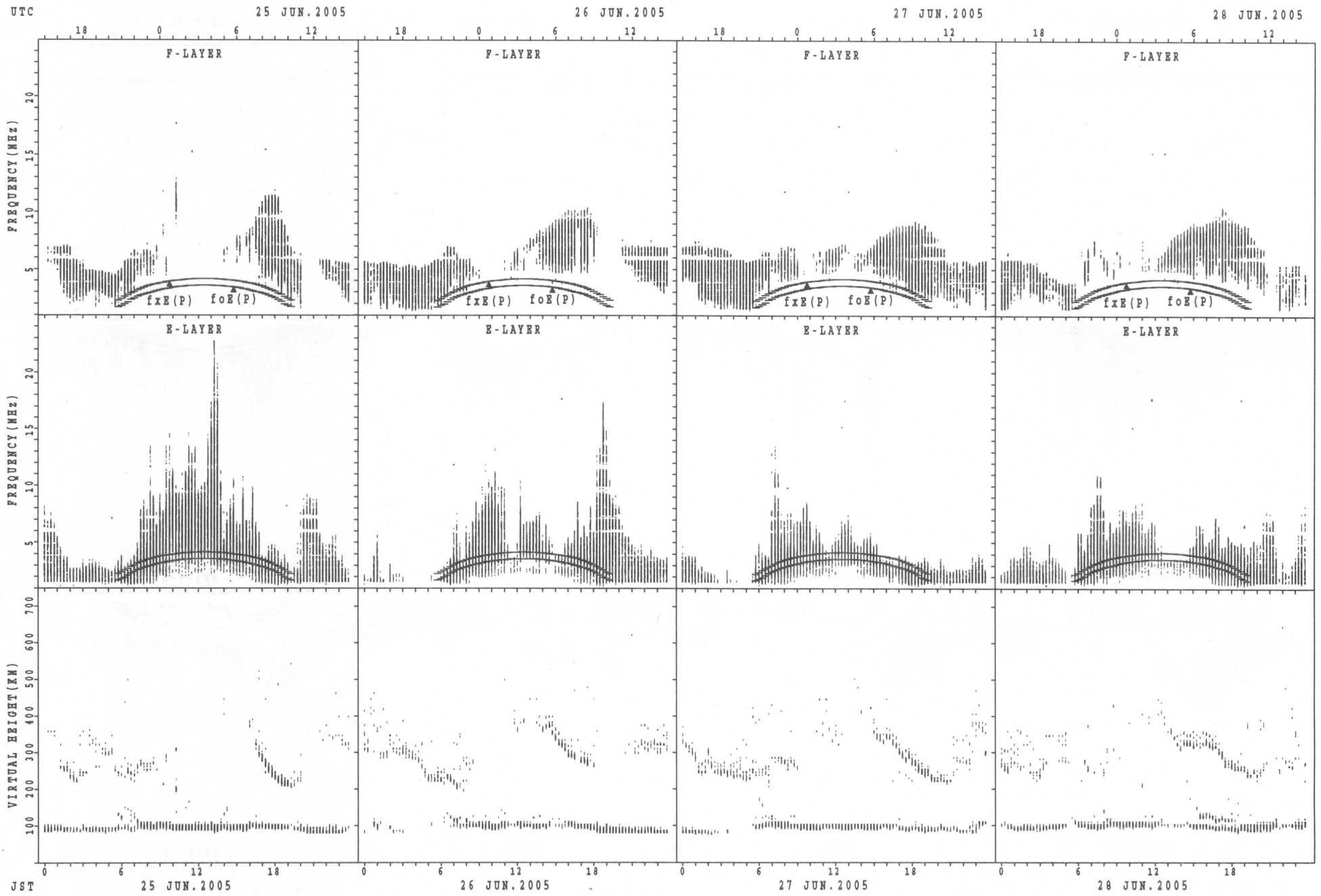
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



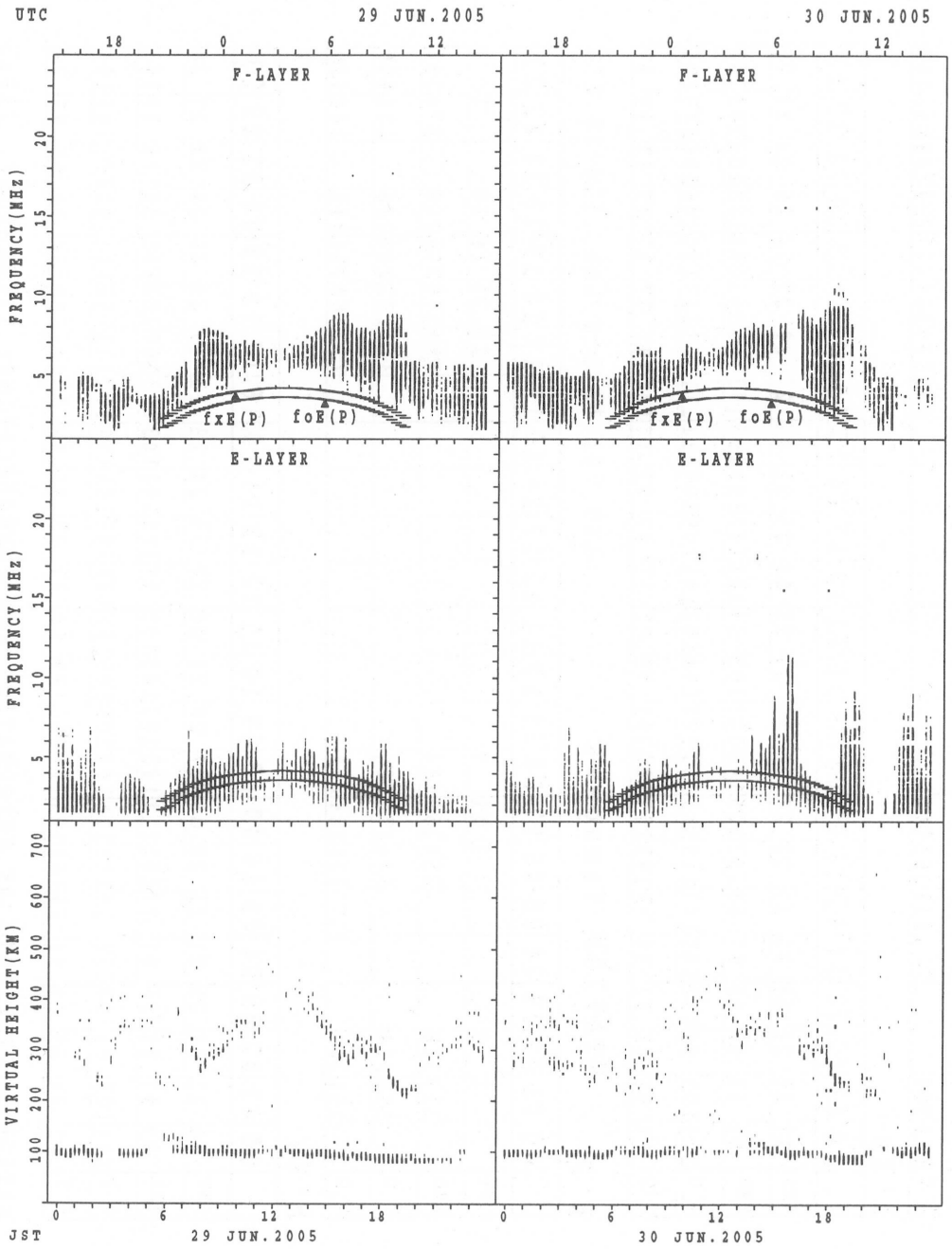
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

JUN. 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					5											6	11	5	13	9	2	2
MED	342	298					306											306	288	276	282	280	262	324
U Q	171	149					314											342	320	294	311	291	284	364
L Q	171	149					268											240	222	253	270	266	240	284

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	20	15	21	18	19	25	28	28	29	27	25	24	18	17	24	25	24	24	29	29	27	23	23	21
MED	97	97	95	95	101	113	111	107	105	103	103	99	99	97	97	103	106	106	105	105	105	105	103	99
U Q	99	101	97	101	111	119	112	109	107	105	103	103	103	102	107	112	111	108	111	111	111	107	105	104
L Q	95	93	91	95	95	107	105	105	103	103	100	97	97	96	95	95	99	102	102	103	103	103	97	97

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	2	2				1	4	11									3	14	17	17	10	4	3	1
MED	359	340				264	286	282									272	282	272	256	266	311	316	326
U Q	380	398				132	310	288									338	296	299	267	270	366	362	163
L Q	338	282				132	269	246									254	266	264	239	230	285	262	163

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	27	25	24	25	20	19	23	27	28	30	25	25	24	25	22	27	27	22	27	24	25	24	28	26
MED	99	99	97	95	97	99	107	105	103	103	103	99	102	101	100	105	107	105	103	101	103	103	103	101
U Q	103	103	99	102	101	107	113	113	107	107	104	103	105	105	107	111	111	107	107	104	106	104	109	105
L Q	95	95	95	93	94	95	103	103	102	101	99	97	97	97	97	97	101	103	97	97	99	97	99	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		1	3				3	11	7									20	20	14	10		1	3
MED		312	312				254	250	274									293	276	266	268		376	350
U Q		156	314				304	276	286									313	292	288	286		188	400
L Q		156	232				236	244	250									273	260	256	240		188	330

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	27	24	25	21	21	26	29	27	28	23	28	27	23	24	23	22	26	29	29	28	28	27	28
MED	99	97	95	95	97	97	107	111	105	103	103	103	99	101	103	103	103	107	103	103	98	101	99	103
U Q	104	103	99	97	100	99	115	114	109	105	105	106	105	105	106	113	105	113	105	103	101	105	105	107
L Q	97	93	89	89	94	95	101	103	101	100	99	99	97	97	99	97	97	103	100	96	95	95	95	98

MONTHLY MEDIANS OF h'F AND h'Es

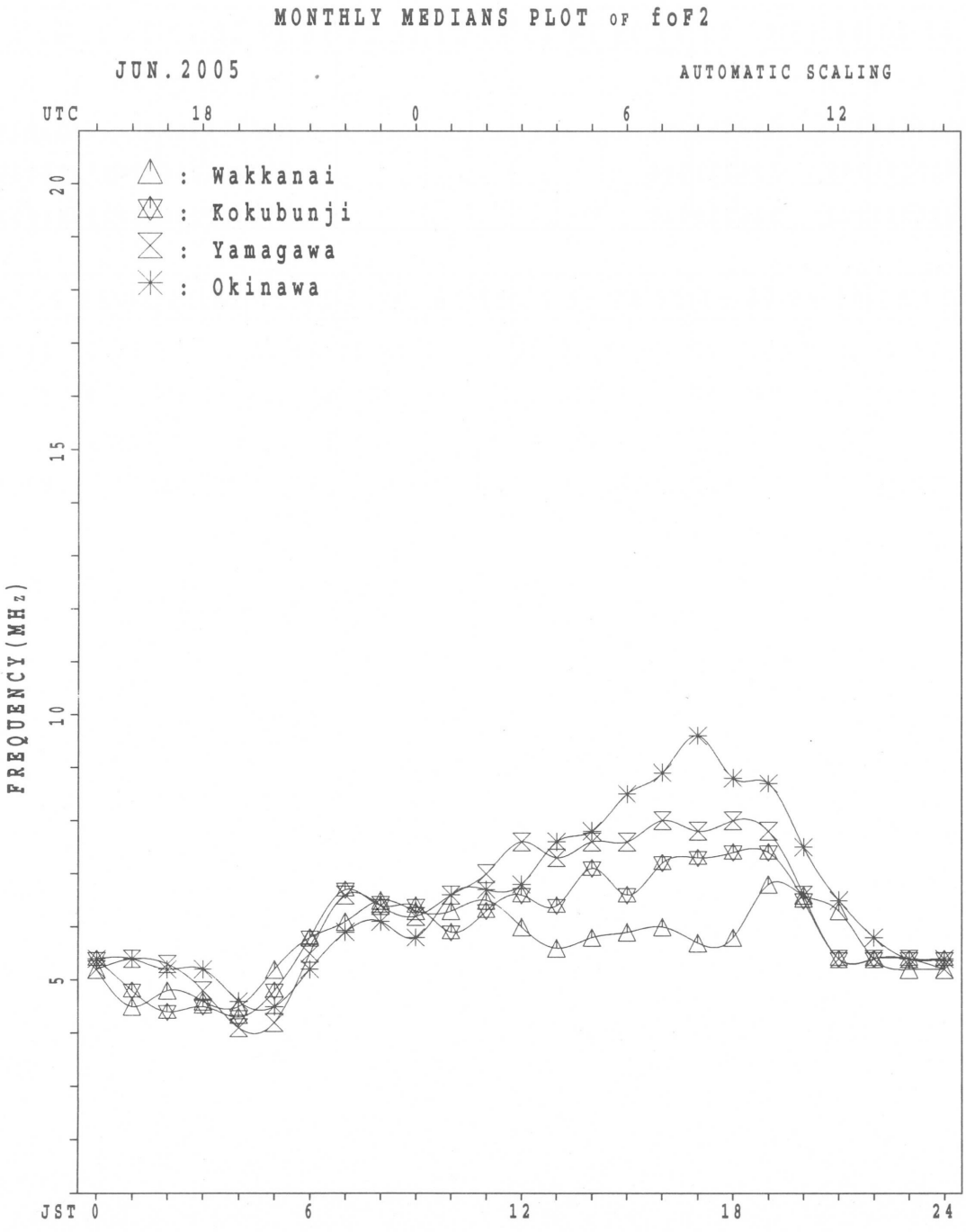
JUN.2005 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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	1	4	4	3	2		1	7	11									26	23	23	10	2	1	2
MED	310	297	284	254	309		252	260	262									295	254	268	251	264	336	343
U Q	155	357	310	256	346		126	272	288									302	286	296	276	272	168	356
L Q	155	267	250	240	272		126	220	240									278	222	236	232	256	168	330

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	26	27	23	25	22	27	28	28	28	26	28	24	25	25	23	23	23	27	27	28	27	28	28
MED	98	97	97	95	95	101	107	107	104	103	100	103	103	103	103	103	103	103	101	97	97	99	97	97
U Q	104	101	101	99	101	105	121	113	110	107	105	112	107	107	111	111	111	109	107	103	101	105	103	102
L Q	93	95	91	89	91	93	101	103	101	100	97	97	99	100	96	97	97	95	97	91	93	91	89	91


MONTHLY MEDIANS PLOT OF foF2
JUN. 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

JUN. 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	54	51	X 40	X 44	X 42																X 70	X 62	X 56	61
2	54	X 51	X 48	X 46	X 45																X 82	83	82	70
3	68	65	65	X 62	X 56															X 85	X 82	X 74	70	X 66
4	X 63	66	X 57	55	X 50															X 87	X 79	69	X 64	X 57
5	X 57	X 54	A	X 49	51															X 85	X 82	A	X 74	X 81
6	X 80	X 61	A	62	65															X 94	X 76	73	X 71	75
7	76	73	70	64	X 52															X 92	X 89	X 83	85	85
8	X 71	X 70	X 66	X 61	X 57															X 86	X 88	X 72	69	71
9	A	X 63	65	64	62															A	X 90	X 80	86	85
10	71	X 60	62	X 52	X 51	61														X 94	X 88	X 74	79	76
11	74	78	68	63	61					A										X 86	A	X 67	X 67	A
12	68	62	63	54	52															X 90	X 86	X 72	A	76
13	A	69	65	A	A															A	X 51	X 57	57	X 52
14	X 51	52	51	X 46	X 38															X 75	X 69	X 55	X 59	X 58
15	58	50	49	50	48															X 76	X 82	X 70	X 72	X 66
16	X 65	X 63	X 67	X 63	X 60															X 54	X 62	X 59	X 60	X 63
17	X 58	X 51	X 42	X 38	X 33															X 55	X 58	60	54	A
18	52	X 48	X 44	X 41	X 42															X 66	X 57	X 55	X 54	X 54
19	X 52	54	X 50	X 49	X 40															X 82	X 64	X 60	X 62	61
20	X 60	X 64	53	56	52															A	A	A	X 62	X 57
21	X 56	56	51	X 44	X 40															X 73	X 68	A	A	A
22	A	A	X 44	X 43	X 42															X 69	X 73	X 74	70	66
23	A	64	X 58	59	51															X 108	X 92	X 74	X 67	X 71
24	A	X 71	X 58	X 37	X 35															X 75	O X 74	X 71	X 69	X 68
25	X 59	X 55	X 50	X 49	X 48															X 111	X 72	X 58	X 58	54
26	X 50	53	52	50	X 45															X 78	X 67	64	X 66	X 62
27	X 58	61	54	X 52	X 50															X 76	X 72	78	73	68
28	63	X 58	X 53	54	51															X 81	X 63	X 58	X 55	65
29	A	58	A	52	49															X 70	X 76	X 58	X 60	64
30	63	X 57	54	54	X 51															X 71	X 73	S 63	X 62	O X 66
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	29	27	29	29	1														25	28	27	28	27
MED	X 60	60	54	X 52	X 50	61														X 81	X 74	X 69	X 66	66
U Q	68	64	65	60	52															X 88	X 82	X 74	72	71
L Q	X 55	54	X 50	X 46	X 42															X 72	X 68	X 59	X 60	X 61

JUN. 2005 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUN. 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	34	38	36	38	46	64	61	A	A	A	58	65	66	63	65	69	74	76	64	55	50	F
2	F	45	42	40	39	54	58	57	62	60	57	63	51	64	71	79	76	64	S 60	A 76	F	F	F	
3	F	F	F	56	50	52	50	62	70	A	61	63	67	63	62	66	69	72	A	79	76	68	F	60
4	57	F	50	F	43	50	62	A	58	58	A	59	64	60	59	66	65	67	75	81	73	F	58	51
5	51	48	A	43	F	53	62	A	65	53	A	57	69	74	66	A	62	62	68	79	76	A	68	75
6	74	54	A	F	F 49	61	79	67	62	A	A	A	65	70	70	81	88	91	87	88	70	F	65	F
7	F	F	F	F	46	50	66	76	69	64	66	76	81	86	78	78	85	83	79	86	83	77	F	F
8	65	63	60	55	50	44	51	56	59	A	68	67	66	65	64	61	67	75	78	80	82	66	F	F
9	A	56	F	F	F	58	66	74	A	A	64	64	65	67	76	77	79	82	82	A	84	73	F	F
10	F	54	F	46	45	F	66	76	90	78	A	A	A	65	68	62	60	66	76	88	82	68	F	F
11	F	F	F	F	F	52	61	79	A	A	A	A	A	68	A	82	82	79	76	80	A	61	61	A
12	F	F	F	F	F	48	58	80	65	60	54	A	58	68	A	66	A	78	79	84	80	66	A	F
13	A	F	F	A	A	36	A	49	A	A	A	A	A	49	45	A	A	60	61	A	45	51	F	46
14	45	F	F	40	32	30	44	A	46	A	A	A	59	A	70	66	61	56	58	69	63	49	53	51
15	F	F	F	F	F	43	45	50	65	56	58	57	52	53	54	61	66	73	70	70	75	64	66	59
16	59	57	60	57	54	47	48	57	A	R	R	R 48	R	51	51	A	54	A	47	48	56	53	54	57
17	52	45	36	32	27	32	44	A	A	A	A	A	A	A	A	58	53	47	46	49	52	F	F	A
18	F	42	38	35	36	40	60	66	A	A	A	A	A	A	A	64	73	72	68	60	51	49	48	48
19	46	F	44	43	34	V 39	46	52	63	54	59	A	52	A	57	A	64	70	74	76	58	54	56	F
20	54	57	F	F	F	46	55	52	56	54	61	A	A	A	59	59	A	A	A	A	A	A	56	51
21	50	F	F	38	34	40	49	60	70	51	52	58	A	A	A	A	A	62	A	67	62	A	A	A
22	A	A	37	37	36	35	56	69	58	A	60	A	A	A	62	65	59	56	58	63	67	S 68	F	F
23	A	F	52	F	F	45	56	66	63	56	A	A	A	A	79	78	92	96	91	102	86	68	60	65
24	A	65	52	30	29	47	59	75	69	67	63	A	71	70	92	92	72	72	67	68	68	65	63	62
25	53	49	44	43	42	43	44	56	58	A	A	54	60	62	A	76	75	74	85	105	66	52	52	F
26	44	F	F	F 40	39	45	52	64	60	60	A	A	A	65	74	82	80	80	75	72	61	S	60	55
27	52	F	F	46	44	44	58	70	60	51	56	57	61	68	75	64	61	A	62	70	66	F	F	F
28	F	52	47	F	F	47	49	A	66	69	59	A	A	A	62	A	80	78	70	75	57	52	48	F
29	A	F	A	F	F	50	50	A	71	74	A	A	A	A	A	72	66	67	58	64	70	52	54	F
30	F	51	F	F	45	46	62	80	62	54	54	61	64	67	A	72	A	68	A	65	67	S	56	S 60
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	13	14	13	17	20	29	29	24	24	17	15	13	17	20	22	24	25	27	26	26	28	20	18	13
MED	52	53	44	40	40	46	56	65	62	58	59	59	64	65	66	66	67	72	72	76	68	62	56	57
U Q	58	57	52	46	46	50	62	74	68	66	63	64	66	68	74	78	80	78	78	81	76	68	61	61
L Q	48	48	38	38	35	40	48	56	60	54	56	57	58	62	59	64	62	64	61	67	62	52	53	51

JUN. 2005 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUN. 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 336	372	404	A	A	A	A	U L 476	A	A	A	A	L	L					
2						L	L	A	A	A	A	L 480	L 492	452	A	464	436	A	A	A				
3							A	A	A	A	A	A	468	L 476	464	A	A	A	A					
4							A	A	L 452	L	A	464	468	L 472	456	448	A	A	A					
5							A	A	L 452	A	A	A	A	A	448	A	A	A	L					
6						L	A	A	A	A	A	A	A	476	A	L 440	432	L	L					
7							A	A	A	L 468	468	A	A	A	A	A	L 432	L 392						
8							L	L	A	A	476	A	A	A	460	452	436	A	A					
9							L	L	A	A	460	L 484	464	468	468	452	440	404	A					
10							L	A	A	A	A	A	A	A	A	452	L 444	L 404	L					
11							L 420	A	A		A	A	A	A	A	A	A	A	A					
12						L 380	L	L 424	L 440	456	A	A	A	A	A	L 460	A	A	A					
13						U L 300	A	A	A	A	A	A	A	440	A	A	A	A	A					
14							A	A	A	A	A	A	A	A	A	L 436	A	A	A					
15						A	U L 380	L 420	428	A	444	468	A	460	A	444	L 420	388	L					
16						A	348	A	A	U L 440	U L 456	U L 448	U L 444	452	A	A	A	A	A					
17							356	A	A	A	A	A	A	A	A	A	L 428	L	A					
18						U L 328	L 372	A	A	A	A	A	A	A	A	A	A	L 388	L					
19							A	A	424	440	U L 456	A	460	A	444	A	A	A	A					
20						L 340	368	A	A	A	A	A	A	A	A	436	A	A	A					
21								L	L 424	L 460	456	A	A	A	A	A	A	A	A					
22							L 372	A	A	A	452	A	A	A	448	436	A	A	A					
23						L	L	A	A	444	A	A	A	A	448	A	404	380	340					
24						A	A	A	A	A	A	A	A	A	A	448	L	L 408	L					
25							U L 396	A	A	A	A	U L 480	A	448	A	A	A	A	A					
26						L	L 428	A	A	A	A	A	A	A	A	468	L 420	L 400	L					
27						L 340	A	A	428	436	A	472	A	464	448	A	L 436	A	A					
28							L	A	A	A	A	A	A	A	A	A	A	396	L					
29								A	A	A	A	A	A	A	A	A	A	A						
30							L 400	L 412	A	448	468	U L 476	A	468	A	A	A	A	A					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						6	11	4	7	8	9	8	7	11	9	13	11	9	1					
MED						L 338	L 372	L 416	L 428	446	456	L 474	468	464	448	448	L 432	L 396	340					
U Q						L 340	L 400	L 422	L 452	L 458	468	L 480	L 476	L 472	462	456	L 436	L 404						
L Q						U L 328	368	408	424	440	454	466	460	452	448	438	L 420	388						

JUN. 2005 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUN. 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						192	UA 252	A	UA 316	A	A	A	B	A	A	A	A	A	A	B				
2						UR 196	UA 248	A	A	A	A	A	A	A	A	A	A	A	A	B				
3						A	A	A	A	A	A	A	A	A	UA 372	A	UA 296	A	A					
4						UR 200	A	A	A	B	A	A	R	A	A	A	UA 304	UA 272	UA 196					
5						A	A	A	A	A	A	A	A	A	A	UA 332	UA 312	A	A					
6						180	UA 244	A	A	A	A	A	A	A	UA 360	A	A	A	A					
7						UR 192	A	A	A	A	A	A	A	A	A	A	UA 328	A	A					
8						UA 188	UA 252	A	A	A	A	A	A	A	A	A	A	UA 272	UA 208					
9						A	A	A	A	A	A	A	A	R	A	A	UR 324	UR 268	A					
10						A	UA 260	A	A	A	A	A	A	A	A	A	A	UR 272	UA 208					
11						A	A	A	A		A	A	A	A	A	A	304	A	A					
12						UA 188	UA 256	A	A	A	A	A	A	A	B	A	A	260	A					
13						A	UA 252	A	A	A	A	A	A	A	A	UA 320	A	A	A					
14						B	UA 232	A	A	A	A	A	A	A	A	UA 316	A	A	UA 192					
15						A	A	UA 308	A	A	A	A	A	A	A	A	UA 296	UR 268	A					
16						UA 164	UA 232	A	A	A	A	UA 376	UA 372	A	A	A	A	A	A					
17						A	276	A	A	A	A	A	A	A	A	A	A	A	A					
18						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
19						B	UA 244	A	A	A	R	A	UA 360	A	A	A	A	A	A					
20						180	UA 244	A	A	A	A	A	A	A	A	UA 352	A	A	A					
21						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
22						B	A	A	A	A	A	A	A	A	A	A	UA 304	A	A					
23						A	A	A	A	A	A	A	A	A	R	UA 316	UR 304	UR 264	UA 200					
24						A	A	UA 280	UA 300	A	A	A	A	A	A	A	A	A	UA 192					
25						A	236	UA 280	A	A	A	A	A	A	A	A	A	A	A					
26						A	A	A	A	A	A	A	A	A	A	UA 324	A	A	A					
27						A	A	A	A	A	A	A	A	R	A	A	A	A	A					
28						A	252	A	A	A	A	A	A	A	A	A	A	A	A					
29						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
30						A	A	A	A	A	A	A	A	A	A	A	A	UA 268	A					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						9	14	3	2			1	2		2	6	9	8	6					
MED						U 188	UA 250	UA 280	UA 308			UA 376	UA 366		UA 366	UA 322	UA 304	U 268	UA 198					
U Q						UR 194	UA 252	UA 308								UA 332	UA 318	UA 272	UA 208					
L Q						180	UA 244	UA 280								UA 316	UA 300	U 266	UA 192					

JUN. 2005 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUN. 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	19	E B 15	J A 20	J A 18	19	30	31	37	J A 57	J A 68	J A 55	J A 58	J A 44	J A 61	J A 59	J A 58	J A 68	J A 42	J A 29	20	J A 38	J A 88	J A 38	J A 28
2	J A 26	J A 24	J A 33	J A 27	J A 17	G 17	29	J A 45	J A 56	J A 68	J A 52	44	J A 46	J A 46	J A 51	J A 42	J A 40	J A 47	J A 100	J A 89	J A 54	J A 62	J A 59	J A 21
3	J A 28	J A 30	J A 38	J A 25	J A 24	J A 29	J A 64	J A 99	J A 99	J A 82	J A 62	J A 97	J A 54	45	43	J A 54	J A 46	J A 60	J A 96	J A 80	J A 70	J A 78	J A 53	J A 76
4	J A 54	J A 41	J A 33	J A 22	J A 20	G	J A 52	J A 118	37	50	J A 89	43	G 36	48	41	36	J A 50	J A 56	J A 50	J A 35	J A 54	J A 74	J A 77	J A 34
5	J A 54	J A 41	J A 66	J A 42	J A 33	J A 25	J A 44	J A 78	J A 42	J A 56	J A 60	J A 64	J A 77	J A 95	42	J A 91	J A 98	68	J A 55	J A 60	J A 82	J A 108	J A 89	J A 60
6	J A 64	J A 60	J A 88	J A 47	J A 44	J A 32	J A 47	J A 58	J A 97	J A 82	J A 60	J A 62	J A 54	J A 49	J A 50	J A 49	36	34	26	J A 51	J A 60	J A 38	J A 36	J A 64
7	J A 69	J A 54	J A 47	J A 20	E B 14	G	J A 45	J A 78	J A 69	J A 60	J A 46	J A 99	J A 49	J A 56	J A 98	J A 89	40	J A 37	J A 50	J A 55	J A 101	J A 76	J A 66	19
8	J A 35	J A 31	J A 23	J A 23	J A 31	23	31	J A 39	J A 59	J A 70	39	J A 65	J A 54	J A 49	J A 56	J A 47	37	J A 49	J A 47	J A 40	J A 171	J A 67	J A 64	J A 43
9	J A 71	J A 71	J A 70	J A 71	J A 82	J A 27	J A 84	35	J A 65	J A 100	44	43	J A 43	G 30	J A 44	36	G 28	32	J A 50	J A 104	J A 62	J A 60	J A 58	J A 104
10	J A 62	J A 65	J A 42	J A 90	J A 71	J A 45	J A 39	J A 77	J A 68	J A 64	J A 99	J A 98	J A 100	J A 76	J A 74	J A 56	J A 45	G 23	28	J A 32	J A 51	J A 81	J A 76	J A 58
11	J A 36	J A 23	J A 36	J A 54	J A 53	J A 35	35	J A 64	J A 97	J A 111	J A 178	J A 134	J A 153	J A 76	J A 124	J A 74	J A 68	J A 75	J A 74	J A 44	J A 101	J A 64	J A 50	J A 102
12	J A 96	J A 53	J A 53	J A 26	19	23	29	36	J A 53	J A 46	J A 58	J A 60	J A 54	J A 73	J A 84	J A 64	J A 80	J A 70	J A 41	J A 54	J A 58	J A 88	J A 107	J A 44
13	J A 85	J A 52	J A 46	J A 78	J A 69	J A 37	J A 111	J A 47	J A 66	J A 131	J A 193	J A 125	J A 72	46	46	J A 63	J A 97	J A 56	J A 49	J A 91	J A 16	21	J A 60	J A 36
14	J A 76	J A 53	J A 23	J A 25	J A 41	21	J A 38	J A 62	J A 54	J A 57	J A 91	J A 114	J A 76	J A 81	J A 69	37	J A 45	J A 47	J A 46	J A 52	E B 15	J A 34	J A 52	J A 54
15	J A 54	J A 52	J A 27	J A 30	J A 32	J A 49	J A 40	34	J A 44	J A 59	J A 56	44	44	41	J A 53	41	37	G 23	24	J A 20	J A 22	J A 53	J A 33	J A 34
16	J A 23	J A 26	J A 24	J A 25	25	J A 43	J A 36	J A 61	J A 102	J A 49	41	43	43	40	J A 49	J A 70	J A 47	J A 81	J A 77	J A 59	J A 54	J A 24	J A 21	E B 15
17	J A 23	19	J A 32	J A 22	J A 21	J A 30	31	J A 62	J A 56	J A 60	J A 72	J A 73	J A 112	J A 79	J A 86	J A 47	J A 83	J A 42	J A 83	J A 39	J A 78	J A 64	J A 56	J A 60
18	J A 23	J A 24	20	J A 22	19	22	J A 37	J A 46	J A 66	J A 58	J A 110	J A 66	J A 52	J A 102	J A 86	J A 71	J A 46	J A 34	26	J A 32	J A 42	J A 23	J A 23	J A 25
19	J A 33	J A 27	J A 27	E B 15	J A 22	20	J A 38	J A 53	J A 42	J A 42	G	J A 58	42	J A 75	J A 72	J A 74	J A 45	J A 53	J A 34	E B 16	J A 28	19	J A 54	J A 86
20	J A 41	J A 94	J A 58	J A 36	J A 33	23	34	J A 46	J A 55	J A 62	J A 73	J A 97	J A 125	J A 126	J A 85	42	J A 116	J A 84	J A 107	J A 89	J A 118	J A 70	J A 37	J A 43
21	J A 77	J A 77	J A 26	J A 27	J A 44	J A 27	29	J A 52	J A 43	J A 53	J A 50	J A 50	J A 100	J A 106	J A 114	J A 117	J A 86	J A 80	J A 80	J A 76	J A 87	J A 84	J A 88	J A 85
22	J A 58	J A 38	J A 34	J A 33	20	23	J A 45	J A 69	J A 62	J A 77	J A 48	J A 69	J A 75	J A 70	J A 40	J A 38	J A 44	J A 69	J A 45	J A 32	J A 130	J A 88	J A 54	J A 66
23	J A 77	J A 53	J A 66	J A 52	J A 33	J A 45	J A 44	J A 52	J A 62	J A 96	J A 86	J A 133	J A 138	J A 118	G J A 30	51	G 23	G 23	28	J A 27	J A 21	J A 24	J A 42	J A 42
24	J A 53	J A 54	J A 75	J A 26	J A 52	J A 40	J A 49	J A 47	J A 62	J A 52	J A 60	J A 86	J A 85	J A 54	J A 71	38	34	32	J A 29	J A 31	J A 51	J A 34	J A 58	J A 54
25	E B 16	J A 21	J A 38	E B 14	J A 17	J A 34	29	J A 46	J A 62	J A 78	J A 83	J A 64	J A 111	J A 55	J A 79	J A 87	J A 80	J A 75	J A 48	J A 102	J A 53	J A 62	J A 32	J A 39
26	J A 54	J A 43	J A 26	J A 25	J A 23	25	J A 35	J A 55	J A 52	J A 68	J A 86	J A 95	J A 236	J A 65	J A 75	J A 81	J A 45	29	22	E B 15	J A 19	22	20	21
27	J A 20	J A 22	22	E B 15	E B 15	B J A 22	J A 44	J A 44	J A 72	J A 45	J A 46	37	J A 61	G 35	39	J A 47	J A 46	J A 69	J A 99	J A 100	J A 124	J A 66	J A 76	J A 52
28	J A 44	J A 102	J A 52	J A 35	J A 41	J A 37	J A 36	J A 87	J A 61	J A 57	J A 56	J A 62	J A 62	J A 98	J A 62	J A 99	J A 98	J A 44	J A 45	J A 26	J A 74	J A 88	J A 52	J A 45
29	J A 97	J A 54	J A 74	J A 58	J A 50	J A 46	J A 44	J A 65	J A 63	J A 136	J A 133	J A 142	J A 82	J A 127	J A 102	J A 133	J A 89	J A 46	J A 53	J A 35	J A 32	20	J A 53	J A 40
30	J A 77	J A 46	J A 32	J A 33	J A 34	J A 35	J A 34	J A 41	J A 53	J A 101	J A 146	41	J A 94	J A 60	J A 86	J A 70	J A 93	J A 60	J A 102	J A 36	J A 44	J A 45	J A 90	J A 69
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	J A 54	J A 44	J A 35	J A 26	J A 32	J A 28	J A 38	J A 52	J A 62	J A 63	J A 60	J A 64	J A 67	J A 63	J A 66	J A 57	J A 46	J A 48	J A 48	J A 42	J A 54	J A 63	J A 54	J A 44
U Q	J A 71	J A 54	J A 53	J A 42	J A 44	J A 37	J A 45	J A 65	J A 66	J A 82	J A 89	J A 97	J A 100	J A 81	J A 85	J A 74	J A 83	J A 69	J A 77	J A 76	J A 82	J A 78	J A 66	J A 64
L Q	J A 28	J A 26	J A 26	J A 22	J A 20	23	J A 34	45	J A 53	J A 56	50	50	49	48	46	42	40	34	29	J A 32	J A 38	34	J A 38	J A 34

JUN. 2005 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUN. 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	E B 15	E B 15	E B 15	E B 15	E B 16	28	30	36	48	A A 68	A A 55	A A 58	42	52	48	55	59	32	22	E B 14	E B 15	17	E B 16	E B 16
2	19	E B 16	18	20	E B 15	G 16	28	40	52	54	48	42	42	42	47	38	35	37	34	A A 89	21	24	E B 16	E B 15
3	16	20	23	18	19	20	42	46	56	A A 82	54	54	41	42	41	51	45	38	A A 96	55	60	51	38	39
4	36	18	19	17	16	G	42	A A 118	36	42	A A 89	40	G 35	42	38	35	44	50	44	34	40	44	30	21
5	28	28	A A 66	24	24	23	41	A A 78	36	46	A A 60	47	62	62	40	A A 91	40	48	29	33	52	A A 108	56	55
6	53	39	A A 88	38	34	28	41	43	54	A A 82	A A 60	A A 62	49	41	45	37	35	30	25	36	29	36	16	20
7	43	40	16	E B 15	E B 14	G	42	50	56	36	40	56	44	55	56	51	38	31	28	43	36	61	44	E B 16
8	19	26	E B 15	18	20	22	29	36	51	A A 70	38	48	46	46	39	41	34	44	43	36	39	55	28	41
9	A A 71	34	38	E B 15	18	25	31	35	A A 65	A A 100	41	39	42	U Y 30	38	34	G 28	29	42	A A 104	44	37	36	44
10	39	38	28	34	23	28	37	70	63	55	A A 99	A A 98	A A 100	47	48	38	34	G 22	23	23	22	49	36	36
11	27	E B 15	23	21	22	27	30	61	A A 97	A A 111	A A 178	A A 134	A A 153	60	A A 124	56	48	57	39	36	A A 101	45	34	A A 102
12	46	28	22	21	E B 16	23	27	35	38	38	44	A A 60	52	57	A A 84	39	A A 80	42	36	43	54	34	A A 107	30
13	A A 85	39	33	A A 78	A A 69	26	A A 111	38	A A 66	A A 131	A A 193	A A 125	A A 72	40	44	A A 63	A A 97	38	36	A A 91	E B 15	E B 16	29	25
14	23	23	17	16	E B 15	20	35	A A 62	44	A A 57	A A 91	A A 114	50	A A 81	62	36	43	38	38	35	E B 15	20	40	36
15	37	16	17	E B 15	E B 14	38	32	32	39	46	39	40	42	39	50	38	35	G 23	23	16	19	28	25	26
16	18	23	19	22	24	35	30	44	A A 102	39	38	41	41	38	44	A A 70	44	A A 81	31	26	E B 16	E B 15	E B 16	E B 15
17	E B 15	E B 15	23	19	17	24	29	A A 62	A A 56	A A 60	A A 72	A A 73	A A 112	A A 79	A A 86	41	35	27	37	31	39	23	38	A A 60
18	18	E B 15	E B 16	16	E B 14	20	32	41	A A 66	A A 58	A A 110	A A 66	A A 52	A A 102	A A 86	45	42	32	22	24	22	E B 16	E B 16	19
19	E B 15	19	E B 16	E B 15	16	18	36	44	35	38	G	A A 58	40	A A 75	36	A A 74	42	39	31	E B 16	25	E B 15	32	E B 15
20	E B 15	42	E B 15	23	23	22	32	43	44	42	47	A A 97	A A 125	A A 126	52	37	A A 116	A A 84	A A 107	A A 89	A A 118	A A 70	27	26
21	17	23	18	19	18	21	27	37	38	38	39	46	A A 100	A A 106	A A 114	A A 117	A A 86	54	A A 80	41	25	A A 84	A A 88	A A 85
22	A A 58	A A 38	30	26	19	18	27	54	48	A A 77	40	A A 69	A A 75	A A 70	36	35	41	49	42	26	35	28	26	E B 15
23	A A 77	39	36	35	22	24	34	42	55	40	A A 86	A A 133	A A 138	A A 118	G 30	45	G 23	G 23	25	22	17	17	20	25
24	A A 53	21	20	18	22	36	39	41	55	46	53	A A 86	48	46	49	36	32	27	27	20	42	22	24	25
25	E B 16	E B 15	E B 15	E B 14	E B 15	20	28	41	45	A A 78	A A 83	38	51	41	A A 79	52	46	44	42	76	48	37	25	21
26	25	19	18	17	16	23	31	50	49	47	A A 86	A A 95	A A 236	48	53	37	35	28	21	E B 15	16	E B 16	E B 15	E B 16
27	E B 16	16	E B 16	E B 15	E B 15	20	37	41	38	38	43	36	48	U Y 35	38	43	34	A A 69	33	65	55	44	37	28
28	40	36	31	24	31	34	34	A A 87	51	51	48	A A 62	A A 62	A A 98	58	A A 99	58	29	26	20	32	38	33	28
29	A A 97	24	A A 74	22	28	31	39	A A 65	57	61	A A 133	A A 142	A A 82	A A 127	A A 102	56	55	42	35	28	24	E B 16	35	25
30	19	17	25	17	25	32	31	36	40	38	38	39	56	42	A A 86	61	A A 93	55	A A 102	26	25	38	30	27
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	26	23	20	18	18	23	32	43	51	52	54	A A 59	52	50	48	44	42	38	34	34	30	35	30	26
U Q	A A 46	36	30	23	23	28	39	A A 61	A A 56	A A 70	A A 86	A A 95	A A 82	A A 79	A A 79	A A 56	A A 55	49	42	43	44	45	37	36
L Q	E B 17	E B 16	E B 16	E B 16	E B 16	20	30	38	40	40	40	42	42	42	40	37	35	29	26	23	21	E B 17	E B 24	E B 19

JUN. 2005 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUN. 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	15	15	15	15	16	13	14	20	14	18	26	23	37	24	20	25	15	14	15	14	15	14	16	16
2	15	16	15	14	15	12	14	14	20	25	25	18	24	28	18	17	15	17	14	15	14	15	16	15
3	14	14	14	15	14	14	15	16	16	23	24	26	21	16	22	19	15	14	14	14	14	13	14	14
4	16	15	14	14	14	14	13	15	15	38	34	26	28	26	24	18	16	17	16	14	15	14	15	15
5	15	15	14	14	16	14	15	15	16	18	26	20	16	22	20	16	17	14	14	14	14	15	15	15
6	14	15	14	14	15	14	15	16	15	20	19	19	18	30	24	16	16	13	16	18	18	15	14	14
7	15	16	16	14	14	16	15	15	16	22	20	25	25	24	18	24	15	15	15	15	14	14	15	16
8	15	15	16	15	16	14	14	15	20	18	19	26	24	28	23	20	17	14	15	15	14	14	16	15
9	14	15	15	15	14	14	14	16	20	22	23	24	23	25	24	16	18	15	14	16	15	16	15	16
10	15	19	14	15	15	16	16	14	16	18	24	21	24	28	20	20	15	16	14	16	15	15	16	15
11	16	15	15	14	15	14	13	15	15	18	16	22	16	19	26	21	15	18	12	14	15	15	16	15
12	15	14	14	15	16	16	15	14	16	19	17	34	34	28	36	23	18	14	15	15	13	16	14	16
13	15	15	14	15	15	14	14	14	20	18	21	32	34	21	18	21	15	14	16	14	15	16	15	15
14	15	15	13	14	15	16	15	15	18	18	22	22	24	26	17	19	16	17	15	13	15	14	15	16
15	15	14	14	15	14	14	16	15	17	18	20	23	21	24	24	24	16	15	14	15	14	16	16	15
16	14	19	15	15	14	13	14	16	16	20	22	26	18	17	19	19	16	14	15	12	16	15	16	15
17	15	15	15	14	14	15	16	17	22	24	23	22	23	24	18	17	14	15	14	15	16	14	14	15
18	15	15	16	14	14	14	14	16	14	20	23	20	18	19	21	17	14	13	14	16	14	16	16	15
19	15	15	16	15	15	15	14	14	15	20	23	18	21	21	24	20	20	12	14	16	15	15	16	15
20	15	15	15	14	14	14	15	14	16	16	24	24	22	23	25	21	14	15	15	15	16	16	16	14
21	15	14	14	14	14	14	17	16	15	18	18	21	19	20	22	16	15	15	16	15	14	15	14	16
22	14	15	14	14	14	16	15	14	16	15	18	20	22	18	23	19	16	13	15	14	15	16	15	15
23	15	14	14	14	14	14	14	15	22	20	19	20	24	14	18	18	14	12	13	14	15	13	14	16
24	14	16	15	14	14	14	14	16	16	17	24	22	24	23	18	16	14	14	13	15	14	15	15	15
25	16	15	15	14	15	15	14	12	15	16	20	21	27	22	17	20	16	13	16	15	14	15	15	15
26	14	16	15	15	14	14	14	14	16	16	17	24	24	19	18	16	16	15	15	15	15	16	16	16
27	16	14	16	15	15	15	14	13	22	16	22	21	23	22	23	17	16	15	15	14	13	15	15	16
28	16	15	14	15	15	14	15	15	16	19	20	26	18	20	19	16	15	16	15	13	16	14	15	16
29	15	15	16	15	15	15	14	14	17	19	25	21	20	28	20	17	16	14	14	13	15	16	15	15
30	16	15	14	16	15	13	15	16	15	18	20	18	28	20	18	16	16	16	12	14	14	15	15	16
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	15	15	15	14	15	14	14	15	16	18	22	22	23	22	20	18	16	14	15	15	15	15	15	15
U Q	15	15	15	15	15	15	15	16	18	20	24	25	24	26	24	20	16	15	15	15	15	16	16	16
L Q	15	15	14	14	14	14	14	14	15	18	19	20	20	20	18	16	15	14	14	14	14	14	15	15

IONOSPHERIC DATA STATION Kokubunji

JUN. 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	303	291	297	256	287	325	378	A	A	A	288	311	321	310	310	292	316	341	345	303	297	F
2	F	290	295	292	311	367	341	350	327	302	287	309	315	306	303	313	330	316	S 312	A	311	F	F	F
3	F	F	F	322	324	341	338	334	338	A	297	285	306	297	301	307	301	315	A	320	302	303	F	297
4	302	F	308	F	315	315	326	A	328	338	A	305	300	291	287	295	314	310	303	330	332	F	297	286
5	300	294	A	284	F	341	344	A	343	339	A	269	260	296	297	A	306	291	282	302	302	A	272	296
6	298	313	A	F	F 295	315	332	343	347	A	A	A	298	300	295	306	292	316	317	327	335	F	297	F
7	F	F	F	F	312	304	319	344	319	316	285	272	293	305	288	277	290	309	279	310	300	292	F	F
8	292	280	306	303	333	312	325	341	310	A	309	310	316	300	311	298	294	308	307	310	318	299	F	F
9	A	297	F	F	F	348	338	347	A	A	336	316	301	293	302	303	293	303	311	A	337	293	F	F
10	F	307	F	307	296	F	303	299	336	340	A	A	A	311	321	314	298	300	296	316	321	287	F	F
11	F	F	F	F	F	291	303	351	A	A	A	A	A	301	A	290	317	310	318	324	A	298	279	A
12	F	F	F	F	F	298	343	352	375	361	321	A	305	319	A	309	A	299	304	319	333	276	A	F
13	A	F	F	A	A	258	A	251	A	A	A	A	A	279	287	A	A	316	330	A	252	259	F	271
14	267	F	F	322	309	345	293	A	314	A	A	A	319	A	328	325	326	319	319	332	332	287	273	289
15	F	F	F	F	F	337	304	277	301	302	333	317	280	275	287	288	299	300	298	294	319	291	301	290
16	294	268	292	297	301	271	290	334	A	R	R	R 279	R	285	300	A	318	A	332	311	299	280	273	283
17	299	318	314	307	302	342	301	A	A	A	A	A	A	A	A	313	313	339	314	317	295	F	F	A
18	F	299	303	293	310	276	323	346	A	A	A	A	A	A	A	299	304	317	339	335	293	296	296	290
19	300	F	303	334	347	V 338	303	297	338	367	332	A	289	A	314	A	309	326	326	329	324	286	304	F
20	284	308	F	F	F	296	332	321	340	286	311	A	A	A	321	309	A	A	A	A	A	A	296	296
21	298	F	F	326	310	323	287	328	367	353	292	314	A	A	A	A	A	314	A	339	312	A	A	A
22	A	A	285	317	309	340	314	334	331	A	322	A	A	A	305	315	323	337	306	312	308	S 320	F	F
23	A	F	317	F	F	337	328	343	374	352	A	A	A	A	277	262	295	303	274	310	336	296	272	278
24	A	310	358	273	282	301	315	323	298	334	315	A	307	258	298	320	324	309	310	313	298	294	287	307
25	295	304	318	317	318	352	297	347	333	A	A	271	301	276	A	286	292	285	298	354	374	288	305	F
26	296	F	F	F 318	298	321	311	344	356	336	A	A	A	278	279	303	301	312	317	346	297	S	307	290
27	289	F	F	291	298	297	320	328	343	347	322	297	297	305	312	321	308	A	319	323	338	F	F	F
28	F	292	317	F	F	362	323	A	328	354	347	A	A	A	287	A	308	314	322	357	298	301	287	F
29	A	F	A	F	F	379	344	A	330	317	A	A	A	A	A	318	304	332	317	312	330	320	292	F
30	F	302	F	F	305	309	326	365	344	370	302	296	302	294	A	314	A	329	A	310	320	S	254	S 294
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	13	14	13	17	20	29	29	24	24	17	15	13	17	20	22	24	25	27	26	26	28	20	18	13
MED	296	300	306	307	309	321	320	338	337	339	315	297	301	296	300	308	306	312	313	320	318	294	294	290
U Q	300	308	317	320	314	342	332	346	346	354	332	312	306	305	312	314	316	317	319	332	332	300	297	296
L Q	290	292	299	292	298	298	303	324	328	316	297	276	291	282	287	296	296	303	303	311	300	287	273	284

JUN. 2005 M(3000)F2 (0.01)

IONOSPHERIC DATA STATION Kokubunji

JUN. 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 310	346	365	A	A	A	A	U L 378	A	A	A	A	L	L					
2						L	L	A	A	A	A	L 404	L 392	391	A	372	379	A	A	A				
3							A	A	A	A	A	A	397	L 371	374	A	A	A	A					
4							A	A	L 400	L	A	410	409	L 382	385	381	A	A	A					
5							A	A	L 377	A	A	A	A	A	386	A	A	A	L					
6						L	A	A	A	A	A	A	A	375	A	L 371	364	L	L					
7							A	A	A	L 383	392	A	A	A	A	A	L 337	L 368						
8							L	L	A	A	403	A	A	A	379	380	364	A	A					
9							L	L	A	A	422	L 372	406	399	382	385	376	352	A					
10							L	A	A	A	A	A	A	A	A	380	L 354	L 351	L					
11							L 340	A	A		A	A	A	A	A	A	A	A	A					
12						L 325	L	L 379	L 402	411	A	A	A	A	A	L 357	A	A	A					
13						U L 326	A	A	A	A	A	A	A	381	A	A	A	A	A					
14							A	A	A	A	A	A	A	A	A	L 380	A	A	A					
15						A	U L 373	L 339	379	A	407	427	A	393	A	369	L 365	358	L					
16						A	363	A	A	U L 404	U L 421	U L 407	U L 379	401	A	A	A	A	A					
17							346	A	A	A	A	A	A	A	A	A	L 361	L	A					
18						U L 335	L 373	A	A	A	A	A	A	A	A	A	A	L 361	L					
19							A	A	390	407	U L 404	A	433	A	408	A	A	A	A					
20						L 347	375	A	A	A	A	A	A	A	A	370	A	A	A					
21								L	L 398	L 402	425	A	A	A	A	A	A	A	A					
22							L 375	A	A	A	422	A	A	A	394	366	A	A	A					
23						L	L	A	A	418	A	A	A	A	400	A	378	367	339					
24						A	A	A	A	A	A	A	A	A	A	377	L	L 341	L					
25							U L 354	A	A	A	A	U L 399	A	374	A	A	A	A	A					
26						L	L 343	A	A	A	A	A	A	A	A	364	L 379	L 349	L					
27						L 338	A	A	424	430	A	414	A	391	397	A	L 356	A	A					
28							L	A	A	A	A	A	A	A	A	A	A	364	L					
29								A	A	A	A	A	A	A	A	A	A	A						
30							L 351	L 380	A	407	411	U L 448	A	426	A	A	A	A	A					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						6	11	4	7	8	9	8	7	11	9	13	11	9	1					
MED						L 330	L 354	L 372	L 398	407	411	L 408	397	391	386	372	L 364	L 358	339					
U Q						L 338	L 373	L 380	402	414	422	420	409	399	398	380	378	366						
L Q						L 325	L 346	352	379	L 403	404	L 402	U L 379	375	380	368	L 356	L 350						

JUN. 2005 M(3000)F1 (0.01)

IONOSPHERIC DATA STATION Kokubunji

JUN. 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						476	398	296	242	A	A	A	384	336	310	E A 334	E A 350	320	266					
2						236	268	250	298	E A 370	E A 374	336	390	340	336	296	270	268	E A 276	A				
3							E A 264	E A 292	E A 272	A	E A 370	E A 378	342	362	354	330	308	292	A					
4							278	A	268	290	A	344	348	382	388	340	320	306	E A 276					
5							270	A	280	292	A	438	E A 472	E A 336	346	A	316	E A 340	320					
6						294	252	240	E A 268	A	A	A	352	342	336	322	300	270	262					
7							264	250	E A 298	280	378	350	310	294	E A 318	368	308	272						
8							298	280	E A 338	A	318	314	320	348	326	360	342	294	276					
9							250	250	A	A	288	320	354	352	316	314	316	294	264					
10							306	E A 392	264	262	A	A	A	330	304	322	338	318	288					
11							328	256	A		A	A	A	E A 370	A	E A 324	286	E A 296	254					
12						352	262	238	242	262	316	A	E A 360	E A 320	A	312	A	310	286					
13						470	A	476	A	A	A	A	A	444	410	A	A	322	260					
14							396	A	E A 370	A	A	A	342	A	E A 312	298	300	290	E A 262					
15						E A 292	322	364	324	E A 302	294	346	E A 324	448	E A 418	370	324	296	282					
16						E A 374	378	294	A	R	R	454	478	434	392	A	324	A	E A 260					
17							358	A	A	A	A	A	A	A	A	334	326	284	E A 312					
18						372	284	254	A	A	A	A	A	A	A	352	302	270	258					
19							364	E A 370	286	264	304	A	418	A	348	A	328	272	252					
20						328	298	E A 332	296	E A 342	E A 308	A	A	A	E A 326	324	A	A	A					
21								282	254	282	408	334	A	A	A	A	A	E A 324	A					
22							316	E A 270	E A 274	A	324	A	A	A	342	302	296	E A 302	306					
23						278	282	274	242	280	A	A	A	A	354	382	306	286	314					
24						E A 326	292	282	E A 328	264	E A 328	A	316	422	306	268	256	288	276					
25							398	268	300	A	A	436	E A 354	402	A	E A 320	306	324	286					
26						274	324	E A 268	256	300	A	A	A	392	360	302	308	278	250					
27						362	296	264	270	304	340	382	E A 378	326	302	282	322	A	286					
28							314	A	312	260	272	A	A	A	E A 408	A	E A 292	276	254					
29								A	E A 280	E A 316	A	A	A	A	A	E A 298	E A 342	264						
30							298	228	264	290	376	376	E A 354	356	A	326	A	E A 282	A					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						13	27	24	24	17	15	13	18	20	22	24	25	27	24					
MED						327	298	266	272	U 277	316	348	350	352	335	322	308	288	274					
U Q						373	328	295	299	E A 303	374	409	384	397	360	337	325	310	286					
L Q						285	270	252	264	264	304	335	342	336	316	302	300	276	260					

JUN. 2005 h'F2 (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUN. 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 B 258	E B 288	E B 264	E B 280	E B 272	E A 322	242	E A 262	A	A	A	A	E A 240	A	A	A	A	232	218	232	224	242	E B 252	E B 260
2	E A 272	E B 276	E B E A 284	E A 298	E B 264	A	198	A	A	A	A	210	208	E A 252	A	216	218	A	A	A	238	E A 288	226	218
3	E A 270	E A 310	E A 274	234	236	228	A	A	A	A	A	A	216	E A 242	228	A	A	A	A	E A 256	E A 328	E A 282	E A 306	E A 320
4	E A 290	E A 272	E A 254	E A 258	242	226	A	A	196	E A 236	A	202	200	232	H 194	206	A	A	A	230	236	E A 326	E A 276	E A 276
5	E A 294	E A 302	A	E A 302	E A 294	228	A	A	204	A	A	A	A	A	226	A	A	A	E A 268	E A 266	E A 294	A	E A 394	E A 312
6	E A 306	E A 296	A	E A 344	E A 318	266	A	A	A	A	A	A	A	E A 238	A	218	230	214	230	236	218	E A 296	238	E A 258
7	E A 384	E A 292	E A 234	216	E B 248	234	A	A	A	210	206	A	A	A	A	A	226	220	230	254	E A 268	E A 336	E A 324	E B 246
8	E A 270	E A 300	E B 246	252	230	216	220	238	A	A	196	A	A	A	214	E A 242	220	A	A	E A 258	E A 240	E A 336	E A 324	E A 320
9	A	E A 312	E A 332	E B 270	E A 250	230	216	210	A	A	204	E A 230	210	214	208	204	210	228	A	A	234	E A 268	E A 296	E A 278
10	E A 336	E A 318	E A 282	E A 314	E A 312	226	A	A	A	A	A	A	A	A	A	206	222	208	236	248	228	E A 340	E A 292	E A 314
11	E A 278	228	228	E A 294	E A 264	E A 236	E A 250	A	A	A	A	A	A	A	A	A	A	A	A	240	A	E A 294	E A 322	A
12	E A 318	E A 276	E A 270	E A 302	E B 274	222	220	208	214	200	A	A	A	A	A	E A 244	A	A	A	238	E A 260	E A 296	A	E A 302
13	A	E A 370	E A 316	A	A	E A 300	A	A	A	A	A	A	A	E A 236	A	A	A	A	A	A	E B 288	E B 330	E A 364	E A 358
14	E A 342	E A 332	E A 280	E A 244	E B 256	228	A	A	A	A	A	A	A	A	A	208	A	A	A	E A 240	214	E A 272	E A 372	E A 318
15	E A 346	E A 268	E A 264	E B 260	E B 250	A	228	212	E A 240	A	H 194	H 188	A	212	A	E A 240	234	218	216	254	226	E A 262	E A 264	E A 296
16	E A 264	E A 322	E A 284	E A 274	E A 272	A	E A 246	A	A	222	H 190	212	E A 250	208	A	A	A	A	A	E A 276	E B 260	E B 316	E B 294	E B 266
17	E B 258	E B 262	E A 302	E A 320	E A 298	E A 254	E A 266	A	A	A	A	A	A	A	A	A	224	218	A	E A 274	E A 324	E A 290	E A 356	A
18	E A 278	E B 254	E B 262	E A 290	E B 274	238	E A 252	A	A	A	A	A	A	A	A	A	A	232	216	224	E A 252	E B 264	E B 264	E A 282
19	E B 272	E A 296	E B 254	218	226	212	A	A	204	206	208	A	190	A	206	A	A	A	A	232	224	E B 274	E A 286	E B 292
20	E B 264	E A 326	E B 246	E A 286	E A 288	210	E A 252	A	A	A	A	A	A	A	A	214	A	A	A	A	A	A	E A 254	E A 260
21	E A 284	E A 288	E A 236	236	E A 256	212	218	A	212	200	H 184	A	A	A	A	A	A	A	A	234	E A 240	A	A	A
22	A	A	E A 358	E A 276	E A 250	226	224	A	A	A	196	A	A	A	H 186	216	A	A	A	E A 236	E A 278	238	E A 306	244
23	A	E A 308	E A 312	E A 280	E A 256	226	E A 246	A	A	200	A	A	A	A	210	A	210	214	244	254	208	220	E A 328	E A 308
24	A	E A 252	218	E A 324	E A 372	A	A	A	A	A	A	A	A	A	A	214	210	H 202	238	248	E A 298	E A 266	E A 276	238
25	E B 246	E B 260	240	E B 248	238	H 184	202	A	A	A	A	198	A	E A 254	A	A	A	A	A	242	218	E A 330	E A 274	E A 282
26	E A 302	E A 280	E A 280	E A 260	E A 274	212	226	A	A	A	A	A	A	A	A	E A 234	212	210	214	210	226	262	E B 236	E B 238
27	E B 272	E A 250	E B 278	E B 280	E B 270	224	A	A	200	200	A	H 182	A	210	218	A	220	A	A	E A 340	E A 258	E A 336	E A 258	E A 274
28	E A 296	E A 322	280	E A 248	E A 290	226	E A 244	A	A	A	A	A	A	A	A	A	A	212	218	220	E A 252	E A 322	E A 334	E A 308
29	A	E A 242	A	E A 298	E A 324	220	E A 268	A	A	A	A	A	A	A	A	A	A	A	E A 288	E A 252	218	212	E A 316	E A 276
30	E A 272	240	E A 322	E A 262	E A 288	E A 290	222	A	A	192	H 180	H 180	A	H 192	A	A	A	A	A	E A 260	246	E A 248	E A 362	E A 288
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	29	27	29	29	26	19	5	7	9	9	8	7	11	9	13	12	12	12	26	28	27	28	27
MED	E A 278	E A 288	E A 274	E A 276	E A 270	224	U 215	211	204	200	196	196	205	U 212	210	211	220	216	224	238	U 228	E A 288	E A 295	E A 282
U Q	E A 304	E A 311	E A 284	E A 298	E A 289	E A 236	E A 250	250	214	216	205	211	E A 240	E A 242	222	E A 237	225	224	241	E A 256	E A 264	E A 326	E A 326	E A 308
L Q	E B 270	E B 261	E 246	250	250	220	220	209	200	200	H 187	H 185	200	210	H 200	207	211	211	217	234	225	262	E 264	E 260

JUN. 2005 h'F (KM)

IONOSPHERIC DATA STATION Kokubunji

JUN. 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						116	120	120	118	A	A	A	B	A	A	A	A	A	A	B				
2						122	116	116	A	A	A	A	A	A	A	A	A	A	A	B				
3						118	A	A	A	A	A	A	A	114	114	A	118	114	A					
4						118	A	A	112	B	A	112	118	118	116	116	112	116	112					
5						A	A	A	A	A	A	A	A	A	114	114	118	A	A					
6						118	120	A	A	A	A	A	A	A	124	118	118	118	120					
7						118	A	A	A	A	A	A	A	A	A	A	116	116	A					
8						116	122	120	A	A	A	A	A	A	A	A	116	118	112					
9						A	A	A	A	A	A	A	A	114	A	A	112	114	116					
10						A	120	A	A	A	A	A	A	A	A	A	A	120	114					
11						A	A	A	A		A	A	A	A	A	A	114	A	A					
12						116	122	116	A	A	A	A	A	112	B	118	116	114	A					
13						A	116	116	116	A	A	A	A	116	116	110	A	A	A					
14						B	110	118	A	116	A	A	A	A	A	116	A	116	116					
15						A	A	118	114	A	114	120	120	116	A	122	120	120	120					
16						114	116	A	A	A	116	116	116	118	A	A	A	A	A					
17						A	120	114	110	A	A	A	A	A	A	A	A	A	A					
18						B	118	A	A	A	A	A	114	A	A	A	A	A	A					
19						A	120	116	114	A	110	110	112	A	A	A	A	A	A					
20						126	120	112	A	A	A	A	A	A	A	114	A	A	A					
21						A	124	118	A	A	A	A	A	A	A	A	A	A	A					
22						B	124	A	A	A	A	A	A	A	A	A	118	A	A					
23						A	A	A	A	A	A	A	A	A	118	116	116	118	118					
24						122	110	114	114	A	A	A	A	A	A	A	A	118	122					
25						A	118	118	A	A	A	A	A	A	A	A	A	A	A					
26						A	A	A	A	A	A	A	A	A	114	112	112	A	A					
27						124	A	A	A	A	A	A	A	118	A	A	A	A	A					
28						A	116	A	A	A	A	A	A	A	A	A	A	118	A					
29						A	118	118	A	A	A	A	A	A	A	A	A	A	A					
30						A	A	A	A	A	118	116	A	116	A	118	A	116	A					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						12	19	14	7	1	4	5	5	9	7	11	13	14	9					
MED						118	120	117	114	116	115	116	116	116	116	116	116	117	116					
U Q						122	120	118	116		117	118	119	118	118	118	118	118	120					
L Q						116	116	116	112		112	111	113	114	114	114	113	116	113					

IONOSPHERIC DATA STATION Kokubunji

JUN. 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	92	B	96	122	118	128	126	120	112	104	104	104	106	104	106	102	102	102	102	116	110	104	106	96
2	96	96	96	94	94	94	136	120	106	104	102	102	102	102	102	100	104	100	90	104	104	104	104	100
3	92	94	90	90	92	112	102	100	100	102	100	96	98	162	126	120	112	106	100	98	98	98	104	100
4	98	94	94	102	102	G	102	100	112	102	100	116	104	124	120	122	120	112	108	102	102	102	98	98
5	100	98	90	94	96	96	106	104	104	100	100	98	98	100	130	112	118	106	106	100	100	98	100	96
6	96	96	94	98	100	118	112	102	106	98	100	100	100	102	124	112	116	118	112	102	100	100	98	100
7	94	96	92	94	B	G	106	104	102	102	102	98	100	100	100	98	114	116	104	102	104	104	104	98
8	94	94	90	92	90	130	120	114	106	106	104	98	100	98	98	100	122	114	108	104	102	102	104	96
9	98	98	96	98	102	106	102	104	102	96	102	102	104	104	104	104	100	120	108	102	102	102	104	100
10	100	96	96	92	94	98	120	104	100	98	96	96	94	98	98	98	96	96	118	94	94	102	98	98
11	96	104	98	90	96	92	116	104	102	100	94	94	98	98	96	96	112	104	104	100	96	98	100	96
12	96	94	92	86	86	116	126	118	106	106	102	100	98	116	112	120	110	112	106	106	98	96	104	100
13	100	98	100	92	92	98	116	116	112	100	98	98	100	126	124	110	102	102	106	106	114	120	108	100
14	110	102	104	102	104	124	120	114	106	114	104	102	104	102	104	120	106	118	112	104	B	94	106	104
15	102	100	100	90	98	98	98	124	118	104	124	122	122	118	106	118	114	106	116	110	104	98	100	106
16	106	106	106	102	102	118	114	106	98	104	116	136	116	124	108	102	106	100	102	100	108	118	108	B
17	102	102	98	98	98	98	138	114	116	104	106	106	100	100	96	98	100	100	100	96	102	106	104	102
18	100	100	100	98	100	148	116	106	104	106	106	108	116	104	106	106	106	104	102	102	100	106	106	112
19	108	88	110	B	96	104	122	114	116	108	G	112	126	104	108	106	104	104	100	B	94	90	106	104
20	104	102	96	96	96	140	120	112	104	102	102	100	112	96	100	116	106	106	104	100	102	100	98	100
21	100	100	98	98	96	100	116	118	104	106	106	98	108	102	100	100	100	100	102	98	96	100	100	96
22	92	88	88	88	86	106	116	102	102	102	102	102	98	96	98	100	118	106	104	104	102	108	104	100
23	98	98	96	96	100	104	100	102	104	108	102	98	96	102	100	114	102	102	112	104	104	100	100	98
24	92	98	94	116	120	120	116	116	112	106	102	100	100	100	98	100	102	118	114	112	104	102	102	96
25	B	114	104	B	98	98	160	116	104	102	100	100	98	98	100	100	100	98	102	96	98	92	94	94
26	96	92	94	106	114	106	104	102	102	102	100	98	96	96	112	112	112	108	102	B	94	94	92	90
27	94	96	94	B	B	124	102	102	106	104	104	104	94	106	104	98	120	94	92	112	108	102	102	98
28	98	96	96	94	94	94	116	100	106	104	104	102	100	98	108	94	94	114	114	94	110	102	108	104
29	100	98	96	88	92	92	120	110	106	104	98	96	96	102	102	96	98	96	92	106	92	94	94	96
30	102	102	104	102	100	100	100	104	104	102	118	110	104	116	102	112	106	112	98	98	112	106	110	106
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	29	30	27	28	28	30	30	30	30	29	30	30	30	30	30	30	30	30	28	29	30	30	29
MED	98	98	96	96	97	105	116	106	105	104	102	100	100	102	104	103	106	106	104	102	102	102	104	100
U Q	101	101	100	102	101	119	120	116	106	106	104	104	104	106	108	112	114	112	108	105	104	104	106	101
L Q	95	95	94	92	94	98	104	102	102	102	100	98	98	98	100	100	102	100	102	99	98	98	100	96

JUN. 2005 h'Es (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

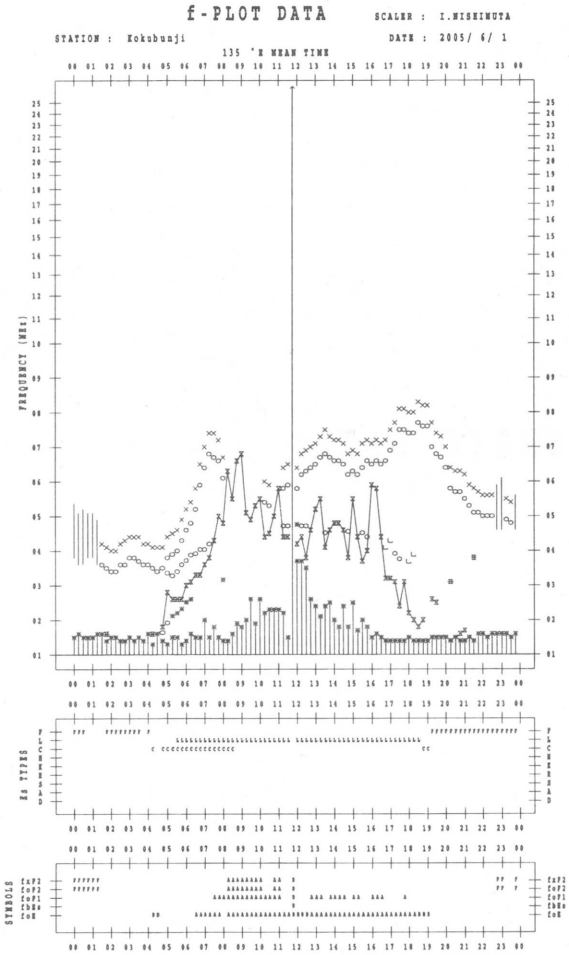
JUN. 2005 TYPES OF Es 135°E MEAN TIME (G.M.T. + 9 H)

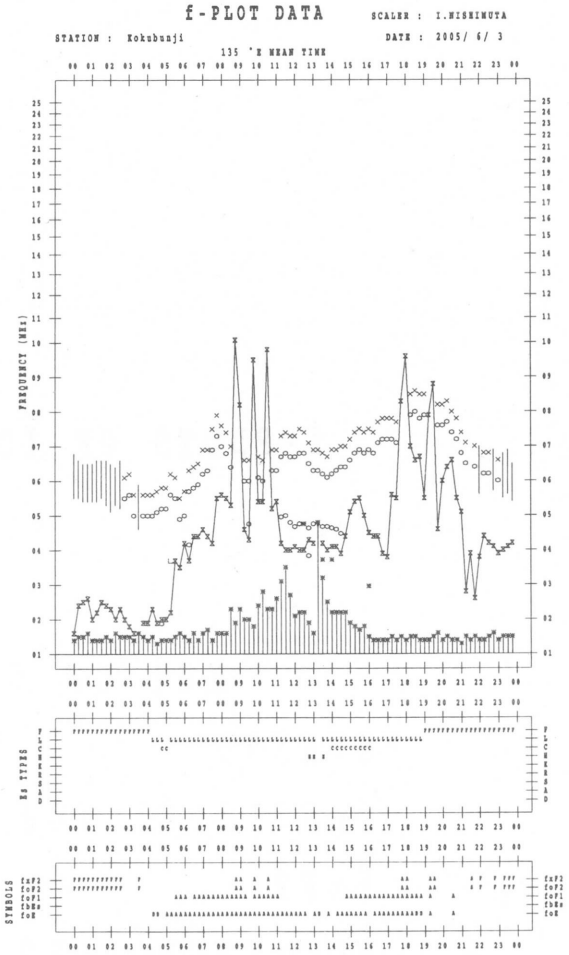
LAT.35°42.4'N LON.139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

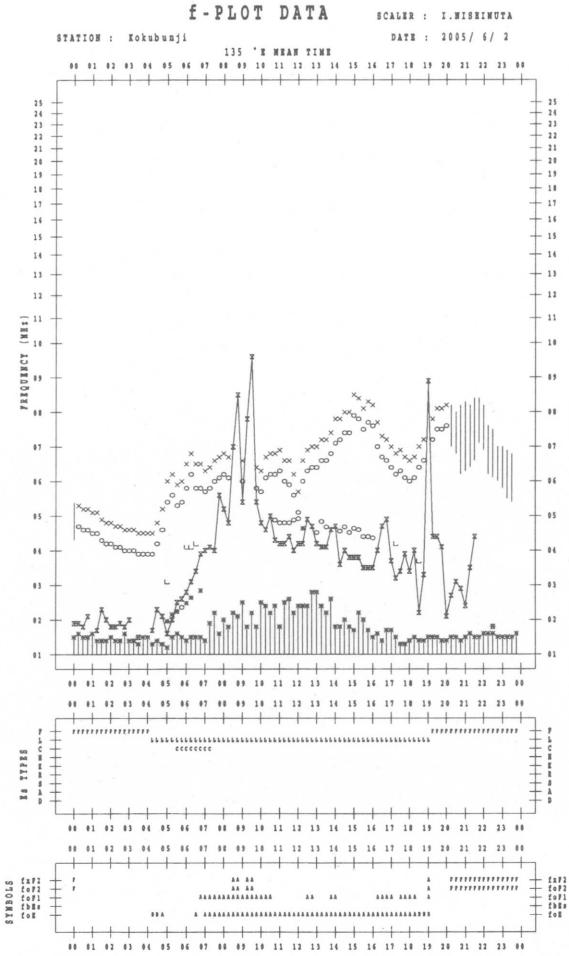
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F 1		F 2	F 2	F 1	C 2	CL 11	CL 21	CL 31	L 3	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 3	C 2	F 2	F 2	F 2	F 2
2	F 2	F 2	F 2	F 3	F 2	L 2	CL 11	CL 21	L 3	L 2	L 2	L 2	L 1	L 1	L 2	L 2	L 2	L 3	L 3	L 5	F 3	F 3	F 2	F 3
3	F 2	F 2	F 2	F 2	F 2	C 2	L 2	L 2	L 2	L 2	L 2	L 2	L 2	HL 11	CL 11	CL 32	CL 21	L 2	L 6	F 4	F 4	F 3	F 4	F 4
4	F 4	F 2	F 2	F 2	F 1		L 3	L 4	CL 11	L 2	L 2	CL 11	L 1	CL 11	CL 11	CL 11	CL 21	CL 31	C 4	F 3	F 3	F 4	F 4	F 3
5	F 4	F 5	F 4	F 3	F 2	L 3	L 2	L 4	L 2	L 2	L 2	L 2	L 2	L 2	CL 11	CL 52	CL 22	L 3	L 3	F 3	F 3	F 6	F 4	F 4
6	F 4	F 4	F 5	F 3	F 4	C 2	CL 42	L 3	L 3	L 3	L 2	L 2	L 2	L 1	CL 21	CL 21	CL 12	CL 21	CL 32	F 4	F 4	F 5	F 3	F 3
7	F 3	F 5	F 4	F 1			L 2	L 2	L 2	L 1	L 2	L 2	L 2	L 2	L 3	L 3	CL 21	CL 21	L 4	F 5	F 5	F 5	F 4	F 2
8	F 3	F 4	F 2	F 2	F 2	HL 11	CL 11	CL 11	L 2	L 3	L 2	L 2	L 2	L 2	L 1	L 2	CL 12	CL 31	CL 62	F 4	F 3	F 6	F 3	F 4
9	F 4	F 4	F 4	F 2	F 3	L 2	L 2	L 2	L 3	L 3	L 2	L 1	L 1	L 1	L 1	L 2	L 2	CL 22	CL 32	F 4	F 5	F 4	F 4	F 4
10	F 5	F 6	F 5	F 3	F 4	L 2	CL 22	L 4	L 2	L 2	L 3	L 3	L 3	L 2	L 2	L 2	L 2	L 1	CL 22	F 5	F 4	F 4	F 4	F 4
11	F 3	F 1	F 2	F 2	F 3	L 3	CL 22	L 3	L 4	L 4	L 4	L 3	L 3	L 2	L 4	L 3	CL 32	L 4	L 5	F 3	F 6	F 5	F 4	F 5
12	F 3	F 4	F 2	F 2	F 1	C 2	CL 21	CL 11	L 2	L 2	L 2	L 3	L 2	CL 21	C 2	CL 21	CL 31	CL 31	L 3	F 5	F 4	F 4	F 4	F 4
13	F 4	F 4	F 6	F 4	F 3	L 3	CL 31	CL 21	CL 21	L 3	L 2	L 2	L 2	CL 11	CL 11	CL 21	L 3	L 3	L 3	F 3	F 2	F 2	F 3	F 4
14	FF 24	F 3	F 2	F 3	F 2	C 2	C 3	C 3	L 2	CL 21	L 3	L 3	L 2	L 3	L 3	CL 11	L 2	CL 21	CL 31	F 5		F 3	F 4	F 5
15	F 5	F 2	F 3	F 3	F 3	L 3	L 2	CL 11	CL 11	L 2	CL 11	CL 11	CL 11	CL 11	L 2	CL 11	C 1	L 1	CL 12	F 1	F 3	F 4	F 2	FF 32
16	F 3	F 2	F 4	F 3	F 4	C 3	CL 21	L 3	L 3	L 2	CL 11	CL 11	CL 11	CL 11	L 2	L 3	L 2	L 5	L 3	F 3	F 2	F 3	F 2	
17	F 1	F 2	F 3	F 4	F 2	L 4	HL 11	CL 21	CL 21	L 3	L 2	L 3	L 4	L 3	L 3	L 2	L 2	L 2	L 4	F 3	F 5	F 3	F 6	F 4
18	F 2	F 2	F 1	F 2	F 1	HL 11	CL 21	L 2	L 3	L 2	L 3	L 3	CL 11	L 3	L 3	L 3	L 2	L 3	L 2	F 3	F 3	F 1	F 2	F 3
19	F 2	F 2	FF 21		F 3	L 2	CL 21	CL 21	CL 21	L 1		C 2	CL 11	L 3	L 2	L 3	L 2	L 2	L 3		F 3	F 2	F 4	F 2
20	F 2	F 4	F 2	F 3	F 3	H 2	CL 21	CL 31	L 2	L 3	L 2	L 3	L 3	L 2	L 2	CL 11	L 3	L 4	L 6	F 5	F 3	F 5	F 4	F 3
21	F 4	F 3	F 3	F 3	F 3	L 2	CL 22	CL 22	L 2	L 1	L 1	L 2	CL 31	L 4	L 3	L 4	L 4	L 5	L 4	F 3	F 3	F 4	F 5	F 5
22	F 4	F 3	F 3	F 1	F 2	L 1	C 2	L 4	L 3	L 3	L 2	L 2	L 3	L 3	L 2	L 2	CL 22	L 4	L 5	F 4	F 3	FF 32	F 5	F 4
23	F 4	F 4	F 5	F 5	F 4	L 2	L 2	L 2	L 2	L 2	L 2	L 3	L 3	L 3	L 1	CL 21	L 1	L 1	CL 21	F 4	F 1	F 3	F 3	F 3
24	F 6	F 3	F 3	F 3	FF 33	CL 31	C 3	CL 21	CL 31	L 3	L 3	L 3	L 2	L 2	L 2	L 1	L 1	CL 11	CL 32	F 3	F 4	F 3	F 3	F 3
25		F 2	F 1		F 2	L 2	HL 11	CL 21	L 3	L 3	L 3	L 2	L 2	L 2	L 3	L 3	L 3	L 4	L 3	F 4	F 5	F 4	F 4	F 3
26	F 3	F 2	F 2	F 2	F 1	L 2	L 2	L 4	L 2	L 3	L 4	L 4	L 4	L 3	CL 21	CL 21	CL 21	L 1	L 2		F 2	F 3	F 2	F 2
27	F 2	F 2	F 2			C 2	L 3	L 2	L 2	L 1	L 2	L 1	L 2	L 1	L 2	L 2	CL 21	L 4	L 2	FF 24	FF 44	F 5	F 3	F 4
28	F 5	F 5	F 4	F 3	F 4	L 2	CL 22	L 3	L 2	L 2	L 2	L 3	L 2	L 3	L 3	L 3	L 4	CL 11	CL 23	F 2	FF 32	F 2	F 6	F 6
29	F 4	F 4	F 3	F 3	F 3	L 3	CL 31	CL 31	L 3	L 2	L 2	L 3	L 3	L 3	L 3	L 3	L 3	L 4	L 3	FF 23	F 3	F 1	F 3	F 4
30	F 4	F 4	F 4	F 2	F 5	L 3	L 2	L 1	L 2	L 2	CL 21	CL 11	L 2	CL 21	L 4	CL 31	L 4	CL 32	L 3	F 3	F 2	F 3	F 4	F 6
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT																								
MED																								
U Q																								
L Q																								

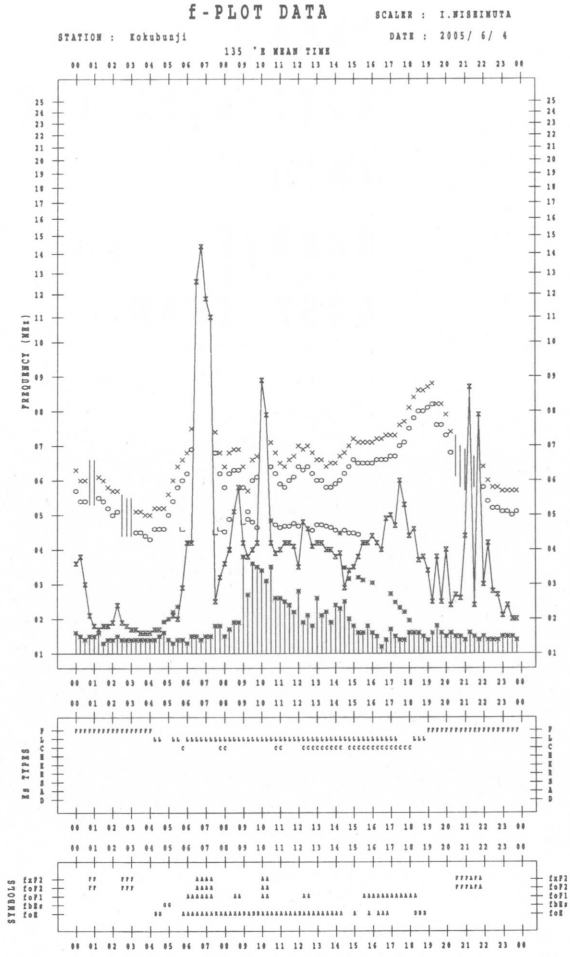
f-PLOTS OF IONOSPHERIC DATA

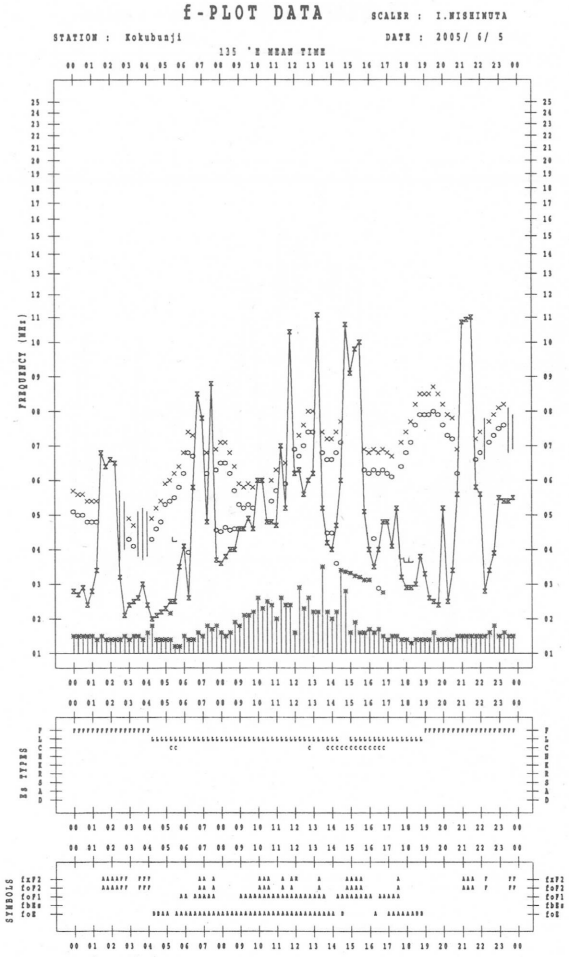
KEY OF f-PLOT	
	SPREAD
	foF2,foF1,foE
	fxF2
	DOUBTFUL foF2,foF1,foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN

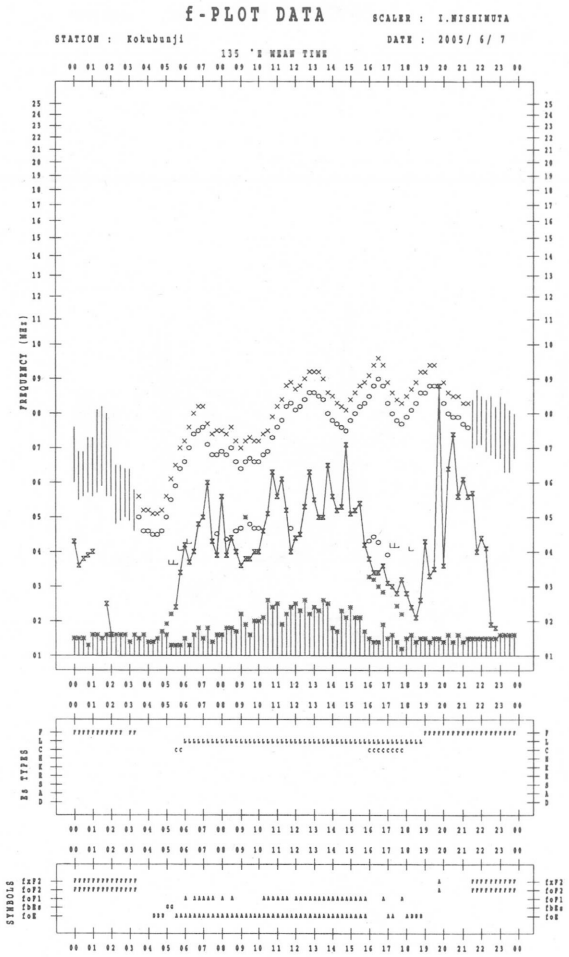

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

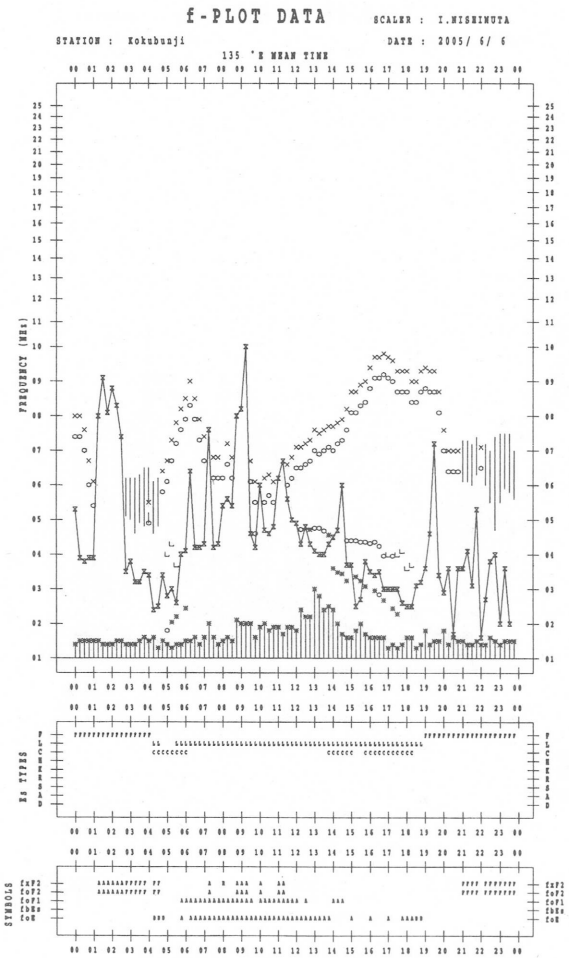

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

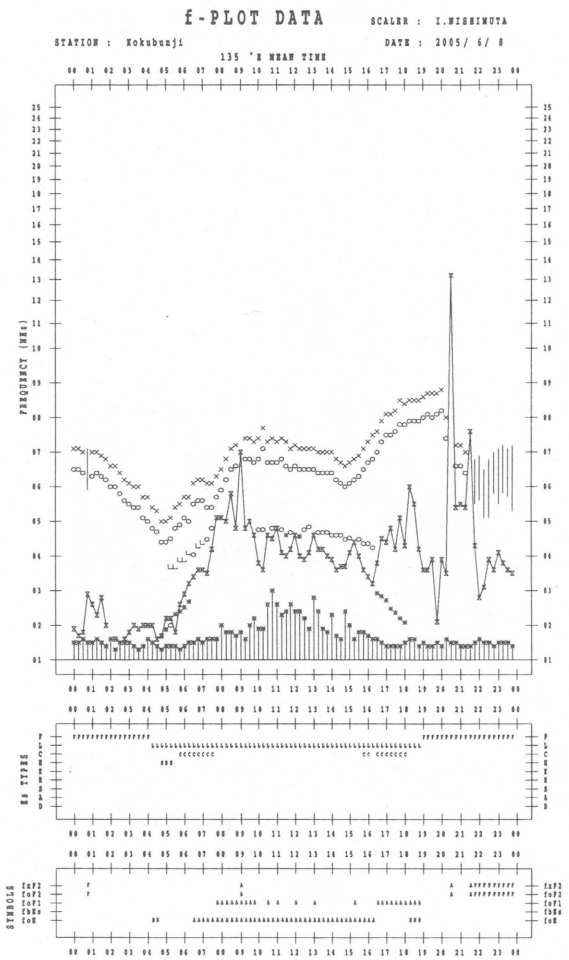

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

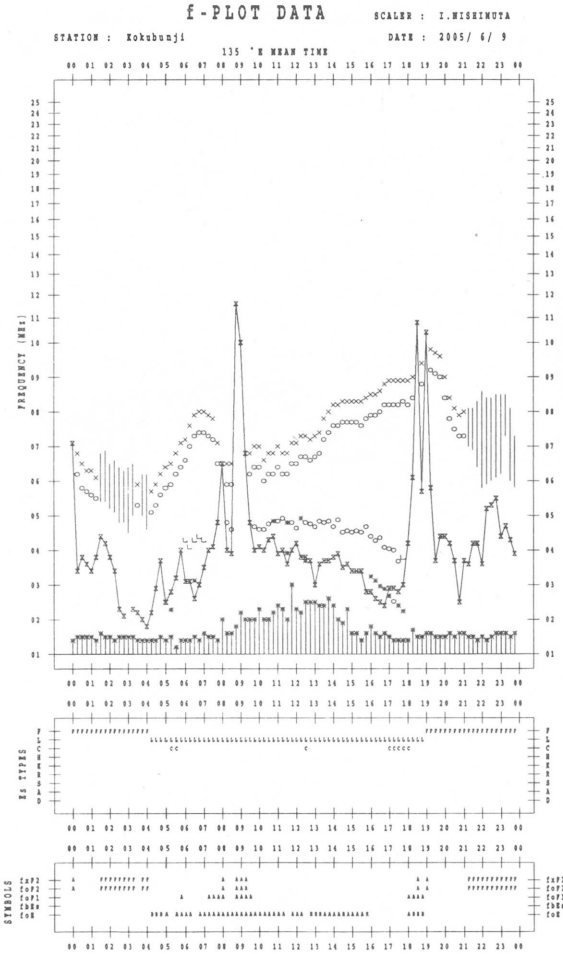

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

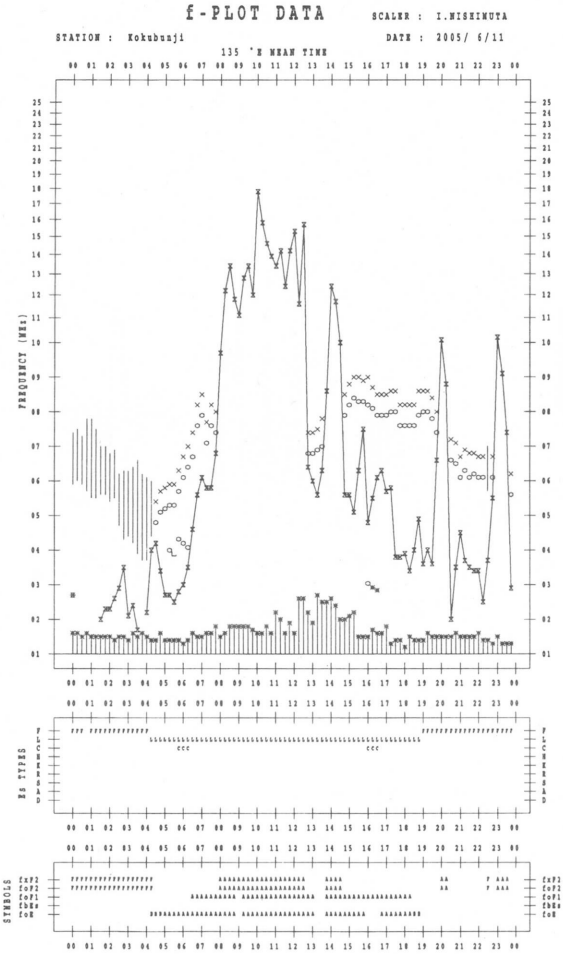

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 5
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

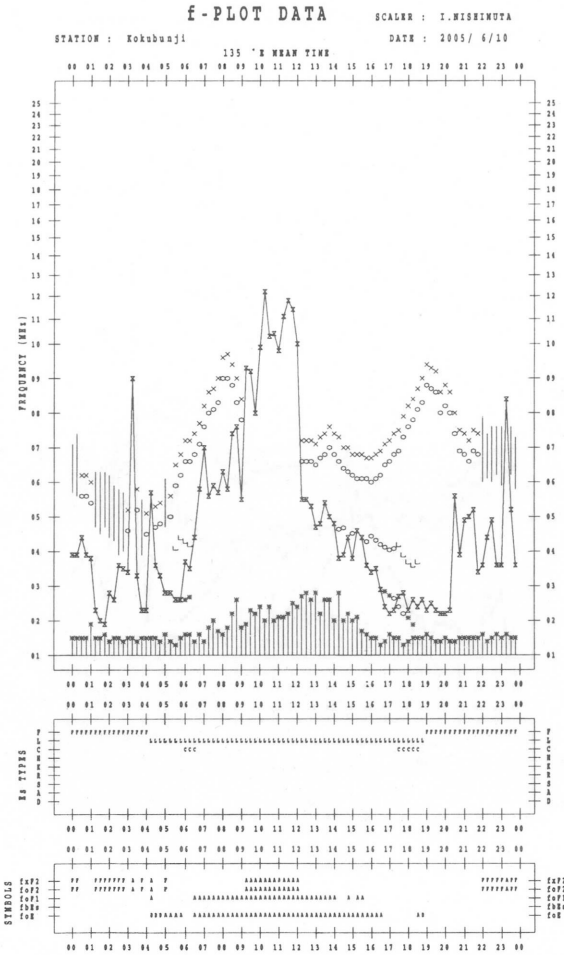

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 7
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

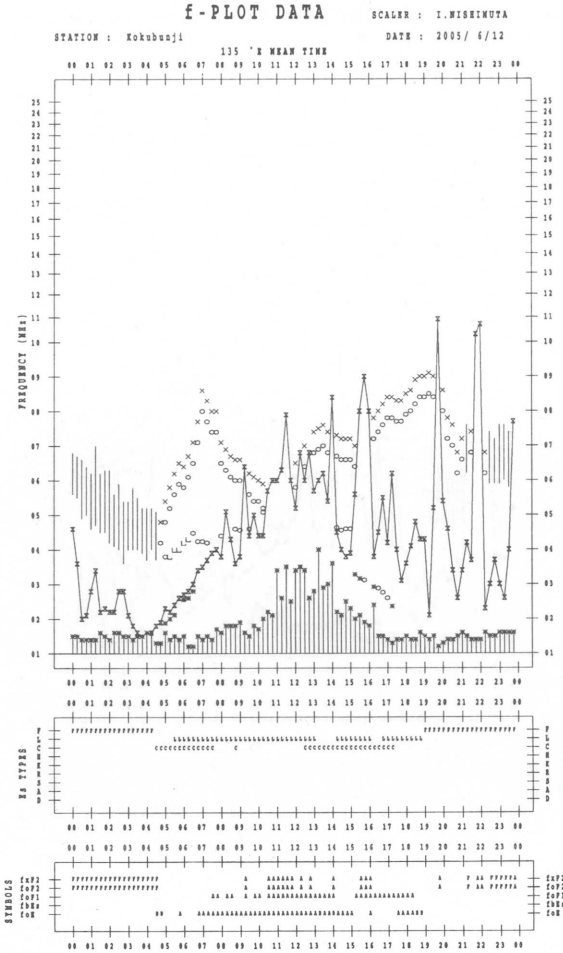

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 6
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

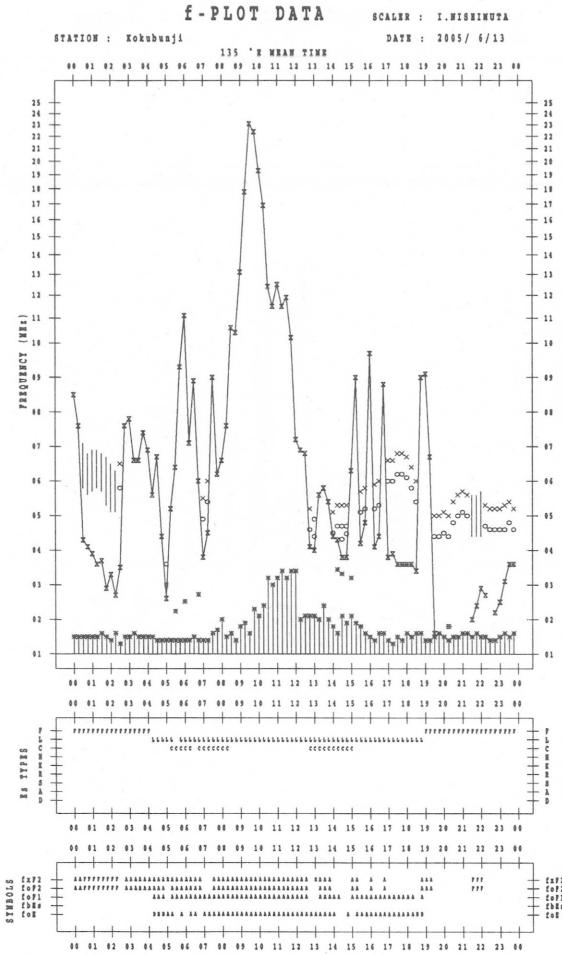

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 8
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

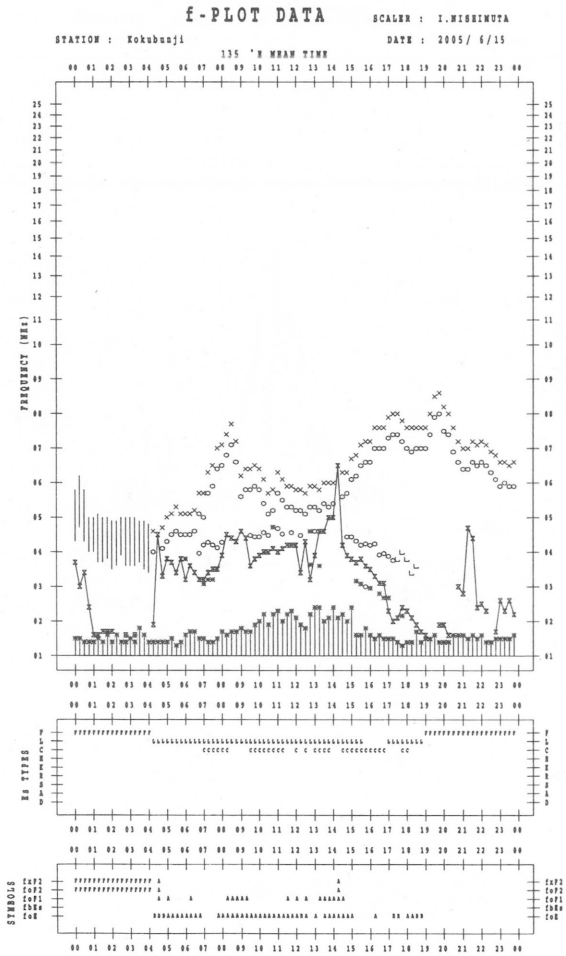

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

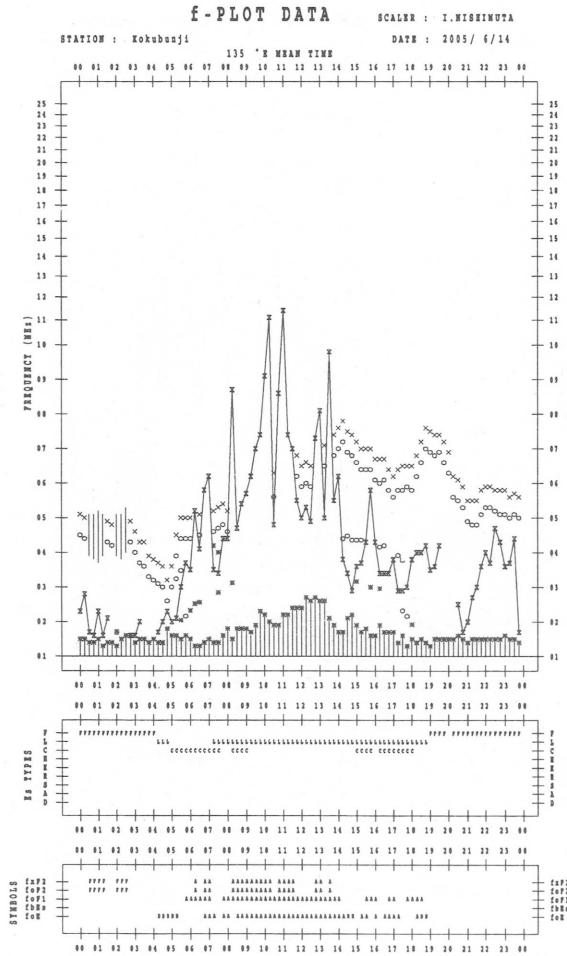

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

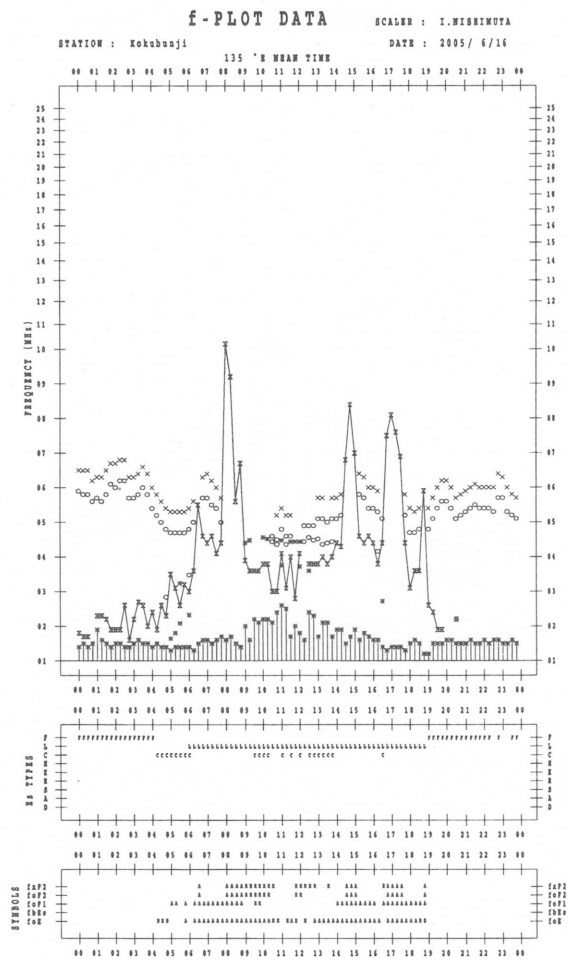

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

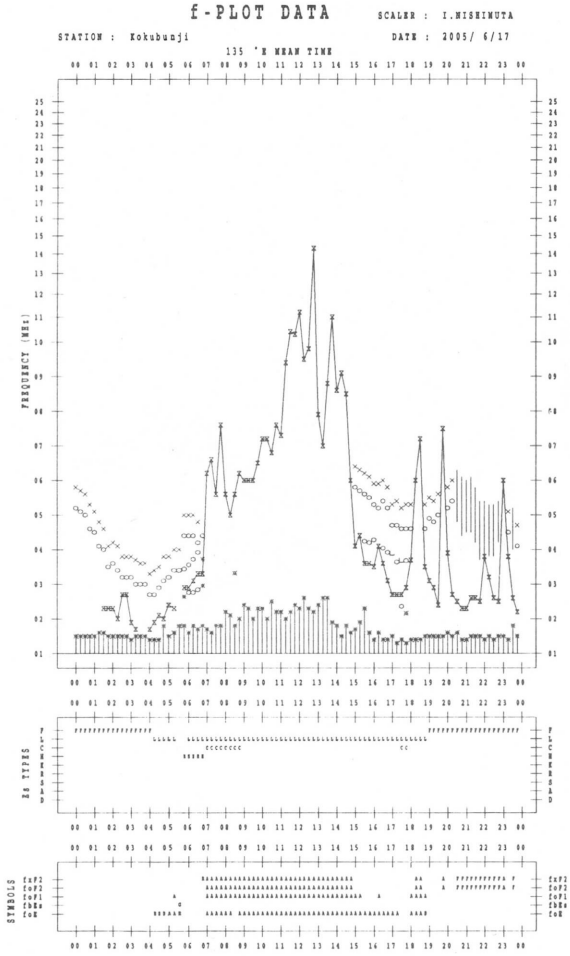

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

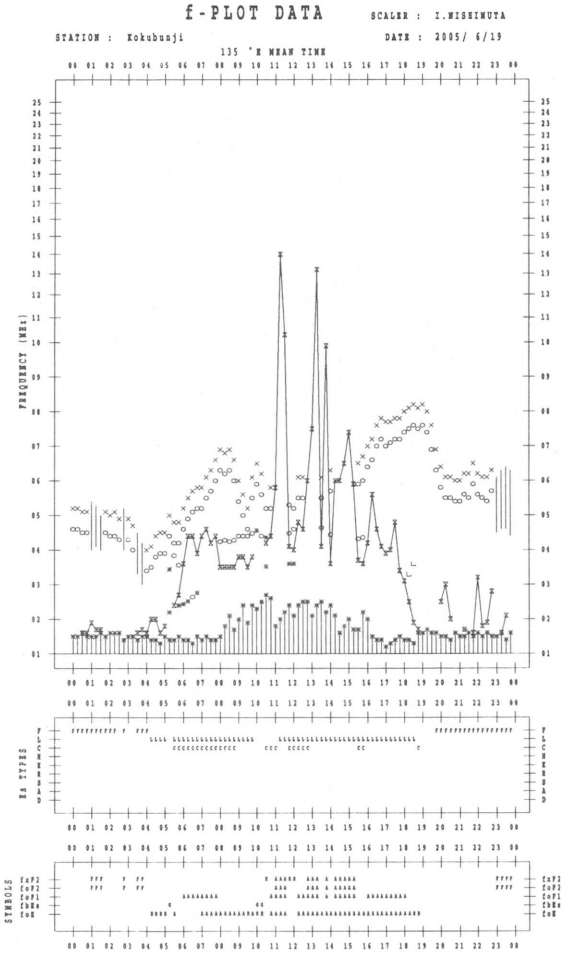

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/13
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

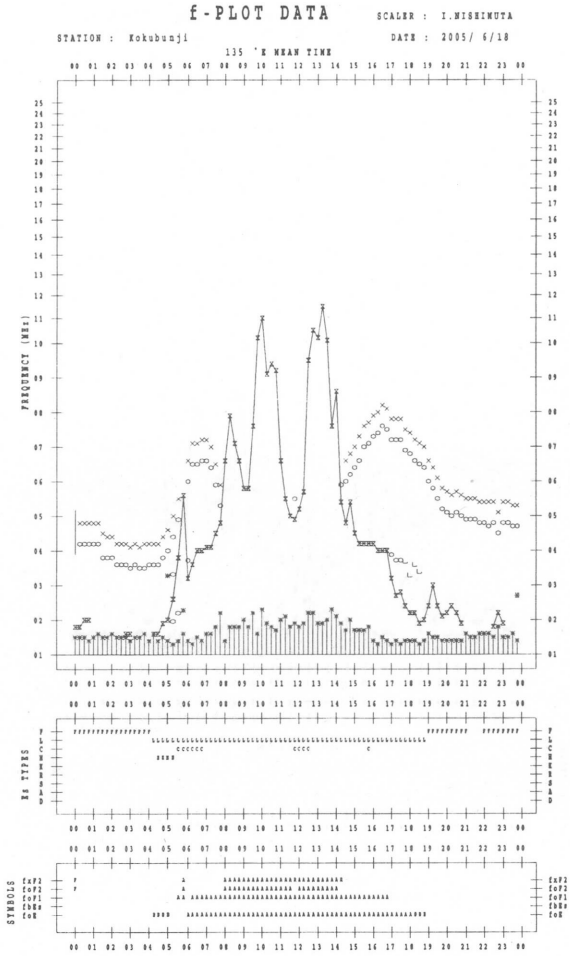

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/15
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

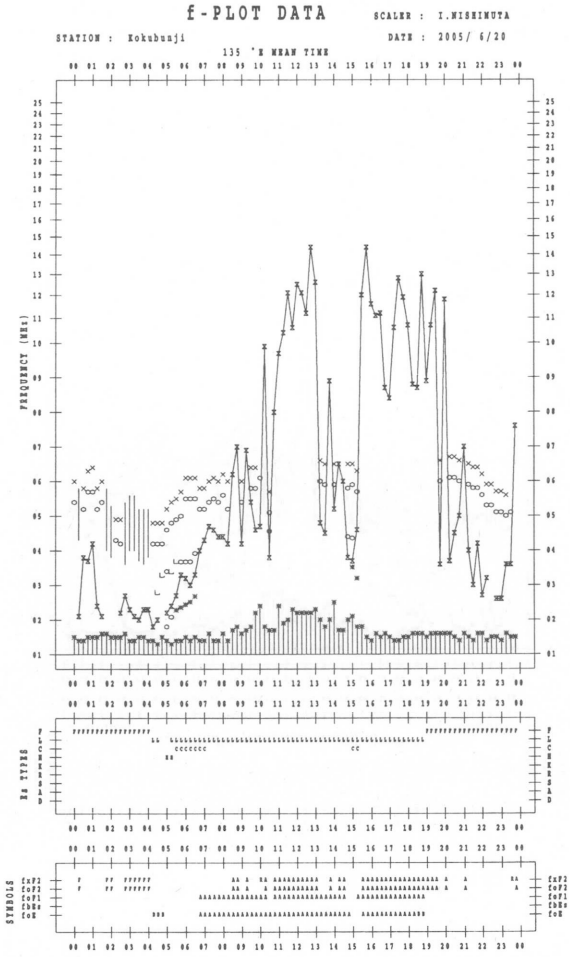

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/14
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

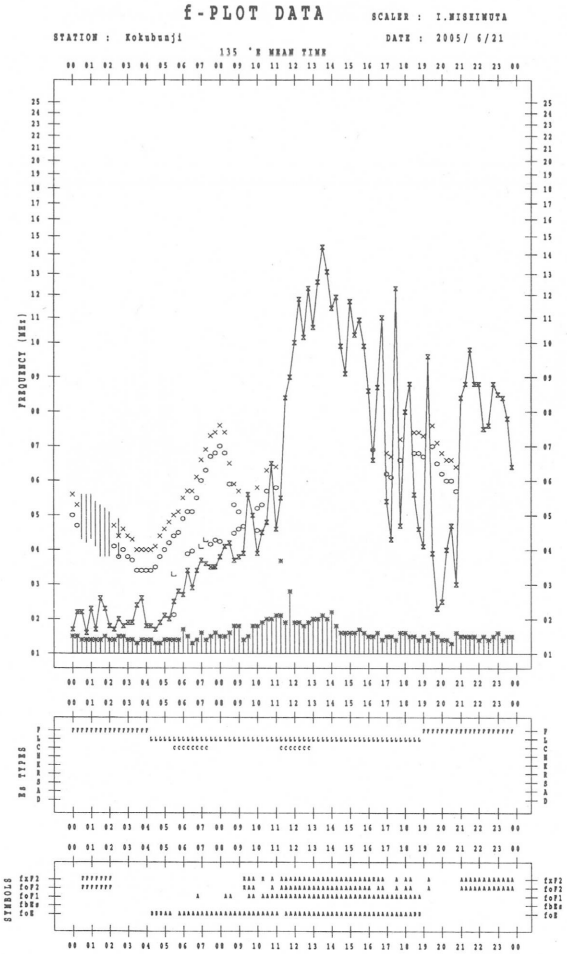

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/16
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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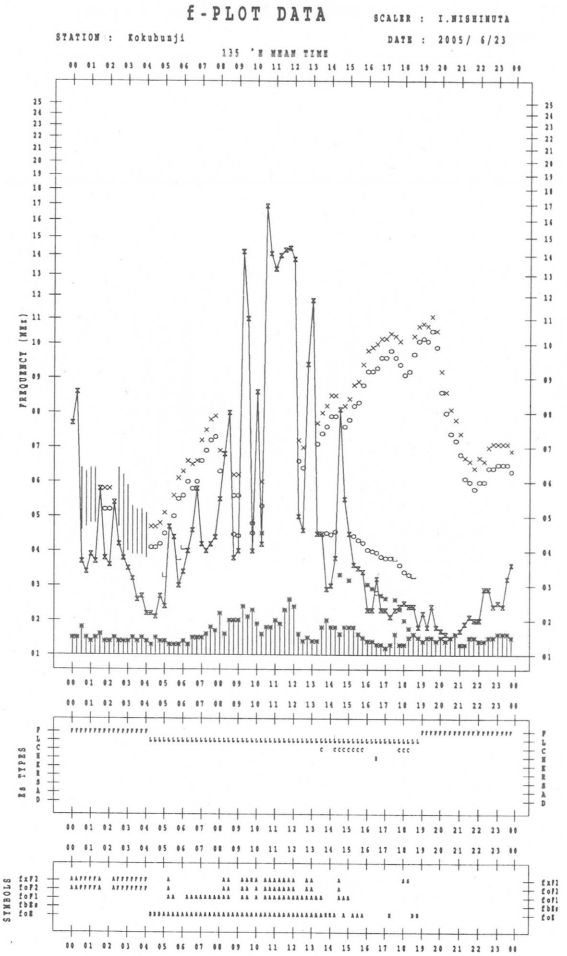
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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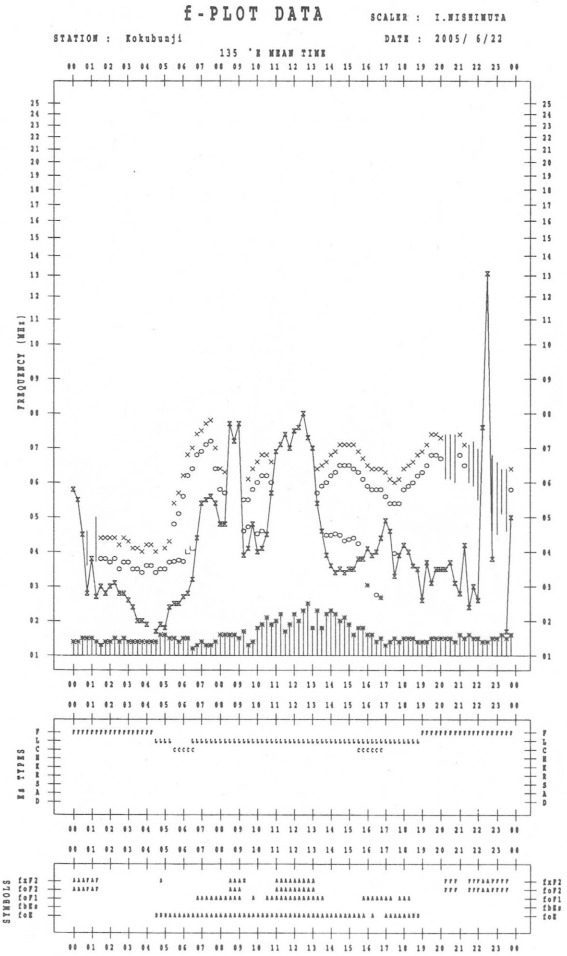
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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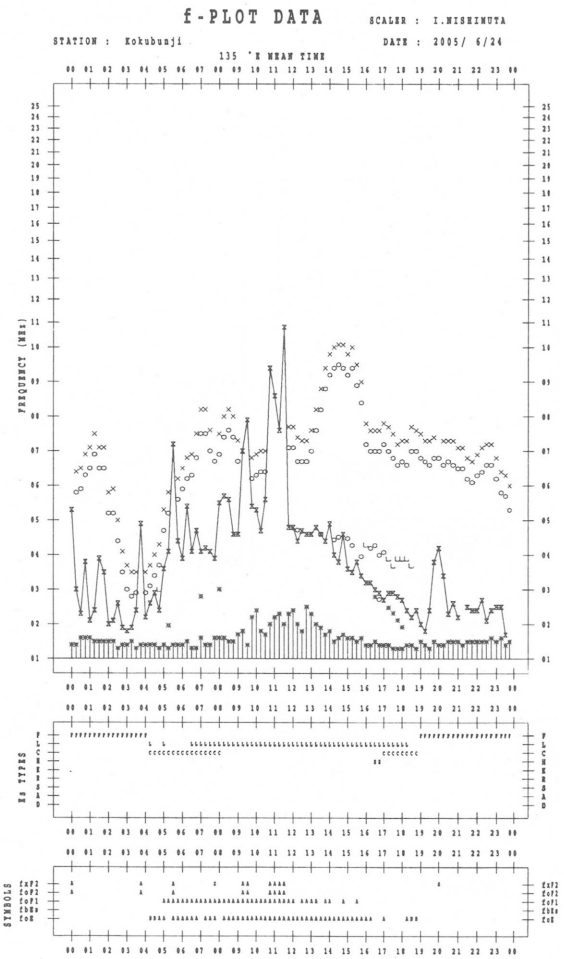
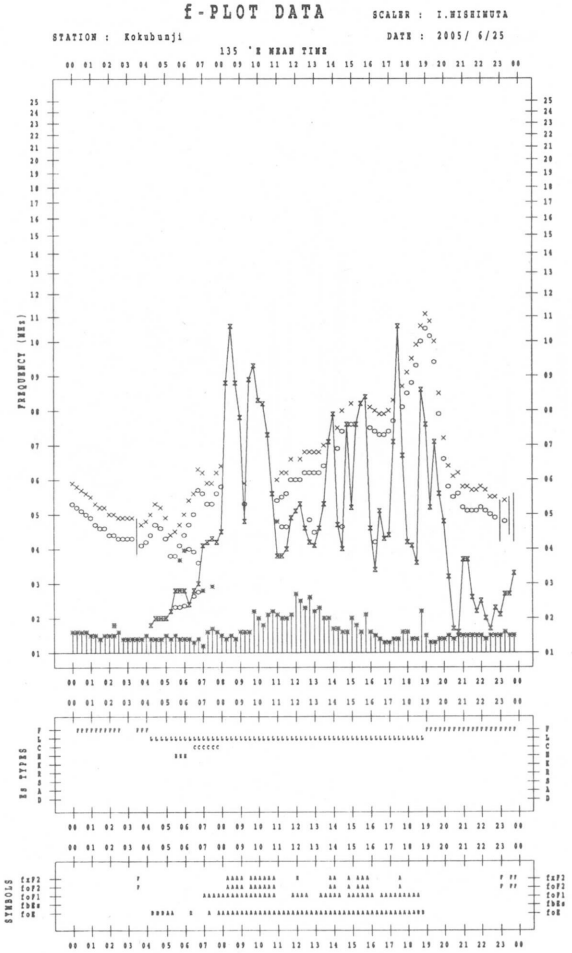
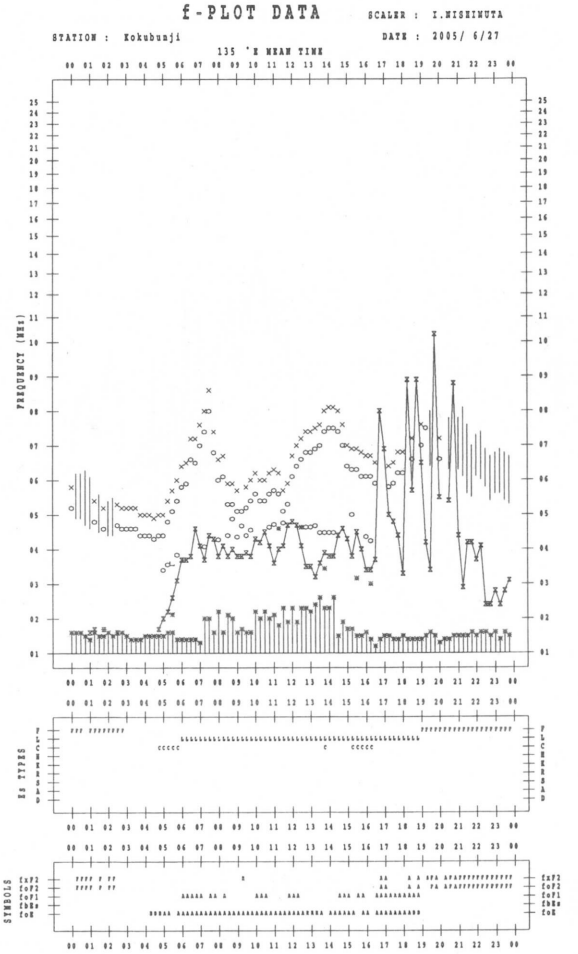
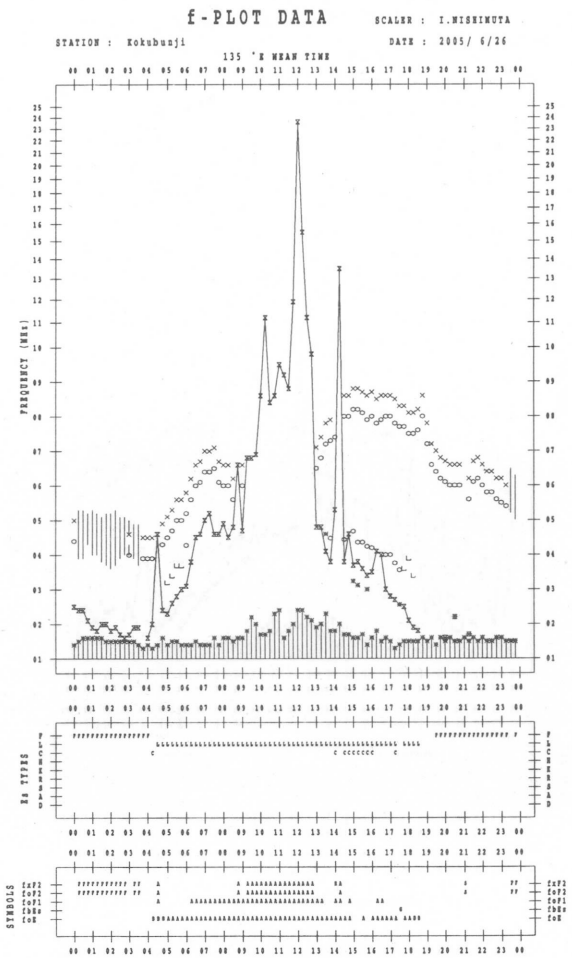
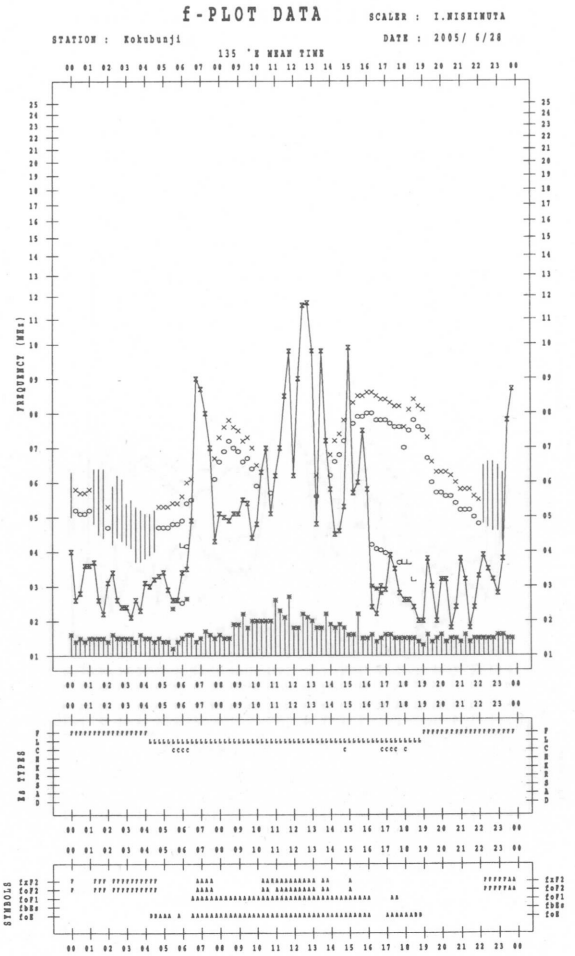
STATION : Kokubunji
DATE : 2005/ 6/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

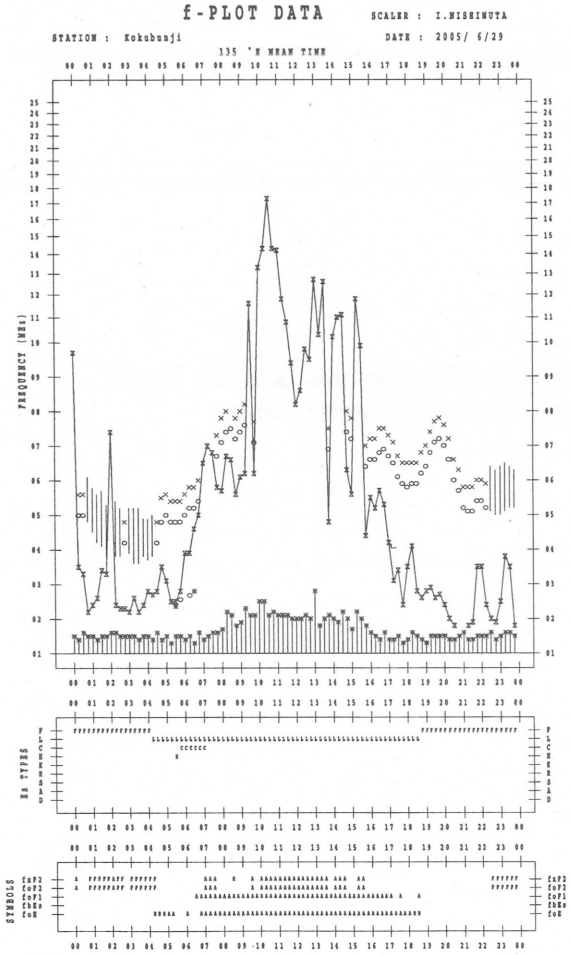

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

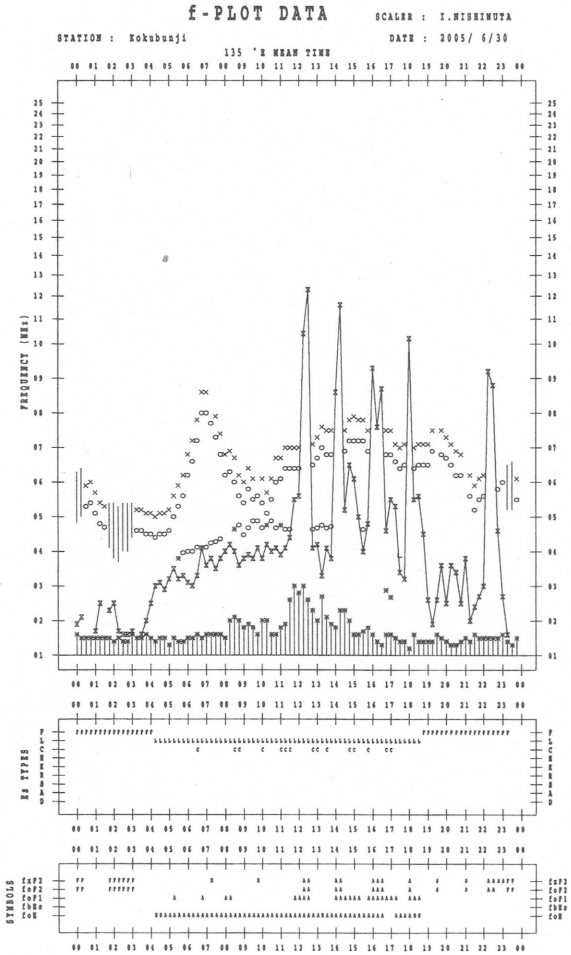

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 6/30
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 June 2005

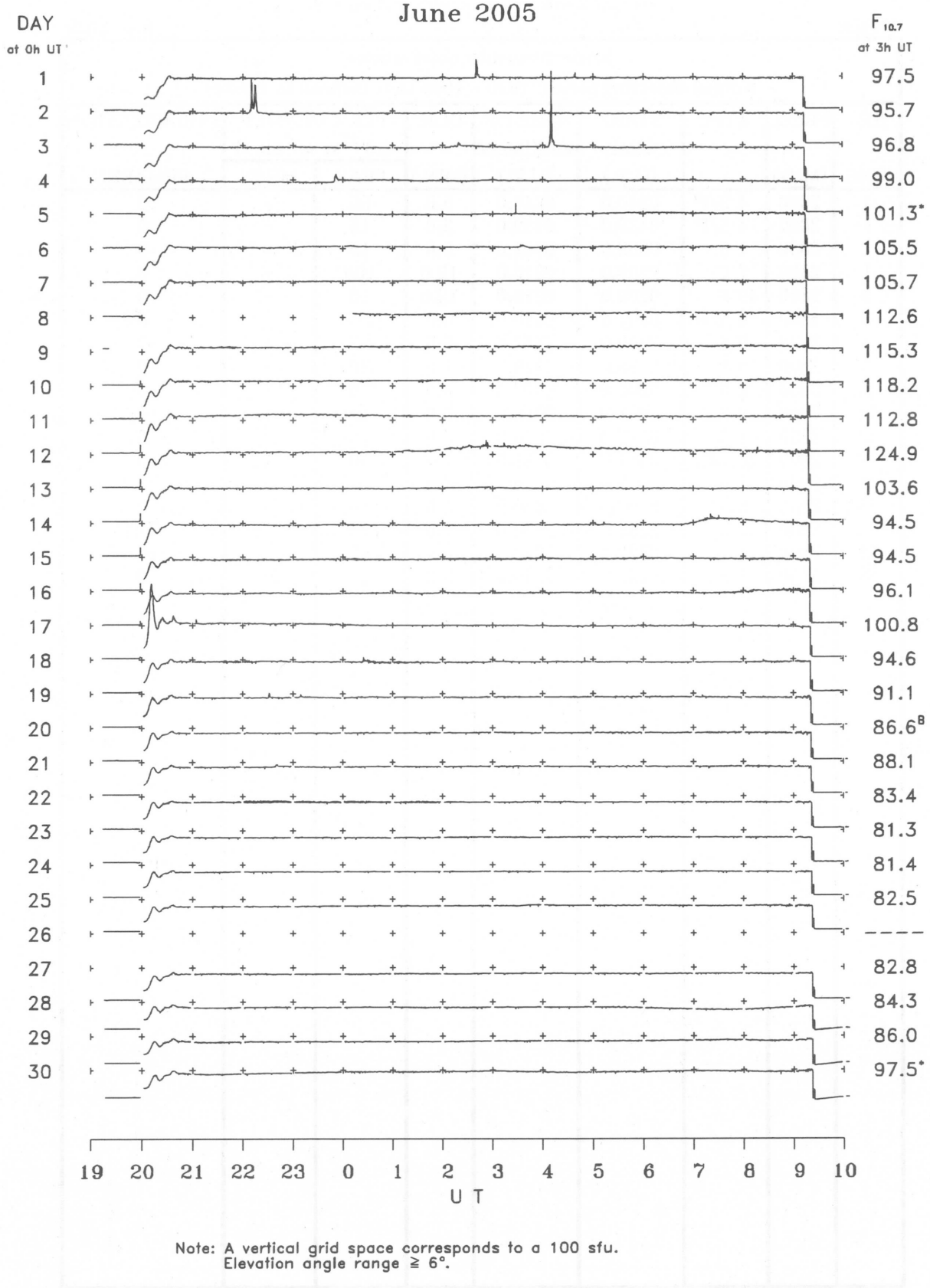
Single-frequency observations

Normal observing period: 1920 - 1000 U.T. (sunrise to sunset)

JUN. 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
1	2800	4 S/F	0240.0	0240.0	5.0	55	-	0
1	2800	4 S/F	0438.0	0439.0	2.0	15	-	0
1	2800	1 S	0658.0	0702.0	5.0	15	-	0
1	2800	7 C	2207.0	2210.0	12.0	100	-	0
3	2800	40 F	0209.0	0219.0	12.0	10	-	0
3	2800	4 S/F	0407.0	0410.0	9.0	215	-	0
3	2800	3 S	2349.0	2352.0	6.0	25	-	0
5	2800	8 S	0328.0	0328.0	1.0	30	-	0
10	2800	1 S	0306.0	0308.0	3.0	10	-	0
14	2800	4 S/F	0057.0	0059.0	3.0	15	-	0
14	2800	1 S	0512.0	0514.0	3.0	10	-	0
14	2800	20 GRF	0654.0	0721.0	///	30	-	0
18	2800	1 S	0025.0	0025.0	1.0	15	-	0
18	2800	8 S	0450.0	0450.0	1.0	10	-	0
18	2800	1 S	2232.0	2232.0	1.0	15	-	WL
18	2800	1 S	2308.0	2310.0	5.0	10	-	0
20	2800	1 S	2238.0	2240.0	5.0	10	-	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 JUNE 2005
F－678 Vol.57 No.6 (Not for Sale)

電離層月報 (2005年6月)
第57巻 第6号 (非売品)
2005年 9月 9日 印刷
2005年 9月15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
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