ISSN 0021-0382

F−675

IONOSPHERIC DATA IN JAPAN

FOR MARCH 2005

VOL.57 NO. 3

CONTENTS

NiCT

NATIONAL INSTITUTE OF INFORMATION
AND COMMUNICATIONS TECHNOLOGY
TOKYO, JAPAN

INTRODUCTION

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

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

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

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

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

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

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

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

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

K Presence of particle *E* layer.

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

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

N Conditions are such that the measurement cannot be interpreted.

O Measurement refers to the ordinary component.

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

Q Range spread present.

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

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

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

V Forked trace which may influence the measurement.

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

X Measurement refers to the extraordinary component.

Y Lacuna phenomena, severe layer tilt.

Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

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

D Greater than.

E Less than.

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

M Mode interpretation uncertain.

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

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

U Uncertain or doubtful numerical value.

X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. SOLAR RADIO EMISSION

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

B1. Daily Data at Hiraiso

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

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

* Measurement impossible because of interference.

B Measurement impossible because of bursts.

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

B2. Outstanding Occurrences at Hiraiso

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

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

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

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

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

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

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

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

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

B3. Summary Plots of F10.7 at Hiraiso

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

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

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

HOURLY VALUES OF foF2 AT Wakkanai

MAR. 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	36	38	36	37	37	36	41	61	64	70	82	68	67	67	66	65	73	62	57	36	34	38	36	40
2	41	43	40	40	40	39	46	60	67	66	74	71	81	74	74	78	70	58	55	43	47	45	37	47
3	38	42	55	53	52	38	45	59	61	72	70	75	83	78	68	70	65		41	40	34	42	45	36
4	42	38	36	37	34	30	38	60	60	66	62	66	74	73	73	68	66	60	45	40	35	34	32	34
5	32	32	32	34	34	30	36	53	60	60	61	68	71	72	66	75	62	62	62	57	44	37	44	48
6	52	42	47	45	42	35	41	52	53	68	67	81	78	80	76	68	71	63	62	54	48	48	51	42
7	54	54	48	52	45	45	61	54	52	68	66	83	74	76	75	75	66	67	53	43	32	37	36	38
8	36		47	47	42	41	51	54	60	72	66	74	76	84	72	78	70	74	72	41	40	42	45	47
9	50	48	48	45	43	32	44	60	67	75	84	82	84	83	78	82	82	78	53	36	38	38	37	41
10	42	43	36	42	40	34	46	54		75	78	82	91	88	83	78	78	66	70	54	53	53	52	54
11	54	54	53	53	46	45	52	63	70	74	82	78	82	77	80	80	66	68	58	44	43	43	38	36
12	39	50	52	50	47	47	52	64	68	70	78	84	89	83	82	76	72	67	60	43	40	40	43	44
13	48	48	47	46	47	45	50	58	67	72	77		84	84	76	74	69	67	62	45	44	42	35	43
14	43	40	46	46	41	42	51	65	73	77	83	86	79	83	83	82	82	74	63	45	42	40	43	43
15	44	40	42	44	26	28	43	65	68	79	74	84	76	74	70	74	75	71	58	47	40	38	40	42
16	40	37	42	40	40	34	53	63	73	83	84	83	71	75	75	67	70	69	60	54	48	43	50	44
17	43	48	45	47	45	44	50	58	78	84	82	76	81	80	80	75	79	80	77	64	52	44	37	42
18	43	43	44	45	43	41	60	73	73	80	77	81	80	82	74	72	77	78	75	61	52	42	44	42
19	40	43	43	39	45	45	63	66	81	74	74	72	78	81	82	82	83	84	76	66	54	54	54	54
20	54	52	52	57	52	45	55	67	78	81	84		82	82	81	72	76	81	70	60	53	53	43	52
21	54	52	53	52	48	47	60	62	72	83	85	80	90		84	76	73	71	69	66	50	51	44	42
22	42	42	47	44	42	37	45	52	55	62	66	70	71	77	78	71	66	69	66	54	48	45	42	43
23	44	39	44	52	50	47	52	54	62	C	73	73	74	75	70	68	67	68	70	54	52	45	44	40
24	43	42	42	43	48	45	60	60	58	72	72	72	76	81	82	78	70	76	75	66	49	44	43	44
25	43	42	43	44	36	36	54	60	70	80		78	77	72	77	74	75	78	76	73	61	44	37	36
26	42	38	43	45	28	35	43		58	66	63	77	80	77	77	77	72	71	66	62	53	52	45	44
27	41	44	45	46	34	33		60	66	74	75	62	68	70	72	78	71	72	64	53	51	44	45	45
28	42	44	43	38	35	34	38	56	67	60	68	75	81	77	73	67	67	66	66	54	53	45	44	44
29	44	43	41	41	40	40	50	57	57	62	73	75	76	69	70	66	64	71	66	54	47	44	43	42
30	44	42	42	42	40	40	51	62	66	74	74	72	72	64	69	66	72	68	70	66	54	45	43	44
31	42	44	48	45	48	47	49	61	72	66	67	64	70	65	72	72	72	46	71	54	52	53	36	47
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	30	31	31	31	31	30	30	30	30	30	29	31	30	31	31	31	30	31	31	31	31	31	31
MED	43	43	44	45	42	40	50	60	67	72	74	75	78	77	75	74	71	69	66	54	48	44	43	43
U Q	44	48	48	47	47	45	53	63	72	77	82	81	82	82	80	78	75	74	70	61	52	45	45	45
L Q	41	40	42	41	37	34	44	56	60	66	67	71	74	73	72	68	67	66	58	43	40	40	37	41

HOURLY VALUES OF fEs AT Wakkanai

MAR. 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	G	G	G	G	32	G	G	40	40	47	36	34	32	31	24	G	G	G	G	G
2	G	29	G	G	G	G	G	G	32	50	45	39	G	G	G	G	G	G	27	G	G	G	G	G
3	G	38	33	33	G	G	G	32	35	40	G	40	G	G	G	34	G	G	11	G	G	G	G	G
4	G	G	G	24	G	G	G	G	47	39	G	40	G	G	G	G	30	29	G	29	G	G	G	G
5	G	25	G	G	G	G	G	G	G	G	39	40	39	38	G	38	35	31	28	30	G	G	G	G
6	27	29	27	25	25	G	G	34	39	42	50	45	48		G	34		G	26	34	G	24	26	G
7	G	G	26	G	G	G	25	32	34	G	40		39	G	G	G	G	32	29	28	G	G	G	G
8	G		G	G	G	G	G		32	G	G	44	G	G	G	G	G	G	57	G	G	G	G	G
9	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	28	11	G	G	G	G	G
10	G	G	G	G	25	29	G			39	G	G	48	41	G	G	G	31	34	27	23	G	G	G
11	G	G	G	G	G	G	G	G	G	G	G	N	G	G	G	G	G	G	G	G	G	G	G	G
12	G	G	26	G	G	G	G	30	G	G	38	46	G	G	G	G	G	G	38	30	G	31	G	G
13	G	G	G	G	G	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G	G
14	G	G	G	G	G	G	G	G	G	44	38	G	G	G	G	G	34	G	41	G	G	G	G	G
15	G	G	G	G	G	G	G	29	39	47	38	41	38	G	39	G	G	29	33	29	G	G	G	G
16	G	G	G	26	G	G	G	G	G	G	41	42	G	40	G	G	G	G	G	G	G	G	G	G
17	G	G	G	G	G	G		30	G	G	G	39	G	G	G	G	G	G	G	G	G	G	G	G
18	G	G	G	G	G	G	G	32	G	G	G	G	42	45	G	G	G	29	G	G	G	G	G	G
19	G	G	G	G	G	G	G	32	44	44	44	42	G	G	G	G	G	40	36	G	G	G	G	G
20	G	G	G	G	G	G		G	40	45	G	G	G	G	G	37	32	39	32	32	25	G	G	G
21	G	G	G	G	G	G	G	G	36	G	45	G	G		G	G	G	G	G	G	G	G	G	G
22	G	G	G	G	G	G	G	G	36	39	G	46	G	G	G	G	34	35	G	G	G	G	G	G
23	G	G	G	G	G	G	G	31	37	C	G	40	39	G	G	G	32	G	33	50	27	G	G	G
24	G	G	26	G	G	G	G	G	G	G	G	39	G	G	G	G		G	G	30	G	G	G	G
25	G	G	G	G	G	G	30	G	G	G	G	G	G	G	G	G		G	G	G	G	G	G	G
26	G	G	G	G	G	G			39	G	41	G	G	G	39	G	33	G	G	G	G	G	28	26
27	28	30	G	G	25	G		35	G	45	40	G	G	G	G	G	G	G	G	G	G	G	G	G
28	G	G	G	G	G	G	G	G	35	43	G	42	G	G	G	G	G	G	G	G	G	G	G	G
29	G	G	G	G	G	G	G	G	G	G	G	G		39	G	G	G	G	G	G	G	G	G	G
30	G	G	G	G	G	G	G	38	35	47	G	51	G	G	G	36	G	G	32	35	31	G	G	G
31	G	G	G	25	G	G	G	G	G	G	49	40	43	G	G	G	42	47	46	40	34	G	G	G
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	30	31	31	31	31	27	28	30	29	31	29	30	29	31	31	28	31	31	31	31	31	31	31
MED	G	G	G	G	G	G	G	G	32	G	G	40	G	G	G	G	G	G	11	G	G	G	G	G
U Q	G	G	G	G	G	G	G	31	36	43	40	42	39	G	G	G	32	31	33	30	G	G	G	G
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Wakkanai

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

HOURLY VALUES OF foF2 AT Kokubunji

MAR. 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	32	32	35	28	30	32	37	62	66	65	72	76	70	66	67	68	72	71	44					35
2	38	39	41	41	41	42	45	58	66	76	76	83	94	92	69	69	76	66	45	28		36	35	36
3			41	38	32		34	51	55	66	82	80	84	72	69	68	66	64	46			A	32	27
4	30	34	34	34	38		34	54	62	62	65	71	81	80	72	68	63	62	54	30	27	27	28	
5	32	32	35	32		28	34	54	61	61	65	81	81	88	85	86	71	76	54		37	27		34
6	34	35	36	37	34		43	55	63	67	87	101	96	84	89	83	72	47	51	53	47	30	46	43
7	43	44	44	44	44	26	41	60	74	67	72	84	106	84	74	86	91	67	43	43		34		38
8	37	37	36	44	36		49	66	69	65	74	111	96	91	89	82	78	77	59	47	A	34		43
9	42	42	44	47	32	26	39	58	76	72	100	101	100	102	104	101	87	76	55	35		36	37	37
10	38	38	44	42		34	41	66	77	81	75	87	95	111	108	87	84	76	66	50	48	48	48	48
11	48	51	46	46	31	27	43	66	73	77	85	90	91	82	78	82	87	75	55	34	37	39	41	43
12	46	48	42	42	37	38	49	63	72	73	88	106	112	107	97	91	84	78	54	38	36	38		
13	43	43	44	43	39	30	43	59	72	77	87	91	98	114	102	94	81	71	61	47		36		38
14	34	38	41	38	31	32	47	66	73	74	87	98	107	101	101	90	76	81	58	44		36	37	38
15	39		32	36	30	28	41	72	87	95	91	102	105	95	84	80	80	76	69	45	34		37	36
16	41	37	36	39	36	32	46	66	72	82	86	88	98	80	74	78	77	72	59	46	46	47	44	
17	43	39	42	43	38	32	47	62	76	91	86	81	90	104	96	85	85		76	54	46	39	43	42
18	43	42	41	39	36	44	59	59	66	75	90	97	91	94	85	85	86	87	81	54	A	42	43	42
19	44	41	43	42	37	35	54		63	77	80	92	96	101	104	106	95	81	80	54	38	36	38	42
20	42	43	48	46		30	48	61	69	78	92	100	106	108	102	87	82	82	71	A	A	45	45	43
21		44	44	41		32	53	68	73	76	90	102	108	111	111	100	91	80	72	54	38		41	39
22	38	43	43	39	41	37	52	61	73	A	94	97	107	98	101	98	76	72	76	54	42	A	38	38
23	43	42	43	44	39	32	48	59	68	76	71	85	97	91	91	75	74	82	78	50	39	39	38	41
24	39	39	39	42	42	27	48	62	62	59	75	94	97	85	84	77	81	86	86	59	46	44	43	44
25	42		42	47	32		45	63	74	88	87	88	90	88	88	77	72	82	90	75	48	44	42	39
26	41	39	43	36	30	30	52	62	66	76	82	101	111	100	94	92	100	82	72	53	44		47	43
27	44	47	51	43			48	66	72	82	75	85	88	90	88	77	82	82		49	44	42	43	41
28	42	42	44	39		34	55	60	69	66	77	92	96	101	100	86	82	78	76	A		37	34	35
29		38	38	37	36	24	46	67	65	71	80	90	85	74	75	80	81	72	71	48	40	43	34	42
30		41	36	38	37	32	49	67	69	85	82	72	69	72	76	80	81	78	84	63	A	42	39	39
31	37	38	37	33	36	37	45	59	61	66	71	69	76	80	78	75	74	72	78		A		44	43
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	27	28	31	31	25	25	31	30	31	30	31	31	31	31	31	31	31	30	30	25	18	24	25	28
MED	41	40	42	41	36	32	46	62	69	76	82	90	96	91	88	83	81	76	68	49	41	38	41	40
U Q	43	43	44	43	38	34	49	66	73	78	87	100	105	101	101	90	85	81	76	54	46	42	43	43
L Q	37	38	36	37	32	28	41	59	65	66	75	83	88	82	76	77	74	72	54	43	37	36	37	37

HOURLY VALUES OF fEs AT Kokubunji

MAR. 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	G	G	G	G	G	G	39	G	G	43	44	50	43	38	31				G
2	G	G	G	G	G	G	G		G	G	G	46	45	47	G	49	G	G	11	G	32	26	G	G
3	G	G	G	G	G	G	G	34	G	43	44	G	G	45	40	G	51	28	41		29	33	G	G
4	G	G	G	G	G	G	G	43	G	G	44	41	46	G	46	G	52	31	G	G	G	G	G	
5	G	G	G	G		G	G	G	G	G	G	44	G	G	G	G	G	G	G		G	G		G
6	25	G	25	36	27	30	G	G	G	G	49	55	43	G	G	38	35	50	31	25	G	40	31	29
7	G	26	G	G	G	G	G	G	G	G	G	43	G	G	G	G	37	40	33	34	37	58	25	G
8	G	G	G	G	G	G	G	G	G	38	40	49	43	G	G	G	G	32	24	33	36	36		G
9	G	G	28	G	G	G	23	46	G	G	G	G	G	G	G	G	40	36	35	G	G	G	G	G
10	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
11	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
12	G	G	G	G	G	G	G	G	G	47	G	50	G	G	38	G	G	G	11	G	G	G		G
13	G	G	G	G	G	G	G	29	G	G	G	G	G	G	G	G	G	G	G	G		G		G
14	G	G	G	G	G	G	G	30	36	G	G	G	G	G	G	50	G	G	G	G		G	G	G
15	G	G	G	G	G	G	29	G	G	G	G	G	G	43	45	43	37	45	40	33	G		G	G
16	G	G	G	G	G	G	G	45	G	G	49	G	G	G	G	G	G	43	38	35	26	G	G	
17	G	G	G	G	G	G	G	G	G	43	43	G	40	G	G	G	G		G	G	G	G	G	G
18	G	G	G	G	28	G	G	G	G	G	G	G	G	G	52	G	84	71	37	29	42	G	G	G
19	G	G	G	G	G	G	G	G		G	G	G	50	40	51	50	45	34	34	34	27	G	G	27
20	23	26	29	25	23	G	G	G	42	49	53	52	47	48	G	42	34	G	28	49	34	30	23	G
21		G	G	G		G	G	34	G	44	47	G	57	45	G	G	G	G	G	G	26	30	30	59
22	49	33	23	23	23	G	G	G	G	80	49	G	G	G	G	43	38	33	30	26	29	41	32	G
23	G	G	G	G	G	G	G	G	44	41	45	62	55	78	48	79	52	36	29	11	31	G	G	G
24	G	G	G	G	G	G	G	G	G	G	G	48	45	G	G	42	40	46	53	59	59	G	G	G
25	G		G	G	G		27	G	G	G	G	G	G	G	G	40	55	43	37	25	31	32	G	G
26	G	G	G	G	G	G	28	35	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
27	G	G	G	G			G	G	G	47	57	47	44	43	48	46	G	39	46	G	G	G	G	G
28	G	G	G	G		G	G	G	G	G	40	G	G	G	G	52	95	59	35	60		G	G	G
29		G	G	G	G	G	29	36	G	G	46	G	G	41	G	47	57	33	29	G	60	26	G	G
30		G	G	G	G	G	29	40	49	61	50	61	67	G	G	G	45	37	43	36	43	26	23	G
31	G	G	G	G	G	G	G	34	G	G	48	50	44	G	47	53	53	43	41	40	52	42	40	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	28	30	31	31	26	29	31	30	30	31	31	31	31	31	31	31	31	30	31	29	27	29	26	29
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	37	34	30	25	27	G	G	G
U Q	G	G	G	G	G	G	G	34	G	43	47	48	45	41	43	46	51	43	38	34	36	31	23	G
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Kokubunji

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

HOURLY VALUES OF foF2 AT Yamagawa

MAR. 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	30	34	34	32	37			44	64	66	77	82	79	73	71	69	72	67		50	26	28	34	37
2	32	34	32	34	38	26	29	43	60	68	76	81	85	101	78	71	76	71	51	32	32	28	26	34
3	34	37	37	37	32	32	28	43	60	76	82	81	84	71	81	70	73		57	36	32	34	A	
4	34	34	34		32	28		47	58	66	67	68	84	88	82	77	70	67	70	38	34	30	32	32
5	32	36	36	34	36	34	28	41		61	73	71	84	97	101	86	89	87	75	37	38	36	34	34
6	35	36	34	37	36		28	51	63	65	80	79	86	80	88	101	82	73	62	53	54	51	36	34
7	37	36	37	A	42		37	58	66	67	77	84	111	87	82	93	104	80	65	43	38	A	A	37
8	36	34	36	34	34	32	34	59	67	66	78	100	114	86	85	97	82	77	78	52	38	37	34	36
9	37	34	52	52	36			47	71	78	83	82	100	98	111	111	98	80	67	52	36		37	
10	37	43		40	29		28	54	71	84	74	78	90	114	113	107	85	85	73	60	36	36	36	36
11		47	39	43	36		28	54	73	74	78	81	96	86	98	102	100	86	74	52	37	37	38	36
12	34	36	37		26	28	29	52	66	80	82	107	114		103	95	86	86	77	51	43	37	40	34
13	40	38	36	41	40			52	67	81	76	84		115	126	112	103	80	72	54	53	A	37	36
14	36	36	36	36	35		28	52		78	80	100	110	111	110	113	84	84	72	54	37	36	43	
15	36	37	41	36	32	30	30	62	81	86	86	99	112	127	117	101	83	83	81	51	37	37	36	36
16	37		37	38	40		30	58	78	78	82	86	96		113	85	86	80	77		52	42	42	37
17	37	38	36	38	35	32	34	58	78	84	71	81	85	112	111	104	98	96	84	66	53	37	37	36
18	37	41	41	37	34	36	41	52	60	75	82	98	C	100	108	96	97	86	82	64	37	40	36	37
19	37	36	36	48	37	37	38	60	62	70	81	87	95	113	111	98	112	81	C	66	48	A	38	A
20	38		A	36	31	28	29	54	65	78	84	98	113	113	128	118	84	77	73	63	42	A	A	42
21	37	50	49	43		29	32	60	66	74	80	102	108	110	126	118	106	82	85	60	34	36	36	35
22	36	36		37	34	34	34	61	94	74	84	87		114	120	104	92	75	82	74	C	A	A	36
23	37	36	43	50			32	C	73	68	81	87	105	C		82	86	82	79	74	54	A	36	42
24	34	42	52	53	39		30	54	66	60	67	85	102	92	87	86	82		82	66	48	A	28	40
25	37	34	37	35	36		28	54	71	83	82	84	84	100		81	73	82		77	52	37	40	36
26	34	37	51	32			37	60	67	72	82	86	100	95	106	102	89	81	81	66	37	32	37	36
27	36	36	41	39	26		32	60	70	78	78	85	87	99		86	84	78	73	63	37	46	38	37
28	36	37		42	29	28	36	53	61	72	81	90	103	111	112	105	88	82	81	52	42	37	36	38
29	36	37	36	37	28		32	55	66	92	80		82	82	C	97	83	80	76	61	A	32	A	43
30	42	42	42	41	36	34	37	61	78		83	75	78	81	89		C	C	84	C	C	38	C	36
31	36	34		36	34	36	42	62	65	C	77	C	81	86	76	74	75	84	81	72		A	37	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	26	28	28	16	27	30	29	29	31	29	28	28	27	30	30	28	28	29	27	22	25	26
MED	36	36	37	37	35	32	32	54	66	74	80	85	96	98	106	97	86	81	76	54	38	37	36	36
U Q	37	38	41	41	36	34	36	60	72	79	82	94	106	111	113	104	97	84	81	66	48	37	38	37
L Q	34	35	36	36	32	28	28	52	63	67	77	81	84	86	85	85	82	77	72	51	36	34	35	36

HOURLY VALUES OF fEs AT Yamagawa

MAR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	42	47	56	58	30	G	G	G	G
2	G	G	G	G	G	G	G	G	G	G	G	G	G	G	42	44	39	32	G	G	G	G	28	G
3	G	24	G	G	G	G	G		34	G	46	58	55	41	43	G	35		36	26	G	23	40	
4	G	23	28		G	G	G	G	G	G	G	48	50	48	40	44	38	33	G	G	G	G	G	G
5	G	G	G	G	G	G	G	G		G	G	G	G	G	50	42	44	32	G	G	G	G	G	G
6	G	G	G	G	30		G	G	G	G	G	40	42	G	G	G	44	36	G	G	G	G	G	G
7	23	39	25	40	G	G	G	G	G	G	G	G	G	G	G	G	G	33	G	G	G	43	44	23
8	G	G	G	G	G	G	G	G	G	G	38	54	G	G	G	44	46	40	36	28	26	28	23	30
9	G	G	G	G	G		G	31	36	G	G	50	N	G	G	G	G	40	33	24	G	25	G	G
10	G	G	G	G	G	G	G	32	G	G	G	G	G	G	G	G	G	G	33	G	G	G	G	G
11		G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	42	32	G	G	G	G	G
12	G	G	G	G	11	G	G	G	G	G	G	G	G	G	G	G	G	33	26	G	G	26	26	G
13	28	G	G	G	G	G	G	40	35	G	G	40	G	43	44	G	G	35	G	11	G	44	G	G
14	G	G	G	G	G	G	G	29	G	36	G	G	43	44	G	G	G	G	G	G	G	G	G	34
15	G	G	G	G	G	G	G	G	G	40	G	G	G	G	G	G	G	G	G	G	G	G	G	G
16	G		G	G	G	G	G	27	G		G	G	G	G	G	G	43	40	35	29	25	G	G	G
17	G	G	G	G	G	G	G	28	34	42	44	44	G	44	40	G	G	G	G	G	G	G	G	G
18	G	G	G	G	G	G	G	G	G	G	G	G	C	42	42	42	G	G	26	29	G	33	29	G
19	G	G	G	G	G	G	G	45	G	37	G	41	64	42	40	G	G	40	C	35	26	41	29	33
20	33	39	58	G	24	G	G		G	44	49	52	G	50	46	G	41	G	G	G	G	43	43	32
21	G	G	G	G		G	G	G	G	44	G	G	G	G	40	G	42	36	G	G	31	G	G	G
22	G	30	25	G	G	G	G	29	42	46	51	42		74	58	61	58	45	41	49	C	40	45	30
23	G	27	G	G	G		G	C	G	G	G	40	43	C	49	56	46	40	43	40	53	39	26	31
24	30	G	G	G			G	G	G	G	39	G	G	G	G	49	60	54	79	60	47	40	G	G
25	G	G	G	G	G		G	32	G	G	G	G	G	42	G	42	G	42	31	39	G	G	G	G
26	G	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
27	G	G	G	G	G	G	G	44	G	G	G	G	G	G	43	G	G	36	29	29	G	G	G	G
28	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	46	36	44	35	G	G	G	G	G
29	G	G	G	G	G		G	G	G	G	G		G	44	C	46	45	41	51	G	39	G	43	27
30	G	G	G	G	G	G	G	33	40		42	55	72	G	127	74	C	C	52	C	C	40	C	G
31	G	G	G	G	G	G	G	G	40	C	40	C	G	G	44	43	50	61	51	34	42	85	39	
	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	31	30	29	23	31	28	30	28	31	29	28	30	30	31	30	29	30	30	29	31	30	29
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	20	G	36	36	30	G	G	G	G	G
U Q	G	G	G	G	G	G	G	30	G	18	38	43	21	42	43	44	44	41	36	29	25	40	29	25
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	16	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Yamagawa

MAR.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	18	16	15	16	16	15	23	15	16	20	20	20	20	16	14	14	16	15	15	18	17	14
2	15	14	15	14	17	15	15	18	14	17	17	18	23	17	20	15	15	15	18	16	15	16	14	15
3	16	14	15	14	14	15	15	14	14	16	18	18	24	33	22	16	16		14	15	18	16	15	
4	15	15	15		16	15	15	18	14	15	18	18	20	20	20	20	16	15	17	15	18	17	15	15
5	15	16	17	16	16	17	18	18		17	18	21	22	22	22	18	17	16	17	17	15	15	15	16
6	18	15	16	15	15		17	17	14	16	21	33	21	29	21	20	17	15	18	15	18	15	16	14
7	16	14	15	15	17	18	18	18	14	17	17	21	20	20	22	18	17	15	21	15	15	14	14	15
8	15	15	16	15	15	17	15	18	14	15	16	20	45	45	22	20	17	16	15	15	15	15	14	15
9	15	16	20	15	15		21	14	28	16	17	18	23	48	34	16	14	14	14	16	22	23	15	18
10	15	15	15	15	15	17	18	15	15	17	20	20	26	20	18	16	14	16	15	17	18	16	18	14
11		15	15	14	14		16	21	14	18	21	20	20	45	35	22	18	15	15	16	15	16	16	16
12	17	17	16	15	15	14	18	17	16	15	21	18	52	47	37	20	18	16	17	15	15	15	16	15
13	15	15	15	14	14	18	18	17	14	16	22	22	48	23	26	23	17	16	18	15	16	15	16	15
14	18	16	15	14	15	20	15	16	15	17	21	21	20	26	21	21	18	15	18	15	17	20	16	15
15	16	15	15	15	14	15	18	21	15	16	20	22	26	23	45	22	16	17	16	17	16	15	15	15
16	15		15	20	16	17	16	17	15	20	22	50	23	27	43	22	16	15	15	14	17	16	15	16
17	18	15	15	15	15	15	15	14	16	17	21	23	26	24	21	21	14	16	18	14	15	16	15	15
18	15	15	15	15	16	15	15	18	14	16	18	48	C		20	34	15	17	17	17	14	15	14	16	16
19	15	15	16	16	15	16	14	21	18	17	42	33	22	47	44	22	20	16	C		17	14	14	14	15
20	15	14	15	15	14	15	14	17	16	16	22	34	21	22	20	18	17	16	18	15	14	15	14	15
21	14	14	16	15		18	16	22	16	17	18	22	22	22	20	20	17	15	20	15	15	18	17	16
22	15	15	15	16	15	15	16	15	15	18	20	22		23	22	22	21	17	15	17	C		15	15	14
23	16	17	18	17	15		18	C	15	18	23	22	26	C	28	21	17	15	16	15	16	14	17	14
24	16	17	15	17	15		15	22	16	17	22	24	53	51	44	18	18	21	15	14	15	16	16	17
25	20	15	18	15	15		18	18	15	17	21	22	24	24	29	21	23	18	14	15	18	22	16	21
26	23	21	15	16	16		15	17	14	17	18	45	51	49	29	23	18	15	20	15	16	17	15	15
27	16	17	16	15	15	20	18	17	15	18	20	48	50	24	22	18	18	14	15	16	18	15	15	16
28	17	17	21	17	14	15	17	22	17	17	22	49	52	50	22	17	16	14	15	18	17	17	16	17
29	15	18	15	17	17		15	22	16	18	22		50	52	C	20	29	16	15	18	17	16	17	18
30	17	16	17	17	16	17	16	18	17		20	20	22	50	21	21	C	C		C	C		C	
31	17	20	17	17	15	20	15	18	16	C	21	C	30	27	35	21	20	15	15	15	16	15	16	17
	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	31	30	30	23	31	30	30	29	31	29	29	30	30	31	30	29	30	30	29	31	30	29
MED	16	15	15	15	15	16	16	18	15	17	20	22	24	25	22	20	17	15	16	15	16	16	16	15
U Q	17	17	17	16	16	18	18	18	16	17	22	33	46	47	34	21	18	16	18	16	17	17	16	16
L Q	15	15	15	15	15	15	15	17	14	16	18	20	21	22	21	18	16	15	15	15	15	15	15	15

HOURLY VALUES OF foF2 AT Okinawa

MAR. 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	34	36	36	38	36			42	65	67	76	101	108	85	82	85	71	71	70	66	47	31	34	38
2			28	30	38			41	65	64	76	93	101	110	98	92	80	74	58	38	38	42	42	28
3	34	34	37	36	32	34	28	40	51	77	105	111	88	88	82	86	85	76	68	62	43	42	40	36
4	34	34	31	32	37			43	92	65	77	86	88	106	106	108	101	90	82	71	60	47	43	43
5	43	38	38	41	41	37		46	58	62	75	82	95	106	122	121	108	116	85	55	53	53	41	37
6	37	40	41	36	28			51	62	66	72	100	102	95	108	124	107	98	86	74	65	47	34	38
7	36	36	36	37	40	A			66	64	77	101	107	106	102	103	107	97	86	66	52	52	38	37
8	37	43	34	34	30	30	30	54	57	64		110	128	110	102	104	102	90	92	76	48	48	42	36
9	32	42	54					44	68	80	107		110	130	141	142	124	100	88	71	49	34	42	36
10	43	48	50	44				47	74	84	81	81	100	128	138	134	118	106	88	73	50	46	50	43
11	42	43	50	38	24			48	94	75	86	92	104	118	131	147	145	140	131	102	77	53	52	51
12	34	42	50	45				48	65	76	101	109	130	138	128	116	109	107	92	71	66		48	47
13	50	52	54	54	42			47	66	80	82	91	105	131	146	148	142	130	107	92	76	62	52	A
14	42	51	51	47	34	28		51	67	74	90	105	118	133	137	135	118	110	90	88	76	54	61	49
15	42	47	60	37	26	29	28	54	78	86	98	108	131	152	148	140	123	114	86	88	66	53	54	36
16	43	43	51	50	46	34	30	54	83	90	92	101	125	148	146	145	130	129	107	107	88	66	54	54
17	51	47	44	52	52	38	38	64	88	74	76	88	102	124	137	140	135	106	107	88	88	87	65	66
18	61	52	52	48	38	36	38	47	60	72	87	98	108	110	116	120	106	92	82	65	48	43	42	42
19	43	42	45	44	32	34	40	68	53	67	97	90	102	124	121	106	110	89	85	73	54	48	45	38
20	43	50		46	A			52	67	75	90	104	116		144	145	107	90	76	65	52	53	52	46
21	50	54	53	53	26	29	30	61	66	75	91	114	120	120	131	137	127	128	105	66	53	50	52	55
22	52	55	87	52	29			51	70	82	87	107	127	142	132	126	121	113		66	56	59		52
23		52	52	66	48	29	30	59	66	78	96	122	131	152	147	147	145	130	109	106	87	78	84	72
24	87	86	88	102	41		30	54	70	86	80	90	117	127	114	118	116	110	93	81	61	52	54	60
25	64	64	66	63	38			51	70	102	107	100	108	126	127	105	88	88	89	74	66	52	50	55
26	48	51	51	48			28	61	72	81	98	101	110	117	121	110	104	100	88	78	50	42	34	
27	40	47	50	42			28	54	67	80	82	96	111	124	126	111	90	75	80	76	66	52	48	43
28	43	43	50	41		26	28	54	60	76	95	102	117	128	137	136	130	108	100	84	64	53	53	52
29	47	42	42	45	37	26		55	63	84	98	104	106	110	124	120	104	101	81	73	66	66	52	63
30	72	72	75	62	43	35	37	58	77	105	87	88	92	110	117	108	102	94	88		64	A	A	44
31	43	42	42	43	41	38	44	55	64	78	86	91	100	102	95	70	81	87	84	66	54	36	A	42
	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	24	15	15	30	31	31	30	30	31	30	31	31	31	31	30	30	31	29	28	29
MED	43	45	50	44	38	34	30	52	66	76	87	100	108	122	126	120	108	100	88	73	60	52	49	43
U Q	50	52	53	52	41	36	38	55	72	82	97	105	118	130	137	140	124	113	93	84	66	53	52	53
L Q	37	42	41	38	31	29	28	47	63	67	80	91	102	110	108	106	102	90	82	66	50	44	42	37

HOURLY VALUES OF fEs AT Okinawa

MAR. 2005

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

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

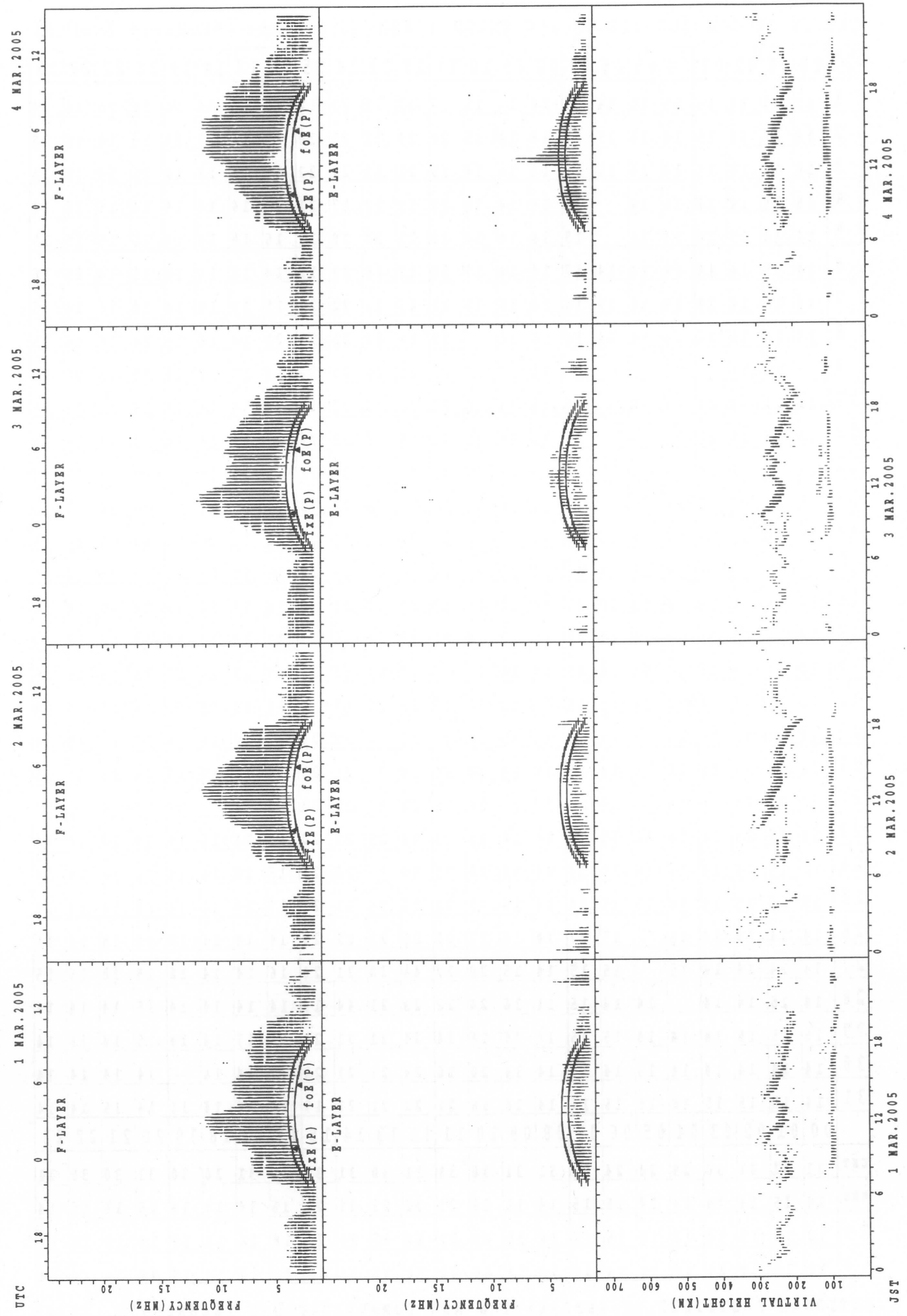
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

HOURLY VALUES OF fmin AT Okinawa

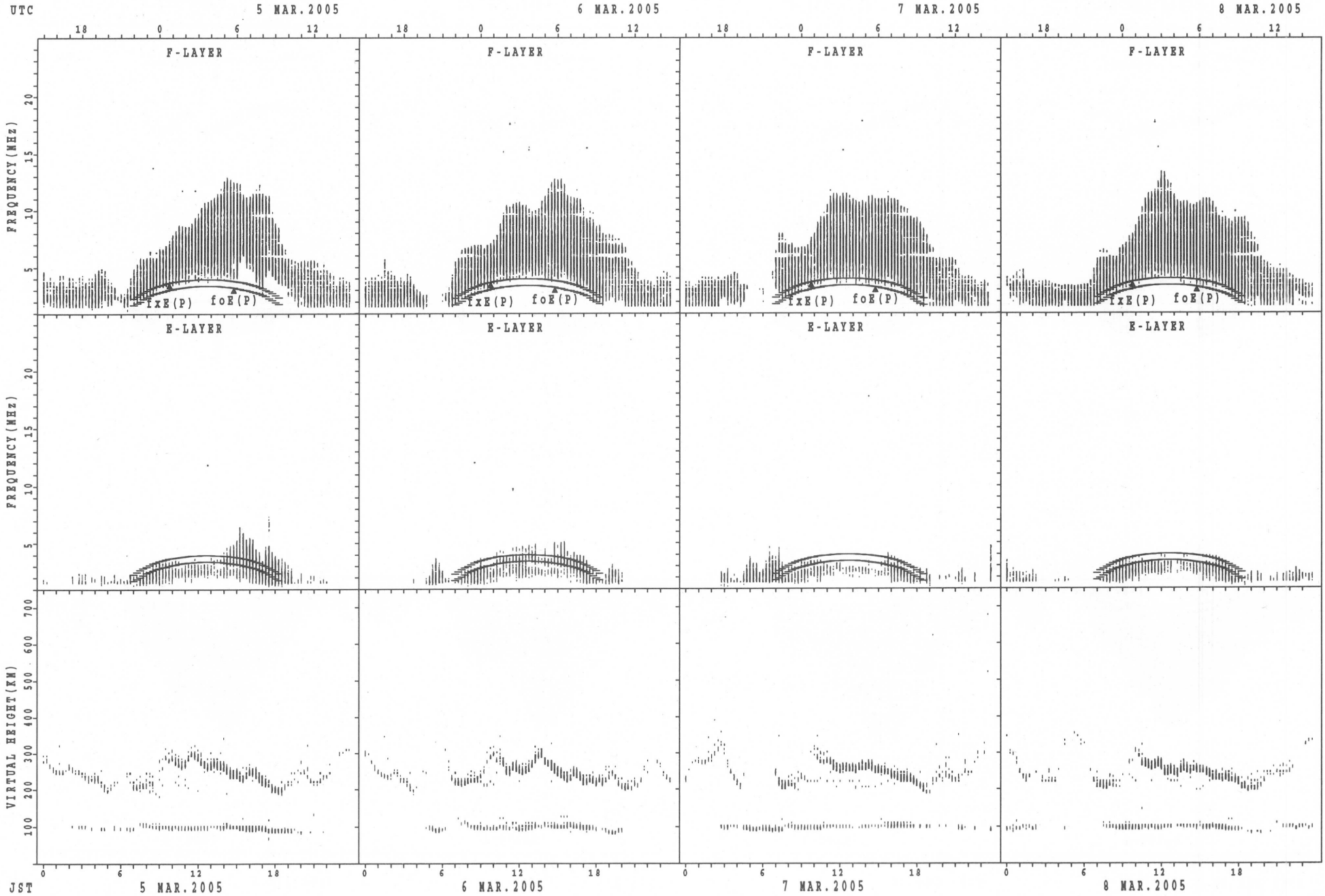
MAR. 2005

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	15	15	14	14	15	15	14	15	14	14	15	17	22	21	20	18	15	14	14	14	15	15	15	14
2	14	15	14	15	14	14	15	17	14	14	15	20	24	22	21	20	15	14	17	14	15	14	15	15
3	15	14	14	15	14	14	15	16	14	14	14	15	21	22	21	22	15	14	18	14	16	14	15	15
4	15	15	14	14	15	14		17	14	14	18	20	18	20	17	21	14	14	14	14	14	15	15	14
5	14	15	15	14	14	14		15	14	14	14	18	21	23	20	18	16	14	14	14	15	15	15	15
6	14	15	14	14	14	14	14	17	14	14	17	18	17	20	29	18	14	14	14	14	15	14	15	16
7	14	15	14	14	14	14	14	14	14	16	18	21	23	22	22	21	15	15	18	14	14	16	14	15
8	14	14	15	14	15	14	14	16	14	14		22	21	44	22	23	21	14	14	14	14	16	14	15
9	15	14	14		15			14	14	15	16	21	22	22	20	20	14	14	14	14	15	15	15	15
10	15	15	14	14	14	18		14	14	14	16	21	22	24	20	17	14	14	14	14	14	15	15	15
11	15	16	15	15	14			15	18	15	22	21	45	23	23	26	17	14	14	14	15	14	15	14
12	18	15	15	14				15	14	14	20	21	40	22	39	21	26	14	14	15	16		15	14
13	14	14	14	14	14	18		14	15	16	22	23	21	38	28	33	21	15	14	14	14	14	15	14
14	14	14	14	14	14	14	15	21	14	15	22	23	27	30	30	20	22	14	14	14	14	15	15	14
15	14	15	14	14	14	15	14	15	14	20	20	24	22	21	23	21	18	15	21	15	14	15	14	15
16	14	16	14	14	14	15	18	15	14	17	21	30	27	27	21	20	16	14	14	14	14	15	14	14
17	14	14	15	15	14	14	14	14	14	18	18	22	23	24	22	18	21	14	14	14	14	14	14	14
18	14	14	14	14	14	14	14	16	14	14	15	17	20	27	16	15	14	15	14	15	15	15	15	15
19	14	15	14	14	14	14	14	15	14	15	16	22	22	23	23	16	20	14	15	14	15	14	14	14
20	14	14	14	14	14		15	15	14	15	18	39	23		21	20	16	14	14	14	15	15	15	14
21	14	14	15	14	14	16	14	15	18	14	20	20	24	27	21	23	14	14	14	14	14	15	14	15
22	14	15	14	14	14		16	15	14	14	16	21	22	27	23	20	17	14		14	15	16		14
23	14	15	15	14	14	14	15	14	14	18	18	22	24	28	22	20	18	14	14	15	14	14	14	14
24	14	15	14	14	14	15	15	14	14	15	20	21	33	27	20	21	15	14	14	14	14	15	14	14
25	15	14	15	14	14	15	15	14	14	15	21	21	23	34	33	21	17	14	14	14	14	14	14	14
26	14	14	14	14	15		15	17	14	15	17	21	21	22	22	20	14	14	14	15	15	15	14	14
27	14	14	14	14	15		15	15	14	15	20	22	46	38	21	20	16	14	14	16	15	18	16	15
28	14	15	14	14		14	14	15	14	16	24	22	23	21	44	15	14	14	14	14	15	14	14	14
29	15	15	15	14	14	14	15	15	14	16	16	24	21	21	21	21	16	17	14	14	15	14	16	14
30	14	14	14	14	14	14	14	14	14	14	20	16	24	23	21	22	17	14	14		14	14	14	14
31	14	15	15	15	16	15	15	14	14	16	16	21	22	21	21	15	16	14	14	14	14	15	14	14
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	30	29	24	24	31	31	31	30	31	31	30	31	31	31	31	30	30	31	30	30	31
MED	14	15	14	14	14	14	15	15	14	15	18	21	22	23	21	20	16	14	14	14	15	15	15	14
U Q	15	15	15	14	14	15	15	16	14	16	20	22	24	27	23	21	18	14	14	14	15	15	15	15
L Q	14	14	14	14	14	14	14	14	14	14	16	20	21	22	21	18	14	14	14	14	14	14	14	14

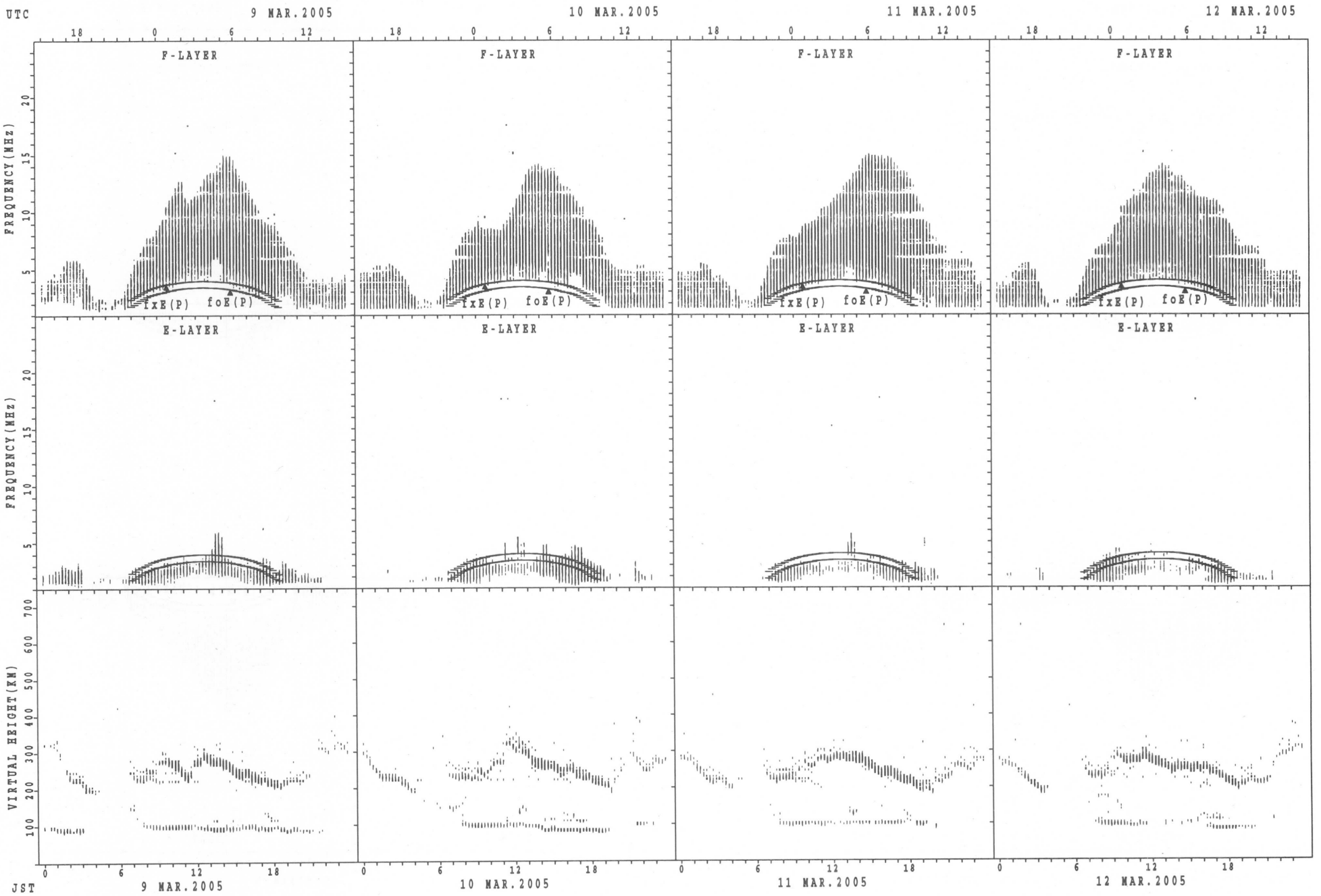

SUMMARY PLOTS AT Okinawa
UTC
JST
1 MAR.2005
2 MAR.2005
3 MAR.2005
4 MAR.2005
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY (MHz)
VIRTUAL HEIGHT (KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



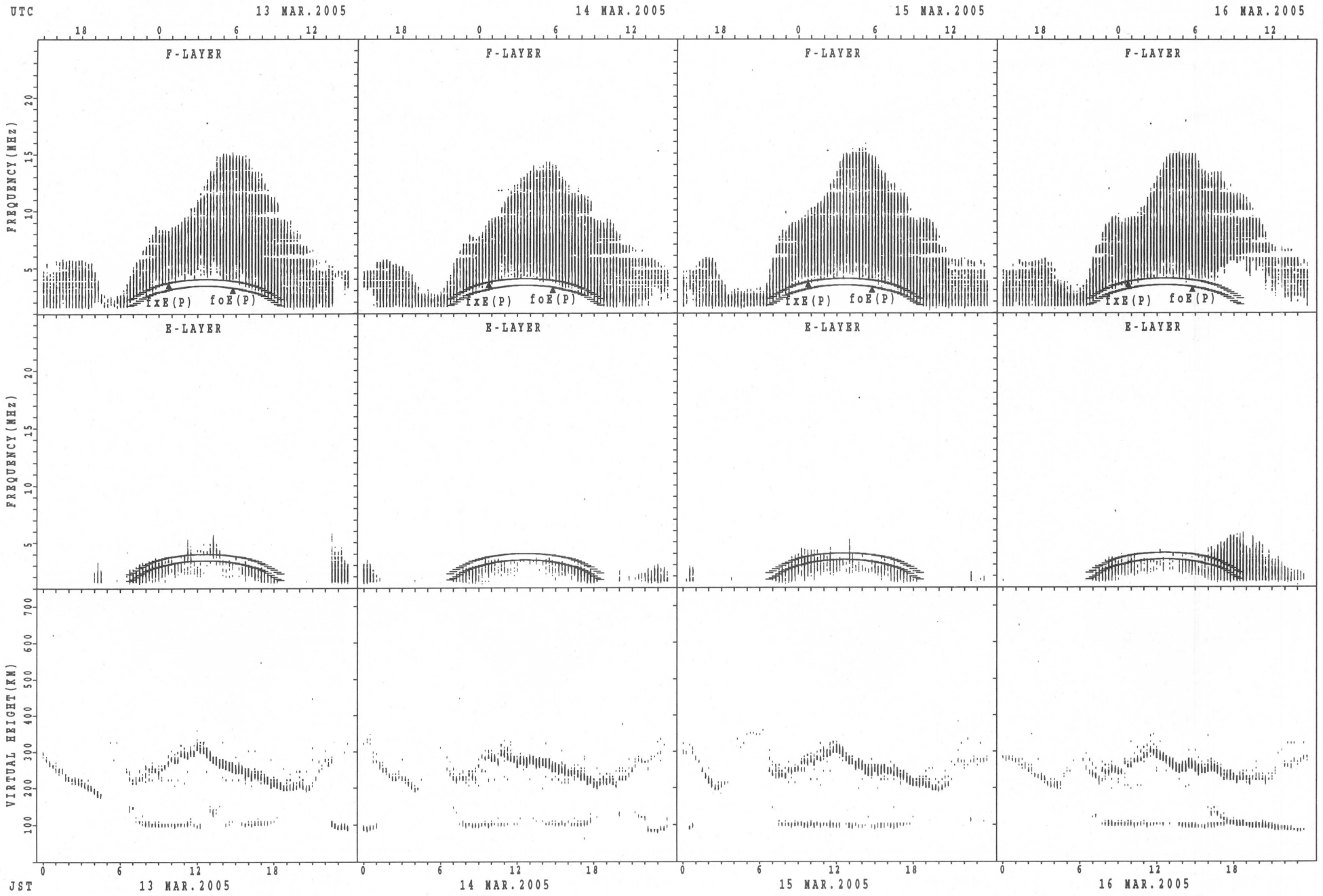
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



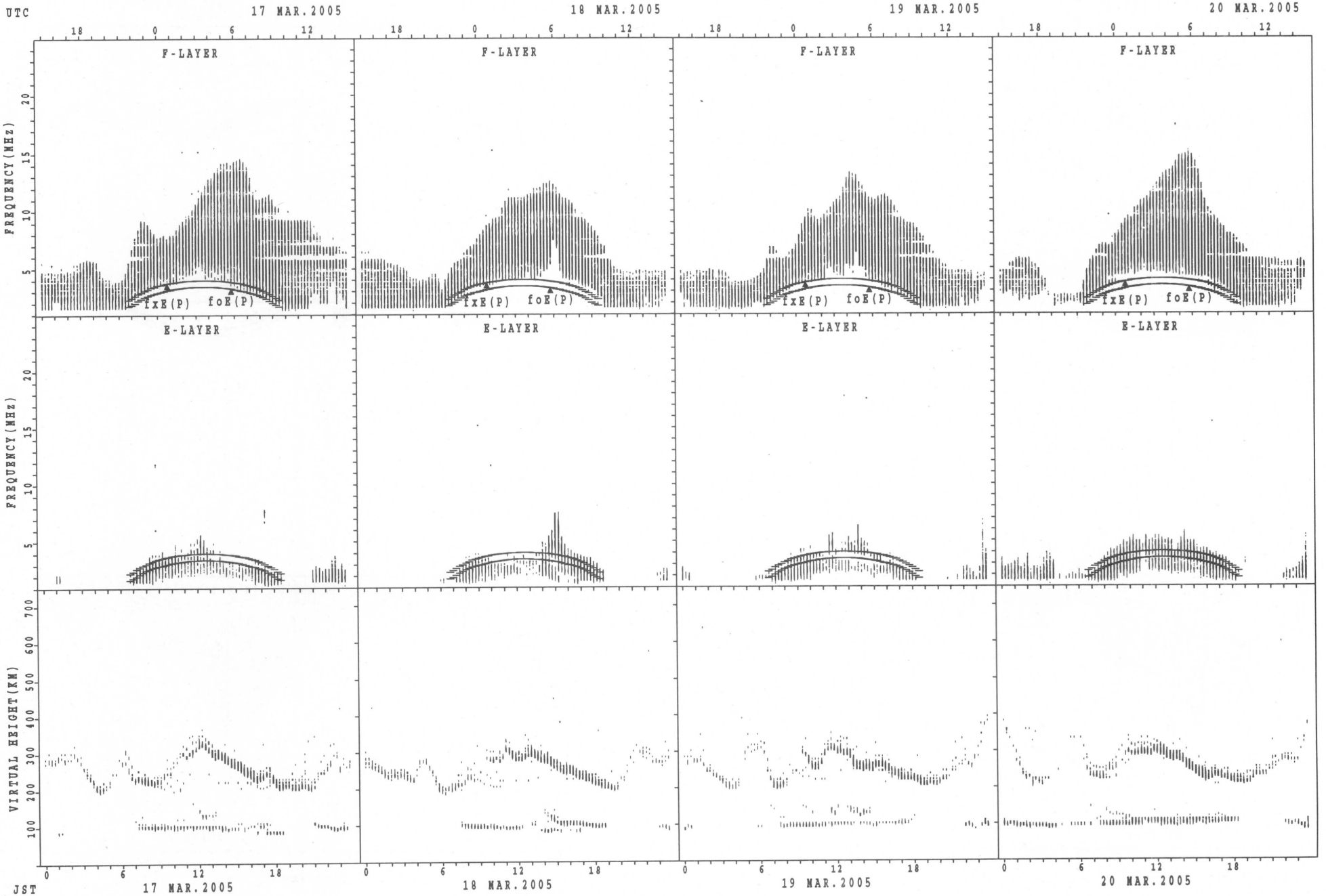
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



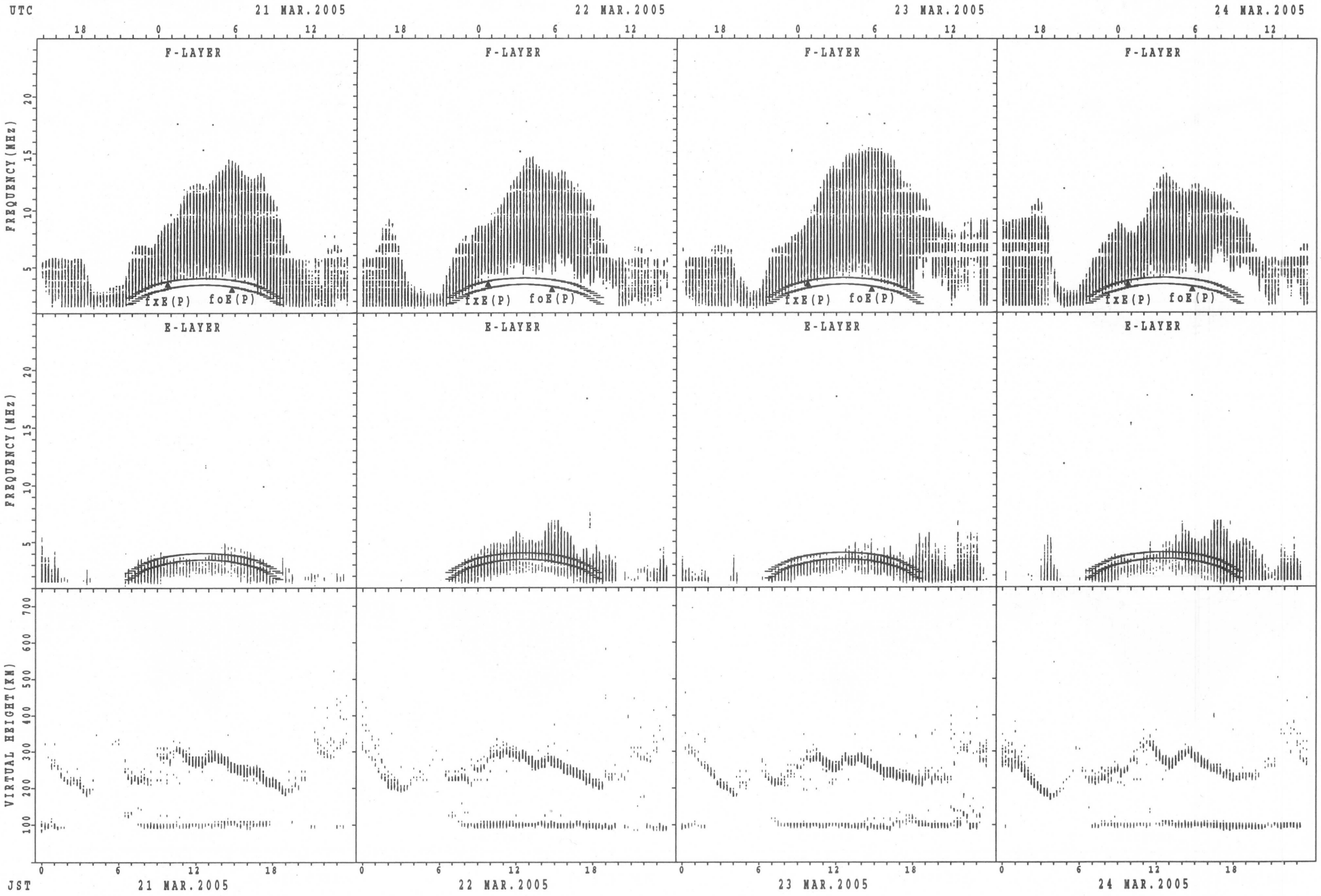
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



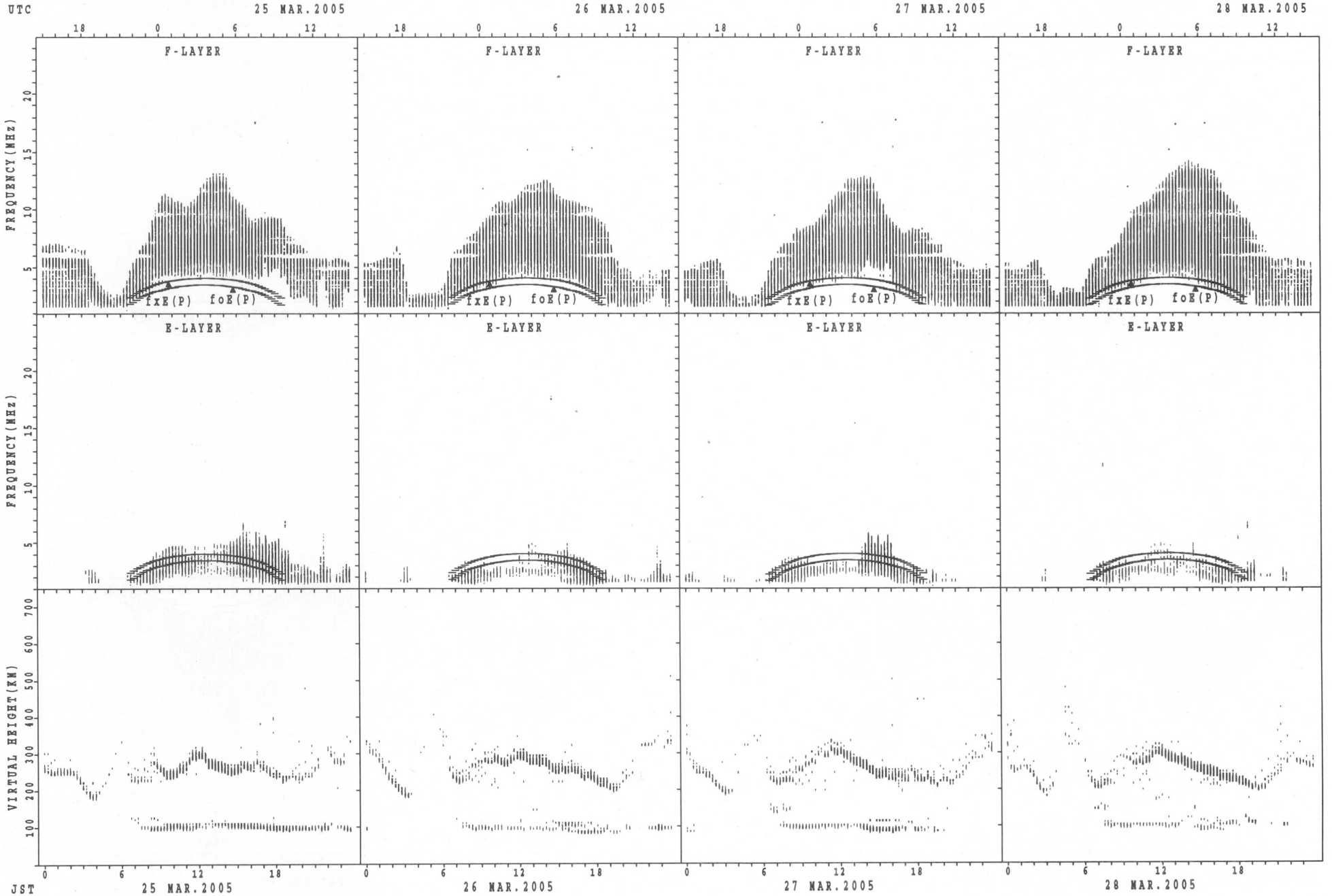
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



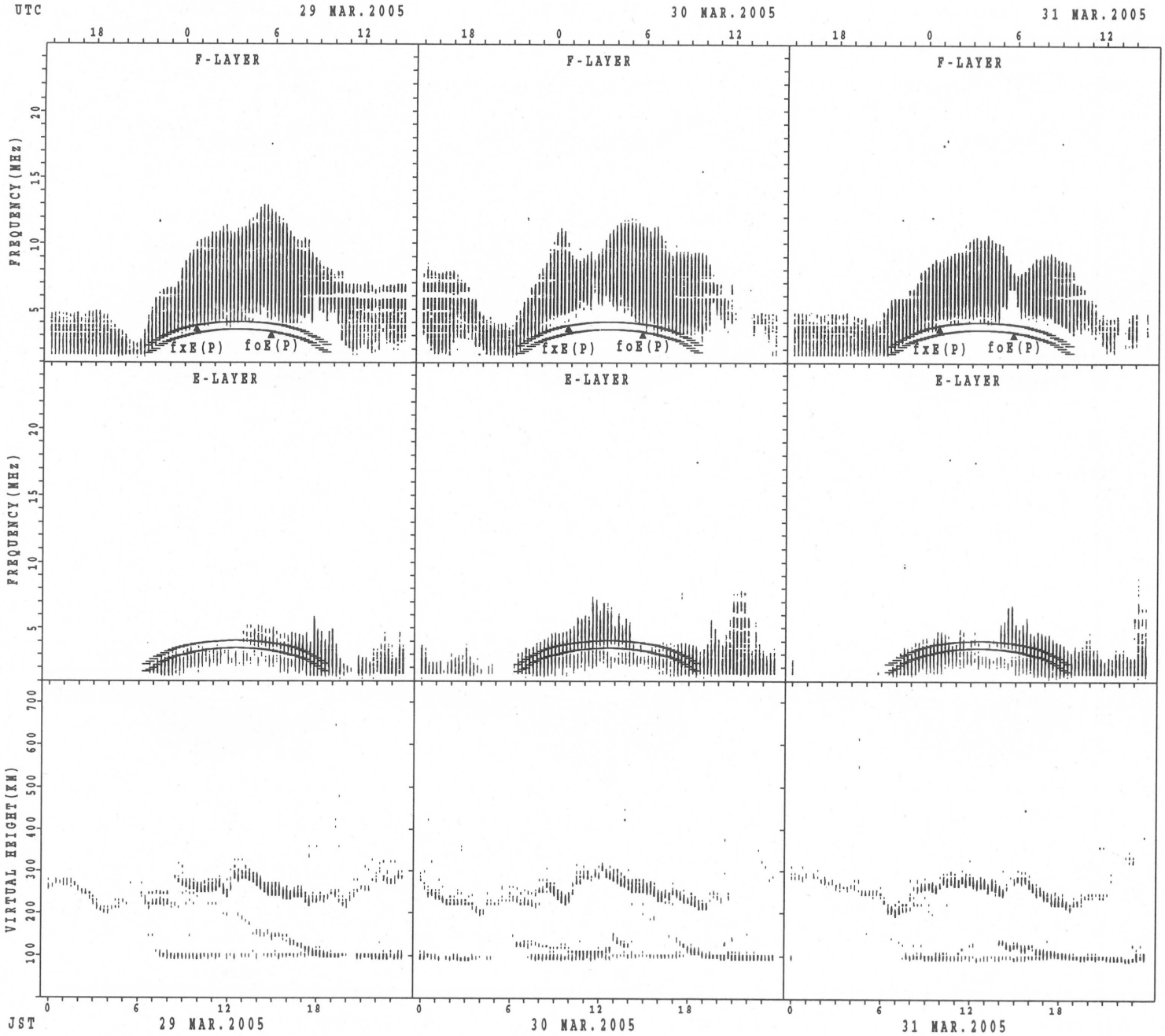
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



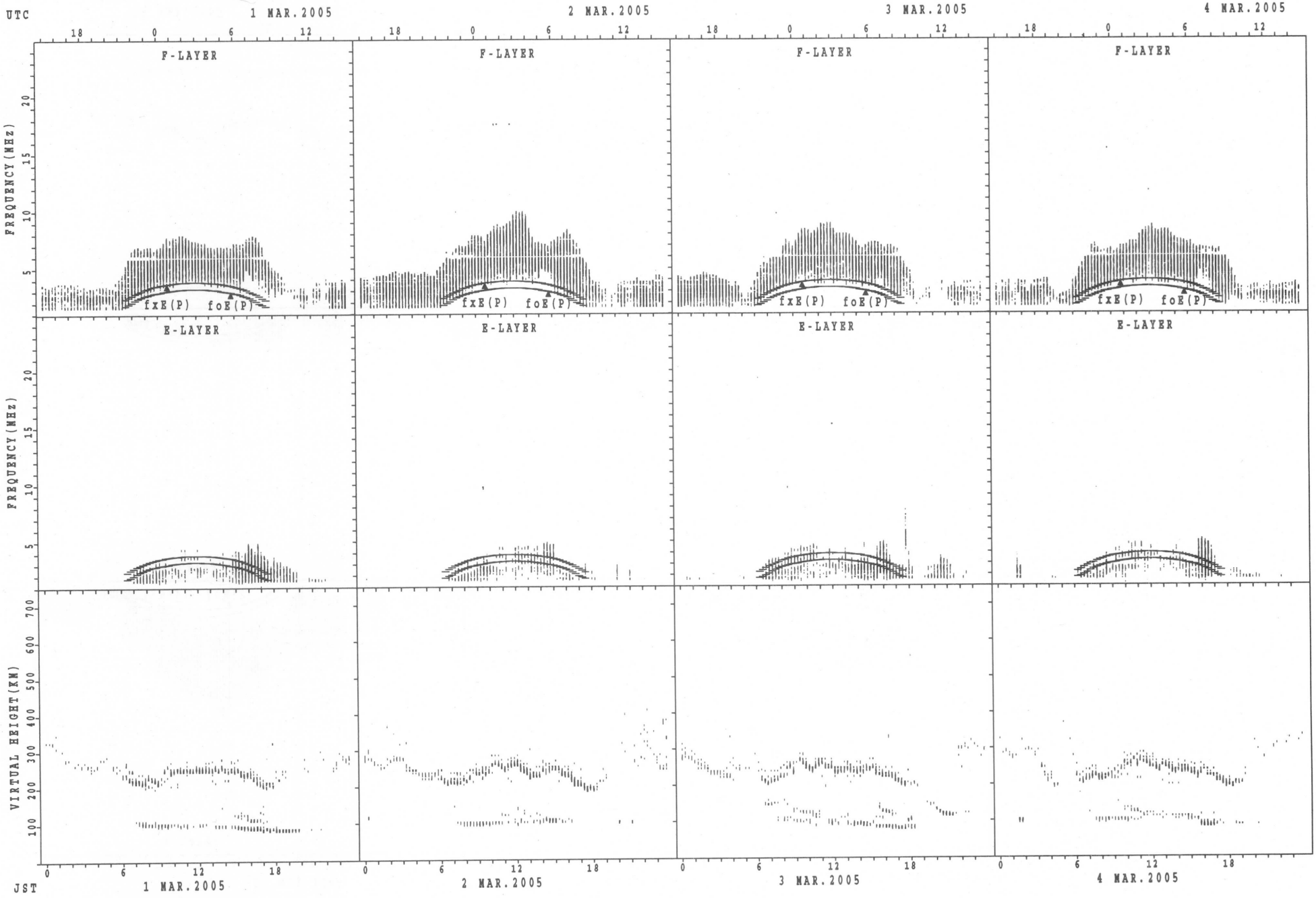
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



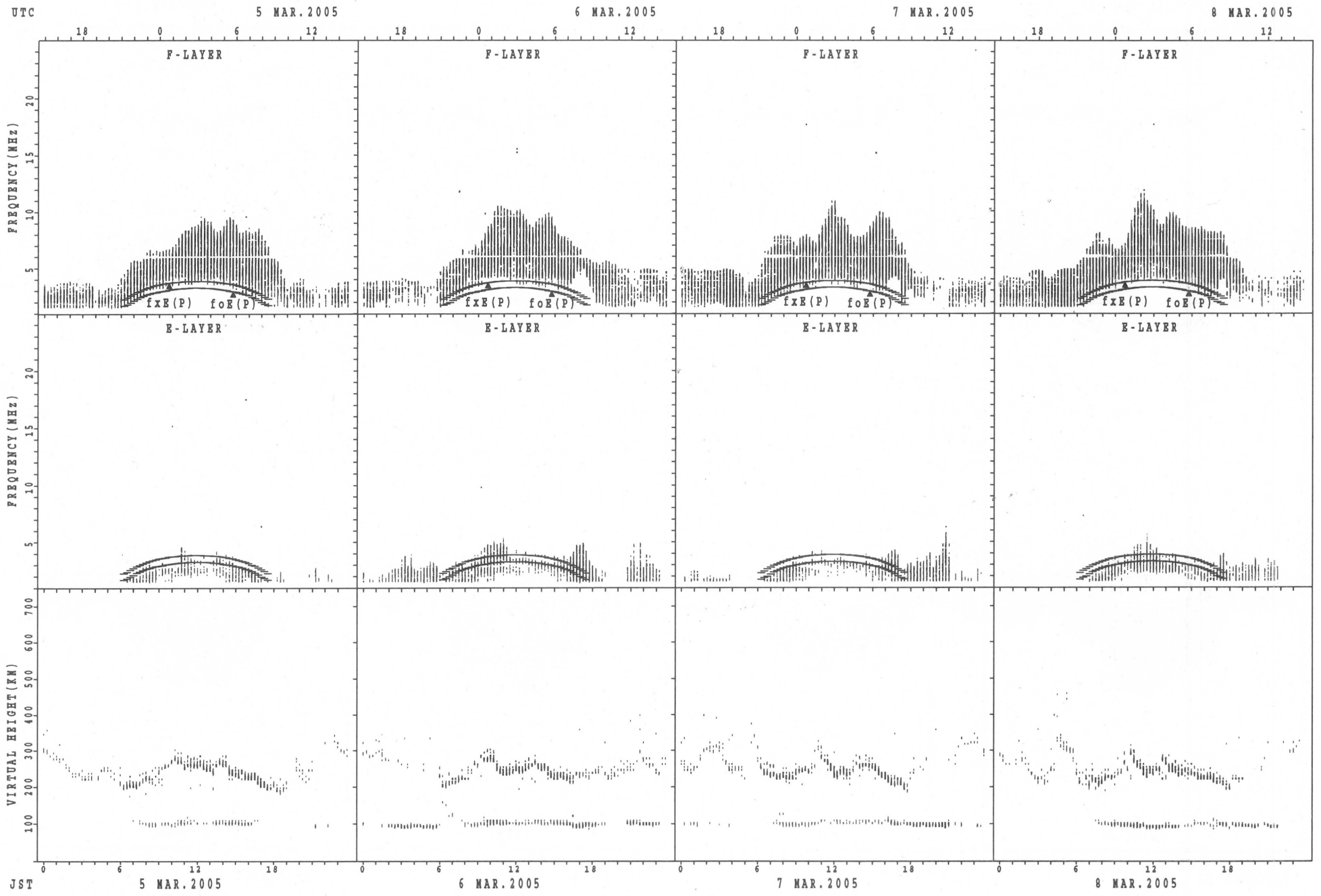
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



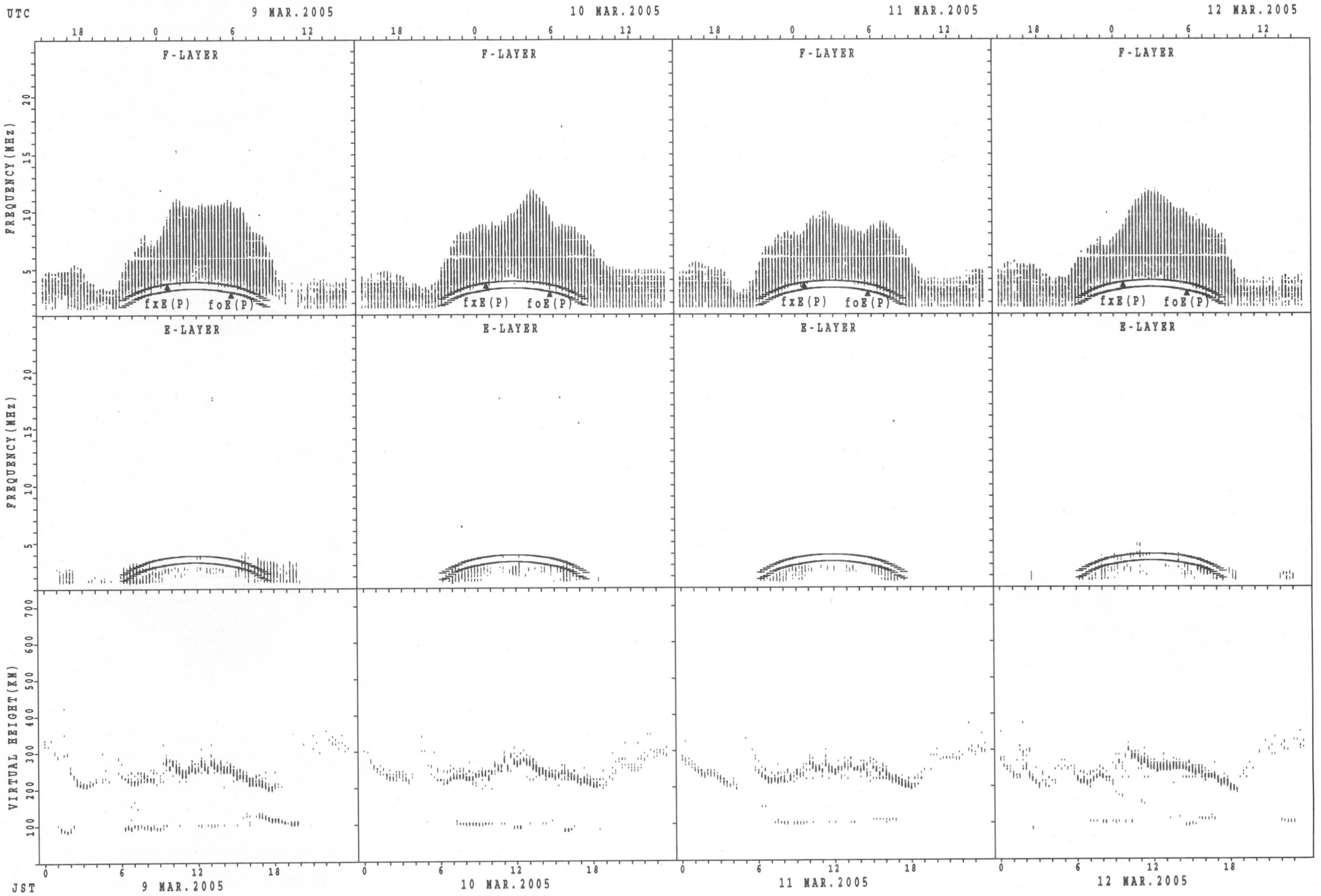
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



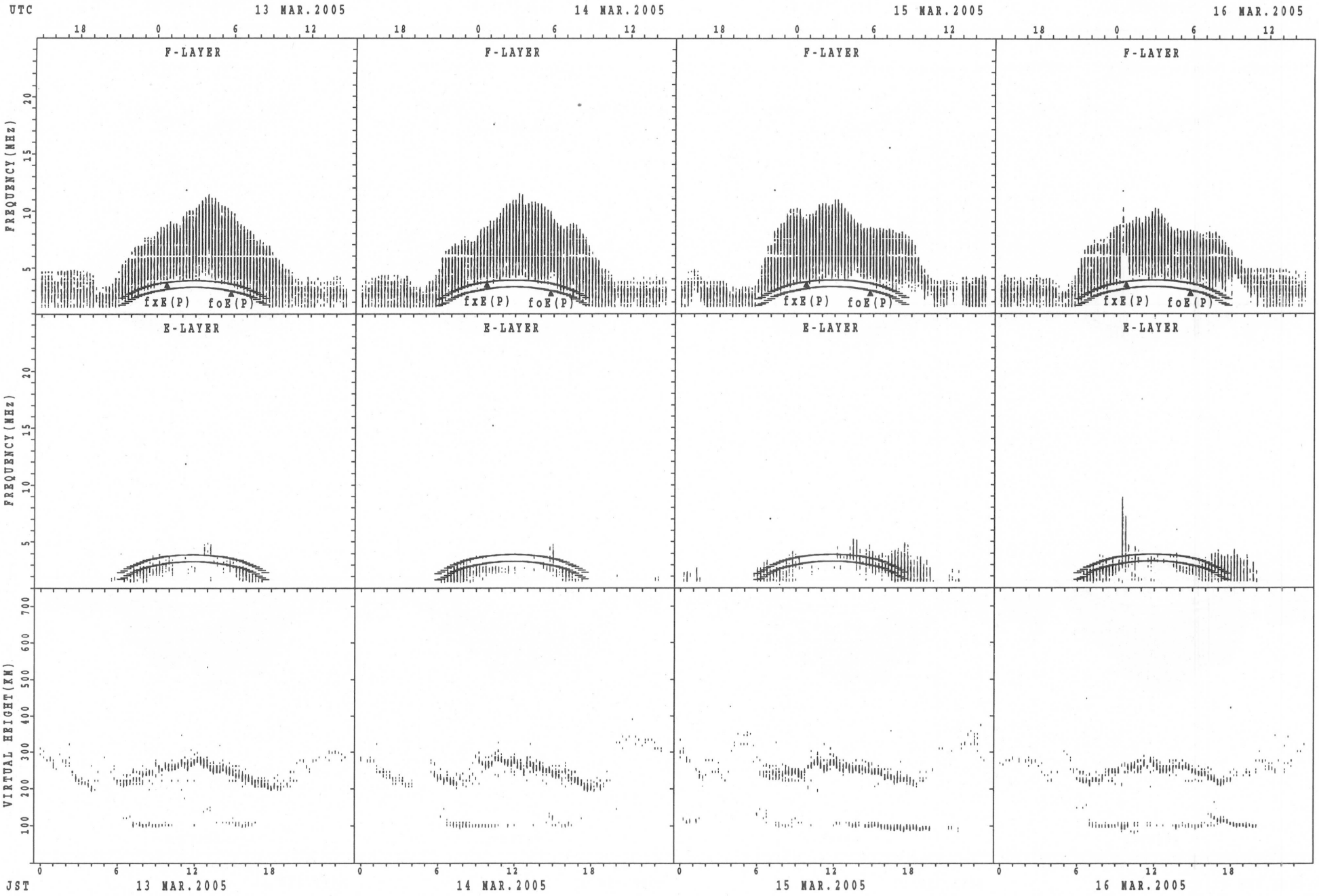
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



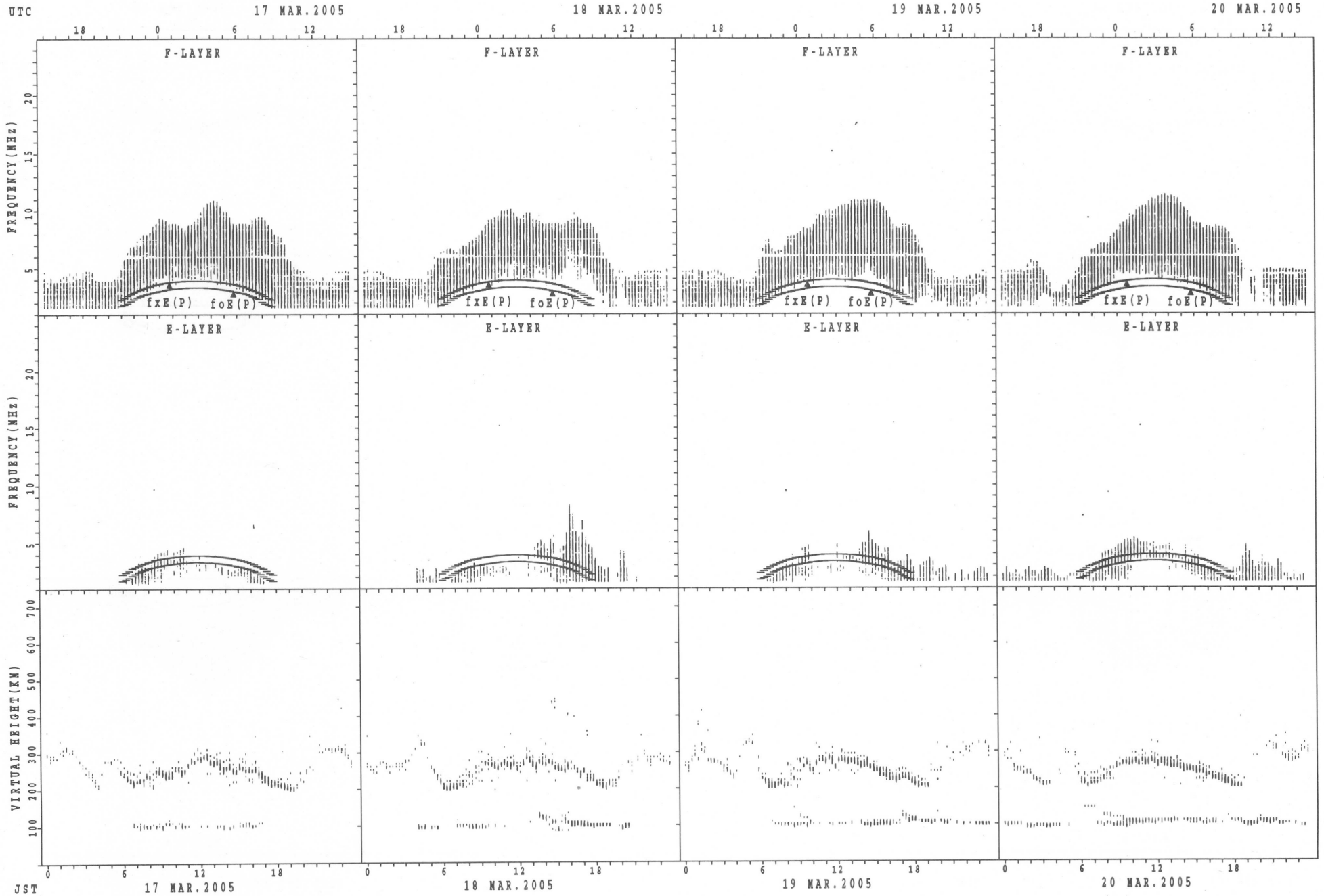
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



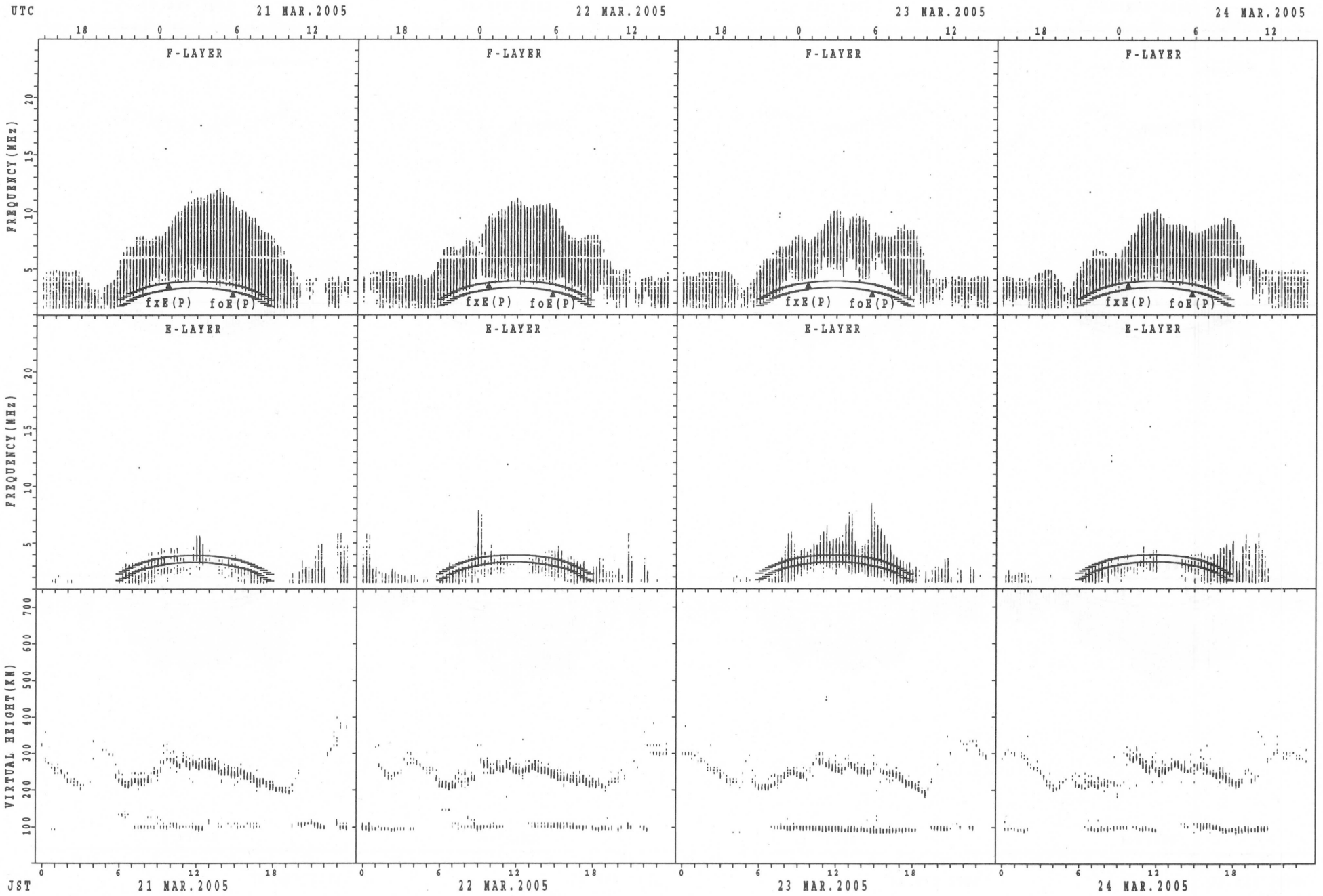
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



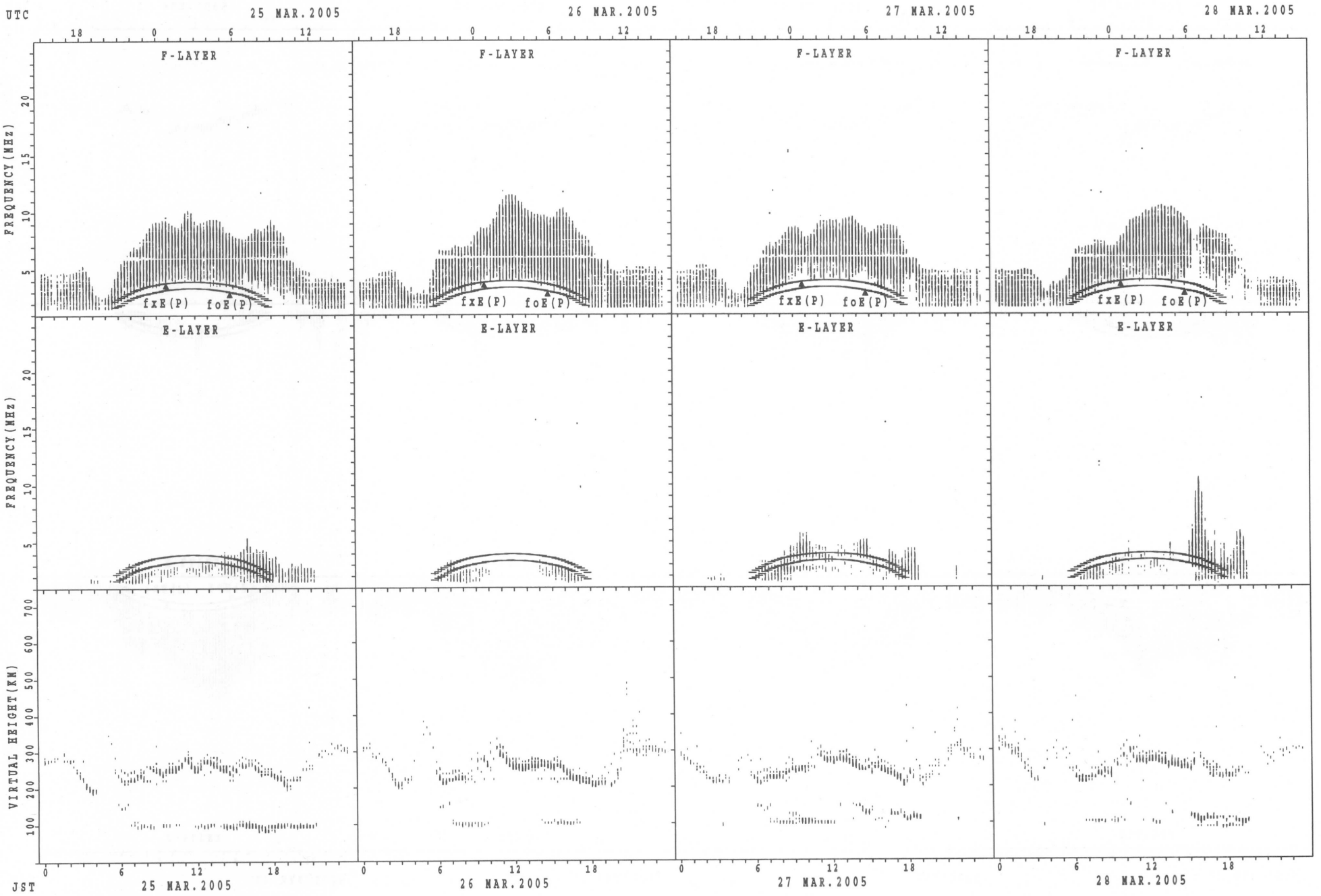
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



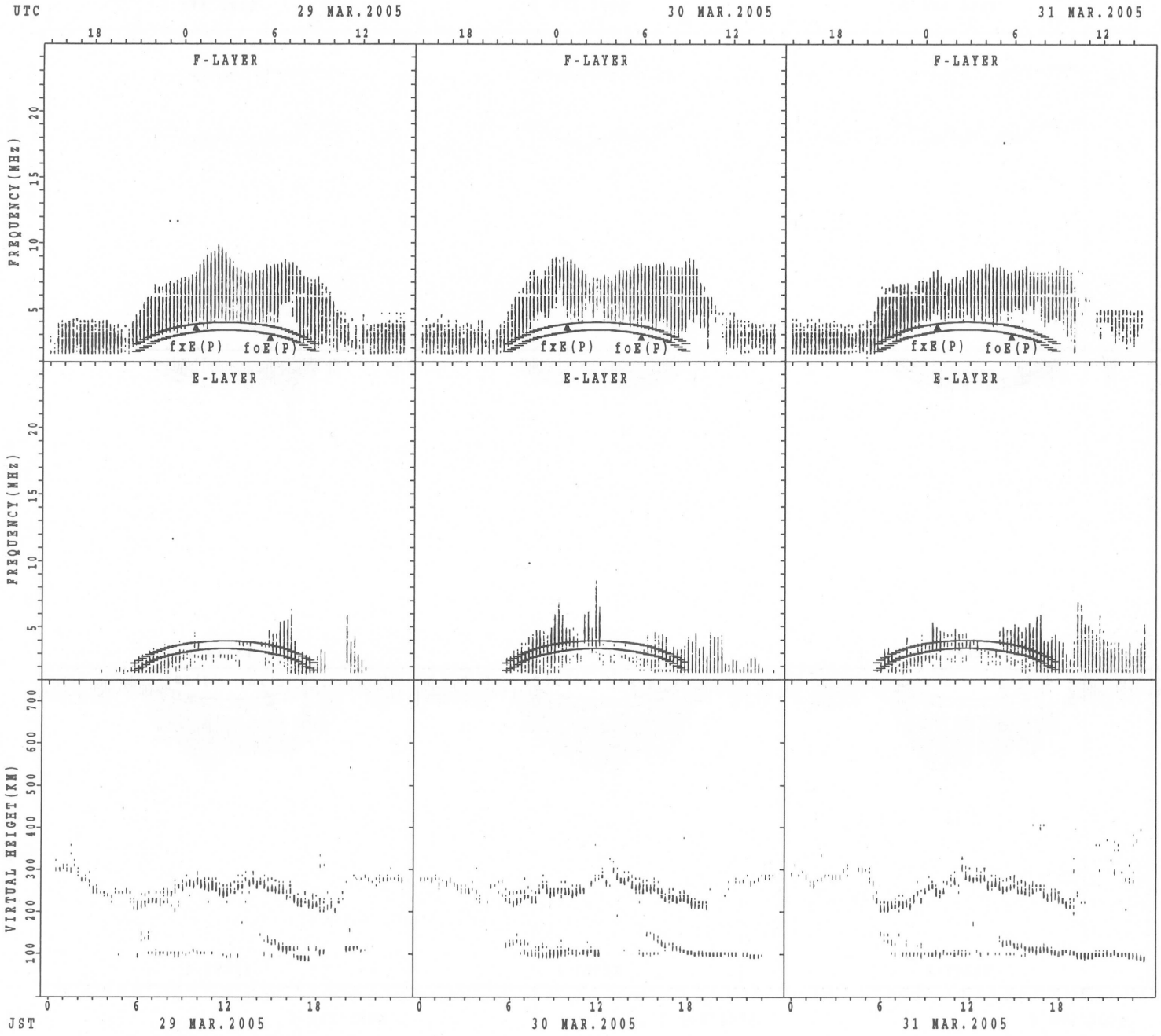
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



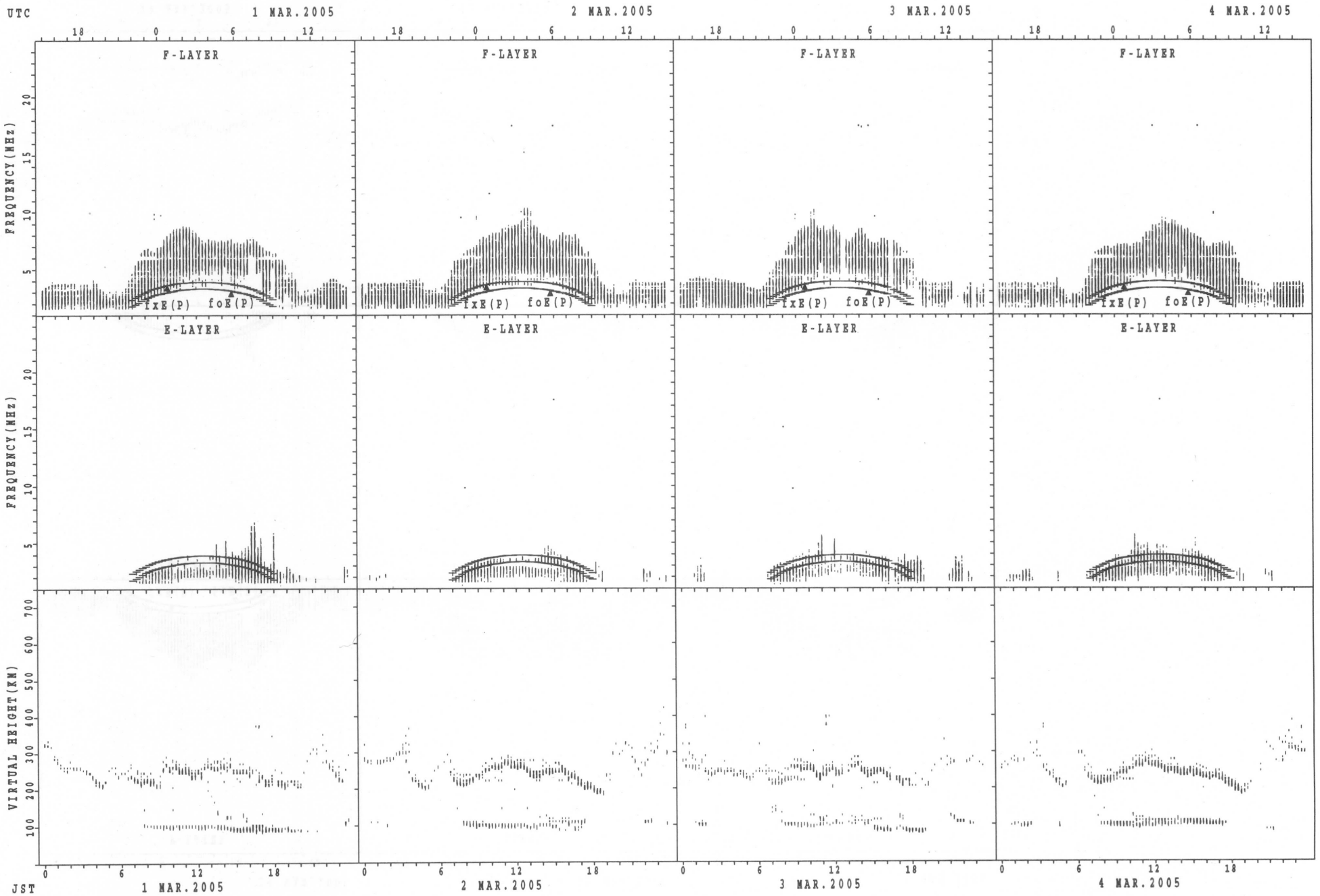
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



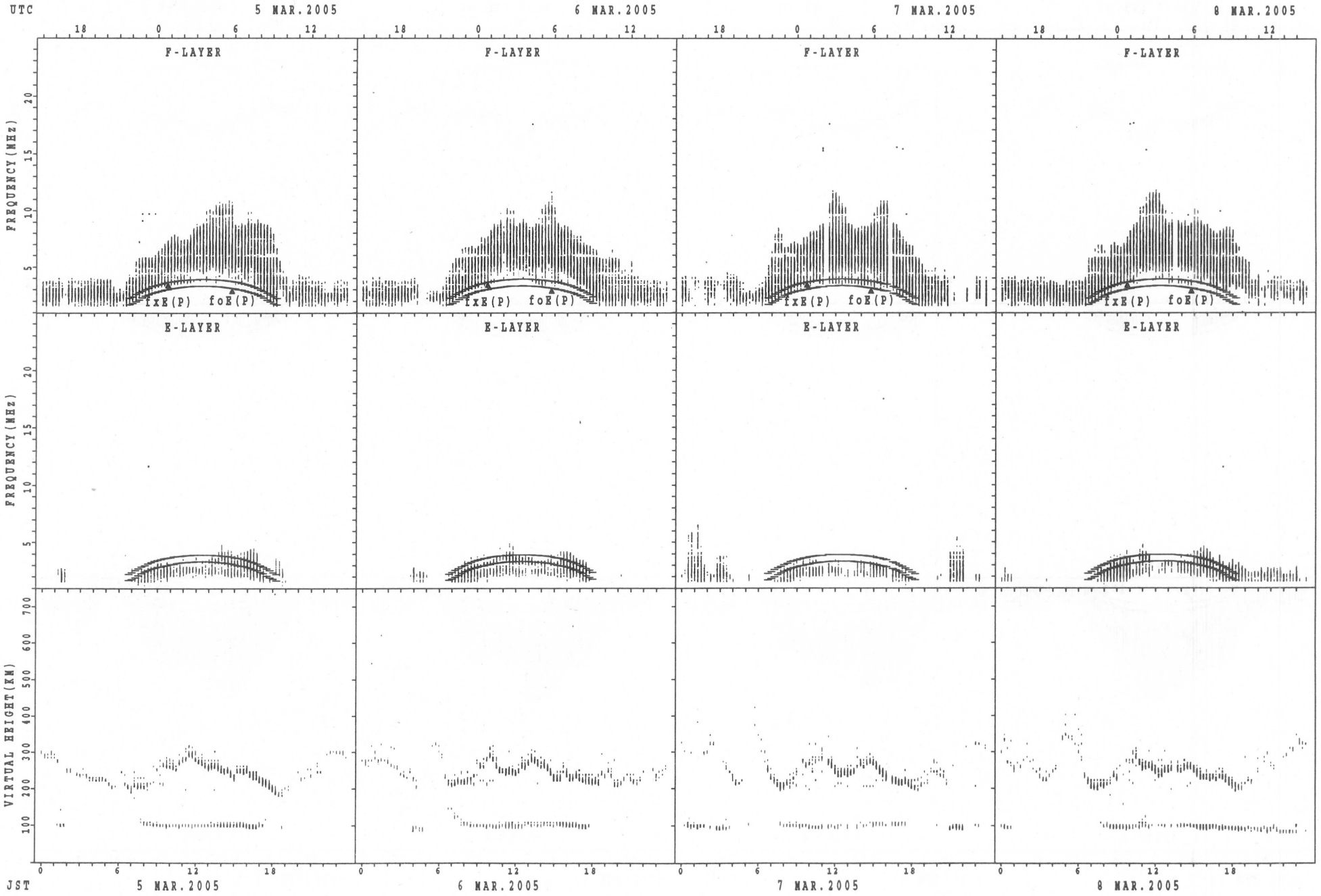
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



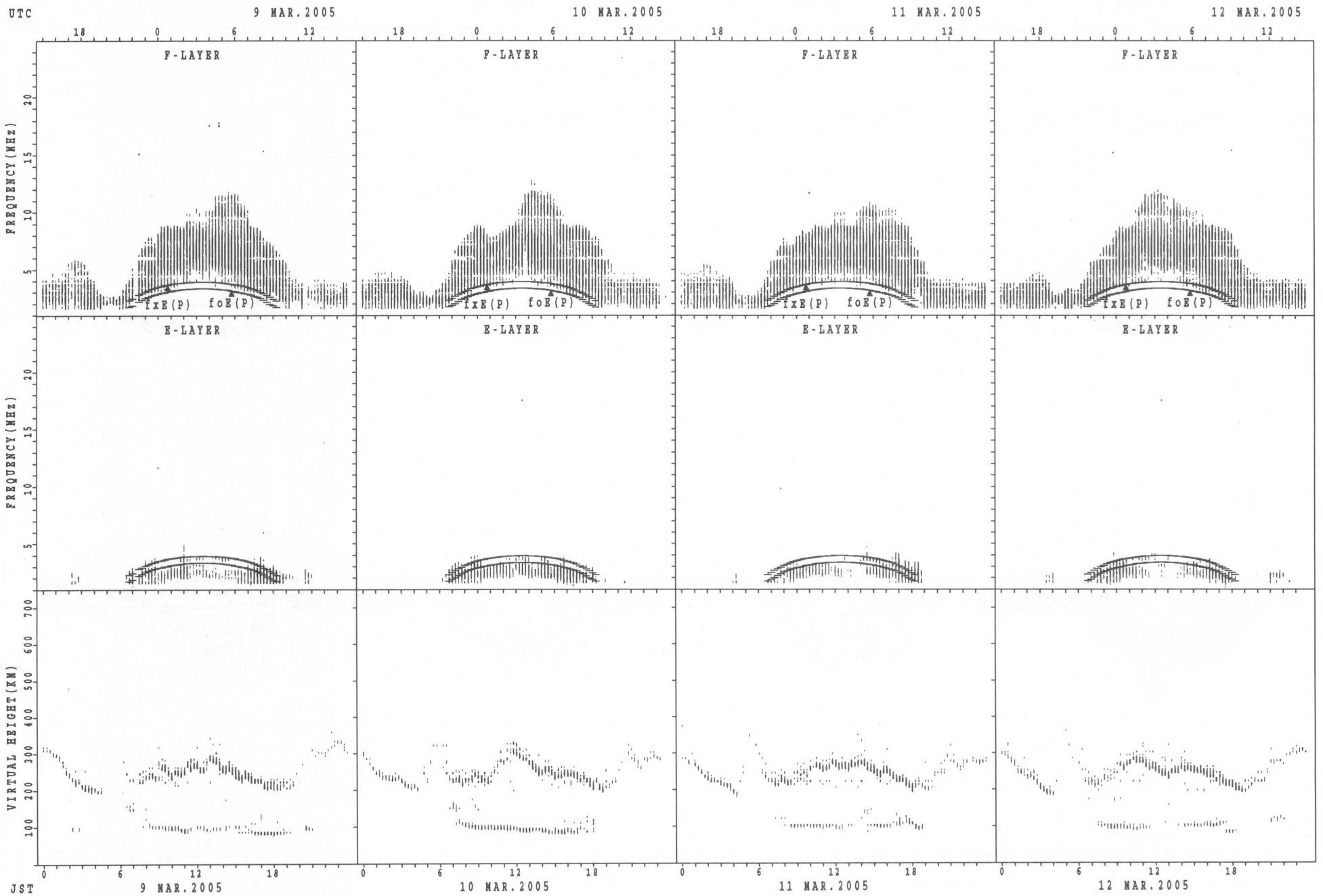
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



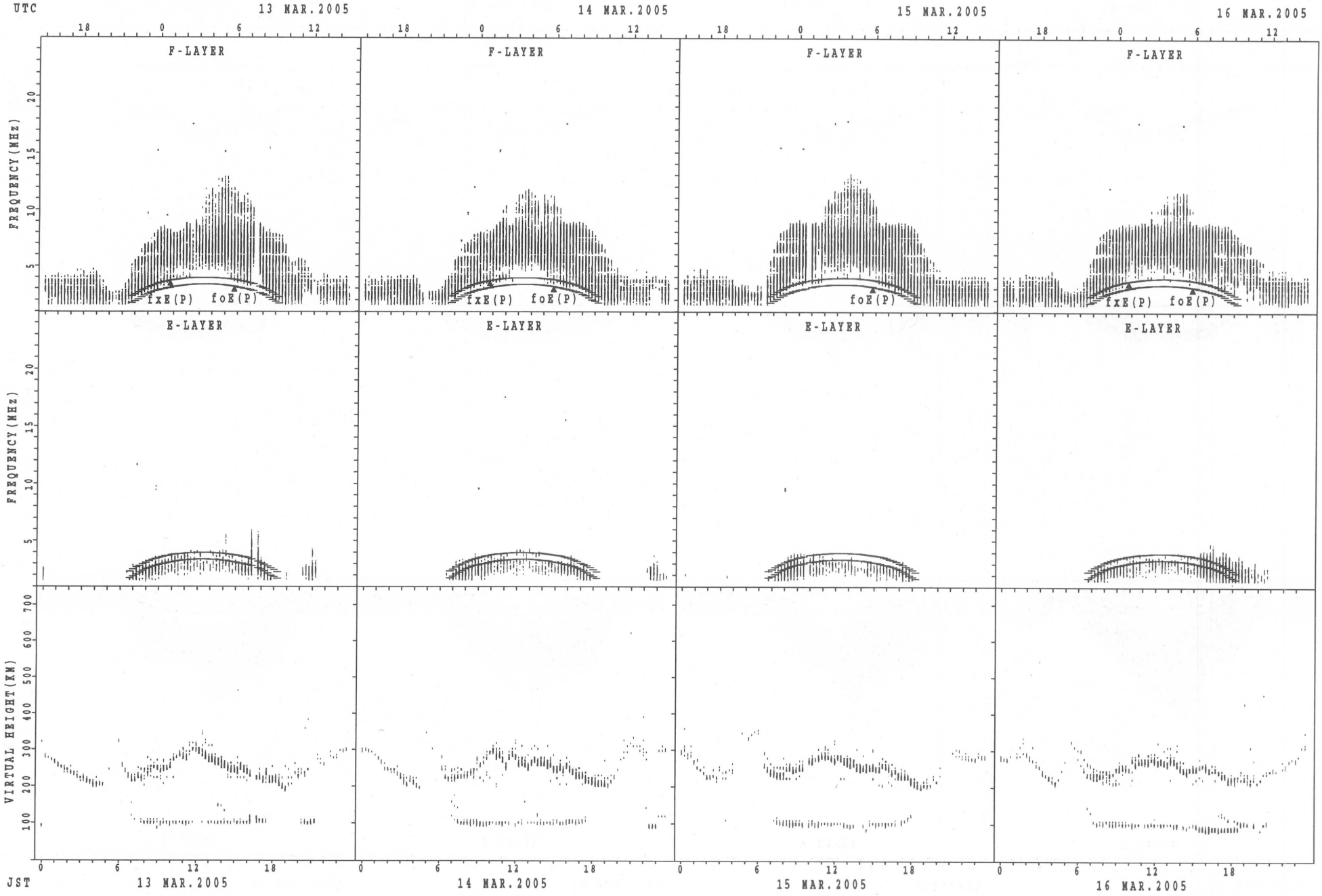
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



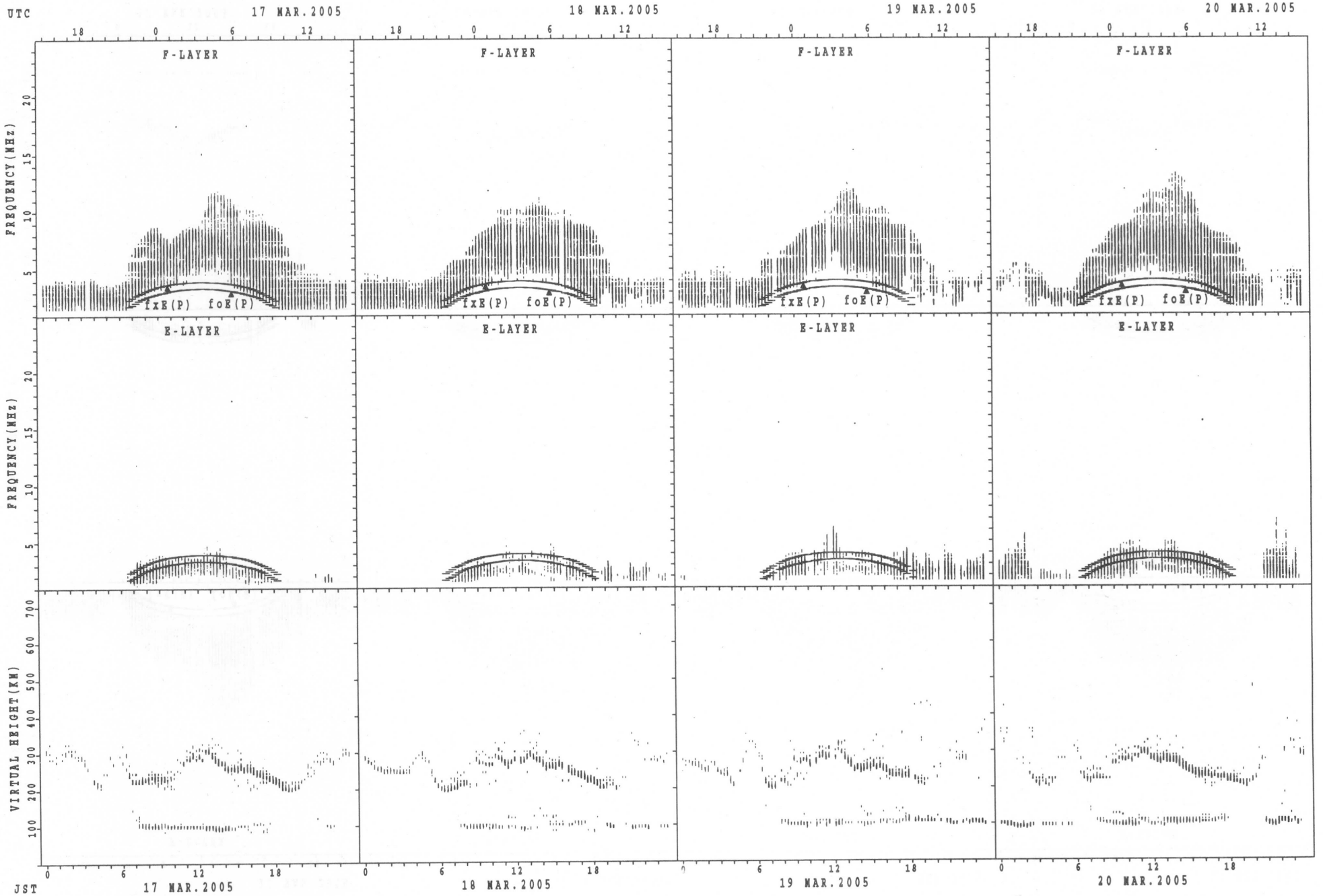
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



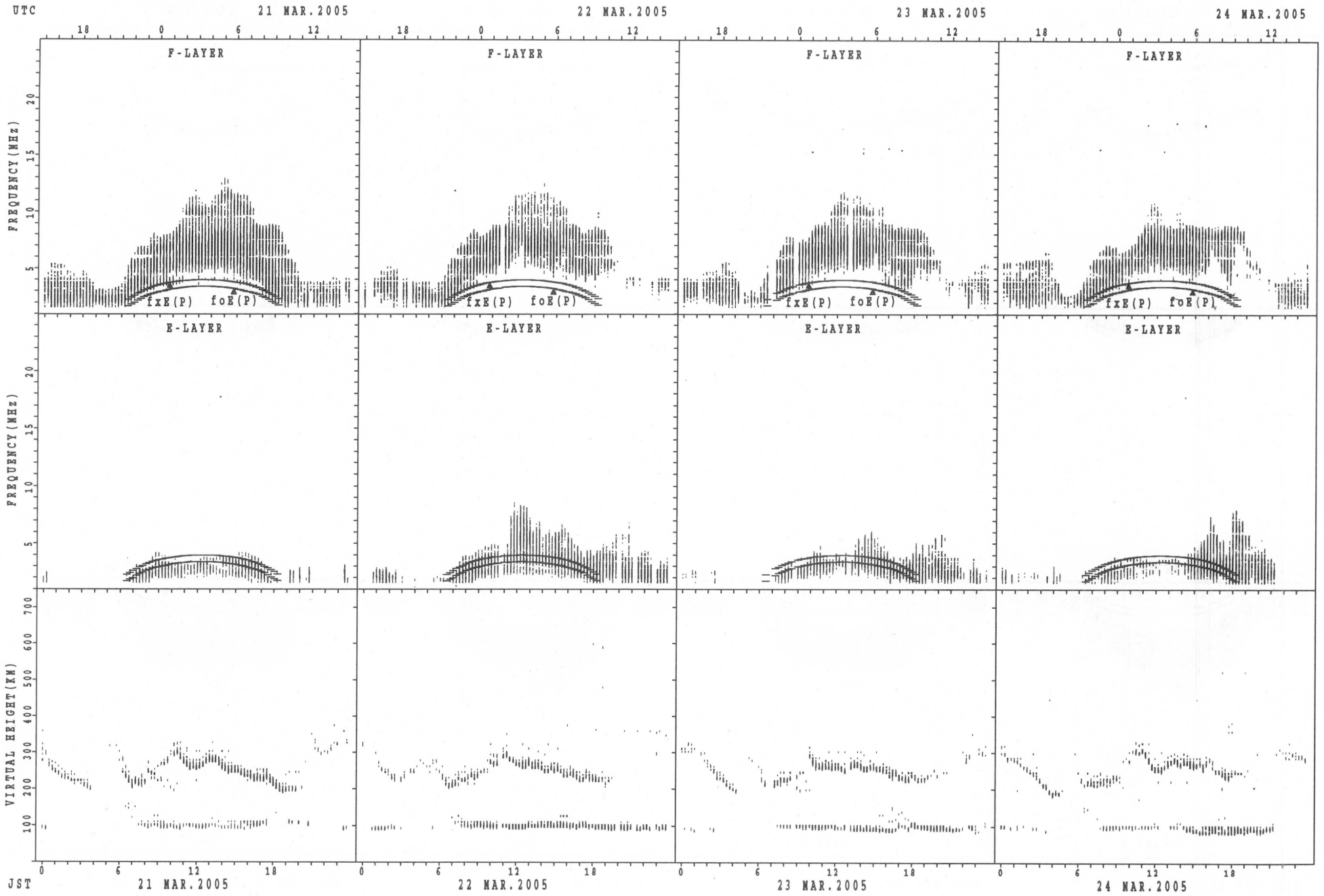
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



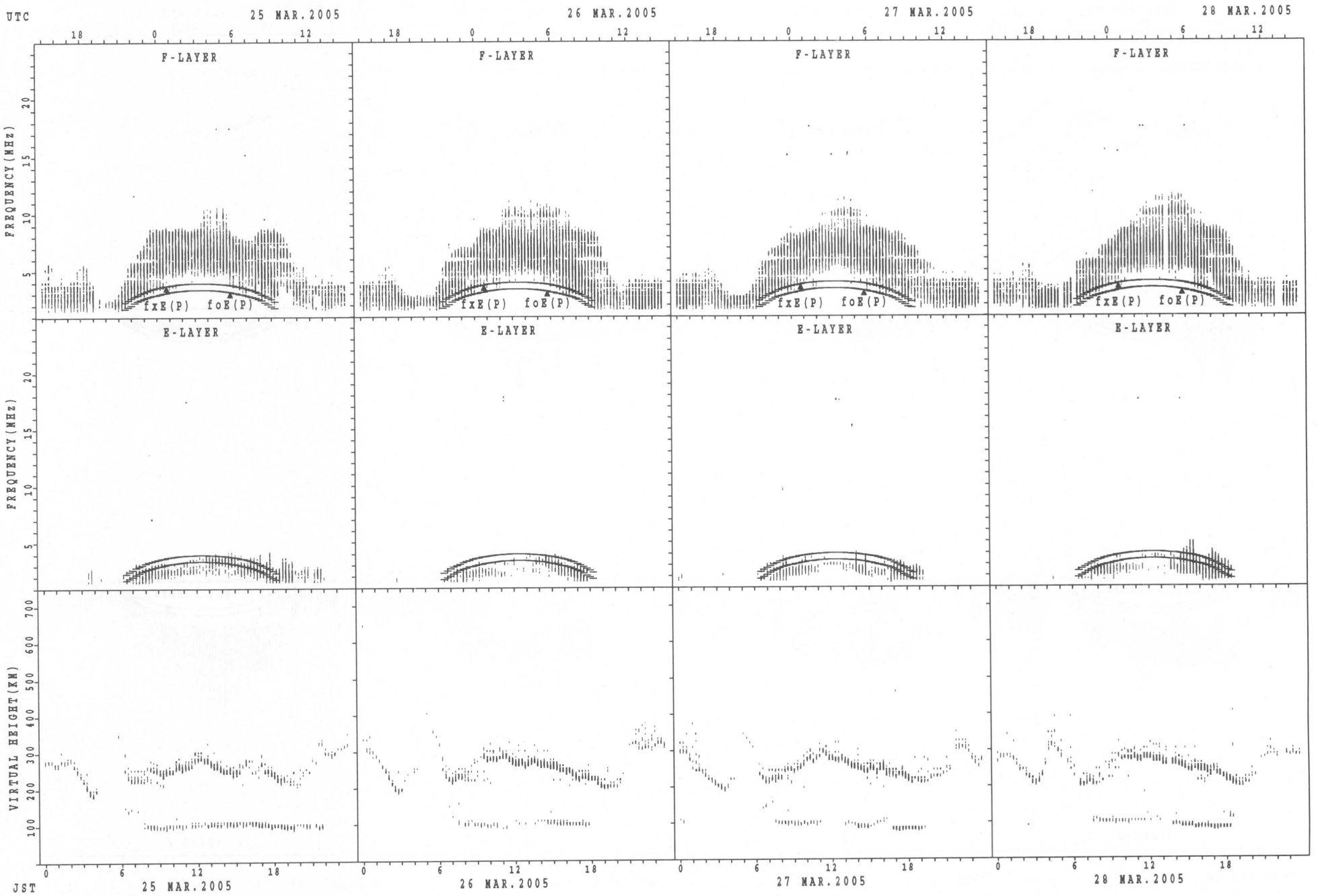
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



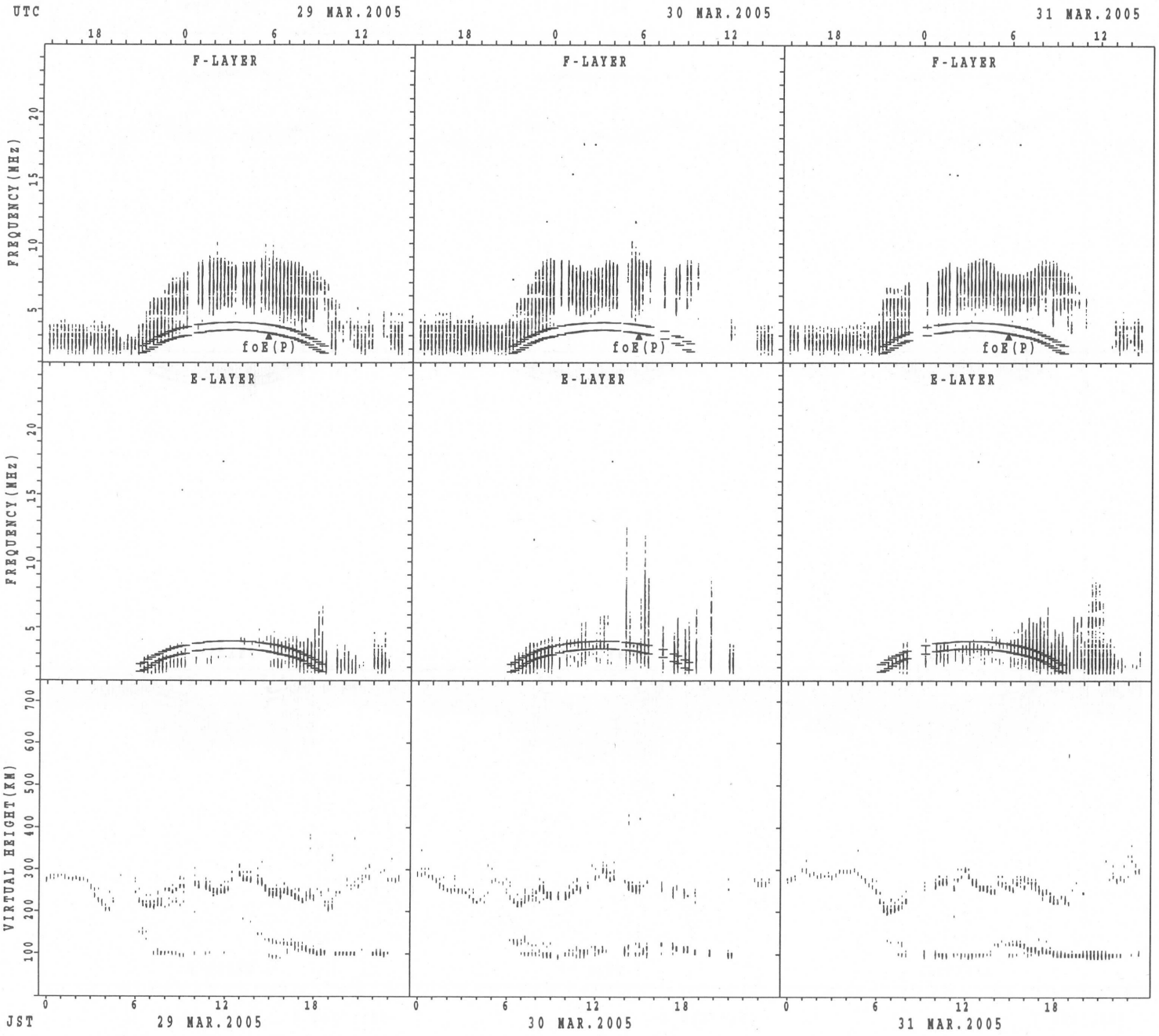
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



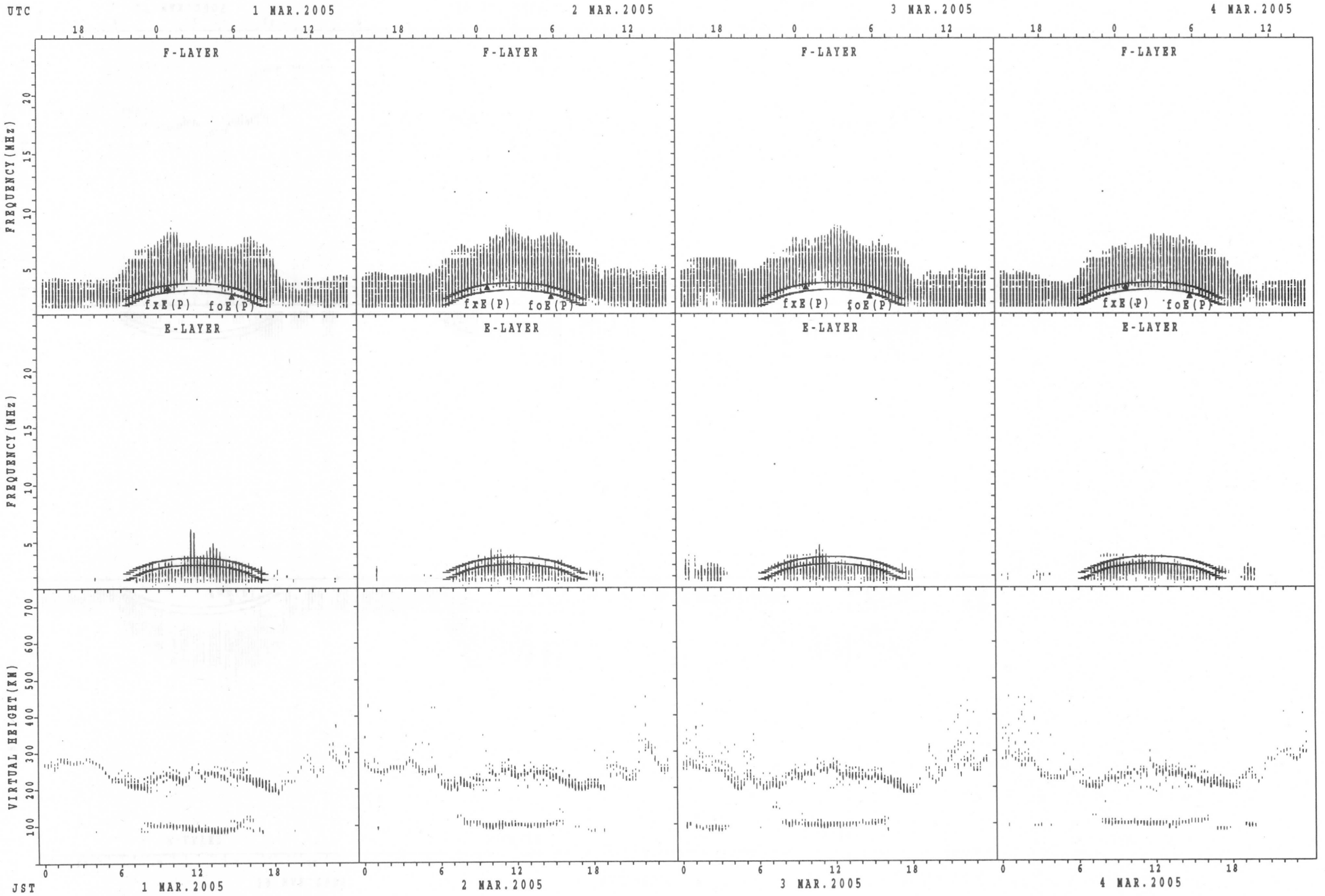
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



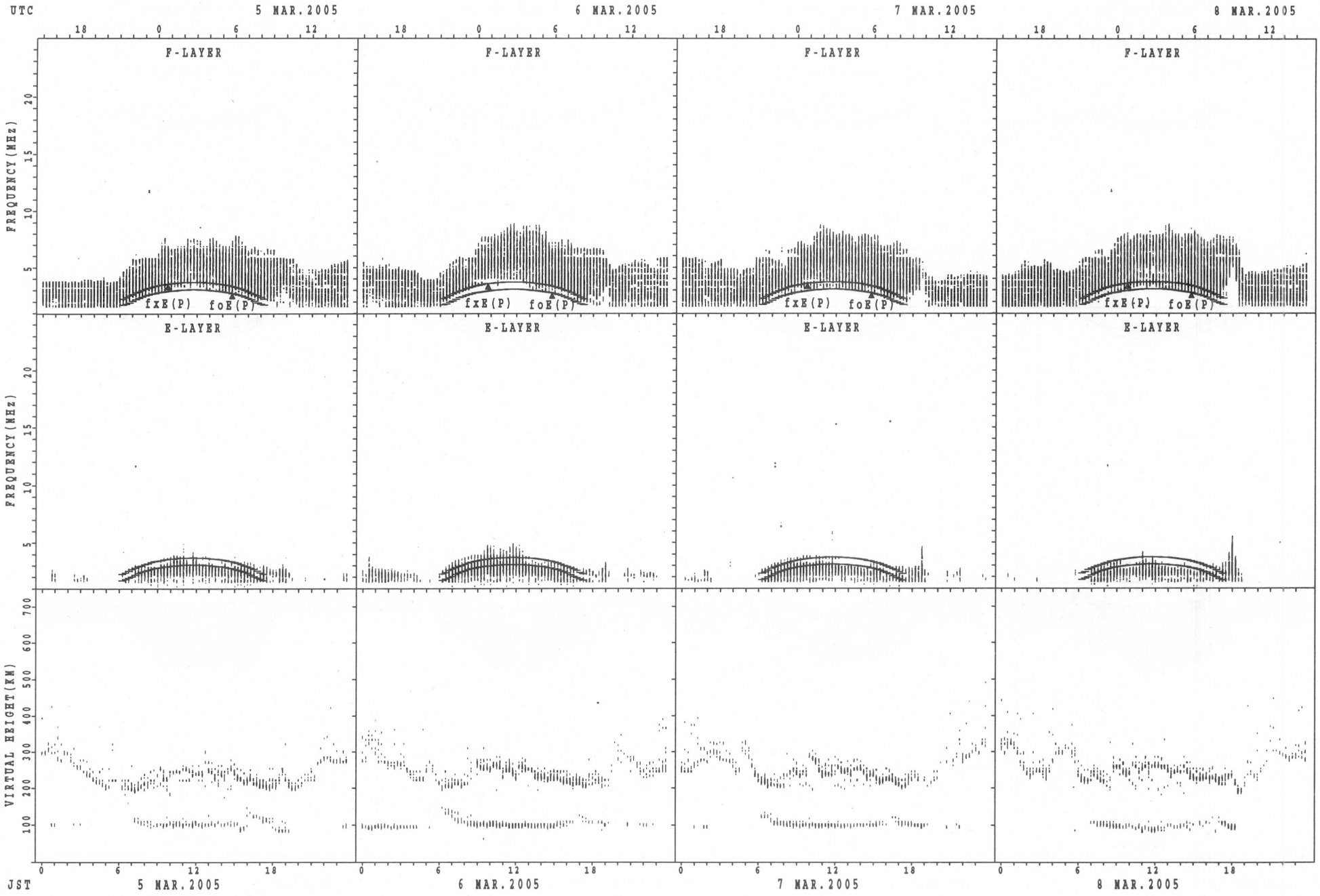
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



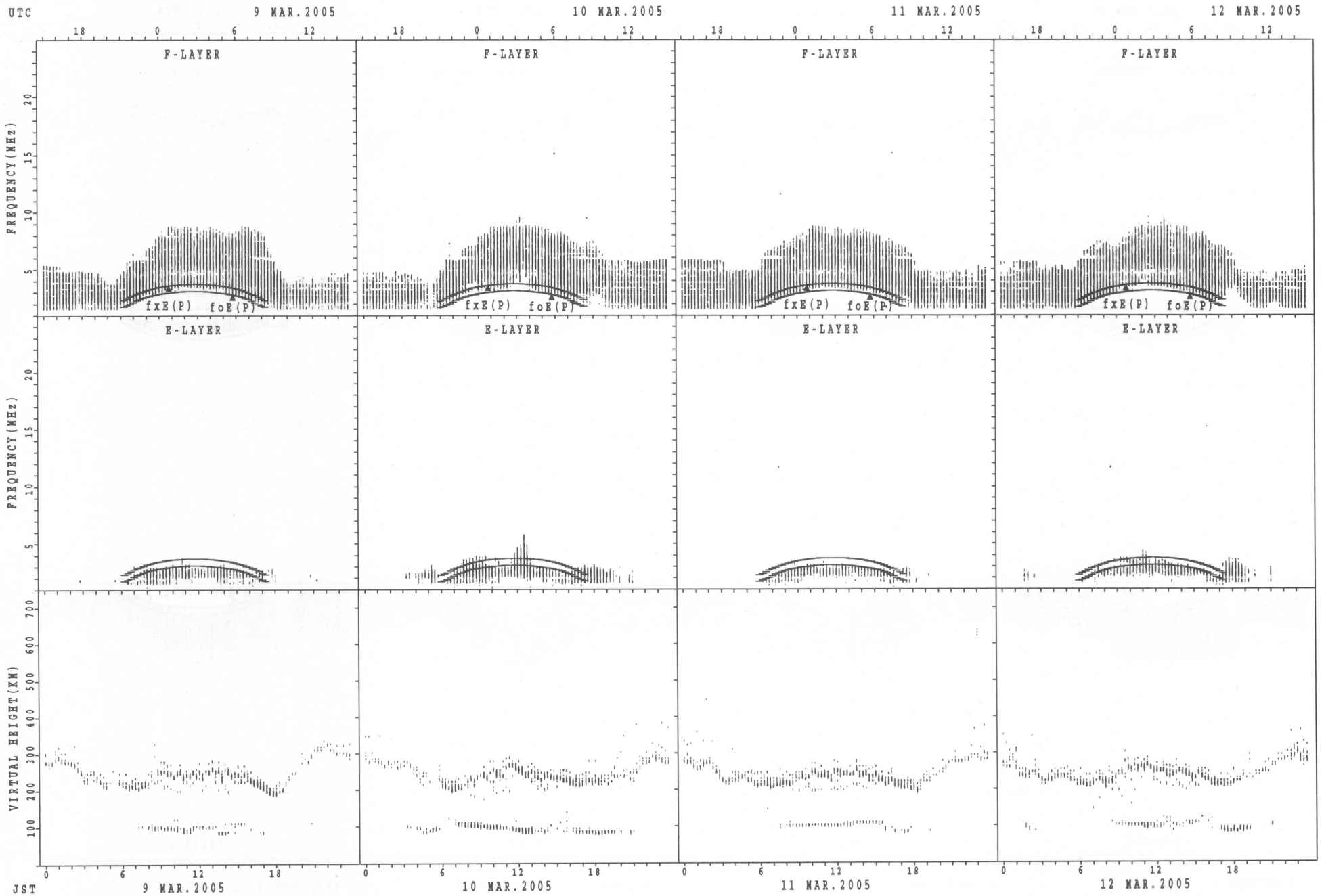
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



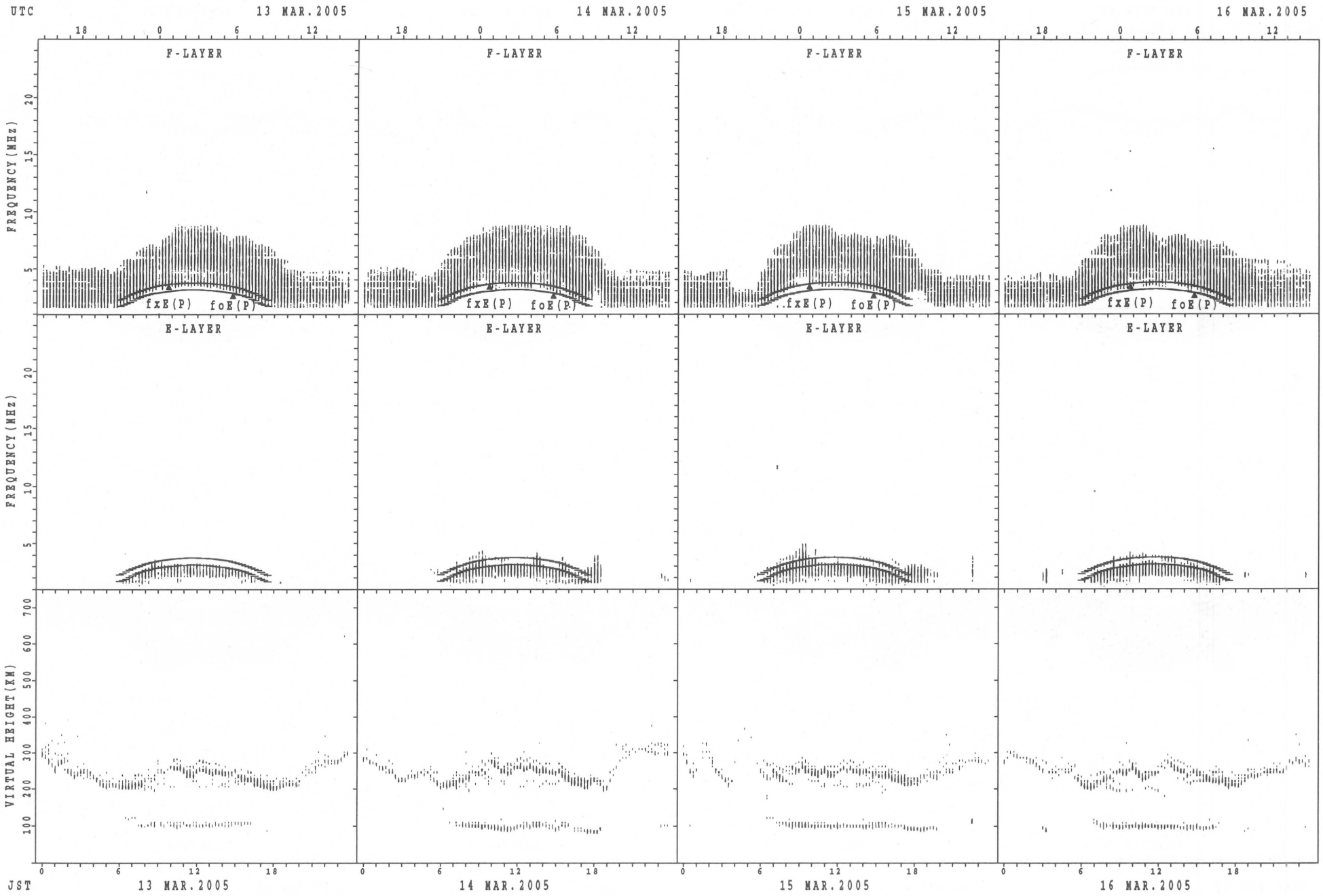
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



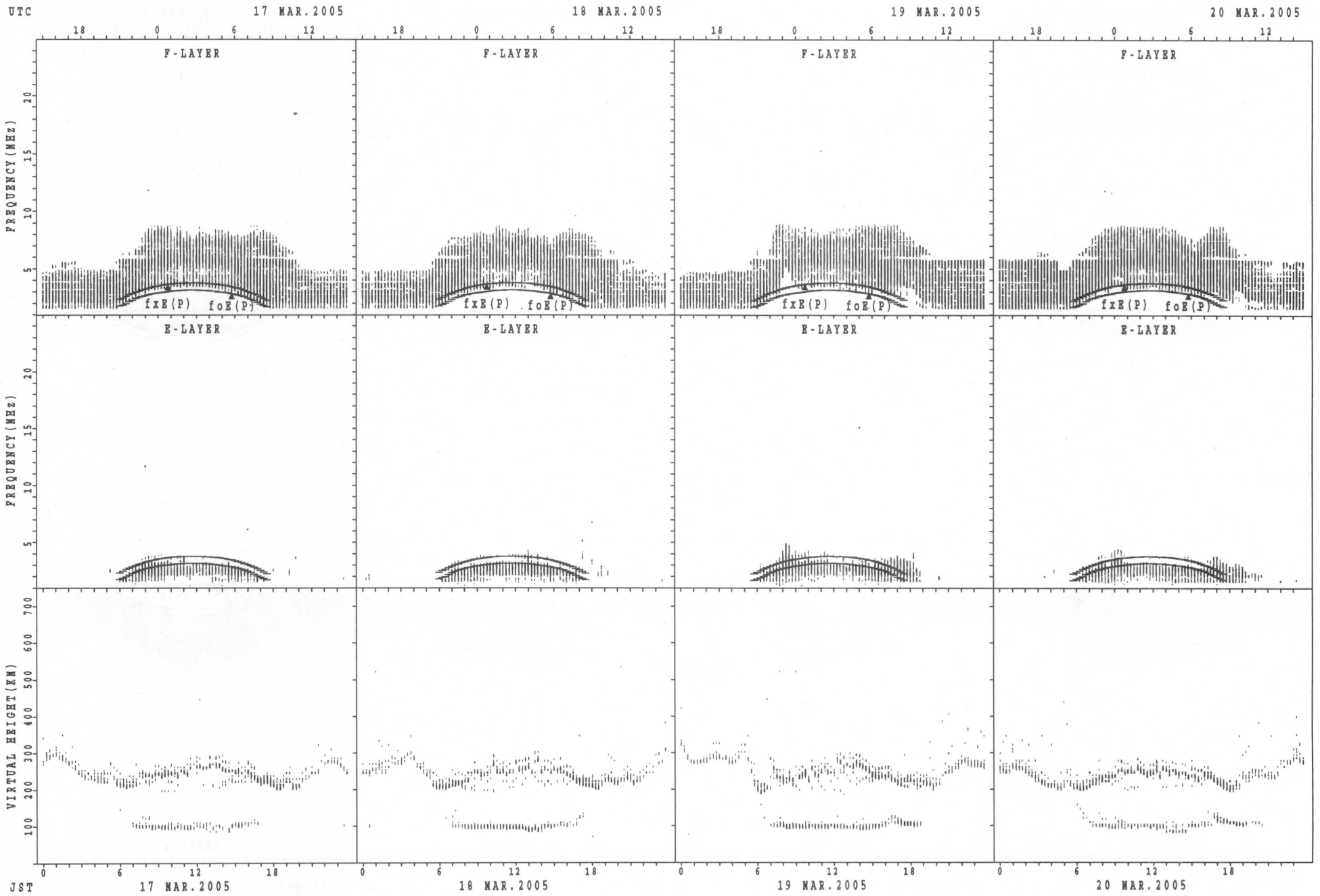
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



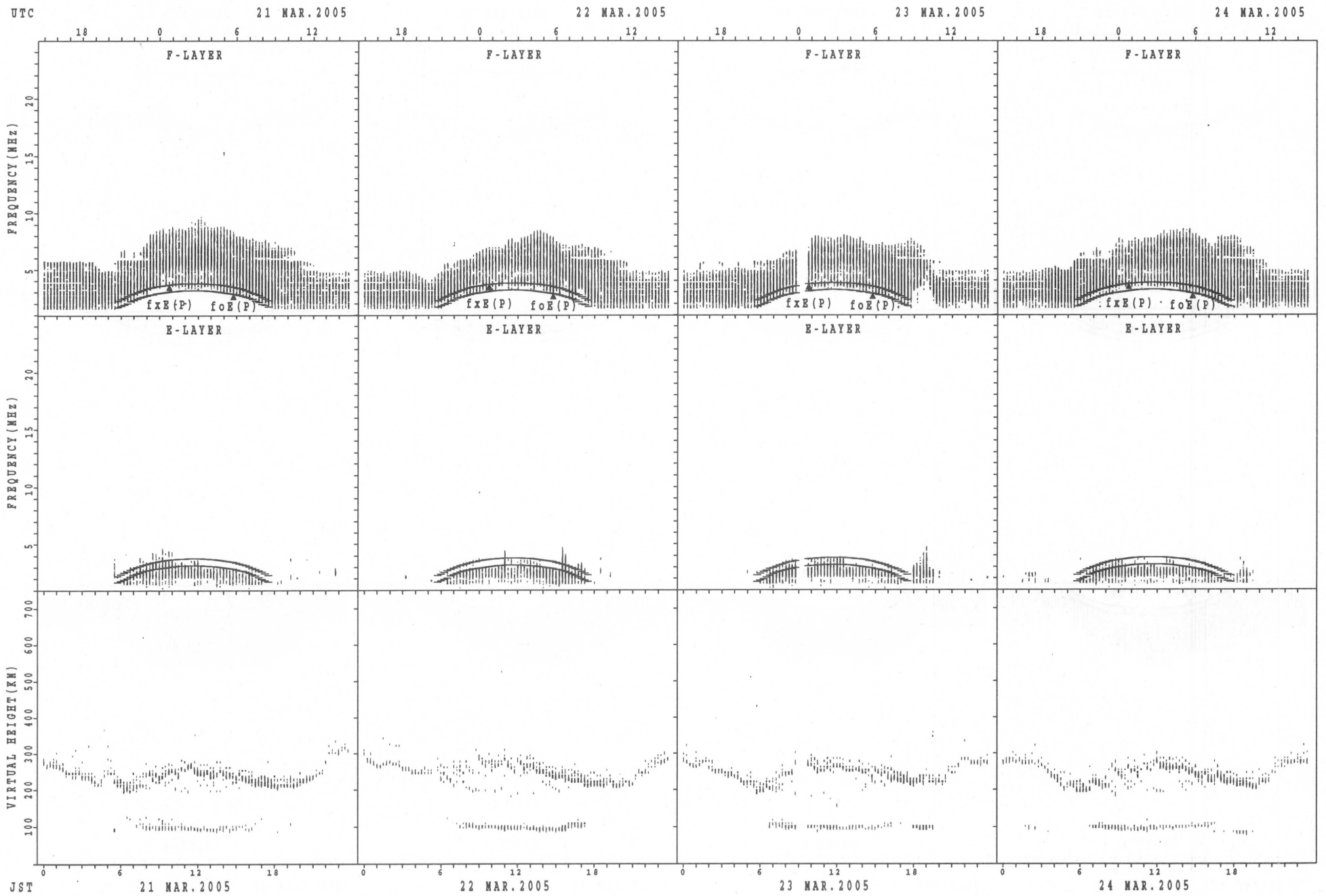
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



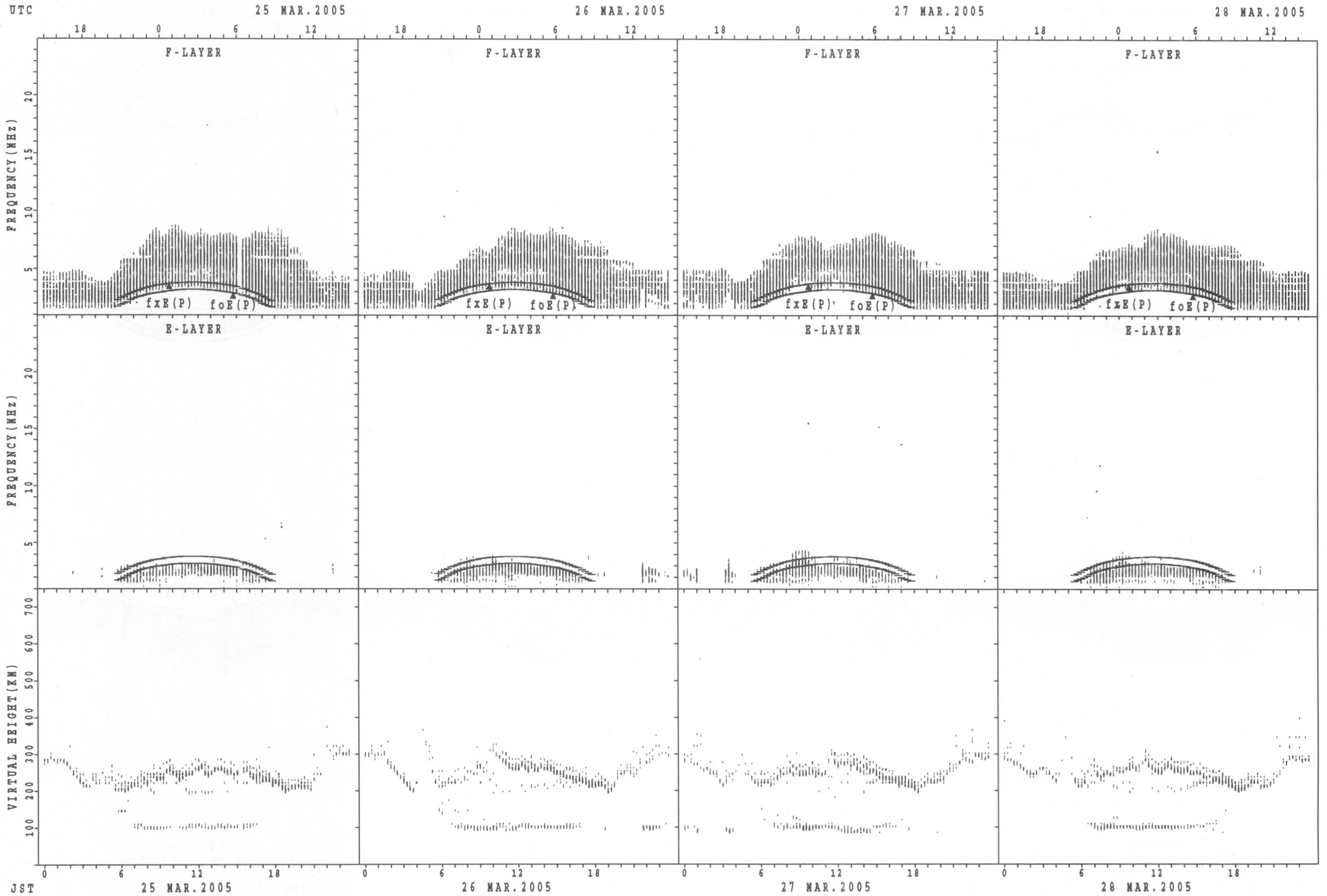
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



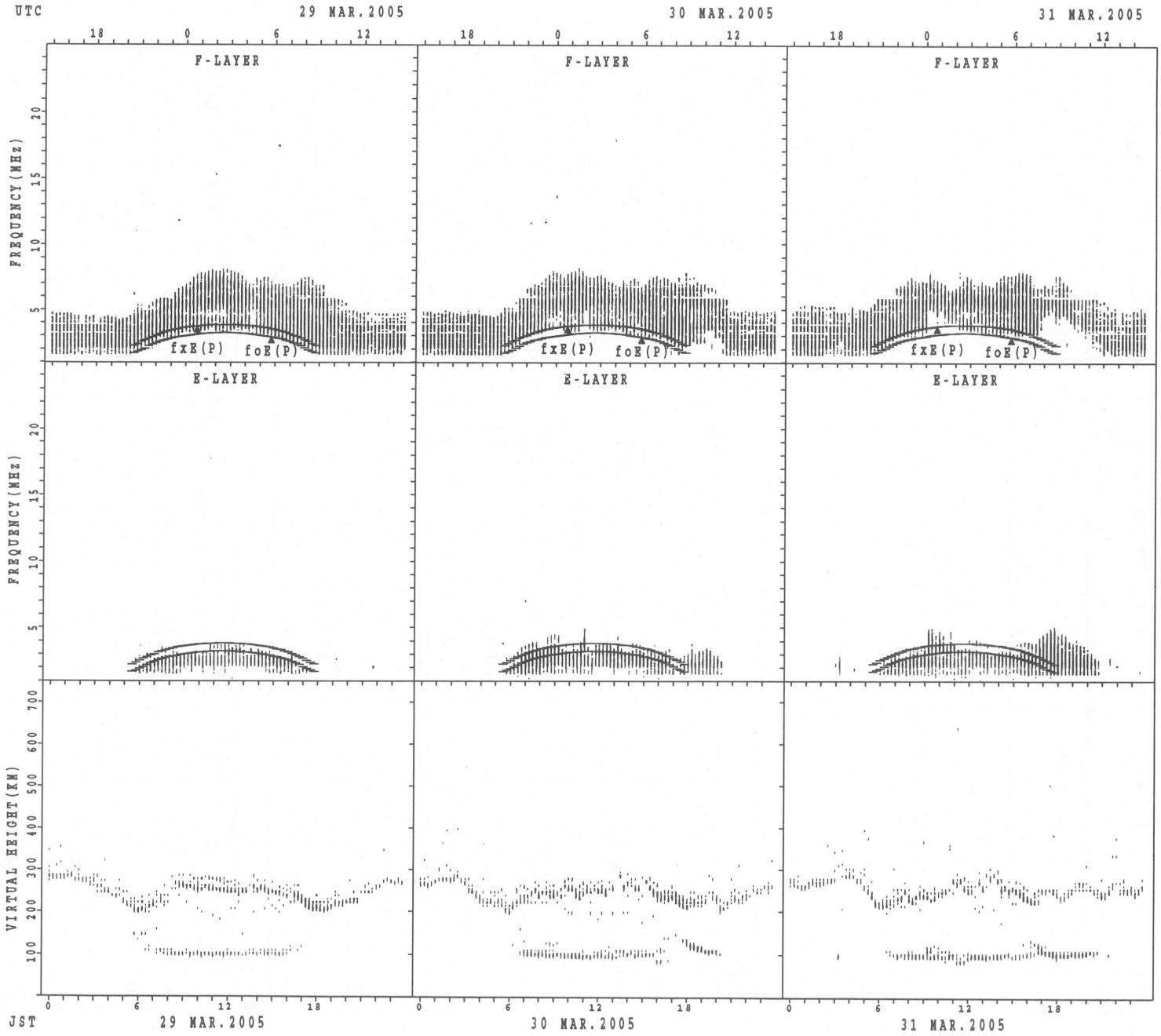
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



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

SUMMARY PLOTS AT Wakkanai



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

MONTHLY MEDIANS OF h'F AND h'Es

MAR. 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	10	18	11					1	28	29	27	17	3				
MED							228	243	247	248					250	245	246	240	242	256				
U Q							114	260	258	270					125	260	255	246	249	270				
L Q							114	236	238	242					125	239	238	230	238	256				

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	2	5	5	5	3	1	2	11	16	13	13	18	9	6	3	6	9	12	15	12	5	2	2	1
MED	100	95	97	95	97	91	141	137	110	107	103	101	99	94	105	103	107	106	101	101	107	109	104	105
U Q	101	101	98	97	99	45	143	147	119	122	110	103	104	153	107	103	122	114	105	104	121	113	105	52
L Q	99	95	90	92	97	45	139	119	101	104	101	97	95	89	89	101	103	89	87	93	94	105	103	52

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							1	17	27	4						20	29	30	16	2				
MED							232	240	246	258						248	238	230	230	229				
U Q							116	247	252	271						254	245	238	238	230				
L Q							116	231	238	248						238	231	222	227	228				

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	3	3	4	3	4	1	6	11	4	10	15	14	13	9	10	15	18	20	20	15	16	12	7	4
MED	105	103	96	95	97	95	140	143	108	109	107	106	105	113	115	107	106	101	102	103	103	104	103	103
U Q	105	105	97	95	97	47	149	167	114	119	113	111	111	136	139	121	113	113	110	105	111	111	103	111
L Q	105	97	93	95	97	47	127	119	103	103	105	103	98	108	103	103	101	95	95	97	97	103	101	101

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									17	22							30	29	24	5				
MED									246	260							244	238	230	240				
U Q									257	272							252	246	238	248				
L Q									238	246							238	230	223	230				

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	4	6	4	1	2			11	7	7	8	12	7	11	15	14	16	22	18	13	8	14	12	8
MED	102	99	98	95	94			155	113	107	107	108	109	113	105	105	103	104	97	97	99	100	102	102
U Q	104	103	104	47	97			161	143	113	125	112	121	161	131	113	107	111	105	103	108	105	110	106
L Q	99	95	97	47	91			127	107	103	103	104	101	107	97	97	94	97	89	90	95	95	97	92

MONTHLY MEDIANS OF h'F AND h'Es

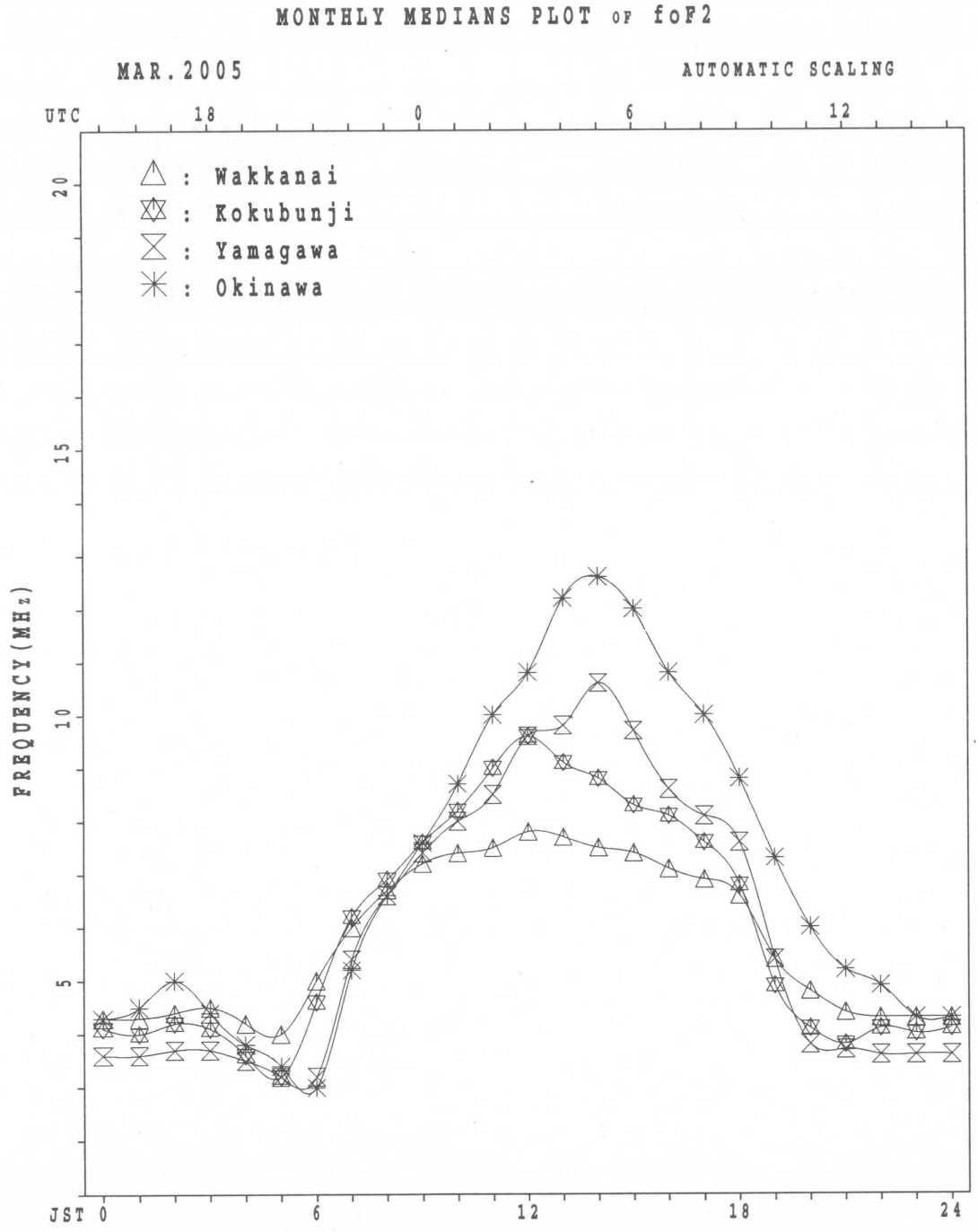
MAR.2005 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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	1	4	1				1	22	27							31	31	29	15	2		1	1
MED	346	306	250	208				268	247	256							238	230	222	240	232		346	358
U Q	173	153	262	104				134	260	280							246	236	234	242	236		173	179
L Q	173	153	240	104				134	238	248							234	230	219	230	228		173	179

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	11	8	6	4	1	4	3	6	9	10	10	9	13	15	19	14	19	22	14	17	12	10	12	16
MED	97	96	96	98	93	95	95	132	125	107	109	107	113	107	109	106	105	105	98	97	100	104	101	97
U Q	103	100	107	102	46	97	97	149	144	107	125	145	158	143	131	111	111	113	107	103	103	111	104	100
L Q	95	94	93	95	46	95	95	97	103	103	107	102	109	103	103	103	99	101	91	93	92	99	97	95


MONTHLY MEDIANS PLOT OF foF2
MAR. 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

MAR. 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	X 38	X 39	X 39	X 38	X 37	X 38	X 43												X 54	X 42	X 38	X 38	X 42	X 41
2	X 44	X 46	X 46	X 46	X 46	X 47	X 49												X 50	X 37	X 36	X 42	44	X 42
3	45	44	X 44	47	X 39	X 33	X 39												X 53	X 34	X 38	X 38	X 38	X 40
4	X 39	X 41	X 39	X 39	X 42	X 28	X 40												X 62	X 38	X 35	X 36	X 36	X 37
5	X 37	X 38	X 40	X 39	X 35	X 35	X 42												X 62	X 39	X 43	X 36	X 36	X 38
6	X 40	X 40	X 41	X 43	X 40	X 38	X 48												X 57	X 59	X 54	X 50	X 51	X 49
7	X 49	X 50	X 49	X 48	50	X 37	X 48												X 51	X 48	X 42	X 42	X 42	X 45
8	X 46	X 44	X 46	X 47	X 42	51	X 53												X 63	X 52	X 44	X 43	X 44	X 48
9	X 47	X 49	X 50	X 52	X 39	X 35	X 45												X 61	X 41	X 41	X 44	X 44	X 44
10	X 48	X 48	X 51	X 47	X 40	X 39	X 48												X 73	X 58	X 55	X 55	X 53	X 54
11	X 55	X 57	X 55	X 54	X 41	X 37	X 50												X 62	X 45	X 45	X 47	X 47	X 49
12	X 52	X 57	X 55	X 52	X 43	X 43	X 54												X 67	X 46	X 42	X 43	X 45	X 46
13	X 48	X 50	X 48	X 50	X 45	X 36	X 48												X 66	X 54	X 44	X 44	X 45	X 44
14	X 44	X 46	X 48	X 45	X 38	X 37	X 52												X 66	X 51	X 43	X 44	X 46	X 46
15	X 46	X 51	X 42	X 44	X 37	X 37	X 46												X 77	X 51	X 42	X 43	X 43	X 44
16	X 46	X 43	X 43	X 45	X 42	X 38	X 52												X 68	X 56	X 52	X 54	X 52	X 49
17	X 48	X 48	X 48	X 50	X 44	X 42	X 54												X 82	X 66	X 52	X 47	X 48	X 49
18	X 51	X 49	X 47	X 45	X 44	X 50	X 66												X 87	X 62	X 50	X 48	X 51	X 51
19	X 51	X 48	X 49	X 48	X 42	X 42	X 60												X 85	X 60	X 46	X 46	X 46	X 47
20	X 48	X 51	X 54	X 56	X 38	X 38	X 54												X 77	X 52	O X 47	X 50	X 51	X 50
21	X 49	X 51	X 50	X 46	X 38	X 37													X 78	X 63	X 45	X 47	X 47	X 46
22	X 45	X 48	X 49	X 45	X 45	X 44													X 82	X 63	X 53	X 48	X 44	X 47
23	X 48	X 48	X 47	X 49	X 44	X 38													X 86	X 59	X 46	X 46	X 46	X 46
24	X 46	X 45	X 46	X 48	X 46	X 33													X 92	X 67	X 55	X 51	X 52	X 52
25	X 52	X 50	X 48	X 54	X 39	X 29													X 95	X 82	X 56	X 51	X 48	X 47
26	X 47	X 48	X 52	X 44	X 37	X 36													X 77	X 66	X 49	X 52	X 53	X 52
27	X 52	X 52	X 56	X 50	X 34	X 34													X 69	X 56	X 51	X 49	X 51	X 52
28	X 50	X 48	X 48	X 44	X 39	X 38													X 81	X 61	X 45	X 46	X 46	X 46
29	X 47	X 44	X 43	X 43	X 41	X 38													X 77	X 63	X 44	X 49	X 48	X 48
30	X 48	X 47	X 46	X 43	X 41	X 38													X 89	X 70	X 51	X 49	X 47	X 47
31	X 45	X 46	X 44	X 42	X 41	X 43													X 84	O X 78	A	X 50	X 50	X 50
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	20												31	31	30	31	31	31
MED	X 47	X 48	X 48	X 46	X 41	X 38	X 48												X 73	X 56	X 45	X 47	X 46	X 47
U Q	X 49	X 50	X 50	X 50	X 44	X 42	X 54												X 82	X 63	X 51	X 50	X 51	X 49
L Q	X 45	X 44	X 44	X 44	X 38	X 36	X 46												X 62	X 46	X 42	X 43	X 44	X 44

MAR. 2005 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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	32	32	33	32	31	31	36	62	66	65	70	75	70	67	66	68	72	72	48	35	32	31	36	35
2	38	40	40	40	40	41	43	58	65	74	74	82	93	92	69	69	76	68	44	31	30	36	F	36
3	F	F	38	F	33	27	33	50	59	65	80	82	86	76	69	68	66	64	46	28	32	32	32	34
4	33	35	33	33	35	22	34	54	63	62	65	70	81	79	72	69	63	63	56	32	29	30	30	31
5	31	32	34	33	29	29	36	53	60	62	65	80	84	88	83	86	78	77	56	33	37	30	30	32
6	34	34	35	37	34	32	42	52	63	66	88	101	96	85	91	84	72	63	51	52	48	S 44	45	43
7	43	44	43	42	F	31	42	65	73	68	73	83	105	82	73	87	91	66	45	42	36	36	36	38
8	40	38	40	41	36	F	47	64	70	63	79	111	94	91	88	80	80	77	57	46	37	37	38	42
9	41	43	44	45	33	29	38	58	75	71	99	102	100	103	103	101	87	77	55	35	35	38	38	38
10	42	42	45	41	34	33	42	65	78	82	82	88	94	110	108	87	83	77	67	52	49	49	47	48
11	49	50	49	48	35	31	44	67	72	77	86	89	89	82	78	82	86	76	56	39	39	41	41	43
12	46	51	49	46	36	37	47	64	72	73	89	106	114	108	97	91	84	80	61	40	36	37	39	40
13	42	44	42	43	39	30	42	60	72	78	87	92	97	110	102	92	80	70	60	47	38	38	38	38
14	38	40	42	38	32	31	46	65	72	74	86	98	107	102	102	89	82	80	60	44	37	38	40	40
15	40	45	36	38	31	30	40	72	87	98	92	103	105	94	85	81	80	76	71	45	36	36	37	38
16	40	37	37	39	36	32	46	68	72	82	86	88	98	86	78	78	77	72	62	50	46	47	46	42
17	42	42	42	44	38	36	48	68	75	90	86	81	90	103	96	86	85	92	76	60	46	41	42	43
18	45	43	41	39	38	44	60	62	68	75	90	96	92	94	84	85	86	90	81	56	44	42	45	45
19	44	42	41	42	36	36	53	66	68	77	80	92	97	102	103	105	95	82	79	54	40	40	40	41
20	42	45	48	50	32	32	48	60	68	78	90	100	106	109	102	88	81	82	71	46	41	44	44	44
21	S 43	45	44	39	32	32	53	70	73	75	89	102	108	112	112	100	91	80	72	56	38	41	40	40
22	39	42	43	39	39	38	57	65	72	69	93	98	107	99	101	97	76	71	76	57	47	42	38	41
23	42	42	41	43	38	32	48	58	67	76	70	86	96	90	91	76	73	82	80	53	40	40	40	40
24	40	39	40	42	40	27	48	62	62	58	76	93	98	85	84	77	81	87	86	61	49	45	46	46
25	46	44	42	48	33	23	45	62	74	89	87	90	90	89	88	76	72	82	89	76	50	44	41	41
26	41	42	46	38	31	30	58	62	65	75	83	102	111	99	93	92	100	82	71	60	42	46	46	46
27	46	46	50	44	28	28	48	66	72	83	74	85	88	89	88	78	82	82	63	50	45	43	45	46
28	44	42	42	38	33	32	53	64	70	66	78	90	95	102	98	87	82	79	74	55	39	40	40	40
29	40	38	37	37	35	32	46	63	66	70	80	90	86	74	75	80	82	73	71	56	38	43	42	42
30	42	41	40	37	35	32	50	66	69	85	83	73	69	71	76	79	80	78	83	64	45	43	40	41
31	39	40	38	36	35	37	62	64	61	68	71	69	75	79	76	74	74	73	78	72	A	44	44	44
	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	31	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	30	31
MED	42	42	41	40	35	32	46	64	70	74	83	90	95	91	88	84	81	77	67	50	39	41	40	41
U Q	43	44	44	43	36	33	50	66	72	78	88	100	105	102	101	89	85	82	76	56	45	44	44	43
L Q	39	39	38	38	32	30	42	60	65	66	74	82	88	82	76	77	76	72	56	40	36	37	38	38

MAR. 2005 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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		L 408	L	L	L	L	L	A							
2									L	L	L	L	L	L	L									
3										L	L	L	L 424	L 432	L	L	A							
4										L	L	L	L 452	L	L 432	L	A							
5									L	L	L 456	L 456	L 456	L 452	L 440	L 416								
6										L	L 468	L	L	L	L	L								
7									L	L	L	L	L	L	L	L								
8											L	L	L	L 468	L									
9										L	L	L	L 456	L	L									
10										L	L	L	L 436	L	L	L	L							
11										L	L	L	L	L	L	L	L							
12									L	L	L	L	L 488	L 492	L	L								
13									L	L	L 468	L 516	L 492	L	L	L	L							
14										L	L 472	L 536	L	L 440	L	L	L							
15										L	L	L 460	L	L	L	L	L							
16									L	L	L	L 472	L	L	L	L								
17									L	L	L	L	L	L 464	L	L 436	L							
18										L	L 468	L	L	L 480	L	L	A							
19									L	L	L	L 488	L	L	A	A	A							
20										L	L	L	L	L	L 444	L	L							
21										L	L	L	A	L 476	L	L								
22									L	A	L 456	L 492	L	L	L	L	L							
23									L	L	L 456	A	A	A	L	A	A	A						
24									L	L	L 476	L 456	L 484	L	L	L	L							
25										L	L 456	L 484	L	L 472	L	L	A							
26									L	L 476	L	L	L	L	L	L	L							
27									L	L	A	L 488	L 476	L 464	A	A	L							
28									L	L	L	L 456	L 464	L 472	L	L	L							
29									L	L 432	L 456	L 456	L	L 464	L 452	A	A							
30									A	A	L	A	A	L 476	L 468	L 424	L							
31									L	L	L 460	L 468	L 452	L 460	L	A	A							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT										2	12	13	11	14	5	3								
MED										L 454	L 458	L 472	L 456	L 466	L 444	L 424								
U Q											L 468	L 490	L 484	L 476	L 460	L 436								
L Q											L 456	L 456	L 452	L 460	L 436	L 416								

MAR. 2005 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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								188	UR 252	R	R	332	344	316	308	284	A	A						
2								192	UR 256	300	324	A	A	A	A	A	UR 248	UR 184						
3								188	252	300	UA 316	A	A	UA 320	304	280	252	A						
4								204	260	296	UA 328	A	A	A	A	A	A	A						
5								200	UR 264	UR 308	324	A	A	A	A	UR 304	UR 260	B						
6								216	276	UA 300	A	A	A	A	A	A	A	B						
7								208	UA 268	A	A	A	A	A	A	UR 292	UA 248	A						
8								UR 200	260	A	A	A	A	UR 360	UR 320	R	248	A						
9								220	276	312	UR 348	UR 344	R	R	R	300	264	200						
10								224	R	312	R	348	R	R	UR 320	R	UR 268	UA 176						
11								204	UR 276	UR 308	R	R	UR 352	R	UR 324	R	UA 268	UR 208						
12								A	UR 284	324	364	376	372	R	A	A	A	UR 200						
13								200	UA 288	A	A	348	R	A	R	A	UR 276	UR 216						
14								UA 232	UR 308	R	R	R	360	348	UR 336	A	R	200						
15								236	A	A	A	R	A	A	A	A	A	A						
16								248	300	A	A	A	A	360	336	UA 312	272	UA 208						
17								236	A	A	A	A	A	A	R	308	UR 272	208						
18								224	276	A	A	R	R	344	A	300	268	A						
19								240	284	UA 328	A	A	A	A	A	A	A	212						
20								228	284	A	A	A	A	A	A	A	272	A						
21							B	244	UA 284	A	A	A	A	A	A	A	UR 272	200						
22							B	228	A	A	A	A	R	R	A	A	A	A						
23							BUR	248	A	A	A	A	A	A	A	A	A	A						
24							B	248	280	UR 312	344	A	A	A	A	UA 308	A	A						
25							B	236	280	R	A	R	R	R	A	A	A	A						
26							B	232	UA 280	R	R	R	A	352	UA 320	A	UR 272	UR 216						
27							B	244	288	A	A	A	A	348	A	304	264	A						
28							B	236	A	UA 304	348	356	356	324	A	A	A	UA 208						
29							B	A	A	A	A	R	R	R	328	296	UA 268	A						
30							B	UA 236	UA 284	A	A	A	A	R	332	304	276	216						
31							UA 172	UA 264	UA 292	A	A	A	A	A	UR 332	UA 300	UA 264	UA 212						
	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	29	24	12	8	6	5	9	11	13	19	15						
MED							UA 172	228	280	308	336	348	356	348	U 324	300	U 268	U 208						
U Q								238	U 284	312	348	356	366	356	UR 332	U 306	UR 272	U 212						
L Q								204	U 266	300	324	344	348	322	320	294	U 260	200						

MAR. 2005 foE (0.01MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 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	E B 16	E B 16	E B 15	E B 16	E B 14	E B 15	E B 15	G	G 22	G 27	G 27	38	39	38	36	37	J A 44	J A 40	J A 35	J A 26	J A 18	J A 17	20	E B 15
2	E B 16	E B 15	E B 15	20	E B 15	E B 16	E B 15	22	G 22	35	37	40	J A 45	40	39	J A 45	G 20	G	J A 16	J A 17	J A 27	J A 20	E B 15	E B 16
3	E B 15	18	E B 14	20	18	19	E B 15	28	31	36	39	37	38	39	37	35	J A 47	J A 24	J A 38	J A 16	J A 24	J A 28	J A 18	E B 15
4	E B 16	E B 15	18	E B 16	E B 15	18	E B 15	24	29	33	38	40	40	J A 38	40	32	J A 48	J A 34	19	J A 22	20	18	E B 15	J A 18
5	E B 15	E B 16	E B 16	J A 16	E B 15	E B 16	E B 16	G	G 19	G 23	35	J A 44	39	38	J A 38	G 23	29	22	18	E B 15	E B 16	E B 16	19	E B 15
6	J A 19	20	J A 18	J A 30	J A 25	J A 24	J A 19	26	31	35	J A 43	J A 51	J A 41	38	J A 39	34	J A 32	J A 45	J A 27	J A 22	E B 16	J A 36	J A 27	J A 29
7	E B 15	J A 24	J A 18	20	19	E B 15	E B 15	G	30	34	34	J A 42	35	J A 38	J A 34	G 26	30	J A 35	J A 27	J A 33	J A 33	J A 53	J A 22	J A 22
8	19	E B 14	E B 15	E B 15	E B 15	E B 15	E B 16	G 17	31	32	J A 36	J A 47	J A 38	J G 28	G 28	G 23	28	J A 26	J A 26	J A 28	J A 31	J A 31	J A 20	J A 18
9	20	J A 32	J A 25	J A 23	J A 18	19	22	27	31	34	G 28	G 25	G 25	G 30	G 22	34	33	29	J A 30	J A 21	18	E B 16	E B 15	E B 15
10	E B 15	E B 16	E B 16	E B 15	E B 15	E B 15	E B 16	28	G 24	35	G 32	40	G 30	G 29	G 23	G	J A 28	22	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16
11	E B 16	E B 16	E B 16	E B 15	E B 15	E B 14	E B 16	24	G 21	G 23	G 22	G 30	37	G 27	G 26	G 23	29	G	E B 15	E B 15	E B 16	E B 16	E B 16	E B 15
12	E B 14	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	24	G 21	40	40	43	43	G	J A 42	35	31	G	E B 15	E B 15	E B 15	E B 15	J A 16	J A 17
13	E B 15	E B 15	E B 15	E B 16	E B 16	E B 16	E B 16	24	J A 32	36	36	39	G 24	J A 47	G 28	35	G 24	G 19	E B 15	E B 15	B J A 17	E B 15	E B 15	E B 16
14	E B 16	E B 15	E B 14	E B 15	E B 15	E B 16	E B 15	26	G 26	G 26	G 29	G 27	43	42	G 26	J A 45	G 24	G	E B 16	E B 15	22	E B 16	E B 16	20
15	J A 16	23	E B 16	E B 16	E B 15	E B 15	22	27	32	36	37	G 29	39	40	38	J A 38	J A 35	J A 46	J A 37	J A 29	J A 16	J A 23	J A 20	A E B 16
16	E B 14	E B 15	E B 15	E B 15	E B 15	19	19	28	34	39	J A 44	42	37	40	40	35	33	J A 38	J A 32	J A 31	A J 22	E B 15	E B 16	E B 16
17	E B 16	E B 15	E B 16	E B 15	E B 15	E B 15	E B 16	26	31	36	40	38	40	38	G 31	34	G 25	24	E B 16	E B 15	E B 15	E B 16	E B 16	E B 15
18	E B 16	E B 15	E B 15	E B 15	J A 24	22	E B 16	25	30	35	36	G 26	G 28	42	J A 46	39	J A 79	J A 65	J A 32	J A 23	J A 38	20	E B 15	18
19	18	E B 15	E B 15	E B 16	E B 15	E B 16	E B 16	G	32	J A 40	37	37	J A 44	J A 43	J A 45	J A 44	J A 44	28	J A 28	J A 30	J A 24	18	19	J A 22
20	J A 17	J A 21	J A 23	J A 20	J A 17	21	J A 18	27	36	J A 44	J A 48	J A 47	J A 45	J A 51	40	37	G 26	23	J A 23	J A 45	J A 38	J A 30	J A 18	19
21	E B 15	J A 20	19	E B 15	E B 15	E B 16	21	27	32	38	40	40	J A 53	40	38	34	G 23	24	E B 15	E B 15	B J A 20	J A 24	J A 26	J A 65
22	J A 56	J A 27	22	J A 20	J A 17	20	20	27	32	J A 76	J A 46	37	G 31	G 28	37	J A 40	31	J A 27	J A 24	J A 22	J A 23	J A 40	J A 31	19
23	E B 16	E B 15	E B 15	E B 15	21	J A 16	19	G 20	J A 46	J A 42	J A 40	J A 56	J A 51	J A 76	J A 50	J A 74	J A 46	J A 32	J A 24	A E B 15	J A 25	J A 24	19	J A 22
24	J A 16	J A 20	J A 20	A E B 14	J A 18	E B 15	E B 17	28	31	J G 27	38	J A 44	J A 44	38	37	36	J A 34	J A 43	J A 47	J A 58	A J 57	A J 24	A E B 14	E B 15
25	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	22	29	31	G 26	37	G 30	G 28	G 32	J A 37	36	J A 49	J A 42	J A 33	A J 21	A J 25	A J 27	E B 15	E B 16
26	E B 16	E B 15	E B 16	E B 15	E B 15	E B 15	22	30	31	G 27	G 24	G 26	38	38	36	32	G 26	G 20	E B 14	E B 15	E B 15	E B 15	E B 15	E B 16
27	E B 15	20	20	20	20	18	22	29	33	J A 42	J A 54	J A 43	38	42	44	40	33	J A 34	J A 40	A J 45	E B 16	E B 15	E B 15	E B 15
28	E B 15	E B 15	E B 16	E B 16	E B 15	E B 16	20	26	32	35	40	38	39	39	J A 46	J A 45	J A 93	J A 52	J A 30	A J 54	18	E B 15	E B 15	E B 15
29	E B 16	E B 15	E B 15	E B 15	E B 16	21	22	30	32	35	40	G 30	G 30	G 25	38	40	J A 54	J A 28	J A 27	19	J A 53	A J 21	E B 15	E B 15
30	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	J A 24	32	J A 43	J A 55	43	J A 57	J A 64	G 27	G 24	38	40	32	J A 38	A J 31	J A 38	A J 20	J A 17	20
31	E B 14	E B 15	E B 15	E B 15	E B 16	E B 15	24	33	34	39	J A 47	J A 43	40	39	42	J A 48	J A 48	J A 40	J A 38	A J 44	52	J A 44	A J 37	J A 26
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	E B 16	E B 15	E B 16	E B 15	E B 15	E B 16	E B 17	26	31	35	38	40	39	38	38	36	33	J A 28	J A 27	A J 22	J A 22	A J 20	E B 16	E B 16
U Q	J A 16	J A 20	J A 18	20	18	19	22	28	32	J A 39	J A 40	J A 43	J A 43	40	J A 40	J A 40	J A 46	J A 40	J A 33	A J 31	J A 31	A J 27	J A 20	A J 20
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16	G 24	G 29	G 32	G 35	G 30	G 35	G 32	G 31	G 34	G 28	G 22	E B 16	E B 15	E B 16	E B 16	E B 15	E B 15

MAR. 2005 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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 16	E B 16	E B 15	E B 16	E B 14	E B 15	E B 15	G	G 22	G 25	G 26	38	38	35	34	35	42	35	32	24	E B 16	E B 15	E B 15	E B 15
2	E B 16	E B 15	E B 15	E B 16	E B 15	E B 16	E B 15	22	G 22	34	36	39	41	38	38	39	G 20	G	E B 15	E B 16	22	17	E B 15	E B 16
3	E B 15	E B 16	E B 14	E B 16	E B 15	16	E B 15	25	30	35	37	36	35	38	35	33	38	18	19	E B 16	19	26	E B 15	E B 15
4	E B 16	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	24	28	32	36	36	37	35	35	30	38	22	E B 15	E B 16	E B 15	16	E B 15	E B 16
5	E B 15	E B 16	E B 16	E B 15	E B 15	E B 16	E B 16	G	G 19	G 22	34	37	36	35	34	G 23	28	21	18	E B 15	E B 16	E B 16	E B 16	E B 15
6	16	E B 15	16	16	19	19	E B 15	25	29	34	38	37	35	35	34	32	27	32	21	16	E B 16	17	18	E B 15
7	E B 15	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	G	28	33	32	35	35	35	32	G 23	29	30	23	24	27	E B 15	19	E B 16
8	E B 15	E B 14	E B 15	E B 15	E B 15	E B 15	E B 16	G 17	30	30	34	40	36	G 27	G 27	G 22	28	22	20	17	28	E B 15	18	E B 15
9	E B 16	E B 15	16	E B 15	E B 15	E B 15	E B 16	26	30	33	G 28	G 24	G U 25	Y 30	G 21	33	32	27	28	20	E B 16	E B 16	E B 15	E B 15
10	E B 15	E B 16	E B 16	E B 15	E B 15	E B 15	E B 16	26	G 24	34	U Y 32	39	G 26	G 29	G 23	G	G 25	21	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16
11	E B 16	E B 16	E B 16	E B 15	E B 15	E B 14	E B 16	22	G 20	G 23	G 22	G 29	37	G 27	G 26	G 21	28	G	E B 15	E B 15	E B 16	E B 16	E B 16	E B 15
12	E B 14	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	24	G 21	39	40	41	40	G	34	33	28	G	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15
13	E B 15	E B 15	E B 15	E B 16	E B 16	E B 16	E B 16	23	30	34	36	38	G 23	39	G 28	32	G 24	G 17	E B 15	E B 15	E B 16	E B 15	E B 15	E B 16
14	E B 16	E B 15	E B 14	E B 15	E B 15	E B 16	E B 15	25	G 26	G 25	G 29	G 26	40	39	G 25	36	G 19	G	E B 16	E B 15	E B 15	E B 16	E B 16	E B 15
15	E B 15	20	E B 16	E B 16	E B 15	E B 15	21	26	32	35	35	G 29	38	38	37	36	31	24	23	20	E B 15	17	E B 16	E B 16
16	E B 14	E B 15	E B 15	E B 15	E B 15	E B 15	18	26	32	34	40	38	35	39	38	33	31	35	30	23	E B 15	E B 15	E B 16	E B 16
17	E B 16	E B 15	E B 16	E B 15	E B 15	E B 15	E B 16	25	30	35	37	38	39	38	G 30	32	G 24	22	E B 16	E B 15	E B 15	E B 16	E B 16	E B 15
18	E B 16	E B 15	E B 15	E B 15	16	E B 16	E B 16	24	30	34	35	G 26	G 28	39	42	34	62	62	29	19	34	E B 15	E B 15	E B 15
19	E B 16	E B 15	E B 15	E B 16	E B 15	E B 16	16	G	31	36	35	36	38	38	42	42	36	27	20	27	17	E B 16	E B 16	18
20	E B 15	17	17	16	E B 15	17	17	26	36	39	45	43	38	37	35	33	G 23	19	17	39	30	E B 16	E B 15	E B 15
21	E B 15	E B 15	16	E B 15	E B 15	E B 16	20	26	31	36	38	36	49	38	35	32	G 23	24	E B 15	E B 15	17	22	20	E B 15
22	17	17	18	17	E B 15	E B 14	19	26	31	52	36	35	G 30	G 24	37	34	30	23	22	18	E B 15	35	16	E B 16
23	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	19	G 20	34	36	39	53	47	54	36	44	44	27	20	E B 15	20	E B 15	E B 15	E B 15
24	E B 15	E B 16	E B 15	E B 14	E B 14	E B 15	E B 17	27	29	G 24	38	39	40	37	36	34	29	35	44	42	30	E B 14	E B 14	E B 15
25	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	21	28	30	G 26	34	G 30	G 28	G 32	35	33	47	34	27	17	20	19	E B 15	E B 16
26	E B 16	E B 15	E B 16	E B 15	E B 15	E B 15	21	29	30	G 26	G 23	G 26	38	38	35	32	G 25	G 19	E B 14	E B 15	E B 15	E B 15	E B 15	E B 16
27	E B 15	E B 15	E B 15	E B 15	E B 14	E B 16	21	28	32	39	46	40	38	41	42	38	32	30	40	E B 15	E B 16	E B 15	E B 15	E B 15
28	E B 15	E B 15	E B 16	E B 16	E B 15	E B 16	18	26	31	34	38	38	38	39	36	38	32	30	24	47	E B 16	E B 15	E B 15	E B 15
29	E B 16	E B 15	E B 15	E B 15	E B 16	E B 16	21	28	31	33	38	G 30	G U 30	Y 25	37	40	47	18	19	E B 16	E B 15	16	E B 15	E B 15
30	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	21	30	37	46	41	46	44	G 27	G 23	34	32	28	35	28	36	16	E B 15	E B 16
31	E B 14	E B 15	E B 15	E B 15	E B 16	E B 15	22	33	32	38	40	39	38	36	39	42	34	30	22	17	A A 52	23	22	16
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16	25	30	34	36	37	38	37	35	33	30	24	20	16	E B 16	E B 16	E B 15	E B 15
U Q	E B 16	E B 16	16	E B 16	E B 15	E B 16	20	26	31	36	38	39	39	38	37	36	36	30	27	23	22	17	16	E B 16
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	G 22	G 28	G 30	G 34	G 30	G 35	G 32	G 30	G 32	G 25	G	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15

MAR. 2005 fbEs (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

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

IONOSPHERIC DATA STATION Kokubunji

MAR. 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	281	293	322	321	314	318	342	376	359	343	351	345	356	355	361	349	362	372	347	358	316	293	328	308
2	308	315	308	304	329	344	339	366	354	358	333	345	339	374	360	349	359	388	392	333	299	314	F	315
3	F	F	335	F	318	334	350	364	347	335	351	333	365	362	359	353	365	366	389	307	315	332	313	301
4	298	309	300	312	383	277	351	363	388	366	349	345	352	348	361	359	360	368	378	368	303	314	301	295
5	293	308	333	345	365	324	364	384	372	355	343	342	332	343	329	348	358	385	366	322	331	309	301	282
6	297	298	309	319	308	312	343	369	361	333	316	349	337	338	335	356	362	362	324	320	313	331	S 315	321
7	307	319	294	300	F	315	301	350	370	358	346	316	352	363	339	334	362	370	334	314	294	306	282	284
8	294	298	316	340	319	F	318	352	384	347	298	345	346	336	361	351	360	356	356	368	301	288	295	286
9	289	302	326	375	356	345	331	356	374	319	325	331	318	324	334	347	363	360	356	332	280	296	280	282
10	293	319	349	339	282	318	346	364	356	340	331	326	309	322	334	347	352	357	344	325	296	300	300	297
11	294	321	331	335	354	292	330	350	358	367	338	332	353	344	331	343	354	365	363	326	299	299	305	303
12	315	340	305	350	344	312	347	362	350	317	308	325	342	336	327	343	346	369	379	316	304	302	289	290
13	290	304	303	352	377	313	337	352	360	332	336	317	320	331	328	346	348	361	353	345	302	315	304	296
14	296	308	334	350	356	302	335	361	355	314	327	312	316	314	335	339	334	361	350	322	290	282	272	285
15	300	322	301	327	292	282	313	336	332	343	318	325	326	335	340	344	347	342	359	347	293	289	282	272
16	304	291	302	314	336	297	338	362	345	346	330	317	329	332	336	340	344	358	351	331	295	307	305	290
17	291	288	295	313	338	306	332	360	352	351	330	321	303	312	318	329	325	353	343	342	308	290	287	287
18	305	301	305	305	288	308	369	369	343	314	326	317	314	327	320	337	336	348	363	346	312	292	291	296
19	302	S 304	307	306	307	282	351	379	334	327	314	315	310	312	319	334	350	343	352	372	307	294	289	288
20	300	314	343	358	321	308	350	357	349	320	313	322	318	328	338	339	348	359	354	345	S 301	281	294	288
21	S 294	310	327	357	285	292	349	362	358	336	305	315	319	321	341	331	351	362	363	366	317	291	297	283
22	280	304	332	305	293	316	366	381	361	327	344	322	334	331	336	351	353	350	358	354	319	307	288	294
23	286	295	315	329	352	316	353	360	357	354	331	322	332	332	336	338	348	355	362	346	301	298	283	287
24	300	304	307	321	367	361	360	366	371	330	325	327	341	323	332	326	328	334	360	330	337	298	299	305
25	306	295	304	333	383	312	338	349	328	340	335	310	337	328	335	337	321	328	328	351	308	302	299	284
26	292	295	331	351	306	280	353	362	350	323	296	313	334	331	329	325	348	361	358	327	305	293	291	292
27	293	311	333	355	351	305	363	366	349	351	335	323	330	329	346	339	343	357	352	331	308	294	286	300
28	279	291	314	359	299	293	355	368	362	345	306	325	322	331	338	338	358	355	361	360	297	307	300	298
29	290	284	306	313	319	322	362	369	351	342	330	333	340	338	340	342	357	354	355	356	300	302	304	312
30	307	313	307	313	339	306	358	360	346	360	353	362	325	319	325	337	347	344	359	351	331	308	316	303
31	298	304	310	309	298	296	373	371	360	343	367	340	338	334	347	339	353	347	353	364	A	304	300	305
	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	31	30	30	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	30	31
MED	295	304	310	328	325	310	349	362	356	342	330	325	332	331	336	340	351	358	356	345	304	300	298	294
U Q	302	313	331	350	354	318	358	369	361	351	343	340	341	338	341	348	359	365	363	356	313	307	304	303
L Q	291	295	305	313	306	296	337	357	349	327	316	317	319	324	329	337	346	350	351	326	299	293	288	286

MAR. 2005 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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		L 411	L	L	L	L	L	A							
2									L	L	L	L	L	L	L									
3										L	L	L	L 410	L 397	L	L	A							
4										L	L	L	L 384	L	L 421	L	A							
5									L	L	L 376	L 381	L 395	L 385	L 378	L 374								
6										L	L 360	L	L	L	L	L								
7									L	L	L	L	L	L	L	L								
8											L	L	L	L 385	L									
9										L	L	L	L 401	L	L									
10										L	L	L	L 423	L	L	L	L							
11										L	L	L	L	L	L	L	L							
12									L	L	L	L	L 387	L 385	L	L								
13									L	L	L 391	L 369	L 370	L	L	L	L							
14										L	L 376	L 334	L	L 405	L	L	L							
15										L	L	L 400	L	L	L	L	L							
16									L	L	L	L 402	L	L	L	L								
17									L	L	L	L	L	L 381	L	L 391	L							
18										L	L 379	L	L	L 356	L	L	A							
19									L	L	L	L 364	L	L	A	A	A							
20										L	L	L	L	L	L 379	L	L							
21										L	L	L	A	L 377	L	L								
22									L	A	L 399	L 373	L	L	L	L	L							
23									L	L	L 416	A	A	A	L	A	A	A						
24									L	L	L 382	L 386	L 370	L	L	L	L							
25										L	L 399	L 384	L	L 372	L	L	A							
26									L	L 341	L	L	L	L	L	L	L							
27									L	L	A	L 368	L 363	A 368	A	A	L							
28									L	L	L	L 393	L 386	L 365	L	L	L							
29									L	L 397	L 398	L 409	L	L 414	L 376	A	A							
30									A	A	L	A	A	L 370	L 359	L 373	L							
31									L	L	L 385	L 384	L 416	L 370	L	A	A							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT										2	12	13	11	14	5	3								
MED										L 369	L 388	L 384	L 387	L 379	L 378	L 374								
U Q											L 399	L 396	L 410	L 385	L 400	L 391								
L Q											L 378	L 368	L 370	L 370	L 368	L 373								

MAR. 2005 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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									230		242	254	252	252	250	252	234							
2									220	242	268	246	260	234	246									
3										256	246	262	236	240	242	248	222							
4										240	258	268	252	252	240	232	230							
5									228	246	270	256	262	246	264	234								
6										274	282	242	248	256	248	236								
7									236	244	250	290	240	240	262	262								
8											292	254	242	266	234									
9										260	272	240	258	270	250									
10										246	242	272	264	268	242	242	246							
11										240	264	250	244	256	254	258	242							
12									230	288	298	262	252	250	250	246								
13									246	270	254	272	272	266	252	248	238							
14										282	264	278	278	260	260	244	248							
15										250	262	266	270	262	250	250	236							
16									236	250	260	258	266	252	264	256								
17									242	250	254	264	290	276	264	262	260							
18										266	266	268	266	268	272	256	262							
19									268	278	254	276	278	278	264	252	230							
20										272	278	272	264	262	252	246	244							
21										250	288	282	268	268	248	242								
22									246	E A 250	244	260	254	256	252	244	240							
23									252	248	258	278	260	268	252	256	244	236						
24									226	258	292	268	256	260	264	276	258							
25										250	254	284	252	272	252	256	266							
26									240	272	262	286	258	256	262	258	244							
27									246	244	238	288	270	272	246	244	248							
28									232	268	282	264	268	262	258	246	246							
29									252	262	270	258	244	262	262	256	242							
30									246	242	244	250	274	304	278	254	250							
31									226	254	236	274	284	276	258	262	246							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT									18	29	31	31	31	31	31	28	22	1						
MED									238	250	262	266	260	262	252	251	244	236						
U Q									246	269	272	276	270	268	262	256	248							
L Q									230	246	250	256	252	252	248	244	238							

MAR. 2005 h'F2 (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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 298	E B 290	E B 260	E B 250	E B 250	E B 252	230	H 202	208	200	H 190	212	E A 236	214	212	E A 230	A	208	224	224	E B 244	E B 282	E B 246	E B 258
2	E B 272	E B 250	E B 256	E B 268	E B 230	220	218	210	H 192	212	224	A	A	A	A	E A 246	H 206	208	194	200	E A 336	E A 260	E B 244	E B 254
3	E B 266	E B 256	232	220	208	220	228	210	220	226	224	206	202	206	216	222	A	210	204	E B 262	E A 274	E A 280	E B 274	E B 288
4	E B 280	E B 272	E B 286	E B 262	204	E B 328	218	210	214	214	222	214	212	206	200	194	A	214	196	192	E B 272	E A 256	E B 290	E B 304
5	E B 294	E B 276	240	222	216	236	208	H 186	H 184	206	202	204	200	H 186	H 190	H 172	218	208	200	198	232	E B 244	E B 296	E B 304
6	E A 286	E B 278	E A 254	E A 248	E A 268	E A 270	228	212	220	222	224	216	200	198	208	210	222	216	214	E A 236	222	E A 240	E A 266	228
7	E B 248	230	E B 284	E B 292	234	220	E B 266	234	212	210	204	198	206	212	202	228	226	212	202	E A 246	E A 324	E B 248	E A 314	E B 300
8	E B 280	E B 250	E B 264	214	218	E B 300	236	208	210	212	204	A	204	206	H 188	234	212	218	194	208	E A 322	E B 250	E A 298	E B 286
9	E B 296	E B 282	E A 248	210	206	204	232	216	218	206	H 194	H 194	H 186	224	204	228	216	212	202	E A 230	E B 280	E B 280	E B 298	E B 312
10	E B 282	E B 244	224	224	212	230	216	228	222	208	202	228	H 192	206	202	200	214	210	206	200	E B 244	E B 250	E B 264	E B 278
11	E B 274	E B 246	226	218	202	E B 272	238	218	212	H 182	196	214	H 190	202	202	206	218	216	200	202	E B 258	E B 256	E B 264	E B 280
12	E B 264	228	244	198	200	226	218	194	H 176	206	214	E A 240	212	H 182	198	210	214	212	192	206	242	E B 272	E B 288	E B 288
13	E B 286	E B 258	E B 260	216	198	E B 252	218	200	214	208	H 184	H 194	H 184	198	206	214	214	208	204	202	212	E B 248	E B 260	E B 282
14	E B 278	E B 264	E B 226	218	E B 206	E B 268	228	216	208	H 190	218	H 192	232	202	216	222	210	216	200	206	E B 260	E B 312	E B 310	E B 298
15	E B 276	E A 252	230	242	E B 264	E B 314	E A 260	230	222	218	208	202	H 196	228	200	214	220	222	214	206	E B 250	E A 290	E B 298	E B 316
16	E B 254	E B 272	E B 258	E B 248	218	E B 258	232	220	206	214	210	H 176	H 186	E A 232	214	214	224	216	216	228	E A 246	E B 252	E B 252	E B 280
17	E B 282	E B 282	E B 286	E B 246	210	E B 248	240	218	210	H 192	208	198	E A 244	188	232	200	H 218	222	210	200	216	E B 252	E B 284	E B 296
18	E B 252	E B 252	E B 248	E B 254	E A 308	E B 254	204	206	208	202	198	H 190	H 180	230	A	216	A	228	214	204	E A 300	E B 248	E B 262	E B 266
19	E B 246	E B 268	E B 264	E B 244	E B 242	E B 306	228	204	210	208	194	200	214	222	A	A	A	226	214	208	218	E B 262	E B 282	E A 310
20	E B 272	E A 248	234	208	222	E A 266	212	214	222	E A 234	A	A	220	216	212	214	204	220	204	E A 264	E A 354	E A 300	E B 272	E B 270
21	E B 286	E B 252	228	206	E B 246	E B 288	226	216	216	210	210	200	A	198	210	206	H 204	216	210	200	216	E A 300	E A 292	E B 310
22	E A 324	E A 286	230	240	E B 266	242	214	206	200	A	196	H 188	194	210	206	220	212	222	212	202	214	E A 328	E A 278	E B 284
23	E B 294	E B 280	E B 262	E B 240	214	242	208	208	202	196	H 196	A	A	A	220	A	A	A	216	188	E A 262	E B 280	E B 298	E B 306
24	E B 280	E B 280	E B 264	240	206	208	H 182	216	190	182	198	186	220	202	214	220	218	240	212	E A 234	222	E B 268	E B 278	E B 280
25	E B 270	E B 266	E B 266	220	190	E B 294	224	220	218	208	196	196	216	204	206	206	A	E A 238	226	204	214	E A 250	E B 278	E B 298
26	E B 294	E B 276	244	E B 204	230	E B 328	226	218	212	H 192	198	202	202	E A 230	222	214	214	220	208	206	220	E B 286	E B 284	E B 296
27	E B 280	E B 256	224	214	204	E B 252	212	222	214	A	A	206	224	E A 246	A	A	220	224	E A 234	202	232	E B 258	E B 292	E B 268
28	E B 284	E B 282	E B 240	212	E B 256	E B 268	224	212	202	202	E A 242	194	204	218	206	A	A	228	216	E A 246	226	E B 256	E B 268	E B 280
29	E B 284	E B 290	E B 280	E B 250	230	224	212	220	216	204	202	H 194	198	H 178	208	A	A	222	216	208	218	E A 260	E B 250	E B 264
30	E B 264	E B 264	E B 258	E B 244	222	E B 228	220	226	A	A	222	A	A	H 184	H 182	214	230	226	222	210	E A 262	E A 242	E A 248	E B 258
31	E B 276	E B 274	E B 260	E B 272	E B 286	E B 276	206	210	206	210	222	212	H 186	H 186	E A 242	A	A	E A 234	218	204	A	E A 288	E A 288	E A 260
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	30	28	29	26	27	29	27	25	21	30	31	31	30	31	31	31
MED	E B 280	E B 266	E B 254	U 224	211	E B 252	221	214	211	208	203	200	201	204	206	214	216	216	210	204	E 244	E B 260	E B 278	E B 284
U Q	E B 286	E B 280	E B 264	E B 248	E B 246	E B 276	230	220	216	212	220	212	216	220	214	222	220	224	216	E A 228	E A 272	E 282	E B 292	E B 300
L Q	E B 270	E 252	232	214	206	228	212	208	206	201	196	H 194	H 192	H 198	202	206	212	212	202	202	220	E B 250	E B 264	E B 268

MAR. 2005 h'F (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 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								118	116	120	114	116	118	116	116	114	114	A						
2							E B 136		118	116	112	116	112	110	112	A	118	116						
3								112	120	114	116	114	A	114	120	112	108	A						
4								120	118	116	118	114	120	116	118	A	A	A						
5								112	112	114	116	A	118	118	A	120	120	B						
6								124	124	120	120	A	A	A	A	A	A	B						
7								120	122	118	A	A	A	A	A	112	120	A						
8								122	116	A	A	A	A	116	112	112	118	114						
9								120	116	116	124	112	116	122	112	116	124	126						
10								116	112	116	114	114	114	114	110	112	112	114						
11								114	118	114	116	118	114	124	114	118	116	114						
12								118	120	122	116	120	120	116	114	112	116	114						
13								114	116	114	116	118	116	120	118	118	118	120						
14								116	116	116	116	114	114	116	116	118	118	114						
15								120	118	118	114	118	118	A	A	A	A	A						
16								114	114	116	A	A	A	114	118	118	118	118						
17								120	118	A	A	A	A	A	122	114	118	120						
18								112	116	116	116	116	116	116	120	114	118	A						
19								112	112	122	114	114	A	A	A	A	A	120						
20								114	116	116	A	A	A	A	A	A	118	A						
21							B	118	122	118	120	A	A	116	116	114	114	112						
22							B	118	118	A	A	A	122	120	116	A	A	A						
23							B	116	A	A	A	A	A	A	A	A	A	A						
24							B	122	114	118	120	A	A	116	A	112	A	A						
25							B	118	118	116	114	118	118	116	A	A	A	A						
26							B	112	112	112	110	116	116	120	118	A	120	116						
27							B	116	116	118	A	A	A	116	118	118	118	120						
28							B	118	118	116	122	122	114	116	116	116	A	116						
29							B	118	120	116	116	118	116	116	116	114	120	116						
30							B	114	116	114	114	A	A	112	112	118	120	122						
31							E B 134	118	114	112	A	A	A	106	116	116	120	122						
	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	31	30	27	22	17	17	24	22	21	22	18						
MED							E B 134	118	116	116	116	116	116	116	116	114	118	116						
U Q								120	118	118	118	118	118	117	118	118	120	120						
L Q								114	116	114	114	114	114	115	114	112	116	114						

MAR. 2005 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

MAR. 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	B	B	B	B	B	B	B	G	104	102	100	158	146	136	138	124	114	114	88	88	88	92	92	B
2	B	B	B	102	B	B	B	174	102	168	150	126	132	120	116	104	102	G	94	92	98	100	B	B
3	B	92	B	94	94	88	B	146	148	124	118	120	100	116	156	164	126	86	106	88	132	120	120	B
4	B	B	102	B	B	100	B	158	166	152	132	116	114	118	112	106	88	94	92	92	84	88	B	96
5	B	B	B	100	B	B	B	G	102	102	146	100	116	118	106	106	158	138	88	B	B	B	96	B
6	104	100	96	96	98	96	102	140	140	124	118	104	104	104	106	106	102	100	98	100	B	108	104	100
7	B	104	100	100	98	B	B	G	122	114	106	104	104	104	104	104	116	104	104	100	98	98	98	100
8	98	B	B	B	B	B	B	104	170	104	98	98	94	96	94	94	136	114	100	100	96	98	98	98
9	90	98	90	106	102	100	102	164	160	162	100	96	96	100	96	180	122	126	118	112	84	B	B	B
10	B	B	B	B	B	B	B	158	100	172	100	164	92	98	102	G	88	126	B	B	B	B	B	B
11	B	B	B	B	B	B	B	144	104	102	100	104	150	102	102	104	114	G	B	B	B	B	B	B
12	B	B	B	B	B	B	B	160	98	166	150	148	140	G	122	118	120	G	B	B	B	B	104	100
13	B	B	B	B	B	B	B	122	116	120	114	152	102	132	106	122	102	108	B	B	134	B	B	B
14	B	B	B	B	B	B	B	130	102	102	102	100	150	138	104	122	104	G	B	B	144	B	B	138
15	124	114	B	B	B	B	132	140	122	118	122	104	120	106	106	104	100	98	98	94	96	96	92	B
16	B	B	B	B	B	92	148	162	138	132	102	102	102	156	136	164	136	122	116	106	104	B	B	B
17	B	B	B	B	B	B	B	138	130	106	108	106	140	104	98	158	104	156	B	B	B	B	B	B
18	B	B	B	B	100	102	B	142	144	130	124	100	108	142	124	120	110	106	102	102	96	98	B	118
19	118	B	B	B	B	B	B	G	144	118	114	110	104	104	106	104	102	124	116	108	112	108	106	106
20	104	100	96	96	96	96	96	144	120	116	106	106	106	106	108	108	104	108	112	104	110	110	106	102
21	B	98	98	B	B	B	136	130	134	122	114	106	104	116	116	118	104	146	B	B	108	112	106	108
22	102	98	96	96	96	98	140	142	122	96	102	104	104	106	114	104	104	104	98	98	98	102	102	94
23	B	B	B	B	90	92	154	100	104	100	102	98	98	98	96	96	94	94	96	B	98	98	102	100
24	100	96	94	B	96	B	B	164	140	102	156	100	92	148	104	114	104	102	96	96	96	108	B	B
25	B	B	B	B	B	B	144	154	146	106	110	102	100	100	100	98	100	92	98	98	98	98	B	B
26	B	B	B	B	B	B	146	146	142	104	98	102	116	166	122	106	104	100	B	B	B	B	B	B
27	B	96	92	96	94	94	142	148	122	118	106	106	102	152	144	132	162	122	110	120	B	B	B	B
28	B	B	B	B	B	B	142	150	122	112	152	142	152	136	124	120	106	112	108	104	90	B	B	B
29	B	B	B	B	B	98	142	132	128	124	108	104	104	98	152	128	118	96	118	102	114	112	B	B
30	B	B	B	B	B	B	126	126	118	110	114	104	104	96	98	154	134	124	106	106	104	100	100	98
31	B	B	B	B	B	B	134	126	120	116	104	104	102	104	134	126	118	120	106	106	102	104	104	100
	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	8	10	9	9	10	11	15	27	31	31	31	31	31	30	31	30	31	27	23	21	23	19	15	14
MED	103	98	96	96	96	96	140	144	122	116	108	104	104	106	106	116	104	108	102	100	98	100	102	100
U Q	111	100	99	101	98	100	144	158	142	124	122	116	120	136	124	126	120	124	110	106	110	108	106	106
L Q	99	96	93	96	94	92	126	130	104	104	102	102	102	102	102	104	102	100	96	95	96	98	98	98

MAR. 2005 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

MAR. 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

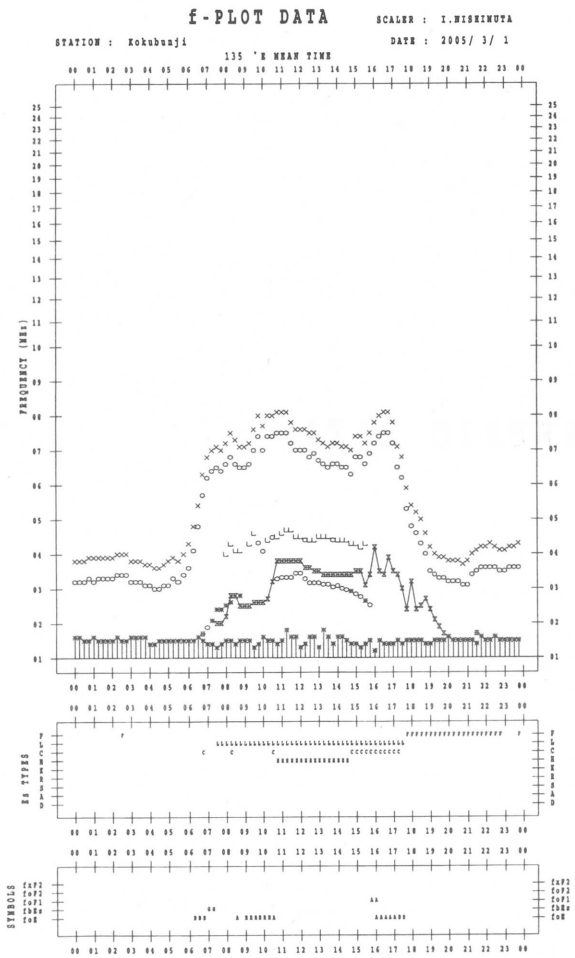
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									L 2	L 2	L 2	HL 11	HL 11	HL 11	HL 11	CL 21	CL 33	CL 35	F 3	F 4	F 2	F 2	F 2	
2				F 1				H 1	L 2	HL 11	HL 11	CL 11	CL 11	CL 11	CL 21	L 3	L 2		F 1	F 1	F 3	F 2		
3		F 1		F 2	F 1	F 2		H 2	HL 11	CL 11	CL 11	CL 11	L 1	CL 22	HL 12	HL 12	CL 22	LC 32	FF 22	F 1	F 2	F 3	F 2	
4			F 1			F 2		H 2	HL 11	HL 11	CL 11	CL 11	CL 11	CL 11	CL 11	L 2	L 5	L 4	F 1	F 1	F 2	F 2		F 1
5				F 1					L 1	L 1	HL 11	L 1	CL 11	CL 11	L 1	L 2	HL 12	H 3	F 1				F 2	
6	F 2	F 1	F 2	F 4	F 2	F 3	F 2	H 2	HL 11	CL 21	CL 21	L 2	L 1	L 1	L 2	L 2	L 3	L 6	F 6	F 2		F 3	F 4	F 2
7		F 2	F 1	F 1	F 1				CL 11	CL 11	L 1	L 1	L 1	L 1	L 1	L 2	CL 21	L 3	F 3	F 4	F 4	F 3	F 3	F 2
8	F 1							L 1	HL 11	L 1	L 2	L 2	L 2	L 2	L 2	L 1	CL 11	CL 31	F 3	F 2	F 5	F 2	F 2	F 1
9	F 1	F 2	F 2	F 1	F 1	F 1	F 1	HL 12	HL 12	HL 11	L 1	L 1	L 1	L 1	L 1	HL 11	CL 21	CL 31	F 5	F 3	F 1			
10								HL 21	L 1	HL 11	L 1	HL 11	L 2	L 2	L 2		L 2	CL 11						
11								H 1	L 1	L 1	L 1	L 1	HL 11	L 1	L 2	L 1	CL 11							
12								H 1	L 1	HL 11	HL 11	HL 21	HL 11		C 1	CL 12	CL 11						F 2	F 2
13								C 1	C 1	CL 11	CL 11	HL 11	L 2	CL 11	L 1	CL 11	L 1	L 2			F 1			
14								CL 22	L 1	L 1	L 1	L 1	HL 11	HL 11	L 1	CL 11	L 2				F 1			F 2
15	F 2	F 3					F 3	H 3	CL 11	CL 11	CL 11	L 1	CL 11	L 1	L 2	L 2	L 3	L 2	F 2	F 2	F 2	F 2	F 2	
16						F 1	F 1	H 1	HL 21	CL 11	L 2	L 2	L 1	HL 11	HL 11	HL 11	HL 21	CL 31	F 5	F 3	F 2			
17								HL 21	CL 11	L 1	L 1	L 1	HL 11	L 1	L 2	HL 11	L 1	HL 11						
18					F 2	F 2		H 1	HL 11	CL 12	CL 11	L 1	L 1	HL 11	CL 21	CL 21	CL 41	L 4	F 3	F 4	F 5	F 2		F 1
19	F 1								HL 11	CL 11	CL 11	CL 11	L 1	L 1	L 2	L 3	L 3	CL 22	F 3	F 4	F 3	F 1	F 2	F 5
20	F 2	F 3	F 3	F 3	F 4	F 2	F 2	H 1	C 1	CL 21	L 2	L 1	L 2	L 1	L 1	L 1	L 2	L 2	F 3	F 6	F 3	F 3	F 2	F 2
21		F 2	F 1				C 3	C 2	CL 21	CL 11	CL 11	L 2	L 2	CL 11	CL 11	CL 11	L 1	HL 22			F 4	F 6	F 4	F 2
22	F 3	F 3	F 4	F 3	F 2	F 2	H 2	HL 11	CL 21	L 2	L 1	L 1	L 1	L 1	CL 11	L 1	L 2	L 3	F 4	F 2	F 2	F 5	F 3	F 1
23					F 2	F 2	F 3	L 2	L 2	L 2	L 2	L 2	L 3	L 3	L 2	L 3	L 4	L 3	F 3		F 2	F 2	F 1	F 2
24	F 1	F 2	F 2		F 1			HL 12	HL 12	L 1	HL 11	L 2	L 2	HL 11	L 2	CL 11	L 2	L 4	F 4	F 3	F 3	F 1		
25							H 2	HL 11	HL 22	L 1	CL 11	L 1	L 1	L 1	L 2	L 2	L 3	L 3	F 3	F 3	F 4	F 3		
26							H 1	H 2	HL 11	L 1	L 1	L 1	CL 11	HL 11	CL 12	L 2	L 1	L 2						
27		F 2	F 2	F 1	F 1	F 1	H 2	HL 21	CL 11	CL 11	L 2	L 2	L 1	HL 11	HL 11	HL 11	HL 11	C 3	F 3	F 2				
28							H 1	HL 11	CL 11	CL 11	HL 11	HL 11	HL 12	HL 22	CL 12	CL 11	L 3	CL 22	FF 23	FF 42	F 1			
29						F 2	HL 13	CL 22	CL 11	CL 11	CL 11	L 1	L 1	L 1	HL 11	CL 21	CL 31	L 3	F 2	F 1	F 3	F 2		
30							C 3	C 3	CL 22	CL 21	CL 21	L 3	L 2	L 1	L 1	HL 21	HL 11	CL 22	F 3	F 4	F 4	F 3	F 3	F 3
31							C 2	CL 21	CL 21	CL 11	L 2	L 2	L 1	L 1	CL 11	CL 21	CL 22	CL 52	F 6	F 2	F 7	F 3	F 4	F 3
	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																								

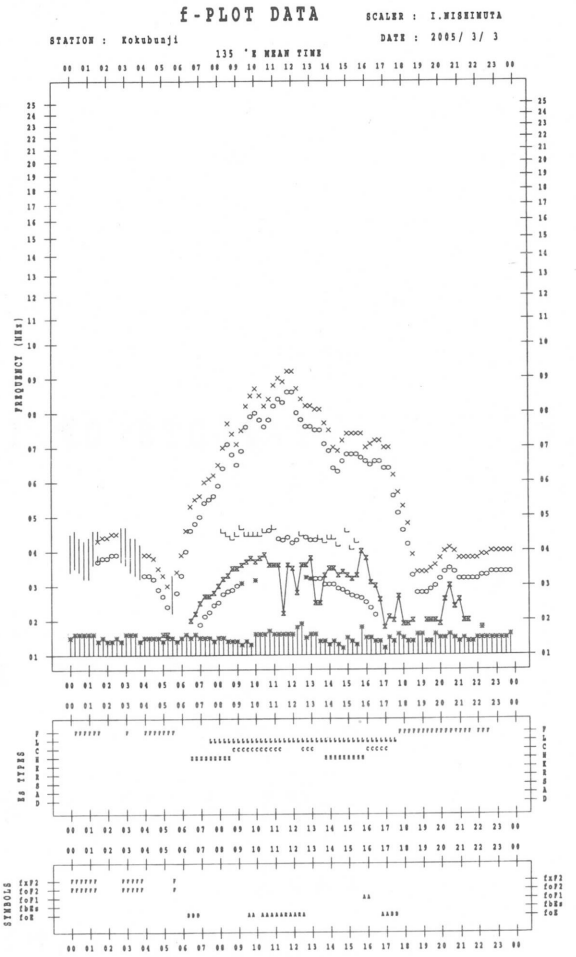
MAR. 2005 TYPES OF Es

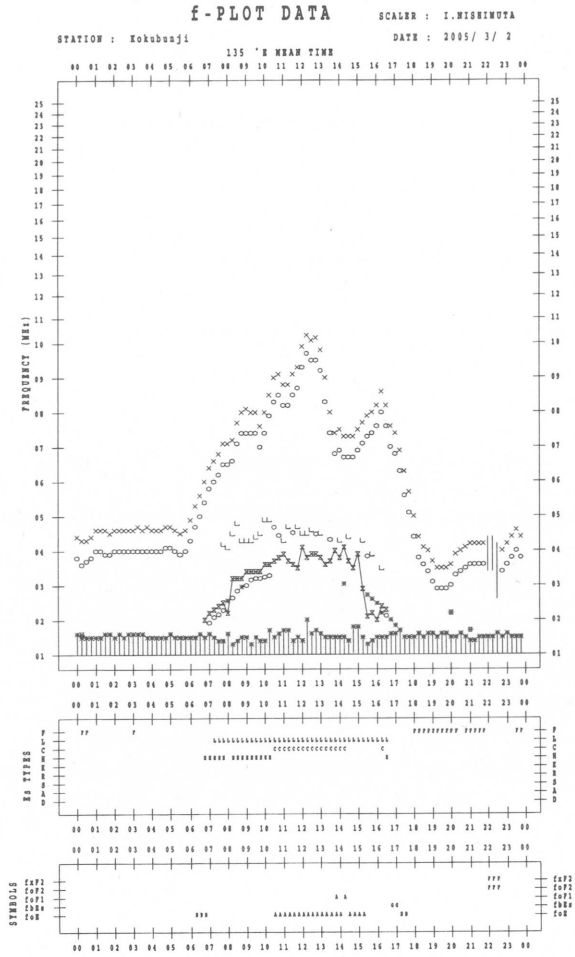
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

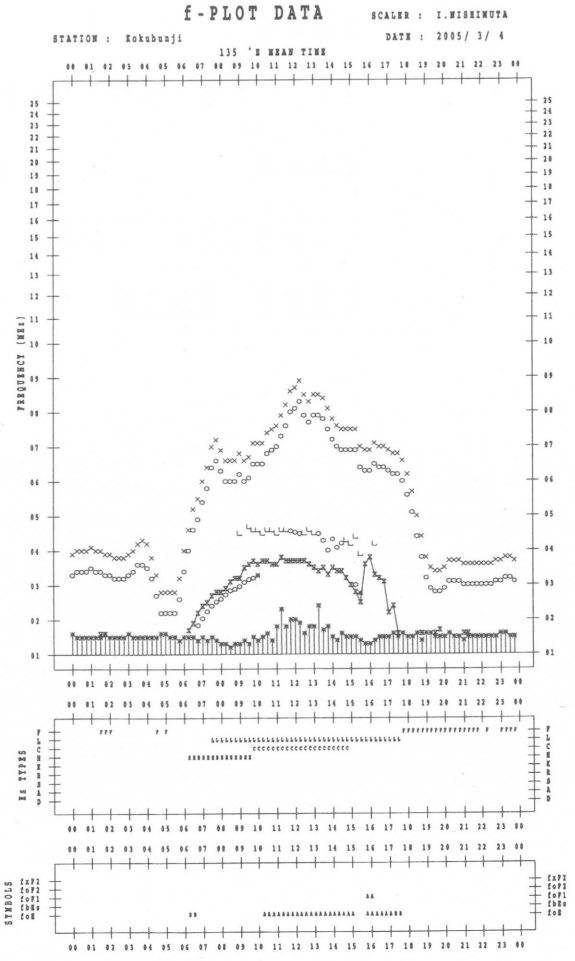
f-PLOTS OF IONOSPHERIC DATA

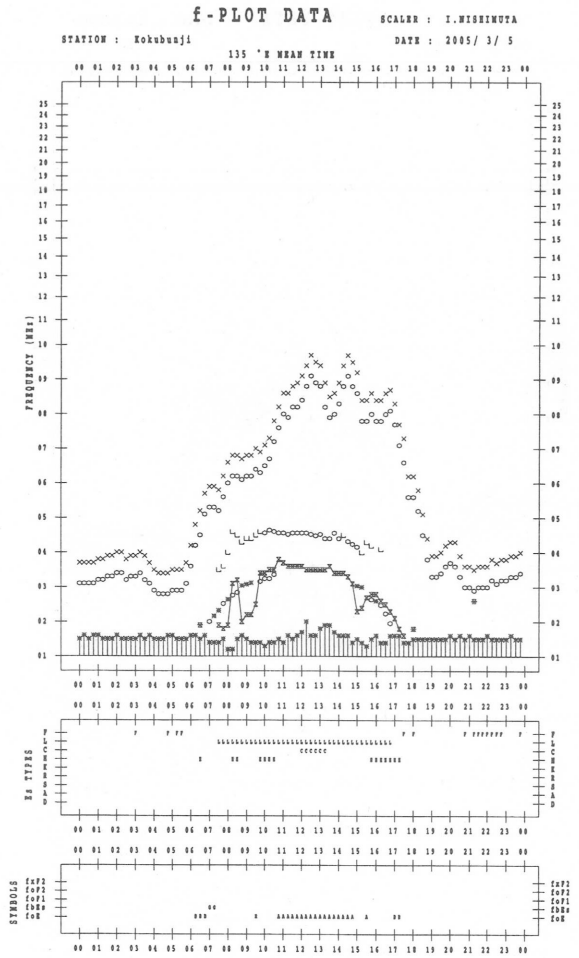
KEY OF f-PLOT	
	SPREAD
	foF2, foF1, foE
	fxF2
	DOUBTFUL foF2, foF1, foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN

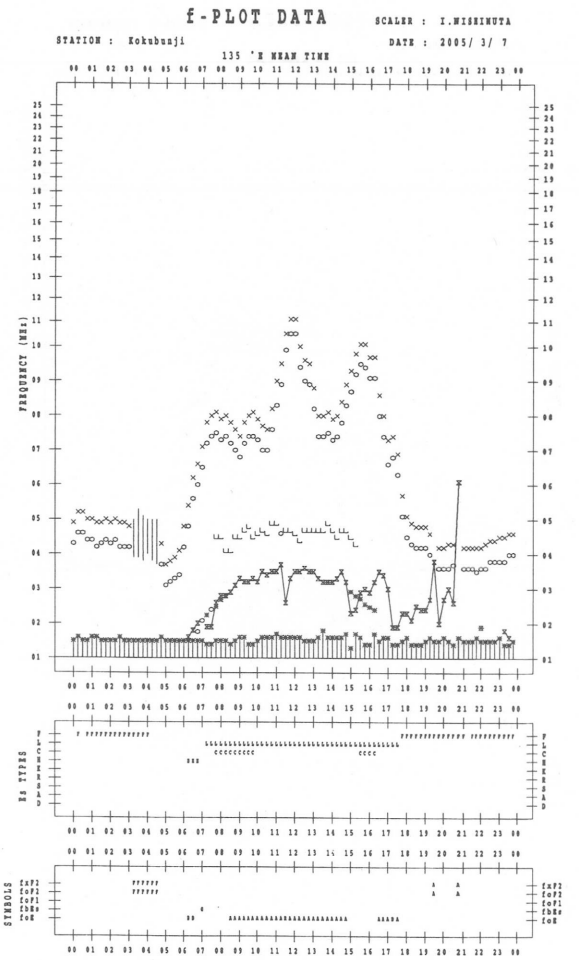

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

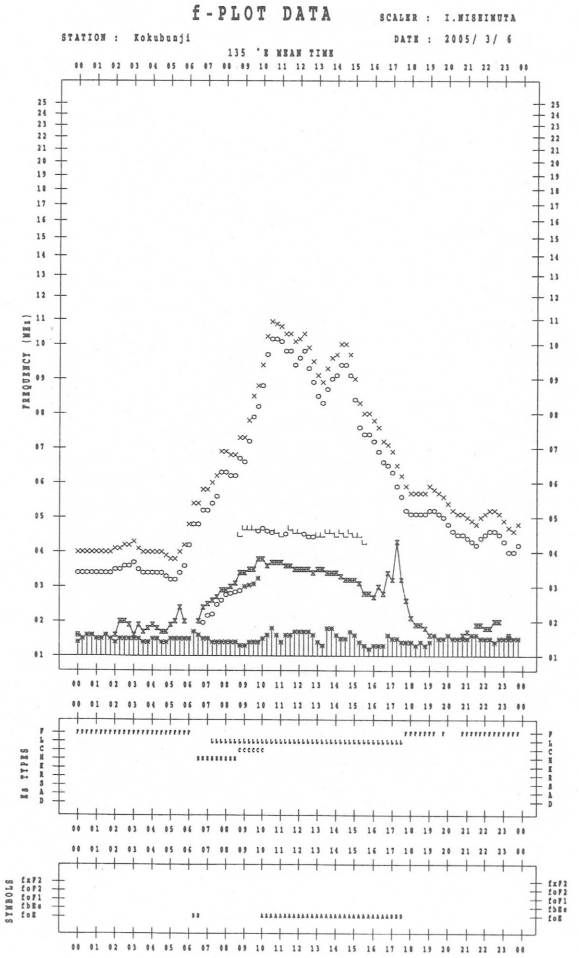

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

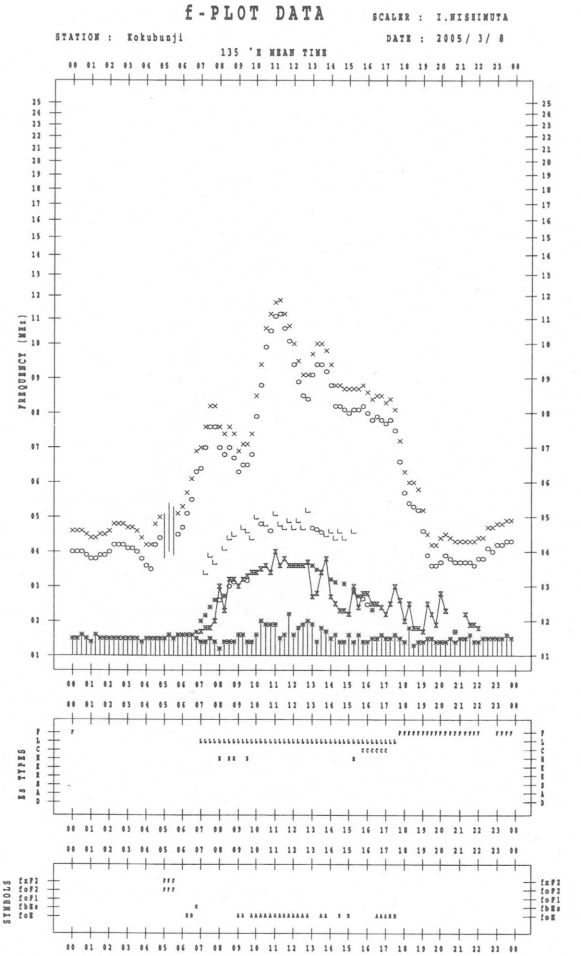

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

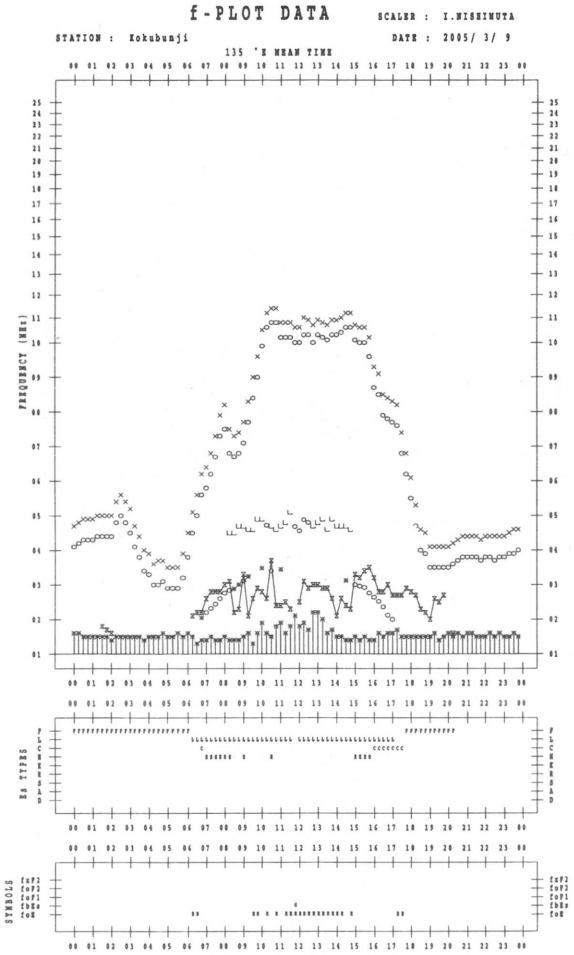

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

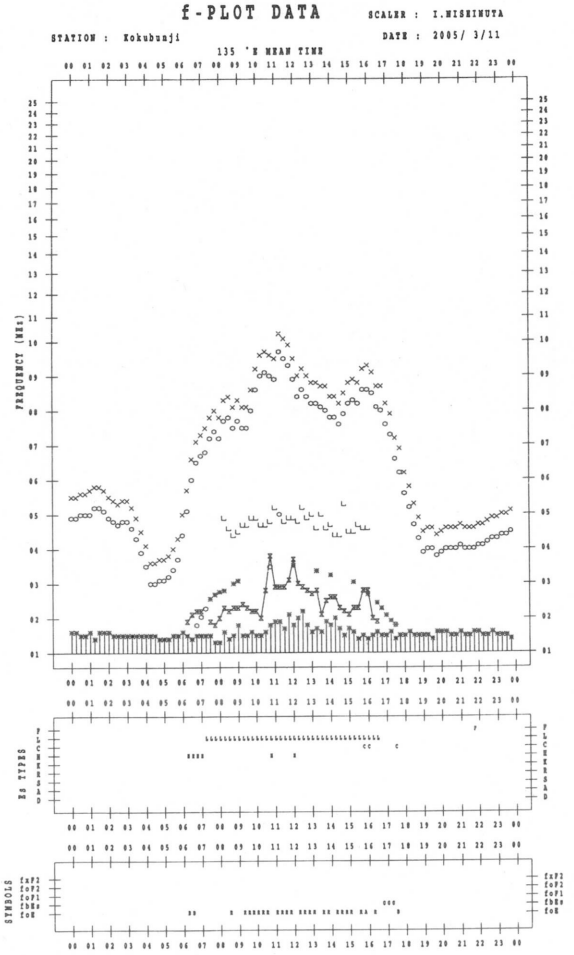

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 5
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

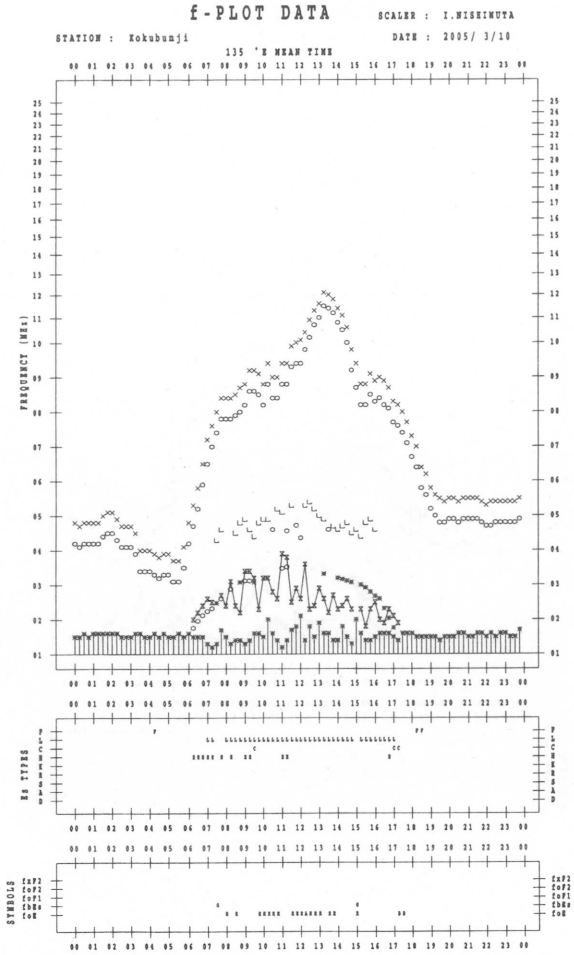

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 7
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

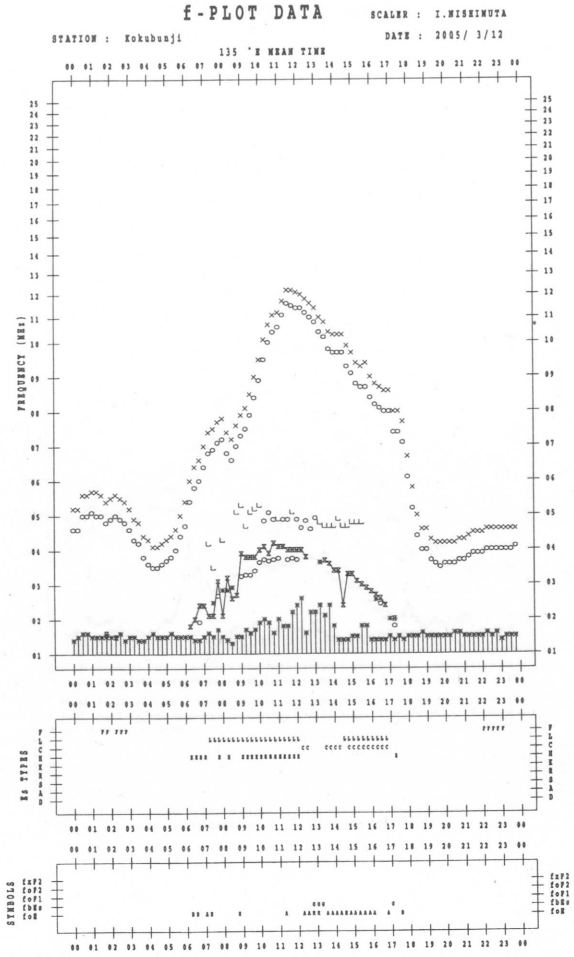

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 6
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

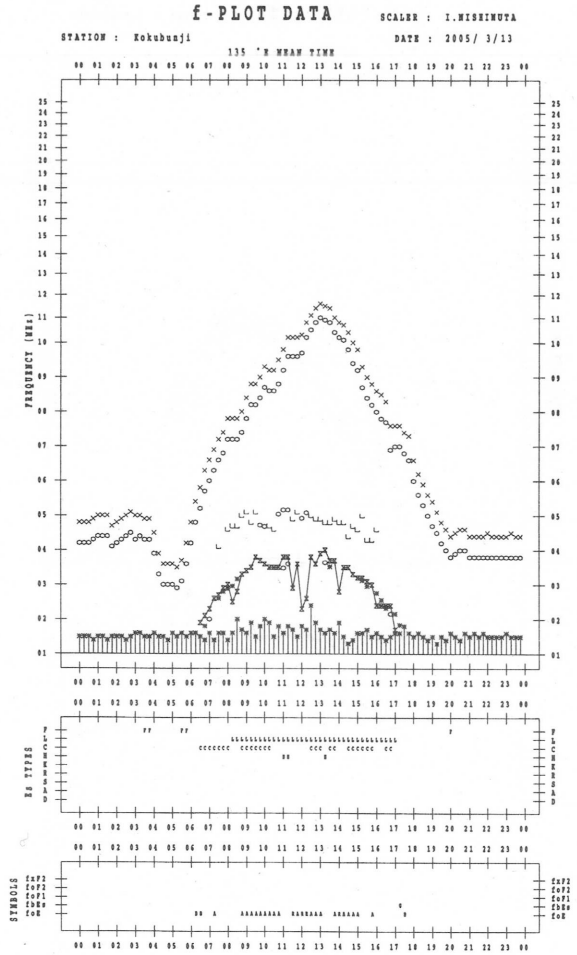

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 8
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

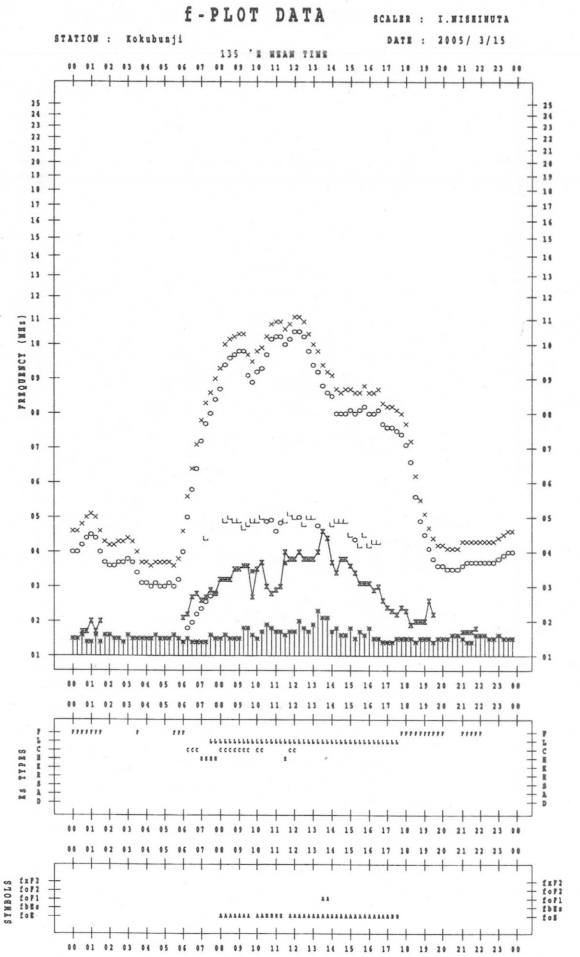

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

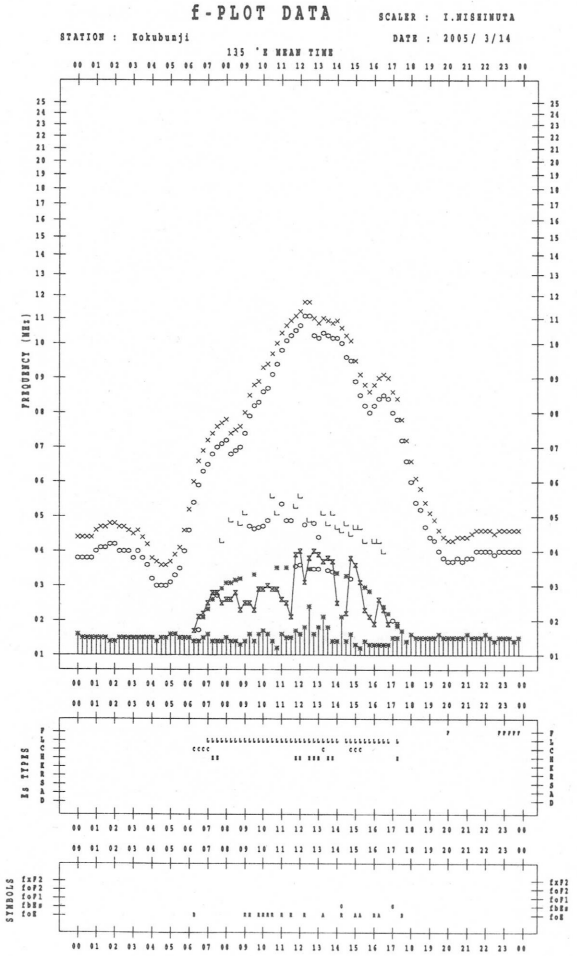

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

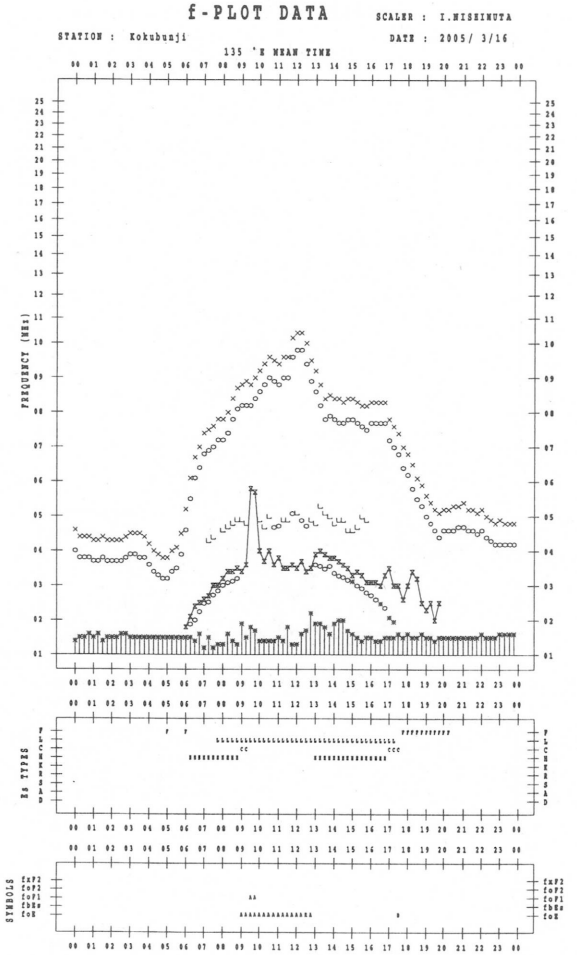

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

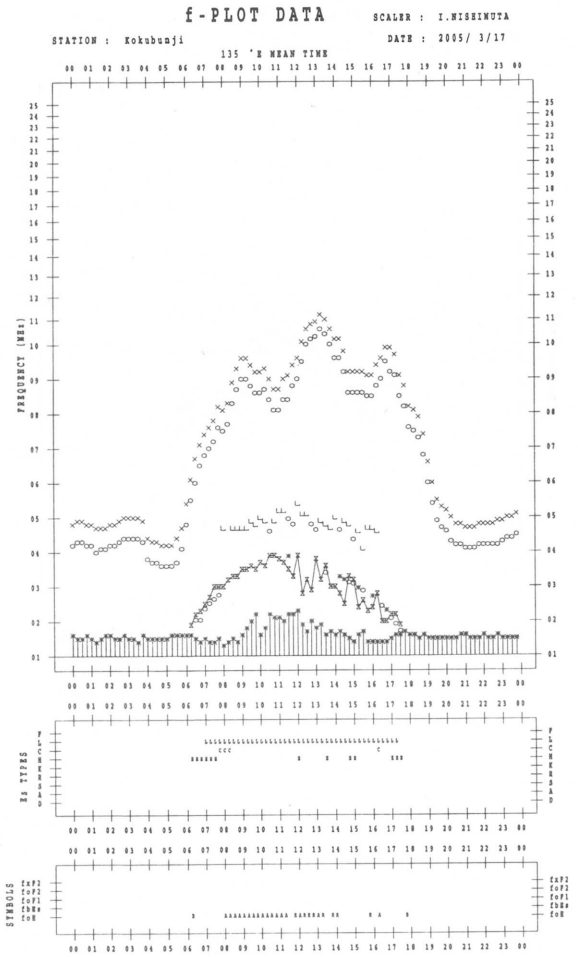

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

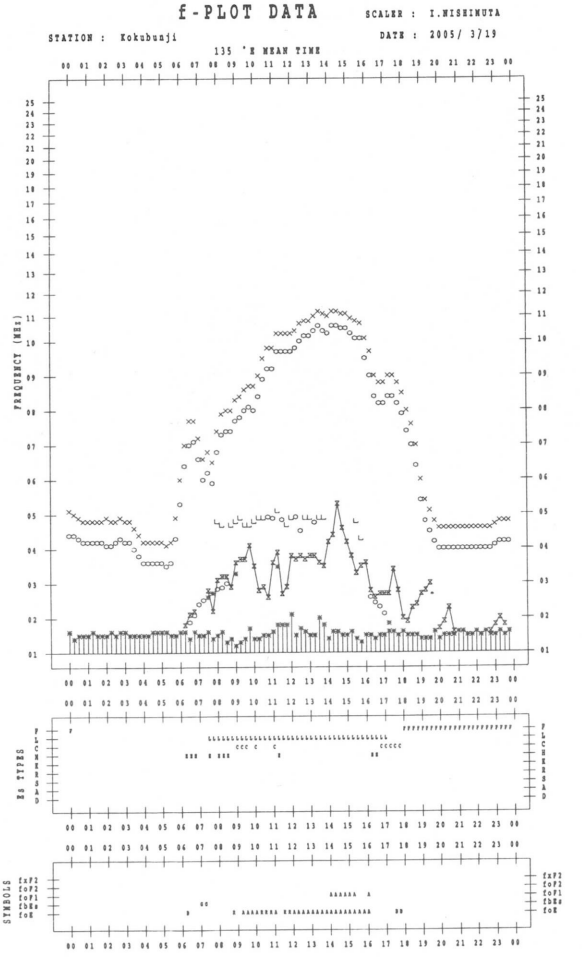

f-PLOT DATA
SCALER : I.NISHINUTA
STATION : Kokubunji
DATE : 2005/ 3/13
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

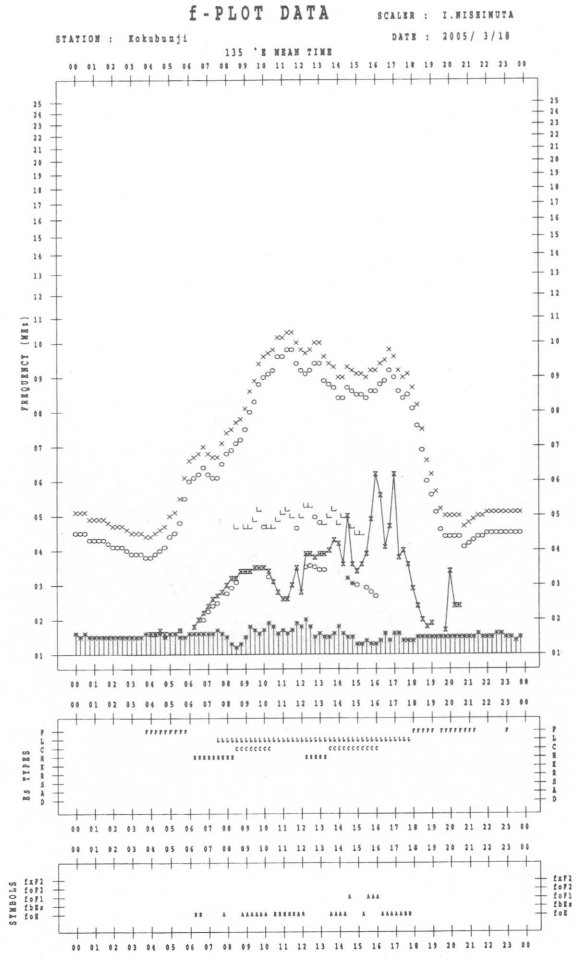

f-PLOT DATA
SCALER : I.NISHINUTA
STATION : Kokubunji
DATE : 2005/ 3/15
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

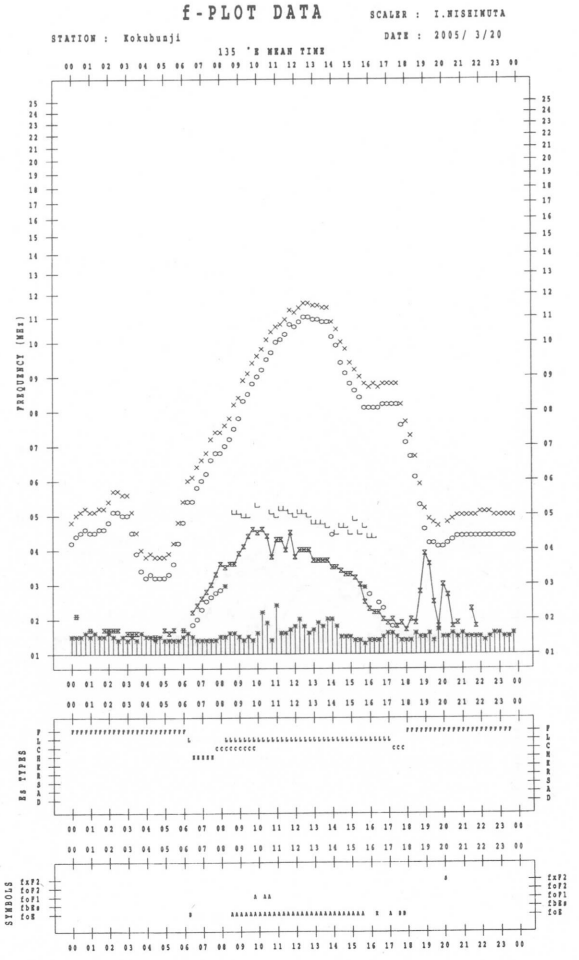

f-PLOT DATA
SCALER : I.NISHINUTA
STATION : Kokubunji
DATE : 2005/ 3/14
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

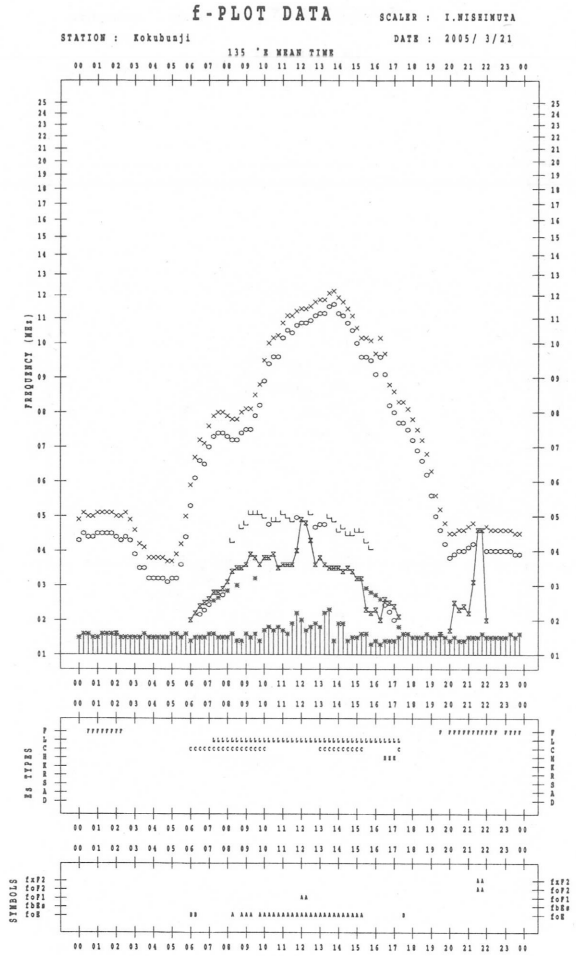

f-PLOT DATA
SCALER : I.NISHINUTA
STATION : Kokubunji
DATE : 2005/ 3/16
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

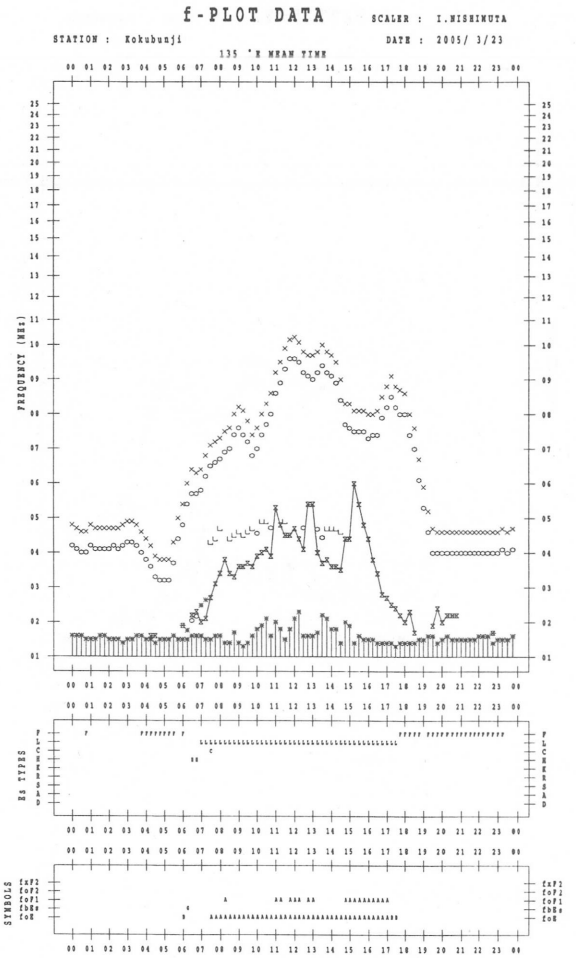

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

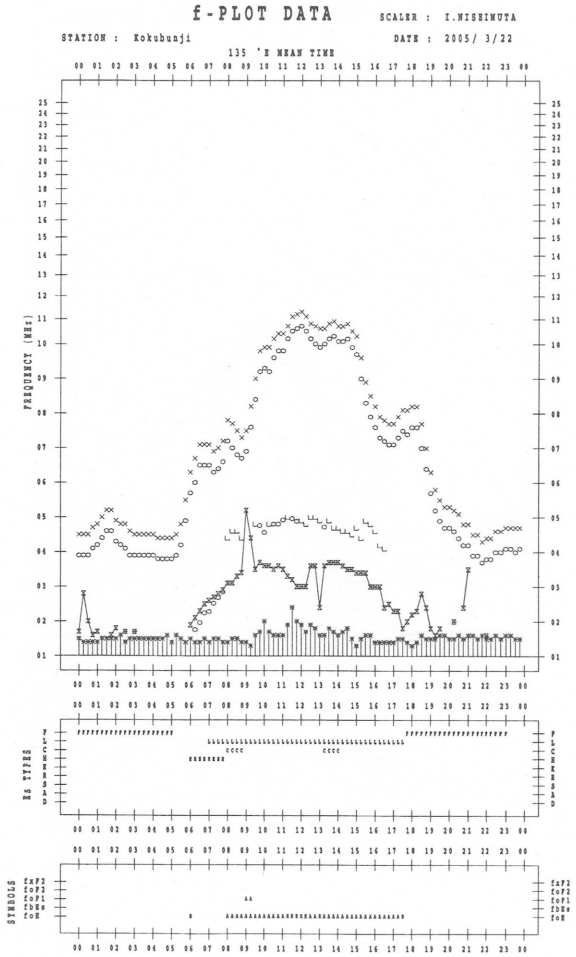

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

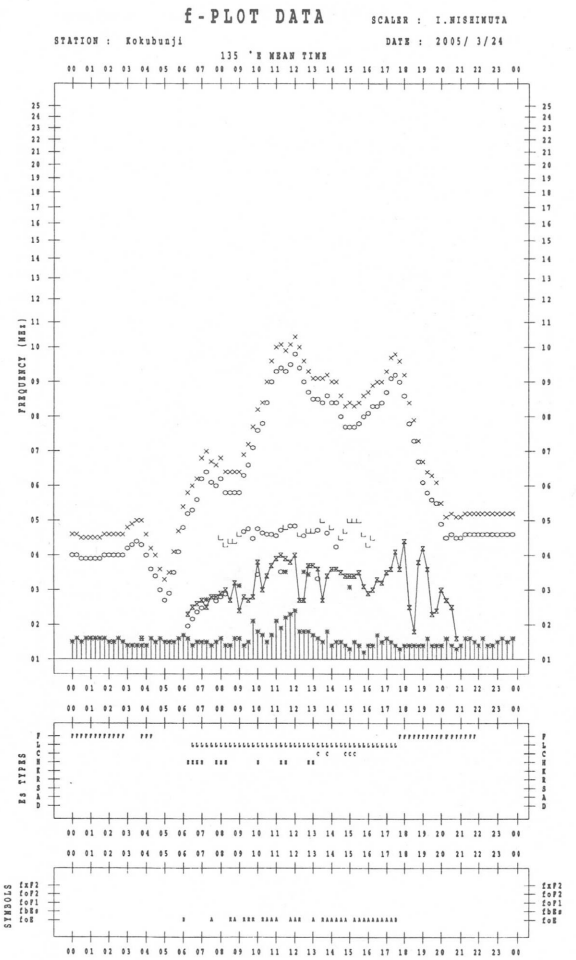

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

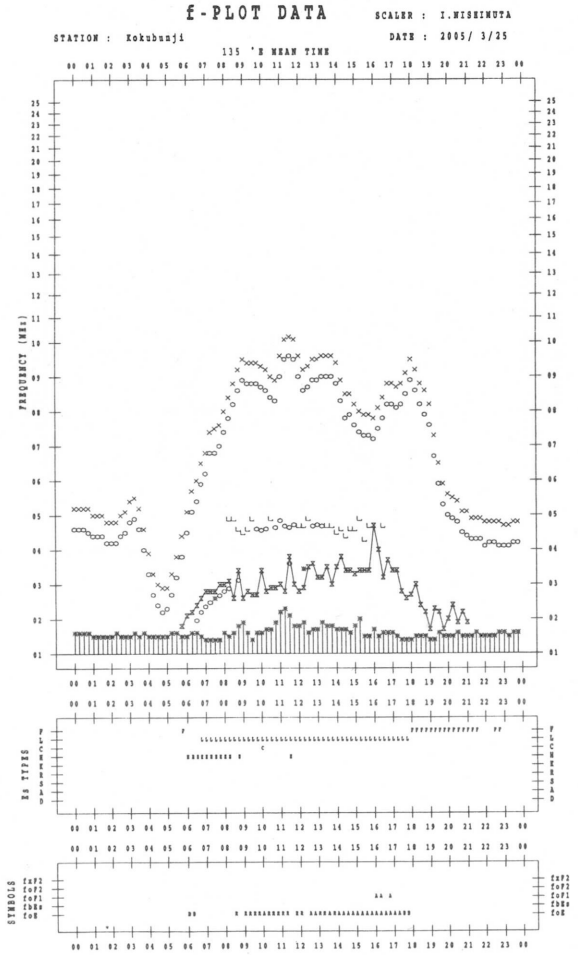

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

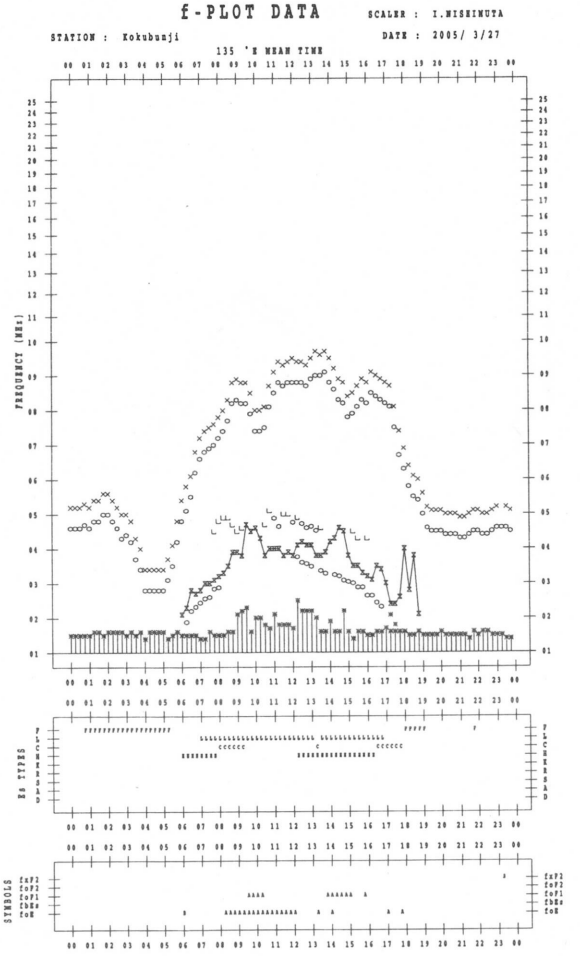

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

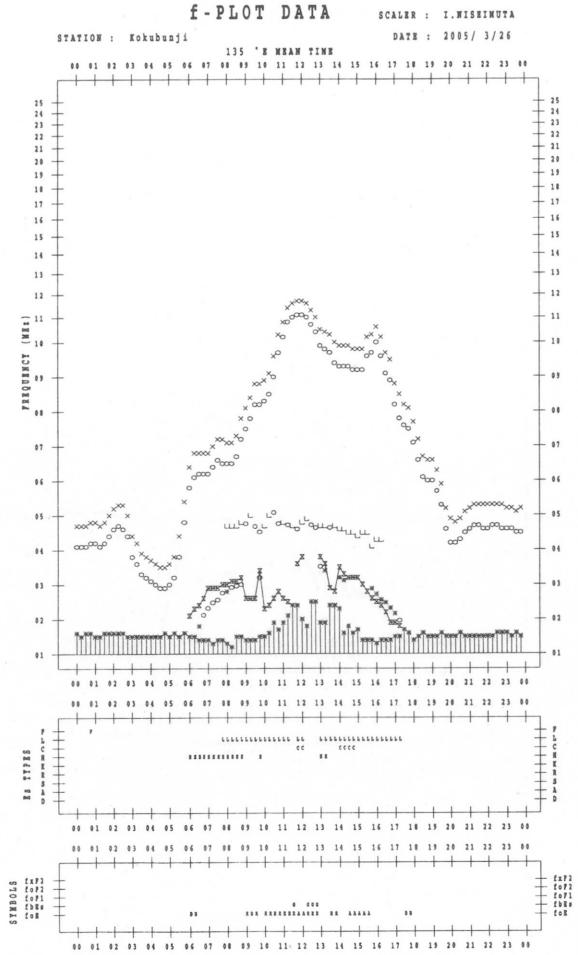

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

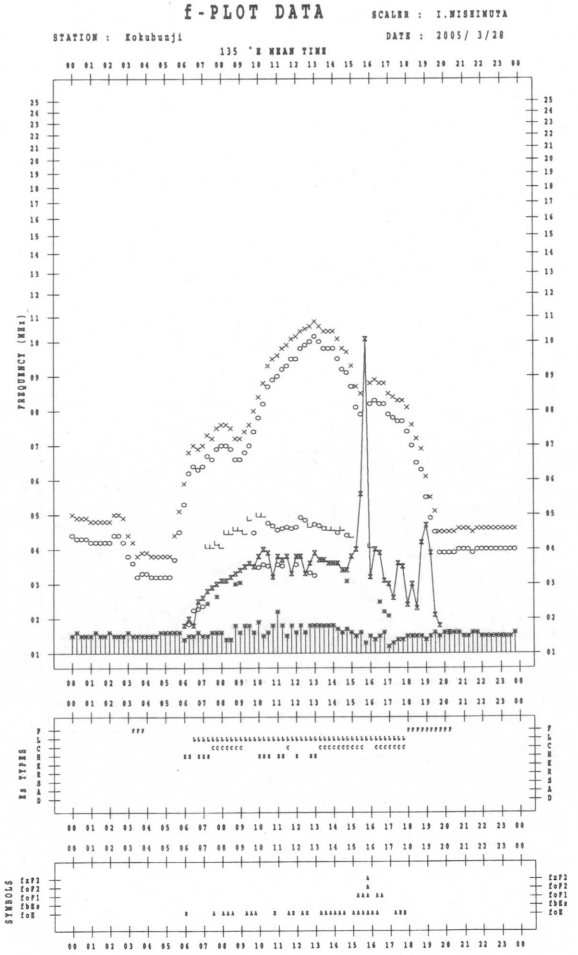

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

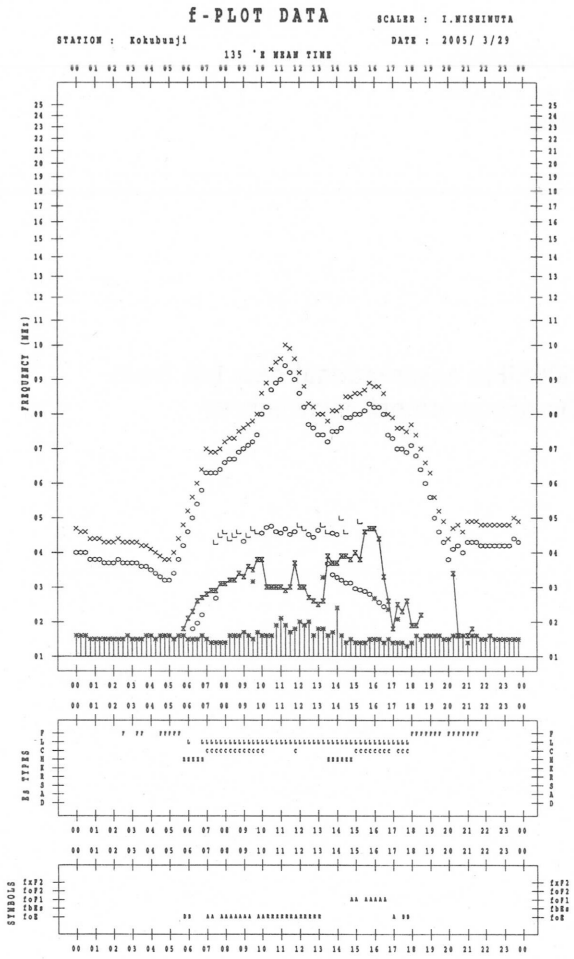

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

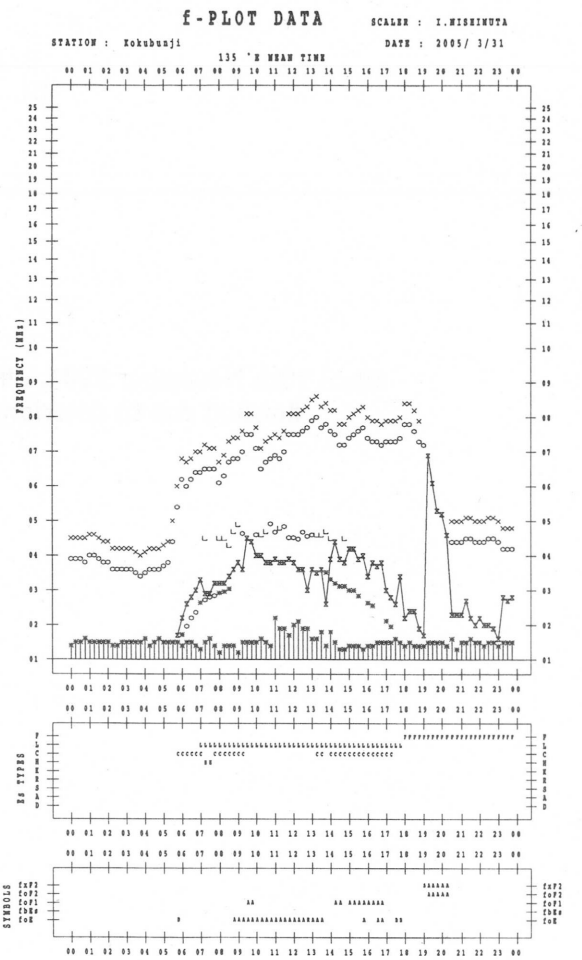

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

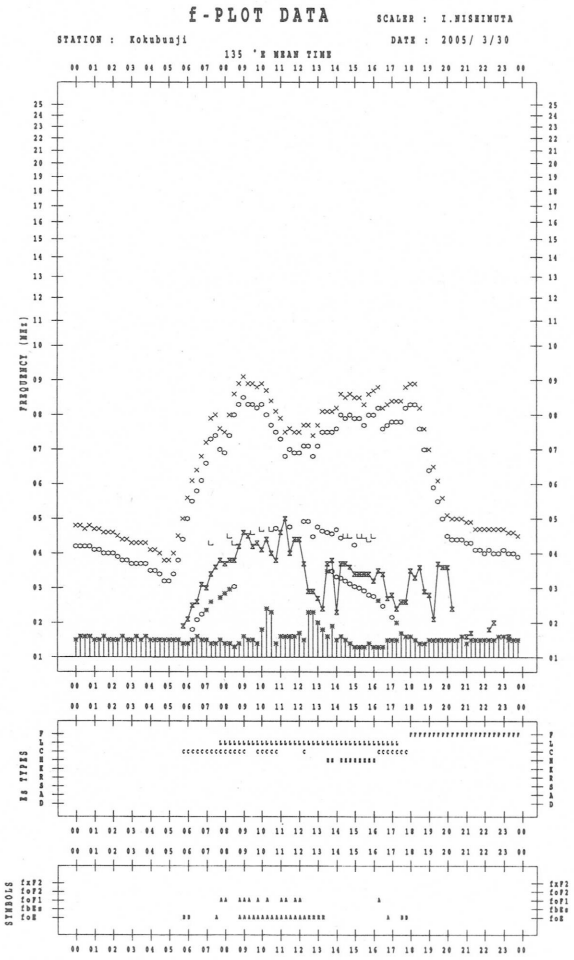

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 3/30
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 March 2005

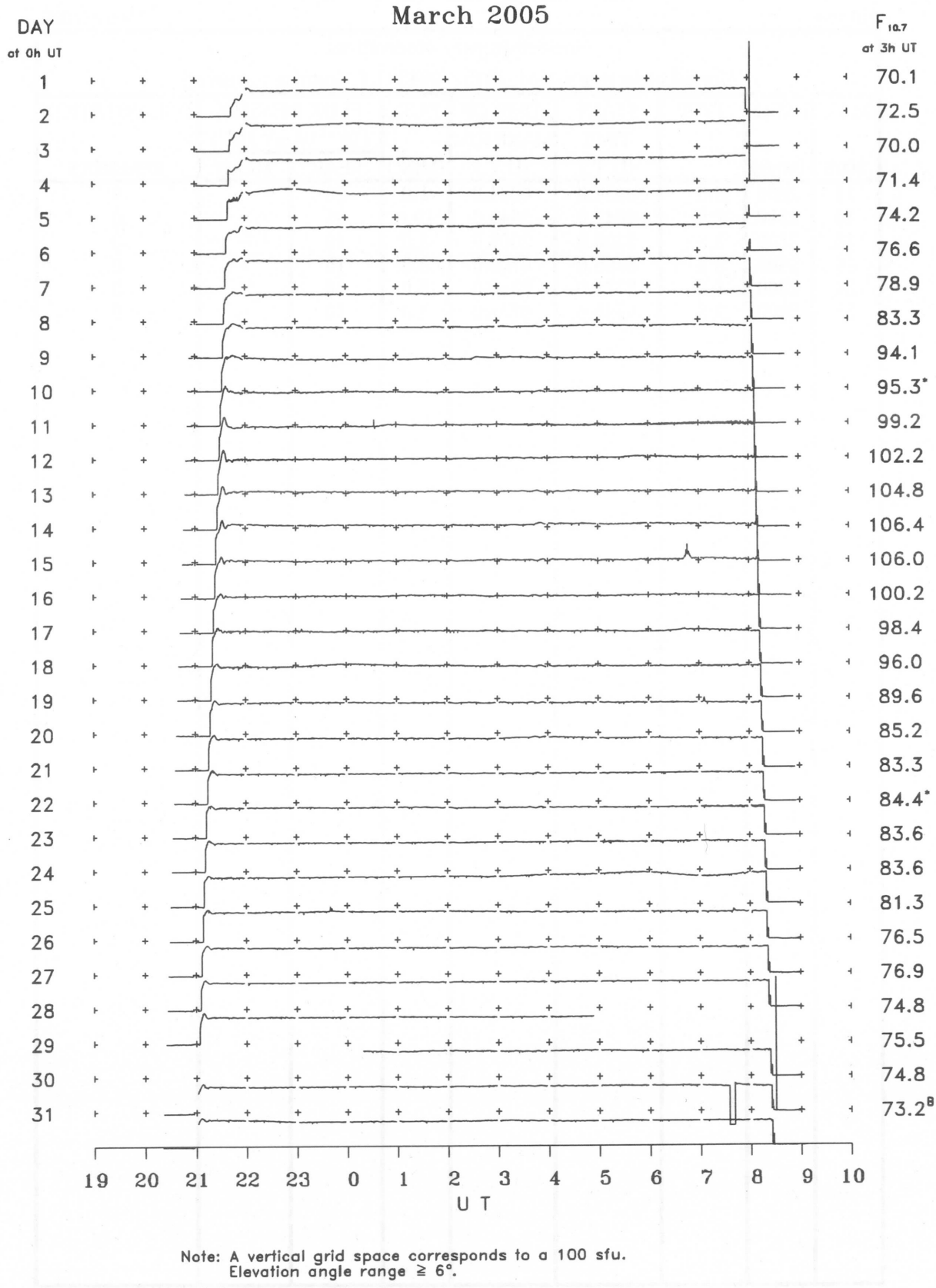
Single-frequency observations

Normal observing period: 2045 – 0845 U.T. (sunrise to sunset)

MAR. 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
11	2800	8 S	0034.0	0034.0	1.0	20	–	0
15	2800	7 C	0642.0	0646.0	10.0	45	–	0
16	2800	3 S	2305.0	2307.0	3.0	10	–	0
19	2800	3 S	0705.0	0706.0	3.0	15	–	0
24	2800	7 C	2338.0	2340.0	5.0	15	–	0
25	2800	3 S	0739.0	0741.0	4.0	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 MARCH 2005
F－675 Vol.57 No.3 (Not for Sale)

電離層月報(2005年3月)
第57巻 第3号(非売品)
2005年 7月 1日 印刷
2005年 7月 5日 発行

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

☎ (042) (327) 7 4 7 8 (直通)

Queries about "Ionospheric Data in Japan" should be forwarded to :
National Institute of Information and Commnications Technology, 2-1
Nukui-Kitamachi 4-chome, Koganei-shi, Tokyo 184-8795 JAPAN