ISSN 0021-0382

F−699

IONOSPHERIC DATA IN JAPAN

FOR MARCH 2007

VOL.59 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. 2007

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

HOURLY VALUES OF fEs AT Wakkanai

MAR. 2007

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	G	G	G	G	G		G	G	G	G	G	G	G	G
2	G	G	G	G	G	G	G	29	36	37	G	G		G	N	G	G	28	28	G	25	G	G	G
3	G	G	G	G	G	G	G		G	G	36	46	G	38	G	G	G	G	G	G	G	G	G	G
4	G	G	G	G	G		G	N	G	36	G	G	G	39	G	33	G	G	33	G	G	G	G	G
5	G	G	G	G	G	G	G	G	G	G	G	G	G	G	36	G	30	G	G	G	G	G	G	G
6	G	G	G	G	G	G	G	30	32	G	40	G	G	G	G	G	30	G	G	G	G	G	G	G
7	G	G	G	G	G	G	G	41	G	G	44	48	42	41	G	G	G	35	G	G	G	G	G	26
8	G	G	G	G	G	G	G	49	32	41	46	38	G	G	G		34	29	32	G	G	G	G	G
9	G	25	G	G	G	G	G	30	40	36	39	39	G	G	G	34	G	G	26	G	G	G	G	G
10	G	G	G	G	G	G	G	47	33	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
11	G	26	32	G	G	G	G	30	38	42	G	37	G	G	G	G	G	G	24	G	G	G	G	G
12	36	25	25	G	G	G	G	G	G	G	G	45	G	G	36	G	G	33	G	26	G	23	26	G
13	G	26	G	26	26	G	G	28	32	G	39	G	G	G	G	34	G	G	26	G	G	G	G	G
14	G	G	G	26	G	G	G	30	34	43	47	G	G	38	G	46	31	29	G	G	26	30	50	G
15	G	G	G	G	G	G	24	G	35	40	G	47	46	G	G	G	G	G	G	G	30	G	G	24
16	29	G	29	28	32	26	25	30	36	40	39	G	G	G	G	G	G	G	G	G	G	G	G	26
17	32	G	35	26	G	G	36	38	G	G	39	G	G	G	G	G	G	G	G	G	G	G	G	G
18	G	G	G	34	32	26	33	G	36	40	42	G	G	G	G	G	G	28	25	G	G	G	G	G
19	G	G	G	G	G	G	G	G	37	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
20	G	G	G	G	G	G	G	30	G	36	G	G	G	G	G	G	G	G	28	27	G	G	G	G
21	G	G	G	G	G	G	G	G	34	38	G	40	G	G	G	G	G	G	G	G	G	G	G	G
22	G	G	G	G	G	G		30	G	37		G	G	G	G	G	G	G	26	G	G	G	G	G
23	G	G	G	G	G	G	G	G	34	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
24	G	38	G	G	G	G	36	34	38	G	41	G	G		38	G	G	G	G	26	G	G	G	G
25	G	G	G	G	G	G	26	G	G	G	39	N	42	41	44	34	32	G	29	34	32	25	G	G
26	G	34	32	G	25	G		G	G	G	44	G	48	G	G	40	34	G	G	G	27	G	G	24
27	G	G	G	G	G	G		G	G	G	45	G	G	39	G	C	C	C	C	C	C	C	C	C
28	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
29	C	C	C	C	C	C	C	C	C	C	C	C	G	G	G	G	40	G	28	G	G	G	G	G
30	G	G	G	G	G	G	G	G	G	42	53	G	39	G	C	G	G	G	26	G	G	G	G	G
31	G	G	G	G	G	G	36	31	39	39	40	G	39	G	G	35	G	G	G	G	G	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	29	29	29	29	29	28	26	26	28	29	28	28	29	29	28	27	29	29	29	29	29	29	29	29
MED	G	G	G	G	G	G	G	30	32	G	39	G	G	G	G	G	G	G	G	G	G	G	G	G
U Q	G	G	G	G	G	G	24	30	36	39	41	37	G	G	G	33	15	G	26	G	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. 2007

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

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

HOURLY VALUES OF foF2 AT Kokubunji

MAR. 2007

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	30	34	34	36	34	36	37	54	64	68	80	90	86	77	66	64	65	61	63	34				
2	34		34	34			30	54	59	72	63	74	71	74	72	59	61	51	42	28				32
3	31		32	34	26				66	65	66	74	81	78	65	56	58	57	43	28		28	24	26
4	26	28	30	25			27	49	60	60	56	76	86	86	81	68	74	57	42	31		A	A	32
5	32	31		37	38		28	47	54	68	64	72	71	84	88	73	62	59	49	34		30	34	26
6	34	34		37	35		32	49		69	58	69	68	76	80	82	69	65	47	34	28		32	
7	30	37					31	54	58	64	62	67	88	69	69	66	64	64	44		34		37	34
8	33	39	38	42	43	28	C	60	73	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	59	68	78	95	90	86	67	65	66	66	49	34	32	32	38
15	39	41	39	32	32	27	38	54	52	55	67	77	77	69	61	69	66	63	48	41	34	36	37	37
16	38	34	39	32	30	30	39	53	49	61	69	90	85	68	61	66	55	55	51	40	30	32	30	28
17	30	30	32	36			34	45	51	51	65	77	82	69	64	65	66	60	51	37	34	34	32	A
18	39		39	36	32	27	36	47	59	63	65	75	72	66	48	57	54	56	49	39	32	28	28	32
19	32	30	27	30			37	52	65	59	59	48	81	76	66	60	41	37	42	34	A	32	32	
20	34	21	27	32	34			51	55	47	66	69	84	75	67	52	57	52	54	30	31	32		
21			42	46	36	34	41	51	50	59	63	75	84	82	78	62	56	64	49	36		34	32	32
22		35	42	42			43	47	59	60	67	80	92	90	80	68	58	38	49	39	32	27	21	
23	32	34	34	36	30	34	45	44	52	51	55	69	76	81	71	66	57	59	61	50	37	37	34	21
24	34	32	32	32			38	48	59	59	84	104	88	81	74	66	63	68	76	54	52	38	34	38
25	34	37	36	42	28	28	49	60	67		68	68	75	61	67	66	66	71	83	66	36	30	37	
26	38	39	36	43	30	27	46	58	69	65	66	80	82	76	60	61	64	67	62	63	51	45	42	23
27	39	27	39	36	30	36	51	54	59	67	69	83	90	86	77	65	64	66	69	63	59	28	32	42
28		42	38	39		32	51	55	55	59	67	68	88	102	88	76	68	83	79	53	32	32	32	32
29	34	32	34	34	28		43	59	60	62	71	80	A	90	74	75	62	64	58	54	49	32		32
30		32	36	37	30	28	46	66		70	75	71	65	71	66	59	58	59	59	62	52	44	45	42
31	41	34	48	32	34	37	52	60	61	63	66	64	70	67	72	68	58	55	60	59	48	30	28	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	21	22	24	17	13	22	24	23	24	25	25	24	25	25	25	25	25	25	24	18	20	20	17
MED	34	34	36	36	32	30	38	54	59	62	66	75	82	76	71	66	62	60	51	40	34	32	32	32
U Q	38	37	39	38	34	35	46	56	64	66	68	80	87	85	79	68	65	65	62	54	49	35	35	37
L Q	31	30	32	32	30	27	34	48	54	59	63	69	73	69	65	60	57	55	47	34	32	30	31	27

HOURLY VALUES OF fEs AT Kokubunji

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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	37	45	G	45	41	G	G	52	39	G	G	G		26	26
2	G		G	G			G	G	G	39	G	53	G	G	G	G	36	31	G	G			26	G
3	G	27	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G	G		G	G	G
4	G	G	G	G	G		G	39	44	45	39	G	G	50	50	G	40	G	29	G	G	33	48	G
5	G	G		G	11		G	G	G	G	G	45	42	G	37	G	35	32	42	G		G	G	G
6	G	G	G	G	G		G	G	G	G	N	G	G	G	51	37	38	G	G	G	G		G	
7	G	G	G		G		G	G	G	G	G	G	G	G	47	43	G	34	G		G		G	G
8	G	G	G	G	G	G	C	G	G	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	43	43	43	G	51	38	38	35	29	G	G	G	G	G	G
15	36	G	29	G	G	G	G	30	G	40	G	G	G	G	G	G	G	G	25	G	G	G	G	G
16	G	26	36	G	G	G	G	G	G	G	G	G	G	G	G	G	36	35	G	G	G	G	G	G
17	G	G	G	G	G		24	33	G	46	44	45	42	40	G	G	41	31	G	25	G	G	G	44
18	27		G	G	G	G	24	33	G	G	G	G	G	G	G	G	40	29	26	29	G	G	G	G
19	G	G	G	G	G	G	25	G	G	G	G	41	G	G	G	39	G	G	26	23	33	G	G	G
20	G	G	G	G	G	G		G	G	43	G	G	G	G	G	G		34	G	34	G	26	G	G
21	G	G	G	G	G	G	26	G	34	41	42	G	G	G	45	40	39	30	25	G		G	G	G
22	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
23	G	G	G	G	G	G		G	G	G	G	G	G	39	N	G	36	30	G	G	G	G	G	G
24	G	G	G	G	G		27	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
25	G	G	G	G	G	G	G	G	G		G	G	G	G	G	G	G	34	23	G	G	G	G	G
26	G	G	G	G	G	G	26	33	G	G	39	48	G	51	50	57	43	36	29	36	46	36	G	G
27	G	G	G	G	G	G	29	35	G	37	49	50	49	53	39	40	44	44	31	30	G	G	G	G
28	28	G	G	G	G	G	G	G	39	G	44	G	G	45	G	G	45	62	37	29	26	29	G	G
29	31	29	24	G	31	24	G	G	39	48	50	44	93	42	G	G	G	G	G	G	G	G	40	33
30	G	G	G	G	G	G	G	G	G	43	50	G	G	G	G	G	36	45	31	G	G	G	G	G
31	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G		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	25	23	24	24	24	17	22	25	25	24	24	25	25	25	24	25	24	25	25	24	20	21	25	24
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	36	30	G	G	G	G	G	G
U Q	G	G	G	G	G	G	24	15	G	42	43	43	G	41	38	37	40	34	27	24	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 Kokubunji

MAR. 2007

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	14	18	15	14	17	13	22	28	28	18	22	21	18	14	13	14	13	17	14	20		14	14
2	15		15	13			21	23	15	30	40	21	23	20	18	15	13	13	14	13			14	13
3	14	13	17	18	17		21	14	13	14	24	41	40	42	18	14	13	22	13	14		14	13	14
4	14	14	14	14	15		14	17	24	17	15	42	42	26	26	15	15	21	14	14	18	14	13	14
5	14	15		14	13		22	13	29	13	24	23	25	21	21	23	13	13	20	23		15	17	14
6	15	13	21	17	14		14	23	14	14	37	38	24	23	13	14	13	13	14	20	13		14	
7	15	14	17		14		15	22	13	13	40	14	42	39	15	14	14	13	22		14		14	25
8	17	21	14	20	14	14	C	23	18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	13	14	15	18	20	18	17	17	13	15	14	14	17	15	14
15	14	14	14	14	15	14	15	17	14	13	20	18	20	18	18	18	14	13	14	14	14	13	14	14
16	13	14	13	14	13	17	15	13	13	13	14	15	17	40	18	29	15	13	15	15	18	17	14	17
17	14	21	13	14	13		15	17	14	14	15	20	20	21	17	18	14	13	14	13	14	14	14	13
18	15		13	14	14	15	17	14	13	14	14	14	18	15	14	20	15	14	15	13	17	14	17	14
19	13	17	17	15	15	17	17	18	14	13	15	22	18	20	14	13	14	14	15	15	13	14	14	13
20	14	14	15	14	13	14		13	14	13	13	18	46	14	13	20	17	13	18	14	14	13	13	13
21	14	13	13	13	14	14	14	14	14	14	18	21	22	18	15	15	15	14	15	14		14	17	14
22	13	13	13	13	13	13	17	14	14	14	17	18	18	18	42	17	14	23	14	14	15	17	13	13
23	13	17	14	14	17	14	18	13	13	17	18	21	22	20	18	14	14	14	15	14	20	15	18	18
24	15	13	15	13	13		15	13	14	15	21	45	20	18	15	15	18	13	14	15	15	14	18	15
25	14	14	17	14	18	17	18	24	15		17	42	42	43	18	15	17	17	14	14	14	17	14	14
26	17	14	15	14	14	17	18	13	14	20	33	33	20	24	17	17	18	14	13	13	14	14	14	17
27	13	18	13	13	13	14	13	13	13	18	31	17	20	18	13	20	15	18	14	14	14	14	17	14
28	14	13	13	13	13	13	18	13	18	17	18	22	29	25	23	20	14	13	13	13	14	15	13	13
29	15	13	13	13	14	13	18	14	15	15	17	25	22	17	40	17	13	21	15	17	14	14	13	13
30	13	13	14	15	14	14	18	14	14	15	17	21	22	22	21	14	13	13	14	14	14	15	13	14
31	14	14	20	14	13	13	20	13	15	18	21	21	21	20	21	17	20	13	17	14	14	15	20	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	25	23	24	24	24	17	23	25	25	24	25	25	25	25	25	25	25	25	25	24	21	21	25	24
MED	14	14	14	14	14	14	17	14	14	14	18	21	22	20	18	17	14	13	14	14	14	14	14	14
U Q	15	15	17	14	14	17	18	20	15	17	24	29	27	24	21	19	16	15	15	14	16	15	17	14
L Q	13	13	13	13	13	13	15	13	13	13	15	18	20	18	14	14	13	13	14	14	14	14	13	13

HOURLY VALUES OF foF2 AT Yamagawa

MAR. 2007

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	32	34	34	38	30	34	51	52	70	82	88	91	78	72	80	78	80	73	47	30	29	30	30
2	30	34	34	35				44	66	71	74	70	76	77	78	71	62	61	55	45	32	30		32
3			34	31	30	26		41	63	66	82	87		108	100	81	78	77	66	46	38	34	32	34
4	37	40	40	37				43	52	56	61	75	89	99	108	108	98	71	54	A	31	30	31	34
5	32	26	34	35	34			41	56	57	71	64	73	88	100	96	75	72	64	42	A		34	29
6	34	34	34	34	37	25	26	46	77	58	58	57	65	87	92	97	94	80	54	45	26	32	32	32
7	32	40	34				59	51	54	61	61	63	84	88	71	72	75	74	51	47	37	36	24	34
8	29	32	34	34	45			54	56	58	66	67	85	91	98	106	97	83	67	48	34	29	30	32
9	32	32	32		34	32	32	51	62	66	71	87	91	90	91	93	76	67	59	43	34	29		
10	30	28	26	29	34			47	51	57	54	72	82	86	92	95	77	70	63	48	A	A	32	32
11		32	32	34	34	30	30	43	56	65	66	70	82	80	83	72	62	62	66	58	34	34	34	34
12	34	37	32	30	30	29	30	44	51	61	68	73	68	77	86	75	73	65	63	51	41	37	37	40
13	38	38		37	29	30	30	54	66	66	70	74	78	86	96	88	75	67	55	53	50	48	36	
14	38	42	34	37	34		28	49	64		75	84	108	109	97	88	86	80	75	65	43	A	34	36
15	34	40	38	31	32			47	52	61	58	72	81	87	77	72	71	61	56	40	34	36	34	34
16	34	34	36	34	31			42	55	67	76	87	85	87	80	78	71	58	61	47	34	29	26	30
17	30	31	34	34				42	48	40	61	72	94	96	80	82	75	62	63	43	34	34	34	34
18	36	34	30	34	29			45	59	65	68	75	84	92	81	70	59	55	55	46	30		32	30
19	30	32	29	32	30			47	54	58	63	80	98	110	100	81	64	58	50	46	34	A	A	32
20	32	30	34	32	31			42	54	59	62	68	88	102	97	83	62	62	61	45	36	29	32	32
21	36	34	32	32	30		26	47	50	57	61	72	84	107	114	90	70	61	66	51		26	30	31
22	30	32	34	32	28			44	51	60	66	75	84	96	98	77	61	65	62	42	32	29	32	30
23	28	34	34	34	32	29	34	41	47	56	57	64	74	91	86	82	76	80	77	48	34	30	31	32
24	30	34	34	38	31		28	45	51	64	74	88	109	90	80	72	73	80	72	62	54	34	37	32
25	37	37	38	50	28		32	54		61	69	68	79	80	80	75	71	76	84	66	50	A	36	37
26		37	37	43	34		29	60	67	78	75	78	87	85	85	70	62	66	72	71	61	48	50	44
27	44	44	44	37	36	36	37	50	59	68	67	72	85	88	81	80	66	67	66	78	62	32	32	34
28	37	40	34	34	32	26	32	51	58	51	61	71	87	98	107	94	92	92	77	54	41			37
29	37	40	42	44	34		29	51	66		74	75	88	88	96	90	78	70	66	71	54	36	36	34
30	34	34	32	31	30	26	32	54	65	68	80	71	76	77	80	70	65	65	67	66	52	37	37	31
31	34	32	35	34	34	34	36	56	62	60	70	80	85	93	96	85	81	80	71	72	50	30		28
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	27	30	30	29	27	12	18	31	30	29	31	31	30	31	31	31	31	31	31	30	28	24	26	29
MED	34	34	34	34	32	30	31	47	56	61	68	72	84	88	91	81	75	67	64	48	35	32	32	32
U Q	37	38	35	37	34	31	34	51	63	66	74	80	88	96	98	90	78	80	71	62	50	36	36	34
L Q	30	32	32	32	30	26	29	43	52	57	61	70	79	86	80	72	65	62	56	45	34	29	31	31

HOURLY VALUES OF fEs AT Yamagawa

MAR. 2007

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	56	G	G	G	G	G	G		G	G	40	50	49	44	41	39	35	30	25	G	G	G	G	G
2	G	G	G	G			G	G	G	G	G	38	40	G	39	G	G	G	G	G	G	G	26	31
3	24	46	36	31	29	G	G	G	32	36	38	G		52	G	G	G	G	28	34	G	G	G	G
4	G	G	G	G	G		G		39	43	47	48	45	48	47	39	35	36	27	49	28	30	G	G
5	31	24	G	G	G		G	28	33	39	42	45	40	G	42	42	52	31	G	G	33		32	25
6	G	G	G	G	26	G	G	G	G	G	39	47	48	G	46	40	44	42	30	G	32	G	G	G
7	G	G	G		G	G	G	G	G	N	G	46	G	40	39	40	59	41	33	28	G	G	G	G
8	32	27	25	G	G		G	27	G	G	G	G	G	G	G	39	G	36	26	23	G	G	G	G
9	G	G	G	34	G	G	G	G	G	G	G	G	G	G	G	G	35	G	G	20	G	26	G	
10	G	G	28	G	G		G	G	G	G	G	40	G	42	40	42	40	G	31	33	47	37	24	G
11	31	24	23	G	G	G	G	G	G	G	G	G	40	40	G	38	35	G	G	G	G	G	23	G
12	G	G	G	G	G	G	G	G	42	G	G	44	G	46	46	43	39	32	G	G	29	24	G	28
13	30	25		28	G	23	G		G	39	41	48	G	42	50	56	44	40	39	38	54	26	48	35
14	G	G	G	G	G		G	G	G		45	44	43	44	43	G	38	38	50	35	28	44	26	G
15	G	G	31	24	26			28	33	G	G	G	41	G	G	G	G	31	G	G	G	G	G	G
16	G	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G	24	G	G	G	G
17	G	G	G	G	11			30	G	G	42	44	46	46	48	40	G	33	28	26	24	G	G	G
18	G	G	G	G	G	G	G	28	G	40	G	42	G	41	G	47	46	41	43	29	27	27	25	G
19	G	G	G	G	G	G	G		G	G	G	G	42	G	40	G	40	36	35	G	G	45	34	48
20	G	G	G	G	G	G	G		G	G	40	46	G	63	44	G	36	37	26	G	G	G	G	G
21	G	G	G	G	G	G	G	31	36	36	G	42	G	G	G	39	40	36	38	G	25	G	G	26
22	G	G	G	G	G		G	40	37	G	G	G	N	G	G		G	G	G	G	G	G	G	G
23	G	G	G	G	G	G	G	42	37	42	45	G	49	47	40	G	G	G	G	G	G	G	G	G
24	G	G	G	G	G	G	G	33	36	G	43	46	G	42	G	39	G	G	26	25	G	G	G	G
25	G	G	G	G	G		G	G		36	G	G	40	40	G	46	G	38	34	34	30	40	28	G
26		G	G	G	G	G	G	29	37	G	G	G	48	70	52	44	G	48	44	57	G	G	G	G
27	G	G	G	G	G	G	G	33	44	41	G	49	52	49	G	G	43	37	31	26	G	G	G	G
28	G	G	G	G	G	G	G	29	40	42	G	49	43	64	60	46	44	G	G	G	32	23	G	G
29	G	G	G	G	11	G	G	G	33		45	46	G	46	51	G	G	36	G	G	G	11	G	G
30	G		34	35	G	G	G		50	40	41	47	41	52	G	G	G	G	31	G	G	G	G	G
31	G	G	G	G	G	G	G	29	36	42	42	G	42	G	G	G	G	G	31	G	G	30	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	30	30	30	30	30	20	29	25	30	28	31	31	29	31	31	30	31	31	31	31	31	30	31	30
MED	G	G	G	G	G	G	G	27	16	G	G	42	40	42	39	39	35	32	27	G	G	G	G	G
U Q	G	G	G	G	G	G	G	29	37	39	42	46	44	47	46	42	40	37	33	29	28	26	24	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 Yamagawa

MAR. 2007

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	14	15	15	14	14	15	15	16	14	14	14	17	17	18	18	16	14	14	15	14	15	16	17	16
2	15	15	15	14			16	17	14	14	14	20	17	17	20	16	14	14	17	14	14	15	15	14
3	15	15	15	14	14	15	15	15	14	14	14	14		18	21	14	14	14	14	14	15	15	15	14
4	14	14	14	14	14		15	14	14	14	16	14	17	20	15	17	16	14	15	14	14	14	15	16
5	15	15	15	15	14		16	14	14	14	15	16	20	20	18	15	14	14	14	14	15	14	15	15
6	15	14	14	14	15	16	16	17	14	15	14	17	18	17	17	16	15	15	14	14	15	15	16	15
7	15	14	15		14	15	15	17	14	14	14	17	21	18	18	18	14	14	14	14	14	15	16	14
8	15	14	14	15	15		17	14	14	14	14	17	18	21	20	17	14	14	15	15	15	16	14	15
9	15	16	15	14	15	15	14	20	15	17	18	33	41	22	20	20	15	14	17	14	15	15	15	
10	18	15	14	14	14		15	16	14	14	15	17	15	20	18	17	16	15	14	14	14	14	16	15
11	14	15	14	18	15	15	16	20	15	14	14	40	41	17	15	17	15	15	18	14	15	15	16	15
12	14	16	16	15	15	15	15	15	14	14	15	17	20	28	20	20	15	14	15	15	14	15	16	14
13	15	15		14	15	14	14	15	14	14	16	14	20	21	18	17	16	15	14	14	14	14	14	14
14	15	16	17	14	14		15	20	14		16	15	18	27	26	21	17	15	14	14	15	14	15	16
15	15	14	14	16	17			15	14	15	16	17	27	27	23	18	14	14	17	14	15	14	15	14
16	14	14	14	14	14		16	20	14	14	20	23	21	18	17	14	14	14	17	15	16	18	16	15
17	16	14	14	14	15			14	14	14	16	16	18	20	18	18	14	14	14	15	15	15	15	14
18	15	15	15	15	15	18	20	15	14	14	15	18	28	20	20	18	14	14	14	14	15	14	15	14
19	21	15	14	14	14	15	16	16	14	14	17	16	18	21	20	18	18	14	14	14	15	16	14	14
20	16	14	15	15	14	14	15	18	14	17	18	18	23	22	20	15	14	14	17	15	14	15	15	14
21	14	14	15	14	14	14	15	14	14	15	18	17	22	21	20	18	16	14	14	16	15	17	15	15
22	15	14	15	14	15		17	17	14	14	17	17	17	47	45	18	21	14	16	14	15	17	15	16
23	14	15	14	15	14	15	14	15	14	14	15	16	18	21	21	17	14	14	17	15	15	17	14	15
24	14	15	15	15	16	15	18	16	14	14	16	17	22	26	22	20	14	14	14	15	15	16	15	14
25	14	17	15	15	15		16	17		15	20	17	22	21	23	17	14	14	14	15	15	16	14	17
26		16	16	15	14	16	16	17	14	14	18	18	21	20	21	18	14	14	14	15	14	15	17	15
27	14	14	14	14	14	14	14	15	14	17	18	16	20	18	17	14	14	14	14	16	14	23	15	14
28	14	14	15	15	15	16	14	14	15	14	18	20	17	21	22	18	18	16	20	15	14	15	15	18
29	14	14	14	14	14	16	17	15	14		18	20	23	21	14	14	14	15	18	14	15	15	15	15
30	15	14	14	14	17	15	15	15	14	14	15	20	26	24	21	17	14	14	14	14	14	14	15	15
31	17	14	15	16	16	14	14	14	14	14	16	22	20	48	21	20	14	14	14	15	15	15	17	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	30	31	30	30	30	20	29	31	30	29	31	31	30	31	31	31	31	31	31	31	31	31	31	30
MED	15	15	15	14	14	15	15	15	14	14	16	17	20	21	20	17	14	14	14	14	15	15	15	15
U Q	15	15	15	15	15	15	16	17	14	14	18	20	22	22	21	18	16	14	17	15	15	16	16	15
L Q	14	14	14	14	14	14	15	15	14	14	15	16	18	18	18	16	14	14	14	14	14	14	15	14

HOURLY VALUES OF foF2 AT Okinawa

MAR. 2007

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			35	34	35	38	31	45	58	66	87	101	89	84	90	96	101	104	88	78	51	30		31
2		30	30	29	31			37	66	74	80	83	77	86	104	90	87	78	73	66	41			
3				26	31	A		40	56	70	82	112	127	148	120	118	108	108	85	64		A	A	
4		43	44	44	31			37	55	58	61	82	106	132	129	139	127	103	73				26	32
5			30	32	26				52	58	66	74	78	97	111	110	106	89	88	45	41			30
6	26	32	32	30	30			50	70	56	60	62	67	90	108	127	126	93	90	67	34	28		30
7	32	34	32	29				46	56	56	61	65	81	86	86	77	82	82	75	54	A			30
8		A	A	34	46			47	55	57	67	71	86	101	102	112	110	105	84	53				
9					28			42	60	64	71	86	97	112	106	107	102	84	66	59	41	29		
10			28	23	34	31		42	57	52	62	67	85	95	106	101	92	78	74	48	40			
11	30				30	30		42	58	61	72	80	96	101	101	92	77	77	72	61	50	34	34	30
12	36	34	34					44	48	57	80	81	74	76	84	86	85	67	68	53	37	32	32	32
13	29	32	38	36				51	66	61	70	82	89	105	126	117	107	A	84	77	54	42	41	
14		32		30	26			45	64	72	76	92	105	119		117	105	110	102	85	54	36	29	29
15	30	35	36	31	30			42		66	64	77	88	100	108	104	86	71	61	45	37	32		32
16	31	34	36	31				41	55	70	90	95	108	127	130	131	125	103	91	63	50	34	34	36
17	31	41	44	42				42	50	57	62	75	100	118	110	118	112	90	66	52	40	30	A	28
18	34	34	32	30				45	58	67	74	82	100	110	111	110	86	82	75	53	42		31	28
19	31	30	32	31	32			42	50	61	73	88	109	140	134	122	86		66	58	51	38		30
20		28	36	41	36			42	52	58	65	77	101	125	138	128	107	92	67	50	32			
21	28		28	31	28			46	51	56	61	80	94	123	150	130	104	91	97	66	44	31	34	32
22		40	43	41	27			44	51	60	70	78	92	108	126	108	88	83	74	53		30	29	32
23	30	28	30	32				39	45	57	65	67	71	87	110	124	130	131	108	74	52	36	28	
24	31	30		30					51	66	80	86	102	107	100	98	92	88	74	71	63	34	34	
25	30	32	46	54				52	58	60	71	71	80	96	91	81	82	96	85	73	53	38		38
26			37	37				50	67	75	84	90	88	101	106	90	80	78	81	80	63	62	54	52
27	31		44	42		30	32	48	60	73	78	78	84	93	98	98	81	75	80	90	37	30		30
28	31	37	34	32				52	60	57	66	76	96	110	117	116	116	117	88	61	44	32		34
29		40	48	47	36		28	54	62	76	77	80	104	128	130	125	107	107	108	108	80	42	42	30
30		31	34	34				51	68	73	76	85	87	96	94	89	86	84	88	66	A	31	31	30
31	30	32	28	30	32			48	60	66	81	90	106	134	148	130	126	131	110	105	84	52		
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	17	21	25	28	18	4	3	29	30	31	31	31	31	31	30	31	31	29	31	30	25	22	14	21
MED	31	32	34	32	31	30	31	45	58	61	71	80	92	105	109	110	102	90	81	64	44	33	33	30
U Q	31	36	40	39	34	34	32	49	60	70	80	86	102	123	126	124	110	104	88	74	53	38	34	32
L Q	30	30	31	30	28	30	28	42	52	57	65	75	84	95	101	96	86	80	73	53	40	30	29	30

HOURLY VALUES OF fEs AT Okinawa

MAR. 2007

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

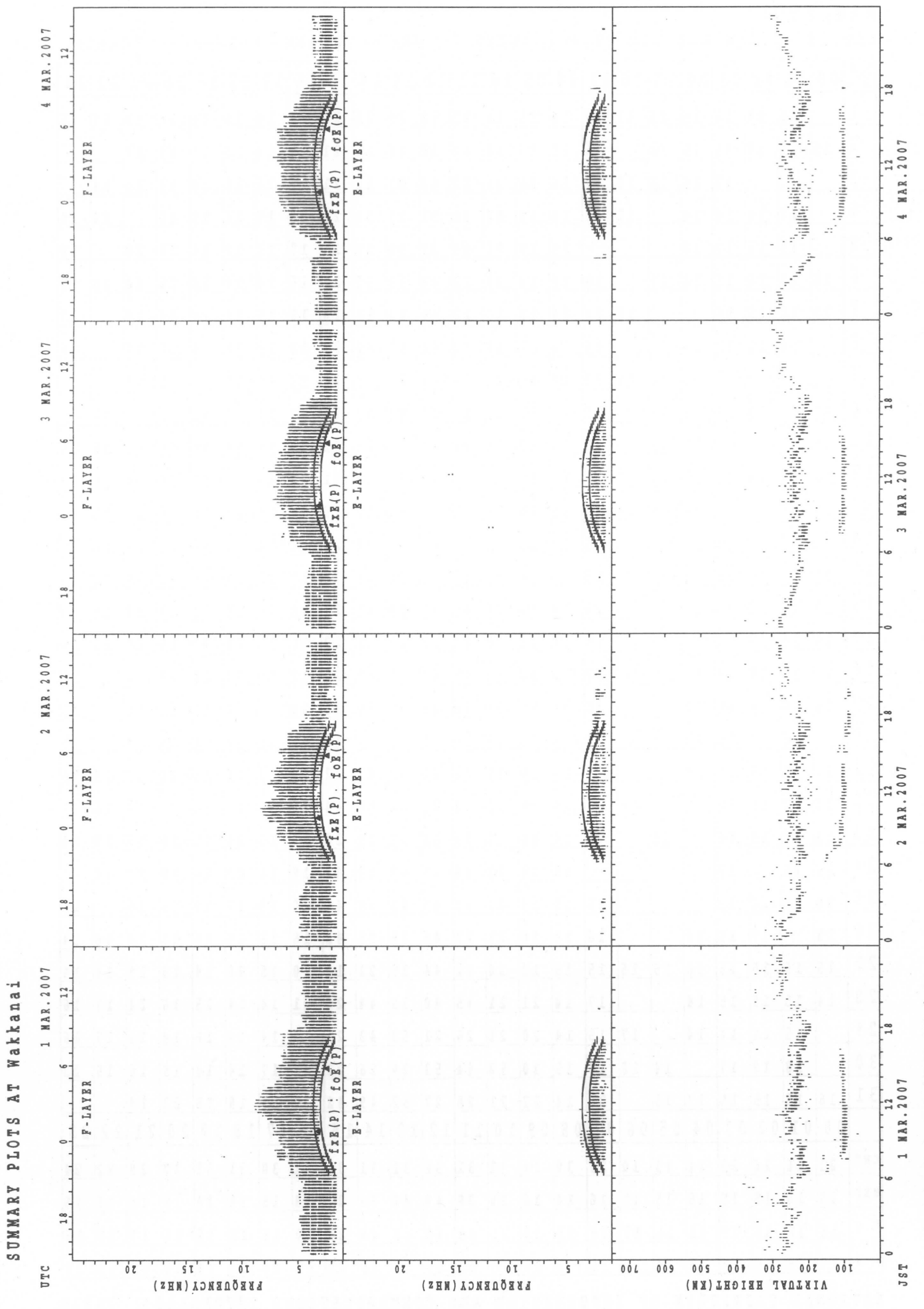
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		30	25	G	G	G	G	G	G	G	46	45	54	51	42	G	38	34	26	24	G	G	G	G
2	G	G	31	26	G	G		G	34	39	G	G	G	G	G	G	36	G	33	28	34	26		
3				G	30	35	G	G	G	G	G	G	G	G	G	G	63	65	35	36	26	49	38	
4		G	G	G	G		G		G	86	46	G	G	45	49	51	55	48	60	35	26		G	G
5		36	G	G	G				G	37	38	47	48	56	74	64	46	38	G	29	28	G		G
6	28	G	G	G	G	G		G	G	G	G	G	G	62	49	50	44	37	31	28	25	G	G	G
7	G	G	G	G			G	G	G	38	G	G	G	G	40	48	G	50	33	35	43	G		G
8		31	34	G	G				G	G	G	G	G	G	G	G	G	34	36	35	25	27		G
9					G	28	28	G	G	G	38	G	G	G	G	G	G	G	G	G	G	G		
10			G	24	G	G		G	G	G	G	G	G	G	G	47	36	G	41	32	30		28	
11	G				G	G		G	46	G	G	G	G	G	G	G	40	G	27	G	G	G	G	G
12	G	G	G	G		G	G	27	39	G	G	46	G	48	G	G	42	35	27	20	G	G	G	G
13	30	25	G	G	G	G	G	28	G	G	38	48	G	G	G	G	96	94	37	29	28	G	26	
14	25	26		G	G			G	G	G	G	G	G	G	G	56	82	51	37	32	G	G	G	28
15	36	G	G	G	G			G		G	G	G	G	G	G	G	44	G	G	G	G	G	31	G
16	G	G	G	G	G			G	G	G	G	G	G	G	G	G	G	G	G	11	G	G	G	G
17	G	G	G	G				28	G	G	G	G	G	G	G	G	G	G	29	26	24	23	40	29
18	G	G	G	G	G			G	G	G	46	G	G	G	G	G	39	38	36	28	G		25	G
19	G	G	G	G	G			G	N	G	G	G	G	G	40	G	41		38	33	37	30		G
20		G	G	G	G			28	32	46	38	48	G	G	G	G	G	G	G	11	29	G		G
21	G	G	G	G	G			G	G	G	G	40	G	G	G	G	G	34	60	41	G	27	G	25
22	36	G	G	G	G			G	G	G	G	G	G	G	G	G		G	G	G		G	G	G
23	G	G	G	G		G			G	36	G	G	G	G	46	39	G	G	G	G	G	G	G	G
24	G	G		G					38	G	G	50	41	G	G	G	G	G	G	G	G	G	G	
25	G	G	G	G				G	G	G	G	G	G	G	G	G	G	43	42	G	37	G		G
26	27		G	G	G			G	G	G	G	G	G	51	55	G	G	G	32	27	G	G	33	G
27	G	G	G	G	G	G	G	34	G	G	G	G	G	53	G	40	G	G	G	G	29	G	28	G
28	G	G	G	G	G			37	51	G	G	50	51	50	G	39	41	42	30	G	G	G	G	G
29		G	G	G	G		G	27	38	51	G	G	G	G	G	G	G	G	29	G	59	G	G	G
30		G	G	G		G	G	G	34	G	G	G	G	45	G	41	G	43	45	51	56	G	G	G
31	G	G	G	G	G	G		G	G	42	G	G	G	G	G	G	G	G	34	27	G	11		
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	26	26	29	24	13	10	26	29	31	31	31	31	31	31	31	30	30	31	31	30	28	22	24
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	18	18	31	27	24	G	G	G
U Q	26	G	G	G	G	G	G	27	33	36	G	40	G	45	40	40	42	42	37	32	29	6	28	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 Okinawa

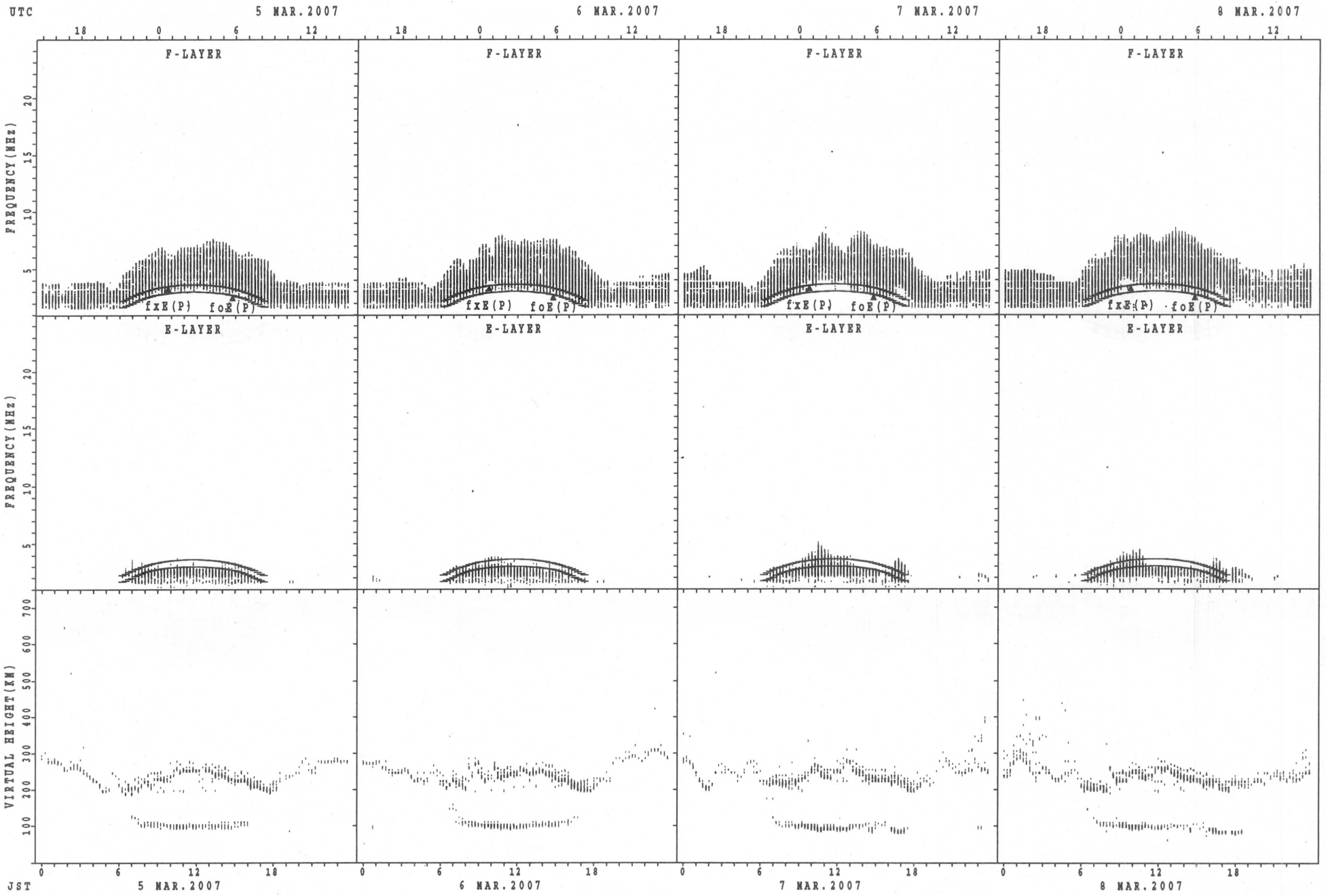
MAR. 2007

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	16	15	15	17	17	14	15	18	22	28	22	23	23	16	14	16	14	16	17	17	15
2	15	15	15	15	15	18		16	15	17	18	42	22	46	26	21	15	14	14	14	14	17		
3				17	14	14	18	17	14	16	21	22	48	21	21	21	16	14	15	14	17	15	14	
4		17	16	14	14		17	16	14	15	18	41	21	21	30	21	20	15	16	15	15		18	15
5		15	16	17	15				15	17	21	33	27	38	29	21	17	15	18	14	15	20		15
6	15	17	16	15	14	17		16	14	14	20	22	44	33	32	21	16	14	14	14	15	18	16	17
7	20	15	15	16			16	20	14	15	18	22	42	22	21	28	18	15	14	14	16	18		17
8		14	14	18	15			14	26	15	16	42	44	50	42	22	18	15	14	14	18	17		14
9					16	14	15	17	14	16	22	42	24	22	50	21	20	15	21	15	17	20		
10			15	16	17	15		16	15	17	21	22	22	42	23	24	20	14	15	14	14		14	
11	17				16	16		16	14	17	16	21	48	22	21	22	20	16	14	14	15	17	16	16
12	15	16	14	16		16	15	15	14	17	20	22	44	33	30	21	20	14	14	17	20	14	15	14
13	14	15	17	17	14	14	17	14	14	16	20	21	32	43	42	30	18	15	14	15	15	16	21	
14	21	15		15	14			18	14	18	18	21	32	42	28	24	17	14	14	14	15	17	20	15
15	14	15	15	18	15			18		16	42	42	30	42	28	22	17	15	14	15	15	15	15	15
16	17	16	15	15	14			18	14	15	20	45	47	23	41	21	18	15	20	14	15	18	16	14
17	15	14	15	14				15	14	14	18	21	22	22	21	22	20	14	14	14	15	15	15	14
18	14	14	15	14	17			20	18	14	20	45	46	50	47	28	18	15	14	14	17		15	15
19	16	20	16	15	14			20	14	18	21	46	48	47	29	23	20		14	15	15	14		15
20		16	14	16	14			17	14	20	18	21	51	49	47	46	42	16	21	14	16	18		15
21	17	17	15	15	15			15	15	15	22	47	22	51	47	22	18	15	15	15	16	15	23	15
22	15	18	15	18	15			21	14	15	18	48	48	50	50	44	20	34	18	15		15	16	16
23	15	15	15	16		15		15	14	16	18	23	45	49	29	22	20	15	20	15	15	17	18	14
24	15	15		17					15	15	22	34	45	43	29	42	18	16	22	16	16	17	16	
25	15	14	16	15				15	15	15	23	45	43	43	49	41	20	14	17	17	15	16		15
26	15		17	15	14			16	14	18	21	23	45	35	35	42	16	15	15	15	17	14	16	14
27	15	15	15	15	16	15	15	15	15	18	20	22	44	39	21	18	20	15	20	14	15	15	14	14
28	14	15	15	15	14			17	14	21	21	45	40	35	44	26	21	14	14	15	16	21	17	16
29		15	15	14	14		17	15	14	20	21	26	21	52	43	21	14	14	14	16	14	15	17	16
30		18	18	17		14	18	14	15	20	52	44	53	29	26	22	22	17	14	14	15	16	15	22
31	16	15	15	15	17	15		20	14	22	21	28	27	52	49	42	29	17	18	15	23	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	21	26	26	29	24	13	10	29	30	31	31	31	31	31	31	31	31	30	31	31	30	28	22	24
MED	15	15	15	15	15	15	17	16	14	16	20	28	43	42	30	22	18	15	15	14	15	16	16	15
U Q	16	16	16	17	15	16	17	18	15	18	21	44	46	49	44	28	20	15	18	15	16	17	17	16
L Q	15	15	15	15	14	14	15	15	14	15	18	22	27	23	26	21	17	14	14	14	15	15	15	14

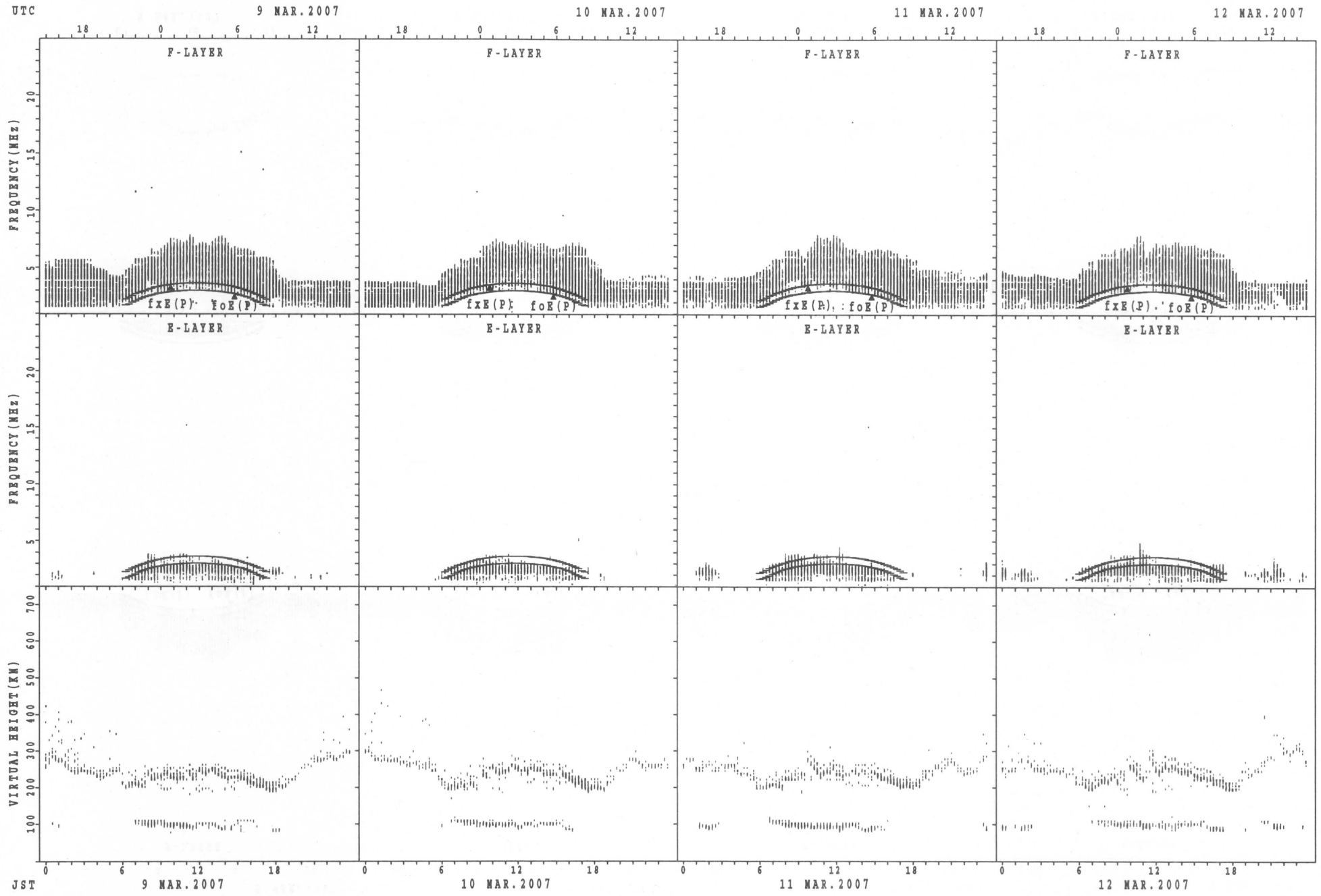

SUMMARY PLOTS AT Wakkanai
UTC
JST
1 MAR.2007
2 MAR.2007
3 MAR.2007
4 MAR.2007
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



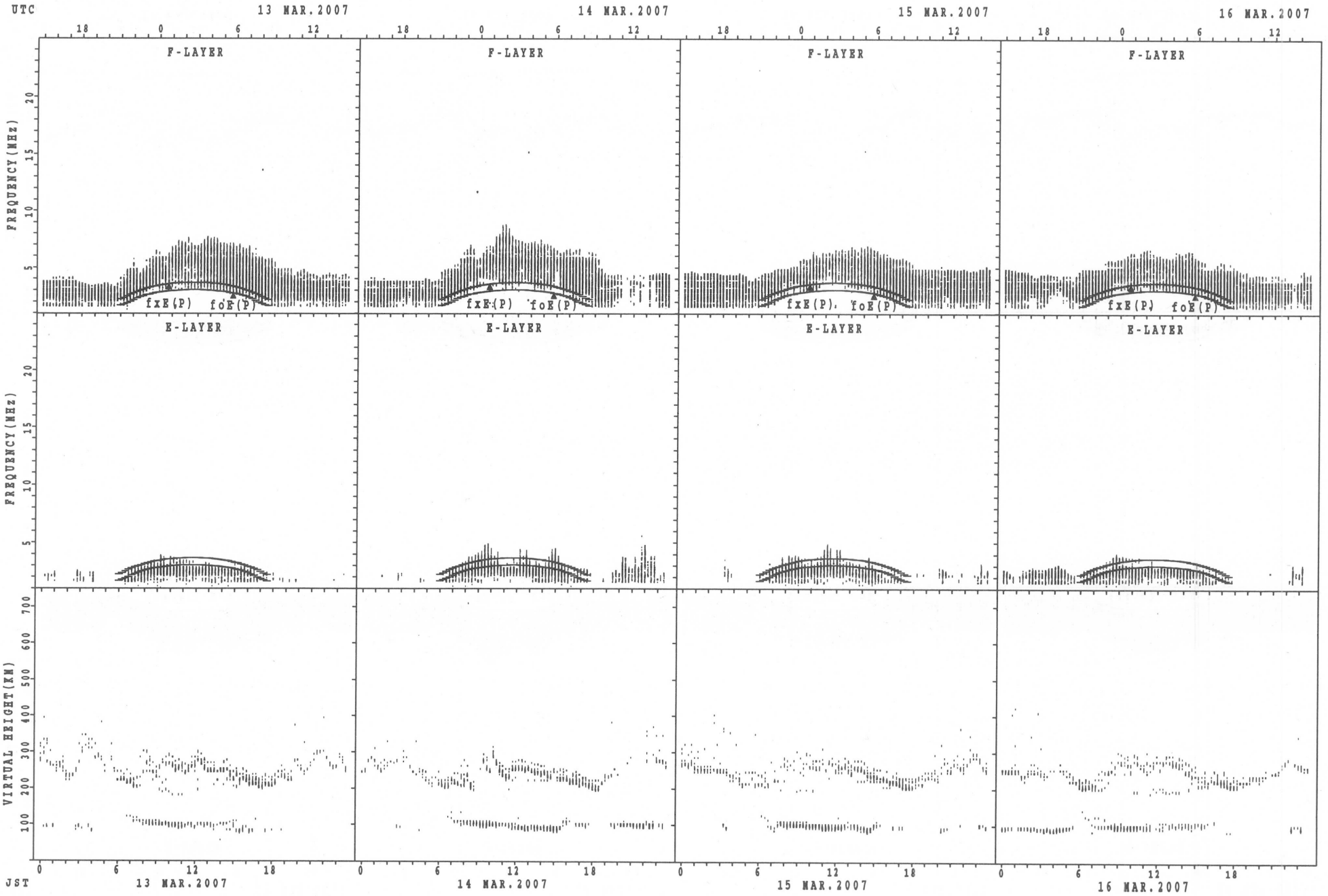
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



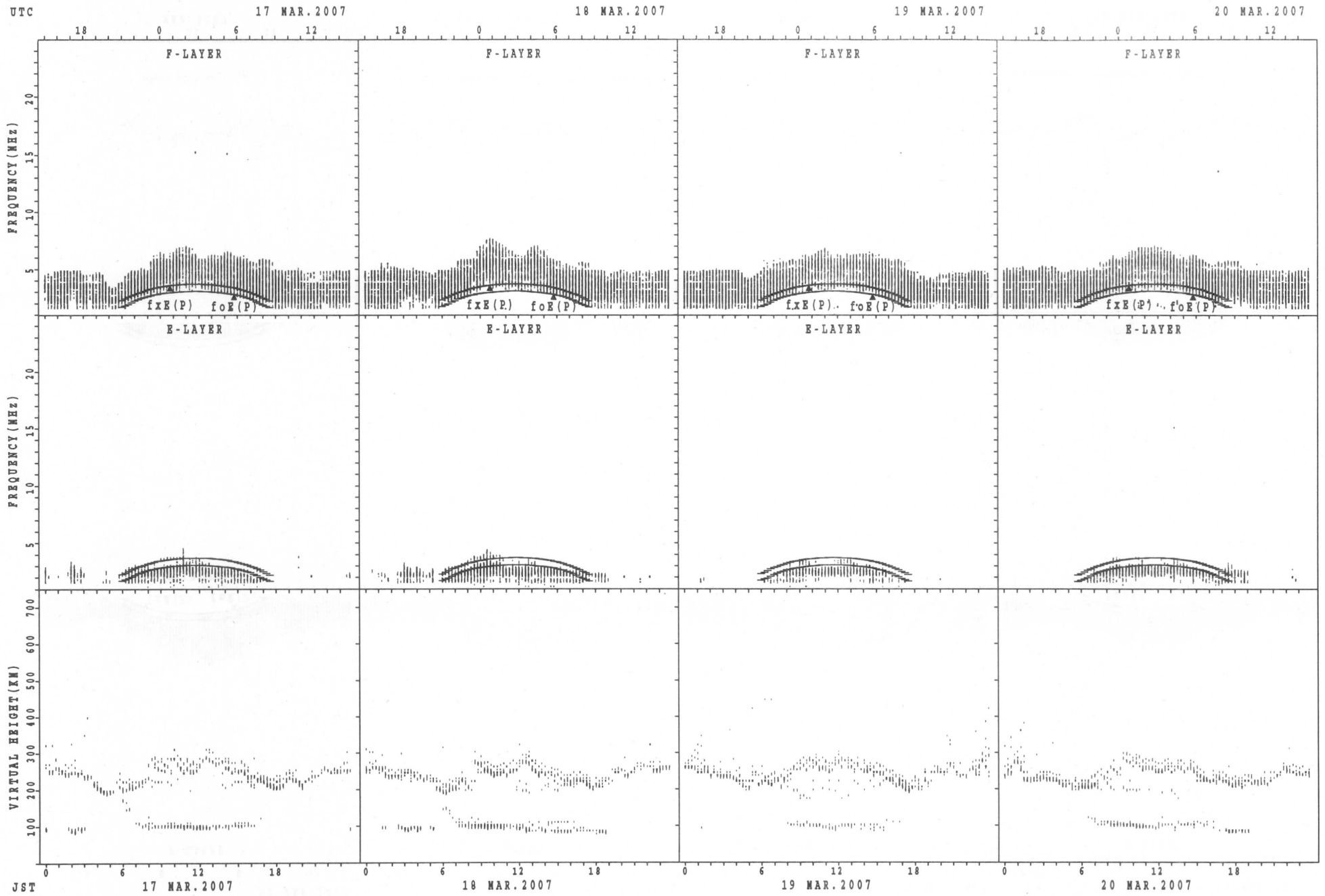
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



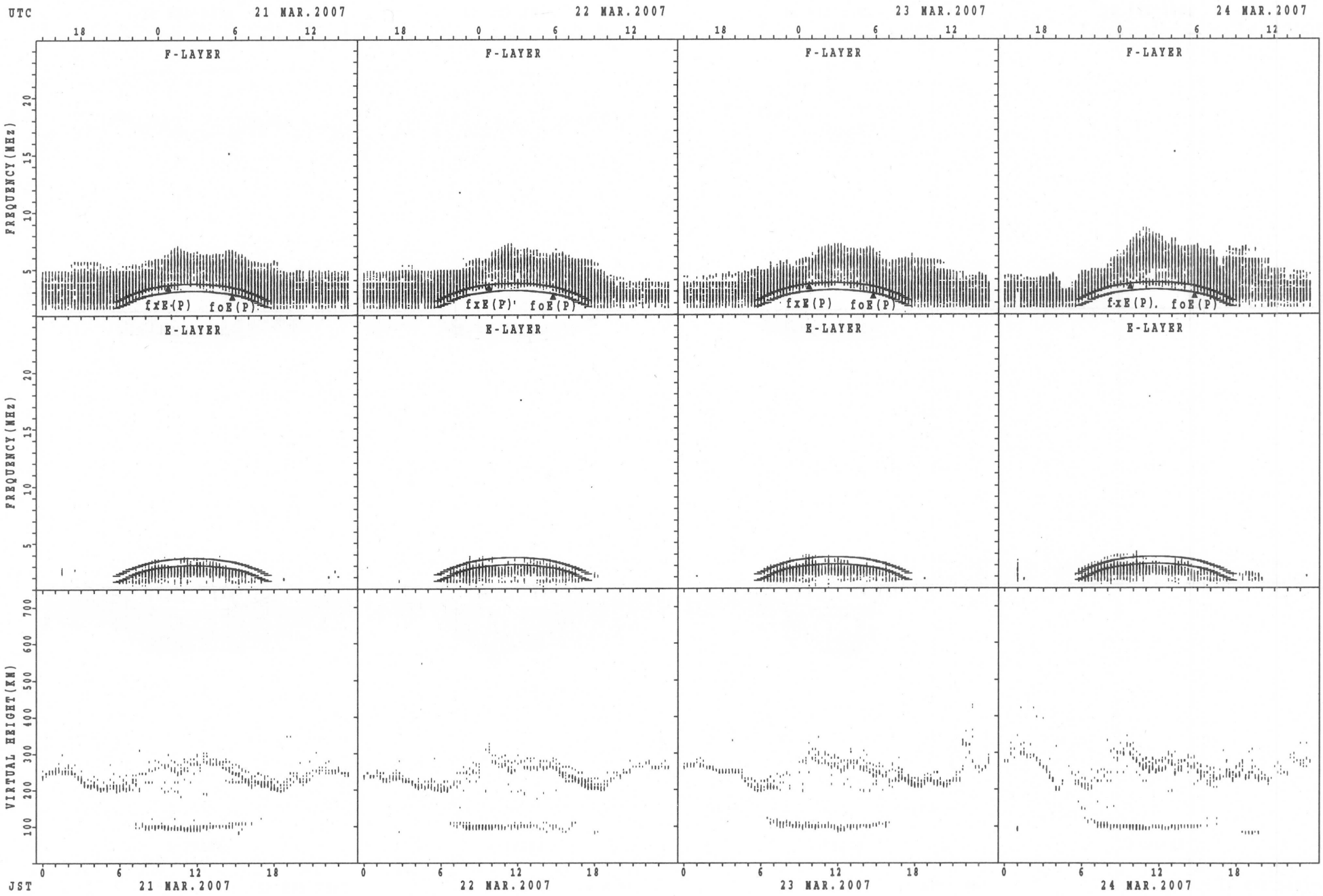
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



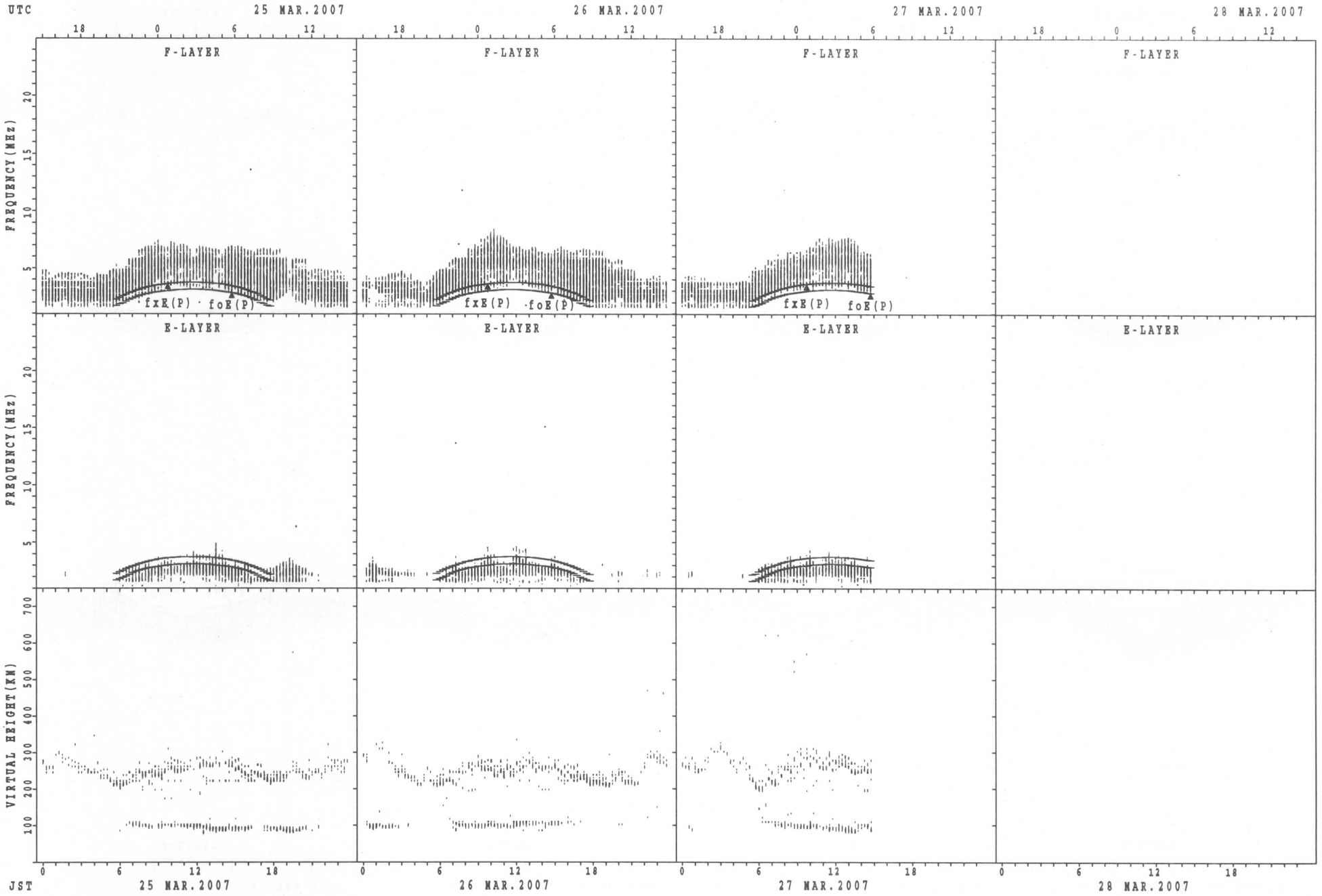
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



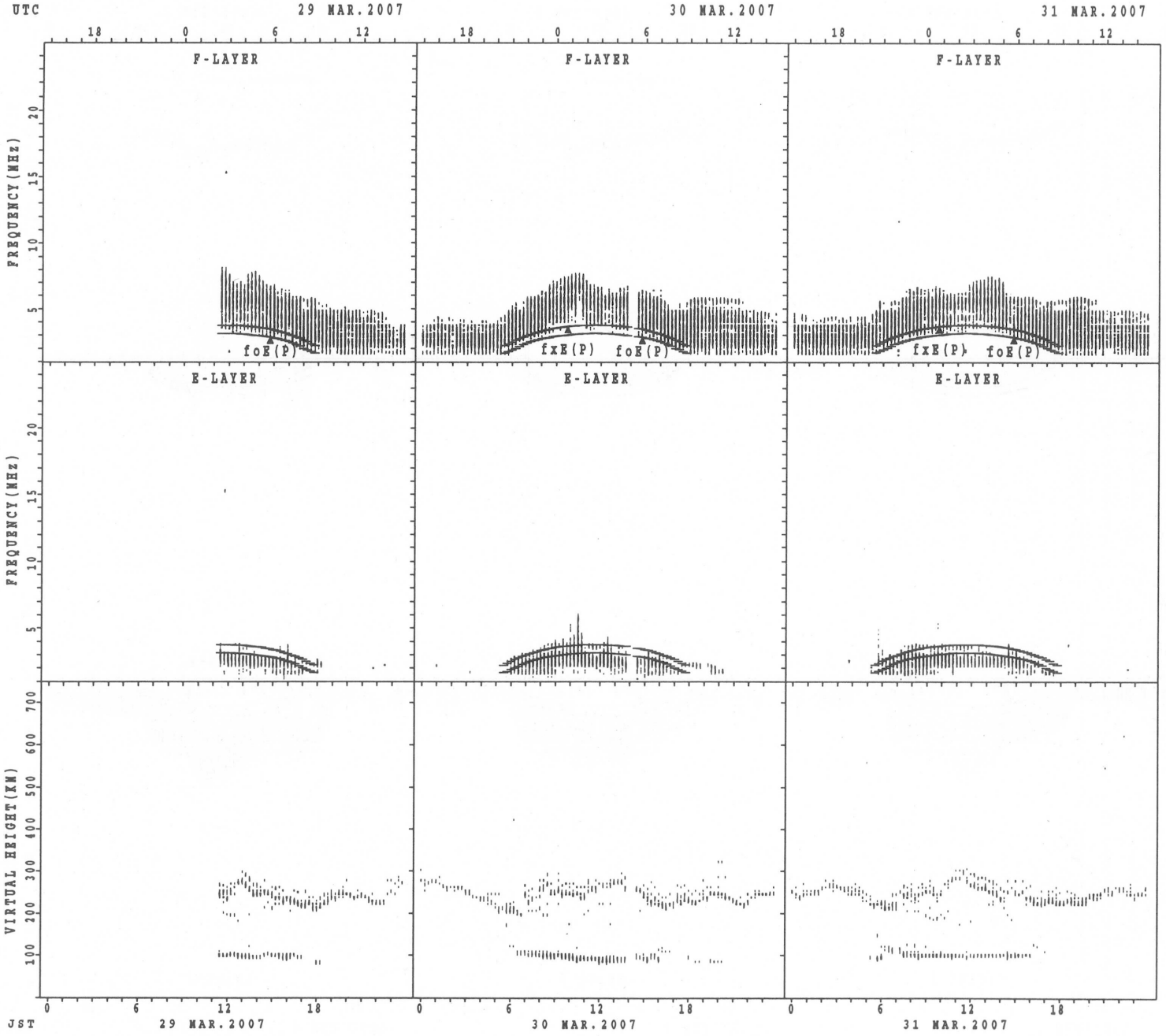
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



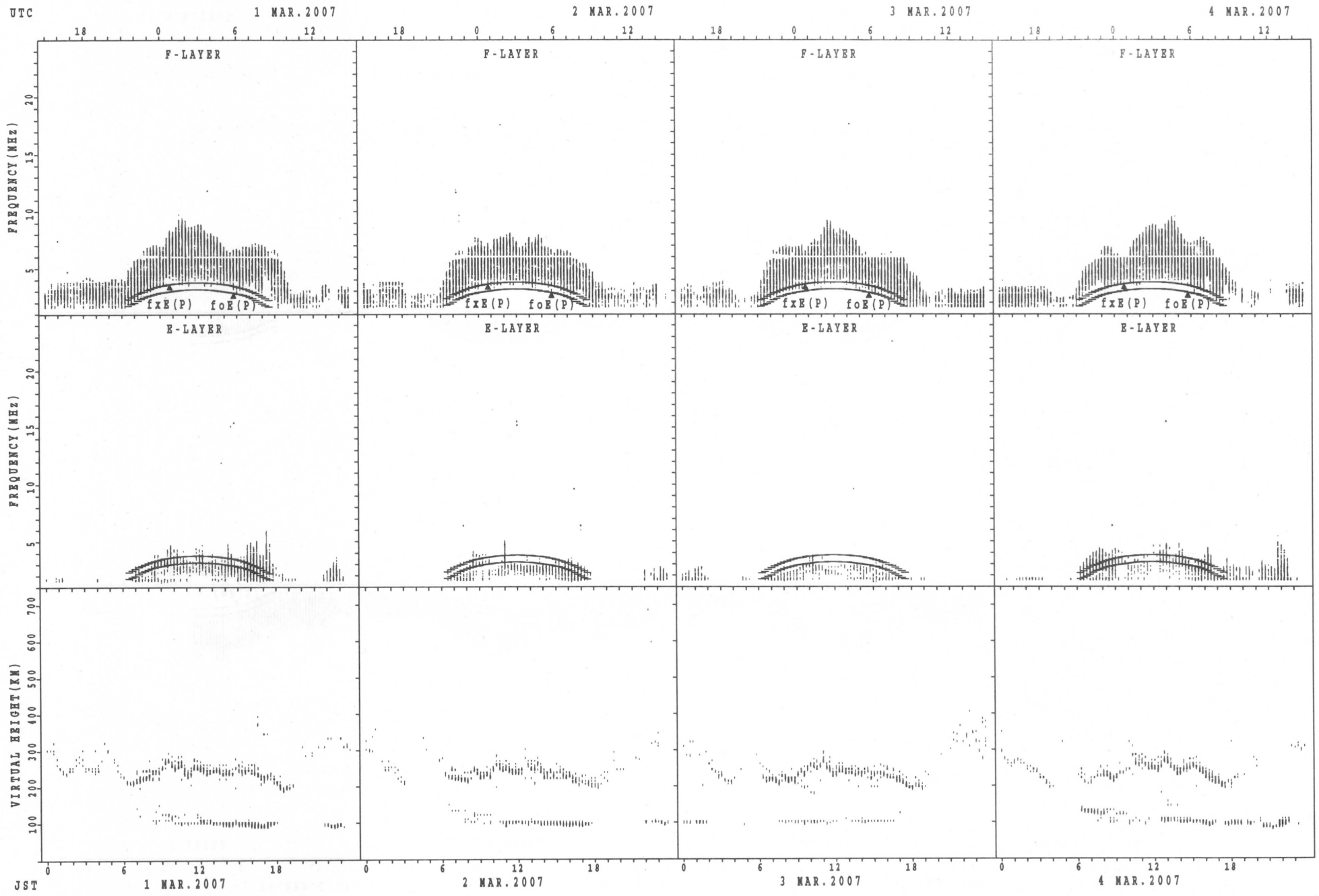
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



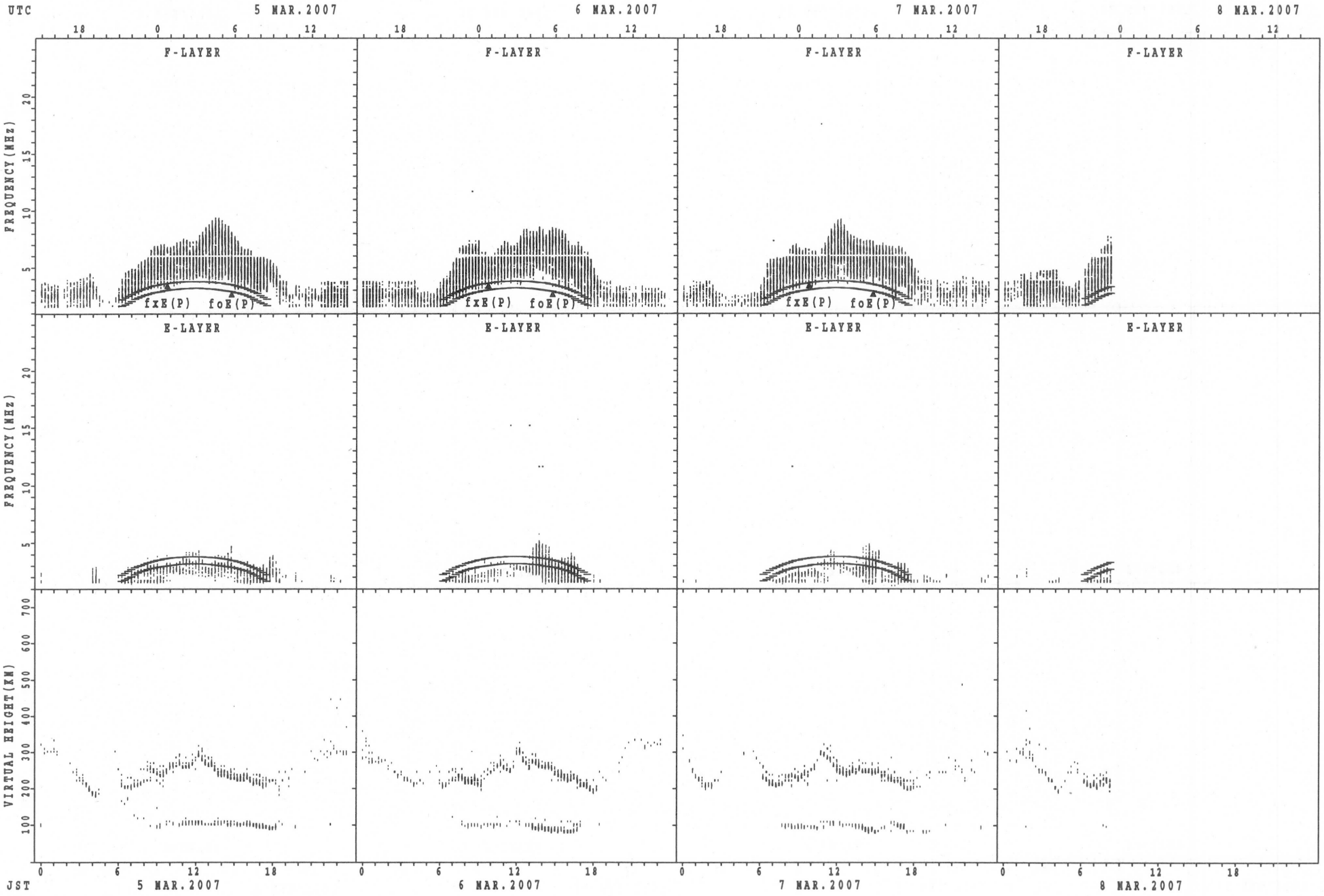
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



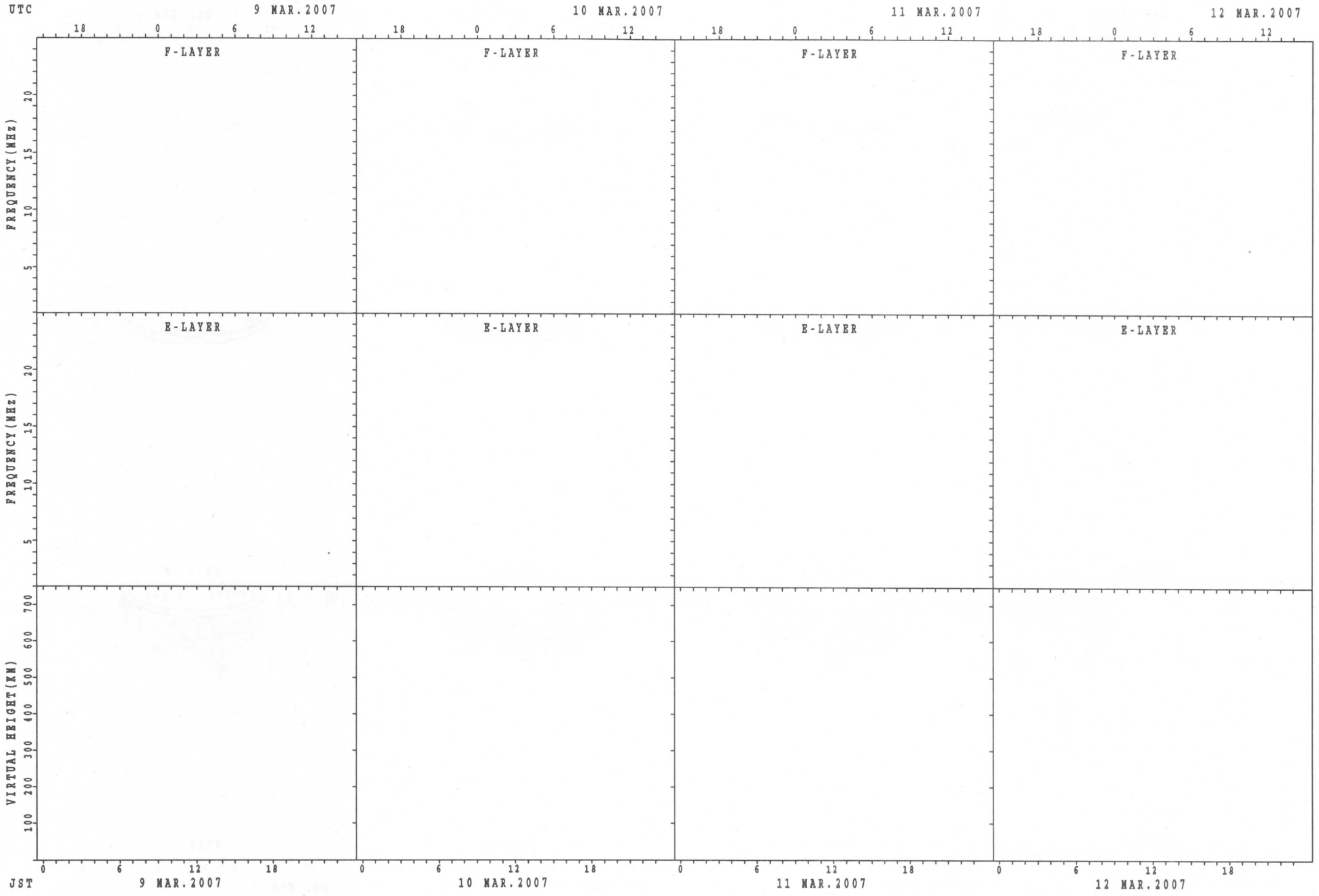
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

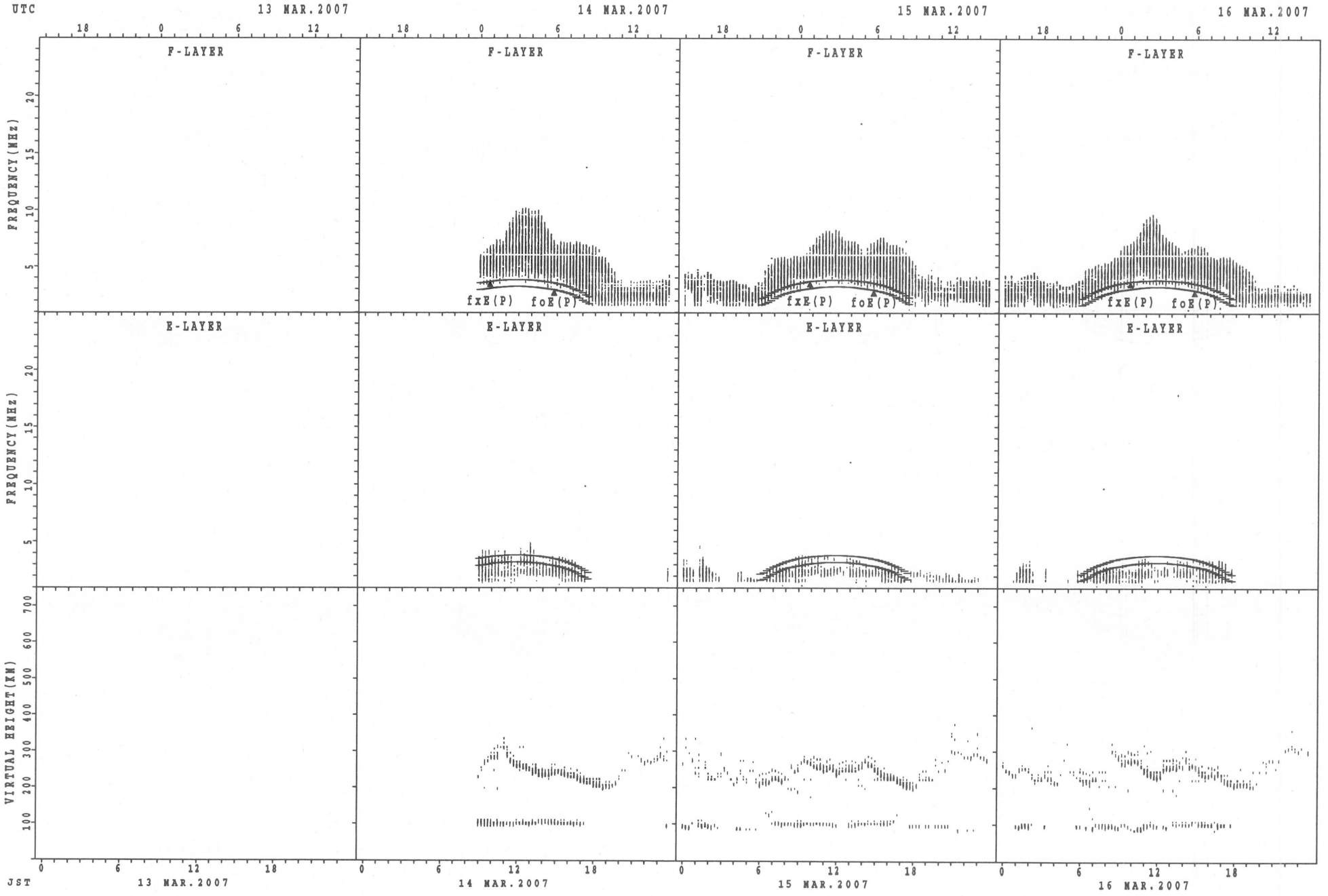


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

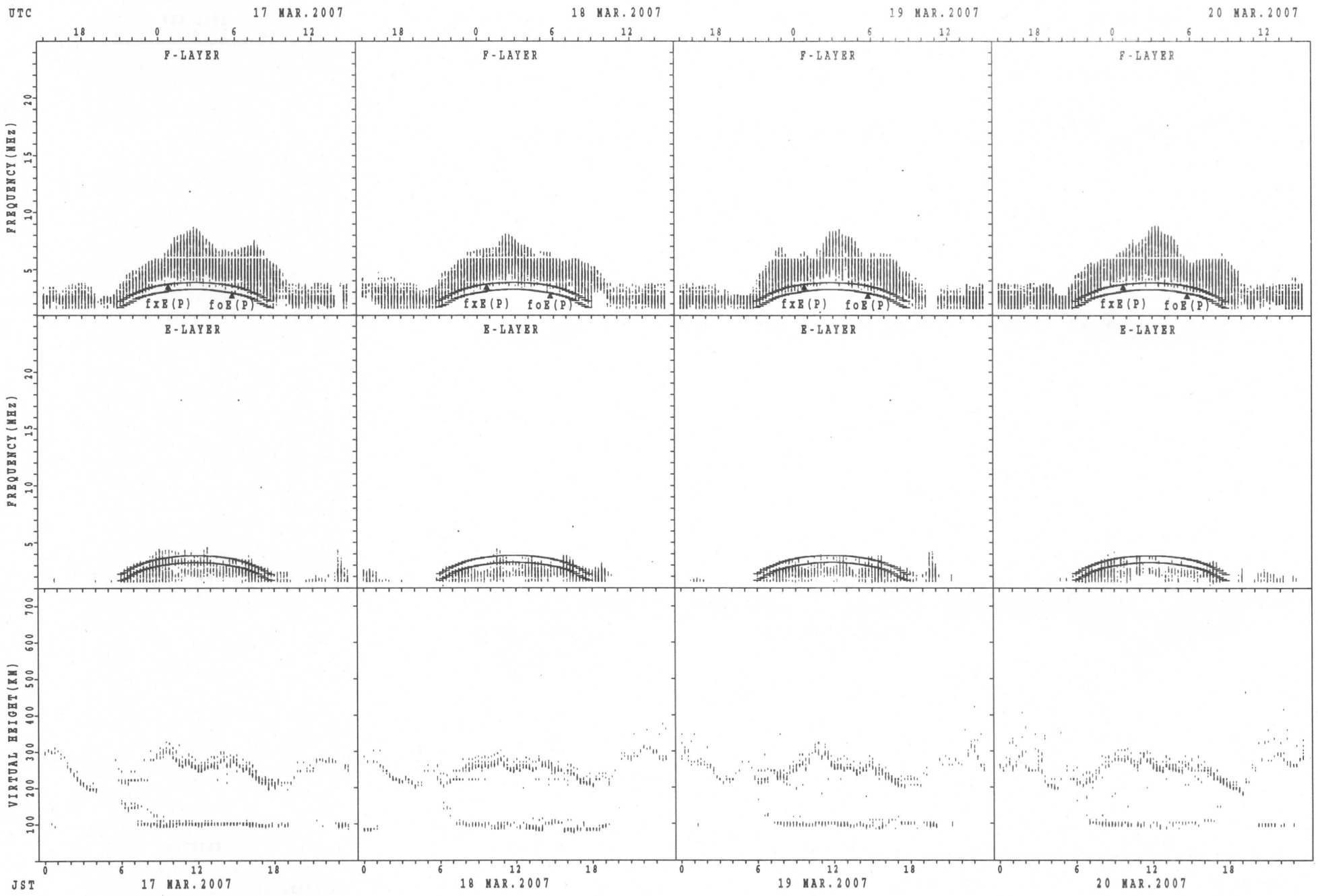


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE



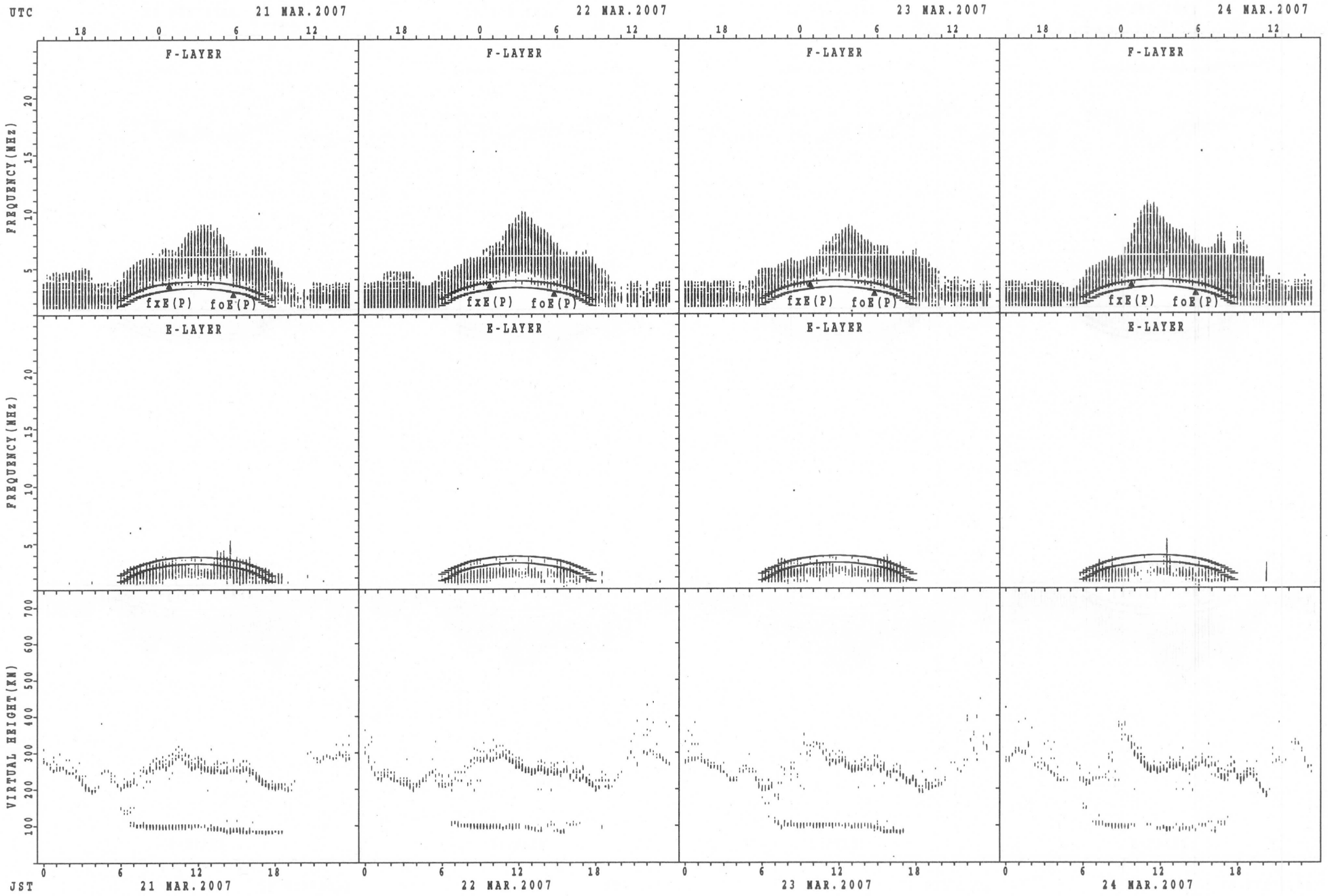
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



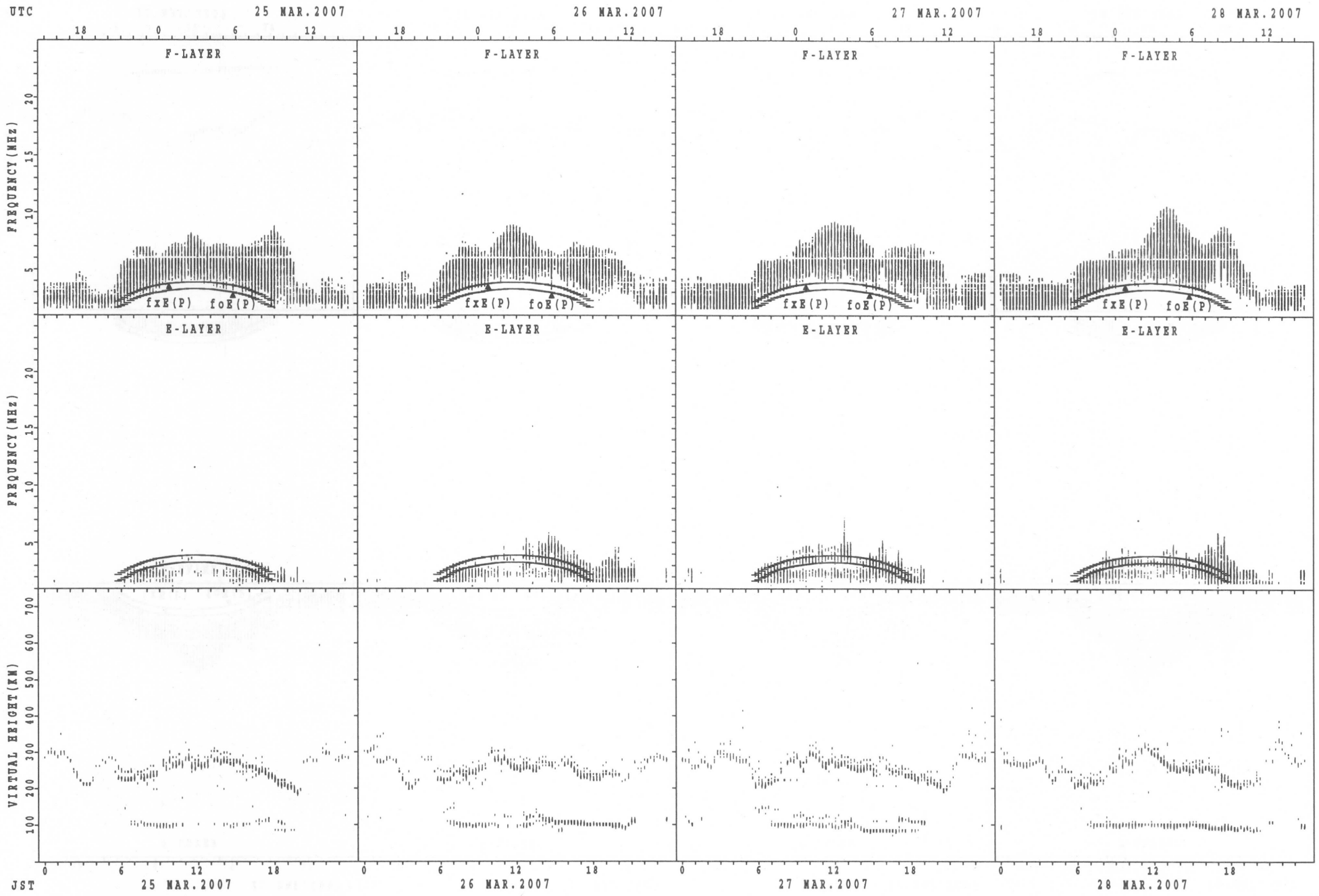
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



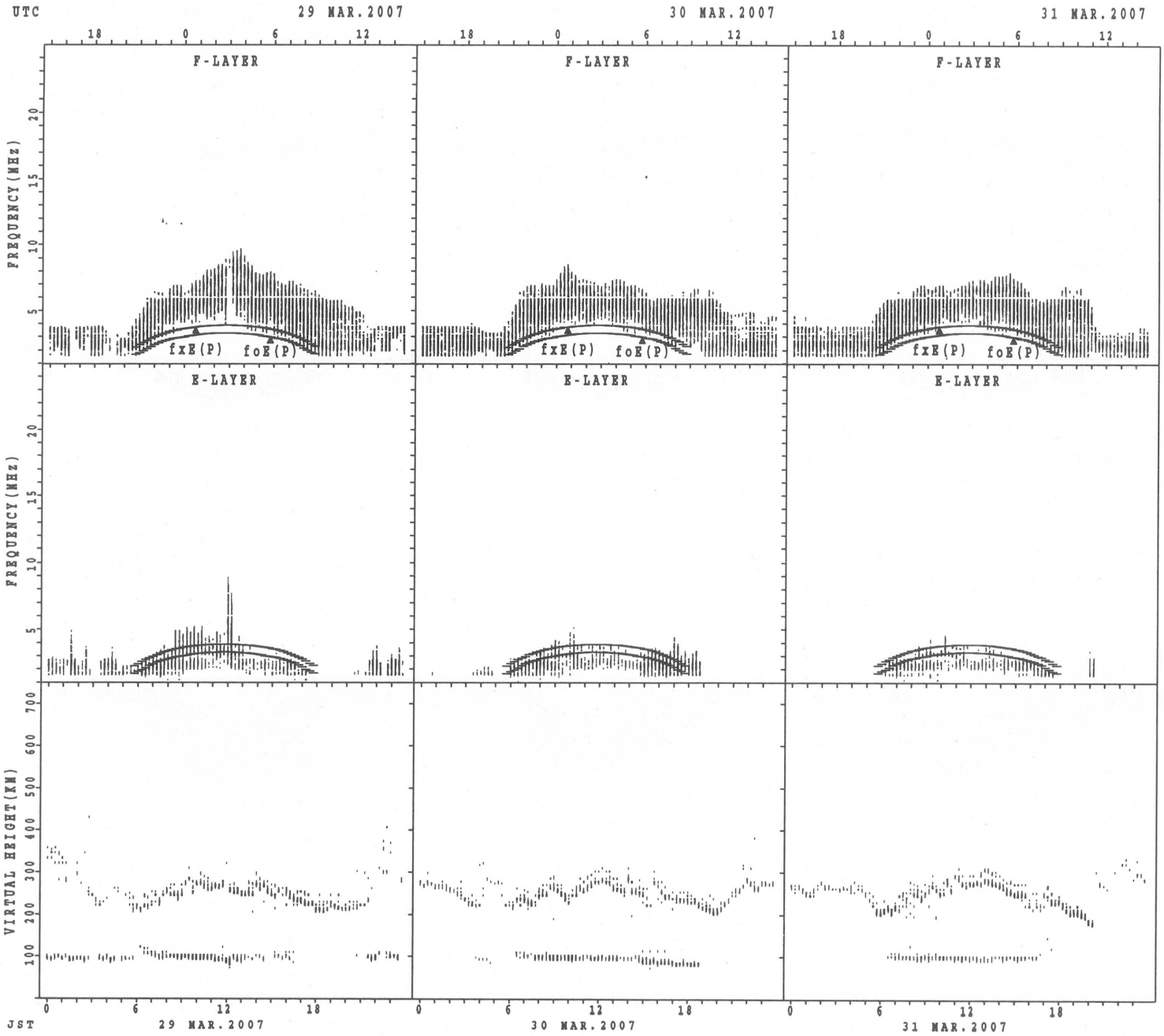
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



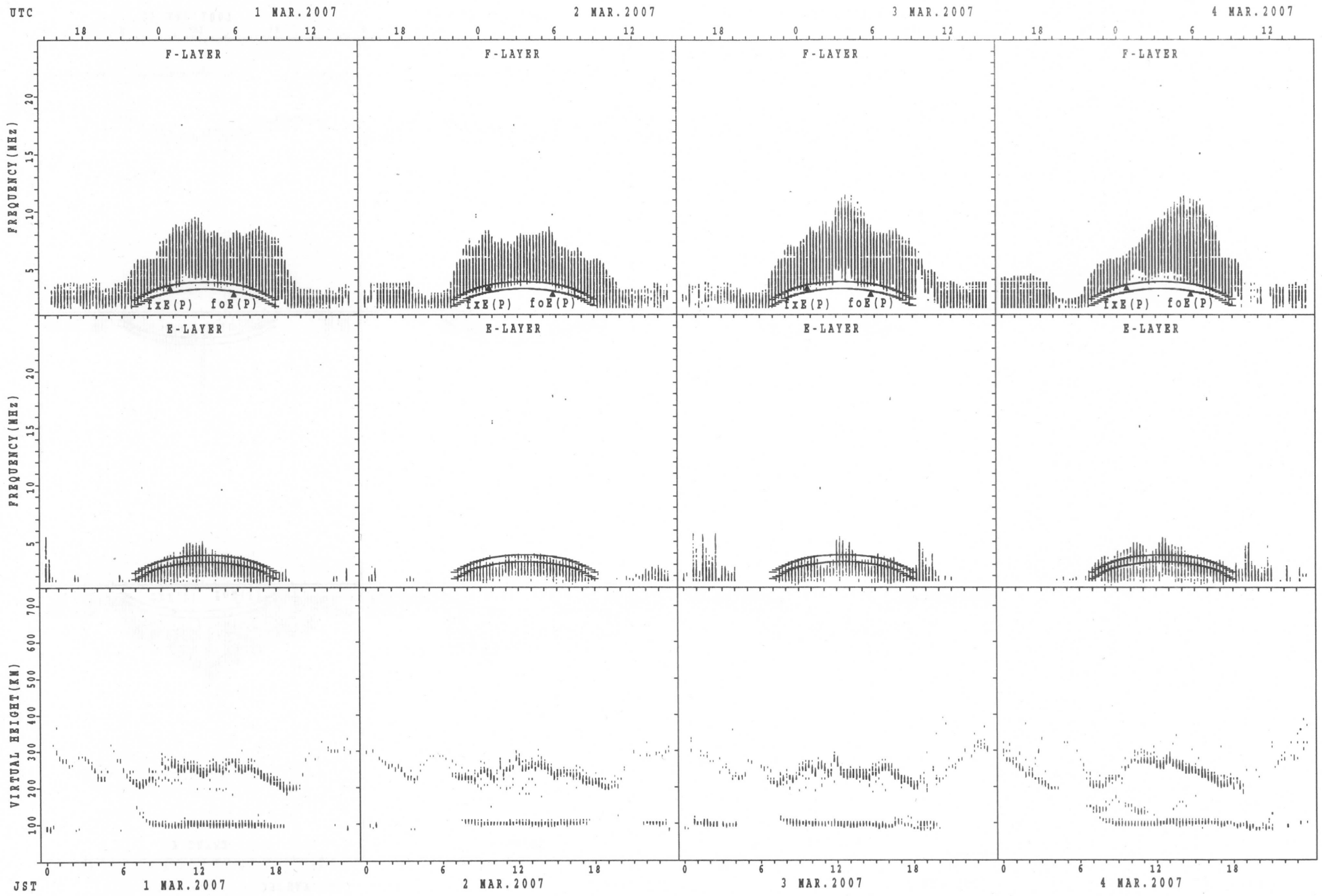
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



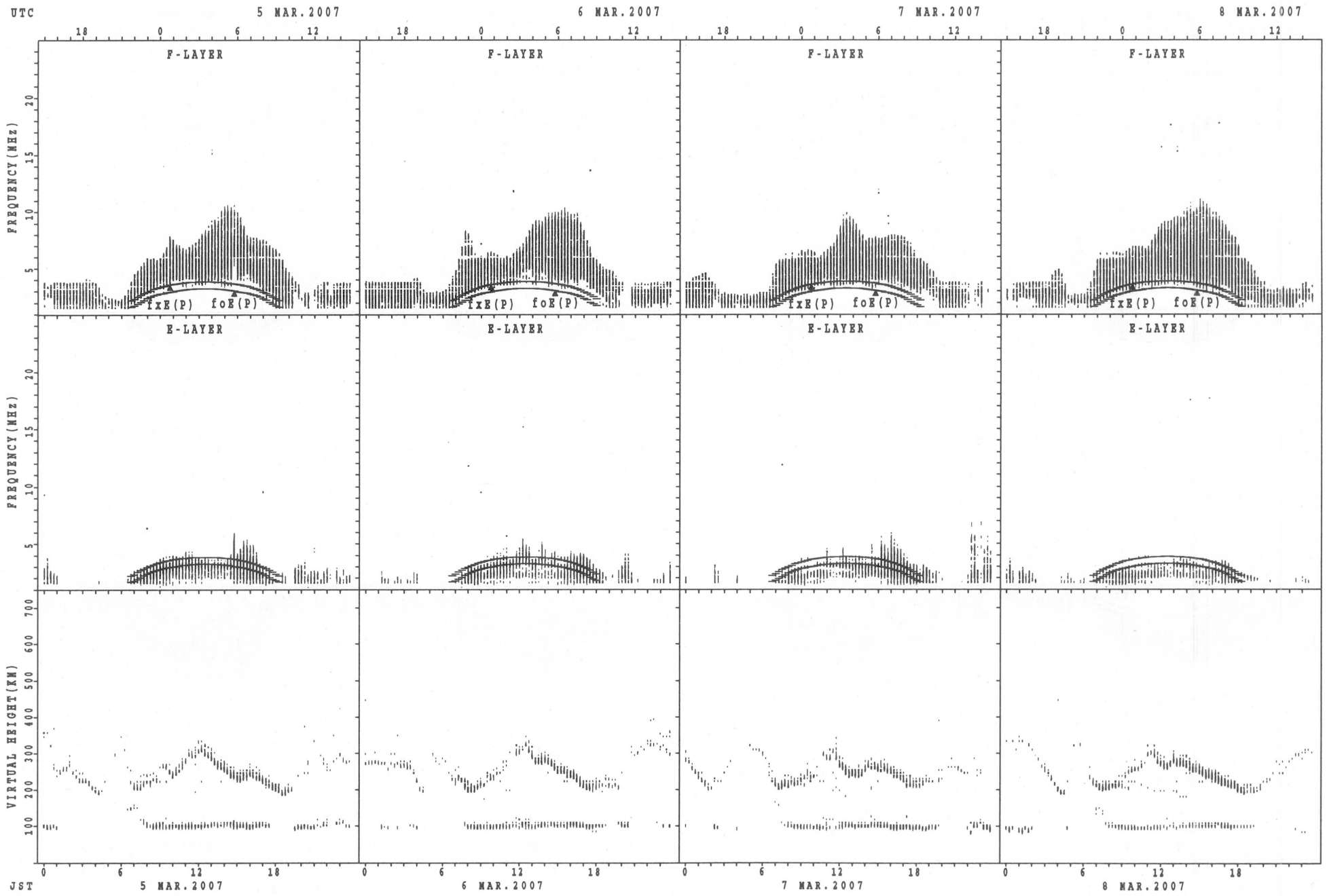
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



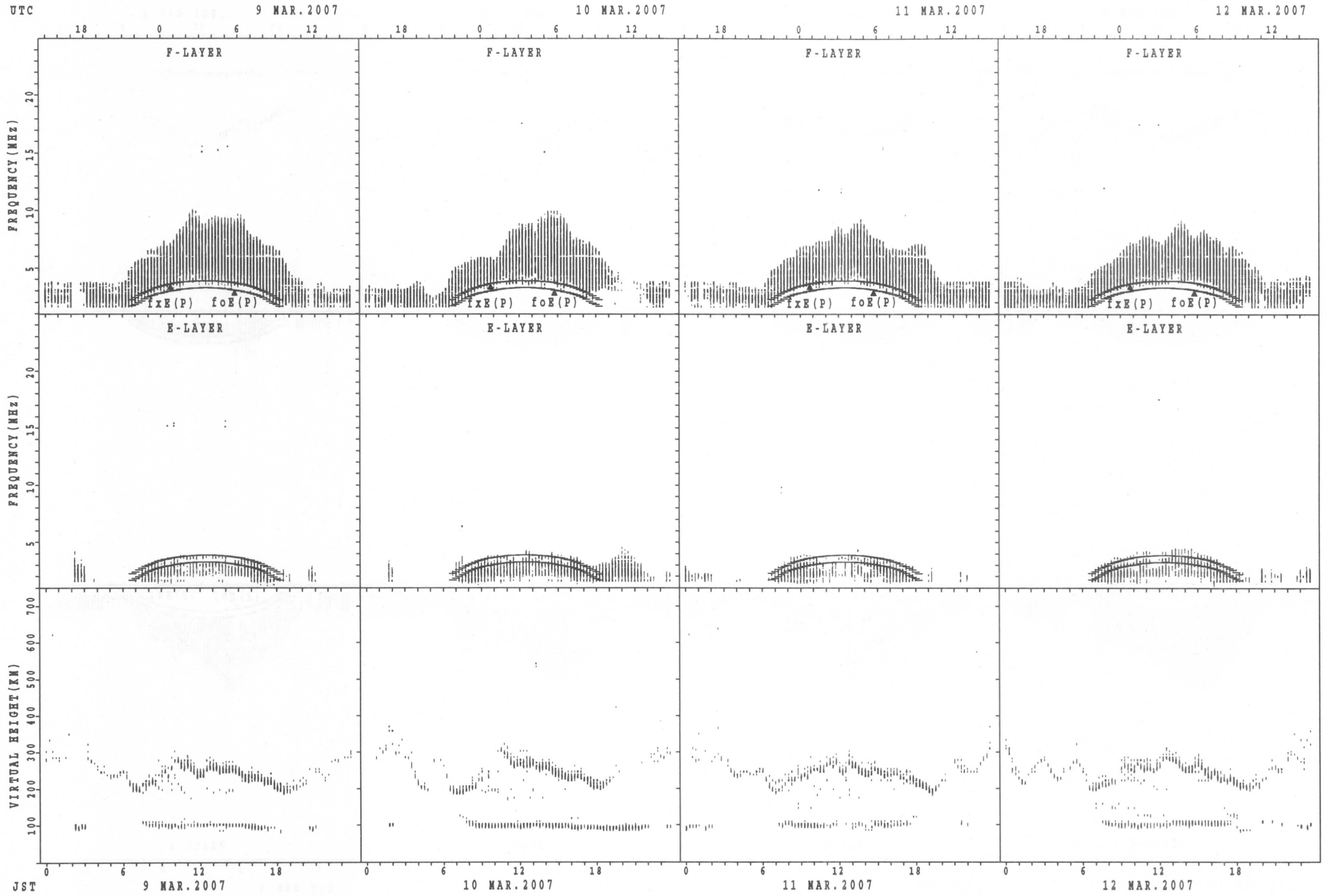
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



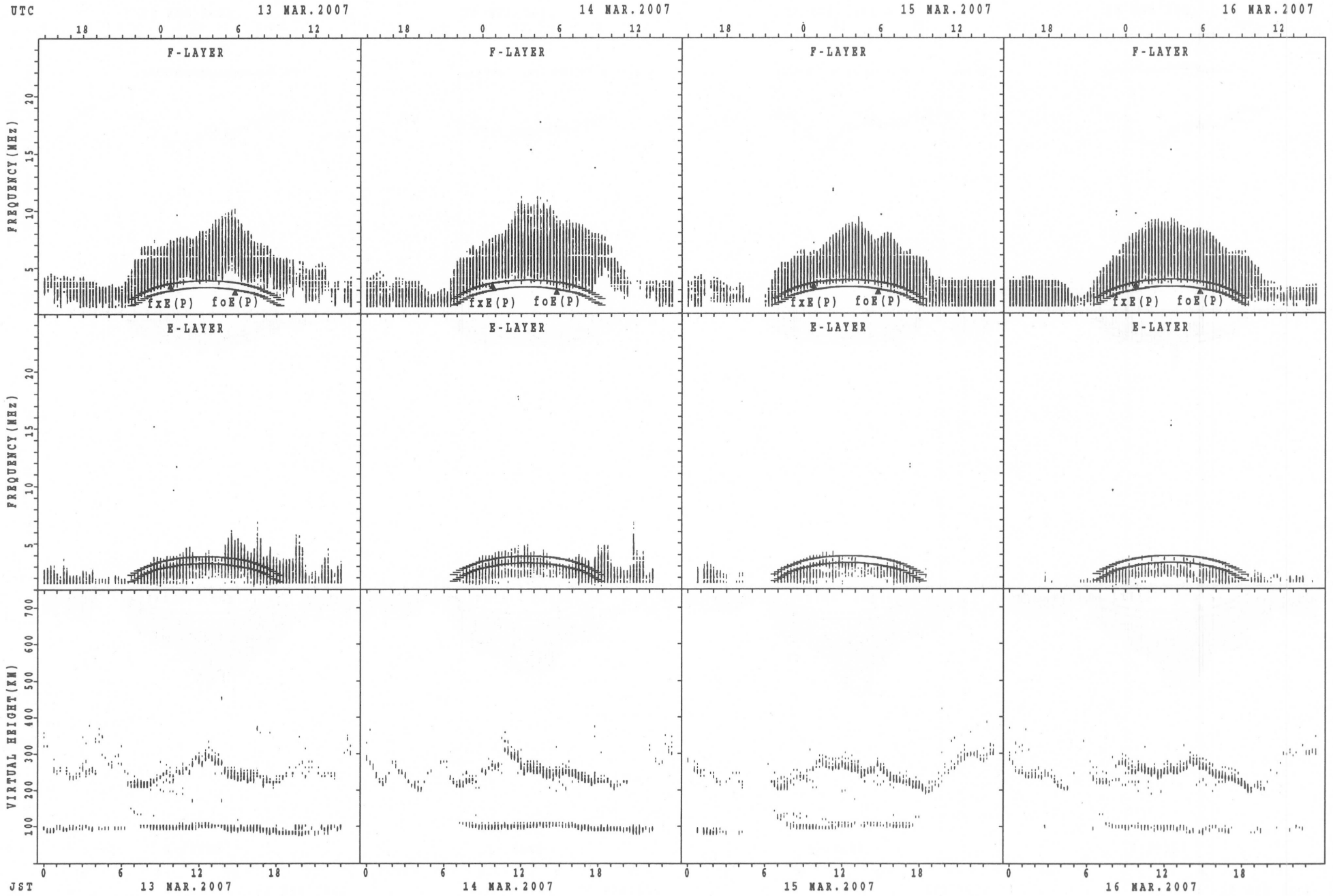
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



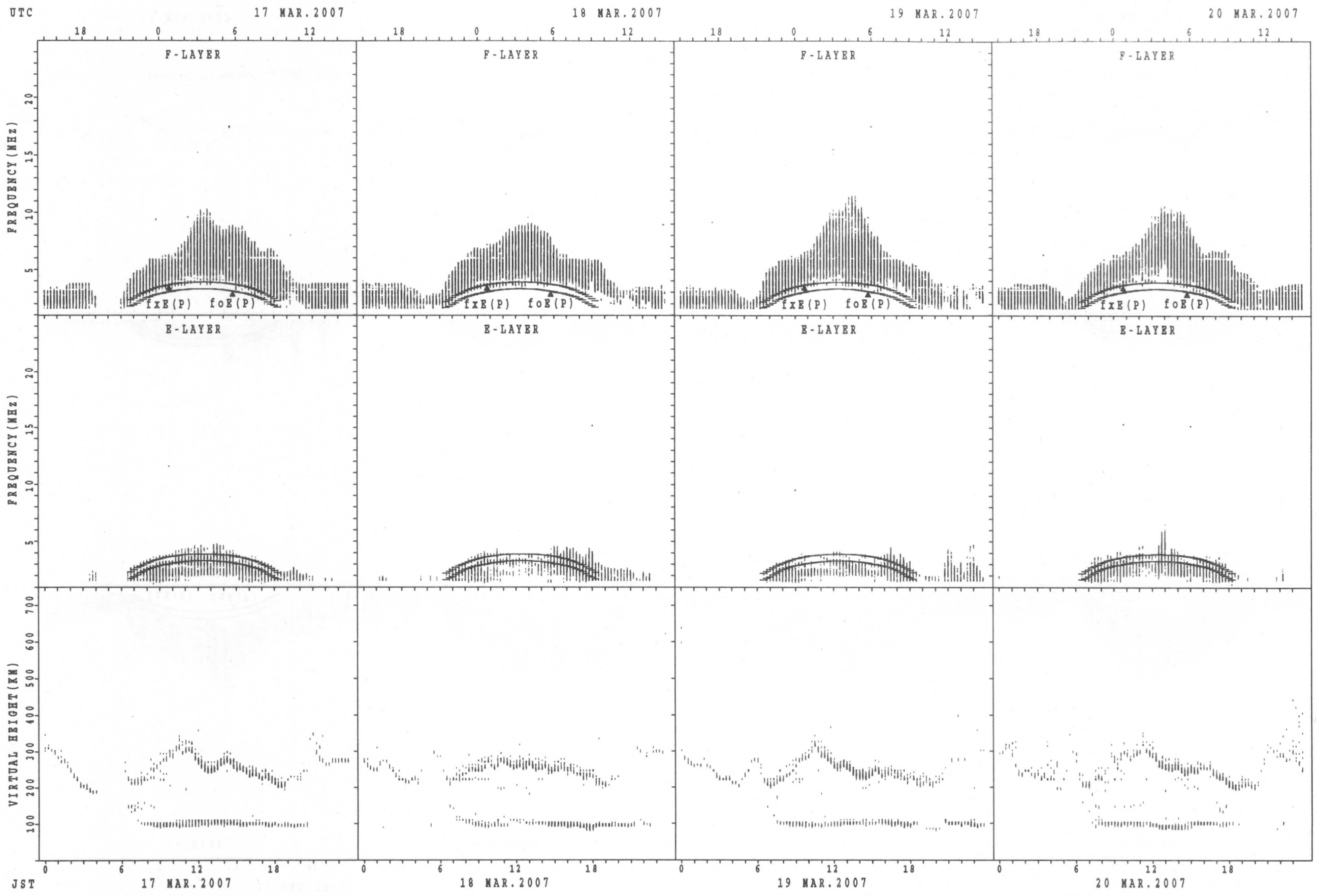
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



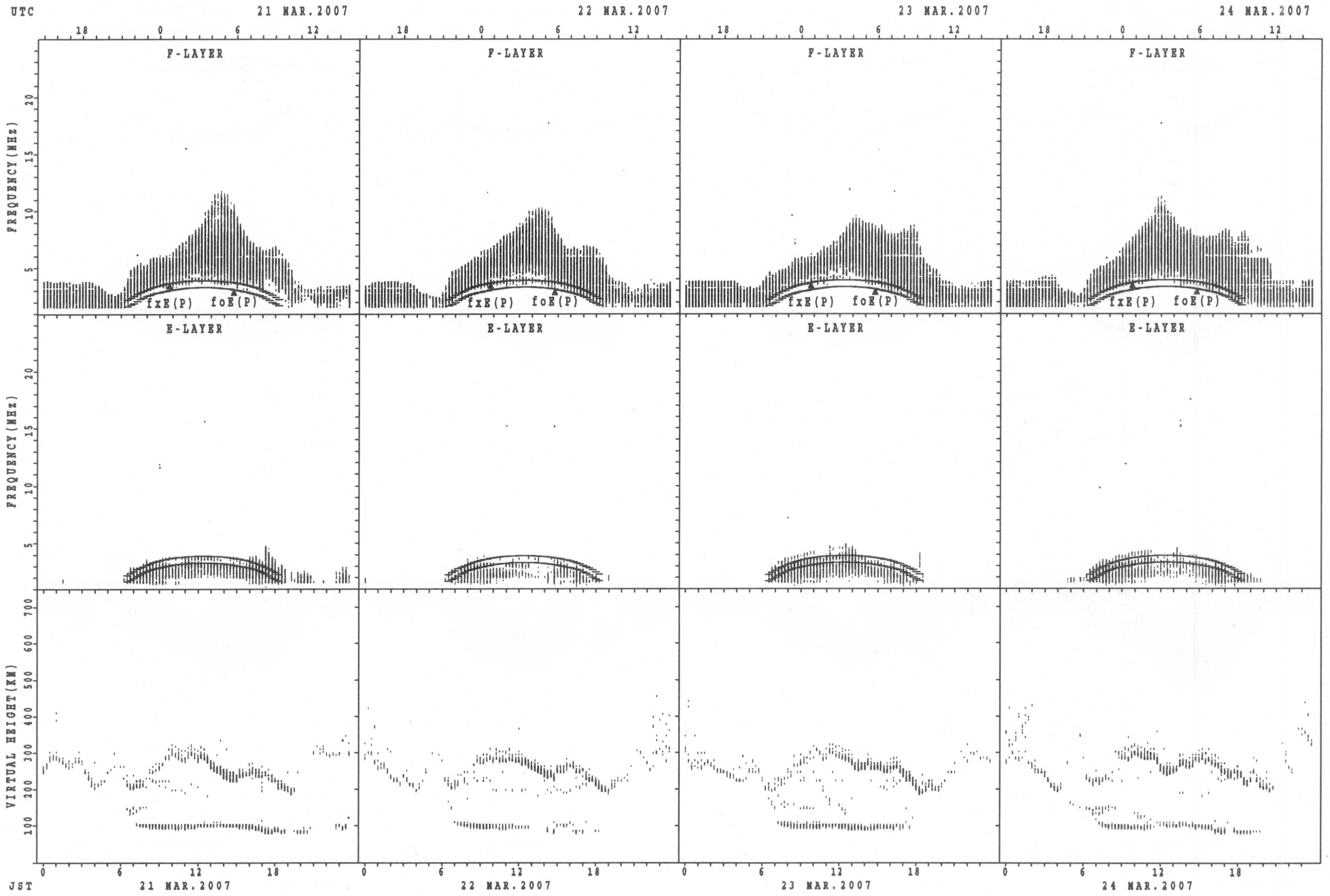
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



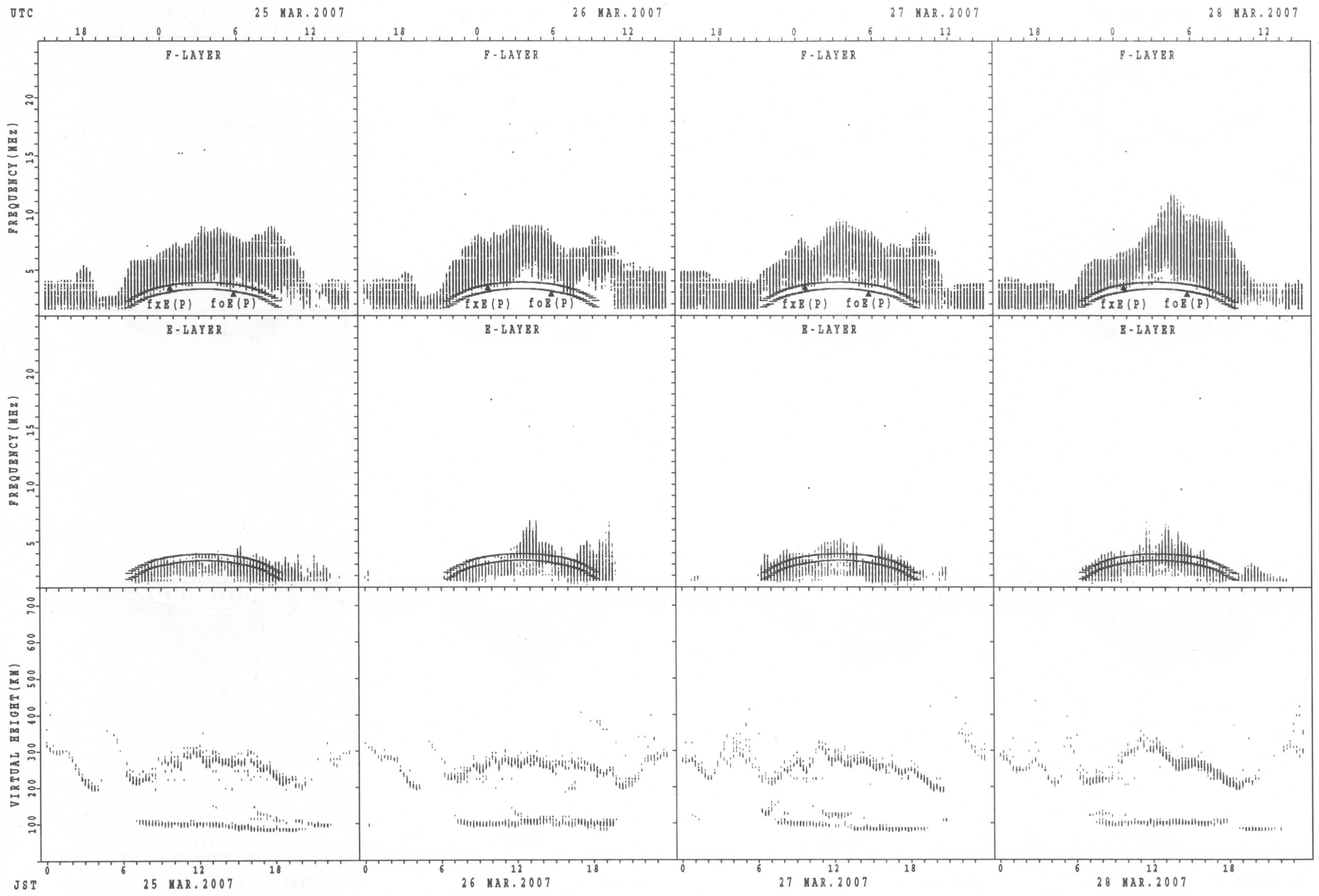
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



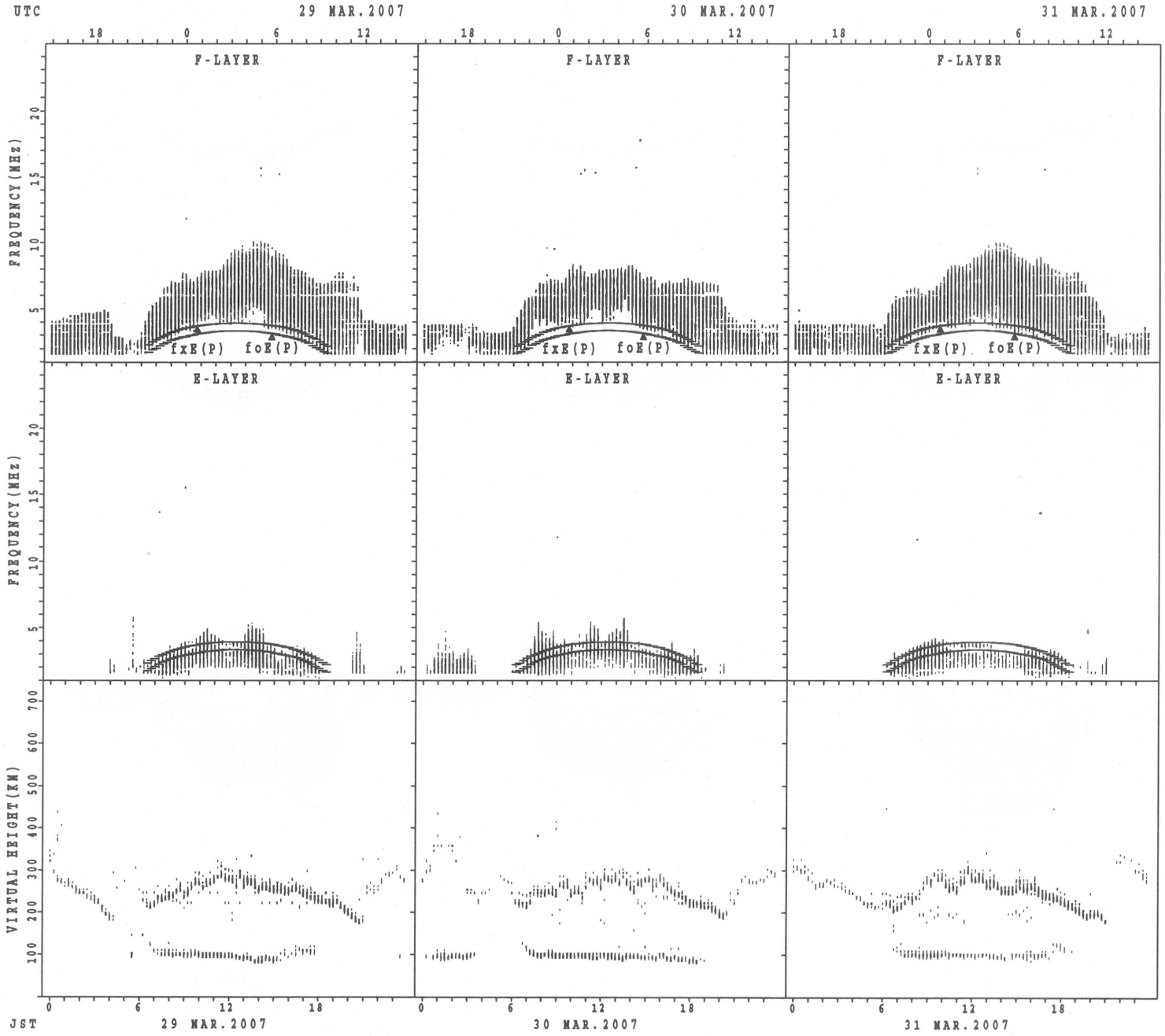
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



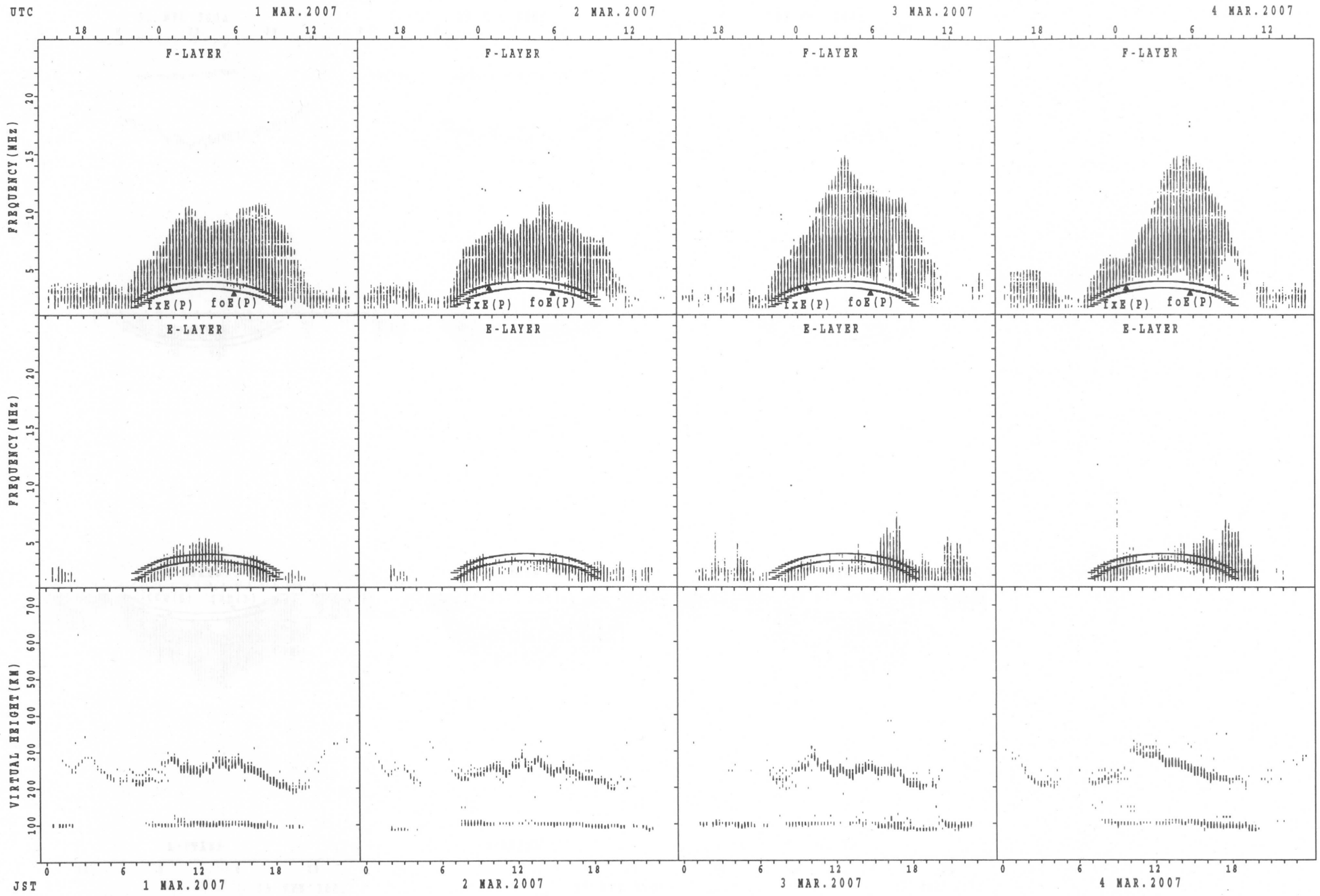
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



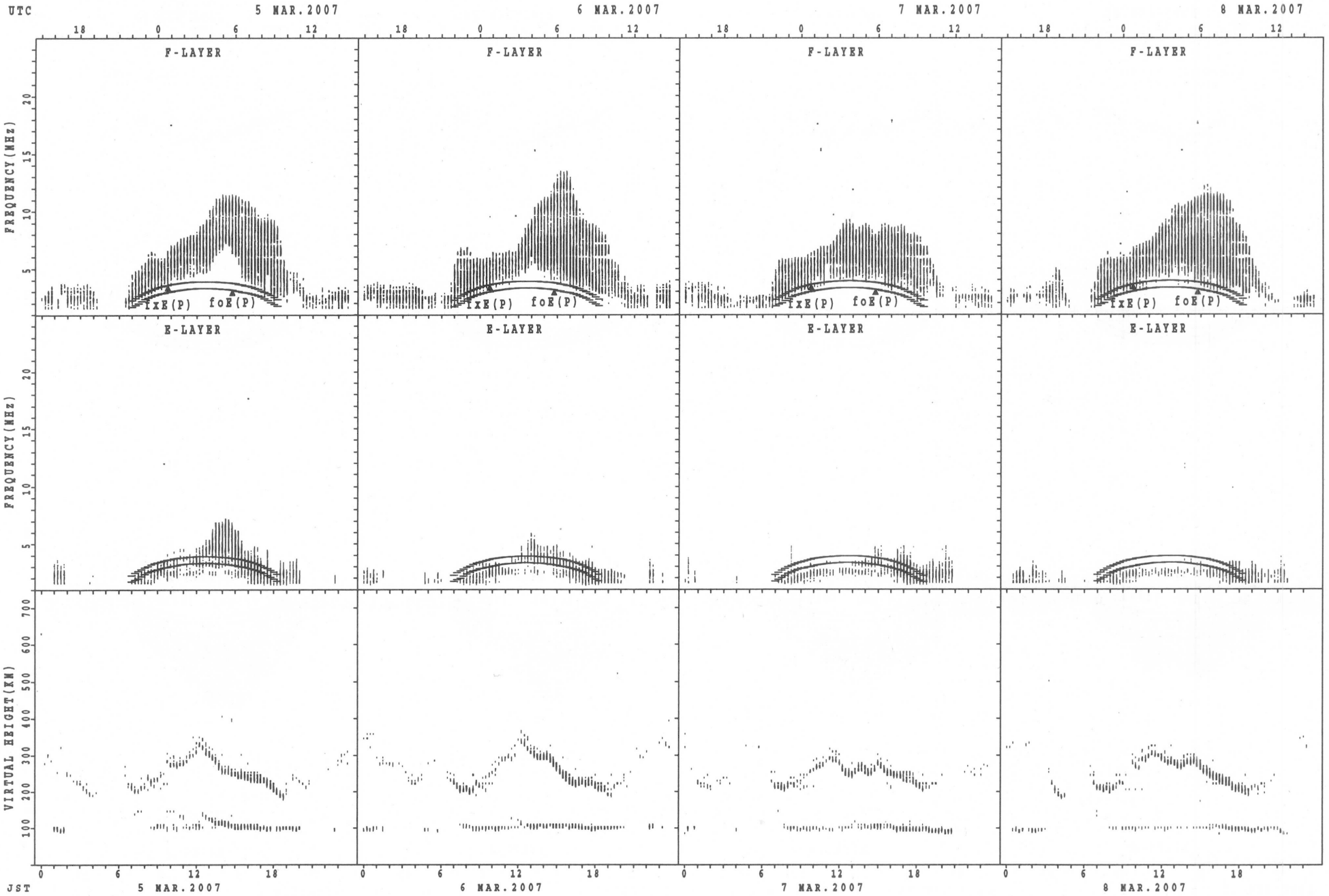
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



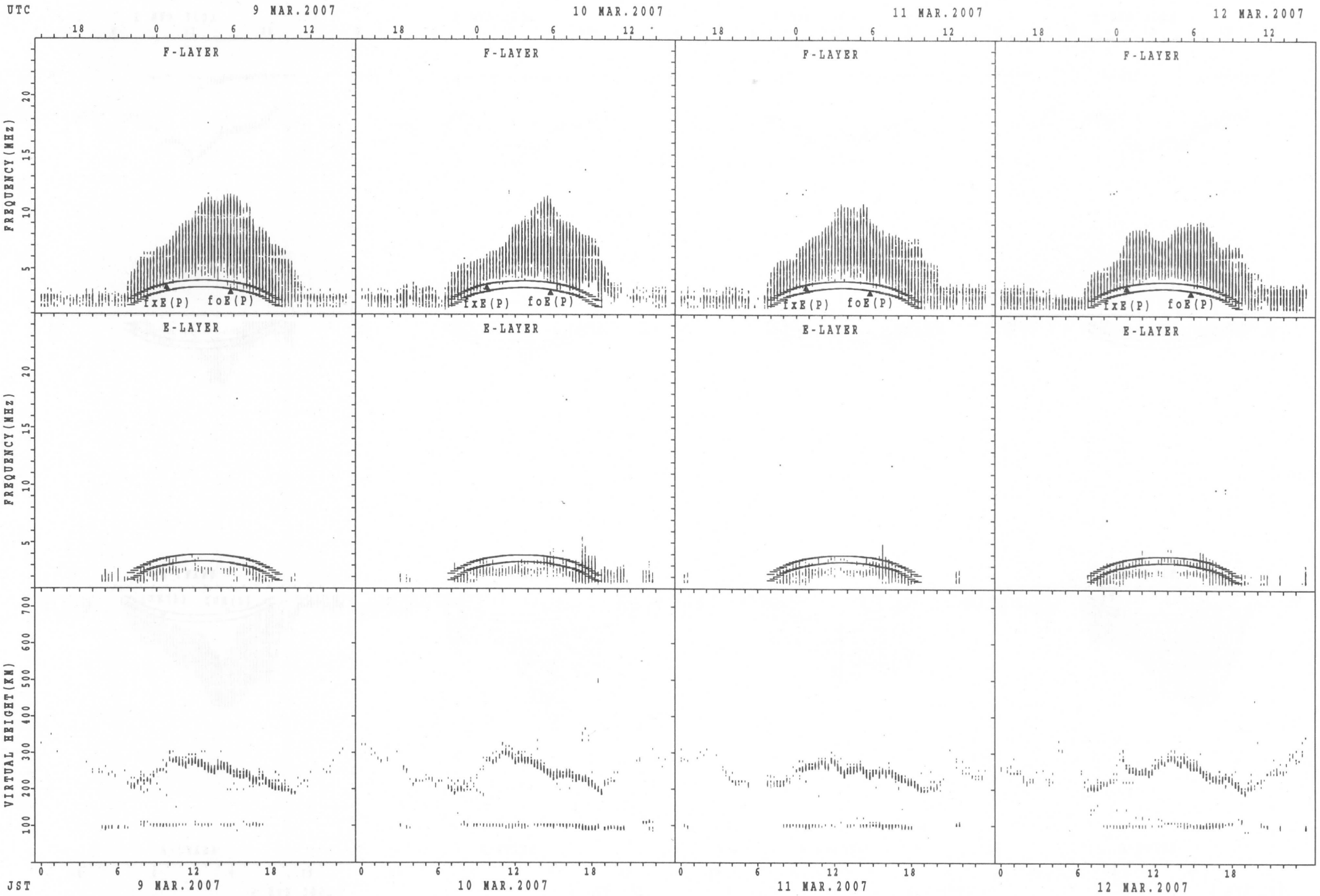
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



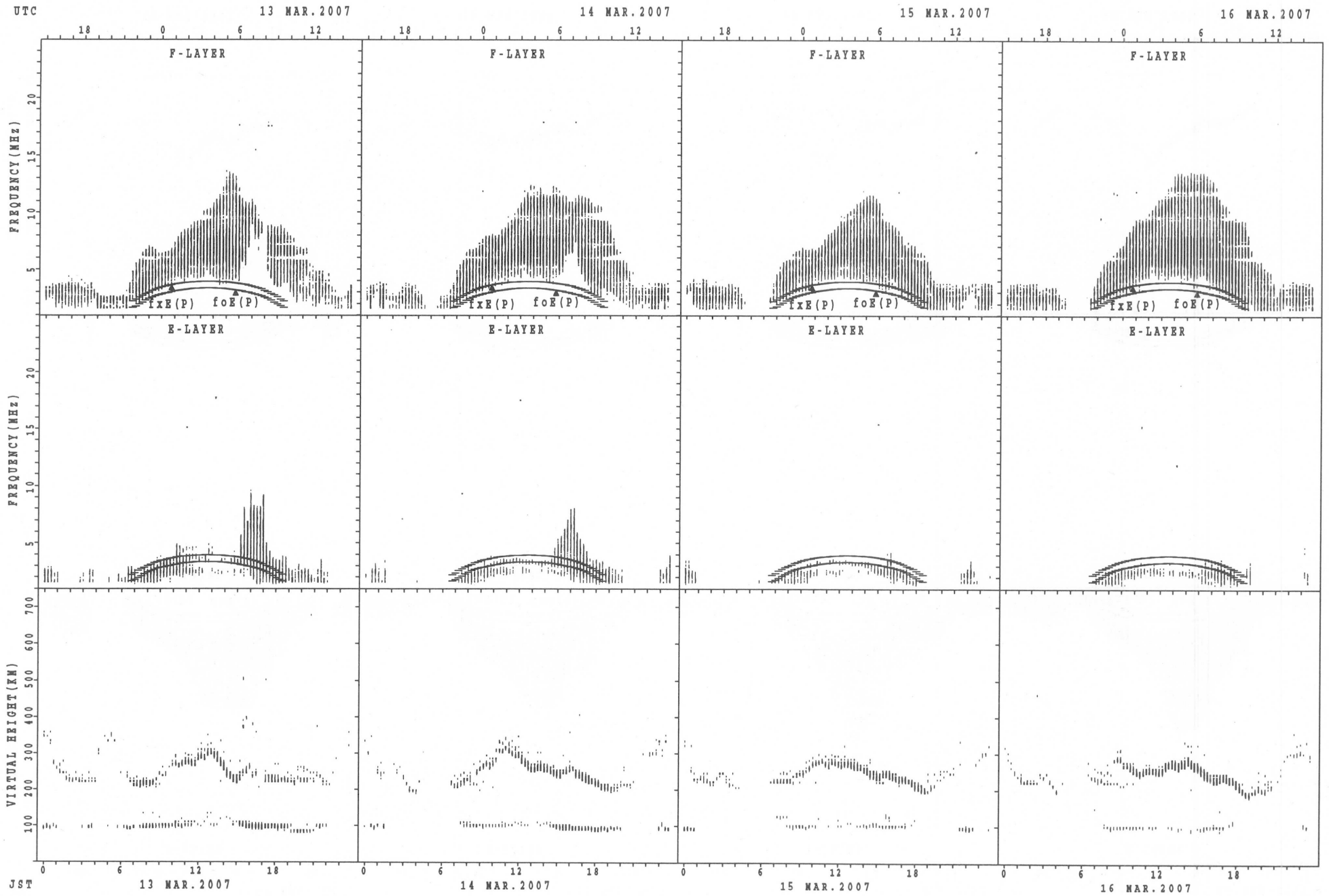
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



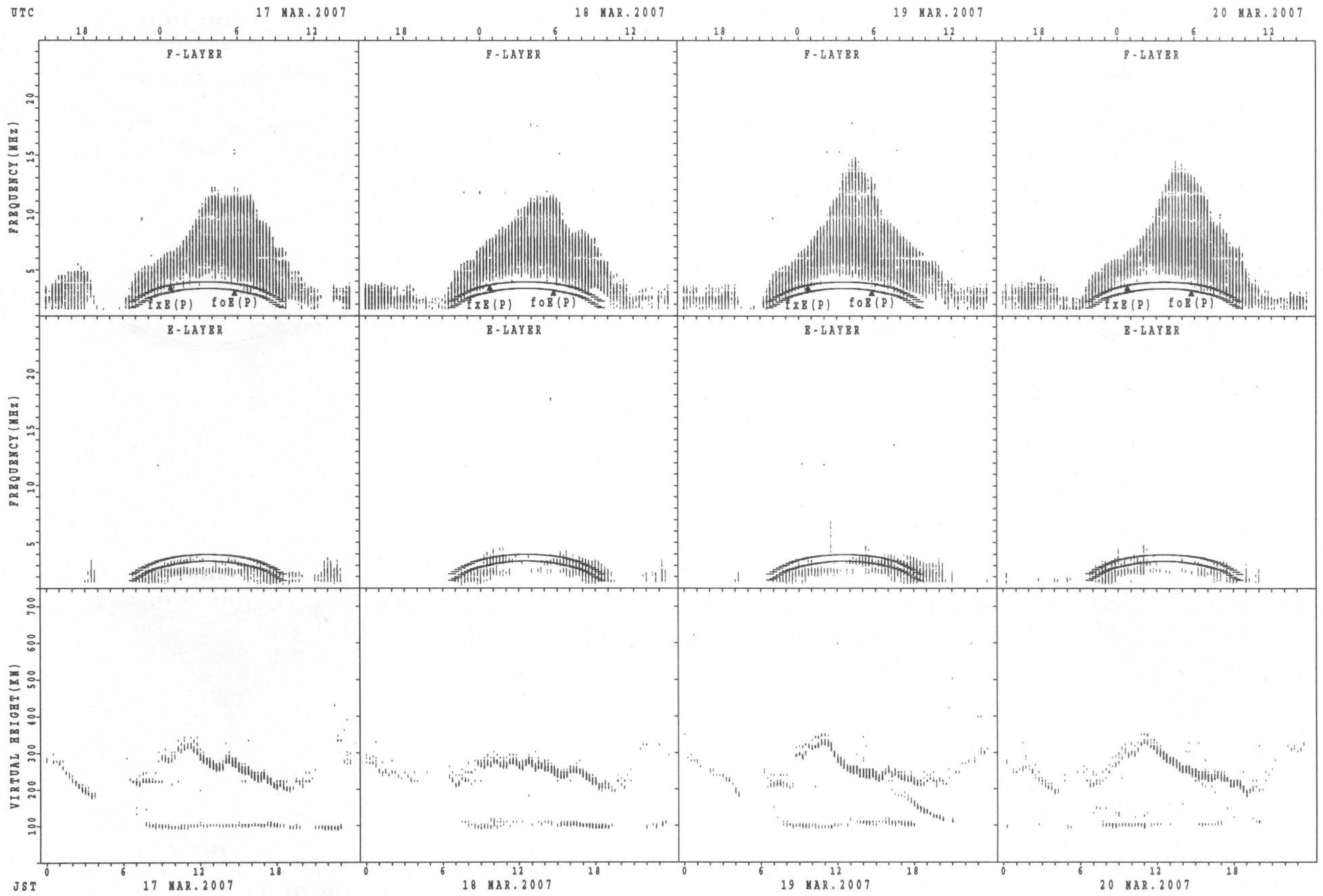
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



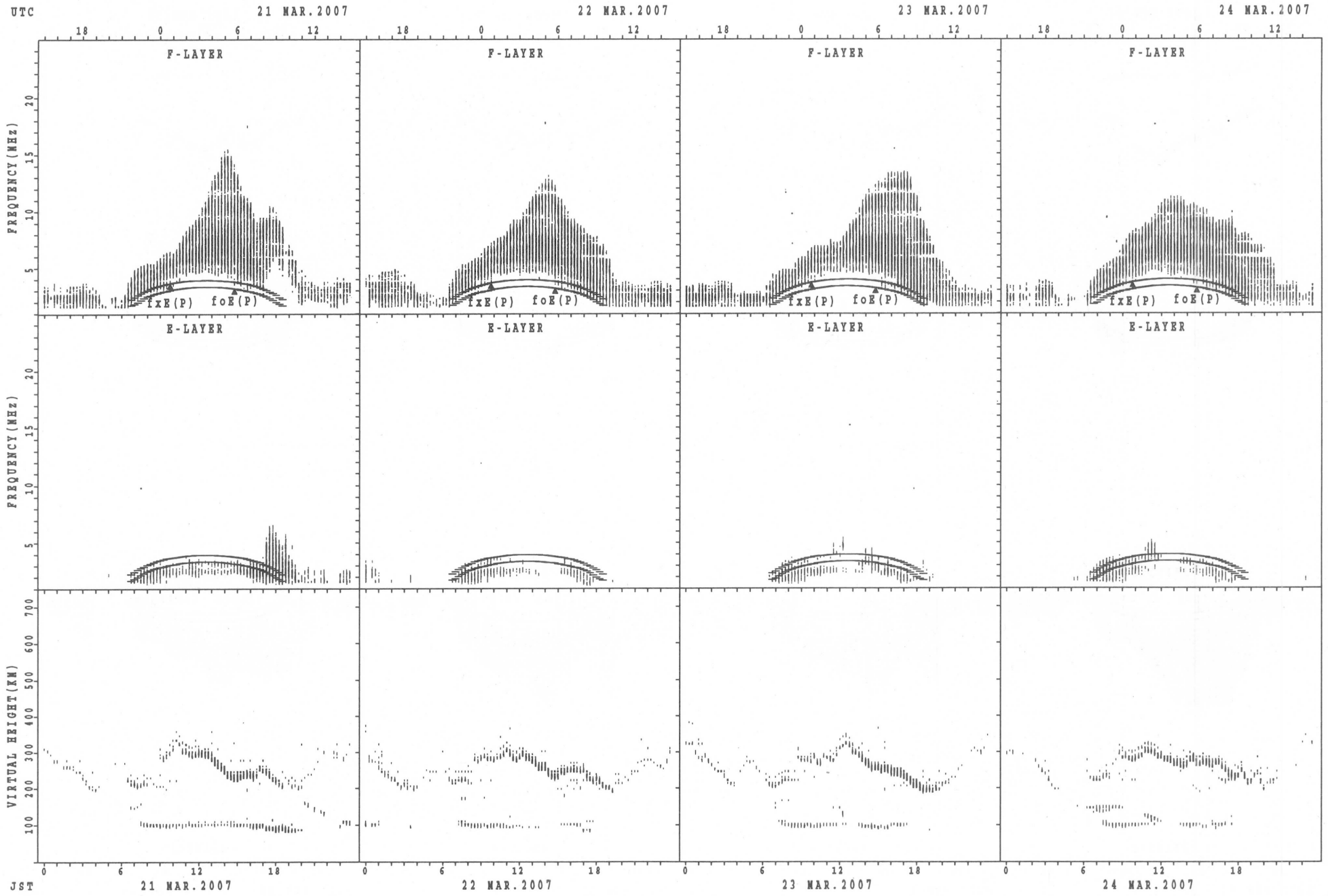
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



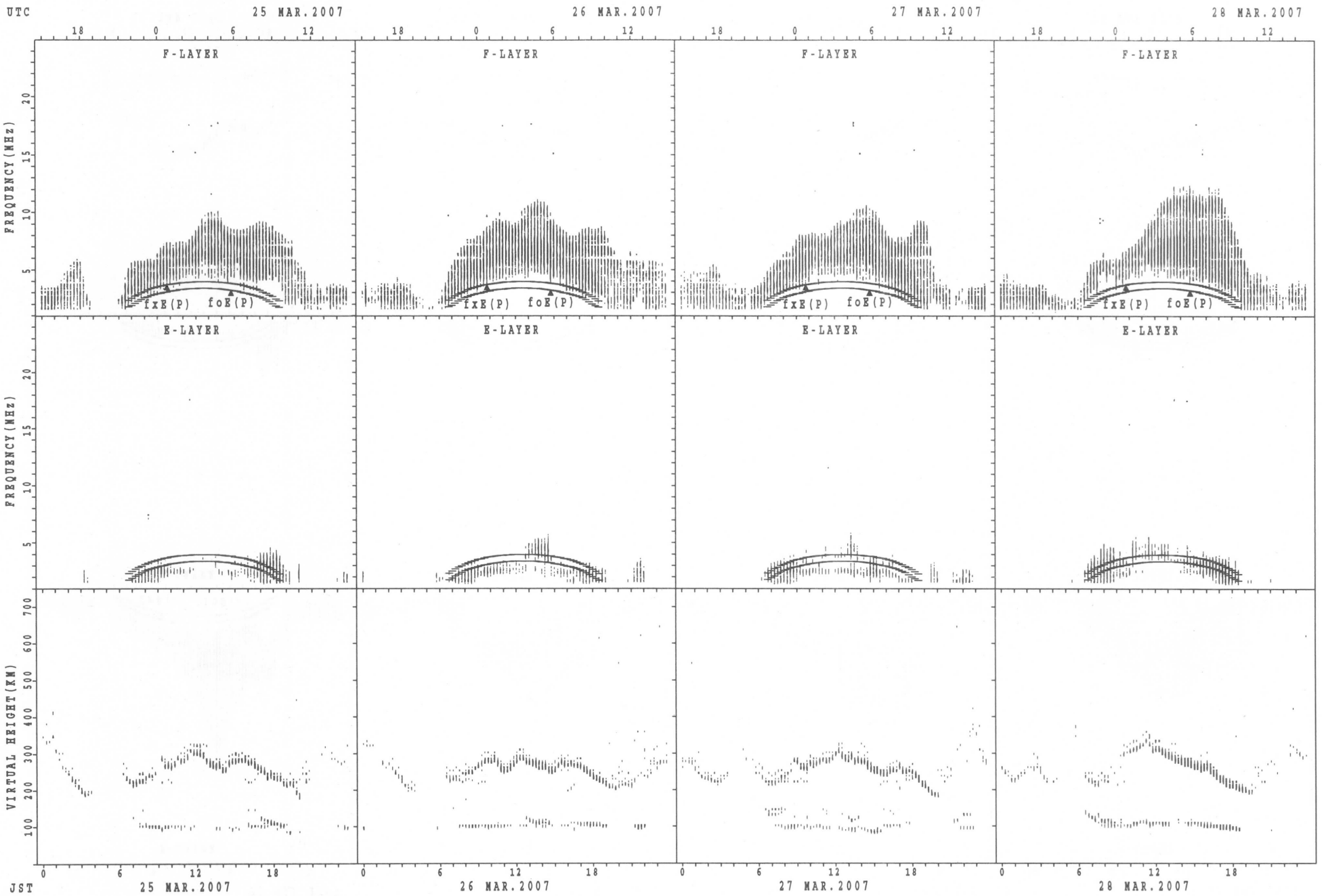
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



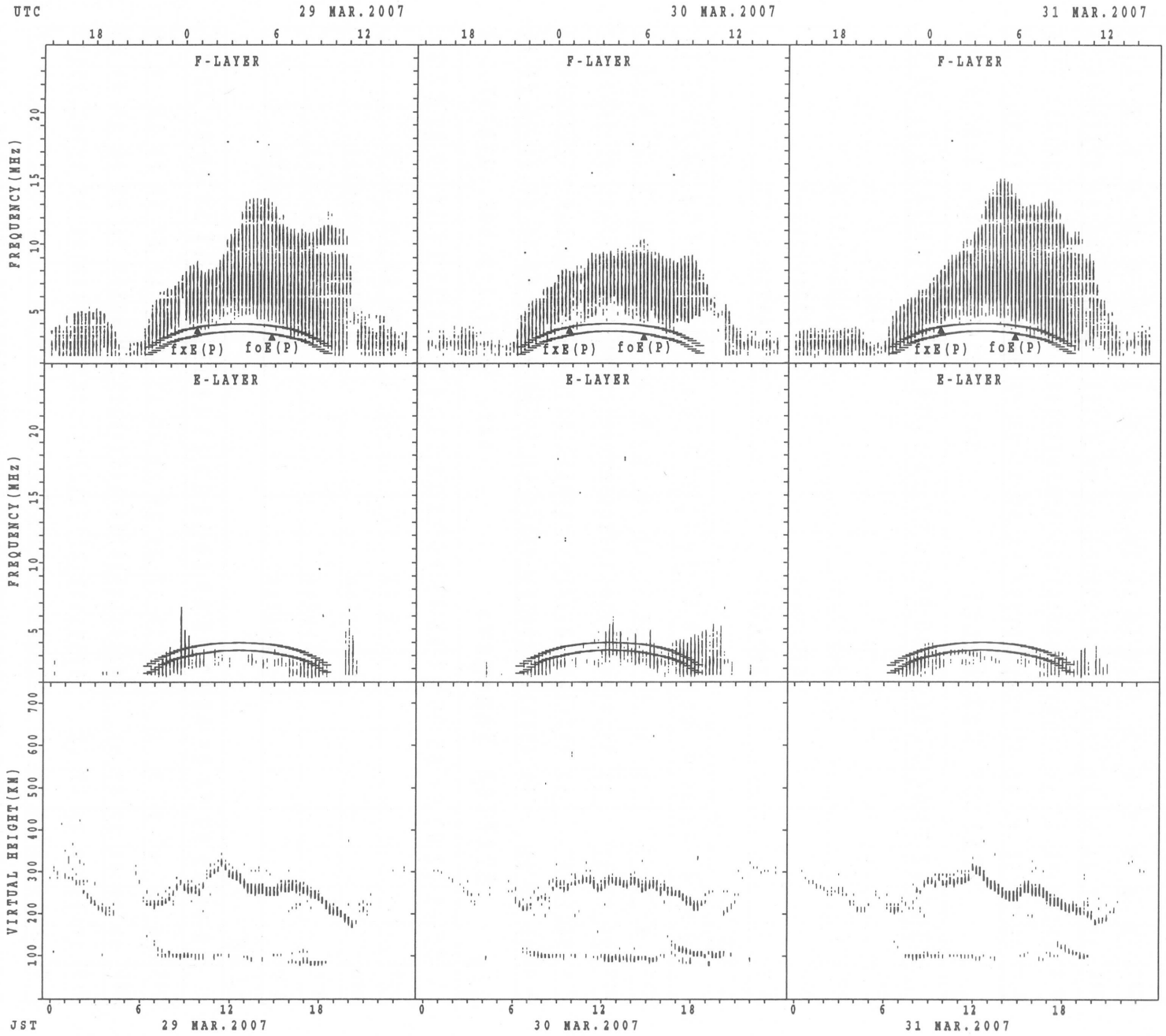
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

MAR. 2007 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	9	8						20	11	4	2					
MED								268	248	247						256	240	243	265					
U Q								134	266	252						264	248	255	266					
L Q								134	241	236						247	238	232	264					

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	6	5	5	4	2	7	15	16	14	16	8	6	6	4	7	7	6	12	4	5	3	2	4
MED	95	97	93	95	90	97	139	137	107	105	101	95	95	95	103	101	109	89	88	89	97	105	100	101
U Q	97	101	98	97	98	97	161	161	122	107	105	98	105	103	144	107	111	91	93	91	104	125	103	128
L Q	91	97	90	93	89	97	91	111	106	103	99	95	91	91	96	91	95	89	84	88	90	91	97	96

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								3	8	5						7	12	10	4	1				
MED								248	242	246						258	248	235	240	224				
U Q								262	251	266						268	269	246	248	112				
L Q								238	233	230						240	245	230	228	112				

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	3	3		1	1	7	6	4	11	10	8	5	9	7	7	15	16	11	7	3	4	4	3
MED	95	97	97		99	91	149	146	113	109	109	106	107	105	105	91	97	98	97	103	95	95	101	97
U Q	96	101	97		49	45	163	151	121	125	115	118	113	110	107	105	103	103	103	109	99	101	104	103
L Q	91	97	95		49	45	143	129	104	103	99	100	99	99	97	87	87	92	89	97	91	93	98	95

h'F STATION Yamagawa LAT. 31°12.1'N LON. 130°37.1'E

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT									7	13							29	23	17	5	1			
MED									244	256							248	238	234	244	226			
U Q									258	284							262	252	244	251	113			
L Q									224	248							237	230	221	233	113			

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	6	5	6	5	3	1		13	15	12	14	19	17	20	17	17	17	19	20	15	12	11	9	6
MED	95	99	98	97	97	97		143	125	109	107	107	105	105	103	103	99	103	96	93	96	99	99	99
U Q	97	103	99	99	97	48		156	161	125	125	113	122	111	108	104	105	107	102	97	99	113	105	105
L Q	93	94	95	93	89	48		131	107	102	103	103	103	101	99	99	96	95	89	87	90	89	97	99

MONTHLY MEDIANS OF h'F AND h'Es

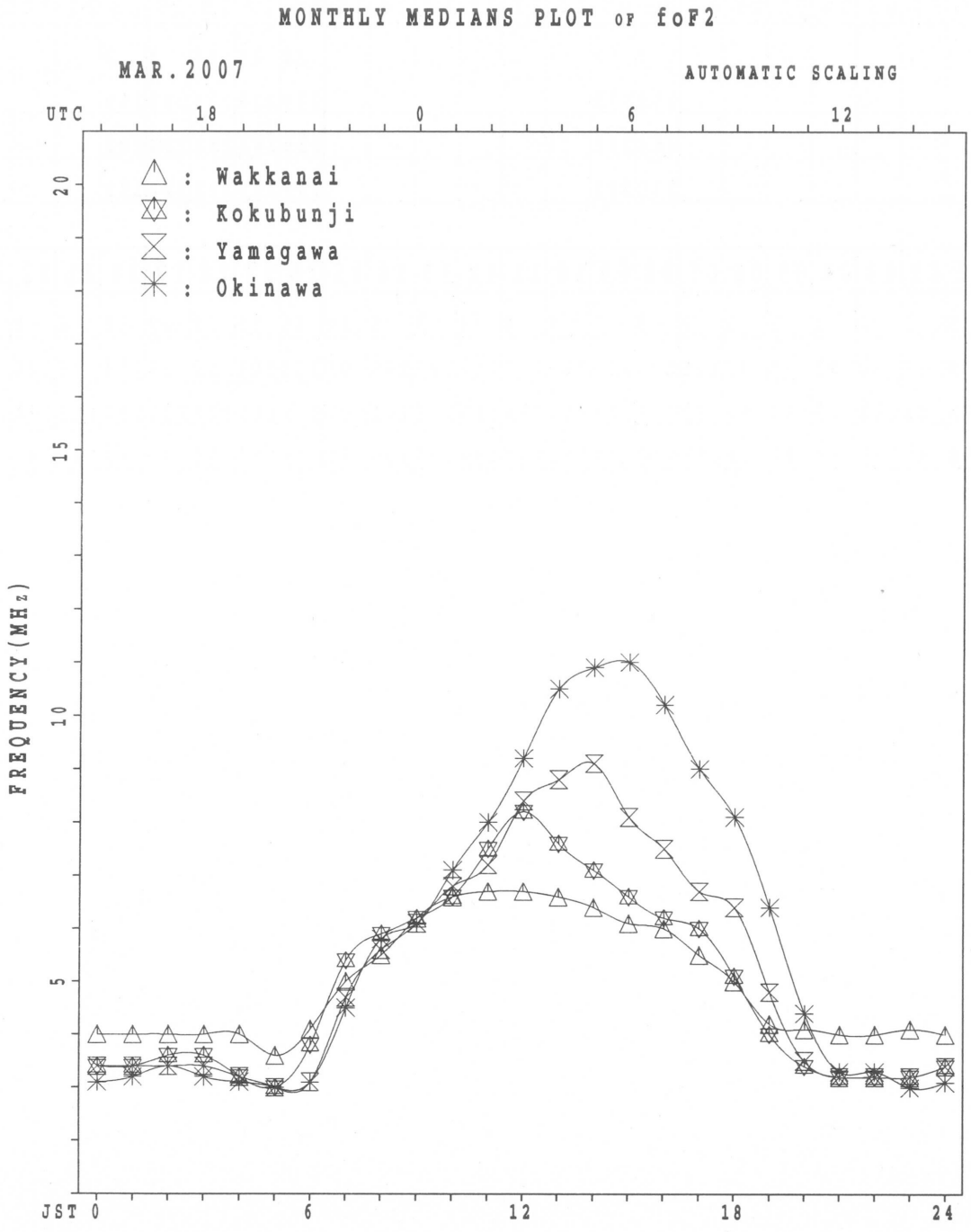
MAR.2007 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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									7	17							28	29	29	9	2			
MED									250	272							239	238	228	222	199			
U Q									264	291							250	248	238	233	208			
L Q									238	262							235	230	218	220	190			

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	6	5	3	2	1	2	1	7	8	7	7	8	4	9	8	10	15	15	22	19	16	6	8	3
MED	98	99	95	98	99	97	97	135	130	105	139	118	112	107	108	102	103	101	99	95	104	98	100	97
U Q	103	103	103	105	49	99	48	139	158	129	163	126	115	122	111	107	105	105	107	103	117	115	108	101
L Q	97	96	91	91	49	95	48	123	105	103	111	110	109	105	105	97	99	97	95	95	96	97	97	95


MONTHLY MEDIANS PLOT OF foF2
MAR.2007
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. 2007 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 42	X 40	X 43	X 41	X 40	X 43												X 67	X 40	X 34	X 35	X 38	X 38
2	X 39	X 40	X 40	X 40	X 30	X 31	X 37												X 48	X 38	X 38	X 39	X 39	X 37
3	X 38	X 37	X 39	X 42	X 33	X 27	X 35												X 49	X 34	X 32	X 34	X 35	34
4	39	X 35	X 35	X 36	X 30	X 25	X 34												X 48	X 38	X 37	X 37	X 37	41
5	X 39	X 38	X 39	X 42	X 44	X 25	X 35												X 57	X 40	X 38	X 37	X 39	X 39
6	X 38	X 39	X 39	X 41	X 40	X 32	X 39												X 52	X 40	X 37	X 37	X 38	X 38
7	X 39	X 44	X 41	X 31	X 30	X 31	X 37				C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C					C	C	C	C	C	C	C	C	C	C	C
15	X 45	X 46	X 44	X 38	X 39	X 32	X 43												X 54	X 46	X 43	X 42	X 43	X 44
16	X 45	X 42	X 45	X 41	X 41	X 35	X 44												X 56	X 50	X 37	X 37	X 37	X 37
17	X 38	X 37	X 39	X 42	X 30	X 27													X 57	X 46	X 41	X 41	X 41	X 42
18	X 44	X 44	X 45	X 42	X 42	X 34													X 55	X 47	X 39	X 41	X 40	X 39
19	40	X 39	X 36	X 37	X 32	X 29													X 48	X 39	X 38	X 39	X 39	43
20	X 40	X 38	42	X 39	X 39	X 28														X 43	X 38	X 38	44	50
21	48	49	50	X 50	X 42	X 39														X 44	X 33	X 39	X 41	X 39
22	42	46	50	49	44	39														X 46	X 38	39	X 39	44
23	X 40	X 38	X 39	X 42	X 38	X 39														X 56	X 46	X 42	X 40	42
24	X 39	X 38	X 38	41	40	X 30														X 71	X 64	X 44	X 42	X 42
25	X 40	X 42	X 44	X 46	X 34	X 34													X 90	X 74	X 42	X 43	X 44	X 42
26	X 44	X 44	X 42	X 48	X 36	X 32														X 69	X 62	X 49	X 46	X 45
27	X 45	X 44	X 46	X 42	X 41	X 40														X 70	X 67	X 43	X 46	52
28	50	49	47	46	46	X 38												X 88		X 59	X 42	X 39	42	43
29	X 39	41	X 39	X 39	X 34	X 32														X 61	X 56	X 49	X 41	46
30	44	X 43	X 42	X 43	X 35	X 35														X 68	X 58	X 51	X 50	X 48
31	X 48	X 47	X 45	X 44	X 42	X 42														X 68	X 56	X 38	X 37	X 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	24	24	24	24	24	24	9											1	12	23	23	23	23	23
MED	X 40	X 42	X 42	X 42	X 39	X 32	X 37											X 88	X 54	X 46	X 39	X 39	X 40	X 42
U Q	X 44	X 44	X 45	X 44	X 42	X 38	X 43												X 57	X 68	X 56	X 43	X 43	44
L Q	X 39	X 38	X 39	X 40	X 34	X 30	X 35												X 48	X 40	X 37	X 37	X 38	X 39

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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	36	34	37	35	34	37	53	64	66	79	88	86	77	66	63	65	68	61	34	28	29	32	32
2	32	34	34	34	24	25	31	55	59	72	63	73	70	73	72	60	61	52	42	32	32	33	33	31
3	32	31	33	36	27	21	29	58	68	65	65	75	80	78	66	58	58	56	43	28	26	28	29	F
4	F	29	29	30	24	19	28	49	62	59	56	76	85	84	81	68	73	59	42	32	31	31	31	F
5	33	32	33	36	38	19	29	46	53	68	64	70	70	83	87	73	63	57	50	34	32	30	33	33
6	32	33	33	35	34	26	33	50	70	69	58	68	68	78	81	81	70	64	46	34	31	31	32	31
7	33	38	35	25	24	25	31	56	59	64	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	59	68	78	95	C	C	C	C	C	C	C	C	C	C	C
15	39	39	38	32	33	26	37	53	53	56	68	76	77	69	61	70	66	64	48	40	37	36	37	37
16	39	36	39	35	34	29	38	47	49	60	69	88	84	68	60	64	55	54	50	43	31	31	31	31
17	32	31	33	36	24	21	33	44	51	56	70	77	82	70	63	63	67	63	51	39	35	35	35	36
18	38	38	39	36	35	28	38	47	59	62	65	75	72	66	62	58	53	54	49	41	33	35	34	33
19	F	33	30	31	26	22	36	53	63	58	58	66	80	75	64	59	61	53	42	33	32	32	32	F
20	34	32	F	32	33	22	38	50	55	57	66	70	82	76	67	51	56	57	54	37	32	32	F	F
21	F	F	F	44	36	33	39	50	56	60	62	73	84	84	75	62	60	64	49	37	27	33	35	33
22	F	F	F	F	F	F	42	47	54	58	66	78	91	89	79	67	57	58	49	40	32	F	32	F
23	34	32	33	36	32	33	44	46	51	50	55	70	75	81	71	65	57	59	62	50	40	36	34	F
24	33	32	32	F	F	24	39	48	54	58	83	103	92	81	75	66	63	68	76	64	58	38	36	36
25	34	36	38	40	28	28	49	61	66	58	68	69	74	66	68	65	67	72	84	68	36	37	38	36
26	38	38	36	42	30	26	44	56	70	66	65	79	85	76	62	60	63	68	68	63	56	42	40	39
27	39	38	40	36	35	34	49	53	58	66	71	83	88	87	76	64	64	66	68	64	61	37	40	F
28	F	F	F	F	F	32	50	55	55	61	66	70	89	102	88	76	68	81	78	53	35	33	F	F
29	33	F	33	33	28	26	43	55	62	61	70	79	88	89	74	74	68	63	60	55	50	43	35	F
30	F	37	36	37	29	29	45	64	66	70	75	70	65	70	67	58	57	56	59	62	52	45	44	42
31	42	41	38	37	36	36	52	58	61	62	66	63	70	69	72	69	57	54	61	62	50	32	31	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	18	20	20	21	21	23	24	24	24	25	24	24	24	23	23	23	23	23	23	23	23	22	21	14
MED	34	35	34	36	32	26	38	53	59	61	66	75	82	77	71	64	63	59	51	40	33	33	34	33
U Q	38	38	38	37	35	32	44	56	64	66	70	78	87	84	76	69	67	66	62	62	50	37	36	36
L Q	32	32	33	32	26	22	33	48	54	58	64	70	73	70	64	60	57	56	48	34	31	31	32	32

MAR. 2007 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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	L	U L 444	L	L	L	A							
2										L	L	U L 444	L	L	U L 388		A							
3									L	L	L	U L 436	U L 440	L	L	L	L							
4										A	U L 432	U L 444	A	A	U L 424	L	A							
5										L	L	U L 436	L	U L 436	L	L	L							
6										L	L	U L 448	L	U L 440	A	L	A							
7										L	C	C	C	C	C	C	C	C	C					
8								C	C	C	C	C	C	C	C	C	C	C						
9								C	C	C	C	C	C	C	C	C	C	C						
10								C	C	C	C	C	C	C	C	C	C	C						
11								C	C	C	C	C	C	C	C	C	C	C						
12								C	C	C	C	C	C	C	C	C	C	C						
13								C	C	C	C	C	C	C	C	C	C	C	C					
14								C	C	L	U L 448	U L 448	L	C	C	C	C	C						
15									L	L	U L 436	U L 432	U L 436	U L 432	L	L	L							
16										U L 416	424	432	L	U L 428	L	L	L							
17									L	U L 420	U L 416	L 440	436	428	U L 420	U L 408	L							
18									L	U L 416	U L 424	432	U L 432	U L 428	U L 416	L	L							
19									L	L	U L 428	U L 432	U L 444	U L 420	U L 416	U L 396	L							
20									L	U L 424	U L 428	432	440	436	U L 420	L	U L 364							
21									L	U L 420	U L 440	444	436	436	U L 428	U L 404	L							
22									L	U L 416	432	440	444	436	428	U L 408								
23								L	L	U L 432	U L 440	424	U L 444	U L 432	U L 424	U L 412	L							
24									U L 412	416	U L 404	U L 452	U L 448	L 436	U L 424	L	L							
25										L	U L 444	L	L	L	U L 432	L	L							
26								L	L	L	U L 460	U L 464	L	A	A	A	L							
27										U L 436	U L 456		U L 456	A	A	L	A							
28									A	L	U L 444	U L 456	U L 464	U L 452	L	L	L							
29							L		L	A	U L 448	U L 436	A	U L 448	L	U L 416	L							
30									L	416	U L 440	U L 460	456	444	U L 448	L	L							
31								L	L	L	436	U L 464	460	U L 448	U L 432	L	L							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT									1	10	19	21	15	16	13	6	1							
MED									U L 412	U L 418	U L 436	U L 440	U L 444	U L 436	U L 424	U L 408	U L 364							
U Q										U L 424	U L 444	U L 450	456	U L 442	U L 430	U L 412								
L Q										416	U L 428	432	436	U L 430	U L 418	U L 404								

MAR. 2007 foF1 (0.01MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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	252	U A 288	A	A	A	A	R	U R 288	A	A						
2								180	A	U A 276	A	A	U R 324	A	U R 304	A	A	B						
3								200	260	U R 300	R	U R 328	R	R	R	U R 284	R	U R 184						
4								184	A	A	A	U R 340	364	A	A	292	A	184						
5								208	268	304	A	A	A	R	A	A	A	A						
6								188	260	U R 296	R	A	R	A	A	A	A	B						
7								B	A	284	C	C	C	C	C	C	C	C	C					
8								C	C	C	C	C	C	C	C	C	C	C						
9								C	C	C	C	C	C	C	C	C	C	C						
10								C	C	C	C	C	C	C	C	C	C	C						
11								C	C	C	C	C	C	C	C	C	C	C						
12								C	C	C	C	C	C	C	C	C	C	C						
13								C	C	C	C	C	C	C	C	C	C	C	C					
14								C	C	A	A	A	R	C	C	C	C	C						
15								U A 188	A	A	A 240	A	A	R	A	U R 300	U R 260	A						
16								A	256	A	R	A	R	R	A	A	A	A						
17							B	188	256	A	A	A	A	A	R	R	A	A						
18							B	224	268	A	A	A	R	A	U R 316	R	A	A						
19							B	228	A	A	324	A	340	A	R	A	A	A						
20							B	220	R	312	324	U R 340	R	U R 324	R	R	R	212		B				
21							B	236	296	A	A	A	U R 348	A	A	A	A	A	B					
22							B	232	U R 280	R	R	A	R	U R 328	R	R	260	U R 196	B					
23							B	U R 232	R	R	352	348	356	A	312	R	A	A	B					
24							B	240	276	312	A	A	A	R	R	R	U R 260	192	B					
25							B	U R 224	A	R	R	320	336	R	R	R	248	A						
26							B	212	R	U R 316	328	U A 336	A	A	A	A	A	A	B					
27							B	236	R	A	A	A	A	A	340	A	A	U A 212	B					
28							B	236	A	A	A	A	A	A	A	A	A		B					
29							U R 176	A	A	A	A	A	A	A	R	R	U R 276	U A 192	B					
30							188	U R 260	300	A	A	R	R	A	R	308	A	A	B					
31							B	U R 252	R	A	A	R	R	U R 332	R	R	U R 272	204	B					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							2	21	11	9	5	6	6	3	4	5	6	8						
MED							182	224	268	U 300	324	U 338	344	U R 328	314	U R 292	U R 260	194						
U Q								236	280	312	340	340	356	U R 332	328	304	U R 272	208						
L Q								188	256	U A 286	282	328	336	U R 324	308	U R 286	260	188						

MAR. 2007 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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	18	19	E B 14	E B 14	20	E B 15	E B 15	24	29	36	J A 41	38	41	36	G 30	J G 26	J A 46	J A 34	J A 28	21	E B 16	18	J A 20	J A 26
2	E B 15	E B 16	E B 16	E B 14	E B 14	E B 15	E B 15	23	29	34	36	J A 48	G 30	34	G 28	29	J A 31	J A 26	E B 15	E B 14	19	E B 15	J A 20	J A 19
3	J A 19	J A 27	19	18	18	J A 20	E B 15	24	29	G 23	G 30	G 28	G 28	G 25	G 24	G 23	G 22	G	E B 15	E B 14	20	E B 15	E B 14	E B 15
4	E B 14	19	J A 17	21	20	E B 15	J A 18	J A 34	38	38	36	G 28	41	J A 56	J A 46	36	J A 34	22	J A 23	J A 22	J A 18	J A 29	J A 44	J A 19
5	J A 20	E B 15	E B 15	E B 15	E B 14	E B 14	E B 15	24	31	34	36	38	J A 39	G 27	J A 36	J A 37	J A 31	J A 27	J A 37	J A 23	J A 17	18	E B 15	20
6	E B 16	E B 15	E B 15	E B 14	E B 15	E B 14	E B 14	23	30	G 25	G 27	36	G 26	J A 48	J A 49	J A 32	J A 34	22	19	E B 14	19	E B 15	19	E B 14
7	19	19	18	E B 15	E B 15	E B 15	18	20	27	32	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	J A 39	J A 40	J A 38	G 32	C	C	C	C	C	C	C	C	C	C	C
15	J A 30	20	J A 23	E B 14	E B 16	20	E B 16	23	29	34	32	36	37	G 30	37	G 22	G 24	22	J A 20	J A 21	J A 18	J A 20	J A 20	21
16	E B 15	J A 20	J A 35	18	E B 15	20	J A 18	J A 23	28	33	G 22	J A 38	G 27	G 25	34	30	29	J A 30	J A 18	20	E B 15	E B 15	E B 15	E B 16
17	E B 15	E B 15	E B 16	E B 15	E B 15	E B 14	18	26	32	J A 40	38	38	36	36	G 30	G 27	J A 34	J A 24	J A 19	J A 20	E B 15	19	20	J A 40
18	J A 22	J A 23	20	19	E B 15	E B 14	18	26	31	34	36	J A 38	G 25	36	G 28	G 28	J A 35	22	J A 22	J A 24	E B 15	E B 15	E B 14	E B 15
19	E B 15	20	18	E B 15	E B 14	E B 15	19	26	30	34	36	35	40	J A 36	G 22	33	27	J A 22	J A 20	J A 17	J A 27	E B 16	18	E B 15
20	E B 15	E B 16	E B 16	E B 16	E B 14	E B 15	19	26	G 25	36	40	G 32	G 26	G 23	G 20	G 22	G	28	23	19	18	J A 22	20	22
21	E B 15	E B 16	19	18	E B 14	E B 14	20	28	32	36	37	39	G 29	36	J A 40	J A 34	J A 34	J A 26	J A 20	J A 22	J A 19	20	E B 15	E B 15
22	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16	28	G 19	G 28	G 29	35	G 26	G 29	G 26	G 24	31	G	E B 15	E B 14	E B 16	E B 15	E B 16	19
23	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	18	G	G 19	G 26	38	42	40	39	34	G	J A 32	J A 25	E B 16	E B 15	E B 15	E B 14	E B 14	E B 14
24	E B 15	E B 15	E B 14	E B 14	E B 15	E B 14	21	28	32	34	37	38	38	G 25	G 26	G 20	G 19	22	E B 14	E B 15	E B 14	E B 14	E B 15	E B 15
25	E B 14	E B 14	E B 15	E B 16	E B 15	E B 16	E B 14	G	31	G 26	G 25	39	G 26	G	G 27	G 26	29	28	22	21	18	19	E B 14	E B 14
26	E B 14	20	E B 16	E B 15	E B 16	E B 16	20	26	G 26	G 28	39	42	40	J A 47	J A 45	J A 55	J A 40	J A 31	J A 25	J A 30	J A 46	J A 34	E B 14	E B 14
27	20	20	18	E B 15	E B 14	E B 14	J A 23	29	G 22	39	J A 44	J A 44	43	J A 48	40	38	J A 40	J A 40	J A 26	J A 24	E B 15	E B 16	E B 14	E B 15
28	J A 26	E B 15	E B 15	20	20	E B 15	20	27	34	37	J A 40	38	J A 43	J A 41	36	J A 35	J A 40	62	38	J A 26	J A 22	J A 24	E B 15	E B 15
29	J A 28	J A 24	J A 24	J A 23	J A 32	24	G	27	34	J A 42	J A 45	J A 43	J A 88	J A 42	G 27	G 20	G 24	22	E B 15	E B 14	E B 13	18	J A 40	J A 30
30	E B 15	E B 15	E B 15	20	22	20	23	G 20	34	J A 37	J A 43	G 30	G 33	36	27	G 26	J A 31	J A 40	J A 32	J A 20	E B 15	E B 16	E B 15	E B 15
31	E B 14	E B 15	E B 15	E B 16	E B 14	E B 15	E B 16	G 22	G 22	J A 38	36	G 32	G 31	G 28	G 26	G 27	G 21	24	E B 14	E B 15	E B 14	E B 15	E B 15	E B 15
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	24	24	24	24	24	24	24	24	25	24	24	24	23	23	23	23	23	23	23	23	23	23	23
MED	E B 15	E B 16	E B 16	E B 15	E B 15	E B 15	18	25	30	34	36	38	34	36	G 30	G 28	J A 31	25	J A 20	20	17	E B 16	E B 15	E B 15
U Q	J A 20	J A 20	18	18	17	16	20	27	32	J A 38	J A 40	39	40	J A 41	J A 37	J A 34	J A 34	J A 30	J A 25	J A 22	J A 19	J A 20	J A 20	20
L Q	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	E B 16	G 23	G 26	G 30	G 34	G 35	G 28	G 28	G 26	G 24	G	22	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15

MAR. 2007 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 fbEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E B 15	16	E B 14	E B 14	16	E B 15	E B 15	22	28	34	36	34	39	35	U Y 30	G 23	31	28	18	E B 16	E B 16	E B 14	E B 15	18
2	E B 15	E B 16	E B 16	E B 14	E B 14	E B 15	E B 15	22	28	32	34	35	G 29	32	G 27	28	28	21	E B 15	E B 14	E B 16	E B 15	E B 15	E B 15
3	17	16	E B 15	E B 16	E B 15	16	E B 15	22	28	G 23	G 26	G 26	G 26	G 25	G 23	G 22	G 20	G	E B 15	E B 14	E B 15	E B 15	E B 14	E B 15
4	E B 14	E B 16	E B 14	E B 15	E B 14	E B 15	16	30	36	36	34	G 27	40	41	35	35	28	22	20	16	E B 16	26	20	E B 15
5	16	E B 15	E B 15	E B 15	E B 14	E B 14	E B 15	24	29	32	33	36	35	G 27	33	30	27	20	30	E B 15	16	16	E B 15	E B 15
6	E B 16	E B 15	E B 15	E B 14	E B 15	E B 14	E B 14	23	28	G 22	G 25	35	G 26	35	39	30	26	19	E B 16	E B 14	E B 14	E B 15	E B 15	E B 14
7	16	16	16	E B 15	E B 15	E B 15	16	19	26	32	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	32	34	34	G 32	C	C	C	C	C	C	C	C	C	C	C
15	16	E B 15	16	E B 14	E B 16	E B 15	E B 16	22	28	31	31	34	35	G 29	33	G 20	G 24	20	E B 15	17	E B 15	E B 15	E B 15	E B 16
16	E B 15	16	19	E B 15	E B 15	E B 16	17	22	27	31	G 21	34	U Y 27	U Y 25	32	30	27	22	17	E B 15	E B 15	E B 15	E B 15	E B 16
17	E B 15	E B 15	E B 16	E B 15	E B 15	E B 14	17	25	30	35	36	36	35	34	G 28	G 27	25	21	E B 14	16	E B 15	E B 14	E B 15	17
18	19	E B 15	E B 15	E B 14	E B 15	E B 14	17	25	28	33	35	36	G 24	34	G 25	G 28	31	22	16	20	E B 15	15	E B 14	E B 15
19	E B 15	E B 15	E B 14	E B 15	E B 14	E B 15	18	26	28	31	35	34	37	34	G 22	31	27	22	18	15	22	E B 16	E B 15	E B 15
20	E B 15	E B 16	E B 16	E B 16	E B 14	E B 15	17	25	G 22	35	38	G 26	G 26	G 22	G 19	G 22	G	26	20	E B 16	E B 15	16	E B 15	E B 16
21	E B 15	E B 16	E B 15	E B 15	E B 14	E B 14	19	25	32	35	36	35	G 29	35	36	34	30	23	19	E B 15	16	E B 16	E B 15	E B 15
22	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16	27	G 19	G 28	G 28	34	G U Y 26	29	G 25	G 21	30	G	E B 15	E B 14	E B 16	E B 15	E B 16	16
23	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	18	G	G 19	G 26	37	36	38	34	34	G	29	21	E B 16	E B 15	E B 15	E B 14	E B 14	E B 14
24	E B 15	E B 15	E B 14	E B 14	E B 15	E B 14	20	27	31	33	34	36	34	G 25	G 23	G 20	G 18	21	E B 14	E B 15	E B 14	E B 14	E B 15	E B 15
25	E B 14	E B 14	E B 15	E B 16	E B 15	E B 16	E B 14	G	28	U Y 26	G 25	38	G 24	G	G 26	G 25	28	25	E B 15	16	E B 14	16	E B 14	E B 14
26	E B 14	E B 14	E B 16	E B 15	E B 16	E B 16	18	24	G 24	G 27	37	41	36	43	41	47	32	27	20	20	20	E B 15	E B 14	E B 14
27	E B 15	E B 15	15	E B 15	E B 14	E B 14	20	28	G 20	35	40	40	39	45	38	36	34	34	19	22	E B 15	E B 16	E B 14	E B 15
28	E B 15	E B 15	E B 15	E B 15	E B 16	E B 15	19	25	31	35	36	36	36	36	34	30	34	58	34	20	16	21	E B 15	E B 15
29	16	E B 15	16	E B 15	17	E B 15	G	25	31	40	40	36	58	38	U Y 27	G 19	G 24	21	E B 15	E B 14	E B 13	E B 14	19	16
30	E B 15	E B 15	E B 15	E B 16	E B 15	E B 15	21	G 20	34	35	36	G 30	U Y 33	35	G 27	G 24	29	32	22	E B 15	E B 15	E B 16	E B 15	E B 15
31	E B 14	E B 15	E B 15	E B 16	E B 14	E B 15	E B 16	G 20	G 22	32	36	G 32	G 31	G 27	G 26	G U Y 27	G 21	22	E B 14	E B 15	E B 14	E B 15	E B 15	E B 15
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	24	24	24	24	24	24	24	24	25	24	24	24	23	23	23	23	23	23	23	23	23	23	23
MED	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	16	24	28	32	35	35	34	34	28	G 28	28	22	16	E B 15	E B 15	E B 15	E B 15	E B 15
U Q	16	16	16	E B 15	E B 15	E B 15	18	25	30	35	36	36	36	35	34	30	30	26	20	16	16	16	E B 15	16
L Q	E B 15	E B 15	E B 15	E B 14	E B 14	E B 14	E B 16	G 22	G 25	G 30	G 32	G 34	G 26	G 27	G 25	G 22	G	21	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15

MAR. 2007 fbEs (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 fmin (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

MAR. 2007 fmin (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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	286	328	331	335	319	318	343	367	359	350	342	352	349	348	361	350	353	371	371	386	316	306	311	295
2	291	318	340	372	307	324	331	372	365	374	349	356	367	355	378	354	375	366	371	332	326	321	299	310
3	300	322	337	360	373	335	347	377	382	369	351	345	360	352	367	366	368	365	365	356	323	300	291	F
4	F	319	340	360	401	341	346	379	380	380	324	341	345	343	360	338	376	385	385	336	328	325	307	F
5	302	305	317	357	405	331	348	386	353	365	345	353	314	329	342	366	360	370	362	351	330	313	291	295
6	311	318	331	348	367	332	359	353	386	397	349	354	312	338	331	348	375	373	375	314	323	296	300	292
7	296	347	376	333	310	319	352	380	359	373	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	357	324	303	335	C	C	C	C	C	C	C	C	C	C	C
15	321	342	342	329	351	374	370	371	371	356	335	359	368	354	346	353	368	379	367	343	323	307	309	296
16	323	339	342	345	359	326	367	366	337	337	332	349	361	342	335	357	362	368	364	361	318	335	298	311
17	305	308	330	369	410	315	366	367	346	337	326	328	344	350	339	351	361	379	358	362	328	323	326	302
18	316	324	335	341	361	320	361	364	348	355	345	346	357	358	361	372	362	376	364	358	304	310	296	310
19	F	304	326	354	346	335	360	357	382	363	349	333	350	350	364	362	375	392	369	338	316	322	319	F
20	319	306	F	326	371	347	361	376	349	352	339	335	344	342	364	371	367	378	375	404	313	296	F	F
21	F	F	F	356	341	338	383	371	363	357	340	335	332	342	351	355	361	387	373	371	329	298	304	308
22	F	F	F	F	F	F	363	365	347	347	334	319	335	351	351	358	361	356	377	366	320	F	299	F
23	310	309	323	323	337	329	374	390	352	348	320	336	330	350	338	345	358	372	378	367	327	325	312	F
24	319	304	307	F	F	343	371	356	341	307	309	339	336	335	343	330	330	351	345	318	362	297	293	300
25	309	313	316	364	328	311	362	369	362	344	341	321	346	318	335	342	339	336	362	376	307	312	296	312
26	300	306	309	348	355	317	369	365	365	353	336	329	344	355	352	352	340	355	348	339	347	320	317	301
27	305	332	319	287	297	316	356	378	341	330	322	327	331	340	353	361	343	353	350	345	354	346	309	F
28	F	F	F	F	F	325	362	374	362	356	343	307	309	325	327	335	337	355	384	359	347	318	F	F
29	307	F	308	327	358	321	358	362	354	358	332	334	331	347	329	353	347	353	362	331	349	344	296	F
30	F	301	319	333	341	316	353	371	370	345	366	350	333	345	341	358	342	359	342	340	342	313	293	303
31	313	320	318	317	323	331	378	383	360	361	362	333	340	331	339	352	352	349	347	355	386	323	286	302
	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	20	20	21	21	23	24	24	24	25	24	24	24	23	23	23	23	23	23	23	23	22	21	14
MED	308	318	328	345	351	326	361	371	360	356	340	336	342	345	346	353	361	368	365	355	327	316	299	302
U Q	316	326	338	358	369	335	368	378	368	364	347	350	350	351	361	361	368	378	375	366	347	323	310	310
L Q	300	306	318	328	326	318	352	365	348	346	329	328	332	338	338	348	343	355	358	338	318	306	294	296

MAR. 2007 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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	L	U L 383	L	L	L	A							
2										L	L	U L 381		L	L	U L 418	A							
3									L	L	L	U L 386	U L 382	L	L	L	L							
4										A	U L 421	U L 375	A	A	U L 391	L	A							
5										L	L	U L 389	L	U L 375	L	L	L							
6										L	L	U L 376	L	U L 366	A	L	A							
7										L	C	C	C	C	C	C	C	C	C					
8								C	C	C	C	C	C	C	C	C	C	C						
9								C	C	C	C	C	C	C	C	C	C	C						
10								C	C	C	C	C	C	C	C	C	C	C						
11								C	C	C	C	C	C	C	C	C	C	C						
12								C	C	C	C	C	C	C	C	C	C	C						
13								C	C	C	C	C	C	C	C	C	C	C	C					
14								C	C	L	U L 379	U L 388	L	C	C	C	C	C						
15									L	L	U L 390	U L 409	U L 395	U L 401	L	L	L							
16										U L 373	386	389	L	U L 392	L	L	L							
17									L	U L 370	U L 399	L 387	392	385	U L 377	U L 364	L							
18									L	U L 390	U L 394	394	U L 395	U L 391	U L 388	L	L							
19									L	L	U L 392	U L 407	U L 383	U L 417	U L 398	U L 389	L							
20									L	U L 387	U L 403	404	395	399	U L 389	L	U L 397							
21									L	U L 388	U L 386	395	403	401	U L 385	U L 387	L							
22									L	U L 383	398	398	390	391	393	U L 398								
23								L	L	U L 378	U L 384	435	U L 380	U L 399	U L 399	U L 405	L							
24									U L 368	393	U L 424	U L 365	U L 385	L 389	U L 397	L	L							
25									L	L	U L 375	L	L	L	U L 382	L	L							
26								L	L	L	U L 395	U L 399	L	A	A	A	L							
27										U L 378	U L 409		U L 397	A	A	L	A							
28									A	L	U L 386	U L 414	U L 381	U L 384	L	L	L							
29									L	A	U L 368	U L 415	A	U L 385	L	U L 373	L							
30									L	418	U L 406	U L 394	399	395	U L 378	L	L							
31								L	L	L	401	U L 382	383	U L 389	U L 383	L	L							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT									1	10	19	21	15	16	13	6	1							
MED									U L 368	U L 385	U L 394	U L 394	U L 390	U L 391	U L 389	U L 388	U L 397							
U Q										390	U L 403	U L 406	395	U L 399	U L 398	U L 398								
L Q										U L 378	U L 386	U L 384	U L 383	U L 385	U L 382	U L 373								

MAR. 2007 M(3000)F1 (0.01)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 h'F2 (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										260	254	240	256	244	244	254	246							
2										240	250	246	242	250	228		230							
3									228	244	258	264	232	242	236	236	234							
4										226	256	268	250	268	238	260	232							
5										246	256	262	288	264	240	238	238							
6										220	248	260	294	252	254	246	224							
7										234	C	C	C	C	C	C	C	C	C					
8								C	C	C	C	C	C	C	C	C	C	C						
9								C	C	C	C	C	C	C	C	C	C	C						
10								C	C	C	C	C	C	C	C	C	C	C						
11								C	C	C	C	C	C	C	C	C	C	C						
12								C	C	C	C	C	C	C	C	C	C	C						
13								C	C	C	C	C	C	C	C	C	C	C	C					
14								C	C	234	284	310	260	C	C	C	C	C						
15									234	250	268	244	242	250	254	256	240							
16										284	274	246	236	254	266	264	244							
17									270	286	288	270	252	262	278	270	246							
18									262	258	260	262	252	256	260	246	248							
19									230	248	264	282	254	252	240	260	228							
20									258	276	280	266	258	260	248	256	246							
21									254	264	274	274	266	252	248	256	256							
22									270	282	282	286	266	242	244	246								
23								212	250	294	310	284	274	252	256	260	246							
24									284	334	300	252	248	260	252	266	270							
25									236	260	266	286	264	292	276	272	270							
26								248	240	252	298	278	256	258	264	256	272							
27										282	294		264	262	248	246	258							
28									222	252	270	300	290	266	260	252	262							
29							228		258	248	272	264	272	252	276	248	260							
30									244	266	234	260	280	268	280	256	274							
31								230	254	252	254	294	272	280	276	250	254							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							1	3	16	25	24	23	24	23	23	22	22							
MED							228	230	252	252	269	266	259	256	254	256	246							
U Q								248	260	279	283	284	272	264	266	260	260							
L Q								212	235	245	256	260	251	252	244	246	238							

MAR. 2007 h'F2 (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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 278	244	230	242	234	E B 270	212	210	222	222	224	220	230	202	H 190	194	A	218	212	190	E B 262	E B 270	E B 294	E A 306
2	E B 292	E B 256	234	204	E B 272	E B 268	236	222	210	218	206	196	188	184	H 176	208	A	210	200	210	234	E B 256	E B 284	E B 292
3	E A 282	E A 272	E B 254	220	204	E A 290	230	216	204	202	H 186	H 188	H 186	196	202	196	H 180	212	192	190	E B 266	E B 272	E B 302	E B 308
4	E B 284	E B 252	242	218	194	E B 270	226	208	228	A	186	190	A	A	228	E A 234	A	210	202	208	238	E A 292	E A 314	E B 290
5	E A 290	E B 274	E B 256	220	190	184	222	202	214	218	206	194	E A 234	208	212	200	208	216	208	204	E A 244	E A 266	E B 270	E B 284
6	E B 280	E B 268	E B 252	224	210	216	216	218	222	200	H 178	200	H 186	198	A	210	A	208	196	214	230	E B 296	E B 302	E B 308
7	E A 294	226	204	230	E B 280	E B 278	236	212	214	196	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	204	190	182	H 180	C	C	C	C	C	C	C	C	C	C	C
15	E A 264	230	222	218	204	208	206	218	208	192	H 176	H 180	H 170	184	200	218	214	212	196	220	230	E B 276	E B 272	E B 268
16	E B 258	226	236	216	206	242	220	H 198	H 190	204	202	192	214	190	194	218	218	224	210	204	214	E B 246	E B 282	E B 290
17	E B 288	E B 278	E B 248	210	196	E B 270	216	218	216	224	210	192	190	204	H 190	198	206	216	202	194	234	238	E B 266	E A 300
18	E A 260	E B 256	226	214	204	226	208	210	206	208	204	188	192	192	H 184	206	212	218	204	214	E B 252	E B 268	E B 280	E B 288
19	E B 270	E B 256	E B 250	218	210	238	214	220	H 186	194	190	H 192	202	H 176	186	190	H 186	212	208	204	E A 280	E B 260	E B 252	E B 298
20	E B 246	246	246	240	202	E B 236	210	218	H 190	202	202	188	180	200	206	198	202	222	204	186	232	E A 270	E B 274	E B 252
21	E B 270	E B 242	240	212	190	E B 222	202	218	216	210	202	194	198	196	202	208	228	216	204	194	216	E B 266	E B 280	E B 276
22	E B 274	E B 226	224	216	E B 202	E B 220	210	208	214	212	198	H 186	204	H 188	192	192	220	H 198	198	204	226	E B 262	E B 286	E A 284
23	E B 262	E B 270	E B 256	E B 244	220	234	194	184	H 194	202	218	H 184	224	188	196	H 184	212	226	212	198	208	246	E B 254	E B 262
24	E B 266	E B 290	E B 276	242	214	214	218	222	218	206	194	210	210	192	188	H 186	H 192	230	234	234	196	E B 266	E B 264	E B 290
25	E B 260	E B 280	E B 274	208	E B 258	E B 254	228	H 192	202	H 182	198	E A 246	202	210	206	208	220	236	224	202	190	E A 270	E B 282	E B 266
26	E B 282	E B 266	E B 276	226	206	E B 260	222	220	216	212	204	216	200	A	A	A	222	230	220	226	218	208	E B 248	E B 272
27	E B 276	E B 250	E B 258	E A 290	E B 276	E B 258	208	212	220	212	218	260	H 190	A	A	212	A	236	228	220	208	202	E B 274	E B 280
28	E B 272	E B 258	E B 252	E B 266	218	234	208	214	A	204	208	202	H 186	194	214	210	234	238	208	202	202	E A 272	E B 302	E B 260
29	E A 278	E B 276	E A 286	240	214	E B 244	198	H 200	H 196	A	E A 246	192	A	212	194	204	214	228	210	212	210	212	E A 278	E A 298
30	E B 268	E B 260	E B 252	232	210	E B 254	218	232	212	206	192	172	182	176	182	222	210	226	226	216	204	E B 246	E B 276	252
31	E B 262	242	E B 250	E B 248	E B 248	238	210	202	204	196	196	180	208	182	192	206	222	218	230	202	188	E B 248	E B 308	E B 282
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	24	24	24	24	24	24	24	23	23	24	24	22	20	20	22	18	23	23	23	23	23	23	23
MED	E B 273	E B 256	E 250	220	207	E B 240	215	213	212	204	201	192	193	193	194	206	213	218	208	204	217	E B 266	E B 280	E B 284
U Q	E B 282	E B 271	E B 256	E B 241	E B 227	E B 264	222	218	216	212	207	201	208	201	204	210	220	228	220	214	E 238	E B 270	E B 294	E 298
L Q	E B 263	243	235	216	203	224	208	205	H 202	200	191	187	H 186	186	189	196	H 206	212	202	198	208	246	E B 270	E B 268

MAR. 2007 h'F (KM)

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IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 h'E (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

MAR. 2007 h'E (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 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	118	116	B	B	94	B	B	144	162	124	124	124	106	104	102	102	102	100	104	98	B	140	100	96
2	B	B	B	B	B	B	B	138	128	118	120	100	102	100	104	100	96	96	B	B	96	B	94	102
3	104	102	102	100	104	94	B	164	158	100	100	100	98	102	102	106	102	G	B	B	94	B	B	B
4	B	94	90	94	96	B	144	126	122	124	122	106	162	104	106	172	100	164	98	98	98	88	98	104
5	100	B	B	B	B	B	B	176	164	136	120	116	106	104	106	104	108	104	100	102	98	100	B	106
6	B	B	B	B	B	B	B	152	168	100	98	114	104	102	94	92	90	100	94	B	108	B	144	B
7	96	96	96	B	B	B	98	134	132	156	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	104	104	104	104	C	C	C	C	C	C	C	C	C	C	C
15	94	98	98	B	B	90	B	118	120	112	100	100	110	106	122	106	106	108	98	92	96	94	88	88
16	B	96	98	88	B	98	98	96	150	112	98	96	100	98	106	106	102	98	98	96	B	B	B	B
17	B	B	B	B	B	B	158	148	134	112	104	104	104	102	102	100	104	100	98	94	B	98	96	98
18	88	94	90	90	B	B	148	146	142	120	116	102	98	92	92	100	86	90	84	96	B	B	B	B
19	B	98	96	B	B	B	146	134	114	100	156	96	144	102	96	112	112	114	104	92	96	B	100	B
20	B	B	B	B	B	B	146	162	98	150	136	98	96	94	90	102	G	138	98	98	98	96	94	96
21	B	B	94	94	B	B	138	140	166	104	100	100	100	100	96	92	90	88	86	90	102	90	B	B
22	B	B	B	B	B	B	B	164	102	100	102	102	100	94	100	92	168	G	B	B	B	B	B	100
23	B	B	B	B	B	B	144	G	100	100	160	148	158	98	154	G	86	88	B	B	B	B	B	B
24	B	B	B	B	B	B	146	152	164	124	126	100	100	92	92	94	98	132	B	B	B	B	B	B
25	B	B	B	B	B	B	B	G	114	104	102	150	102	G	100	100	156	116	86	108	90	92	B	B
26	B	114	B	B	B	B	136	146	100	106	126	118	122	122	120	114	106	106	106	104	98	104	B	B
27	124	110	118	B	B	B	144	140	100	124	118	118	112	106	148	88	92	120	118	110	B	B	B	B
28	94	B	B	112	90	B	140	148	122	104	102	102	102	102	100	102	102	98	96	92	92	108	B	B
29	100	100	100	110	98	96	G	122	118	106	102	102	90	96	100	92	102	128	B	B	B	104	100	108
30	B	B	B	92	94	96	166	104	170	100	98	100	100	100	98	96	94	92	90	94	B	B	B	B
31	B	B	B	B	B	B	B	106	104	104	106	104	102	100	98	100	104	146	B	B	B	B	B	B
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	9	11	10	8	6	5	14	22	24	25	24	24	24	22	23	22	22	21	16	15	12	11	9	9
MED	100	98	97	94	95	96	144	142	125	106	105	102	102	101	100	100	102	104	98	96	97	98	98	100
U Q	111	110	100	105	98	97	146	152	160	124	123	115	108	104	106	106	106	124	102	102	98	104	100	105
L Q	94	96	94	91	94	92	138	126	109	102	101	100	100	98	96	94	94	97	92	92	95	92	94	96

MAR. 2007 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2007 TYPES OF Es 135°E MEAN TIME (G.M.T. + 9 H)

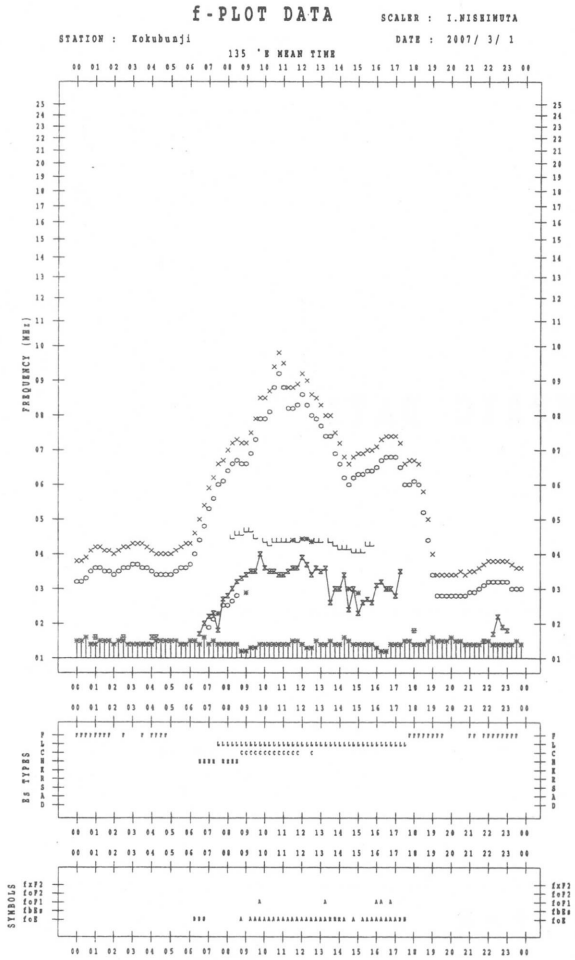
LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

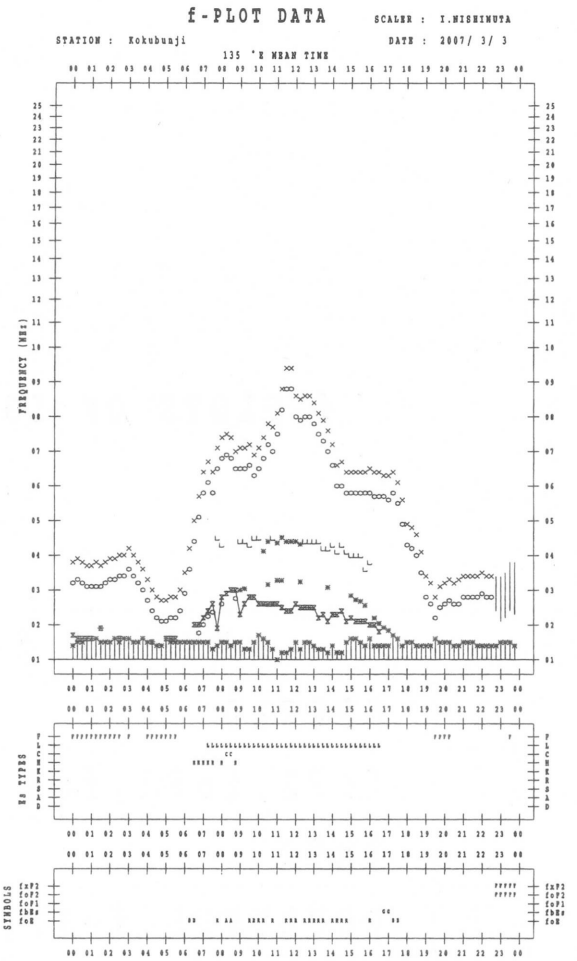
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F 2	F 1			F 3			H 2	HL 21	CL 11	CL 11	CL 11	L 2	L 1	L 1	L 2	L 2	L 5	F 2	F 1		F 1	F 2	F 3
2								H 2	CL 11	CL 11	CL 11	L 3	L 2	L 2	L 2	L 2	L 3	L 2			F 1		F 2	F 2
3	F 2	F 3	F 1	F 1	F 1	F 2		H 2	HL 11	L 2	L 2	L 2	L 2	L 2	L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

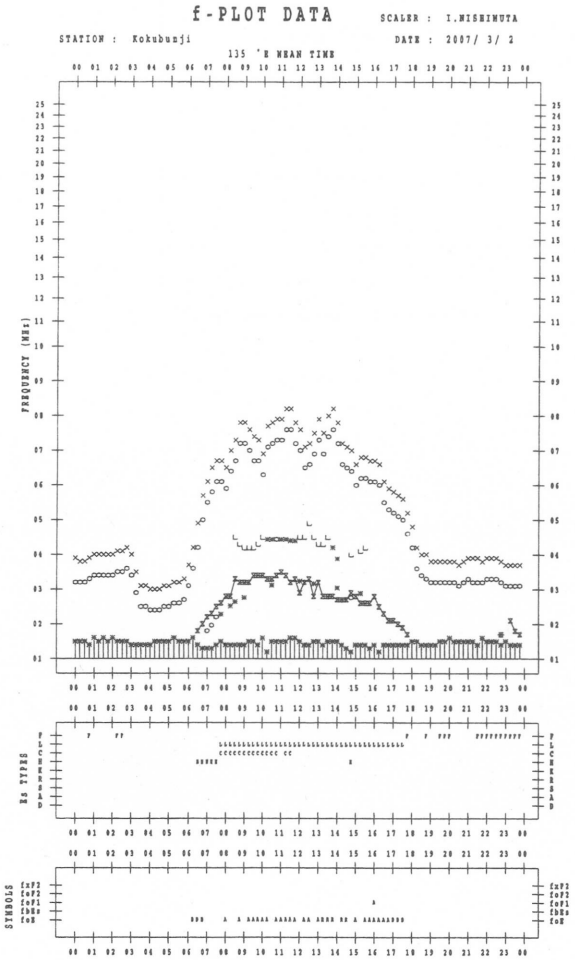
MAR. 2007 TYPES OF Es

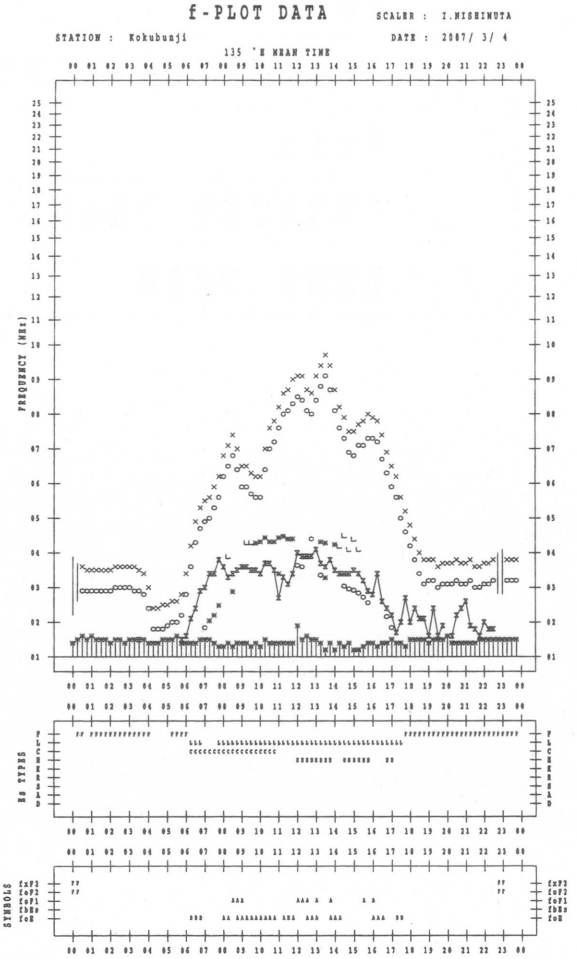
f-PLOTS OF IONOSPHERIC DATA

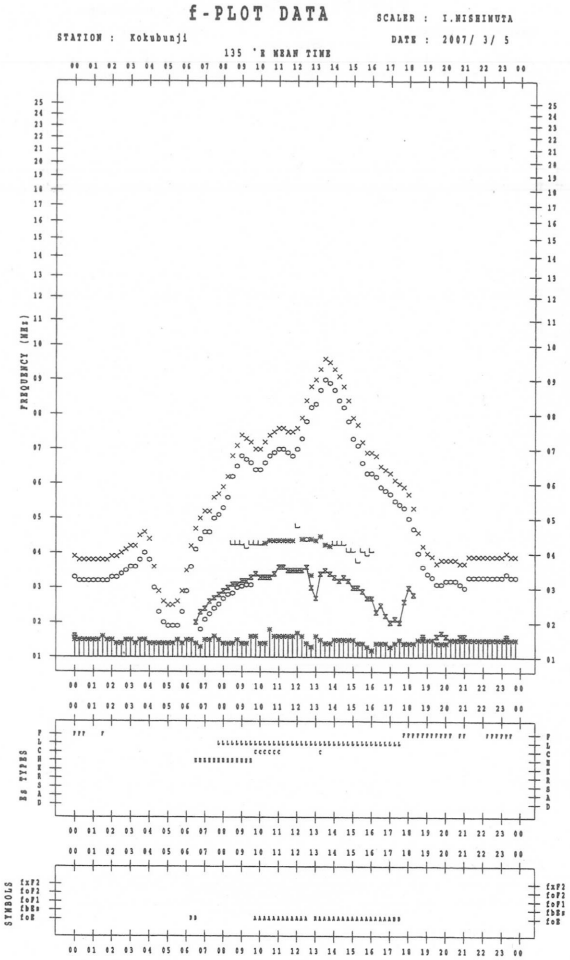
KEY OF f-PLOT	
	SPREAD
	foF2, foF1, foE
	fxF2
	DOUBTFUL foF2, foF1, foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN

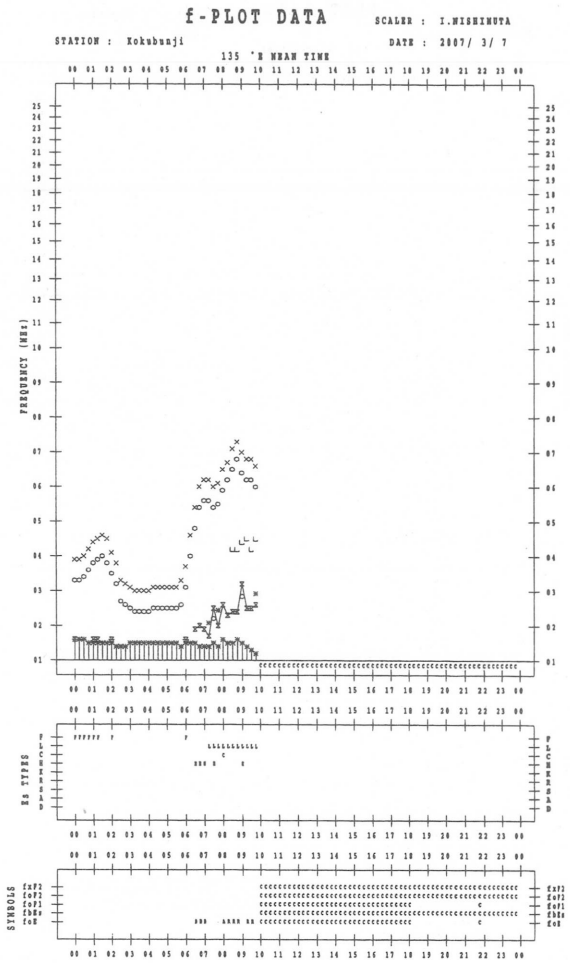

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

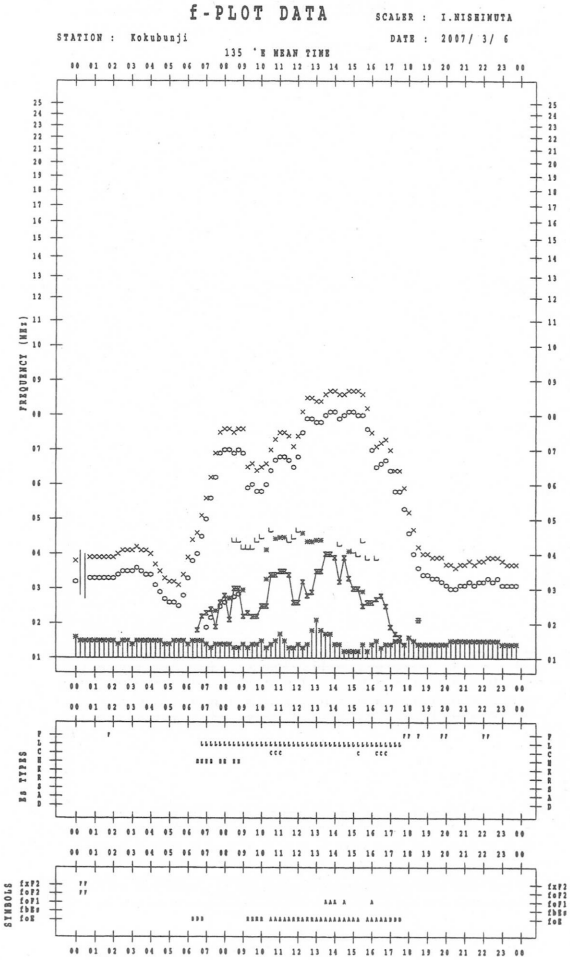

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

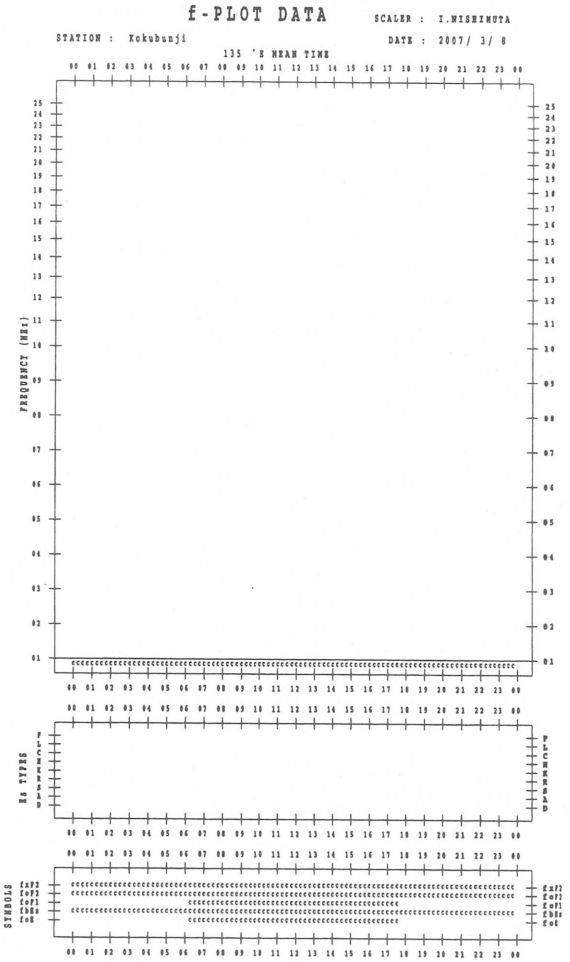

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

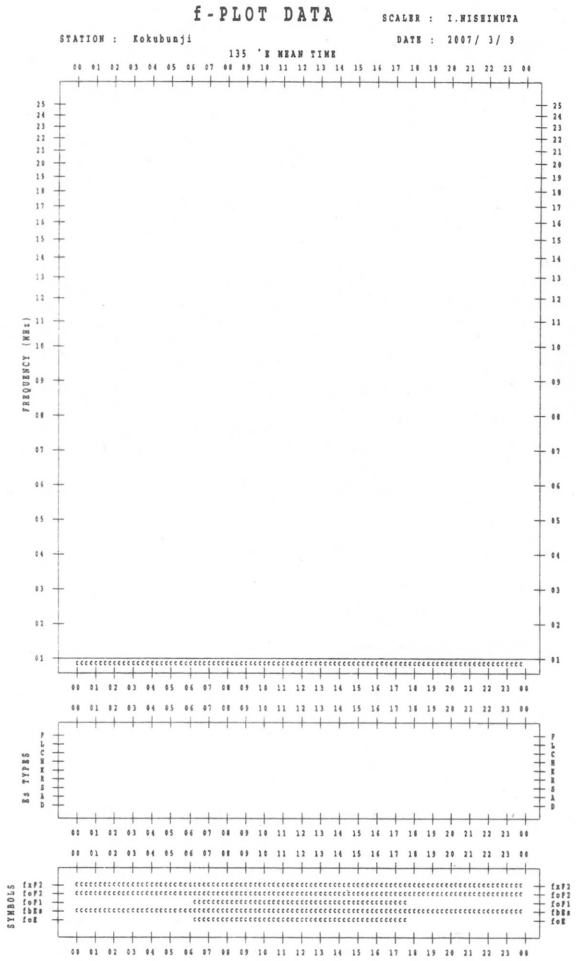

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

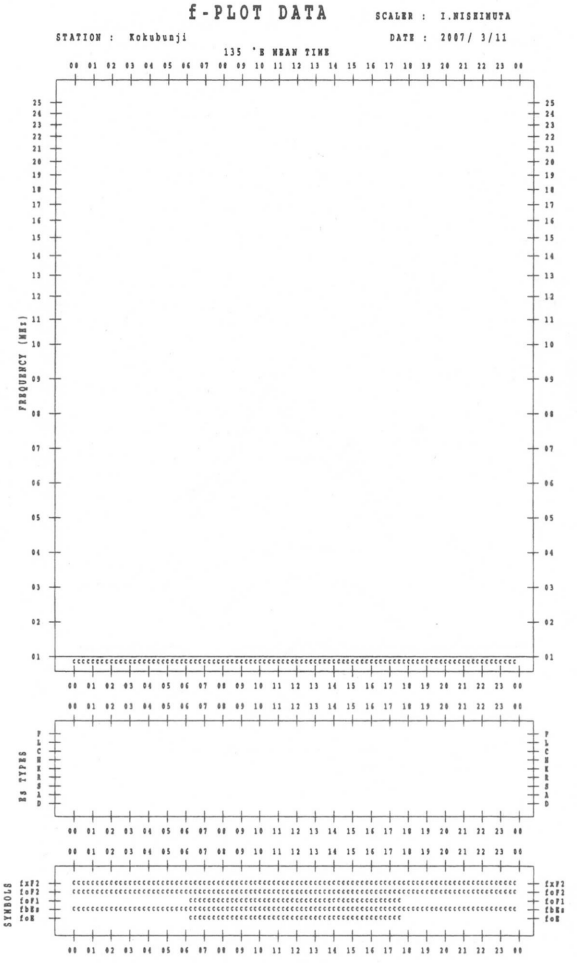

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

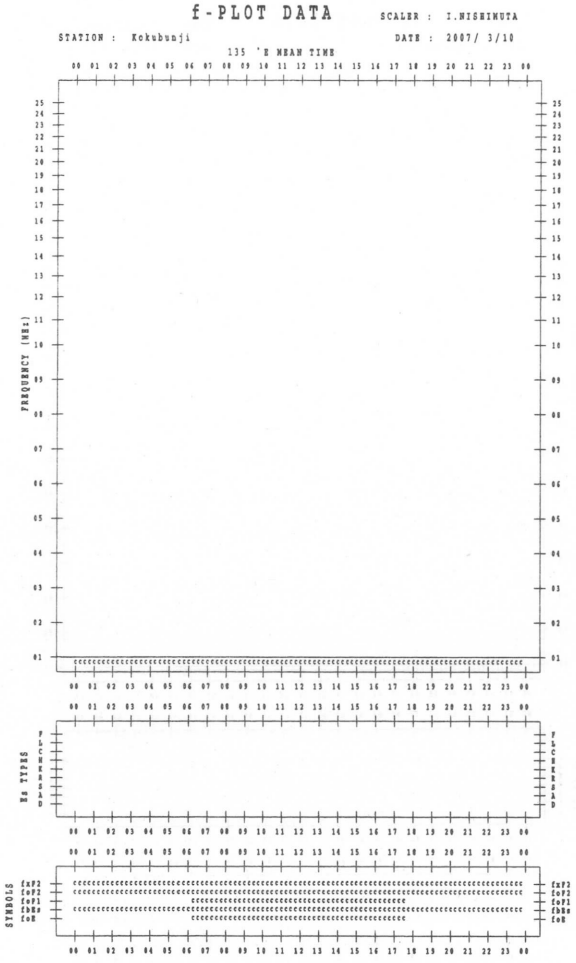

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

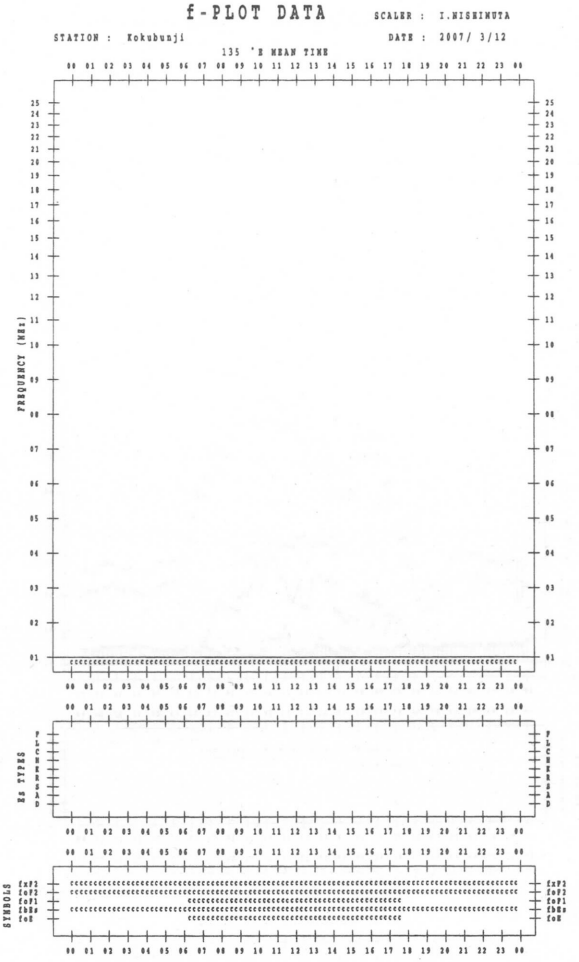

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

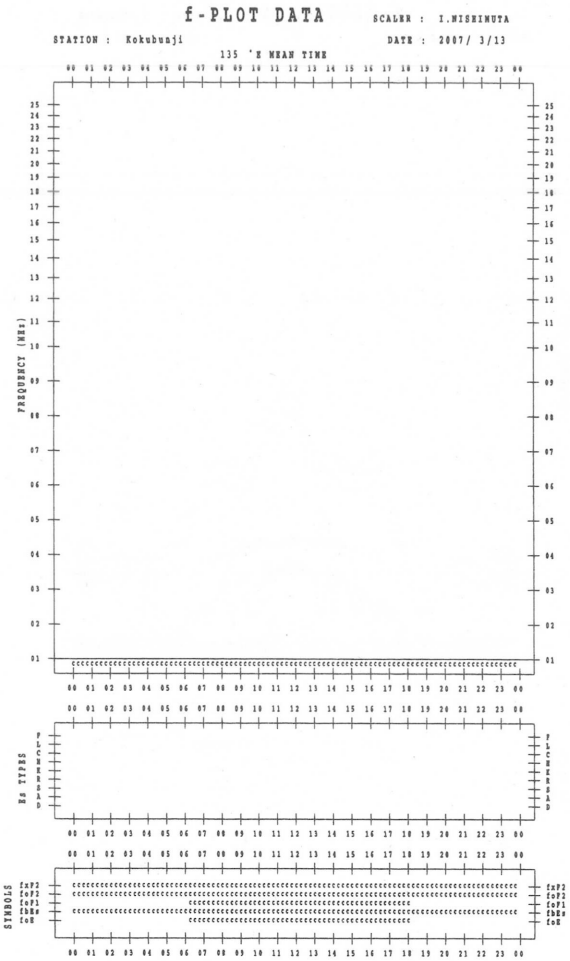

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

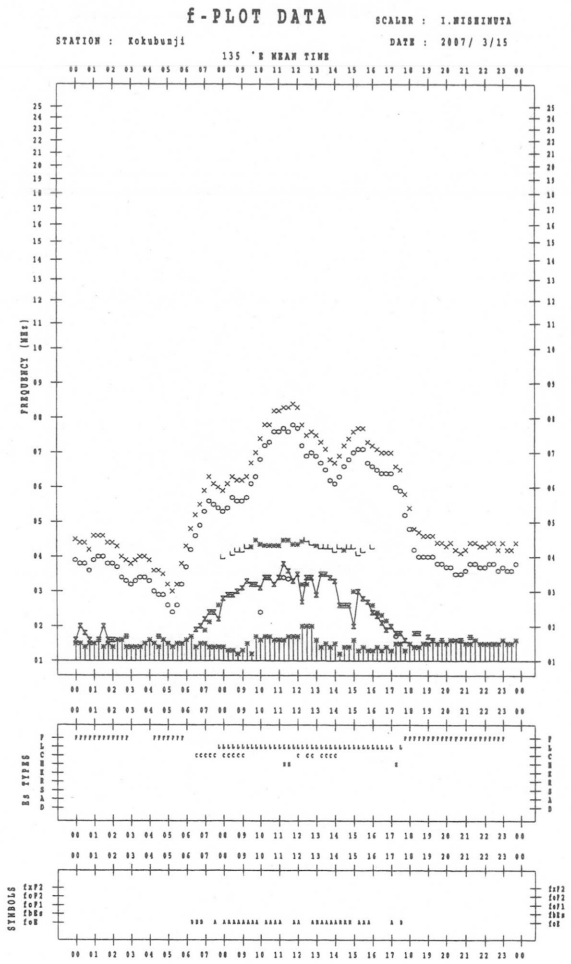

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

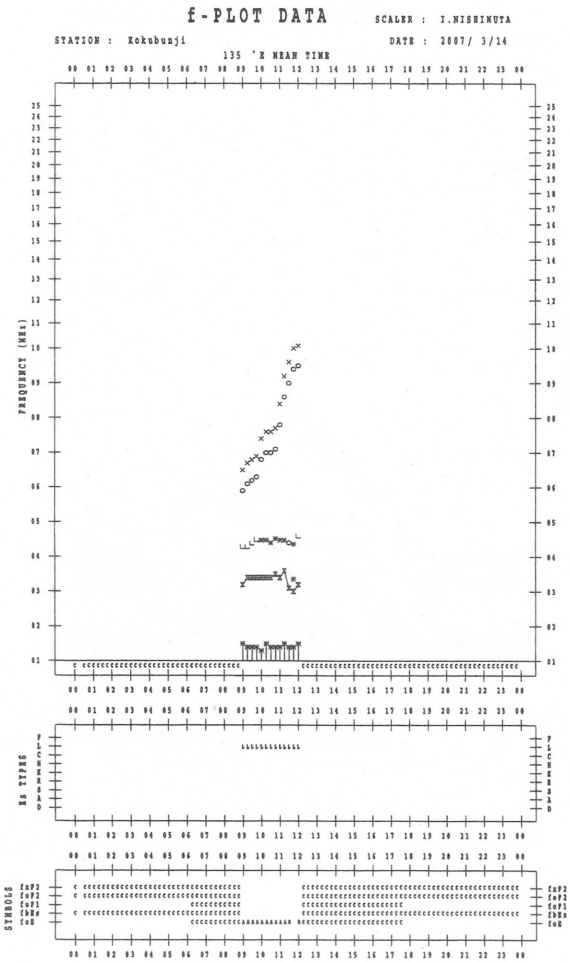

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

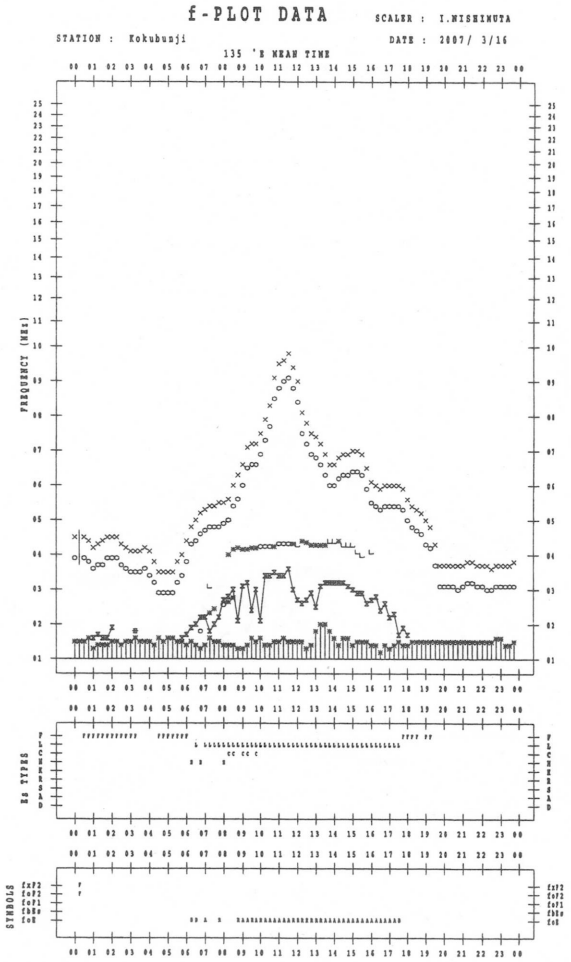

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

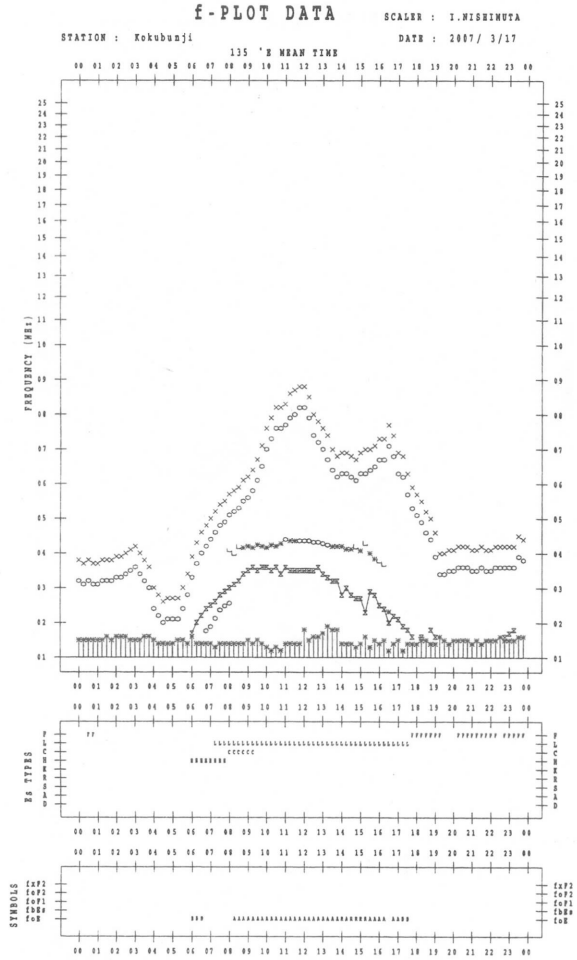

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

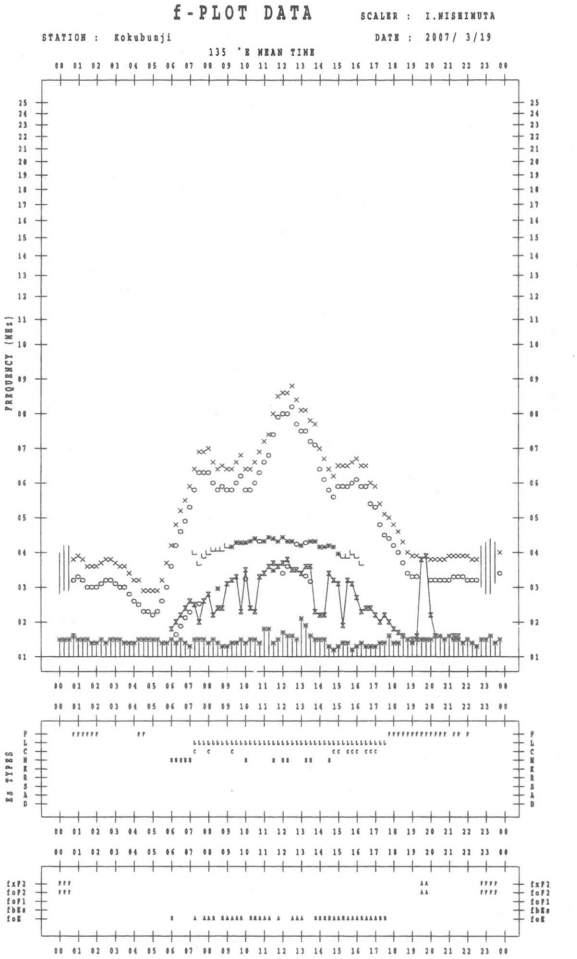

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/13
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

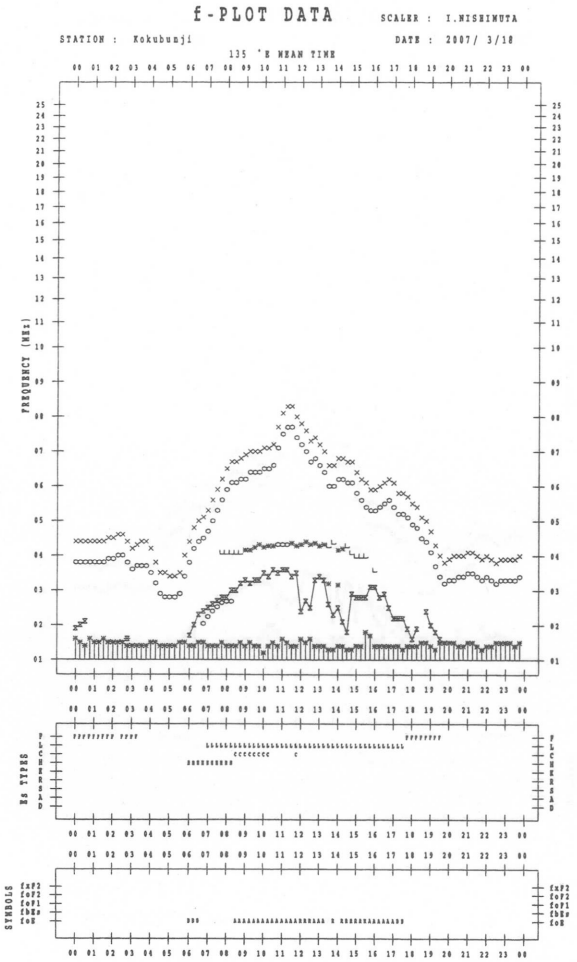

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/15
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

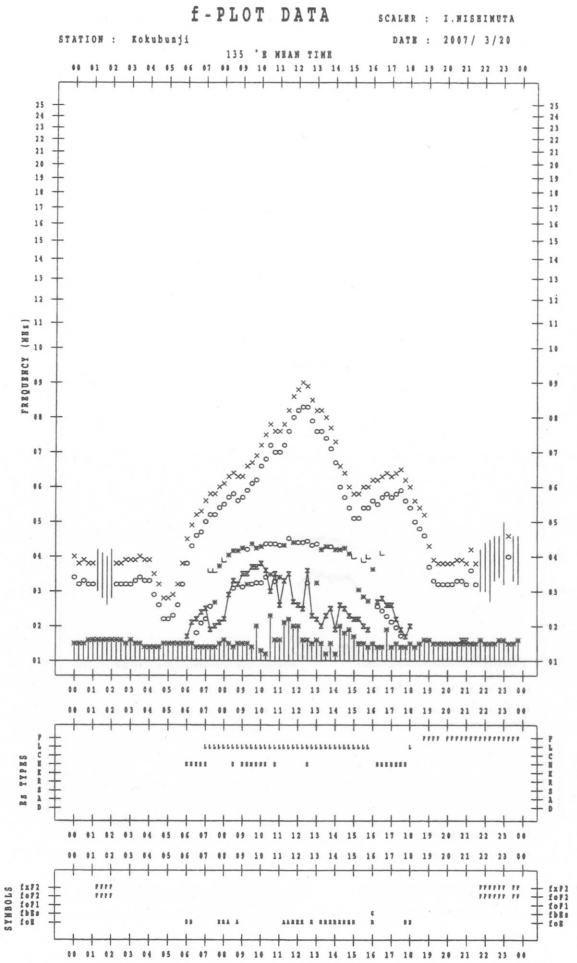

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/14
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/16
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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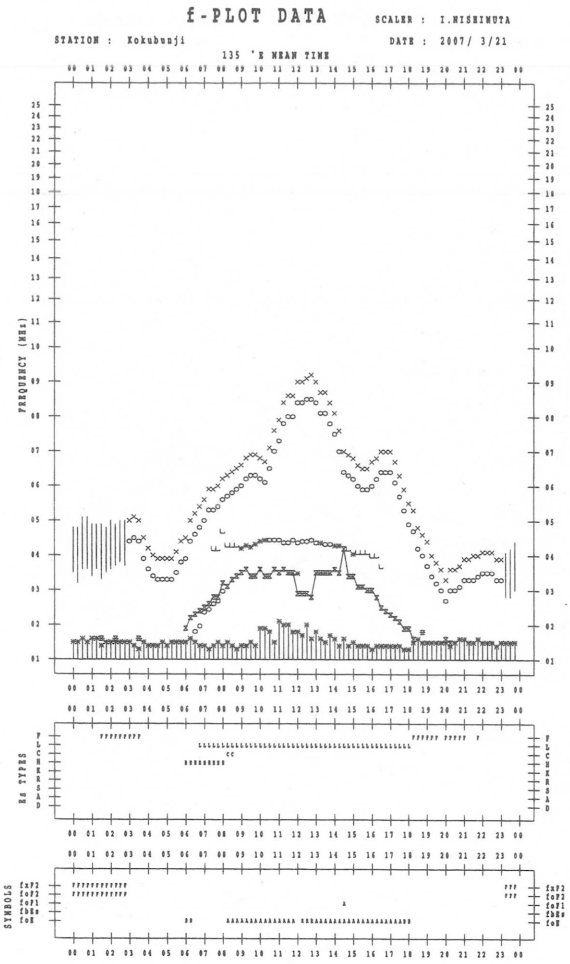
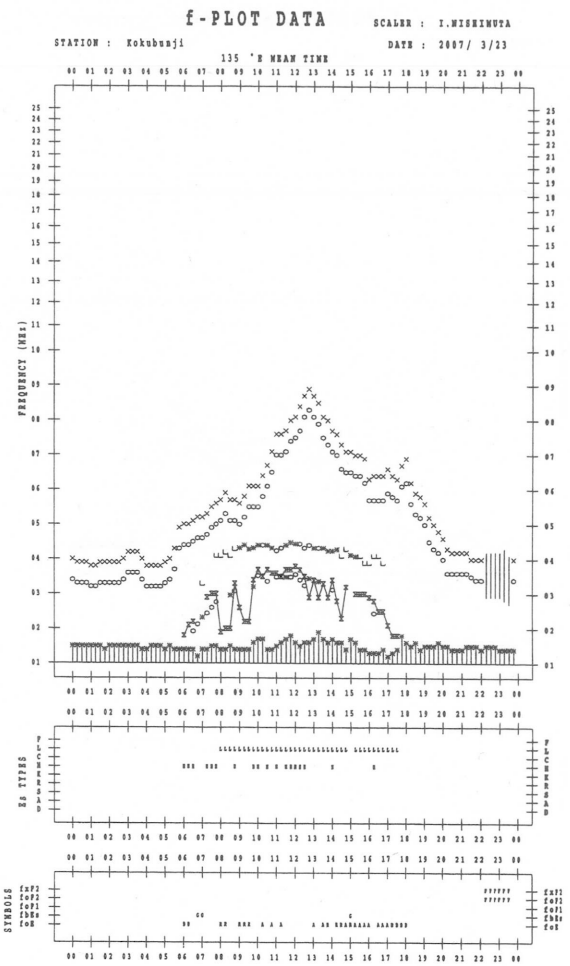
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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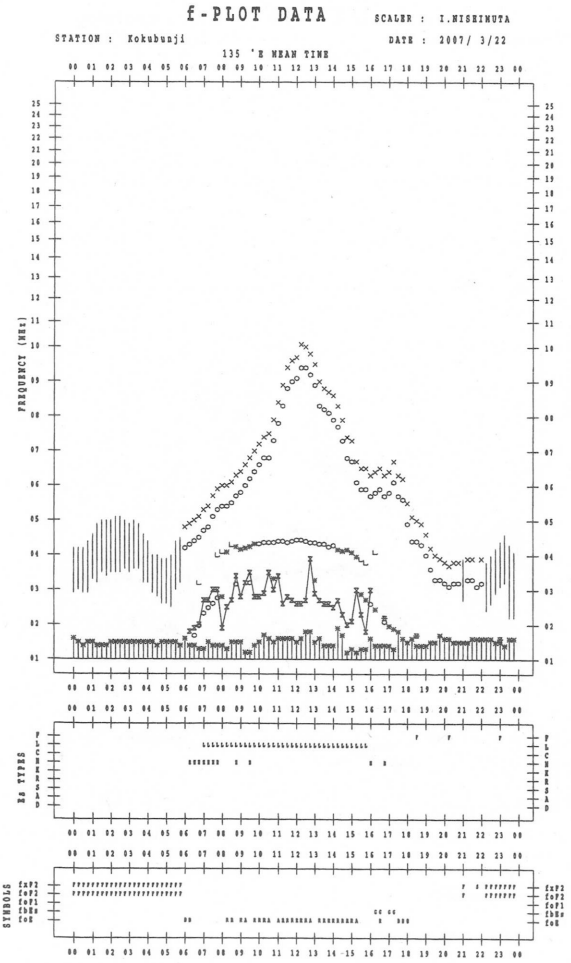
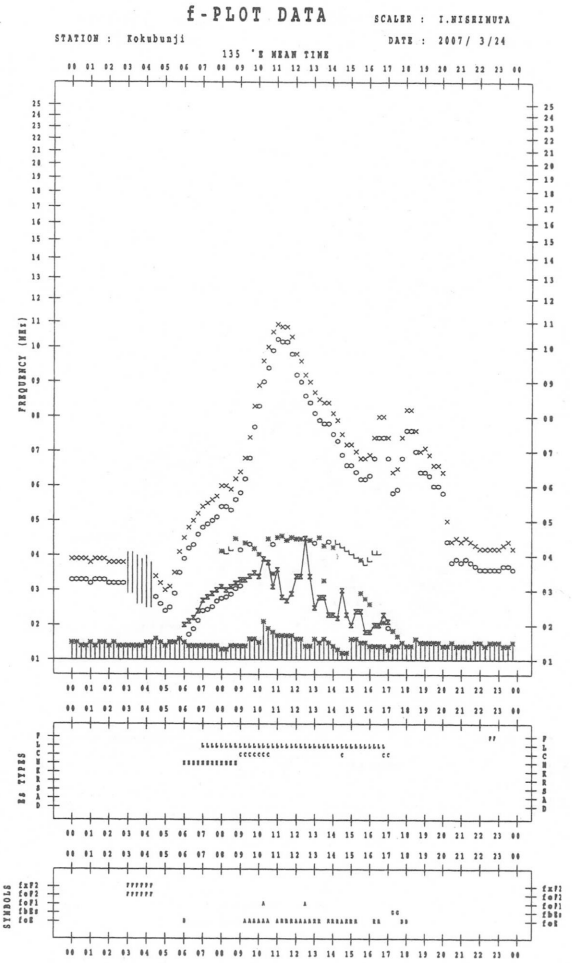
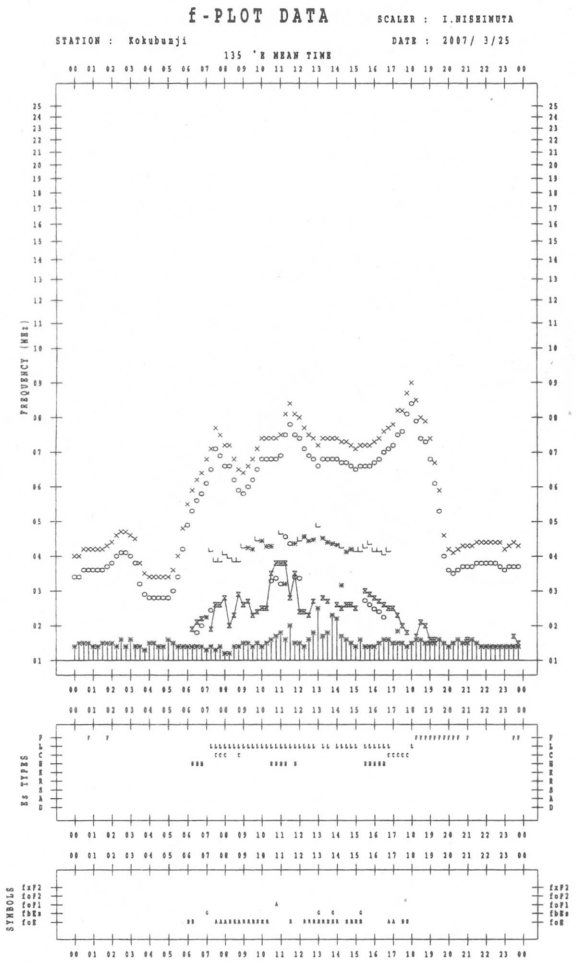
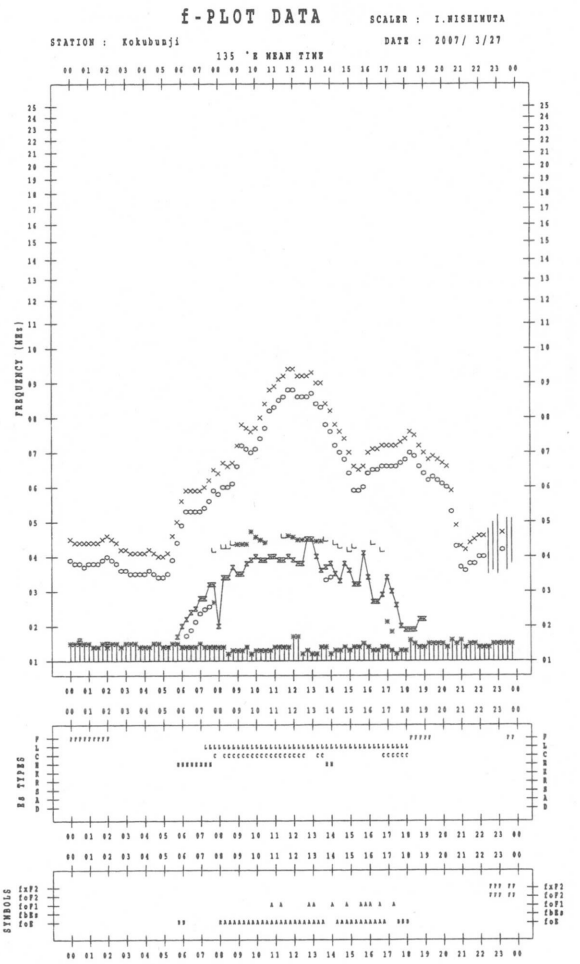
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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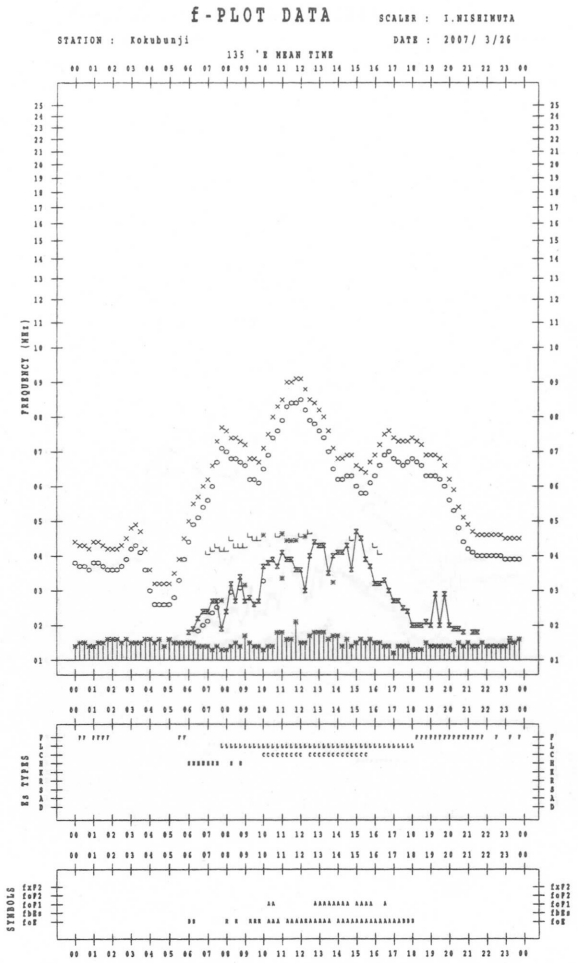
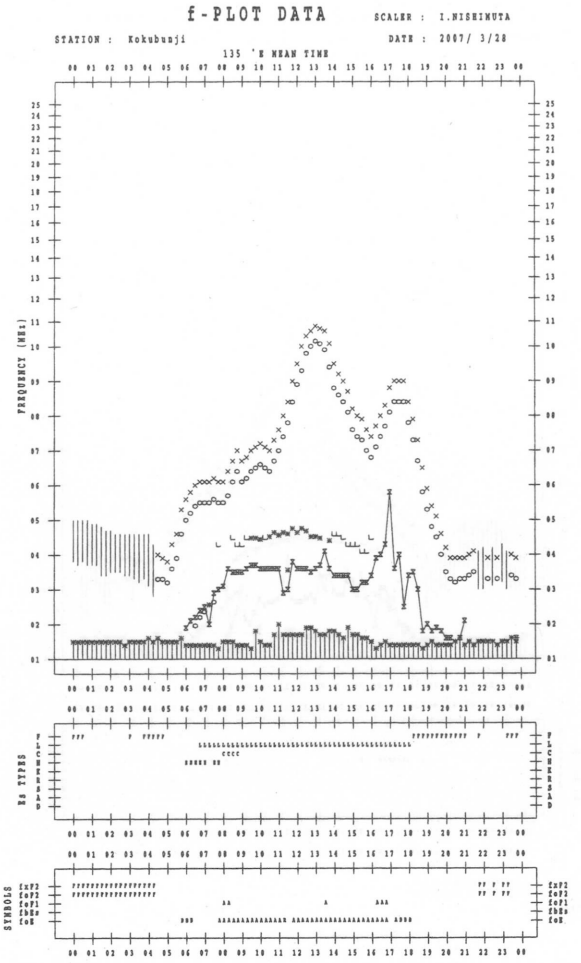
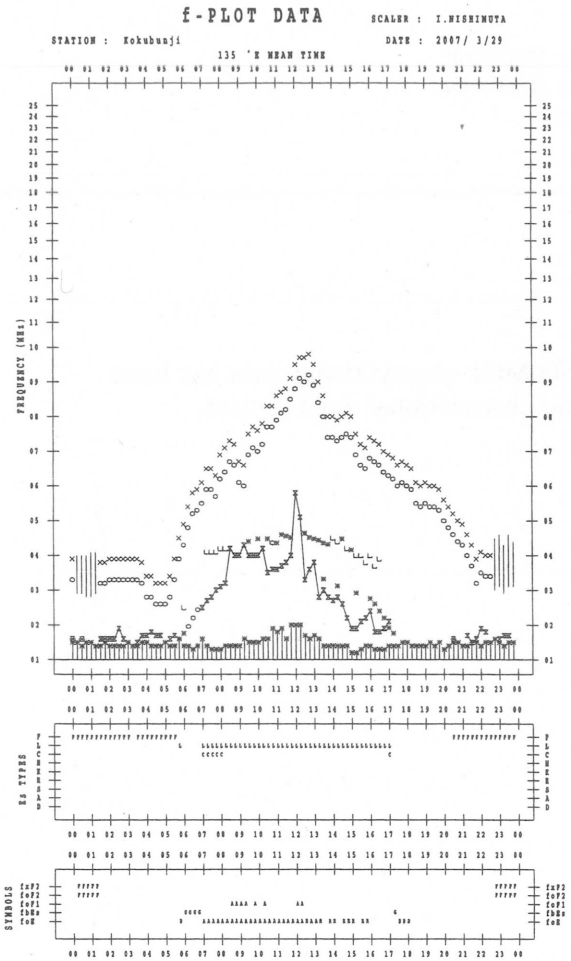
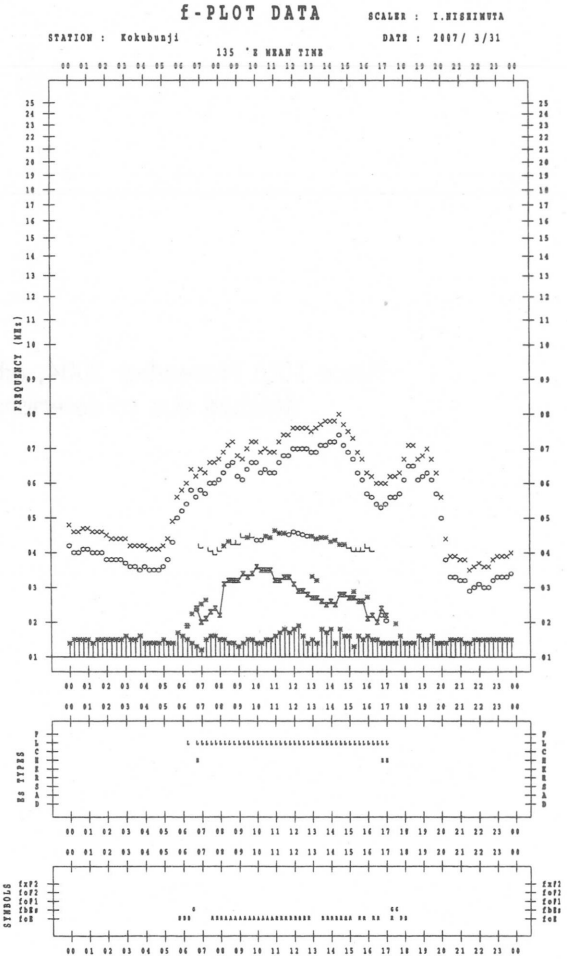
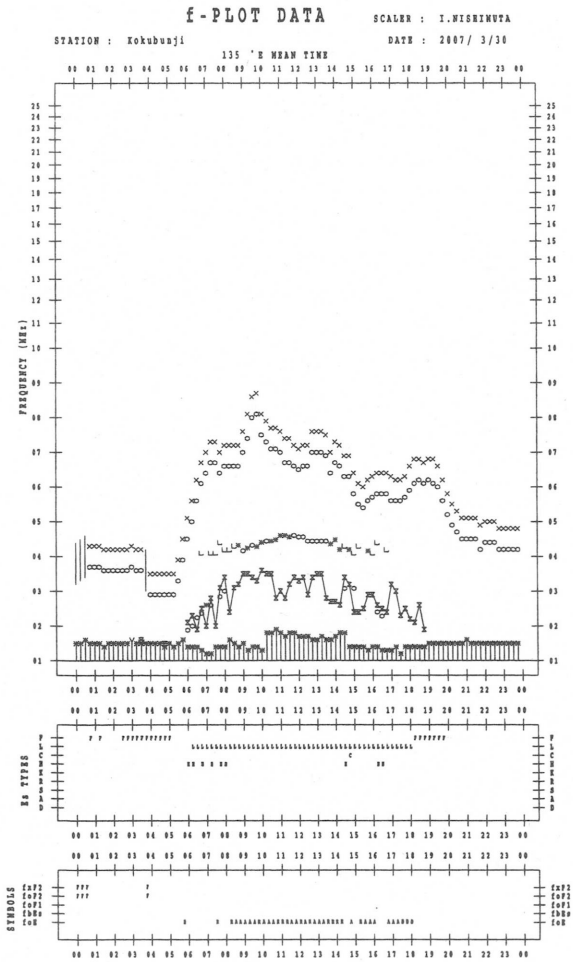
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 3/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 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 2007

Single-frequency observations

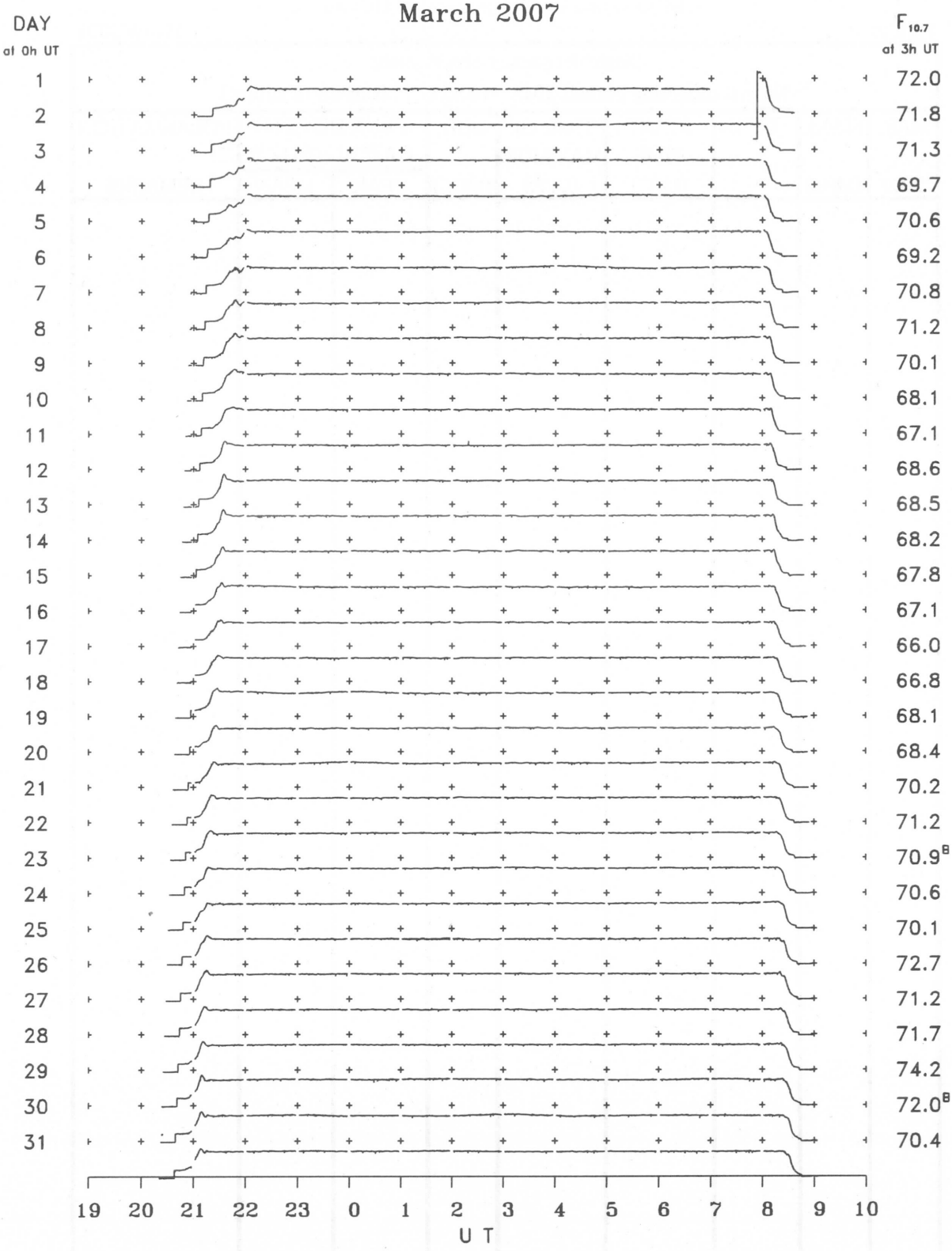
Normal observing period: 2045 - 0850 U.T. (sunrise to sunset)

MAR. 2007	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

B. Solar Radio Emission

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

March 2007



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

IONOSPHERIC DATA IN JAPAN FOR MARCH 2007
F－699 Vol.59 No.3 (Not for Sale)

電離層月報 (2007年3月)
第59巻 第3号 (非売品)
2007年 6月 8日 印刷
2007年 6月 15日 発行

編集兼 独立行政法人情報通信研究機構
発行所 〒184－8795 東京都小金井市貫井北町4丁目2－1
☎ (042) (327) 7 5 4 0 (直通)

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