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IONOSPHERIC DATA IN JAPAN

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CONTENTS

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INTRODUCTION

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

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

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

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

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

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

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

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

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

K Presence of particle *E* layer.

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

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

N Conditions are such that the measurement cannot be interpreted.

O Measurement refers to the ordinary component.

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

Q Range spread present.

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

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

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

V Forked trace which may influence the measurement.

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

X Measurement refers to the extraordinary component.

Y Lacuna phenomena, severe layer tilt.

Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

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

D Greater than.

E Less than.

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

M Mode interpretation uncertain.

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

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

U Uncertain or doubtful numerical value.

X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

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

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

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

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

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

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

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

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

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

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

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

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

Median count (**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

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

HOURLY VALUES OF fEs AT Wakkanai

APR. 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		33	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
2	G	28	G	G	G	G	28	36	G		45	44	G	G	G	G	G	G	G	G	G	G	32	G
3	G	G	G	G	G	G	29	36	44	44	G	46	G	G	G	G	G	G	G	24	G	G	G	G
4	G	G	G	G	28	G	G		G	41	40	G	G	G	G	49	G	G	G	G	G	G	28	28
5	G	G	G	G	G	G	G	G	G		G	G	G	G	G	G	G	30	G	G	G	G	G	G
6	G	G	G	G	G	G	32	G	G	G	G	G	G	N	G	G	G	G	G	G	G	G	G	G
7	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	29	G	G	G	G	G	G
8	G	G	G	G	G	G			40	G	43	G	G	G	G	G	G	G		G	G	G	G	G
9	G	G	G	G	G	G	33	36	35	G	G		G	G	G	G	G	34	28	G	G	G	G	G
10	G	G	G	G	G	G	34	38	G	G	G	G	40	G	G	N	G	G	G	G	G	G	G	G
11	G	G	G	G	G	G	28	32	G	G	G	41	G	G	G	G	G	G	G	G	G	G	G	G
12	G	G	G	G	G	G	G	G	G	G	G	G	39	40	G	G	39	35	G	G	G	G	G	G
13	24	G	G	G	G	G	G	G	G	G	G	G	G	G	41	47	70	69	40	34	37	28	34	28
14	31	36	33	40	48	G		38	43	46	46	46	G	G	49	44	42	G	28	30	G	G	G	G
15	G	G	G	G	G	G	G	G	G	G	G	G	G	39	G	G	G	G	G	G	G	G	G	G
16	G	G	G	G	G	G	G	36	G	G	G	G	G	G	G	G	G	G	28	26		G	G	G
17	G	G	G	G	G	G	30		36	G	G	G	G	G	39	G	G	G	29	11	G	G	G	G
18	G	G	G	G	G	G	32	G	G	40	G	39	G	G	G	G	G	39	31	28	24	26	26	28
19	26	29	G	G	G	G	34	37	52	40	77	48	56	66		50	45	58	65		44	39	80	65
20	39	40	57	39	26	G	35	61	59	69	53	42	G	60	51	G	G	52	33	34	26	G	G	G
21	G	G	28	G	G	G	30	G	G	G	G	G	G	G	G	G	G	36	30	28	30		G	G
22	G	G	G	G	30		36	40	G	G	G	G	40	49	47	52	38	G	30	26	29	G	G	G
23	G	26	30	G	G	28	G	G	G	46	58	G	G	G	G	G	G		G	G	30	33	38	48
24	30	G	25	29	G	G	39	52	53	48	G	G	G	44	58	45	68	34	52	42	G	33	G	G
25	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	31	32	35	G	G	G	G
26	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
27	G	G	G	G	36	28	34	G	G	G	G	44	G	G	G	G	39	35	32	G	G	G	G	G
28	G	G	G	24	G	29	G	40	G	G	40	G	G	G	G	G	G	G	G	G	G	G	G	G
29	23	G	G	24	11	30	G	43	42	44	G	G	G	G	G	G	G	G	G	G	25	29	27	G
30	24	G	G	G	G	G	G	G	G	G	G	41	G	G	G	G	G	G	G	G	G	G	G	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	29	27	27	30	28	30	29	30	29	29	29	30	29	29	29	29	29	30	30
MED	G	G	G	G	G	G	28	32	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
U Q	G	G	G	G	G	G	33	38	36	40	40	41	G	G	G	G	G	34	30	27	24	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

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

HOURLY VALUES OF foF2 AT Kokubunji

APR. 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		28	28	31	27	27	46	57	52	56	48	62	73	71	82	91	69	59	61	54	51	A	42	37
2	42	44	39	42	30	34	49	52	66	76	74	63	65	75	85	77	63	65	66	54	39	A	A	33
3	37	41		32	31		48	54	61	72	81	80	90	91	78	68	74	64	57	54	47	41	36	A
4	A	38	31	34	30	32	42	45	A	52	A	62	69	73	73	65	46		55	62	60	39	39	41
5	32	32	36	37	30	30	34		52	53	56	67	67	69	67	62	54	50	52	56	48	34	32	32
6	32	31	30	30		27	41	45	56	60	61	63	56	68	68	55	52	51	49	47	49	47	35	46
7	36	30	32	32	32	32	43	51	56	59	63	51	66	74	66	59	54	52	49	48	44	42	43	44
8	44	42	36	34	32	32	41	47	54	55	65	66	71	64	66	56	59	55	53	44	39	36	34	38
9	38	38	32	34	25	28	45	52	52	55	54		62	76	82	71	58	51	52	52	49	48	44	44
10	44	41	43	32	23	27	45	53	51	60	64	64	58	58		69	65	62	62	64	48	44	38	32
11	32	30	30	32	27	30	41	55	52		57	56	67	67	67	66	65	65	66	71	57	30	37	37
12	37	34	37	34	30	30	46	51	58	53	59	61	67	56	75	A	A		A	A	A	A	42	42
13	39	42	41	43	28	30	47	58	54	62	63	63	64	72	72	73	61	62	63	55	A	A	A	32
14	37	34	34	34	28	34	47	49	48	A	56	68	70			60	62	58	59	52	47	32	39	37
15	36	36	34	39	34	28	42	46	48	57	66	67	76	69	59	56	66	57	54		52	33	42	41
16	39	36	34	34	27	28	45	52	56	58	66	61	67	72	65	63	59	58	51	57	52	46	36	32
17	32	32	34	32		24	49	57	57	51	59	48	62	68	62	65	59	47	47	55	54	44	44	46
18	42	42	42	34		28		52	40	54	59	67	65		77	68	57	55	50	48	49	47	45	
19		41	32	28	A	34	52	57	66	64	A	78	A	74	70	64	A	61	A	66	65	49	42	A
20	39		34	34	A	39	39	54	A	61	A	63	76		80	71	68	65	52		48	45	42	45
21	41	41	39	35	27		45	55	60	76	72	84	82	78	62	55	57	62	68	55	54	50	51	47
22	44	42	43	39	27	32	52	55	67	62	A	66		63	61	60	59	59	51	62	61	32	45	47
23	47	45	21	42	36	41	46	59	64	54	67	64	74	72	74	85	A	A	A		54	49	47	
24	48	45	A	A	27	A	53	58	59	56	62		52	57	62		A	61	66	40	54	A	49	51
25	A	44	49	39		32	49	55	49	57	66	71	80	85	90	81	71	A	A	A	50	49	45	
26			38	34	32	36	53	54	56	62	67	74	83	87	85	81	63	56	57	66	66	43	34	42
27	43	39	32	34	32	31	52		69	66	59	62	64	73	77	75	77	79	63	63	61	51	44	48
28	48	44	43	37	34	39	49	74	62			64	90	96	78	69	66	67	76	87	63		43	46
29	42	43	38	42	32	40	40	59	59		54	67	62	71	85	91	78	83	80	61	54	52	52	44
30		48	46		39	26	41	49			56	A	61	67	76	82	71	66	58	67	64	47	41	38
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	24	28	28	28	24	27	29	28	27	25	25	27	28	27	28	28	26	26	26	25	28	24	28	25
MED	39	41	35	34	30	31	46	54	56	58	62	64	67	72	74	68	62	60	57	55	52	44	42	42
U Q	43	42	40	38	32	34	49	57	61	62	66	67	75	75	79	76	68	65	63	63	58	48	44	46
L Q	36	34	32	32	27	28	41	51	52	54	56	62	63	67	66	61	58	55	52	52	48	37	37	37

HOURLY VALUES OF fEs AT Kokubunji

APR. 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	G	G	G	G	G	G	30	50	40	G	G	G	G	48	G	G	G	G	28	G	49	36	23	29
2	33	33	G	G	G	G	29	38	45	57	57	53	60	65	39	G	G	38	65	40	30	37	29	33
3	30	G	G	G	G	G	29	37	53	50	52	48	42	G	53	G	G	30	27	26	G	G	70	39
4	39	30	G	27	30	36	29	43	59	40	73	50	52	72	G	43	34		31	G	G	G	G	29
5	G	26	29	G	G	G	G		G	G	G	44	48	53	G	G	G	34	G	28	G	G	G	G
6	G	G	G	G	G	G	G	G	G	G	G	G	G	G	N	G	G	G	23	G	G	G	G	G
7	G	G	G	G	G	G	G	G	G	G	G	G	G	N	39	G	G	37	G	25	G	G	G	G
8	G	G	G	G	G	G	29	G	G	G	47	G	G	G	G	G	G	G	G	G	G	G	G	G
9	G	G	G	G	G	G	36	G	G	G	G		G	G	G	40	36	G	G	G	28	23	G	G
10	G	G	G	G	G	G	34	40	47	38	G	46	45	G		G	45	57	54	24	27	G	G	G
11	G	G	G	G	G	G	29	45	47	50	49	48	G	G	G	G	G	G	27	G	G	G	G	G
12	G	G	G	G	G	G	39	G	42	48	G	48	G	G	48	123	96	127	72	78	70	57	34	39
13	24	G	G	G	24	G	33	42	47	54	51	40	50	45	G	G	45	37	51	56	60	52	45	G
14	G	G	33	24	G	G	G	40	45	61	51	61	59	82	65	52	39	45	31	G	29	22	G	26
15	G	29	G	G	23	G	31	35	44	49	G	G	G	G	G	G	34	G	39	39	67	28	28	27
16	G	G	G	G	G	G	G	G	G	G	47	45	G	45	G	G	G	G	G	G	G	G	G	G
17	G	G	G	G	G	G	G	G	G	G	G	G	42	43	G	G	G	33	30	22	G	G	G	G
18	G	G	G	G	G	G		39	G	G	G	50	G	56	57	45	G	35	31	35	37	36	50	43
19	32	29	25	G	50	24	34	37	53	59	84		85	52	72	104	64	58	75	54	24	24	29	36
20	G	47	25	48	53	G	29	43	74	59	80	45	59	68	55	52	G	45	36		36	32	27	29
21	26	27	G	G	G		30	G	36	44	G	G	G	G	G	G	G	G	G	27	G	G	G	G
22	29	33	G	G	G	G	36	40	45	62	83	66	62	G	G	G	G	G	33	28	24	29	36	44
23	40	G	55	29	25	G	39	35	45	45	G	G	58	G	G	G	79	95	70	61	58	40	28	34
24	36	60	40	58	39	59	56	41	55	47	49	G	G	53	G	62	60	53	50	53	82	114	G	39
25	35	G	G	11	G	G	34	G	G	45	45	G	46	40	G	G	53	81	125	114	80	33	39	34
26	37	39	31	36	26	G	43	54	54	G	G	G	G	G	G	45	G	G	G	G	G	G	G	G
27	G	G	30	29	G	G	36		45	45	G	G	G	G	G	45	56	61	63	44	29	45	G	G
28	G	G	G	G	G	G	G	G	50		G	45	G	G	G	G	G	35	G	27	G	G	G	G
29	G	G	G	G	G	G	37	G	54	58		46	49	43	G	G	35	38	34	29	26	G	G	G
30	37	29	34	29	23	33	G	41	37	46	50	52	G	50	53	52	35	49	41	35	29	30	G	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	29	29	28	30	29	29	28	30	29	28	30	30	29	30	29	30	30	30	30
MED	G	G	G	G	G	G	30	37	45	45	G	44	G	40	G	G	G	35	31	27	26	22	G	G
U Q	32	29	25	24	23	G	36	41	50	52	51	48	50	52	43	45	45	51	51	42	37	36	29	34
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

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

HOURLY VALUES OF foF2 AT Yamagawa

APR. 2007

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

HD	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	31	32	31	34	32	26	34	46	54	54	59	69	74	74	88	92	76	64	66	66	64	A		37
2	40	44	42	43	32	31	38	52	59	67	70	58	64	92	84	86	C	C	75	65	47	42	42	44
3	47	50	45	45	34		34	58	65	78	C	C	C	C	C	C	C	C	80	72	57	32	34	34
4	30	34		34			37	45	48	C	C	C	94	78	88	82	63		65	76	73	37	34	38
5	40	37	34	34	29		34	48	55	60	61	65	71	86	88	70	61	58	58	65	50		32	34
6	32	34	34	34	34	30	32	54	61	65	57	59	64	76	72	60	52	54	55	58	62	50	45	40
7	36	32	32	30	29	28	37	48	59	60	64	64	71	77	64	62	60	60	60	55	50	45		47
8	45	42	34	29	30	28	34	48	59	62	63	61	62	69	69	61	58	57	52	61	54	45	42	42
9	38	37	32	32	30	29	36	46	52	62		60	62	81	92	75	57		60	64	53	52	52	50
10	42	42	52	40	37	28	36	50	57	66	64	58	58	61	68	70	A	59	66	A	A	A	36	34
11	36	37	36	36	28	28	34	54	57	58	57	57	68	77	80	70	62	68	75	77	64	A	34	34
12	34	34	34	37			36	51	55	57	57	65	77	72	84	86	75	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	65	73	80	84	81	80	62	55	61	72	48	A	34	34
14	34	32	31	34	28		37	51	57	64	58	58	71	84	68	64	65	66	A	55	54	43		37
15	38	34	34	42	31	A	34	46	48	61	63	64	64	63	68	68	67	70	60	71	61	36	31	28
16	32	34	34	34		A	34	54	56	60	65	72	77	86	78	64	60	51	57	66	76	40	29	32
17	34	34	34	38			37	60	55	60	60	71	84	80	79		58	48	55	62	66	48	48	52
18	50	50	51	47	29	29	44		57	51	55	71	77	80	86	72	55		60	55	51	54		48
19	50	50	44	42	A	A	45	61	A	61	72	78	78	80	83	78	65	60	A		66	42	32	36
20	34	34	A		28	29		60	55	62	72	70	80	91	84	81	77	66	60	52	51	50	44	42
21	42	41	42	42	28		38	55	64	75	90	77	86	90	96	86	73	63	62	61	54	47	26	42
22	40	42	42	44	26	26	42		60	64	66	67	71	74	78	78	76	61	65	64	56	29	48	48
23	52	48	41	41	34	26	38		62	62	72	78	91	88	82	88	82	72	76	77	65	37	45	47
24	45	44	42	39	34	29	50	58	60	61	63	59	70	62	70	71		71	72	64	51		54	52
25	52	52	53	34			41	60	56	67	70	78	93	91	A	A	A	A	A	54	66	53	A	
26	42	39	42		30	28	42	58	59	56	72	78	91	86	83	86	77	65	75	76	59	41	38	38
27	42	41	40	34	34	32	47	74	64	60	65	72	84	95	98	104	100			A	A	A	47	52
28	50	45	46	45	26	29	42	66	64	A	55	67	97	101	91	88	78	88	103		70	47	50	50
29	51	48	48	48	42	39	63	56	60	65	72	70	91	96	97	116	124	111		76	52	50	54	52
30		50	50	45	28	A	42	57	A	67	70	62	78	80	94	96	94	87	71	74	77	52		40
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	29	27	27	23	17	28	26	27	27	27	28	29	29	28	27	25	22	24	25	27	22	23	28
MED	40	41	41	38	30	29	37	54	57	62	64	67	77	80	83	78	65	64	64	65	57	45	42	41
U Q	46	46	45	43	34	29	42	58	60	65	70	72	85	89	88	86	77	70	73	73	66	50	48	48
L Q	34	34	34	34	28	28	34	48	55	60	59	60	69	75	75	70	60	58	60	59	51	40	34	35

HOURLY VALUES OF fEs AT Yamagawa

APR. 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	G	G	G	G	G	G	G	35	33	44	58	40	52	52	50	75	42	G	G	28	38	58	32	G
2	G	G	27	26	G	G	23	35	39	46	50	60	G	G	50	G	C	C	31	28	G	G	G	31
3	44	40	G	G	G		24	36	45	54	C	C	C	C	C	C	C	C	46	36	38	G	G	G
4	G	G	39	G	27	27	26	40	46	C	C	C		G	45	G	40	41	G	33	30	20	G	G
5	G	G	G	G	26	27	G	41	36	38	G	45	G	42	G	G	G	37	31	26	54	41	G	G
6	G	G	G	G	G	G	G	G	G	37	40	42	45	G	G	G	G	38	G	28	25	G	24	G
7	G	G	G	G	G	G	G		40	50	60	60	49	G	G	46	G	G	36	45	39	28	49	24
8	G	G	G	23	G	G	G	40	38	46	G	46	48	G	41	G	41	G	28	24	G	G	G	G
9	G	G	G	G	G	G	G	34	39	G		G	G	44	G	45	39		27	29	33	26	G	50
10	G	G	G	G	G	G	24	31	40	G	G	G	40	G	58	59	80	54	60	86	93	78	G	G
11	G	G	G	G	G	G	25	34	39	46	44	43	40	53	61	56	47	40	35	30	24	32	30	G
12	G	G	G	G	G	G	26	30	42	44	56	50	70	66	80	55	61	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	44	48	51	56	52	53	52	52	48	32	44	58	30	32
14	27	G	G	G	G	26	23	34	39	44	G	G	46	58	58	53	G	41	103	47	26	G	45	26
15	24	G	G	G	25	29	29	36	40	44	47	48	50	40	G	G	G	40	40	34	26	G	G	24
16	G	G	28	40	39	32	25	G	G	44	46	44	44	46	50	57	38	34	37	26	G	11	25	G
17	G	G	G	G	G		27	36	36	G	40	G	41	G	52		50	92	38	44	28	24	G	G
18	G	G	26	G	G	G	32	35	G	60	50	45	G	G	G	G	G	50	45	28	68	50	49	32
19	36	32	33	37	68	72	33	41	62	50	52	62	G	56	52	G	41	43	70	41	28	35	24	G
20	25	G	54	36	37	26		39	43	46	43	G	49	61	G	62	44	G	32	G	G	68	41	48
21	52	32	G	28	G	G	30	G	36	42	44	G	62	45	44	40	G	33	30	31	40	28	G	G
22	G	G	G	G	G	G	30	38	51	51	G	G	G	G	49	55	49	33	33	G	35	36	33	37
23	82	36	44	32	26	28	30	42	56	61	54	48	48	86	68	63	63	53	61	26	31	28	25	G
24	G	G	24	G	G	G	28	41	57	57	59	51	G	53	64	65	71	53	59	30	32		46	44
25	40	34	36	23	G	G	25	38	55	45	G	G	G	62	94	133	114	87	92	60	82	53	77	54
26	29	G	33	48	G	G	28	40	45	47	43	G	41	54	49	48	56	43	48	26	32	33	G	G
27	G	G	G	G	G	G	28	36	40	G	G	G	G	G	47	77	132	162			151	91	59	G
28	G	G	G	G	G	G	34	38	42	68	44	44	G	G	G	G	G	38	39	N	G	G	G	G
29	G	G	G	G	G	G	27	33	43	49	67	48	56	65	75	47	73	74	74	61	60	49	28	25
30		G	G	32	G	37	34	50	72	50	53	G	52	79	53	68	G	43	51	44	49	59	35	G
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	29	29	29	29	27	28	28	29	28	27	28	28	29	29	28	28	26	28	27	29	28	29	29
MED	G	G	G	G	G	G	26	36	40	46	44	44	42	45	50	50	42	41	38	30	32	30	25	G
U Q	26	G	27	27	13	27	29	40	45	50	53	48	49	57	58	60	58	53	55	44	46	51	38	31
L Q	G	G	G	G	G	G	23	34	37	43	G	G	G	G	G	G	G	34	31	26	25	6	G	G

HOURLY VALUES OF fmin AT Yamagawa

APR. 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	17	15	14	15	15	14	16	14	14	14	15	20	24	18	18	17	14	16	27	18	15	16	14	16
2	17	26	14	14	14	14	15	16	14	17	17	16	27	22	24	21	C	C	16	14	15	14	14	14
3	14	14	14	14	14		17	17	14	17	C	C	C	C	C	C	C	C	14	14	15	16	15	17
4	17	15	14	14	14	14	15	14	14	C	C	C	20	20	20	18	16	15	20	14	15	14	14	15
5	14	15	15	14	14	14	15	18	14	15	18	18	22	18	34	33	17	15	17	15	14	14	16	16
6	14	14	14	14	14	15	14	15	14	14	16	18	21	22	41	18	17	14	15	14	15	16	15	15
7	16	15	15	15	14	15	15	14	14	14	17	18	20	36	34	22	17	14	15	14	14	14	14	15
8	14	14	18	15	14	15	15	14	14	14	18	18	18	18	20	15	14	14	15	15	16	14	14	14
9	14	15	15	14	14	14	15	14	14	16		18	30	22	20	17	17	14	14	14	14	14	15	14
10	14	15	15	15	14	14	17	14	14	14	15	18	23	18	33	23	15	14	14	15	15	15	14	14
11	15	15	14	14	14	14	16	21	14	14	17	18	21	18	20	17	14	16	14	14	15	14	14	15
12	15	14	14	14	18	15	16	15	14	17	17	18	20	20	18	17	16	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	16	16	21	22	27	20	16	14	15	14	14	15	15	14
14	14	14	16	15	16	16	16	14	14	18	16	18	27	20	21	16	16	14	14	15	14	15	14	14
15	15	15	15	14	15	14	14	14	14	14	18	17	30	21	18	42	14	14	14	14	14	14	17	17
16	14	14	14	14	14	14	17	14	15	17	14	21	20	26	26	20	17	14	14	16	16	14	15	15
17	15	16	14	14	14		14	14	16	18	17	27	18	18	18		14	14	15	14	15	14	15	14
18	14	14	14	16	17	15	14	14	17	17	17	24	20	20	18	21	16	14	17	14	15	14	15	15
19	14	15	14	14	14	15	14	14	14	15	17	18	23	20	17	17	15	14	14	14	14	15	15	15
20	14	15	14	14	14	14		14	14	14	18	20	18	18	20	29	16	14	14	14	15	14	14	14
21	14	14	14	14	14	15	14	14	14	16	20	21	21	27	20	18	17	15	14	14	14	15	15	18
22	14	14	14	14	15	15	15	15	14	15	18	18	27	21	22	20	15	14	15	15	15	14	14	15
23	14	14	14	14	17	14	14	16	14	16	18	32	22	33	24	17	14	14	14	14	14	14	16	15
24	15	16	14	14	14	14	14	14	14	16	18	28	27	20	34	18	16	17	16	14	16		15	14
25	14	15	15	14	14	14	15	14	28	17	21	47	22	27	21	18	29	14	14	15	14	14	14	14
26	15	15	15	17	16	16	14	14	17	17	20	20	24	23	21	18	18	14	14	14	14	14	17	14
27	15	15	14	15	16	17	14	14	15	17	20	22	49	20	24	20	16	14		14	14	15	14	16
28	15	14	15	15	18	14	15	15	14	16	27	27	29	47	22	21	16	14	17	14	14	15	15	17
29	15	15	14	15	14	15	14	14	15	20	17	27	23	27	23	21	18	15	14	14	14	14	14	14
30		15	15	14	15	14	16	14	16	18	21	26	29	23	23	29	17	14	14	15	14	14	14	18
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	29	29	29	29	27	28	29	29	28	27	28	29	29	29	28	28	27	28	29	29	28	29	29
MED	14	15	14	14	14	14	15	14	14	16	17	19	22	21	21	19	16	14	14	14	14	14	15	15
U Q	15	15	15	15	15	15	16	15	15	17	18	25	27	24	25	21	17	15	15	15	15	15	15	16
L Q	14	14	14	14	14	14	14	14	14	14	17	18	20	19	20	17	15	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

APR. 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		31	34	29			46	51	62	66	64	82	78	90	90	86	75	73	72		52		
2			40	41	29	26	29	48	61	71	69		68	98	100	86	77	75	81	66	54	52	48	41
3	48	51	54	50				58	71	80	67	92	107	138		143	148	147	146	118	76	50	49	
4		42	36	42			109	46		64	72	82	91	95	87	90	82	75	76	78	66	32		28
5	29	29	29	31				51	60	62	60	68	76	100	117	106	88	82	75	71	40	A	30	31
6	A	30	29	31				55	67		55	63	76	74	82	68	55	56	66	71	66	53	42	A
7		32			29	29	31	57	62	60	61	67	80	80	82	73	68	73	72	66	63	48	45	48
8	47	36		30			30	52	61	68	62	56		77	82	77	61	47	58	66	52			28
9	30	30	30	31				46	54	59	60	60	67	90	102	82	80	63	58	66	63		42	31
10	41	29	30	30	28			51	61	62	60		60	67	79	76	66	62	76	76	46	40	A	A
11	30	A	31					56		54	55	A	68	87	88	74	65	A	86	86	A	A	A	
12	32	30	30	34			26	51	59	56	58	63	80	86	102	86	80	78	80	74	54	45		A
13			50	30	A	A	A	51	61	A	66	81	90	100	91	82	70	61	66	76	66		A	
14			36	30			29	58	62		74	67	72	93	94	88	75	60	55	63	64	46	A	34
15	A	28	30	50	A	A			56	66	72	57	68	78	78	74	61	74	77	76	50	30	32	34
16	A	26	31	32	28	A	22	48	56	60	67	80	95	108	85	82	65	57	A		A	44		41
17	36	34	31	37			30	47	57	67	67	77	90	105	92	74	60	58	66	66	59	42	A	A
18		37	44	31			36	54	64	58	65	82	100	100	90	76	57	A	63	63	49	53	A	
19		A	41	A	A	A	30	50	66	61	65	82	100	104	98	88	81	81	66	A	63	51	A	A
20			31	A	30		35	56	68	61	71	81	88	106	107	107	82	68	75	64	52	43	30	
21	28	23	29	42	A		30	52	62	74	87	82	94	110	131	127	101	86	72	66	66	53		36
22	34	30	30	30				59		58		76	82	87	97	96	86	78	80	66	54	47	42	44
23	41	40	41			A		51	58	64	74	87	102	102	94	98	98	92	100	106	74	42	45	43
24	44	46	48		24	31	43	58	56	62	68	70	77	C	78	83	88	82	76	73	54	47	47	50
25	44	53	50	A	A	A	35	50	60	72	72	80	85	96	98	110	111	85	82	74	65	66	50	
26	A	A		30			36	57	59	A	73	82	102	112	108	104	106	89	103	88	62	A		34
27		31		32			42	66	56	61	68	86	107	126	147	150	140	127	104	85	78	A	A	A
28	A	42	42	41			35	73	64	55	A	A	112	114	112	103	105	118	128	108	52	46	42	49
29	50	51	51	50	43	30	44	61	58	66	73	78	A	124	131		171	146	146	122	79	48		53
30	54	54	71	37				61	72	66	62	72	82	102	111	107	106	102	96		86	A	A	A
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	16	22	26	23	8	4	18	29	27	26	28	26	28	29	29	29	30	28	29	27	27	22	13	16
MED	38	33	34	32	29	30	33	52	61	62	67	78	84	100	94	88	82	76	76	73	63	47	42	38
U Q	45	42	44	41	29	30	36	58	64	66	72	82	97	107	107	105	101	87	91	85	66	52	47	46
L Q	30	30	30	30	28	27	30	50	57	60	61	67	76	86	86	76	66	62	66	66	52	43	37	32

HOURLY VALUES OF fEs AT Okinawa

APR. 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	G	G	G	G	G		G	G	33	G	G	49	48	57	G	G	G	G	28	G	34	31	29	25
2		G	G	25	G	G	G	35	46	49	49	72	G	50	G	48	G	G	32	47	36	36	G	G
3	G	28	G	G			G	35	47	56	53	60	50	54	79	51	65	55	50	40	G	30	26	50
4		G	G	G	G	27	26	28	33	42	G	G	G	G	G	G	G	G	G	G	23	G		G
5	G	G	G	G	G			30	33	G	G	G	G	G	G	G	G	41	34	44	43	56	G	G
6	49	G	30	G			G	G	G	G	G	G	G	G	G	G	G	34	36	41	53	107	38	42
7	29	G	28	33	G	G	G	G	G	38	51	G	G	57	G	G	G	G	35	G	26	G	G	26
8	G	G		G	27	G	G	34	36	G	G	G	G	41	49	G	44	G	33	29	G	G	G	G
9	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	29	28	36
10	38	36	G	G	G	G	G	G	34	43	G	G	G	G	54	42	38	45	43	43	48	30	59	59
11	32	80	G				G	29		50	44	50	G	G	60	53	64	74	72	80	60	57	29	33
12	28	G	G	G			G	G	G	37	48	G	51	G	53	57	56	44		44	58	43	38	38
13	36	36	43	28	50	67	47	40	50	60	55	58	68	55	44	54	G	G	44	28	28	G	36	
14			G	G	G	.	G	34	35	42	39	G	G	G	46	48	43	40	39	35	28	30	28	G
15	34	G	G	28	38	28	30		G	G	41	G	G	51	G	G	G	G	G	28	32	G	G	G
16	38	G	G	G	G	28	G	48	49	44	G	G	G	54	54	50	50	80	69	69	90	36	32	G
17	G	25	G	G			G	G	G	G	G	G	42	52	G	G	G	39	45	26	35		56	44
18	37	34	34	33	33	30	28	48	40	54	G	49	50	G	G	G	G	66	44	28	34	24	47	36
19	38	70	33	49	51	40	39	44	47	55	59	66	G	G	66	55	42	42	51	60	49	37	40	47
20	28	30	G	40	G	23	24	44	45	48	G	68	61	51	G	58	65	35	55	36	54	33	27	37
21	32	G	48	36	36		26	G	G	38	46	G	48	62	62	64	50	48	36	35	28	32	32	28
22	28	G	26	G			G	41		47	63	G	G	G	G	61	G	G	37	45	37	34	G	33
23	G	G	27		G	42	32	40	45	52	53	50	42	70	64	77	74	54	60	28	38	G	32	34
24	26	G	G	36	26	29	G	G	41	59	50	57	53	C	55	61	57	55	51	40	G	27	G	G
25	G	30	33	53	48	36	31	36	48	63	68	G	86	80	G	48	41	82	60	37	42	45	39	46
26	72	50		26		G	24	37	47	76	47	G	50	48	60	64	59	52	36	34	55	50	34	G
27		G		G		G	26	36	G	51	66	G	46	74	50	54	G	46	46	51	46	88	57	50
28	59	49	40	G		G	G	38	48	49	75	114	80	67	G	G	G	G	34	33	35	28	28	G
29	G	G	G	G	G	G	G	33	38	47	68	72	94	70	62		54	56	58	51	44	36	40	35
30	58	28	G	24		26	36	38	51	52	58	53	64	54	G	G	50	78	88	84	57			108
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	26	29	27	28	20	20	29	29	28	30	30	30	30	29	30	29	30	30	29	30	30	28	28	29
MED	28	G	G	G	G	24	G	34	37	47	46	G	42	51	22	48	40	42	43	36	36	32	30	33
U Q	38	32	30	30	34	29	27	39	47	52	55	57	51	57	55	56	54	55	53	45	49	40	38	43
L Q	G	G	G	G	G	G	G	G	G	37	G	G	G	G	G	G	G	G	34	28	28	25	13	G

HOURLY VALUES OF fmin AT Okinawa

APR. 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	15	16	17		20	16	14	15	20	22	22	21		20	14	14	14	22	15	15	16	16
2		21	20	14	16	14	15	17	26	23	32	36	45	36	59	33	33	17	14	14	15	14	15	17
3	15	14	15	17			18	16	14	18	20	33	33	32	29	21	15	14	14	14	14	15	15	14
4		16	16	15	15	16	16	14	14	15	21	22	22	22	52	22	40	17	22	15	14	17		14
5	15	15	15	20	15			16	15	21	20	44	27	50	43	42	21	15	14	14	14	14	14	16
6	15	18	15	16			18	14	14	18	21	46	47	44	49	42	23	15	15	14	14	14	15	14
7	15	14	15	14	15	14	16	15	14	21	32	53	53	38	20	22	16	14	14	14	15	20	17	15
8	15	15		16	15	15	14	14	15	22	29	44	22	34	28	21	15	18	16	14	15	21	15	14
9	15	15	15	14	17	14	16	15	14	17	21	45		49	21	21	20	18	14	15	16	15	14	14
10	15	14	16	14	14	15	18	15	14	23	21	46	46	51	24	32	29	16	14	15	14	14	15	14
11	15	14	15				18	15		17	32	21	47	53	26	26	17	15	14	14	14	15	14	15
12	14	21	15	14			18	22	14	30	22		36	55	35	33	29	16	14	15	14	14	15	14
13	15	16	16	14	15	15	15	14	14	21	21	21	39	26	35	33	22	17	14	14	14	24	14	
14			17	15	15		15	14	14	20	24	28	50	26	46	22	22	16	14	14	16	15	15	17
15	15	21	18	15	14	15	14		14	15	21	44	48	35	47	44	20	16	14	14	14	14	16	15
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17	17	15	16	15			15	14	15	21	21	52	54	39	52	20	21	15	14	14	17	14	14	14
18	15	15	14	15	14	14	15	14	16	21	27	32	32	53	46	50	18	15	15	14	15	15	15	14
19	14	14	15	14	15	14	14	14	14	20	20	24	52	49	24	32	18	14	14	15	14	14	15	14
20	14	16	15	14	14	15	15	14	14	16	26	28	28	26	50	30	22	23	14	14	15	16	18	14
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22	15	20	17	15			16	14		21	27	52	50	52	53	20	16	18	14	14	14	14	17	15
23	15	14	15		16	17	14	14	14	22	32	34	36	40	40	21	16	22	15	15	15	15	15	15
24	15	15	15	15	14	14	15	16	14	20	34	35	30	C	39	33	29	15	14	14	15	14	14	14
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27		20		15		15	16	14	15	29	28	30	52	34	32	27	20	16	14	15	15	14	14	15
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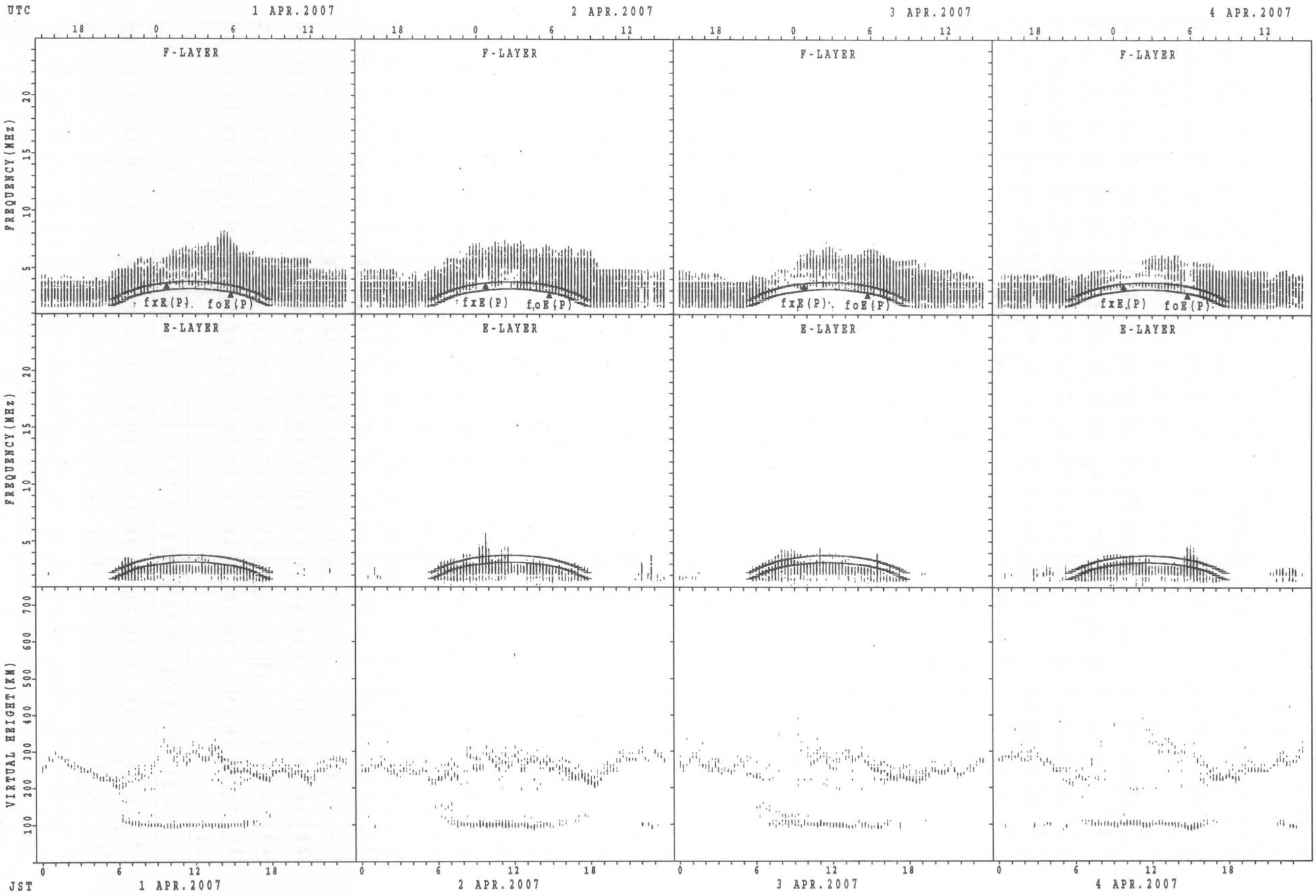
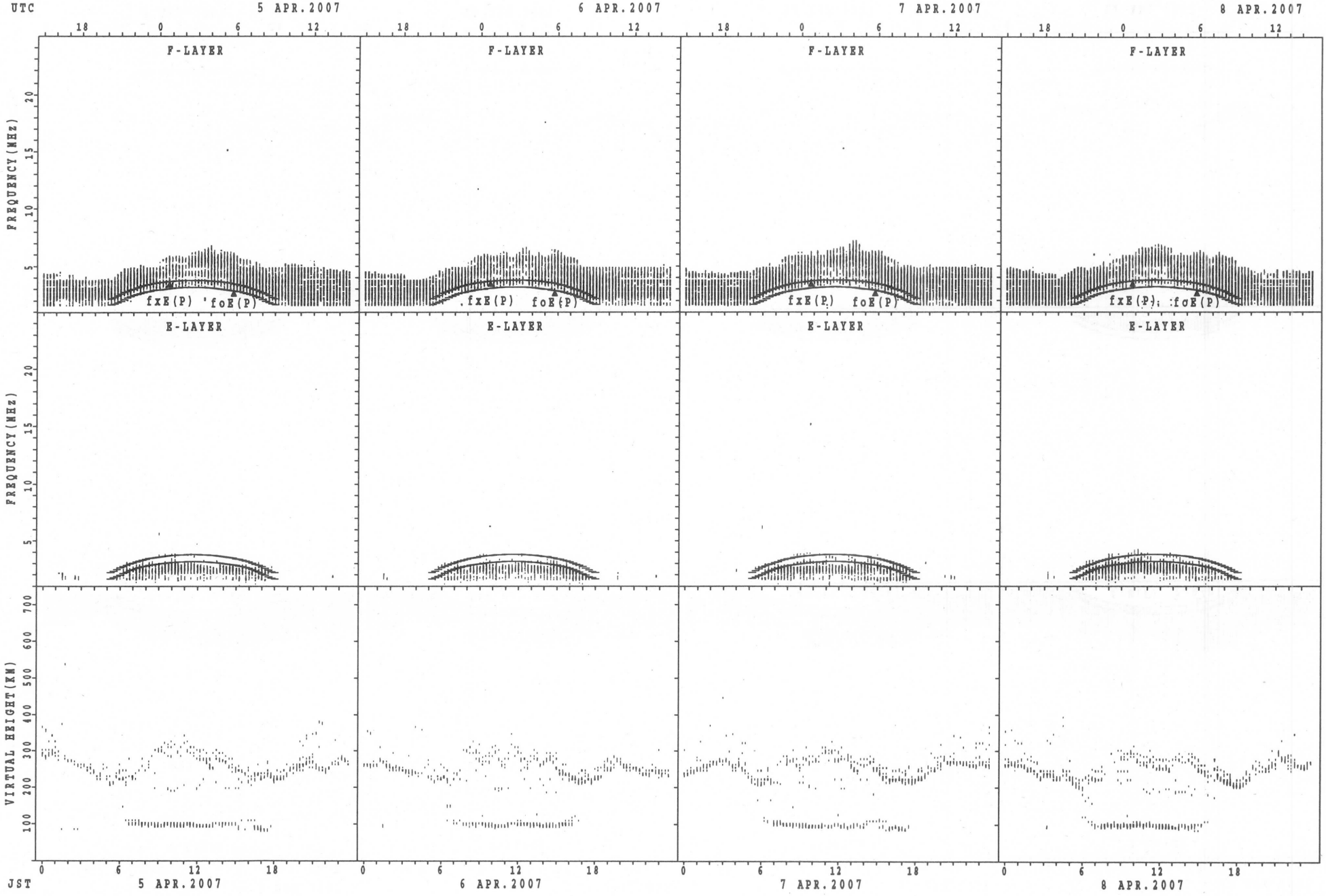
29	15	15	15	21	15	15	16	14	15	22	29	30	33	29	27		20	17	14	16	14	15	20	15
30	15	16	14	15		16	15	15	18	22	28	32	30	33	28	27	21	18	14	16	15	14	14	15
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	26	29	27	28	20	20	29	29	28	30	30	28	29	29	29	29	30	30	30	30	30	30	29	29
MED	15	15	15	15	15	15	16	14	14	21	24	32	36	36	35	27	21	16	14	14	14	14	15	15
U Q	15	16	16	16	15	15	17	15	15	22	29	44	49	49	48	33	22	17	14	15	15	15	15	15
L Q	15	14	15	14	14	14	15	14	14	18	21	28	29	29	28	21	18	15	14	14	14	14	14	14

SUMMARY PLOTS AT Wakkanai



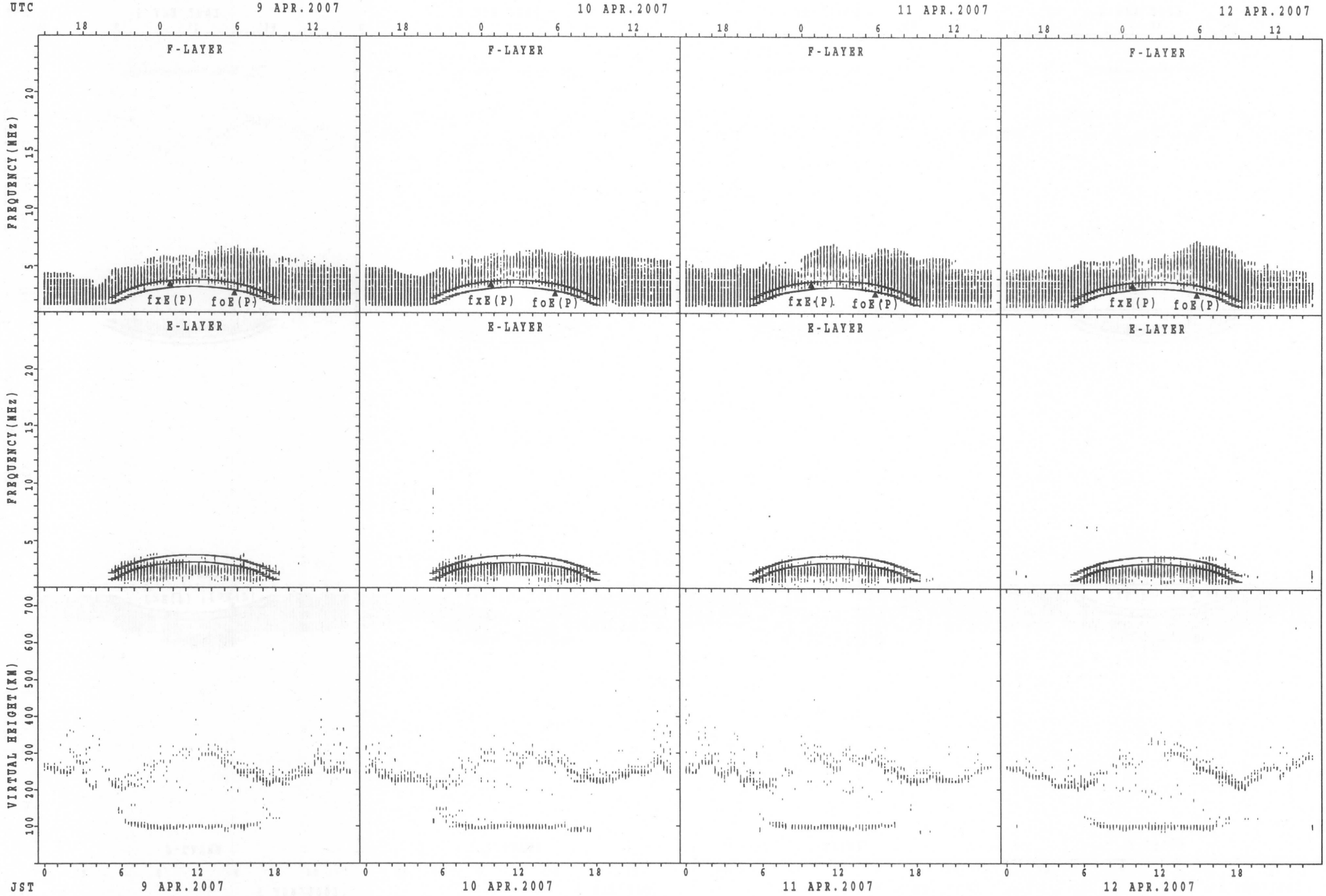
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



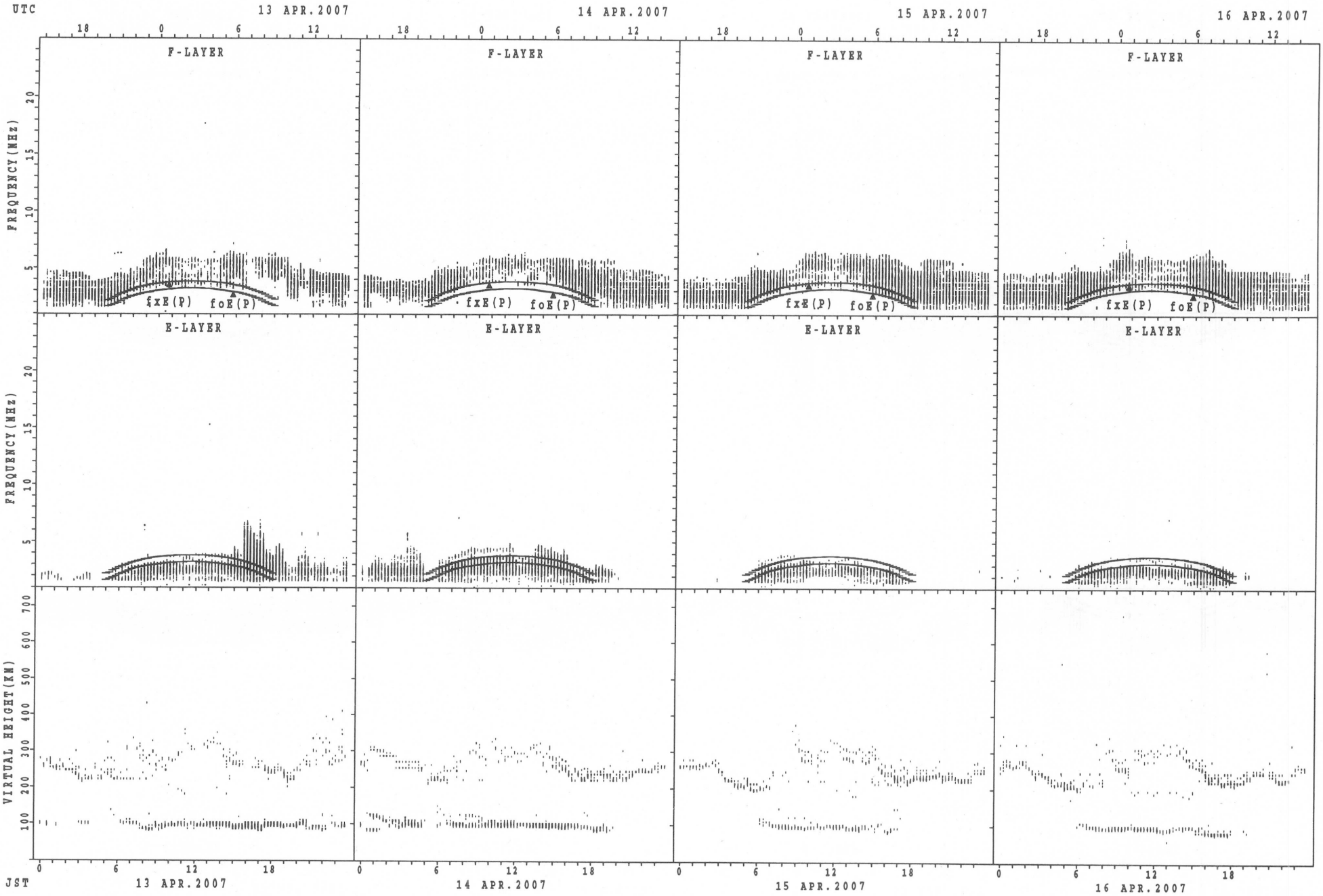
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



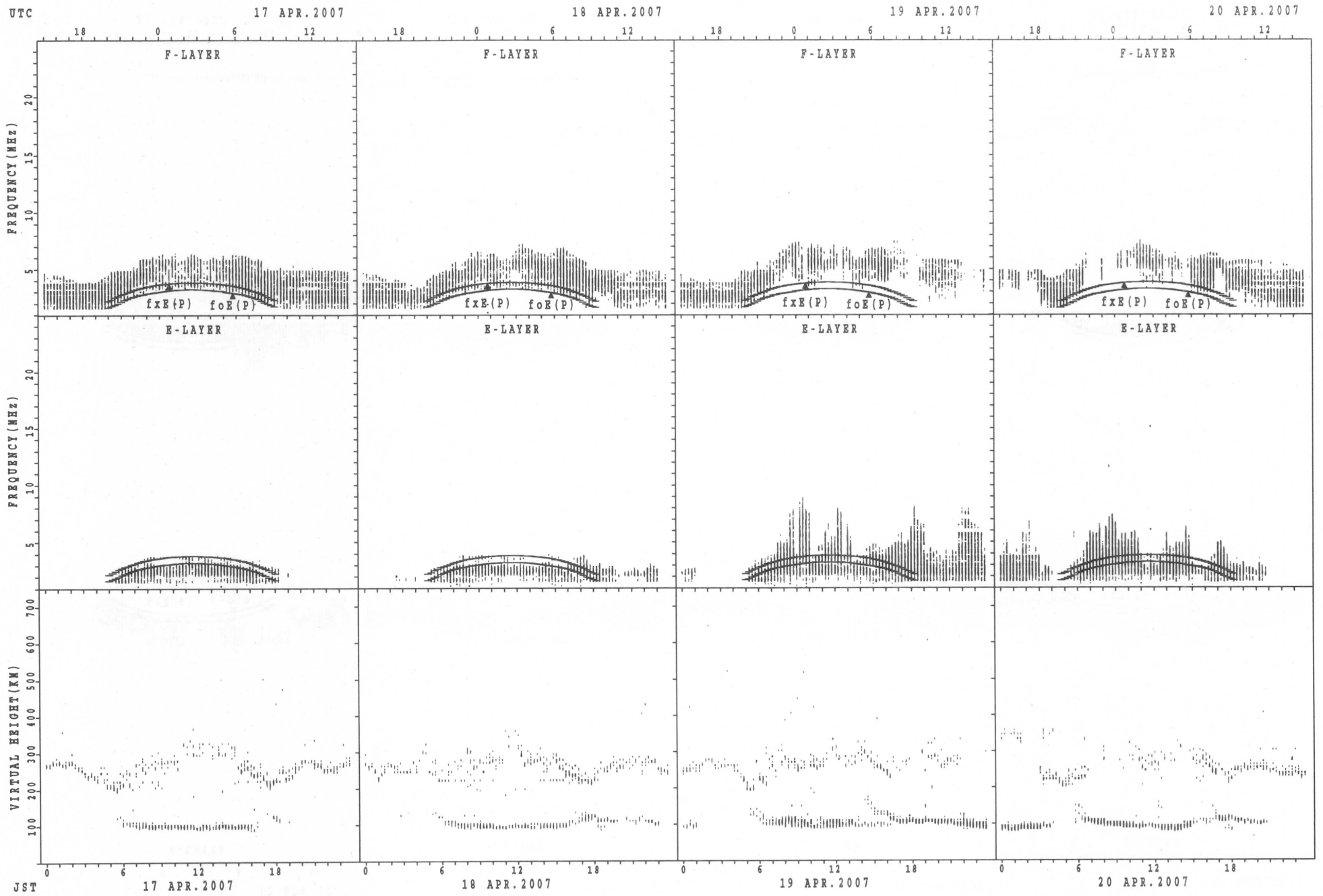
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



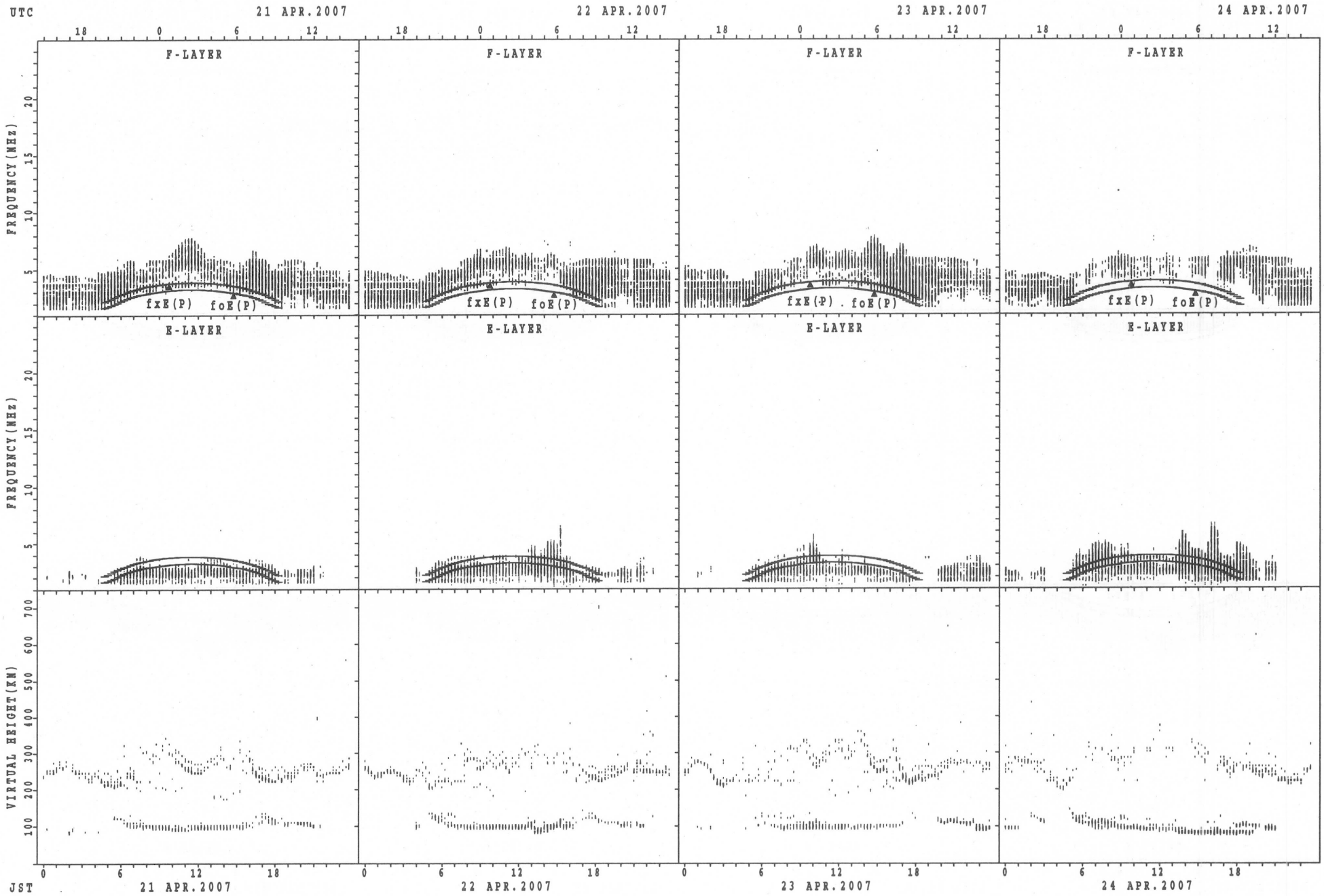
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



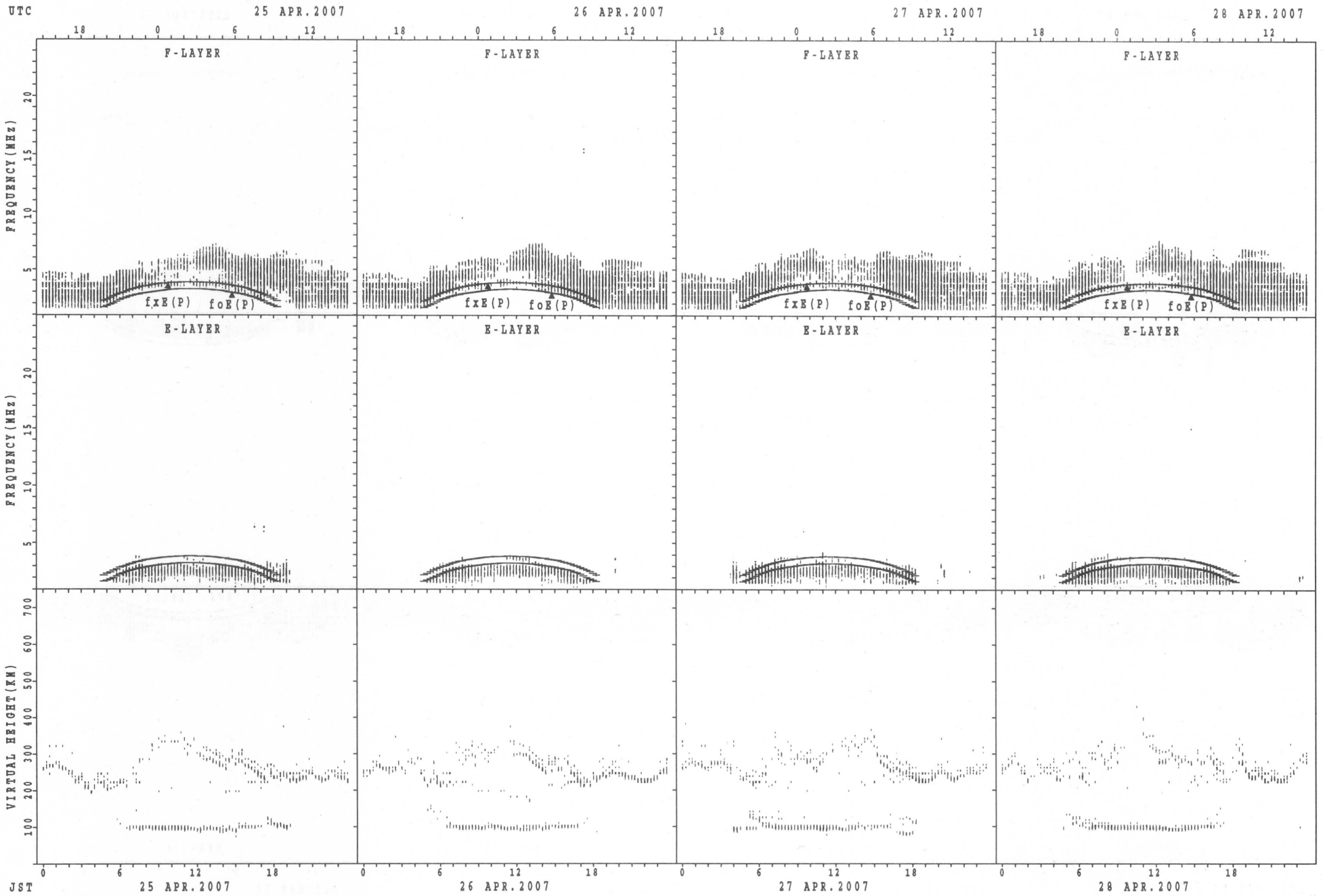
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



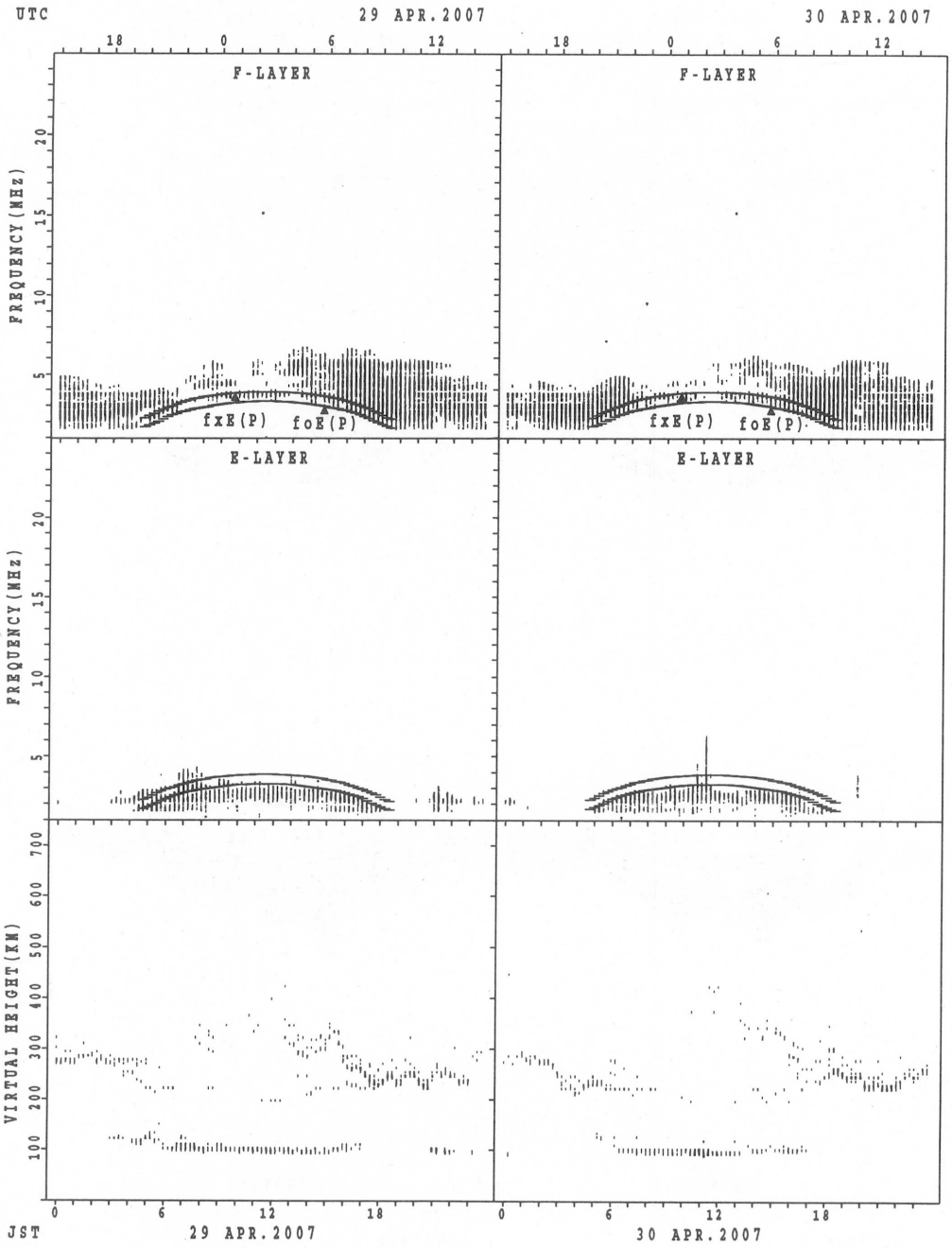
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



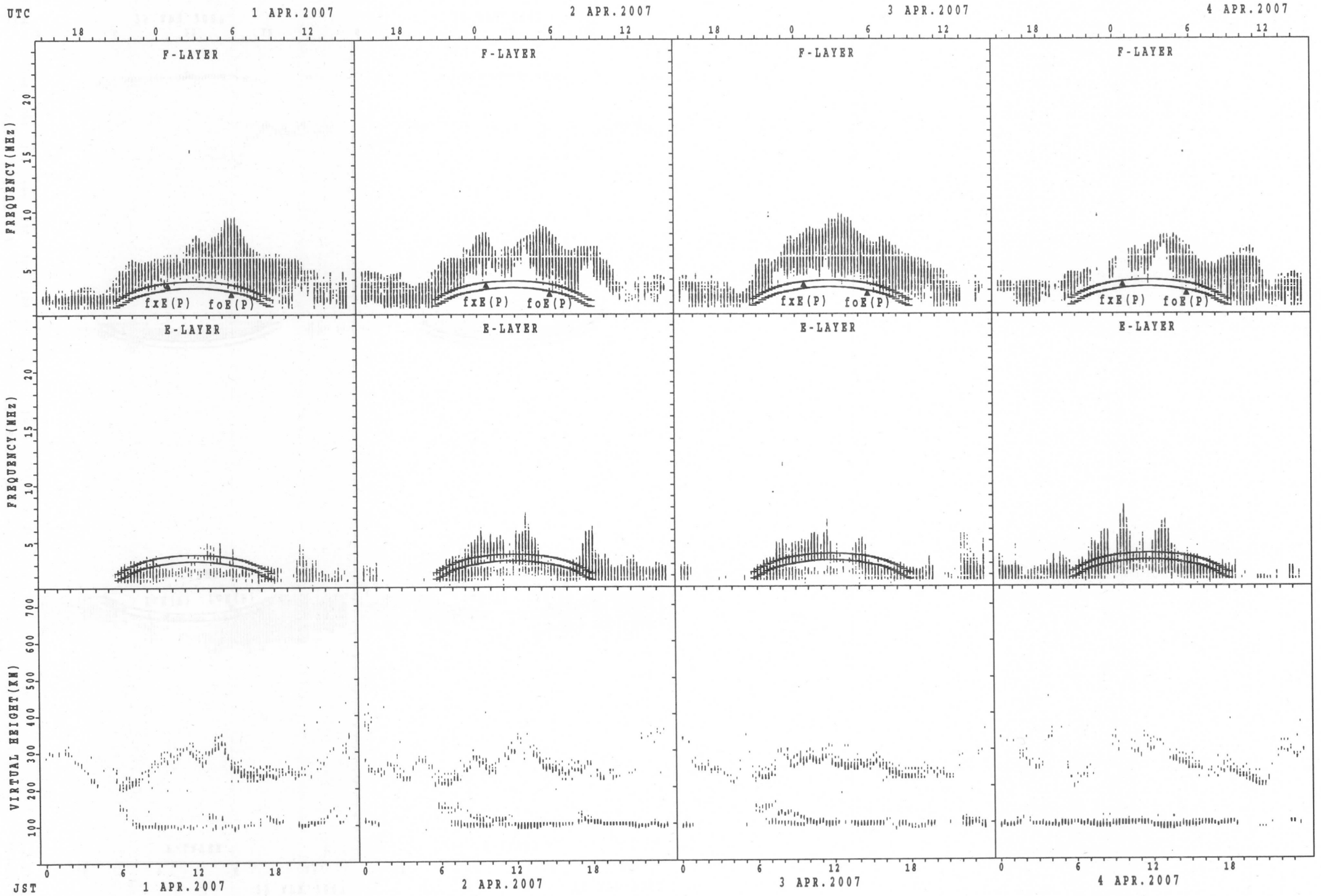
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



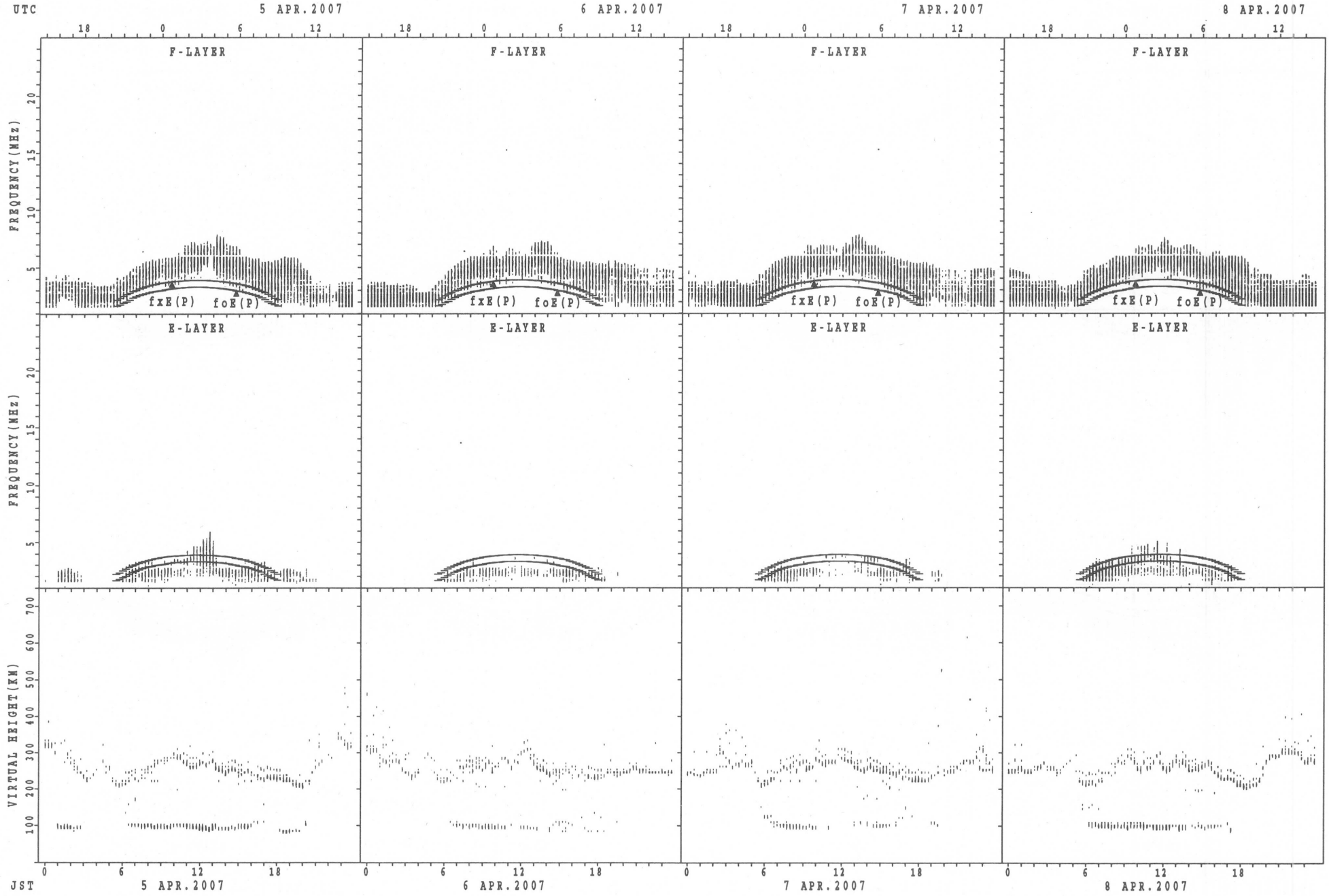
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



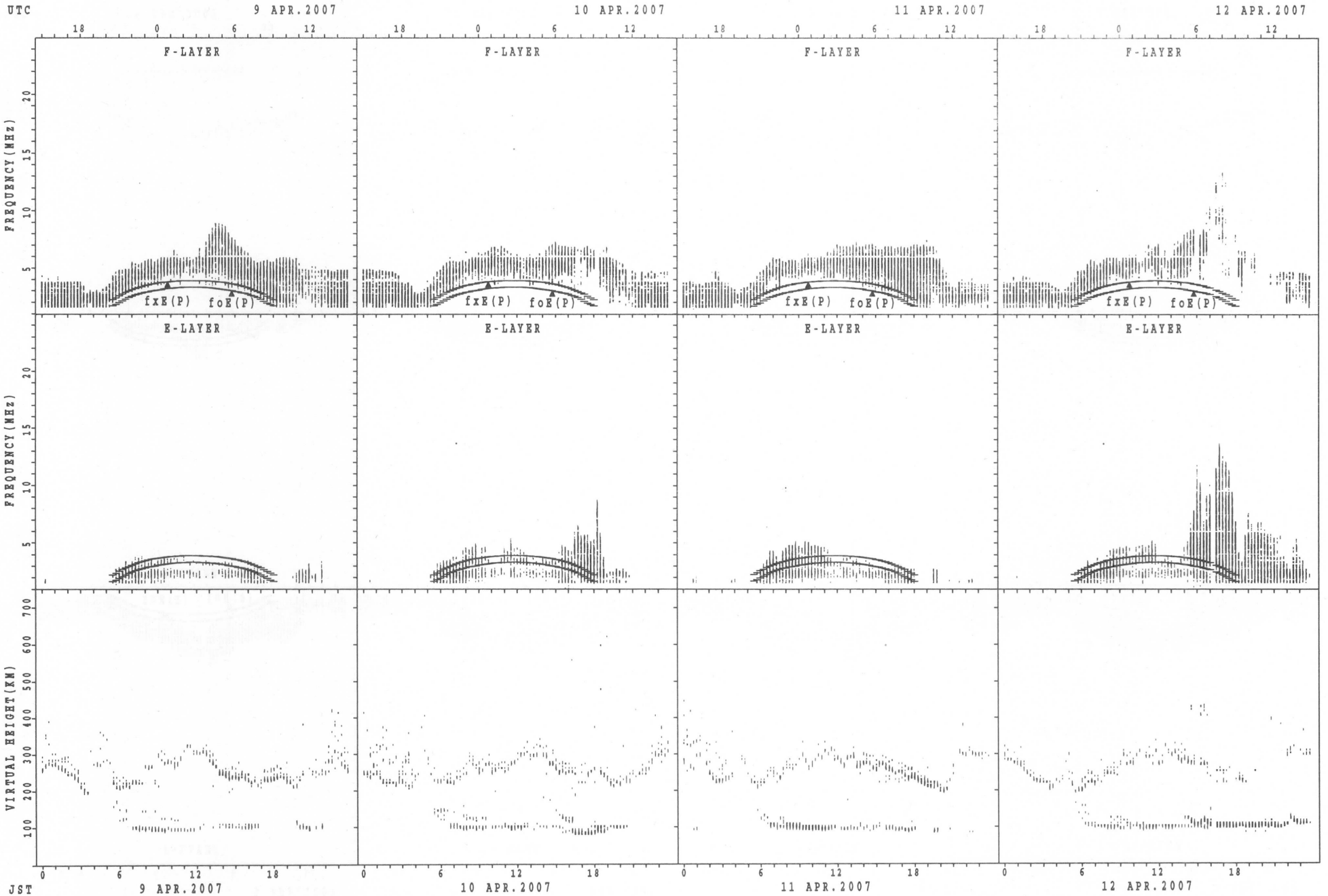
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



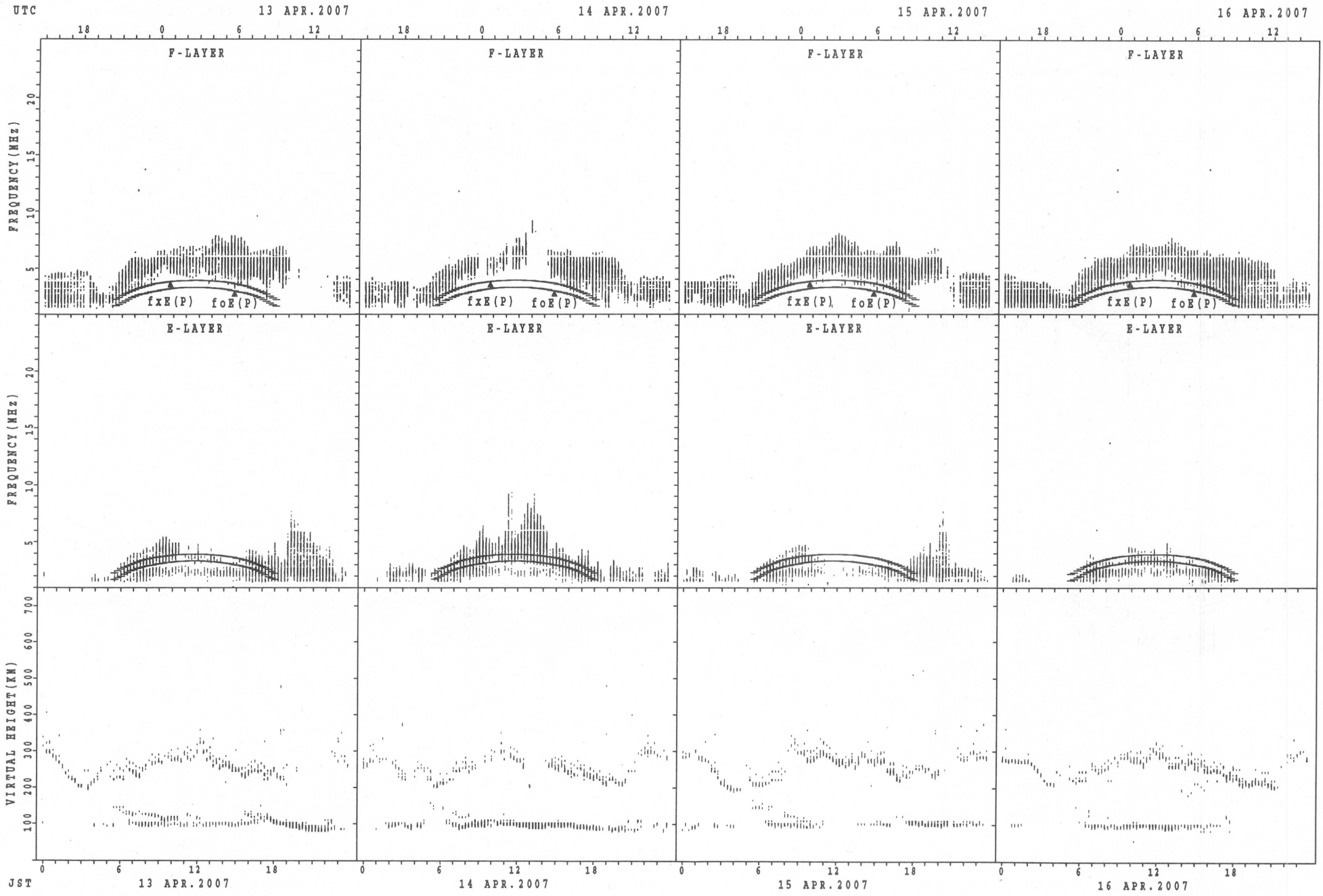
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



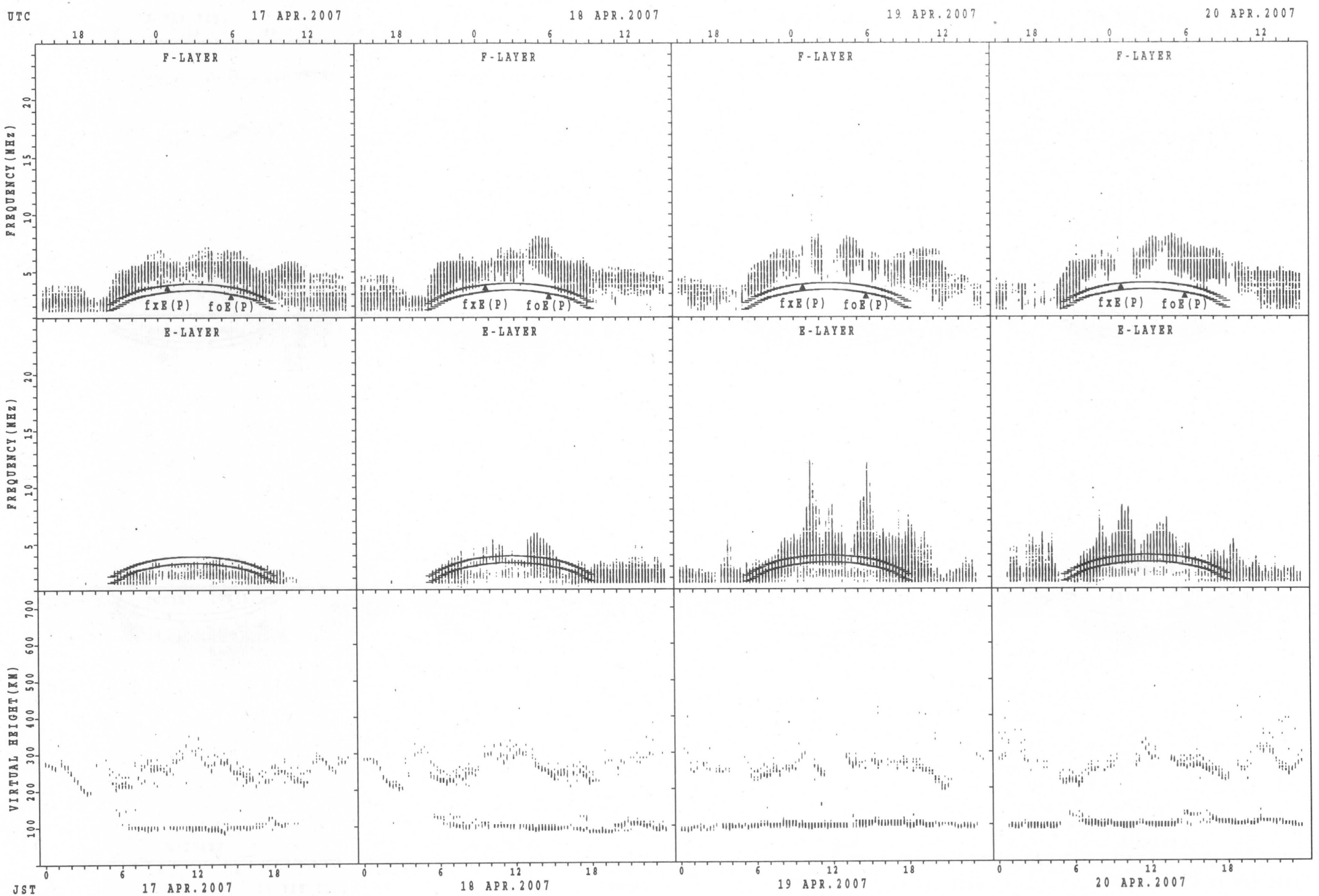
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



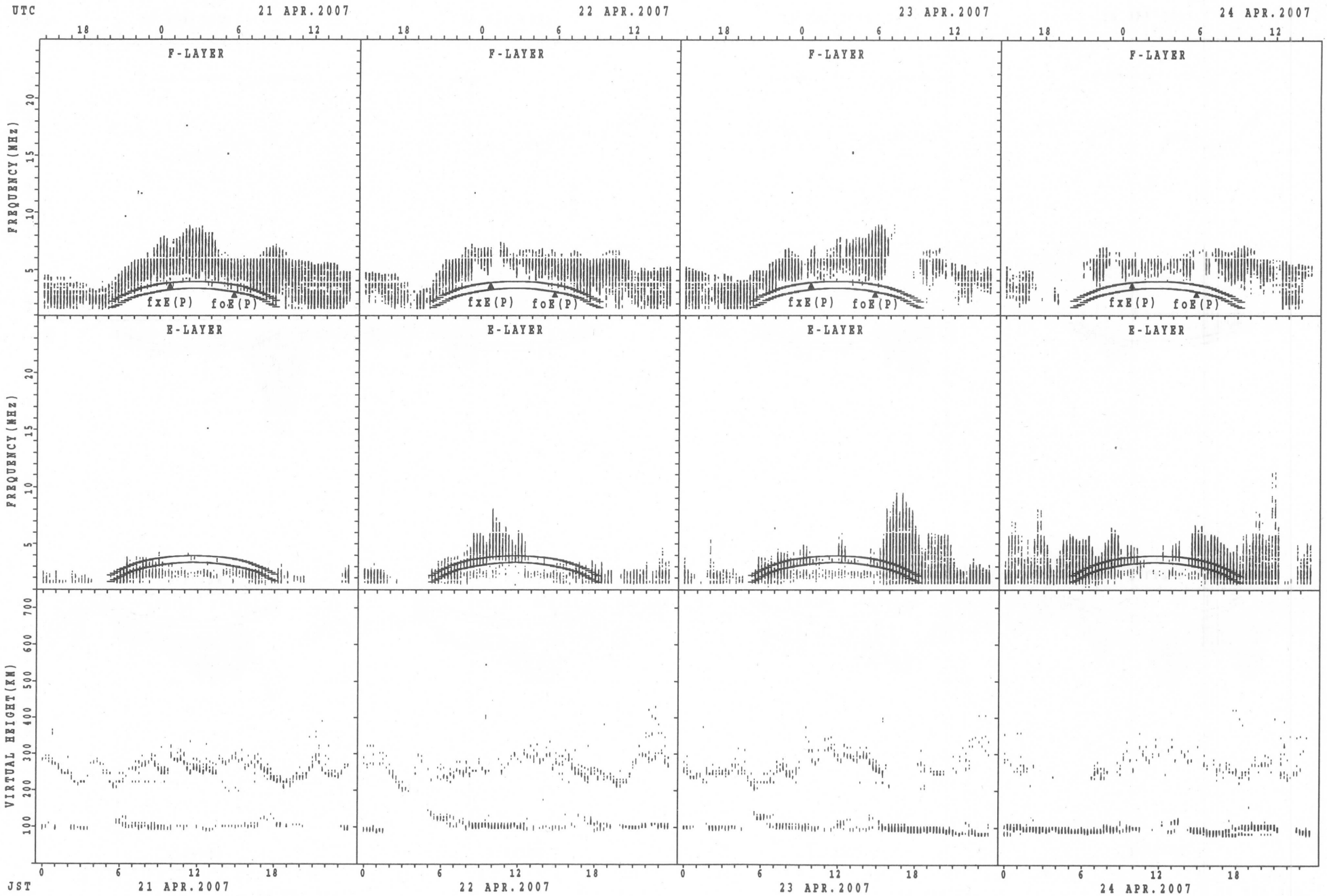
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



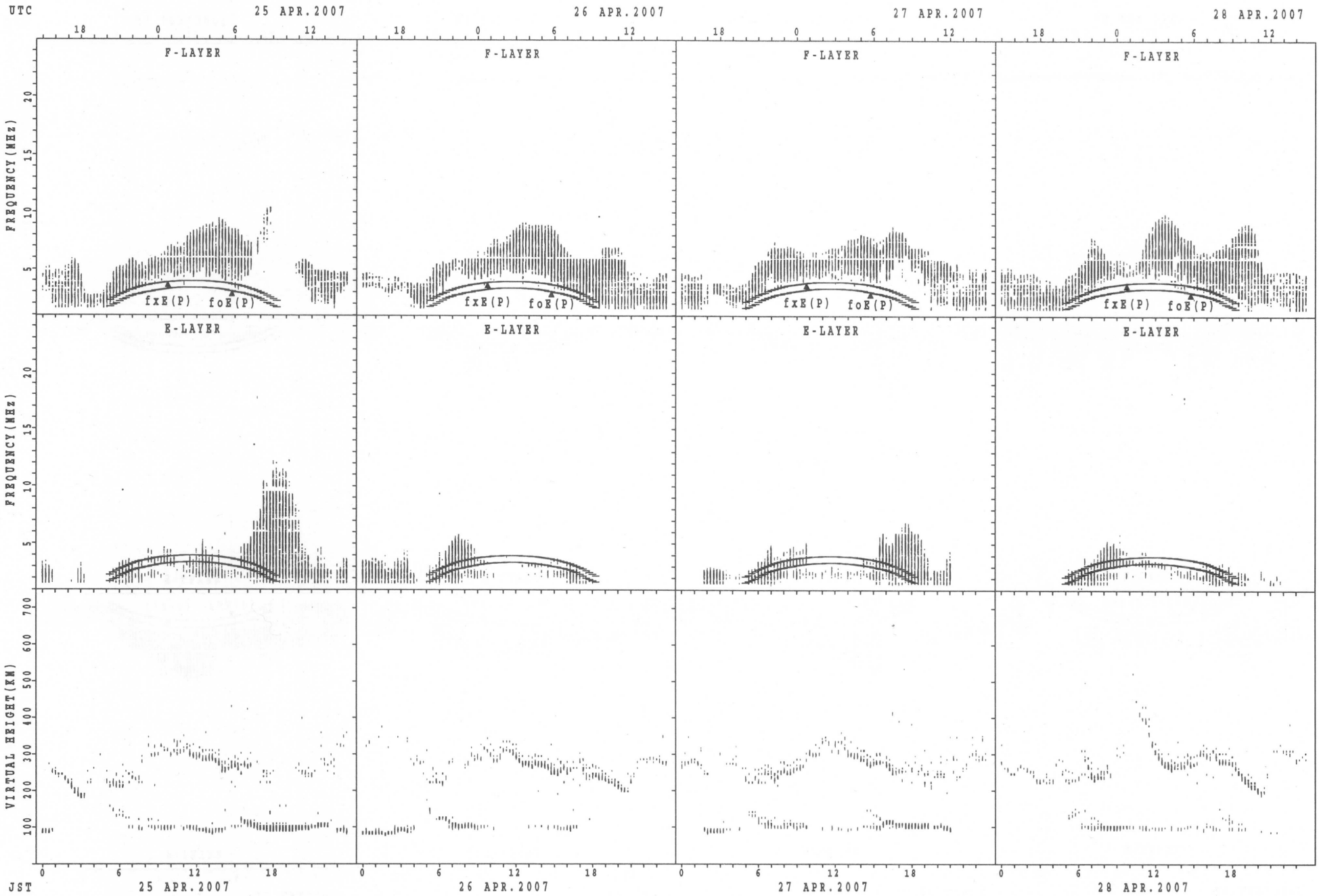
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



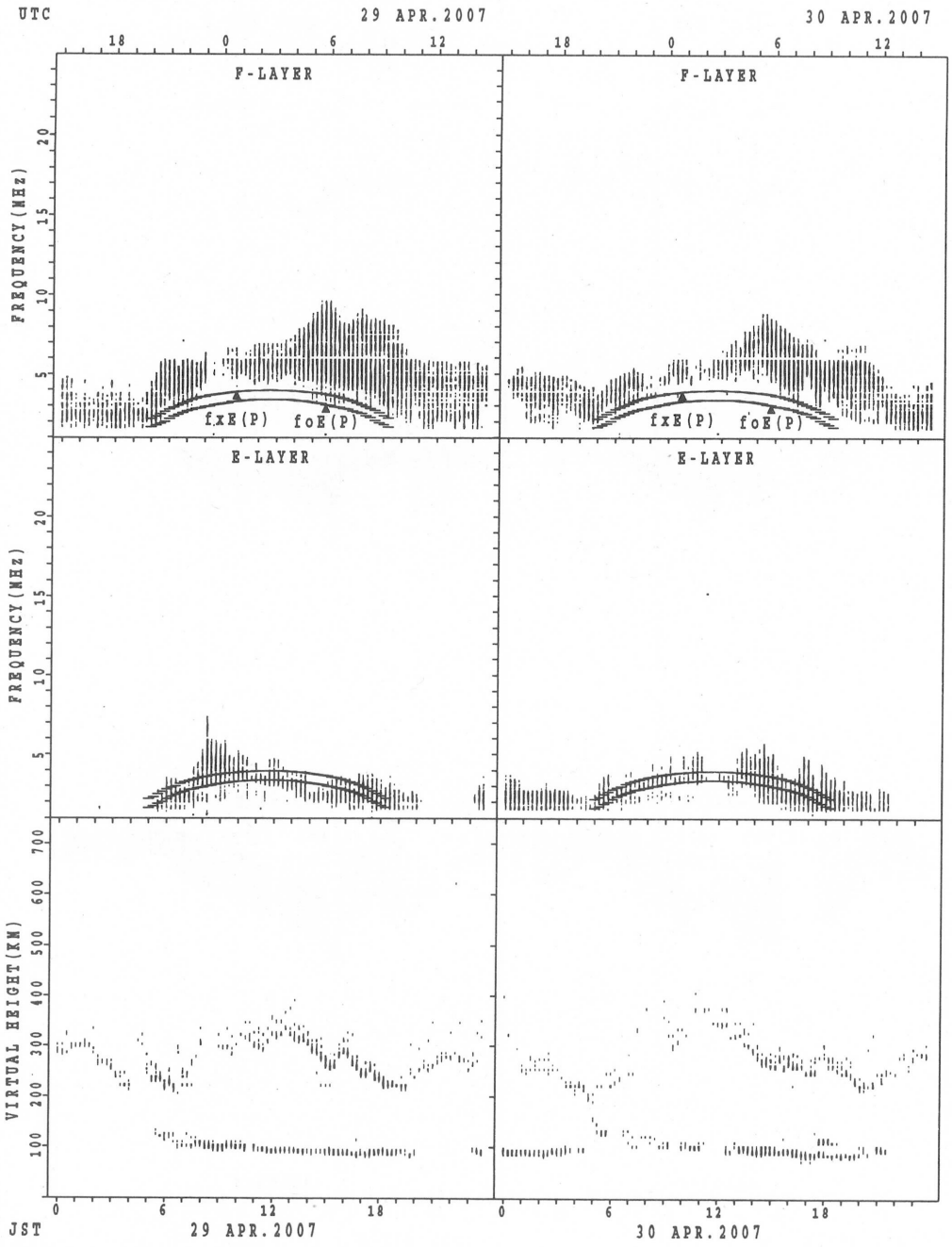
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



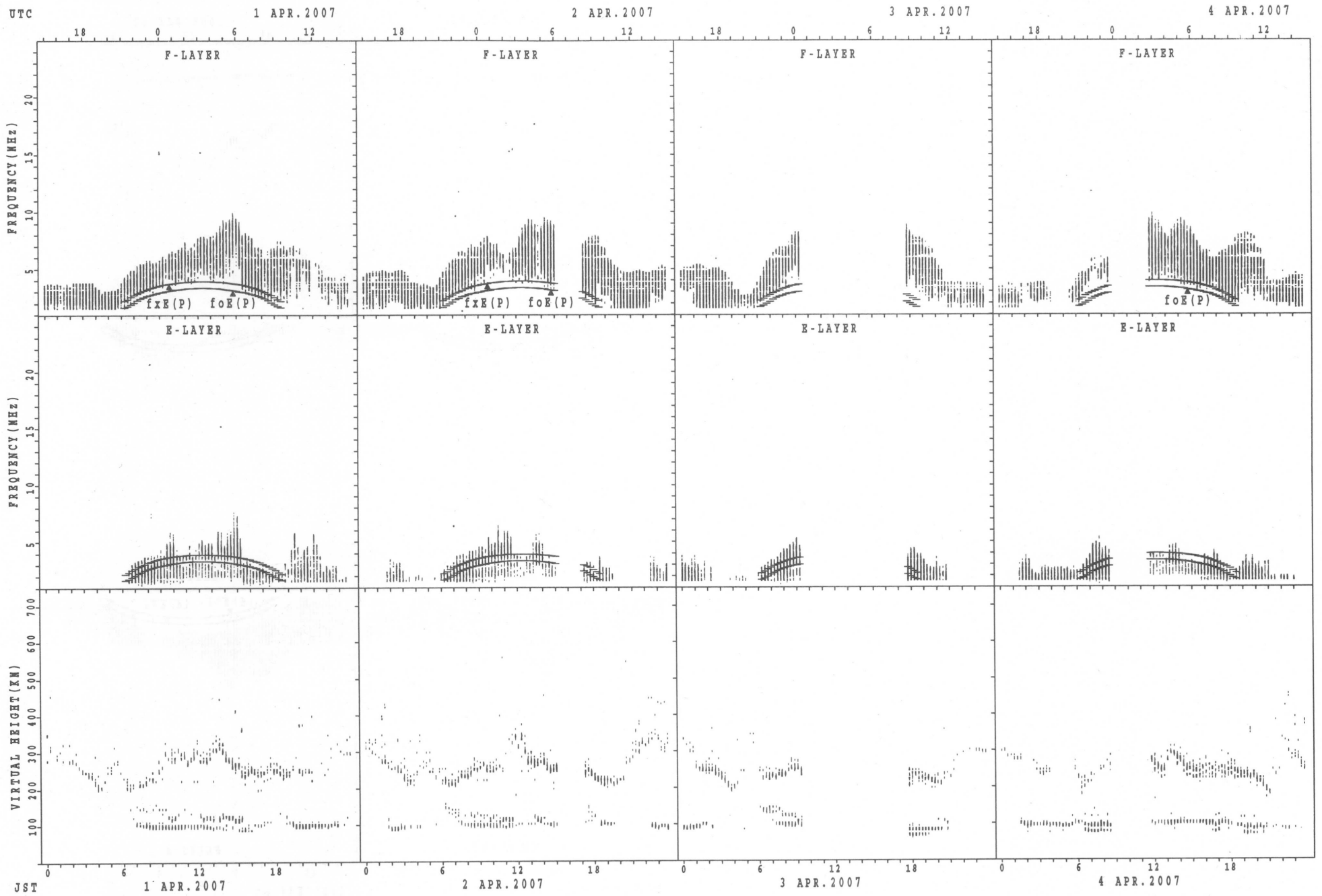
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



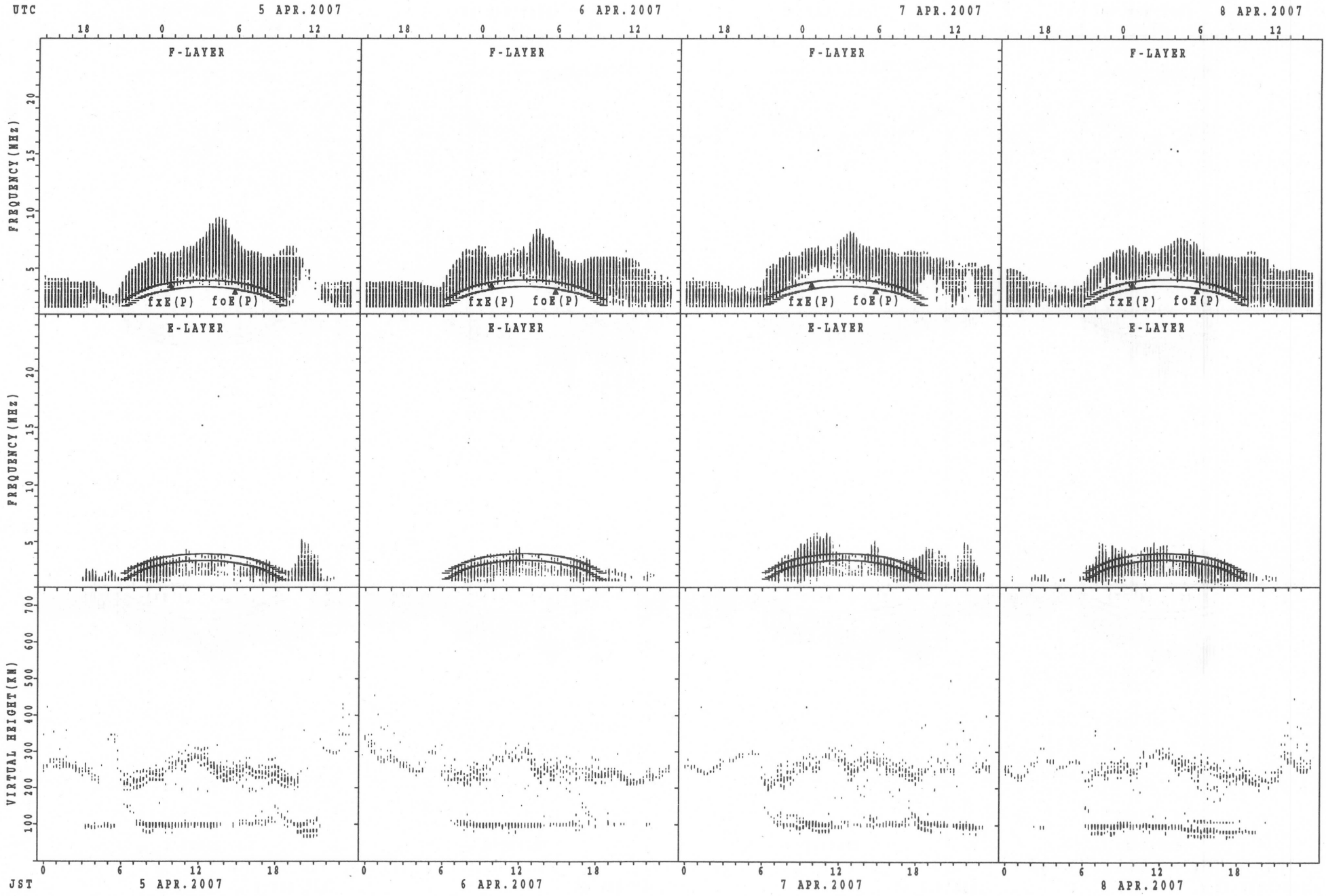
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



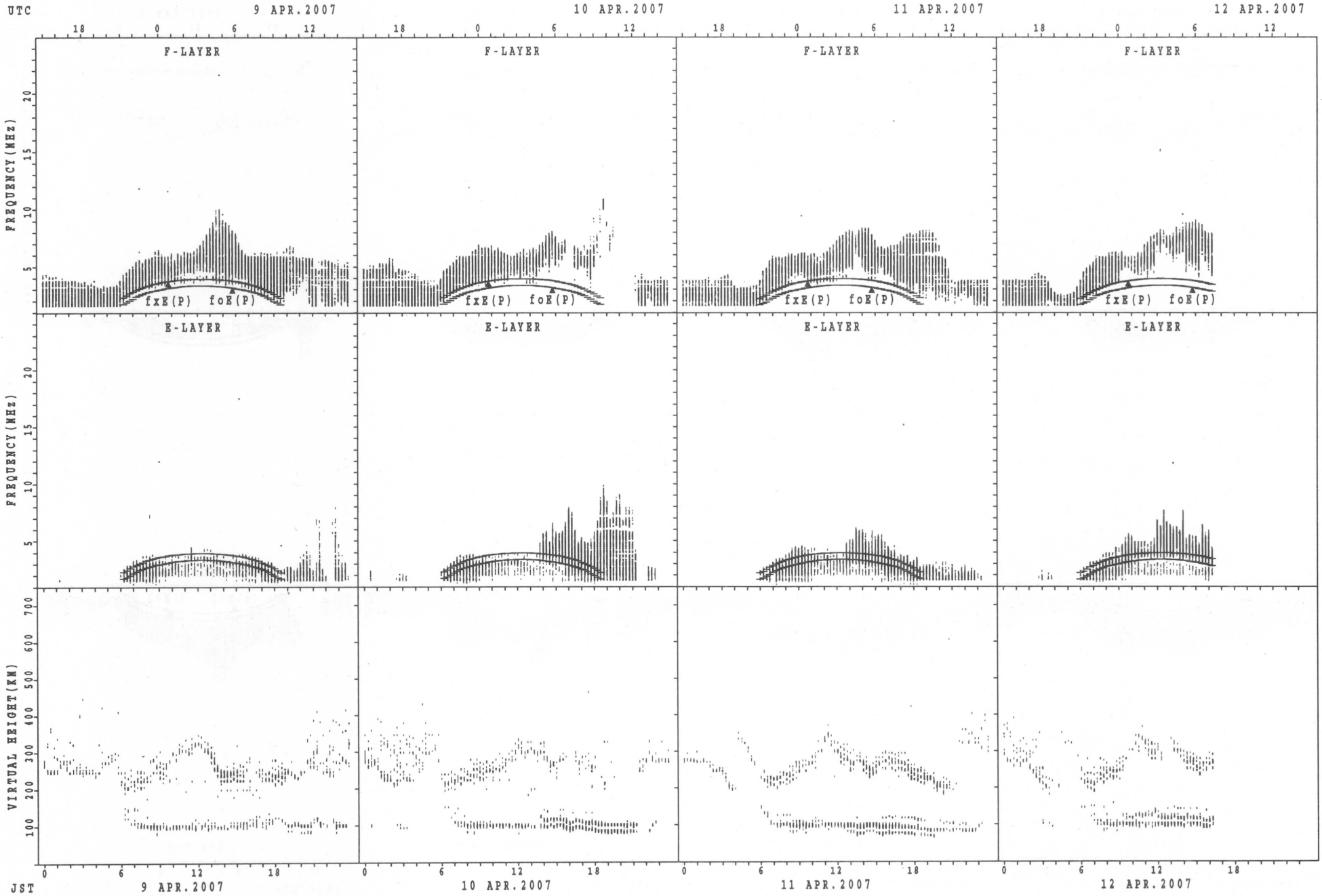
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



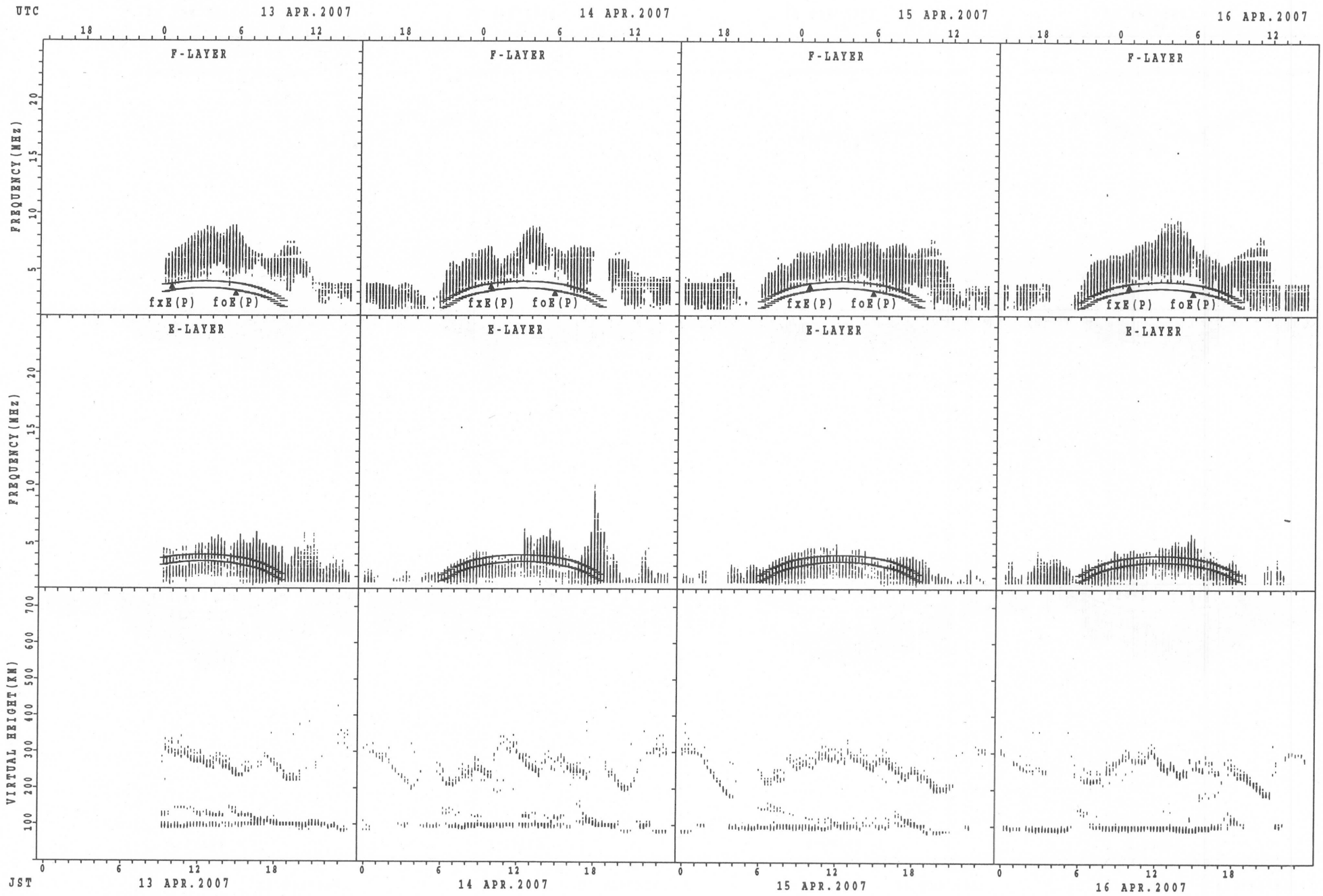
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



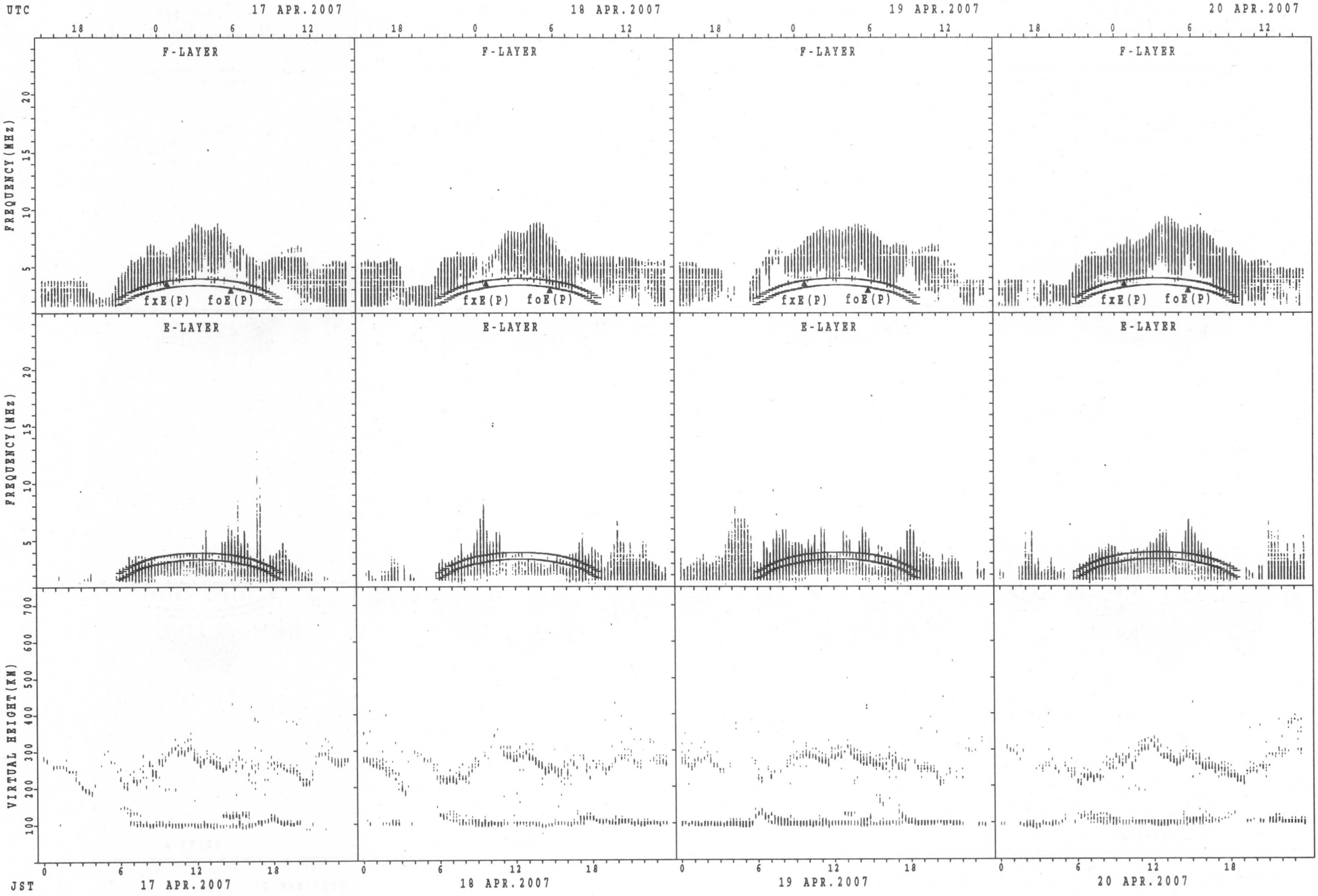
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



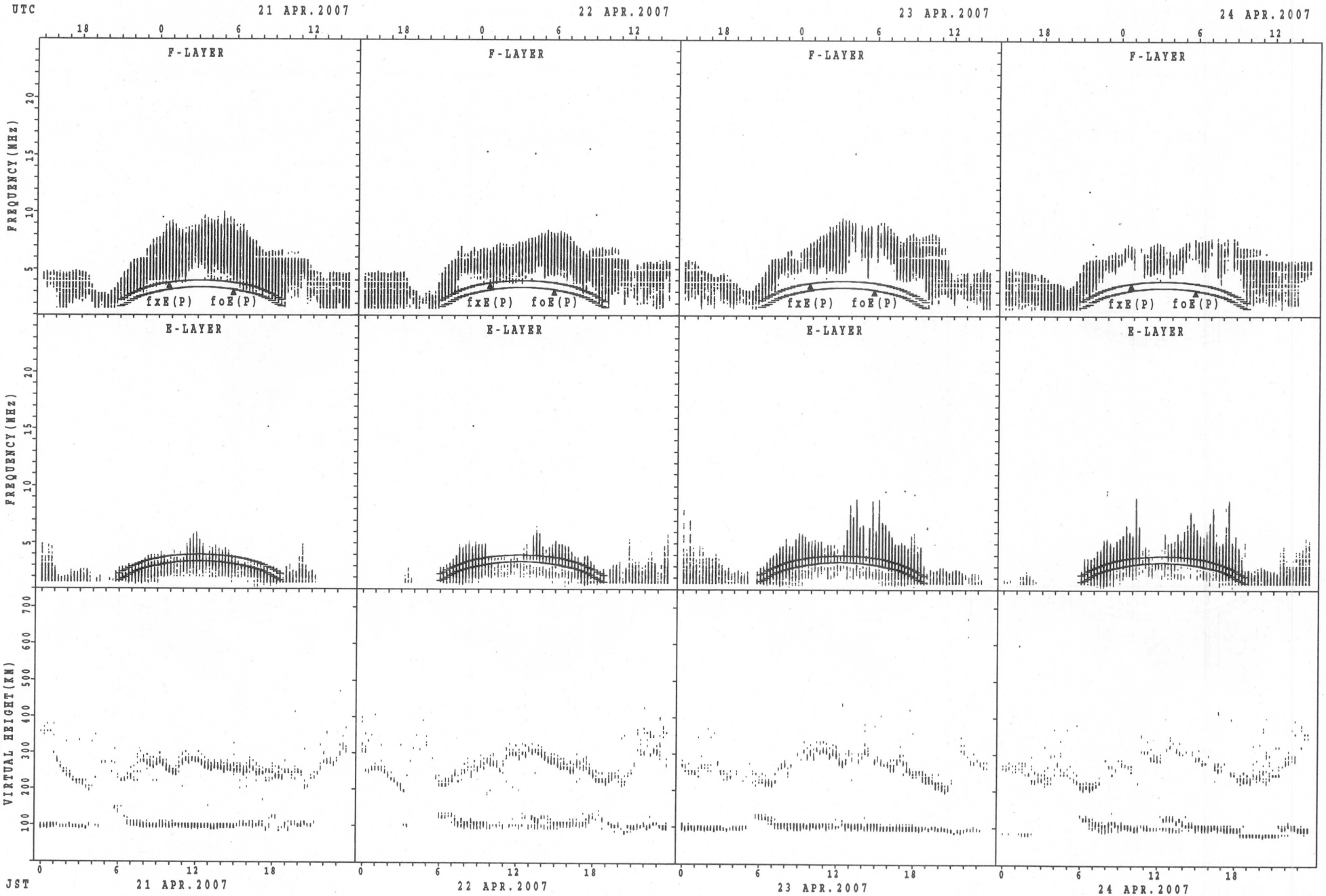
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



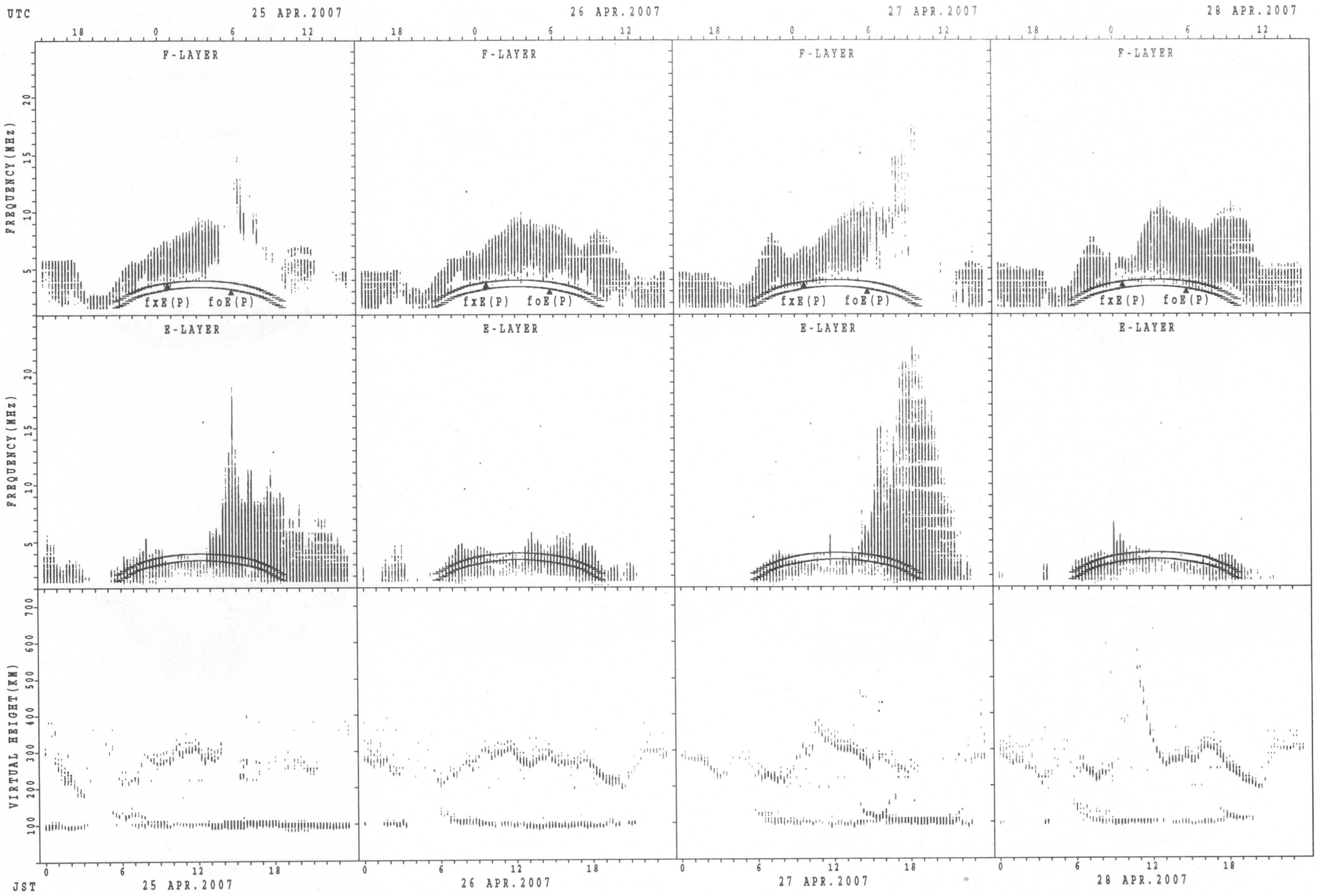
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



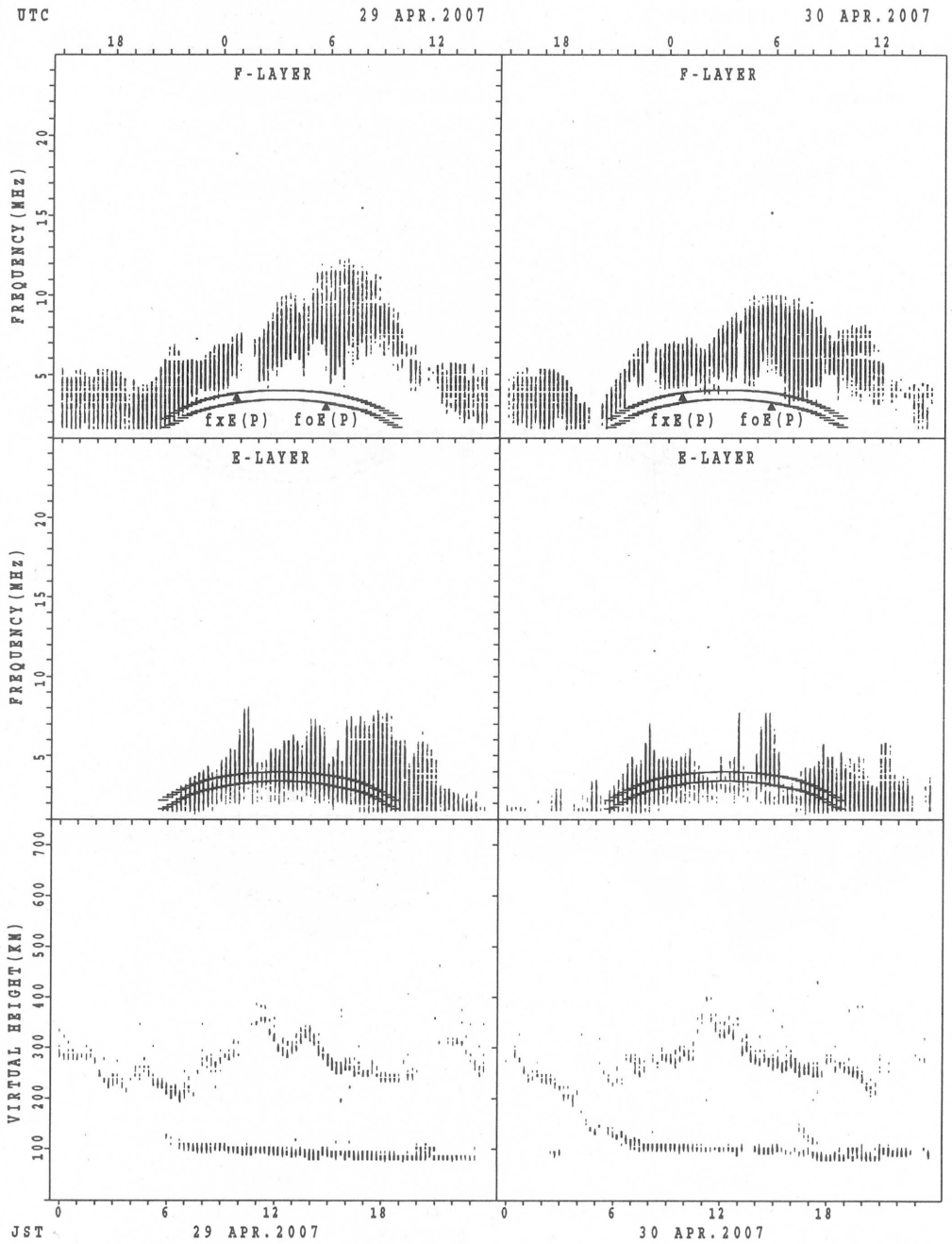
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



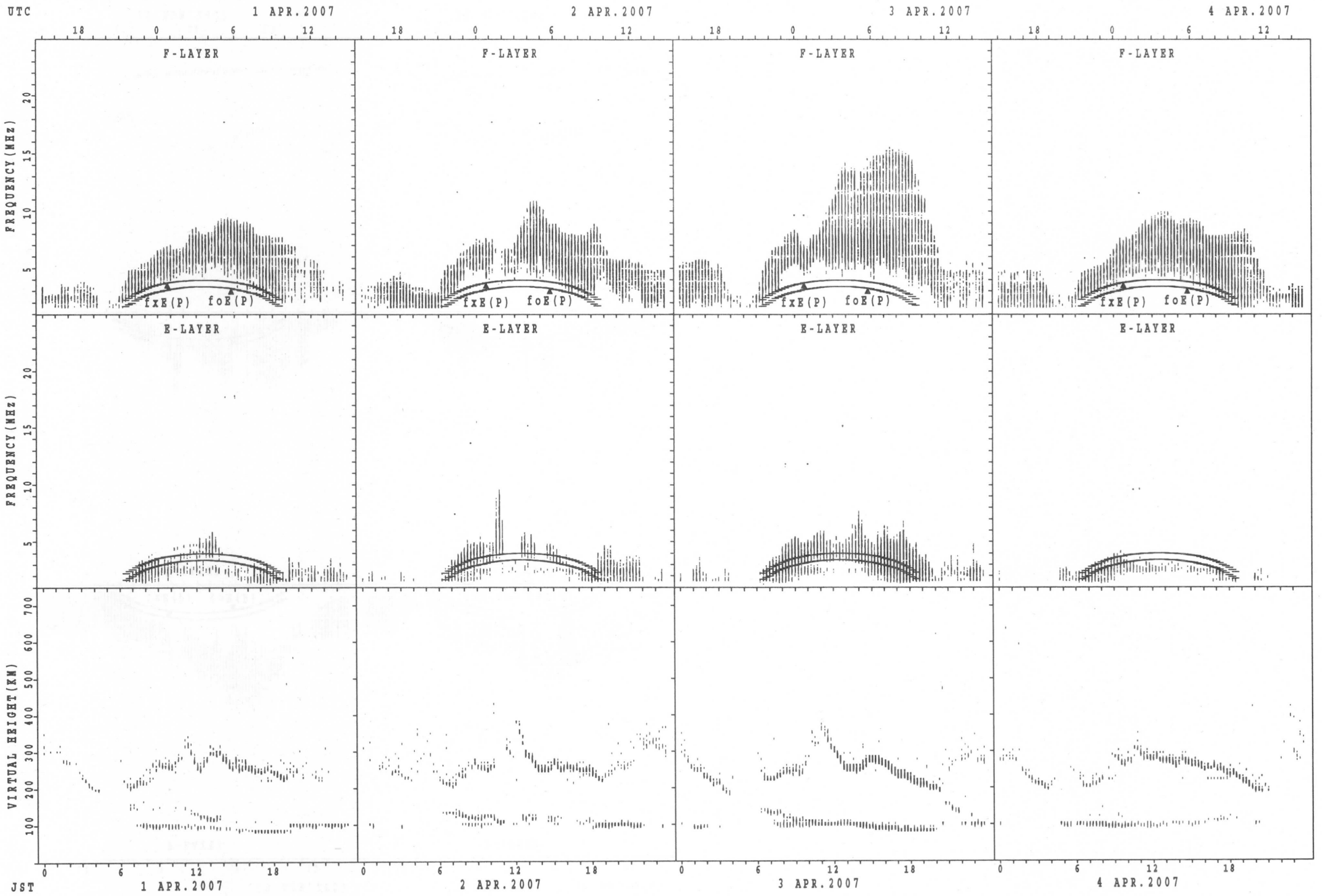
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



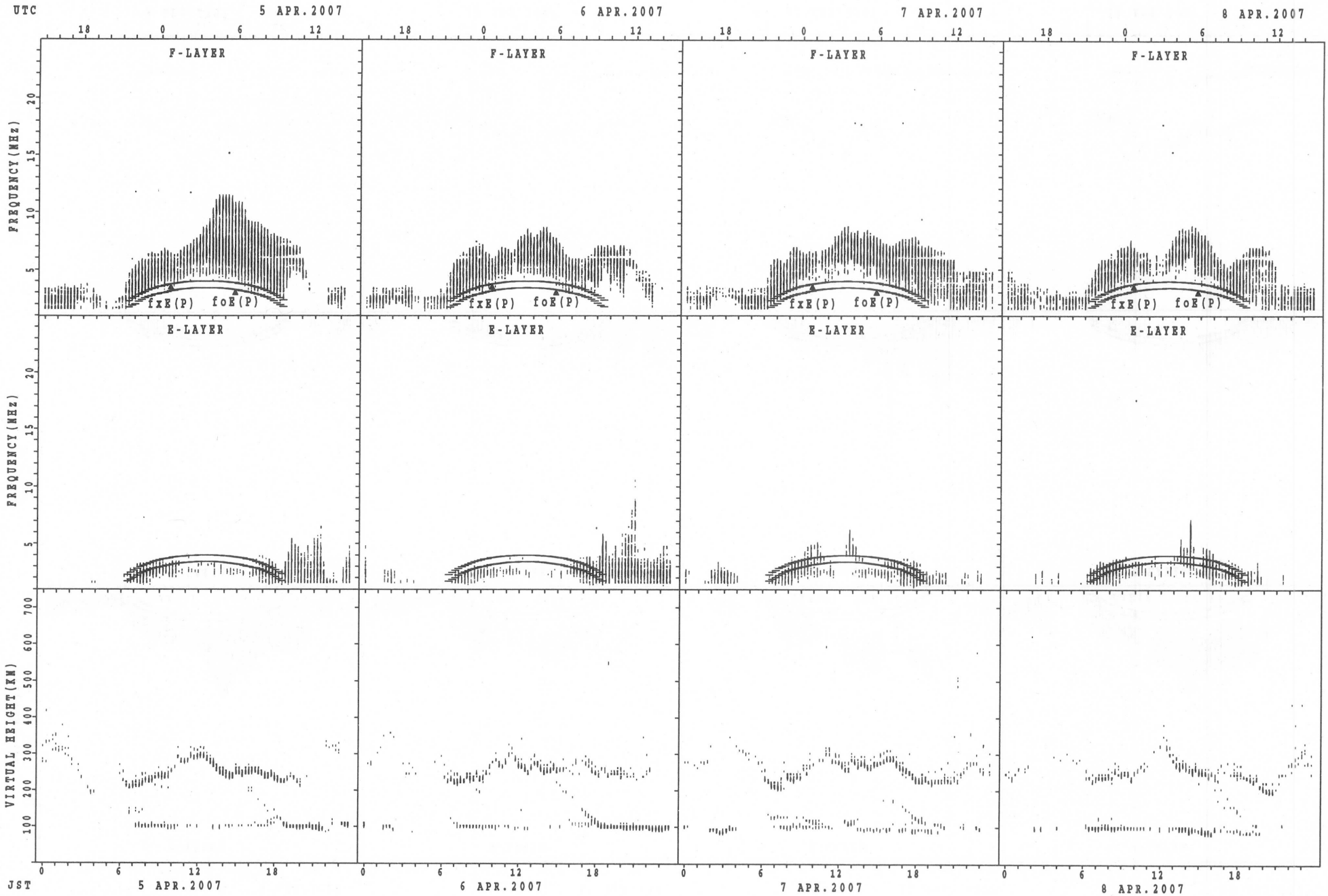
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



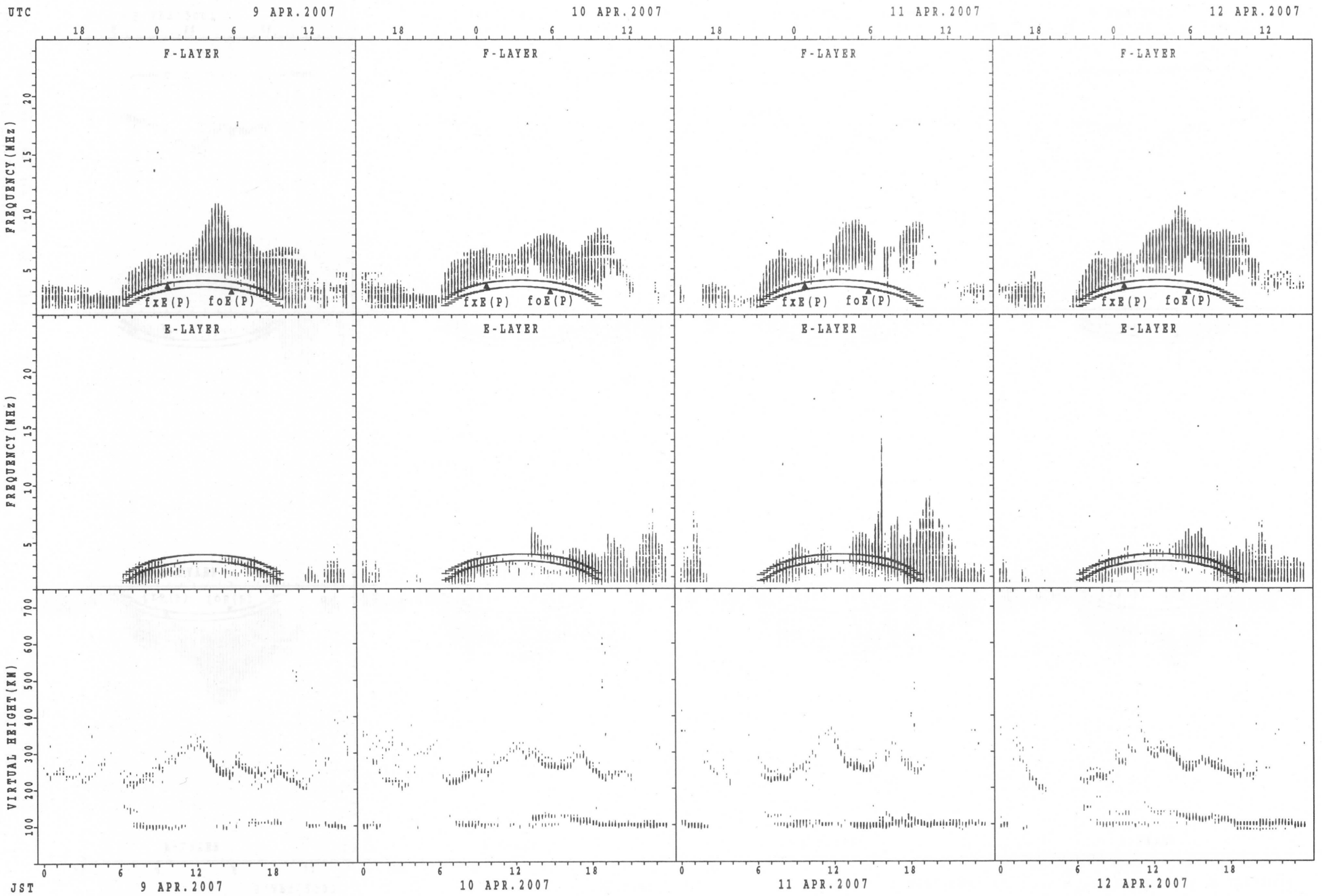
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



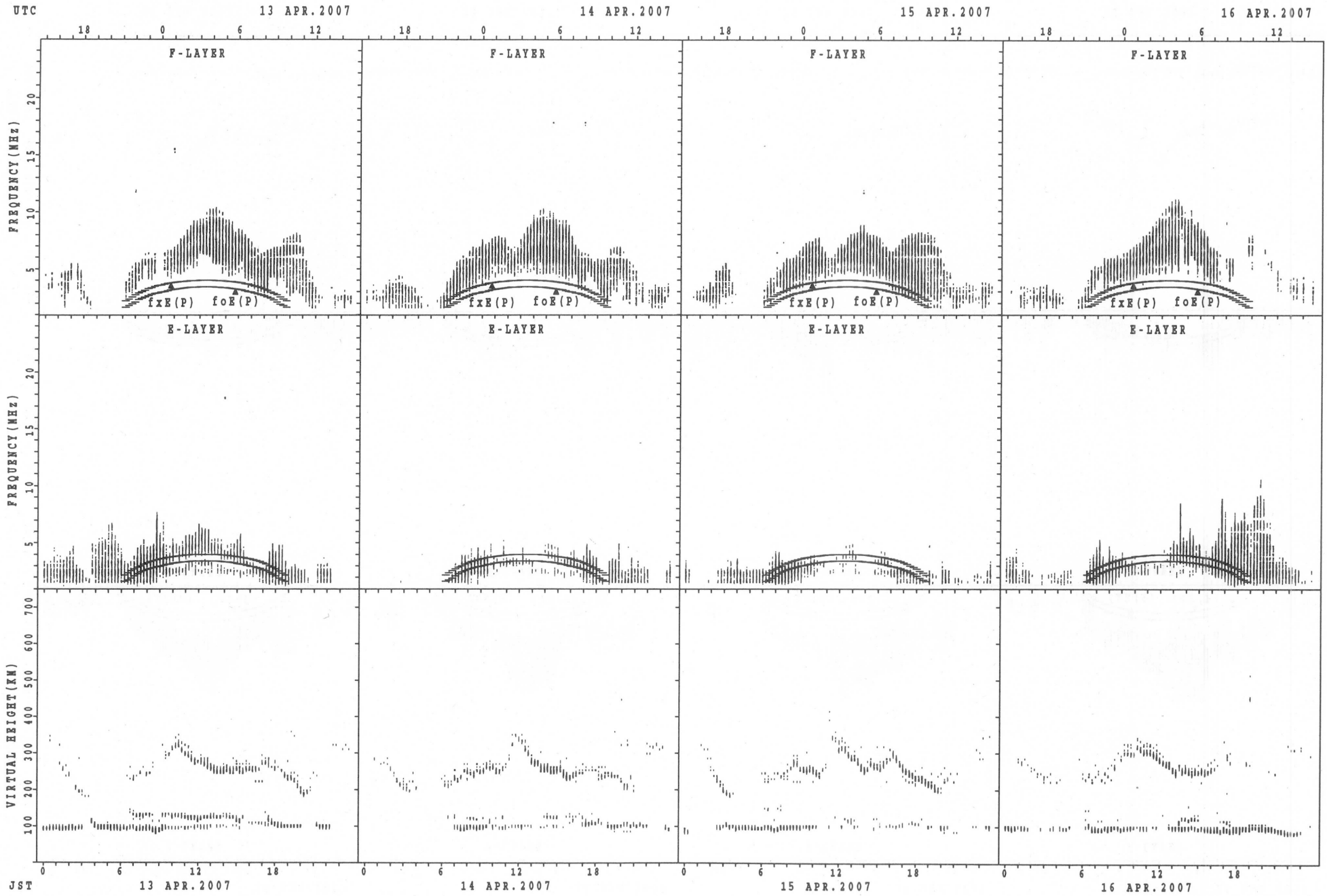
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



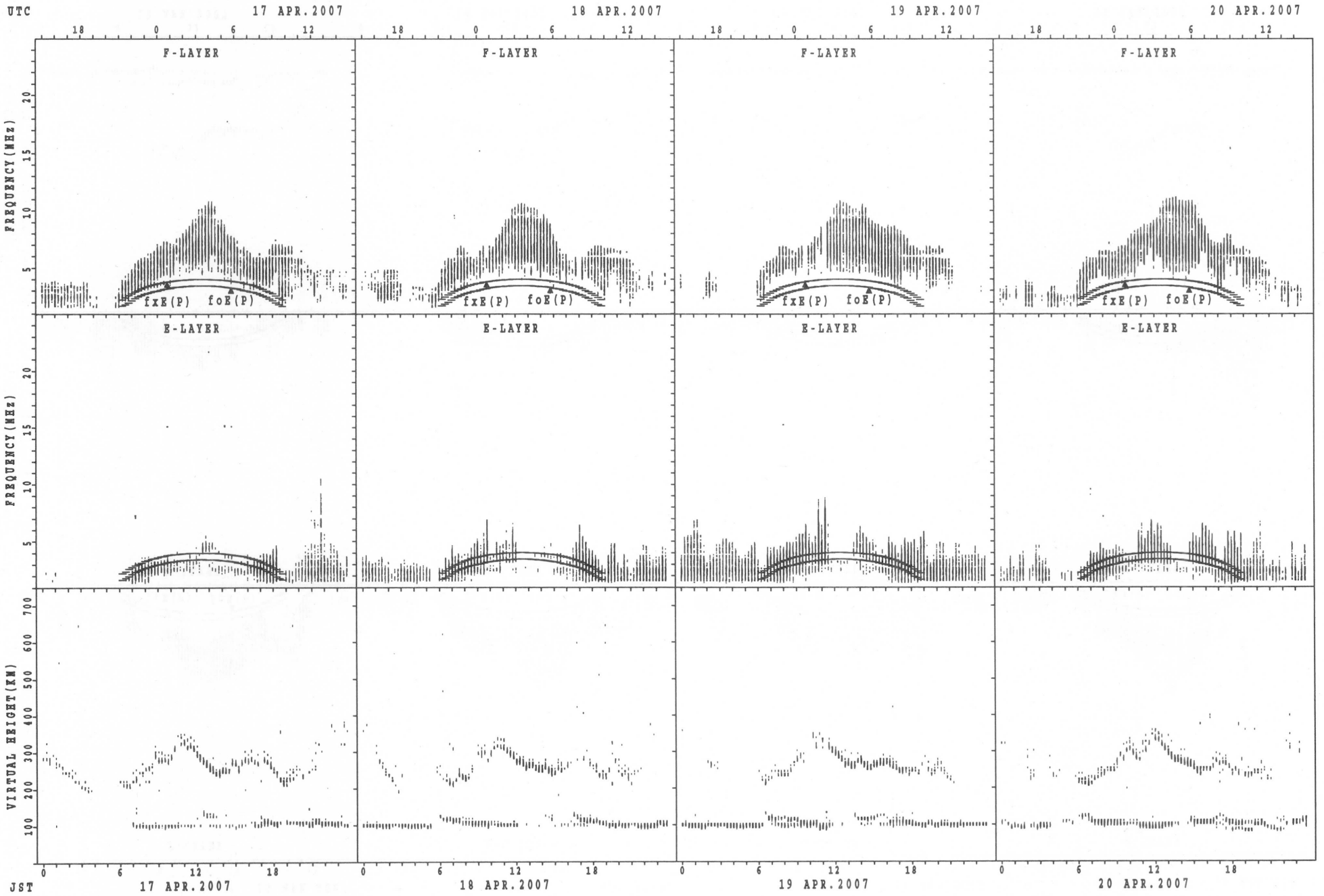
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



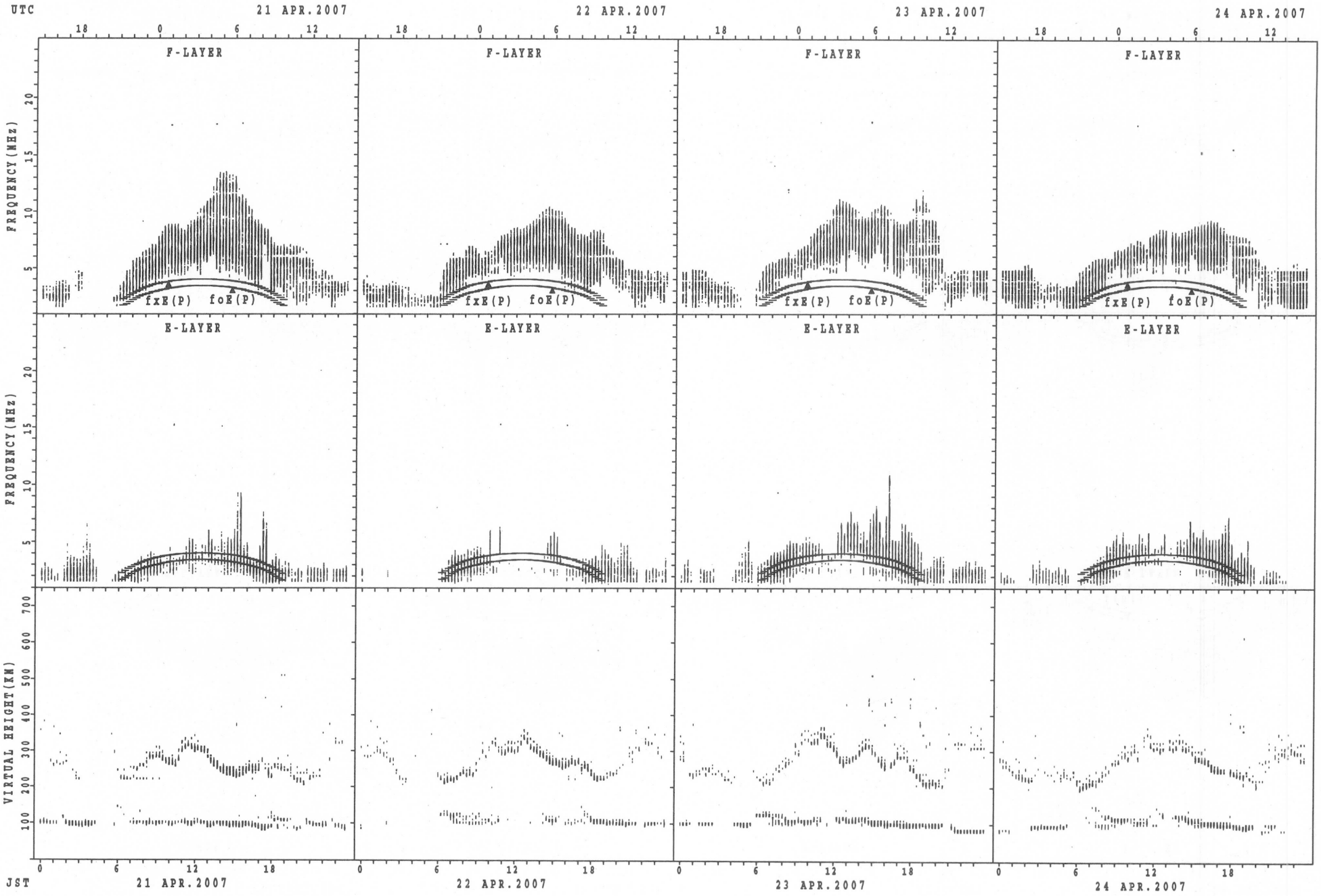
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



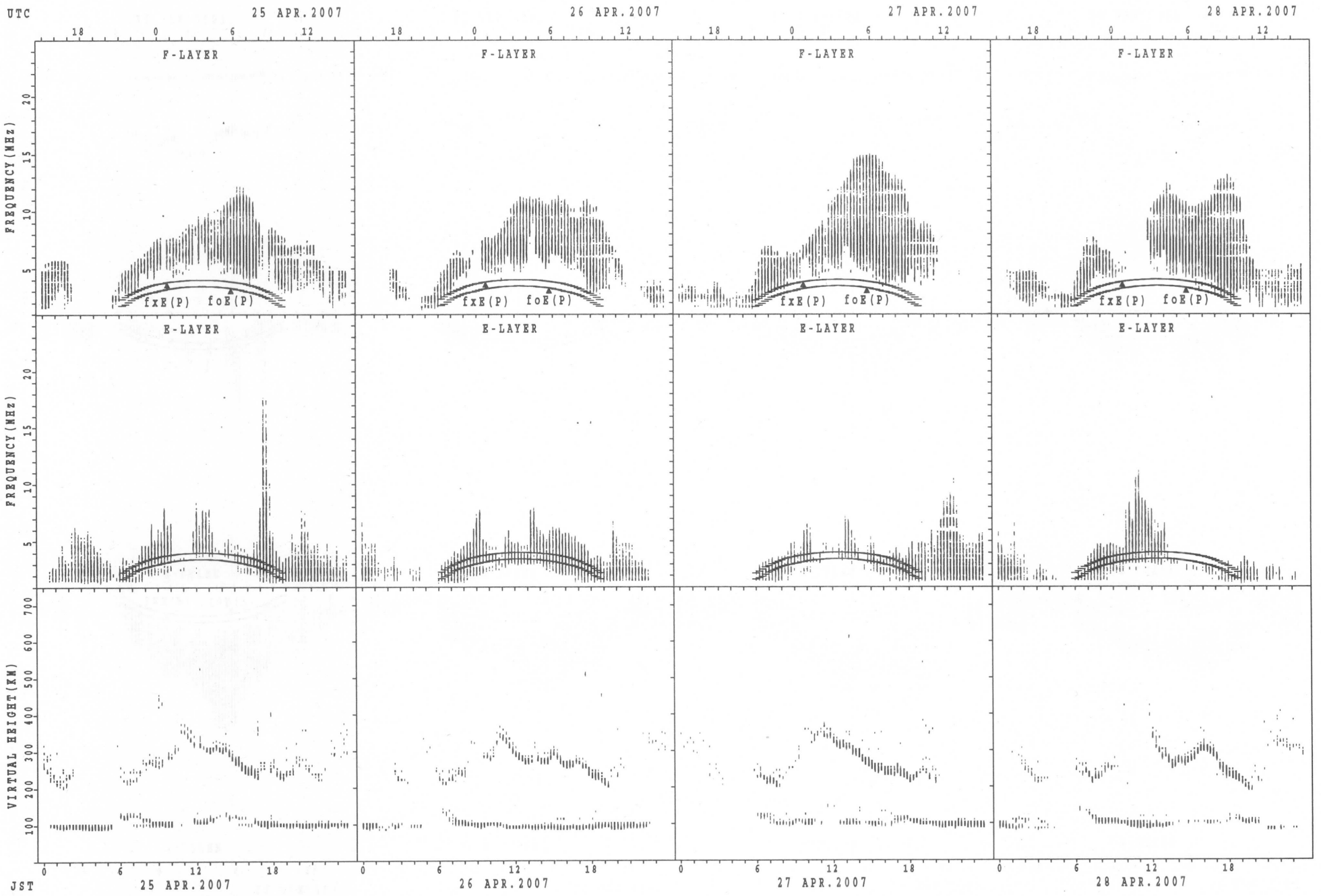
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



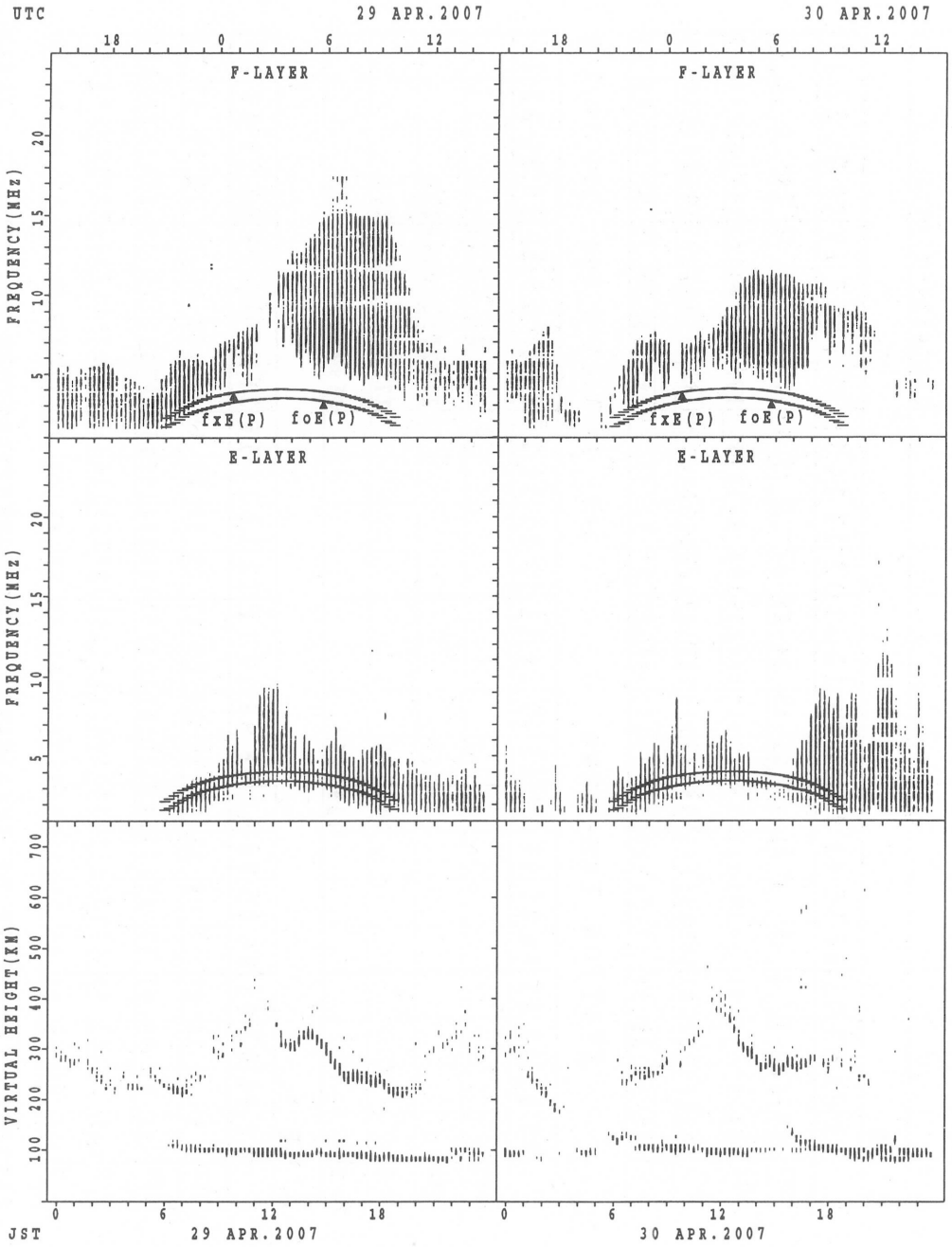
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

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

APR. 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																	13	6	1					
MED																	272	265	282					
U Q																	289	286	141					
L Q																	260	252	141					

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	7	5	5	5	5	4	14	14	9	9	8	9	4	6	6	6	7	12	13	10	8	6	7	5
MED	99	99	99	99	103	128	134	113	107	107	104	103	104	99	98	95	103	113	111	102	108	105	109	95
U Q	105	110	120	121	104	145	149	143	113	114	106	106	145	107	101	103	127	123	121	113	113	113	115	105
L Q	97	93	90	93	95	124	119	111	106	100	102	99	100	95	89	91	95	104	101	95	105	97	103	95

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								3									15	10	6	5	1			
MED								260									272	263	265	266	240			
U Q								272									284	266	266	270	120			
L Q								238									258	248	248	235	120			

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	12	11	9	8	9	4	21	17	21	19	14	16	14	15	9	11	14	19	22	20	18	16	12	14
MED	93	97	91	98	99	101	131	119	113	107	104	105	100	97	105	109	103	107	103	103	103	103	106	99
U Q	103	103	102	101	101	131	145	128	123	113	111	109	103	111	118	127	117	131	107	105	105	107	111	105
L Q	91	91	89	94	97	98	120	109	105	103	99	103	97	95	95	95	99	95	95	95	97	95	99	93

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								4	7								4	14	12	10	6			
MED								239	260								270	279	250	244	237			
U Q								247	266								279	286	268	256	244			
L Q								229	246								259	256	241	238	232			

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	9	5	10	10	7	9	22	25	26	24	20	17	18	18	21	19	19	22	25	25	24	20	17	12
MED	99	97	99	97	97	97	133	125	111	107	103	105	105	102	105	107	107	110	111	99	97	103	101	100
U Q	101	99	103	99	97	106	145	140	119	111	107	111	129	119	114	115	121	119	118	106	104	107	104	105
L Q	94	96	95	95	95	95	125	114	107	104	101	99	97	95	98	97	101	103	98	88	95	96	95	92

MONTHLY MEDIANS OF h'F AND h'Es

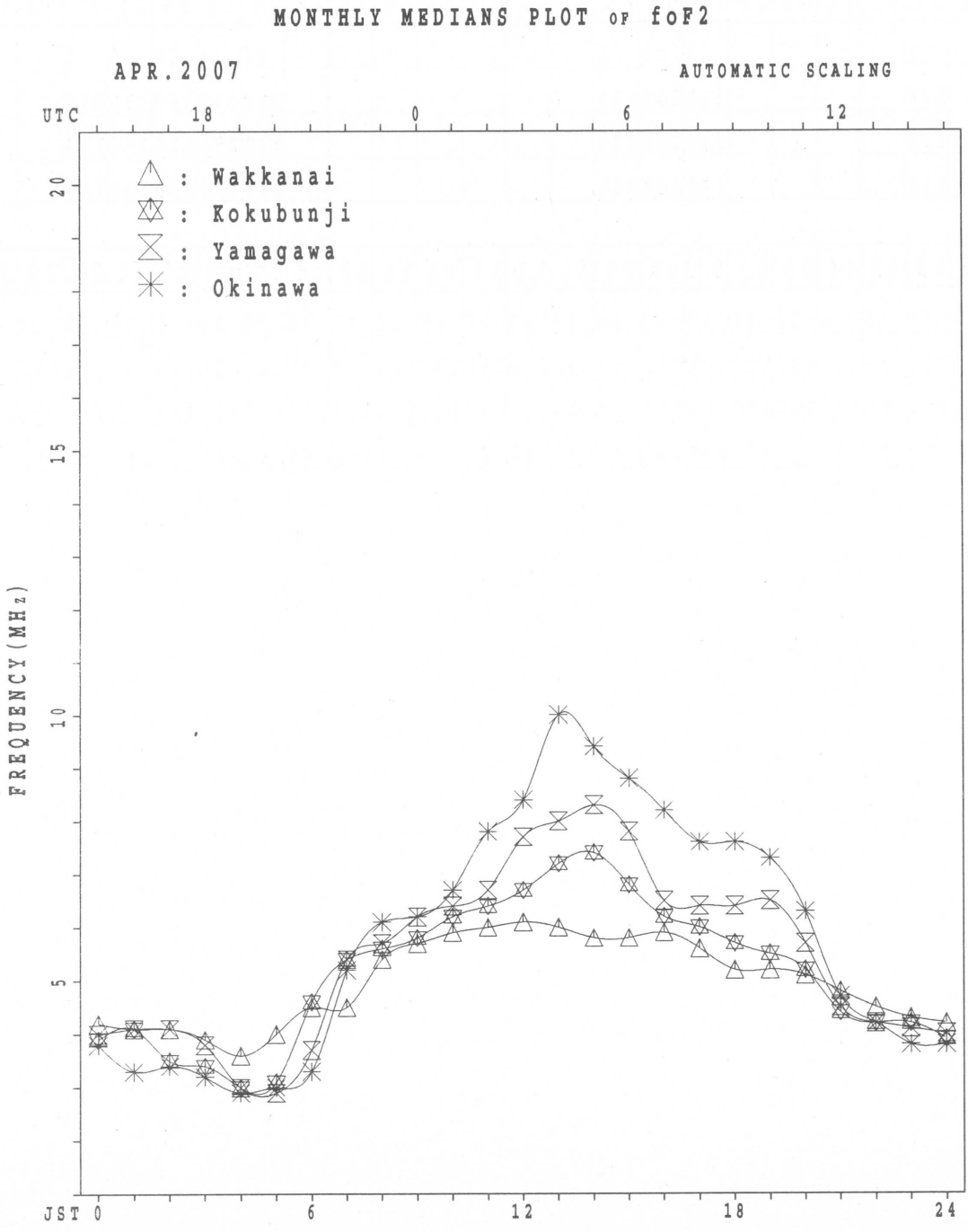
APR.2007 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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			1					3	14	3								20	24	20	9	1		
MED			276					230	250	280								260	248	240	236	266		
U Q			138					236	254	284								270	256	258	252	133		
L Q			138					224	242	246								244	237	222	220	133		

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	17	12	10	12	8	11	12	20	20	23	19	13	16	18	15	17	16	20	26	26	26	22	21	19
MED	103	101	103	98	99	101	127	121	112	107	105	103	106	105	115	107	105	111	106	103	103	102	101	103
U Q	105	103	105	103	101	105	128	129	119	113	117	112	127	117	121	118	113	113	113	105	105	105	105	103
L Q	96	98	99	97	97	97	100	109	105	101	103	98	95	99	97	101	95	101	103	97	101	95	95	97


MONTHLY MEDIANS PLOT OF foF2
APR. 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

APR. 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 40	X 36	X 35	X 36	X 33	X 32														X 66	X 63	X 52	X 47	X 48
2	50	52	47	48	X 38	X 39														X 60	X 46	X 44	X 46	X 46
3	X 44	X 46	X 46	X 42	X 36	X 31														X 59	X 53	X 47	X 44	46
4	X 44	X 44	X 42	X 40	43	44														X 68	X 67	X 45	X 43	X 46
5	46	45	46	46	X 35	X 35														X 61	X 53	X 43	X 42	42
6	40	42	40	37	X 31	X 32														X 58	X 55	X 54	X 52	X 51
7	X 49	X 43	X 41	44	39	42														X 54	X 51	X 50	X 49	X 50
8	X 49	X 47	X 43	X 40	X 39	X 38														X 50	X 44	45	46	45
9	46	44	45	44	X 32	X 34														X 64	X 59	X 54	X 51	53
10	X 51	52	X 48	46	X 34	X 32														X 69	X 58	X 49	X 46	50
11	48	44	42	50	X 32	X 35														X 77	X 62	X 43	X 42	X 42
12	X 42	46	X 42	X 40	X 34	X 35														A	A	X 46	51	X 46
13	46	X 46	X 50	X 49	X 36	X 35														X 67	A	A	49	48
14	X 42	X 41	X 40	X 39	X 33	X 38														X 64	X 52	X 45	X 44	X 43
15	X 43	X 42	X 41	X 44	X 40	X 34														X 66	X 65	X 48	X 46	49
16	49	46	X 41	X 40	X 34	X 34														X 63	X 59	X 52	X 42	X 43
17	X 42	X 41	X 41	X 40	X 30	X 35														X 61	X 61	X 51	X 52	X 50
18	X 47	X 48	X 48	X 40	X 34	X 35														X 56	X 55	X 52	X 49	X 48
19	X 45	X 46	X 43	X 44	X 34	X 40														X 73	X 75	X 55	X 46	X 45
20	X 44	X 42	44	X 40	X 37	X 42														X 59	X 54	X 50	55	X 50
21	X 46	X 44	X 44	X 42	X 34	X 39														X 65	X 61	56	60	X 52
22	X 49	X 47	X 47	X 44	X 34	X 37														X 68	X 67	X 54	53	54
23	X 53	X 50	X 47	X 46	44	X 45														X 70	X 65	X 55	X 53	X 52
24	X 54	X 51	X 50	X 40	X 33	A														X 72	X 66	X 60	59	X 56
25	X 54	X 52	X 55	X 46	X 30	X 39														A	X 65	X 54	X 51	X 48
26	49	X 45	X 43	43	X 39															X 72	X 72	X 50	X 48	X 46
27	X 49	X 46	X 44	X 40	X 39															X 72	X 67	X 57	X 53	X 55
28	X 54	X 52	X 48	X 46	X 39															X 93	X 76	X 53	X 52	X 52
29	X 51	X 49	X 48	X 46	X 39	X 49														X 74	X 62	X 62	X 60	X 60
30	X 54	X 55	X 51	X 51	X 44															X 71	X 73	X 53	X 46	X 46
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	25														28	28	29	30	30
MED	X 48	X 46	X 44	X 44	X 34	X 35														X 66	X 62	X 52	X 49	X 48
U Q	X 50	X 49	X 48	X 46	X 39	X 40														X 72	X 66	X 54	52	X 52
L Q	X 44	X 44	X 42	X 40	X 33	X 34														X 60	X 54	X 46	X 46	X 46

APR. 2007 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 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	34	30	28	30	27	26	45	54	52	55	58	63	76	70	83	92	69	59	59	60	57	45	41	42
2	F	F	F	F	32	33	49	57	65	74	74	62	66	73	84	77	62	65	66	54	40	38	40	39
3	38	40	40	36	30	25	49	53	61	71	81	80	89	90	78	68	72	65	58	53	47	41	37	F
4	38	38	36	34	F	F	40	45	A	52	60	62	68	74	71	64	51	50	55	62	61	39	38	40
5	F	F	F	F	29	29	40	46	51	54	56	67	67	69	70	62	53	50	52	55	47	37	36	F
6	F	F	F	F	25	26	39	49	56	60	60	62	56	68	68	55	51	50	49	52	49	48	46	45
7	43	37	35	F	F	F	40	50	56	60	63	64	64	73	64	60	53	51	49	48	45	44	43	44
8	43	41	37	34	33	32	43	46	53	54	65	64	72	63	66	55	60	55	54	44	38	F	F	F
9	F	F	F	F	25	28	43	51	52	54	59	58	62	75	84	70	60	51	52	58	53	48	45	F
10	45	F	42	F	28	26	44	51	52	60	64	63	58	59	60	69	64	62	63	63	52	43	40	F
11	F	F	F	F	26	28	42	53	51	51	57	59	66	64	66	65	66	65	67	71	56	37	36	36
12	36	F	36	34	28	29	44	51	57	52	58	62	66	64	74	A	A	A	A	A	A	40	F	40
13	F	40	44	43	30	29	46	58	54	62	63	64	63	70	71	72	61	60	62	61	A	A	F	F
14	36	35	34	33	26	32	45	49	57	57	57	68	72	A	58	61	61	58	60	58	46	39	38	37
15	37	35	35	37	33	28	42	45	48	55	65	67	76	69	60	61	68	57	54	60	59	42	40	F
16	F	F	33	34	28	28	44	52	57	59	65	68	65	72	64	62	59	58	55	57	52	46	36	37
17	36	35	35	34	24	29	47	51	57	63	59	55	62	68	62	63	57	48	48	55	55	45	46	44
18	41	42	42	34	27	29	54	57	59	54	59	66	66	66	76	68	57	56	50	50	49	46	43	41
19	39	40	37	38	28	33	51	56	64	63	74	79	61	74	72	63	58	58	A	67	69	48	40	39
20	38	36	F	34	31	36	57	54	61	60	A	63	74	72	78	70	68	64	53	53	48	44	F	44
21	40	38	37	35	28	33	45	53	60	73	69	82	82	78	61	56	56	63	68	58	55	F	F	46
22	43	41	41	38	27	31	49	56	64	64	A	66	64	63	60	61	60	58	56	62	61	48	F	F
23	47	44	41	40	F	39	44	55	63	52	68	66	72	72	73	85	A	A	A	64	58	49	47	45
24	48	45	44	34	27	A	52	59	61	56	60	63	58	59	61	62	63	60	68	65	60	54	F	50
25	48	46	49	40	24	33	48	55	51	58	66	71	80	84	90	81	70	70	A	A	59	48	44	42
26	F	39	38	F	33	35	51	54	56	61	69	72	84	86	84	80	64	57	56	66	66	43	42	40
27	43	40	38	34	33	36	52	65	69	63	60	61	65	72	76	74	77	79	66	66	60	51	47	49
28	48	46	42	40	33	40	48	74	61	56	52	69	89	94	77	68	63	66	75	87	70	47	46	46
29	45	43	42	40	33	43	58	56	60	59	61	67	66	71	84	92	78	84	80	68	55	56	54	54
30	48	49	45	45	38	36	43	50	47	53	56	56	63	70	80	80	70	67	57	65	66	47	40	40
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	22	22	24	22	27	27	30	30	29	30	28	30	30	29	30	29	28	28	26	28	28	27	23	22
MED	42	40	38	34	28	31	45	53	57	58	60	64	66	71	72	68	62	58	56	60	55	45	41	42
U Q	45	43	42	40	33	35	49	56	61	62	66	68	74	74	78	76	68	65	66	65	60	48	46	45
L Q	38	37	36	34	27	28	43	50	52	54	58	62	63	67	64	62	58	56	53	54	48	41	38	40

IONOSPHERIC DATA STATION Kokubunji

APR. 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	U L 436	440	452	440	A	U L 444	L								
2									A	A	A	L	A	A	U L 432	L	L	A	A					
3									A	A	A	A	U L 448	436	A	L	L							
4									A	U L 428	A	432	440	A	424	U L 400	L							
5									L	U L 420	U L 432	A	U L 444	U L 444	U L 424	L	L							
6								L	L	U L 424	U L 436	432	U L 444	432	U L 408	L								
7									L	L	436	436	460	U L 440	U L 424	U L 412	L							
8									L	U L 436	432	436	436	U L 452	U L 428	L	L							
9									L	U L 436	436	U L 444	440	440	428	U L 404	L							
10									A	U L 428	432	U L 436	L 452	436	U L 428	U L 404	A	A						
11									A	A	A	A	444	436	U L 432	U L 408	L	L						
12									L	U L 420	U L 436	U L 452	432	428	A	A	A	A	A					
13								A	A	A	A	A	A	432	U L 428	U L 412	A	A						
14								L	A	A	A	A	A	A	A	A	L	A						
15									L	A	U L 432	448	444	U L 440	420	428	L							
16								L	L	424	432	448	U L 444	436	428	412	L	L						
17								L	L	420	U L 440	U L 472	444	428	U L 432	L	L	L						
18									L	L	U L 444	U L 444	456	A	A	A	L							
19									A	A	A	A	A	A	A	A	A	A	A					
20								L	A	A	A	U L 448	A	A	A	A	A	A						
21								L	U L 416	428	444	U L 444	A	444	436	U L 420	L	L						
22								L	U L 416	A	A	A	A	U L 424	U L 428	L	U L 388	L						
23								L	L	U L 444	U L 436	U L 460	E A	436	436	416	A	A	A					
24							A	L	A	U L 432	A	U L 444	444	A	U L 436	A	A	A						
25								L	U L 436	U L 432	448	452	448	448	U L 428	U L 428	A	A	A					
26								A	A	U L 452	U L 456	U L 460	U L 452	U L 460	U L 428	U L 420	L	L						
27								A	U L 420	U L 428	U L 444	U L 472	U L 464	U L 444	U L 452	U L 420	A							
28								L	A	U L 452	U L 444	U L 460	452	U L 440	U L 444	U L 424	U L 396	L	L					
29								L	A	A	A	460	468	U L 456	448	436	U L 408	L						
30									U L 416	U L 440	440	U L 448	444	A	A	A	L	A						
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT									5	18	19	22	22	21	23	15	3							
MED									U L 416	U L 430	U L 436	U L 448	444	440	U L 428	U L 416	U L 396							
U Q									U L 428	U L 436	U L 444	U L 460	452	U L 444	U L 436	424	U L 408							
L Q									U L 416	U L 424	432	444	444	434	428	U L 408	U L 388							

APR. 2007 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 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							B	252	284	UR 332	R	R	356	A	A	R	R	UA 192	B					
2							B	224	UA 284	A	A	A	A	A	A	R	R	UA 212	B					
3							B	228	A	A	A	A	A	R	A	A	UR 268	A	B					
4							B	A	A	A	A	A	A	A	R	A	R	A	B					
5							172	232	R	R	A	A	A	A	R	R	R	220	B					
6							B	UR 248	R	R	R	R	344	R	R	R	R	208	B					
7							196	256	R	A	R	R	368	332	A	R	UR 264	228	B					
8							184	252	A	A	A	A	A	R	R	R	R	220	B					
9							184	248	292	A	A	A	A	A	R	A	A	UR 208	B					
10							184	248	292	A	A	A	A	A	A	300	A	A	B					
11							B	A	A	A	A	A	R	R	R	R	R	A	B					
12							184	260	UA 292	A	A	A	A	A	316	A	A	A	B					
13							188	260	A	A	A	A	A	A	A	300	A	A	B					
14							204	256	A	A	A	A	A	A	A	A	A	A	B					
15							176	244	UA 296	A	A	A	A	A	R	R	R	A	B					
16							196	268	A	A	A	A	A	A	UR 320	R	R	212	B					
17							200	252	304	328	A	A	A	A	A	312	R	228	B					
18							UA 220	A	A	A	A	A	A	A	A	A	A	UA 216	B					
19							A	268	A	A	A	A	A	A	A	A	A	A	B					
20							UA 220	A	A	A	A	A	A	A	A	A	A	A	B					
21							228	A	A	A	R	R	384	A	R	A	R	224	B					
22							UA 220	A	A	A	A	A	A	R	R 332	R	A	228	B					
23							232	A	A	A	A	A	A	A	UR 332	A	A	A	B					
24							A	A	A	A	A	A	A	A	A	A	A	A	A					
25							208	UA 272	A	A	A	A	A	A	UR 352	A	A	A	B					
26						B	A	A	A	A	A	352	B	R	A	316	A	UA 228	B					
27						B	A	A	A	A	R	R	R	R	R	UA 304	A	UA 228	B					
28						B	232	A	A	A	A	A	A	A	R	UR 336	288	228	B					
29							UA 216	A	A	A	A	A	A	A	R	R	A	A	B					
30						B	228	A	A	A	A	A	A	A	A	A	280	A	B					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							20	17	7	2		1	4	1	5	6	4	15						
MED							202	252	292	330		352	362	332	UR 332	308	274	220						
U Q							220	260	296				376		UR 342	316	284	228						
L Q							184	246	284				350		318	300	UR 266	212						

APR. 2007 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 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	E B 16	E B 14	E B 15	E B 15	E B 15	E B 15	24	29	33	G 20	G 30	G 30	41	43	38	G 25	G 23	24	22	E B 19	J A 46	J A 36	J A 18	J A 24
2	J A 32	J A 28	19	E B 14	E B 15	21	23	30	38	J A 52	J A 52	J A 47	J A 55	J A 58	J A 37	G 28	G 21	32	J A 61	J A 34	J A 24	J A 38	28	J A 29
3	J A 25	J A 18	J A 21	20	19	21	24	31	J A 48	43	J A 48	J A 45	41	G 25	J A 47	34	G 20	J A 26	J A 22	J A 21	J A 20	22	J A 86	J A 37
4	J A 34	J A 31	J A 21	J A 23	J A 26	J A 33	J A 25	J A 38	J A 52	J A 37	79	44	J A 46	J A 69	29	G J A 43	J A 28	J A 26	J A 30	20	20	J A 17	20	J A 26
5	J A 18	J A 23	J A 24	21	E B 14	E B 15	G	29	G 27	G 28	38	46	J A 42	J A 50	30	G 22	G 20	27	18	J A 23	20	20	20	E B 15
6	E B 15	E B 14	E B 14	E B 16	E B 14	E B 15	19	G 20	G 25	G 27	G 28	G 25	38	G 26	G 23	G 20	G 20	25	J A 23	J A 19	E B 15	E B 16	E B 15	E B 16
7	E B 16	E B 15	E B 16	E B 16	E B 15	E B 15	26	28	G 26	36	G 27	G 24	42	39	35	G 25	G 23	31	E B 17	J A 20	E B 14	19	E B 15	E B 15
8	E B 16	18	E B 16	E B 15	E B 15	E B 15	23	30	34	39	J A 41	37	36	G 32	G 26	G 27	G 20	25	E B 16	20	E B 15	E B 15	E B 15	E B 16
9	E B 15	E B 14	E B 15	E B 15	E B 14	E B 16	25	30	34	36	38	36	35	36	G 30	33	30	G 20	E B 16	E B 15	J A 26	J A 21	E B 16	E B 15
10	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	28	32	40	39	39	J A 42	J A 42	36	34	36	J A 40	J A 52	J A 48	J A 29	J A 21	E B 15	E B 14	E B 15
11	E B 15	22	E B 14	E B 15	20	20	22	J A 40	J A 42	J A 45	J A 43	J A 43	G 34	G 30	G 27	G 26	G 24	28	J A 23	J A 16	J A 18	20	19	E B 16
12	E B 15	J A 17	E B 15	E B 14	E B 15	E B 15	23	29	36	41	38	J A 42	37	J A 40	J A 43	J A 122	J A 97	J A 126	J A 77	J A 72	J A 69	J A 52	J A 28	J A 43
13	J A 19	E B 15	E B 18	E B 15	J A 20	21	26	35	40	J A 48	J A 46	41	44	39	35	35	38	30	J A 45	63	J A 56	J A 55	J A 40	19
14	E B 15	20	J A 28	J A 20	J A 21	E B 14	26	34	J A 39	J A 56	J A 46	J A 57	J A 52	J A 77	J A 71	J A 46	J A 33	J A 38	J A 26	21	J A 23	J A 21	J A 20	J A 24
15	J A 22	J A 23	J A 18	20	J A 17	E B 15	25	31	37	42	39	38	38	35	G 27	G 28	G 28	29	J A 33	J A 33	J A 78	J A 32	J A 29	J A 21
16	19	20	20	E B 15	E B 14	E B 15	24	34	34	36	J A 42	J A 42	J A 38	J A 41	G 29	G 21	G 19	24	18	E B 14	E B 15	E B 16	E B 14	E B 15
17	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	26	30	34	35	36	38	J A 40	J A 43	J A 42	36	G 18	27	25	22	E B 15	E B 15	20	E B 14
18	E B 15	E B 15	19	18	E B 15	E B 15	25	J A 33	34	38	42	J A 48	40	J A 54	J A 52	J A 42	35	30	J A 26	J A 30	J A 32	J A 32	J A 55	J A 38
19	J A 28	J A 23	J A 24	J A 20	J A 43	J A 20	J A 32	31	J A 49	J A 54	J A 77	J A 56	J A 89	J A 53	J A 66	J A 98	J A 59	J A 56	J A 71	J A 49	J A 22	J A 18	J A 24	J A 30
20	E B 15	J A 45	J A 24	J A 48	J A 52	E B 14	28	J A 40	J A 68	J A 54	J A 74	40	J A 54	J A 65	J A 50	J A 46	35	J A 38	J A 31	J A 32	J A 43	J A 27	J A 23	J A 24
21	J A 21	J A 22	19	20	18	E B 15	30	32	36	38	G 33	G 29	46	38	G 27	32	G 20	28	19	J A 22	22	E B 15	E B 16	E B 15
22	J A 25	J A 30	J A 21	J A 18	E B 14	E B 16	31	33	39	J A 57	J A 76	J A 60	J A 58	G 27	G 26	G 22	32	30	J A 28	J A 22	J A 18	J A 24	J A 30	J A 39
23	J A 39	20	J A 53	J A 27	J A 21	J A 18	34	31	38	J A 41	J A 39	38	J A 52	37	G 27	G 35	J A 84	J A 90	J A 66	J A 55	J A 62	J A 38	22	J A 33
24	J A 31	J A 55	J A 54	J A 66	J A 35	J A 54	J A 51	J A 36	J A 50	40	J A 43	42	42	J A 50	38	J A 59	J A 53	J A 47	J A 45	J A 50	J A 86	J A 122	19	J A 33
25	J A 31	21	E B 14	E B 15	E B 15	E B 15	28	34	36	40	J A 42	J A 40	J A 45	J A 45	J A 43	J A 46	J A 48	J A 78	J A 126	J A 129	J A 77	J A 27	J A 36	J A 30
26	J A 32	J A 39	J A 29	J A 34	J A 23	J A 22	J A 39	J A 49	J A 49	39	37	40	E B 39	G 28	34	38	33	29	19	E B 16	E B 15	E B 14	E B 15	E B 14
27	E B 15	E B 14	J A 28	J A 23	J A 22	J A 19	30	J A 44	38	J A 40	G 28	G 27	G 31	G 28	G 26	40	J A 57	J A 56	J A 57	J A 45	J A 23	J A 40	E B 15	E B 14
28	E B 15	E B 15	E B 15	E B 15	E B 15	19	26	35	J A 44	J A 44	39	38	37	38	G 30	G 31	34	29	22	J A 22	J A 17	J A 21	21	E B 15
29	E B 15	E B 16	E B 15	E B 15	E B 15	E B 14	30	31	J A 48	J A 52	J A 47	40	J A 43	J A 38	G 27	G 28	34	J A 36	J A 31	J A 24	J A 24	E B 15	E B 15	J A 19
30	J A 35	J A 30	J A 30	J A 24	J A 20	21	26	34	37	40	J A 55	J A 50	43	J A 46	J A 52	J A 47	32	J A 45	J A 35	J A 34	J A 24	J A 25	E B 15	E B 14
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	17	20	19	17	E B 15	E B 15	26	32	38	40	J A 42	40	42	39	34	34	32	30	J A 27	J A 22	J A 22	J A 21	20	19
U Q	J A 28	J A 23	J A 24	J A 21	J A 21	20	30	J A 35	J A 44	J A 45	J A 47	J A 45	J A 46	J A 50	J A 43	J A 43	J A 38	J A 45	J A 45	J A 34	J A 43	J A 32	J A 28	J A 30
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	24	30	34	37	G 38	G 38	38	G 35	G 27	G 27	G 21	27	22	20	E B 18	E B 16	E B 15	E B 15

APR. 2007 foEs (0.1MHz)

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IONOSPHERIC DATA STATION Kokubunji

APR. 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 16	E B 14	E B 15	E B 15	E B 15	E B 15	22	28	32	G 20	G 30	U Y 30	38	40	36	G 24	G 22	22	20	E B 19	34	19	16	18
2	16	19	E B 15	E B 14	E B 15	E B 15	22	29	36	44	48	41	44	51	34	G 23	G 20	30	57	30	19	26	24	21
3	20	E B 15	16	16	E B 15	16	22	29	42	40	43	42	40	G 25	45	31	G 20	23	18	16	E B 15	E B 15	E B 15	21
4	E B 14	19	E B 14	E B 15	17	16	20	33	A A 52	33	44	36	37	55	G 29	33	20	22	18	16	E B 16	E B 15	E B 15	E B 15
5	E B 15	E B 15	17	E B 16	E B 14	E B 15	G	27	G 26	G 28	36	42	40	38	27	G 22	G 19	26	17	18	E B 16	E B 15	E B 15	E B 15
6	E B 15	E B 14	E B 14	E B 16	E B 14	E B 15	18	G 20	G 24	G 26	G 27	G 25	38	U Y 26	G 23	G 20	G 19	24	20	16	E B 15	E B 16	E B 15	E B 16
7	E B 16	E B 15	E B 16	E B 16	E B 15	E B 15	21	27	G 24	34	U Y 27	G 24	40	37	33	G 25	G 23	30	E B 17	17	E B 14	E B 15	E B 15	E B 15
8	E B 16	E B 14	E B 16	E B 15	E B 15	E B 15	22	28	32	36	37	36	34	G 30	G 26	U Y 27	U Y 20	24	E B 16	E B 15	E B 15	E B 15	E B 15	E B 16
9	E B 15	E B 14	E B 15	E B 15	E B 14	E B 16	24	29	33	35	36	35	34	35	G 29	32	29	G 19	E B 16	E B 15	E B 15	E B 15	E B 16	E B 15
10	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	25	30	39	37	37	38	37	35	32	34	37	45	45	27	19	E B 15	E B 14	E B 15
11	E B 15	E B 15	E B 14	E B 15	E B 16	E B 14	22	34	39	40	41	39	U Y 34	G 29	G 26	G 26	G 22	23	18	E B 15	16	E B 15	E B 15	E B 16
12	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	22	28	35	37	37	38	35	35	40	A A 122	A A 97	A A 126	A A 77	A A 72	A A 69	30	E B 15	23
13	E B 15	E B 15	E B 18	E B 15	E B 14	E B 16	24	32	37	45	44	39	41	37	34	34	36	30	42	46	A A 56	A A 55	26	E B 15
14	E B 15	E B 16	17	E B 14	E B 15	E B 14	24	31	38	54	41	53	45	A A 77	54	43	31	32	20	E B 14	21	18	E B 15	18
15	E B 16	19	E B 14	E B 15	E B 14	E B 15	24	29	36	42	38	36	35	34	G 27	U Y 28	G 28	24	28	30	32	E B 15	E B 15	E B 15
16	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15	22	30	32	35	36	38	35	36	G 28	G 21	G 18	23	17	E B 14	E B 15	E B 16	E B 14	E B 15
17	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	24	28	33	35	35	37	36	37	36	34	G 18	26	20	E B 14	E B 15	E B 15	E B 15	E B 14
18	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	23	29	31	35	40	38	36	45	44	39	30	28	21	25	24	18	15	26
19	21	E B 15	E B 15	E B 14	18	E B 15	23	29	42	46	58	43	45	43	53	57	53	30	A A 71	19	E B 15	E B 15	20	22
20	E B 15	16	E B 15	16	22	E B 14	24	30	54	45	A A 74	38	49	62	43	44	32	35	30	27	30	17	E B 15	E B 15
21	E B 16	E B 15	E B 15	18	E B 15	E B 15	28	29	32	35	G 32	G 29	42	35	G 27	30	G 20	26	18	E B 16	E B 16	E B 15	E B 16	E B 15
22	19	19	16	E B 15	E B 14	E B 16	29	31	36	51	A A 76	55	55	G 26	G 26	G 22	31	28	20	19	E B 16	20	E B 15	16
23	E B 15	E B 15	19	E B 15	E B 16	15	32	30	34	36	35	35	49	36	G 26	34	A A 84	A A 90	A A 66	53	37	23	E B 15	21
24	20	E B 16	30	26	18	A A 54	43	33	46	39	42	37	39	44	33	46	52	39	41	E B 15	20	18	E B 15	19
25	24	E B 14	E B 14	E B 15	E B 15	E B 15	27	32	34	38	39	36	37	38	G 32	34	44	63	A A 126	A A 129	34	20	18	22
26	29	28	21	17	16	18	34	44	44	37	36	38	E B 39	G 28	34	37	31	26	18	E B 16	E B 15	E B 14	E B 15	E B 14
27	E B 15	E B 14	E B 15	19	E B 14	E B 15	27	39	36	38	G 28	G 27	G 30	G 28	G 26	37	39	50	49	35	19	31	E B 15	E B 14
28	E B 15	E B 15	E B 15	E B 15	E B 15	18	25	31	40	40	37	37	36	34	G 30	G 29	33	28	21	E B 15	E B 15	16	E B 15	E B 15
29	E B 15	E B 16	E B 15	E B 15	E B 15	E B 14	26	29	44	46	42	38	39	34	U Y 27	G 27	31	28	23	18	16	E B 15	E B 15	E B 15
30	16	18	18	16	E B 16	20	25	32	35	38	37	39	38	45	45	42	32	40	32	22	19	22	E B 15	E B 14
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	24	30	36	38	37	38	38	36	32	32	30	28	20	18	16	E B 16	E B 15	E B 15
U Q	16	16	16	16	16	16	26	32	40	42	42	39	41	43	36	37	36	35	42	27	24	20	15	19
L Q	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15	22	29	32	35	36	36	36	G 34	G 27	G 26	G 20	24	18	E B 15	E B 15	E B 15	E B 15	E B 15

APR. 2007 fbEs (0.1MHz)

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IONOSPHERIC DATA STATION Kokubunji

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

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IONOSPHERIC DATA STATION Kokubunji

APR. 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	309	310	310	330	347	334	376	382	369	355	347	319	335	307	305	344	352	344	339	313	338	315	293	314
2	F	F	F	F	304	322	370	359	366	346	368	334	318	323	342	353	357	350	341	338	351	277	286	294
3	288	313	315	321	363	295	363	373	337	348	331	319	332	343	345	342	352	363	354	332	327	345	307	F
4	306	301	317	317	F	F	388	357	A	324	327	338	318	334	339	366	341	340	336	339	364	341	310	305
5	F	F	F	F	327	330	374	372	363	347	341	350	340	342	363	361	354	350	349	350	359	312	318	F
6	F	F	F	F	331	323	364	347	353	363	356	353	340	346	366	373	359	349	337	321	320	312	320	321
7	321	335	326	F	F	F	378	368	347	347	335	343	333	345	358	361	367	356	351	325	324	304	304	323
8	317	306	328	322	324	319	375	361	347	352	355	355	358	339	364	357	354	353	365	352	302	F	F	F
9	F	F	F	F	313	309	382	363	349	332	343	324	327	320	345	368	361	346	342	328	332	311	314	F
10	311	F	356	F	343	320	356	375	360	369	365	363	343	336	326	348	343	349	346	337	352	319	311	F
11	F	F	F	F	300	322	365	372	362	340	358	332	340	329	337	347	341	344	340	352	371	301	300	301
12	300	F	339	350	352	337	395	383	369	347	358	338	346	317	327	A	A	A	A	A	A	302	F	307
13	F	305	342	364	350	328	373	358	358	351	348	323	312	331	346	363	358	365	350	346	A	A	F	F
14	308	317	327	349	346	349	380	360	365	368	348	339	335	A	356	359	362	355	359	357	368	308	301	310
15	302	321	314	373	404	335	379	375	344	339	342	333	335	339	333	355	353	349	347	335	360	319	308	F
16	F	F	330	334	369	329	377	347	363	346	343	349	327	352	342	355	349	342	340	345	345	355	308	306
17	320	305	333	381	332	344	383	348	349	355	341	322	326	353	350	358	375	361	345	326	339	303	307	309
18	313	306	354	380	307	317	371	376	377	368	337	345	327	314	354	381	362	349	353	318	312	317	321	309
19	318	325	327	322	350	328	366	357	348	363	339	368	312	331	346	359	349	340	A	333	350	362	300	312
20	300	302	F	317	321	356	384	364	363	359	A	327	329	317	338	351	353	352	357	331	330	295	F	324
21	301	313	329	355	320	337	355	348	345	349	317	330	337	348	343	334	346	341	356	330	330	F	F	323
22	322	316	334	374	317	326	346	368	352	341	A	360	339	336	332	333	333	353	335	335	350	303	F	F
23	314	329	356	332	F	349	379	347	374	353	339	316	329	324	311	339	A	A	A	327	356	327	309	294
24	314	324	350	323	351	A	359	358	365	368	362	340	329	321	343	344	334	347	336	328	316	304	F	314
25	307	328	354	415	333	347	383	376	327	329	327	305	314	314	337	333	333	363	A	A	336	321	311	307
26	F	315	310	F	327	348	366	355	354	339	328	309	315	325	330	350	340	331	334	345	365	329	303	310
27	310	299	344	319	314	335	362	367	358	350	328	320	311	324	323	322	328	347	348	327	322	304	312	294
28	313	320	323	345	336	347	327	367	373	335	274	263	302	327	328	329	320	322	315	343	366	286	291	302
29	295	286	308	326	355	328	384	369	337	335	325	327	301	304	310	334	307	343	340	335	310	302	292	305
30	296	318	313	335	373	377	361	341	304	308	332	306	298	303	313	333	336	346	316	318	346	328	301	304
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	22	22	24	22	27	27	30	30	29	30	28	30	30	29	30	29	28	28	26	28	28	27	23	22
MED	310	314	328	334	333	330	374	364	358	348	341	332	329	329	340	351	350	349	344	334	342	312	307	308
U Q	314	321	343	364	351	347	380	372	365	355	352	345	337	340	346	360	358	353	351	344	358	327	311	314
L Q	301	305	316	322	320	322	363	357	347	339	330	320	315	318	328	336	338	344	337	327	326	303	300	304

APR. 2007 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 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	U L 386	388	411	402	A	U L 363	L								
2									A	A	A	L	A	A	U L 364	L	L	A	A					
3									A	A	A	A	U L 385	397	A	L	L							
4									A	U L 377	A	416	393	A	377	U L 385	L							
5									L	U L 400	U L 414	A	U L 385	U L 391	U L 392	L	L							
6								L	L	U L 382	U L 394	400	U L 397	409	U L 412	L								
7									L	L	407	379	384	U L 402	U L 415	U L 401	L							
8									L	U L 384	401	417	410	U L 381	U L 399	L	L							
9									L	U L 387	386	U L 397	403	379	390	U L 397	L							
10									A	U L 377	397	U L 391	L 389	393	U L 415	U L 387	A	A						
11									A	A	A	A	386	408	U L 380	U L 375	L	L						
12									L	U L 396	U L 395	U L 380	398	394	A	A	A	A	A					
13								A	A	A	A	A	A	396	U L 385	U L 366	A	A						
14								L	A	A	A	A	A	A	A	A	L	A						
15									L	A	U L 390	383	386	U L 385	411	367	L							
16								L	L	396	395	386	U L 391	382	394	387	L	L						
17								L	L	405	U L 394	U L 375	401	408	U L 391	L	L	L						
18									L	L	U L 400	U L 403	375	A	A	A	L							
19									A	A	A	A	A	A	A	A	A	A	A					
20								L	A	A	A	U L 394	A	A	A	A	A	A						
21								L	U L 376	370	401	U L 413	A	390	386	U L 382	L	L						
22								L	U L 384	A	A	A	A	U L 439	U L 422	L	U L 378	L						
23								L	L	U L 393	U L 389	U L 383	E A	383	383	385	A	A	A					
24							A	L	A	U L 398	A	U L 367	389	A	U L 383	A	A	A						
25								L	U L 370	U L 407	385	388	366	384	U L 397	U L 382	A	A	A					
26								A	A	U L 372	U L 406	U L 384	U L 388	U L 393	U L 408	U L 392	L	L						
27								A	U L 382	U L 413	U L 387	U L 379	U L 383	U L 385	U L 392	U L 389	A							
28								L	A	U L 385	U L 406	U L 357	372	U L 380	U L 385	U L 389	U L 364	L	L					
29								L	A	A	A	382	374	U L 377	366	342	U L 361	L						
30									U L 372	U L 368	386	U L 330	390	A	A	A	L	A						
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT									5	18	19	22	22	21	23	15	3							
MED									U L 376	U L 386	U L 395	U L 385	388	391	U L 391	U L 385	U L 364							
U Q									U L 383	U L 398	U L 401	400	397	400	U L 408	U L 389	U L 378							
L Q									U L 371	U L 377	388	U L 379	384	382	383	375	U L 361							

APR. 2007 M(3000)F1 (0.01)

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APR. 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									248	276	278	308	278	296	300	250								
2									246	262	244	284	318	284	260	248	244	248	E A 274					
3									268	258	272	272	264	252	260	260	250							
4									A	332	306	284	306	280	264	248	258							
5									264	278	288	270	272	278	242	242	252							
6								264	266	256	266	278	278	270	246	240								
7									262	270	284	272	286	266	256	248	250							
8									280	266	260	264	260	282	258	260	250							
9									270	290	278	308	306	290	248	242	228							
10									258	252	252	252	288	290	298	262	254	250						
11									262	270	268	308	292	292	276	258	260	260						
12									254	276	276	292	272	298	284	A	A	A	A					
13								246	248	266	274	294	290	280	262	246	238	250						
14								250	258	E A 286	276	280	274	A	E A 300	254	246	258						
15									288	296	276	290	272	264	288	272	256							
16								268	258	264	276	266	300	266	272	260	252	252						
17								258	274	262	276	310	304	256	276	252	234	248						
18									234	248	292	268	294	316	250	230	246							
19									248	248	282	242	310	288	260	E A 276	E A 288	250	A					
20								248	E A 262	254	A	268	278	E A 316	262	262	258	244						
21								266	270	262	292	280	258	258	278	292	266	272						
22								248	252	280	A	E A 260	E A 288	294	280	272	286	250						
23								256	244	264	284	308	286	298	296	264	A	A	A					
24							E A 252	252	236	250	258	288	300	314	298	282	E A 272	238						
25								252	302	304	294	308	294	286	258	264	266	E A 274	A					
26								254	264	288	300	308	290	272	272	254	258	278						
27								240	256	260	304	328	324	302	288	272	272							
28								252	236	296	438	394	306	266	264	272	296	286	282					
29								242	302	300	304	302	324	322	308	266	288	260						
30									362	362	312	366	344	322	294	264	264	248						
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							1	15	29	30	28	30	30	29	30	29	26	17	2					
MED							E A 252	252	262	267	278	286	290	285	270	260	255	250	278					
U Q								258	270	288	293	308	306	298	288	269	266	266						
L Q								248	248	260	273	270	278	268	260	248	250	248						

APR. 2007 h'F2 (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 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 270	E B 282	E B 286	E B 250	212	E B 252	204	220	208	206	194	H 166	212	A	216	212	216	224	228	238	230	234	E A 274	E A 270
2	E A 266	240	E B 248	220	240	E B 242	214	220	A	A	A	E A 246	A	A	228	H 192	H 192	A	A	218	212	E A 372	E A 332	E A 310
3	E A 308	E B 250	E A 246	234	206	E A 292	228	228	A	A	A	A	E A 236	190	A	204	214	224	222	218	220	214	E B 270	E A 292
4	E B 286	E A 290	E B 262	E B 244	E A 282	E A 268	202	222	A	194	A	190	208	A	204	224	210	212	232	222	206	200	E B 268	E B 274
5	E B 298	E B 294	E A 264	228	222	234	H 166	226	212	210	198	A	E A 230	206	196	200	H 200	228	232	218	208	226	E B 262	E B 324
6	E B 294	E B 282	E B 254	240	226	E B 262	H 188	H 194	218	210	H 196	206	202	H 182	206	196	226	224	228	242	228	244	242	234
7	234	226	232	E B 248	E B 248	E B 248	214	210	212	206	202	190	234	198	184	H 178	H 194	232	224	218	226	242	E B 272	252
8	242	244	238	E B 246	236	E B 260	212	220	220	212	208	188	178	200	196	196	H 190	226	210	208	E B 266	E B 278	E B 296	E B 264
9	E B 256	E B 264	E B 244	210	E B 252	E B 258	204	216	218	212	210	190	202	206	206	200	192	H 178	232	224	214	E B 240	236	E B 262
10	242	238	218	218	212	E B 266	224	220	A	226	224	204	206	198	H 180	210	A	A	E A 252	226	214	222	238	E B 286
11	E B 274	E B 280	242	222	E B 258	238	218	232	A	A	A	A	214	H 186	200	212	228	226	234	220	204	228	E B 284	E B 282
12	E B 282	E B 266	234	216	212	224	202	212	218	220	202	218	200	198	A	A	A	A	A	A	A	E A 334	E B 292	E A 310
13	E B 294	E B 274	232	206	202	228	230	A	A	A	A	A	A	202	186	208	A	A	230	E A 244	A	A	E A 322	E B 266
14	E B 252	E B 264	E A 268	220	228	224	208	214	A	A	A	A	A	A	A	A	236	A	226	210	204	220	E B 278	E A 286
15	E B 268	E A 284	E B 262	216	188	218	210	216	218	A	228	192	192	210	204	198	220	216	226	234	224	216	E B 266	E B 284
16	E B 274	E B 268	E B 266	232	E B 212	232	218	222	218	200	204	216	192	214	196	H 186	204	H 196	222	208	212	210	E B 256	E B 276
17	E B 266	E B 262	240	206	E B 240	226	214	212	220	200	198	200	200	188	H 186	E A 236	202	204	226	232	218	E B 258	E B 272	E B 258
18	E B 274	E B 266	212	202	E B 288	E B 252	230	222	210	204	222	204	200	A	A	A	206	E A 236	220	E A 256	E A 260	E A 252	E A 248	E A 298
19	E A 270	238	E B 250	232	224	232	224	232	A	A	A	A	A	A	A	A	A	A	A	232	218	198	E A 292	E A 292
20	E B 276	E A 290	E B 272	E A 264	E A 270	212	218	218	A	A	A	212	A	A	A	A	A	A	214	240	E A 238	E A 312	E B 246	E B 232
21	E B 274	E B 264	240	214	E B 252	230	210	224	218	222	210	196	A	H 190	214	204	198	220	232	210	216	E B 252	242	228
22	E A 256	E A 274	242	206	236	228	228	212	230	A	A	A	A	194	H 178	224	218	216	226	228	208	E A 264	E B 286	E A 300
23	246	230	236	240	E B 256	230	212	218	220	204	222	206	A	206	H 184	220	A	A	A	E A 288	230	E A 260	E B 252	E A 298
24	E A 264	240	E A 248	E A 292	230	A	A	226	A	224	A	H 196	220	A	194	A	A	A	E A 252	216	240	226	224	E A 264
25	E A 264	240	220	188	210	220	214	222	212	200	224	206	E A 242	200	194	212	A	A	A	A	E A 248	226	E A 262	E A 264
26	E A 302	E A 302	E A 278	E A 274	E A 262	226	220	A	A	222	H 182	208	204	202	202	200	206	214	236	226	210	214	E B 272	E B 278
27	E B 258	E B 272	234	E A 274	E B 262	228	224	A	226	198	H 188	192	198	212	210	232	A	236	E A 252	232	234	E A 276	242	E B 286
28	E B 270	238	E B 248	218	216	230	226	228	A	216	206	204	222	200	204	H 186	230	E A 246	238	224	198	E A 252	E B 292	E B 276
29	E B 280	E B 284	E B 280	E B 252	218	E B 238	220	208	A	A	A	220	E A 230	202	198	218	228	230	238	214	220	E B 248	E B 270	E B 250
30	E A 292	246	E A 250	236	206	192	220	234	228	224	200	E A 322	200	A	A	A	216	A	E A 282	252	216	232	238	E B 254
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	29	29	27	17	20	19	23	22	21	23	23	21	19	25	28	28	29	30	30
MED	E B 270	E 265	E 247	221	U 218	226	214	220	218	210	204	202	202	200	198	204	210	222	228	223	216	U 225	E B 269	E B 276
U Q	E B 282	E 282	E B 262	E 246	E B 252	E B 252	224	226	220	221	222	212	E A 222	206	206	218	223	230	E A 237	236	230	E A 259	E B 284	E A 292
L Q	258	240	236	216	212	226	209	214	212	202	H 198	192	200	192	H 186	H 196	H 199	214	225	218	211	221	246	E B 262

APR. 2007 h'F (KM)

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APR. 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							B	124	114	120	120	116	116	116	120	120	122	118	B					
2							B	120	114	116	114	120	A	A	A	118	116	120	B					
3							B	114	120	120	116	A	A	118	A	A	118	A	B					
4							B	A	A	A	A	A	A	A	114	A	114	A	B					
5							E B 138	128	118	118	A	A	A	A	112	112	114	120	B					
6							B	118	116	118	118	118	112	118	112	112	118	118	B					
7							124	124	126	118	114	110	120	120	A	116	120	126	B					
8							128	120	118	116	112	A	A	116	116	116	120	118	B					
9							120	118	114	112	108	108	112	120	124	A	A	124	B					
10							128	122	114	116	118	A	A	116	A	116	114	A	B					
11							B	A	116	A	A	A	122	116	116	116	116	A	B					
12							122	122	118	114	112	A	A	A	118	A	120	A	B					
13							124	124	116	120	118	114	112	112	116	118	120	120	B					
14							116	118	A	A	A	A	A	A	A	A	A	A	B					
15							114	120	116	110	110	114	112	114	114	120	124	120	B					
16							116	118	118	116	A	A	A	A	118	112	114	118	B					
17							118	118	118	118	A	A	A	A	A	118	112	124	B					
18							122	118	116	118	A	A	A	A	A	A	116	116	B					
19							A	122	A	A	A	A	A	A	A	A	A	A	B					
20							122	124	A	A	A	A	A	A	A	118	118	120	B					
21							118	116	114	A	114	118	114	A	110	A	118	120	B					
22							122	122	118	A	A	A	A	118	116	112	114	118	B					
23							128	122	116	A	A	116	116	116	116	114	A	A	B					
24							A	A	A	A	A	A	118	118	114	A	A	A	A					
25							122	118	118	116	A	A	A	A	118	118	116	A	B					
26						B	124	116	A	A	A	116	B	116	A	120	A	120	B					
27						B	114	114	114	A	112	114	114	114	112	120	120	120	B					
28						B	128	122	A	A	A	A	A	A	114	116	116	112	B					
29							118	120	A	A	A	A	A	A	116	114	A	A	B					
30						B	124	120	114	116	A	A	114	A	A	A	114	A	B					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							22	27	22	17	13	11	12	15	19	20	23	18						
MED							122	120	116	116	114	116	114	116	116	116	116	120						
U Q							124	122	118	118	118	118	117	118	118	118	120	120						
L Q							118	118	114	116	112	114	112	116	114	114	114	118						

APR. 2007 h'E (KM)

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APR. 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	B	B	B	B	B	B	140	156	134	102	100	98	144	124	126	100	108	124	116	B	104	110	122	114
2	118	108	114	B	B	90	144	132	122	116	116	120	100	100	102	102	98	126	110	104	102	102	96	100
3	96	96	98	90	90	92	138	136	122	120	116	108	102	102	98	102	102	94	92	92	106	104	108	104
4	94	96	98	98	98	100	102	96	96	98	102	106	98	90	90	98	102	100	100	98	90	98	94	100
5	96	104	96	98	B	B	G	158	104	102	104	102	102	96	100	96	104	152	138	92	92	92	94	B
6	B	B	B	B	B	B	144	106	104	104	100	100	156	100	96	104	96	162	126	108	B	B	B	B
7	B	B	B	B	B	B	138	150	106	120	104	102	170	158	104	104	104	152	B	116	B	92	B	B
8	B	86	B	B	B	B	144	142	128	118	114	106	104	102	102	102	100	170	B	98	B	B	B	B
9	B	B	B	B	B	B	150	142	138	126	124	124	116	116	104	106	104	104	B	B	112	104	B	B
10	B	B	B	B	B	B	140	134	128	120	122	104	104	118	106	142	126	92	110	108	102	B	B	B
11	B	96	B	B	96	98	136	108	116	104	102	102	106	98	100	102	102	98	94	122	96	94	92	B
12	B	122	B	B	B	B	144	148	124	116	116	106	104	100	132	106	110	104	106	106	106	106	108	114
13	104	B	B	B	98	98	138	124	120	116	114	122	118	112	124	156	120	122	104	100	96	90	88	96
14	B	88	98	102	100	B	134	128	98	104	106	106	106	100	96	102	102	98	98	92	92	108	90	96
15	94	92	90	100	102	B	146	140	118	114	112	114	114	116	104	112	104	130	108	106	104	110	108	106
16	102	102	102	B	B	B	148	136	128	120	100	100	100	96	102	102	92	132	138	B	B	B	B	B
17	B	B	B	B	B	B	140	150	146	142	102	104	104	100	96	150	102	142	118	110	B	B	106	B
18	B	B	120	122	B	B	126	120	116	116	104	106	104	98	98	96	124	128	88	90	106	106	108	90
19	92	96	96	96	98	102	106	136	106	102	102	102	102	102	104	104	106	104	98	104	104	98	96	96
20	B	102	106	98	98	B	124	118	104	102	100	102	102	102	104	126	126	114	108	106	106	112	110	104
21	100	100	100	96	96	B	116	116	114	104	102	100	144	102	98	106	106	134	122	106	106	B	B	B
22	98	96	94	88	B	B	128	122	116	106	106	106	106	104	100	98	128	132	116	110	108	104	106	108
23	102	102	100	102	102	100	122	118	114	100	104	116	112	112	96	126	102	102	100	100	100	96	88	92
24	94	100	100	98	102	98	98	98	106	106	106	106	114	118	108	100	98	98	104	106	106	106	88	98
25	92	92	B	B	B	B	134	122	122	116	104	102	100	96	104	116	118	104	98	98	98	104	108	92
26	88	90	88	96	98	168	126	116	106	104	106	158	B	98	100	154	100	118	118	B	B	B	B	B
27	B	B	90	92	92	150	114	114	116	106	100	94	100	96	96	132	116	114	104	106	106	96	B	B
28	B	B	B	B	B	144	148	130	106	104	104	104	104	102	96	102	150	134	118	114	96	92	90	B
29	B	B	B	B	B	B	124	128	104	104	104	104	98	98	94	94	94	92	92	92	90	B	B	94
30	94	94	92	92	98	154	132	120	118	116	106	106	106	104	100	100	160	94	116	88	108	104	B	B
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	15	19	17	15	14	12	29	30	30	30	30	30	29	30	30	30	30	30	27	26	24	22	19	16
MED	96	96	98	98	98	100	136	128	116	106	104	105	104	102	100	103	104	116	108	105	104	104	96	99
U Q	102	102	101	100	100	147	144	140	122	116	112	106	114	112	104	116	118	132	118	108	106	106	108	105
L Q	94	92	93	92	96	98	124	118	106	104	102	102	102	98	96	100	102	100	98	98	96	96	90	95

APR. 2007 h'Es (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 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

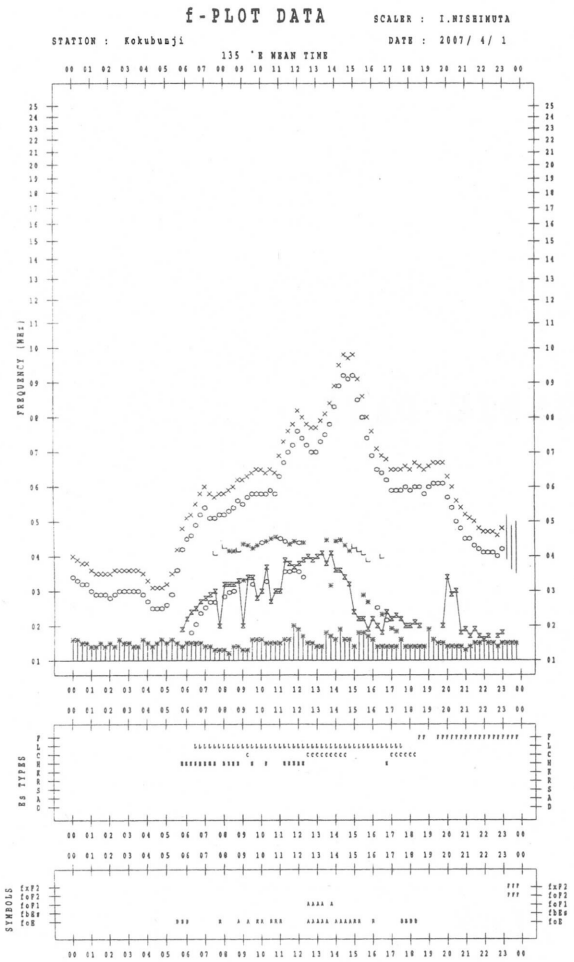
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							H 2	HL 21	HL 22	L 2	L 1	L 2	HL 12	CL 11	CL 21	L 2	L 2	CL 11	C 4		F 3	F 4	F 3	F 3
2	F 2	F 2	F 2			F 2	H 2	HL 21	CL 21	CL 21	CL 21	CL 21	L 3	L 2	L 2	L 2	L 2	CL 22	C 5	F 8	F 5	F 5	F 4	F 5
3	F 3	F 2	F 2	F 2	F 1	F 2	H 2	HL 21	CL 21	CL 21	CL 21	L 2	L 2	L 2	L 2	L 1	L 2	L 3	L 2	F 3	F 2	F 2	FF 22	F 4
4	F 2	F 2	F 1	F 1	F 2	F 3	L 2	L 3	L 3	L 2	L 2	L 2	L 2	L 3	L 2	L 2	L 2	L 3	L 2	F 1	F 2	F 1	F 2	F 3
5	F 2	F 2	F 2	F 1				HL 12	L 2	L 2	L 2	L 2	L 3	L 2	L 2	L 2	L 1	HL 21	H 2	F 2	F 2	F 2	F 1	
6							H 1	L 2	L 2	L 2	L 2	L 2	HL 11	L 2	L 2	L 1	L 2	HL 11	HL 21	F 1				
7							H 2	HL 12	L 2	CL 21	L 1	L 1	HL 11	HL 11	L 2	L 1	L 2	HL 11		F 3		F 2		
8		F 2					H 2	HL 22	CL 12	CL 11	CL 11	L 2	L 2	L 2	L 1	L 2	L 2	HL 11		F 1				
9							H 2	HL 11	HL 12	CL 12	CL 12	CL 11	CL 11	CL 11	L 2	L 1	L 2	L 2			F 2	F 3		
10							H 4	HL 21	CL 21	CL 21	CL 11	L 2	L 2	CL 11	L 2	HL 11	CL 22	L 3	CL 34	FF 34	F 3			
11		F 2			F 2	F 1	H 1	L 2	CL 21	L 2	L 2	L 2	L 2	L 1	L 1	L 1	L 2	L 3	L 4	F 1	F 3	F 2	F 1	
12		F 1					H 2	HL 21	CL 11	CL 21	CL 11	L 2	L 1	L 2	HL 21	L 3	CL 62	L 5	L 5	F 4	F 4	F 3	F 2	F 3
13	F 2				F 2	F 2	HL 21	CL 11	CL 21	CL 21	CL 21	CL 11	CL 11	CL 11	CL 11	HL 11	CL 11	CL 21	L 2	F 6	F 4	F 5	F 3	F 2
14		F 1	F 3	F 2	F 2		H 3	CL 11	L 2	L 2	L 2	L 2	L 2	L 2	L 3	L 2	L 2	L 3	L 3	F 2	F 5	FF 32	F 2	F 3
15	F 1	F 3	F 1	F 2	F 3		H 2	HL 12	CL 11	CL 11	CL 11	CL 11	CL 11	CL 11	L 1	L 2	L 2	CL 11	L 3	F 7	F 3	F 2	F 2	F 2
16	F 1	F 2	F 1				H 2	HL 21	CL 11	CL 11	L 1	L 1	L 1	L 2	L 1	L 2	L 2	HL 11	HL 11					
17							H 3	HL 22	HL 12	HL 12	L 2	L 2	L 2	L 2	L 2	HL 11	L 1	HL 21	C 2	F 1			F 2	
18			F 1	F 1			C 2	C 2	CL 11	CL 11	L 2	L 2	L 2	L 2	L 3	L 3	CL 22	CL 13	L 4	F 4	FF 54	F 2	F 2	F 3
19	F 3	F 2	F 2	F 2	F 3	F 2	L 3	HL 22	L 2	L 3	L 3	L 2	L 2	L 1	L 2	L 3	L 3	L 2	L 4	F 2	F 2	F 2	F 2	F 5
20		F 2	F 2	F 4	F 3		C 2	C 1	L 3	L 2	L 3	L 2	L 2	L 2	L 2	CL 11	CL 21	CL 21	L 4	F 5	F 3	F 3	F 2	F 2
21	F 3	F 3	F 1	F 2	F 2		C 2	CL 22	CL 11	L 2	L 2	L 1	HL 11	L 2	L 2	L 2	L 2	HL 21	CL 21	F 2	F 3			
22	F 2	F 2	F 2	F 2			C 2	CL 21	CL 11	L 2	L 2	L 2	L 2	L 2	L 1	L 2	CL 11	CL 31	CL 22	F 3	F 2	F 4	F 2	F 3
23	F 2	F 1	F 2	F 2	F 2	F 1	C 3	CL 22	CL 11	L 1	L 1	CL 11	CL 22	CL 12	L 2	CL 12	L 4	L 5	L 5	F 5	F 4	F 5	F 2	F 4
24	F 2	F 2	F 5	F 4	F 3	F 5	L 5	L 3	L 2	L 2	L 2	L 1	CL 11	CL 21	CL 11	L 3	L 4	L 3	L 5	FF 22	F 3	F 3	F 2	F 3
25	F 4	F 2					H 2	CL 12	CL 11	CL 11	L 2	L 2	L 2	L 2	L 2	CL 11	CL 22	L 4	L 4	F 4	F 3	F 3	F 3	F 2
26	F 4	F 4	F 2	F 4	F 2	H 1	CL 21	CL 32	L 2	L 2	L 1	HL 11		L 1	L 2	HL 11	L 2	CL 12	C 2					
27			F 2	F 2	F 1	H 1	C 2	C 2	CL 11	L 2	L 2	L 2	L 2	L 1	L 1	CL 21	CL 31	CL 31	L 5	F 5	F 3	F 5		
28						H 1	HL 21	CL 11	L 2	L 2	L 2	L 1	L 1	L 2	L 2	L 2	HL 11	HL 21	C 3	FF 32	F 2	F 2	F 1	
29							C 2	CL 11	L 2	L 2	L 2	L 1	L 2	L 1	L 1	L 1	L 2	L 3	L 3	F 3	F 2			F 2
30	F 3	F 2	F 2	F 2	F 2	H 2	CL 21	CL 11	CL 11	CL 11	L 2	L 2	CL 11	L 2	L 3	L 2	HL 12	L 4	CL 23	F 3	FF 21	F 4		
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT																								
MED																								
U Q																								
L Q																								

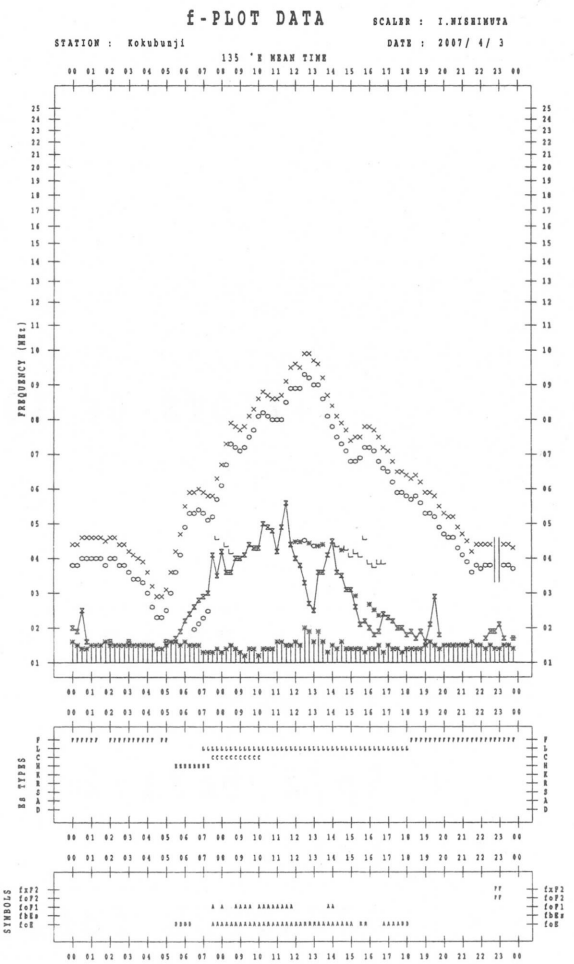
APR. 2007 TYPES OF Es

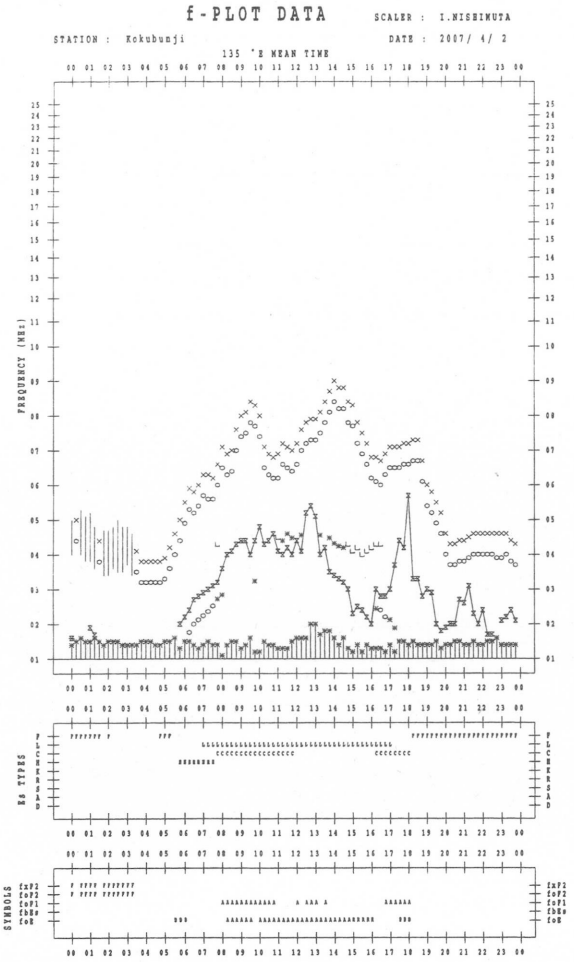
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

f-PLOTS OF IONOSPHERIC DATA

KEY OF f-PLOT	
|	SPREAD
⬡	foF2, foF1, foE
×	fxF2
✳	DOUBTFUL foF2, foF1, foE
⧖	fbEs
⌊	ESTIMATED foF1
⍑, ⍑	fmin
∧	GREATER THAN
∨	LESS THAN


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


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


f-PLOT DATA
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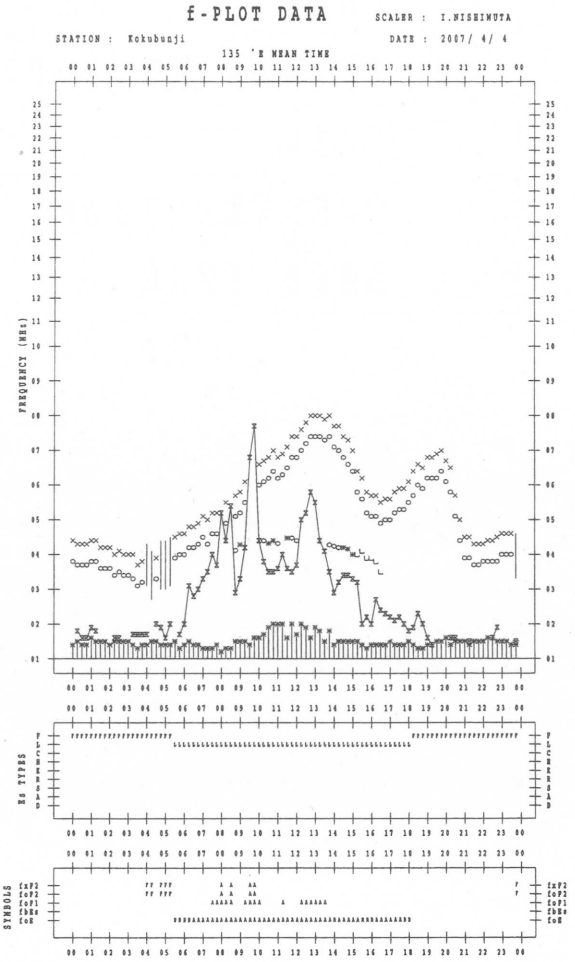
STATION : Kokubunji
DATE : 2007/ 4/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


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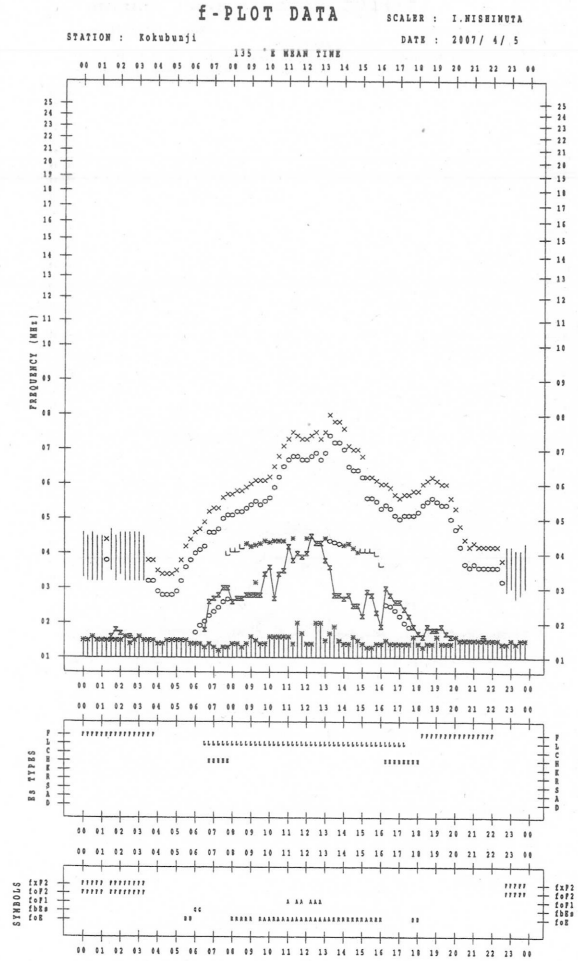
STATION : Kokubunji
DATE : 2007/ 4/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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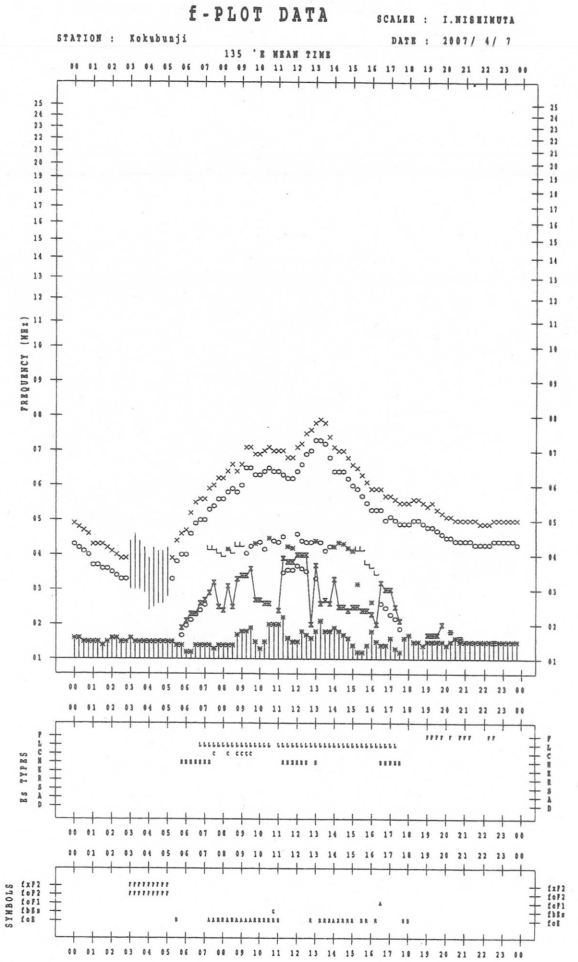
STATION : Kokubunji
DATE : 2007/ 4/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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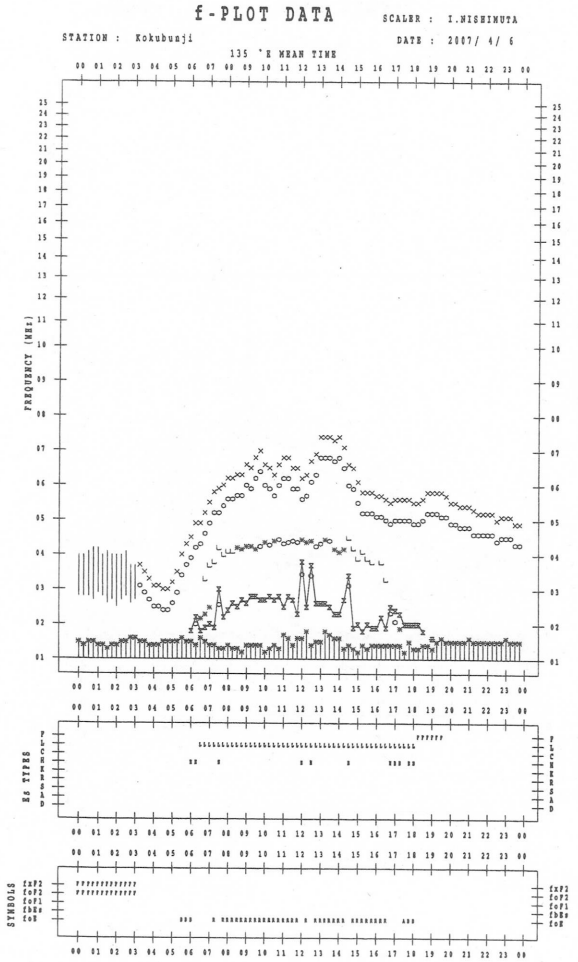
STATION : Kokubunji
DATE : 2007/ 4/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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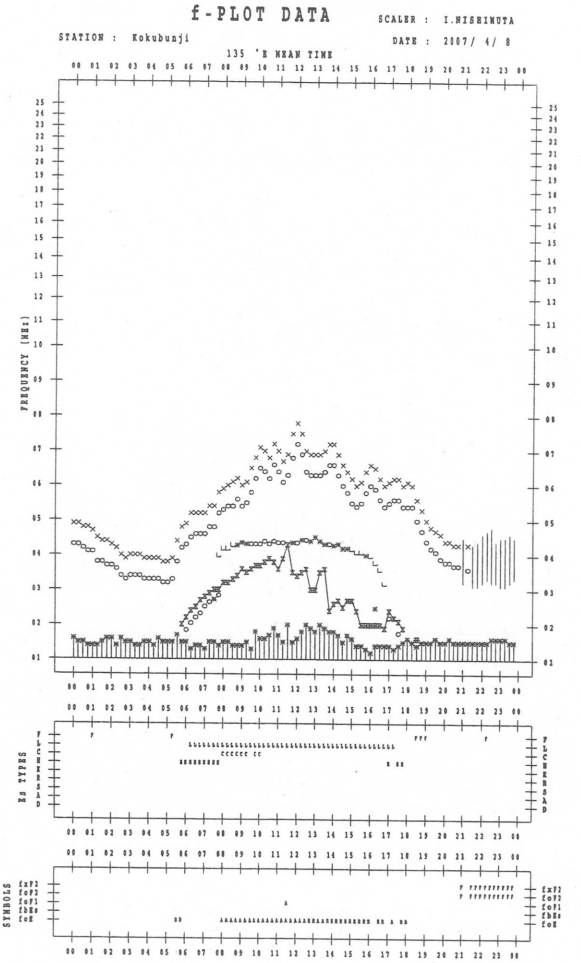
STATION : Kokubunji
DATE : 2007/ 4/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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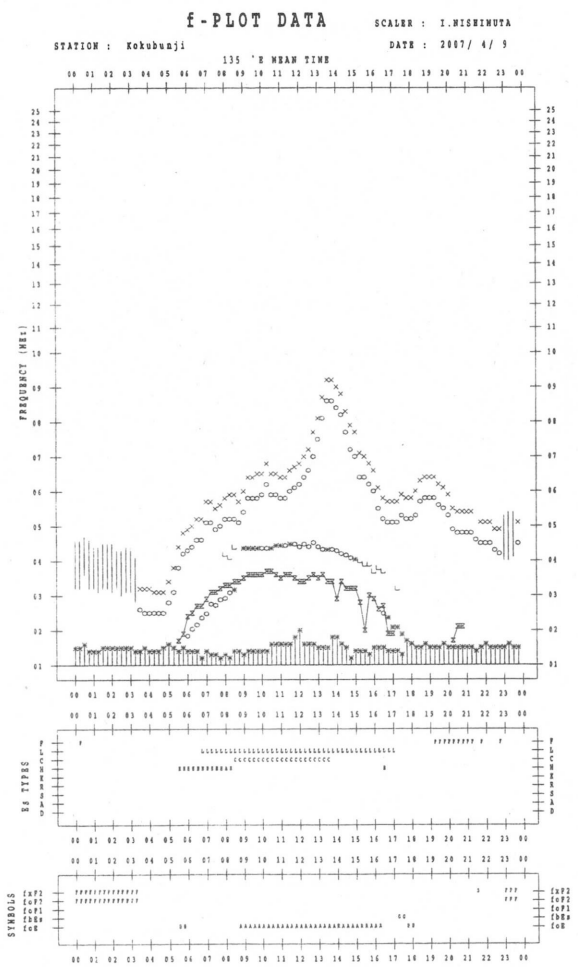
STATION : Kokubunji
DATE : 2007/ 4/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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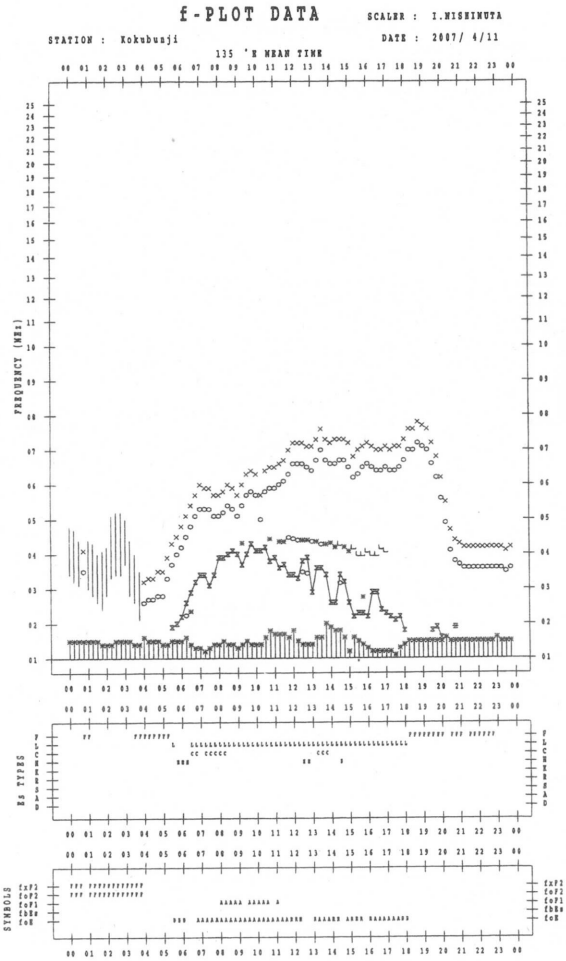
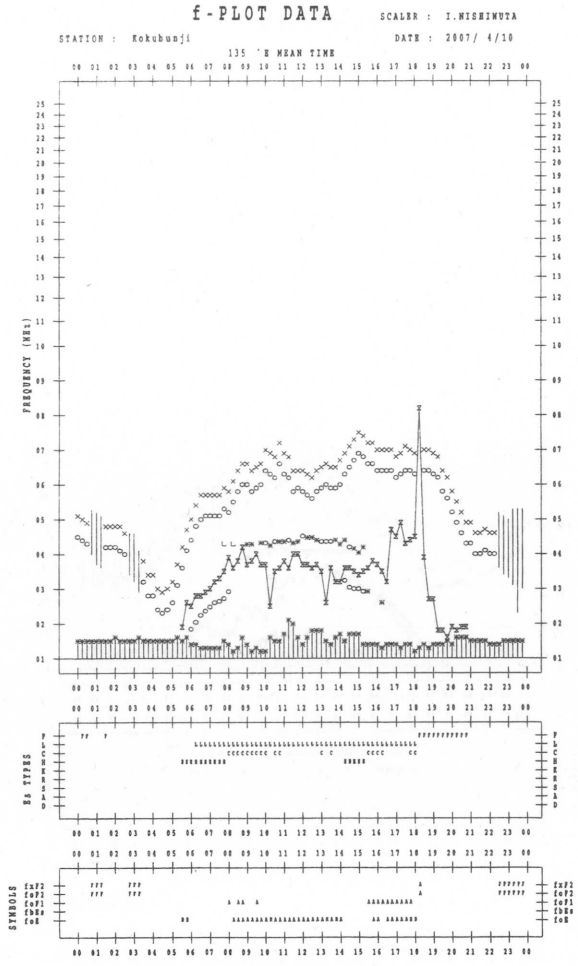
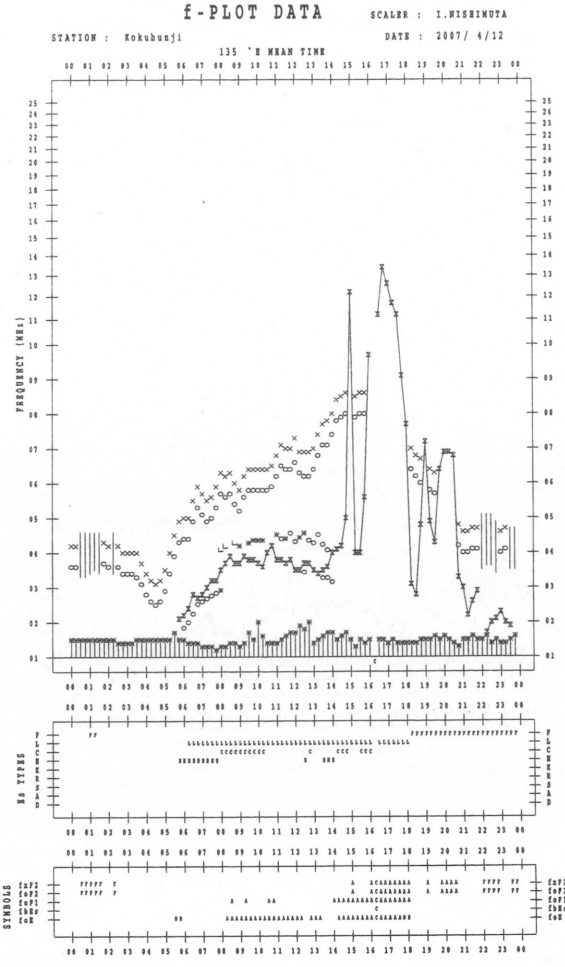
STATION : Kokubunji
DATE : 2007/ 4/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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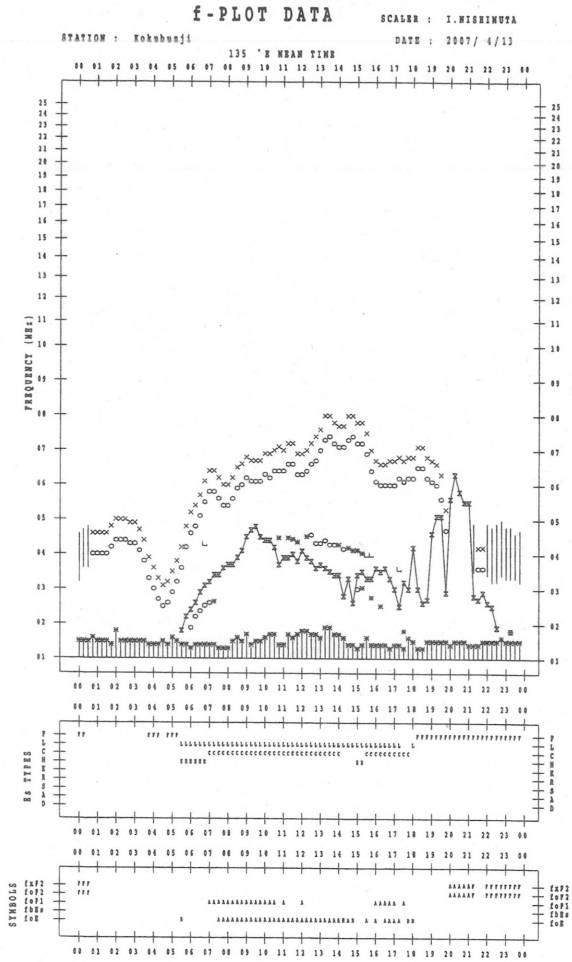
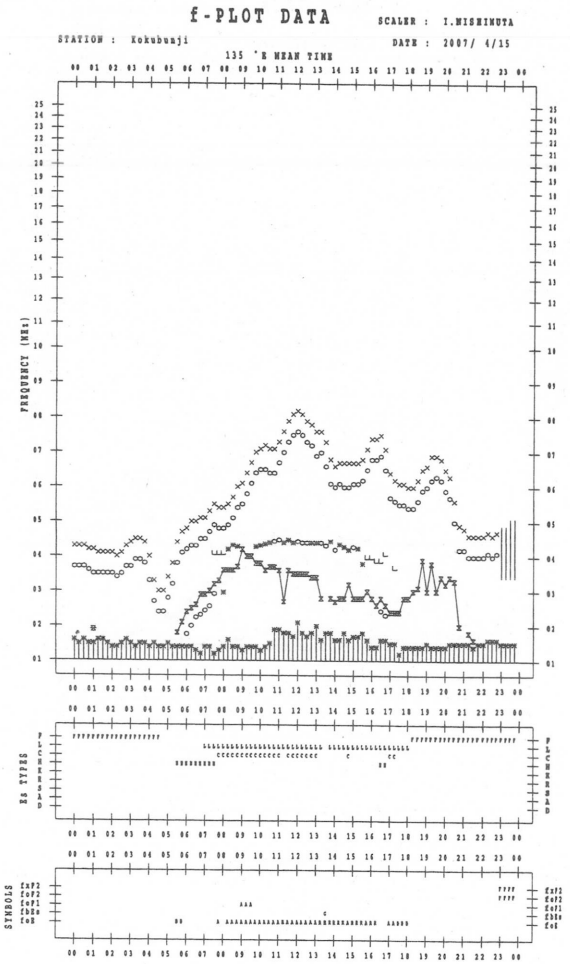
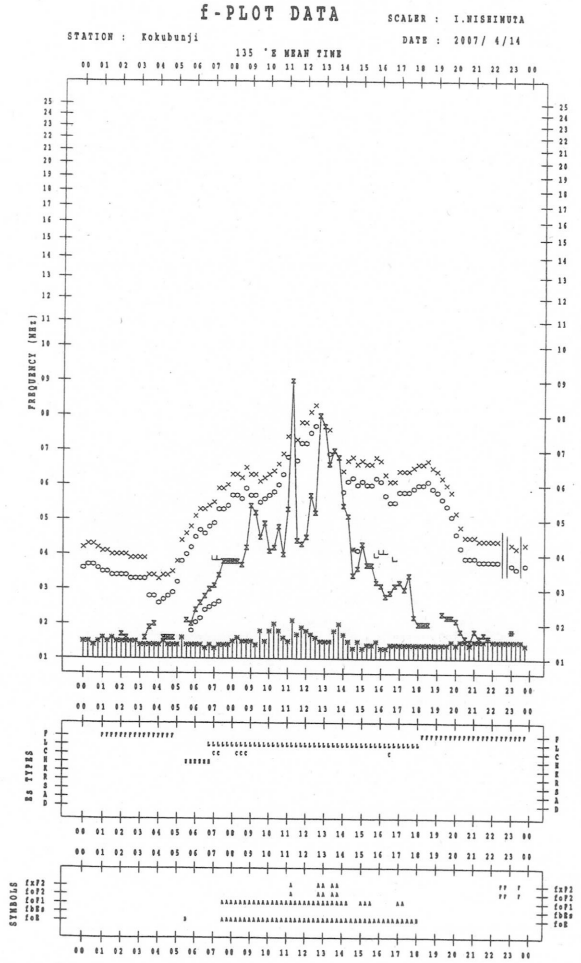
STATION : Kokubunji
DATE : 2007/ 4/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/13
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/15
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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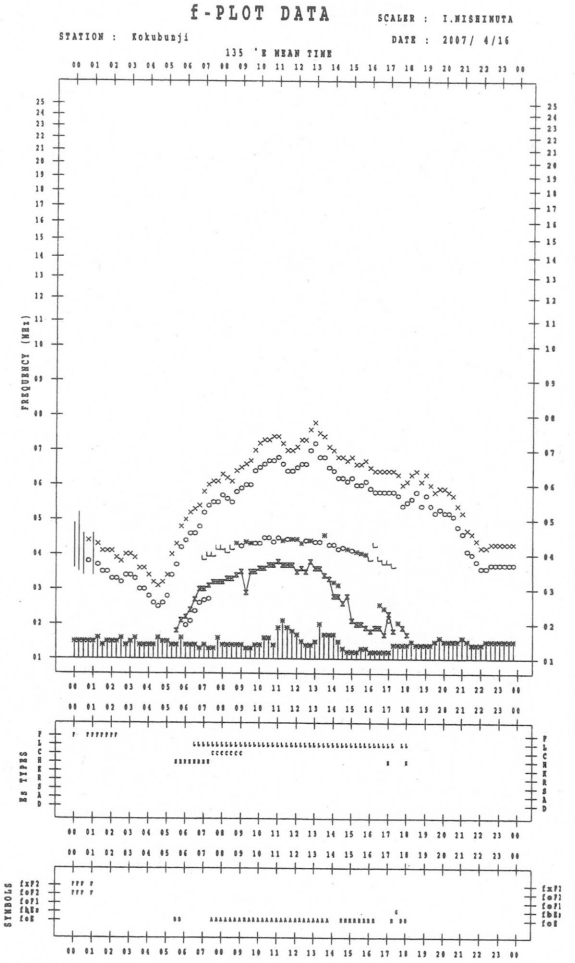
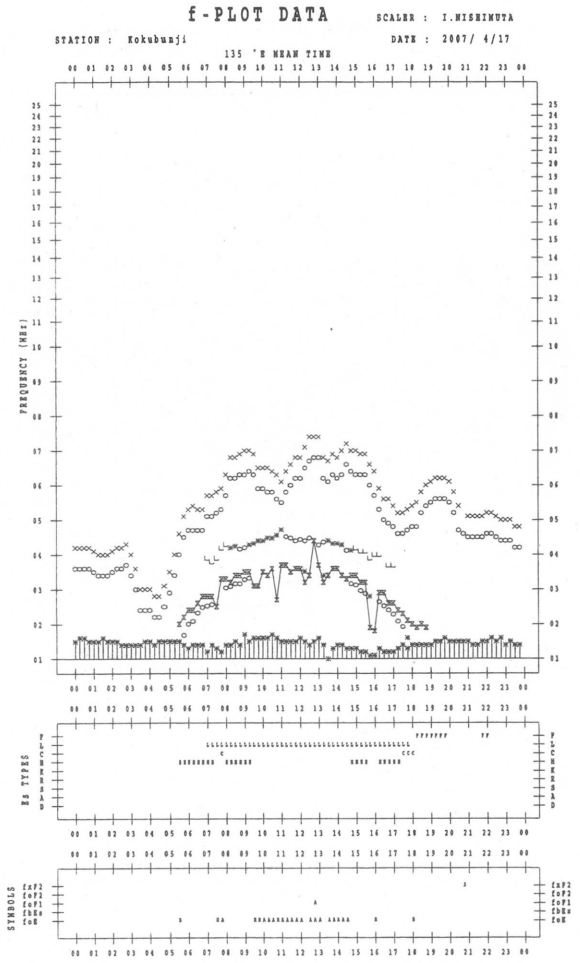
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/14
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/16
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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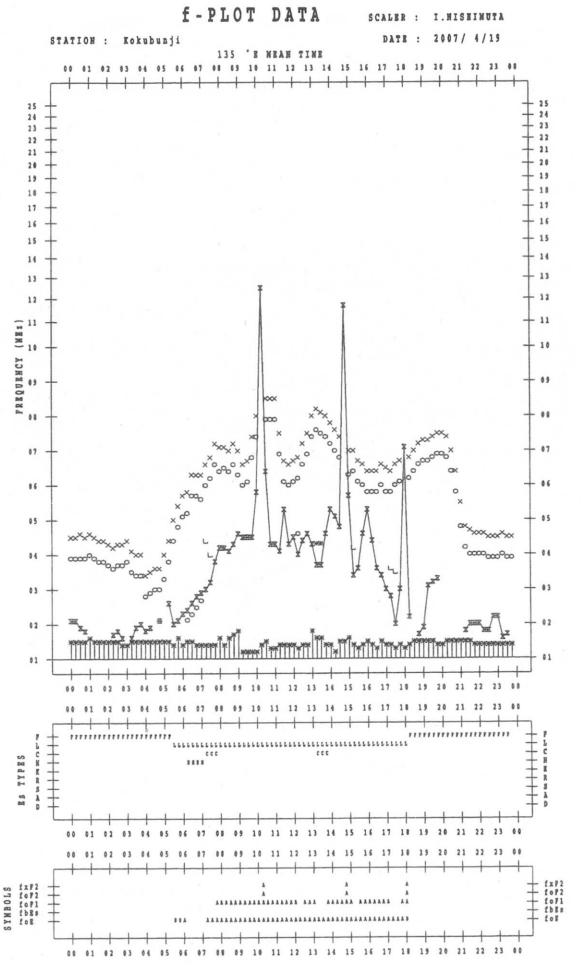
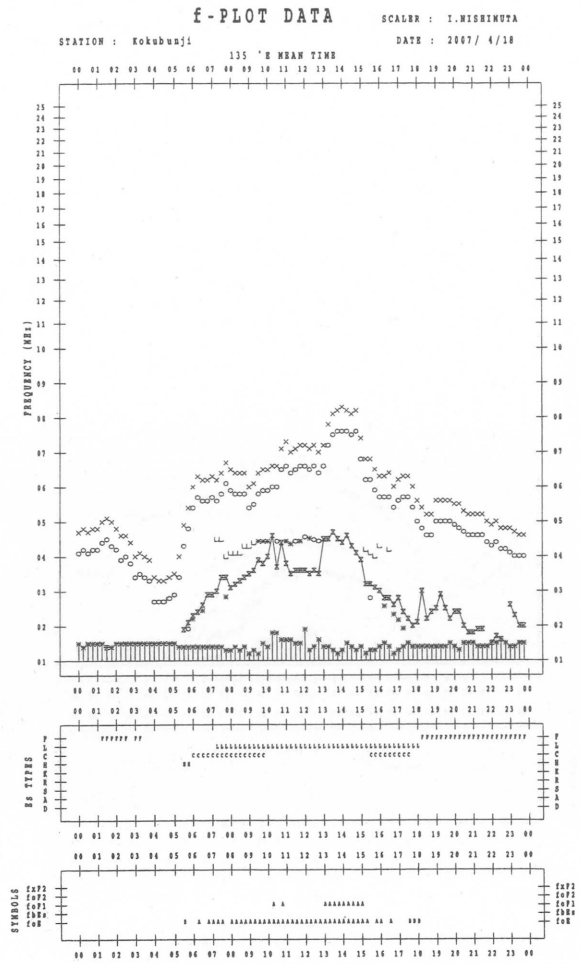
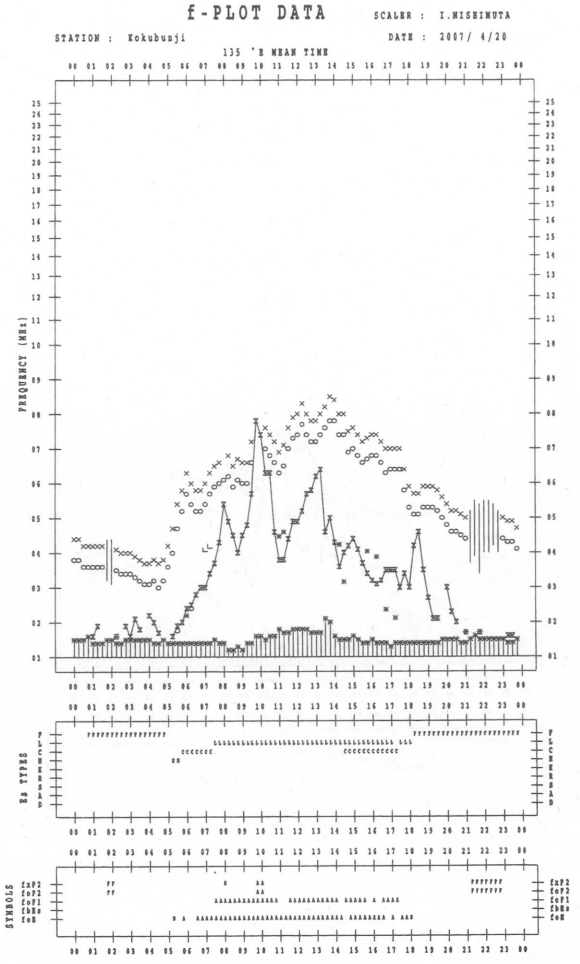
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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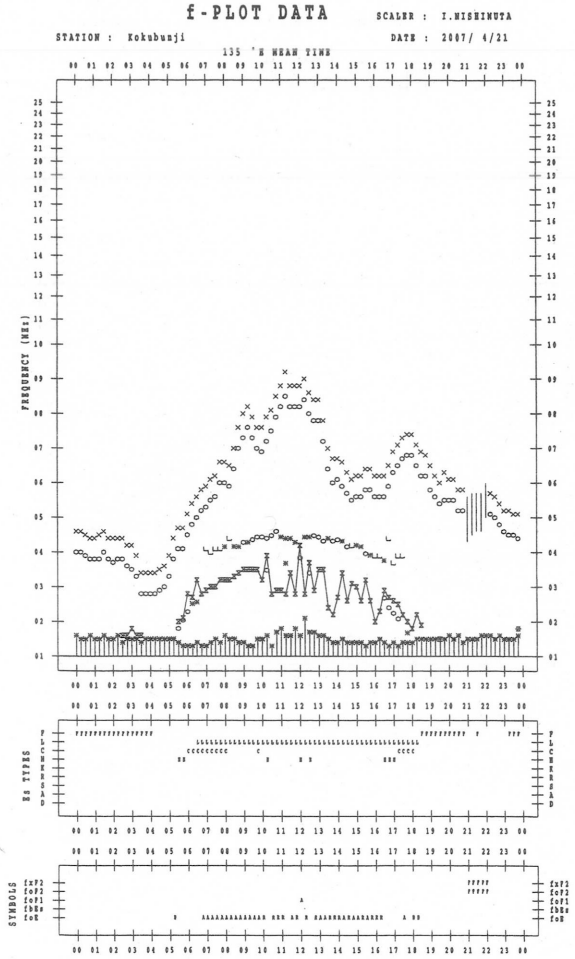
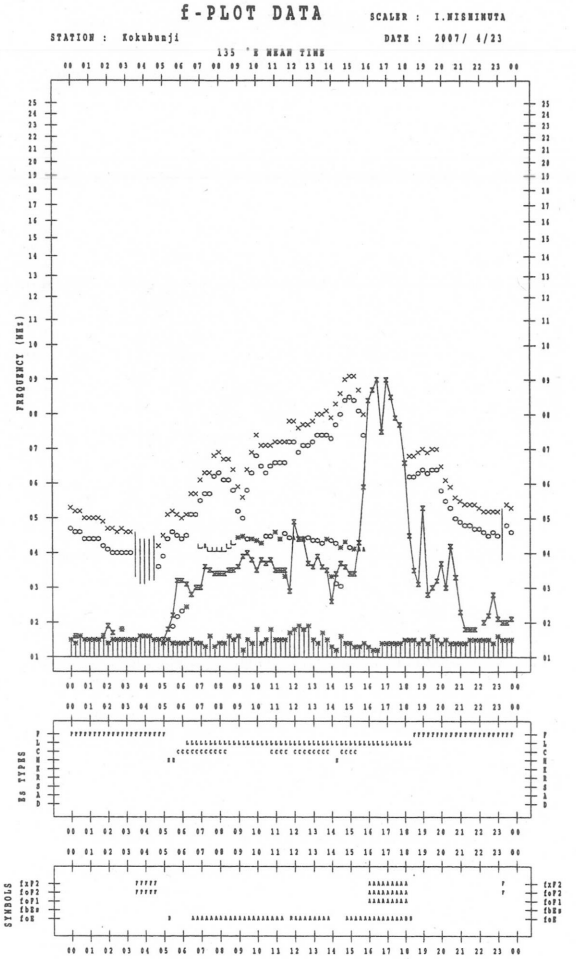
STATION : Kokubunji
DATE : 2007/ 4/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/21
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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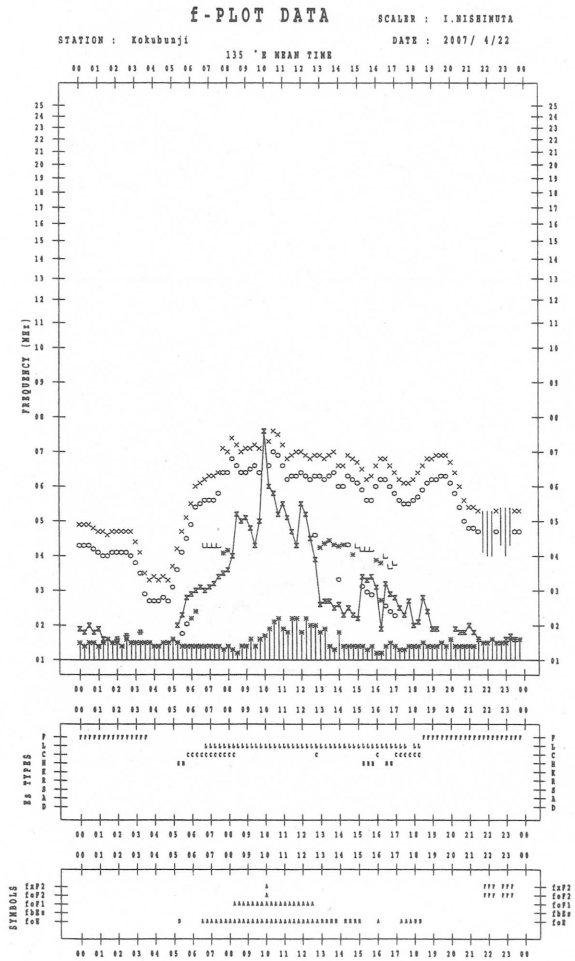
STATION : Kokubunji
DATE : 2007/ 4/23
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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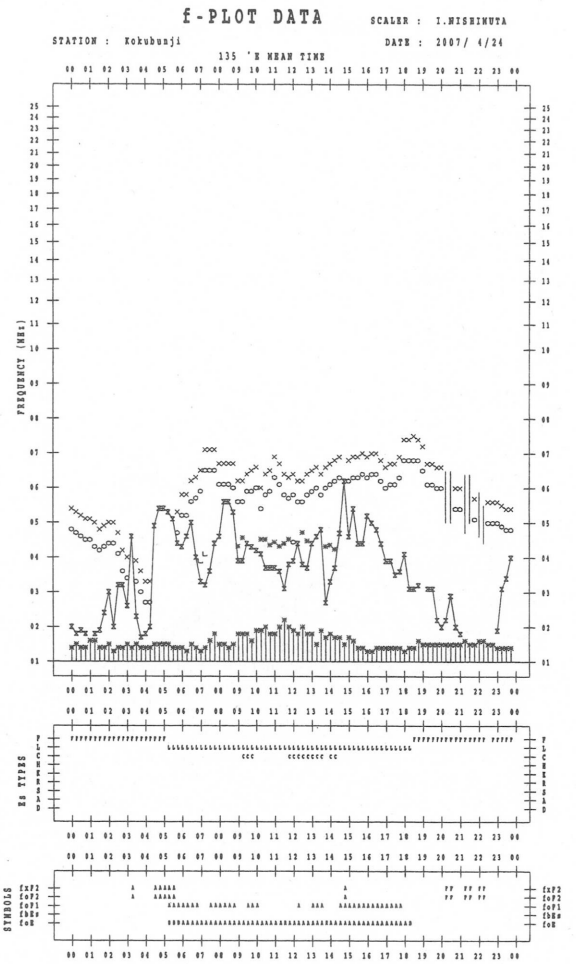
STATION : Kokubunji
DATE : 2007/ 4/22
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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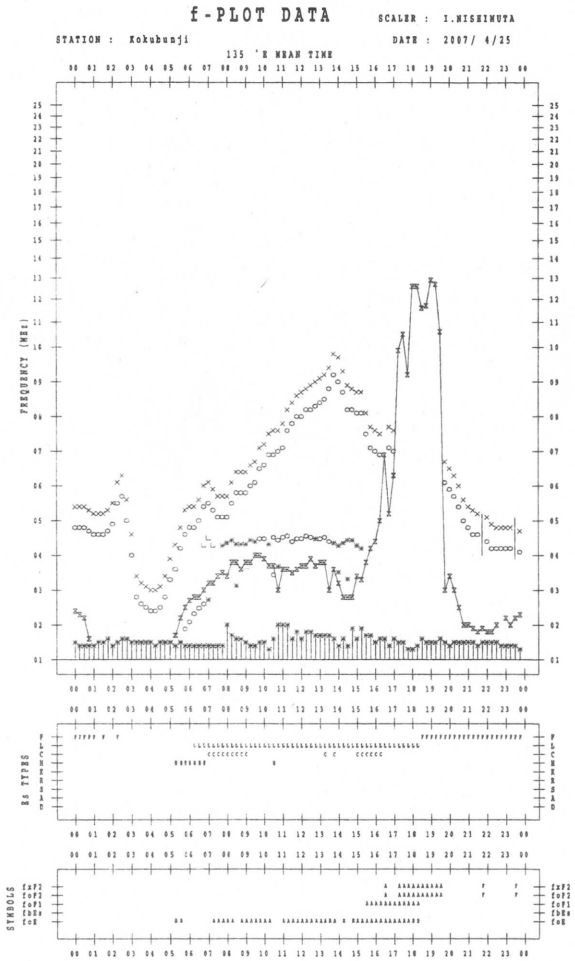
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/24
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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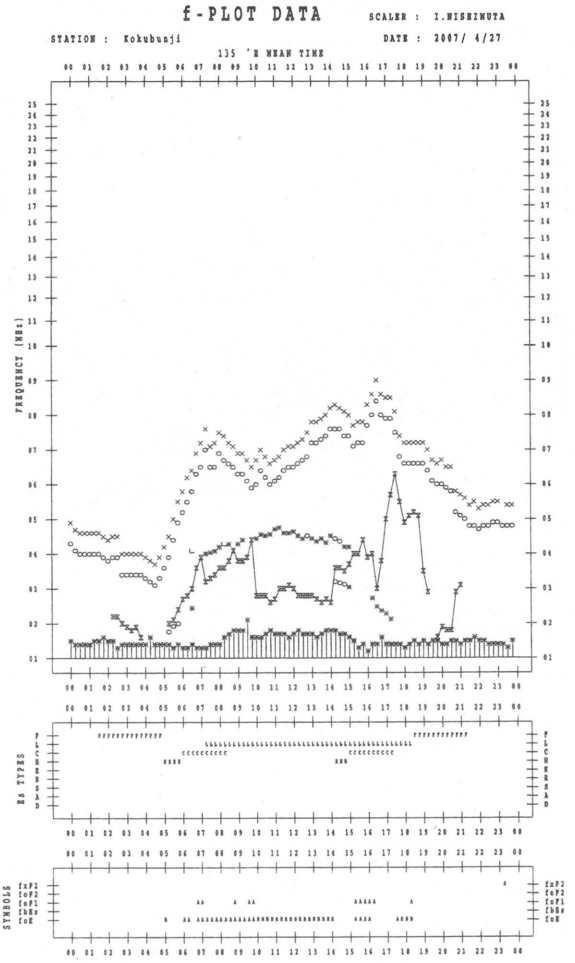
STATION : Kokubunji
DATE : 2007/ 4/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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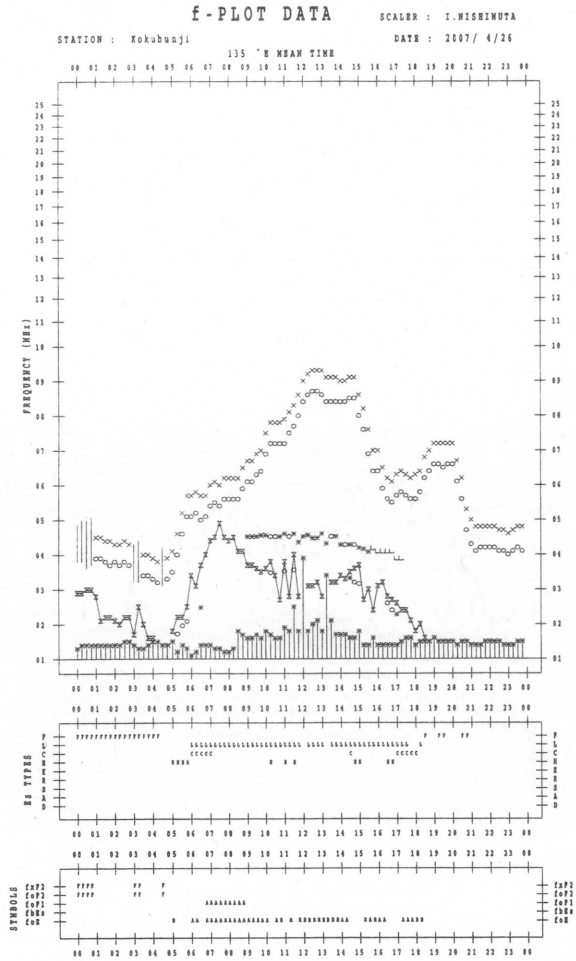
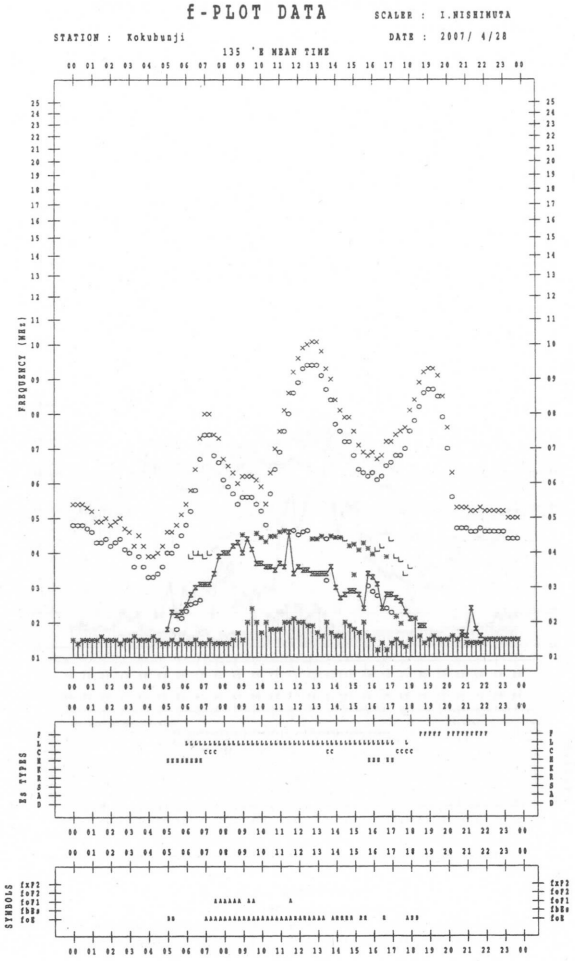
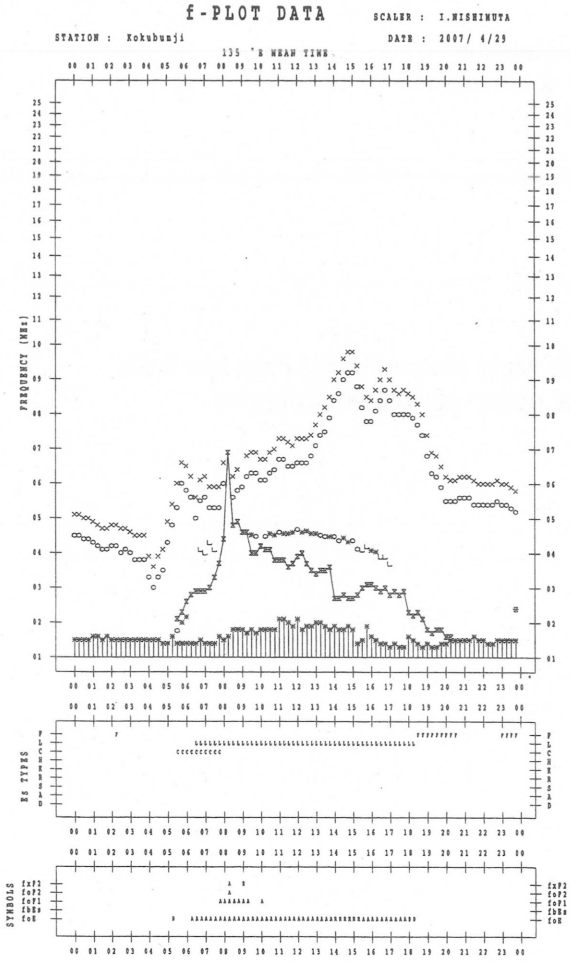
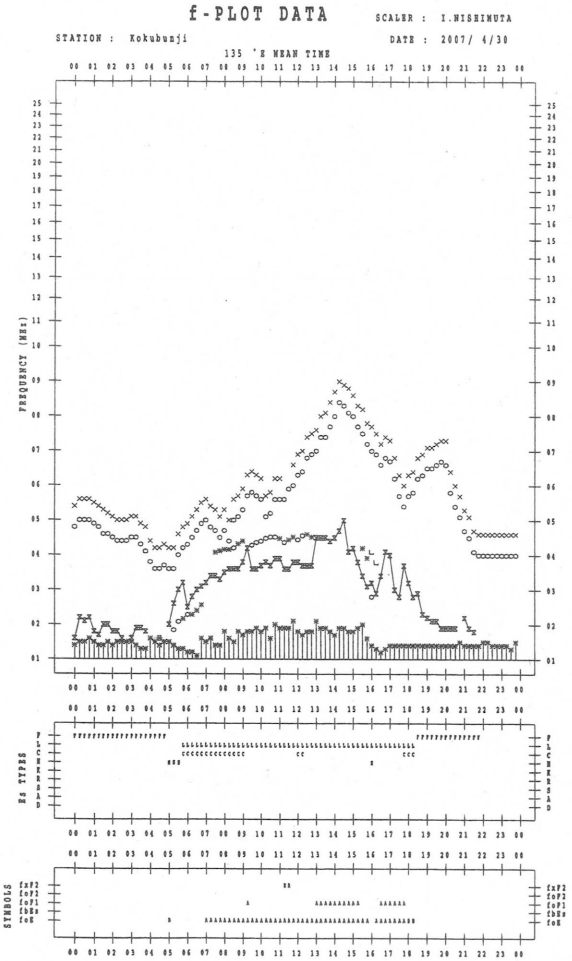
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2007/ 4/30
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 April 2007

Single-frequency observations

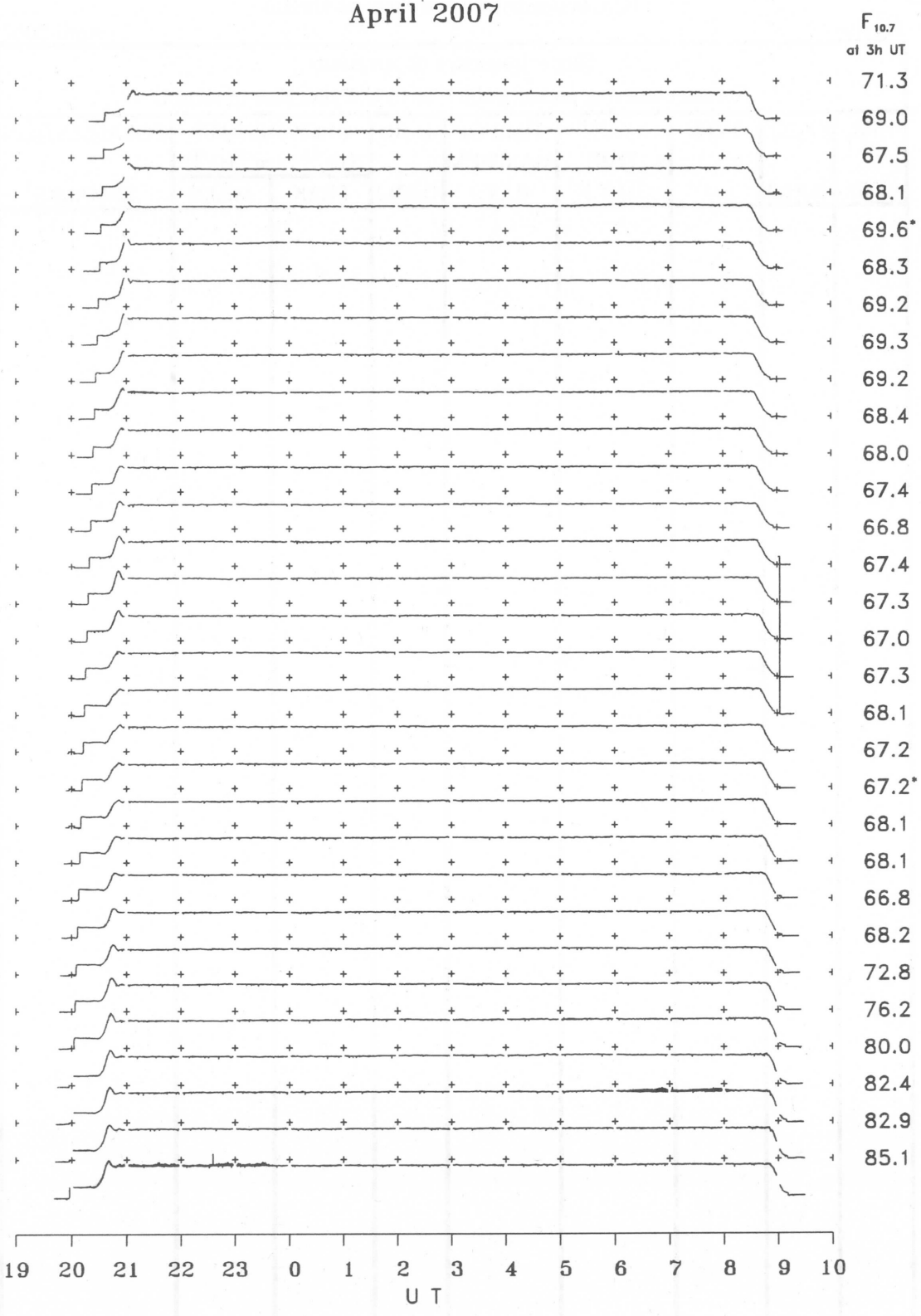
Normal observing period: 2000 - 0915 U.T. (sunrise to sunset)

APR. 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

April 2007



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

IONOSPHERIC DATA IN JAPAN FOR APRIL 2007
F－700 Vol.59 No.4 (Not for Sale)

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