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IONOSPHERIC DATA IN JAPAN

FOR APRIL 2005

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NATIONAL INSTITUTE OF INFORMATION
AND COMMUNICATIONS TECHNOLOGY
TOKYO, JAPAN

INTRODUCTION

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

A Measurement influenced by, or impossible because of, the presence of a lower thin layer, for example *Es*.
B Measurement influenced by, or impossible because of, absorption in the vicinity of *fmin*.
C Measurement influenced by, or impossible because of, any non-ionospheric reason.
D Measurement influenced by, or impossible because of, the upper limit of the normal frequency range in use.
E Measurement influenced by, or impossible because of, the lower limit of the normal frequency range in use.
F Measurement influenced by, or impossible because of, the presence of spread echoes.
G Measurement influenced by, or impossible because the ionization density of the layer is too small to enable it to be made accurately.
H Measurement influenced by, or impossible because of, the presence of a stratification.
K Presence of particle *E* layer.
L Measurement influenced or impossible because the trace has no sufficiently definite cusp between layers.
M Interpretation of measurement questionable because the ordinary and extraordinary components are not distinguishable.
N Conditions are such that the measurement cannot be interpreted.
O Measurement refers to the ordinary component.
P Man-made perturbations of the observed parameter; or spur type spread *F* present.
Q Range spread present.
R Measurement influenced by, or impossible because of, attenuation in the vicinity of a critical frequency.
S Measurement influenced by, or impossible because of, interference or atmospherics.
T Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.
V Forked trace which may influence the measurement.
W Measurement influenced or impossible because the echo lies outside the height range recorded.
X Measurement refers to the extraordinary component.
Y Lacuna phenomena, severe layer tilt.
Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

A Less than. Used only when *fbEs* is deduced from *foEs* because total blanketing of higher layer is present.
D Greater than.
E Less than.
I Missing value has been replaced by an interpolated value.
J Ordinary component characteristic deduced from the extraordinary component.
M Mode interpretation uncertain.
O Extraordinary component characteristic deduced from the ordinary component. (Used for x-characteristics only.)
T Value determined by a sequence of observations, the actual observation being inconsistent or doubtful.
U Uncertain or doubtful numerical value.
X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

f An *Es* trace which shows no appreciable increase of height with frequency.
l A flat *Es* trace at or below the normal *E* layer minimum virtual height or below the part *E* layer minimum virtual height.
c An *Es* trace showing a relatively symmetrical cusp at or below *foE*. (Usually a daytime type.)
h An *Es* trace showing a discontinuity in height with the normal *E* layer trace at or above *foE*. The cusp is not symmetrical, the low frequency end of the *Es* trace lying clearly above the high frequency end of the normal *E* trace. (Usually a daytime type.)
q An *Es* trace which is diffuse and non-blanketing over a wide frequency range.
r An *Es* trace showing an increase in virtual height at the high frequency end similar to group retardation.
a An *Es* trace having a well-defined flat or gradually rising lower edge with stratified and diffuse traces present above it.
s A diffuse *Es* trace which rises steadily with frequency and usually emerges from another type *Es* trace.
d A weak diffuse trace at heights below 95 km associated with high absorption and large *fmin*.
n The designation 'n' is used to denote an *Es* trace which cannot be classified into one of the standard types.
k The designation 'k' is used to show the presence of particle *E*. When *foEs* > *foE* (particle *E*) the *Es* type precedes k.

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

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

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

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

B. SOLAR RADIO EMISSION

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

B1. Daily Data at Hiraiso

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

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

* Measurement impossible because of interference.
B Measurement impossible because of bursts.

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

B2. Outstanding Occurrences at Hiraiso

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

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

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

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

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

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

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

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

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

B3. Summary Plots of F10.7 at Hiraiso

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

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

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

HOURLY VALUES OF foF2 AT Wakkanai

APR. 2005

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

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

HOURLY VALUES OF fEs AT Wakkanai

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	28	28	G	26	29	24	G	37	G	45	47	44	G	G	44	44	G	30	47	34	23	26	G	G
2	G	G	G	G	G	29	G	G	44	44	46	46	40	50	42	38	36	46	41	33	33	33	G	G
3	G	34	38	30	27	25	G	G	35	48	47	G	G	G	G	G	G	G	G	G	26	G	G	G
4	G	G	G	G	26	G	G	G	44	40	45	47	49	G	G	34	G	26	G	G	G	G	30	30
5	33	29	G	G	G	G	G	33	35	G	G	G	44	G	G	G	34	G	G	G	G	G	G	G
6	G	G	G	G	G	G			G	42	G	G	97	G	G	G	34	G	28	G	G	G	G	G
7	G	G	G	G	G	G	G	G	G	44	G	G	G	G	G	G	G	38	G	G	G	G	G	G
8	G	G	G	G	G	G	G	42	G	G	G	G	G	52	41	G	G	32	30	32	28	26	G	G
9	33	G	G	G	G	G	G		G	G	G	G	G	G	G	G	34	33	30	28	G	G	G	G
10	G	G	G	G	G	G	33	41	G	39	47	G	G	G	G	G	G	36	34	29	G	G	G	G
11	G	G	G	G	G	G	G	N	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
12	G	G	G	G	G	G	31	G	G	G	G		G	G	G	G		33	30	29	G	G	G	G
13	G	G	G	G	G	G	G	G	G	45	51	G	G		44	50	37	40	G	G	31	46	43	37
14	33	24	G	G	G	G	31	G	42	46	47	G	G	G	G	G	58	37	33	35	32	G	G	G
15	G	G	G	G	G	G		G	44	38	48	50	51	52	G	36	G	G	G	33	29	40	28	28
16	G	G	G	G	G		33	38	G	48	48	G	G	G	G	G	G	36	25	28	28	G	G	G
17	G	G	G	G	30	G	33	G	G	G	G	G	G	G	G	G	G	G	30	G	G	G	G	G
18	G	G		G	G	G	34	G	37	48	46	40	G	G	41	G	G	G	G	G	G	G	G	G
19	G	G	G	G	G	G	34	G	G	G	G	G	G	G	G	36	34	G	G	G	34	G	G	G
20	39	27	G	G	G	G		39	48	39	39	G	G	G	G	G	G	33	G	G	G	G	28	G
21	G	G	G	G	G	G	33	40	45	38	46	G	G	G	G	G	G	G		G	G	31	G	G
22	G	24	G	G	G	G	32	G	G	39	G	G	G	G	G	40	G	G	G	G	G	28	G	G
23	G	G	G	G	G	G	33	G	G	G	G	G	G	G	G	G	G	G	30	G	G	G	G	G
24	G	G	G	G	G	G	G	41	52	G		G	G	G	G	G	48	40	45	32	40	G	26	G
25	G	G	G	32	G	30		72	51	49	47	G	G	G	G	42	47	43	44	40		G	G	G
26	G	G	G	G	G	G	37	44	38	51	48	50	50		39	G	34	38	38	27	29	G	G	G
27	G	G	G	G	G	29	35	40	43	G	G	G	G	G	G	G	G	38	29	28	G	G	G	G
28	G	G	G	G	G	G	33	G	G	G	G	40	G	G	G	G	G	G	36	G	24	G	G	G
29	G	G	G	G	32	28	38	42	59	G	42	G	G	41	G	39	34	45	35	34	G	25	G	G
30	G	G	G	G	G	29	34	47	61	47	62	88	51	G	G	G	36	51	52	49	38	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	29	30	30	29	26	27	29	30	29	29	30	28	30	30	29	30	29	30	29	30	30	30
MED	G	G	G	G	G	G	32	G	G	39	40	G	G	G	G	G	G	32	30	14	G	G	G	G
U Q	G	G	G	G	G	12	33	41	44	45	47	40	G	G	G	36	34	38	35	32	29	26	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. 2005

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

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

HOURLY VALUES OF foF2 AT Kokubunji

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	44	42	42	39	38	55	59	64	69	84	97	106	81	87	81	85	86	90	71	A		34	34
2	41		38	41	28		46	61	72	71	69	76	83	81	81	78	76	74	78	73	52	44	44	44
3	46	44	42	45	38	36	54	71	63	72	71	86	97	91	92	75	68	74	81	72	47	36	27	36
4	37	36	34	36	28	28	51	66	69	59	72	78	90	86	85	76	68	67	73	74	61	54	52	53
5	47	48	47	44	36	36	64	72	67	66	84	98	84	75	101	106	82	69	72	80	64	54	54	54
6	54	54	63	65	64	59	68	69	77	82	76	97	106	114	106	98	93	100	78	62	51	53	53	
7		51	47	46	46	44	62	77	80	77	74	82	88	90	92	91	87	A	A	62	55	47	43	
8	48	44	44	48	39	37	57	68	80	91	80	85	92	92	94	92	96	86	87	66	52	42		44
9	45	45	44	46	27	43	49	63	73	94	84	93	97	94	95	90	77	81	82	62	44	44	41	43
10	47	44	45	47	37	38	58	66	67	77	79	82	94	97	92	84	72	A	101	88	A	A		42
11	43	42	42	42		35	59	74	76	78	87	87	100	83	81	86	81	81	81	66	52	47	44	47
12	47	47	48	44		34	60	67	80	73	66	85	102	116	117	92	101	102	90	59	51	A	44	47
13	42	47	43	42	32	41	51	60	61	62	74	80	84	92	90	87	100	90	91	66	52	53	53	51
14	52	55	65	A		34	54	56	57	52	A	A	78	75	72	77	75	73	82	76	62	53	52	53
15	52	55	51	46	44	45	59	59	59	72	82	75	85	86	87	87	77	A	72	77	66	A	A	45
16	48	44	44	46	43	43	73	69	72	69	68	71	83	91	91	90	78	77	74	72			52	54
17	52	53	54		39	44	68	68	72	77	80	81	90	101	90	93	91	96	92	85	54			44
18	43	42	43	39		39	69	71	66	66	71	77	98	101	101	90	81	87	95	83	78	47	49	52
19	52	48	50	46	44	46	75	63	60		67	77	87	96	97	90	72	71	82	86	87	53	48	48
20	45	45	46	46	44	49	64	66	67	64	80	81	97	102	95	80	78	85	91	99	88	52		A
21	49	47		41	31	39	62	78	67	81	92	72	82	87	90	91	76	67	73	81	81	66	53	51
22		47	43	46	44	46	55	65	66	66	76	72	80	74	80	86	84	65	63	A	A	52	47	48
23	48	45		44	36	36	52	68	77	69	63	A	64		69	72	69	74	A	76	80	A	44	36
24	34	39		41	39	41		66	A	A	A	A	71	80	A	76	69		64		47	A	A	A
25	A	A	A	42	44	40	55	62	A		77	90	95	92	84	83	72	59	64	66	54	52		53
26	51			44	42	49	62	56	55	61	A	71	91	100	100	94	84	71	74	80	78	54	49	
27	44	44	43	41	36	44	63	68	64	63	71	76	84	82	77	77	77	67	69	71	66	54	54	54
28	53	52	49	46	42	42	41	67	75	63	67	67	A	A	75	78	82	80	77	80	54	53	52	51
29		49	47	44	43	46	62	58	74	80	66	58		68	74	80	81	82	81	77	64	A	54	51
30	52	52	42	46	42	52	73	72	58	61	69	80	77	81	88	101	91	78	65	A	65	64	54	54
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	25	27	25	28	26	29	29	30	28	27	27	27	28	28	29	30	30	26	28	27	26	21	23	25
MED	47	47	44	44	39	41	59	66	67	69	74	80	89	90	90	86	80	78	80	74	58	53	49	48
U Q	52	51	48	46	44	45	64	69	74	77	80	86	97	96	95	91	85	86	88	80	66	54	53	53
L Q	43	44	42	42	36	36	54	62	63	63	69	75	83	81	81	78	75	71	72	66	52	47	44	44

HOURLY VALUES OF fEs AT Kokubunji

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	57	29	29	29	24	G	G	G	G	G	53	60	69	47	44	G	G	G	60	41	41		40	37
2	33	47	28	27	G	27	G	42	50	52	51	G	G	47	G	38	G	G	G	32	50	49	49	58
3	24	G	G	G	G	G	G	33	38	40	G	G	G	G	G	G	G	G	G	G	31	G	G	G
4	G	G	G	G	G	G	28	G	G	G	G	G	G	51	48	44	43	40	57	G	G	G	G	G
5	G	G	26	G	G	G	G	G	G	47	40	43	G	G	G	G	42	40	G	G	G	G	G	G
6	G	G	G	G	G	G	G	G	G	44	G	47	45	G	G	53	40	46	43	29	G	G	G	
7	G	G	G	G	G	G	G	G	G	38	G	G	G	G	G	61	73	107	116	G	G	G	G	
8	G	G	G	G	G	G	G	G	42	46	G	49	62	G	G	48	G	35	G	G	59	25	49	G
9	G	G	G	G	G	G	G	42	46	50	62	49	G	G	43	40	36	30	31	G	29	28	28	G
10	G	G	G	G	G	G	G	G	G	47	54	49	G	48	48	59	50	94	81	84	60	60	34	G
11	G	37	G	G	29	25	G	G	50	60	53	54	50	50	53	53	39	40	40	30	33	32	26	G
12	G	G	G	G		G	30	G	43	48	50	50	G	G	G	G	G	32	G	G	25	40	34	G
13	G	G	G	G	G	G	G	G	G	G	G	47	49	G	G	56	49	35	40	40	35	32	32	57
14	40	G	G	28	27	G	G	39	47	55	61	55	55	56	59	G	G	43	50	45	52	41	40	34
15	39	23	33	G	G	G	G	G	G	40	G	61	53		57	92	80	66	60	48	57	59	70	G
16	G	G	G	25	30	G	G	G	G	39	52	51	49	G	G	G	44	45	50	29	50	26	G	G
17	G	G	G	G	G	G	G	39	46	G	G	G	G	G	78	52	44	43	53	69	36	40		G
18	G	G	G	G		G	G	40	51	47	48	G	G	G	G	G	55	35	50	28	G	G	G	G
19	G	G	G	G	G	G	G	G	45		49	G	G	G	G	38	G	G	31	G	G	28	G	G
20	G	G	G	37	27	25	40	40	53	48	G	G	G	G	49	53	43	G	31	29	40	31	40	40
21	G	G	G	G	24	G	33	41	49	50	G	G	G	48	55	50	48	40	68	67	27	G	G	G
22		G	G	G	G	G	33	41	44	G	G	G	72	G	G	G	G	48	55	60	60	G	G	G
23	G	G	G	G	G	G	36		43	39	G	72	50	65	64	54	55	80	75	59	37	39	G	G
24	G	G		G	G	G	30	51	64	54	70	84	53	61	81	43	59		60		69	69	126	71
25	68	48	82	39	34	32	58	54	72	73	58	64	43	45	42	50	G	58	49	50	34	G	G	G
26	G	G	G	G	G	G	G	40	50	55	64	54	G	54	G	46	50	51	51	51	29	45	30	
27	G	G	G	G	G	25	36	42	49	52	47	G	44	G	41	39	47	47	41	43	23	33	G	G
28	G	G	G	G	G	G	36	40	49	47	G	49	80	72	50	G	57	55	55	57	G	26	36	33
29	24	26	G	G	G	G	35	40	48	G	G	46	49	51	50	48	42	36	31	29	26	68	49	34
30	31	34	35	G	G	30	G	43	G	50	G	G	G	42	G	G	57	61	60	79	68	34	36	35
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	30	29	30	28	30	30	29	30	29	30	30	30	29	30	30	30	29	30	29	30	29	29	27
MED	G	G	G	G	G	G	G	39	44	47	20	47	22	G	42	44	43	40	50	32	34	31	28	G
U Q	24	G	G	G	12	G	33	41	49	51	53	54	50	50	50	53	50	53	60	54	50	40	40	34
L Q	G	G	G	G	G	G	G	G	G	38	G	G	G	G	G	G	G	33	31	G	23	G	G	G

HOURLY VALUES OF fmin AT Kokubunji

APR. 2005

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

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

HOURLY VALUES OF foF2 AT Yamagawa

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	59	34	35	38	30	32	56	64	66	76	95		98	78	85	98	96		64	35	A	A	A
2	36	36	37	36	34		37	55	67	74	67	74	80	97	100	84	75	73	76	76	36	34	36	37
3	37	37	A	A	35	29	34	57	67	70	81	82	100	97	94	98	85	84	78	82	58	34	31	36
4	32	34	34	37	34		32	58	74	71	70	74	82	86	85	86	71	66	74	80	66		38	36
5	36	42	43	43	37		34	70	58	57	77	105	82	73	100	98	82	71	78		78		37	37
6	42	37	42	50	37	37	38	64	67	74	77	86			109	97	89	101	92	81	73	53	34	37
7	38	37	42	36		36	38	70	82	71	76	80	86	112	100	98	90	98	82	80	53	32	36	36
8	36	37		52			36	62	74	81	79	81			102	98	91	98	110	82	A	31	A	37
9	36	36	42	36	31	30	38	51	75		77	82	98				83	81	82	78	A	42	32	36
10	37	36	36	36	36	34	38	62	66	68	81	78	81	79	98		96	98	109		A	37	36	A
11	A	A	A	37	36	A	42	61	80	77	79		86	A	98	85	84	81	A	81	A		42	36
12	37	36	37	37	26		39	61	66	70	67	80		113	122	98	111	115	99	76		37	34	37
13	37	37	36	37	37	28	36	56	69	62	76	77	82	98	112	110	110	100	93	78	54	A	A	38
14		50		A		32	53	72	81	90	82	81	87	100	98	95	79	84	84	82	A		34	50
15	34	36		38		37	49	51	65	81	82	80	85	80	84	81	84	84	86	89	77	50	A	32
16	36	32	28	32	34	32	56	66	64	74	74	80	A	102	81	82	79	84	79	82	78	53	A	A
17	A	36	54	44	31	26	47	66	66	67	78	76	86	82	82	85	98	86	88	87	64	36		36
18	34	36	38	36	36	A	52	72	67	63		81	85	109	110	99	100	100	112	86	78	51	37	36
19		37	51	37	32	36	68	59	61	63		81	83	98	96	98		81	80	86	81	64	37	
20	36	36	42	36			56	66	58	71	71	84	86	94	101	88					81	42	37	37
21	37		50	C	34	34	53	74	66	82	80	77	86	94	106	C	81	84	92			74	52	54
22	61		54	36	38		51	70	80	83	77	73		81	84	88	100		82	77	38		A	34
23	37	32	34	49	28		38	66	82	66	64	65		A	A			81	100	A	A	A	A	38
24	42	A	36	37	36	A	55	66	A	A	A	A	A	82	81	81	86	83	78	74	A	A	A	36
25	A	A	A	36	32		38	58	A	A	A	76	82	84		89		81	72	72	A	A	36	A
26	37	36	36	36	38	40	58	57	55	55	66	65	81	A	110	98		94	90		81	39	36	
27		38	37	37	30	32	54	62	63	64	70	78	89			C	86	77	A	A	78	66	C	54
28			53	51	36	37	54	C	69	C	A			76	78	81	89	81	80	81	66	A	A	
29	42	36	36	36	36	38	51	69	82	70	57	58	67	80	82				81	69	78	64		37
30	37		36	34	37	36	58	55	63	A	67	78	81	78				83	81	73	60	63	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	22	23	24	27	25	18	30	29	28	25	25	27	21	23	25	23	23	27	26	23	20	19	17	22
MED	37	36	37	37	36	34	44	62	67	70	76	80	85	94	98	89	86	84	82	80	70	42	36	37
U Q	37	37	42	38	37	37	54	67	74	75	79	81	86	98	104	98	98	98	92	82	78	63	37	37
L Q	36	36	36	36	32	30	38	57	64	65	68	76	81	80	83	85	82	81	79	76	56	36	34	36

HOURLY VALUES OF fEs AT Yamagawa

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	60	G	G	G	G	G	G	33	42	52	60	51	54	61	52	G	G	36		34	24	44	40	39
2	G	G	26	35	33	33	33	37	38	37	43	G	G	G	G	40	G	32	30	28	26	G	G	34
3	32	31	39	44	30	28	30	33	42	44	49	46	42	G	G	G	G	G	27	29	G	G	G	G
4	G	G	G	G	G		G	G	G	G	G	44	G	G	G	51	43	53	60	40	G		G	G
5	G	G	G	G	G		G	G	38	G	G	50	43	44	G	G	G	G	34	26	26		G	G
6	G	G	G	G	G	G	G	G	38	44	G	G	G		44	40	55	38	62	33	29	G	G	G
7	G	G	G	G	G	G	G	G	G	G	G	G	G	G	41	39	G	46	43	26	G	28	G	G
8	G	G	G	G			G	33	G	G	G	G	G	G	G	46	51	40	38	71	60	G	34	26
9	G	G	G	G	G	G	G	40	50		43	G	G		G	G	G	G	39	44	33	G	G	G
10	31	G	G	G	G	G	G	35	G	41	57	42	42	42	41	40	G	40	45	56	59	G	24	41
11	39	41	37	G	39	39	27	40	53	41	G	44	78	102	43	84	72	64	84	45	45		G	G
12	28	G	G	11	G		G	G	42	47	44	G		52	44	44	G	46	42	28		G	G	34
13	G	G	G	G	G	G	G	G	G	G	40	57	43	G	53	G	68	47	40	38	44	43	72	33
14		G	G	43	36	25		39	44	46	44	54	45	42	58	53	52	44	32	60	103	G	G	39
15	G	G	29	33	29	26	28	G	G	G	G	56	66	64	64	76	44	38	41	41	G	26	46	G
16	G	G	G	G	G	G	G		G	G	G	41	95	70	G	G	G	G	40	37	G	G	40	44
17	43	40	38	G	G	G	G	G	G	39	G	G	G	111	56	G	45	88	66	60	44	G	27	40
18	34	30	27		41	37	30	39	38	52	42	G	G	G	G	G	40	42	32	32	28	G	G	G
19		33	36	24	G	G	G	35	42	G	41	43	G	58	G	41	41	40	50	60	32	40	29	
20	G	G	29	25	G	28	G	39	44	54	57	G	G	G	42	G		G	36	28	G	36	32	G
21	G		G	C	G	G	32	44	45	50	58	54	43	44	G	C	G	48	60	51	40	36	50	G
22	G	G	G	G	G		29	38	42	41	G	G		G	G	G	38	60	44	29	35		32	G
23	G	G	G	G	G		29	40	49	44	45	G	52	93	100	42		81	96			94	71	30
24	28	33	G	G	33	50	37	56	66	67	116	107	102	44	G	40	43	92	57	93	43	92	80	69
25		54	44	G	G	G	32	38	64	105	119	45	56	78	59	44	43	39	52	60	60	57	44	83
26	G	G	G	30	G	G	G	G	41	41	46	57	80	81	G	G	52	35	49	60	48	32	26	29
27	G	G	G	G	G	G	32	42	44	G	40	53	44			C	39	69	105	73	43	28	C	32
28	G	30	G	G	G	G	30	C	G	C	71	42	G	G	G	G	38	49	61	57	42	82	43	32
29	G	G	G	G	28	G	G	35	G	40	55	48	59	57	72	G		57	55	92	25	G		28
30	G		G	G	G	G	30	42	56	80	58	42	G	62	43		56	52	72	42	29	43	67	83
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	27	28	30	28	29	24	29	28	30	28	30	30	28	27	29	27	27	30	29	29	28	26	28	29
MED	G	G	G	G	G	G	G	35	42	41	43	42	42	44	41	39	40	43	45	42	32	27	28	29
U Q	28	30	27	17	28	27	30	39	44	48	57	51	55	64	52	44	51	53	60	60	44	43	43	39
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	36	38	30	24	G	G	G

HOURLY VALUES OF fmin AT Yamagawa

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	15	17	17	18	16	18	17	20	15	18	20	34	33	24	34	52	21	17		15	15	15	16	15
2	17	15	16	16	16	17	14	14	18	17	21	45	23	48	28	23	20	17	15	15	16	15	18	16
3	16	15	15	16	15	17	15	14	17	18	23	24	27	28	24	22	18	15	18	15	15	15	18	17
4	17	15	16	16	16		15	15	17	20	21	27	27	22	22	17	18	16	16	14	18		18	17
5	15	20	16	17	20		16	17	17	20	22	27	24	23	21	20	17	15	15	17	16		17	17
6	28	16	18	20	17	15	16	15	15	20	22	26	33		26	23	16	14	16	14	16	17	20	17
7	17	17	18	17	15	17	16	24	17	18	45	48	50	47	22	46	21	17	15	15	20	23	18	17
8	20	16	18	17			17	15	21	20	23	51	54	52	51	22	20	17	16	16	17	18	15	15
9	17	18	17	16	18	20	17	16	21		23	32	53		26	45	34	29	16	15	15	18	16	16
10	16	17	16	17	15	16	17	15	17	22	26	34	35	23	32	22	20	18	17	17	15	20	16	14
11	15	16	15	16	15	16	17	15	17	26	46	27	34	30	27	23	22	16	17	16	15		16	16
12	16	17	15	14	17		18	18	18	21	36	58		34	35	27	28	21	15	16		20	16	15
13	17	20	17	21	17	16	17	23	18	18	22	36	34	36	34	51	28	18	15	15	14	17	20	20
14		17	18	17	15	18	18	15	17	17	34	33	35	38	35	39	21	21	15	20	16	17	17	16
15	20	21	14	15	15	17	15	16	29	20	47	39	48	40	34	22	18	14	16	15	16	17	16	18
16	17	18	20	17	16	17	17	15	17	21	24	30	33	22			20	18	15	16	15	17	15	17
17	15	17	15	15	17	18	21	29	18	18	23	53	48	32	28	52	33	20	18	15	15	16	14	15
18	15	15	14	21	15	14	18	16	29	20	34	26		52		46	20	20	14	16	14	18	30	17
19		16	16	16	16	16	18	15	20	22	33	52		33	29	23	20	16	14	14	15	16	15	
20	18	16	16	15	22	14	18	17	17	23	30	30	28		29	51		20	20	15	17	17	15	17
21	17		20	C	16	23	15	18	18	20	22	32	27	33	53	C	24	20	16	15	16	18	17	17
22	16	20	15	20	17		15	22	17	21	45	50		49		53	39	17	18	14	15		15	18
23	15	16	22	17	21		14	14	17	21	24	21	33	33	28	28		16	15	14	17	15	15	15
24	21	17	18	17	15	15	16	15	18	18	23	26	29	32		47	20	15	15	18	16	15	16	15
25	17	15	16	17	22	17	17	21	18	22	33	28	27	29	24	23	15	15	15	16	18	17	16	17
26	16	16	15	15	17	20	23	22	21	32	32	36	46	33	59	51	28	18	17	14	15	15	18	16
27	22	16	18	18	21	15	15	18	20	22	48	52	32			C	22	18	16	18	15	16	C	16
28	17	18	16	15	23	14	15	C	18	C	23	30		54	54	53	32	23	15	16	16	15	15	15
29	16	16	16	17	15	15	20	16	20	23	27	35	39	43	35	54		16	15	15	16	16		15
30	20		17	18	15	15	15	21	21	23	34	33	52	30	30		33	18	16	15	15	16	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	28	28	30	29	29	24	30	29	30	28	30	30	25	26	25	26	27	30	29	30	29	26	28	29
MED	17	16	16	17	16	16	17	16	18	20	25	33	33	33	29	34	21	17	16	15	16	17	16	16
U Q	17	17	18	17	17	17	18	20	20	22	34	45	47	43	35	51	28	20	16	16	16	18	18	17
L Q	16	16	15	16	15	15	15	15	17	18	23	27	27	29	26	23	20	16	15	15	15	15	15	15

HOURLY VALUES OF foF2 AT Okinawa

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	44	42	46	42	37	A	30	58	71	71	72	96	108	116	110	114	111	108	101	A	A	A	A	A
2	42	48	53	60	42	29	A	56	72	78	68	78	96	111	116	106	98	77	77	73	51	40	34	34
3	42	43	44	48	A		32	56	66	81	92	101	117	136	141	146	150	131	134	131	88	73	66	66
4	66	64	54	64	54	32	38	64	72	81	76	87	101	108	117	108	100	84	84	88	65	38		32
5	50	48	C	C	C		28	70	C	51	72	111	C	86	115	115	C	78	96	127	66	C	40	40
6	C	43	C	54	C	30	34	55	74	77	87	C	C	C	C	120	C	120	101	110	C	C	C	50
7	C	C	C	C	44		38	C	C	C	80	C	117	C	146	C	C	121	110	88	76	50		41
8	42	54	60	88	C		31	61	76	81	85	102	114	126	137	125	116	127	140	94	52	42	42	41
9	42	47	47	43			C	61	76	88	82	86	112	127	126	121	108	101	89	87	60	42	37	37
10	38	36	40	41	30	29	37	60	74	76	84	85	93	108	104	111	117	134	143	119	A	A	37	A
11	43	C	C	C	30	32	C	C	C	77	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	117	102	101		53		
15	53	52	C	C	C	C	C	C	C	C	C	C	88		106	88	98	110	128			A	A	
16	A	A					36	52	64	71	86	93	92	108	107	90	88	108	106	88	84		25	
17	A				A		32	66	65	70	91		88	90	104	103	108	110	112	106				
18			34				35	63	71			83	90	108	110	108	130	134	134	108	66			
19							54	59	65	68	68	83	107	110	115	119	114	107	A	90	A	A		
20			A	66	53		35	63	71	70	80	87	107	108		126	107	129		131	83			38
21		52	54	30			43	66	80	81	76	86	104	110	129	127	A	A	A	131	A	A	64	66
22			66		29		36	74	88	82	76	73	87	88	105	112	110	122	110	87	A			
23	A							82	88	64				82	A	105	105	106	108	108		32		A
24	A	A	A	A	A	A	52	A	A	A	A	A	92	105	108	106	106	90	104	88	60	A	A	A
25								64	A	A	A	A	A	A	108	110	128	108	88	72	A	A	A	A
26	A	A	A					50	53		A	A	81	107	135	138	137	148	152	131	106	44		53
27	A	32					41	59	69	A	71	83	112	130	135	131	120	89	88	89	87	A	A	A
28	A			A	A	A	51	73	67				72	86	90	103	108	99	87	84		53	A	A
29	A	32	44	32	32		A	74	82	63	66			102	102	107	108	121	108	105	87		A	
30					32			55	60		74	84	88	92	88	111	110	100	88		77	77		
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	10	13	11	11	10	5	18	23	21	18	19	16	21	22	23	25	22	26	24	24	15	11	8	11
MED	42	47	47	48	34	30	36	61	71	76	76	86	96	108	110	111	109	109	105	98	76	44	38	41
U Q	50	52	54	64	44	32	41	66	76	81	85	94	110	111	129	123	117	122	120	114	87	53	53	53
L Q	42	39	44	41	30	29	32	56	65	70	72	83	88	92	105	106	106	100	88	88	60	40	35	37

HOURLY VALUES OF fEs AT Okinawa

APR. 2005

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	48	24	G	G	53	36	24	G	42	50	48	61	52	55	53	G	G	46	71	81	92	78	58	38
2	34	25	24	33	G	G	34	34	36	40	46	45	50	50	G	G	G	G	28	41	43	34	29	36
3	33	G	G	32	58	34	24	G	37	40	42	46	44	G	42	G	G	G	30	G	21	28	G	G
4	G	G	G	G	11	G	G	G	35	38	40	52	51	78	97	50	42	38	36	50	38	27	43	G
5	G	G	C	C	C	G	G	36	C	42	G	G	C	G	58	73	C	57	68	60	40	C	G	G
6	C	G	C	G	C	G	G	G	36	41	G	C	C	C	C	43	C	38	35	28	C	C	C	25
7	C	C	C	C	G		G	C	C	C	G	C	G	C	G	C	C	38	G	26	26	26	29	23
8	24	G	G	G	C		G	32	G	G	G	G	G	G	G	G	G	36	28	30	34	51	30	G
9	G	G	G	G		G	C	35	42	G	59	60	42	G	51	41	G	G	43	40	42	30	G	G
10	G	G	G	G	G	G	G	35	37	45	40	50	69	65	G	G	53	105	71	60	71	54	28	36
11	34	C	C	C	G	27	C	C	C	45	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	50	42	30	35	32	G	G
15	G	G	C	C	C	C	C	C	C	C	C	C	71		G	78	38	35	34	36	51	71	68	34
16	36	43	28	G	G		G	G	G	G	70	64	G	G	G	43	G	36	G	G	28	G	G	G
17	36	33	29	28	28		G	G	40	G	60	79	G	G	G	G	G	G	G	34	G		G	
18			G				G	36	46	55		G	G	G	G	72	79	66	51	27	39			G
19		G	G	G	33	G	G	38	37	41	G	G	52	69	G	75	58	73	136	73		88		28
20	G	G	37	G	26		G	36	45	56	60	G	G	G	67	G	G	36	38	G	G			G
21		32	G	G			28	41	52	56	58	G	58	G	G	G	118	131	151	104	92	70	G	33
22	G		G	G	G		G	36	G	40	G	G	G	G	G	G	G	49	79	54	52		G	28
23	30			G				44	61	47	54	51	53	51	94	51	50	50	50	34	25	G	35	30
24	43	48	49	56	46	36	27	60	69	97	70	90	51	66	G	G	56	61	82	71	57	36	69	29
25			G	G			G	38	62	85		137	95	114	115	G	50	50	52	67	70	72	81	
26		34	39			29		G	36	49	80	65	60	53	68	50	93	93	69		59	G	G	G
27	26	G	G	G	G		28	36	48	60	G	G	49	G	51	64	G	36	65	72	82	72		57
28	27	G	G	43	38	59	36	38	52	G	G		G	G	G	G	G	74	83	69	70		37	29
29		G	G	G	G	G	41	38	46	50	G	64	G	G	52	G	50	73	90	28	27	39	26	
30			G		G		G	36	G	60	64	G	G	G	G	G	G	G	37	69	34	G	28	33
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	18	20	21	20	17	14	22	24	23	25	23	22	24	23	25	25	23	27	27	26	25	20	22	24
MED	26	G	G	G	G	G	G	36	40	45	42	48	46	G	G	G	G	46	50	40	40	35	28	26
U Q	34	28	26	14	35	34	27	38	48	55	60	64	52	55	55	50	53	66	71	69	64	70	37	33
L Q	G	G	G	G	G	G	G	G	36	39	G	G	G	G	G	G	G	36	34	28	27	26	G	G

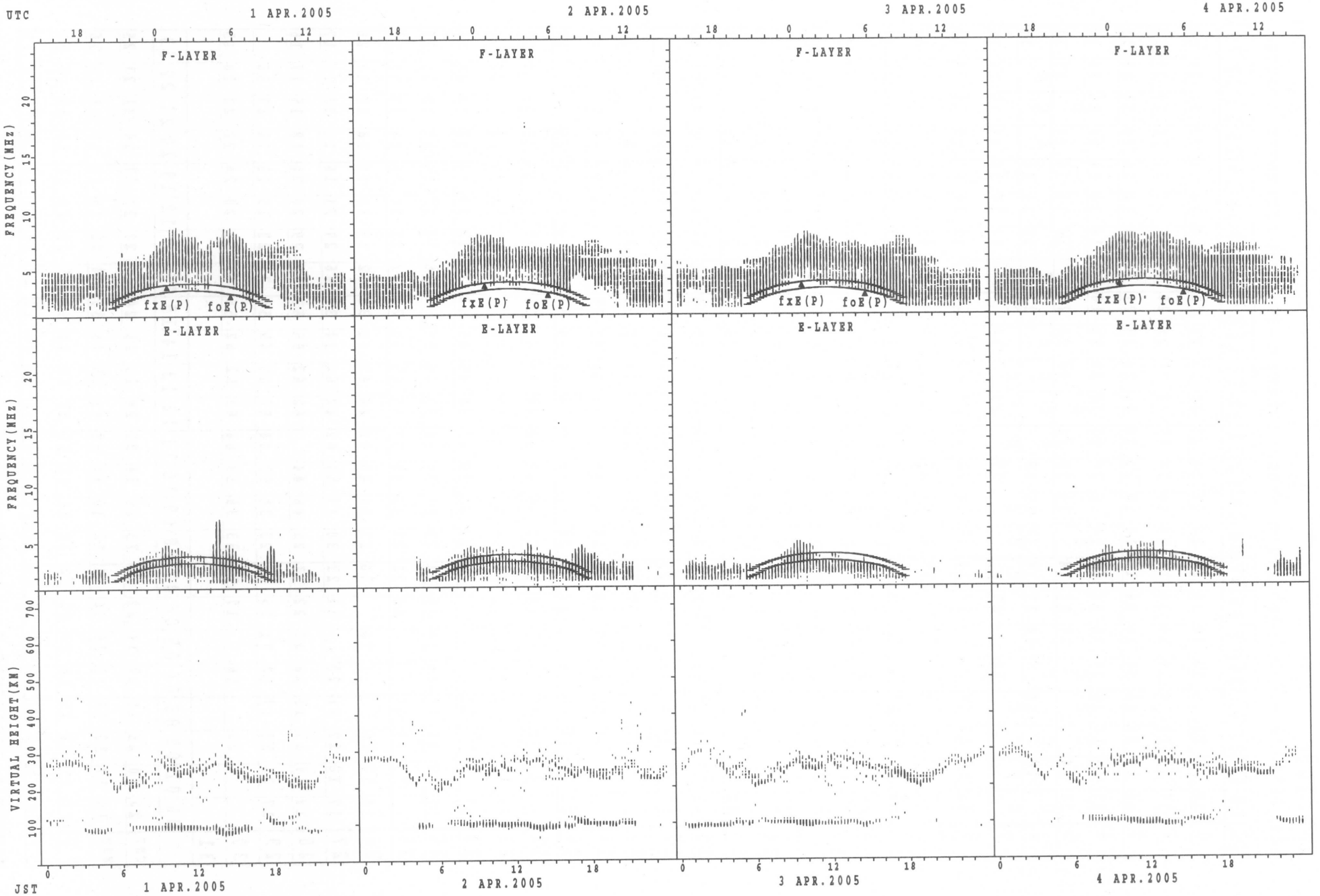
HOURLY VALUES OF fmin AT Okinawa

APR. 2005

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

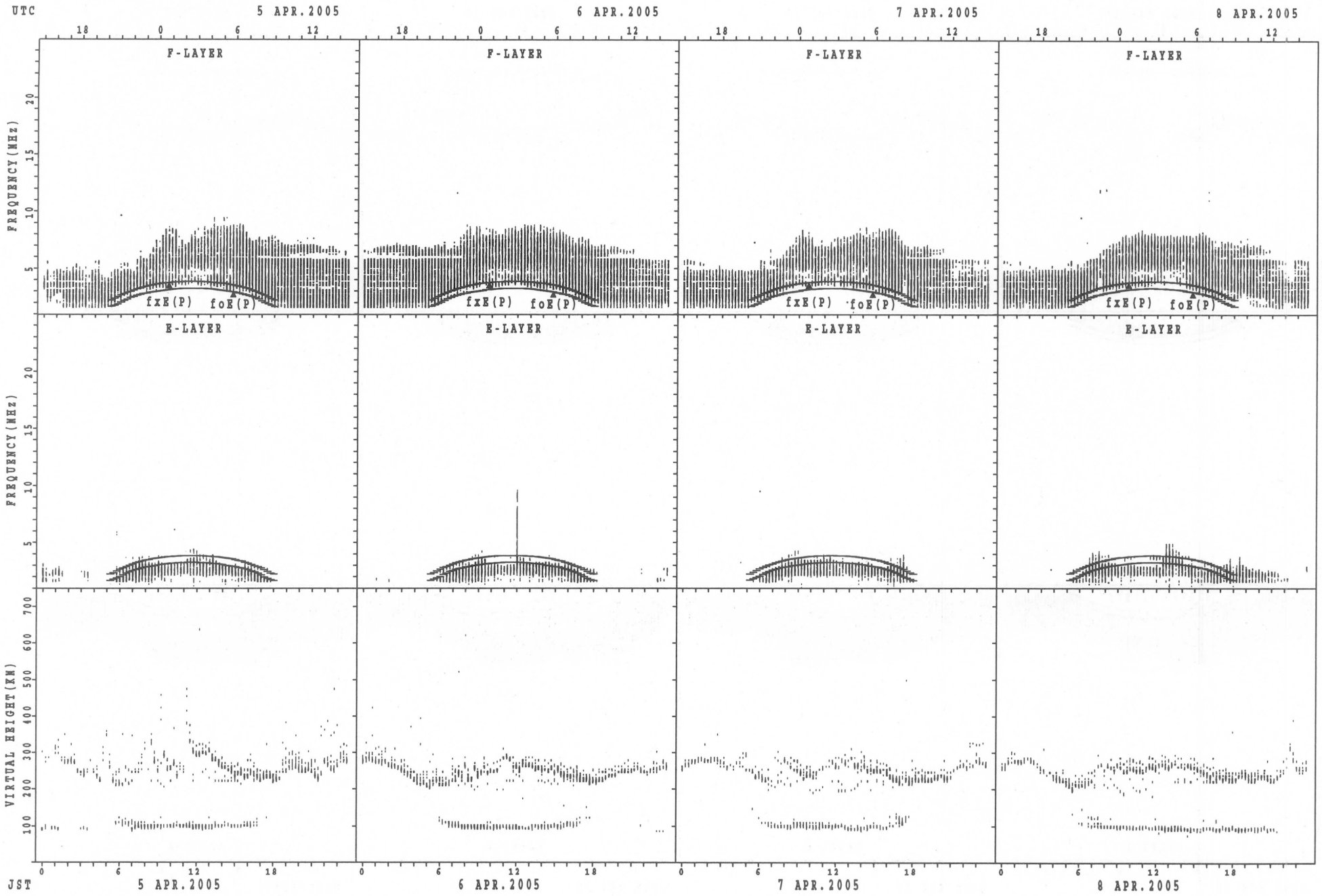
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	14	15	14	15	14	14	14	14	14	15	20	17	22	23	21	21	18	14	14	14	14	14	15	14
2	14	14	15	14	14	14	14	14	14	14	16	22	22	26	21	20	17	15	14	14	14	14	14	15
3	14	14	20	14	14	14	14	14	14	18	21	26	26	28	23	21	18	14	14	14	14	14	14	15
4	17	15	14	14	14	15	14	14	14	15	20	23	22	21	22	16	16	14	14	14	14	14	14	15
5	14	14	C	C	C	15	17	14	C	14	20	21	C	46	24	22	C	14	14	14	14	C	15	15
6	C	18	C	14	C	14	15	14	14	15	18	C	C	C	C	22	C	15	14	14	C	C	C	14
7	C	C	C	C	14		15	C	C	C	22	C	30	C	24	C	C	14	14	14	14	15	14	15
8	15	17	15	14	C		14	14	15	18	22	24	27	30	22	23	17	14	14	14	14	14	14	15
9	15	17	15	15		21	C	14	14	21	23	23	32	29	28	22	18	14	15	14	15	14	14	15
10	15	14	17	14	15	14	15	14	14	16	18	24	35	29	27	22	14	14	14	14	14	14	15	14
11	14	C	C	C	14	14	C	C	C	16	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	23	21	15	20	15	24	33
15	22	22	C	C	C	C	C	C	C	C	C	C	43		46	43	32	22	14	15	15	16	18	15
16	16	15	20	17	71		22	29	23	45	38	40	60	62	58	28	54	46	18	27	15	22	21	24
17	17	17	20	17	15		21	23	22	45	40	44	58	62	46	46	55	44	18	17	22		22	
18			22				20	22	29	39		62	60	54	55	33	30	21	15	15	20			16
19		66	21	66	15	22	28	22	29	32	54		42	46	47	38	40	28	16	23	20	20		21
20	22	20	15	20	18		22	22	28	33	39	60	58	54	45	47	54	30	14	21	20			20
21		43	30	16			15	17	22	30	44	58	44	54	63	56	34	27	18	15	21	20	18	17
22	44		22	81	15		20	21	34	32	52	53	53	56	54	55	42	29	18	14	18		22	20
23	17			31				22	28	35	39	44	38	45	45	42	36	22	18	14	15	18	15	16
24	15	18	15	15	15	16	16	21	23	30	34	34	33	44	55		36	30	18	14	17	18	15	20
25			71	66			66	21	21	45	40	33	35	43	30	23	22	21	16	15	14	22	18	18
26	15	17	16			16		30	21	30	40	40	40	43	40	35	32	17	17	15	18	18	17	26
27	17	18	22	71	20		14	22	30	33	57	62	42	62	34	33	46	29	21	16	16	20	16	17
28	17	17	17	18	18	17	22	21	21	46	44		62	62	55	53	48	29	20	20	18	15	17	16
29	17	21	15	17	18	71	15	20	23	34	58	44	58	60	45	54	34	23	15	15	18	17	66	
30			22		16		17	21	33	38	39	64	63	62	62	55	45	45	20	24	22	22	20	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	20	20	21	20	17	14	22	24	23	25	24	21	24	23	25	24	23	27	27	27	26	21	23	25
MED	16	17	17	16	15	15	16	21	22	30	38	40	41	46	45	33	34	22	15	15	16	16	16	16
U Q	17	19	22	25	18	17	21	22	28	36	42	55	58	60	54	46	45	29	18	16	20	20	20	20
L Q	14	15	15	14	14	14	14	14	14	16	20	23	31	29	24	22	18	14	14	14	14	14	14	15

SUMMARY PLOTS AT Wakkanai



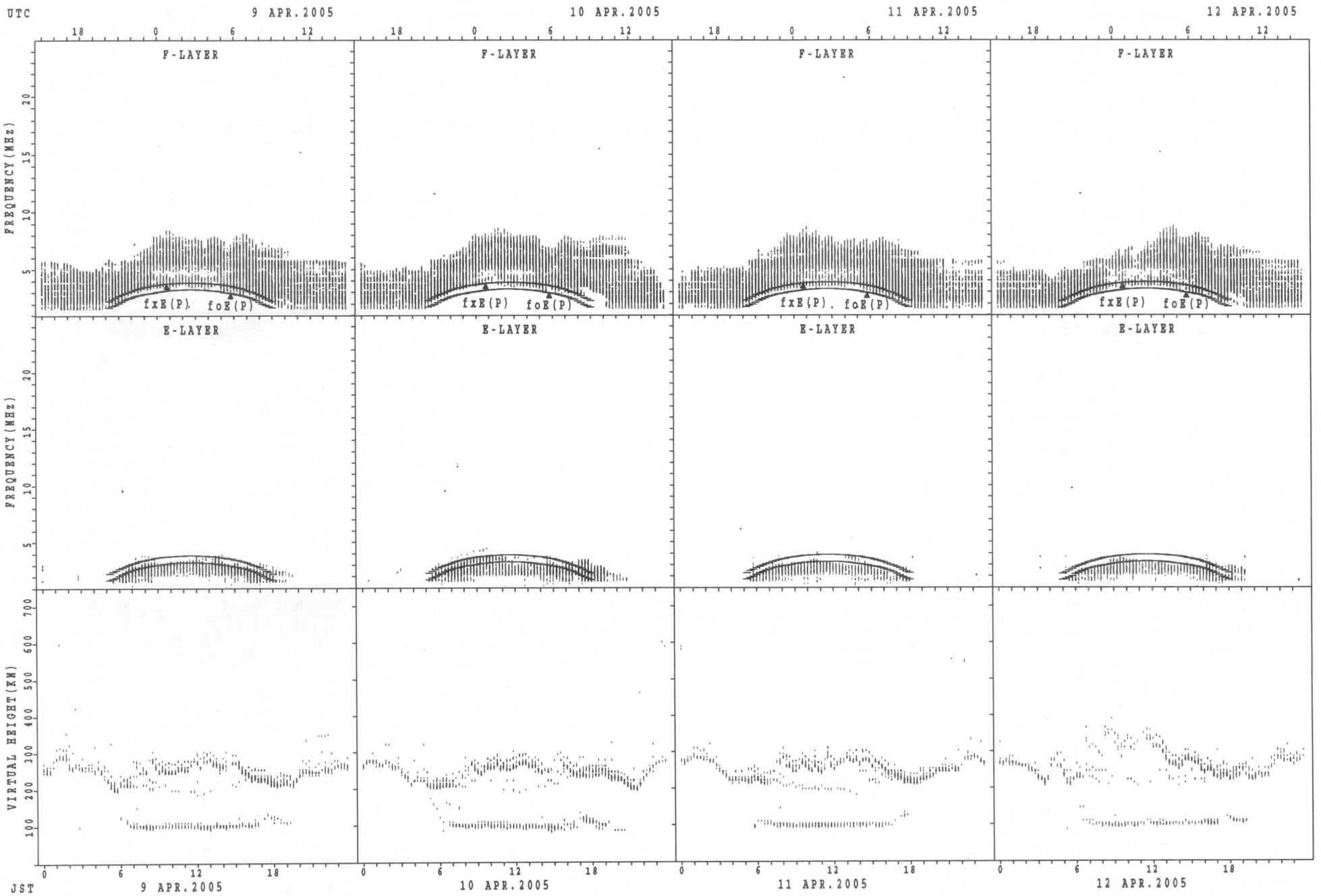
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



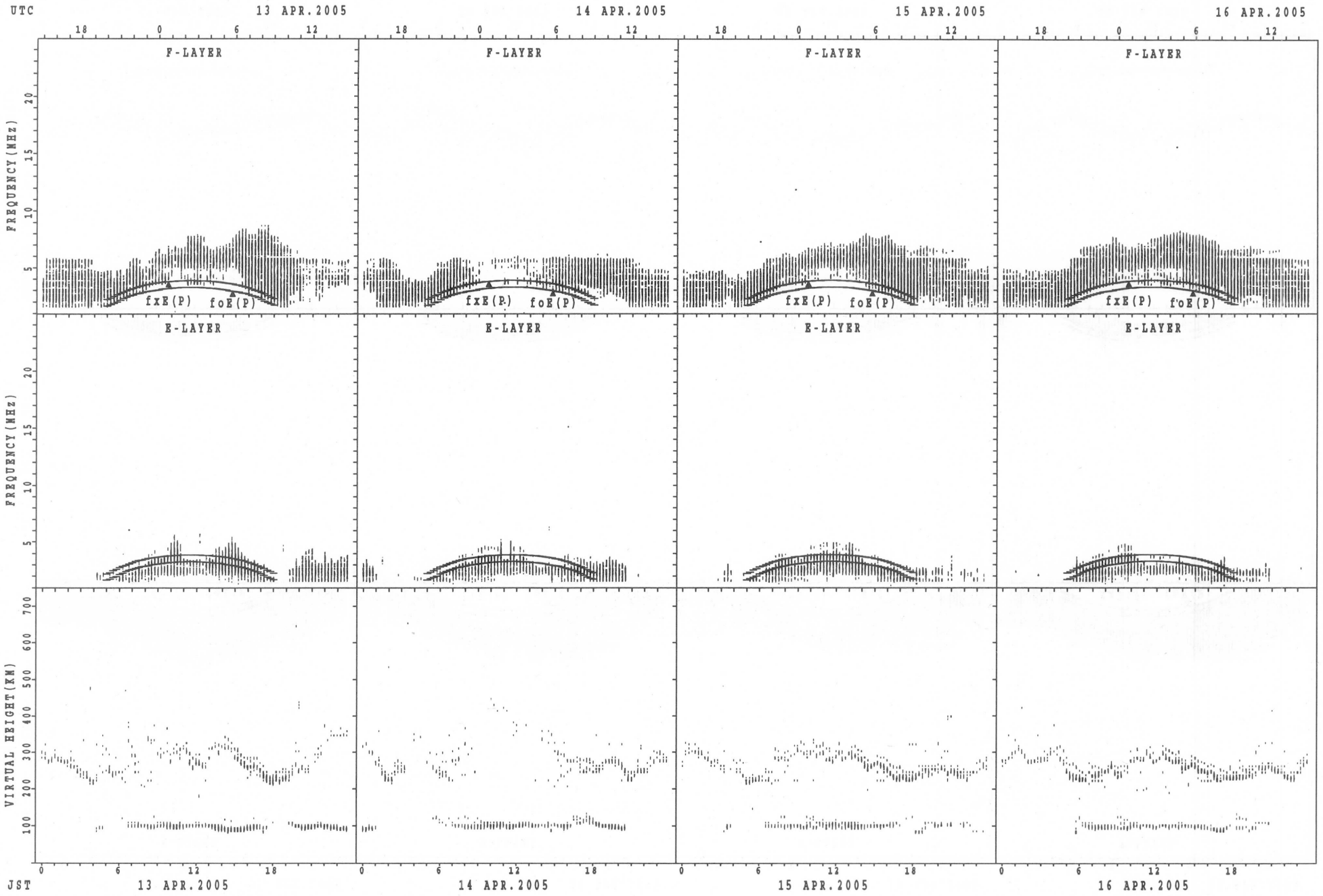
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



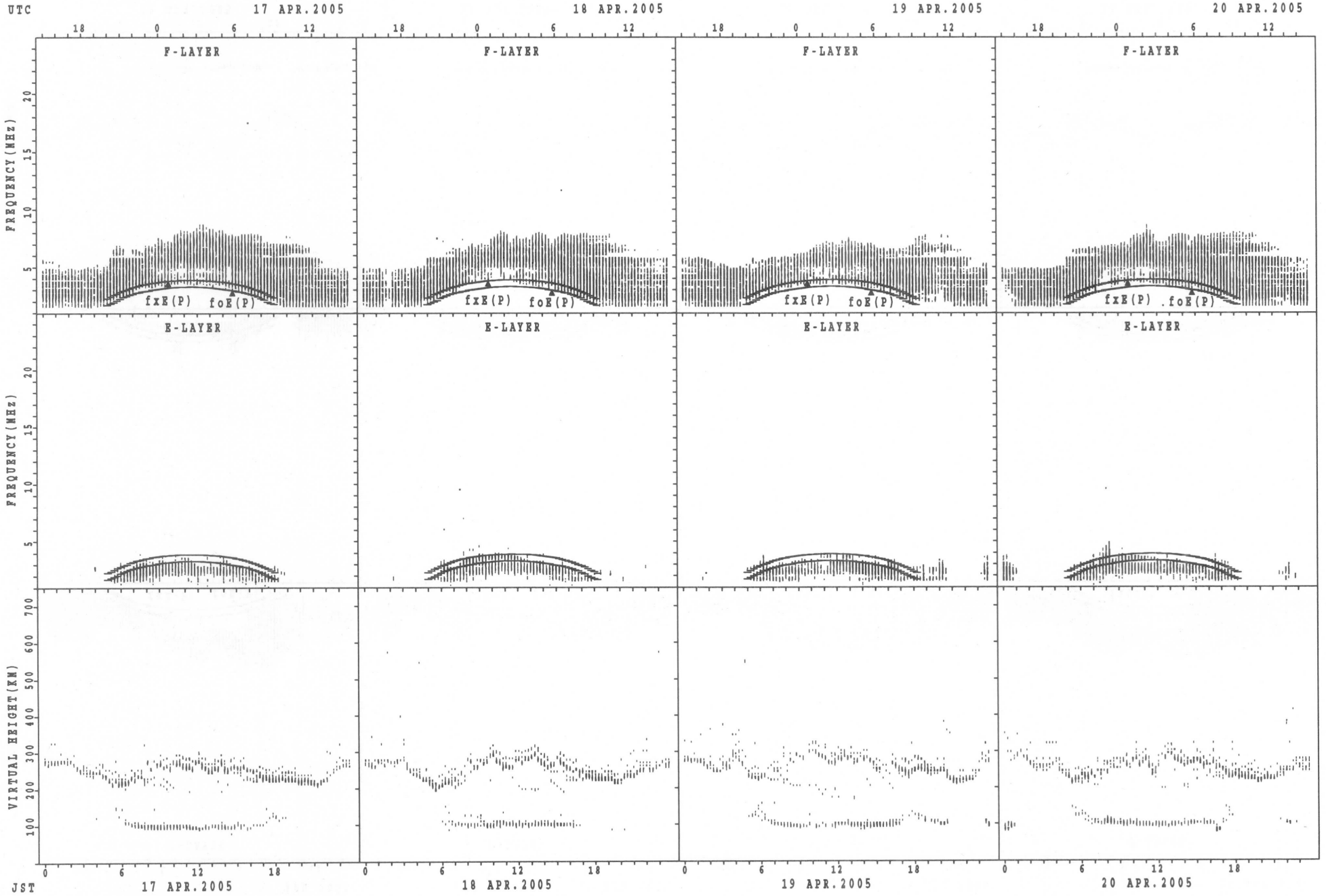
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



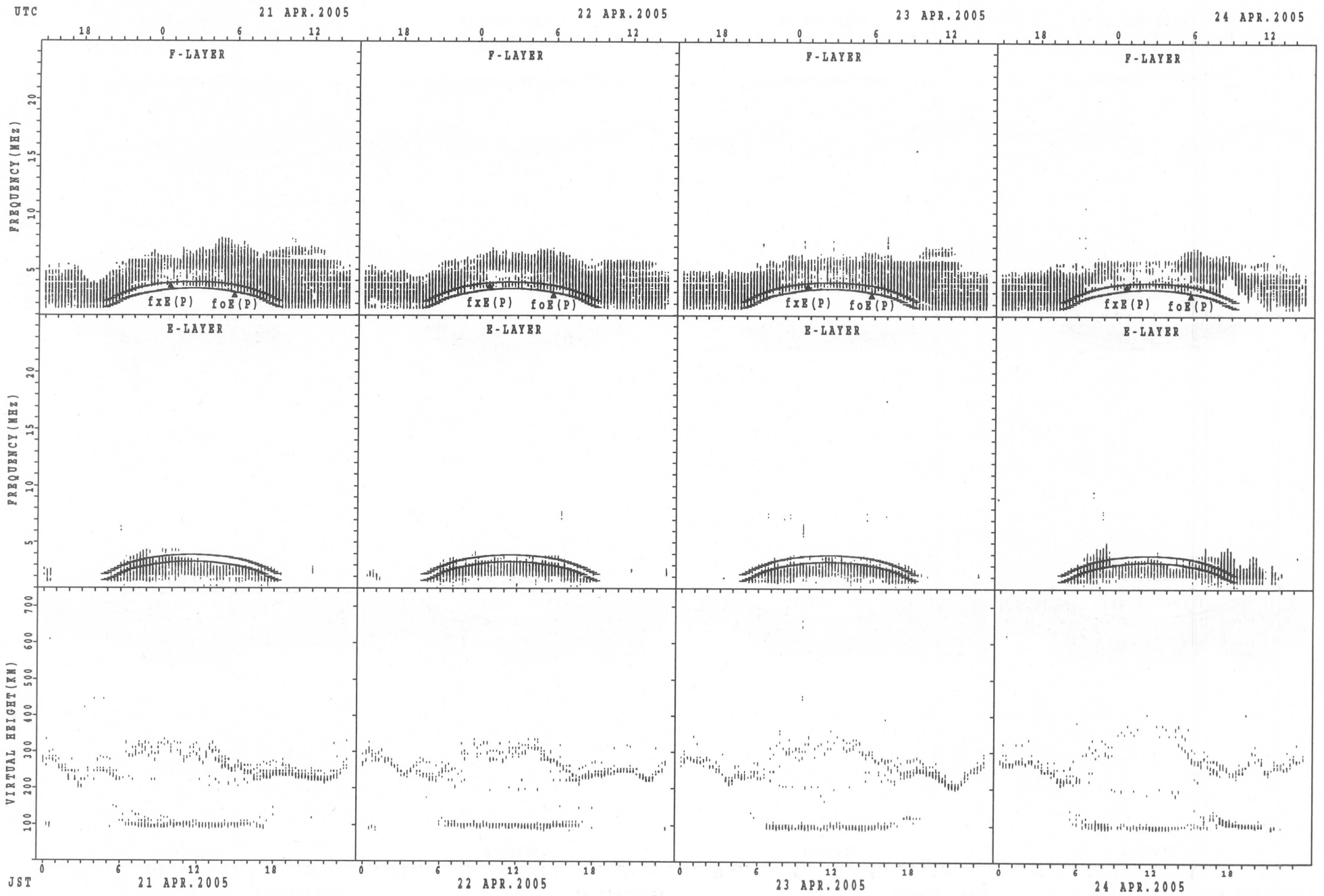
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



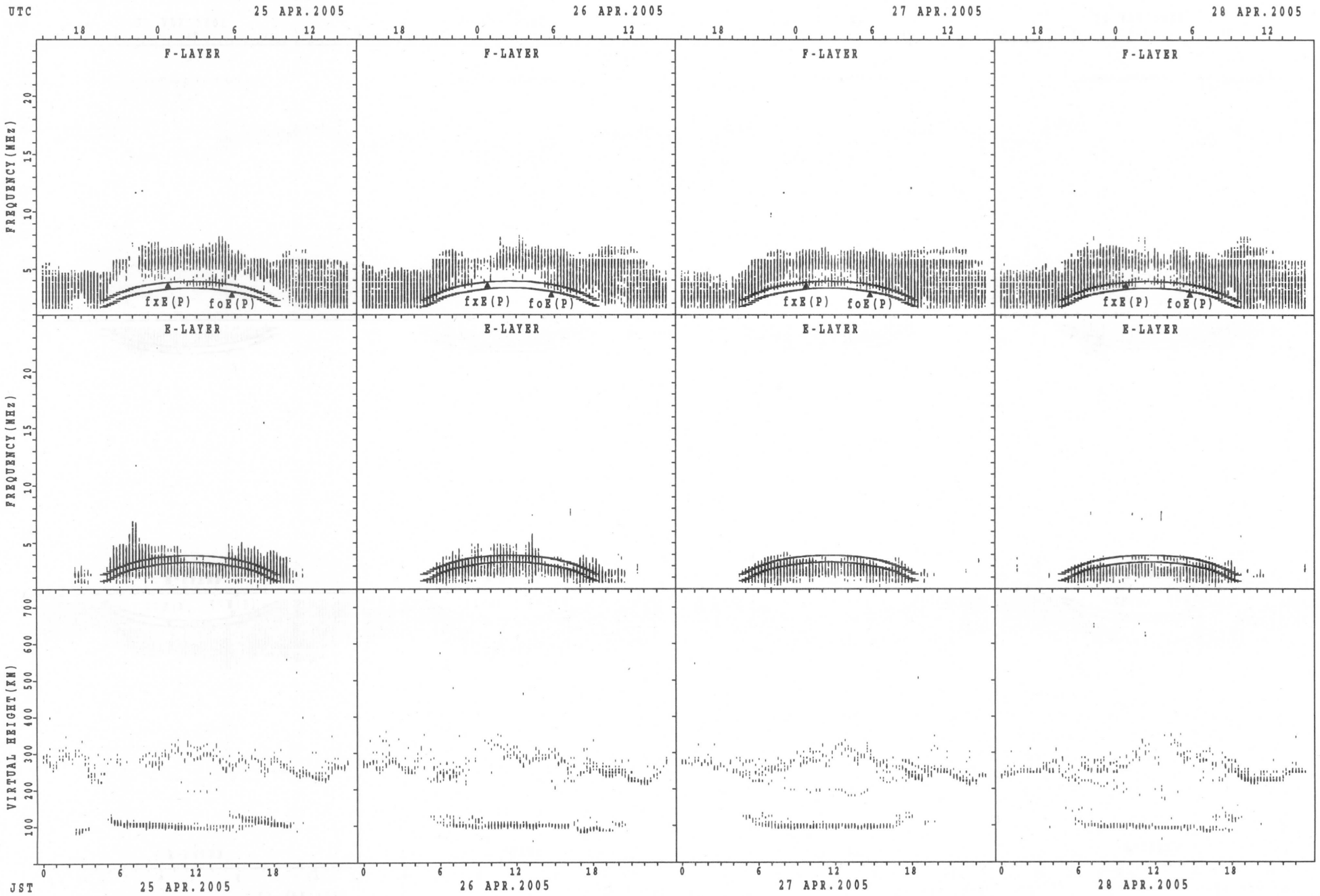
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



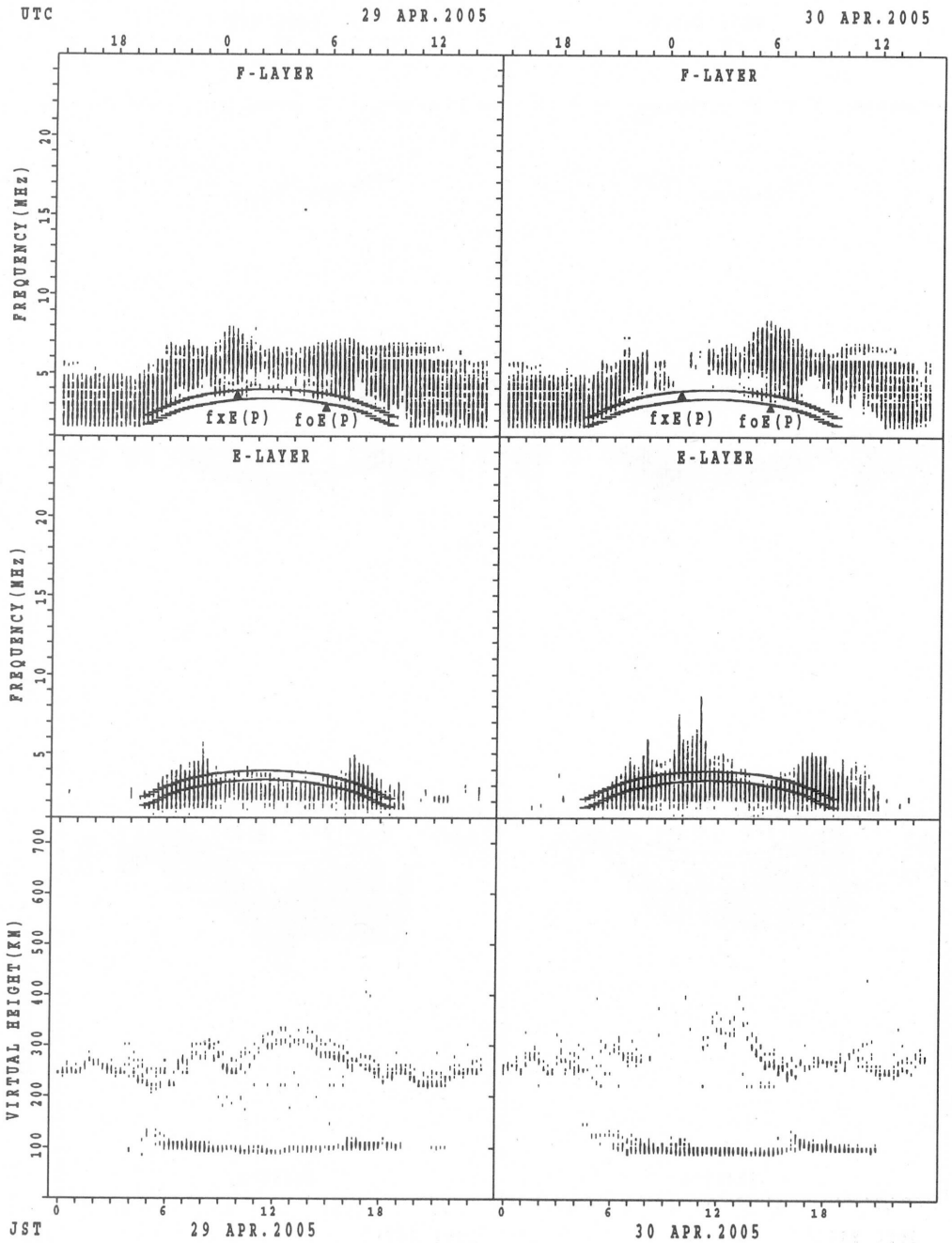
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



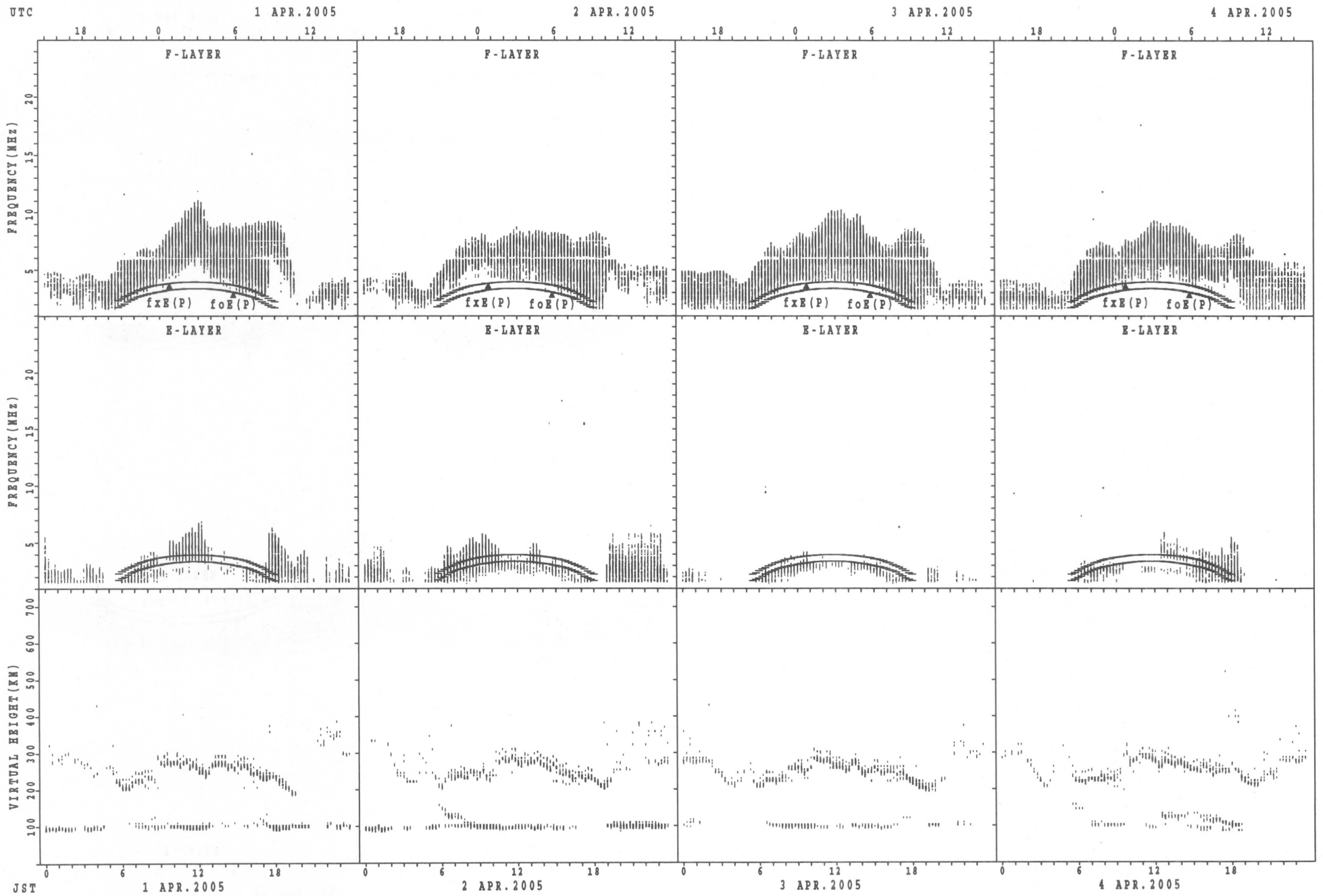
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



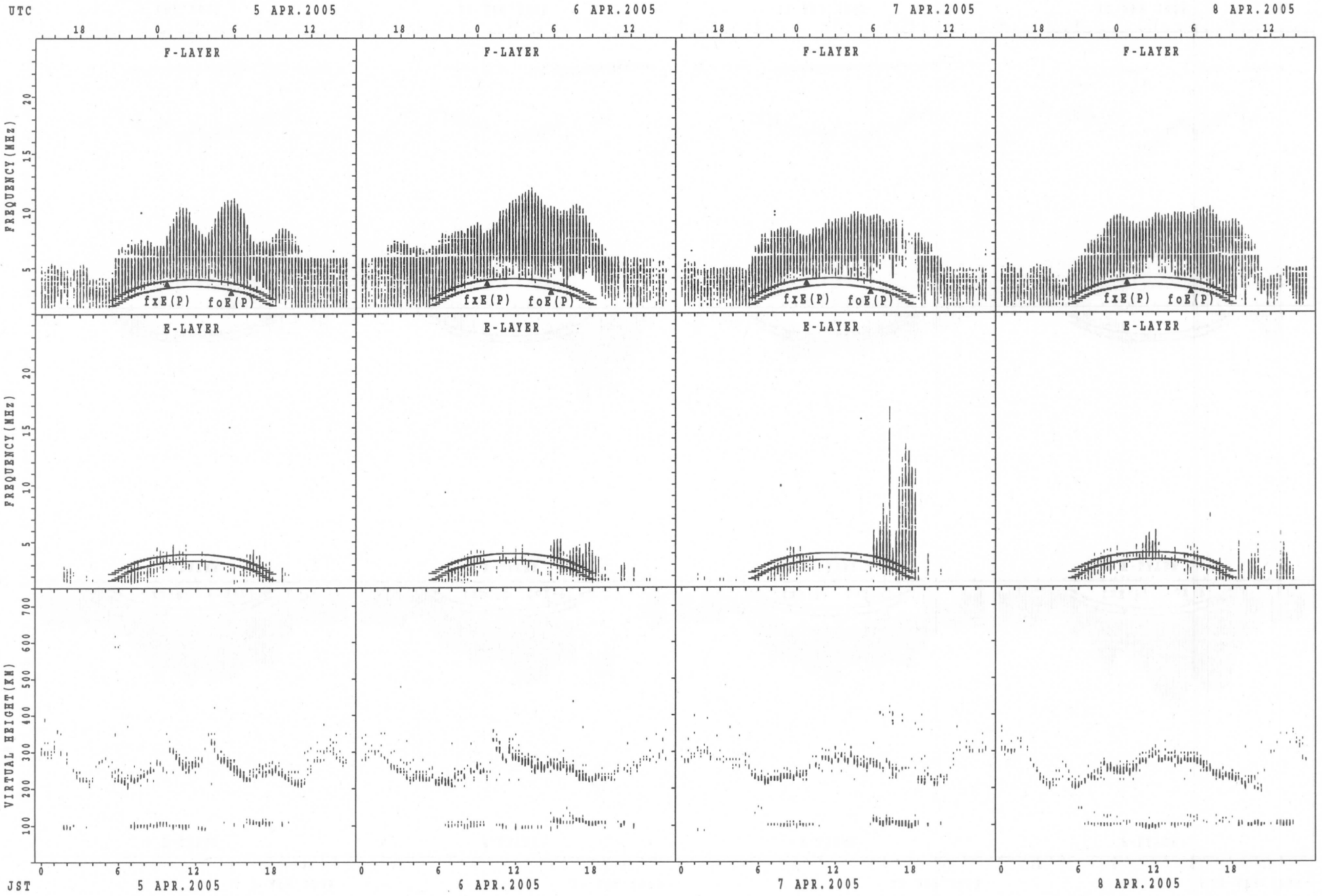
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



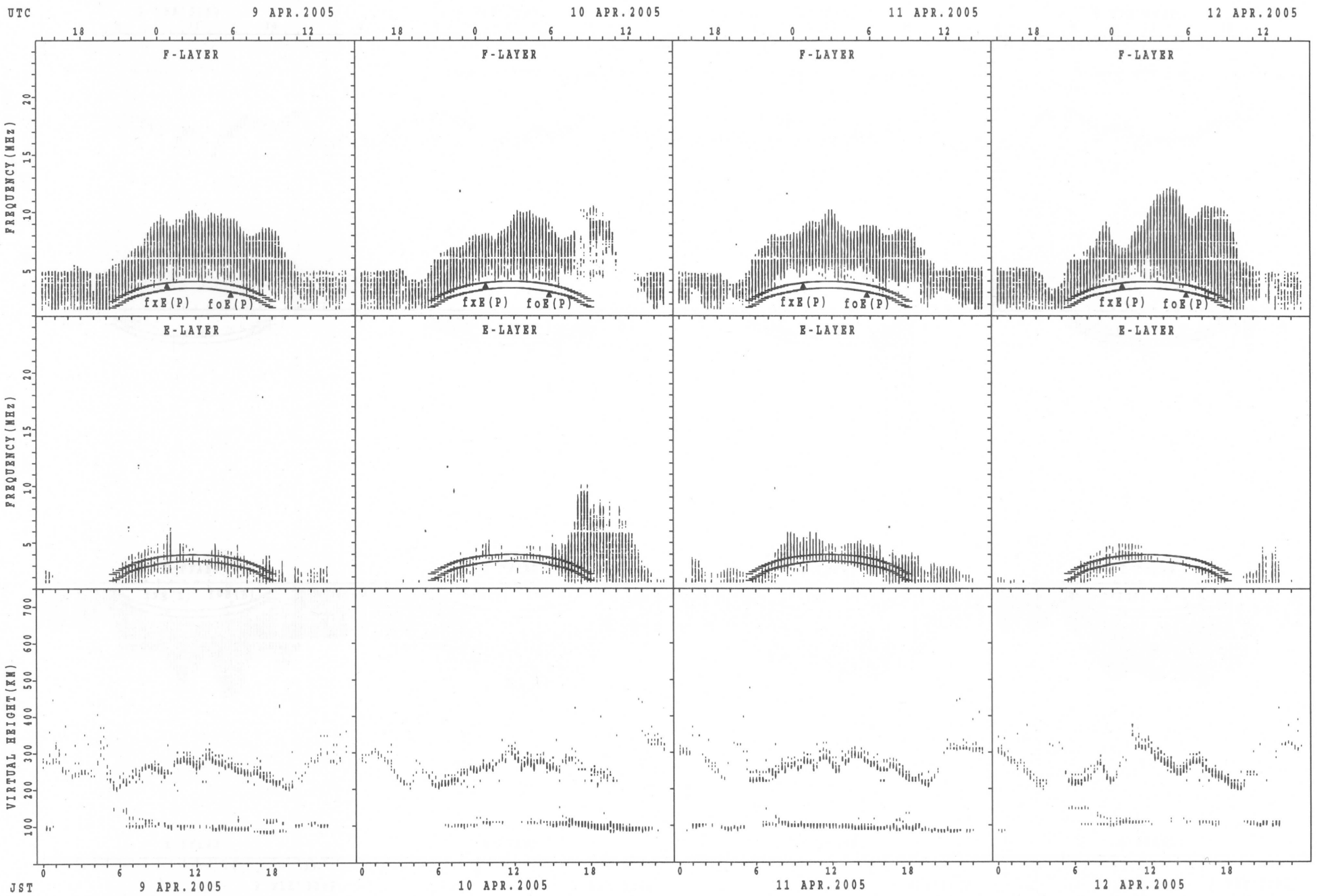
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



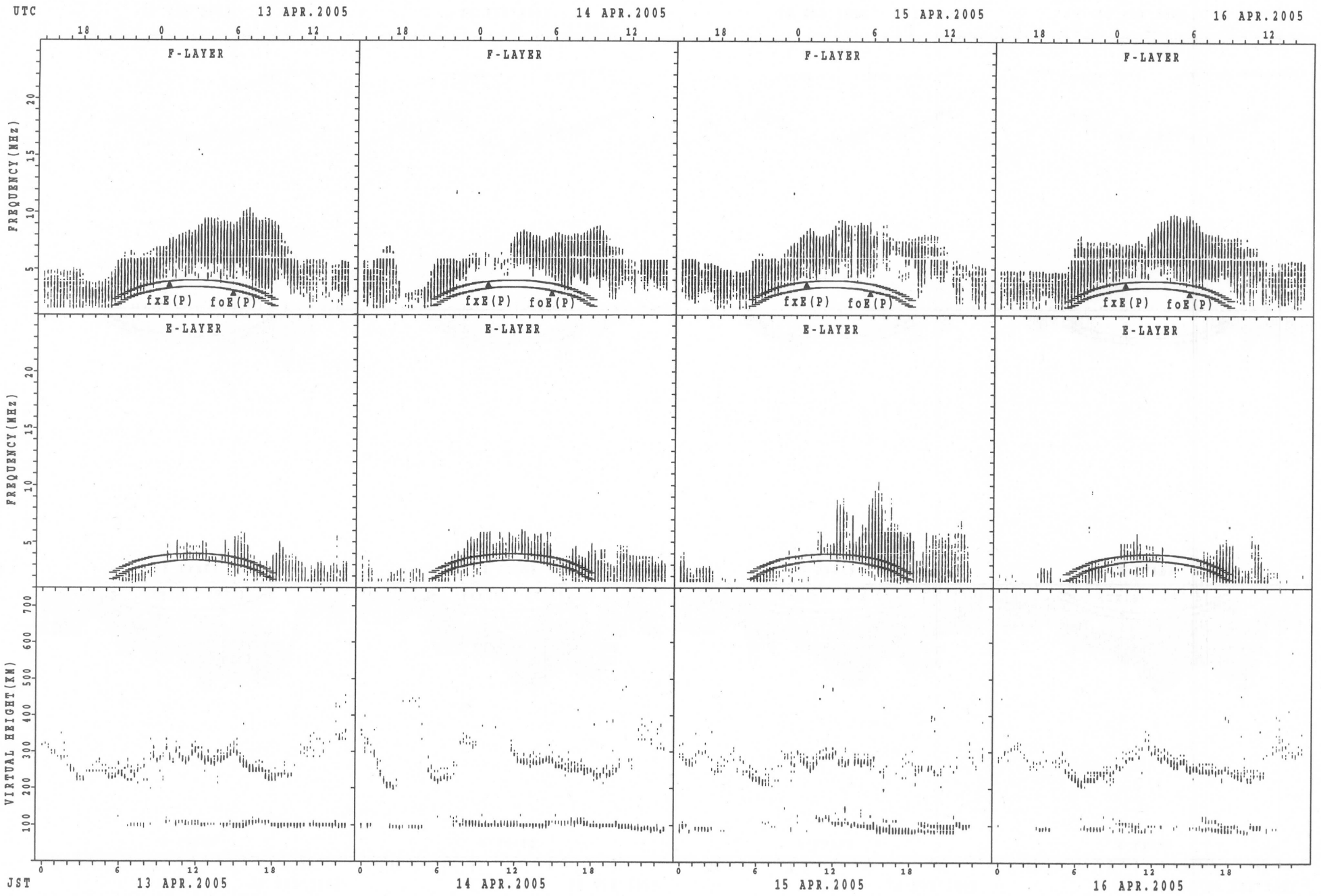
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



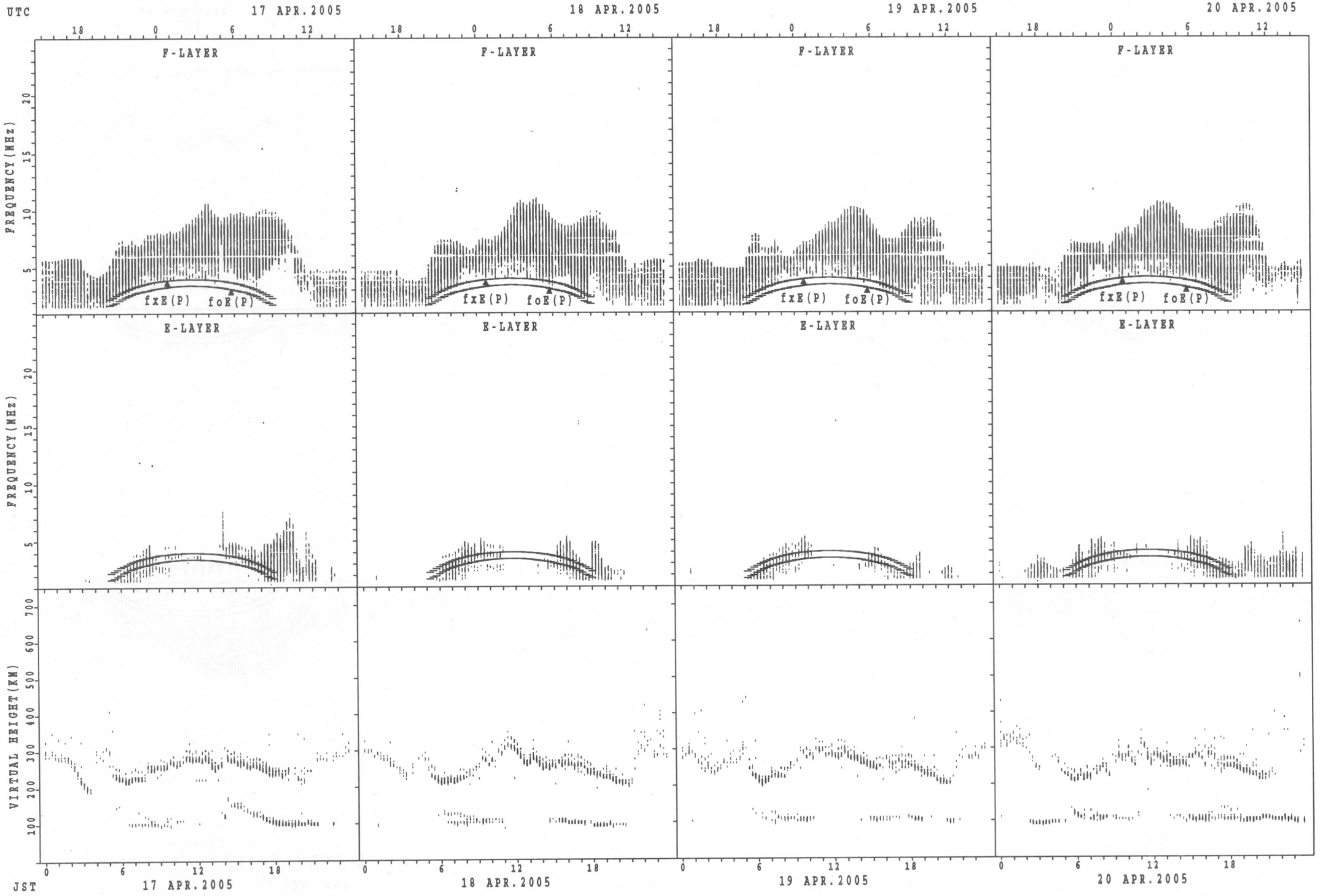
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



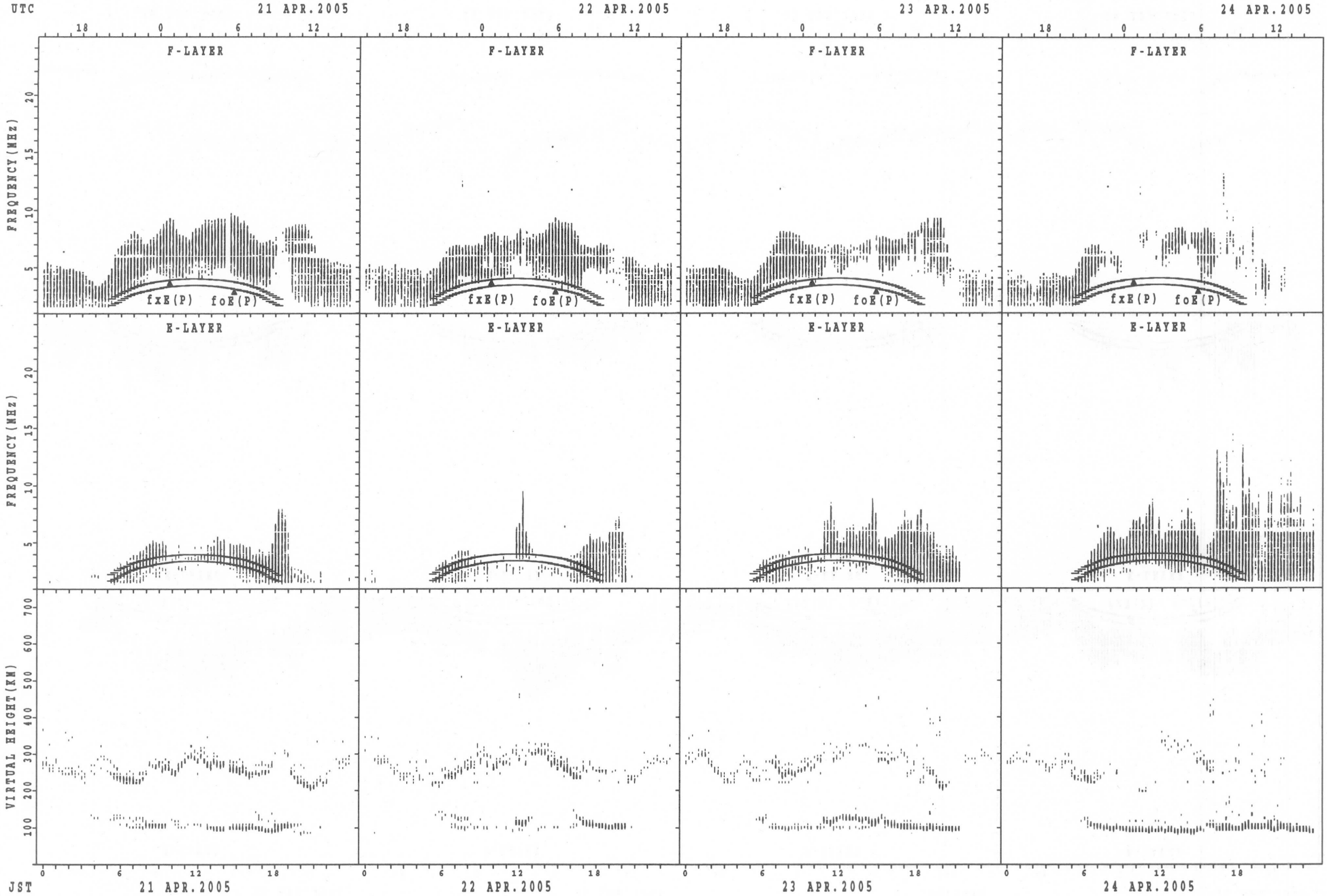
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



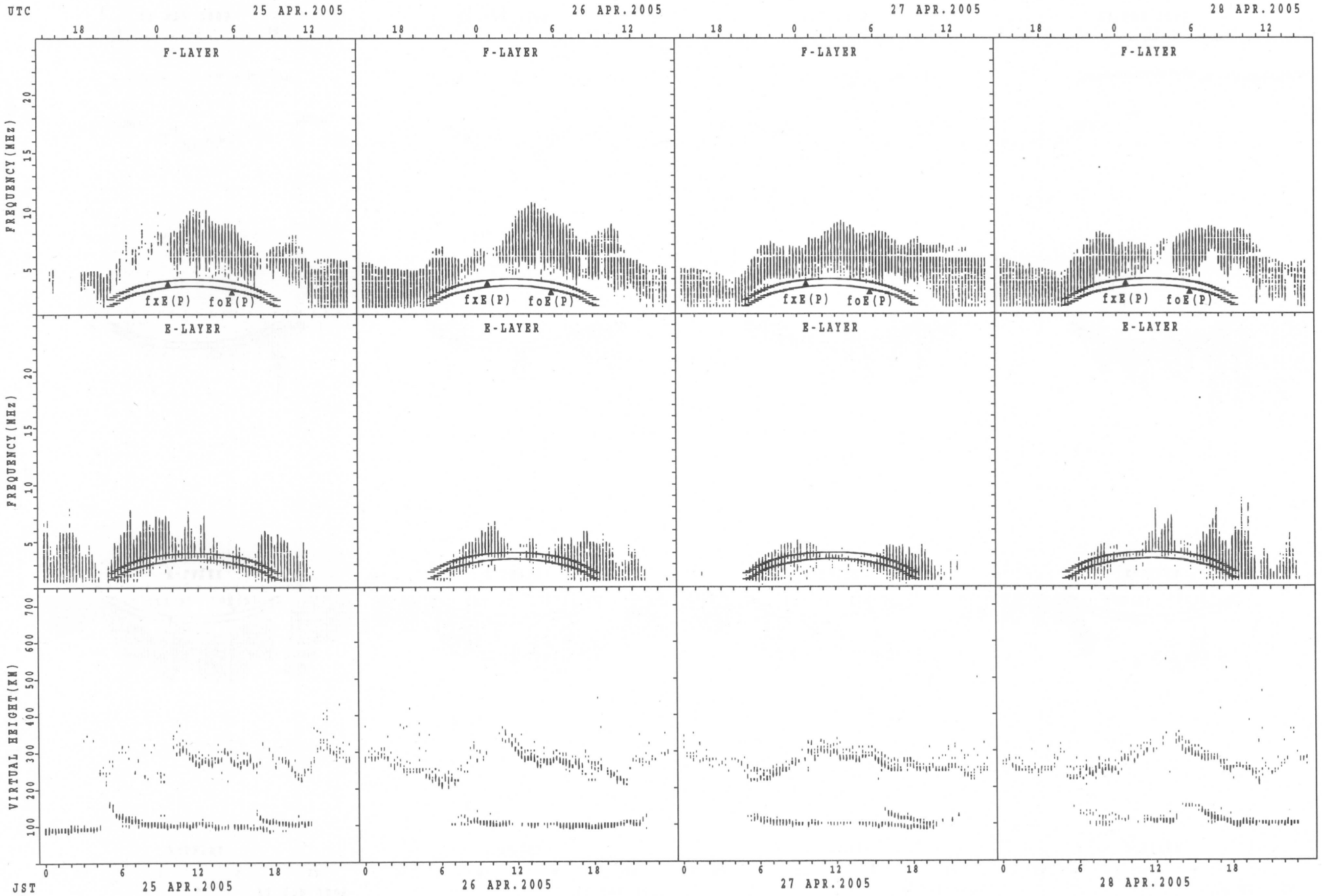
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

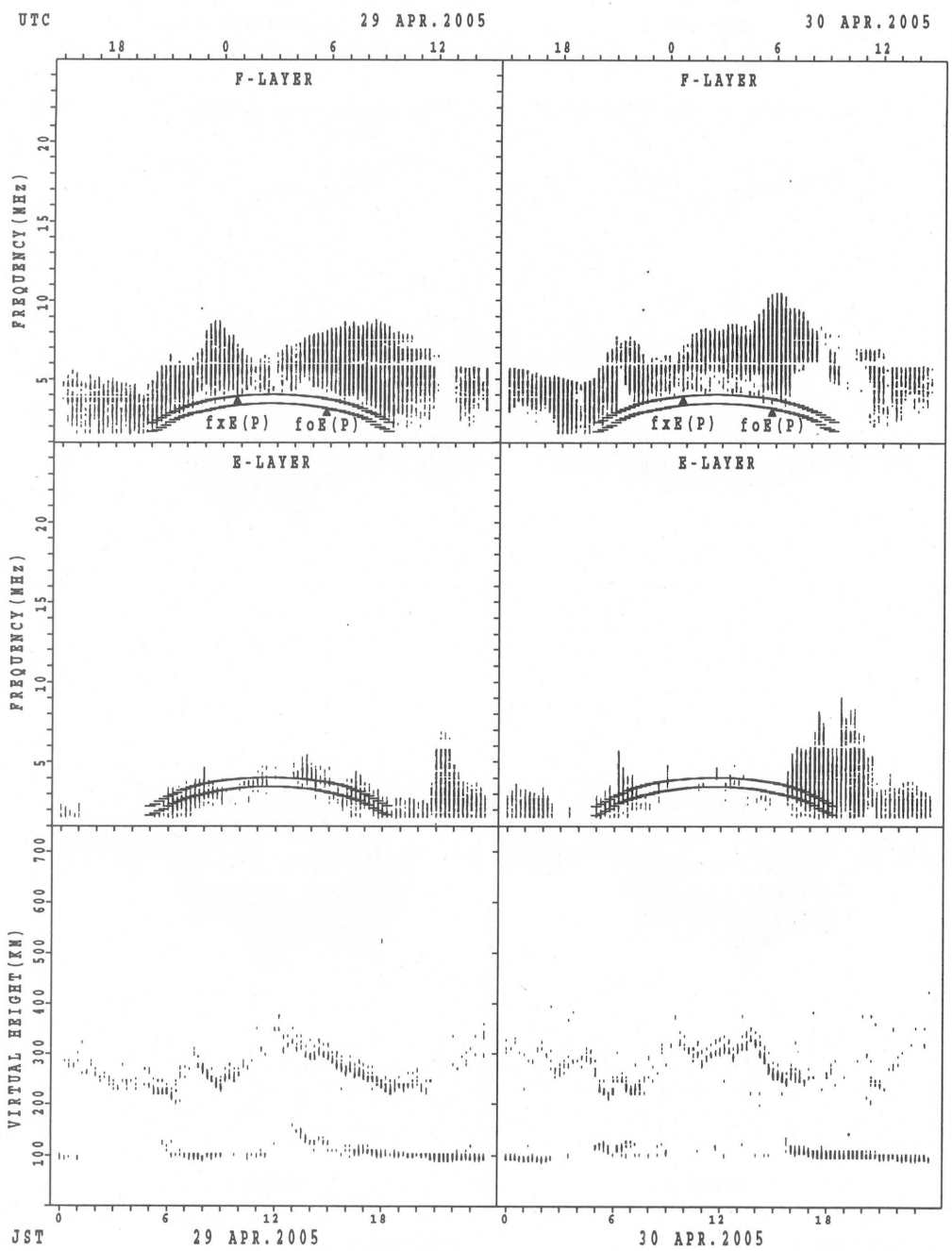


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

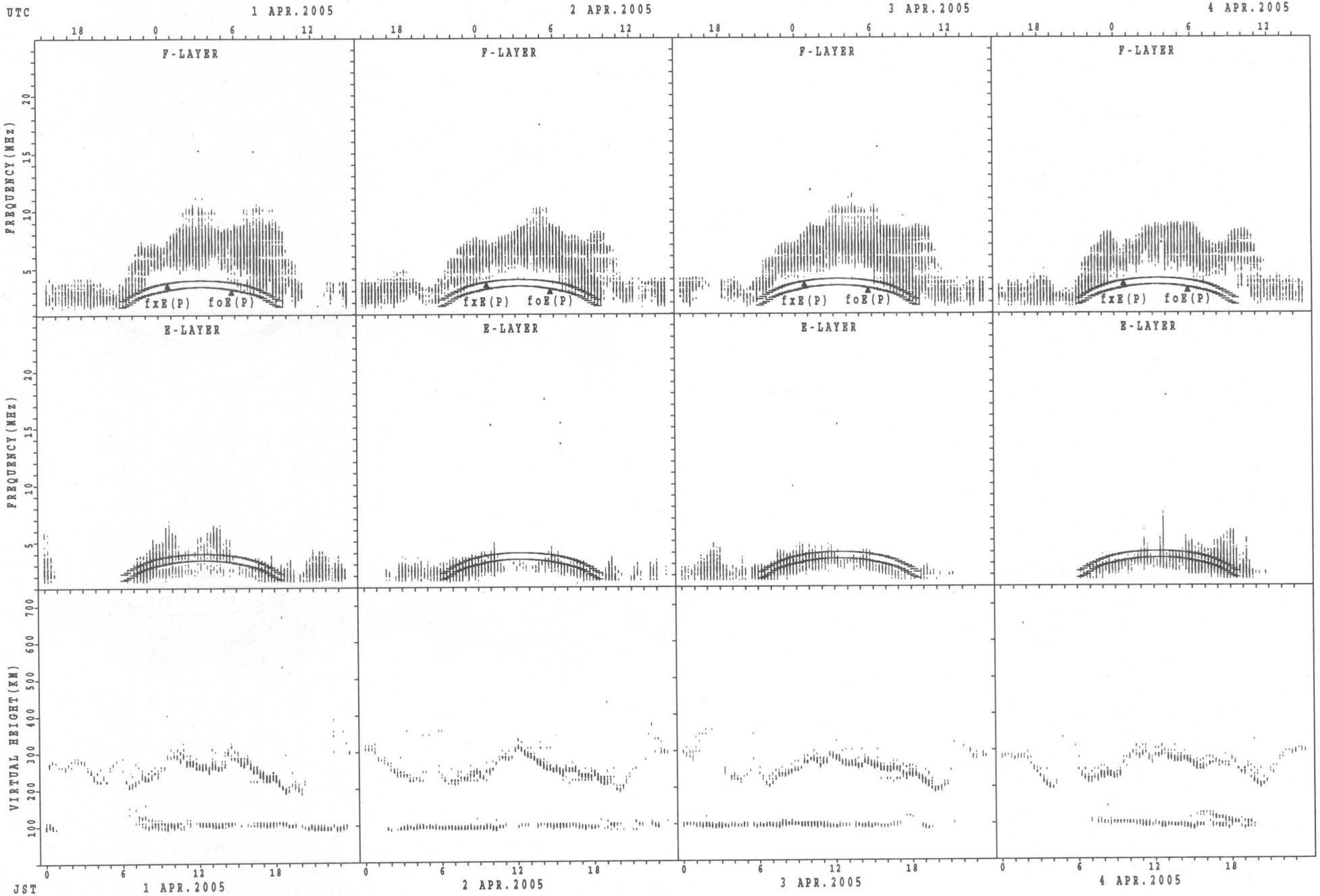
SUMMARY PLOTS AT Kokubunji



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

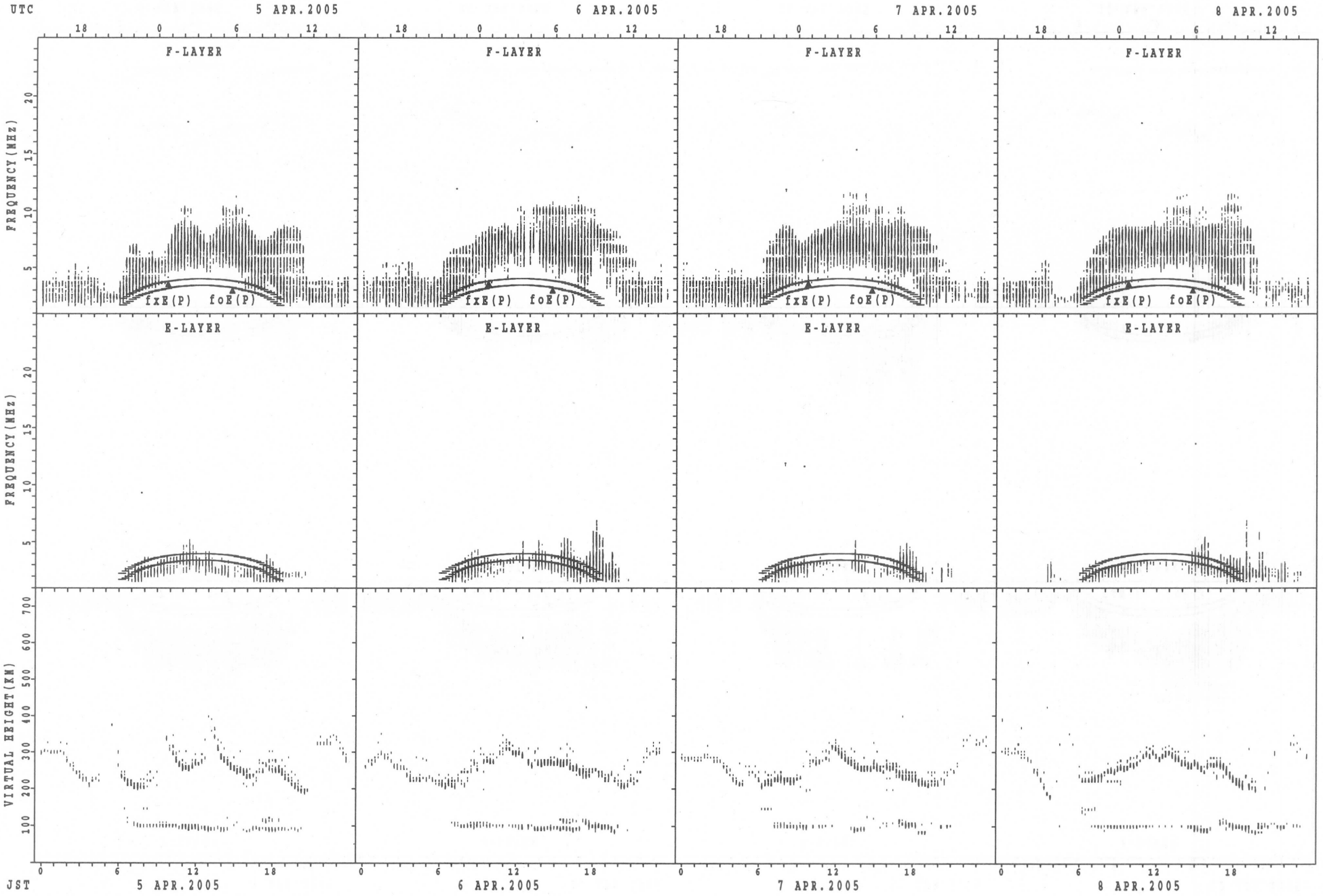

SUMMARY PLOTS AT Kokubunji
UTC
29 APR.2005
30 APR.2005
18
0
6
12
F-LAYER
FREQUENCY(MHz)
fxE(P)
foE(P)
E-LAYER
VIRTUAL HEIGHT(KM)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



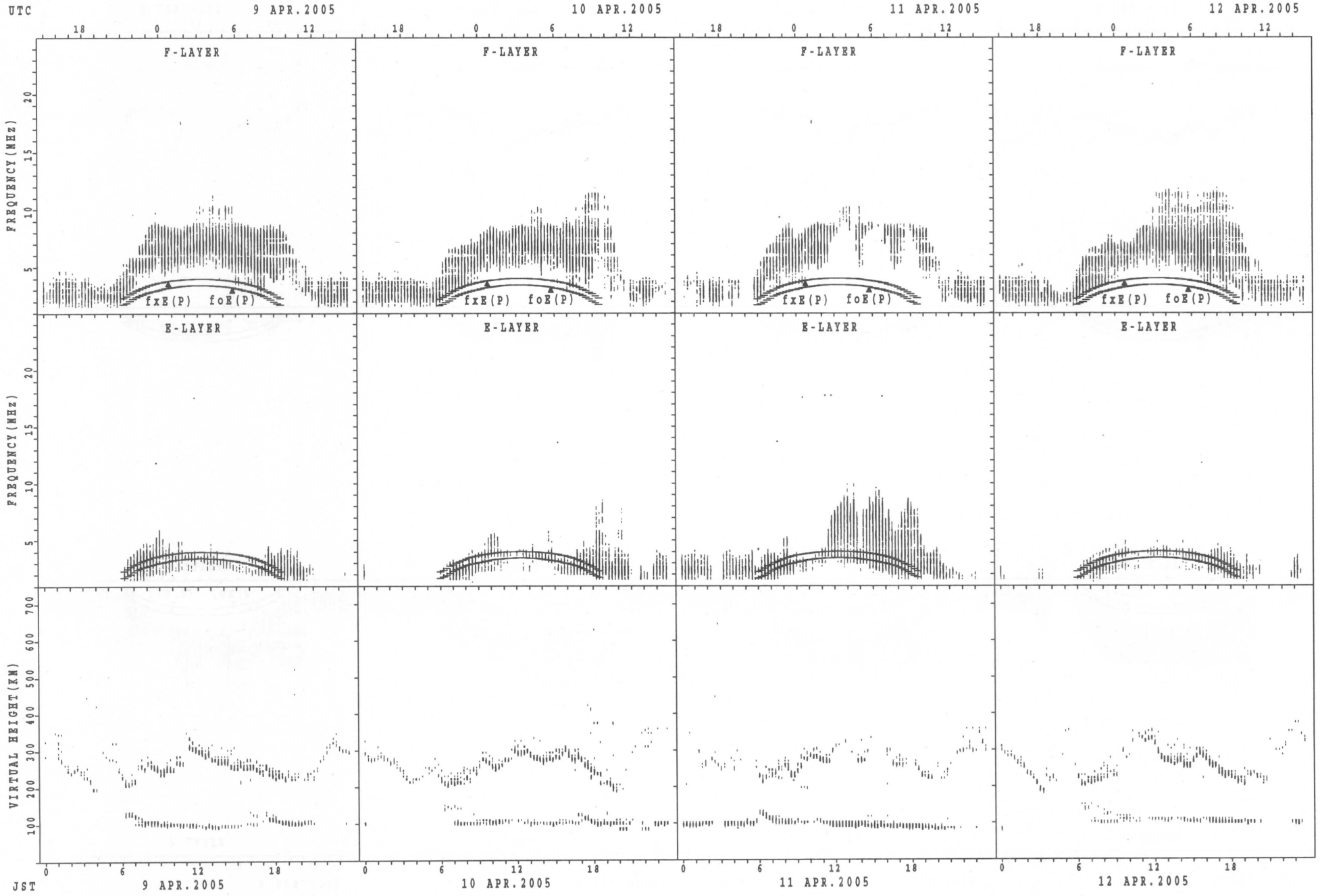
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



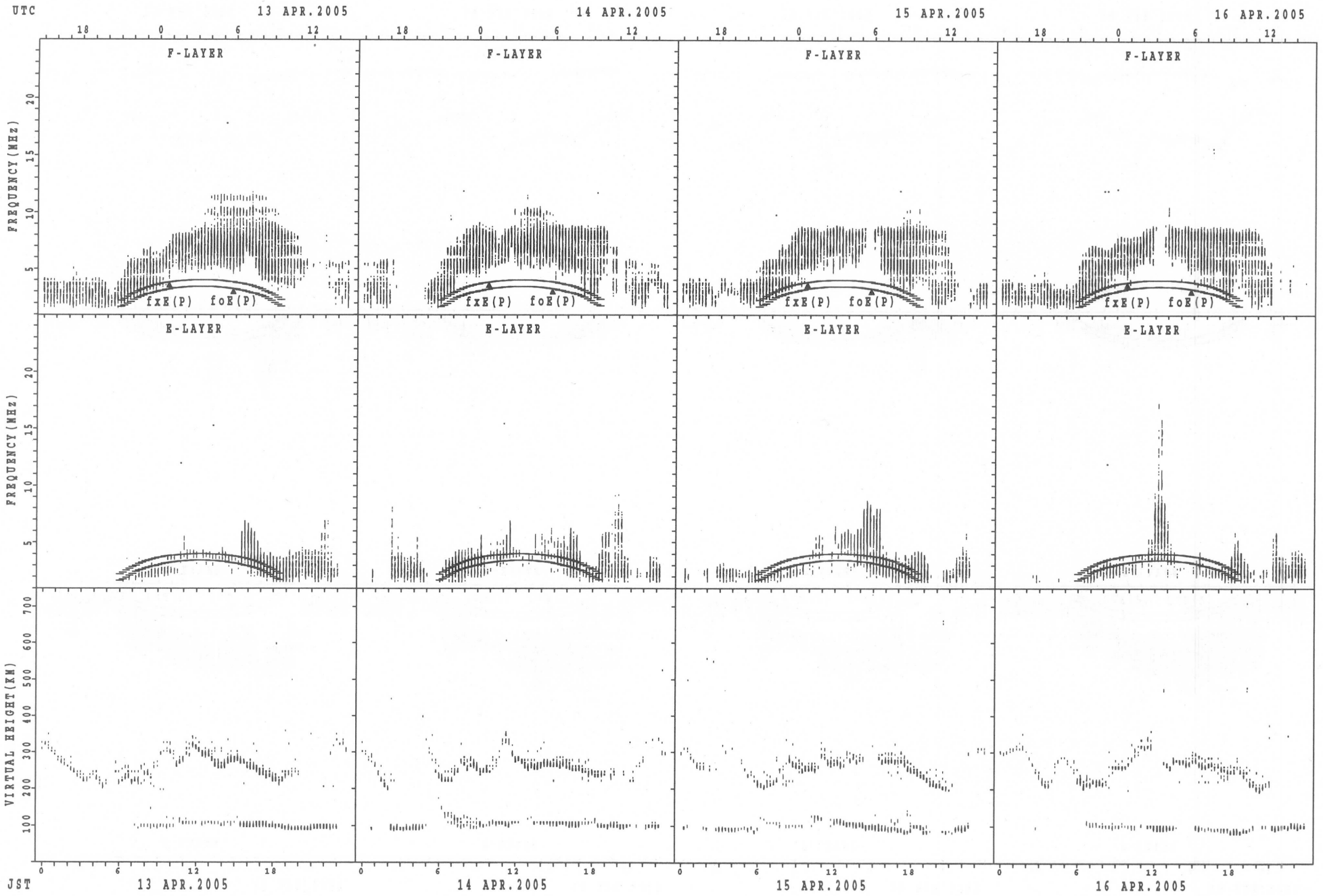
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



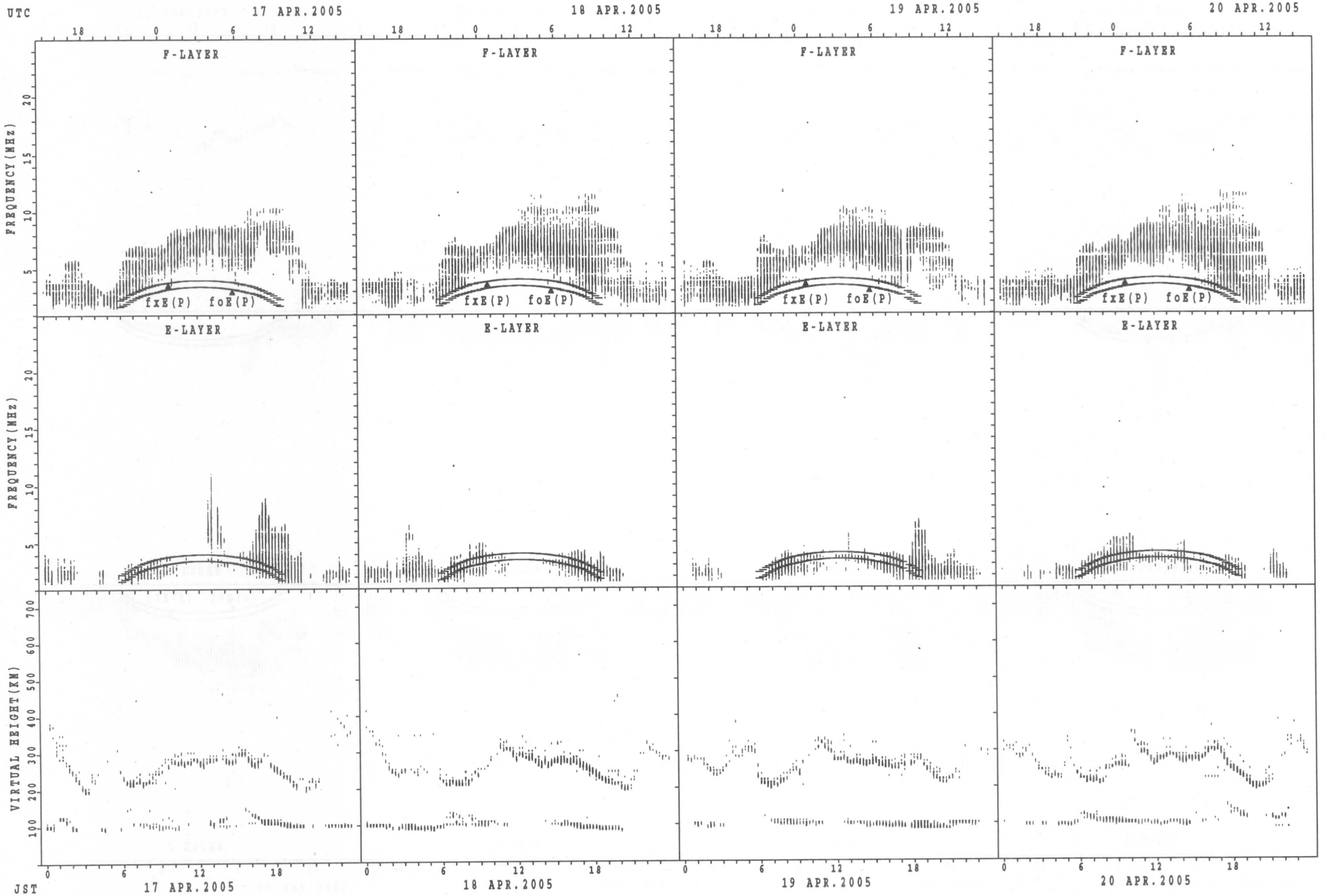
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



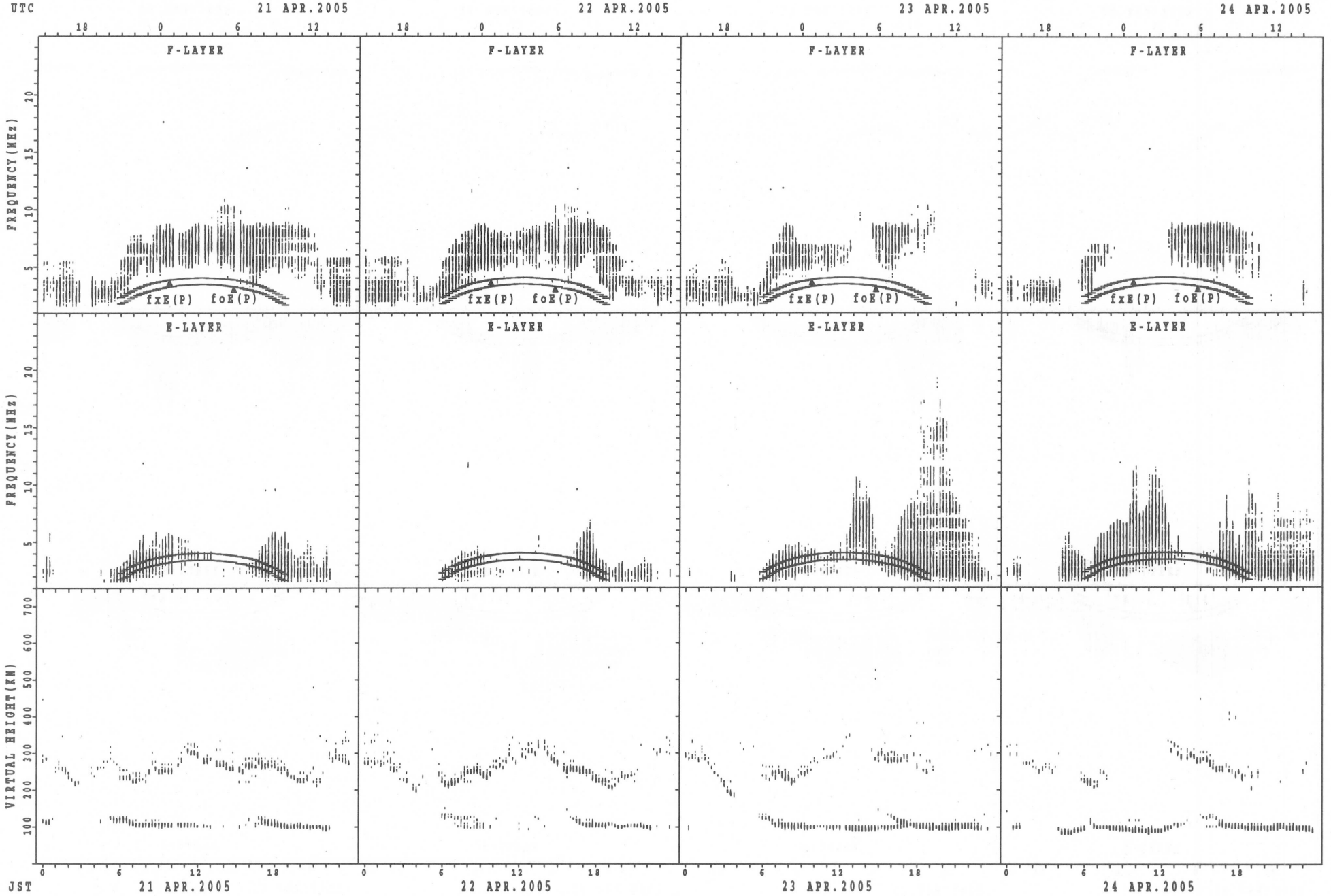
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



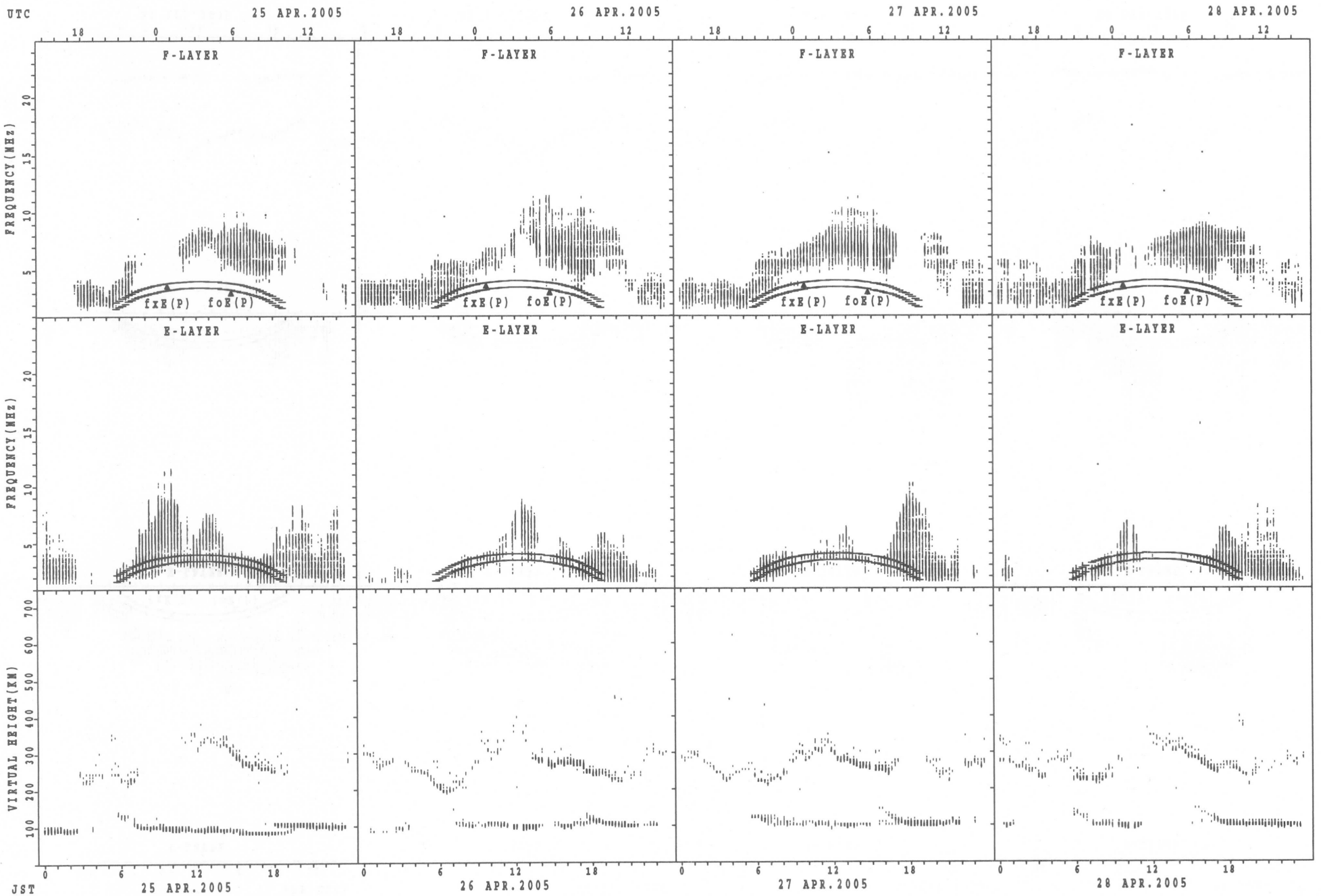
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

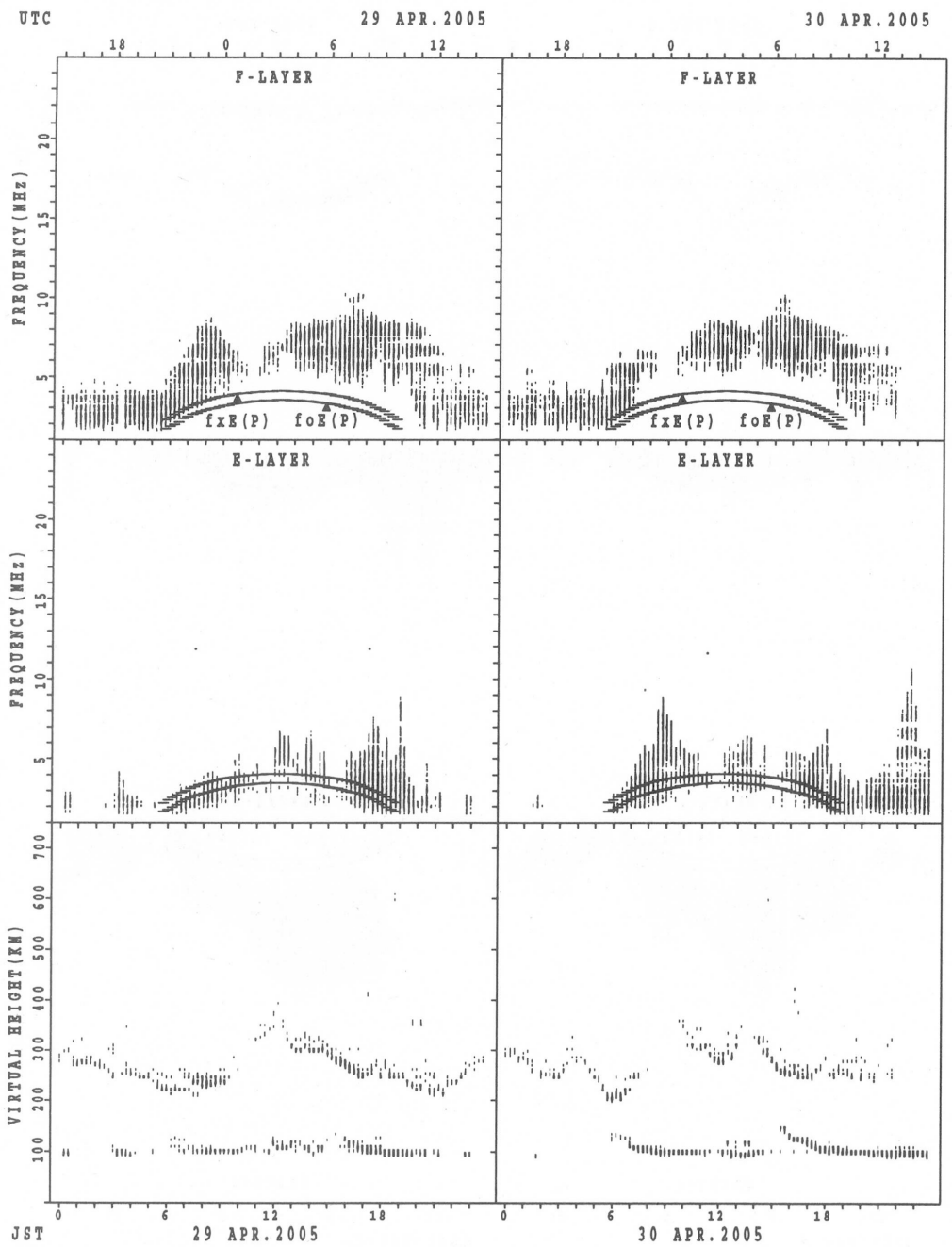


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

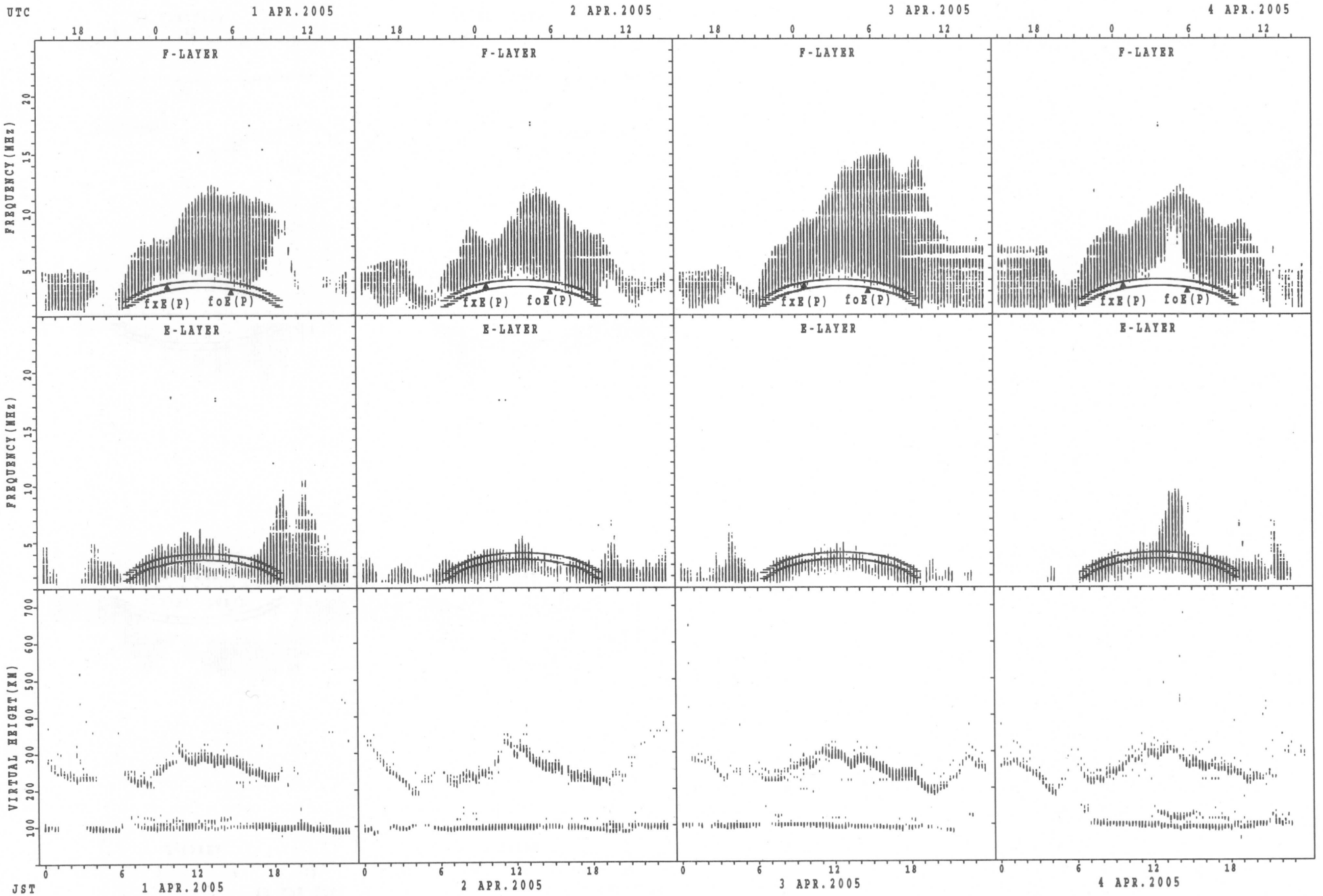


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE



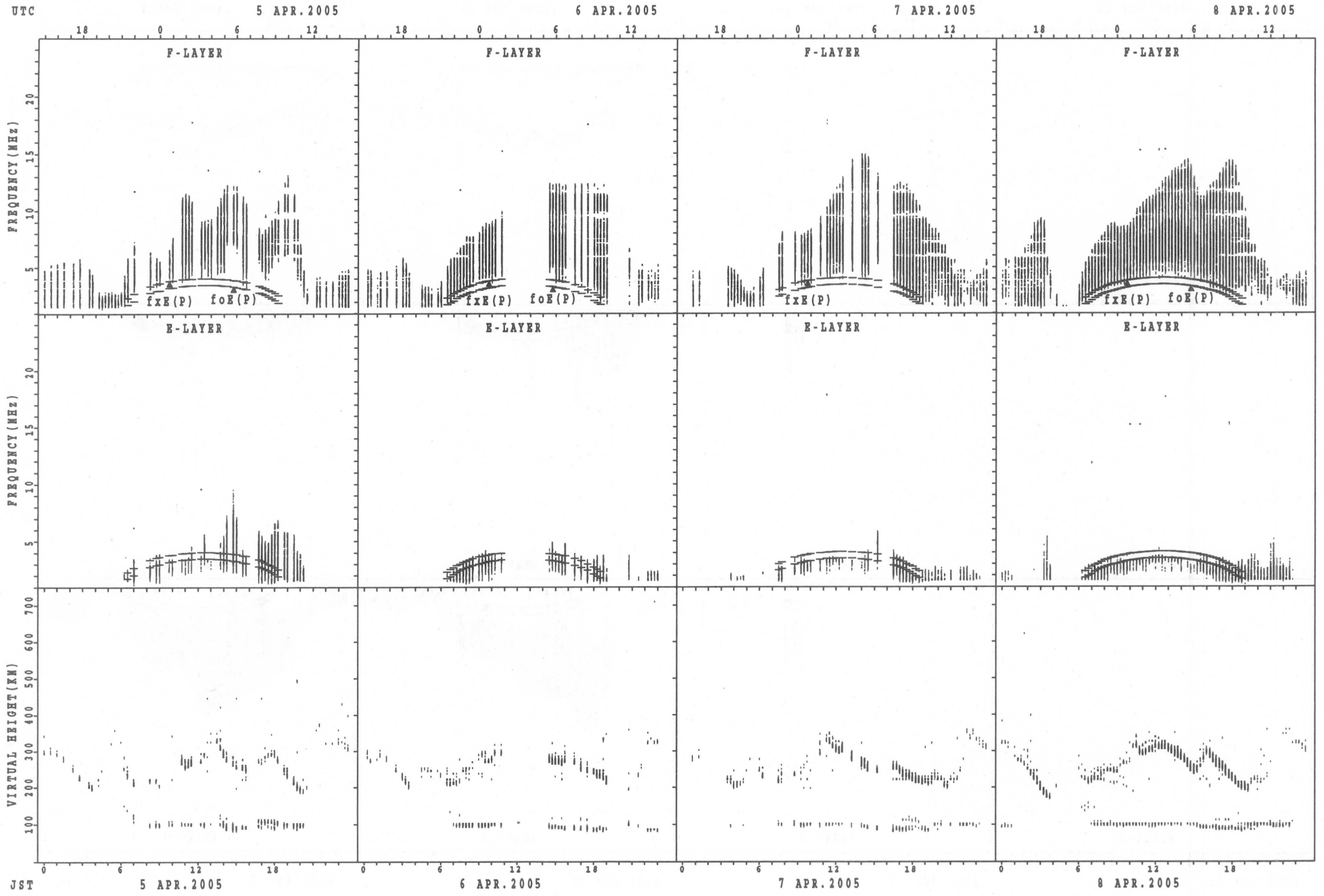
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa

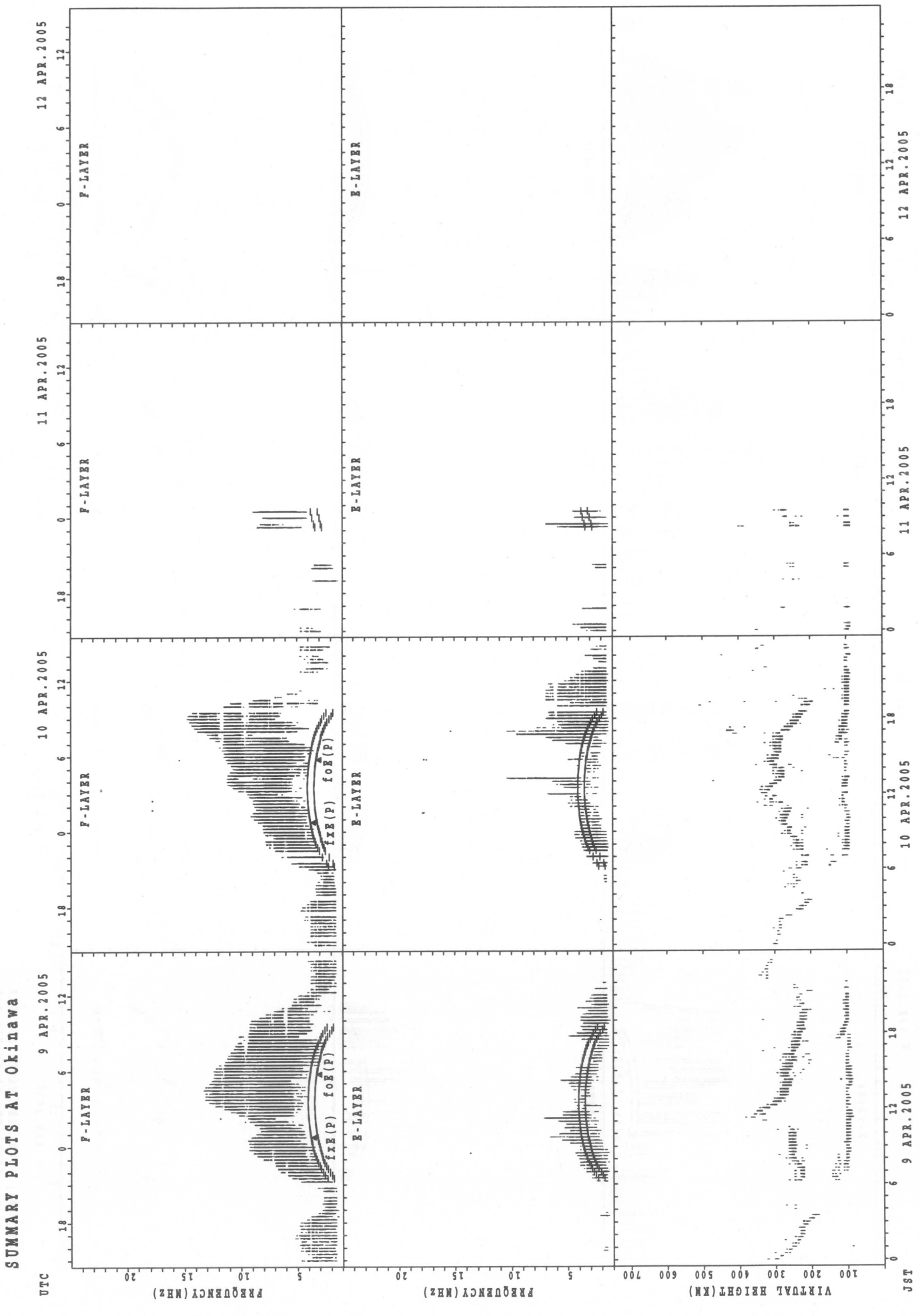


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

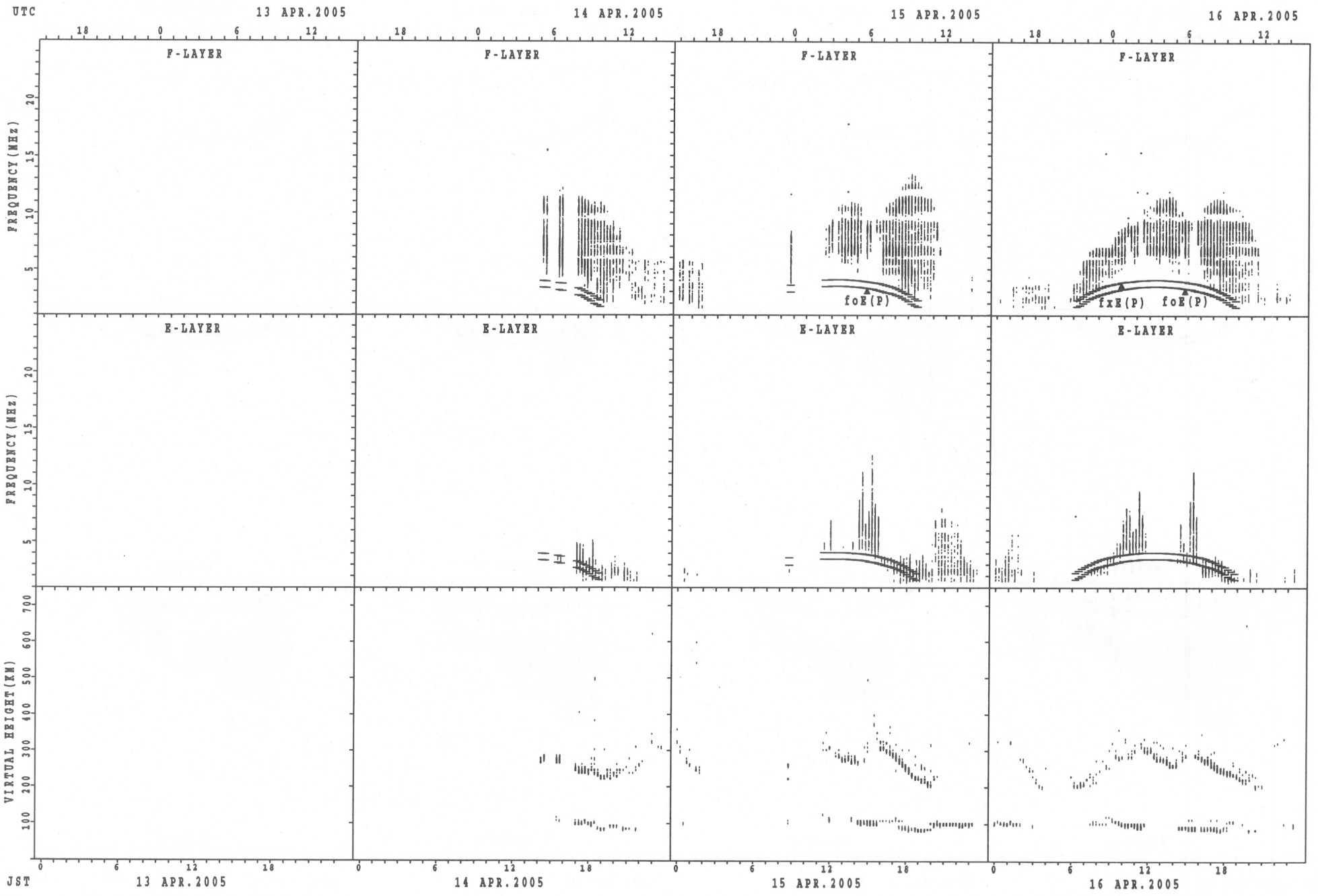
SUMMARY PLOTS AT Okinawa



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

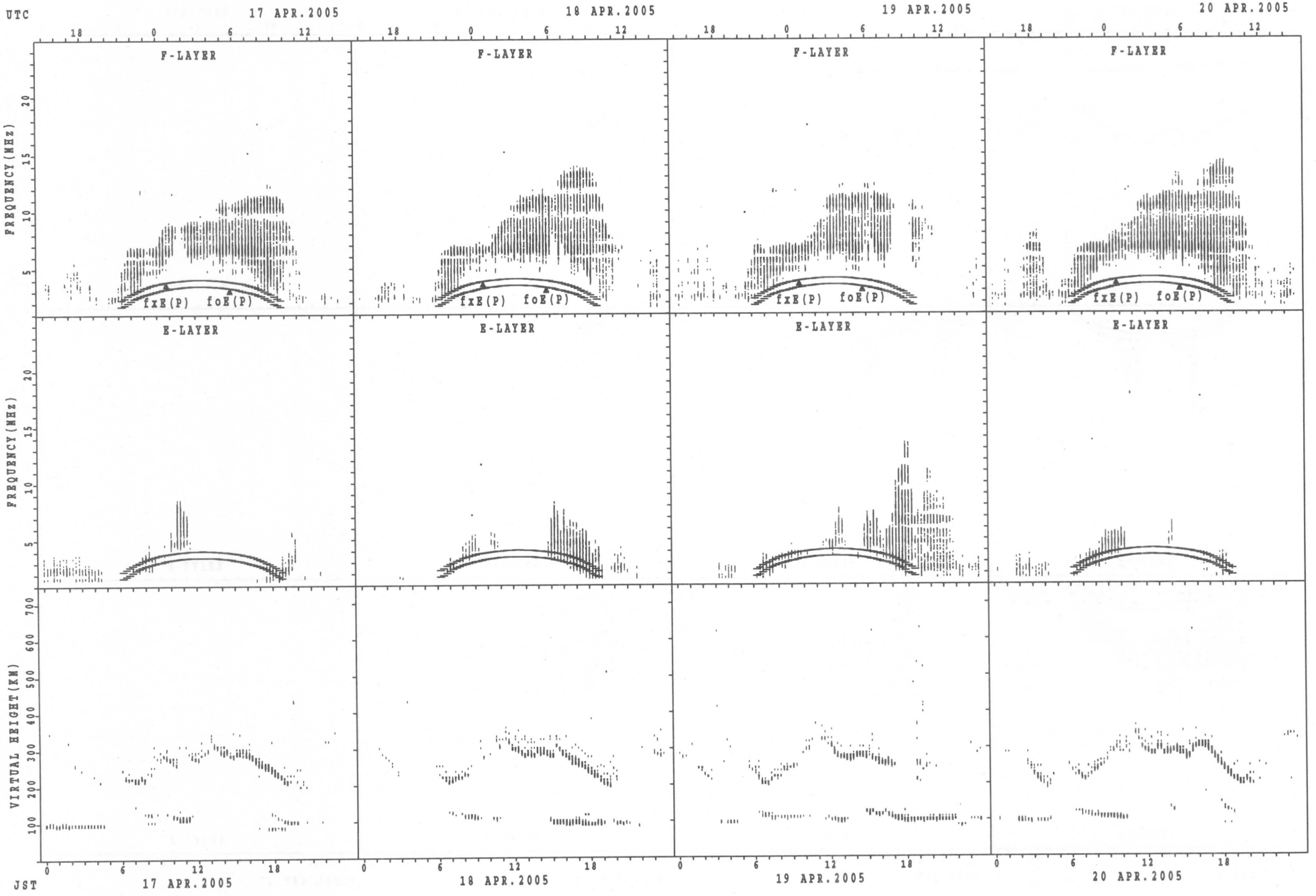

SUMMARY PLOTS AT Okinawa
UTC
JST
9 APR.2005
10 APR.2005
11 APR.2005
12 APR.2005
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P)
foE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



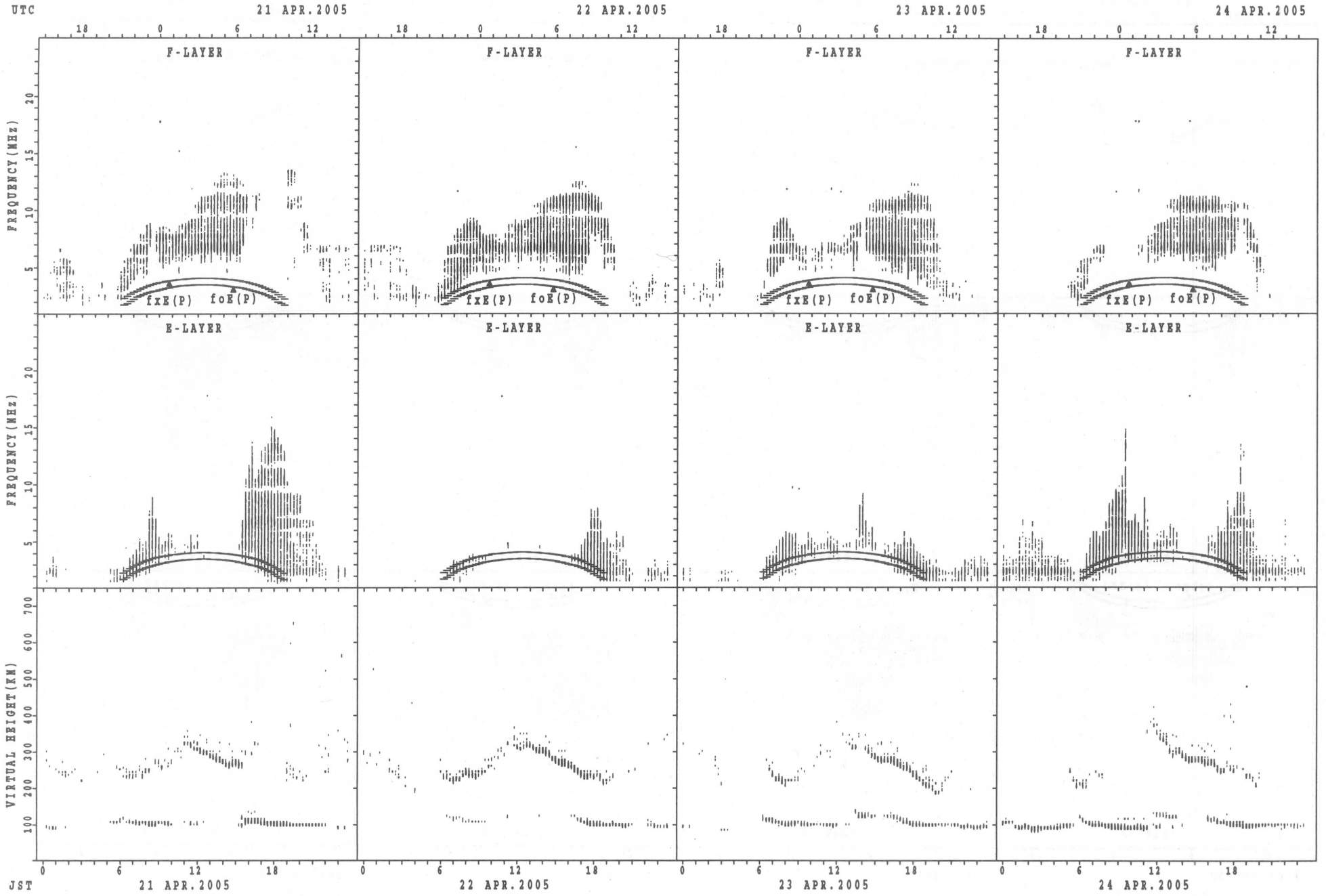
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa

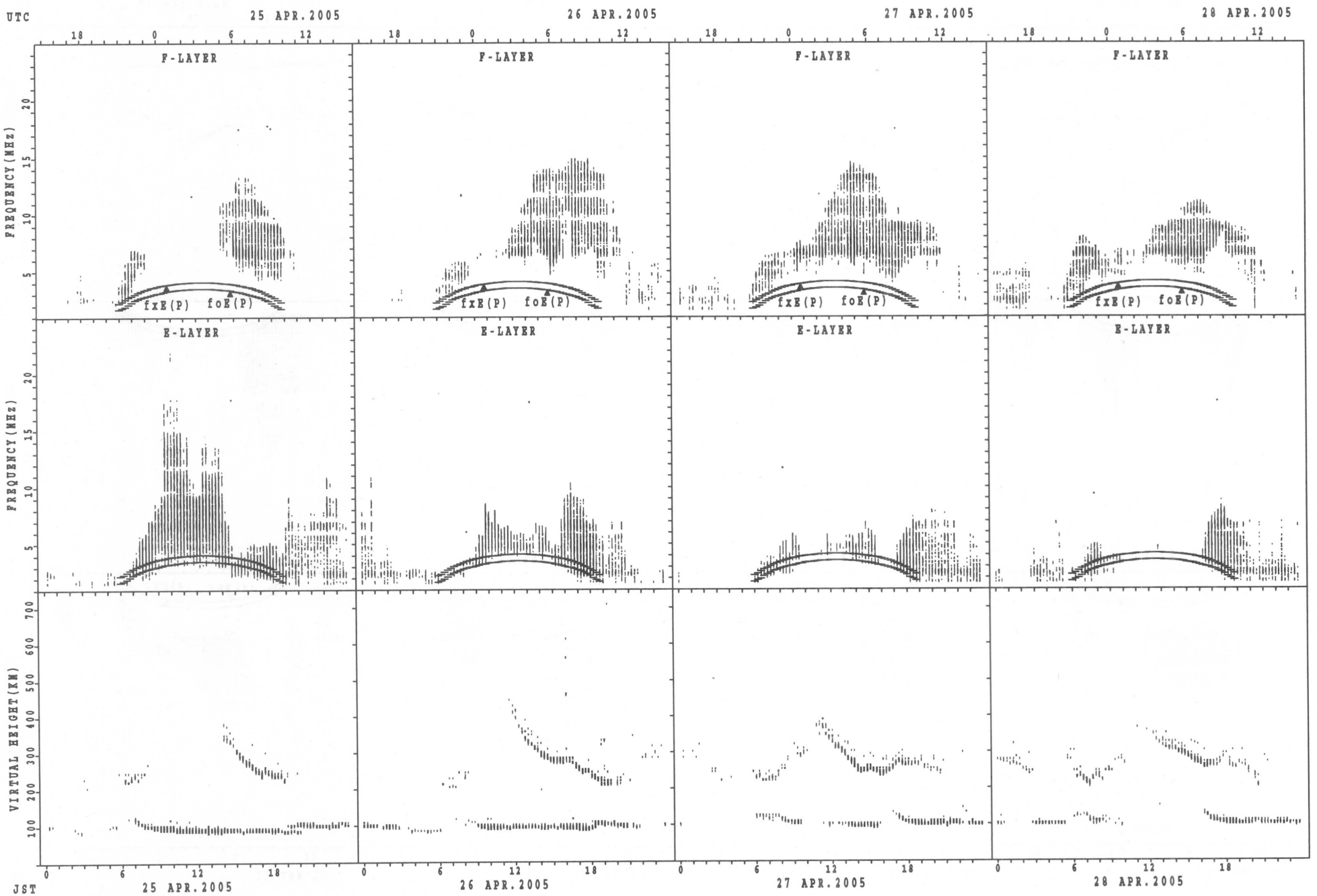


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

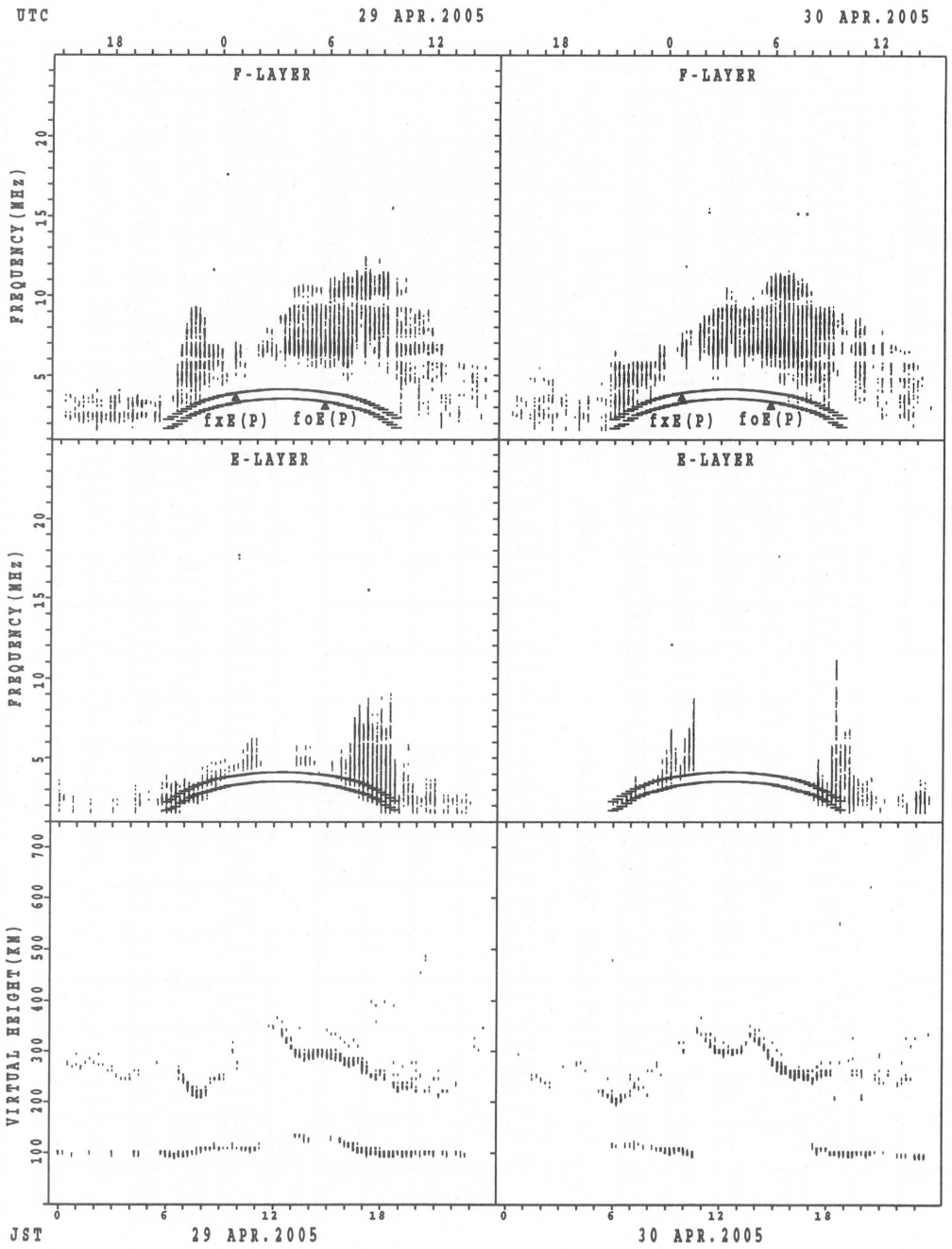
SUMMARY PLOTS AT Okinawa



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


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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

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

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT		1					6	10	2								25	16	8	14	10	6		
MED		348					255	260	267								262	259	251	272	272	279		
U Q		174					260	264	282								278	264	262	280	282	292		
L Q		174					248	256	252								254	255	247	264	266	268		

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	4	6	1	3	5	7	15	13	14	18	16	8	7	5	6	8	13	17	19	15	13	9	5	2
MED	93	99	95	95	97	121	145	113	107	107	106	101	101	95	94	100	103	113	111	103	103	103	103	94
U Q	108	103	47	97	127	131	149	134	113	111	108	107	103	144	103	108	112	125	119	109	105	105	106	95
L Q	90	93	47	91	94	101	125	107	105	103	103	98	99	94	89	92	99	98	103	99	100	91	99	93

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT			1		1		14	24	12								30	25	24	23	9			
MED			232		288		242	240	258								261	258	239	250	236			
U Q			116		144		250	255	267								272	272	269	260	247			
L Q			116		144		230	234	243								248	247	230	238	230			

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	8	7	6	6	7	6	11	16	20	23	15	18	15	14	16	20	21	24	25	21	23	20	16	9
MED	97	97	97	98	97	108	125	119	112	109	103	103	105	105	109	104	113	109	103	101	105	101	103	97
U Q	102	99	99	99	101	127	131	128	113	113	109	109	113	125	123	118	120	113	105	105	105	107	105	104
L Q	95	91	93	95	93	97	119	111	106	103	101	101	97	101	99	98	103	104	97	95	99	98	99	97

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							1	16	19								18	29	27	26	12	1		
MED							222	235	248								266	262	252	243	240	266		
U Q							111	250	266								274	272	262	252	261	133		
L Q							111	224	232								254	244	240	236	229	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	8	8	9	7	8	8	13	19	20	19	20	19	16	17	15	14	17	25	29	29	22	14	17	17
MED	103	101	97	95	97	97	121	113	109	105	105	107	103	105	105	102	103	107	105	103	103	103	103	101
U Q	109	104	98	97	97	101	130	121	113	111	108	111	112	111	111	107	130	113	111	105	105	109	105	105
L Q	98	96	94	95	94	94	98	107	105	103	100	99	97	96	95	95	95	102	101	93	95	95	98	99

MONTHLY MEDIANS OF h'F AND h'Es

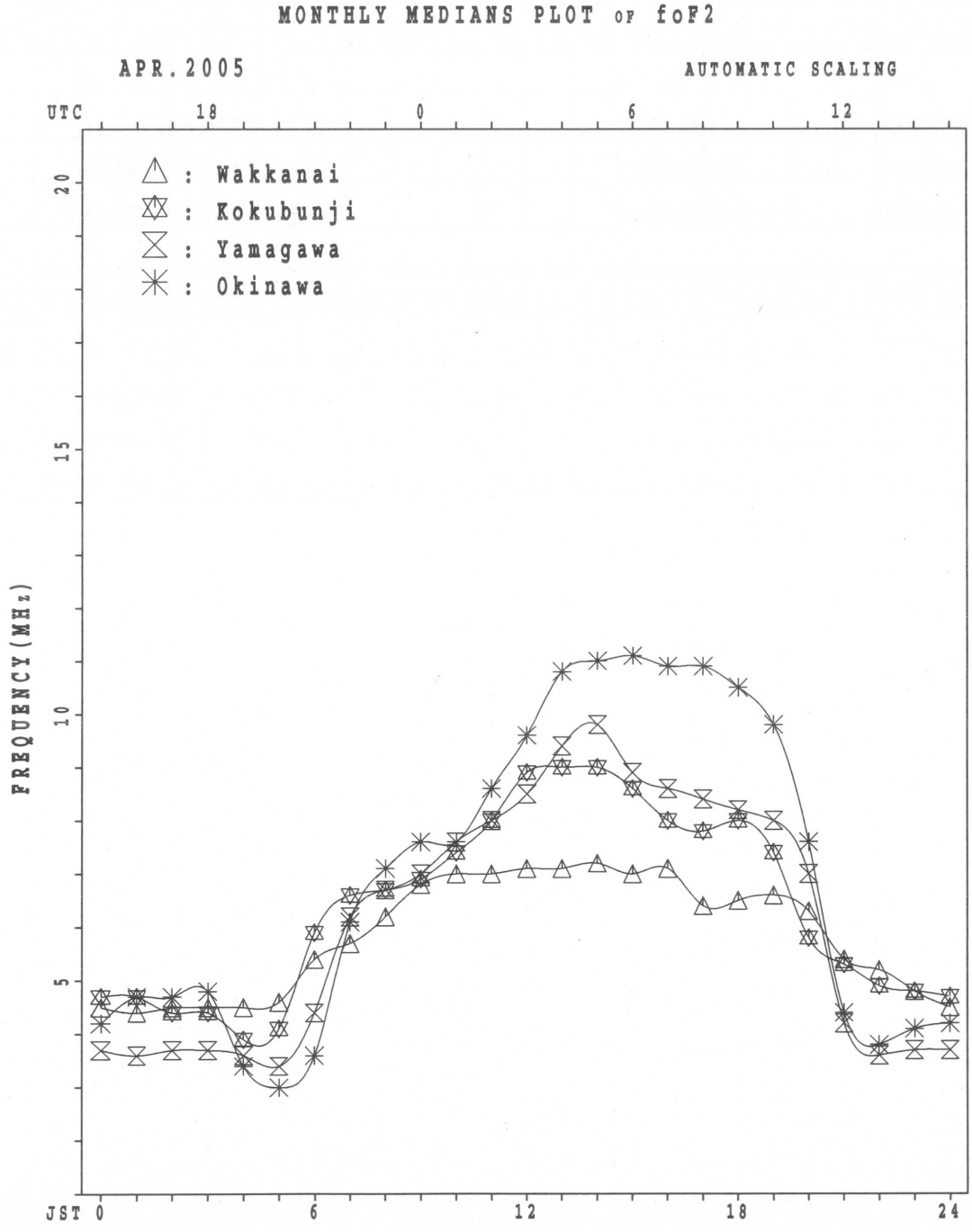
APR.2005 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT			1	2				8	16	8							6	25	25	24	11	1		
MED			302	238				238	246	250							247	254	234	226	240	296		
U Q			151	264				252	255	262							254	262	246	246	250	148		
L Q			151	212				228	234	246							246	241	227	215	216	148		

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	11	7	6	5	7	6	8	17	19	20	14	13	14	9	11	11	11	22	24	23	23	16	13	14
MED	99	97	99	97	101	97	111	119	111	107	103	99	104	103	105	99	115	105	103	103	103	103	103	97
U Q	105	103	99	101	103	101	121	124	113	111	105	107	107	117	123	119	121	111	105	103	105	105	104	101
L Q	99	95	97	95	97	95	102	112	103	101	99	97	97	98	95	97	95	93	95	91	97	98	100	95


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

IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	X 48	X 50	X 47	X 47	X 45	X 43														X 77	X 42	X 37	X 40	45
2	X 44	X 45	X 44	X 49	X 35	X 33														X 79	X 57	56	56	X 55
3	X 53	X 50	X 48	X 50	X 44	X 40														X 78	X 52	X 42	X 44	X 44
4	X 44	X 42	X 41	X 42	X 34	X 35														X 81	X 67	X 63	X 58	X 58
5	X 56	X 54	X 54	X 56	X 44	X 42														X 86	X 75	X 68	X 65	X 69
6	X 67	X 68	X 69	X 72	71	66														X 68	X 64	X 62	X 60	X 57
7	X 58	X 56	X 54	X 53	X 53	X 51														X 75	X 62	X 54	X 53	X 54
8	X 53	X 53	X 51	X 54	X 46	X 45														X 82	X 64	X 46	X 49	X 52
9	X 51	X 50	X 51	X 52	48	X 48														X 68	X 54	X 51	X 51	X 52
10	X 53	X 51	X 51	X 52	X 42	X 44														X 101	X 70	A	X 47	X 49
11	X 50	51	51	X 47	X 38	X 39														X 75	X 58	X 56	X 54	X 53
12	X 54	54	X 52	X 50	X 39	X 40													X 102	X 64	X 57	X 54	X 52	X 54
13	X 53	X 54	X 54	X 48	X 42	X 46														X 72	X 58	X 62	X 61	X 57
14	X 58	X 60	X 73	X 28	X 32	X 39														X 82	X 71	X 67	X 65	X 64
15	X 64	X 58	X 56	X 52	X 49	X 50														X 83	X 82	X 65	X 57	X 57
16	X 56	X 51	X 51	X 52	X 49	X 50														X 79	X 72	X 58	X 59	X 60
17	X 58	X 58	X 58	61	X 45	X 48														X 91	X 68	X 51	X 50	X 50
18	X 49	X 49	X 49	X 46	X 40	X 46														X 91	X 84	X 55	X 56	X 57
19	X 56	X 54	X 56	X 51	X 49	X 49														X 94	X 93	X 60	X 55	X 55
20	X 52	X 51	X 51	X 51	X 48	X 55														X 105	X 101	X 65	X 54	X 55
21	X 56	X 53	52	X 46	X 36	X 45														X 87	X 90	X 72	X 60	X 57
22	X 55	X 54	X 54	X 53	X 50	X 47														X 72	X 66	X 58	X 56	X 56
23	X 55	X 53	53	X 49	X 43	X 43														X 96	X 86	O X 48	X 50	X 49
24	X 50	X 47	X 46	X 47	X 45	X 47														X 71	X 55	X 54	X 50	A
25	A	52	A	X 47	X 48															X 78	X 77	X 58	64	65
26	X 56	54	53	52	50															X 87	X 85	X 64	X 56	X 53
27	X 52	X 51	X 49	X 46	X 44	X 50														X 78	X 76	X 70	X 71	X 66
28	X 60	X 58	X 56	X 53	X 50	X 48														X 86	X 73	X 61	X 58	X 56
29	X 57	X 56	X 54	X 52	X 50	X 52														X 82	X 77	X 66	X 61	X 58
30	X 58	X 56	X 54	X 52	X 49	X 58														A	X 70	X 70	X 63	X 62
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	30	29	30	30	28													1	29	30	29	30	29
MED	X 55	X 53	X 52	X 51	X 45	X 46													X 102	X 81	X 70	X 58	X 56	X 56
U Q	X 58	X 56	X 54	X 52	X 49	X 50														X 87	X 77	X 65	X 60	X 58
L Q	X 52	X 51	X 50	X 47	X 42	X 42														X 75	X 58	X 54	X 51	X 52

APR. 2005 fxI (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	42	44	41	41	39	37	55	58	65	68	84	97	106	84	87	83	86	87	89	71	36	30	34	F
2	38	39	38	43	29	27	46	60	72	71	70	76	83	79	80	78	76	73	78	72	51	F	F	49
3	47	43	42	44	38	34	52	69	64	74	75	88	97	90	92	74	68	73	81	72	46	36	38	38
4	38	36	35	36	28	29	50	64	70	61	72	77	90	86	85	76	68	67	72	75	60	57	52	52
5	50	48	48	50	37	36	64	72	68	67	84	100	84	78	101	107	83	69	72	80	69	62	59	63
6	61	62	63	66	F	F	70	V 74	78	86	80	96	106	114	106	97	95	99	78	62	58	56	54	51
7	52	50	48	46	47	45	68	76	79	77	74	81	87	89	93	90	86	86	81	69	56	48	47	48
8	47	47	45	48	40	39	51	67	79	90	86	84	92	92	94	92	96	86	88	76	58	40	42	45
9	44	44	45	46	F	42	52	62	72	89	86	92	96	94	94	90	76	80	81	62	48	45	45	46
10	47	45	45	46	36	38	59	64	67	77	79	80	93	96	92	84	73	A	100	94	64	A	41	42
11	44	F	F	41	32	33	59	73	76	78	86	89	99	83	81	87	78	80	82	69	52	50	47	47
12	48	F	46	44	33	34	59	62	79	73	67	85	102	116	116	93	101	102	96	58	51	48	46	48
13	47	48	48	42	36	40	58	61	60	67	74	80	84	92	88	87	100	89	88	66	52	56	55	51
14	52	54	67	22	26	33	55	54	58	58	60	60	78	79	73	78	74	76	83	76	64	61	58	58
15	58	52	50	46	43	44	59	55	60	69	82	75	84	85	87	86	77	72	72	77	76	59	51	51
16	50	45	45	46	43	44	72	71	71	68	68	71	83	92	91	91	78	77	73	73	66	52	53	54
17	52	52	52	F	38	42	68	70	72	77	79	84	91	102	90	92	91	97	96	85	62	45	44	44
18	43	43	43	39	34	39	70	71	64	67	70	78	99	102	102	89	82	85	96	85	78	48	50	51
19	50	48	50	45	43	43	73	63	60	61	68	77	87	95	98	88	71	70	82	88	87	54	49	49
20	46	45	45	45	42	49	67	66	66	68	80	84	95	102	94	78	78	84	91	99	95	59	48	49
21	50	47	F	40	30	39	68	78	68	81	90	74	81	V 87	90	90	76	68	72	81	84	66	54	51
22	49	48	48	47	44	41	56	64	65	66	76	72	79	74	80	86	84	65	64	66	60	52	50	50
23	49	47	F	43	36	37	51	70	76	70	66	64	66	64	69	72	70	73	78	R 90	80	42	44	43
24	44	41	40	41	39	41	63	65	61	52	A	A	70	78	76	76	72	65	63	65	49	48	44	A
25	A	F	A	41	42	38	52	63	A	A	77	88	96	92	84	86	70	57	65	72	71	51	F	F
26	50	F	F	F	F	46	58	56	54	60	60	70	91	100	99	95	85	69	73	80	79	58	50	46
27	46	45	43	40	38	44	62	68	64	64	71	74	83	82	76	76	77	66	69	72	70	64	65	60
28	54	52	50	46	44	42	61	69	74	64	67	67	66	70	74	78	81	80	78	80	67	55	52	50
29	51	50	48	46	44	46	63	58	76	80	67	62	64	68	74	78	81	82	81	76	71	60	55	52
30	52	50	48	46	43	52	72	72	60	61	70	80	80	81	89	101	92	78	66	A	64	64	56	56
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	26	25	28	27	29	30	30	29	29	29	29	30	30	30	30	30	29	30	29	30	28	28	27
MED	49	47	46	44	38	40	59	66	68	68	74	80	87	88	90	86	78	77	80	75	64	53	50	50
U Q	52	50	49	46	43	44	68	71	75	77	81	86	96	95	94	91	86	86	88	80	71	59	54	52
L Q	45	44	43	41	34	36	55	62	62	64	68	73	81	79	80	78	74	69	72	69	52	48	44	46

IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									L	L	A	A	A	L	L 424	L	L	L						
2									A	A	A	L 488	L 476	L	L 456	L	L							
3								L	L	L	L 472	L 472	L 472	L	L 444	L	L							
4									L	L	L 464	L 476	L 480	L	L	L	A	A						
5							L	L	L	L	L 488	L 488	L	L 500	L 476	L								
6									L	L	L	L 496	L	L 488	L	A	L							
7								L	L	L	L	L	L 504	L	L 456	A	A	A						
8									L	L	L 464	L 484	A	L 484	L	L	L							
9								L	L	L 448	A	L 504	L	L 488	L 468	L	L							
10								L	L	L	A	L 492	L 488	L	L 480	L	L	A	A					
11								L	L	A	A	A	L 472	L 476	A	A	L	A						
12									L	A	L	L 500	L 500	L 476	L	L	L							
13								L	L	L 444	L 436	L 476	L 488	L 468	L 464	L 468	A	L						
14									L 440	A	A	L 476	A	A	A	L	L	L						
15									L	L	L	A	L	L	L	A	A							
16									L	L	L	L 476	L 480	L 476	L 472	L	L							
17									L	L	L	L 488	L	L 452	A	L 440	A	A						
18										L	L	L 488	L 468	L	L	L	A	L						
19									L	L	L 480	L 500	L 480	L 484	L 460	L	L	L						
20								L	A	L	L 476	L 488	L 476	L	L 452	A	L							
21								L	A	L	L 460	L 476	L	L	A	L	A		L					
22								L	L	L 436	L 456	L 468	A	L 476	L 452	L 436								
23								L	L	L 444	L 456	A	L 460	A	A	A	A	A						
24							L	A	A	A	A	A	A	L 464	A	L 440	A	A	A					
25							A	A	A	A	A	A	456	L 460	L 484	A	L	A	A					
26								L	A	A	A	A	L 464	A	L 464	A	A	A						
27								L	L	A	L 456	L 484	L 468	L 464	L 456	L 440	A	A						
28							L	A	A	L 456	L 476	L 456	A	A	L 460	L 440	A	A						
29								L	L	L 448	L 464	L 492	464	L 476	A	L 452	L	L						
30								L	L	L 468	L 476	L 464	L 448	L 492	L 472	L 432	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									1	7	14	22	18	16	17	8								
MED									L 440	L 448	L 464	L 486	L 474	L 476	L 460	L 440								
U Q										L 456	L 476	L 492	L 480	L 486	L 472	L 446								
L Q										L 444	L 456	L 476	L 464	L 466	L 454	L 438								

APR. 2005 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							180	260	A	A	A	A	A	A	A	304	A	A	B					
2							B	244	A	A	A	A	A	A	A	A	272	U R 228	B					
3							U R 180	260	A	A	R	A	A	R	A	R	U R 268	220	B					
4							200	264	300	R	R	R	352	A	A	A	U A 272	U A 228	B					
5							184	260	A	A	A	A	R	R	R	U R 304	A	A	B					
6							180	U R 260	A	A	A	A	A	R	R	A	U A 276	220	B					
7							U A 196	264	A	A	A	R	356	A	A	312	U A 272	A	B					
8							U A 172	U A 256	A	A	A	A	A	A	A	U A 300	U A 272	A	B					
9							228	280	A	A	A	A	U R 348	A	A	A	A	236	B					
10							212	268	A	A	A	A	A	A	A	A	A	U A 224	B					
11							212	260	A	A	A	A	A	A	A	A	U A 292	U A 252	B					
12							192	256	U A 316	A	A	A	A	R	A	R	A	A						
13							R	U R 268	A	U R 328	A	A	A	A	A	A	A	A	B					
14							216	U A 276	A	A	A	A	A	A	A	A	U A 280	U A 228	B					
15							204	272	304	A	A	A	A	A	A	A	A	A	B					
16							212	272	308	A	A	A	A	A	A	R	A	U A 236	B					
17							208	272	U A 304	R	A	A	A	R	A	360	288	A	B					
18							U A 232	U A 280	A	A	A	A	R	A	A	A	A	A	B					
19							212	A	U A 300	A	A	R	R	A	R	A	A	U A 236	B					
20							216	U A 276	A	A	A	R	R	A	A	A	A	244	B					
21							U A 220	A	A	A	A	A	A	A	A	A	A	A	B					
22							212	U A 264	A	A	R	R	A	A	R	R	276	U A 236	B					
23							U A 216	A	A	A	A	A	A	A	A	A	A	A	B					
24							U A 208	A	A	A	A	A	A	A	A	A	A	A	B					
25						B	U A 224	A	A	A	A	A	A	A	A	A	292	A	B					
26						B	224	268	A	A	A	A	A	A	A	A	A	A	B					
27							A	A	A	A	A	A	A	A	A	A	288	244	B					
28							232	A	A	A	A	A	A	A	368	U R 320	A	U A 236	B					
29							A	A	A	A	A	A	A	376	344	A	A	A	B					
30							U A 228	U A 276	A	A	R	A	A	U A 348	A	R	284	U A 244	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							26	22	6	1			3	2	2	6	13	15						
MED							212	266	304	U R 328			352	362	356	308	U 276	U A 236						
U Q							U A 220	U A 272	308				356			320	288	244						
L Q							196	260	300				U R 348			304	U 272	228						

APR. 2005 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	JA 53	JA 23	JA 23	JA 24	JA 21	EB 15	22	29	34	36	JA 48	JA 54	JA 62	JA 47	39	38	31	24	JA 54	JA 35	JA 36	JA 17	JA 35	JA 31
2	JA 32	JA 45	JA 22	JA 22	JA 20	JA 23	24	35	JA 43	JA 46	JA 45	42	JA 44	JA 42	39	JA 35	G 22	G 20	EBJA 15	JA 26	JA 58	JA 45	JA 53	JA 64
3	JA 24	JA 20	JA 21	JA 17	20	EB 15	22	28	32	34	G 33	JA 36	36	G 31	34	G 28	G 25	26	EBEB 15	16	JA 26	JA 17	JA 20	21
4	18	EBEB 16	EBEB 15	EBEB 15	19	EB 15	23	30	34	G 23	G 28	G 31	39	44	41	38	37	JA 34	JA 51	JA 19	EBEB 15	EBEB 15	EBEB 14	EBEB 15
5	EBEB 15	EBEB 15	JA 27	EB 15	20	EB 15	21	30	33	JA 42	JA 44	JA 44	G 30	G 25	G 28	G 20	JA 36	JA 34	JA 24	JA 19	EBEB 15	EBEB 16	EBEB 15	EBEB 16
6	EBEB 15	EBEB 15	EBEB 15	EBEB 17	EBEB 14	EBEB 14	G	G 19	34	38	35	JA 42	JA 43	G 33	GJA 24	A 48	35	JA 44	JA 38	JA 24	JA 20	JA 19	19	18
7	EB 15	20	JA 19	18	EBEB 15	EBEB 15	23	30	36	38	JA 40	G 30	38	39	39	JA 58	JA 68	AJA 102	AJA 110	A 17	JA 19	EBEB 16	EBEB 16	EBEB 16
8	EBEB 19	EBEB 15	EBEB 15	EBEB 16	EBEB 15	EBEB 15	24	31	36	41	39	JA 44	JA 57	39	39	41	31	30	20	EB 15	JA 64	AJA 19	AJA 54	EB 15
9	EBEB 14	EBEB 16	EB 15	18	EBEB 15	EBEB 15	25	35	JA 42	JA 46	JA 60	JA 45	39	JA 43	JA 37	38	30	30	JA 31	JA 18	JA 24	JA 24	JA 22	EB 16
10	EBEB 15	EBEB 16	EBEB 16	EBEB 14	20	18	G	29	37	41	JA 51	43	39	42	JA 42	AJA 54	AJA 44	AJA 90	J 75	AJA 78	JA 53	AJA 64	JA 35	21
11	JA 20	JA 32	JA 22	JA 19	JA 26	JA 21	23	31	JA 45	JA 54	JA 52	JA 49	JA 45	JA 43	JA 47	JA 47	JA 34	34	JA 34	JA 24	JA 28	JA 28	JA 22	21
12	JA 18	19	19	EBEB 15	EBEB 15	EBEB 16	25	32	38	40	JA 45	JA 46	40	G 28	37	G 32	30	27	EBEB 17	16	JA 19	AJA 37	JA 31	19
13	EBEB 16	EBEB 15	EBEB 16	EBEB 15	EBEB 16	EBEB 16	G	G 20	31	G 26	42	40	JA 46	40	38	JA 50	JA 44	29	JA 34	AJA 36	JA 31	AJA 32	JA 26	AJA 61
14	JA 44	AJA 32	AJA 18	AJA 22	AJA 21	EB 15	25	32	JA 42	JA 49	JA 58	JA 51	JA 50	AJA 52	AJA 53	A 36	34	JA 38	JA 46	AJA 40	JA 53	AJA 37	JA 37	AJA 34
15	JA 37	AJA 24	AJA 30	JA 18	AEB 16	EB 15	24	30	34	40	41	JA 57	JA 68	AJA 57	AJA 51	AJA 86	AJA 74	AJA 61	AJA 56	AJA 47	JA 53	AJA 59	AJA 78	EB 16
16	JA 17	AJA 20	20	JA 19	AJA 24	EB 15	24	32	35	39	JA 46	JA 47	JA 45	AJA 41	37	G 29	38	JA 40	JA 46	AJA 25	JA 49	AJA 24	20	EB 16
17	20	EBEB 15	EBEB 15	EBEB 16	EBEB 14	EBEB 15	24	32	JA 40	G 29	39	41	40	GJA 27	A 72	46	38	JA 38	52	JA 68	JA 37	AJA 36	JA 60	EB 15
18	EBJA 16	EB 16	EBEB 16	EBEB 15	EBEB 15	EBEB 16	27	33	JA 44	JA 42	JA 42	JA 51	G 24	36	37	34	JA 48	AJA 30	JA 45	AJA 26	JA 18	19	EB 15	EBEB 16
19	EB 15	21	EB 16	EBEB 14	EBEB 16	EBEB 14	25	31	38	JA 43	JA 45	G 29	G 30	38	GJA 28	A 40	32	26	JA 24	AJA 18	19	JA 22	EBEB 16	EBEB 15
20	JA 32	AJA 20	AJA 18	AJA 37	AJA 22	AJA 20	AJA 35	34	JA 46	JA 43	38	G 28	G 24	38	JA 44	AJA 48	JA 43	27	JA 27	AJA 28	JA 37	AJA 28	JA 34	AJA 36
21	JA 23	20	EBEB 15	BJA 15	18	21	26	34	JA 43	JA 46	JA 41	40	40	JA 45	AJA 49	AJA 46	AJA 42	AJA 40	JA 61	AJA 66	JA 22	20	EB 15	19
22	JA 18	AJA 19	EBEB 15	EBEB 15	EBEB 14	EBEB 16	28	34	38	38	G 26	G 32	JA 76	AJA 46	G 30	G 27	34	JA 43	JA 50	AJA 56	JA 55	19	19	EB 15
23	JAEB 18	EBEB 15	EBEB 14	EBEB 15	EBEB 15	EBEB 15	29	34	JA 39	JA 40	38	J 68	AJA 54	AJA 62	AJA 62	AJA 53	AJA 49	AJA 74	AJA 69	AJA 55	JA 38	AJA 38	AEB 16	EBEB 15
24	EBEB 15	EBEB 15	EBEB 16	EBEB 15	EBEB 16	EBEB 16	25	J 43	AJA 58	AJA 48	AJA 66	JA 77	JA 49	AJA 57	AJA 74	AJA 41	JA 60	AJA 74	AJA 55	AJA 95	JA 85	AJA 76	AJA 128	A 66
25	JA 64	AJA 50	AJA 82	AJA 38	AJA 32	AJA 27	AJA 52	AJA 50	A 68	A 68	A 56	A 60	JA 44	AJA 45	AJA 38	A 48	34	JA 52	JA 42	AJA 46	JA 37	AJA 20	EB 15	EB 15
26	EBEB 16	EBEB 15	EBEB 16	EBEB 14	EBEB 15	EBEB 16	26	34	JA 44	JA 52	JA 60	JA 49	JA 44	AJA 48	AJA 46	AJA 46	JA 44	AJA 46	JA 45	AJA 58	JA 24	AJA 44	JA 29	EB 15
27	EBJA 16	EB 31	EBEB 15	EBEB 15	EBEB 15	BJA 24	AJA 31	AJA 38	AJA 43	JA 47	JA 44	JA 44	JA 45	AJA 40	A 40	JA 37	AJA 43	AJA 41	JA 36	AJA 40	JA 22	AJA 28	JA 16	EBEB 15
28	EBEB 15	EBEB 15	EBEB 15	EBEB 15	EBEB 15	EBEB 16	29	34	JA 43	40	41	44	JA 75	AJA 69	A 43	40	JA 50	AJA 57	JA 50	AJA 53	JA 23	AJA 19	JA 35	AJA 34
29	JA 19	AJA 19	A 18	EB 15	EBEB 16	EBEB 15	29	33	JA 42	35	38	JA 42	43	44	JA 51	AJA 42	36	31	JA 31	AJA 23	JA 21	AJA 52	JA 52	AJA 32
30	JA 34	AJA 31	AJA 32	AJA 18	19	JA 25	28	37	34	JA 45	G 27	40	38	44	38	GA 26	JA 51	AJA 56	JA 58	AJA 74	JA 64	AJA 29	JA 35	AJA 37
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	18	19	EBEB 16	EBEB 16	EBEB 16	EBEB 16	25	32	38	41	JA 42	JA 44	JA 44	42	39	JA 40	38	JA 38	JA 45	AJA 32	JA 30	AJA 26	JA 24	17
U Q	JA 24	AJA 23	AJA 21	AJA 18	AJA 20	AJA 18	28	34	JA 43	AJA 46	AJA 48	JA 49	JA 49	AJA 46	AJA 47	AJA 48	AJA 44	AJA 52	AJA 54	AJA 55	JA 53	AJA 37	JA 35	AJA 32
L Q	EBEB 15	EBEB 15	EBEB 15	EBEB 15	EBEB 15	EBEB 15	23	30	34	38	38	G 40	39	G 38	37	G 35	34	30	31	JA 19	AJA 21	19	EBEB 16	15

APR. 2005 foEs (0.1MHz)

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IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	19	E B 15	20	E B 15	E B 15	E B 15	21	28	32	35	44	49	60	40	37	37	30	23	48	33	32	E B 15	E B 16	17
2	17	E B 16	19	19	E B 15	17	22	34	40	41	43	40	37	38	38	30	G 21	G 18	E B 15	E B 15	23	28	23	E B 15
3	16	E B 15	16	E B 15	E B 14	E B 15	22	28	31	33	G 32	36	35	G 31	34	G 28	G 23	24	E B 15	E B 16	20	E B 14	E B 15	E B 14
4	16	E B 16	E B 15	E B 15	E B 15	E B 15	22	29	32	G 23	G 28	E B 31	38	41	40	35	35	31	50	16	E B 15	E B 15	E B 14	E B 15
5	E B 15	E B 15	E B 14	E B 15	E B 15	E B 15	21	28	31	37	35	37	U Y 30	G 25	G 28	G 19	33	30	20	17	E B 15	E B 16	E B 15	E B 16
6	E B 15	E B 15	E B 15	E B 17	E B 14	E B 14	G	G 19	32	36	35	38	39	U Y 33	G 24	43	32	34	33	22	17	E B 15	E B 15	E B 15
7	E B 15	E B 16	E B 15	E B 15	E B 15	E B 15	23	28	34	37	38	G 30	38	37	37	45	37	72	66	E B 15	E B 15	E B 16	E B 16	E B 16
8	E B 19	E B 15	E B 15	E B 16	E B 15	E B 15	23	29	34	39	37	38	52	38	38	38	30	27	18	E B 15	E B 16	E B 16	20	E B 15
9	E B 14	E B 16	E B 15	E B 15	E B 15	E B 15	24	34	36	38	52	39	39	38	34	35	28	30	25	E B 16	19	E B 15	19	E B 16
10	E B 15	E B 16	E B 16	E B 14	E B 15	16	G	29	35	38	45	41	38	40	38	36	33	A A 90	64	65	35	A A 64	29	E B 16
11	17	E B 16	16	16	19	E B 16	23	30	40	50	44	46	41	40	42	42	G 28	33	26	19	26	19	E B 15	E B 16
12	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16	24	31	36	40	42	41	39	G 28	35	G 32	28	24	E B 17	E B 16	E B 15	34	E B 16	E B 15
13	E B 16	E B 15	E B 16	E B 15	E B 16	E B 16	G	G 20	30	G 26	39	38	38	37	35	35	40	26	29	27	27	21	24	20
14	E B 16	E B 16	E B 16	18	16	E B 15	23	30	38	44	53	44	46	48	46	35	30	34	42	34	17	32	28	26
15	21	E B 16	20	E B 15	E B E B 16	E B 15	22	28	33	38	40	48	44	41	41	40	36	49	48	37	42	37	E B 16	E B 16
16	E B 14	E B 15	E B 15	E B 16	20	E B 15	23	29	34	37	42	42	41	36	34	G 28	36	33	31	24	18	17	17	E B 16
17	E B 16	E B 15	E B 15	E B E B 16	E B 14	E B 15	24	31	38	G 29	38	41	39	G 26	68	G 32	37	34	48	62	27	E B 15	E B 16	E B 15
18	E B 16	E B 15	E B 16	E B 16	E B 15	E B 16	26	32	38	39	40	35	G 24	36	35	33	40	26	42	24	16	E B 15	E B 15	E B 16
19	E B 15	E B 16	E B 16	E B 14	E B 16	E B 14	24	31	37	38	39	G 29	G 30	36	G 28	35	30	25	22	E B 16	E B 14	19	E B 16	E B 15
20	E B 16	E B 16	16	20	17	E B 15	32	32	44	39	37	G 28	U Y 24	38	38	41	34	26	24	19	29	24	29	26
21	E B 15	E B 15	E B 15	E B E B 16	16	25	34	40	40	38	39	40	41	46	38	37	33	56	54	20	16	E B 15	E B 15
22	E B 15	E B 15	E B 15	E B E B 14	E B 16	27	33	36	35	G 26	U Y 32	48	41	G 29	G 26	32	36	41	44	46	E B 15	E B 15	E B 15
23	E B 16	E B 15	E B 14	E B 15	E B 15	E B 15	28	32	35	37	36	54	41	53	46	43	46	62	67	36	24	33	E B 16	E B 15
24	E B 15	E B 15	E B 16	E B 15	E B 16	E B 16	24	39	52	45	A A 66	A A 77	45	40	54	36	46	53	47	44	E B 15	19	34	A A 66
25	A A 64	34	A A 82	27	22	20	44	42	A A 68	A A 68	48	47	39	39	35	41	32	48	40	42	19	E B 15	E B 15	E B 15
26	E B 16	E B 15	E B 16	E B E B 14	E B 15	E B 16	25	32	37	46	55	46	41	46	39	43	38	34	38	30	19	24	22	E B 15
27	E B 16	E B 16	E B 15	E B E B 15	E B 15	16	26	32	37	44	39	39	40	36	35	32	38	34	31	35	E B 16	E B 16	E B 16	E B 15
28	E B 15	E B 15	E B 15	E B E B 15	E B E B 15	E B E B 16	28	33	41	39	39	41	53	56	42	38	46	45	44	35	E B 15	17	21	18
29	16	17	E B 16	E B 15	E B E B 16	E B 15	27	32	40	34	38	39	42	41	45	40	35	30	23	21	18	25	24	19
30	21	22	23	E B 15	E B 15	19	27	34	33	38	G 27	38	38	40	37	G 26	46	49	42	A A 74	46	23	22	25
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 16	E B 15	E B 16	E B 15	E B 15	E B 15	24	31	36	38	39	39	39	38	38	36	34	33	39	26	19	17	E B 16	E B 16
U Q	16	E B 16	16	16	16	16	26	33	40	40	44	44	42	41	42	40	38	45	48	37	27	24	22	17
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	22	29	33	36	37	37	38	36	35	G 32	30	26	24	E B 16	E B 16	E B 15	E B 15	E B 15

APR. 2005 fbEs (0.1MHz)

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IONOSPHERIC DATA STATION Kokubunji

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

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

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

APR. 2005 fmin (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	307	307	305	313	317	312	360	356	368	342	322	329	345	326	322	328	337	340	361	384	314	301	295	F
2	310	304	312	348	350	329	365	367	370	337	329	333	334	336	335	335	361	347	348	349	316	F	F	305
3	309	310	306	336	348	317	360	371	340	339	321	316	326	328	354	338	348	337	347	369	353	299	301	303
4	300	297	314	348	327	310	357	356	370	356	347	326	329	328	328	338	335	337	331	342	330	320	292	307
5	283	285	299	325	315	302	354	361	347	329	287	328	330	276	308	325	342	324	310	330	333	288	276	285
6	292	283	294	317	F	F	351	V 321	327	346	275	305	307	316	329	333	324	343	354	337	306	300	287	299
7	303	290	282	301	307	303	358	366	368	360	321	320	320	318	330	336	335	338	336	342	342	293	284	295
8	290	288	295	336	343	325	370	365	342	349	338	321	314	315	319	318	332	347	342	361	372	294	289	274
9	308	293	333	312	F	312	357	354	337	337	318	315	319	309	326	339	344	339	352	355	319	293	295	304
10	299	290	301	345	313	319	375	374	349	356	340	325	316	322	317	331	319	A	341	364	373	A	293	275
11	295	F	F	320	295	316	355	341	350	336	321	313	337	327	312	325	325	332	346	344	323	284	293	288
12	288	F	320	358	299	302	376	353	335	364	321	302	298	323	336	315	320	333	357	344	310	280	274	287
13	283	287	310	330	313	334	348	351	339	325	324	320	310	321	321	299	320	320	345	322	288	284	292	273
14	261	291	359	376	274	290	356	332	311	326	320	299	320	327	332	335	332	333	335	335	317	315	275	284
15	297	296	294	309	303	314	359	357	326	331	346	324	325	331	325	327	342	324	321	324	335	315	290	297
16	291	281	302	310	300	306	370	365	365	343	330	316	300	314	325	335	339	341	333	329	341	304	275	287
17	288	297	302	F	303	300	359	368	343	348	345	321	313	339	310	319	321	329	334	354	342	295	298	306
18	294	305	312	351	308	313	383	383	365	316	334	296	312	321	329	331	328	322	340	338	349	301	283	297
19	298	301	301	315	298	300	393	369	374	331	329	314	316	323	327	337	322	322	322	326	352	347	288	299
20	274	281	295	323	301	338	374	377	363	329	332	293	310	325	331	318	300	304	317	334	355	339	275	285
21	298	307	F	324	317	316	353	362	320	322	344	314	314	V 305	322	338	340	329	317	314	337	339	300	301
22	298	299	306	336	321	316	343	350	349	331	353	327	327	308	313	329	345	342	337	333	332	321	290	295
23	299	295	F	326	319	325	318	341	342	347	342	318	326	322	324	326	324	325	322	R 338	380	330	292	299
24	307	305	296	308	302	329	360	369	365	334	A	A	301	306	308	318	336	340	333	362	302	303	278	A
25	A	F	A	286	319	329	348	351	A	A	310	306	317	315	309	300	334	320	327	320	358	275	F	F
26	299	F	F	F	F	336	372	380	352	344	311	301	312	313	306	301	326	329	320	334	352	317	294	304
27	296	301	308	318	308	348	364	361	357	344	335	314	316	327	316	325	344	346	324	328	313	307	317	315
28	301	312	318	318	305	314	357	351	345	366	333	333	324	316	315	320	328	329	332	334	335	314	299	297
29	301	307	303	329	320	338	364	340	337	361	346	309	310	318	315	311	320	333	335	331	316	322	306	295
30	292	304	295	300	294	334	357	368	340	333	314	323	301	300	295	328	334	348	345	A	280	328	293	284
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	26	25	28	27	29	30	30	29	29	29	29	30	30	30	30	30	29	30	29	30	28	28	27
MED	298	297	303	324	308	316	359	361	347	339	329	316	316	321	322	328	333	333	335	337	334	304	292	297
U Q	301	305	312	336	319	329	370	368	365	348	341	324	326	327	329	335	340	340	345	352	352	320	295	303
L Q	290	290	296	312	301	308	355	351	338	331	320	308	310	314	313	318	324	324	324	330	316	294	284	285

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

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									L	L	A	A	A	L	L 407	L	L	L						
2									A	A	A	L 386	L 386	L	L 377	L	L							
3								L	L	L	L 384	L 382	L 380	L	L 368	L	L							
4									L	L	L 397	L 377	L 358	L	L	L	A	A						
5							L	L	L	L	L 362	L 363	L	L 353	L 349	L								
6									L	L	L	L 368	L	L 364	L	A	L							
7								L	L	L	L	L	L 361	L	L 383	A	A	A						
8									L	L	L 395	L 384	A	L 374	L	L	L							
9								L	L	L 397	A	L 375	L	L 370	L 367	L	L							
10								L	L	L	A	L 380	L 391	L	L 372	L	L	A	A					
11								L	L	A	A	A	L 398	L 377	A	A	L	A						
12									L	A	L	L 367	L 355	L 365	L	L	L							
13								L	L	L 385	L 409	L 363	L 355	L 364	L 384	L 359	A	L						
14									L 356	A	A	L 392	A	A	A	L	L	L						
15									L	L	L	A	L	L	L	A	A							
16									L	L	L	L 381	L 383	L 379	L 370	L	L							
17									L	L	L	L 377	L	L 407	A	L 375	A	A						
18										L	L	L 368	L 392	L	L	L	A	L						
19									L	L	L 376	L 362	L 387	L 373	L 370	L	L	L						
20								L	A	L	L 379	L 408	L 403	L	L 380	A	L							
21								L	A	L	L 391	L 380	L	L	A	L	A		L					
22								L	L	L 381	L 379	L 382	A	L 382	L 401	L 384								
23								L	L	L 395	L 392	A	L 384	A	A	A	A	A						
24							L	A	A	A	A	A	A	L 380	A	L 362	A	A	A					
25							A	A	A	A	A	A	369	L 388	L 366	A	L	A	A					
26								L	A	A	A	A	L 399	A	L 373	A	A	A						
27								L	L	A	L 405	L 373	L 398	L 391	L 381	L 371	A	A						
28							L	A	A	L 393	L 394	L 419	A	A	A	L 367	A	A						
29								L	L	L 394	L 413	L 385	408	L 365	A	L 363	L	L						
30								L	L	L 374	L 374	L 378	L 386	L 360	L 366	L 386	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									1	7	14	22	18	16	16	8								
MED									L 356	L 393	L 392	L 379	L 386	L 374	L 372	L 369								
U Q										L 395	L 397	L 384	L 398	L 381	L 382	L 380								
L Q										L 381	L 379	L 368	L 369	L 364	L 368	L 362								

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APR. 2005 h'F2 (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									240	278	272	278	250	268	272	278	252	236						
2									238	238	236	280	270	276	268	262	242							
3								234	248	262	262	274	258	256	246	262	254							
4									234	244	266	288	276	272	274	256	262	252						
5							248	240	246	272	306	262	268	340	282	258								
6									240	264	258	282	286	270	260	256	262							
7								240	234	240	264	280	284	274	268	262	256	E A 282						
8									264	248	244	274	294	278	272	274	254							
9								250	264	254	248	280	264	286	272	254	250							
10								238	252	250	264	284	288	272	272	262	278	A	256					
11								258	260	266	272	284	262	270	290	264	260	258						
12									272	224	276	314	302	270	246	274	274							
13								250	264	274	282	280	300	276	280	300	262	258						
14									326	302	E A 324	362	290	272	270	278	264	252						
15									280	272	264	282	290	266	274	260	238							
16									246	250	278	288	300	290	268	256	252							
17									260	258	272	278	278	256	E A 298	268	258	250						
18										266	272	300	296	266	254	258	260	266						
19									228	266	284	296	276	276	260	254	280	272						
20								228	240	274	276	284	282	264	256	274	300							
21								230	236	280	250	278	282	264	272	256	242		286					
22								258	266	278	258	274	284	300	302	260								
23								270	248	252	262	E A 306	288	E A 304	298	280	274	E A 294						
24							242	232	E A 256	E A 296	A	A	332	308	298	286	256	E A 264	E A 264					
25							E A 270	236	A	A	312	304	268	272	302	268	278	E A 310	E A 256					
26								226	242	284	E A 352	326	296	286	274	280	264	258						
27								242	248	268	292	300	298	280	286	280	254	250						
28							244	236	254	242	292	292	E A 298	E A 300	302	288	274	254						
29								258	270	234	260	338	344	320	290	298	266	264						
30								228	274	282	310	276	302	308	322	256	256	242						
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							4	18	28	29	29	29	30	30	30	30	28	17	4					
MED							244	239	249	265	269	283	286	274	272	263	260	255	258					
U Q							259	250	264	276	288	300	298	290	290	278	270	E A 269	275					
L Q							243	232	240	249	261	278	276	270	268	258	254	251	256					

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APR. 2005 h'F (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E A 282	E B 278	E A 282	E B 262	230	E B 250	208	218	208	198	A	A	A	224	202	E A 236	212	H 198	226	206	E A 344	E B 258	E B 318	E A 306
2	E A 280	E B 272	E A 278	232	202	242	208	230	A	A	A	H 188	H 182	E A 238	212	208	210	226	226	206	220	E A 296	E A 284	E B 252
3	E A 260	E B 268	E A 268	232	208	226	208	216	212	202	H 192	196	H 182	204	206	212	212	226	220	202	200	E B 272	E B 292	E B 280
4	E A 282	E B 282	E B 268	222	238	E B 266	220	224	218	206	202	H 182	224	E A 244	E A 234	214	A	A	E A 262	220	208	226	E B 262	E B 262
5	E B 290	E B 286	E B 272	224	216	E B 252	220	202	202	206	H 190	190	216	212	210	218	218	234	240	226	208	E B 240	E B 276	E B 282
6	E B 258	E B 288	E B 266	E A 242	218	220	H 192	212	208	200	192	206	E A 252	208	212	A	232	228	214	218	E A 242	E B 240	E B 264	E B 264
7	E B 268	E B 272	E B 280	258	E B 254	E B 258	228	216	210	210	198	204	202	204	206	A	A	A	E A 262	212	206	E B 246	E B 302	E B 284
8	E B 300	E B 286	E B 292	224	206	226	202	224	218	216	202	194	A	202	202	234	222	222	222	204	200	E B 262	E A 306	E B 312
9	E B 258	E B 268	236	234	E B 216	230	204	222	216	210	A	H 192	214	212	206	214	218	E A 236	218	202	214	E B 264	E A 284	E B 256
10	E B 268	E B 278	E B 268	222	208	E B 240	210	214	210	A	A	204	H 186	216	212	218	E A 246	A	A	226	206	A	E A 326	E B 304
11	E A 286	E B 296	E A 274	240	E A 246	E B 272	222	222	A	A	A	A	214	220	A	A	218	A	222	210	224	E A 280	E B 294	E B 292
12	E B 292	E B 266	E B 250	208	218	E B 274	216	218	228	A	228	222	228	208	214	214	210	234	218	202	214	E A 334	E B 288	E B 306
13	E B 300	E B 292	E B 256	218	E B 240	E B 240	236	214	208	H 188	210	220	212	210	206	208	A	224	214	226	E A 260	E A 300	E A 282	E A 322
14	E B 324	E B 278	204	E A 252	E A 360	E B 282	222	228	E A 264	A	A	E A 242	A	A	A	212	226	A	236	234	226	E A 266	E A 324	E A 300
15	E A 278	E B 254	E A 274	238	E B 252	238	224	210	212	216	218	A	A	E A 242	A	A	A	E A 258	E A 256	E A 248	236	E A 258	E B 262	E B 262
16	E B 270	E B 284	E B 278	E B 248	E A 262	E B 258	224	214	208	210	224	220	222	200	188	214	A	E A 240	E A 236	230	220	E A 246	E A 294	E B 278
17	E B 282	E B 276	E B 256	206	E B 264	E B 252	224	218	224	208	208	208	208	H 204	A	H 182	A	A	234	236	204	220	E B 264	E B 268
18	E B 282	E B 276	E B 266	228	226	246	208	214	224	210	212	196	196	198	220	202	A	218	230	216	204	202	E B 286	E B 280
19	E B 266	E B 274	E B 236	230	E B 254	E B 260	216	214	A	226	218	214	198	H 190	H 194	212	206	228	242	230	216	202	E B 266	E B 262
20	E B 300	E B 308	E A 284	E A 236	E A 256	226	212	208	A	216	H 192	H 188	H 178	222	216	A	E A 234	236	242	226	218	214	E A 328	E A 310
21	E B 260	E B 260	E B 234	226	E B 232	250	224	A	A	A	204	214	E A 236	A	A	E A 244	A	E A 246	E A 290	E A 282	220	208	208	E B 262
22	E B 268	E B 272	E B 254	228	E B 234	232	218	230	224	206	206	H 198	A	H 198	206	H 186	240	E A 246	E A 246	E A 240	E A 262	218	E B 256	E B 272
23	E B 268	E B 286	E B 252	222	230	236	222	226	210	206	202	A	E A 236	A	A	A	A	A	E A 304	E A 242	214	E A 286	E B 258	E B 270
24	E A 270	E B 266	E B 276	E B 250	E B 256	238	220	A	A	A	A	A	A	226	A	236	A	A	A	238	218	E A 270	E A 370	A
25	A	E A 314	A	E A 310	E A 258	E A 244	A	A	A	A	A	A	224	218	204	A	226	A	A	E A 266	222	E B 270	E B 298	E B 282
26	E B 266	E B 274	E B 252	E B 242	232	228	208	202	A	A	A	A	208	A	228	A	A	A	E A 254	228	214	234	E A 268	E B 272
27	E B 282	E B 272	E B 260	E B 252	E B 258	232	224	212	214	A	202	200	200	204	198	212	A	A	E A 250	242	236	246	234	228
28	E B 246	E B 246	238	234	246	228	222	A	A	216	204	200	A	A	A	E A 256	A	A	E A 246	234	208	222	E A 254	E A 282
29	E A 266	E A 270	E B 254	232	236	228	218	204	A	190	210	194	210	222	A	E A 246	E A 232	224	232	226	226	238	E A 256	E A 272
30	E A 286	E A 284	E A 288	E B 256	E B 252	E A 252	216	A	204	212	194	206	214	228	216	218	A	A	E A 236	A	E A 332	226	E A 274	E A 298
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	30	29	30	30	30	29	25	20	20	21	23	23	25	21	22	16	17	27	29	30	29	30	29
MED	E B 278	E B 276	E B 266	228	E 237	234	218	216	212	209	204	200	210	210	206	213	218	226	228	222	216	E 246	E 283	E B 280
U Q	E B 286	E B 286	E 277	E B 248	E 254	E B 252	223	223	221	214	211	214	224	223	215	E A 234	E A 232	E A 238	E A 250	E A 237	E A 226	E A 270	E A 298	E A 299
L Q	E B 266	E B 270	E B 252	224	218	230	208	212	208	204	196	H 194	H 198	204	203	212	212	224	222	211	208	224	E 262	E B 263

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APR. 2005 h'E (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							128	114	114	112	A	A	A	A	114	114	118	118	B					
2							B	118	118	A	A	A	A	A	A	A	114	122	B					
3							120	118	A	A	116	A	A	116	A	116	120	118	B					
4							126	118	118	112	116	114	114	114	116	114	116	118	B					
5							124	118	116	A	A	A	118	112	114	110	118	A	B					
6							110	116	122	114	112	A	A	114	114	114	120	126	B					
7							124	114	114	114	A	114	114	112	112	110	122	A	B					
8							128	116	122	112	A	A	A	A	116	116	116	116	B					
9							130	122	116	A	A	A	118	A	A	A	A	112	B					
10							122	122	118	118	A	A	A	A	A	A	120	118	B					
11							120	122	116	A	A	A	A	A	A	A	110	112	B					
12							124	120	114	114	A	A	A	116	A	122	A	A						
13							118	118	114	116	116	A	A	A	A	A	A	A	B					
14							124	118	118	A	A	A	A	A	A	118	118	118	A					
15							114	116	120	114	114	114	118	116	A	A	A	A	B					
16							116	118	114	110	110	A	A	A	A	108	112	120	B					
17							116	116	112	112	112	A	A	112	116	116	118	122	B					
18							122	124	118	116	A	A	114	114	A	A	A	A	B					
19							116	118	118	116	A	114	114	118	118	A	A	124	B					
20							118	118	A	A	A	114	116	122	114	A	A	122	B					
21							124	122	116	A	A	114	114	A	A	A	A	A	B					
22							116	122	118	114	112	118	112	114	114	114	118	122	B					
23							118	120	A	A	A	120	118	118	118	122	120	A	B					
24							116	114	A	A	A	A	A	A	A	A	114	A	B					
25						B	118	116	A	A	A	A	116	A	A	A	124	A	B					
26						B	116	114	120	A	A	A	A	A	A	A	A	A	B					
27							114	A	A	A	A	118	A	A	A	A	118	118	B					
28							114	116	116	112	112	114	A	A	116	116	116	120	B					
29							120	120	A	A	A	A	120	114	114	114	118	118	B					
30							122	116	118	A	116	A	118	116	116	116	120	112	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							29	29	23	15	10	10	14	15	14	16	21	19						
MED							120	118	118	114	113	114	116	114	115	115	118	118						
U Q							124	120	118	116	116	118	118	116	116	116	120	122						
L Q							116	116	114	112	112	114	114	114	114	114	116	118						

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APR. 2005 h'Es (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	96	96	96	98	98	B	158	154	128	118	102	98	100	104	118	182	118	112	104	102	102	102	102	98
2	94	94	92	94	98	98	150	128	116	104	98	98	98	98	98	96	96	106	B	100	102	102	102	100
3	104	112	100	100	100	B	156	152	98	96	100	98	102	100	100	100	98	132	B	B	104	112	110	104
4	104	B	B	B	98	B	152	146	132	102	100	102	148	124	120	122	116	116	106	106	B	B	B	B
5	B	B	98	B	100	B	138	136	122	102	104	102	100	92	104	92	118	104	106	106	B	B	B	B
6	B	B	B	B	B	B	G	102	116	112	114	102	98	96	94	118	136	126	112	110	106	106	92	94
7	B	90	90	88	B	B	142	146	120	116	102	98	130	134	110	112	120	104	100	104	106	B	B	B
8	B	B	B	B	B	B	136	136	126	118	104	100	100	100	130	114	132	116	112	B	106	106	106	B
9	B	B	B	90	B	B	142	118	116	104	100	100	154	100	100	120	94	132	116	86	106	106	102	B
10	B	B	B	B	94	94	G	168	120	120	104	104	102	106	104	102	122	110	102	96	100	92	94	94
11	90	102	102	98	92	92	150	130	114	102	100	100	100	100	96	92	94	114	110	90	90	90	90	88
12	88	88	84	B	B	B	142	142	124	116	106	106	106	106	106	108	106	106	B	B	108	106	106	94
13	B	B	B	B	B	B	G	100	108	102	112	104	104	104	104	100	104	106	108	100	96	102	102	100
14	102	102	102	100	100	B	152	122	112	104	104	102	102	104	102	120	124	118	102	102	104	98	94	92
15	90	92	92	92	B	B	156	134	150	124	126	126	118	116	104	102	92	92	90	108	104	100	102	B
16	100	100	100	100	96	B	160	144	132	122	112	102	102	102	100	100	122	118	108	96	102	94	90	B
17	90	B	B	B	B	B	148	130	120	98	108	108	108	102	122	154	134	120	110	106	102	104	132	B
18	B	98	B	B	B	B	128	122	116	112	104	94	96	116	108	102	106	104	96	96	92	92	B	B
19	B	102	B	B	B	B	138	120	116	118	104	98	98	118	106	106	108	178	110	106	106	102	B	B
20	106	98	100	94	94	94	116	118	106	104	104	98	98	120	114	98	102	166	102	98	100	110	104	100
21	106	106	B	B	128	92	126	116	114	106	120	116	110	104	102	104	104	130	114	110	108	90	B	98
22	92	92	B	B	B	B	128	122	120	122	102	100	116	124	98	100	154	122	110	106	106	106	94	B
23	116	B	B	B	B	B	118	118	104	104	104	120	126	126	122	118	116	106	106	102	102	100	B	B
24	B	B	B	B	B	B	122	114	104	102	96	94	96	94	92	96	112	102	100	134	106	100	100	98
25	88	92	90	96	96	160	126	118	106	104	104	104	112	102	98	100	146	116	114	104	108	108	B	B
26	B	B	B	B	B	B	134	126	120	104	104	102	104	102	100	100	98	100	96	98	102	108	118	B
27	B	120	B	B	B	120	118	108	104	104	104	112	102	100	100	100	130	122	116	108	98	110	B	B
28	B	B	B	B	B	B	128	122	116	110	114	116	104	104	146	140	122	114	102	104	102	100	102	102
29	100	100	100	B	B	B	118	112	100	102	104	104	118	152	130	126	120	116	106	106	104	98	100	100
30	96	96	94	98	98	118	118	120	126	106	100	106	114	116	130	100	116	116	108	104	104	102	102	100
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	17	18	14	12	13	8	27	30	30	30	30	30	30	30	30	30	30	30	27	27	28	27	21	15
MED	96	98	97	97	98	96	138	122	116	104	104	102	103	104	104	102	116	116	106	104	104	102	102	98
U Q	104	102	100	99	100	119	150	136	122	116	106	106	114	116	118	118	122	122	110	106	106	106	105	100
L Q	90	92	92	93	95	93	126	118	108	102	102	98	100	100	100	100	104	106	102	98	102	98	94	94

APR. 2005 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

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

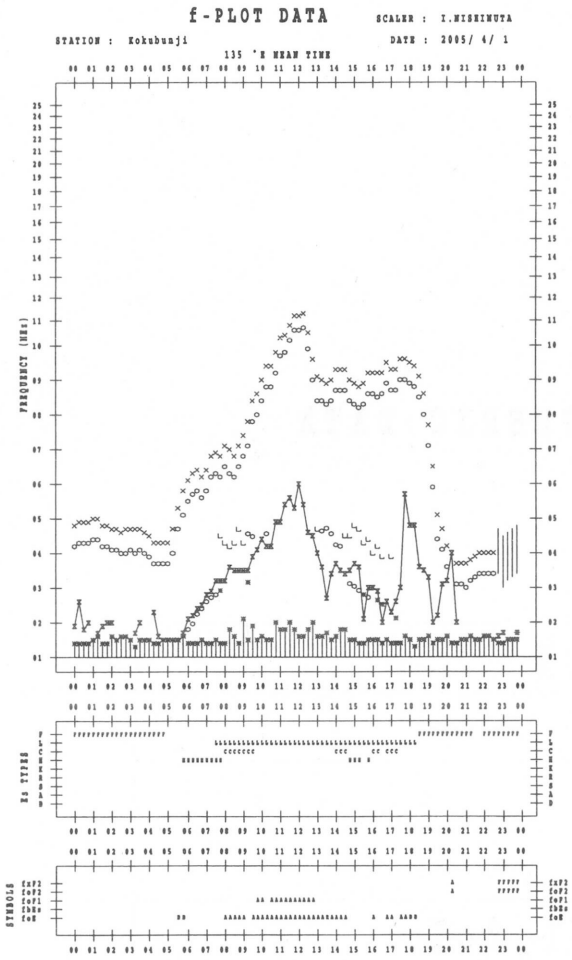
LAT. 35°42.4'N LON. 139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

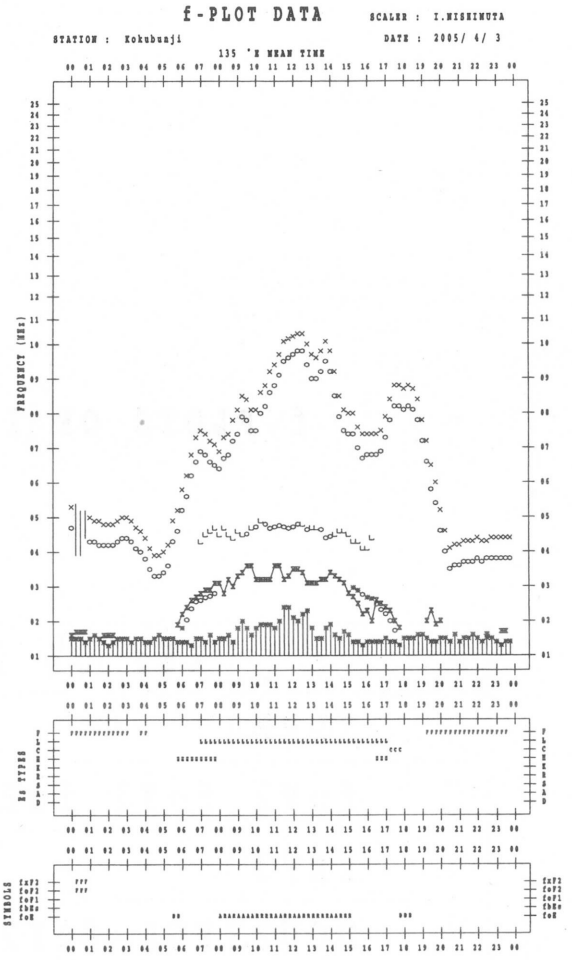
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F3	F3	F3	F2	F3		H1	H1	CL11	CL11	L2	L3	L3	L1	CL21	HL11	CL21	CL22	L4	F4	F5	F2	F2	F2
2	F4	F2	F2	F3	F1	F2	HL22	CL22	CL21	L2	L2	L1	L1	L2	L2	L2	L1	L2		F1	F2	F2	F4	F2
3	F1	F1	F2	F1	F1		H1	HL11	L2	L2	L2	L2	L1	L1	L2	L1	L2	HL11			F3	F1	F2	F1
4	F2				F1		H2	HL21	HL11	L1	L2	L1	HL11	CL21	CL11	CL11	CL22	CL32	L4	F2				
5			F2		F2		H2	HL22	CL12	L1	L1	L2	L1	L1	L1	L1	CL21	L3	L3	F1				
6								L2	CL11	CL11	CL11	L1	L1	L2	L2	CL22	CL22	CL41	C3	FF32	F2	F2	F2	F1
7		F1	F2	F2			H2	HL11	CL21	CL11	L1	L2	HL11	CL11	CL11	CL21	CL22	L3	L3	F1	F2			
8							H1	H2	CL11	CL21	L1	L2	L2	L1	CL11	CL21	CL11	CL31	L3		F2	F1	F3	
9				F1			H1	CL21	CL11	L2	L2	L2	HL11	L1	L2	CL12	L2	HL22	CL23	F3	F3	F3	F2	
10					F2	F1		HL11	CL21	CL11	L2	L2	L1	L1	L1	L1	CL21	CL41	L4	F4	F3	F4	F3	F2
11	F1	F2	F2	F2	F2	F2	HL11	HL22	CL21	L3	L2	L2	L2	L2	L2	L3	L2	CL32	CL22	F3	F5	F3	F3	F2
12	F1	F2	F1				H2	HL11	CL11	CL11	L1	L1	L1	L1	L1	L1	L2	L2			F2	F5	F3	F2
13								L1	CL11	L1	CL11	L1	L2	L1	L1	L2	L2	L2	L3	F3	F3	F4	F3	F3
14	F3	F2	F2	F3	F3		H2	CL11	CL11	L2	L2	L2	L2	L2	L3	CL11	CL21	CL31	L4	F4	F4	F3	F3	F2
15	F2	F2	F2	F1			H1	CL11	HL11	CL11	CL11	CL21	CL21	CL11	L2	L3	L3	L4	L4	FF24	FF42	FF32	F2	
16	F2	F2	F1	F1	F3		HL11	HL12	HL12	CL11	CL22	L2	L1	L1	L1	L1	CL21	CL32	CL32	F3	F2	F2	F1	
17	F1						H2	HL11	CL21	L1	CL11	L2	L1	L1	CL21	HL21	HL21	CL31	C6	F5	F4	F3	F1	
18		F2					CL11	CL11	CL11	CL11	L2	L2	L1	CL11	L1	L2	L3	L2	L3	F4	F2	F1		
19		F2					H2	CL11	CL21	CL11	L2	L1	L1	CL11	L1	L1	L2	HL11	C4	F2	F1	F2		
20	F1	F1	F2	F3	F3	F2	C2	CL11	CL21	L2	L1	L1	L1	CL11	CL11	L2	L2	HL11	LC32	F1	F4	F4	F5	F3
21	F1	F1			F1	F1	CL21	CL21	CL21	L2	CL22	CL11	CL11	L2	L2	L2	L3	CL23	CL45	F3	FF22	F1		F1
22	F2	F1					C2	CL21	CL11	CL11	L2	L1	CL21	CL21	L1	L2	HL11	C4	C5	F5	F5	F1	F1	
23	F1						C3	CL11	L2	L1	L1	CL21	CL21	CL21	CL21	CL31	CL21	L5	L4	F5	F3	F5		
24							C1	CL21	L2	L2	L3	L3	L2	L2	L2	L2	CL32	L3	L3	FF54	F2	F3	F4	F4
25	F3	F4	F4	F3	F2	H2	C3	CL31	L4	L3	L2	L2	CL11	L2	L1	L2	HL12	CL42	CL22	F4	F3	F1		
26							H1	C2	CL11	L2	L2	L2	L1	L2	L2	L2	L3	L4	L6	F2	F3	F3	FF22	
27		F1				F1	C3	L2	L2	L2	L2	CL11	L1	L1	L1	L2	HL22	CL32	CL43	FF42	F2	F2		
28							C2	CL11	CL11	CL21	CL11	CL11	L3	L2	HL11	HL11	CL31	CL31	C4	F2	F2	F3	F4	F3
29	F3	F2	F1				C2	CL21	L2	L1	L1	L1	CL11	HL11	CL21	CL11	CL21	CL31	L3	F3	F6	F4	F3	F3
30	F4	F4	F2	F1	F1	F4	CL21	CL11	CL21	L1	L1	L1	CL11	CL11	CL11	L1	CL21	C3	C5	F5	F5	F3	F3	F3
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																								

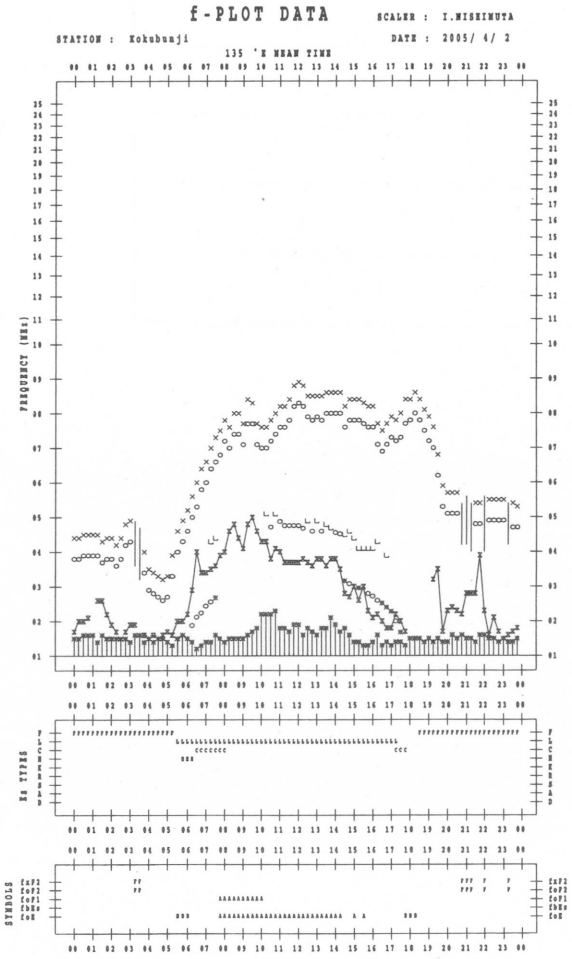
APR. 2005 TYPES OF Es

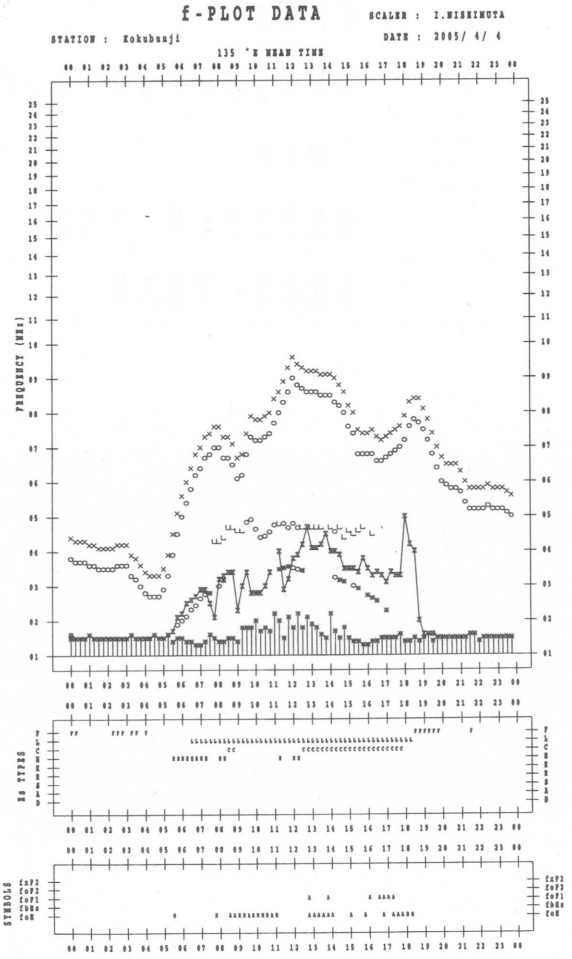
f-PLOTS OF IONOSPHERIC DATA

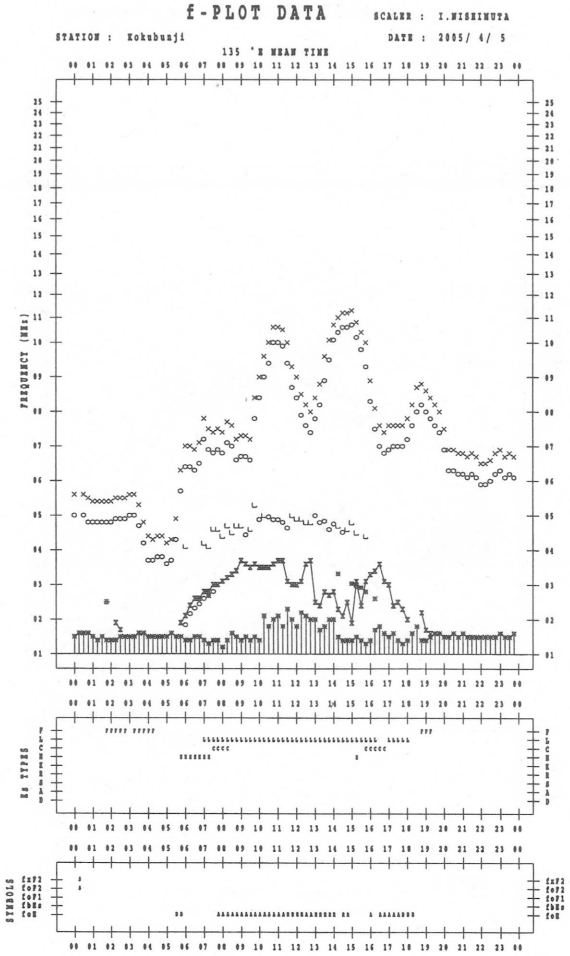
KEY OF f-PLOT	
	SPREAD
	foF2, foF1, foE
	fxF2
	DOUBTFUL foF2, foF1, foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN

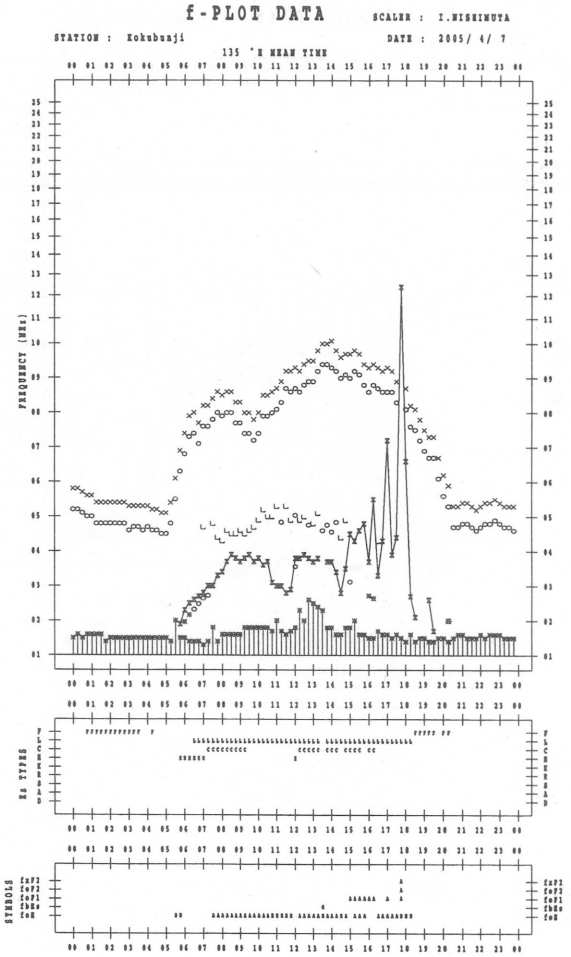

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

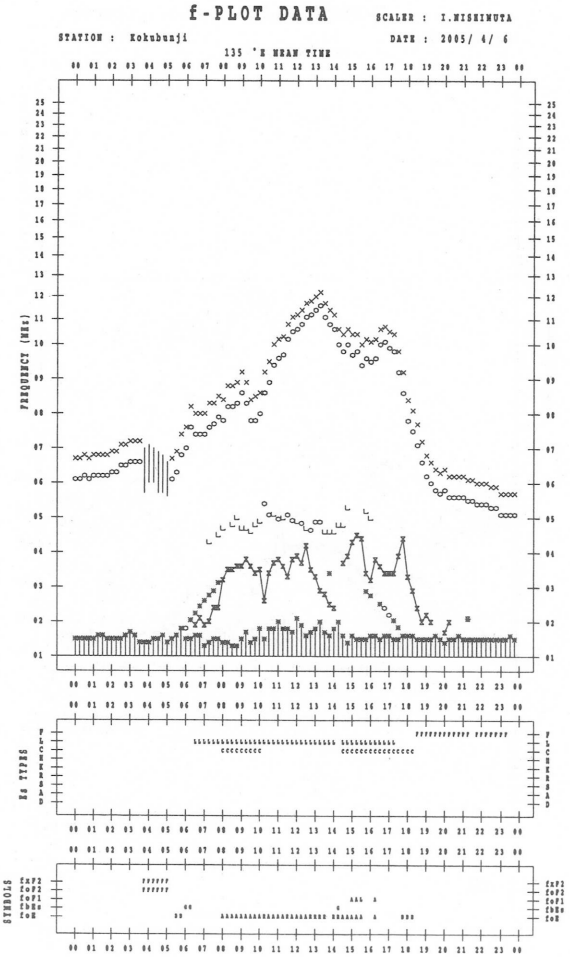

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

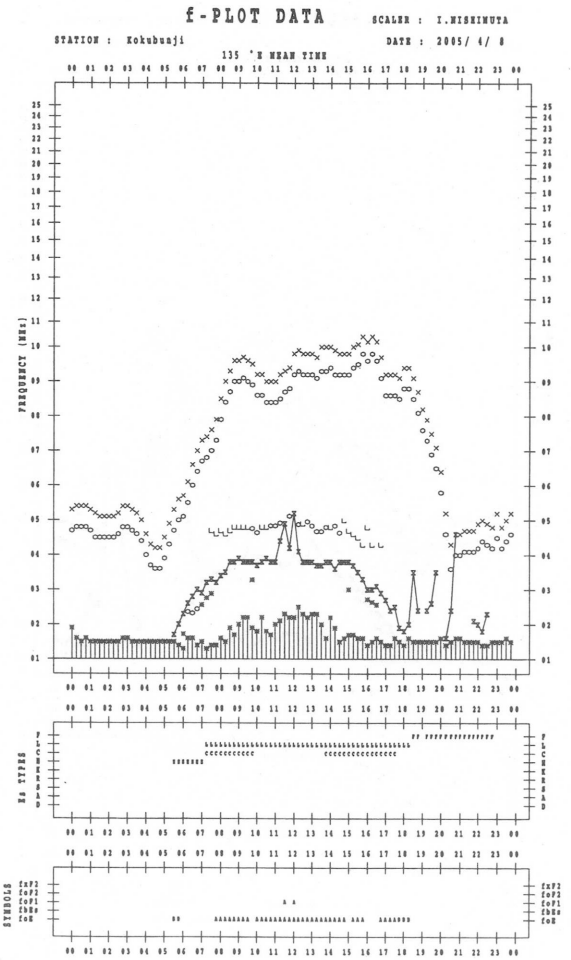

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

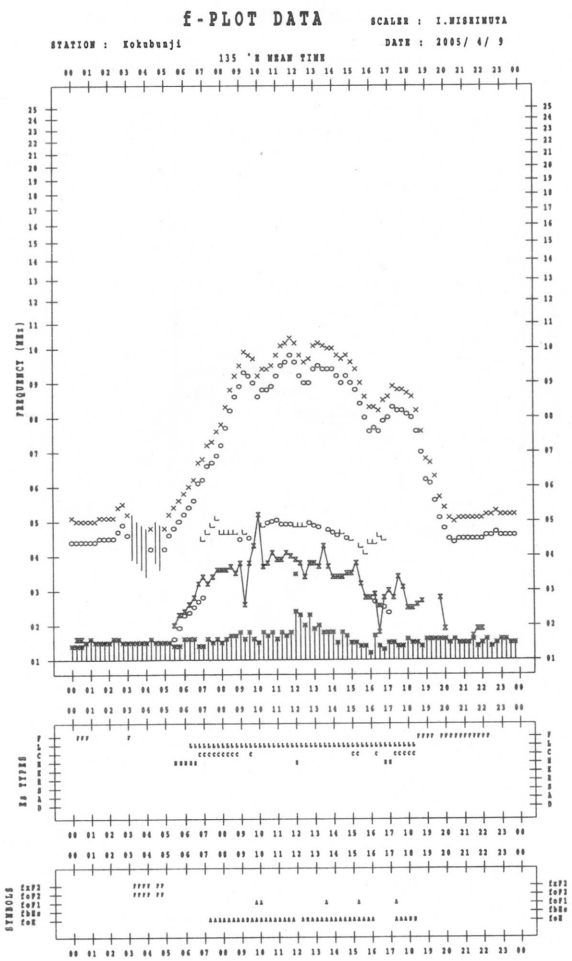

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

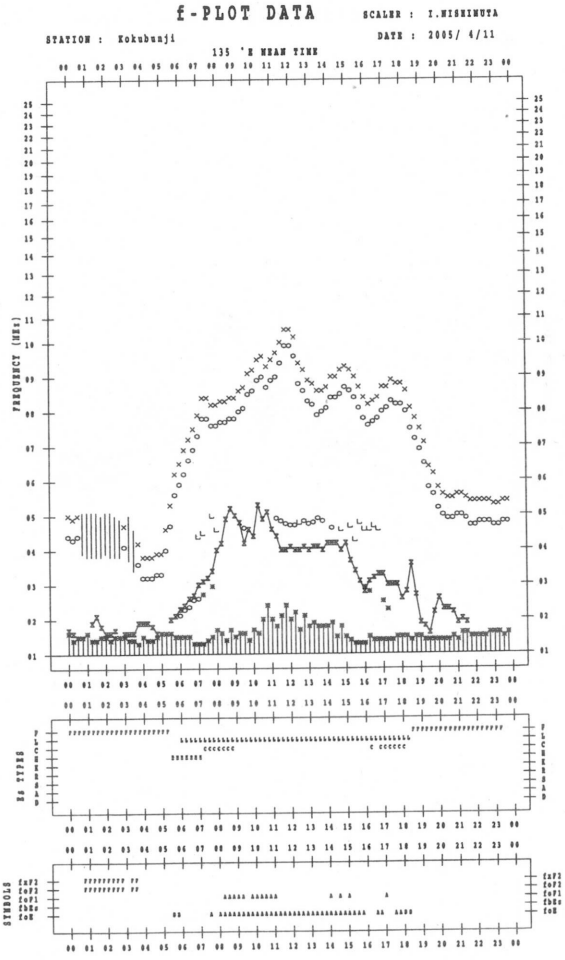

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

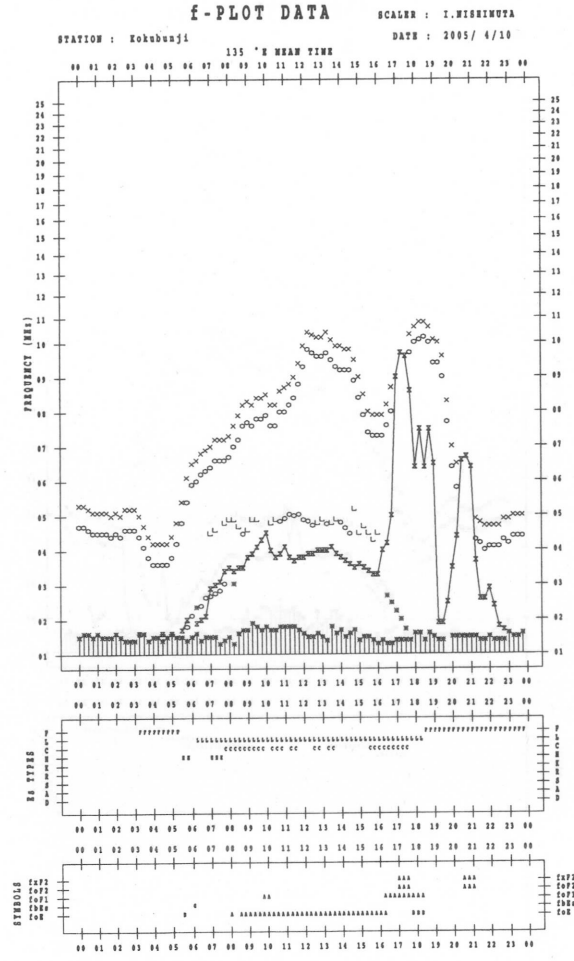

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

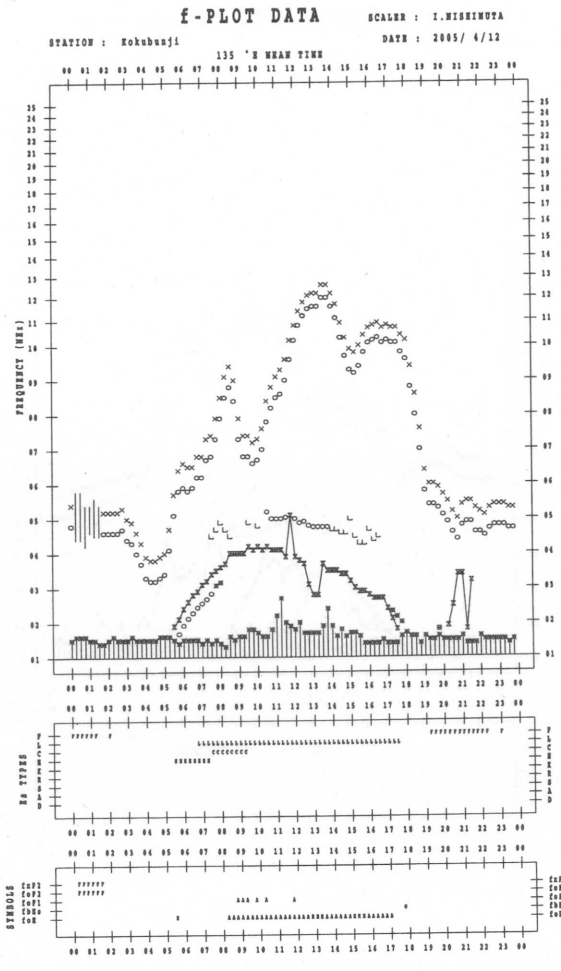

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

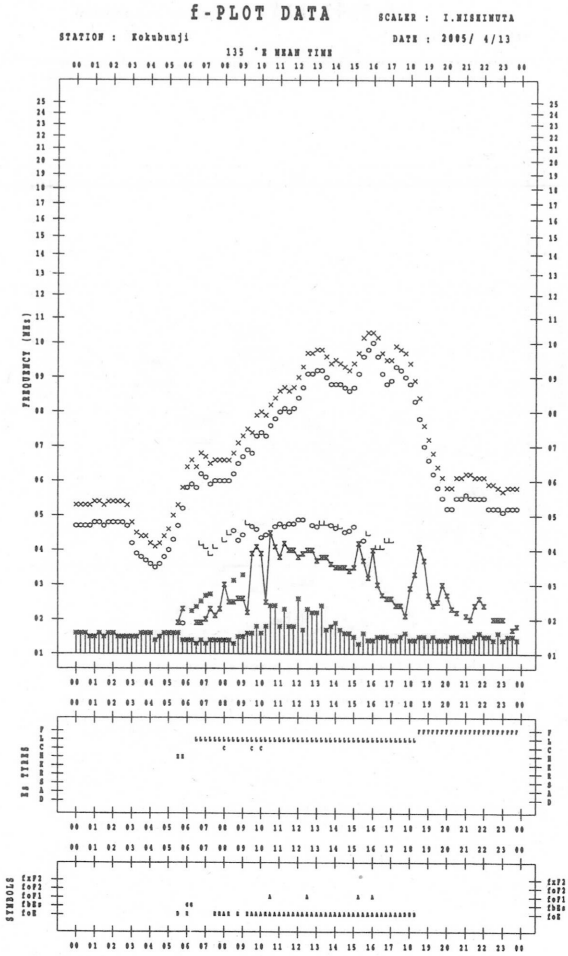

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

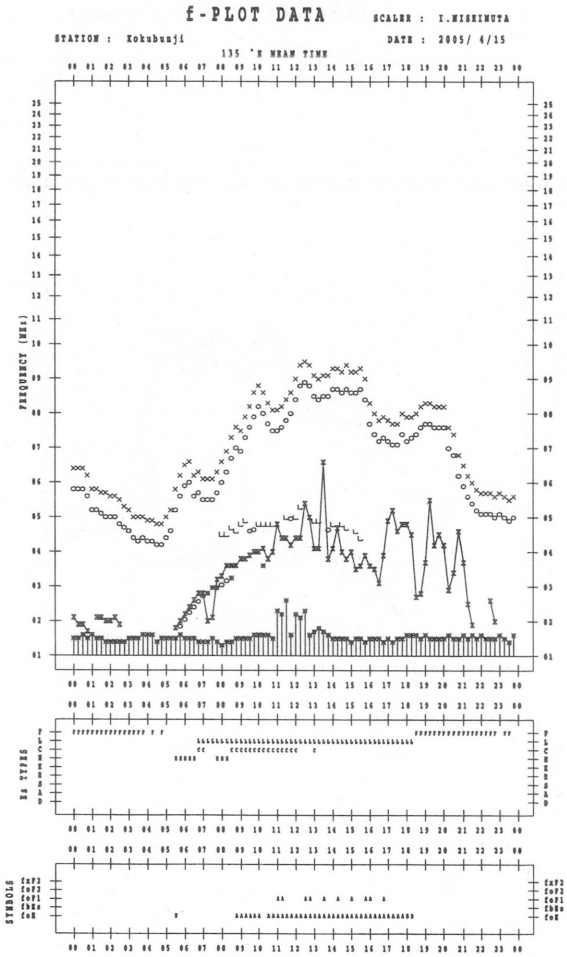

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/ 9
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

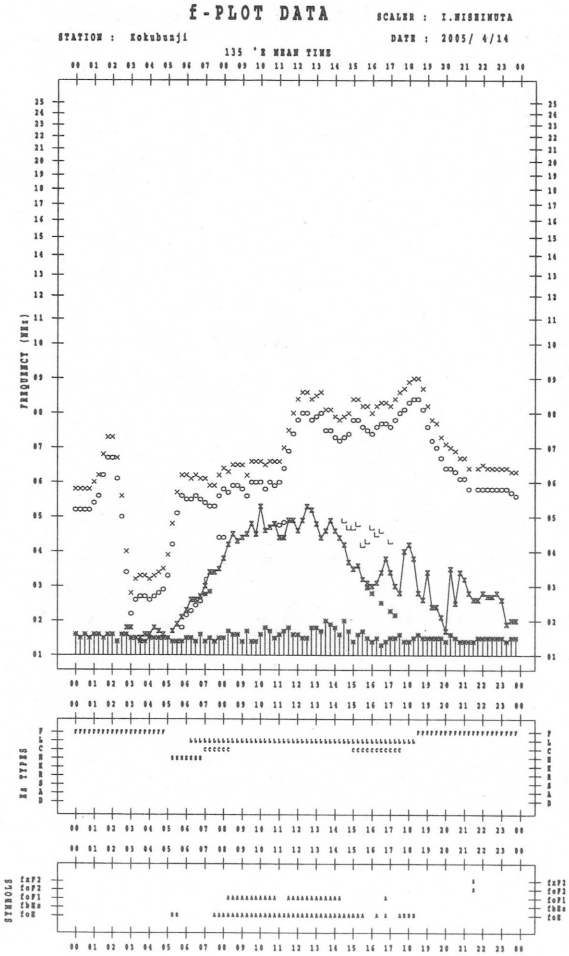

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/11
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

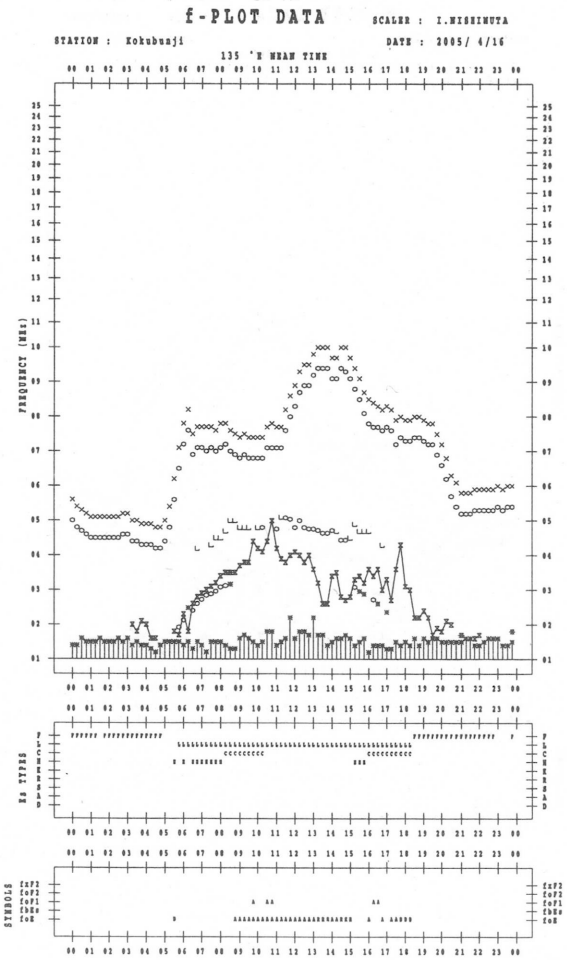

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/10
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

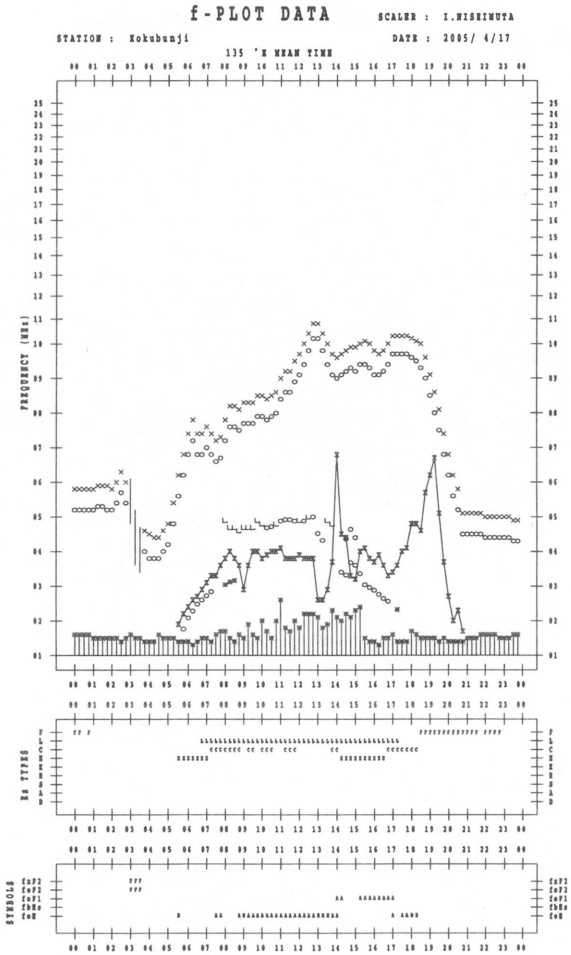

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/12
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

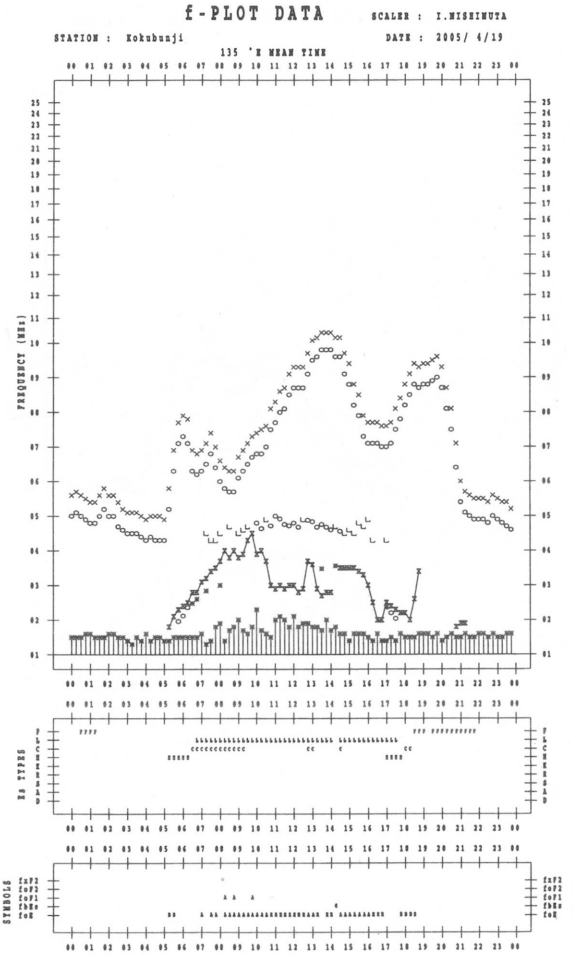

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/13
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

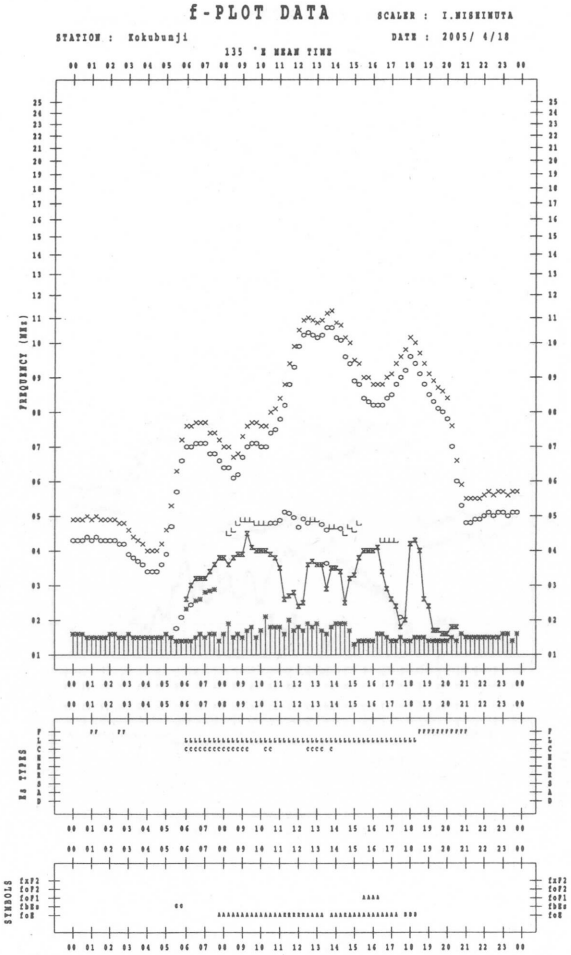

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/15
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

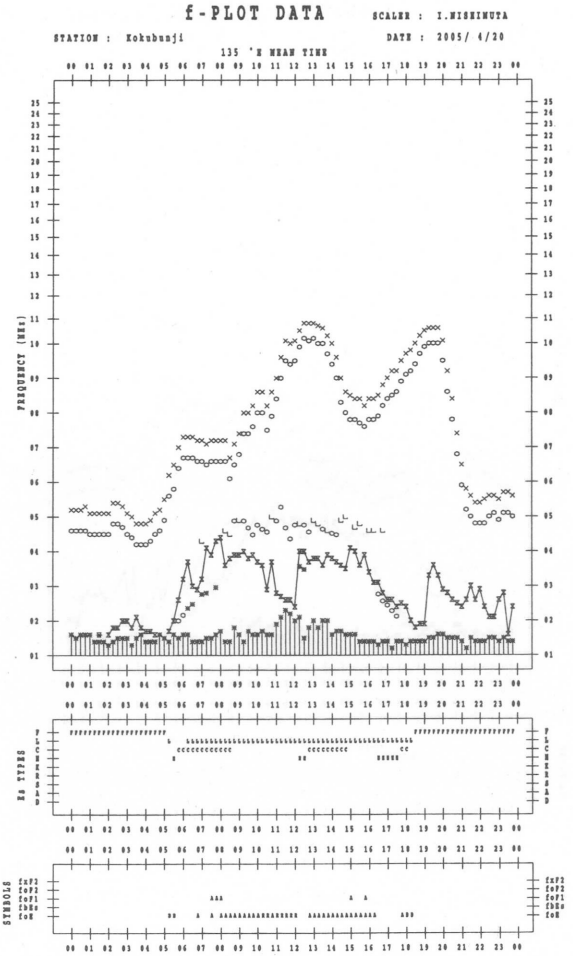

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/14
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

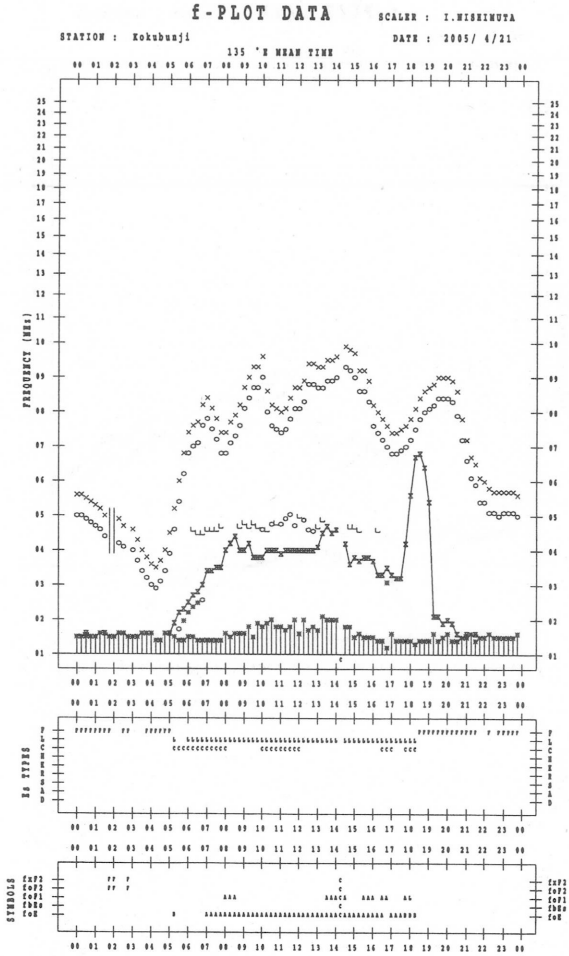

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/16
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

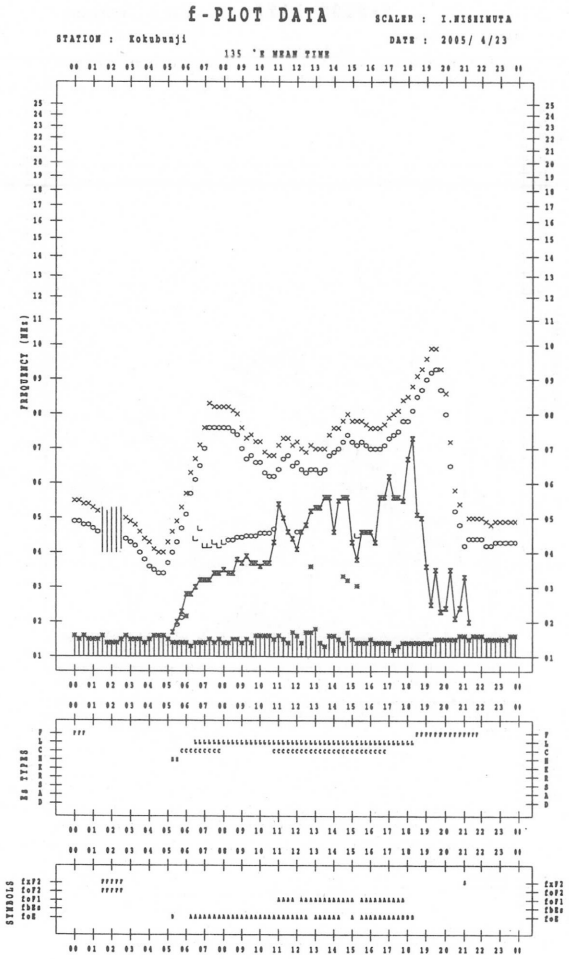

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

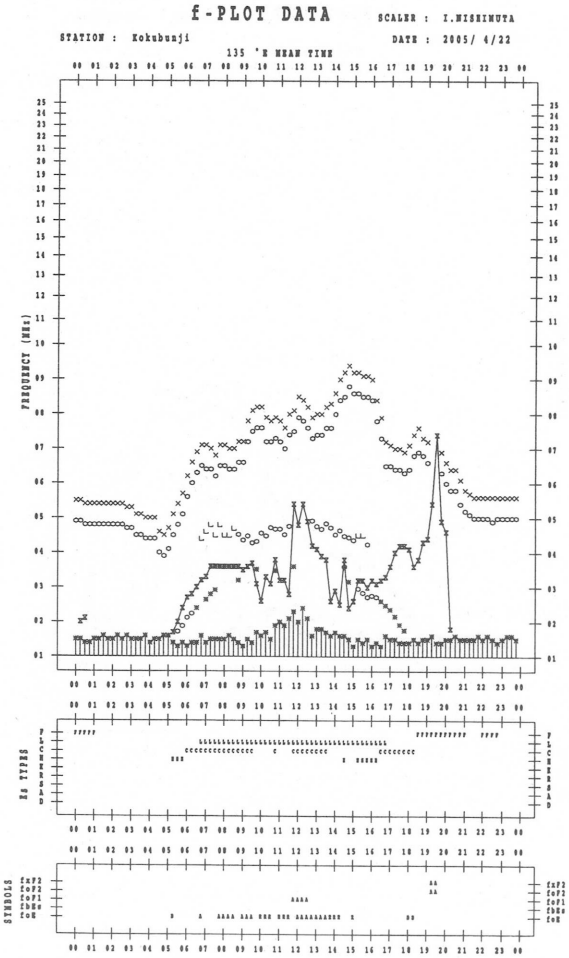

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

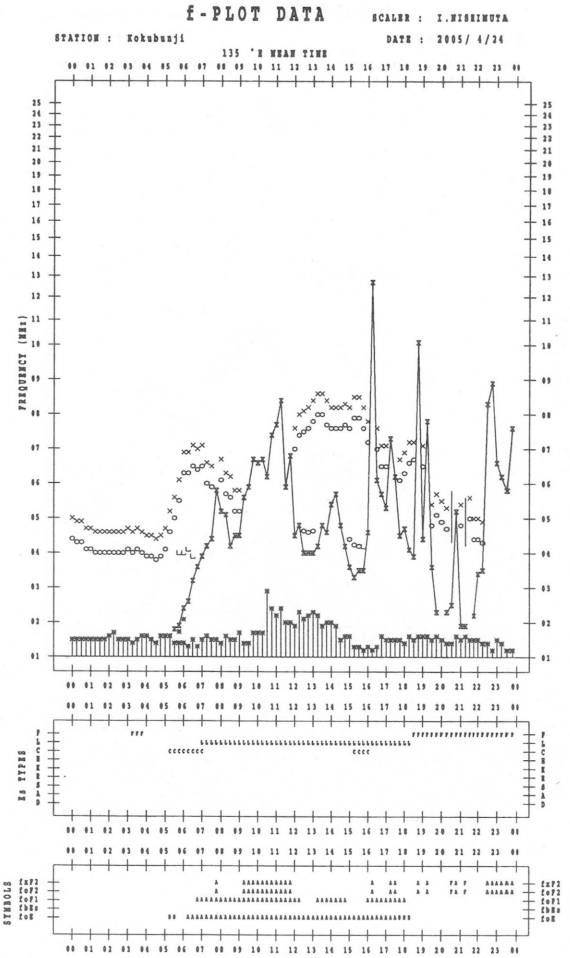

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

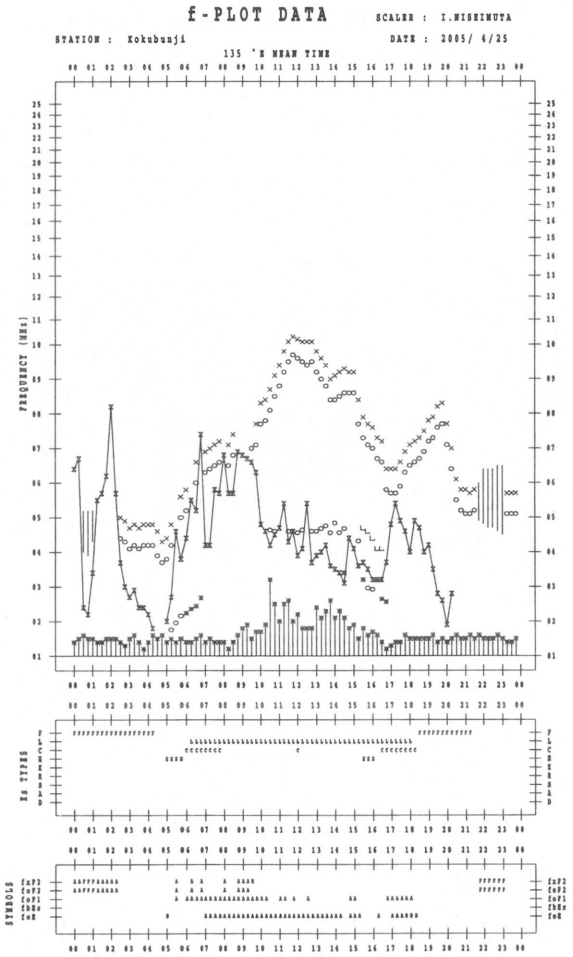

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

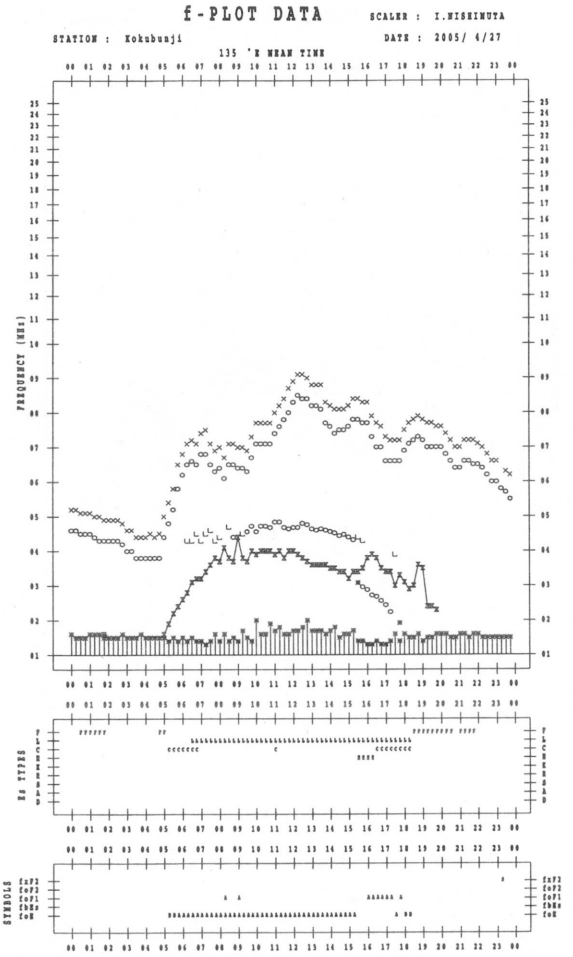

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

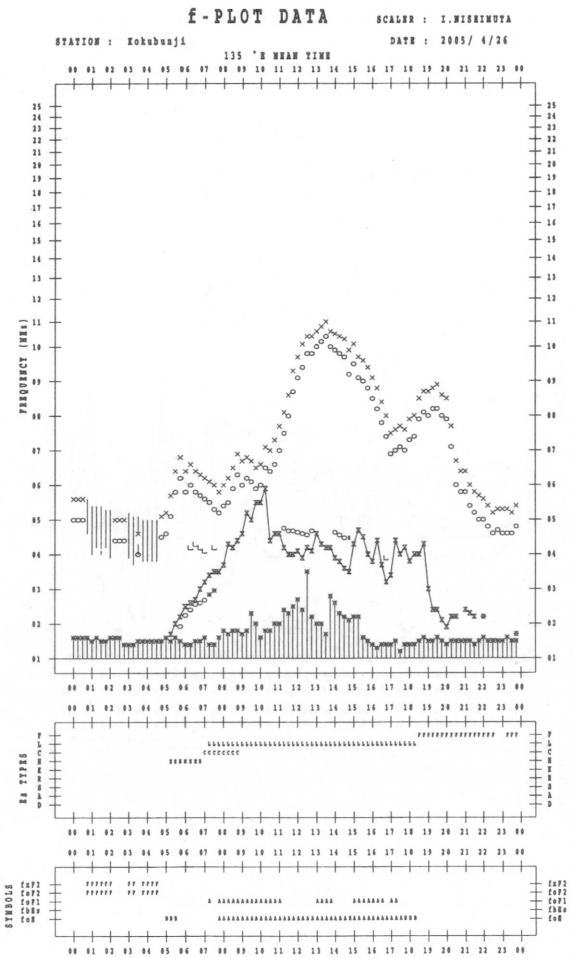

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

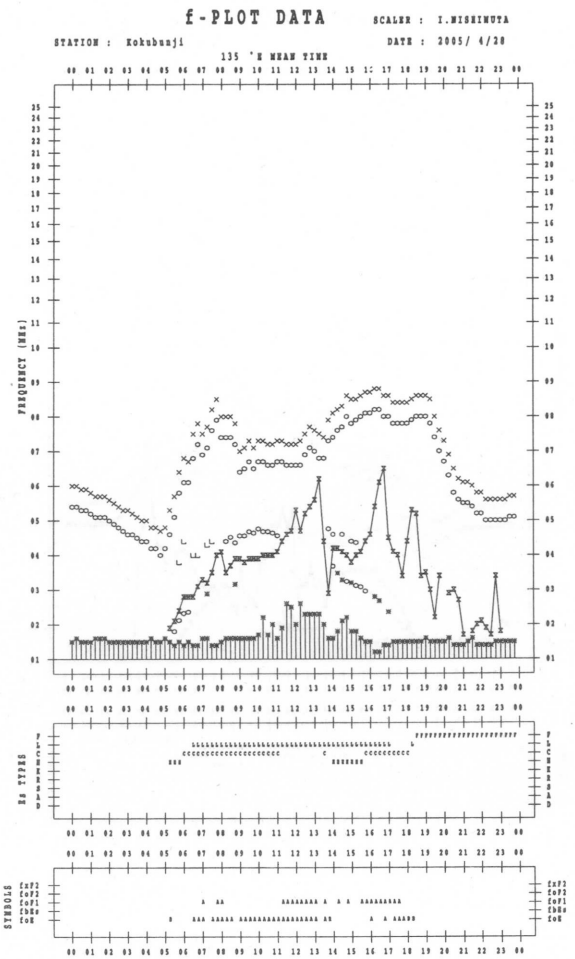

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

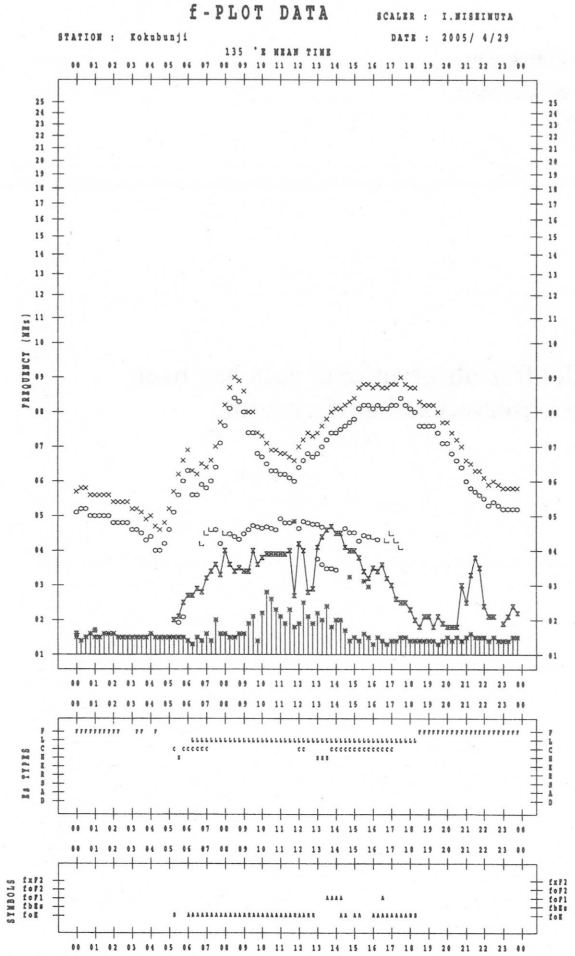

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

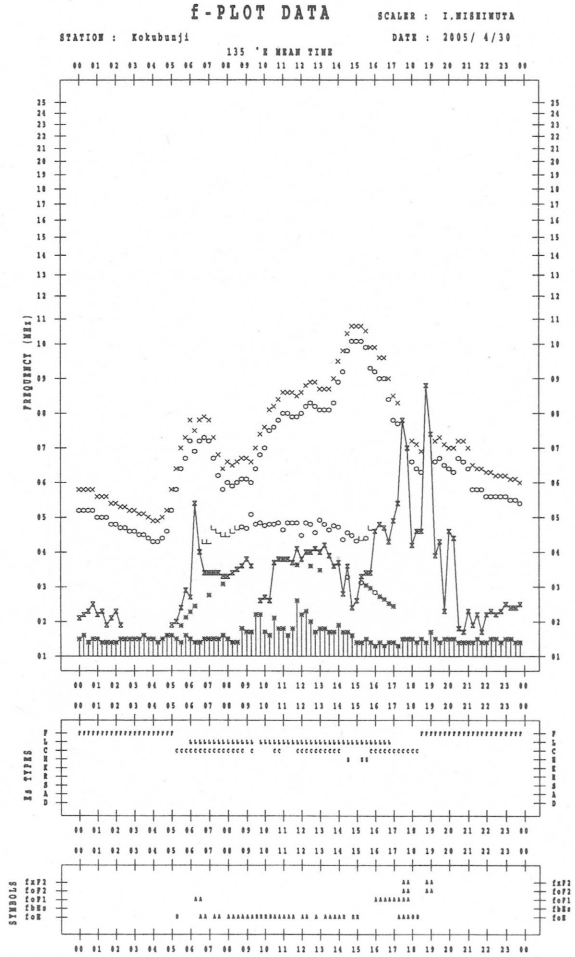

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATA : 2005/ 4/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATA : 2005/ 4/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATA : 2005/ 4/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATA : 2005/ 4/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2005/ 4/29
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


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

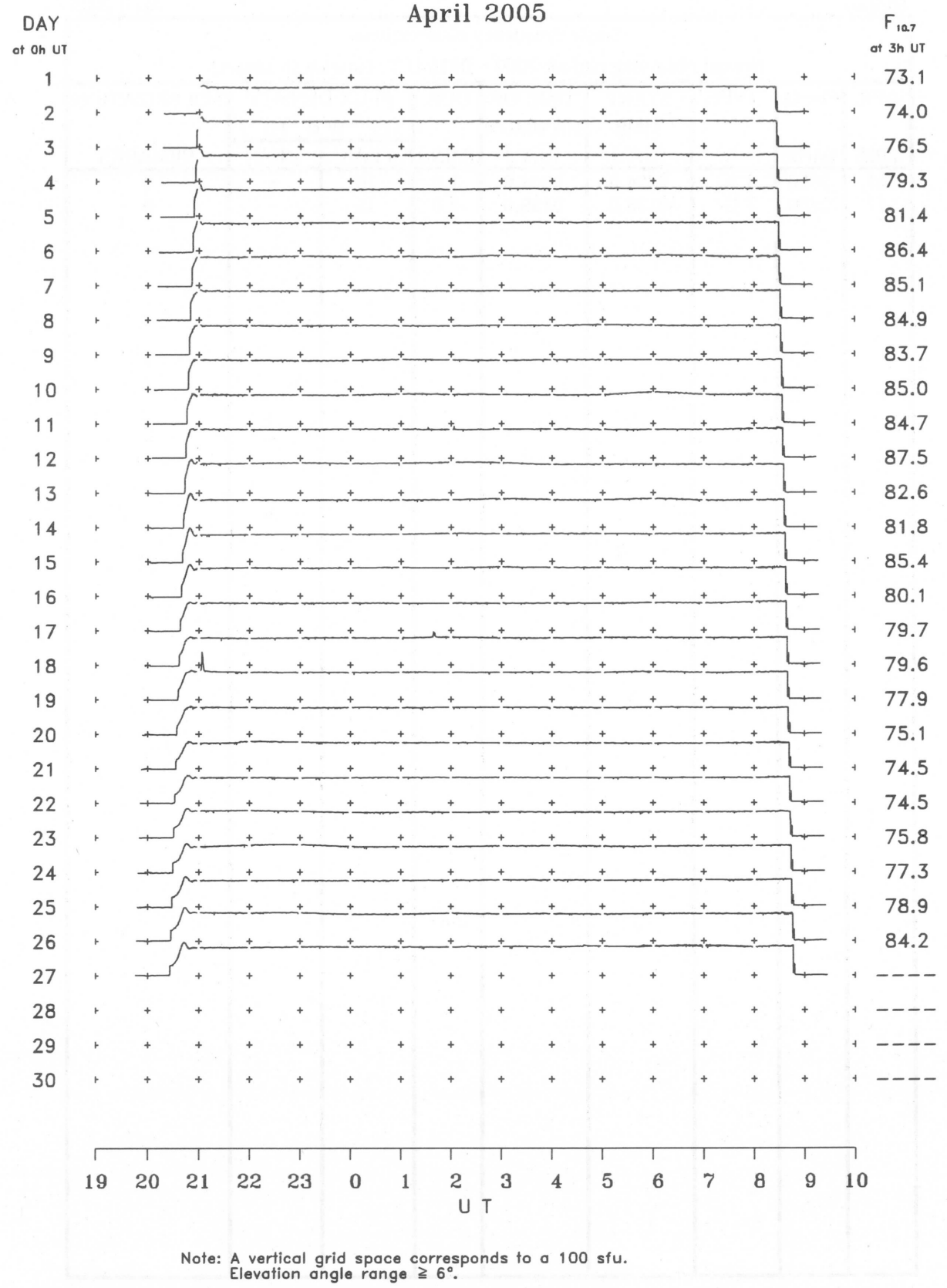
Single-frequency observations

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

APR. 2005	FREQ. (MHz)	TYPE	START TIME (U.T.)	TIME OF MAXIMUM (U.T.)	DUR. (MIN.)	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) PEAK	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) MEAN	POLARIZATION REMARKS
11	2800	8 S	0204.0	0204.0	1.0	10	–	0
17	2800	7 C	0138.0	0139.0	3.0	15	–	0

B. Solar Radio Emission

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



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

IONOSPHERIC DATA IN JAPAN FOR APRIL 2005
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