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IONOSPHERIC DATA IN JAPAN

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CONTENTS

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INTRODUCTION

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

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

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

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

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

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

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

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

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

K Presence of particle *E* layer.

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

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

N Conditions are such that the measurement cannot be interpreted.

O Measurement refers to the ordinary component.

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

Q Range spread present.

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

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

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

V Forked trace which may influence the measurement.

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

X Measurement refers to the extraordinary component.

Y Lacuna phenomena, severe layer tilt.

Z Third magneto-electronic component present.

(ii) Qualifying Letters

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

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

D Greater than.

E Less than.

I Missing value has been replaced by an interpolated value.

J Ordinary component characteristic deduced from the extraordinary component.

M Mode interpretation uncertain.

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

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

U Uncertain or doubtful numerical value.

X Measurement deduced from the third magneto-electronic component.

(iii) Description of Types of *Es*

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

The types are:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. SOLAR RADIO EMISSION

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

B1. Daily Data at Hiraiso

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

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

* Measurement impossible because of interference.

B Measurement impossible because of bursts.

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

B2. Outstanding Occurrences at Hiraiso

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

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

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

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

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

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

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

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

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

B3. Summary Plots of F10.7 at Hiraiso

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

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

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

HOURLY VALUES OF foF2 AT Wakkanai

MAY 2006

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

HOURLY VALUES OF fEs AT Wakkanai

MAY 2006

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	26	G	G	G	G	28	33	36	G	G	40	G	G	G	G	G	G	37	30	27	30	30	25	G
2	G	G	G	G	G	31	33	G	G	81		51	49	G	G	G	G	38	37	51	35	G	G	G
3	G	G	G	26	G	G		G		G	40	G	G	G	39	48	52	50	49	34	28	39	G	G
4	23	G	G	31	26	G		34	38	G	G	60	49	G	G	G	39	31	34	33	26	34	G	G
5	G	G	G	27	G	29	G	G	38	50	42	G	62	45	G	52	44	51		G	G	G	23	30
6	G	24	26	27	28		G	39	G	50	51	44	G	43	G	41	43	58	39	32	38	25	32	31
7	33	32	36	G	G	G	36	45	48	53	58	G	60	51	G	G	G	G	34	32	28	G	G	G
8	G	G	26		30	37	42	G	42	46	79	G	60	G	G	45	G	46	60	35	50	39	78	59
9	39	32	G	G	G	G	39	50	48		61	80	76	80	45	G	36	G	32	53	46	43	G	25
10	59	G	G	G	G	G	46	49	60	53	66	63	62	45	47	50	G	37	G	G	11	G	G	26
11	G	G	27	G	G	32	38	46	G	50	50	50	G		40	G	G	41	G	G	G	39	29	26
12	26	39	39	34	36	50	47	45	47	72	65	63	75	52	50	44	53	52	34	46	60	34	28	G
13	G	G	G	G	G	32	49	65	72	65	49	G	G		58	51	45	38	37	39	G	G	32	26
14	G	G	G	G	G	35	40	50	54	60	G	42	54	62	82	40	60	61	36	28	28	G	G	G
15	24	G	G	G	G	G	G	41	44	G	G	64	52	45	57	41	G	G	G	34	36	25	27	G
16	G	G	G	G	G	34	39	46	48	49	G	G		G	G	38	35	44	43	40	32		31	G
17	G	G	G	G	G	35	42	51		50		47	G	50	76	48	41	73		79	G	68	70	53
18	39	27	44	34	G	38	53	48	63	C	C	64	G	54	39	62	72	59	48	38	60	70	49	56
19	48	39	32	32	31	39		49	80	63	42	59	94	81	68	51	46	60	70	48	50	44	66	43
20	60	54	38	28	G	33	47	60	68		G	G	42	G	43	38	38	71	56	48	39	38	40	40
21	32	G	G	G	29	41	42	42		88	52	81	81	69	99	86	83	86	98	71	95	72	39	46
22	39	51	40	29	39	46	51	61		87	78	42	G	68	68	90	80	96	106	38	36	29	37	39
23	48	43	38	34	35	33	52	76	73	76	90	78	58	59	G	37	47	51		76	50	45	29	59
24	81		80	60	50	58	61	68	70	73	83	80	60	G	46	51	43	61	38	45	111	51	67	44
25	68	33	29	28	30	42	60	79	150		98	84	69	56	64	80		68	72	77	110	145	111	109
26	86	58	68	66	79	98	61	90	83	89	76	108	108	74	84	96	66	82	86	95		68	60	72
27	60	48	34	26	33	40	42	53	52	50	52	47	150	122		145	110	72	47	58	60	44	50	47
28	39	29	G	28	G	52	80	67	71	51	48	50	42	41	47	50	58	60	43	34	G	34	50	59
29	57	52	37	46	51	60		70	144	81	95	58	43	48	98	52	52	45	34		60	108	55	59
30	45	65	60	60	39	37	60	52	46	75	72	86	83	104		65	52	51	76	67	60	50	72	89
31	57	59	37	34	39	43	57	68	81	80	59	77	86	88	82	97	60	65	61	57	77	81	60	69
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	30	31	30	31	30	27	31	27	27	28	31	30	29	29	31	30	31	28	30	30	30	31	31
MED	33	26	26	27	G	35	42	49	52	53	52	51	56	50	46	48	44	51	41	40	37	39	32	39
U Q	57	43	38	34	35	42	53	65	72	76	74	77	75	68	68	62	58	65	60	57	60	51	60	59
L Q	G	G	G	G	G	29	38	41	42	50	41	G	G	G	G	38	35	38	34	33	28	25	23	G

HOURLY VALUES OF fmin AT Wakkanai

MAY 2006

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	14	15	14	18	14	15	14	14	17	16	17	23	23	21	21	18	15	20	16	16	15	14	15	15
2	16	15	21	15	15	16	14	15	15	17	18	20	18	21	18	18	16	15	14	15	16	15	14	14
3	17	14	16	15	14	20	14	14	15	20	21	21	50	22	18	17	15	14	14	14	15	15	15	15
4	15	15	15	15	14	18	16	14	16	16	22	21	18	17	18	16	14	15	16	14	15	14	15	15
5	16	15	15	14	21	15	14	14	15	15	20	18	17	21	18	15	15	14	14	15	15	15	15	14
6	15	15	14	15	15	20	14	15	14	17	20	21	21	21	20	16	15	14	14	14	14	14	14	15
7	15	14	14	15	14	21	16	24	18	21	22	20	23	21	21	17	17	18	17	14	15	15	18	15
8	15	21	16		14	16	21	15	18	21	20	18	20	22	22	16	18	15	14	14	15	14	15	14
9	14	16	14	15	15	20	14	16	18		20	18	20	17	20	20	17	17	16	14	15	15	15	14
10	14	15	14	14	14	16	16	16	20	21	22	22	23	18	21	17	16	15	22	14	15	15	15	15
11	14	15	15	14	14	14	15	15	18	17	24	18	20		15	16	15	14	17	15	17	15	15	20
12	15	14	14	14	15	15	15	14	15	16	17	18	18	20	20	20	15	14	15	14	14	15	14	15
13	17	17	14	14	15	15	14	15	17	15	16	17	16	18	20	17	14	14	15	14	15	15	14	15
14	15	14	15	15	14	15	14	15	16	18	18	18	20	18	17	16	14	14	14	14	16	14	15	15
15	17	16	16	16	15	15	20	16	14	17	17	20	20	18	21	14	14	15	14	14	14	14	15	15
16	14	14	14	14	14	14	15	16	15	18	18	20	17	20	17	14	14	14	14	14	14		14	14
17	16	16	14	14	17	14	15	23	15	15	21	22	21	18	15	18	15	14	14	14	14	14	15	14
18	15	15	14	14	14	15	14	16	17	C	C	17	18	20	18	20	14	21	15	14	14	17	14	15
19	15	15	14	14	14	14		16	17	14	20	18	20	34	20	15	15	14	15	14	15	14	15	14
20	15	14	15	15	15	16	14	18	17		20	17	17	17	17	17	14	14	15	14	14	15	15	15
21	14	15	14	14	14	15	14	17	16	21	20	20	15	18	15	17	16	14	15	14	15	14	14	14
22	15	14	15	15	15	14	14	18	15	18	16	20	18	18	18	21	16	14	14	14	15	15	14	15
23	14	15	15	14	15	14	14	17	18	18	18	20	20	20	18	20	16	14		14	14	14	15	15
24	15	14	14	14	14	15	14	16	20	21	20	18	18	18	18	21	17	14	14	14	14	14	14	14
25	14	15	14	14	14	14	14	18	22	20	20	21	20	26	24	16	15	14	14	14	15	14	14	14
26	15	15	14	15	14	14	14	15	15	24	23	18	20	21	17	20	18	14	15	14		17	16	14
27	14	15	14	15	14	14	15	16	16	20	33	20	18	20	18	15	16	14	14	14	14	15	14	14
28	14	14	16	14	15	17	15	14	18	18	20	20	22	18	18	17	16	14	14	14	14	14	15	14
29	14	15	14	14	14	15		16	20	21	21	20	22	18	15	14	15	15	14	14	14	14	14	15
30	15	15	14	14	14	14	15	17	15	21	16	18	18	17	17	23	16	14	14	14	14	15	14	14
31	14	15	14	15	14	15	14	15	20	20	20	22	22	23	20	20	18	16	15	14	14	15	15	14
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	30	31	31	29	31	31	28	30	31	31	30	31	31	31	31	30	31	30	30	31	31
MED	15	15	14	14	14	15	14	16	17	18	20	20	20	20	18	17	15	14	14	14	15	15	15	15
U Q	15	15	15	15	15	16	15	17	18	21	21	21	21	21	20	20	16	15	15	14	15	15	15	15
L Q	14	14	14	14	14	14	14	15	15	16	18	18	18	18	17	16	15	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Kokubunji

MAY 2006

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	52	47	51	45	41	48	64	71	64	59	63	62	71	68	72	77	86	78	69	72	66	66	54	60
2	48	A	48	47	41	41	66	90	74	81		63	70	76	78	77	71	63	66	77	77	64	54	53
3	54	54	53	54	52	53	60	64	65	68	70	65	76	82	82	87	84	84	80	80	80	64	41	A
4	42	45	42	A	41	44	55	61	72	66	59		68	76	84	88	84	68	66	76	78	80	65	54
5	54	55	52	45	43	41						59	48	48	65	72	69	57	61	62	62	53	53	54
6	54	50	47		41	53	59	59	63	68	67	59	64	71	A	81	84	84	85	A	63	A	65	65
7	A	A	54	55	A	A	58	A	A			A	A		54	55	51	42	61	84	64	37	39	39
8		42	37	32	32	45	51	51	A	A	A	A	A		63	64	59	58		62	54	52	51	48
9	46	A		38	41	44	55	59	58	48	53				77	90	80	65	56	55	55	54	52	
10	44	45	44	41	38	46	55	60					68	78	82	80	65	59	59	A	64	55	54	53
11	51			45	44	55	60			55	62			71	76	A	84		91	81	66	53	54	54
12	54	54	54	53	47	54	59	59	A	A	61		81	82	84	67	A	A	64	A	75	54	53	49
13	47	45	44	44	42	53	59	56	52	A	A	A	68	72	76	67	62	64	71	77	74	52	52	54
14	54	52	44	46		48	61	A	55	A	A	A	A	63	75	81	76	70	67	54	50	55	54	54
15	54	45	45	44	41	43	55	A	62	56					68	77	A	66	57		54	61	54	52
16	A	39	38	30	36	45	A		59	55	56	A	A	A	63	69	66	63	69	72	66	54	54	54
17	44	34			41	47	55	45	54	56	56		A	A	A	68	86	90	98	88		46	A	44
18		A	38	34	36	44	62	52	A	A				64	A	A	145	170	76	A	54	63	51	
19	45	42		A	A	42	39	A	A	A				61		65	A	A	A	54			47	
20	47	44		34	34	44	51	51	A	A	A	A	A			59		48	54	A	63	54		54
21	54	54	44	44	42	55	55	A	A	67		A		56	A	A		A	58	A	73	A	A	54
22	54	54	54	46	42		55	69	A	A	A		A	A		72	C	A	A	A	66	65	62	54
23	54	48	A	42	41	45	65	58	A				48	A	62	67	69		68	66	A	54	A	A
24	45	46	A	44	44	48	71	A	A	A	A	A	A	A		68	77	82	80	77	74	61	A	46
25	48	47	44	46	45		48	66	61	A	A	A	A	A		A		58	58	A	66	66	62	52
26	45	A		42	44	52	55	A	59		A				61	A	65	66	68	A	65	A	66	58
27	54	54	A	A	44	45	54	98	A	A	A	A	A		60	67	75	77	77	61	58	53	58	65
28	A	A	52	52	52	62	66	A	A		A	A	A	A	A	84	82	81	71	72	66		54	53
29	A	A	47	41	44	47	48	A	85	59	C	C	C	C	C	C	C	A	A	74	A	A	62	65
30	73	64	54	55	52	49	57	78	142	79	57	A		A	A	A	A	66	A	A	A		52	54
31	54	A	53	54	44	A		A	76	A	59			A	A	85	84	79	69	63	55	52	54	54
	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	22	22	26	28	27	28	18	16	13	11	5	10	14	18	24	22	24	26	20	26	24	26	26
MED	52	47	47	44	42	47	56	60	62	59	59	62	68	71	74	72	76	66	68	72	66	54	54	54
U Q	54	54	53	47	44	53	60	69	73	68	63	64	71	76	78	81	84	80	76	77	73	63	58	54
L Q	45	45	44	41	41	44	55	56	58	55	56	59	64	63	63	67	66	61	61	62	58	53	52	52

HOURLY VALUES OF fEs AT Kokubunji

MAY 2006

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G	G	G	G	G	35	42	45	G	44	G	G	G	G	G	49	53	31	29	G	G	G	G
2	G	43	G	G	G	26	34	G	42	44	43	G	G	G	G	46	41	39	41	30	47	25	27	G
3	50	35	29	33	30	G	G	40	49	40	51	50	G	G	G	G	G	G	30	G	33	40	G	57
4	44	G	G	49	30	G	G	34	46	50	G		50	47	G	G	G	G	31	44	28	52	37	29
5	G	G	G	G	G	G		G		G		G	47	G	G	52	50			59	49	G	G	28
6	29	G	34	35	26	G	G	G	45	49	60	G	G	G	86	71	72	55	40	131	86	95	80	43
7	69	94	G	25	68	76	35	52	76	55	49	62	51		48	G	G	G	G	G	G	G	G	57
8	50	24	29	G	G	39	37	49	59	101	94	96	52	G	61	39	45	46	60	59	54	40	36	58
9	52	82	49	33	26	25	G	43	48	51	G	60	58		54	40	G	G	G	G	43	43	49	59
10	50	G	G	G	G	G	42	45	63	47			G	46	43	G	G	G	35	71	50	47	39	G
11	32	G	34	30	G	G	G		46	G	51	48		48	51	94	G		83	59	29	G	G	40
12	41	24	G	G	G	34	39	51	71	72	49	51	G	49	48	83	80	86	51	71	58	48	39	35
13	24	G	G	G	27	28	42	49	62	79	71	110	66	G	59	G	53	38	50	111	72	50	22	G
14	G	28	29	33		32	48	69	58	72	60	67	68	57	45	G	G	39	40	37	32	40	33	32
15	G	G	23	31	35	G	39	65	59	50	48			41	G	61	80	62	56		29	47	49	57
16	49	G	G	G	G	30	72	57	54	48	49	60	64	96	G	43	54	47	36	59	34	53	44	33
17	45	59	G	28	G	29	34	34	45	G	G		145		104	51	59	52	57	43	26	40	59	39
18	39	48	37	60	G	36	48	50	56	64		39	47	57	74	70	180	158	96	94	65	58	72	50
19	35	26	48	49	59	36	G	70	114	51		46		49	61	62	122	152	133	33	42	60	50	59
20	59	48	34	G	29	29	43	49	148	82	132	61	61	51	50	43	48	34	32	60	59		55	30
21	43	35	34	30	G	G	47	62	135	G	G	75	G	51	116	122	87	95	53	80	71	102	72	50
22	53	34	43	40	32	43	42	59	75	64	96		74	76		40	C	82	80	71	59	50	59	44
23	34	27	83	26	G	G	36	48	64		51	58	54	68	55	G	41	82	55	78	80	60	59	71
24	48	39	64	39	32	34	50	92	86	104	119	160	107		90	60	83	G	82	50	G	58	93	41
25	45	41	40	29	G		43	60	57	76	84	84	118	117	77	152	107	80	49	73	38	71	50	45
26	67	50	50	33	50	36	37	72	60		107	65	54	40	50	74	39	30	35	60	40	80	49	59
27	67	50	72	60	37	31	58	105	113	86	75	88	80	47	49	45	39	38	31	33	42	50	36	57
28	80	72	33	26	G	30	49	67	100	150	117	107	78	89	91	62	64	59	69	50	36	34	47	40
29		104	72	72	43	42	63	180	81	56	C	C	C	C	C	C	C	114	90	58	68	90	82	83
30	54	60	54	53	32	G	40	82	134	87	59	95	63	68	108	153	95	53	94	89	79	51	78	26
31	69	71	60	50	25	89	47	60	80	94	34		57	87	82	53	40	52	37	40	70	41	59	59
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	31	31	31	30	30	30	30	30	29	26	24	27	26	29	30	29	29	30	30	31	30	31	31
MED	45	35	34	30	26	29	40	52	61	55	51	60	54	48	51	48	49	52	50	59	43	49	49	43
U Q	53	50	49	40	32	36	47	67	81	80	84	86	68	68	79	70	80	81	69	71	65	58	59	57
L Q	32	G	G	G	G	G	34	43	49	45	44	47	G	G	22	G	20	32	35	37	32	40	33	30

HOURLY VALUES OF fmin AT Kokubunji

MAY 2006

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

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

HOURLY VALUES OF foF2 AT Yamagawa

MAY 2006

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	54	53	54	54	48	44	51	65	74	57	A	72	77	86	88	91	100	91	81	81	83	64	54	52
2	54	52	54	48	42	41	52	76	74	70	63	70	83	95	96	95	81	76	76	76	74	66	64	53
3	60	52	52	51	48	48	55	72	65	65	72	70	77	83	91	96	106	108	96	88	87	76	53	48
4	45	42	42		34	37	52	60	60	62		A	A	82	97	100	110	91	77	82	82		62	62
5	66	54	61	52	54	51	41		47	55		56		58	65	76	75	62	71	76	62		54	51
6	54	53	48	41	37	37	54	61	62	61	66	62	70	71	72	85	86	90	78	82	64	50	A	54
7	52	A	54	52	47	51	65	50	A	61	A	A	A	60	62	60	58	40	70	90	66	42	36	42
8	40					28	46	57	62	62	62	50	68	77	75	81	92	77	74	75	71			
9	52	45	50	39	38	37	52	59	56		58	A		72	91	98	110	78	66		62	39	52	50
10	49	47	47	45	40	42	58	55	57	55	56	A	A	93		A	A	80		87	74	54	42	
11	50	52	44	42	40	45	54	44	51			59	58		A				116	78	54	60	65	65
12			55	54	51	52	66	58	54	58	60	61	73	88	87	76	76	71	80	81	74	60		53
13	54	52	54	54	54	40	54		56	A	A	A					A		75	76	79	54		52
14	54	54	48	44	38	40	52	44	58	57	60	A	67	76	84	96	98	86	72	66	54	66	58	54
15	62	50	46	42	41	41		72	57	56	55		57		77		82	80	70	45	71	66		A
16	A	52	52		41	42	52				52	A	58	58	72	79	80	81	82	74	54	52	48	
17			38	37	36	32		54	A	55	56	44	46	57	66	77	88	101	111	85	66		54	51
18	52	51		46	41	38	55	60	57	A				64	66		A	73		64			A	A
19		34	34	A	A	42		A	A	A	A			65	76	77	68	61	A	66		54		
20	A	48				32	46	55	57	A	A	A	A	A			58	62	70	65	64	52	54	54
21	52	51	50	46	42	42	57	55	78	A	48	61	61	66	68	68	73	72	78	85	66	66	A	52
22	52	44	42	38	38	34	48	66	70	67	54		A	59	62	69	75	71	70	70	71	71	54	54
23	54	66	51		41	38	48	58	63	A	A	60		A	60	74	82	78	68	64	54	54	48	
24		44	42	46	42	49	54	A	A		A	64	A	72	75	76			A		90	80	66	
25		62	54	54	42	46	54	63	62	A	A	59	A	60		A	70	76	72	72		66	47	52
26	A	A	47	44	40		48	55	56	56	56			A	A	70	72	73	66	64		64	53	A
27	66		52	46		41	51	68	A	A	A	A	A	A		76		90	76	61	50	51	58	52
28	54	61	52	47	45	44	52	62	60	A	A	A	A	A	80	84		82	82		78	72	62	50
29	52	51	50	A	48	48	58	75	90	57	A	A	58		62	70	73	77	86	82	71	73	54	52
30	52	54	54	63	54	47	51	A	A	A		A	A	A	70	A	A	A	A	A	A		73	
31	66	54	68	55	42	A	44	58	89	71	A	A	A	A	A	86	88	80			A	46	50	A
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	23	25	28	24	27	29	28	25	24	17	14	13	13	20	23	23	23	27	25	26	25	25	23	20
MED	54	52	50	46	42	42	52	59	60	58	57	61	67	72	75	77	81	78	76	76	71	60	54	52
U Q	54	54	54	53	48	46	54	65	67	63	62	67	75	82	87	91	92	86	81	82	76	66	62	54
L Q	52	47	46	43	40	37	49	55	56	56	55	57	58	60	66	74	73	72	70	66	62	52	50	51

HOURLY VALUES OF fEs AT Yamagawa

MAY 2006

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

HD	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	25	G	33	26	G	26	29	40	39	61	100	62	G	50	50	55	61	48	45	58	39	48	32	25
2	G	G	G	G	G	G	G	36	45	44	46	49	53	G	G	39	42	34	G	G	32	26	27	28
3	G	29	G	26	G	G	G	38	42	46	76	65	67	52	46	45	48	38	32	28	44	33	32	39
4	40	40	G	55	33	58	29	38	44	47	64	107	87	G	44	48	G	G	35	40	37	68	41	40
5	G	G	G	G	G	G	30	37	43	46	50	G	53	G	40	55	49	56	44	33	43	68	28	30
6	G	G	23	26	G	24	28	35	37	43	40	G	G	42	48	56	42	G	G	G	39	40	32	36
7	50	71	57	49	35	36	34	49	76	56	104	118	61	G	47	60	38	G	53	50	40	43	32	32
8	29	37	49	49	30	28	36	49	44	39	46	56	48	G	51	50	G	40	49	43	60	80	66	67
9	33	34	43	28	30	G	37	37	50	60	58	59	63	59	63	52	G	G	31	G	46	23	34	33
10	45	36	43	26	G	G	32	36	56	52	50	109	104	76	68	121	131	83	132	66	34	54		69
11	71	51	40	38	29	32	31	49	41	49	57	55	51	97	120	148	134		55	90	42	G	33	59
12	94	90	40	G	G	34	37	45	41	48	85	44	G	G	48	52	42	46	36	46	49	55	78	48
13	36	34	28	30	G	G	30	53	57	67	101	76	79	156	99		170	146	G	60	39	57	59	30
14	27	33	G	40	G	29	45	50	51	58	59	64	57	51	72	G	G	G	34	31	38	36	39	38
15	40	40	29	25	G	G	60	52	64	54	49	56	61	63	68	81	58	68	66	58	59	41	72	78
16	59	49	39	59	30	G	57	68	76		45	86	57	51	46	70	42	G	40	38	G	G	26	50
17	59	50	34	43	45	36	68	135	96	64	48	46	46	G	81	62	46	44	29	G	34	80	44	30
18	G	G	58	61	28	G	34	56	60	58	65	66	72	48	65		124	109			123	84	102	116
19	85	29	39	75	67	34	70		88	61	65	56	51	58	64	G	47	70	71	78	84	34	54	43
20	49	G	44	33	G	34	40	53	68	103	63	76	83	69	52	40	38	61	52	65	47	24	55	
21	58	57	33	41	29	G	29	45	51	90	G	G	50	57	51	48	42	46	37	29	53	40	53	43
22	28	57	28	24	35	48	37	62	54	64	61	64	59	51	54	G	G	44	33	38	57	23	25	44
23	112	68	78	91	30	44	31	40	49	76	88	51		92	52	G	50	G	37	40	30	49	82	57
24	78	37	79	39	24	G	36	81	85	80	116	69	117	54	44	74		159		148	71	71	34	80
25	83	50	68	46	54	48	42	37	48	92	128	121	71	53	70	84	49	G	32	36	50	58	59	48
26	59	60		77	59	58	34	43	50	52	48	79	77	100	64	G	44	G	41	32	67	43	59	82
27	58	59	57	54	50	28	49	61	100		150	70	54	66	73	62	91	79	59	35	26	G	78	58
28	58	43	33	G	38	27	32	51	64	64	63		151	113	72	78	96	85	66	78	58	32	34	28
29	35	28	42	60	34	42	47	56	42	G	175	80	52	61	50	58	54	39	38	29	33	58	58	68
30	56	69	57	56	44	41	33	113	147			100	98	86	78		163	151	161	92	89	114	65	72
31	49	70	49	55	44	56	39	49	59	62	90	88	84	74	121	77	82	84	84	78	50	37	40	57
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	29	31	31	31	31	30	31	28	30	30	30	31	31	28	30	30	29	30	31	31	30	31
MED	49	40	39	41	30	28	34	49	51	58	64	64	60	54	63	55	48	44	40	40	44	43	40	48
U Q	59	57	53	55	38	41	42	56	64	64	100	80	77	76	72	72	82	79	60	60	59	58	59	67
L Q	28	29	28	26	G	G	30	38	44	47	49	55	51	42	48	46	42	G	32	31	37	33	32	33

HOURLY VALUES OF fmin AT Yamagawa

MAY 2006

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	15	15	14	15	15	14	14	14	15	18	24	27	26	27	26	21	18	14	14	14	15	14	14	15
2	15	17	15	16	15	15	20	14	17	23	23	24	28	24	27	20	17	16	14	15	14	15	14	14
3	15	14	15	15	15	15	15	14	16	22	29	28	33	32	20	22	18	16	14	14	14	14	15	14
4	14	14	14	14	14	14	16	14	16	16	21	22	24	27	26	20	16	17	14	14	15	14	14	14
5	15	15	14	14	15	14	14	15	16	22	26	24	36	26	48	24	18	15	14	14	14	14	14	14
6	15	14	14	14	15	16	14	14	14	20	23	27	26	48	27	21	20	15	15	16	14	14	14	14
7	14	15	14	14	15	14	14	14	16	29	23	28	27	27	27	21	20	14	14	14	14	14	14	14
8	14	14	14	14	14	14	14	14	15	18	20	26	22	27	27	23	20	14	14	14	14	14	14	14
9	14	14	14	14	14	14	14	14	14	18	20	29	24	35	27	20	18	17	14	15	14	15	14	14
10	14	14	14	14	14	14	15	14	15	18	18	28	29	32	23	18	14	14	14	14	14	14	14	14
11	15	14	14	14	15	14	15	14	18	23	21	27	21	24	20	18	17		14	14	14	15	15	14
12	15	14	14	14	16	14	15	15	14	20	20	20	20	20	18	18	15	15	14	14	15	14	14	14
13	14	14	14	15	14	14	15	14	14	17	21	21	21	27	18	16	14	14	14	14	14	14	14	15
14	14	14	14	14	14	14	14	14	14	15	16	21	21	20	26	21	17	14	14	14	15	14	14	14
15	14	14	14	14	14	14	14	14	14	20	27	26	27	26	30	17	16	14	14	14	15	15	14	14
16	14	14	14	14	14	14	14	15	14		17	24	22	22	26	23	17	14	14	15	15	14	14	14
17	14	14	14	14	14	14	14	14	15	16	20	18	28	22	34	20	15	14	14	14	14	14	15	14
18	14	14	14	14	15	15	14	14	15	17	18	22	27	24	22		17	14	14	14	15	14	14	14
19	14	14	14	14	14	14	14	14	15	15	35	21	26	21	21	20	14	14	14	14	14	15	14	14
20	14	14		14	14	14	14	14	14	20	29	26	27	27	24	20	17	15	15	14	14	14	14	14
21	14	14	14	14	14	14	14	14	16	17	22	48	34	34	22	21	18	15	14	14	15	14	14	14
22	14	14	15	14	14	14	14	14	14	21	23	24	32	27	24	24	17	14	14	14	14	15	15	14
23	14	14	14	14	14	14	14	14	15	16	22	26	27	34	34	23	15	15	14	14	14	14	14	14
24	14	15	14	14	14	15	14	14	17	20	20	33	32	33	24	17	18	15	14	14	14	14	14	14
25	14	15	14	14	14	14	14	14	16	17	32	28	34	34	27	24	20	15	14	14	14	14	14	14
26	14	14	14	14	14	14	16	14	16	17	21	21	23	32	28	17	18	15	14	14	14	15	14	14
27	14	14	14	14	14	15	14	15	14	17	21	26	28	26	21	21	17	17	14	14	15	15	14	14
28	14	14	14	14	14	15	14	14	15	18	22	22	26	26	20	18	16	14	14	14	14	15	14	14
29	15	14	14	14	15	15	14	16	14	18	21	32	30	27	21	20	16	14	14	14	14	14	14	14
30	15	14	14	14	14	14	14	15	14	16	27	35	27	24	20	20	28	17	14	14	14	14	14	14
31	15	15	14	14	14	14	17	14	17	16	22	28	28	28	21	18	17	14	14	14	15	14	15	14
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	30	31	31	31	31	31	31	30	31	31	31	31	31	30	31	30	31	31	31	31	31	31
MED	14	14	14	14	14	14	14	14	15	18	22	26	27	27	24	20	17	14	14	14	14	14	14	14
U Q	15	14	14	14	15	15	15	14	16	20	24	28	29	32	27	21	18	15	14	14	15	15	14	14
L Q	14	14	14	14	14	14	14	14	14	17	20	22	24	24	21	18	16	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

MAY 2006

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	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	A	132	134	100	43	47	
11	C	C	C	C	C	C	C	C	C	C	C	C	65	80	88	97	117	138	A	A	A	64	66	66
12	61	52	54	A	52	55	42	A	A	58	A		76	93	88	86	A	92	102	88	62	52	52	49
13	51		44	50	34	29	45	A	57	64	61	68	78	A	A	81	A	87	A	85	78	63	58	64
14	65	54	52	50	34	35	52	65	64	68	58		71	92	106	128	138	110	92	86	83	77	65	62
15	54	52	44	A	A	36	57	58	A	44	A	A	72	90	91	101	101	90	86	87	84	73	65	53
16		52	44	A	38	30	A	74	61	A	A	A	64	63	80	100	102	87	92	86	66	64	52	43
17	37	37		36	A		42	54	66	57	A			63	77	90	103	110	102	88	69	61	63	63
18	61	52	50	42	41	42	58	A	60	A	56	A		65	67	80	90	87	86	77	A	64	50	A
19	A	A	A	A	A	A	A	A	45	52			A	71	A	88	A	74	A	A	75	A		
20	52	42		45	42	30	48	60	63	63		A	A	57			62	68	78	72	A	58	58	54
21	51	54	44	42	38	32	40	67	80			62	70	73	74	81	87	88	90	88	88	71		
22	52	A		36		29	43	A	64	A	A	A	A	72	70	67	75	85		77	73	64	66	63
23	52	61	54	53	A	A	45	66	57	A		A	A	A	64	80	87	87	75	63	A		46	48
24	A	48	47	44	42		48	57	59	58		A	76		97	100	101	107	118	121	106	76	66	66
25	65	65	65	60	58	52		62		58		A	A	67	A	A	C	C	C	C	C	C	C	C
26	C	C	C	C	C	C	C	C	C	C		65		C	C	78	81	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	A	61	A	A	82	A	A	A	A		53	52	65
28	64	72	61	59	53	42	50	66	65	A	A	68	84	A	A	A	90	A	88	A	87	71	71	65
29	61	58	53	50	50	50	57	84	67	58	A	64	A	A	A	76	86	88	101	84	79	73	65	61
30		52	61	54	47	A	A	A	A	A	A	A	A	A	72	113	86	97	88	84	76	76		73
31	74	85	99	66	65	45	44	67	87	A			72		86	92	A	90	84	66	A	48		42
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	14	15	14	14	13	13	14	12	14	10	3	5	11	12	13	18	15	17	15	16	14	18	16	16
MED	58	52	52	50	42	36	46	66	64	58	58	65	72	72	80	87	90	88	90	86	78	64	60	62
U Q	64	61	61	54	52	47	52	67	66	63	61	68	76	85	89	100	102	102	102	88	87	73	65	65
L Q	52	52	44	42	38	30	43	59	59	57	56	63	65	64	71	80	86	87	86	77	73	58	52	51

HOURLY VALUES OF fEs AT Okinawa

MAY 2006

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

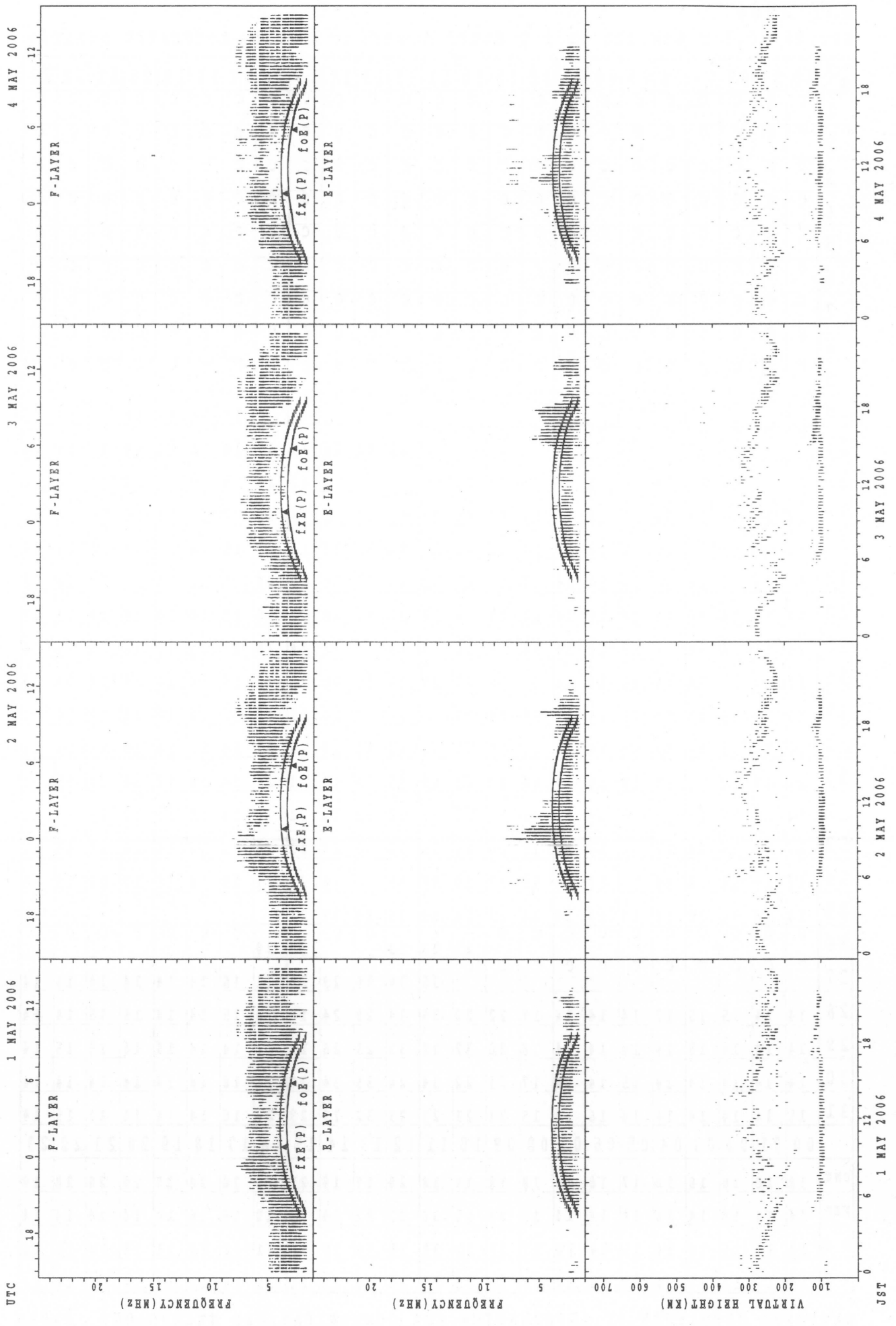
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	38	90	G	19	G	44	38
11	C	C	C	C	C	C	C	C	C	C	C	C	G	G	42	80	77	93	105	106	78	36	27	G
12	58	46	58	59	47	34	38	83	136	78	72		G	G	G	G	90	G	43	51	31		57	69
13	49	46	G	34	G	25	42	60	48	50	56	60	69	92	148	76	103	62	115	77	44	29	45	93
14	79	37	34	G	G	36	51	60	51	78	56	58	47	67	56	G	G	G	G	G	30	50	40	38
15	36	43	40	58	46	36	50	60	88	62	84	67	62	51	61	55	50	50	65	60	39	27	34	46
16	56	58	44	58	25	41	56	56	62	95	60	52	66	50	58	G	G	44	40	44	36	33	34	G
17	51	48	39	35	49	36	49	68	92	60	61	52	G	G	54	41	54	70	44	26	G	G	G	40
18	37	34	46	G	G	G	39	163	65	80	53	83	G	G	48	58	50	44	76	94	176	59	68	72
19	110	72	105	79		84	45	52	50	44	50		64	74	96	92	92	74	114	96	60	86	41	44
20	37	28	41	42	G	26	46	55	50	44	44	55	66	52	48	51	G	G	40	42	65	79	60	44
21	49	G	G	33	25	30	37	40	41	46	42	G	G	57	G	48	G	35	34	48	52	72	37	
22	46	58	40	47	29	G	29	77	80	113	86	98	95	65	50	44	G	G	39	33	32	40	36	34
23	53	34	58	34	67	68	48	41	52	70	50	78	114	72	62	53	91	54	34	28	78	36	33	39
24	70	58	59	29	32		35	39	72	54	78	180	.69		49	41	G	35	39	G	28	G	29	40
25	40	37	48	93	90	65	70	49	48	52	G	113	122	69	93	72	C	C	C	C	C	C	C	C
26	C	C	C	C	C	C	C	C	C	C	G	G	71	C	C	50	G	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	180	55	59	78	73	119	106	91	68	55	44		40
28	38	31	G	G	G	26	35	60	82	91	94	66	72	91	140	123	86	92	91	104	72	50	36	49
29	27	35	48	26	34	34	34	48	50	50	69	59	138	75	88	50	52	37	30	46	G	26	G	30
30	58	38	70	49	37	89	116	91	132	112	152	111	69			103	105	48	51	48	52	36	32	67
31	43	56	33	35	33	G	29	42	55	71	61	70	65	86	84	113	109	77	58	40	114	27	28	40
	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	18	18	18	17	17	18	18	18	18	19	18	21	18	19	21	20	20	20	20	20	19	19	19
MED	49	40	42	35	32	34	44	58	58	66	60	66	66	62	58	53	53	46	48	47	48	36	36	40
U Q	58	56	58	58	46	53	50	68	82	80	78	98	71	74	88	78	91	72	90	72	68	50	44	49
L Q	38	34	34	29	G	25	35	48	50	50	50	55	24	50	48	42	G	35	39	30	30	27	29	38

HOURLY VALUES OF fmin AT Okinawa

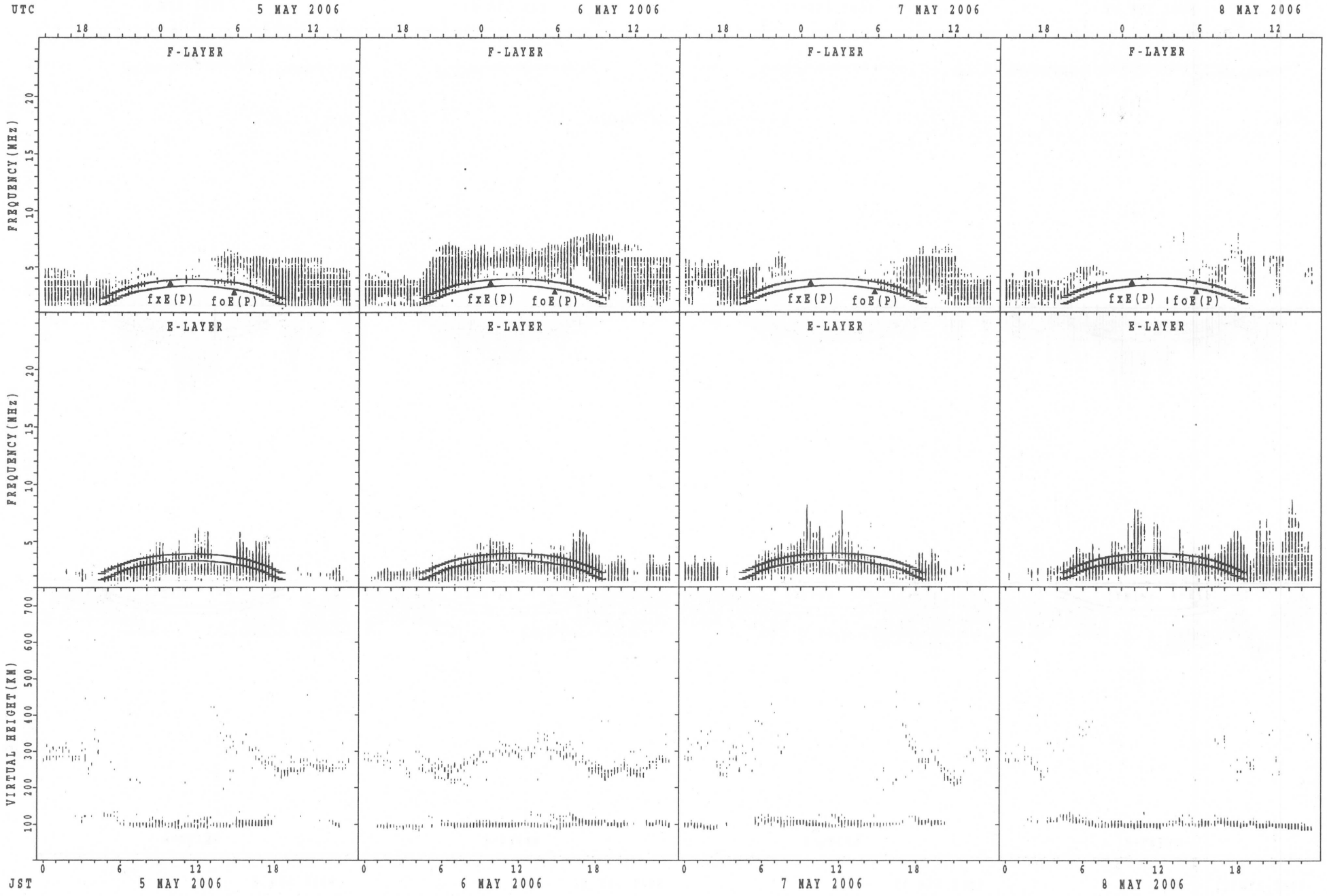
MAY 2006

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

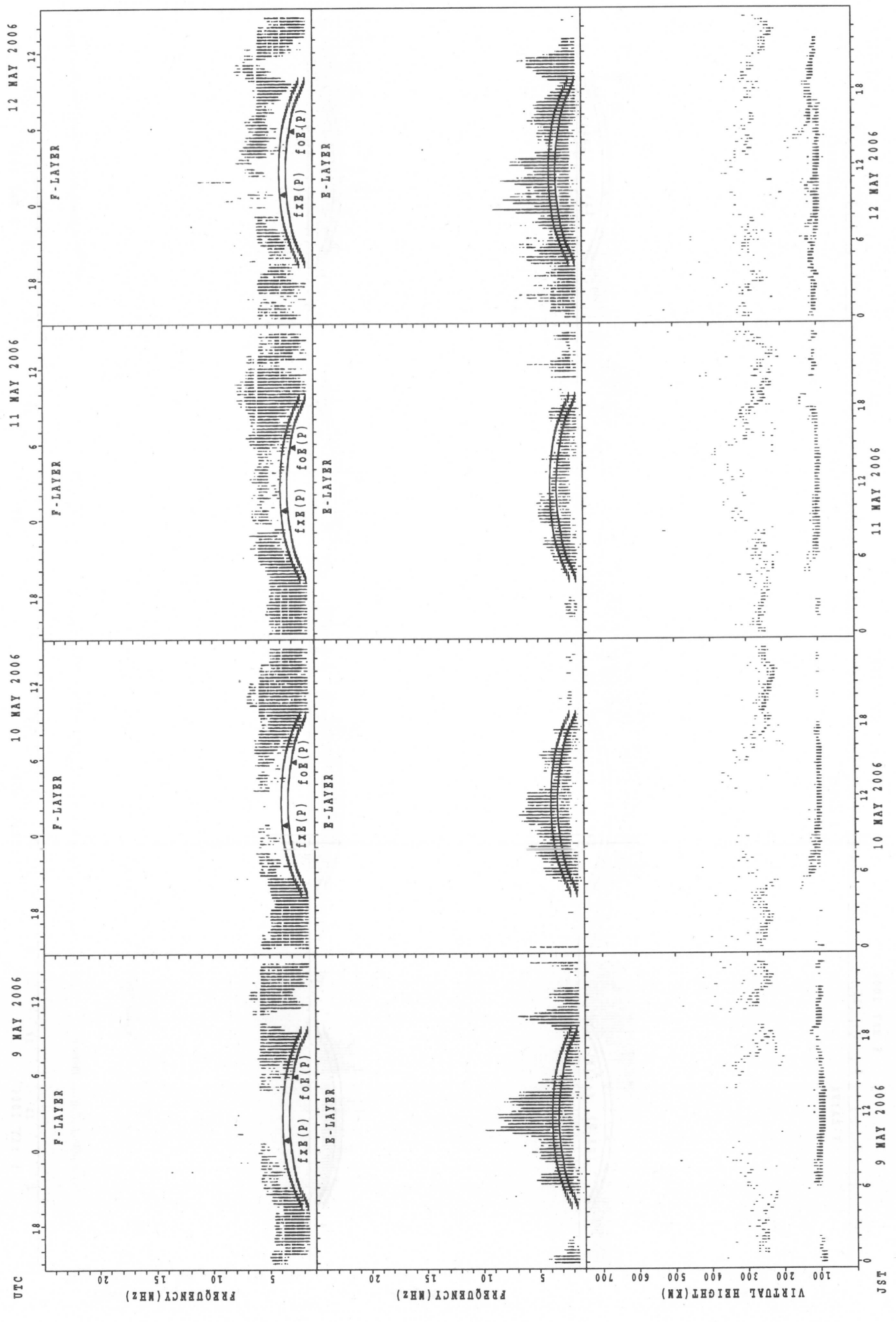
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
5	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
6	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
7	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
8	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
10	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	14	14	17	14	15	14	14
11	C	C	C	C	C	C	C	C	C	C	C	C	29	52	24	39	17	14	14	14	14	14	14	15
12	15	14	14	14	14	14	14	14	14	23	22					48	23	15	14	15	14	14	14	14
13	14	14	15	14	14	14	14	14	14	20	23	23	40	38	35	23	18	15	14	14	15	14	14	14
14	14	14	17	14	14	14	14	14	14	18	29	22	32	30	34	15	14	15	14	20	14	14	14	14
15	14	14	14	14	14	15	14	14	17	22	33	32	35	33	35	29	20	17	14	14	17	14	14	14
16	14	14	14	14	14	14	14	14	17	15	24	28	23	32	28	21	20	14	14	14	14	14	15	17
17	14	14	14	14	14	14	14	14	14	20	20	27	49		22	24	15	17	14	17	16	14	14	14
18	14	14	14	14	14	15	14	14	14	18	21	29	32	48	35	22	18	14	14	14	14	14	14	14
19	15	14	15	14	14	17	14	14	15	20	27		26	35	24	21	20	17	14	14	14	14	14	14
20	15	15	14	14	15	14	14	14	14	21	22	30	32	30	27	26	22	14	14	14	15	14	15	14
21	14	14	21	14	14	14	14	14	14	23	21	49	49	38	38	24	21	14	14	14	14	14	15	
22	14	15	14	14	14	15	14	14	15	18	23	32	30	32	23	22	20	14	14	14	14	14	15	14
23	14	14	15	14	14	14	14	14	15	20	24	37	38	38	27	23	20	15	14	14	14	14	14	14
24	14	14	14	14	14		15	14	15	21	29	30	35		34	22	21	18	14	16	17	22	15	15
25	14	18	14	14	14	14	14	14	14	21	24	40	36	39	37	27	C	C	C	C	C	C	C	C
26	C	C	C	C	C	C	C	C	C	C	23	23	23	C	C	22	20	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	36	34	30	29	20	21	16	14	14	14	14	15	14
28	14	14	15	15	17	14	14	14	17	22	22	35	34	29	24	18	14	15	14	14	15	15	14	14
29	14	14	14	15	14	14	14	14	18	20	32	28	33	29	26	22	21	14	14	14	14	15	15	14
30	14	14	14	14	14	15	14	14	17	21	22	34	24	35	34	35	21	18	14	14	14	14	14	14
31	15	14	14	14	14	14	16	14	15	21	21	23	29	32	29	23	20	16	14	14	14	14	15	14
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	18	18	18	18	18	17	18	18	18	18	19	18	20	17	19	21	20	20	20	20	20	20	20	19
MED	14	14	14	14	14	14	14	14	15	20	23	30	32	33	29	23	20	15	14	14	14	14	14	14
U Q	14	14	15	14	14	15	14	14	17	21	27	35	35	38	35	26	21	16	14	14	15	14	15	14
L Q	14	14	14	14	14	14	14	14	14	20	22	27	29	30	24	21	18	14	14	14	14	14	14	14


SUMMARY PLOTS AT Wakkanai
UTC
JST
1 MAY 2006
2 MAY 2006
3 MAY 2006
4 MAY 2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY (MHz)
VIRTUAL HEIGHT (KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

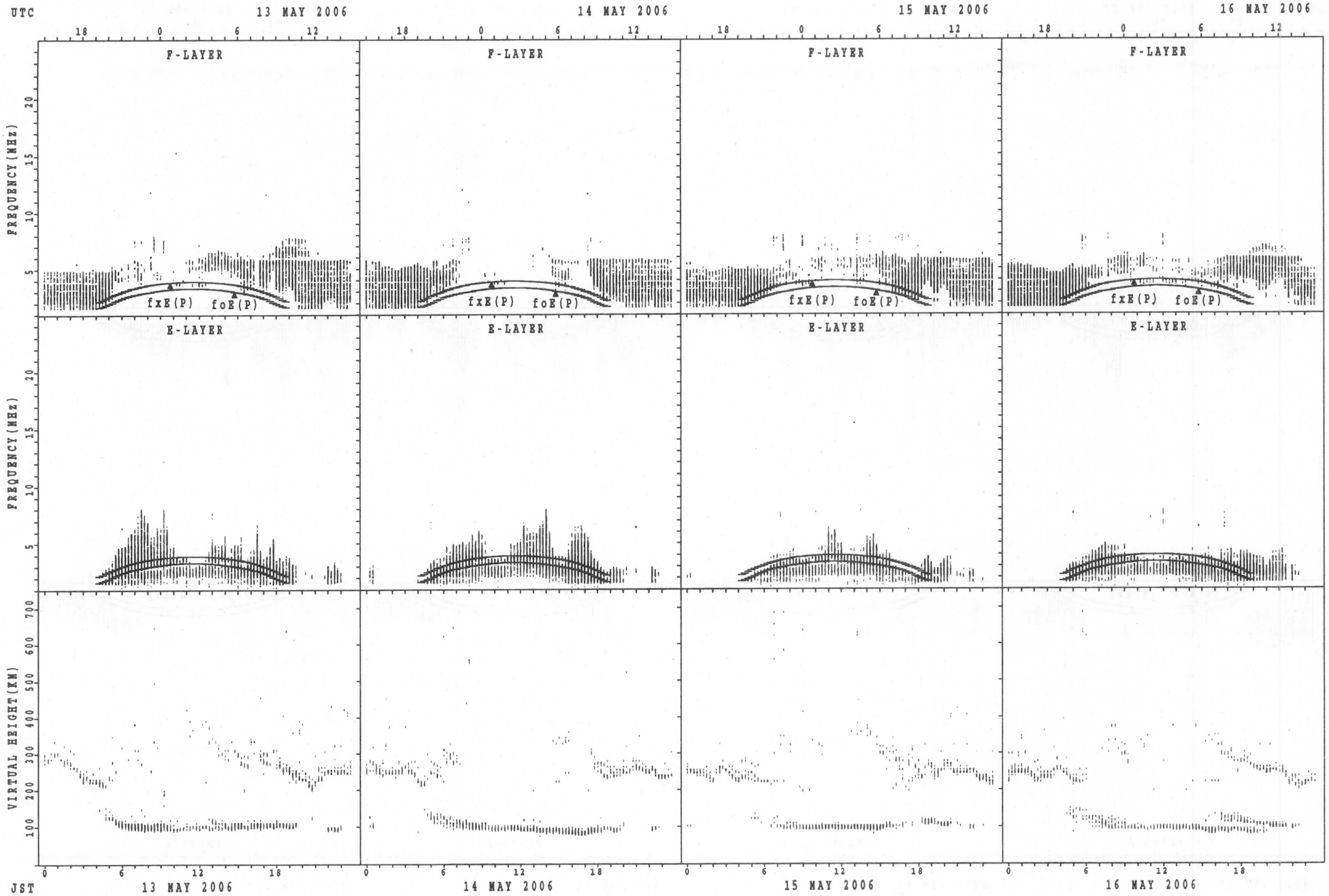
SUMMARY PLOTS AT Wakkanai



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

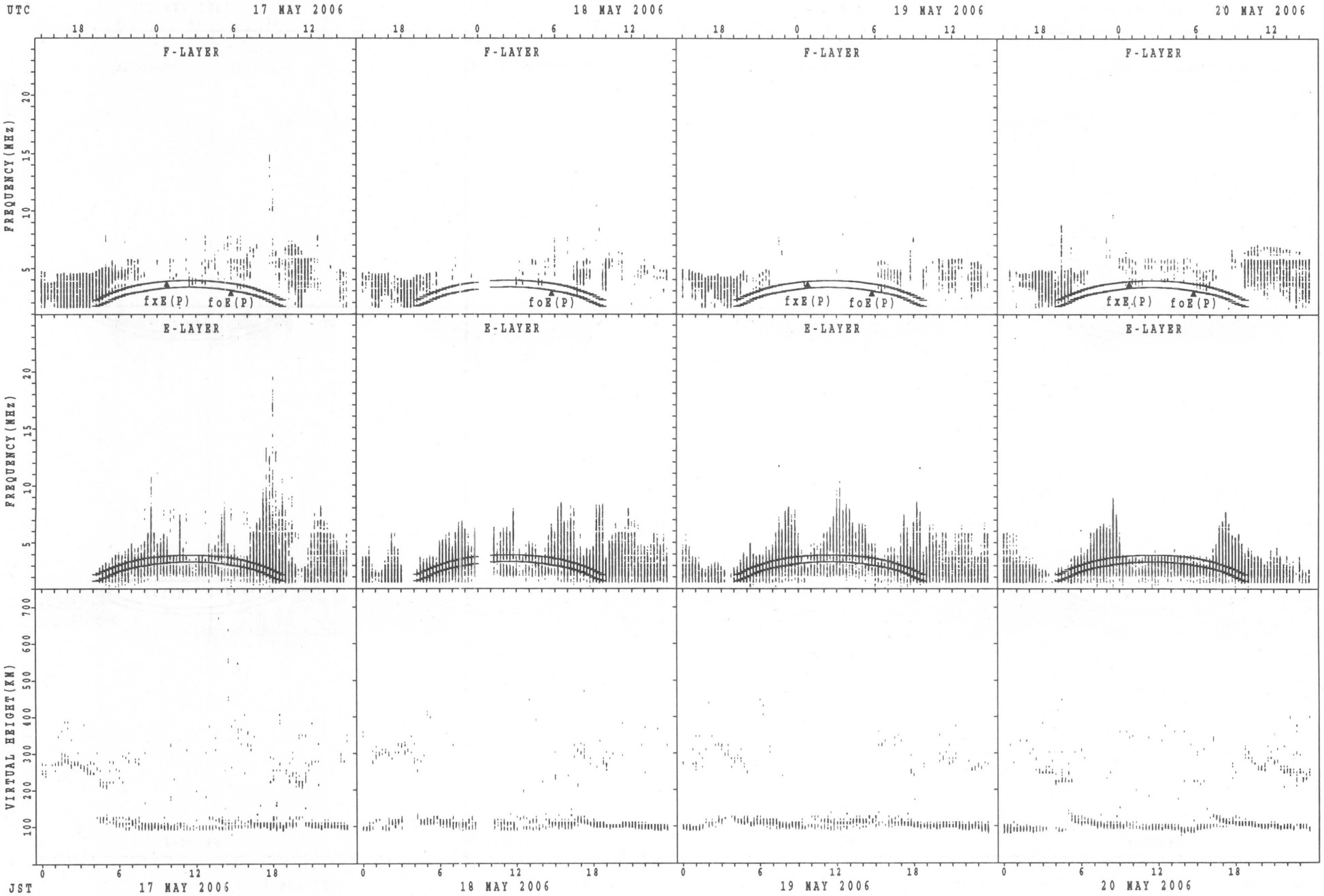

SUMMARY PLOTS AT Wakkanai
UTC
JST
9 MAY 2006
10 MAY 2006
11 MAY 2006
12 MAY 2006
F-LAYER
E-LAYER
fxE(P) foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



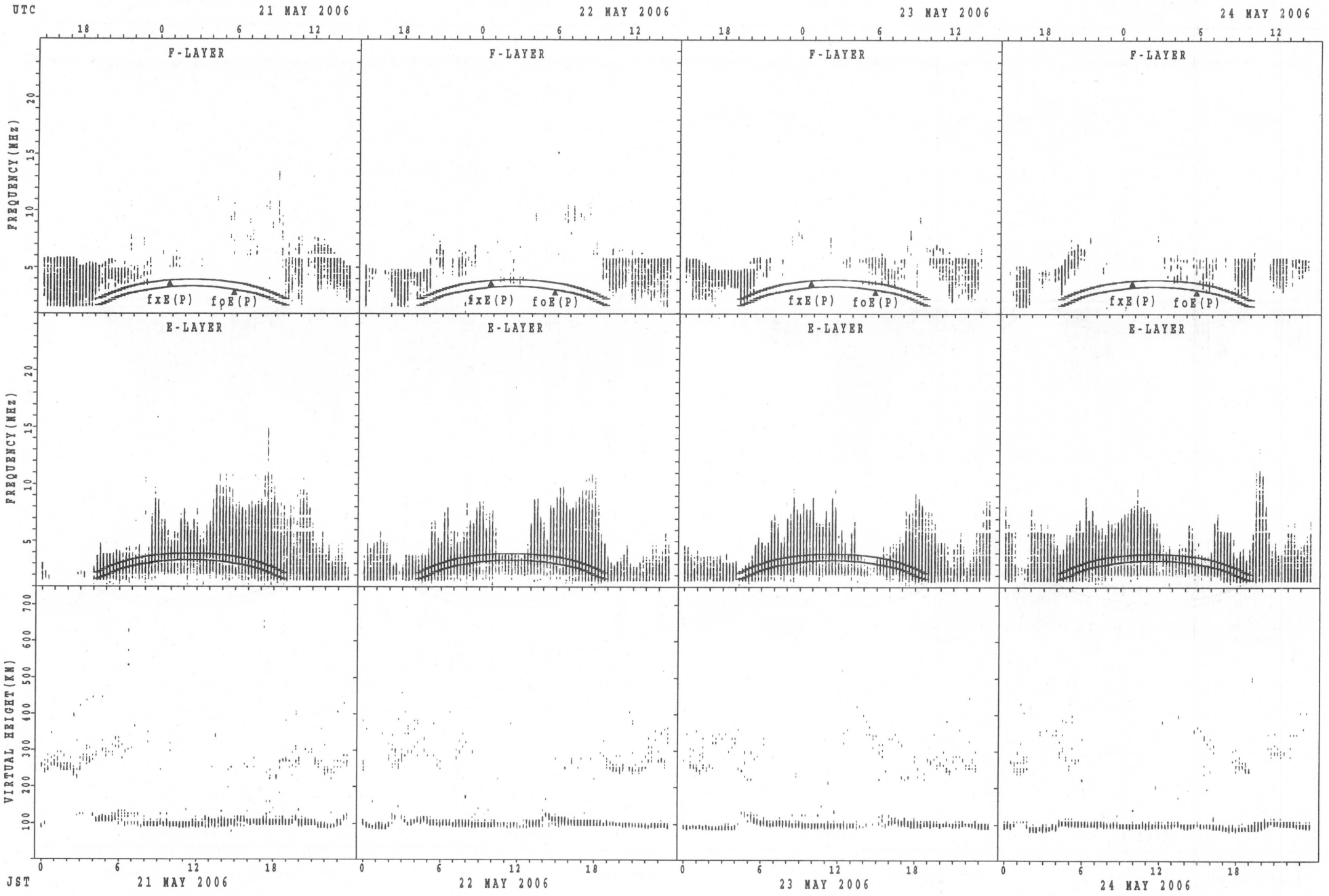
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai

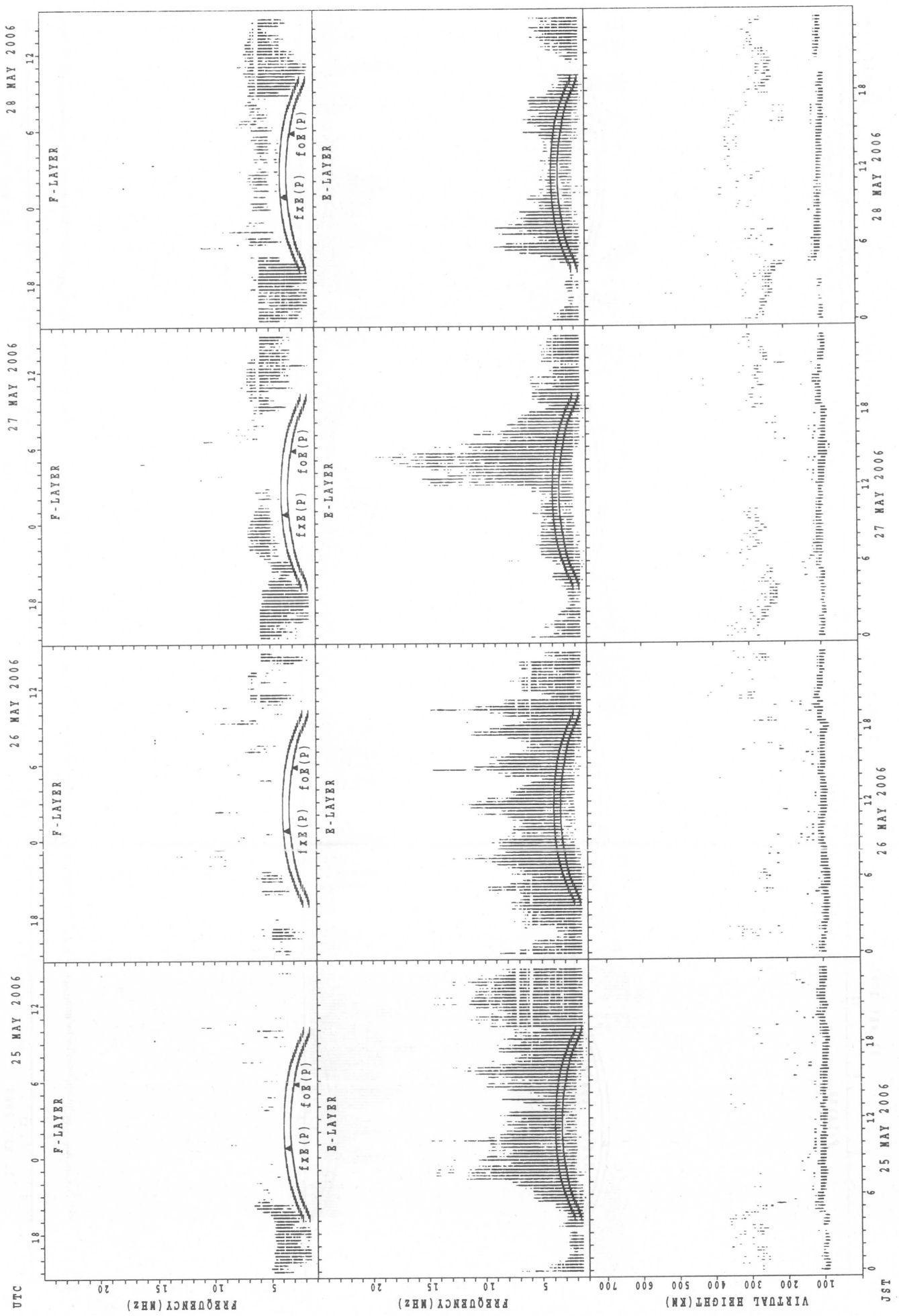


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

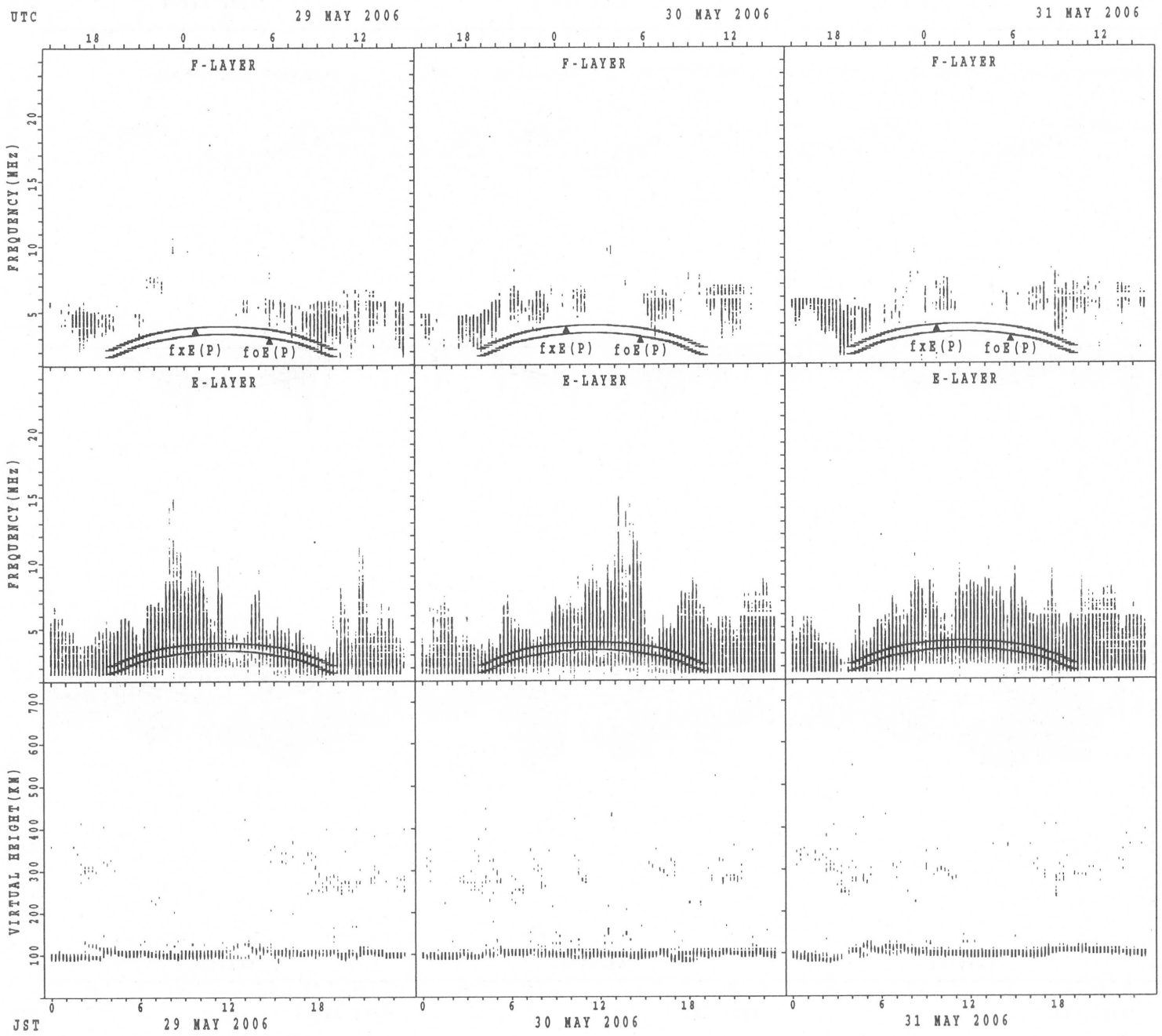
SUMMARY PLOTS AT Wakkanai



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

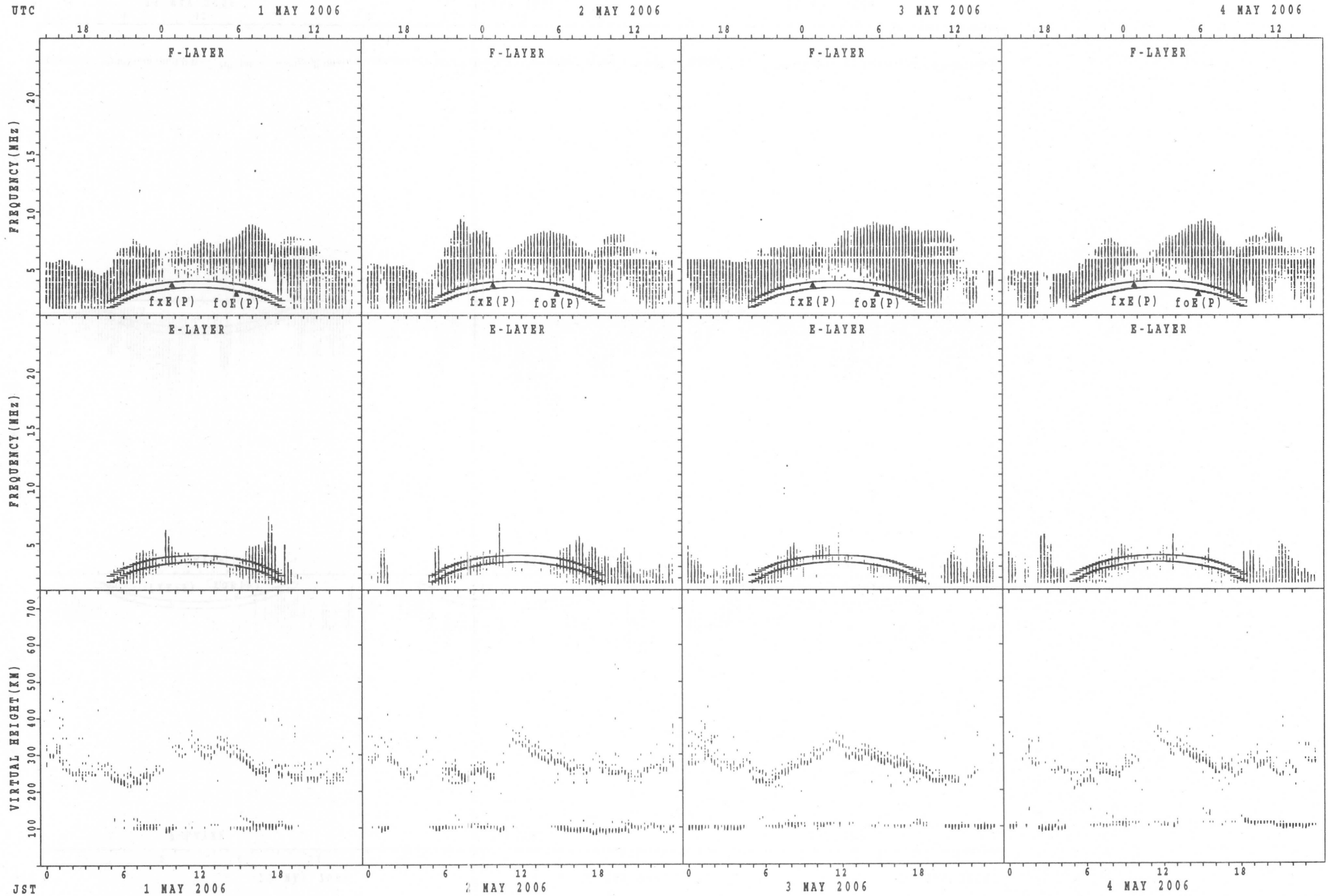

SUMMARY PLOTS AT Wakkanai
UTC
JST
25 MAY 2006
26 MAY 2006
27 MAY 2006
28 MAY 2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY (MHz)
VIRTUAL HEIGHT (KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



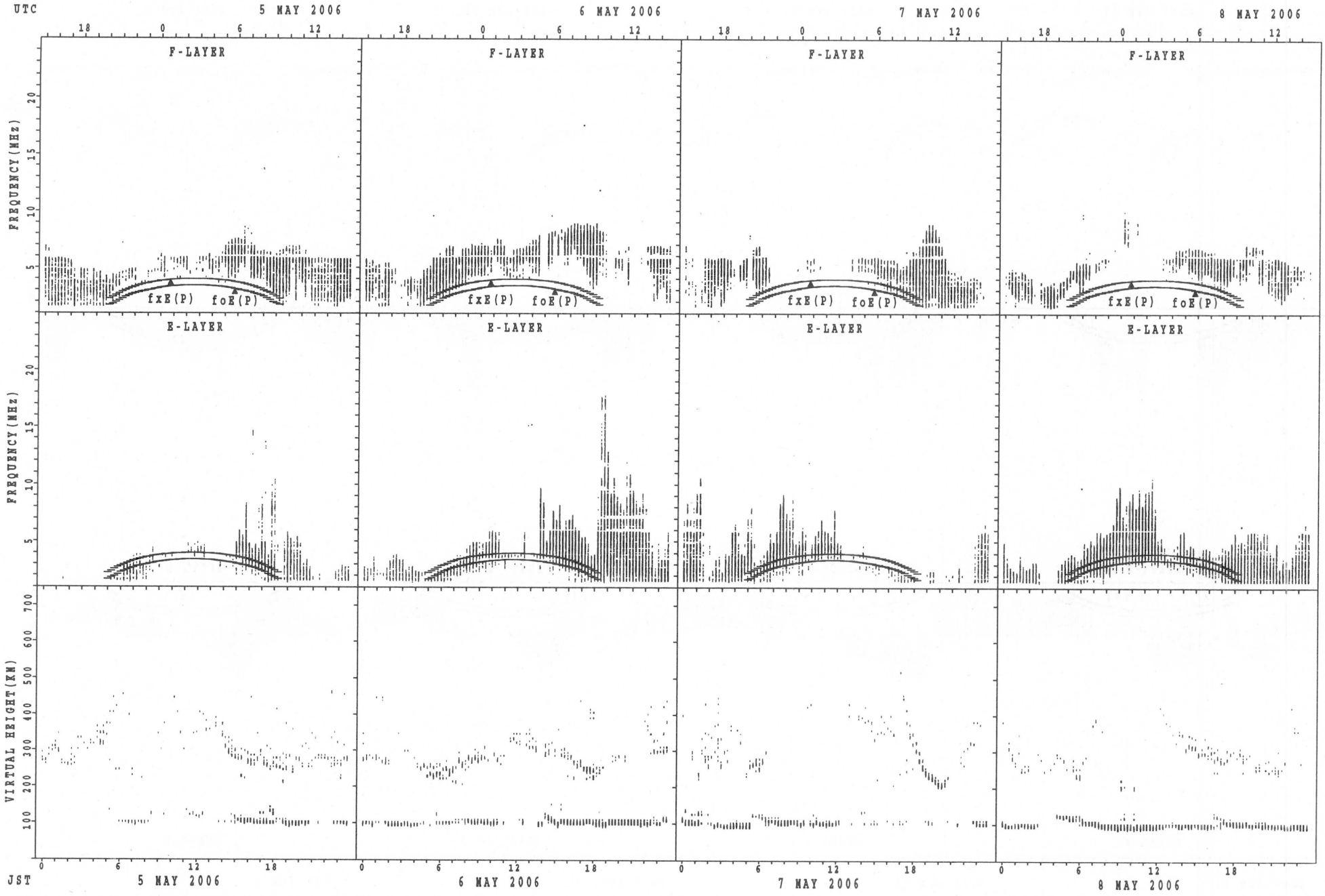
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

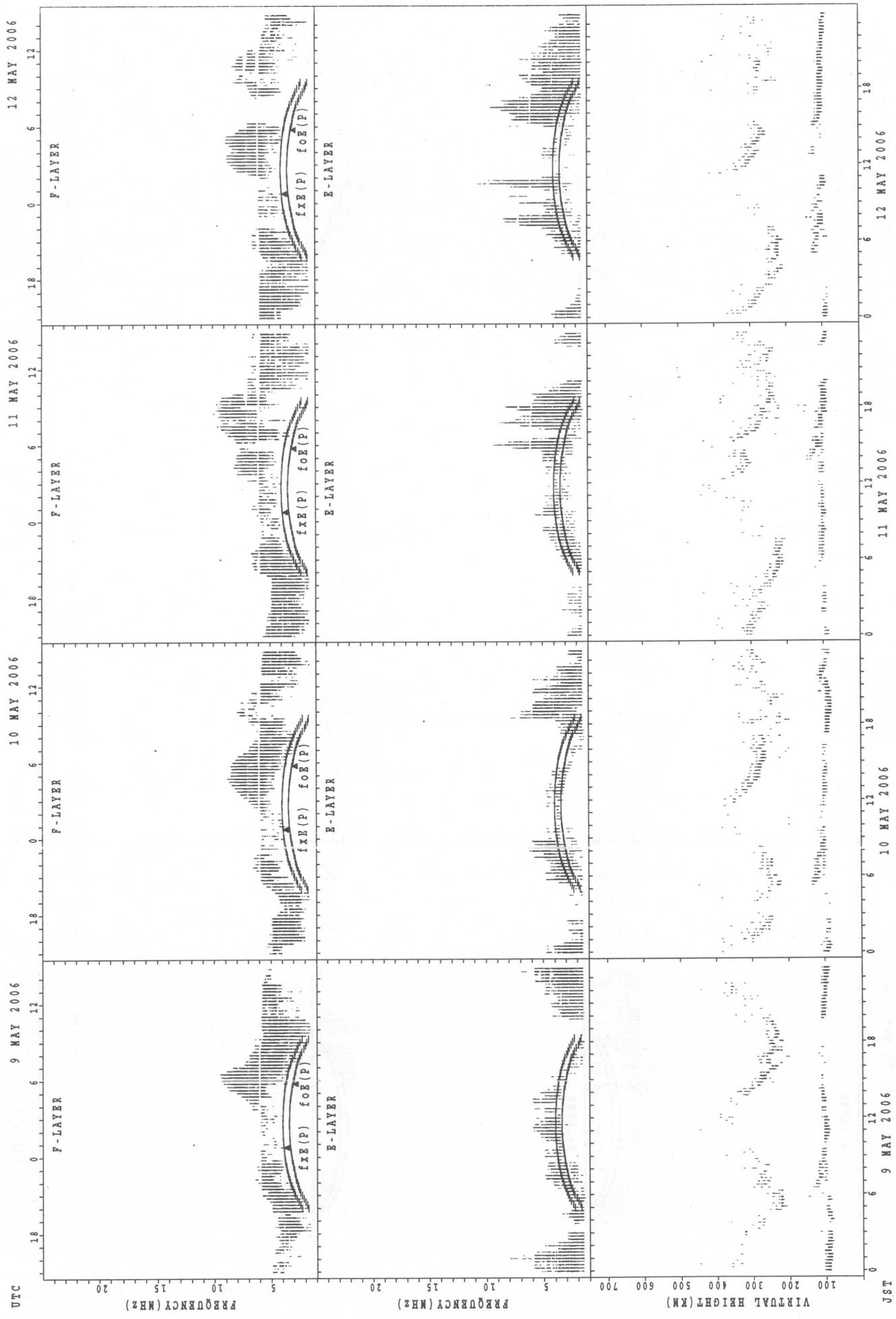


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

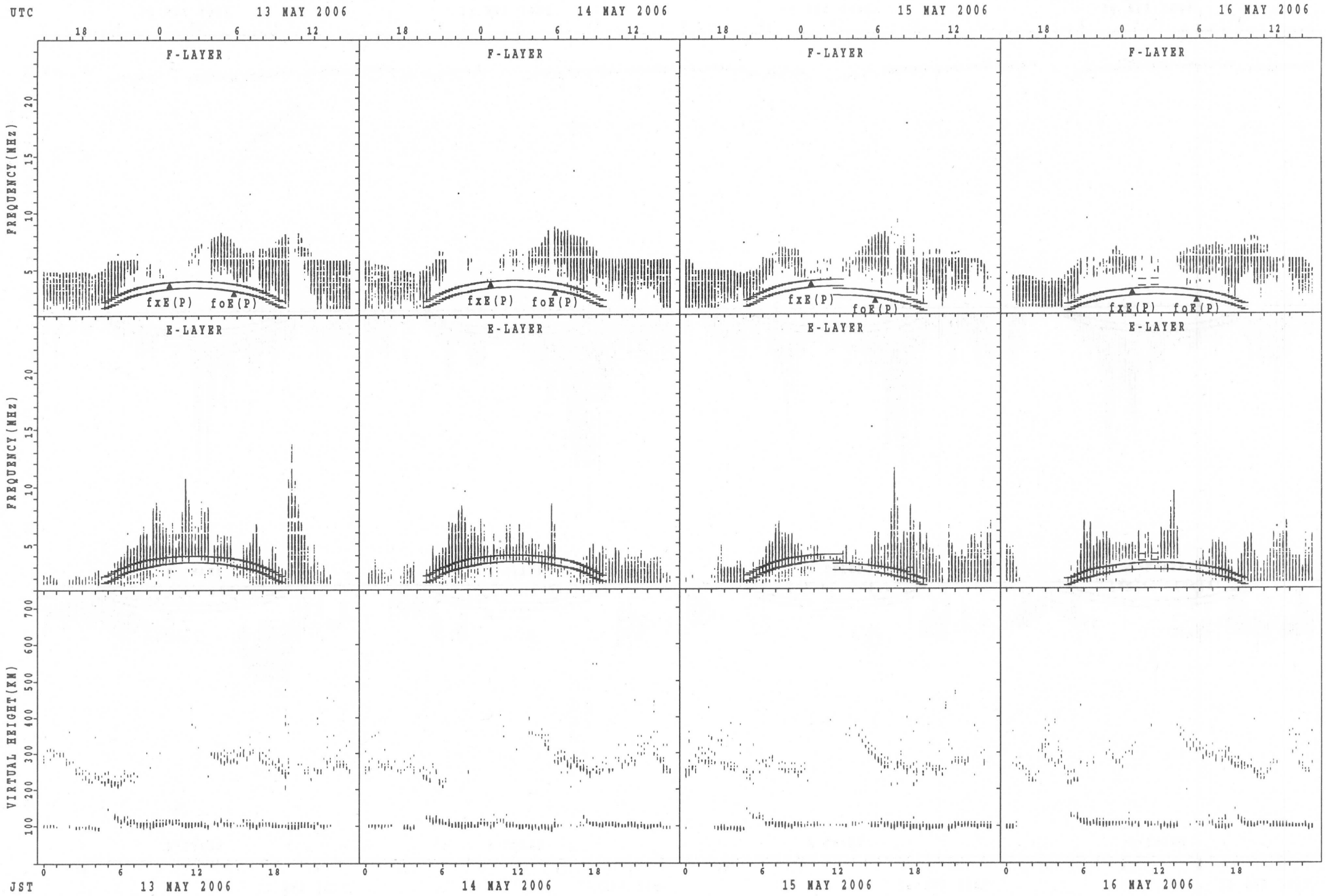
SUMMARY PLOTS AT Kokubunji



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

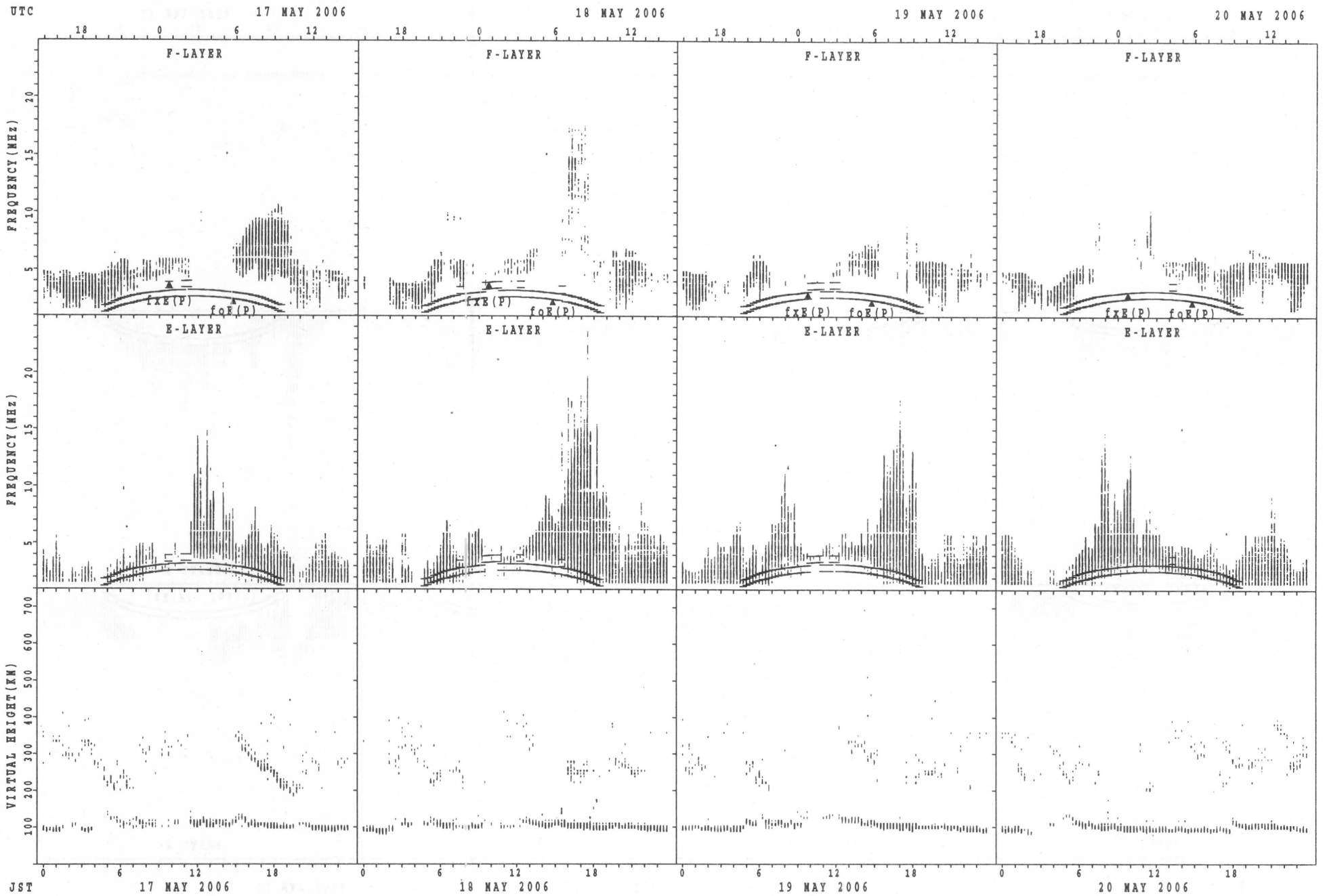

SUMMARY PLOTS AT Kokubunji
UTC
JST
9 MAY 2006
10 MAY 2006
11 MAY 2006
12 MAY 2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY (MHz)
VIRTUAL HEIGHT (KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



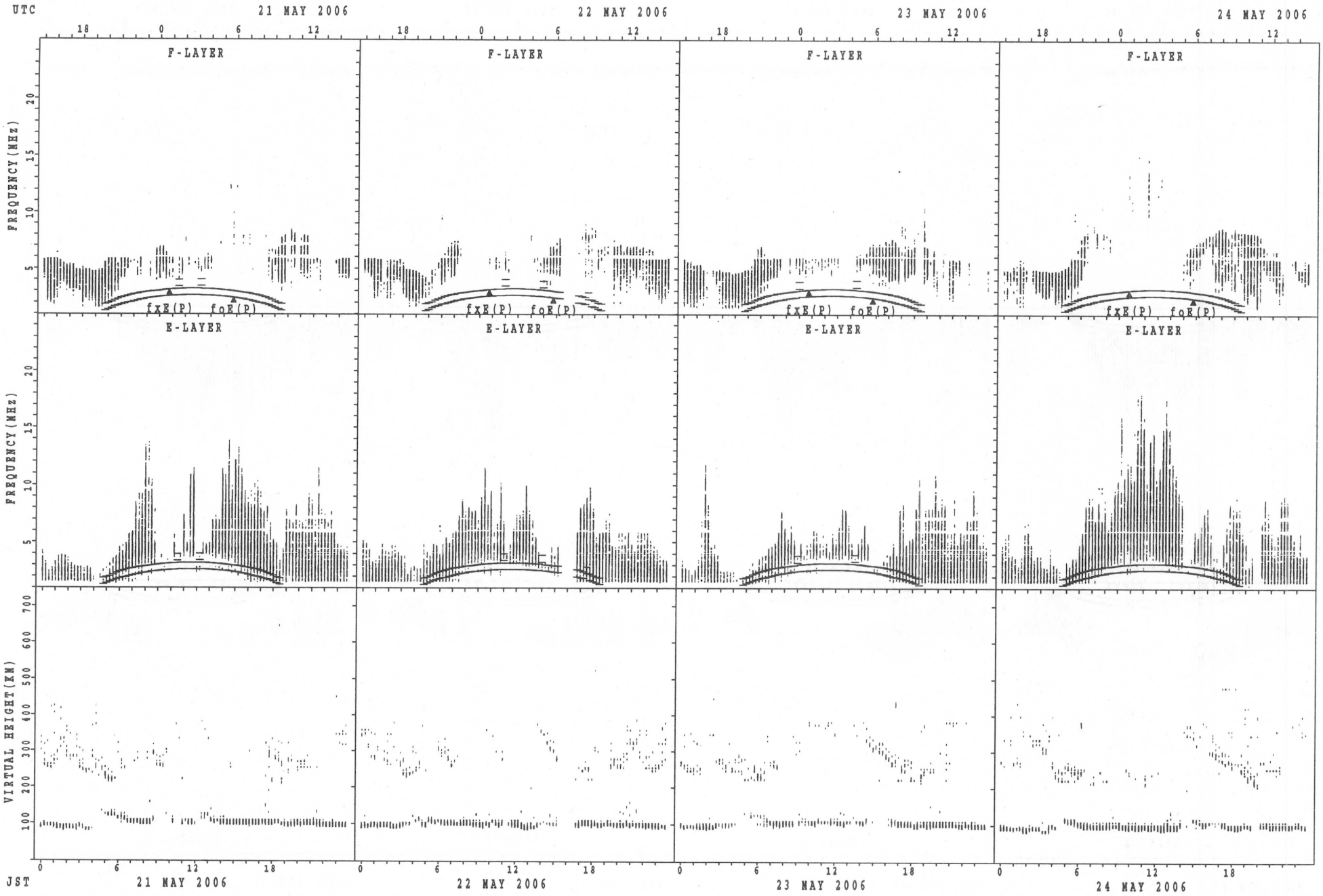
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



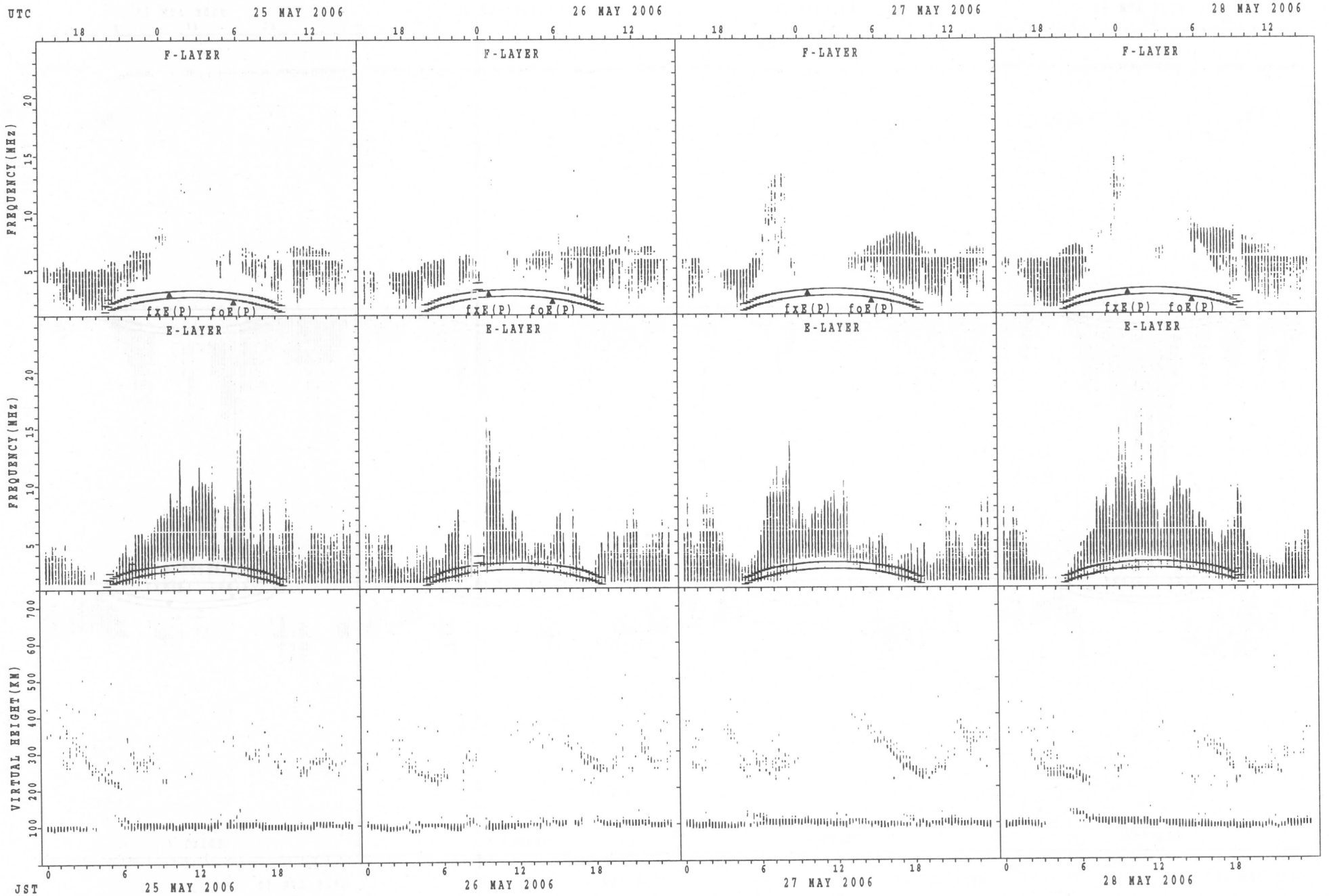
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



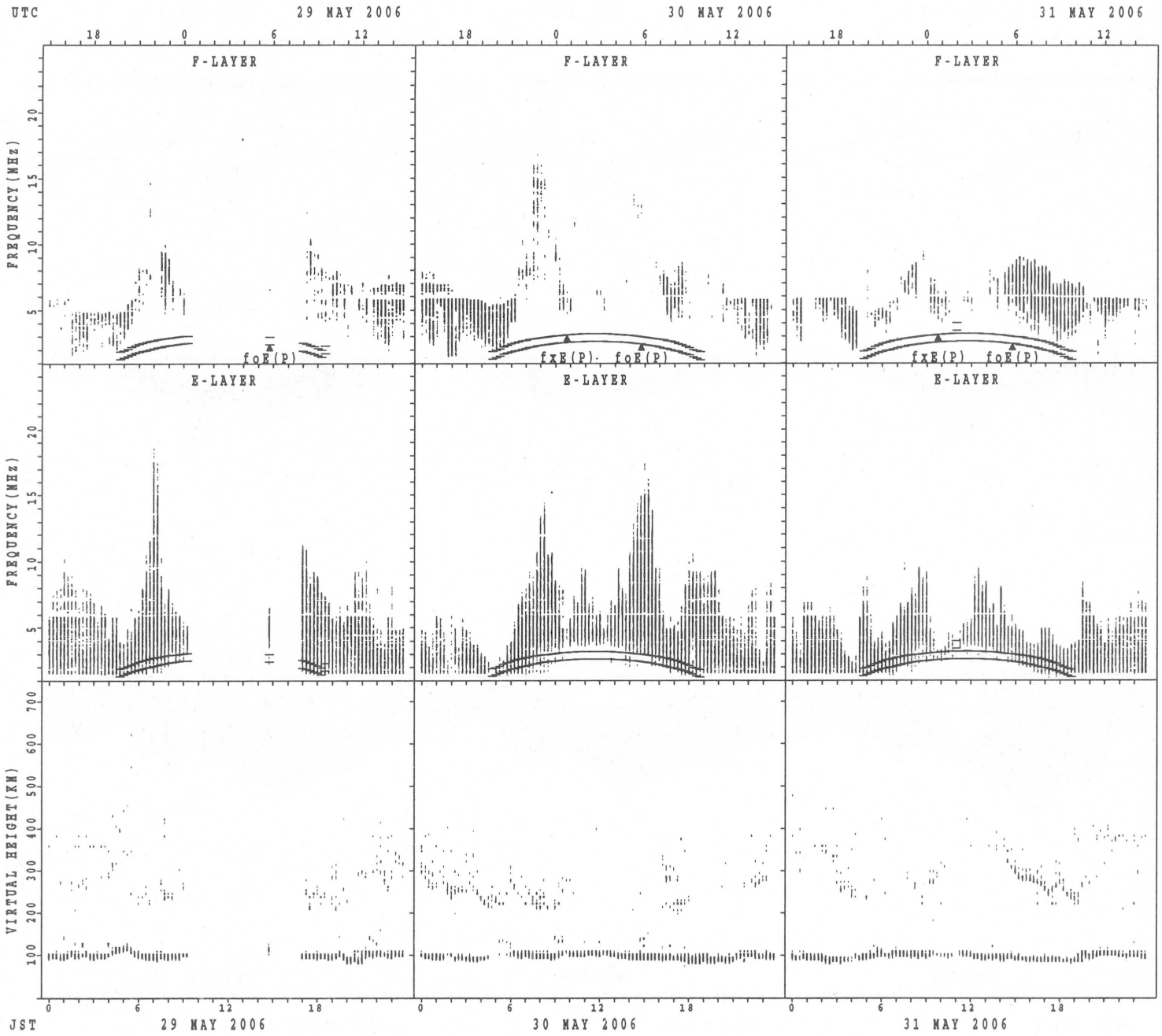
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



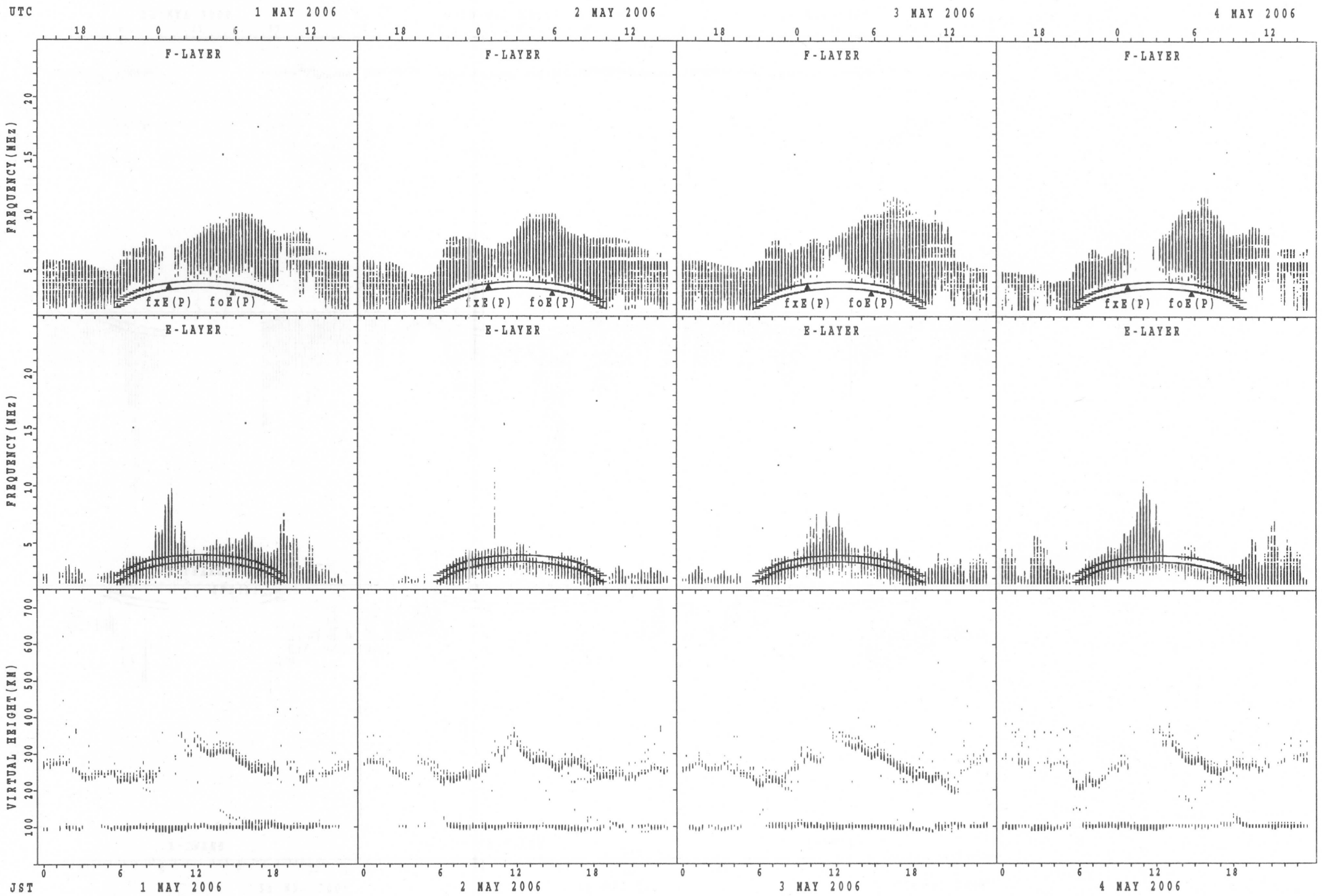
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



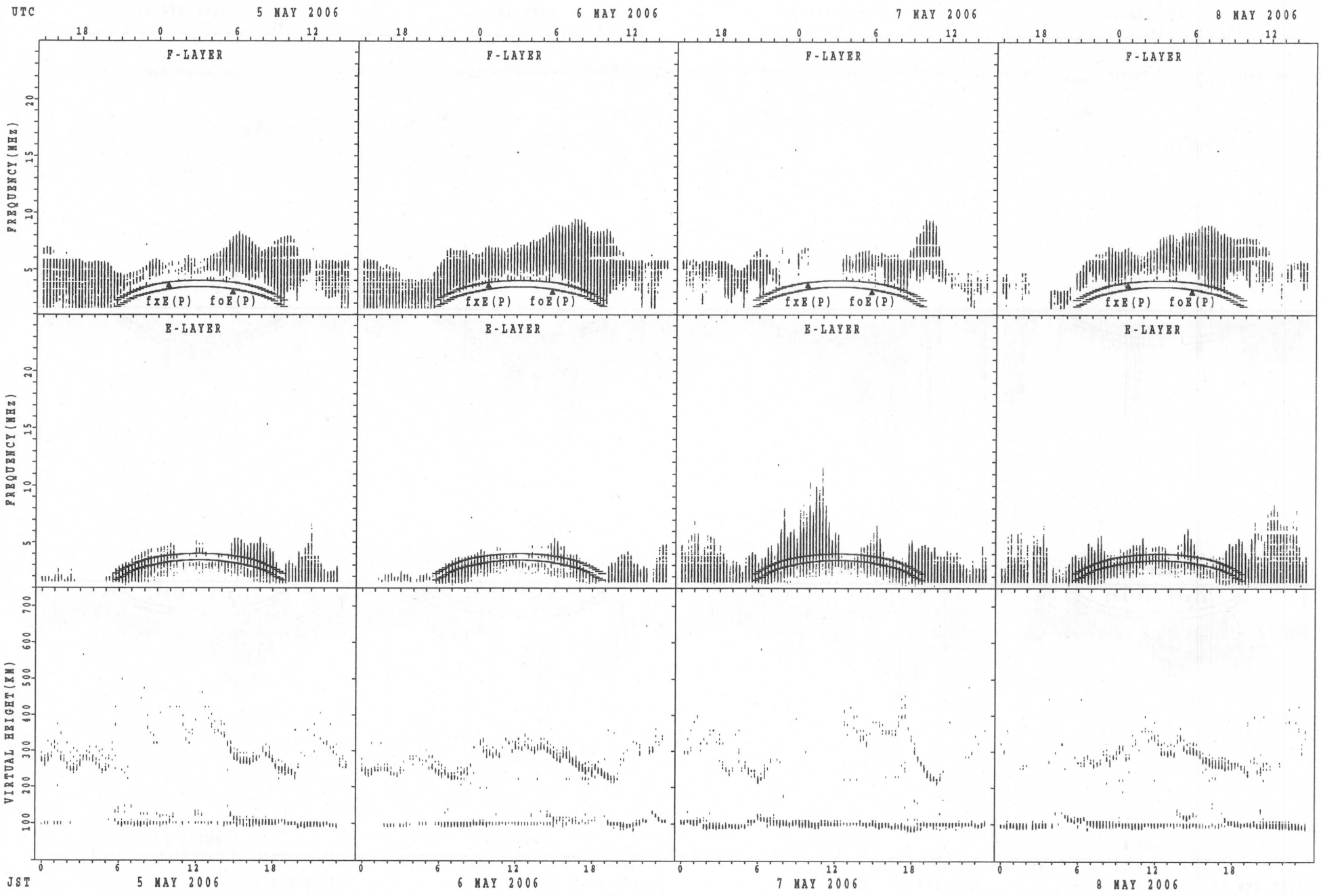
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

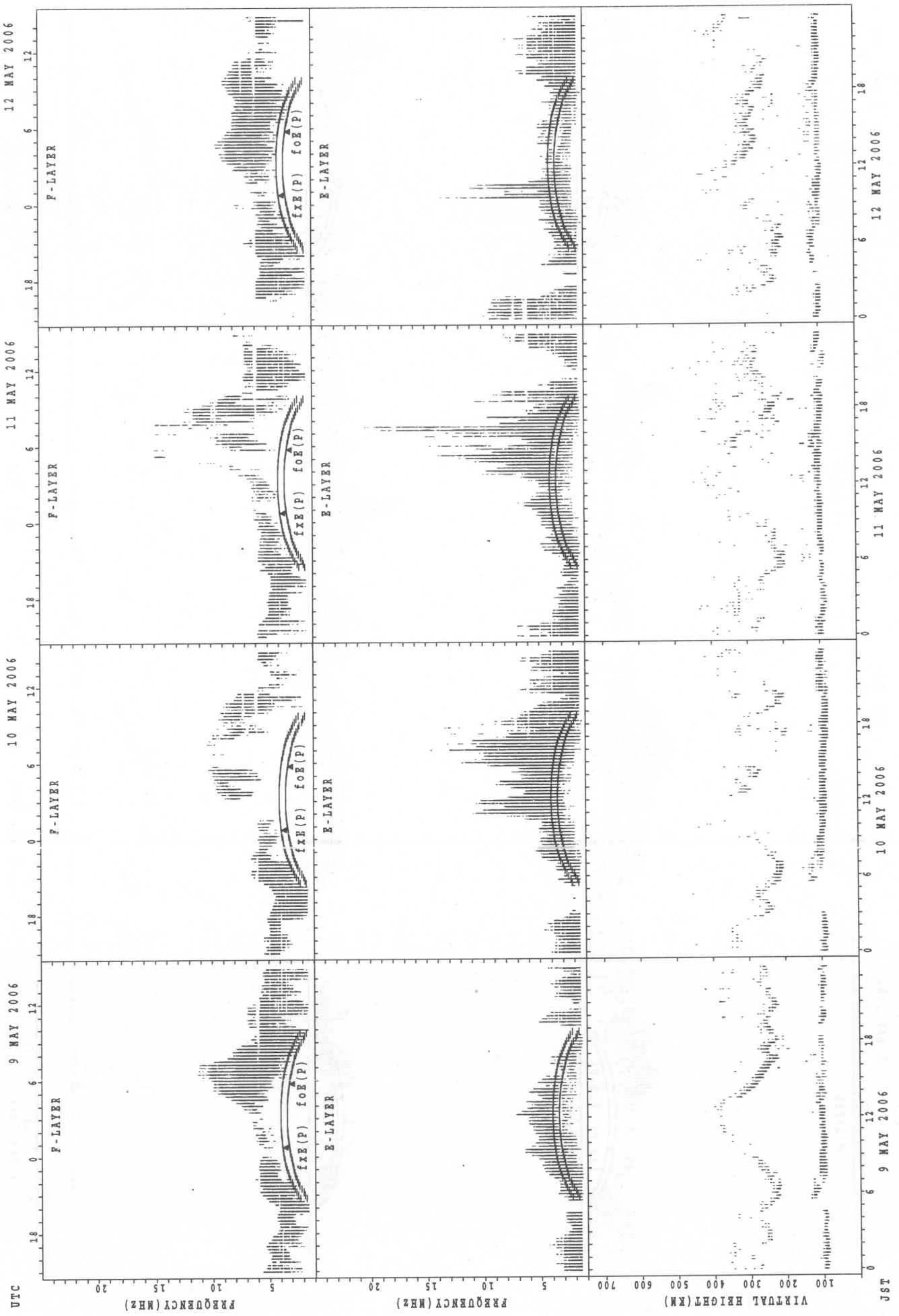


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

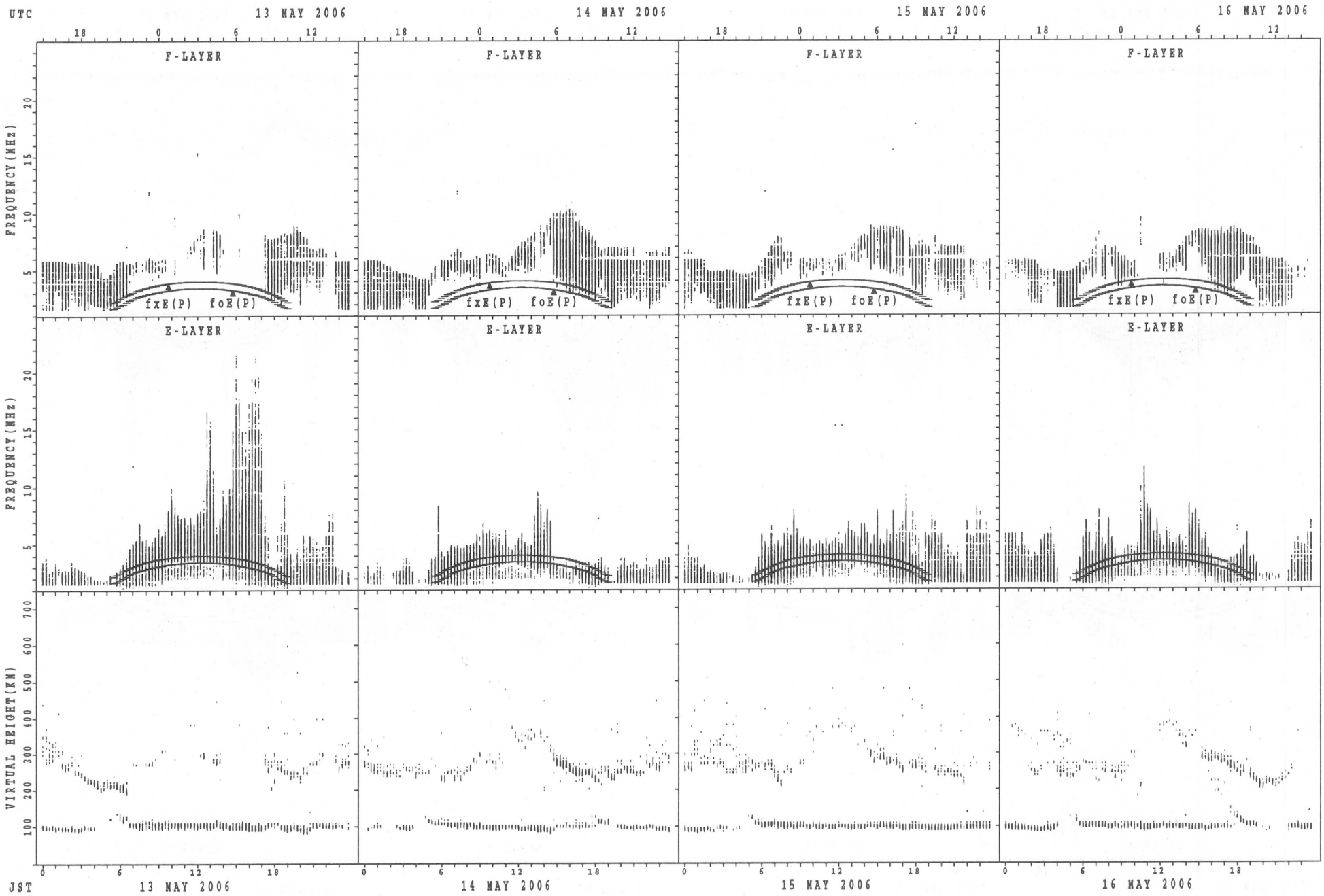
SUMMARY PLOTS AT Yamagawa



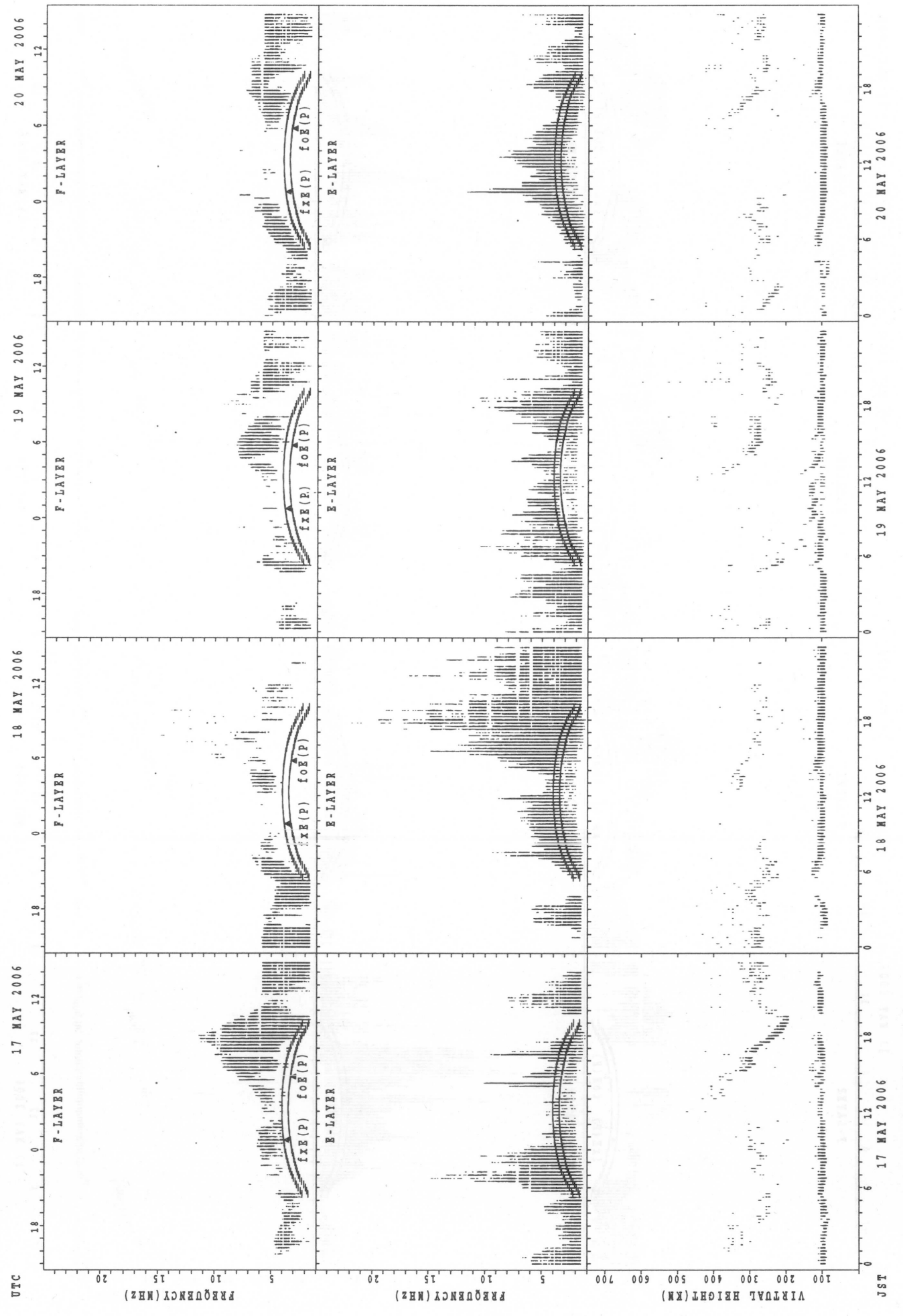
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE


SUMMARY PLOTS AT Yamagawa
UTC
JST
9 MAY 2006
10 MAY 2006
11 MAY 2006
12 MAY 2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY (MHz)
VIRTUAL HEIGHT (KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

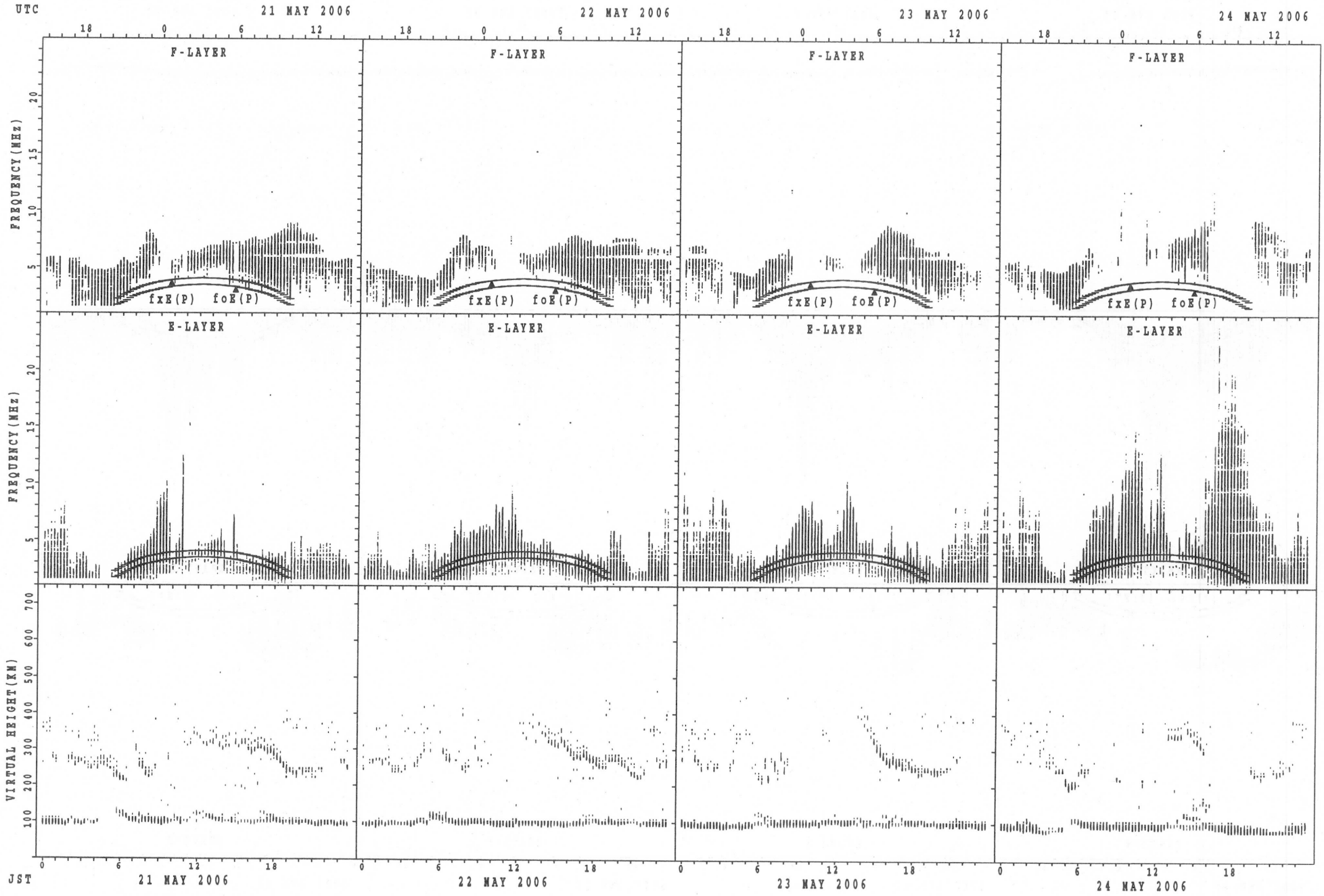
SUMMARY PLOTS AT Yamagawa



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

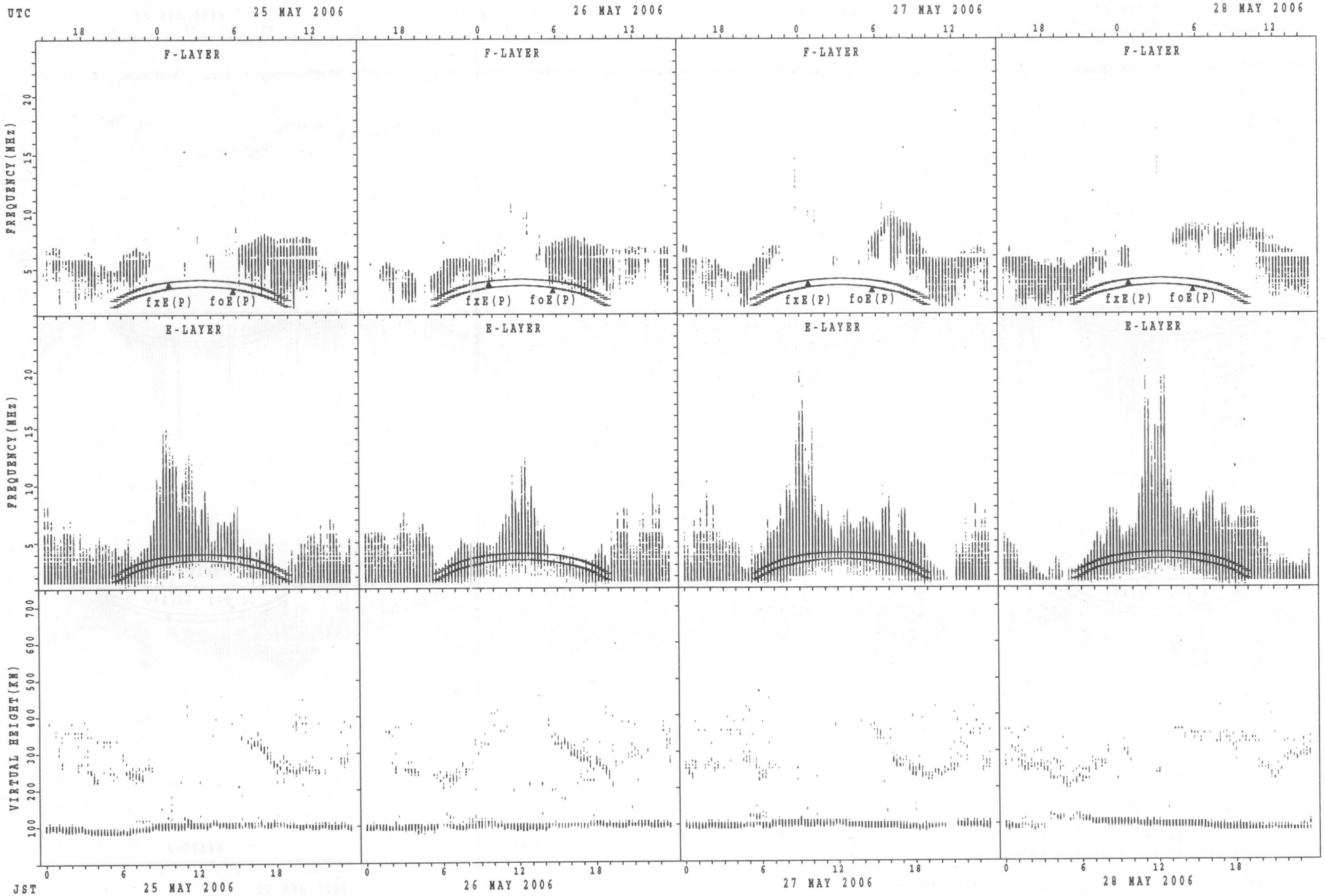

SUMMARY PLOTS AT Yamagawa
UTC
JST
17 MAY 2006
18 MAY 2006
19 MAY 2006
20 MAY 2006
F-LAYER
E-LAYER
FREQUENCY (MHz)
VIRTUAL HEIGHT (KM)
fxE(P)
foE(P)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



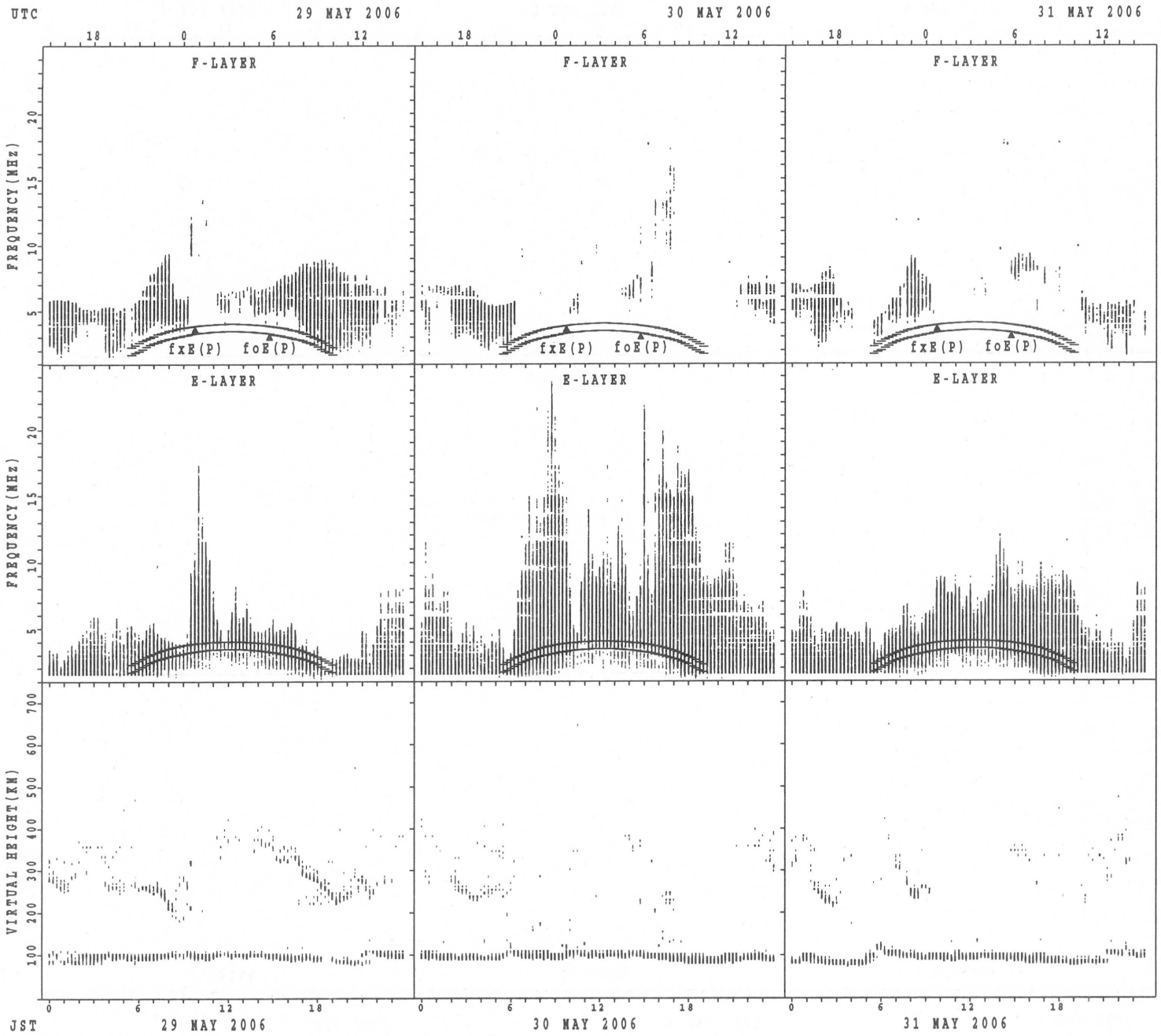
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



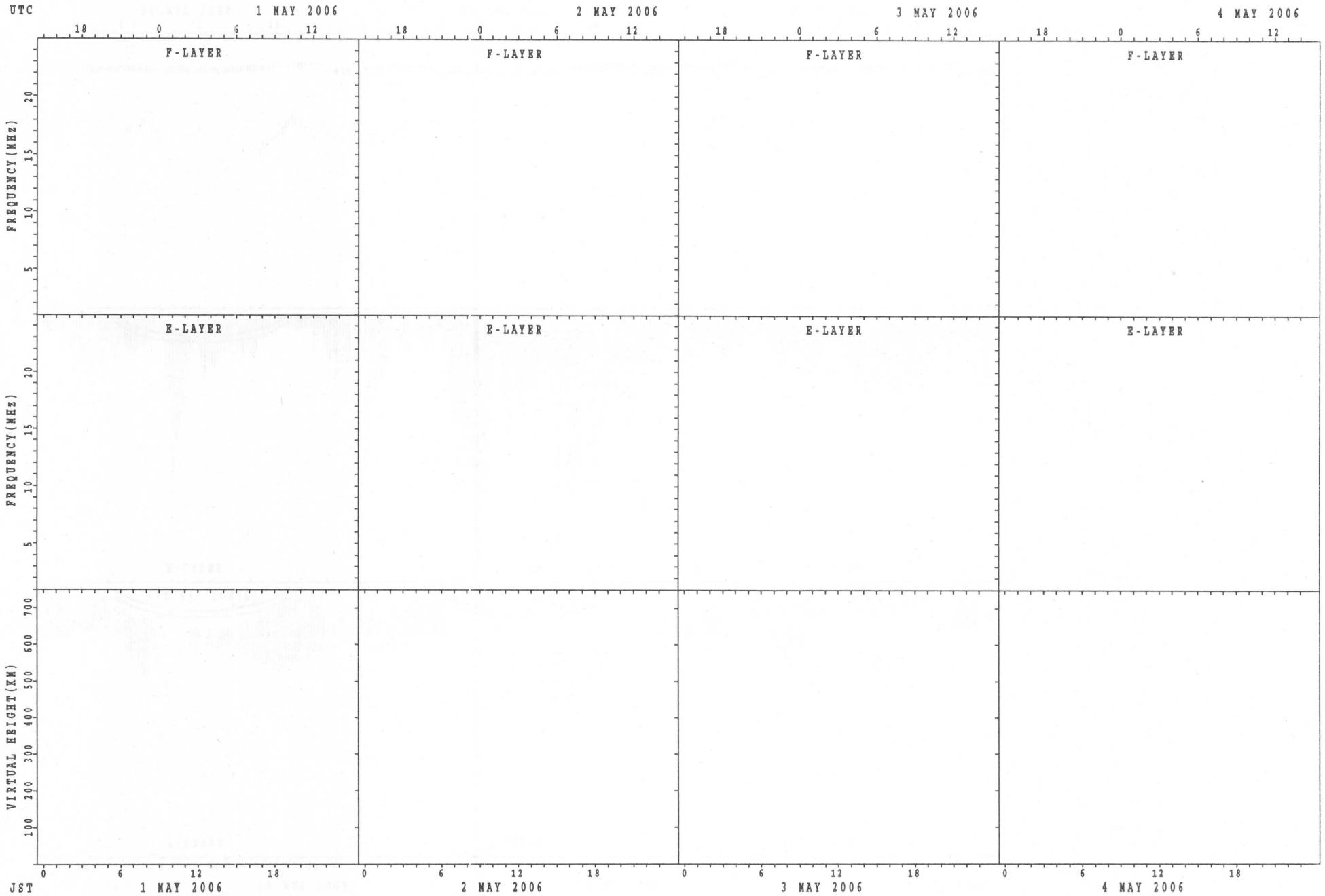
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



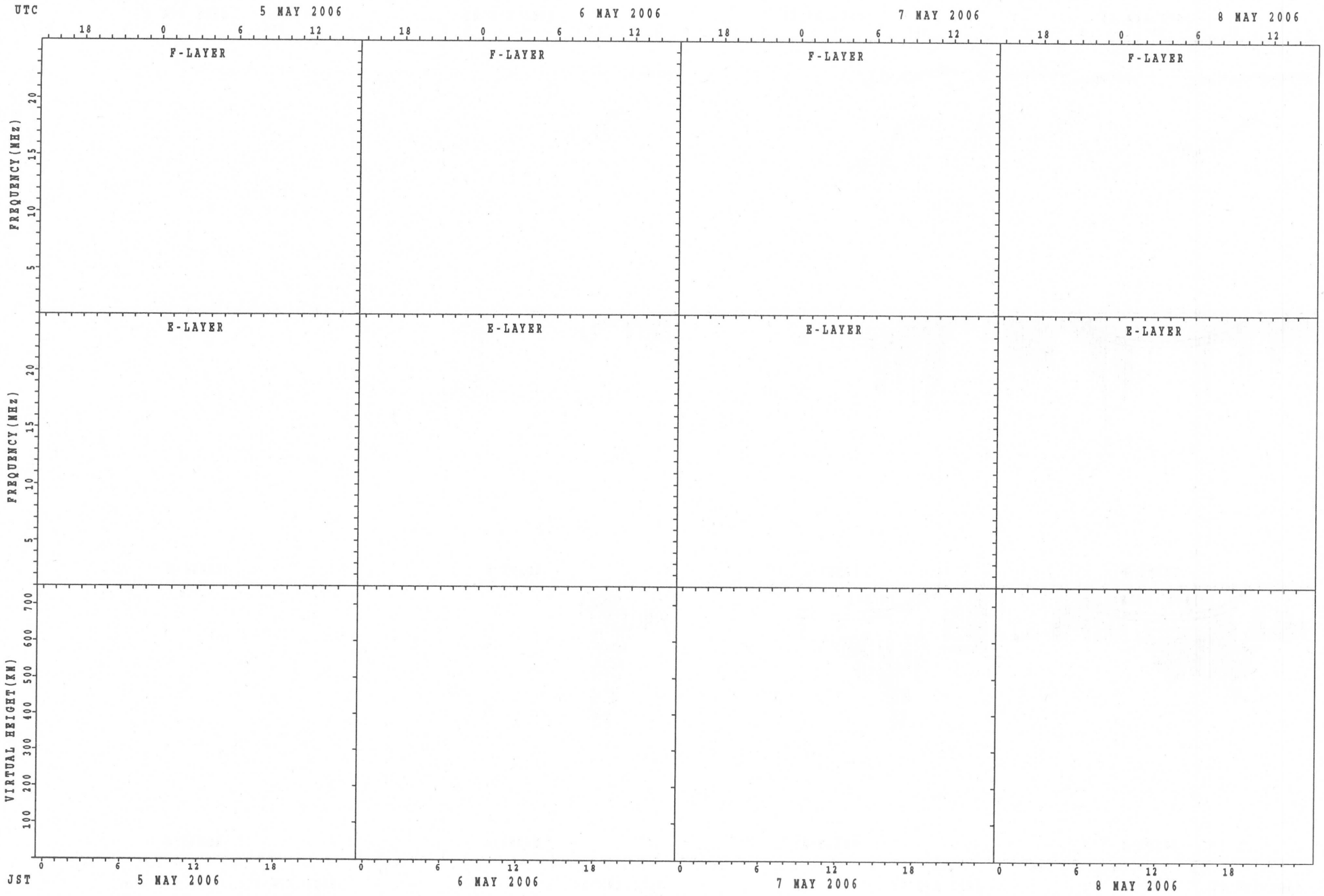
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



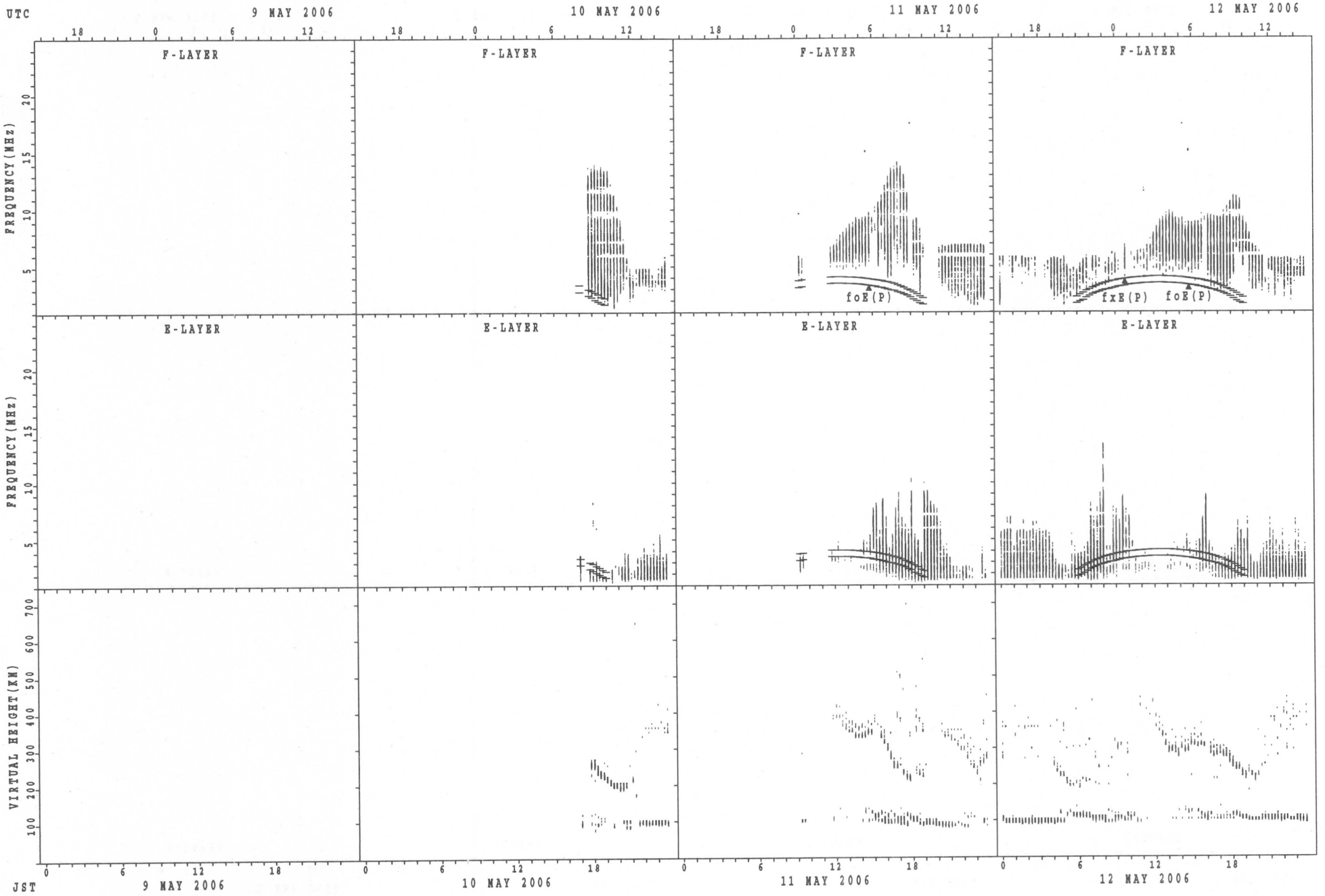
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



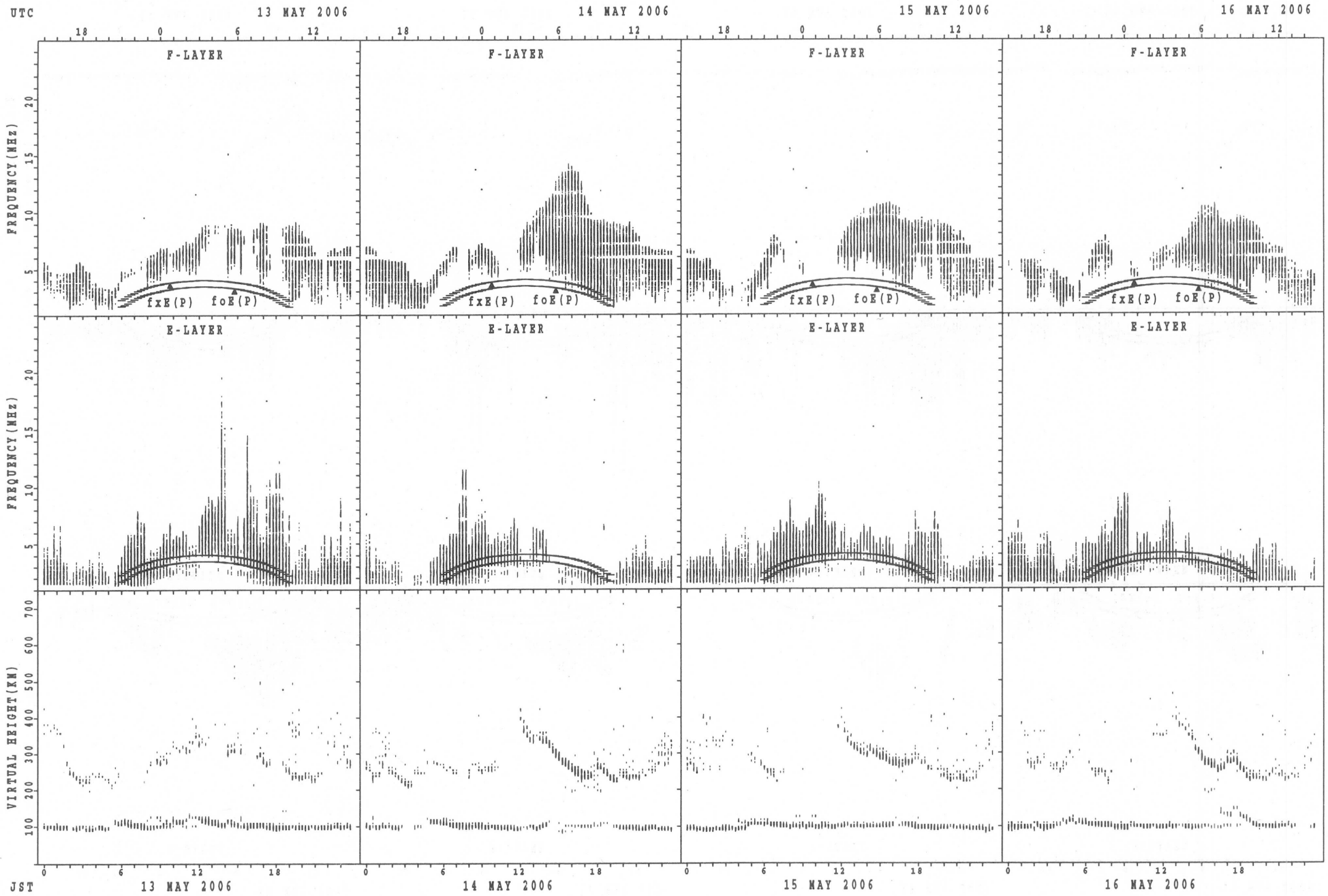
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



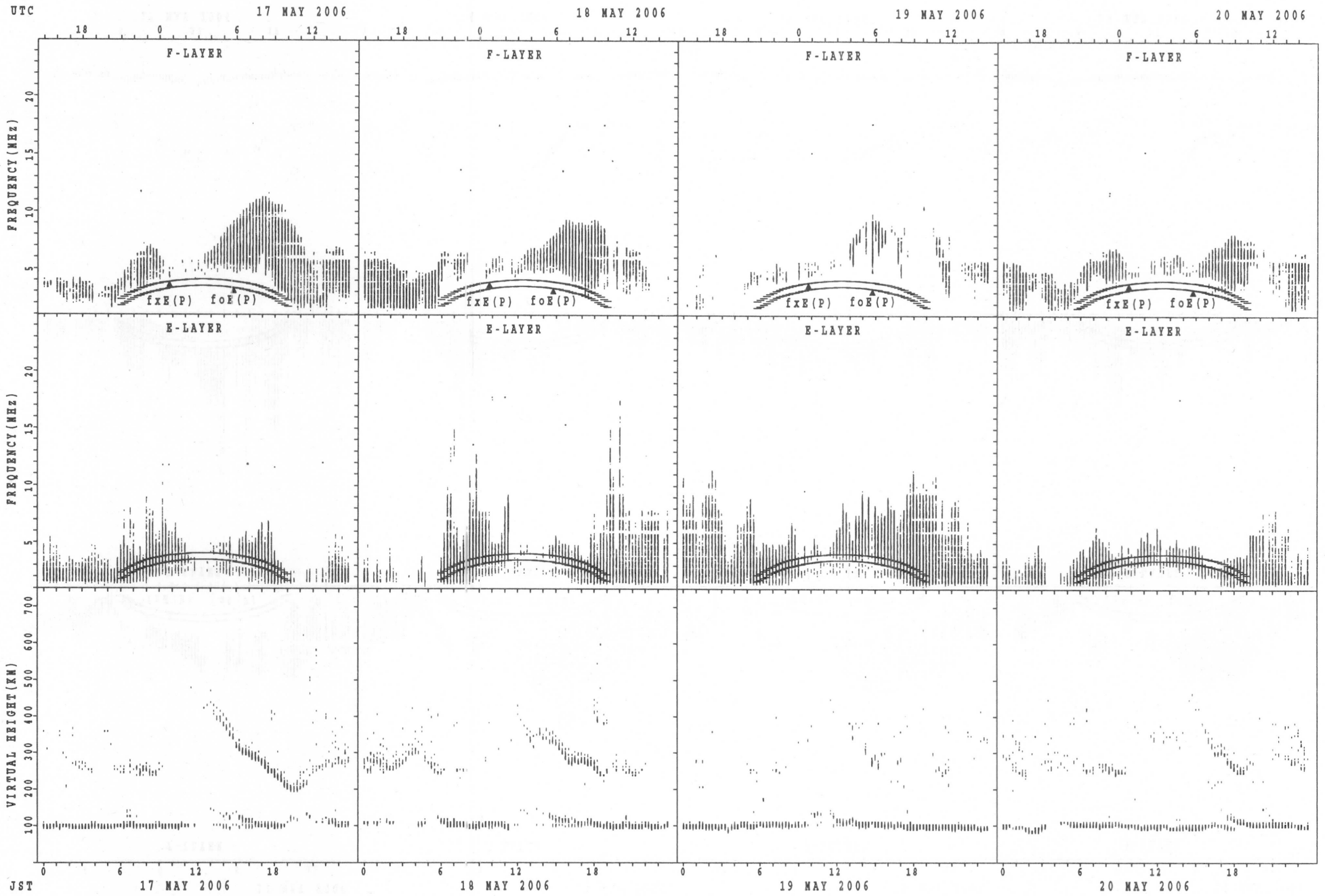
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



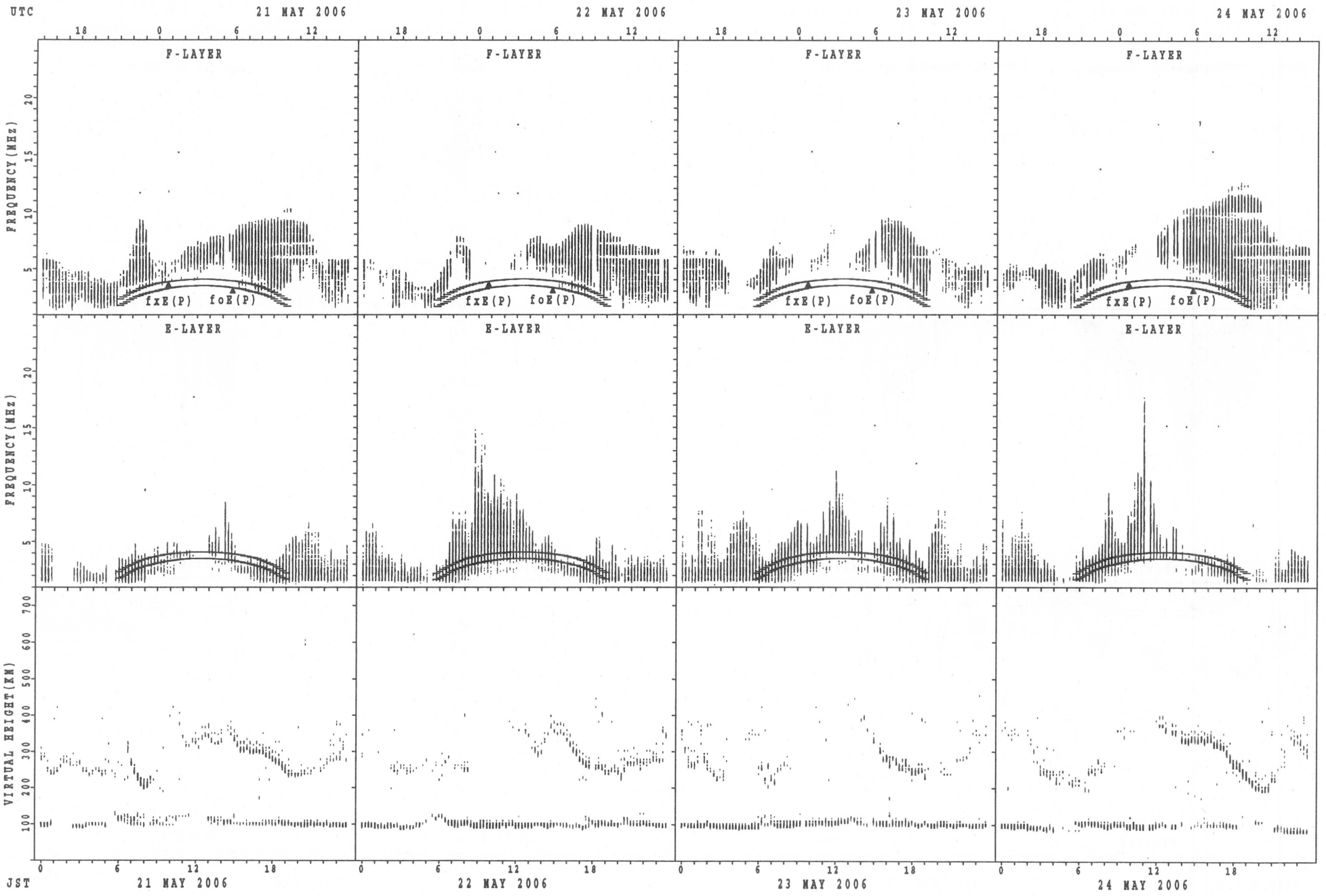
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



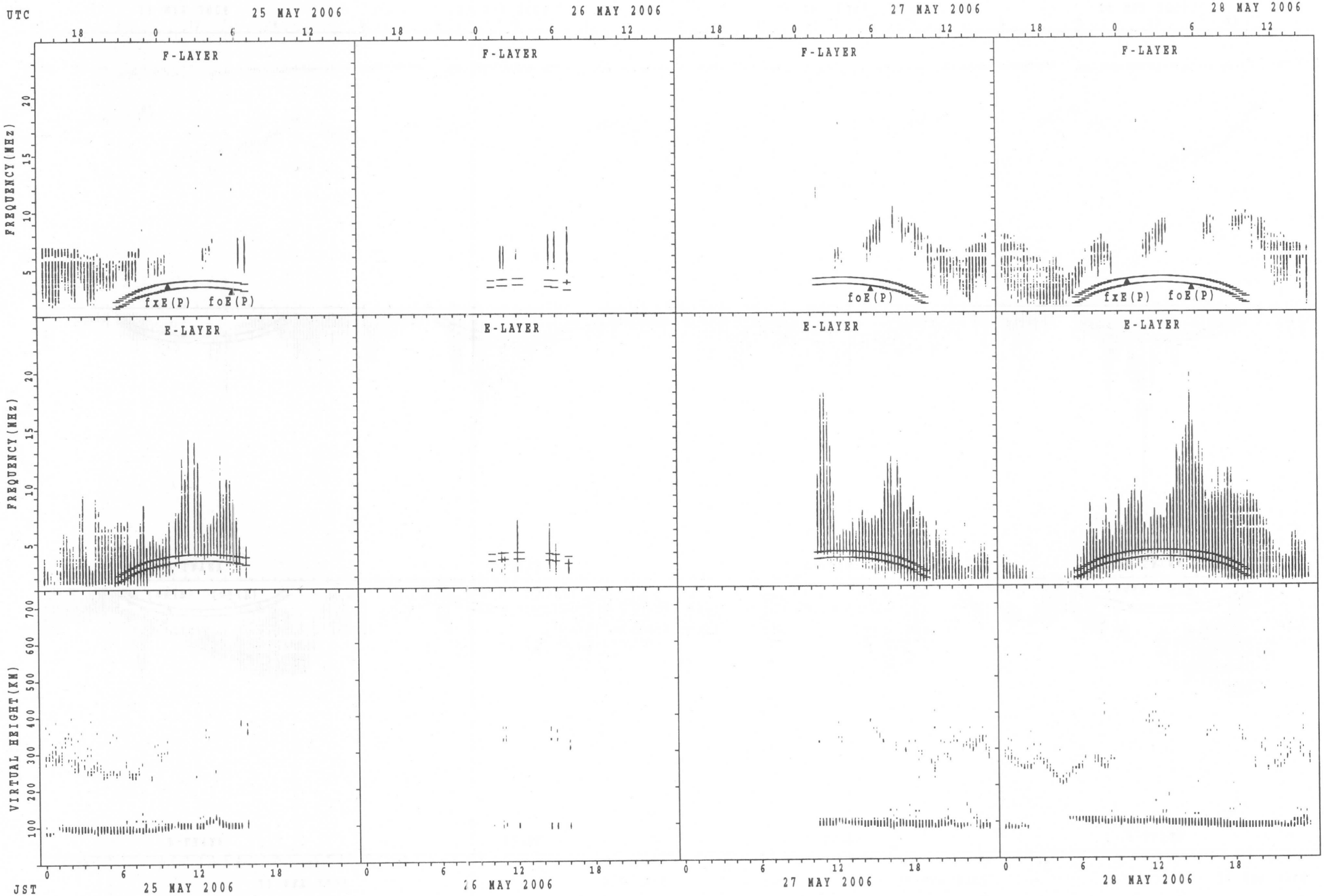
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



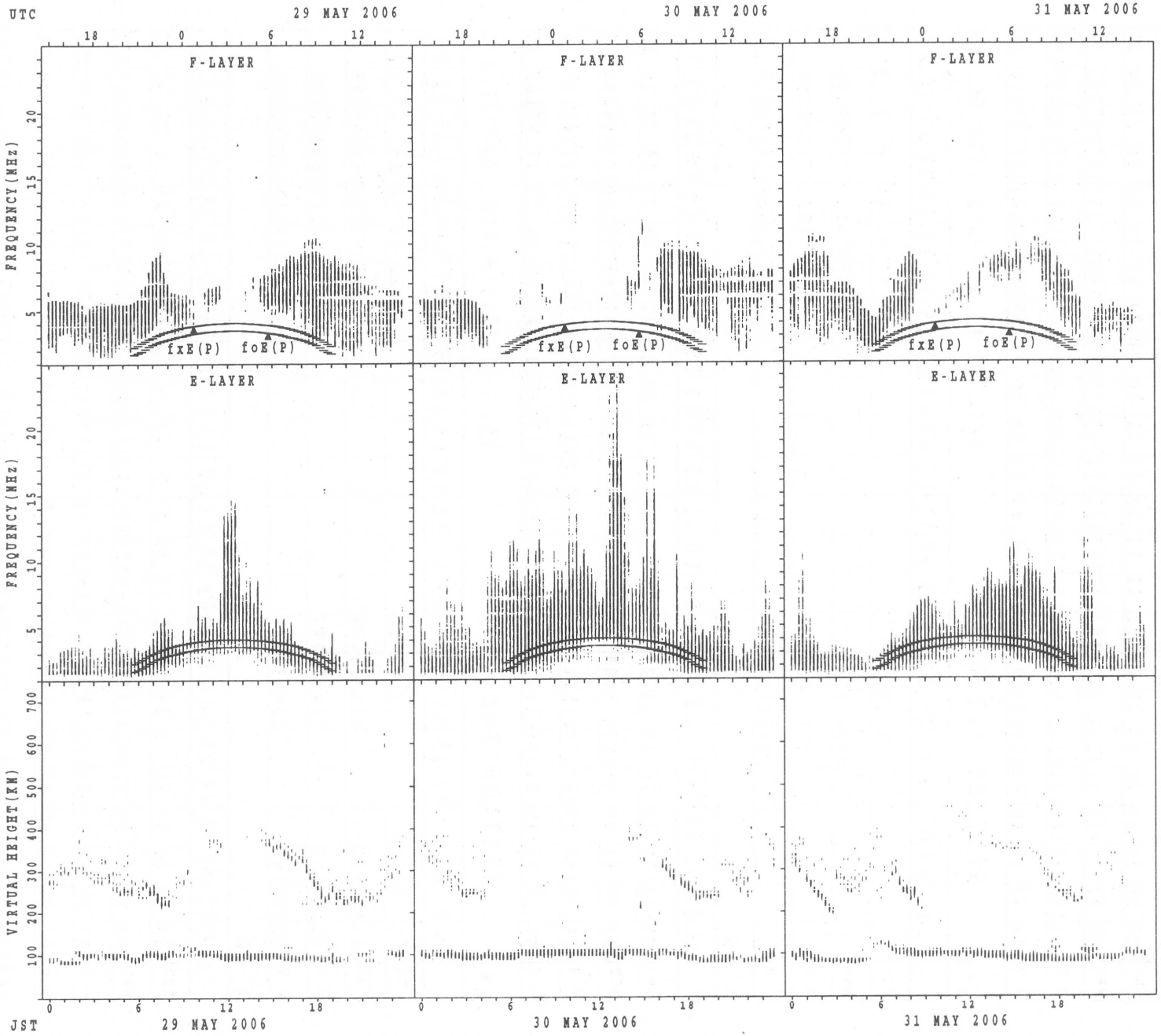
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h'F AND h'Es

MAY 2006 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						2	6	5									4	8	9	7	9	4		
MED						265	281	270									308	296	288	280	288	288		
U Q						266	286	290									314	304	302	294	295	295		
L Q						264	268	266									291	287	247	268	275	284		

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	16	17	18	15	24	24	27	23	23	23	23	22	21	20	25	23	28	25	27	25	24	24	22
MED	99	97	97	97	97	115	113	111	107	105	103	103	102	105	105	107	111	107	105	105	107	105	103	102
U Q	102	100	105	111	111	125	119	113	111	109	111	105	111	110	114	116	113	113	115	111	110	110	107	105
L Q	96	95	91	95	95	110	107	103	103	103	101	99	97	98	98	96	99	103	103	103	103	103	100	99

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	12	10									13	16	12	11	9	3	2	
MED						252	241	249									262	266	236	268	276	246	300	
U Q						126	263	264									294	305	269	288	293	338	302	
L Q						126	232	228									245	262	219	258	246	240	298	

h'Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	25	22	21	22	16	19	24	27	30	24	22	20	20	19	22	22	22	23	28	27	28	26	26	27
MED	99	97	97	97	97	117	113	109	105	103	104	103	103	105	107	107	107	103	103	103	105	104	104	101
U Q	104	101	100	97	102	129	119	111	107	108	111	105	108	113	111	113	109	111	106	105	109	105	107	105
L Q	97	95	95	95	93	103	111	105	103	103	101	100	101	97	101	101	97	97	97	97	98	99	101	99

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	2	1	1				1	12	11									22	18	17	10	6	1	
MED	363	384	298				216	239	250									264	272	256	264	265	392	
U Q	444	192	149				108	251	270									296	284	267	280	280	196	
L Q	282	192	149				108	230	234									248	240	247	246	256	196	

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	26	25	24	27	21	19	29	30	31	27	29	27	27	24	30	23	25	21	26	26	30	28	30	31
MED	100	97	97	97	97	103	113	109	105	105	103	101	103	103	107	111	105	103	107	103	101	103	103	103
U Q	103	99	100	97	101	111	119	113	111	113	107	105	105	109	119	113	113	113	113	105	103	105	105	107
L Q	97	95	94	95	95	97	103	103	103	103	99	99	99	97	99	97	97	95	97	95	95	97	99	99

MONTHLY MEDIANS OF h'F AND h'Es

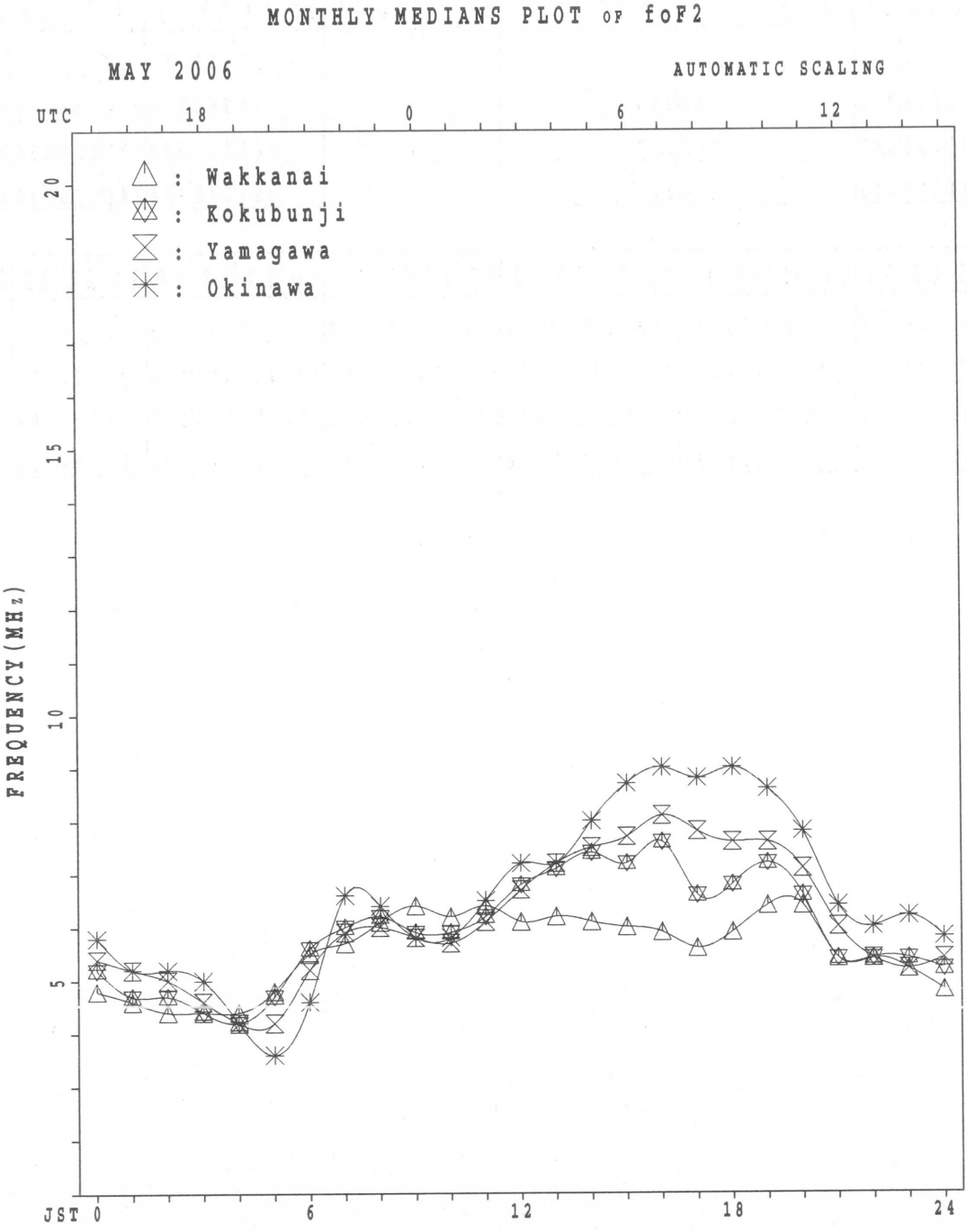
MAY 2006 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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	1	1				7	9									15	15	15	11	1	1	1
MED	402	302	248	286				250	248									278	260	256	256	256	280	418
U Q	201	320	124	143				262	257									286	272	262	272	128	140	209
L Q	201	284	124	143				234	226									254	248	234	240	128	140	209

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	18	17	15	15	12	14	18	18	18	18	17	16	16	14	17	18	13	16	19	17	18	16	17	17
MED	103	101	99	97	95	102	107	108	105	104	105	103	103	102	103	103	105	105	101	101	99	101	97	97
U Q	105	103	107	103	104	111	113	111	107	107	111	104	105	111	112	111	112	108	113	107	103	105	104	103
L Q	97	97	97	95	95	97	103	103	103	101	101	100	97	97	95	95	99	100	97	95	97	94	91	95


MONTHLY MEDIANS PLOT OF foF2
MAY 2006
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

MAY 2006 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 59	X 59	X 57	X 52	X 47															X 82	X 78	X 74	X 66	X 60
2	X 55	X 55	X 53	X 53	X 46															X 83	X 82	X 71	X 68	X 68
3	X 65	X 63	X 62	X 59	X 57															X 87	X 87	X 72	X 54	X 52
4	X 49	X 50	52	X 46	X 46															X 82	X 85	X 87	X 76	X 72
5	X 73	X 66	X 59	X 52	X 50															X 74	X 69	X 63	X 64	X 62
6	X 60	X 56	X 55	X 46	X 46															X 86	X 76	A	X 70	X 70
7	X 71	A	X 60	X 60	X 54															X 91	X 74	X 49	X 46	X 47
8	X 46	X 47	X 43	X 39	X 37															X 74	X 70	X 62	X 56	X 52
9	X 51	X 49	50	X 44	X 46															X 60	X 62	X 60	X 59	X 57
10	X 57	58	54	50	X 43															X 80	X 77	X 61	X 58	X 57
11	X 56	54	55	50	X 48															X 87	X 74	X 70	X 72	X 68
12	X 65	X 65	X 60	X 60	X 53															X 80	X 81	X 72	X 57	X 56
13	X 54	X 51	X 50	X 49	X 46															X 83	X 80	X 64	X 62	X 62
14	X 60	X 57	X 54	X 52	X 49															X 65	X 62	X 61	X 59	X 60
15	X 59	53	54	53	50															X 69	X 68	X 65	X 60	X 57
16	X 46	X 44	X 44	46	44															X 79	X 73	X 63	X 59	61
17	52	46	50	50	50															X 93	X 58	X 52	X 50	X 50
18	X 46	X 45	X 44	43	43															O X 68	X 68	X 68	X 57	52
19	52	X 47	X 44	X 42	X 41															X 62	X 61	X 57	X 53	55
20	53	52	X 47	X 39	40															X 68	X 68	X 65	66	66
21	63	62	58	54	51															X 83	X 78	X 69	A	65
22	59	X 57	61	56	51												C			X 72	X 74	72	69	65
23	X 58	X 54	A	X 48	X 47															X 72	X 61	X 59	X 58	A
24	56	57	52	53	50															X 83	X 79	X 66	X 64	64
25	62	57	59	53	X 50															X 71	X 74	X 70	X 67	X 56
26	X 50	X 46	X 48	50	X 46															X 70	X 70	X 68	75	69
27	64	X 58	60	52	50															X 67	X 65	64	69	71
28	X 60	58	64	60	X 57															X 78	X 73	X 73	X 65	X 64
29	X 64	X 63	X 53	X 46	52						C	C	C	C	C	C	C			X 79	A	X 73	73	76
30	81	80	75	X 59	X 56															X 79	X 75	X 66	X 65	X 62
31	64	64	64	62	X 56															X 75	X 63	X 58	66	64
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	30	30	31	31															31	30	30	30	30
MED	X 59	X 56	X 54	X 52	X 49															X 79	X 74	X 66	X 64	X 62
U Q	X 64	X 59	60	54	X 51															X 83	X 78	X 71	68	66
L Q	X 52	X 50	X 50	X 46	X 46															X 70	X 68	X 61	X 58	X 56

MAY 2006 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 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	53	53	51	46	40	47	64	71	64	60	64	64	72	68	71	76	86	78	68	76	72	68	59	53
2	49	49	47	47	40	42	65	87	78	80	60	63	69	77	78	77	70	63	66	77	76	65	62	62
3	58	56	56	53	51	54	60	63	65	67	69	66	76	83	84	87	82	84	79	81	81	66	48	46
4	43	44	F	40	40	43	56	67	73	66	61	61	68	76	84	87	84	68	66	75	78	81	70	66
5	67	60	53	46	44	40	42	46	49	57	55	59	56	54	66	72	68	61	58	68	63	56	57	56
6	54	50	49	40	40	52	60	58	64	66	66	59	64	70	A	79	83	84	84	R 80	69	A	64	64
7	65	A	54	54	48	58	59	A	A	52	54	52	A	54	54	56	54	49	59	85	68	43	40	41
8	40	41	37	33	31	44	51	50	55	A	A	A	54	59	64	64	59	56	55	68	64	56	50	46
9	45	43	F	38	40	44	53	59	59	56	54	55	58	64	77	89	V 78	66	56	54	56	54	53	50
10	51	F	F	F	37	45	56	61	57	53	52	58	67	78	82	80	65	58	59	74	70	55	52	51
11	50	F	F	F	42	53	59	56	52	54	60	56	61	77	76	72	84	88	93	81	68	64	66	62
12	59	59	54	54	47	53	62	58	58	A	55	60	81	81	84	67	A	A	64	74	75	65	51	50
13	48	45	44	43	40	53	59	55	53	55	56	A	67	73	77	67	62	64	68	77	74	58	56	56
14	54	51	47	46	43	50	63	A	58	50	A	61	60	64	74	81	76	72	63	59	56	55	53	54
15	53	F	F	F	F	42	52	60	63	55	51	53	46	57	67	76	A	65	56	63	62	59	54	50
16	40	38	37	F	F	44	A	49	56	58	55	52	A	A	61	66	66	63	66	73	67	57	53	F
17	F	F	F	F	F	47	52	45	53	54	56	56	A	A	55	68	84	91	98	87	52	46	44	43
18	40	39	38	F	F	42	60	52	50	A	50	54	55	64	67	A	A	A	A	62	62	62	50	F
19	F	41	38	36	35	41	59	A	43	47	46	50	53	63	65	66	62	A	A	56	54	51	47	F
20	F	F	40	33	F 30	42	49	49	A	58	A	58	A	54	53	58	54	48	52	62	62	59	F	F
21	F	F	F	F	F	54	53	54	A	65	58	A	56	63	A	A	60	57	65	77	72	63	A	F
22	F	51	F	F	F	39	54	68	A	A	A	60	A	A	60	70	C	A	A	66	68	F	F	F
23	52	48	A	42	41	44	65	57	A	56	54	56	56	55	62	67	68	68	66	66	55	53	52	A
24	F	F	F	F	F	48	70	A	A	55	A	A	64	62	62	68	76	80	79	77	72	60	58	F
25	F	F	F	F	44	48	48	62	60	A	A	A	A	60	60	64	62	57	59	65	68	64	61	50
26	44	40	42	F	40	50	54	A	58	55	A	60	58	59	61	A	65	66	66	64	64	62	F	F
27	F	51	F	F	F	44	58	A	A	A	A	A	A	56	60	67	74	77	76	60	58	F	F	F
28	54	F	F	F	51	58	66	A	A	A	A	A	63	68	A	83	80	79	74	72	67	67	59	58
29	58	S 57	47	40	F	46	55	78	84	58	C	C	C	C	C	C	C	A	A	73	A	67	F	F
30	F	F	F	53	50	48	56	A	A	A	58	A	60	A	A	A	72	68	71	73	69	60	59	56
31	F	F	F	F	50	38	47	55	77	75	61	54	61	A	A	83	82	78	68	69	57	51	F	F
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	19	16	17	22	31	30	23	22	23	21	22	23	25	25	26	26	26	27	31	30	28	24	19
MED	52	49	47	43	40	46	57	58	58	56	56	58	61	64	66	71	71	67	66	73	68	60	54	53
U Q	56	53	52	50	47	52	60	63	64	65	60	60	67	74	77	80	82	78	74	77	72	64	59	58
L Q	44	41	39	39	40	42	53	52	53	54	54	54	56	58	60	67	62	61	59	64	62	55	50	50

MAY 2006 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 foF1 (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L	L	L	L	L		L			A	A						
										464	476	504	480	476	460	448								
2							L	L		L	E S		L		L	L	L	L						
								424	444	456		480	480	468	464	440	416							
3								L	L	L	L	L				L	L	L						
										452	492	472	480	464	472	440	424							
4								L	L	L	L	U L	L	L			L	L						
										456	472	484	488	468	460	456								
5						L							U L			A	A	L						
							340	400	416	444	452	456	460	456	448									
6								L	L	L	A	U L	U L	L	A	A	A	A						
										456		492	480	456										
7							L	A	A			A	A					L	L					
										428	448			448	444	420	416	388						
8								A	A	A	A	A	A		A		L	L						
														464		436								
9								L	L	U L	L	A	A	L	A	A	L	L						
									428	524	452			464										
10								A	A	L	L		U L	A			L	L						
										444	480	460	464		448	444	424							
11								A	L	L	L	U L		U L		A	L	A						
									448	444	460	472	460	468	452		392							
12								A	A	A	U L	A	U L			A								
											476		440	448	460									
13								A	A	L	A	A	L		A	L	A							
										456			516	452		424								
14								A	A	L	A	A	A	A				L						
										460					436	432	392							
15							L	A	A	A	L		U L	U L		A								
											460	468	464	448	424		A	A						
16							A	A	A	A	A	A	A	A			A	L						
															444	436		376						
17							L	L	L		A		A	A	A	A	A	A						
								412	420	448		448												
18							A	A	A	A	L	U L	U L	A	A	A	A	A	A					
											452	452	448											
19						L		A	L	A	A	U L	A	A	A	A	A	A	A					
							336		404			436												
20								A	A	A	A	A	A	U L	U L	L	U L	U L	L					
														452	432	420	388	412						
21							L	A	A		L	A	U L	A	A	A	A	A	A					
										436	460		476											
22							L	E A	A	A	A	U L	A	A			C	A	A					
												444			444	420								
23							L	A	A		U L	U L	A	A	A			A	A					
										440	460	468				428	404							
24							E A	A	A	E A	A	A	E A	E A	U L	E A	E A	L						
															472			388						
25								L	L	A	A	A	A		E A	E A	E A	U L	E A					
								412	448					468				416						
26								A	L	U L	A	A	L			A	L	L	L					
									424	484			460	464	448		420	384						
27							A	A	A	A	A	A	A			L		L	L					
														456	452	440	416							
28							E A	A	A	A	A	A	E A	E A	A	E A	E A	E A	E A					
29						L	E A	E A	E A	E A	C	C	C	C	C	C	C	A	A					
						332																		
30							L	A	A	A	A	A	A	A	A	A	A	A	A					
31						A	A	A	A	A	U L	U L	A	A	A	A		A	L					
											484	460					420							
	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	4	8	16	14	15	14	17	17	14	11	6						
MED						L		L	L	L	L	U L	L				L	L						
						332	338	412	426	454	460	468	470	464	448	436	416	388						
U Q								L	L	L	L	L	L	L			L	U L						
								418	446	458	476	480	480	468	460	440	420	412						
L Q									L			U L	L				L	L						
								406	418	444	452	452	460	452	444	424	392	384						

MAY 2006 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 foE (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						B	U A 232	A	A	A	A	A	A	A	R	U A 320	U A 284	A	B					
2						B	A	A	A	A	A	R	R	R	R	A	A	A	B					
3						B	240	A	A	A	A	A	A	R	A	R	A	U A 244	B					
4						B	232	288	A	A	A	A	A	A	348	332	U R 300	244	180					
5						B	232	A	A	A	A	A	A	A	344	A	A	A	A					
6						B	U A 216	A	A	A	A	A	A	A	A	A	U A 288	A	B					
7						B	U A 232	A	A	A	A	A	A	A	344	R	R	U R 240	184					
8						B	U A 216	A	A	A	A	A	A	A	A	A	A	A	A					
9						B	232	U A 284	A	A	A	A	A	A	A	U A 312	U A 276	A	B					
10						B	U A 224	A	A	A	A	A	A	A	A	R	R	A	A					
11						B	A	A	A	R	A	A	A	A	A	A	296	A	A					
12						B	A	A	A	A	A	A	R	A	336	A	U A 280	A	B					
13						B	U A 232	A	A	A	A	A	A	A	A	A	A	U A 228	A					
14						B	A	A	A	A	A	A	A	A	A	316	U R 288	U A 240	B					
15						B	U A 244	A	A	A	A	A	A	A	A	A	A	A	A					
16						B	U A 236	A	A	A	A	A	A	A	U R 336	A	A	A	U A 172					
17						180	A	A	A	A	A	356	A	A	A	U A 308	U A 280	U A 232	A					
18						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
19						B	U R 244	A	A	A	A	A	A	A	A	A	A	A	A					
20						U A 168	U A 232	A	A	A	A	A	A	A	A	A	A	A	A					
21						176	A	A	A	432	A	A	R	A	A	A	A	A	A					
22						B	A	A	A	A	A	A	A	A	A	A	C	A	B					
23						B	A	A	A	A	A	A	A	A	A	U R 316	U A 292	A	A					
24						B	A	A	A	A	A	A	A	A	A	316	A	A	B					
25						B	U A 240	A	A	A	A	A	A	A	A	A	A	A	B					
26						B	A	A	A	A	A	A	A	A	A	A	A	260	A					
27						U A 188	A	A	A	A	A	A	A	A	A	A	A	U A 248	A					
28						180	U A 244	A	A	A	A	A	A	A	A	A	A	A	A					
29						B	A	A	A	A	C	C	C	C	C	C	C	A	A					
30						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
31						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						5	16	2		1		1			5	7	9	8	3					
MED						180	U A 232	286		432		356			344	U 316	U A 288	U A 242	180					
U Q						184	U A 240								346	320	U 294	U A 246	184					
L Q						172	U A 232								336	U A 312	U A 280	U A 236	U A 172					

MAY 2006 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 foEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	19	E B 16	E B 16	E B 15	E B 15	E B 17	28	36	J A 42	39	J A 48	43	42	40	G 31	40	J A 43	J A 50	J A 33	J A 22	E B 15	19	E B 15	E B 15
2	20	J A 54	E B 15	E B 14	E B 15	19	28	34	36	J A 40	44	G 29	G 30	G 30	G 34	J A 41	J A 38	J A 33	J A 37	J A 27	J A 41	29	J A 26	J A 22
3	J A 45	J A 40	J A 25	J A 27	J A 26	19	26	34	J A 43	J A 41	J A 47	J A 47	44	G 30	39	G 27	32	28	23	J A 18	J A 27	J A 40	22	J A 55
4	J A 38	J A 24	E B 16	J A 59	J A 26	E B 19	28	35	40	J A 44	40	40	J A 46	J A 53	43	41	G 25	G 20	25	J A 40	J A 24	J A 46	J A 33	J A 24
5	E B 16	E B 16	E B 15	E B 15	20	E B 16	27	32	36	37	40	40	46	42	38	J A 47	J A 46	J A 53	J A 34	J A 66	J A 49	21	E B 18	J A 24
6	J A 23	J A 36	J A 28	J A 31	J A 22	18	26	31	38	J A 53	J A 57	41	42	39	J A 82	J A 72	J A 68	J A 51	J A 40	J A 125	J A 91	J A 97	J A 79	J A 52
7	J A 64	J A 93	21	J A 19	J A 62	J A 55	29	J A 46	J A 70	J A 52	J A 46	J A 58	J A 54	38	43	G 26	G 24	G 22	21	J A 19	18	22	19	J A 55
8	J A 46	J A 27	J A 23	E B 14	E B 14	J A 32	30	J A 45	J A 52	J A 97	J A 91	J A 98	J A 53	39	J A 55	J A 42	J A 42	J A 42	J A 52	J A 53	J A 52	J A 42	J A 32	J A 54
9	J A 55	J A 77	J A 47	J A 27	J A 20	J A 19	28	36	J A 44	J A 49	42	J A 55	J A 54	43	J A 50	41	33	27	21	E B 15	J A 39	J A 39	J A 46	J A 53
10	J A 53	J A 20	J A 22	24	E B 16	28	J A 38	40	J A 58	J A 43	39	41	40	47	J A 44	G 29	G 25	28	J A 32	J A 68	J A 45	J A 44	J A 35	J A 20
11	J A 26	22	J A 31	J A 31	J A 20	19	26	35	J A 40	G J A 31	J A 50	J A 47	42	J A 48	48	J A 87	32	J A 87	J A 77	J A 53	J A 26	E B 15	J A 19	J A 44
12	J A 35	J A 19	J A 17	E B 15	E B 16	J A 28	32	J A 45	J A 67	J A 68	J A 61	J A 53	G 29	J A 44	42	J A 80	J A 72	J A 82	J A 46	J A 66	J A 55	J A 42	J A 34	J A 30
13	J A 19	20	20	J A 17	J A 24	21	J A 37	49	J A 58	J A 75	J A 81	J A 106	J A 60	48	J A 63	34	J A 47	31	J A 39	J A 105	J A 87	J A 44	17	E B 15
14	E B 15	J A 26	J A 23	J A 27	J A 20	25	J A 45	J A 66	J A 53	J A 67	J A 56	J A 65	J A 63	J A 52	J A 41	37	G 24	32	J A 49	J A 33	J A 33	J A 37	J A 28	J A 34
15	J A 16	20	J A 18	J A 26	J A 31	24	31	J A 62	J A 56	J A 44	J A 42	40	38	J A 45	37	J A 66	J A 75	J A 54	J A 60	J A 53	J A 23	J A 48	J A 47	J A 53
16	J A 52	J A 19	E B 16	E B 15	E B 15	23	J A 68	J A 51	J A 48	J A 43	J A 52	J A 54	J A 63	J A 90	G 28	38	J A 50	J A 42	29	J A 53	J A 28	J A 48	J A 41	J A 42
17	J A 38	J A 54	J A 20	J A 25	21	24	31	34	40	38	45	41	J A 140	J A 94	J A 99	J A 48	J A 53	J A 48	J A 52	J A 43	21	36	63	38
18	J A 34	J A 42	J A 46	J A 66	22	J A 30	J A 44	J A 43	J A 51	J A 58	41	39	42	J A 51	J A 69	J A 65	J A 190	J A 175	J A 93	J A 97	J A 69	J A 52	J A 70	J A 55
19	J A 32	J A 24	J A 42	J A 47	J A 61	J A 32	G	J A 68	J A 111	42	43	J A 47	42	48	J A 56	J A 64	J A 122	J A 148	J A 127	J A 27	J A 37	J A 58	J A 55	J A 54
20	J A 54	J A 52	J A 34	E B 16	J A 24	23	J A 38	J A 46	J A 143	J A 82	J A 129	56	J A 63	47	J A 52	J A 41	J A 42	J A 36	25	J A 56	J A 54	J A 142	J A 53	J A 35
21	J A 42	J A 31	J A 33	J A 25	J A 20	22	J A 41	J A 56	J A 130	G 28	40	J A 69	31	G 53	J A 113	J A 116	J A 84	J A 107	54	J A 74	J A 72	J A 108	J A 72	J A 45
22	J A 49	J A 30	J A 38	J A 37	J A 26	J A 44	J A 38	J A 53	J A 73	J A 58	J A 91	J A 66	J A 70	J A 73	39	40	C	J A 76	J A 75	J A 67	J A 58	J A 47	J A 74	J A 44
23	J A 30	J A 24	J A 92	J A 24	J A 20	21	31	J A 42	J A 66	41	J A 40	J A 54	J A 50	J A 64	J A 57	G 25	38	J A 77	J A 49	J A 78	J A 87	J A 64	J A 55	J A 75
24	J A 52	J A 32	J A 70	J A 35	J A 34	J A 29	J A 44	J A 88	J A 84	J A 98	J A 118	J A 154	J A 109	J A 173	J A 100	J A 56	J A 82	32	J A 70	J A 44	20	J A 74	J A 96	J A 44
25	J A 43	J A 42	J A 38	J A 23	E B 14	20	36	J A 54	J A 52	J A 71	J A 80	J A 84	J A 112	J A 122	J A 84	J A 148	J A 110	J A 75	J A 47	J A 71	36	J A 72	J A 48	J A 40
26	J A 67	J A 63	J A 52	J A 31	J A 52	J A 32	J A 32	J A 74	J A 60	38	J A 102	J A 60	J A 49	J A 43	46	J A 68	38	30	J A 30	J A 53	J A 44	J A 79	J A 44	J A 58
27	J A 69	J A 45	J A 78	J A 71	J A 35	24	J A 51	J A 100	J A 106	J A 80	J A 69	J A 85	J A 75	J A 48	J A 58	J A 45	J A 36	32	J A 25	J A 27	J A 37	J A 48	J A 37	J A 55
28	J A 74	J A 78	J A 31	J A 24	21	25	35	J A 63	J A 96	J A 149	J A 136	J A 118	J A 75	J A 98	J A 85	J A 61	J A 74	J A 53	J A 76	J A 45	J A 31	J A 28	J A 43	J A 44
29	J A 52	J A 96	J A 88	J A 68	J A 37	J A 36	J A 58	J A 180	J A 77	J A 56	C	C	C	C	C	C	C	J A 107	J A 84	J A 53	68	J A 85	J A 75	J A 89
30	J A 51	J A 59	J A 56	J A 48	J A 31	21	33	J A 89	J A 139	J A 89	J A 53	J A 90	J A 58	J A 63	J A 127	J A 146	J A 89	J A 47	J A 98	J A 89	J A 80	J A 55	J A 77	J A 23
31	J A 76	J A 76	J A 55	J A 45	J A 24	J A 85	J A 43	J A 55	J A 74	J A 93	J A 37	J A 38	J A 52	J A 85	J A 75	J A 48	J A 38	J A 54	J A 32	J A 33	J A 77	J A 44	J A 60	J A 55
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	29	31	31	31	31	31	31	31
MED	J A 43	J A 32	J A 31	J A 26	J A 22	24	32	J A 46	J A 58	J A 52	J A 49	J A 54	J A 51	J A 48	J A 51	J A 46	J A 43	J A 48	J A 46	J A 53	J A 41	J A 46	J A 44	J A 44
U Q	J A 53	J A 54	J A 47	J A 37	J A 31	J A 30	J A 41	J A 63	J A 77	J A 75	J A 80	J A 69	J A 63	J A 64	J A 75	J A 66	J A 74	J A 76	J A 70	J A 68	J A 68	J A 64	J A 63	J A 55
L Q	26	22	E B 20	E B E B 17	E B 20	19	28	36	43	41	42	41	42	43	41	40	34	32	30	J A 33	J A 27	37	28	J A 30

MAY 2006 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 fbEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E B 16	E B 16	E B 16	E B 15	E B 15	E B 17	26	35	36	36	37	39	37	38	G 28	36	39	37	24	19	E B 15	16	E B 15	E B 15
2	E B 15	17	E B 15	E B 14	E B 15	18	26	32	34	36	41	G 29	G 30	G 29	G 33	36	34	27	33	20	26	25	E B 15	E B 15
3	E B 16	20	20	21	E B 16	18	25	32	36	37	41	41	40	G 30	37	G 27	30	26	20	E B 15	23	35	E B 15	27
4	27	E B 15	E B 16	24	18	E B 19	27	34	39	41	38	38	40	41	40	39	G 22	G 19	24	35	19	36	29	22
5	E B 16	E B 16	E B 15	E B 15	E B 15	E B 16	26	31	35	37	38	39	41	40	36	42	40	30	23	25	32	E B 16	E B 18	16
6	20	E B 15	26	23	17	18	25	30	36	39	48	38	38	38	A A 82	59	60	49	34	55	44	A A 97	36	26
7	24	A A 93	E B 16	18	31	45	28	A A 46	A A 70	38	41	44	A A 54	36	40	G 26	G 24	G 22	20	E B 16	E B 15	E B 15	E B 16	E B 16
8	E B 16	E B 15	17	E B 14	E B 14	30	29	42	47	A A 97	A A 91	A A 98	46	38	48	34	34	31	40	42	E B 15	18	24	24
9	20	21	22	20	E B 15	16	26	35	38	43	36	46	46	40	45	38	31	26	20	E B 15	34	32	32	32
10	32	17	21	20	E B 16	26	34	38	53	39	36	37	39	46	38	G 29	G 24	27	28	58	38	26	21	E B 15
11	E B 15	E B 15	E B 16	18	E B 15	18	26	34	38	G 31	40	38	38	38	40	46	G 29	40	76	41	21	E B 15	E B 14	16
12	30	16	E B 15	E B 15	E B 16	26	27	38	50	A A 68	41	45	G 28	40	38	41	A A 72	A A 82	40	65	38	35	28	23
13	17	E B 15	E B 16	E B 15	16	20	35	40	44	40	45	A A 106	44	40	46	34	40	29	31	17	36	26	E B 15	E B 15
14	E B 15	E B 15	E B 16	17	E B 15	24	40	A A 66	47	38	A A 56	43	52	44	36	35	G 22	28	25	23	23	E B 16	23	19
15	E B 15	E B 15	E B 16	E B 15	19	21	29	54	47	40	40	37	37	37	35	41	A A 75	39	26	23	16	28	24	35
16	25	E B 15	E B 16	E B 15	E B 15	22	A A 68	42	45	41	43	46	A A 63	A A 90	G 28	34	45	29	26	47	26	36	27	20
17	20	20	E B 16	17	E B 15	22	27	31	37	35	44	40	A A 140	A A 94	47	43	48	38	39	36	18	20	30	21
18	20	28	E B 15	E B 15	E B 15	19	34	34	45	A A 58	38	37	40	44	61	A A 65	A A 190	A A 175	A A 93	44	16	E B 16	22	22
19	23	E B 15	20	21	22	25	G	A A 68	34	40	41	40	41	48	48	43	48	A A 148	A A 127	24	E B 15	28	28	23
20	29	17	23	E B 16	16	22	35	40	A A 143	44	A A 129	51	A A 63	39	35	34	32	27	22	45	37	20	34	E B 15
21	30	19	21	E B 15	E B 15	20	36	41	A A 130	G 28	38	A A 69	G 31	50	A A 113	A A 116	42	49	53	36	23	44	A A 72	35
22	38	22	19	24	16	24	28	42	A A 73	A A 58	A A 91	38	A A 70	A A 73	38	37	C	A A 76	A A 75	54	30	38	19	18
23	16	E B 15	A A 92	E B 15	E B 15	19	28	38	A A 66	37	37	44	48	49	46	G 25	32	42	45	31	24	E B 15	43	A A 75
24	22	20	24	E B 14	E B 15	23	36	A A 88	A A 84	46	A A 118	A A 154	49	48	40	43	63	30	32	20	E B 14	25	20	32
25	26	31	16	E B 16	E B 14	19	34	34	38	A A 71	A A 80	A A 84	A A 112	39	45	54	41	34	28	40	19	24	25	24
26	E B 15	26	21	17	16	22	29	A A 74	33	35	A A 102	50	41	39	41	A A 68	31	29	22	50	26	E B 15	26	32
27	30	29	22	26	19	23	46	A A 100	A A 106	A A 80	A A 69	A A 85	A A 75	40	38	38	32	30	23	24	17	20	23	23
28	36	36	20	16	E B 16	23	32	A A 63	A A 96	A A 149	A A 136	A A 118	48	58	A A 85	54	51	37	53	31	25	24	26	25
29	43	24	18	19	19	26	47	58	62	44	C	C	C	C	C	C	C	A A 107	A A 84	48	A A 68	36	22	18
30	30	26	E B 15	25	19	20	30	A A 89	A A 139	A A 89	48	A A 90	50	A A 63	A A 127	A A 146	62	40	66	58	54	27	27	18
31	22	37	22	29	17	30	38	48	64	62	36	37	48	A A 85	A A 75	44	34	37	24	27	18	26	42	39
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	29	31	31	31	31	31	31	31
MED	22	17	17	17	E B 16	22	29	40	47	40	41	44	45	40	40	40	39	34	31	35	23	25	24	22
U Q	30	26	21	21	17	24	35	A A 58	A A 70	A A 58	A A 69	A A 69	A A 52	A A 49	A A 48	46	50	A A 42	53	47	34	35	29	27
L Q	E B 16	E B 15	E B 16	E B 15	E B 15	19	26	34	37	37	38	38	39	38	37	34	G 31	28	24	23	E B 17	E B 16	E B 19	E B 16

MAY 2006 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 fmin (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

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

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

MAY 2006 fmin (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 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	304	299	321	314	313	341	360	378	364	340	327	301	323	316	319	323	334	340	326	314	321	319	317	305
2	293	294	301	320	302	285	333	346	347	350	349	321	314	316	325	329	343	335	313	314	336	311	305	313
3	297	283	296	303	299	324	367	351	353	347	336	322	307	317	307	319	325	322	316	320	337	353	312	304
4	287	294	F	312	336	360	356	357	363	359	354	299	307	302	314	320	340	334	308	303	292	339	302	299
5	310	277	292	268	279	289	281	284	272	312	316	337	321	298	305	335	339	327	325	314	308	290	294	297
6	296	297	321	296	310	325	347	363	322	351	324	348	317	320	A	322	325	324	333	R 331	308	A	281	286
7	278	A	290	309	287	311	352	A	A	278	289	270	A	293	309	322	295	250	292	332	353	293	296	273
8	289	309	327	320	312	342	354	312	306	A	A	A	285	299	321	315	329	334	315	320	320	310	303	307
9	303	292	F	293	313	350	354	346	326	322	310	283	313	303	306	325	V 332	356	338	315	295	293	285	307
10	288	F	F	F	303	345	366	363	352	318	302	302	300	305	314	330	338	341	307	336	356	313	294	304
11	295	F	F	F	326	353	380	392	341	325	327	282	281	306	309	287	308	311	332	344	305	298	312	291
12	290	298	303	326	333	353	383	375	348	A	S 268	276	303	309	324	336	A	A	307	303	319	336	287	303
13	290	286	300	325	331	362	376	364	338	340	327	A	315	321	329	338	321	305	302	286	342	304	296	304
14	309	309	315	322	315	345	373	A	364	298	A	321	317	296	298	324	333	342	335	328	304	298	294	294
15	316	F	F	F	F	358	337	351	363	382	303	300	346	319	312	326	A	349	329	316	312	308	308	309
16	337	324	347	F	F	354	A	337	327	357	330	303	A	A	323	331	325	313	319	336	337	324	294	F
17	F	F	F	F	F	358	354	310	344	327	341	325	A	A	291	281	308	323	340	366	319	312	312	311
18	301	292	306	F	F	338	363	364	359	A	287	287	301	326	317	A	A	A	A	307	300	325	336	F
19	F	309	296	296	294	351	375	A	348	293	280	263	290	310	308	328	337	A	A	324	319	310	285	F
20	F	F	341	331	F 304	354	338	329	A	326	A	336	A	324	302	328	319	297	325	305	314	313	F	F
21	F	F	F	F	F	359	329	356	A	357	314	A	310	311	A	A	323	321	300	322	320	340	A	F
22	F	306	F	F	F	326	319	343	A	A	A	351	A	A	296	317	C	A	A	311	306	F	F	F
23	311	330	A	307	325	341	369	358	A	341	303	318	321	292	310	313	327	338	339	343	310	306	305	A
24	F	F	F	F	F	335	372	A	A	291	A	A	329	312	289	296	301	312	307	311	332	334	296	F
25	F	F	F	F	328	336	349	365	339	A	A	A	A	314	312	317	320	305	330	304	312	327	305	321
26	315	300	310	F	339	379	366	A	349	265	A	314	292	308	312	A	319	332	321	312	298	303	F	F
27	F	322	F	F	F	320	337	A	A	A	A	A	A	293	295	302	310	330	347	321	312	F	F	F
28	296	F	F	F	321	366	384	A	A	A	A	A	316	319	A	310	304	311	320	326	307	316	297	307
29	298	S 300	320	310	F	293	302	314	373	369	C	C	C	C	C	C	C	A	A	310	A	294	F	F
30	F	F	F	317	338	356	343	A	A	A	342	A	332	A	A	A	314	312	307	301	329	314	300	293
31	F	F	F	F	307	303	295	289	340	312	323	336	303	A	A	314	310	328	318	339	313	293	F	F
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	19	16	17	22	31	30	23	22	23	21	22	23	25	25	26	26	26	27	31	30	28	24	19
MED	297	299	308	312	313	345	354	351	348	327	323	308	313	310	310	322	324	326	320	316	314	312	298	304
U Q	310	309	321	321	328	356	369	364	359	351	333	325	321	318	318	328	333	335	332	331	329	324	306	307
L Q	290	292	298	300	303	325	337	329	338	312	302	287	301	300	304	314	310	312	307	310	307	300	294	294

MAY 2006 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 M(3000)F1 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L	L	L 410	L 411	L 398	403	L 374	388	368	A	A						
2							L	L 371	392	L 388	E S	404	L 400	394	L 384	L 382	L 378	L						
3								L	L	L 413	L 358	L 410	394	395	372	L 379	L 364	L						
4								L	L	L 391	L 404	U L 404	L 370	L 382	370	384	L	L						
5						L	356	359	393	425	374	375	U L 387	388	380	A	A	L						
6								L	L	L 398	A	U L 383	U L 387	L 395	A	A	A	A						
7							L	A	A	379	393	A	A	376	366	382	377	L 342	L					
8								A	A	A	A	A	A	392	A	375	L	L						
9								L	L 408	U L 372	L 397	A	A	L 394	A	A	L	L						
10								A	A	L 407	L 383	427	U L 411	A	384	361	L 374	L						
11								A	L 382	L 397	L 396	U L 393	410	U L 367	367	A	L 381	A						
12								A	A	A	U L 379	A	U L 418	392	362	A	A	A						
13								A	A	L 383	A	A	L 351	379	A	L 378	A	L						
14								A	A	L 391	A	A	A	A	375	372	404	L						
15							L	A	A	A	L 396	391	U L 414	U L 409	414	A	A	A						
16							A	A	A	A	A	A	A	A	374	358	A	L 373						
17							L	383	L 395	388	A	378	A	A	A	A	A	A						
18							A	A	A	A	L 391	U L 391	U L 404	A	A	A	A	A	A					
19						L	384	A	L 395	A	A	U L 362	A	A	A	A	A	A	A					
20								A	A	A	A	A	A	U L 400	U L 408	L 395	U L 408	U L 339	L					
21							L	A	A	421	L 393	A	U L 378	A	A	A	A	A	A					
22							L	E A	A	A	A	U L 396	A	A	397	403	C	A	A					
23							L	A	A	402	U L 400	U L 359	A	A	A	377	386	A	A					
24							E	A A	A	E	A A	A	E	A E	A U	L 377	E A	E A	L 358					
25								L 378	L 390	A	A	A	A	398	E	A E A	E A	U L 355	E	A				
26								A	L 433	U L 377	A	A	L 407	402	393	A	L 374	L 373	L					
27							A	A	A	A	A	A	A	433	387	L 380	370	L	L					
28							E	A A	A	A	A	A	E	A E	A	A E	A E	A E	A	E				
29						L 338	E	A E	A E	A E	C	C	C	C	C	C	C	A	A					
30								L	A	A	A	A	A	A	A	A	A	A	A					
31							A	A	A	A	A	U L 392	U L 405	A	A	A	A	369	A	L				
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						1	2	4	8	16	14	15	14	17	17	14	11	6						
MED						L 338	370	374	L 394	L 394	L 393	U L 393	L 402	394	380	378	L 377	L 356						
U Q								380	L 402	L 408	L 397	U L 404	U L 410	399	390	382	386	L 373						
L Q								365	L 391	L 386	L 383	378	L 387	L 380	371	372	370	L 342						

MAY 2006 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 h'F2 (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								230	242	270	302	340	304	308	312	288	266	250						
2							280	246	248	256	262	324	322	298	278	282	260	262						
3								244	260	276	292	314	318	290	302	280	272	274						
4								254	246	266	270	354	332	318	292	280	252	254						
5						338	422	408	448	346	334	302	332	358	340	278	268	282						
6								252	264	268	322	274	322	304	A	E A 286	E A 278	260						
7							258	A	A	426	402	E A 464	A	396	352	332	364	474	326					
8								E A 348	E A 318	A	A	A	396	348	318	316	292	282						
9								262	290	338	336	420	360	336	310	272	240	252						
10								250	E A 304	312	360	360	344	300	282	266	276	272						
11								222	296	328	306	410	394	318	316	340	288	280						
12								238	E A 266	A	442	430	308	278	278	276	A	A						
13								228	E A 284	304	324	A	320	302	272	274	302	280						
14								A	250	392	A	334	E A 326	356	326	270	268	260						
15							282	278	246	240	366	366	338	330	314	284	A	262						
16							A	E A 274	302	264	292	370	A	A	320	306	290	290						
17							252	364	284	314	296	320	A	A	E A 382	350	296	266						
18							234	240	E A 276	A	426	390	372	314	E A 342	A	A	A	A					
19						276	240	A	298	E A 326	E A 422	478	392	332	E A 322	278	E A 288	A	A					
20								E A 286	A	310	A	E A 312	A	334	358	312	320	352	290					
21							296	248	A	264	304	A	344	326	A	A	310	E A 314	E A 322					
22							316	262	A	A	A	282	A	A	358	306	C	A	A					
23							236	268	A	302	362	328	320	388	334	304	286	276	260					
24							234	A	A	E A 360	A	A	E A 310	346	368	336	E A 330	278						
25								252	284	A	A	A	A	340	340	320	286	330	268					
26								A	280	464	A	E A 340	380	330	314	A	308	268	272					
27							E A 262	A	A	A	A	A	A	386	370	326	302	260	248					
28							216	A	A	A	A	A	324	E A 326	A	294	290	286	E A 268					
29						342	E A 362	288	234	260	C	C	C	C	C	C	C	A	A					
30							280	A	A	A	270	A	318	A	A	A	E A 324	280	E A 366					
31						E A 294	E A 376	E A 378	E A 278	E A 286	298	318	350	A	A	300	284	260	284					
	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	16	23	22	23	21	22	23	25	25	26	26	26	10					
MED						316	263	251	272	295	314	338	332	330	317	291	287	274	273					
U Q						340	306	286	296	338	364	390	360	347	347	316	302	282	E A 322					
L Q						285	238	244	250	266	294	318	320	306	306	278	272	260	268					

MAY 2006 h'F2 (KM)

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IONOSPHERIC DATA STATION Kokubunji

MAY 2006 h'F (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E B 260	E B 286	236	232	E B 232	232	224	A	208	200	H 182	H 172	H 166	212	212	208	A	A	238	236	228	222	218	220
2	E B 264	E A 280	E B 272	230	236	250	220	214	200	194	S	194	190	H 182	212	204	216	220	E A 252	240	232	232	248	E B 250
3	E B 260	E A 278	E A 272	E A 256	E B 252	232	218	208	212	H 190	220	202	192	212	H 192	204	206	212	224	226	224	214	218	E A 282
4	E A 334	E B 270	E B 252	240	242	210	224	220	218	220	200	188	218	220	228	E A 236	H 204	202	244	E A 274	E A 266	228	256	E A 276
5	E B 260	E B 292	242	E B 298	E B 292	266	238	228	208	190	212	210	228	242	H 198	A	A	224	E A 246	250	E A 266	252	E B 276	E A 254
6	E A 268	E B 258	E A 256	E A 296	E A 262	226	224	214	212	206	A	200	198	204	A	A	A	A	242	236	E A 264	A	E A 342	E A 290
7	E A 300	A	E B 258	E A 258	E A 306	E A 278	A	A	A	244	210	A	A	214	E A 260	220	202	222	252	242	206	236	E B 256	E B 306
8	E B 292	248	244	238	232	E A 240	230	A	A	A	A	A	A	198	A	196	E A 260	E A 246	E A 282	E A 278	230	E A 246	E A 262	E A 280
9	E A 288	E A 304	E A 280	E A 292	248	212	228	E A 240	226	226	198	A	A	224	A	A	H 202	H 190	214	230	E A 304	E A 310	E A 292	E A 296
10	E A 318	E A 288	E A 246	236	E B 268	E A 246	234	A	A	202	198	198	192	A	212	216	200	210	E A 284	E A 272	230	E A 258	E A 254	E B 252
11	E B 284	E B 278	E B 264	E A 270	246	230	212	A	206	194	214	198	200	206	E A 254	A	214	A	E A 276	230	236	E B 256	E B 240	E A 268
12	E A 318	E A 278	E B 258	232	208	220	220	A	A	A	212	A	H 176	224	228	A	A	A	E A 270	E A 348	E A 260	226	E A 296	E A 278
13	E A 278	E B 286	E B 254	234	232	224	220	A	A	202	A	A	E A 250	236	A	198	A	218	E A 262	240	224	E A 248	E B 260	E B 254
14	240	E B 260	E B 250	230	236	222	218	A	A	208	A	A	A	A	202	220	204	218	236	242	E A 254	E B 258	E A 284	E A 272
15	232	E B 270	E B 260	E B 254	E A 252	224	226	A	A	A	210	196	198	H 180	192	A	A	A	234	242	234	E A 264	E A 264	E A 288
16	E A 252	E B 250	218	E B 282	E B 256	216	A	A	A	A	A	A	A	A	H 198	206	A	198	E A 260	E A 254	226	E A 264	E A 304	246
17	E A 256	E A 286	E B 284	E A 286	E B 264	216	202	202	212	206	A	E A 242	A	A	A	A	A	A	234	204	200	E A 250	E A 310	E A 262
18	E A 282	E A 304	E B 264	E B 290	E B 288	226	A	A	A	A	224	206	206	A	A	A	A	A	E A 262	E A 248	230	216	E A 296	
19	E A 286	E B 254	E A 280	E A 308	E A 318	E A 248	212	A	206	A	A	E A 264	A	A	A	A	A	A	A	232	224	E A 282	E A 308	E A 276
20	E A 310	E A 274	E A 242	E A 236	E B 272	E A 232	E A 250	A	A	A	A	A	A	218	H 182	204	216	226	238	E A 286	E A 250	236	E A 308	E B 252
21	E A 288	E A 262	E A 278	E A 250	E B 220	226	E A 248	A	A	H 188	H 188	A	212	A	A	A	A	A	A	E A 254	226	E A 242	A	E A 326
22	E A 316	E A 282	E A 254	E A 262	222	236	226	A	A	A	A	212	A	A	204	222	C	A	A	E A 310	E A 250	E A 306	E A 258	232
23	E A 254	236	A	E B 258	E B 246	218	220	A	A	210	200	E A 254	A	A	A	H 194	206	A	A	220	E A 242	242	E A 336	A
24	E A 250	E A 268	E A 286	E A 300	E B 256	222	A	A	A	A	A	A	A	A	194	A	A	E A 230	E A 254	236	208	218	E A 266	E A 296
25	E A 318	E A 324	E A 272	E A 278	232	224	218	218	212	A	A	A	A	200	A	A	A	228	A	E A 280	234	E A 248	E A 258	E A 248
26	240	E A 310	E A 290	E A 266	240	212	206	A	184	202	A	A	222	190	222	A	194	222	232	E A 284	E A 280	238	E A 278	E A 266
27	E A 324	E A 252	E A 294	E A 314	E A 278	226	A	A	A	A	A	A	A	182	192	218	212	E A 238	222	210	234	E A 278	E A 304	E A 260
28	E A 302	E A 314	E A 280	E A 248	222	226	A	A	A	A	A	A	A	A	A	A	A	A	A	E A 248	224	E A 248	E A 266	E A 276
29	E A 316	E A 310	E A 252	E A 272	E A 284	E A 254	A	A	A	A	C	C	C	C	C	C	C	A	A	E A 278	A	E A 280	E A 292	E A 256
30	E A 300	E A 256	232	238	226	226	238	A	A	A	A	A	A	A	A	A	A	A	A	E A 304	E A 282	E A 262	E A 260	E A 260
31	E A 314	E A 340	E A 268	E A 262	232	A	A	A	A	A	H 186	198	A	A	A	A	218	A	214	218	218	E A 308	E A 334	E A 330
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	30	30	31	31	30	23	8	12	16	14	15	14	17	17	14	14	16	22	31	30	30	30	30
MED	E A 286	E A 278	E 259	E 258	E 246	225	222	215	210	202	205	199	198	212	201	206	206	218	U 230	U 226	U 224	E A 248	E A 266	E A 270
U Q	E A 314	E A 292	E A 278	E A 286	E A 268	E A 236	230	224	212	209	212	E A 212	218	222	225	220	216	E A 227	E A 260	E A 278	E A 254	E A 264	E A 304	E A 288
L Q	E 260	E 260	250	238	232	222	218	211	206	194	H 198	196	192	194	193	204	202	211	234	232	224	236	256	E 254

MAY 2006 h'F (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

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MAY 2006 h'E (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						B	118	118	A	A	A	A	A	A	114	112	112	118	B					
2						B	A	120	112	A	A	114	114	116	116	A	A	A	B					
3						B	122	116	A	A	A	A	A	118	A	114	118	120	B					
4						B	114	118	118	A	116	114	A	116	116	118	120	120	120					
5						B	118	118	116	116	112	114	112	110	114	114	A	A	A					
6						B	114	120	A	A	A	A	A	114	A	A	120	A	B					
7						B	124	116	A	A	A	A	A	116	116	114	116	118	124					
8						B	116	A	A	A	A	A	A	A	A	A	A	118	A					
9						B	122	114	116	A	A	A	A	112	A	118	112	116	B					
10						B	112	114	A	A	A	112	A	A	A	114	112	112	A					
11						B	116	A	A	114	A	A	A	A	112	116	114	A	A					
12						B	112	114	A	112	112	A	110	112	110	114	116	A	B					
13						B	118	118	118	A	112	A	A	A	114	114	114	114	A					
14						B	114	A	A	A	A	A	A	A	A	114	114	120	B					
15						B	120	A	A	A	A	A	A	A	A	A	A	A	A					
16						B	112	112	116	A	A	A	A	A	114	A	116	118	124					
17					124	122	114	118	114	118	122	A	118	118	116	116	116	A						
18						B	A	A	A	A	A	A	116	122	112	112	A	A	A					
19						B	114	118	A	112	112	108	114	116	116	116	A	A	A					
20					128	114	106	A	A	A	A	A	A	A	A	A	A	120						
21					120	118	118	A	114	112	A	112	110	A	A	A	A	A	A					
22						B	112	A	A	A	A	A	A	A	112	112	C	A	B					
23						B	124	118	A	A	A	A	A	A	112	118	116	A	A					
24						B	A	A	A	A	A	A	A	A	A	118	A	116	B					
25						B	116	116	A	A	A	A	A	A	A	A	A	A	B					
26						B	A	A	116	A	A	A	A	A	116	A	118	122	118					
27					124	120	116	A	A	A	A	A	A	A	A	A	A	118	A					
28					120	120	120	A	A	A	A	A	A	A	A	A	A	A	A					
29						B	A	A	A	A	C	C	C	C	C	C	C	A	A					
30						B	122	A	A	A	A	A	A	A	A	A	A	A	A					
31						B	116	116	A	A	A	A	A	A	A	A	A	A	A					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						5	26	21	8	6	7	6	6	12	15	17	15	14	5					
MED						124	117	116	116	114	112	114	113	116	114	114	116	118	120					
U Q						126	120	118	118	114	116	114	114	117	116	117	118	120	124					
L Q						120	114	114	116	112	112	112	112	112	112	114	114	116	119					

MAY 2006 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 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	88	B	B	B	B	B	122	118	106	104	102	102	106	106	104	122	118	114	108	108	B	88	B	B
2	100	98	B	B	B	102	100	118	112	106	104	96	100	102	102	102	98	94	92	90	96	108	106	102
3	102	102	100	98	102	142	132	112	104	104	106	106	108	102	102	102	120	128	110	106	104	100	104	102
4	100	104	B	98	96	B	154	134	116	102	112	114	104	114	148	142	100	100	128	112	112	104	102	102
5	B	B	B	B	106	B	136	120	126	122	124	130	120	122	152	116	106	106	104	102	100	102	B	100
6	100	100	102	98	96	136	126	128	104	106	106	106	104	126	98	108	108	104	106	102	106	108	104	102
7	110	102	104	100	98	98	120	114	104	106	106	106	102	108	134	102	102	104	136	114	94	106	106	106
8	104	98	98	B	B	124	118	108	98	96	98	98	98	98	98	104	104	122	104	104	104	100	98	98
9	96	92	94	92	88	96	140	118	118	104	106	102	102	116	108	116	116	112	110	B	108	106	106	104
10	98	92	92	90	B	104	120	118	106	106	104	112	104	102	102	100	98	122	90	92	88	110	108	96
11	90	92	98	98	106	124	118	104	102	104	102	102	104	106	124	116	116	104	104	104	94	B	102	100
12	96	94	94	B	B	120	118	120	106	110	108	102	98	120	140	118	114	104	112	108	108	106	104	100
13	102	100	100	100	98	140	118	118	118	108	114	106	106	106	114	114	114	114	104	102	102	102	100	B
14	B	102	98	100	110	122	116	106	104	106	106	106	102	100	96	152	102	124	110	106	106	104	102	102
15	98	98	98	98	94	142	122	102	104	104	106	106	104	106	106	104	98	104	102	96	98	102	106	102
16	100	102	B	B	B	130	112	116	112	104	106	104	102	102	104	104	118	124	124	106	108	106	106	106
17	98	96	104	98	98	132	118	122	120	114	116	160	108	114	110	118	118	116	106	102	112	102	98	100
18	98	94	94	112	114	114	106	106	102	104	106	100	114	116	112	116	106	104	102	102	108	106	102	94
19	96	102	98	94	94	116	G	116	108	138	126	124	128	118	116	114	104	104	104	104	104	102	98	96
20	94	94	94	B	108	134	120	114	102	106	102	100	100	96	96	98	98	96	114	110	106	106	106	100
21	96	96	92	94	90	124	122	112	104	106	112	106	102	122	106	106	104	106	106	104	108	104	104	100
22	100	100	100	98	112	106	118	102	106	102	104	104	104	98	116	114	C	102	104	104	104	100	102	98
23	100	98	98	98	100	130	118	108	104	104	108	108	106	106	114	106	124	104	104	102	102	104	104	104
24	96	94	88	94	90	116	104	104	102	102	102	100	98	98	104	120	106	120	100	100	100	100	100	106
25	100	98	102	98	B	146	118	116	108	100	104	106	104	104	108	102	106	104	104	98	98	108	106	102
26	100	96	92	96	106	102	102	96	114	102	96	96	102	104	118	100	120	144	118	106	108	104	108	102
27	100	100	98	98	96	126	120	108	106	104	104	104	104	106	106	100	96	120	96	96	100	102	102	98
28	96	96	100	96	96	128	120	112	102	102	102	102	100	100	98	98	94	94	94	92	92	92	92	92
29	96	98	102	100	100	116	102	96	100	100	C	C	C	C	C	C	C	104	104	102	88	108	108	98
30	102	98	104	94	94	100	122	104	102	100	104	104	104	104	102	98	98	98	92	92	92	98	108	100
31	98	98	98	94	90	98	116	112	102	104	104	100	104	100	98	98	96	92	92	90	106	108	106	104
	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	26	24	24	28	30	31	31	31	30	30	30	30	30	30	29	31	31	30	30	30	29	29
MED	98	98	98	98	98	123	118	112	104	104	106	104	104	106	106	106	106	104	104	102	104	104	104	100
U Q	100	100	100	98	106	131	122	118	112	106	108	106	106	114	116	116	116	120	110	106	108	106	106	102
L Q	96	95	94	94	94	105	116	106	102	102	104	102	102	102	102	102	98	104	102	98	98	102	102	98

MAY 2006 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

MAY 2006 TYPES OF Es 135°E MEAN TIME (G.M.T. + 9 H)

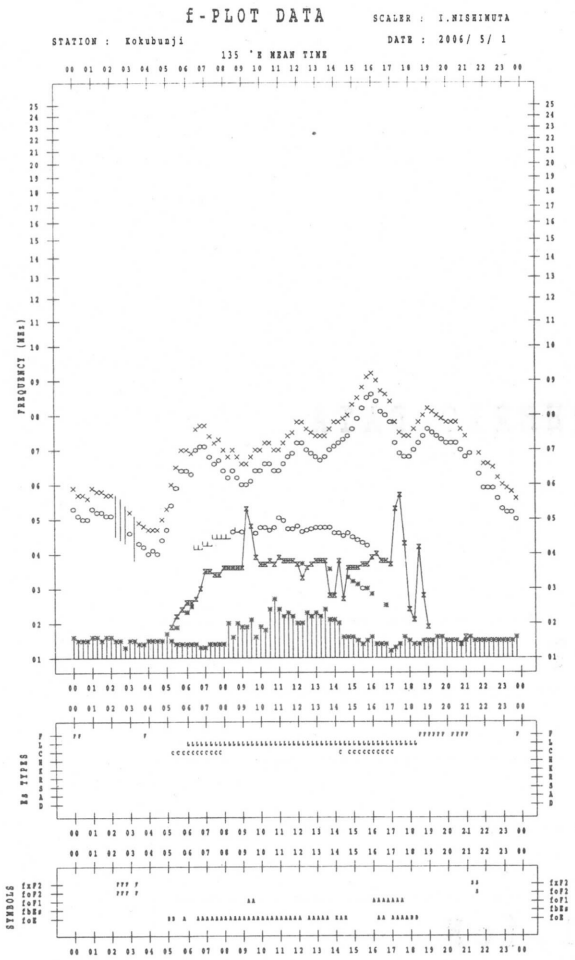
LAT.35°42.4'N LON.139°29.3'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

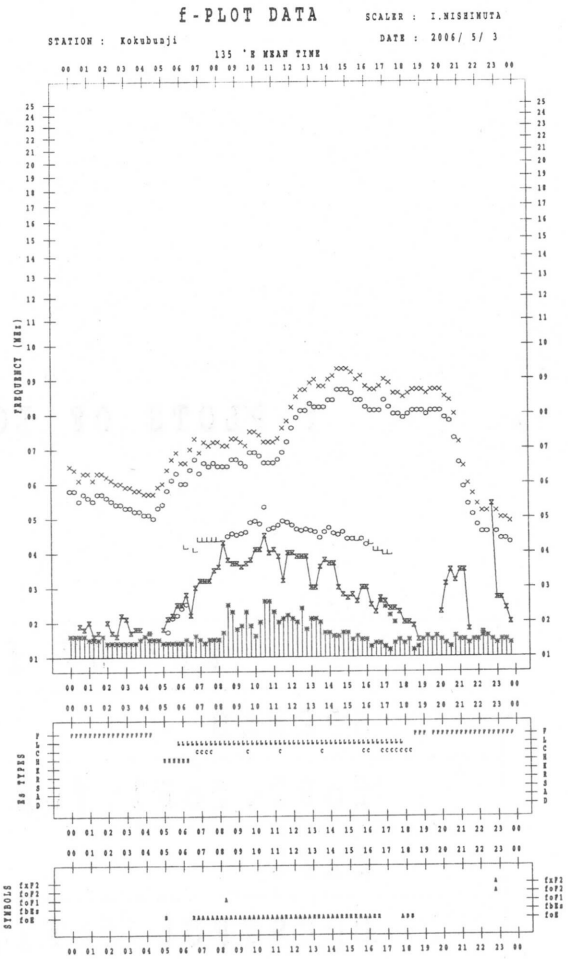
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F 1						CL 11	CL 22	L 2	L 2	L 2	L 1	L 1	L 2	L 1	CL 11	CL 21	CL 42	L 5	F 3		F 1		
2	F 2	F 2				L 3	L 2	CL 22	CL 22	L 2	L 2	L 2	L 1	L 1	L 1	L 1	L 3	L 3	L 3	F 4	F 3	FF 22	F 2	F 2
3	F 3	F 3	F 3	F 3	F 4	H 2	HL 11	CL 11	L 1	L 1	L 2	L 1	L 1	L 1	L 1	L 2	CL 11	CL 11	C 2	F 1	F 4	F 4	F 2	F 4
4	F 4	F 2		F 4	F 3		HL 11	HL 11	CL 11	L 1	CL 11	CL 11	L 2	CL 11	HL 11	HL 11	L 2	L 1	C 2	F 4	F 3	F 5	F 5	F 3
5					F 1		H 1	CL 11	CL 11	CL 11	CL 11	CL 11	CL 11	CL 11	HL 11	CL 21	L 3	L 2	L 2	F 4	F 4	F 2		F 3
6	F 3	F 3	F 3	F 4	F 4	HL 11	CL 11	CL 12	L 1	L 2	L 2	L 1	L 2	CL 11	L 3	L 3	CL 42	L 4	L 4	F 5	F 4	F 6	F 4	F 2
7	F 4	F 4	F 2	F 2	F 4	L 6	CL 11	CL 21	L 3	L 2	L 2	L 2	L 2	CL 11	CL 11	L 2	L 2	L 2	C 1	F 1	F 1	F 1	F 1	F 3
8	F 3	F 3	F 4			C 3	C 2	L 2	L 2	L 3	L 3	L 3	L 2	L 2	L 2	L 2	L 3	CL 22	L 3	F 7	F 3	F 3	F 3	F 4
9	F 3	F 4	F 5	F 4	F 2	L 2	HL 11	CL 21	CL 21	L 2	L 1	L 2	L 2	CL 11	L 2	CL 21	C 2	CL 11	L 2		F 3	F 6	F 6	F 4
10	F 3	F 2	F 2	F 2		L 2	C 2	CL 11	L 2	L 2	L 2	CL 11	L 2	L 1	L 2	L 2	L 2	CL 11	L 3	F 4	F 4	FF 23	F 3	F 2
11	F 2	F 1	F 2	F 2	F 1	C 1	C 1	L 1	L 1	L 1	L 2	L 2	L 1	L 1	CL 11	CL 21	CL 11	L 3	L 5	FF 53	F 3		F 1	F 2
12	F 4	F 2	F 2			C 2	C 3	CL 21	L 3	CL 21	CL 11	L 2	L 1	CL 11	HL 11	CL 22	CL 32	L 4	C 4	F 6	F 6	F 4	F 5	F 6
13	F 3	F 2	F 2	F 3	F 3	H 2	CL 21	CL 22	CL 22	L 2	CL 21	L 3	L 2	L 2	CL 21	CL 21	CL 21	CL 22	L 4	F 3	F 3	F 4	F 2	
14		F 2	F 2	F 3	F 2	C 3	C 2	L 3	L 2	L 2	L 2	L 2	L 2	L 3	L 2	HC 11	L 2	CL 21	L 4	F 3	F 5	F 2	F 3	F 3
15	F 1	F 1	F 2	F 3	F 3	HL 22	CL 31	L 3	L 2	L 2	L 1	L 1	L 1	L 2	L 2	L 3	L 4	L 3	L 3	F 3	F 2	F 3	F 5	F 5
16	F 3	F 2				C 2	C 3	C 2	CL 21	L 2	L 2	L 2	L 3	L 3	L 1	L 2	CL 21	CL 32	CL 22	F 5	F 3	F 4	F 4	F 4
17	F 4	F 3	F 1	F 4	F 2	H 2	CL 11	CL 11	CL 11	CL 11	CL 11	HL 11	L 3	CL 31	CL 21	CL 21	CL 21	CL 32	L 5	F 5	F 2	F 3	F 4	F 4
18	F 3	F 5	F 3	F 2	F 1	L 2	L 2	L 3	L 3	L 3	L 1	L 2	CL 11	CL 21	CL 31	CL 31	L 4	L 5	L 3	F 5	F 2	F 3	F 3	F 3
19	F 4	F 3	F 4	F 4	F 3	C 3		CL 21	L 2	CL 21	CL 11	CL 11	CL 11	CL 11	CL 21	CL 21	L 3	L 4	L 4	F 3	F 3	F 3	F 3	F 4
20	F 3	F 2	F 2		F 2	C 2	C 3	C 3	L 3	L 2	L 3	L 2	L 3	L 2	L 2	L 2	L 2	L 2	C 2	F 3	F 5	F 4	F 4	F 2
21	F 3	F 3	F 3	F 2	F 2	C 2	C 3	CL 31	L 3	L 2	CL 11	L 2	L 2	CL 21	L 3	L 4	L 2	L 4	L 5	F 4	F 4	F 4	F 4	F 4
22	F 5	F 3	F 2	F 4	F 2	L 2	C 2	L 4	L 3	L 3	L 3	L 2	L 2	L 2	CL 11	CL 11		L 3	L 4	F 5	F 6	F 6	F 3	F 3
23	F 2	F 3	F 6	F 1	F 2	C 2	CL 11	CL 21	L 4	L 2	L 2	L 2	L 2	L 2	CL 21	L 1	CL 11	L 3	L 4	F 3	F 3	F 2	F 4	F 4
24	F 4	F 3	F 3	F 2	F 2	C 3	L 2	L 3	L 3	L 3	L 2	L 2	L 2	L 2	L 2	CL 21	L 2	CL 21	L 2	F 3	F 1	F 2	F 4	F 5
25	F 4	F 7	F 3	F 3		H 2	CL 32	CL 22	L 1	L 3	L 4	L 3	L 3	L 3	L 2	L 3	L 3	L 3	L 3	F 3	F 3	F 3	F 5	F 5
26	F 2	F 5	F 3	F 3	FF 22	L 2	L 2	L 5	CL 22	L 2	L 3	L 2	L 2	L 1	CL 22	L 3	CL 11	HL 12	C 2	F 4	F 3	F 3	F 5	F 4
27	F 4	F 5	F 4	F 5	F 3	CL 21	CL 31	CL 31	L 3	L 2	L 2	L 3	L 3	L 2	L 2	L 2	L 2	CL 22	L 5	F 2	F 2	F 2	F 4	F 4
28	F 4	F 4	F 4	F 2	F 1	C 2	C 2	CL 32	L 3	L 3	L 3	L 3	L 2	L 3	L 3	L 4	L 3	L 5	L 3	F 3	F 4	F 3	F 3	F 2
29	F 4	F 6	F 5	F 4	F 5	C 3	L 3	L 3	L 2	L 2								L 5	L 5	F 5	F 5	FF 24	F 3	F 3
30	F 4	F 4	F 3	F 3	F 3	L 2	CL 21	L 3	L 3	L 3	L 2	L 3	L 3	L 3	L 4	L 4	L 4	L 3	L 3	F 4	F 4	F 3	F 3	F 3
31	F 3	F 2	F 3	F 3	F 2	L 2	CL 22	CL 31	L 3	L 3	L 2	L 1	L 2	L 4	L 3	L 3	L 3	L 3	L 4	F 3	F 2	F 4	F 6	F 6
	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																								

MAY 2006 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 : 2006/ 5/ 1
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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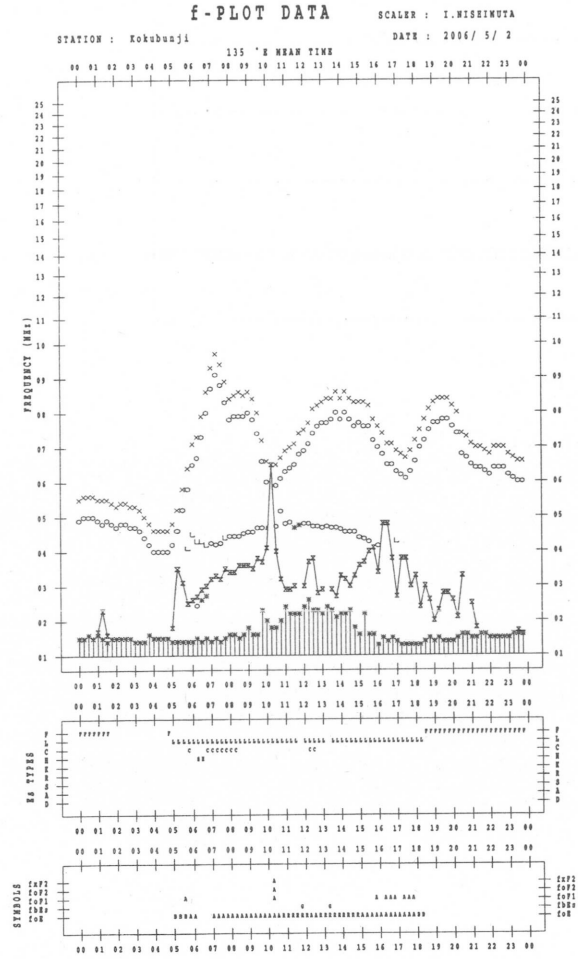
STATION : Kokubunji
DATE : 2006/ 5/ 3
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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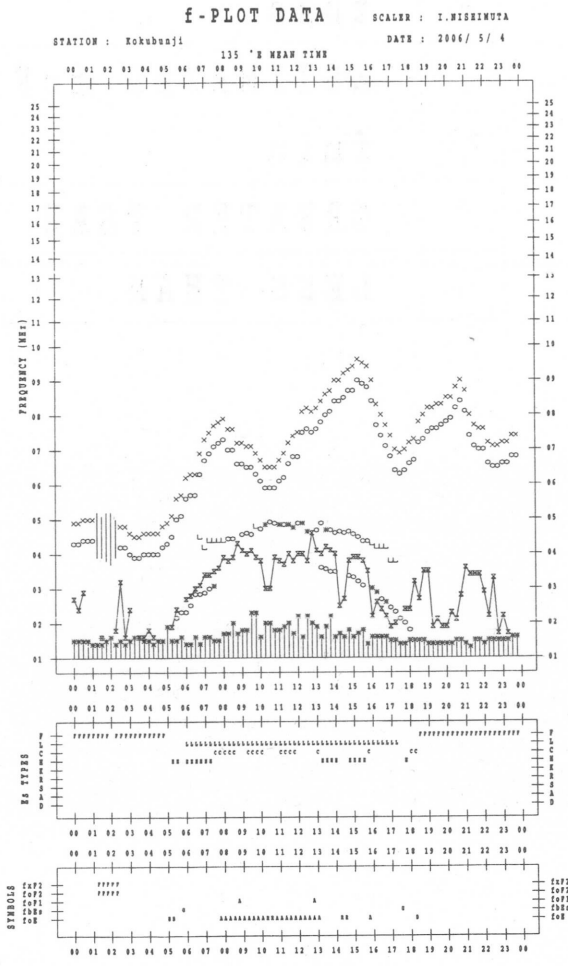
STATION : Kokubunji
DATE : 2006/ 5/ 2
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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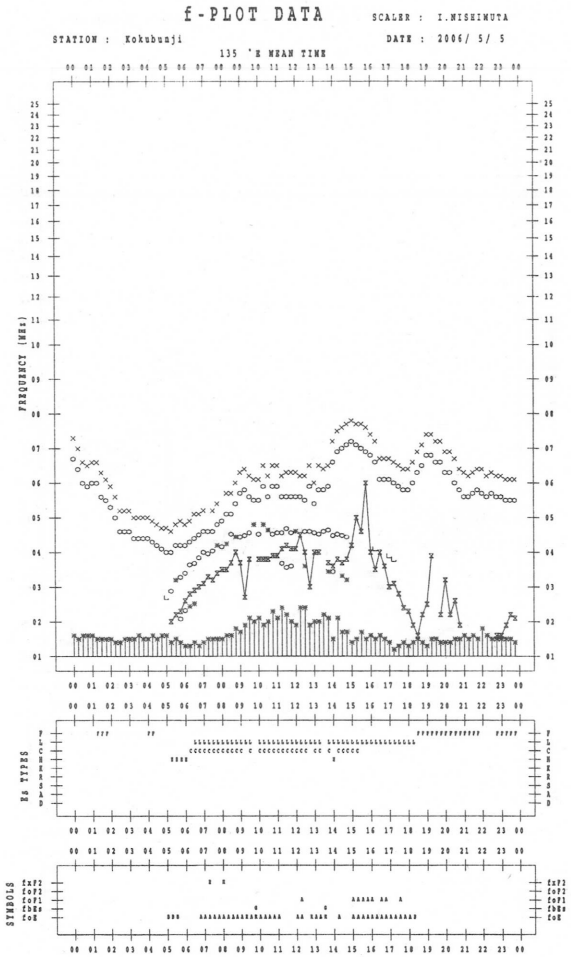
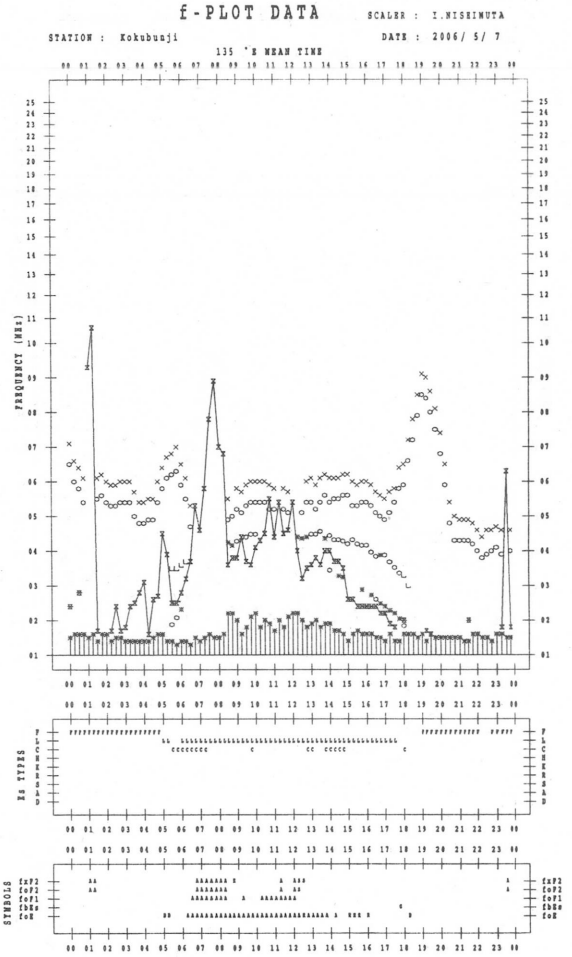
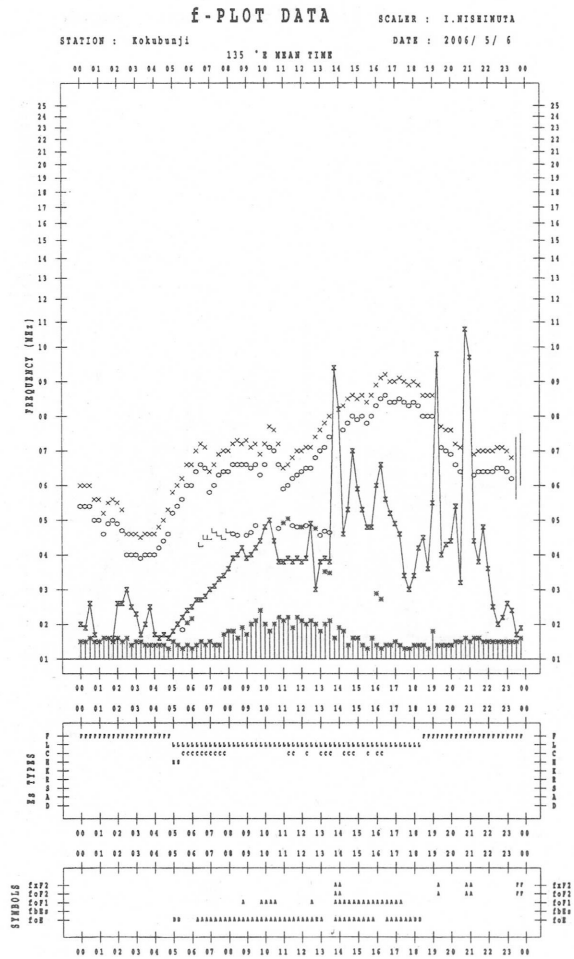
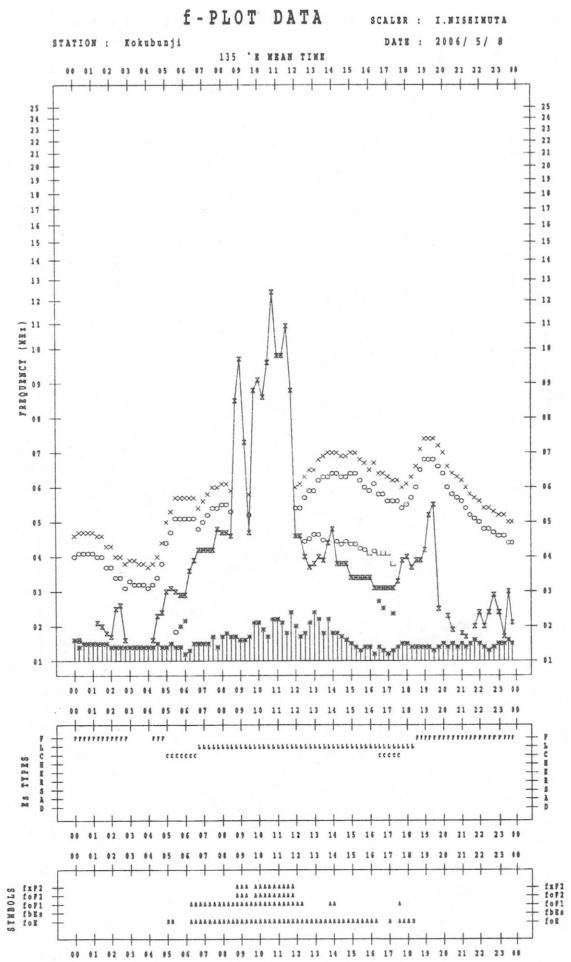
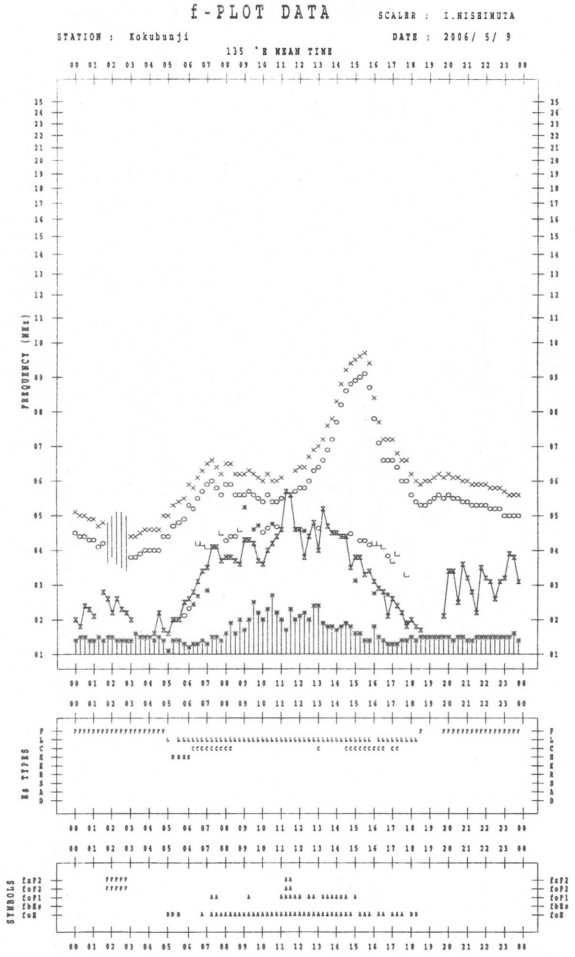
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/ 4
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

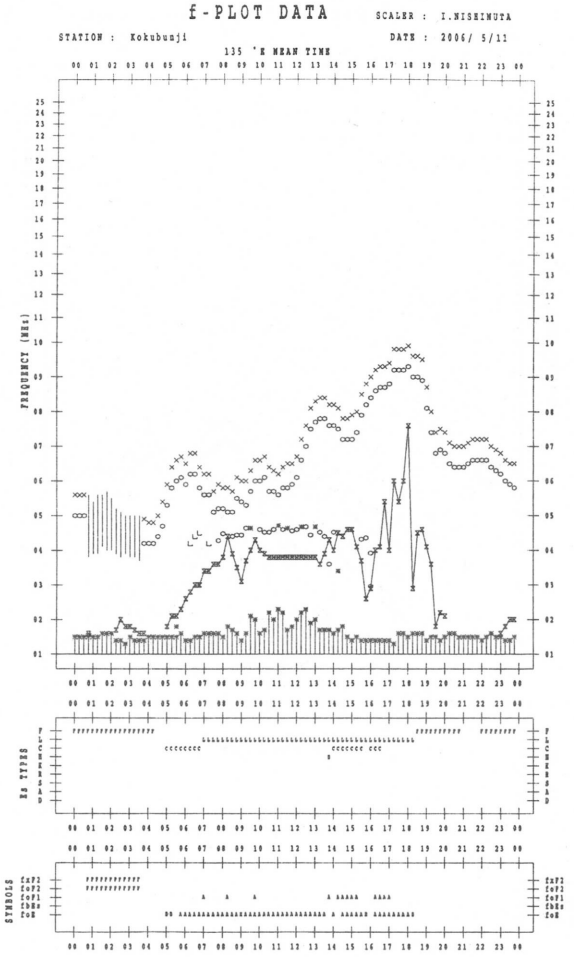

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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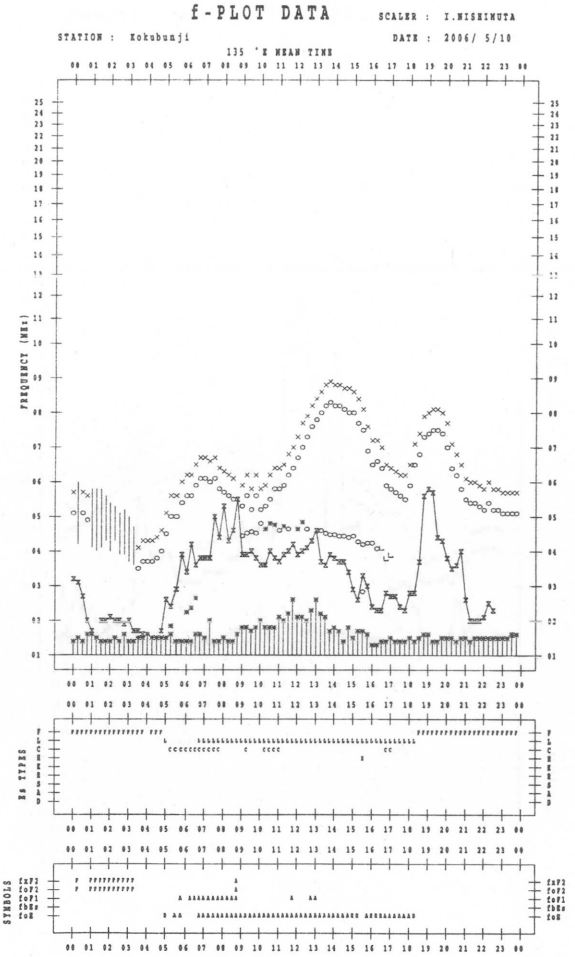
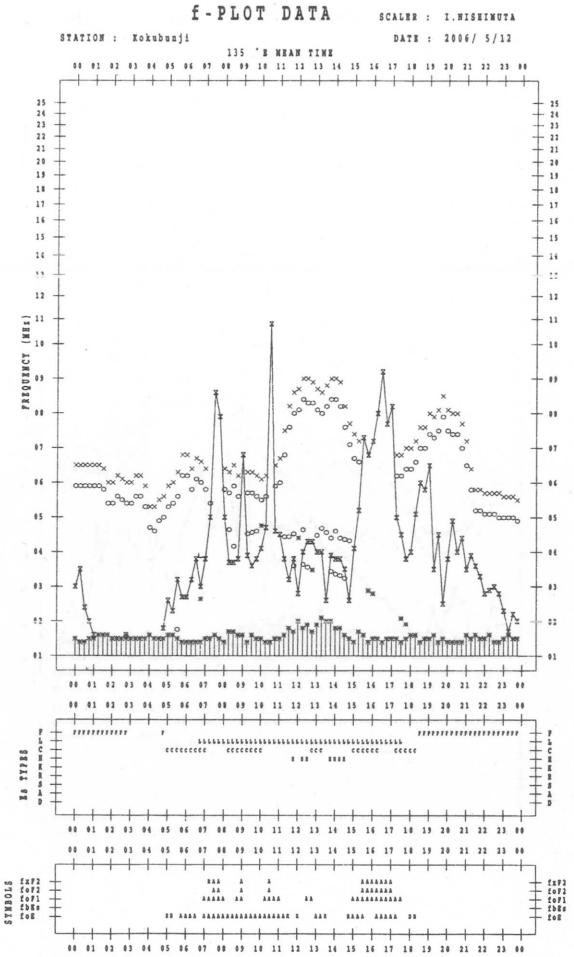
STATION : Kokubunji
DATE : 2006/ 5/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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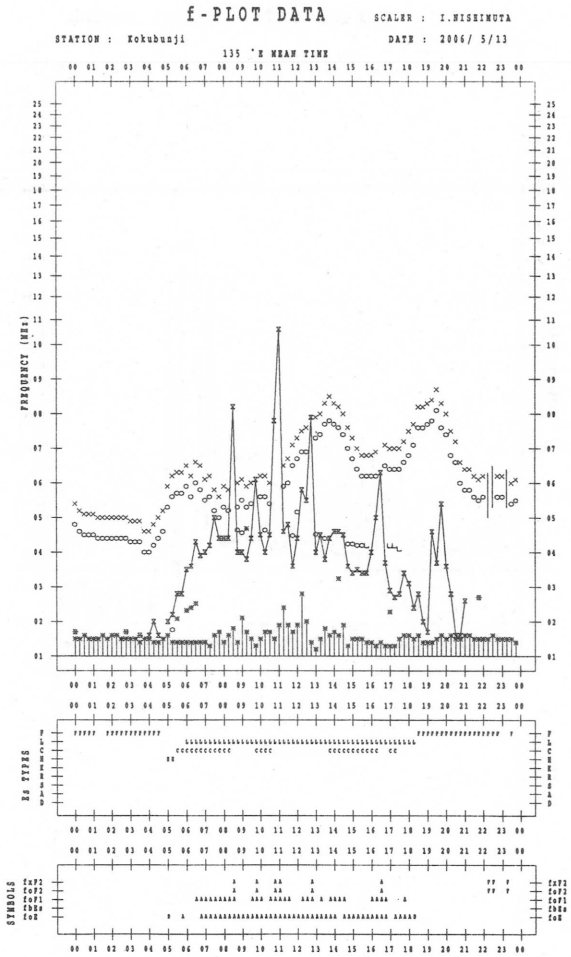
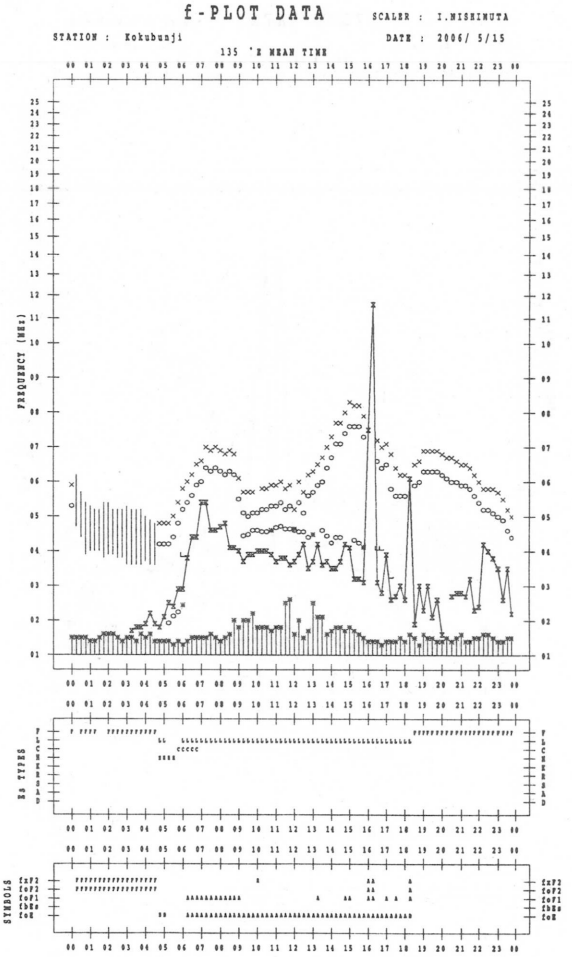
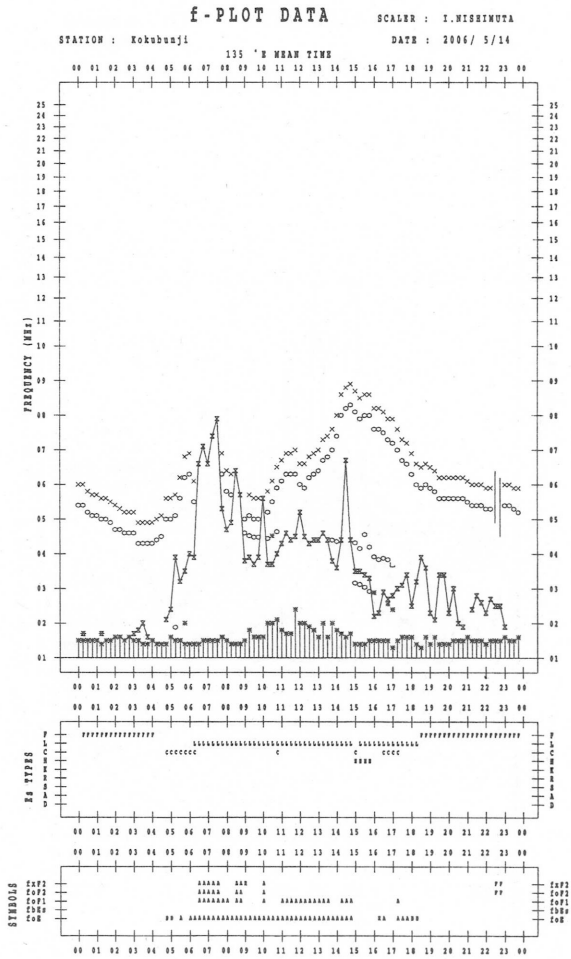
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/13
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/15
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS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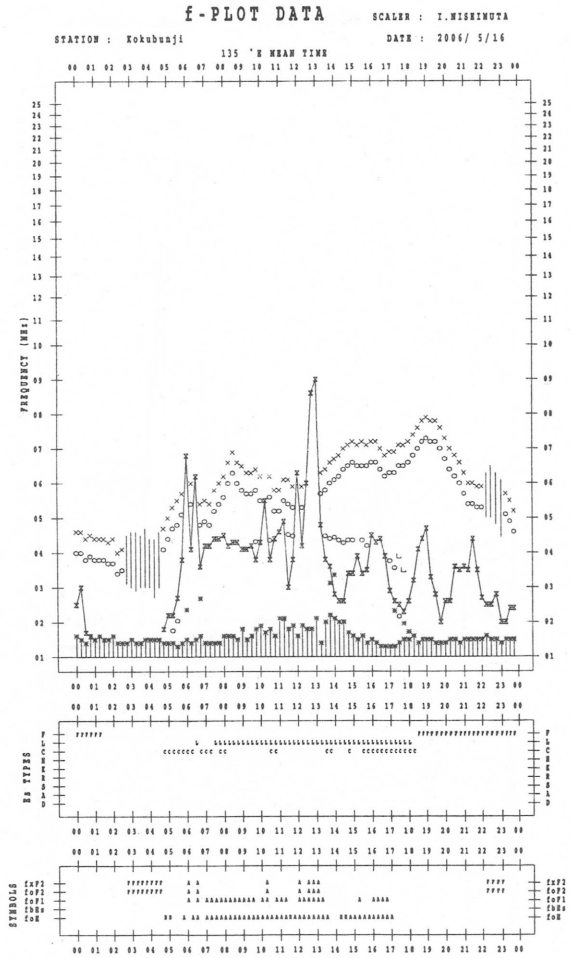
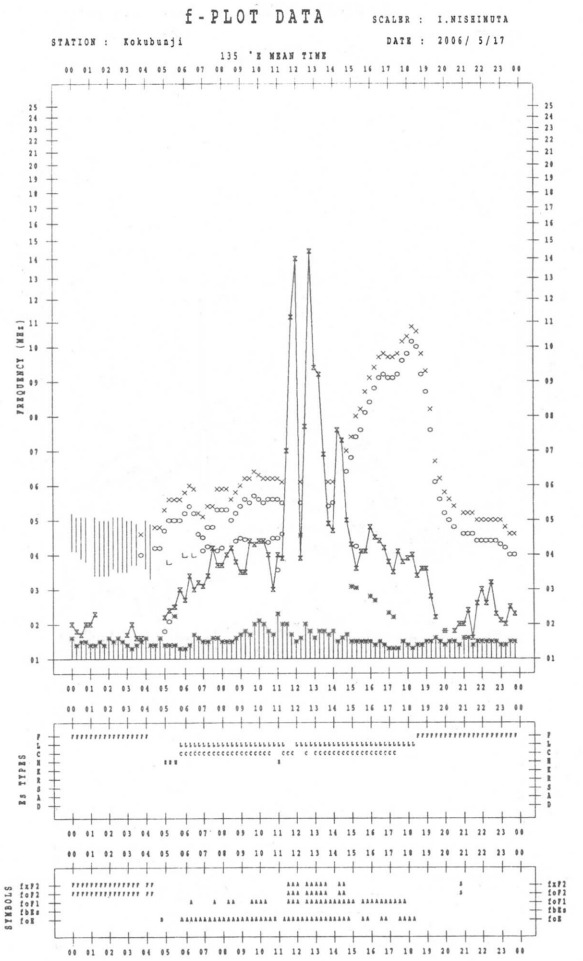
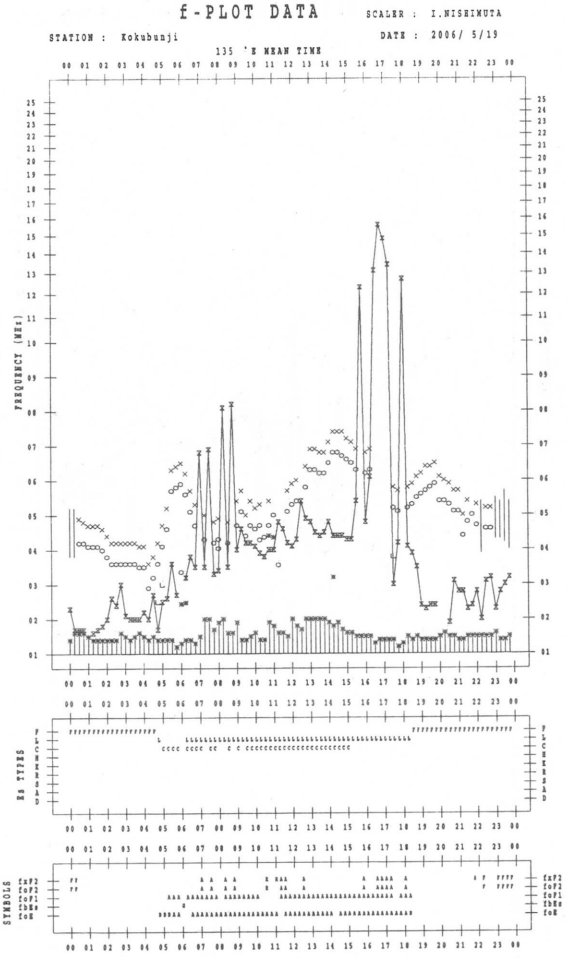
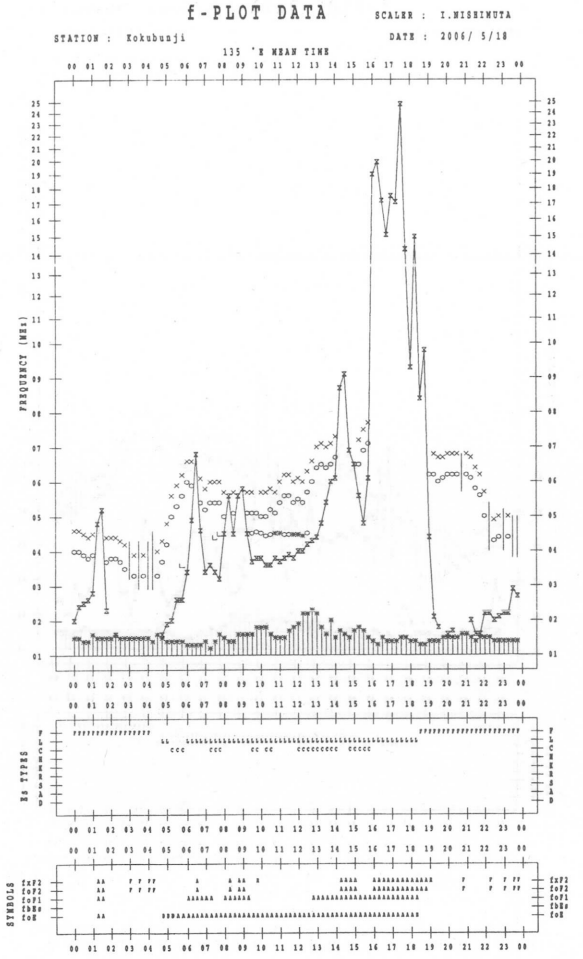
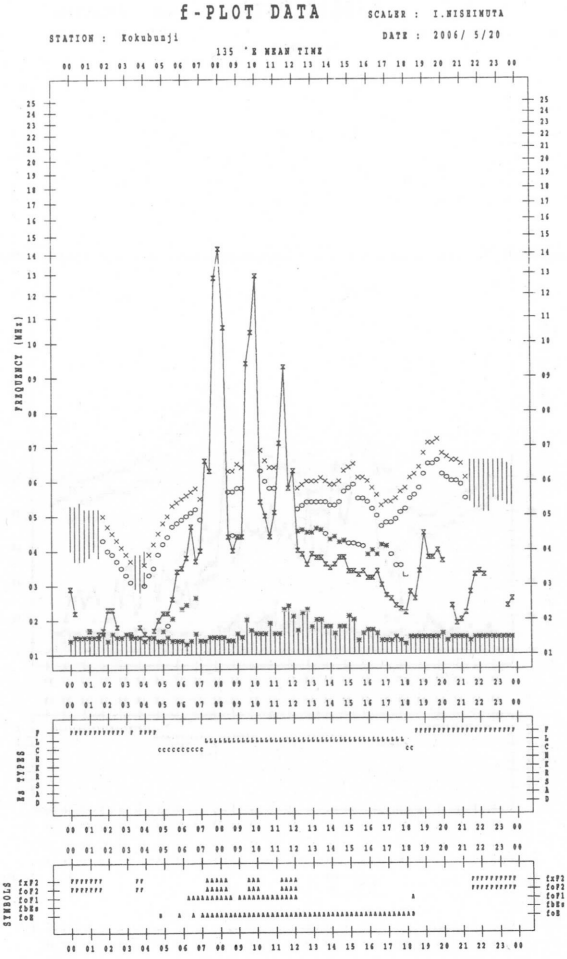
STATION : Kokubunji
DATE : 2006/ 5/14
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

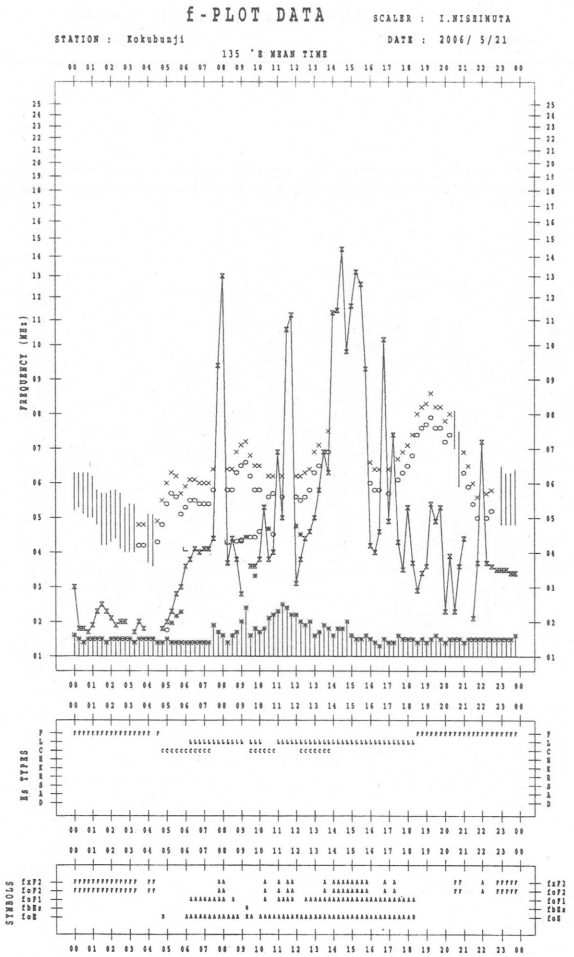

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/16
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

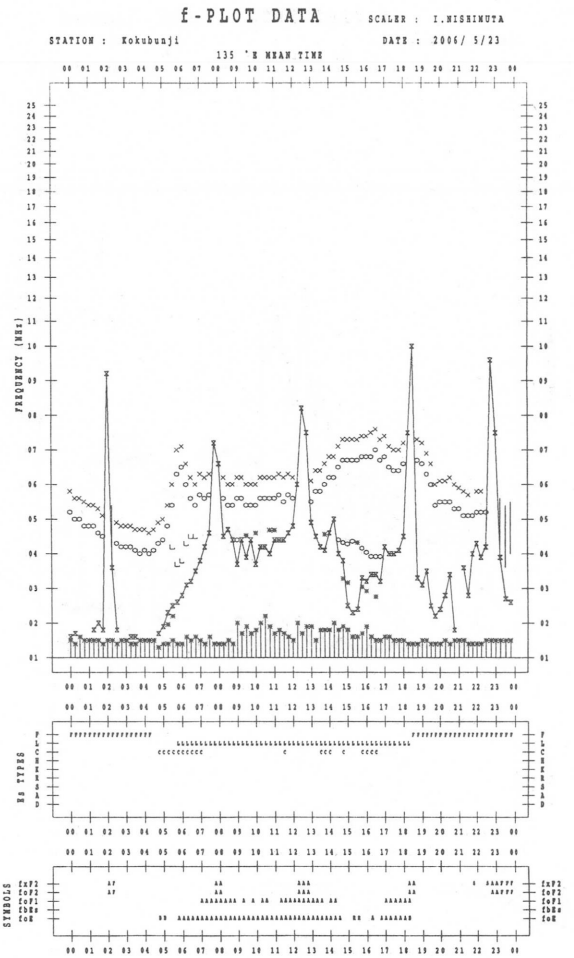

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

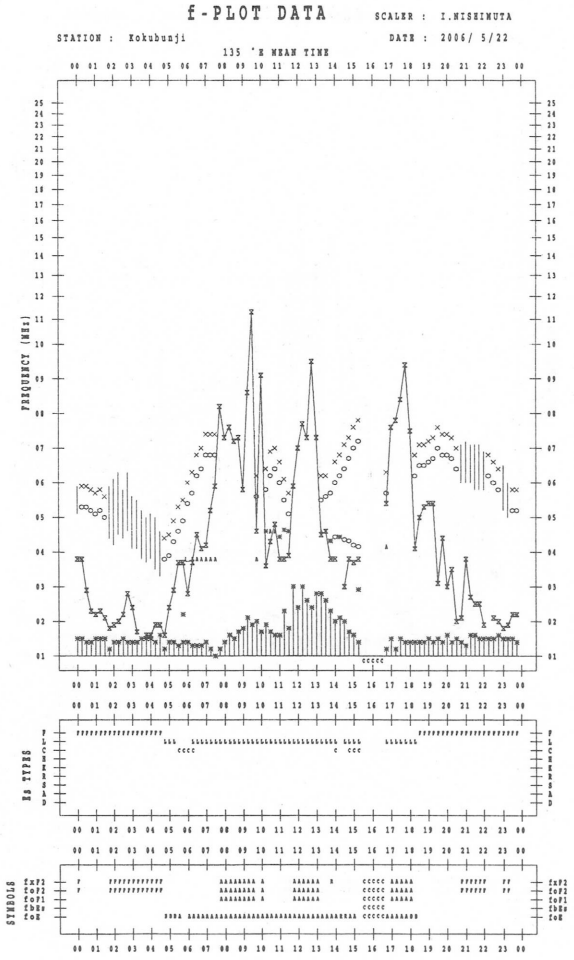

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/21
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/23
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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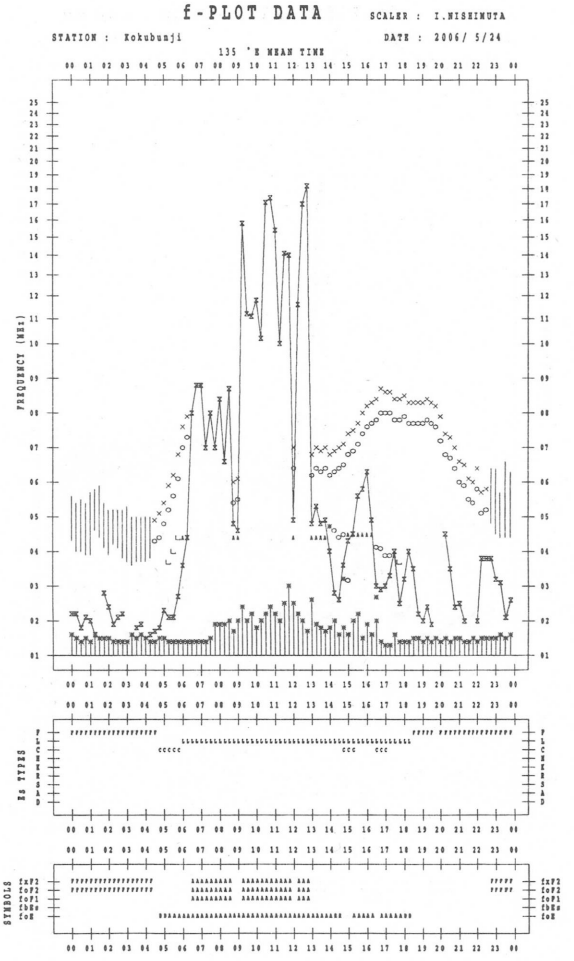
STATION : Kokubunji
DATE : 2006/ 5/22
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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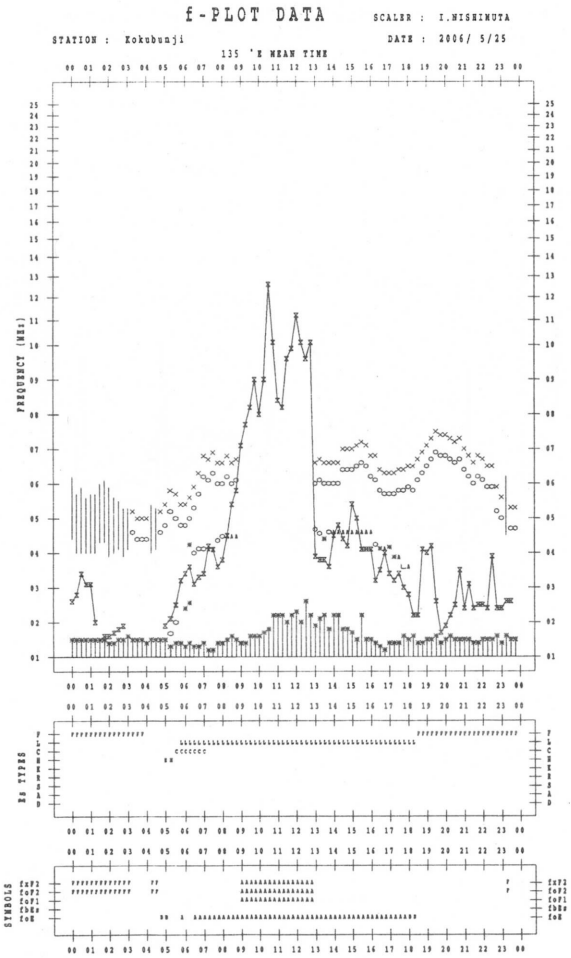
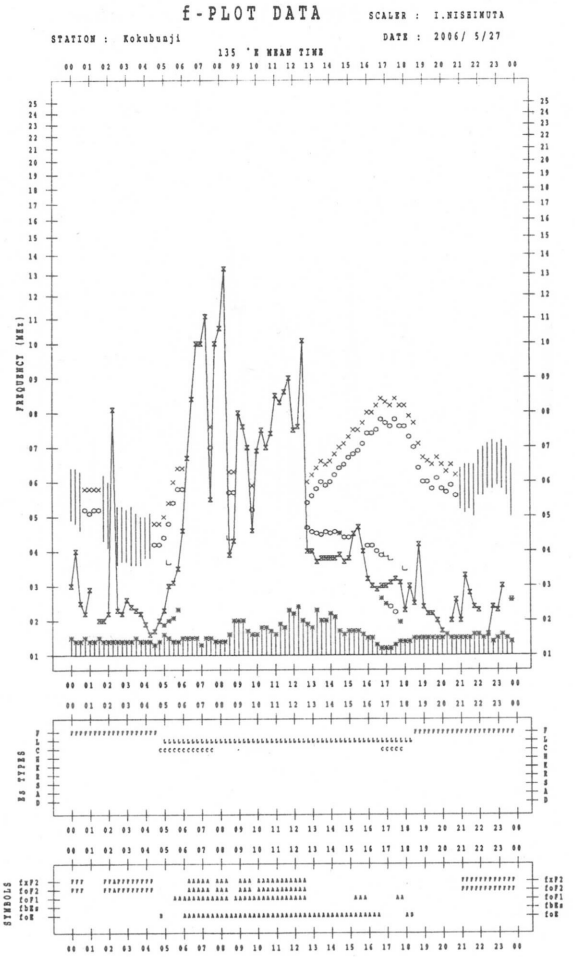
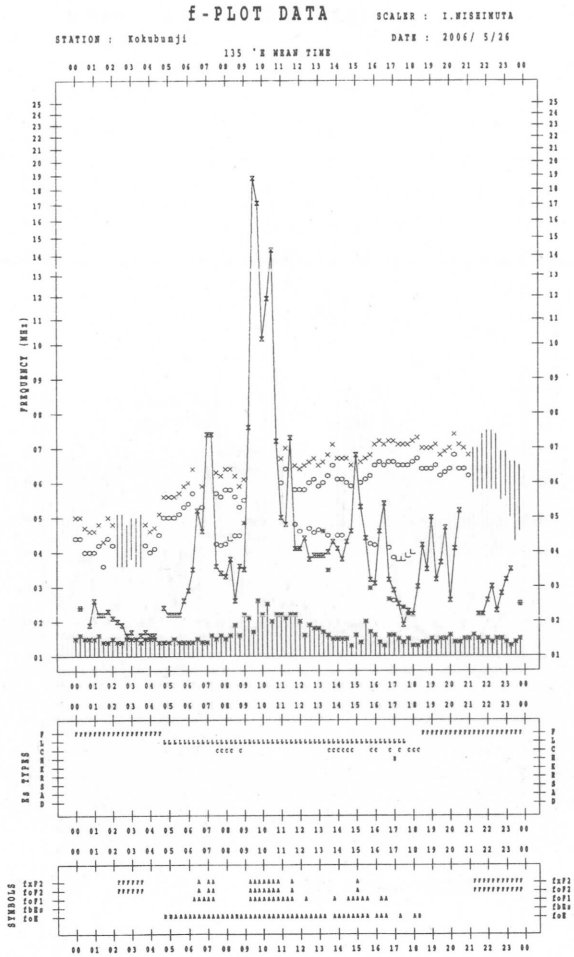
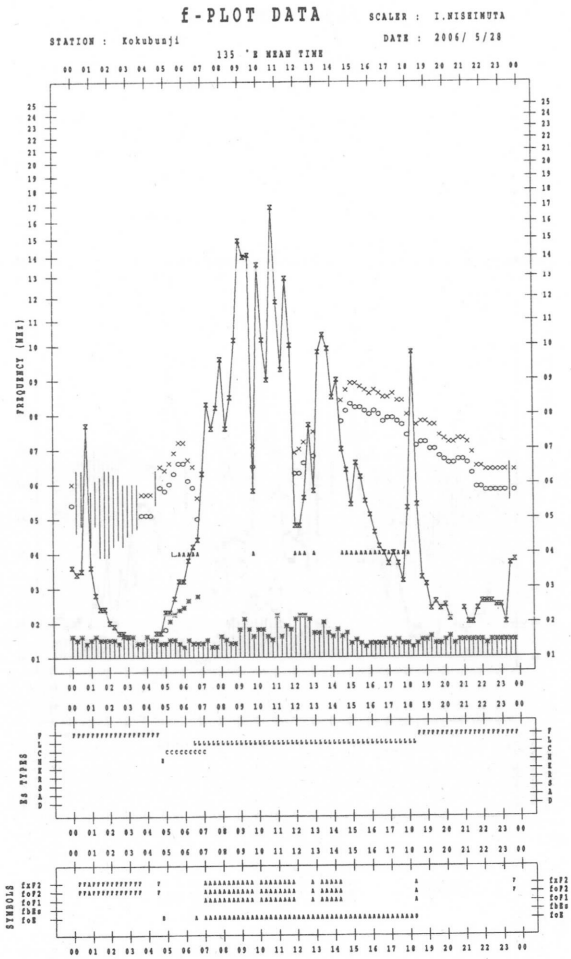
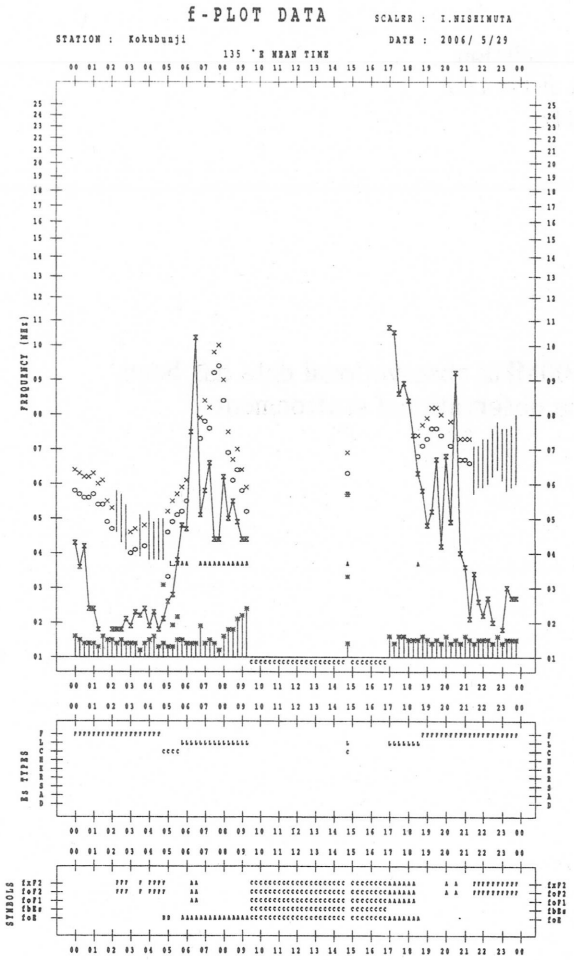
STATION : Kokubunji
DATE : 2006/ 5/24
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

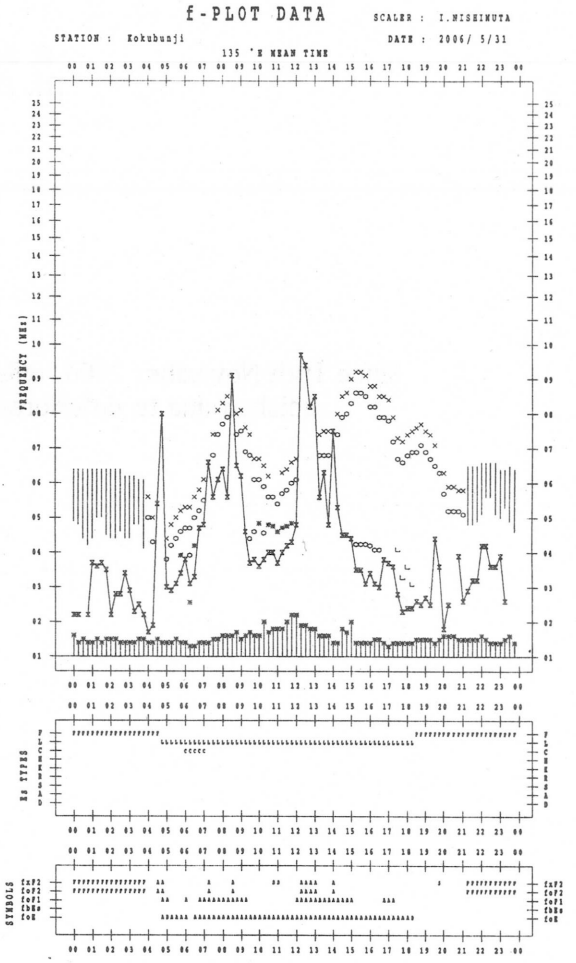

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/25
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

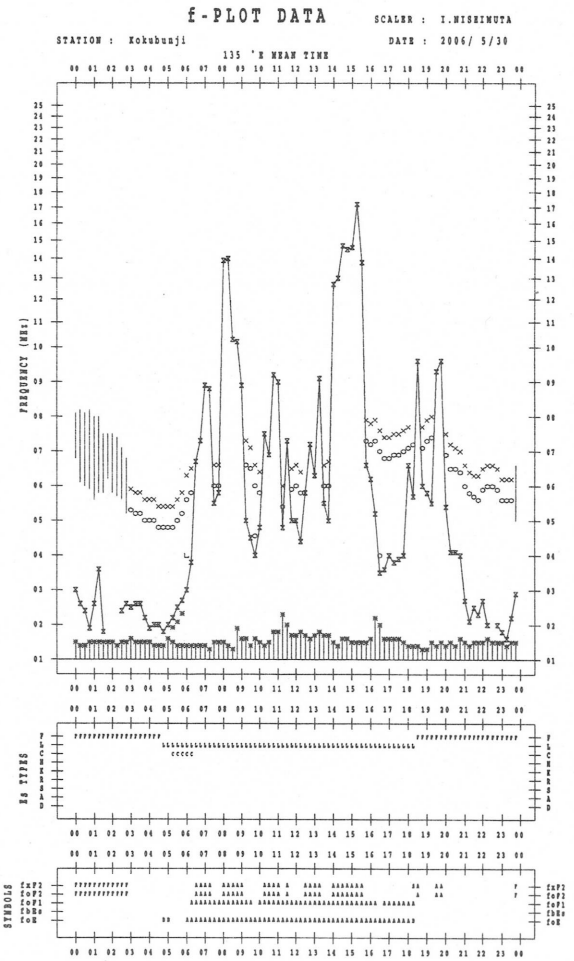

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/27
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/26
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/28
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 5/30
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 May 2006

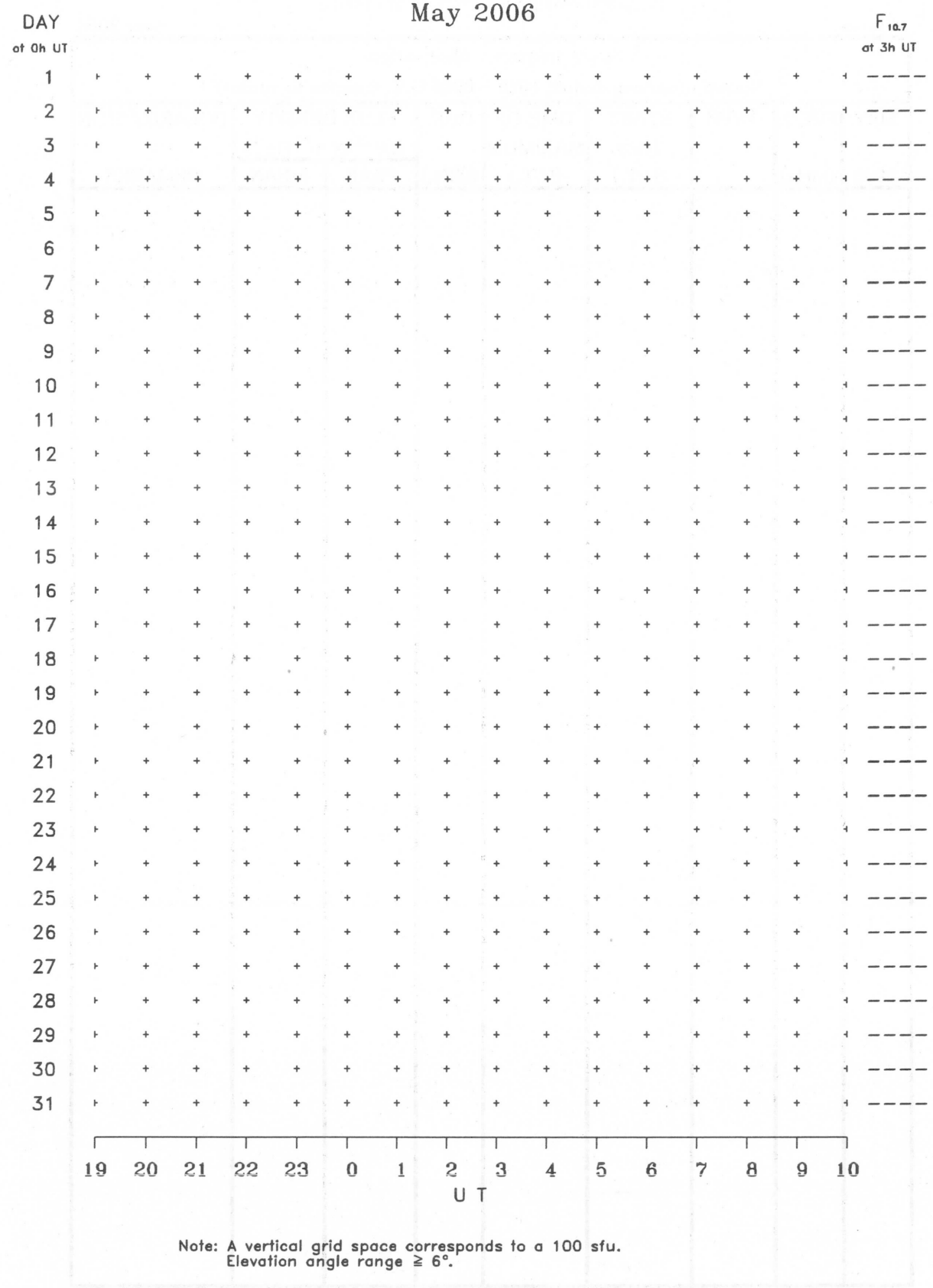
Single-frequency observations

Normal observing period: 1925 - 0945 U.T. (sunrise to sunset)

MAY 2006	FREQ. (MHz)	TYPE	START TIME (U.T.)	TIME OF MAXIMUM (U.T.)	DUR. (MIN.)	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) PEAK	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) MEAN	POLARIZATION REMARKS

B. Solar Radio Emission

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



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F－689　Vol.58　No.5（Not for Sale）

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☎（042）（327）7540（直通）

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