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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

JUL. 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	45	45	41	44	55	A	A	A	A	A	A	A	A	A	A		57	A	A	A	63	60	54
2	54	47	46	42	44	49	A	A	A	A	A	A	A	A		54	A	A		A	A	54	A	
3	A	A	A	A	40	53	54	A	59	A	A	A	A	A	A	A		A	A	A	63	66	61	52
4		47	45	42	44	53	55	A	A	A	A	A	54		42	53	39		52	58	54	62	72	45
5	44	40	46	45	A	A		59	A	A	A	A	A	A	A	A	57	62	67	57	A		62	61
6	60	55	61	53	48	52	A	A		A			A	61	54	A	A	60	72	62	73	A	64	58
7	52	51	52	52	46	47	47	A	A	A	A	A	A	A	55		A	A	55	A	A	60	54	52
8	52	54	52	51	47	48	A	59	A		A	A	A		A	A		A	A	66	66	62	54	53
9	A			A	38	42	A	A	A	A	A	A	A			A	A		60	46	A	54	54	54
10	A	A	40	A	A	44	A		A	67	A	A	A	A			A	A	A	72	73	71	53	52
11	43	A	A	41	42	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	64	52	44
12	41	40	41	41	38		41		A	A	A	A	A	A	A	A		46	A	34	A	54	44	47
13	32	A	A	A	40	A	A		A	A	A	A	A	A	A	A		A	A	A	60	61	A	A
14		40	34	36	35	A	A	A		A	A	A	A	A	A	A	A	A	A	52	61	54	A	40
15	A	A	A	A	29	38	A	A	A	A	A	A	A	A		46	52		56	A	A	A	A	47
16	54	47	37	40	42	46	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	54	A
17	A	A	A	A			A	A	A	A	A	A	A		A	A	A	A		A	61	58	54	A
18	A	A	39	41		40	A	A	A	A	A	A	A	A	A	A	40	A		A		55	54	50
19	45			38		46	46	A	A	A	A	A	A		A	A	A	A		46		52	A	34
20	42		A		41		45	54	51		A	A	A	A	A	A	54		A	61	66		58	45
21	A		A	A	A	A	A	61	A	A	A	A	A	A	A	A	47	A	A		A	A	A	48
22	A	A			46	A	A	A	67	57	A				A	A	A	A	A	A	53	55	A	A
23	A	44	A	37	39	45	51	A	A	A	A	A	A	A		A	A	A	54	A	A	A	A	
24	A			47	45	40		A	A	62	68	A	A	A	A	A		A	A	58	A	61	A	A
25	A	A	A	41	40	45	A	A	A	A	A	A	A	A	42	46	53	A			71	61	54	54
26	52	45	52	52	46	57	A	A	A	A	A	A	A	A	A	A	A	A	A	A	61	60	60	48
27	42	45	42	41	38			A	66		58	A		A			A		52	66	70	71	61	54
28	54	39		45	44	47	A		62	66	A	58	A	A	A	A	A	49	39		A	A	A	A
29		53	45	46	36	43	44		A	A	A	A	A		A			A	A	A	54	58	58	54
30	A	45		39	35	45	55	A	A	A	58	39	A	A	A	A	A	A	A	42		A	A	A
31	52	A		36	19	40	A		A	A		A	A	A		54	57	56	49	62	60	54	52	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	16	16	15	22	25	21	9	4	5	4	3	2	1	1	4	5	8	6	10	14	15	22	20	22
MED	50	45	45	41	41	46	47	59	62	64	58	48	54	61	48	53	52	56	54	58	61	60	54	52
U Q	53	49	52	46	44	50	54	60	66	66	68	58	27	30	54	54	55	60	60	62	70	62	60	54
L Q	42	42	40	40	38	42	44	56	55	59	58	39	27	30	42	46	43	49	52	46	60	54	54	47

HOURLY VALUES OF fEs AT Wakkanai

JUL. 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	49	29	32	28	28	50	55	59	72	75	99	98	76	81	79	60	43	48	157	60	95	G	G	44
2	34	36	27	27	30	48	60	86	94	97	101	60	68	66	60	37	59	85		72	55	37	66	78
3	52	49	58	43	33	33	42	81	51	90	80	98	82	73	82	64	63	75	78	77	46	36	33	32
4	50	37	43	33	39	44	47	60	79	79		78	50	36	35	34	40		40	34	50	38	28	G
5	G	26	32	G	68	78	78	69	151	117	80	82	106	75	60	72	29	48	59	48	72		38	33
6	41	59	G	G	35	34	61	68	51	61	57	49	51	36	40	83	82	81	60	61		81	44	38
7	28	42	34	26	G	34	30	52	77	78	67	76	84	65	64	59	61	53	38	78	86	46	26	33
8	40	33	37	30	29	42	48	36	57	89	148	77	47	70	83	103	60	122	111	59	39	39	39	30
9	59	45	60	49	G	35	66	68	58	68	99	77	66	41	50	82	60	61	60	49		39	51	40
10	52	83	51	50	61	32	60	74	95	66	96	112	70	63	51	45	88	132	156	72	65	49	58	29
11	G	50	71	51	35	60	62	84	76	60	72	92	79	61	83	101	51	66	70	68	73	55	40	29
12	27	32	33	30	37		46	88	84	76	97	114	88	113	64	58	47	45	64	35	153	52	32	30
13	34	47	50	76	43	79	64	46	64	85	97	148	122	82	86	63	48	74	133	79	39	59	78	67
14	39	39	32	34	52	40	46	61		52	50	68	64	67	76	176	98	89	109	68	36	45	70	37
15	78	49	54	52	31	37	62	79	68	87	85	51	91	69	46	47	40	57	72	146	86	82	83	48
16	40	26	28	38	35	45	54	64	59	60	58	68	99	58	63	80	111	88	78	82	76	71	57	50
17	60	61	46	70	51	38	64	66	90	110	106	75	49	41	59	65	60	51	73	108	59	36	32	79
18	49	43	38	39	40		66	67	67	90	108	88	49	53	68	62	32	51	56	60	50	36	39	44
19	38	37	39	31	39	34	42	58	88	86	93	68	98		147	111	84	131	51	36	49	32	52	61
20	36	44	44	33	38	32	36	35	32	47	62	58	50	64	67	77	61	50	71	30	50		27	30
21	68	38	70	93	79	86	120	79	179	148	107	155	84	70	46	72	82	82	76	82		60	70	43
22	78	68	37	46	48	64	54	68	58	68	76	46	35	36	147	180	146	86	81	145	50	79	80	104
23	83	47	58	27	26	36	48	63	111	59			66	64	38	75	52	53	41	72	94	82	78	79
24	80	45	61	30	G	39	52	54	61	58	59	96	81	76	47	84	64	109	84	94	78	48	71	60
25	60	71	58	29	G	52	72	78	58	76	62	51	56	68	35	34	43	76	72	68	44	58	46	33
26	G	G	32	32	33	49	60	94	118	85	68	75	55	67	60	49	58	59	60	60	51	58	60	59
27	25	31	G	39	29	35	52	72	66	73	51	62	40	49	42		47	48	54	41	54	51	36	32
28	32	43	61	40	26	41	51	59	47	52	52	50	63	98	71	83	85	50	53	88	88	78	60	68
29	57	39	34	G	G	28	35	53	67	66	68	55	44	38	61	45	41	73	79	68	56	39	44	43
30	60	32	45	39	28	G	39	63	64	58	40	37	82	113	148	110	74		68	30	39	72	78	60
31	37	70	39	37	G		46	51	77	109	52	50	52	46	50	48	35	50	60	25	G	40	G	43
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	28	31	31	30	31	29	30	31	30	31	30	31	29	30	31	28	29	31	31
MED	41	43	39	34	33	40	54	66	68	76	76	75	66	66	61	68	60	66	70	68	54	49	46	43
U Q	60	49	58	46	40	49	62	78	88	89	98	92	84	73	79	83	82	85	79	79	77	65	70	60
L Q	34	33	32	29	26	34	46	58	58	60	58	55	50	49	47	49	43	50	59	48	47	38	33	32

HOURLY VALUES OF fmin AT Wakkanai

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

HOURLY VALUES OF foF2 AT Kokubunji

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

HOURLY VALUES OF fEs AT Kokubunji

JUL. 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	129	89	68	54	49	G	47	84	95	90	94	50	62	83	61	107	G	G	60	60	53	50	60	90
2	82	65	59	G	48	50	84	117	107	42	54		76	62	43	48	48	53	55	41	65	60	40	51
3	46	49		G	29	36	42	51	59	80	89	114	78	60	130	96	70	78	61	72		79		58
4	50	43	38	26	G	34	67	79	68	94	122	103	117	96	104	83	85	96	82	66	65	60	51	67
5	44	53	59	71	60	33	51	106	62	53	60	81	102	94	85	81	98	60	35	50	60	65	69	70
6	70	60	71	86	72	36	31	61	70	92	70	62	73	96	94	G	50	106		133	107	69	50	59
7	40	60	37	43	37	51	51	51	62		50	54	102	96	104	45	33	33	106	105	70	35	51	60
8	92	60	40		51	G	41	54	67	95	95	102	124	67		73	65	40	24	G	25	G	49	29
9	28	G	G	G		G		93	82	92	36	43			60	50	117	61	157	80	37	156	68	70
10	48	43	33	G	G	40	111	104	68	70	97	71	70	52	156	185	185	162	124	149	88	68	35	50
11	51	60	84	60	82	104	60	93	136	67	138	127		135	86	113	81	61	109	79	84	79	92	93
12	60	60	42	49	42		59	51	96	59	G	70	73	55		G	G	36	G	28	G	G	42	36
13	40	29	27		43	50	60	89	116		163	83	64	57	91		84	83	82	60	41	73	50	81
14	50	51		56		G	37	46	76	58	61	120	66	42		62	77	97	175	68	54	69	95	33
15	36	51	26		25	G	51	53	73	151	75	123	104	137	125	40	34	31	43	33	31		30	60
16	59	58	50	40	33	31	42	61	60	104	84	112	101	62	53		43	53	46	60	41	113	59	39
17	37	41	54	33	35	37	39	68	80		97	103	91	185	149	39	92	122	48	63	89	81	43	40
18	59	72	36	29	G	G	42	56	52	86	119	95	52	62	68	101	82	42	50	60	58	35	39	72
19	43	33	39	25	27	50	64	29	60	62	84	84				84	106	50	43	60	43	33	27	24
20	G	46	50	60	58	26	35	34	33	45	48			G	44	41	44	82	35	28	25	11	24	G
21		G	39	31	29	28	34	46	43	G	47			93	43	48	80	78	60	56	60	72	69	45
22	30	36	36	41	26		40	60	92	104		88		84	45	G	118	94	83	49	43	48	43	114
23	40	39	29	G	30	G	41	52	81	84	110	62	94	106	122	48	45	49	48	90	90	70	45	40
24	43	72	50	G	G	29	37	49	40	39	G			52	33	53	73	40	60	80	89	58	72	69
25	82	86	56	49	24	32	44	84	87	62	89	70	97	88	132	46	102	139	94		104			49
26	32	42	40	32	24	G	42	55	75	104	93	100	86	50	G	61	G	47	42	42	50	53	49	60
27	81	40			G	29	49	71	92	85	77	72	64	83	46	43	47	56	33	26	41	41	30	67
28	60	39	G	G	G	34	26	40	35	43		43	G			36	35	G	36	31	42	51	53	70
29	53	70	67	70	28	G	38	51	77	100	124	105	50	69	54	47	52	68	137	94	67	50	31	29
30	29	28	60	31	G	29	42	40	45	50	52	51	75	90	95	104	73	60	49	31	34	40	G	29
31	49	39	27	G	G	G	G	41	45	70	88		54	82	84	47	55	94	67	G	G	G	34	32
	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	28	27	29	29	30	31	31	28	29	26	24	28	26	29	31	31	30	30	30	29	29	31
MED	48	49	40	32	29	29	42	55	70	75	84	84	76	82	84	48	70	60	58	60	54	58	49	58
U Q	60	60	57	54	45	36	51	84	87	93	97	103	99	95	104	83	85	94	83	79	70	71	59	70
L Q	40	39	34	G	G	G	38	49	59	55	53	62	64	58	46	42	44	42	43	33	41	37	34	36

HOURLY VALUES OF fmin AT Kokubunji

JUL. 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	14	13	13	14	13	22	13	18	23	33	34	35	36	36	33	30	42	40	14	13	14	15	13	13
2	13	13	13	13	13	13	14	13	23	28	29	31	40	29	29	23	30	17	20	13	18	14	14	14
3	14	14		13	13	14	21	24	25	31	33	34	33	33	30	29	25	15	20	17	14	13	14	13
4	13	13	13	14	17	13	20	24	31	35	34	35	36	34	29	26	21	17	13	13	14	13	13	14
5	14	14	14	14	13	14	13	14	18	35	36	39	37	36	39	33	29	23	13	13	14	13	14	14
6	13	13	13	13	13	13	14	17	21	24	34	34	33	36	34	53	33	15	20	13	13	13	13	13
7	13	13	13	13	13	13	13	21	25		42	36	39	33	29	22	42	21	13	17	13	15	13	13
8	13	13	15	13	13	18	13	17	28	30	36	34	39	35	34	34	25	14	13	15	17	13	13	14
9	13	24	23	13		18	13	14	23	22	29	25			36	43	21	18	13	14	13	13	14	13
10	13	13	13	17	14	13	14	24	21	28	31	33	30	30	38	34	28	23	15	13	14	14	13	15
11	15	13	13	13	14	13	14	18	20	29	29	34	29	26	26	24	24	21	15	15	13	14	14	14
12	13	14	13	13	13		13	15	21	25	47	35	35	34		43	42	13	22	13	44	22	13	13
13	13	15	14		14	13	13	17	23	33	28	29	25	29	26	23	21	17	13	14	14	15	14	22
14	13	13	13	17		17	13	17	21	24	26	29	31	36		31	25	15	13	13	13	14	13	13
15	13	13	13		14	18	13	14	22	36	31	26	30	28	29	31	23	23	14	24	13		14	13
16	13	15	14	13	13	13	13	14	17	22	31	25	33	28	24		28	18	13	14	13	14	14	13
17	13	13	13	13	13	14	13	15	20	29	35	36	33	33	31	29	28	14	13	18	14	13	13	14
18	13	13	13	13	18	30	22	17	20	24	29	31	31	28	34	20	20	17	13	14	14	17	13	14
19	13	13	15	14	14	13	14	17	21	24	30	28				35	34	23	14	13	14	13	14	14
20	15	13	13	13	13	13	13	14	18	26	29			45	34	34	29	13	13	13	17	13	15	14
21		18	14	15	14	13	13	14	21	44	28	33		36	34	33	26	14	14	13	14	14	13	13
22	13	13	13	13	14		17	13	18	28		36	33	35	34	35	28	14	13	13	14	14	13	14
23	14	13	14	22	15	20	13	13	26	29	45	36	36	35	34	24	21	13	14	14	13	14	13	13
24	13	14	13	13	20	14	13	15	23	22	55			26	24	34	29	23	14	22	13	13	14	14
25	14	15	14	14	14	14	13	14	13	29	31	33	33	29	26	28	23	14	13	13	13	13		13
26	13	13	14	13	13	25	20	18	21	28	25	29	26	29	53	23	17	14	13	13	13	13	14	13
27	13	13			17	13	13	14	26	24	29	29	29	30	28	25	23	15	13	15	14	14	13	13
28	13	13	17	14	17	14	14	17	22	26	44	34	50			44	17	13	14	14	14	13	13	13
29	14	13	14	13	13	20	13	13	13	20	28	28	33	30	22	21	20	15	13	14	14	15	14	14
30	13	13	14	14	22	13	13	20	20	26	29	35	37	33	25	23	18	13	13	14	14	14	14	13
31	13	15	14	14	14	18	24	15	26	30	33		34	34	34	21	33	18	14	23	18	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	30	31	29	28	29	29	31	31	31	30	30	28	26	28	27	30	31	31	31	31	31	30	30	31
MED	13	13	13	13	14	14	13	15	21	28	31	34	33	33	31	30	25	15	13	14	14	14	14	13
U Q	14	14	14	14	14	18	14	18	23	30	35	35	36	35	34	34	29	21	14	15	14	14	14	14
L Q	13	13	13	13	13	13	13	14	20	24	29	29	31	29	26	23	21	14	13	13	13	13	13	13

HOURLY VALUES OF foF2 AT Yamagawa

JUL. 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	A				34	30	40		A	A	A	66	A		60	57	73	77	78	84	81	75	65	64
2	53	A	43		A	32	A			57	54	A	A	57		58	62	71	73	72	76	54	52	51
3	53	A	42	42	41	36	44	56	A	61	A		A	A	A		62	70	72	72	72	43		50
4	48	A	A		A	41	42	58	A	A	A	A	A	A		74	A	A	80	A		A	50	54
5	52	52	54	52	34	A		57	61	66	50	A	56		66	67	71	A	72	78	52		38	A
6	42	A	A	A	A	A	41	57	60	A	A	A	A	A	A	A	A	A	A	134	A	66	A	
7	54		A	55	47	53	55		49	A	A	A	60	A	68	78	78	74	73	74	76	40	36	38
8	37	32		34		A	A	47	54	A	A	A	A	A	76	75	A	60	71	74	54	51	53	46
9	36	40	36	41	42	34	47	55	51	45	53		A		A	A		61	65	66	51	A		37
10	34	A	A		A	A	A	54	72	A	A	A	A	A	A	58	A	A	81	98	64		A	37
11	A	39	38	34		34	44	A	A	A	A	A	A		63	67	72	81	76	75	63		A	
12	40	40	36	39	37	35	A	45	A	A	55	55		A		72	75	62	54	56	52	53	54	54
13		50	37	A	29	31	44	A	A	A	A	A	A	A	A			53	68	64		42	A	A
14	A	A	A		26	A	A	51	A	A	51	A	A			55	A	54	A	60	61	A	A	40
15	34	32		29		29	45	32	40	A	A		A	A	A	A	A	A	A	54	54	54	46	A
16	42	46	46	40	34	34	45		56	57	A	A	A	A	A		53			61	51	54	44	A
17	34	34	A	32	28	29	42	47	62	A	A	A	A		67	57	49	50	A	A	55	A	A	52
18	52	48	44	40	40	38	47	57	51	A	A	A	59		A	A	A	A	A	56	51	52	44	45
19		A	A	29		30		51	A	A	A	54		A		60	66	77	77	60	45	44	38	38
20	34	30	32	28	26	28	42	A	54	58					58		55	61	71	74	80	A	40	40
21	40	37	37	34	26	A	A	A	56	44	57			58		56	58	62	56	52	64	54	52	44
22	46	A	42	36		34		51	57	47	55	A					62	57	57	63	66	53	A	37
23	37	40	34	34	33	32	42	34	A	A		A	A	A	A	A	65	66	A	A	A	A	A	42
24	A		34	34	29	A	37	54	72	71	57						A	54	A	A	A	54	47	42
25	A	A	37	A	29	30	44	46	62	66	A	A		A	A	56	56	72	76	A	A	A	A	A
26	A				38	32	40	54	57	66		A		A	A	A	A	36	A	53	54	54	51	47
27	50	48	45	42	36	29	A	54	76	A		49	A	A	A	66	64	63	70	75	72	74	50	55
28		40	38	32	36	32	40	52	65		49	61	61	58	56	71	87	61	46	46	55	54	52	A
29	51	A	41	37		34	40	58	71	73		A		A	A	A	58	68	70	A	78	A	A	A
30	40	39	41	35		32	44		50	59	A	A	A	A	A	A	A	A	A	60	61	54	54	44
31	37	38		34	34	32	A	69	68	54	A	A	A	A	78	74	52		A	72	76	76	50	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	22	17	19	22	20	24	20	22	21	14	9	5	4	3	9	17	19	22	20	25	25	20	19	21
MED	41	40	38	34	34	32	43	54	57	58	54	55	60	58	66	66	62	62	72	66	61	54	50	44
U Q	51	47	43	40	37	34	44	57	66	66	56	63	60	58	72	73	72	71	76	74	74	54	52	51
L Q	37	35	36	34	29	30	40	47	52	54	50	51	57	57	59	57	56	57	66	58	53	51	44	39

HOURLY VALUES OF fEs AT Yamagawa

JUL. 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	60	47	44	28	G	G	35	57	86	70	127	62	109		57	50	58	70	95		41	70	40	50
2	38	84	71	48		29	60	60		51	48		151	39	35	54	G	G	30	27	26	G	32	32
3	33	72	55	26	G	G	38	63	73	54	81	88	140	83	91	61	48	46	61	52	50	25	58	29
4	49	110	71	50	54	36	40	83	82	92	124	120	62	77	84	62	151	94	97	82	61	59	41	30
5	33	26	26	40	36	80	59	35	45	G	32	78	56	58	70	53	60	78	53	43	32	36	28	59
6	60	60	77	85	84	70	33	50	60	92	58	136	117	95	149	155	148		116	94	124	59	89	59
7	44	72	87	38	58	G	38	54	49	71	63	58	90	79	82	50	62	92	60	27	27	26	30	G
8	30	30	43	33	51	55	61	43	54	97	149	185	173	118	57	34	82	38	57	68	42	28	G	G
9	G	24	G	G	G	G		30	35	46	50	56	80		92	85	70	44	40	30	G	60	39	46
10	36	68	77	40	54	58	83	60	53			148	64	90	82	51	157		80	46	59	36	68	34
11	60	28	28	37	40	G	32	114	169	93	150	84	80	44	48	59	43	73	82	58	58		69	46
12	48	40	34	33	33	53	82	120	77	90	46	38	41	63	59	50	63	55	46	50	58	43	50	46
13	54	58	26	50	G	40	30	67	78	135	75	117	62	50	86	43	47	50	50	39	55	57	86	83
14	84	53	33	37	24	49	51	51	148	124	50	59	58	48		53	64	105	87	85	46	40	50	34
15	27	33	48	33	47	28	32	43	50	84	110		64		106	151	110	78	72	76	38	23	44	56
16	36	45	56	28	G	26	33	50	56	59	66	58	92	79	81	38	46	56	69	59	59	115	59	59
17	33	60	68		26	24	34	39	51	60	111	173	88	101	47	55	44	47	70	60	64	59	71	50
18	50	40	33	31	26	27	29	47	53	60	78		41	86	102	118	120	117	64	58	31	24	26	G
19	44	49	48	25	33	29	82	36	60	109	58	46	45	62		41	42	34	32	28	27	27	27	40
20	30	29	33	33	38	25	91	84	57	48	47	43	48	42	56	52	51	58	39	44	33	70	26	G
21	26	60	37	27	49	47	65	79	82	48	47	42	52	41	50	58	47	42	44	G	34	43	53	48
22	50	69	39	34	27	28	48	38	72	56	65	65	42		48	53	50	61	46	36	26	48	56	37
23	G	26	26	G	28	29	28	56	70	81	96	124	95	84	82	86	50	44	103	92	78	72	48	53
24	60	49	48	37	30	42	27	43	50	45	45	33	48	40	40	56	55	54	83		94	43	32	35
25	68	83	60	49	27	G	35	45	60	61	124	124	125	166	78	45	30	65	80	116	115	108	81	82
26	67	46	43	47	31	G	26	39	60	50	64	66	48	70	132	109	80	43	60	40	40	43	28	54
27	40	G	G	G	G	24	52	43	56	71	61	55	52	72	79	55	51	50	42	35	28	23	49	56
28	59	30	G	G	G	G	28	34	49	79	65	49	40	53	44	37	37	40	37	29	G	34	59	59
29	49	48	50	37	31	32	32	28	G	45	66	77	55	114	150	113	60	50	60	84	56	83	83	46
30	83	27	32	G	39	G	60	44	48	56	87	62	72	74	84	66	70	67	103	69	51	40	36	33
31	48	30	40	47	33	26	43	43	36	48	68	133	124	75	60	63	48	94	110	60	65	50	39	60
	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	30	31	30	31	30	30	30	28	31	27	29	31	31	29	31	29	31	30	31	31
MED	48	47	43	34	31	28	38	47	56	60	66	66	64	74	79	55	55	55	61	52	46	43	48	46
U Q	60	60	56	40	40	42	60	60	73	90	96	122	95	86	88	66	70	75	83	72	59	59	59	56
L Q	33	30	32	27	24	G	32	39	50	50	50	55	48	50	53	50	47	44	46	35	31	28	32	33

HOURLY VALUES OF fmin AT Yamagawa

JUL. 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	14	15	14	15	16	15	14	14	15	20	20	24	27		22	20	18	15	14	14	14	14	15	14
2	14	14	14	14	14	15	14	14		17	22	24	28	28	28	23	18	14	14	14	14	15	14	14
3	14	14	14	15	16	15	14	14	14	24	20	26	38	27	22	21	17	14	14	14	15	15	14	14
4	14	14	14	14	15	14	14	14	17	17	28	28	24	30	26	21	17	15	14	14	15	15	14	14
5	15	14	15	14	16	16	14	14	14	20	24	35	26	24	20	21	18	14	17	14	14	14	14	15
6	15	15	15	16	14	14	14	14	14	18	26	24	28	33	21	20	17	16	16	14	14	14	14	14
7	14	14	14	14	14	14	14	14	20	18	29	32	32	30	32	21	18	14	14	15	14	14	14	14
8	15	14	14	14	16	15	14	14	16	18	23	34	33	35	18	21	20	18	14	16	14	14	17	15
9	15	15	16	14	14	14	20	14	16	18	17	35	26		20	22	15	14	14	14	15	14	14	14
10	14	14	14	14	15	14	14	14	17	15	21	26	24	23	24	23	16	16	14	14	15	14	14	14
11	14	14	14	14	14	15	14	14	17	17	20	20	18	24	26	34	44	14	14	14	14		15	15
12	14	14	14	14	14	14	14	14	16	15	17	26	26	27	24	21	20	16	14	14	14	15	14	14
13	14	14	15	14	14	14	14	14	14	15	20	23	24	26	24	22	18	15	14	15	14	15	14	14
14	14	14	14	14	14	15	14	14	15	17	17	20	26	27		34	21	16	14	14	14	14	14	14
15	14	14	14	14	14	14	14	14	14	16	17		33	22	17	18	17	14	14	14	14	15	14	15
16	14	14	14	14	14	14	15	14	15	15	18	27	23	24	27	24	20	14	14	14	14	14	14	14
17	14	14	14	14	14	15	14	14	15	17	30	18	35	27	24	24	18	15	14	14	14	15	14	15
18	15	14	15	14	14	15	15	14	14	17	20	23	24	22	20	18	18	15	14	14	15	15	15	15
19	14	14	14	15	14	14	14	14	16	18	18	21	28	22	20	20	17	14	14	14	20	15	15	14
20	14	14	14	14	15	15	15	14	14	17	18	29	27	26	26	22	20	14	14	15	14	14	16	15
21	15	14	15	15	14	14	14	14	16	18	18	24	21	26	20	18	29	16	14	18	14	15	14	14
22	14	14	15	14	14	14	14	14	14	18	22	21	21		34	22	18	16	14	14	16	15	14	14
23	16	14	15	15	16	14	14	14	17	18	21	24	26	27	23	20	17	14	14	14	14	14	14	15
24	15	14	15	14	14	14	16	14	15	16	20	24	26	24	26	21	18	15	14	14	14	14	14	15
25	14	14	14	14	14	14	14	14	16	14	17	18	29	20	27	20	16	14	14	14	16	14	14	14
26	14	15	15	14	14	14	14	14	14	14	27	21	23	27	26	22	18	15	14	14	14	14	14	14
27	14	14	14	15	14	14	14	14	14	14	20	24	33	27	22	20	16	16	14	14	14	14	14	15
28	14	14	14	15	14	15	14	14	16	17	21	23	26	26	22	20	18	14	14	14	16	14	14	15
29	15	14	14	14	15	14	14	14	14	15	16	21	24	22	21	18	16	16	14	14	14	14	14	14
30	14	14	14	15	14	14	14	14	15	18	21	23	23	20	21	20	17	15	14	15	15	14	14	14
31	14	14	14	14	14	15	15	14	14	17	18	21	21	26	21	17	17	14	14	15	14	14	14	14
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	30	31	31	30	31	28	30	31	31	31	31	31	31	30	31	31
MED	14	14	14	14	14	14	14	14	15	17	20	24	26	26	22	21	18	15	14	14	14	14	14	14
U Q	15	14	15	15	15	15	14	14	16	18	22	26	28	27	26	22	18	16	14	14	15	15	14	15
L Q	14	14	14	14	14	14	14	14	14	15	18	21	24	23	21	20	17	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

JUL. 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	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
26	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
28	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
29	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
30	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	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																								

HOURLY VALUES OF fEs AT Okinawa

JUL. 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	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
26	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
28	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
29	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
30	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	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																								

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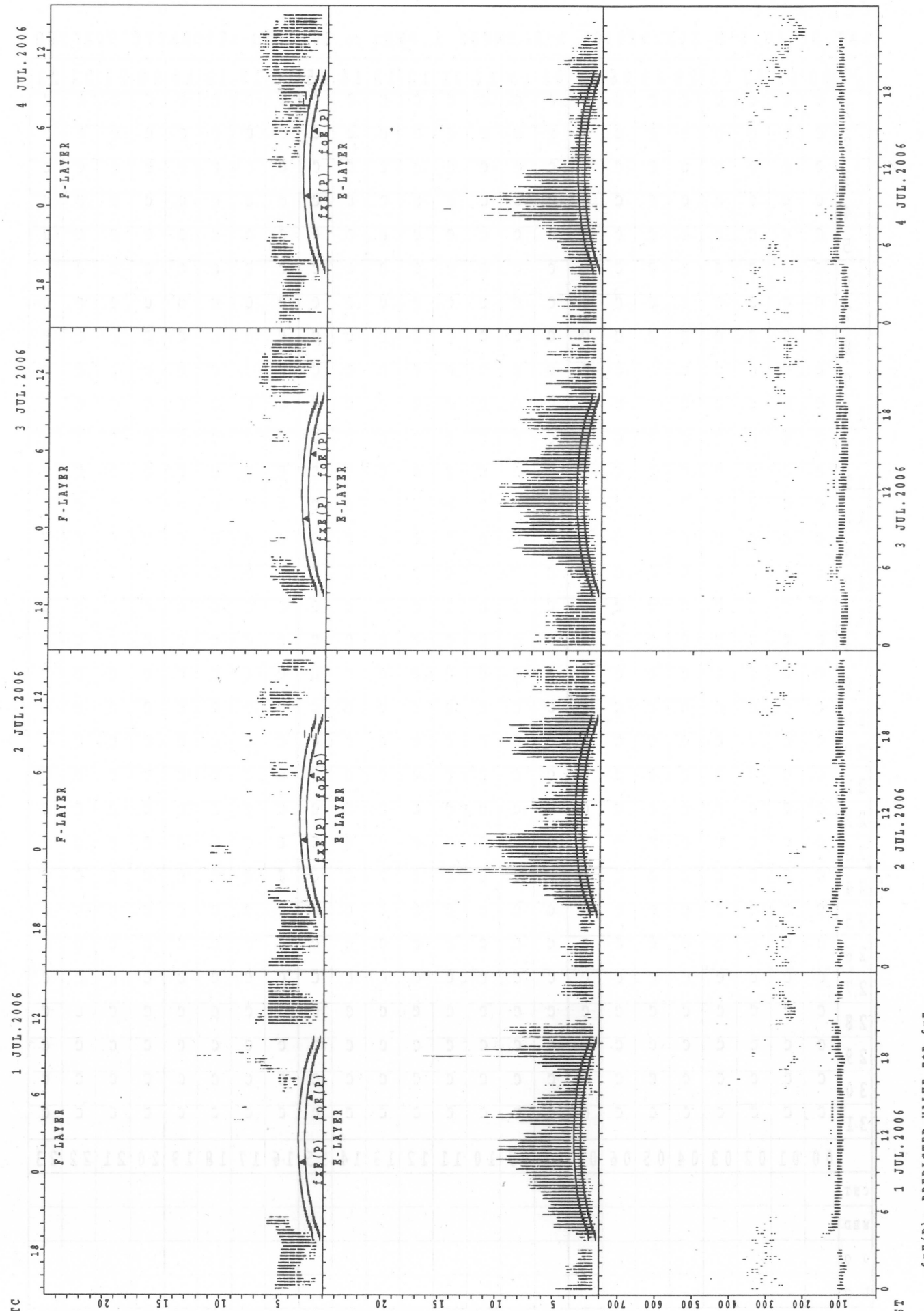
HOURLY VALUES OF fmin AT Okinawa

JUL. 2006

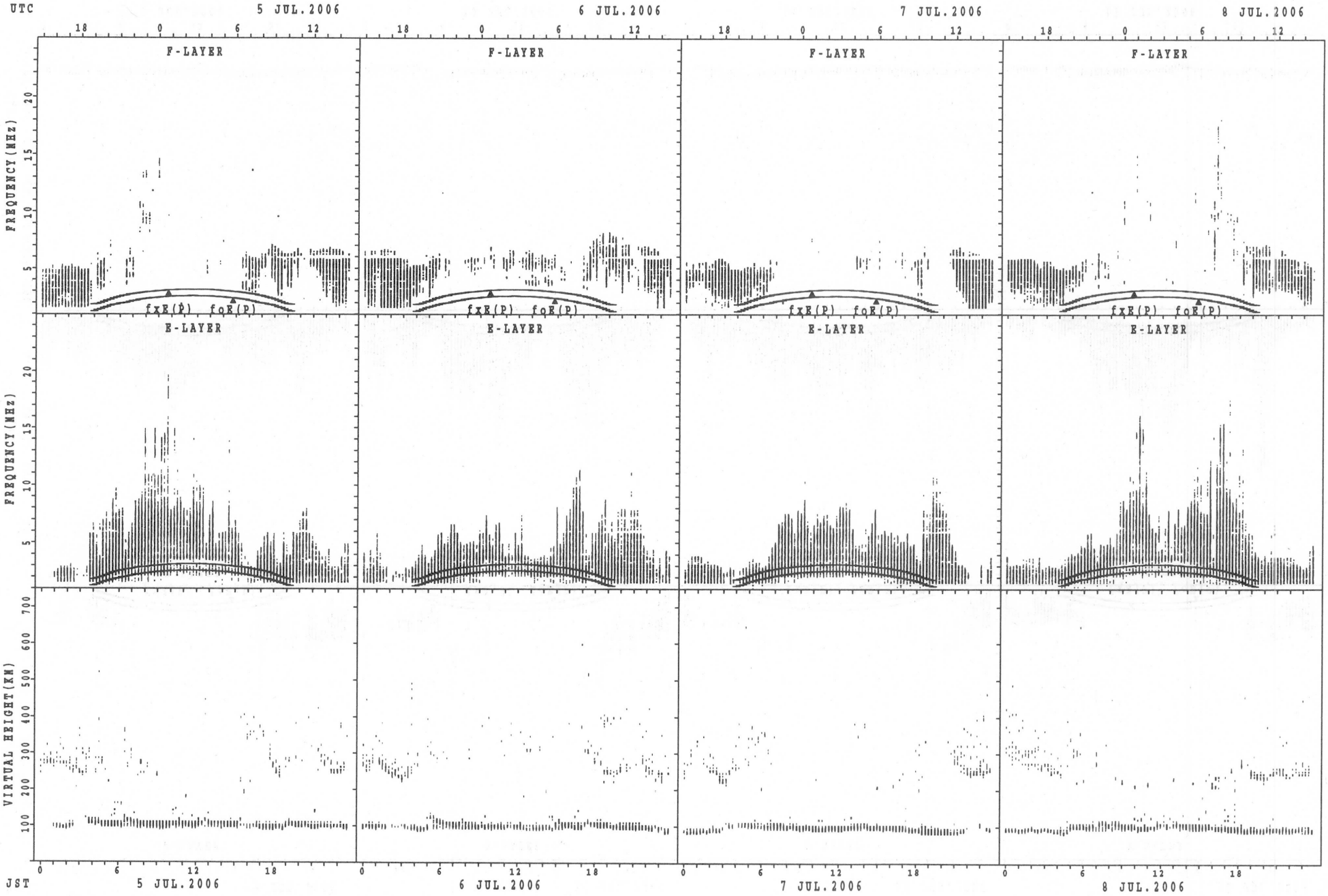
LAT. 26°40.5'N LON. 128°09.2'E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

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	C	C	C	C	C	C	C
11	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
16	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
17	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
18	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
19	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
21	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
22	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
23	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
25	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
26	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
27	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
28	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
29	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
30	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
31	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	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																								

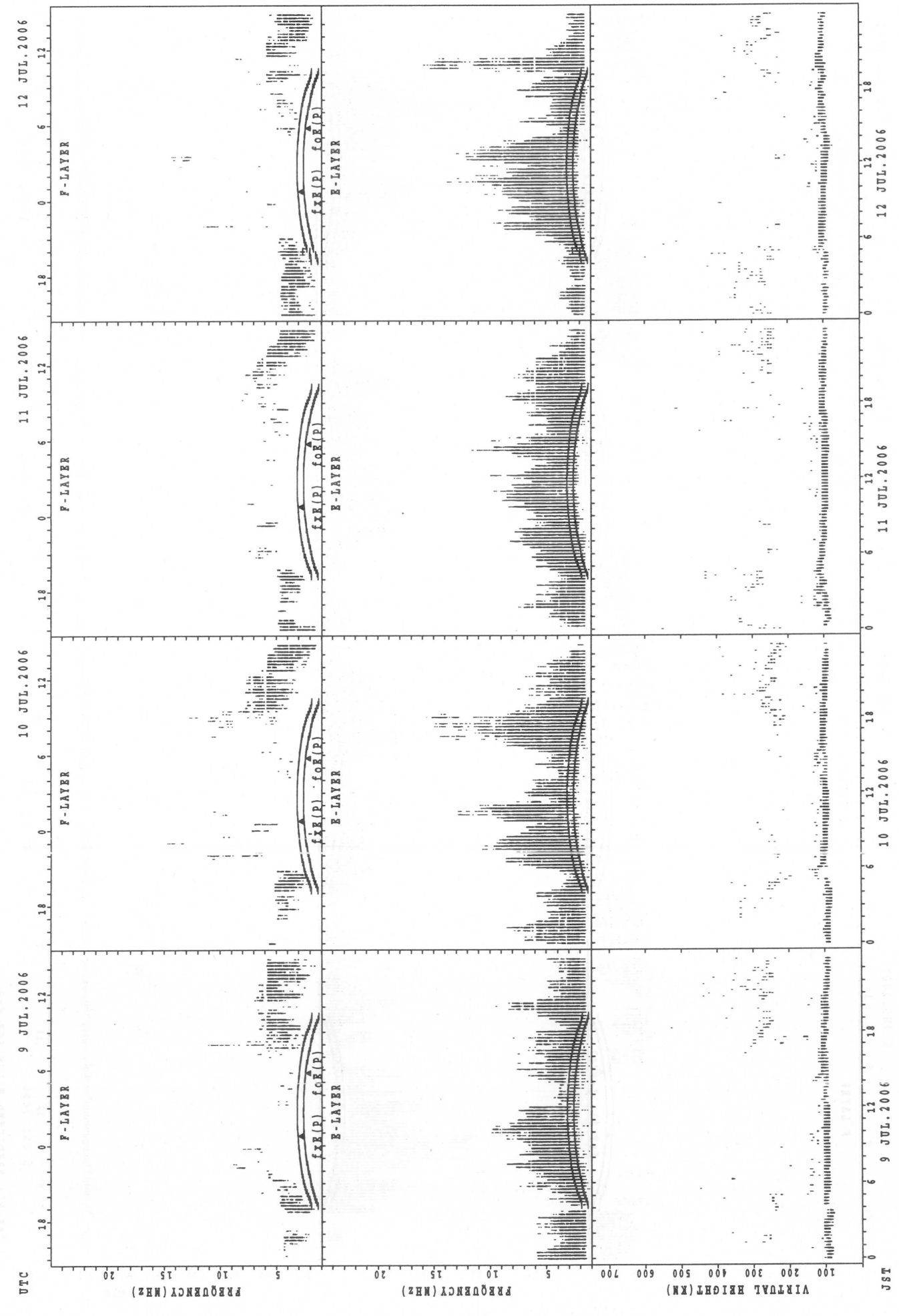
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN


SUMMARY PLOTS AT Wakkanai
UTC
JST
1 JUL.2006
2 JUL.2006
3 JUL.2006
4 JUL.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

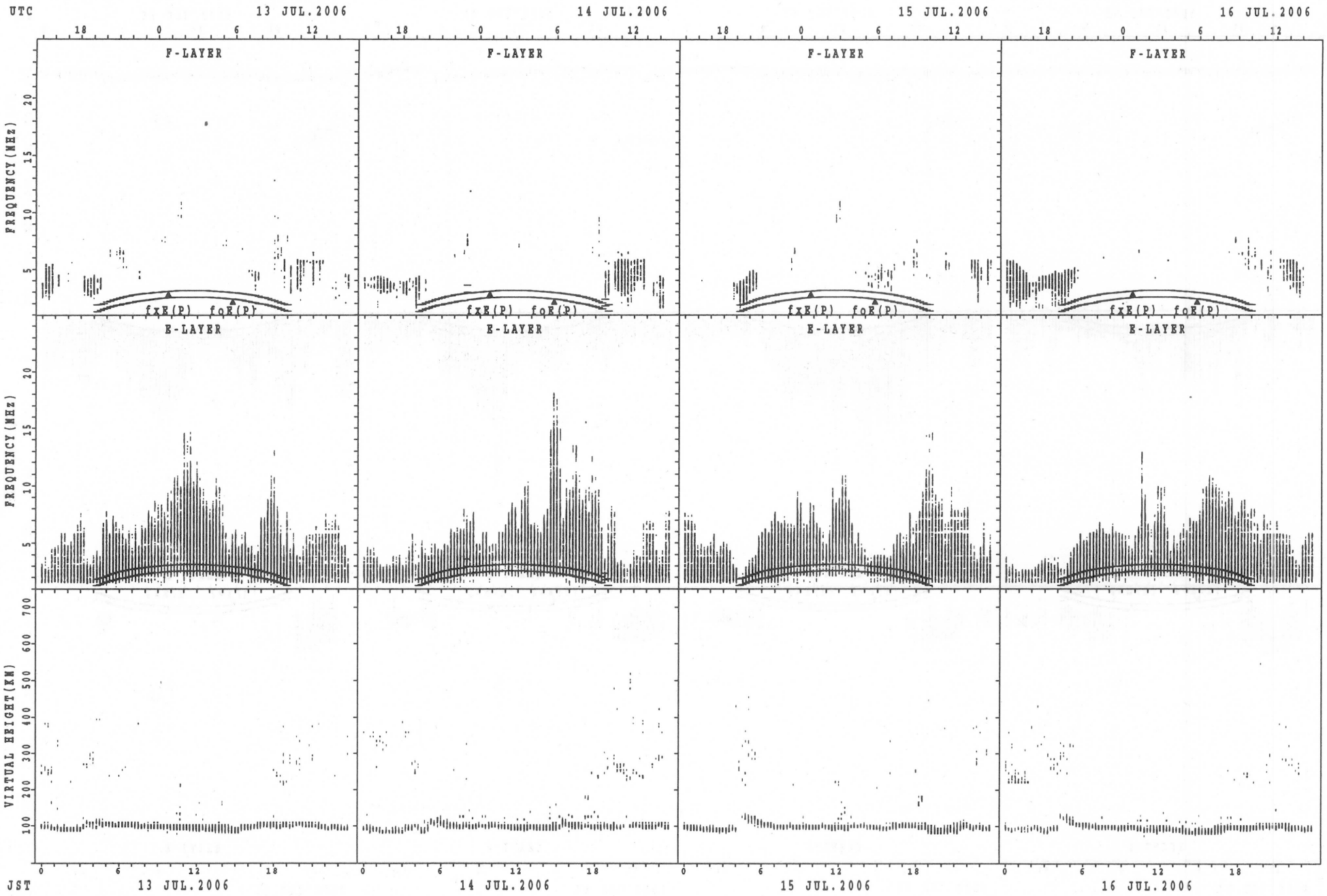
SUMMARY PLOTS AT Wakkanai



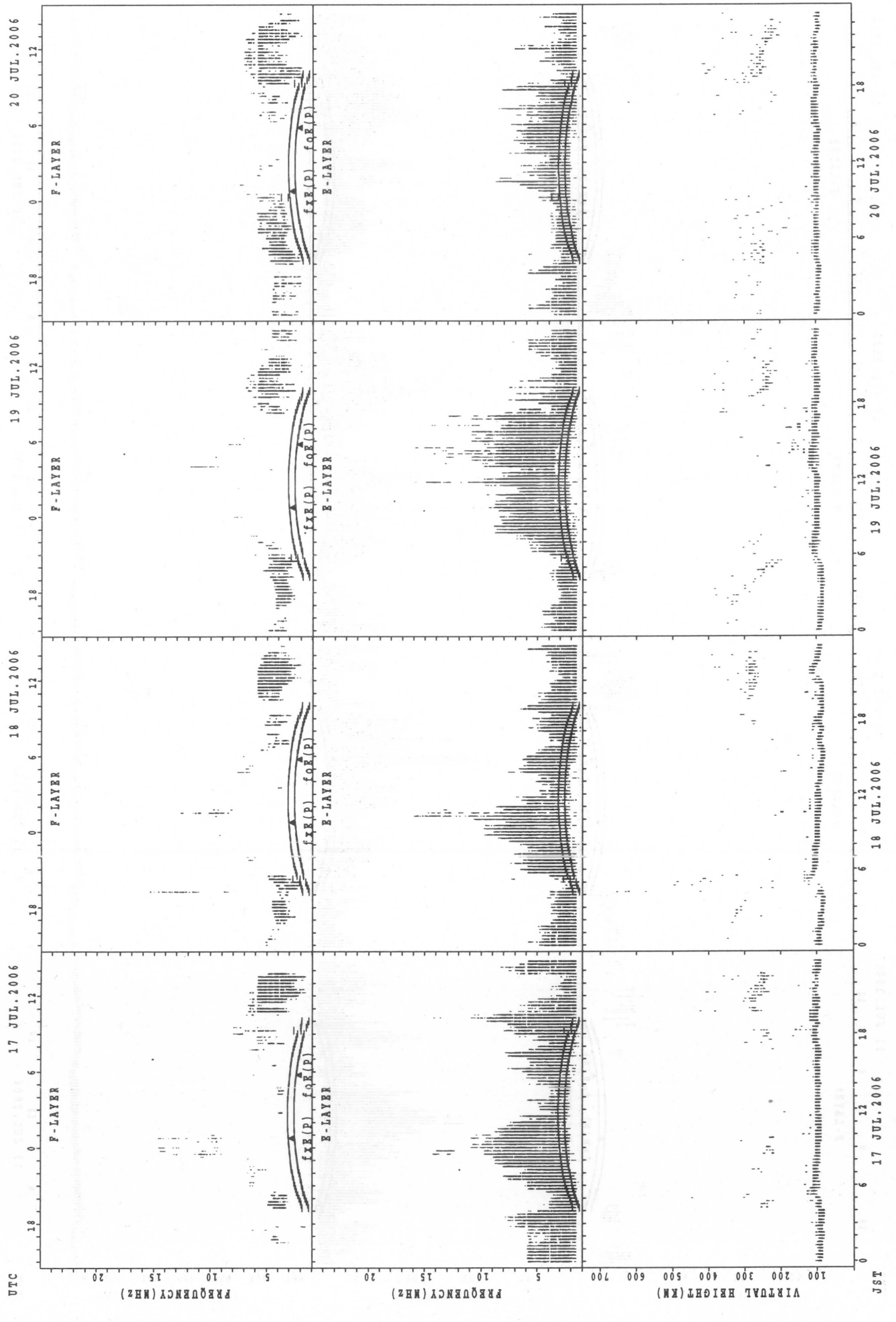
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE


SUMMARY PLOTS AT Wakkanai
UTC
JST
9 JUL.2006
10 JUL.2006
11 JUL.2006
12 JUL.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

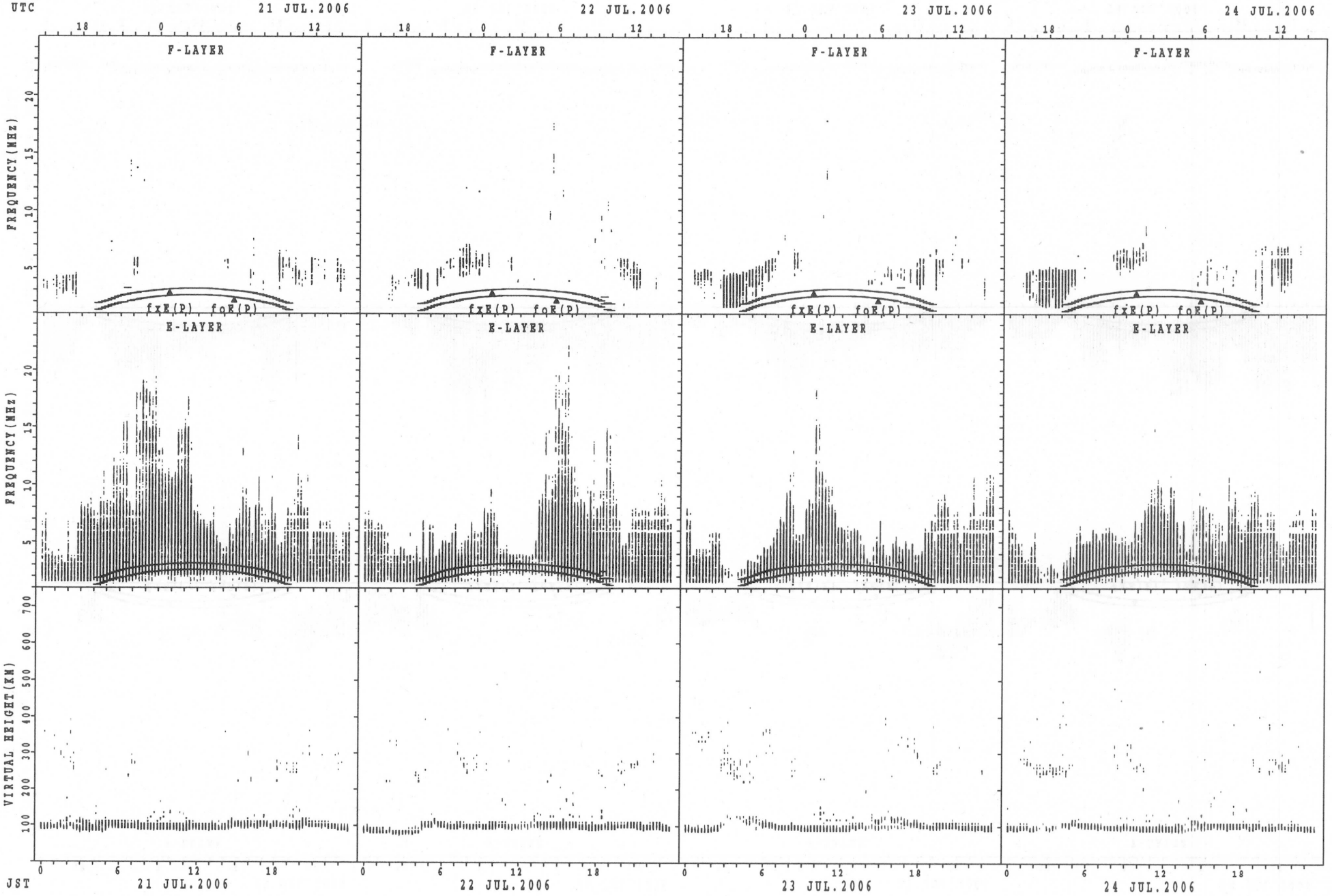
SUMMARY PLOTS AT Wakkanai



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

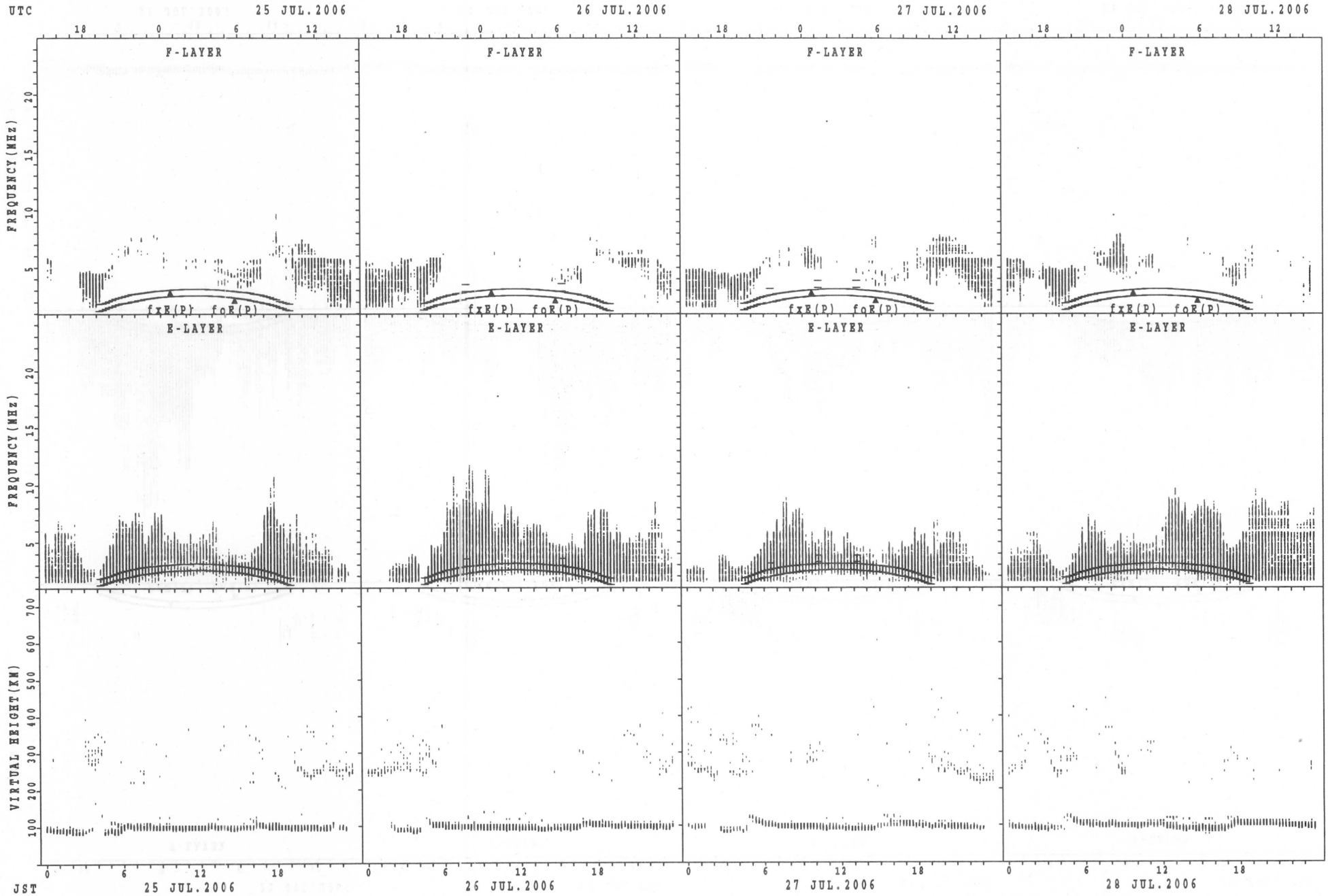

SUMMARY PLOTS AT Wakkanai
UTC
JST
17 JUL.2006
18 JUL.2006
19 JUL.2006
20 JUL.2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



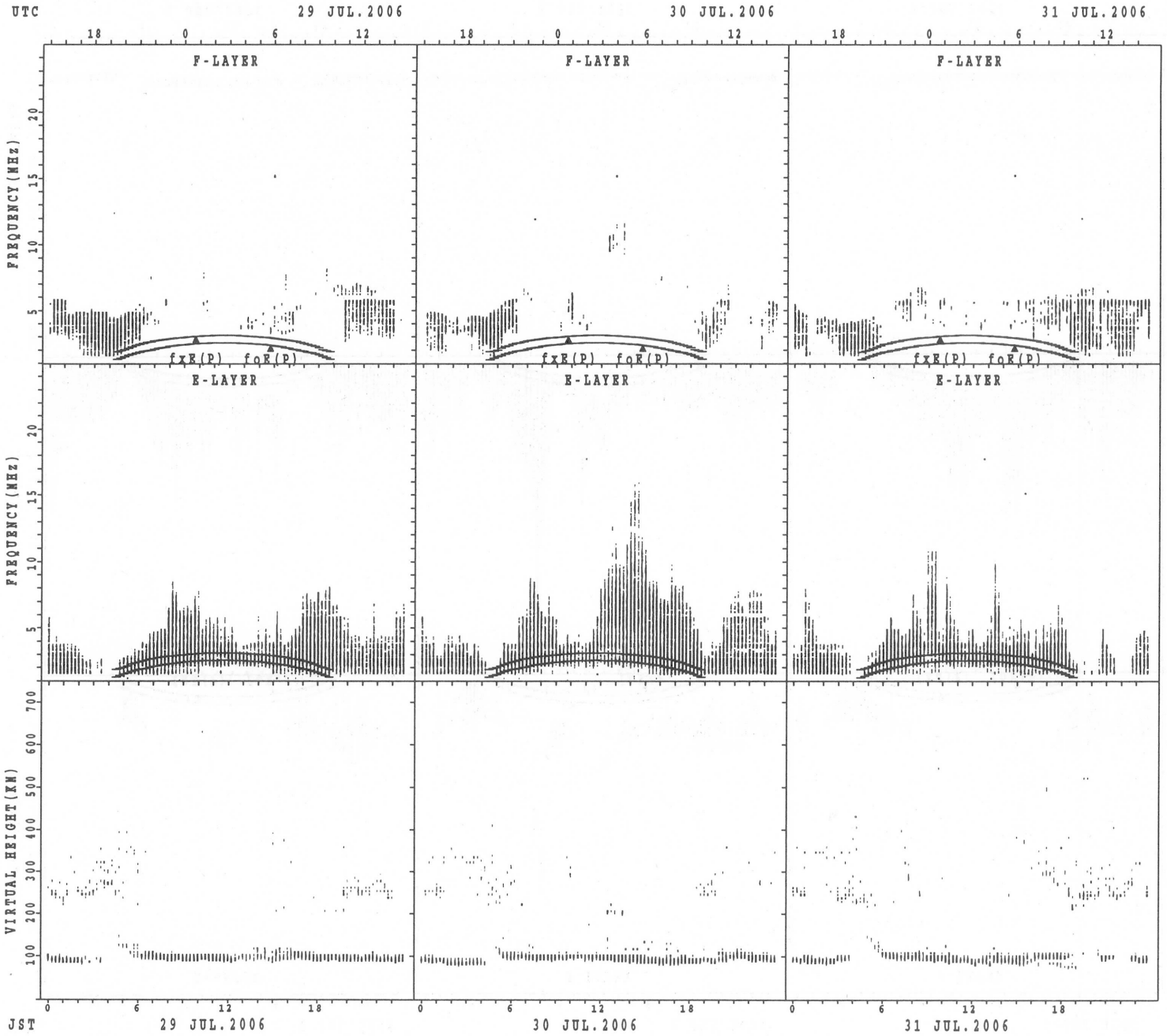
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai

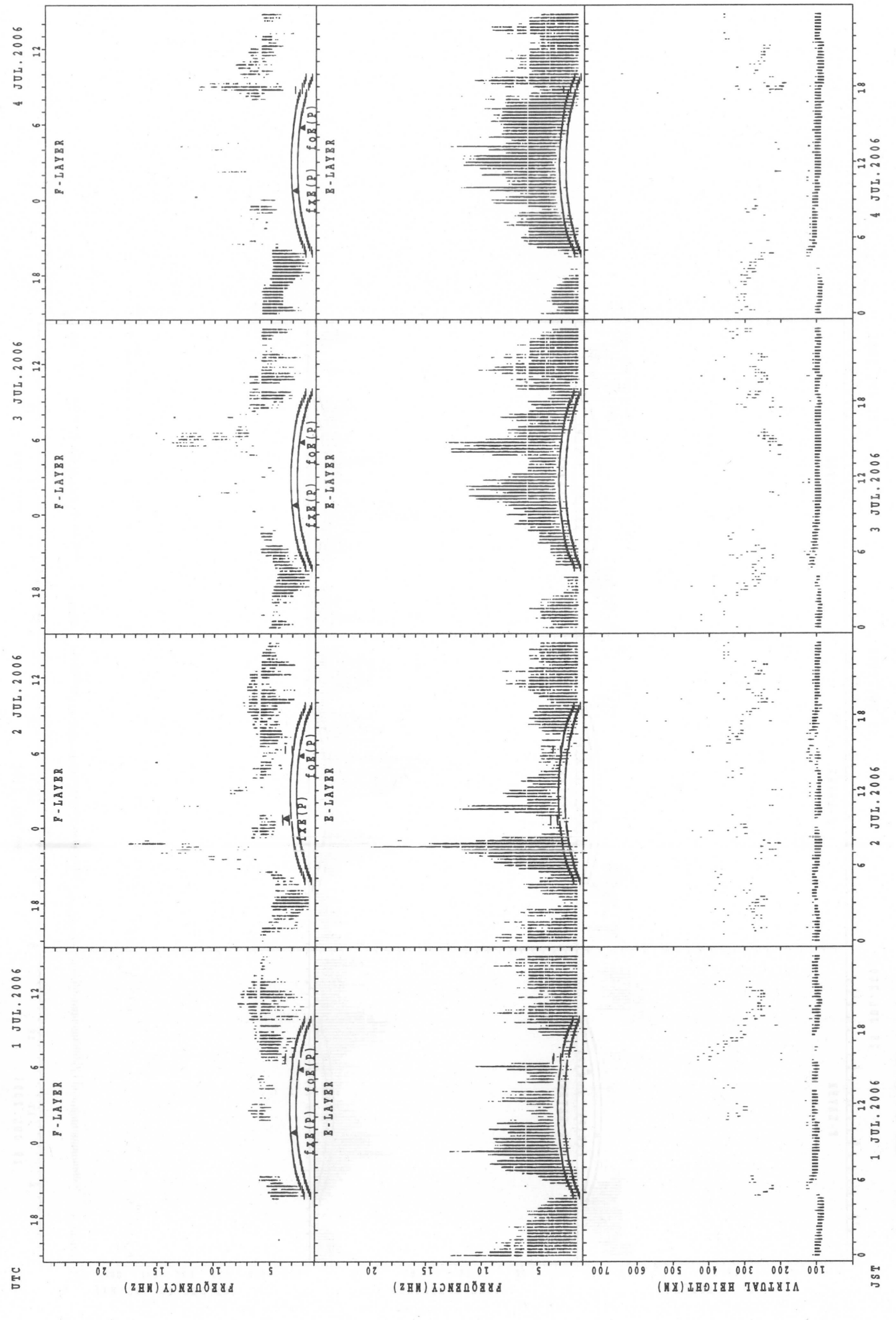


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

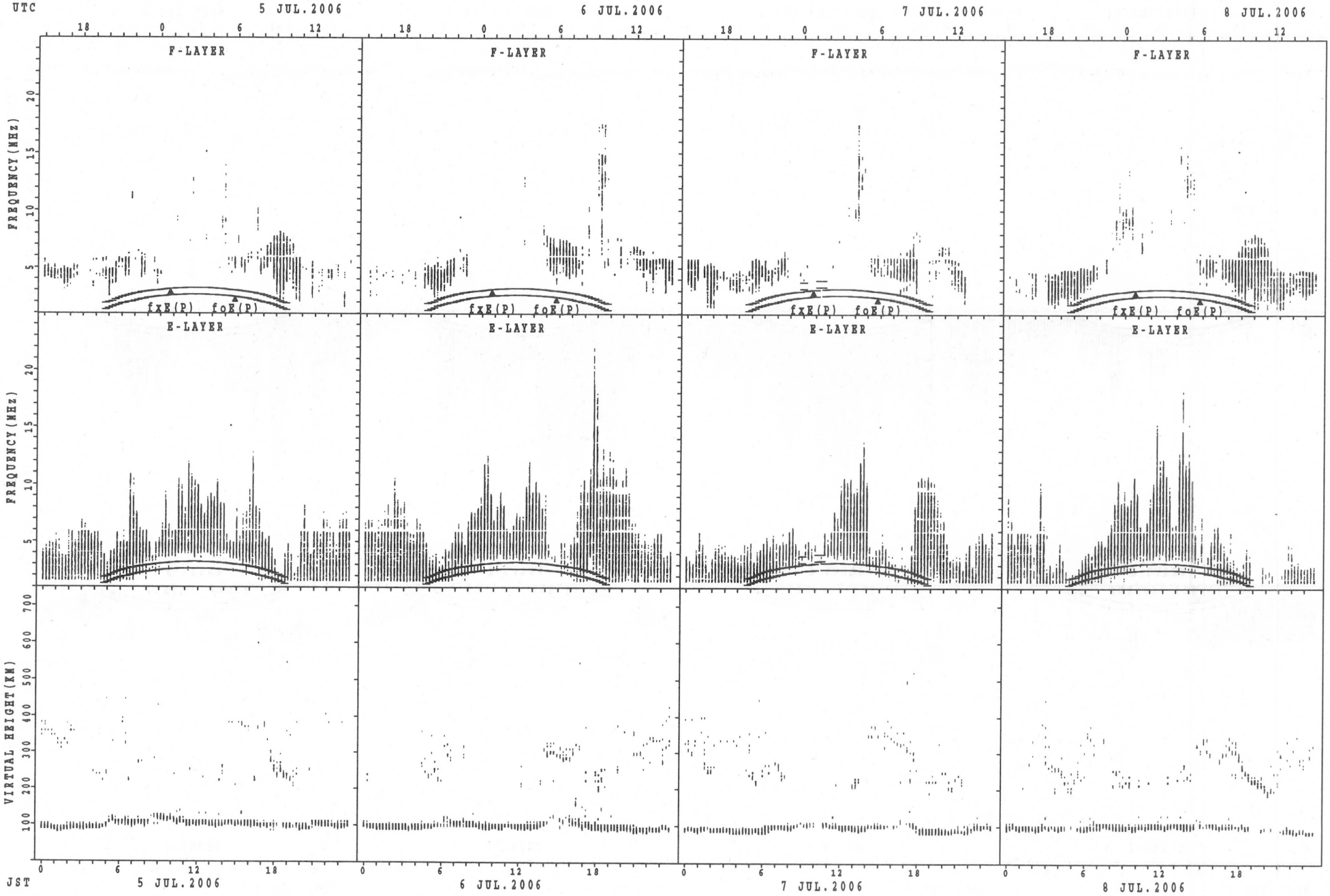
SUMMARY PLOTS AT Wakkanai



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

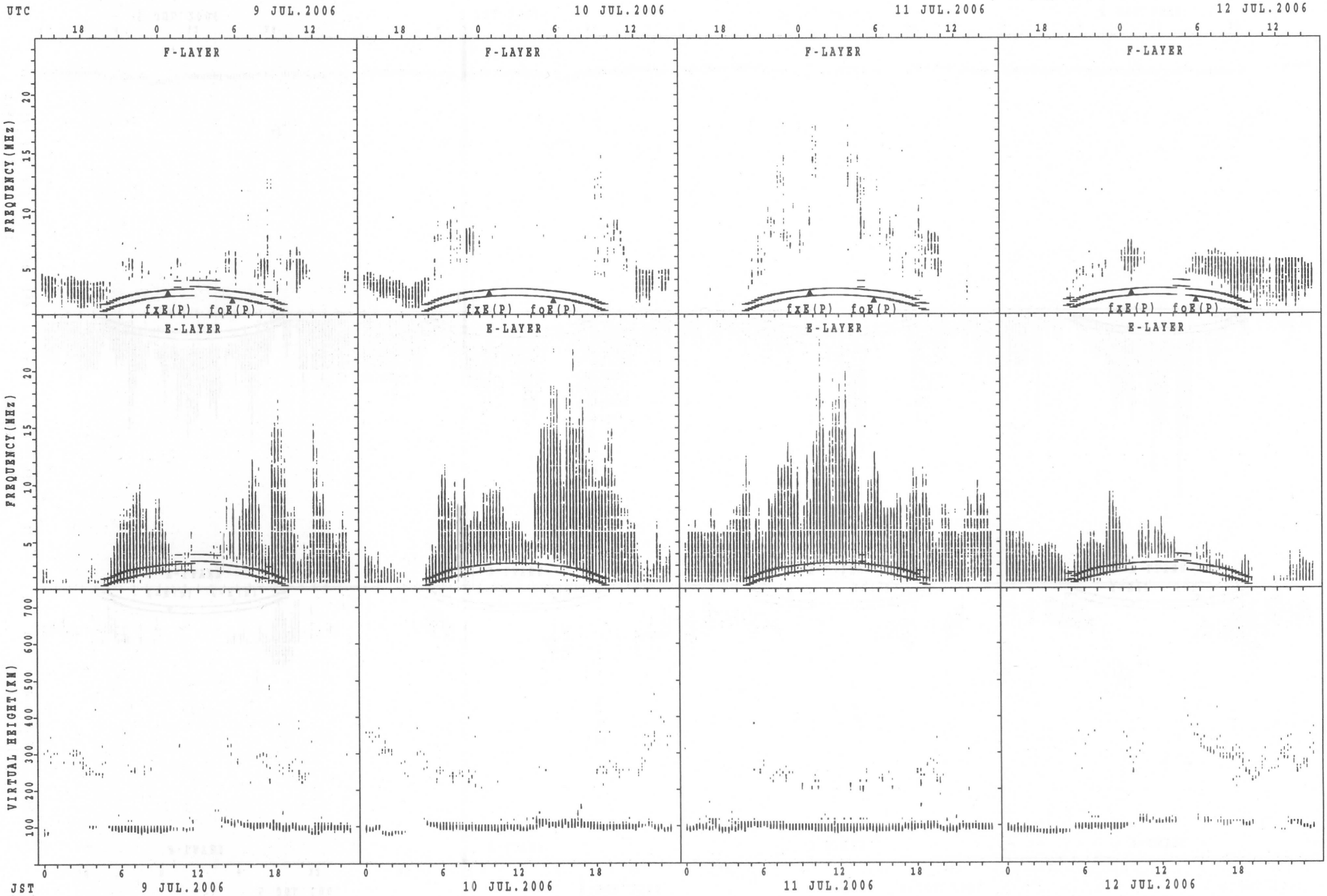

SUMMARY PLOTS AT Kokubunji
UTC
JST
1 JUL.2006
2 JUL.2006
3 JUL.2006
4 JUL.2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



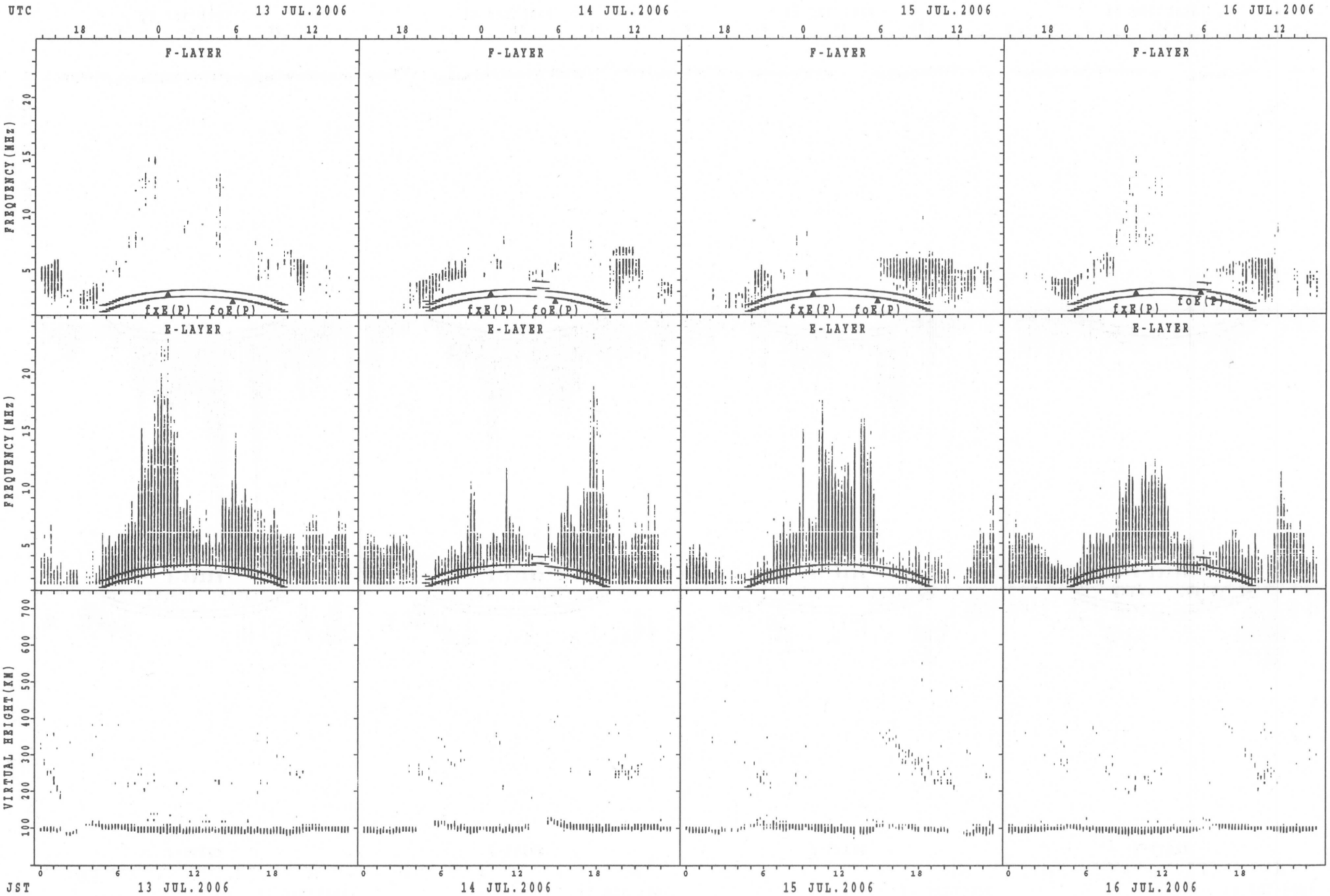
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



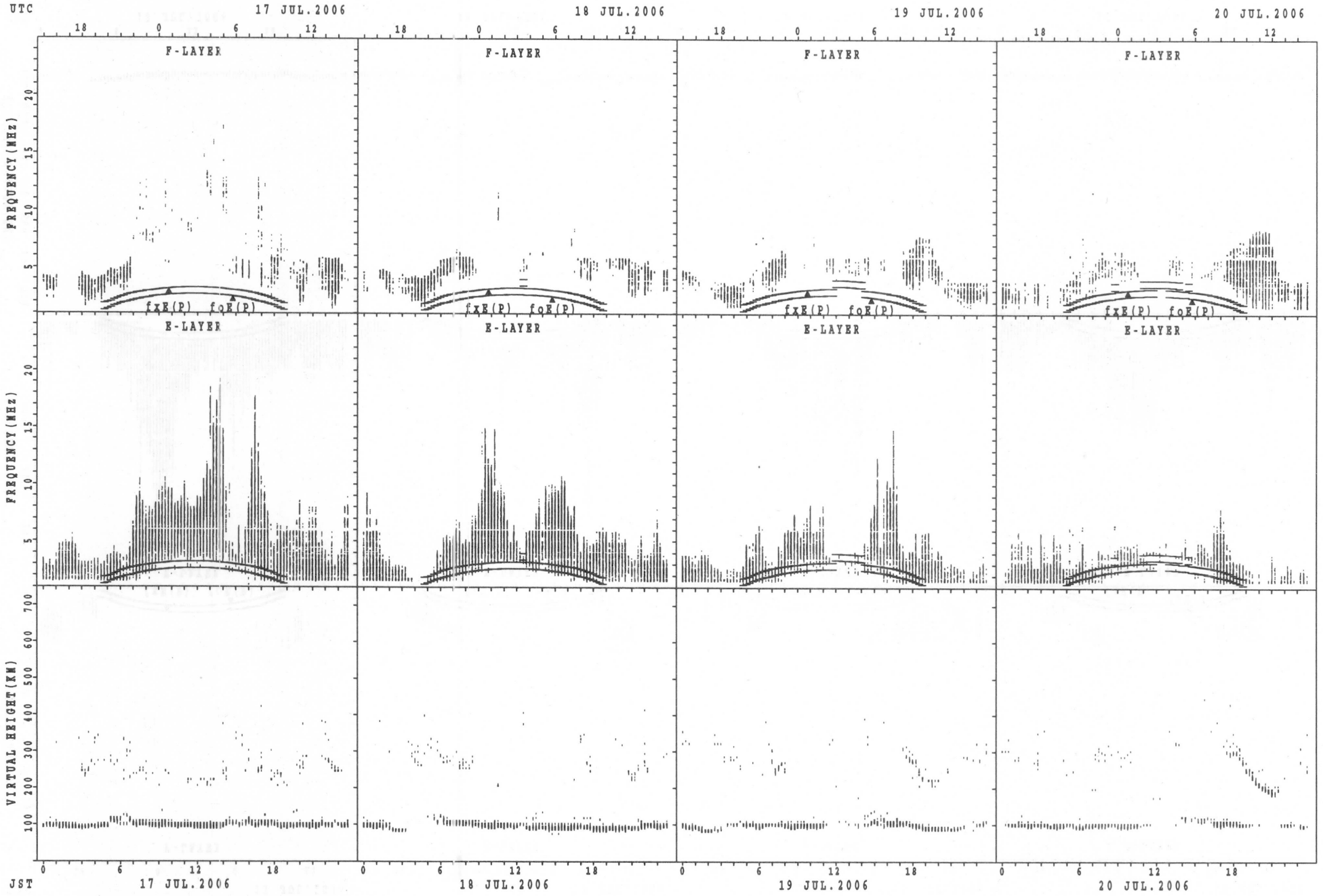
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



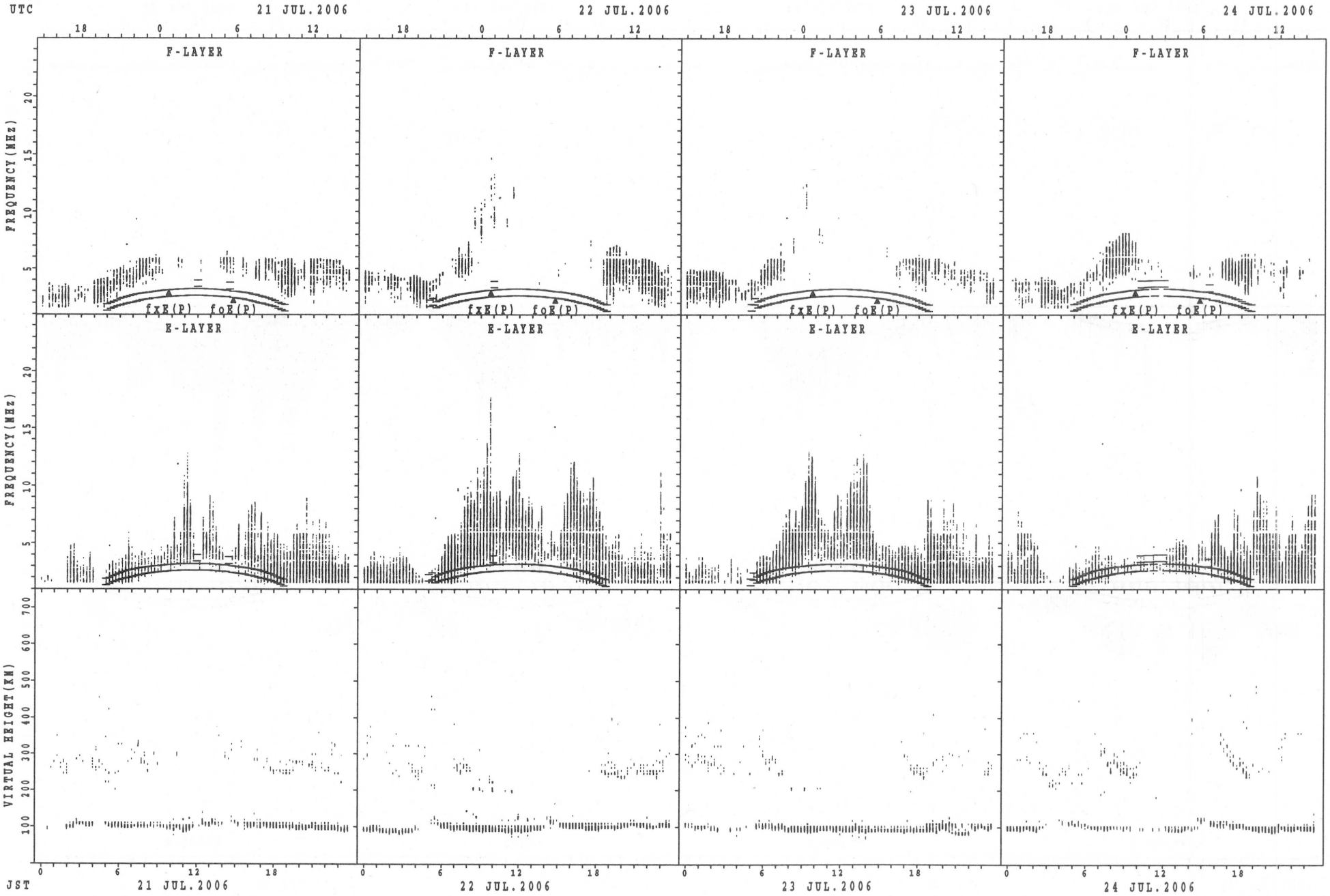
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

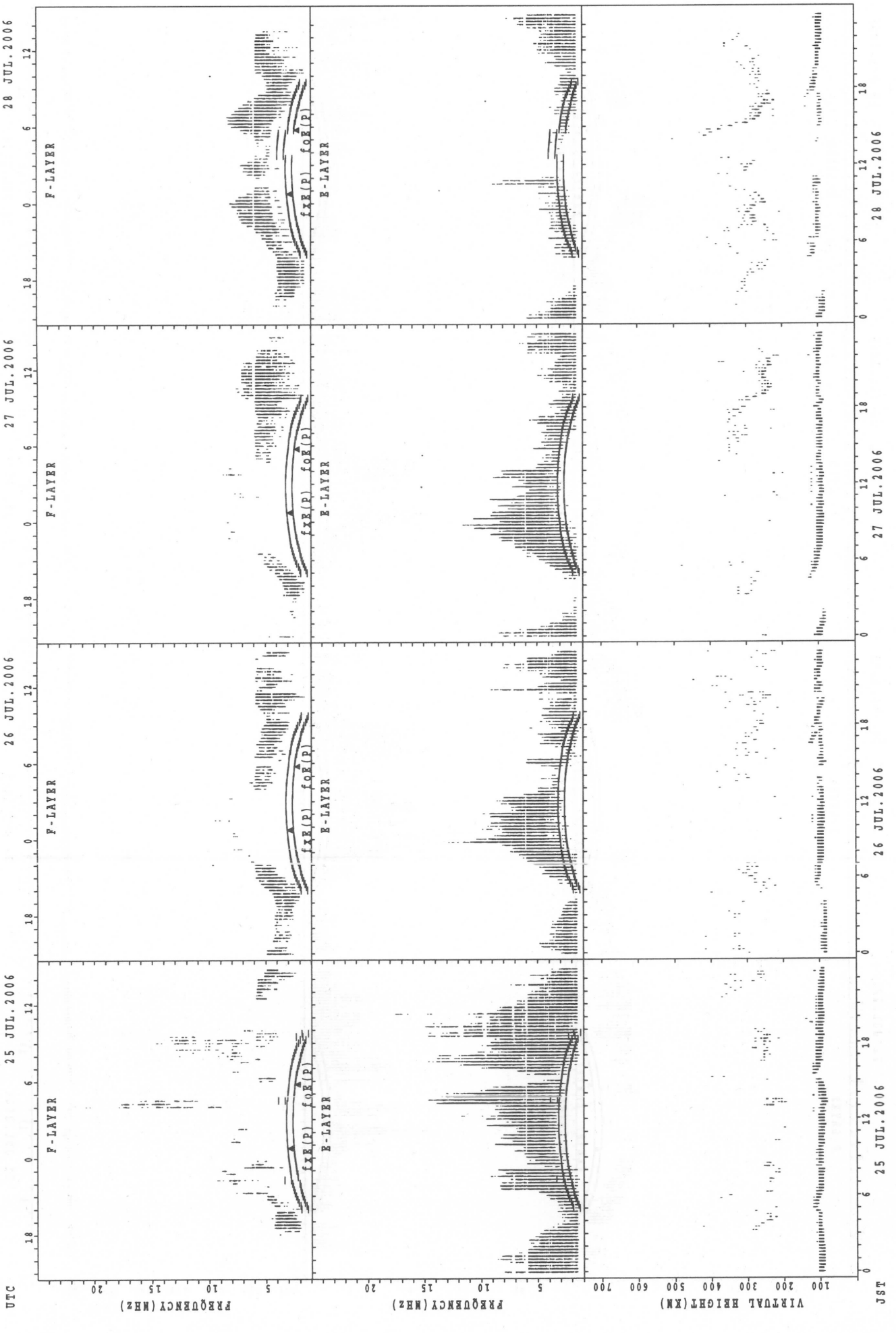


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

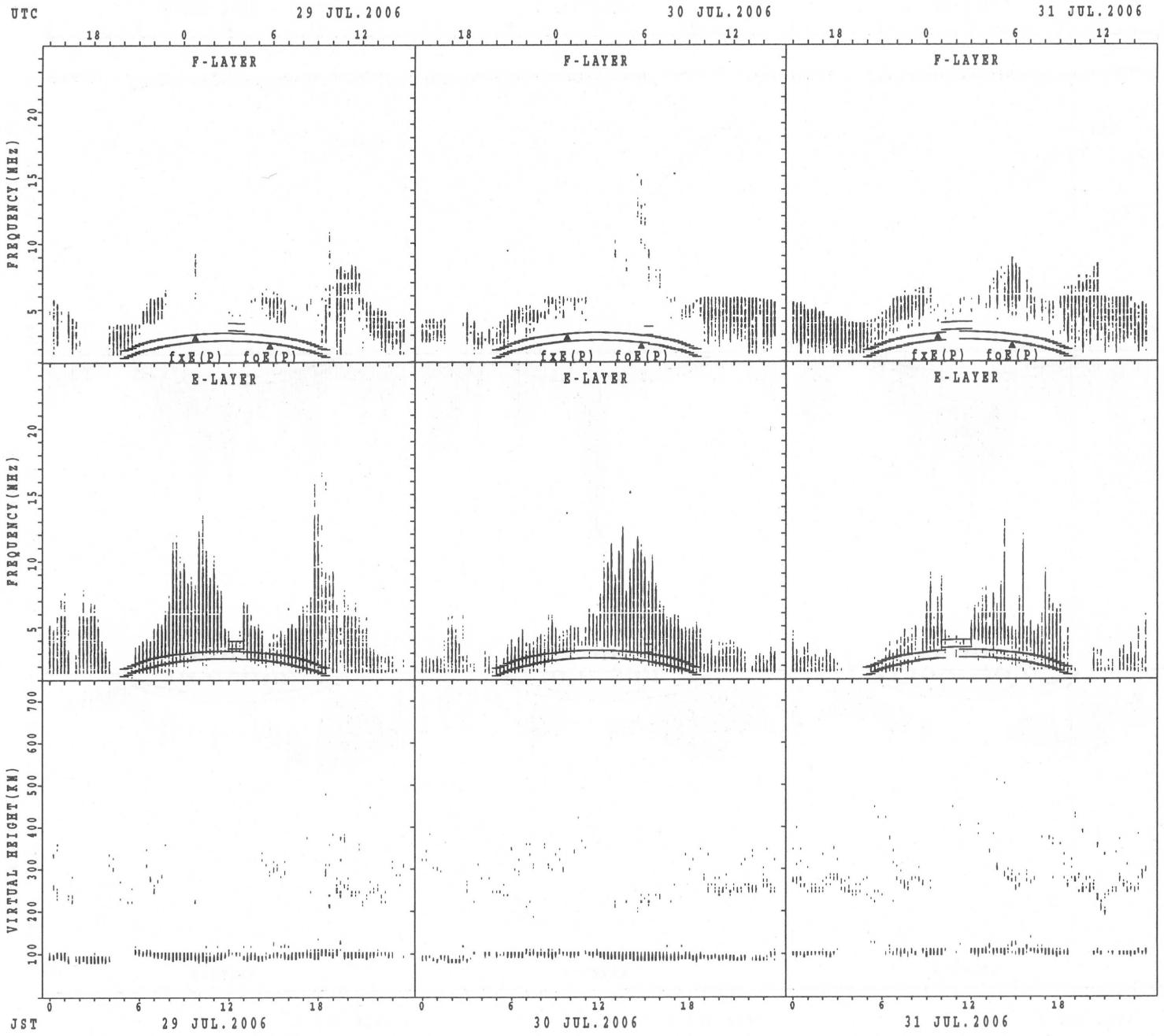
SUMMARY PLOTS AT Kokubunji



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

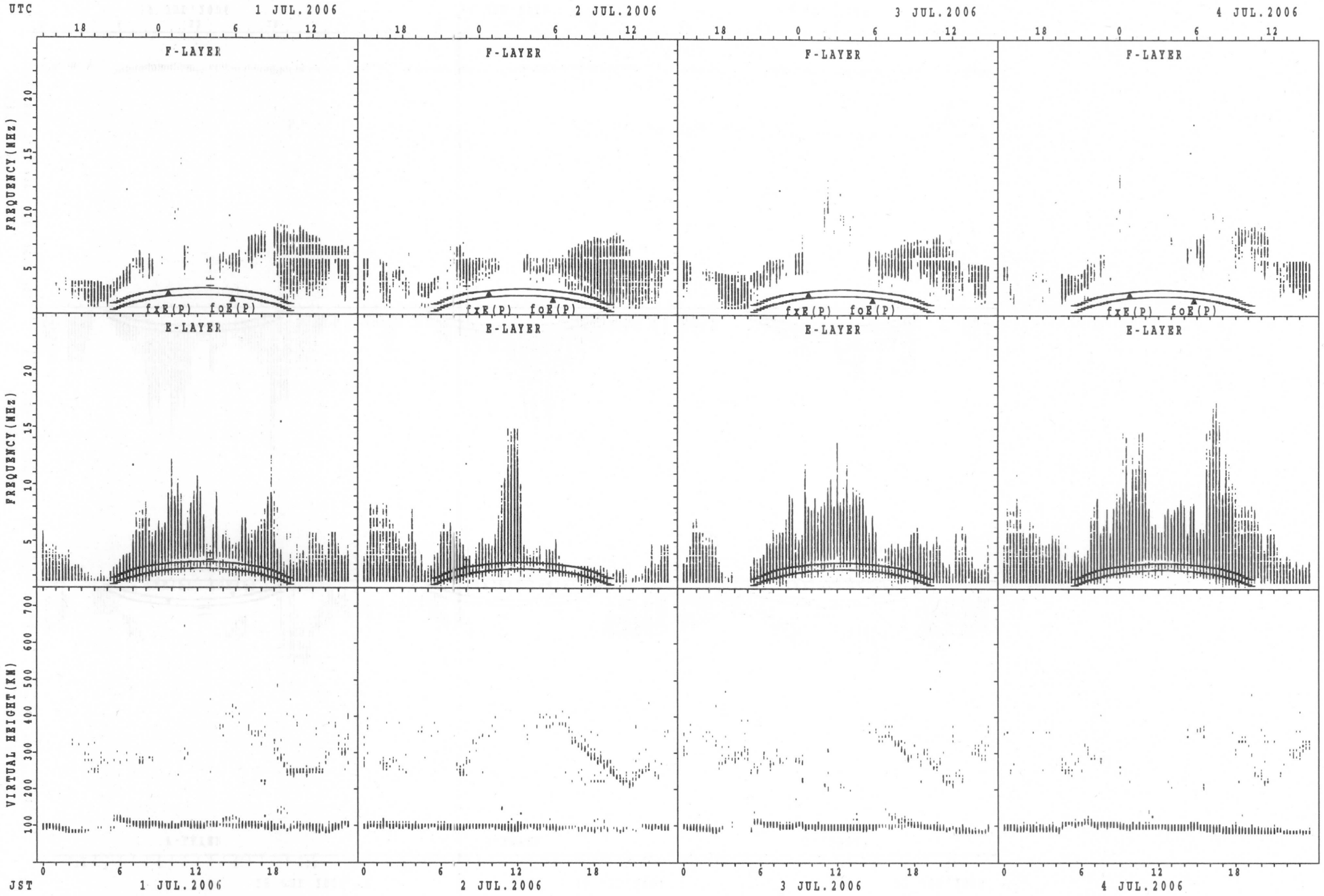

SUMMARY PLOTS AT Kokubunji
UTC
JST
25 JUL.2006
26 JUL.2006
27 JUL.2006
28 JUL.2006
F-LAYER
E-LAYER
fxE(P) foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji

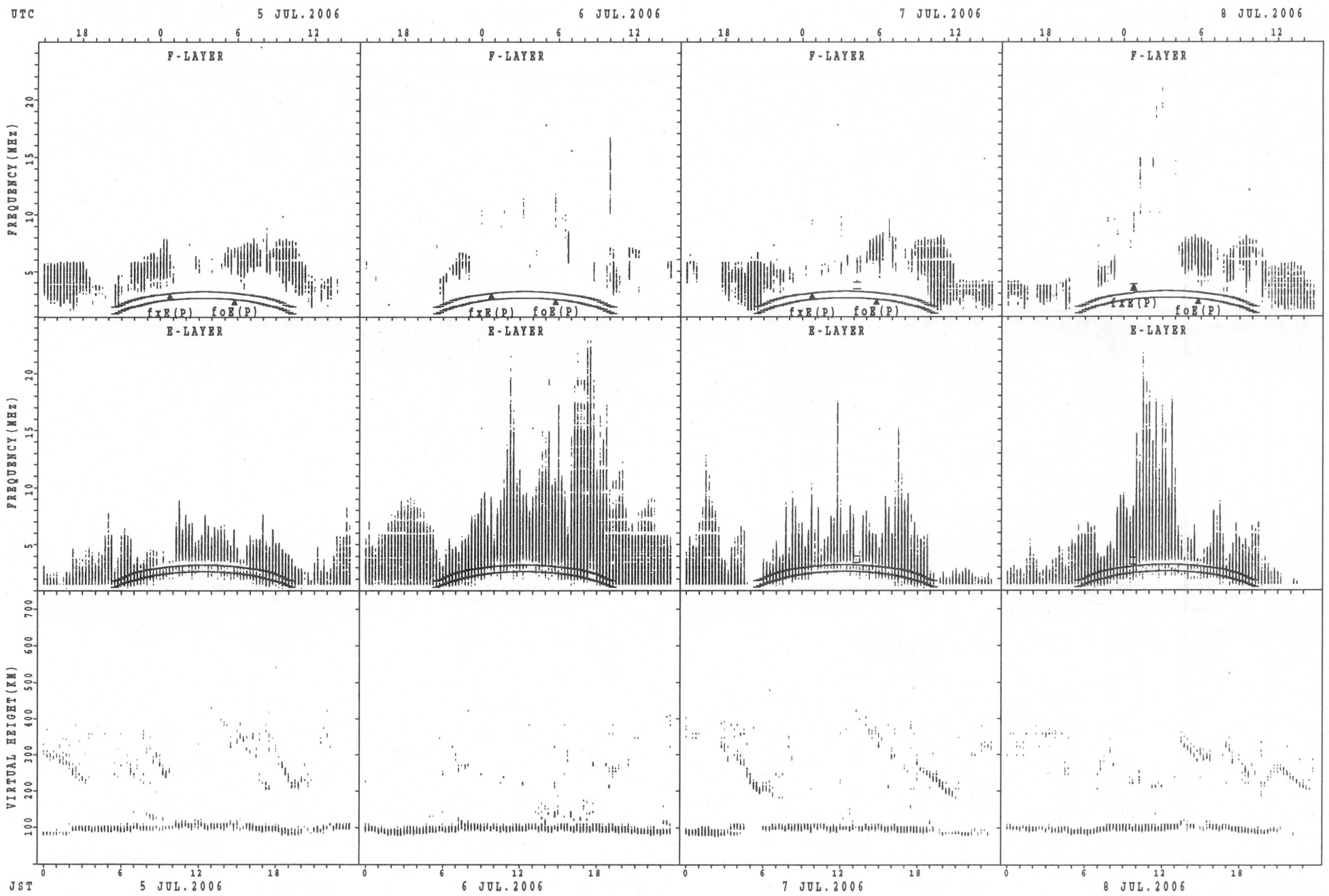


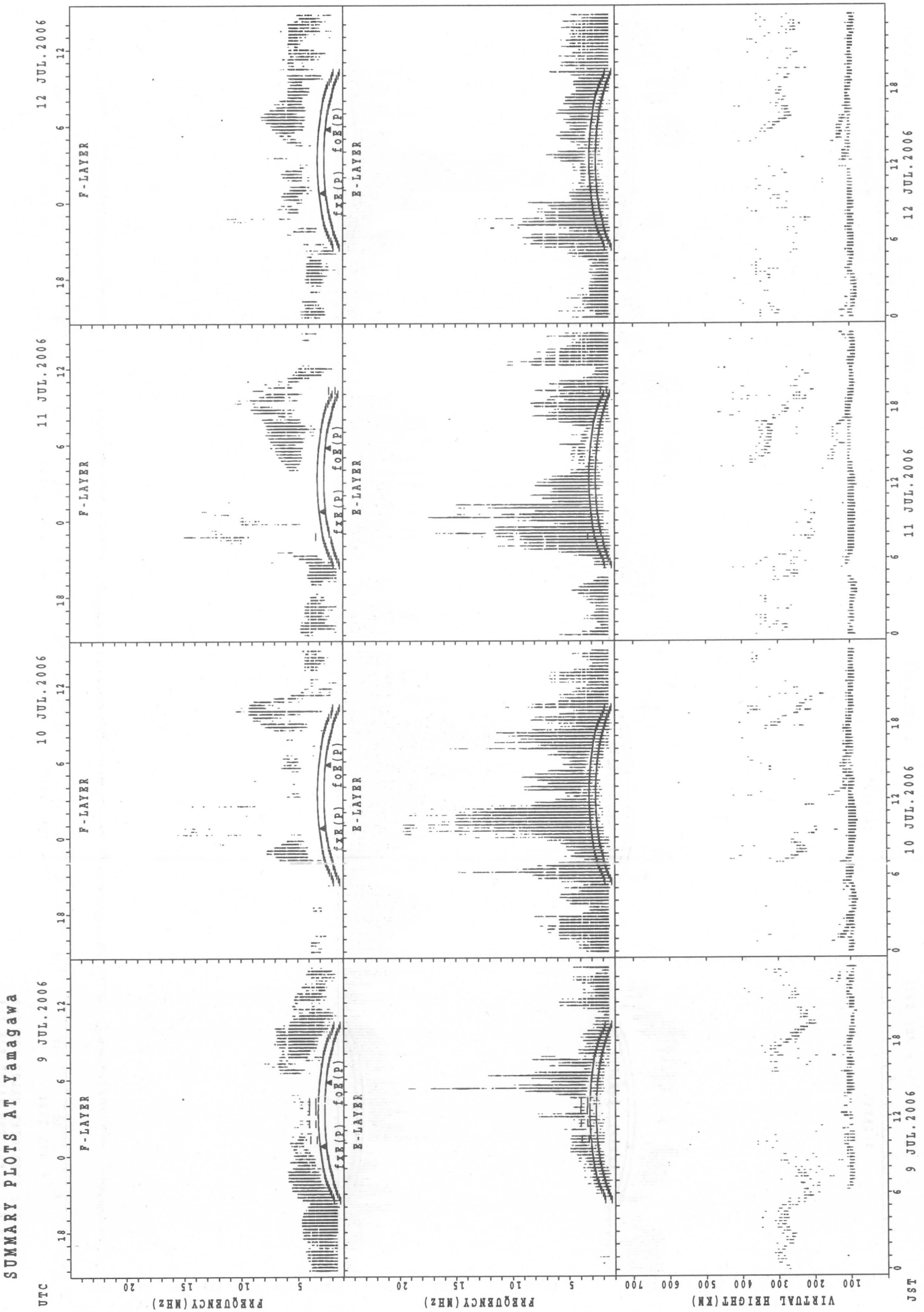
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa

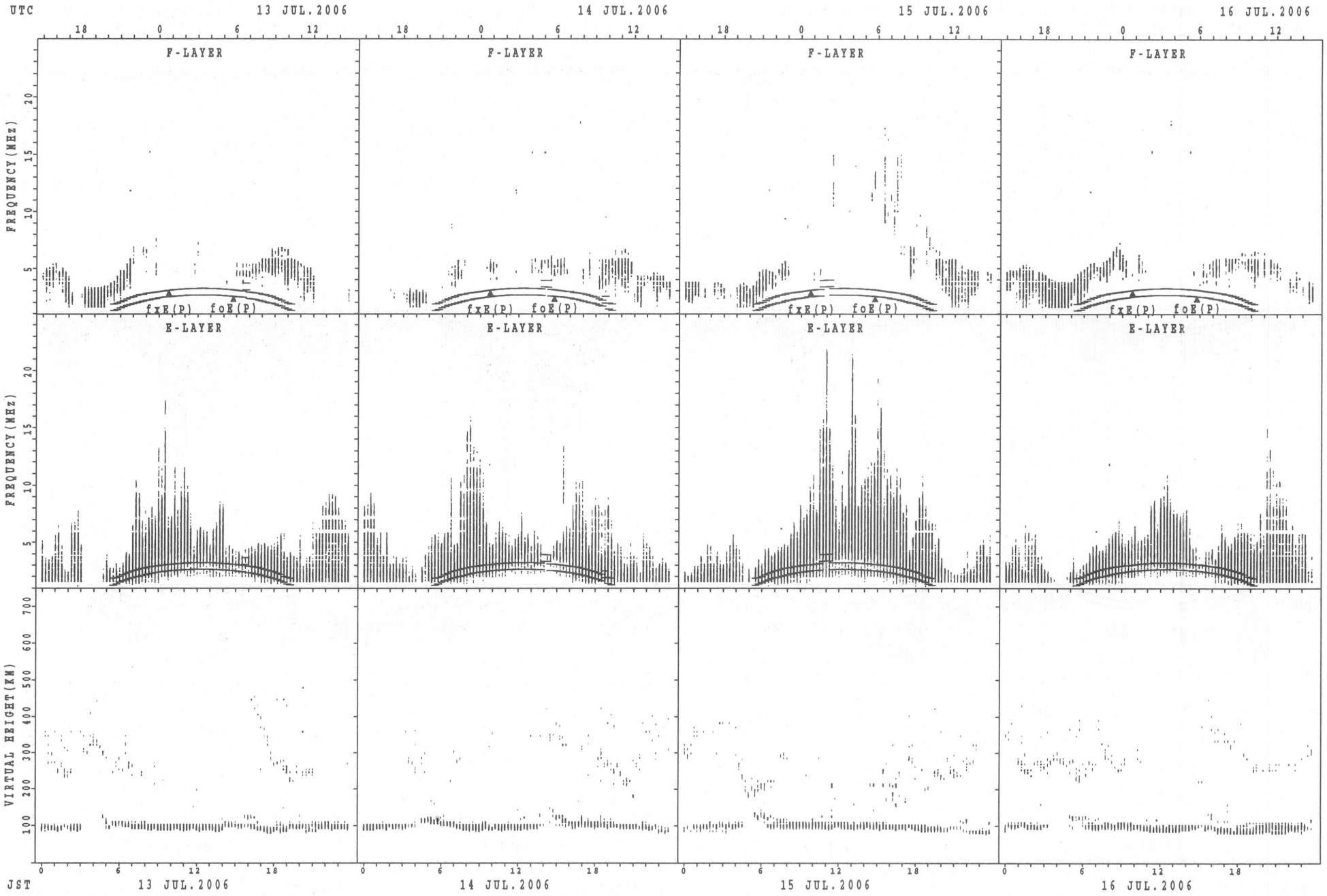


fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE


SUMMARY PLOTS AT Yamagawa
UTC
5 JUL.2006
6 JUL.2006
7 JUL.2006
8 JUL.2006
F-LAYER
E-LAYER
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P)
foE(P)
JST
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

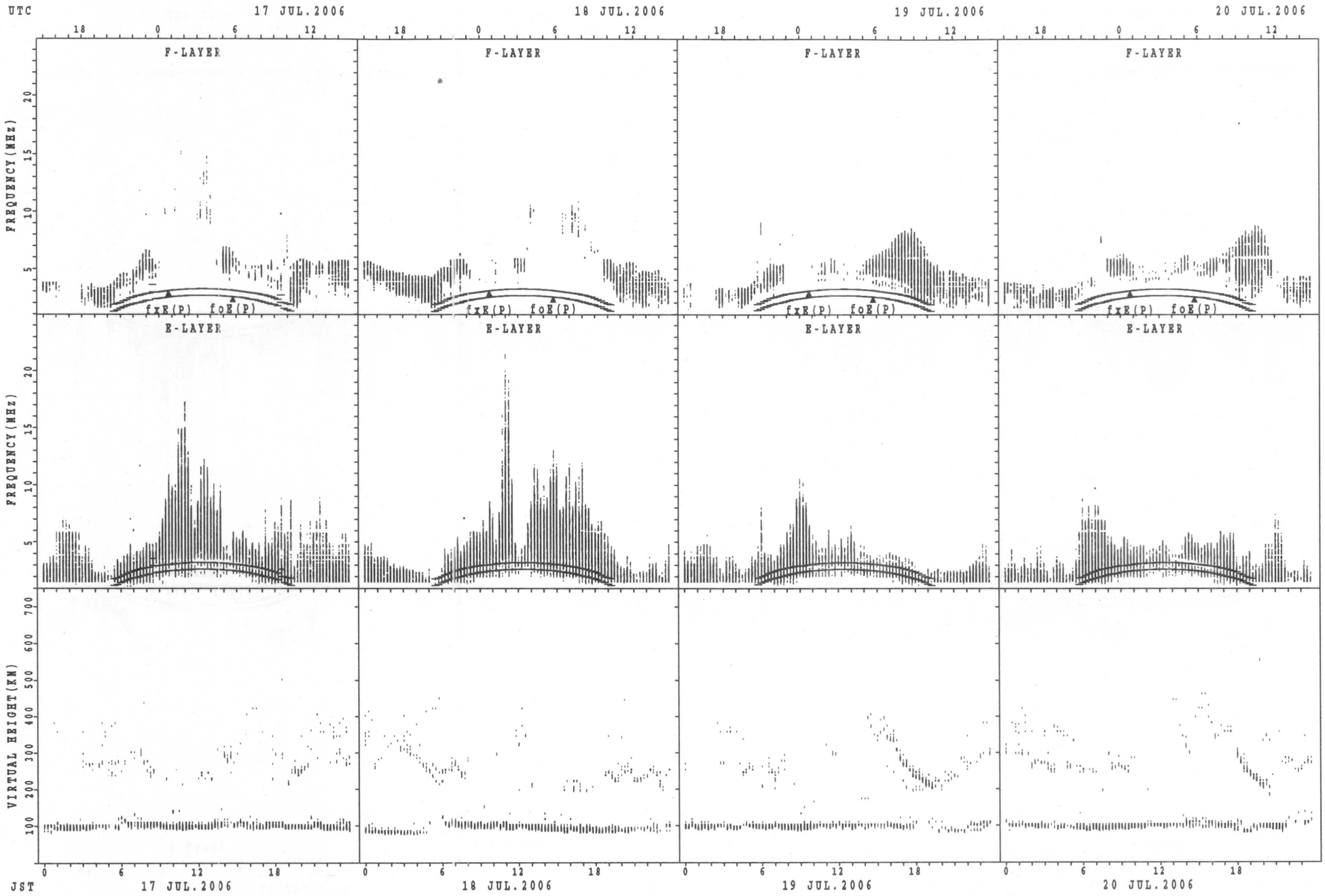

SUMMARY PLOTS AT Yamagawa
UTC
JST
9 JUL.2006
10 JUL.2006
11 JUL.2006
12 JUL.2006
F-LAYER
E-LAYER
fxE(P)
foE(P)
FREQUENCY(MHz)
VIRTUAL HEIGHT(KM)
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



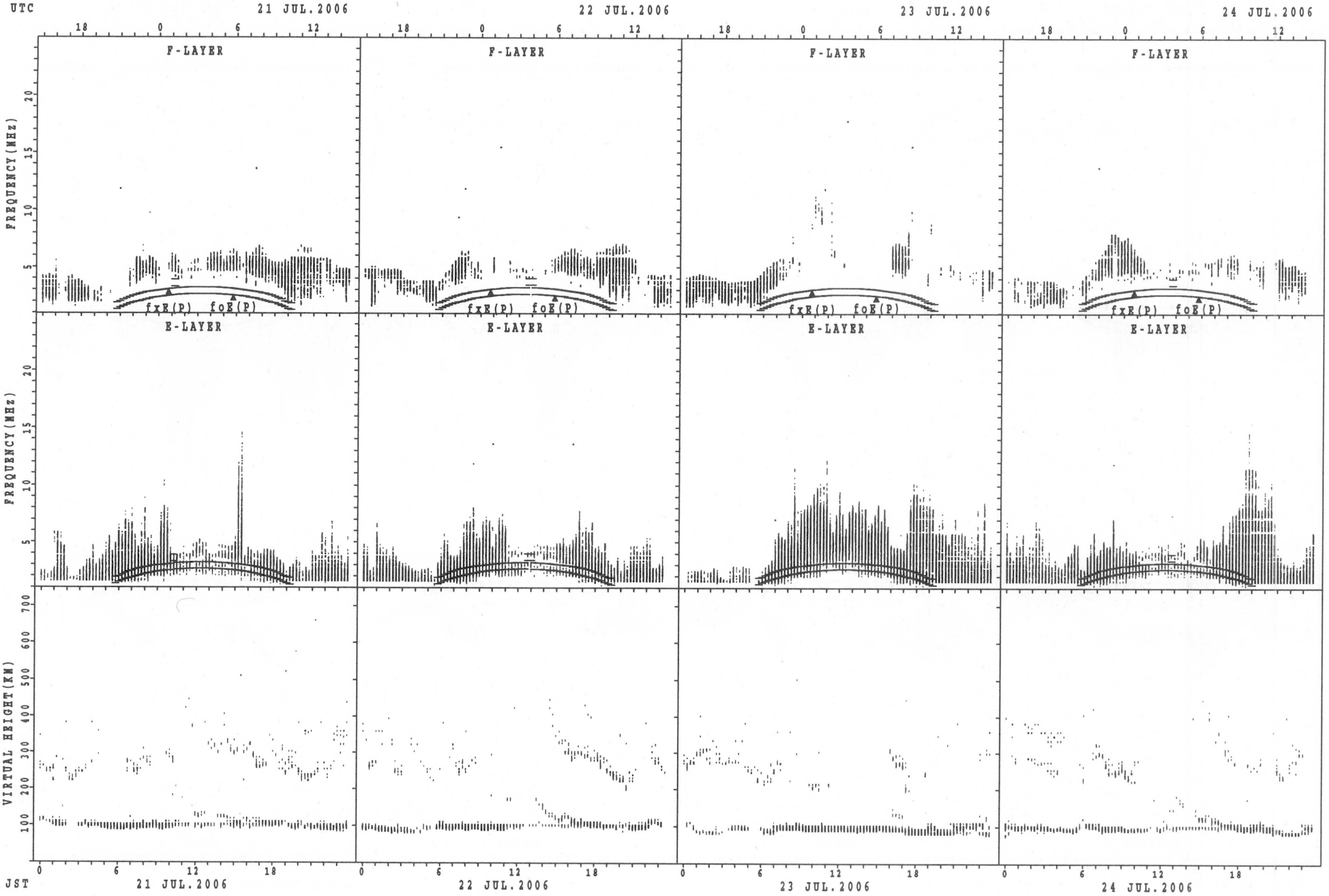
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



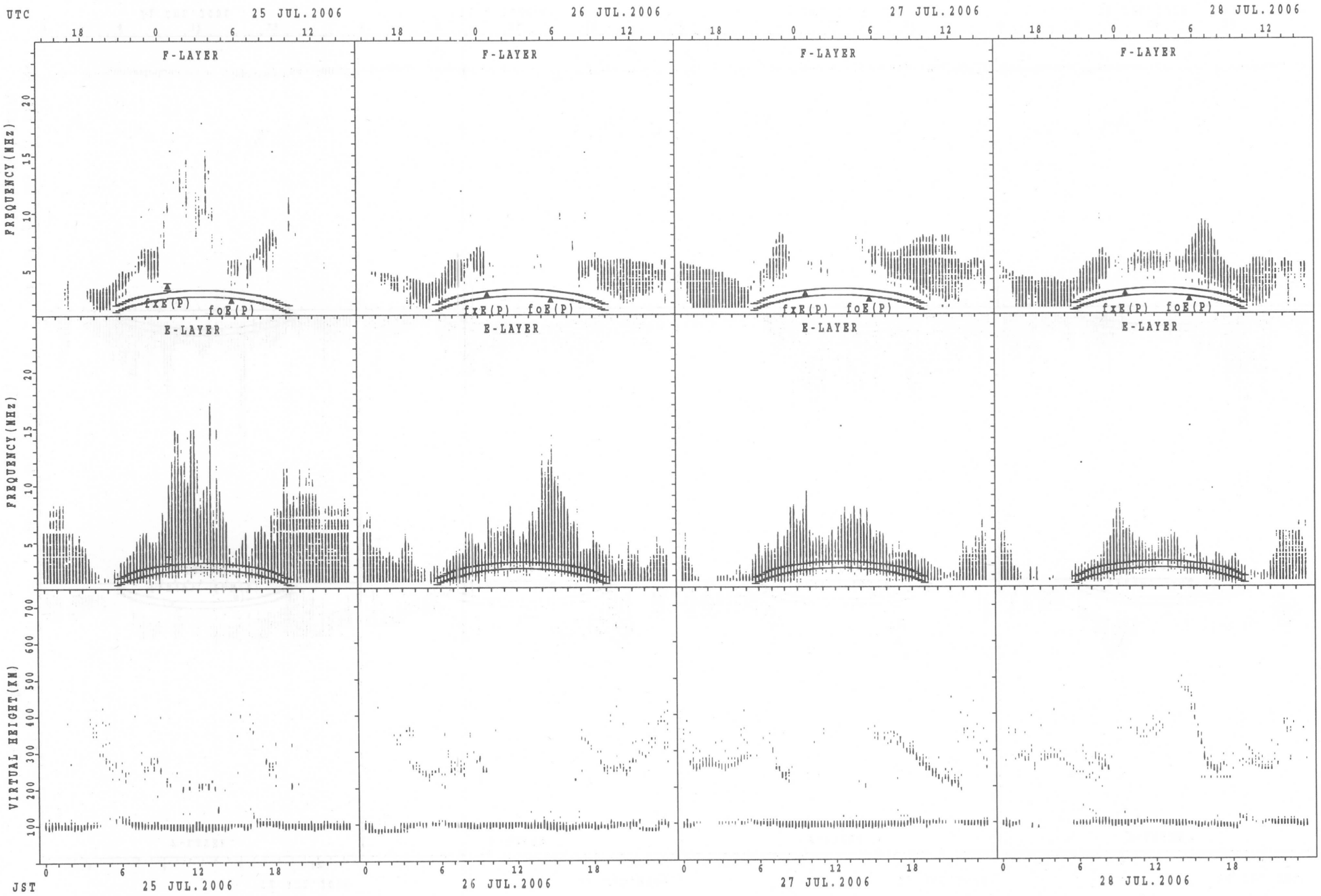
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



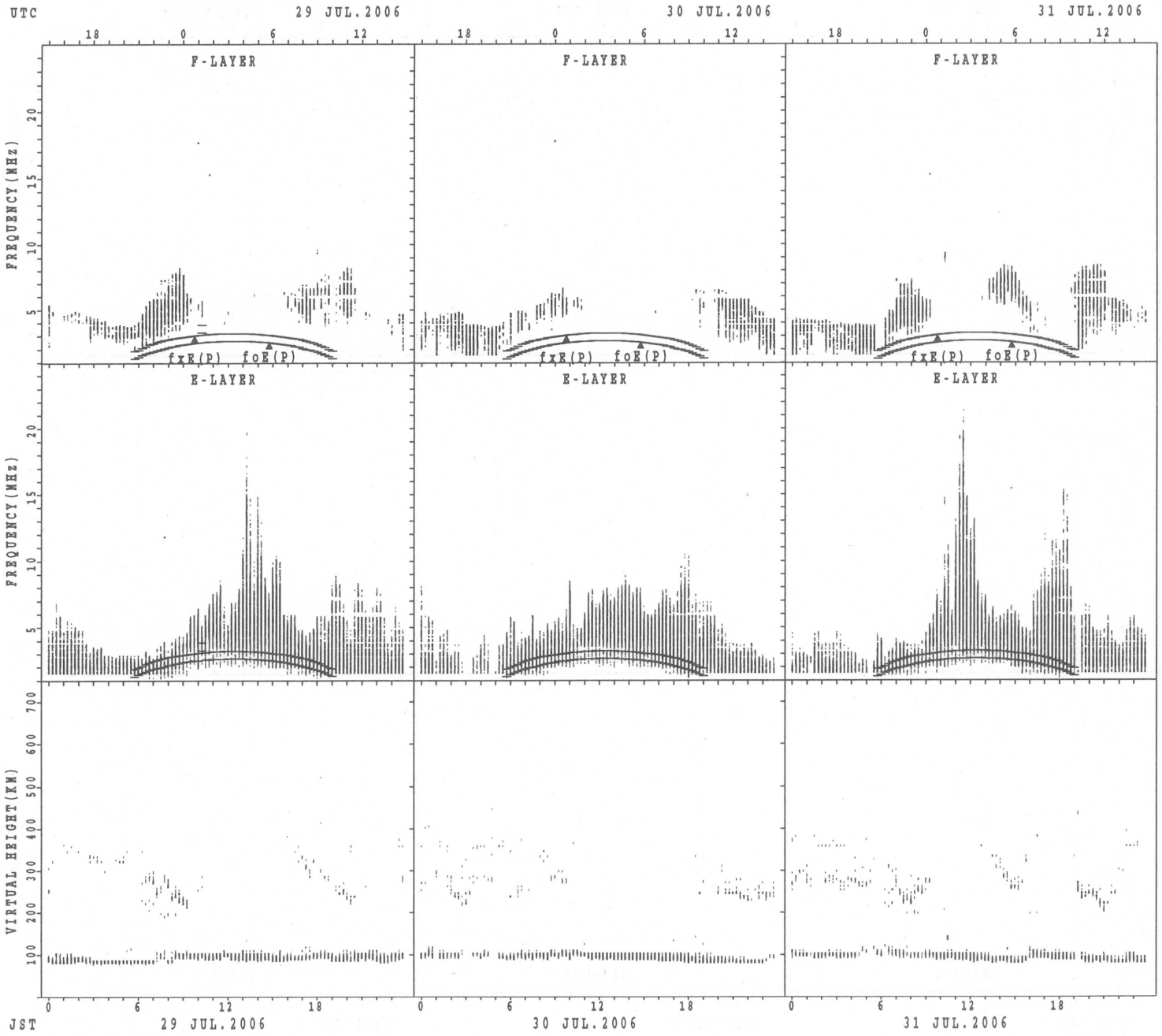
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



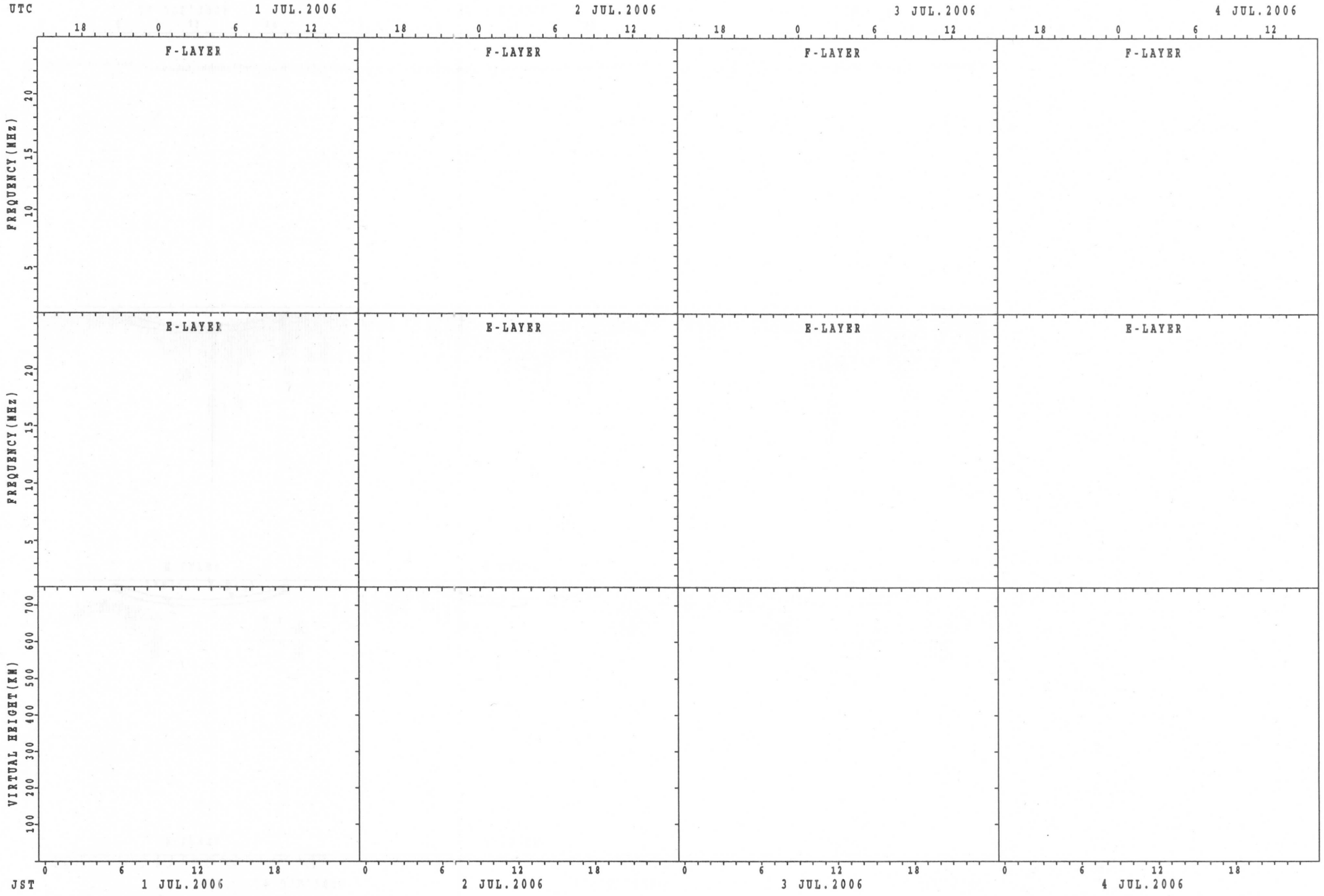
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



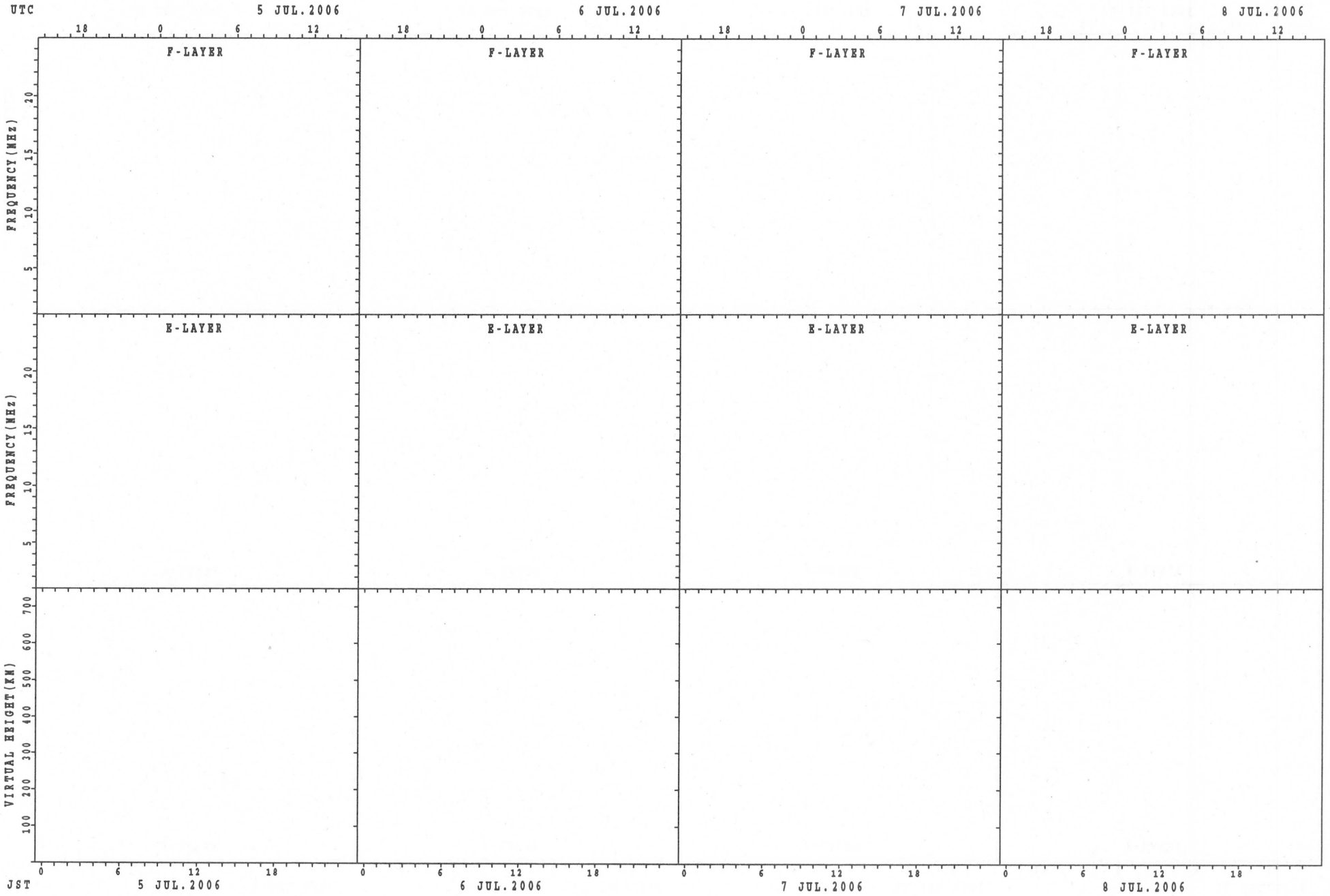
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



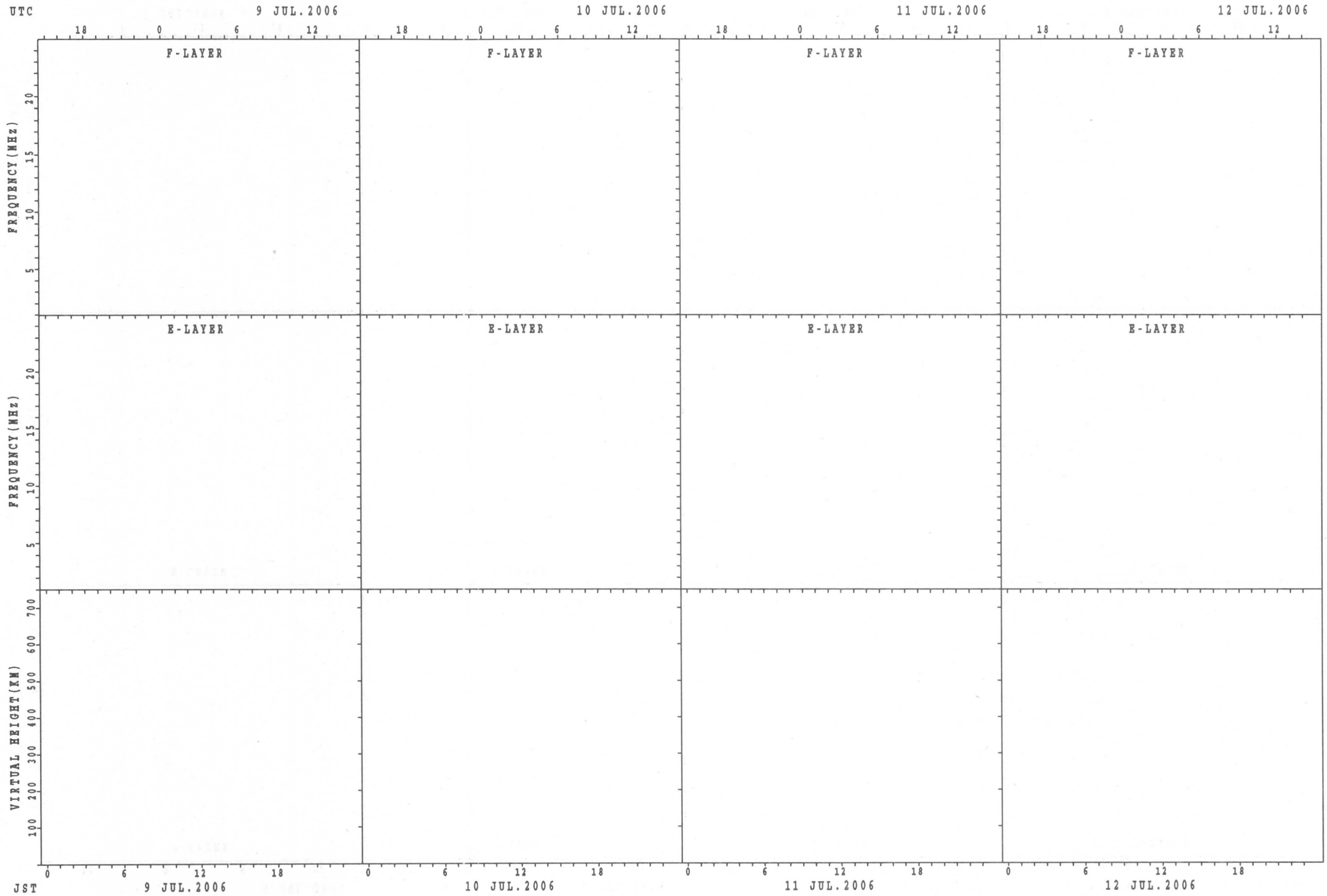
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



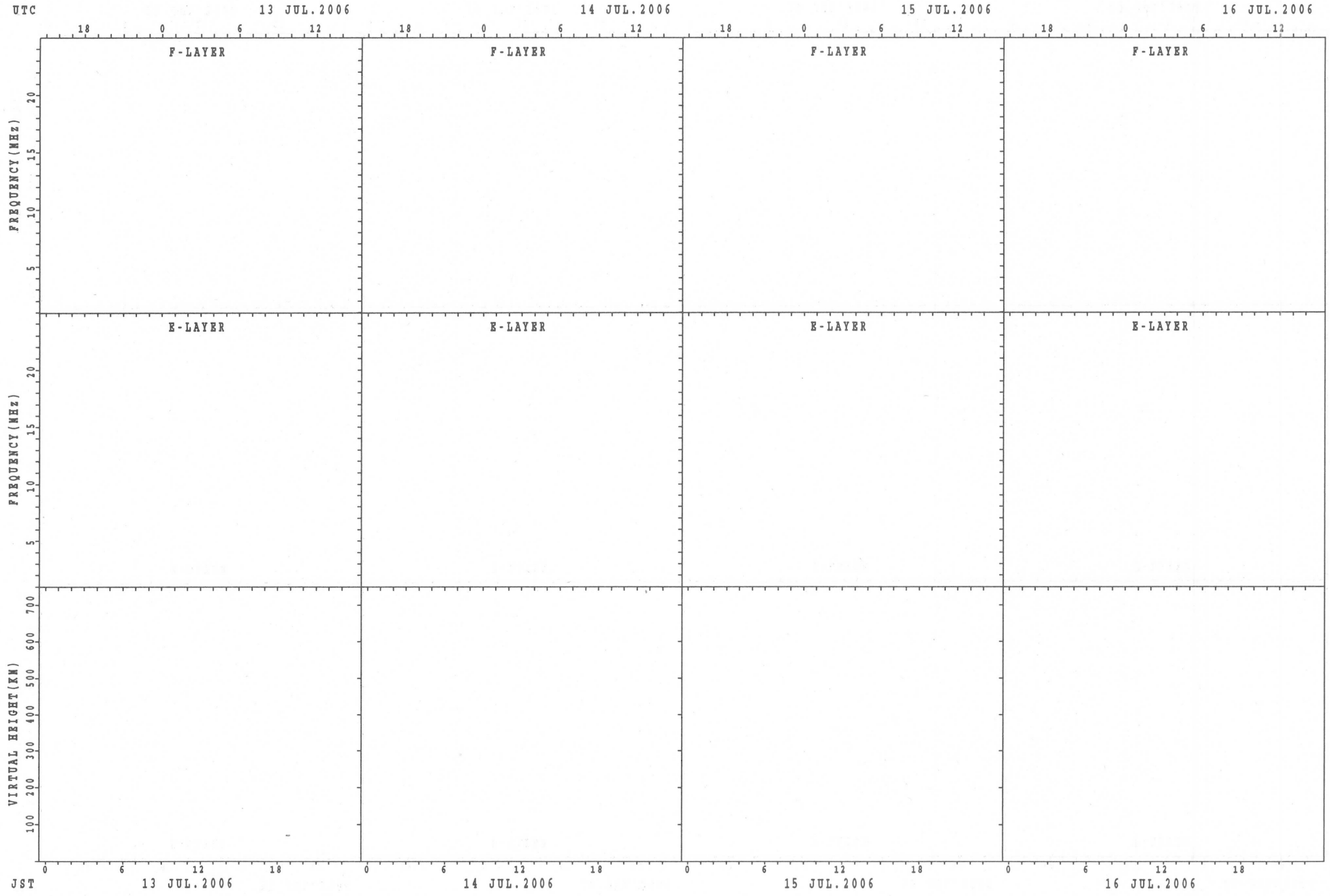
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



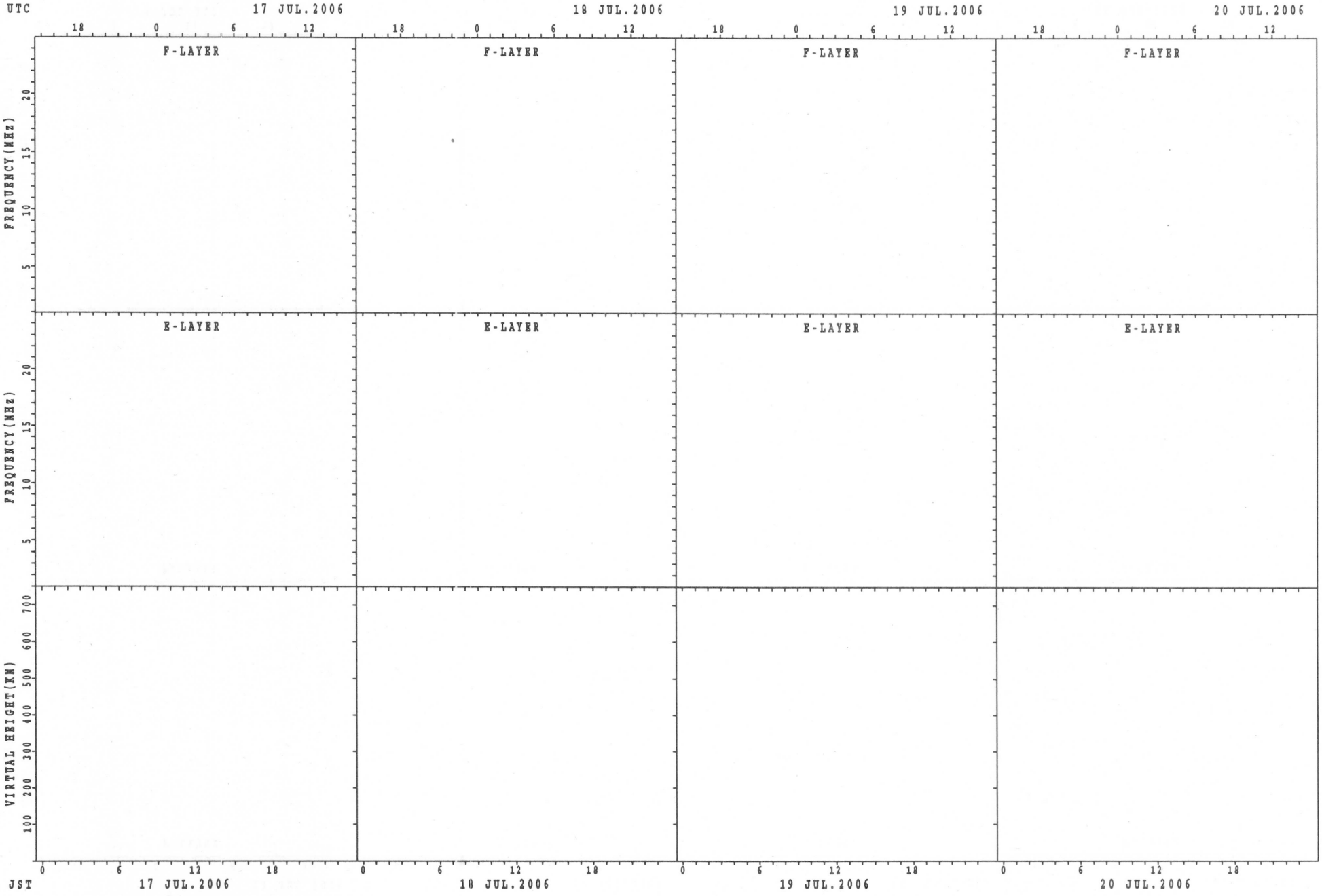
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



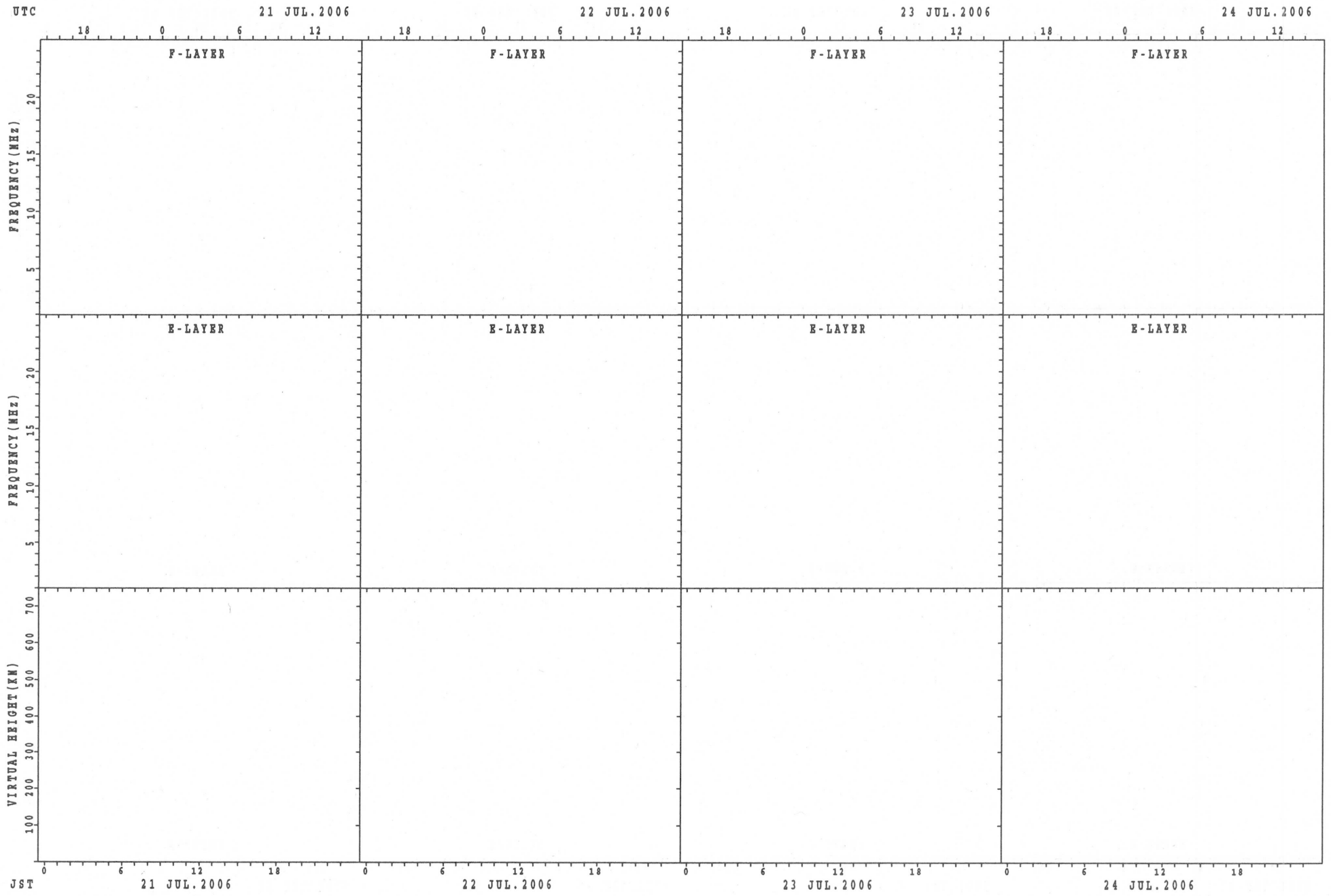
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



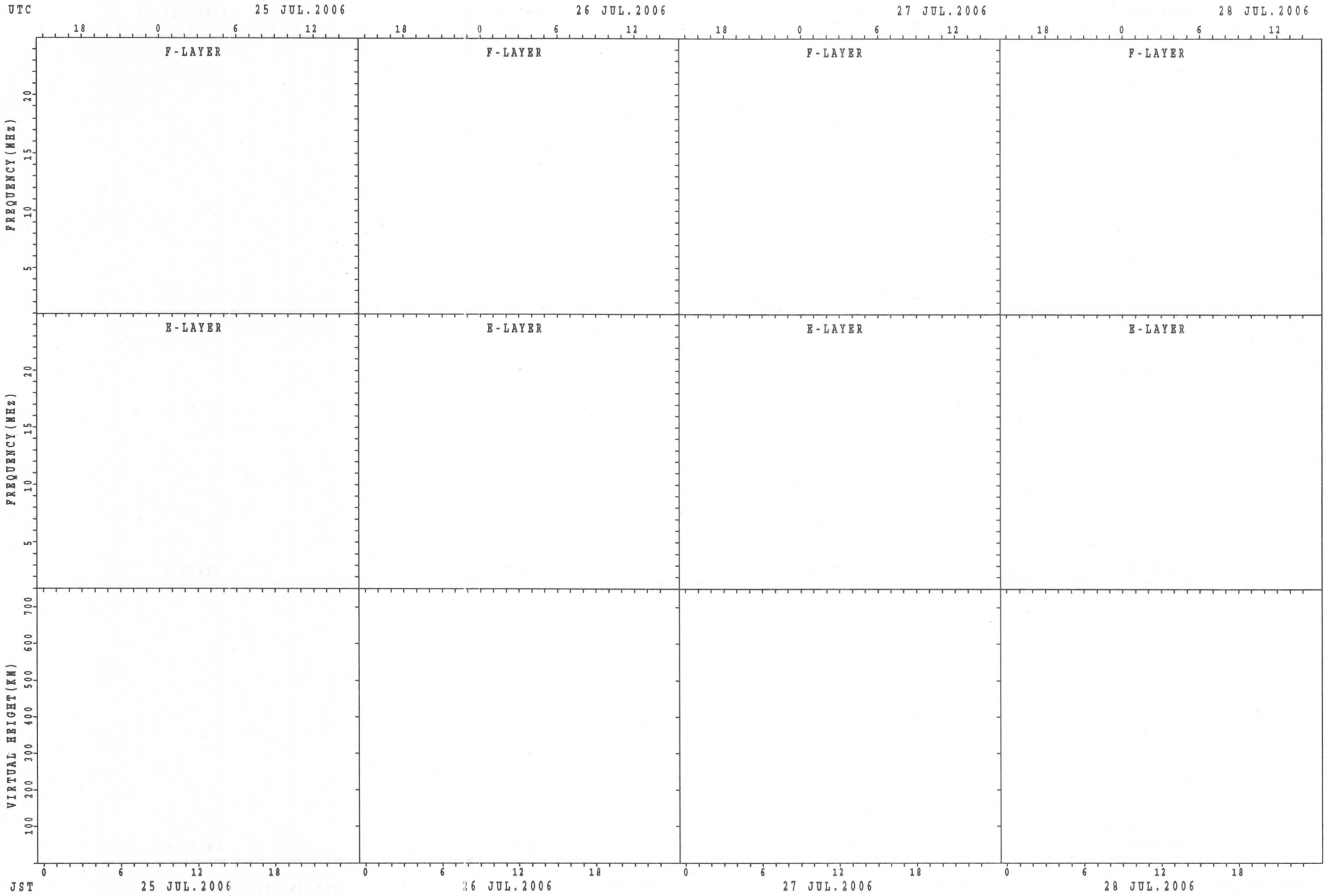
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



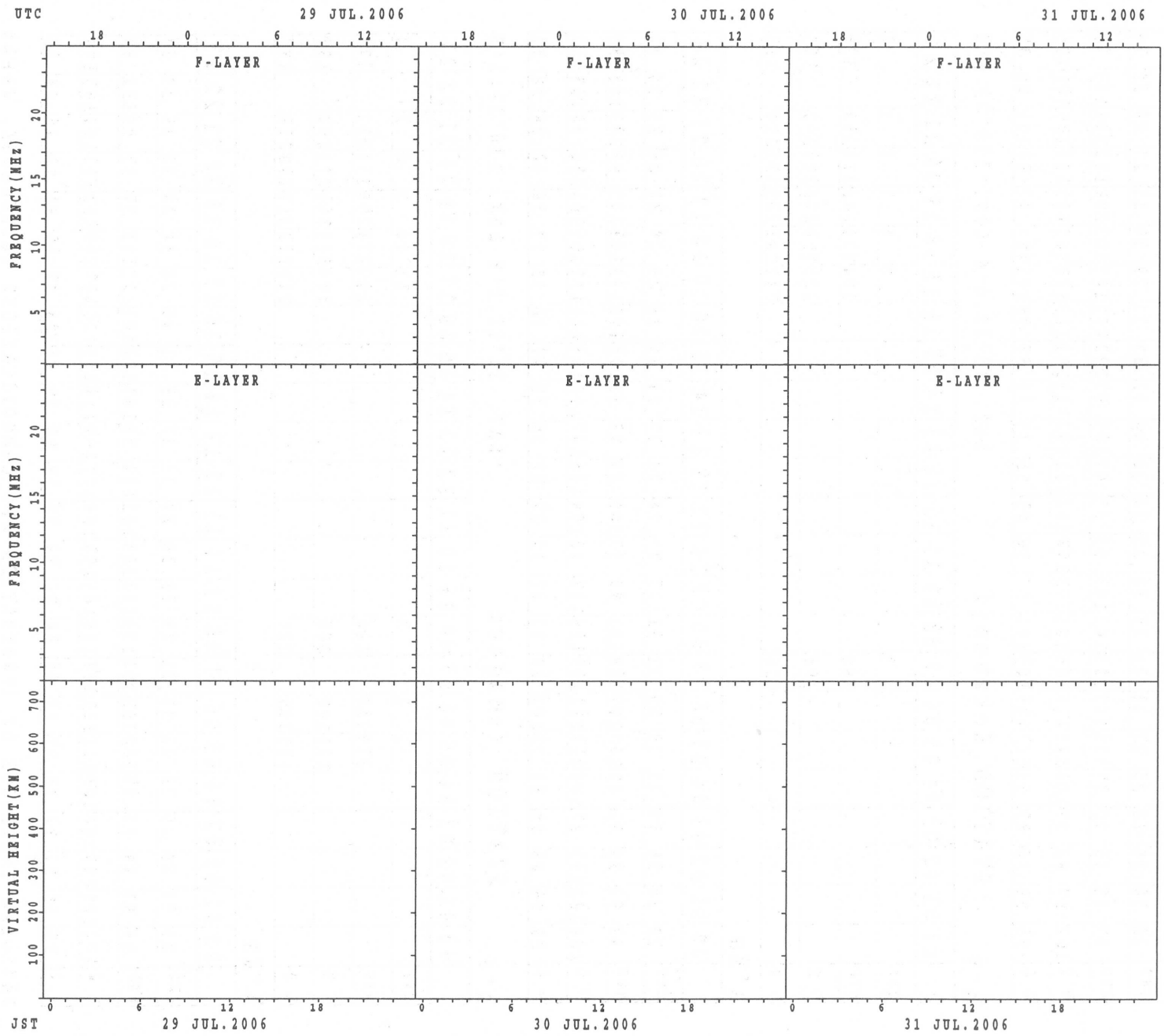
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

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

JUL. 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	5	7	4	2	1	
MED																		234	234	260	279	273	256	
U Q																		248	271	300	296	298	128	
L Q																		220	230	242	259	248	128	

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	28	30	29	28	25	27	31	31	30	31	29	30	31	30	31	30	31	29	30	31	27	28	29	30
MED	97	95	95	93	95	111	107	103	103	103	99	99	97	100	97	103	107	103	103	103	103	104	103	99
U Q	102	97	98	97	104	113	111	105	105	103	103	101	101	103	109	109	113	109	107	107	107	105	105	105
L Q	95	91	90	89	91	103	105	103	101	97	96	95	95	95	93	97	99	101	101	97	97	101	99	95

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								3										5	5	5	6	4		1
MED								268										304	214	266	271	259		326
U Q								304										325	290	276	280	292		163
L Q								216										232	207	248	232	224		163

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	29	29	26	19	21	19	29	31	31	27	27	26	23	27	25	25	28	29	29	28	28	25	28	30
MED	97	97	95	91	97	107	107	103	101	99	97	100	99	97	99	105	108	105	103	103	99	103	103	99
U Q	104	102	103	97	105	113	111	107	105	103	99	105	105	107	106	113	111	111	105	103	105	108	105	103
L Q	95	94	89	89	90	99	103	99	97	97	95	97	97	95	95	97	96	99	99	96	92	98	98	97

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

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT						1	1		7									11	10	9	8	3		1
MED						270	210		246									282	273	258	253	232		374
U Q						135	105		266									344	304	262	271	252		187
L Q						135	105		226									240	222	217	238	218		187

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	29	30	28	25	23	22	30	31	29	29	30	28	31	27	29	31	30	28	31	28	29	29	30	27
MED	99	97	98	97	97	102	103	103	103	103	103	101	103	99	107	107	107	101	103	97	97	99	101	97
U Q	102	105	103	100	103	111	111	107	105	105	105	104	107	107	114	119	117	107	105	103	103	103	105	103
L Q	95	95	91	92	95	97	99	99	98	98	99	97	99	95	95	95	103	95	95	94	92	94	89	95

MONTHLY MEDIANS OF h'F AND h'Es

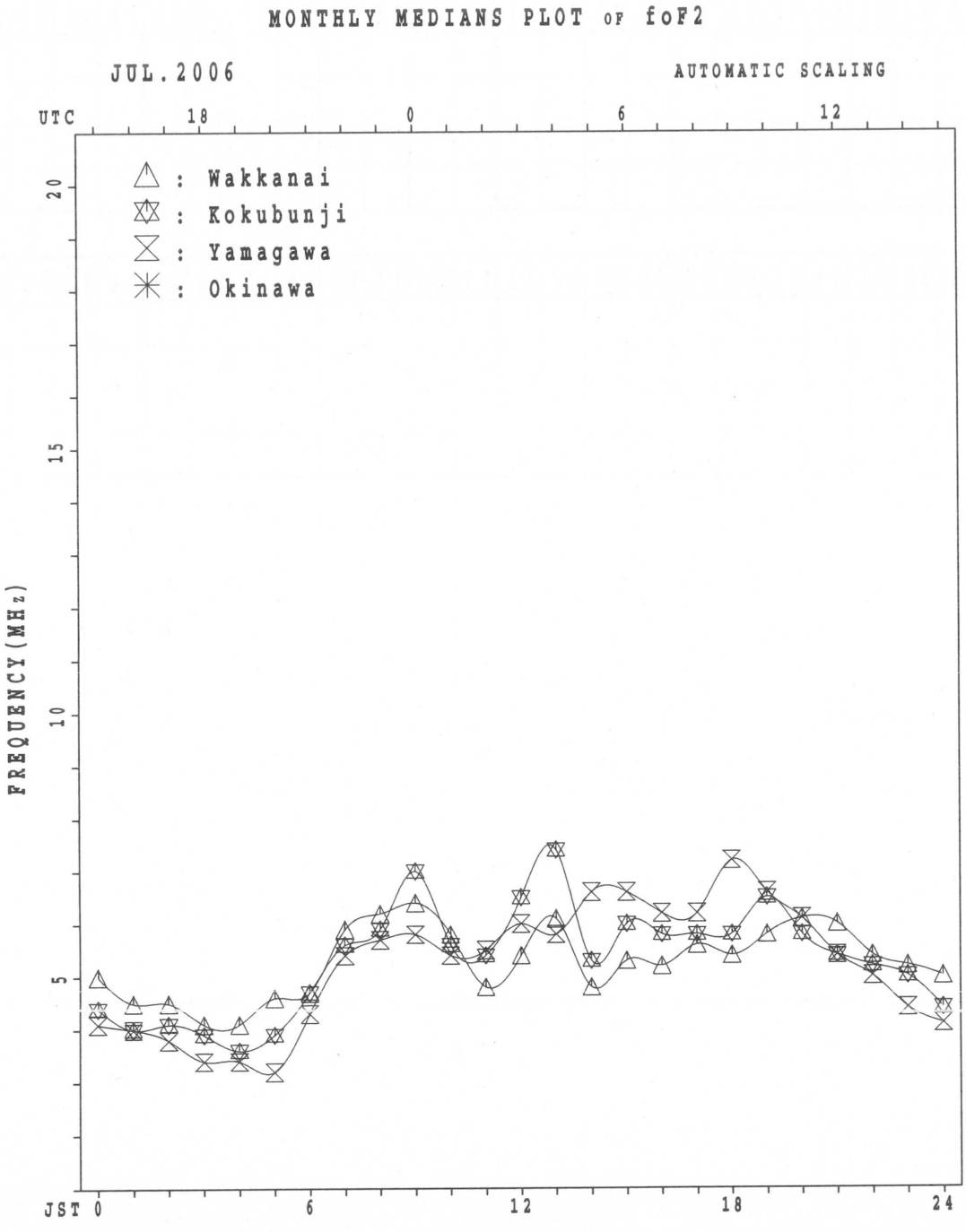
JUL.2006 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

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																								
MED																								
U Q																								
L Q																								

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																								
MED																								
U Q																								
L Q																								


MONTHLY MEDIANS PLOT OF foF2
JUL. 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

JUL. 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	A 54		X 49	X 46	X 44															X 72	X 80	X 76	71	64
2	66	60	51	51	X 45															X 78	X 74	X 70	X 64	61
3	X 52	X 53	52	50	X 43															X 75	X 75	X 74	68	64
4	63	63	60	X 52	50															X 80	X 81	X 70	64	X 58
5	61	X 60	56	A	A															X 79	X 60	X 51	53	X 55
6	A 54		58	53	51															X 84	X 74	X 70	67	64
7	64	64	X 53	51	51															O X 73	X 82	X 56	A	A
8	A	A	X 46	50	51															X 82	X 72	X 52	X 50	52
9	X 47	X 44	X 44	46	X 38															X 71	X 69	X 52	61	51
10	51	49	47	X 39	40															X 88	X 84	X 56	X 49	51
11	54	X 51	51	A	A															X 83	X 65	A	A	A
12	A	A	A	A	A	X 44														X 63	X 61	X 60	X 60	X 58
13	X 55	X 57	X 34	X 33	X 35															X 68	X 62	X 59	57	A
14	X 46	A	A	X 37	X 38															X 62	X 72	X 66	46	46
15	40	X 35	X 35	X 31	X 31															X 67	X 61	X 51	X 53	X 55
16	X 51	52	50	47	43															X 64	X 65	A	X 55	51
17	49	X 43	X 41	X 42	X 38															X 52	X 57	X 57	64	63
18	54	52	49	48	49															X 60	X 62	X 59	57	A
19	52	49	X 40	40	X 37															X 79	X 57	X 44	X 41	X 40
20	42	41	44	41	A															X 78	X 87	X 75	X 43	X 40
21	X 38	X 38	X 38	X 37	42															X 60	X 65	X 60	X 61	X 58
22	50	50	X 45	X 43	47															X 69	X 70	X 64	X 59	X 53
23	51	52	51	51	44					A										X 66	X 60	X 57	58	52
24	X 43	46	45	49	X 33															X 71	X 64	57	A	A
25	A	A	A	X 41	48															X 79	X 61	A	64	63
26	X 50	X 46	47	49	48															X 53	X 60	X 57	62	66
27	48	50	X 35	X 34	X 36															X 73	X 74	X 72	X 64	A
28	A	48	X 42	X 40	X 40															X 56	X 64	X 61	X 62	X 52
29	64	X 52	X 39	A	X 38															X 78	X 86	X 68	X 52	47
30	46	49	X 44	50	X 34															X 61	X 65	X 64	X 59	X 56
31	X 56	54	X 47	X 44	X 40															X 74	X 76	X 69	X 61	X 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	27	28	27	27	1														31	31	28	28	25
MED	51	51	X 46	46	X 42	X 44														X 72	X 65	X 60	X 60	55
U Q	56	54	51	50	48															X 79	X 75	X 70	64	62
L Q	X 46	X 46	X 42	X 40	X 38															X 63	X 61	X 56	X 53	51

JUL. 2006 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

JUL. 2006 foF2 (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUL. 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							A	A	A	A	A	A	A	A	A	A	420	UL376	A					
2							A	A	A	UL448	UL460	A	A	A	UL452	448	A	A	A					
3							A	A	A	A	A	A	A	A	A	A	A	A	A					
4							A	A	A	A	A	A	A	A	A	A	A	A	A					
5							A	A	L516	UL428	A	A	A	A	A	A	A	A	L					
6							UL412	A	A	A	A	A	A	A	A	UL436	A	A	A					
7							A	A	A	UL448	A	A	A	A	A	UL420	UL404	UL388	A					
8								A	A	A	A	A	A	A	A	A	A	L392	UL340					
9							A	A	A	428	A	UL468	UL508	452	A	424	A	A	A					
10							A	A		A	A	UL456	A	A	A	A	A	A	A					
11						A	A	A	A	A	A	A	A	A	A	A	A	UL384	A					
12							L372	A	A	A	UL412	A	A	A	A	A	UL412	L376	UL336					
13						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
14							UL380	A	A	A	A	A	A	UL440	UL448	UL420	A	A						
15							A	A	A	A	A	A	A	A	A	UL428	UL404	L	L					
16							A	A	A	A	A	A	A	A	A	UL408	416	A	L344					
17							UL368	A	A	A	A	A	A	A	A	A	UL384	L	A					
18							UL368	A	A	A	A	A	A	A	UL536	A	A	UL388	A					
19						A	A	388	A	A	A	UL452	UL448	UL456	UL432	A	A	A	A					
20							UL376	UL392	412	432	A	UL484	UL452	UL448	A	A	A	A	UL348					
21							UL368	UL400	L408	L444	UL448	A	UL448	A	A	A	A	A	A					
22							UL392	A	A	A	A	A	A	A	A	A	A	A	A					
23							L368	A	A		A	A	A	A	A	A	UL416	A	A					
24							396	UL412	420	436	L456	UL472	UL480	A	UL432	A	A	380						
25							A	A	A	A	A	A	A	A	A	432	A	A	A					
26							A	A	A	A	A	A	A	UL452	UL432	A	UL404	UL392	L					
27							A	A	A	A	A	A	A	A	440	A	A	UL380	332					
28						A	UL368	392	420	440	UL460	UL476	UL452	UL488	UL432	432	L	L						
29							UL356	A	A	A	A	A	UL444	A	A	A	A	A	A					
30							A	UL428	UL412	A	A	UL472	A	A	A	A	A	A	L					
31							360	388	412	A	A	468	A	A	A	A	A	UL384	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							13	7	7	8	5	8	7	6	8	10	8	10	5					
MED							UL368	UL392	412	438	UL456	UL470	UL452	UL452	UL436	426	UL408	UL384	UL340					
U Q							UL386	UL412	420	UL446	UL460	UL474	UL480	UL456	UL450	432	416	UL388	L346					
L Q							L368	388	412	430	UL430	UL462	UL448	UL448	UL432	UL420	UL404	L380	334					

JUL. 2006 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUL. 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	A	A	A	A	A	A	A	A	A	A	296	A	A					
2						A	A	A	A	A	A	A	A	A	A	A	A	U A 252	A					
3						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
4						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
5						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
6						B	U A 232	A	A	A	A	A	A	A	A	U A 324	A	A	A					
7						B	A	A	A	A	A	A	A	A	A	A	A	U A 256	A					
8						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
9						B	A	A	A	A	A	360	U R 364	348	A	U A 316	A	A	A					
10						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
11						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
12							A	A	A	A	A	A	A	A	U A 340	A	U A 284	A	A					
13						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
14						B	U A 224	U A 260	A	A	A	A	A	A	344	U A 308	U A 288	A	A					
15						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
16						B	A	A	A	A	A	A	A	A	A	A	U A 280	A	A					
17						B	U A 232	A	A	A	A	A	A	A	A	A	U A 292	U A 260	A					
18						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
19						A	A	U R 296	A	A	A	A	A	A	R	A	A	A	A					
20						B	A	A	A	A	A	A	U R 356	R	A	A	A	A	A					
21						B	A	A	A	A	A	A	R	A	A	A	A	A	A					
22						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
23						B	A	A	A		A	A	A	A	A	A	A	A	A					
24						B	A	A	A	A	R	R	A	A	U A 348	A	U A 300	A	A					
25						B	U A 220	A	A	A	A	A	A	A	A	A	U A 292	U A 244	A					
26						B	A	A	A	A	A	A	A	A	332	A	A	R U A 244	A					
27						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
28						B	U A 220	A	A	A	A	A	R	R	R	300	A	U A 248	U A 184					
29						B	A	A	A	A	A	A	A	A	A	U A 308	A	A	A					
30						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
31						B	220	A	A	A	A	U R 372	A	A	A	A	U A 284	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							6	2				2	2	1	4	5	8	6	1					
MED							U A 222	U 278				366	U R 360	348	342	U A 308	U A 290	U A 250	U A 184					
U Q							U A 232								346	U A 320	U A 294	U A 256						
L Q							220								336	304	U A 284	U A 244						

JUL. 2006 foE (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUL. 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	J A 132	J A 87	J A 68	J A 54	J A 43	21	J A 42	J A 77	J A 99	J A 84	J A 88	J A 56	J A 58	J A 90	J A 56	J A 111	G 26	32	J A 54	J A 54	J A 49	J A 49	J A 62	J A 91
2	J A 85	J A 72	J A 70	J A 24	J A 46	J A 45	J A 79	J A 116	J A 103	J A 44	J A 52	J A 103	J A 71	J A 60	J A 46	J A 51	J A 49	J A 48	J A 52	J A 36	J A 68	J A 64	J A 45	J A 47
3	J A 50	J A 42	J A 45	J A 29	J A 23	J A 30	J A 36	J A 46	J A 54	J A 76	J A 100	J A 112	J A 74	J A 58	J A 124	J A 102	J A 63	J A 75	61	J A 74	J A 40	J A 85	J A 89	J A 60
4	J A 46	J A 41	J A 35	J A 24	J A 23	J A 31	J A 60	J A 76	J A 63	J A 99	J A 116	J A 97	J A 124	J A 99	J A 108	J A 76	J A 98	J A 116	J A 51	J A 62	J A 68	J A 54	J A 51	J A 78
5	J A 42	J A 54	J A 65	J A 69	J A 57	J A 31	J A 46	J A 101	J A 56	J A 56	J A 56	J A 92	J A 98	J A 88	J A 82	J A 79	J A 97	J A 54	J A 30	J A 44	J A 56	J A 63	J A 69	J A 74
6	J A 65	J A 58	J A 77	J A 94	J A 72	J A 40	31	J A 55	J A 67	J A 85	J A 68	J A 63	J A 69	J A 96	J A 95	38	J A 46	J A 99	J A 192	J A 128	J A 106	J A 67	J A 51	J A 52
7	J A 37	J A 54	J A 35	J A 45	J A 33	J A 45	J A 44	J A 45	J A 57	J A 45	J A 49	J A 51	J A 97	J A 96	J A 111	J A 50	34	35	J A 99	J A 99	J A 88	J A 30	J A 46	J A 61
8	J A 97	J A 62	J A 36	J A 23	J A 45	19	J A 34	J A 48	J A 72	J A 91	J A 93	J A 98	J A 119	J A 63	J A 155	J A 73	J A 58	J A 42	J A 25	J A 22	J A 20	20	J A 48	J A 28
9	J A 26	20	20	J A 20	J A 35	J A 30	J A 61	J A 88	J A 77	J A 90	J A 51	43	47	42	J A 56	J A 56	J A 118	J A 59	J A 154	J A 77	J A 35	J A 156	J A 78	J A 78
10	J A 44	J A 42	J A 28	J A 20	E B 15	J A 35	J A 104	J A 98	66	J A 66	J A 96	J A 85	J A 65	J A 54	J A 155	J A 182	J A 193	J A 172	J A 129	J A 151	J A 91	J A 62	J A 31	J A 56
11	J A 46	J A 66	J A 88	J A 63	J A 82	J A 103	J A 58	J A 87	J A 130	J A 64	J A 143	J A 129	J A 232	J A 129	J A 81	J A 108	J A 75	J A 57	J A 103	J A 74	J A 87	J A 77	J A 90	J A 86
12	J A 76	J A 61	J A 46	J A 46	J A 44	24	J A 43	J A 47	J A 90	J A 56	38	J A 67	J A 68	J A 52	43	41	35	30	24	J A 22	E B 14	20	J A 38	J A 31
13	J A 38	J A 43	J A 20	J A 20	J A 46	J A 56	J A 54	J A 86	J A 114	J A 209	J A 177	J A 98	J A 62	J A 72	J A 88	J A 169	J A 86	J A 82	J A 78	J A 55	J A 44	J A 71	J A 47	J A 80
14	J A 47	J A 63	J A 76	J A 53	J A 40	20	31	J A 42	J A 79	J A 59	J A 58	J A 126	J A 62	41	41	J A 56	J A 74	J A 99	J A 174	J A 77	J A 55	J A 86	J A 114	J A 28
15	J A 41	J A 53	J A 26	J A 22	J A 20	J A 22	J A 46	J A 49	J A 68	J A 150	J A 70	J A 120	J A 100	J A 141	J A 132	41	35	32	J A 38	J A 33	J A 39	J A 22	J A 32	J A 59
16	J A 56	J A 56	J A 58	J A 45	J A 31	J A 25	J A 42	J A 55	J A 54	J A 97	J A 90	J A 111	J A 110	J A 60	J A 50	38	37	J A 48	J A 45	J A 53	J A 34	J A 111	J A 53	J A 36
17	J A 35	J A 40	J A 53	J A 29	J A 30	J A 33	J A 34	J A 62	J A 76	J A 73	J A 94	J A 98	J A 96	J A 194	J A 145	41	J A 88	J A 121	J A 44	J A 62	J A 90	J A 82	J A 40	J A 36
18	J A 78	J A 72	J A 33	J A 29	20	21	J A 37	J A 53	J A 46	J A 83	J A 125	J A 94	J A 47	56	65	J A 97	J A 71	J A 36	J A 44	J A 55	J A 52	J A 30	J A 47	J A 83
19	J A 44	J A 36	J A 37	J A 22	J A 22	J A 43	J A 59	G 26	J A 54	J A 60	J A 80	J A 80	38	36	G J A 31	J A 80	J A 100	J A 44	J A 38	J A 53	J A 42	J A 29	J A 23	J A 21
20	J A 20	J A 42	J A 52	J A 57	J A 54	J A 24	J A 39	J A 35	34	J A 48	J A 45	42	G 33	G J A 34	44	41	39	J A 75	J A 31	J A 22	J A 20	E B 15	J A 20	J A 19
21	22	19	J A 41	J A 34	J A 24	J A 24	28	J A 44	37	37	J A 44	J A 78	G	J A 86	44	46	J A 78	J A 72	J A 54	J A 43	J A 73	J A 86	J A 86	J A 43
22	J A 27	J A 35	J A 37	J A 36	J A 23	J A 21	J A 34	J A 55	J A 92	J A 118	J A 90	J A 83	J A 100	J A 82	J A 54	42	J A 116	J A 94	J A 82	J A 44	J A 46	J A 42	J A 52	J A 114
23	J A 52	J A 34	J A 27	J A 24	J A 34	J A 25	J A 38	J A 46	J A 76	J A 78	J A 104	J A 58	J A 90	J A 112	J A 116	J A 49	J A 40	J A 45	J A 44	J A 88	J A 101	J A 78	J A 51	J A 42
24	J A 48	J A 75	J A 56	J A 22	20	J A 25	30	J A 44	J A 37	37	G 33	G 34	40	J A 52	40	J A 48	J A 68	J A 38	J A 57	J A 74	J A 99	J A 56	J A 75	J A 66
25	J A 88	J A 87	J A 54	J A 47	J A 29	J A 30	J A 39	J A 80	J A 86	J A 57	J A 83	J A 64	J A 106	J A 84	J A 142	J A 43	J A 97	J A 142	J A 93	J A 167	J A 104	J A 100	J A 76	J A 44
26	J A 32	J A 39	J A 40	J A 28	J A 23	J A 23	J A 35	J A 49	J A 69	J A 98	J A 89	J A 97	J A 84	J A 52	40	J A 57	J A G 24	J A 41	J A 40	J A 39	J A 45	J A 49	J A 48	J A 64
27	J A 89	J A 43	J A 27	J A 19	19	J A 24	J A 46	J A 67	J A 86	J A 83	J A 74	J A 74	J A 68	J A 78	J A 46	J A 47	J A 44	J A 52	J A 33	J A 22	J A 36	J A 42	J A 27	J A 62
28	J A 79	J A 43	J A 21	E B 15	E B 15	J A 28	27	J A 34	34	J A 43	J A 56	J A 48	G 29	G 31	G 30	37	J A 33	30	28	J A 25	J A 39	J A 52	J A 47	J A 70
29	J A 47	J A 87	J A 61	J A 66	J A 23	E B 16	31	J A 45	J A 72	J A 94	J A 119	J A 99	J A 48	J A 64	J A 57	J A 47	J A 48	J A 62	J A 134	J A 95	J A 87	J A 48	J A 27	J A 26
30	J A 27	J A 26	J A 55	J A 26	E B 15	J A 24	J A 38	J A 37	J A 47	J A 48	J A 54	J A 47	J A 81	J A 92	J A 93	J A 98	J A 71	J A 56	J A 44	J A 26	J A 31	J A 36	J A 20	J A 25
31	J A 46	J A 33	J A 27	J A 17	E B 15	E B 15	J A 27	34	J A 43	J A 72	J A 83	46	J A 53	J A 82	J A 82	J A 48	J A 50	J A 99	J A 62	J A 67	E B 14	J A 26	J A 29	J A 26
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	J A 46	J A 43	J A 41	J A 29	J A 29	J A 25	J A 39	J A 49	J A 68	J A 73	J A 83	J A 83	J A 69	J A 72	J A 65	J A 50	J A 63	J A 56	J A 52	J A 55	J A 49	J A 54	J A 48	J A 56
U Q	J A 76	J A 63	J A 58	J A 47	J A 44	J A 33	J A 46	J A 77	J A 86	J A 91	J A 96	J A 98	J A 98	J A 92	J A 111	J A 80	J A 88	J A 94	J A 93	J A 77	J A 87	J A 78	J A 69	J A 74
L Q	J A 37	J A 39	J A 28	J A 22	20	22	34	J A 44	J A 54	J A 56	J A 54	56	48	52	44	42	39	41	J A 38	J A 36	36	J A 30	J A 32	J A 31

JUL. 2006 foEs (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

JUL. 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	A A 132	22	36	33	33	20	38	A A 77	A A 99	A A 84	A A 88	45	51	46	46	A A 111	G 26	29	48	22	38	22	32	38
2	41	24	19	E B 15	E B 14	26	A A 79	A A 116	53	35	40	A A 103	A A 71	48	37	37	42	39	41	33	46	23	23	36
3	24	35	25	E B 15	18	27	34	40	43	A A 76	A A 100	A A 112	46	47	A A 124	A A 102	52	A A 75	58	54	29	27	35	39
4	24	28	24	17	E B 15	25	A A 60	A A 76	45	45	48	A A 97	A A 124	A A 99	44	A A 76	50	41	46	43	43	41	32	36
5	29	31	20	A A 69	A A 57	25	43	56	45	37	A A 56	A A 92	A A 98	A A 88	A A 82	A A 79	47	41	26	37	38	34	28	28
6	A A 65	35	23	20	20	20	30	47	55	A A 85	A A 68	A A 63	52	68	46	36	40	42	62	49	44	31	28	30
7	26	32	E B 15	24	20	23	37	38	A A 57	38	A A 49	44	A A 97	A A 96	53	36	32	31	A A 99	52	38	24	A A 46	A A 61
8	A A 97	A A 62	24	16	20	17	29	44	A A 72	A A 91	A A 93	A A 98	A A 119	A A 63	A A 155	43	47	30	22	20	16	E B 15	18	20
9	20	E B 15	E B 16	E B 14	16	20	A A 61	43	A A 77	40	43	41	42	40	46	37	A A 118	48	32	34	24	27	36	36
10	23	17	20	16	E B 15	24	A A 104	A A 98	63	A A 66	A A 96	38	A A 65	A A 54	A A 155	44	A A 193	52	A A 129	54	36	42	E B 15	23
11	35	30	24	A A 63	A A 82	A A 103	38	A A 87	A A 130	46	A A 143	A A 129	A A 232	A A 129	A A 81	A A 108	A A 75	30	A A 103	32	41	A A 77	A A 90	A A 86
12	A A 76	A A 61	A A 46	A A 46	A A 44	22	32	A A 47	A A 90	44	37	A A 67	A A 68	A A 52	41	41	34	30	24	16	E B 14	E B 15	26	25
13	24	17	16	E B 16	E B 16	34	39	A A 86	A A 114	A A 209	A A 177	A A 98	A A 62	A A 72	A A 88	A A 169	39	39	34	39	19	38	35	A A 80
14	34	A A 63	A A 76	E B 15	17	17	30	37	A A 79	A A 59	A A 58	A A 126	A A 62	39	39	36	45	42	35	30	26	24	18	18
15	17	23	E B 14	E B 15	16	16	29	A A 49	A A 68	A A 150	A A 70	A A 120	A A 100	A A 141	A A 132	36	32	30	31	23	19	16	17	25
16	39	26	27	21	17	23	32	46	42	A A 97	A A 90	A A 111	A A 110	A A 60	A A 50	36	35	36	26	40	20	A A 111	17	21
17	23	21	27	18	16	26	28	48	A A 76	A A 73	A A 94	A A 98	A A 96	A A 194	43	37	33	31	34	36	E B 15	26	24	E B 15
18	20	17	22	22	E B 14	19	32	45	41	A A 83	A A 125	A A 94	46	53	46	A A 97	A A 71	34	35	45	37	25	24	A A 83
19	26	24	23	E B 15	17	A A 43	A A 59	G 26	42	A A 60	A A 80	39	37	36	G 31	A A 80	A A 100	40	31	46	28	25	16	16
20	16	17	16	16	A A 54	16	28	30	32	35	43	39	G 33	G 30	44	39	38	44	26	20	16	E B 15	E B 15	E B 15
21	E B 15	E B 15	16	18	17	20	26	33	35	36	38	A A 78	G	A A 86	42	43	A A 78	A A 72	38	17	35	22	22	E B 16
22	15	24	18	22	E B 15	18	31	44	42	A A 118	A A 90	A A 83	A A 100	A A 82	A A 54	40	A A 116	A A 94	42	27	24	34	E B 16	16
23	E B 16	E B 16	17	18	18	18	28	38	A A 76	A A 78	A A 104	A A 58	A A 90	A A 112	A A 116	39	35	37	30	32	24	22	24	23
24	24	E B 15	16	E B 15	E B 15	21	28	28	32	36	G 33	G 34	38	A A 52	38	38	44	32	26	32	25	23	A A 75	A A 66
25	A A 88	A A 87	A A 54	23	17	20	34	A A 80	A A 86	A A 57	A A 83	A A 64	A A 106	A A 84	A A 142	36	A A 97	A A 142	49	34	24	A A 100	21	23
26	23	26	26	22	19	18	32	43	57	59	A A 89	A A 97	A A 84	38	39	A A 57	G 22	32	23	23	20	32	28	39
27	17	25	19	16	E B 15	18	36	A A 67	A A 86	68	45	A A 74	A A 68	A A 78	37	41	40	30	24	17	29	23	23	A A 62
28	A A 79	18	19	E B 15	E B 15	25	25	29	34	37	36	39	G 29	G 31	G 30	35	30	26	24	22	24	26	32	26
29	37	23	18	A A 66	16	E B 16	28	38	A A 72	A A 94	A A 119	A A 99	40	A A 64	42	42	37	42	A A 134	47	28	44	16	16
30	E B 15	20	23	22	E B 15	20	36	29	36	42	44	40	A A 81	A A 92	A A 93	A A 98	A A 71	38	27	25	19	28	E B 15	18
31	17	16	E B 15	16	E B 15	E B 15	25	32	35	52	A A 83	42	46	46	54	42	42	30	28	18	E B 14	E B 15	22	22
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	24	24	20	18	17	20	32	44	57	A A 59	A A 80	A A 78	A A 68	A A 63	46	41	42	38	34	32	25	26	24	25
U Q	A A 39	31	25	22	20	25	A A 38	A A 67	A A 77	A A 84	A A 94	A A 98	A A 98	A A 88	A A 88	A A 79	A A 71	42	48	43	37	34	32	A A 39
L Q	17	17	16	E B 15	E B 15	18	28	37	42	40	44	42	46	46	41	37	35	30	26	22	19	22	17	18

JUL. 2006 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

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

JUL. 2006 fmin (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUL. 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	A	F	307	323	308	369	336	A	A	A	A	323	329	311	308	A	295	302	313	300	322	315	F	F
2	F	F	F	F	304	293	A	A	332	339	320	A	A	327	317	275	317	315	317	326	312	293	323	F
3	311	301	F	F	321	332	339	330	339	A	A	A	323	310	A	A	307	A	314	309	331	324	F	F
4	F	F	F	295	F 322	349	A	A	333	353	325	A	A	A	305	A	310	309	299	313	337	358	F	306
5	F	292	F	A	A	345	308	338	326	277	A	A	A	A	A	A	299	285	302	345	319	311	F	307
6	A	F	F	F	F	347	294	304	338	A	A	A	295	300	312	322	326	315	314	308	290	299	F	F
7	F	F	311	F	F	347	380	357	A	273	A	310	A	A	309	302	304	297	A	S 315	352	340	A	A
8	A	A	328	F	F	376	338	330	A	A	A	A	A	A	A	326	332	315	319	332	365	316	309	F
9	305	315	310	F	322	333	A	357	A	361	343	312	343	261	319	338	A	332	318	324	330	288	F	F
10	F	F	F	320	F	330	A	A	362	A	A	281	A	A	A	296	A	308	A	333	384	323	291	F
11	F	290	F	A	A	A	285	A	A	355	A	A	A	A	A	A	A	312	A	341	353	A	A	A
12	A	A	A	A	A	338	325	A	A	311	334	A	A	A	296	323	312	328	324	332	305	294	297	315
13	298	360	288	302	308	327	315	A	A	A	A	A	A	A	A	A	273	308	313	335	329	312	F	A
14	325	A	A	315	319	347	329	348	A	A	A	A	A	281	311	299	304	316	305	310	318	359	F	F
15	F	301	299	284	303	362	362	A	A	A	A	A	A	A	A	307	305	321	330	343	327	306	304	348
16	306	F	F	F	F	323	302	345	355	A	A	A	A	A	A	297	270	316	311	330	321	A	336	F
17	F	305	310	342	323	334	309	332	A	A	A	A	A	A	315	333	351	344	322	320	310	324	F	F
18	F	F	F	F	F	321	336	358	362	A	A	A	273	329	313	A	A	322	337	326	321	352	F	A
19	F	F	311	F	322	A	A	366	371	A	A	296	311	342	303	A	A	285	325	356	353	324	306	313
20	F	F	F	F	A	325	321	332	347	348	361	R 343	R 331	326	327	297	297	305	303	317	356	396	333	313
21	326	312	324	346	F	324	323	338	338	351	321	A	347	A	335	312	A	A	351	321	320	314	325	354
22	F	F	322	343	F	315	272	344	362	A	A	A	A	A	A	279	A	A	320	303	335	323	324	303
23	F	F	F	F	F	331	330	339	A	A	A	A	A	A	A	314	281	342	350	330	325	298	F	F
24	332	F	F	F	340	351	282	302	346	351	340	288	296	A	300	307	302	326	328	333	318	F	A	A
25	A	A	A	315	F	332	315	A	A	A	A	A	A	A	A	302	A	A	332	339	336	A	F	F
26	326	295	F	F	F	325	314	330	337	337	A	A	A	302	330	A	329	335	340	311	316	278	F	F
27	F	F	306	310	322	316	320	A	A	351	328	A	A	A	309	311	312	313	307	316	320	321	341	A
28	A	F	304	305	323	316	291	310	326	351	318	291	342	330	261	286	329	350	313	310	303	296	306	317
29	F	320	303	A	309	333	255	364	A	A	A	A	316	A	308	334	322	298	A	301	316	369	331	F
30	F	F	314	F	343	334	314	293	321	322	314	310	A	A	A	A	A	296	325	310	324	327	315	309
31	314	F	316	313	336	330	292	339	333	351	A	295	293	320	311	340	341	318	297	312	315	358	305	320
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	9	10	15	13	16	29	26	21	17	15	10	10	12	12	19	21	22	27	27	31	31	27	15	11
MED	314	303	310	315	322	332	315	338	338	351	326	303	320	316	311	307	308	315	318	321	322	321	315	313
U Q	326	315	316	332	323	347	330	352	358	351	340	312	336	328	317	324	326	326	328	333	336	340	331	320
L Q	306	295	304	304	308	324	294	330	332	322	320	291	296	301	305	297	299	305	311	310	316	299	305	307

JUL. 2006 M(3000)F2 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUL. 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							A	A	A	A	A	A	A	A	A	A	397	UL366	A					
2							A	A	A	UL477	UL372	A	A	A	UL388	359	A	A	A					
3							A	A	A	A	A	A	A	A	A	A	A	A	A					
4							A	A	A	A	A	A	A	A	A	A	A	A	A					
5							A	A	L343	UL353	A	A	A	A	A	A	A	A	L					
6							UL364	A	A	A	A	A	A	A	A	UL383	A	A	A					
7							A	A	A	UL399	A	A	A	A	A	UL393	UL378	UL374	A					
8								A	A	A	A	A	A	A	A	A	A	L364	UL352					
9							A	A	A	432	A	UL411	UL429	323	A	402	A	A	A					
10							A	A		A	A	UL426	A	A	A	A	A	A	A					
11						A	A	A	A	A	A	A	A	A	A	A	A	UL359	A					
12							L373	A	A	A	UL467	A	A	A	A	A	UL367	L376	UL372					
13						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
14							UL379	A	A	A	A	A	A	UL441	UL361	UL402	A	A						
15							A	A	A	A	A	A	A	A	A	UL388	UL380	L	L					
16							A	A	A	A	A	A	A	A	A	UL407	374	A	L362					
17							UL375	A	A	A	A	A	A	A	A	400	UL390	L	A					
18							UL374	A	A	A	A	A	A	A	UL357	A	A	UL363	A					
19						A	A	401	A	A	A	UL424	UL408	UL417	UL423	A	A	A	A					
20							UL368	UL388	398	395	A	UL404	UL455	UL430	A	A	A	A	UL348					
21							UL362	UL401	L427	L409	UL421	A	UL425	A	A	A	A	A	A					
22							UL345	A	A	A	A	A	A	A	A	A	A	A	A					
23							L359	A	A		A	A	A	A	A	A	UL368	A	A					
24							356	UL364	379	405	L415	UL402	UL402	A	UL420	A	A	353						
25							A	A	A	A	A	A	A	A	A	374	A	A	A					
26							A	A	A	A	A	A	A	UL387	UL393	A	UL391	UL368	L					
27							A	A	A	A	A	A	A	A	378	A	A	UL367	366					
28						A	UL360	372	399	402	UL396	UL404	UL402	UL422	UL388	364	L	L						
29							UL360	A	A	A	A	A	U390	A	A	A	A	A	A					
30							A	UL362	UL401	A	A	UL365	A	A	A	A	A	A	L					
31							359	380	409	A	A	442	A	A	A	A	A	UL372	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							13	7	7	8	5	8	7	6	8	10	8	10	5					
MED							UL362	UL380	399	404	UL415	UL408	UL408	UL420	UL388	390	UL379	UL366	UL362					
U Q							UL374	401	409	420	LUL444	UL425	UL429	UL430	UL406	UL402	UL390	UL372	369					
L Q							359	UL364	379	UL397	UL384	UL403	UL402	387	UL370	374	UL371	UL363	UL350					

JUL. 2006 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUL. 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							266	A	A	A	A	314	298	338	340	A	374	328	E A 300					
2							A	A	E A 310	300	332	A	A	320	312	426	312	326	280					
3							272	310	304	A	A	A	326	340	A	A	E A 340	A	E A 308					
4							A	A	286	268	328	A	A	A	340	A	E A 342	318	310					
5							E A 318	E A 294	324	390	A	A	A	A	A	A	E A 332	344	258					
6							380	E A 370	E A 314	A	A	A	E A 372	E A 388	308	294	282	308	E A 320					
7							234	272	A	414	A	E A 320	A	A	E A 356	348	348	322	A					
8								E A 312	A	A	A	A	A	A	A	304	296	306	292					
9							A	250	A	288	308	374	302	366	E A 350	278	A	296	276					
10							A	A		A	A	388		A	A	A	E A 350	A	E A 316	A				
11						A	E A 402	A	A	270	A	A	A	A	A	A	A	310	A					
12							306	A	A	324	264	A	A	A	386	312	302	286	286					
13						E A 346	E A 332	A	A	A	A	A	A	A	A	A	E A 374	340	286					
14							336	274	A	A	A	A	A	430	330	370	E A 364	328						
15							238	A	A	A	A	A	A	A	A	334	340	286	278					
16							E A 328	272	264	A	A	A	A	A	A	416	450	322	300					
17							332	E A 356	A	A	A	A	A	A	340	324	278	266	E A 278					
18							290	256	250	A	A	A	E A 418	E A 308	326	A	A	326	E A 274					
19						A	A	272	246	A	A	404	330	306	354	A	A	E A 348	272					
20							314	298	274	284	268	320	R 324	346	316	398	384	E A 326	298					
21							304	290	278	270	354	A	290	A	296	E A 336	A	A	234					
22							438	262	252	A	A	A	A	A	A	E A 396	A	A	286					
23							290	276	A		A	A	A	A	A	E A 334	414	284	252					
24							438	332	254	258	240	324	344	A	390	E A 382	E A 384	296						
25							326	A	A	A	A	A	A	A	A	366	A	A	E A 270					
26							284	272	E A 308	E A 300	A	A	A	360	300	A	304	294	272					
27							298	A	A	E A 288	286	A	A	A	352	338	318	320	304					
28						E A 274	368	320	276	248	300	370	288	372	458	340	264	242						
29							474	248	A	A	A	A	350	A	336	292	E A 324	E A 354	A					
30							328	378	344	320	322	352	A	A	A	A	A	E A 338	284					
31							400	280	280	E A 280	A	376	392	320	310	252	266	328	318					
	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	25	21	16	15	10	10	12	12	19	21	22	27	24					
MED						E A 310	316	276	274	286	304	361	320	341	335	336	U 320	314	282					
U Q							374	316	E A 309	320	328	376	361	369	354	376	374	328	300					
L Q							290	272	259	270	268	320	300	320	312	308	302	296	273					

JUL. 2006 h'F2 (KM)

IONOSPHERIC DATA STATION Kokubunji

JUL. 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	A	E A 312	E A 324	E A 298	E A 340	234	A	A	A	A	A	A	A	A	A	A	H 194	218	A	248	E A 250	238	E A 278	E A 326
2	E A 318	228	242	246	E B 262	E A 268	A	A	A	180	E A 260	A	A	A	220	228	A	A	A	238	E A 282	E A 242	222	E A 310
3	E A 298	E A 316	E A 330	E B 268	E A 256	E A 250	A	A	A	A	A	A	A	A	A	A	A	A	A	E A 296	230	248	E A 256	E A 288
4	E A 278	E A 286	E A 264	E A 278	E B 264	222	A	A	A	A	A	A	A	A	A	A	A	A	A	E A 268	232	234	E A 300	E A 306
5	E A 316	E A 324	E A 280	A	A	240	A	A	E A 288	E A 258	A	A	A	A	A	A	A	A	230	220	E A 280	E A 298	E A 310	E A 290
6	A	E A 318	E A 320	E A 262	E A 278	212	222	A	A	A	A	A	A	A	A	202	A	A	A	E A 270	E A 292	E A 272	244	E A 282
7	E A 298	E A 298	236	E A 256	E A 274	226	A	A	A	212	A	A	A	A	A	218	228	236	A	E A 302	214	212	A	A
8	A	A	E A 278	E A 252	246	198	218	A	A	A	A	A	A	A	A	A	A	216	222	228	204	208	E A 264	E A 250
9	248	E B 256	244	E B 252	226	228	A	A	A	208	A	204	202	E A 292	A	208	A	A	A	E A 248	224	E A 270	E A 264	E A 320
10	E A 304	E A 284	E A 278	232	E B 264	242	A	A	240	A	A	H 180	A	A	A	A	A	A	A	E A 264	202	E A 300	E B 270	E A 302
11	E A 316	E A 324	E A 302	A	A	A	A	A	A	A	A	A	A	A	A	A	A	222	A	238	228	A	A	A
12	A	A	A	A	A	218	224	A	A	A	H 184	A	A	A	A	A	218	204	220	220	234	244	E A 282	E A 268
13	E A 272	222	240	E B 300	E B 272	A	A	A	A	A	A	A	A	A	A	A	A	A	A	248	226	E A 298	E A 322	A
14	E A 316	A	A	E B 268	E A 270	230	220	A	A	A	A	A	A	H 186	212	208	A	A	E A 284	E A 272	238	234	E A 268	E A 270
15	E A 284	E A 316	E B 298	E B 328	E A 290	198	A	A	A	A	A	A	A	A	A	214	220	238	E A 248	230	220	206	E A 256	232
16	E A 326	E A 298	E A 300	E A 266	E A 252	E A 258	A	A	A	A	A	A	A	A	A	214	224	A	220	E A 266	E A 244	A	228	E A 278
17	E A 316	E A 288	E A 310	234	242	E A 262	218	A	A	A	A	A	A	A	A	222	210	224	A	E A 282	230	E A 242	E A 270	224
18	228	E A 296	E A 262	E A 306	E B 260	230	226	A	A	A	A	A	A	A	E A 256	A	A	E A 256	A	E A 300	E A 270	226	E A 266	A
19	E A 278	E A 274	E A 284	E B 250	E A 270	A	A	H 190	A	A	A	194	198	H 174	H 182	A	A	A	A	222	198	E A 244	E A 254	E A 256
20	E A 278	E A 268	E A 280	E A 274	A	230	210	214	202	206	A	H 188	186	H 180	A	A	A	A	242	246	206	186	204	E B 250
21	E B 242	E B 260	238	250	E A 258	220	H 188	202	192	188	188	A	184	A	A	A	A	A	A	238	E A 258	E A 246	224	206
22	E A 258	E A 266	E A 260	E A 236	232	226	E A 242	A	A	A	A	A	A	A	A	A	A	A	A	236	222	E A 262	224	234
23	E B 272	E B 260	E A 256	248	240	234	224	A	A	A	A	A	A	A	A	A	218	A	A	E A 246	226	E A 262	E A 278	E A 326
24	222	E B 272	E A 272	218	210	220	210	214	208	H 180	194	202	188	A	202	A	A	E A 260	224	234	238	E A 268	A	A
25	A	A	A	E A 316	228	222	A	A	A	A	A	A	A	A	A	228	A	A	A	238	216	A	E A 250	234
26	E A 264	E A 306	E A 314	E A 306	E A 282	E A 238	A	A	A	A	A	A	A	206	230	A	212	218	214	E A 256	E A 238	E A 338	E A 326	E A 288
27	208	E A 294	E A 304	E A 294	E B 256	232	A	A	A	A	A	A	A	A	210	A	A	210	210	246	230	232	208	A
28	A	E A 282	E A 280	E B 272	E B 246	A	220	218	208	204	196	198	202	H 192	H 180	220	202	218	228	E A 258	E A 268	E A 276	E A 278	E A 280
29	E A 328	E A 264	E A 300	A	E A 274	220	226	A	A	A	A	A	E A 238	A	A	A	A	A	A	E A 302	234	210	222	E A 248
30	E B 280	E A 282	E A 286	E A 250	222	232	A	212	208	A	A	E A 264	A	A	A	A	A	A	E A 246	E A 248	232	E A 250	242	E A 254
31	E A 250	E A 242	238	E A 268	226	234	228	220	196	A	A	186	A	A	A	A	A	212	E A 252	264	236	196	E A 270	238
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	25	27	28	27	27	27	14	7	8	8	5	8	7	6	8	10	9	13	13	31	31	28	28	25
MED	E A 278	E A 284	E A 280	E A 266	E 258	226	220	214	206	200	191	194	193	H 186	208	216	218	218	224	238	226	E A 244	E A 264	E A 270
U Q	E A 316	E A 306	E A 301	E A 294	E A 272	E A 238	226	218	224	210	228	203	202	206	225	222	222	237	E A 247	E A 268	E A 244	E A 269	E A 278	E A 296
L Q	254	E 264	258	250	240	220	218	202	199	184	186	H 187	186	H 180	H 192	208	206	214	220	238	222	229	235	243

JUL. 2006 h'F (KM)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

JUL. 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	124	A	A	A	A	A	A	A	A	A	124	116	A					
2						A	A	A	A	A	A	A	A	A	A	112	114	114	114					
3						B	120	A	A	A	A	A	A	A	A	A	A	A	A					
4						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
5						B	A	A	A	112	112	A	A	A	A	A	A	A	A					
6						B	122	120	A	A	A	A	A	A	A	116	116	A	A					
7						B	A	A	A	A	A	A	A	A	A	A	A	118	A					
8						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
9						B	A	A	A	A	A	116	116	118	120	122	A	A	A					
10						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
11						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
12							A	A	A	A	116	118	A	116	120	120	118	118	A					
13						A	A	A	A	A	A	A	A	A	A	A	A	A	A					
14						B	112	118	A	A	A	A	A	A	116	118	120	A	A					
15						A	120	120	A	A	A	A	A	A	A	112	110	116	A					
16						B	A	A	A	A	A	A	A	A	A	116	114	A	A					
17						B	114	A	A	A	A	A	A	A	A	A	114	114	A					
18						B	116	A	A	A	A	A	A	A	A	A	A	A	A					
19						A	A	120	A	A	A	A	A	A	120	A	A	A	A					
20						B	A	A	A	A	A	A	112	124	120	112	112	A	A					
21						B	A	A	A	A	A	A	110	A	A	116	A	A	A					
22						B	A	A	A	A	A	A	A	A	A	122	A	A	A					
23						B	A	A	A		A	A	A	A	A	A	A	A	A					
24						B	116	A	A	A	118	118	A	A	124	114	114	120	A					
25						B	116	A	A	A	A	A	A	A	A	A	114	118	A					
26						A	A	A	A	A	A	A	A	A	118	A	114	116	A					
27						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
28						B	118	A	A	A	A	A	114	114	114	110	A	116	118					
29						B	114	A	A	A	A	A	A	A	A	116	A	A	A					
30						B	A	A	A	A	A	A	A	A	A	A	A	A	A					
31						B	114	112	A	A	A	112	112	A	A	120	114	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							12	5		1	3	4	5	4	8	14	13	10	2					
MED							116	120		112	116	117	112	117	120	116	114	116	116					
U Q							120	120			118	118	115	121	120	120	117	118						
L Q							114	115			112	114	111	115	117	112	114	116						

JUL. 2006 h'E (KM)

IONOSPHERIC DATA STATION Kokubunji

JUL. 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	102	98	92	92	90	122	116	104	106	106	102	106	106	106	104	102	104	128	106	98	92	98	102	102
2	100	100	100	104	106	104	104	102	96	100	96	94	94	94	98	122	118	110	110	104	100	100	98	100
3	96	94	94	94	98	112	116	106	104	102	104	98	96	100	98	102	98	98	94	104	94	98	98	96
4	100	98	92	92	92	122	106	104	106	104	104	100	98	100	100	96	96	96	96	92	92	92	100	96
5	98	92	108	94	94	104	106	106	106	118	120	108	106	102	100	104	104	104	100	96	92	102	106	102
6	104	100	98	98	96	102	122	112	102	104	100	102	102	100	106	118	122	102	98	96	100	96	94	92
7	96	94	94	90	90	90	94	102	102	104	106	102	102	102	104	104	104	118	96	92	90	92	94	100
8	94	96	100	104	98	100	98	106	102	104	98	102	104	110	106	108	106	106	104	98	96	94	92	90
9	86	92	88	106	106	106	96	98	92	96	100	132	126	150	120	120	102	102	104	98	100	106	104	100
10	96	96	86	86	B	108	102	102	100	100	98	96	96	120	106	104	104	104	102	100	100	100	108	98
11	94	96	116	92	98	104	104	104	102	100	98	98	96	96	90	92	92	96	100	100	96	122	98	98
12	94	92	90	86	86	92	100	100	96	96	118	116	108	116	138	120	116	110	104	108	B	92	108	102
13	100	100	92	94	112	104	104	104	96	98	98	96	98	98	98	96	96	96	94	90	92	102	102	98
14	98	96	96	96	96	106	118	116	98	104	100	100	100	106	126	116	112	104	102	102	102	102	106	100
15	104	92	98	98	100	104	120	118	104	102	102	102	100	98	96	114	116	110	102	102	96	96	90	94
16	106	100	100	100	102	108	104	98	96	94	94	92	92	98	98	120	116	104	100	100	106	100	100	100
17	102	104	98	94	96	102	120	104	104	100	100	100	100	98	96	104	112	112	104	100	100	98	104	106
18	104	102	92	90	94	110	120	106	106	106	100	100	100	96	98	96	94	98	92	92	92	92	98	98
19	98	94	88	88	102	102	98	102	102	96	100	98	104	104	100	106	106	106	104	92	92	90	92	108
20	108	102	102	102	100	102	96	98	106	102	102	108	104	100	116	118	118	102	106	104	102	B	104	104
21	98	98	98	110	108	106	106	102	102	104	102	98	G	106	106	118	102	102	104	106	104	104	100	100
22	96	96	92	92	92	112	100	100	102	102	100	96	94	96	104	120	104	106	102	104	104	110	108	106
23	110	104	100	98	96	102	104	104	98	98	100	100	100	98	96	98	96	96	96	102	104	110	110	106
24	102	100	98	108	114	114	112	102	100	102	102	100	100	100	126	122	118	118	104	104	98	110	98	104
25	100	96	96	100	102	116	112	100	100	104	102	102	98	96	94	104	114	110	102	102	98	100	100	96
26	88	88	88	88	88	90	104	104	98	98	94	94	96	96	136	96	92	120	104	106	108	100	104	104
27	96	92	92	92	112	118	102	100	98	96	96	96	94	94	100	100	96	94	104	96	98	100	102	98
28	96	90	88	B	B	116	124	100	102	102	106	104	98	102	102	130	98	122	118	110	104	104	100	98
29	96	94	92	90	90	B	108	104	96	94	96	92	104	96	98	120	100	100	100	102	98	98	100	98
30	94	90	90	86	B	102	102	106	104	100	102	102	100	98	96	96	94	94	94	94	92	92	94	90
31	102	102	102	106	B	B	120	112	106	104	102	138	116	104	104	116	116	106	102	104	B	102	104	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	31	31	31	30	27	29	31	31	31	31	31	31	30	31	31	31	31	31	31	31	29	30	31	31
MED	98	96	94	94	98	104	104	104	102	102	100	100	100	100	100	106	104	104	102	100	98	100	100	100
U Q	102	100	100	100	102	112	116	106	104	104	102	102	104	104	106	120	116	110	104	104	102	102	104	104
L Q	96	92	92	90	92	102	102	100	98	98	98	96	96	96	98	100	96	98	98	96	92	96	98	98

JUL. 2006 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

JUL. 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

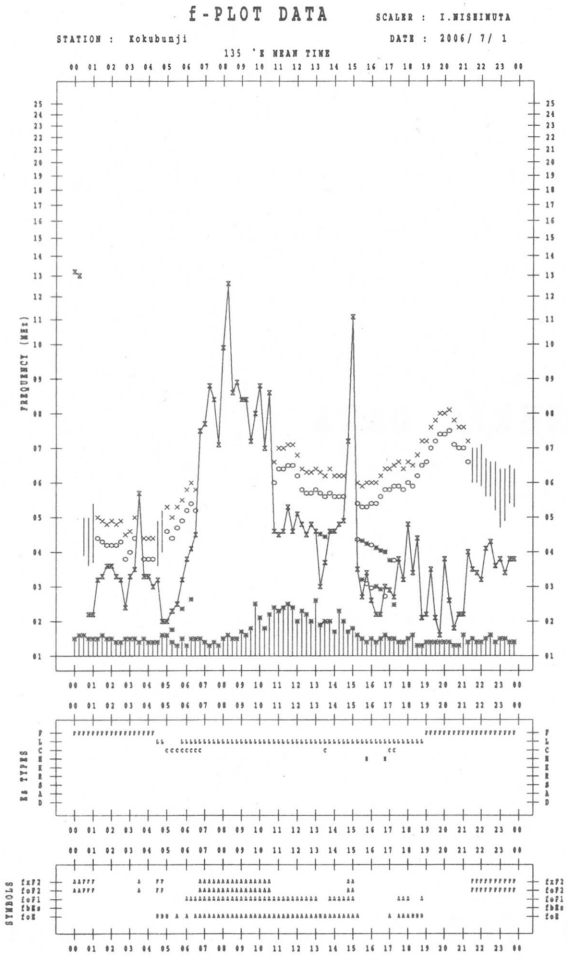
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	F5	F4	F4	F3	F3	C2	CL31	L4	L4	L3	L4	L2	L2	L2	L3	L3	L1	CL11	L4	F3	F3	F2	F6	F7
2	F5	F4	F3	F2	F3	L2	L5	L4	L3	L2	L2	L3	L3	L3	L2	CL22	CL21	CL42	CL42	F5	F5	F3	F3	F4
3	F2	F4	F3	F2	F3	C3	CL21	L2	L3	L3	L3	L3	L2	L3	L3	L4	L3	L5	L3	F5	F3	F3	F3	F3
4	F2	F3	F3	F2	F2	C2	L6	L3	L3	L3	L3	L3	L3	L4	L3	L3	L3	L3	L3	F4	F4	F4	F3	F4
5	F3	F3	FF12	F4	F5	L2	L3	L3	L2	CL21	CL21	L3	L3	L3	L3	L3	L3	L3	L3	F3	F4	F4	F4	F4
6	F7	F5	F5	F3	F5	L2	CL22	CL22	L3	L3	L3	L3	L3	L4	L3	CL11	CL21	L3	L3	F3	F4	F4	F3	F3
7	F4	F3	F4	F2	F2	L2	L2	L3	L3	L2	L2	L3	L3	L3	L3	L2	L2	CL22	L3	F4	F5	F5	F4	F5
8	F5	F6	F5	F2	F4	L2	L2	L3	L3	L4	L4	L3	L3	L3	L3	L3	L2	L2	L2	F2	F1	F1	F3	F3
9	F2	F1	F2	F1	F2	L2	L3	L2	L3	L2	L2	HL11	CL11	HL11	CL21	CL21	L4	L3	L5	F3	F3	FF23	F3	F3
10	F2	F2	F3	F3		C3	L4	L4	L2	L3	L3	L2	L3	CL12	L5	L3	L4	L4	L4	F3	F3	F4	F2	F3
11	F4	F5	FF45	F4	F3	L3	L3	L3	L3	L3	L3	L3	L3	L4	L4	L4	L4	L2	L3	F3	F4	FF24	F5	F5
12	F4	F3	F3	F3	F3	F1	L2	L2	L3	L2	CL11	CL21	L3	CL21	HL11	C1	CL21	CL21	L3	F3		F1	F4	F4
13	F5	F3	F3	F1	F2	L3	L3	L3	L3	L4	L4	L3	L3	L3	L3	L3	L3	L4	L3	F3	F3	F5	F7	F4
14	F3	F3	F3	F3	F3	L3	C2	CL21	L3	L2	L4	L2	L3	L2	CL11	CL21	CL31	L3	L2	F3	F3	F3	F3	F2
15	F3	F3	F2	F1	F2	L3	CL22	CL22	L3	L3	L2	L2	L2	L2	L3	CL11	CL22	CL22	L3	F3	F3	F2	F2	F3
16	F3	F3	F2	F2	F2	L4	L3	L3	L3	L3	L2	L3	L3	L3	L2	CL11	CL21	L3	L4	F3	F3	F5	F3	F3
17	F5	F5	F3	F3	F2	L3	C2	L3	L3	L4	L4	L4	L4	L4	L3	L2	CL22	CL22	L2	F3	F2	F3	F4	F3
18	F3	F3	F3	F2	F1	C2	CL21	L3	L2	L3	L3	L3	L2	L3	L2	L2	L3	L2	L3	F3	F5	F4	F3	F4
19	F3	F3	F2	F2	F3	L3	L3	L2	L3	L3	L3	L2	L2	L1	L1	L3	L3	L2	L3	F4	F3	F3	F4	F2
20	F2	F3	F3	F3	F4	L2	L2	L2	L2	L2	L1	L1	L1	L1	CL11	C1	C2	L3	L2	F3	F1		F2	F1
21	F1	F1	F2	F3	F2	L2	L2	L2	L2	L2	L1	L2		L2	L2	CL11	L2	L3	L3	F2	F3	F3	F3	F2
22	F3	F2	F3	F3	F2	C2	L2	L3	L2	L3	L3	L2	L2	L3	L2	CL22	L3	L3	L3	F3	F3	F4	F2	F2
23	F3	F2	F2	F2	F2	L2	L2	L3	L3	L3	L3	L2	L3	L2	L3	L2	L2	L2	L2	F3	F3	FF32	FF22	F3
24	F5	F3	F3	F1	F1	C3	CL22	L2	L2	L2	L1	L1	L2	L2	CL11	CL11	CL21	CL21	L2	F3	F3	FF32	F5	F4
25	F4	F5	F5	F4	F3	L4	CL21	L4	L4	L3	L3	L3	L3	L4	L4	L2	CL42	CL42	L4	F3	F4	F3	F3	F3
26	F3	F3	F3	F3	F2	L1	L2	L2	L3	L3	L3	L3	L3	L2	HL11	L3	L2	CL22	L2	F3	FF23	F4	F3	F3
27	F3	F3	F2	F2	F1	C3	L4	L3	L4	L3	L3	L3	L3	L3	L2	L2	L2	L2	L4	F2	F2	F5	F4	F5
28	F3	F3	F2			C2	CL11	L2	L1	L2	L2	L2	L1	L2	L1	HL11	L2	CL22	CL22	F3	F5	F3	F4	F4
29	F5	F4	F5	F4	F2		CL21	L2	L3	L3	L3	L3	L2	L3	L2	CL12	L3	L4	L4	F3	F3	F4	F2	F1
30	F2	F2	F2	F2		L2	L2	L2	L2	L2	L2	L2	L3	L4	L4	L4	L3	L3	L3	F4	F3	F5	F1	F2
31	F2	F4	F3	F3			C2	CL32	L2	L2	L3	CL21	CL21	L2	L2	CL21	CL22	L2	L3	F2		F1	F3	F5
	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																								

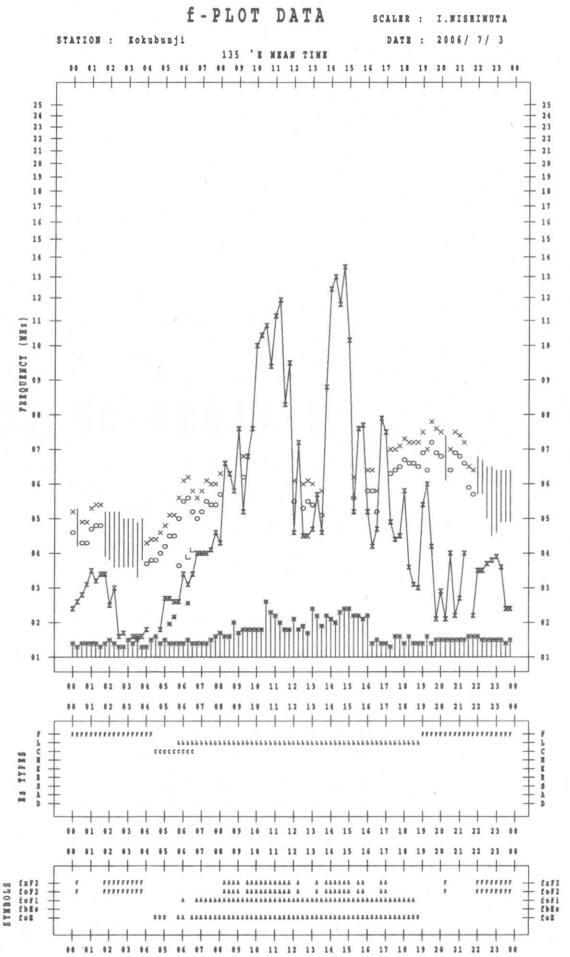
JUL. 2006 TYPES OF Es

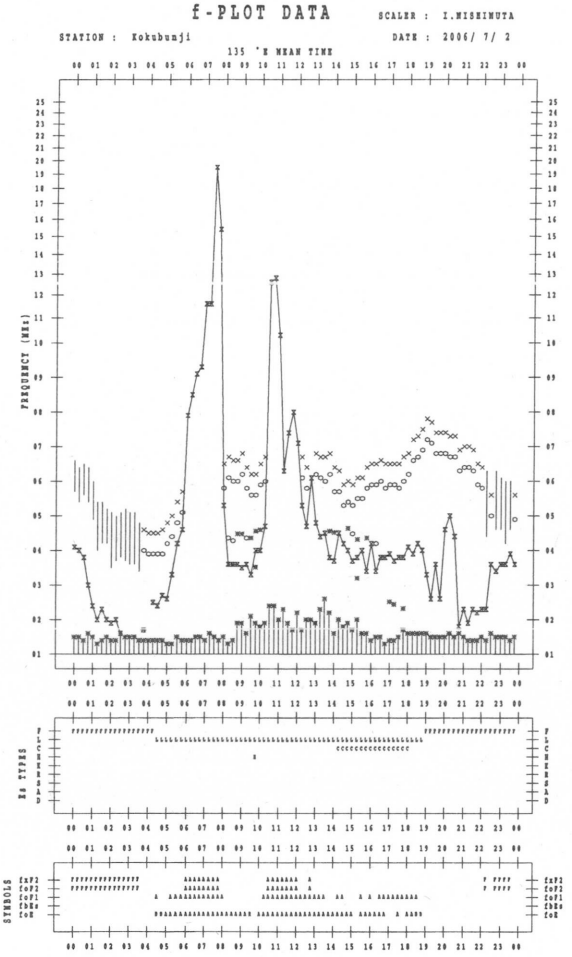
NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

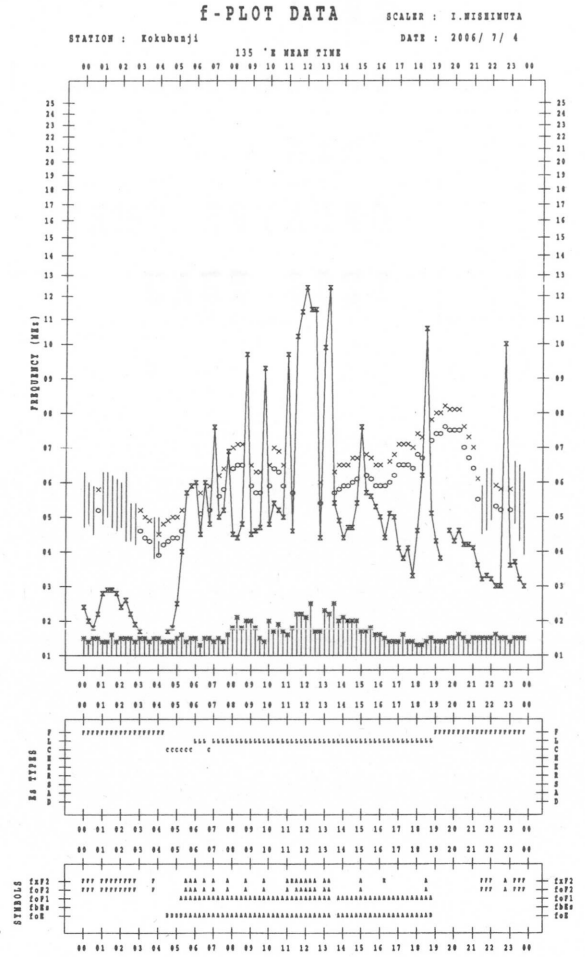
f-PLOTS OF IONOSPHERIC DATA

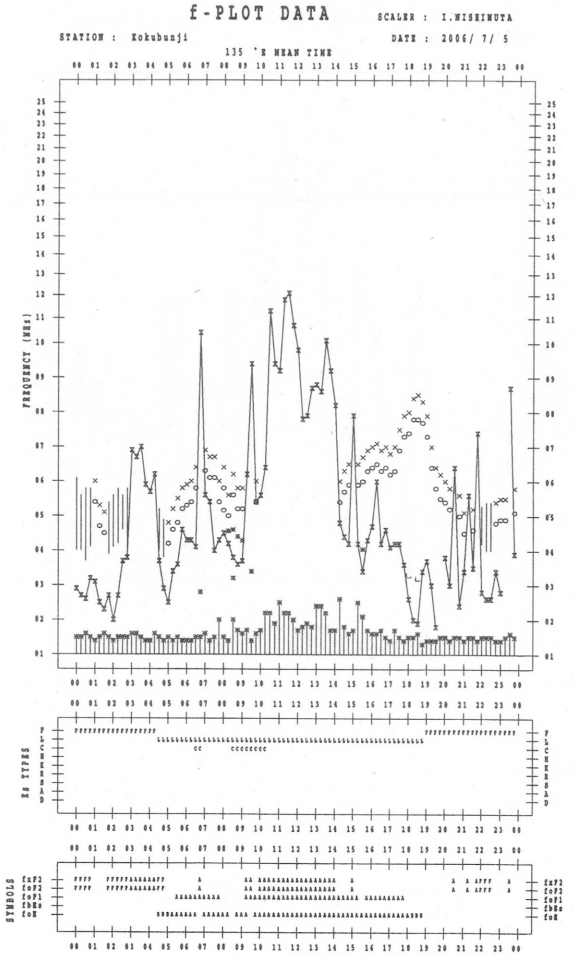
KEY OF f-PLOT	
	SPREAD
	foF2, foF1, foE
	fxF2
	DOUBTFUL foF2, foF1, foE
	fbEs
	ESTIMATED foF1
	fmin
	GREATER THAN
	LESS THAN

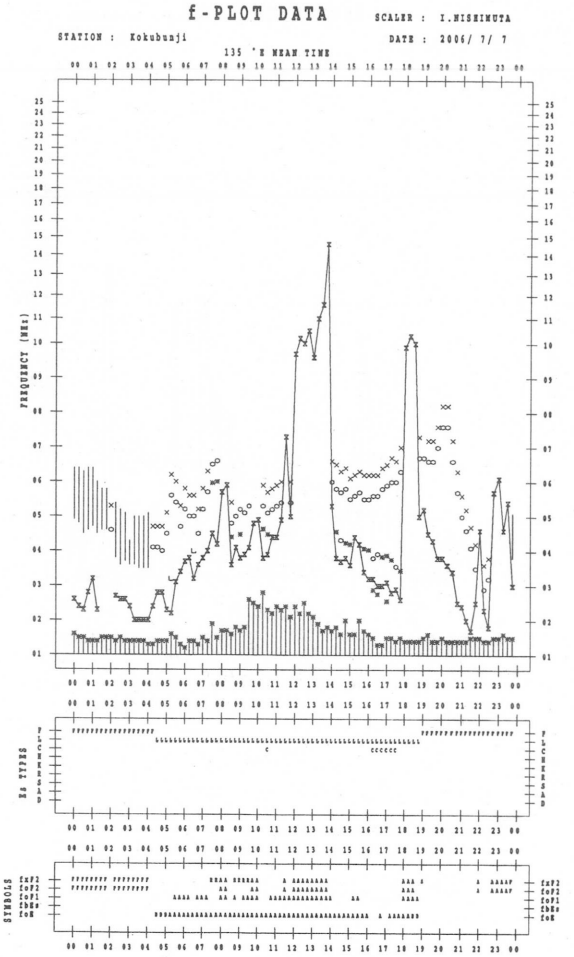

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 1
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

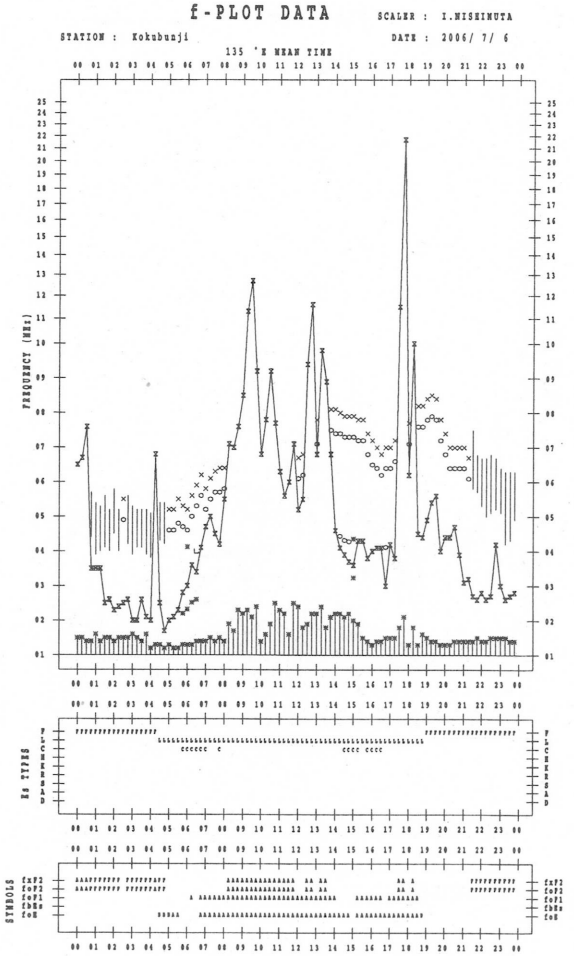

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 3
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

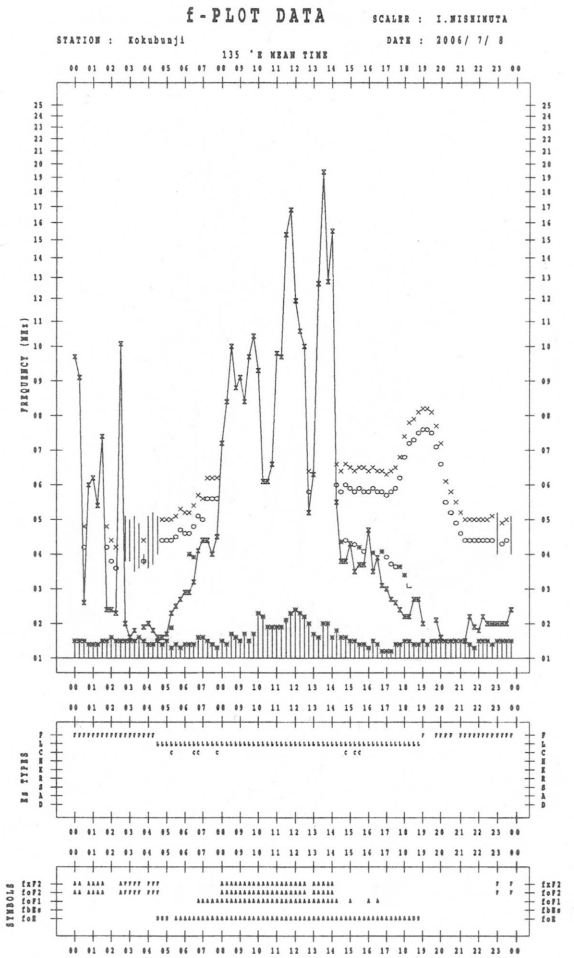

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 2
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

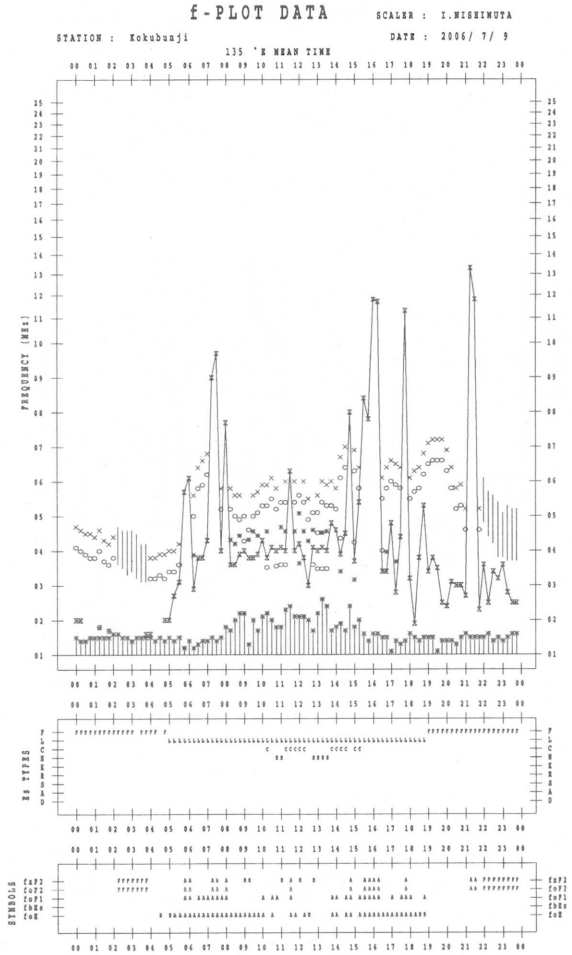

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 4
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

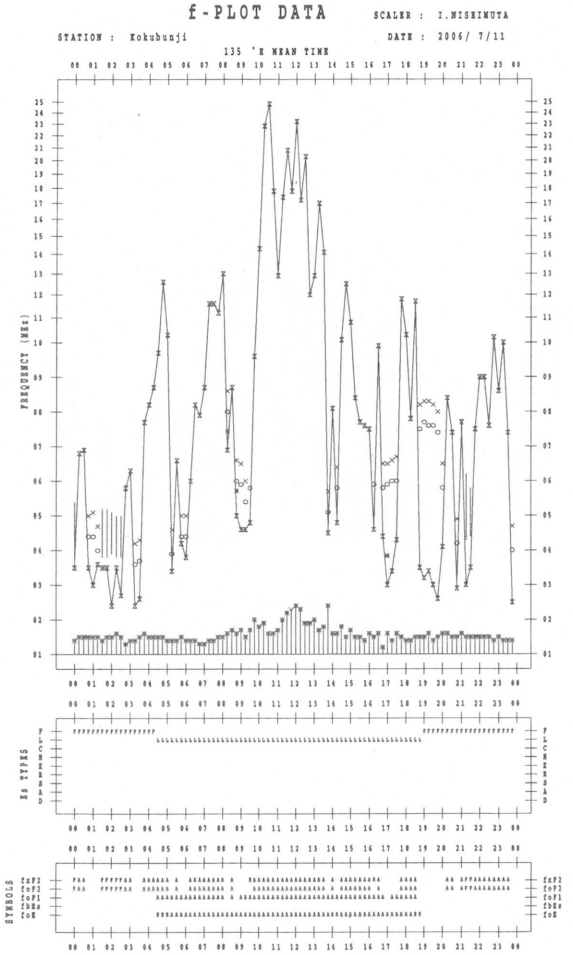

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 5
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

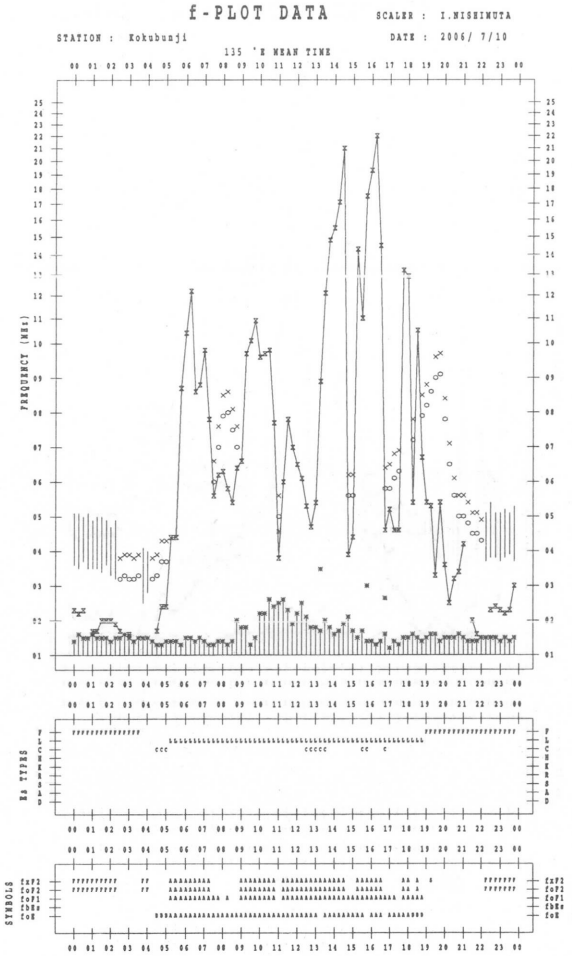

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 7
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

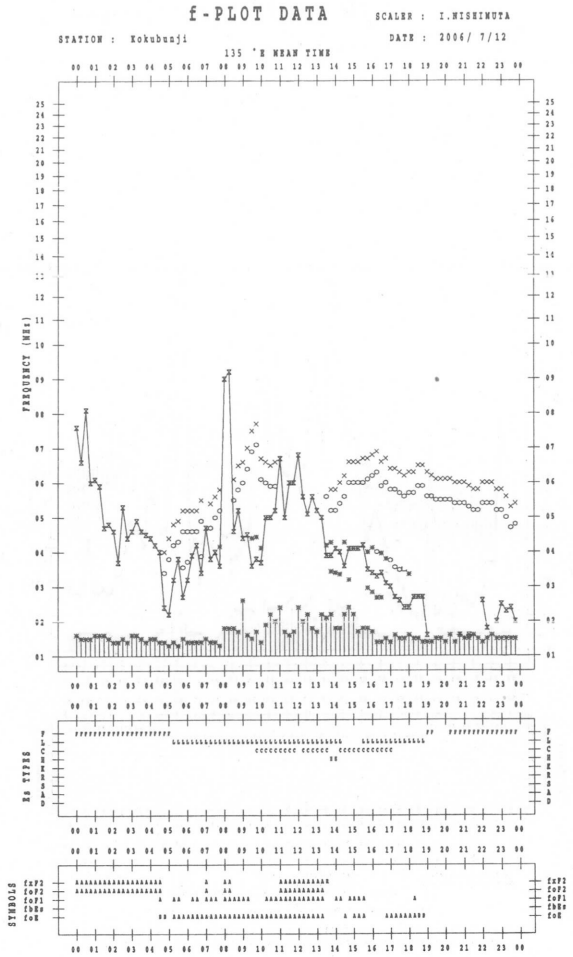

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 6
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

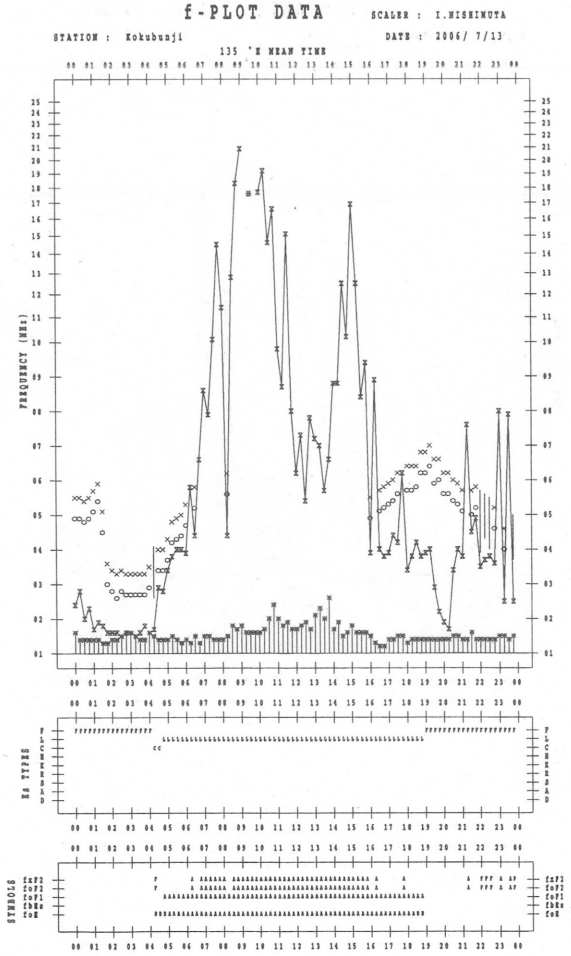

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 8
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

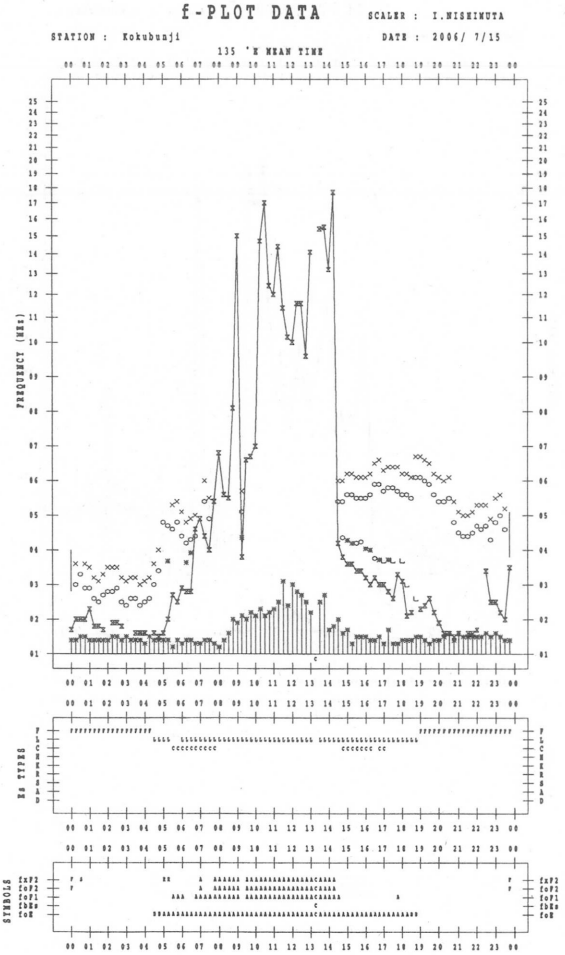

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/ 9
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

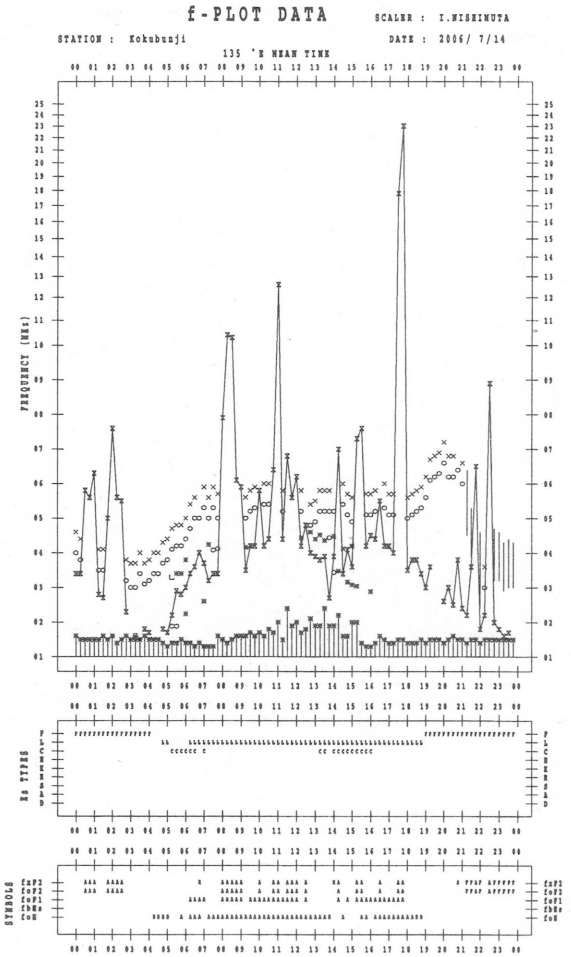

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/11
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

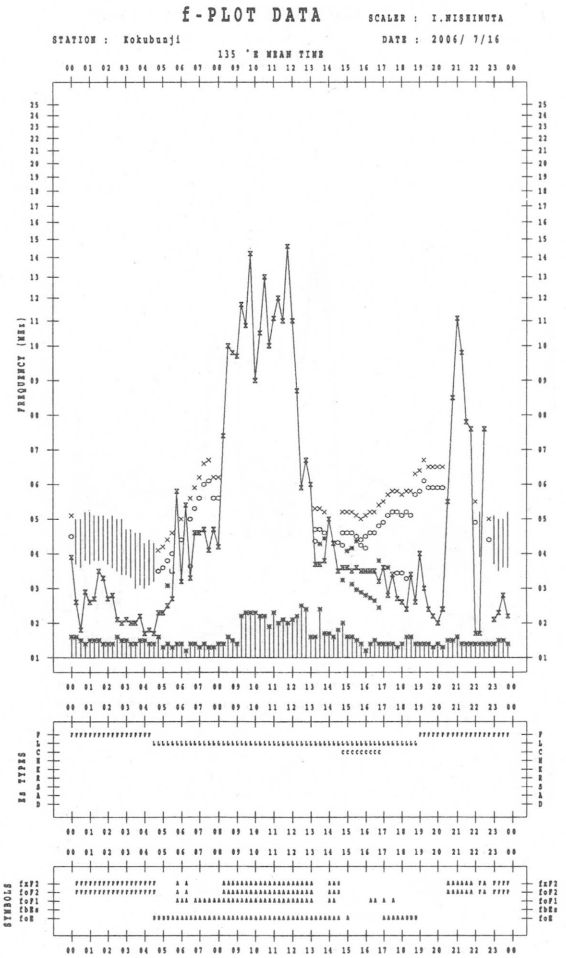

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/10
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

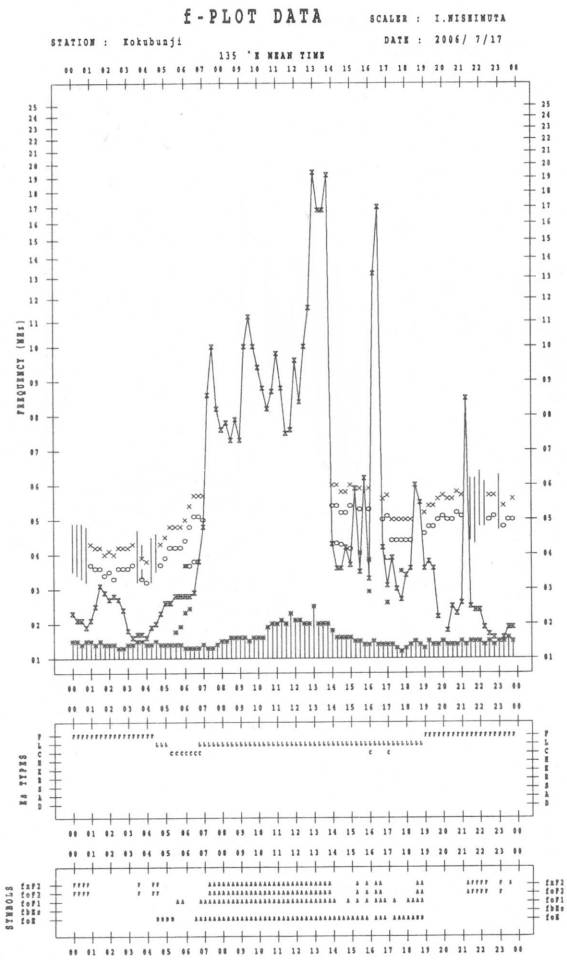

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/12
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

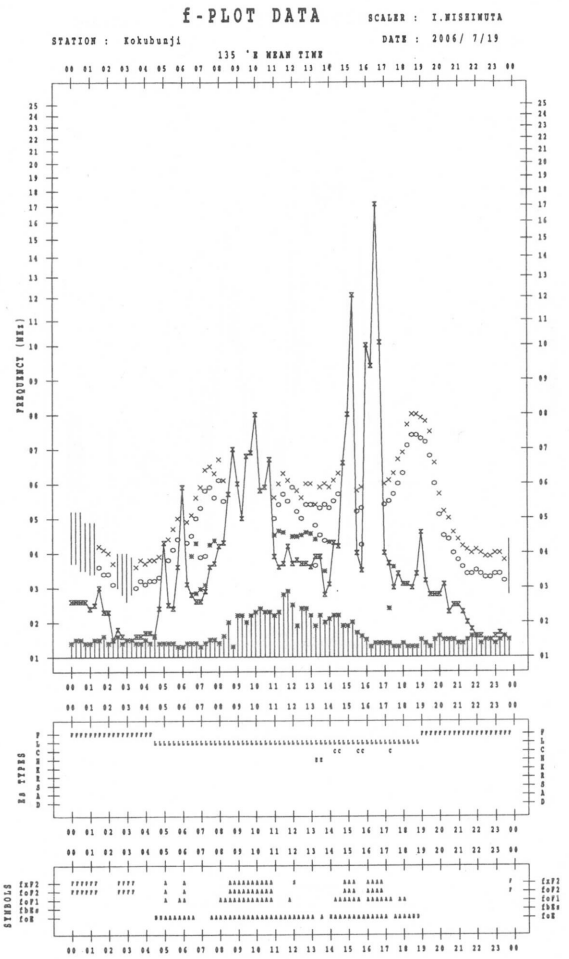

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/13
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

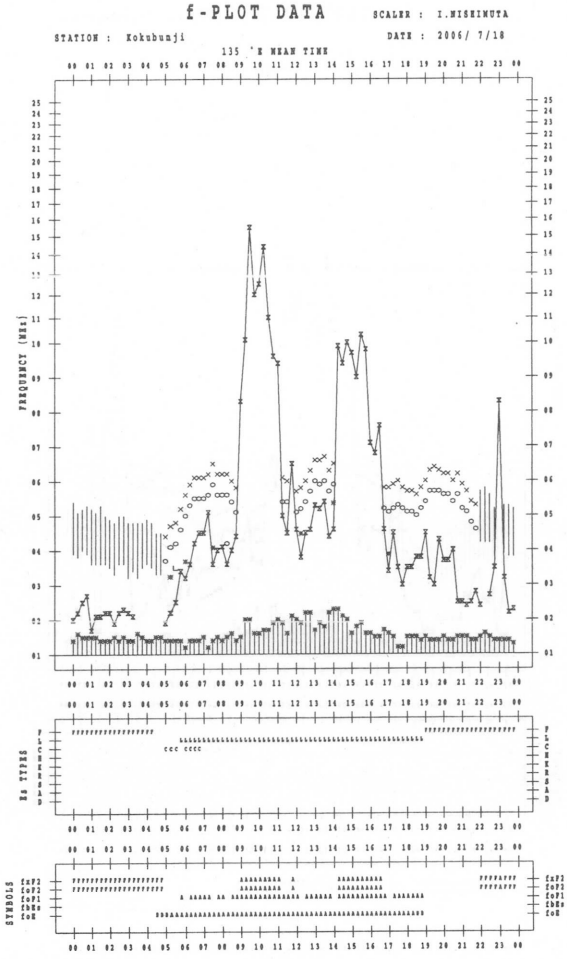

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/15
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/14
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/16
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/17
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/19
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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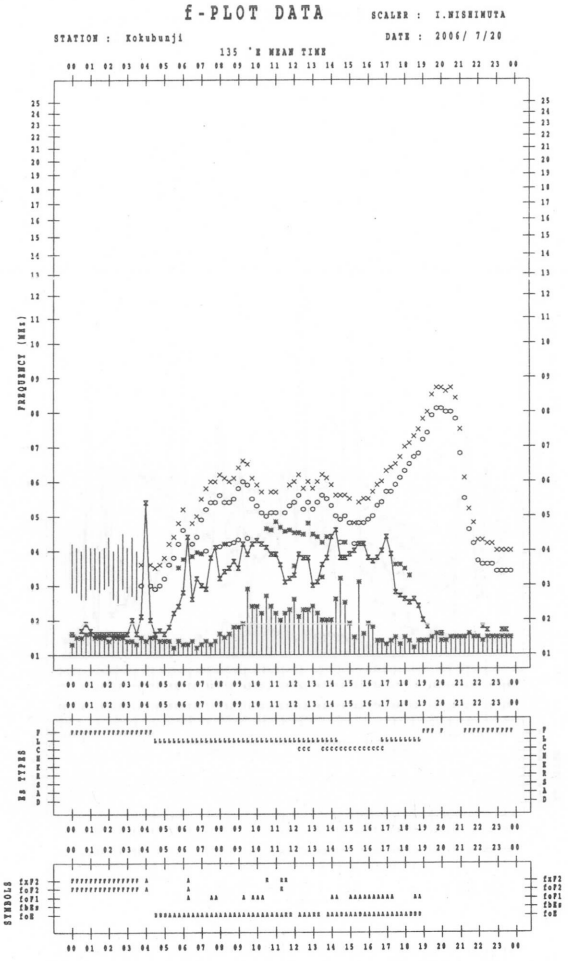
STATION : Kokubunji
DATE : 2006/ 7/18
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
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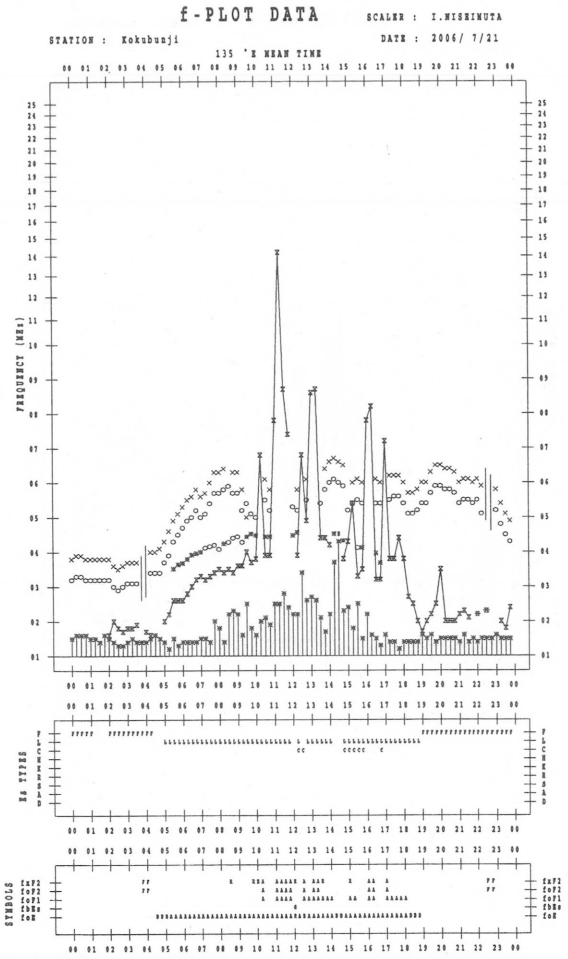
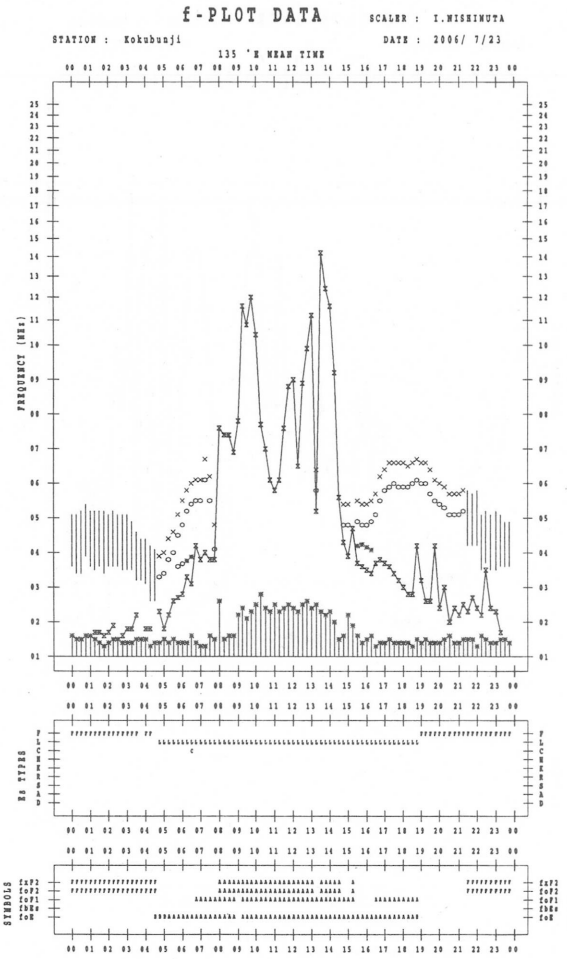
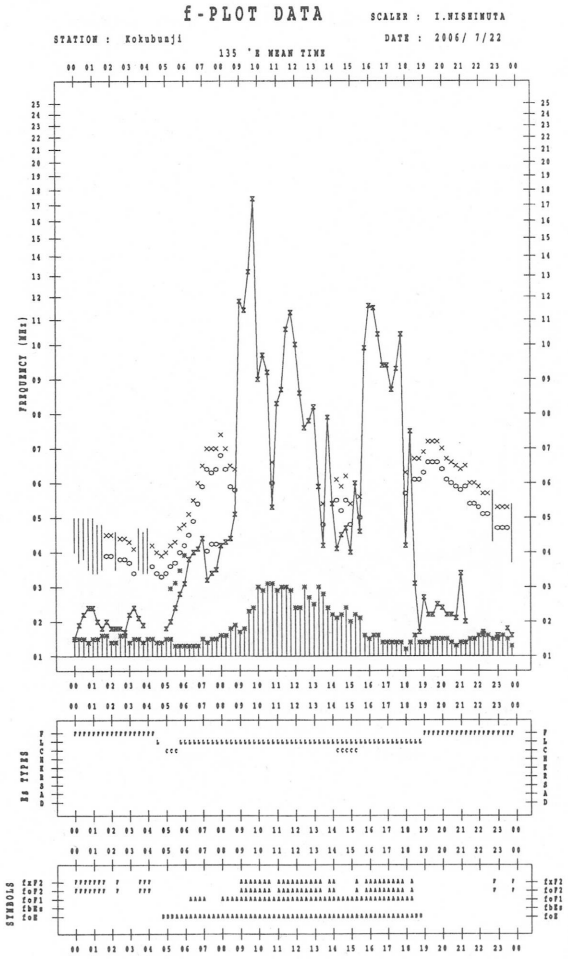
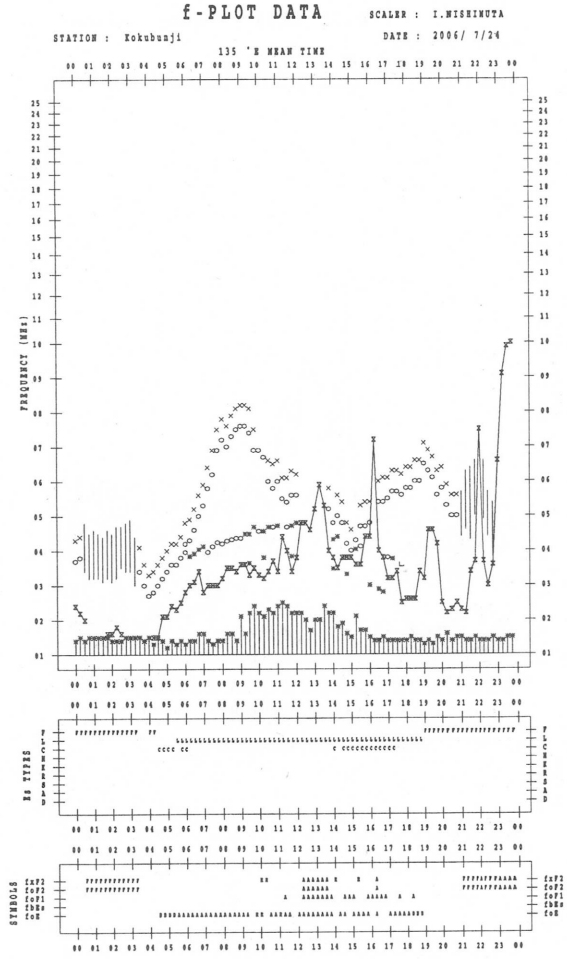
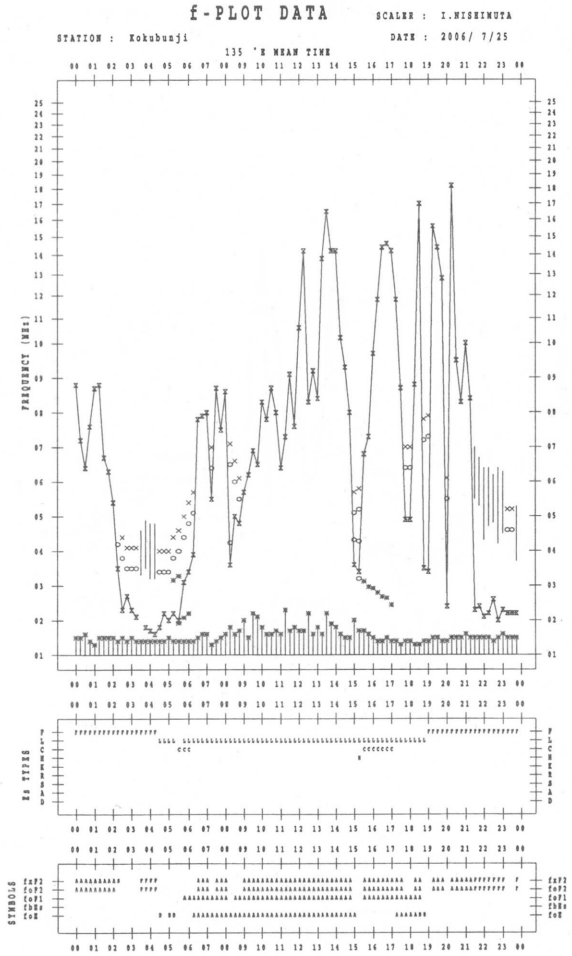
STATION : Kokubunji
DATE : 2006/ 7/20
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

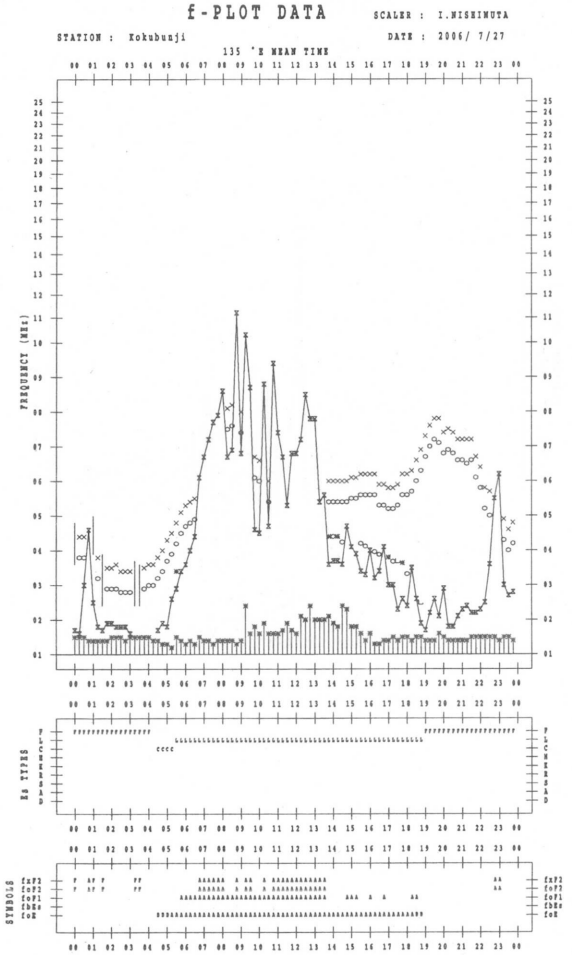

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/21
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

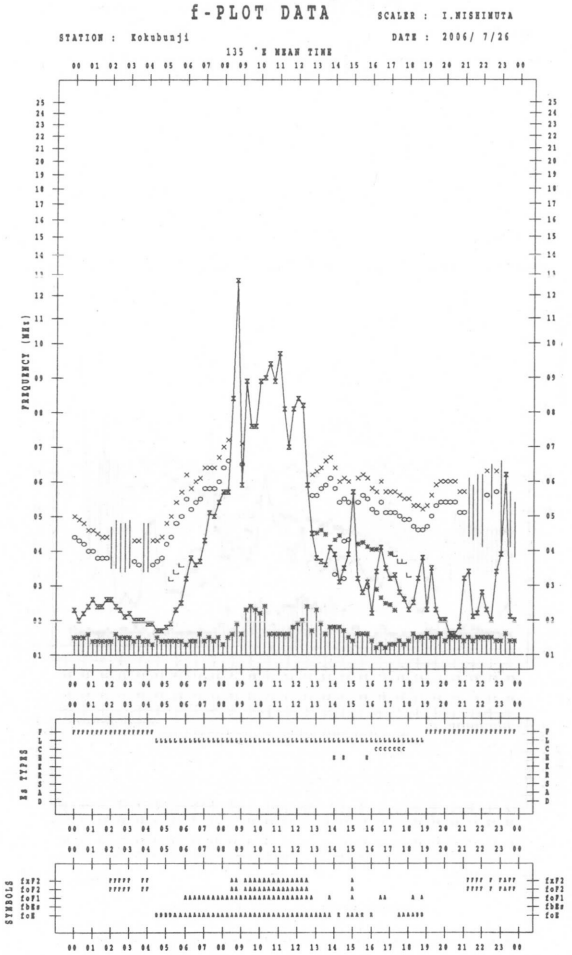

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/23
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

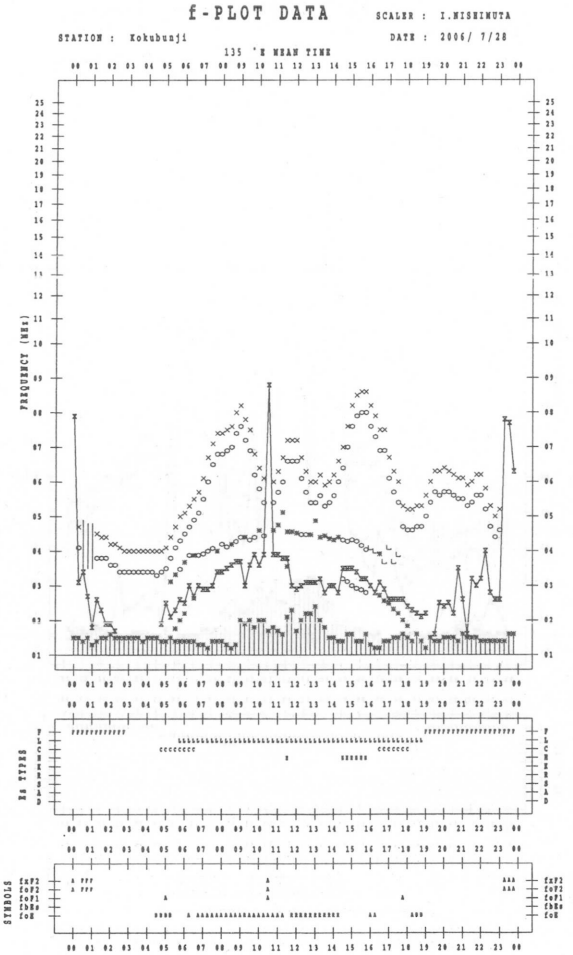

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/22
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

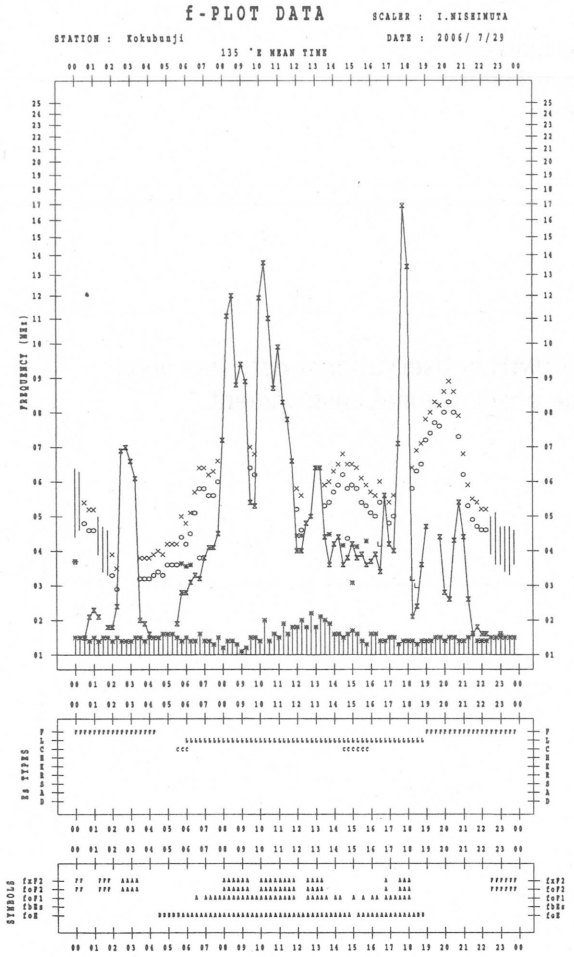

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/24
135 'E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS

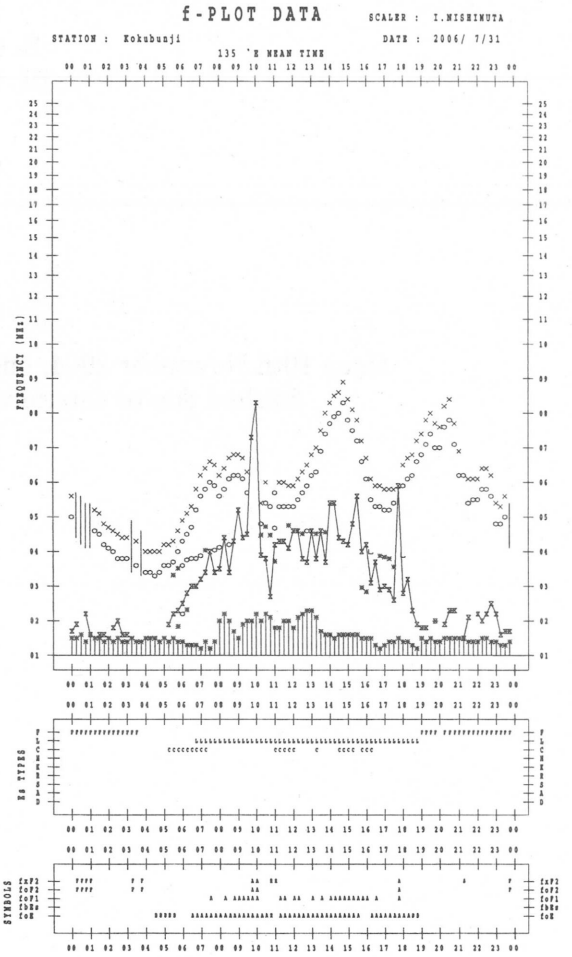

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/25
135 °E MEAN TIME
FREQUENCY (MHz)
Rx TYPES
SYMBOLS

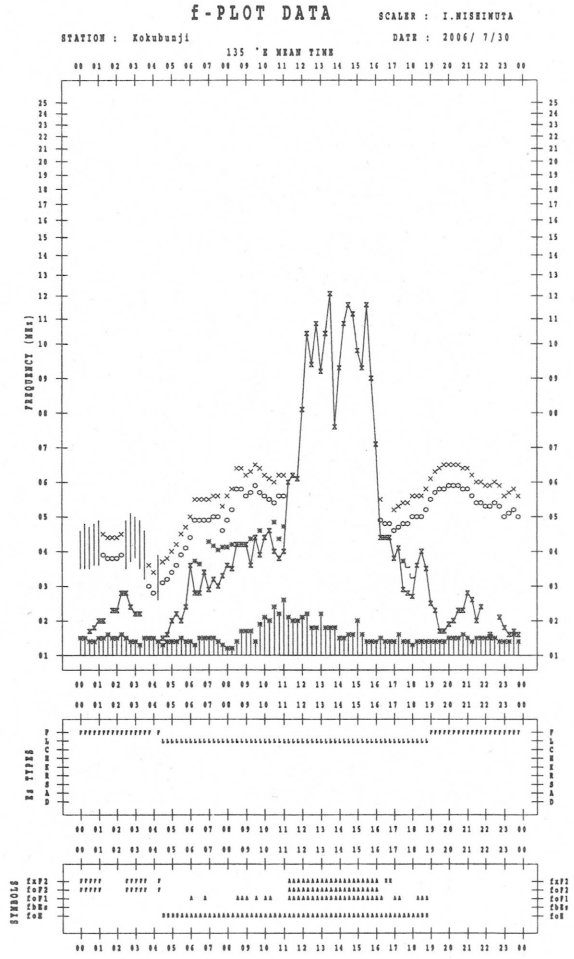

f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/27
135 °E MEAN TIME
FREQUENCY (MHz)
Rx TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/26
135 °E MEAN TIME
FREQUENCY (MHz)
Rx TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/28
135 °E MEAN TIME
FREQUENCY (MHz)
Rx TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/29
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/31
135 °E MEAN TIME
FREQUENCY (MHz)
Es TYPES
SYMBOLS


f-PLOT DATA
SCALER : I.NISHIMUTA
STATION : Kokubunji
DATE : 2006/ 7/30
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

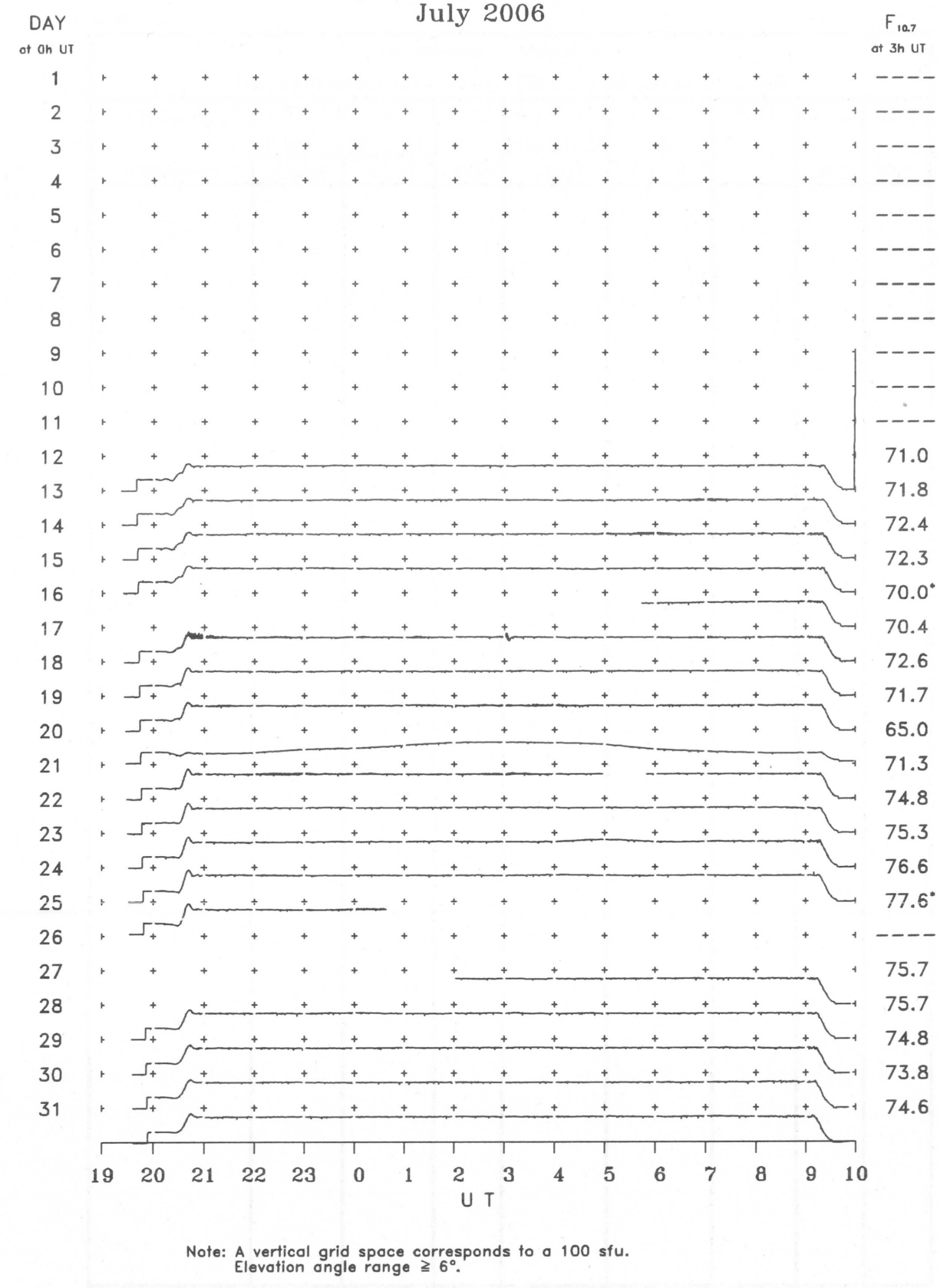
Hiraiso July 2006

Single-frequency observations
Normal observing period: 1925 - 1000 U.T. (sunrise to sunset)

JUL. 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



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

IONOSPHERIC DATA IN JAPAN FOR JULY 2006
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