F-735

IONOSPHERIC DATA IN JAPAN

FOR MARCH 2010

VOL. 62 NO. 3

CONTENTS

≪Real Time Ionograms on the Web ・・・・・・・・・・・・・http://wdc.nict.go.jp/index_eng.html≫

NATIONAL INSTITUTE OF INFORMATION
AND COMMUNICATIONS TECHNOLOGY
TOKYO, JAPAN

INTRODUCTION

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

Stations	Geographic(WGS84)		Geomagnetic (IGRF-10(2005))		Technical Method
	Latitude	Longitude	Latitude	Longitude	
✳Wakkanai/Sarobetsu	45˚10'N	141˚45'E	36.4˚N	208.9˚	Vertical Sounding (I)
Kokubunji	35˚43'N	139˚29'E	26.8˚N	208.2˚	Vertical Sounding (I)
Yamagawa	31˚12'N	130˚37'E	21.7˚N	200.5˚	Vertical Sounding (I)
Okinawa	26˚41'N	128˚09'E	17.0˚N	198.6˚	Vertical Sounding (I)
Hiraiso	36˚22'N	140˚37'E	27.6˚N	209.1˚	Solar Radio Emission (S)

✳We moved the observation facilities at Wakkanai to Sarobetsu on February 2009. The new observatory is located at approximately 26km south from the old observatory. The observation at Sarobetsu commenced on March 6, 2009.

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 a 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 by experienced specialists to supplement automatically-scaled parameters.

A1. Automatic Scaling

Digital ionograms are automatically scaled by the pattern recognition method. The following five characteristics of the ionospheric are listed below. 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 iono-spheric 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 very small ionization density of the layer (for *fEs*).

N Impossible automatic scaling because of complex echoes.

Blank No digital record because of problems occurring in the auto matic data processing system, but existence of film record.

c. Definitions of 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 spread ***F*** trace
foF2 ***foF1*** ***foE*** ***foEs***	Ordinary wave critical frequency for the ***F2***, ***F1***, ***E,*** and ***Es*** (including particle type ***E)*** layers, respectively
fbEs	Blanketing frequency of the ***Es*** layer, e.g. the lowest ordinary wave frequency visible through ***Es***
fmin	Lowest frequency that shows vertical ionospheric reflections
M(3000)F2 ***M(3000)F1***	Maximum usable frequency factor for a path of 3000 km for transmission by the ***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.
Z 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 as-sociated 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. 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
SGD Code	Letter Symbol	Morphological Classification
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.

B2. Summary Plots of F10.7 at Hiraiso

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

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

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

HOURLY VALUES OF foF2 AT Wakkanai

MAR. 2010

LAT. 45°10.0′N LON. 141°45.0′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	34	34	34	34	32	31	34	58	64	61	62	68	68	66	58	60	64	58	A	29	38	29	34	34
2	34	34	30	34	34	34	47	41	65	61	67	67	64	72	58	57	58	56	43	37	42	34	34	42
3	34	44	42	40	37	31	38	62		68	66	74	67	63	61	60	65	63	40	37	40	38	35	36
4	34	32	37	31	35	35	42	65	66	64	68	65	66	68	62	60	68	70	58	34	29	32	34	32
5	30	34	34	37	40		35	60	67	66	56	67		68	60	64	64	61	54	37	38	36	34	34
6	37	36	32	37	35	32	41	52	60	64	66	62	65	67	63	65	67	62	62	44	37	32	32	34
7	34	34	34	34	34	34	46	53	58	62	61	64			61	66	66	67	61	44	41	35	34	35
8	A	36	A	36	32	34	43	60	65	67		64	66	66	62	58	66	62	54	41	34	34	37	A
9	42	42	43	41	38	38	23	60	62	65	64	65	66	72	67	A	60	60	50	42	36	38	40	38
10	32	37	37	34	38	32	51	58	58	62	66	66	63	63	65	67	64	60	57	50	47	46	38	42
11	34	38	32	36	31	34	47	50	54	63	69	72	91	68	65	63	66	71	60	42	47	37	44	49
12	44	45	47	46	45	42	52	54	63	64	68	67		65	69	66	62	68	64	61	54	54	54	58
13	52	62		60	64	46	48	60	58	60	66	67	70	68	68	65	62	61	62	54	53	54	54	47
14	52	51	53	54	52	52	60	54	60			67	67	62	68	64	65	61	60	58	51	54	54	54
15	52	52	52	52	52	58	48	63	63	65	64	69	68	68	67	58	64	62	55	51	52	53	51	52
16	54	51	34	47	47	47	54	55	62	66	66	68	65	67	69	64	61	66	61	52	50	50	50	52
17	52	51	51	47	45	42	47	54	64	67	69		61	68	70	68	60	68	57	54	47	48	50	34
18	52	52	52	54	34	47	52	62	65	68	69	79	84	67	70	61	61	62	63	62	53	52	58	53
19	53	42	42	52	48	50	63	64	67			67	66	67	70	76	65	66	53	37	53	52	52	54
20	53	51	50	51	52	44	52	60	65	67	68		68	68	67	68	67	65	58	53	53	52	32	53
21	53	52	54	53	53	50	54	61	60	65	70	68	69	68	70	70	60	60	53	50	51	48	34	37
22	43	42	32	43	42	37	52	60	68	64	65	71	66	66	70	66	62	60	58	47	37	32	18	34
23	32	40	40	40	34	34	54	60	62	62	66	66	70	70	70	67	68	66	65	61	52	43	49	51
24	50	52	52	54	54	52	54	62	60	66		80	69	69	67	64	63	61	58	51	54	54	54	49
25	48	47	47	47	46	42	50	55	55	59	68	61	69	70	67	70	65	66	56	51	47	44	37	42
26	42	45	42	44	42	37	54	48	60	67	69	64	69	70	70	70	64	62	61	50	53	51	47	49
27	48	52	50	54	38	34	48	58	62	69	70	70	68	70	64	66	66	58	57	54	54	52	37	42
28		41		47	45	32	47	54	60	66	69	69	68	57	68	66	65	64	66	52	47	47	41	47
29	47	48	50	50	41	34	47	60	57	64	54		69	65	66	64	61	55	58	53	54	50	51	50
30	44	47	45	46	42	42	47	53	56	67	68	66	68	65	58	65	61	55	50	45	47	47	41	42
31	41	34	34	40	37	34	46	51	54	61	69		71	65	61	61	60	61	56	58	60	54	54	52
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	29	31	28	31	31	30	31	31	30	29	27	27	28	30	31	30	31	31	30	31	31	31	31	30
MED	44	44	42	46	41	37	48	58	62	65	67	67	68	68	67	65	64	62	58	50	47	47	41	44
U Q	52	51	50	52	47	46	52	60	65	67	69	69	69	68	69	67	66	66	61	54	53	52	51	52
L Q	34	36	34	37	35	34	46	54	58	62	65	65	66	65	62	61	61	60	54	42	40	36	34	36

HOURLY VALUES OF fEs AT Wakkanai

MAR. 2010

LAT. 45°10.0′N LON. 141°45.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	26	G	G	G	G	G	G	27		38	38	38	G	G	G	34	G	28	40	32	34	29	25	24
2	G	G	G	G	23	G	G	28	38	49	39	43	39	G	G	G		G	G	G	G	G	G	G
3	33	32	G	G	G	G	G	35	41	G	G	39	48	G	G	34	G		G	G	G	G	G	G
4	G	G	28	32	G	G	G	32	34	39	41	41	40	G	G	34	G	G	G	G	G	G	G	G
5	G	G	G	G	G		G	44	32	35	38	38	G	G	G	36	31	G	11	G	G	G	G	G
6	G	G	G	G	G	G	G	44	33	34	G	38	G	G	G	34	36	G	G	G	G	G	G	G
7	G	G	G	G	G	G	G	39	G	38	40	38	41	37	38	34	33	60	27	G	33	G	32	32
8	39	32	33	G	24	G	G	41	37	35	40		G	G	G	34	34	29	G	G	G	33	35	41
9	41	34	28	G	29	G	33		44	57	38	40	G	G	42	59	G	G	26	25	25	G	G	G
10	G	G	G	25	24	G	G	32	36	40	40	41	46	38	40	G	33	G	G	G	G	G	G	G
11	G	G	G	G	G	G	G			40	42	G	42	38	42	34	G		28	G	G	G	G	G
12	38	34	G	G	25	G			33	G	48	44	G	40	G		33	G	G	G	G	G	G	G
13	G	G		G	32	G	G	29	34	42	39	39	G	39	G	G	G	G	24	26	G	G	G	G
14	G	G	G	G	G	G	30	30	34	G	39	40	G	38	G	34	36	34	G	29	25	G	G	G
15	G	27	39	41	34	34	29	32	35	47	45	47	G	42	47	40	35	36	26	29	22	23	G	G
16	G	G	G	28	G	G		30	33	39	43	45	43	41	37	43	32	G	G	G	G	G	G	G
17	G	G	G	G	G	G		G	33	40	38	41	G	39	G	G	33	G	G	G	G	G	G	G
18	G	G	G	G	G	G	G	34	G	39	38	G	G	G	G	G	G	G	G	G	G	G	G	G
19	G	G	G	G	G	G		G	34			G			G	G	32	27	29	27	G	G	G	G
20	G	G	G	G	G	G	G	30		G	G	G	40	G	38	G	G	G	G	G	G	G	G	G
21	G	26	G	G	23	G	G	32	40	36	G	G	G	38	36	39	35	28	28	32	G	G	G	G
22	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	38	G	G	G	G	G	G	G	G
23	G	G	G	G	G	G		G	37	G	40	38	G	62	G	35	32	36	G	G	G	G	G	G
24	G	G	G	24	G	G		32	35	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
25	G	G	G	G	G	G	38	G	34	G	G	G	38	G	G	37	34	32	30	29	G	G	G	G
26	G	G	G	G	G	G	40	41	37	G	38	G	G	G	G	G		G	G	G	G	G	G	G
27	G	G	G	G	11	G	30	G	34	G	G	G	G	G	G	36	35	28	24	G	G	G	G	25
28		G		G	G	G	G	38	34	G	G	G	G	G	G	G		G	G	G	G	G	G	G
29	G	G	G	G	29	G	31	35	35	G	G	G	G	G	G	39	G	28	G	G	G	G	G	G
30	G	G	G	G	G	G	28	31		G	G	G	G	G	G	36		G	G	26	G	G	G	G
31	G	G	G	G	G	G	32	35	40	G	G	G	G	G	38	36	G	29	26	G	G	G	G	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	30	31	29	31	31	30	25	28	27	30	30	30	30	30	31	30	27	29	31	31	31	31	31	31
MED	G	G	G	G	G	G	G	32	34	34	38	38	G	G	G	34	32	G	G	G	G	G	G	G
U Q	G	G	G	G	23	G	30	35	37	39	40	40	39	38	37	36	34	28	26	26	G	G	G	G
L Q	G	G	G	G	G	G	G	27	33	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Wakkanai

MAR. 2010

LAT. 45°10.0′N LON. 141°45.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	15	16	15	16	14	14	15	14	14	14	14	14	14	14	14	14	14	14	14	15	14	14	15	14
2	14	14	14	14	15	15	14	14	14	14	14	14	14	14	14	14	14	16	14	15	14	15	14	16
3	15	14	14	14	15	16	14	14	14	14	14	14	14	15	14	14	14	17	15	14	14	14	15	14
4	15	15	14	14	14	15	14	14	14	14	14	14	14	14	14	14	15	16	15	14	14	15	15	14
5	14	15	15	14	14		14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	15	14
6	15	15	15	15	15	14	14	15	14	14	14	14	14	14	14	14	14	17	14	14	15	14	15	14
7	15	14	14	14	14	15	14	14	14	14	14	14	17	14	14	14	14	14	14	14	14	15	14	14
8	14	14	14	14	15	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14	15	14	14	14
9	14	14	14	14	14	15	14	14	14	14	14	14	14	14	14	14	14	18	14	14	14	15	15	17
10	15	14	14	14	14	15	14	14	14	14	14	14	14	14	14	14	14	15	15	14	14	14	15	14
11	15	14	16	14	14	15	14	14	14	14	14	14	15	14	14	14	14	14	14	14	14	15	15	15
12	14	14	14	15	14	14	16	14	14	14	14	14	14	14	14	14	14	17	14	14	14	14	14	14
13	14	14		14	14	14	15	14	14	14	14	14	15	14	14	14	14	15	14	14	14	14	14	14
14	14	15	14	14	14	14	16	14	14	14	14	14	14	14	15	14	14	14	14	15	14	14	14	14
15	14	14	14	14	14	14	14	14	14	14	15	15	14	15	15	14	14	14	14	14	15	14	14	14
16	14	15	15	14	14	15	17	14	14	14	14	15	14	14	14	14	14	18	14	14	15	14	14	14
17	14	14	14	14	14	14	15	14	14	14	14	14	14	14	14	14	14	18	14	14	14	15	14	15
18	15	14	14	14	15	14	14	15	14	14	14	14	14	15	14	14	14	21	14	15	15	14	14	15
19	14	14	14	15	14	14	14	14	14	14		14	15	15	18	15	14	17	14	14	14	14	14	14
20	14	15	14	14	15	14	14	14	14	14	14	15	14	14	14	14	14	21	15	14	14	15	14	14
21	14	15	14	16	16	14	17	14	14	14	14	14	14	14	14	14	14	14	14	14	15	14	14	15
22	14	15	15	14	14	14	17	14	14	43	14	15	15	14	14	14	14	14	15	14	15	15	15	14
23	14	14	14	14	14	15	14	14	14	14	20	24	16	15	14	15	14	18	15	14	15	15	14	14
24	14	14	14	15	14	14	14	14	14	14	14	16	16	14	15	15	14	15	14	14	17	14	14	14
25	14	14	14	14	14	14	14	14	14	15	14	17	17	14	14	14	14	14	15	14	15	14	14	15
26	14	15	14	14	14	14	14	14	14	14	15	15	17	14	14	14	14	20	15	14	15	15	15	14
27	15	14	14	14	15	14	14	14	14	14	14	15	20	15	14	14	14	14	15	15	14	14	14	16
28		15		14	17	14	20	14	14	14	14	15	20	14	17	16	14	20	15	14	14	14	15	15
29	15	15	14	14	14	15	14	14	14	15	15	14	14	16	14	14	14	14	15	14	14	14	14	15
30	14	14	14	14	14	15	14	14	14	14	14	15	14	15	17	14	14	21	15	14	14	14	14	14
31	14	14	15	15	14	14	15	14	14	14	14	14	15	14	14	14	14	14	15	14	14	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	30	31	29	31	31	30	31	31	31	31	30	31	31	31	31	31	31	31	31	31	31	31	31	31
MED	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	15	14	14	14	14	14	14
U Q	15	15	14	14	15	15	15	14	14	14	14	15	15	15	14	14	14	18	15	14	15	15	15	15
L Q	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Kokubunji

MAR. 2010

LAT. 35°43.0′N LON. 139°29.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

HD	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	32	26	34	34	35		38	52	63	67	67	78	78	69	66	62	55	66	A	A	A		34	27
2	32	32	34	34	36	27	36	52	69	74	65	69	82	75	72	65	61	51	49	34	32	38		32
3	34		36	36	30	26	34		65	77	78	72	75	71	62	62	58	61	57	36	36	34	32	27
4	35	30	32	36	32	26	39	54	67	73	62	76	80	67	67	71	66	67	66	27	A	A	A	A
5	31	32	34	38				49	64	75	66	83	78	72	69	61	65	64	60	41			31	
6	36	34	32	35	27	30	35	52	58	61	62	77	87	90	85	74	65	72	64	44	37			27
7	34	32	34	34		28	34	44	63	69	58	69	86	106	91	84	66	77	67	34		34	34	32
8	38	36	34	36	35	27	20	65	68	73	63	66	91	96	64	67	66	69	52	A	A	31	39	36
9	32	34	33			28	41	59	64	65	62	67	77	73	73	68	63	65	59	36	27		31	
10	A		34	37		30	41	54	61	48	68	61	78	78	66	75	72	68	58	46	34	39	A	
11	32	37		38	38	39	47	N	71	63	71	72	77	91	86	82	68	62	76	47	34	37	32	
12		39	32	39	39	34	46	66	67	69	64	67	77	84	88	85	69	82	77	55	28	37	41	42
13	39	41	44	44	44	32	46	62	72	62	72	86	90	85	82	72	76	74	59	51	44	45	42	44
14	42	44	42	44	46	28	45	58	65	68	64	73	85	84	71	75	78	71	66	45		41	39	41
15	42	42	42	42	41	38	46	66	68	64	73	81	71	76	68	73	72	69	66	50	A	44	47	42
16	41	42	45	44	42	42	45	72	79	67	72	73	81	72	68	65	68	72	74	53	A	A	34	41
17	39		42	39	41	31	41	59	71	72	67	84	104	76	71	71	72	66	62	51	42	32	34	34
18	41	38	39	39	32		43	57	73	75	73	90	101	91	75	69	62	59	59	54	52	52	51	47
19	49	42	43	43	36	35	46	66	84	80	81	88	91	82	78	69	75	67	57	43	41	42	42	43
20	45	42	48	38	39		46	62	66	85	85	72	84	86	72	67	69	64	66	52	44	42	42	43
21	36	42	38	39	42	30	47	63	69	67	66	81	80	78	64	66	67	73	75	54	36	38	39	36
22	36	36	38	37	38	30	47	58	62	62	66	75	87	81	80	74	65	65	66	54	28	30	27	34
23	36	32	37	38	36	48	42	59	64	63	58	69	87	94	82	72	72	77	72	53	34	36		41
24	41	41	39	41	36	27	46	59	59	68	70	85	90	85	74	70	67	66	64	53	44	43	42	45
25	49	47	44	41	44	34	42	54	55	64	68	85	96	96	85	78	74	78	71	44	36	34	39	39
26	39	39	38	45	34		45	58	58	66	66	73	87	80	84	78	80	81	71	54	46	43	43	42
27	36	44	44	31	27		45		68	78	84	87	91	90	86	69	68	67	66	51	44	43	41	38
28	38	36	39	32	30	26	46	64	66	64	65	69	77	82	78	72	66	68	71	54	32	34	32	36
29	38	31	41	36			44	58	58	58	74	72	73	77	74	65	62	64	61	51	36	38	27	42
30	42	47	46	42	43	39	46	61	62	66	74	80	80	69	76	64	65	61	55	51	42	37	48	27
31	34	41	43	48			42	56	74	65	77	90	91	85	74	61	55	56	64	64	54	49	49	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	29	28	30	30	25	23	30	28	31	31	31	31	31	31	31	31	31	31	30	29	23	25	26	26
MED	38	38	38	38	36	30	44	58	66	67	67	75	84	82	74	70	67	67	65	51	36	38	39	40
UQ	41	42	43	42	41	35	46	62	69	73	73	84	90	90	82	74	72	72	71	53	44	43	42	42
LQ	34	33	34	36	33	27	41	54	62	64	64	69	78	75	68	65	65	64	59	43	34	34	32	34

HOURLY VALUES OF fEs AT Kokubunji

MAR. 2010

LAT. 35°43.0′N LON. 139°29.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	31	41	50	40	G	25	25
2	G	G	G	G	G	G	G	G	G	G	G	G	G	G	40	G	G	G	G	G	G	G	G	G
3	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
4	G	G	G	G	G	G	G	G	G	G	G	G	G	52	50	G	38	46	37	31	36	36	29	30
5	G	G	G	G	11		G	G	G	G	G	G	G	49	G	G	34	G	G	G			G	
6	G	G	G	G	G	G	G	32	G	G	G	G	G	G	G	G	G	G	G	30	G	G		G
7	G	G	G	G		G	G	G	33	G	G	G	49	49	39	G	35	G	G	G	G	G	G	G
8	G	G	G	G	G	G	29	28	38	G	G	G	G	G	G	G	G	34	26	36	68	G	32	G
9	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	
10	27	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	33	27	G	27	G	33	
11	25	G	G	G	G	G	22	G	G	G	G	G	48	G	38	G	G	G	G	G	G	G	G	
12		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
13	G	G	G	G	G	G	30	G	G	41	G	50	49	G	38	G	G	G	31	27	G	29	G	G
14	G	G	G	G	G	G	G	G	G	G	G	G	G	G	40	G	G	G	G	G	30	G	G	G
15	G	G	G	G	G	G	G	G	G	G	G	51	45	52	64	G	45	33	38	22	34	G	G	G
16	25	G	G	G	G	G	24	G	34	G	G	G	G	G	G	G	G	34	26	34		39	G	G
17	27	33	30	23	29	G	G	G	G	53	54	G	G	G	45	60	48	31	G	G	G	27	G	33
18	G	G	G	29	G	G	28	G	G	G	G	G	G	G	G	G	G	G	G	G	26	G	G	G
19	G	G	G	G	G	G	26	30	G	G	G	G	G	G	38	G	G	G	G	G	G	G	G	G
20	G	G	G	G	G		G	G	35	G	39	G	G	G	G	G	G	G	G	G	G	G	G	G
21	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	34	27	31	23	G	G	G
22	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	25	G	G	G	G	G
23	G	G	G	G	G	G	36	G	G	G	G	G	49	G	G	G	33	G	36	G	27	28	33	30
24	G	27	G	G	G	G	29	40	G	G	50	G	65	48	G	G	G	G	G	G	G	G	G	G
25	G	29	G	G	G	G	G	G	G	G	G	G	G	50	G	G	33	35	G	G	G	G	G	G
26	33	29	G	G	G	G	29	G	G	44	50	48	43	G	G	G	G	G	G	G	G	G	G	G
27	G	G	G	G	G	G	29		G	G	44	G	G	G	G	G	G	29	G	G	G	G	G	G
28	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	36	37	29	G	G	G	G	G	G
29	G	G	G	G			28	G	G	G	G	G	G	G	G	G	G	G	G	27	G	G	G	G
30	G	G	G	G	G	G	27	G	G	G	G	G	G	G	G	G	35	G	24	G	G	G	G	G
31	G	G	G	G	G	G	29	G	G	G	G	G	G	G	G	40	G	34	27	G	G	G	G	G
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	31	31	31	28	28	31	30	31	31	31	31	31	31	31	31	31	31	31	31	29	30	30	27
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
U Q	G	G	G	G	G	G	28	G	G	G	G	G	G	G	38	G	33	33	27	27	26	G	G	G
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Kokubunji

MAR. 2010

LAT. 35°43.0′N LON. 139°29.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

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

HOURLY VALUES OF foF2 AT Yamagawa

MAR. 2010

LAT. 31°12.0′N LON. 130°37.0′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	42	42		38	34	34		46	51	59	73	77	88	86	87	76	66	60	39	26	34	A	41	34
2	34	35		36	45	30		45	53	55	74	70	78	94	80	82	68	65	58	A	37	40	37	32
3	34	34	32	34				45	68	68	72	70	80	88	72	71	60	58	68	52	34	29	26	
4	31	28	34	34	39			48	60	71	74	76	79	77	87	78	66	71	75	44	30	A	31	30
5	30	32	34	34	31			45	58	66	72	88	81	74	77	76	67	82	71	A	A	28	32	32
6	34	30	37	38	37	59			51	60	72	73	67	87	91	84	78	83	83	66	34		28	30
7	32		34	34	36	30	32		60	60	64	60	85	104	92	91	78	76	66	46	32	32	34	34
8	37	36	34	35	36	34	31	49	57	67	67	64	82	96	C	72	70	66	65	45	32	35	37	36
9	30	37	34	34	36	29	30	48	55	67	65	61	68	80	76	69	76	78	39	50	40	36	36	34
10	35	34	34	34	36	28	28	51	59	63	67	64	75	90	69	63	74	67	39	50	42	38	36	28
11	34	32	32	34	32		34	52	67	67	59	63	76	86	87	89	76	68	82	54	40	37	37	32
12	36	37	37	32	41	29	31	52	63	60	62	65		86	92	88	86	94	89	65	36	29	32	34
13	34	30	40	41	50			54	65	60		80	86	92	92	86	87	85	71	63	44	44	42	44
14	43	A	40	34	38	26	28	60	64	78	65	70	87	79	90	88	90	77	73	45	45	34	32	32
15	34	34	32	37	41	30	32	54	67	68	70	78	68	84	78	80	80	77	81	70	A	41	A	A
16	A	36	38	34	34	28	30	50	71	75	64	68	84	77	68	67	61	76	88	71	54	A	A	A
17	41	40	37	37	40	20	32	52	67	77	67	70	87	97	92	82	78	72	71	54	A	A	A	32
18	36	36	36	34	28		29	52	63	64	84	87	89	96	91	81	74	61	42	48	54	47	42	44
19	34	42	46	37	38	35	32	52	78	85	71	81	96	110	97	88	75	75	71	54	47	47	51	42
20	42	41	41	40	42	32	32	54	74	90	87	72	84	90	88	72	68	71	81	73	51	44	43	34
21	36	36	32	36	37		32	52	68	78	76	69	86	97	80	63	68	80	87	72	A	34	40	34
22	36	38	37	36	37	32	36		68	78	72	72	80	88	88	86	83	67	74	72	50		34	37
23	28	34	28	47	38		29	52	62	66	62	70	75	88	95	81	75	76	81	71	A	A	36	36
24	37	38	38	45			28	50	58	60	68	72	88	88	94	68	68	72	65	54	48	37	33	37
25	34	32	37	40	36		30	50	54	61	67	80	94	89	104	91	94	95	87	55	39		41	42
26	41	38	40	44	34		28	54	71	67	66	A	A	95	96	98	90	95	83	66	50	43	44	37
27	42	44	44	41	28	26	30	52	70	77	78	80	95	107	108	77	67	72	80	68	54	40	36	34
28	37	36	41	44	34		30	54	64	67	68	71	84	91	94	83	74	71	72	66	40	34	34	37
29	36	40	36	37			32	55	61	62	64	75	76	76	82	78	73	68	57	52	46	37	43	42
30	40	42	38	42	32	29	34	59	69	72	72	68	77	91	91	68	64	66	66	54	44	37	41	38
31	40	38	41	43			30	50	62	71	76	74	78	88	82	64	60	64	63	70	52	A	49	47
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	29	31	27	17	24	28	31	31	30	30	29	31	30	31	31	31	31	29	26	22	28	28
MED	36	36	37	37	36	30	30	52	63	67	69	72	82	88	89	80	74	72	71	54	43	37	36	34
U Q	40	39	40	41	39	33	32	54	68	75	73	77	87	95	92	86	78	78	81	69	50	41	41	37
L Q	34	34	34	34	34	28	29	49	58	61	65	68	76	86	80	71	67	67	65	50	36	34	33	32

HOURLY VALUES OF fEs AT Yamagawa

MAR. 2010

LAT. 31°12.0′N LON. 130°37.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	32	33	G	G	G	G	G	G	152	45	41	42	42	39	G	37	38	48		30	68	40	26
2	28	G		G	G	G		G	G	45	G	G		G	G	G	G	G	49	40	G	G	G	G
3	G	G	G	G	G	G	G	G	G	35	G	48	43	41	40	46	43	37	34	26	G	G	G	
4	G	G	G	G	G			G	32	G	G	G	G	G	G	G	37	33	48	30	27	39	G	G
5	G	G	G	G	G	G		G	38	G	G	G	G	46	G	G	G	40	57	77	60	G	G	G
6	G	G	G	G	G	G		G	G	G	G	G	G	G	G	G	35	G	29	11	G	G	G	G
7	G	G	G	G	G	G	G	G	34	39	G	G	43	40	67	60	35	G	G	29	25	G	G	G
8	G	G	G	G	G	G	G	G	G	G	41	G	40	G	C	G	G	G	G	G	G	G	G	G
9	G	G	G	G	G	G	G			35	G	G	G	G	G	G	G	G	G	G	G	G	G	G
10	G	G	G	G	G	G	G		32	35	G	G	G	G	50	48	44	43	45	26	30	G	G	G
11	G	G	G	G	G		G	G	G		G	42	50	G	G	G	G	G	G	G	G	G	G	G
12	G	G	G	G	G	G	G		G	52	G	G		46	G	G	G	31	G	11	11	G	24	27
13	G	G	G	G	11			G	G	G		40	50	G	48	N	40		44	30	32	30	30	G
14	G	33	G	G	G	G	G	32	38	42	G	G	G	51	52	52	49	42	43	50	28	G	G	G
15	G	G	G	G	G	G	G		G	40	G	G	G	48	43	44	43	34	G	33	48	31	40	40
16	42	G	26	G	G	G	G	28	G	36	G	G	50	42	G	40	G	51	65	57	34	45	48	46
17	G	G	G	G	G	32	G	26	40	38	38	52	49	47	50	44			G	G	41	37	40	32
18	33	G	G	G	G		G	28		G	43	47	G	G	G	52	42	36	50	60	35	G	24	28
19	G	G	24	G	G	G	G	32	32	G	G	G	G	G	G	39	36	36	32	24	G	G	G	G
20	G	G	G	G	G	G	G	32	G	36	G	44	52	50	55	G	44	68	31	34	30	G	G	G
21	G	G	G	G	G		G	29	34	40	41	43	51	50	50		43	38	32	26	34	G	G	G
22	G	G	G	G	G	G	G		33	38	38	51	48	G	G	42	G	G	27	28	24	G	G	G
23	G	G	G	G	G	G	G	G	G	G	G	G	G	G		38	G	42	40	34	36	33	G	G
24	G	G	G	G	30		G	35	40	G	39	G	G	G	G	50	43	58	51	49	32	G	G	G
25	G	G	G	G	11		G	G	34	G	G	47	43	40	G	G	G	G	31	26	G		G	G
26	G	G	G	G	36		G	G	33	G	52	72	88	70	46	G	G	34	33	26	24	G	G	G
27	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	49	G		28	G	G	G	G	G
28	G	G	G	G	G		G	34	33	G	G	G	41	G	46	52	48	41	29	G	G	G	G	28
29	G	G	G	G		G	G	G	G	G	G	G	G	G	G	44	G	37	29	G	G	29	G	G
30	G	G	G	G	G	G	G	G	34	G	G	G	G	G	41	41	46	35	28	24	G	G	G	G
31	G	G	G	G			G	30	33	G	G	G	42	44	G	38	47	40	40	28	27	44	G	G
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	30	31	29	21	26	26	29	30	30	31	29	31	29	29	30	28	31	30	31	30	31	30
MED	G	G	G	G	G	G	G	G	32	G	G	G	40	G	G	39	36	36	32	26	25	G	G	G
U Q	G	G	G	G	G	G	G	29	34	38	38	43	48	46	47	47	43	40	45	34	32	30	G	G
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	27	11	G	G	G	G

HOURLY VALUES OF fmin AT Yamagawa

MAR. 2010

LAT. 31°12.0′N LON. 130°37.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

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

HOURLY VALUES OF foF2 AT Okinawa

MAR. 2010

LAT. 26°41.0′N LON. 128°09.0′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	42			34	31	32		41	51	63	75	90	110	130	130	132	95	67	61	54	43		A	A
2					42			38	54	60	66	96	102	114	127	121	121	85	67	54	52	44	52	
3		34	30	30				44	64	65	68	84	105	102	113	90	88	73	70	66	31			28
4	30	32		41	31			42	55	60	77	97	88	101	107	98	88	89	75	60	44		A	32
5			28		29			38	60	64	78	90	90	80	86	98	90	82	85	63	44		30	
6	30	34	30	42	31			42	50	57	74	94	86	94	121	111	120	125	131	110	67		29	34
7			28	30				46	52	58	69	72	87	106	120	101	91	84	77	60	29		32	
8	30	34	34	28	34	30			58	65	76	85	108	137	143	125	108	90	86	72	54		43	44
9	42	42	40	34	37	31		46	55	64	68	73	75	78	76	87	80	81	67	66	53	43	36	
10		31		32	31			48	55	64	72	78	82	97	90	70	72	82	67	60	42	36	32	
11			32	28	30			48	64	72	72	70	80	97	104	104	108	84	89	82	53	37	34	36
12	30	31		32	32	32		52	59	61	66	72	73	92	96	105	112	108	106	71	46		30	30
13	31	28	34	33	42			46	60	64	75	85	90	101	108	104	102	106	101	81	44			44
14	44	45	43	45	42			50	64	68	68	81	100	120	112	98	106	101	87	81		A		
15				41	41	29		52	67	80	93	82	81	81	96	95	88	100	103	86	52	35		
16	34	32	A	30	36			51	70	80	76	77	97	90	76	81	78	80	88	94	60	A		
17	32	A		34	41			52	67	75	76	83	101	126	142	141	127	124	102	82		34	31	
18	29	41		44	31			52	62	70	84	107	115	111	112	125	110	96	76	71	61	45	32	34
19		32	31	37	36		29		75	87	78	86	115	146	143	136	127	126	110	87	80	72	67	52
20	41	41	34		41			54	71	85	87	82	97	108	108	97	86	85	87	80	53	52	42	A
21		34	28	30	32			54	64	75	77	76	86	108	108	91	102	108	105	78	41			40
22	38	34	34	30	34	31	31	53	62	81	81	80	88	106	107	110	121	103	94	76	66	67	42	A
23		A	33	34	32			52	57	68	69	76	88	88	102	101	108	98	99	76	52		36	
24			46	51	37	A		48	58	66	71	78	90	105	110	91	84	86	75	63	54	44		29
25		32	30	35	31	A	A	47	55	68	70	86	110	126	144	148	149	149	131	89	66	62	49	44
26	44	44	44	51	34			54	61	70	68	77	91	108	123	124	130	130	127	90	88	77	67	53
27	44	52	53	32				55	65	84	86	91	105	122	124	97	85	90	88	87	66	42	30	34
28	42	41	40	42	32			52	63	73	82	82	90	108	116	106	97	88	96	82	61	47	44	47
29		47	46	38				50	63	66	67	80	75	76	85	90	91	73	57	54	52	36	47	44
30	44	46	46	36	28			52	65	76	68	76	78	101	112	84	76	86	84	77	54		34	38
31		40	42	30				45	65	78	84	77	77	96	104	82	76	74	74	70		50	48	47
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	17	22	22	28	26	6	2	29	31	31	31	31	31	31	31	31	31	31	31	31	28	17	22	18
MED	38	34	34	34	33	31	30	50	62	68	75	82	90	105	110	101	97	89	87	76	53	44	36	39
U Q	43	42	43	41	37	32	31	52	65	76	78	86	102	114	123	121	112	106	102	82	61	57	47	44
L Q	30	32	30	30	31	30	29	45	55	64	68	77	82	94	102	91	86	82	75	63	44	36	32	34

HOURLY VALUES OF fEs AT Okinawa

MAR. 2010

LAT. 26°41.0′N LON. 128°09.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G			G	G	G		G	G	36	38	39	G	G	G	G	G	G	G	G	G		32	49
2				G	G	G		G	G	G	G	G	G	G	G	G	N	G	G	G	24	G	G	G
3		G	G	G	G	G		G	G	G	G	G	G	G	41	G	G	G	G	G	G			G
4	G	G		G	11			G	G	G	G	G	G	G	G	G	G	G	G	G	G		30	G
5	33	G	G	G	G			G	G	G	G	G	G	G	49	38	G	41	30	39	35	26	G	
6	G	G	G	G	31	G		G	G	G	G	G	G	G	G	G	G	G		G		G	G	G
7			G	G		G	G	G	G	36	G	G	G	G		G	G	G	G	11	G		G	
8	G	G	G	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G		G	G
9	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	
10		G		G	G			G	G	36	G	G	G	G	G	G	G	G	29	26	G	G	G	G
11		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
12	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	45	39	32	G			G	G
13	G	G	G	G	11			G	G	G	G	G	G	G	G	G	G	G	G	G	G	G		G
14	30	27	G	G	G			G	G	G	G	G	G	48	G	G	46	39	36	G		50		
15				G	G	G		G	G	G	G	49	G	G	G	G	G	G	36	G	G	G		
16	G	28	40	G	G	G		29	G	G	G	G	46	G	G	G	G	49	44	51	58	38		48
17	28	49	39	31	32	29	G	G	32	G	40	46	59	51	52	48	G	G	32	33		G	G	
18	G	G	G	G	G			G	37	G	G	40	48	49	G	49	50	122	114	50	30	G	G	33
19	37	26	G	G	G	G	G		G	G	G	G	G	G	G	48	39	G	32	30	30	G	G	G
20	G	G	G	G	G		G	G	G	G	G	G	G	G	G	G	40	57	61	G	44	G	G	30
21		G	G	G	G		G	G		39	G	G	G	75	60	47	G	G	33	28	48	29		G
22	G	G	G	G	G	G	G	G	32	G	G	42	56	51	50	85	69	G	30	29	36	G	G	36
23	27	41	G	G	G	G		G	G	G	G	40	G	G	G	58	43	39	31	29	G		28	
24		G	G	G	28	30		G	G	G	G	G	G	G	G	G	G	34	32	G	G	G		G
25		G	G	G	23	28	30	G	G	G	G	G	G	G	G	G	40	35	35	40	28	G	G	G
26	G	G	G	G	35			28	G	G	G	G	G	42	50	61	G	G	30	39	27	G	G	G
27	G	G	G	G			G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
28	G	G	G	G	G			G	G	G	G	G	G	G	G	40	G	39	G	36	30	32	G	G
29		G	G	G				G	G	G	G	G	G	G	G	G	G	G	29	G	G	G	G	28
30	G	G	G	G	G		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
31		G	G	G			G	33	G	G	G	40	G	G	G	G	G	G	G	26		G	G	G
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	20	27	26	31	27	17	14	29	30	31	31	31	31	31	30	31	30	31	30	31	26	24	24	24
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	30	G	G	G	G	G
U Q	14	G	G	G	11	G	G	G	G	G	G	G	G	G	G	40	39	39	32	30	30	G	G	14
L Q	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

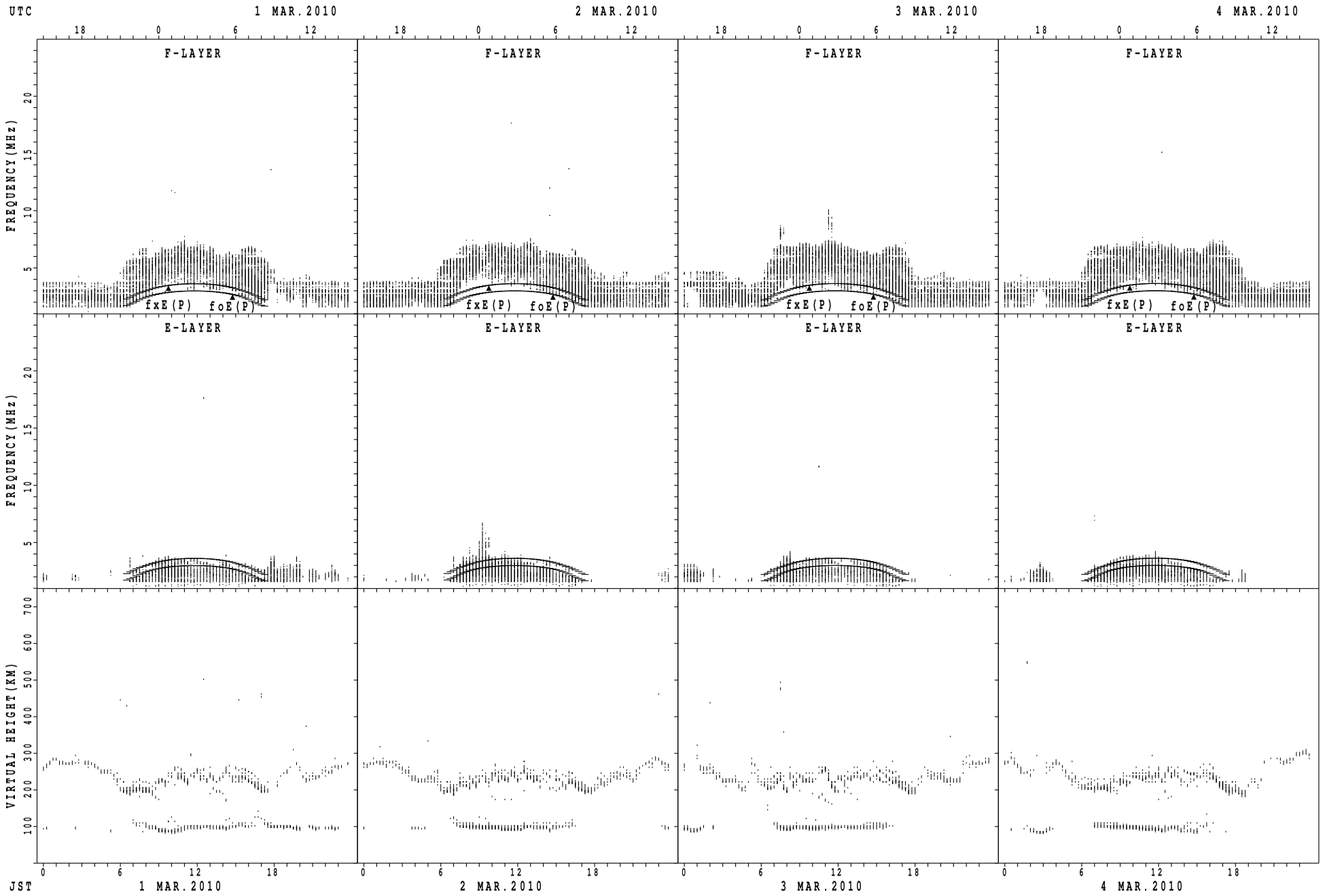
HOURLY VALUES OF fmin AT Okinawa

MAR. 2010

LAT. 26°41.0′N LON. 128°09.0′E SWEEP 1.0MHz TO 30.0MHz AUTOMATIC SCALING

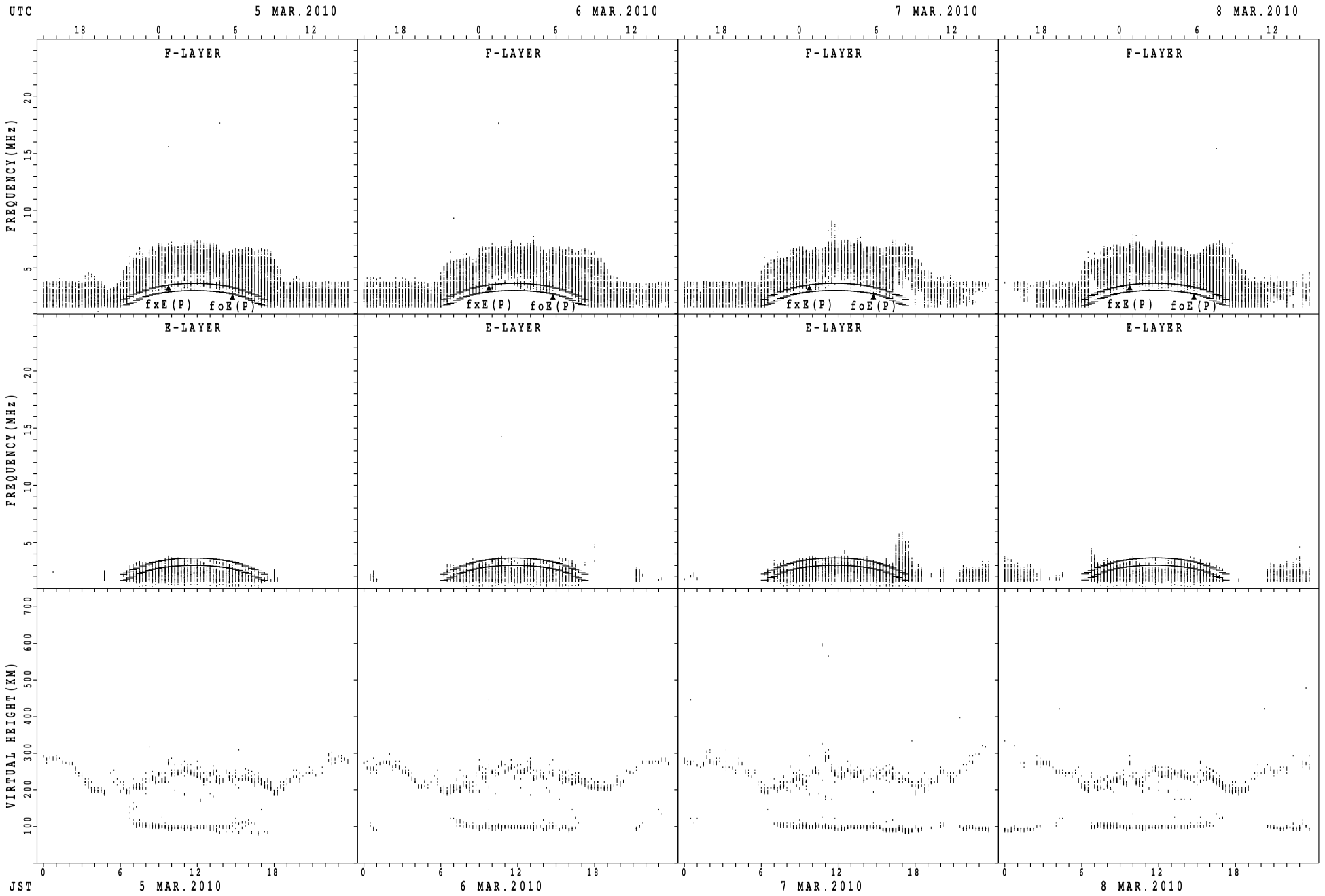
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	26			15	20	15		18	15	28	30	42	44	52	22	41	21	18	22	15	21		14	14
2				16	15	16		17	26	20	44	48	49	48	43	42	15	14	18	15	16	18	18	28
3		21	20	15	14	15		17	15	18	41	44	43	44	42	24	17	14	23	26	15			18
4	16	15		14	16			18	27	15	22	42	43	44	43	40	30	18	21	15	15		15	15
5	15	18	15	16	15			21	28	30	18	43	43	55	43	22	17	16	14	14	14	14	21	
6	18	16	15	30	21	16		20	14	35	43	42	49	44	48	22	36	26	20	14	18	16	22	14
7			17	15		14	18	23	14	20	22	24	52	42	41	35	14	28	20	15	15		18	
8	16	15	15	16	15	15	15		15	18	42	42	45	52	44	40	20	14	21	15	15		28	23
9	26	16	15	16	15	16	18	21	15	21	22	43	47	43	43	42	36	14	23	15	16	15	22	
10		18		15	15			21	14	15	21	43	49	43	43	42	39	16	15	16	15	15	15	16
11		17	18	17	16	15	16	20	14	15	21	44	48	42	44	27	24	14	22	15	18	20	22	15
12	15	17	18	20	18	14	15	22	14	29	22	44	45	44	43	42	22	16	15	15	15		16	15
13	15	20	22	22	14			20	14	16	39	44	53	44	43	41	38	15	24	14	15	23		18
14	14	15	23	18	14			21	14	30	23	44	50	40	44	43	28	14	15	20		15		
15				20	14	20		20	15	16	42	34	46	45	44	36	21	15	16	16	14	15		
16	16	15	14	18	14	17		15	15	15	23	44	52	44	46	44	22	16	16	14	14	14		16
17	15	14	14	15	14	15	14	22	14	20	33	45	35	35	34	33	41	15	18	14		14	15	
18	23	21	15	15	14			21	14	17	23	42	34	36	35	30	24	16	14	15	14	26	20	15
19	14	18	18	17	14	26	22		14	33	43	44	54	55	44	28	14	14	14	14	18	21	15	15
20	16	21	17	15	14		18	17	16	20	41	54	51	44	46	45	22	14	14	14	16	22	15	14
21		18	21	17	15		15	21	15	18	27	44	45	33	23	21	43	18	17	14	14	14		15
22	15	15	18	15	17	14	15	22	16	23	24	30	33	30	29	23	21	14	15	15	14	15	21	15
23	15	15	18	18	14	15		23	14	18	17	50	51	45	45	33	26	21	14	14	22		20	
24		24	22	15	15	14		23	15	21	28	30	51	30	45	42	21	14	14	15	21	15		24
25		22	22	16	15	14	14	22	15	23	43	44	45	54	53	44	26	20	14	15	17	27	22	26
26	26	27	15	15	15			16	14	20	27	44	53	35	32	30	27	17	14	14	15	14	15	20
27	20	15	15	15			18	22	15	16	44	44	54	52	49	42	18	18	23	17	15	15	15	22
28	16	18	15	15	15			22	29	22	44	44	44	52	51	30	27	23	21	14	15	15	28	26
29		17	15	16				22	14	21	43	43	33	45	52	43	26	22	14	15	17	27	15	14
30	15	18	24	14	23		15	23	14	21	42	46	53	51	43	42	40	14	22	15	14	15	22	15
31		16	18	15			15	18	26	29	42	34	46	43	53	42	38	18	24	16		22	34	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	20	27	26	31	27	17	14	29	31	31	31	31	31	31	31	31	31	31	31	31	28	24	24	24
MED	16	17	18	16	15	15	15	21	15	20	30	44	47	44	43	40	24	16	17	15	15	15	19	15
U Q	19	20	20	17	16	16	18	22	15	23	42	44	51	51	46	42	36	18	22	15	17	21	22	21
L Q	15	15	15	15	14	14	15	18	14	17	22	42	44	42	42	30	21	14	14	14	14	15	15	15

SUMMARY PLOTS AT Wakkanai



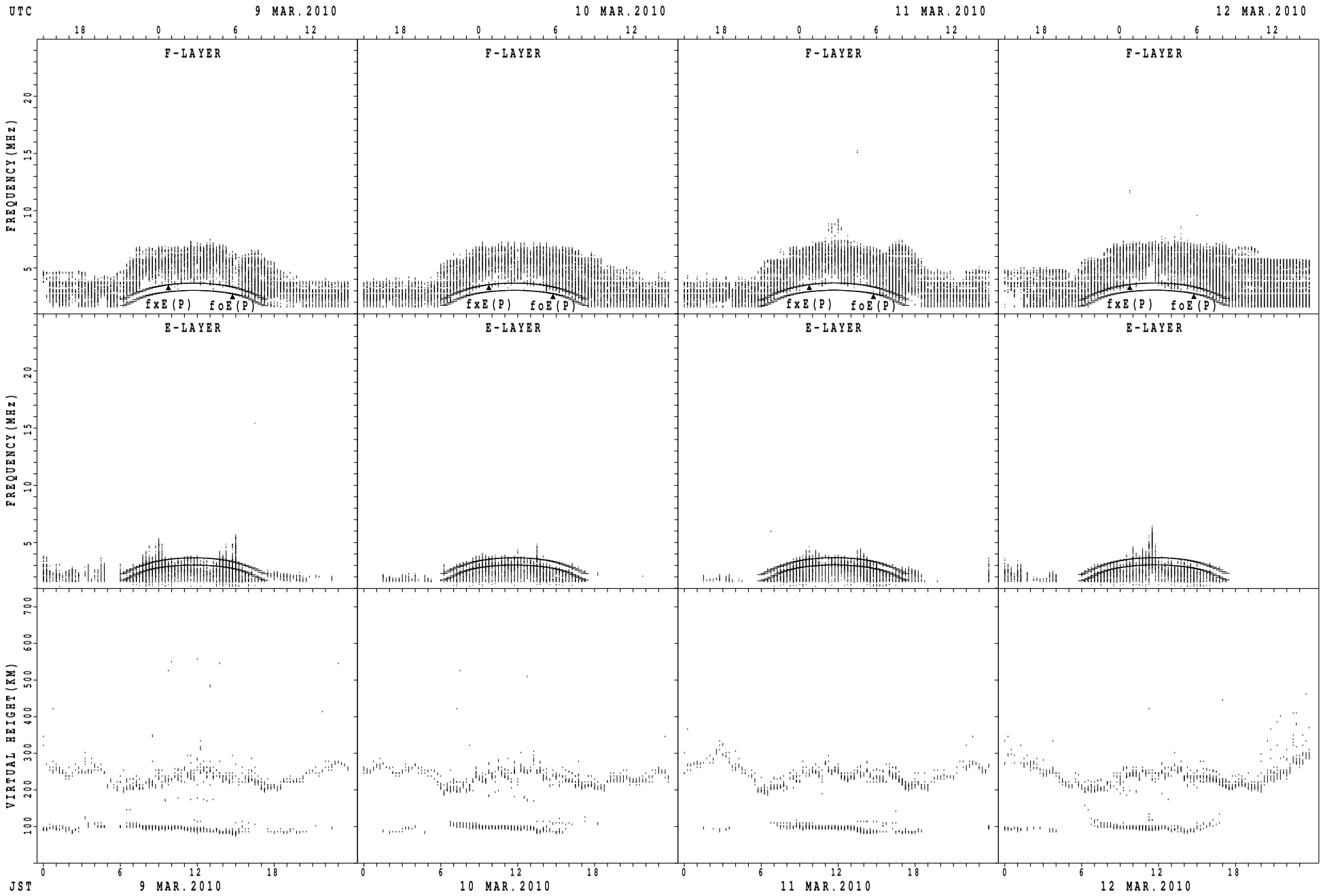
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



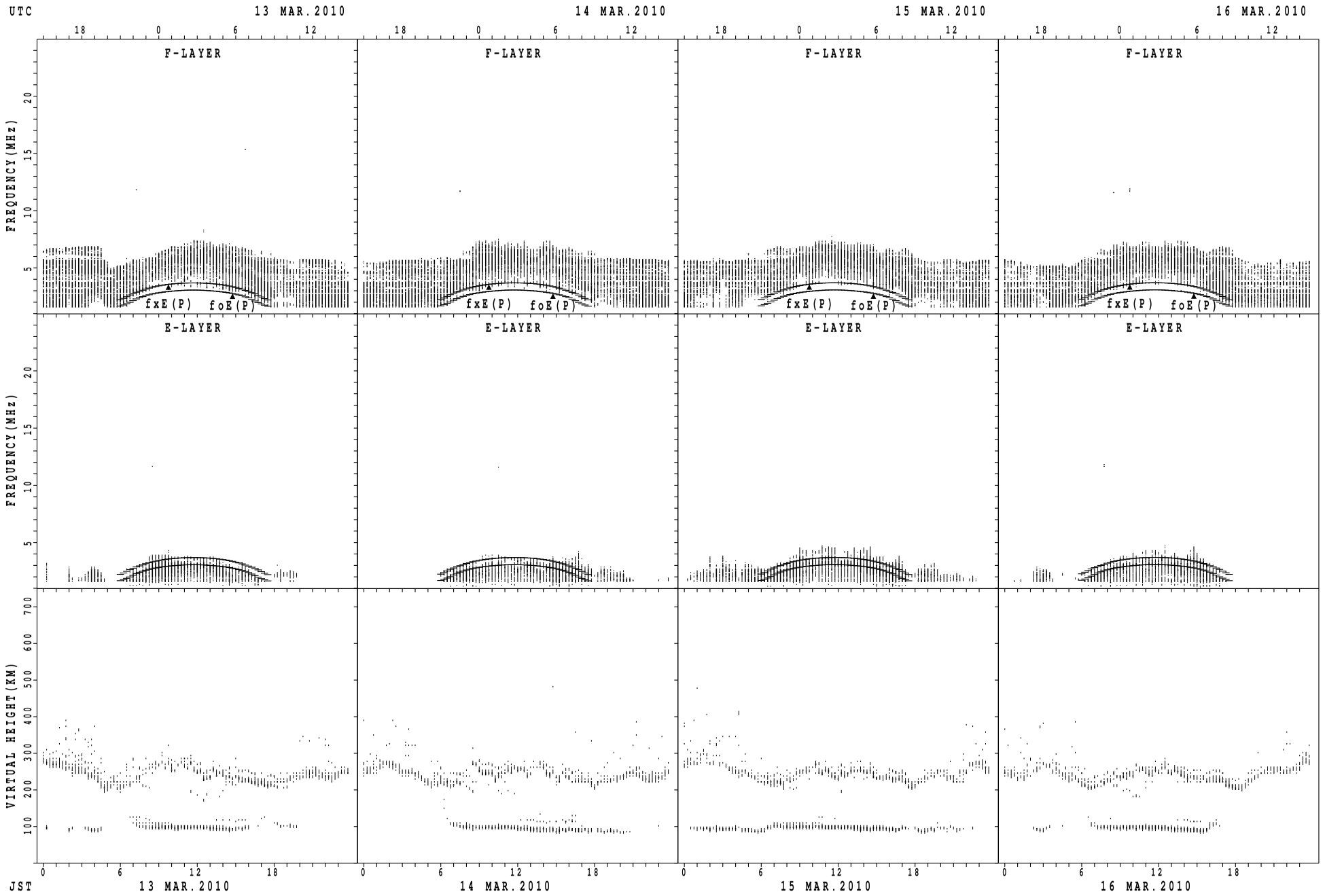
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



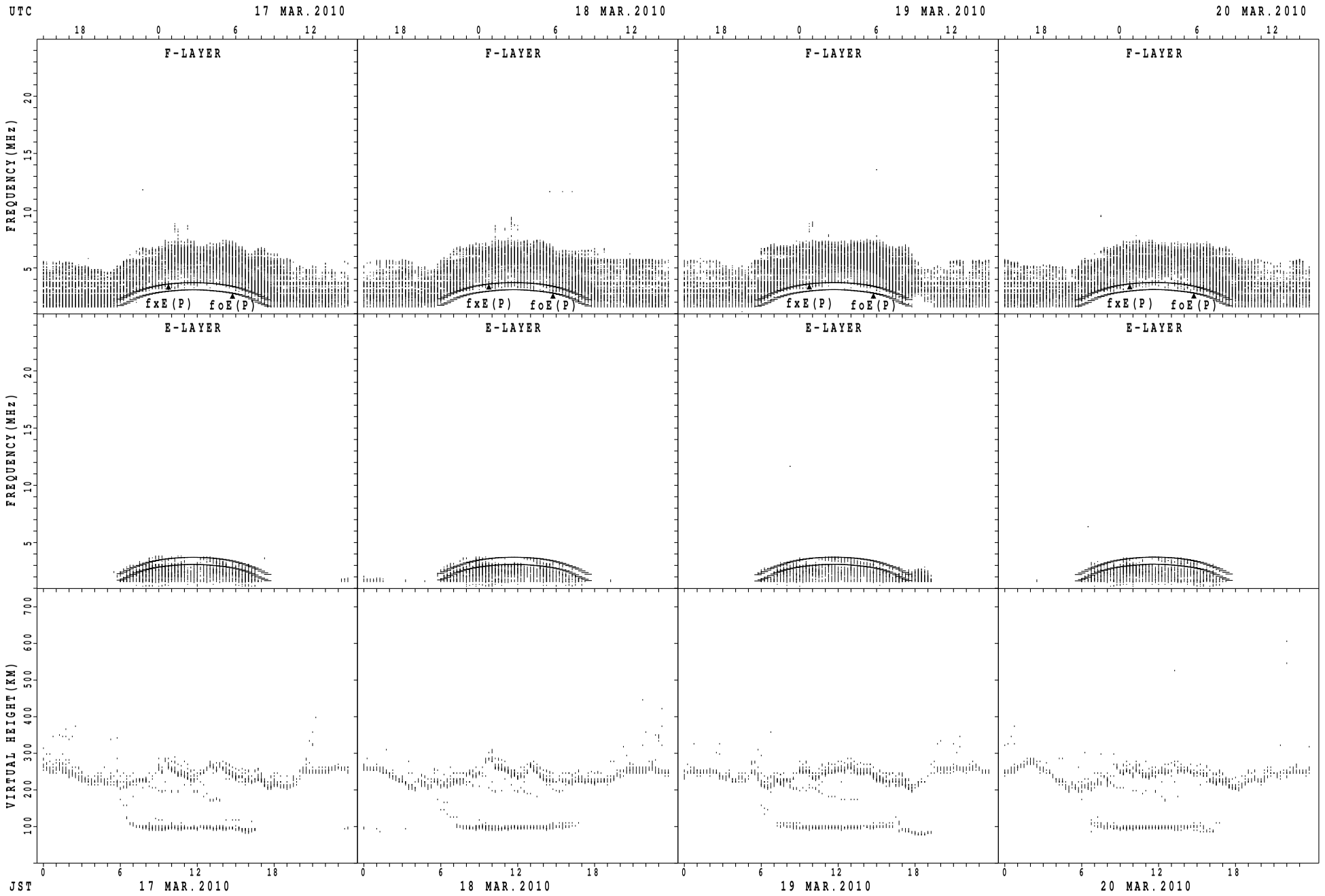
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



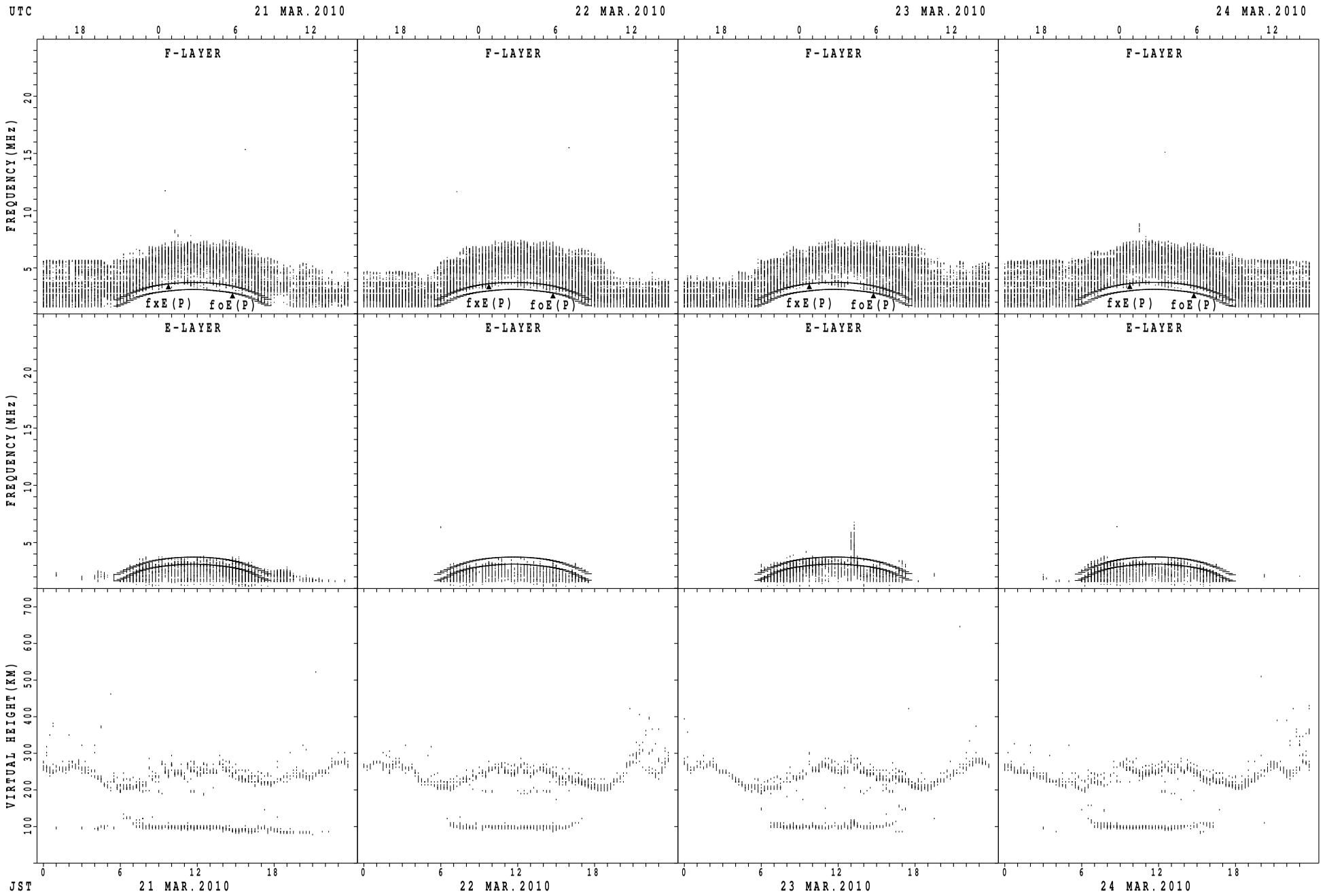
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



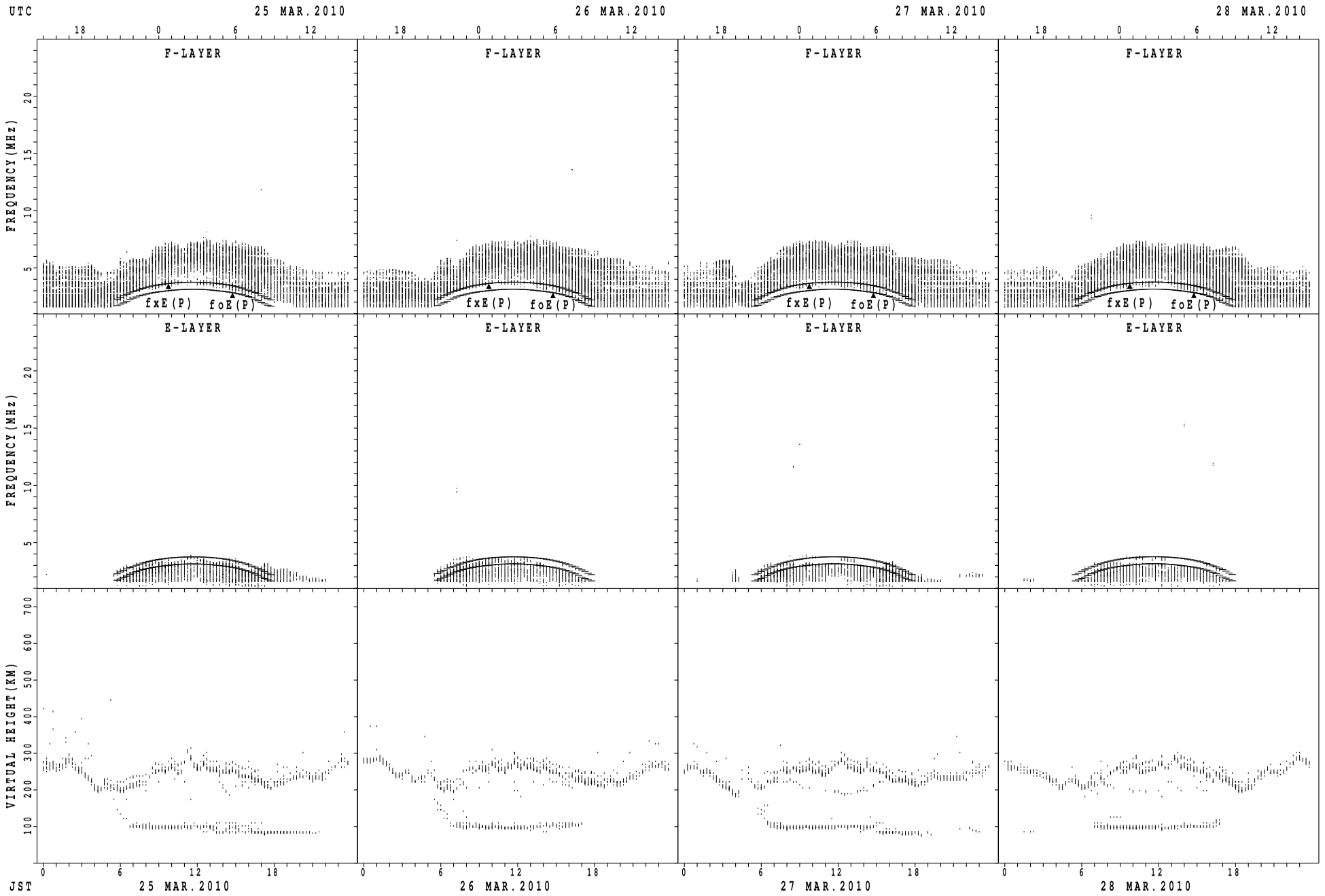
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



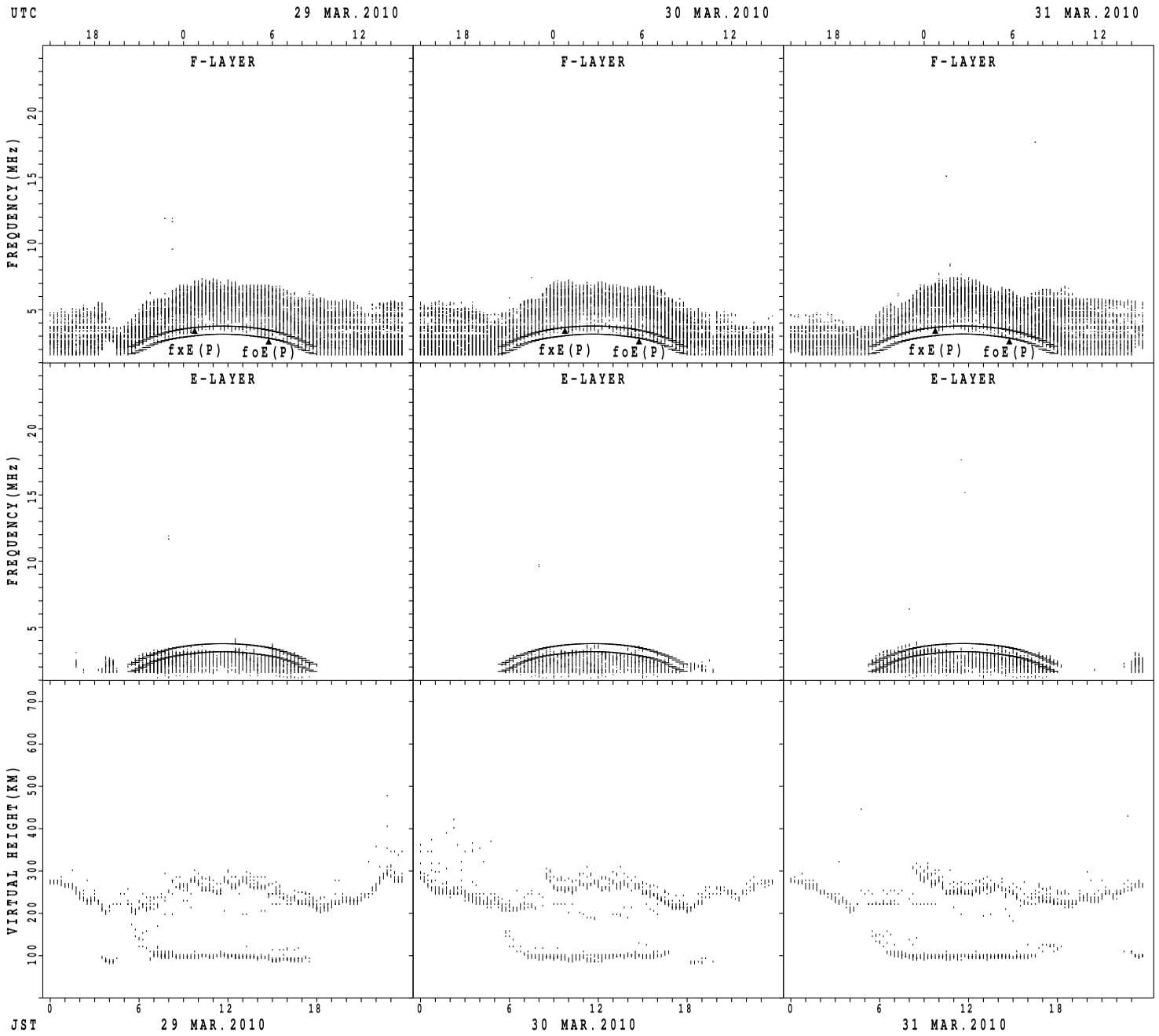
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



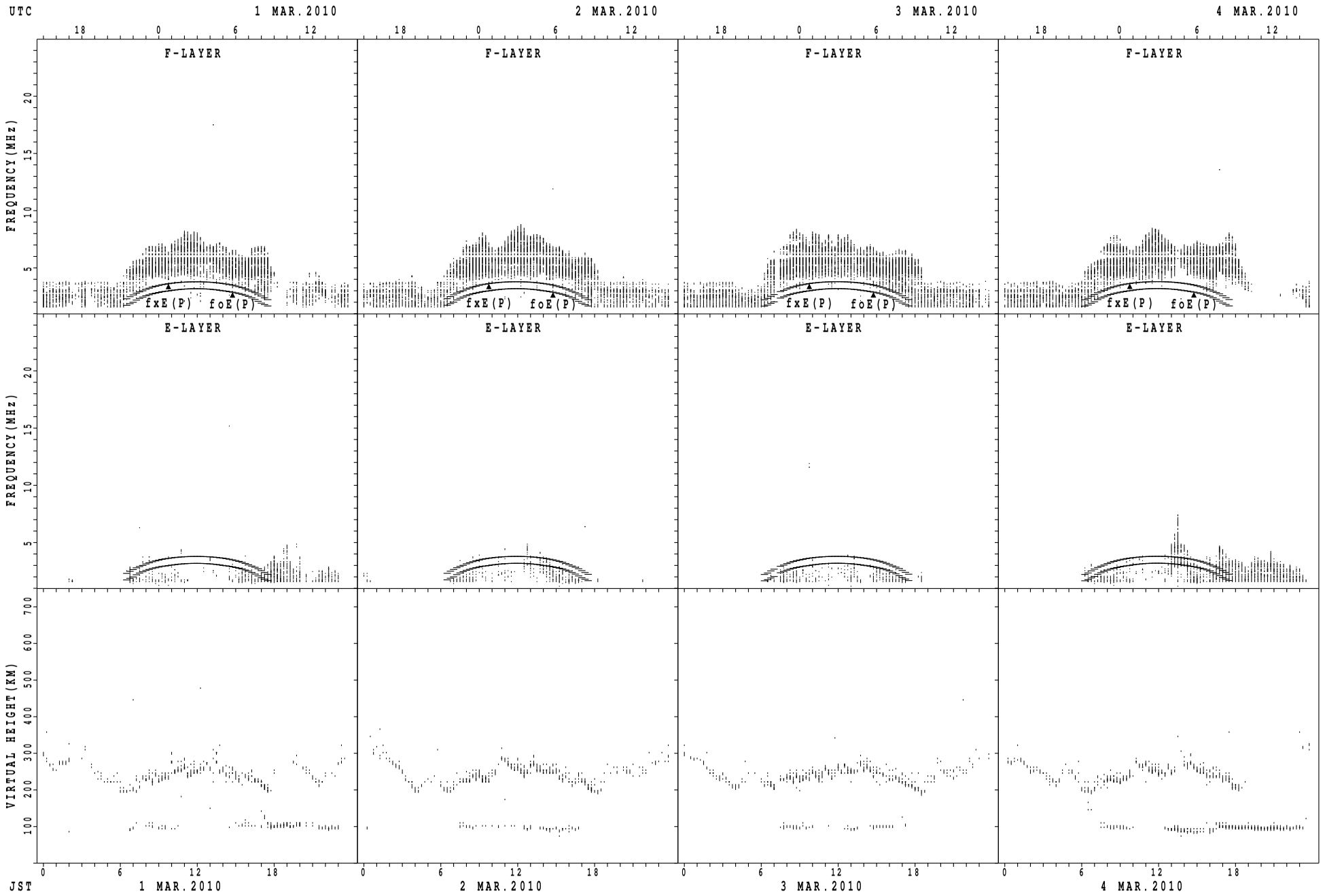
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



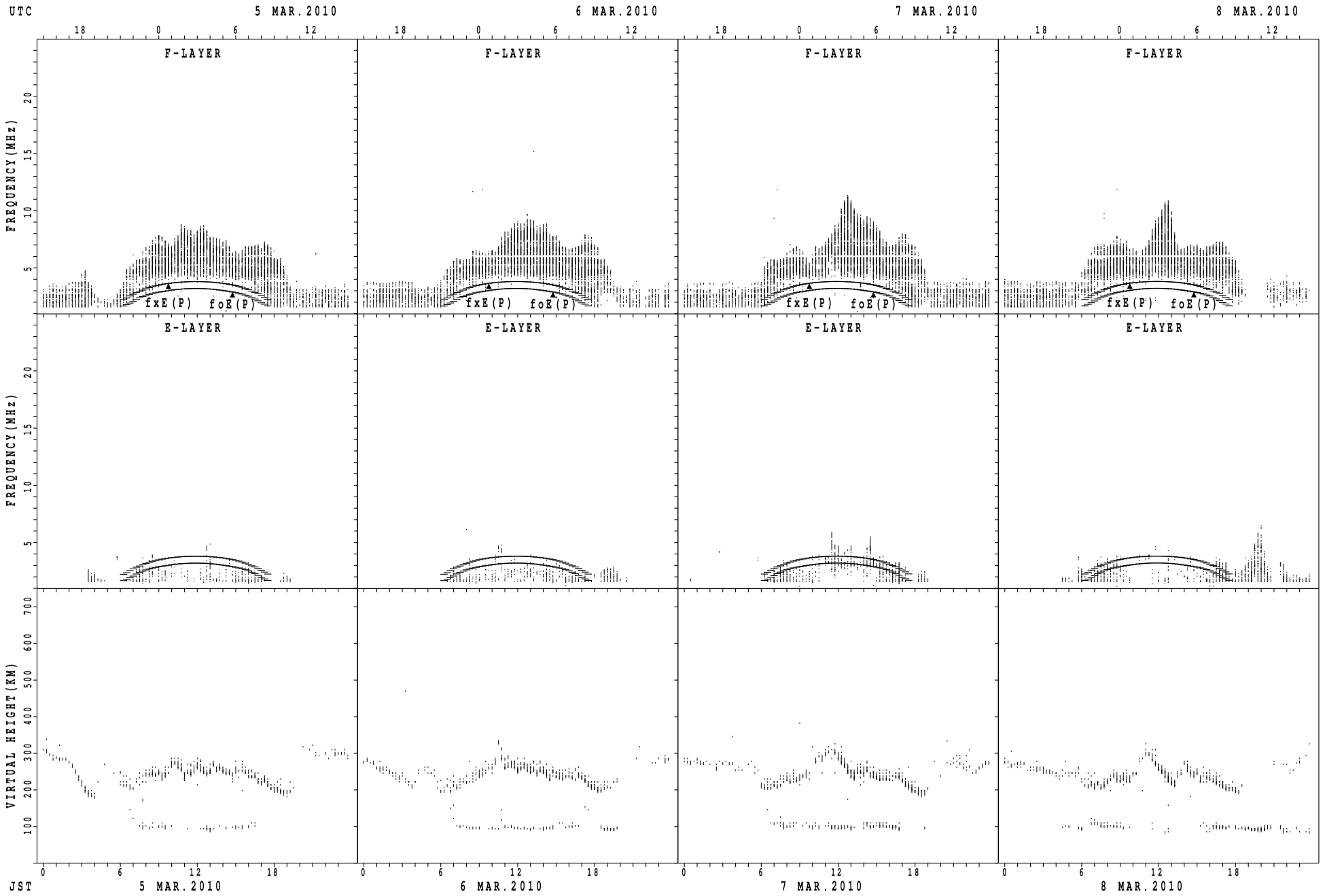
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



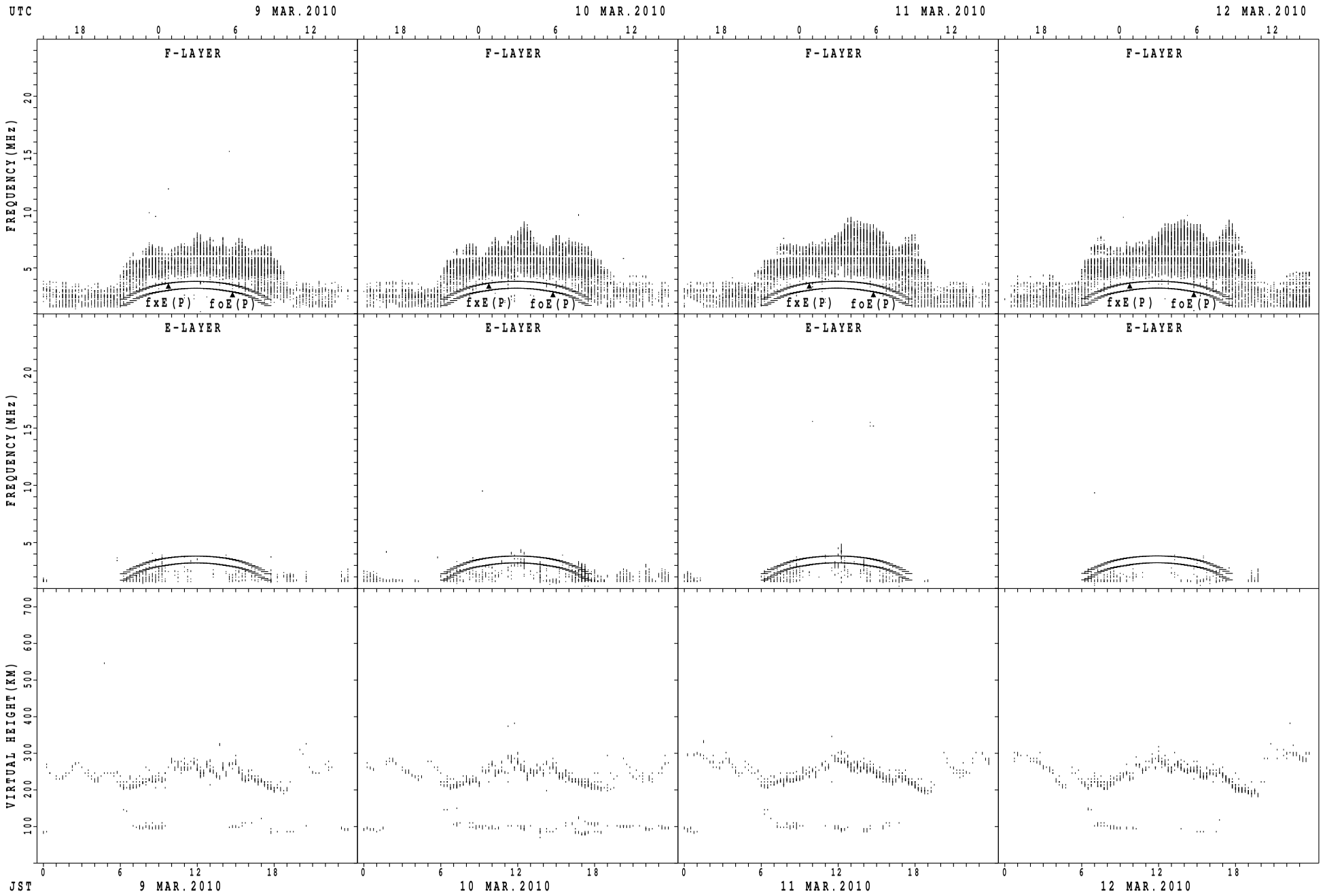
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



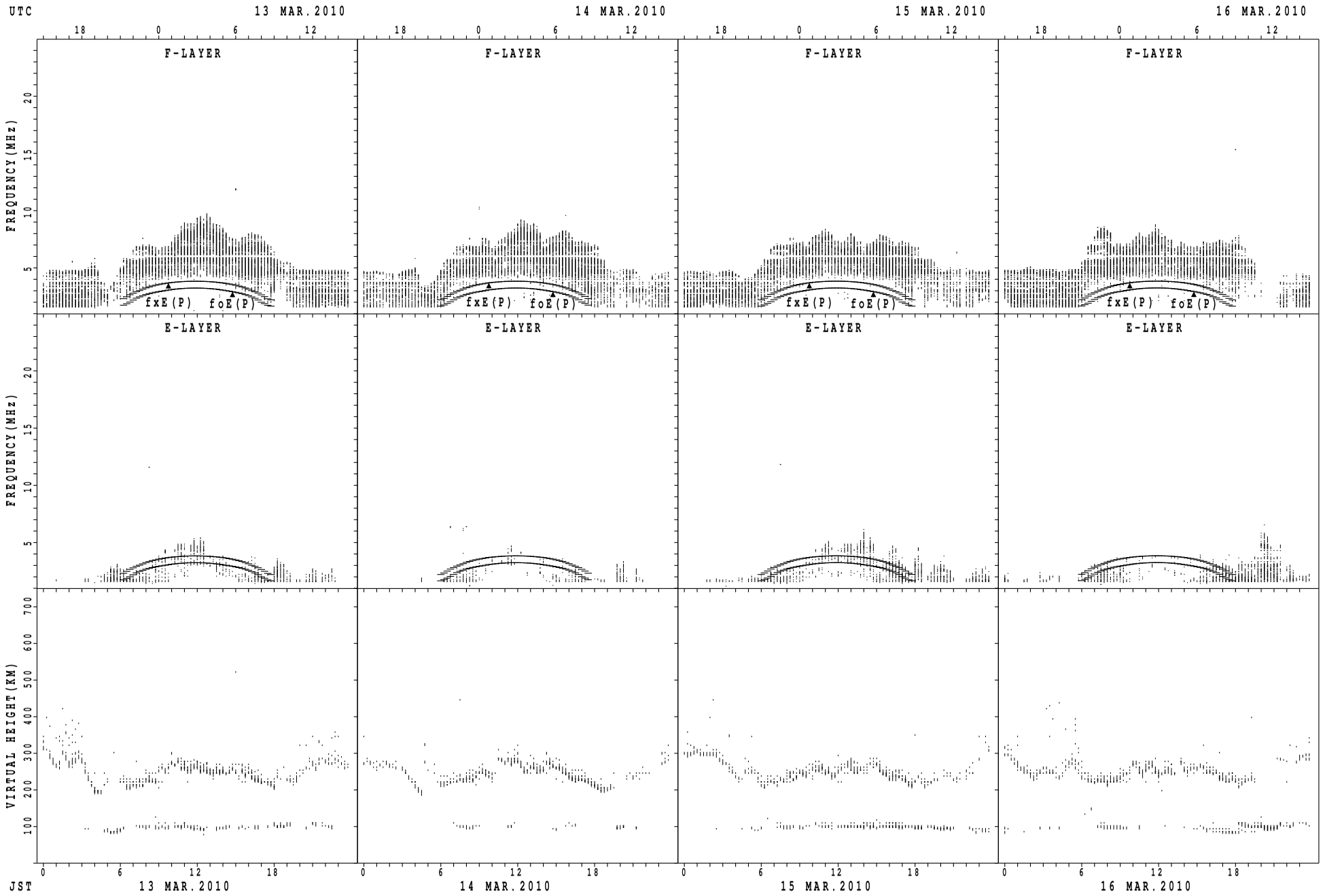
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



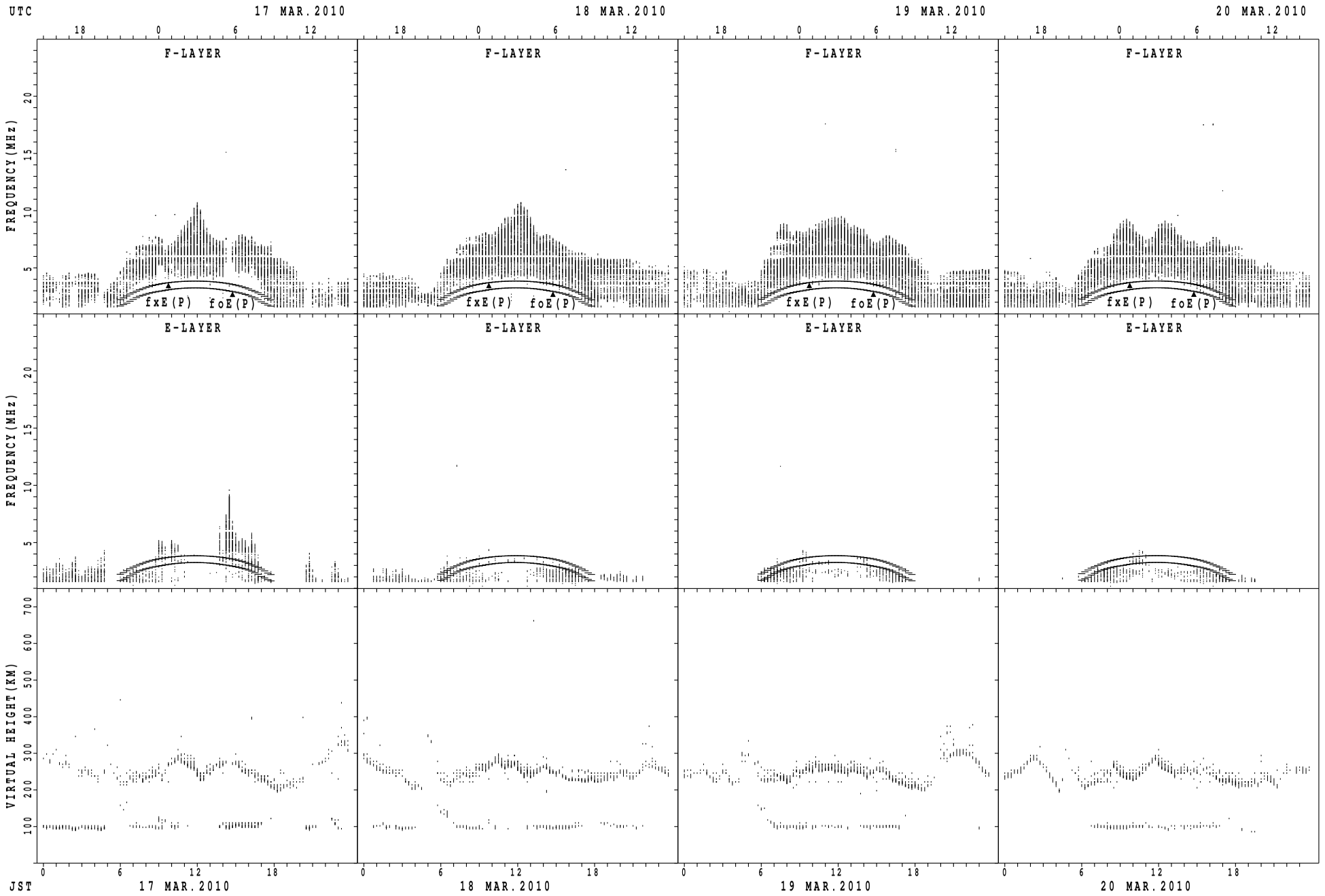
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



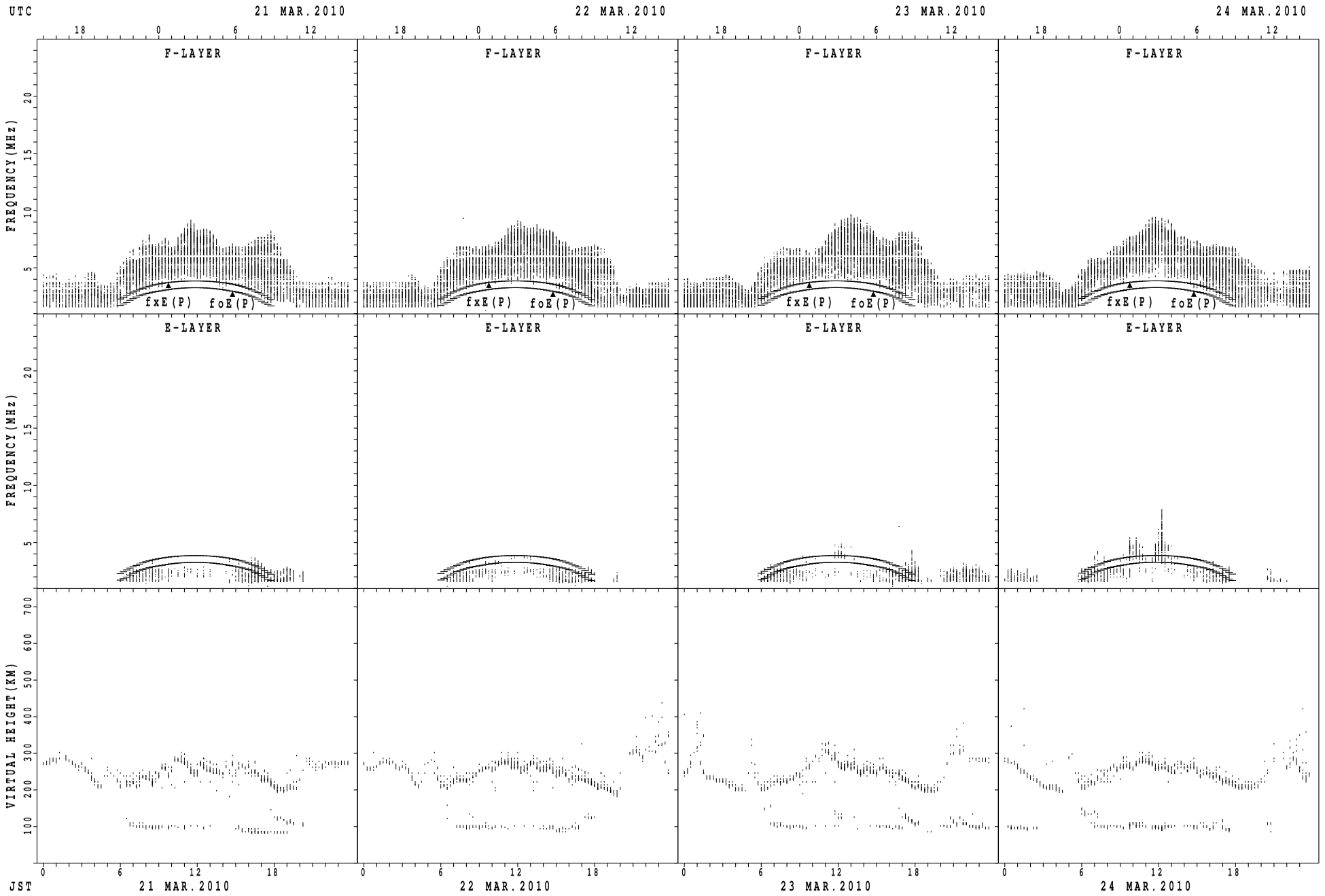
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



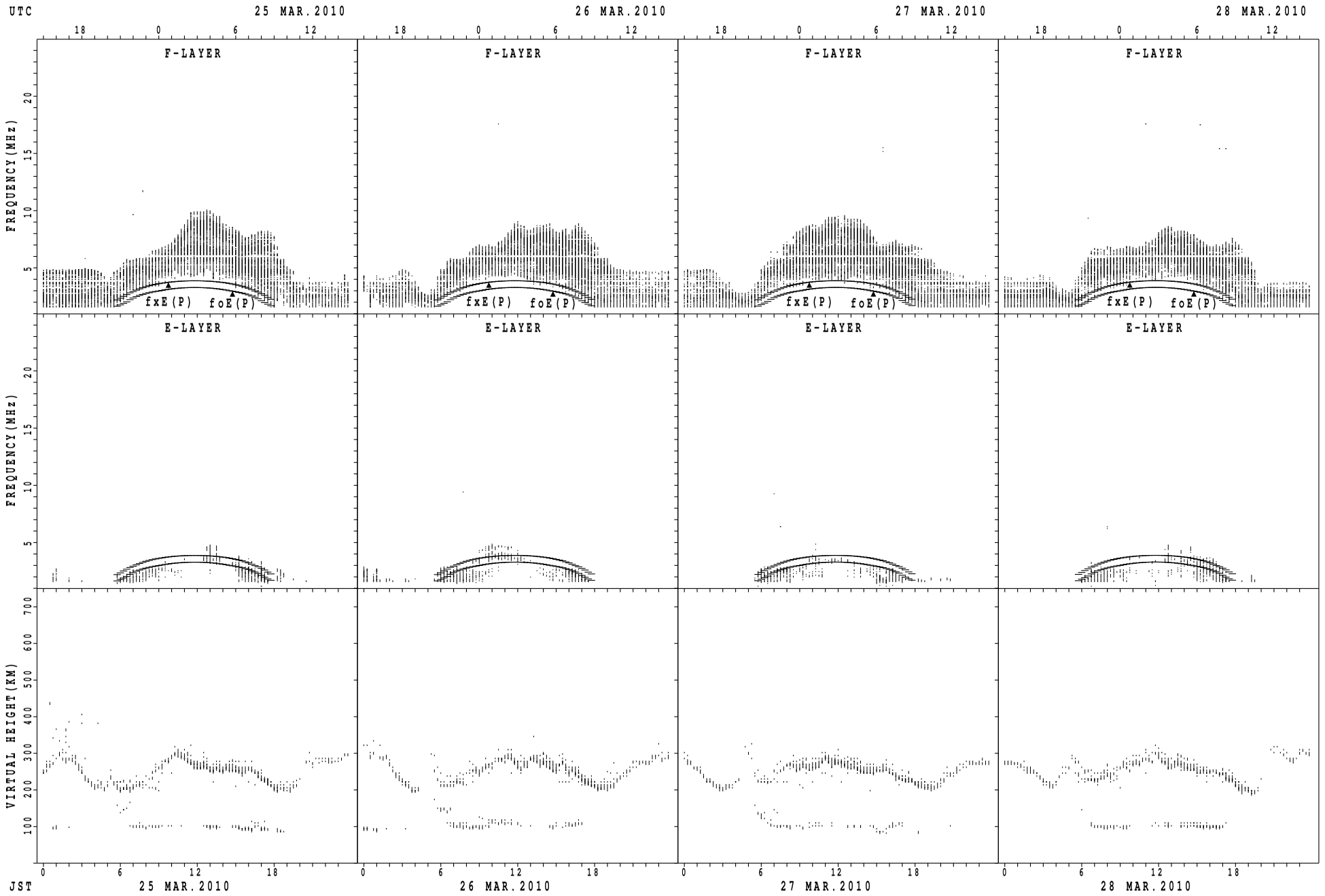
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



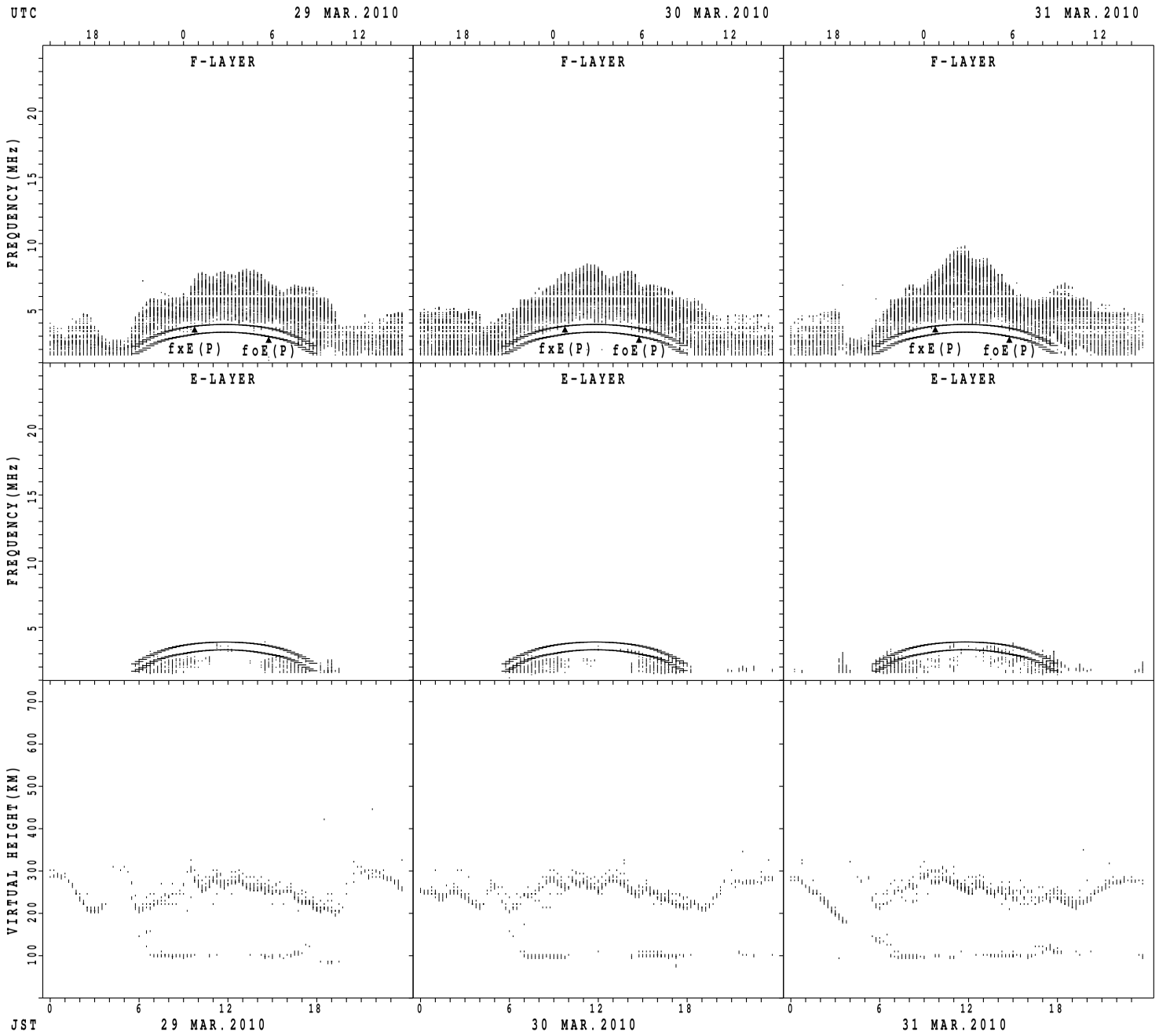
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



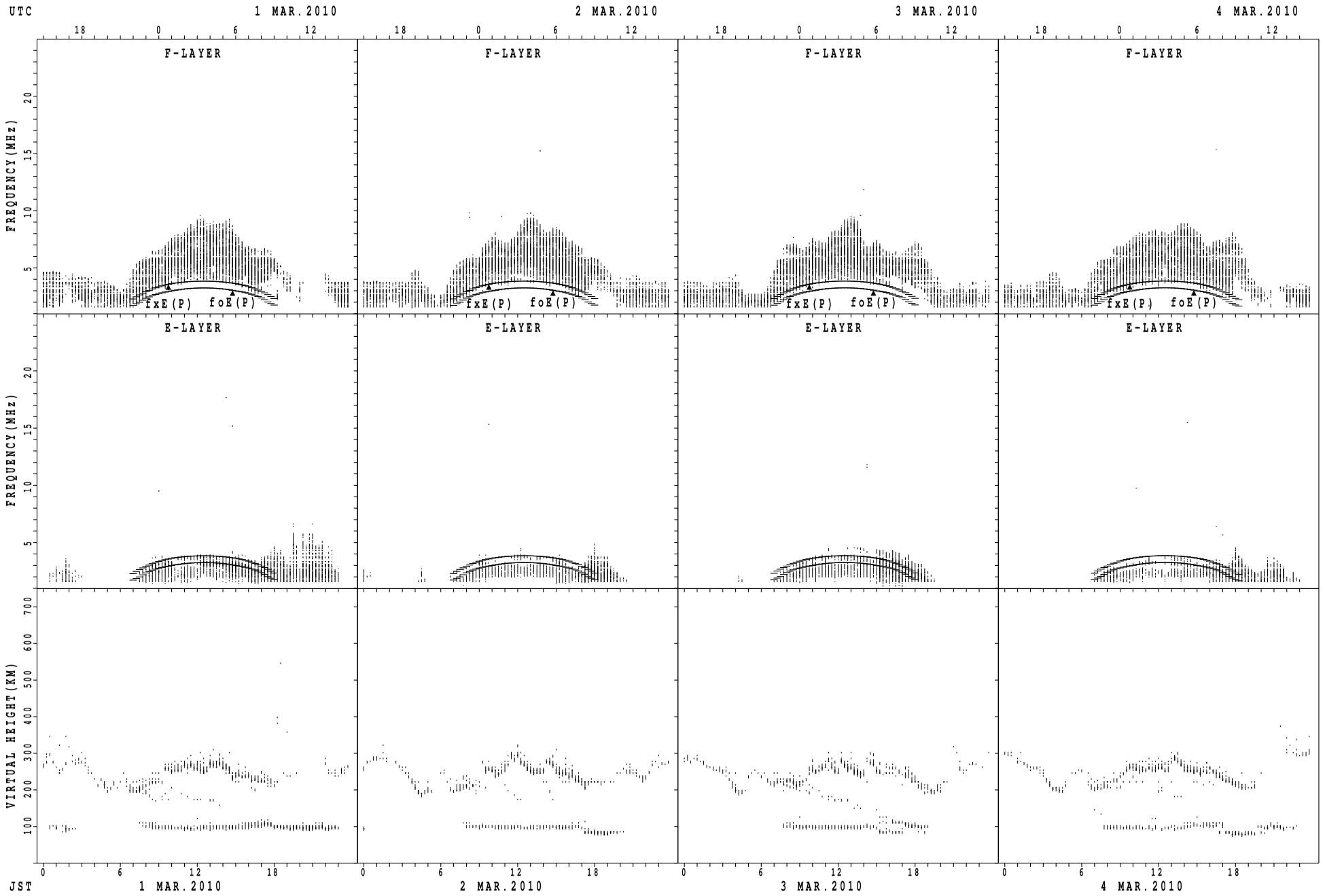
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



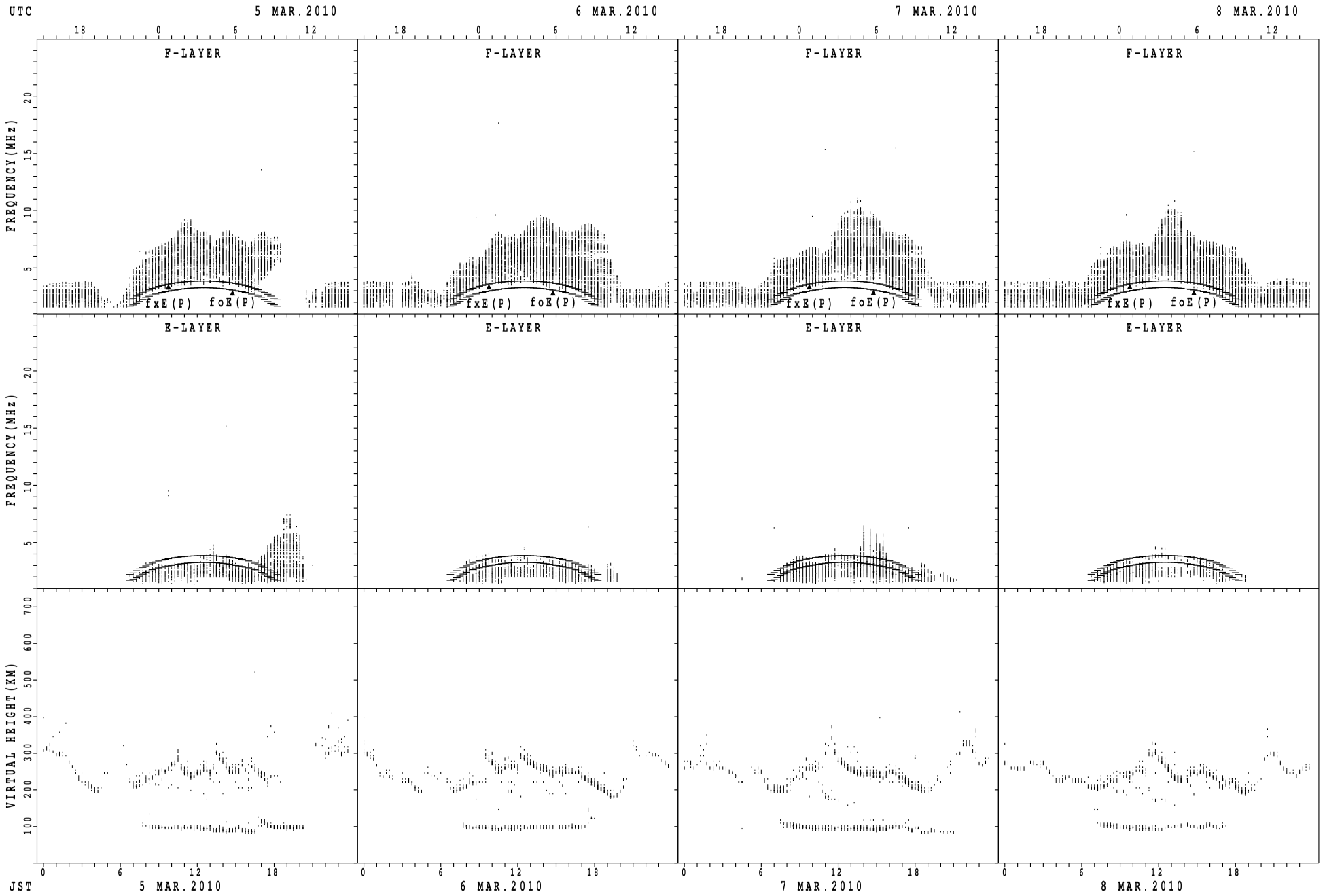
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



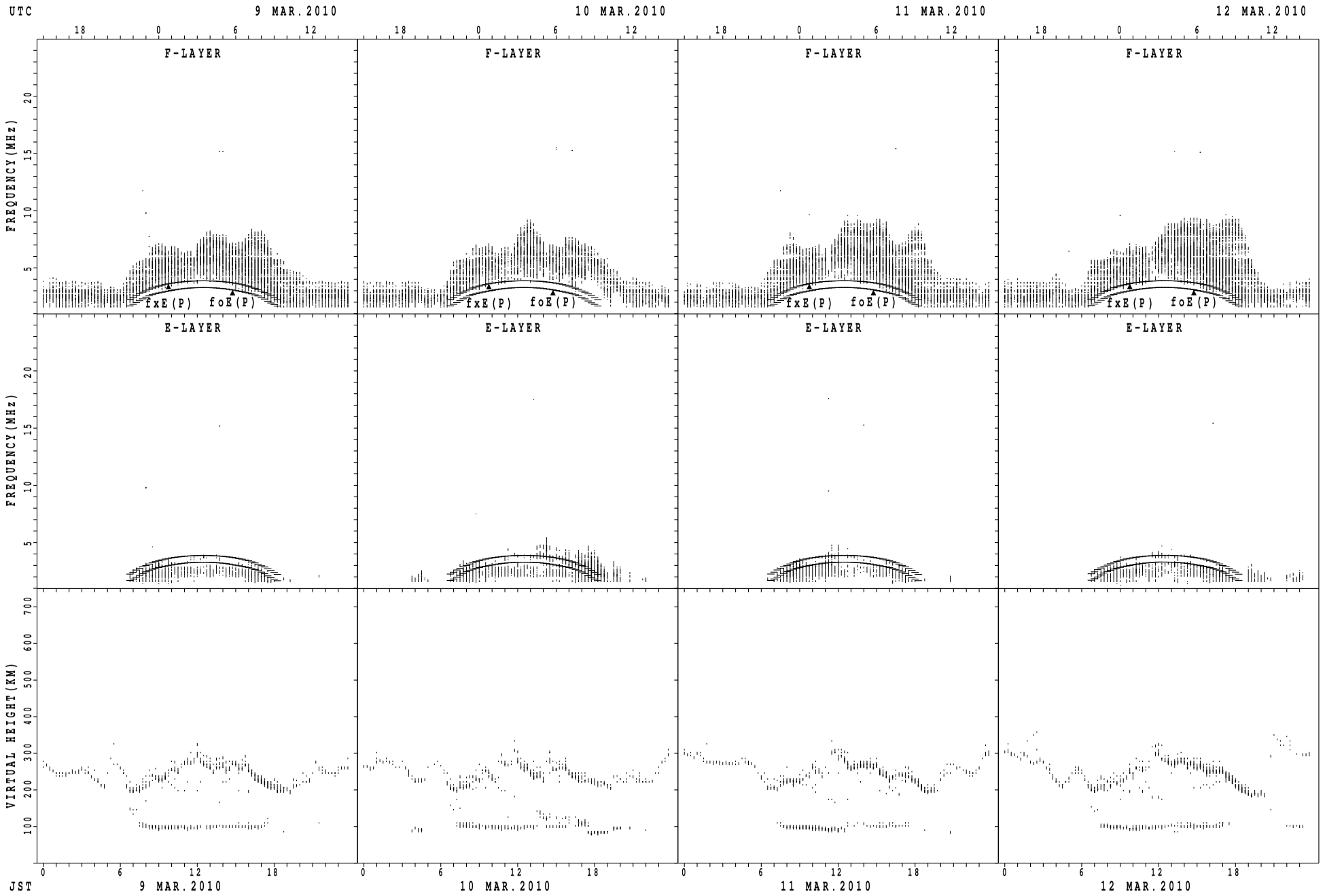
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



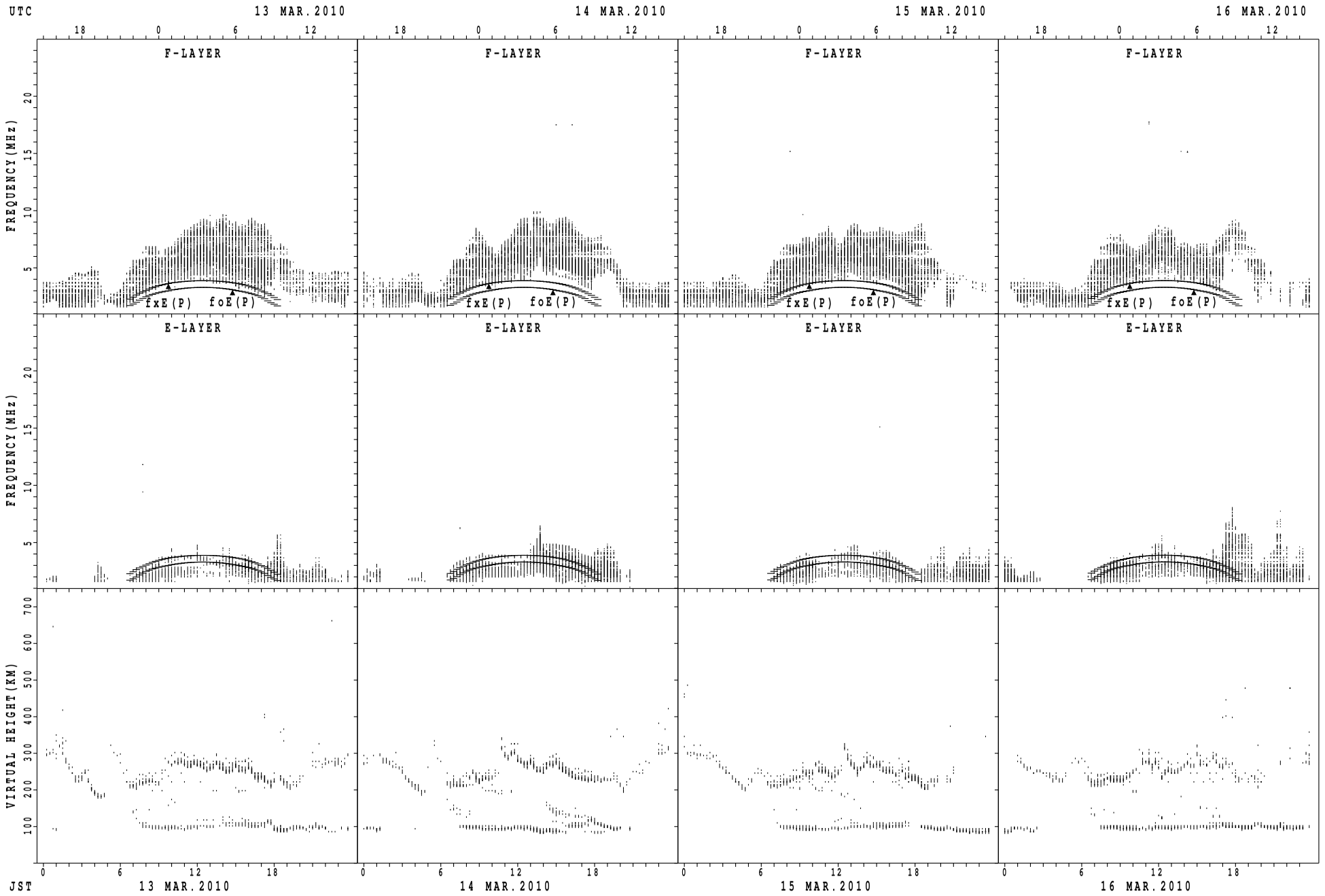
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



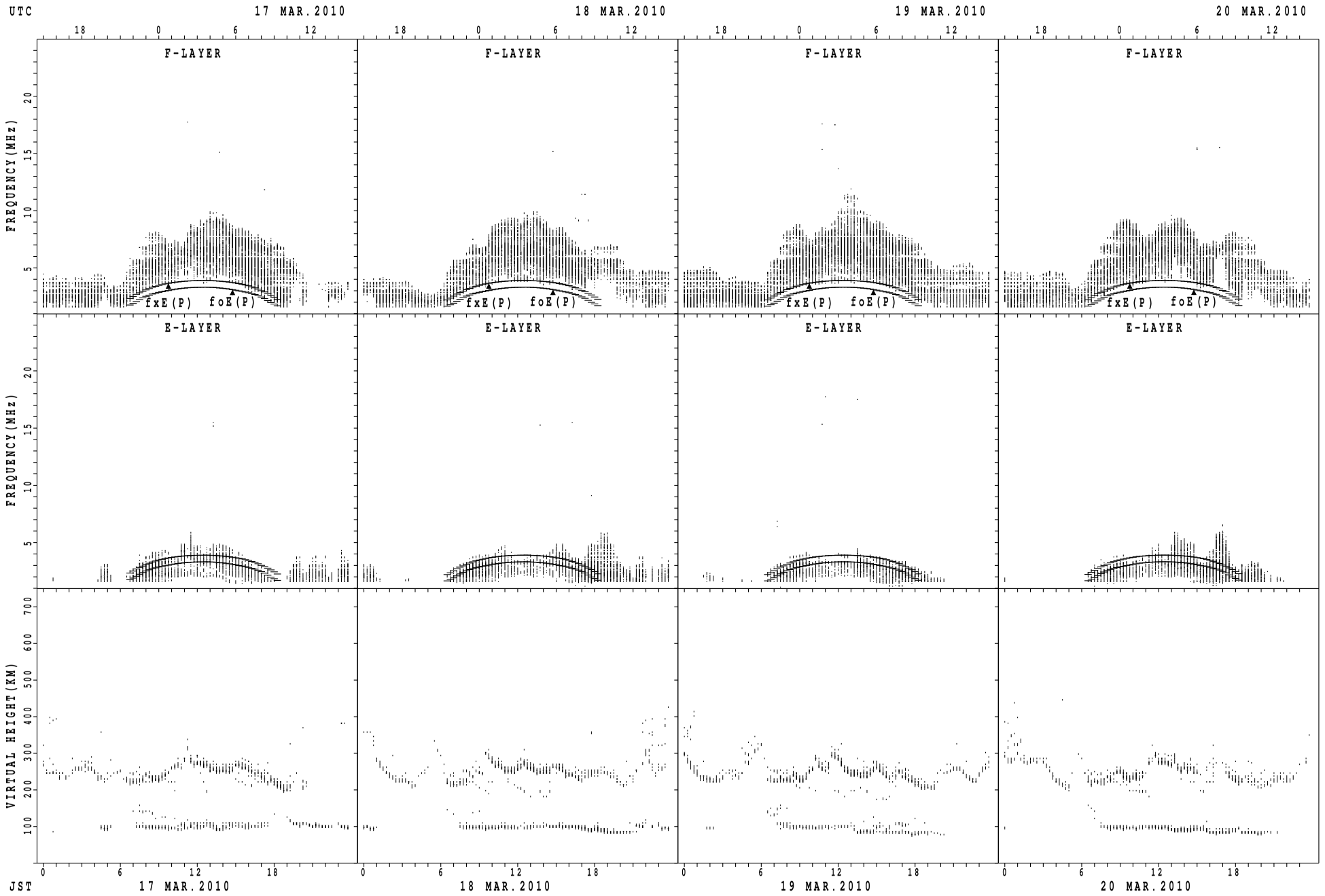
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



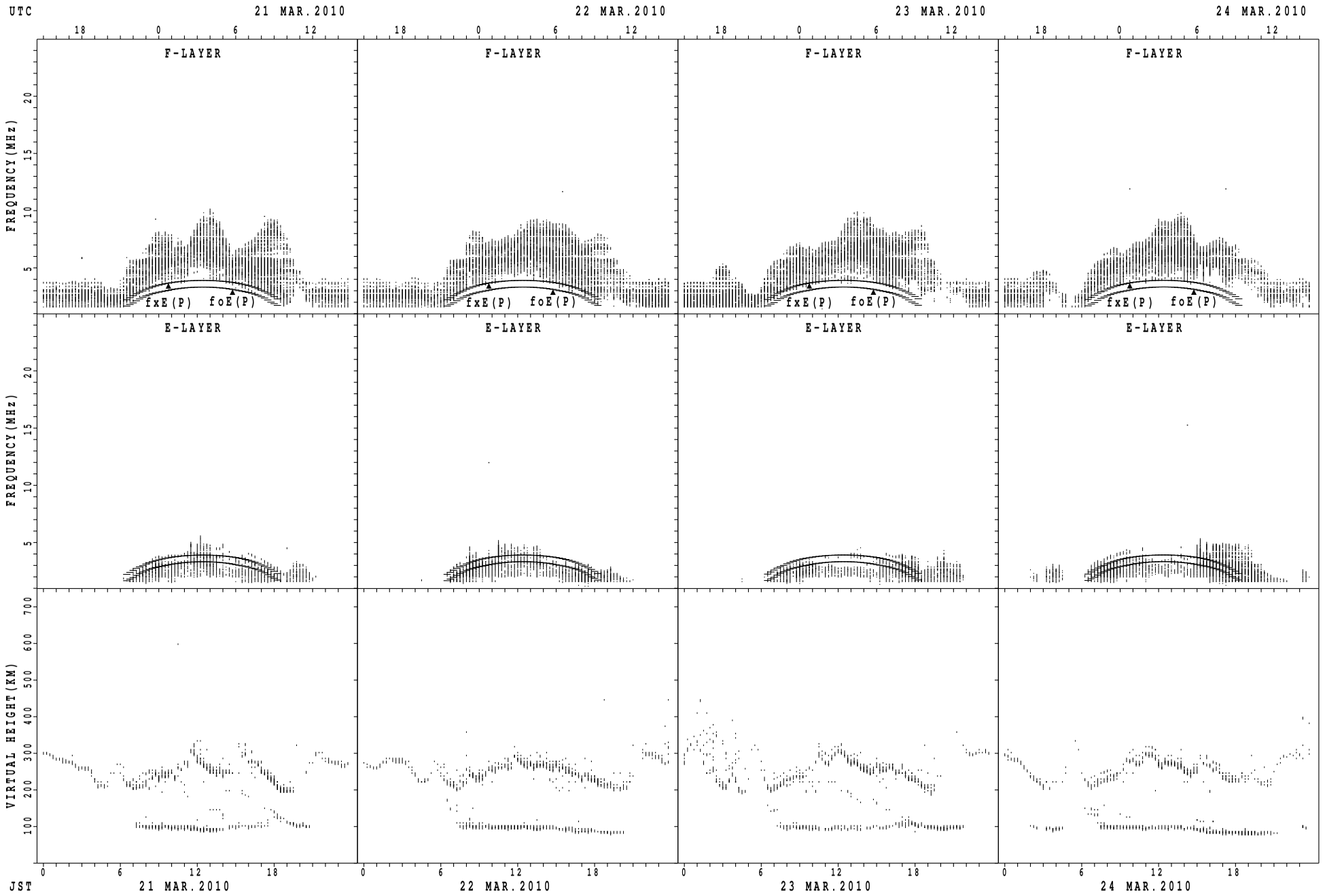
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



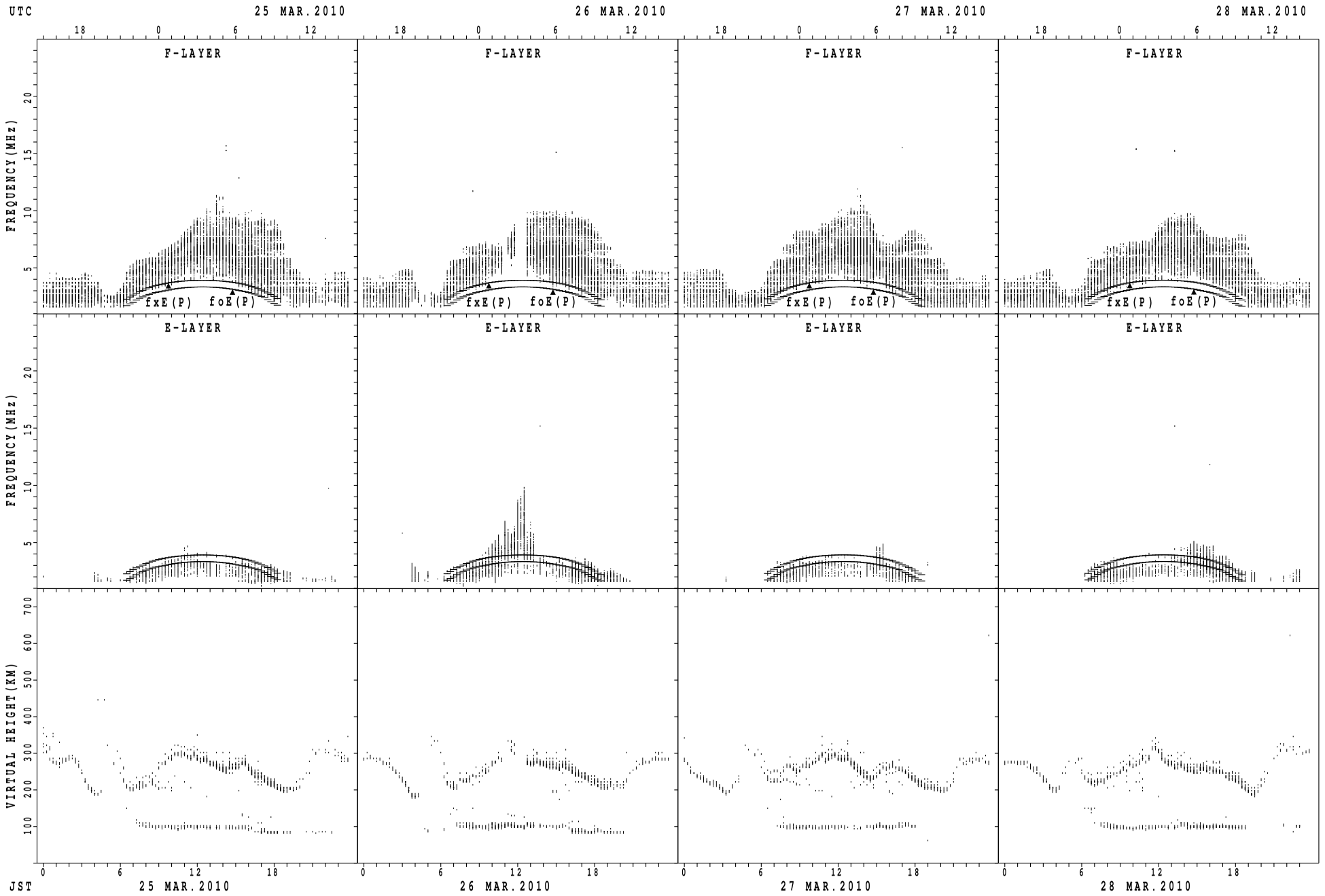
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



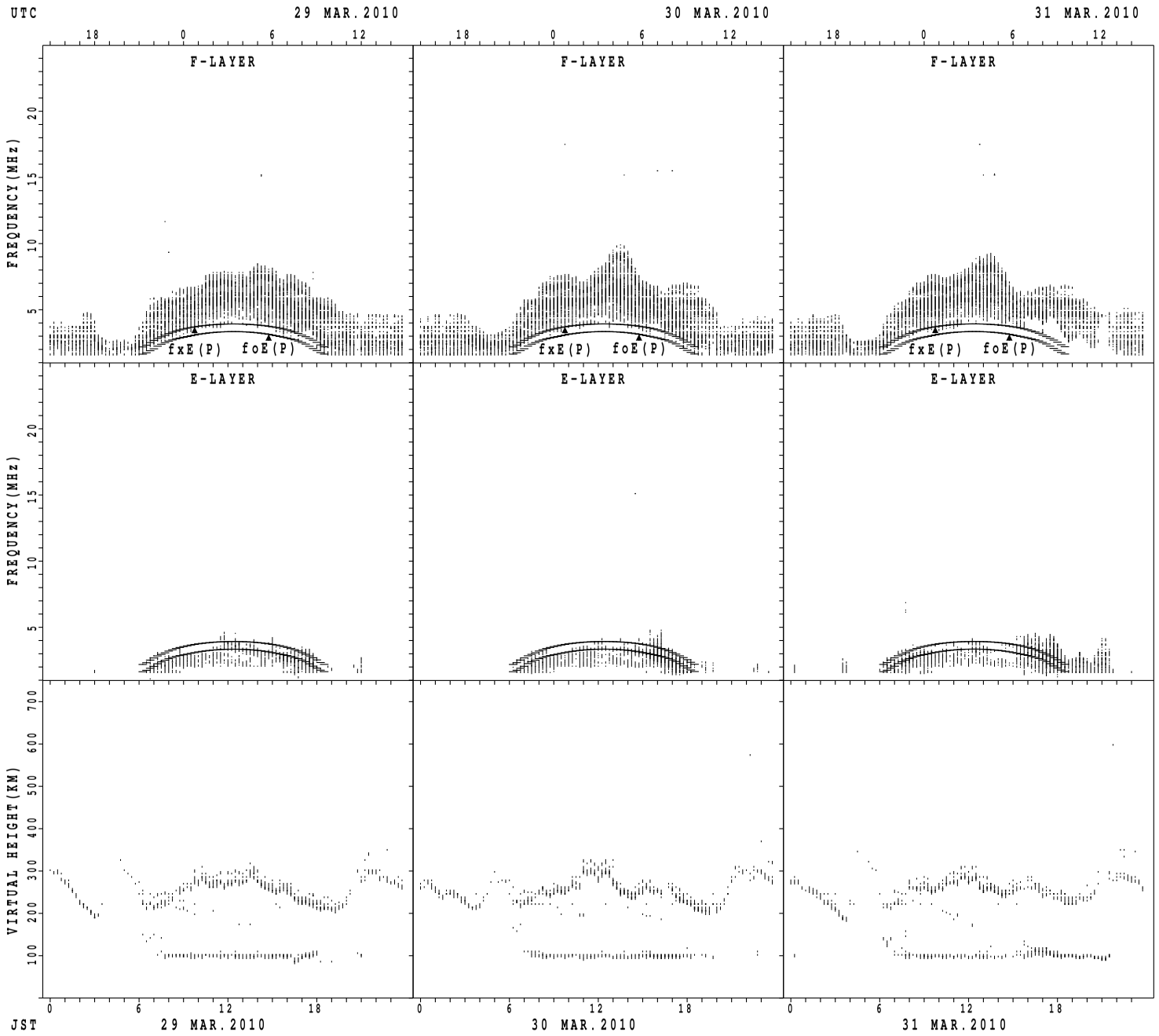
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



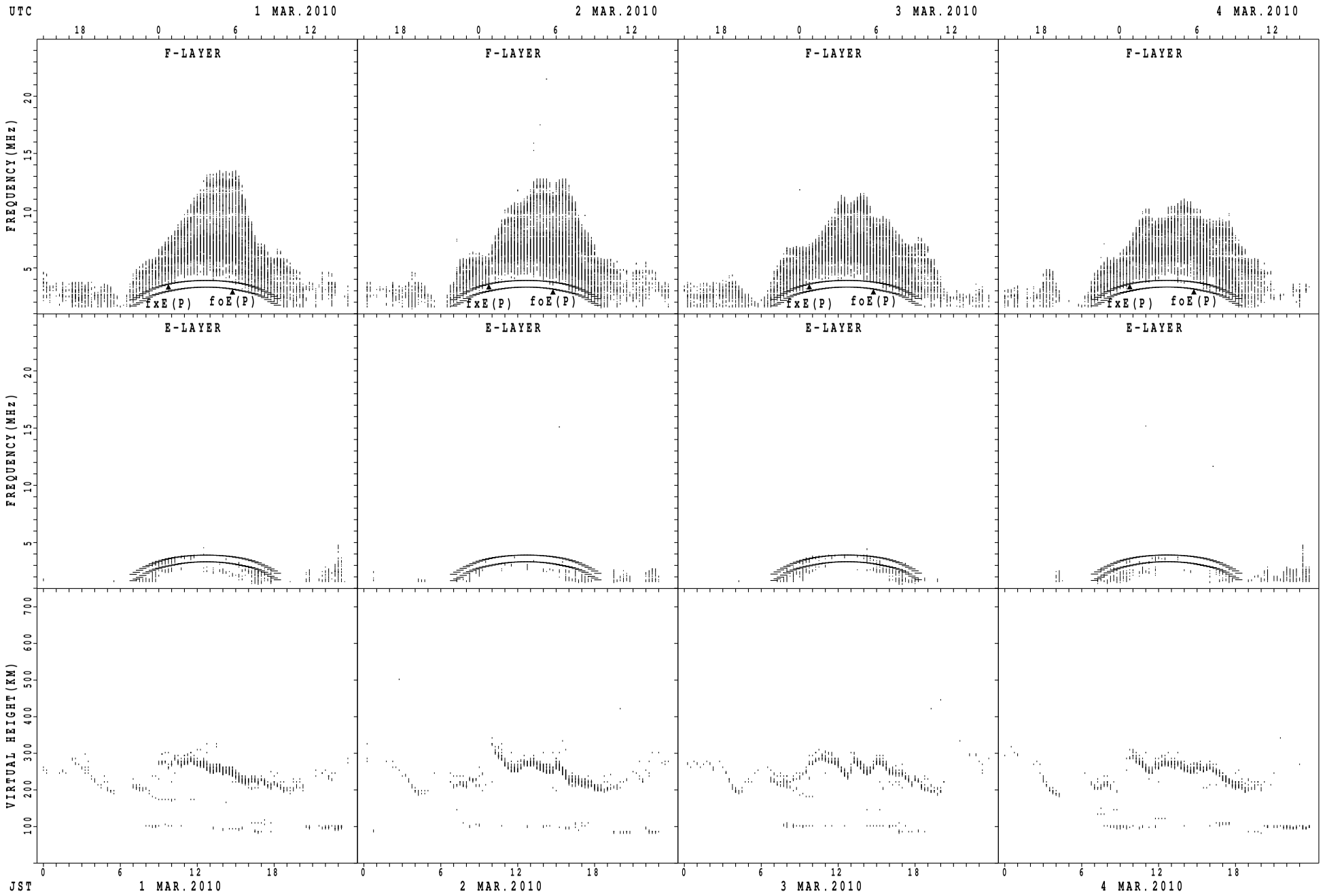
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



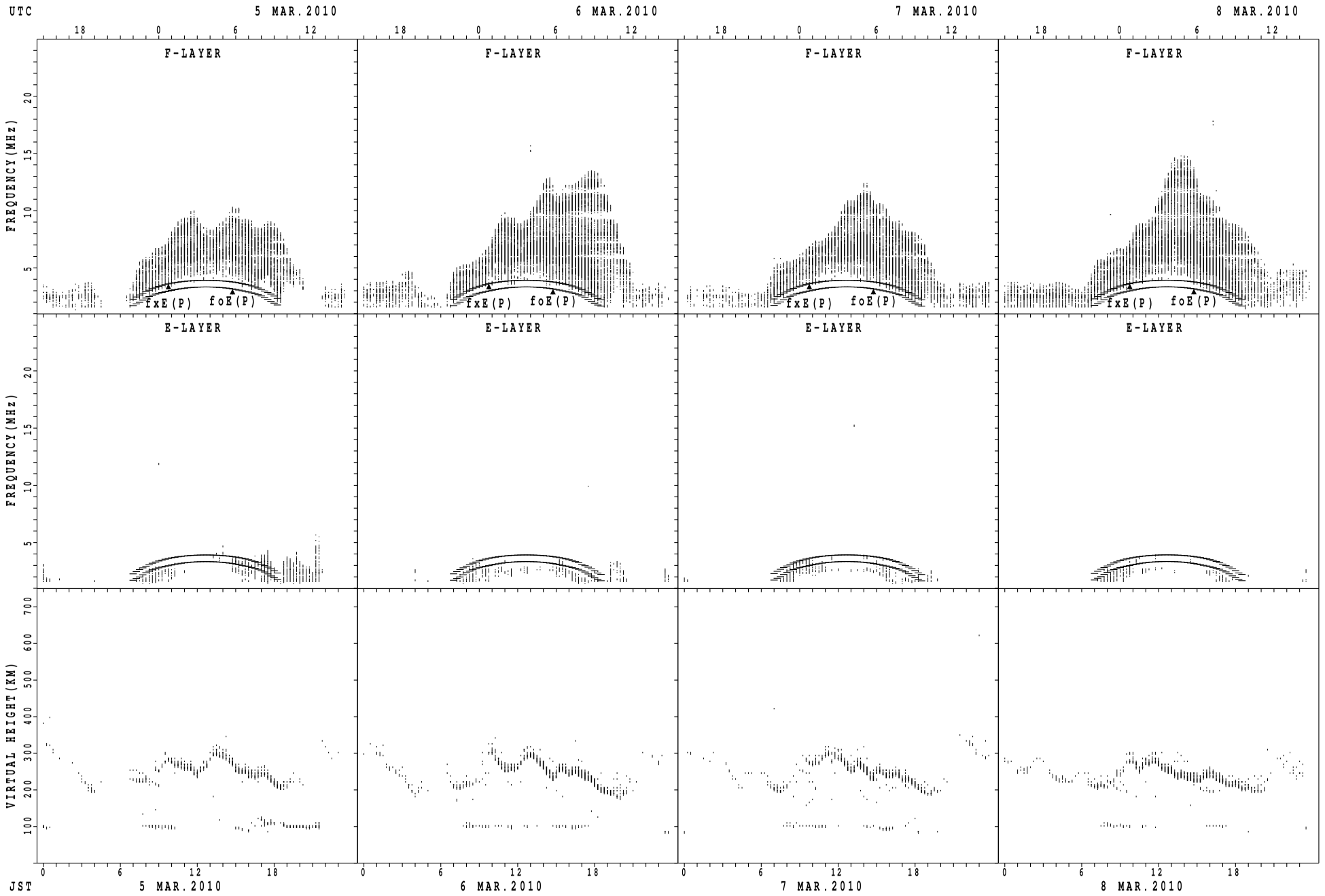
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



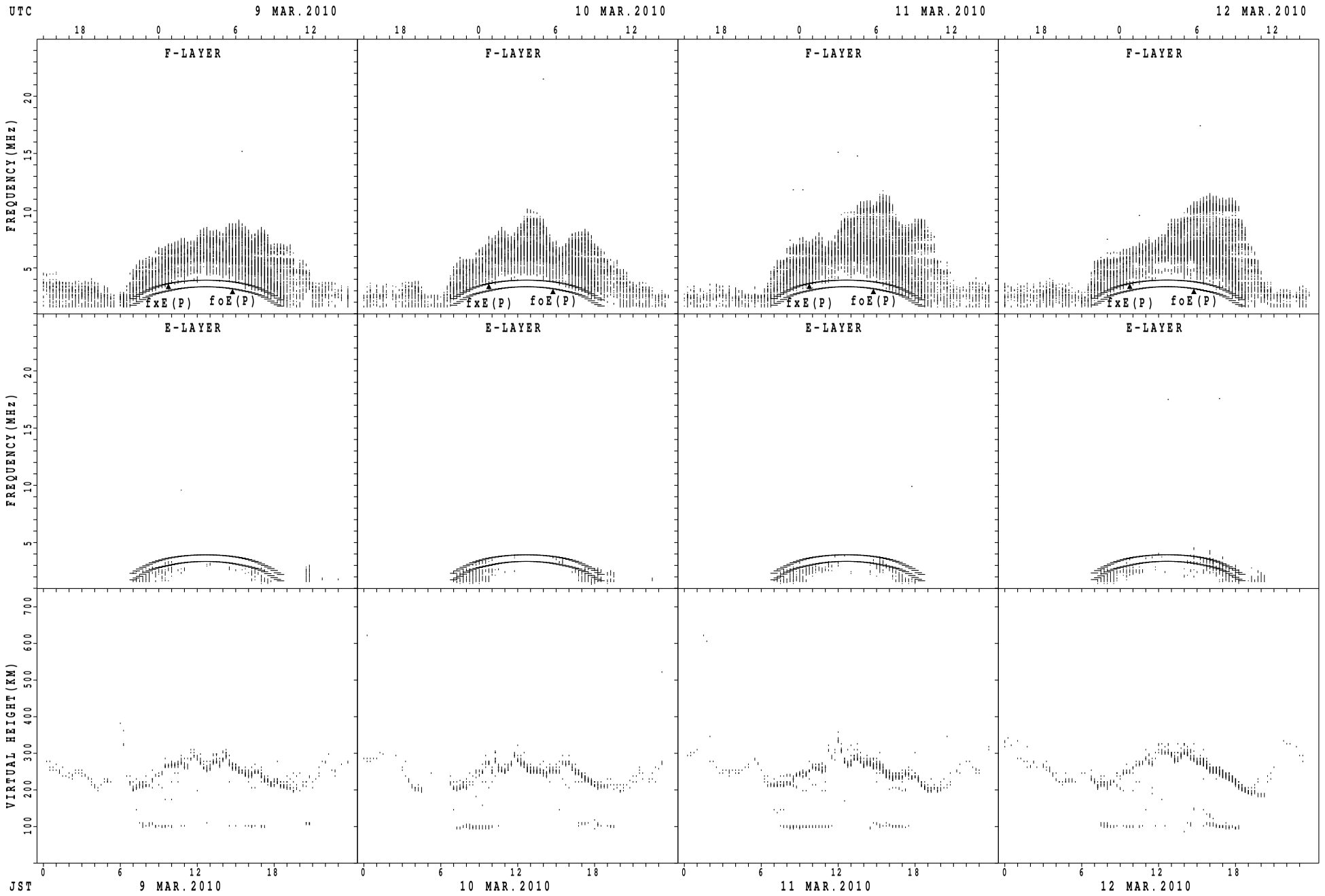
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



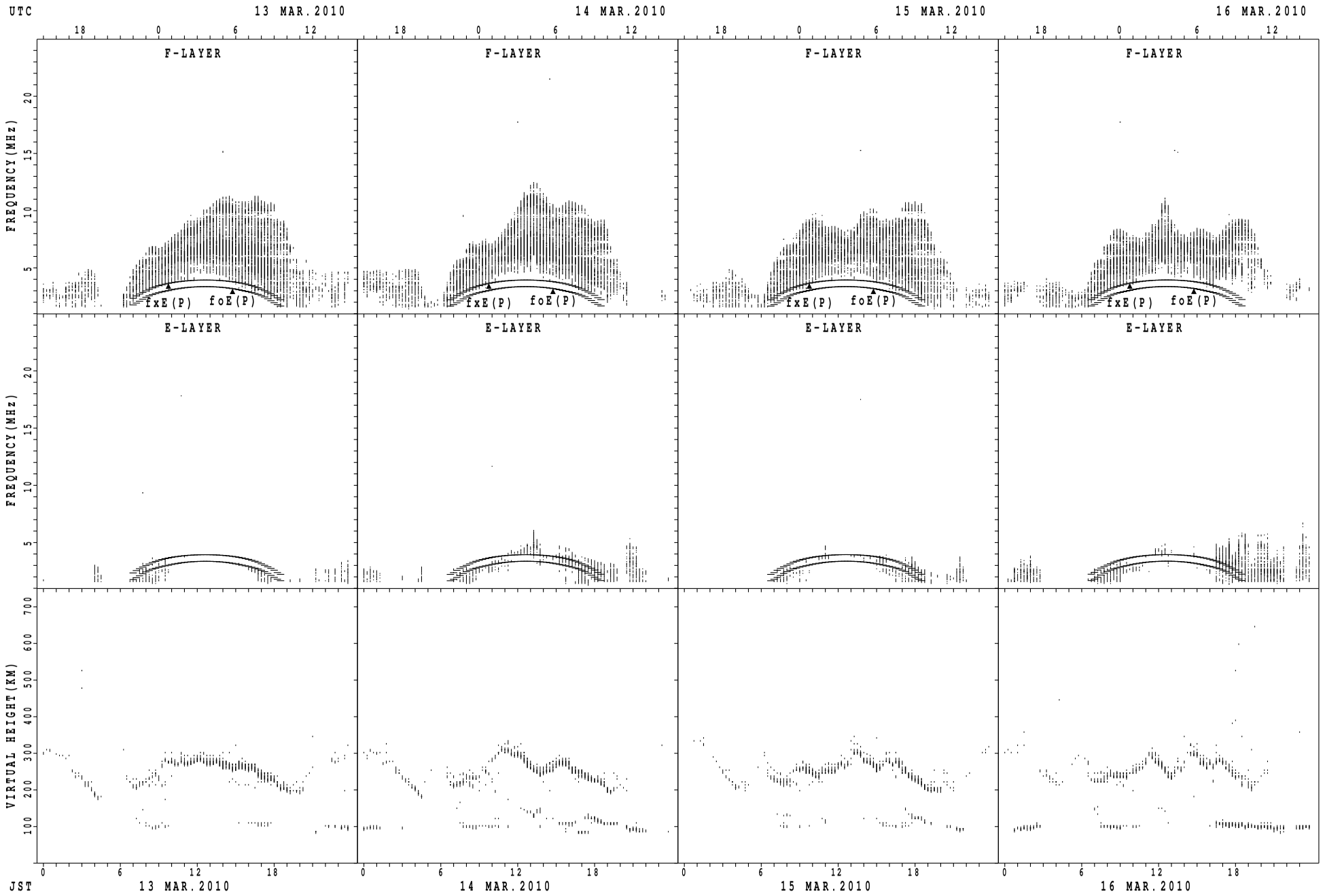
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



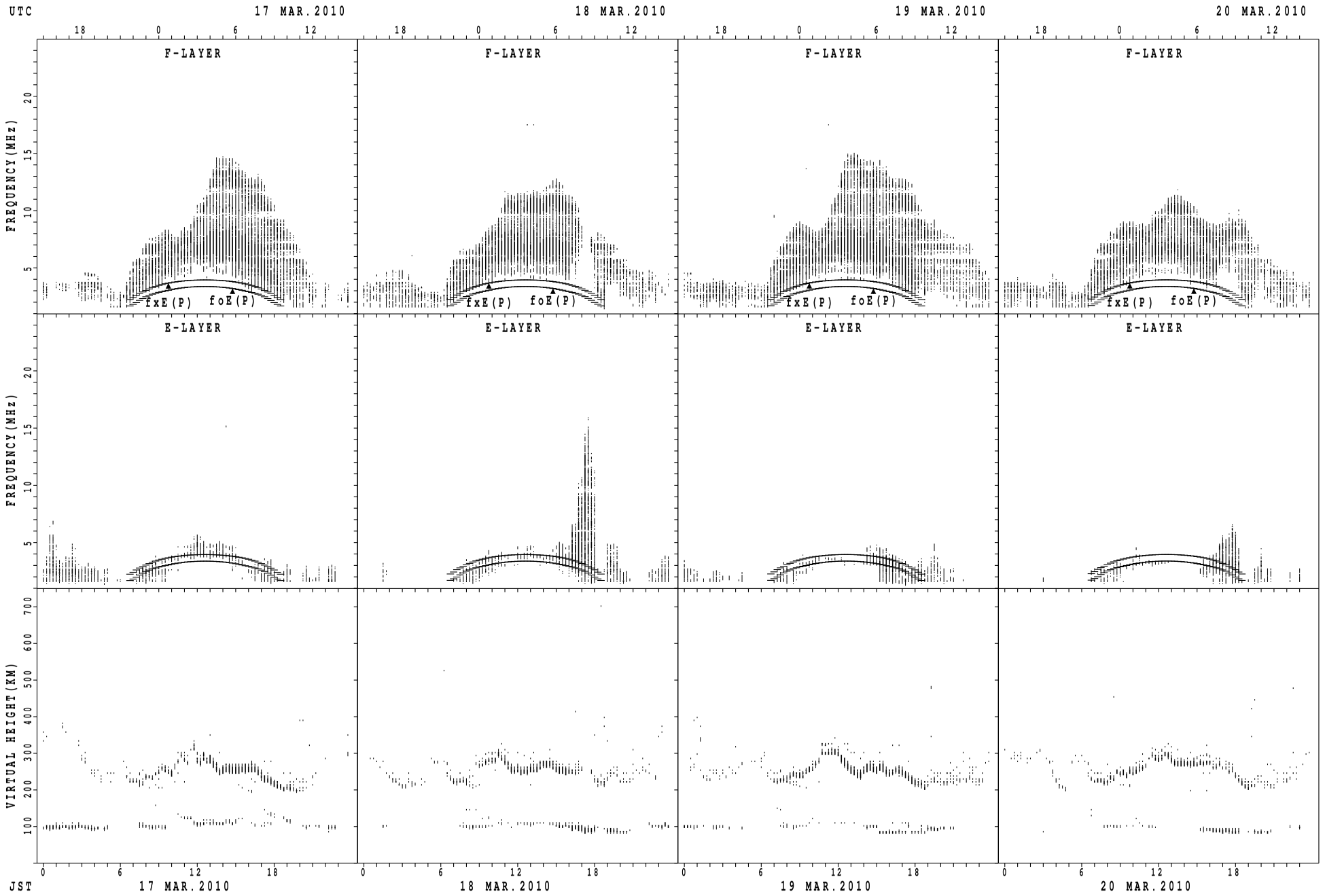
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



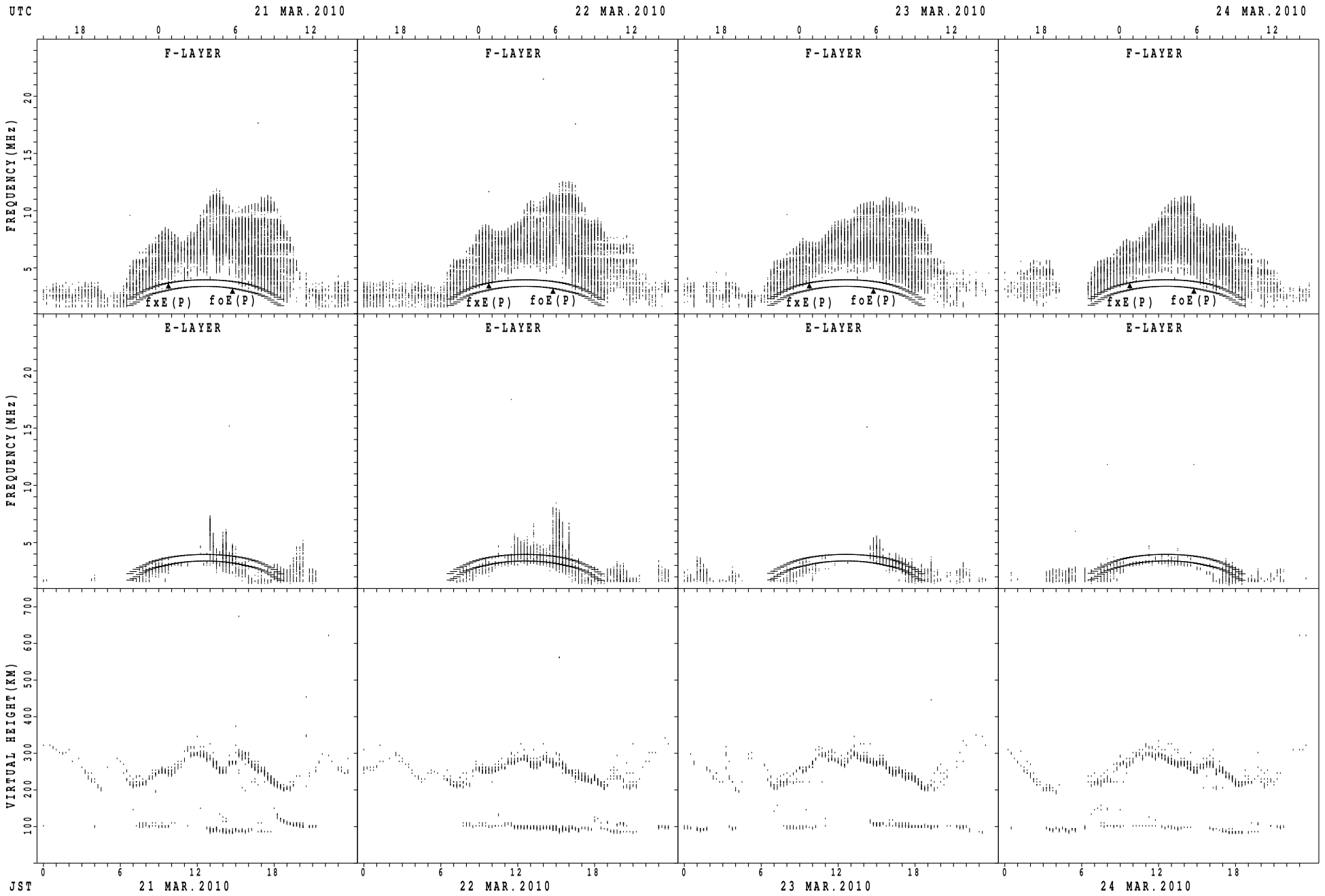
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



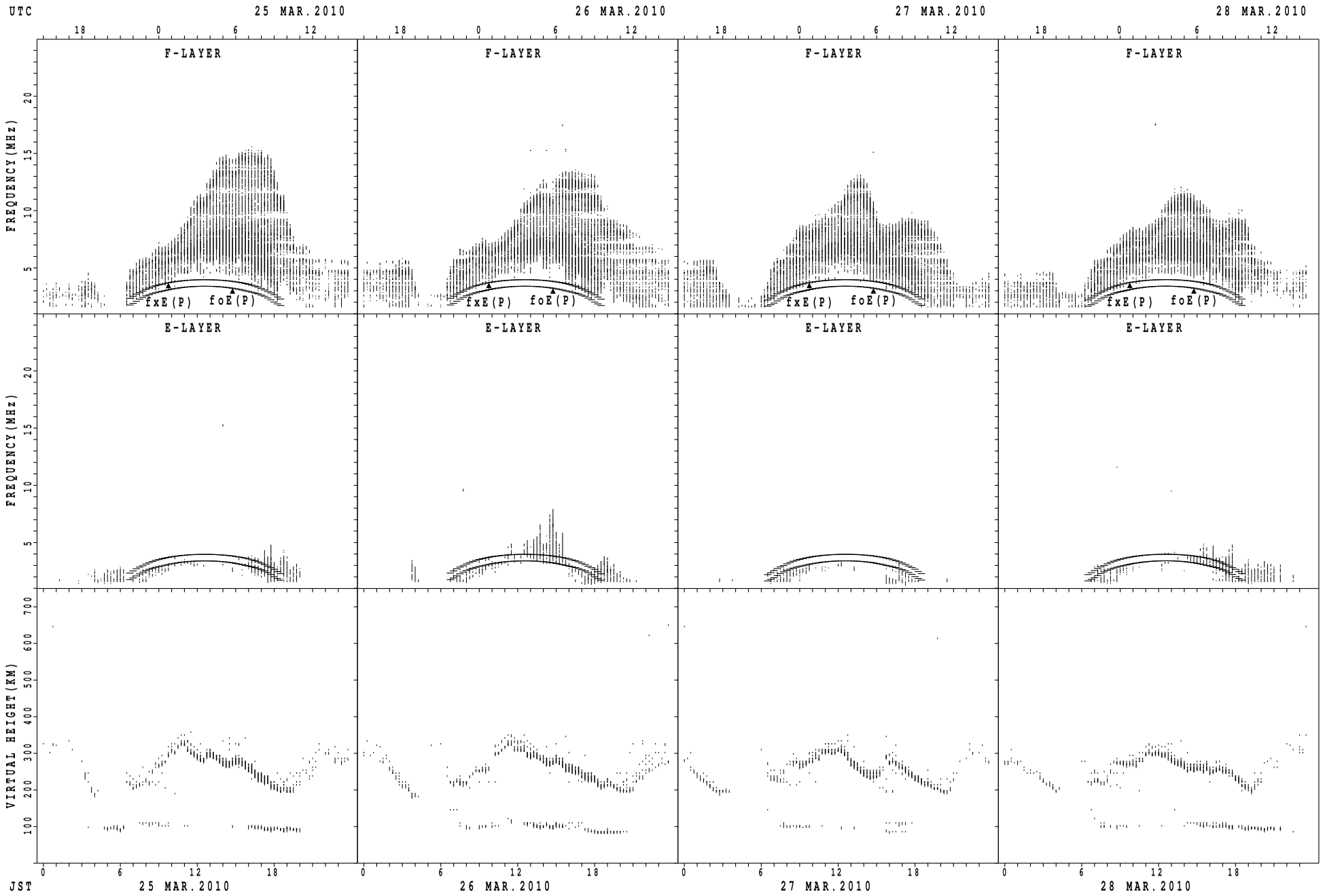
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



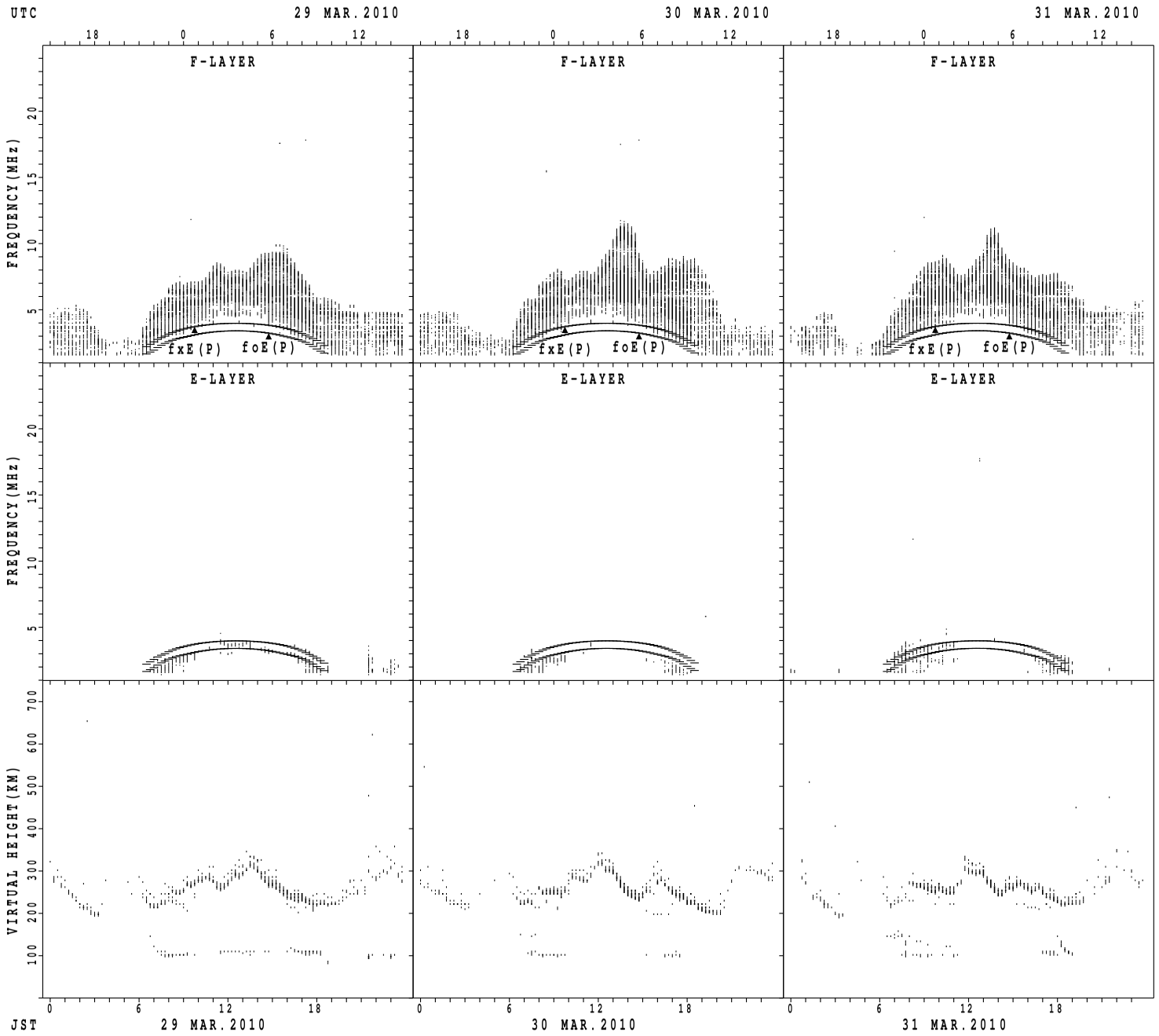
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



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

SUMMARY PLOTS AT Okinawa



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

MONTHLY MEDIANS OF h′F AND h′Es

MAR.2010 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

h′F STATION Wakkanai LAT. 45°10.0′N LON. 141°45.0′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			5	14	9						19	22	15	4	1				
MED					268			236	238	238						254	254	246	238	256				
U Q					134			251	256	246						258	260	250	253	128				
L Q					134			225	214	232						248	248	232	236	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	5	6	4	5	9	1	9	22	24	16	18	16	9	11	9	20	15	12	11	9	5	3	3	5
MED	95	95	93	91	97	91	149	125	103	102	100	100	95	97	95	101	101	97	91	87	97	97	97	95
U Q	95	95	94	96	100	45	149	149	110	106	103	120	185	167	98	110	113	126	103	97	145	99	99	103
L Q	93	93	92	88	91	45	123	113	99	100	97	97	95	95	90	93	91	89	87	87	92	97	97	93

h′F STATION Kokubunji LAT. 35°43.0′N LON. 139°29.0′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								9	20	5						11	22	21	13	1				
MED								236	245	230						250	255	242	232	244				
U Q								246	262	243						256	258	249	240	122				
L Q								226	233	222						238	246	232	223	122				

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	5	4	1	2	1		13	4	4	3	5	3	7	6	9	3	9	12	12	9	9	5	5	4
MED	95	96	99	98	99		147	127	101	115	105	107	101	99	99	105	103	101	105	99	103	105	99	99
U Q	100	99	49	101	49		152	152	104	119	113	113	113	101	107	105	106	113	110	108	108	114	107	103
L Q	92	94	49	95	49		133	110	101	101	104	103	97	95	94	103	100	92	98	95	95	97	92	99

h′F STATION Yamagawa LAT. 31°12.0′N LON. 130°37.0′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									15	21							27	25	22	7				
MED									248	240							254	246	237	236				
U Q									260	264							262	260	240	246				
L Q									238	227							248	238	230	230				

h′Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	3	2	3		2	1		10	15	13	8	11	15	14	13	16	17	20	24	21	18	9	7	7
MED	95	95	91		139	97		140	107	101	107	105	135	101	115	105	105	106	97	89	97	99	103	105
U Q	99	97	97		185	48		143	137	122	138	163	179	167	134	136	114	111	105	101	103	104	105	105
L Q	89	93	91		93	48		135	103	98	98	101	97	95	101	99	98	99	88	87	87	98	95	97

MONTHLY MEDIANS OF h′F AND h′Es

MAR.2010 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

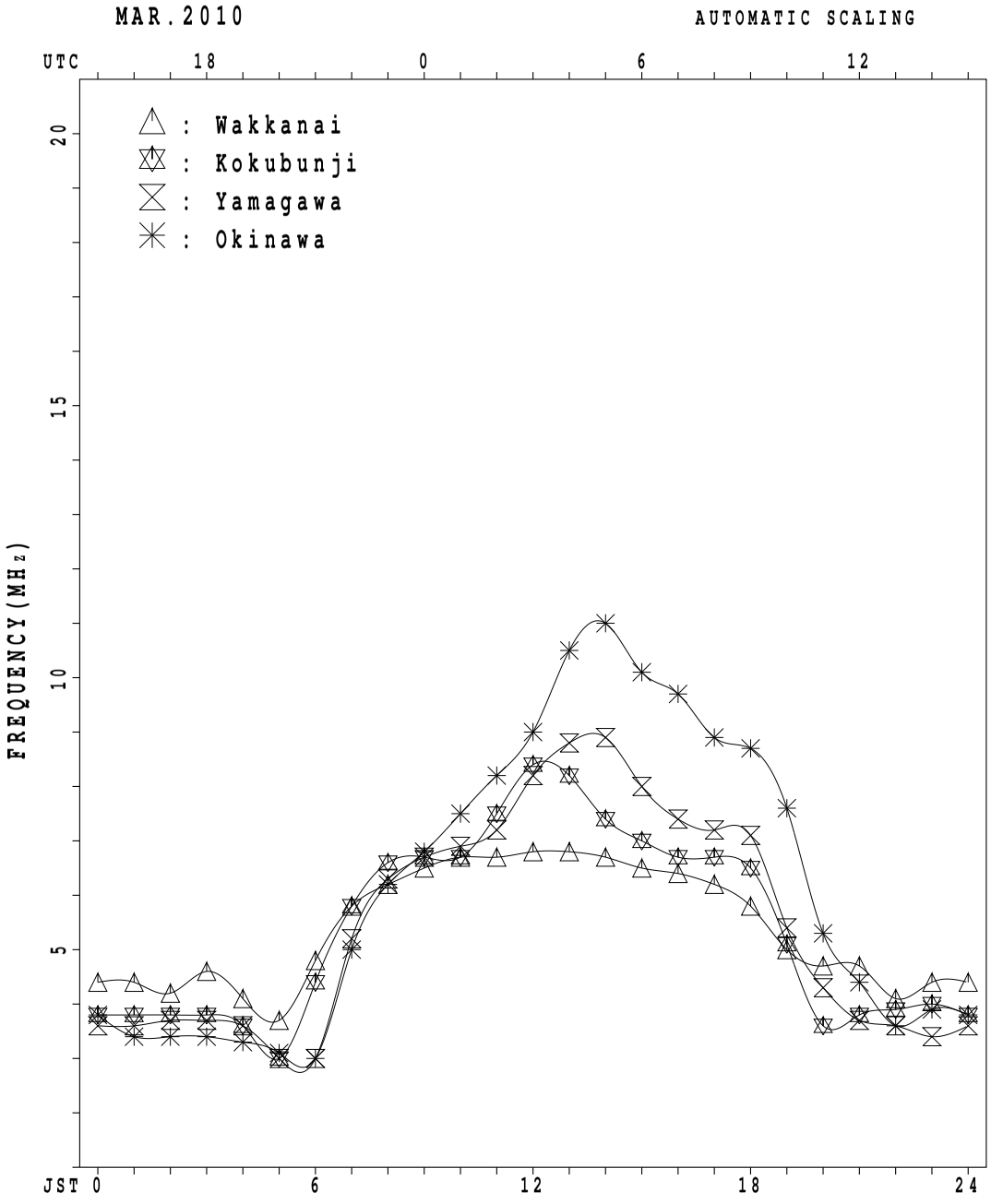
h′F STATION Okinawa LAT. 26°41.0′N LON. 128°09.0′E

	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									11	25							27	31	28	22	4	2	1	
MED									248	262							250	240	225	222	242	260	278	
U Q									268	270							262	254	235	232	254	264	139	
L Q									246	249							238	236	222	216	228	256	139	

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	5	5	2	1	5	3	1	3	3	4	2	7	4	6	6	9	8	10	17	13	11	5	3	6
MED	101	97	97	103	103	95	91	145	107	177	144	115	109	110	107	103	102	105	103	103	95	95	99	103
U Q	103	105	99	51	187	97	45	155	145	182	175	127	133	115	159	107	109	109	120	106	103	104	105	103
L Q	96	95	95	51	97	89	45	145	101	168	113	109	103	99	99	97	95	97	92	94	89	94	97	99

MONTHLY MEDIANS PLOT OF foF2



IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 fxI (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0'N LON.139°29.0'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

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

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 foF2 (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′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	35	33	36	34	35	34	35	52	62	67	67	78	77	70	65	61	59	66	42	32	36	42	35	30
2	32	33	34	36	37	27	33	52	67	74	64	70	82	74	71	64	61	56	50	37	38	38	37	35
3	34	35	38	36	32	27	34	59	70	77	78	72	76	71	62	62	58	62	58	38	36	36	33	33
4	34	34	37	37	36	34	38	53	68	72	62	75	80	66	66	70	64	68	69	37	A	A	32	31
5	30	33	34	41	24	20	31	49	64	74	66	82	79	72	69	62	65	63	60	40	29	32	33	33
6	33	36	35	36	30	30	35	54	55	60	61	77	86	88	84	74	64	72	69	50	34	28	30	33
7	34	33	34	33	33	32	41	58	62	58	60	69	91	105	88	84	65	76	65	37	35	37	38	36
8	37	36	37	37	37	35	42	62	65	72	63	65	92	96	62	66	66	70	53	32	A	38	38	36
9	35	38	34	34	34	30	40	59	63	64	62	67	76	72	72	68	63	65	58	36	31	34	34	33
10	36	36	35	36	34	32	40	60	67	60	68	66	79	77	65	74	72	69	58	46	39	40	40	36
11	37	38	40	38	38	38	49	61	70	66	70	72	77	90	86	82	68	68	76	48	36	40	36	36
12	40	38	38	40	40	34	45	68	63	63	64	66	78	84	89	84	69	78	77	56	36	36	40	42
13	F	F	F	F	F	31	45	61	72	62	70	85	90	91	81	71	77	74	62	51	44	44	F	F
14	F	43	42	41	45	F	44	60	71	67	63	72	85	83	71	74	77	70	68	48	44	44	40	40
15	F	F	F	F	F	F	49	64	68	68	72	81	71	75	68	72	72	68	65	57	49	47	45	F
16	F	F	F	F	F	F	F	71	77	68	71	72	80	70	68	64	68	70	74	58	41	A	39	F
17	40	F	F	39	40	30	42	61	70	71	68	83	103	76	70	71	72	66	62	52	41	38	37	38
18	40	39	39	37	32	25	41	58	71	74	76	90	102	91	74	69	62	59	60	60	58	54	50	49
19	50	46	46	42	38	36	46	70	84	78	80	88	91	82	80	69	74	68	58	43	41	42	41	45
20	43	42	40	40	41	32	46	62	68	85	83	71	84	85	70	67	69	68	67	58	50	48	42	43
21	41	42	42	42	43	34	47	63	V 69	66	66	82	79	78	64	65	66	72	75	53	37	39	40	40
22	39	38	38	36	38	32	46	59	68	64	68	76	87	81	80	73	65	63	68	60	32	32	F	F
23	F	F	36	37	F	F	46	57	62	63	59	69	88	91	84	71	71	77	75	57	35	35	F	40
24	41	41	38	40	F	F	45	57	60	67	74	84	90	85	73	70	67	64	64	55	45	42	42	F
25	F	47	F	F	42	F	48	53	56	62	69	86	95	97	86	79	72	78	74	49	38	38	40	40
26	41	40	40	44	34	30	45	57	57	66	66	73	86	80	83	78	78	82	71	55	46	44	45	44
27	44	45	45	37	29	26	45	56	67	79	84	87	91	88	86	69	68	67	66	58	46	43	40	40
28	40	40	40	41	33	29	46	64	64	62	65	68	76	81	78	72	65	68	72	60	34	36	38	37
29	38	38	42	38	25	25	44	54	57	58	74	72	73	77	74	64	61	64	61	51	38	41	41	42
30	46	49	47	47	42	F	44	59	60	65	72	80	79	71	75	64	64	60	54	51	42	42	43	42
31	41	41	44	46	25	26	40	57	64	65	78	91	92	84	74	61	55	56	64	64	54	51	50	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	25	26	26	27	26	24	30	31	31	31	31	31	31	31	31	31	31	31	31	31	29	29	28	26
MED	39	38	38	38	36	30	44	59	67	66	68	75	84	81	74	70	66	68	65	51	38	40	40	39
U Q	41	42	42	41	40	34	46	62	70	72	74	83	91	88	83	74	72	72	71	57	44	44	42	42
L Q	34	36	36	36	32	27	40	56	62	63	64	70	78	74	68	64	64	64	58	40	36	36	36	35

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 foF1 (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0'N LON.139°29.0'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									L	U L 408	L	U L 444	L	A	A	L	L							
2										L	L	U L 448	440	L	U L 436	U L 412								
3									L	L	U L 444	U L 440	U L 460	L	L	L								
4									L	A	A	U L 460	U L 432	A	A	L	L							
5									L	L	U L 460	E B	440	A	L	L								
6										A	L	A	U L 460	L	L	A	L							
7										L	432	U L 476	A	444	L									
8										L	L	U L 476	432	L	U L 456	U L 400	L							
9										L	U L 452	U L 448	448	432	436	L	L							
10										L	L	L	U L 468	U L 448	L	L	U L 392							
11									L	L	L	U L 464	U L 456	A	A	L								
12											L	U L 468	468	U L 440	L	L	L							
13											U L 464	U L 468	448	L	L	L	L							
14									L	L	L	L	U L 480	L	L	L	L							
15										L	U L 468	U L 452	U L 468	464	L	A	A							
16										L	U L 476	U L 464	U L 472	U L 456	L	L	L							
17									L	L	A	U L 468	L	U L 468	U L 460	A	A							
18									L	L	U L 456	U L 476	U L 468	U L 476	L	L	L							
19										L	L	L	464	464	U L 448	L	L							
20									L	U L 452	452	U L 484	460	U L 460	U L 432	L	L							
21									L	L	U L 468	U L 452	L	456	L		L							
22										L	L	U L 464	464	L	U L 452	L	L							
23									L	L	U L 472	460	440	452	L	L	U L 376							
24									L	L	448	464	A	U L 456	U L 464	U L 420	L							
25										L	L	U L 456	A	A	U L 436	L	L							
26									L	L	U L 456	A	464	460	U L 444	L	L	L						
27									L	L	460	U L 480	472	460	444	L	L							
28									L	L	444	460	468	U L 452	440	L	L	L						
29									L	L	444	452	U L 464	460	444	L	L							
30									L	428	448	464	448	464	444	L	L							
31									L	444	448	448	U L 464	456	L	L								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT										4	18	25	25	19	14	3	2							
MED										436	U L 454	U L 464	464	456	U L 444	U L 412	U L 384							
U Q										448	U L 464	U L 468	U L 468	464	U L 452	U L 420								
L Q										418	448	U L 452	448	452	U L 436	U L 400								

MAR. 2010 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 foE (0.01MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0'N LON.139°29.0'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								UR 204	256	R	R	R	R	312	328	A	R	UA 188						
2								UR 208	R	R	A	R	R	R	A	A	A	UR 176						
3								212	A	A	R	R	R	R	R	A	A	A						
4								188	R	312	A	R	UR 348	A	A	R	A	A						
5								B	UR 272	304	R	B	R	A	R	R	A	184						
6								200	260	300	R	372	R	R	R	288	R	192						
7								UA 220	A	A	R	A	A	A	A	A	A	B						
8								B	A	A	R	R	R	R	R	R	R	B						
9								204	UR 292	UR 312	R	R	R	R	R	R	A	UR 204						
10								208	R	R	R	R	R	R	R	R	A	A						
11								A	R	A	R	A	A	328	A	R	R	R						
12								224	R	A	R	R	A	R	A	A	A	A						
13								UA 192	R	A	A	A	A	R	A	R	UR 360	R						
14								UA 220	R	R	R	R	A	R	R	R	260	A						
15								UR 244	R	R	A	A	A	A	A	A	A	A						
16							B	A	A	R	R	R	R	R	R	R	A	A						
17							B	228	A	A	A	A	R	R	A	A	A	A						
18							B	252	R	A	A	A	A	R	R	R	A	192						
19							B	UR 256	A	A	A	R	R	R	A	A	R	188						
20							B	244	A	R	A	A	R	R	R	UR 316	R	UR 212						
21							B	A	R	R	R	R	R	R	R	R	R	A						
22							B	228	296	R	R	R	R	R	R	UR 304	R	A						
23							B	240	280	312	R	R	A	A	R	UA 300	260	220						
24							B	240	R	A	A	A	A	A	A	A	A	A						
25							B	240	288	R	R	A	356	A	R	A	A	A						
26							B	244	A	A	A	A	A	A	R	A	UR 272	UR 220						
27							B	A	A	R	A	A	A	A	R	A	UR 276	UR 232						
28							B	252	R	R	R	A	R	A	A	A	A	UR 212						
29							B	252	R	R	R	A	A	R	A	R	R	A						
30							B	232	R	R	A	R	A	R	A	A	A	A						
31							B	240	R	R	A	A	A	A	A	A	R	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								25	7	5		1	2	2	1	4	5	12						
MED								228	280	312		372	352	320	328	U 302	UR 272	U 198						
U Q								244	292	312						UR 310	UR 318	UR 216						
L Q								208	260	302						294	260	188						

MAR. 2010 foE (0.01MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 foEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E B 15	E B 15	20	E B 15	J A 19	20	E B 14	G 18	31	G 21		G 26	G	41	41	35	G 22	25	J A 38	J A 50	J A 44	J A 22	J A 22	J A 22
2	J A 22	E B 14	E B 14	E B 14	E B 14	E B 15	E B 14	G	G 23	G 29	34	G 26	G	G 31	J A 39	36	27	G	26	E B 16	E B 15	E B 14	E B 15	E B 15
3	E B 14	E B 14	E B 14	E B 15	E B 15	E B 20	E B 15	26	35	37	G 31	G	G 31	G 25	G 31	34	29	23	E B 15	E B 14	E B 15	E B 15	E B 15	E B 15
4	E B 14	E B 15	E B 15	E B 14	E B 14	E B 15	E B 14	23	G 23	38	36	G 30	G	J A 48	J A 45	G 26	29	J A 39	J A 31	J A 28	J A 31	J A 42	J A 27	J A 26
5	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	20	G 22	36	G 29	E B 42	G 28	J A 47	G 26	G 25	28	25	E B 15	E B 16	E B 14	E B 16	E B 15	E B 14
6	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	25	31	37	G 27	42	G 26	G 28	G 27	34	G 23	25	J A 18	J A 24	21	E B 15	E B 15	E B 15
7	E B 16	E B 15	E B 15	E B 15	20	E B 15	E B 14	29	32	J A 35	G 31	41	J A 46	J A 43	J A 41	35	J A 33	25	E B 15	J A 21	E B 16	E B 16	E B 15	E B 15
8	E B 15	E B 15	E B 14	E B 15	E B 16	J A 23	J A 23	J A 26	33	32	G 28	G 33	G 27	G 29	G 26	G	G 22	J A 30	J A 22	J A 31	J A 76	J A 24	J A 26	22
9	21	E B 15	E B 15	E B 15	E B 14	E B 14	E B 15	26	G 22	G 24	G	G 32	G	G	G	G 26	30	G	J A 23	J A 20	21	E B 15	E B 15	E B 15
10	J A 22	20	20	20	20	E B 15	E B 14	26	G 24	G 26	G 30	G 31	G 33	G 30	G 26	G 19	32	J A 28	J A 23	J A 18	J A 21	22	J A 28	J A 19
11	J A 19	21	E B 15	E B 15	E B 15	E B 15	E B 17	27	G 26	37	G 26	40	J A 41	42	43	G	G 23	G	E B 14	E B 15	E B 15	E B 15	E B 15	E B 15
12	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	32	G 24	36	G 27	G 32	43	G	36	37	39	23	E B 15	E B 14	E B 14	E B 15	E B 15	E B 14
13	E B 16	22	E B 15	E B 15	E B 15	J A 20	J A 27	24	G 24	40	43	J A 46	J A 46	G 33	38	G 26	G 24	G 20	J A 28	J A 23	20	J A 24	21	19
14	18	E B 15	E B 15	E B 15	E B 15	E B 14	E B 16	28	G 23	G	G 34	G	40	G	G 25	G 23	33	24	19	E B 15	J A 30	J A 23	E B 15	E B 14
15	E B 15	E B 15	19	20	20	20	J A 19	G 19	G 27	G 27	40	J A 44	41	J A 46	J A 58	J A 45	J A 40	J A 28	J A 32	21	J A 31	22	19	J A 24
16	J A 23	19	18	J A 23	22	18	18	27	J A 38	G 28	G 28	G 32	G	G 32	G 28	G 24	30	J A 31	J A 23	J A 30	J A 74	J A 42	J A 53	22
17	J A 22	J A 27	J A 26	J A 28	J A 30	J A 22	22	28	35	J A 49	J A 48	J A 39	G 33	G 34	40	J A 54	J A 42	J A 29	18	E B 14	E B 15	J A 23	E B 15	J A 29
18	J A 22	J A 19	20	J A 24	20	20	22	30	G 22	36	38	40	40	G 33	G 30	G 26	30	24	E B 14	21	J A 21	21	E B 15	E B 15
19	E B 15	E B 15	E B 15	E B 14	E B 15	E B 14	J A 21	G 22	35	36	40	G 33	G 30	G 26	38	32	G 28	24	E B 14	E B 15	E B 15	E B 15	E B 14	20
20	E B 15	E B 14	E B 14	E B 14	18	E B 14	E B 15	28	35	G 27	J A 39	39	G 30	G 29	G 24	G 22	G 22	G 20	E B 15	20	18	E B 15	E B 15	E B 14
21	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	28	G 25	G 28	G 28	G 30	G 28	G 29	G 29	G 25	G 22	J A 28	21	J A 26	J A 17	E B 15	E B 15	E B 15
22	E B 16	E B 15	E B 15	E B 14	E B 15	E B 15	19	27	33	G 27	G 27	G 30	G 32	G 30	G 26	G 23	G 23	26	19	E B 15	18	E B 16	E B 14	E B 15
23	E B 16	E B 16	E B 15	E B 14	E B 15	E B 14	20	29	32	37	G 26	G 29	44	42	G 29	35	30	26	J A 32	20	J A 22	J A 28	J A 28	J A 24
24	20	J A 22	J A 20	E B 15	E B 15	E B 14	22	32	G 27	37	J A 45	39	J A 59	J A 44	40	36	J A 28	26	22	E B 15	22	21	18	E B 15
25	E B 15	J A 25	20	19	E B E B 14	E B 14	21	28	34	G 26	33	J A 38	43	J A 44	G 33	34	J A 35	24	E B 14	J A E B 20	E B E B 16	E B 15	E B 15	E B 16
26	J A 30	J A 24	20	20	20	E B 14	24	28	34	38	J A 45	J A 44	J A 42	38	G 27	35	G 23	G 20	E B 14	E B 14	E B 14	E B 14	E B 15	E B 15
27	E B 15	E B 16	E B 15	E B 14	E B 14	E B 15	22	31	34	G 29	J A 42	39	40	40	G 30	34	G	G 21	21	E B 15	20	E B 15	E B 15	E B 15
28	E B 15	E B 15	E B 14	E B 15	E B 14	E B 14	20	G 22	G 26	G 27	G	38	G 31	38	38	36	J A 36	G 19	E B 15	E B 15	E B 14	E B 15	E B 15	E B 15
29	E B 15	E B 15	E B 15	E B 14	E B 16	E B 14	22	28	G 27	G 28	G 30	39	41	G 32	41	G 26	G 22	24	J A 19	J A E B 22	E B 15	E B 15	E B 16	E B 14
30	E B 15	E B 15	18	E B 14	E B 14	E B 15	20	28	G 26	G 27	36	G 29	38	G	37	32	30	22	J A 18	E B 15	E B 14	20	21	E B 15
31	E B 15	E B 15	E B 15	E B E B 15	E B 14	18	23	30	G 24	G 23	39	J A 40	36	37	36	34	G 25	27	20	19	19	E B 15	18	E B 16
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	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	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	19	27	G 27	G	G	E G 38	G	G	G	32	28	24	19	19	18	E B 16	E B 15	E B 15
U Q	J A 20	J A 19	19	15	19	18	22	28	34	37	J A 39	40	J A 41	J A 42	40	35	J A 32	J A 27	J A 23	J A 22	J A 22	J A 22	J A 21	J A 20
L Q	E B 15	E B 15	E B 15	E B 14	E B 14	E B 14	E B 14	G 24	G 24	G 27	G 28	G 31	G 31	G 30	G 27	G 26	G 23	G	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15

MAR. 2010 foEs (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 fbEs (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15	E B 14	G 16	28	G 20		G 24	G	38	40	34	G 22	24	34	16	19	E B 15	17	16
2	E B 15	E B 14	E B 14	E B 14	E B 14	E B 15	E B 14	G	G 22	G 26	32	G 26	G	G 28	33	32	23	G	21	E B 16	E B 15	E B 14	E B 15	E B 15
3	E B 14	E B 14	E B 14	E B 15	E B 15	E B 15	E B 15	24	30	32	G 23	G	G 30	G 23	G 29	31	27	22	E B 15	E B 14	E B 15	E B 15	E B 15	E B 15
4	E B 14	E B 15	E B 15	E B 14	E B 14	E B 15	E B 14	22	G 22	33	33	G 28	G	40	40	G 26	28	35	27	22	A A 31	A A 42	22	18
5	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	19	G 20	34	G E B 28 42		G 27	41	G 24	G 23	27	21	E B 15	E B 16	E B 14	E B 16	E B 15	E B 14
6	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	24	30	36	G 24	41	G 24	G 26	G 26	34	G 22	23	E B 15	20	E B 15	E B 15	E B 15	E B 15
7	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	24	30	33	G 30	37	40	34	36	33	28	20	E B 15	E B 16	E B 16	E B 16	E B 15	E B 15
8	E B 15	E B 15	E B 14	E B 15	E B 16	E B 15	19	23	30	31	G 24	G 33	G 26	G 27	G 25	G	G 20	23	17	20	A A 76	E A 15	17	E B 15
9	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	E B 15	25	G 22	G 23	G	G 31	G	G	G	G 24	28	G	17	E B 14	E B 16	E B 15	E B 15	E B 15
10	E B 16	E B 16	E B 15	E B 15	E B 14	E B 15	E B 14	23	G 22	G 25	G 28	G 30	G 31	G 28	G 21	G 18	30	24	18	16	17	E B 16	24	E B 15
11	E B 15	16	E B 15	E B 15	E B 15	E B 15	E B 17	24	G 20	34	G 26	37	35	39	39	G	G 22	G	E B 14	E B 15	E B 15	E B 15	E B 15	E B 15
12	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	24	G 21	35	G 25	G 29	39	G	34	34	29	22	E B 15	E B 14	E B 14	E B 15	E B 15	E B 14
13	E B 16	E B 15	E B 15	E B 15	E B 15	16	20	23	G 23	39	39	36	36	G 32	34	G 25	G 21	G 18	20	18	E B 15	16	E B 16	E B 15
14	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	E B 16	28	G 22	G	G 32	G	38	G	G 23	G 22	30	23	E B 15	E B 15	21	18	E B 15	E B 14
15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	G 19	G 22	G 25	36	36	39	38	36	36	33	24	22	E B 15	25	18	E B 15	E B 16
16	17	E B 15	E B 14	E B 15	E B 15	E B 15	17	26	34	G 27	G 23	G 26	G	G 30	G 28	G 22	27	26	19	25	23	A A 42	16	E B 15
17	16	20	E B 15	E B 15	16	E B 16	19	26	32	36	43	36	G 32	G 34	37	47	39	22	16	E B 14	E B 15	E B 15	E B 15	16
18	E B 16	E B 15	E B 15	E B 16	E B 15	E B 15	20	28	G 21	34	37	37	38	G 32	G 29	G 26	26	22	E B 14	E B 15	E B 15	E B 15	E B 15	E B 15
19	E B 15	E B 15	E B 15	E B 14	E B 15	E B 14	18	G 20	32	35	34	G 32	G 28	G 25	35	32	G 27	22	E B 14	E B 15	E B 15	E B 15	E B 14	E B 16
20	E B 15	E B 14	E B 14	E B 14	E B 15	E B 14	E B 15	26	34	G 24	35	36	G 27	G 27	G 24	G 22	G 21	G 19	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14
21	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	E B 14	26	G 24	G 27	G 28	G 28	G 28	G 27	G 27	G 23	G 20	22	18	23	E B 15	E B 15	E B 15	E B 15
22	E B 16	E B 15	E B 15	E B 14	E B 15	E B 15	18	26	32	G 27	G 25	G 28	G 30	G 30	G 25	G 21	G 22	24	17	E B 15	E B 15	E B 16	E B 14	E B 15
23	E B 16	E B 16	E B 15	E B 14	E B 15	E B 14	18	26	30	35	G 26	G 28	41	39	G 26	35	29	23	26	E B 15	E B 15	17	18	16
24	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	21	29	G 26	35	40	38	43	38	37	33	27	24	E B 15	E B 15	E B 16	E B 15	16	E B 15
25	E B 15	E B 16	E B 16	E B 15	E B 14	E B 14	20	27	31	G 24	G 30	37	39	43	G 30	33	30	23	E B 14	E B 15	E B 16	E B 15	E B 15	E B 16
26	17	18	E B 16	16	E B 14	E B 14	21	27	32	36	39	41	40	36	G 25	32	G 20	G 20	E B 14	E B 14	E B 14	E B 14	E B 15	E B 15
27	E B 15	E B 16	E B 15	E B 14	E B 14	E B 15	21	29	31	G 27	37	38	37	36	G 30	32	G	G 20	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15
28	E B 15	E B 15	E B 14	E B 15	E B 14	E B 14	18	G 21	G 26	G 25	G	37	G 30	36	36	32	30	G 18	E B 15	E B 15	E B 14	E B 15	E B 15	E B 15
29	E B 15	E B 15	E B 15	E B 14	E B 16	E B 14	20	27	G 22	G 27	G 28	36	38	G 32	37	G 24	G 22	23	E B 16	E B 15	E B 15	E B 15	E B 16	E B 14
30	E B 15	E B 15	E B 15	E B 14	E B 14	E B 15	19	26	G 25	G 25	34	G 28	36	G	35	32	29	22	E B 14	E B 15	E B 14	E B 15	E B 15	E B 15
31	E B 15	E B 15	E B 15	E B 15	E B 14	E B 16	21	28	G 24	G 23	37	37	35	35	33	32	G 24	26	19	E B 15	E B 15	E B 15	E B 15	E B 16
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	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	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	17	25	G 26	G	G	E G 36	G	G	G	32	27	22	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15
U Q	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	20	27	31	35	36	37	38	38	36	33	29	24	19	16	16	16	16	16
L Q	E B 15	E B 15	E B 15	E B 14	E B 14	E B 14	E B 14	G 23	G 22	G 25	G 26	G 28	G 30	G 28	G 26	G 24	G 22	G	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15

MAR. 2010 fbEs (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 fmin (0.1MHz) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′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	15	14	15	14	12	25	15	25	14	22	15	14	14	16	16	15	15	14	14
2	15	14	14	14	14	15	14	14	15	15	14	15	24	17	18	15	11	13	14	16	15	14	15	15
3	14	14	14	15	15	15	15	14	14	14	15	27	18	16	18	14	14	15	15	14	15	15	15	15
4	14	15	15	14	14	15	14	14	14	14	15	16	22	18	14	13	16	14	13	15	15	15	14	14
5	15	15	15	15	15	14	14	15	14	14	17	42	15	13	17	14	12	13	15	16	14	16	15	14
6	16	15	15	15	15	15	15	14	13	13	14	16	14	16	14	14	14	13	15	16	15	15	15	15
7	16	15	15	15	15	15	14	14	14	14	13	16	20	18	16	14	14	14	15	16	16	16	15	15
8	15	15	14	15	16	15	15	15	15	15	15	20	16	15	16	15	11	16	14	14	15	15	15	15
9	15	15	15	15	14	14	15	13	13	13	22	21	25	23	21	13	15	14	14	14	16	15	15	15
10	16	16	15	15	14	15	14	14	14	13	13	20	18	16	12	12	16	14	14	15	14	16	15	15
11	15	15	15	15	15	15	17	15	15	14	14	16	18	20	18	19	13	14	14	15	15	15	15	15
12	16	15	15	15	15	15	14	14	13	15	13	16	19	22	16	14	14	12	15	14	14	15	15	14
13	16	15	15	15	15	15	14	12	13	14	15	16	24	22	19	18	16	14	14	14	15	14	16	15
14	15	15	15	15	15	14	16	14	13	18	19	25	21	18	16	14	13	15	15	15	14	14	15	14
15	15	15	15	15	15	15	15	13	14	14	16	21	20	17	18	14	13	14	14	15	15	16	15	16
16	15	15	14	15	15	15	15	14	13	12	16	16	26	24	15	15	13	13	15	14	14	14	14	15
17	15	15	15	15	16	16	16	14	15	14	15	15	17	26	22	18	15	13	12	14	15	15	15	15
18	16	15	15	16	15	15	15	14	14	14	15	19	21	18	19	14	14	13	14	15	15	15	15	15
19	15	15	15	14	15	14	15	16	15	15	14	22	14	17	15	18	14	13	14	15	15	15	14	16
20	15	14	14	14	15	14	15	14	14	14	15	17	17	18	15	14	14	15	15	15	15	15	15	14
21	15	15	15	15	15	14	14	14	12	14	14	18	18	20	21	14	15	14	15	15	15	15	15	15
22	16	15	15	14	15	15	15	14	14	16	14	16	17	15	14	15	14	14	14	15	15	16	14	15
23	16	16	15	14	15	14	15	15	15	12	18	16	18	16	14	15	15	14	14	16	15	15	15	16
24	15	15	16	15	15	14	14	15	16	15	18	18	19	17	13	14	14	14	15	15	16	15	16	15
25	15	16	16	15	14	14	15	12	15	14	20	22	27	19	16	16	14	14	14	15	16	15	15	16
26	15	16	16	16	14	14	16	13	13	14	14	18	18	17	15	17	12	14	14	14	14	14	15	15
27	15	16	15	14	14	15	14	15	14	14	15	22	20	16	18	13	14	13	15	15	15	15	15	15
28	15	15	14	15	14	14	15	14	14	17	21	16	17	18	18	15	13	14	15	15	14	15	15	15
29	15	15	15	14	16	14	15	16	15	14	20	22	18	20	14	13	14	14	16	15	15	15	16	14
30	15	15	15	14	14	15	13	14	12	14	14	17	17	20	19	14	14	11	14	15	14	15	15	15
31	15	15	15	15	14	16	14	14	15	15	15	16	22	15	14	14	14	13	14	15	15	15	15	16
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	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	15	15	15	15	15	14	14	14	15	17	18	18	16	14	14	14	14	15	15	15	15	15
U Q	16	15	15	15	15	15	15	15	15	15	18	21	22	20	18	15	14	14	15	15	15	15	15	15
L Q	15	15	15	14	14	14	14	14	13	14	14	16	17	16	14	14	13	13	14	14	14	15	15	15

MAR. 2010 fmin (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 M(3000)F2 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0'N LON.139°29.0'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	307	338	320	305	334	355	363	382	378	381	343	349	340	363	340	367	351	379	377	327	324	345	329	339
2	301	290	324	330	385	353	370	371	373	364	346	336	339	328	359	360	378	355	367	331	319	329	323	320
3	302	305	314	343	356	337	352	402	363	371	361	341	350	349	342	344	346	352	361	351	320	342	330	315
4	314	303	322	328	357	320	365	365	364	375	342	337	360	359	349	351	348	348	378	366	A	A	300	292
5	308	298	313	362	418	349	367	376	355	354	335	363	335	347	346	349	349	366	373	384	297	307	305	303
6	308	322	349	342	343	327	366	368	383	371	346	354	345	345	337	352	351	356	365	370	327	317	311	307
7	315	311	313	327	323	319	359	391	381	378	328	329	317	361	337	360	343	364	373	366	322	313	317	338
8	314	315	320	318	324	342	351	386	383	374	357	324	343	360	341	368	366	375	375	377	A	302	333	324
9	334	341	330	320	346	335	365	386	374	364	343	353	359	353	361	345	360	367	379	386	316	335	321	326
10	321	318	314	324	335	316	354	377	386	394	339	321	339	352	359	354	367	374	360	347	315	332	340	321
11	312	303	307	299	322	314	349	374	375	368	350	337	324	341	339	355	357	345	367	352	301	315	317	315
12	316	298	307	310	351	329	354	375	383	370	342	352	333	328	323	348	351	348	367	378	318	296	288	300
13	F	F	F		F	331	360	374	369	354	334	340	333	341	346	352	351	365	366	341	317	294	F	F
14	F	304	310	324	374	F	347	360	369	350	360	342	321	331	334	338	353	358	363	343	319	330	308	302
15	F	F	F	F	F	F	364	370	350	360	347	358	336	356	336	338	359	355	347	334	333	329	320	F
16	F	F	F	F	F	F	F	352	375	367	341	342	360	360	356	337	346	355	353	361	313	A	307	F
17	295	F	F	314	348	316	365	363	362	354	332	329	361	347	339	333	339	354	355	332	330	304	297	289
18	308	314	326	340	364	285	358	353	363	347	324	329	335	357	339	354	362	349	338	324	310	308	300	307
19	321	321	330	313	336	300	336	346	374	352	345	341	344	342	354	343	358	362	356	339	293	292	297	308
20	339	314	312	317	347	309	347	361	347	354	366	347	337	348	350	354	340	354	352	338	317	336	319	313
21	305	307	298	306	344	320	358	370	V 352	363	329	335	338	354	346	341	338	351	369	360	318	320	318	310
22	316	308	308	325	345	309	360	361	372	344	352	328	336	327	338	357	346	353	364	379	343	291	F	F
23		F	339	359	F	F	370	371	381	372	340	315	329	343	336	342	350	355	365	368	327	302	F	296
24	302	307	332	367	F		367	370	350	341	335	325	340	349	346	347	358	361	357	348	323	290	305	
25		285	F	F	340	F	384	388	366	348	319	318	338	332	335	334	330	348	357	349	314	317	307	297
26	297	294	311	356	388	293	360	368	357	363	341	318	335	314	328	331	335	357	351	343	317	307	303	298
27	300	319	346	358	354	320	354	347	339	337	331	319	324	328	349	345	347	363	352	356	331	317	322	304
28	301	306	311	347	337	302	349	363	364	348	342	337	330	341	339	354	340	348	355	362	321	297	302	292
29	303	301	344	378	309	311	365	371	363	344	341	339	335	340	344	350	352	358	365	367	305	296	304	302
30	319	316	310	324	348	F	349	360	352	338	344	335	349	333	352	343	360	359	349	346	319	304	305	299
31	308	315	324	394	314	313	355	345	342	323	326	330	339	338	346	367	351	342	336	330	325	306	300	296
	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	26	26	27	26	24	30	31	31	31	31	31	31	31	31	31	31	31	31	31	29	29	28	26
MED	308	308	317	327	346	320	360	370	366	360	342	337	338	345	342	349	351	355	363	351	319	308	308	306
U Q	316	316	330	356	356	333	365	376	375	371	346	342	344	354	349	354	358	363	367	367	324	329	320	315
L Q	302	303	311	317	335	310	352	361	355	348	334	328	333	333	337	342	346	351	353	339	314	300	302	298

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 M(3000)F1 (0.01) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1									L	U L 409	L	U L 365	L	A	A	L	L							
2										L	L	U L 420	377	L	U L 380	U L 383								
3									L	L	U L 399	U L 419	U L 373	L	L	L								
4									L	A	A	U L 392	U L 402	A	A	L	L							
5									L	L	U L 390	E B	433	A	L	L								
6										A	L	A	U L 381	L	L	A	L							
7										L	399	U L 365	A	387	L									
8										L	L	U L 363	438	L	U L 386	U L 394	L							
9										L	U L 389	U L 402	438	404	377	L	L							
10										L	L	L	U L 360	U L 408	L	L	U L 394							
11									L	L	L	U L 399	U L 379	A	A	L								
12											L	U L 390	377	U L 393	L	L	L							
13											U L 393	U L 387	376	L	L	L	L							
14									L	L	L	L	U L 381	L	L	L	L							
15										L	U L 383	U L 384	U L 407	410	L	A	A							
16										L	U L 386	U L 399	U L 381	U L 406	L	L	L							
17									L	L	A	U L 397	L	U L 398	U L 385	A	A							
18									L	L	U L 383	U L 380	U L 389	U L 385	L	L	L							
19										L	L	L	389	387	U L 401	L	L							
20									L	U L 371	399	U L 387	421	U L 391	U L 391	L	L							
21									L	L	U L 402	U L 398	L	401	L		L							
22										L	L	U L 404	388	L	U L 379	L	L							
23									L	L	U L 383	419	438	416	L	L	U L 395							
24									L	L	413	372	A	U L 371	U L 371	U L 396	L							
25										L	L	U L 403	A	A	U L 400	L	L							
26									L	L	U L 394	A	399	402	U L 394	L	L	L						
27									L	L	389	U L 385	365	379	381	L	L							
28									L	L	381	411	394	U L 389	384	L	L	L						
29									L	L	390	390	U L 396	381	374	L	L							
30									L	387	386	377	398	382	384	L	L							
31									L	378	390	406	U L 385	384	L	L								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT										4	18	25	25	19	14	3	2							
MED										382	U L 390	U L 392	389	391	U L 384	U L 394	U L 394							
U Q										398	399	U L 404	404	404	U L 391	U L 396								
L Q										374	U L 386	U L 382	378	384	379	U L 383								

MAR. 2010 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 h′F2 (KM) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′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									238	232	276	258	254	256	256	242	242							
2										240	246	284	262	268	252	256								
3									242	232	244	258	258	252	258	260								
4									236	218	228	270	246	250	268	252	250							
5									254	244	266	242	268	252	258	252								
6										242	262	262	256	260	250	240	244							
7										234	312	300	292	238	248									
8										236	248	294	260	228	278	244	240							
9										240	286	260	256	264	268	270	234							
10										218	272	256	272	248	248	256	240							
11									240	234	254	266	288	258	262	248								
12											236	258	280	254	258	250	250							
13											274	262	262	250	250	256	248							
14									248	248	242	278	276	258	252	266	244							
15										248	262	244	254	260	256	278	236							
16										236	266	252	242	246	258	264	252							
17									252	242	274	276	240	244	266	268	242							
18									240	262	268	268	260	244	266	246	242							
19										248	260	254	256	254	246	258	242							
20									260	246	230	258	272	254	248	252	262							
21									238	240	254	280	246	260	252		274							
22										254	250	274	262	268	252	244	252							
23									240	242	278	300	268	260	250	244	248							
24									264	260	264	276	262	250	262	250	248							
25										262	290	284	262	256	252	258	258							
26									252	244	260	292	266	280	274	258	254	238						
27									268	258	260	284	272	266	254	254	254							
28									242	266	264	284	288	260	260	252	252	250						
29									248	272	266	274	268	274	262	252	260							
30									256	274	258	270	254	276	256	252	240							
31									272	288	280	270	252	264	254	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									18	29	31	31	31	31	31	29	25	2						
MED									248	244	262	270	262	256	256	252	248	244						
U Q									256	259	274	284	272	264	262	258	253							
L Q									240	236	250	258	254	250	252	247	242							

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 h′F (KM) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E B 288	E B 254	E B 268	E B 268	E B 234	218	202	198	184	184	214	200	206	A	A	216	196	216	E A 226	E A 232	E A 266	E B 230	218	E A 242
2	E B 278	E B 292	E B 274	E B 242	198	222	210	202	210	208	194	200	178	198	198	192	216	218	206	226	E B 244	E B 232	E B 234	E B 262
3	E B 274	E B 278	E B 244	222	204	220	224	212	202	196	212	188	188	210	224	216	208	224	204	200	E B 246	222	E B 232	E B 264
4	E B 276	E B 272	E B 244	E B 234	210	E B 246	208	200	200	A	A	186	184	A	A	208	210	218	206	206	A	A	E A 332	E A 318
5	E B 304	E B 278	E B 272	208	180	172	208	H 192	210	204	208	E B 232	210	A	204	196	224	216	202	188	E B 278	E B 286	E B 290	E B 296
6	E B 280	E B 264	E B 242	222	210	E B 242	200	210	214	A	222	A	204	212	E A 234	A	204	232	202	202	212	E B 242	E B 266	E B 266
7	E B 270	E B 268	E B 262	E B 256	E B 252	E B 256	212	212	218	198	190	202	A	206	206	228	220	224	198	182	230	E B 258	E B 252	E B 242
8	264	E B 258	E B 242	E B 246	E B 236	E B 234	212	210	210	208	200	200	182	210	196	202	200	212	198	210	A	E A 264	E A 248	E B 262
9	E B 254	E B 232	E B 242	E B 248	220	E B 238	214	208	210	188	184	176	178	200	212	222	208	212	202	194	E B 264	E B 234	E B 246	E B 258
10	E B 270	E B 250	E B 266	E B 250	E B 230	E B 250	216	210	216	200	202	196	210	180	210	218	190	216	206	200	216	224	E A 238	216
11	E B 250	E A 276	E B 274	E B 266	E B 246	E B 246	208	210	202	202	194	206	194	A	A	190	212	214	210	194	E B 268	E B 244	E B 232	E B 284
12	E B 268	E B 278	E B 270	E B 258	218	226	218	216	200	228	204	202	216	186	196	212	212	216	200	190	192	E B 270	E B 276	E B 282
13	E B 294	E B 256	E B 268	E B 274	198	214	210	210	214	204	198	204	198	194	196	200	220	218	206	218	224	E A 256	E B 264	E B 258
14	E B 258	E B 258	E B 258	E B 256	208	E B 248	210	218	214	202	194	196	216	204	174	200	204	226	212	194	E A 250	228	E B 232	E B 258
15	E B 284	E B 288	E B 288	E B 268	E B 230	E B 244	216	222	216	210	212	192	204	204	204	A	A	220	208	206	218	222	E B 230	E B 264
16	E A 284	E B 262	E B 238	E B 234	E B 232	E B 256	232	220	218	194	202	194	196	200	180	202	206	228	220	204	224	A	E B 266	E B 278
17	E A 276	E A 274	E A 264	E B 240	216	224	214	224	214	210	A	184	220	190	198	A	A	218	208	204	216	E B 244	E B 270	E A 306
18	E B 286	E B 254	E B 238	E B 230	198	E B 302	228	222	216	210	210	206	196	198	188	190	198	226	222	216	222	228	E B 254	E B 248
19	E B 230	E B 236	E B 234	E B 238	214	E B 268	224	224	224	206	200	206	204	196	188	188	218	218	208	206	E B 268	E B 278	E B 294	E B 264
20	E B 236	E B 244	E B 268	E B 260	218	222	210	214	210	202	196	182	196	196	196	200	210	220	214	204	214	212	E B 238	E B 242
21	E B 254	E B 262	E B 274	E B 256	212	E B 230	206	216	192	206	190	192	180	200	202	224	E A 234	224	206	200	206	E B 254	E B 256	E B 256
22	E B 264	E B 256	E B 264	E B 256	216	E B 244	208	218	218	200	198	190	194	188	192	194	214	228	210	202	196	E B 292	E B 272	E B 308
23	E B 232	E B 302	E B 226	216	202	214	202	212	200	202	194	190	198	192	194	200	202	224	206	198	196	E A 286	E A 288	E B 276
24	E B 270	E B 258	E B 230	206	200	E B 248	206	214	212	206	210	210	A	214	218	200	192	220	212	198	206	E B 258	E B 252	E B 250
25	E B 238	E B 272	E B 280	E B 238	E B 204	E B 202	198	206	204	202	210	202	A	A	202	206	214	226	206	194	210	E B 254	E B 268	E B 270
26	E A 294	E A 294	E B 260	212	190	E B 296	212	212	208	208	208	A	212	190	198	206	210	210	210	200	218	E B 250	E B 258	E B 282
27	E B 278	E B 254	218	200	198	E B 268	216	218	210	208	206	184	224	204	196	198	208	232	216	206	204	E B 230	E B 256	E B 258
28	E B 262	E B 256	E B 248	216	204	E B 238	212	H 188	206	198	192	190	192	194	208	204	208	214	220	194	204	E B 284	E B 278	E B 286
29	E B 282	E B 278	E B 228	202	216	E B 280	204	216	210	198	204	204	194	186	198	210	200	218	208	200	E B 230	E B 284	E B 284	E B 278
30	E B 252	E B 236	E B 246	E B 236	212	E B 242	206	228	214	204	204	196	182	206	196	202	200	222	212	206	E B 230	E B 260	E B 258	E B 268
31	E B 270	E B 264	E B 230	200	E B 256	E B 254	212	226	222	210	204	190	182	208	212	210	208	224	234	214	222	E B 242	E B 264	E B 272
	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	29	29	29	28	26	28	28	29	31	31	31	29	29	31	31
MED	E B 270	E B 262	E B 258	E B 238	207	E B 242	210	212	210	204	202	196	196	199	198	202	208	220	208	201	213	E B 250	E B 258	E B 264
U Q	E B 282	E B 278	E B 268	E B 256	E B 230	E B 254	216	218	216	208	209	203	208	206	207	211	214	224	212	206	E B 245	E B 267	E B 272	E B 282
L Q	E B 254	E B 254	E B 238	216	202	222	206	210	204	199	194	190	186	192	196	199	201	216	206	194	208	230	E B 238	E B 258

MAR. 2010 h′F (KM)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 h′E (KM) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′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								124	126	126	128	130	120	126	130	A	118	124						
2								114	118	122	124	118	124	116	A	A	A	120						
3								120	120	120	120	120	126	114	116	120	120	116						
4								124	124	120	120	118	116	A	A	118	A	A						
5								B	120	120	120	B	128	A	118	118	118	130						
6								114	122	122	112	118	122	116	120	122	122	122						
7								116	120	A	122	A	A	A	A	A	A	B						
8								B	A	A	120	124	124	116	124	124	116	B						
9								112	114	116	120	118	122	126	118	116	124	126						
10								116	118	120	118	120	116	120	118	114	118	A						
11								118	124	A	122	A	A	116	A	122	122	120						
12								116	120	A	120	122	126	124	112	116	114	116						
13								112	122	120	A	A	A	118	A	118	122	126						
14								120	120	120	124	116	A	122	116	118	116	120						
15								126	120	120	118	A	A	A	A	A	A	A						
16							B	114	120	118	118	122	128	130	122	122	A	A						
17							B	126	124	122	A	A	122	116	A	A	A	A						
18							B	124	122	122	114	A	114	120	116	114	A	112						
19							B	118	118	114	A	114	114	116	A	A	118	120						
20							B	122	124	116	A	A	120	118	114	116	118	126						
21							B	122	118	114	114	114	116	116	116	118	110	A						
22							B	120	120	120	116	118	112	116	114	118	114	120						
23							B	116	114	112	112	120	116	114	114	120	124	118						
24							B	118	124	122	A	A	A	A	122	A	A	122						
25							B	114	118	116	114	A	122	A	122	A	116	114						
26							B	114	118	118	120	A	A	A	118	118	116	122						
27							B	120		120	A	A	A	A	118	116	116	120						
28							B	122	120	114	118	A	116	A	A	A	A	120						
29							B	120	122	122	118	118	A	118	A	116	114	116						
30							B	118	116	116	A	118	A	120	A	A	A	A						
31							B	120	118	116	116	A	A	A	A	A	116	116						
	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	27	24	17	20	21	19	20	21	22						
MED								118	120	120	119	118	121	118	118	118	118	120						
U Q								122	122	122	120	121	124	121	122	120	121	122						
L Q								115	118	116	116	118	116	116	116	116	116	116						

MAR. 2010 h′E (KM)

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 h'Es (KM) 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0'N LON.139°29.0'E SWEEP 1.0MHz TO 30.0MHz IN 15.0SEC IN MANUAL SCALING

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	B	B	92	B	92	100	B	98	144	104	G	100	G	152	158	104	104	130	106	106	106	102	100	96
2	96	B	B	B	B	B	B	G	104	106	118	102	G	98	96	100	94	G	118	B	B	B	B	B
3	B	B	B	B	B	102	B	152	110	116	104	G	108	98	102	118	126	118	B	B	B	B	B	B
4	B	B	B	B	B	B	B	142	106	136	110	102	G	96	96	94	92	102	100	100	98	98	96	100
5	B	B	B	B	B	B	B	126	108	150	102	B	100	100	104	102	108	144	B	B	B	B	B	B
6	B	B	B	B	B	B	B	148	152	156	98	158	100	98	98	166	104	164	124	98	96	B	B	B
7	B	B	B	B	104	B	B	122	118	106	100	104	100	100	106	108	106	102	B	96	B	B	B	B
8	B	B	B	B	B	96	102	114	106	106	102	100	98	106	104	G	96	100	104	98	94	96	96	96
9	94	B	B	B	B	B	B	156	98	98	G	106	G	G	G	102	122	G	92	94	94	B	B	B
10	100	94	94	94	94	B	B	150	104	102	102	104	98	98	96	96	120	86	108	98	102	102	102	100
11	104	92	B	B	B	B	B	126	102	106	102	100	100	168	92	G	100	G	B	B	B	B	B	B
12	B	B	B	B	B	B	B	164	102	102	98	104	130	G	120	114	114	118	B	B	B	B	B	B
13	B	90	B	B	B	92	88	128	100	112	108	104	102	100	100	100	98	102	110	108	100	104	106	94
14	94	B	B	B	B	B	B	144	98	G	106	G	104	G	102	94	146	126	94	B	96	100	B	B
15	B	B	96	94	94	94	92	106	104	104	114	102	106	104	100	106	102	104	104	102	96	96	96	94
16	92	92	90	94	92	92	136	120	120	104	102	102	G	106	102	106	104	94	86	104	110	102	108	110
17	108	100	100	98	100	106	156	156	128	118	106	106	102	106	104	104	102	104	118	B	B	104	B	118
18	102	102	102	100	96	98	138	134	102	120	114	104	120	102	102	102	100	146	B	108	106	102	B	B
19	B	B	B	B	B	B	144	106	114	110	102	104	102	100	102	104	102	140	B	B	B	B	B	96
20	B	B	B	B	96	B	B	150	134	100	104	106	100	98	100	102	100	104	B	92	88	B	B	B
21	B	B	B	B	B	B	B	136	100	98	98	100	100	104	104	98	94	88	130	116	110	B	B	B
22	B	B	B	B	B	B	152	162	146	102	100	102	98	104	98	96	96	132	118	B	88	B	B	B
23	B	B	B	B	B	B	142	158	148	132	100	100	126	124	106	134	148	144	110	90	104	122	110	102
24	100	96	98	B	B	B	138	132	106	126	106	106	102	100	124	104	96	126	100	B	90	84	88	B
25	B	98	98	98	B	B	134	160	142	104	104	106	160	104	100	98	120	110	B	92	B	B	B	B
26	98	96	98	92	96	B	142	144	126	114	116	106	106	106	104	116	104	112	B	B	B	B	B	B
27	B	B	B	B	B	B	134	128	104	104	106	108	108	104	104	118	G	106	88	B	108	B	B	B
28	B	B	B	B	B	B	148	102	100	98	G	104	102	102	106	106	102	100	B	B	B	B	B	B
29	B	B	B	B	B	B	150	158	106	104	104	116	104	106	106	102	100	136	92	92	B	B	B	B
30	B	B	96	B	B	B	138	156	100	98	106	106	102	G	106	104	106	104	102	B	B	102	104	B
31	B	B	B	B	B	144	130	138	102	98	118	108	108	104	102	102	100	124	116	116	108	B	108	B
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	10	9	10	7	9	9	17	30	31	30	28	28	26	27	30	29	30	28	20	17	18	13	11	10
MED	99	96	97	94	96	98	138	140	106	105	104	104	102	104	102	104	102	111	105	98	99	102	102	98
U Q	102	99	98	98	98	104	146	156	126	116	107	106	108	106	106	107	108	131	117	107	106	103	108	102
L Q	94	92	94	94	93	93	132	126	102	102	102	102	100	100	100	100	100	102	97	93	94	97	96	96

IONOSPHERIC DATA STATION Kokubunji

MAR. 2010 TYPES OF Es 135°E MEAN TIME (G.M.T. + 9 H)

LAT.35°43.0′N LON.139°29.0′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			F2		F2	F1		L2	HL22	L2		L2		HL12	HL12	L2	L2	CL22	F3	F4	F3	F3	F3	F2
2	F2								L2	L2	CL12	L2		L2	L2	L2	L2		F2					
3						F1		H2	CL22	CL12	L2		L2	L2	L2	CL12	CL22	C2						
4								HL22	L2	HL22	CL22	L2		L2	L3	L3	L2	L4	F3	F5	F5	F5	F5	F4
5								C2	L2	HL22	L2		L2	L3	L2	L2	L2	HL11						
6								H2	HL22	HL22	L2	HL12	L2	L2	L2	HL12	L2	HL22	F2	F5	F3			
7					F1			CL22	CL22	L2	L2	L2	L2	L3	L2	L2	L2	L2		F1				
8						F2	F3	C2	L2	L2	L2	L2	L2	L2	L2		L2	L2	F3	F3	F4	F2	F2	F2
9	F2							H2	L2	L2		L2				L2	CL22		F2	F2	F2			
10	F3	F2	F2	F2	F2			H2	L2	L2	L2	L2	L2	L2	L2	L2	C2	L4	F2	F3	F3	F3	F2	F2
11	F3	F2						C2	L2	L2	L2	L2	L2	HL22	L2		L2							
12								HL22	L2	L2	L2	L2	C2		CL22	CL12	CL22	C2						
13		F2				F4	F3	CL22	L2	CL22	L2	L2	L3	L2	L2	L2	L2	L2	F3	F4	F2	F3	F1	F1
14	F1							H2	L2		L2		L2		L2	L2	HL22	C2	F2		F3	F3		
15			F2	F2	F2	F2	F2	L2	L2	L2	CL22	L2	L2	L2	L2	L2	L2	L3	F3	F2	F5	F2	F2	F2
16	F2	F1	F2	F2	F2	F1	H2	C2	CL22	L2	L2	L2		L2	L2	L2	L2	L2	F3	FF42	FF23	F4	F3	F2
17	F4	F5	F3	F3	F3	F2	H2	HL22	CL22	CL22	L2	L2	L2	L2	L2	L3	L3	L2	F3			F4		FF32
18	F2	F2	F2	F2	F2	F2	H3	H2	L2	CL12	CL12	L2	CL12	L2	L2	L2	L1	HL12		F1	F3	F2		
19							H4	L2	CL12	CL22	L2	L2	L2	L1	L2	L2	L2	HL22						F4
20					F1			HL22	CL22	L2	L2	L2	L2	L2	L2	L2	L2	L2		F1	F2			
21								CL22	L2	L2	L2	L2	L2	L2	L2	L2	L3	L3	FF32	FF41	F2			
22							H2	H2	HL22	L2	L2	L2	L2	L2	L2	L2	L2	H2	F3		F1			
23							H2	H2	HL22	HL12	L2	L2	CL12	CL12	L2	CL12	HL12	HL22	F2	F2	F2	F2	F4	F3
24	F2	F3	F2				H2	CL22	L2	CL12	L2	L2	L2	L2	CL11	L2	L2	CL11	F1		F1	F2	F1	
25		F2	F2	F1			H2	H2	HL22	L2	L2	L2	HL22	L2	L2	L2	CL13	CL12		F2				
26	F2	F3	F2	F1	F1		H4	HL22	CL22	CL22	CL22	L2	L2	L2	L2	CL12	L2	L2						
27							H3	CL21	L2	L2	L2	L2	L2	L2	L2	CL12		L2	F2		F2			
28							H3	L2	L2	L2		L2	L2	L2	L2	L2	L2	L2						
29							H3	HL22	L2	L2	L2	CL12	L2	L2	L2	L2	L2	C2	F2	F2				
30			F1				H2	HL11	L2	L2	L2	L2	L2		L2	L2	L3	L3	F1			F2	F2	
31						F1	H3	HL22	L2	L2	CL22	L2	L2	L2	L2	L2	L2	CL21	F3	F1	F1		F1	
	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																								

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

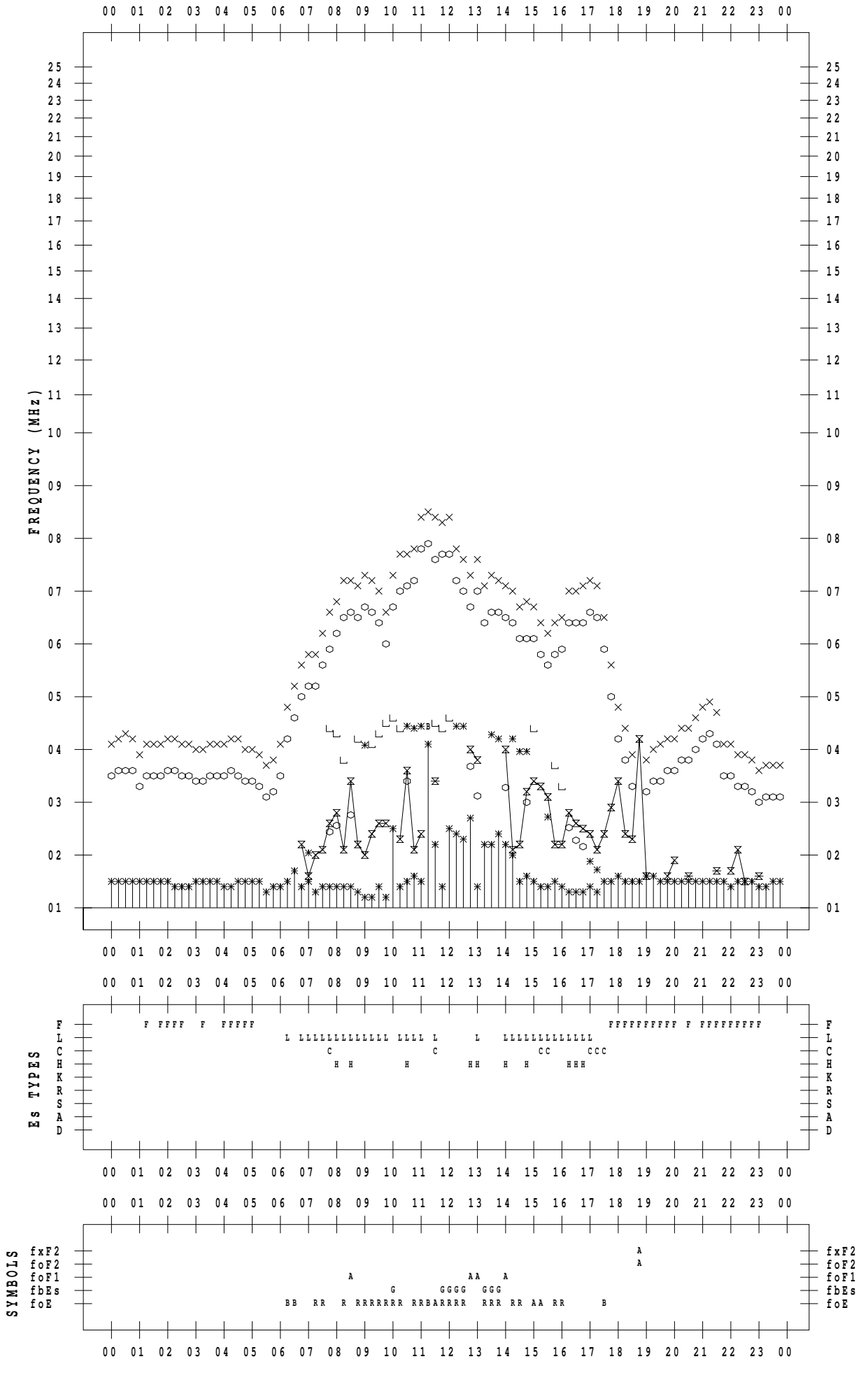
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 1

135 °E MEAN TIME



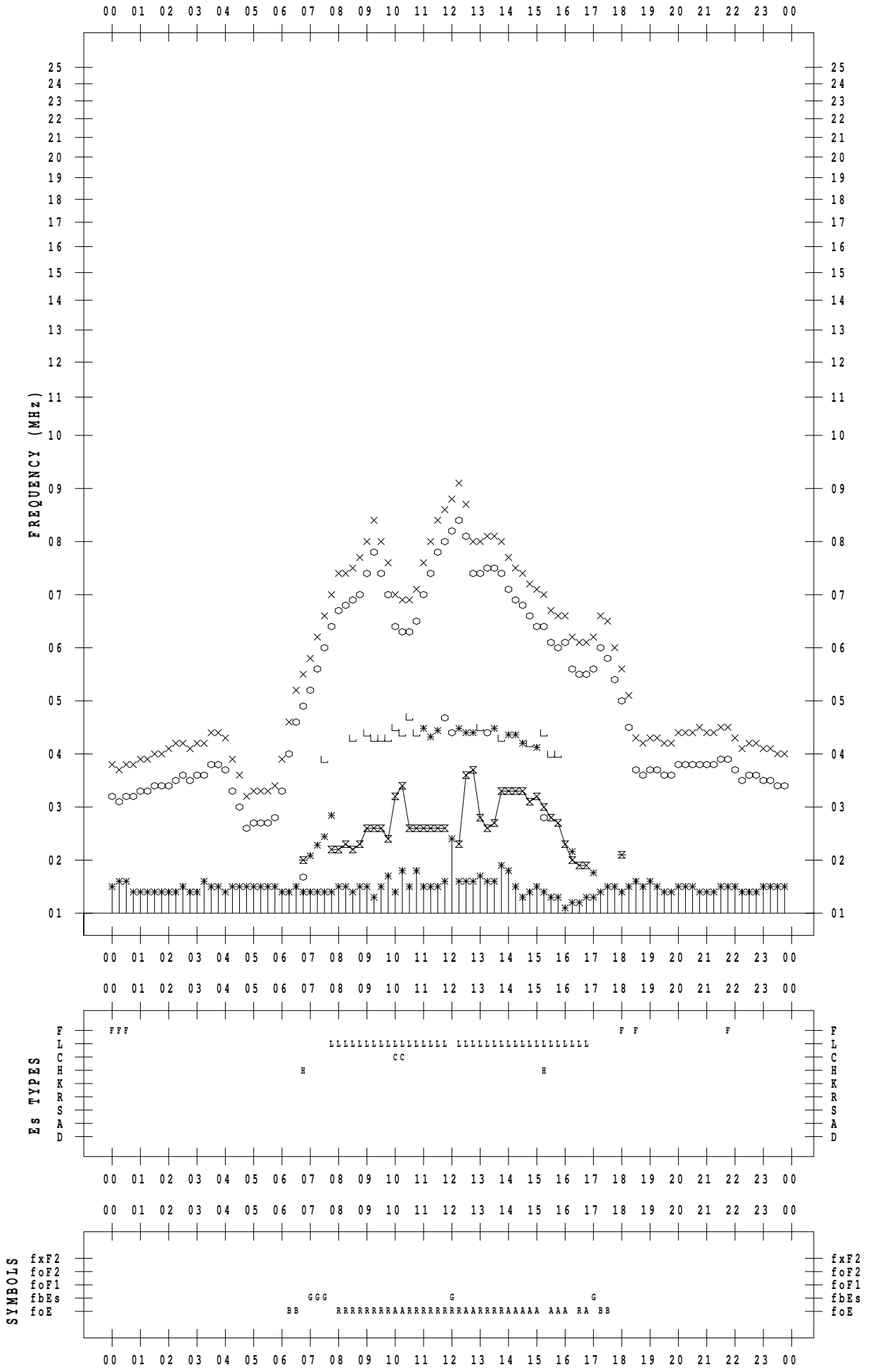
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 2

135 °E MEAN TIME



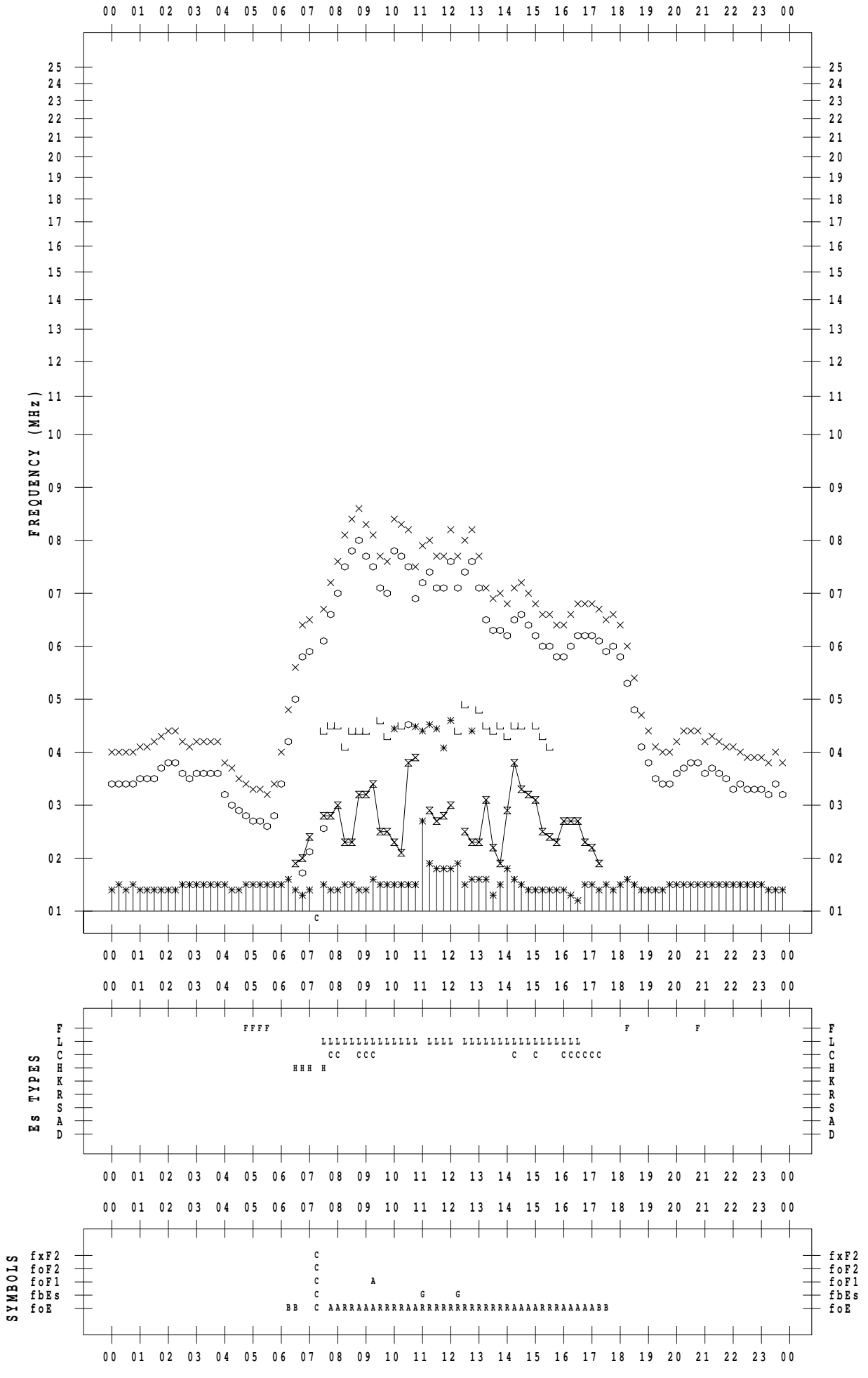
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 3

135 °E MEAN TIME



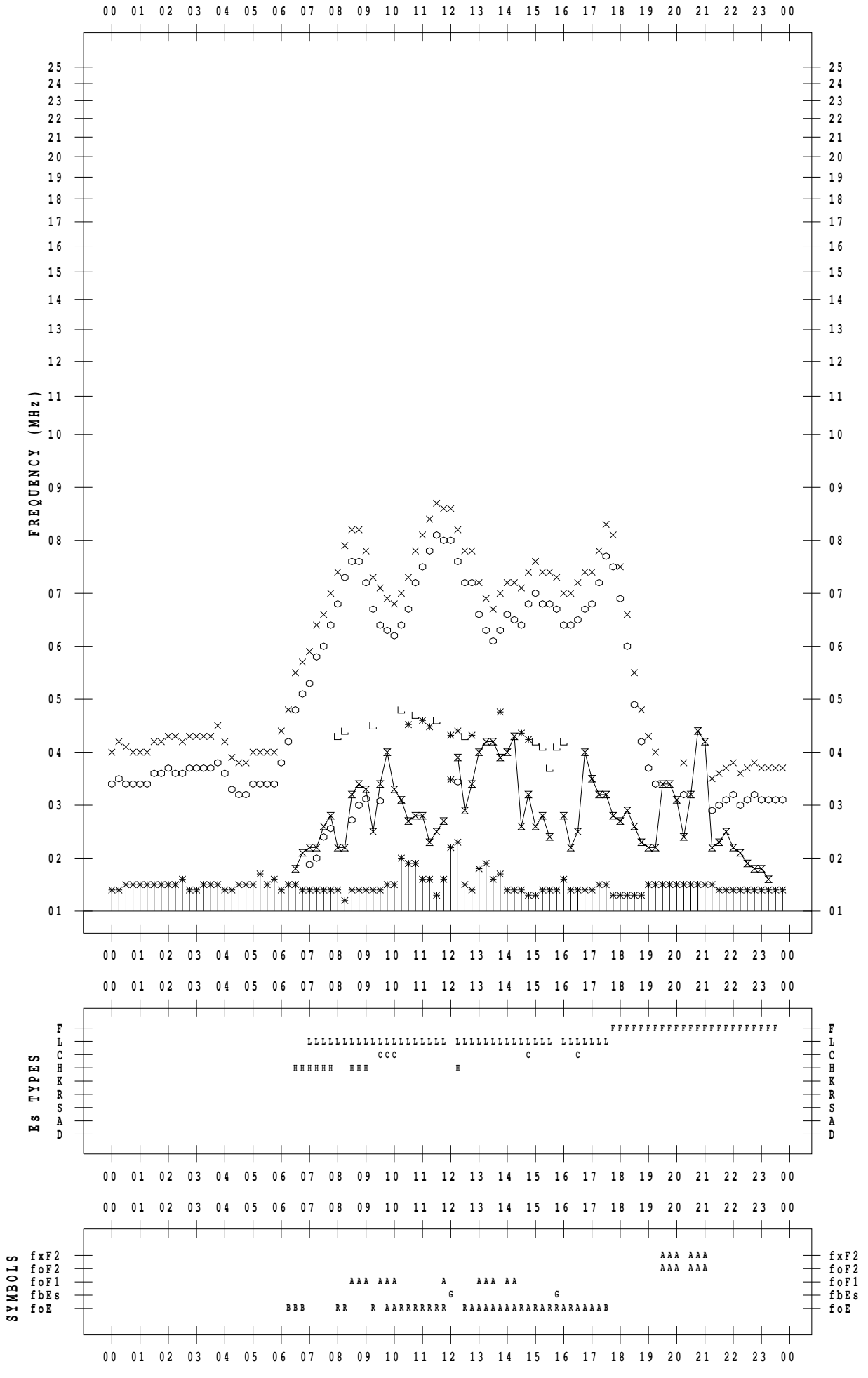
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 4

135 °E MEAN TIME



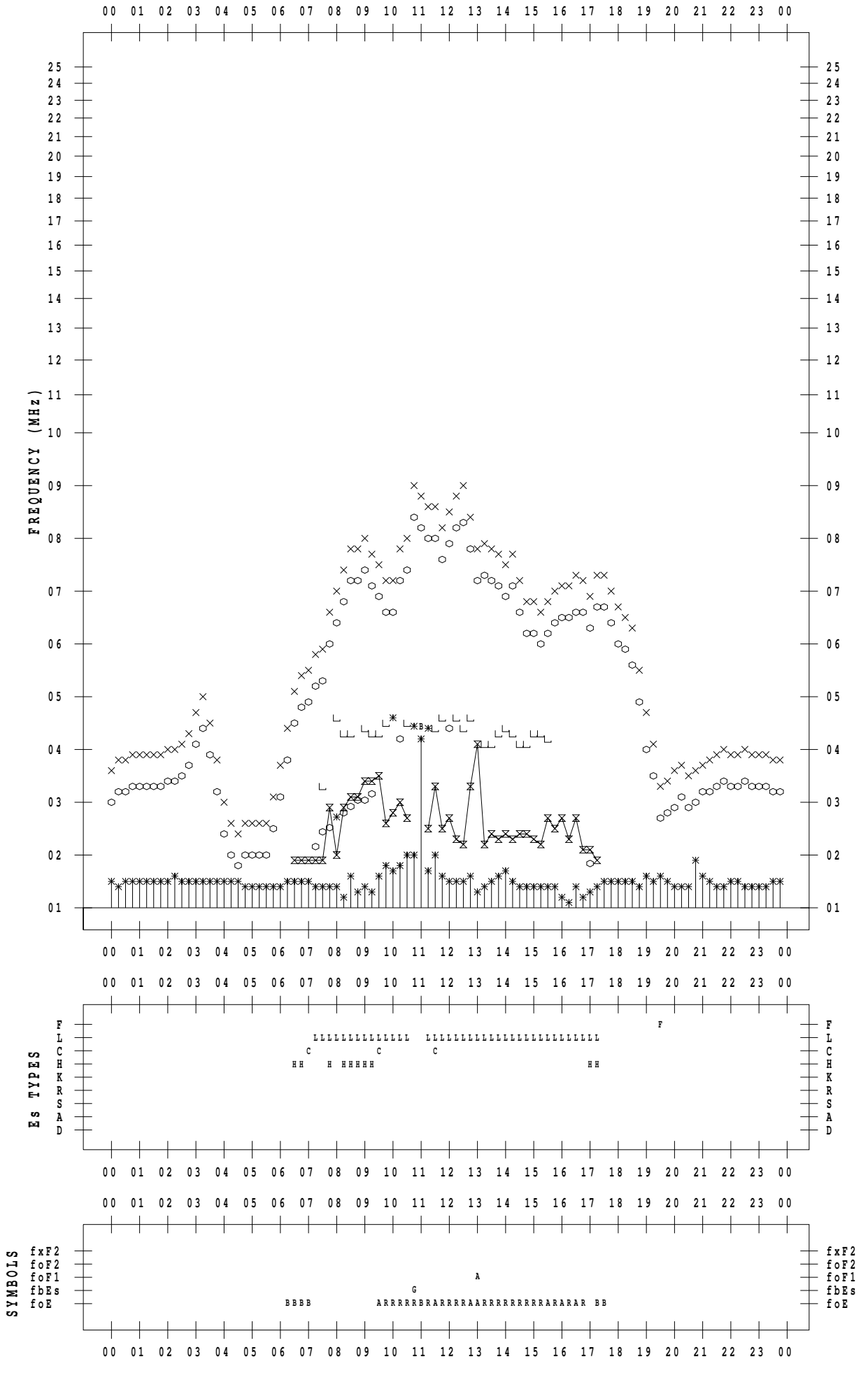
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 5

135 °E MEAN TIME



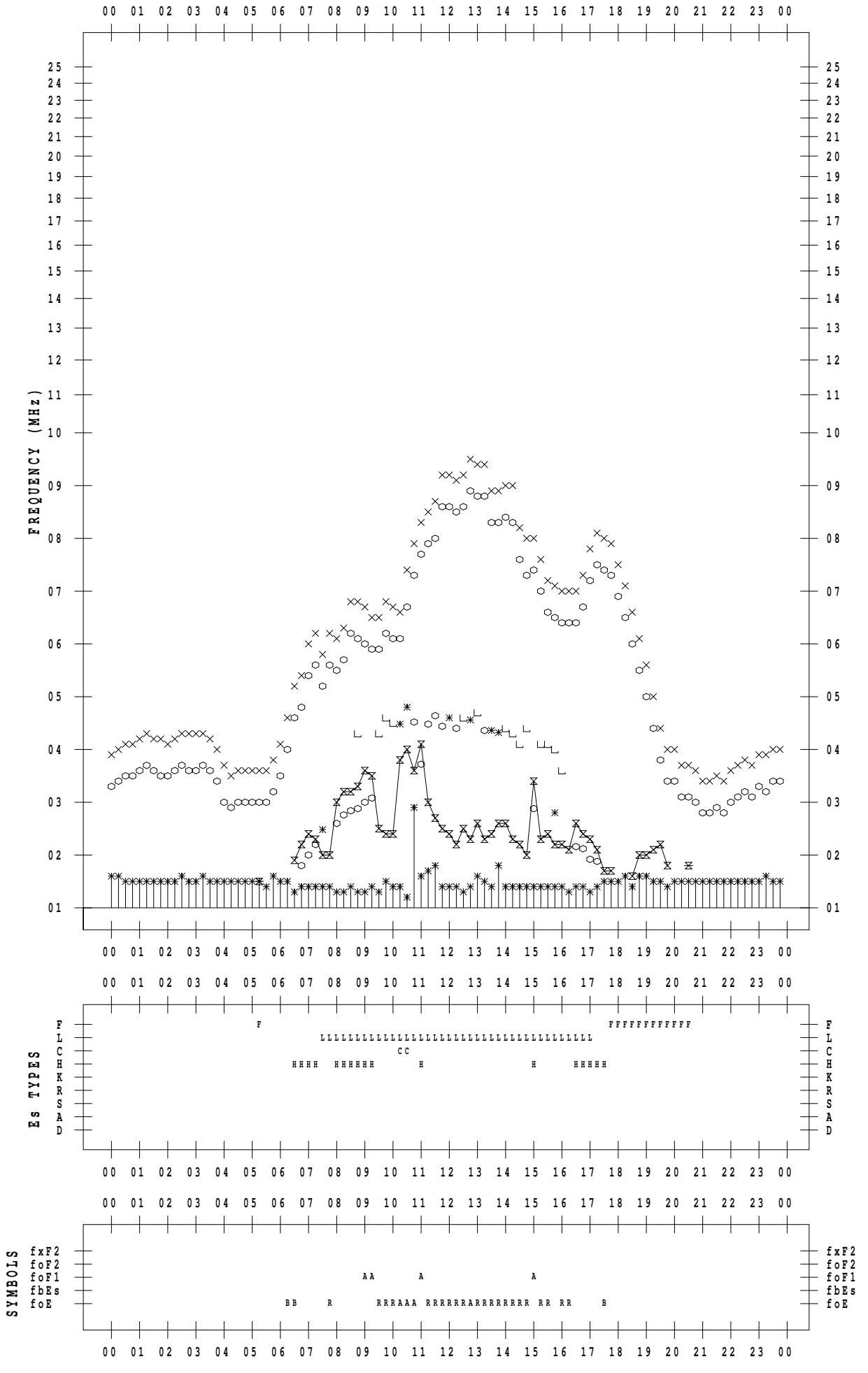
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 6

135 °E MEAN TIME



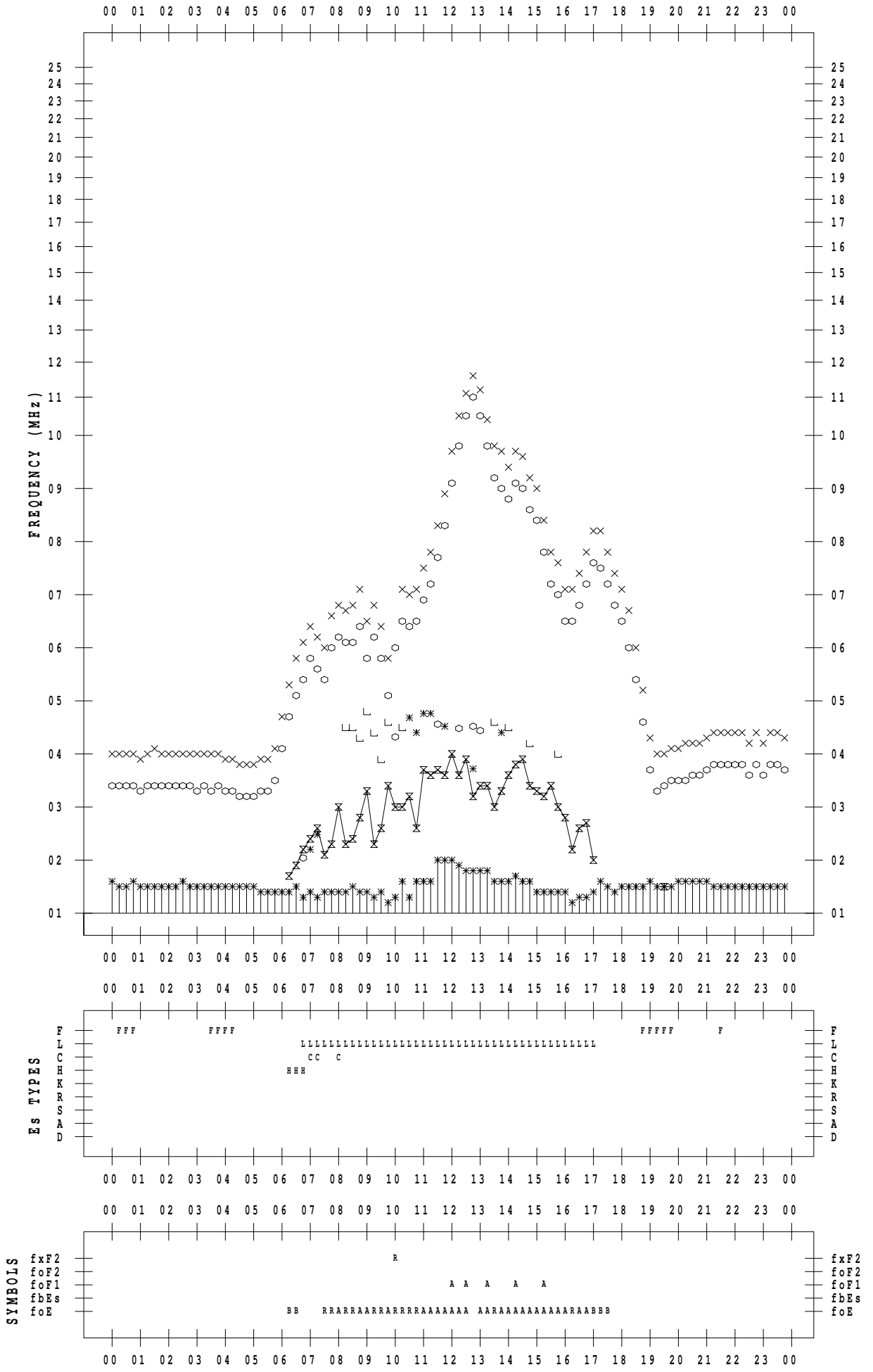
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 7

135 °E MEAN TIME



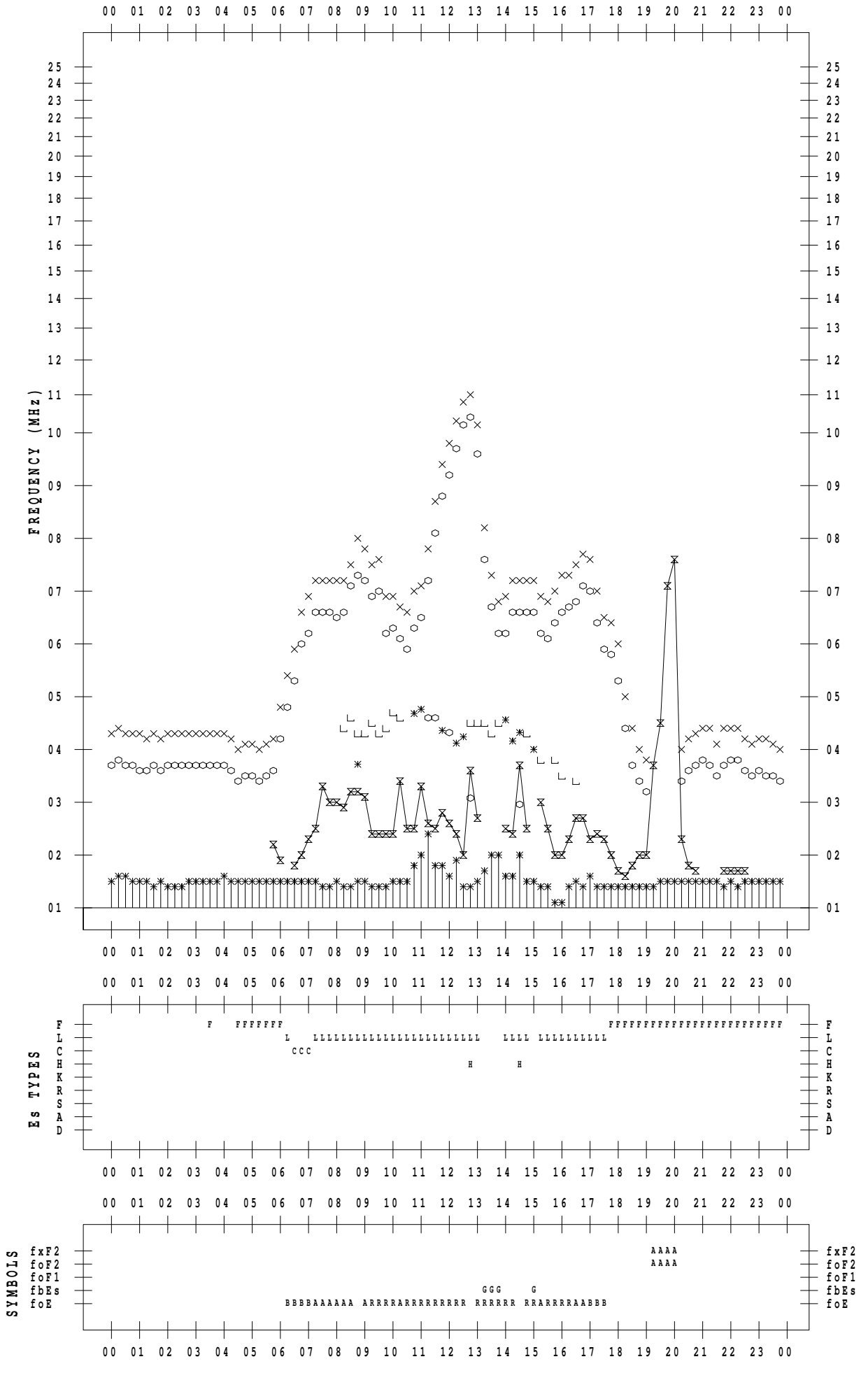
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 8

135 °E MEAN TIME



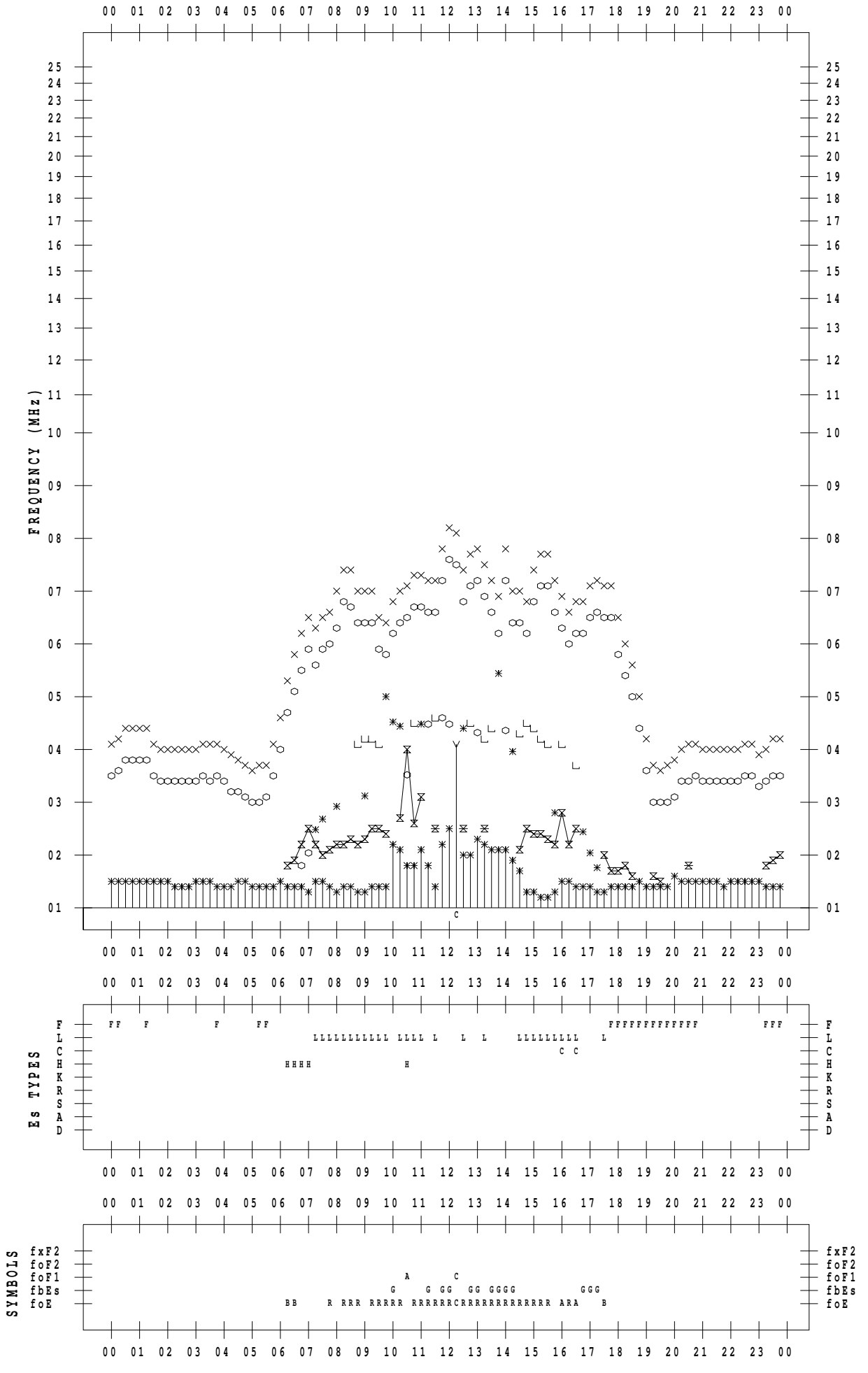
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/ 9

135 °E MEAN TIME



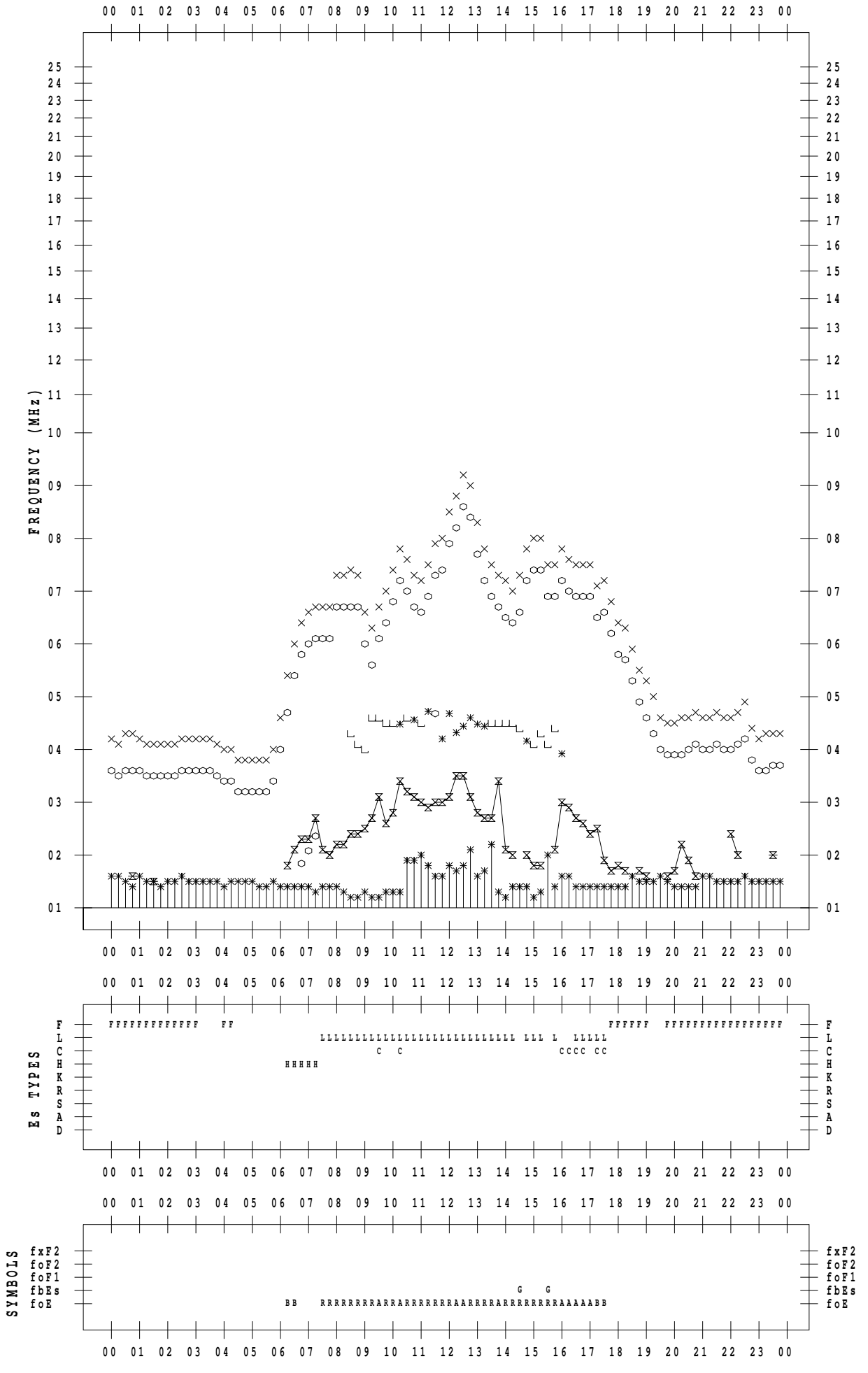
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/10

135 °E MEAN TIME



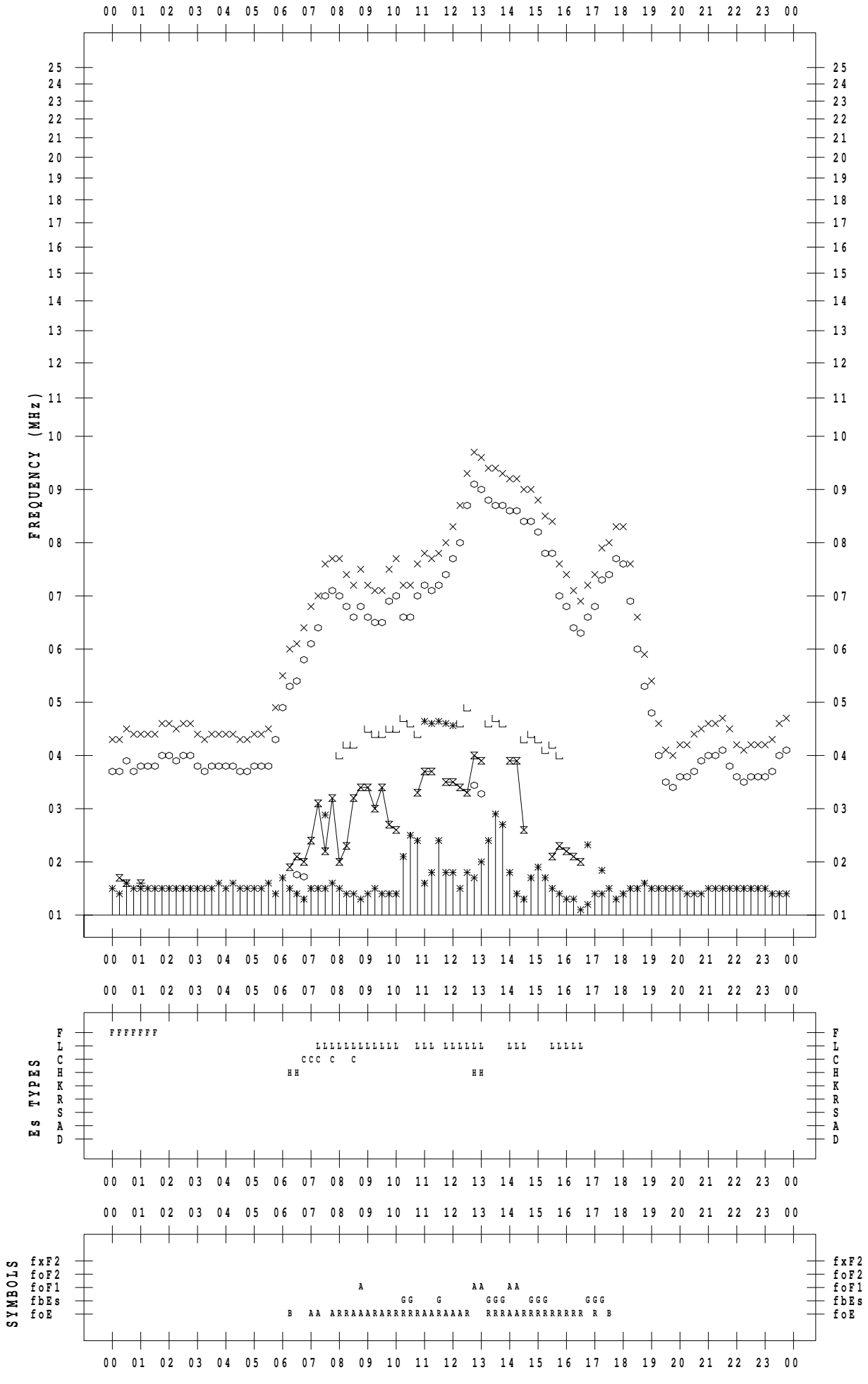
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/11

135 °E MEAN TIME



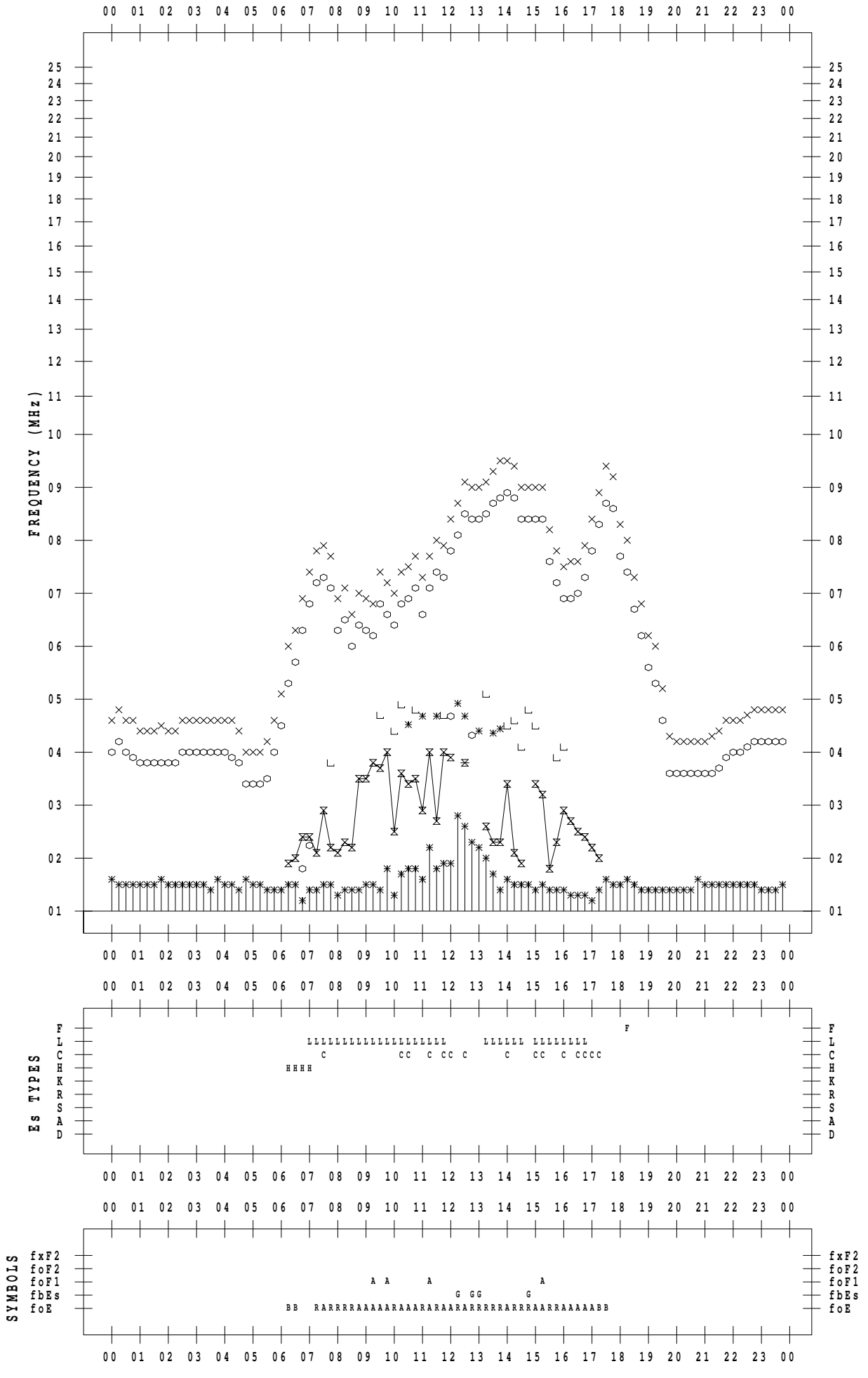
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/12

135 °E MEAN TIME



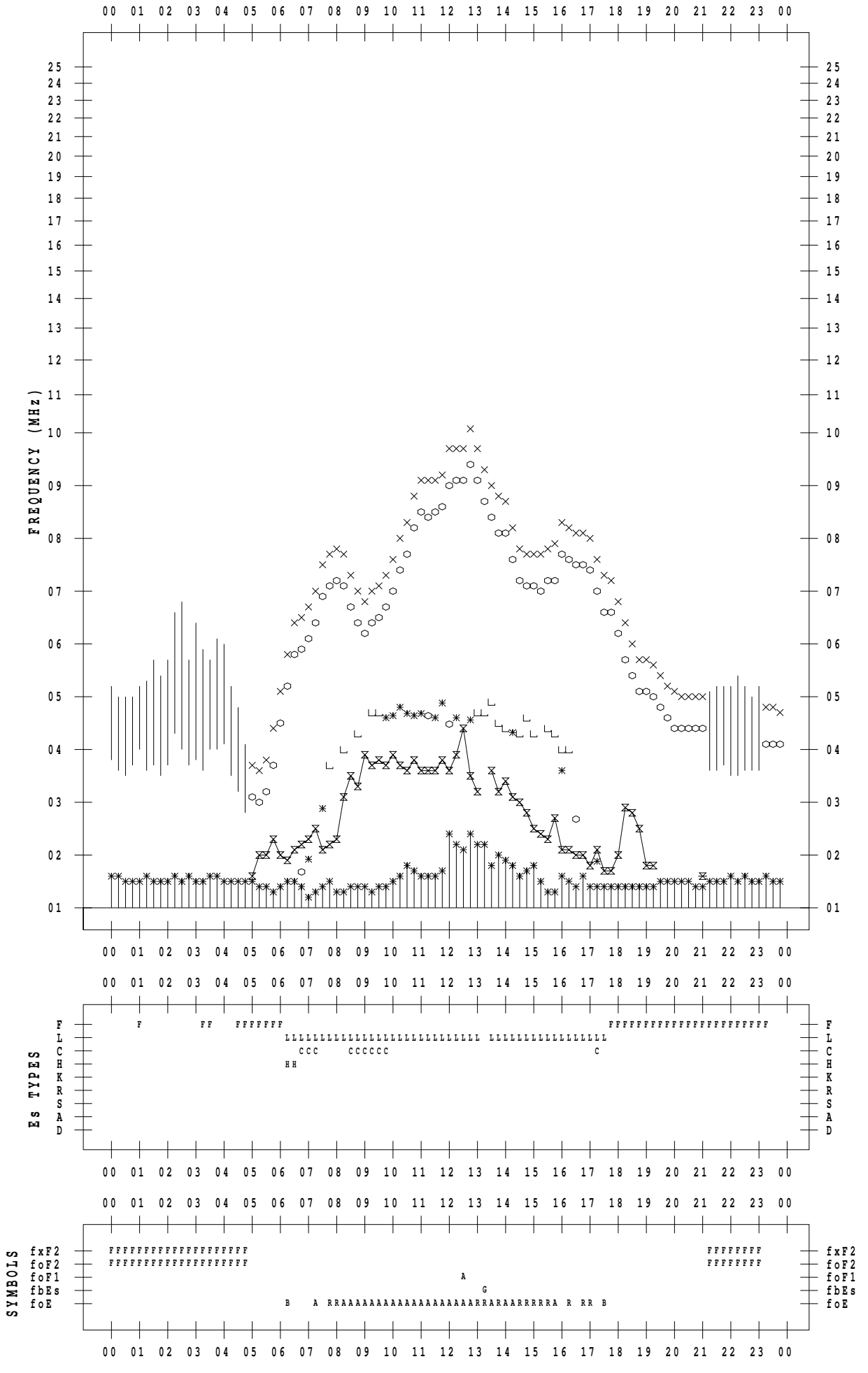
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/13

135 °E MEAN TIME



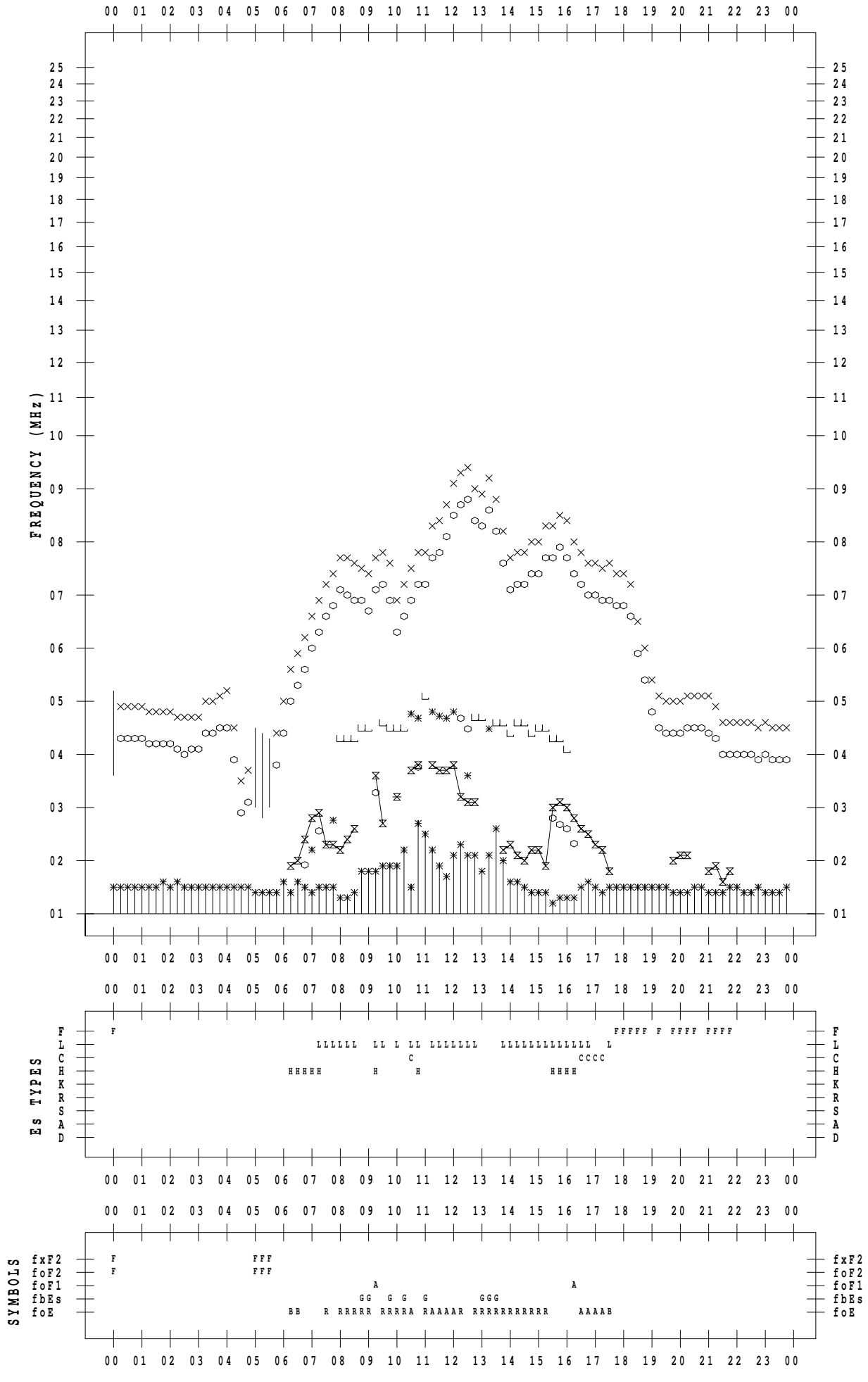
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/14

135 °E MEAN TIME

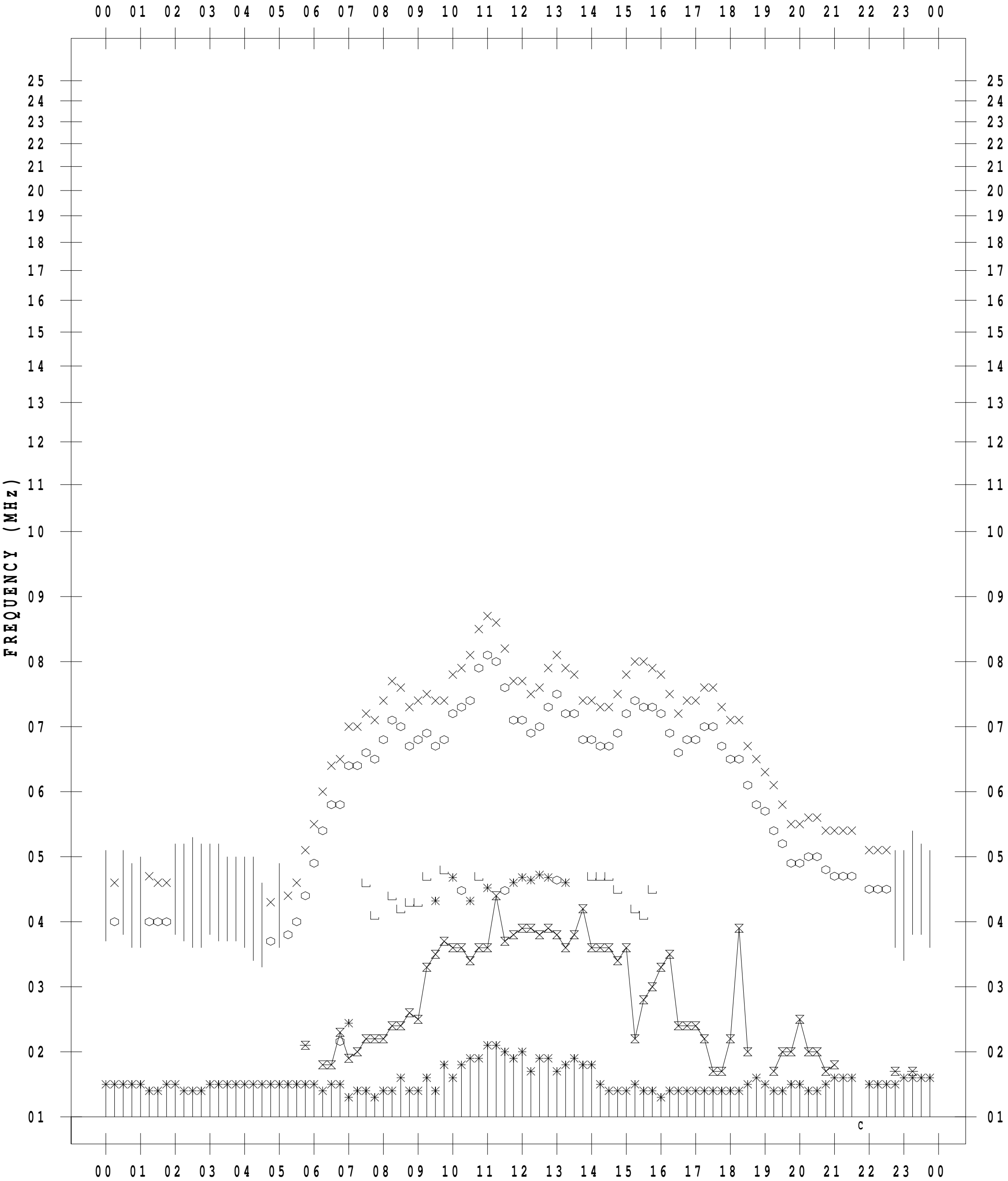


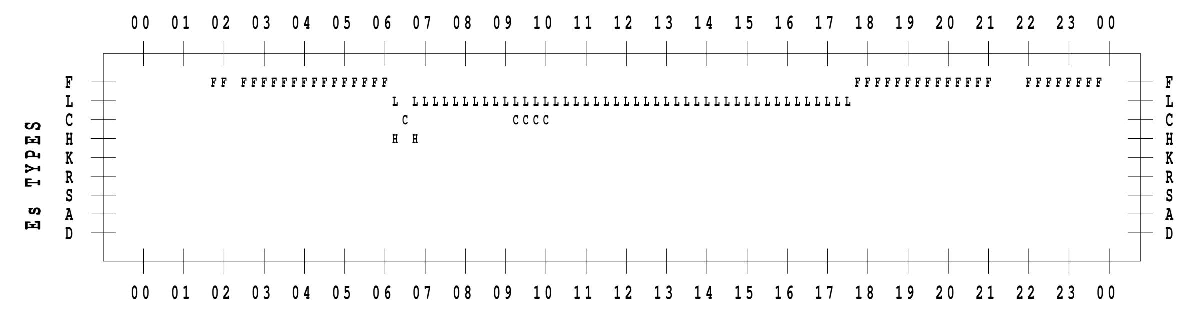
f-PLOT DATA

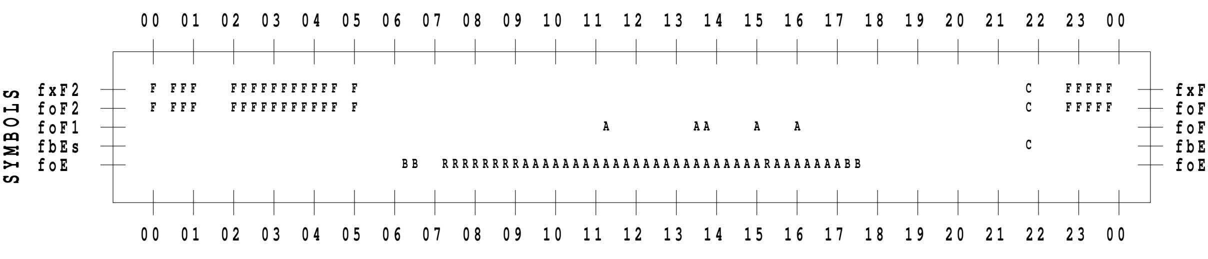
SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2010/ 3/15

135 °E MEAN TIME







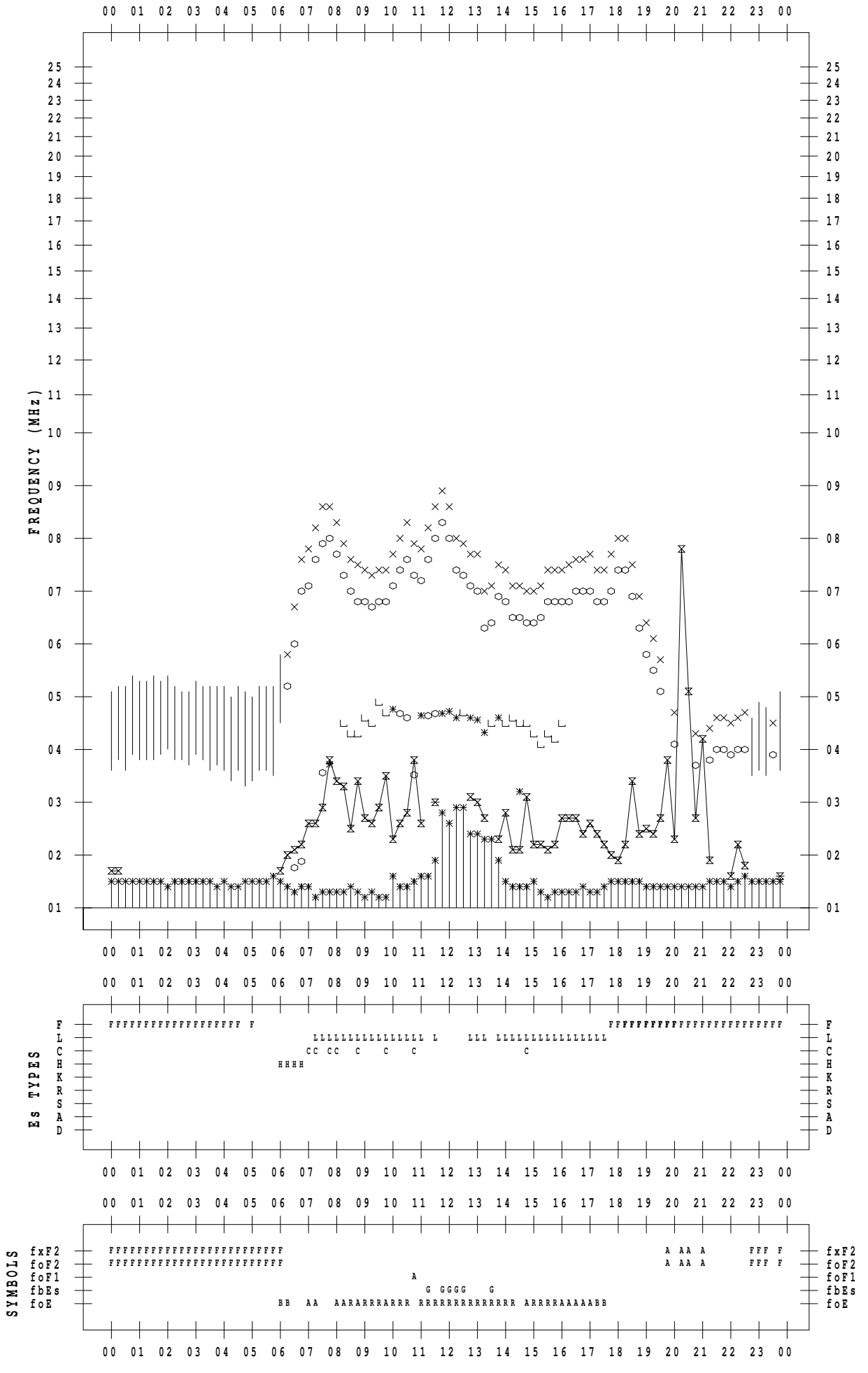
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/16

135 °E MEAN TIME



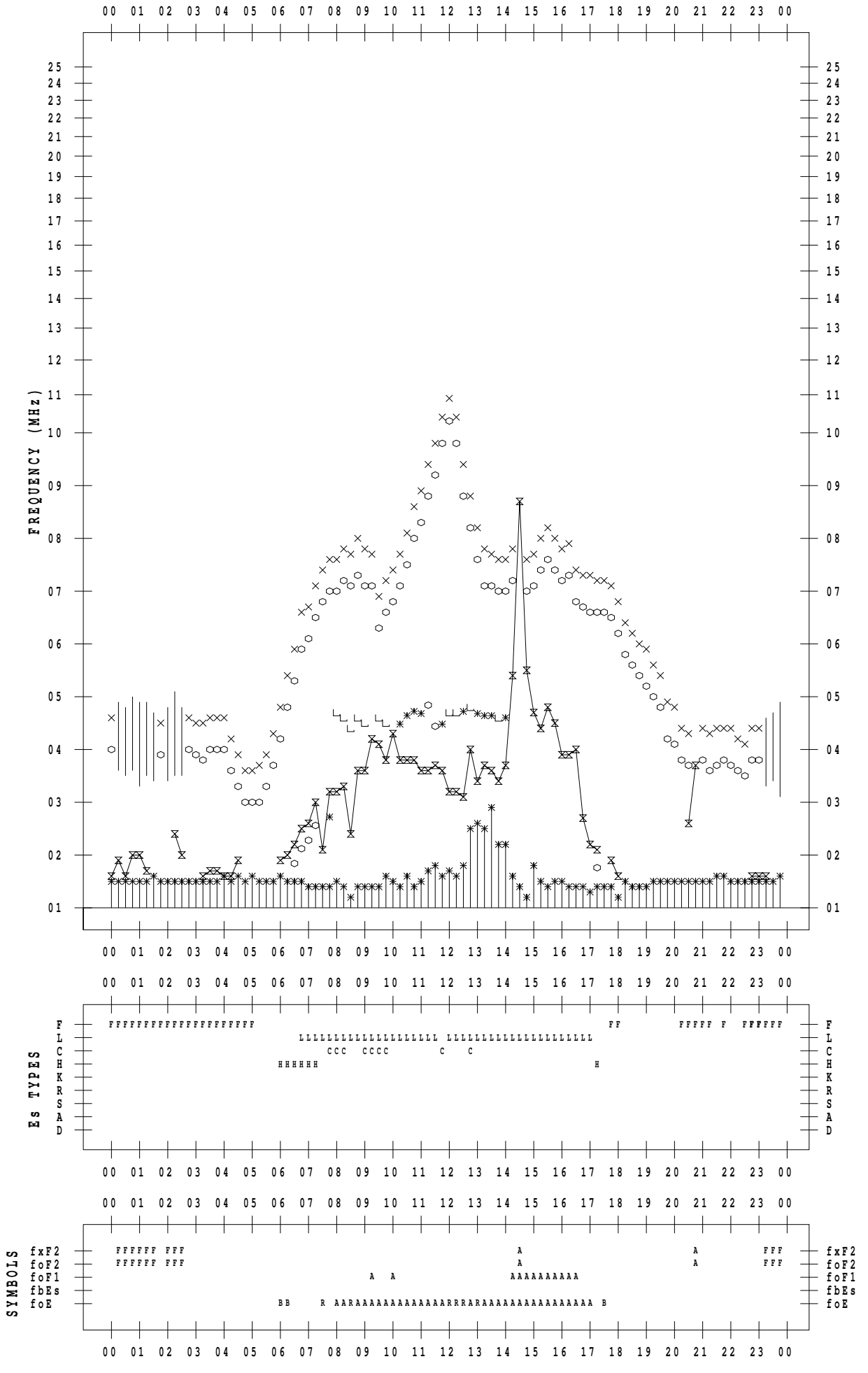
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/17

135 °E MEAN TIME



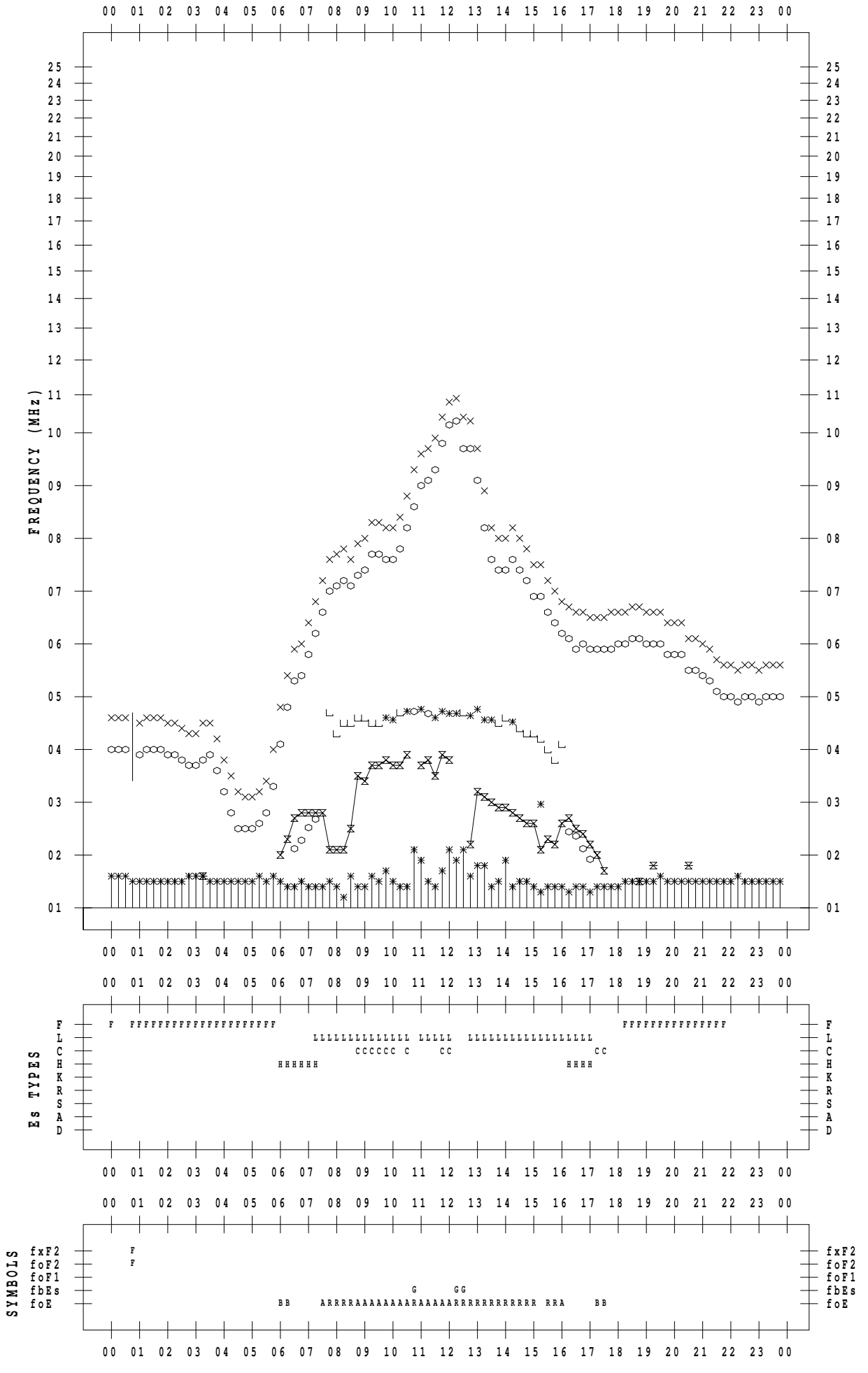
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/18

135 °E MEAN TIME



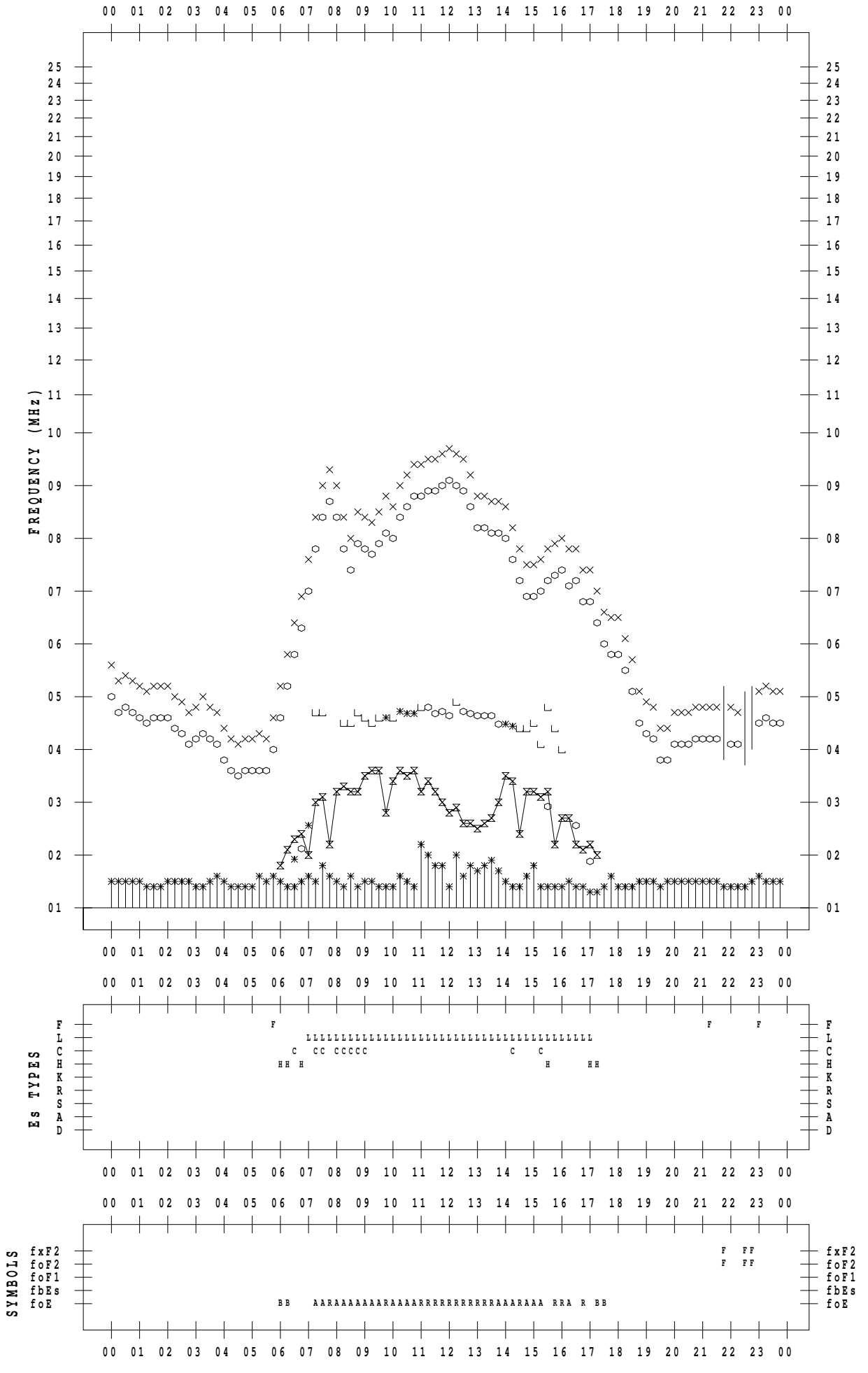
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/19

135 °E MEAN TIME



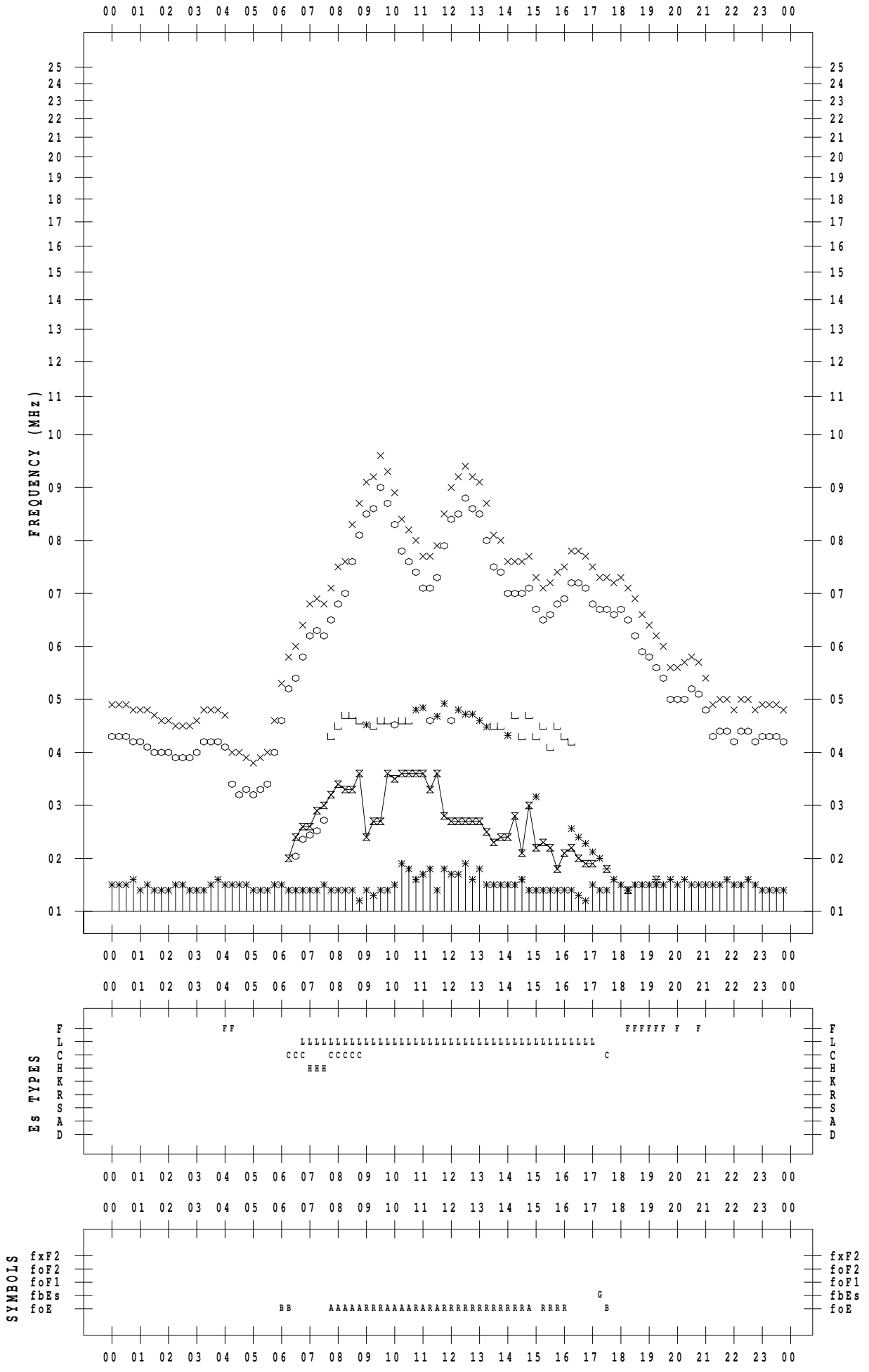
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/20

135 °E MEAN TIME



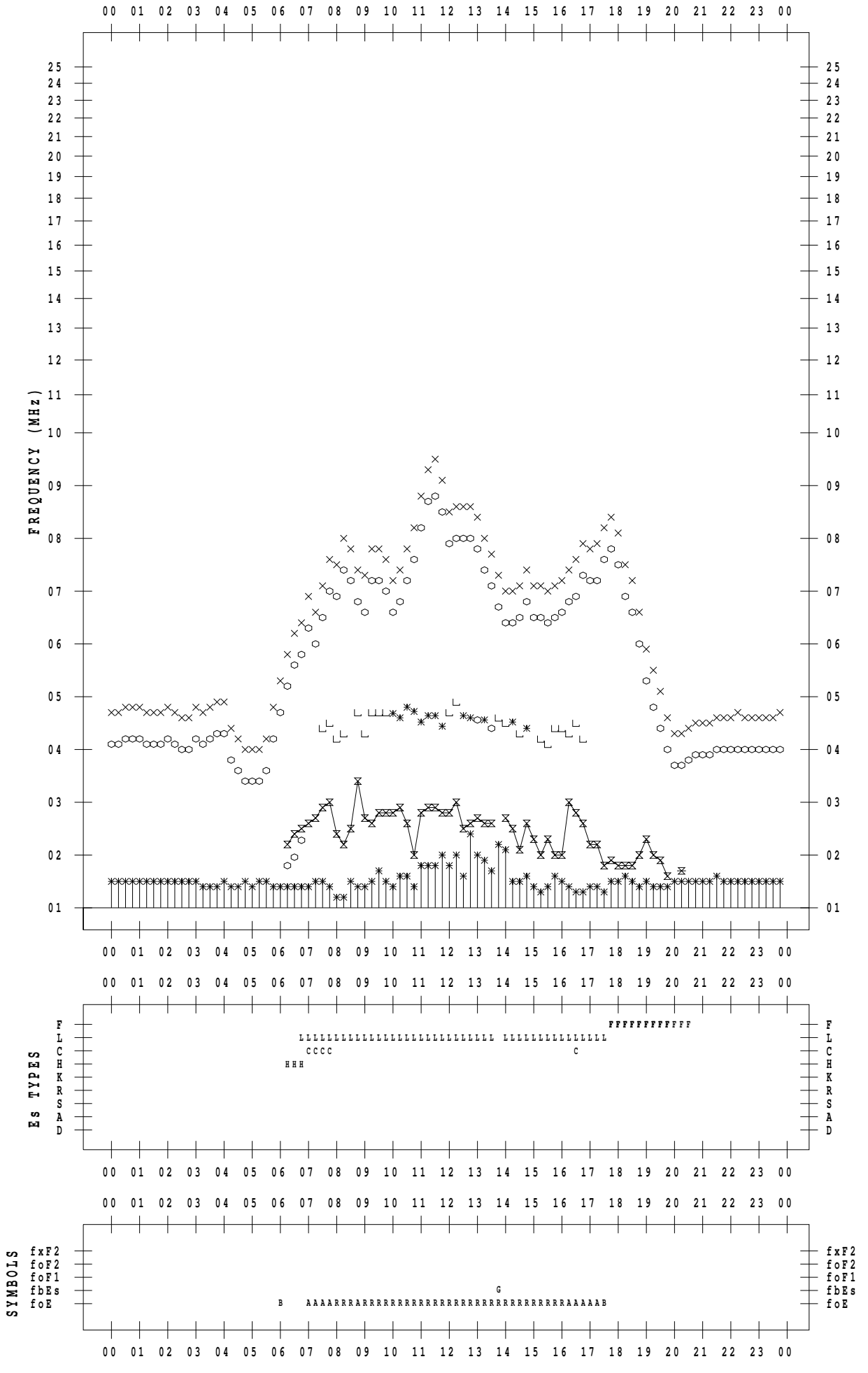
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/21

135 °E MEAN TIME



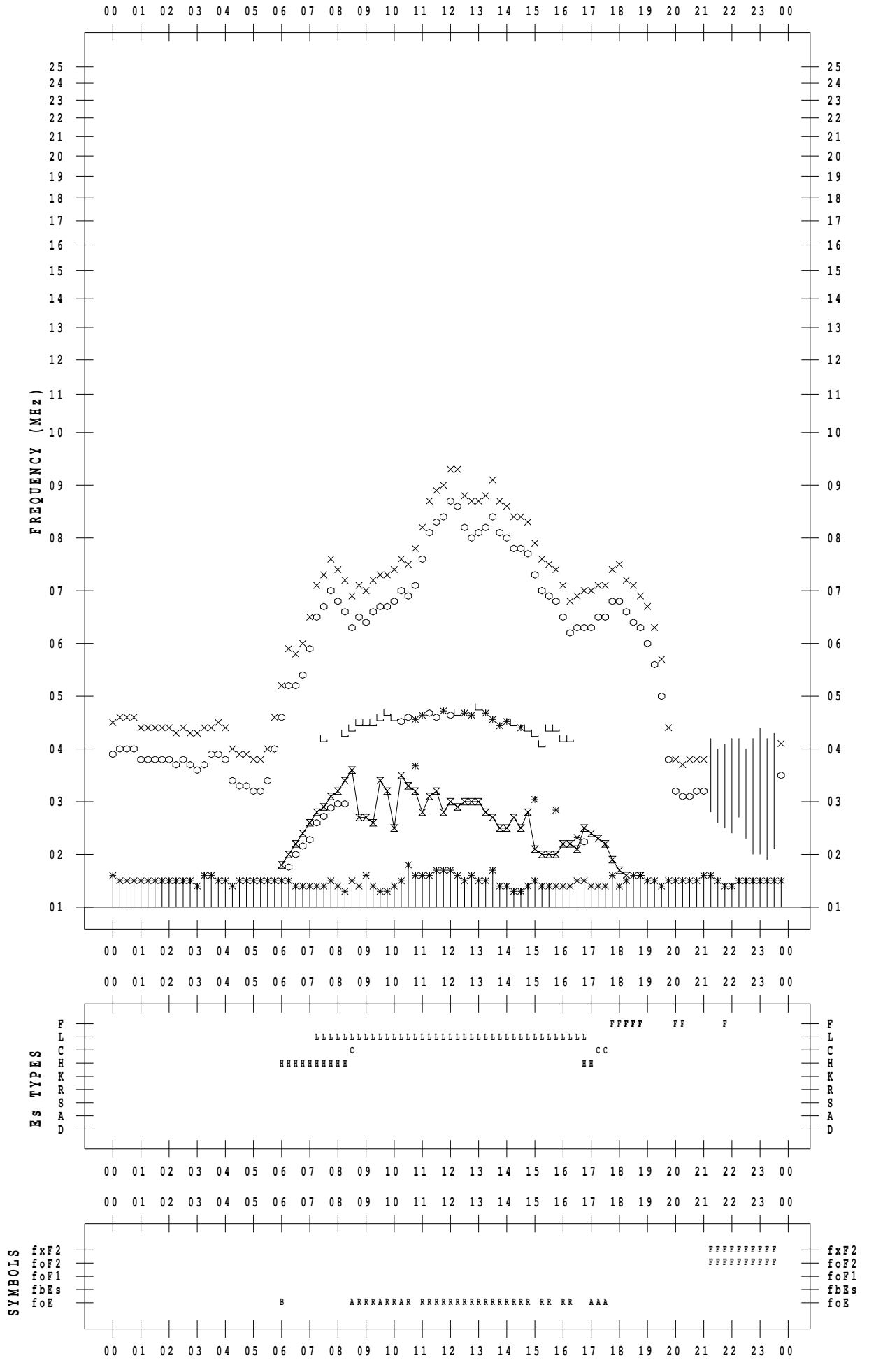
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/22

135 °E MEAN TIME



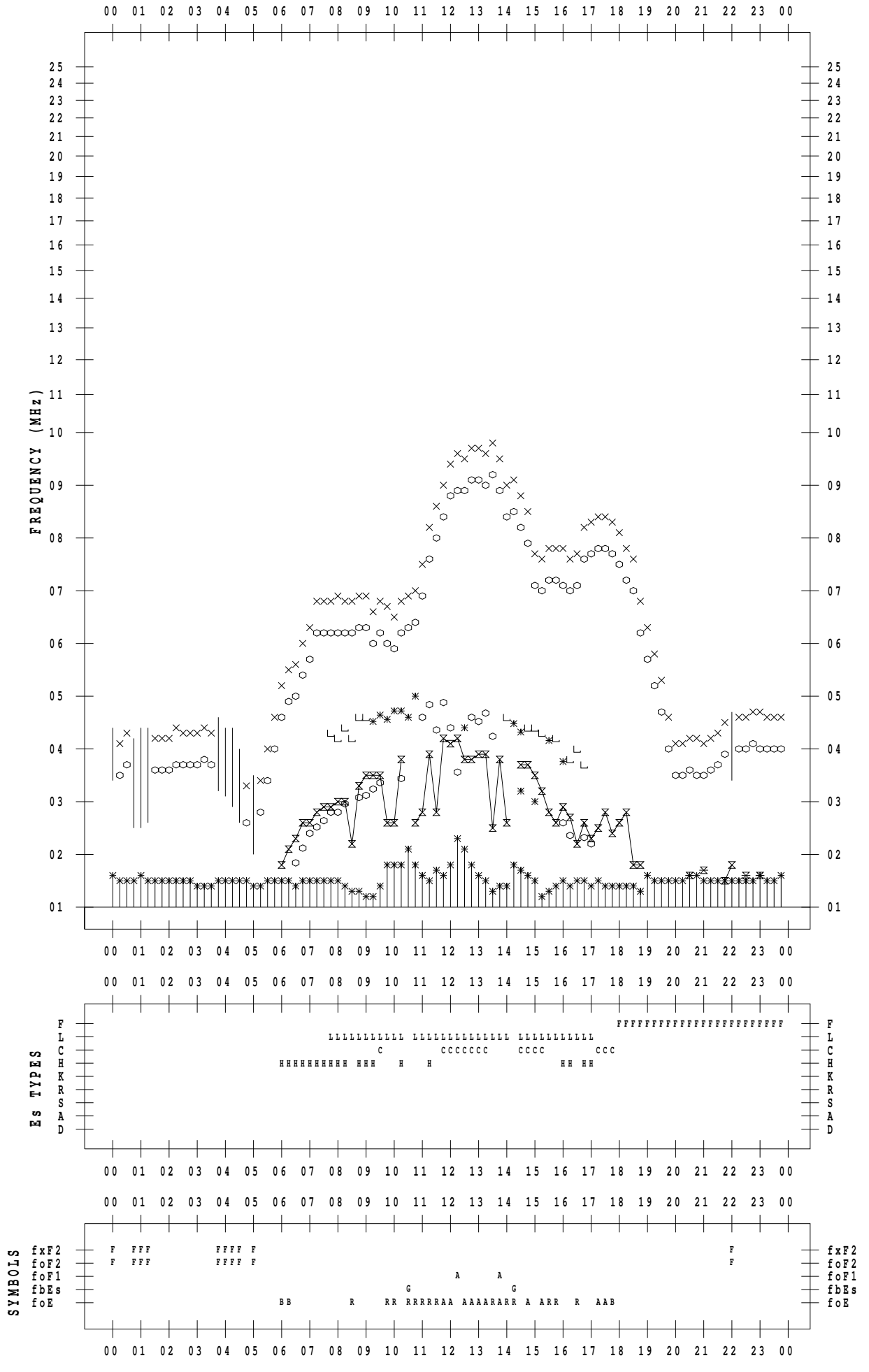
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/23

135 °E MEAN TIME



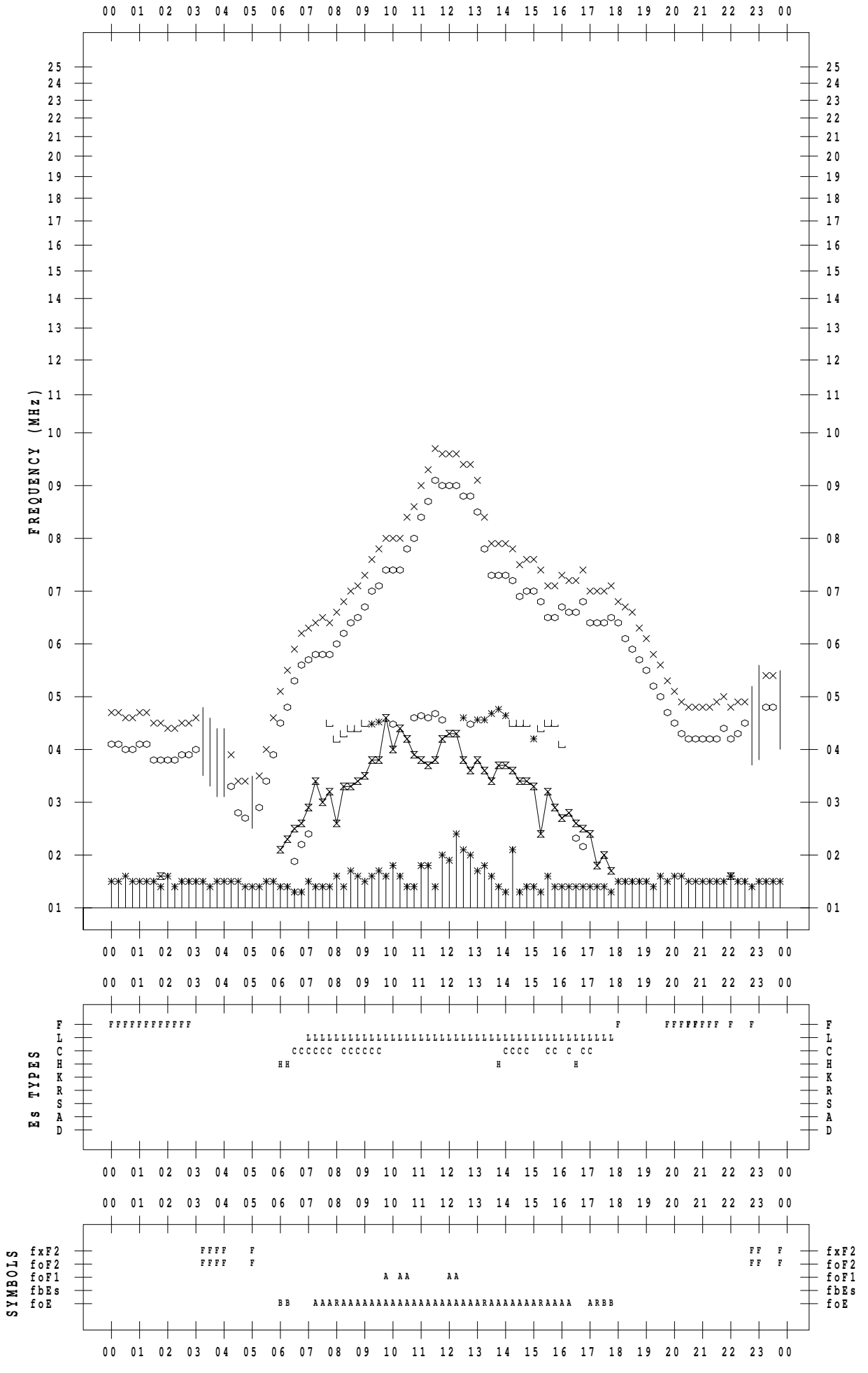
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/24

135 °E MEAN TIME



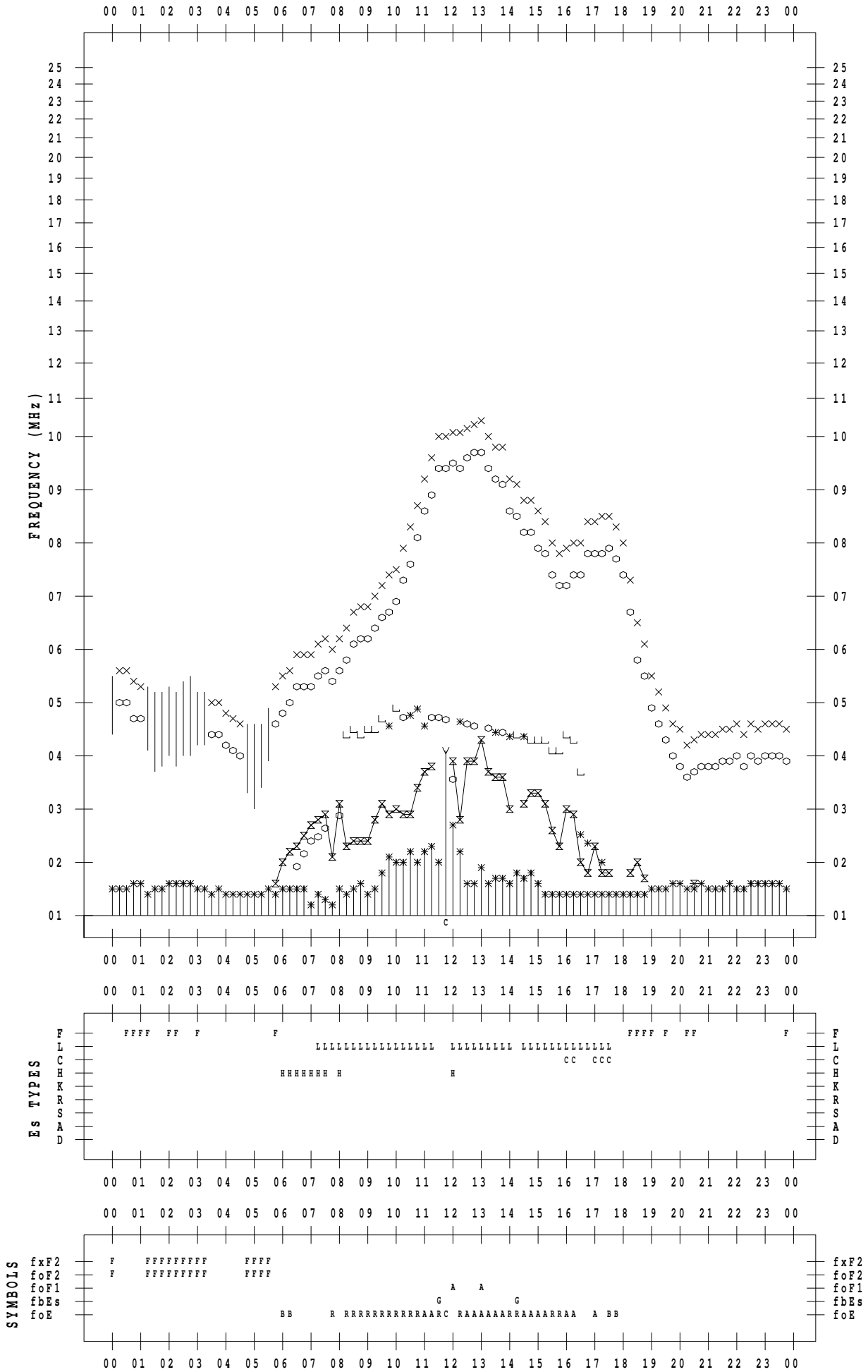
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/25

135 °E MEAN TIME



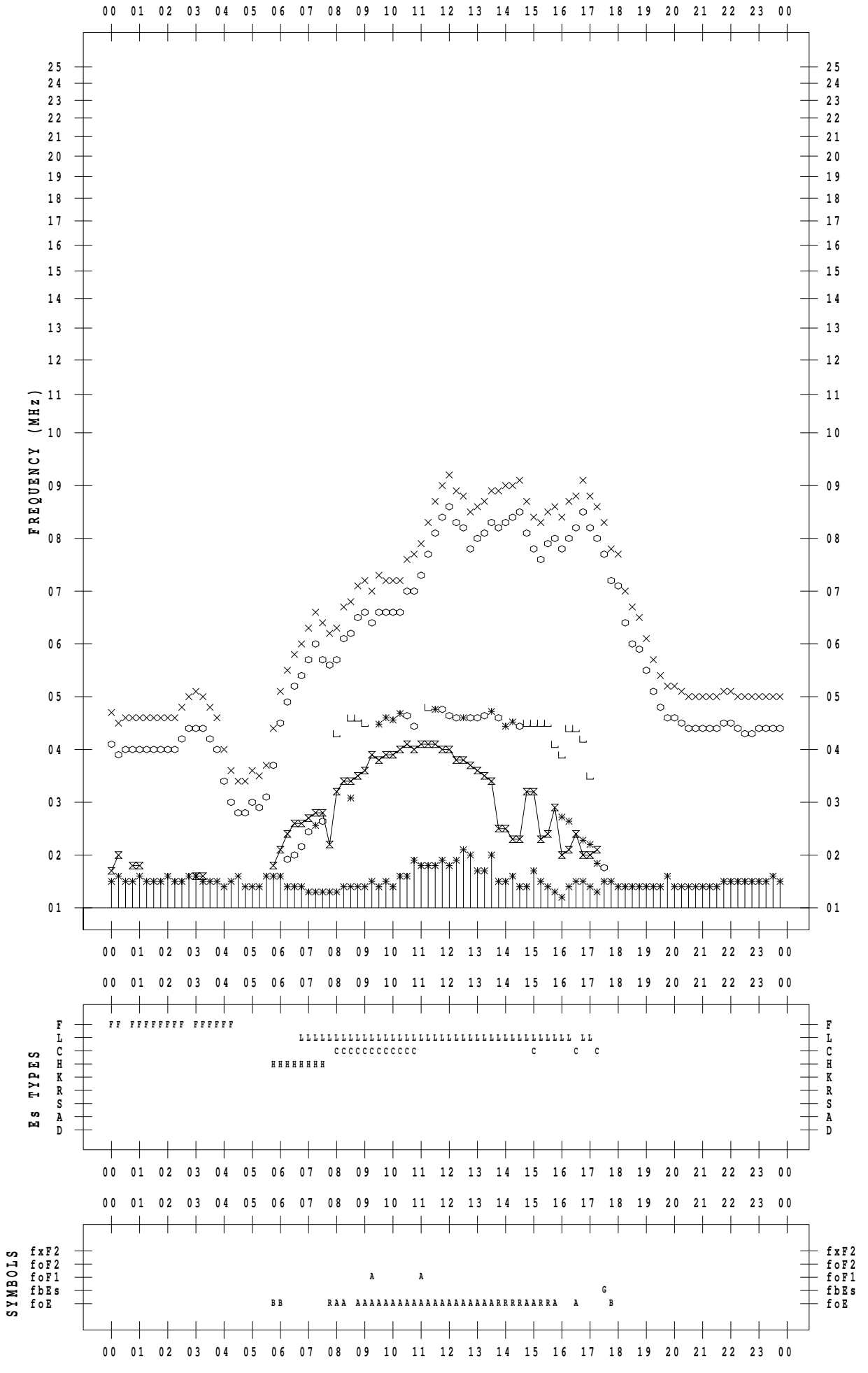
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/26

135 °E MEAN TIME



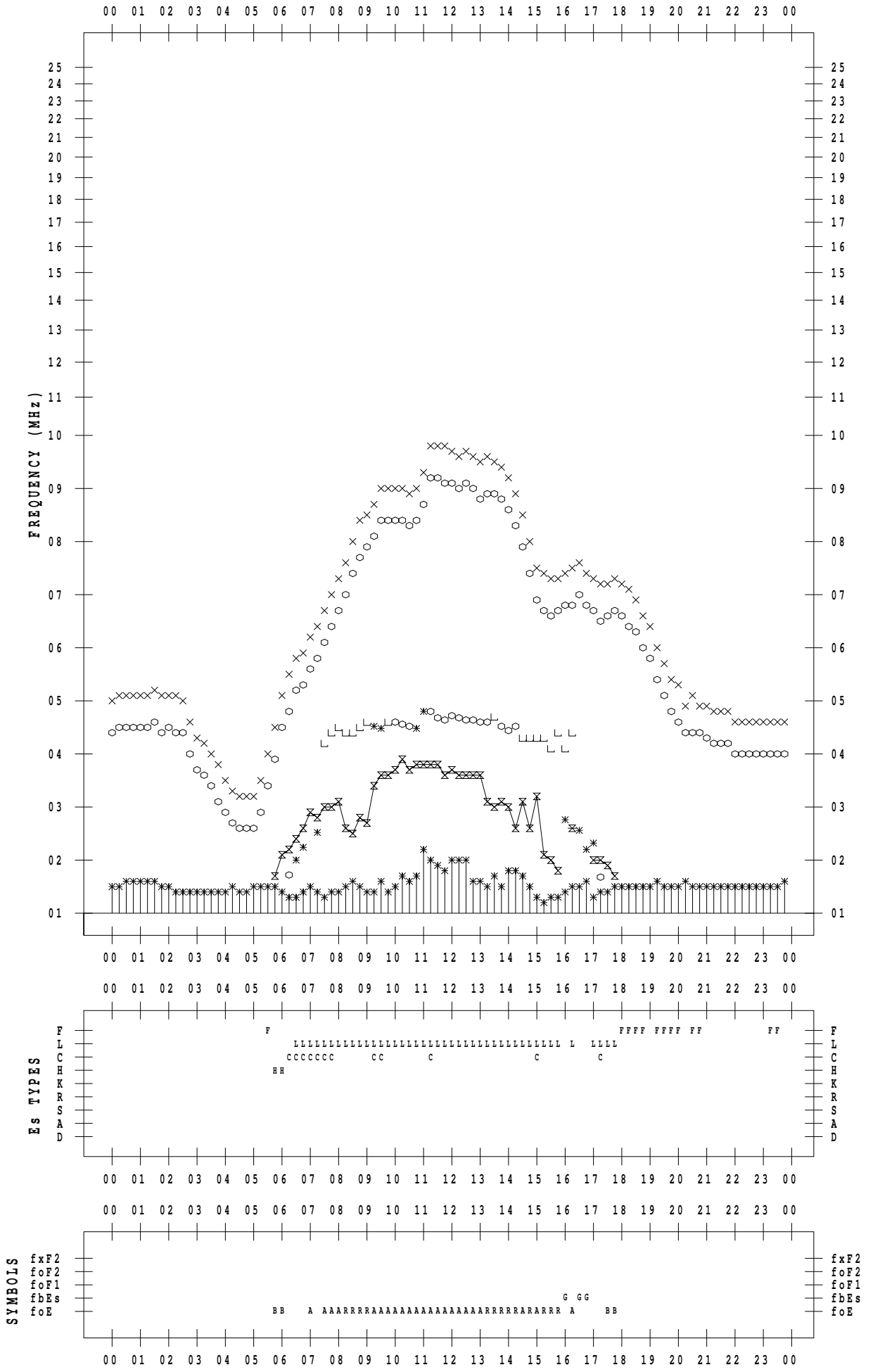
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/27

135 °E MEAN TIME



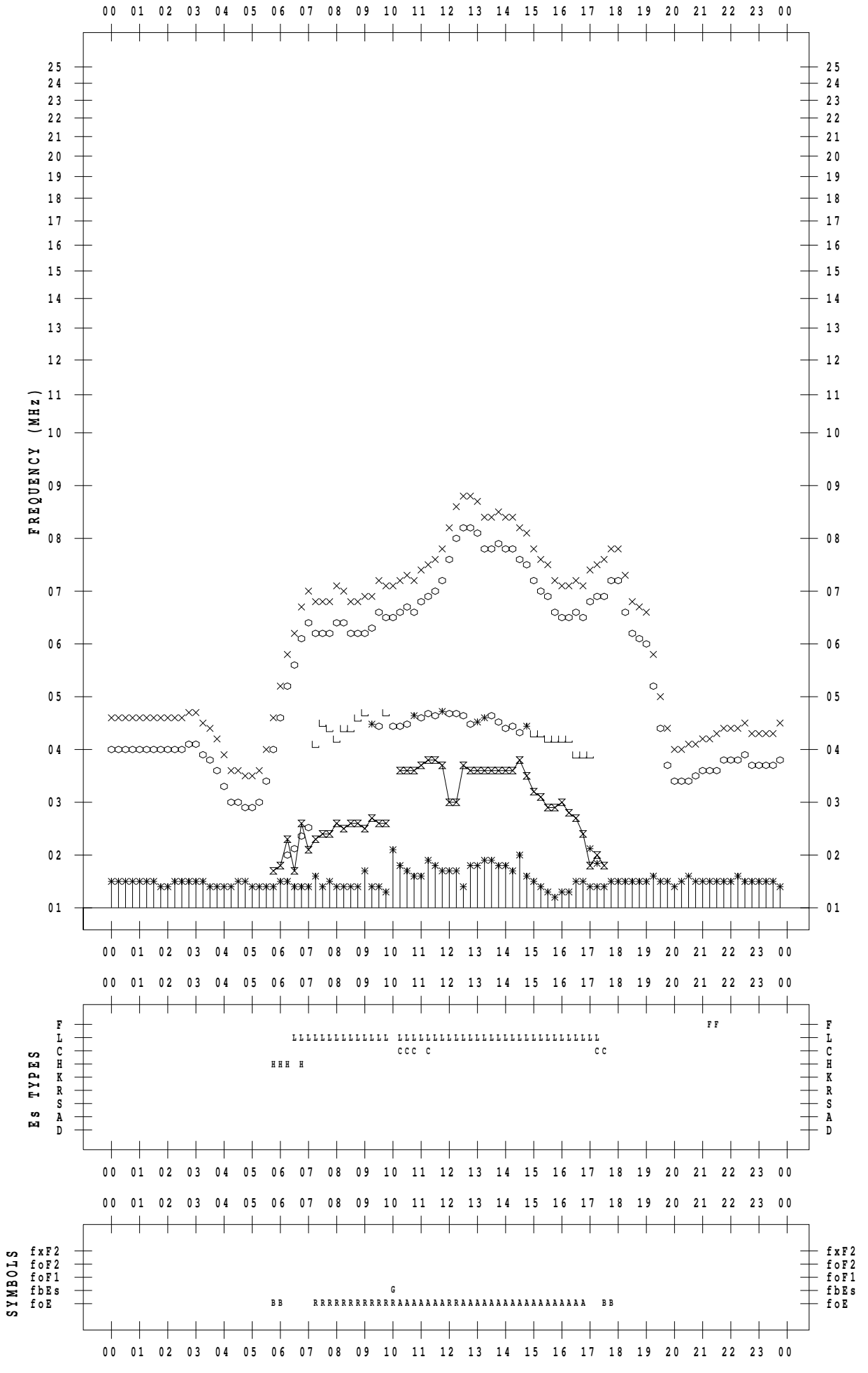
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/28

135 °E MEAN TIME



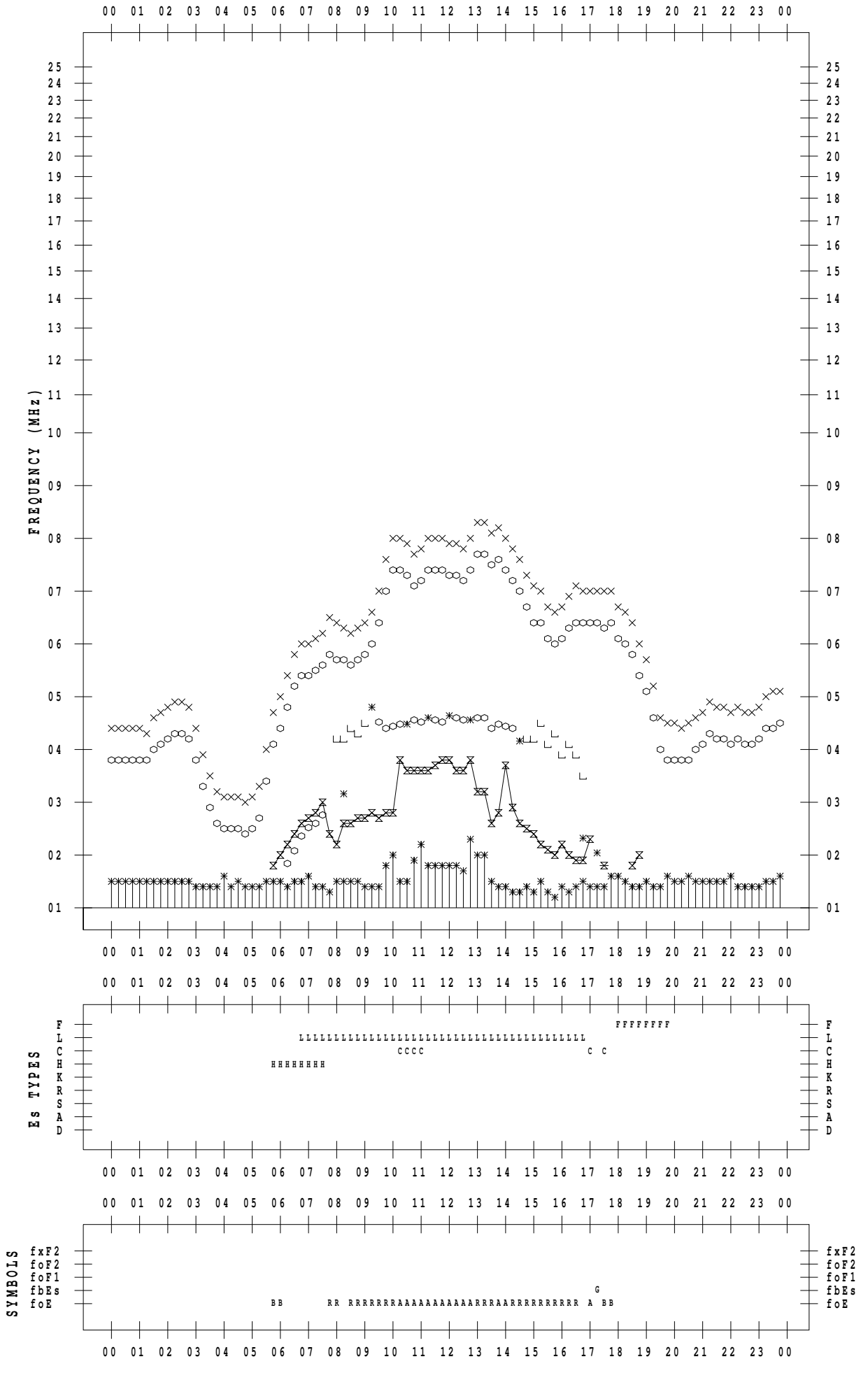
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/29

135 °E MEAN TIME



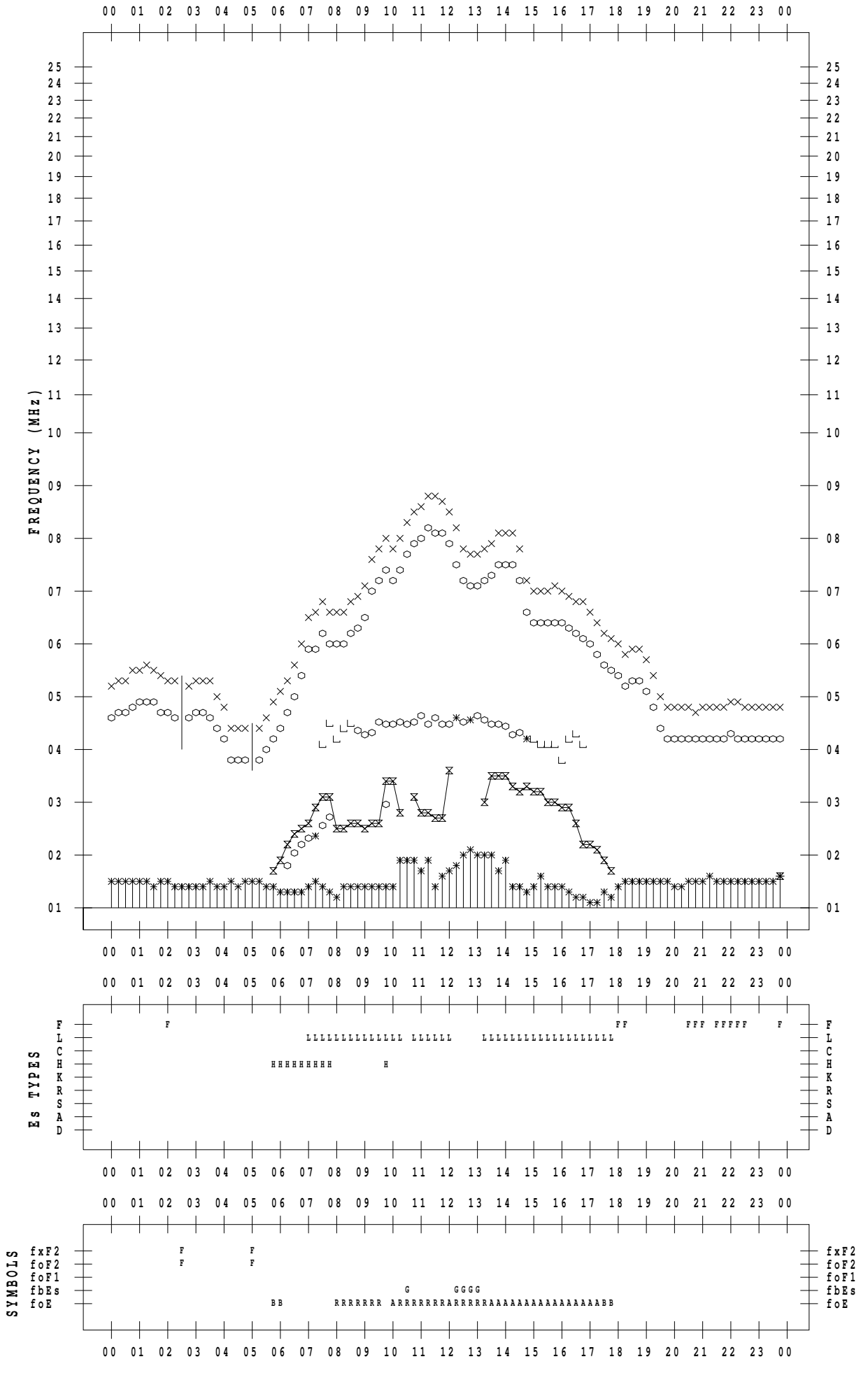
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/30

135 °E MEAN TIME



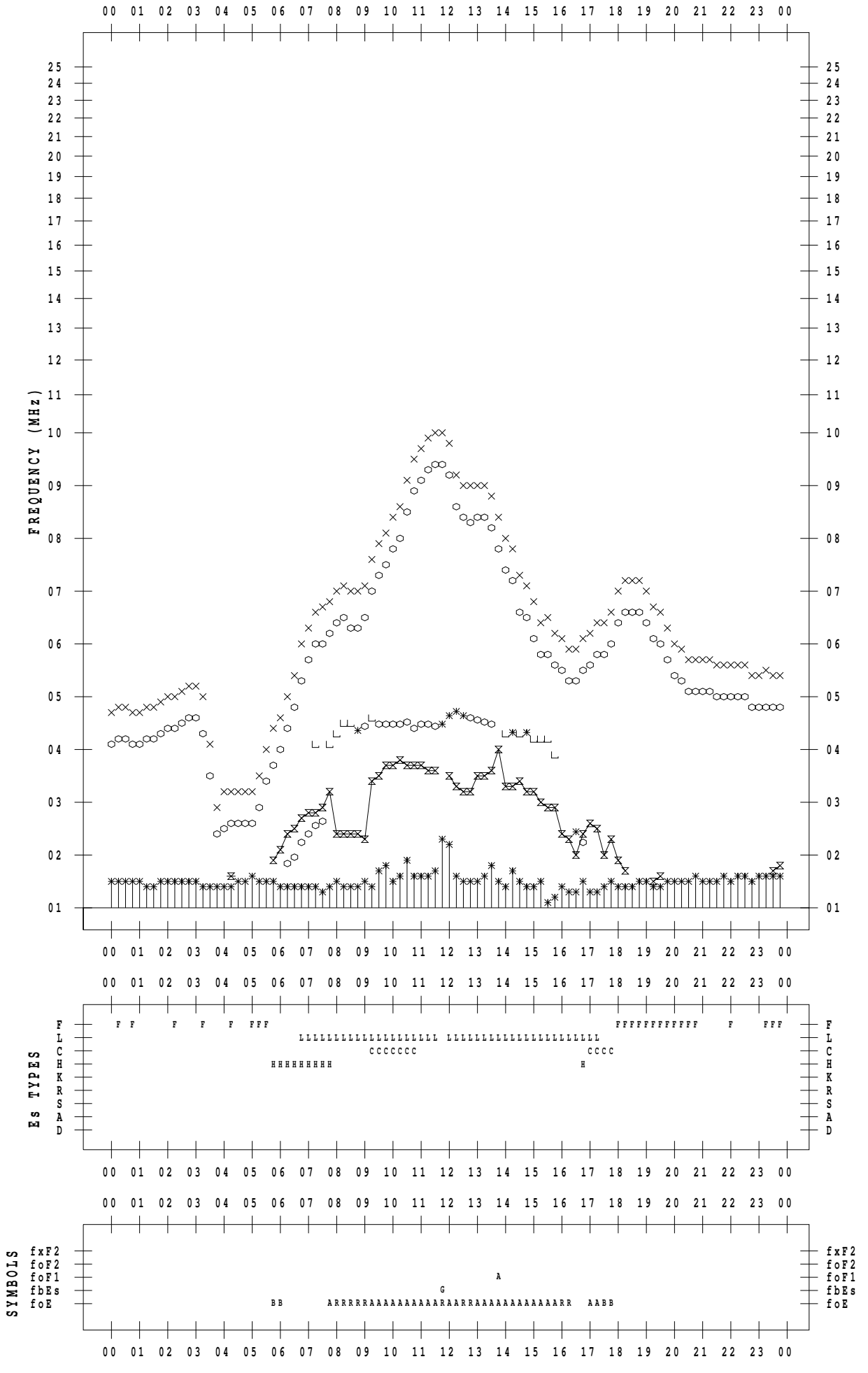
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/ 3/31

135 °E MEAN TIME



B. Solar Radio Emission

B1.Outstanding Occurrences at Hiraiso

Hiraiso March 2010

Single-frequency observations

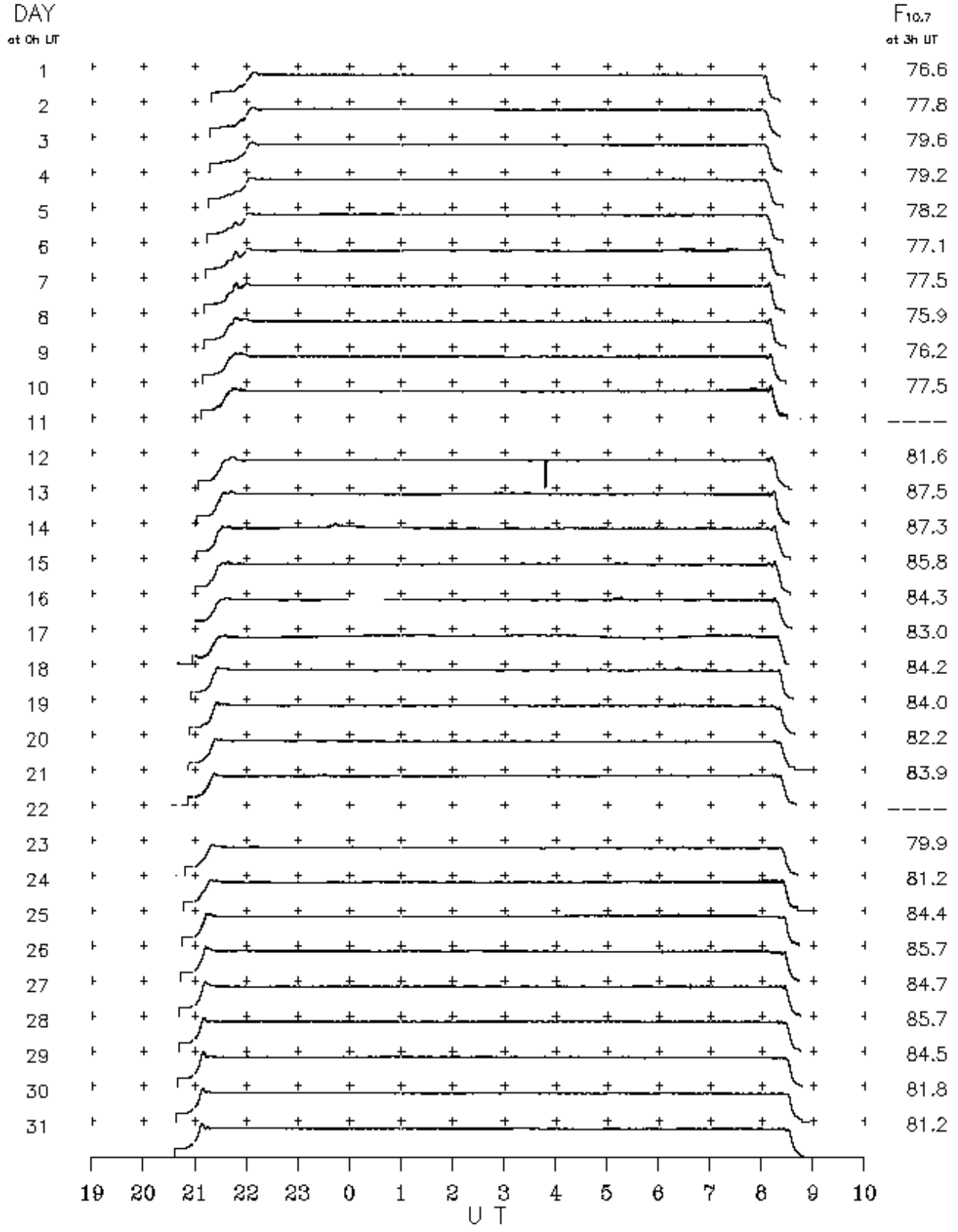
Normal observing period: 2045 - 0850 U.T. (sunrise to sunset)

MAR. 2010	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
13	2800	4 S/F	2333.0	0030.0	57.0	10	-	

B.Solar Radio Emission

B2. Summary Plots of $F_{10.7}$ at Hiraiso

March 2010



Note: A vertical grid space corresponds to a 100 sfu.
Elevation angle range ≧ 6°
A link to the daily plot data directory : http://sunbase.nict.go.jp/solar/denpa/hirasDB/2010/03/