F-742

IONOSPHERIC DATA IN JAPAN

FOR OCTOBER 2010

VOL. 62 NO. 10

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≪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

OCT. 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	42	38	38	34	40	52	61	62	65	68	65	68	59	62	65	62	63	66	56	45	42	34	34
2	32	34		32	38	34	50	66	63	68	64		69	65	65	66	66	64	57	47	46	44	43	41
3	34	34	37	37	35	34	52	60	63	62	66	65	62	70	61	64	66	61	54	50		38	48	42
4	38	34	33	36	38	35	54	54	61	74	68	68	68	67	65	61	60	61	50	44	47	42	41	
5			34	32	34	38	54	61	60	67	59	69	68	62	66	56	62	62	53	50	43	37	47	34
6	34	34	34	37	34	36	56	65	68	74	70	59	69	67	64	67	64	59	48	47	48	35	32	34
7	36	31	30	37	37	36	52	65	62	67		59	67	67	61	68	64	60	47	44	34	32	40	32
8	35	37	34	30	34	35	56	68	74	66	68	83	66	67	62	61	63		49		42	42	45	42
9	31	34	31	36	36	34	51	63	63	66	58	70	70	71	62	62	65	55	43	42	44	34	51	50
10	50	40	45	42	43	44	54	66	61	67	70	64	68	66	61	65	65	60		45	39		38	37
11	40	31	40	36	38	34	27	55	64	66	67	70	69	66	58	56	64	67	55	53	55	50	42	40
12	34	43	46	37	31	36	54	62	62	62		54	69	70	62	64	64		50	40	37	34	44	32
13	43	38	34	34	37	35	46	58	65	66	82	59	59	68	65	67	66	63		47	42	34	43	34
14	38	38	36	43	36	41	51	63	66	66	70	70	74	64	61	66	64	54	34	42	36	34	43	32
15	44	35	46	43	40	34	47	70	61	61		59	68	67	62	60	66	66	55	57		48	44	43
16	37	48	52	54	54	37	50	65	66	66	67			68	70	67	64	62	52	55	38		52	52
17	50	50	51	52	55	54	50	59	67	77	59	71	59	65	70	70	67	65	64	63	47		48	
18	51	51	47	50	48	47	53	65	67	66	75		71		62	67	67	61	56	56		41	39	32
19		44		34	47	50	47	60	69		68	65	84		65	66	71	65	54	48	A	A		34
20		41	47	47	51	47	47	58	61	65	70	89	90	67	65					46	A	50	47	52
21		32	37	33	51	34	34	53	63		75		69	67	64	61	A		42	A	47		32	34
22	40	38	42	40	41	40	43	58	65	64		69	75	70	66	65	70	58	A	35	37		32	32
23	34	36	34	38	33	34	34	56	66	67	70	91	88	67	66	67	64	58	46	38	44	44	42	41
24	34			37	38	29		51	67	69	88	75	68	62	62	67	66	64	A		48	50	47	44
25	42	44	44	46	44	44	47	58	66	59		76	61	70	A	A	A	A	A	46	44	34		32
26	47	51	54	51	50	44	46	64	67	71	67	65	59	66		68	64	46	47	47		A	44	44
27	42	45	47	52	50	48	52	60	61	66	67	70		66	68	66	67	55	52	46	46	38	42	42
28	42	45	44	47	51	36	42	62	64	65	70	66	64	67	63	68	70	58	42	31	32	32	43	43
29	34	42	44	34	45	26	37	58	61	62	63	69	65	66	65	66	64	39	38	36	34	32	34	38
30			32	37	44	35	34	54	55	62	A	66	66	69	64	60	56	43	29			34	34	32
31	32			34	37	32	44	64	62	64	66	65		64	60	54	61	50	42	43	34	34	36	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	26	27	27	31	31	31	30	31	31	29	25	27	28	29	29	29	28	27	25	27	24	24	29	28
MED	38	38	40	37	38	36	50	61	63	66	68	68	68	67	64	66	64	60	50	46	44	38	43	38
U Q	42	44	46	46	48	44	52	65	66	67	70	70	69	68	65	67	66	63	54	50	46	43	46	42
L Q	34	34	34	34	36	34	44	58	61	64	66	65	65	65	62	61	64	55	42	42	37	34	37	33

HOURLY VALUES OF fEs AT Wakkanai

OCT. 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	G	G	G	G	G	G	G	36	G	38	G	39	41	38	G	G	35	G	G	G	G	G	G	24
2	24	25	56	33	34	27	29	G	41	G	44	G	G	G	G	34	44	G	G	G	24	30	23	G
3	G	G	G	27	27	G	28	33	G	G	G	G	G	G	G	35	39	40	G	28	41	24	G	G
4	G	23	30	G	G	G	G	G	34	41	G	G	38	G	G	38	35	G	29	26	26	34	39	40
5	39	36	33	29	23	G	29	G	G	39	G	48	43	53	45	37	29	G	26	G	G	G	G	G
6	G	G	G	G	G	G	G			G	G	G	39	38	41	34	G	32	34	39	34	33	29	28
7	G	G	G	G	31	28		31	34	G	G	G	G	39	41	40	34	33	28	34	32	26	33	G
8	G	24	25	27	G	G	G	34	G	G	G	G	G	G	38	34	55	70	40	38	G	G	G	G
9	G	G	29	G	G	G	25	30	34	G	G	G	42	40	41	44	50	28	31	G	24	G	G	G
10	G	G	G	G	23	G	G	33	34	43	58	39	G	G	G	33	50	35	25	27	28	33	32	30
11	G	G	G	G	G	G	32	44	39	48	54	50	50	48	50	56	63	55	43	41	27	G	G	G
12	24	26	23	G	G	G	G	35	53	45	61	41	50	55	53	54	62	58	30	26	25	G	28	G
13	G	24	32	31	G	G	27	30	40	42	41	50	43	40	G	34	43	38	41	32	25	G	G	26
14	G	G	G	G	G	27	G	30	37	37	39	G	38	G	42	G	30	G	35	G	G	27	G	25
15	23	G	24	28	26	26	G	G	G	39	G	G	G	G	G	G	30	25	34	33	G	G	24	24
16	24	G	G	G	G	G	G	33	G	G	G	G	G	41	37	G	G	G	G	G	G	36	G	G
17	G	G	G	G	G	G	G	32	G	40	44	39	G	38	G	32	G	33	40	36	34	26	27	
18	32	35	G	G	G	26	G	40	44	38	G	G	44	41	46	32	34	G	G	G	60	G	33	36
19	43	33	36	G	28	23	46	35	34		60	G	39	G	G		41	37	44	G	51	36	59	28
20	41	G	G	G	G	26	G	G	G	50	43	86	49	55	66	102	84	70		39	43	29	40	40
21	51	32	33	36	24	G	G	32	46	72	80	40	53	G	G	58	72	51	38	43	33	33	34	28
22	33	28	27	38	34	33	27	G	G	G	38	G	41	44	43	G	33	41	38	30	26	31	G	24
23	G	33	33	G	36	30	33	33	34	38	G	G	G	G	G	G	29	G	G	G	26	27	28	34
24	32	46	43	29	26	25	24	30	35	36	40	40	50	41	35	36	47	62	57	43	33	G	G	G
25	G	30	28	G	24	G	G	30	37	46	54	58	49	66	67	84	91	60	38	32	G	G	44	60
26	39	30	G	29	G	G	G	32	38	39	G	50	G	G	G	G	G	11	30	33	33	52	25	26
27	G	33	G	G	G	G	G	32	49	45	39	G	G	G	G	G	27	26	G	G	G	G	G	31
28	G	58	36	24	25	27	25		38	49	39	41	54		G	G	G	25	G	G	G	26	26	G
29	G	G	33	26	24	G	G	48	G	44	36	G	40	42	38	35	34	40	G	G	G	G	G	28
30	40	37	34	G	G	11	G	48	41	51	72	42	G	G	34	G	G	24	G	39	33	38	24	28
31	29	33	36	28	26	G	24	29	40	44	49	G	G	G	40	37	35	34	28	G	G	G	28	40
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	30	29	30	30	31	31	31	30	31	30	31	31	30	31	31	31	31	30
MED	G	24	25	G	G	G	G	32	34	39	39	G	39	38	35	34	35	33	30	27	26	26	24	26
U Q	32	33	33	28	26	26	27	34	40	45	49	41	44	41	42	38	50	41	38	36	33	33	32	30
L Q	G	G	G	G	G	G	G	29	G	G	G	G	G	G	G	G	29	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Wakkanai

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

OCT. 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	41	39	37	36	32	32	53	67	81	66	60	65	75	76	68	58	77	96	85	49	28	27		34
2		34	34	36			47	58	75	62	65	62	82	86	76	80	71	67	59	44	44		32	
3	42	A	34	36	27		49	56	75	62	65	66	75	85	82	65	61	75	72	65				42
4	39			32	34	30	47	63	67	68	69	77	69	54	68	70	63	67	54	52	42	46	34	
5	36				34	34	52	69	74	67	67	77	67	64	68	76	65	63	67	51		44	44	37
6	34	34	34	34	35	32	54	67	73	69	67	67	85	87	66	66	63	71		46	44	A	A	
7	A		31	36		32	51	72	82	72	59	72	88	69	63	64	66	72	55	42	41	36		
8			28				58	65	64	86	72	78	91	87	65	67	61	63	65	54	44			39
9		26		A	32	32	55	63	66	63	60	75	73	66	77	71	58	59	53	45	46	41	48	43
10	32	48	27	58		34	58	64	64	72	68	C	C	C	C	C	C	C	C	C	50	34	32	
11	26				28	31	42	59	64	66	64	81	84	68	67	59	61	60	55	52	51	A	A	A
12	A	37	41	43		30	54	81	65	92	77	81	67	72	91	72	80	74	55	47	A	34	A	
13	34		36	39		27	47	59	91	74	71	76	92	84	82	76	78	81	51	A			36	36
14	27	32	35		34	31	44	65	77	76	75	78	78	76	77	64	66	67	49	37			39	20
15	34	34	34	36	31	30	46	56	71	89	65	73	90	80	64	66	66	66	A	A	A		A	32
16			34	89	34		42	59	81	78	65	71	76	86	76	77	65	62	42	47	44	26	38	25
17	34		34	36	39		42	66	69	74	82	84	75	78	82	85	85	72	47	42	37	30	37	37
18	43	34		38	44	43	54	67	74	72	71	82	74	69	80	80	78	76	55	47	49	A	A	
19	37	36	39		46		46	65	67	77	68	73	76	81	90	81	75	67	55	42	A	A	37	
20	34	32		39	41	35	47	66	62	76	80	78	100	81	76	66	64	51	48	47	47	43		38
21	39	42	44	47	45	35	46	72	76	85	88	104	91	78	80	86	68	65	A	A	38	30	27	30
22		A	31	34	32	25	42	59	65	77	77	81	86	81	92	76	64	58	A	A	A	23	A	A
23	30	A	34	27	24	27	44	63	65	75	82	85	81	84	77	75	75	62	C			A	36	A
24		34	39		23		44	73	69	88	114	81	68	68	69	69	84	80	36		A	36	36	38
25	A	A	A	38	A	A	45	69	76	84	82	76	74	68	78	82	74	53		A	A	A	A	32
26	36	25	37		32	34	47	73	88	76	74	73	67	77	88	74	60	54	46	37		39		34
27	38	A		43	42	39	54	68	76	78	73	67	68	85	75	87	72	52	38	39	A	A	A	A
28	34	36		39	34	26	42	64	74	75	68	67	72	74	76	77	64	64	38	34			34	34
29	26	28			A		39	62	69	61	71	68	71	74	81	72	59	54		A	34	A	28	27
30	31		27	34	33		38	59	60	64	84	89	76	69	74	69	59	49	39		27		A	A
31	A	27	27		28	28	30	59	64	66	70	73	61	72	72	72	54	52	28				28	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	17	21	21	23	21	31	31	31	31	31	30	30	30	30	30	30	30	23	20	16	14	16	17
MED	34	34	34	36	34	32	47	65	71	74	71	76	76	76	76	72	66	64	53	46	44	35	36	34
U Q	38	36	37	41	39	34	53	68	76	78	77	81	85	84	81	77	75	72	55	50	46	41	37	38
L Q	31	30	31	35	31	29	42	59	65	66	65	71	71	69	68	66	61	58	42	42	37	30	32	31

HOURLY VALUES OF fEs AT Kokubunji

OCT. 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	29	G	G	G	G	30	G	G	G	G	G	G	G	G	G	G	29	25	11	G	G	G	G
2	G	G	G	G	G	G	G	G	38	G	52	50	G	G	G	G	G	G	G	G	G		28	30
3	23	27	G	G	G	G	G	G	G	G	G	50	G	G	G	G	38	29	29	37	39	G	29	23
4	23	G	G	G	G	22	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
5	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	30	G	G	34	29	24	G
6	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	40	27	
7	29	G	G	G	G	G	29	G	G	G	G	G	G	G	G	G	G	26	26	28	G	G		
8	G	G	G			G	29	G	G	G	G	41	G	G	G	G	G	G	38	G	G		G	G
9	G	G	G	29	G	G	G	G	G	G	G	G	47	G	G	G	G	G	G	G	G	49	22	G
10	G	G	G	G	G	G		G	G	G	G	C	C	C	C	C	C	C	C	C	G	G	G	G
11	G		G	G	G	G	G	G	G	G	G	72	G	G	60	G	G	50	44	33	26	40	58	41
12	58	34	22	33		G	26	34	G	G	G	G	G	G	42	G	34	28	G	25	54	G	29	G
13	G		G	G		G	27	38	G	G	G	G	G	G	G	G	53	30	34	34	27	33	G	24
14	G	G	G	G	G	G	G	33	G	G	G	G	G	G	G	G	G	G	28	30	29	G	24	G
15	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	30	32	50	58	40	28	27	24
16		25	G	G	G	G	G	G	G	G	G	49	G	G	G	G	G	G	24	G	G	G	G	G
17	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
18	G	G	G	G	G	G	G	G	G	46	49	75	50	49	G	G	G	G	26	G	39	33	29	
19	G	G	G	G	G	29	30	G	53	G	G	G	G	G	G	G	G	26	29	45	39	33	27	31
20	23	G	25	28	G	G	G	G	G	G	G	G	G	50	G	81	62	40	27	G	G	G	29	G
21	24	29	G	G	G	G	27	G	G	G	40	80	G	G	G	G	G	G	49	38	24	G	26	27
22	28	32	G	G	G	G	G	G	G	40	G	43	G	G	G	45	40	35	52	72	50	28	32	33
23	33	27	G	G	G	G	G	G	G	53	G	G	G	G	G	G	31	29	C	34	34	26	24	28
24	33	25	30	34	24	25	G	G	44	G	G	G	G	G	G	G	G	31	31	25	29	G	23	31
25	59	58	68	34	49	27	G	34	G	G	G	G	49	G	G	G	45	26	36	45	41	36	31	G
26	G	G	G	G	23	G	23	30	G	G	G	G	G	G	38	G	G	G	G	G	26	27		24
27	25	30		G	G	G	G	G	G	41	G	G	G	G	G	G	G	27	G	G	60	59	48	46
28	G	28	24	33	G	G	G	G	G	50	G	G	G	G	47	G	29	G	G	G	30	24	G	G
29	G	G	G	31	30	G	G		G	47	47	46	53	47	50	36	36	34	35	40	25	35	26	G
30	G	G	G	G	11		G	G	G	G	G	G	43	G	G	G	G	G	G	G	G	G	32	35
31	58	G	G	G	G	G	G	G	G	G	48	G	G	G	G	G	G	34	25	G		26	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	29	30	30	28	30	30	30	31	31	31	30	30	30	30	30	30	30	29	30	30	29	29	28
MED	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	26	26	6	26	26	26	G
U Q	25	27	G	G	G	G	23	G	G	G	G	43	G	G	G	G	31	30	34	34	39	33	29	29
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

OCT. 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	20	13	17	13	14	13	13	14	17	40	37	44	43	42	39	41	29	13	15	14	24	14	15	14
2	17	14	14	14	13	15	13	13	15	34	36	33	40	42	17	17	14	20	13	14	15		14	14
3	14	13	14	13	15	18	21	22	14	18	42	34	43	42	39	17	13	13	13	13	13	15	13	13
4	14	14	13	13	14	14	20	18	17	20	40	43	42	40	38	40	14	18	14	13	14	14	13	14
5	14	21	15	15	15	14	18	14	15	40	42	42	40	42	40	17	13	13	13	14	13	13	14	15
6	15	14	13	14	14	14	18	18	15	39	41	44	40	39	17	17	30	21	14	14	13	13	13	
7	13	13	15	14	18	22	14	18	38	39	42	44	43	39	20	15	14	14	14	13	13	13		
8	14	14	14			13	13	14	15	15	42	41	22	40	40	13	13	17	13	14	14		14	14
9	17	14	17	13	13	15	20	30	15	39	13	42	33	43	40	40	14	17	14	13	14	13	14	13
10	17	14	14	17	17	14	18	13	14	13	21	C	C	C	C	C	C	C	C	C	13	14	14	18
11	14		18	13	13	13	17	14	18	14	42	33	40	39	17	15	14	13	13	13	14	13	13	13
12	13	13	13	13		15	14	13	14	17	17	18	20	21	14	13	13	13	13	13	13	15	14	21
13	14		13	14		13	14	13	14	15	21	42	13	41	39	14	13	13	14	14	17	15	14	17
14	18	14	14	14	13	15	18	14	14	17	21	43	40	42	17	15	13	15	15	13	14	20	14	15
15	15	14	13	14	17	14	15	13	15	14	40	43	42	40	17	13	14	13	13	14	13	14	13	13
16		14	14	14	13	22	20	14	14	42	43	18	40	44	37	20	15	17	14	14	14	17	17	18
17	14	15	14	17	14	13	18	18	13	17	41	42	42	18	20	31	13	14	14	15	13	14	15	13
18	13	14	20	14	13	14	17	14	14	33	37	36	31	33	18	14	13	17	15	13	13	13	14	
19	14	17	14	17	15	14	18	13	14	14	39	42	43	49	14	17	39	15	14	14	13	13	14	14
20	15	13	14	13	15	18	17	13	14	18	41	39	41	39	36	18	13	13	13	14	14	13	13	15
21	14	14	14	13	14	14	17	13	13	20	40	34	40	22	14	14	37	14	13	13	14	13	14	14
22	13	13	14	15	15	14	13	18	14	14	18	18	40	17	15	17	13	13	14	14	13	13	13	13
23	13	14	14	15	14	14	14	13	14	14	18	39	42	39	15	15	13	13	C	13	14	13	14	14
24	13	14	13	14	13	13	15	28	14	15	20	40	38	17	17	13	13	13	14	17	13	14	13	13
25	14	13	14	13	13	13	14	13	14	14	20	18	40	15	14	13	15	14	13	13	13	13	13	14
26	14	13	13	15	14	14	14	13	14	17	40	42	40	42	18	17	13	15	14	15	14	13		13
27	14	13		13	14	15	14	15	18	22	39	20	20	40	14	13	23	14	17	15	13	13	13	14
28	14	14	14	13	13	14	17	14	14	15	39	40	22	23	17	14	13	15	14	15	13	14	13	14
29	15	14	14	13	13	13	13	13	13	15	37	21	36	20	15	13	13	13	13	13	17	14	17	17
30	14	15	15	14	13		14	13	13	14	21	43	22	21	18	17	22	14	14	20	14	17	14	13
31	13	14	14	20	13	14	14	13	14	18	30	21	22	21	20	14	13	13	14	20		14	13	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	30	29	30	30	28	30	31	31	31	31	31	30	30	30	30	30	30	30	29	30	30	29	29	28
MED	14	14	14	14	14	14	15	14	14	17	39	40	40	39	18	15	13	14	14	14	14	14	14	14
U Q	15	14	14	15	15	15	18	18	15	33	41	42	42	42	37	17	15	15	14	14	14	14	14	15
L Q	14	13	14	13	13	13	14	13	14	14	21	33	31	21	15	14	13	13	13	13	13	13	13	13

HOURLY VALUES OF foF2 AT Yamagawa

OCT. 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		37	34	36	30	28	34	71	81	70	67	65	74	90	76	66	77	102	88	54	41	A		40
2	46	52	48	41			36	63	72	65	63	67	74	90		88	75	70	80	66	52	46	45	43
3	34	41	42	34	32	30	37	55	64	67	61	56	70	84	88	78	66	80	86	76	46	36	36	36
4	34		34	34	30	30	61	59	69	67	72	78	67	71	70	75	65	75	78	64	46	42	42	34
5	34	34	34	34	34	30	35		66	72	69	61	69	70	78	86	77	77	70	53	46	44	44	37
6	34	32	34	34	28	34	45	54	68	76	75	66	90	108	96	74	68	74	67	50	36	32	31	30
7	32	32	31	34	30	31	37	52	64	82	62	71	92	90	80	70	71	78	78	54	50	A		26
8	26	29	30	31		28	34	54	64	84	81	71	78	90	91	81	63	70	80	53	34	34	35	34
9	32	31	28	32	31	29	41	59	52	62	64	69	72	66	80	73	67	64	68	67	54	45	43	40
10	34	34	26	32	32	36	38	54	62	71	68	66	71	81	85	75	78	83	83	83	43	34	28	28
11	A	A		34	31	34	40	59	72	70	63	80	95	88	90	81	71	67	67	50	50	46	37	
12	34	34	38	35		29	40	86	69	92	90	77	78	78	96	91	84	93	72	53	49		A	A
13	A	35	34	31			32	62	67	81	67	76	84	87	100	96	82	92	77	42	A	31	34	
14	36	34	32	69	34	32	32	54	71	77	76	76	70	85	92	73	66	66	71	42		37	40	41
15	34	36	34	36	37	30	30	54	72	71	93	64	86	110	92	80	72	77	63		A	34		31
16		34	34	48			28		66	74	72	67	72	82	96	81	75	62	58	54	40	42	36	36
17	34	36	34	34	44		30	63	60	72	88	78	77	80	86	N	96	84	64	42		A	38	
18	40	42	34	34	37	32	32	53	78	86	82	71	72	84	89	95	91	85	76	52	45	40	38	40
19	37	36	36	40	47		26	56	74	78	80	70	77	92	116	108	88	79	67	54	36	30		A
20	A	34	30	32	32	26	34	64	71	75	81	78	87	96	91	80	76	67	64	55	47	44	31	
21	34	38	37	37	38		30		68	84	96	97	98	96		108	90	86	52	44	37	32	30	28
22	A	34	30	36	41			51	62	74	88	90	81	95	58		78	65	52	43	37	34	A	
23	A	34	37	36			26	54	66	76	81	91	75	83	96	95	75	67	55	51		29		37
24	36	37	30	34	36	26	26	52	73	75	92	89	72	67	80	84	90	82	55	A	34	34	A	36
25	A	37	34	36	38	28	32		68	71	94	90	87	94	114	89	80	70	54			34	A	32
26	37	37	40	40	37	28	29	61	78	70	87	78	80	76	90	82	76	70	55			32	A	
27			34	37	40			54	64	70	77	77	72	87		97	88	70	45	29	34	32	34	
28	34	34	32	34	36		28	53	67	78	71	69	67	72	93	96	88	71	47		31	36	37	34
29	30	31	28		34			54	65	60	66	68	70	76	91	84	67	67	49			36	34	
30		32	31	32	38			54	66	62	75	91	82	72	78	99	78	70	51	A	34		28	26
31	28	28	A		30	31		55	65	62	64	75	75	67	83	90	66	53	54	34		30	30	32
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	21	28	29	29	25	19	26	27	31	31	31	31	31	31	28	29	31	31	31	24	22	26	21	21
MED	34	34	34	34	34	30	33	54	67	72	75	75	75	84	90	84	76	71	67	53	42	34	36	34
U Q	36	37	35	36	38	32	37	61	72	78	87	78	84	90	94	95	84	82	77	54	47	42	39	38
L Q	33	33	30	34	31	28	30	54	64	70	67	67	72	76	80	76	68	67	54	43	36	32	31	30

HOURLY VALUES OF fEs AT Yamagawa

OCT. 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	28	29	28	G	G	G	G	34	G	44	52	G	42	G	G	G	G	36	33	24	G	33	32	30
2	25	G	G	G	G		27	33	41	42	43	45	47	45		48	40	44	49	59	30	G	G	G
3	G	G	G	G	G	G	G	32	G	G	46	54	52	47	44	44	40	30	28	27	27	G	27	26
4	G		G	G	G	G	G	35	G	G	G	G	G	42	G	G	42	32	G	G	G	G	G	G
5	G	G	G	G	G	G	G	30	38	46	49	47	44	47	44	53	43	33	30	44	G	25	29	29
6	G	25	G	G	G	G	G	31	G	38	46	G		40	G	G	40	G	24	G	G	G	30	G
7	G	G	G	G	G	G	G	G	34	G	G	G	44	G	G	G	40	36	28	26	29	48	28	G
8	G	G	G	G	G	G	G	33	37	41	G	G	42	G	G	G	G	G	28	26	30	32	G	G
9	G	G	G	G	G	G	G	G	G	G	G	G	G	42	G	G	37	31	32	29	G	G	39	G
10	G	G	G	G	G	G	11		39	G	45	G	G	G	G	G	G	G	G	11	G	28	28	25
11	40	43	39	G	40	43	G	33	44	40	40	70	59	50	G	G	G	29	G	31	25	G	G	
12	G	G	24	31	33	24	G	38	45	G	G	G	G	41	G	G	G	G	G	11	G	29	48	40
13	44	G	G	25	G	G	G	30	40	G	47	G	G	G	G	40	36	G	32	29	48	28	26	36
14	G	G	G	G	G	G	G	G	G	42	G	G	G	59	51	64	41	78	37	28	43	32	G	G
15	G	G	G	G	G	G	G	28	36	42	G	G	G	G	44	G	38	33	G	34	50	34	40	32
16	35	24	G	G	G	G	G			38	G	42	56	40	48	44	57	59	58	60	G	G	G	G
17	26	26	G	G	G		G	48	G	G	G	42	G	G	G	G	G	29	27	26	35	43	28	33
18	26	G	G	G	G	G	G	G	36	46	51	75	50	54	49	G	40	28	G	51	59	G	G	26
19	G	G	G	G	G	11	G	28	34	G	G	G	G	44	G	G	40	G	G	G	G	G	39	48
20	48	26	G	23	25	G	G	32	42	41	45	G	G	G	G	G	35	28	G	G	26	27	G	
21	G	G	G	G	G	26	24	42	40	G	42	G	G	G	46	37	43	33	27	29	G	G	G	G
22	40	G	G	G	11			30	36	G	G	G	G	47	51		G	G	G	G	G	25	40	24
23	38	36	27	26	G		G	33	40	39	G	G	G	G	39	G	40	38	29	35	30	26	40	G
24	G	29	31	27	27	24	G		G	43	105	49	G	G	47	45	40	34	G	48	61	36	44	33
25	34	25	G	31	23	G	G	G	36	G	G	G	46	G	47	50	52	34	G	27		31	37	33
26	33	32	25	G	G	G	G	26	36	36	40	G	G	G	G	G	34	34	24	32	40	32	48	34
27	33	33	G	G	G	G	G	39	36	45	46	50	55	50		37	37	G	11	G	G	G	G	33
28	32	G	G	31	G		G		G	41	41	43	56	42	40	40	36	G	26	G	25	G	G	G
29	29	G	G	G	G		G	27	38	48	50	49	44	40	G	G	39	29	35	31	26	G	G	34
30	27	G	G	G	G		G	G	38	45	48	42	43	G	G	42	37	34	47	39	31	32	G	G
31	G	33	43	34	G	G		28	38	42	45	63	63	53	49	40	44	36	G	28	32	23	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	30	31	31	31	24	29	27	30	31	31	31	30	31	29	30	31	31	31	31	30	31	31	29
MED	25	G	G	G	G	G	G	30	36	39	41	G	22	40	G	G	39	31	26	28	26	25	27	25
U Q	33	26	G	23	G	G	G	33	39	42	46	47	47	47	46	42	40	34	32	34	32	32	39	33
L Q	G	G	G	G	G	G	G	26	G	G	G	G	G	G	G	G	34	G	G	11	G	G	G	G

HOURLY VALUES OF fmin AT Yamagawa

OCT. 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	14	14	15	15	15	16	15	17	14	17	16	20	35	50	20	18	14	14	15	15	15	14	17	14
2	14	14	14	15	16		15	14	14	20	18	18	21	21		18	17	14	14	14	14	15	14	14
3	17	15	14	16	15	15	14	16	15	15	21	23	17	22	18	15	16	14	14	14	14	15	14	15
4	14		15	14	16	15	15	14	14	14	16	17	21	20	21	26	16	14	15	15	15	15	15	15
5	15	15	15	14	15	15	14	14	14	14	15	20	20	21	18	15	16	14	14	14	14	14	14	14
6	14	14	15	15	16	15	15	14	14	14	17	16	18	18	18	14	14	14	15	14	15	14	14	15
7	15	15	14	14	14	15	14	14	14	14	15	15	22	20	20	17	14	14	14	14	14	14	14	15
8	15	14	15	15	15	14	14	14	14	15	18	17	17	20	16	15	14	15	14	15	14	14	15	15
9	16	15	14	15	15	14	14	17	14	14	15	17	15	14	16	17	14	14	14	14	15	14	14	14
10	14	15	15	15	15	15	14	17	14	14	15	15	16	21	20	14	14	14	15	14	15	14	14	15
11	15	14	14	15	14	14	15	14	14	17	14	18	17	17	18	17	14	14	15	14	14	14	15	
12	14	15	15	14	14	15	14	14	14	14	15	22	18	21	17	15	14	18	16	15	16	15	14	14
13	14	15	15	14	14	16	14	15	14	14	14	21	16	17	16	14	14	14	14	15	16	15	15	14
14	14	15	15	14	15	15	15	17	14	17	21	16	18	20	23	17	14	14	14	14	14	14	14	15
15	14	15	15	14	15	14	15	16	14	14	15	18	24	21	20	17	14	14	14	14	14	14	14	14
16	14	15	14	14	14	17	14		15	17	16	18	20	21	14	22	15	14	15	14	16	15	14	14
17	15	15	15	14	14		14	16	14	15	21	18	18	18	14	14	14	14	15	15	14	15	14	14
18	15	15	15	15	14	15	14	14	15	18	20	15	27	18	23	17	16	15	15	14	14	17	15	15
19	16	15	15	14	14	15	16	14	14	14	17	18	41	20	22	16	15	20	15	14	15	18	14	14
20	14	14	14	14	14	15	14	14	14	16	15	18	18	18	18	17	14	14	14	14	16	14	17	
21	15	15	16	14	18	15	15	14	14	16	17	16	17	17	14	14	14	14	15	14	15	16	16	17
22	14	16	15	14	14			14	14	15	15	18	18	18	17		15	20	15	15	15	14	14	14
23	17	14	14	14	16		15	14	14	14	16	14	14	15	14	14	14	15	14	14	14	15	14	15
24	15	15	14	15	15	15	14	14	14	14	14	17	21	22	18	18	14	14	16	14	14	14	14	14
25	14	15	15	14	14	15	15	18	14	14	14	18	20	15	14	14	14	14	15	15		14	14	16
26	14	14	14	15	15	14	15	15	14	14	16	18	20	15	18	17	15	14	15	14	14	14	14	15
27	14	14	14	14	16	15	16	14	14	17	18	18	20	17		16	14	16	15	18	14	15	15	14
28	14	14	14	14	14		15	18	14	16	14	21	17	18	17	17	14	14	15	15	15	15	14	15
29	15	16	15	22	15		18	16	14	14	14	17	18	18	16	15	14	14	14	14	16	16	17	15
30	15	15	15	15	14		16	20	14	14	15	15	18	17	16	14	14	14	14	15	14	14	15	16
31	15	15	14	14	14	16		14	14	14	15	16	18	18	18	14	14	14	16	15	14	14	15	14
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	30	31	31	31	24	29	30	31	31	31	31	31	31	29	30	31	31	31	31	30	31	31	29
MED	14	15	15	14	15	15	15	14	14	14	15	18	18	18	18	16	14	14	15	14	14	14	14	15
U Q	15	15	15	15	15	15	15	16	14	16	17	18	21	21	20	17	15	14	15	15	15	15	15	15
L Q	14	14	14	14	14	15	14	14	14	14	15	16	17	17	16	14	14	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

OCT. 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				34				70	67	77	67	80	87	102	118	104	110	128	125	88	86	67		50
2		88	76	46	28		34	65	71	64	70	72	75	86	108	90	88	89	97	79	67	50	A	
3	A		52	30		30	30	57	67	64	91		71	78	91	98	88	105	114	86	66		37	34
4		31				30	32	58	60	67	75	77	71	70	76	78	77	88	100	74	49	44	35	
5					31		30	60	65	73	81	63	70	82	87	92	97	97	85	67	A	A	50	40
6							34	56	71	72	80	87	104	122	137	127	97	90	78	48	36	30		30
7		31		30	30		31	58	73	77	84	90	104	110	116	90	80	87	95	76	51			
8			31	36	28			53	71	76	92	90	87	98	117	113	87	82	76	58				
9		30	29				32	58	52	58	75	84	84	77	87	87	77	84	88	88	77		36	30
10				29				51	60	68	71	77	75	97	116	109	110	127	131		77	41	43	
11			28	30	32		30	60	67	67	67	81	102	108	152	139	126	98	88	67	54	53	34	32
12		34			29		32	73	66	84	112	95	86	76	98	111	100	120	102	34		36		34
13		A	36	A	A	A	A	58	67	78	77	78	82	81	110	114	108	108	102	49	A		28	
14				32				54	70	77	88	90	84	87	108	98	87	88	87	53	43	44	36	40
15				34	30			56	64	67	77	96	88	108	124	111	112	82	63	53			A	
16	32	34		42		A		52	67	84	80	73	83	87	108	128	127	100	88	77	A		59	
17		41			40		26	54	63	70	114	96	85	88	103	107	117	104	80	50	52	52	50	49
18	47	47	38	32	39			57	82	81	100	84	80	88	101	112	106	105	88	65	54			52
19	32	34		35	38			56	72	81	84	97	87	108	148		157	128	88	83	74	52	43	42
20	A	41						60	72	72	78	102	86	90	107	110	89	74	78	78	60	43	43	
21	30		42					54	82	78	92	110	110	131	145	152		137	110	77	52	53	50	43
22	43		32	39				51	66	72	90	120	96	110	126	135	127	101	64	46		53	44	
23	34		34	30				51	71	71	83	101	93	90	114	116	102	72	63	54		A	43	34
24			34	40				57		84	100	81	82	76	100	102	100	80	64	A	A		28	34
25	32		A			28	28	57	63	72	86	111	108	142		141	128	101	64	52	46	A	44	44
26	A	A						58	81	68	81	97	113	90	97	97	88	82	A	A	A	A	A	
27				34				47	56	80	75	100	102	132	148	146	137	128	93	43		43		38
28		32		44	38			54	67	71	77	77	77	102		142	139	117	88	72			53	50
29	42	35	37			34	30	54	66	65	66	79	75	88	105	98	83	80	62	34	31		40	31
30		30		32	30			48	66	66	76	88	86	89	102	128	138		84	71	61	47	37	
31				29				47	67	69	70	77	84	78	96	100	90	63	54	44				
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	8	13	12	19	12	4	12	31	30	31	31	30	31	31	29	30	30	30	30	28	18	15	20	18
MED	33	34	35	34	30	30	30	56	67	72	80	88	86	90	108	110	101	98	88	66	54	47	43	39
UQ	42	41	40	39	38	32	32	58	71	78	90	97	96	108	121	128	126	108	97	77	67	53	47	44
LQ	32	31	31	30	29	29	30	53	65	67	75	78	80	82	99	98	88	82	76	49	49	43	36	34

HOURLY VALUES OF fEs AT Okinawa

OCT. 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	29		G	G				G	G	G	G	G	G	G	G	G	G	32	G	G	G	G		G
2		G	G	G	G	G	27	40	G	G	49	48	G	G	G	G	G	32	G	26	G	28	45	
3	25		G	G		G	G	29	G	38	52	57	50	43	G	49	41	40	32	36	40	35	28	28
4		G				G	G	G	G	G	G	G	G	50	50	50	44	48	28	G	G	G	G	
5					G	G	G		G	G	G	48	50	51	50	G	39	40	37	43	58	48	37	27
6							G	G	G	G	G	G	G	G	G	G	G	34	G	G	G	G	G	G
7		G		G	G		G	G	G	G	G	G	G	G	G	G	G	34	35	36	G	36	27	
8			G	G	G			32	38	G	G	54	50	G	G	G	G	G	30	G		29		
9		G	G		G		G	G	G	G	G	G	G	G	G	52	49	35	G	G	11	28	G	G
10		26		G			G	G	G	G	G	G	G	G	G	G	G	G	G	G		G	G	G
11			G	G	G		G	G	G	G	G	G	G	G	G	G	42	G	G	24	G	G	G	G
12		G			G		G	30	G	39	G	42	G	G	G	39	G	G	G	G		G		G
13	34	54	29	40	38	38	26	G	G	G	G	G	G	G	48	G	G	35	37	50	39		G	
14	29	27	G	G	G			G	G	G	G	G	G	G	48	66	60	44	41	27	24	42	29	G
15				G	G	G		G	G	42	56	54	56	G	G	G	44	38	32	26		34	49	34
16	28	G		G		28		G	36	G	G	48	88	54	52	G	38	80	57	60	69	49	28	G
17		G			G		G	41	G	47	49	G	G	G	G	51	45	40	40	49	G	G	G	G
18	38	29	G	G	G			32	G	43	50	G	G	G	G	G	38	35	G	11	38	31	26	G
19	G	G		G	11			29	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
20	48	G		G			G	32	46	44	G	48	G	G	G	G	G	G	27	G	G	G	G	
21	G		G		G			34	35	42	42	41	G	G	G	G	G	G	G	G	G	28	G	G
22	G		G	G				29	38	G	G	G	G	55	50	46	G	G	11	G	G	G	G	G
23	G	G	G	G	26			34	39	G	G	49	43	49	G	G	G	G	G	G		34	G	29
24	28	28	G	36				G	G	36	46	51	57	G	G	G	G	42	59	70	35		G	43
25	G	28	46	24	29	G	G	G	G	G	G	49	G	G	G	G	51	G	G	G	26	47	29	34
26	33	40	30	G				G	50	G	G	G	G	55	80	59	43	29	54	40	28	32	29	G
27	G		29	32				36	37	66	G	47	49	52	G	G	36	G	11	G	G	G		29
28		G		G	G		G	G	G	G	G	G	G	G		G	40	34	27	37	39	32	G	G
29	G	G	G			G	G	30	38	44	48	52	50	G	G	G	G	G	G	G	G	G	G	G
30		G		G	G			G	G	50	G	51	G	46	50	G	46	G	36	29	28	G	G	G
31				G				G	37	45	46	48	49	49	43	38	39	G	G	28		28	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	16	20	17	23	18	9	16	30	31	31	31	31	31	31	30	31	31	31	31	31	25	29	27	24
MED	26	G	G	G	G	G	G	G	G	G	G	41	G	G	G	G	36	32	11	11	G	28	G	G
U Q	31	27	15	G	G	14	G	32	37	42	46	49	49	49	48	39	43	38	36	36	36	34	28	27
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

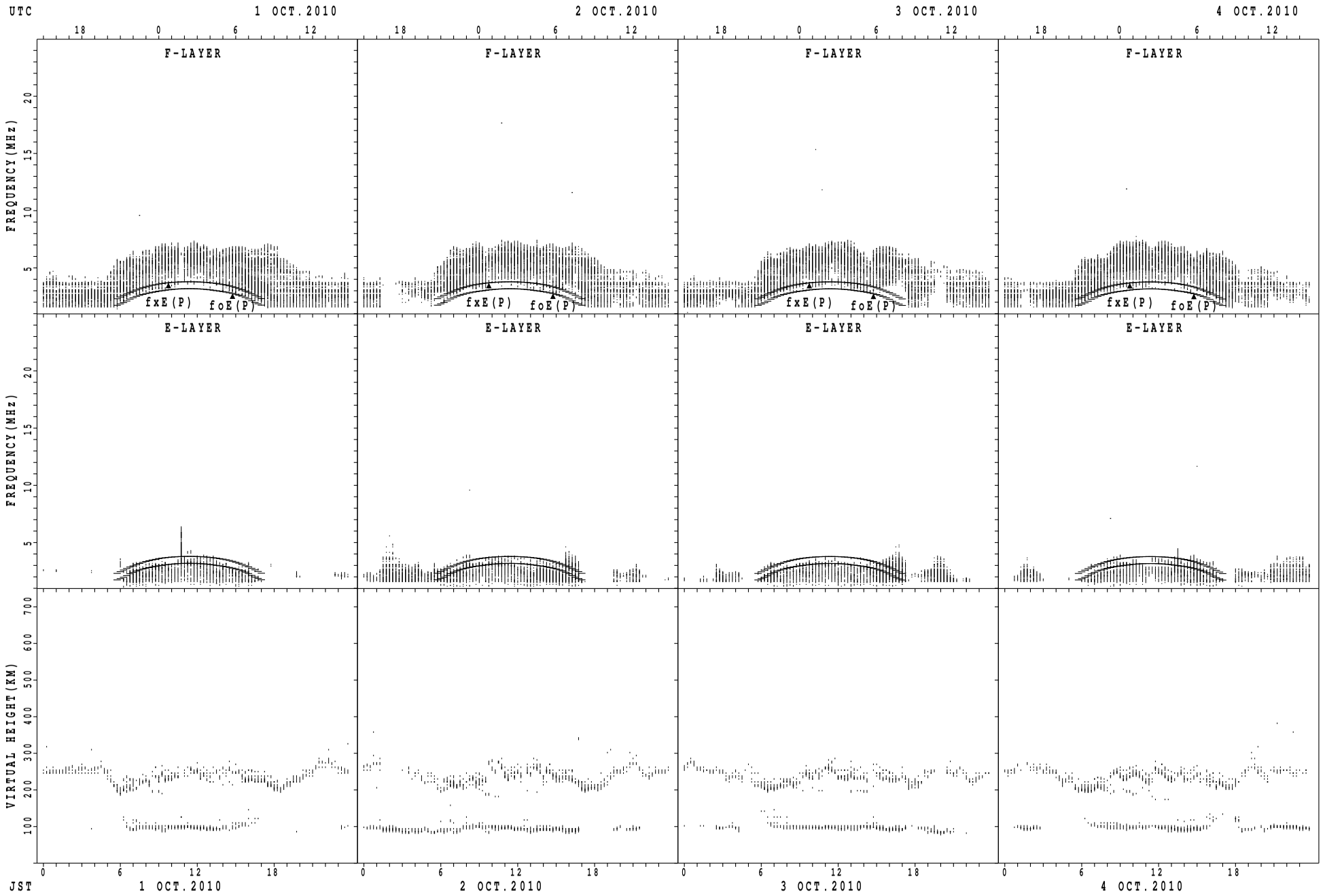
HOURLY VALUES OF fmin AT Okinawa

OCT. 2010

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

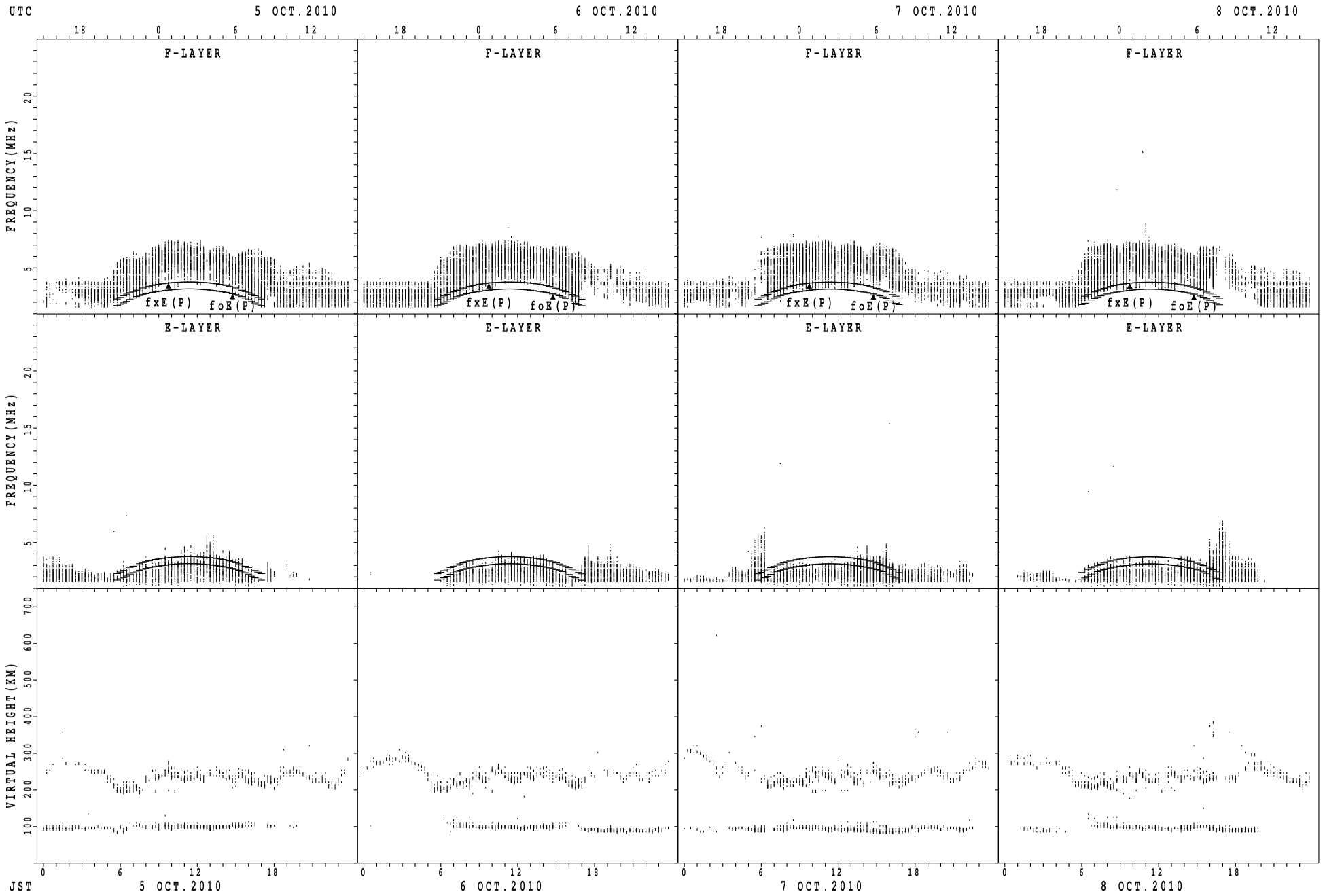
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	14		20	16				18	14	30	53	44	52	45	54	43	23	15	22	15	16	16		22
2		16	20	20	15	15	16	14	17	29	32	33	53	45	44	33	23	16	23	15	18	16	14	
3	15		15	16		15	15	16	24	29	33	34	36	34	55	29	26	14	14	15	14	14	15	15
4		18				15	17	22	15	30	46	43	44	35	34	30	27	21	15	15	15	18	27	
5					20	17	17	14	28	24	43	35	33	34	32	42	23	14	14	14	15	14	16	15
6							23	23	16	22	41	44	45	44	43	40	30	20	21	16	15	20	15	15
7		15		20	22		15	15	29	30	41	44	48	33	43	41	28	14	14	14	16	15	15	
8			15	16	14			15	21	39	42	27	27	26	24	41	36	15	14	14		15		
9		15	17		17		15	22	14	29	44	44	44	26	43	27	21	14	20	16	15	18	17	16
10		16		14			15	23	28	21	40	52	44	56	43	44	37	14	22	15	15	15	16	16
11			16	18	15		15	23	14	32	44	53	44	29	28	39	21	15	16	16	15	15	23	21
12		15			18		21	14	18	18	23	22	43	44	40	30	30	26	20	18		16		21
13	15	14	15	15	14	15	17	21	14	34	35	22	33	32	30	39	18	22	15	21	18		18	
14	16	14	22	16	16			23	18	33	29	44	44	50	32	29	16	16	14	14	17	15	17	28
15				15	15	20		16	18	29	32	33	35	44	43	30	22	14	15	15		14	14	15
16	15	18		15		17		23	17	21	32	34	33	35	32	44	15	14	16	16	15	15	15	26
17		23			22		17	18	29	30	32	45	44	48	42	28	14	14	14	15	24	23	16	17
18	14	15	20	18	16			15	28	28	30	32	43	45	40	42	22	20	15	15	15	17	17	27
19	27	22		18	15			15	29	34	43	47	32	46	43	40	29	14	16	14	15	16	17	17
20	15	18		23			20	16	23	27	42	30	32	42	43	40	21	15	14	15	20	30	15	
21	15		22		18			14	15	26	28	27	23	44	43	41	29	24	21	39	23	14	21	21
22	16		18	22				15	14	33	40	43	38	39	36	32	21	24	16	17	23	15	20	22
23	16	24	17	14	15			15	18	22	44	22	23	21	16	14	14	26	28	16		17	15	15
24	15	15	17	15				22	15	28	30	35	35	43	44	40	32	16	16	17	17		18	15
25	20	14	15	15	14	14	18	27	14	17	39	33	45	51	42	37	16	17	32	23	14	18	21	15
26	14	15	15	32				21	23	32	29	44	45	38	32	27	24	15	18	14	16	14	14	23
27	15		15	15				16	22	27	29	30	32	30	27	39	20	22	16	15	26	15		15
28		22		20	20		16	20	27	33	34	30	43	29		42	23	15	16	15	16	17	18	14
29	15	21	21			21	17	14	14	26	29	30	30	30	44	39	29	22	17	23	28	18	15	15
30		15		15	18			22	14	28	23	32	33	30	29	28	18	23	14	14	15	16	16	21
31				21				22	16	27	28	30	29	28	27	21	18	18	22	14		15	22	
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	16	20	17	23	18	9	16	31	31	31	31	31	31	31	30	31	31	31	31	31	26	29	27	24
MED	15	16	17	16	16	15	17	18	18	29	34	34	38	38	41	39	23	16	16	15	16	16	16	16
U Q	16	19	20	20	18	18	17	22	24	32	42	44	44	45	43	41	29	22	21	16	18	17	18	21
L Q	15	15	15	15	15	15	15	15	14	26	29	30	32	30	32	29	18	14	14	14	15	15	15	15

SUMMARY PLOTS AT Wakkanai



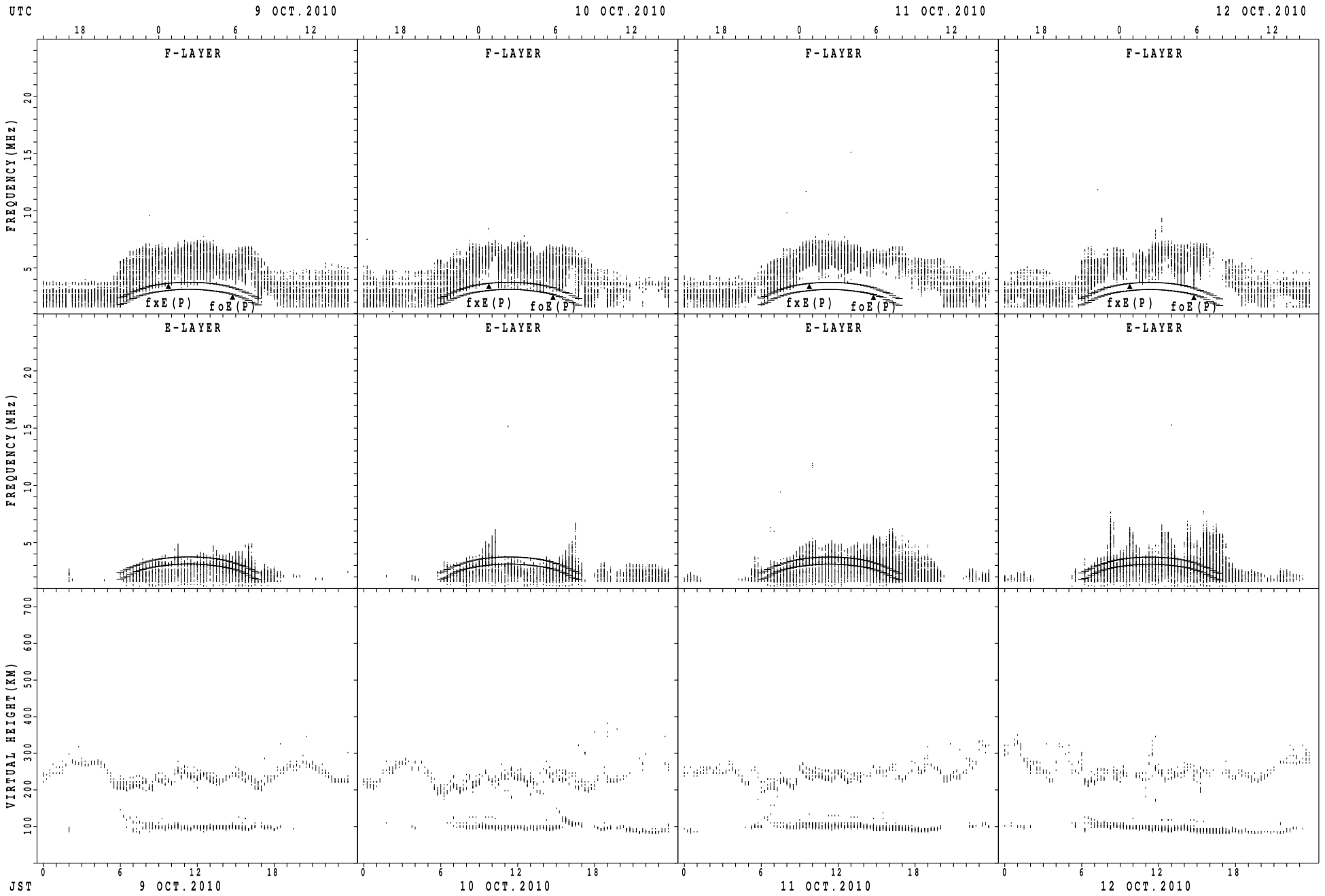
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



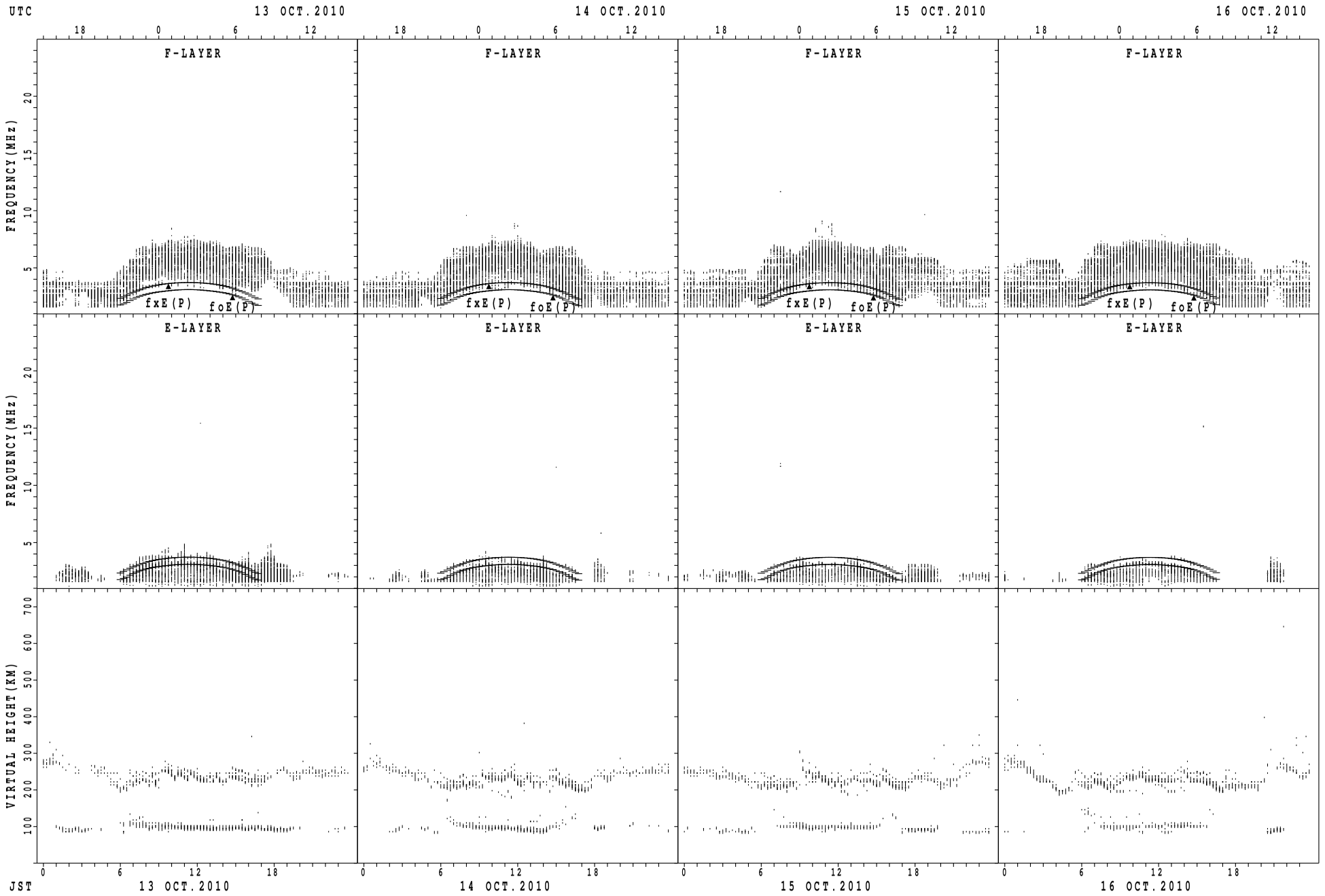
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



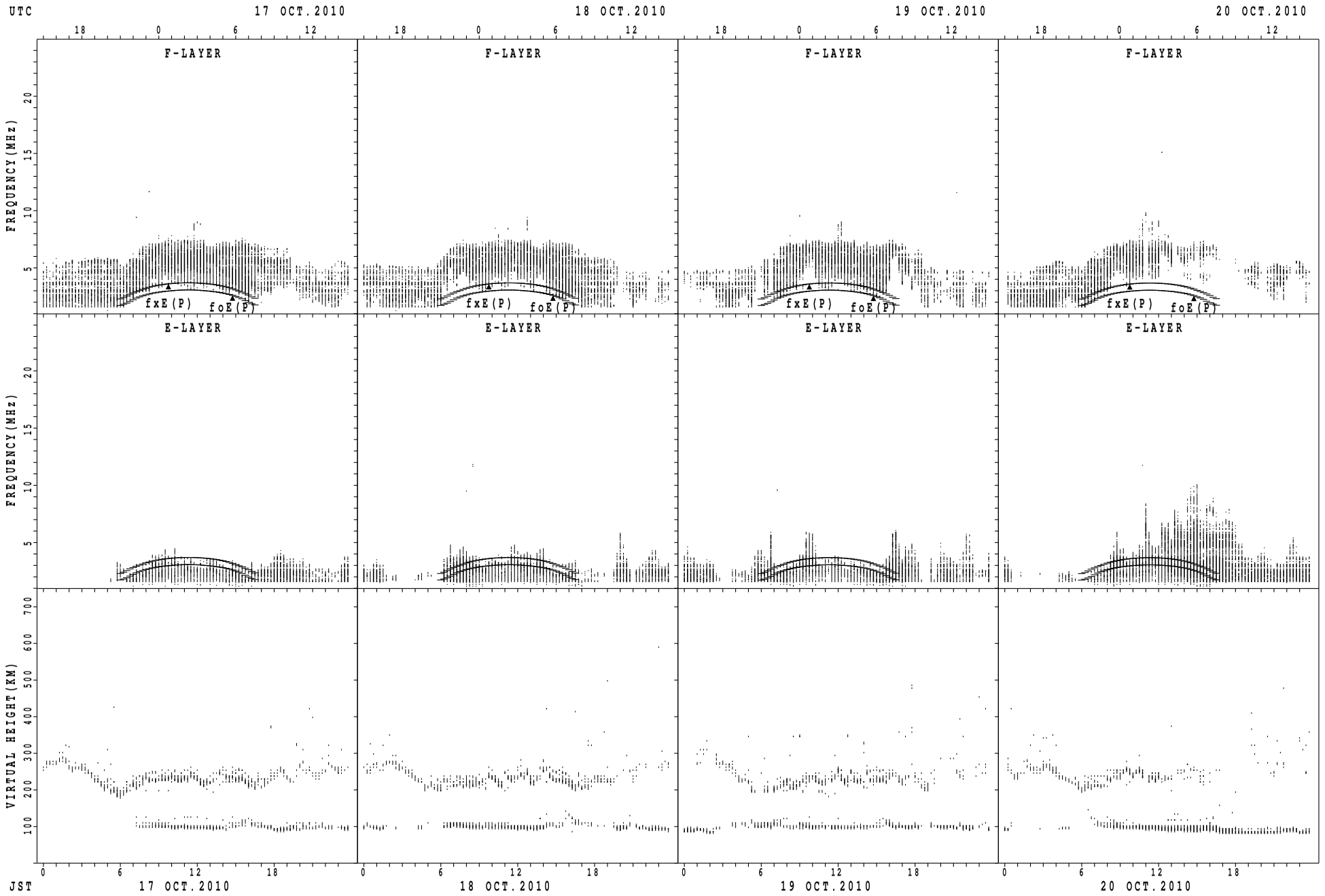
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



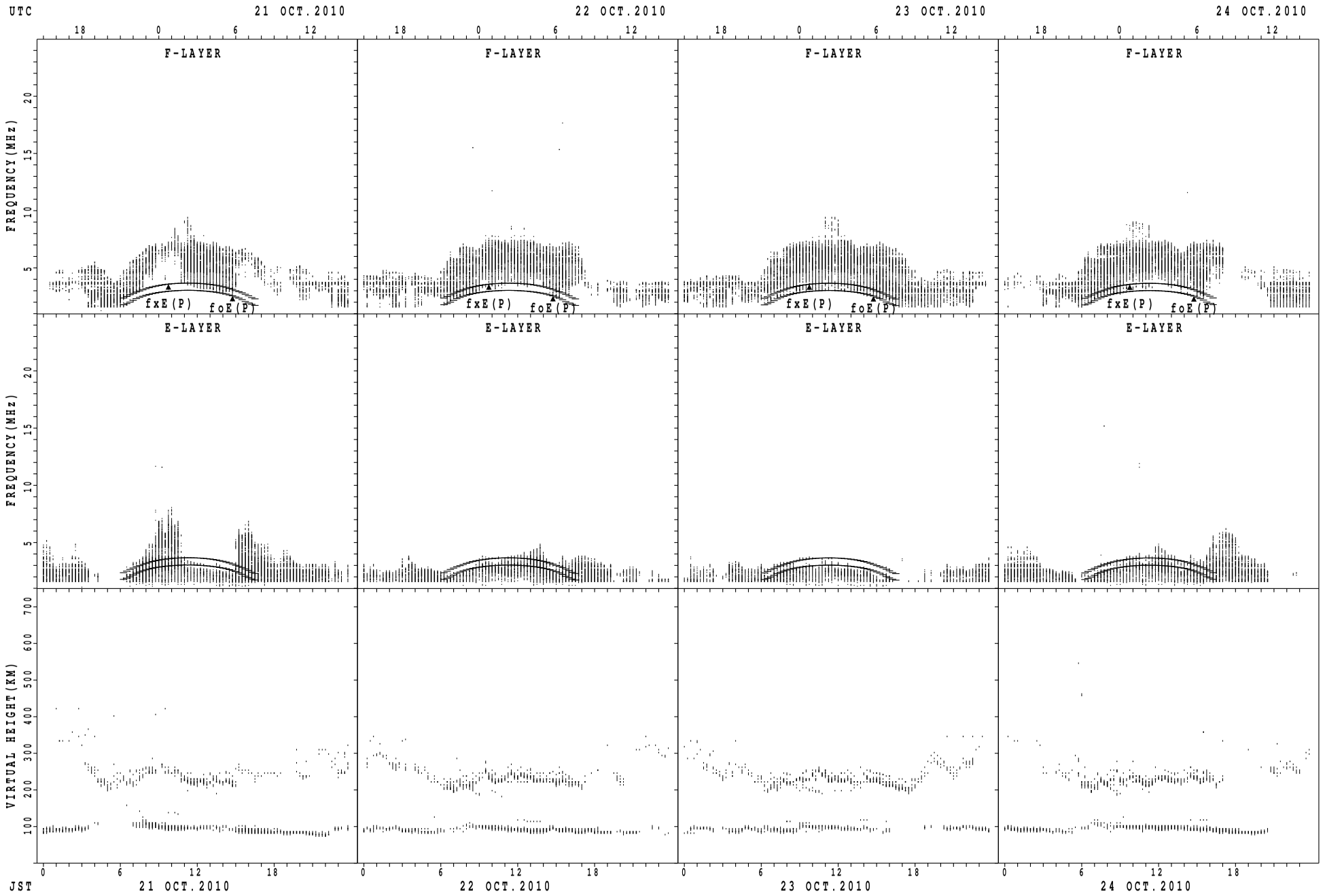
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



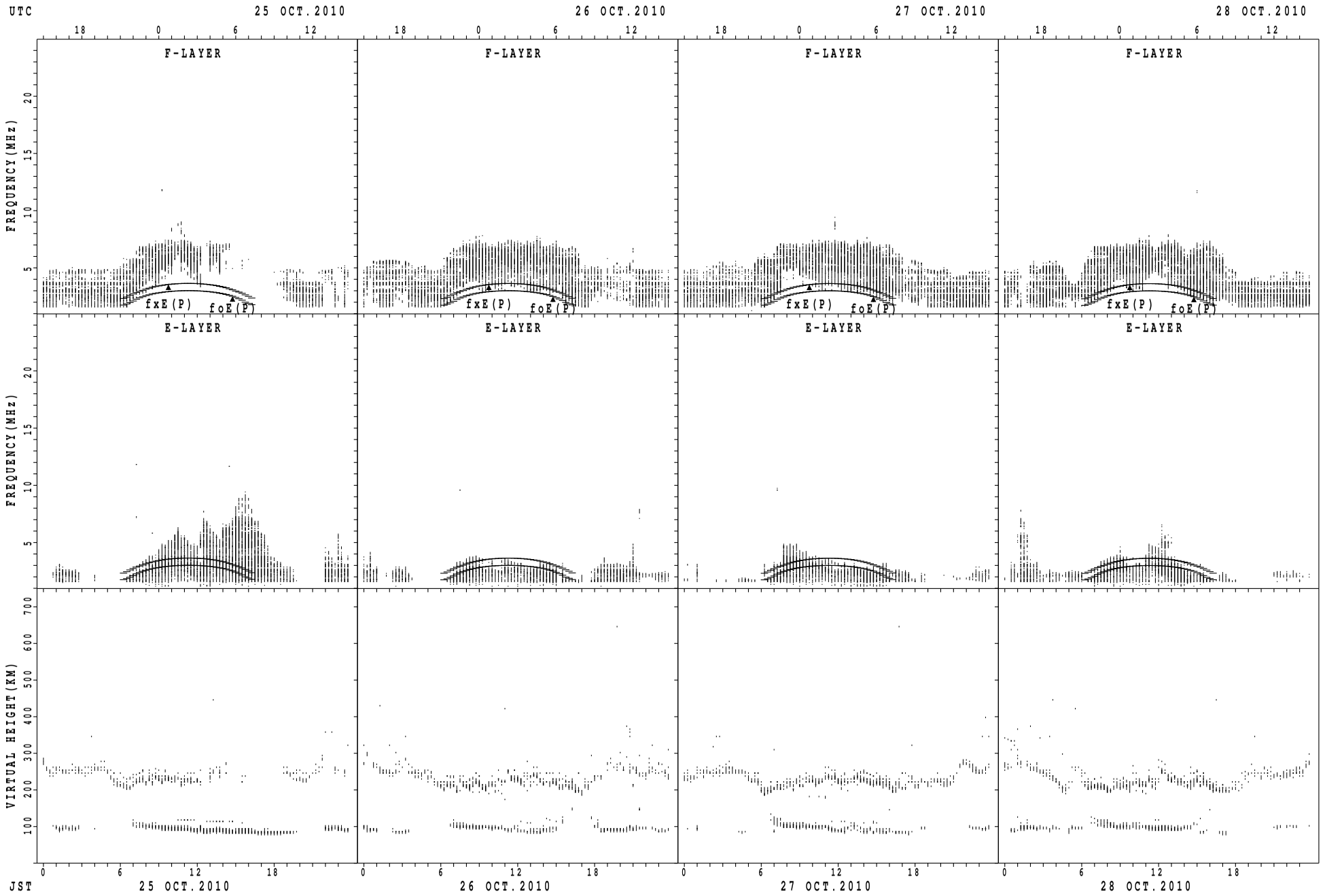
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



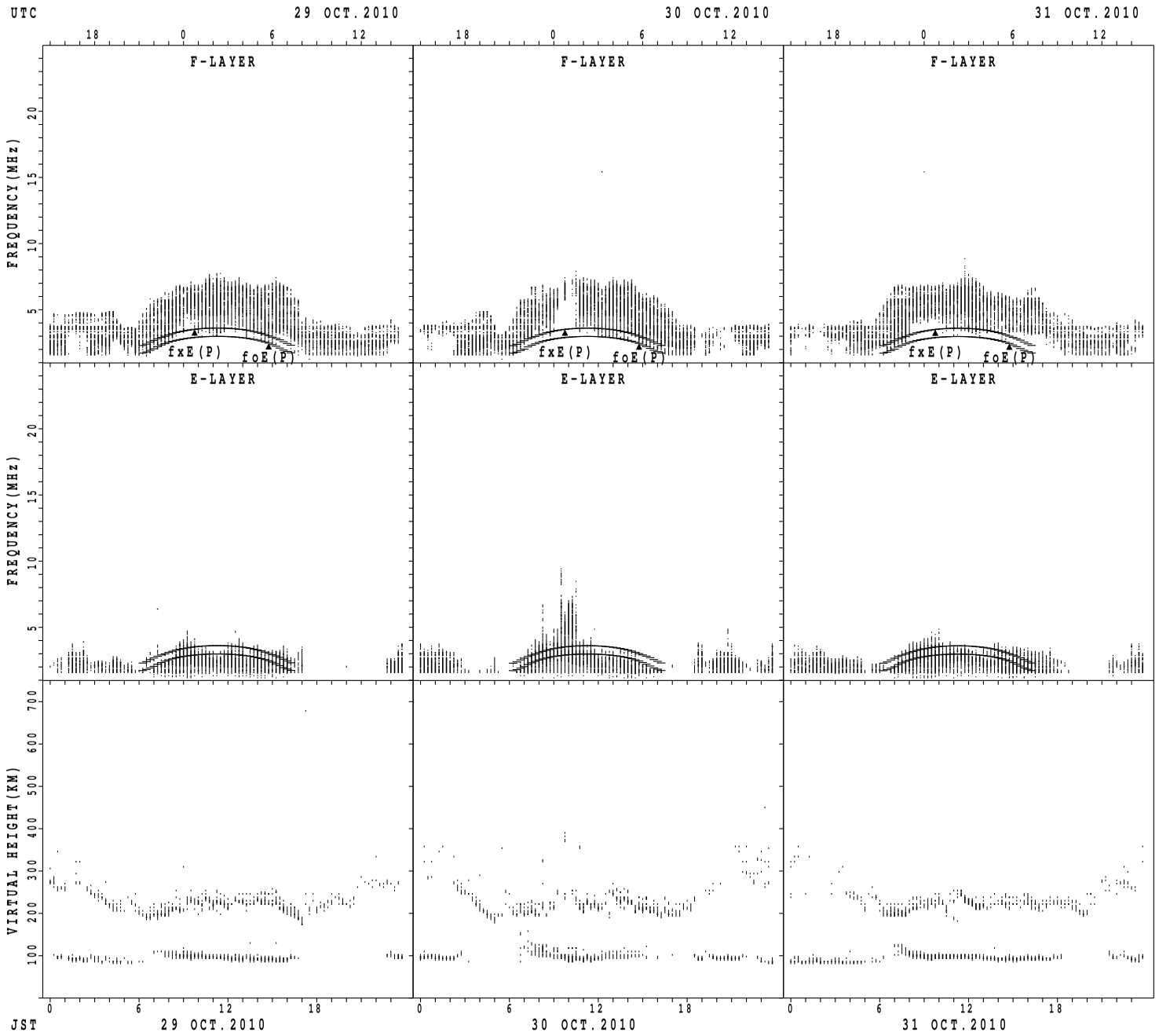
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



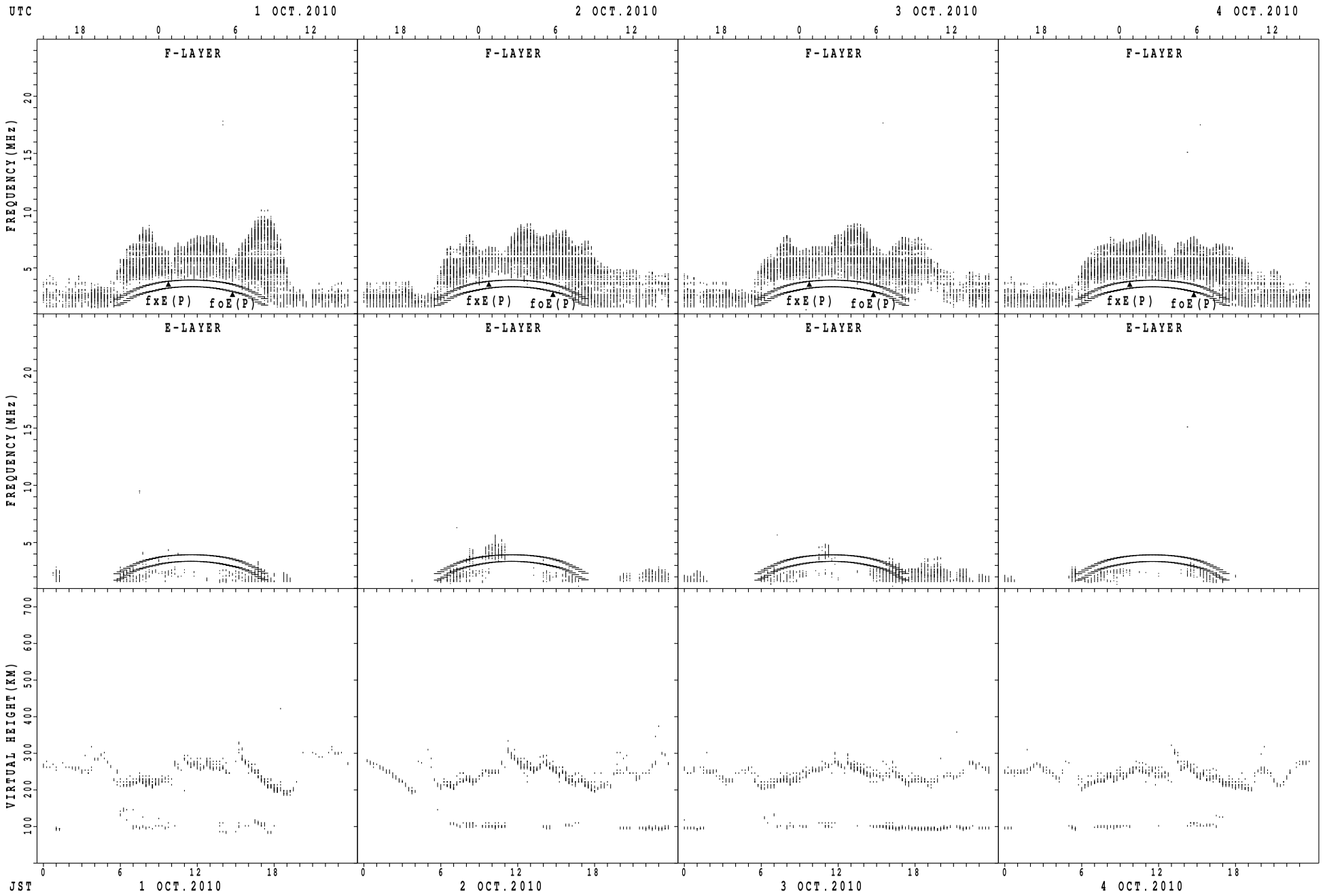
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



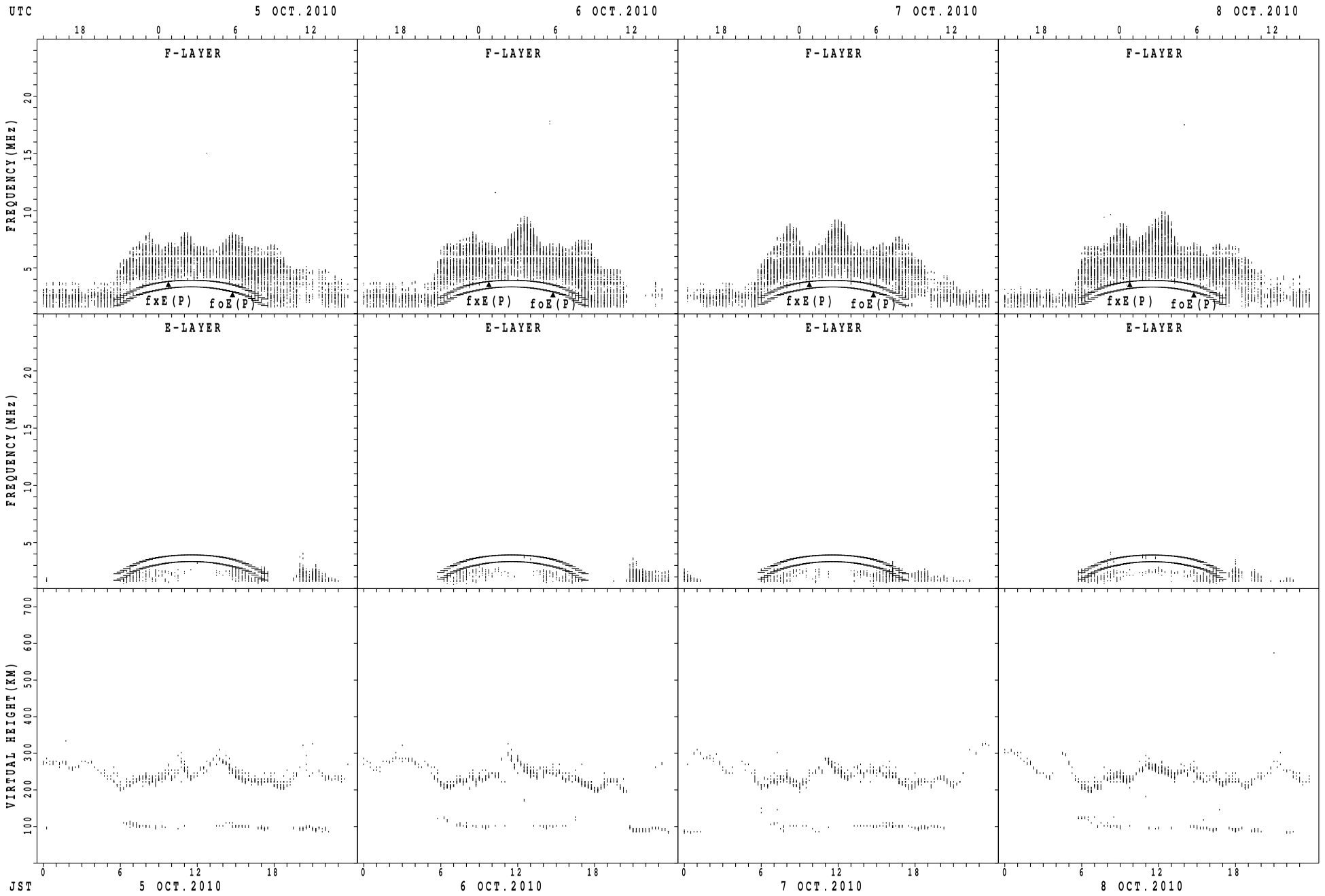
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



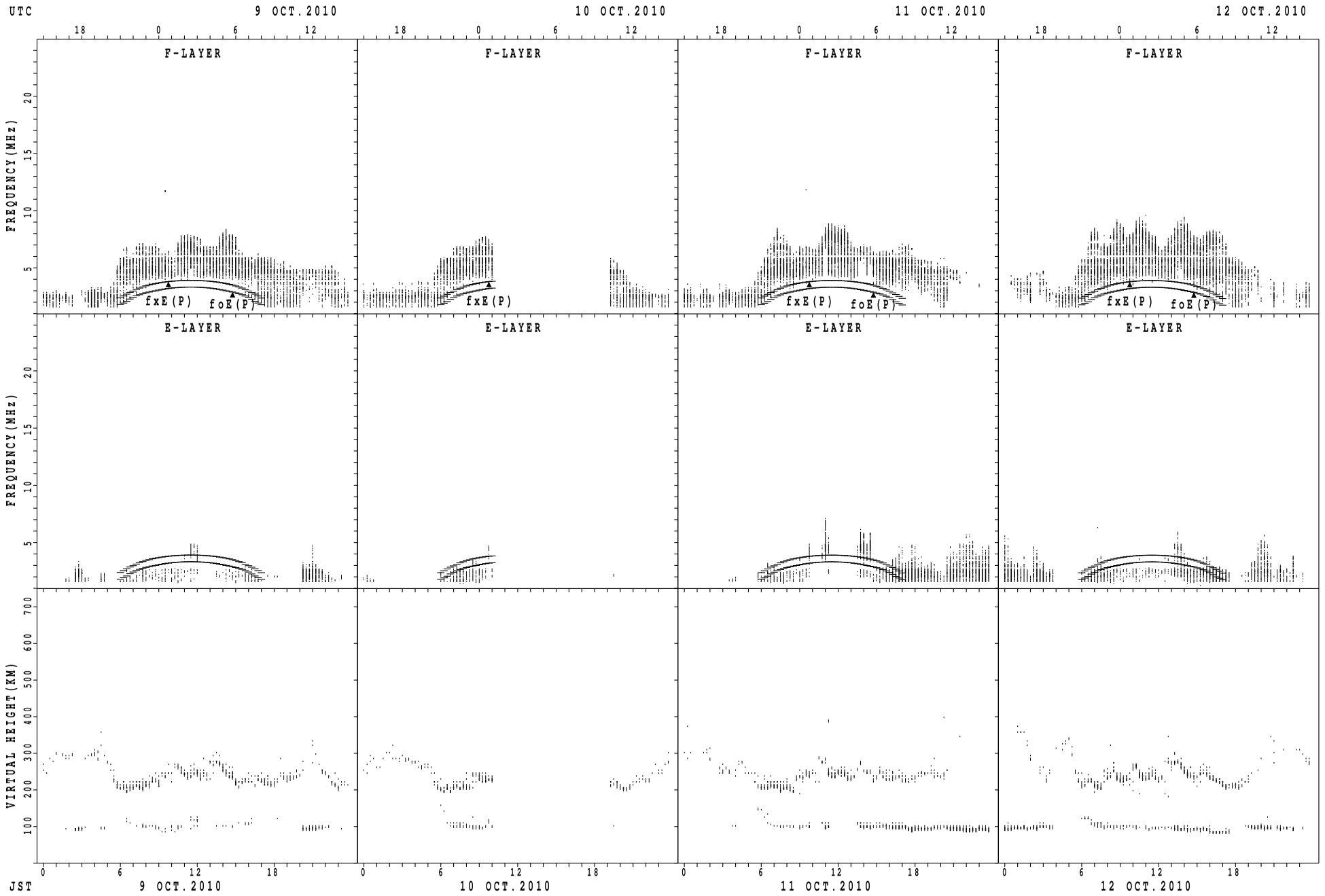
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



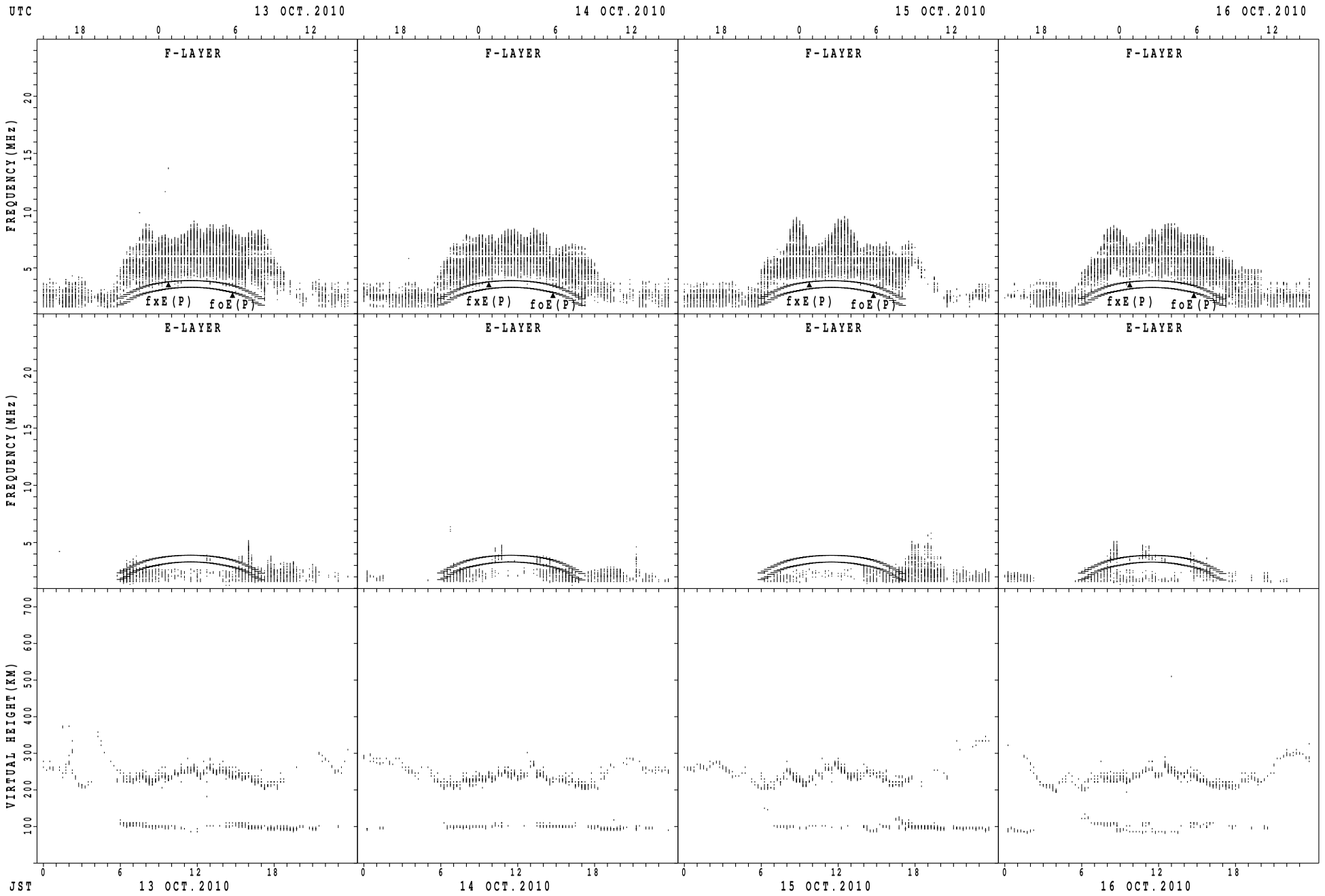
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



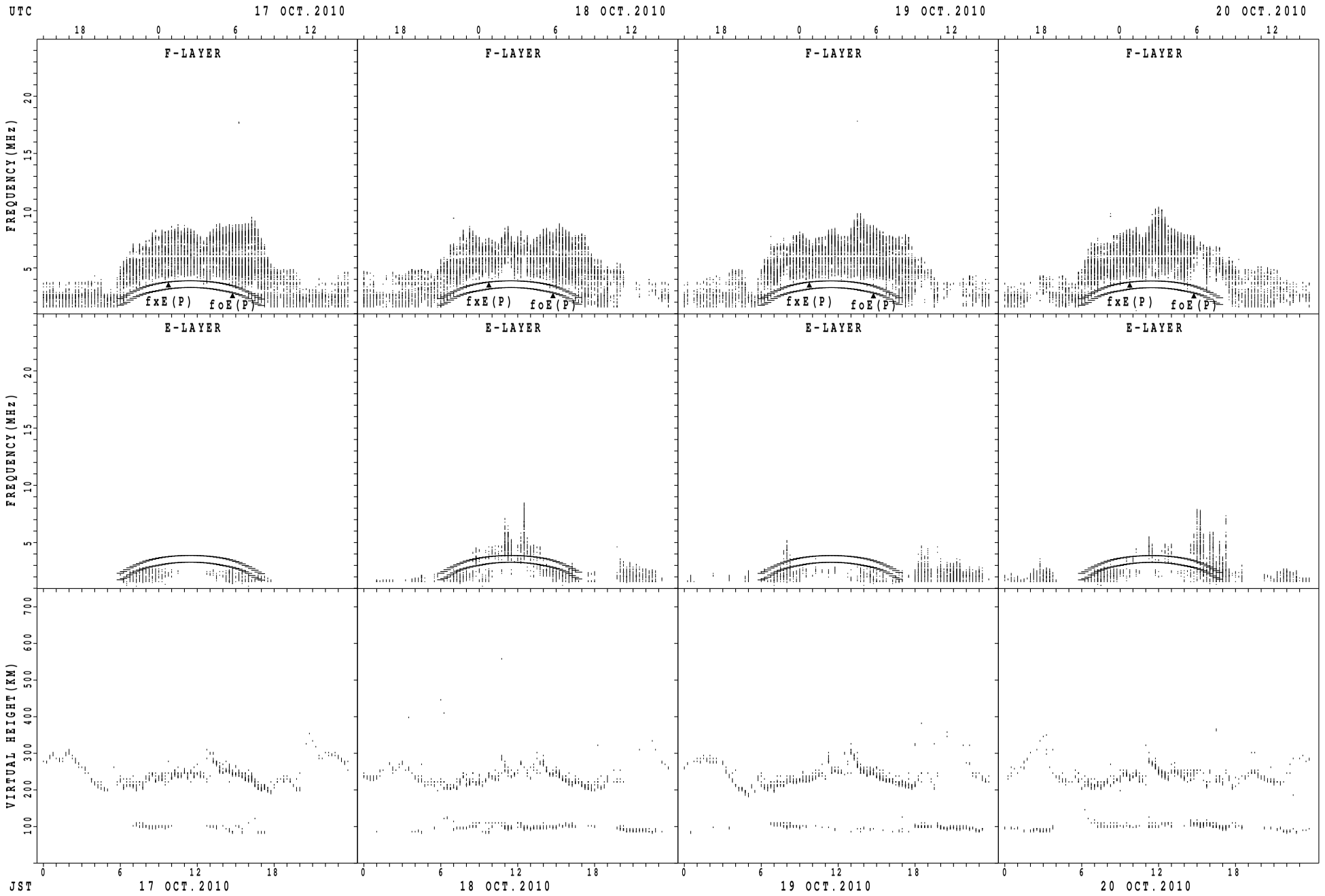
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



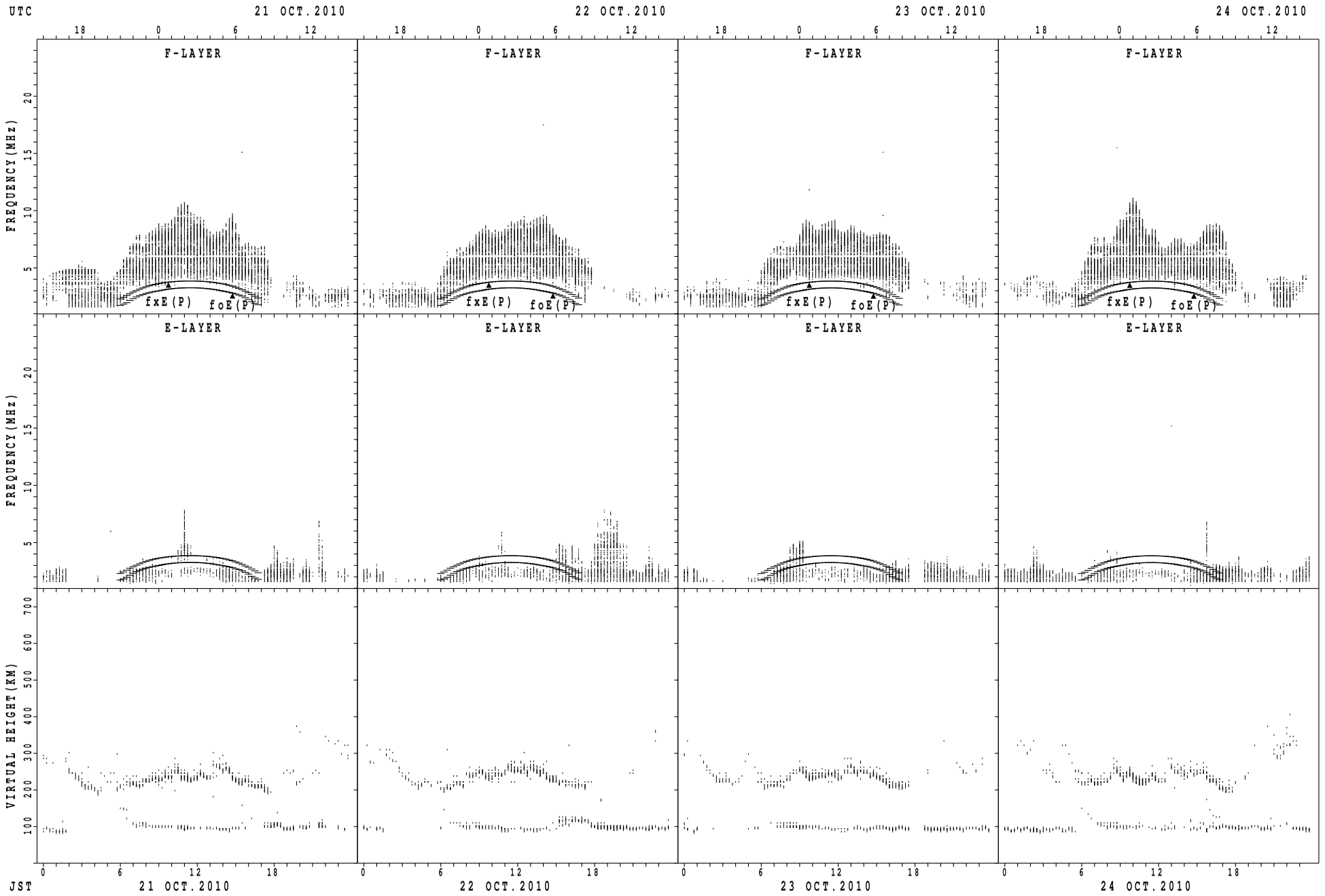
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



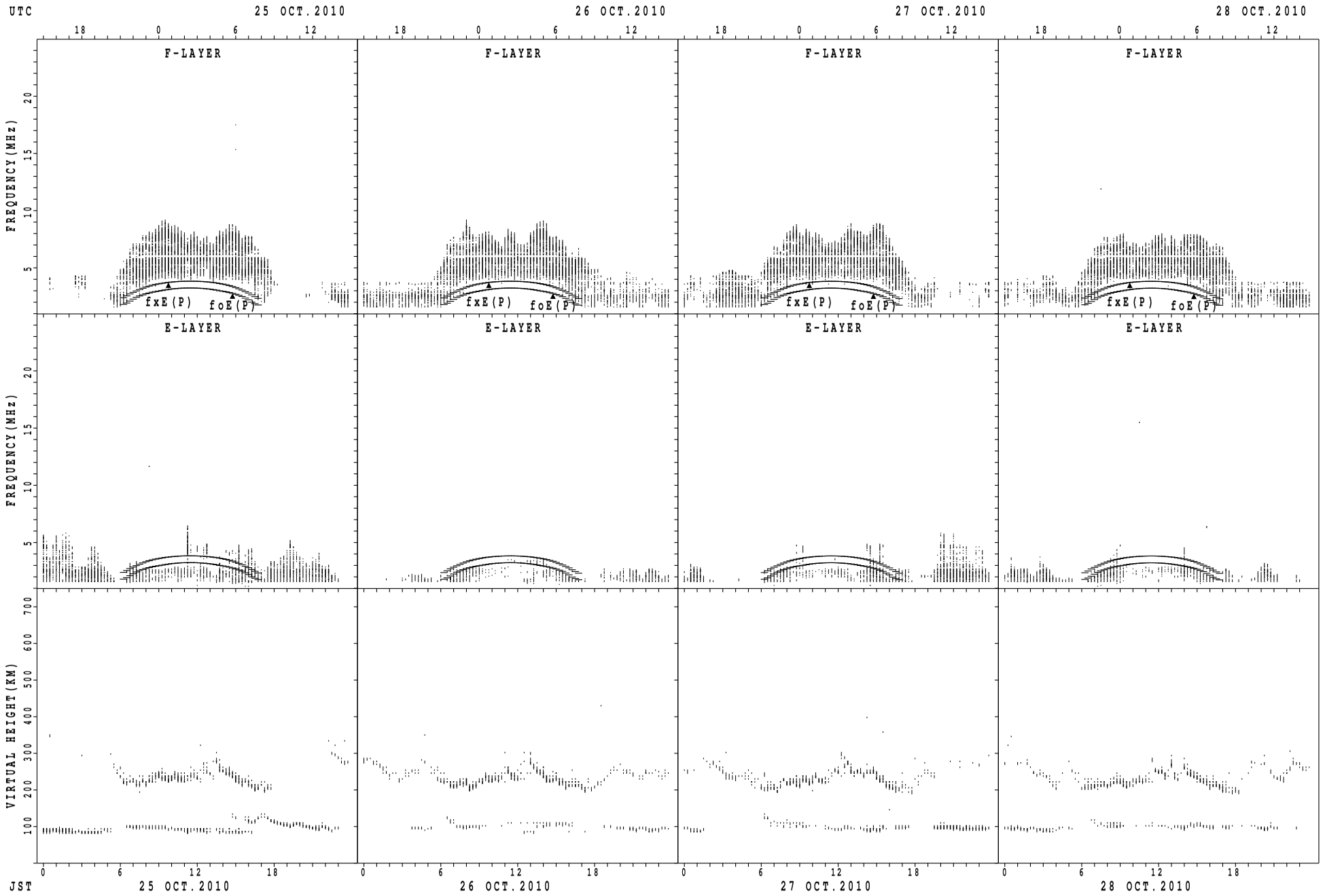
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



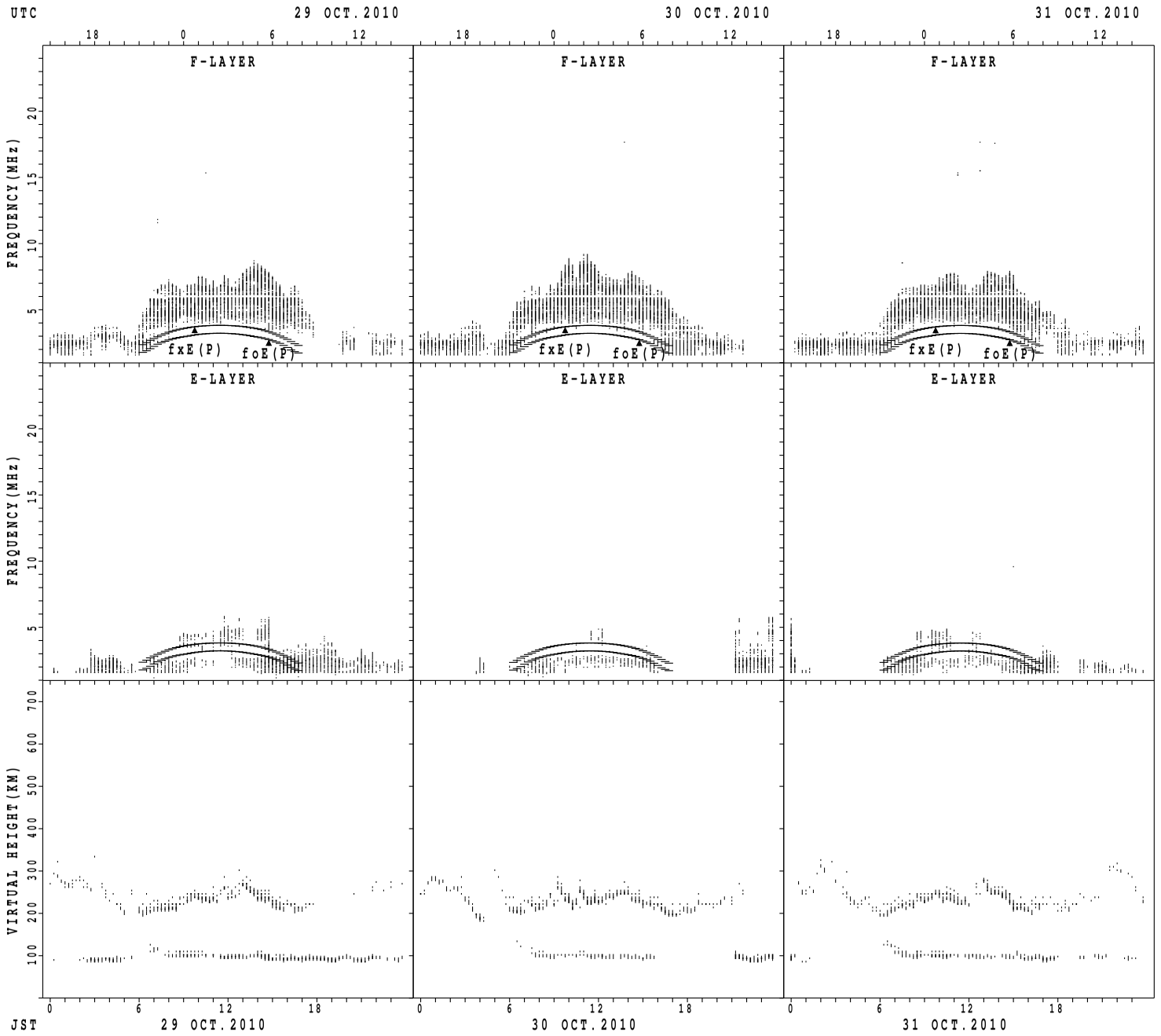
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



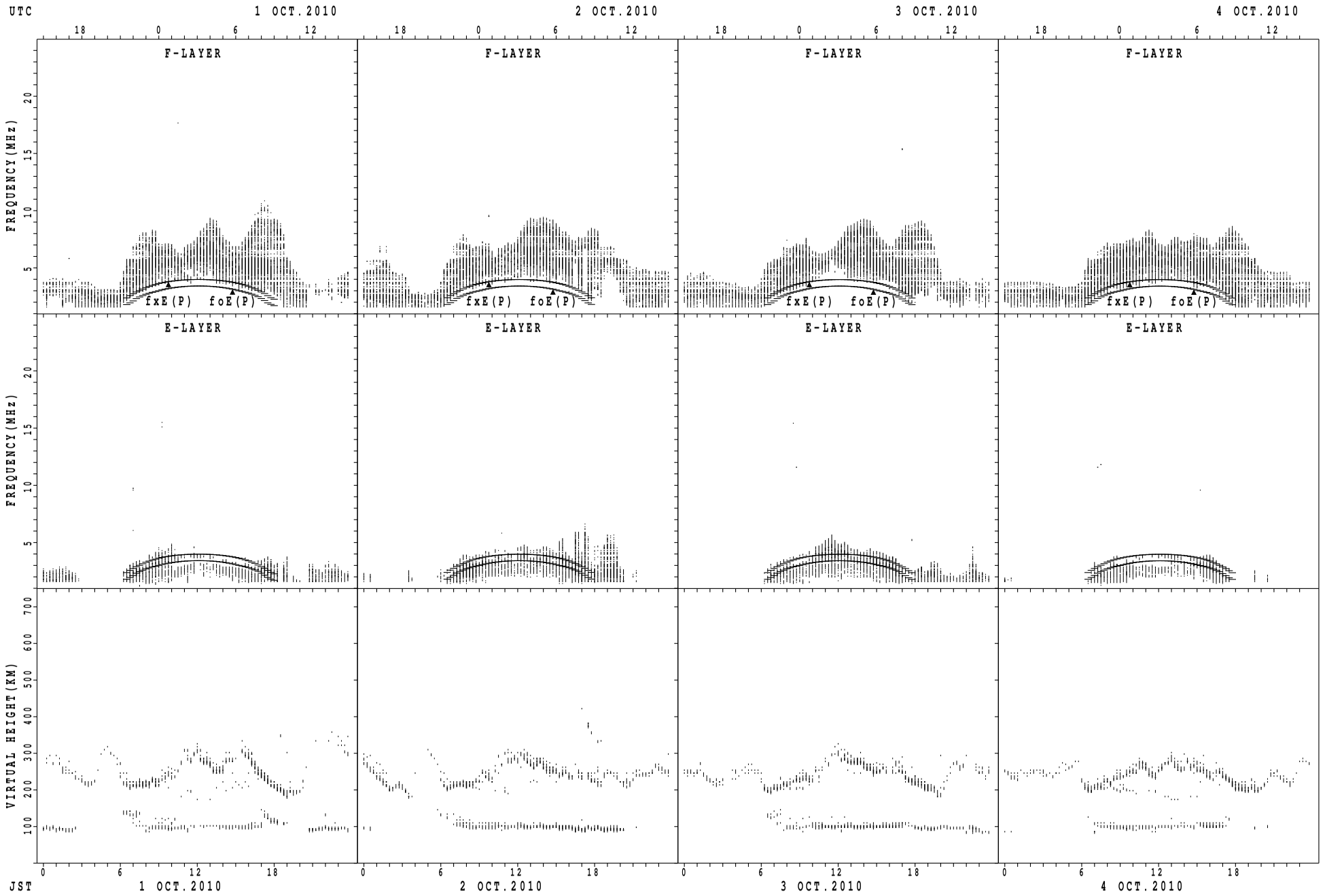
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



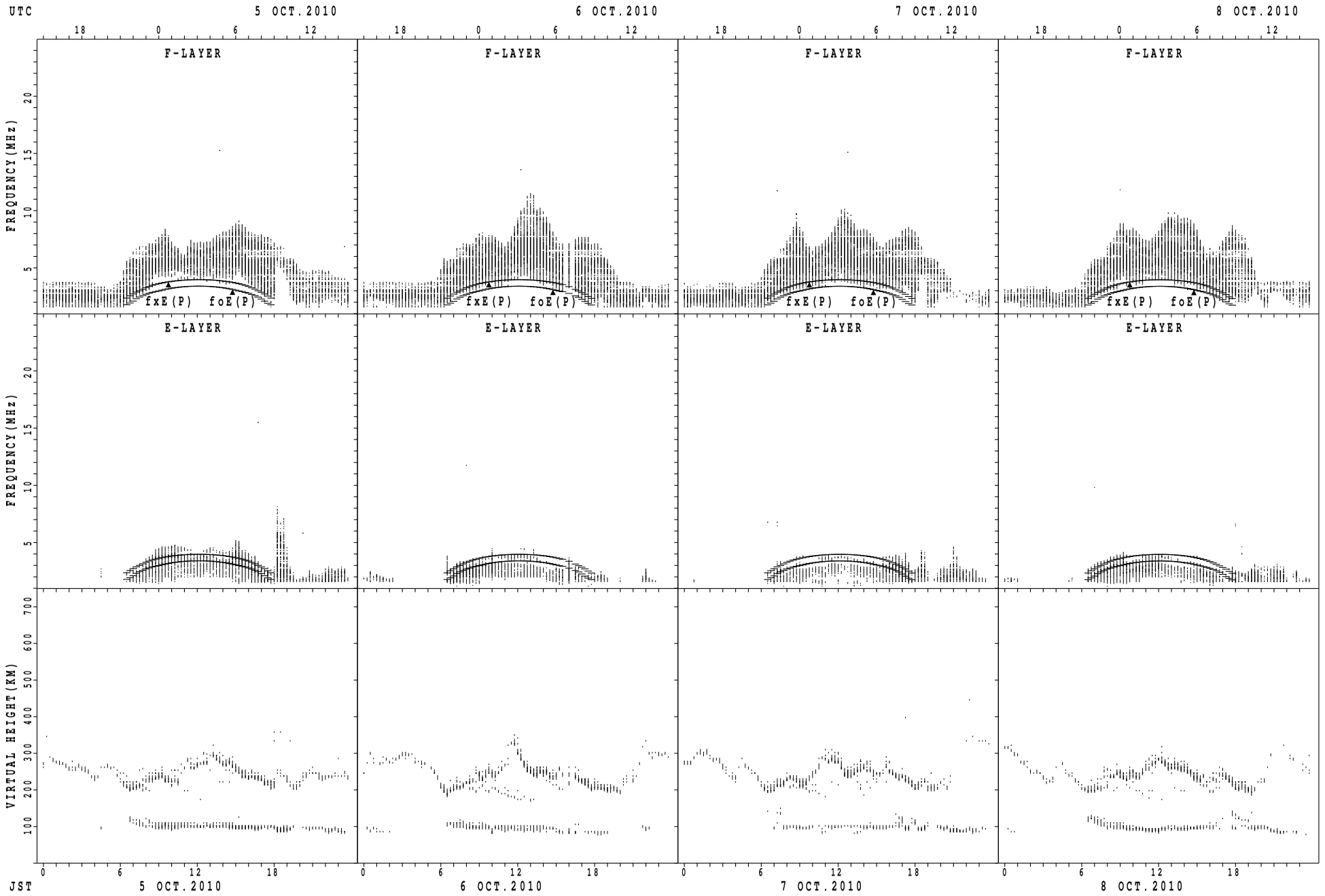
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



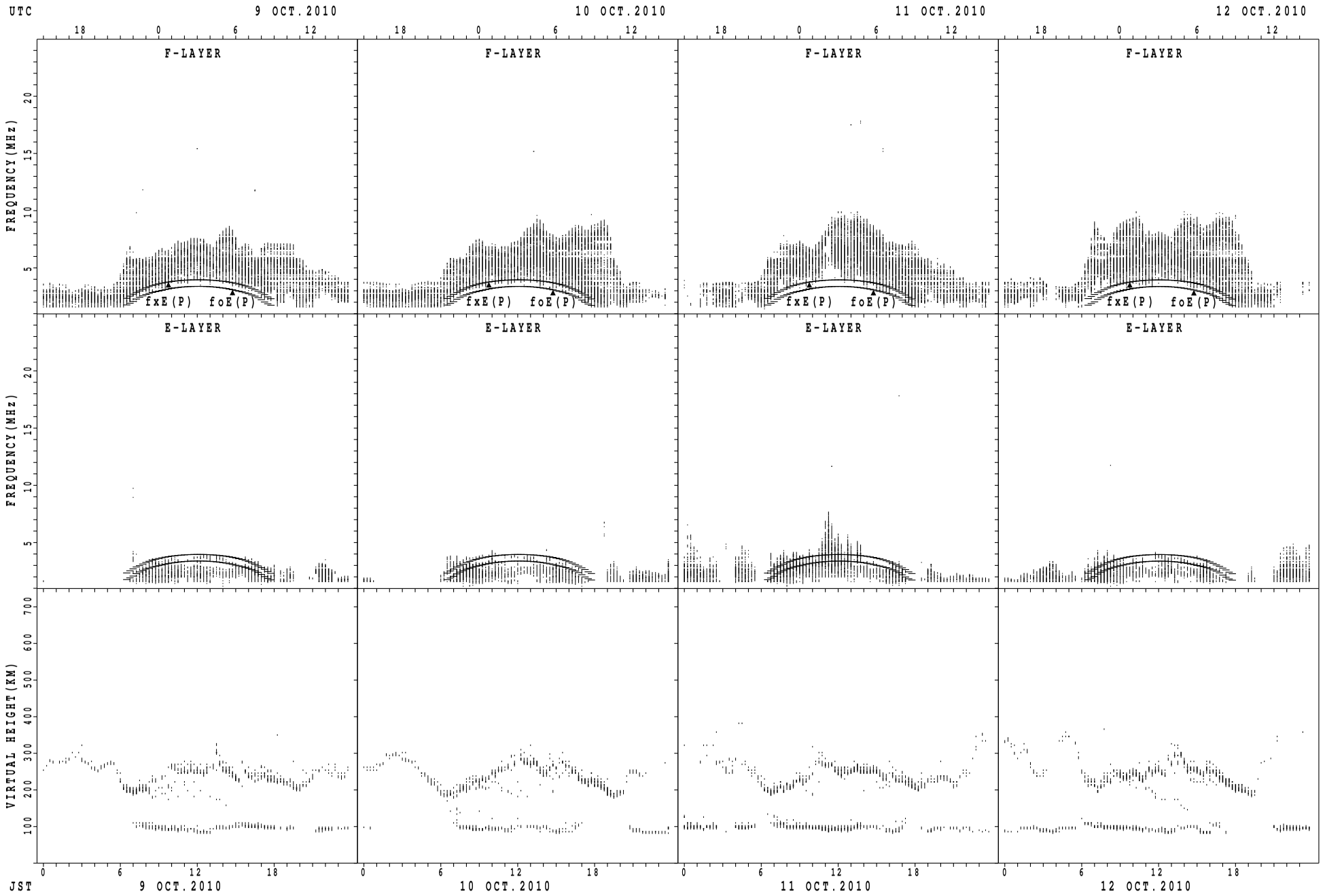
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



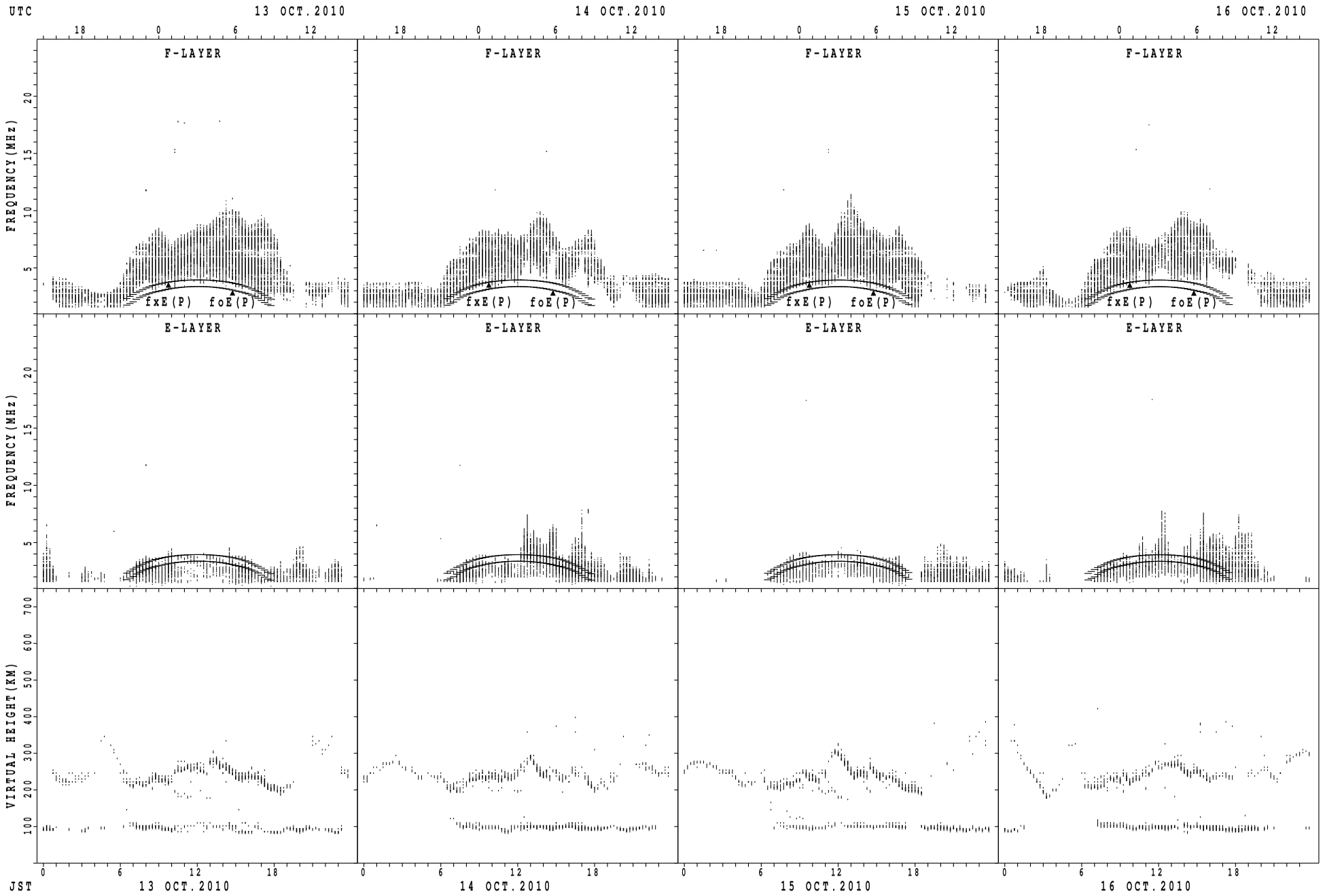
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



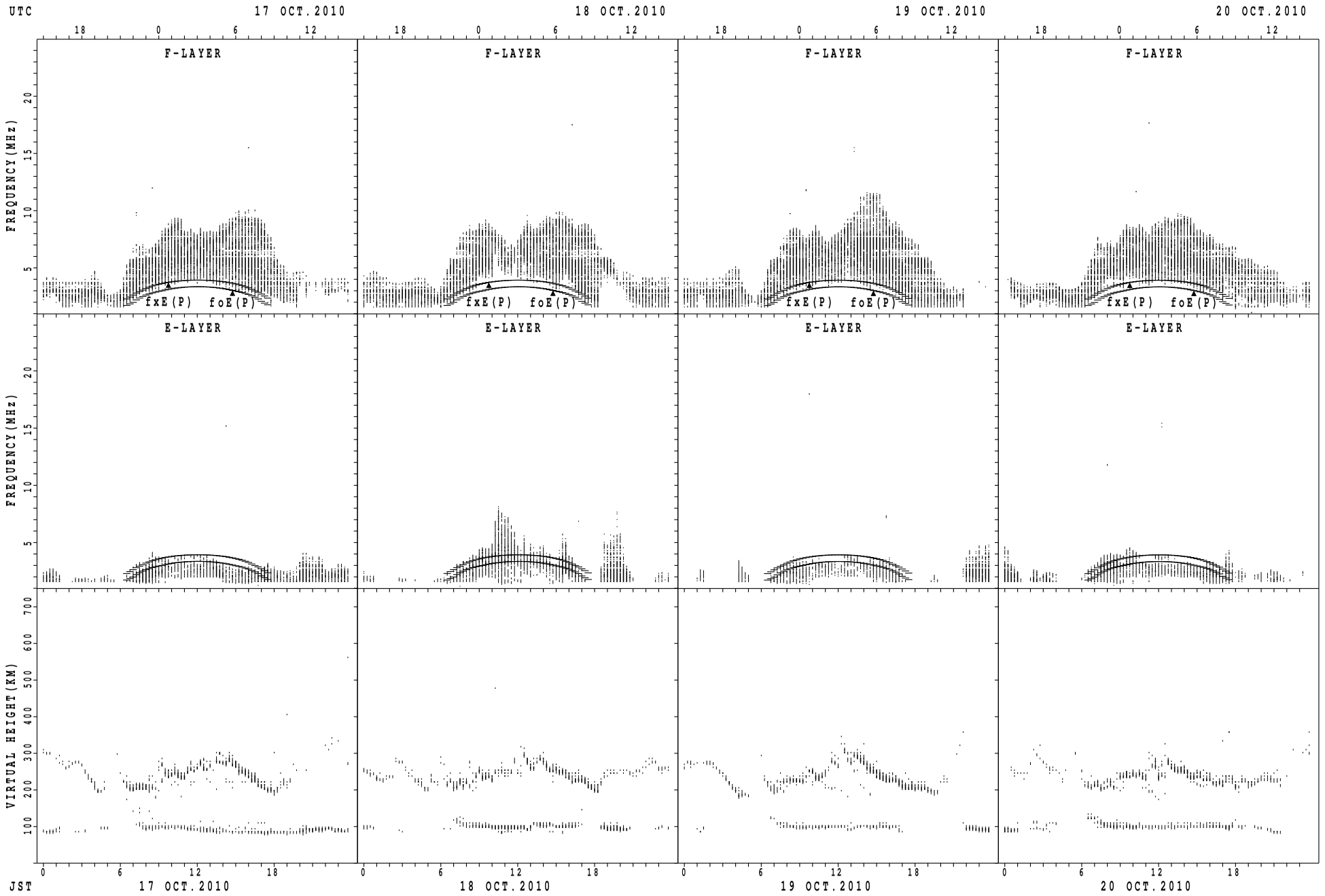
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



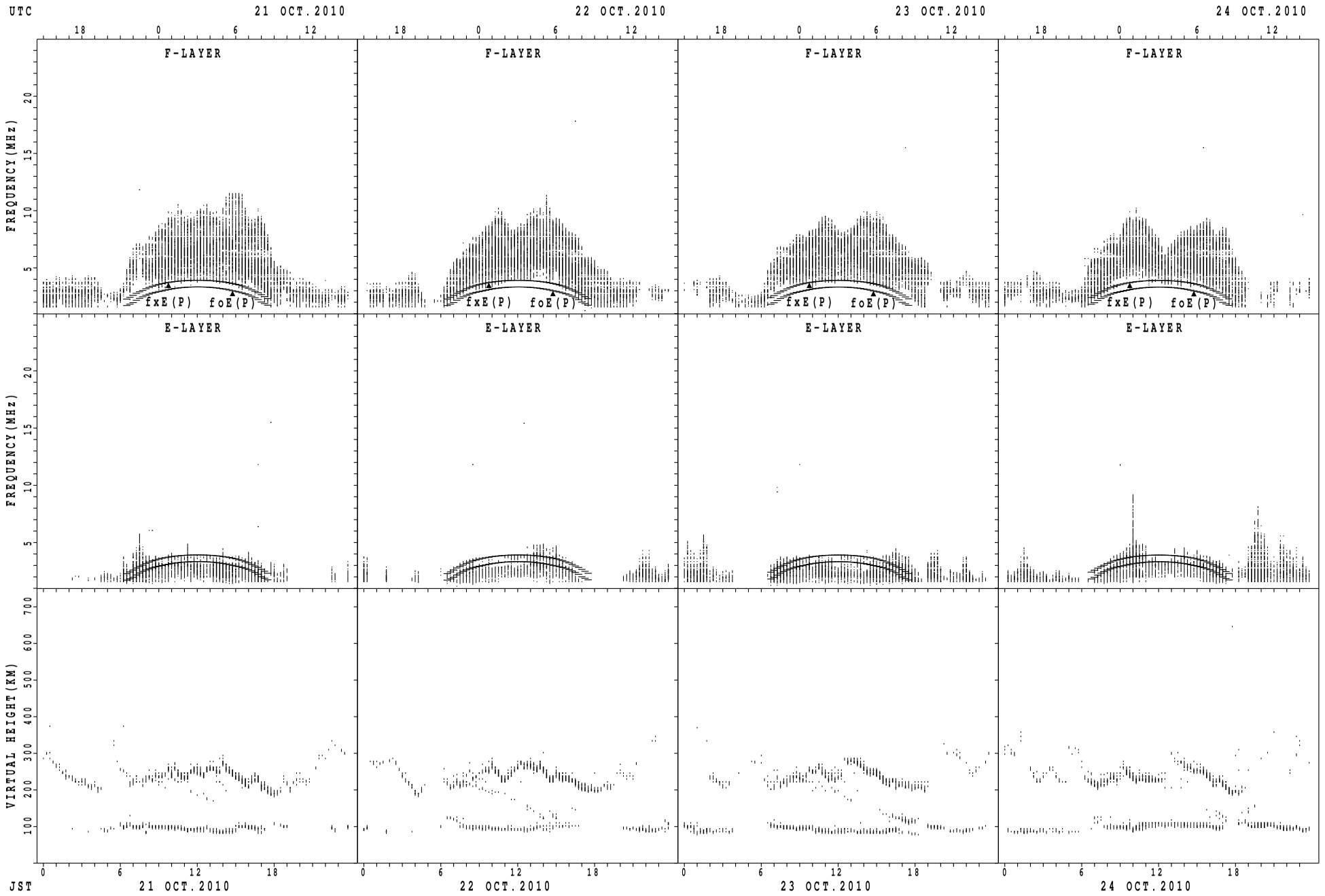
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



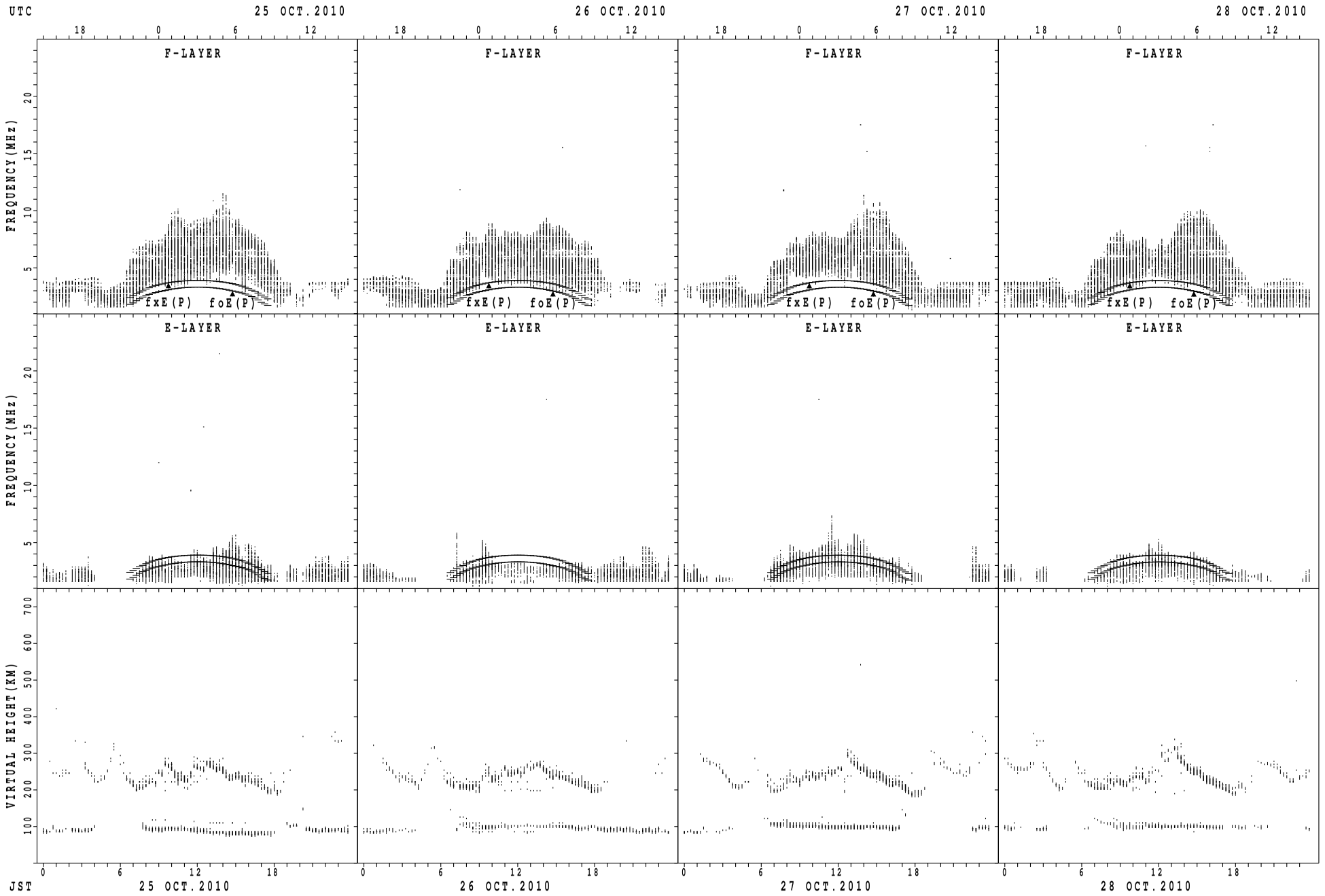
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



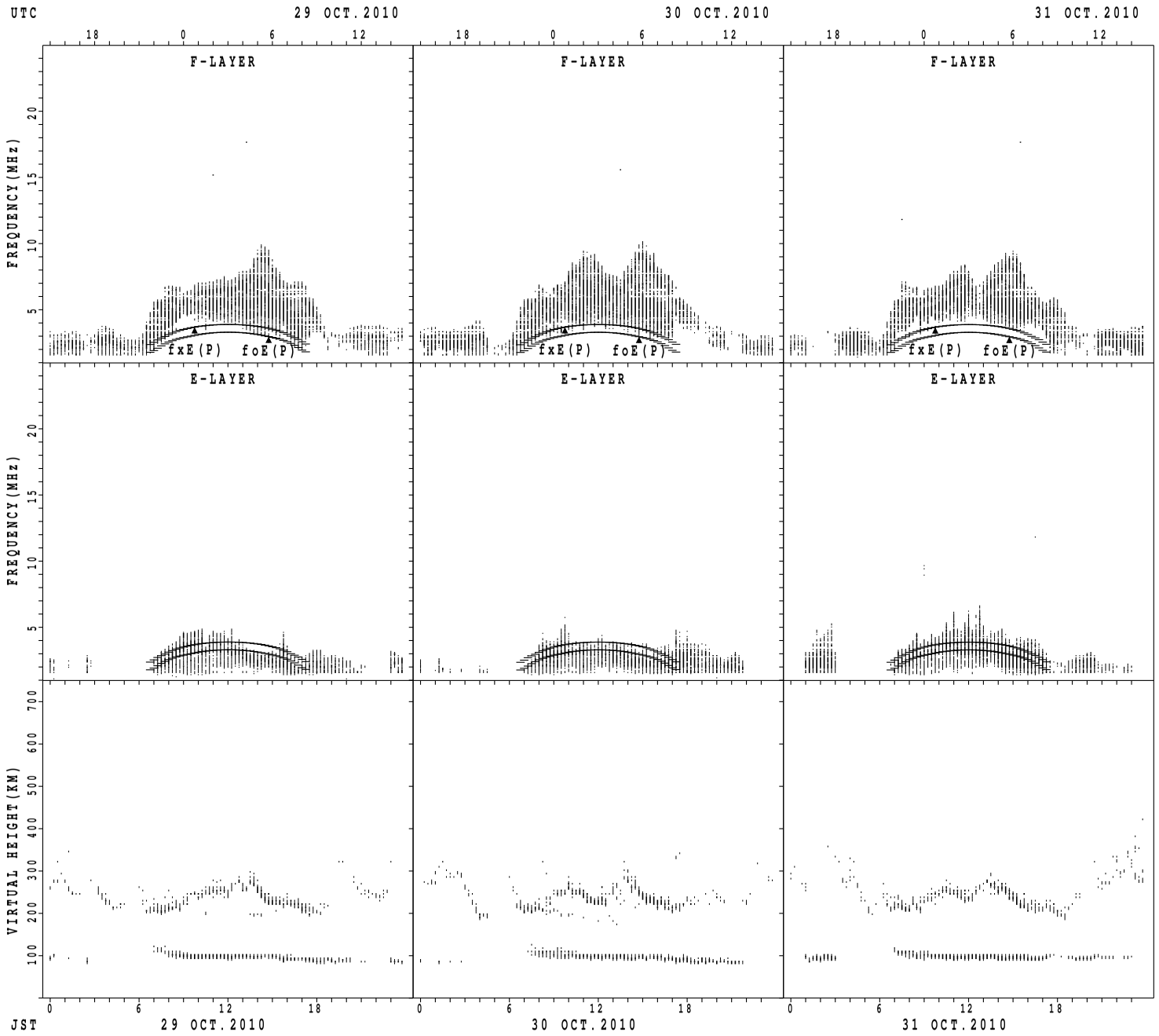
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



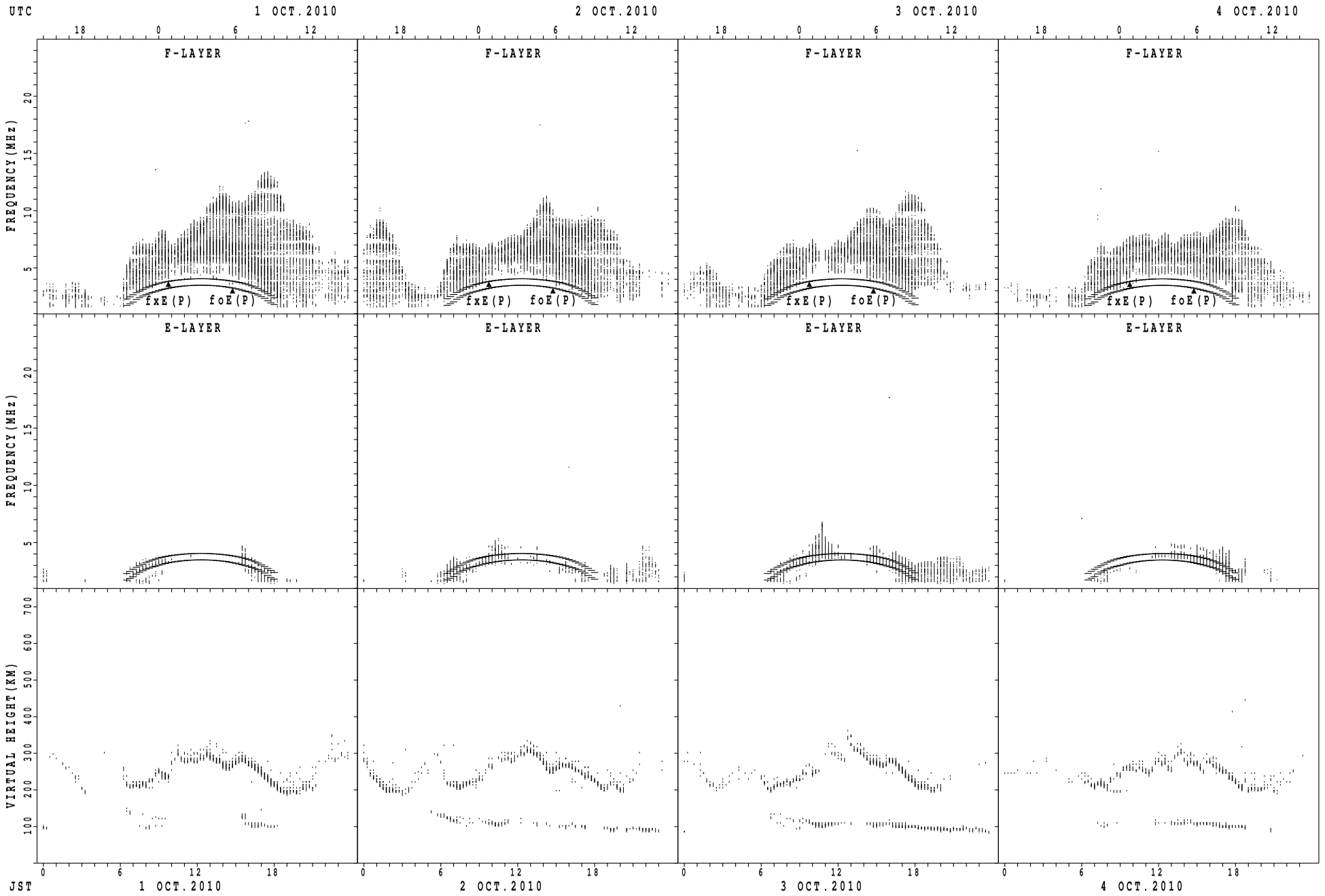
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



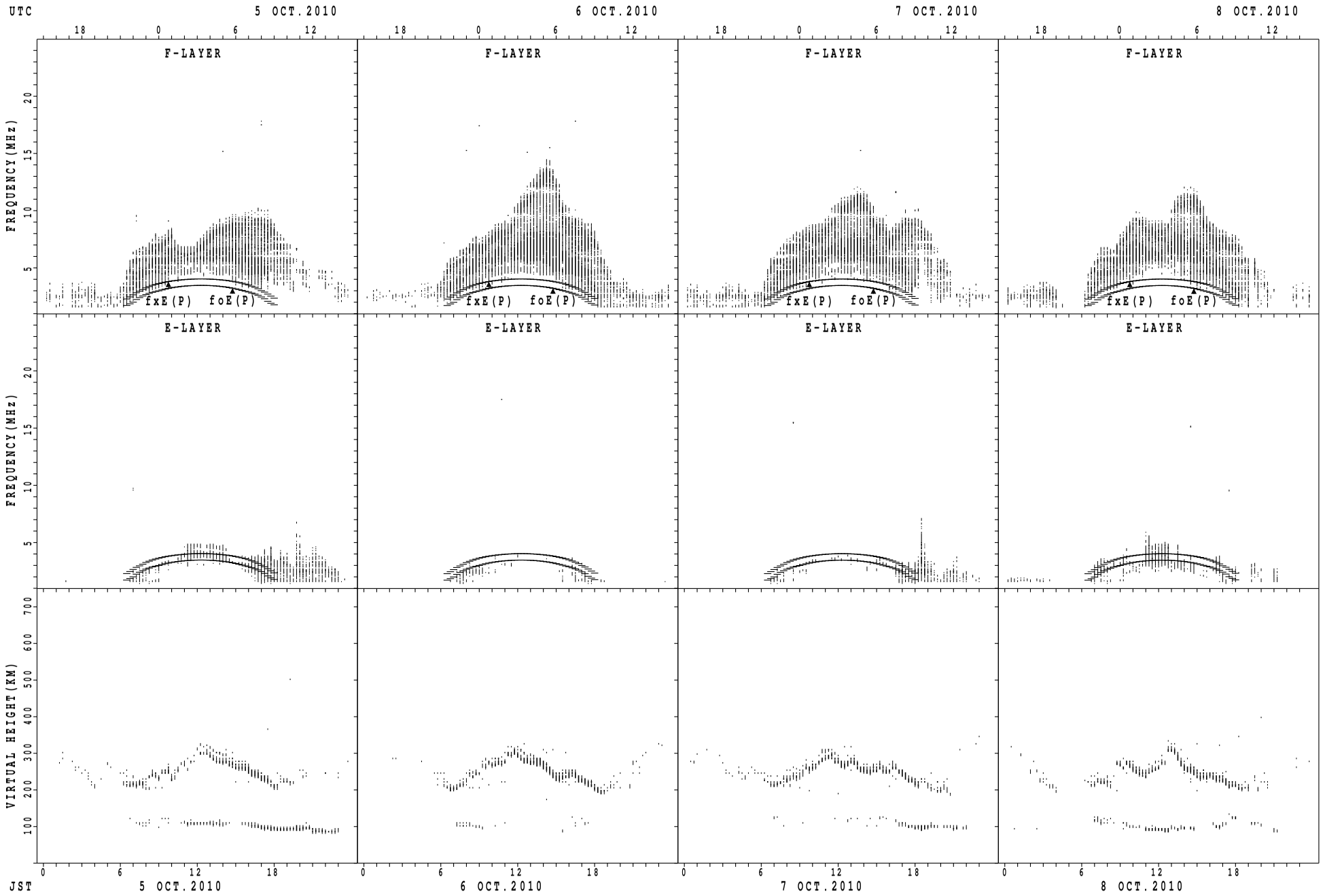
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



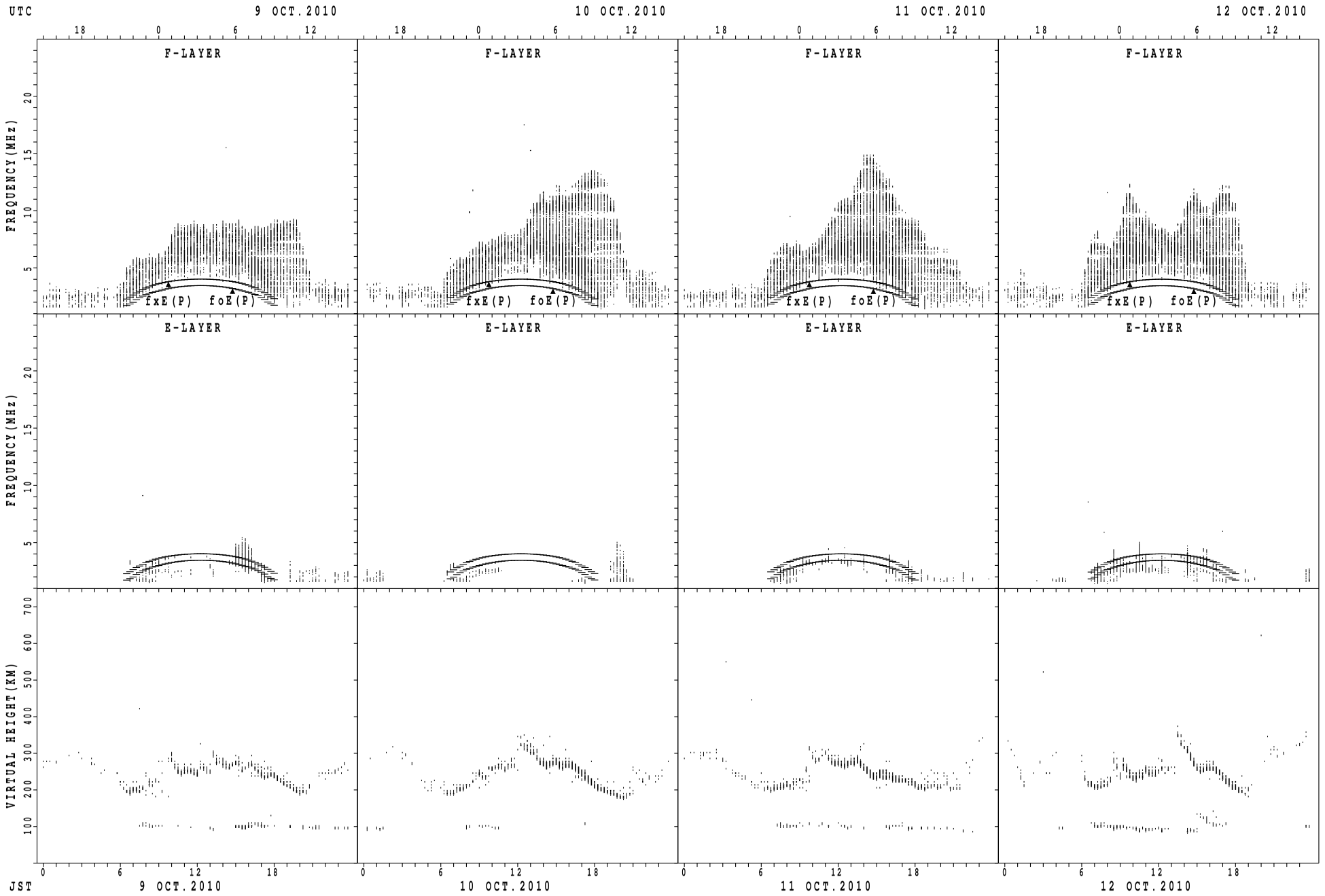
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



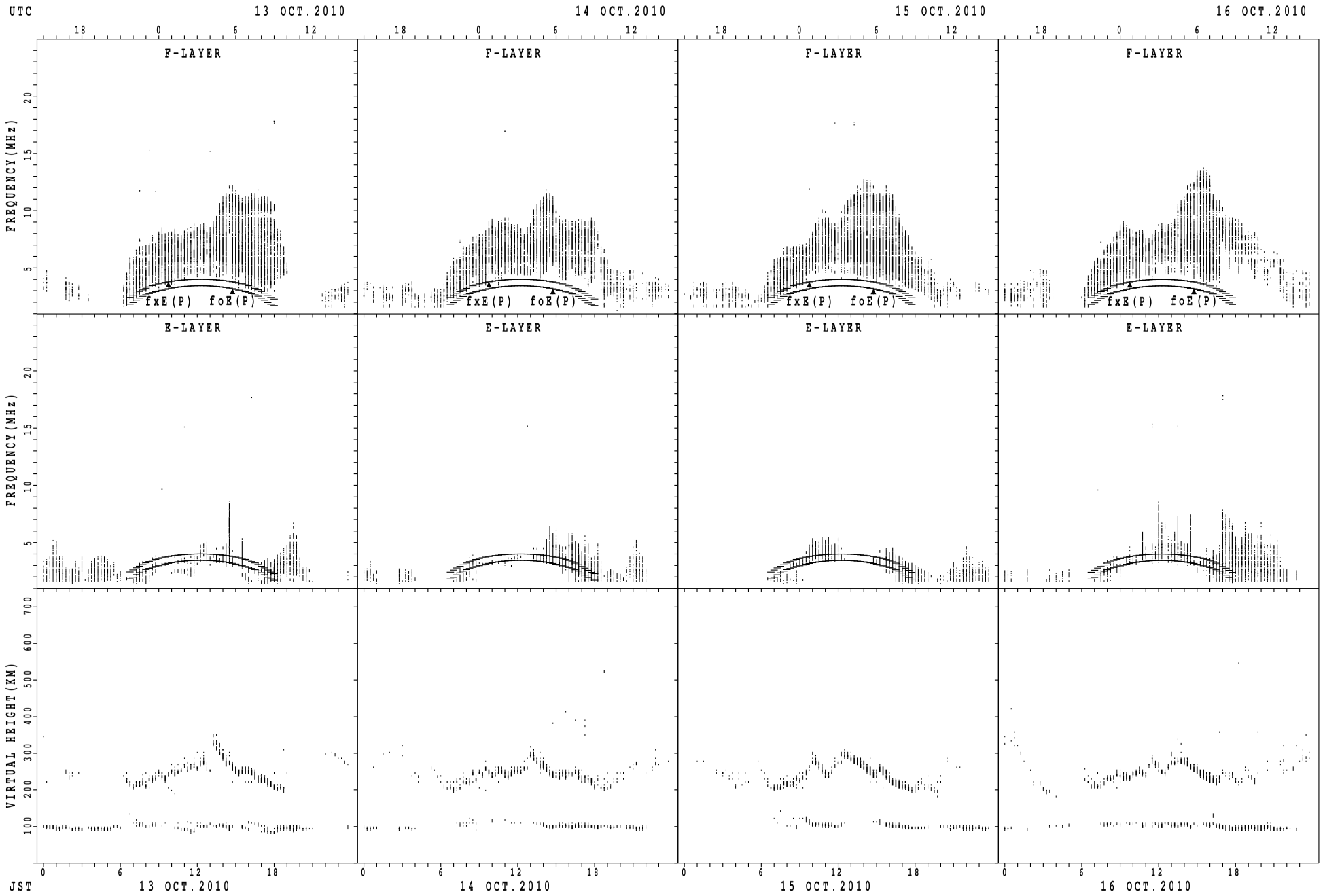
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



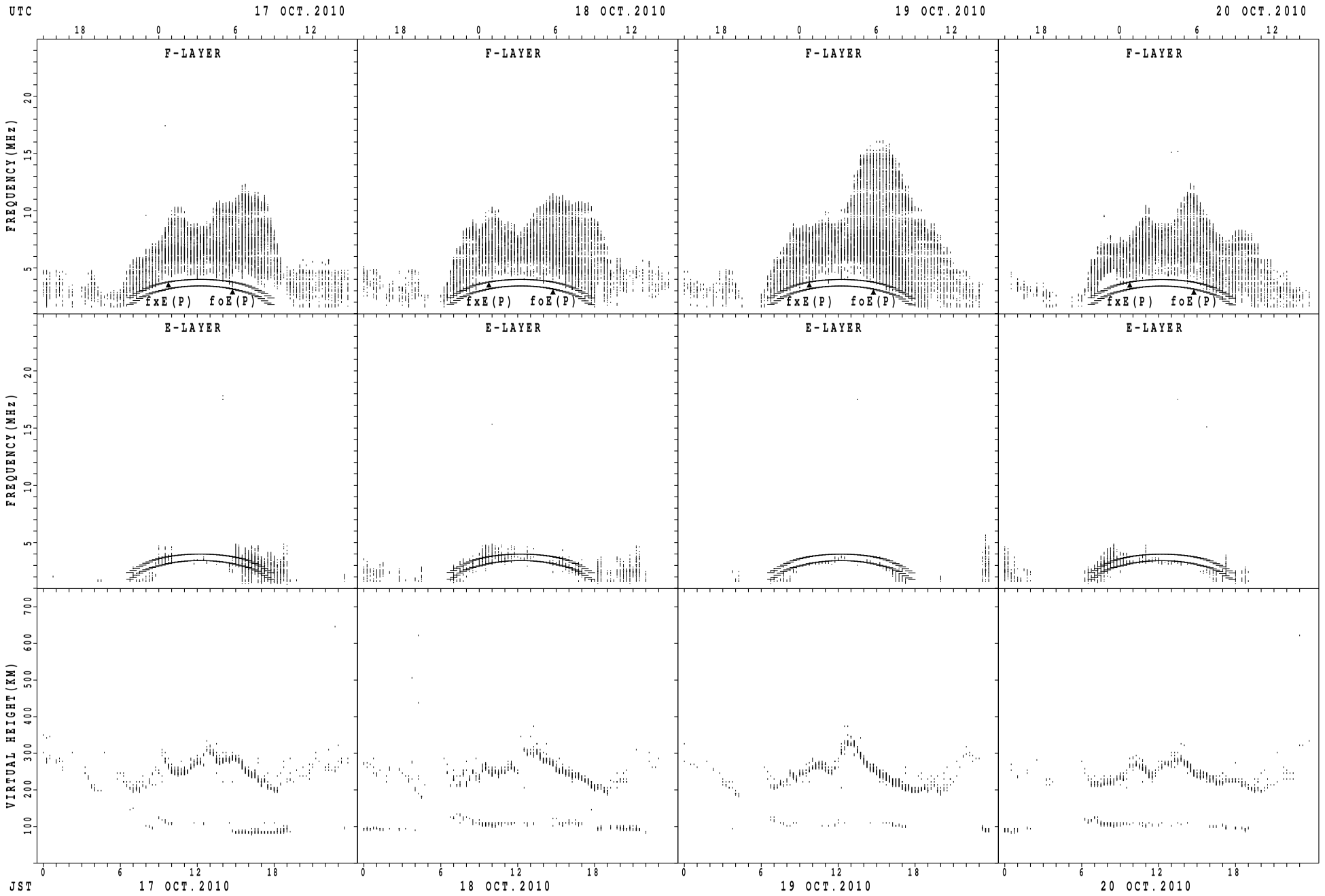
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



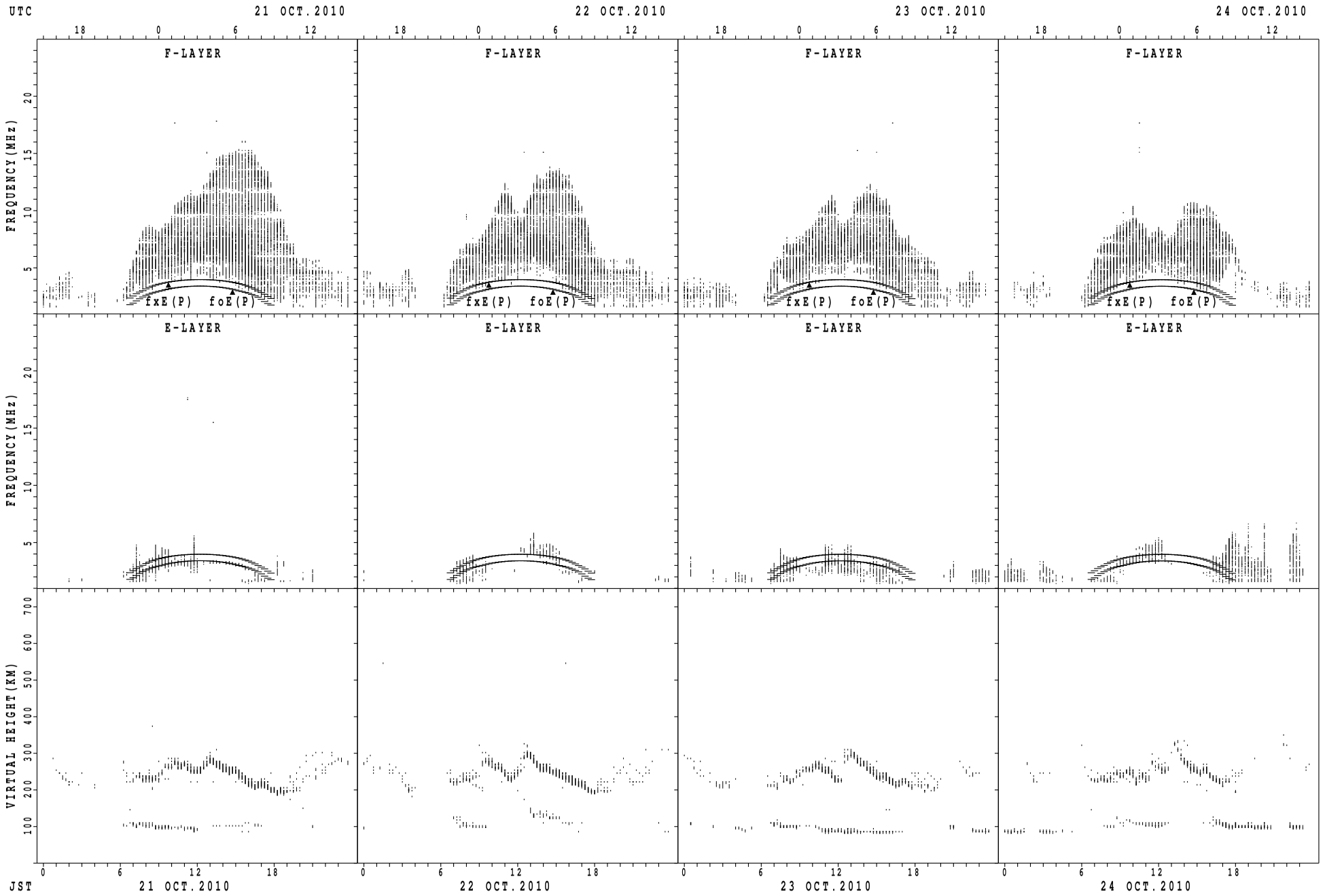
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



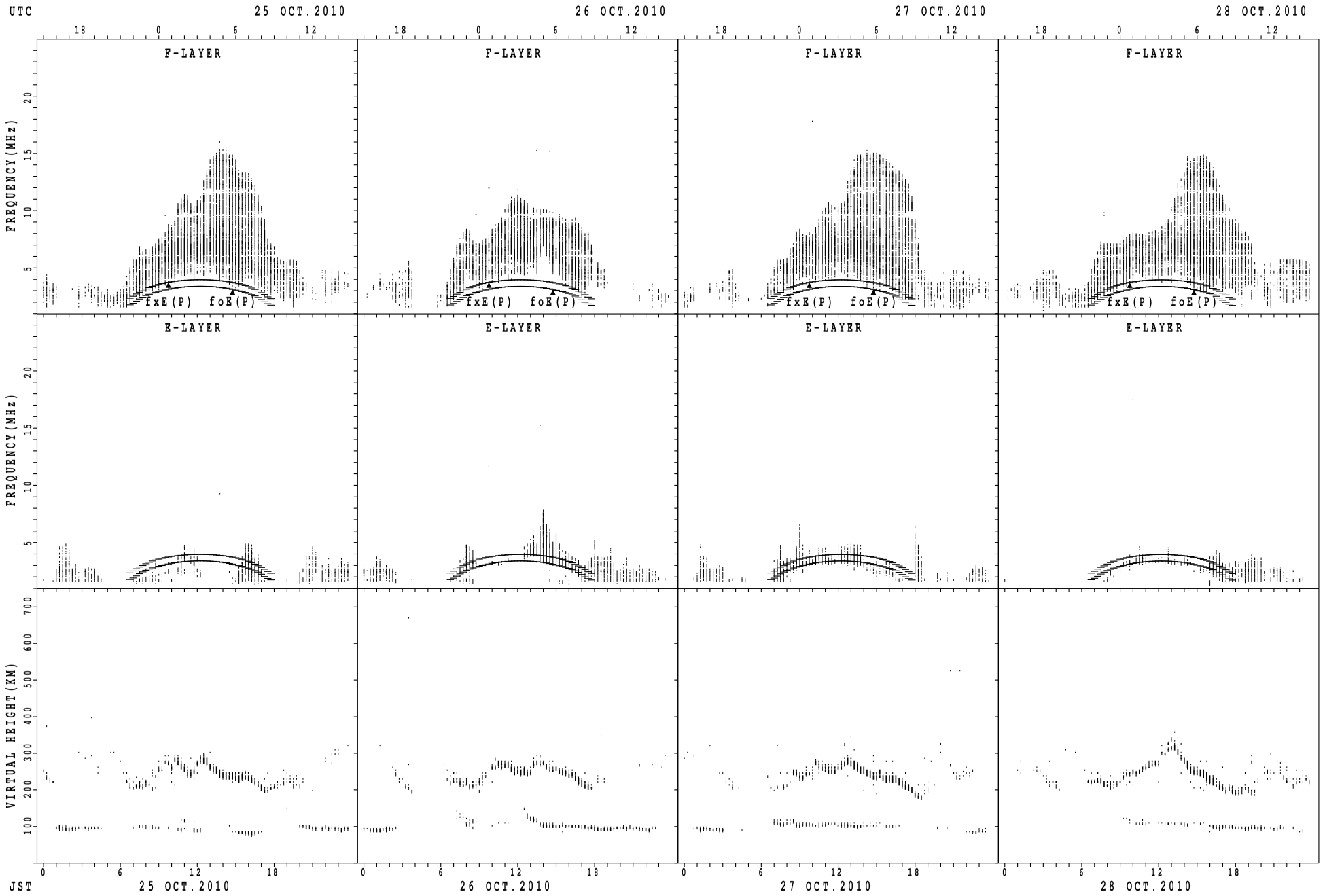
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



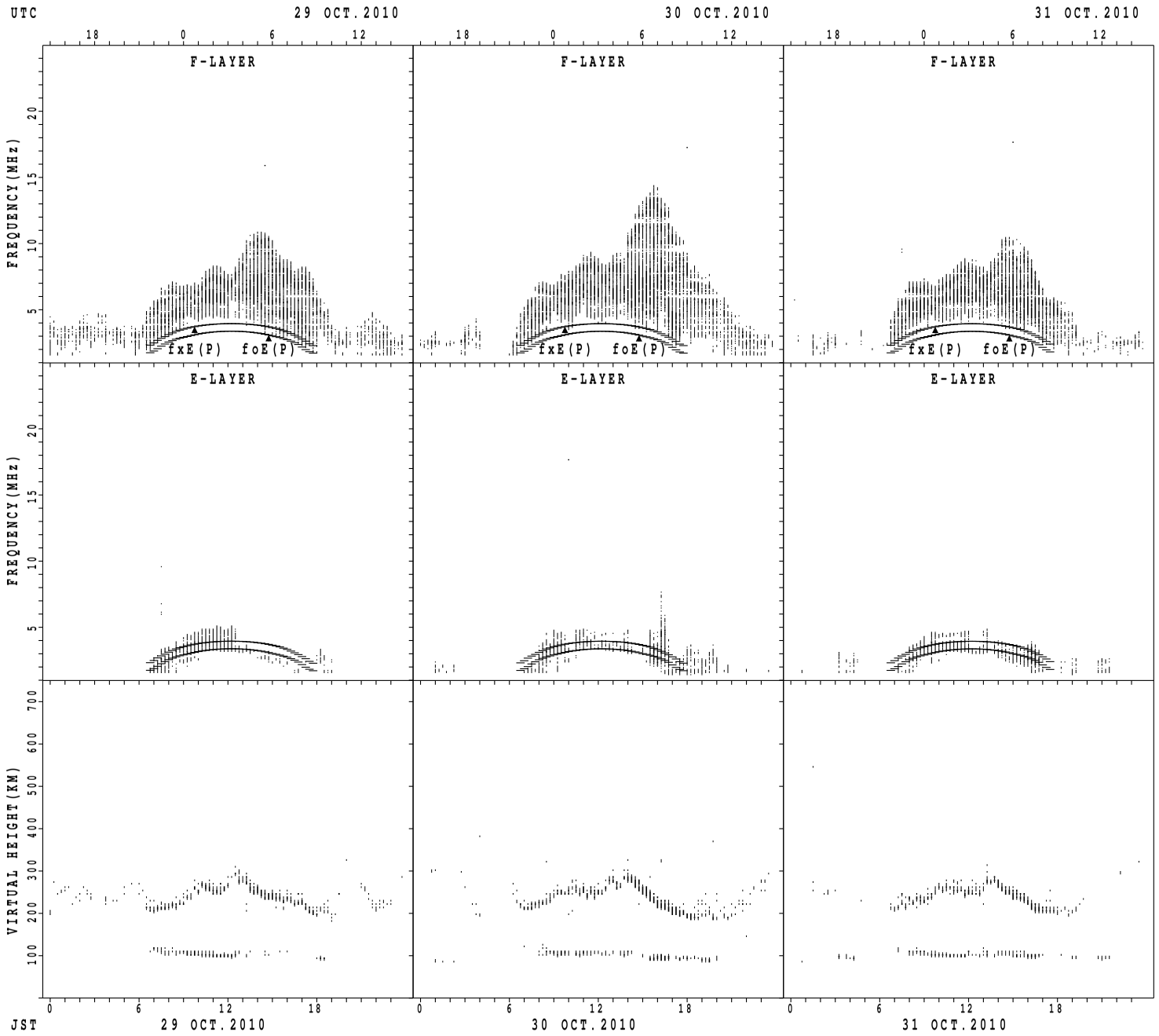
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

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

OCT.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								15	24	13	2			9	18	22	21	8	2					
MED								232	233	236	241			238	256	250	240	235	250					
U Q								238	243	239	242			250	266	262	248	238	260					
L Q								228	222	230	240			231	248	244	232	232	240					

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	14	18	18	13	15	11	12	23	20	22	18	14	18	16	17	20	25	22	20	18	20	17	18	19
MED	95	97	95	91	93	91	100	113	105	103	102	99	97	95	97	97	95	95	94	91	96	95	97	95
U Q	97	99	95	95	97	97	109	143	112	107	103	101	103	97	103	101	109	103	100	95	100	101	101	97
L Q	91	93	93	89	89	89	93	107	102	101	99	95	95	95	93	95	92	89	90	89	90	89	91	89

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								22	27	13					14	24	17	15	6	1				
MED								226	230	238					248	240	232	230	242	240				
U Q								234	236	244					256	254	242	244	248	120				
L Q								220	224	230					246	235	228	228	234	120				

h′Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	12	11	5	7	4	4	8	5	3	6	5	9	5	3	5	3	10	17	18	14	18	16	20	13
MED	95	95	93	91	95	100	137	107	101	107	103	105	105	97	99	111	99	99	102	96	97	97	97	95
U Q	97	95	96	95	96	145	143	107	107	113	105	105	112	105	105	127	105	106	105	103	103	97	98	97
L Q	92	91	91	91	92	93	119	101	101	103	103	98	97	95	97	95	95	94	97	95	95	95	95	94

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								8	24	28						25	24	23	15	4				
MED								230	230	237						242	232	230	224	228				
U Q								230	236	254						252	250	248	232	250				
L Q								224	222	222						235	224	222	214	211				

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	16	12	7	8	5	4	2	21	21	19	18	13	15	17	13	13	24	22	18	22	18	18	17	16
MED	95	91	93	91	103	94	121	115	107	105	103	101	97	105	103	101	99	99	99	96	95	94	93	94
U Q	95	94	99	95	108	99	135	125	107	107	107	106	105	174	107	103	105	105	111	103	99	95	95	95
L Q	91	89	91	90	91	90	107	103	100	103	99	98	97	101	99	97	95	95	89	93	95	91	91	91

MONTHLY MEDIANS OF h′F AND h′Es

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

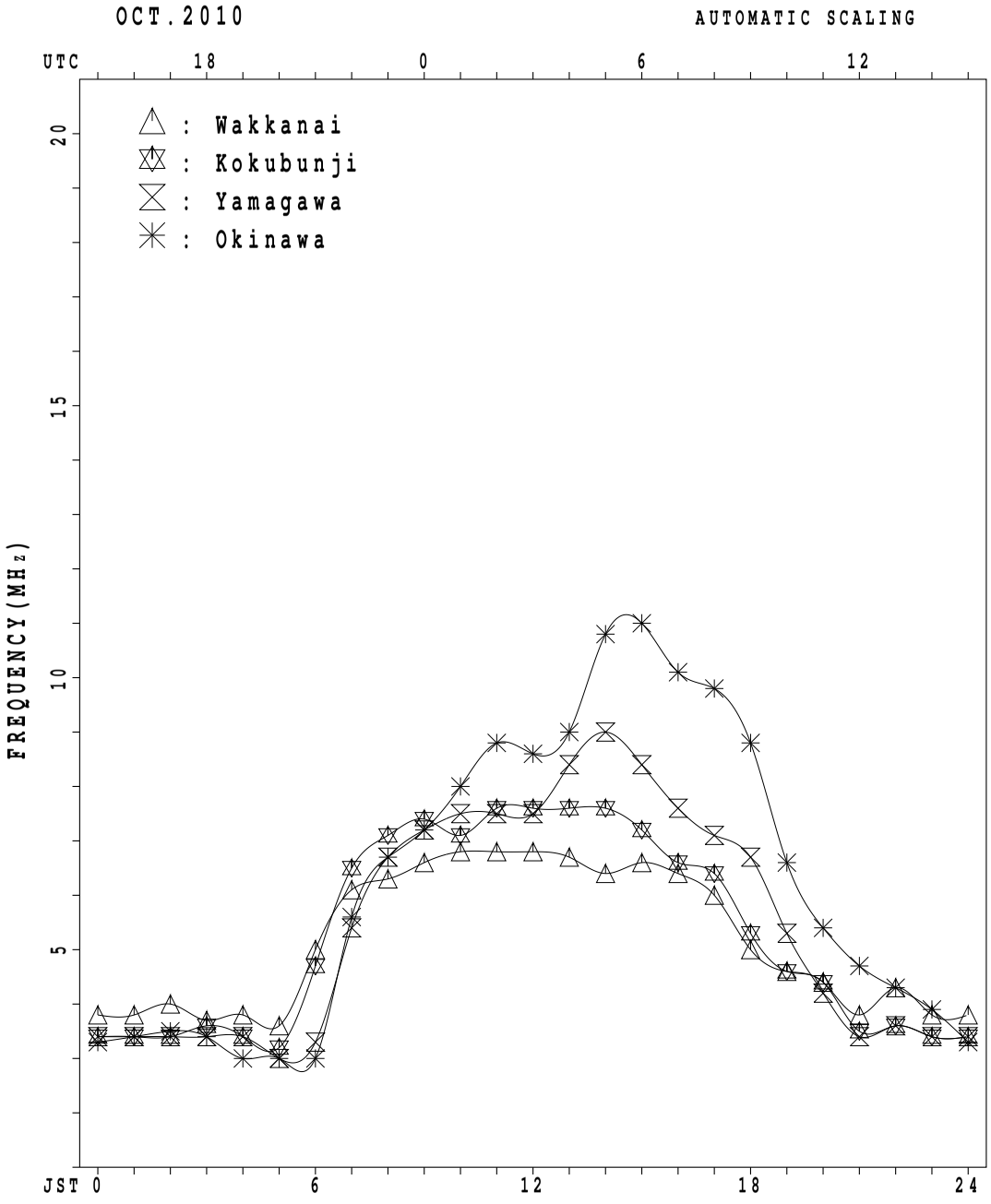
h′F STATION Okinawa LAT. 26°41.0′N LON. 128°09.0′E

	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		1	1					3	26	30						17	31	31	24	13	5	1		
MED		248	216					228	236	246						246	238	230	214	224	214	244		
U Q		124	108					230	240	256						249	256	240	226	232	234	122		
L Q		124	108					226	226	238						238	224	214	211	214	204	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	9	7	4	4	3	2	2	13	10	12	9	16	10	10	9	9	16	17	15	15	11	16	10	7
MED	95	97	96	93	95	101	116	119	107	108	107	105	104	110	107	105	103	103	99	97	97	97	97	95
U Q	98	97	97	96	97	107	133	125	111	114	112	108	107	113	112	114	107	106	103	101	99	97	99	97
L Q	91	91	95	89	95	95	99	109	107	103	105	100	103	105	105	102	100	99	95	97	95	95	91	91

MONTHLY MEDIANS PLOT OF foF2



IONOSPHERIC DATA STATION Kokubunji

OCT. 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 46	X 46	X 45	X 44	X 40	X 39													X 91	X 55	X 38	X 40	X 40	X 40
2	X 42	X 40	X 41	X 42	X 31	X 31													X 65	X 56	X 51	X 52	X 49	X 45
3	X 48	X 45	X 40	X 41	X 36	X 40													X 78	X 72	X 55	X 51	X 48	X 46
4	X 46	X 45	X 42	X 42	X 40	X 37													X 67	X 57	X 49	X 50	X 42	X 42
5	X 42	X 42	X 41	X 41	X 40	X 40													X 73	X 57	X 52	X 50	X 50	X 46
6	X 40	X 41	X 40	X 41	X 42	X 42													X 68	X 52	X 54	X 36	X 44	X 42
7	X 43	X 40	X 41	X 42	X 39	X 41													X 61	X 53	X 47	X 43	X 35	X 36
8	X 37	X 36	X 38	X 38	X 34	X 35													X 72	X 60	X 51	X 46	X 46	X 46
9	X 38	X 36	X 36	X 37	X 38	X 36													X 60	X 57	X 55	X 52	X 54	X 51
10	X 40	X 40	X 39	X 41	X 41	X 40						C	C	C	C	C	C	C	C	C	X 57	X 41	X 40	X 40
11	X 38	X 41	X 39	X 38	X 36	X 37													X 63	X 58	X 56	X 50	X 48	X 46
12	A	X 44	X 46	X 48	X 38	X 36													X 62	X 54	X 50	X 45	X 42	X 43
13	X 44	X 43	X 43	X 44	X 32	X 33													X 62	X 45	X 42	X 42	X 43	X 42
14	X 41	X 40	X 41	X 41	X 40	X 38													X 58	X 44	X 42	X 44	X 46	X 45
15	X 42	X 42	X 42	X 42	X 40	X 36													X 72	X 44	A	X 36	X 36	X 39
16	X 38	X 40	X 42	X 45	X 40	X 32													X 55	X 53	X 50	X 41	X 41	X 42
17	X 43	X 42	X 41	X 42	X 45	X 35													X 54	X 53	X 43	X 40	X 43	X 45
18	X 51	X 46	X 50	X 47	X 52	X 48													X 62	X 57	X 56	X 41	X 42	X 43
19	X 44	X 44	X 45	X 45	X 53														X 71	X 55	O X 43	X 41	X 44	X 46
20	X 41	X 42	X 42	X 46	X 45	X 42													X 54	X 52	X 54	X 54	X 43	X 44
21	X 46	X 48	55	60	X 49	42													X 43	X 47	X 43	X 36	X 35	X 38
22	X 39	X 39	X 40	X 42	X 41	X 33	X 47												X 53	A	A	X 37	X 34	X 35
23	X 38	X 36	X 40	X 42	X 37	X 34													C	X 42	X 42	X 44	X 43	X 44
24	X 43	X 41	X 45	X 44	X 39	X 38													X 51	X 37	X 42	X 41	X 41	X 44
25	A	A	A	X 45	A	X 36													X 41	A	A	A	X 39	X 39
26	X 40	X 41	X 43	X 40	X 40	X 40													X 52	X 44	X 46	X 48	X 47	X 43
27	X 46	X 43	X 46	X 48	X 47	X 45													X 43	X 46	X 42	X 40	X 39	X 40
28	X 41	X 42	X 42	X 44	X 41	X 33												X 71	X 46	X 39	X 42	X 42	X 42	X 40
29	X 38	X 40	X 40	X 39	X 43	X 34													X 39	A	X 42	A	X 37	X 40
30	X 40	X 38	X 38	X 40	X 42	X 28													X 47	X 42	X 36	X 33	X 36	A
31	A	X 35	X 34	X 34	X 35	X 34													X 48	X 42	X 39	X 33	X 36	X 39
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	30	30	31	30	30	1											1	29	27	28	29	31	30
MED	X 42	X 41	X 41	X 42	X 40	X 36	X 47											X 71	X 60	X 53	X 46	X 42	X 42	X 42
U Q	X 44	X 43	X 43	X 45	X 42	X 40													X 68	X 57	X 53	X 49	X 46	X 45
L Q	X 40	X 40	X 40	X 41	X 38	X 34													X 50	X 44	X 42	X 40	X 39	X 40

OCT. 2010 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 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	40	40	39	38	34	33	54	67	80	65	60	67	73	76	67	60	76	96	85	49	31	34	34	34
2	36	34	35	36	25	25	48	63	75	62	65	62	82	85	74	79	73	68	59	50	45	46	43	39
3	42	39	34	35	30	34	50	58	74	62	65	66	75	85	83	64	61	73	71	66	49	45	42	40
4	40	39	36	36	34	30	48	61	68	70	70	76	70	59	68	71	62	66	61	51	42	44	36	36
5	36	36	35	35	34	34	50	62	74	66	67	78	66	63	68	75	64	62	66	51	46	44	44	40
6	34	35	34	35	35	36	63	67	73	71	67	67	86	87	66	64	63	71	62	46	48	30	38	36
7	37	34	35	36	33	35	51	71	82	69	63	72	88	69	62	64	67	72	55	47	41	37	28	29
8	31	30	32	32	28	29	58	65	70	85	71	77	90	86	65	66	61	63	66	54	45	39	40	40
9	32	30	30	30	32	31	57	62	66	63	60	75	73	66	77	73	59	60	53	51	49	46	48	45
10	34	33	33	35	35	34	58	63	65	71	68	C	C	C	C	C	C	C	C	C	50	35	34	33
11	32	35	33	32	30	30	50	72	70	65	62	82	84	70	67	59	60	67	56	52	50	44	42	40
12	A	38	39	42	32	30	55	82	70	90	78	85	67	76	90	72	78	74	56	48	43	38	35	36
13	38	37	37	38	26	27	47	65	85	74	72	76	86	84	83	76	78	80	56	39	36	36	37	36
14	35	34	35	34	34	32	48	69	75	74	74	78	78	76	76	64	65	66	52	37	36	38	40	38
15	36	36	36	36	34	30	44	55	71	88	64	74	90	79	64	65	66	65	66	38	A	30	30	32
16	32	34	36	39	34	26	43	60	80	79	66	72	76	86	76	77	66	61	48	47	44	35	35	36
17	37	36	35	36	38	29	49	68	70	75	81	83	75	78	82	84	85	72	48	47	37	34	37	39
18	44	40	43	40	46	42	54	70	73	73	70	80	75	70	80	80	77	76	56	51	50	35	36	36
19	38	38	39	39	47	29	47	65	68	78	68	70	77	81	88	82	73	74	65	49	37	35	38	40
20	35	36	36	40	38	36	46	69	67	76	81	78	100	81	76	71	65	57	48	46	48	48	36	38
21	40	42	F	F	43	F	46	71	74	84	88	103	91	79	79	86	67	64	37	41	37	30	29	32
22	33	33	33	36	35	27	41	60	64	78	77	82	86	87	90	76	67	60	47	A	A	31	28	29
23	31	30	34	36	31	28	43	63	63	74	82	85	82	83	76	74	74	64	C	36	36	38	37	38
24	37	35	39	38	33	32	42	72	69	88	108	80	70	69	68	69	83	78	45	31	36	35	34	38
25	A	A	A	39	A	30	45	68	75	84	82	77	73	68	78	82	73	58	35	A	A	A	33	33
26	34	35	37	34	34	34	49	72	88	76	74	72	67	76	86	74	60	61	46	38	40	42	40	37
27	40	37	40	42	41	39	44	65	76	76	72	68	69	85	75	86	72	52	37	40	36	34	32	34
28	35	35	36	38	35	27	42	63	73	74	68	68	76	75	76	76	64	65	40	33	36	36	35	33
29	32	34	34	33	36	27	38	60	68	62	71	68	70	72	80	71	61	54	33	A	36	A	31	33
30	34	32	32	34	35	22	36	53	63	64	84	88	75	70	74	68	60	50	40	36	30	27	30	A
31	A	29	28	28	29	28	36	54	63	65	70	73	60	71	72	72	53	51	42	36	32	27	30	33
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	30	29	30	30	30	31	31	31	31	31	30	30	30	30	30	30	30	29	27	28	29	31	30
MED	36	35	35	36	34	30	48	65	71	74	70	76	76	76	76	72	66	65	53	47	40	36	36	36
U Q	38	37	37	38	35	34	51	69	75	78	78	80	86	84	80	77	73	72	62	51	47	43	40	39
L Q	34	34	34	34	32	28	43	61	68	65	66	70	70	70	68	66	61	60	44	38	36	34	32	33

IONOSPHERIC DATA STATION Kokubunji

OCT. 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									A	A	L	464	460	452	L	L	L							
2									A	L	A		L	UL 452	L	L								
3									L	L	L	A	A	UL 464	A	L								
4								L	L	L	L	464	UL 460		L	A	L							
5									L	L	UL 432	UL 452	UL 436	L	L	L	L							
6										L	L	L	UL 500	UL 444	L	L								
7									L	L	L	UL 464	L	L	A		A							
8									L	L	L	UL 488	UL 452	L	L	L								
9										L	UL 436	448	A	L	L									
10										L	A	C	C	C	C	C	C	C						
11										L	L	A	L	L	A	A								
12										L	L	L	L	L	A									
13									L	L	L	L	L	L	L									
14									L	L	L	UL 460	L	L	L									
15									L		L	456	UL 476	L	L	L								
16									L	A	436	A	A	L	L	L								
17										L	432	L	UL 432	L	L	L								
18									L	A	A	A	A		L	L								
19										L	L	L	L	L	L	L								
20										L	A		L	A	A	A								
21										L	L	L	L	L	L									
22									L	L	UL 448	L	424	L	L	A								
23									L	A	A	L	L	L	L	L								
24										L	L	A	L	L	L									
25									L	L	L	UL 428	L	L	A	A								
26											L	L	A	UL 464	A	L								
27									L		L	L	L	L	L	A								
28										L	L		L	UL 436	L	L								
29											UL 436	L	L	L	L	A								
30											UL 436	428	L	L	L									
31										L	A	L	UL 440	UL 460	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											7	10	9	7										
MED											UL 436	458	UL 452	UL 452										
U Q											UL 436	UL 464	UL 468	UL 464										
L Q											432	448	UL 434	UL 444										

OCT. 2010 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 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							B	U A 248	A	A	A	R	R	A	R	R	A	B						
2							B	A	A	A	A	A	R	R	R	R	U R 248	B						
3							B	U A 256	A	A	R	A	A	R	A	A	A	B						
4							B	R	R	R	R	A	R	R	A	A	A	B						
5							B	A	R	R	R	A	A	A	R	A	R	B						
6							B	A	A	A	R	R	R	R	R	R	A	B						
7							B	244	R	R	R	A	R	A	A	A	A	B						
8							B	A	A	A	R	A	R	R	R	R	R	B						
9							B	R	R	R	R	A	A	R	R	R	224	B						
10							B	228	U R 288	R	A	C	C	C	C	C	C	C						
11							B	244	R	R	A	A	R	R	A	A	A	B						
12							B	A	A	R	R	A	R	A	A	A	U R 252	B						
13							B	A	A	A	A	R	R	R	R	A	A	B						
14							B	A	R	R	A	A	R	R	A	A	A	B						
15							B	224	R	R	A	A	R	R	R	R	A	B						
16							B	240	A	A	A	A	A	A	A	A	A	B						
17							B	228	A	R	R	R	R	R	R	R	A	B						
18							B	U R 244	A	A	A	A	A	A	A	A	A	B						
19						B	B	A	A	A	R	R	R	R	R	R	216	B						
20							B	240	A	A	A	A	A	A	A	A	A	B						
21							B	A	A	A	A	A	A	R	R	R	212	B						
22								232	A	A	A	A	R	R	A	A	A	B						
23							B	228	A	A	A	A	R	R	A	R	A	B						
24							B	216	A	A	A	A	R	R	A	A	208	B						
25							B	A	R	R	R	A	A	R	284	A	A	B						
26							B	A	A	A	R	R	A	A	A	R	A	B						
27							B	A	A	A	R	A	A	R	R	A	192	B						
28							B	U R 224	R	A	R	A	R	A	A	A	A								
29							B	240	U R 300	A	A	A	A	A	A	A	A	B						
30							B	220	A	A	A	A	A	A	R	A	A	B						
31							B	232	A	A	A	A	A	A	R	R	A	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								17	2						1		7							
MED								232	U R 294						284		216							
U Q								U 244									U R 248							
L Q								226									208							

OCT. 2010 foE (0.01MHz)

IONOSPHERIC DATA STATION Kokubunji

OCT. 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 16	J A 25	20	E B 15	E B 14	E B 15	24	32	36	38	38	G 27	G 25	39	G 20	G 19	31	J A 32	20	E B 15	E B 15	E B 15	E B 16	E B 15
2	E B 15	E B 15	E B 16	E B 15	E B 15	J A 20	21	30	37	38	J A 49	J A 46	G 24	G	G 26	G 22	G 22	E B 16	E B 14	E B 15	21	21	J A 24	J A 24
3	22	J A 23	E B 14	19	E B 15	E B 18	J A 23	J A 32	37	38	G 24	J A 45	42	G	39	34	J A 34	J A 24	J A 22	J A 32	J A 35	20	J A 24	22
4	21	E B 15	E B 14	E B 14	E B 15	J A 21	19	G 21	G 27	G 28	G 29	42	G 28	G	J A 36	32	24	21	J A 19	E B 15	E B 14	E B 15	E B 15	E B 16
5	E B 16	E B 14	E B 15	E B 15	E B 15	E B 15	J A 20	27	G 25	G 28	G 26	40	36	42	G 26	36	G 22	J A 26	E B 15	J A 20	J A 35	J A 25	J A 24	20
6	E B 14	E B 15	E B 14	E B 15	E B 15	E B 15	J A 20	29	35	34	G 29	G 29	G	G	G 27	G 24	28	20	E B 16	E B 15	E B 15	J A 44	J A 26	J A 21
7	J A 30	20	E B 14	19	E B 15	E B 15	21	30	G 20	G 25	G 22	43	G	36	40	32	31	J A 23	J A 20	J A 24	22	20	18	E B 16
8	E B 15	E B 15	E B 16	19	E B 15	E B 15	J A 24	30	36	36	G 30	37	G 32	G 26	G 26	G 25	G 20	22	J A 35	20	J A 19	19	20	E B 15
9	E B 16	E B 15	20	J A 23	E B 14	20	18	G	G 23	G 24	G 23	42	J A 45	G 26	G 25	G	26	20	J A 17	E B 15	20	J A 58	J A 21	J A 18
10	J A 18	18	E B 15	E B 15	20	E B 15	19	26	G	G 20	42	C	C	C	C	C	C	C	C	C	E B 15	E B 16	E B 16	E B 15
11	E B 14	21	20	19	20	E B 14	J A 20	31	G	G	J A 39	J A 68	G	G	J A 54	36	30	J A 43	J A 49	J A 30	J A 24	J A 48	J A 54	J A 42
12	J A 55	J A 30	J A 24	J A 36	23	E B 15	22	29	33	G 28	G 28	38	G 27	36	J A 40	34	J A 32	J A 23	E B 15	J A 20	J A 56	J A 22	J A 24	E B 14
13	E B 15	E B 15	E B 15	20	E B 15	E B 14	21	J A 35	34	34	36	G 28	G 25	G 26	G 24	31	J A 47	J A 25	J A 32	J A 27	J A 32	J A 27	J A 23	J A 20
14	21	21	20	E B 15	E B 14	20	J A 16	J A 28	G 27	G 25	38	38	G	G	34	30	J A 26	E B 15	J A 26	J A 28	J A 26	21	23	E B 15
15	E B 14	E B 15	E B 14	E B 16	E B 15	E B 15	E B 16	G 19	G 23	G 25	42	42	G 26	G 26	32	G 22	24	J A 27	50	J A 64	J A 38	J A 23	J A 22	J A 23
16	J A 21	J A 20	J A 17	E B 14	E B 15	E B 14	20	29	34	42	37	J A 48	J A 40	40	37	32	34	E B 17	J A 26	J A 18	E B 15	20	20	E B 15
17	E B 16	E B 14	E B 14	E B 15	E B 15	E B 16	19	30	J A 37	G 29	G 28	G 28	G	G 27	G 23	G 18	26	20	E B 15	E B 15	E B 16	E B 15	E B 15	19
18	E B 15	19	19	E B 15	J A 18	20	J A 20	G 21	32	38	J A 46	J A 73	41	J A 43	J A 42	34	29	E B 15	J A 20	E B 16	J A 36	J A 28	24	19
19	20	22	J A 20	E B 15	22	E B 15	19	28	J A 47	39	G 28	G 25	G 28	G 21	G 25	G 20	26	20	J A 31	J A 45	J A 34	J A 35	J A 24	J A 26
20	22	22	24	J A 25	J A 20	E B 15	E B 16	26	34	35	40	J A 41	J A 39	J A 46	J A	J A 76	J A 59	J A 36	J A 30	E B 15	21	20	J A 27	21
21	J A 19	J A 29	20	E B 14	E B 14	19	20	30	33	35	40	J A 77	39	G 28	J A 34	G 24	24	18	J A 44	J A 45	J A 18	J A 22	J A 24	J A 21
22	J A 26	J A 40	E B 15	E B 15	21	18	J A 20	G 20	31	34	36	J A 38	G 24	G 28	38	39	J A 38	34	J A 52	J A 77	J A 60	J A 22	J A 28	J A 28
23	J A 29	J A 33	22	19	E B 14	22	20	28	J A 34	J A 48	41	J A 36	G 23	G 24	32	G 23	J A 26	J A 28	C	J A 30	J A 30	J A 22	J A 20	J A 25
24	J A 30	J A 21	J A 28	J A 30	J A 18	J A 20	18	25	33	36	38	42	G 27	G 24	34	33	27	J A 29	J A 31	J A 20	J A 24	20	22	J A 24
25	J A 73	J A 52	J A 68	J A 29	J A 44	J A 24	E B 14	J A 32	G 27	G 26	G 28	40	J A 43	G 25	37	40	J A 39	J A 24	J A 31	J A 43	J A 38	J A 34	J A 34	20
26	J A 25	E B 15	22	20	J A 20	21	J A 18	26	30	36	G 28	G 29	41	36	J A 38	G 27	23	E B 15	20	20	J A 21	J A 22	J A 20	J A 23
27	J A 22	J A 30	19	E B 15	E B 16	E B 15	E B 15	27	J A 37	J A 45	G 25	42	J A 37	G 24	G 25	J A 38	24	J A 22	E B 14	22	J A 55	J A 62	J A 52	J A 44
28	J A 17	J A 26	J A 19	J A 29	20	20	E B 14	G	G 22	J A 44	G 30	42	G 28	34	J A 42	29	22	J A 21	E B 16	20	J A 28	18	E B 14	20
29	18	E B 15	22	J A 27	J A 30	J A 19	20	G	G	J A 42	J A 41	J A 43	J A 49	J A 46	J A 52	J A 36	J A 36	J A 31	J A 38	J A 35	J A 24	30	J A 22	22
30	20	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15	26	34	36	41	J A 38	J A 42	J A 36	G 27	J A 31	22	E B 14	E B 14	E B 15	E B 14	20	J A 48	J A 43
31	J A 58	20	E B 15	E B 16	E B 15	E B 16	J A 18	G	31	35	J A 42	39	J A 40	35	G 24	G 22	J A 24	J A 33	J A 26	J A 19	J A 20	21	20	J A 18
	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	30	30	30	30	30	30	30	29	30	31	31	31	31
MED	20	20	19	E B 16	E B 15	E B 16	20	28	33	35	36	40	G	G	34	31	26	J A 22	J A 22	J A 20	J A 24	J A 22	J A 23	20
U Q	J A 25	J A 25	20	J A 20	20	20	20	30	35	38	41	J A 43	J A 40	36	J A 38	34	J A 32	J A 28	J A 32	J A 30	J A 35	J A 28	J A 24	J A 24
L Q	E B 16	E B 15	E B 15	E B 15	E B 15	E B 15	E B 18	G	G 27	G 28	G 28	G 37	G 27	G 26	G 26	G 24	24	E B 20	E B 16	E B 15	E B 18	20	E B 20	E B 16

OCT. 2010 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 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 16	E B 15	E B 15	E B 15	E B 14	E B 15	23	29	35	37	37	G 26	G 24	36	G 19	G 18	28	25	18	E B 15	E B 15	E B 15	E B 16	E B 15
2	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	20	28	35	34	46	44	G 23	G	G 24	G 22	G 21	E B 16	E B 14	E B 15	E B 15	E B 14	E B 16	17
3	E B 14	17	E B 14	E B 15	E B 15	E B 18	20	27	32	36	G 24	39	40	G	38	30	30	21	20	25	25	E B 15	18	E B 15
4	E B 15	E B 15	E B 14	E B 14	E B 15	E B 15	17	G 20	G 25	G 27	G 26	38	G 25	G	35	30	22	19	E B 15	E B 15	E B 14	E B 15	E B 15	E B 16
5	E B 16	E B 14	E B 15	E B 15	E B 15	E B 15	18	23	G 24	G 24	G 24	36	34	39	G 24	32	G 21	21	E B 15	E B 15	22	16	E B 15	16
6	E B 14	E B 15	E B 14	E B 15	E B 15	E B 15	E B 15	28	30	32	G 28	G 27	G	G	G 26	G 24	26	18	E B 16	E B 15	E B 15	22	18	18
7	20	E B 15	E B 14	E B 16	E B 15	E B 15	20	28	G 20	G 24	G 21	39	G	35	36	29	28	18	17	16	15	E B 15	E B 16	E B 16
8	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	19	26	31	34	G 28	34	G 30	G 25	G 24	G 25	G 19	18	19	E B 15	E B 15	E B 15	E B 15	E B 15
9	E B 16	E B 15	E B 15	18	E B 14	E B 16	17	G	G 21	G 22	G 22	39	40	G 24	G 24	G	24	19	E B 15	E B 15	E B 15	19	E B 16	E B 15
10	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	17	26	G	G 20	38	C	C	C	C	C	C	C	C	C	E B 15	E B 16	E B 16	E B 15
11	E B 14	19	E B 14	E B 14	E B 15	E B 14	18	28	G	G	37	66	G	G	51	33	28	19	20	17	16	20	36	18
12	A A 55	20	15	16	E B 15	E B 15	17	27	30	G 25	G 26	35	G 25	34	36	31	G 22	19	E B 15	E B 15	18	18	19	E B 14
13	E B 15	E B 15	E B 15	E B 16	E B 15	E B 14	19	22	28	32	34	G 26	G 22	G 24	G 23	29	45	22	26	22	E B 15	20	E B 15	E B 15
14	E B 16	E B 15	E B 15	E B 15	E B 14	E B 15	E B 16	25	G 24	G 24	36	35	G	G	32	28	24	E B 15	21	17	19	E B 16	20	E B 15
15	E B 14	E B 15	E B 14	E B 16	E B 15	E B 15	E B 16	G 18	G 22	G 24	36	38	G 24	G 25	G 32	G 20	23	24	41	19	A A 38	17	E B 16	16
16	E B 15	17	E B 15	E B 14	E B 15	E B 14	18	26	33	39	35	43	35	36	34	30	30	E B 17	17	16	E B 15	E B 15	E B 15	E B 15
17	E B 16	E B 14	E B 14	E B 15	E B 15	E B 16	18	26	33	G 27	G 26	G 25	G	G 26	G 22	G 15	23	19	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15
18	E B 15	15	18	E B 15	15	E B 15	E B 16	G 19	31	36	40	52	38	40	35	31	26	E B 15	17	E B 16	19	21	17	E B 15
19	E B 15	E B 16	16	E B 15	E B 16	E B 15	19	25	36	35	G 27	G 25	G 27	G 20	G 23	G 20	24	18	16	35	16	21	17	21
20	E B 15	15	E B 15	17	E B 15	E B 15	E B 16	25	32	33	38	39	37	42	35	32	36	31	E B 15	E B 15	16	E B 15	19	E B 15
21	E B 15	20	E B 15	E B 14	E B 14	E B 15	18	26	31	32	37	38	35	G 27	26	G 23	24	16	22	19	16	E B 14	17	E B 15
22	E B 15	21	E B 15	E B 15	E B 15	E B 15	E B 15	G 20	30	32	34	36	G 23	G 27	35	36	32	31	36	A A 77	A A 60	19	20	18
23	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	26	31	43	39	31	G 22	G 22	28	G 22	22	20	C	20	21	17	E B 15	19
24	23	16	17	20	E B 15	16	16	24	32	32	34	39	G 24	G 24	34	30	24	20	24	17	21	E B 15	E B 15	18
25	A A 73	A A 52	A A 68	23	A A 44	18	E B 14	28	G 24	G 24	G 27	38	30	G 23	36	36	34	20	27	A A 43	A A 38	A A 34	20	16
26	E B 15	E B 15	E B 16	E B 15	E B 15	E B 15	16	22	28	32	G 25	G 26	38	35	36	G 26	22	E B 15	E B 16	17	E B 15	18	17	16
27	16	22	E B 15	E B 15	E B 16	E B 15	E B 15	24	32	34	G 24	36	34	G 23	G 24	35	22	18	E B 14	E B 16	E B 15	17	17	16
28	E B 14	16	E B 15	16	E B 15	E B 15	E B 14	G	G 21	32	G 28	36	G 28	33	31	29	20	16	E B 16	E B 15	20	E B 15	E B 14	E B 14
29	E B 16	E B 15	E B 15	20	15	E B 15	E B 15	G	G	35	35	34	37	38	28	30	25	28	19	A A 35	E B 16	A A 30	E B 17	E B 16
30	16	E B 15	E B 15	E B 15	E B 15	E B 14	E B 15	25	30	32	36	35	33	34	G 25	23	20	E B 14	E B 14	E B 15	E B 14	15	A A 22	43
31	A A 58	E B 15	E B 15	E B 16	E B 15	E B 16	E B 15	G	30	32	39	35	33	34	G 24	G 19	23	20	16	E B 15	18	E B 15	E B 14	E B 15
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	29	30	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	30	32	34	36	G	G	30	29	24	19	17	16	16	16	E B 16	E B 16
U Q	16	17	15	16	E B 15	E B 15	18	27	32	34	37	39	35	35	35	31	28	21	20	19	20	19	18	17
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	G	G 25	G 25	G 26	G 34	G 25	G 25	G 24	G 23	22	E B 17	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15

OCT. 2010 fbEs (0.1MHz)

IONOSPHERIC DATA STATION Kokubunji

OCT. 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	16	15	15	15	14	15	14	13	11	15	14	14	14	14	14	14	15	13	15	15	15	15	16	15
2	15	15	16	15	15	15	14	14	14	19	16	15	15	19	16	14	13	16	14	15	15	14	16	15
3	14	14	14	15	15	18	14	13	14	15	15	17	16	18	19	14	14	13	13	15	14	15	14	15
4	15	15	14	14	15	15	14	15	13	14	19	15	14	24	16	15	14	12	15	15	14	15	15	16
5	16	14	15	15	15	15	14	14	13	13	14	15	18	18	14	15	14	13	15	15	15	15	15	16
6	14	15	14	15	15	15	15	16	14	15	16	16	17	12	16	16	15	15	16	15	15	15	14	14
7	15	15	14	16	15	15	15	15	15	15	14	18	16	12	15	13	14	15	15	15	14	15	16	16
8	15	15	16	15	15	15	15	14	14	14	18	14	18	14	15	14	14	14	15	15	15	15	15	15
9	16	15	15	14	14	16	14	14	14	13	14	13	15	16	16	15	14	15	15	15	15	14	16	15
10	15	15	15	15	15	15	14	14	15	14	16	C	C	C	C	C	C	C	C	C	15	16	16	15
11	14	16	14	14	15	14	15	12	12	14	14	18	20	15	17	14	13	13	14	14	14	14	14	14
12	14	14	15	15	15	15	15	15	14	13	14	12	15	16	15	13	13	14	15	15	15	15	14	14
13	15	15	15	16	15	14	15	14	14	14	16	15	12	13	13	14	13	14	14	14	15	15	15	15
14	16	15	15	15	14	15	16	15	14	16	16	22	21	18	13	14	14	15	15	14	14	16	14	15
15	14	15	14	16	15	15	16	14	13	12	13	14	18	14	14	13	14	12	14	14	14	15	16	15
16	15	15	15	14	15	14	14	14	14	15	15	16	12	15	15	14	15	17	15	16	15	16	15	15
17	16	14	14	15	15	16	14	14	14	15	18	17	17	15	12	13	14	16	15	15	16	15	15	14
18	15	15	14	15	14	15	16	14	14	14	14	27	18	16	17	15	12	15	16	16	15	14	15	15
19	15	16	15	15	16	15	14	15	15	14	13	17	16	15	15	14	15	15	16	15	14	14	15	15
20	15	15	15	14	15	15	16	15	15	14	11	20	17	21	13	15	14	13	15	15	15	15	15	15
21	15	15	15	14	14	15	15	15	14	15	15	14	18	16	14	13	14	14	15	13	14	14	15	15
22	15	14	15	15	15	15	15	14	12	15	15	17	14	14	15	14	14	13	16	16	14	15	15	14
23	15	15	15	15	14	15	15	14	16	13	13	16	15	14	14	13	14	15	C	14	16	15	15	15
24	15	16	15	15	15	14	16	14	14	14	12	11	14	15	14	14	15	15	14	15	14	15	15	15
25	15	16	15	16	15	14	14	14	14	15	15	15	16	14	14	13	14	14	15	15	15	14	14	16
26	15	15	16	15	15	15	15	14	15	11	14	18	22	12	16	13	13	15	16	16	15	15	16	15
27	15	14	15	15	16	15	15	14	16	15	14	15	17	14	12	14	13	14	14	16	14	13	15	14
28	14	15	15	15	15	15	14	14	14	11	12	16	14	19	12	15	13	15	16	15	14	15	14	14
29	16	15	15	15	14	15	15	14	14	14	15	18	16	15	14	14	14	15	15	15	16	15	17	16
30	15	15	15	15	15	14	15	14	15	15	14	15	17	19	17	15	12	14	14	15	14	14	16	15
31	16	15	15	16	15	16	14	14	15	12	16	15	15	13	14	13	14	13	16	15	14	15	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	31	31	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	29	30	31	31	31	31
MED	15	15	15	15	15	15	15	14	14	14	14	16	16	15	14	14	14	14	15	15	15	15	15	15
U Q	15	15	15	15	15	15	15	15	15	15	16	17	18	18	16	15	14	15	16	15	15	15	16	15
L Q	15	15	14	15	15	15	14	14	14	13	14	15	15	14	14	13	13	13	14	15	14	14	14	15

IONOSPHERIC DATA STATION Kokubunji

OCT. 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	317	312	320	327	308	315	370	360	394	391	349	337	346	342	348	315	323	354	382	383	301	299	304	300
2	308	325	337	362	382	316	369	386	368	374	356	310	334	344	332	352	362	356	360	335	326	333	327	312
3	312	318	343	354	338	318	387	373	376	374	359	335	340	334	342	351	335	351	344	361	329	337	302	310
4	310	324	327	322	336	311	379	388	367	360	358	362	364	305	335	361	356	367	359	368	317	360	326	313
5	317	317	324	313	326	335	368	381	370	376	372	356	343	345	336	358	350	354	352	340	305	313	337	334
6	317	328	307	301	316	317	368	385	367	360	361	323	323	346	359	345	344	362	367	344	357	307	297	322
7	321	287	307	329	318	316	372	374	364	386	341	325	352	346	358	340	350	370	364	358	340	355	297	308
8	297	307	322	339	308	316	374	388	368	372	357	337	339	366	343	369	337	352	356	353	339	313	317	332
9	321	316	307	321	292	319	386	388	384	392	351	365	361	337	347	381	354	352	333	328	326	316	329	342
10	315	324	310	300	312	320	373	390	367	374	379	C	C	C	C	C	C	C	C	C	359	339	347	318
11	298	291	328	331	329	340	372	393	377	371	362	344	350	358	367	360	358	363	349	326	323	313	318	296
12	A	281	311	350	308	291	366	385	360	371	325	349	371	322	355	338	348	366	356	339	334	303	308	302
13	311	318	309	374	324	322	350	363	370	366	346	340	358	341	339	346	357	370	352	335	328	298	303	331
14	311	311	313	323	338	322	370	394	383	363	377	354	369	321	355	350	358	376	375	319	316	317	328	328
15	322	313	316	324	329	345	368	345	345	376	369	331	346	367	339	360	382	363	362	354	A	328	298	300
16	310	301	322	360	391	334	378	364	367	379	350	356	334	351	360	364	367	365	344	325	343	323	294	304
17	303	309	303	326	351	326	361	390	359	356	355	358	352	319	334	343	352	363	328	334	336	301	293	302
18	328	335	314	302	329	346	370	368	371	377	362	356	317	328	337	345	367	366	349	329	350	311	311	301
19	310	308	312	313	370	408	364	377	383	363	364	333	345	323	348	358	360	360	365	360	289	297	310	335
20	317	324	307	298	352	330	351	373	373	349	340	313	347	331	357	364	363	360	343	312	326	340	328	300
21	305	310	F	F	378	F	355	369	364	367	351	348	333	316	341	370	373	375	326	340	351	338	292	286
22	315	311	299	323	368	372	375	376	357	350	351	335	340	331	353	364	376	370	361	A	A	338	291	312
23	303	322	330	369	368	303	362	387	370	344	355	352	348	339	354	357	377	370	C	332	299	293	316	315
24	307	300	308	327	359	311	354	373	360	348	365	363	371	343	348	345	360	376	371	327	311	310	297	309
25	A	A	A	326	A	311	342	372	369	364	364	371	359	332	351	373	373	375	378	A	A	A	297	323
26	310	324	325	334	329	323	352	387	381	364	382	343	360	341	365	360	371	365	356	340	319	330	328	329
27	317	322	309	327	349	327	371	383	372	385	367	349	344	355	350	359	389	364	342	337	328	310	313	317
28	308	316	324	357	379	334	372	374	373	384	379	334	342	354	347	362	362	372	367	317	333	350	304	321
29	317	323	324	317	349	387	375	381	389	364	367	362	364	339	366	370	356	374	361	A	337	A	335	319
30	327	314	310	341	397	314	376	385	390	359	379	365	361	351	349	376	375	375	370	345	337	363	314	A
31	A	318	313	324	343	343	382	376	384	380	368	375	356	336	354	391	385	365	353	347	358	302	297	312
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	30	29	30	30	30	31	31	31	31	31	30	30	30	30	30	30	30	29	27	28	29	31	30
MED	312	316	313	326	338	322	370	381	370	371	361	348	348	340	348	360	360	365	356	339	328	316	310	312
U Q	317	323	324	341	368	335	375	387	381	377	368	358	360	346	355	364	373	370	366	353	340	338	327	323
L Q	308	309	308	321	324	316	362	373	367	360	351	335	340	331	341	346	352	360	346	328	318	305	297	302

IONOSPHERIC DATA STATION Kokubunji

OCT. 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									A	A	L	410	395	389	L	L	L							
2									A	L	A		L	UL 386	L	L								
3									L	L	L	A	A	UL 377	A	L								
4								L	L	L	L	399	UL 402		L	A	L							
5									L	L	UL 424	UL 414	UL 409	L	L	L	L							
6										L	L	L	UL 361	UL 403	L	L								
7									L	L	L	UL 386	L	L	A		A							
8									L	L	L	UL 378	UL 399	L	L	L								
9										L	UL 411	399	A	L	L									
10										L	A	C	C	C	C	C	C	C						
11										L	L	A	L	L	A	A								
12										L	L	L	L	L	A									
13									L	L	L	L	L	L	L									
14									L	L	L	UL 407	L	L	L									
15									L		L	420	UL 386	L	L	L								
16									L	A	427	A	A	L	L	L								
17										L	425	L	UL 401	L	L	L								
18									L	A	A	A	A		L	L								
19										L	L	L	L	L	L	L								
20										L	A		L	A	A	A								
21										L	L	L	L	L	L									
22									L	L	UL 404	L	424	L	L	A								
23									L	A	A	L	L	L	L	L								
24										L	L	A	L	L	L									
25									L	L	L	UL 421	L	L	A	A								
26											L	L	A	UL 367	A	L								
27									L		L	L	L	L	L	A								
28										L	L		L	UL 369	L	L								
29											UL 409	L	L	L	L	A								
30											UL 395	414	L	L	L									
31										L	A	L	UL 418	UL 367	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											7	10	9	7										
MED											UL 411	408	UL 401	UL 377										
U Q											425	UL 414	UL 414	389										
L Q											UL 404	UL 399	UL 390	UL 367										

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NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

OCT. 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									220	218	246	282	264	270	260	282	278							
2									238	236	248		272	264	274	250								
3									234	234	250	258	270	264	250	248								
4								228	236	238	246	256	236		260	238	236							
5									238	230	236	260	246	276	276	246	238							
6										232	244	278	278	246	242	254								
7									234	214	252	286	252	236	242		248							
8									234	232	236	276	250	246	250	242								
9										222	256	244	248	276	258									
10										236	234	C	C	C	C	C	C	C						
11										242	244	272	244	238	242	236								
12										234	258	234	230	280	256									
13									244	240	238	248	248	258	262									
14									232	234	230	254	238	264	242									
15									256		226	258	266	238	268	246								
16									246	228	238	250	238	252	252	242								
17										238	234	248	248	300	256	254								
18									234	222	236	262	250		284	258								
19										238	232	244	252	298	250	234								
20										240	238		248	250	236	232								
21										234	240	240	240	240	264									
22									254	248	240	256	250	266	248	228								
23									238	256	236	242	236	266	252	236								
24										246	238	220	228	264	252									
25									230	242	232	226	246	248	256	230								
26											230	262	236	270	244	242								
27									234		230	242	258	252	238	242								
28										232	224		258	266	266	242								
29											240	244	242	274	242	230								
30											234	240	236	246	252									
31										230	246	236	230	276	250	216								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								1	16	26	31	27	30	28	30	22	4							
MED								228	235	234	238	250	248	264	252	242	243							
U Q									241	240	246	262	252	272	260	248	263							
L Q									234	230	234	242	238	247	244	234	237							

IONOSPHERIC DATA STATION Kokubunji

OCT. 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 262	E B 248	E B 252	232	E B 268	E B 256	206	216	A	A	194	186	184	206	206	208	234	228	204	190	E B 250	E B 272	E B 278	E B 284
2	E B 264	E B 256	E B 244	218	196	E B 260	200	206	A	202	A	E A 256	220	208	186	198	220	208	198	E B 210	E B 242	230	E B 238	E A 272
3	E B 252	E A 254	E B 234	224	222	E B 238	206	204	210	200	196	A	A	206	A	196	220	230	216	206	226	226	E A 278	E B 260
4	E B 248	E B 238	E B 244	E B 256	E B 228	E B 246	206	180	204	198	204	206	190	200	212	A	H 172	220	204	E B 204	E B 240	230	E B 224	E B 260
5	E B 270	E B 268	E B 258	E B 256	E B 256	E B 228	204	208	208	198	192	190	192	204	204	206	202	216	214	202	E A 262	228	228	220
6	E B 252	E B 252	E B 264	E B 276	E B 268	E B 256	216	208	214	196	196	198	194	176	200	218	206	220	200	210	206	E A 292	E A 280	E A 264
7	E A 256	E B 276	E B 276	E B 254	E B 236	E B 250	204	222	204	190	198	216	214	196	A	218	A	218	208	210	220	202	E B 276	E B 278
8	E B 304	E B 288	E B 262	E B 234	E B 264	E B 262	206	206	202	200	198	186	190	188	206	200	212	218	210	206	226	E B 248	E B 240	E B 222
9	E B 236	E B 258	E B 274	E A 280	E B 292	E B 266	204	204	212	202	198	202	A	210	222	216	216	220	212	220	228	E A 262	E B 236	202
10	218	E B 252	E B 278	E B 272	E B 266	E B 250	202	206	210	198	A	C	C	C	C	C	C	C	C	C	206	204	222	234
11	E B 268	E A 292	E B 276	E B 238	230	E B 238	208	210	206	188	204	A	200	190	A	A	228	222	212	226	234	E A 246	E A 322	E A 310
12	A	E A 330	E A 278	226	E B 280	E B 302	218	214	222	214	194	196	190	186	A	214	232	212	210	210	224	E A 276	E A 274	E B 278
13	E B 254	E B 244	E B 258	208	208	E B 246	222	222	208	204	208	198	192	190	226	218	232	214	206	216	E B 238	E A 290	E B 274	E B 244
14	E B 274	E B 274	E B 264	E B 262	E B 240	E B 244	214	212	206	202	204	194	184	206	206	202	210	206	202	230	E A 254	E B 266	E A 258	E B 244
15	E B 244	E B 246	E B 248	E B 254	224	E B 228	208	200	204	220	198	186	200	200	204	204	216	212	218	220	A	E A 252	E B 276	E A 302
16	E B 306	E A 280	E B 250	208	202	222	204	210	214	A	192	A	A	188	210	216	212	210	202	214	212	E B 238	E B 274	E B 280
17	E B 272	E B 280	E B 280	E B 252	214	E B 198	216	210	210	206	184	200	190	218	216	220	220	206	196	E B 220	E B 198	E B 300	E B 274	E B 286
18	E B 234	226	E A 266	E B 258	226	208	212	208	202	A	A	A	A	222	226	228	224	216	204	212	216	E A 260	E A 278	E B 262
19	E B 250	E B 264	E A 272	E B 258	208	190	212	204	212	210	192	192	202	208	206	214	220	214	204	228	E A 252	E A 324	E A 272	E A 240
20	228	226	E B 268	E A 266	220	206	206	206	208	202	A	200	204	A	A	A	218	210	200	230	232	210	E A 250	E B 260
21	E B 262	E A 270	E B 252	212	198	E B 204	208	216	224	206	202	192	192	186	232	224	220	208	210	E A 240	214	E B 238	E A 320	E B 298
22	E B 274	E A 288	E B 284	E B 240	212	204	206	210	206	198	200	192	186	220	210	A	212	208	E A 232	A	A	E A 238	E A 340	E A 306
23	E B 272	E B 284	E B 242	218	210	E B 256	216	212	202	A	A	204	208	212	212	216	212	208	C	E A 238	E A 314	E A 268	E B 240	E A 258
24	E A 300	E A 298	E A 280	E A 250	214	E A 268	218	218	216	208	192	A	200	200	210	228	230	202	206	216	E A 288	E B 288	E B 298	E A 282
25	A	A	A	E A 256	A	E A 296	236	216	194	206	202	190	196	192	A	A	212	202	220	A	A	A	E A 324	E A 284
26	E B 266	E B 266	230	E B 224	E B 236	E B 250	222	210	208	210	198	198	A	214	A	212	206	206	200	222	E B 242	230	230	226
27	E A 244	E A 256	E B 256	E B 240	222	222	210	204	196	210	196	196	188	206	198	A	208	200	E B 206	228	E B 238	E A 266	E A 252	E B 260
28	E B 264	E A 266	E B 246	E A 232	198	E B 250	206	214	216	200	192	220	196	212	208	216	214	202	190	232	E A 258	218	E B 242	E B 254
29	E B 260	E B 262	E B 258	E A 270	214	198	206	206	214	222	204	204	212	212	216	A	218	202	206	A	E B 240	A	E B 254	E B 254
30	E A 246	E B 268	E B 246	232	188	E B 258	210	202	212	220	206	194	202	194	210	216	216	196	202	206	E B 214	214	E A 282	A
31	A	E B 236	E B 274	E B 248	224	E B 222	198	208	210	206	A	204	192	180	216	188	204	206	206	206	228	E B 270	E B 272	E B 268
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	28	30	30	31	30	31	31	31	29	27	25	25	25	29	23	23	29	30	29	27	28	29	31	30
MED	E B 261	E B 265	E B 260	E B 248	U 212	E B 246	208	208	208	202	198	197	194	204	210	216	216	210	206	213	E 233	E 248	E 274	E B 261
U Q	E B 271	E A 280	E B 274	E B 258	E B 240	E B 256	216	214	213	210	203	204	202	211	216	218	220	218	211	228	E A 246	E 271	E A 278	E A 282
L Q	E 247	E B 252	E B 248	226	210	222	206	206	204	198	193	192	190	190	206	204	211	206	202	206	218	229	E B 240	244

OCT. 2010 h′F (KM)

IONOSPHERIC DATA STATION Kokubunji

OCT. 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							B	116	116	114	114	114	116	114	114	114	124	B						
2							B	118	A	A	A	A	118	116	116	116	116	B						
3							B	118	114	116	120	A	A	120	A	A	A	B						
4							B	116	120	122	122	A	120	120	A	A	A	B						
5							B	A	118	118	118	118	A	A	118	A	118	B						
6							B	112	A	A	118	120	120	116	120	118	116	B						
7							B	118	118	116	118	116	116	116	A	114	118	B						
8							B	124	122	122	118	A	118	120	120	122	122	B						
9							B	122	120	122	114	118	118	118	118	112	118	B						
10							B	110	110	118	A	C	C	C	C	C	C	C						
11							B	118	110	108	A	A	122	120	A	A	A	B						
12							B	116	116	116	116	A	114	A	A	116	114	B						
13							B	A	A	A	A	114	114	114	116	120	A	B						
14							B	A	120	120	A	A	114	118	A	A	A	B						
15							B	116	118	118	A	116	120	120	118	120	A	B						
16							B	120	116	114	114	A	A	112	112	A	A	B						
17							B	112	A	120	120	124	124	124	118	108	114	B						
18							B	122	122	118	A	A	A	A	A	A	A	B						
19						B	B	A	A	A	116	116	116	120	112	114	110	B						
20							B	122	122	A	A	A	A	A	A	A	A	B						
21							B	116	A	A	A	A	A	116	116	118	118	B						
22								126	114	A	A	A	116	118	112	114	124	B						
23							B	118	110	A	A	A	114	114	A	116	A	B						
24							B	114	A	A	A	A	116	116	116	114	116	B						
25							B	A	118	118	120	A	A	116	110	108	108	B						
26							B	A	A	A	120	124	A	A	A	122	A	B						
27							B	116	A	A	118	A	A	118	116	A	114	B						
28							B	122	122	A	122	A	120	A	A	A	A							
29							B	118	110	A	A	A	A	A	A	A	A	B						
30							B	120	122	122	A	A	A	A	122	A	A	B						
31							B	122	A	A	A	A	A	A	120	118	A	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								25	21	17	16	10	18	21	18	18	15							
MED								118	118	118	118	117	117	118	116	116	116							
U Q								122	121	121	120	120	120	120	118	118	118							
L Q								116	114	116	116	116	116	116	114	114	114							

OCT. 2010 h′E (KM)

IONOSPHERIC DATA STATION Kokubunji

OCT. 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 96	98	98	B 98	B 96	B 96	130	132	120	118	114	102	102	120	96	94	128	114	96	B 96	B 100	B 96	B 94	B 100
2	B 98	B 98	B 98	B 98	B 96	98	138	130	106	106	106	106	104	G 104	98	102	102	B 96	B 96	B 96	100	96	94	100
3	98	98	B 96	98	B 96	B 96	138	126	116	120	102	106	106	G 104	104	104	104	102	100	98	94	98	94	100
4	96	B 96	B 96	B 96	B 96	96	136	98	106	102	102	102	104	G 104	106	106	106	130	100	B 96	B 96	B 96	B 96	B 96
5	B 96	B 96	B 96	B 96	B 96	B 96	108	106	106	106	100	120	106	104	104	100	102	98	B 96	98	98	98	94	94
6	B 96	B 96	B 96	B 96	B 96	B 96	116	120	108	108	104	104	G 104	G 104	100	102	128	156	B 96	B 96	B 96	96	90	92
7	90	90	B 96	90	B 96	B 96	140	138	96	102	96	112	G 104	116	104	116	122	104	102	98	104	102	98	B 96
8	B 96	B 96	B 96	92	B 96	B 96	124	128	120	118	104	102	98	96	104	104	96	148	94	96	90	92	88	B 96
9	B 96	B 96	92	94	B 96	94	140	G 104	104	104	96	122	118	104	104	G 104	160	154	126	B 96	102	98	96	100
10	96	96	B 96	B 96	104	B 96	148	148	G 104	102	106	C 96	C 96	C 96	C 96	C 96	C 96	C 96	C 96	C 96	B 96	B 96	B 96	B 96
11	B 96	102	106	106	106	B 96	142	138	G 104	G 104	108	102	G 104	G 104	104	106	104	104	98	98	98	98	98	94
12	94	96	96	102	106	B 96	118	118	122	102	100	98	98	104	100	132	94	88	B 96	106	102	102	102	B 96
13	B 96	B 96	B 96	98	B 96	B 96	112	108	108	104	98	98	92	98	102	112	102	100	98	98	98	98	104	100
14	98	98	94	B 96	B 96	104	108	100	100	100	104	108	G 104	G 104	106	106	106	B 96	104	100	96	96	100	B 96
15	B 96	B 96	B 96	B 96	B 96	B 96	B 96	100	100	100	106	114	102	102	102	96	102	118	104	104	100	100	100	94
16	96	94	90	B 96	B 96	B 96	120	148	122	126	114	104	96	116	120	106	108	B 96	98	100	B 96	102	102	B 96
17	B 96	B 96	B 96	B 96	B 96	B 96	164	144	102	102	102	106	G 104	100	100	94	122	90	B 96	B 96	B 96	B 96	B 96	94
18	B 96	94	94	B 96	90	96	102	94	114	110	104	104	106	102	102	102	106	B 96	106	B 96	102	96	96	90
19	90	96	100	B 96	98	B 96	160	106	108	102	102	102	102	92	92	92	140	130	102	102	100	98	96	94
20	96	94	94	92	94	B 96	B 96	144	120	104	108	108	104	106	106	106	106	102	106	B 96	100	94	94	92
21	88	88	92	B 96	B 96	90	138	132	106	104	100	100	98	98	98	96	122	134	108	98	98	104	106	96
22	100	100	B 96	B 96	94	92	94	108	112	100	102	94	94	98	120	122	122	118	108	102	102	102	100	100
23	94	94	94	94	B 96	98	100	142	114	102	102	100	94	94	94	98	96	96	C 96	96	94	94	94	94
24	96	96	92	90	90	90	138	130	102	106	106	100	100	100	124	124	142	102	104	100	98	98	108	100
25	90	90	90	88	88	90	B 96	104	100	96	96	94	94	94	138	120	120	128	116	110	106	100	100	92
26	92	B 96	96	96	96	96	130	106	100	98	102	106	106	98	104	106	104	B 96	90	102	96	94	90	90
27	96	96	92	B 96	B 96	B 96	B 96	116	108	102	102	104	100	102	100	96	142	98	B 96	102	102	100	98	98
28	94	96	94	94	94	96	B 96	G 104	104	104	102	104	104	102	102	104	100	100	B 96	102	100	100	B 96	100
29	100	B 96	96	94	94	94	100	G 108	G 108	106	106	100	100	104	96	96	96	96	96	96	94	92	96	94
30	94	B 96	B 96	B 96	B 96	B 96	B 96	138	124	118	104	106	100	102	102	102	108	B 96	B 96	B 96	B 96	108	100	94
31	98	88	B 96	B 96	B 96	B 96	136	G 106	106	108	106	102	102	102	102	100	102	102	98	98	100	104	96	96
	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	19	17	14	12	13	25	27	28	30	31	30	25	24	30	29	30	24	21	21	24	27	26	23
MED	96	96	94	94	94	96	130	126	107	104	102	104	102	102	103	104	106	103	102	100	100	98	97	94
U Q	97	98	96	98	101	97	139	138	115	108	106	106	104	104	104	106	122	129	106	102	102	102	100	100
L Q	93	94	92	92	92	91	110	106	103	102	102	102	98	98	100	97	102	99	98	98	97	96	94	94

OCT. 2010 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

OCT. 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		F3	F1				C2	CL22	CL22	CL22	CL11	L2	L2	CL22	L2	L2	CL22	C3	F2					
2						F2	H2	C2	L2	L2	L2	L2	L2		L2	L2	L2				F2	F2	F3	F3
3	F2	F3		F1			H2	C2	CL21	CL21	L2	L2	L2		L2	L2	L2	L3	F4	F6	F3	F1	F3	F2
4	F2					F2	H2	L1	L2	L2	L2	L2	L2		L2	L2	L1	CL22	F1					
5							L2	L2	L2	L2	L2	CL12	L2	L2	L2	L2	L2	L3		F1	F2	F2	F2	F1
6							C2	C2	L2	L2	L2	L2			L2	L2	C2	H2				F2	F2	F2
7	F3	F2		F1			H3	H2	L2	L2	L2	CL22		CL22	L2	CL22	CL22	L3	F2	F2	F2	F1	F1	
8				F2			C2	CL21	CL21	CL21	L2	L2	L2	L2	L2	L2	L2	H2	F3	F1	F2	F2	F2	
9			F2	F3		F1	H2		L2	L2	L2	CL12	CL12	L2	L2		H1	H2	F1		F1	F3	F1	F1
10	F1	F1			F1		H2	H2		L2	L2													
11		F2	F1	F1	F1		H2	H2			L2	L2			L3	L2	L3	L2	F2	F2	F2	F3	F7	F3
12	F3	F4	F3	F3	F1		C2	C2	CL11	L2	L2	L2	L2	L2	L2	CL11	L2	L2		F1	F3	F2	F5	
13				F1			C2	L3	L2	L2	L2	L1	L2	L1	L1	L2	L2	L2	F3	F3	F2	F2	F1	F1
14	F2	F2	F1			F1	L1	L3	L2	L1	L2	L2			L2	L2	L2		F3	F3	F2	F2	F2	
15								L2	L2	L2	L2	CL11	L2	L2	L2	L2	L3	C2	F6	F3	F4	F2	F2	F3
16	F2	F2	F2				C4	H2	C2	CL22	CL22	L2	L2	CL11	CL11	L2	L2		F3	F1		F1	F2	
17							H1	H2	L2	L2	L2	L2		L2	L2	L2	C1	L2						F1
18		F3	F2		F2	F2	L2	L2	CL11	CL11	L2	L3	L2	L2	L2	L2	L2		F3		F3	F5	F3	F2
19	F1	F2	F2		F1		H3	L3	L2	L2	L2	L2	L2	L2	L2	L2	HL11	CL11	F2	F6	F4	F2	F2	F4
20	F2	F2	F2	F4	F2			HL22	CL22	L2	L2	L2	L2	L2	L2	L2	L3	L4	F2		F2	F3	F4	F3
21	F2	F4	F2			F1	H2	C2	L3	L2	L2	L2	L2	L2	L2	L2	CL11	H1	F3	F3	F2	F2	F2	F2
22	F2	F2			F1	F1	L2	L2	CL21	L2	L2	L2	L2	L2	CL11	CL11	CL31	C4	F5	F5	F4	F6	F5	F4
23	F2	F4	F2	F3		F2	L2	H2	C2	L3	L2	L2	L2	L2	L3	L2	L3	L2		F5	F4	F5	F4	F3
24	F4	F5	F5	F4	F2	F2	HL11	H2	L2	L2	L2	L2	L2	L1	CL22	CL12	H2	LC22	F4	F3	F4	F2	F2	F4
25	F5	F4	F5	F4	F4	F2		L3	L2	L2	L2	L2	L2	L2	HL12	CL22	CL22	CL22	F3	F6	F7	F6	F3	F2
26	F2		F1	F1	F2	F2	CL11	L2	L2	L2	L2	L1	L2	L2	L2	L2	L2		F1	F1	F2	F3	F2	F3
27	F3	F3	F2					C2	L2	L2	L2	L2	L2	L2	L2	L2	HL11	L2		F1	F4	F4	F3	F3
28	F2	F3	F3	F3	F2	F2			L1	L2	L2	L2	L2	L2	L2	L2	L2	F3		F2	F3	F2		F2
29	F1		F2	F3	F2	F2	L2			L2	L2	L2	L2	L2	L1	L2	L2	L3	F3	F4	F2	F5	F3	F2
30	F2							H2	CL11	CL11	L2	L2	L2	L2	L2	L2	L2					F1	F4	F4
31	F4	F2					H1		L2	L2	L3	L2	L2	L2	L2	L2	L2	L3	F2	F1	F2	F1	F1	F2
	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																								

OCT. 2010 TYPES OF Es

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

f-PLOTS OF IONOSPHERIC DATA

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

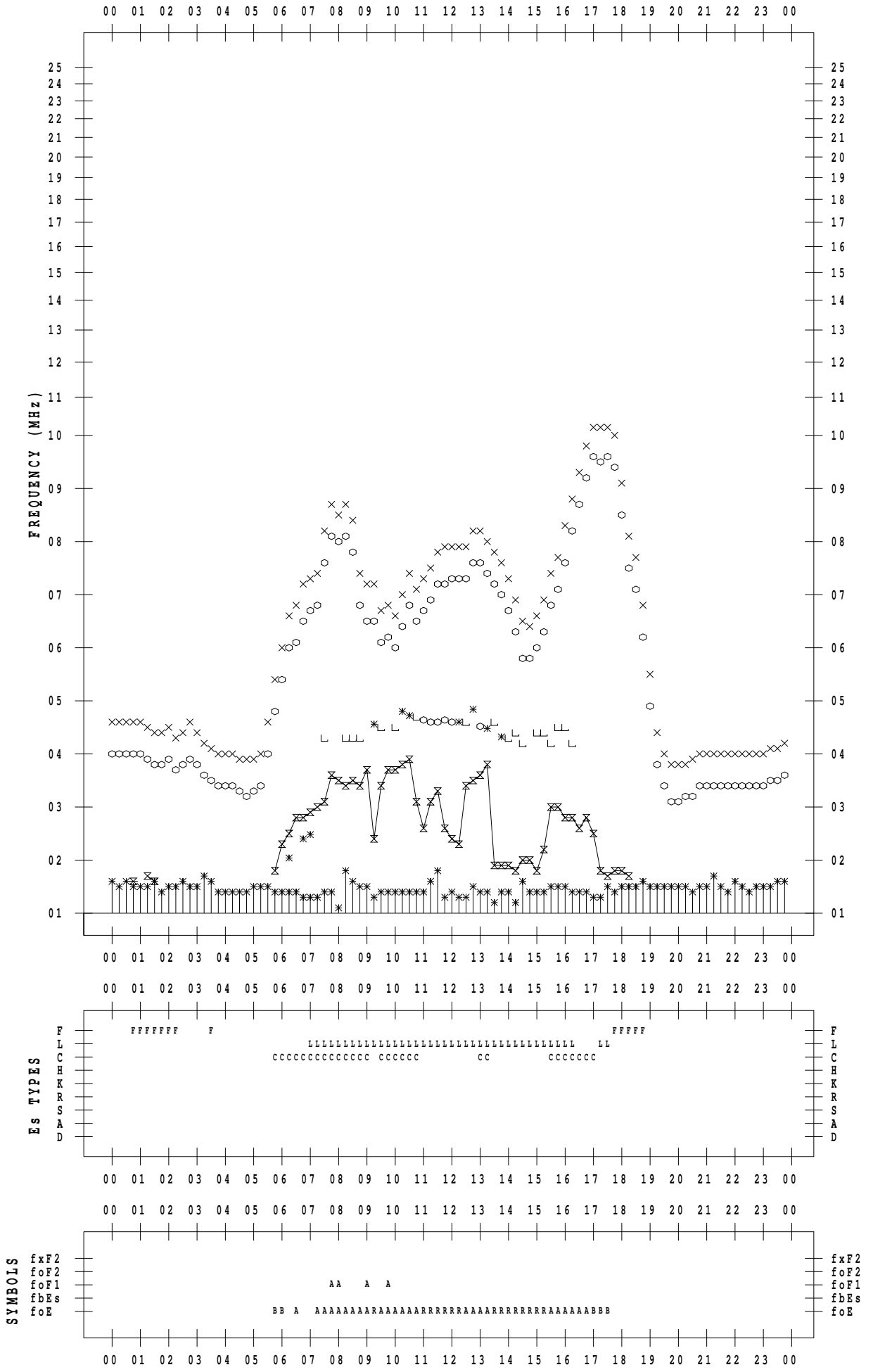
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 1

135 °E MEAN TIME



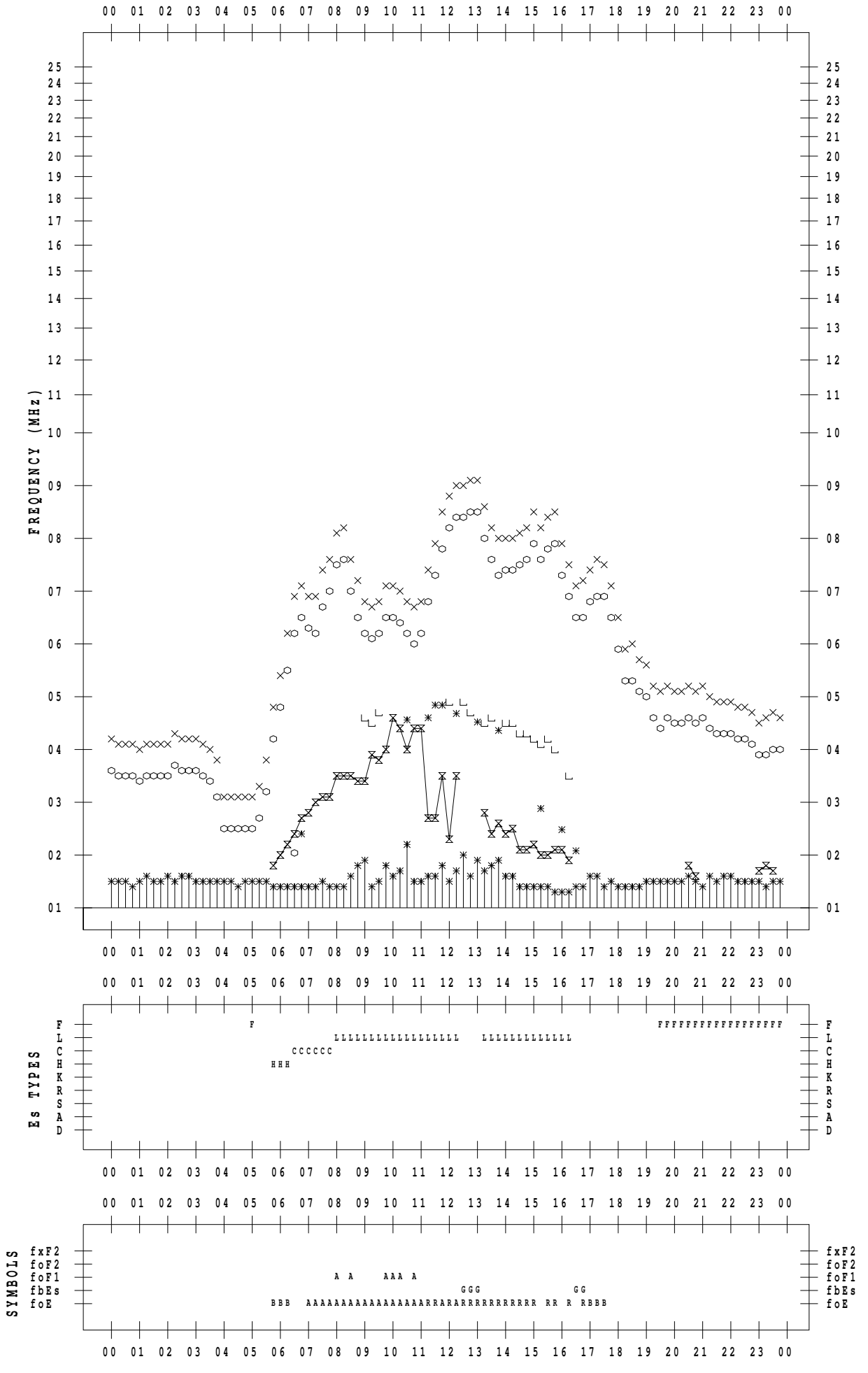
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 2

135 °E MEAN TIME



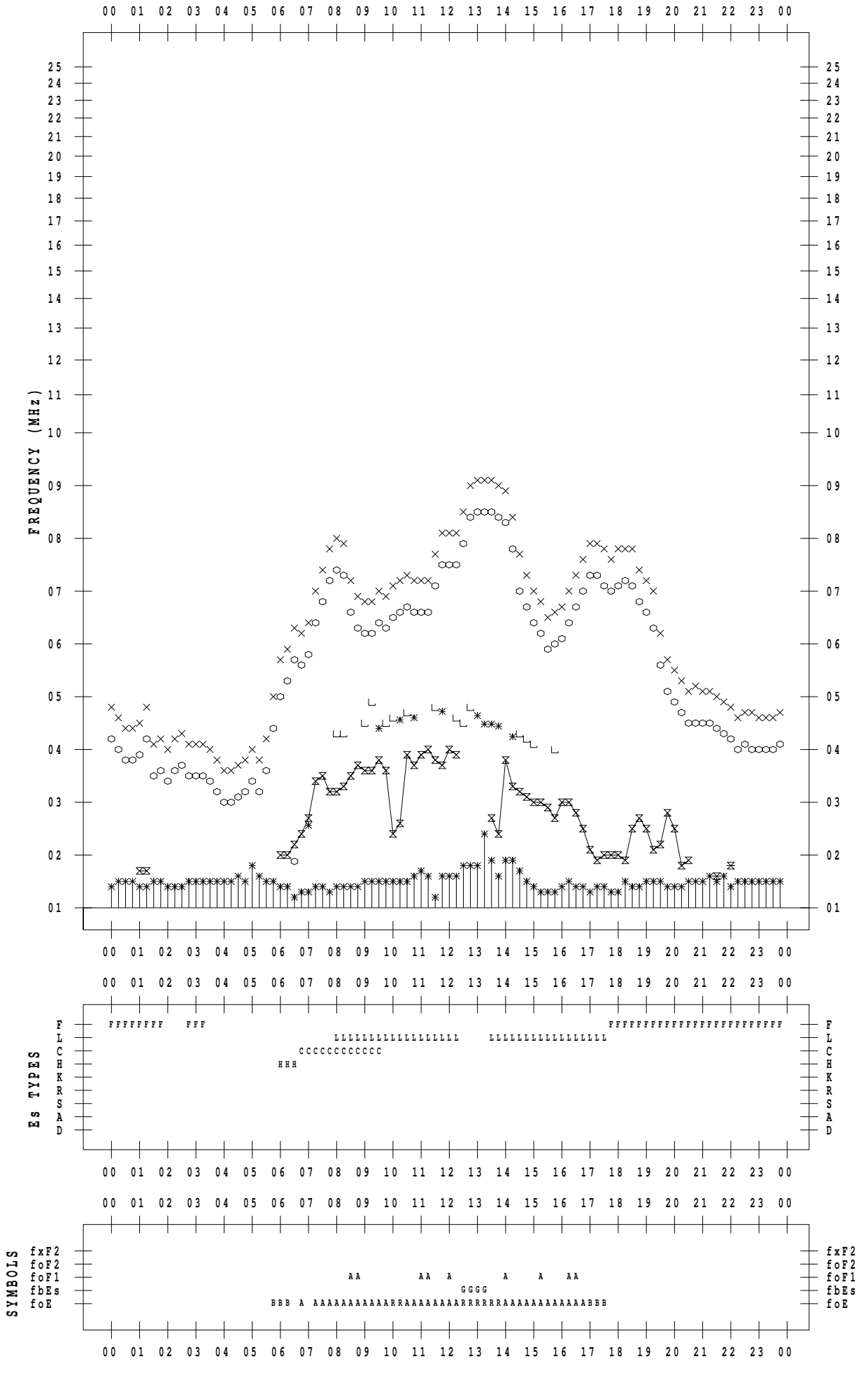
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 3

135 °E MEAN TIME



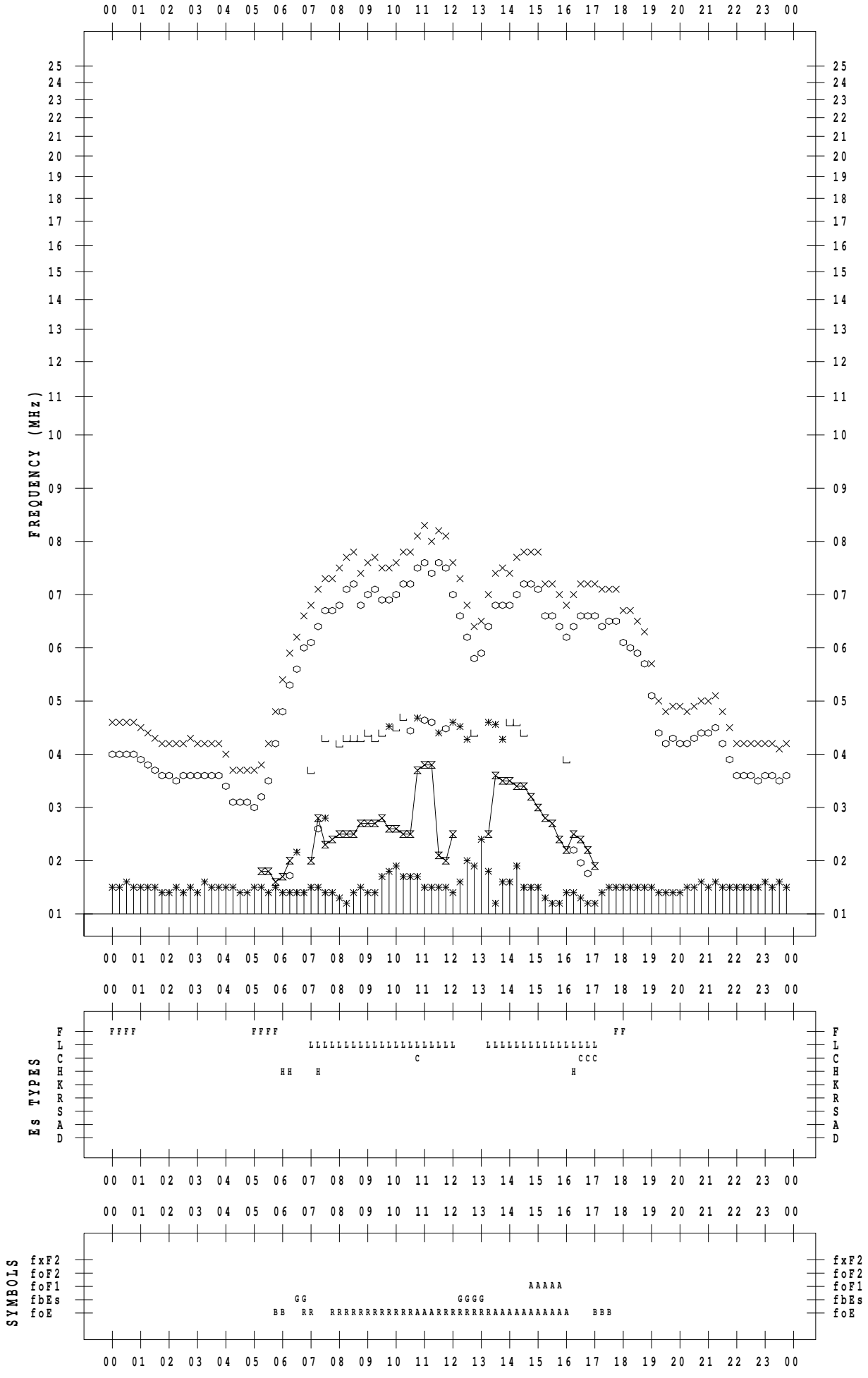
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 4

135 °E MEAN TIME



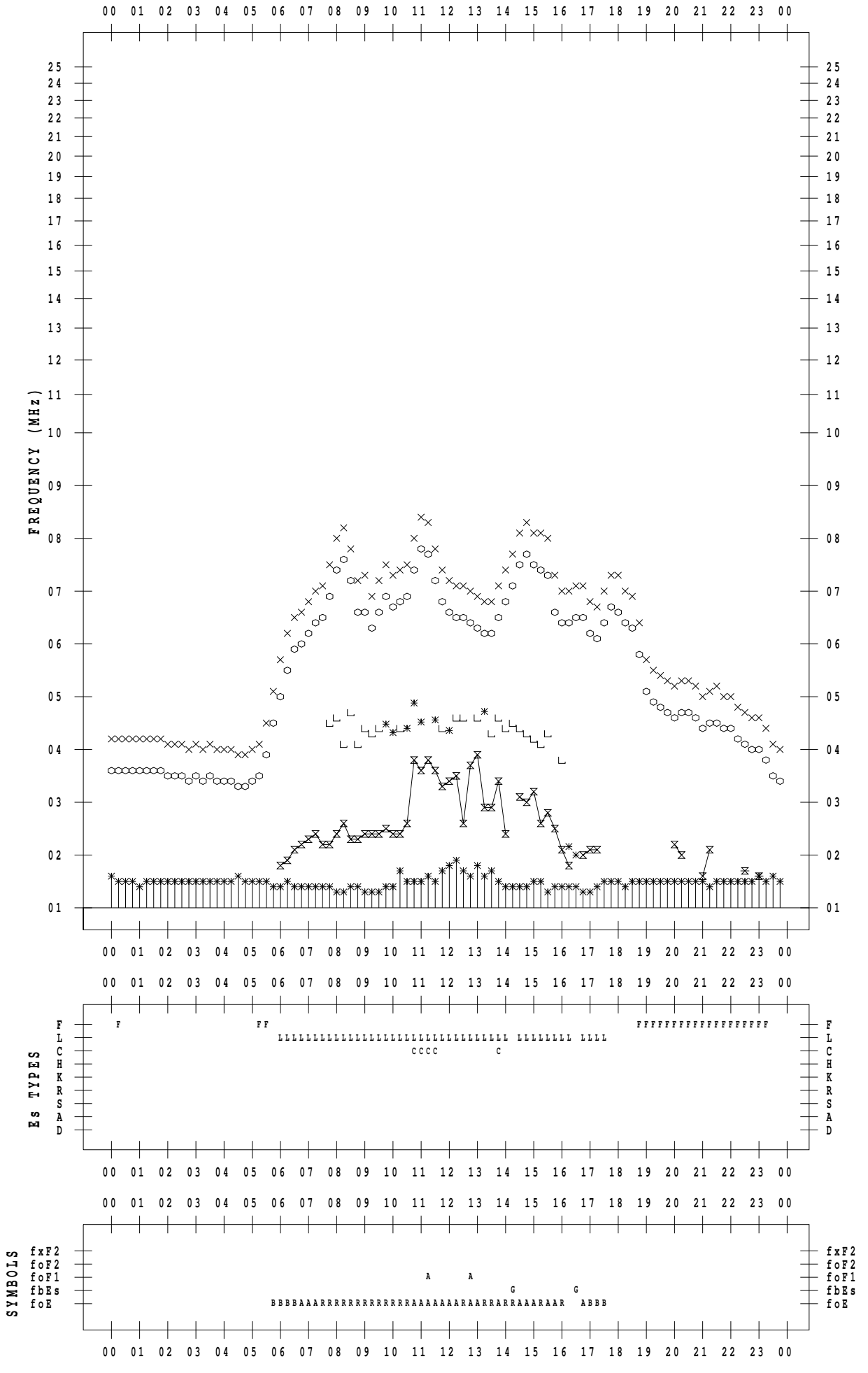
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 5

135 °E MEAN TIME



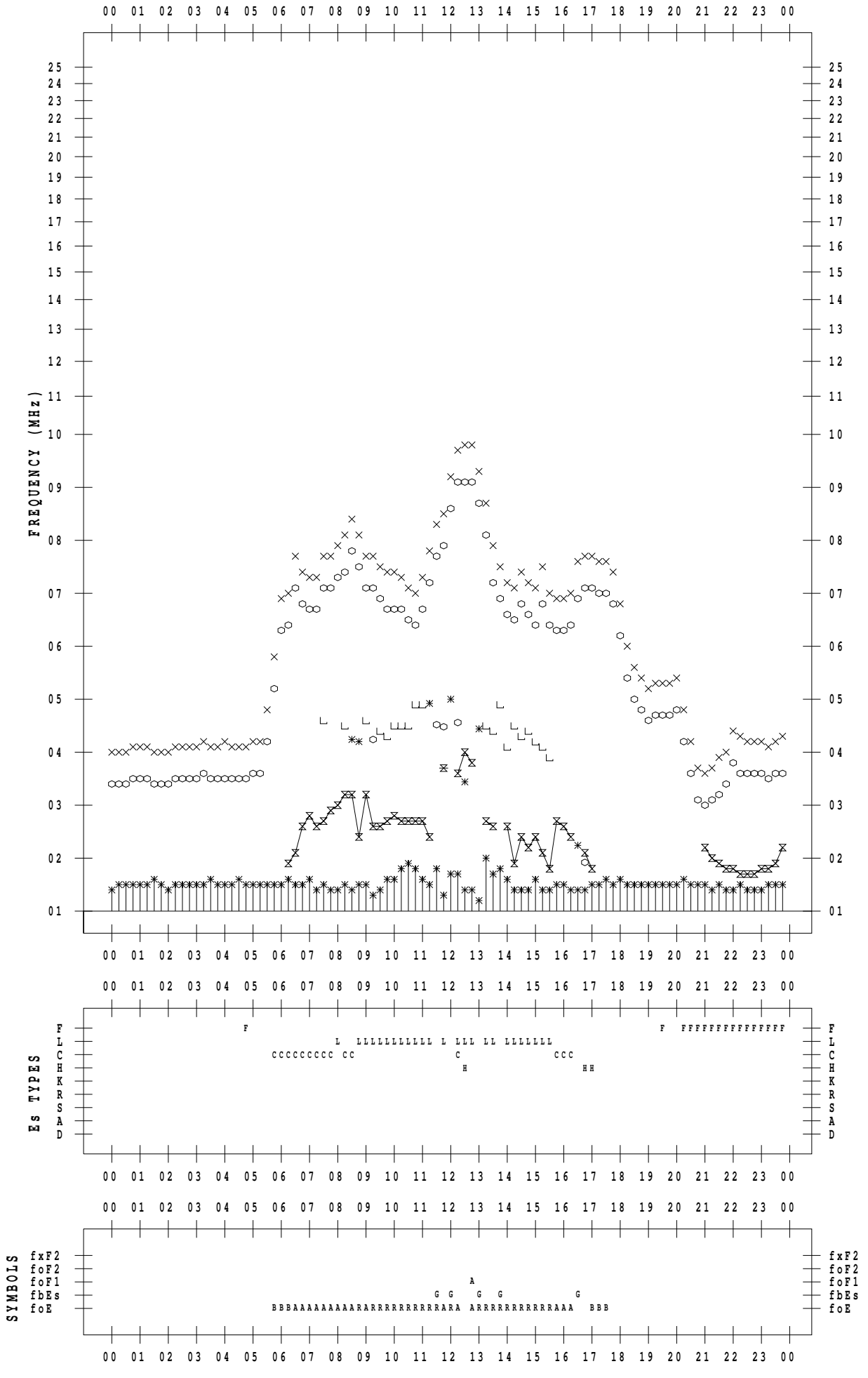
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 6

135 °E MEAN TIME



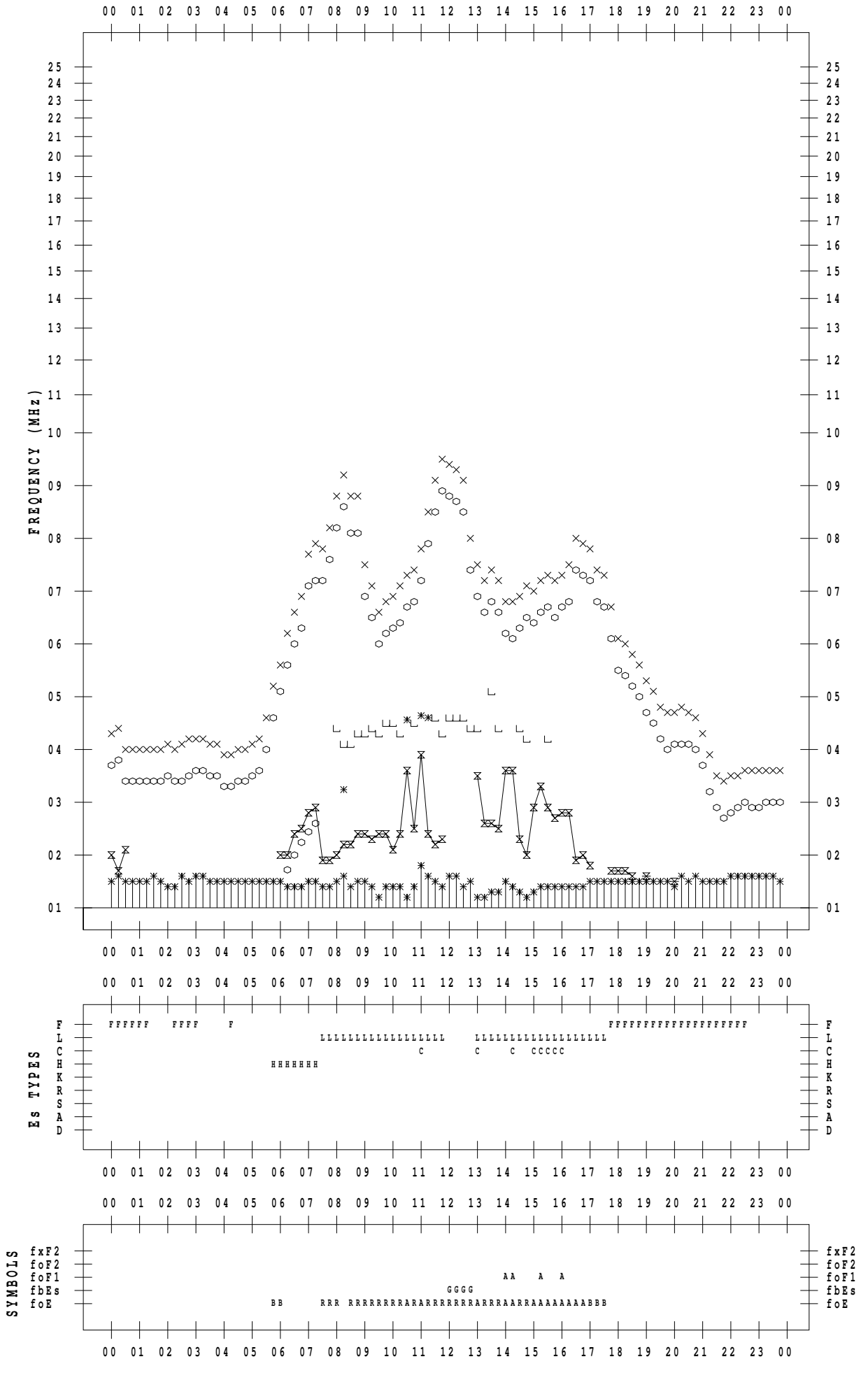
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 7

135 °E MEAN TIME



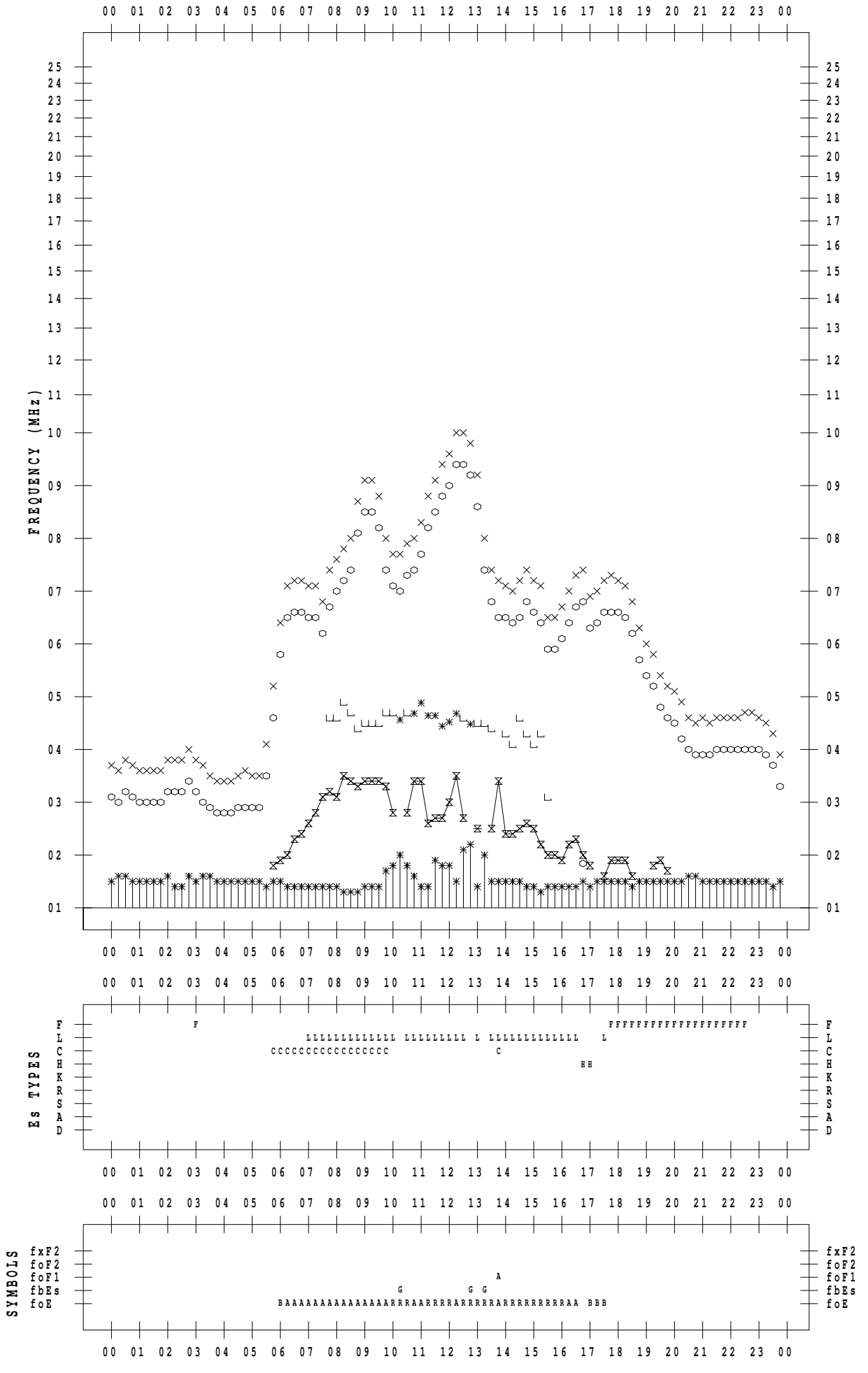
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 8

135 °E MEAN TIME



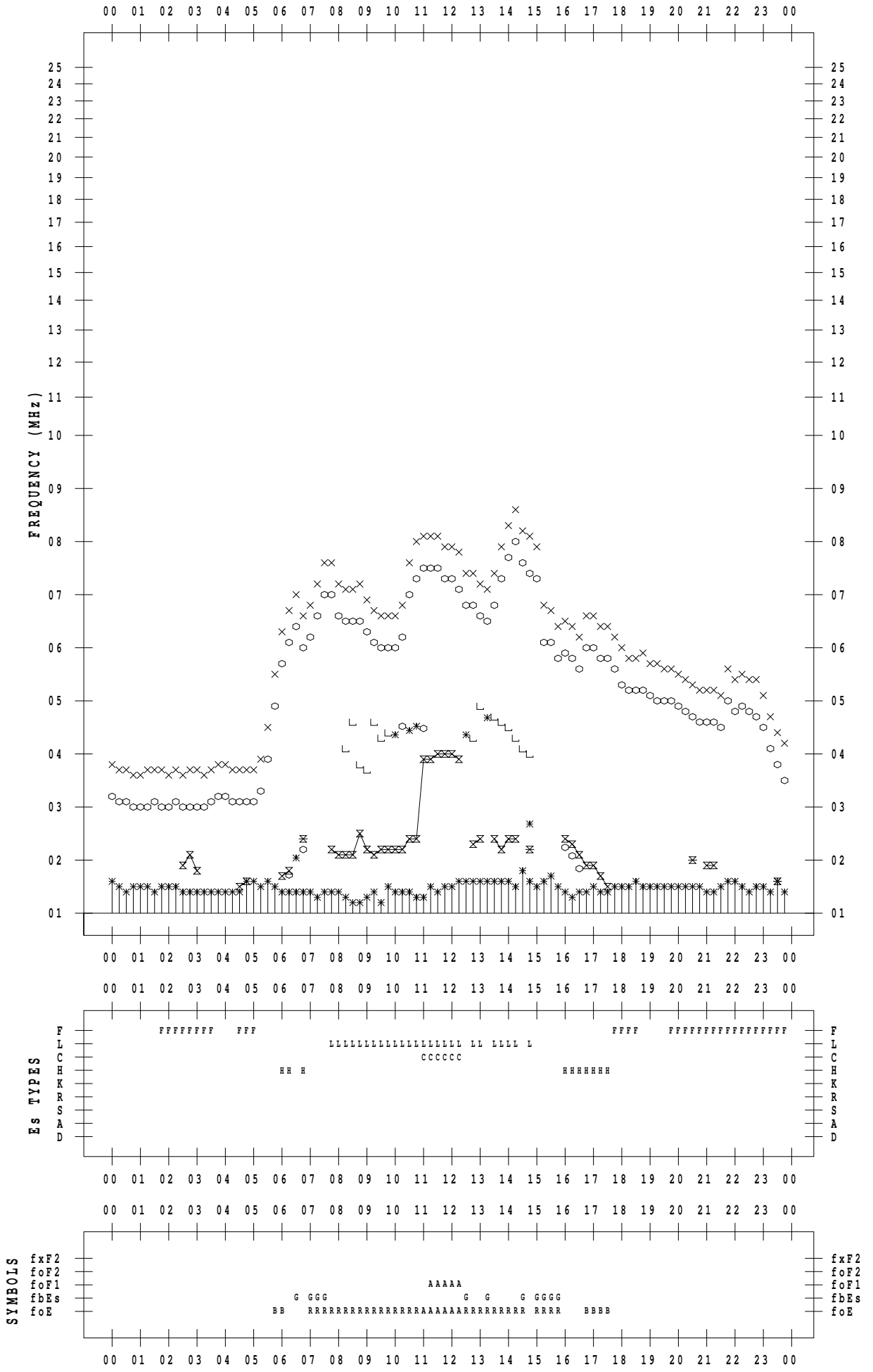
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/ 9

135 °E MEAN TIME



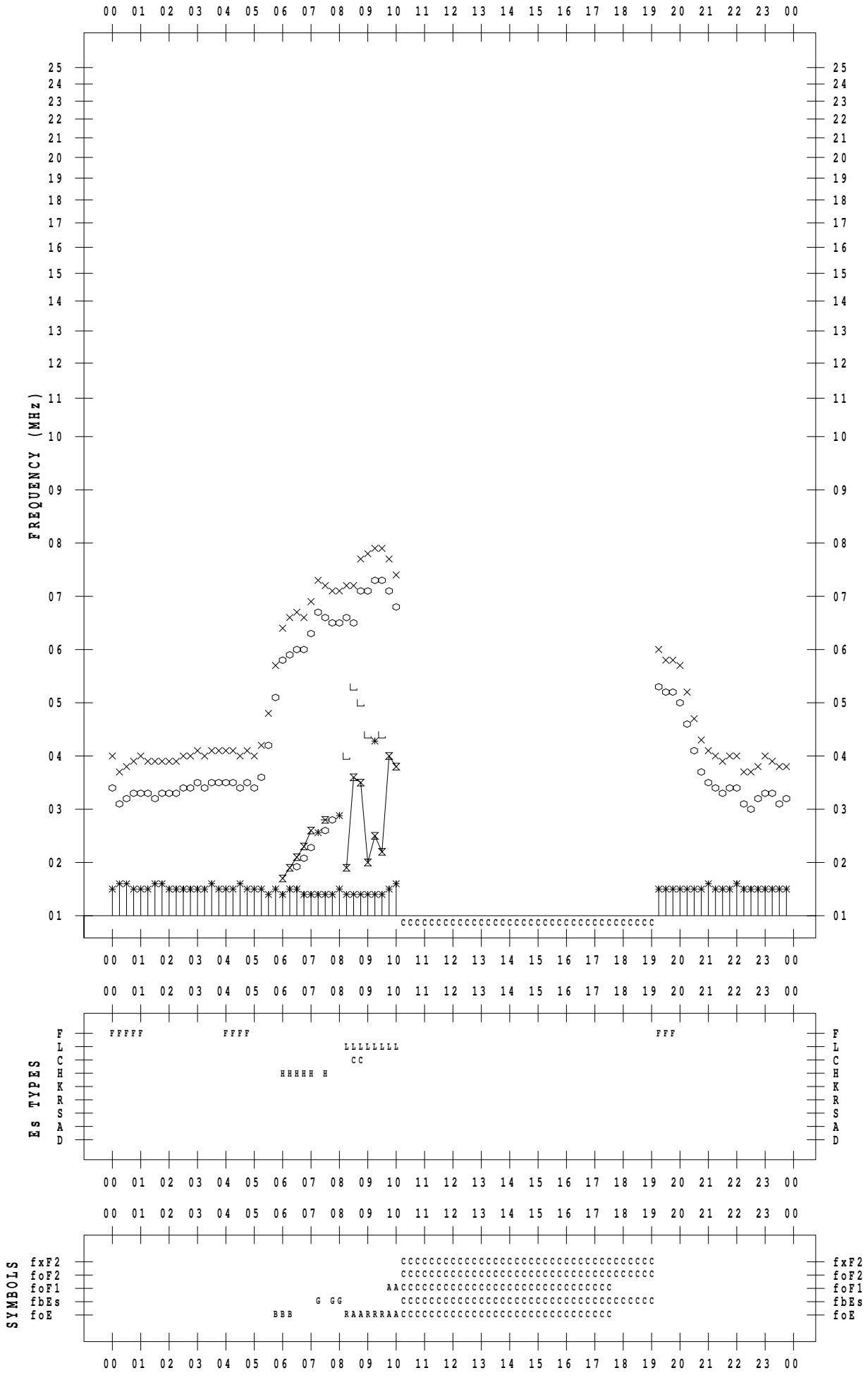
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/10

135 °E MEAN TIME



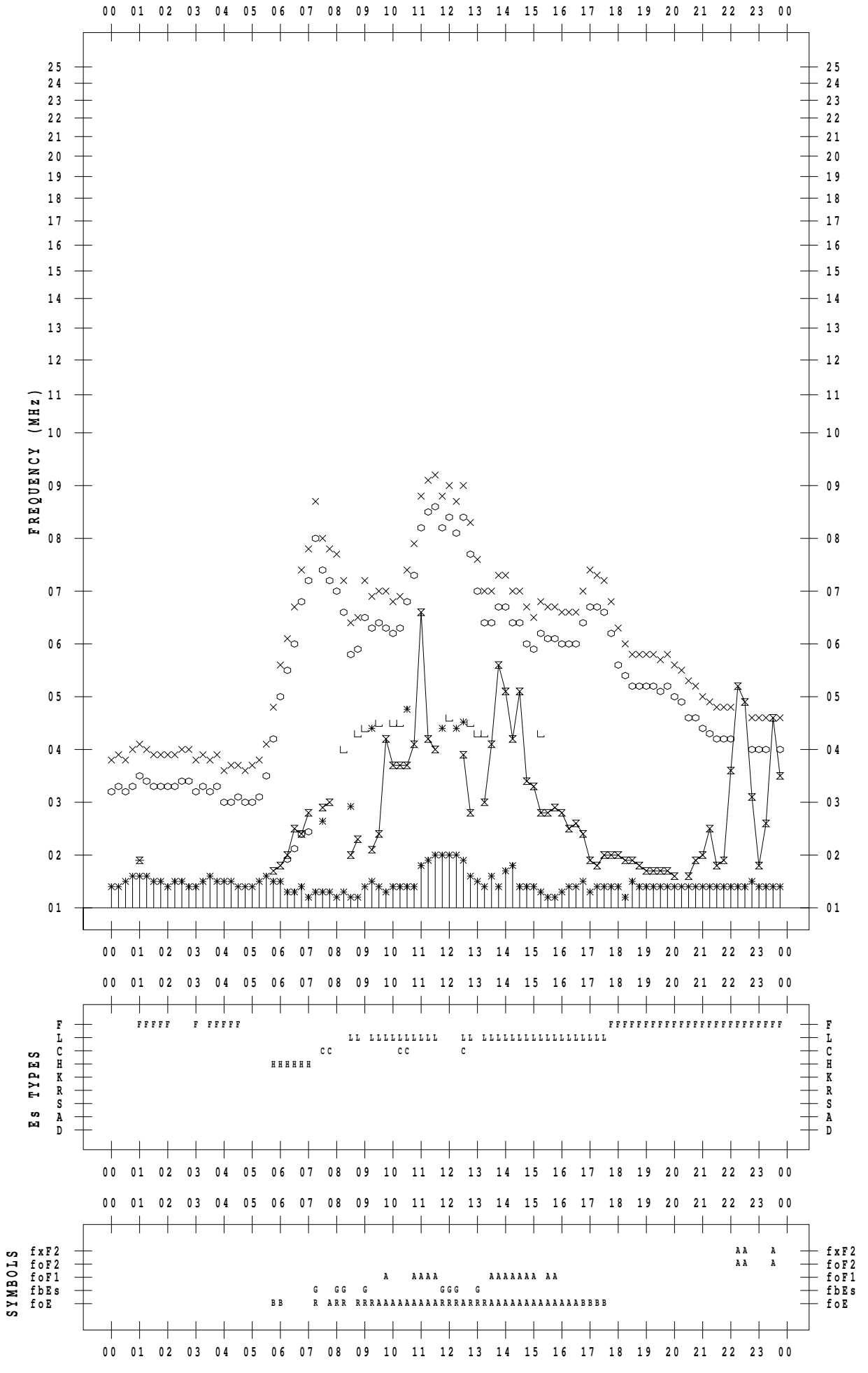
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/11

135 °E MEAN TIME



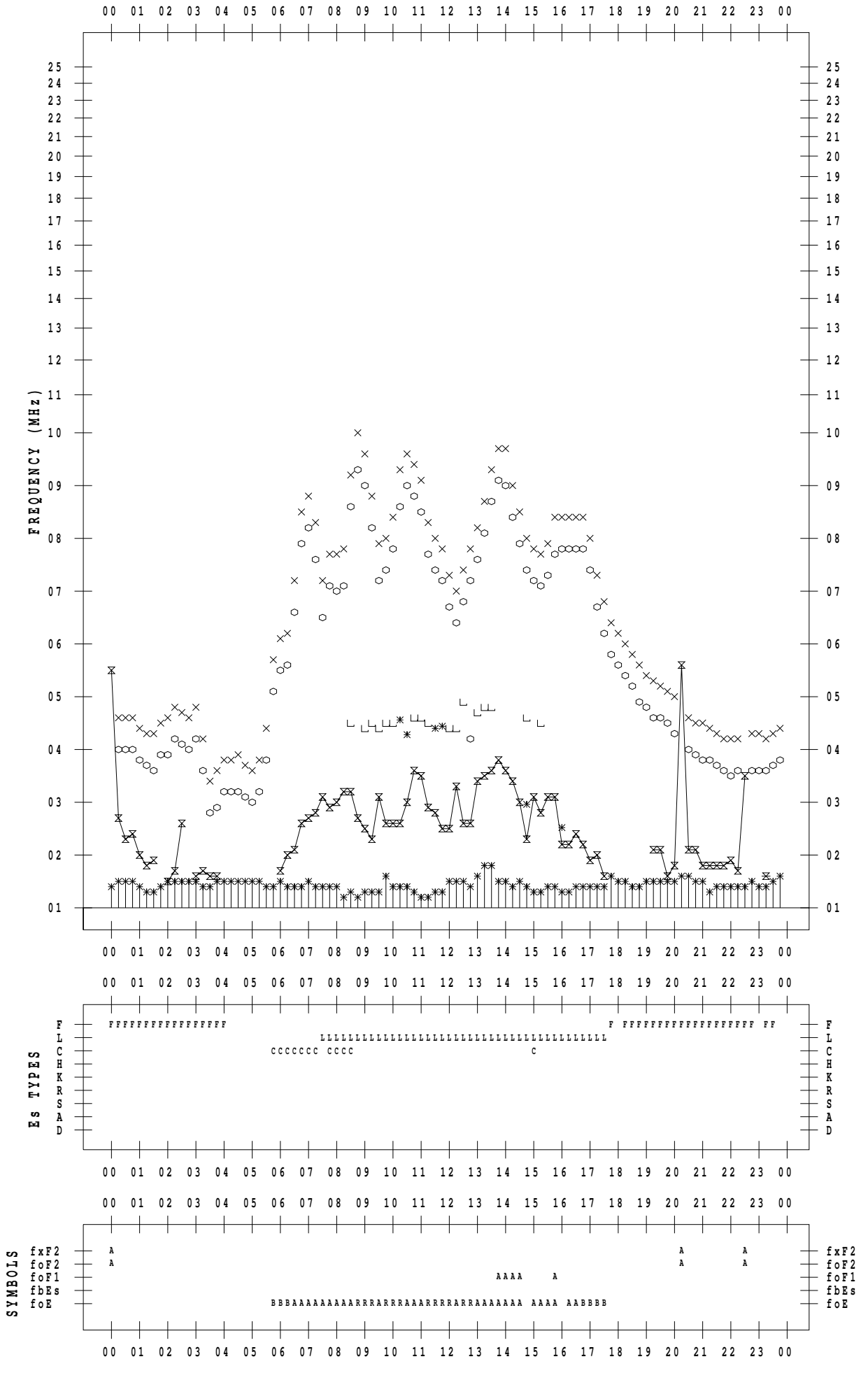
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/12

135 °E MEAN TIME



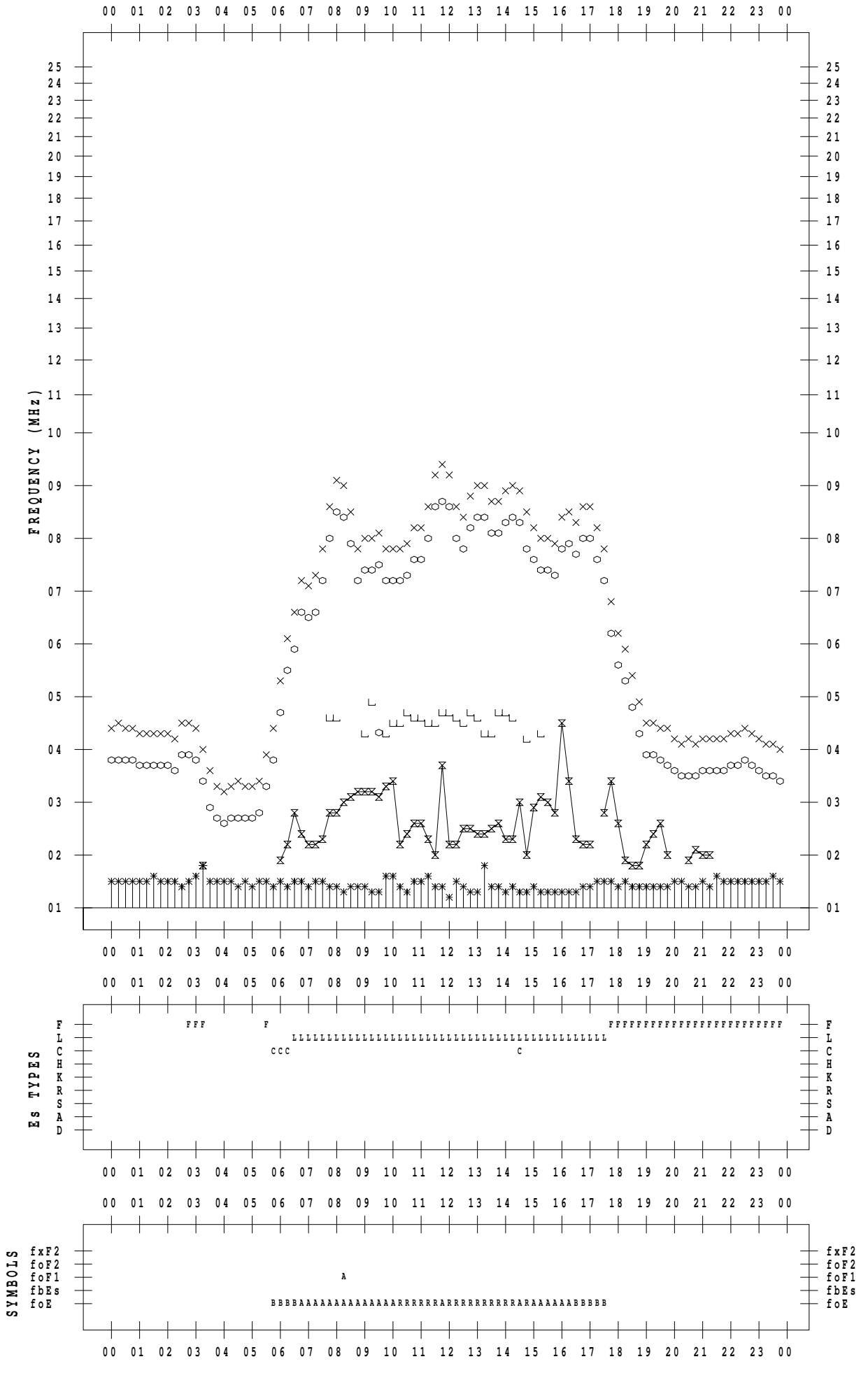
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/13

135 °E MEAN TIME



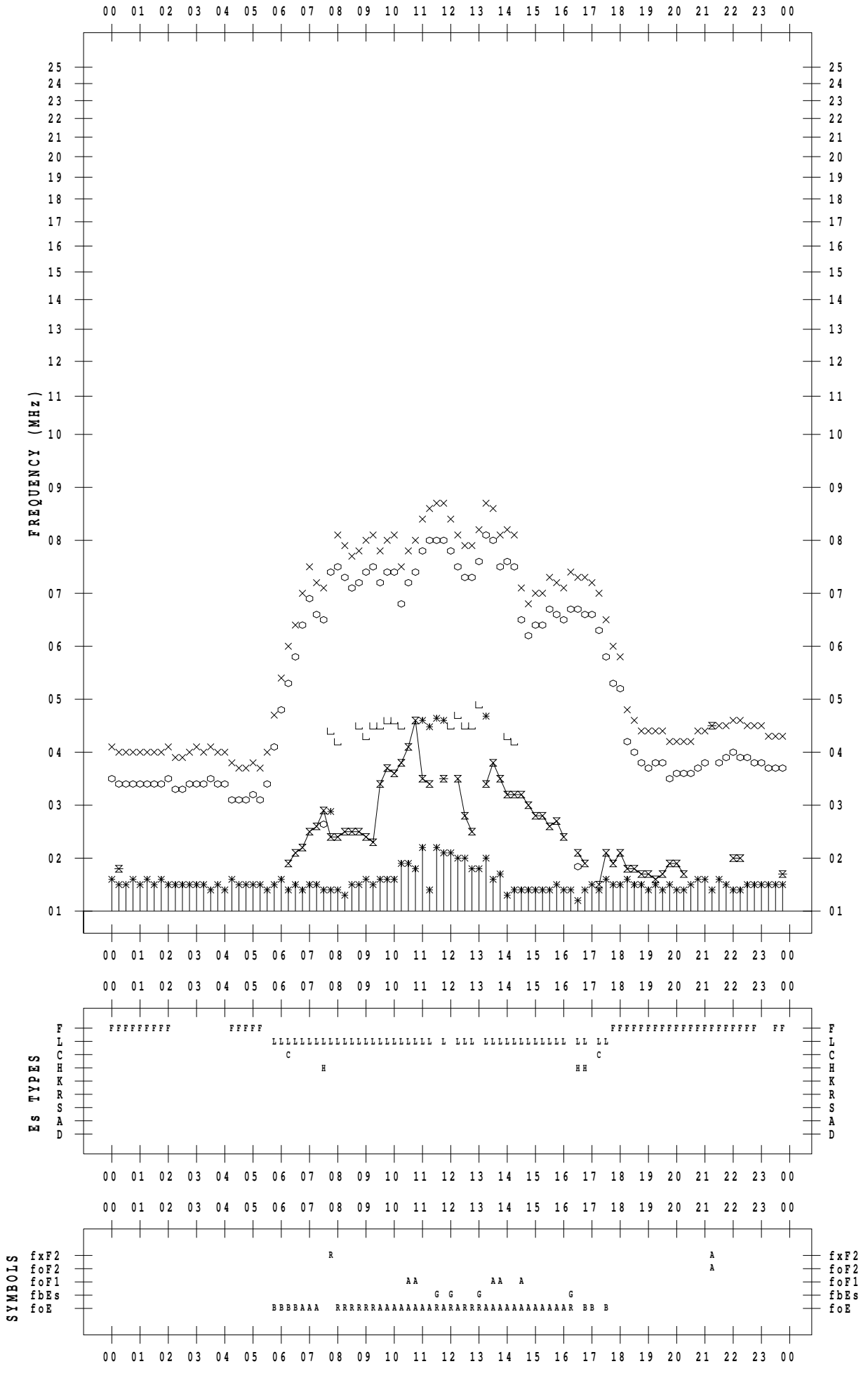
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/14

135 °E MEAN TIME



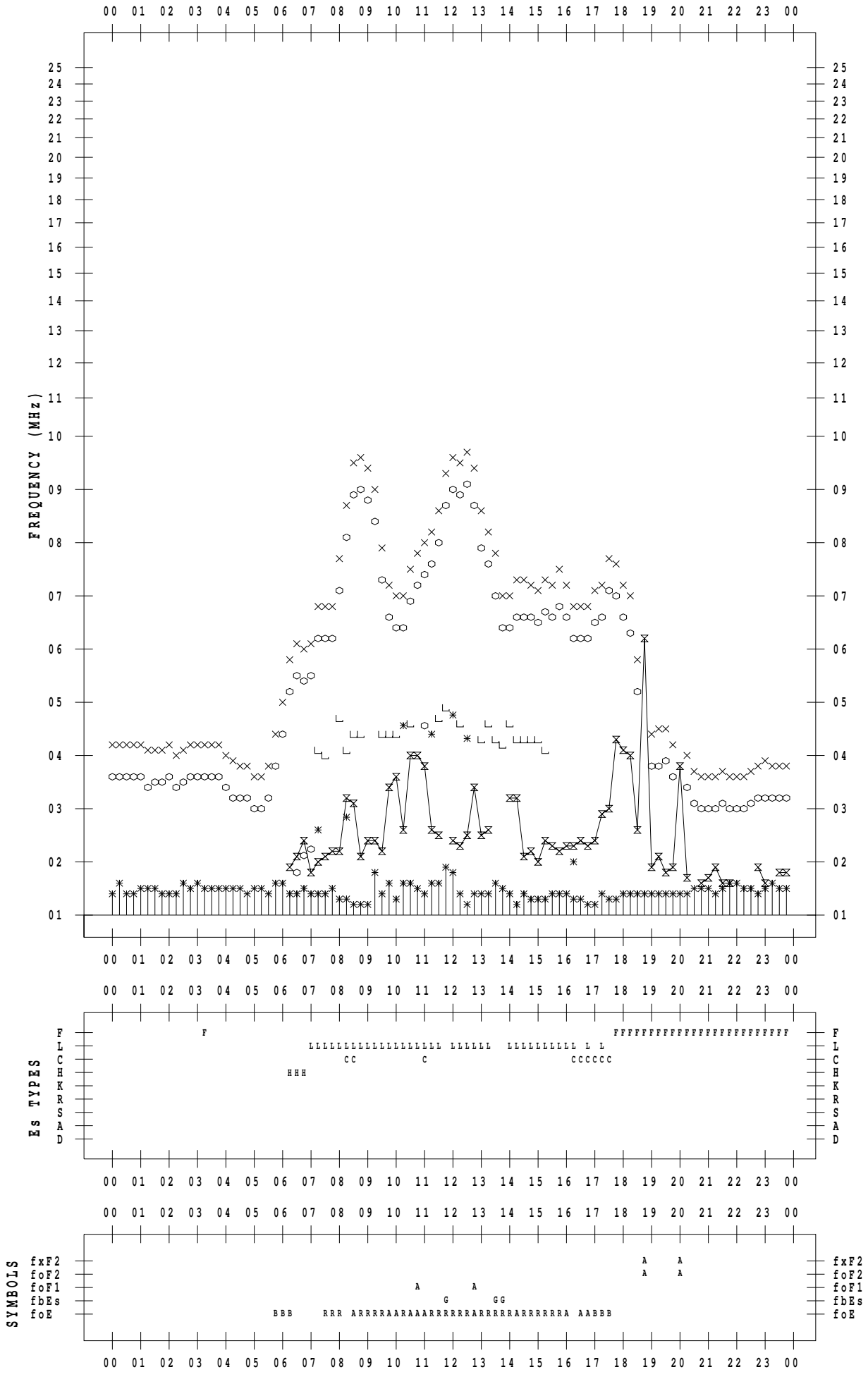
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/15

135 °E MEAN TIME

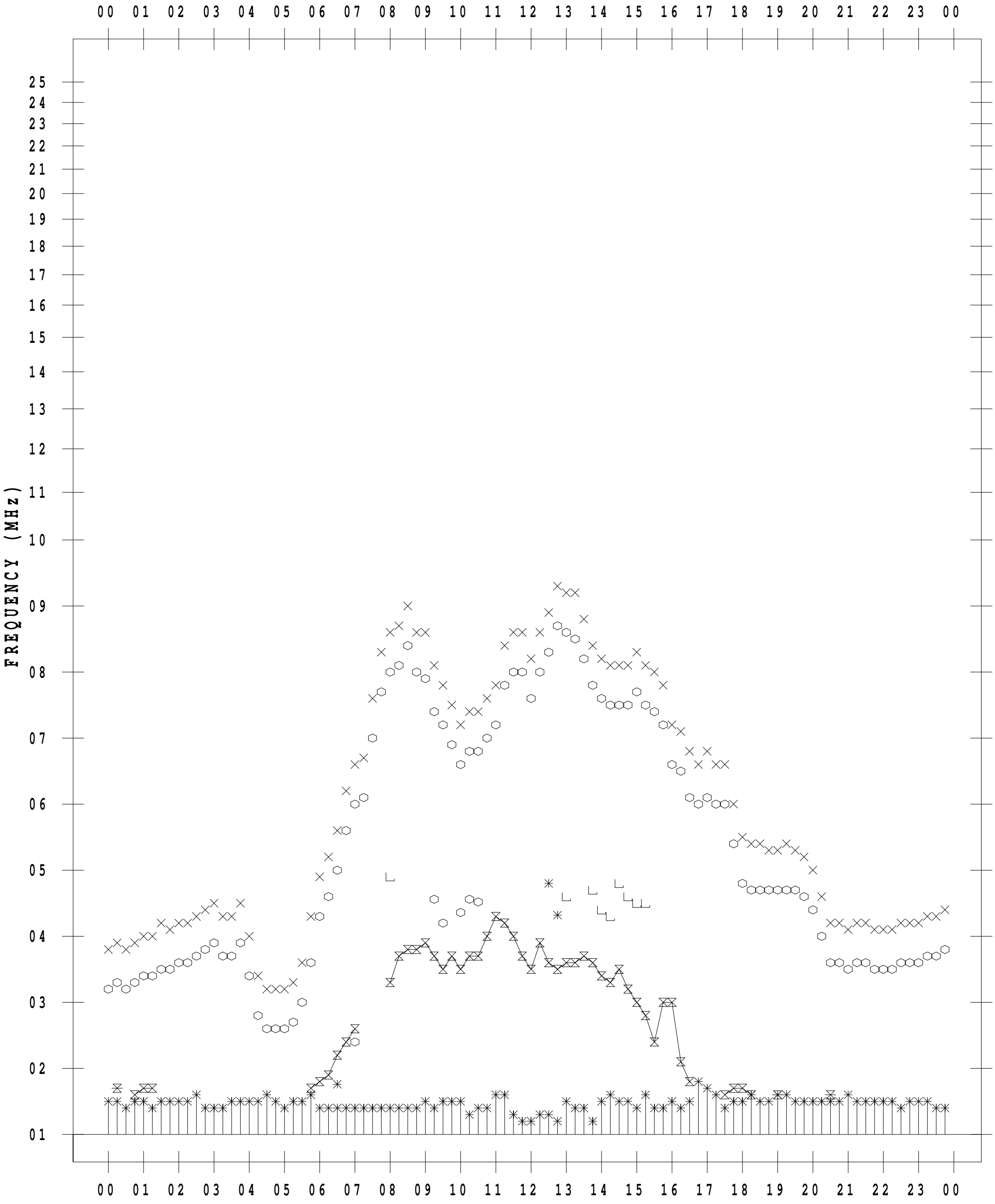


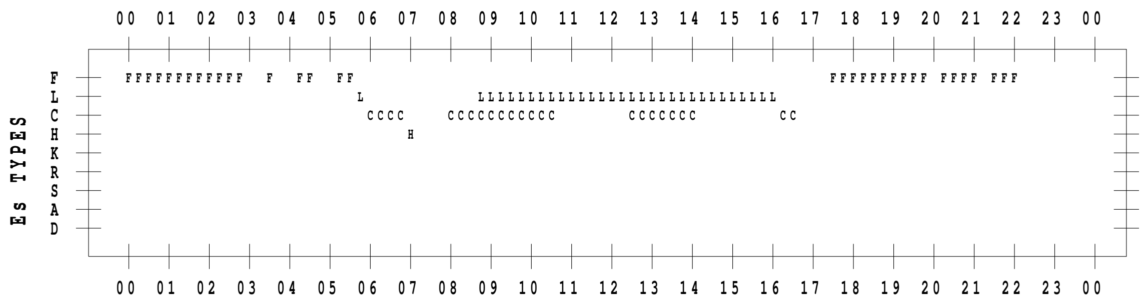
f-PLOT DATA

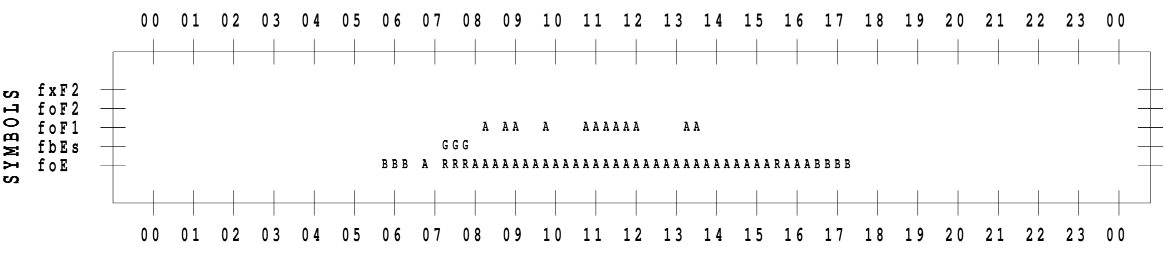
SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2010/10/16

135 °E MEAN TIME







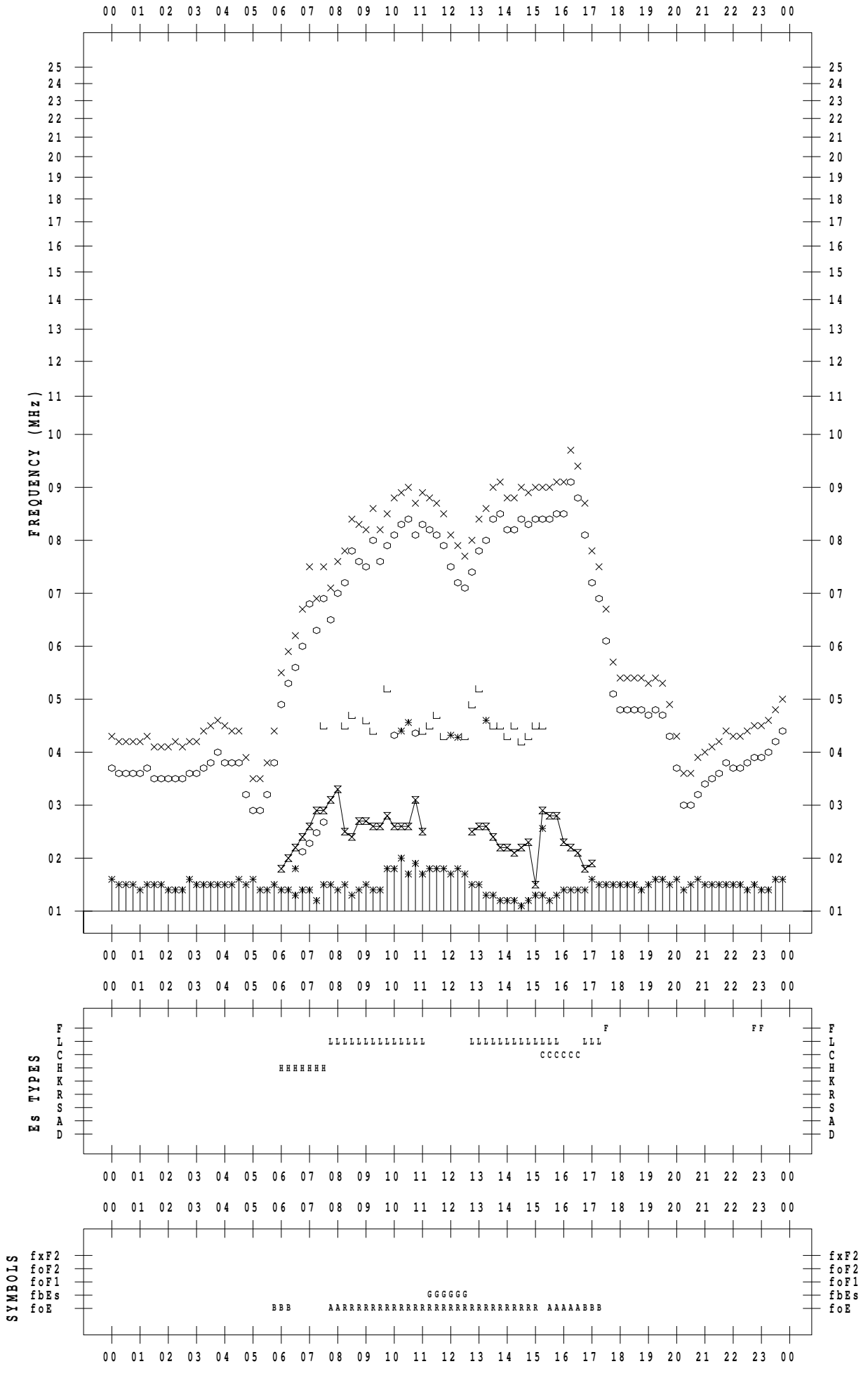
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/17

135 °E MEAN TIME



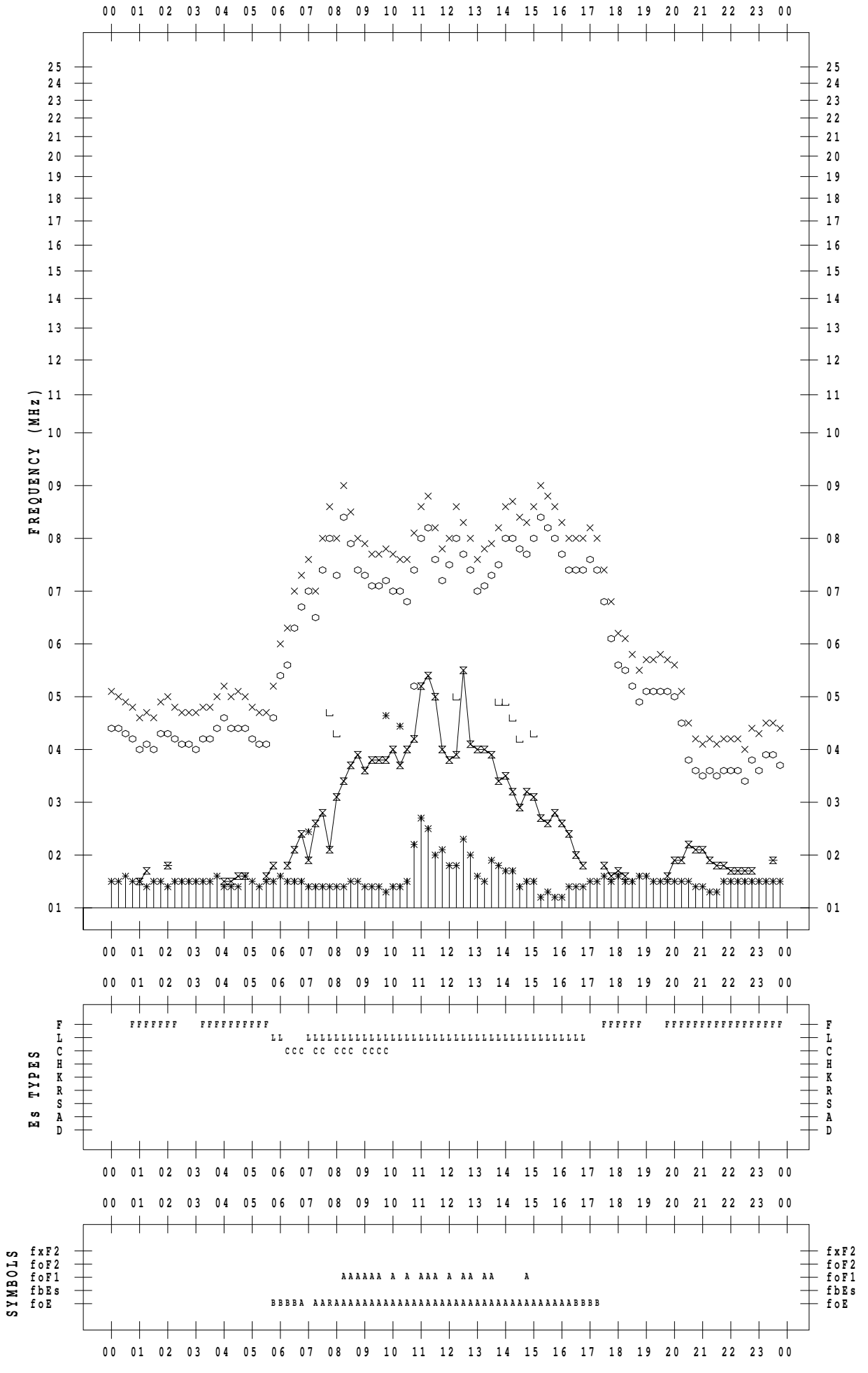
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/18

135 °E MEAN TIME



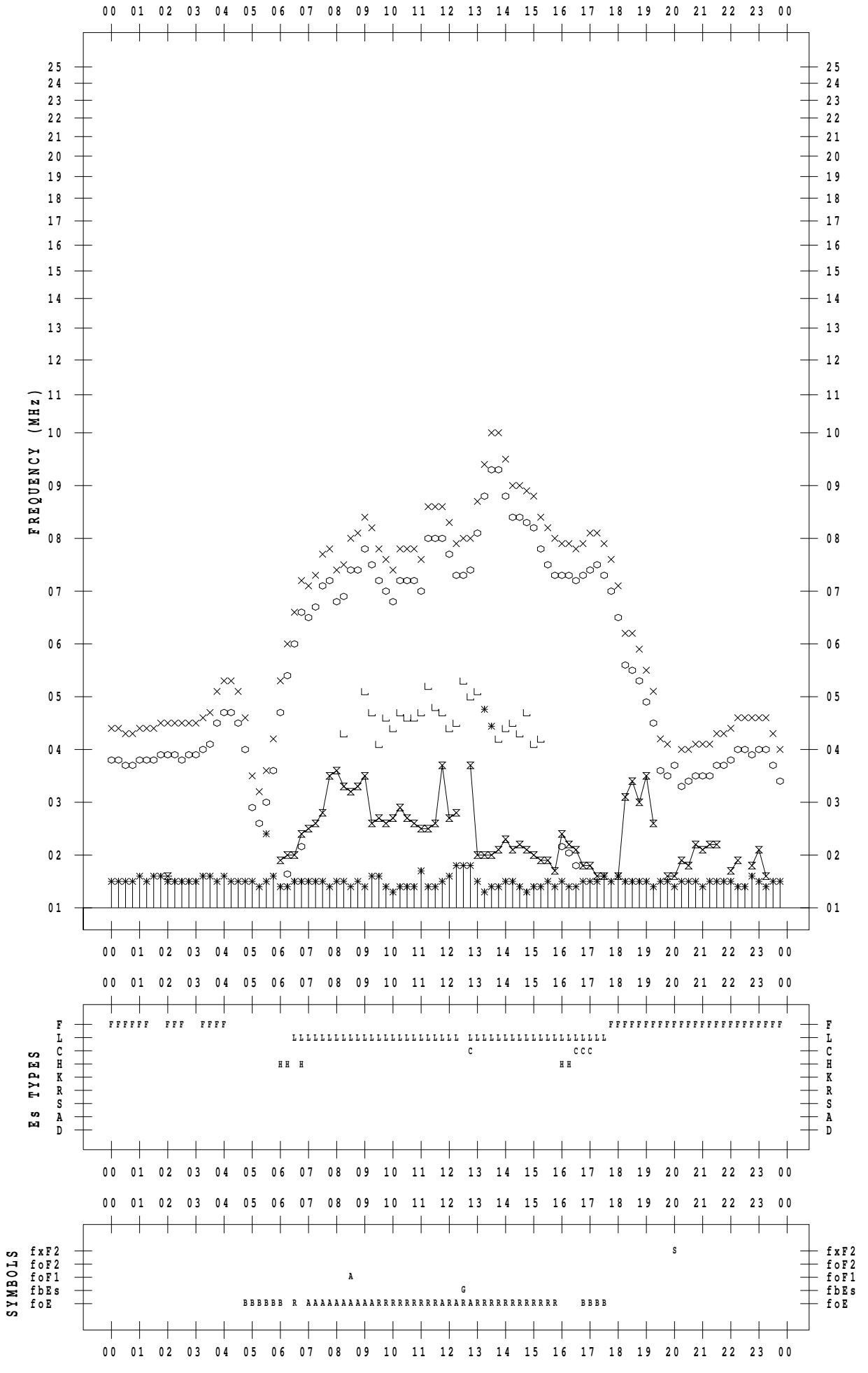
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/19

135 °E MEAN TIME



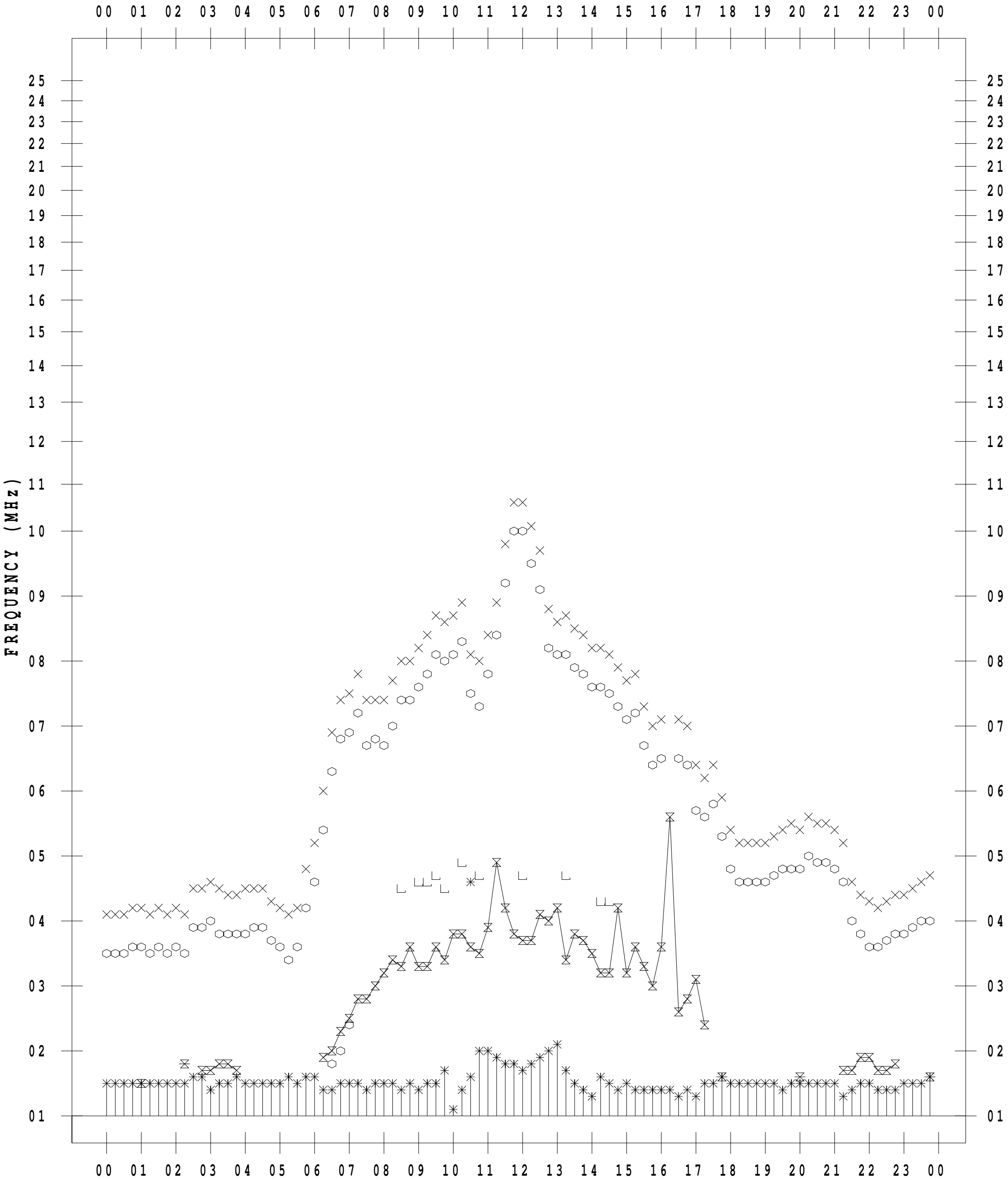
f-PLOT DATA

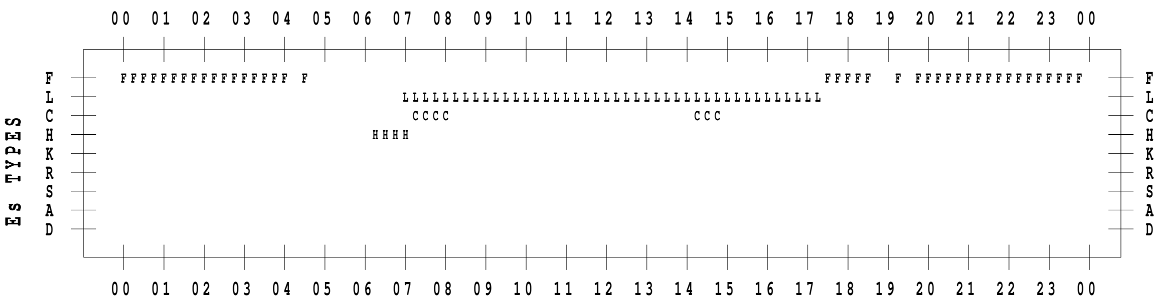
SCALER : I.NISHIMUTA

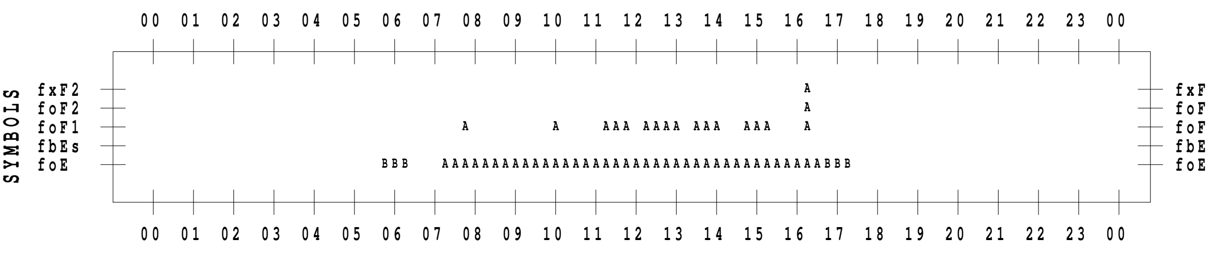
STATION : Kokubunji

DATE : 2010/10/20

135 °E MEAN TIME







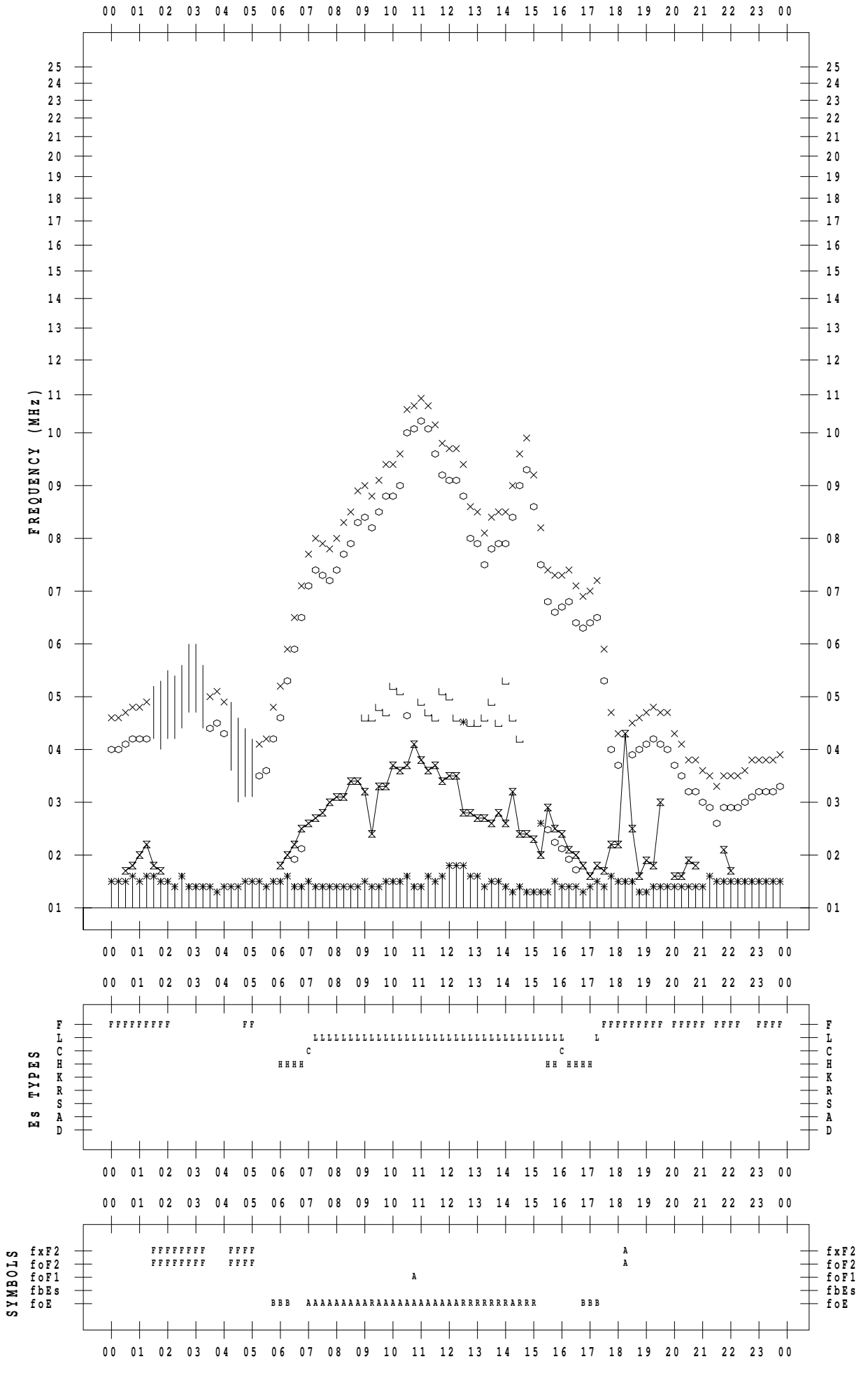
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/21

135 °E MEAN TIME



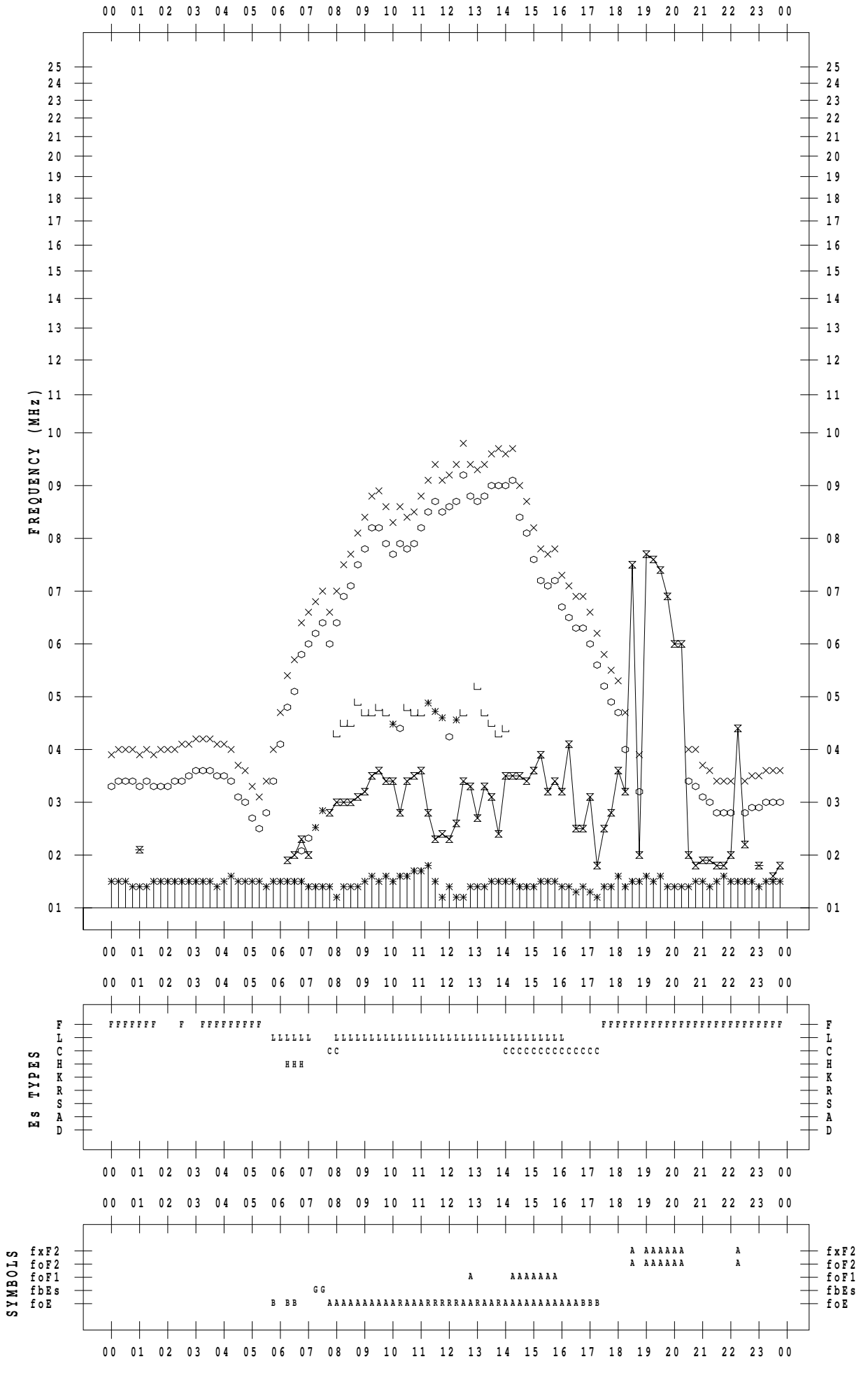
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/22

135 °E MEAN TIME



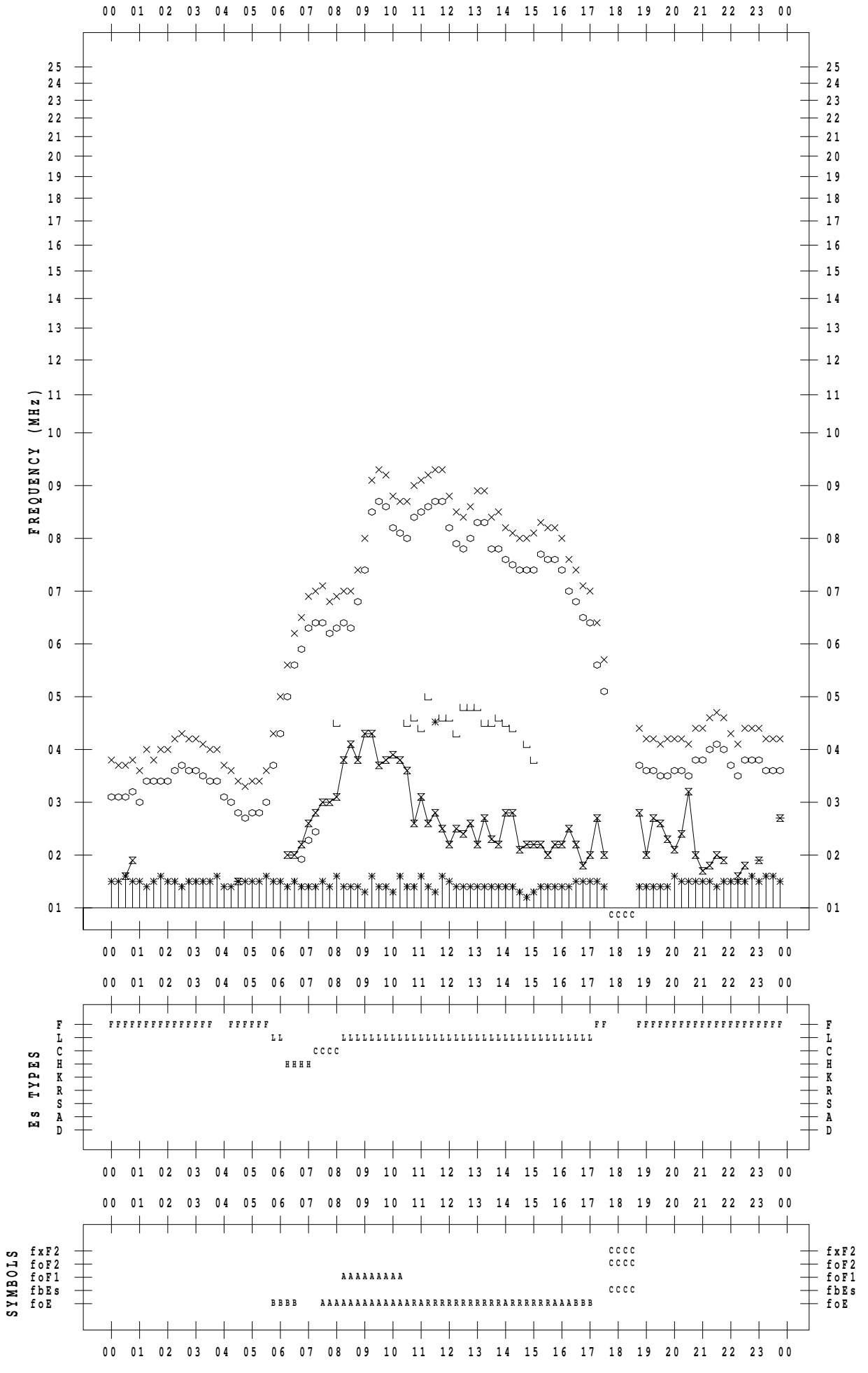
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/23

135 °E MEAN TIME



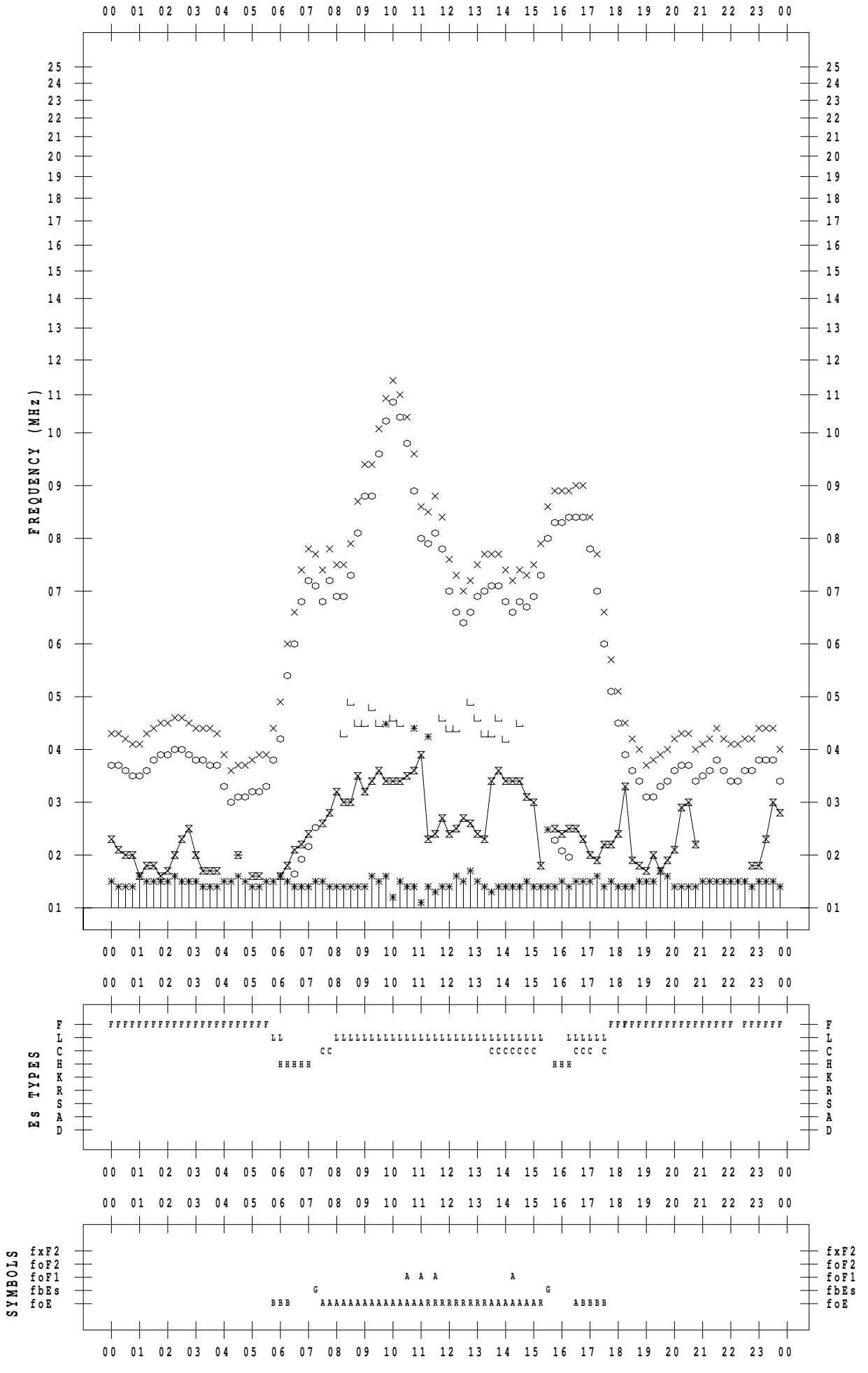
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/24

135 °E MEAN TIME



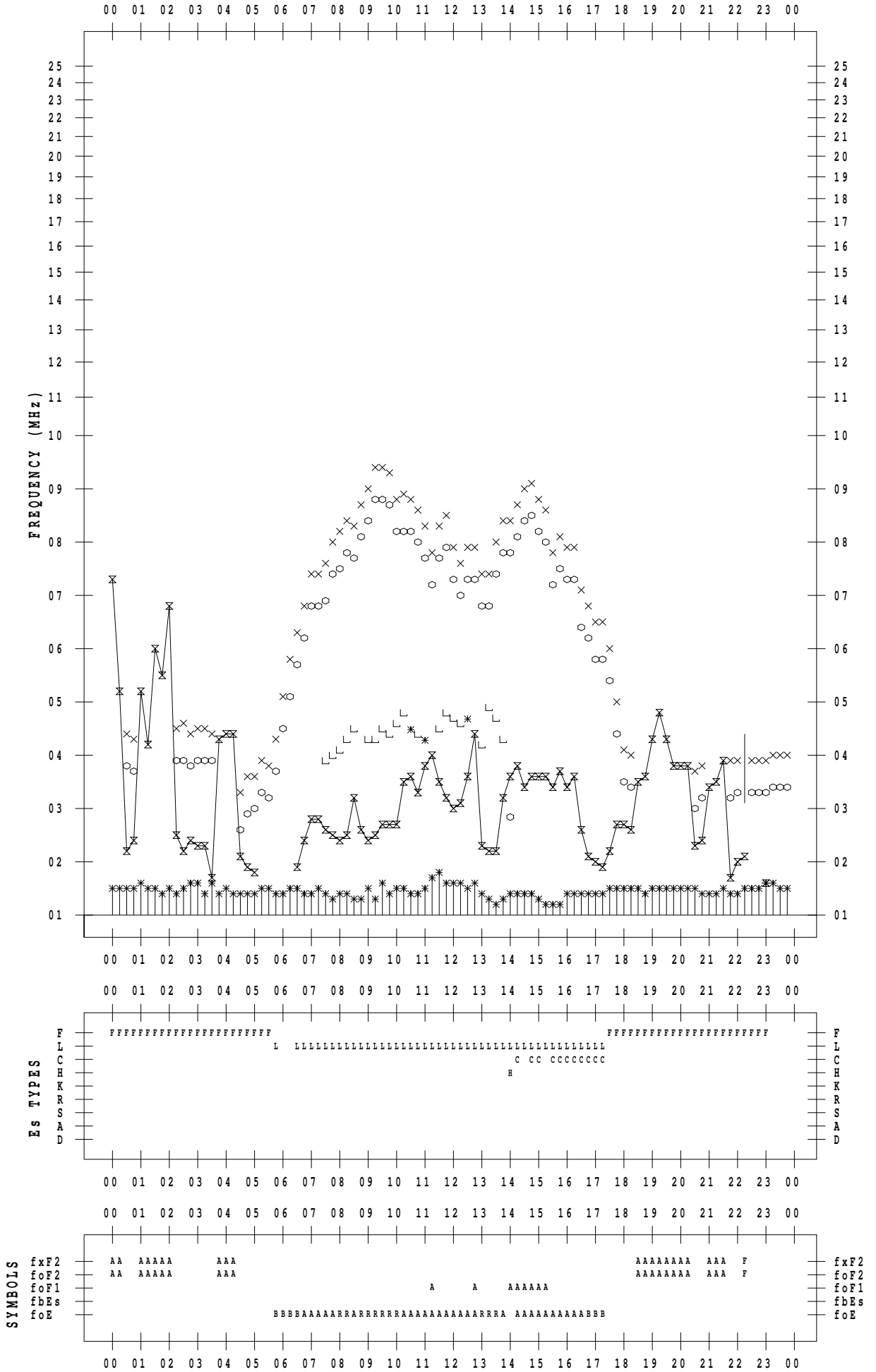
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/25

135 °E MEAN TIME



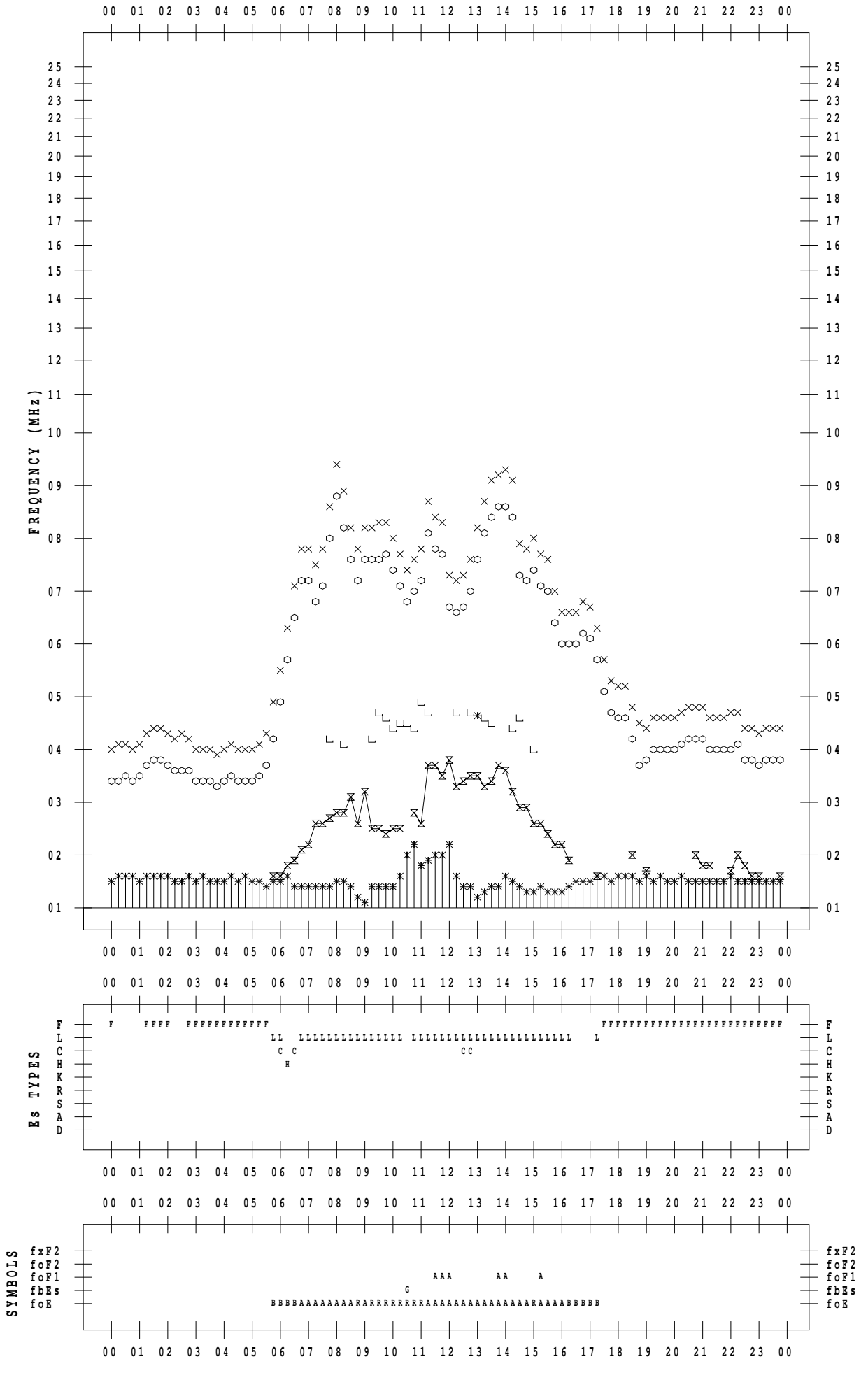
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/26

135 °E MEAN TIME



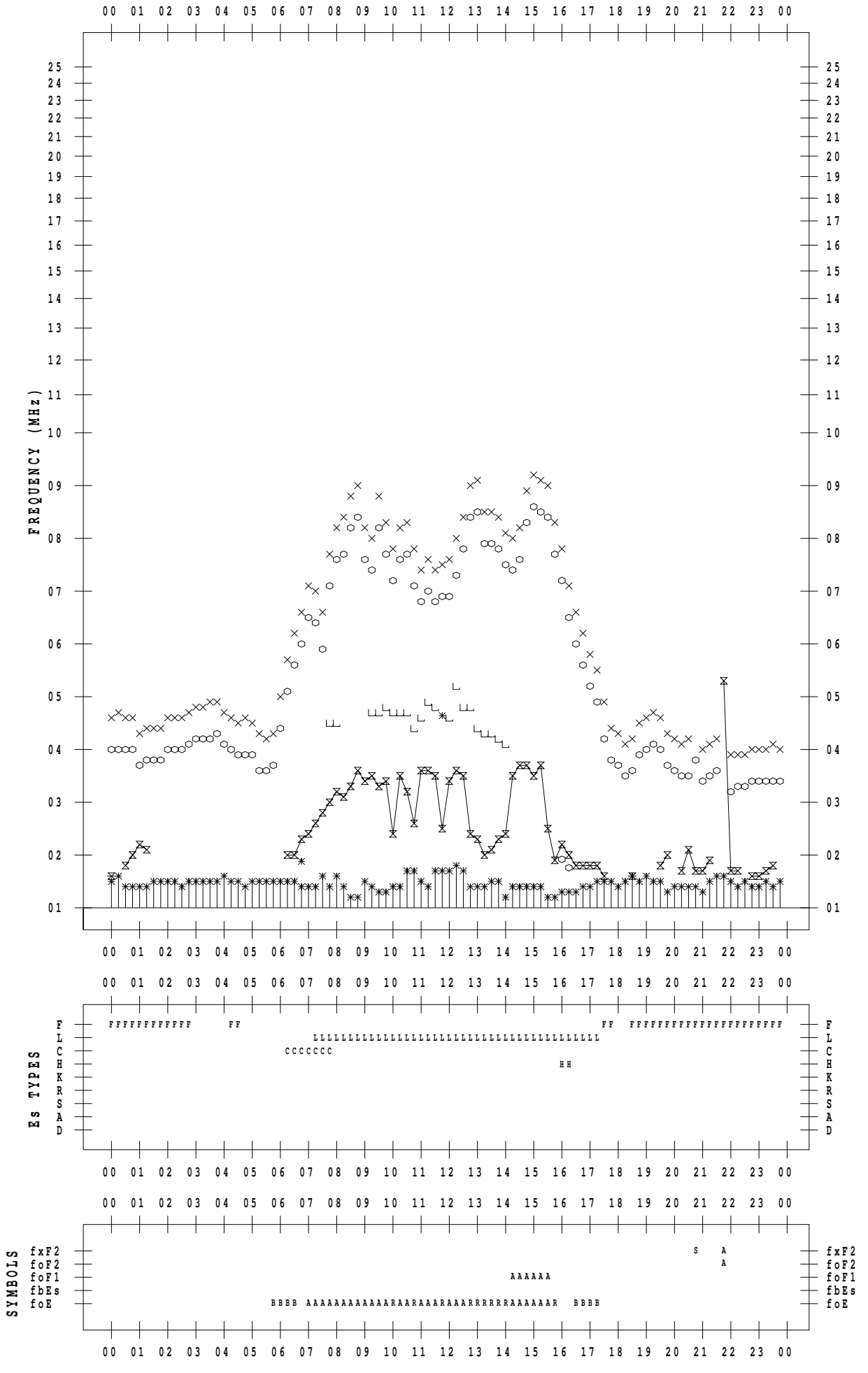
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/27

135 °E MEAN TIME



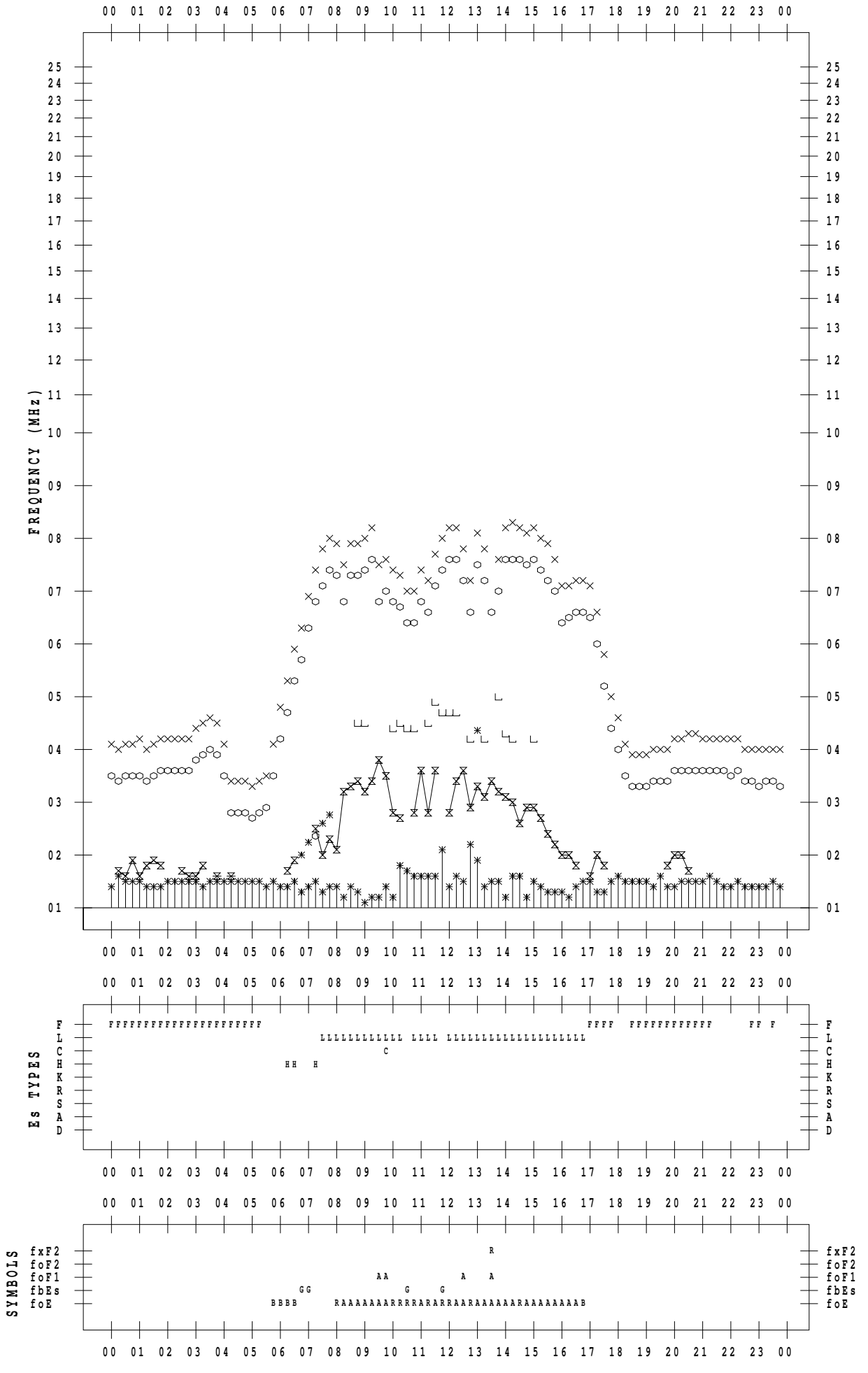
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/28

135 °E MEAN TIME



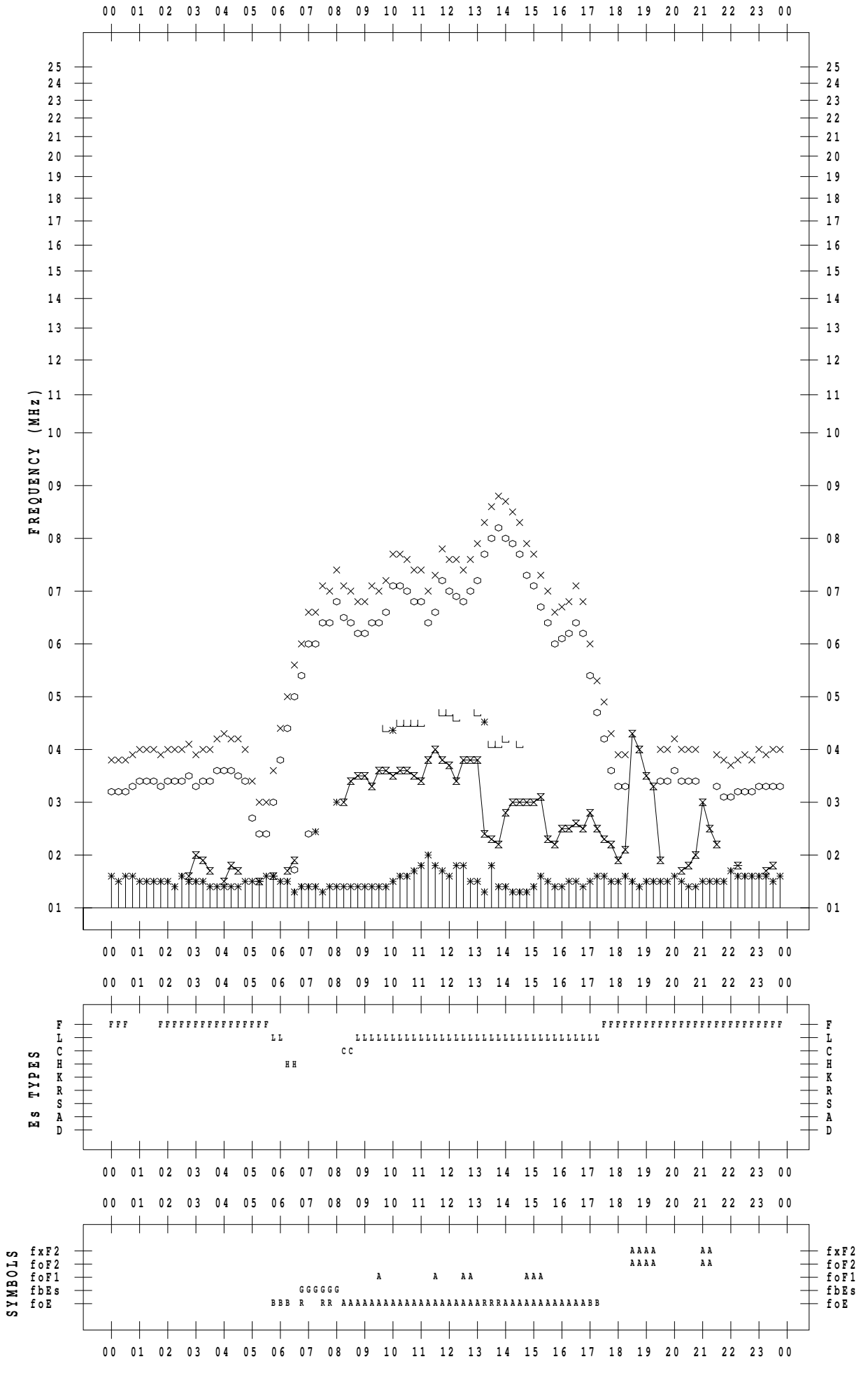
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/29

135 °E MEAN TIME



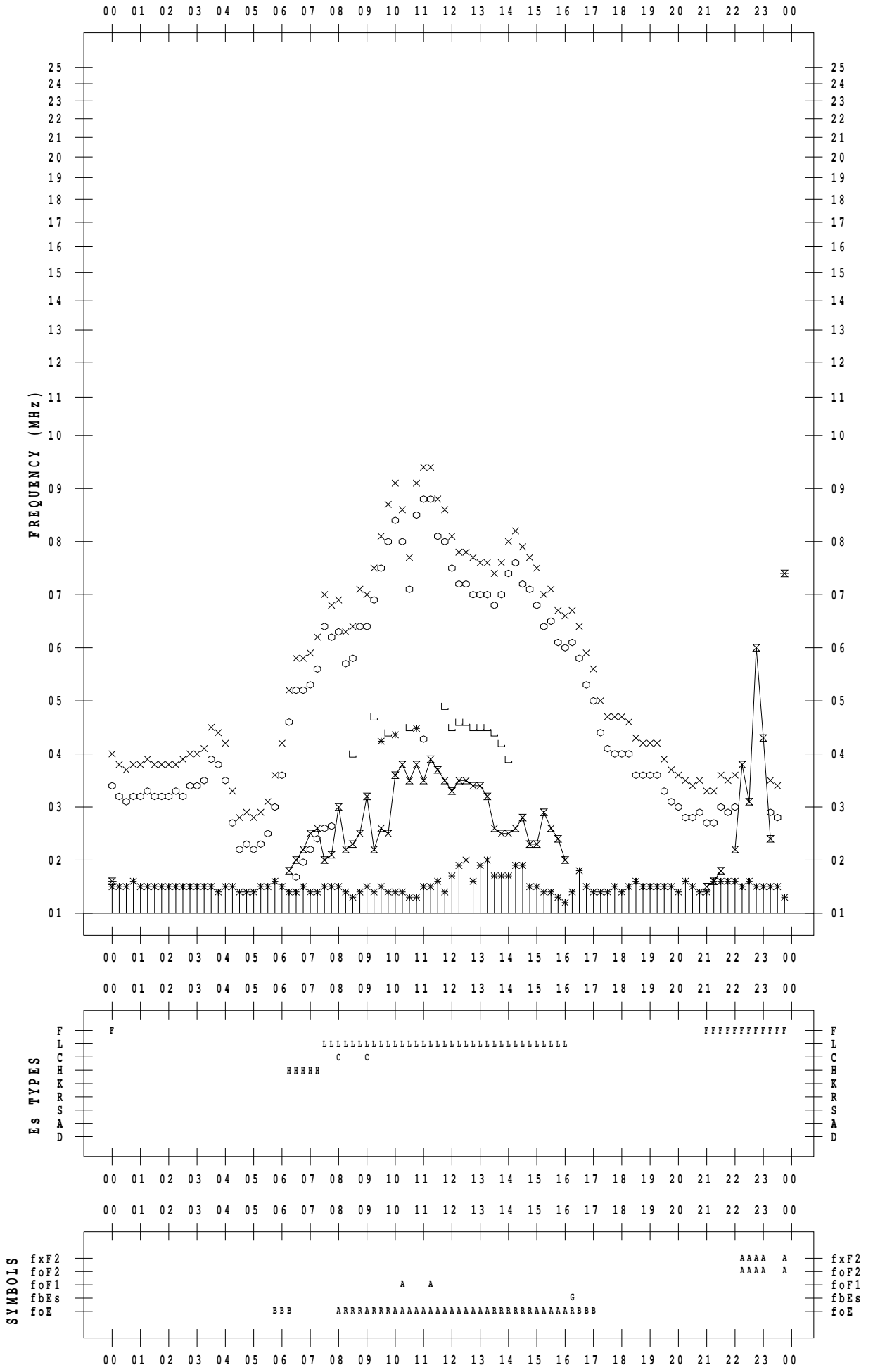
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/30

135 °E MEAN TIME



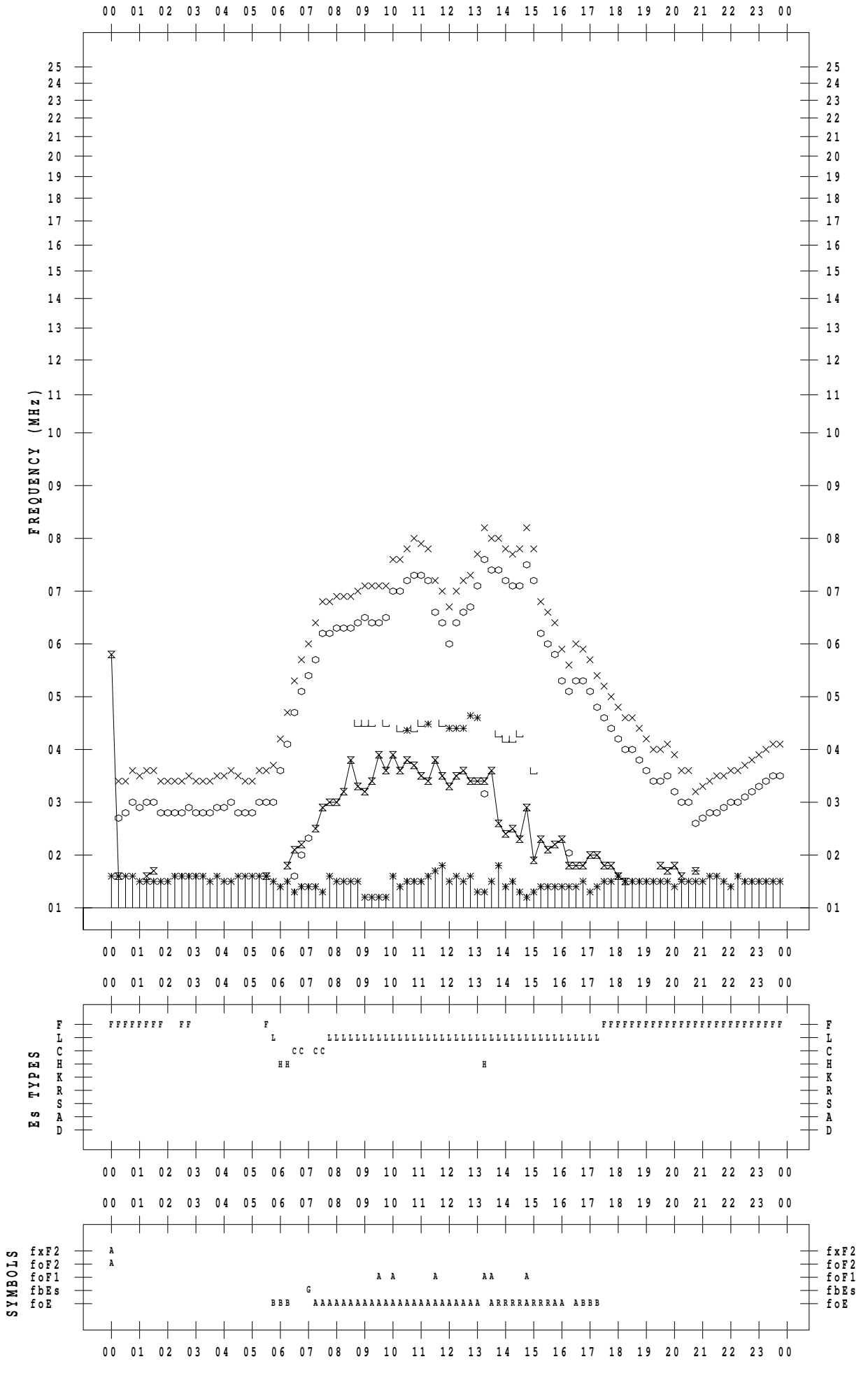
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2010/10/31

135 °E MEAN TIME



B. Solar Radio Emission

B1.Outstanding Occurrences at Hiraiso

Hiraiso October 2010

Single-frequency observations

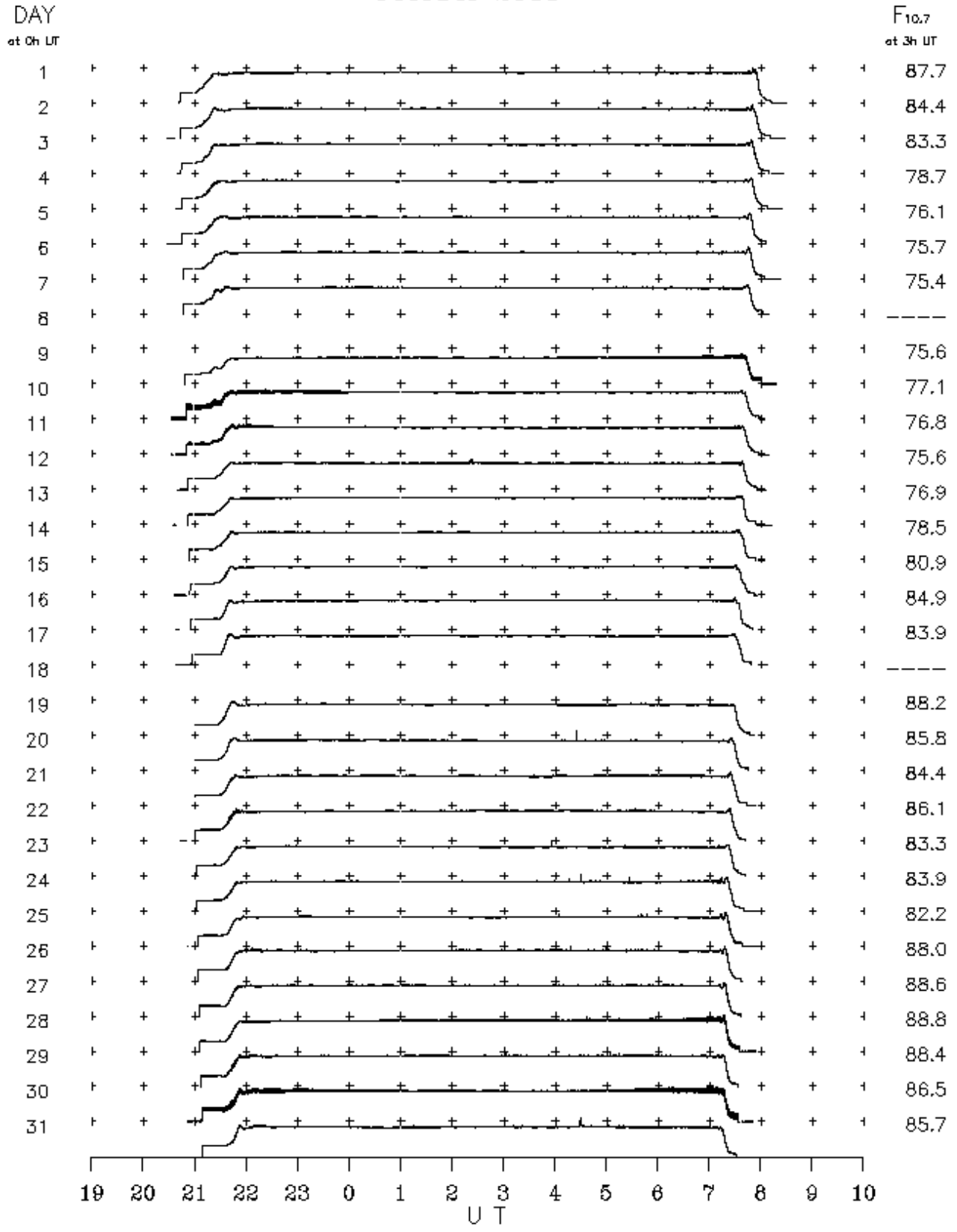
Normal observing period: 2040 - 0805 U.T. (sunrise to sunset)

OCT.	FREQ.	TYPE	START TIME	TIME OF MAXIMUM	DUR.	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1})		POLARIZATION
2010	(MHz)		(U.T.)	(U.T.)	(MIN.)	PEAK	MEAN	REMARKS
31	2800	7 C	0428.0	0429.0	3.0	20	-	

B.Solar Radio Emission

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

October 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/2010/10/