F-724

IONOSPHERIC DATA IN JAPAN

FOR APRIL 2009

VOL. 61 NO. 4

CONTENTS

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

NATIONAL INSTITUTE OF INFORMATION
AND COMMUNICATIONS TECHNOLOGY
TOKYO, JAPAN

INTRODUCTION

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

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

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

A. IONOSPHERE

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

A1. Automatic Scaling

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

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

a. Characteristics of Ionosphere

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

b. Descriptive Letters

The following descriptive letters are used in the tables.

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

C Impossible measurement because of any failure in observation.

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

N Impossible automatic scaling because of complex echoes.

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

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

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

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

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

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

d. Reliability of Automatic Scaling

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

e. Summary Plot

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

A2. Manual Scaling

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

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

a. Characteristics of Ionosphere

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

b. Symbols

(i) Descriptive Letters

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

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

(ii) Qualifying Letters

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

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

(iii) Description of Types of *Es*

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

The types are:

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

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

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

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

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

B. SOLAR RADIO EMISSION

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

B1. Outstanding Occurrences at Hiraiso

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

Listed in the table are the date, frequencies, the type of event, the start time and the time of maximum, both in U.T. expressed in hours, minutes and tenths of a minute, the duration in minutes, the peak and mean flux densities in 10^{-22} Wm^{-2} Hz^{-1} unit, and the polarization.

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

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

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

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

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

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

B2. Summary Plots of F10.7 at Hiraiso

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

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

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

HOURLY VALUES OF foF2 AT Wakkanai

APR. 2009

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

HOURLY VALUES OF fEs AT Wakkanai

APR. 2009

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	26	G	G	G	G	G	36	39	40	G	G	G	G	38	38	37	G	G	25	G	G	G	G	G
2	G	G	G	G	G	G	39	42	34	36	38	38	G	G	G	G	G	35	G	G	G	24	24	25
3	G	G	G	G	G	G		G	39	G	38	G	G	G	G	41	32	33	28	30	33	G	G	G
4	G	G	G	G	G	G		G	G	G	G	G	G	G	41	41	48	39	G	29	24	G	G	G
5	G	G	G	G	G	G	35	40	36	43	48	G	39	40	38	G	33	38	33	26	G	G	G	G
6	G	G	G	G	G	G	27	34	35	G	G	G	G	41	39	G	G	30	G	G	G	G	G	G
7	G	G	G	G	G	G	G	32	G	37	G	G	38	40	G	G	G	30	31	36	29	G	G	G
8	G	G	G	G	G	G	G	32	G	G	G	44	40	40	G	G	G	30	G	G	G	G	G	G
9	G	G	G	G	G	G	28	36	35	G	G	G	G	41	39	G	34	29	29	G	G	G	G	G
10	G	G	G	G	G	G	29	G	G	G		38	G	40	47	35	35	G	G	G	G	G	G	G
11	G	G	G	G	G	G	31	G	G	40	G	G	G	38	43	38	44	50	30	G	G	G	G	G
12	G	G	G	G	G	G	32	35	G	G	G	G	G	40	G	G	33	G	G	23	G	G	G	G
13	G	G	G	G	G	G	38	38	40	G	G	G	G	G	G	G	G	28	G	G	26	G	G	G
14	G	G	G	G	G	G	32	37	G	38	G	G	G	38	40	G	G	G	G	29	23	G	25	G
15	G	G	24	G	G	G	G	38	G	G	G	G	40	G	38	40	34	34	30	28	28	G	G	28
16	G	25	G	34	34	29	39	G	G	48	G	44	G	G	G	G	G	G	G	24	G	28	26	G
17	G	G	G	G	G	26	33	38	43	G	48	45	G	44	G	G	33	G	G	G	23	33	34	G
18	G	G	G	G	G		32	G	40	47	G	G	G	G	G	G	G	32	28	G	G	G	G	G
19	32	G	G	G	G	G	G	35	G	G	G	G	39	G	39	37	38	50	46	34	33	G	G	G
20	G	G	G	G	G	G	34	40	41	G	52	39	G	G	G	G	33	30	28	G	G	27	33	G
21	G	G	G	G	G		G	39	44	G	G	G	G	39	38	G	34	34	27	26	24	G	G	G
22	G	22	G	G	G	G	G	G	G	G	G	G	G	G	G	37	33	35	44	38	41	38	29	34
23	28	G	G	23	G	G	35	46	44	G	43	40	40	G	G	G	33	35	29	G	G	G	G	G
24	G	G	G	G	G	28	34	39	G	G	G	G	G	G	G	G	G	31	28	G	G	G	G	G
25	G	G	G	G	G		30	41	49	48	49	G	G	G	54	36	G	G	36	34	36	36	40	40
26	33	G	G	G	G		34	40	G	G	G	G	39	39	40	36	34	G	26	G	G	G	G	G
27	G	23	G	G	G	G	35	G	G	G	G	G	G		G	36	G	G	G	G	G	G	G	G
28	G	G	G	G	G	G	34	41	G	G	G	G	G	40	G	38	50	43	G	G	G	G	G	G
29	G	G	G	G	G	29	33	38	G	G	G	G	G	G	39	39	G	G	G	G	G	G	G	G
30	G	G	G	G	G	28	37	42	53	60	50	44	G	40	G	36	38	40	44		38	33	57	26
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	26	28	30	30	30	29	30	30	29	30	30	30	30	30	29	30	30	30	30
MED	G	G	G	G	G	G	32	38	G	G	G	G	G	38	G	G	33	30	26	G	G	G	G	G
U Q	G	G	G	G	G	G	35	40	40	37	38	38	G	40	39	37	34	35	30	28	26	G	24	G
L Q	G	G	G	G	G	G	27	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

HOURLY VALUES OF fmin AT Wakkanai

APR. 2009

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

APR. 2009

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

HOURLY VALUES OF fEs AT Kokubunji

APR. 2009

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G	G	G	G	G	39	35	G	G	G	G	G	60	G	G	33	G	32	41	41	G	G	G
2	G	G	G	G	G	G	41	G	35	G	G	46	G	G	43	G	G	G	28	27	36	56	45	24
3	70		25	G	G	G	36	G	G	G	G	53	45	44	52	40	40	37	34	G	G	G	G	G
4	G	G	G	G	G	G	33	39	G	G	45	G	G	G		G	G	31	24	G	G	G	G	G
5	G	G	G	G	G	G	31	37	G	G	G	43	40	G	G	G	G	G	25	24	G	35	G	G
6	G	G	G	G	G	G	26	G	G	G	50	43	50	G	G	G	G	G	G	G	G	G	G	G
7	G	G	G	G	G	G	29	37	G	43	G	G	40	G	45	G	G	G	G	G	G	G	G	G
8	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	33	39	G	G	26	G	G
9	G	G	G	G	G	G	39	G	G	G	48	56	45	45	G	43	G	G	27	24	27	G	31	32
10	G	G	G	G	G	G	29	G	G	G	46		45	40	G	G	G	33	G	G	G	G	G	G
11	G	G	G	G		G	26	G	G	G	G	G	G	G	G	G	G	G	29	29	35	51	26	29
12	G	G	G	G	G	G			42		G	43	G	G	G	G	45	56	53	41	34	28	40	29
13	G	G	G	G	G	G	29	34	42	45	G	G	40	G	G	G	G	G	G	G	28	24	G	29
14	28	G	G	G	G	G	31	39	44	44	G	46	40		G	G	G	35	35	26	22	G	26	28
15	G	G	G	G	G	G	33	43	43	G	G	G	G	G	G	G	G	G	G	49	37	27	G	24
16	G	G	G	G	G	G	33	45	G	G	G	G	53	G	G	G	35	G	27	26	26	32	G	28
17	49	31	37	31	27	29	G		39	43	G	47	G	44	61	47	40	G	G	G	23	46	46	27
18	26	G	G	G	G	G	30	53	G	G	G	52	45	60	149	102	84	52	34	28	31	60	26	G
19	27	G	G	G		G	30	G	60	G	G	G	47	G	45	44	G	G	G	G	30	G	G	G
20	G	G	G	33	34	G	G	33	G	G	40	G	44	51	G	G	48	40	49	53	28	G	31	45
21	35	40	34	36	G	G	G	42	64	48	G	40		45	G	47	45	G	30	47	25	31	30	35
22	35	G	G	G	37	30	28	G	G	G	G	G	G	55	G	58	50	80	115	105	82	45	36	49
23	39	29	22	G	G	G	37	47	55	55	G	48	G	45	83	40	52	41	41	51	34	50	23	28
24	G	G	G	G	G	G		G	47	45	50		G	48	G	G	45	64	57	62	59	45	28	G
25	G	G	G	G	G	G	33	42	51	49	53	46	64	102	66	64	80	94	82	40	34	59	54	33
26	24	29	G	G	G	G	35	49	45	G	G	G	90	G	55	71	71		55	G	G	40	36	33
27	G	G	G	25	29	G	G	G	56	46	G	G			44	48	34	62	61		53	38	36	26
28	G	G	G		G	G	G	43	37	51	47		47		G	50	68	53	54	48	30	26	28	26
29	30	33	26	26	36	42	36	49	47	50	49	42	47	G	G	G	41	45	30	41	49	83	23	24
30	24	G	G	G	G	G	32	59	52	57	60	70	53	52	G	103	81	94	118			59	47	68
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	29	30	29	28	30	28	28	30	29	30	27	28	27	29	30	30	29	30	28	29	30	30	30
MED	G	G	G	G	G	G	30	36	36	G	G	40	40	G	G	G	34	33	31	26	28	30	26	26
U Q	27	G	G	G	G	G	34	43	47	45	46	46	47	48	45	47	48	52	53	44	35	46	36	29
L Q	G	G	G	G	G	G	26	G	G	G	G	G	G	G	G	G	G	G	24	G	G	G	G	G

HOURLY VALUES OF fmin AT Kokubunji

APR. 2009

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

HOURLY VALUES OF foF2 AT Yamagawa

APR. 2009

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

HOURLY VALUES OF fEs AT Yamagawa

APR. 2009

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G	G	G	G	G	G	G	33	39	36	G	G	G	G	G	G	G	47	42	57	36	38	57	G
2	G	G	G	G	G	G	G	43	40	44	G	G	42	G	43	43	43	36	49	40	25	23	46	G
3	37	33	49	G	G	28	G	G	38	G	45	G	G	G	G	44	46	41	30	27	G	28	G	26
4	G	G	G	G			23	34	41	G		G	G	46	62	42	42	34	29	32	27	34		G
5	26	44	27	G	G	G	G	34	38	43	46	43	43	40	40	G	41	44	36	32	29			G
6	G	G	G	G	G	G	G		40	G	G	G	G	G	G	44	56	33	62	40	30	G	G	G
7	G	G	G	G	28		G	34	40	40	G	46	G	44	49	43	36	G	G	33	G		G	G
8	G	G	G	G	G	G		30	G	G	G	G	G	G	G	G	G	39	35	36	32	33	G	G
9	27	G	G	G	G	G	25	36	G	G	G	G	41	42	G	G	G	37	33	G	26	G	26	G
10	38	G	G	G	G	G	25	35	40	G	G	46	44	56	50	G	G	40	38	31	G	11	G	G
11	G	G	G	G		G		G	G	G	G		G	G	G	G	G	G	30	G	G	G	39	29
12	53	46	24	28	33	28	24	G	41	G	G	G	G	58	74	G	48	46	41	57	65	40	45	43
13	G	28	G	G	G	G		33	40	43	G	G	G	G	G	G	G	G	34	G	25	20		G
14	32	32	32	24	G	G		36	41	45	G	G	G	48	G	48	48	45	37	36	46	29	G	24
15	G	G	G	G	G	G	26	42	41	G		G	G	G	70	G	G	G	G	G	G	G	33	24
16	G	33	31	27	G	G	28	35	42	42	44	G	G	G	G	G	42	42	29	30	25	27	G	G
17	32	36	G	G	G	G	G	34	42	46	45	43	49	G	G	38	G	G	34	28	29	43	33	33
18	46	39	G	G	G	G	28	36	43	G	47	G	59	G	52	78	48	44	152		81	49	48	G
19	G	45	47	32	36	25	31	40	41	49	58	50	43	42	51	50	G	41	44	53	46	82	G	26
20	G	G	G		G		28	36	40	43	G	80	96	59	51	48	44	34	33	32	32	34	38	24
21	27	34	40	33	28		28	40	45	59	88	66	80	87	48	44	N	54	56	G	G	G	27	29
22	26	G	G	G	G		26	35	G	45	G	G	G	G	G	40	G	G	32	G	G	24	22	G
23	G	G	G	G	36	39	32	49	43	44	46	42	44	G	G	45	42	56	45	61	38	59	46	43
24	37	29	C	C	C	C	C	C	C	C	103	79	130	122	65	87	60	41	54		60	49	84	59
25	46	43	78	33	33	26	33	47	47	47	46	51	52	58	116	78	63	126	161	79	86	59	34	38
26	34	40	38	22	31	33	26	G	G	50	46	G	G	43	44	40	G	G	34	48	27	44	39	G
27	G	G	G	G	G	24	25	32	40	48	48	46	54	63	52	59	65	59	69	36		73	68	40
28	33	30	G	27	G	G	26	38	56	43	44	49	51	50	56	52	80	83	78	90	58	45	46	28
29	33	26	G	G	G	G			43	46	60	49	60	57	56	50	64	90	74	61	59	72	81	59
30	G	58	43	36	G	G	28	52	44		58	81	95		91	161	92	56		170	84	82	80	69
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	29	28	27	24	24	27	29	28	28	29	30	29	30	30	29	30	29	28	29	28	27	30
MED	14	27	G	G	G	G	26	35	40	43	44	G	42	42	46	43	42	41	37	34	29	34	34	24
U Q	33	36	31	25	28	24	28	40	42	45	46	49	52	56	56	50	52	47	55	55	52	49	46	33
L Q	G	G	G	G	G	G	G	33	38	G	G	G	G	G	G	G	G	33	32	27	13	21	G	G

HOURLY VALUES OF fmin AT Yamagawa

APR. 2009

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	14	14	15	14	15	16	15	16	15	21	14	18	17	16	14	14	14	15	14	15	14	14
2	15	14	15	14	16	15	15	15	14	14	15	18	17	17	16	17	15	14	14	14	15	14	14	14
3	14	14	14	14	15	15	15	14	14	14	18	17	17		21	18	17	14	15	14	15	14	21	14
4	14	15	14	14			15	15	14	14		22	20	21	20	18	14	14	14	14	14	14		15
5	15	14	15	14	14	14	15	17	14	15	18	17	21	17	20	17	14	14	14	14	15	15		14
6	14	14	14	14	14	14	17	14	14	14	15	18	47	23	17	20	17	14	14	14	14	14	15	14
7	14	14	14	14	14		15	14	14	17	16	20	18	18	22	15	14	14	17	14	15	15	16	15
8	15	14	14	15	15	16	15	14	15	16	18	18	20	23	21	16	14	14	14	14	14	21	14	15
9	15	15	15	14	14	14	16	14	14	17	20	22	18	20	18	20	16	18	16	14	15	15	14	15
10	14	14	15	15	14	15	16	14	15	18	18	18	20	21	18	18	16	14	14	14	15	15	15	15
11	15	15	17	15		16	16	14	14	14	20	18	17	26	18	18	17	14	16	15	15	15	14	15
12	14	15	15	14	14	14	16	14	15	15	18	18	21	30	21	45	16	14	14	14	15	14	14	15
13	14	15	14	15	15	14	15	17	14	14	15	18	18	18	16	17	15	14	14	14	14	14		16
14	14	14	15	15	15	16	17	17	14	14	18	18	20	20	40	17	15	14	14	14	15	14	15	15
15	14	15	14	15	14	14	16	14	14	14		18	17	46	18	16	14	14	21	14	15	18	14	15
16	16	14	15	14	15	15	15	14	14	15	15	34	23	46	45	23	17	14	15	14	14	15	15	14
17	15	14	15	14	14	18	16	14	14	15	16	20	20	18	17	17	17	14	14	14	14	14	14	14
18	14	14	15	17	14	15	14	14	14	15	20	17	32	20	17	21	17	15	14		15	14	14	15
19	15	14	14	14	14	14	14	14	14	16	18	18	27	18	18	15	14	14	14	14	15	14	15	15
20	14	15	14		15		14	15	14	16	15	18	20	20	16	14	14	14	14	15	14	14	14	14
21	15	14	14	15	14		15	14	14	16	17	18	21	23	18	18	14	14	14	14	14	16	14	14
22	16	15	20	15	14		15	14	14	15	17	18	17	18	20	16	14	14	14	15	14	15	14	14
23	14	14	15	14	14	15	14	14	14	17	17	20	23	20	24	23	18	16	14	15	14	14	14	14
24	14	14	C	C	C	C	C	C	C	C	18	18	23	28	24	21	17	14	15	14	14	14	14	14
25	14	14	15	14	14	14	14	14	14	15	15	23	23	22	21	18	17	14	14	14	14	14	14	14
26	14	14	14	15	15	14	16	14	16	18	18	27	28	22	22	18	14	14	14	14	14	14	14	16
27	20	15	15	15	14	14	17	14	14	16	17	20	22	22	23	16	17	15	15	14	14	14	14	14
28	14	15	15	14	17	15	16	15	15	18	17	20	26	21	20	18	15	14	14	14	14	14	14	14
29	14	14	15	14	14	14	14		14	18	18	20	20	21	20	17	16	14	14	15	16	15	15	15
30	15	14	14	14	15	14	14	14	14		17	21	23	20	20	21	22	14	14	14	15	15	14	14
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	29	28	27	24	29	28	29	28	28	30	30	29	30	30	30	30	30	29	30	30	27	30
MED	14	14	15	14	14	14	15	14	14	15	17	18	20	21	20	18	16	14	14	14	14	14	14	14
U Q	15	15	15	15	15	15	16	15	14	16	18	20	23	23	21	20	17	14	15	14	15	15	15	15
L Q	14	14	14	14	14	14	14	14	14	14	15	18	18	18	18	16	14	14	14	14	14	14	14	14

HOURLY VALUES OF foF2 AT Okinawa

APR. 2009

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				42	45	C	C	C	C	C	C	C	C	C	71	73	53		A	A
2		A		A				42	45	C	C	57	61	72	76	77	86	87	80	74	54	A	A	
3			A	A	26			A	54	56	58	62	71	85	76	76	69	76	84	78	66	35		
4				28				45	54	51	54	64	75	70	65	65	58	61	74	76	66	37		
5		29	29	28	26			44	57	50	54	75	82	91	97	101	108	130	141	141	110	52	34	30
6	30	31	36	46	41		30	42		60	60	67	76	91	96	98	78	74	84	76	65	53		
7	28	30		28	26			46	58	57	59		69	78	85	78	72	81	91	87	110		29	
8		30		34	36		29	42	57	59	54		64	76	78	75	62	56	60	67	66	52	36	29
9	31		31	28	29		25	44	56	78	60	67	68	84	95	104	88	69	72	87	77	43		31
10							32	47	62	65	56		77	91	101	106	90	81	95	110	85	52	36	
11								54	67	67	59		67	88	85		71	72	84	87	54	43		28
12	29						40	51	61	63	50	63	75	82	89	90	95	90	96	88	88	A	42	45
13		36		42	29		32	54		58	52		72	85	98	104	92	78	78	85	84	52	A	28
14	28	26		28				46	62	55	55	59	71	67	66	66	62	58	65	75	80	42		28
15							23	47	51	56	65	66	63	84	88	95	100	105	110	102	76	50	43	34
16	45	44	37	34			32	54	56	59	52	57	70	80	97	90	82	82	84	76	78	66	30	
17	24	32	32					64	63	62	54		76	94	101	90	86	72	71	74	74	54	A	
18					A	A	32	47	59	61	60	A	69	A	96	101	97	90	82	86	75	A	A	A
19	A	A	A	A	A		36	44	A	55			72	72	97	90	88	78	65	77	89	53		A
20	A	A	A	A	A		29	56	64	59	60		59	66	68	84	90	86	90	85	77	54	40	41
21	32	36	30	32				51	66	67	53				77	81	81	78	84	88		54	30	32
22				29			29	58	71	60	56			66	72	75	64	78	97	102	73	32	26	
23							34	54	62	58	A	A	68	88	101	105	104	118	130		87	63	44	A
24	A	31					35	52	94	56	54	A	64	72	87	95	99	90	77	75	78		A	A
25	A	A	A	A	A	A	A	54	A	A	65	71	77	90	78	84	90	90	102	102	71	A	A	A
26	A						34	56	51		53	70	81	87	99	116	135	119	88	88	87		31	
27	42		42	42	35	A	38	55	64	A	A	A	A	68	80	76	A	61	62	66	72	80	54	
28	A	A	A	A	A		37	61	61	59				62	77	87	98	92	A	89	89	84	A	51
29	52	45	45	42	23		37	70	49	55	54		57	76	86	91	A	100	85	A	A	79	A	A
30	A	A	A	A	A	A	37	58	A	59	A	A	68	90	104	122	124	102	100	102		76	A	A
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	10	11	8	14	9		19	29	25	25	23	12	25	27	29	28	27	29	29	28	27	22	13	11
MED	30	31	34	30	29		32	51	59	59	55	65	70	82	87	90	88	81	84	86	77	52	36	31
U Q	42	36	39	42	35		37	55	63	61	60	68	75	88	97	101	98	91	95	88	87	63	42	41
L Q	28	30	30	28	26		29	44	54	56	54	60	65	72	77	77	72	73	73	75	66	43	30	28

HOURLY VALUES OF fEs AT Okinawa

APR. 2009

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	G			G	G		G	G	G	C	C	C	C	C	C	C	C	C	35	24	G	23	49	36
2	25	38	G	38	G		G	32	G	C	C	G	G	G	G	G	G	58	54	36	46	29	32	32
3	G	29	49	44	36		30	55	G	G	39	G	G	G	48	G	58	G	34	28	36	G		
4	G	G		G	G		G	34	G	39	46	48	48	G	52	G	47	61	42	29	29	G	26	
5		30	G	G	27		G	28	G	42	G	41	G	G	G	G	G		41	30	19	41	30	G
6	G	G	G	G	G	G	G	37		G	G	G	G	G	G	42	60	35	42	44	25	37	27	
7	G	G	27	G	G		24	41	G	G	G	G	G	G	G	G	G	48	44	52	36		G	G
8		G		G	G		G	31	36	G		G	G	G	G	G	G	G	36	31	G	27	G	G
9	G	G	28	G	G	G	G	33	G	G	G	G	G	G	40	G	G	G	31	35	24	11		G
10	G						G	30	G	39	54		G	G	60	G	45	36	58	46	30	G	42	28
11	G	G		G			G	29	G	G	G		G	51	49	39	44	41	42	55	G	G		G
12	G	G	G	G			28	32	G	G	G	G	G	50	G	40	G	G	39	69	58	69	86	39
13	35	G		G	G		G	34		G	G	G	G	G	G	69	55	52	81				49	27
14	G	G	G	G			G	30	41	G	48	G	G	41	G	G	G	G	34	58	49	44	36	G
15	G	29	G	G		G	G	34	42	45	50	51	G	53	G	G	G	G	G	G	G	G	G	G
16	G	G	G	G		27	26	34	42	44	G	G	G	G	G	G	44	G	32	G	34	G	G	29
17	G	G	G	G	G			32	G	45	G		G	G	G	G	G	40	38	G	28	27	30	G
18		29			26	30	G	33	40	50	48	68	G	115	83	G	G	35	61	G	24	51	44	41
19	50	56	48	43	39	G		48	61	52		52	50	56	72	39	42	49	42	37	35	30	38	40
20	59	58	59	58		G	G	34	44	G	48	G	51	G	43	48	51	46	56	46	39	49	36	39
21	36	27	28	G				43	48	57	G	G	45	46	G	61	48	G	38	40	46	32	G	G
22				G			G	30	G	42	G	G		G	G	G	G	G	29	26	22	G	24	
23		G					27	G	42	52	71	76	54	G	G	46	49	41	40		40	38	29	39
24	26	28					G	32	38	37	48	54	48	46	G	50	67	42	38	33	28	29	36	30
25	53	59	50	49	58	51	71	54	78	74	66	56	56	52	42	50	44	50	52	56	39	50	58	56
26	28				G		G	29	40	40	41	48	51	G	49	42	36	G	G	G	41	35	G	G
27	28	37	32	38	37	43	34	52	53	77	72	82	68	60	66	66	70	G	40	46	53		40	38
28	43	70	61	47	46	29	G	42	50	42	G	42		G	50	47	39	74	95	94	46	39	58	38
29	30	G	40	G	29		G	38	38	47	48	54	56	66	83	56	135	95		136	106	81	72	82
30	72		59	56	56	38	31	44	66	50	69	96	106	47	G	G	42	G	40	36	71	78	83	72
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	25	25	19	25	19	11	27	30	28	28	26	26	27	29	29	29	29	28	29	28	29	27	27	26
MED	G	G	28	G	G	27	G	34	38	41	40	21	G	G	G	G	42	36	40	36	35	30	36	30
U Q	35	33	49	40	37	38	26	41	43	48	48	54	51	50	49	47	50	48	48	49	46	44	49	39
L Q	G	G	G	G	G	G	G	30	G	G	G	G	G	G	G	G	G	G	34	27	24	G	24	G

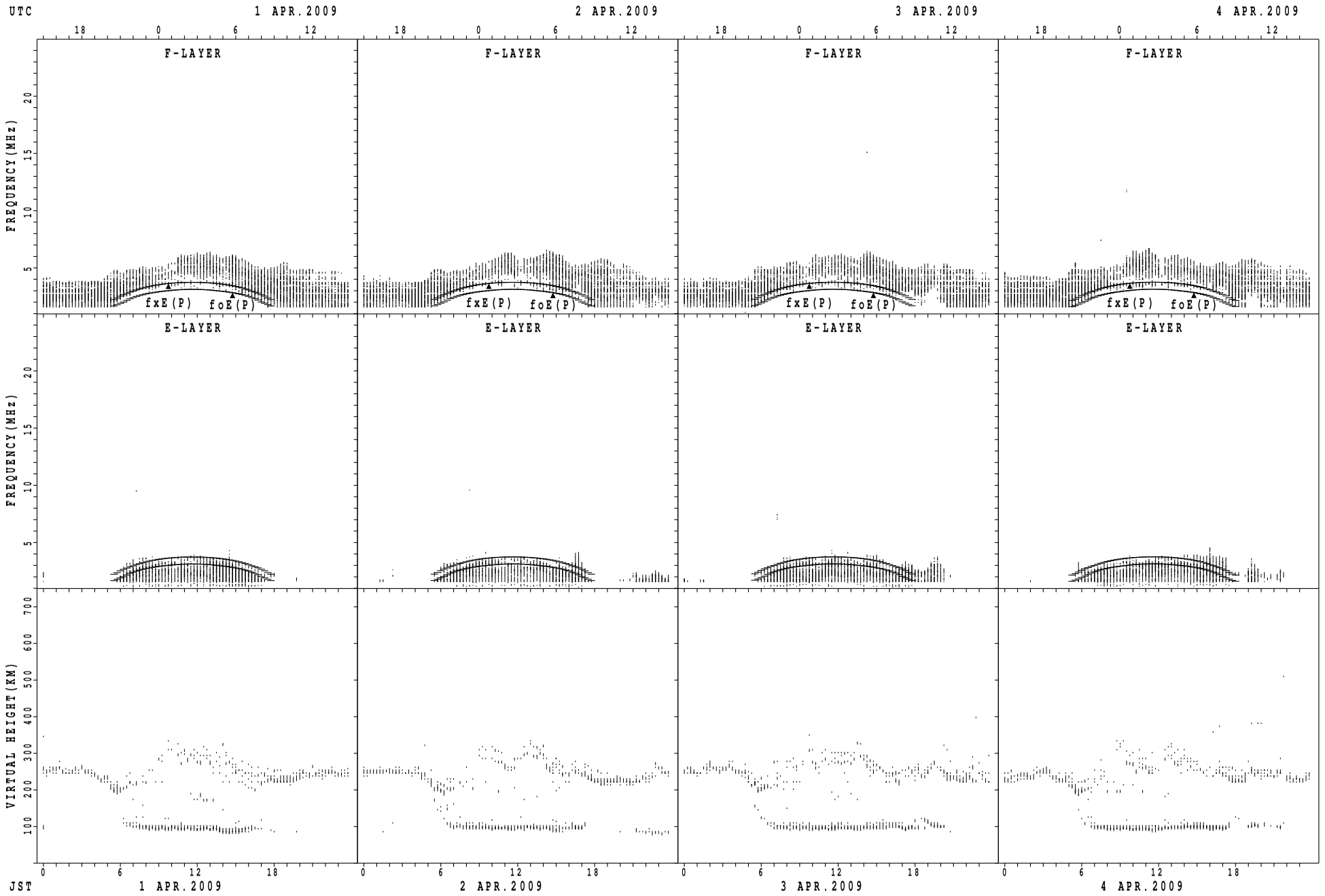
HOURLY VALUES OF fmin AT Okinawa

APR. 2009

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

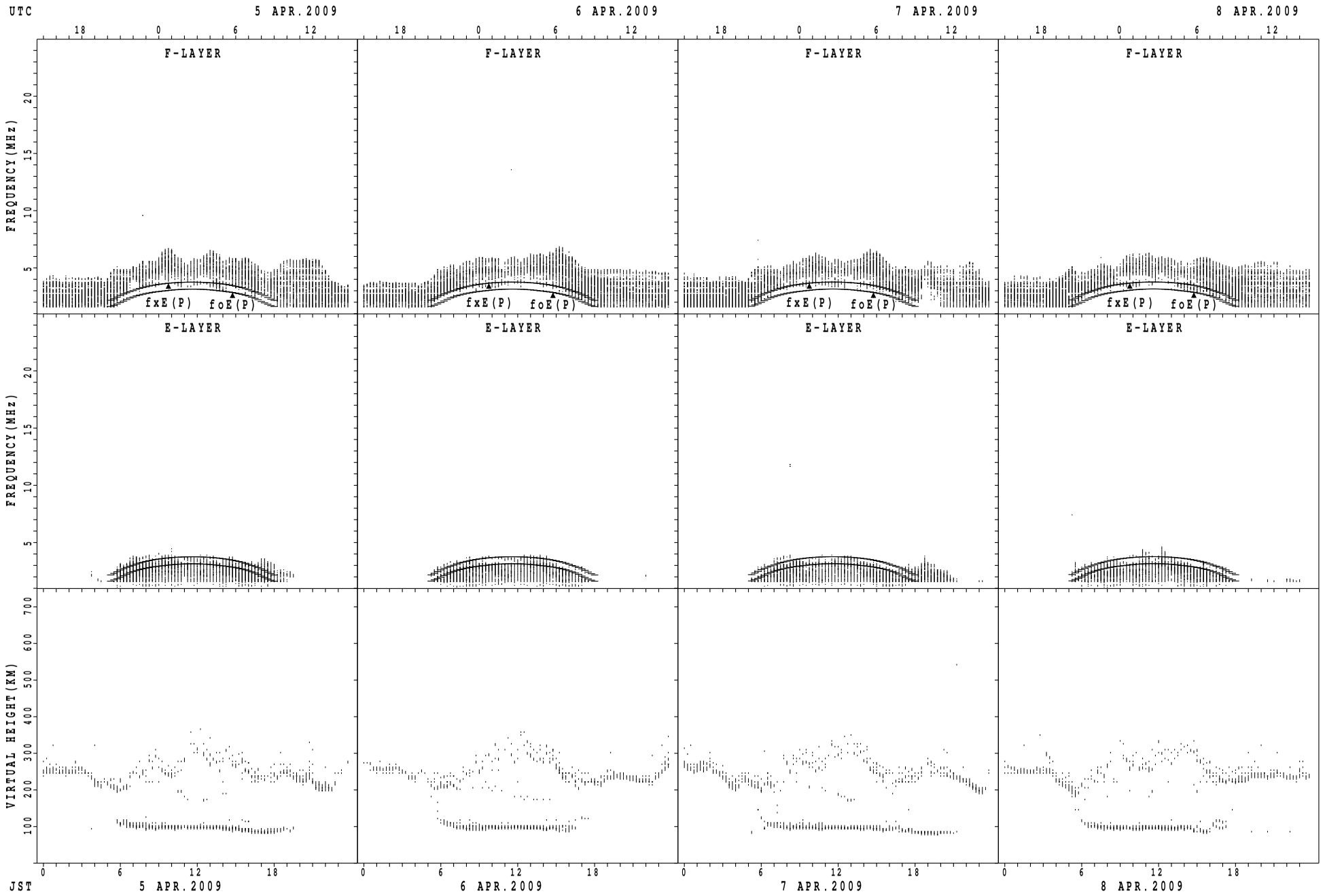
D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	17			15	15		16	15	30	C	C	C	C	C	C	C	C	C	14	16	15	16	14	14
2	15	15	15	15	16		16	15	14	C	C	22	22	52	49	41	21	14	14	14	14	14	14	14
3	15	16	16	14	14		15	14	14	15	18	46	45	53	34	44	16	18	14	14	14	16		
4	15	15		15	15		17	16	14	18	23	27	26	45	38	42	27	14	14	14	14	15	16	
5		15	14	14	15		15	15	15	28	44	46	48	53	27	20	16	14	14	15	21	15	14	16
6	17	17	15	15	15	16	14	21		32	44	47	50	50	46	28	22	16	14	14	15	14	15	
7	15	17	15	14	14		17	14	15	18	45	46	47	46	24	18	18	15	20	14	15	15	20	16
8		15		15	15		14	16	14	22	44	44	48	46	46	43	39	18	14	14	16	15	16	15
9	15	21	16	14	14	17	16	15	14	21	22	48	49	53	54	44	42	28	22	14	15	17		20
10	15						15	15	14	29	30		51	53	38	44	16	14	14	14	15	15	14	21
11	21	16		18			20	15	28	18	22		53	38	45	40	30	16	14	14	15	15		15
12	14	14	20	15			14	16	16	21	23	48	46	36	47	45	30	34	14	14	15	16	15	15
13	14	16		17	15		16	14		16	22	55	22	52	50	36	21	27	17	15	14	15	14	15
14	15	14	15	21			20	16	14	38	32	42	49	51	44		39	29	14	14	14	14	14	15
15	17	14	15	16		16	22	15	15	22	30	33	45	35	46	45	42	14	14	14	15	14	18	15
16	21	16	15	18		14	15	14	15	20	29	47	49	49	47	45	29	34	15	15	14	14	14	15
17	16	16	14	14	15			14	18	18	32			52	48	45	24	17	14	18	20	17	15	15
18		16			14	15	15	16	14	29	34	36	46	37	34	45	44	26	15	14	14	15	15	15
19	15	14	14	15	14	15	18	14	15	22		40	29	29	27	22	16	14	14	14	14	14	14	14
20	14	14	14	14	14	15	21	14	15	29	21	44	38	46	52	35	29	14	16	14	14	15	14	14
21	14	18	16	14				14	15	21	23	28	29	29	24	22	21	14	20	14	15	15	24	21
22				14			15	14	17	20	28	26		26	46	44	44	14	14	14	15	15	15	
23		15					14	14	15	23	23	28	29	28	23	22	21	16	14		14	14	15	14
24	15	15					17	14	15	22	23	32	30	30	48	26	21	15	14	14	14	15	14	15
25	15	14	14	14	15	14	15	14	16	22	27	33	33	30	30	32	22	16	15	14	16	15	18	15
26	15				15		17	14	15	26	24	34	34	48	28	22	21	15	22	24	14	15	27	17
27	15	14	15	14	14	14	15	14	15	21	27	33	33	33	33	30	26	30	20	14	14	14	14	14
28	14	14	14	14	14	15	22	14	17	21	27	28		53	28	33	29	18	14	15	16	16	15	15
29	15	15	15	18	15		16	14	17	23	24	27	30	34	33	32	20	15	14	14	15	15	15	14
30	15	15	15	14	15	15	15	14	17	22	27	32	30	33	50	24	23	16	14	14	17	14	15	14
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	25	26	19	25	20	11	28	30	28	28	27	26	26	29	29	28	29	29	30	29	30	30	27	26
MED	15	15	15	15	15	15	16	14	15	22	27	35	42	46	44	36	23	16	14	14	15	15	15	15
U Q	15	16	15	15	15	16	17	15	16	24	32	46	48	52	47	44	30	22	15	14	15	15	16	15
L Q	15	14	14	14	14	14	15	14	14	20	23	28	30	33	29	25	21	14	14	14	14	14	14	14

SUMMARY PLOTS AT Wakkanai



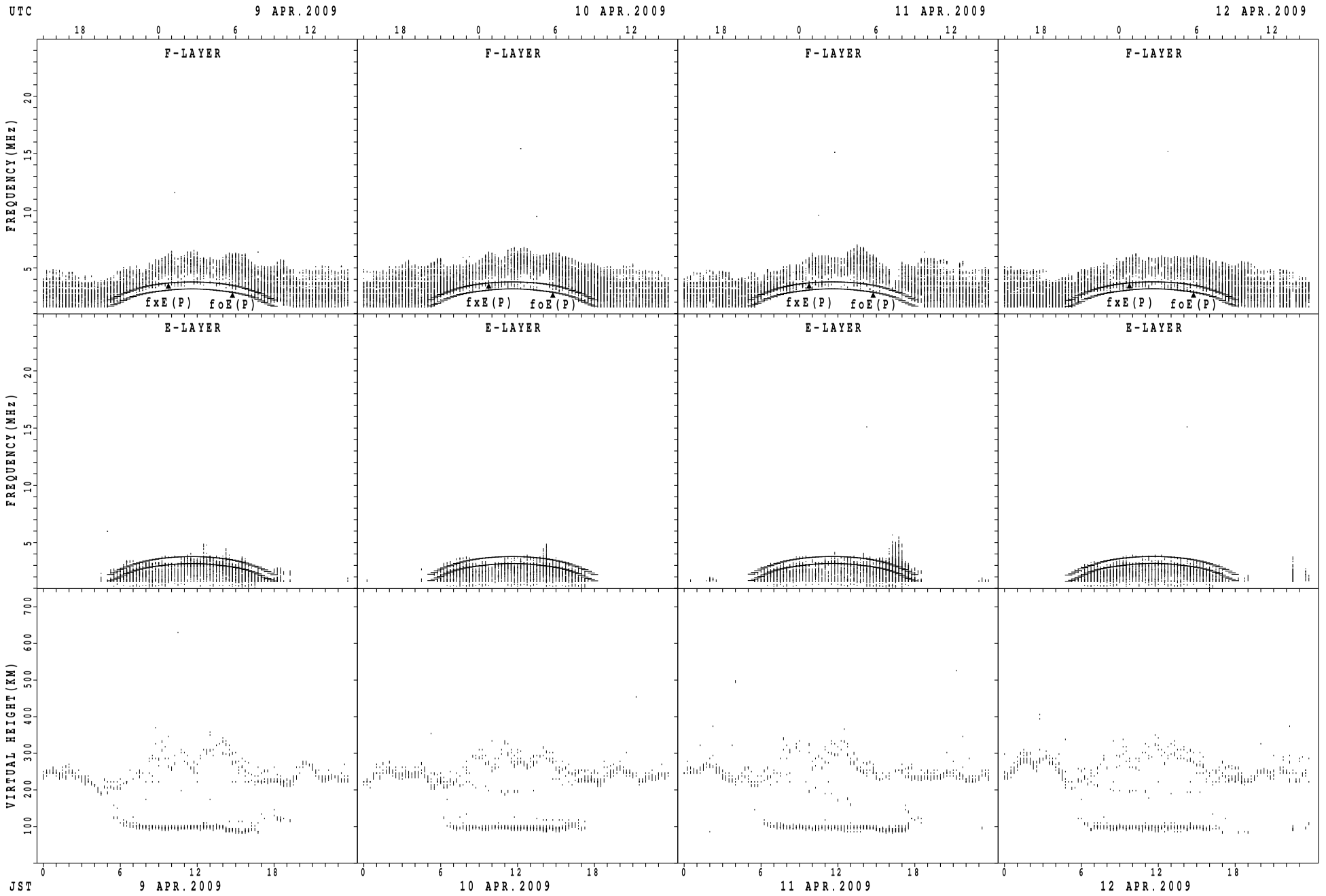
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



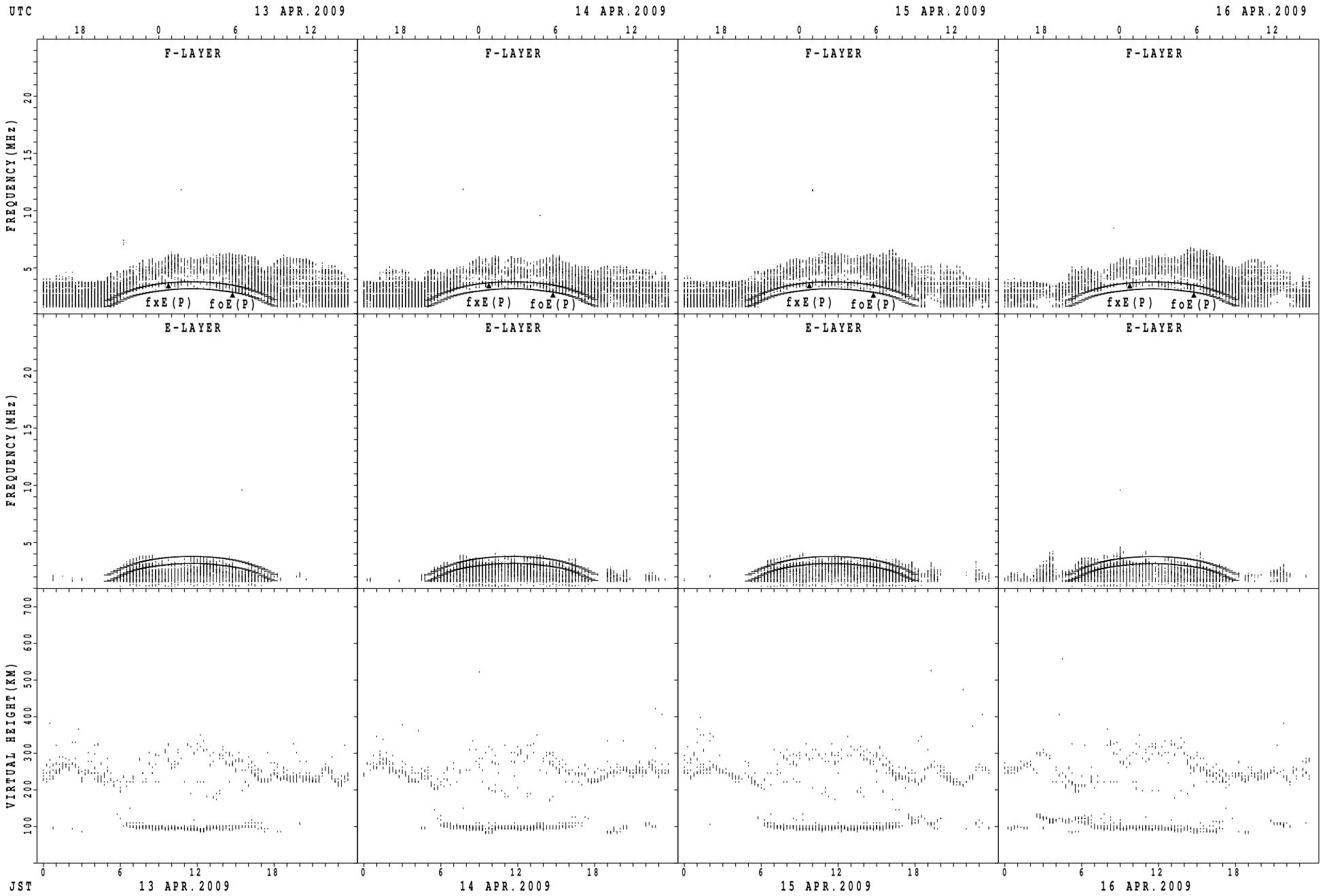
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



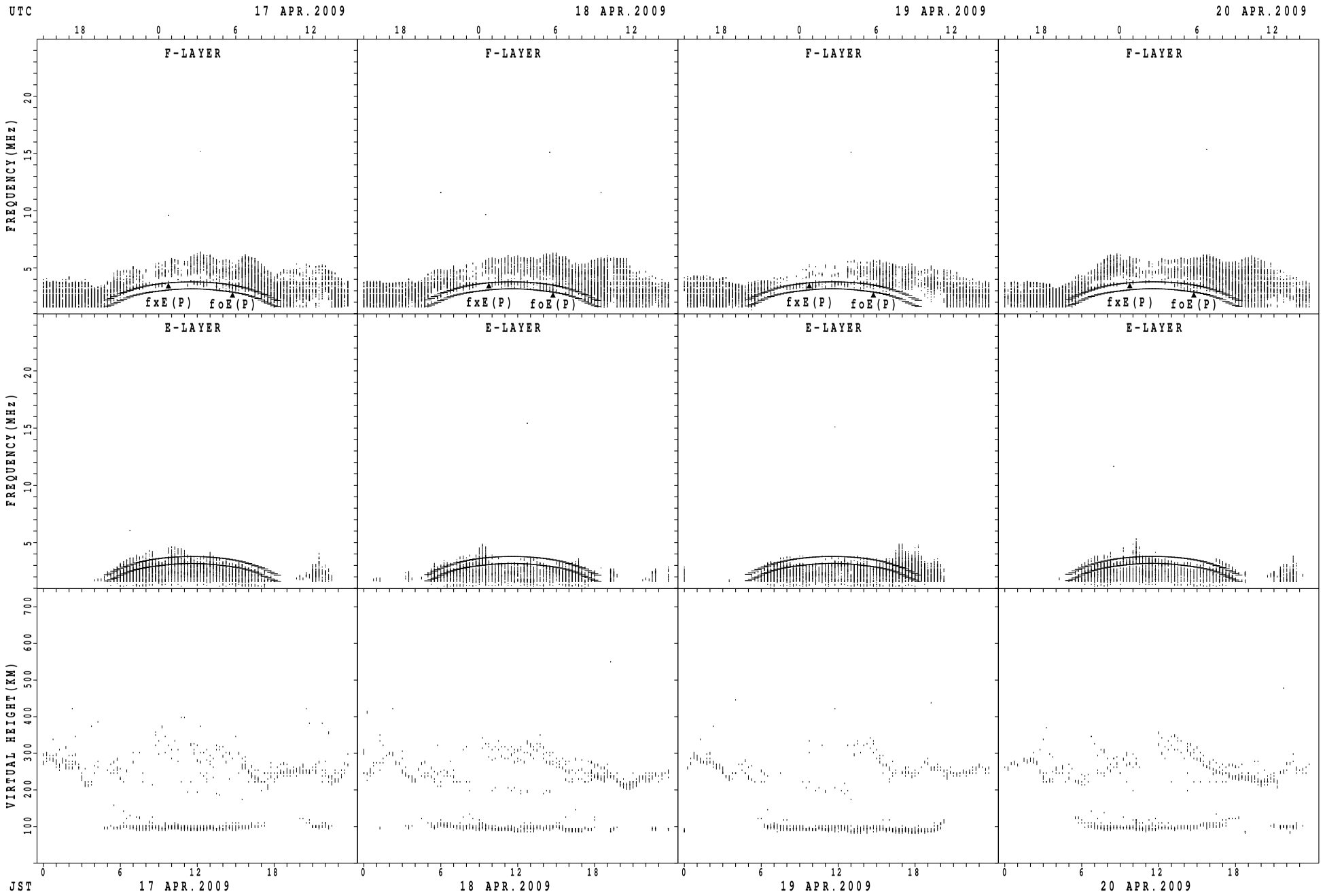
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



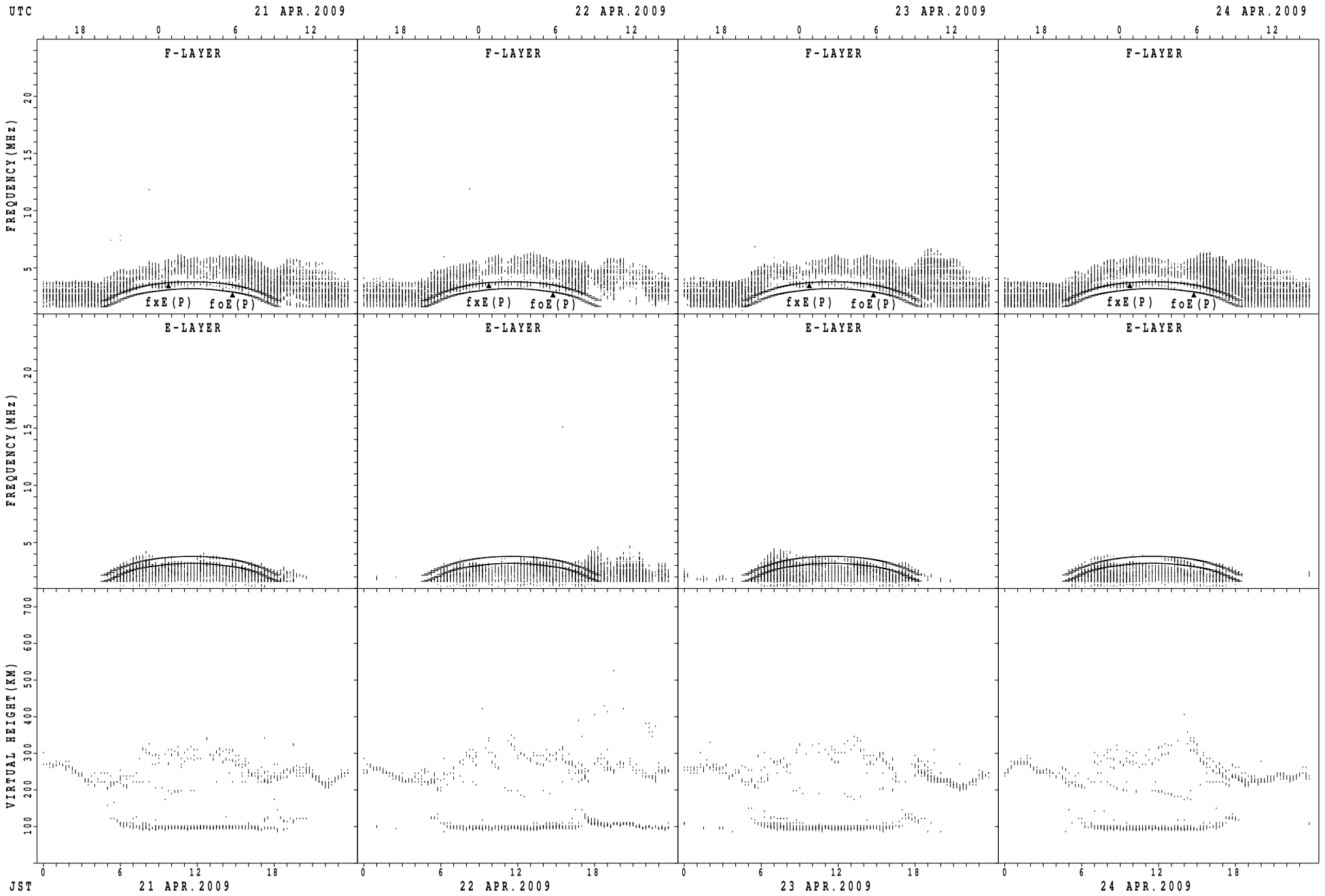
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



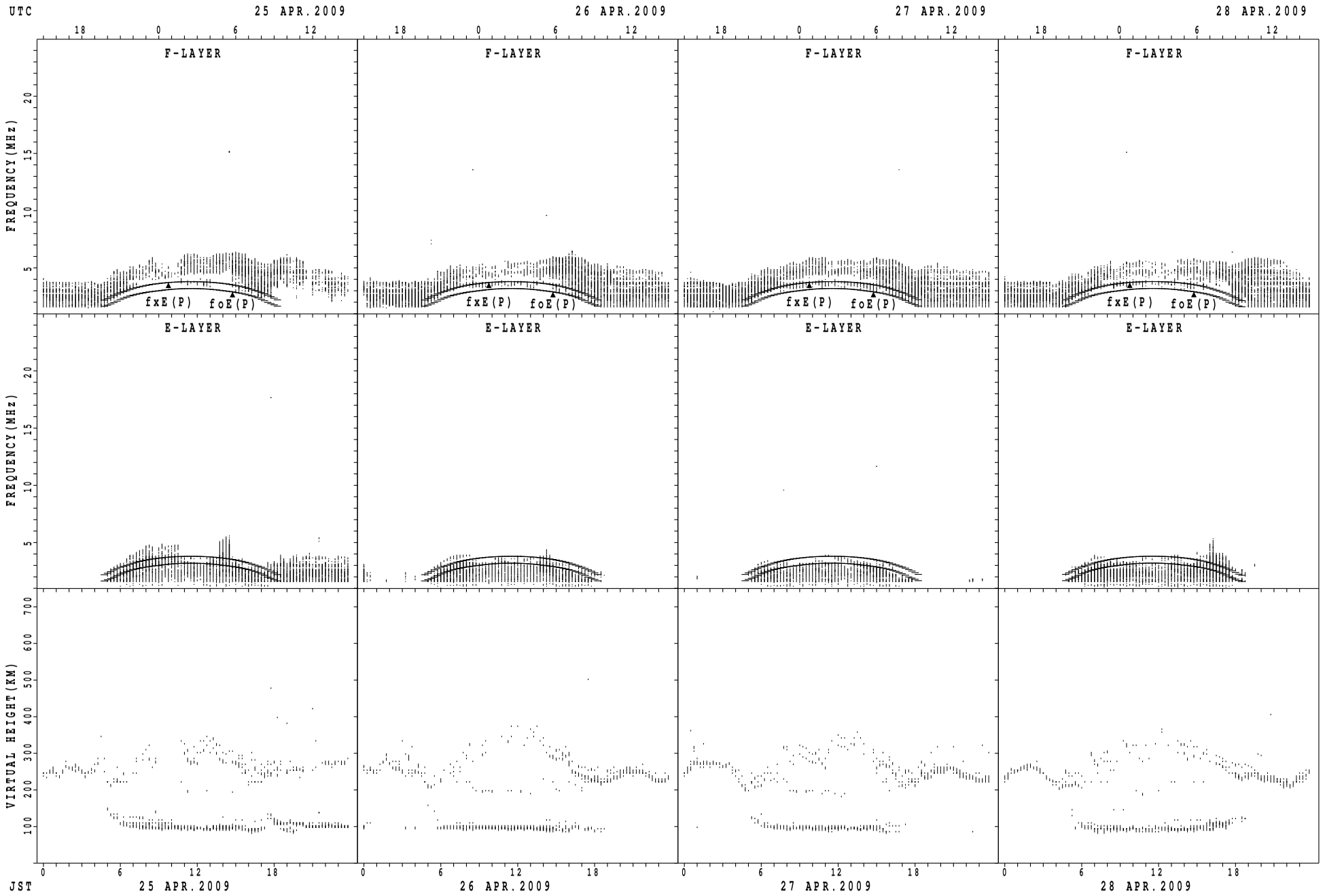
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



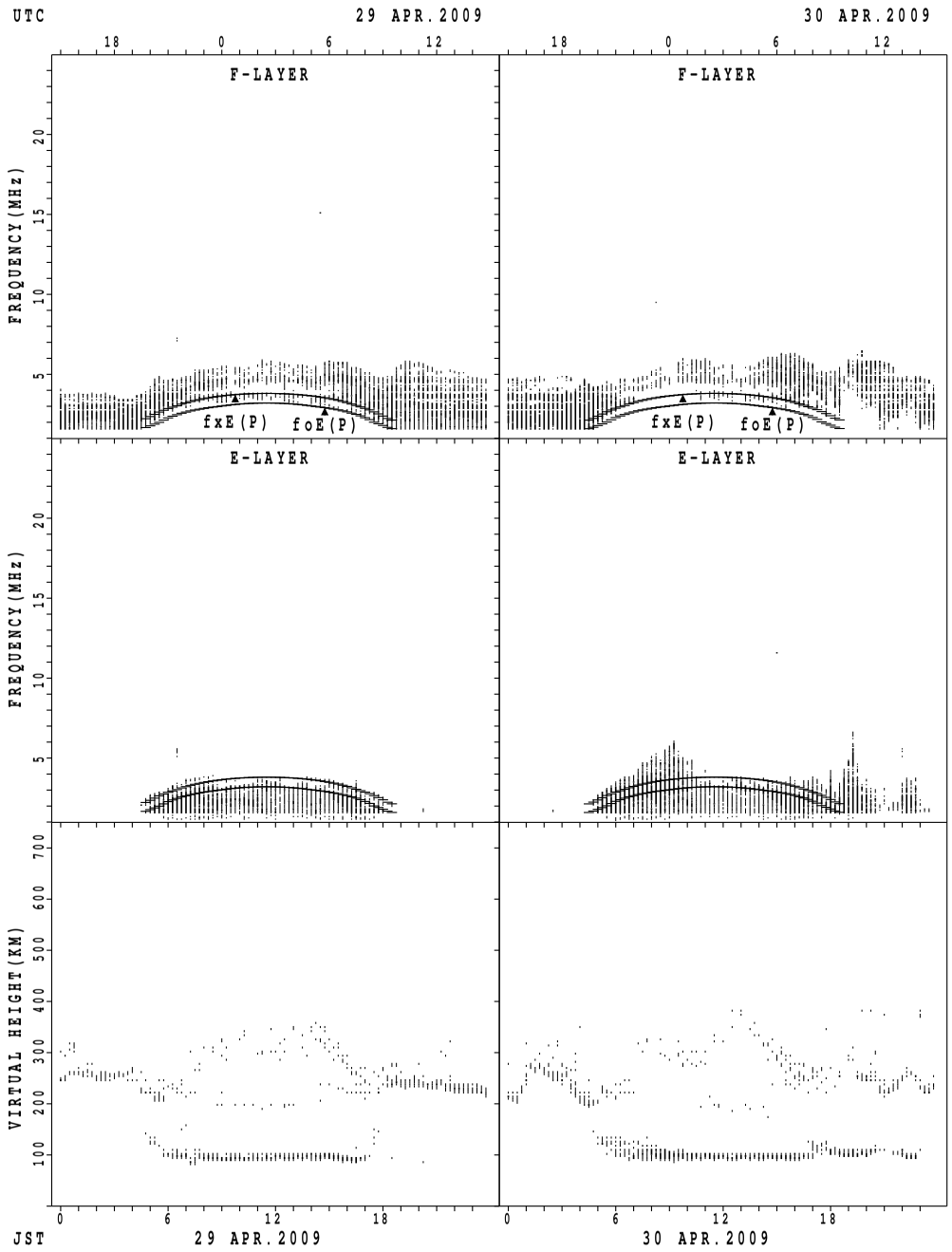
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



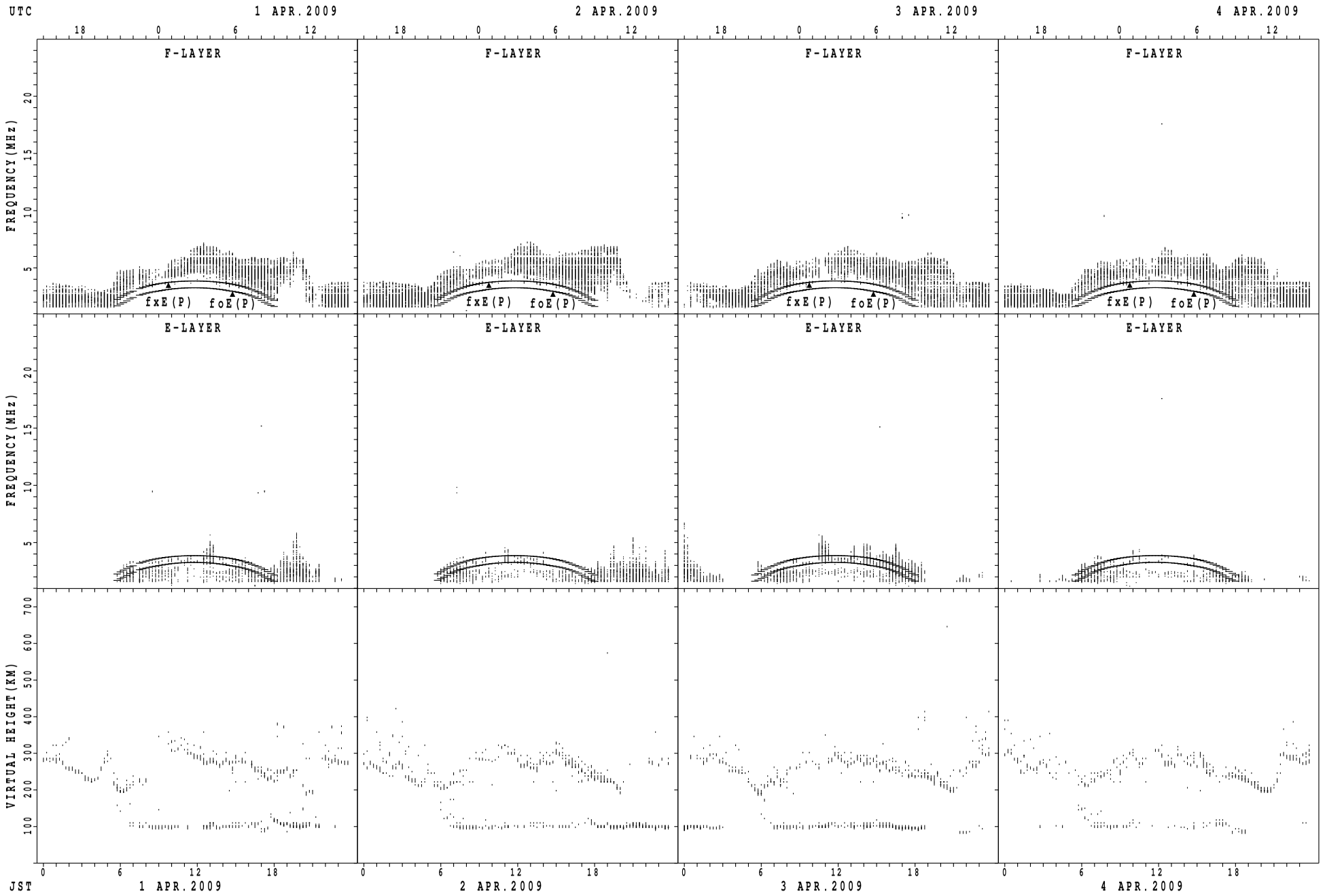
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Wakkanai



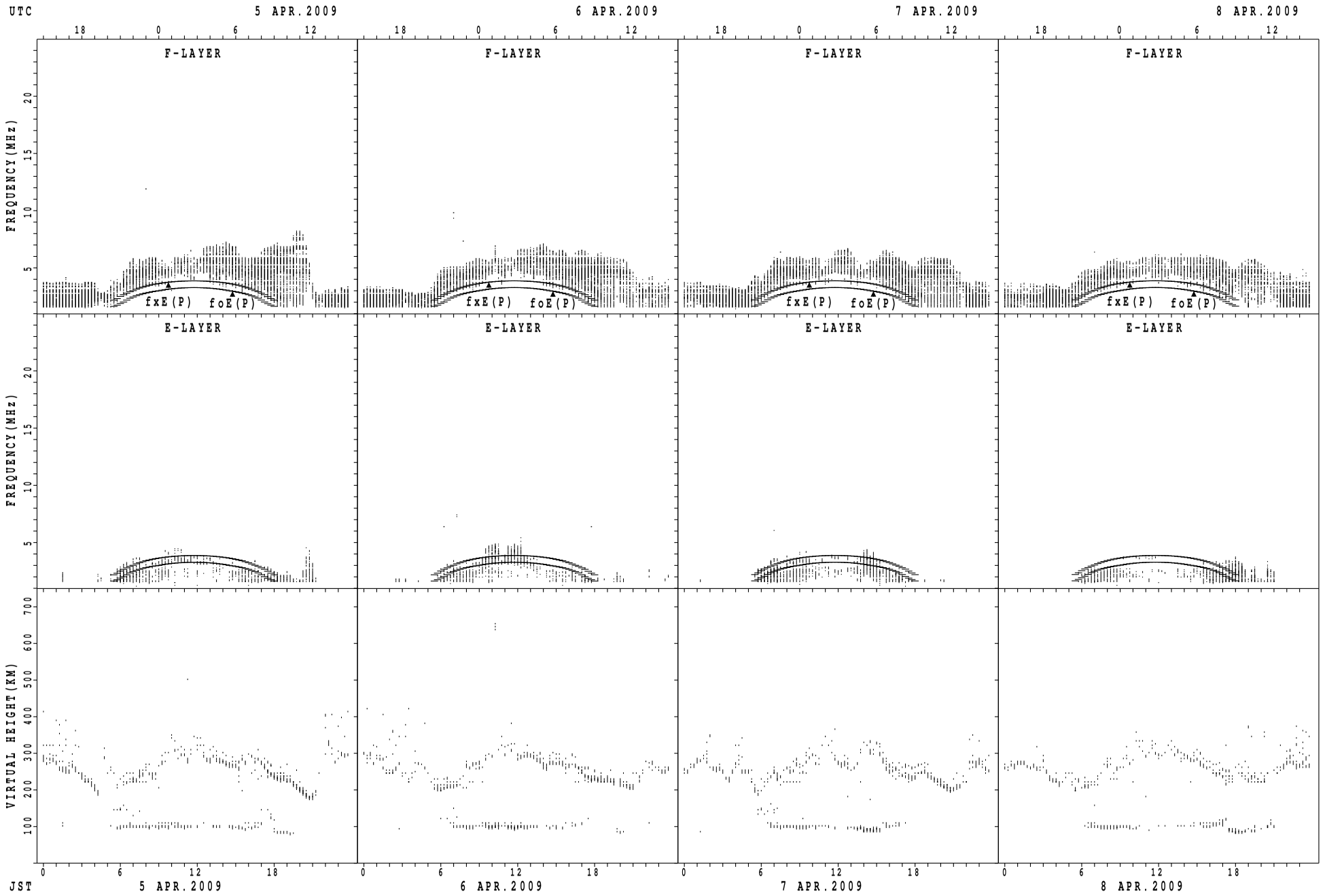
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



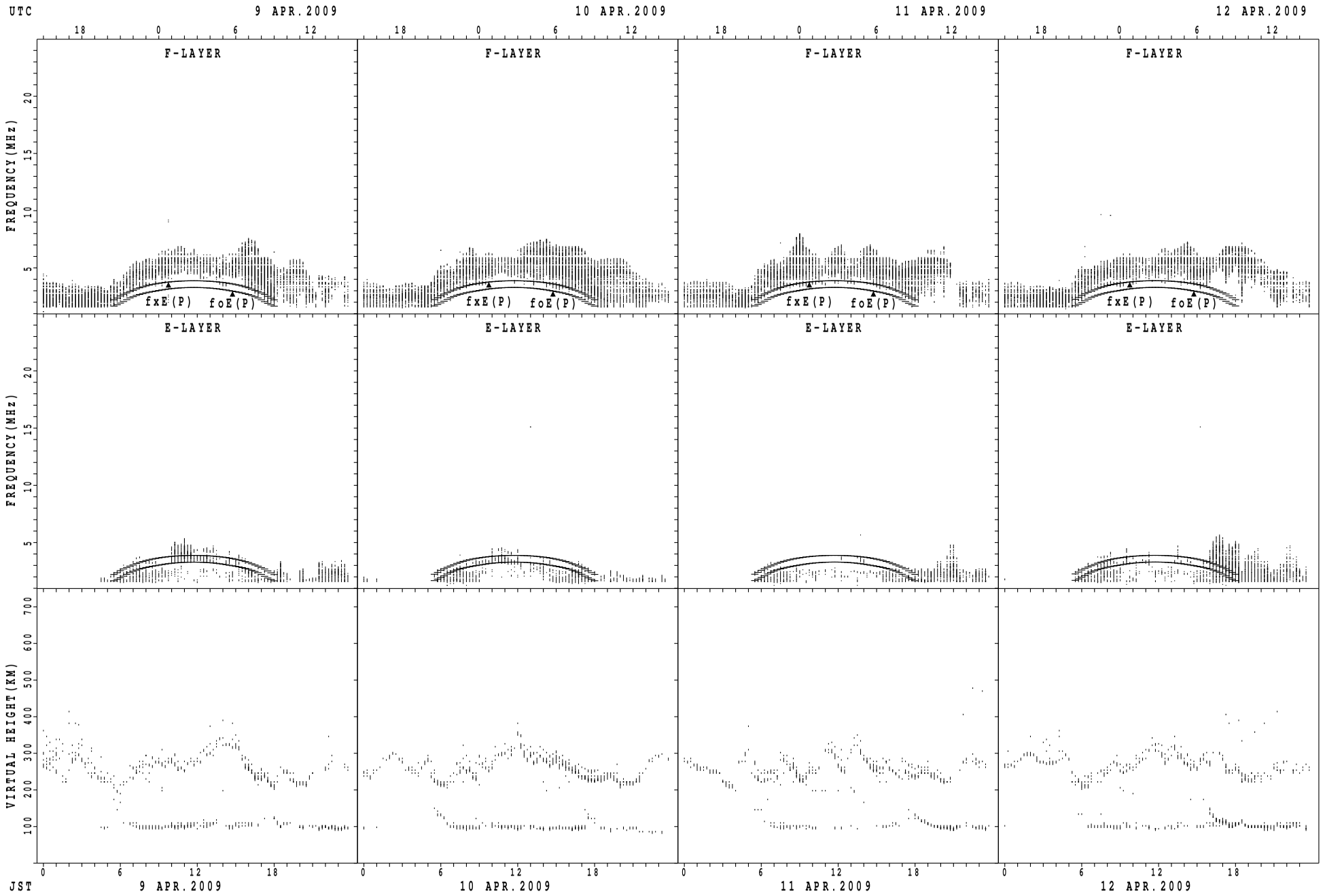
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



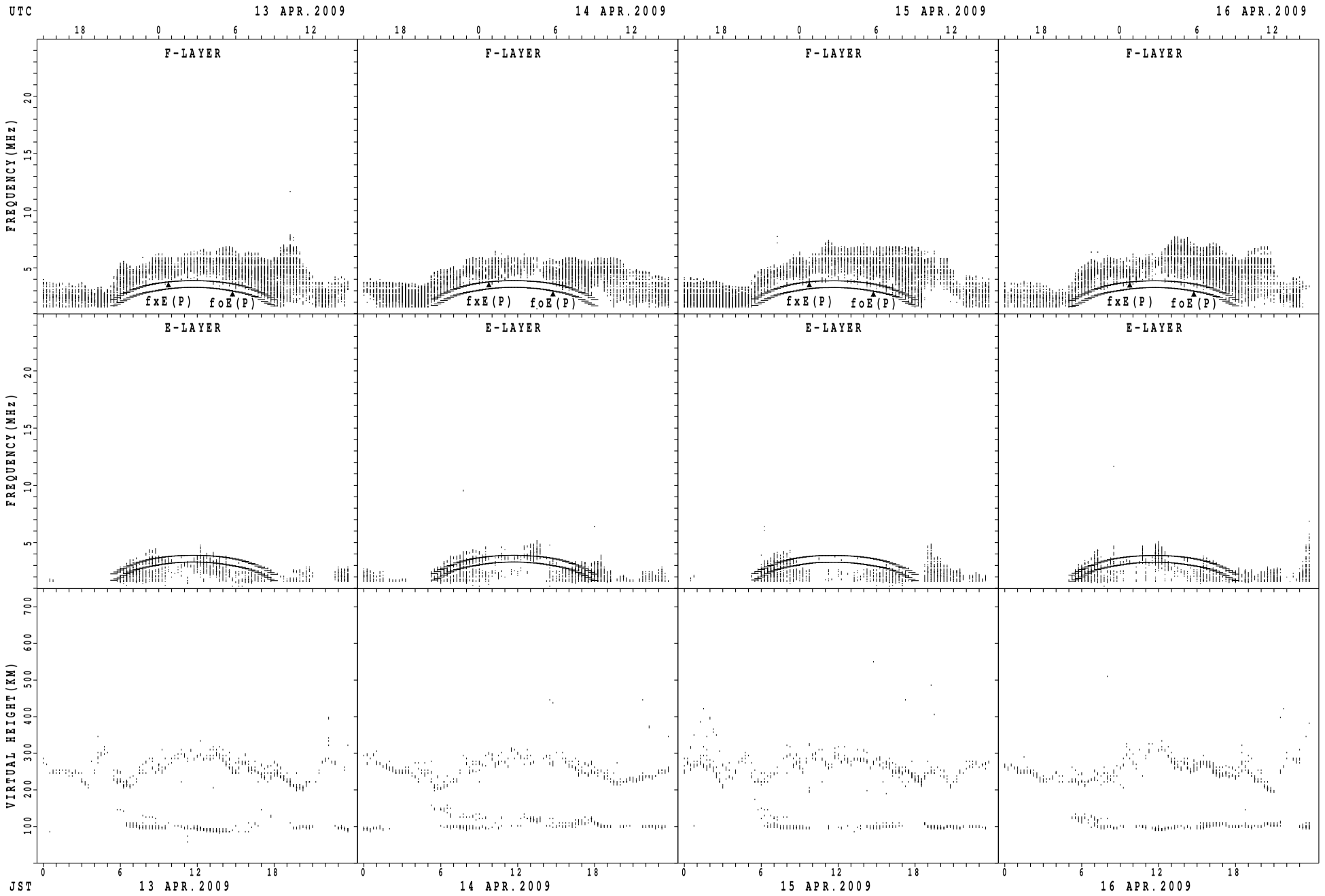
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



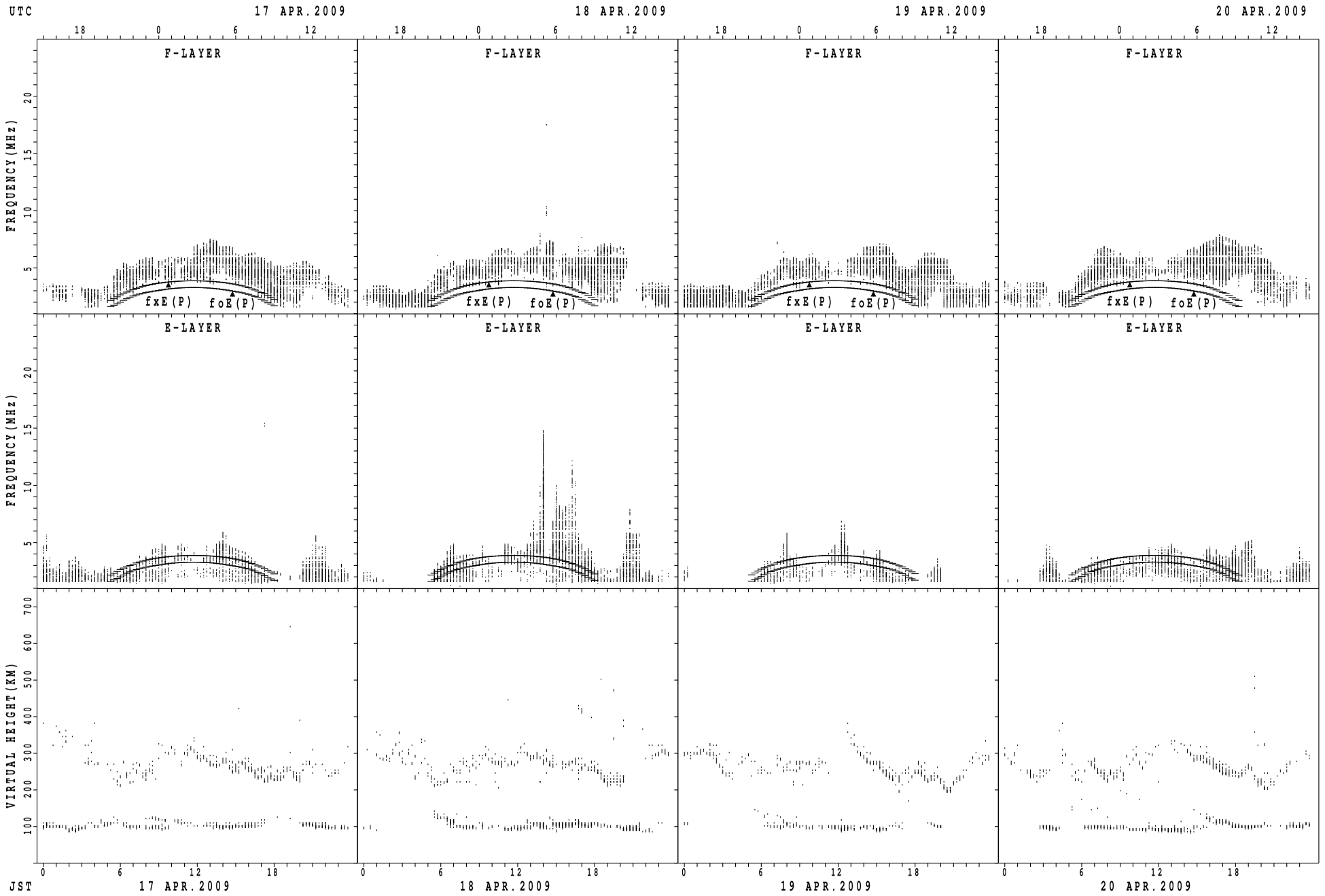
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



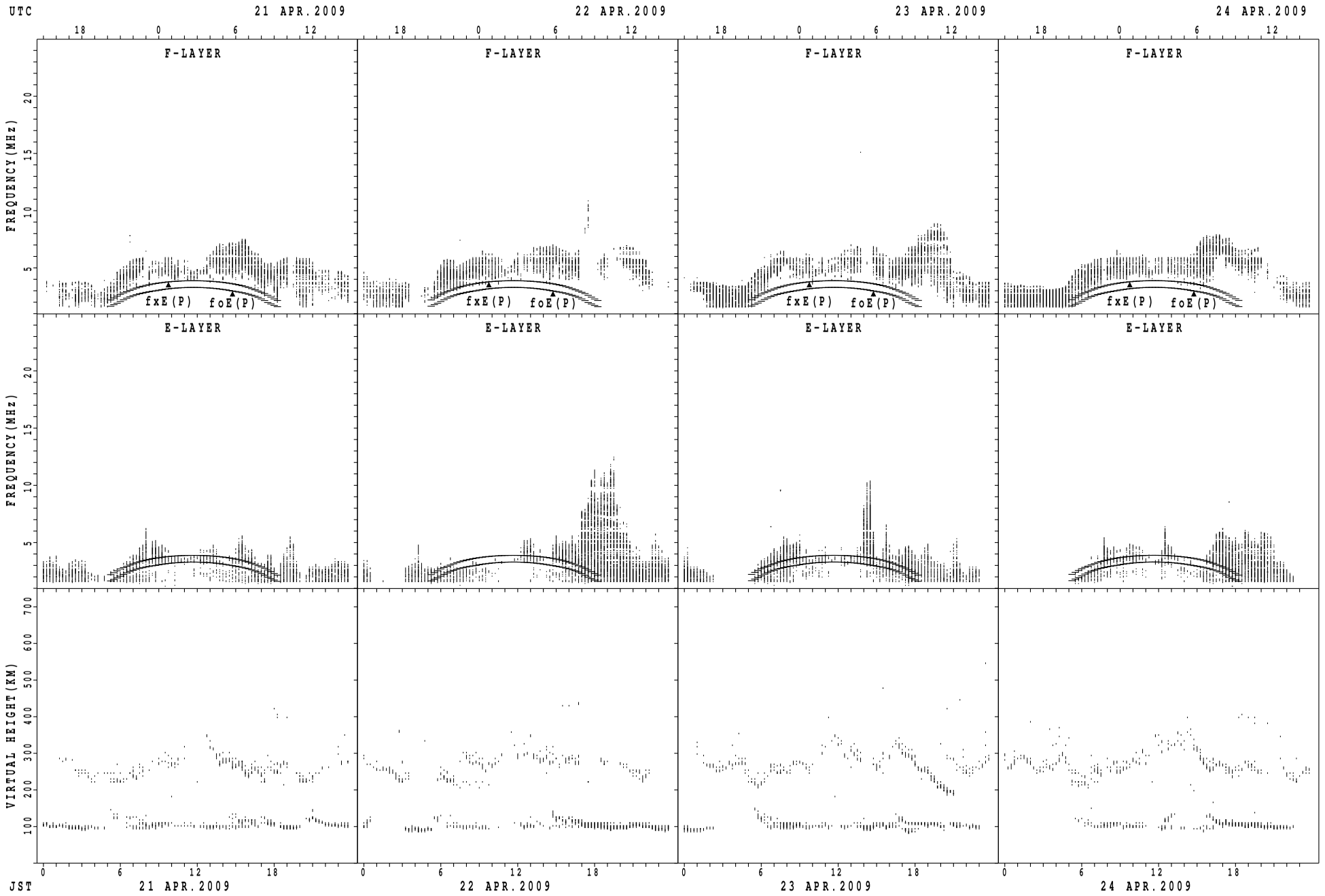
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



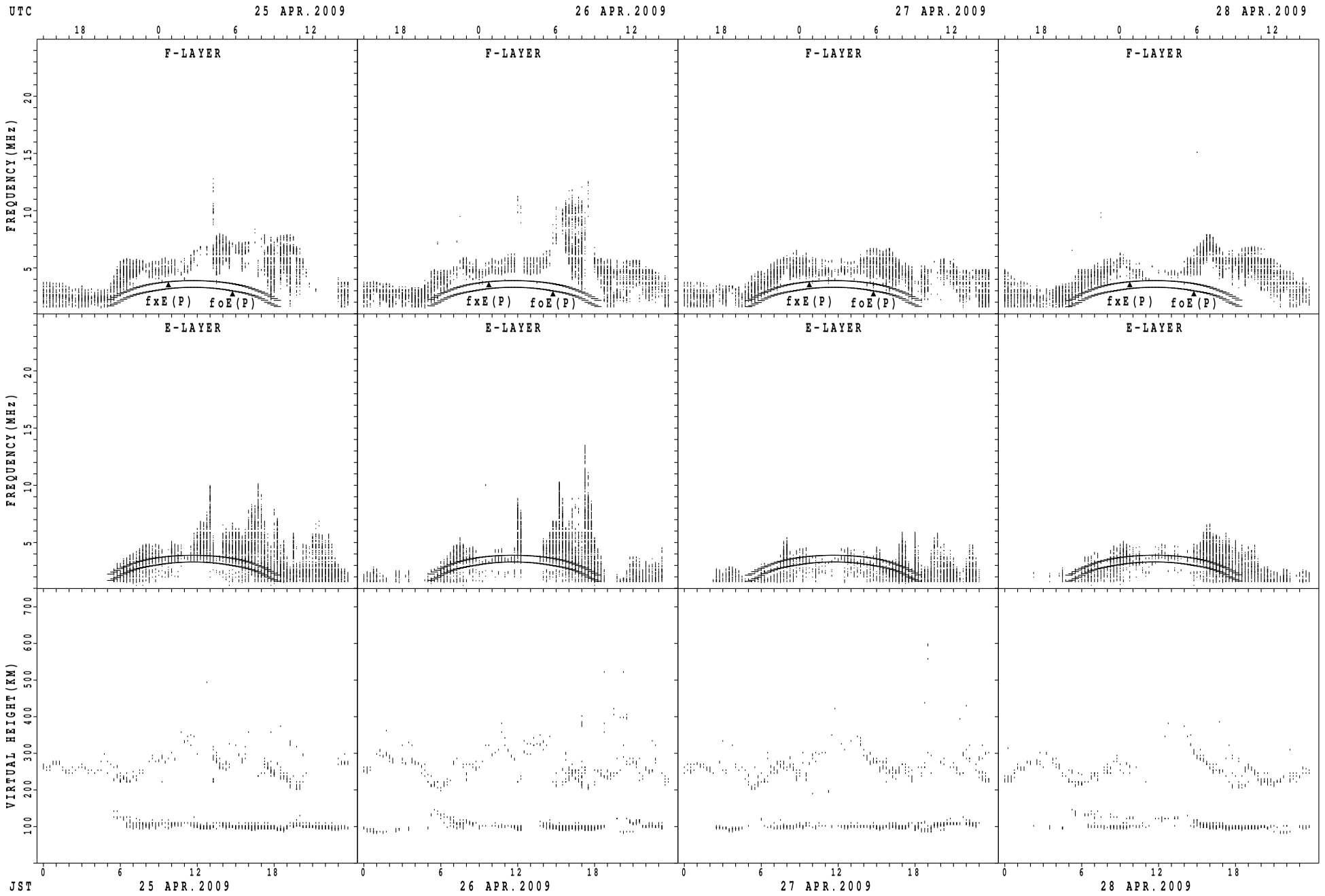
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



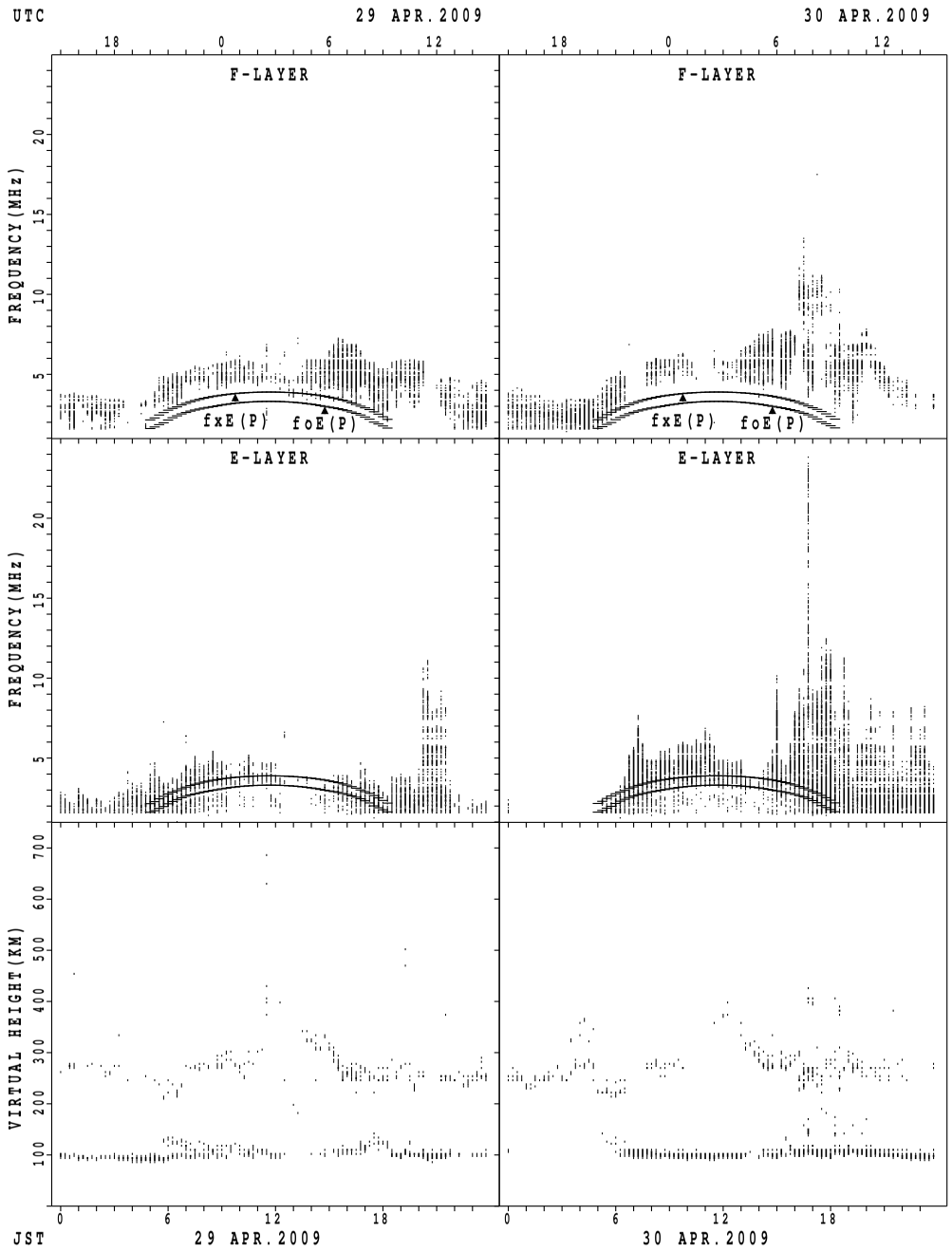
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



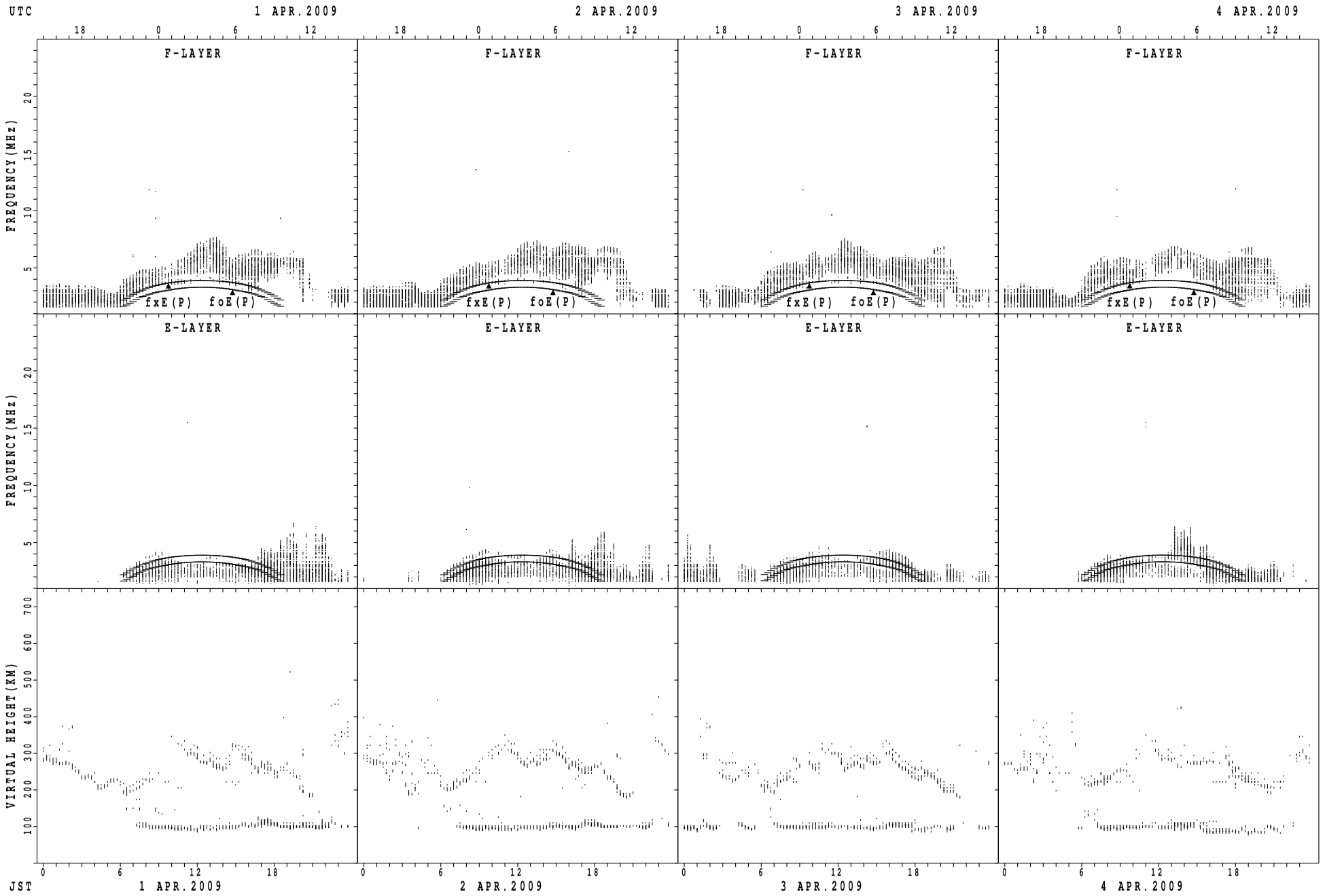
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Kokubunji



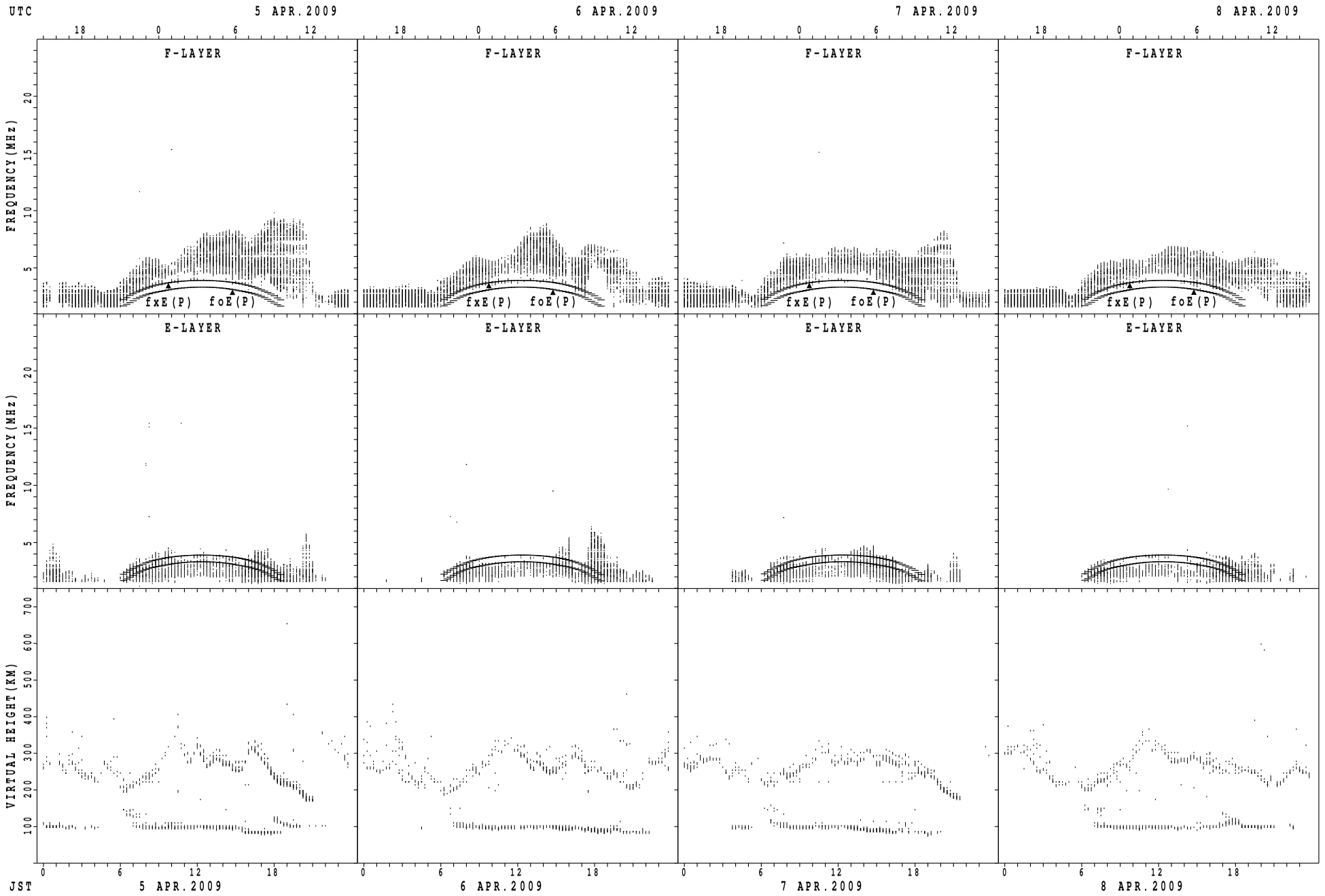
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



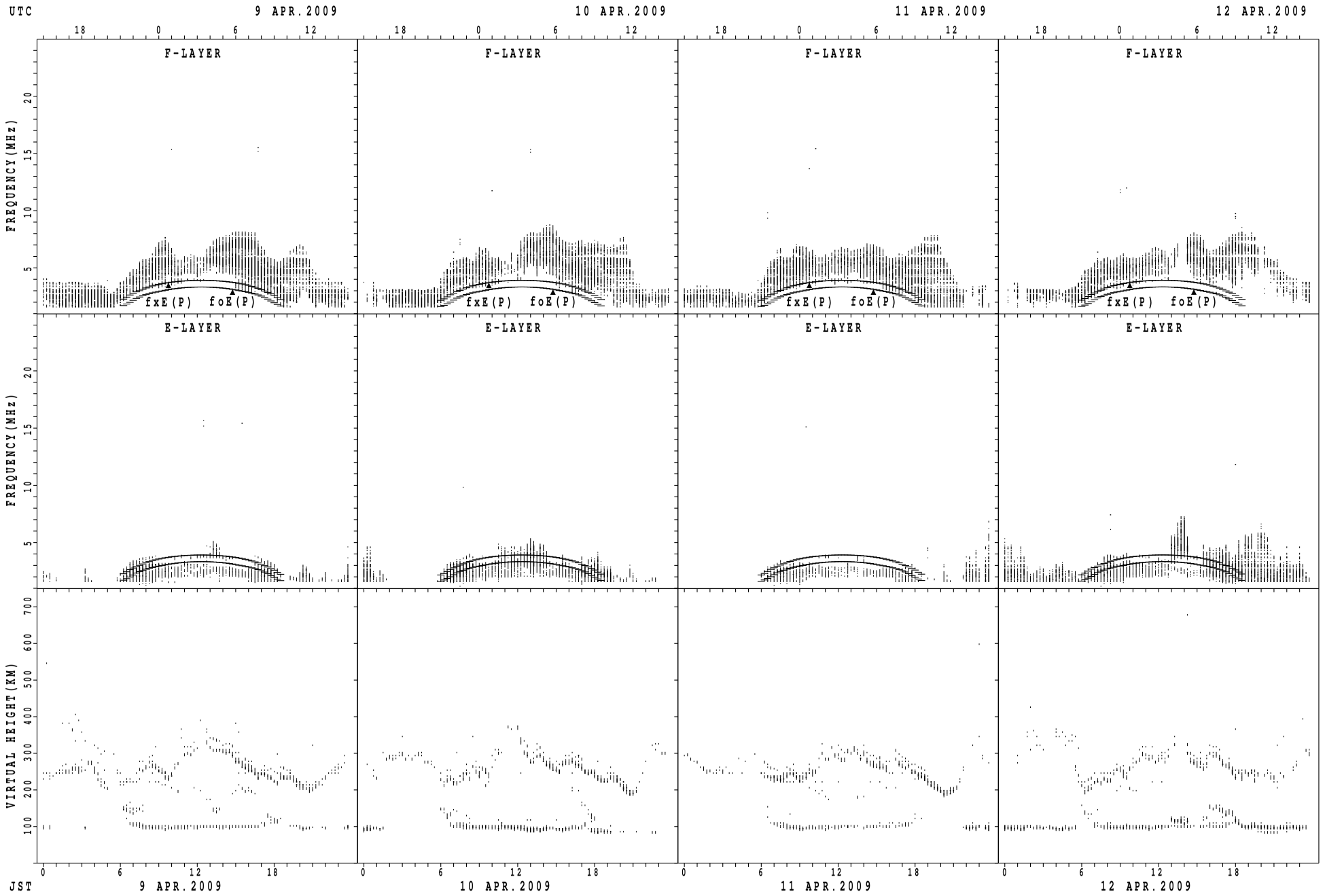
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



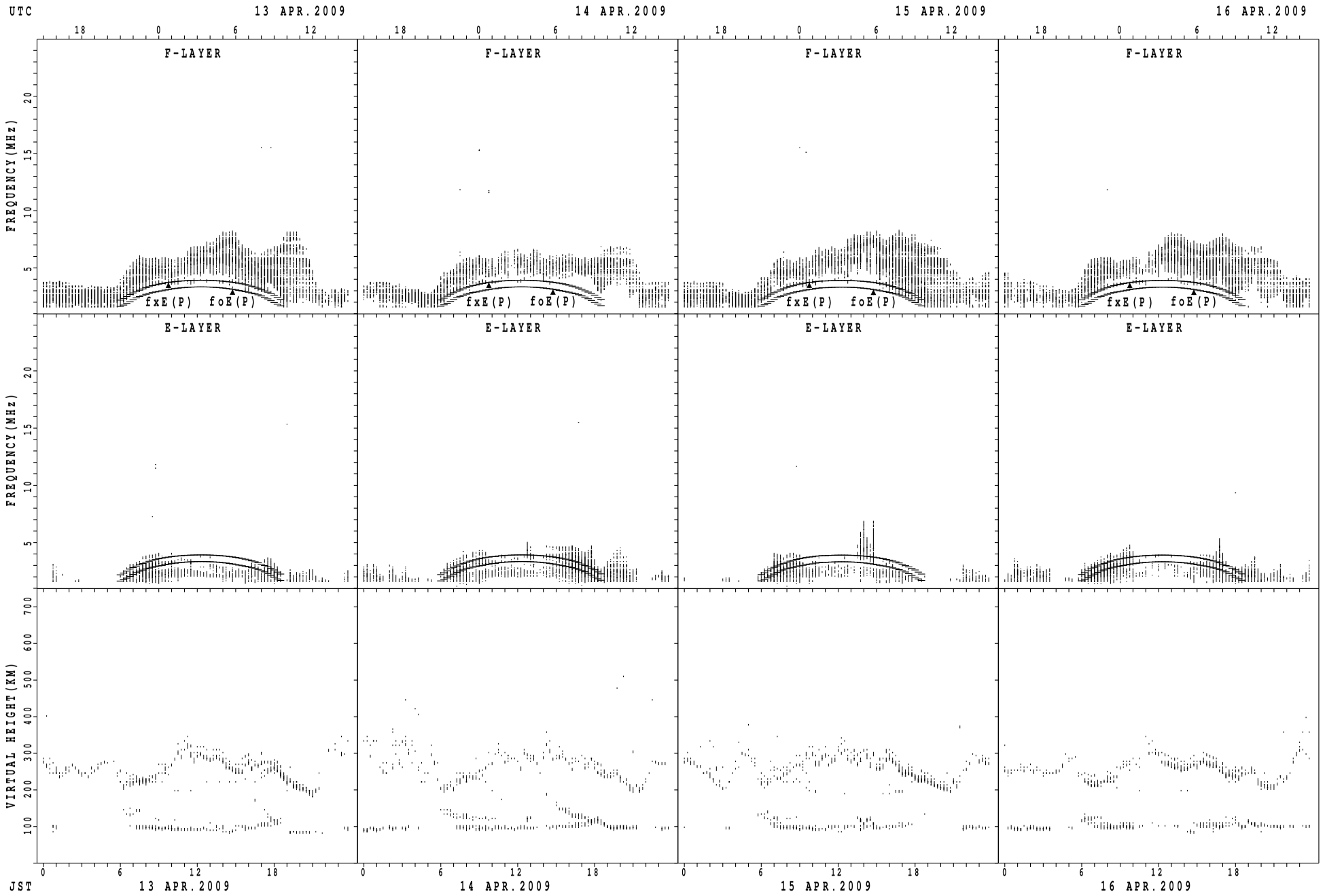
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



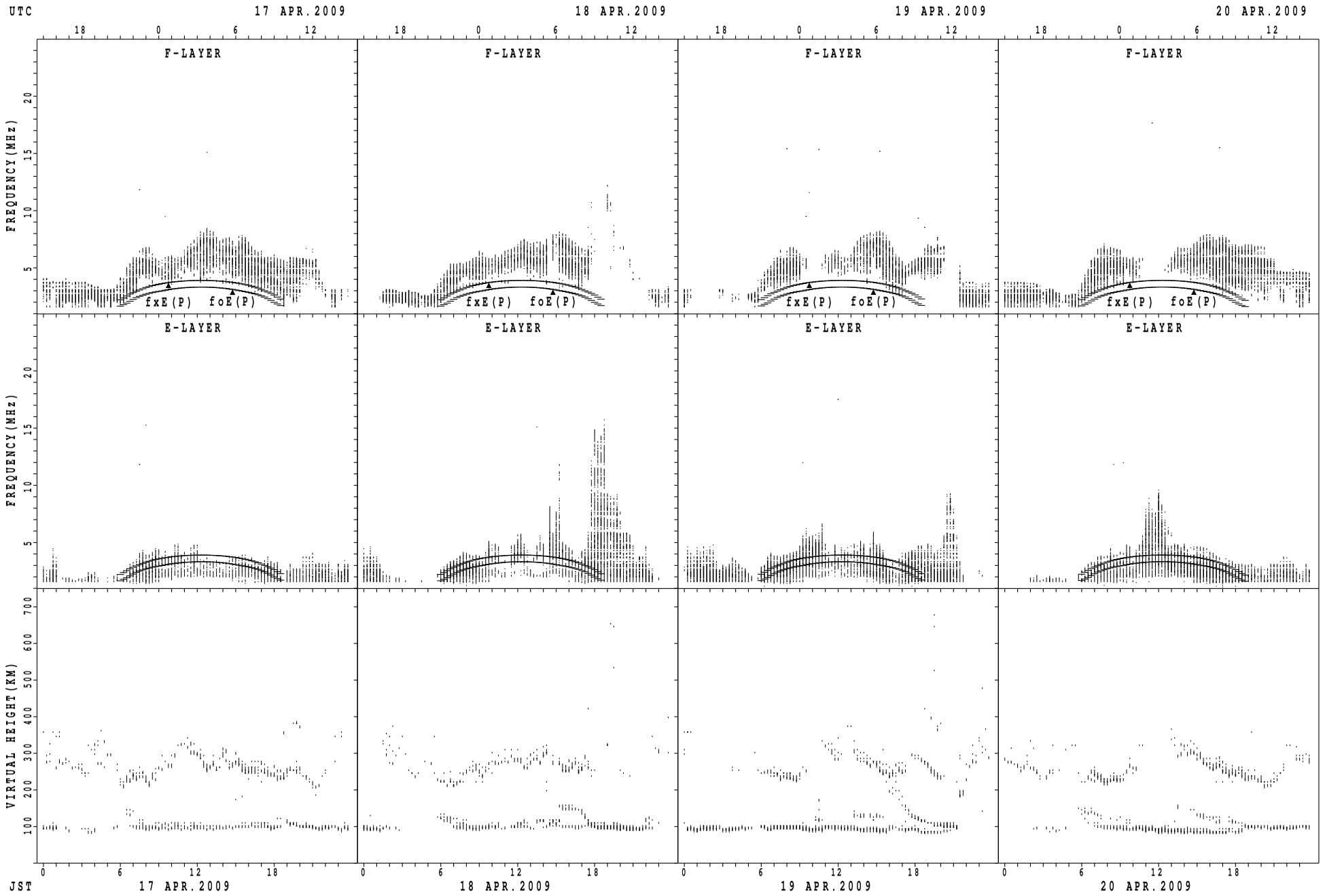
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



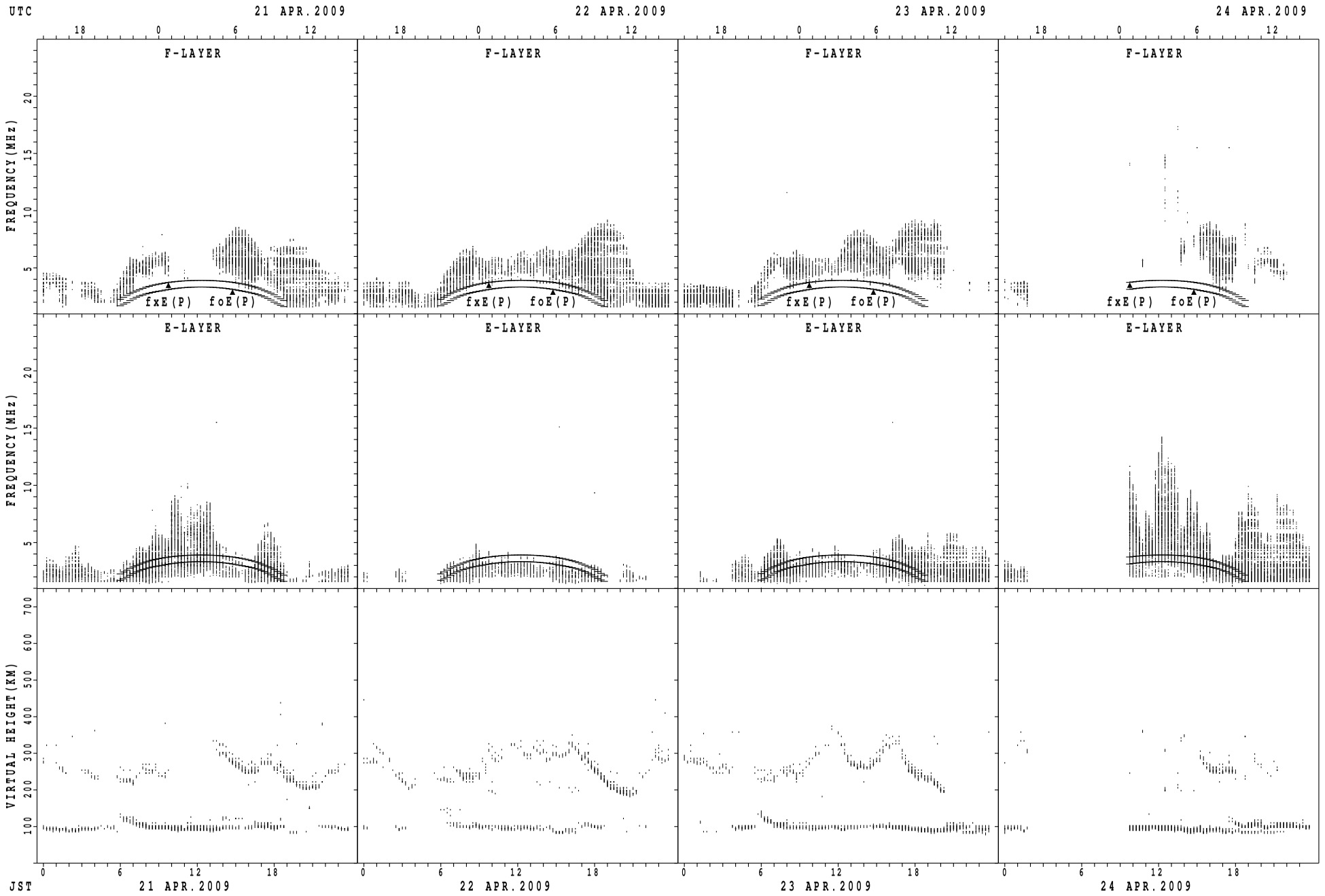
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



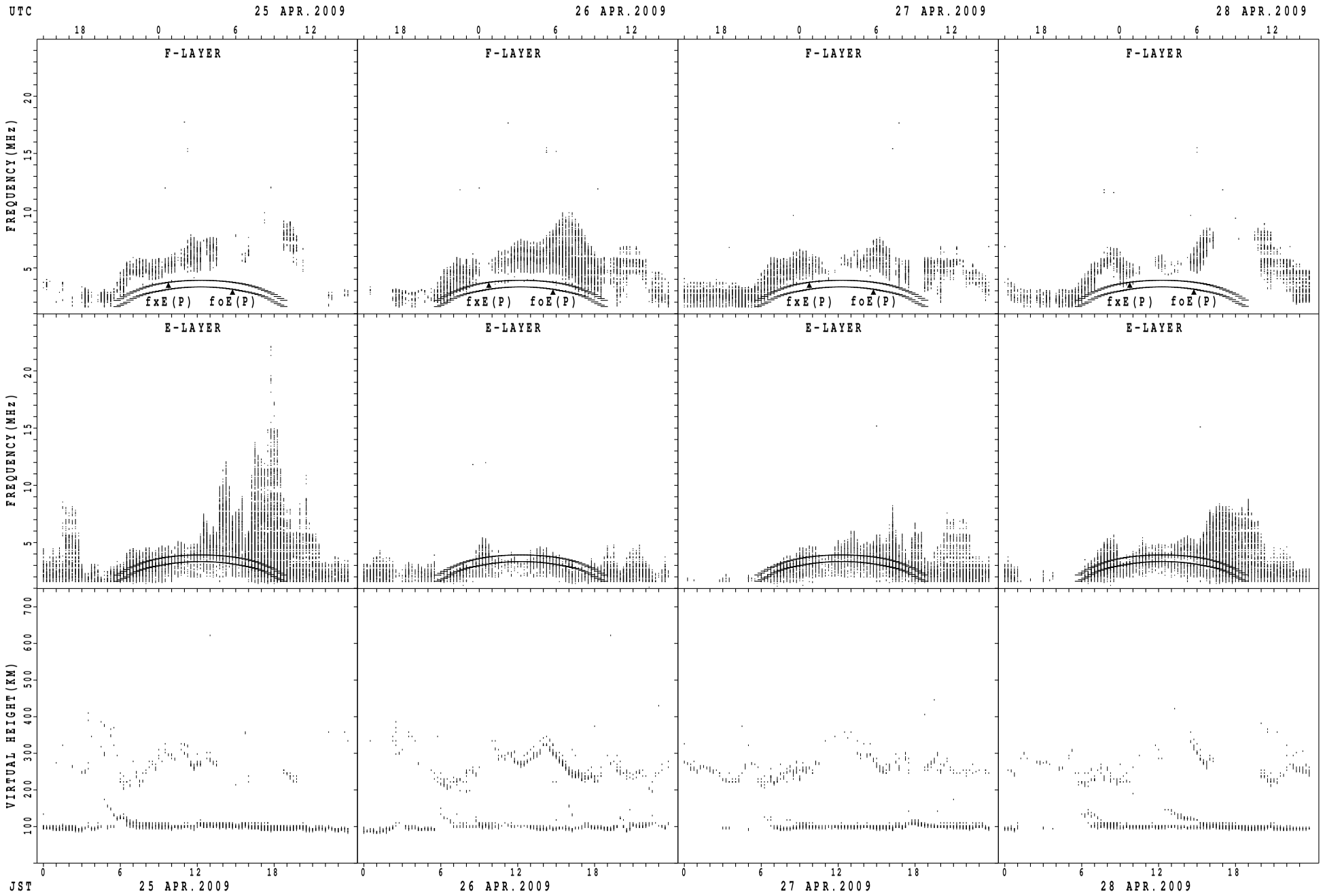
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



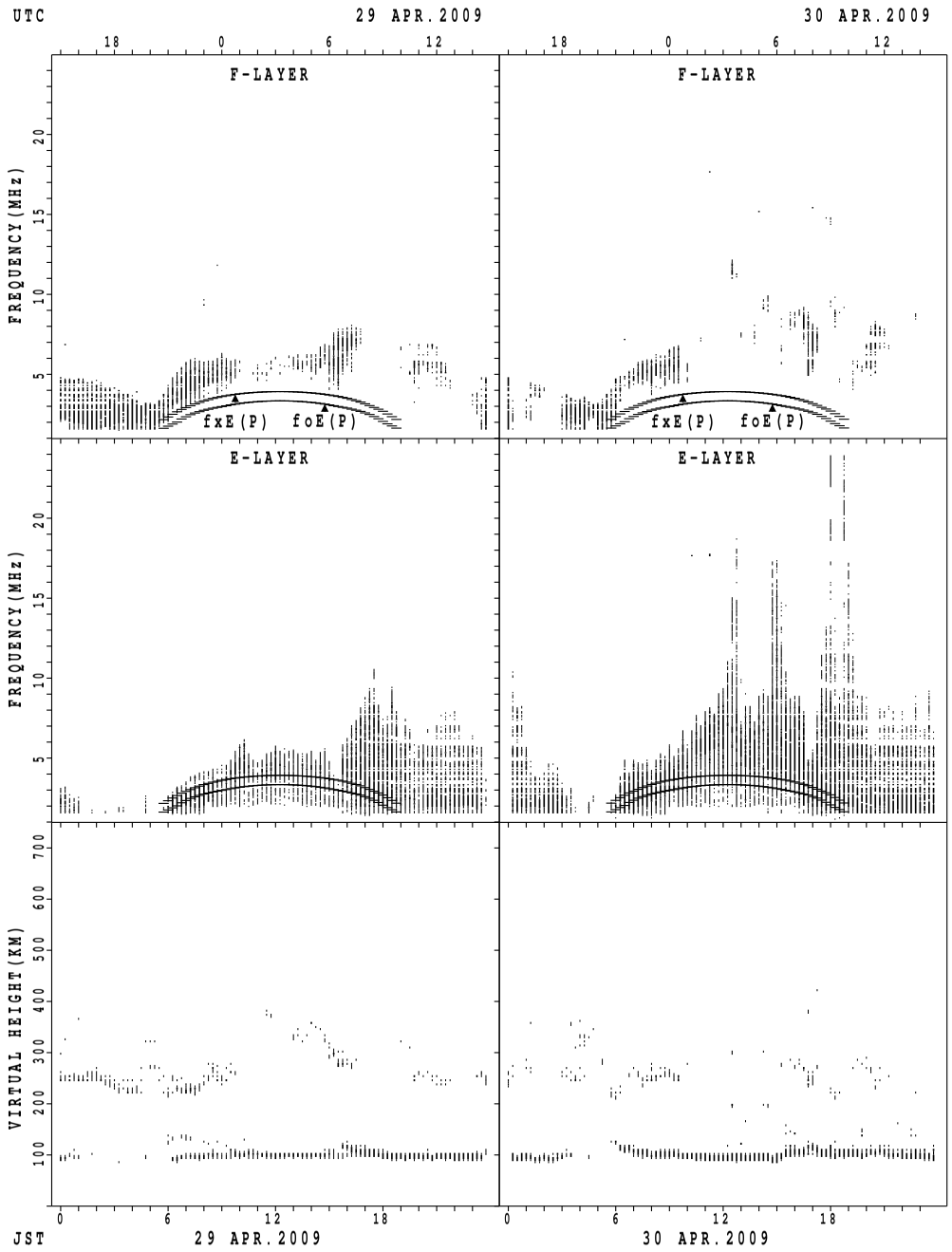
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



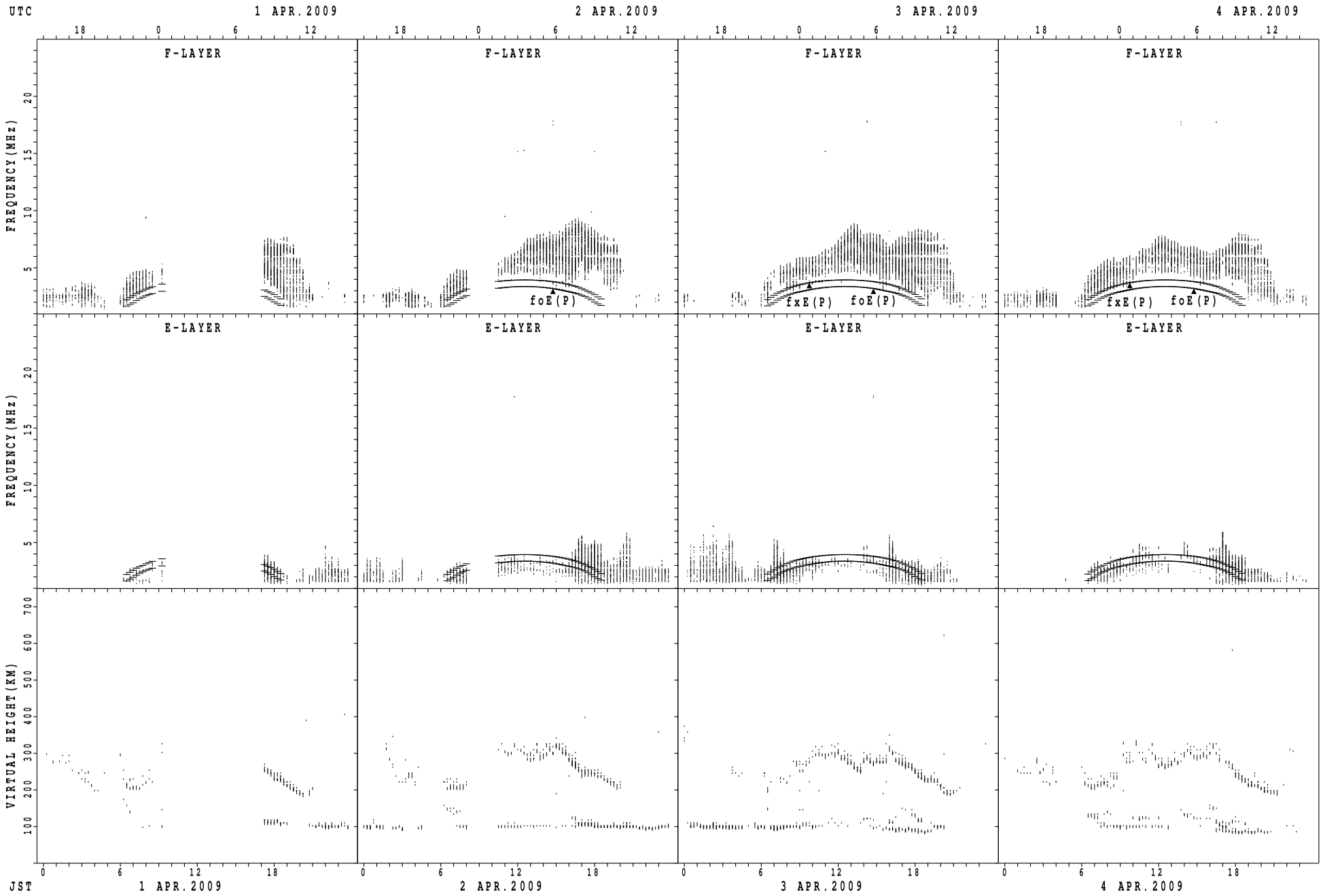
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Yamagawa



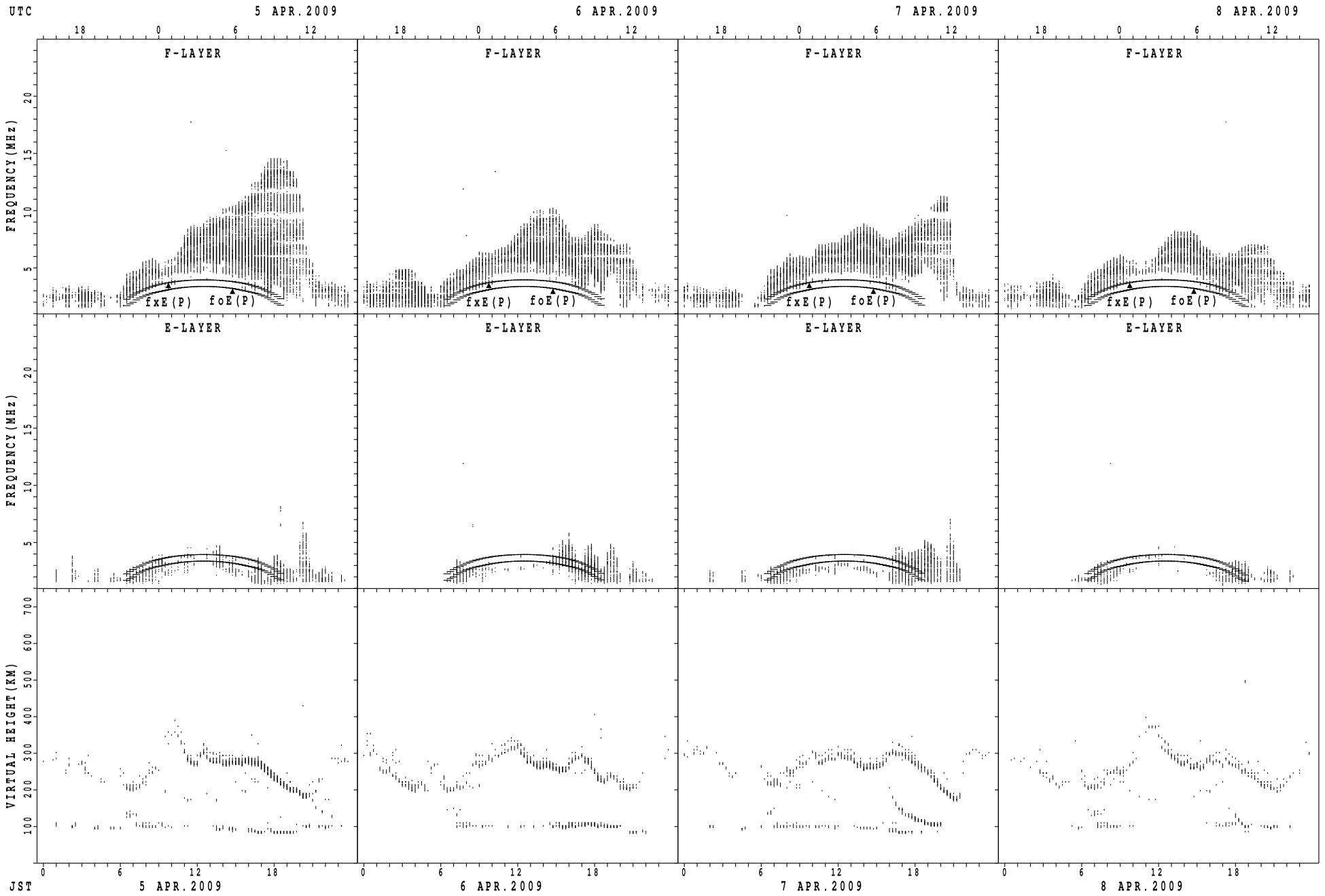
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



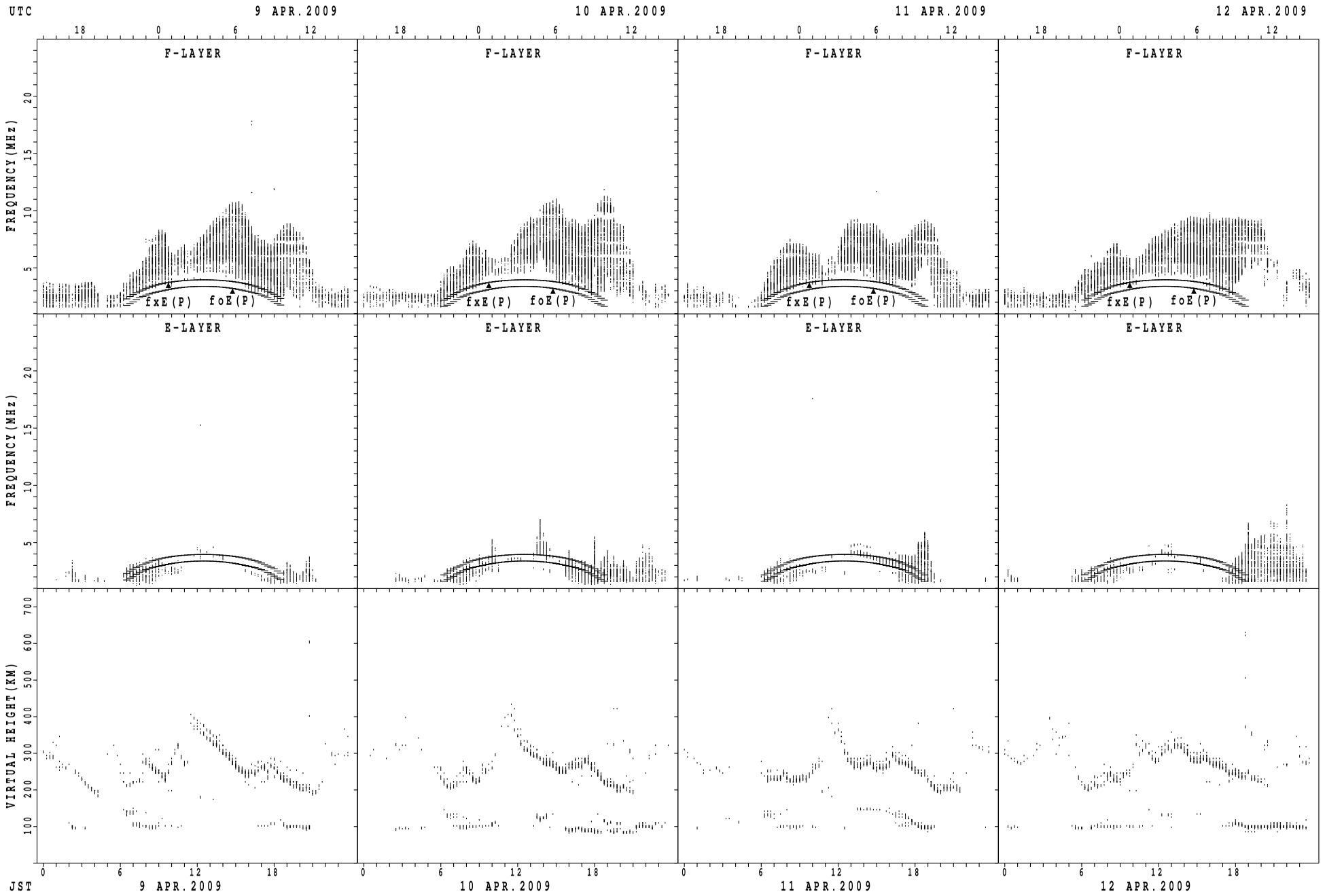
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



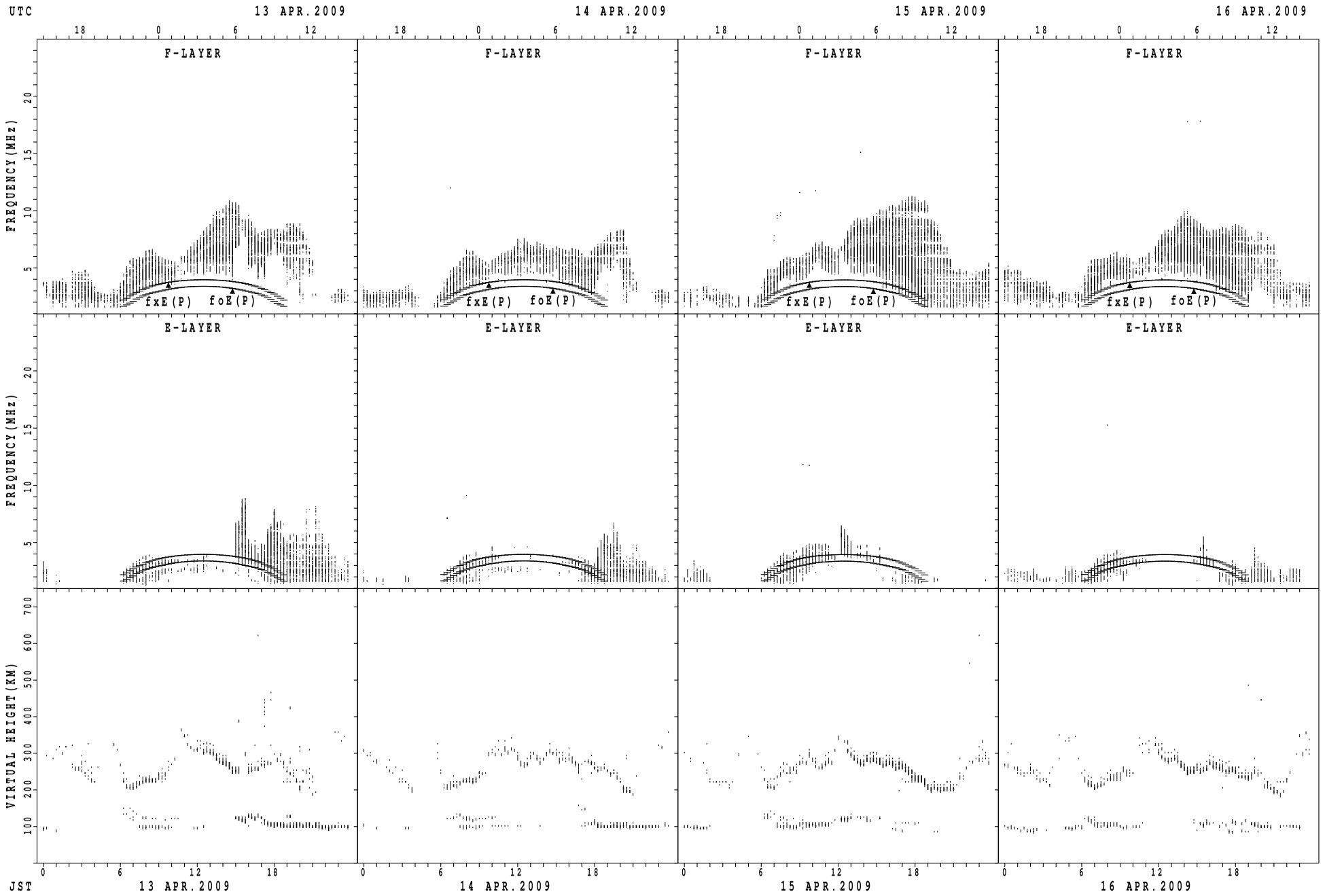
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



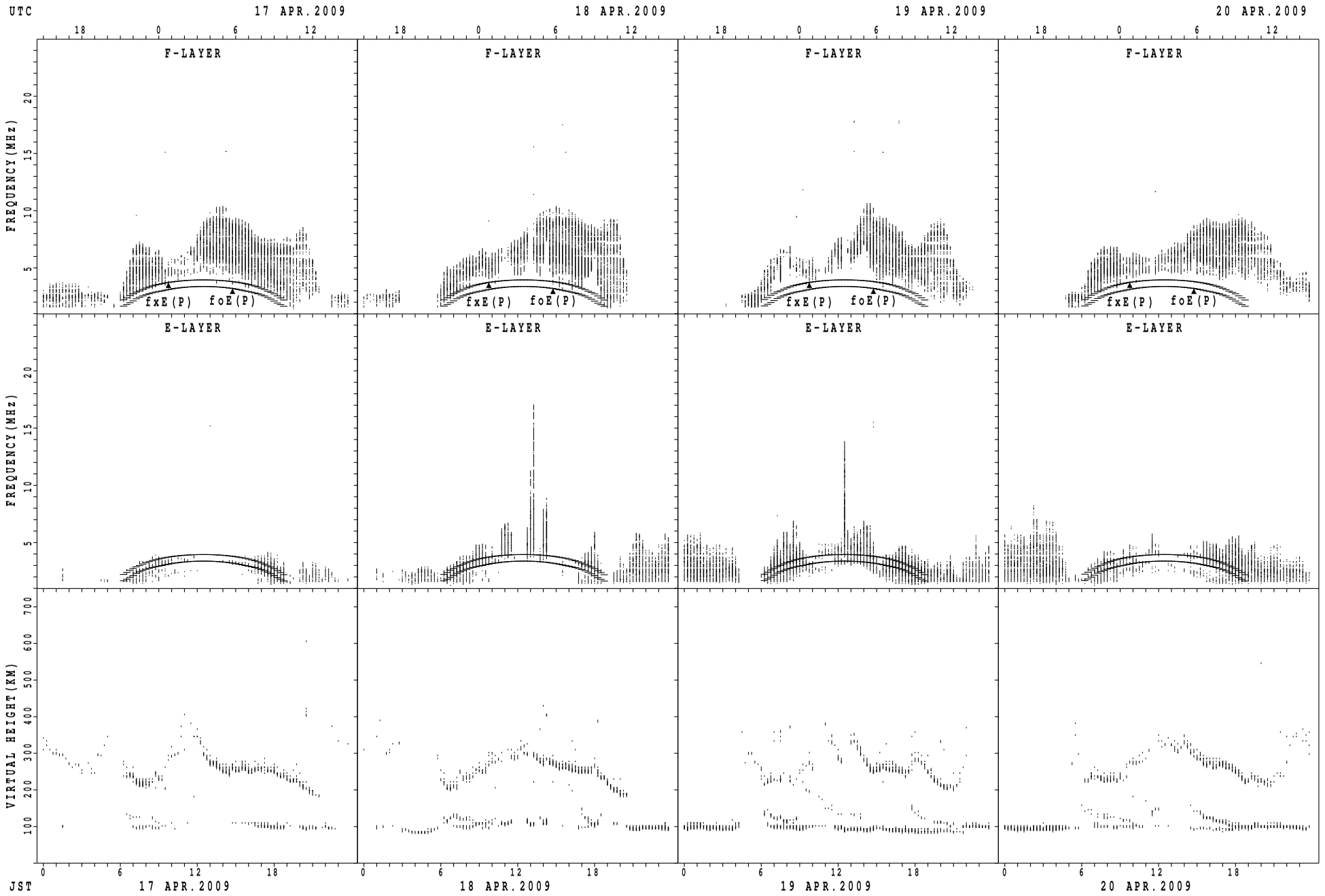
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



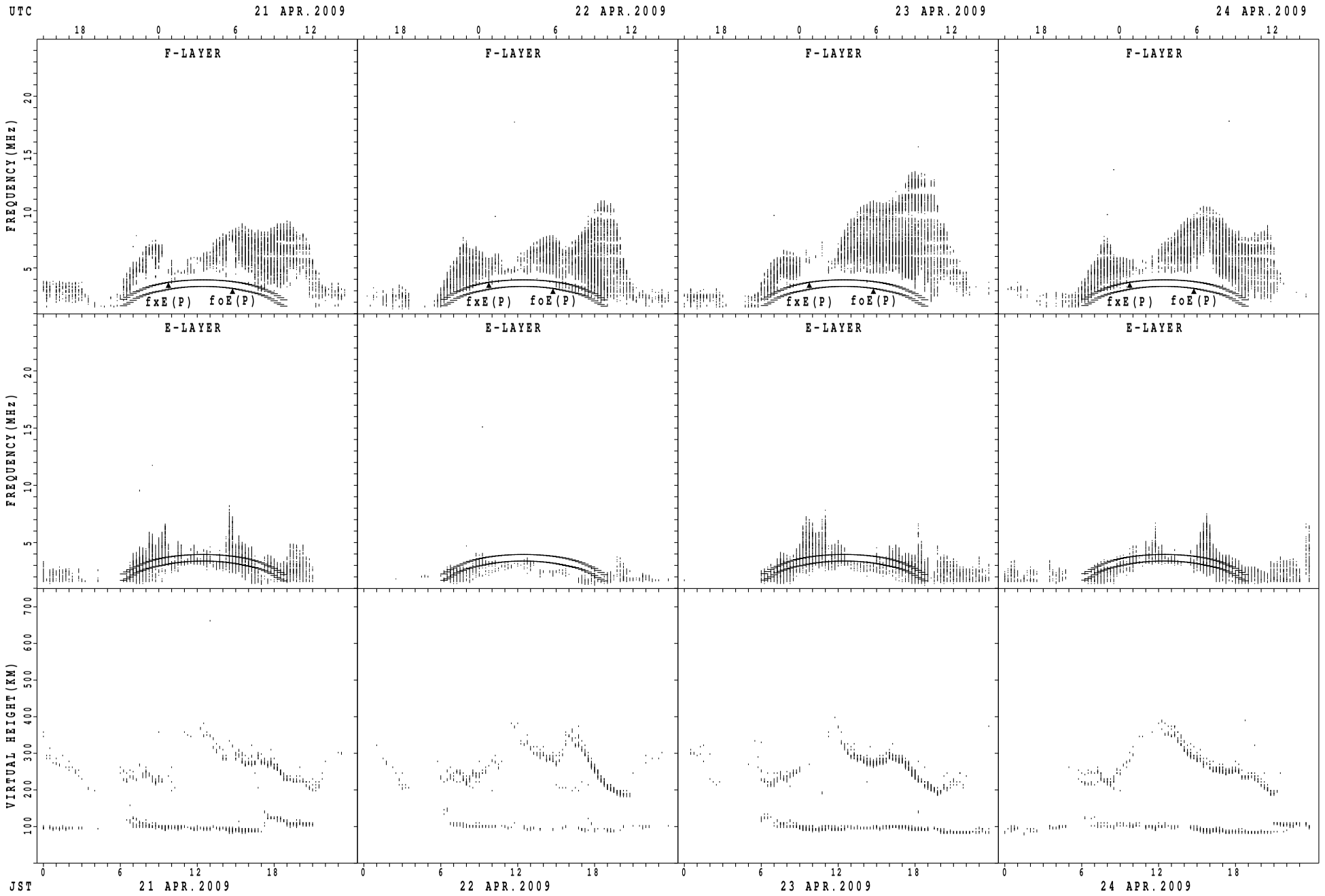
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



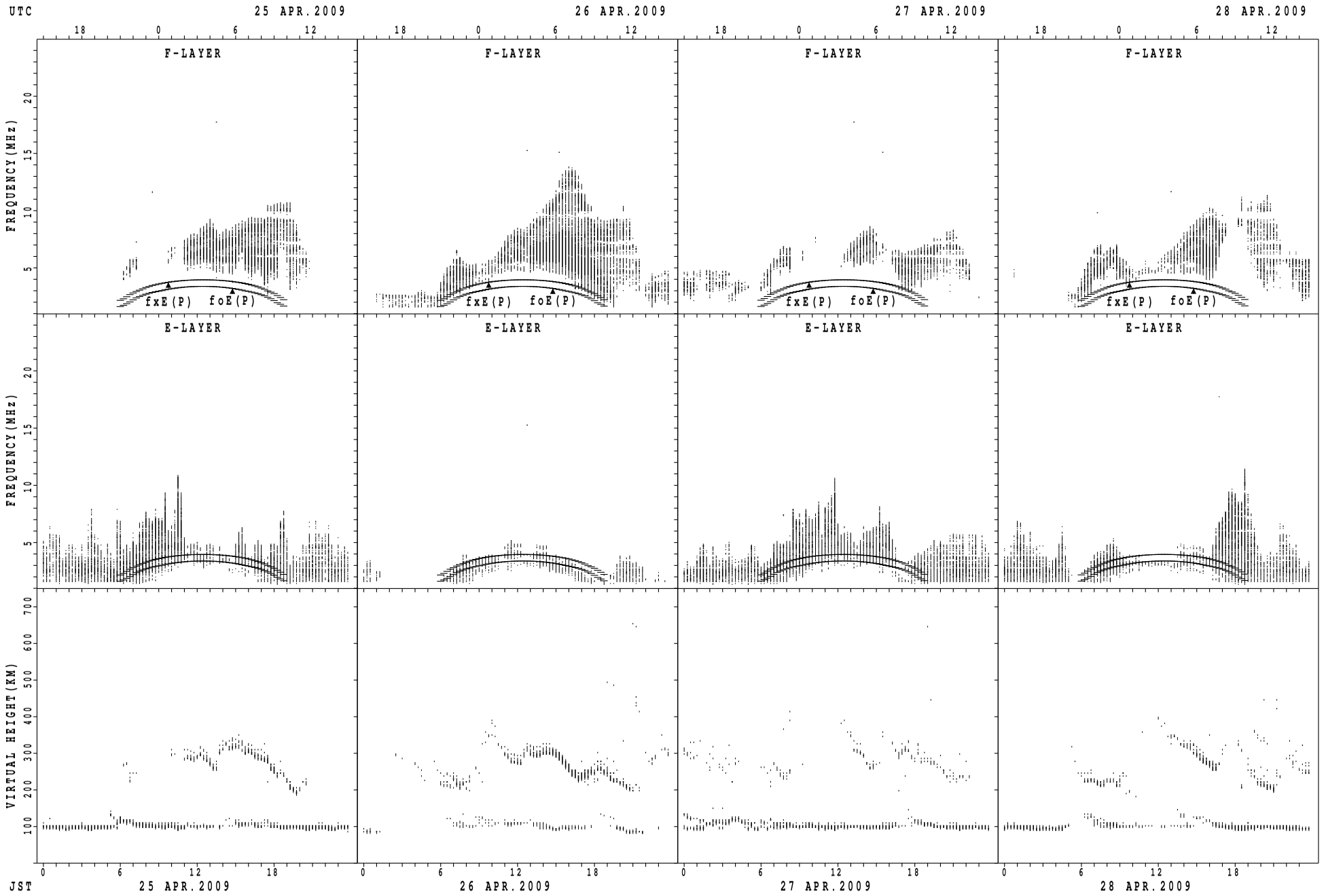
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

SUMMARY PLOTS AT Okinawa



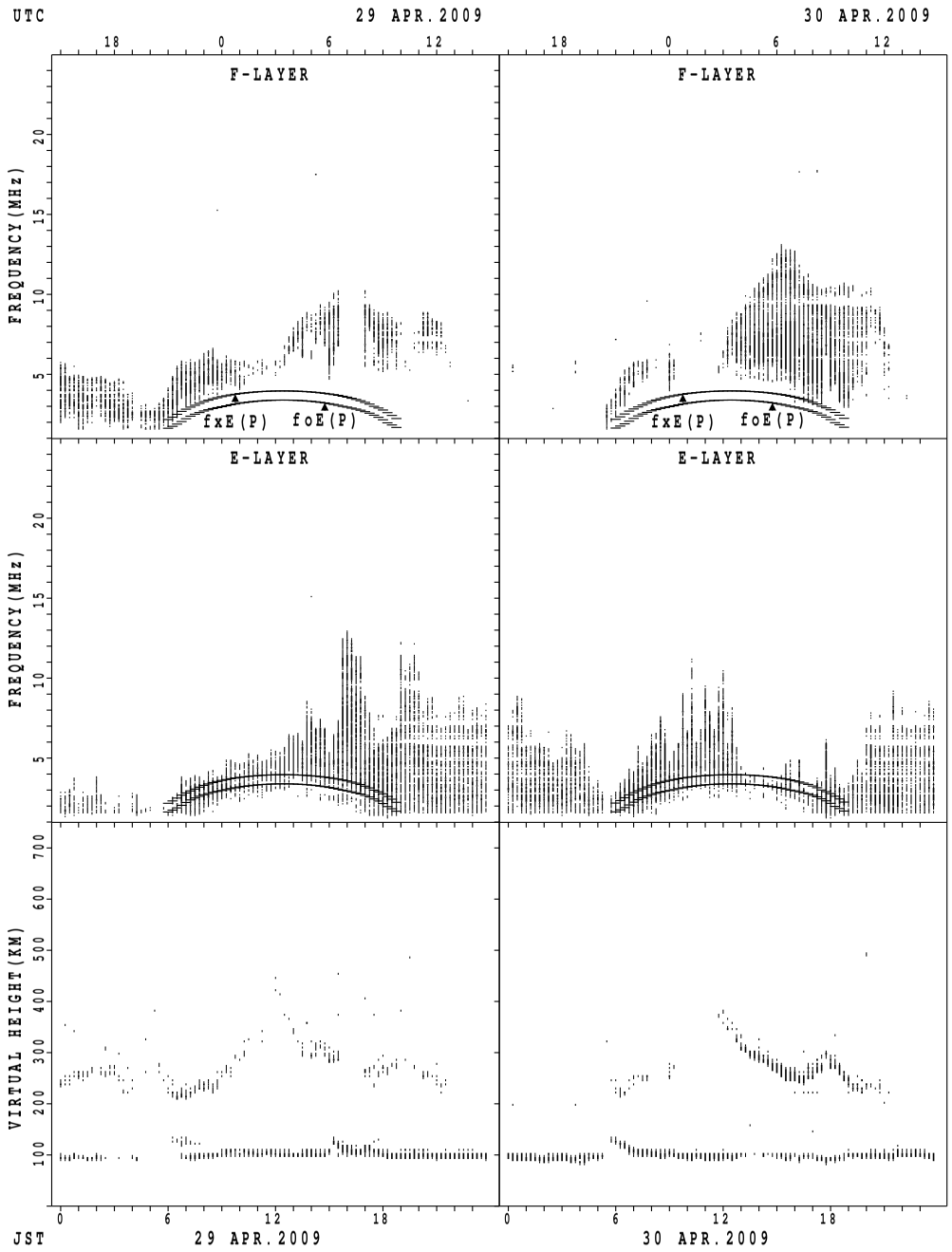
fxE(P); PREDICTED VALUE FOR fxE
foE(P); PREDICTED VALUE FOR foE

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

APR.2009 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																	6							
MED																	281							
U Q																	290							
L Q																	272							

h′Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	4	3	1	2	1	5	22	22	14	9	8	8	7	15	14	14	17	20	17	12	12	7	8	5
MED	99	101	109	110	121	131	149	131	112	107	107	100	99	97	98	101	101	112	111	96	105	105	104	101
U Q	106	101	54	123	60	140	155	149	131	112	120	137	187	101	101	101	107	128	120	106	116	113	106	106
L Q	94	99	54	97	60	106	125	113	107	101	103	97	95	97	95	97	97	96	92	87	101	103	99	93

h′F STATION Kokubunji LAT. 35°43.0′N LON. 139°29.0′E

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT																	11	5	6	8	5	1		
MED																	262	258	256	261	244	258		
U Q																	276	274	272	285	254	129		
L Q																	248	235	254	248	231	129		

h′Es

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	11	5	5	5	5	3	22	17	16	12	10	14	17	13	10	13	17	16	23	18	21	20	18	19
MED	103	95	97	97	95	95	136	119	112	107	105	105	101	105	104	107	107	108	103	103	103	105	103	103
U Q	105	104	99	100	100	107	149	139	118	113	113	111	119	110	105	112	119	113	111	111	105	111	105	105
L Q	95	91	93	96	95	93	131	113	106	105	103	103	95	99	99	100	104	100	99	101	101	100	101	97

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								1	7								2	15	11	9	15	2		
MED								242	246								285	272	254	246	232	241		
U Q								121	248								306	290	262	257	244	248		
L Q								121	240								264	250	244	231	220	234		

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	15	16	10	9	7	7	17	23	24	18	15	14	16	15	18	20	18	23	27	22	22	21	19	16
MED	97	95	97	95	95	95	129	131	111	107	103	102	100	103	104	106	103	105	107	101	101	103	99	100
U Q	99	99	99	97	97	101	144	139	125	113	105	105	109	125	113	118	113	137	113	105	105	105	105	105
L Q	93	94	95	94	95	93	124	113	106	105	101	97	98	97	95	96	99	95	99	95	99	97	97	97

MONTHLY MEDIANS OF h′F AND h′Es

APR.2009 135E MEAN TIME(UTC+9H) AUTOMATIC SCALING

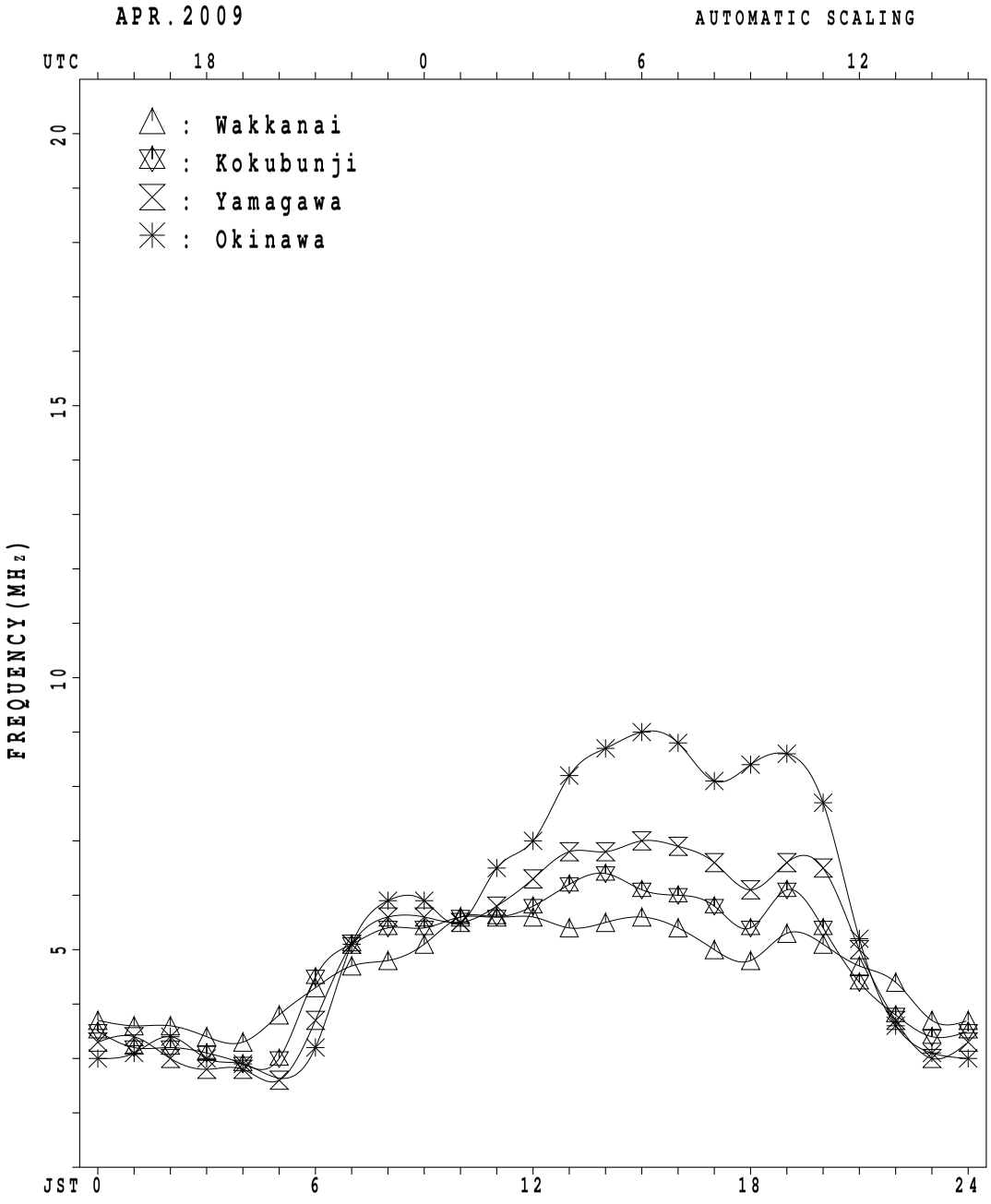
h′F STATION Okinawa LAT. 26°41.0′N LON. 128°09.0′E

	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	11	1								25	26	28	26	7		
MED								252	238	278								266	254	239	224	220		
U Q								126	248	139								281	270	256	236	230		
L Q								126	224	139								251	246	229	214	206		

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	12	11	8	9	6	8	28	16	18	14	13	11	12	13	14	18	16	27	23	24	19	21	16
MED	97	100	99	97	99	98	103	122	111	103	106	105	101	106	119	112	107	106	103	103	103	103	101	100
U Q	103	104	105	102	101	101	121	134	113	107	109	112	111	131	144	135	117	116	113	105	103	105	105	104
L Q	95	97	97	95	96	97	101	113	106	103	103	98	97	103	102	99	97	102	95	93	96	97	98	97

MONTHLY MEDIANS PLOT OF foF2



IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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 39	39	X 37	X 36	X 34	X 30														X 64	X 58	X 39	X 39	X 41
2	X 41	42	X 41	41	38	37														X 73	X 62	X 35	X 38	X 40
3	X 39	X 40	38	X 35	X 33	X 35														X 66	X 62	X 47	X 40	46
4	40	39	X 36	X 32	X 29	X 29														X 65	X 62	X 46	47	49
5	47	44	47	42	46	X 31														X 75	X 85	O X 49	X 32	X 33
6	X 35	37	X 34	X 33	X 29	X 30													X 63	X 64	X 60	X 50	X 45	X 45
7	X 43	X 40	38	X 36	X 33	X 36													X 56	X 64	X 66	X 54	45	X 42
8	X 40	X 38	X 38	X 37	X 37	X 35														X 60	X 57	X 50	X 47	48
9	48	44	40	37	X 35	X 32														X 56	X 60	X 43	X 46	X 44
10	X 43	X 39	X 38	X 38	X 39	X 37														X 60	X 61	X 50	X 45	X 42
11	X 44	X 43	X 41	X 42	X 34	X 34														X 67	X 68	A	X 43	X 43
12	X 42	X 41	X 37	37	36	X 33														X 73	X 58	X 50	X 48	X 43
13	X 41	X 41	X 38	X 38	X 32	X 32														X 76	X 68	X 46	X 41	X 44
14	X 42	X 42	43	X 38	40	X 36														X 64	X 59	X 52	X 49	X 46
15	45	46	43	44	39	X 35														X 67	X 64	X 50	X 46	X 46
16	X 44	X 44	X 42	X 39	X 36	X 38														X 67	X 70	X 56	X 44	X 42
17	X 41	41	X 35	X 35	X 33	X 35														X 56	X 57	X 54	X 46	X 39
18	X 36	X 36	35	34	35	X 35														X 75	X 71	A	X 40	42
19	42	38	38	40	X 33	X 33														X 66	X 66	X 47	X 41	X 41
20	X 40	X 40	X 40	X 39	X 30	X 31														X 72	X 69	X 52	X 47	X 43
21	X 43	X 40	X 38	X 39	X 35	X 36														X 62	X 65	X 57	X 52	X 49
22	X 46	X 44	X 43	X 43	X 34	X 34														X 76	X 77	70	X 58	A
23	47	46	X 38	X 36	X 35	X 38														X 88	X 90	X 51	X 45	X 41
24	X 39	40	X 33	X 34	X 34	X 39														X 68	X 67	X 46	X 46	X 40
25	X 42	X 41	X 38	X 36	X 36	X 35														X 81	X 70	X 43	A	45
26	X 43	X 40	X 38	X 35	X 34	X 42														X 59	X 60	X 57	X 54	51
27	X 44	X 41	X 40	X 38	X 35	X 43														X 60	X 62	X 57	52	52
28	52	X 44	X 40	X 35	X 35	X 40														X 72	X 70	X 61	X 52	X 47
29	X 43	X 40	X 38	X 36	X 34	X 38														X 64	X 66	X 57	X 50	X 47
30	X 45	X 42	X 40	X 38	X 37	X 40														74	80	60	X 50	X 39
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30													2	30	30	28	29	29
MED	X 42	X 41	X 38	X 37	X 35	X 35													X 60	X 66	X 66	X 50	X 46	X 43
U Q	44	43	X 40	39	36	X 38														X 73	X 70	X 56	X 50	46
L Q	X 40	40	X 38	X 35	X 33	X 33														X 64	X 60	X 46	X 42	X 41

APR. 2009 fxI (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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	33	F	31	30	28	24	44	45	46	46	52	57	64	64	60	56	54	54	53	58	51	33	32	35
2	35	F	35	F	F	F	40	46	45	50	53	56	66	68	58	56	59	61	65	67	56	29	32	34
3	33	34	F	29	26	29	42	51	50	51	55	57	61	61	58	59	54	51	52	60	56	41	34	F
4	F	F	30	26	23	23	40	47	51	54	53	51	58	61	58	55	54	45	53	59	56	40	F	F
5	F	F	F	F	F	25	39	54	54	51	53	58	57	64	66	64	55	60	68	69	79	43	25	27
6	29	F	28	27	23	24	44	47	50	54	53	55	61	63	67	60	59	62	57	58	54	44	39	39
7	37	34	F	30	27	29	39	52	56	58	55	53	61	59	50	54	60	52	50	57	60	48	F	36
8	34	32	32	31	31	28	42	45	52	51	52	56	58	56	56	55	56	53	46	54	50	44	40	F
9	F	F	F	F	28	26	37	50	54	60	61	63	60	59	57	60	72	57	49	50	54	37	40	37
10	37	33	32	32	33	31	47	49	59	55	58	57	58	68	69	66	65	63	52	54	55	44	39	36
11	38	37	35	36	28	28	47	54	56	76	60	55	66	54	64	61	55	50	53	61	62	A	37	37
12	36	35	31	F	F	26	46	48	52	57	58	55	58	60	67	60	57	61	64	66	51	44	42	37
13	35	35	32	32	26	26	50	44	49	58	56	58	61	62	64	61	59	57	55	69	62	40	35	38
14	36	36	F	32	F	30	44	46	53	54	59	57	56	56	53	51	56	52	55	58	53	45	42	40
15	F	F	F	F	F	29	44	49	50	61	58	68	64	65	65	64	65	62	62	61	58	44	39	40
16	38	38	36	32	30	32	48	52	58	54	58	58	59	71	71	64	66	61	54	61	64	50	38	36
17	35	F	29	28	27	29	46	48	54	51	56	62	67	70	65	60	58	55	50	50	50	48	40	32
18	30	30	F	F	F	29	46	52	53	53	59	61	58	63	65	66	58	56	62	69	65	A	33	F
19	F	F	F	F	27	27	40	44	54	52	59	53	51	55	64	64	65	48	50	60	60	41	35	35
20	34	34	34	33	24	25	42	56	64	59	54	56	51	58	58	63	69	73	70	66	63	46	41	36
21	36	34	32	33	29	30	45	54	A	51	56	53	50	58	65	67	66	55	49	56	59	51	46	43
22	40	38	37	37	28	28	48	53	52	58	60	52	59	60	64	65	60	A	A	70	70	F	52	A
23	F	F	32	29	29	32	45	54	59	54	54	52	58	61	64	64	54	57	68	82	84	45	39	35
24	33	F	27	27	28	33	48	52	54	59	55	56	55	55	55	64	74	72	62	62	61	40	40	36
25	36	35	32	30	30	29	52	52	50	53	54	54	62	A	75	66	68	71	73	75	64	36	A	F
26	37	34	32	30	28	36	44	47	55	51	54	55	A	56	59	67	75	73	58	54	53	51	48	F
27	38	35	34	32	28	37	43	51	56	56	54	52	51	53	60	64	62	51	48	54	56	51	F	F
28	F	38	34	29	29	34	45	49	54	59	51	47	50	50	52	65	75	59	56	66	64	54	46	40
29	37	34	32	30	28	32	44	48	50	53	57	52	51	48	56	61	68	57	51	58	59	51	44	41
30	39	36	34	32	31	34	46	A	52	56	57	A	53	59	71	72	72	66	64	F	F	F	44	33
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	23	19	22	23	24	29	30	29	29	30	30	29	29	29	30	30	30	29	29	29	29	26	26	22
MED	36	35	32	30	28	29	44	49	53	54	56	56	58	60	64	64	60	57	55	60	59	44	40	36
U Q	37	36	34	32	29	32	46	52	56	58	58	58	61	64	65	65	68	62	63	66	64	48	42	39
L Q	34	34	31	29	27	26	42	47	50	51	54	53	54	56	58	60	56	52	50	56	54	40	35	35

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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									UL 376	UL 408	420	432	436	436	UL 436	UL 408	L							
2										UL 412	420	432	428	432	UL 428	UL 412	L	L						
3									L	UL 416	424	A	428	UL 420	420	UL 408	L							
4									L	412	432	UL 436	428	428	UL 416	UL 400	L							
5								A	L	UL 428	UL 440	436	444	420	420	404	L	L						
6									L	UL 412	A	424	428	UL 424	424	408	L	L						
7								L	UL 408	416	424	436	436	424	UL 428	UL 420	L							
8									UL 400	412	420	432	428	432	420	UL 408	L							
9								L	UL 400	UL 412	A	A	424	432	UL 424	416	UL 392							
10									L	412	424	UL 432	UL 436	428	428	UL 420	L	L						
11								L	392	416	428	436	432	UL 444	420	L	L							
12									UL 388	420	424	UL 436	448	UL 436	428	UL 408	A	A						
13									L	A	A	440	440	436	420	404	L							
14									UL 392	UL 428	UL 420	444	440	A	424	UL 412	UL 384							
15									UL 400	416	UL 436	UL 436	444	444	UL 412	UL 420	L	L						
16									UL 392	420	428	428	A	UL 432	420	L	L							
17								L	A	420	428	420	444	440	A	A	L							
18								A	L	416	428	A	440	436	420	A	A	A						
19								UL 388	A	408	UL 412	432	440	428	424	UL 408	UL 376							
20								UL 376	L	UL 428	432	UL 432	440	432	420	UL 416	A	A	A					
21								A	A	A	420	436	UL 448	432	424	A	A	L						
22								L	UL 416	416	428	UL 444	432	A	UL 412	A	A	A	A					
23								A	A	A	UL 440	448	436	440	A	UL 404	UL 404	A	A					
24								L	A	416	A	432	424	440	424	408	A	A						
25								L	A	A	A	UL 444	A	A	A	A	A	A	A					
26								A	A	416	432	440	A	416	A	A	A	A						
27								L	A	412	428	440	UL 428	428	UL 424	A	UL 380	A						
28								A	A	A	420	UL 432	432	A	428	A	A	A	A					
29								A	A	A	428	432	440	440	424	396	384	A						
30								A	A	A	A	A	A	A	UL 420	A	A	A	A					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								2	10	23	24	26	26	25	26	19	6							
MED								UL 382	UL 396	416	428	436	436	432	424	UL 408	UL 384							
U Q									UL 400	420	430	440	440	438	UL 424	UL 416	UL 392							
L Q									UL 392	412	420	432	428	428	420	404	UL 380							

APR. 2009 foF1 (0.01MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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	236	UR 332	A	A	A	A	A	A	312	A	A	A					
2							184	248	296	A	A	A	A	328	A	R	R	UA 212	B					
3							168	240	284	A	A	A	A	A	A	A	A	A	B					
4							204	252	A	A	A	A	A	R	A	A	A	A	B					
5							B	244	A	A	A	A	A	A	R	R	284	216	B					
6							192	248	A	A	A	A	A	A	R	R	R	208						
7							180	264	292	A	A	R	R	R	A	A	260	R						
8							B	236	R	R	R	R	R	R	R	R	268	A	B					
9							180	264	304	A	A	A	A	A	A	A	A	UA 216	B					
10							B	236	A	A	A	A	A	A	A	R	R	A	B					
11							192	252	A	R	A	R	R	A	R	R	264	216	B					
12							216	252	A	A	A	A	A	A	A	R	272	A	A					
13							B	A	A	A	A	A	R	R	R	R	256	208	B					
14							224	A	A	A	320	A	A	A	A	A	A	UA 224	B					
15							204	UA 252	A	A	R	R	R	R	A	R	264	220	B					
16							A	A	A	A	A	A	A	R	R	A	A	A	B					
17							196	A	A	A	A	A	A	A	A	A	A	248	B					
18							UA 208	A	A	A	UR 316	A	R	A	A	A	A	A	B					
19							184	A	A	A	R	R	A	A	A	A	R	UR 224	B					
20							200	256	A	R	R	A	A	A	A	300	A	A	B					
21							216	A	A	A	A	A	A	A	R	A	A	A	B					
22							UA 224	A	A	R	R	R	A	A	UA 340	A	A	A	B					
23							A	A	A	A	A	A	A	A	A	A	A	A	B					
24							UR 224	UR 292	A	A	A	A	R	A	R	A	UA 280	A	B					
25							UA 216	A	A	A	A	A	A	A	A	A	A	A	B					
26							212	A	A	A	A	A	A	R	A	A	A	A	B					
27							220	260	A	A	UR 344	R	A	A	A	A	A	A	B					
28							220	A	A	A	A	A	A	A	A	A	A	A	B					
29							A	A	A	A	A	A	A	R	A	A	A	A	B					
30							UA 204	A	A	A	A	A	A	A	A	A	A	A	B					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							22	16	5		3			1	1	2	8	10						
MED							204	252	296		UR 320			328	UA 340	306	266	216						
U Q							216	258	318		UR 344						276	U 224						
L Q							192	242	288		UR 316						262	212						

APR. 2009 foE (0.01MHz)

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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 14	E B 15	E B 15	E B 15	E B 15	E B 15	21	30	G 27	37	37	38	38	J A 60	38	36	31	26	J A 27	J A 40	J A 58	J A 18	E B 15	E B 15
2	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	21	31	36	37	37	J A 42	36	38	36	G 28	G 23	26	J A 22	J A 25	J A 34	J A 52	J A 45	J A 28
3	J A 67	J A 27	J A 19	20	E B 16	E B 15	20	G 22	33	35	37	J A 48	39	J A 42	J A 52	35	J A 34	J A 31	J A 30	J A 21	E B 14	20	21	J A 24
4	J A 16	E B 14	E B 14	19	20	19	27	32	34	35	38	39	37	G 26	35	34	29	J A 25	J A 20	J A 20	E B 15	E B 15	E B 15	J A 18
5	E B 15	E B 15	E B 15	E B 15	20	E B 14	24	31	34	36	37	40	38	35	G 27	G 24	33	26	19	J A 24	20	18	E B 14	E B 14
6	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	23	30	32	36	J A 45	J A 41	J A 48	37	G 31	G 25	G 22	24	E B 14	E B 15	J A 20	20	E B 14	E B 14
7	22	18	E B 15	E B 15	E B 15	E B 14	23	30	34	37	38	G 30	G 27	G 28	J A 40	34	32	G 20	18	E B 15	J A 20	E B 16	E B 15	E B 15
8	E B 15	E B 15	E B 15	E B 16	E B 14	E B 14	19	28	G 26	G 28	G 27	G 26	G 29	G 28	G 26	G	30	30	J A 34	J A 19	20	J A 27	E B 15	E B 15
9	E B 14	E B 15	E B 15	E B 15	E B 14	20	21	30	35	36	J A 42	J A 50	40	39	36	36	29	26	20	J A 19	J A 22	20	J A 26	J A 32
10	19	19	E B 14	E B 14	E B 15	E B 14	23	28	33	36	41	38	40	35	38	G 22	G 22	J A 27	20	21	J A 18	20	19	20
11	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	24	29	33	G 28	36	G 28	G 25	36	G 25	G 24	30	G	22	J A 23	J A 31	J A 56	J A 26	J A 24
12	20	E B 15	19	E B 14	E B 15	E B 15	G	30	36	37	36	36	36	37	35	G 26	38	J A 50	J A 49	J A 35	J A 34	22	J A 46	J A 23
13	20	18	E B 14	E B 15	E B 15	E B 15	23	32	36	42	40	35	40	G 31	G 29	G 20	30	26	E B 16	J A 21	J A 23	J A 24	E B 15	J A 26
14	J A 25	J A 20	20	20	E B 14	E B 14	26	33	38	38	38	40	41	44	42	35	31	29	J A 29	J A 20	21	19	J A 22	J A 23
15	18	18	E B 16	E B 15	E B 15	E B 14	27	36	37	36	G 24	G 27	G 29	G 28	G 26	G 26	31	26	22	J A 45	J A 32	J A 23	E B 15	J A 18
16	E B 16	E B 15	E B 15	E B 14	E B 14	20	27	J A 40	35	36	37	39	52	G 30	G 27	33	31	J A 26	J A 22	J A 20	J A 20	J A 28	J A 29	J A 32
17	J A 60	J A 29	J A 31	J A 26	J A 21	J A 23	23	30	38	J A 39	40	J A 41	41	39	J A 57	J A 41	J A 35	G 22	20	18	J A 18	J A 46	J A 44	J A 26
18	J A 20	20	20	E B 14	E B 15	E B 15	25	J A 48	34	37	G 26	J A 46	G 36	J A 56	J A 144	J A 97	J A 79	J A 47	J A 29	J A 23	J A 25	J A 77	J A 20	22
19	J A 23	E B 14	E B 15	E B 15	E B 15	E B 14	24	32	J A 56	J A 40	G 28	G 32	J A 42	J A 38	J A 39	J A 40	G 22	G 20	19	J A 20	29	E B 13	E B 15	E B 15
20	J A 19	20	E B 15	J A 32	J A 32	E B 16	25	32	35	G 29	G 32	38	J A 40	J A 47	37	36	J A 42	J A 34	J A 44	J A 47	J A 24	J A 27	J A 30	J A 43
21	J A 29	J A 34	J A 30	J A 34	22	E B 16	27	36	J A 60	J A 42	36	39	40	39	G 32	41	38	28	J A 25	J A 54	J A 19	J A 25	32	J A 28
22	J A 33	E B 15	E B 15	J A 29	J A 33	J A 26	28	31	34	G 26	G 27	G 27	40	J A 50	39	J A 52	J A 44	J A 73	J A 123	J A 109	J A 82	J A 42	J A 30	J A 45
23	J A 44	J A 26	21	J A 20	J A E B 14	E B 14	30	J A 41	J A 51	J A 52	38	43	39	40	J A 78	J A 34	J A 48	J A 38	J A 36	J A 46	J A 33	J A 59	J A 24	J A 21
24	E B 16	E B 14	E B 15	E B 15	E B 15	E B 15	G	G 21	J A 41	39	J A 44	37	G 36	J A 44	G 28	35	J A 38	J A 58	J A 52	J A 59	J A 58	J A 44	J A 23	E B 15
25	E B 15	E B 14	E B 14	E B 15	E B 15	E B 14	27	35	J A 45	J A 45	J A 47	39	J A 59	J A 96	J A 62	J A 58	J A 74	J A 90	J A 76	J A 44	J A 37	J A 64	J A 54	J A 26
26	J A 22	J A 23	E B 15	J A 22	J A 19	J A 22	28	J A 44	J A 44	38	38	39	J A 84	G	J A 50	J A 66	J A 68	J A 87	J A 50	20	J A 21	J A 38	J A 33	J A 38
27	E B 15	E B 15	18	J A 21	J A 24	22	28	31	J A 50	40	G 32	G 31	38	38	38	J A 46	30	J A 58	J A 59	J A 53	J A 50	J A 36	J A 53	J A 29
28	J A 26	E B 15	E B 15	20	J A 27	21	29	37	38	44	40	38	41	41	34	J A 45	J A 64	J A 50	J A 50	J A 43	J A 27	22	J A 26	J A 21
29	J A 25	J A 27	J A 21	J A 24	J A 33	J A 44	30	40	41	J A 44	42	J A 42	40	G	36	34	35	J A 39	23	J A 38	J A 33	J A 85	J A 18	J A 20
30	J A 28	E B 15	E B 15	E B 14	E B 15	E B 14	28	J A 53	J A 46	J A 51	J A 57	J A 65	J A 48	J A 47	35	J A 99	J A 75	J A 92	J A 114	J A 125	J A 107	J A 63	J A 52	J A 74
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	20	E B 15	E B 15	E B 15	E B 15	E B 15	24	32	36	37	38	39	40	38	36	35	32	J A 28	J A 26	J A 24	J A 24	J A 26	J A 24	J A 23
U Q	J A 25	J A 20	19	J A 20	J A 20	20	27	J A 36	J A 41	J A 40	J A 40	J A 41	J A 41	J A 44	J A 40	J A 41	J A 42	J A 50	J A 49	J A 45	J A 34	J A 46	J A 32	J A 28
L Q	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	23	30	34	36	G 36	G 35	G 36	G	G 31	G 28	30	26	20	20	20	20	E B 15	E B 18

APR. 2009 foEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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 14	E B 15	E B 15	E B 15	E B 15	E B 15	20	28	G 26	36	36	37	37	37	36	34	30	23	22	29	43	E B 15	E B 15	E B 15
2	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	20	29	32	34	35	38	36	37	33	G 26	G 22	24	19	23	30	18	18	E B 15
3	E B 15	22	16	E B 15	E B 16	E B 15	18	G 20	30	33	34	44	36	38	36	32	30	28	20	15	E B 14	E B 15	16	E B 16
4	E B 15	E B 14	E B 14	E B 15	E B 15	E B 14	24	30	32	32	36	38	36	G 25	33	31	28	22	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16
5	E B 15	E B 15	E B 15	E B 15	E B 15	E B 14	22	29	32	34	37	38	35	34	G 27	G 23	32	24	18	16	E B 15	E B 15	E B 14	E B 14
6	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	22	27	31	33	40	38	37	35	G 30	G 24	G 21	23	E B 14	E B 15	E B 16	E B 14	E B 14	E B 14
7	E B 16	E B 15	E B 15	E B 15	E B 15	E B 14	21	28	33	35	36	G 28	G 26	G 28	35	32	29	G 18	16	E B 15	E B 14	E B 16	E B 15	E B 15
8	E B 15	E B 15	E B 15	E B 16	E B 14	E B 14	18	26	G 26	G 27	G 26	G 24	G 27	G 26	G 24	G	30	26	22	16	E B 15	16	E B 15	E B 15
9	E B 14	E B 15	E B 15	E B 15	E B 14	E B 15	20	29	34	33	40	44	38	37	34	35	28	22	16	E B 16	18	E B 14	E B 15	20
10	E B 15	E B 15	E B 14	E B 14	E B 15	E B 14	21	27	31	34	38	37	38	34	35	G 21	G 22	23	17	E B 15	E B 15	E B 14	E B 15	E B 14
11	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	22	27	32	G 25	34	G 27	G 23	34	G 25	G 23	29	G	19	18	27	A A 56	E B 15	16
12	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	G	28	34	34	34	36	35	36	33	G 26	36	40	42	34	26	E B 15	22	E B 15
13	E B 15	E B 15	E B 14	E B 15	E B 15	E B 15	22	30	33	38	37	33	38	G 30	G 29	G 19	28	25	E B 16	E B 16	18	18	E B 15	17
14	E B 16	E B 14	E B 14	E B 15	E B 14	E B 14	26	31	36	36	36	38	39	40	38	34	29	27	24	18	E B 14	E B 15	E B 15	E B 15
15	E B 15	E B 15	E B 16	E B 15	E B 15	E B 14	25	34	35	33	G 22	G 27	G 26	G 27	G 24	G 25	29	25	18	30	28	19	E B 15	E B 15
16	E B 16	E B 15	E B 15	E B 14	E B 14	E B 15	24	32	32	34	35	37	50	G 30	G 27	31	30	21	19	16	16	20	E B 15	E B 15
17	E B 15	E B 15	22	16	16	18	22	28	36	37	38	38	37	37	46	36	32	G 20	18	17	E B 15	35	20	E B 16
18	E B 15	E B 15	E B 15	E B 14	E B 15	E B 15	23	32	32	34	G 26	42	G 36	36	36	41	33	30	22	17	20	A A 77	E B 15	E B 15
19	E B 15	E B 14	E B 15	E B 15	E B 15	E B 14	22	29	39	33	G 26	G 31	37	36	36	33	G 21	G 19	18	E B 15	28	E B 13	E B 15	E B 15
20	E B 15	E B 15	E B 15	E B 15	E B 15	E B 16	24	29	33	G 27	G 32	35	36	37	36	35	38	31	40	43	20	19	E B 15	22
21	22	20	16	16	E B 15	E B 16	24	34	A A 60	39	35	37	38	37	G 32	39	37	26	21	21	16	19	20	20
22	22	E B 15	E B 15	E B 15	20	20	26	29	32	G 25	G 25	G 27	37	44	38	50	36	A A 73	A A 123	30	34	25	22	A A 45
23	25	19	E B 15	E B 14	E B 14	E B 14	30	38	45	40	36	39	38	36	56	32	32	32	34	42	24	E B 15	16	E B 15
24	E B 16	E B 14	E B 15	E B 15	E B 15	E B 15	G	G 21	38	37	42	36	G 36	39	G 27	33	34	56	45	43	36	29	E B 14	E B 15
25	E B 15	E B 14	E B 14	E B 15	E B 15	E B 14	25	32	42	40	41	38	45	A A 96	52	56	51	66	23	E B 15	26	28	A A 54	18
26	16	18	E B 15	E B 15	E B 14	E B 15	26	38	37	34	36	38	A A 84	G	48	59	52	29	44	E B 15	16	31	25	20
27	E B 15	E B 15	E B 14	E B 16	18	E B 15	24	30	47	36	G 31	G 30	36	37	36	39	28	35	36	34	36	18	E B 14	E B 15
28	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	26	35	36	38	39	37	40	40	34	42	53	40	42	39	20	17	18	17
29	20	22	16	17	E B 14	19	28	39	38	40	41	40	40	G	34	33	32	37	22	35	30	34	E B 15	E B 15
30	16	E B 15	E B 15	E B 14	E B 15	E B 14	24	A A 53	41	47	48	A A 65	43	44	34	54	58	34	40	24	37	31	28	18
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	E B 15	E B 15	E B 15	E B 15	E B 15	E B 15	22	29	34	34	36	37	37	36	34	33	30	26	22	18	20	18	E B 15	E B 15
U Q	16	15	15	E B 15	E B 15	E B 15	25	32	38	37	38	38	38	37	36	39	36	34	36	30	28	28	18	17
L Q	E B 15	E B 15	E B 15	E B 14	E B 15	E B 14	21	28	32	33	G 34	G 33	G 36	G	G 30	G 26	28	23	18	E B 15	E B 15	E B 15	E B 15	E B 15

APR. 2009 fbEs (0.1MHz)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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	14	15	15	15	15	15	14	13	12	15	14	15	15	15	14	13	12	13	13	15	15	14	15	15
2	15	15	15	14	15	15	14	14	16	14	14	18	14	13	14	14	14	14	14	14	14	15	16	15
3	15	16	14	15	16	15	14	14	12	15	12	16	14	15	14	14	14	12	14	15	14	15	16	16
4	15	14	14	15	15	14	14	13	13	15	14	18	14	11	15	14	12	14	15	15	15	15	15	16
5	15	15	15	15	15	14	14	14	14	13	15	16	17	16	13	14	14	13	15	15	15	14	14	14
6	15	15	15	14	15	15	14	14	14	12	14	15	15	19	16	14	14	13	14	15	16	14	14	14
7	16	15	15	15	15	14	15	14	14	15	14	20	14	14	16	14	14	14	15	15	14	16	15	15
8	15	15	15	16	14	14	15	13	14	16	15	16	17	15	15	14	14	14	13	13	15	15	15	15
9	14	15	15	15	14	15	13	14	13	15	15	15	12	17	17	14	15	13	15	16	16	14	15	14
10	15	15	14	14	15	14	15	13	15	14	16	16	16	14	14	14	12	14	14	15	15	14	15	14
11	15	15	15	15	15	15	13	14	14	14	14	14	18	15	16	14	14	13	15	14	16	15	15	16
12	15	15	15	14	15	15	14	14	14	16	14	15	14	15	13	15	14	14	15	14	14	15	14	15
13	15	15	14	15	15	15	14	14	14	14	14	13	14	18	15	14	13	14	16	16	14	14	15	15
14	16	14	14	15	14	14	14	15	13	14	15	18	18	14	14	14	14	14	13	14	14	15	15	15
15	15	15	16	15	15	14	14	15	15	13	14	14	20	14	14	14	13	14	15	15	15	14	15	15
16	16	15	15	14	14	15	14	14	13	16	14	16	15	13	12	14	14	12	14	14	14	13	15	15
17	15	16	14	15	15	14	14	14	15	14	22	18	17	18	14	14	12	13	14	15	16	14	15	16
18	16	15	15	14	15	15	14	14	14	13	14	13	17	13	14	13	17	14	14	15	15	14	15	15
19	15	14	15	15	15	14	14	12	13	12	14	14	16	12	15	14	15	14	14	15	14	13	15	15
20	15	15	15	16	15	16	14	13	14	14	14	13	14	18	15	13	13	13	16	14	15	16	15	15
21	14	15	15	14	16	16	14	13	13	16	14	16	18	14	14	14	14	14	13	14	14	14	14	14
22	14	15	15	15	16	14	14	13	13	13	14	16	17	14	17	13	13	15	15	15	15	16	15	15
23	15	15	15	14	14	14	14	14	15	15	12	14	20	20	20	14	13	15	15	15	14	15	15	15
24	16	14	15	15	15	15	14	13	14	15	18	16	18	18	14	13	14	13	14	16	14	14	14	15
25	15	14	14	15	15	14	14	14	12	14	14	14	14	16	14	13	15	13	12	15	14	15	14	14
26	16	14	15	14	14	15	14	12	14	14	14	17	18	18	13	14	14	12	13	15	14	14	15	15
27	15	15	14	16	15	15	15	14	15	14	14	17	20	17	16	12	14	14	15	14	14	14	14	15
28	15	15	15	15	15	15	14	14	16	12	15	13	21	14	16	14	13	13	15	14	14	14	15	14
29	15	14	14	14	14	14	13	14	14	15	12	16	13	20	16	12	14	15	14	14	15	14	15	15
30	15	15	15	14	15	14	14	11	13	14	15	13	14	15	14	14	13	13	14	14	16	15	16	15
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	15	15	15	15	15	15	14	14	14	14	14	16	16	15	14	14	14	14	14	15	14	14	15	15
U Q	15	15	15	15	15	15	14	14	14	15	15	16	18	18	16	14	14	14	15	15	15	15	15	15
L Q	15	15	14	14	15	14	14	13	13	14	14	14	14	14	14	13	13	13	14	14	14	14	15	15

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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	308	F	328	339	354	301	404	397	389	339	335	331	336	337	348	346	328	347	346	348	382	389	302	317
2	316	F	342	F	F	F	383	391	368	357	350	331	343	345	343	326	339	343	349	355	397	307	327	317
3	308	322	F	305	337	332	388	369	373	363	355	327	335	349	352	351	347	339	346	333	350	371	324	F
4	F	F	310	315	361	342	376	374	385	378	345	355	328	348	352	350	369	340	331	339	354	350	F	F
5	F	F	F	F	F	342	391	388	369	364	314	339	326	340	341	337	318	326	331	333	378	381	282	328
6	292	F	336	341	318	341	393	397	364	367	345	345	346	331	351	342	336	351	349	332	354	343	311	319
7	327	326	F	322	322	339	369	374	358	369	337	319	356	360	323	315	353	347	334	326	366	365	F	310
8	327	321	322	339	345	329	380	383	363	361	344	345	346	334	341	334	350	366	340	337	354	323	302	F
9	F	F	F	F	340	339	390	361	356	352	346	367	343	335	319	312	340	363	368	325	360	329	308	307
10	332	326	301	311	330	310	391	355	364	351	359	337	313	328	332	338	348	346	350	333	353	344	299	317
11	309	324	332	359	305	296	355	369	359	385	372	335	359	314	336	363	358	343	335	337	359	A	300	314
12	325	306	303	F	F	333	402	354	383	366	356	340	330	319	344	351	343	338	344	362	350	304	316	329
13	331	331	334	352	337	310	377	397	361	367	360	346	339	339	342	348	351	354	327	347	371	348	281	325
14	316	327	F	339	F	333	394	392	356	374	352	348	342	355	342	327	336	345	346	343	345	343	330	320
15	F	F	F	F	F	322	370	369	342	354	346	344	332	355	335	324	342	351	349	334	350	343	320	311
16	322	328	336	355	326	354	365	375	386	356	356	342	333	339	345	333	339	347	342	326	349	394	302	313
17	286	F	294	313	310	341	353	370	393	349	319	332	331	338	342	351	350	368	356	318	339	343	335	326
18	300	311	F	F	F	344	377	391	354	351	348	345	336	337	339	336	340	352	327	345	353	A	317	F
19	F	F	F	F	353	313	348	323	370	357	380	360	328	322	336	341	363	339	327	337	362	341	315	315
20	308	323	339	362	299	312	340	353	371	365	344	352	336	313	319	329	335	339	351	338	359	342	317	298
21	325	319	323	344	352	351	371	373	A	357	362	354	297	326	345	350	362	365	326	323	338	348	328	316
22	317	327	328	352	342	324	365	366	346	352	347	315	341	321	335	338	343	A	A	310	346	F	336	A
23	F	F	314	330	311	333	374	364	386	352	357	334	319	326	343	353	317	315	320	337	379	384	310	329
24	315	F	322	332	302	337	357	368	361	370	348	361	333	331	334	316	342	344	350	340	354	340	339	308
25	323	321	325	327	334	316	384	383	363	352	341	326	332	A	339	324	317	329	336	343	373	325	A	F
26	333	321	299	312	324	381	366	379	385	364	346	336	A	331	326	330	334	352	356	322	325	323	334	F
27	322	329	327	344	334	364	360	366	371	382	357	343	298	320	340	341	352	349	330	311	322	328	F	F
28	F	323	306	316	317	359	383	378	370	369	364	347	324	299	304	327	356	349	321	328	342	365	336	320
29	332	324	329	310	323	348	368	361	382	366	362	336	330	283	324	320	353	338	332	329	342	329	319	326
30	315	345	333	327	295	338	383	A	373	368	361	A	310	313	327	329	349	345	316	F	F	F	349	336
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	23	19	22	23	24	29	30	29	29	30	30	29	29	29	30	30	30	29	29	29	29	26	26	22
MED	317	324	326	332	328	337	376	373	369	364	349	342	333	331	340	336	343	346	340	334	354	343	317	317
U Q	327	327	333	344	341	343	388	386	382	368	359	348	342	340	343	348	352	352	349	342	364	365	330	326
L Q	308	321	310	315	314	319	365	365	360	352	345	333	327	320	332	327	336	339	328	326	346	329	302	313

APR. 2009 M(3000)F2 (0.01)

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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									UL 420	UL 426	422	369	401	391	UL 393	UL 404	L							
2										UL 392	397	426	425	386	UL 378	UL 403	L	L						
3									L	UL 400	419	A	413	UL 411	398	UL 382	L							
4									L	401	393	UL 410	428	397	UL 400	UL 393	L							
5								A	L	UL 408	UL 404	406	413	425	385	395	L	L						
6									L	UL 394	A	436	414	UL 422	384	395	L	L						
7								L	UL 383	396	406	398	401	412	UL 416	UL 386	L							
8									UL 391	419	428	420	409	397	392	UL 395	L							
9								L	UL 384	UL 418	A	A	428	383	UL 395	379	UL 364							
10									L	406	390	UL 419	UL 418	403	385	UL 375	L	L						
11								L	386	390	402	408	410	UL 392	417	L	L							
12									UL 396	386	417	UL 408	377	UL 383	392	UL 380	A	A						
13									L	A	A	407	371	386	396	378	L							
14									UL 393	UL 385	UL 412	400	389	A	402	UL 378	UL 369							
15									UL 384	375	UL 402	UL 405	442	394	UL 397	UL 383	L	L						
16									UL 390	408	416	404	A	UL 413	414	L	L							
17								L	A	422	424	426	389	412	A	A	L							
18								A	L	406	400	A	397	412	403	A	A	A						
19								UL 365	A	403	UL 414	424	407	403	395	UL 391	UL 385							
20								UL 377	L	UL 408	429	UL 429	403	414	395	UL 360	A	A	A					
21								A	A	A	423	418	UL 393	416	406	A	A	L						
22								L	UL 384	401	394	UL 389	408	A	UL 417	A	A	A	A					
23								A	A	A	UL 410	406	402	396	A	UL 375	UL 358	A	A					
24								L	A	408	A	416	420	383	416	383	A	A						
25								L	A	A	A	UL 396	A	A	A	A	A	A	A					
26								A	A	416	409	403	A	408	A	A	A	A						
27								L	A	405	435	406	UL 390	400	UL 403	A	UL 399	A						
28								A	A	A	416	UL 413	388	A	365	A	A	A	A					
29								A	A	A	446	403	401	402	403	399	398	A						
30								A	A	A	A	A	A	A	UL 398	A	A	A	A					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								2	10	23	24	26	26	25	26	19	6							
MED								UL 371	UL 388	405	413	408	405	402	398	UL 383	UL 377							
U Q									UL 393	408	422	419	414	412	403	UL 395	398							
L Q									UL 384	394	402	403	393	392	392	UL 378	UL 364							

APR. 2009 M(3000)F1 (0.01)

NATIONAL INSTITUTE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, JAPAN

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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									232	304	300	308	292	278	266	278	284							
2										286	280	318	284	262	280	302	278	260						
3									248	266	276	318	296	272	270	266	262							
4									244	248	296	284	308	278	282	270	246							
5								226	254	266	336	294	316	282	282	268	298	282						
6									266	262	288	292	282	292	264	276	264	258						
7								250	262	246	290	336	276	254	326	328	260							
8									268	262	278	290	292	312	286	282	266							
9								264	268	272	274	250	278	300	318	316	260							
10									254	268	262	300	352	294	284	280	258	258						
11								254	266	230	244	308	266	306	286	256	264							
12									250	256	258	286	308	290	274	258	264	274						
13									266	256	270	294	288	282	286	252	256							
14									268	258	288	268	298	274	284	288	270							
15									296	262	288	272	288	268	282	284	264	252						
16									236	260	274	286	E A 296	280	274	256	272							
17								264	228	288	322	294	286	268	278	254	268							
18								232	268	266	278	278	276	286	274	266	268	260						
19								324	252	258	252	282	324	326	288	272	236							
20								262	236	256	282	270	316	324	314	286	268	242	238					
21								246	A	268	268	286	382	316	278	258	246	248						
22								238	290	274	266	318	290	318	284	276	266	A	A					
23								250	236	274	270	318	324	308	E A 294	258	300	302	268					
24								254	258	250	274	272	312	316	308	312	254	250						
25								242	E A 250	278	296	330	302	A	256	E A 298	E A 296	E A 344	248					
26								250	230	264	290	316	A	302	304	E A 314	E A 258	242						
27								262	242	238	288	296	368	328	288	278	254	240						
28								248	244	248	272	302	354	376	372	290	254	254	E A 280					
29								E A 260	252	268	262	302	336	428	316	306	262	258						
30								A	262	256	254	A	358	330	288	E A 274	256	246	E A 266					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT								17	28	30	30	29	29	29	30	30	30	17	5					
MED								250	253	262	277	294	298	294	284	276	264	256	257					
U Q								262	266	268	288	312	324	317	294	290	268	267	274					
L Q								244	243	256	268	283	287	278	278	266	256	247	243					

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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 272	E B 276	E B 252	E B 240	218	E B 268	194	202	202	198	202	228	212	216	182	210	208	232	222	E A 242	220	192	E B 270	E B 270
2	E B 270	E B 258	228	E B 258	214	E B 222	206	216	206	210	204	192	186	226	212	194	192	218	226	228	200	E A 276	E A 260	E B 244
3	E B 280	E A 284	E A 282	E B 274	E B 252	E B 252	192	H 178	208	198	194	A	200	216	206	212	222	222	232	226	216	192	E A 236	E B 256
4	E B 282	E B 272	E B 248	E B 272	220	E B 232	218	218	206	206	200	210	188	196	206	188	214	214	232	214	198	198	E B 280	E B 270
5	E B 272	E B 266	E B 246	226	202	E B 232	216	A	212	202	194	204	188	178	178	204	218	234	230	220	200	178	E B 280	E B 266
6	E B 278	E B 276	E B 242	E B 238	E B 236	E B 234	206	208	200	210	A	188	196	178	200	200	220	226	224	220	214	204	E B 248	E B 244
7	E B 248	E B 268	E B 256	E B 240	E B 260	E B 234	202	224	214	208	202	202	186	202	186	192	226	222	234	E B 236	214	194	212	E B 266
8	E B 246	E B 256	E B 260	E B 250	E B 222	226	H 184	210	200	196	192	H 184	188	210	196	206	214	224	216	224	210	E A 230	E B 264	E B 250
9	E B 258	E B 248	E B 220	E B 284	E B 232	206	194	226	218	198	A	A	196	E A 242	202	214	224	228	208	E B 232	208	228	E B 256	E A 278
10	E B 238	E B 232	E B 270	E B 272	E B 228	E B 256	212	210	222	212	E A 250	186	202	192	204	198	218	220	222	226	208	208	E B 244	E B 270
11	E B 270	E B 256	E B 246	218	192	E B 276	218	216	212	216	198	194	198	206	168	196	204	224	226	236	218	A	E B 268	E A 268
12	E B 250	E B 250	E B 284	E B 274	E B 264	E B 266	206	216	212	204	192	202	194	182	184	202	A	A	E A 238	214	212	E B 238	E B 250	E B 234
13	E B 258	E B 238	E B 232	216	E B 234	E B 270	218	202	214	A	A	202	194	212	192	200	220	228	232	216	202	208	E B 260	E A 260
14	E B 262	E B 266	E B 254	E B 234	226	E B 234	196	212	224	214	202	212	214	A	212	194	188	E A 238	E A 238	222	208	216	220	E B 234
15	E B 244	E B 256	E B 258	206	E B 232	E B 256	210	234	220	216	196	198	170	200	210	206	202	214	226	224	232	206	E B 248	E B 262
16	E B 260	E B 242	E B 240	218	E B 224	212	222	232	216	210	192	200	A	202	184	200	224	220	228	E A 246	214	198	E B 260	E B 270
17	E B 298	E B 324	E A 324	E A 266	E A 258	E A 254	208	210	A	202	190	188	202	194	A	A	212	220	224	E A 242	224	E A 256	218	226
18	E B 288	E B 280	E B 268	E B 270	E B 234	E B 234	208	A	218	206	198	A	202	184	212	A	A	A	E A 246	210	210	A	E B 254	E B 280
19	E B 278	E B 286	E B 290	E B 248	218	E B 256	228	214	A	194	192	196	206	212	204	204	E A 222	192	240	216	220	206	E B 238	E B 264
20	E B 268	E B 264	E B 236	208	E B 308	E B 250	218	226	208	196	196	172	202	184	210	E A 230	A	A	A	E A 252	210	208	E B 252	E A 314
21	E A 278	278	E A 264	E A 232	224	E B 232	218	A	A	A	188	198	206	194	192	A	A	214	E A 234	E A 244	222	224	232	E A 260
22	E A 282	E B 248	E B 244	220	E A 254	E A 294	218	206	214	210	214	198	194	A	216	A	A	A	A	E A 256	E A 236	E A 232	210	A
23	E A 280	E A 274	E B 254	E B 246	E B 268	216	210	A	A	A	202	206	208	186	A	212	210	A	A	238	208	188	E A 234	E B 256
24	E B 252	E B 266	E B 268	E B 250	E B 258	228	214	212	A	212	A	188	204	194	H 192	200	A	A	E A 244	E A 256	E A 222	E A 240	226	E B 224
25	E B 248	E B 254	E B 240	E B 246	E B 232	E B 240	226	216	A	A	A	208	A	A	A	A	A	A	A	206	202	E A 270	A	E A 248
26	E A 244	E A 268	E B 268	E B 260	E B 262	216	200	A	A	200	196	212	A	200	A	A	A	A	E A 240	226	232	E A 274	E A 236	238
27	E B 234	E B 252	E B 242	E B 246	E A 254	208	210	216	A	206	188	198	188	192	212	A	198	A	E A 268	E A 274	E A 272	E A 230	E B 242	226
28	218	E B 250	E B 260	E B 260	E B 260	220	220	A	A	A	200	198	228	A	226	A	A	A	A	E A 248	212	210	214	226
29	E A 250	E A 282	E A 266	E A 258	E A 252	E A 242	210	A	A	A	202	E A 230	E A 230	194	190	212	210	A	E A 246	E A 254	232	E A 252	E B 228	E B 236
30	E A 228	E B 218	E B 242	E B 242	E B 256	222	212	A	A	A	A	A	A	A	186	A	A	A	A	E A 262	E A 230	220	E A 244	E A 232
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	30	30	30	30	30	30	30	22	19	23	24	26	26	25	26	21	20	18	24	30	30	28	29	29
MED	E B 261	E B 265	E B 254	E B 246	E B 234	E B 234	210	215	212	206	196	198	198	195	201	201	214	222	228	221	212	203	E B 244	E B 256
U Q	E B 278	E B 276	E B 268	E B 260	E B 258	E B 256	218	218	218	210	202	206	206	211	210	211	221	228	E A 239	E A 246	222	E A 235	E B 260	E B 269
L Q	E B 248	E B 250	E B 242	232	224	222	206	210	206	198	192	192	188	189	186	197	206	218	225	220	208	201	230	E 235

APR. 2009 h′F (KM)

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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	124	122	116	116	110	114	A	118	118	120	A	A					
2							128	126	124	120	120	A	A	120	A	120	126	120	B					
3							118	122	122	116	116	A	A	A	A	A	A	A	B					
4							122	128	128	126	A	120	116	116	116	116	118	A	B					
5							B	118	118	118	A	A	A	A	118	114	116	126	B					
6							122	126	120	120	A	A	A	A	120	114	120	128						
7							118	130	118	118	116	114	118	114	A	A	122	132						
8							B	124	122	122	118	104	116	116	116	116	126	126	B					
9							124	120	122	122	A	A	A	A	A	A	116	122	B					
10							B	118	118	118	A	A	A	A	A	114	118	A	B					
11							124	118	118	118	118	120	114	114	114	120	116	118	B					
12							124	122	122	120	A	A	110	112	108	116	120	116	A					
13							B	110	116	116	118	A	A	112	110	110	114	114	B					
14							128	126	118	118	118	118	118	116	120	114	118	132	B					
15							122	122	122	118	108	112	120	118	116	120	118	122	B					
16							124	118	116	122	120	A	A	118	118	118	A	A	B					
17							124	120	122	120	118	114	118	A	A	A	A	128	B					
18							122	126	122	118	116	A	112	A	A	118	A	A	B					
19							114	120	A	120	122	118	A	A	A	A	120	128	B					
20							118	122	118	116	114	A	A	A	A	116	118	A	B					
21							114	118	112	A	A	A	A	A	118	116	122	126	B					
22							126	114	118	118	116	118	A	A	118	120	122	A	B					
23							122	122	A	A	A	A	A	A	A	A	A	114	B					
24							122	120	A	A	A	A	120	120	118	114	114	114	B					
25							118	120	A	A	A	A	A	A	A	A	A	A	B					
26							120	122	122	120	A	A	A	124	A	A	A	A	B					
27							120	118	A	A	116	118	A	A	A	A	A	A	B					
28							120	116	116	114	114	112	112	112	112	116	A	A	B					
29							122	124	118	A	114	A	A	120	118	118	A	126	B					
30							110	A	A	A	A	A	A	A	A	A	A	A	B					
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT							25	29	24	23	18	12	12	14	16	20	19	17						
MED							122	122	119	118	116	116	116	116	118	116	118	126						
U Q							124	124	122	120	118	118	118	120	118	118	122	128						
L Q							118	118	118	118	116	112	113	114	115	114	116	117						

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 h'Es (KM) 135°E MEAN TIME (G.M.T. + 9 H)

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

D \ H	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	B	B	B	B	B	B	140	150	104	142	124	118	116	104	122	156	130	106	122	108	104	108	B	B
2	B	B	B	B	B	B	162	136	132	126	122	102	110	164	106	102	106	128	118	106	100	106	106	102
3	100	106	102	100	B	B	136	102	156	120	118	108	108	102	104	106	100	98	94	108	B	94	86	96
4	96	B	B	106	108	106	136	136	128	122	106	118	118	106	116	112	118	106	90	90	B	B	B	104
5	B	B	B	B	98	B	146	134	120	114	106	100	102	104	102	102	160	144	120	88	88	88	B	B
6	B	B	B	B	B	B	158	146	132	118	104	104	100	106	104	100	100	158	B	B	90	94	B	B
7	96	88	B	B	B	B	144	142	136	122	118	106	98	104	94	92	164	108	132	B	92	B	B	B
8	B	B	B	B	B	B	128	158	104	100	98	98	102	100	100	G	166	120	90	88	96	100	B	B
9	B	B	B	B	B	102	146	148	136	124	102	102	102	102	104	102	120	120	122	108	104	102	100	96
10	96	96	B	B	B	B	132	160	134	116	102	102	100	98	96	92	92	94	118	100	90	90	96	92
11	B	B	B	B	B	B	148	148	136	100	106	96	94	112	98	104	146	G	132	120	106	100	112	106
12	100	B	110	B	B	B	G	146	126	116	104	106	118	112	116	106	140	120	106	108	100	92	102	108
13	94	92	B	B	B	B	144	118	124	114	110	98	96	96	94	90	166	140	B	118	98	98	B	100
14	98	94	94	96	B	B	140	128	124	120	128	126	130	120	126	116	118	130	118	104	104	104	102	98
15	88	100	B	B	B	B	134	122	120	118	96	102	96	104	98	98	158	150	146	108	102	102	B	98
16	B	B	B	B	B	124	116	122	120	114	114	102	98	98	96	116	106	106	104	100	102	110	114	108
17	104	104	94	96	104	106	144	130	122	122	120	116	124	108	104	104	104	104	130	118	112	110	106	100
18	96	96	98	B	B	B	134	118	116	116	100	98	100	116	104	112	104	108	108	106	104	100	96	98
19	108	B	B	B	B	B	140	126	108	130	98	104	102	100	98	96	94	102	154	112	104	B	B	B
20	92	90	B	102	94	B	156	136	122	102	94	92	98	98	94	144	124	108	106	106	106	106	106	108
21	108	104	104	100	100	B	132	124	110	106	108	104	102	100	102	128	122	120	108	102	104	126	110	106
22	106	B	B	110	92	96	132	130	120	100	100	100	104	104	130	122	124	106	108	102	100	112	108	98
23	96	94	94	100	B	B	118	116	104	104	104	104	110	106	104	110	104	120	114	110	108	110	108	102
24	B	B	B	B	B	B	G	106	102	106	106	104	102	120	98	112	124	116	106	102	108	104	98	B
25	B	B	B	B	B	B	126	120	106	106	104	102	104	102	104	104	98	102	98	94	102	100	102	98
26	98	94	B	106	102	100	142	114	120	110	106	104	98	G	104	100	96	100	96	100	120	112	108	106
27	B	B	98	98	98	98	146	136	104	104	104	102	102	102	102	102	106	106	100	108	104	108	118	110
28	138	B	B	102	108	100	142	124	122	120	120	120	124	126	116	118	106	106	104	102	102	102	106	102
29	104	98	94	94	94	94	122	118	116	108	114	106	106	G	114	120	106	120	122	100	102	100	102	104
30	108	B	B	B	B	B	124	106	106	102	104	100	98	100	108	106	108	106	102	106	110	110	104	102
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT	19	13	9	12	10	9	28	30	30	30	30	30	30	28	30	29	30	29	28	28	28	27	21	23
MED	98	96	98	100	99	100	140	129	120	115	106	103	102	104	104	106	113	108	108	106	103	102	106	102
U Q	106	102	103	104	104	106	145	142	128	120	114	106	110	110	108	116	130	120	122	108	105	110	108	106
L Q	96	93	94	97	94	97	132	118	108	106	102	100	98	100	98	101	104	106	103	100	100	100	101	98

APR. 2009 h'Es (KM)

IONOSPHERIC DATA STATION Kokubunji

APR. 2009 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							H 2	HL 22	L 2	HL 22	CL 12	CL 12	CL 12	L 2	CL 12	HL 21	CL 11	L 1	CL 31	F 3	F 4	F 2		
2							H 2	HL 22	HL 22	CL 11	CL 11	L 2	L 2	HL 12	L 2	L 2	L 2	C 2	C 3	F 3	F 5	F 3	F 3	F 2
3	F 3	F 4	F 2	F 1			H 2	L 2	HL 12	CL 22	CL 22	L 2	L 2	L 2	L 2	L 2	L 2	L 3	L 3	F 2		F 2	F 2	F 1
4	F 1			F 1	F 1	F 1	HL 32	HL 22	CL 22	CL 22	L 2	CL 22	CL 22	L 2	CL 21	CL 21	CL 22	L 2	L 1	F 2				F 2
5					F 1		HL 22	HL 22	CL 22	CL 22	L 2	L 2	L 2	L 2	L 2	L 2	HL 12	HL 22	CL 42	F 3	F 2	F 2		
6							H 2	HL 21	CL 22	CL 22	L 2	L 2	L 2	L 2	L 2	L 2	L 2	HL 12			F 2	F 1		
7	F 1	F 2					H 2	HL 22	HL 22	CL 12	CL 12	L 2	L 2	L 2	L 2	L 2	HL 12	L 2	H 2		F 1			
8							H 2	HL 12	L 2	L 2	L 2	L 2	L 2	L 2	L 2		HL 22	CL 22	L 3	F 2	F 2	F 2		
9						F 1	H 2	H 2	HL 22	CL 11	L 2	L 3	L 2	L 2	L 2	L 2	C 2	CL 21	C 2	F 2	F 3	F 1	F 3	F 5
10	F 2	F 2					H 3	HL 22	CL 22	CL 12	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 3	C 2	F 2	F 3	F 1	F 2	F 2
11							H 3	HL 22	HL 22	L 2	CL 22	L 2	L 2	CL 12	L 2	L 2	HL 22		C 4	F 3	F 5	F 5	F 2	F 2
12	F 1		F 1					HL 21	CL 22	CL 11	L 2	L 2	CL 12	CL 12	CL 22	L 2	HL 32	CL 42	L 3	F 3	F 5	F 3	F 6	F 2
13	F 2	F 2					H 3	C 2	CL 22	CL 22	CL 12	L 2	L 2	L 2	L 2	L 2	HL 12	H 2		F 3	F 4	F 2		F 3
14	F 3	F 2	F 2	F 2			HL 32	CL 23	CL 23	CL 22	CL 12	CL 12	HL 11	CL 22	CL 22	CL 12	CL 11	HL 11	C 3	F 3	F 2	F 3	F 2	F 2
15	F 2	F 1					H 3	CL 22	CL 22	CL 12	L 2	L 2	L 2	L 1	L 2	L 2	HL 11	HL 22	H 2	F 4	F 4	F 3		F 2
16						F 1	C 2	C 2	CL 22	CL 22	CL 12	L 2	L 2	L 2	L 2	CL 11	L 2	L 2	L 3	F 4	F 3	F 5	F 3	F 2
17	F 2	F 5	F 3	F 3	F 3	F 3	HL 22	CL 22	CL 12	CL 22	CL 11	CL 11	CL 11	L 2	L 2	L 2	L 2	L 2	H 2	F 3	F 2	F 6	F 3	F 2
18	F 2	F 1	F 1				C 3	CL 32	CL 22	CL 22	L 2	L 2	L 2	CL 12	L 2	CL 32	L 2	L 2	L 3	F 2	F 2	F 6	F 2	F 1
19	F 2						H 2	CL 22	L 2	CL 22	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 2	H 2	F 2	F 3			
20	F 1	F 1		F 2	F 3		H 2	HL 12	CL 12	L 2	L 2	L 2	L 2	L 2	L 2	HL 11	CL 21	L 2	L 3	F 4	F 2	F 2	F 2	F 3
21	F 6	F 5	F 3	F 3	F 2		H 2	CL 21	C 3	L 2	L 2	L 2	L 2	L 2	L 2	CL 11	CL 21	CL 22	L 3	F 4	F 3	F 4	F 4	F 7
22	F 4			F 1	F 3	F 3	CL 22	CL 22	CL 12	L 2	L 2	L 2	L 2	L 2	CL 11	CL 21	CL 21	L 5	L 3	F 4	F 4	F 3	F 2	F 4
23	F 3	F 2	F 2	F 2			C 2	CL 22	L 3	L 2	L 2	L 2	L 2	L 2	L 2	L 1	L 2	CL 32	CL 23	F 4	F 3	F 3	F 2	F 2
24								L 2	L 2	L 3	L 2	L 2	L 2	CL 22	L 2	CL 22	CL 22	CL 32	L 4	F 5	F 4	F 5	F 2	
25							C 2	CL 22	L 3	L 2	L 2	L 2	L 2	L 3	L 3	L 3	L 3	L 3	L 3	F 2	F 5	F 4	F 4	F 3
26	F 2	F 4		F 2	F 2	F 1	HL 22	CL 32	CL 12	CL 11	L 2	L 2	L 3		L 3	L 3	L 4	L 3	L 5	F 2	FF 22	FF 62	FF 32	F 3
27			F 2	F 2	F 3	F 1	H 2	HL 22	L 3	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 3	L 4	FF 22	F 5	F 2	F 2	F 2
28	F 2			F 1	F 1	F 2	H 2	CL 22	CL 22	CL 22	CL 22	CL 22	CL 22	CL 22	CL 22	CL 22	L 3	L 3	L 4	F 5	F 2	F 4	FF 32	F 3
29	F 6	F 5	F 4	F 4	F 4	F 4	CL 34	CL 32	CL 22	L 2	CL 12	L 2	L 2		CL 11	CL 11	L 2	CL 22	C 3	F 4	F 3	F 4	F 2	F 2
30	F 2						C 2	L 3	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 2	L 3	L 3	L 3	F 3	F 3	F 3	F 5	F 4
31																								
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CNT																								
MED																								
U Q																								
L Q																								

APR. 2009 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

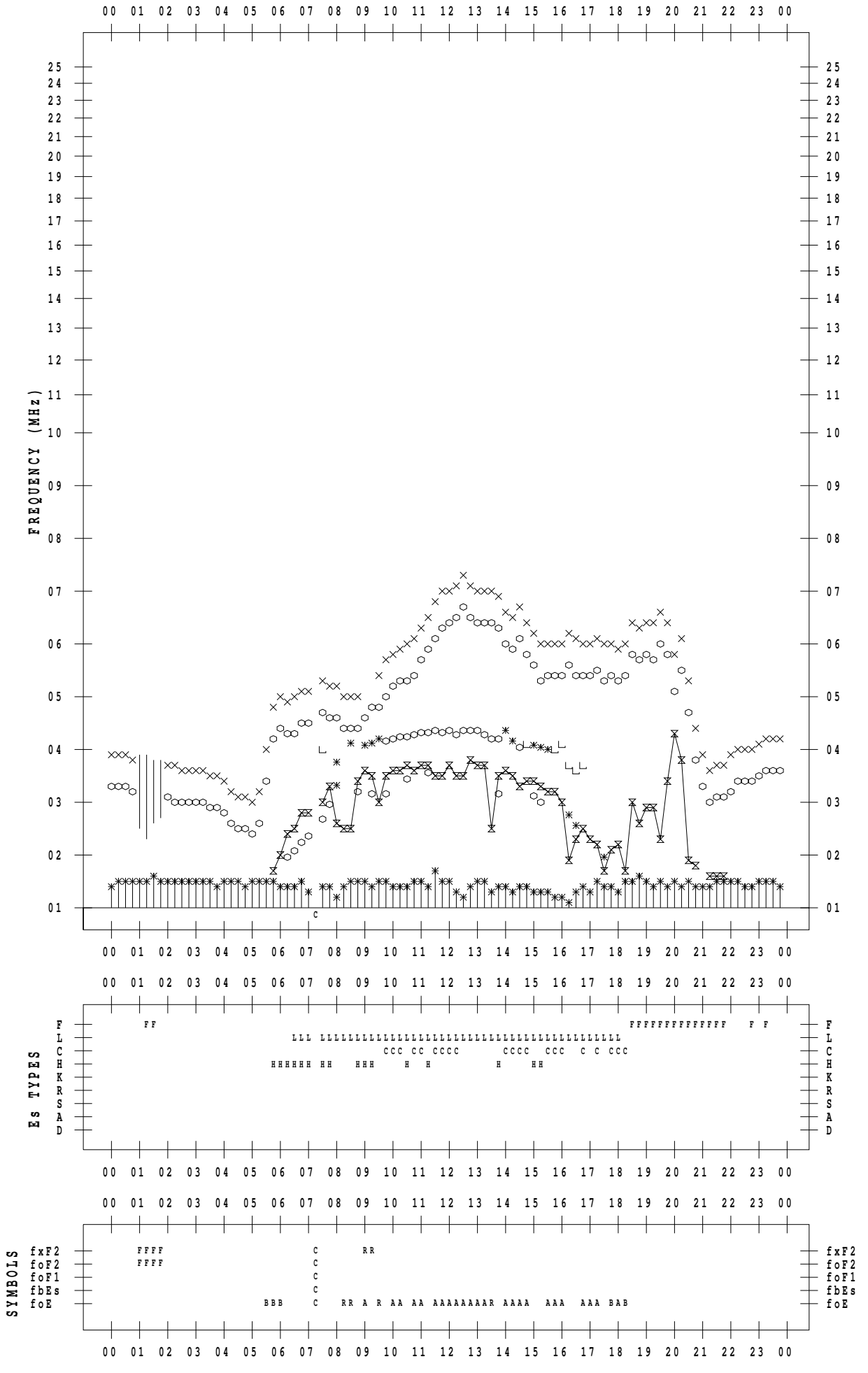
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/ 1

135 °E MEAN TIME



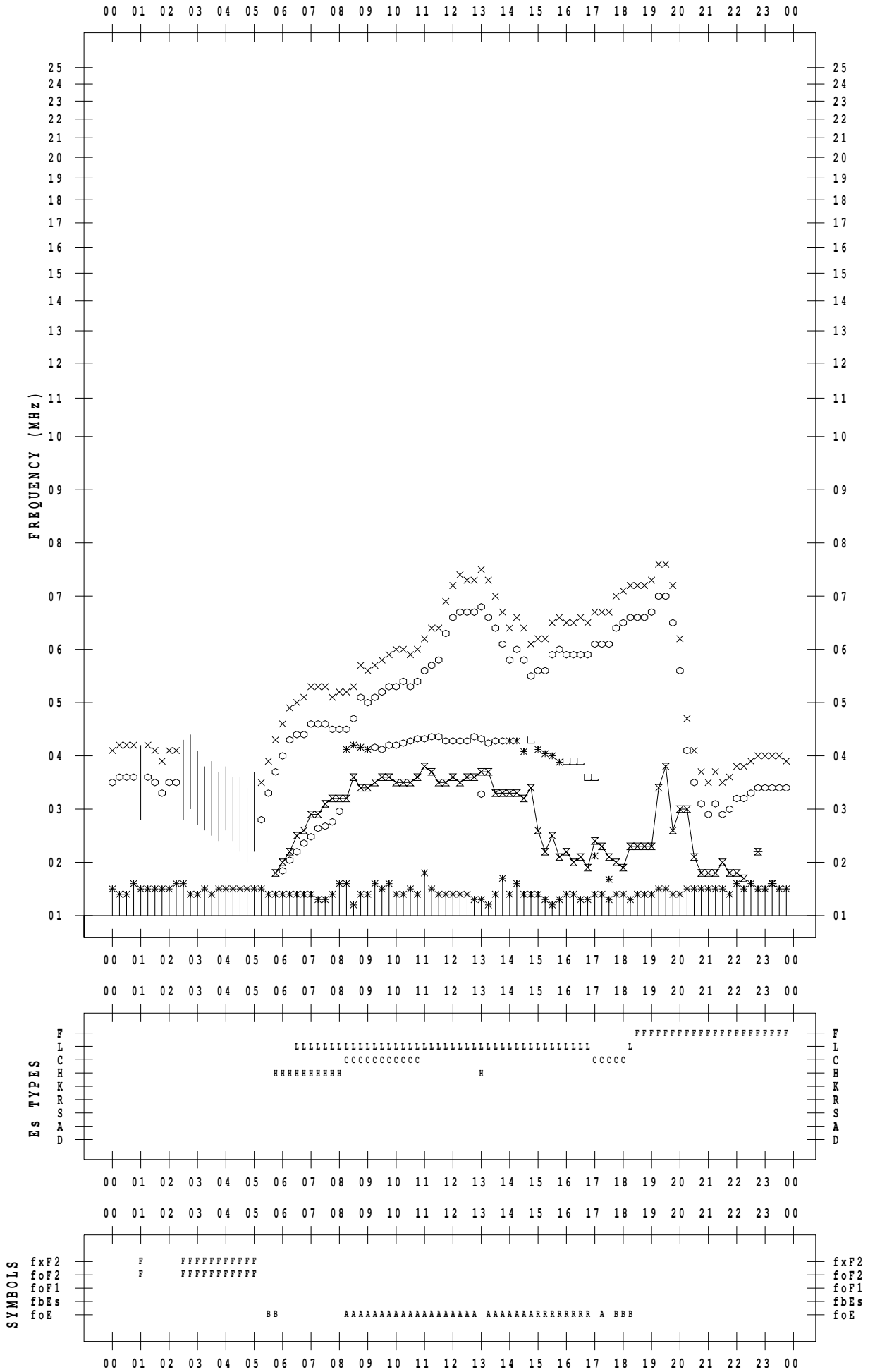
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/ 2

135 °E MEAN TIME



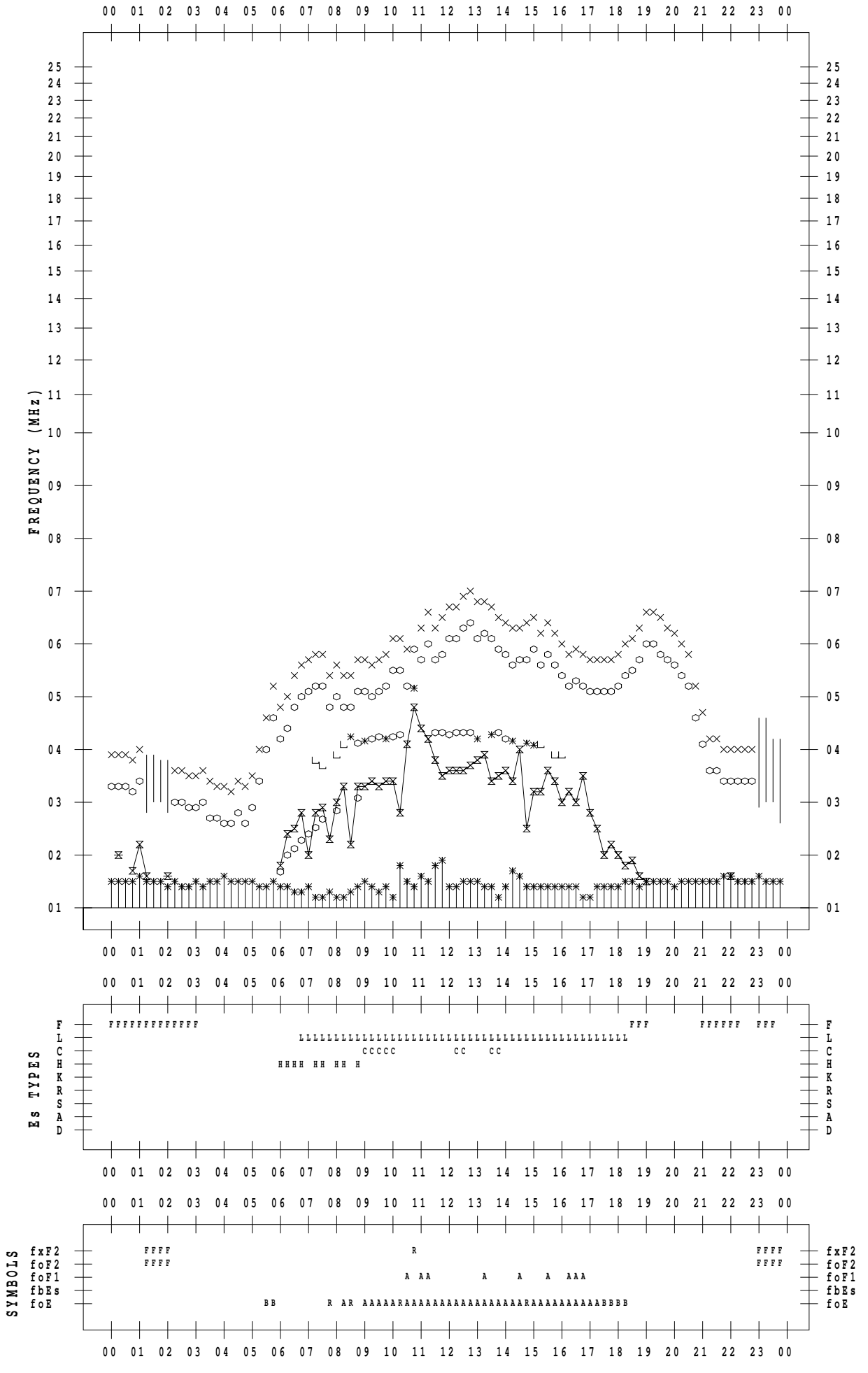
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/ 3

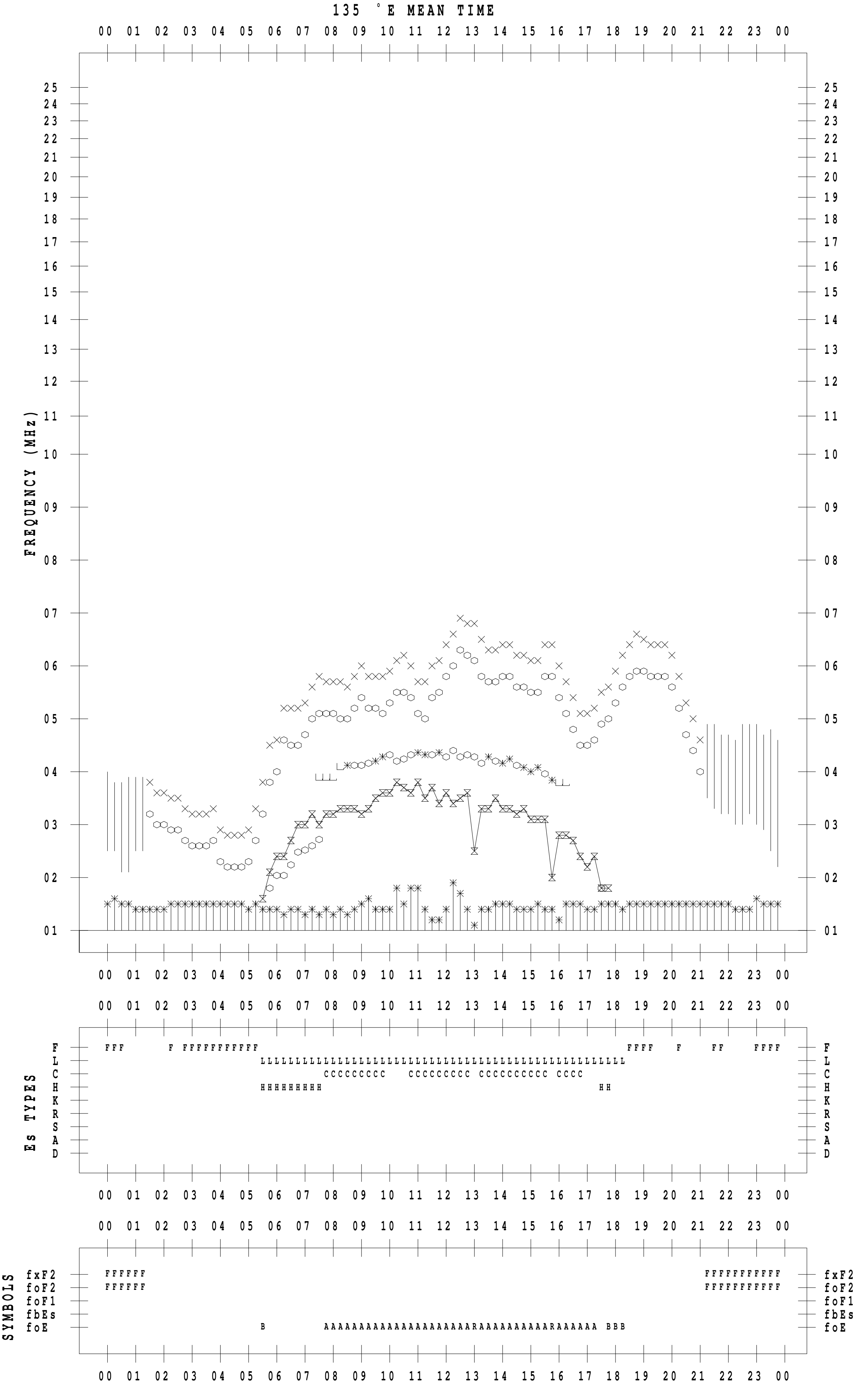
135 °E MEAN TIME



f-PLOT DATA

SCALER : I.NISHIMUTA

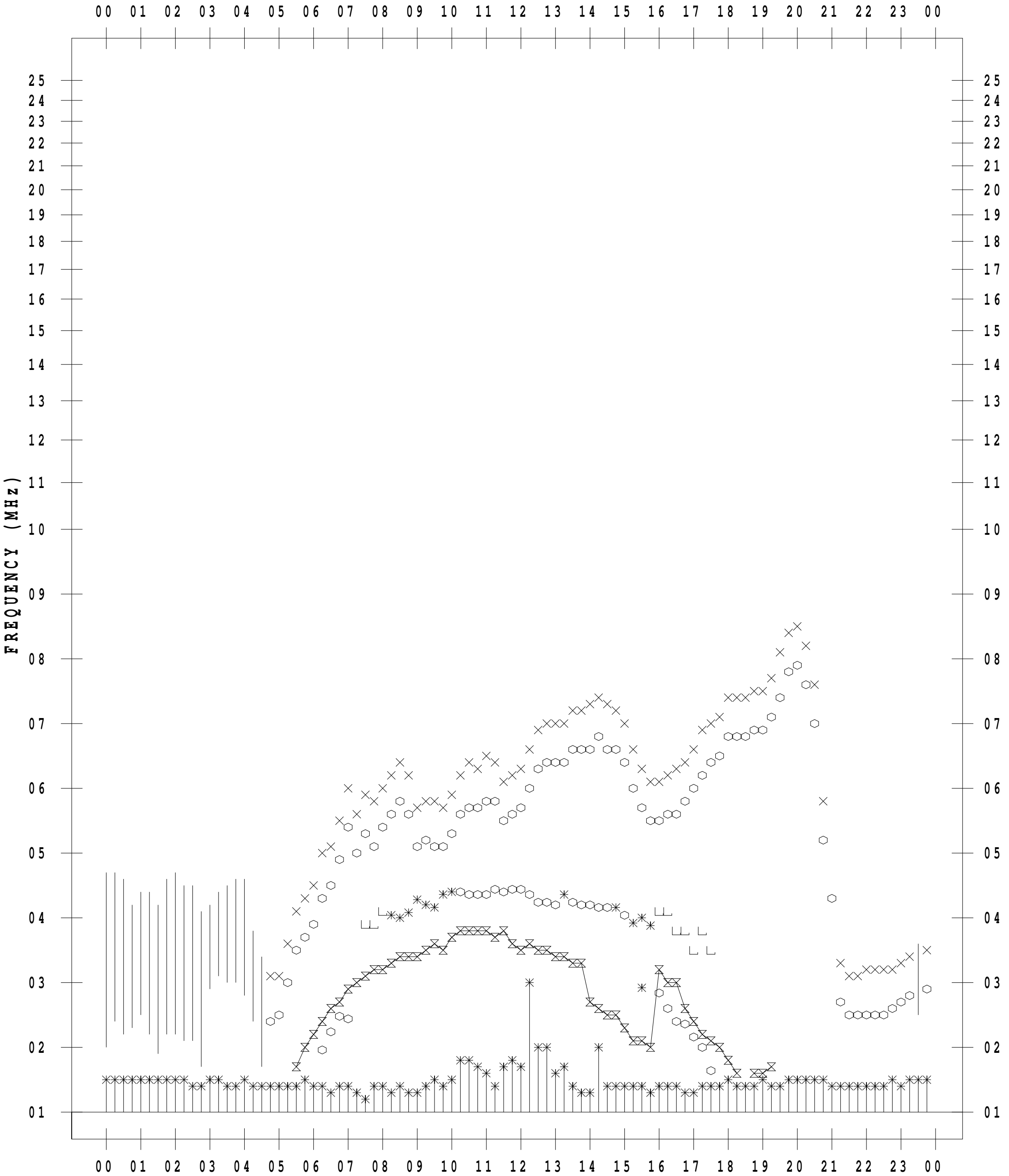
STATION : Kokubunji   DATE : 2009/ 4/ 4

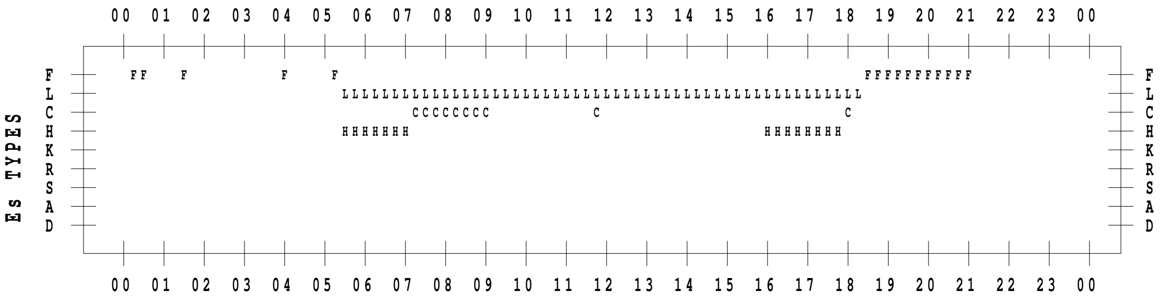


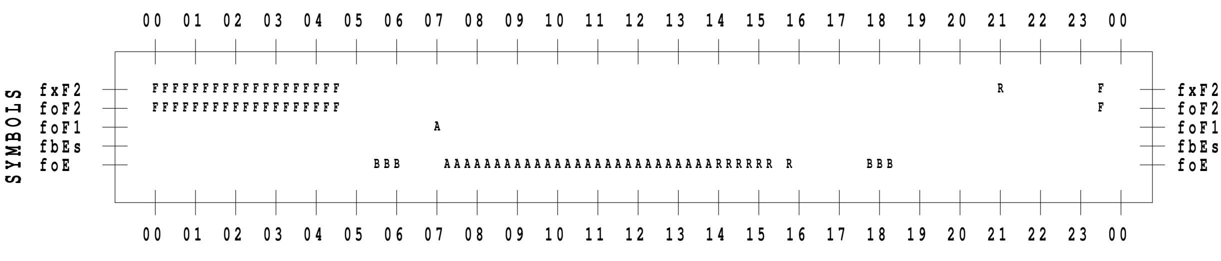
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2009/ 4/ 5







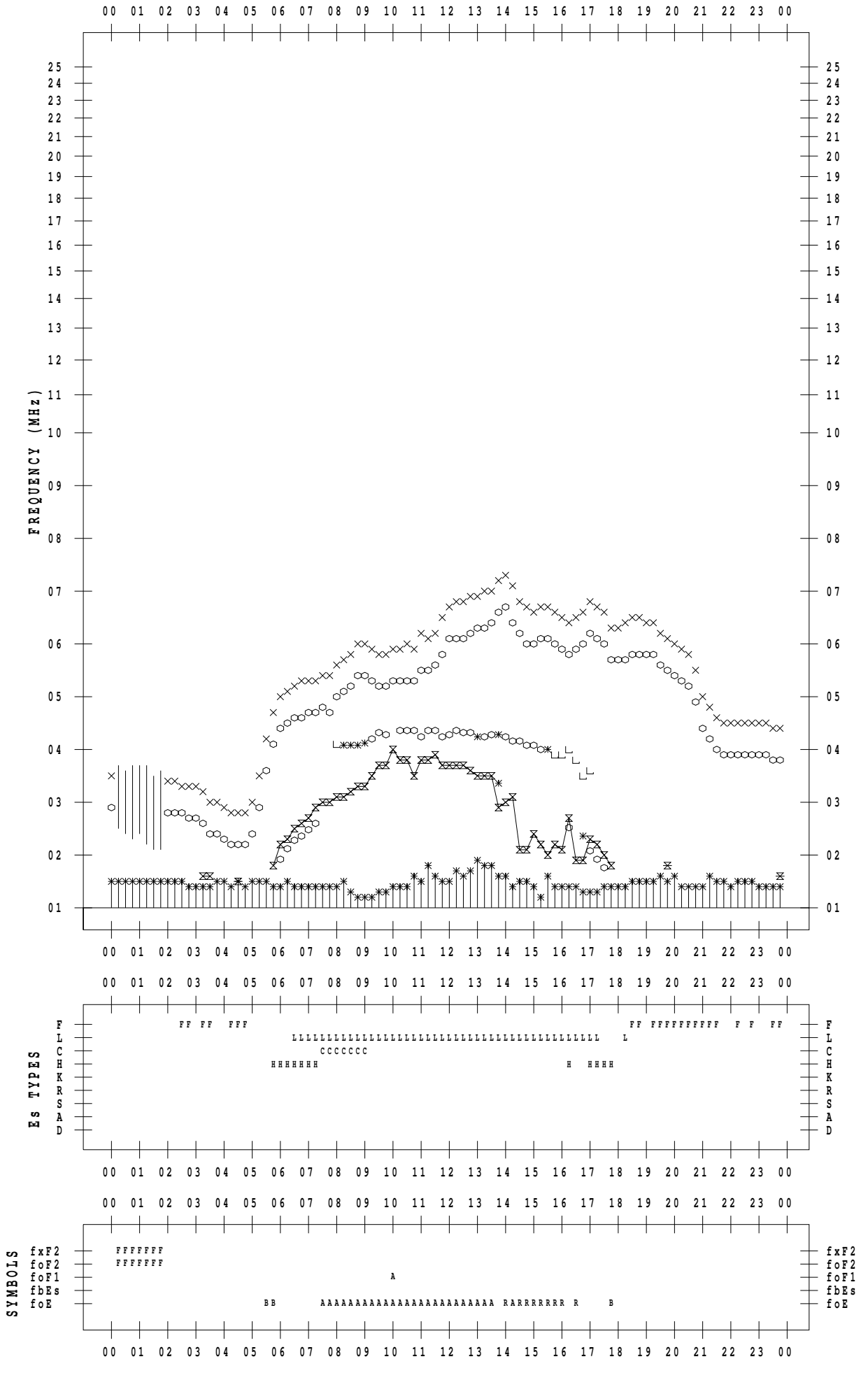
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/ 6

135 °E MEAN TIME



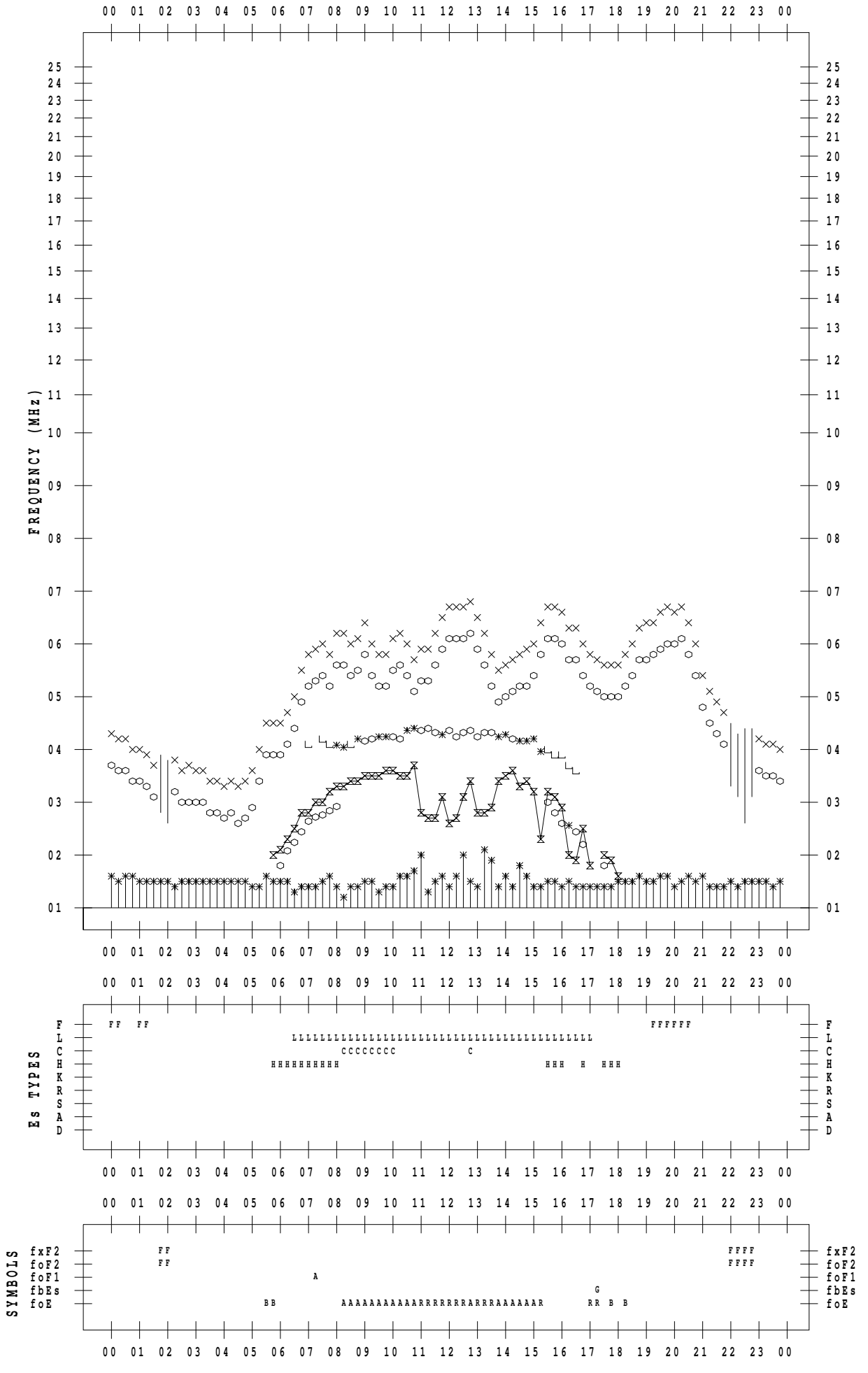
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/ 7

135 °E MEAN TIME



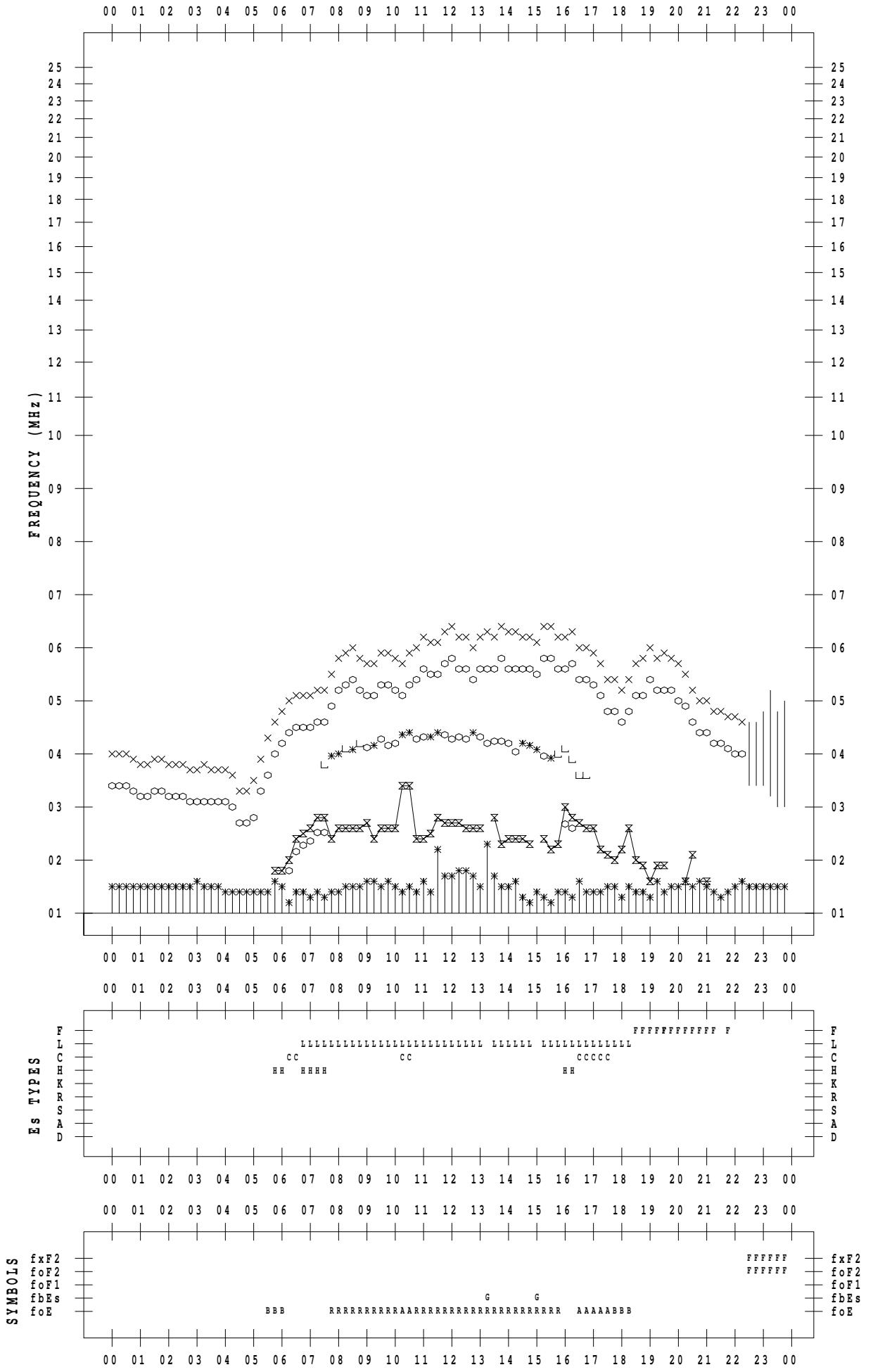
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/ 8

135 °E MEAN TIME



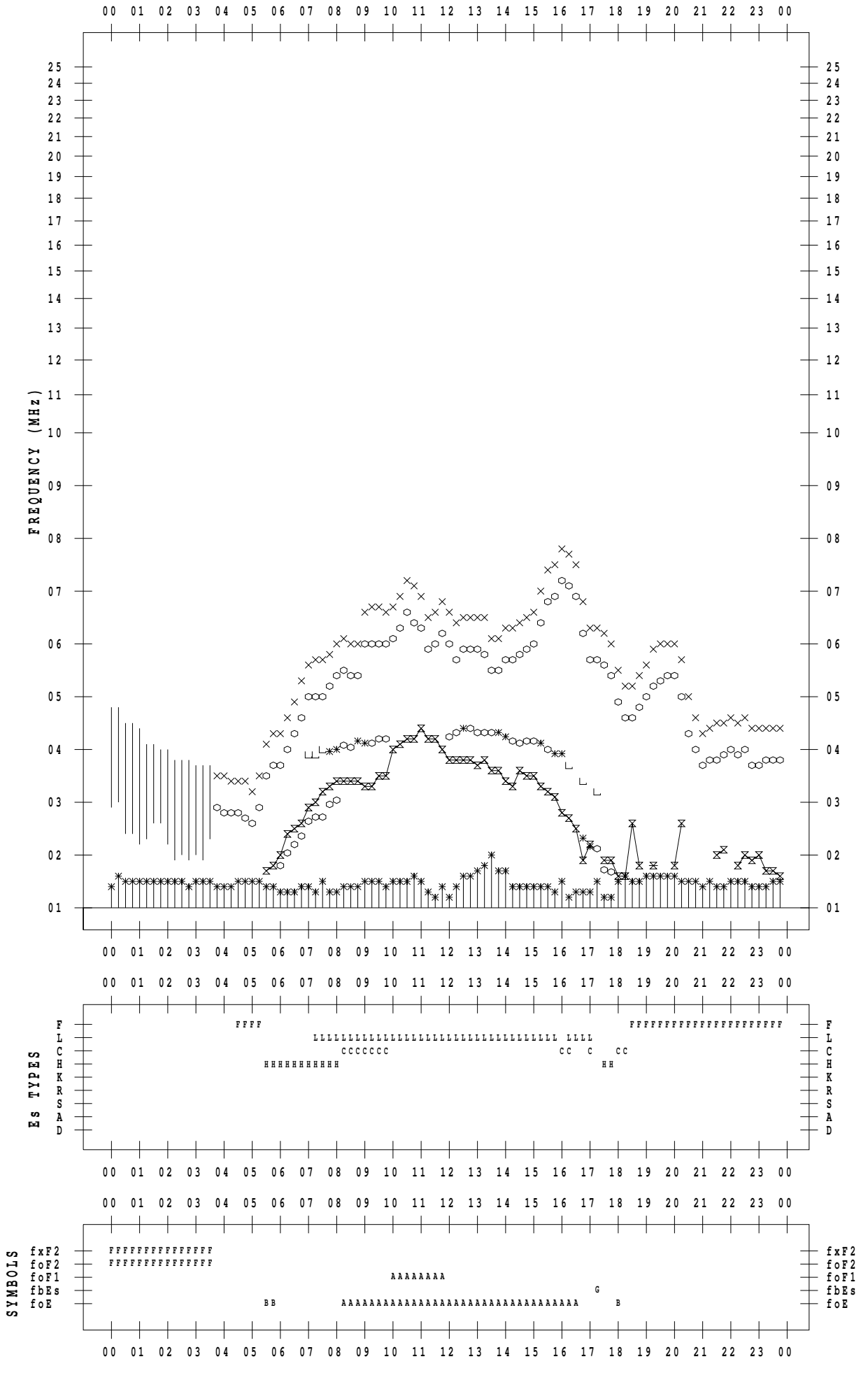
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/ 9

135 °E MEAN TIME



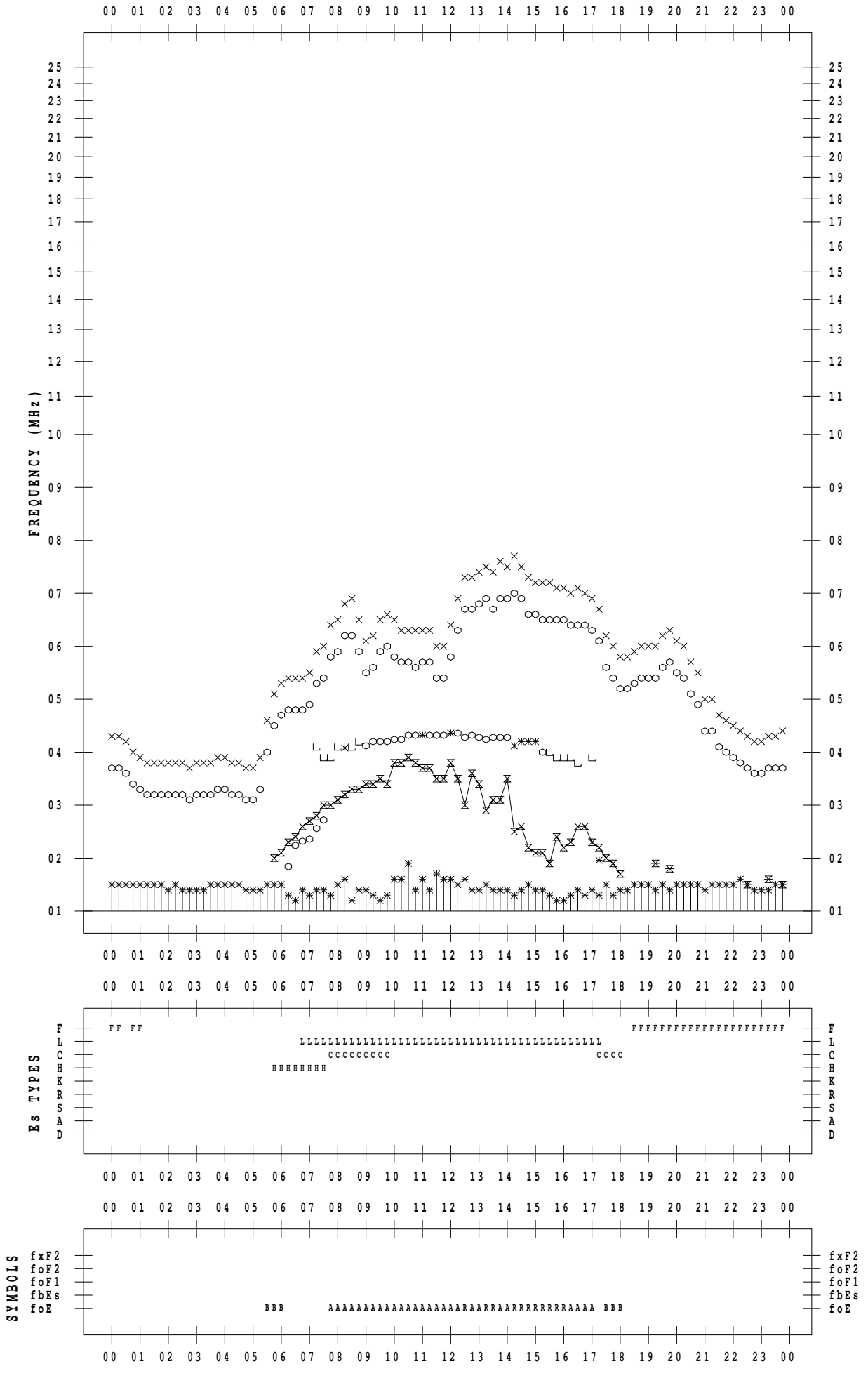
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/10

135 °E MEAN TIME



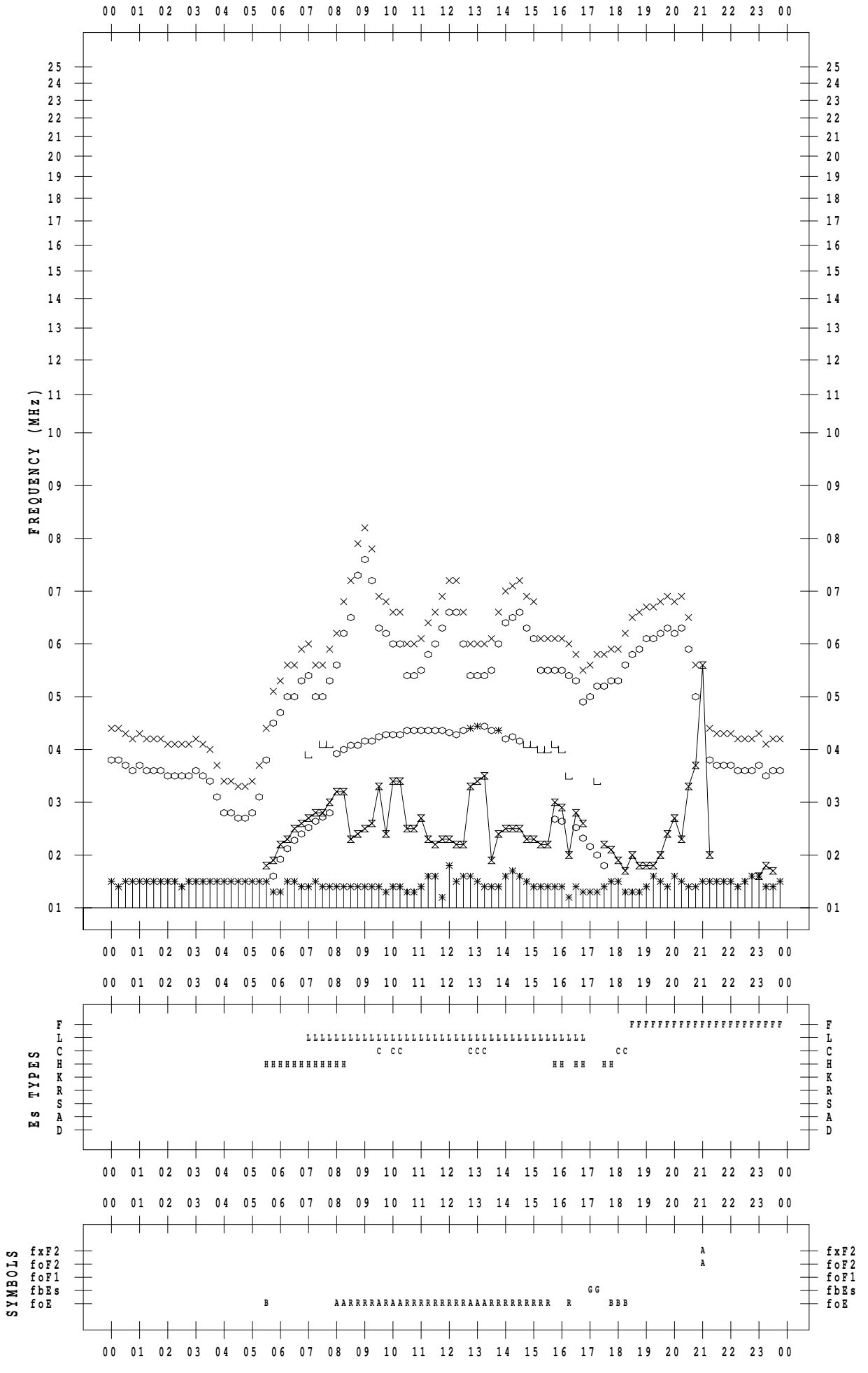
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/11

135 °E MEAN TIME



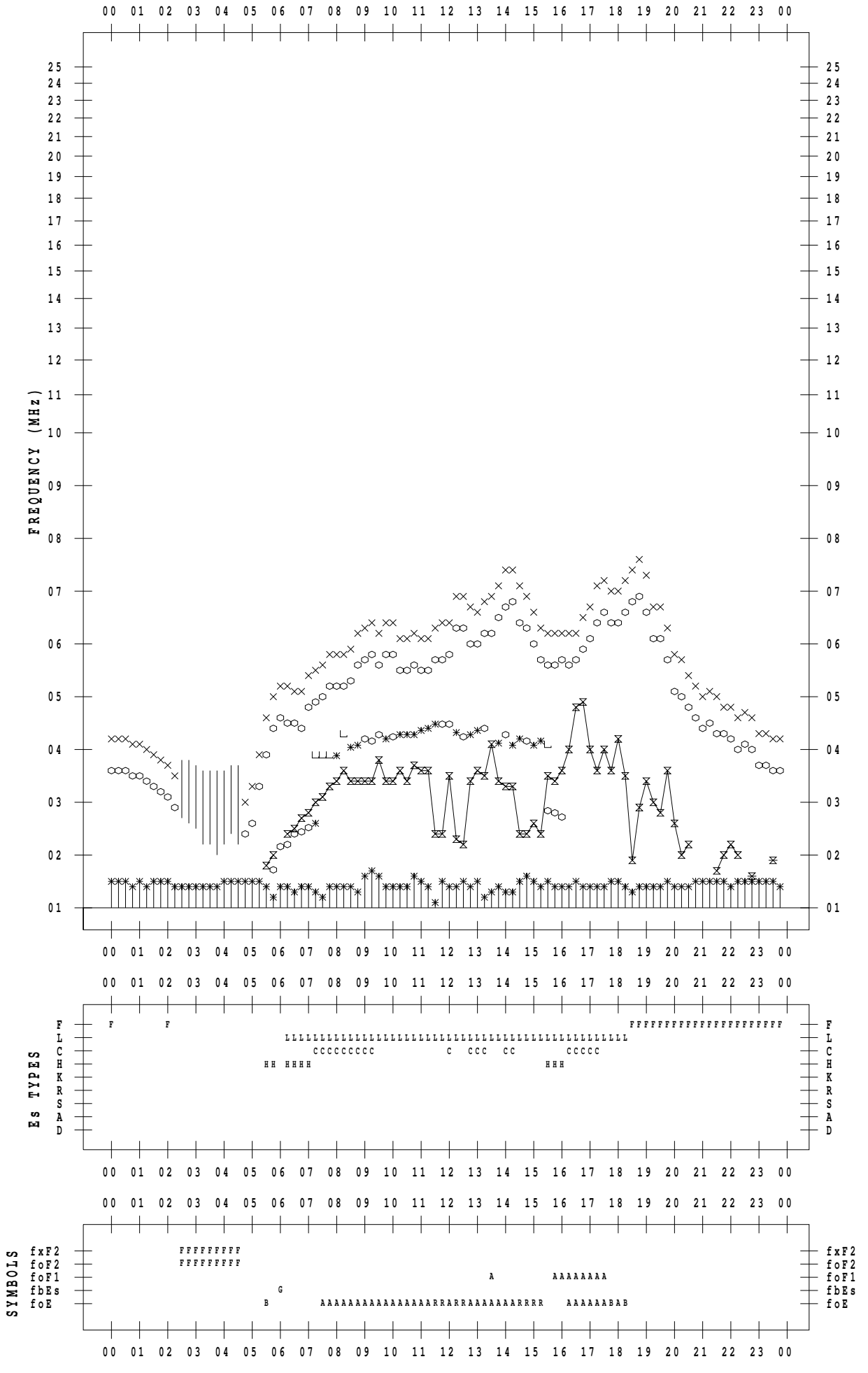
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/12

135 °E MEAN TIME



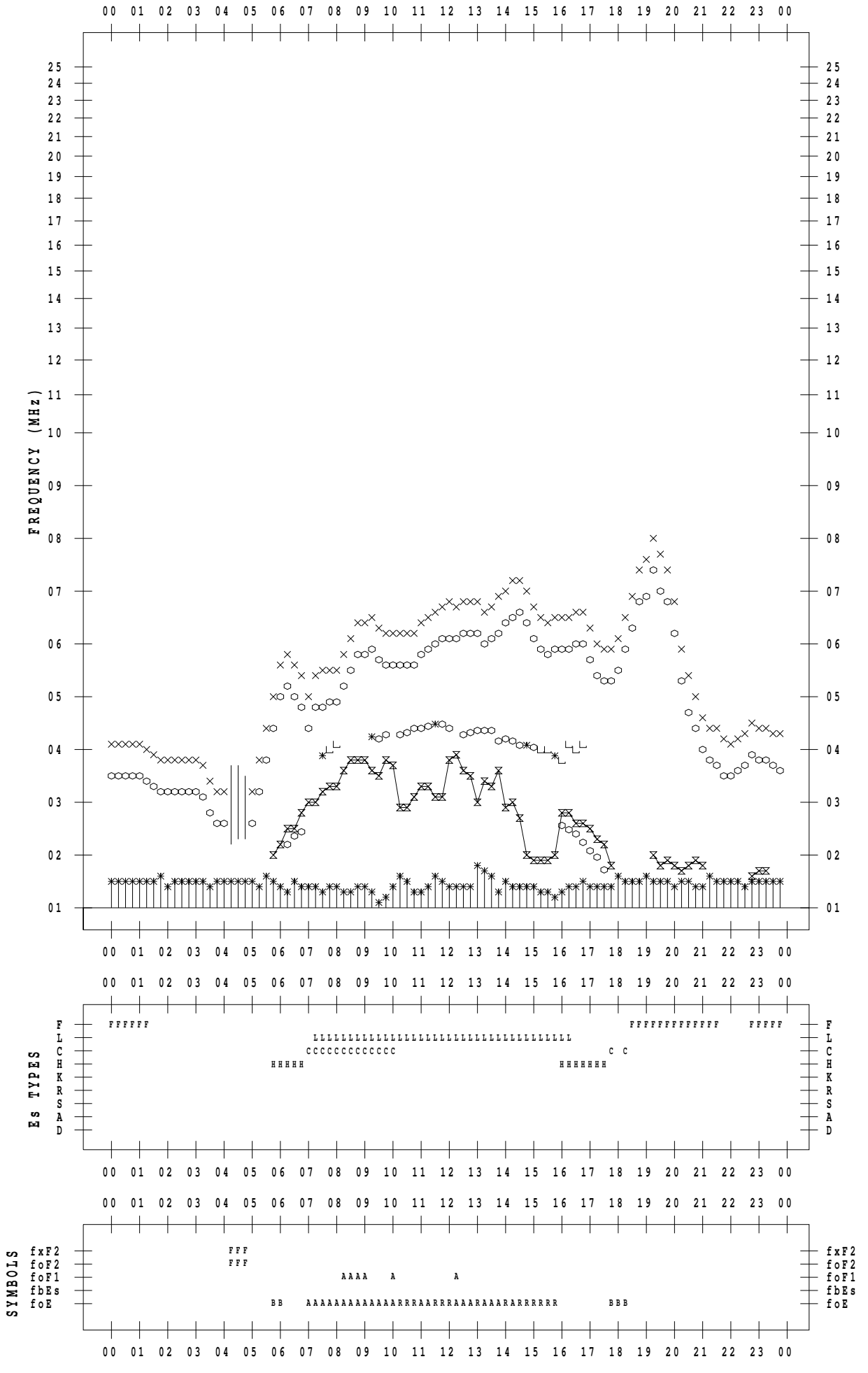
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/13

135 °E MEAN TIME



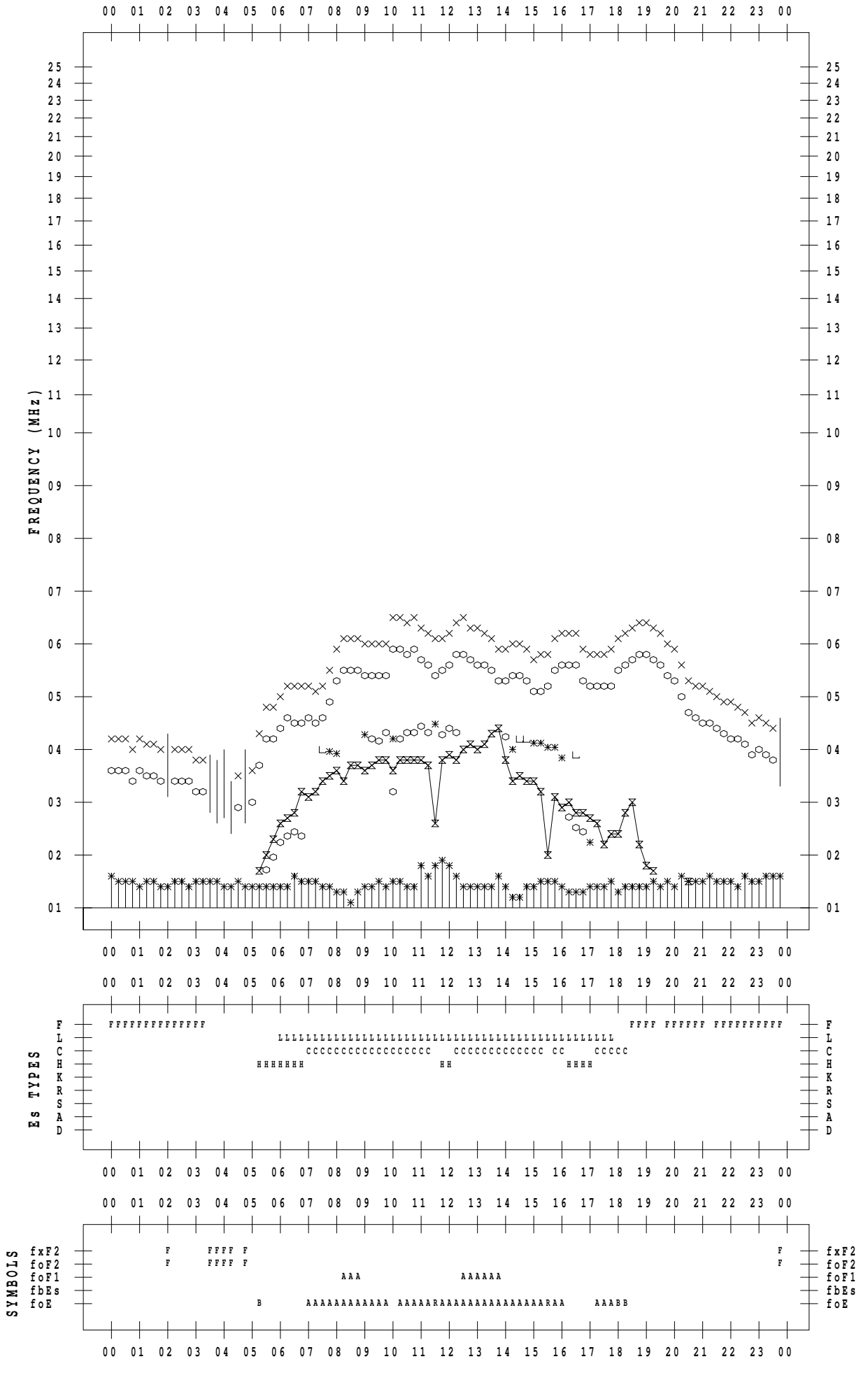
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/14

135 °E MEAN TIME



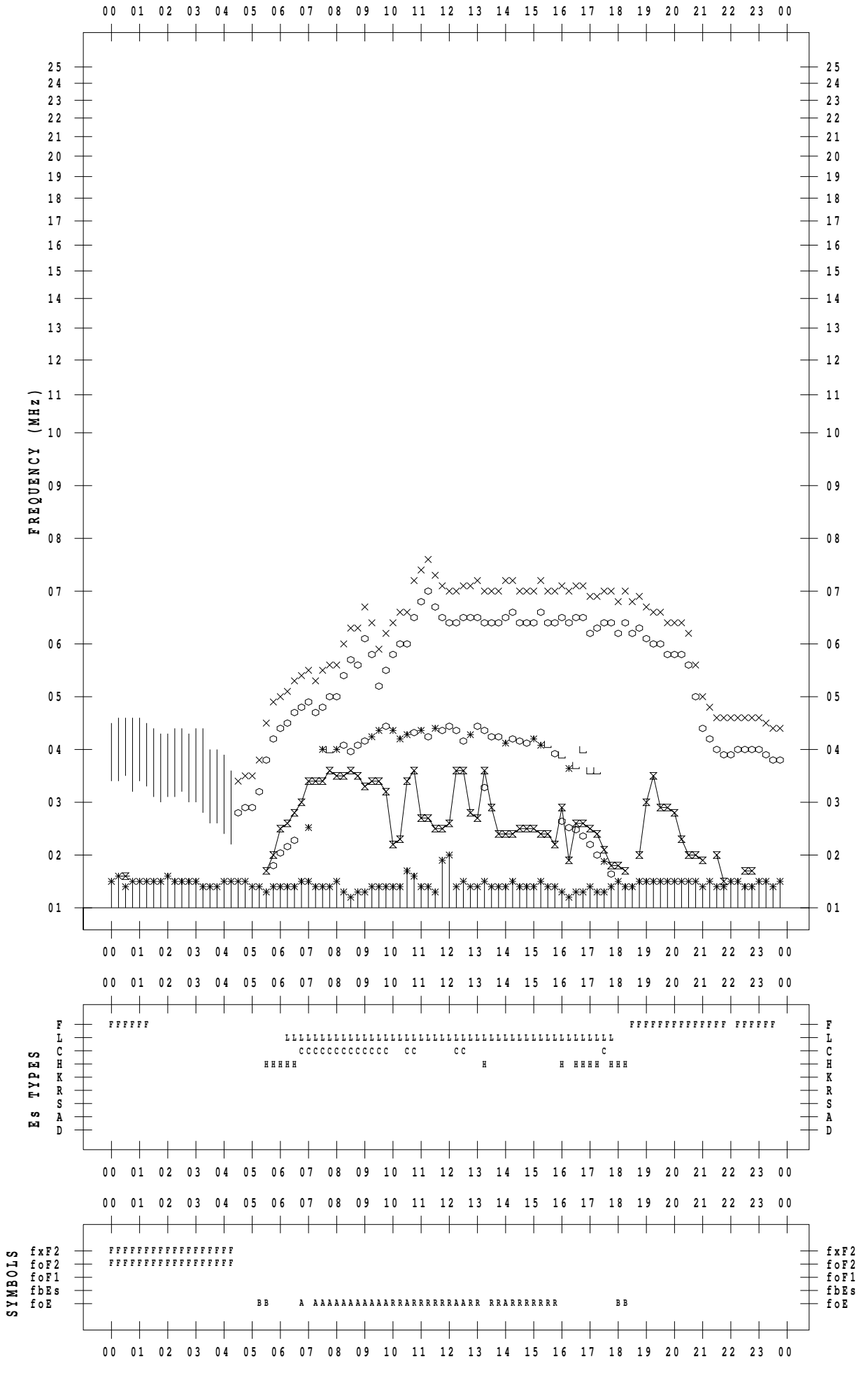
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/15

135 °E MEAN TIME



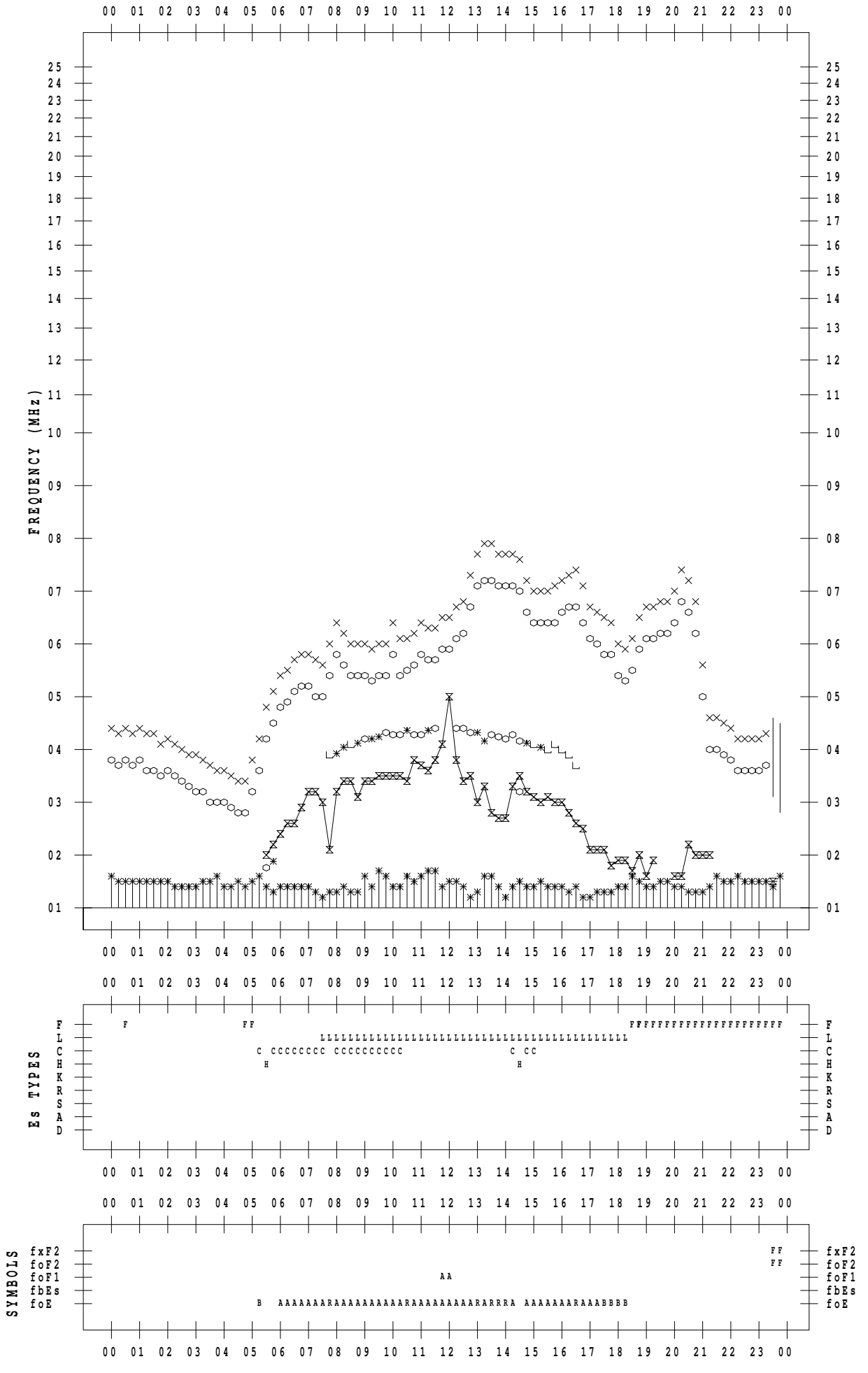
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/16

135 °E MEAN TIME

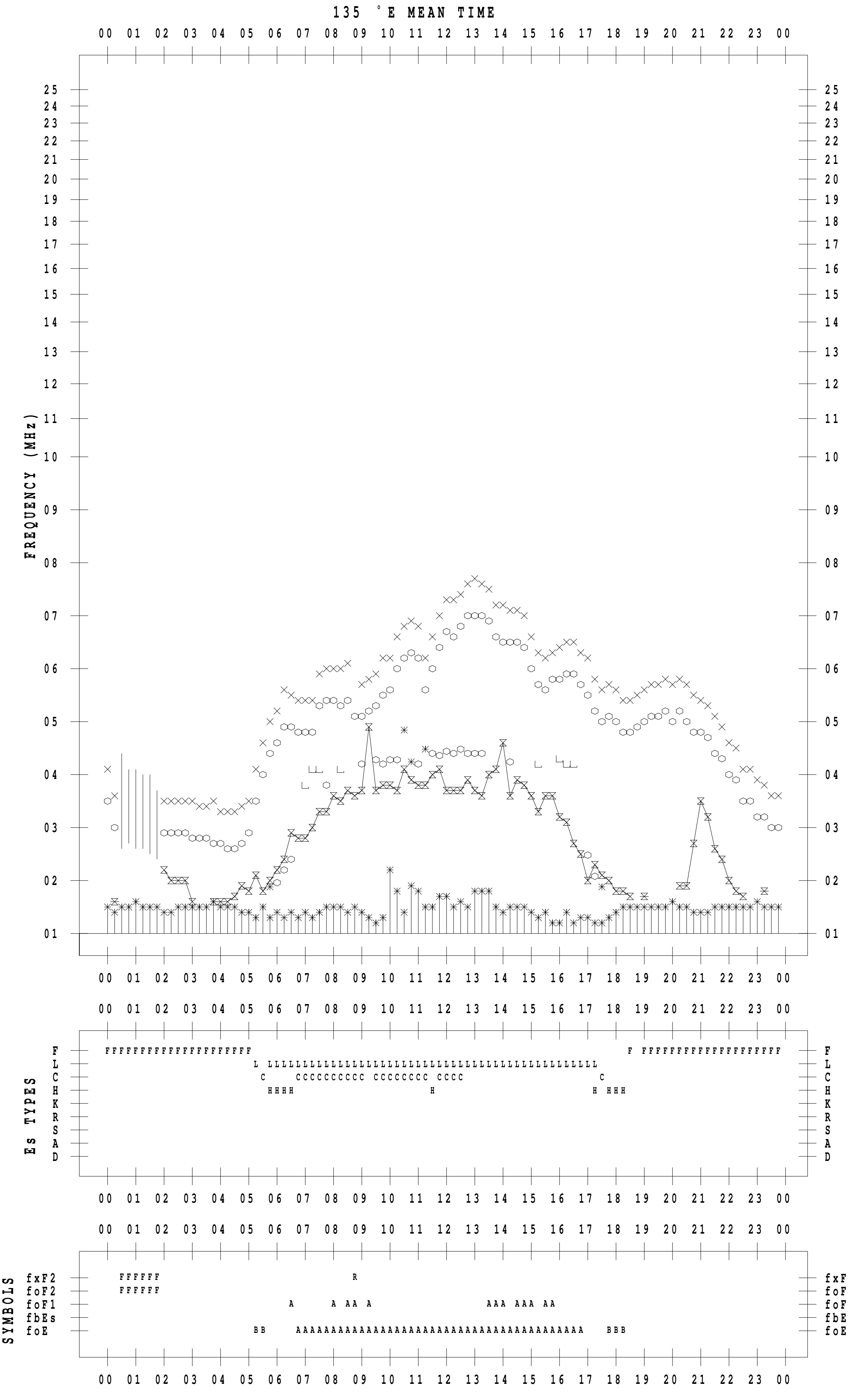


f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/17

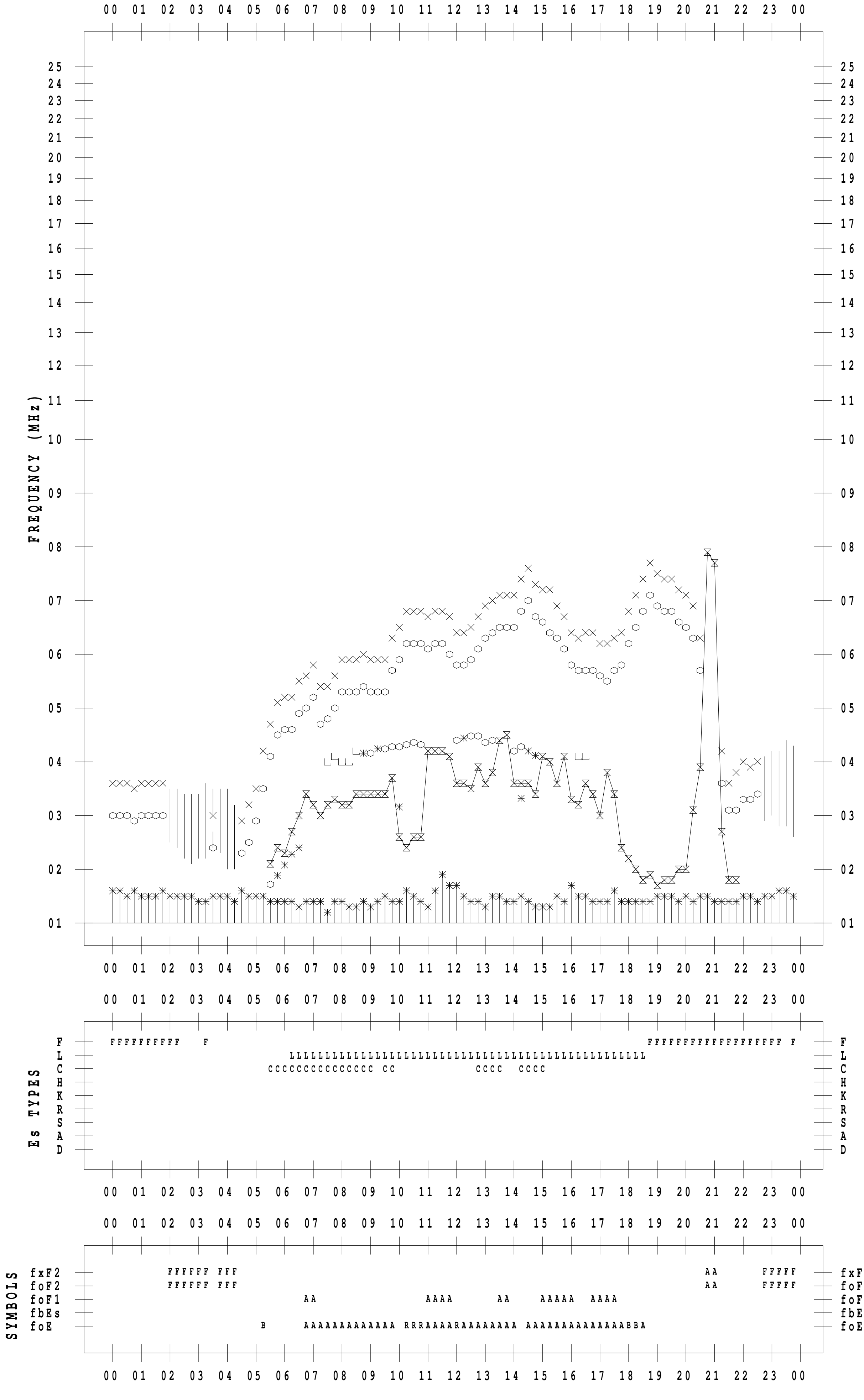


f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2009/ 4/18

135 °E MEAN TIME



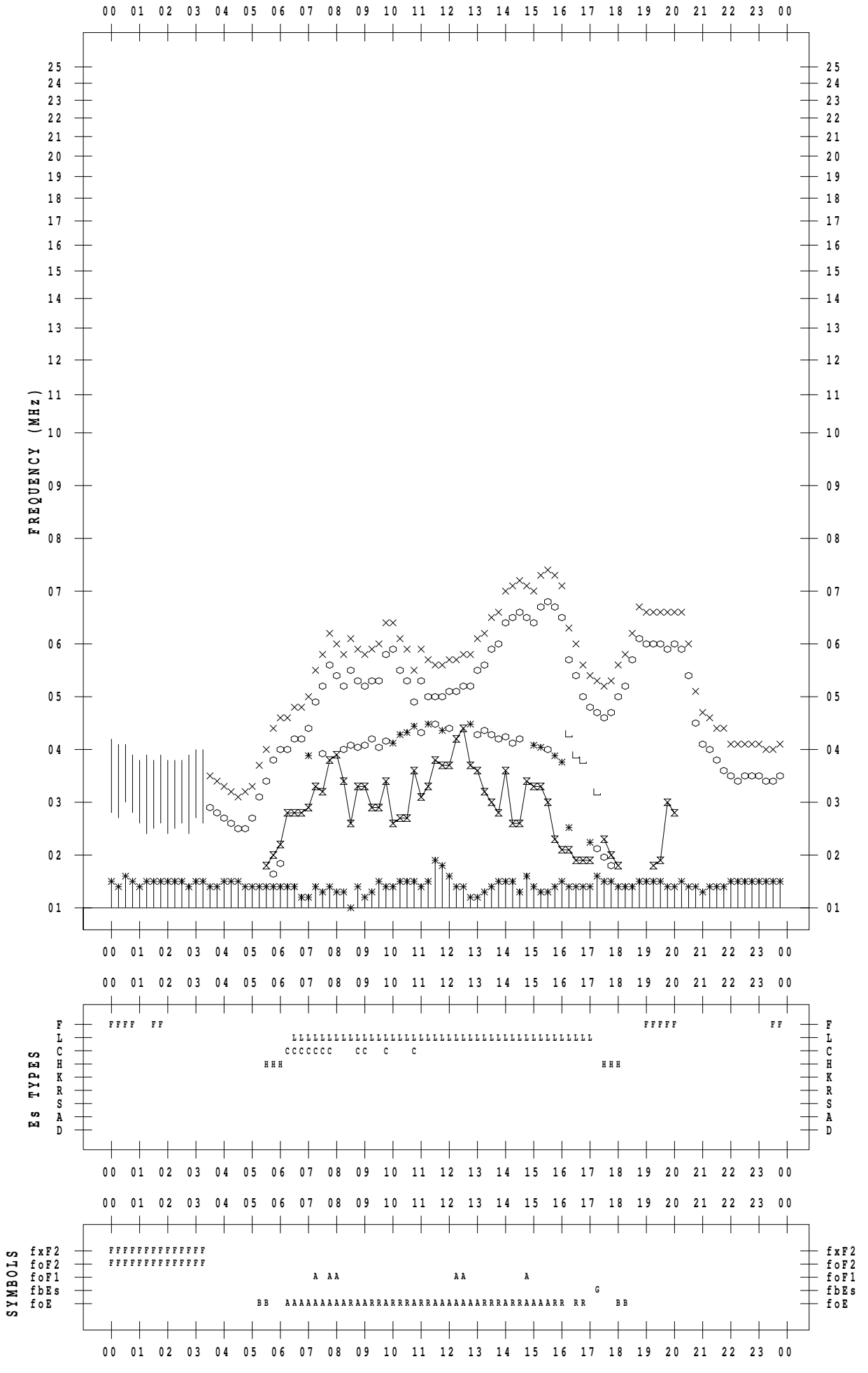
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/19

135 °E MEAN TIME



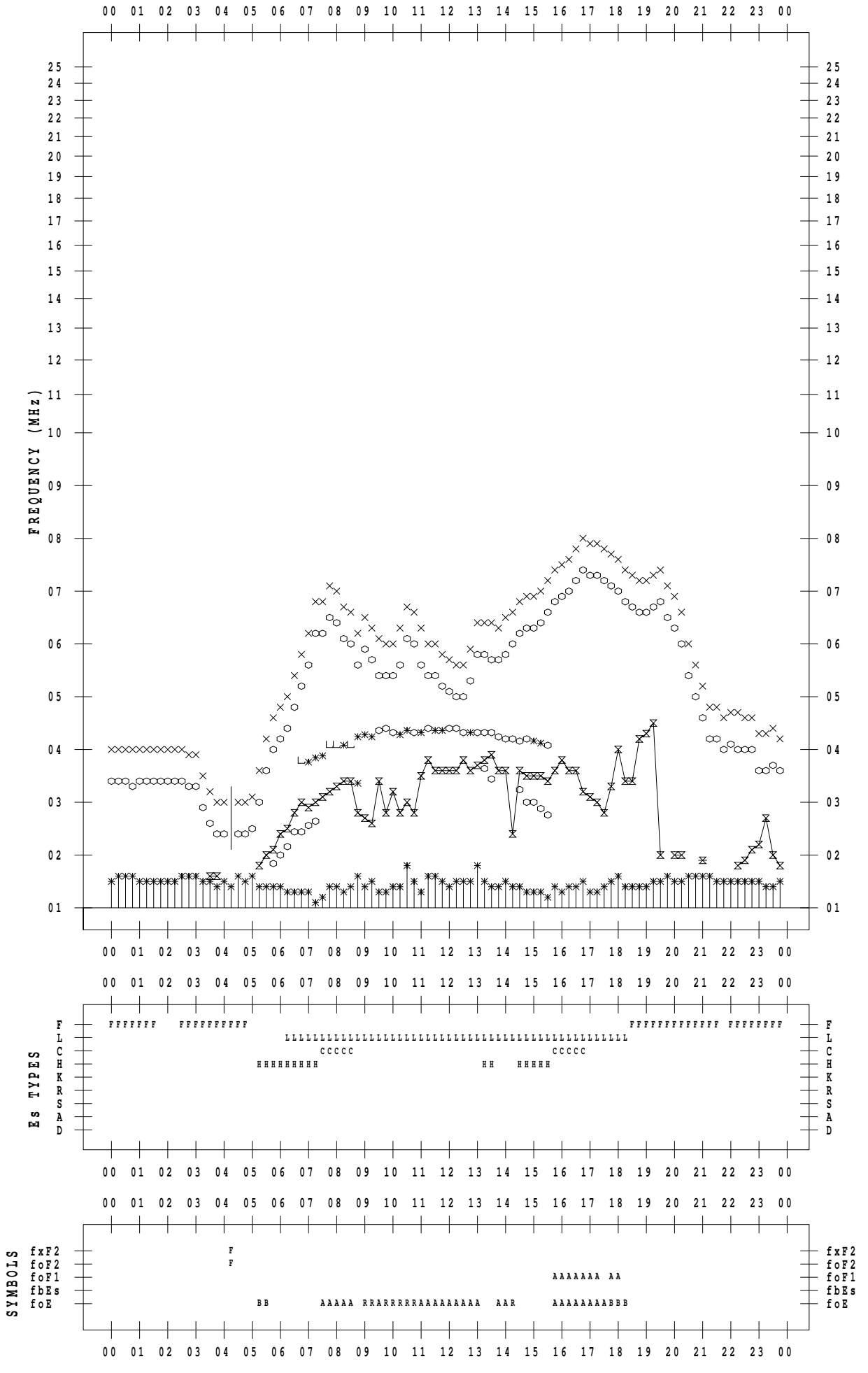
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/20

135 °E MEAN TIME



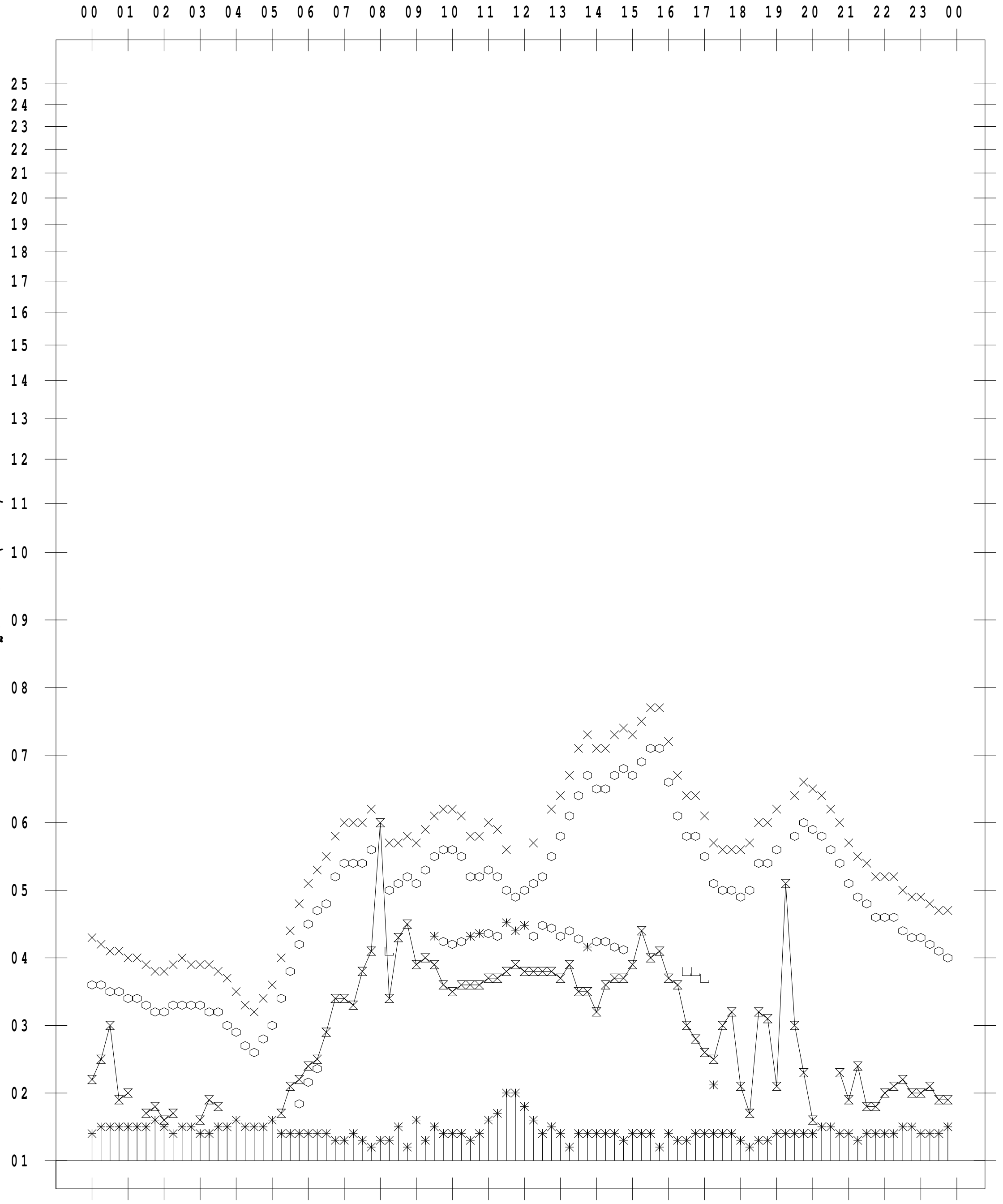
f-PLOT DATA

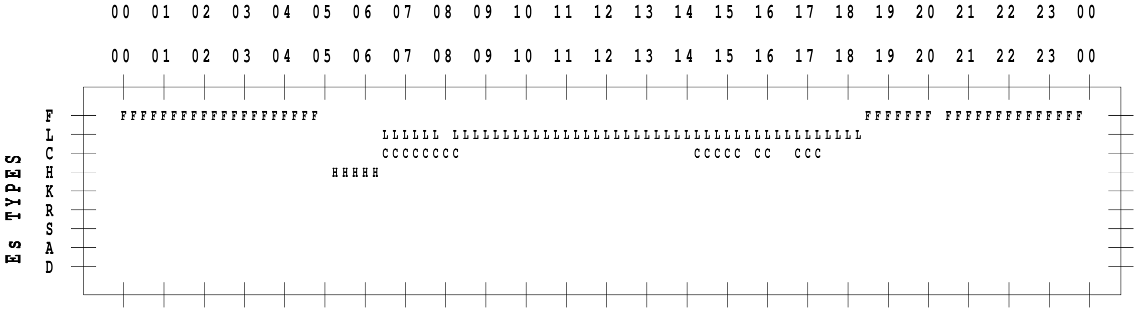
SCALER : I.NISHIMUTA

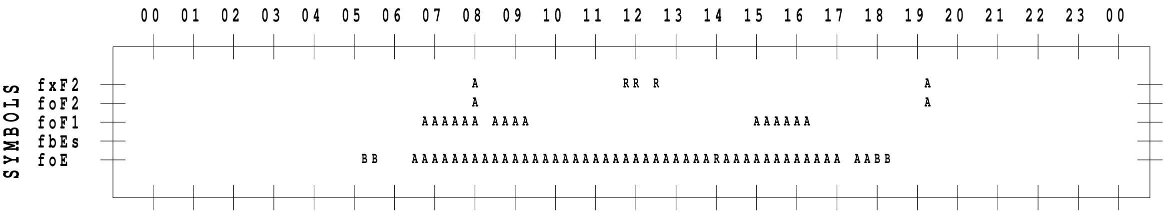
STATION : Kokubunji

DATE : 2009/ 4/21

135 °E MEAN TIME







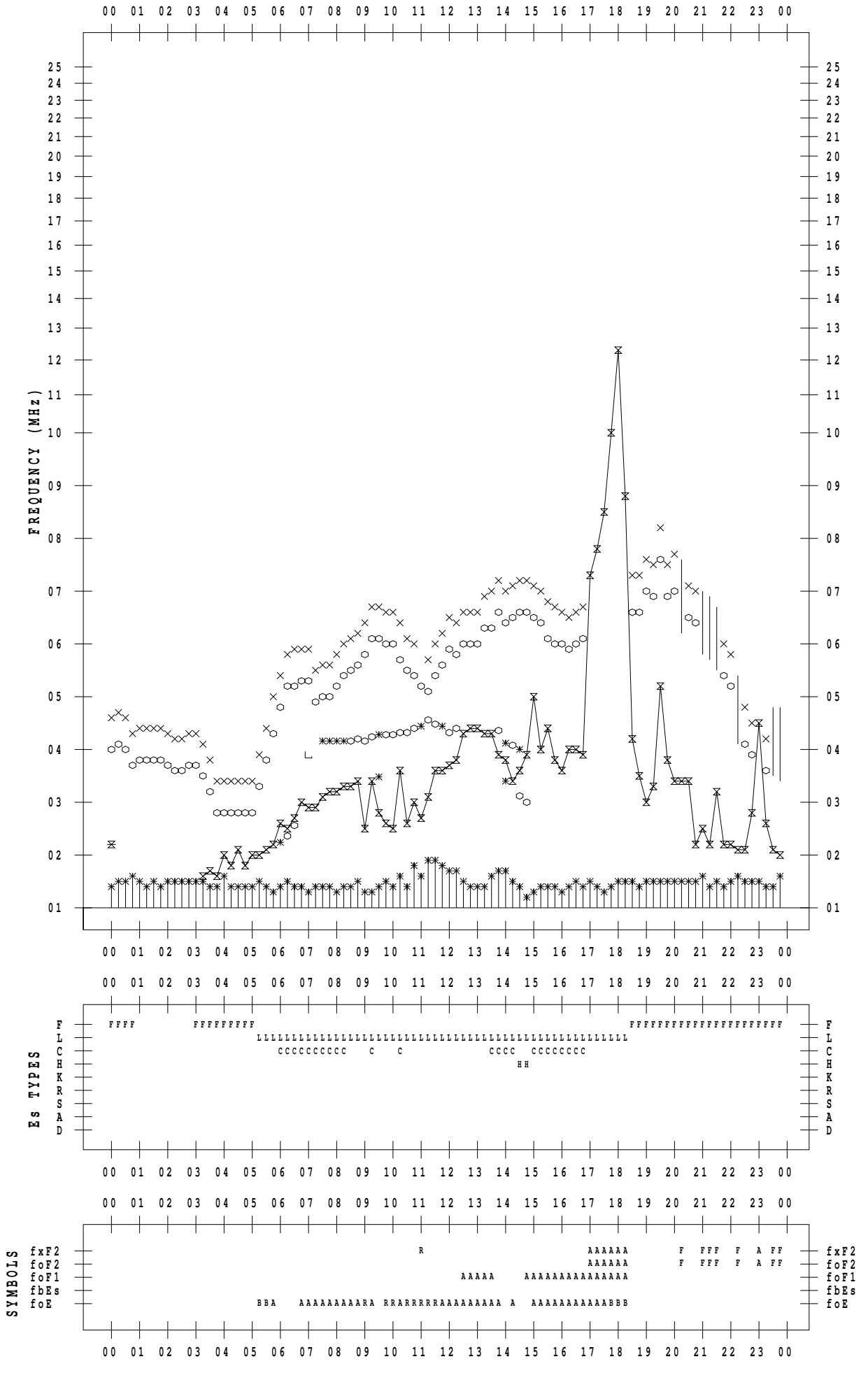
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/22

135 °E MEAN TIME



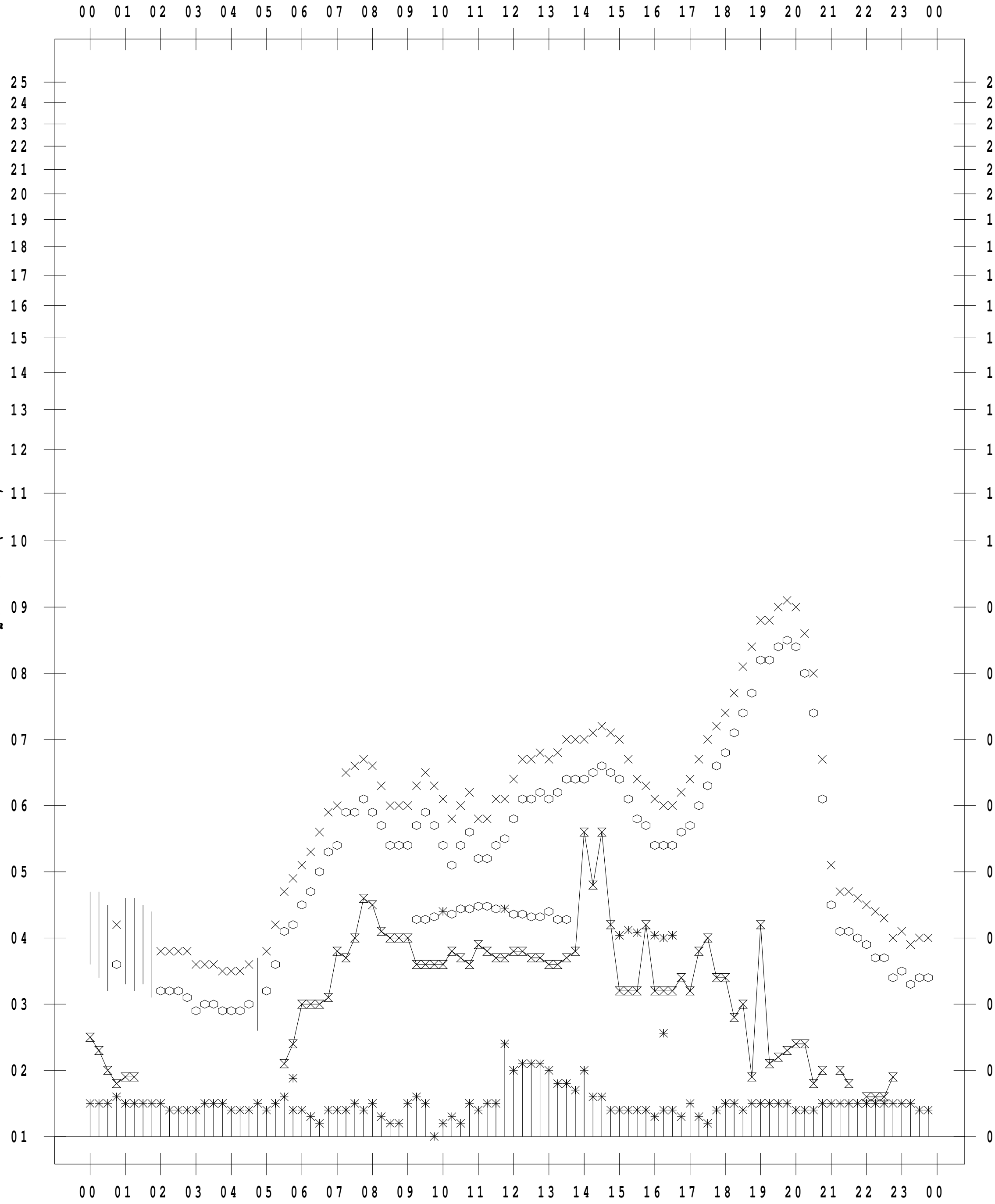
f-PLOT DATA

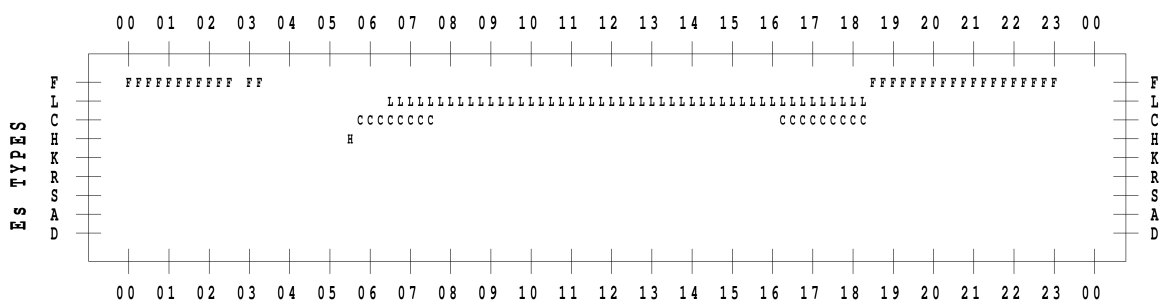
SCALER : I.NISHIMUTA

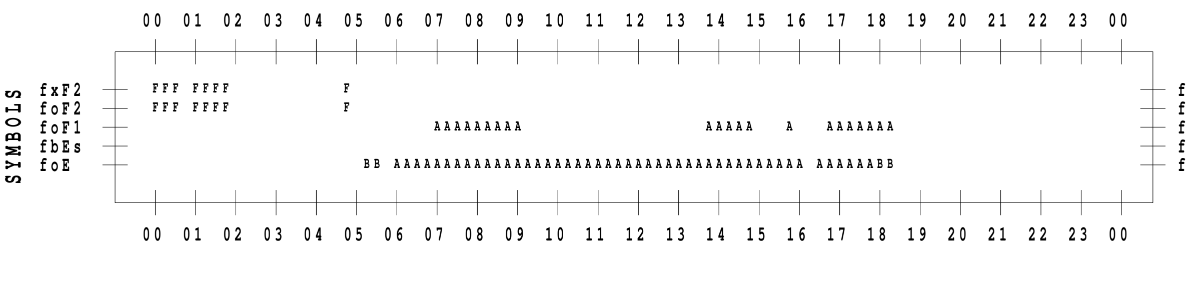
STATION : Kokubunji

DATE : 2009/ 4/23

135 °E MEAN TIME







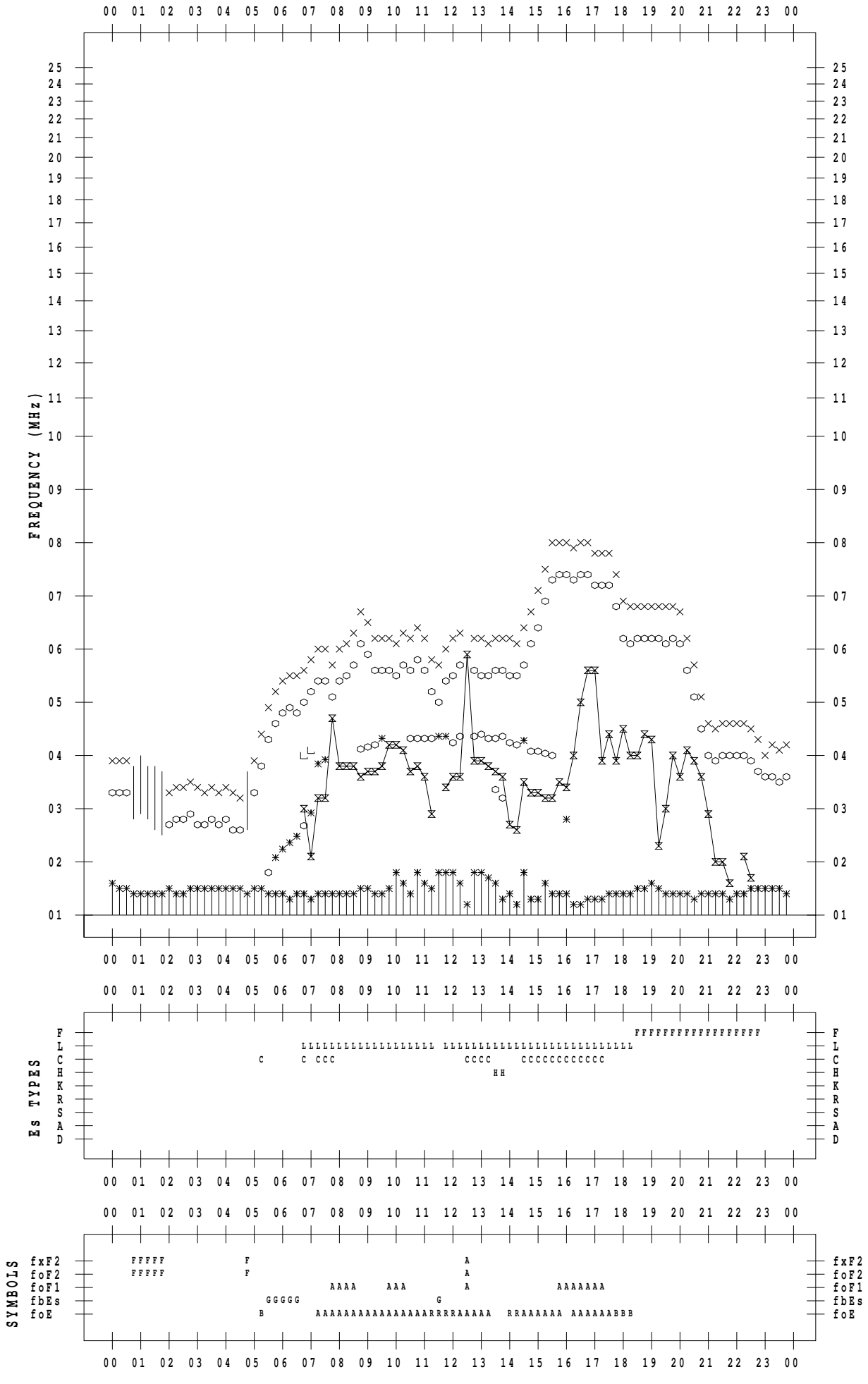
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/24

135 °E MEAN TIME



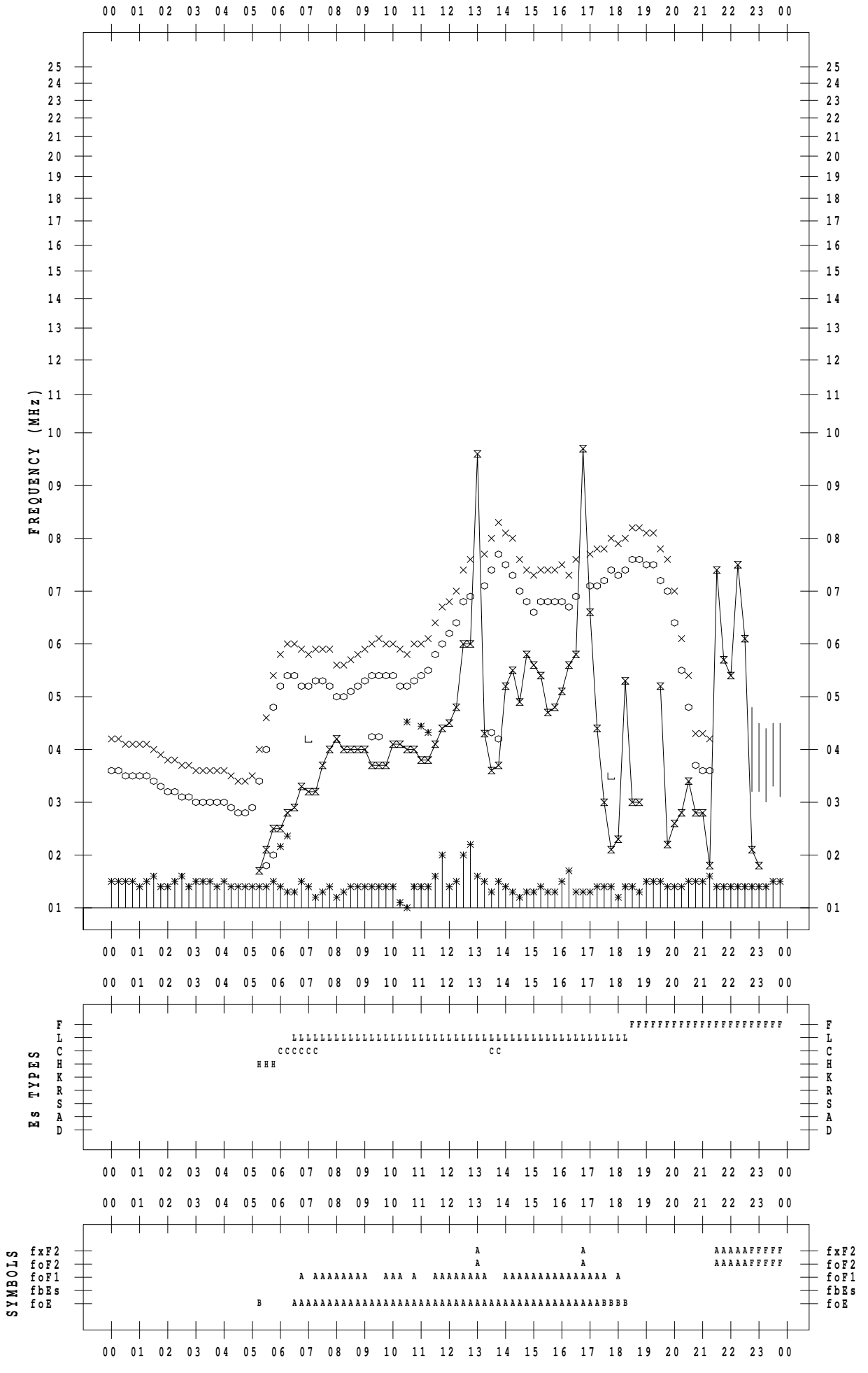
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/25

135 °E MEAN TIME



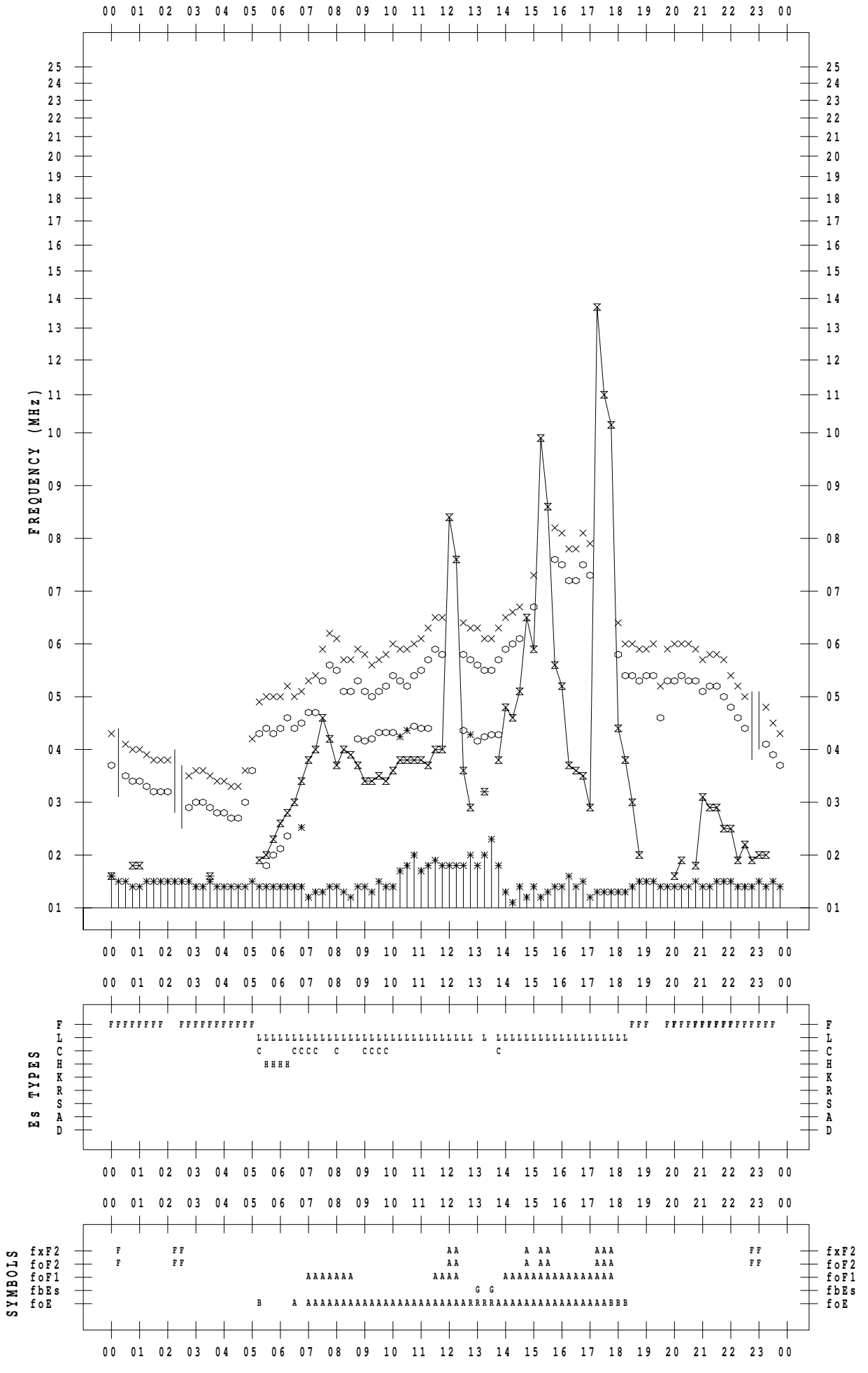
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/26

135 °E MEAN TIME

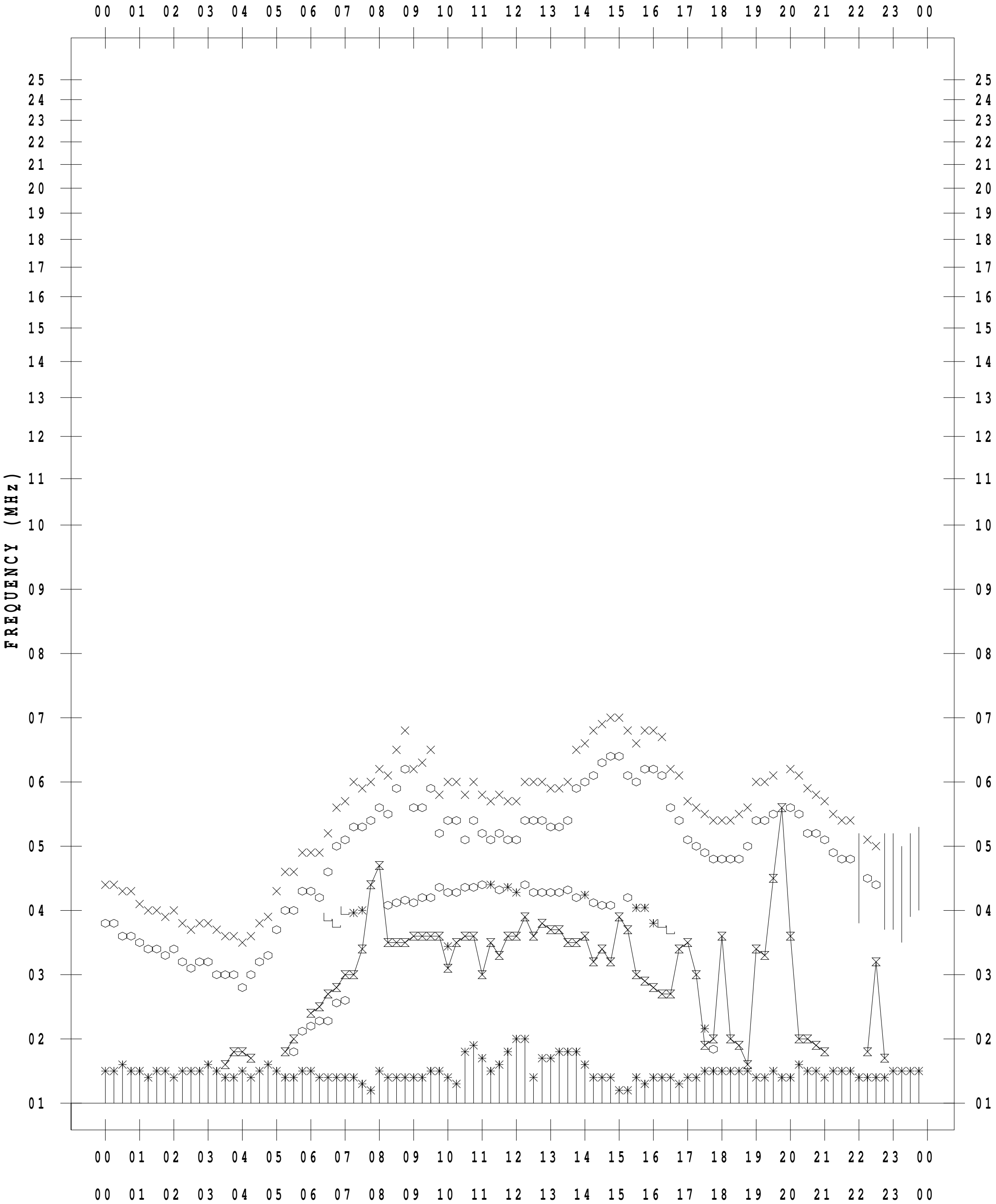


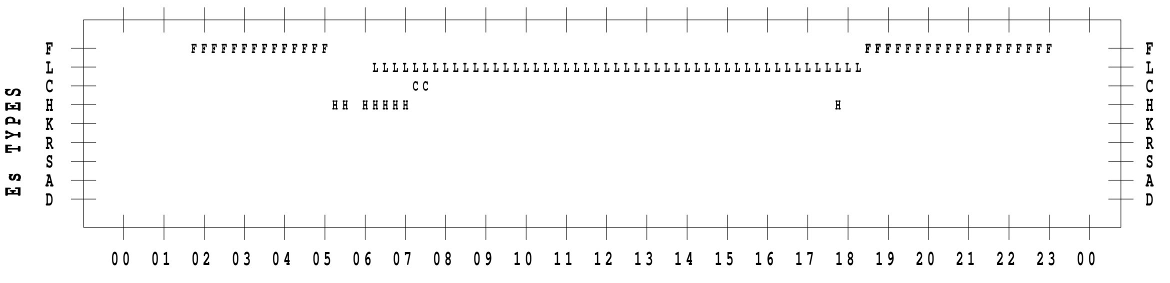
f-PLOT DATA

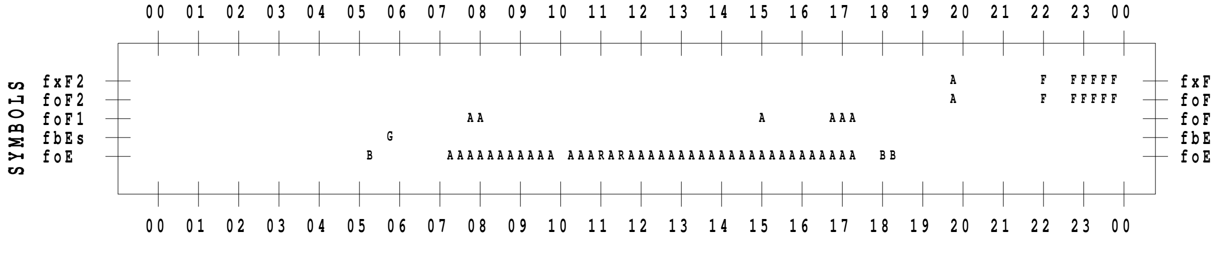
SCALER : I.NISHIMUTA

STATION : Kokubunji DATE : 2009/ 4/27

135 °E MEAN TIME







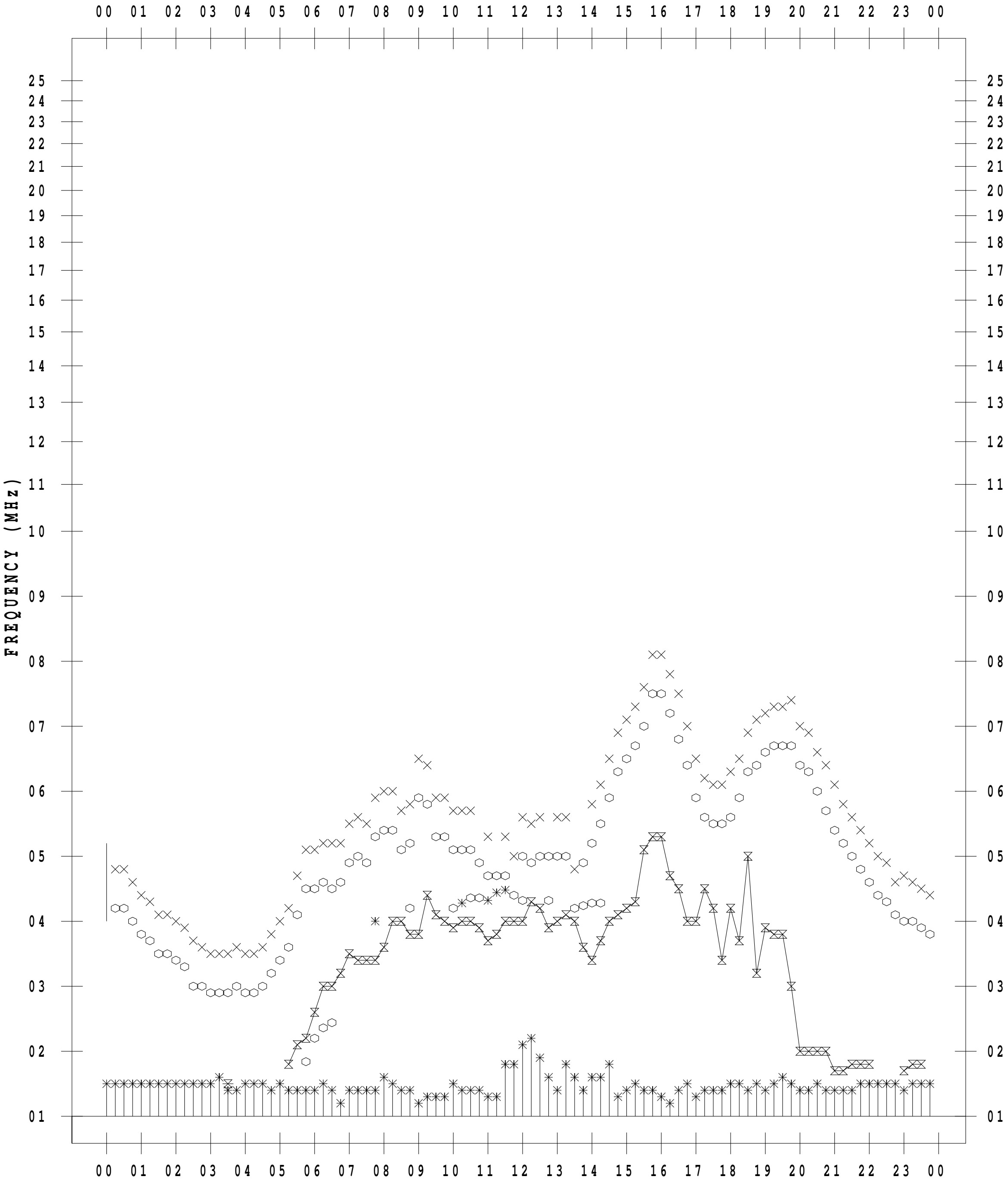
f-PLOT DATA

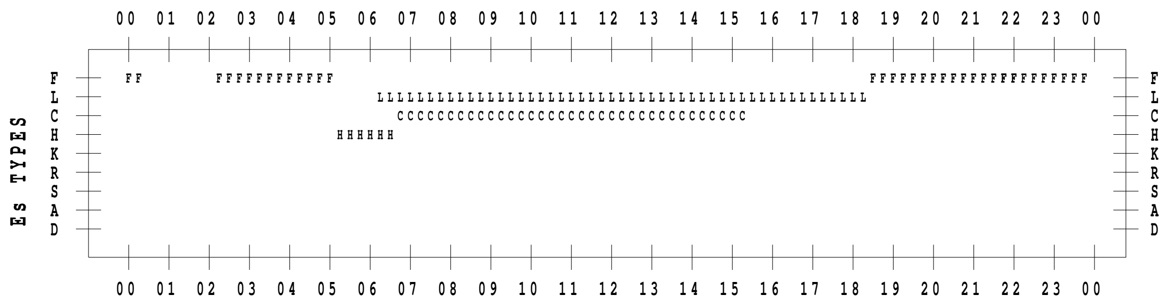
SCALER : I.NISHIMUTA

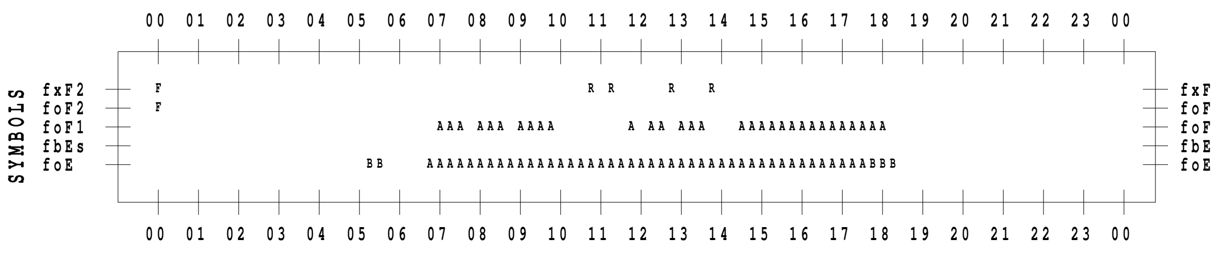
STATION : Kokubunji

DATE : 2009/ 4/28

135 °E MEAN TIME







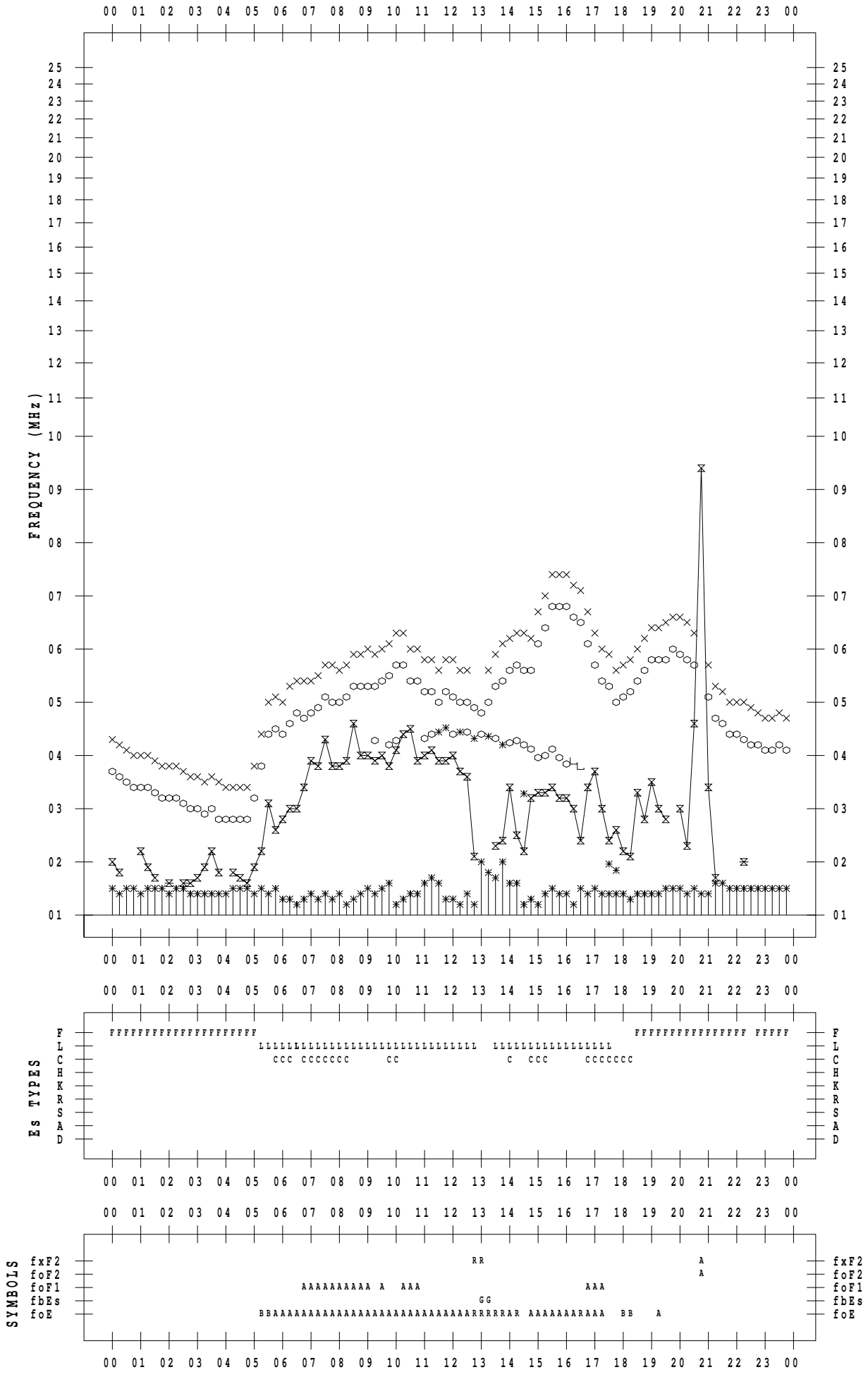
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/29

135 °E MEAN TIME



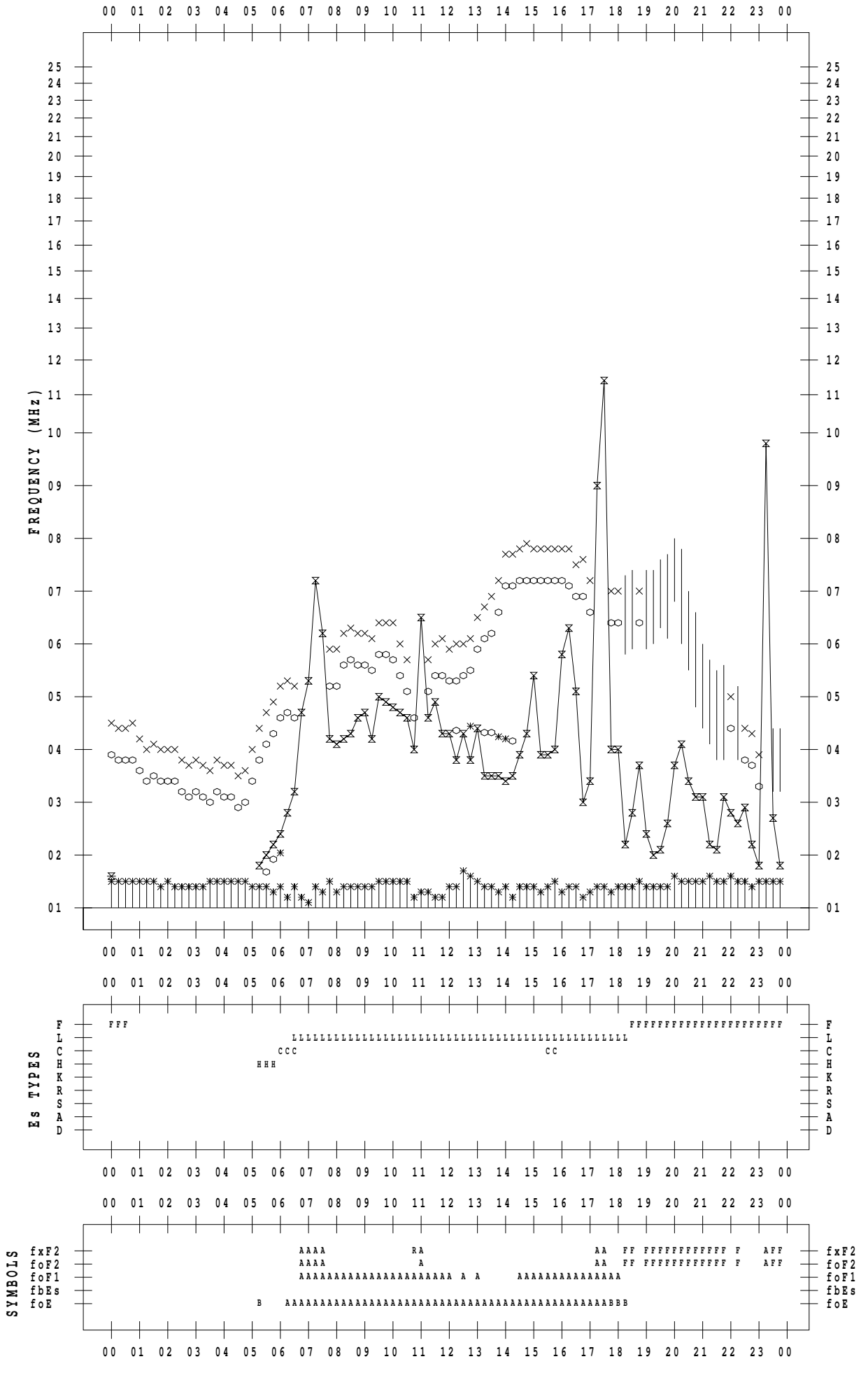
f-PLOT DATA

SCALER : I.NISHIMUTA

STATION : Kokubunji

DATE : 2009/ 4/30

135 °E MEAN TIME



B. Solar Radio Emission
B1.Outstanding Occurrences at Hiraiso

Hiraiso April 2009

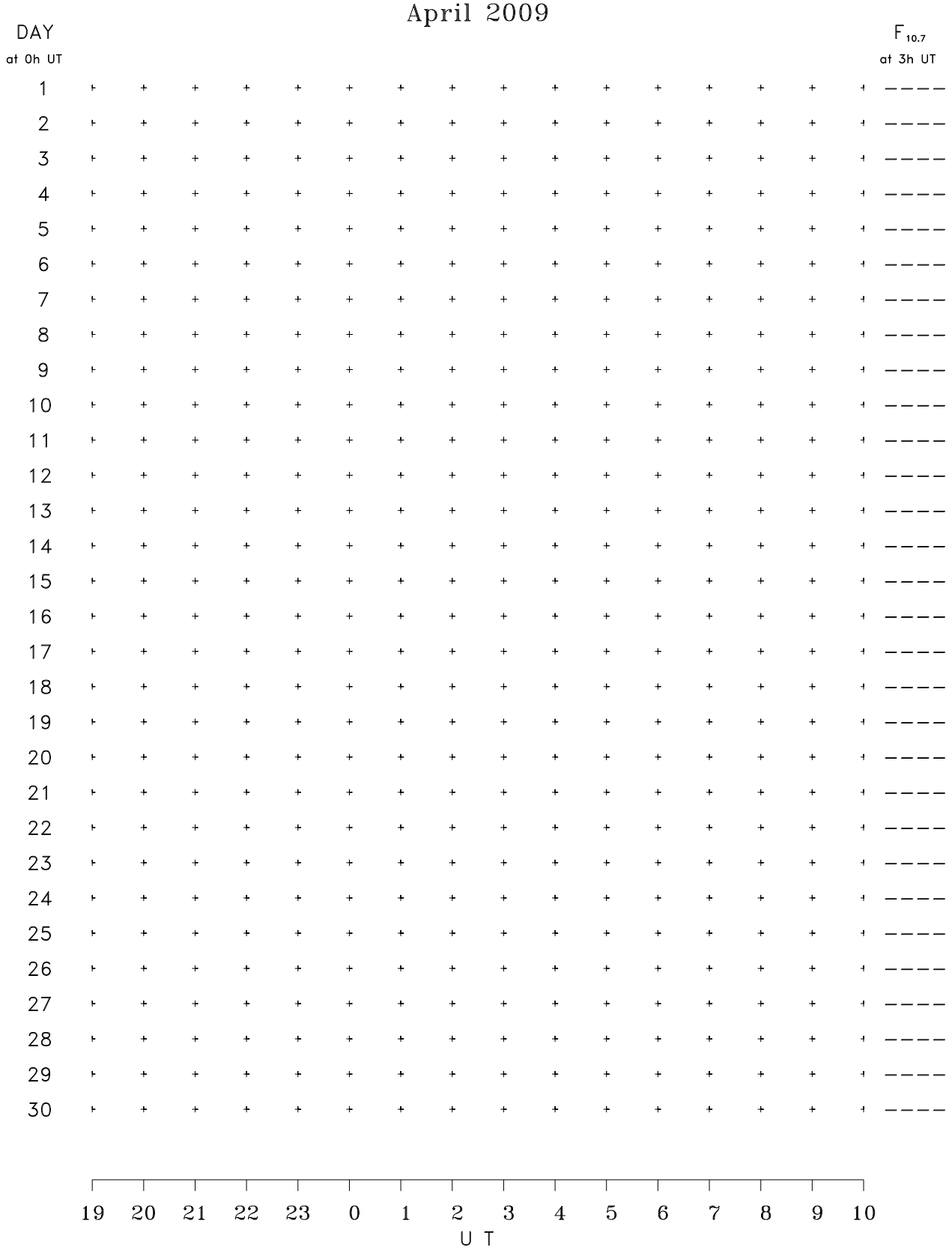
Single-frequency observations
Normal observing period: **** - **** U.T. (sunrise to sunset)

APR. 2009	FREQ. (MHz)	TYPE	START TIME (U.T.)	TIME OF MAXIMUM (U.T.)	DUR. (MIN.)	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) PEAK	FLUX DENSITY (10^{-22} W m^{-2} Hz^{-1}) MEAN	POLARIZATION REMARKS

No data for the 2800MHz fixed-frequency observation are available due to system maintenance.

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

April 2009



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