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IONOSPHERIC DATA IN JAPAN

FOR SEPTEMBER 1985

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RADIO RESEARCH LABORATORY
MINISTRY OF POSTS AND TELECOMMUNICATIONS
TOKYO, JAPAN

INTRODUCTION

This Series contains data on ionosphere (I), solar radio emission (S) and radio propagation (P) obtained at the following stations under the Radio Research Laboratories, Ministry of Posts and Telecommunications of Japan.

Station	Geographic		Geomagnetic		Technical Method
	Latitude	Longitude	Latitude	Longitude	
Wakkanai	45°23.5'N	141°41.2'E	35.3°N	206.5°	Vertical Sounding (I)
Akita	39°43.5'N	140°08.0'E	29.5°N	205.9°	" (I)
Kokubunji	35°42.4'N	139°29.3'E	25.5°N	205.8°	" (I)
Yamagawa	31°12.1'N	130°37.1'E	20.4°N	198.3°	" (I)
Okinawa	26°16.9'N	127°48.4'E	15.3°N	196.0°	" (I)
Hiraiso	36°22.0'N	140°37.5'E	26.3°N	206.8°	Radio Receiving (S, P)
Inubo	35°42.2'N	140°51.5'E	25.6°N	207.0°	" (P)

A. IONOSPHERE

Ionospheric observations are carried out at five stations in Japan by means of vertical sounding method.

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 Handbook of Ionogram Interpretation and Reduction (Second Edition) 1972".

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 *E* layers respectively

fbEs — Blanketing frequency of the *Es* layer, e.g. the lowest ordinary wave frequency visible through *Es*

fmin — Lowest frequency which shows vertical ionospheric reflections

M(3000)F2, *M(3000)F1* — Maximum usable frequency factor for a path of 3000 km for transmission by *F2* and *F1* layers respectively

h'F2, *h'F*, *h'E*, *h'Es* — Minimum virtual height on the ordinary wave for the *F2*, whole *F*, *E* and *Es* layers respectively

Types of *Es* — See below A. b. (iii)

b. Symbols

(i) Descriptive Letters

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

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 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 perturebation of parameters-Presence of polar spure traces.

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.

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 is present on the ionogram, the type for the trace used to determine *foEs* must be written first. The number of multiple traces 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 normal *E* layer minimum virtual height or below the particle *E* layer minimum virtual height.

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

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

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

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

a — An *Es* trace having a well-defined flat or gradually rising lower edge with stratified and

diffuse traces present above it.

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

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

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

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

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

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

Median (MED) of a set of numbers is the middle value when the numbers 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 are carried out on 100, 200 and 500 MHz at Hiraiso. Observation equipments are: a 5 meter parabolic reflector with a total-power receiver for 500 MHz and a 10 meter parabolic reflector with two polarimeters for 100 and 200 MHz. Observations are feasible almost from sunrise to sunset.

Time is expressed in hours, minutes and tenths of minutes U. T. and the unit of flux density is 10^{-22} Wm^{-2} Hz^{-1} for both components of polarization.

All symbols and terminology in the table of data are used in accordance with the "Descriptive Text of Solar-Geophysical Data, NOAA" and "Instruction Manual Monthly Report for Solar Radio Emission, WDC-C2".

a. Daily Data

Flux density. The three-hourly and daily mean values are given.

Variability. The three-hourly and daily mean values are given at 200 MHz only.
Variability is expressed in the following four grades.

0 quiet or no burst,
1 a few bursts,
2 many bursts,
3 very many bursts.

The number of bursts exceeding the mean flux level is counted.

Daily data with parenthesis mean that observation time does not exceed one third of the period.

b. Outstanding Occurrences

The phenomena are picked up on the following criteria:
1. distinct from the prevailing kind of activity,
2. correlated with other known solar phenomena,
3. remarkable change-over from one situation to another.

Type is denoted by numerical code and letter symbol in parallel as follows:

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

Flux density is the increase of flux over the level at which daily flux is calculated, or the increase of flux over the underlying burst when the event is superposed on another burst of long duration.

Polarization is expressed by the polarization degree and sence 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 deu to small increase of flux.
00 polarization degree of less than 1 percent.

The following symbols may be attached after numerical values in table, if necessary.

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

C. RADIO PROPAGATION

a. Measurement of H. F. Field Strength

Field strength observation of 15 MHz standard waves transmitted from WWV and WWVH stations which are located respectively at Fort Collins, Colorado and Kauai, Hawaii, is carried out at Hiraiso. In order to avoid interference among the same frequency waves, the upper side-band of WWV or WWVH with the audio tone 600 Hz is picked up by the use of a narrow band pass filter with 80 Hz band width. Particulars of the transmitters and the receiver are summarized in the following table.

Characteristics	Transmitter		Receiver
Station Call	WWV	WWVH	
Location	Fort Collins, Colorado	Kauai, Hawaii	Hiraiso, Ibaraki
latitude	40°41'N	22°00'N	36°22'N
longitude	105°02'W	159°46'W	140°38'E
Distance	9150 km	5910 km	-
Carrier Power	10 kW	10 kW	-
Modulation	50 %	50 %	-
Antenna	$\lambda/2$ vertical	$\lambda/2$ vertical	4.5 m vertical rod
Bandwidth	-	-	80 Hz for upper side-band
Calibration	-	-	Every an hour

The tabulated *field strength* in dB above one microvolt per meter is the peak average of the incident upper side-band field intensity in 45 seconds after the universal time indicated on the table. Abbreviated symbols are as follows:

CNT number of observed values,
MED median,
UD value of the uppermost decile when they are ranked according to magnitude,
LD value of the lowest decile when they are ranked according to magnitude,
U uncertain,
E less than,
C influenced by, or impossible because of, any artificial accident,
S influenced by, or impossible because of, interferences or atmospherics.

b. Radio Propagation Quality Figures

The tabulated six-hourly quality figures are calculated for standard waves WWV transmitted from Fort Collins and standard waves WWVH transmitted from Kauai.

Quality figures expressing radio propagation conditions are ranged over five grades as follows:

1 very poor (very disturbed),
2 poor (disturbed),
3 rather poor (unstable),
4 normal,
5 good.

Whole day quality figure ranged in grades of 1_0, 1+, 2-, 2_0, 2+, 3-, 3_0, 3+, 4-, 4_0, 4+, 5-, 5_0 stands for an average of six-hourly ones of the two circuits. Abbreviated symbols are as follows:

C artificial accident,
S propagational accident,
U inaccurate.

Radio propagation conditions which can be described with a code in the following

N normal,
U unstable,
W disturbed

are forecast 12 hours in advance and broadcast six per an hour from JJY Station.

Data on a *geomagnetic storm* correlated with a radio propagation disturbance are tabulated from observation at Kakioka Magnetic Observatory, Japan Meteorological Agency. *Time* (U.T.) is expressed in unit of hour and minute (or tenth of hour), and *range* in gamma. When they are uncertain quantitatively, /'s are replaced with them. Continuation of a geomagnetic storm is denoted by ---.

c. Sudden Ionospheric Disturbances

(i) SWF

The table of short wave fade-out (SWF) is prepared from the record of field intensities measured at Hiraiso.

Drop-out intensities of the 10 MHz, the 20 MHz, and the 25 MHz waves are respectively distinguished by marks ', " and ''' from these of the 15 MHz wave for WWV and WWVH. Values of *start*, *duration*, *type*, and *importance* are obtained from data of the circuit whose drop-out intensity in dB is underlined as xx. When these quantities are not given correctly, they are accompanied by the following symbols.

D greater than,
E less than,
U uncertain or doubtful.

Types of fade-out are as follows:

S sudden drop-out and gradual recovery,
SL slow drop-out taking 5 to 15 minutes and gradual recovery,
G gradual and irregular in both drop-out and recovery.

Importance of fade-out is scaled according to its amplitude into nine ascending grades as 1-, 1, 1+, 2-, 2, 2+, 3-, 3, 3+.

Correspondence of solar optical flare, solar radio burst, and geomagnetic crochet to SWF is marked by X in accordance with interchange messages of IUWDS and observations at Hiraiso.

(ii) SPA

Data of sudden phase anomaly (SPA) are prepared from the records of phase measurement of VLF radio waves received at Inubo. The transmitting stations are listed in the following table.

Phase advance is shown in unit of degree at its maximum stage. No transmission or no reception during the period is indicated by —, and indistinguishable record is spaced out, and multi-peak event is marked by *.

Out of more than two circuits on which the same SPA event is observed, the *phase advance* on the circuit on which the SPA is the most remarkable or distinct is underlined. As for the underlined, *phase advance*, *start*, *end* and *maximum* times are obtained.

In table (i) SWF and (II) SPA, *date* indicates the day to which *start-time* of event belongs.

The following letters may be attached to the value, if necessary.

D greater than,
E less than,
U uncertain or doubtful.

Transmitting Stations

Name	Location (Geographic Coordinate)		Call Sign	Frequency (kHz)	Radiation Power (kW)	Arc Distance from Inubo (km)
Rugby	52°22'N	001°11'W	GBR	16.0	(750) 60	9550
Jim Creek	48°12'N	121°55'W	NLK	18.6	(1200) 130	7620
North West Cape	21°49'S	114°10'E	NWC	22.3	1000	6990
Aldra	66°25'N	013°09'E	Ω/N	13.6	10	7820
North Dakota	46°22'N	098°21'W	Ω/ND	13.6	10	9140
Haiku	21°24'N	157°50'W	Ω/H	13.6	10	6100
La Reunion	20°58'S	055°17'E	Ω/LR	13.6	10	10970

IONOSPHERIC DATA

SEP. 1985 | FXI (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 45	X 44	X 40	X 35	X 34	X 34														C	C	C	C	C
2	C	C	C	C	C	C														X 59	X 59	X 59	X 52	X 53
3	X 51	X 50	X 46	X 43	X 41	X 43														X 57	X 58	X 59	X 57	X 56
4	56	50	X 43	X 42	43	X 42														X 67	X 62	X 62	X 58	X 47
5	X 45	X 47	X 47	X 47	X 45	X 46														X 64	X 62	X 57	X 57	X 46
6	X 45	X 45	X 44	X 46	X 46	X 51														X 62	X 61	X 58	X 57	X 56
7	X 52	X 52	X 50	52	45	X 42														X 57	X 50	X 49	X 49	X 49
8	X 48	X 46	X 46	X 42	X 40	X 42														X 60	X 58	A	X 52	A
9	A	A	A	X 44	X 47	X 42														X 65	X 57	X 49	X 43	X 41
10	X 41	X 42	A	X 39	X 37	X 36														X 60	X 57	X 46	X 42	X 43
11	X 44	X 45	X 43	X 44	X 45	X 51														X 53	52	56	58	51
12	50	A	40	43	48	48														X 60	X 60	58	52	X 44
13	48	45	48	48	40	X 45														X 63	C	C	C	X 47
14	X 46	C	C	C	C	C														X 74	X 70	X 60	X 43	X 37
15	X 35	X 42	X 37	X 36	X 25	A														X 58	X 55	X 57	X 57	X 46
16	X 40	X 44	X 45	X 41	X 36	X 35													X 61	X 58	X 58	X 59	A	53
17	X 46	X 47	X 41	X 39	X 39	X 40													X 56	X 58	X 54	X 53	X 52	X 40
18	X 38	X 38	X 37	X 37	X 35	X 36													X 56	X 58	X 54	X 51	X 49	X 47
19	X 45	X 42	X 40	X 40	X 39	X 40													X 60	X 57	X 57	X 53	X 50	X 49
20	X 42	X 40	35	35	38	40													X 52	X 47	X 45	X 44	X 45	X 40
21	X 40	X 37	X 35	X 36	X 36	X 35													X 61	X 59	X 54	X 50	X 47	X 43
22	X 42	X 42	X 41	X 41	X 38	X 38													X 59	X 57	X 60	X 55	X 48	X 49
23	X 45	X 45	X 46	X 44	X 42	X 42													X 57	X 58	X 58	X 51	X 48	X 42
24	X 42	X 42	X 41	X 42	X 41	X 40													X 62	X 59	X 54	X 46	X 42	X 42
25	X 40	X 41	X 41	X 39	X 38	X 37													X 65	X 56	X 50	X 48	X 46	X 47
26	X 48	X 46	X 44	X 43	X 44	X 41													X 56	X 51	X 51	X 48	X 44	X 43
27	X 43	X 41	X 41	X 42	X 42	X 40													X 67	X 58	X 55	X 49	A	X 42
28	X 43	X 46	X 45	X 40	X 42	X 37													X 57	X 55	X 52	X 48	X 45	X 43
29	46	44	X 45	X 42	X 40	X 37													X 60	X 57	X 50	A	A	X 47
30	X 46	X 46	X 41	X 41	X 42	X 40													X 55	X 51	X 51	X 51	X 51	X 51
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	28	26	26	28	28	27													15	29	28	26	25	28
MED	X 45	X 44	X 42	X 42	X 40	X 40													X 59	X 58	X 56	X 52	X 49	X 46
UQ	X 47	X 46	X 45	X 44	X 44	X 42													X 61	X 60	X 58	X 58	X 52	X 49
LQ	X 42	X 42	X 40	X 39	X 38	X 37													X 56	X 57	X 52	X 49	X 45	X 42

SEP. 1985 | FXI (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOF2 (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	38	37	33	28	27	27	34	40	40	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	52	58	62	61	55	54	55	54	51	50	52	52	52	45	46
3	44	43	39	36	34	36	42	46	45	49	53	55	51	55	54	51	50	43	48	50	51	52	50	49
4	F 49	F 43	36	35	F	35	50	45	49	51	53	53	51	50	50	50	50	53	57	60	55	55	51	40
5	38	40	40	40	38	39	48	47	C	60	57	51	51	53	51	50	51	50	54	57	55	50	50	39
6	38	38	37	39	39	44	50	54	51	56	55	54	51	58	57	53	46	52	50	55	54	51	50	49
7	45	45	43	F 43	F	35	40	43	48	44	46	46	A	49	51	49	51	47	49	50	43	42	42	42
8	41	39	39	35	33	35	43	51	49	46	47	45	45	47	49	44	46	45	50	53	51	A	45	A
9	A	A	A	37	40	35	39	43	53	57	48	52	55	A	A	A	A	53	55	58	50	42	36	34
10	34	35	A	32	30	29	34	43	A	A	H 42	43	A	A	44	43	47	46	46	53	50	39	35	36
11	37	38	36	37	38	44	42	44	A	A	47	51	52	51	51	49	47	49	52	46	F	F	F	F
12	F	A	F 30	F	F	F	40	47	54	53	50	50	46	R	53	54	50	46	50	53	53	F	F	37
13	F	F 36	F 36	F	F 34	38	41	44	50	51	55	H 45	53	52	51	49	49	47	55	56	C	C	C	40
14	39	C	C	C	C	C	C	C	C	53	52	49	48	50	55	48	50	49	56	67	63	53	36	30
15	28	35	30	29	18	A	A	43	53	A	A	50	A	56	51	50	51	48	49	51	48	50	50	39
16	33	37	38	34	29	28	43	H 43	47	52	56	A	A	A	48	54	50	50	54	51	51	52	A	F
17	39	40	34	32	32	33	41	50	48	53	50	51	54	45	51	46	47	47	49	51	47	46	45	33
18	31	31	30	30	28	29	38	48	50	55	52	51	51	55	53	51	45	50	49	51	47	44	42	40
19	38	35	33	33	32	33	47	49	54	52	53	50	53	53	53	52	49	49	53	50	50	46	43	42
20	35	33	F	F	F	F	42	43	46	55	52	58	50	63	57	60	51	50	45	40	38	37	38	33
21	33	30	28	29	29	28	37	47	50	51	53	63	54	50	57	57	55	58	54	52	47	43	40	36
22	35	35	34	34	31	31	41	49	53	59	60	58	59	60	58	53	51	50	52	50	53	48	41	42
23	38	38	39	37	35	35	40	52	63	63	59	59	53	59	58	53	58	50	50	51	51	44	41	35
24	35	35	34	35	34	33	46	51	53	61	66	57	54	55	55	53	56	55	55	52	47	39	35	35
25	33	34	34	32	31	30	40	48	53	55	59	58	56	60	58	53	55	60	58	49	43	41	39	40
26	41	39	37	36	37	34	44	45	53	59	61	64	66	58	61	53	59	57	49	44	44	41	37	36
27	36	34	34	35	35	33	33	53	60	61	68	68	60	60	63	57	55	61	60	51	48	42	A	35
28	36	39	38	33	35	30	44	A	50	64	61	70	63	62	58	57	56	53	50	48	45	41	38	36
29	F	F 35	38	35	33	30	40	49	52	63	66	66	61	58	54	54	55	58	53	50	43	A	A	40
30	39	39	34	34	35	33	42	49	57	64	63	60	59	62	68	60	55	53	48	44	44	44	44	44
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	25	25	24	25	27	27	25	26	28	28	25	25	28	28	28	29	29	29	27	24	23	26
MED	38	37	36	35	34	33	41	47	51	55	54	54	53	55	54	53	51	50	50	51	50	44	42	39
UQ	39	39	38	36	35	35	44	49	53	60	60	60	59	59	58	54	55	53	54	53	52	50	45	42
LQ	35	35	34	32	30	30	40	44	49	52	51	50	51	51	51	50	49	48	49	50	46	42	38	35

SEP. 1985 | FOF2 (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOF1 (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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								350	370	C	C	C	C	C	C	C	C							
2								C	C	A	430	A	430	420	420	400	L 370							
3										410	420	430	430	420	410	390	L 360							
4									410	420	420	430	430	420	L 430	400	L 380							
5								A	C	410	430	430	420	H 430	L	410	370							
6								370	400	100	420	420	400	410	410	380								
7							340	390	A	A	A	A	A	A	410	400	370							
8								360	390	400	410	410	410	410	400	380	L 360							
9							310	A	A	410	L 420	410	420	A	A	A	A							
10								350	A	A	380	400	A	A	390	390	A							
11								A	A	A	400	410	410	400	400	L								
12								370	A	400	410	410	430	430	400	390	340							
13									L	420	400		410	410	410	H 400								
14								C	C	410	A	A	430	410	400	L 360	L 360							
15								350	380	A	A	400	A	410	380	A								
16									380	400	A	A	A	A	400	380								
17							290	350	380	400	400	410	400		400	A	L 350							
18								350	390	400	400	410	420	400	400									
19									390	410	410	420	410	410	400	380								
20									L 360	390		410	L	410	400	L 380								
21									390	390	400	410	400	400	400	L 390								
22									390	A	A	420	420	410	400									
23									380	400	410	H 420		410	400									
24										410	400	420	L 410	H 410	L 400	L								
25									380	400	410	410	410	410	400									
26									L	410	410	410	410	400	L 390									
27										L 400	420	A	410	L	400									
28								A	A	A	400	420	410	410	400	L								
29									L 420	400	410	410	410	400	370									
30									L	L	410	430	400	410	400	L								
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							3	9	15	21	23	23	23	23	27	15	9							
MED							310	350	390	400	410	410	410	410	400	390	L 360							
UQ							325	370	390	410	420	420	420	410	400	400	L 370							
LQ							300	350	380	400	400	410	410	410	400	380	L 360							

SEP. 1985 | FOF1 (0.01 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOE (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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							160	225	260	C	C	C	C	C	C	C	C	C	C					
2							C	C	C	295	305	310	315	315	A	A	A	A	E					
3							205	245	255	280	300	315	315	310	300	285	245	190	S					
4							205	250	270	285	300	300	305	305	300	A	A	195	S					
5							190	245	C	295	300	A	305	305	300	285	250	195	S					
6							A	A	A	300	A	A	A	A	300	280	A	A	A					
7							A	A	A	295	305	305	305	300	290	255	225	S	S					
8							170	A	A	A	300	A	300	300	290	270	230	200	E					
9							155	230	250	285	A	300	300	A	A	A	A	A	E					
10							150	220	275	285	290	295	A	A	A	280	230	190	E					
11							A	215	245	A	290	300	300	300	295	270	235	A	E					
12							A	220	A	A	305	305	305	300	300	285	240	185	E					
13							A	A	A	A	A	305	300	300	295	280	A	A	E					
14							C	C	C	A	A	A	H 300	295	295	280	215	180	E					
15							160	210	A	A	A	A	A	A	A	A	230	A	E					
16							165	220	245	290	A	A	A	A	A	A	A	155						
17							160	210	225	A	A	305	310	300	A	A	A	A						
18							S	200	H 255	285	295	300	300	300	290	255	225	A						
19							A	A	255	A	295	300	300	300	290	250	220	A						
20							A	210	250	275	295	300	300	295	275	245	215	A						
21							185	220	250	260	285	295	A	300	295	280	220	A						
22							170	220	255	275	285	A	A	A	A	255	220	A						
23							170	215	245	A	290	300	300	A	A	A	210	160						
24							155	220	255	A	295	305	305	300	290	250	230	S						
25							A	210	255	275	295	300	305	300	290	245	205	A						
26							A	210	245	280	290	295	295	290	280	250	215	A						
27							A	240	265	H 280	290	300	300	290	270	A	200	175						
28							S	210	250	280	295	295	A	A	A	A	220	A						
29							170	225	260	A	A	300	A	300	285	250	A	A						
30							A	A	270	290	A	A	295	285	275	260	215	S						
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							15	22	21	18	20	21	21	21	20	20	21	10	9					
MED							170	220	255	285	295	300	300	300	290	265	220	188	E					
UQ							178	225	260	290	300	305	305	300	298	280	230	195	E					
LQ							160	210	250	280	290	300	300	300	288	250	215	175	E					

SEP. 1985 | FOE (0.01 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	ES 15	27	21	22	21	24	30	29	33	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	JA 48	JA 40	46	42	40	43	40	42	36	31	22	22	32	JA 51	JA 63
3	42	25	26	21	ES 16	E	G	G	G	35	36	G	G	40	G	G	G	G	ES 16	28	29	26	38	40
4	31	ES 13	27	29	24	ES 16	G	32	35	35	G	G	G	G	34	40	36	G	22	ES 16	27	32	42	JA 44
5	JA 35	E	JA 60	JA 56	39	27	G	JA 43	C	36	43	32	G	G	G	37	G	G	ES 15	23	JA 28	JA 30	JA 33	ES 14
6	26	31	24	E	E	26	24	32	35	35	34	40	34	41	G	G	30	32	JA 50	41	36	30	ES 15	JA 30
7	JA 33	JA 43	JA 50	JA 33	38	JA 33	30	36	46	42	43	52	53	50	44	42	41	38	JA 49	34	32	JA 44	47	31
8	JA 51	26	26	23	31	ES 16	28	37	43	JA 48	G	43	G	G	36	G	JA 49	28	JA 45	40	26	JA 106	JA 60	JA 83
9	JA 57	JA 60	JA 50	31	36	33	31	35	48	43	34	45	JA 47	JA 83	JA 83	JA 130	JA 130	42	43	31	30	27	JA 51	32
10	JA 43	JA 70	JA 57	36	30	31	41	32	JA 69	47	52	55	JA 76	JA 57	49	G	JA 43	JA 56	JA 50	JA 70	42	ES 16	ES 11	ES 13
11	ES 16	31	26	24	28	32	JA 47	51	JA 104	63	37	40	41	37	G	G	29	43	JA 35	JA 53	JA 64	JA 35	39	JA 51
12	JA 63	JA 55	JA 60	35	JA 35	25	18	G	JA 76	35	G	G	G	G	G	33	30	G	33	31	JA 31	JA 34	ES 15	ES 15
13	ES 15	ES 15	31	26	36	30	28	JA 60	31	43	42	G	32	G	G	G	JA 43	JA 76	JA 33	26	C	C	C	30
14	ES 15	C	C	C	C	C	C	C	C	40	JA 67	JA 62	G	G 24	G 26	G	JA 49	27	31	ES 16	ES 16	26	ES 16	30
15	ES 16	ES 14	23	E	24	41	JA 54	42	JA 43	JA 97	JA 69	37	JA 63	JA 50	40	JA 43	43	43	50	JA 47	42	JA 49	JA 47	30
16	39	30	28	31	28	26	27	36	32	35	52	JA 67	JA 60	JA 85	JA 61	42	40	39	39	41	38	41	JA 83	JA 50
17	34	28	31	23	31	33	39	JA 64	JA 54	JA 51	40	G	G	G	42	52	42	37	30	34	38	50	32	ES 13
18	JA 50	27	22	23	26	22	32	43	50	37	G	G	G	G	G	G	G	23	24	26	38	27	31	33
19	37	24	25	23	ES 13	ES 12	25	32	G	35	G	G	31	38	G	G	28	23	26	21	ES 16	23	21	25
20	21	ES 16	22	23	20	24	22	G	G	37	35	G	G	G	G	G	G	26	ES 16	ES 13	26	ES 16	ES 16	21
21	23	21	23	20	20	ES 13	G	JA 129	G	G	G	G	41	G	G	G	G	33	29	ES 16	ES 16	ES 16	31	23
22	22	ES 16	ES 13	ES 16	ES 16	ES 16	G	G	32	JA 50	JA 45	38	JA 45	40	JA 49	G 21	24	28	34	ES 16	31	JA 49	34	24
23	24	23	22	ES 11	ES 12	ES 16	31	G	32	38	G	G	G	35	40	JA 43	27	23	ES 16	27	JA 40	24	24	ES 16
24	ES 16	ES 11	ES 16	ES 15	ES 12	ES 13	G	G	G	40	40	G	G	G	G	G	27	ES 17	26	26	27	ES 11	ES 16	ES 16
25	ES 16	ES 12	ES 16	ES 16	E	21	24	30	G	35	37	40	G	G	G	G	28	25	20	24	21	22	20	ES 16
26	18	ES 16	ES 13	ES 16	ES 13	ES 16	31	G	G	34	36	G	G 23	G	G	34	32	33	JA 52	26	JA 60	41	34	31
27	33	31	25	44	31	25	36	36	47	38	JA 48	54	40	JA 51	JA 55	JA 70	32	31	28	ES 16	JA 75	JA 45	41	31
28	32	34	23	31	28	ES 16	41	JA 60	JA 53	JA 43	38	G	33	JA 37	JA 56	JA 33	28	43	JA 32	30	30	JA 33	JA 50	24
29	30	ES 14	23	21	20	20	27	G	30	38	36	G	31	G	G	30	35	31	30	JA 30	36	JA 94	JA 73	JA 30
30	30	27	25	21	E	21	28	29	G	G	43	36	G	G	30	G	G	ES 15	26	23	ES 16	30	21	ES 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	29	28	28	28	28	28	28	28	27	29	29	29	29	29	29	29	29	29	29	29	28	28	28	29
MED	30	26	25	23	24	23	28	32	33	38	37	32	31	G 24	G 26	G 21	30	31	31	26	30	31	34	30
UQ	37	31	30	31	31	28	32	42	48	43	43	43	41	40	43	40	42	38	JA 39	34	38	JA 42	47	32
LQ	18	ES 16	22	18	E 14	ES 16	20	G	G	35	34	G	G	G	G	G	27	23	26	22	26	25	20	ES 16

SEP. 1985 | FOES (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FBES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 S 15	E	E	E	E	E	G	G	G	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	46	40	42	G	G	35	33	27	23	E	E	E	23	40	21
3	20	E	E	E	E S 16	E	G	G	G	G	G	G	G	G	G	G	G	G	E S 16	E	20	E	E	E
4	20	E S 13	E	E	E	E S 16	G	G	32	G	G	G	G	G	34	32	29	G	G	E S 16	E	25	29	30
5	E	E	E	E	E	E	G	41	C	G	39	32	G	G	G	G	G	G	E S 15	E	E	E	E	E S 14
6	E	E	E	E	E	E	22	28	33	G	34	34	34	40	G	G	28	24	31	30	24	E	E S 15	E
7	29	40	35	30	E	E	23	34	41	41	41	41	A A 53	41	36	35	32	G	E	22	E	27	34	21
8	E	E	E	E	E	E S 16	16	31	30	36	G	34	G	G	G	G	28	26	E	21	20	A A 106	30	A A 83
9	A A 57	A A 60	A A 50	E	28	26	30	34	41	38	32	37	41	A A 83	A A 83	A A 130	A A 130	25	18	21	20	20	25	21
10	28	E	A A 57	30	E	E	G	28	A A 69	A A 47	34	39	A A 76	A A 57	38	G	36	37	39	50	27	E S 16	E S 11	E S 13
11	E S 16	20	E	E	E	25	32	43	A A 104	A A 63	G	40	40	G	G	G	G	36	G	26	20	E	E	E
12	E	A A 55	E	E	E	E	18	G	41	31	G	G	G	G	G	G	G	G	25	E	E	E	E S 15	E S 15
13	E S 15	E S 15	E	E	E	E	21	25	31	38	32	G	25	G	G	G	35	40	32	E	C	C	C	E
14	E S 15	C	C	C	C	C	C	C	C	33	44	47	G	G 24	G 26	G	33	G	16	E S 16	E S 16	E	E S 16	E
15	E S 16	E S 14	E	E	E	A A 41	A A 54	33	37	A A 97	A A 69	31	A A 63	39	30	38	32	37	41	36	29	20	21	E
16	25	22	22	E	E	E	G	30	G	G	41	A A 67	A A 60	A A 85	38	31	32	30	21	26	24	21	A A 83	21
17	29	E	E	E	E	21	27	33	35	30	30	G	G	G	35	34	27	21	E	26	E	33	E	E S 13
18	E	E	E	E	E	E	25	34	35	35	G	G	G	G	G	G	G	20	E	E	E	E	E	20
19	28	E	E	E	E S 13	E S 12	20	25	G	32	G	G	22	38	G	G	G	18	E	E	E S 16	E	E	E
20	E	E S 16	E	E	E	E	20	G	G	37	34	G	G	G	G	G	G	19	E S 16	E S 13	E	E S 16	E S 16	E
21	E	E	E	E	E	E S 13	G	20	G	G	G	G	34	G	G	G	G	20	20	E S 16	E S 16	E S 16	20	E
22	E	E S 16	E S 13	E S 16	E S 16	E S 16	G	G	30	40	42	31	38	34	30	G 20	17	17	25	E S 16	E	E	E	E
23	E	E	E	E S 11	E S 12	E S 16	G	G	G	30	G	G	G	30	29	29	16	G	E S 16	E	32	E	E	E S 16
24	E S 16	E S 11	E S 16	E S 15	E S 12	E S 13	G	G	G	33	29	G	G	G	G	G	16	E S 17	E	E	E	E S 11	E S 16	E S 16
25	E S 16	E S 12	E S 16	E S 16	E	E	21	29	G	G	G	G	G	G	G	G	G	19	E	E	E	E	E	E S 16
26	E	E S 16	E S 13	E S 16	E S 13	E S 16	19	G	G	G	36	G	G 23	G	G	24	20	21	38	E	25	30	20	E
27	22	20	E	E	22	E	E	22	32	38	40	50	39	39	38	28	G	G	E	E S 16	E	32	A A 41	20
28	21	21	E	E	E	E S 16	32	A A 60	37	41	37	G	31	37	36	30	G	37	30	E	20	25	E	E
29	E	E S 14	E	E	E	E	G	G	30	37	31	G	31	G	G	22	24	20	E	30	29	A A 94	A A 73	30
30	E	E	E	E	E	E	20	26	G	G	38	31	G	G	G	G	G	E S 15	E	E	E S 16	21	E	E S 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	29	28	28	28	28	28	28	28	27	29	29	29	29	29	29	29	29	29	29	29	28	28	28	29
MED	E E 15	E E 12	E	E	E	E	18	26	30	33	32	G	G 22	G	G	G	17	20	16	16	16	16	16	E E 14
UQ	21	18	E E 13	E E 11	E E 12	E S 16	22	33	36	38	39	37	38	38	35	30	29	25	25	22	22	25	27	20
LQ	E	E	E	E	E	E	G	G	G	G	G	G	G	G	G	G	G	G	E	E	E	E	E	E

IONOSPHERIC DATA

SEP. 1985 | FMIN (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	ES 15	ES 11	E	E	ES 16	ES 12	11	11	12	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	12	18	18	17	18	16	10	10	10	E	ES 13	E	E	ES 11	E
3	E	E	E	E	ES 16	E	10	10	13	11	16	16	20	18	18	17	13	10	ES 16	E	ES 12	ES 13	ES 13	ES 11
4	ES 13	ES 13	ES 11	E	E	ES 16	ES 12	10	16	17	20	18	18	18	18	17	10	10	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16
5	ES 13	E	ES 12	E	ES 12	E	12	10	C	18	18	18	18	16	18	11	11	11	ES 15	E	ES 15	ES 15	E	ES 14
6	E	ES 15	ES 15	E	E	E	E	10	12	11	18	19	19	19	18	17	10	10	E	ES 12	ES 15	E	ES 15	ES 15
7	ES 15	E	E	E	E	E	E	10	11	17	17	17	17	20	20	17	16	ES 16	ES 15	ES 13	ES 16	E	ES 12	ES 11
8	ES 16	ES 16	ES 16	ES 12	E	ES 16	ES 11	12	16	16	17	16	17	18	16	10	10	10	E	ES 12	ES 14	ES 16	ES 12	ES 16
9	ES 16	ES 13	ES 16	E	E	E	10	10	11	18	17	19	18	18	17	11	10	10	E	E	ES 12	E	ES 15	ES 12
10	E	E	E	E	ES 12	ES 16	E	13	15	18	17	17	18	17	16	11	10	10	E	ES 15	ES 12	ES 16	ES 11	ES 13
11	ES 16	ES 11	ES 16	ES 13	ES 16	E	E	11	17	15	17	17	18	17	18	11	10	10	E	ES 12	ES 15	ES 15	E	E
12	ES 15	ES 15	E	E	E	E	E	10	10	17	18	17	16	17	17	13	12	10	E	E	ES 15	ES 15	ES 15	ES 15
13	ES 15	ES 15	E	E	E	E	10	10	10	11	17	16	12	10	18	15	10	10	E	ES 15	C	C	C	E
14	ES 15	C	C	C	C	C	C	C	C	18	16	18	19	17	17	10	10	10	E	ES 16	ES 16	ES 12	ES 16	ES 16
15	ES 16	ES 14	ES 15	E	E	E	E	10	10	11	18	18	16	16	12	16	10	10	E	E	ES 12	ES 12	ES 16	ES 16
16	ES 16	ES 11	ES 13	E	E	ES 16	12	13	13	11	20	18	11	10	10	13	10	11	E	E	ES 16	ES 14	ES 16	E
17	ES 14	E	E	ES 12	E	ES 11	10	10	10	18	16	20	18	18	16	12	10	10	E	ES 12	ES 16	E	E	ES 13
18	ES 16	ES 14	ES 15	ES 16	ES 16	ES 16	ES 16	10	11	16	18	17	17	19	18	17	10	E	ES 16	ES 16	ES 16	ES 16	ES 16	ES 13
19	ES 11	ES 16	ES 16	ES 16	ES 13	ES 12	10	10	17	16	17	17	16	11	18	13	12	E	E	ES 16	ES 16	ES 16	ES 16	ES 13
20	ES 16	ES 16	ES 16	ES 13	ES 13	ES 16	E	10	12	10	18	20	16	18	16	12	12	10	ES 16	ES 13	ES 16	ES 16	ES 16	ES 16
21	ES 16	ES 16	ES 12	ES 13	ES 16	ES 13	11	10	10	16	16	17	17	17	16	15	10	10	E	ES 16	ES 16	ES 16	ES 13	ES 16
22	ES 16	ES 16	ES 13	ES 16	ES 16	ES 16	E	12	11	16	17	19	18	18	10	10	10	E	ES 11	ES 16	ES 12	ES 13	ES 16	ES 15
23	ES 12	ES 16	ES 16	ES 11	ES 12	ES 16	E	10	10	10	17	17	18	16	13	12	10	10	ES 16	E	ES 16	ES 12	ES 12	ES 16
24	ES 16	ES 11	ES 16	ES 15	ES 12	ES 13	E	11	10	17	16	18	17	16	12	10	10	ES 17	E	ES 15	ES 16	ES 11	ES 16	ES 16
25	ES 16	ES 12	ES 16	ES 16	E	ES 15	E	10	10	12	10	12	17	17	16	12	10	10	ES 11	E	ES 13	ES 16	ES 16	ES 16
26	ES 13	ES 16	ES 13	ES 16	ES 13	ES 16	10	10	12	16	20	18	16	18	11	12	12	E	ES 13	ES 16	ES 13	ES 16	ES 11	ES 16
27	ES 13	ES 16	ES 15	E	E	ES 12	E	10	12	10	16	18	17	18	11	10	10	10	E	ES 16	ES 16	E	ES 11	ES 12
28	ES 12	E	ES 16	ES 16	ES 13	ES 16	ES 16	13	11	10	18	17	16	13	11	17	10	10	E	E	E	ES 15	ES 15	E
29	ES 15	ES 14	E	ES 15	E	ES 15	12	12	17	12	17	19	18	17	12	11	10	10	E	E	ES 11	E	ES 15	ES 15
30	E	E	E	E	E	E	E	11	13	11	17	11	19	12	10	10	10	ES 15	E	E	ES 16	E	ES 15	ES 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	29	28	28	28	28	28	28	28	27	29	29	29	29	29	29	29	29	29	29	29	28	28	28	29
MED	ES 15	ES 14	ES 13	EE 11	EE 12	ES 12	EE 10	10	12	16	17	18	17	17	16	12	10	10	E	ES 12	ES 15	ES 14	ES 15	ES 15
UQ	ES 16	ES 16	ES 16	ES 15	ES 13	ES 16	10	11	13	17	18	18	18	18	18	15	10	10	ES 13	ES 16	ES 16	ES 16	ES 16	ES 16
LQ	ES 13	EE 11	E	E	E	E	E	10	10	11	17	17	16	16	12	11	10	10	E	E	ES 12	E	ES 12	ES 12

SEP. 1985 | FMIN (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | M(3000)F2 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	290	275	310	280	290	295	300	305	250	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	305	335	345	345	340	330	330	350	350	335	305	305	315	305	305
3	320	355	320	320	315	325	355	365	330	325	355	350	330	345	340	350	345	325	310	295	295	305	300	310
4	F 315	F 330	305	290	F	320	365	355	350	350	350	360	355	335	295	320	300	335	315	315	325	330	335	325
5	305	295	295	295	300	305	340	355	C	325	365	350	360	340	315	320	335	340	335	320	325	320	335	305
6	315	310	310	305	305	330	355	365	345	340	345	350	345	340	340	345	325	345	325	315	315	315	300	300
7	290	310	290	F 330	F	295	265	280	335	285	310	310	A	295	325	315	335	340	315	325	300	310	290	290
8	295	300	295	320	305	300	285	330	340	320	280	290	270	300	330	335	320	315	305	320	315	A	275	A
9	A	A	A	300	305	340	280	315	245	360	295	325	340	A	A	A	A	320	330	330	300	290	305	300
10	295	290	A	A	300	305	295	290	A	A	H 335	235	A	A	300	285	315	315	310	A	320	295	305	305
11	295	290	305	300	300	320	340	A	A	A	320	310	320	335	335	325	315	325	340	305	F	F	F	F
12	F	A	F 300	F	F	F	350	320	350	330	340	350	275	R	320	335	340	325	325	320	320	F	F	305
13	F	F 305	F 310	F	F 295	330	340	335	320	345	350	H 340	340	340	330	305	325	310	310	305	C	C	C	300
14	310	C	C	C	C	C	C	C	C	250	275	A	310	300	345	320	320	325	290	310	315	325	325	270
15	250	300	290	345	345	A	A	290	330	A	A	300	A	340	330	325	335	315	305	335	295	275	285	320
16	305	260	285	295	315	315	310	H 300	310	250	365	A	A	A	295	335	340	325	335	300	295	325	A	F
17	295	300	325	320	295	305	310	355	310	260	340	330	360	335	335	330	320	325	305	315	295	300	315	310
18	295	300	300	305	305	315	315	355	340	360	360	350	330	340	355	345	340	330	315	310	300	305	300	305
19	295	315	310	320	320	310	340	355	370	360	360	345	350	345	350	360	330	330	320	280	285	280	280	290
20	310	310	F	F	F	F	345	335	370	350	310	325	295	335	330	340	350	335	335	285	285	295	295	295
21	305	300	285	310	295	320	325	345	355	335	325	345	335	325	340	320	340	325	335	325	310	295	295	305
22	310	300	315	325	315	330	340	335	345	340	335	340	330	335	335	345	335	320	305	305	315	310	295	290
23	295	285	295	300	315	315	320	345	345	365	350	345	305	335	330	360	350	355	305	300	325	320	295	300
24	290	310	300	300	315	320	360	360	370	345	370	350	340	345	350	355	340	335	330	330	325	305	300	300
25	305	295	300	310	320	295	320	350	360	360	335	340	340	335	345	355	345	335	345	325	325	295	300	305
26	300	280	290	290	345	325	345	360	360	335	330	345	350	330	345	320	340	350	325	300	305	310	295	310
27	310	310	295	310	320	325	325	360	335	355	350	355	330	325	335	330	345	345	335	315	335	315	A	290
28	305	300	315	335	320	305	345	A	325	330	325	330	335	345	345	350	345	350	335	315	310	295	300	305
29	F	F 315	305	320	335	320	350	335	335	340	350	335	350	340	355	360	345	345	340	325	325	A	A	310
30	305	315	325	325	320	310	345	345	350	345	350	355	340	340	340	350	355	350	335	325	300	305	305	320
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	25	24	24	25	27	26	25	26	28	27	25	25	28	28	28	29	29	28	27	24	23	26
MED	305	300	300	310	315	315	340	345	340	340	340	345	340	335	335	335	340	330	325	315	310	305	300	305
UQ	310	310	310	320	320	325	345	355	350	350	350	350	345	340	345	350	345	345	335	325	322	315	305	310
LQ	295	295	295	300	300	305	312	320	330	325	325	328	330	335	330	320	325	325	310	305	300	295	295	300

SEP. 1985 | M(3000)F2 (0.01)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | M(3000)F1 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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								350	385	C	C	C	C	C	C	C	C							
2								C	C	A	A	A	370	370	355	350	L 335							
3										385	385	385	390	370	370	365	L 355							
4									355	380	390	375	385	390	L 345	350	L 330							
5								A	C	370	370	410	395	H 350	L	335	350							
6								385	370	35	380	395	410	A	365	375								
7							350	A	A	A	A	A	A	A	A	A	A							
8								A	370	A	365	385	385	385	355	335	L 335							
9							A	A	A	A	L 395	415	A	A	A	A	A							
10								340	A	A	395	A	A	A	A	330	A							
11								A	A	A	400	A	A	375	355	L								
12								330	A	365	390	390	360	360	355	335	360							
13									L	A	375		365	365	365	H 350								
14								C	C	360	A	A	360	365	355	L 360	A							
15								A	A	A	A	400	A	A	340	A								
16									370	360	A	A	A	A	A	335								
17							A	A	A	375	380	365	375		350	A	L 350							
18								A	A	390	405	375	405	380	350									
19									335	385	400	400	395	A	355	335								
20									L 360	A		390	L	340	350	L 335								
21									345	390	355	385	375	375	345	L 330								
22									335	A	A	345	A	345	340									
23									340	360	375	H 360		380	350									
24										360	380	380	L 395	H 365	L 330	L								
25									370	355	365	365	365	360	345									
26									L	365	A	385	365	360	L 360									
27										A	A	A	A	L	A									
28								A	A	A	A	355	370	A	A	L								
29									L 355	A	390	400	400	400	380									
30									L	L	390	390	400	380	365	L								
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							1	4	12	15	19	21	19	19	22	14	7							
MED							350	345	358	365	385	385	385	370	355	335	L 350							
UQ								368	370	382	392	395	395	380	360	350	352							
LQ								335	342	360	375	375	368	360	345	335	L 335							

SEP. 1985 | M(3000)F1 (0.01)

IONOSPHERIC DATA

SEP. 1985 | H'F2 (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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								345	525	C	C	C	C	C	C	C	C							
2								C	C	355	300	275	280	300	325	295	275							
3										310	290	280	325	285	300	290	255							
4									295	285	290	280	290	310	345	300	310							
5								A	C	265	260	300	275	300	L 325	315	285							
6								240	285	275	270	290	280	270	285	270								
7							465	410	300	420	395	375	A	380	325	320	295							
8								295	295	335	400	405	445	360	310	305	295							
9							405	345	310	250	355	340	305	A	A	A	A							
10								350	A	A	300	595	A	A	380	375	310							
11								A	A	A	330	370	325	335	305	300								
12								305	280	300	290	285	450	R	340	300	260							
13									330	300	275		300	300	300	310								
14								C	C	275	255	A	355	355	275	275	300							
15								360	290	A	A	345	A	295	295	280								
16									335	275	255	A	A	A	355	280								
17							305	290	305	275	300	320	275		305	275	275							
18								270	295	250	285	295	320	290	275									
19									255	255	265	295	290	300	280	255								
20									250	285		295	360	280	290	255								
21									275	305	305	275	295	300	285	295								
22									255	260	275	275	295	280	270									
23									240	245	255	255		285	280									
24										255	245	255	275	290	275	255								
25									250	275	290	275	275	290	265									
26									250	280	255	255	255	270	250									
27										245	250	245	250	305	255									
28								A	285	255	275	270	255	250	255	250								
29									305	250	245	240	240	255	250									
30									245	250	240	255	250	260	265	245								
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							3	10	22	26	27	26	24	24	28	21	10							
MED							405	325	288	275	275	282	290	292	288	290	290							
UQ							435	350	305	300	300	320	322	302	318	300	300							
LQ							355	290	255	255	255	270	275	280	272	270	275							

SEP. 1985 | H'F2 (KM)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | H'F (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	250	295	280	300	295	260	H 200	240	205	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	A	A	A	H 225	H 195	A 240	A 225	240	245	240	245	250	255	A	275
3	275	245	245	245	250	240	230	230	205	205	205	205	195	200	205	200	225	205	250	255	290	275	260	250
4	245	235	255	295	260	255	230	225	225	225	205	220	295	200	230	240	245	245	250	240	245	250	245	A
5	250	255	255	255	275	245	230	A	C	210	225	200	195	200	210	200	220	240	250	240	250	240	225	225
6	250	245	255	250	240	230	H 200	205	205	220	200	200	200	A	210	200	240	240	A 250	A 280	265	260	255	260
7	300	A	A	A 250	290	300	215	A	A	A	A	A	A	A	A	A	A	H 240	250	245	250	300	A	295
8	255	255	255	230	265	275	245	A	225	A	H 195	225	210	200	220	225	235	255	255	245	255	A	A	A
9	A	A	A	255	A	A	A	A	A	A	205	205	A	A	A	A	A	255	245	245	250	250	A 305	300
10	A	295	A	A	295	295	215	240	A	A	205	A	A	A	A	230	A	A 300	A	A	245	240	250	255
11	255	300	295	255	260	250	A	A	A	A	200	A	A	225	225	205	205	A	225	A 275	300	280	255	270
12	270	A	290	300	270	240	210	195	A	220	200	200	215	215	210	235	225	225	250	250	245	250	230	250
13	280	290	275	225	260	240	240	215	225	A	205	H 210	195	205	210	H 200	A	A	A 270	255	C	C	C	250
14	225	C	C	C	C	C	C	C	C	230	A	A	H 195	205	255	220	A	H 225	295	250	240	205	225	300
15	370	255	280	225	250	A	A	A	A	A	A	200	A	A	225	A	A 280	A	A	A	305	300	260	240
16	A	310	310	295	260	260	245	230	210	220	A	A	A	A	A	A 245	255	250	255	275	295	260	A	295
17	A	275	250	255	305	325	A	A	A	205	200	200	200	225	A 250	A	245	250	245	255	280	A	240	225
18	280	275	280	260	250	250	250	A	A	A 215	195	205	190	195	H 200	225	235	245	240	255	260	255	260	260
19	A	260	255	255	245	260	240	225	205	210	195	195	195	A	215	225	H 200	245	240	290	280	275	285	275
20	245	245	300	300	295	255	245	205	230	A	H 210	200	195	H 200	210	245	H 225	245	230	255	295	290	280	295
21	255	290	290	260	260	215	245	250	215	H 195	210	195	A 210	195	250	245	H 245	250	245	230	245	255	290	255
22	260	275	255	245	245	255	235	220	240	A	A	215	A	235	225	H 210	245	245	250	255	255	245	275	255
23	275	300	260	255	245	245	240	H 205	230	200	205	205	H 200	H 195	215	H 245	245	240	245	255	255	245	255	250
24	280	270	280	265	240	250	225	H 210	235	230	205	205	200	195	195	230	245	240	240	220	225	235	255	255
25	290	290	275	280	245	305	250	H 250	225	225	205	205	205	225	205	H 225	240	240	210	240	235	270	255	255
26	250	285	295	295	220	245	225	225	215	225	A	205	205	295	230	230	235	225	A	250	260	A 280	255	255
27	295	295	290	270	250	255	255	230	255	A	A	A	A	A	A	H 230	245	245	230	240	210	A	A	300
28	300	285	250	245	240	205	A 245	A	A	A	A	205	H 200	A	A	230	250	A	A 250	245	255	275	260	285
29	285	265	250	245	230	250	225	230	230	A	205	205	215	200	200	H 205	240	235	230	A	A 260	A	A	A
30	250	230	250	250	220	255	205	225	220	210	A 225	200	200	200	205	220	225	220	205	230	240	265	260	245
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	24	25	25	27	27	26	24	19	18	16	20	22	21	20	23	25	24	25	26	26	28	24	22	26
MED	265	275	275	255	250	252	232	225	225	218	205	205	200	200	215	225	240	245	245	250	255	258	255	255
UQ	282	290	290	275	268	260	245	230	230	225	205	205	210	220	228	230	245	245	250	255	272	275	260	285
LQ	250	255	255	248	245	245	220	212	210	208	200	200	195	198	208	210	225	240	240	240	245	248	250	250

SEP. 1985 | H'F (KM)

IONOSPHERIC DATA

SEP. 1985 | H'E (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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							125	105	105	C	C	C	C	C	C	C	C	C	C					
2							C	C	C	105	105	105	105	105	A	A	A	A	E					
3							115	105	105	105	105	105	105	105	105	105	105	110	S					
4							110	105	105	105	105	105	105	105	105	105	110	110	S					
5							125	110	C	105	105	A	105	100	105	110	115	115	S					
6							A	A	A	A	A	A	A	A	110	110	A	A	A					
7							A	A	A	105	105	105	105	105	105	105	110	S	S					
8							A	A	A	A	105	A	100	105	100	105	110	105	E					
9							130	125	110	105	105	105	105	105	105	105	105	A	E					
10							105	115	110	105	105	105	105	105	A	105	105	120	E					
11							A	105	105	105	105	105	105	105	105	105	110	A	E					
12							A	105	A	A	105	105	105	105	110	115	110	115	E					
13							A	A	A	A	A	105	105	105	110	110	A	A	E					
14							C	C	C	105	A	A	105	115	125	105	110	125	E					
15							115	110	105	105	105	A	A	A	A	A	110	110	E					
16							130	120	105	105	A	A	A	A	A	A	A	130						
17							125	110	105	110	105	105	105	105	A	A	A	A						
18							S	105	105	105	105	105	105	105	110	110	115	A						
19							A	A	105	A	105	105	110	105	105	100	105	A						
20							A	105	105	105	110	110	105	105	105	105	110	A						
21							130	A	105	105	105	105	105	105	105	105	105	A						
22							115	115	105	105	105	105	A	A	A	125	125	A						
23							130	110	105	105	105	105	105	A	A	A	120	130						
24							125	110	105	A	A	105	105	105	105	105	120	S						
25							A	125	110	110	105	105	105	105	105	105	105	A						
26							A	110	105	105	105	105	125	105	105	A	A	A						
27							A	A	A	105	105	105	105	105	105	A	110	110						
28							S	110	105	105	105	105	105	105	A	A	110	A						
29							130	120	110	105	105	110	A	105	105	110	A	A						
30							A	A	110	105	A	A	105	105	120	105	115	S						
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							14	20	21	23	23	22	24	24	21	21	22	11						
MED							125	110	105	105	105	105	105	105	105	105	110	115						
UQ							130	115	105	105	105	105	105	105	110	110	115	122						
LQ							115	105	105	105	105	105	105	105	105	105	105	110						

SEP. 1985 | H'E (KM)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | H'ES (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	S 100	135	130	130	125	125	125	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	110	110	110	105	110	105	105	100	100	105	105	105	105	105	105
3	105	100	105	105	S	E	G	G	G	115	110	G	G	120	G	G	G	G	S	120	105	120	110	105
4	105	S 105	105	105	105	S	G	125	125	110	G	G	G	G	180	105	105	G	130	S	125	105	105	105
5	105	E 120	105	105	105	G	115	C	105	105	105	G	G	G	105	G	G	S	105	100	100	100	S
6	100	105	105	E	E	105	105	105	105	150	105	105	105	105	G	G	105	100	100	100	100	100	S	105
7	110	110	100	100	100	100	100	125	120	115	120	110	110	105	105	105	105	105	105	105	140	105	105	105
8	105	100	105	105	105	S	105	105	105	105	G	100	G	G	105	G	140	130	105	105	105	110	105	105
9	105	100	100	105	100	100	125	125	125	125	120	115	110	105	105	105	105	100	105	100	100	100	105	105
10	105	105	105	105	105	130	110	130	120	125	110	110	105	105	105	G	130	120	105	105	105	S	S	S
11	S 100	130	120	105	105	105	105	105	105	105	105	105	110	115	G	G	125	105	115	105	110	110	110	110
12	115	105	105	105	105	110	105	G	105	105	G	G	G	G	G	120	115	G	110	105	105	110	S	S
13	S	S 100	100	100	100	100	100	115	100	105	100	G	100	G	G	G	100	100	100	100	C	C	C	100
14	S	C	C	C	C	C	C	C	C	105	100	100	G	105	105	G	135	130	125	S	S	125	S	120
15	S	S 135	E	145	130	125	125	105	105	110	105	110	100	105	100	125	120	110	105	105	105	105	105	100
16	100	100	100	100	100	100	135	125	125	105	100	100	100	100	100	100	125	120	110	105	110	105	105	105
17	105	105	105	125	125	115	110	110	105	110	105	G	G	G	100	105	105	105	105	105	105	105	105	S
18	110	105	105	105	100	125	110	105	105	110	G	G	G	G	G	G	G	100	105	115	105	105	100	100
19	100	100	100	100	S	S	110	105	G	105	G	G	100	180	G	G	105	105	100	100	S	105	105	105
20	105	S 105	100	105	100	105	G	G	125	125	G	G	G	G	G	G	G	105	S	S	145	S	S	110
21	105	105	105	105	105	S	G	105	G	G	G	G	105	G	G	G	G	105	105	S	S	S	105	105
22	105	S	S	S	S	S	G	G	125	110	110	105	105	100	100	100	100	100	110	S	110	105	105	105
23	100	105	100	S	S	S	125	G	110	110	G	G	G	105	105	105	105	105	S	100	105	110	105	S
24	S	S	S	S	S	S	G	G	G	105	105	G	G	G	G	G	105	S	100	100	100	S	S	S
25	S	S	S	S	E	105	105	140	G	130	125	120	G	G	G	G	105	105	105	100	105	105	105	S
26	105	S	S	S	S	S	105	G	G	125	125	G	105	G	G	105	105	105	105	140	110	105	105	105
27	105	100	100	120	115	105	100	100	130	130	120	115	110	110	110	110	125	110	105	S	125	110	105	105
28	105	105	105	145	105	S	140	130	125	115	110	G	110	105	105	105	125	110	105	105	105	110	110	110
29	115	S 100	100	100	100	100	150	G	115	105	110	G	105	G	G	100	100	105	100	105	110	105	105	105
30	105	105	105	100	E	100	100	105	G	G	105	105	G	G	105	G	G	S	105	105	S	115	100	S
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	18	24	21	19	18	22	20	19	27	22	15	16	15	15	15	23	23	25	23	24	24	22	21
MED	105	105	105	105	105	105	108	115	115	110	110	105	105	105	105	105	105	105	105	105	105	105	105	105
UQ	105	105	105	105	105	115	125	125	125	120	120	110	110	110	105	105	125	110	110	105	110	110	105	105
LQ	105	100	100	100	100	100	105	105	105	105	105	105	105	105	105	102	105	102	105	100	105	105	105	105

SEP. 1985 | H'ES (KM)

IONOSPHERIC DATA

SEP. 1985 | TYPES OF ES | 135° E Mean Time (G.M.T. + 9 h)

Station WAKKANAI Lat. 45° 23.5' N, Long. 141° 41.2' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		F 1	F 2	F 2	F 2	F 1	C 3	C 2	C 3															
2										C 4	C 3	C 3	C 2	C 3	L 4	L 4	L 3	L 3	L 2	F 1	F 1	F 7	F 6	F 4
3	F 5	F 3	F 3	F 2						C 2	C 2			C 1						F 3	F 5	F 3	F 2	F 3
4	F 4		F 2	F 2	F 2			C 2	C 3	C 3					H 2	C 2	C 3		C 1		F 1	F 3	F 3	F 3
5	F 2		FF 22	F 2	F 2	F 2		C 5		C 2	C 2	L 2				L 1				F 1	F 3	F 2	F 2	
6	F 2	F 2	F 1			F 1	L 2	L 2	L 2	HL 11	L 2	L 2	L 2	L 1			L 2	L 2	L 4	F 2	F 3	F 2		F 2
7	F 4	F 4	F 3	F 4	F 2	F 2	L 4	CL 22	CL 32	C 3	C 3	C 2	C 4	C 3	C 3	C 4	C 3	C 3	L 2	F 4	FF 12	F 4	F 5	F 3
8	F 2	F 2	F 2	F 2	F 2		L 2	L 5	L 4	L 3		L 3			C 1		C 2	C 3	L 2	F 4	F 2	F 4	F 3	F 6
9	F 7	F 7	F 7	F 2	F 7	F 4	C 6	C 3	C 4	C 3	C 2	C 2	C 3	C 6	C 6	C 7	C 7	L 3	L 3	F 5	F 3	F 2	F 3	F 4
10	F 5	F 7	F 5	F 7	F 4	F 2	C 3	C 2	C 5	C 4	C 3	C 2	C 4	C 4	L 2		C 4	C 6	L 7	F 7	F 3			
11		F 4	F 2	F 1	F 2	F 6	L 4	C 6	C 6	C 4	C 1	C 3	C 2	C 2			C 1	L 2	C 1	F 3	F 3	F 2	F 2	F 2
12	F 2	F 6	F 2	F 2	F 2	F 1	L 1		L 2	L 2						C 2	C 2		C 3	F 3	F 2	F 3		
13			F 2	F 1	F 2	F 2	L 1	CL 11	L 1	L 3	L 2		L 2				L 4	L 3	L 5	F 2				F 2
14										C 1	L 4	L 3		L 2	L 2		C 3	C 1	C 2			F 1		F 1
15			F 2		F 1	F 6	C 6	C 1	C 5	C 3	C 3	L 2	CL 42	L 3	L 3	L 3	C 4	C 6	C 6	F 5	F 4	F 6	F 4	F 3
16	F 4	F 4	F 4	F 2	F 2	F 1	C 2	C 3	C 2	C 1	L 4	L 3	L 4	L 3	L 2	L 4	CL 32	C 4	F 5	F 5	F 6	F 6	F 7	F 5
17	F 4	F 2	F 3	F 2	FF 42	F 6	C 6	C 4	C 2	C 2	C 2				L 4	L 4	L 3	L 3	F 2	F 5	F 2	F 6	F 2	
18	F 2	F 2	F 2	F 1	F 2	F 1	C 5	C 4	C 4	C 2								L 1	F 1	F 2	F 3	F 2	F 3	F 3
19	F 4	F 2	F 2	F 2			L 1	L 2		L 3			L 3	H 1			C 1	L 2	F 2	F 2		F 2	F 2	F 2
20	F 1		F 1	F 2	F 1	F 2	L 1			C 2	C 2							L 2			F 2			F 1
21	F 2	F 2	F 2	F 2	F 2			L 1					C 2					L 2	F 3				F 4	F 1
22	F 2								C 4	C 2	C 4	C 2	L 2	L 4	L 3	L 2	L 2	L 2	F 5		F 3	F 4	F 2	F 2
23	F 2	F 2	F 2				C 1		C 2	C 2				L 2	L 3	L 3	L 1	L 1		F 3	F 6	F 2	F 2	
24										L 4	L 2						L 2		F 2	F 3	F 2			
25						F 2	LC 12	C 3		CL 22	C 2	C 1					C 1	L 3	F 1	F 2	F 2	F 2	F 2	
26	F 2						L 2			C 2	C 2		L 2			L 3	L 4	L 3	F 7	F 2	F 5	F 3	F 3	F 3
27	F 4	F 4	F 2	FF 22	FF 32	F 2	L 3	LC 32	CL 43	C 2	C 4	C 4	C 4	C 3	C 3	L 2	C 1	C 3	F 2		FF 12	F 6	F 5	F 2
28	F 5	F 5	F 2	FF 12	F 2		C 5	C 4	C 3	C 3	C 2		C 1	C 3	L 3	L 3	C 2	L 3	F 2	F 1	F 2	F 4	F 2	F 2
29	F 2		F 2	F 2	F 2	F 2	C 2		C 2	C 2	C 1		L 2			L 1	L 3	L 2	F 2	F 3	F 3	F 4	F 4	F 3
30	F 2	F 2	F 2	F 2		F 2	L 1	L 1			L 2	L 2			L 1				F 1	F 2		F 2	F 2	
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																								
UQ																								
LQ																								

The Radio Research Laboratories, Japan

SEP. 1985 | TYPES OF ES

IONOSPHERIC DATA

SEP. 1985 | FXI (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 52	X 50	X 52	X 46	X 44	43		53												X 60	X 57	X 58	X 56	X 53
2	X 50	X 50	X 46	X 36	X 34	X 38														X 62	X 58	X 54	X 50	X 51
3	52	52	46	40	40	40														X 60	X 59	X 60	X 59	X 56
4	X 54	X 43	43	40	41	40														X 73	X 65	X 60	X 52	46
5	43	48	51	49	50	50														X 69	X 64	X 63	X 44	43
6	X 38	X 40	X 41	X 40	X 40	X 42														X 66	X 63	X 62	X 57	62
7	52	51	50	49	43	42														X 62	X 56	X 50	X 46	50
8	52	46	X 41	X 40	X 36	40														C	C	C	C	C
9	C	C	C	C	C	C														X 75	X 51	A	X 40	40
10	40	43	43	39	39	35														A	A	39	44	52
11	50	43	40	40	43	42														X 56	X 52	X 51	53	58
12	52	52	53	53	57	56														X 60	X 52	50	52	53
13	48	50	48	50	49	40														X 69	X 64	X 62	X 49	X 43
14	X 41	X 39	X 42	44	41	42														X 75	X 73	X 64	X 36	X 36
15	X 32	X 38	X 38	X 30	X 27	A														X 62	63	61	60	56
16	53	A	52	50	40	X 34														X 59	X 55	59	A	51
17	51	X 45	X 44	X 41	40	40														X 60	X 59	A	50	52
18	44	40	40	40	40	38														X 58	X 55	53	52	50
19	X 46	44	X 41	X 39	X 35	X 36														X 64	X 60	X 64	X 61	X 58
20	X 64	X 48	37	36	36	36														R 52	X 47	X 48	48	46
21	45	X 40	X 39	X 37	X 34	X 32													X 77	X 65	X 52	X 46	X 44	X 44
22	X 42	X 41	X 41	X 37	X 36	X 35													X 67	X 62	64	58	58	54
23	54	52	50	49	48	43													X 60	X 62	X 61	X 47	50	X 44
24	X 42	X 42	X 42	X 41	X 40	X 40													X 69	X 69	X 52	X 37	X 37	X 40
25	X 39	X 38	X 38	X 40	X 37	X 35													X 76	X 56	X 45	X 45	X 45	X 44
26	X 44	X 42	X 41	X 39	X 40	X 39													X 66	X 52	X 50	X 47	X 41	X 41
27	X 42	X 41	X 40	X 39	X 39	X 39													X 70	X 65	X 54	X 45	X 42	X 39
28	X 42	X 42	X 42	X 42	X 42	X 37													X 60	X 55	X 53	X 44	44	47
29	43	49	50	40	40	35													X 77	X 63	X 47	49	50	50
30	50	43	X 39	40	41	40													X 62	X 48	X 43	X 45	50	47
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	28	29	29	29	28		1											10	28	28	27	28	29
MED	46	X 43	X 42	40	40	40		53											X 68	X 62	X 56	X 51	X 50	50
UQ	52	50	48	44	42	42													X 76	X 66	X 62	X 60	52	53
LQ	X 42	X 41	X 40	X 39	X 37	X 36													X 62	X 58	X 52	X 46	X 44	X 44

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOF2 (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long. 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	46	44	46	40	38	F	44	F 45	48	50	49	48	53	51	54	54	51	56	54	54	51	52	50	47
2	44	44	40	30	28	32	41	50	56	56	56	57	60	65	57	56	59	56	53	56	52	48	44	45
3	F	F	F 36	F 31	F 31	F 32	53	46	50	54	56	52	52	55	54	57	46	46	47	54	53	54	53	50
4	48	37	F	F 32	F 32	F 33	47	47	56	59	56	52	50	47	50	53	52	52	60	67	59	54	46	F 36
5	F 36	F	F	F	F	F	45	50	54	65	61	51	50	53	52	56	60	57	54	63	58	57	38	F 35
6	32	34	35	34	34	36	50	55	H 50	57	57	56	56	A	57	55	51	52	55	60	57	56	51	F
7	F 44	F 42	F 42	F	F	F 32	43	47	51	A	A	53	51	54	57	59	A	56	54	56	50	44	40	F
8	F	F 38	35	34	30	F 31	43	55	51	50	50	51	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	54	55	56	56	52	51	61	73	69	45	A	34	F 32
10	F	F	F	F 31	F 31	F 27	36	43	45	A	A	45	A	47	48	50	49	47	52	A	A	F	F	F
11	F	F	F 32	F 32	F	F 34	39	49	49	A	48	49	53	55	55	51	49	A	50	50	46	45	F 44	F
12	F	F	F	F	F	F	44	46	49	53	55	47	51	46	50	57	60	55	51	54	46	F 42	F	F
13	F	F	F	F	F	F	H 45	46	51	50	53	53	51	55	52	51	48	54	60	63	58	56	43	37
14	35	33	36	F 34	F	F 33	51	49	55	51	H 50	49	54	51	57	51	50	60	61	69	67	58	30	30
15	26	32	32	24	21	A	38	48	60	64	58	57	61	57	54	54	49	51	54	56	F 55	F 51	F	F
16	F	A	F	F	F	28	36	64	A	51	60	56	52	56	54	56	53	52	S 55	53	49	F 50	A	F 43
17	F 41	39	38	35	F 32	F 32	41	50	58	57	52	56	52	50	48	52	48	52	53	54	53	A	F	F
18	F 36	F 33	F 32	F 32	F 31	F 30	41	53	57	57	49	52	57	52	55	52	52	50	56	52	49	F 44	F 43	F 42
19	40	F 35	35	33	29	30	45	50	52	56	56	52	57	55	55	54	56	53	58	58	54	58	55	52
20	58	42	F	F	F	F	43	49	53	52	62	59	57	68	70	64	58	54	55	R 46	41	42	F	F
21	F 37	34	33	31	28	26	40	46	56	50	54	64	61	54	60	60	66	71	71	59	46	40	38	38
22	36	35	35	31	30	29	44	50	66	68	56	62	A	65	57	53	54	56	61	56	F 56	F 50	F	F
23	F	F	F 39	F 38	F	F	43	54	59	62	61	60	54	61	66	60	52	59	54	56	55	41	F 41	38
24	36	36	36	35	34	34	52	55	56	63	61	57	58	58	56	55	55	62	63	63	46	31	31	34
25	33	32	32	34	31	29	44	55	60	57	57	64	65	61	61	56	53	70	70	50	39	39	39	38
26	38	36	35	33	34	33	47	52	54	57	66	72	66	67	55	60	67	68	60	46	44	41	35	35
27	36	35	34	33	33	33	46	59	62	68	69	68	R 64	H 57	64	68	68	66	64	59	48	39	36	33
28	36	36	36	36	36	31	44	49	55	81	65	71	69	72	65	56	62	65	54	49	47	38	F 36	F
29	F	F	F	F	F	F 26	39	56	57	71	77	66	61	62	60	52	56	62	71	57	41	F	F	F 39
30	F	F 35	33	F 32	F	F	47	53	62	72	65	I C 65	66	64	59	64	62	62	56	42	37	39	F	F 37
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	20	21	22	18	21	29	29	28	26	27	30	27	28	29	29	28	28	29	28	28	25	20	19
MED	36	36	35	33	31	32	44	50	55	57	56	56	56	56	56	55	53	56	55	56	50	45	40	38
UQ	42	38	36	34	34	F 33	46	54	58	64	61	62	61	62	59	57	60	62	61	60	55	54	45	42
LQ	36	34	33	F 31	30	29	41	47	51	52	54	52	52	52	54	52	50	52	54	52	46	41	36	35

SEP. 1985 | FOF2 (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOF1 (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							L	L	400	380	430	430	430	430	420	400	L	L	A					
2								L	A	A	420	A	A	420	420	L	L	L						
3									400	420	A	430	430	430	420	410	L 330	L						
4								L	400	420	430	440	430	430	430	410	L 380	L						
5								L	A	A	430	440	430	430	440	410	380	L	A					
6								L	L	420	430	430	L 430	A	420	410	380	L						
7								370	390	A	A	A	430	440	A	400	A	A	A					
8								370	400	L	410	420	C	C	C	C	C	C	C					
9						C	C	C	C	C	C	A	A	420	400	400	380	L						
10							L	340	A	A	A	A	A	410	400	390	L	L						
11									390	A	420	420	410	410	390	390	L	A	A					
12							L	390	L	400	410	L	430	420	420	370	370	L						
13								L	L	410	400	410	420	420	410	L	L	L						
14								L	L 370	L	L	410	420	430	420	370	L							
15								A	A	410	420	420	430	A	L	390	L	L						
16								A	A	L	410	A	420	A	A	480	L	A						
17								A	A	A	420	A	A	420	L	L 380	L							
18								L	390	410	420	430	420	420	L 420	L	L							
19								L	380	L 410	420	420	420	410	L 410	L	L	L						
20								L	A	L	410	L 420	L	L 420	L 410	L 380	L							
21								L	L	410	420	430	420	L	420	420	A							
22								L	380	A	410	A	A	420	420	L								
23								L	L	410	420	430	L	430	410	L								
24									390	410	L 430	L 430	L 430	L 430	L	L	L							
25									L	A	L	430	430	430	410	L								
26									L	L	420	430	430	420	390	L	L							
27									L	L	L	L 430	L	A	L	L	L							
28									A	A	A	430	430	440	L 400	A	A							
29									L	410	L	L	L	L 420	400	L	L							
30									L	410	420	I C 430	410	420	L	L	L							
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								4	11	14	21	21	20	24	22	16	6							
MED								370	390	410	420	430	430	420	415	400	380							
UQ								380	400	410	420	430	430	430	420	410	380							
LQ								355	385	410	410	420	420	420	400	385	370							

SEP. 1985 | FOF1 (0.01 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOE (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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						S	195	A	A	A	320	A	A	325	320	A	A	A	S					
2						S	200	240	280	300	A	A	A	A	A	295	265	205	S					
3						S	A	245	270	A	A	335	A	A	310	295	250	220	S					
4						S	A	A	A	A	A	A	340	330	320	295	260	220	S					
5						S	205	240	A	A	320	325	R 340	335	310	280	250	230	S					
6						S	190	A	A	305	A	A	340	A	310	A	A	A	S					
7						S	S	A	A	A	315	320	A	A	A	A	A	A	S					
8						S	A	A	A	A	A	A	C	C	C	C	C	C	C					
9						C	C	C	C	C	C	A	A	330	305	A	A	A	S					
10						S	S	245	A	A	A	A	A	A	305	285	A	A	S					
11							S	A	A	A	A	A	R 320	305	295	270	240	A	S					
12							S	225	260	295	305	310	315	310	305	A	A	A	S					
13							S	A	A	A	310	320	320	315	A	A	245	205	S					
14							S	A	255	295	305	310	A	315	A	280	A	A	S					
15							A	230	265	290	305	A	A	A	300	280	235	A	S					
16							A	A	A	A	A	A	320	A	290	A	245	A	S					
17							A	A	A	A	A	A	A	A	A	A	A	S	S					
18							190	A	A	A	300	305	320	310	295	275	A	S	S					
19							S	230	255	285	A	315	320	315	305	280	230	190	S					
20							195	A	255	290	A	A	310	305	300	A	225	A	S					
21							190	225	260	280	290	300	A	A	A	290	240	185						
22							185	A	A	A	A	A	A	A	295	275	245	S						
23							190	240	A	A	A	315	320	310	300	265	A	S						
24							S	225	255	290	305	310	320	310	290	270	230	S						
25							S	225	265	A	A	A	320	320	A	A	A	S						
26							S	220	260	280	305	A	A	A	290	265	240	S						
27							S	225	255	295	300	A	A	305	A	A	A	S						
28							S	A	260	290	A	A	A	A	A	275	A	S						
29							S	A	A	A	A	A	A	A	A	A	A	S						
30							S	A	A	300	A	I C 305	310	300	285	255	230	S						
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							9	13	13	13	12	12	14	16	19	17	15	7						
MED							190	230	260	290	305	312	320	312	300	280	240	205						
UQ							195	240	265	295	312	320	320	322	308	285	248	220						
LQ							190	225	255	290	302	308	320	308	295	270	232	198						

SEP. 1985 | FOE (0.01 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long. 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 S 15	J A 18	E S 16	E S 16	E S 15	E S 16	26	J A 32	32	J A 54	35	J A 35	J A 43	G	J A 44	39	J A 44	J A 37	J A 32	J A 32	J A 41	J A 28	J A 32	J A 28
2	E S 16	J A 25	J A 24	J A 23	J A 29	J A 24	25	32	J A 44	J A 46	J A 46	J A 46	J A 52	J A 44	37	G	G	G	20	E S 16	E S 16	E S 16	J A 24	J A 32
3	J A 57	J A 50	J A 41	J A 24	J A 19	E S 16	27	G	33	37	J A 46	G	J A 50	35	G	G	G	G	20	E S 16	E S 16	J A 50	J A 27	J A 23
4	J A 29	J A 24	J A 18	J A 18	J A 20	J A 18	25	J A 36	J A 38	J A 45	J A 42	38	G 26	G 27	G	G	G	G	E S 16	J A 18	E S 16	J A 20	J A 19	J A 24
5	E S 16	J A 19	E S 15	E S 15	E S 15	E S 15	22	32	J A 50	J A 69	G	G	G	G	G	G	G	G	J A 47	J A 32	J A 19	J A 23	J A 28	J A 32
6	J A 28	E S 15	E S 15	J A 21	E S 15	E S 16	G	J A 29	30	G	34	37	37	J A 56	G	33	J A 50	J A 29	J A 21	J A 25	J A 25	J A 35	E S 16	J A 74
7	J A 61	J A 60	J A 52	J A 50	J A 35	J A 32	J A 24	J A 40	37	J A 67	J A 58	J A 46	J A 44	J A 50	J A 46	J A 110	J A 66	J A 86	J A 86	J A 72	J A 50	J A 20	J A 32	J A 64
8	J A 32	J A 20	E S 16	E S 16	E S 15	E S 16	23	J A 28	J A 28	J A 44	J A 50	J A 38	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	J A 46	J A 56	38	34	34	J A 41	J A 54	J A 50	J A 23	J A 54	J A 38	J A 41	J A 50
10	J A 53	J A 50	J A 30	J A 29	J A 37	J A 44	J A 35	30	J A 46	J A 65	J A 45	J A 50	J A 66	J A 54	37	J A 44	J A 54	J A 35	J A 106	J A 108	J A 78	J A 97	J A 44	J A 24
11	J A 36	J A 26	J A 44	J A 25	J A 31	J A 36	J A 24	J A 26	J A 38	J A 54	J A 62	37	G	G	G	G	G	J A 64	J A 32	J A 36	J A 29	J A 25	J A 52	J A 32
12	J A 95	J A 35	J A 90	J A 59	J A 64	J A 50	J A 24	G	G	G	G	35	37	37	38	34	29	J A 28	J A 24	E S 15	J A 41	J A 25	J A 62	J A 40
13	J A 32	J A 19	E S 15	E S 15	J A 20	E S 15	J A 29	J A 44	J A 29	J A 33	35	35	35	34	37	32	G	G 20	J A 26	J A 28	J A 53	J A 50	J A 34	J A 18
14	J A 18	E S 16	J A 25	J A 18	J A 20	E S 15	J A 28	J A 29	35	J A 43	J A 44	J A 50	J A 40	43	J A 92	32	J A 46	J A 143	J A 93	J A 50	J A 18	J A 26	J A 21	J A 40
15	J A 40	J A 24	E S 15	E S 16	J A 20	J A 42	J A 112	J A 46	J A 65	32	34	37	J A 40	J A 46	G	G	G	28	J A 28	E S 16	J A 25	J A 32	J A 31	J A 50
16	J A 37	J A 53	J A 29	J A 24	J A 21	E S 16	J A 28	J A 50	J A 135	J A 53	33	J A 51	G	J A 50	J A 45	30	G	J A 46	J A 41	J A 40	J A 50	J A 32	J A 62	J A 29
17	J A 20	J A 76	J A 33	J A 24	J A 29	J A 25	J A 30	J A 40	J A 54	J A 56	J A 66	J A 53	J A 50	J A 44	J A 40	J A 46	J A 29	J A 50	J A 36	J A 30	J A 29	J A 62	J A 34	J A 64
18	J A 26	E S 15	J A 21	J A 18	E S 15	E S 15	G	28	31	35	G	32	33	G	G	J A 29	30	23	J A 20	E S 16	E S 16	J A 29	E S 16	J A 19
19	E S 16	J A 20	E S 15	E S 15	E S 15	E S 15	E S 17	G	32	32	J A 33	G 30	G 31	G 28	G	G	G	22	J A 19	E S 16	E S 17	J A 22	J A 20	J A 19
20	E S 17	E S 16	E S 16	E S 16	E S 16	E S 16	G	28	J A 44	39	36	J A 42	G	G	G	30	28	J A 30	J A 24	E S 16	E S 17	J A 25	J A 22	J A 20
21	E S 17	E S 16	J A 20	J A 23	J A 22	E S 15	22	27	30	33	35	J A 44	34	33	34	G	J A 46	24	J A 22	J A 32	J A 20	E S 16	E S 16	J A 24
22	J A 25	E S 16	E S 15	E S 15	E S 16	E S 16	G	26	36	J A 44	J A 44	J A 57	J A 93	35	G 28	G	G	21	J A 23	E S 16	J A 37	J A 41	J A 64	J A 36
23	J A 19	E S 15	E S 15	E S 16	J A 18	E S 15	G	J A 28	32	35	J A 34	G	G	G	G	G	J A 29	J A 24	J A 24	J A 28	J A 23	J A 24	J A 29	J A 31
24	E S 16	E S 16	E S 16	J A 18	E S 16	E S 15	E S 17	G	G	G	G	G	G	G	G	G	J A 29	J A 22	J A 24	E S 16	E S 15	E S 15	E S 15	E S 15
25	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	22	30	36	J A 44	37	J A 35	G	G	J A 43	J A 34	29	J A 36	J A 60	J A 33	J A 32	J A 19	E S 16	E S 15
26	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 17	G	33	35	37	J A 41	J A 35	J A 53	J A 42	J A 42	J A 41	J A 33	J A 29	J A 18	J A 18	J A 24	J A 20	E S 16
27	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 17	G	34	J A 46	J A 44	39	37	J A 47	J A 54	35	J A 46	J A 110	J A 65	J A 62	E S 16	E S 16	E S 16	E S 16
28	E S 15	J A 30	J A 24	J A 21	J A 27	J A 25	E S 16	32	J A 53	J A 50	J A 44	J A 44	34	J A 42	J A 36	J A 54	J A 50	J A 44	J A 25	J A 50	J A 46	J A 50	J A 35	J A 41
29	J A 47	J A 21	J A 24	J A 23	J A 20	E S 15	J A 24	J A 32	J A 31	J A 76	J A 37	J A 36	J A 54	J A 44	J A 44	J A 29	J A 46	J A 61	J A 35	J A 50	J A 32	J A 64	J A 24	J A 24
30	J A 23	J A 24	J A 32	J A 23	J A 26	E S 16	23	27	32	G	J A 42	C	G	G	G	G	G	E S 17	E S 15	E S 16	E S 15	J A 26	J A 24	J A 25
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	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
MED	J A 23	J A 20	J A 18	J A 18	J A 20	E S 16	23	29	34	J A 44	J A 37	J A 38	35	35	34	30	29	J A 29	J A 26	J A 28	J A 25	J A 26	J A 27	J A 28
UQ	J A 36	J A 26	J A 29	J A 23	J A 26	J A 24	J A 26	J A 32	J A 44	J A 53	J A 44	J A 46	J A 44	J A 44	J A 42	34	J A 46	J A 46	J A 41	J A 36	J A 41	J A 38	J A 34	J A 40
LQ	E S 16	E S 16	E S 15	E S 16	E S 15	E S 15	17	26	31	33	34	35	G	G	G	G	G	22	J A 22	E S 16	E S 17	J A 22	J A 20	J A 20

SEP. 1985 | FOES (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FBES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long. 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	ES 15	E	ES 16	ES 16	ES 15	ES 16	23	28	30	34	35	35	37	G	34	36	29	28	31	28	33	20	E	E
2	ES 16	E	19	19	E	G	24	30	41	43	38	46	37	40	33	G	G	G	19	ES 16	ES 16	ES 16	21	23
3	E	20	20	18	E	ES 16	26	G	30	35	43	G	35	34	G	G	G	G	20	ES 16	ES 16	E	E	19
4	E	E	E	E	E	G	24	32	34	40	38	36	G 25	G 26	G	G	G	G	ES 16	E	ES 16	E	E	E
5	ES 16	E	ES 15	ES 15	ES 15	ES 15	22	30	47	57	G	G	G	G	G	G	G	G	38	28	E	E	20	E
6	18	ES 15	ES 15	E	ES 15	ES 16	G	25	30	G	34	37	37	AA 56	G	32	30	25	G	19	E	25	ES 16	23
7	E	19	19	21	23	25	20	34	36	AA 67	AA 58	44	36	42	43	37	AA 66	50	51	42	41	18	E	E
8	E	E	ES 16	ES 16	ES 15	ES 16	20	25	28	35	34	35	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	44	45	35	33	32	26	24	20	E	37	AA 38	23	E
10	21	E	20	E	23	G	18	27	38	AA 65	AA 45	42	AA 66	36	36	34	30	30	21	AA 108	AA 78	E	E	E
11	E	E	E	E	E	20	G	24	28	AA 54	36	36	G	G	G	G	G	AA 64	32	27	E	E	E	E
12	20	23	E	E	E	25	G	G	G	G	G	29	37	35	35	32	28	25	20	ES 15	E	E	E	E
13	E	E	ES 15	ES 15	E	ES 15	21	27	29	33	28	25	35	33	33	29	G	G 19	G	20	20	E	20	E
14	E	ES 16	E	E	E	ES 15	22	26	31	33	37	34	38	37	38	30	34	24	G	30	E	E	E	23
15	20	E	ES 15	ES 16	E	AA 42	22	39	39	32	33	36	39	43	G	G	G	24	28	ES 16	23	28	22	29
16	29	AA 53	23	E	E	ES 16	23	50	AA 135	33	33	42	G	45	42	30	G	43	34	33	20	E	AA 62	E
17	E	E	E	E	E	E	30	37	51	41	40	48	45	40	33	30	24	21	22	20	E	AA 62	30	30
18	E	ES 15	E	E	ES 15	ES 15	G	25	30	35	G	26	26	G	G	22	27	21	19	ES 16	ES 16	E	ES 16	E
19	ES 16	E	ES 15	ES 15	ES 15	ES 15	ES 17	G	32	30	33	G 20	G 19	G 21	G	G	G	21	G	ES 16	ES 17	E	E	E
20	ES 17	ES 16	ES 16	ES 16	ES 16	ES 16	G	28	41	35	35	36	G	G	G	29	27	29	22	ES 16	ES 17	20	18	E
21	ES 17	ES 16	18	19	E	ES 15	21	27	30	33	33	34	34	33	34	G	42	20	19	E	E	ES 16	ES 16	E
22	E	ES 16	ES 15	ES 15	ES 16	ES 16	G	26	35	40	36	52	AA 93	33	G 20	G	G	20	E	ES 16	20	32	19	E
23	E	ES 15	ES 15	ES 16	E	ES 15	G	20	32	34	33	G	G	G	G	G	25	19	19	19	E	21	E	E
24	ES 16	ES 16	ES 16	E	ES 16	ES 15	ES 17	G	G	G	G	G	G	G	G	G	20	19	22	ES 16	ES 15	ES 15	ES 15	ES 15
25	ES 15	ES 15	ES 15	ES 15	ES 15	ES 15	21	29	34	43	36	35	G	G	34	30	26	23	56	E	19	E	ES 16	ES 15
26	ES 15	ES 15	ES 15	ES 15	ES 15	ES 15	ES 17	G	32	34	35	34	35	35	33	34	32	25	E	E	E	19	E	ES 16
27	ES 15	ES 15	ES 15	ES 15	ES 15	ES 15	ES 17	G	32	39	38	36	35	47	35	34	33	58	36	49	ES 16	ES 16	ES 16	ES 16
28	ES 15	23	20	E	26	21	ES 16	29	50	47	44	39	34	34	33	44	50	44	25	23	20	30	E	E
29	E	E	E	E	E	ES 15	G	26	30	37	33	34	35	34	32	28	30	19	22	E	20	E	E	E
30	E	E	20	E	E	ES 16	20	26	30	G	34	C	G	G	G	G	G	ES 17	ES 15	ES 16	ES 15	E	E	E
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	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
MED	EE 15	EE 15	EE 15	EE 15	EE 15	ES 15	20	26	32	35	35	35	35	34	33	29	26	23	20	16	EE 16	EE 15	EE 15	E
UQ	ES 16	ES 16	18	ES 16	ES 15	ES 16	22	29	38	41	38	39	37	37	34	32	30	28	28	27	20	20	19	16
LQ	E	E	ES 15	E	E	ES 15	G	24	30	33	33	29	G	G	G	G	G	19	16	ES 16	E	E	E	E

SEP. 1985 | FBES (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FMIN (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	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 S 15	E S 16	E S 16	E S 16	E S 15	E S 16	E S 16	17	16	17	17	18	17	17	17	17	17	16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15
2	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	17	16	17	17	18	17	17	18	16	17	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 15
3	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	E S 16	16	16	16	17	17	17	17	17	17	16	16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15
4	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	17	17	17	17	17	16	17	16	16	E S 16	E S 15	E S 16	E S 16	E S 15	E S 15
5	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	17	17	17	18	18	17	17	16	16	16	16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15
6	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	E S 16	16	16	17	17	18	18	17	18	17	16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 16	E S 15
7	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	E S 16	16	17	17	18	17	17	16	16	16	16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15
8	E S 16	E S 15	E S 16	E S 16	E S 15	E S 16	E S 16	16	16	16	16	18	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	17	17	18	19	18	16	16	E S 16	E S 15	E S 16	E S 15	E S 15	E S 15
10	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	17	17	17	18	19	17	17	17	E S 16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15
11	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	16	17	17	17	17	18	17	16	E S 16	E S 16	E S 16	E S 16	E S 15	E S 16	E S 15
12	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	17	16	16	17	18	17	17	17	16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15
13	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	16	16	17	16	16	17	17	16	16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15
14	E S 15	E S 16	E S 15	E S 15	E S 15	E S 15	E S 16	16	17	17	18	17	17	16	16	17	16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15
15	E S 15	E S 15	E S 15	E S 16	E S 15	E S 15	E S 16	16	16	17	17	19	17	17	17	17	17	E S 16	E S 16	E S 16	E S 15	E S 15	E S 16	E S 15
16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 16	E S 16	16	16	17	17	17	19	17	17	17	16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15
17	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	17	17	16	17	17	17	17	17	17	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15
18	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	17	17	17	17	18	17	16	16	E S 17	E S 16	E S 16	E S 16	E S 15	E S 16	E S 16
19	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 17	16	16	17	16	17	16	16	17	17	16	E S 16	E S 16	E S 16	E S 17	E S 16	E S 16	E S 16
20	E S 17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	17	18	17	17	18	18	18	16	17	E S 16	E S 16	E S 16	E S 17	E S 15	E S 16	E S 18
21	E S 17	E S 16	E S 15	E S 16	E S 15	E S 15	E S 1	16	16	17	16	16	17	17	18	17	14	E S 16	E S 16	E S 15	E S 15	E S 16	E S 16	E S 15
22	E S 15	E S 16	E S 15	E S 15	E S 16	E S 16	E S 15	16	16	17	17	17	18	17	16	16	16	E S 17	E S 15	E S 16	E S 15	E S 15	E S 15	E S 15
23	E S 15	E S 15	E S 15	E S 16	E S 15	E S 15	E S 16	16	16	17	18	18	17	17	17	17	15	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15
24	E S 16	E S 16	E S 16	E S 15	E S 16	E S 15	E S 17	17	16	16	17	17	17	16	16	16	16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15
25	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	16	17	17	17	16	16	16	16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 16	E S 15
26	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 17	16	17	17	16	18	17	17	16	16	17	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16
27	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 17	17	16	17	17	18	19	18	18	17	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
28	E S 15	E S 15	E S 16	E S 15	E S 15	E S 15	E S 16	16	16	18	17	17	17	17	16	17	16	E S 16	E S 15	E S 16	E S 15	E S 15	E S 15	E S 15
29	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	16	17	18	17	17	18	16	16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15
30	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	E S 16	E S 16	16	17	17	C	17	17	16	17	16	E S 17	E S 15	E S 16	E S 15	E S 15	E S 15	E S 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	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
MED	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	17	17	17	17	17	17	17	16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15
UQ	E S 16	E S 15	E S 15	E S 15	E S 15	E S 16	E S 16	16	16	17	17	18	17	17	18	17	16	E S 16	E S 16	E S 16	E S 16	E S 15	E S 16	E S 15
LQ	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	16	16	16	17	17	17	17	16	16	16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15

SEP. 1985 | FMIN (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | M(3000)F2 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	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	285	280	300	290	320	F	320	F 315	335	335	285	285	330	325	310	335	300	330	320	305	280	290	300	295
2	295	315	325	315	300	320	365	340	340	340	350	315	325	340	340	330	335	335	320	310	315	305	310	305
3	F	F	F 345	F 330	F 330	F 345	370	340	350	350	350	325	320	325	325	350	340	325	325	300	290	295	315	320
4	340	320	F	F 310	F 310	F 310	340	335	355	370	340	340	340	320	305	310	320	315	300	315	330	335	345	F 315
5	F 325	F	F	F	F	F	345	360	335	360	375	365	310	320	290	320	320	325	315	315	330	350	325	F 315
6	310	315	320	330	325	325	360	365	H 345	340	345	355	320	A	330	340	335	315	325	315	325	320	300	F
7	F 300	F 315	F 310	F	F	F 305	325	325	315	A	A	325	310	295	325	335	A	340	A	320	320	300	305	F
8	F	F 305	310	305	300	F 300	320	340	335	320	295	310	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	325	330	340	340	325	310	305	335	350	340	A	295	F 310
10	F	F	F	F 300	F 295	F 305	335	330	340	A	A	325	A	320	310	320	320	320	325	A	A	F	F	F
11	F	F	F 315	F 310	F	F 310	335	365	345	A	315	285	310	310	325	330	355	A	310	315	285	295	F 300	F
12	F	F	F	F	F	F	330	325	325	315	355	335	335	305	290	330	335	330	335	320	340	F 300	F	F
13	F	F	F	F	F	F	H 340	365	340	340	335	340	305	340	340	335	305	315	315	310	325	340	325	325
14	325	330	340	F 330	F	F 325	345	350	360	335	H 330	320	320	340	340	335	320	330	290	310	320	355	310	290
15	255	290	320	335	325	A	320	295	330	345	330	345	325	335	320	345	325	330	325	315	F 300	F 305	F	F
16	F	A	F	F	F	315	275	360	A	350	345	335	330	330	325	330	320	335	S 325	305	305	F 305	A	F 295
17	F 290	295	315	315	F 300	F 305	315	330	345	370	355	335	330	310	310	340	320	325	320	310	320	A	F	F
18	F 320	F 305	F 310	F 310	F 320	F 305	340	340	355	365	360	330	365	335	325	330	345	335	325	325	320	F 295	F 295	F 300
19	310	F 310	300	325	315	310	340	365	360	360	375	340	345	345	325	340	340	340	330	295	280	290	285	290
20	320	330	F	F	F	F	330	345	395	325	285	355	335	310	340	345	340	335	345	R 320	280	290	F	F
21	F 295	295	305	295	325	340	350	325	355	350	335	325	345	330	315	310	320	310	335	345	305	305	290	300
22	305	295	315	325	320	315	345	355	345	370	350	335	A	340	345	325	335	335	320	320	F 290	F 300	F	F
23	F	F	F 305	F 315	F	F	350	345	355	350	345	360	315	325	335	345	330	355	315	305	340	310	F 290	315
24	295	305	310	315	315	325	370	365	375	350	355	350	355	345	320	330	340	340	335	350	330	300	290	295
25	305	295	305	320	305	290	360	345	375	370	345	340	345	330	340	350	320	340	350	360	305	300	315	300
26	310	300	300	300	330	335	360	360	345	340	350	335	340	345	340	310	345	350	350	310	320	315	300	300
27	310	305	300	305	305	335	345	350	355	365	345	350	R 360	H 330	330	350	345	350	345	365	335	310	315	300
28	295	305	310	325	360	320	350	365	345	345	340	335	330	335	335	340	340	350	330	310	325	335	F 290	F
29	F	F	F	F	F	F 325	350	375	365	365	380	350	345	340	345	340	340	330	350	365	330	F	F	F 300
30	F	F 315	305	F 315	F	F	360	365	350	370	340	I C 350	360	345	345	345	350	350	330	350	320	305	F	F 325
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	20	21	22	18	21	29	29	28	26	27	30	27	28	29	29	28	28	28	28	28	25	20	19
MED	305	305	310	315	318	315	345	345	345	350	345	335	330	330	325	335	335	332	325	315	320	305	300	300
UQ	315	315	315	325	325	325	350	365	355	365	352	350	345	340	340	340	340	340	335	335	330	315	315	315
LQ	295	295	305	305	305	F 305	330	335	340	340	335	325	320	320	320	330	320	325	320	310	302	300	292	298

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | M(3000)F1 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N. Long. 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							L	L	365	400	365	370	385	365	360	A	L	L	A					
2								L	A	A	405	A	A	A	375	L	L	L						
3									375	380	A	410	395	375	380	360	L 410	L						
4								L	370	A	395	385	420	400	375	350	L 375	L						
5								L	A	A	395	405	425	395	355	375	360	L	A					
6								L	L	385	400	435	L 370	A	370	360	365	L						
7								A	A	A	A	A	370	A	A	A	A	A	A					
8								355	355	L	415	390	C	C	C	C	C	C	C					
9						C	C	C	C	C	C	A	A	390	395	370	350	L						
10							L	380	A	A	A	A	A	370	400	365	L	L						
11									380	A	395	380	385	385	395	370	L	A	A					
12							L	390	L	390	365	L	350	375	360	400	360	L						
13								L	L	385	425	410	400	375	385	L	L	L						
14								L	L 390	L	L	395	A	370	A	415	L							
15								A	A	360	375	380	A	A	L	365	L	L						
16								A	A	L	390	A	385	A	A	290	L	A						
17								A	A	A	A	A	A	A	L	L 375	L							
18								L	385	400	405	390	405	395	L 350	L	L							
19								L	390	L 380	405	420	405	390	L 360	L	L	L						
20								L	A	L	390	L 380	L	L 355	L 365	L 370	L							
21								L	L	385	390	380	395	L	355	345	A							
22								L	A	A	395	A	A	360	360	L								
23								L	L	380	380	395	L	360	360	L								
24									405	405	L 385	L 390	L 385	L 360	L	L	L							
25									L	A	L	375	365	370	365	L								
26									L	L	380	375	365	370	390	L	L							
27									L	L	L	L 395	L	A	L	L	L							
28									A	A	A	365	375	365	L 375	A	A							
29									L	A	L	L	L	L 375	380	L	L							
30									L	385	400	I C 390	390	375	L	L	L							
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								3	9	12	20	21	18	21	21	14	6							
MED								380	380	385	395	390	385	375	370	368	362							
UQ								385	390	395	402	395	400	385	380	375	L 375							
LQ								368	370	380	382	380	370	365	360	360	360							

SEP. 1985 | M(3000)F1 (0.01)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | H'F2 (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	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							295	280	300	300	400	405	300	335	330	290	340	270	260					
2								275	295	265	275	325	300	280	285	295	270	260						
3									275	280	275	320	340	320	310	270	250	260						
4								250	260	250	260	295	305	345	360	325	290	265						
5								250	285	250	240	270	350	330	395	320	290	260	A					
6								230	270	260	270	280	310	A	300	280	295	270						
7								290	300	A	A	310	340	350	320	290	A	A	A					
8								270	270	320	365	355	C	C	C	C	C	C	C					
9						C	C	C	C	C	C	320	300	290	300	305	320	290						
10							295	300	300	A	A	340	A	335	355	320	295	260						
11									285	A	345	405	345	330	295	295	250	A	260					
12							255	345	300	290	260	L 280	305	375	280	305	260	260						
13								255	285	280	300	290	310	290	300	280	310	285						
14								240	245	260	L 280	330	320	295	275	290	310							
15								A	290	255	290	280	290	290	300	280	L 280	270						
16								230	A	250	270	300	300	300	300	290	280	A						
17								305	A	245	270	300	295	340	L 310	290	280							
18								250	245	250	275	300	265	300	300	280	260							
19								230	260	255	235	285	280	295	300	285	260	255						
20								265	225	340	240	255	300	310	260	255	245							
21								280	255	275	295	295	265	305	320	305	280							
22								245	255	240	270	290	A	270	275	265								
23								255	235	250	260	250	L 280	280	265	265								
24									230	255	255	260	260	275	280	275	255							
25									220	250	280	280	260	280	260	255								
26									250	260	250	270	250	260	255	270	250							
27									240	250	250	235	250	280	285	255	260							
28									A	250	250	260	270	285	255	270	A							
29									240	240	230	250	250	260	255	245	255							
30									240	230	250	I C 260	250	260	245	260	245							
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							3	19	26	26	27	30	27	28	29	29	24	12	2					
MED							295	255	260	255	270	290	300	295	300	280	275	262	260					
UQ							295	280	285	275	280	320	308	330	310	295	292	270						
LQ							275	248	240	250	250	270	265	280	275	270	255	260						

SEP. 1985 | H'F2 (KM)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | H'F (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long. 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	240	295	260	265	250	280	250	220	210	210	220	210	205	230	230	A	230	A	A	270	A	275	255	250
2	275	260	230	260	E S 300	250	230	230	A	A	200	A	A	A	205	230	205	240	240	240	230	245	260	A
3	260	A 270	250	260	255	240	230	220	220	220	A	200	200	200	200	205	200	240	245	250	270	270	250	240
4	225	245	260	270	270	260	210	225	220	A	210	205	195	200	200	210	220	235	245	240	235	220	210	250
5	245	250	260	260	270	240	230	235	A	A	200	200	195	200	200	H 195	200	245	A	250	220	220	220	245
6	270	255	255	240	230	240	220	195	210	205	200	200	225	A	200	220	220	220	240	250	240	260	245	A
7	270	235	255	245	A 230	A	245	A	A	A	A	A	220	A	A	A	A	A	A	A	A	250	260	280
8	265	260	260	245	255	275	240	220	215	230	195	200	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	A	A	200	195	230	230	220	230	205	A	A	A	280
10	A	295	280	275	A	285	245	200	A	A	A	A	A	A	200	230	225	A	250	A	A	230	280	255
11	265	255	270	270	270	260	240	245	210	A	205	220	200	200	210	220	205	A	A	260	265	260	260	245
12	235	A	285	270	260	A	200	H 200	200	200	220	200	A	220	220	200	240	220	230	225	220	245	255	275
13	280	280	245	235	205	245	H 220	230	205	210	200	200	200	200	200	200	210	250	240	240	235	220	240	230
14	245	260	250	245	235	255	240	210	215	210	200	200	A	220	A	200	A	270	280	255	230	200	260	A
15	E A 425	305	230	230	E S 295	A	255	A	A	225	220	200	A	A	210	200	215	245	245	245	280	260	245	A
16	A	A	A	270	245	270	A	A	A	200	195	A	200	A	A	220	240	A	A 245	A	260	245	A	280
17	275	280	250	260	285	285	A	A	A	A	A	A	A	A	225	220	225	245	240	255	245	A	A	A
18	250	260	260	250	245	265	240	230	210	200	200	200	200	195	200	230	245	245	240	230	240	270	270	255
19	240	255	270	245	245	255	230	220	220	220	210	195	200	225	245	215	235	235	230	270	300	270	285	260
20	230	230	E S 280	315	285	275	220	230	A	215	200	210	200	225	220	230	230	240	230	230	300	300	300	290
21	275	270	260	295	235	265	225	220	235	210	205	200	205	210	220	250	A	250	220	220	240	245	275	275
22	285	275	245	230	270	260	230	230	A	A	210	A	A	215	200	210	250	245	225	235	255	A	275	260
23	260	280	270	250	235	255	225	220	225	210	200	210	195	200	245	240	230	240	235	250	220	255	245	240
24	275	280	270	270	260	245	210	220	210	195	220	210	210	205	220	235	220	240	225	210	220	210	270	275
25	280	295	285	245	250	305	220	230	A	A	220	200	220	220	230	235	240	250	A	205	250	250	250	265
26	255	285	290	280	240	240	220	220	225	210	210	225	225	220	210	A	A	230	210	230	250	245	230	280
27	270	270	270	270	235	210	210	235	230	A	A	215	200	A	A	A	A	A	A 240	A	210	225	230	280
28	285	A 300	255	245	A 230	A 250	210	230	A	A	A	A	200	210	220	A	A	A 240	220	245	230	A	280	295
29	275	285	260	230	250	230	205	230	225	A	200	200	205	200	205	220	A	240	225	200	220	270	280	270
30	240	240	A 270	255	240	255	205	220	210	210	205	I C 200	200	200	215	195	240	225	210	200	240	260	270	255
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	27	27	28	29	28	26	27	25	18	17	23	22	21	21	25	24	22	23	24	25	25	25	26	24
MED	265	270	260	260	248	255	225	220	215	210	205	200	200	205	210	220	228	240	238	240	240	250	260	262
UQ	275	282	270	270	265	270	240	230	225	215	210	210	205	220	220	230	240	245	242	250	255	260	275	280
LQ	245	255	252	245	235	245	215	220	210	205	200	200	200	200	200	202	215	235	225	225	230	230	245	250

SEP. 1985 | H'F (KM)

IONOSPHERIC DATA

SEP. 1985 | H'E (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	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						S	S	110	105	105	105	105	105	110	110	105	110	110	S					
2						S	S	105	105	105	105	105	105	105	A	105	105	110	S					
3						S	S	105	105	105	105	105	105	105	105	105	110	110	S					
4						S	S	A	105	105	105	A	A	A	105	105	105	110	S					
5						S	S	110	105	105	105	100	100	100	100	100	110	105	S					
6						S	S	A	105	110	A	A	105	A	105	105	110	S	S					
7						S	S	A	A	A	105	105	105	105	105	105	105	S	S					
8						S	S	A	A	A	A	A	C	C	C	C	C	C	C					
9						C	C	C	C	C	C	105	105	110	110	110	110	A	S					
10						S	S	105	105	105	110	105	105	105	105	105	110	S	S					
11							S	110	A	110	105	105	105	105	105	105	110	S	S					
12							S	105	105	105	100	A	100	105	105	105	110	S	S					
13							S	A	A	A	A	A	110	105	105	105	105	A	S					
14							S	105	105	A	A	A	A	A	A	105	105	S	S					
15							S	110	105	105	105	A	A	A	100	105	110	S	S					
16							S	110	105	105	105	105	105	105	105	105	110	S	S					
17							S	A	105	105	105	100	105	100	105	A	A	S	S					
18							S	110	105	105	105	A	A	105	100	A	A	S	S					
19							S	105	105	105	A	110	110	110	105	110	110	S	S					
20							S	110	110	110	105	105	105	105	100	A	110	S	S					
21							S	110	110	105	105	105	105	105	105	110	110	S						
22							S	110	105	105	105	105	100	105	110	105	110	S						
23							S	A	110	110	A	105	105	110	110	105	A	S						
24							S	110	105	105	105	105	105	105	105	105	A	S						
25							S	110	110	110	110	105	105	105	A	A	A	S						
26							S	110	110	105	105	105	105	105	110	105	110	S						
27							S	110	105	105	105	105	105	105	105	105	110	S						
28							S	110	110	105	105	105	105	105	110	110	110	S						
29							S	110	105	105	105	A	A	A	A	A	110	S						
30							S	S	105	105	105	I C 105	105	105	105	110	110	S						
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								21	25	25	23	21	24	24	25	24	24	5						
MED								110	105	105	105	105	105	105	105	105	110	110						
UQ								110	105	105	105	105	105	105	105	105	110	110						
LQ								105	105	105	105	105	105	105	105	105	110	110						

SEP. 1985 | H'E (KM)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | H'ES (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	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	S	140	S	S	S	S	125	120	115	105	135	110	120	G	120	130	120	120	120	110	110	110	105	105
2	S	100	100	100	100	100	140	135	120	110	110	110	105	105	105	G	G	G	140	S	S	S	105	105
3	100	100	100	100	100	S	130	G	130	110	110	G	115	110	G	G	G	G	115	S	S	115	110	100
4	100	100	100	100	100	100	120	115	110	110	105	100	100	100	G	G	G	G	S	105	S	100	100	100
5	S	95	S	S	S	S	140	120	110	105	G	G	G	G	G	G	G	G	110	105	100	100	100	100
6	100	S	S	105	S	S	G	105	110	G	100	150	145	100	G	120	120	110	110	110	100	110	S	110
7	105	105	105	100	100	100	100	100	120	120	120	120	115	110	110	110	105	105	105	110	105	105	110	105
8	100	100	S	S	S	S	135	105	105	105	100	100	C	C	C	C	C	C	C	C	C	C	C	C
9	C	C	C	C	C	C	C	C	C	C	C	110	110	145	135	120	115	105	105	105	105	110	110	105
10	100	105	105	105	100	100	100	145	110	110	110	110	105	105	125	120	110	110	105	105	105	105	105	100
11	105	105	105	100	100	100	100	120	100	110	110	110	G	G	G	G	G	110	110	100	100	100	120	105
12	105	105	105	105	100	100	105	G	G	G	G	100	140	130	120	115	120	110	110	S	120	100	110	105
13	100	130	S	S	110	S	100	100	100	100	95	95	130	130	110	115	G	105	105	100	100	100	100	95
14	100	S	100	100	100	S	130	120	130	120	120	120	95	135	115	140	120	110	110	100	100	105	115	100
15	100	100	S	S	140	120	120	120	120	125	120	120	100	100	G	G	G	120	115	S	105	100	100	100
16	100	95	95	95	100	S	120	110	105	115	120	105	G	110	110	120	G	110	110	105	105	105	100	100
17	100	100	100	100	100	100	110	110	105	105	105	105	105	105	105	105	100	100	100	100	100	105	105	105
18	100	S	140	100	S	S	G	110	110	110	G	100	95	G	G	100	125	120	95	S	S	105	S	100
19	S	100	S	S	S	S	S	G	125	130	100	100	100	100	G	G	G	135	100	S	S	105	100	100
20	S	S	S	S	S	S	G	130	120	120	115	110	G	G	G	105	140	115	110	S	S	110	110	110
21	S	S	100	100	105	S	150	145	140	120	120	105	120	110	110	G	120	150	130	105	105	S	S	105
22	100	S	S	S	S	S	G	145	125	115	110	105	105	125	95	G	G	135	115	S	110	105	105	100
23	100	S	S	S	105	S	G	105	115	110	105	G	G	G	G	G	100	100	100	100	100	100	120	110
24	S	S	S	105	S	S	S	G	G	G	G	G	G	G	G	G	100	100	95	S	S	S	S	S
25	S	S	S	S	S	S	145	135	120	110	110	110	G	G	120	100	100	100	120	100	100	100	S	S
26	S	S	S	S	S	S	S	G	130	120	120	115	120	110	120	150	135	110	105	110	105	105	105	S
27	S	S	S	S	S	S	S	G	135	125	120	125	120	115	110	115	110	105	105	105	S	S	S	S
28	S	105	105	100	100	100	S	135	120	110	110	110	110	110	120	125	110	110	110	105	105	105	110	105
29	105	105	100	100	100	S	100	130	115	110	110	105	105	100	100	105	115	105	105	105	105	105	105	105
30	105	100	100	100	100	S	145	115	110	G	115	C	G	G	G	G	G	S	S	S	S	115	100	110
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	18	18	15	17	17	9	19	23	27	25	25	25	21	20	17	17	18	24	27	19	20	25	23	25
MED	100	100	100	100	100	100	120	120	115	110	110	110	110	110	110	115	115	110	110	105	105	105	105	105
UQ	105	105	105	100	100	100	138	132	122	120	120	110	120	120	120	120	120	118	112	105	105	105	110	105
LQ	100	100	100	100	100	100	102	110	110	110	105	105	105	102	110	105	105	105	105	100	100	100	100	100

SEP. 1985 | H'ES (KM)

IONOSPHERIC DATA

SEP. 1985 | TYPES OF ES | 135° E Mean Time (G.M.T. + 9 h)

Station AKITA Lat. 39° 43.5' N, Long 140° 08.0' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		F 1					C 2	C 2	C 1	C 1	H 1	C 2	C 1		C 1	C 2	C 2	C 3	C 6	F 3	F 4	F 4	F 4	F 3
2		F 3	F 3	F 3	F 2	L 1	H 1	H 2	C 2	C 2	C 2	C 2	C 3	C 2	L 2				H 2				F 3	F 7
3	F 4	F 3	F 4	F 3	F 2		CL 31		C 2	C 2	C 2		C 1	C 1					C 2			F 2	F 2	F 3
4	F 2	F 2	F 2	F 2	F 2	L 1	C 2	CL 31	C 2	C 2	C 2	L 1	L 1	L 1						F 2		F 2	F 2	F 2
5		F 2					H 2	C 2	C 3	C 4									C 2	F 2	F 1	F 2	F 3	F 2
6	F 2			F 1				L 2	C 2		L 1	HL 12	H 1	L 3		C 1	C 2	C 2	C 1	F 2	F 1	F 3		F 3
7	F 2	F 2	F 3	F 3	F 7	L 3	L 4	L 4	CL 13	CL 32	C 2	C 2	C 1	C 3	C 2	C 3	C 3	C 4	C 3	F 4	F 5	F 2	F 1	F 2
8	F 2	F 4					H 2	L 2	L 2	L 2	L 2	L 2												
9												C 2	C 2	H 1	H 1	C 1	C 2	L 3	L 3	F 1	F 3	F 4	F 4	F 1
10	F 3	F 2	F 4	F 2	F 4	L 2	LH 22	H 2	C 2	C 4	C 2	C 2	C 3	C 2	C 2	C 2	C 4	C 5	L 6	F 4	F 3	F 3	F 2	F 1
11	F 1	F 2	F 2	F 2	F 2	F 4	L 1	C 2	L 2	C 3	C 2	C 1						C 5	CL 42	F 5	F 2	F 2	FF 21	F 1
12	F 3	F 3	F 3	F 2	F 2	F 3	L 1					L 1	H 1	H 1	C 1	C 1	C 2	C 3	C 5		F 1	F 2	F 2	F 3
13	F 4	F 1			F 1		L 2	L 4	L 2	L 2	L 3	L 2	CL 11	CL 12	C 1	C 1		L 2	L 2	F 3	F 3	F 2	F 2	F 1
14	F 1		F 1	F 1	F 1		C 2	C 1	C 1	CL 22	CL 12	CL 12	L 3	HL 12	CL 21	H 1	C 2	C 2	C 1	F 4	F 1	F 1	F 1	F 4
15	F 3	F 2			F 2	F 4	C 3	C 3	C 2	C 1	C 1	CL 12	L 2	L 4				C 2	C 4		F 5	F 2	F 2	F 4
16	F 3	F 3	F 2	F 2	F 1		C 3	C 4	C 3	C 2	C 1	C 2		C 2	C 2	C 1		C 5	C 7	F 4	F 3	F 2	F 5	F 2
17	F 2	F 2	F 3	F 2	F 2	F 2	C 3	CL 31	C 2	C 2	C 2	C 2	C 2	C 3	C 2	L 2	L 2	L 2	L 2	F 2	F 2	F 4	F 6	F 3
18	F 2		FF 12	F 2				C 2	C 2	C 2		L 1	L 2			L 1	CL 11	CL 21	L 2			F 1		F 1
19		F 1							C 2	C 1	L 2	L 1	L 1	L 1				H 2	L 1			F 1	F 2	F 2
20								C 2	C 2	C 2	C 1	C 2				L 3	H 2	C 3	C 4			F 4	F 3	F 2
21			F 2	F 2	F 2		H 2	H 2	H 2	C 2	C 1	C 1	C 1	C 2	C 2		C 2	H 1	F 2	F 2	F 1			F 2
22	F 2							H 1	C 2	C 2	C 2	C 2	C 3	C 1	L 1			H 1	F 1		F 2	F 4	F 4	F 2
23	F 1				F 1			L 1	C 3	C 2	L 1						L 2	L 3	F 2	F 3	F 2	F 2	F 2	F 2
24				F 2													L 1	L 2	F 3					
25							H 3	H 2	C 2	C 2	C 2	C 2			CL 12	L 4	L 2	L 5	FF 34	F 2	F 2	F 2		
26									C 2	C 2	C 1	C 1	C 1	C 1	C 1	H 2	H 2	C 3	F 1	F 1	F 2	F 3	F 2	
27									H 2	C 2	C 2	C 1	C 1	C 2	C 2	C 3	C 4	C 3	F 3	F 3				
28		F 2	F 3	F 3	F 4	F 3		H 3	C 2	C 3	C 2	C 3	C 1	C 1	C 2	C 3	C 3	C 3	F 3	F 3	F 5	F 5	F 3	F 3
29	F 2	F 2	F 2	F 2	F 2		L 1	C 2	C 2	C 3	C 2	L 2	L 2	L 2	L 2	L 2	C 4	L 2	F 2	F 1	F 3	F 2	F 2	F 3
30	F 2	F 5	F 4	F 2	F 2		H 2	C 2	C 2		C 1											F 2	F 2	F 2
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																								
UQ																								
LQ																								

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FXI (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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 56	X 53	X 56	X 52	X 50	X 51														X 65	X 61	X 58	S 57	S 56
2	S 52	S 51	X 50	X 38	X 34	X 36														X 72	X 61	X 55	X 54	X 51
3	X 50	S 50	X 46	X 39	S 39	S 39														X 63	S 63	X 64	X 62	X 57
4	X 51	X 44	X 41	X 39	X 38	X 39														S 81	S 68	X 63	X 43	X 39
5	X 39	X 39	X 39	44	40	S 40														S 74	X 75	X 63	A	X 40
6	X 39	S 39	X 40	X 39	X 37	X 39														S 71	X 67	X 61	X 58	X 56
7	X 49	U S 52	S 44	S 45	X 42	S 39														S 69	X 61	S 51	S 49	S 47
8	S 46	S 44	X 41	X 40	S 38	S 37														S 71	X 57	X 46	X 46	X 44
9	X 45	X 42	X 39	X 38	X 36	X 32														S	X 41	X 37	X 36	X 36
10	S 37	S 36	X 35	S 32	34	33														S 72	S	A	X 36	X 38
11	X 39	U S 39	S 38	45	42	S 37														X 59	S 53	X 49	X 50	X 49
12	S 42	X 42	S 42	X 40	A	S 37														X 61	X 53	S 42	47	48
13	46	X 41	X 41	X 39	S 39	S 37														S 78	S 70	X 57	X 43	S 41
14	X 40	X 41	S 41	X 40	X 39	S 39														S 79	S 79	S 60	X 34	X 35
15	X 33	S 36	X 37	H 27	S	X 29														X 68	S 67	S 63	A	A
16	S 45	S 41	41	X 39	S 37	X 35													A	X 65	S 58	S	50	S
17	49	S 45	X 46	X 42	X 40	S 39													X 69	X 64	X 62	X 52	45	40
18	S 41	40	X 41	X 39	X 35	X 34													X 67	X 65	X 54	S 50	50	S 46
19	S 45	X 40	X 40	X 39	X 36	X 36													X 71	X 70	S 65	X 66	S 67	S 65
20	X 67	S 46	X 42	X 39	X 39	X 38													X 69	X 61	X 48	X 48	X 45	X 41
21	X 41	X 42	X 41	S 37	X 35	S 31													X 96	S 75	X 46	X 42	S 41	S 42
22	X 42	X 40	X 39	X 32	X 33	X 34													S 80	X 71	X 56	U S 51	A	S 43
23	S 42	S 42	S 41	41	43	40													X 74	X 68	S 58	X 51	X 49	X 47
24	X 43	X 42	X 43	X 42	X 39	X 41													S 78	S 79	X 39	X 36	X 35	X 37
25	X 38	X 36	X 36	X 37	X 34	X 32													X 82	X 60	A	X 42	X 42	X 42
26	X 42	X 42	X 41	X 39	X 39	X 39													X 71	X 58	S 54	S 48	X 43	S 41
27	S 42	X 42	X 41	X 40	X 40	X 39													U S 75	X 64	S 52	S 39	X 39	X 37
28	S 39	X 40	X 42	X 42	X 36	S													X 76	X 59	X 56	X 40	X 38	X 38
29	A	U S 39	S 38	X 38	36	S 33													S 84	S 77	X 41	S	X 40	X 41
30	X 41	X 39	X 38	S 38	X 35	X 34													S 79	X 52	S 41	S 42	S 45	S 43
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	28	29													14	29	28	27	27	28
MED	X 42	X 42	X 41	X 39	X 38	X 37													X 76	X 68	X 58	X 51	X 45	X 42
UQ	X 46	X 44	X 42	X 41	X 40	39													S 80	S 72	S 64	X 59	50	48
LQ	X 40	X 39	X 39	X 38	X 36	X 34													X 71	X 63	X 52	X 42	X 40	X 40

SEP. 1985 | FXI (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOF2 (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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	50	47	50	46	44	S 45	43	52	54	J R 49	50	R 56	53	55	55	55	55	63	62	59	55	52	S 51	S 50
2	S 46	S 45	44	32	28	30	45	49	57	62	57	60	64	68	66	65	65	61	65	66	55	49	48	S 45
3	S 44	S 44	S 40	33	S 33	S 33	47	46	58	62	55	55	55	54	57	58	50	49	48	57	S 57	58	56	51
4	S 45	S 38	35	33	32	33	45	55	62	66	54	53	51	51	50	56	57	57	S 65	S 75	S 62	57	37	33
5	33	33	33	F 34	F	S 34	43	54	59	71	59	55	51	50	54	63	64	59	60	S 68	69	S 57	A	34
6	33	33	34	33	31	33	50	52	55	57	52	56	54	55	A	58	52	56	S 60	S 65	61	55	52	50
7	43	U S 46	S 38	S 39	S 36	S 33	S 53	48	56	51	A	A	A	60	65	66	59	58	57	S 63	55	S 45	S 43	S 41
8	S 40	S 38	35	34	S 32	S 31	46	54	55	55	46	63	62	60	55	55	50	55	64	S 65	51	40	40	38
9	39	36	33	32	30	26	49	70	55	57	60	56	56	54	58	54	58	74	87	I S 76	35	31	30	30
10	S 31	S 30	S 29	S 26	F	F	S 35	46	50	R 48	R 48	E G 45	46	56	52	58	56	56	57	S 66	A	A	30	32
11	33	U S 33	S 32	F	F	S 31	S 43	48	51	47	49	53	R 51	61	58	62	51	45	51	53	S 47	S 43	44	S 43
12	S 36	36	S 36	34	A	S 31	46	56	51	58	53	50	54	52	54	59	65	68	60	55	47	S 36	F	F
13	F	35	35	33	S 33	S 31	S 43	53	50	51	52	58	53	54	56	53	52	60	S 71	S 72	S 64	51	37	S 35
14	34	35	S 35	34	33	S 33	49	S 60	59	55	55	52	58	63	54	52	52	S 65	S 66	S 73	S 73	S 54	28	29
15	27	S 30	31	H 21	A	23	39	51	61	69	64	61	64	62	56	55	55	56	S 68	S 62	S 61	S 57	A	A
16	S 39	S 35	F	33	S 31	29	S 37	S 81	59	53	55	59	62	61	55	55	60	61	A	S 59	S 52	S	F	S
17	F	S 39	40	36	34	S 33	44	S 59	60	58	56	56	A	55	53	55	54	56	63	58	56	46	F	F
18	S 35	F	35	33	29	28	46	65	65	56	55	61	58	55	53	57	53	58	61	59	48	S 44	F	S 40
19	S 39	34	34	33	30	30	47	58	59	57	57	53	56	59	54	57	59	63	S 65	S 64	S 59	S 60	S 61	S 59
20	S 61	S 40	36	33	33	32	45	48	58	A	63	58	57	65	R 82	64	63	61	63	55	42	S 42	39	35
21	S 35	36	35	S 31	29	S 25	42	50	55	56	56	58	67	62	59	66	S 78	S 80	90	69	S 40	36	S 35	S 36
22	S 36	S 34	33	26	27	28	47	56	70	65	57	66	68	67	65	56	58	63	S 74	S 65	50	U S 45	A	S 37
23	S 36	S 36	S 35	F	F 33	F	46	S 62	63	59	56	62	59	67	62	61	55	60	68	S 62	S 52	45	43	41
24	37	36	37	36	33	35	54	54	60	56	66	68	58	61	62	60	58	S 73	S 72	S 73	33	30	29	31
25	32	30	30	31	28	26	49	57	67	59	59	69	74	65	63	61	58	S 72	S 76	54	A	36	36	36
26	36	36	35	33	33	33	56	58	S 62	62	65	70	S 79	71	56	63	70	S 81	S 65	52	S 48	S 42	37	35
27	36	36	35	34	34	33	49	57	C	69	69	74	67	61	59	70	S 80	S 76	U S 69	58	S 46	S 33	33	31
28	S 33	34	36	36	30	A	46	52	61	80	S 72	66	76	S 79	75	67	70	S 75	70	S 53	50	34	32	S 32
29	A	U S 33	S 32	32	F 30	S 27	46	54	69	S 74	63	66	69	59	59	56	52	62	S 78	S 71	35	A	34	35
30	35	33	32	S 32	29	28	49	58	65	S 77	59	69	63	R 75	63	58	68	72	S 73	46	35	36	39	U S 37
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	27	29	29	28	25	27	30	30	29	29	29	29	28	30	29	30	30	30	29	30	28	27	23	26
MED	S 36	36	35	33	32	31	46	54	59	58	56	58	58	60	57	58	58	61	65	S 62	52	45	37	36
UQ	S 40	S 38	36	34	33	S 33	49	58	62	65	60	66	66	65	62	63	64	72	S 71	S 68	S 58	53	44	S 41
LQ	34	33	33	32	30	28	43	51	55	55	54	55	54	55	54	55	53	57	61	57	46	36	34	33

SEP. 1985 | FOF2 (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOF1 (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Day \ Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L	390	L 430	460	470	A	460	450	L 430	L	L						
2									L 420	A	A	450	440	A	430	410	U L 420	L						
3									390	430	440	440	440	440	430	L 410	L	L						
4								L	A	420	440	440	A	440	460	420	L 390	U L 330						
5								L	410	410	A	440	450	450	450	420	400	L	A					
6								L	L 410	420	450	430	A	A	A	A	L	L						
7								L 380	480	A	A	A	A	A	430	430	370	A						
8							L	L 390	410	400		H 440	430	440	430	L 420	390	L						
9							L	U L 340	L 410	420	430	L 430	420	L 440	L 440	A	L 390	U L 320						
10								L 340	370	410	430	R 450	A	A	L 420	400	L 380	A						
11								L	L 370	L	430	440	450	440	420	400	L	L						
12								L 390	380	400	420	L 430	430	430	430	H 420	A	L						
13								L	L 400	L 410	430	430	L 440	430	L 410	L 400	U L 380	L						
14								L	L 400	U L 430	420	440	420	410	410	L 400	U L 400	L						
15								L	L 400	A	430	440	420	420	410	L 390	L	A						
16								A	L 380	L 400	L	440	A	A	420	L 410	L 380	L						
17							L	L 370	A	A	440	A	A	440	420	L 410	U L 380	A						
18								L	L 410	L 420	430	430	440	440	L 430	L 410	L	L						
19								L	L 400	H 420	420	L	460	L 440	L 410	L 410	U L 380	L						
20									A	A	A	420	L 420	450	A	L	L							
21								A	A	A	430	L 440	L 440	L 460	U L 450	L 410	L	L						
22								L	L 400	L 420	L 440	450	U L 460	L 450	L 430	L	L							
23								L	L 400	L 420	L 420	430	420	430	L 410	U L 410	L							
24								L	L 400	U L 410	450	L 450	L 440	L 440	L 420	L 380	L	L						
25									A	A	A	A	450	A	L 430	U L 390	A							
26								L	L	430	A	430	450	U L 440	L	U L 410	A							
27									C	A	L	L 440	L 440	L 440	L	L 400	L	L						
28									L	A	A	A	L 460	L 430	L	L	A							
29									L	L 400	A	A	L 440	L 430	L 400	L 390	L							
30									L	L 420	440	L 460	L 460	L 430	L 430	L	L							
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								6	20	20	19	24	23	24	25	24	12	2						
MED								L 375	L 400	420	430	440	440	440	430	L 410	L 385	U L 325						
UQ								L 390	L 410	420	440	445	450	440	430	L 415	L 395							
LQ								L 340	L 390	L 410	430	430	430	L 430	L 420	L 400	L 380							

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOE (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long. 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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	S						190	240	275	H 310	R 330	I R 350	350	340	325	300	H 270	225	S					
2							200	260	280	305	320	335	A	A	A	310	270	H 210	B					
3							190	255	280	300	315	A	A	350	330	300	260	H 220	B					
4							A	240	A	A	A	A	A	A	A	A	A	A	B					
5							H 200	A	A	A	A	A	A	A	315	300	265	220	S					
6							H 200	250	280	A	330	A	A	335	310	290	260	A	S					
7							185	250	280	305	A	340	A	A	A	A	A	A	S					
8							A	250	275	300	A	A	A	R 325	315	300	A	A	S					
9							180	H 250	A	285	295	310	320	325	315	280	250	A	S					
10							A	240	280	300	320	330	A	A	320	285	255	A	S					
11							170	A	A	A	A	A	340	330	A	A	A	A	S					
12							A	A	260	295	R 315	335	335	330	310	290	250	A	S					
13							S	H 250	275	300	320	335	335	325	310	290	A	A	S					
14							170	240	270	300	315	H 340	R 340	335	310	280	250	A	S					
15							160	H 240	275	H 295	H 310	320	320	325	305	280	245	180	B					
16							A	230	A	A	A	A	A	315	300	270	250	190						
17							A	A	A	A	A	A	A	A	A	A	A	A						
18		S					A	A	A	A	A	335	340	330	305	A	250	A						
19							165	240	270	H 300	A	R 330	R 340	335	305	285	250	160			S			
20			S	S			S	H 240	270	295	A	A	A	A	A	A	A	160						
21							A	H 240	265	290	305	320	A	A	A	270	250	160						
22							180	230	260	290	305	A	A	A	310	280	250	160						
23							160	H 240	270	290	A	310	A	A	A	A	A	A						
24							160	250	270	295	310	320	320	320	300	275	245	160				S	S	S
25							S	240	A 270	295	A	A	A	310	300	275	240	A						
26							S	250	280	295	A	A	320	305	300	280	250	A					S	S
27							A	235	I C 270	H 300	H 310	310	315	310	300	270	A	S					S	S
28	S						160	H 245	275	290	300	315	320	305	300	270	240	A						
29							170	250	A	A	A	A	310	A	305	A	A	A						
30							S	A	A	305	R 320	325	330	300	290	265	240	S						
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							16	24	21	22	16	17	15	19	22	22	20	11						
MED							175	240	275	298	315	330	330	325	308	280	250	180						
UQ							190	250	280	300	320	335	340	332	315	290	258	215						
LQ							162	240	270	295	308	320	320	312	300	275	248	160						

SEP. 1985 | FOE (0.01 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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 S 15	J A 20	22	23	J A 19	E S 15	G	31	36	33	G 18	42	44	G	37	38	31	31	J A 36	18	J A 21	J A 37	J A 32	J A 56
2	J A 24	23	J A 26	J A 23	J A 18	20	26	29	37	J A 54	46	45	41	J A 57	37	G 29	G 24	23	22	22	18	E S 15	E S 16	24
3	J A 33	J A 31	J A 33	J A 25	J A 25	20	J A 42	29	33	J A 39	36	36	36	G	G	G	G	G	23	J A 24	J A 19	J A 25	J A 31	J A 29
4	J A 19	J A 26	J A 19	20	20	22	24	28	J A 43	J A 41	44	J A 43	J A 49	J A 58	44	31	J A 32	J A 33	J A 34	J A 32	J A 25	J A 20	J A 20	22
5	18	E S 16	E S 15	E S 15	E S 15	E S 16	G	29	J A 42	J A 44	J A 53	J A 48	36	36	37	34	29	28	47	J A 32	J A 30	J A 73	J A 66	J A 55
6	J A 34	J A 23	J A 29	J A 19	19	19	G	G 24	G 21	J A 30	35	36	J A 50	51	J A 66	J A 53	J A 55	29	J A 24	J A 34	23	19	J A 26	18
7	E S 16	E S 16	22	J A 51	J A 29	19	27	30	39	46	J A 86	71	J A 87	J A 48	J A 49	J A 44	70	J A 58	18	J A 35	J A 56	J A 55	30	J A 24
8	J A 19	J A 18	J A 17	J A 18	J A 20	J A 19	21	29	31	37	J A 37	J A 39	42	G 31	G	36	35	51	J A 31	J A 34	J A 47	J A 26	J A 19	J A 21
9	21	20	J A 21	J A 33	J A 27	J A 19	25	31	34	33	33	33	35	G 18	34	J A 56	J A 48	J A 81	J A 39	J A 29	22	22	22	22
10	E S 16	J A 20	23	J A 26	J A 22	J A 20	J A 26	G 23	32	35	36	40	48	61	37	36	30	J A 54	E S 16	J A 30	J A 53	41	22	24
11	22	18	J A 24	24	J A 18	20	23	27	30	J A 37	J A 40	35	G 31	G 28	J A 40	J A 38	J A 53	J A 29	23	J A 19	J A 25	38	J A 21	J A 22
12	J A 21	19	J A 83	J A 60	J A 54	J A 32	37	30	G 19	G 23	35	39	39	37	37	38	J A 43	J A 30	J A 24	J A 30	18	23	22	25
13	J A 26	J A 34	J A 22	J A 21	J A 19	20	22	27	33	J A 52	39	40	36	35	35	G	J A 29	J A 30	J A 22	J A 26	J A 27	J A 19	19	J A 27
14	J A 20	19	E S 15	E S 16	21	E S 14	23	27	35	35	39	G 25	36	G 20	35	38	J A 46	J A 53	36	18	J A 58	J A 36	J A 33	J A 34
15	J A 30	J A 24	J A 22	18	J A 22	J A 20	J A 28	J A 43	J A 43	J A 46	J A 66	38	35	G 19	G	31	G	46	J A 27	J A 22	J A 29	J A 53	J A 84	J A 65
16	J A 34	J A 30	J A 25	20	21	20	25	J A 47	J A 50	31	J A 46	J A 51	J A 48	J A 45	39	34	G	27	J A 84	J A 44	J A 30	J A 27	J A 32	J A 55
17	J A 24	20	J A 31	J A 27	J A 27	25	21	34	J A 53	J A 52	J A 42	J A 50	J A 64	J A 54	J A 52	J A 59	J A 54	J A 58	J A 76	J A 44	J A 29	J A 29	20	J A 34
18	J A 26	19	19	22	18	19	17	25	36	34	35	G 27	G 25	G 21	G 23	28	29	30	J A 21	J A 21	J A 32	J A 33	23	23
19	J A 19	21	E S 16	18	20	E S 15	21	28	33	G 25	J A 33	G 28	G 25	G	G	31	30	21	17	J A 20	E S 15	J A 20	J A 30	J A 24
20	J A 22	19	E S 14	E S 15	E S 14	E S 15	E S 16	28	J A 53	J A 85	J A 46	J A 42	J A 38	45	J A 59	J A 41	27	31	21	19	E S 15	E S 16	E S 16	E S 15
21	J A 21	J A 20	20	E S 15	J A 21	J A 17	30	40	40	J A 52	40	35	34	34	32	G	30	24	J A 19	22	19	J A 26	J A 21	23
22	J A 21	E S 15	23	23	19	E S 14	20	27	31	38	J A 42	35	35	32	G 18	G	G	18	18	20	21	J A 33	J A 58	J A 68
23	J A 30	J A 19	17	18	E B 13	E S 15	24	28	32	36	36	34	35	J A 38	J A 40	J A 42	J A 30	J A 24	25	23	J A 21	23	E S 16	24
24	J A 33	24	18	19	J A 18	J A 19	G	G	30	34	34	34	G 24	G 24	32	G 18	28	24	J A 24	J A 20	19	E S 16	18	18
25	18	20	18	17	E S 15	E S 15	23	31	41	J A 65	J A 66	J A 55	36	J A 46	G	31	36	33	48	J A 40	J A 53	E S 15	20	22
26	20	20	19	E S 16	E S 15	E S 16	E S 15	27	32	39	J A 41	38	40	J A 41	32	32	36	J A 41	J A 37	J A 30	J A 27	24	E S 16	E S 16
27	20	E S 15	E B 13	18	22	19	18	26	C	40	34	42	J A 50	43	G 24	32	32	J A 30	J A 49	J A 56	J A 68	J A 29	E S 16	E S 15
28	E S 16	17	J A 23	24	J A 24	J A 32	23	27	32	J A 51	J A 61	J A 50	40	38	G	35	J A 39	J A 36	J A 45	J A 24	J A 26	J A 25	21	J A 31
29	J A 51	J A 26	J A 26	17	18	E S 15	22	27	38	36	J A 50	J A 69	34	34	G 29	J A 44	J A 41	J A 44	J A 30	J A 29	22	J A 38	J A 33	23
30	J A 30	23	J A 18	23	J A 20	19	21	31	31	G 29	G 28	G 26	G 25	G 24	G 22	G	G	21	20	19	E S 16	E S 16	19	J A 25
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	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	J A 21	20	22	20	J A 20	19	22	28	34	38	40	39	36	36	34	34	30	30	J A 24	J A 25	J A 25	J A 26	22	24
UQ	J A 30	J A 23	J A 24	J A 24	J A 22	20	25	31	40	J A 46	J A 46	J A 45	44	J A 45	39	J A 38	J A 41	J A 44	J A 37	J A 32	J A 30	J A 36	J A 31	J A 31
LQ	19	19	18	18	18	E S 15	18	27	32	34	35	35	35	G 24	G 22	29	28	24	21	20	19	20	19	22

SEP. 1985 | FOES (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FBES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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 S 15	16	E	E	E	E S 15	G	30	33	G	G 18	39	44	G	37	34	31	29	33	16	20	22	29	17
2	E	E	19	18	E	E	23	28	35	47	45	41	39	50	34	G 28	G 23	17	21	E	E	E S 15	E S 16	E
3	21	27	22	18	19	E	34	28	33	39	36	36	35	G	G	G	G	G	22	16	E	E	E	E
4	E	20	E	E	E	E	23	26	40	38	35	39	45	38	34	31	30	30	31	28	24	20	18	E
5	E	E S 16	E S 15	E S 15	E S 15	E S 16	G	28	40	38	45	40	35	35	35	33	28	26	37	20	18	30	A A 66	23
6	23	18	27	E	E	E	G	G 18	G 21	30	35	35	44	51	A A 66	48	31	23	16	33	E	E	E	E
7	E S 16	E S 16	15	23	E	E	24	30	38	44	A A 86	A A 71	A A 87	46	41	36	35	35	G	35	19	25	21	E
8	E	E	E	16	16	16	20	28	G	36	34	34	37	G 28	G	32	29	25	18	20	28	18	17	19
9	E	E	16	E	21	E	24	29	33	32	33	33	34	G 18	33	45	34	21	21	21	E	E	E	E
10	E S 16	E	E	E	19	E	20	G 21	31	32	34	40	45	47	36	U Y 36	29	45	E S 16	30	A A 53	A A 41	E	E
11	E	E	E	E	E	E	G	26	28	32	34	34	G 30	G 27	36	31	31	25	G	E	20	E	17	19
12	21	E	E	17	A A 54	24	17	28	G 19	G 23	35	39	38	36	35	36	37	28	22	21	E	E	E	E
13	E	17	19	E	15	E	21	27	32	27	39	37	35	G	34	G	26	23	G	E	E	E	E	23
14	E	E	E S 15	E S 16	E	E S 14	21	26	30	34	39	G 25	36	G 20	G	31	38	25	G	E	33	31	21	22
15	20	18	18	E	A A 22	16	23	30	38	46	37	37	34	G 19	G	31	G	38	27	19	E	22	A A 84	A A 65
16	23	29	20	E	E	E	24	40	30	30	40	40	44	44	37	33	G	24	A A 84	23	E	18	E	24
17	E	E	E	17	19	E	20	31	41	50	40	48	A A 64	40	32	34	33	35	28	33	24	21	E	20
18	E	G	E	E	16	E	17	25	32	34	35	G 27	G 24	G 21	G 23	28	27	28	20	E	19	E	E	E
19	E	E	E S 16	E	E	E S 15	21	27	31	G 25	33	G 27	G 25	G	G	31	29	20	16	E	E S 15	E	E	E
20	E	E	E S 14	E S 15	E S 14	E S 15	E S 16	27	50	A A 85	44	38	34	35	54	36	26	30	E	E	E S 15	E S 16	E S 16	E S 15
21	E	E	E	E S 15	15	E	24	40	40	48	39	35	34	34	32	G	29	24	16	E	E	E	E	E
22	19	E S 15	E	E	E	E S 14	20	26	30	37	37	35	34	32	G 18	G	G	18	E	18	E	E	A A 58	18
23	E	E	E	E	E B 13	E S 15	20	27	31	34	34	33	34	34	32	33	27	19	E	19	18	E	E S 16	E
24	E	E	E	E	E	E	G	G	29	34	33	34	G 24	G 24	31	G 18	27	22	20	E	E	E S 16	G	G
25	E	E	E	E	E S 15	E S 15	22	31	40	44	48	51	34	46	G	30	36	32	45	40	A A 53	E S 15	E	E
26	E	E	E	E S 16	E S 15	E S 16	E S 15	G	30	36	40	38	38	40	31	32	36	40	20	26	E	E	E S 16	E S 16
27	E	E S 15	E B 13	E	E	E	17	25	C	40	34	41	36	37	G 24	30	29	21	26	44	27	E	E S 16	E S 15
28	E S 16	E	15	E	22	A A 32	21	G	32	48	61	46	39	37	G	34	39	18	41	20	E	20	E	E
29	A A 51	E	19	E	E	E S 15	22	26	38	36	49	45	33	34	G 25	31	33	32	28	E	E	A A 38	E	E
30	E	E	E	19	E	E	20	30	28	G 28	G 28	G 26	G 25	G 24	G 22	G	G	21	19	E	E S 16	E S 16	E	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	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	E	E	E E 13	E	E E 14	E	20	27	32	36	36	38	35	34	32	31	29	25	20	19	E E 15	16		
UQ	16	16	16	16	16	E S 15	23	30	38	44	40	40	39	40	35	34	33	30	28	26	20	21	17	19
LQ	E	E	E	E	E	E	17	26	30	32	34	34	34	G 21	G 18	28	26	21	16	E	E	E	E	E

SEP. 1985 | FBES (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FMIN (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long. 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Day \ Hour	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 S 15	E S 14	E S 15	E S 15	E S 15	E S 15	14	14	15	15	17	20	22	17	19	15	15	14	E S 14	E S 14	E S 16	E S 16	E S 14	E S 15
2	E S 16	13	E S 14	E S 15	E S 15	E S 16	14	13	15	15	19	20	22	22	20	17	15	14	13	E S 16	E S 16	E S 15	E S 16	E S 16
3	E S 16	E S 15	E S 14	13	E S 15	E S 15	E S 14	14	15	16	16	19	17	16	19	16	14	14	13	E S 14	E S 15	E S 16	E S 16	E S 15
4	E S 15	E S 14	E S 15	E S 15	E S 15	E S 16	E S 15	13	14	14	19	15	16	16	15	16	15	16	13	E S 15	E S 15	E S 15	E S 16	E S 15
5	E S 16	E S 16	E S 15	E S 15	E S 15	E S 16	E S 14	14	15	16	15	16	16	16	13	15	13	13	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
6	E S 15	E S 15	E S 15	E S 15	E S 15	E S 14	E S 14	14	15	15	16	16	14	19	16	14	15	15	E S 14	E S 16	E S 16	E S 16	E S 16	E S 15
7	E S 16	E S 16	13	E S 14	E S 15	E S 15	E S 15	14	14	15	16	18	15	16	15	14	16	15	E S 15	E S 16	E S 16	E S 16	E S 14	E S 15
8	E S 16	E S 15	E S 15	13	13	E S 14	13	13	14	16	16	17	17	20	17	16	14	13	E S 14	E S 16	E S 16	E S 15	E S 14	E S 15
9	E S 16	E S 15	13	13	E S 15	E S 15	E S 15	13	15	14	16	15	16	15	15	16	16	13	E S 15	E S 14	E S 16	E S 15	E S 15	E S 14
10	E S 16	E S 15	E S 15	E S 15	E S 15	E S 14	E S 15	14	14	16	19	20	20	20	16	15	15	14	E S 16	E S 16	E S 15	E S 15	E S 15	E S 16
11	E S 15	E S 15	E S 15	E S 15	E S 15	E S 15	E S 16	15	14	15	17	16	17	17	15	15	14	13	E S 14	E S 16	E S 16	E S 15	E S 16	E S 16
12	E S 16	E S 15	E S 15	E S 14	E S 15	E S 16	E S 14	13	14	16	14	17	16	15	16	14	15	15	E S 15	E S 15	E S 16	E S 15	E S 16	E S 16
13	E S 16	E S 15	13	E S 15	13	E S 15	E S 16	14	15	15	16	15	15	15	15	14	14	13	E S 16	E S 15	E S 15	E S 15	E S 15	E S 16
14	E S 15	E S 16	E S 15	E S 16	E S 15	E S 14	E S 16	15	13	14	17	15	15	16	14	15	13	15	E S 15	E S 16	E S 15	E S 16	E S 16	E S 15
15	E S 15	E S 15	E S 15	E S 15	E S 14	E S 15	13	13	14	16	14	15	15	14	16	14	14	14	13	E S 15	E S 16	E S 16	E S 16	E S 15
16	E S 15	E S 14	13	E S 15	E S 15	E S 16	E S 15	14	15	16	15	16	20	20	15	14	14	14	E S 16	E S 15	E S 15	E S 15	E S 16	E S 16
17	E S 16	E S 15	E S 15	E S 15	E S 15	E S 16	E S 14	15	15	16	17	15	16	15	15	15	15	15	E S 15	E S 16	E S 15	E S 16	E S 16	E S 15
18	E S 16	E S 15	E S 15	E S 15	13	E S 16	E S 14	14	15	14	16	16	16	15	15	14	15	13	E S 15	E S 15	E S 15	E S 16	E S 16	E S 16
19	E S 16	E S 16	E S 16	E S 15	E S 15	E S 15	E S 14	15	16	16	15	15	16	19	17	16	15	15	E S 15	E S 16	E S 15	E S 16	E S 16	E S 15
20	E S 16	E S 15	E S 14	E S 15	E S 14	E S 15	E S 16	14	14	15	16	16	19	17	16	15	14	13	E S 16	E S 16	E S 15	E S 16	E S 16	E S 15
21	E S 16	E S 15	E S 15	E S 15	E S 14	E S 15	E S 15	15	14	15	15	19	15	15	14	15	14	E S 15	E S 14	E S 15	E S 15	E S 16	E S 15	E S 16
22	E S 15	E S 15	E S 15	E S 14	13	E S 14	E S 15	14	16	14	16	16	15	15	14	16	16	14	E S 15	E S 15	E S 16	E S 16	E S 16	E S 15
23	E S 16	E S 14	13	E S 14	13	E S 15	E S 14	15	14	14	15	19	18	16	19	15	13	14	E S 16	E S 15	E S 15	E S 15	E S 16	E S 15
24	E S 14	E S 15	E S 16	E S 15	E S 15	E S 14	13	14	14	15	15	17	16	16	15	14	14	E S 15	E S 16	E S 15	E S 15	E S 16	E S 15	E S 16
25	E S 16	E S 15	E S 16	E S 15	E S 15	E S 15	E S 16	14	14	15	15	16	16	20	17	14	14	E S 14	E S 14	E S 14	E S 14	E S 15	E S 16	E S 16
26	E S 16	E S 15	E S 15	E S 16	E S 15	E S 16	E S 15	15	16	14	20	17	17	16	16	15	14	E S 14	E S 14	13	E S 16	E S 16	E S 16	E S 16
27	E S 16	E S 15	13	E S 15	E S 15	E S 15	13	14	C	14	16	16	19	16	14	14	14	E S 14	E S 15	E S 16	E S 14	E S 16	E S 16	E S 15
28	E S 16	E S 15	13	E S 15	E S 14	E S 16	E S 14	14	14	14	16	19	16	16	17	15	14	E S 14	E S 15	E S 14	E S 15	E S 15	E S 16	E S 15
29	E S 16	E S 15	E S 15	E S 14	E S 15	E S 15	13	14	14	15	15	19	18	18	15	17	16	E S 14	E S 16	E S 16	E S 16	E S 15	E S 16	E S 16
30	E S 16	E S 15	13	E S 15	E S 15	E S 15	E S 14	14	14	16	16	20	20	16	17	14	14	E S 15	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
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	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	E S 16	E S 15	E S 15	E S 15	E S 15	E S 15	E S 14	14	14	15	16	16	16	16	16	15	14	14	E S 15	E S 15	E S 15	E S 16	E S 16	E S 15
UQ	E S 16	E S 15	E S 15	E S 15	E S 15	E S 16	E S 15	14	15	16	17	19	18	18	17	16	15	15	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
LQ	E S 15	E S 15	13	E S 14	E S 14	E S 15	E S 14	14	14	14	15	16	16	15	15	14	14	14	E S 14	E S 15	E S 15	E S 15	E S 15	E S 15

SEP. 1985 | FMIN (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | M(3000)F2 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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	295	280	305	300	310	S 320	300	325	330	J R 330	305	R 320	325	315	315	305	315	320	320	310	300	290	S 290	S 290
2	S 270	S 295	305	300	305	300	340	330	340	330	340	305	325	315	325	325	320	315	320	320	320	300	310	S 290
3	S 290	S 305	S 320	295	S 300	S 305	345	330	340	335	335	320	320	320	320	325	325	310	310	295	S 295	305	310	305
4	S 320	S 300	300	305	300	315	345	330	335	340	325	330	325	310	290	310	320	320	S 300	S 310	S 315	335	310	310
5	305	305	300	F 300	F	S 310	340	320	330	340	340	350	305	290	285	315	320	325	315	S 320	330	S 325	A	330
6	295	305	300	310	320	330	340	340	330	330	310	315	330	310	A	320	320	320	S 310	S 310	310	310	300	305
7	300	U S 295	S 320	S 305	S 320	S 280	S 325	320	320	325	A	A	A	310	315	325	320	320	315	S 315	330	S 290	S 285	S 290
8	S 290	S 290	300	305	S 310	S 280	325	320	330	330	340	310	320	320	335	330	320	325	325	S 320	335	310	300	310
9	305	300	305	305	305	295	320	335	340	330	330	320	320	300	315	320	310	320	330	I S 340	350	280	290	290
10	S 290	S 290	S 300	S 305	F	F	S 300	335	330	R 315	R 280	G	A	320	310	320	325	325	310	S 325	A	A	300	295
11	300	U S 295	S 295	F	F	S 300	S 330	340	330	330	310	315	R 290	315	310	330	335	330	310	320	S 310	S 310	305	S 310
12	S 310	315	S 310	310	A	S 280	340	340	320	330	320	315	320	310	305	310	320	335	320	320	325	S 300	F	F
13	F	300	305	310	S 320	S 305	S 320	345	330	330	320	330	325	320	340	325	310	305	S 310	S 315	S 320	325	310	S 290
14	310	300	S 310	310	300	S 310	330	S 340	345	330	330	295	320	330	310	325	295	S 305	S 300	S 290	S 310	S 320	310	290
15	270	S 290	310	H 325	A	310	320	325	320	325	340	310	330	330	320	320	325	320	S 330	S 310	S 310	S 290	A	A
16	S 305	S 285	F	300	S 300	310	S 290	S 330	360	330	305	310	300	320	310	310	320	320	A	S 330	S 305	S	F	S
17	F	S 280	305	305	290	S 290	325	S 340	340	345	330	335	A	320	320	320	320	320	310	305	320	310	F	F
18	S 300	F	280	305	300	300	335	340	340	350	330	330	340	335	310	320	310	330	310	330	305	S 280	F	S 300
19	S 295	305	290	295	310	300	335	340	335	330	340	320	315	330	320	320	320	315	S 320	S 300	S 280	S 290	S 285	S 295
20	S 310	S 305	300	280	300	315	350	320	340	A	325	325	320	295	R 320	330	320	325	320	325	280	S 275	290	290
21	S 300	320	305	S 290	320	S 300	340	320	335	330	330	310	320	310	305	305	S 310	S 310	330	335	S 315	305	S 280	S 300
22	S 300	S 280	310	300	295	305	330	335	330	340	330	325	320	315	320	320	320	310	S 310	S 320	310	U S 300	A	S 290
23	S 290	S 285	S 290	F	F 300	F	325	S 340	330	335	320	320	315	320	320	330	320	320	315	S 320	S 310	310	300	305
24	305	300	310	300	280	295	340	345	340	335	320	330	325	325	320	310	320	S 325	S 320	S 330	325	310	290	295
25	305	295	295	310	295	295	340	350	345	330	310	320	325	335	325	330	320	S 310	S 330	340	A	300	305	295
26	290	285	295	290	300	300	345	340	S 345	340	325	320	S 325	325	320	320	320	S 325	S 340	325	S 305	S 310	300	295
27	290	310	310	310	310	310	345	335	C	325	330	330	315	320	305	310	S 315	S 330	U S 330	330	S 310	S 305	315	290
28	S 290	310	310	320	320	A	350	335	330	330	S 325	320	320	S 320	320	320	325	S 320	335	S 320	310	310	310	S 290
29	A	U S 285	S 290	320	F 310	S 310	340	330	340	S 330	340	340	330	320	325	330	320	315	S 315	S 335	310	A	290	305
30	305	315	300	S 300	305	305	335	340	330	S 335	320	335	320	R 335	330	320	320	325	S 330	325	310	300	305	U S 295
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	27	29	29	28	25	27	30	30	29	29	29	29	27	30	29	30	30	30	29	30	28	27	23	26
MED	S 300	300	305	305	305	305	335	335	335	330	325	320	320	320	320	320	320	320	320	S 320	310	305	300	295
UQ	305	305	310	310	310	310	340	340	340	335	330	330	325	325	320	325	320	325	330	330	320	310	310	305
LQ	S 290	S 290	300	300	300	298	325	330	330	330	320	315	320	310	310	315	320	315	310	S 310	308	S 295	290	S 290

SEP. 1985 | M(3000)F2 (0.01)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | M(3000)F1 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station: KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long. 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Day \ Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								L	350	L 355	350	340	A	360	330	L 335	L	L						
2									L 350	A	A	345	370	A	360	340	U L 350	L						
3									360	350	365	360	365	360	350	L 340	L	L						
4								L	A	350	380	355	A	355	340	345	L 330	A						
5								L	A	390	A	380	375	370	340	340	340	L	A					
6								L	L 350	360	365	355	A	A	A	A	L	L						
7								L 340	320	A	A	A	A	A	350	340	A	A						
8							L	L 345	345	370		H 365	335	360	355	L 345	355	L						
9							L	U L 340	L 360	355	360	L 350	360	L 345	L 340	A	L 330	U L 340						
10								L 355	340	360	355	R 330	A	A	L 350	A	L 350	A						
11								L	L 380	L	370	335	360	365	370	350	L	L						
12								L 350	350	350	350	L 340	340	360	350	H 340	A	L						
13								L	L 345	L 355	365	375	L 350	365	L 355	L 365	U L 335	L						
14								L	L 355	U L 355	360	365	345	360	345	L 340	U L 350	L						
15								L	A	A	350	360	360	350	350	L 345	L	A						
16								A	L 360	L 370	L	345	A	A	360	L 330	L 335	L						
17							L	L 350	A	A	360	A	A	345	340	L 340	U L 350	A						
18								L	L 350	L 360	365	380	365	350	L 345	L 330	L	L						
19								L	L 340	H 350	350	L	350	L 360	L 360	L 340	U L 345	L						
20									A	A	A	360	L 365	335	A	L	L							
21								A	A	A	355	L 365	L 350	L 330	U L 330	L 330	L	L						
22								L	L 350	L 350	L 360	360	U L 340	L 340	L 340	L	L							
23								L	L 350	L 360	L 360	370	360	340	L 350	U L 340	L							
24								L	L 345	U L 370	355	L 340	L 345	L 340	L 350	L 340	L	L						
25									A	A	A	A	345	A	L 345	U L 350	A							
26								L	L	370	A	360	345	A	L	U L 340	A							
27									C	A	L	L 360	L 360	L 340	L	L 340	L	L						
28									L	A	A	A	L 345	L 340	L	L	A							
29									L	L 365	A	A	L 340	L 350	L 350	L 340	L							
30									L	L 350	370	L 345	L 350	L 355	L 355	L	L							
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								6	18	20	19	24	23	23	25	23	11	1						
MED								L 348	L 350	L 358	360	360	350	350	350	L 340	L 345	U L 340						
UQ								L 350	L 355	368	365	365	360	360	355	342	U L 350							
LQ								L 340	L 345	350	355	345	345	L 340	L 340	L 340	L 335							

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SEP. 1985 | M(3000)F1 (0.01)

IONOSPHERIC DATA

SEP. 1985 | H'F2 (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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								270	265	295	385	330	315	330	325	310	295	270						
2									285	270	270	320	300	305	300	290	290	280						
3									270	250	290	310	325	320	320	285	275	285						
4								280	265	240	275	280	E A 310	320	405	340	290	280						
5								260	275	245	260	265	370	425	390	325	275	255	265					
6								240	270	275	310	310	280	E A 335	A	300	270	280						
7								305	380	295	A	A	A	320	295	265	280	255						
8							280	275	285	290		305	295	290	300	285	330	275						
9							270	245	240	275	280	310	300	340	305	315	325	275						
10								270	275	320	445	G	A	325	315	295	280	280						
11								255	275	L 280	380	325	410	295	285	270	255	245						
12								245	275	265	275	325	320	355	345	310	275	250						
13								240	265	270	320	275	310	315	275	300	320	280						
14								245	260	265	305	380	320	270	305	285	335	275						
15								280	280	280	265	320	280	285	315	295	275	280						
16								240	220	275	340	315	315	290	315	315	280	250						
17							280	265	250	265	285	280	A	320	315	305	285	270						
18								250	240	240	295	275	270	295	335	290	295	255						
19								230	255	260	260	L 290	325	290	305	280	280	265						
20									E A 275	A	250	265	305	355	260	260	265							
21								E A 280	260	275	280	320	275	310	325	315	265	260						
22								260	260	245	280	285	305	275	280	285	275							
23								245	260	255	275	280	290	285	270	275	255							
24								230	240	240	305	275	270	275	275	290	270	250						
25									235	245	E A 310	295	270	285	270	260	265							
26								235	240	255	265	270	260	255	255	285	265							
27									C	250	255	260	260	280	310	275	260	235						
28									280	245	E A 275	285	285	270	265	275	260							
29									230	235	235	260	260	280	265	270	260							
30									245	235	250	265	285	255	280	255	265							
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							3	22	29	29	28	29	27	30	29	30	30	22	1					
MED							280	250	262	265	279	290	298	294	305	288	275	270	265					
UQ							280	270	275	275	306	320	315	320	315	305	290	280						
LQ							275	240	245	245	264	275	278	280	275	275	265	255						

IONOSPHERIC DATA

SEP. 1985 | H'F (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Day \ Hour	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	250	305	250	265	270	255	225	240	225	205	H 190	E A 270	A	230	E A 240	245	240	E A 255	250	245	265	300	285	270
2	280	255	250	275	270	265	225	H 220	240	A	A	E A 285	225	A	220	215	H 205	245	250	230	215	250	260	280
3	290	E A 295	260	270	285	260	235	230	230	E A 250	H 195	210	205	205	210	215	H 205	H 240	245	275	270	260	255	240
4	215	270	280	265	265	250	225	A 240	A	A	190	E A 240	A	E A 245	H 200	H 180	E A 240	A	265	260	220	220	235	265
5	270	270	275	280	280	260	230	225	A	200	A	210	195	195	H 195	250	235	230	A	255	225	215	A	270
6	E A 300	280	E A 310	240	240	250	220	210	H 170	H 175	205	H 180	A	A	A	A	E A 230	245	250	255	225	240	245	240
7	240	260	220	E A 295	240	285	240	230	E A 265	A	A	A	A	A	A	H 235	A	A	240	250	230	E A 270	270	295
8	275	270	265	255	260	285	235	225	220	215	210	190	E A 245	230	215	235	230	245	255	235	235	260	270	275
9	270	260	270	275	E A 295	335	250	240	220	205	H 185	H 180	215	H 180	H 225	A	A	240	230	215	185	295	300	305
10	290	285	275	275	325	330	240	220	245	205	200	E A 260	A	A	E A 260	Y	230	A	255	230	A	A	300	290
11	260	270	280	280	250	265	230	H 230	H 200	210	190	H 180	220	H 185	210	220	A 235	H 215	240	230	245	290	270	240
12	250	265	265	280	A	A	240	230	H 175	210	215	E A 275	E A 245	230	H 230	E A 260	A	E A 250	235	235	215	250	290	270
13	290	285	260	260	230	255	H 220	H 230	225	215	A 235	215	H 210	205	H 210	215	210	H 235	240	230	215	210	235	E A 300
14	260	280	255	240	255	250	230	230	215	200	230	195	230	210	205	H 210	A	A 240	260	265	255	230	A 265	E A 330
15	E A 405	355	255	230	A	305	245	E A 255	A	A	E A 240	220	210	210	220	H 240	245	A	A 245	240	230	250	A	A
16	E A 295	E A 350	310	270	270	275	H 270	A	H 210	180	A	E A 250	A	A	E A 255	E A 235	220	240	A	235	240	285	275	E A 335
17	285	280	255	280	E A 315	295	235	E A 255	A	A	E A 250	A	A	E A 250	H 205	E A 245	E A 255	A	245	E A 275	250	245	315	330
18	275	270	255	250	265	270	H 235	235	225	200	H 190	H 170	185	190	H 195	H 190	240	A 250	245	220	250	270	300	260
19	240	255	275	250	255	260	235	225	210	190	H 200	195	H 190	H 180	H 225	230	240	235	230	260	295	280	290	265
20	225	225	260	325	285	270	225	230	A	A	A	A 220	190	255	A	A	240	250	230	220	265	295	295	245
21	300	260	255	265	270	255	230	A	A	A	E A 250	205	200	225	H 200	H 195	240	245	220	210	220	275	300	280
22	E A 310	280	245	255	265	245	235	H 240	225	E A 240	210	215	H 205	H 195	220	H 210	245	H 260	240	220	210	265	A	300
23	295	285	280	255	245	270	235	240	220	210	220	H 200	205	H 225	240	225	230	H 250	235	235	230	255	250	260
24	290	285	270	265	285	260	215	215	210	210	H 190	H 180	H 180	220	215	H 215	235	E A 240	225	215	195	245	285	310
25	290	300	295	235	265	320	235	230	A	A	A	A	H 210	A	240	225	A	E A 250	E A 240	A 235	A	255	255	280
26	290	300	295	290	255	240	225	220	230	215	A	225	E A 245	A	205	240	A	235	215	230	235	230	260	300
27	275	260	260	260	250	210	205	H 195	I C 235	A	H 235	A	200	225	H 190	240	245	235	220	255	E A 240	215	235	300
28	290	265	260	245	E A 245	A	210	H 225	235	A	A	A	235	235	H 215	E A 255	A	H 245	A 225	235	225	E A 245	270	315
29	A	300	295	235	240	280	220	225	E A 240	E A 230	A	A	205	210	210	225	E A 240	255	235	205	230	A	305	260
30	255	255	260	280	265	265	225	225	220	210	210	H 185	H 180	H 190	210	235	240	235	215	200	245	260	250	275
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	28	28	30	28	23	20	21	24	23	23	27	26	23	25	28	30	28	28	27	29
MED	275	272	261	265	264	265	230	229	222	208	205	U 199	205	210	212	223	238	242	240	235	230	254	270	275
UQ	290	285	278	278	272	282	235	234	230	212	220	A 221	216	228	222	238	240	248	248	252	248	272	292	298
LQ	260	260	255	250	250	255	225	225	212	200	H 190	H 188	198	195	H 205	215	228	235	229	220	220	238	255	265

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IONOSPHERIC DATA

SEP. 1985 | H'E (KM)

135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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	S						125	110	A	105	A 110	A	110	105	110	105	105	115	S					
2							120	105	105	105	105	105	105	A	A	A 120	A 115	A 120	B					
3							E S 135	110	105	105	105	105	105	105	105	105	105	115	B					
4							E S 130	105	A 110	A	A	A	A	A	A	A	A	A	B					
5							E S 120	110	105	A 110	A	A	A	A	E A 125	A 125	A 110	110	S					
6							E S 125	A 120	A 110	A	E A 125	A	A	A 115	A 115	A 110	105	115	S					
7							E S 120	110	105	A 115	A	A 115	A	A 110	A 110	A 110	110	115	S					
8							A	105	A 115	A 110	A	A	A	A 120	115	110	A 110	115	S					
9							E S 130	110	105	105	105	105	105	A 110	105	105	110	115	S					
10							A	A	E A 135	105	110	110	105	105	105	110	110	115	S					
11							E S 140	A	A	A	A	A 115	A 120	A 115	A	A	A	A	S					
12							A	A	A 110	A 110	E A 120	A 115	A 115	A 110	A 110	A 110	110	115	S					
13							S	A 110	A	E A 130	A 110	A 110	A 110	A 110	A 110	105	A	A	S					
14							E S 130	110	105	A 110	A 115	A 110	A 120	A 110	A 110	A 110	A 120	115	S					
15							125	110	105	105	A 110	A 115	A 125	A 110	105	110	110	115	B					
16							E S 125	110	105	A 115	A 115	A 110	110	A 110	A 115	A 110	110	115						
17							125	110	105	105	105	105	A 110	105	105	A	A	A						
18		S					120	110	105	100	A 110	E A 120	A 110	A 110	A 110	A	A 115	A						
19							E S 135	A 120	E A 125	E A 120	A	E A 120	A 115	105	110	110	110	120			S			
20			S	S			S	115	105	E A 125	A 110	A 110	A	A	A	A 110	110	115						
21							A	A 120	A 115	E A 125	A 115	110	105	A 110	A 110	105	110	E S 125						
22							E S 140	110	105	A 115	A 115	A 110	A 110	A 110	A 110	110	115	E A 120						
23							E S 135	110	A 115	A 115	A 115	110	110	A	A	A	A	A						
24							125	110	105	A 110	A 110	A 110	A 110	A 110	A 110	A 110	110	E S 130				S	S	S
25							S	110	105	105	105	105	A 110	110	110	105	110	E S 135						
26							S	115	105	105	105	A 110	A 110	A 110	105	110	110	115					S	S
27							A	A	C	105	E A 125	A 120	A 120	A 115	A 120	A 110	110	S					S	S
28	S						E S 140	110	E A 130	E A 125	105	A 110	105	105	110	110	115	E S 120						
29							125	110	105	105	A	A	A 110	A	E A 125	110	110	E S 115						
30							S	A	A	E A 135	E A 120	A 115	A 110	A 110	A 110	105	110	S						
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							20	25	25	27	23	24	24	24	25	25	25	22						
MED							E S 125	110	105	A 108	A 110	A 110	A 110	A 110	A 110	110	110	115						
UQ							E S 135	110	A 108	A 112	A 112	A 114	A 112	A 110	A 110	A 110	110	118						
LQ							125	110	105	105	105	110	108	108	110	105	110	115						

SEP. 1985 | H'E (KM)

IONOSPHERIC DATA

SEP. 1985 | H'ES (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long. 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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	S	105	100	130	125	S	G	125	125	150	105	145	130	G	E G 175	140	140	120	110	120	120	115	110	105
2	100	100	100	95	95	100	135	135	125	115	115	110	110	105	105	105	105	110	130	120	120	S	S	100
3	100	100	100	100	100	105	130	125	125	120	115	110	110	G	G	G	G	G	120	115	115	115	110	105
4	100	100	95	95	95	95	120	120	110	105	105	100	100	100	100	115	100	100	100	100	100	100	100	95
5	95	S	S	S	S	S	G	120	115	110	100	100	100	145	130	150	E G 170	130	115	115	100	100	100	100
6	100	100	100	100	100	100	G	100	100	105	150	105	100	125	115	115	115	115	110	110	110	95	110	100
7	S	S	100	105	100	105	135	140	125	125	120	115	110	110	110	110	105	110	115	110	105	105	105	105
8	100	100	100	100	100	100	135	125	125	115	105	105	105	105	G	130	120	110	110	110	110	105	105	105
9	100	100	100	100	100	100	130	120	115	115	120	135	130	100	160	120	120	110	105	105	105	105	110	115
10	S	105	105	100	100	100	100	105	145	125	125	115	110	110	135	120	115	110	S	105	105	105	105	120
11	110	105	120	120	100	105	105	155	105	100	105	115	105	105	100	100	100	105	105	105	100	95	95	95
12	95	95	105	110	100	100	100	170	100	100	160	150	135	135	125	120	115	110	110	105	110	105	95	105
13	100	100	100	100	100	130	120	130	130	100	125	125	135	130	125	G	110	105	105	105	100	100	100	100
14	100	100	S	S	105	S	125	125	120	120	120	100	E G 170	100	135	140	125	115	110	100	105	105	105	105
15	100	100	100	110	125	125	125	120	115	115	115	120	125	95	G	140	G	120	115	110	110	110	105	105
16	100	95	95	95	125	140	120	115	115	115	105	105	110	115	115	115	G	115	110	105	105	110	100	105
17	100	100	105	100	100	100	110	110	105	105	110	105	105	105	110	105	105	100	100	100	100	100	100	105
18	100	100	100	125	120	100	115	110	110	105	110	105	105	100	100	105	130	120	95	95	110	105	105	105
19	100	100	S	100	100	S	150	140	130	100	100	100	105	G	G	145	125	145	110	115	S	105	100	100
20	100	100	S	S	S	S	S	125	120	115	110	110	105	110	105	110	110	115	110	110	S	S	S	S
21	110	110	110	S	100	105	150	130	130	125	125	125	120	120	125	G	135	125	120	115	100	110	110	100
22	100	S	100	100	100	S	155	150	135	120	120	120	120	130	100	G	G	150	120	110	110	115	110	105
23	105	110	100	100	B	S	150	130	120	115	120	115	110	105	105	105	100	100	95	95	115	95	S	115
24	110	105	105	105	110	105	G	G	140	125	125	130	100	100	E G 160	100	125	115	100	95	95	S	110	110
25	105	100	105	100	S	S	135	130	120	115	110	110	120	115	G	145	135	120	115	115	110	S	110	105
26	100	95	95	S	S	S	S	155	135	115	115	115	115	110	130	170	125	110	105	105	105	100	S	S
27	100	S	B	115	105	120	105	150	C	120	130	120	120	120	100	125	110	110	105	110	105	110	S	S
28	S	135	100	115	100	100	140	150	130	115	115	115	120	120	G	130	120	115	110	110	110	105	105	105
29	105	100	100	100	100	S	130	125	115	110	105	105	125	105	110	110	110	110	110	105	105	105	105	105
30	100	105	100	95	100	110	145	135	110	105	105	105	105	105	105	G	G	145	120	100	S	S	110	110
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	26	26	25	25	25	20	24	29	29	30	30	30	30	27	24	25	25	29	29	30	27	25	25	27
MED	100	100	100	100	100	102	130	125	120	115	115	112	110	110	111	120	115	115	110	108	105	105	105	105
UQ	100	105	105	110	105	108	138	140	130	120	120	120	120	120	128	140	125	120	115	110	110	110	110	105
LQ	100	100	100	100	100	100	118	120	115	105	105	105	105	105	105	110	110	110	105	105	102	100	100	100

SEP. 1985 | H'ES (KM)

IONOSPHERIC DATA

SEP. 1985 | TYPES OF ES | 135° E Mean Time (G.M.T. + 9 h)

Station KOKUBUNJI TOKYO Lat. 35° 42.4' N, Long 139° 29.3' E Sweep 1 MHz to 20 MHz in 20sec in automatic operation

Hour / Day	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	K 1	F 4	F 1	F 1	F 2			H 2	HL 21	H 1	L 1	HL 11	H 1		H 2	H 2	H 2	C 5	C 6	F 2	F 4	F 4	F 7	F 3
2	F 2	F 2	F 5	F 3	F 2	FF 21	H 2	H 2	H 2	C 2	C 2	C 2	C 2	L 3	L 2	L 2	L 2	LL 22	HL 21	F 1	F 1			F 2
3	F 6	F 6	F 4	F 4	F 5	F 1	C 5	C 2	C 2	C 2	C 2	C 1	C 1						C 3	F 2	FF 21	FF 21	F 2	F 2
4	F 3	F 4	F 2	F 2	F 2	F 2	C 2	C 3	CL 31	LL 22	LL 12	L 2	L 2	L 2	L 2	LL 12	L 3	L 5	L 5	F 5	F 5	F 4	F 5	F 4
5	F 2							C 2	C 3	CL 21	L 2	L 3	L 1	HL 12	HL 12	HL 12	HL 21	H 2	C 6	FF 21	F 2	F 4	F 5	F 4
6	F 5	F 5	F 4	F 4	F 2	F 1		L 2	L 2	LL 11	HLL 11	LL 11	L 2	HL 11	CL 11	CL 21	C 2	C 2	C 2	F 3	F 2	F 2	FF 21	F 1
7			F 3	F 4	F 3	F 1	H 3	H 3	H 2	HL 21	CL 22	CL 22	CL 22	CL 21	CL 21	CL 41	C 4	C 6	CL 21	FF 52	F 5	F 4	F 7	F 2
8	F 2	F 2	F 2	F 2	F 5	F 2	HL 22	H 2	HL 11	CL 21	LL 21	L 1	L 2	L 1		H 2	C 2	C 3	C 4	FF 41	F 5	F 3	F 4	F 4
9	F 2	F 2	F 7	F 2	F 3	F 3	HL 51	C 3	C 2	C 2	C 1	H 1	H 1	L 1	H 1	H 2	C 3	C 3	L 4	F 6	F 1	F 1	F 2	F 1
10		F 2	F 2	F 3	F 7	F 3	L 2	L 3	HL 22	C 1	C 1	C 2	C 2	C 3	H 2	C 2	C 2	C 4		F 7	F 7	F 5	F 1	F 1
11	F 1	F 1	FF 32	FF 12	F 2	F 1	L 2	HLL 22	L 2	L 2	L 1	CL 11	L 1	L 1	L 2	L 3	L 3	LL 44	L 1	FF 12	FF 12	F 3	F 2	F 4
12	F 4	F 1	F 2	FF 12	F 4	F 5	LH 23	HL 23	L 2	L 1	HL 11	HL 11	HL 21	HL 11	HL 21	HL 21	C 2	C 3	L 3	F 4	F 1	FF 11	F 2	FF 11
13	F 2	F 2	F 3	F 4	F 3	FF 12	C 3	CL 22	HL 23	LH 32	HL 11	HL 11	HL 11	HL 11	HL 11		L 2	L 4	LL 21	F 2	F 3	F 1	F 1	F 3
14	F 2	F 2			F 2		H 4	C 2	C 2	CL 21	CL 11	L 1	HL 12	L 1	HL 11	HL 21	CL 42	C 4	L 2	F 1	FF 41	FF 32	FF 31	F 4
15	F 2	F 2	FF 12	FF 11	F 4	F 5	C 4	C 3	C 2	C 2	CL 11	CL 11	CL 21	L 1		H 1		C 5	C 5	F 4	F 1	F 5	F 3	FF 23
16	F 4	F 3	F 4	F 2	F 2	FF 11	C 7	C 4	C 2	CL 11	CL 21	CL 21	C 2	CL 21	CL 21	CL 31		C 3	F 4	F 4	F 2	F 4	F 3	F 5
17	F 2	F 2	FF 32	F 4	F 5	F 2	C 3	C 3	C 3	C 2	C 2	C 2	CL 31	C 2	C 2	L 2	L 3	L 3	F 2	F 2	F 2	F 2	F 1	F 4
18	F 3	LK 21	F 2	FF 21	F 2	F 1	C 1	C 2	C 3	C 2	CL 11	L 1	L 1	L 1	L 1	LL 11	HL 22	CL 32	F 4	F 2	FF 22	F 2	FF 11	F 1
19	F 2	F 1		F 1	F 2		H 2	HL 22	HL 22	L 2	L 2	L 1	L 1			H 1	H 2	H 2	FF 11	FF 11	K 1	F 2	F 2	F 4
20	F 2	F 1	K 1	K 1				H 2	C 2	CL 22	CL 21	CL 21	L 1	LL 21	L 3	CL 21	C 2	C 4	F 2	F 1				
21	F 2	F 2	F 1		F 2	F 2	HL 31	HL 31	HL 21	HL 21	HL 21	C 1	C 1	CL 11	CL 11		H 2	CL 41	F 3	F 1	F 1	F 3	F 2	F 2
22	F 3		F 3	F 3	F 1		H 3	H 2	H 2	HL 21	CL 21	CL 11	CL 11	CL 11	L 1			HL 21	F 1	F 2	F 1	F 3	F 7	F 4
23	F 2	FF 11	F 1	F 1			H 2	H 2	CL 22	CL 21	CL 21	C 1	C 2	L 2	L 2	L 3	L 3	LC 21	FF 22	FF 22	FF 14	F 1		F 2
24	F 2	F 2	F 1	F 2	F 2	F 2			H 2	C 2	CL 11	CL 11	L 1	L 1	HL 11	L 1	H 2	CL 51	F 4	F 3	F 1	K 1	LK 21	LK 21
25	F 2	F 2	F 2	F 2			H 2	H 3	C 3	C 2	C 3	C 4	CL 11	C 2		H 1	H 5	C 5	F 6	F 7	F 4		F 2	F 2
26	F 2	F 2	F 3					H 1	H 2	C 2	C 2	CL 21	CL 11	CL 21	C 1	H 1	H 2	C 5	F 5	F 5	F 3	F 3	K 1	K 1
27	F 2			F 1	F 2	F 1	L 3	HL 23		C 2	CL 11	CL 11	CL 11	CL 11	L 2	HL 11	C 3	LL 41	F 5	F 3	F 4	F 2	K 1	K 1
28	K 1	F 1	F 5	FF 21	F 4	F 6	HL 5	H 2	HL 21	CL 21	C 2	CL 21	C 1	C 1		H 2	C 5	C 3	F 3	F 4	F 1	F 5	F 3	F 2
29	F 5	F 2	F 4	F 2	F 1	F 1	H 3	C 2	C 3	C 3	L 2	L 3	CL 11	LL 21	LL 11	C 2	C 3	C 5	F 5	F 4	F 2	F 6	F 5	F 3
30	F 3	F 3	F 3	F 2	F 1	F 1	H 3	HL 22	LL 21	L 2	L 2	L 1	L 1	L 1	L 1			H 2	F 3	F 1			F 2	F 5
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																								
UQ																								
LQ																								

SEP. 1985 | TYPES OF ES

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FXI (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C														C	C	C	C	C
2	C	C	C	C	C	C														C	C	C	C	C
3	C	C	C	C	C	C														X 67	X 69	X 68	X 64	X 65
4	X 59	57	55	52	X 36	X 34														X 85	X 74	X 68	X 53	X 39
5	46	43	41	38	36	X 33														X 79	X 86	X 70	A	44
6	A	45	44	46	40	39														X 76	X 76	X 69	X 60	X 58
7	X 56	X 55	X 50	X 44	48	X 31														X 72	X 69	X 48	47	47
8	48	45	40	X 35	X 34	X 35														X 73	X 70	X 54	X 48	47
9	S 47	X 43	S	X 37	X 37	X 35														U S 97	X 54	X 33	X 35	X 36
10	X 36	U S 38	X 36	36	X 33	X 31														S 86	X 59	A	X 36	39
11	38	36	S 34	X 35	S 36	X 34														X 69	X 67	U S 43	O S 44	44
12	45	S 41	S 41	41	44	28														X 82	S 61	X 36	X 38	X 39
13	X 40	X 38	X 39	X 36	X 34	X 31														X 86	X 75	X 55	X 38	X 39
14	X 38	X 38	S 38	X 37	X 35	X 32														X 80	S 97	X 56	X 30	X 32
15	A	X 33	X 42	X 26	X 24	X 24														S 98	X 80	A	A	A
16	39	43	40	S 39	35	X 33														X 77	U S 57	45	39	40
17	48	U S 36	43	S	40	43														H 91	X 80	45	41	43
18	45	X 41	40	40	34	35														X 82	S 73	O S 50	X 49	S 49
19	49	X 43	X 39	X 37	X 35	X 33														U S 79	X 76	X 77	X 73	X 67
20	X 62	U S 41	X 42	X 38	S 40	S 44														S 82	U S 59	U S 47	48	46
21	48	O S 59	50	45	45	X 27														X 93	X 63	O S 32	S 35	39
22	35	44	43	35	33	U S 29														S 87	S 70	U S 40	X 41	U S 39
23	X 40	X 42	45	46	42	X 37														X 81	X 61	X 45	X 44	S 42
24	X 39	X 39	X 39	X 38	X 40	X 36														X 72	X 55	X 36	X 35	X 35
25	X 36	X 36	X 36	X 40	X 31	X 39														X 60	X 50	X 40	X 39	X 38
26	X 39	X 40	X 39	X 38	X 38	X 32														X 75	X 65	X 46	X 41	X 40
27	X 40	X 42	X 39	X 38	X 37	X 30														X 82	X 57	X 37	X 35	X 35
28	X 36	X 39	X 39	X 36	X 33	X 26														X 77	U S 62	X 42	X 40	X 41
29	X 40	X 42	X 40	X 40	X 36	X 32														X 85	X 54	X 34	X 35	X 37
30	X 39	S 41	X 38	X 36	34	S 32														X 72	X 47	S 37	S 37	O S 37
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	27	26	26	27	27														28	28	26	26	27
MED	X 40	X 41	40	X 38	X 36	X 33														X 80	X 66	X 45	X 40	X 40
UQ	48	43	43	40	40	X 35														X 86	X 74	X 55	X 48	45
LQ	X 39	X 38	X 39	X 36	X 34	X 31														X 74	X 58	X 37	X 36	X 38

SEP. 1985 | FXI (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOF2 (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long. 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	62	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	56	59	57	57	58	C	C	49	48	61	63	62	58	S 59
4	53	F	F	F	30	28	37	54	71	61	56	55	53	55	51	56	61	65	72	79	68	62	47	33
5	F	F 34	F 32	F	F 27	27	42	49	73	57	53	51	50	53	60	69	67	62	67	73	80	64	A	F
6	A	F	F	F	F	F	35	45	58	66	57	52	54	52	57	61	57	56	58	70	70	63	54	52
7	50	49	S 44	38	F 38	25	37	53	58	53	53	62	72	70	72	78	70	58	58	66	63	42	F	F
8	F	F 35	F 29	29	28	29	31	49	57	48	51	61	61	58	57	53	52	60	70	67	64	48	42	F
9	S 42	37	A	31	31	29	36	60	51	49	63	59	59	56	56	59	75	91	101	91	48	27	29	30
10	31	S 32	30	F 27	27	25	38	45	50	J R 49	51	54	56	60	59	66	U H 73	71	76	80	54	A	30	F
11	F	F	S 28	29	33	28	34	48	48	C	C	C	C	C	C	59	60	55	50	63	S 61	37	S 38	F
12	F	35	35	F 31	F 34	F	34	50	54	52	51	53	53	63	59	59	68	76	77	76	55	30	32	33
13	34	32	33	30	28	25	33	48	57	52	53	53	53	53	53	51	51	69	82	80	69	J S 49	32	33
14	32	32	32	31	29	26	35	54	52	51	54	54	57	66	56	55	57	69	77	S 74	91	50	24	S 26
15	A	27	36	20	18	18	30	55	66	74	63	70	66	65	66	61	64	77	89	S 92	S 74	A	A	A
16	F	F	F	S 33	U F 29	27	27	76	56	49	52	60	71	86	75	56	58	73	73	S 71	U S 51	F	F	F
17	F	U S 30	F	A	F	U F 32	U S 36	59	R 60	55	61	54	59	R 71	67	63	H 64	69	77	U S 85	73	U F 36	U F 34	F 33
18	35	35	F 32	F 31	F 26	F 25	35	55	72	56	H 54	60	63	60	59	61	66	64	S 68	76	67	U S 44	43	S 43
19	U F 37	37	33	31	29	27	S 36	49	56	R 61	59	62	64	61	U R 61	55	60	65	68	U S 73	70	71	67	S 61
20	56	U S 35	36	32	S 34	U S 38	43	51	62	62	58	61	58	66	87	66	61	S 64	A	S 76	U S 53	U S 41	F	F
21	F	S 53	F	F 31	F 32	21	S 34	53	53	55	63	54	69	71	75	81	91	91	S 100	87	57	S 26	S 29	F 30
22	F	F 30	F	F	F 25	U S 23	S 30	64	67	56	56	67	70	80	79	H 69	63	65	75	S 81	S 64	U S 34	35	U S 33
23	34	36	F	F	F 32	31	35	50	63	59	56	A	70	75	65	60	57	68	80	75	55	39	38	S 36
24	33	33	33	32	34	30	34	51	55	60	57	65	72	68	76	64	65	68	77	66	49	30	29	29
25	30	30	30	34	25	33	32	50	57	60	57	73	74	74	67	63	64	65	66	54	44	34	33	32
26	33	34	33	32	32	26	36	66	57	63	61	66	86	76	64	59	70	78	78	69	59	40	35	34
27	34	36	33	32	31	24	31	52	59	72	61	70	82	H 80	66	71	76	84	86	76	51	31	29	29
28	30	33	33	30	27	20	30	51	68	71	61	60	78	92	87	86	78	70	72	71	56	36	34	35
29	34	36	34	34	30	26	35	54	67	72	67	77	96	98	U R 93	H 84	64	64	73	79	48	28	29	31
30	32	35	32	30	F	S 26	32	51	64	71	H 60	70	79	86	65	58	65	72	84	65	41	31	31	U S 31
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	23	19	21	24	25	27	27	27	26	27	26	27	27	27	27	27	29	27	28	28	25	23	20
MED	34	35	33	31	30	26	35	51	58	58	57	60	64	66	65	61	64	68	75	74	60	39	34	33
UQ	37	36	34	32	32	29	36	54	65	63	61	66	72	76	74	68	69	72	79	80	68	49	40	36
LQ	32	32	32	30	27	25	32	50	56	52	54	54	57	59	58	58	60	64	68	68	52	31	30	30

SEP. 1985 | FOF2 (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOF1 (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	C	C	C	C	C	C	C	C	C	C	C					
2							C	C	C	C	C	C	C	C	C	C	C	L	C					
3							C	C	C	C	U L 430	L 450	L 450	L 440	L 430	C	C	L						
4								L	A	A	U L 450	U L 450	U L 460	L 440	U L 430	A	L 410	L 380	A					
5									L	L	A	U L 430	U L 460	L 430	U L 440	L 430	L 410	L	L					
6									L 390	L	L 420	U L 450	A	U L 460	L 430	L 430	L 410	U L 380						
7									L	A	U L 440	A	L 430	L 440	A	L 420	A	A						
8								L	L	U L 420	U L 430	L 430	A	L 430	A	U L 450	L 420	A						
9								L	L	L	A	A	A	A	450	440	410	370	A					
10								L	430	420	H 430	A	A	440	A	400	A	A	A					
11									L	C	C	C	C	C	C	410	450	U L 350	L					
12								L	L	L 400	A	450	450	A	A	410	400	A	A					
13								L	L	410	420	430	430	430	430	430	400	380	L					
14								L	L	400	U L 450	440	430	430	430	440	420	L	L					
15								L	L	L	430	450	450	460	450	450	L	370	L					
16								L	L	A	A	440	430	H 450	420	U L 490	410	L	L					
17								L	L	410	420	A	A	A	440	420	A	A	A					
18								L	L	L	430	430	440	450	440	430	400	L	A					
19								L	A	A	U L 430	430	440	450	U L 420	U L 410	400	L	A					
20									L	L	420	U L 460	U L 450	U L 440	U L 450	A	A	L	A					
21										A	420	U L 430	U L 460	U L 460	450	440	U L 410	A						
22								L	L	L	U L 470	440	U L 420	450	L	L	A	A	A					
23									L	L 400	L 420	A	U L 440	L 440	L 430	L	L	L						
24									L	U L 420	L 410	L 440	L 450	L 450	L 430	L	L	L						
25									L	A	A	A	A	U L 450	A	L	A	L						
26										A	U L 420	L 440	L 450	L 440	A	A								
27										L	L	L 450	L 450	L 440	L 430	U L 420	L	L						
28									L	L	A	A	A	A	U L 420	U L 440	L	A						
29									L	A	A	L 430	L 450	L 440	L	L 410	L	L						
30									L	420	L 410	440	440	450	430	L	420	L						
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	9	19	20	20	23	19	19	14	6						
MED									410	410	L 430	L 440	L 450	L 440	L 430	430	410	375						
UQ										420	U L 430	450	L 450	450	440	440	L 420	L 380						
LQ										400	L 420	L 430	435	L 440	L 430	415	400	370						

SEP. 1985 | FOF1 (0.01 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOE (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	C	C	C	C	C	C	C	C	C	C	C					
2							C	C	C	C	C	C	C	C	C	C	C	240	C					
3							C	C	C	C	310	325	A	A	A	C	C	250	175					
4							S	200	250	280	305	A	A	A	A	A	A	A	A					
5							S	195	255	A	A	A	A	A	A	A	A	A	A					
6							S	A	255	300	A	330	A	340	325	310	A	240	A					
7							S	230	275	305	315	325	330	320	310	R 290	270	225	S					
8							S	200	255	A	A	A	A	330	320	300	280	235	S					
9							S	A	255	295	305	H 320	330	320	310	300	290	240	S					
10							S	R 205	250	290	305	315	320	325	315	300	260	A	S					
11							S	190	A	C	C	C	C	C	C	A	260	215	A					
12							S	A	A	285	A	330	335	330	R 325	300	280	235	S					
13							S	215	260	295	315	330	330	330	320	R	A	A	A					
14							S	210	280	300	A	315	315	A	A	A	A	A	S					
15							S	200	255	285	300	315	315	320	310	300	270	220	A					
16							S	190	A	A	A	A	R 330	A	A	300	R 275	A	A					
17							S	195	245	275	285	A	A	A	310	295	A	A	S					
18							S	A	260	260	A	U R 320	R 330	R 330	320	300	R 270	230	S					
19							S	210	250	290	A	A	A	A	300	305	275	220	S					
20							S	220	A	290	305	A	A	A	A	A	A	A	S					
21							S	190	250	H 280	A	310	H 320	315	310	295	260	230	S					
22							S	190	A	A	R 310	330	330	320	315	295	270	A	S					
23							S	210	250	280	305	315	A	340	R 320	300	265	220	A					
24							S	205	255	295	U R 320	R 325	R 330	R 325	315	295	260	220	S					
25							S	200	260	290	305	320	A	325	310	300	U R 280	230	S					
26							S	220	255	295	305	U R 320	325	320	310	295	260	200	S					
27							S	190	250	290	310	320	A	325	305	295	265	205	S					
28							S	A	250	A	300	310	310	310	305	290	R 250	A	S					
29							S	210	265	A	A	A	A	A	A	300	290	250	S					
30							S	215	U R 260	295	R 310	A	R 330	R 320	305	H 290	250	215	S					
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	20	17	18	15	18	20	21	20	19	1					
MED								202	255	290	305	320	330	325	310	300	270	230	175					
UQ								210	260	295	310	325	330	330	320	300	278	238						
LQ								195	250	282	305	315	320	320	310	295	260	220						

SEP. 1985 | FOE (0.01 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	G 22	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	44	47	JA 51	JA 51	JA 41	C	C	G	G	ES 16	JA 27	ES 16	JA 20	JA 30
4	ES 16	JA 44	JA 21	ES 16	JA 20	JA 18	19	28	JA 47	JA 51	43	JA 45	37	JA 38	JA 36	JA 46	JA 40	JA 33	JA 52	JA 110	JA 60	JA 37	JA 26	JA 52
5	JA 29	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	27	33	36	JA 49	JA 46	39	JA 37	JA 44	JA 37	JA 33	JA 30	JA 33	JA 30	JA 37	JA 42	JA 84	JA 32
6	JA 62	JA 25	JA 20	JA 39	JA 34	JA 21	JA 20	JA 41	31	34	34	43	JA 51	44	JA 45	40	36	JA 42	JA 51	JA 41	JA 25	JA 20	JA 25	JA 18
7	JA 26	JA 32	JA 22	ES 16	ES 16	ES 16	ES 16	28	JA 41	JA 50	44	JA 54	37	38	JA 45	JA 39	JA 44	JA 44	JA 41	JA 37	JA 36	JA 18	JA 32	JA 40
8	JA 42	JA 30	JA 20	JA 20	JA 23	20	ES 16	28	29	33	JA 52	JA 44	JA 55	37	44	JA 42	G	JA 58	JA 41	JA 74	JA 24	JA 36	JA 26	JA 29
9	JA 37	JA 17	JA 30	JA 20	ES 16	JA 17	JA 21	JA 25	31	37	46	50	50	50	40	42	G	29	JA 36	JA 29	JA 25	ES 16	JA 17	ES 16
10	JA 20	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	G	G	31	35	45	46	39	45	40	JA 60	JA 47	JA 36	JA 26	42	JA 61	ES 16	JA 22
11	JA 36	JA 17	ES 16	ES 16	ES 16	ES 16	ES 16	24	35	C	C	C	C	C	C	JA 35	G 24	G 19	JA 20	ES 16	ES 16	JA 42	JA 33	JA 34
12	JA 21	17	ES 16	ES 16	ES 16	ES 16	ES 16	26	JA 37	JA 54	41	39	45	52	49	36	35	JA 42	JA 39	JA 52	JA 36	JA 39	JA 20	ES 16
13	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	24	JA 39	36	39	38	37	35	34	38	JA 33	JA 25	24	JA 18	ES 16	ES 16	JA 18	JA 27
14	JA 25	JA 18	JA 18	JA 20	ES 16	ES 16	ES 16	24	G	G	44	38	39	33	32	32	JA 51	JA 39	JA 192	JA 70	JA 41	JA 22	JA 18	ES 16
15	JA 33	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	27	39	43	44	38	37	35	35	33	JA 44	33	JA 24	JA 135	JA 65	JA 51	JA 51	JA 41
16	33	JA 20	JA 20	21	19	ES 16	ES 16	JA 30	JA 44	JA 45	JA 89	63	G 28	JA 45	36	JA 39	G	JA 30	JA 25	47	JA 84	JA 35	39	JA 25
17	ES 16	59	JA 51	40	JA 29	21	20	24	31	36	51	JA 55	JA 53	JA 58	JA 44	JA 44	JA 43	JA 43	JA 40	JA 84	JA 65	JA 34	JA 20	JA 20
18	24	20	21	20	19	ES 16	17	JA 32	G	JA 35	JA 36	G 31	G 27	JA 36	G 25	G 19	G 20	G 21	JA 31	JA 40	JA 35	JA 46	JA 20	21
19	22	23	22	22	JA 24	ES 16	ES 16	26	JA 55	JA 49	JA 41	33	36	33	36	JG 23	30	25	JA 34	JA 38	JA 21	JA 20	18	ES 16
20	26	JA 17	21	JA 19	JA 19	JA 18	19	JA 29	JA 39	JA 49	39	JA 45	47	JA 47	JA 74	JA 65	JA 65	JA 50	71	JA 110	JA 107	JA 52	JA 25	JA 36
21	JA 34	JA 20	ES 16	ES 16	ES 16	20	JA 25	JA 40	JA 43	JA 49	40	42	JA 50	41	36	31	33	JA 43	JA 26	JA 52	ES 16	21	JA 25	JA 17
22	JA 24	JA 25	17	23	18	17	22	24	31	38	38	35	37	37	JA 44	38	JA 47	JA 51	JA 35	JA 34	71	JA 50	23	21
23	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	G	31	33	35	JA 65	JA 35	G 32	G 28	G 24	G 20	32	JA 30	JA 36	JA 21	ES 16	JA 18	JA 22
24	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	JA 25	JA 24	30	33	37	37	38	36	G	G	G	27	17	ES 16	JA 18	ES 16	ES 16	ES 16
25	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	26	34	JA 48	JA 46	44	JA 57	41	45	35	41	33	JA 29	JA 50	JA 65	JA 18	ES 16	ES 16
26	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	G	29	JA 45	JA 42	33	34	39	44	JA 45	JA 43	JA 47	JA 36	JA 24	ES 16	ES 16	ES 16	ES 16
27	JA 21	ES 16	JA 18	ES 16	ES 16	ES 16	ES 16	24	30	31	G 28	G 29	JA 33	G 28	G 26	G 22	30	25	ES 16	JA 18	JA 34	JA 20	JA 39	ES 16
28	JA 36	ES 16	JA 17	ES 16	ES 16	JA 18	ES 16	25	30	JA 36	JA 45	JA 55	JA 50	JA 47	42	JA 42	36	JA 38	JA 51	JA 44	JA 43	JA 29	JA 25	ES 16
29	JA 17	JA 18	ES 16	JA 23	JA 19	JA 18	ES 16	24	29	JA 50	JA 51	JA 47	38	38	JA 37	37	G	G	ES 16	JA 27	JA 36	JA 21	JA 21	JA 24
30	JA 33	JA 29	JA 20	ES 16	ES 16	ES 16	ES 16	G	G 20	31	G 27	JA 35	G 22	G 27	G	G	G	29	20	ES 16	ES 16	ES 16	ES 16	ES 16
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	27	27	27	27	27	27	27	27	27	26	27	27	27	27	27	27	27	29	28	28	28	28	28	28
MED	JA 24	17	17	ES 16	ES 16	ES 16	ES 16	25	31	36	42	44	38	38	40	37	33	JA 33	JA 34	JA 38	JA 36	JA 22	JA 20	JA 21
UQ	JA 33	JA 24	JA 20	20	19	18	19	28	JA 39	JA 49	46	JA 47	50	44	44	JA 41	JA 43	JA 43	JA 40	JA 52	JA 52	JA 40	JA 26	JA 30
LQ	16	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	24	30	33	38	38	36	36	34	32	G 20	25	JA 24	JA 25	JA 21	17	JA 18	ES 16

SEP. 1985 | FOES (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FBES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	G 22	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	42	38	37	37	37	C	C	G	G	E S 16	E	E S 16	E	19
4	E S 16	32	E	E S 16	18	E	19	28	44	48	41	42	36	34	35	44	35	25	45	62	42	20	20	E
5	E	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	25	32	34	47	39	33	35	41	35	32	27	26	30	20	20	A A 84	23
6	A A 62	E	E	E	22	E	G	25	30	34	34	41	44	40	40	G	31	33	40	E	E	E	E	E
7	18	E	E	E S 16	E S 16	E S 16	E S 16	26	32	47	41	50	36	38	44	38	42	38	40	34	27	E	20	29
8	20	E	E	E	E	E	E S 16	23	29	31	40	38	52	37	43	38	G	52	38	32	E	21	20	27
9	28	17	A A 30	20	E S 16	E	20	23	30	36	44	49	49	46	39	40	G	28	33	21	19	E S 16	E	E S 16
10	19	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	G	G	30	32	42	44	38	44	39	43	44	35	20	24	A A 61	E S 16	18
11	E	E	E S 16	E S 16	E S 16	E S 16	E S 16	G	33	C	C	C	C	C	C	32	G 24	G 19	19	E S 16	E S 16	E	25	18
12	E	E	E S 16	E S 16	E S 16	E S 16	E S 16	20	30	34	40	36	42	51	48	35	30	40	39	48	E	17	E	E S 16
13	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	G	23	34	36	28	37	35	34	32	28	24	19	E	E S 16	E S 16	E	20
14	19	E	E	18	E S 16	E S 16	E S 16	G	G	G	35	36	37	33	32	31	30	34	20	30	25	20	17	E S 16
15	A A 33	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	25	37	40	42	37	35	34	34	32	35	30	20	55	54	A A 51	A A 51	A A 41
16	E	E	E	E	E	E S 16	E S 16	23	35	40	50	32	G 28	38	34	34	G	21	22	44	41	E	E	20
17	E S 16	21	24	A A 40	20	E	G	G	29	35	41	49	51	55	42	41	39	42	35	54	42	21	17	E
18	E	E	E	E	E	E S 16	17	22	G	32	35	G 30	G 27	G 24	G 24	G 19	G 20	G 17	31	35	26	41	19	E
19	E	19	E	E	18	E S 16	E S 16	25	41	46	37	33	35	33	34	G 23	29	G	33	27	E	19	E	E S 16
20	17	E	E	E	E	E	G	24	31	36	38	35	41	34	39	54	45	40	A A 71	66	35	30	E	E
21	E	E	E S 16	E S 16	E S 16	E	20	28	36	48	39	39	23	40	35	31	32	43	G	21	E S 16	E	E	E
22	E	E	E	E	E	E	G	23	30	37	36	G	36	36	41	36	43	43	33	30	38	24	E	E
23	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	G	28	32	33	A A 65	34	G 32	G 28	G 24	G 19	31	28	34	20	E S 16	18	20
24	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	19	19	29	32	36	36	37	35	G	G	G	G	17	E S 16	E	E S 16	E S 16	E S 16
25	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	24	34	48	44	43	54	40	45	34	40	30	28	42	20	E	E S 16	E S 16
26	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	G	29	43	20	33	34	38	43	44	42	45	29	E	E S 16	E S 16	E S 16	E S 16
27	20	E S 16	E	E S 16	E S 16	E S 16	E S 16	22	28	31	G 28	G 29	33	G 28	G 25	G 22	29	24	E S 16	E	E	E	E	E S 16
28	E	E S 16	E	E S 16	E S 16	E	E S 16	24	29	24	43	53	49	45	40	42	35	32	30	27	25	23	22	E S 16
29	E	E	E S 16	19	E	E	E S 16	G	G	48	45	40	36	35	34	33	G	G	E S 16	23	25	20	E	E
30	17	20	E	E S 16	E S 16	E S 16	E S 16	G	G 20	G	G 27	34	G 22	G 25	G	G	G	28	E	E S 16	E S 16	E S 16	E S 16	E S 16
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	27	27	27	27	27	27	27	27	27	26	27	27	27	27	27	27	27	29	28	28	28	28	28	28
MED	16	16	16	E S 16	E S 16	E S 16	E S 16	23	30	34	39	38	36	36	37	34	30	30	28	28	20	16	16	16
UQ	18	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	24	32	43	42	42	43	39	42	38	37	40	35	38	26	21	20	20
LQ	E	E	E	E E 16	E S 16	E	E S 16	G	28	32	35	34	34	34	34	28	G 20	22	19	16	E E 16	E E 16	E	E

SEP. 1985 | FBES (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FMIN (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	16	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	17	20	20	20	18	C	C	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
4	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	17	18	19	18	17	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
5	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	17	17	19	17	18	16	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
6	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	20	18	18	19	18	17	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
7	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	20	18	18	20	18	18	17	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
8	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	20	18	18	20	18	18	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
9	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	18	16	19	16	20	19	16	16	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
10	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	20	20	19	20	19	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
11	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	16	C	C	C	C	C	C	16	15	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
12	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	14	15	18	16	17	17	16	16	15	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
13	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	16	17	18	17	18	15	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	17	15	19	21	23	19	17	17	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	17	19	19	20	22	20	17	16	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	14	18	19	23	20	17	21	16	16	12	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	17	19	21	20	19	17	16	15	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
18	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	17	17	17	16	16	15	14	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
19	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	16	16	17	16	16	15	15	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
20	E S 16	E S 16	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16	14	15	16	16	18	16	16	16	14	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
21	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	13	12	16	18	17	16	16	15	15	14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
22	E S 16	E S 16	E S 16	E S 16	E S 15	E S 16	E S 16	E S 16	16	16	16	16	21	20	19	17	16	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
23	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	18	19	18	18	17	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
24	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	16	16	17	16	16	16	18	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
25	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	17	18	17	18	18	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
26	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	17	16	17	18	16	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
27	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	19	18	16	17	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
28	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	16	18	16	16	20	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
29	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	17	16	18	18	20	19	17	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
30	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	19	17	18	16	15	15	17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
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	27	27	27	27	27	27	27	27	27	26	27	27	27	27	27	27	27	29	28	28	28	28	28	28
MED	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	18	18	18	18	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
UQ	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	17	17	19	20	20	19	17	16	16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
LQ	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	16	17	17	16	16	16	15	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16

SEP. 1985 | FMIN (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | M(3000)F2 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	315	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	375	345	335	325	325	C	C	355	310	310	315	320	310	S 320
4	340	F	F	F	315	305	335	360	380	385	365	335	320	335	315	310	320	315	320	335	345	345	330	320
5	F	F 325	F 330	F	F 315	315	355	355	395	385	360	360	310	300	310	310	330	320	320	320	350	390	A	F
6	A	F	F	F	F	F	350	355	355	395	370	325	335	270	325	325	325	320	300	320	335	325	315	305
7	310	335	S 330	315	F 355	300	325	360	360	395	310	305	335	320	325	340	350	345	335	350	335	335	F	F
8	F	F 330	F 310	345	320	275	340	375	395	355	295	345	335	325	335	320	315	325	335	330	335	345	320	F
9	S 300	325	A	300	320	310	325	365	370	315	365	345	340	325	320	290	310	315	345	370	370	280	280	290
10	290	S 295	325	F 295	290	290	345	375	300	J R 345	325	315	320	320	320	320	U H 305	325	330	360	360	A	295	F
11	F	F	S 310	300	330	355	340	370	360	C	C	C	C	C	C	330	300	335	315	315	S 345	320	S 300	F
12	F	310	305	F 330	F 365	F	330	360	370	350	345	315	295	325	305	310	325	330	340	350	380	275	290	335
13	305	310	320	325	305	295	335	360	315	365	345	360	340	330	330	310	295	310	330	345	345	J S 365	315	310
14	315	320	310	320	355	330	340	370	365	370	310	295	310	270	305	235	300	305	310	S 290	340	390	295	S 305
15	A	275	335	390	300	320	335	345	350	350	335	325	335	310	320	315	305	315	335	S 345	S 365	A	A	A
16	F	F	F	S 320	U F 295	295	295	360	400	375	A	300	300	325	315	305	310	335	340	S 365	U S 350	F	F	F
17	F	U S 315	F	A	F	U F 295	U S 335	355	R 375	345	360	295	305	R 325	320	315	H 310	320	330	U S 350	385	U F 320	U F 295	F 320
18	315	315	F 330	F 320	F 325	F 320	340	365	395	375	H 340	340	325	325	320	310	335	330	S 315	330	350	A	315	S 325
19	U F 310	310	320	320	325	315	S 345	365	355	R 360	345	340	345	325	U R 320	300	335	330	330	U S 315	285	295	290	S 310
20	320	U S 300	305	280	S 295	U S 315	350	360	370	370	360	325	300	280	325	325	320	S 320	A	S 340	U S 350	U S 290	F	F
21	F	S 330	F	F 340	F 360	335	S 325	365	365	355	350	340	325	315	285	295	315	315	S 345	355	375	S 290	S 275	F 285
22	F	F 285	F	F	F 320	U S 305	S 300	360	380	365	310	335	320	325	350	H 305	315	325	325	S 350	S 375	U S 310	300	U S 270
23	310	305	F	F	F 330	320	330	350	365	355	340	A	335	340	340	335	315	330	345	360	335	320	315	S 335
24	320	305	305	310	340	365	350	370	365	350	335	325	340	315	335	350	330	345	350	355	365	300	295	295
25	300	315	300	350	360	210	345	370	385	360	305	330	330	330	345	325	350	355	340	340	330	325	305	295
26	305	310	320	310	330	345	345	350	385	365	345	325	330	355	335	315	340	345	360	345	365	335	315	295
27	295	320	350	330	370	375	355	365	355	375	345	320	330	H 325	340	325	330	340	360	330	360	320	295	310
28	300	320	335	335	370	325	335	370	380	380	370	290	320	330	325	335	345	340	355	365	355	335	310	315
29	310	320	310	340	350	325	355	380	390	375	350	335	340	330	U R 310	H 295	320	345	355	340	395	320	295	320
30	320	310	320	315	F	S 340	345	370	365	385	H 305	340	350	350	345	320	325	335	355	370	350	320	320	U S 305
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	23	19	21	24	25	27	27	27	26	26	26	27	27	27	27	27	29	27	28	28	24	23	20
MED	310	315	320	320	328	315	340	365	370	365	345	328	330	325	325	315	320	330	335	345	350	320	300	310
UQ	315	320	330	335	355	330	345	370	382	375	360	340	335	330	335	325	330	340	345	355	365	335	315	320
LQ	300	308	310	310	315	300	332	360	360	355	325	315	320	318	318	308	310	320	322	330	338	305	295	295

SEP. 1985 | M(3000)F2 (0.01)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | M(3000)F1 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long. 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	C	C	C	C	C	C	C	C	C	C	C					
2							C	C	C	C	C	C	C	C	C	C	C	L	C					
3							C	C	C	C	A	L 390	L 390	L 385	L 395	C	C	L						
4								A	A	A	A	A	U L 380	L 385	U L 395	A	A	L 370	A					
5									L	L	A	U L 405	U L 390	L 420	A	L 385	L 355	L	L					
6									L 370	L	L 415	A	A	A	A	L 360	L 380	A						
7									L	A	A	A	L 395	L 375	A	L 380	A	A						
8								L	L	U L 390	A	L 395	A	L 395	A	A	L 345	A						
9								L	L	L	A	A	A	A	350	A	345	350	A					
10								L	355	380	H 390	A	A	365	A	A	A	A	A					
11									L	C	C	C	C	C	C	390	335	U L 340	L					
12								L	L	L 390	A	H 380	A	A	A	385	345	A	A					
13								L	L	385	380	370	395	395	385	370	360	335	L					
14								L	L	395	U L 370	365	370	370	340	320	345	A	L					
15								L	A	A	A	355	375	365	340	340	A	350	L					
16								L	L	A	A	385	395	H 355	380	U L 305	330	L	L					
17								L	L	390	A	A	A	A	A	A	A	A	A					
18								L	L	L	395	405	385	390	365	350	335	L	A					
19								L	A	A	U L 385	405	385	375	U L 380	U L 365	350	L	A					
20									L	L	390	U L 360	U L 365	U L 365	A	A	A	L	A					
21										A	370	U L 385	U L 360	U L 345	345	340	U L 340	A						
22								L	L	L	U L 360	385	U L 430	355	L	L	A	A	A					
23									L	L 385	L 405	A	U L 385	L 365	L 385	L	L	L						
24									L	U L 370	L 400	L 375	L 375	L 375	L 370	L	L	L						
25									L	A	A	A	A	U L 345	A	L	A	L						
26										A	A	L 385	L 365	L 375	A	A								
27										L	L	L 365	L 375	L 385	L 385	U L 355	L	L						
28									L	L	A	A	A	A	A	A	L	A						
29									L	A	A	A	L 375	L 385	L	L 380	L	L						
30									L	380	L 420	385	405	H 380	380	L	H 310	L						
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	9	12	17	19	22	14	14	13	5						
MED									362	385	L 390	385	L 385	L 375	380	362	345	350						
UQ										390	L 402	L 390	392	L 385	L 385	L 380	350	350						
LQ										380	375	370	L 375	L 365	350	340	335	340						

SEP. 1985 | M(3000)F1 (0.01)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | H*F2 (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	C	C	C	C	C	C	C	C	C	C	C					
2							C	C	C	C	C	C	C	C	C	C	C	295	C					
3							C	C	C	C	270	295	310	320	320	C	C	270						
4								245	240	240	270	300	340	320	345	350	310	295	280					
5									220	230	A	275	370	380	350	310	280	290	270					
6									270	230	280	295	295	440	330	300	310	300						
7									245	265	320	A	300	300	310	280	270	270						
8								235	230	280	370	300	300	325	295	350	340	A						
9								235	240	L	260	285	290	320	320	350	305	280	240					
10								225	355	290	340	335	320	315	300	300	285	265	250					
11									250	C	C	C	C	C	C	290	330	260	260					
12								240	250	265	270	355	380	305	330	330	290	270	245					
13								230	230	260	280	280	300	320	300	355	385	295	245					
14								230	240	250	L 325	320	340	280	295	345	320	290	270					
15								260	265	250	285	290	290	320	300	330	315	280	250					
16								245	205	245	E A 350	345	315	285	270	310	325	255	245					
17								240	230	275	245	E A 355	E A 335	290	295	305	280	275	255					
18								230	220	245	285	270	285	300	305	305	280	270	255					
19								235	260	240	270	270	270	310	285	L 285	285	275	255					
20									235	235	240	290	L	300	275	A 290	E A 285	270	A					
21										A 265	260	275	300	295	325	310	280	275						
22								240	225	250	350	275	285	285	260	270	285	280	250					
23									250	240	270	A	280	280	280	290	280	270						
24									245	270	275	295	270	320	275	265	280	240						
25									230	250	A	295	280	280	270	295	255	240						
26										250	270	290	280	260	270	E A 290								
27										240	275	290	280	275	280	285	280	255						
28									240	240	240	A	290	275	280	275	250	250						
29									230	240	270	275	265	255	270	275	275	270						
30									240	230	250	270	260	255	250	285	285	250						
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								13	24	25	25	24	26	27	27	27	26	27	14					
MED								235	240	250	270	290	291	300	295	300	285	270	252					
UQ								240	250	265	285	299	312	320	315	320	310	280	260					
LQ								230	230	240	270	275	280	280	275	285	280	262	245					

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | H'F (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	225	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	A	H 200	H 200	210	210	C	C	220	H 225	265	255	245	270	270
4	215	E A 300	235	240	E A 275	E S 290	250	A	A	A	A	A	H 200	H 200	H 195	A	E A 250	E A 245	A	E A 275	A 240	215	A 240	S 230
5	E S 290	E S 270	E S 280	E S 280	E S 300	E S 280	220	225	230	200	A	200	H 195	H 180	A	E A 270	230	225	A	E A 265	230	200	A	E A 315
6	A	S 270	S 260	S 260	E S 275	S 260	220	220	225	230	H 190	A	A	240	A	225	225	A	A 250	S 250	240	230	E S 270	E S 270
7	E A 280	E S 270	S 245	S 250	220	E S 290	250	230	A	A	E A 270	A	200	220	A	E A 240	A	A	265	A 240	A 235	220	A	A
8	A 260	E S 275	E S 290	E S 270	S 270	E S 290	250	230	230	220	E A 270	A 230	A	200	A	A	225	A	E A 265	A 250	220	225	E A 260	A
9	A 305	255	A	E A 300	E S 265	E S 280	A 255	235	215	215	A	A	A	A	E A 250	A	230	235	A	200	200	S	E S 315	E S 300
10	A 330	S 300	S 275	E S 285	E S 330	E S 325	240	H 220	210	H 195	200	A	A	E A 240	A	A	A	A	A	A 210	A 200	A	E S 300	A 310
11	A 325	290	E S 290	E S 300	240	S 240	230	220	A 230	C	C	C	C	C	C	200	205	200	250	240	215	S 215	E A 315	A 300
12	300	280	S 280	265	200	E S 350	245	235	230	H 235	A	H 200	A	A	A	215	245	A	A	E A 245	200	A	S 305	280
13	270	E S 275	270	245	S 270	E S 290	245	225	A	225	E A 250	H 215	205	195	H 200	225	230	235	235	230	215	200	E S 250	E A 300
14	A 290	E S 280	E S 280	A 270	E S 240	E S 250	240	225	220	205	205	200	200	H 185	H 200	205	235	A	245	A 300	A 210	200	A	E S 300
15	A	E S 360	250	200	S	S	250	245	A	A	A	E A 250	215	205	200	230	A	E A 260	A 235	E A 250	E A 240	A	A	A
16	E S 270	E S 300	E S 295	E S 260	E S 275	E S 295	E S 270	240	A	A	A	H 185	200	A 230	225	A 230	225	H 230	A	225	E A 245	E S 305	E S 400	E A 350
17	E S 270	E A 320	E A 330	A	E A 320	E S 285	255	225	A 225	205	A	A	A	A	A	A	A	A	A	245	220	E A 280	E A 285	E S 295
18	E S 285	260	250	250	255	E S 275	250	220	230	205	200	H 190	180	H 185	185	H 205	H 205	235	A	250	220	E A 400	260	250
19	260	E A 275	260	260	255	245	220	230	A	A	A 210	190	195	200	205	H 205	235	230	A	255	250	E A 270	E S 275	235
20	230	E S 235	E S 275	E S 325	E S 295	255	210	225	235	A	A 225	200	A 245	205	A	A	A	A	A	E A 220	230	E A 335	E S 325	E S 305
21	E S 295	245	E S 270	E S 260	230	E S 250	250	215	230	A	E A 245	A 230	A 220	A 255	H 220	230	180	A	235	210	200	E S 260	E S 325	E S 330
22	E S 305	E S 320	245	235	E S 275	E S 295	S 260	245	235	E A 230	200	200	185	H 195	A	E A 245	A	A	A	225	225	E A 280	E S 270	E S 305
23	E S 290	E S 280	E S 280	E S 275	245	250	240	225	220	220	205	A	H 180	H 190	225	225	225	A	A 240	225	225	E S 240	A 250	E S 275
24	E S 290	E S 290	E S 300	E S 295	240	225	230	220	225	210	210	220	220	200	220	H 200	H 220	230	230	220	200	E S 270	E S 275	E S 320
25	E S 315	E S 300	E S 300	235	220	E S 325	245	220	A	A	A	A	A	E S 255	A	240	A	240	230	E A 270	225	E S 250	E S 255	E S 290
26	E S 300	E S 300	E S 290	E S 280	230	235	230	220	225	A	E A 240	H 190	H 200	225	A	A	E A 275	E A 255	225	220	215	220	S 255	E S 300
27	E S 310	E S 255	E S 250	E S 265	220	210	S 245	225	235	220	H 200	H 190	H 195	215	205	225	220	240	225	215	205	225	E S 275	E S 290
28	E S 300	E S 275	S 245	S 245	200	E S 285	S 245	230	240	240	A	A	A	A	A	A	A	A	230	225	225	E A 250	E A 300	E S 290
29	E S 295	E S 280	E S 280	E A 260	230	E S 275	230	225	230	A	A	E A 250	205	200	225	220	230	240	230	225	205	E A 270	E S 295	E S 290
30	A 270	A 280	280	S 285	300	S 255	230	215	230	215	195	205	185	185	H 180	210	H 230	A 245	230	200	200	S 235	S 260	S 285
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	27	26	26	26	26	27	26	20	16	16	18	19	23	15	19	19	17	17	28	28	24	24	25
MED	E S 290	E S 280	E S 278	U S 231	U 238	E S 278	245	225	230	216	204	200	200	200	205	220	228	232	232	232	219	U 221	E S 275	E S 295
UQ	E S 300	E S 300	E S 290	E S 280	E S 275	E S 290	250	230	230	225	E A 242	212	205	217	221	228	231	238	242	A 247	230	E A 270	E S 302	E S 305
LQ	E E 270	E S 270	S 248	245	230	S 242	230	220	225	205	200	H 190	195	195	200	208	222	230	230	222	205	219	S 250	E S 280

SEP. 1985 | H'F (KM)

IONOSPHERIC DATA

SEP. 1985 | H'E (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	C	C	C	C	C	C	C	C	C	C	C					
2							C	C	C	C	C	C	C	C	C	C	C	A	C					
3							C	C	C	C	115	115	115	115	115	C	C	115	E S 130					
4							S	120	115	110	110	110	115	115	A	115	A	A	A					
5							S	120	115	115	110	115	110	A	A	A	A	A	A					
6							S	A	A	A	A	115	110	110	115	115	115	120	120					
7							S	E S 130	120	120	115	115	115	110	115	115	115	120	S					
8							S	120	115	115	115	115	115	115	115	120	120	120	S					
9							S	A	115	115	H 100	H 100	100	110	110	110	110	115	S					
10							S	125	115	110	110	110	110	110	110	110	110	110	S					
11							S	115	105	C	C	C	C	C	C	A	E A 115	A	A					
12							S	A	A	A	A	105	105	105	A 110	A 110	A	115	S					
13							S	A	A	A 110	105	110	105	H 105	105	A 110	A	A	A					
14							S	120	110	110	110	115	110	110	105	105	A	A	S					
15							S	E S 120	115	105	110	110	110	110	110	110	110	110	A					
16							S	120	115	115	105	A	E A 125	A	E A 115	110	110	115	A					
17							S	120	115	115	115	115	115	110	110	110	110	110	S					
18							S	115	115	105	105	A	115	115	115	110	110	115	S					
19							S	E S 125	115	115	A	A	115	115	110	115	110	110	S					
20							S	E S 125	105	105	E A 120	115	115	A	A	A	110	115	S					
21							S	115	110	110	A	A	115	115	120	H 110	E A 120	120	S					
22							S	E A 120	110	E A 120	105	115	115	115	115	115	115	115	S					
23							S	120	120	115	115	115	115	A	A	A	120	120	A					
24							S	A	120	115	115	110	110	110	110	115	115	120	S					
25							S	E S 125	115	115	115	115	115	115	115	115	115	120	S					
26							S	120	120	115	115	115	A	115	115	115	115	120	S					
27							S	120	115	A	A	A	A	A	A	115	115	120	S					
28							S	A	A	A	110	115	115	120	120	115	120	120	S					
29							S	E S 130	A	A	A	A	115	A	A	115	120	120	S					
30							S	115	110	110	A	A	A	A	105	110	110	E B 130	S					
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								21	22	21	20	20	24	20	21	23	22	23	2					
MED								118	115	115	110	115	115	112	115	115	114	118	122					
UQ								122	115	115	115	115	115	115	115	115	115	120						
LQ								120	110	110	108	110	110	110	110	110	110	115						

SEP. 1985 | H'E (KM)

IONOSPHERIC DATA

SEP. 1985 | H'ES (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N. Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	105	C	C	C	C	C	C
3	C	C	C	C	C	C	C	C	C	C	120	120	120	110	110	C	C	G	G	S	120	S	115	105
4	S	105	100	S	100	100	130	125	120	120	120	115	120	110	105	120	100	100	110	105	100	100	100	105
5	105	S	S	S	S	S	S	130	130	125	115	110	110	100	95	100	100	100	100	95	100	105	110	110
6	110	110	110	100	100	100	100	100	150	160	120	130	125	130	125	130	125	120	115	115	115	115	110	115
7	110	110	105	S	S	S	S	140	130	125	125	120	125	125	120	120	115	115	110	110	110	110	115	110
8	110	100	100	100	100	100	S	130	130	120	115	120	115	130	120	120	G	120	115	110	110	110	110	110
9	100	100	100	100	S	100	100	100	125	125	115	115	115	115	120	120	G	120	110	105	110	S	115	S
10	100	S	S	S	S	S	S	G	G	120	125	110	115	120	115	115	110	105	105	105	105	100	S	105
11	105	110	S	S	S	S	S	135	115	C	C	C	C	C	C	100	105	100	100	S	S	105	105	105
12	105	110	S	S	S	S	S	100	105	130	135	135	120	115	135	135	140	115	110	105	105	105	105	S
13	S	S	S	S	S	S	S	145	100	140	130	125	125	125	130	120	100	100	100	105	S	S	105	105
14	105	105	105	100	S	S	S	145	G	G	115	115	110	120	120	110	105	105	110	105	105	100	100	S
15	105	S	S	S	S	S	S	125	120	120	115	120	120	125	125	125	115	110	110	110	105	105	105	110
16	105	100	100	100	145	S	S	120	110	110	105	110	110	105	115	125	G	125	110	105	105	110	110	105
17	S	105	105	100	105	100	105	125	115	115	110	105	110	110	110	110	105	105	105	105	105	100	100	100
18	115	100	105	100	105	S	120	120	G	110	110	105	105	100	105	105	100	105	115	105	105	100	100	110
19	105	95	105	105	100	S	S	130	120	115	110	115	110	110	110	100	130	135	110	110	120	105	105	S
20	100	105	100	100	100	100	110	135	125	120	115	120	105	105	105	105	110	110	105	105	105	105	110	105
21	105	100	S	S	S	175	135	130	130	125	125	120	100	120	120	145	155	120	120	125	S	110	125	105
22	120	100	105	105	105	105	105	150	135	125	125	135	120	115	115	115	110	110	105	105	105	105	110	105
23	S	S	S	S	S	S	S	G	125	125	125	125	120	105	105	105	105	130	120	110	110	S	110	105
24	S	S	S	S	S	S	100	100	130	130	130	130	130	130	G	G	G	130	150	S	120	S	S	S
25	S	S	S	S	S	S	S	140	130	120	120	120	115	125	125	150	140	140	130	120	120	115	S	S
26	S	S	S	S	S	S	S	G	150	125	120	125	130	125	120	120	120	120	110	100	S	S	S	S
27	100	S	100	S	S	S	S	150	130	150	105	105	105	105	100	100	130	120	S	115	115	110	105	S
28	110	S	105	S	S	100	S	140	140	100	120	115	120	120	125	120	120	110	110	105	105	100	100	S
29	100	105	S	100	100	100	S	140	130	120	120	115	120	120	100	125	G	G	S	110	105	115	120	120
30	105	105	100	S	S	S	S	G	105	160	105	100	100	100	G	G	G	130	120	S	S	S	S	S
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	20	17	15	11	10	10	9	23	24	25	27	27	27	27	25	25	21	27	25	24	23	21	23	18
MED	105	105	105	100	100	100	105	130	128	125	120	120	115	115	115	120	110	115	110	105	105	105	110	105
UQ	110	105	105	100	105	100	120	140	130	125	125	122	120	125	120	125	125	120	115	110	112	110	110	110
LQ	102	100	100	100	100	100	100	122	118	120	115	112	110	108	105	105	105	105	105	105	105	100	105	105

IONOSPHERIC DATA

SEP. 1985 | TYPES OF ES | 135° E Mean Time (G.M.T. + 9 h)

Station YAMAGAWA Lat. 31° 12.1' N, Long 130° 37.1' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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																								
2																		L 2						
3											C 3	C 2	C 2	C 3	C 2						F 3		F 3	F 6
4		F 4	F 2		F 4	F 2	C 3	C 5	C 4	C 6	C 4	C 3	C 1	C 2	L 2	CL 42	L 3	L 3	L 6	F 6	F 5	F 3	F 4	F 2
5	F 2							C 3	C 2	C 2	C 5	C 2	C 2	L 2	L 5	L 4	L 5	L 3	L 6	F 7	F 2	F 3	F 6	F 5
6	F 5	F 2	F 2	F 2	F 5	F 2	L 2	L 3	HL 12	HL 12	CL 21	C 2	C 2	C 2	C 2	C 1	C 1	C 4	C 3	F 2	F 3	F 3	F 4	F 2
7	F 4	F 2	F 3					H 2	H 3	C 6	C 3	C 2	C 2	C 2	C 2	C 2	C 3	C 6	C 7	F 4	F 7	F 3	F 5	F 4
8	F 5	F 4	F 2	F 2	F 2	F 2		C 3	C 2	C 1	C 4	C 3	C 3	C 1	C 2	C 2		C 6	C 7	F 3	F 2	F 3	F 6	F 7
9	F 4	F 7	F 4	F 5		F 1	L 4	L 4	C 3	C 2	C 3	C 4	C 3	C 2	C 2	C 2		C 4	L 4	F 6	F 4		F 1	
10	F 1									C 1	C 1	C 2	C 2	C 1	C 2	C 2	C 5	C 5	L 7	F 4	F 2	F 4		F 3
11	F 3	F 1						H 1	HC 32							L 3	L 2	L 2	L 2			F 3	F 3	F 3
12	F 2	F 1						L 3	L 3	HL 22	HL 21	C 1	C 2	C 4	CL 21	CL 11	HL 12	C 6	L 6	F 5	F 2	F 3	F 1	
13								HL 23	LH 22	HL 21	C 3	CL 21	C 1	C 1	C 1	CL 12	L 1	L 3	L 2	F 1			F 1	F 2
14	F 5	F 2	F 2	F 2				H 2			C 2	CL 21	C 2	C 1	C 1	C 2	L 2	L 4	L 3	F 3	F 5	F 3	F 2	
15	F 5							C 3	C 3	C 4	C 4	C 2	C 1	C 1	C 1	C 1	C 3	C 3	L 2	F 6	F 6	F 5	F 5	F 3
16	F 2	F 2	F 2	F 2	F 1			C 4	C 3	C 4	C 4	L 2	L 1	CL 21	CL 11	C 2		C 2	L 4	F 8	F 5	F 5	FF 53	FF 61
17		F 5	F 4	F 6	F 5	F 2	L 1	C 4	C 3	C 2	C 3	C 3	C 3	C 5	C 3	C 5	C 5	C 7	L 6	F 6	F 3	F 2	F 2	F 1
18	FF 11	F 2	F 1	F 2	F 1		C 3	C 1		C 3	C 2	L 2	L 1	L 1	L 1	L 1	L 1	L 1	C 6	F 4	F 7	F 6	F 3	F 1
19	F 2	F 3	F 1	F 2	F 4			C 2	C 3	CL 41	CL 31	CL 11	CL 11	CL 11	CL 21	L 2	HL 11	H 2	L 4	F 3	F 1	F 3	F 1	
20	F 4	F 3	F 2	F 6	F 2	F 2	L 1	H 2	C 3	C 3	CL 31	CL 11	CL 31	CL 21	LL 21	L 5	C 5	CL 61	LL 61	FF 61	FF 42	FF 42	F 2	F 2
21	F 2	F 2				F 1	C 1	C 4	C 4	C 3	CL 12	CL 22	LC 22	CL 32	CL 12	HL 11	HL 22	C 4	CL 21	FFF 15		F 2	FF 21	F 2
22	FF 12	F 3	F 2	F 2	F 2	F 1	L 2	H 2	HC 22	CL 21	C 2	HL 11	C 1	C 2	C 3	C 3	C 4	C 5	L 7	F 7	F 5	F 4	F 2	F 1
23									C 3	C 2	C 2	C 3	C 2	L 1	L 1	L 2	L 2	CL 42	CL 43	F 7	F 3		F 2	F 3
24							L 4	LH 42	H 2	H 2	H 2	H 2	H 2	H 1				H 1	H 3		F 2			
25								H 3	H 3	C 4	C 3	C 3	C 4	C 2	C 2	H 2	H 3	H 3	H 6	F 6	F 4	F 3		
26									H 2	C 3	C 2	C 1	CL 12	CL 11	CL 21	C 3	C 4	C 5	C 6	F 3				
27	F 3		F 2					H 2	H 2	HL 12	L 1	L 2	L 2	L 2	L 2	L 2	C 2	C 2		F 3	F 1	F 4	F 5	
28	F 2		F 3			F 2		HL 24	HL 33	L 3	CL 32	C 3	C 4	C 3	C 2	C 4	C 3	C 5	C 4	F 6	F 3	F 4	F 4	
29	F 2	F 2		F 1	F 1	F 2		H 1	HL 33	CL 43	CL 32	CL 22	C 2	CL 22	L 2	C 2				F 7	F 4	F 5	F 2	F 2
30	F 3	F 3	F 1						L 1	H 1	L 2	L 2	L 1	L 2				C 3	C 1					
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																								
UQ																								
LQ																								

SEP. 1985 | TYPES OF ES

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FXI (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 58	S 53	S 51	S 53	X 48	X 48	X 60													X 83	X 70	X 49	S 50	48
2	X 52	X 48	49	X 42	30	X 30	X 42													U S 117	S 96	X 49	43	45
3	S 48	43	42	39	36	34	X 41													S 75	X 77	S 77	U S 69	67
4	55	61	A	40	40	32	36													A	X 78	A	S 62	S 41
5	X 38	36	35	36	35	34	U S 43													S 128	X 138	S 85	S 53	U S 45
6	48	54	47	S 48	40	40	X 39													X 85	X 92	X 75	X 56	U S 53
7	S 52	U S 50	S 48	X 45	S 40	X 36	S 39													S 84	S 66	S 44	38	37
8	36	A	35	37	X 33	27	S 30													X 83	X 73	X 66	X 46	44
9	U S 43	U S 45	S 41	S 39	S 37	U S 34	S 38													U S 122	U S 89	S 61	U S 46	S 48
10	U S 46	S 54	V 56	41	34	S 38	U S 45													U S 98	S 63	A	A	36
11	36	35	S 34	X 34	34	X 30	X 36													X 78	X 79	U S 46	U S 32	37
12	40	38	35	42	S 30	34	X 33													U Y 105	X 55	X 39	X 38	X 38
13	42	S 40	S 38	39	S 31	S 32	S 31													X 90	S 74	S	X 36	X 36
14	35	37	X 36	X 35	35	S 32	X 34													S 93	U S 115	S 38	S 28	S 31
15	S 33	X 30	S 44	X 24	S	S 24	X 33													S 113	S 74	A	A	A
16	A	X 37	X 38	X 32	X 30	S 28	32													X 93	X 41	37	X 38	A
17	A	38	U S 38	U S 30	A	A	39													X 142	S 78	A	A	U S 48
18	S 53	V 58	60	U S 46	X 37	32	X 36													S 109	U S 102	A	A	A
19	A	38	38	X 35	X 32	S 30	S 34													S 85	S 95	90	77	S 69
20	S 48	S 48	S 44	X 39	X 41	X 56	U S 34													U S 97	U S 69	A	A	S 39
21	A	A	U S 36	39	X 39	O S 29	S 33													S 121	X 63	S 33	X 31	X 31
22	40	38	38	36	28	X 30	U S 33													U S 121	60	42	40	41
23	S 49	S 60	X 59	S 61	X 60	X 50	S 40													U S 99	U S 77	U S 56	X 57	U S 53
24	S 57	U S 46	S 42	41	46	U S 38	S 31													X 76	X 59	X 39	X 35	S 35
25	S	S 36	S 34	X 41	X 27	X 25	X 28													X 69	X 69	38	A	39
26	S 40	S 41	U S 38	X 41	S 38	X 31	X 34													S 95	U S 108	A	S 41	S 45
27	S 43	S 44	X 47	S 50	X 39	S 26	X 31													X 95	X 49	X 28	X 36	X 36
28	X 36	X 36	X 38	X 37	X 31	S 24	X 30													S 86	U S 43	A	40	40
29	41	42	X 47	U S 56	X 44	X 35	X 36													S 87	U S 78	A	S 42	U S 44
30	S 44	U S 45	39	38	40	45	S 32													S 88	U S 76	U S 45	A	U S 46
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	28	29	30	28	29	30													29	30	20	23	27
MED	44	42	39	39	36	32	34													S 93	S 75	46	41	41
UQ	S 49	S 49	47	42	40	36	X 39													S 109	S 89	64	S 52	S 47
LQ	40	38	38	36	32	S 30	S 32													X 85	X 63	38	37	37

The Radio Research Laboratories. Japan

IONOSPHERIC DATA

SEP. 1985 | FOF2 (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	52	47	45	47	42	S 42	54	46	51	57	57	64	75	67	65	62	67	70	71	77	64	S 43	S 44	F
2	46	42	F	S 36	F	24	36	R 48	R 52	57	64	66	66	73	80	81	80	84	91	U S 111	S 90	S 43	F	F
3	S 42	F	F	F	F	F	35	R 62	68	R 63	61	63	64	R 72	65	63	67	60	R 65	S 69	S 71	S 71	U S 63	F
4	F	F	A	F	F	F	F	60	70	59	55	57	67	R 83	U R 74	65	67	A	R 87	A	72	A	S 56	35
5	32	F	F	F	F	F	U S 37	U R 63	62	57	54	R 55	R 59	U R 89	U R 110	R 109	R 112	119	R 121	122	132	79	47	39
6	F	F	F	S 42	F	F	J S 33	51	64	61	54	U R 55	A	56	61	64	67	R 62	64	79	86	69	S 50	U S 47
7	S 46	S 44	U S 42	39	S 34	30	S 33	53	64	58	A	63	81	86	84	87	84	71	72	S 78	60	38	F	F
8	F	A	F	F 28	27	F	S 24	53	56	50	R 66	R 65	61	60	65	61	62	68	74	77	67	60	40	F
9	S 42	U S 39	S 35	S 32	S 31	28	32	55	51	60	65	54	67	64	64	R 74	94	U R 113	U S 120	U S 116	U S 83	U S 55	S 40	S 42
10	S 40	48	V 50	F	F	S 32	U S 39	U R 54	50	R 48	R 57	63	69	R 72	70	74	88	89	81	U S 92	S 57	A	A	F
11	F	F	S 28	29	F	24	30	49	52	56	53	R 64	79	90	77	68	80	79	R 61	72	S 73	S 40	U S 26	F
12	F	F	F	F 33	S 24	F	27	54	54	51	48	54	65	69	76	73	77	83	93	U Y 99	49	S 33	32	32
13	F	S 34	S 32	F	U S 25	U S 26	U S 25	R 53	R 52	50	50	55	56	56	R 53	53	R 62	78	J R 101	84	68	S	30	30
14	F	F	30	S 29	F	J S 26	S 28	R 52	R 51	56	54	67	59	63	R 61	63	74	81	R 94	S 87	J S 109	S 32	22	S 25
15	S 27	24	S 38	S 18	S	S 18	S 27	56	65	78	70	73	73	77	71	77	R 83	R 100	R 113	J S 107	S 68	A	A	A
16	A	31	32	26	24	U S 22	F	R 70	R 62	49	R 49	61	79	99	R 107	H 83	78	U R 100	R 93	87	35	F	32	A
17	A	F	U S 32	U S 24	A	A	F	R 62	60	56	62	59	86	R 118	U R 121	R 116	U R 123	U R 124	133	136	U S 72	A	A	U S 42
18	47	U S 49	F 47	U S 40	31	F 23	S 30	R 65	R 58	U R 63	U R 66	R 64	R 87	R 114	R 123	R 118	R 112	R 108	U R 104	J S 103	U S 96	A	A	A
19	A	F	F	S 29	26	24	S 28	50	R 60	63	C 60	R 75	71	R 75	76	R 72	R 69	74	76	79	U S 89	F	F	S 63
20	S 42	U S 42	38	S 33	35	50	U S 28	50	69	U R 65	57	53	R 64	70	95	89	R 72	79	75	U S 91	U S 63	A	A	S 33
21	A	A	U S 30	F	S 33	23	S 27	52	52	R 61	59	63	R 66	80	85	99	108	118	116	115	57	S 27	25	S 25
22	F	F	F	F	F	S 24	U S 27	65	54	61	58	70	78	90	95	U R 108	U R 109	U R 107	U R 108	U S 115	F	F	F	F
23	J S 43	54	53	55	54	U S 44	34	52	56	66	58	J R 64	77	86	89	76	76	88	J R 101	U S 93	U S 70	U S 52	J S 51	47
24	J S 50	40	36	F	F 38	S 32	U S 25	46	R 53	R 64	64	66	81	93	R 101	R 86	83	90	78	70	53	33	29	S 29
25	A	S 30	J S 28	35	21	19	22	S 60	53	52	66	76	90	89	76	84	88	79	R 57	J S 63	U S 63	F	A	F
26	34	S 35	U S 32	35	32	25	S 28	58	57	61	61	74	91	105	U R 95	R 84	80	84	R 95	U S 89	U S 102	A	S 35	39
27	S 37	38	41	U S 44	33	U S 20	25	55	58	71	73	72	93	100	83	68	80	95	J S 101	89	J S 43	28	30	30
28	30	30	32	31	25	S 18	S 24	56	R 67	R 64	67	62	81	94	93	94	97	86	86	80	S 42	A	F 31	F
29	F 32	F 33	S 41	J S 50	38	30	30	56	64	66	69	92	138	J R 145	126	123	123	R 118	R 99	81	U S 72	A	S 36	U S 38
30	S 38	S 39	F	F	F	F	S 26	R 53	R 67	R 69	73	R 77	93	R 104	U R 111	U R 110	R 92	R 87	R 95	S 82	S 70	S 39	A	S 40
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	18	20	21	18	22	27	30	30	30	29	30	29	30	30	30	30	29	30	29	29	16	19	17
MED	S 42	39	36	S 33	32	24	S 28	54	58	60	60	64	75	84	82	79	80	86	93	87	S 70	S 42	35	S 38
UQ	S 46	44	42	40	35	S 30	33	60	64	64	66	70	81	94	95	94	94	R 100	R 101	U S 103	S 83	S 58	S 46	S 42
LQ	S 34	33	S 32	S 29	25	23	S 26	52	52	56	55	59	66	70	70	68	72	79	75	79	60	S 33	30	S 30

SEP. 1985 | FOF2 (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOF1 (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long. 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								A	L	L	L 440	450	450	L 460	L 430	430	L 420	L 410	L					
2								A	A	A	A	A	A	A	440	L 550	530	400	A					
3								L	L	A	A	450	450	440	430	L 430	430	L 410	L					
4								A	A	A	A	A	A	L 430	A	A	A	A	A					
5								L	L	A	A	A	L	450	A	420	A	A	A					
6								A	L	A	A	A	A	A	A	430	L 410	L 390	L					
7									L	A	A	A	A	A	A	A	A	A	A					
8									L	L	A	A	A	A	A	A	A	A	A					
9									L	A	A	A	450	A	440	430	A	A	A					
10										L	420	430	440	440	440	430	400	L 390	A					
11								L	L	L	L 460	440	450	420	L 440	L 430	410	L	L					
12									L	L	A	L	L 430	440	L 430	430	L 410	L	A					
13									L 370	L 400	L 430	440	450	L 440	L 440	L 420	L 410	L 380	L					
14									L	L 420	L 440	440	L 430	460	460	440	410	L 390	L 320					
15									L	A	L 420	A	A	470	A	A	A	A	L					
16								L	L	L	L	L 440	L 420	L	A	450	L 410	L	A					
17								L	L	L	L	L	440	450	A	A	A	A	A					
18									L	L 410	430	440	440	L 460	440	440	L 420	A	A					
19									L	A	L 440	L 440	L 450	440	440	L 430	410	L 370						
20									L	A	L	A	L	L	A	A	L	A	A					
21									L	A	A	L	L	L	L 450	450	L	L	A					
22									L	L	L	450	440	L 450	L 450	L	L 420	L	L					
23									L	L	L 420	L 430	L 420	L 440	L 440	L 440	L	L						
24								L	L	L	L 420	450	L 480	L 450	L 430	420	L 410	L						
25									A	A	L	L	L 460	A	A	A	A	L	A					
26									L	L	L	L 450	440	A	A	L	L	A	A					
27									L	L	450	440	L	440	L	L	L	L						
28									L	L	L	U L 450	L 460	L 440	L 430	L	L	A						
29									L	L	L	U L 440	U L 440	U L 450	L 480	L 440	L	A						
30									L	L	L 440	440	450	450	L 440	430	410	L						
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									1	3	12	17	20	20	18	19	15	8	1					
MED									L 370	L 410	L 435	440	445	445	L 440	430	410	L 390	L 320					
UQ										L 415	L 440	450	450	450	L 440	440	420	L 405						
LQ										L 405	L 420	440	440	440	L 430	430	410	L 385						

SEP. 1985 | FOF1 (0.01 MHZ)

IONOSPHERIC DATA

SEP. 1985 | FOE (0.01 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								A	A	A	A	A	A	R 355	A	325	300	265	210					
2								210	R 260	A	A	A	A	R 340	A	A	A	A	A					
3								R 210	260	A	R 325	A	A	A	A	A	A	A	A					
4								200	255	290	310	A	A	A	330	R 320	R 300	A	A					
5								200	260	A	A	A	A	A	A	A	A	A	A					
6								210	A	A	A	A	A	A	330	315	A	R 250	A					
7								A	A	295	315	A	A	A	A	A	A	A	A					
8								A	260	295	315	325	330	330	325	310	290	A	S					
9								R 190	250	290	310	325	330	330	325	315	285	R 240	S					
10								A	R 225	A	R 310	325	340	335	320	315	280	R 220	S					
11								210	A	A	A	A	340	R 345	330	320	R 290	A	A					
12								190	A	A	A	330	335	340	330	305	285	245	A					
13								R 210	R 270	295	A	A	335	335	A	A	A	A	R 180					
14								S	A	A	A	330	325	330	300	R 290	280	235	S					
15								195	245	290	305	320	325	325	315	300	R 270	A	S					
16								195	R 250	A	A	A	A	A	A	A	300	R 245	A					
17								200	245	A	A	A	A	A	A	A	280	A	A					
18								A	A	A	A	A	A	330	R 325	320	285	A	S					
19								205	250	290	315	R 310	R 310	325	325	A	280	230	A					
20								R 210	A	A	A	R 330	A	A	A	A	A	A	A					
21								R 195	R 260	A	A	A	A	R 330	A	310	285	240	S					
22								190	R 250	295	310	R 330	A	A	A	A	290	A	S					
23								215	A	A	A	340	345	350	325	A	A	230	180					
24								210	A	300	320	325	330	330	320	305	290	230	S					
25								R 210	250	A	310	330	330	330	320	310	A	230	S					
26								190	260	300	R 310	320	330	A	A	A	280	230	A					
27								190	A	A	320	330	340	340	320	310	280	A	S					
28								R 210	250	285	310	320	325	325	320	305	275	A	S					
29								215	265	A	A	A	A	A	A	A	A	A	S					
30								220	J R 255	300	A	A	335	A	330	315	275	235	S					
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								24	19	12	14	15	16	18	17	17	20	14	3					
MED								208	255	295	310	325	330	330	325	310	285	235	180					
UQ								210	260	298	315	330	338	340	330	315	290	245	195					
LQ								195	250	290	310	322	328	330	320	305	280	230	180					

SEP. 1985 | FOE (0.01 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FOES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	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	ES 16	ES 16	ES 16	JA 21	JA 24	ES 16	JA 23	28	JA 32	38	JA 44	45	JA 44	G	JA 48	36	G	G	G	JA 29	22	22	32	JA 33
2	JA 30	22	21	ES 16	ES 16	ES 16	JA 24	32	JA 40	JA 52	JA 50	JA 50	JA 48	48	JA 37	JA 34	JA 38	JA 30	JA 44	JA 32	JA 30	22	JA 31	JA 32
3	22	22	22	23	20	21	20	28	JA 38	JA 52	JA 67	JA 53	JA 46	JA 48	JA 43	JA 64	JA 31	JA 33	JA 34	JA 24	ES 16	ES 16	JA 26	JA 60
4	JA 42	JA 32	JA 40	JA 23	23	JA 26	JA 21	JA 35	JA 40	JA 43	JA 50	JA 48	JA 62	JA 66	JA 77	JA 85	JA 110	JA 107	JA 62	JA 108	JA 77	JA 108	JA 75	JA 29
5	JA 32	JA 26	JA 26	JA 31	JA 28	JA 21	19	28	JA 62	JA 48	JA 68	JA 60	JA 40	39	JA 57	JA 50	JA 76	JA 150	JA 52	JA 131	JA 51	JA 21	JA 36	JA 77
6	JA 53	JA 53	JA 51	JA 36	JA 35	JA 26	22	31	33	JA 54	45	46	JA 65	44	JA 53	35	JA 37	31	22	JA 21	23	JA 24	JA 25	JA 27
7	JA 24	23	ES 16	ES 16	ES 16	JA 21	ES 16	JA 29	JA 34	40	63	JA 55	JA 79	JA 52	JA 68	JA 56	JA 54	JA 52	JA 44	JA 42	JA 64	JA 34	23	JA 30
8	32	JA 42	JA 33	JA 21	JA 24	JA 21	JA 25	JA 25	33	JA 51	JA 43	JA 51	JA 52	JA 46	JA 52	JA 48	JA 49	JA 48	JA 40	JA 35	JA 37	JA 33	JA 24	JA 30
9	23	23	23	JA 20	JA 19	23	ES 16	23	32	JA 43	JA 48	JA 46	JA 44	JA 52	JA 44	JA 45	JA 44	JA 54	JA 74	JA 41	JA 36	JA 33	JA 27	JA 35
10	JA 27	JA 26	JA 24	JA 23	23	JA 26	23	JA 30	JA 36	JA 39	JA 44	42	42	38	37	G	38	JA 36	JA 38	JA 32	JA 64	JA 66	JA 60	JA 35
11	JA 26	23	JA 21	JA 24	JA 30	JA 20	22	G	31	JA 38	JA 57	JA 63	38	G	40	G	G	JA 26	24	22	ES 16	23	JA 25	JA 21
12	JA 29	ES 16	22	ES 16	ES 16	21	ES 16	JA 26	JA 30	JA 41	JA 42	JA 55	JA 44	39	39	36	JA 33	33	JA 32	JA 30	32	JA 23	JA 28	JA 26
13	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	23	33	JA 42	42	42	41	39	JA 34	JA 33	JA 29	JA 32	JA 25	JA 30	JA 35	JA 26	21	20
14	ES 16	ES 16	JA 27	JA 26	ES 16	ES 16	ES 16	JA 20	JA 34	JA 34	JA 33	G	38	38	JA 44	JA 33	33	JA 36	JA 30	ES 16	ES 16	22	22	23
15	JA 26	21	JA 26	ES 16	S	ES 16	ES 16	24	30	JA 44	JA 41	JA 65	JA 73	JA 43	JA 50	JA 77	JA 53	JA 54	JA 78	JA 103	JA 45	JA 35	JA 41	JA 51
16	JA 78	JA 25	JA 17	22	20	19	ES 16	23	JA 36	JA 50	JA 56	35	35	40	JA 50	35	33	33	JA 41	JA 76	JA 110	JA 31	23	JA 74
17	JA 64	JA 34	JA 30	JA 28	JA 35	JA 38	JA 25	G	30	35	36	40	42	42	JA 47	JA 44	JA 46	JA 43	JA 36	JA 33	JA 26	JA 50	JA 40	JA 35
18	JA 26	JA 21	23	JA 31	JA 21	ES 16	ES 16	JA 31	JA 30	JA 33	35	JA 33	JA 34	G	G	35	JA 36	JA 44	JA 51	JA 40	JA 62	JA 53	JA 78	JA 60
19	JA 53	JA 35	JA 24	21	20	ES 16	ES 16	26	JA 33	JA 47	40	34	35	35	JA 44	JA 36	30	JA 29	JA 27	24	JA 22	JA 30	JA 40	ES 16
20	ES 16	23	ES 16	19	18	19	ES 16	26	36	47	JA 72	JA 48	JA 44	JA 38	JA 48	JA 53	JA 54	JA 48	JA 54	JA 70	JA 87	JA 84	JA 50	JA 60
21	JA 60	JA 51	JA 32	JA 20	ES 16	JA 20	ES 16	29	39	JA 53	JA 46	JA 45	JA 47	42	37	34	32	JA 35	JA 35	JA 35	JA 78	JA 40	ES 16	ES 16
22	ES 16	ES 16	ES 16	20	21	ES 16	19	23	30	35	40	JA 43	JA 57	37	JA 44	42	JA 41	JA 36	20	22	22	JA 24	22	23
23	22	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	G	JA 29	JA 32	JA 34	36	35	G	35	35	JA 40	G	G	JA 22	ES 16	ES 16	ES 16	ES 16
24	ES 16	ES 16	ES 16	JA 18	ES 16	ES 16	ES 16	G	37	34	37	41	39	37	42	36	G	G	ES 16	ES 16	ES 16	ES 16	JA 21	23
25	JA 30	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	24	JA 36	JA 46	41	38	39	JA 56	JA 47	JA 45	JA 53	29	JA 34	JA 43	JA 41	JA 32	JA 61	JA 26
26	JA 25	JA 25	20	22	JA 19	ES 16	ES 16	23	32	JA 42	36	38	42	JA 47	JA 45	JA 41	JA 37	JA 47	JA 47	JA 53	JA 35	JA 40	JA 33	ES 16
27	ES 16	22	ES 16	ES 16	23	ES 16	ES 16	24	27	JA 30	JA 35	JG 29	JG 30	JG 29	JG 28	JG 28	30	25	22	19	ES 16	22	JA 25	JA 33
28	22	22	22	21	ES 16	ES 16	21	JA 26	31	36	37	37	42	40	40	39	38	JA 43	JA 38	40	ES 16	42	22	JA 41
29	JA 26	JA 25	ES 16	ES 16	ES 16	ES 16	ES 16	G	30	38	JA 44	JA 43	JA 39	40	JA 36	JA 36	JA 34	JA 36	JA 28	JA 33	JA 35	JA 53	JA 25	20
30	21	ES 16	JA 21	22	ES 16	ES 16	ES 16	G	JA 31	34	JA 35	JA 51	G	JA 36	G	36	36	31	20	23	ES 16	ES 16	JA 54	JA 31
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	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	JA 26	22	22	21	19	ES 16	ES 16	24	33	JA 42	JA 42	JA 44	JA 42	40	JA 44	JA 36	JA 37	JA 36	JA 34	JA 32	JA 34	JA 30	JA 26	JA 30
UQ	JA 32	JA 26	JA 26	JA 23	JA 23	JA 21	21	28	JA 36	JA 47	JA 50	JA 51	JA 47	JA 46	JA 48	JA 45	JA 46	JA 47	JA 44	JA 42	JA 51	JA 40	JA 40	JA 35
LQ	21	ES 16	ES 16	ES 16	ES 16	ES 16	ES 16	23	30	35	37	38	38	37	37	35	32	30	24	JA 23	ES 16	22	23	23

SEP. 1985 | FOES (0.1 MHZ)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | FBES (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N., Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 S 16	E S 16	E S 16	18	19	E S 16	20	25	31	36	41	42	40	G	38	35	G	G	G	29	E	E	30	24
2	E	E	E	E S 16	E S 16	E S 16	E	31	29	46	46	47	46	47	37	33	36	30	40	32	25	21	19	25
3	E	E	E	E	E	E	E	27	35	50	55	42	41	41	38	40	30	28	26	E	E S 16	E S 16	17	35
4	30	20	A A 40	19	20	E	E	35	40	42	50	48	61	38	68	60	61	A A 107	55	A A 108	32	A A 108	38	28
5	26	17	18	19	18	E	E	27	33	46	46	50	38	38	53	39	66	66	40	45	18	20	20	29
6	E	E	28	33	20	22	E	30	33	43	45	44	A A 65	43	50	35	37	29	22	18	20	18	20	23
7	E	E	E S 16	E S 16	E S 16	E	E S 16	25	32	39	A A 63	53	51	49	67	54	52	49	42	41	36	26	E	E
8	29	A A 42	E	E	20	E	E	23	32	40	42	49	50	45	50	47	47	44	36	33	31	22	21	E
9	E	E	E	E	E	E	E S 16	23	31	43	47	44	43	46	42	40	41	52	50	40	25	22	19	28
10	25	25	21	21	E	E	E	20	32	37	37	41	41	37	36	G	36	35	35	30	37	A A 66	A A 60	25
11	20	E	E	E	20	E	E	G	30	32	40	40	37	G	36	G	G	24	20	E	E S 16	21	E	E
12	20	E S 16	E	E S 16	E S 16	E	E S 16	25	29	32	36	40	40	38	38	34	32	32	30	E	27	20	20	E
13	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	23	29	37	41	41	40	38	34	33	29	26	24	25	33	22	E	E
14	E S 16	E S 16	E	E	E S 16	E S 16	E S 16	20	28	33	32	G	36	36	44	33	31	36	28	E S 16	E S 16	E	E	E
15	18	E	25	E S 16	S	E S 16	E S 16	24	29	40	40	45	67	43	48	60	49	44	22	74	33	A A 35	A A 41	A A 51
16	A A 78	E	E	E	E	E	E S 16	23	32	33	34	35	35	40	48	35	32	32	40	76	25	E	E	A A 74
17	A A 64	20	18	21	A A 35	A A 38	17	G	30	34	36	39	40	41	47	44	45	43	36	33	26	A A 50	A A 40	34
18	U Y 26	21	20	E	E	E S 16	E S 16	30	28	30	33	33	34	G	G	34	31	37	51	40	58	A A 53	A A 78	A A 60
19	A A 53	28	E	E	E	E S 16	E S 16	24	30	43	38	34	34	35	43	33	30	28	26	E	E	29	28	E S 16
20	E S 16	E	E S 16	E	E	E	E S 16	23	33	47	34	46	42	38	47	45	36	44	51	55	45	A A 84	A A 50	20
21	A A 60	A A 51	18	E	E S 16	E	E S 16	29	32	51	45	42	45	41	37	33	32	33	35	32	28	19	E S 16	E S 16
22	E S 16	E S 16	E S 16	E	E	E S 16	E	23	29	34	40	37	40	37	41	40	39	33	19	E	E	20	E	E
23	E	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	G	28	31	33	G	G	G	34	32	39	G	G	21	E S 16	E S 16	E S 16	E S 16
24	E S 16	E S 16	E S 16	E	E S 16	E S 16	E S 16	G	32	33	37	40	38	36	38	35	G	G	E S 16	E S 16	E S 16	E S 16	E	E
25	A A 30	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	24	35	45	40	38	39	54	46	44	52	29	33	43	17	28	A A 61	19
26	25	18	E	E	17	E S 16	E S 16	23	30	34	36	38	41	46	45	41	37	46	47	45	35	A A 40	29	E S 16
27	E S 16	E	E S 16	E S 16	E	E S 16	E S 16	22	27	30	28	G 29	G 30	G 29	G 28	G 28	29	25	G	E	E S 16	E	E	E
28	E	E	E	E	E S 16	E S 16	E	G	30	34	36	36	41	38	39	38	37	40	38	37	E S 16	A A 42	E	E
29	21	19	E S 16	E S 16	E S 16	E S 16	E S 16	G	29	37	40	39	36	35	35	34	30	35	27	32	28	A A 53	E	E
30	17	E S 16	E	E	E S 16	E S 16	E S 16	G	29	32	34	39	G	35	G	36	35	30	17	E	E S 16	E S 16	A A 54	20
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	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	18	16	16	E E 16	16	E S 16	E S 16	23	30	37	40	40	40	38	40	35	36	33	32	32	25	22	20	18
UQ	26	19	18	E S 16	17	E S 16	E S 16	25	32	43	45	44	43	43	47	41	41	44	40	41	32	A A 40	38	28
LQ	16	E	E	E	E	E	E	20	29	33	36	37	36	35	36	33	30	28	22	16	E S 16	16	E	E

IONOSPHERIC DATA

SEP. 1985 | FMIN (0.1 MHZ) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long. 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	17	17	17	19	19	23	17	14	15	E S 16	E S 16	E S 16	E S 16	E S 16
2	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	15	18	17	23	25	25	18	15	15	14	E S 16	E S 16	E S 16	E S 16	E S 16
3	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	15	23	21	22	22	19	19	15	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
4	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	15	14	16	28	27	23	23	21	16	16	16	E S 16	E S 16	E S 16	E S 16	E S 16
5	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	14	15	15	17	19	16	16	15	16	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
6	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	14	14	15	18	24	22	17	16	14	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
7	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	18	19	28	28	28	27	19	18	14	15	E S 16	E S 16	E S 16	E S 16	E S 16
8	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	16	16	16	25	24	22	18	18	14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
9	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	15	16	25	27	18	26	19	18	14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
10	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	14	15	17	18	23	24	25	21	16	14	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
11	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	19	19	18	19	23	21	16	19	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
12	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	16	14	16	17	18	17	18	16	14	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
13	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	14	16	19	22	20	20	18	14	14	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	16	16	23	23	24	24	26	17	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
15	E S 16	E S 16	E S 16	E S 16	S	E S 16	E S 16	15	14	16	16	25	27	25	19	18	15	14	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	14	14	15	16	16	25	23	23	17	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	15	17	26	27	27	22	25	19	20	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
18	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	15	22	22	28	21	16	14	14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
19	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	16	23	23	23	23	26	23	16	14	14	16	E S 16	E S 16	E S 16	E S 16	E S 16
20	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	14	15	15	19	18	18	15	15	15	14	14	E S 16	E S 16	E S 16	E S 16	E S 16
21	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	16	16	23	18	17	17	15	14	14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
22	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	15	15	27	16	23	22	22	18	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
23	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	15	14	17	23	23	20	21	15	14	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
24	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	14	15	19	18	20	17	16	21	17	14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
25	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	16	15	18	22	18	18	16	16	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
26	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	17	25	19	18	18	16	15	15	17	15	E S 16	E S 16	E S 16	E S 16	E S 16
27	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	16	16	17	23	18	16	17	15	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
28	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	14	14	17	20	28	27	26	23	24	16	14	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
29	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	16	16	16	26	25	22	21	15	16	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
30	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	14	15	22	21	20	18	18	16	16	14	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
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	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	15	15	16	16	20	22	22	21	18	16	14	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
UQ	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	16	15	16	19	25	25	24	23	21	17	15	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
LQ	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 15	14	14	15	16	18	19	18	18	16	15	14	14	E S 16	E S 16	E S 16	E S 16	E S 16

SEP. 1985 | FMIN (0.1 MHZ)

IONOSPHERIC DATA

SEP. 1985 | M(3000)F2 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	300	295	290	310	310	S 335	370	390	350	350	300	310	315	315	290	320	330	330	325	325	360	S 300	S 295	F
2	325	310	F	S 345	F	310	360	380	R 360	350	335	330	320	310	300	295	300	310	320	U S 350	S 355	S 310	F	F
3	S 310	F	F	F	F	F	340	R 365	370	R 365	345	335	330	R 320	325	300	330	310	R 290	S 310	S 325	S 325	U S 340	F
4	F	F	A	F	F	F	F	365	375	365	365	305	315	R 295	U R 290	305	280	A	R 335	A	345	A	S 355	315
5	330	F	F	F	F	F	U S 350	U R 385	375	375	350	R 335	R 290	U R 280	U R 300	R 305	R 295	300	R 320	335	365	365	320	335
6	F	F	F	S 355	F	F	J S 335	350	365	365	365	U R 310	A	305	310	320	320	R 305	295	315	350	360	S 330	U S 295
7	S 305	S 285	U S 335	305	S 325	300	S 305	365	365	360	A	270	310	315	310	320	335	340	335	S 345	350	330	F	F
8	F	A	F	F 340	370	F	S 335	365	375	310	R 340	R 330	325	310	330	325	320	325	325	335	345	360	310	F
9	S 310	U S 305	S 300	S 310	S 320	320	310	365	350	360	345	335	330	330	295	R 275	305	U R 330	U S 360	U S 345	U S 375	U S 280	S 275	S 285
10	S 285	280	V 300	F	F	S 280	U S 345	U R 370	360	R 320	R 315	315	320	R 320	320	310	335	330	340	U S 360	S 360	A	A	F
11	F	F	S 305	275	F	355	335	370	305	355	300	R 305	295	320	325	280	310	340	R 305	335	S 370	S 325	U S 305	F
12	F	F	F	F 365	S 355	F	335	370	370	380	355	295	325	295	315	315	310	325	340	U Y 370	335	S 305	280	295
13	F	S 310	S 310	F	U S 320	U S 305	U S 320	R 395	R 385	360	350	335	340	340	R 320	290	R 300	300	J R 340	355	340	S	300	285
14	F	F	315	S 345	F	J S 325	S 340	R 375	R 350	355	325	330	320	315	R 310	295	305	300	R 325	S 300	U S 380	S 390	295	S 280
15	S 275	270	S 355	S 360	S	S 305	S 315	355	340	350	340	320	310	290	350	285	R 295	R 315	R 335	J S 345	S 365	A	A	A
16	A	290	310	305	310	U S 340	F	R 355	R 390	365	R 365	310	290	280	R 310	H 280	290	U R 340	R 355	365	385	F	280	A
17	A	F	U S 350	U S 335	A	A	F	R 360	370	340	340	305	290	R 295	U R 305	R 300	U R 305	U R 320	340	340	U S 370	A	A	U S 295
18	295	U S 315	F 330	U S 350	340	F 345	S 335	R 375	R 370	U R 355	U R 365	R 330	R 280	R 275	R 270	R 315	R 320	R 320	U R 325	J S 340	U S 365	A	A	A
19	A	F	F	S 325	325	355	S 340	380	R 360	365	C	R 335	325	R 305	300	R 305	R 305	335	330	330	U S 315	F	F	S 335
20	S 355	U S 310	300	S 290	300	360	U S 355	370	345	U R 365	365	340	R 305	280	310	335	R 305	330	320	U S 360	U S 365	A	A	S 305
21	A	A	U S 315	F	S 365	350	S 335	375	370	R 360	355	350	R 310	310	300	305	315	340	345	365	375	S 335	290	S 300
22	F	F	F	F	F	S 335	U S 330	370	350	360	360	320	305	310	315	U R 320	U R 305	U R 310	U R 315	U S 345	F	F	F	F
23	J S 290	295	300	310	335	U S 365	325	365	355	365	345	J R 320	310	325	335	320	315	330	J R 345	U S 345	U S 370	U S 315	J S 295	320
24	J S 300	285	305	F	F 355	S 360	U S 340	370	R 360	R 350	360	320	295	320	R 335	R 335	325	345	360	350	360	335	295	S 295
25	A	S 315	J S 305	355	370	290	340	S 375	375	365	320	330	325	330	315	335	350	365	R 350	J S 350	U S 365	F	A	F
26	295	S 300	U S 360	340	345	340	S 320	370	360	345	325	310	320	325	U R 315	R 310	310	335	R 345	U S 335	U S 360	A	S 300	290
27	S 310	315	315	U S 320	360	U S 365	320	345	360	340	355	290	310	340	350	300	310	335	J S 345	360	J S 375	290	300	300
28	300	300	330	320	360	S	S 335	375	R 375	R 350	360	305	295	320	320	330	345	360	360	360	S 370	A	F 305	F
29	F 310	F 335	S 305	J S 310	370	335	335	355	380	370	320	305	310	U R 305	310	315	335	R 355	R 350	360	U S 375	A	S 335	U S 290
30	S 300	S 320	F	F	F	F	S 305	R 360	R 375	R 370	355	R 335	315	R 315	U R 260	U R 265	R 305	R 340	R 345	S 370	S 350	S 385	A	S 315
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	18	20	21	18	21	27	30	30	30	28	30	29	30	30	30	30	29	30	29	29	16	19	17
MED	S 300	302	310	S 325	342	335	S 335	370	365	360	348	320	310	312	310	308	310	330	338	345	S 365	S 328	300	S 295
UQ	S 310	S 315	S 330	S 345	360	355	S 340	375	375	365	360	335	320	320	320	320	325	340	345	360	U S 370	360	S 315	S 315
LQ	S 295	290	302	310	320	S 310	S 322	365	355	350	330	305	305	295	300	295	R 305	315	R 325	S 335	350	S 308	295	S 290

SEP. 1985 | M(3000)F2 (0.01)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | M(3000)F1 (0.01) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								A	L	L	L 375	375	375	L 390	L 395	370	L 370	L 340	L					
2								A	A	A	A	A	A	A	410	L 310	290	350	A					
3								L	L	A	A	400	400	410	395	L 395	370	L 380	L					
4								A	A	A	A	A	A	L 395	A	A	A	A	A					
5								L	L	A	A	A	L	420	A	A	A	A	A					
6								A	L	A	A	A	A	A	A	395	L 390	L 385	L					
7									L	A	A	A	A	A	A	A	A	A	A					
8									L	L	A	A	A	A	A	A	A	A	A					
9									L	A	A	A	A	A	A	385	A	A	A					
10										L	405	A	375	385	385	385	375	A	A					
11								L	L	L	L 360	385	400	405	L 365	L 395	365	L	L					
12									L	L	A	L	L 395	375	L 370	370	L 365	L	A					
13									L 405	L 410	A	385	400	L 410	L 410	L 380	L 355	L 355	L					
14									L	L 390	L 375	395	L 420	370	A	365	365	A	L 375					
15									L	A	A	A	A	A	A	A	A	A	L					
16								L	L	L	L	L 430	L 430	L	A	375	L 365	L	A					
17								L	L	L	L	L	410	375	A	A	A	A	A					
18									L	L 390	395	410	420	L 390	375	350	L 355	A	A					
19									L	A	L 385	L 410	L 400	385	A	L 360	380	L 350						
20									L	A	L	A	L	L	A	A	L	A	A					
21									L	A	A	L	L	L	L 385	360	L	L	A					
22									L	L	L	400	410	L 420	A	L	A	L	L					
23									L	L	L 405	L 430	L 430	L 365	L 375	L 365	L	L						
24								L	L	L	L 405	375	L 375	L 375	L 370	380	L 365	L						
25									A	A	L	L	L 370	A	A	A	A	L	A					
26									L	L	L	L 400	385	A	A	L	L	A	A					
27									L	L	395	430	L	L 410	L	L	L	L						
28									L	L	L	U L 375	L 370	L 385	L 350	L	L	A						
29									L	L	L	U L 385	U L 385	U L 375	L 355	L 365	L	A						
30									L	L	L 385	410	390	410	L 395	370	365	L						
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									1	3	10	16	19	19	14	18	14	6	1					
MED									L 405	L 390	L 390	400	400	390	L 380	370	365	L 352	L 375					
UQ										L 400	405	410	410	410	L 395	385	370	L 380						
LQ										L 390	L 375	385	L 380	375	L 370	365	L 365	L 350						

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IONOSPHERIC DATA

SEP. 1985 | H'F2 (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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								200	240	265	350	345	300	310	305	315	300	290	270					
2								225	230	A	290	270	320	340	320	320	310	310	275					
3								225	235	A	A	295	290	290	290	340	290	310	L 275					
4								250	230	240	A	A	A	290	A	A	A	A	A					
5								210	210	230	A	A	L 370	350	A	290	A	A	A					
6								A 235	235	240	315	315	A	360	340	310	300	300	310					
7									245	240	A	A 365	315	295	305	295	265	265	255					
8									240	U L 325	275	300	290	345	300	305	305	265	265					
9									240	260	270	290	290	290	345	340	305	265	230					
10										L 320	330	315	290	300	300	315	270	255	235					
11								215	L 255	250	325	340	310	275	270	L 340	295	250	250					
12									240	230	215	375	305	335	300	300	300	280	255					
13									220	250	275	300	295	300	330	380	325	300	250					
14									L 250	255	315	300	300	325	330	350	305	290	265					
15									255	255	270	295	A	330	310	A 340	310	275	245					
16								245	205	220	L 250	340	315	290	250	310	275	250	240					
17								240	230	L 260	275	300	330	290	270	290	270	260	240					
18									240	250	240	275	315	275	280	285	265	260	250					
19									230	240	C 270	270	280	300	300	300	315	265						
20									250	220	240	A	A	375	310	270	300	260	275					
21									230	A	260	280	A	305	340	335	290	250	240					
22									230	250	260	310	290	300	290	285	275	A	250					
23									225	250	265	305	305	295	270	280	295	270						
24								210	250	260	260	305	330	290	270	270	260	245						
25									215	240	315	270	280	270	280	280	260	230	230					
26									230	250	250	300	280	260	260	270	275	260	A					
27									230	270	260	320	290	260	260	290	290	260						
28									235	250	250	L 315	320	290	275	275	250	245						
29									215	235	300	305	295	290	290	290	255	225						
30									230	235	250	275	275	265	275	290	275	250						
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	29	27	26	27	25	30	28	29	28	27	20					
MED								225	230	250	270	300	300	295	295	300	290	260	250					
UQ								240	240	258	300	315	315	325	310	320	302	278	268					
LQ								210	230	240	250	292	290	290	272	285	270	250	240					

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IONOSPHERIC DATA

SEP. 1985 | H'F (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long. 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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	255	255	295	255	275	260	225	A	210	215	E A 255	A	A 225	200	220	225	210	210	225	240	205	250	E A 345	330
2	255	255	240	230	S	S	230	A	A	A	A	A	A	A	210	200	E A 250	A 230	A	220	200	210	A	E A 310
3	270	275	250	S 250	E S 280	S 265	240	A 225	A 230	A	A	A	E A 250	E A 245	A 225	E A 250	A 215	210	E A 245	255	240	230	230	A
4	A	A	A	240	A 250	A	E S 250	A	A	A	A	A	A	H 200	A	A	A	A	A	A	A 225	A	A 230	A
5	A 300	A	A 300	A	A	S 250	235	A 220	A 220	A	A	A	200	190	A	A	A	A	A	A 230	210	200	A 240	A
6	S 290	270	A	A	A	200	250	A	A 220	A	A	A	A	A	A	205	A	A 225	A 225	A 250	215	210	A 220	A 295
7	260	275	255	250	240	275	S 260	210	245	A	A	A	A	A	A	A	A	A	A	245	215	245	265	300
8	A	A	290	255	245	S	S	225	240	E A 250	A	A	A	A	A	A	A	A	A	250	225	210	265	290
9	S 255	280	S 280	290	S 240	S 270	245	220	215	A	A	A	A	A	A	A 255	A	A	A	215	195	A 240	A 325	A 340
10	A 320	310	250	290	E S 340	S 310	225	230	220	A 225	205	A	E A 255	205	205	200	E A 255	A	A	230	200	A	A	A
11	A 310	285	295	285	295	250	240	220	H 210	200	A	A	H 190	H 200	220	200	200	215	230	250	205	205	S	S
12	A	305	300	240	205	S	255	220	220	210	A	205	E A 245	A 220	E A 250	210	215	A	A	210	205	A 275	A 320	310
13	275	S 270	S 255	230	E S 285	S 280	S 275	215	210	A 220	E A 255	A 240	210	195	190	215	215	230	A 245	215	230	210	E S 255	E S 300
14	S 290	S 280	S 265	245	S 290	230	S 230	210	205	215	190	220	190	200	A	200	230	A	A 255	260	200	190	S	S
15	A	S	250	S 250	S	S	S 260	230	220	A	A	A	A	A	A	A	A	A	A 245	230	205	A	A	A
16	A	E S 310	260	S	S	S	S	A 240	A 220	200	200	190	H 190	200	A	A 230	A 230	A	A	A	200	S	E S 300	A
17	A	A 280	240	A	A	A	A 250	A 230	210	210	200	200	A 230	A 240	A	A	A	A	A	215	200	A	A	A
18	290	270	250	225	240	S 250	240	220	210	205	200	200	185	180	250	220	240	A	A	230	210	A	A	A
19	A	A	S 255	S 250	S 245	S 235	240	205	210	A	A 220	190	180	195	A	205	220	225	250	235	230	A 285	A 290	225
20	200	S 260	S 260	S	S	220	210	220	A 235	A	210	A	A	210	A	A	A	A	A	A	A 220	A	A	A
21	A	A	A	S	215	S 250	S 260	205	210	A	A	A	A	A	210	200	A 230	A	A	210	210	A	S	S
22	S	S 270	S 260	240	S	S	E S 260	215	210	210	A	200	200	190	A	A	A	A	E A 240	210	200	A 220	S	E S 300
23	305	290	255	255	220	205	230	225	210	200	200	195	185	180	220	215	A	220	240	210	200	200	260	245
24	255	295	300	270	240	210	S 225	205	205	205	210	A 215	205	190	E A 250	240	H 210	220	215	215	200	220	S 300	E S 340
25	A	S 290	S	235	215	S	S	210	A	A	A	A	A 235	A	A	A	A	A 240	A	A	210	A	A	A
26	A	E A 300	260	235	A 230	A 240	A 240	220	220	A 220	210	200	A 220	A	A	A	A	A	A	250	210	A	A	S
27	S 290	260	240	220	200	S	S	210	A 220	H 190	210	H 190	210	H 190	210	210	210	A 230	235	210	190	S	S 275	E S 290
28	S 300	290	250	225	210	S	S 255	220	225	210	210	H 200	A	210	A	A	A	A	230	215	195	A	S 300	300
29	300	300	250	240	200	225	245	210	215	215	A	A 230	205	200	200	220	240	A	210	215	210	A	265	300
30	295	S 265	S 255	S 260	A 250	S 250	E S 250	220	215	220	220	210	210	195	180	215	245	A 245	230	205	195	185	A	310
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	24	26	24	22	19	26	26	27	18	15	15	20	21	14	19	16	12	15	26	30	17	17	16
MED	290	278	255	248	238	250	241	220	215	210	208	200	204	200	212	212	220	225	232	225	205	210	265	296
UQ	300	291	280	255	U 260	S 262	S 252	225	220	218	212	212	A 219	202	222	221	235	A 230	A 245	245	215	240	295	308
LQ	258	270	250	235	215	228	230	210	210	205	200	198	190	190	205	202	212	218	228	215	200	205	255	U 264

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IONOSPHERIC DATA

SEP. 1985 | H'E (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Hour / Day	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 125	110	A	105	105	105	110	A	110	110	110	B 120					
2								110	110	105	105	105	105	105	105	A	A	A	A					
3								110	110	105	105	105	105	105	105	A	A	A	A					
4								E B 120	110	105	105	110	110	110	110	110	110	105	A					
5								E B 120	105	105	105	105	105	105	105	105	105	A	A					
6								E A 125	A	A	A	A	A	A	A 120	105	105	110	A					
7								B 115	110	110	110	110	110	110	110	105	A	A	A					
8								A	105	A 120	110	110	110	110	110	110	110	110	S					
9								120	105	100	105	115	110	100	115	110	110	105	S					
10								115	105	105	105	105	105	110	105	105	105	105	S					
11								110	A	A	A	A	110	110	105	105	110	A	A					
12								B 120	A	A	A	110	110	110	105	105	110	110	A					
13								120	110	A	A	A	105	105	105	105	105	A	110					
14								S	A	A	A	110	110	110	110	115	110	110	S					
15								120	115	110	105	115	110	110	105	105	105	105	S					
16								110	110	105	105	105	105	105	105	105	105	105	A					
17								110	110	110	B 115	B 115	110	110	110	110	110	105	A					
18								115	105	105	A	A	A	110	100	A	A	A	S					
19								125	110	115	115	110	105	105	105	A	100	100	A					
20								E B 120	110	105	A	105	105	A 115	A 115	105	105	A 115	A					
21								E B 120	110	110	A	A	A	105	105	105	110	110	S					
22								E B 125	110	E A 120	110	110	A 115	110	110	110	110	110	S					
23								B 120	110	A	A	110	110	110	110	A	A	110	S					
24								E B 130	A	A	110	110	105	105	105	110	110	110	S					
25								E B 120	110	110	110	110	110	110	110	110	110	110	S					
26								E B 120	A 115	110	B 115	110	105	A	A	A	A 115	A 115	A					
27								E B 120	110	110	E A 120	E A 120	E A 120	E A 120	E A 120	E A 120	110	110	S					
28								A	A 115	A 115	110	110	110	110	110	110	110	A	S					
29								B 120	105	A	A	A	A	A	A	105	105	A	S					
30								125	105	A	A	A	105	A	105	105	110	110	S					
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								27	25	20	19	23	26	26	27	24	25	21	2					
MED								B 115	110	109	108	110	109	110	105	105	110	110	115					
UQ								B 120	110	110	110	110	110	110	110	110	110	110						
LQ								112	105	105	105	105	105	105	105	105	105	105						

SEP. 1985 | H'E (KM)

IONOSPHERIC DATA

SEP. 1985 | H'ES (KM) | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

Day \ Hour	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	S	S	S	130	125	S	120	115	115	115	110	110	110	G	105	150	G	G	G	110	110	105	105	105
2	105	100	100	S	S	S	100	120	120	120	115	115	115	115	115	110	110	105	105	100	100	100	100	110
3	100	100	100	100	100	100	120	115	115	115	115	115	115	115	110	105	110	110	110	110	S	S	100	105
4	100	100	100	100	100	130	125	120	120	120	115	115	115	115	115	115	115	110	110	110	105	105	100	100
5	100	100	100	100	100	100	100	120	115	115	115	115	115	115	110	110	110	105	105	110	110	110	105	110
6	110	110	110	100	100	100	100	140	140	100	130	130	120	125	115	120	115	115	110	110	110	110	105	105
7	100	100	S	S	S	100	S	120	115	115	110	110	110	110	110	110	105	105	105	105	105	105	100	100
8	105	105	100	100	100	100	100	100	120	115	115	110	110	110	110	110	110	110	105	105	105	105	100	105
9	105	100	100	100	100	120	S	120	120	115	115	115	115	115	115	120	110	110	105	105	105	100	100	100
10	100	95	100	100	100	100	100	115	110	115	115	120	115	120	120	G	110	105	100	100	105	105	105	100
11	100	100	125	100	100	100	100	G	110	105	100	105	160	G	130	G	G	115	100	100	S	100	110	100
12	105	S	100	S	S	105	S	145	150	100	105	115	115	150	145	145	140	115	110	105	105	105	105	105
13	S	S	S	S	S	S	S	125	125	120	120	120	115	120	120	115	120	100	115	105	105	105	105	105
14	S	S	100	100	S	S	S	120	115	110	115	G	115	115	110	115	150	115	105	S	S	100	100	100
15	100	100	100	S	S	S	S	120	120	115	115	115	110	110	110	105	105	105	105	105	100	100	100	100
16	105	105	105	100	100	110	S	120	115	115	115	115	115	115	115	120	120	120	105	105	105	105	105	105
17	105	105	105	100	100	115	100	G	115	115	115	115	115	115	115	115	115	110	110	100	100	100	100	100
18	95	95	95	125	135	S	S	115	115	110	105	105	105	G	G	E G 170	125	125	110	105	105	100	105	105
19	105	105	105	105	105	S	S	125	125	120	120	120	120	120	115	100	E G 140	120	110	110	105	105	105	S
20	S	105	S	105	105	105	S	135	120	115	110	115	115	115	115	110	110	115	110	110	110	110	105	105
21	105	105	105	100	S	110	S	130	130	120	120	120	120	120	120	E G 130	150	130	115	110	110	110	S	S
22	S	S	S	110	110	S	110	140	135	130	120	120	120	120	120	120	120	115	115	110	110	110	115	105
23	100	S	S	S	S	S	S	G	115	105	105	105	105	G	130	100	100	G	G	100	S	S	S	S
24	S	S	S	110	S	S	S	G	100	130	140	125	120	125	150	150	G	G	S	S	S	S	105	110
25	110	S	S	S	S	S	S	135	120	115	115	120	125	120	120	135	120	E G 135	120	115	115	110	110	110
26	110	105	105	105	105	S	S	E G 140	135	125	120	120	120	120	120	120	120	115	110	110	105	100	100	S
27	S	110	S	S	100	S	S	E G 130	120	120	110	105	105	105	105	105	120	120	110	110	S	100	105	105
28	100	105	100	100	S	S	100	145	120	110	115	120	115	115	115	110	110	105	105	100	S	105	100	100
29	100	100	S	S	S	S	S	G	125	110	110	110	115	110	115	115	110	105	105	100	105	105	105	100
30	100	S	100	105	S	S	S	G	125	130	105	100	G	100	G	E G 190	145	125	120	110	S	S	155	140
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	21	20	21	17	14	12	24	30	30	30	29	29	26	28	28	27	27	27	28	22	26	28	26
MED	100	100	100	100	100	102	100	120	120	115	115	115	115	115	115	114	115	112	110	105	105	105	105	105
UQ	105	105	105	105	105	110	115	134	125	120	115	120	120	120	120	122	120	116	110	110	110	105	105	105
LQ	100	100	100	100	100	100	100	120	115	110	110	110	115	115	110	110	110	105	105	102	105	100	100	100

SEP. 1985 | H'ES (KM)

The Radio Research Laboratories, Japan

IONOSPHERIC DATA

SEP. 1985 | TYPES OF ES | 135° E Mean Time (G.M.T. + 9 h)

Station OKINAWA Lat. 26° 16.9' N, Long 127° 48.4' E Sweep 1 MHz to 25 MHz in 24sec in automatic operation

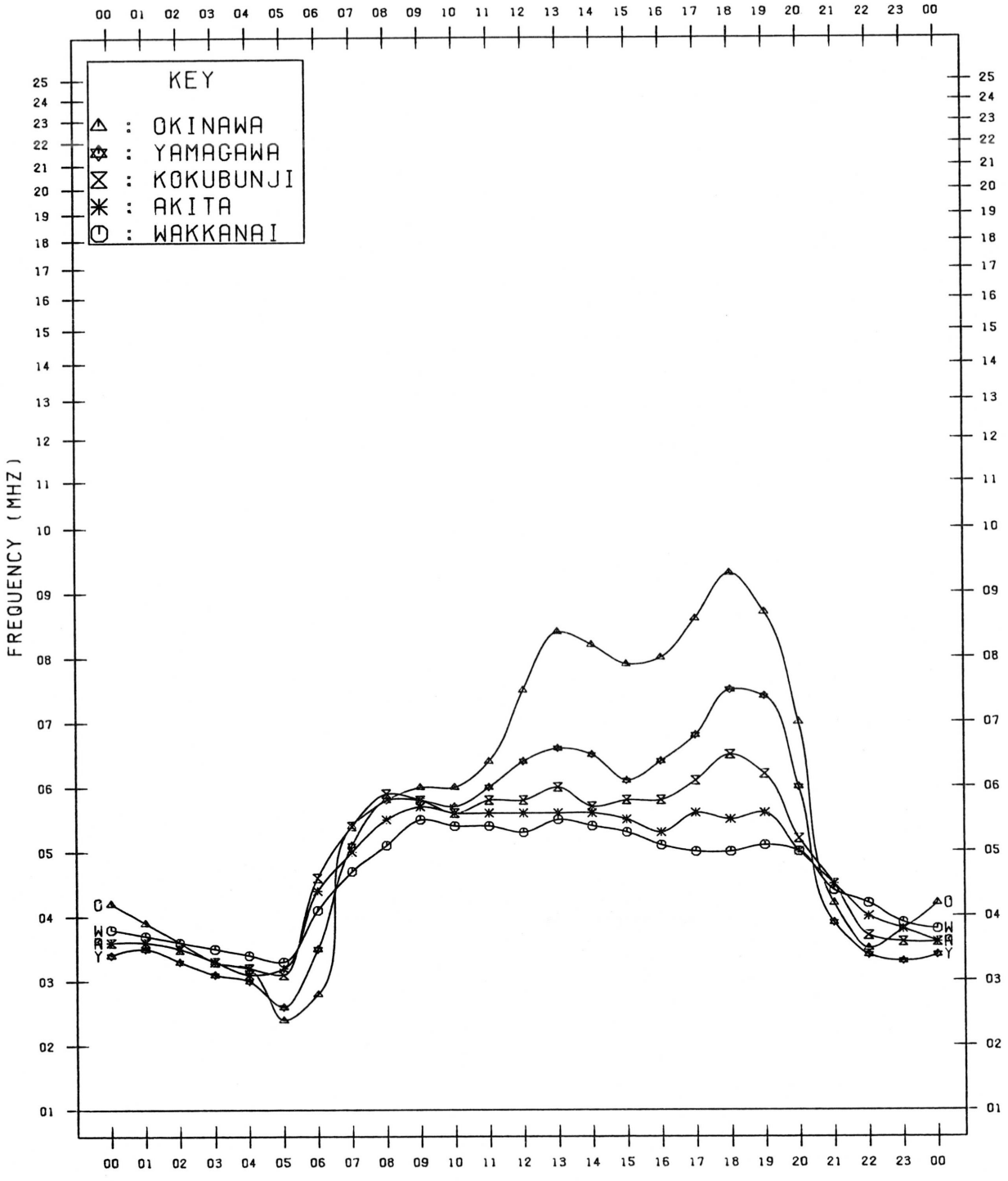
Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1				FF 31	F 6		F 5	C 2	C 2	CL 22	C 4	C 2	C 2		LH 11	H 2				F 6	F 7	F 3	F 7	F 7
2	F 3	F 1	F 1				F 1	C 3	C 1	C 4	C 4	C 3	C 2	C 3	C 1	L 2	L 2	L 3	L 3	F 7	F 4	F 2	F 3	F 5
3	F 2	F 3	F 2	F 1	F 1	F 1	F 1	C 3	C 3	C 4	C 5	C 2	C 2	C 2	C 2	L 2	L 1	L 1	L 2	F 2			F 3	F 5
4	F 5	F 2	F 4	F 2	F 2	F 2	F 1	C 4	C 3	C 5	C 3	C 2	C 3	C 2	C 5	C 4	C 5	C 5	L 6	F 4	F 4	F 4	F 4	F 3
5	F 3	F 2	F 2	F 3	F 3	F 2	F 1	C 5	C 5	C 6	C 3	C 3	C 1	C 3	C 3	C 3	C 6	L 5	LL 42	FF 43	FF 32	F 4	F 3	F 3
6	F 2	F 2	F 6	F 8	F 7	F 4	F 4	HL 32	HL 32	L 4	HL 32	HL 21	CL 31	CL 11	CL 31	C 1	C 2	C 2	L 3	F 5	F 4	F 3	F 4	F 3
7	F 2	F 1				F 2		C 2	C 3	C 3	C 5	C 3	C 3	C 3	C 5	C 4	L 3	L 7	L 7	F 7	F 6	F 4	F 2	F 2
8	F 7	F 3	F 2	F 8	F 8	F 3	F 4	L 4	C 3	CL 42	C 2	C 3	C 2	C 2	C 2	C 2	C 5	C 7	L 7	F 7	F 3	F 4	F 7	FF 22
9	F 2	F 2	F 2	F 2	F 1	FF 11		C 3	C 3	C 3	C 4	C 1	C 1	CL 21	C 1	C 3	C 4	C 7	L 7	F 7	F 3	F 4	F 3	F 4
10	F 5	F 6	F 4	F 4	F 1	F 5	F 3	L 2	C 3	C 2	C 2	C 2	C 2	C 1	C 1		C 2	L 4	L 5	F 7	F 6	F 3	F 4	F 3
11	F 3	F 2	FF 11	F 1	F 2	F 2	F 2		L 1	L 3	L 3	L 1	HL 11		H 1			CL 11	L 2	F 1		F 3	F 1	F 4
12	F 3		F 2			F 1		H 2	HL 12	L 2	L 1	CL 21	CL 21	HL 11	H 1	HL 21	HL 22	CL 41	CL 63	F 7	F 7	F 7	F 5	F 4
13								C 2	C 1	CL 32	CL 22	CL 12	C 2	C 1	C 1	C 1	C 1	L 1	C 3	F 7	F 3	F 7	F 2	F 2
14			F 2	F 3				C 1	L 1	L 1	L 1		C 1	C 1	C 2	C 1	H 1	C 3	L 3			F 1	F 2	F 2
15	F 3	F 1	F 4					C 3	C 1	C 3	C 2	C 2	C 3	C 2	C 3	C 5	C 6	L 4	L 5	F 4	F 5	F 7	F 4	F 4
16	F 4	F 2	F 2	F 2	F 2	F 1		C 3	C 4	C 3	C 2	C 1	C 1	C 1	C 2	C 1	C 1	C 2	L 7	F 7	F 3	F 3	F 3	F 5
17	F 5	F 2	F 2	F 3	F 4	FF 62	F 2		C 2	C 4	C 1	C 1	C 1	C 2	C 2	C 2	C 2	C 6	L 4	F 5	F 4	F 3	F 3	F 3
18	F 3	F 3	F 4	FF 11	FF 12			C 2	C 1	C 1	L 2	L 1	L 1			HL 11	HL 11	HL 32	C 6	F 7	F 6	F 3	F 3	F 4
19	F 3	F 5	F 2	F 1	F 1			C 2	C 2	C 2	C 1	C 1	C 1	CL 11	C 2	L 3	C 1	CL 21	L 3	F 2	F 3	F 5	F 4	
20		F 2		F 1	F 1	F 1		H 2	C 2	C 4	L 1	C 2	C 1	CL 11	CL 21	C 3	C 3	CL 51	L 6	FF 37	FF 25	F 4	F 5	F 5
21	F 6	F 4	F 6	F 2		F 1		H 2	H 3	C 6	CL 21	CL 11	CL 21	C 1	C 1	C 1	H 1	H 4	C 6	F 7	F 4	F 4		
22				F 1	F 1		F 1	H 1	H 2	HL 11	C 2	C 1	CL 21	C 1	C 2	C 2	C 2	C 3	C 3	F 2	F 1	F 2	F 1	F 2
23	F 1								C 1	L 1	L 1	L 1	L 1		H 1	L 2	L 5			F 3				
24				F 2					L 3	HL 11	H 1	C 2	C 1	C 1	H 1	H 2							F 2	F 2
25	F 6							H 2	C 4	C 3	C 3	C 1	C 1	C 4	C 2	H 2	C 3	C 2	C 5	F 6	F 3	F 3	F 3	F 2
26	F 1	F 2	F 1	F 1	F 2			H 1	HL 11	C 2	C 1	C 1	C 2	CL 22	CL 21	CL 31	CL 31	CL 41	L 7	F 6	F 7	F 3	F 2	
27		F 1			F 1			C 2	C 2	C 1	L 1	L 1	L 1	L 1	L 1	L 1	C 1	C 1	L 1	F 1		F 1	F 2	F 2
28	F 1	F 1	F 2	F 1			F 1	HL 21	CL 21	CL 21	CL 21	C 1	C 1	C 1	C 1	C 2	C 2	L 5	L 7	F 6		F 5	F 2	F 3
29	F 2	F 2							H 2	CL 22	CL 22	CL 11	CL 11	CL 11	CL 11	C 2	C 1	L 4	L 3	F 7	F 4	F 3	F 2	F 1
30	F 1		F 3	F 1					C 1	HL 11	L 3	L 2		L 2		H 1	H 1	C 2	C 1	F 1			FF 11	FF 51
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																								
UQ																								
LQ																								

SEP. 1985 | TYPES OF ES

The Radio Research Laboratories, Japan

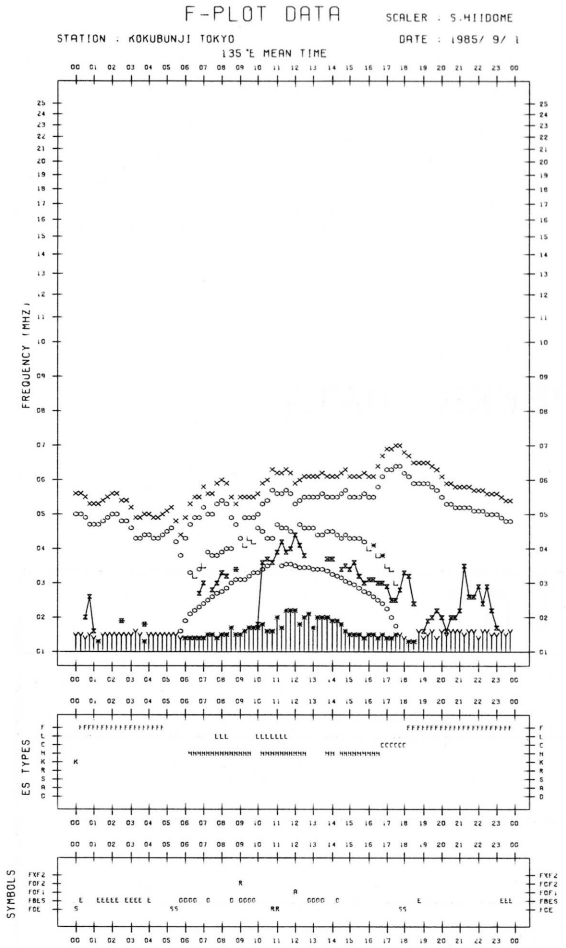
MONTHLY MEDIAN VALUES OF FOF2

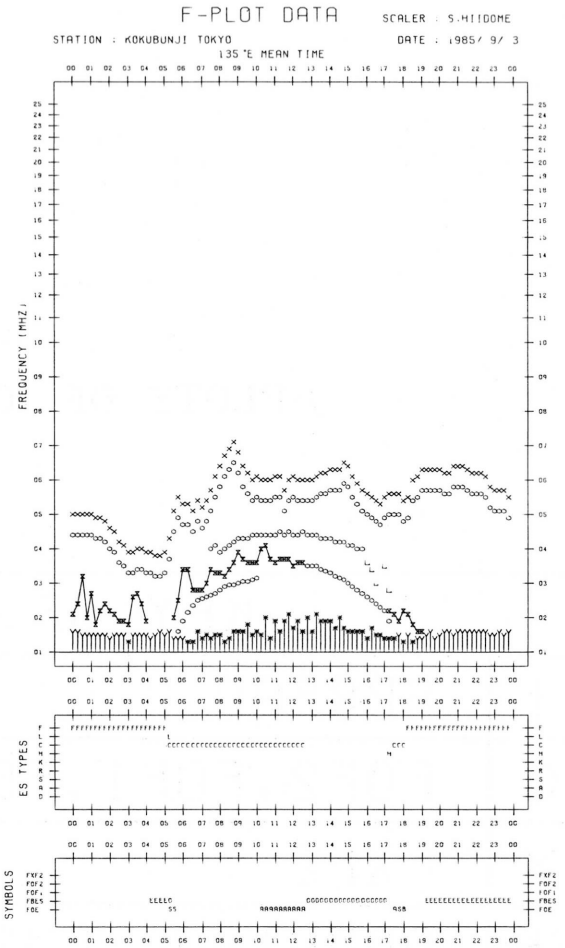
135 °E MEAN TIME SEP. 1985



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 : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 1
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
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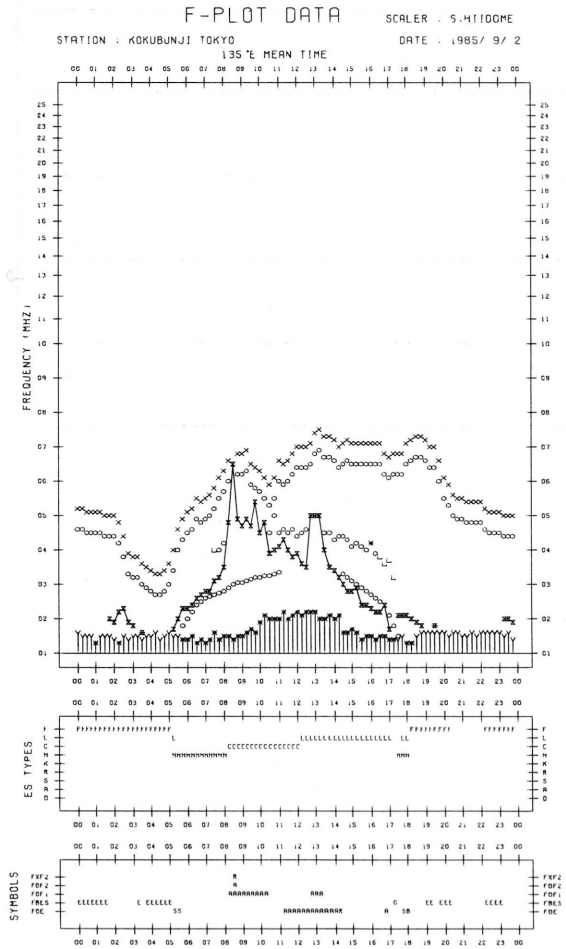
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 3
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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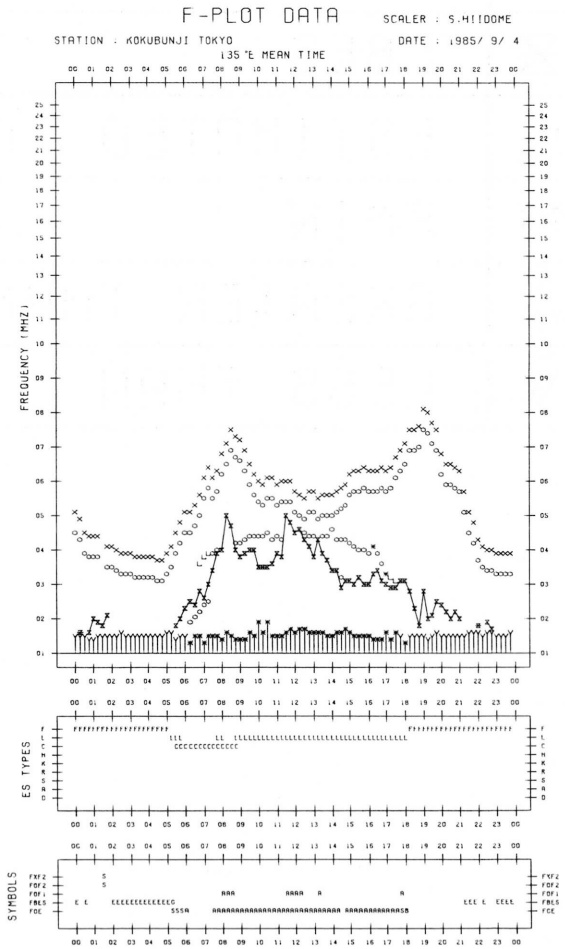
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 2
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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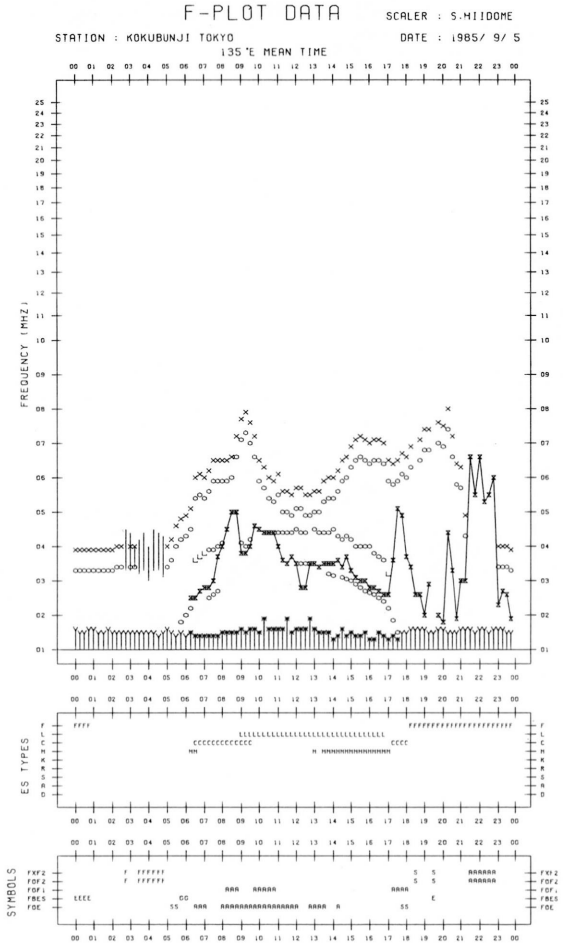
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 4
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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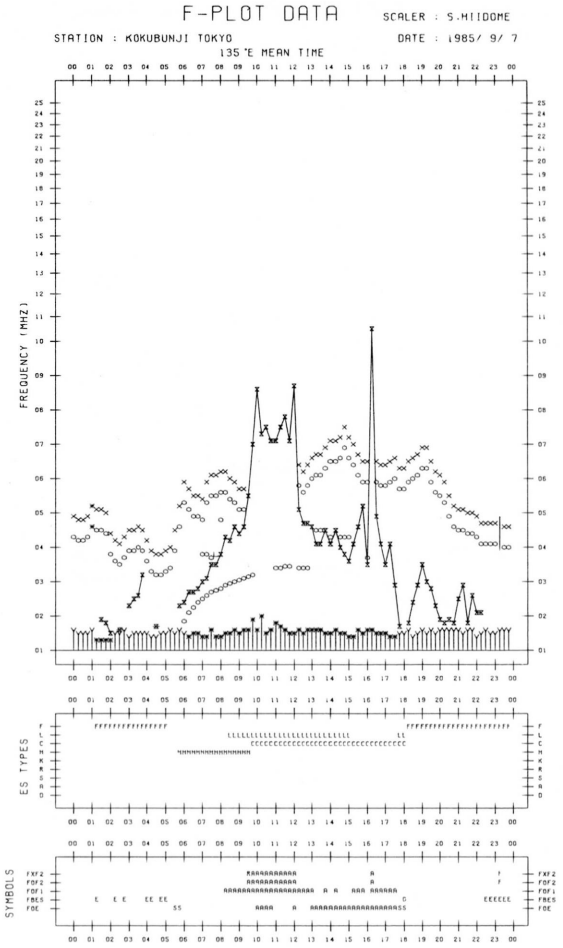
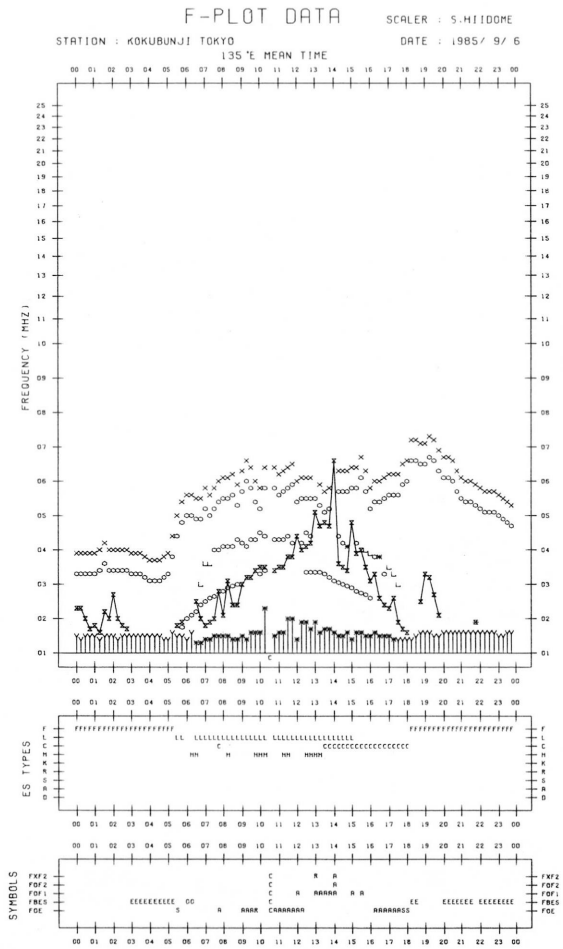
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 5
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 7
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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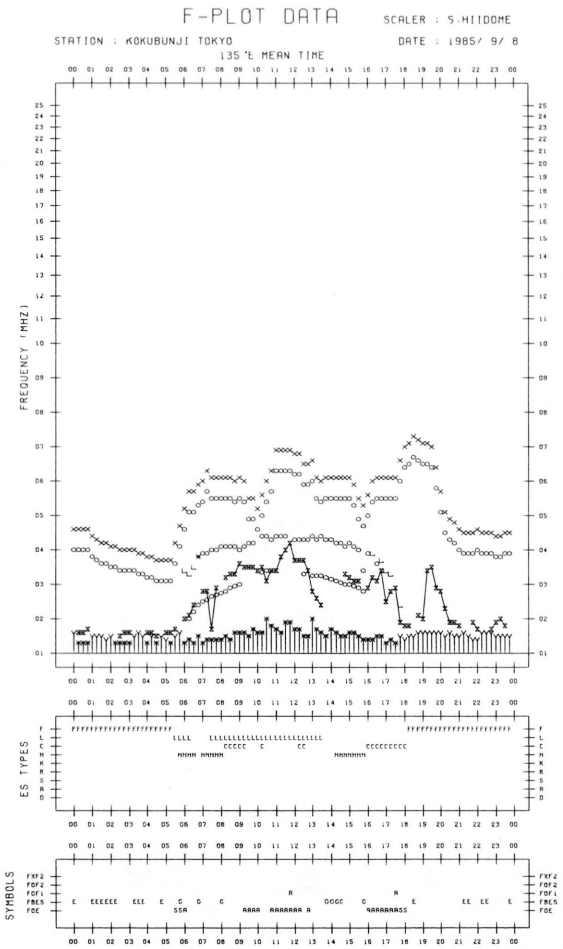
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 6
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
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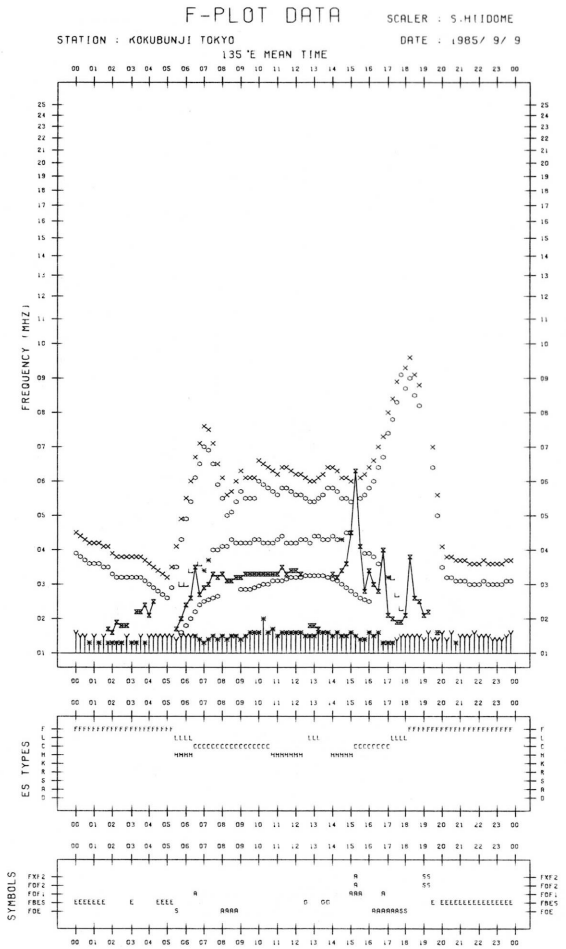
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 8
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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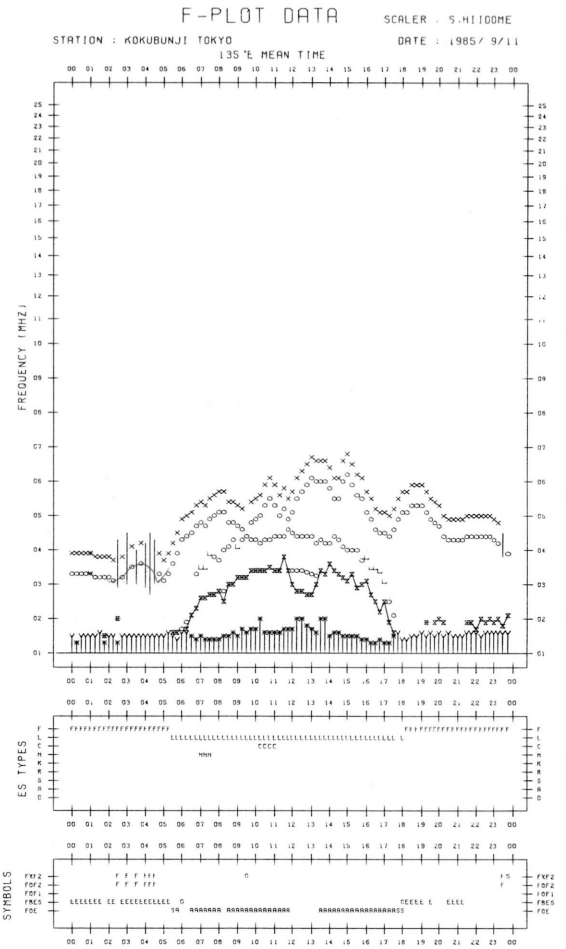
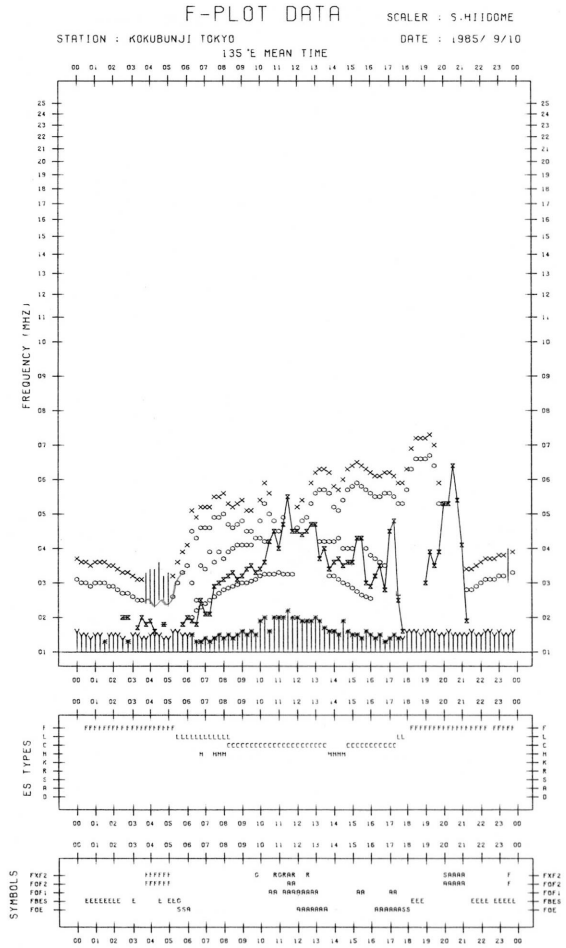
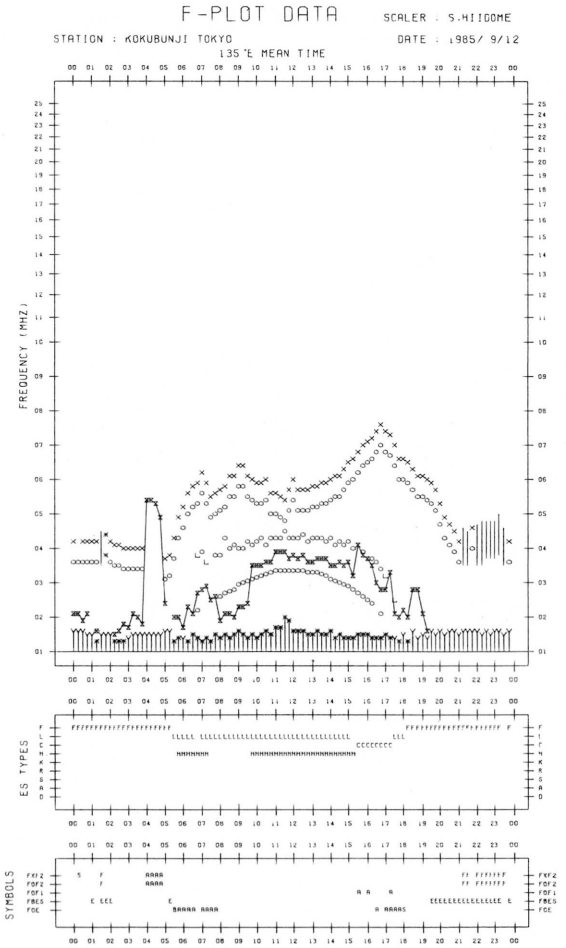
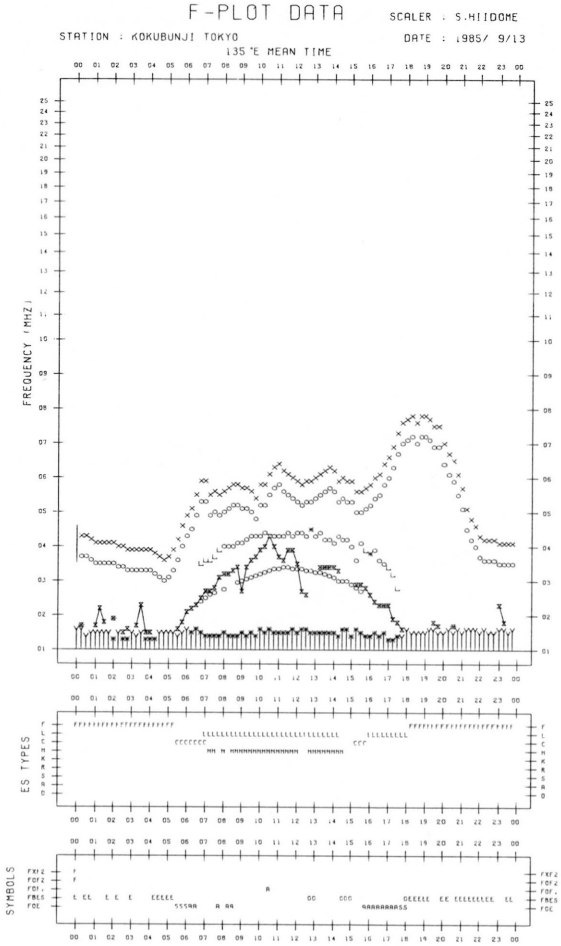
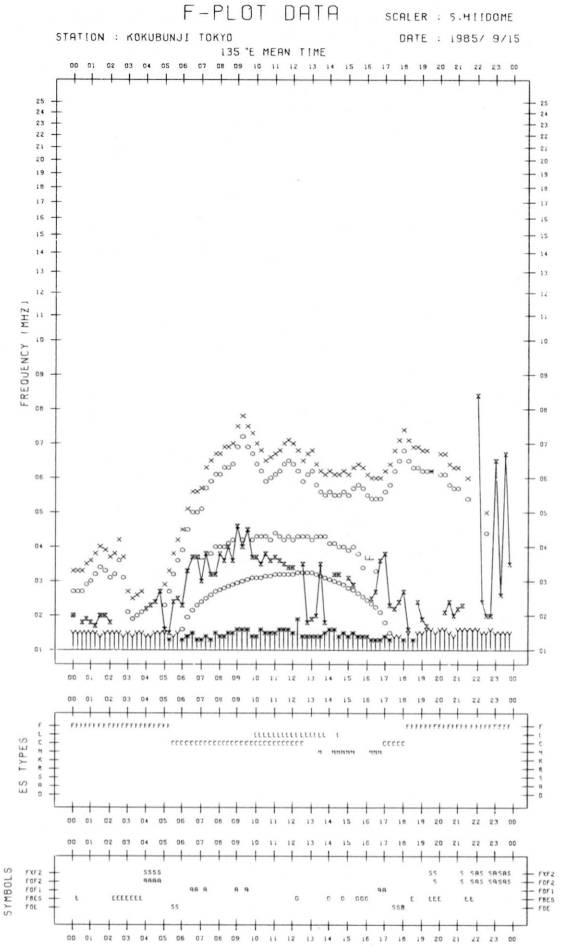
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/ 9
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS

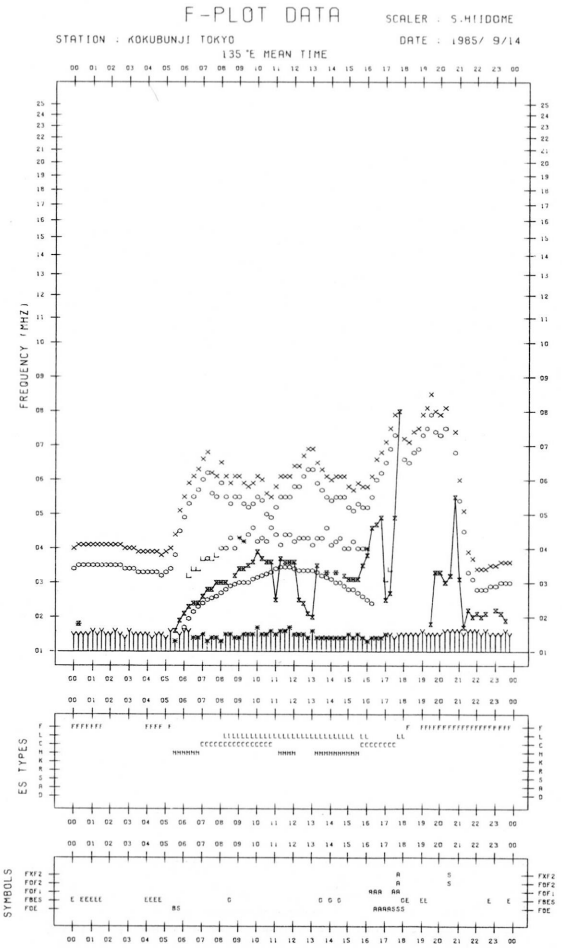

F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/11
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS

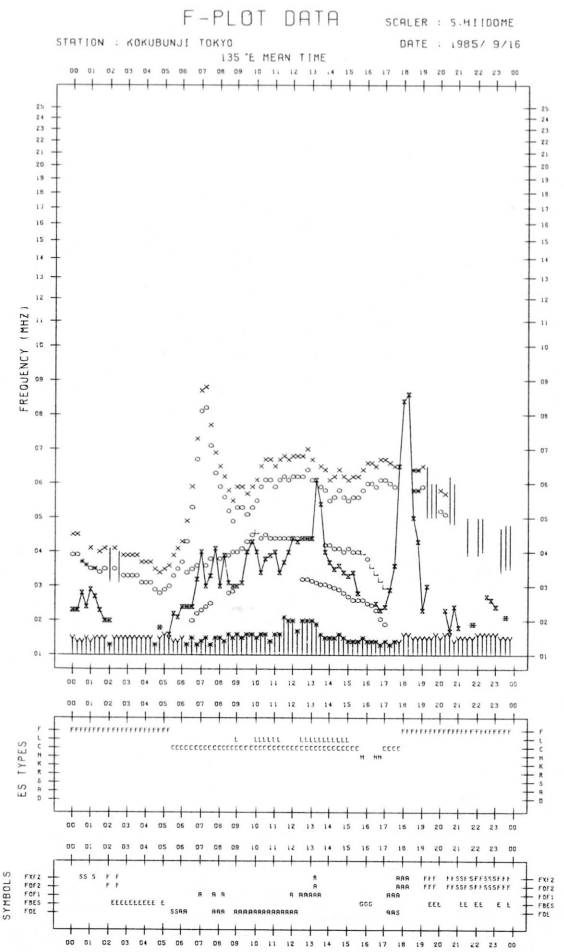

F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/10
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/12
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/13
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/15
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/14
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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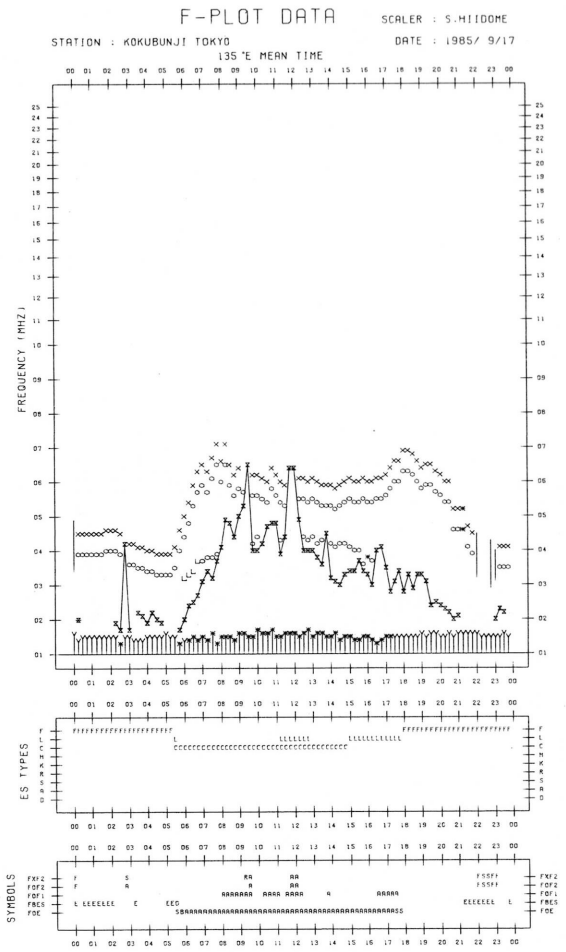
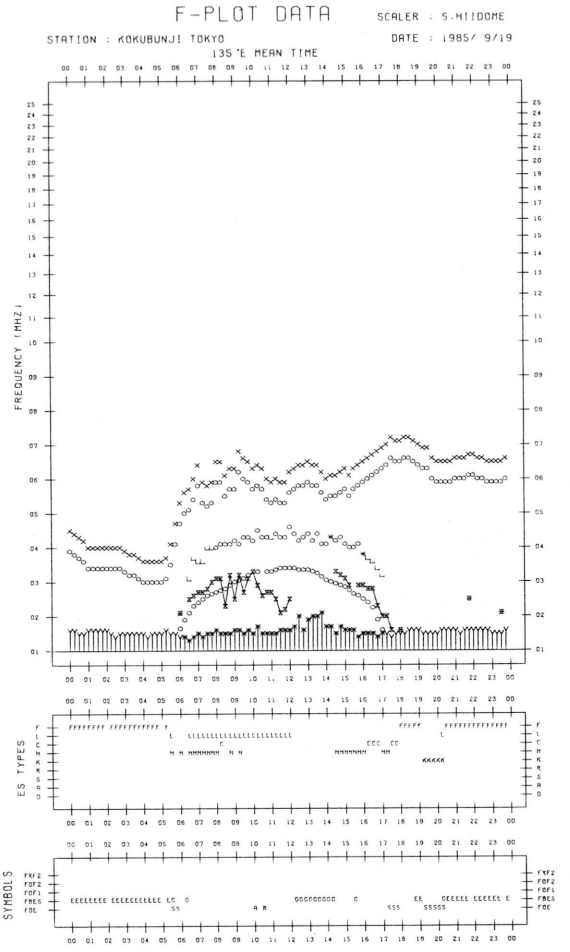
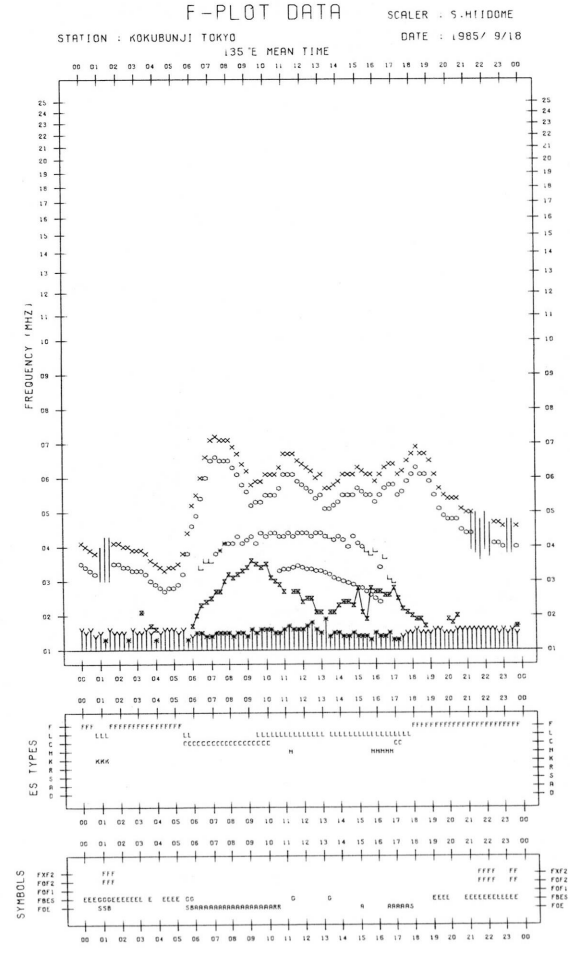
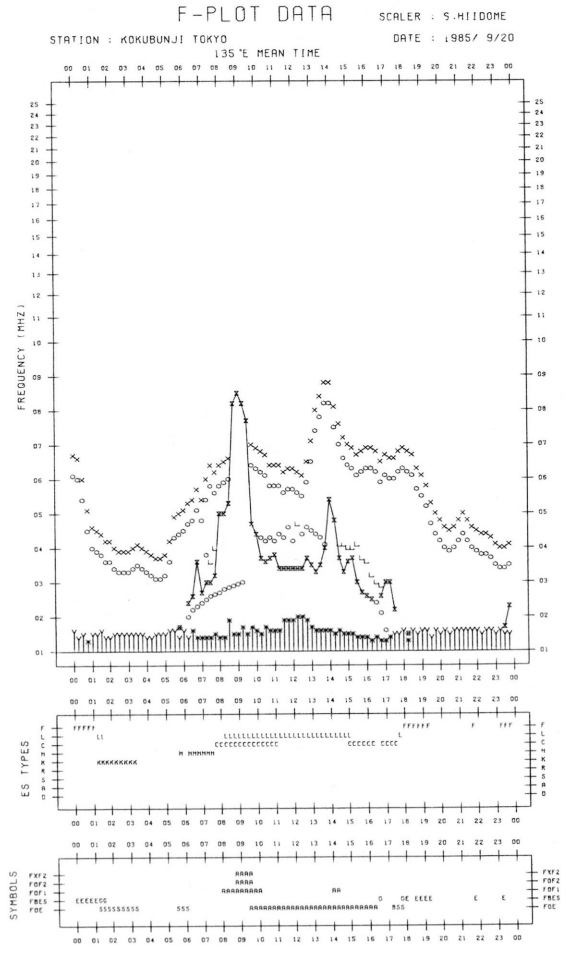
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/16
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/17
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/19
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/18
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE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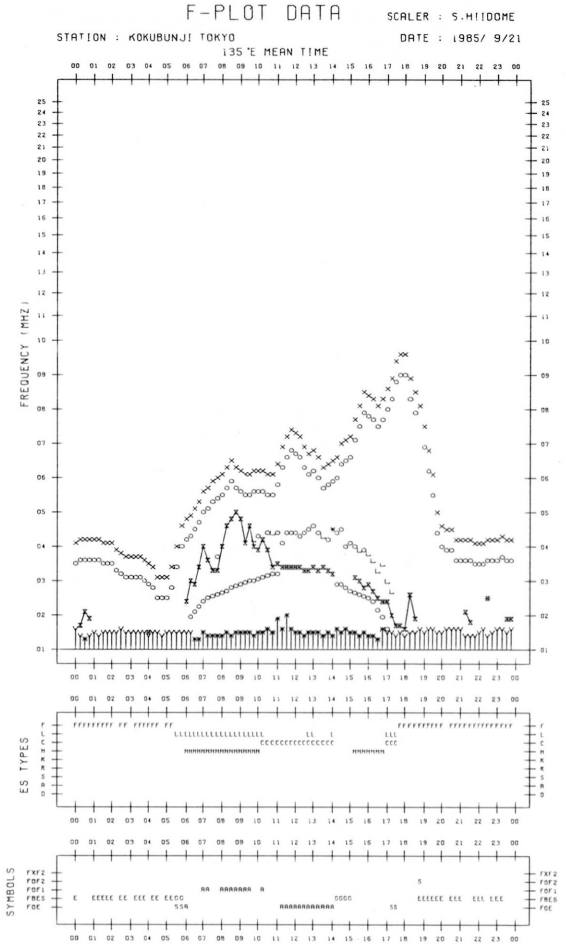
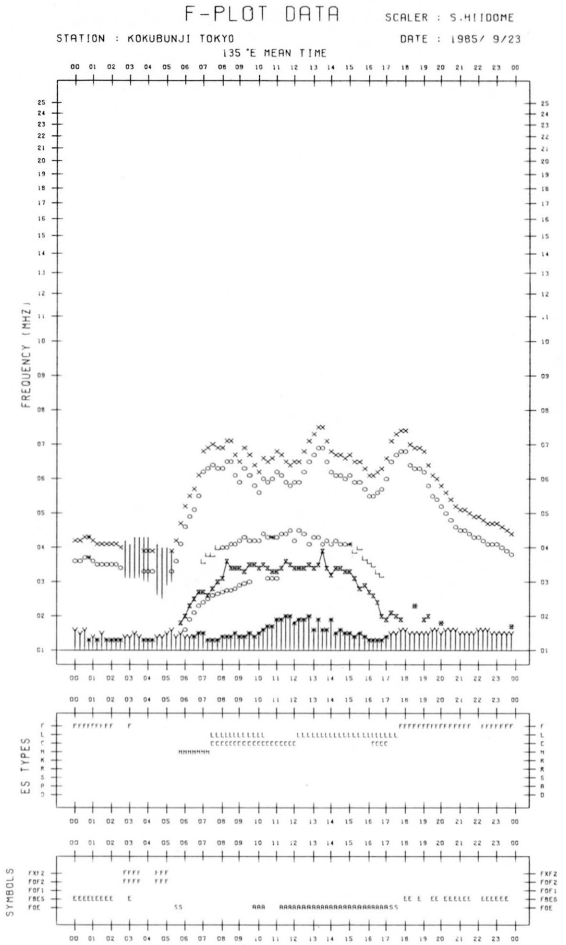
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/20
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/21
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE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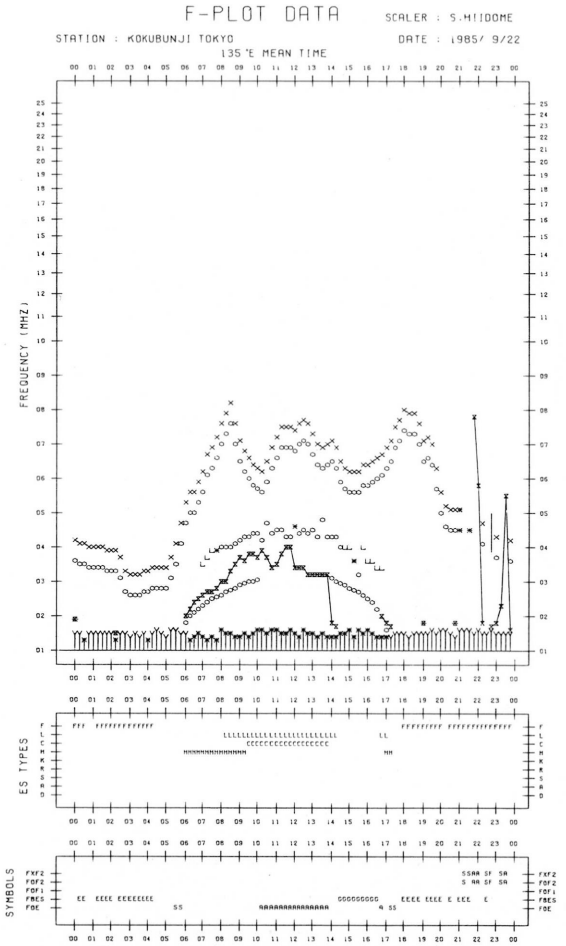
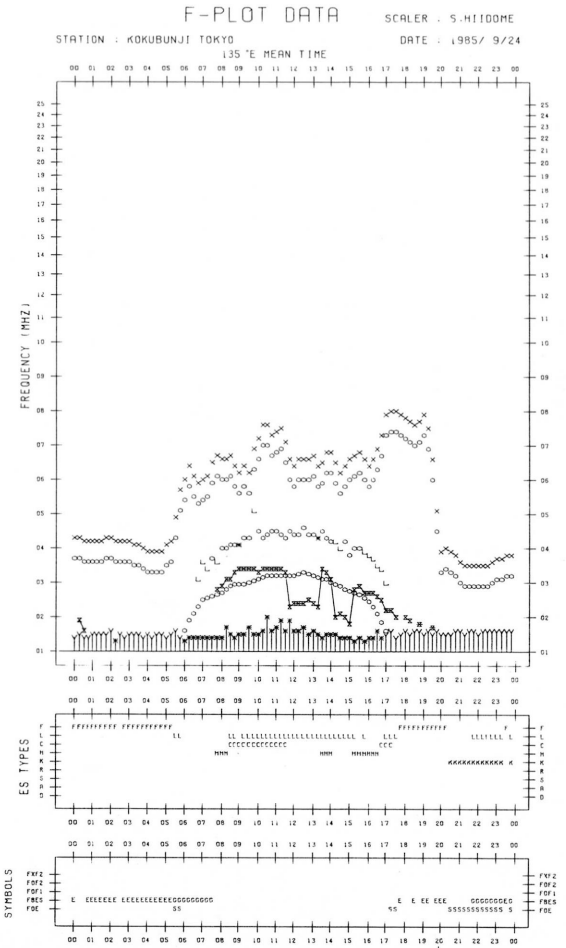
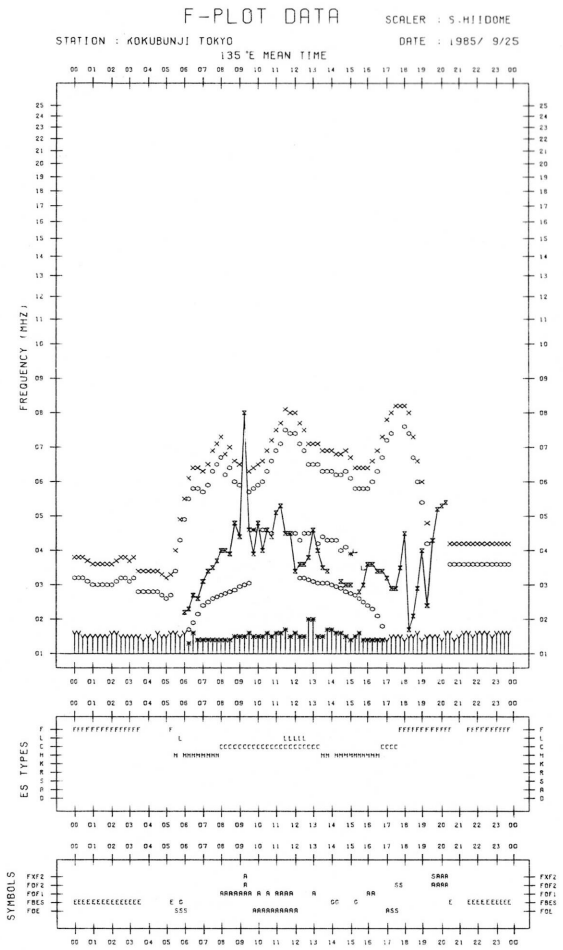
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/23
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/22
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE


F-PLOT DATA
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/24
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS
FXF2
FOF2
FOF1
FMES
FOE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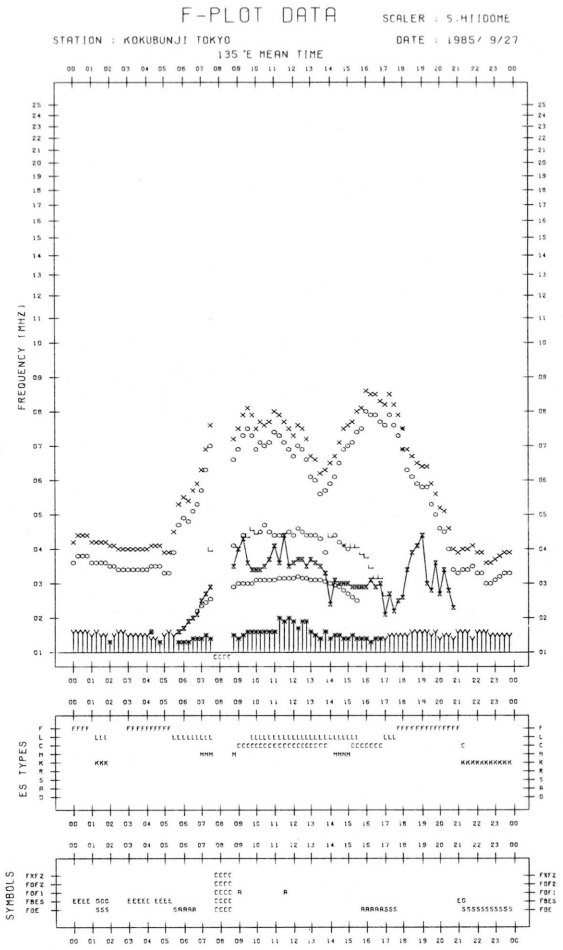
SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/25
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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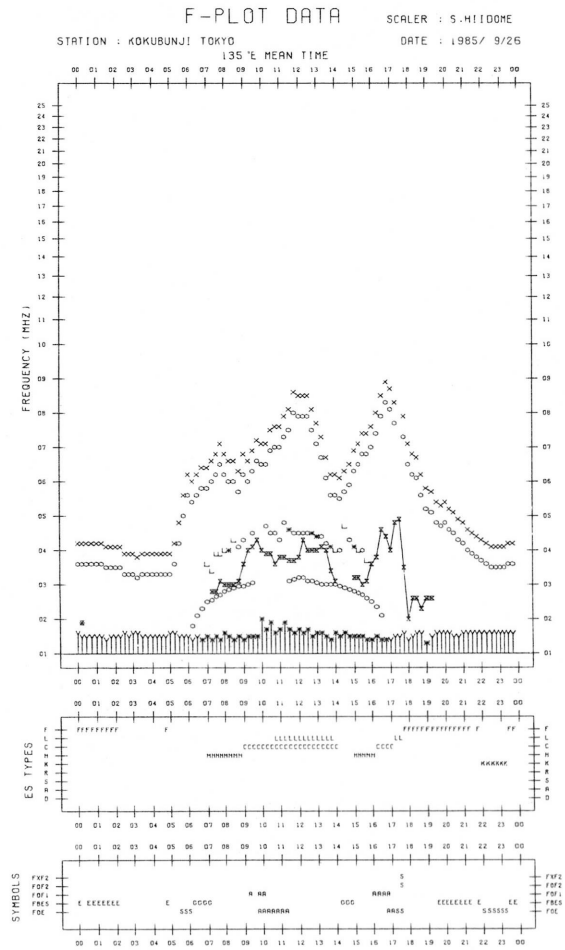
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/27
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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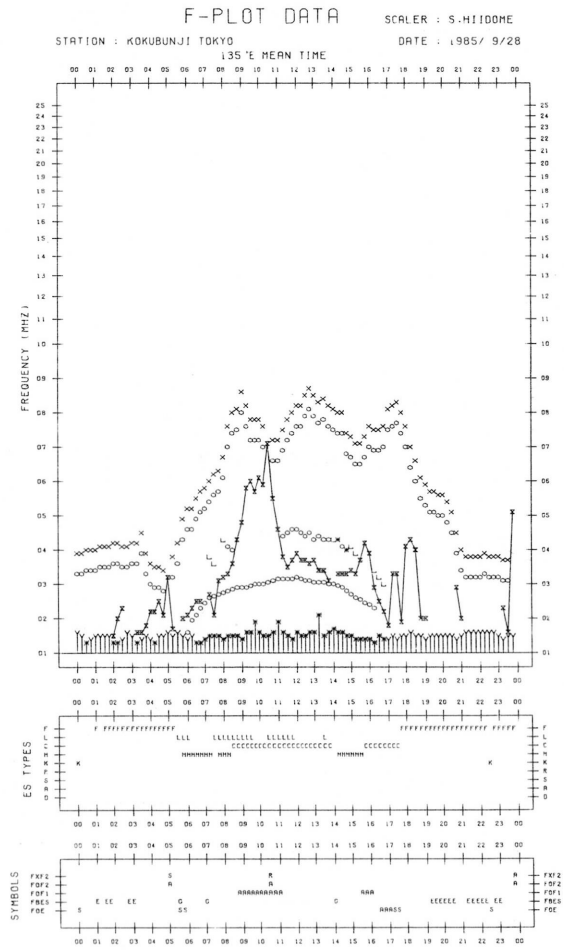
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/26
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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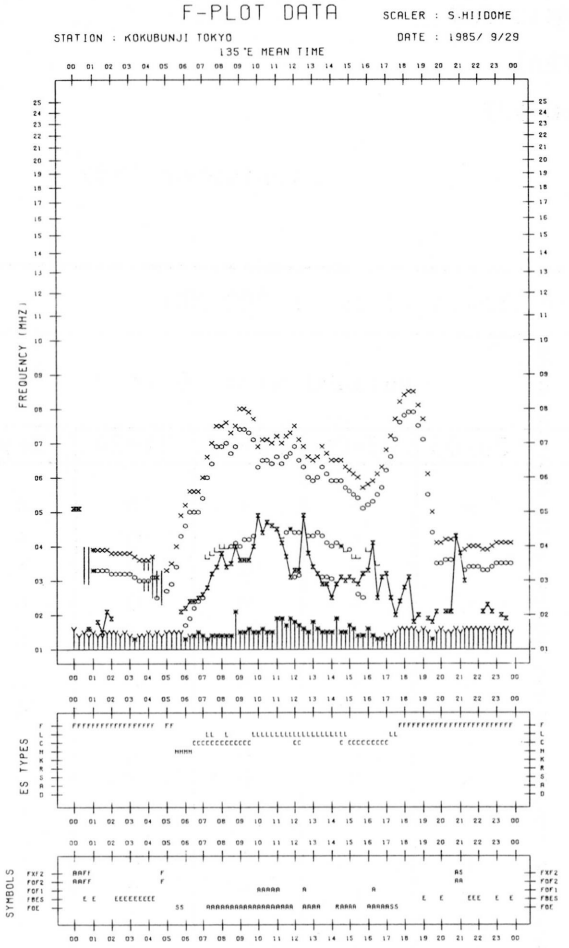
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/28
135 'E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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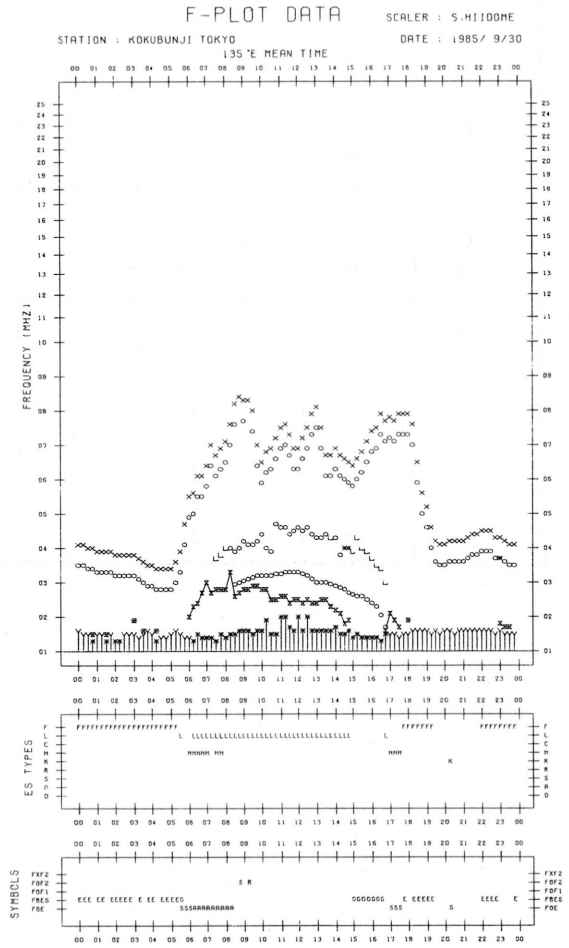
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/29
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS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SCALER : S.HIIDOME
STATION : KOKUBUNJI TOKYO
DATE : 1985/ 9/30
135 °E MEAN TIME
FREQUENCY (MHZ)
ES TYPES
SYMBOLS

SOLAR RADIO EMISSION

HIRAISO (HIRA)

36.37N 140.62E

Hiraiso Branch, R.R.L.,
Nakaminato, Ibaraki,
311-12 JAPAN

September 1985

Single-frequency total flux observations at 200 MHz

	Flux density: 10^{-22} Wm^{-2}Hz^{-1}					Variability: 0 to 3				
UT	00-03	03-06	06-09	21-24	Day	00-03	03-06	06-09	21-24	Day
Date										
1	q	q	q	6	q	*	*	*	*	*
2	6	6	6	6	6	*	*	*	0	*
3	6	6	6	6	6	*	*	*	0	*
4	6	q	6	6	6	*	*	*	0	*
5	6	6	6	6	6	0	*	*	*	0
6	6	6	6	6	6	*	*	*	*	*
7	6	6	q	6	6	*	*	*	0	*
8	6	6	6	6	6	0	0	0	0	0
9	6	6	6	6	6	0	0	0	*	0
10	6	6	6	6	6	0	0	0	*	0
11	6	6	q	6	6	0	*	*	0	*
12	6	6	6	6	6	0	0	*	*	0
13	6	6	q	6	6	0	*	*	*	*
14	6	6	6	6	6	0	*	*	*	*
15	6	6	6	6	6	*	*	*	*	*
16	q	6	q	6	6	*	*	*	*	*
17	q	q	q	6	6	*	*	*	*	*
18	6	6	q	6	6	0	*	*	0	*
19	6	6	6	6	6	0	0	*	0	0
20	6	6	6	6	6	*	*	*	0	*
21	6	6	6	6	6	0	0	0	0	0
22	6	6	q	q	6	0	*	*	*	0
23	6	6	6	6	6	*	0	*	*	*
24	6	6	q	6	6	*	*	*	0	*
25	6	6	6	6	6	0	0	0	*	0
26	6	6	6	q	6	0	0	*	*	*
27	6	6	6	q	6	*	0	0	*	0
28	6	6	6	6	6	*	*	*	*	*
29	6	6	6	6	6	0	*	*	*	*
30	q	q	q	6	q	*	*	*	*	*

q: likely quiet.

*: interference.

SOLAR RADIO EMISSION

HIRAISO (HIRA)

36.37N 140.62E

Hiraiso Branch, R.R.L.,
Nakaminato, Ibaraki,
311-12 JAPAN

September 1985

Single-frequency total flux observations at 500 MHz					
Flux density: 10^{-22} Wm^{-2}Hz^{-1}					
UT	00-03	03-06	06-09	21-24	Day
Date					
1	27	27	27	26	27
2	27	27	27	26	27
3	26	26	26	26	26
4	26	26	26	26	26
5	26	26	26	26	26
6	26	25	25	26	26
7	26	25	25	25	25
8	25	25	25	24	25
9	24	24	24	24	24
10	24	24	24	23	24
11	24	23	24	24	23
12	24	24	24	23	24
13	24	24	24	23	24
14	23	23	23	23	23
15	24	24	24	23	24
16	24	24	24	24	24
17	24	24	24	24	24
18	24	24	24	24	24
19	24	24	24	24	24
20	24	24	24	24	24
21	25	25	24	24	25
22	25	25	24	25	25
23	25	25	25	26	25
24	26	26	26	25	26
25	25	25	25	24	25
26	26	26	25	26	25
27	26	26	25	25	26
28	25	25	25	25	25
29	25	25	24	24	25
30	24	24	24	23	24

Note No observations during the following periods:

4th 0300 - 0412

SOLAR RADIO EMISSION

HIRAISO (HIRA)

36.37N 140.62E

Hiraiso Branch, R.R.L.,
Nakaminato, Ibaraki,
311-12 JAPAN

September 1985

Outstanding Occurrences

(single-frequency observations)

Normal observing period: 2025 - 0845 (sunrise to sunset)

SEP 1985	FREQ	STATION	TYPE	START TIME UT	TIME OF MAXIMUM UT	DUR MIN	FLUX DENSITY PEAK	FLUX DENSITY MEAN	POLARIZATION POSITION REMARKS
15	500	HIRA	46 C	0732.3	0736.1	5.5	39	4	O
18	500		8 S	0308.6	0308.8	0.6	3	-	WR
	200		8 S	0308.7	0309.0	0.7	72	-	O
	100		8 S	0308.7	0309.0	0.7	380	-	O

RADIO PROPAGATION

MEASUREMENT OF H.F. FIELD STRENGTH (UPPER SIDE-BAND OF WWV)

SEP 1985 FREQUENCY 15 MHZ BANDWIDTH 80 HZ RECEIVING ANTENNA ROD 4.5 M

MEASURED AT HIRAISO

UT DAY	00H 15M	01H 15M	02H 15M	03H 15M	04H 15M	05H 15M	06H 15M	07H 15M	08H 15M	09H 15M	10H 15M	11H 15M	12H 15M	13H 15M	14H 15M	15H 15M	16H 15M	17H 15M	18H 15M	19H 15M	20H 15M	21H 15M	22H 15M	23H 15M
1	ES -9	ES -5	-5	ES -13	ES -9	ES -13	ES -1	ES -2	ES -2	ES -20	ES -13	ES 7	ES -9	ES -9	ES -9	ES -13	ES -13	ES -13	ES -13	ES -13	-9	-4	-13	-13
2	-4	-6	ES -9	-6	-6	-3	ES -9	ES -9	ES -9	-9	ES -18	ES -3	ES -2	ES -14	ES -5	ES -14	ES -14	-5	ES -23	ES -23	4	3	2	-5
3	3	-1	ES -6	ES -4	ES -9	ES -9	ES -9	ES -18	ES -14	ES -23	ES -23	ES 4	ES 2	ES -5	ES 2	2	ES -23	ES -23	ES -23	ES -23	1	7	2	-6
4	-3	3	ES -4	ES -5	ES -5	ES -5	ES -9	ES -5	ES -18	ES -18	S	-1	ES -23	ES -8	ES -14	-10	ES -23	-3	-10	ES -23	3	1	ES -9	-5
5	-8	2	ES -5	ES -3	ES -5	C	ES -2	3	ES -10	C	C	ES -1	ES -2	ES -5	ES -5	ES -8	-10	ES -14	ES -14	ES -14	2	4	3	-5
6	-6	-3	-4	-6	ES -18	-7	ES -9	-4	ES 1	ES -18	ES -18	ES -4	ES -6	ES -6	ES 1	ES -9	ES -18	ES -18	ES -18	ES -18	-14	ES -18	ES -9	ES -9
7	-8	ES -8	ES -8	ES -8	ES -8	ES -8	ES 0	ES -10	ES -3	ES -8	ES -8	ES -3	ES -5	ES -14	ES -14	ES -14	-8	-6	ES -23	ES -23	ES -23	ES -23	-8	-5
8	-8	ES -14	ES -14	ES -8	ES -14	ES -14	ES -9	ES -1	ES -8	ES -14	ES -14	ES 0	ES -5	ES -23	ES -23	ES -23	ES -23	-6	ES -23	ES -23	-10	ES -23	ES -23	-6
9	ES -18	ES -9	ES -12	ES -17	ES -18	ES -18	ES -12	ES -9	ES -4	ES -17	ES -18	ES -18	ES -14	ES -14	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -14	-10	-10	ES -14
10	ES -14	ES -1	ES -14	ES -5	ES -4	ES -14	ES -14	ES -5	ES -8	ES -14	ES -8	ES -8	ES -23	ES -23	ES -23	ES -23	ES -23	ES -8	-8	-10	-11	-8	-10	-10
11	ES -23	ES -11	ES -14	2	ES -8	ES -5	ES -5	ES -5	ES -5	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-14	-1	8	2	-6
12	ES -14	-6	2	-5	ES -8	ES -12	ES -8	ES -5	ES -5	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	2	2	0	-8
13	-9	-9	ES -12	ES -14	ES -14	ES -14	ES -6	ES -5	ES -5	ES -5	ES -5	ES -1	ES -8	ES -8	ES -8	ES -23	ES -23	ES -23	ES -23	ES -23	-3	-3	-1	-5
14	-12	-14	C	ES -6	ES -4	ES -9	ES -18	ES 2	ES -1	ES -18	ES -9	ES 1	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18
15	ES -18	ES -18	ES -9	ES -6	ES -18	ES -18	ES -18	ES -1	ES -6	ES -23	ES -23	ES -3	ES -9	ES -9	ES -9	ES -18	ES -18	ES -18	ES -18	ES -18	-1	-7	ES -6	ES -9
16	ES -5	ES -5	ES -2	ES -3	ES -5	ES -8	ES -5	ES -2	ES -2	ES -9	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-9	ES 2	ES -14
17	ES -18	ES -14	ES -3	ES -18	ES -18	ES -17	ES -9	ES -18	ES -7	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -6	ES -6	ES -4	-1	-9	-7
18	-9	ES -14	ES -9	ES -12	ES -18	ES -18	ES -17	ES 1	ES -6	ES -6	ES -18	ES -23	ES -9	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-3	-6	-1	-9
19	ES -15	ES -12	ES -12	ES -15	ES -15	ES -24	ES -24	ES -6	ES -9	ES -9	ES -24	ES -9	ES 1	ES -1	ES -2	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -15	ES -6	ES -24
20	ES -24	ES -4	ES -6	ES -11	ES -9	ES -5	ES -6	ES -5	ES -9	ES -24	ES -24	ES -9	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	-4	ES 1	-2
21	ES -19	ES -19	ES -10	-1	ES -19	ES -10	ES -2	ES -18	ES -2	ES -15	ES -10	ES -19	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-3	-2	13	4
22	-12	ES -18	ES -9	ES -6	ES -9	ES -6	ES -9	ES -14	ES -5	ES -18	ES -18	ES -18	ES -1	ES -1	ES -6	ES -18	ES -18	ES -18	ES -18	ES -18	ES -9	-6	7	3
23	-1	ES -3	ES -18	ES -18	ES -17	ES -6	ES -18	ES -3	ES -9	ES -18	ES -18	ES -18	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-6	2	-6	-6
24	-1	ES -5	ES -1	ES -23	ES -1	ES -10	ES -2	ES 2	ES -8	ES -14	ES -14	ES -14	ES -2	ES -23	ES -23	ES -2	ES -2	ES -23	ES -23	ES -23	2	2	2	-1
25	-3	ES -14	ES -14	ES -8	ES -8	ES -14	ES -23	ES -8	ES -8	ES -14	ES -14	ES -14	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-3	-1	9	2
26	0	ES 2	-3	7	2	ES -10	ES -4	ES -1	ES 3	ES -14	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	3	4	9	10	2
27	-6	C	ES -5	ES 2	ES -9	ES -9	ES -3	ES -6	ES -3	ES -18	ES -9	ES -5	ES -4	ES -8	ES -4	ES -4	ES -4	ES -4	ES -23	ES -23	-1	4	5	2
28	3	ES -5	ES -2	ES -14	ES -1	ES -2	ES -2	ES 2	ES -2	ES -14	ES -23	ES -1	ES -5	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	11	7	2	3
29	7	ES 2	ES -3	ES -3	ES -3	ES -6	ES -6	ES 1	ES -1	ES -18	ES -6	ES -18	ES 4	ES -23	ES -23	ES -23	ES -23	2	ES -23	ES -23	-11	6	13	5
30	ES 3	ES 3	ES 1	ES 1	ES -3	ES 5	ES -6	ES -3	ES 1	ES -15	ES -15	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	-6	7	8	10
CNT	30	29	29	30	30	29	30	30	30	29	28	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	US -8	ES -6	ES -6	ES -6	ES -8	ES -9	ES -8	ES -5	ES -5	ES -17	ES -18	ES -9	ES -9	ES -20	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	US -4	-2	US 0	-6
UD	3	ES 2	ES -1	ES 2	ES -1	ES -3	ES -2	ES 2	ES 1	ES -8	ES -8	ES 1	ES 1	ES -5	ES -2	ES -4	ES -8	ES -4	ES -10	ES -10	4	7	10	4
LD	ES -19	ES -18	ES -14	ES -18	ES -18	ES -18	ES -18	ES -18	ES -10	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -24	ES -24	ES -24	ES -24	ES -24	ES -23	ES -18	ES -13	ES -14

RADIO PROPAGATION

MEASUREMENT OF H.F. FIELD STRENGTH (UPPER SIDE-BAND OF WWVH)

SEP 1985 FREQUENCY 15 MHZ BANDWIDTH 80 HZ RECEIVING ANTENNA ROD 4.5 M

MEASURED AT HIRAISO

UT DAY	00H 45M	01H 45M	02H 45M	03H 45M	04H 45M	05H 45M	06H 45M	07H 45M	08H 45M	09H 45M	10H 45M	11H 45M	12H 45M	13H 45M	14H 45M	15H 45M	16H 45M	17H 45M	18H 45M	19H 45M	20H 45M	21H 45M	22H 45M	23H 45M
1	7	12	16	7	9	22	22	18	19	16	12	1	5	-4	-5	ES -13	ES -13	ES -13	ES -13	6	9	9	7	11
2	9	11	14	17	22	26	26	24	14	0	ES -9	ES -9	2	0	-5	ES -14	ES -14	ES -23	ES -23	12	8	9	7	8
3	7	7	12	13	20	18	22	22	12	-1	2	9	ES 1	ES 2	ES -11	ES -23	ES -5	ES -23	ES -23	4	9	8	8	13
4	11	12	15	18	17	19	24	19	14	17	11	21	ES -14	ES -14	ES -23	ES -23	ES -23	ES -23	ES -23	2	12	17	14	12
5	7	8	C	8	C	C	28	21	9	ES -2	ES -5	ES 1	ES -8	ES -5	ES -5	ES -8	ES -14	0	ES -14	12	12	17	12	9
6	6	11	17	8	19	27	22	27	17	-9	ES -18	ES 0	ES -6	ES -3	ES 1	ES -9	ES -18	ES -18	ES -18	12	9	11	6	4
7	4	8	14	15	18	28	21	23	17	2	ES -5	ES -3	ES -14	ES -14	ES -14	ES -14	ES -14	ES -23	ES -23	-14	12	7	15	10
8	12	7	17	12	17	17	22	4	7	-8	ES -8	ES -5	ES -23	ES -23	ES -23	ES -23	ES -23	-14	ES -23	0	9	19	12	12
9	17	12	11	16	22	21	18	4	7	-17	ES -18	ES -18	ES -14	ES -14	ES -23	ES -23	ES -23	ES -23	ES -23	-12	-2	10	11	3
10	2	9	7	11	18	23	29	12	ES -8	ES -8	ES -8	ES -8	ES -23	ES -23	ES -23	ES -23	ES -23	ES -8	2	9	10	7	7	6
11	4	5	16	22	17	17	21	ES -5	ES -5	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	6	-1	ES -23	6	18	7	12
12	12	10	10	11	18	19	11	ES -5	ES -5	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-10	15	11	11	7
13	8	9	7	12	20	27	6	ES -5	ES -5	ES -5	ES -5	ES -2	ES -8	ES -8	ES -23	ES -23	ES -23	ES -23	ES -23	-1	3	-1	5	7
14	8	6	9	22	17	19	17	4	20	17	19	17	25	-9	ES -18	ES -18	ES -18	7	ES -18	ES -18	13	7	12	14
15	13	12	12	17	17	5	4	11	ES 0	-6	16	ES -18	ES -9	ES -9	ES -9	ES -18	ES -18	ES -18	ES -18	12	7	12	15	5
16	7	9	14	19	21	16	8	8	6	-1	-14	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-6	ES -23	ES -23	12	16	18	14
17	10	8	13	13	17	21	21	18	12	12	12	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -18	ES -6	-1	14	17	20	12
18	7	9	13	15	16	24	9	ES -6	ES -6	ES -18	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	14	13	11	17	7
19	11	6	6	11	19	21	15	ES -6	ES -3	ES -24	ES -24	ES -2	ES -2	ES -3	ES -24	ES -24	ES -24	ES -24	ES -24	1	16	11	10	18
20	16	12	11	21	26	27	21	18	ES -9	ES -24	ES -24	ES -9	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	12	10	8	15	6
21	11	11	17	16	15	25	23	20	15	14	11	ES -19	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-12	10	22	16	14
22	8	12	13	18	12	19	33	31	22	19	-9	ES -1	ES -1	ES -1	ES -18	ES -18	ES -18	ES -18	ES -18	14	8	19	16	17
23	11	7	9	17	22	27	22	ES -3	ES -9	ES -18	ES -18	ES -18	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	12	19	13	14	11
24	12	12	12	20	21	19	32	2	ES -5	ES -14	ES -3	ES -5	ES -2	ES -23	ES -23	ES -2	ES -2	ES -23	ES -23	ES -23	25	20	16	11
25	13	26	21	26	26	23	22	-1	ES -8	ES -14	ES -14	-1	ES -23	ES -23	ES -23	ES -23	ES -23	0	9	17	26	16	13	12
26	16	18	18	17	22	22	17	9	ES 3	ES -14	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	22	13	12	12	14
27	10	17	21	18	17	30	27	11	3	6	ES -18	ES -9	ES -4	ES -4	ES -4	ES -4	ES -4	ES -4	ES -23	12	17	12	12	14
28	8	12	17	17	22	27	26	ES 0	ES -5	ES -14	ES -23	ES -8	ES -23	ES -23	ES -23	ES -23	ES -23	ES -23	-1	-6	12	17	14	13
29	13	11	21	23	16	23	17	ES -1	ES -1	ES -6	ES -18	ES -18	ES -1	ES -23	ES -23	ES -23	ES -23	0	-2	-11	8	15	16	12
30	13	11	16	15	21	35	18	-2	ES 1	ES -15	ES -15	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	ES -24	16	11	16	16	12
CNT	30	30	29	30	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
MED	10	11	14	16	18	22	22	8	US 3	ES -7	ES -12	ES -8	ES -14	ES -20	ES -23	ES -23	ES -23	ES -23	ES -23	3	12	12	12	12
UD	16	17	21	22	22	28	29	24	19	17	12	9	2	ES -1	ES -5	ES -8	ES -5	0	-1	16	19	19	17	14
LD	4	6	7	8	15	17	8	ES -5	ES -8	ES -23	ES -23	ES -23	ES -23	ES -23	ES -24	ES -24	ES -24	ES -24	ES -24	ES -23	6	7	7	5

RADIO PROPAGATION

RADIO PROPAGATION QUALITY FIGURES

HIRAIO

Time in U.T.

Sep. 1985	Whole Day Figure	W W V 00 06 12 18 / 06 12 18 24	W W V H 00 06 12 18 / 06 12 18 24	Conditions 00 06 12 18 / 06 12 18 24	Principal Geomagnetic Storms Start	End	Range
1	4o	4U S S 3	4 5 5U 4	N N N N			
2	4+	4U S S 4	4 5 5U 4	N N N N			
3	4+	4U S S 4	4 5 S 4	N N N N			
4	4+	4U S 5U 4	4 5 S 4	N N N N			
5	4+	4U S S 4	4 5U S 4	N N N N			
6	4-	4U S S 3	4 4 S 4	N N N N			
7	4o	S S 5U 3	4 5 S 3	N N N N			
8	4-	S S S 3	4 4 S 4	N N N N			
9	3+	S S S 3	4 4 S 3	N N N N			
10	4o	S S S 4	4 4U S 4	N N N N			
11	4-	3U S S 4	4 3U 5U 4	N N N N			
12	4-	4U S S 4	4 3U S 4	N N N N			
13	3+	S S S 4	4 3U S 3	N N N N			
14	4o	S S S 3	4 5 5U 3	N N N N	0600	16.0	69
15	3+	S S S 3	3 4U S 4	N N N N			
16	4-	S S S 3	4 4 S 4	N N N N			
17	4+	S S S 4	4 5 S 4	N N N N			
18	4-	S S S 4	4 3U S 4	N N N N			
19	4o	S S S 2	3 3U S 4	N N N N	05.0	---	130
20	3+	S S S 3	4 3U S 4	U U U U	---	---	
21	4o	3U S S 4	4 5 S 4	U U U U	---	23.0	
22	4o	S S S 4	4 5 S 4	N N N N			
23	3+	S S S 4	4 3U S 4	N N N N			
24	3+	S S S 4	4 3U S 4	N N N N			
25	5-	S S S 5	5 4U 5U 4	N N N N			
26	4+	5U S S 5	4 3U S 4	N N N N			
27	4+	S S S 5	5 4 S 4	N N N N			
28	4o	S S S 5	4 3U S 4	N N N N			
29	4o	S S S 4	4 3U 5U 4	N N N N			
30	4-	S S S 5	4 3U S 3	N N N N			

SUDDEN IONOSPHERIC DISTURBANCES

HIRAISO

Time in U.T.

Sep. 1985	S W F					Correspondence		
	Drop-out Intensities (dB) CO HA 1) 2)	Start	Duration	Type	Imp.	Solar Flare	Solar Noise	Geomag. Crochet
	None							

RADIO PROPAGATION

Sudden Ionospheric Disturbance (SPA)

I N U B O

Sep. 1985	S P A							
	Phase Advance (degrees)					Time (U.T.)		
Date	GBR	Ω/LR	NWC	Ω/H	Ω/ND	Start	End	Maximum
15		—	13			0736	0818	0742

IONOSPHERIC DATA IN JAPAN FOR SEPTEMBER 1985

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Queries about "Ionospheric Data in Japan" should be forwarded to:
The Radio Research Laboratory, Ministry of Posts and Telecommunications,
2-1 Nukui-Kitamachi 4-chome, Koganei-shi, Tokyo 184 JAPAN.