COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF EXTERNAL AFFAIRS

AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITIONS

INTERIM REPORTS

9

Hourly Measurements of Ionospheric Characteristics Macquarie Island, 1952

By

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C O N T E N T S

INTRODUCTION.

Routine h'f ionospheric soundings were commenced in June 1950 at Macquarie Island (Geographic Latitude 54° 29'S, Longitude 158° 58' E, Geomagnetic Latitude 61°S, Longitude 243°E). Hourly values for 1950 and 1951 were the subjects of ANARE Interim Reports Numbers 2 and 6. The following report presents hourly values and graphs of ionospheric characteristics observed during 1952. Unfortunately all records for April, May, June, and July were destroyed in a fire which occurred at the Station in 1952.

The equipment, originally designed and built at C.S.I.R.O. Radiophysics Laboratory, is, with minor modifications, as described by Higgs (1943) and is substantially similar to ionospheric recorders in use at Townsville, Brisbane, Canberra, Hobart and Watheroo. The recorder sweeps a frequency range from 1.0 to 13.0 mc/s in one minute fifty-five seconds and is entirely automatic. The transmitter peak pulse power is approximately 1.5kw and the receiver sensitivity about 10 micro-volt. The record obtained is photographic, on standard 35mm film, and is normally made six times per hour. Height marks at 50 km intervals, frequency marks at every 0.5 mc/s from to 10 mc/s and 11,12 and 13 mc/s, and the time are included on each record. The frequency-time sweep is logarithmic.

The main modification in the equipment is a change in antenna switching circuits to make possible the use of a single wire Delta antenna (Cones, 1949). Two such antennas, one for transmitting and the other for receiving, rigged at right angles, with 1100 ohm terminating resistors, are supported on a single 70 foot guyed steel mast.

The characteristics published in this report are those recommended at the Fifth Meeting of The International Radio Consultative Committee (C.C.I.R.) in Stockholm, 1948, and later by Commission 111 of U.R.S.1. at its 1950 Assembly in Zurich:--

f^oF2) - ordinary-wave critical frequency for the
f^oF1) F2, F1 and E layers respectively.
f^oE)

fEs - highest frequency on which echoes of the sporadic type are observed from the lower part of the E layer.

h'F2) - minimum virtual height on the ordinary-wave
h'F1) branch for the F2, F1 and E layers respectively.
h'E)

h'Es - minimum virtual height of sporadic E echoes

hpF2 - virtual height of the F2 layer measured on the ordinary-wave branch at a frequency equal to 0.834 f^oF2

(M3000)F2) - maximum usable frequency factor for a
(M3000)F1) path of 3000 km for transmission by the F2 and F1 layers respectively.

Provisional monthly median values of f^oF2, (M3000)F2, f^oF1 and (M3000)F1 are published in regular bulletins of the Ionospheric Prediction Service of the Commonwealth Observatory.

The following descriptive symbols have been used in the tabulation :----

considered doubtful

x no median given because of too few values

xx median value of f_{Es} less than the median value of $f^{o}E$

SUMMARY

The monthly median values of the critical frequencies, heights and transmission factors for the normal layers followed the expected daily and seasonal trends for a medium to high latitude station. During the winter months the F1 layer was seldom seen.

Polar blackouts were quite common at night, particularly during the equinox and to a lesser degree during the summer months. For many months it was impossible to obtain median values of the F2-layer characteristics for the several hours around midnight owing to the severity and the regularity of the blackouts. On the other hand, echoes from the sporadic-E layer were more common at night than during the day, and were frequently observed intermittently during a polar blackout when there were no F2- layer echoes. Sporadic-E layer echoes were not associated in the same way with daylight fades.

ACKNOWLEDGEMENTS

Acknowledgement is made to the Ionospheric Prediction Service of the Commonwealth Observatory for the loan of the equipment and for help in the reduction of results. Special thanks are due to Mrs. M. Harrison and the I.P.S. Publications Section for the preparation of the results for publication.

REFERENCES

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Cones, H. N. 1949 Impedance Characteristics of Some Experimental Broadband Antennas for Vertical Incidence Ionospheric Soundings, J. of Res. of N.B.S. 43, 71.

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Cohen, D.S. 1952 Australian National Antarctic Research Expedition Interim Report No. 2, "Hourly Measurements of Ionospheric Characteristics, Macquarie Island, 1950".

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a characteristic not measurable because of blanketing by Es

b characteristic not measurable because of increased absorption of any type

c characteristic not observed because of either partially or completely lost records

d characteristic at a frequency higher than the normal upper limit of the equipment; also, when followed by a numerical value, d has the meaning of "greater than"

e characteristic at a frequency lower than the normal lower limit of the equipment; also, when followed by a numerical value, e has the meaning of "less than"

f spread echoes present

g (a) F2 layer critical frequency equal to or less than the F1 layer critical frequency

(b) measurement of hpF2 prevented by retardation in the F1 layer, the F2 layer critical frequency being close to that of the F1 layer; the symbol thus used is included in the median count as a value greater than the median

(c) used on Es tabulation sheets when no Es echoes are observed though regular E layer echoes are present

h stratification observed within the layer

j ordinary-wave characteristic deduced from measured extraordinary-wave characteristic

k ionospheric storm in progress

l (a) critical frequency or M3000 for F1 layer omitted or doubtful because no definite or abrupt change in slope of the h'f curve is observed either for the first reflection or any of the multiples

(b) minimum virtual height for the F2 layer omitted because the F2 layer trace is continuous with the F1 layer trace and without a point of zero slope

n nature of the observation is such that it is not possible for the characteristic to be interpreted

p trace extrapolated to critical frequency

q distinct F1 layer not present

s characteristic obscured by interference or by atmospherics

v trace forked near critical frequency

w characteristic at a height greater than the normal upper limit of equipment

y used on Es tabulation sheets when Es trace is intermittent in frequency range

z third component of h'f trace for layer is observed

( ) individual observed values thus enclosed are

GRAPHICAL REPRESENTATION

OF

IONOSPHERIC CHARACTERISTICS

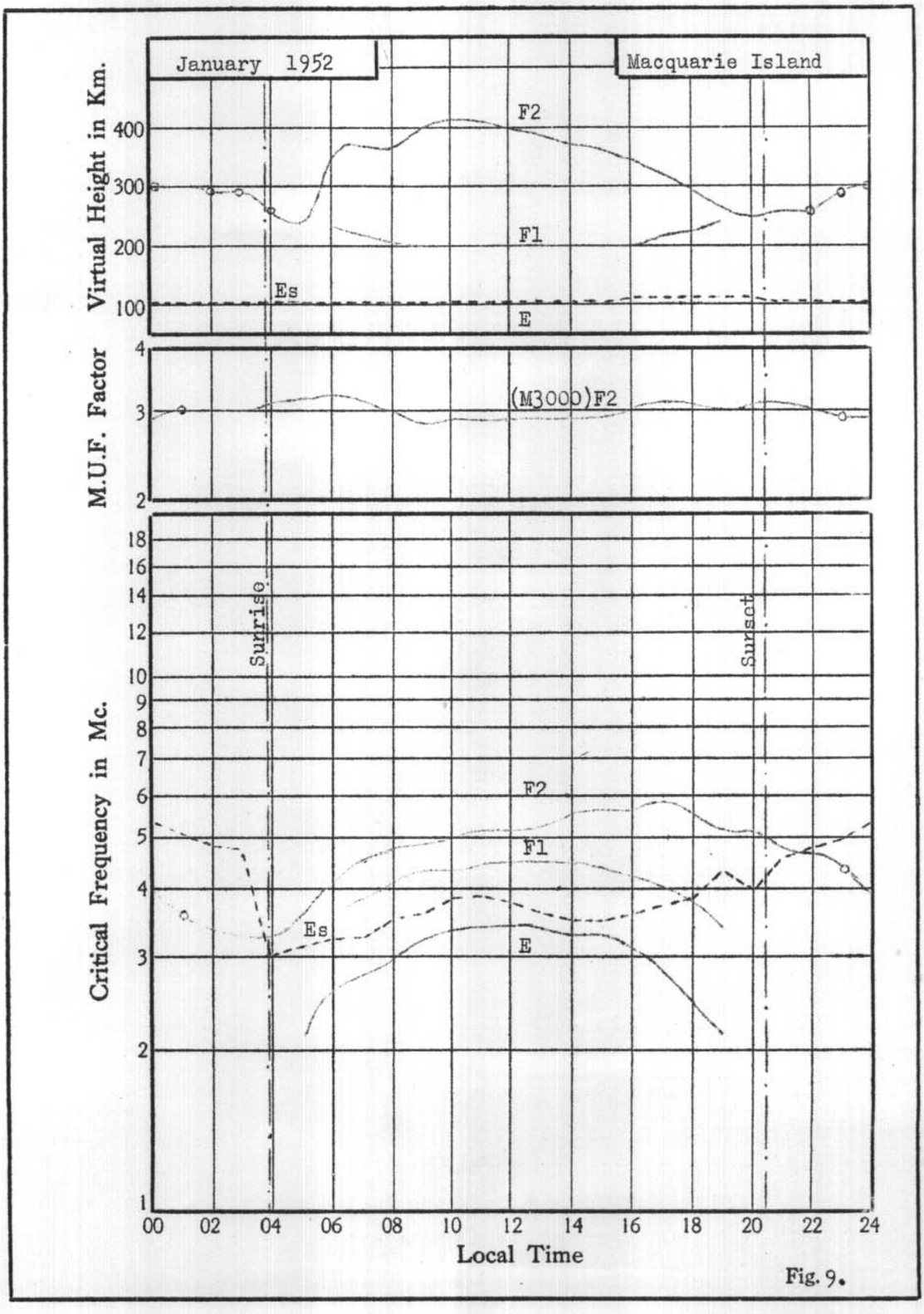


Fig. 9.

GRAPHICAL REPRESENTATION

OF

IONOSPHERIC CHARACTERISTICS

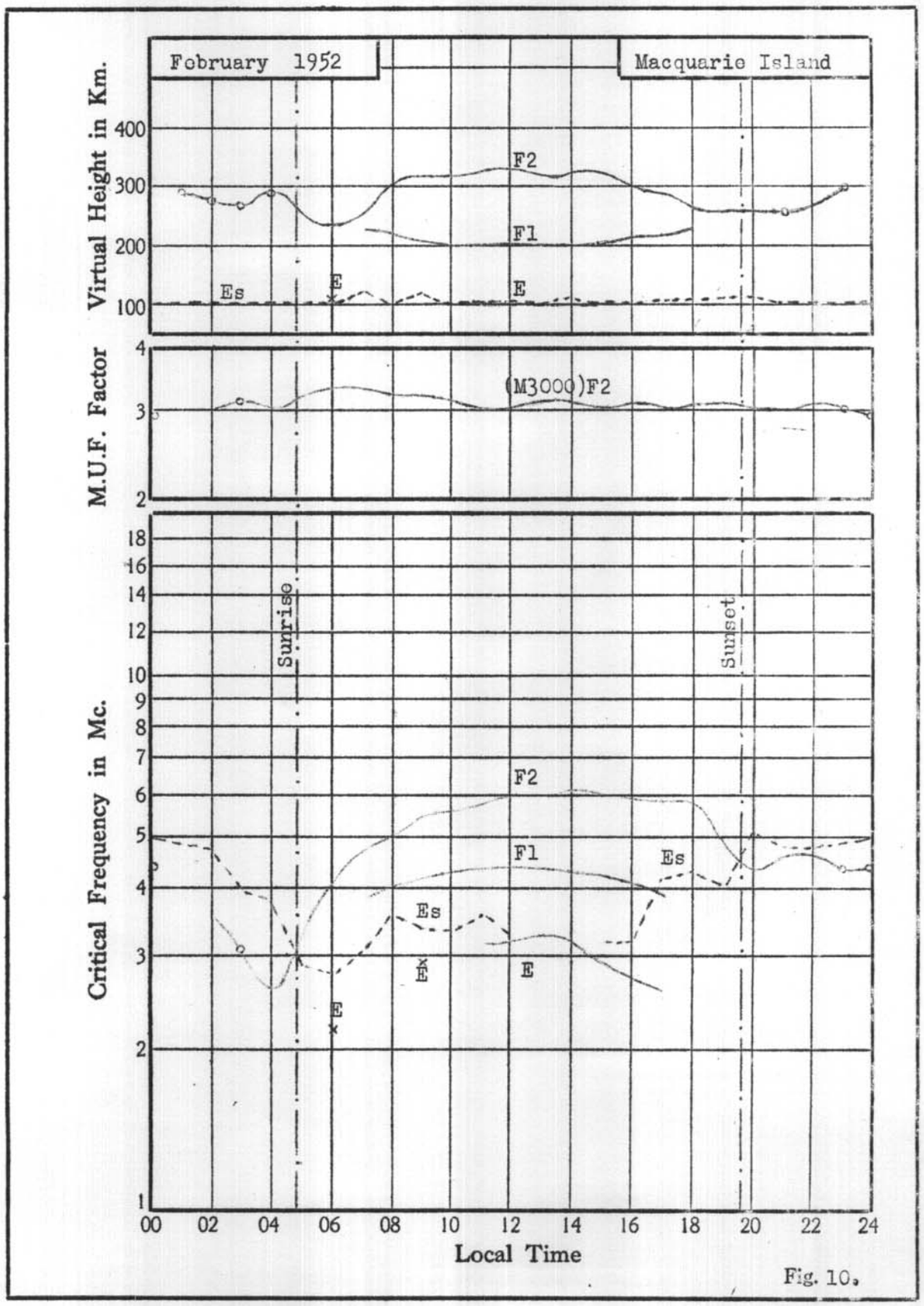


Fig. 10.

GRAPHICAL REPRESENTATION

OF

IONOSPHERIC CHARACTERISTICS

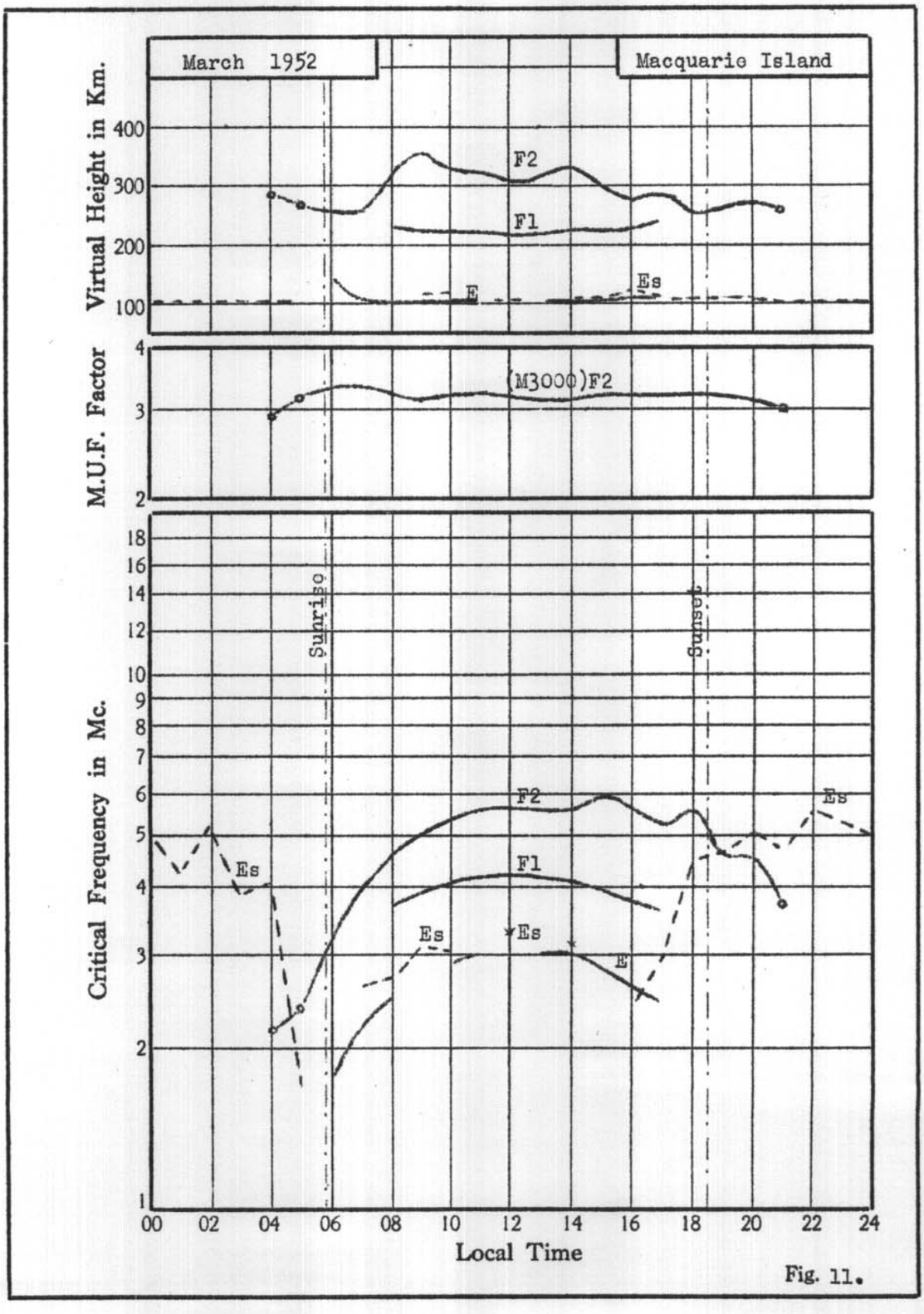


Fig. 11.

GRAPHICAL REPRESENTATION

OF

IONOSPHERIC CHARACTERISTICS

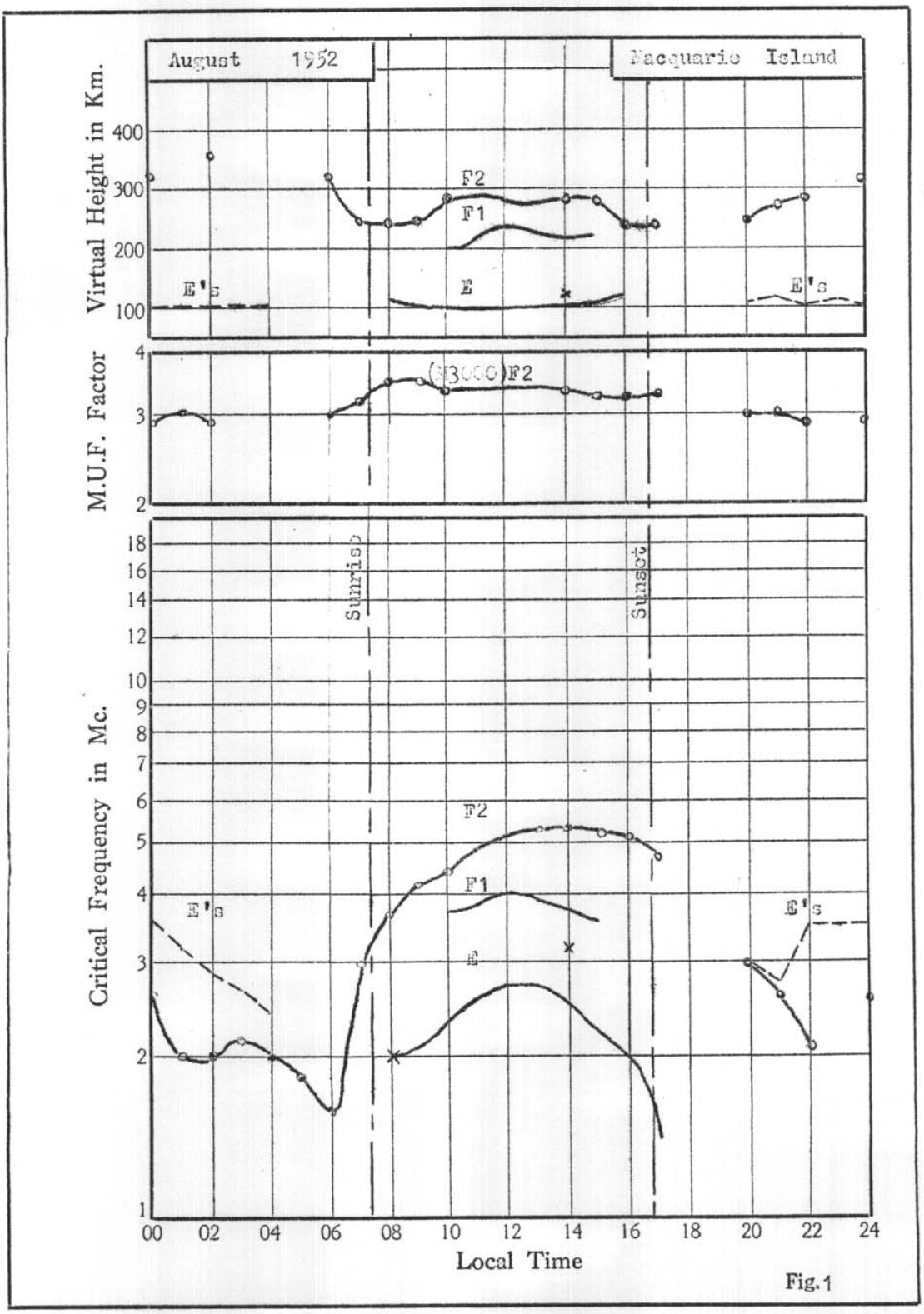


Fig. 1

GRAPHICAL REPRESENTATION

OF

IONOSPHERIC CHARACTERISTICS

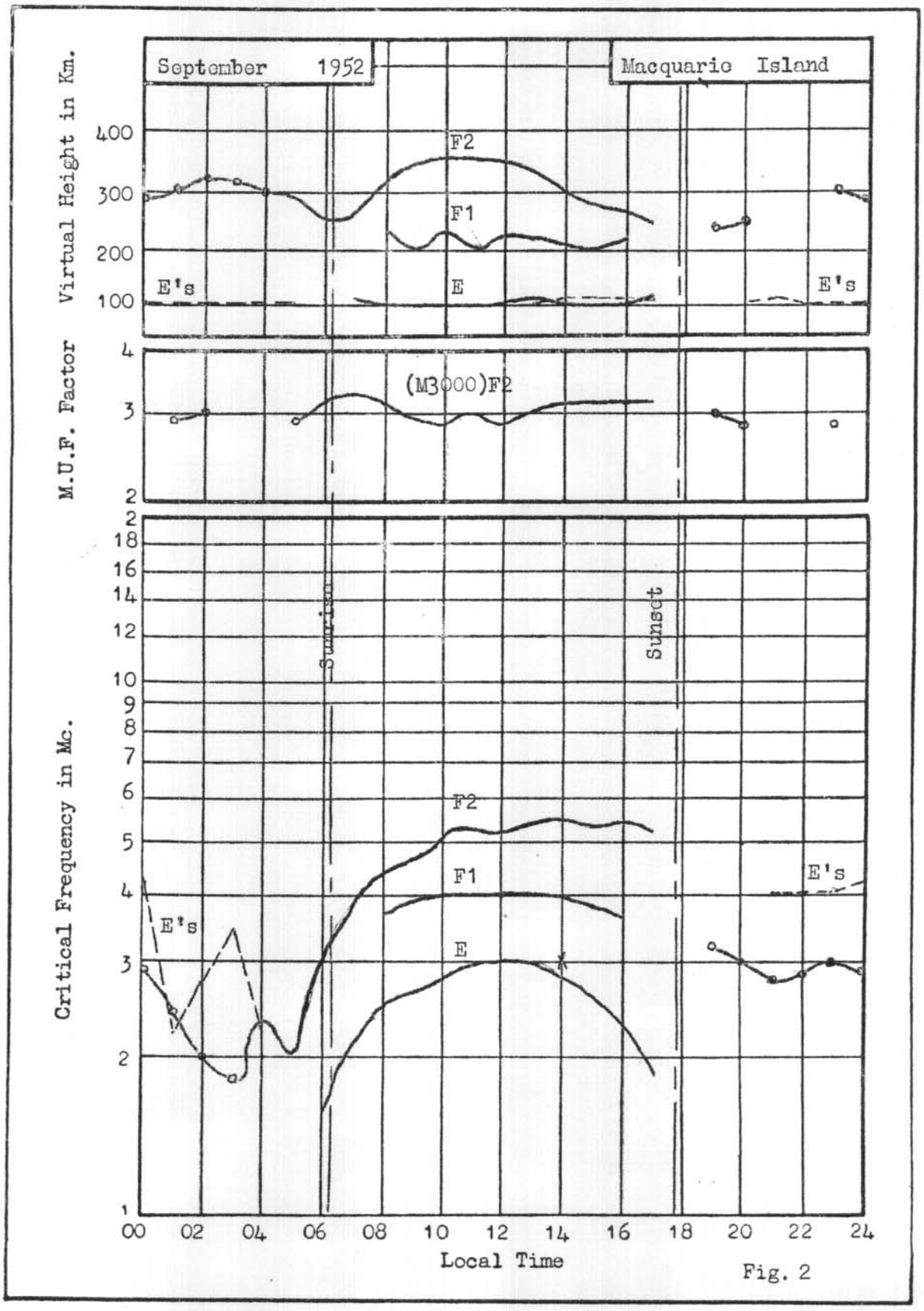


Fig. 2

GRAPHICAL REPRESENTATION

OF

IONOSPHERIC CHARACTERISTICS

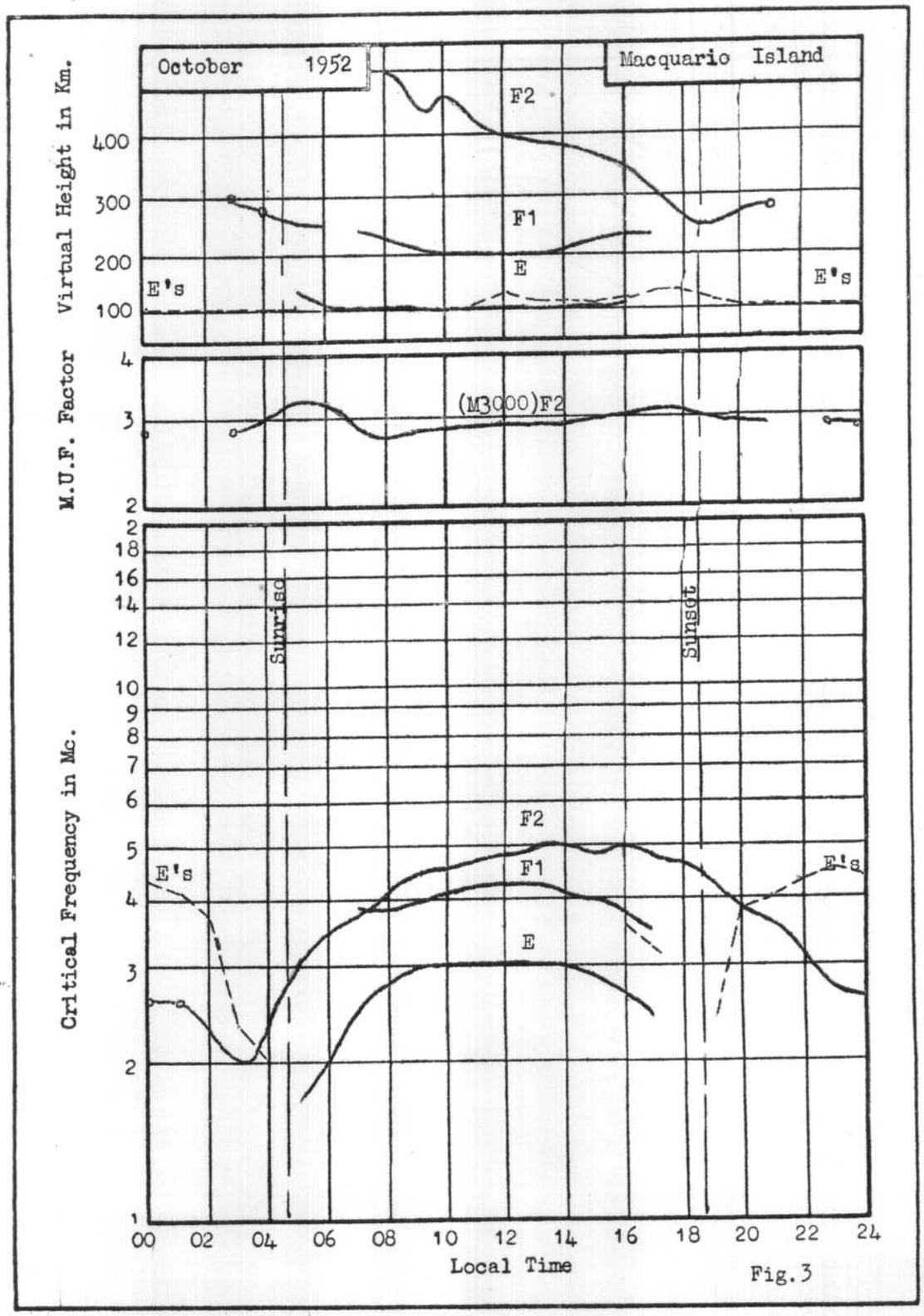


Fig.3

GRAPHICAL REPRESENTATION OF IONOSPHERIC CHARACTERISTICS

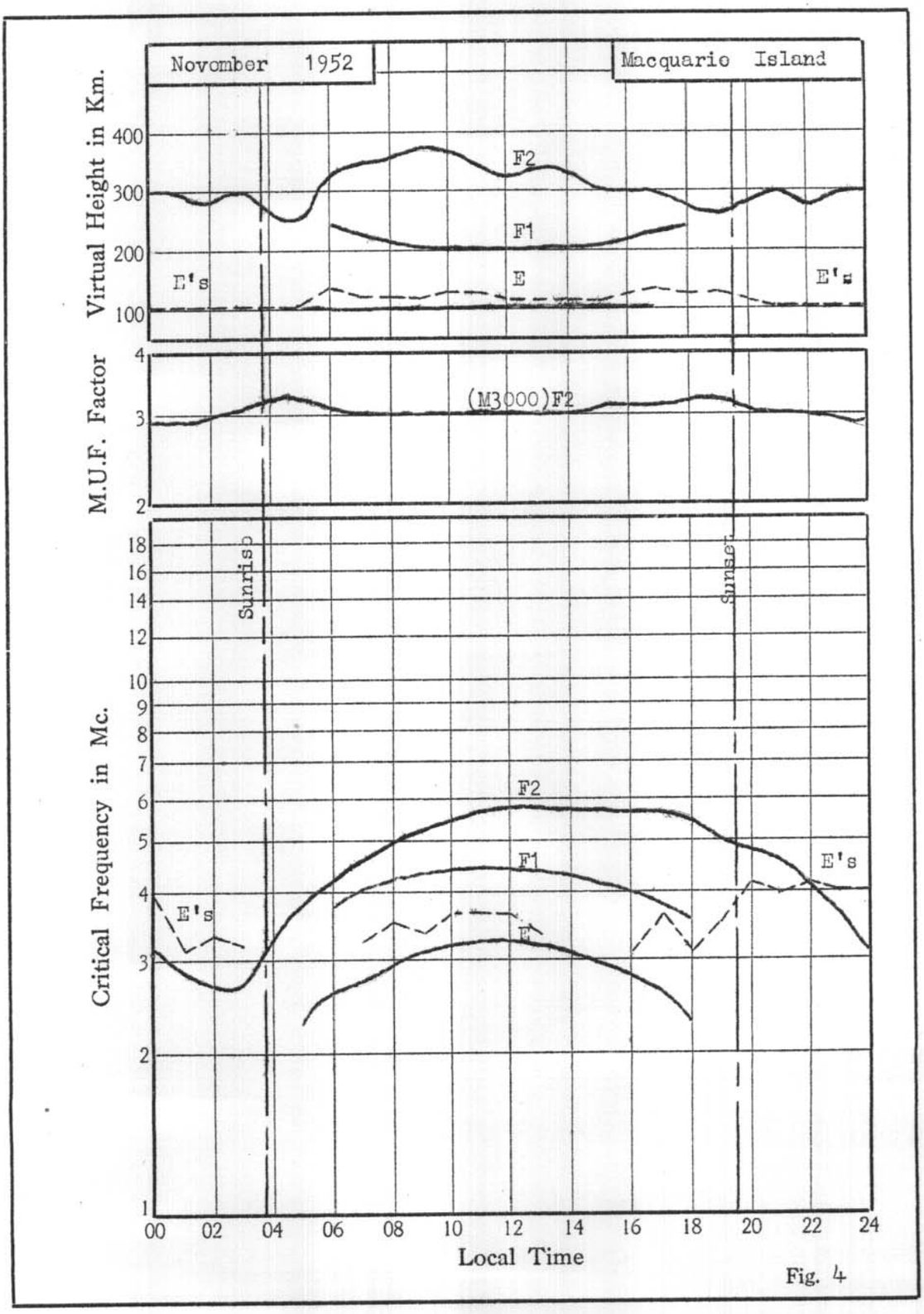


Fig. 4

GRAPHICAL REPRESENTATION

OF

IONOSPHERIC CHARACTERISTICS

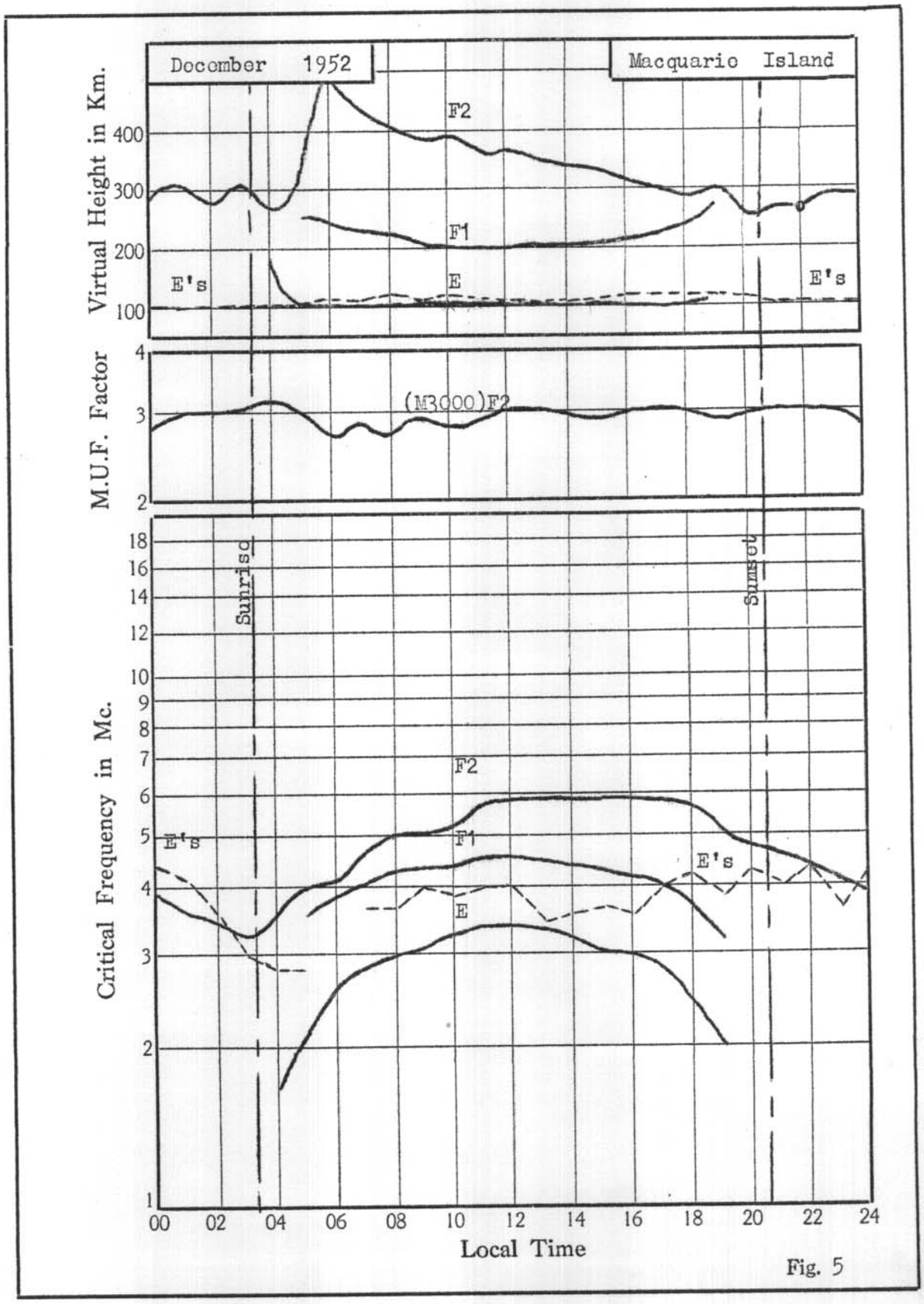


Fig. 5

HOURLY VALUES OF f8F2 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11
1	b	b	b	b	b	b	b	g	b	b	g	g
2	4.2	4.4	3.9	3.2	3.8	3.9f	5.2	4.9f	6.2	5.7z	5.8z	c
3	4.5f	3.9f	3.7f	3.8f	3.8f	4.5f	4.7	6.0f	5.7f	6.0f	6.1f	6.5f
4	4.0	4.3f	4.6f	4.1f	3.9f	4.3f	4.3f	4.9f	5.8f	6.2f	6.3f	6.4f
5	a	a	a	b	4.5	4.1f	4.5	4.7	4.6	4.9	5.2	5.8
6	a	b	b	b	b	4.0	4.1	4.5	4.7	4.7	5.3	5.0
7	a	a	b	b	b	3.6	4.0	4.3f	4.8	4.8v	4.7v	4.8
8	b	b	b	b	b	4.1	4.6	f	5.3	5.4v	5.7	5.5
9	4.0f	s	3.4f	3.9f	3.7f	4.0f	4.5	4.6	5.2	5.2	5.5	5.4
10	s	s	(3.5)s	b	b	3.6f	g	g	4.2	g	g	5.1
11	b	b	a	b	b	b	3.8f	g	g	4.4	g	4.8
12	a	b	b	b	b	3.6	g	g	4.3	4.5	g	4.8
13	c	c	c	c	c	c	c	c	c	c	c	c
14	b	b	b	b	b	b	g	b	b	b	b	b
15	b	b	b	b	b	b	3.8	g	b	b	5.0	5.0f
16	b	b	b	b	b	b	b	4.0	g	g	g	g
17	(3.2)s	a	a	b	2.9	3.3f	4.2	5.0	c	c	c	5.6
18	3.8f	3.8f	3.1f	b	3.3	4.0	4.3	4.6f	(4.7)f	5.1f	5.0	5.3
19	3.8s	3.3f	f	2.3f	2.7f	3.4f	3.9fz	5.0f	f	5.4v	5.4f	5.3f
20	3.4s	b	3.8s	3.8s	(3.2)f	3.6f	4.3	4.7f	5.3f	5.2f	5.3f	5.5f
21	4.0s	(3.5)s	3.2f	3.4f	3.6f	4.0z	4.5	5.2f	5.6f	5.8	6.3	6.2
22	3.2s	2.7s	b	3.4s	3.2	3.5	4.3	4.7f	4.8f	(5.5)f	5.3f	5.6
23	a	s	s	2.6f	2.9	n	n	5.0	4.5	4.3	4.8f	4.6
24	a	b	a	b	b	b	b	3.8	4.4	g	g	g
25	b	b	b	b	b	g	4.0	4.5	4.8	4.6	4.8	5.0
26	a	a	a	2.6	b	3.4	4.0	4.4	4.6	4.7	4.8	4.8v
27	s	s	3.3	c	b	3.8	4.2	4.8	5.0	4.8	5.3	5.2
28	a	b	b	a	a	b	c	c	c	c	c	c
29	b	b	b	2.6	b	3.5	4.2	4.8	5.0f	5.4	5.4	5.3
30	a	b	b	b	b	b	b	b	b	b	g	g
31	b	3.3	2.4	2.5	2.5	3.4	4.1	4.1	c	c	4.8	4.8
Median	3.9	(3.6)	3.4	3.3	3.3	3.6	4.2	4.6	4.8	4.9	5.0	5.2
No.	10	8	10	12	13	21	24	26	22	23	27	27

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF f°F2 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

Hour / Day	12	13	14	15	16	17	18	19	20	21	22	23
1	4.8	5.2	5.1	5.4	6.5	6.3	5.2f	5.0	a	b	c	b
2	c	c	6.7	6.7	c	c	c	8.0p	6.0f	5.7f	(6.0)f	4.6f
3	6.5f	6.8	6.9	6.9	6.8	6.8z	c	7.0	7.0	5.3f	(5.5)s	4.5f
4	6.8f	7.0	6.5	6.6	6.2	5.9	5.9	c	6.2	(6.8)s	5.6	4.8s
5	5.6	5.6z	b	f	c	c	c	c	c	c	c	c
6	4.7	5.4	5.6f	5.3f	5.6	4.8	4.5	4.5	b	b	a	b
7	5.2	5.2	5.2	5.4	5.6f	5.8	5.4	5.0f	c	c	c	a
8	5.7	5.7	5.9	6.5	6.7	6.7f	c	5.1z	5.4	b	b	b
9	5.4	5.3	5.8	5.7	5.8	6.5	6.4	6.0	5.2	4.7f	(4.0)s	s
10	5.2	5.4v	5.5z	6.1v	6.1	5.5f	f	4.0f	4.0f	3.5f	a	a
11	g	5.3v	5.0	5.5	5.7f	6.5v	4.8f	4.8	4.5	a	a	a
12	g	4.8z	5.4	5.8v	c	5.8v	5.0	a	b	b	b	a
13	c	c	c	c	c	c	c	4.7	4.8f	b	b	b
14	5.2	5.4	5.4v	5.4	b	5.7vf	4.7f	4.3	a	b	b	c
15	4.9f	5.2f	5.4	6.1	c	6.0f	c	4.1f	4.2f	4.1	b	b
16	g	4.7	4.7	5.3	5.2	5.3f	c	5.4	4.3f	3.8f	3.3s	3.0s
17	5.7	6.0	5.9	6.2	c	6.0	5.9	6.0	5.0f	4.6f	4.7f	4.2
18	5.3	5.4	5.5	5.5	5.5	5.6	5.3	5.6	5.4	5.0s	4.9s	4.4s
19	5.7f	5.5f	5.5	6.0z	c	5.9	6.0	5.8	5.9	s	4.5s	(4.0)s
20	5.5f	5.5	5.7	5.8	6.0	6.0	6.2p	5.9	5.7z	s	4.8s	4.5s
21	6.5	6.7	6.4	6.4z	6.9	6.5	c	6.3	5.0s	4.3	(4.0)s	3.4s
22	5.5	5.5z	5.5	5.4	5.5	5.8	6.3	5.5	s	s	s	b
23	g	g	4.8	4.8v	4.8f	4.7	4.5	a	a	a	b	b
24	g	g	4.9f	5.2	4.5	4.5	4.3	4.3v	4.0	3.3	a	a
25	5.2	5.4	5.4	5.0	5.1	5.1	c	5.4	4.3f	s	(4.0)s	b
26	5.2	5.1	5.1	5.2	5.3	5.7	c	a	5.7	4.8	a	s
27	5.2f	5.4	5.5	6.2	5.7	6.0	5.7	c	a	a	s	b
28	c	c	c	c	c	c	5.5	4.5	a	a	a	a
29	5.5	5.8	5.5	5.5z	5.3z	5.9	6.2	4.7	b	4.7	c	a
30	4.4	4.6	4.7	6.0f	6.2	7.0f	a	a	a	a	a	b
31	4.8	5.1	5.1	4.9	5.3	5.2	5.2z	5.4	5.3	4.8	s	s
Median	5.2	5.4	5.5	5.6	5.6	5.9	5.5	5.2	5.2	4.7	4.7	(4.4)
No.	28	28	28	28	22	27	19	24	19	14	11	9

Sweep: 1.0 - 13.0 Mc/s in 1m55s Time used: 157.5°E.M.T.

HOURLY VALUES OF foF1 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

Hour / Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1		b	3.9	b	b	4.5	4.4	4.6	4.6	4.5	4.4h	4.4	4.2	4.0	a
2		4.3	1	4.4	4.7z	4.7	c	c	c	4.6	4.4	c	c	c	b
3		b	4.3	4.3	4.5h	4.7	4.7	4.8h	4.7	4.7h	4.5	4.4	4.2	c	3.4
4		q	4.0f	4.5f	4.6h	4.6	4.6	4.7f	4.7	4.5	4.5	4.2	4.1	4.1	c
5		1	3.9	4.2h	4.4h	4.4	4.5	4.5z	4.5z	b	a	c	c	c	c
6		q1	4.1v	4.1	4.2	4.3	4.4h	4.4h	4.3	4.3	4.2	4.5v	a	a	a
7		3.6	3.9	4.1	4.2	4.3	4.4	4.4	4.5	4.3h	4.2	4.1v	4.1	3.7	3.4
8		3.8	b	4.3	4.5	4.5	4.6	4.6	4.6	4.5	4.4	4.3	4.3f	c	q
9		1	1	4.2	4.5	4.5	4.6	4.6	4.6	4.5h	4.3h	4.2h	4.2	3.8	a
10	3.4f	3.5	3.8	4.1	4.3	4.4	4.4h	4.6	4.6	4.4	4.3	b	3.9	a	a
11		3.6	3.8	4.1v	4.2h	4.3	4.5	4.6	4.5	4.4f	4.4	4.3	4.3	3.8	3.4
12		3.9	4.0	4.0	4.3	4.4	4.4	4.5	4.5	4.6v	4.4	c	4.1	a	a
13		c	c	c	c	c	c	c	c	c	c	c	c	c	a
14		3.7	b	b	b	b	b	4.5	4.5	4.5	b	b	4.2	a	a
15		3.6	3.8	b	b	4.5	4.5	4.5	4.7v	4.6h	4.4	c	4.2	c	q
16		b	3.8	4.1h	4.2h	4.3	4.4	4.4	4.4	4.4	4.4	4.3v	4.1	c	q
17		3.7	4.2	c	c	c	4.6	4.6	4.7	4.6	4.5	c	4.1	b	q
18		q	4.2f	4.2f	4.4	4.5	4.5	4.5	4.5	4.5	4.4	4.3	4.1	3.8	q
19		q	4.2	4.3	4.5	4.4	4.6	4.6f	4.5f	4.6	4.5	c	4.1	3.8	q
20		3.8	1	4.3	4.5	4.5f	4.5f	4.7f	4.5	4.6	4.5	4.4	4.2	a	q
21	1	1	4.3	4.5	4.6	4.7h	4.6f	4.8	4.7h	4.6	4.6h	4.5v	4.3	c	3.3
22	3.3	3.8	4.0f	4.1f	f	4.5f	4.7h	4.6	4.5z	4.5	4.5	4.2	4.1	3.8	1
23		n	3.8	4.0	4.1	4.1	4.3	4.3	4.4	4.2	4.3	4.4	4.1v	3.6	a
24		b	3.6	4.0h	4.1	4.1	4.2	4.3	4.3	4.3	4.2	4.0	3.9	3.6	q
25	3.4	3.6	3.9	4.1	4.2	4.2	4.4	4.4	4.4	4.4	4.3	4.2	4.0	c	3.4
26		3.7	3.9	4.2	4.2	4.4	4.5	4.4	4.4	4.4	4.3	4.2	4.0	c	a
27		q	4.0	4.1	4.2	4.2h	4.5	4.4	4.5	4.5	4.3	4.3	4.2	3.8	c
28		c	c	c	c	c	c	c	c	c	c	c	c	3.7	a
29		q	3.9	4.3	4.4h	4.4	4.4	4.6	4.5	4.5	4.3	4.3h	4.2h	3.6	a
30		b	b	b	b	4.1	4.2	4.2	4.3	4.2	4.1	4.2	3.9	a	a
31		3.4	3.8	c	c	4.3	4.4h	4.3	4.4	4.5	4.3	4.0	4.0	3.7	q
Median	*	3.7	3.9	4.2	4.4	4.4	4.5	4.5	4.5	4.5	4.4	4.3	4.1	3.8	3.4
No.		14	23	23	22	27	27	28	28	28	27	21	26	14	5

Sweep: 1.0 - 13.0 Mc/s in 1m55s

Time used: 157.5°E.M.T.

HOURLY VALUES OF foE OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

Hour / Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1		b	b	b	b	b	b	b	b	b	b	a	3.1	2.9	a	a
2		b	b	a	3.2	3.3z	3.4	c	c	c	b	3.2	c	c	c	b
3	1.8	2.3	b	a	3.1	a	a	a	a	3.4	a	a	a	2.9	c	2.1
4		2.2	2.6f	2.8	a	a	3.3	3.4	a	3.4	a	b	b	3.0	2.6f	c
5		a	2.6	2.7	2.9	3.1	a	3.5	3.4z	3.4z	b	a	c	c	c	c
6		b	2.6f	2.9	2.9	3.1	b	b	3.3	b	b	3.3	3.2	a	a	a
7		a	2.6h	2.9	3.0	3.2	3.4	3.4	3.5	3.5	3.3	3.2	3.1	2.9	2.5z	a
8		a	a	b	b	a	3.5	3.4	a	3.4	3.3	3.2	3.1	3.0	c	(2.5)f
9		a	2.6	2.8	3.0	a	a	a	a	a	a	3.1	3.1	2.9h	2.5f	a
10		2.6f	b	b	3.2	3.3	3.4	3.4	a	a	a	a	b	a	a	a
11		b	2.6	2.8	3.1	b	b	b	b	3.6	3.4	b	3.2	3.0	a	a
12		b	a	a	3.1	3.3	a	b	b	a	3.4	b	c	a	a	a
13		c	c	c	c	c	c	c	c	c	c	c	c	c	c	a
14		b	b	b	b	b	b	b	b	b	3.4	b	b	a	a	a
15		b	b	b	b	b	b	b	3.6	b	3.4	b	c	c	c	a
16		b	b	2.7	3.2	a	3.4	a	a	a	a	3.3	3.1	2.9	c	a
17		2.1	a	2.9	c	c	c	3.4	3.4	3.4	3.4	3.2	c	a	b	a
18		2.1f	2.6f	2.8	3.0	3.3	a	a	a	3.4	3.4	a	b	b	a	a
19		2.1	2.5	2.9	3.2	3.3	a	a	a	a	a	3.4	c	2.9	a	2.2
20		2.1f	2.5f	a	a	a	a	a	a	3.4	3.3	3.3	3.0	a	a	a
21	1.7	a	b	b	a	3.3	a	a	a	a	a	3.3	a	a	c	2.2
22		2.2f	a	a	a	a	a	a	a	3.4z	3.3	3.3	3.2	a	2.7	2.2
23		a	2.4	2.8	3.0	3.2	3.4	3.4	3.4	3.3	3.3	3.3	3.0	a	a	a
24		b	b	b	2.9	3.3	a	a	a	a	a	a	a	a	a	2.2
25		b	2.5	a	2.9	a	a	3.3	3.4	3.4	a	3.3	a	a	c	2.0f
26		b	a	a	a	a	a	3.4	3.4	a	3.3	3.1	a	c	c	a
27		a	a	a	3.1	3.1	3.1	3.3	3.3	3.4	3.2	3.3	2.9	c	c	c
28		b	c	c	c	c	c	c	c	c	c	c	c	c	a	a
29		b	c	c	3.0	3.2	3.3	3.3	3.5	3.5	3.3	3.1	3.0	2.7	a	a
30		b	b	b	b	b	b	b	a	a	3.2	a	a	a	a	a
31		1.9	b	a	c	c	a	3.3	a	3.3	a	3.1	a	a	2.4	a
Median	*	2.1	2.6	2.8	3.0	3.3	3.4	3.4	3.4	3.4	3.3	3.3	3.1	2.9	2.5	2.2
No.		9	11	11	17	13	9	12	10	15	15	17	12	10	5	7

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF fEs OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

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	5.0	5.2	4.8	4.5	b	b	b	b	b	b	b	b	b	b	b	4.0	g	3.3	5.1	5.8	5.8	5.2	c	5.5
2	4.8	3.6	3.6	b	b	b	b	3.2	g	g	g	c	c	c	b	g	c	c	c	b	2.8	2.7	5.5	4.5
3	5.2	4.7	4.2	e	g	3.1	b	5.8	4.0	4.0	5.7	4.0	3.9	3.8	3.9	7.6	4.9	3.2	c	2.4	2.8	4.7	D4.7	4.8
4	4.7	4.2	5.3	5.5	2.9	2.8	2.8	g	3.2	3.8	4.0	4.0	4.0	3.8	3.9	b	b	g	3.0	c	4.0	6.6	7.5	7.5
5	D4.7	5.5	5.4	5.7	4.7	5.0	g	g	g	3.4	4.0	3.6	3.5	3.5	7.5	5.7	c	c	c	c	c	c	c	c
6	5.8	5.5	5.6	5.4	b	b	2.8	2.9	3.5	3.4	b	b	g	b	b	g	3.5	5.5	5.7	5.3	b	5.5	5.1	b
7	5.5	5.5	6.0	b	b	3.4	g	3.3	3.1	3.4	4.5	3.8	3.6	3.8	3.4	g	g	g	g	2.5	c	c	c	5.7
8	5.8	5.8	b	b	b	3.5	4.8	b	5.4	5.6	4.0	5.5	5.5	g	3.9	3.5	g	3.5	c	g	5.3	b	b	5.3
9	4.1	4.0	4.2	6.0	b	5.0	3.8	3.9	3.6	7.6	7.5	5.3	3.9	4.0	4.0	3.4	g	g	g	5.4	2.8	4.5	5.5	D4.5s
10	4.0	5.0	4.1	5.2	5.3	5.0	b	b	3.9	3.5	g	3.8	7.6	3.7	3.9	3.5	b	4.7	4.7	5.3	3.5	4.6	D4.7	D5.0s
11	5.5	5.2	6.0	b	b	b	3.3	g	g	b	b	b	b	g	g	b	3.6	g	3.9	4.2	4.1	5.7	4.8	5.4
12	5.8	5.3	5.9	5.0	b	4.1	4.1	5.5	5.0	5.7	3.9	5.2	b	3.9	3.5	b	c	4.6	5.3	5.3	4.5	b	b	5.4
13	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	5.7	4.0	5.1	b	b
14	5.6	5.0	4.7	b	b	b	b	b	b	b	b	b	b	b	g	b	b	3.6	3.5	4.8	4.6	5.0	5.5	c
15	3.8	b	b	b	b	b	b	b	b	b	b	b	g	b	g	b	c	g	c	2.6	3.1	3.5	4.5	4.7
16	6.0	b	b	b	b	b	b	g	7.5	3.4	3.7	4.0	3.6	3.5	3.4	g	4.1	3.6	c	2.4	3.0	3.1s	c	3.5
17	4.2	4.7	5.2	4.8	3.0	g	3.5	g	c	c	c	5.0	4.2	3.7	3.6	g	c	3.2	b	2.5	3.0	1.8	3.2	5.5
18	7.0	5.5	6.2	4.5	4.0	g	3.5	g	6.0	7.5	3.9	4.2	5.7	3.7	4.7	3.4	b	b	3.5	5.1	4.0	e	3.5	4.7
19	6.0s	5.7	3.5	5.2	5.7	2.3	3.3	3.3	3.5	4.1	4.2	5.6	6.0	6.0	4.3	3.5	c	5.0	3.1	3.4	3.4	s	s	s
20	5.0s	4.7s	2.3s	3.1s	g	2.4	3.1	3.5	4.0	3.9	3.5	3.5	3.5	g	g	g	3.3	4.6	6.0	3.3	b	D4.8	3.5	b
21	b	b	5.0	3.5	2.7	3.8	b	b	3.3	3.4	5.5	4.3	5.8	5.9	5.8	5.0	3.6	7.5	c	2.5	b	2.3	s	D4.7
22	D4.7	4.3	5.2	3.0	2.1	2.5	4.3	4.3	4.9	5.2	5.5	7.7	5.4	3.5	4.3	g	5.8	5.0	3.0	3.1	s	s	s	D4.7
23	D4.7	s	s	s	3.3	3.2	3.3	3.3	3.2	g	g	3.5	g	g	g	4.3	7.5	7.3	4.2	5.5	5.6	6.0	4.4	5.0s
24	5.5s	b	5.0s	5.7	b	b	b	b	3.0	3.5	3.4	3.7	4.0	5.4	D7.7	D7.7	D7.7	D7.7	3.8	2.8	4.2	D4.5s	D4.5	s
25	s	b	4.7	4.3	b	b	2.7	4.8	4.6	3.6	3.5	3.6	3.5	g	3.4	3.8	3.8	4.0	c	g	2.2	s	s	s
26	s	5.7	D4.7	4.6	b	3.5	4.0	4.8	3.6	4.5	4.3	3.7	3.7	3.6	3.5	3.5	3.5	c	c	5.8	e	3.3	5.5	s
27	s	e	3.2	2.4	b	2.5	3.0	c	g	3.3	3.5	g	g	g	g	5.0	3.1	c	3.5	c	D7.7	6.0	s	b
28	5.9	b	5.0	5.2	5.5	b	c	c	c	c	c	c	c	c	c	c	c	c	3.9	6.1	5.5	5.0	s	D4.7
29	D4.7	5.5	b	4.0	b	b	g	g	g	3.3	g	3.4	g	g	g	g	g	g	4.9	7.7	b	D4.7	c	7.5
30	5.8	b	b	7.0	b	b	b	5.3	b	b	4.3	b	3.5	3.4	g	3.7	6.0	D7.7	5.8	5.9	7.5	D4.5	6.5	b
31	5.5	4.7	3.3	3.3	1.5	g	b	3.3	c	c	3.4	3.4	5.2	3.5	3.5	g	4.7	5.0	4.8	4.4	e	e	s	s
Median	5.4	5.0	4.9	4.7	3.0	3.2	3.3	3.3	3.5	3.6	3.9	3.9	3.8	3.6	3.5	3.5	3.6	3.8	3.9	4.4	4.0	4.6	4.8	5.0
No.	26	23	24	22	13	18	18	21	23	22	23	22	24	24	26	24	19	24	20	27	24	24	16	19

Sweep: 1.0 - 13.0 Mc/s in 1m55s Time used: 157.5°E.M.T. MACQUARIE ISLAND fEs, JANUARY 1952

HOURLY VALUES OF h'F2 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

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	b	b	b	b	b	b	g	b	b	g	g	690	420	440	420	320	300	350	a	a	b	c	b
2	a	300	b	b	b	240	350	1	250	300	300	c	c	c	320	300	c	c	c	260	230	240	260	260
3	300	290	300	280	240	220	b	260	230	250	310	300	320	300	300	300	300	260	c	250	240	230	220	a
4	a	330	260	270	250	220	200	300	320	330	320	330	300	320	280	310	280	300	260	c	240	220	260	a
5	a	a	a	b	a	210	1	370	450	420	420	320	390	360	b	a	c	c	c	c	c	c	c	c
6	a	b	b	b	b	b	230	450	390	500	400	440	500	400	350	410	350	a	a	a	b	b	a	b
7	a	a	b	b	b	a	460	500	340	450	500	500	430	360	440	370	350	340	270	270	c	c	c	a
8	b	b	b	b	b	290	400	b	300	350	350	320	320	370	360	320	300	300	c	260	a	b	h	b
9	330	270	a	a	b	250	1	1	360	400	340	380	390	390	330	360	340	340	260	310	250	300	a	330
10	290	300	300	b	b	650	g	g	700	g	g	410	430	420	420	400	310	360	a	a	300	a	a	a
11	b	b	a	b	b	b	620	g	g	600	g	620	g	500	440	470	350	280	400	330	a	a	a	a
12	a	b	b	b	b	a	g	g	600	660	g	500	g	590	380	360	c	320	370	a	b	b	b	a
13	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	350	a	b	b	b
14	b	b	b	b	b	b	g	b	b	b	b	b	450	400	450	490	b	420	300	a	a	b	b	c
15	b	b	b	b	b	b	790	g	b	b	430	410	500	400	450	390	c	280	c	300	a	a	b	b
16	b	b	b	b	b	b	b	600	g	g	g	g	g	530	500	420	360	320	c	270	240	300	a	a
17	a	a	a	b	320	250	300	300	c	c	c	390	390	350	380	340	c	280	270	260	280	300	300	310
18	300	300	a	b	250	220	220	350	460	400	410	400	370	400	370	360	360	320	1	230	260	260	250	250
19	300	270	f	290	260	230	220	310	320	320	360	390	330	360	360	340	c	300	280	220	240	220	220	250
20	300	b	290	280	250	220	350	1	320	360	380	350	310	340	340	360	320	280	270	260	250	240	250	290
21	270	320	330	300	260	240	1	320	300	290	300	320	310	300	320	330	300	300	c	290	250	260	270	320
22	300	350	b	340	270	450	360	330	360	270	320	350	350	370	350	350	340	320	270	260	s	270	s	b
23	a	s	s	a	a	n	n	350	420	530	600	800	g	g	470	540	500	380	420	a	a	a	b	b
24	a	b	a	b	b	b	b	800	750	g	g	g	g	g	510	320	410	520	350	280	290	a	a	a
25	b	b	b	b	b	g	350	400	320	470	600	550	400	390	320	310	350	350	c	300	270	s	290	b
26	a	a	a	a	b	b	420	390	360	420	400	530	400	400	390	400	370	320	c	a	250	260	a	s
27	s	270	260	300	b	220	200	250	300	350	340	390	360	370	300	320	350	320	310	c	a	a	s	b
28	a	b	b	a	a	b	c	c	c	c	c	c	c	c	c	c	c	c	310	a	a	a	a	a
29	b	b	b	a	b	280	220	340	380	340	310	360	350	310	310	330	320	300	300	a	b	280	c	a
30	a	b	b	b	b	b	b	b	b	b	g	g	590	560	510	510	320	300	a	a	a	a	a	a
31	b	a	a	300	270	250	300	390	c	c	410	410	380	360	350	380	340	320	300	250	250	240	s	s
Median	(300)	300	(295)	(295)	(260)	240	350	370	360	400	410	410	395	390	365	360	340	320	300	265	250	260	(260)	(290)
No.	8	10	6	8	9	17	20	23	23	23	27	27	28	28	28	28	22	26	17	18	15	14	9	7

Sweep: 1.0 - 13.0 Mc/s in 1m55s Time used: 157.5°E.M.T.

HOURLY VALUES OF hpF2 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

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	b	b	b	b	b	b	g	b	b	g	g	g	g	g	g	330	300	350	a	a	b	c	b
2	350	320	300	300	300	250	g	g	250	g	g	c	c	c	320	320	c	c	c	330	270	270	(300)	280
3	330	320	340	310	270	240	250	260	230	250	310	300	320	300	300	320	320	290	c	280	290	270	(270)	270
4	400	330	300	300	290	280	260	g	320	330	320	330	320	330	290	310	290	320	290	c	290	300	320	320
5	a	a	a	b	320	300	300	g	g	g	g	320	g	g	b	a	c	c	c	c	c	c	c	c
6	a	b	b	b	b	350	290	g	g	g	g	g	g	g	g	g	350	a	a	a	b	b	a	b
7	a	a	b	b	b	330	g	g	g	g	g	g	g	g	g	g	350	340	290	290	c	c	c	a
8	b	b	b	b	b	290	g	b	g	g	g	g	g	g	360	330	320	320	c	290	320	b	b	b
9	330	s	320	320	310	290	g	g	g	g	g	g	g	g	g	g	340	350	300	330	300	320	(350)	s
10	s	s	(300)	b	b	g	g	g	g	g	g	g	g	g	g	400	310	360	f	a	310	a	a	a
11	b	b	a	b	b	b	g	g	g	g	g	g	g	g	g	g	350	290	g	330	a	a	a	a
12	a	b	b	b	b	a	g	g	g	g	g	g	g	g	g	360	c	330	g	a	b	b	b	a
13	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	350	350	b	b	b
14	b	b	b	b	b	b	g	b	b	b	b	b	g	g	g	g	b	420	300	350	a	b	b	c
15	b	b	b	b	b	b	g	g	b	b	g	g	g	g	g	390	c	290	c	350	350	360	b	b
16	b	b	b	b	b	b	b	g	g	g	g	g	g	g	g	g	g	320	c	330	320	310	350	360
17	(350)	a	a	b	320	360	g	g	c	c	c	g	g	350	g	340	c	290	280	280	310	320	320	340
18	340	320	300	b	260	270	260	g	g	g	g	g	g	g	g	g	g	320	300	280	300	300	310	280
19	320	310	f	320	300	250	230	g	f	g	g	g	g	g	g	340	c	310	290	290	300	s	260	(300)
20	350	b	320	320	(250)	290	g	g	g	g	g	g	g	g	g	g	320	300	290	290	300	s	300	320
21	320	(330)	350	300	280	270	g	g	g	g	300	320	320	300	330	330	310	310	c	320	290	300	(320)	350
22	330	360	b	350	300	g	g	g	g	f	g	g	g	g	g	g	g	320	310	300	s	s	s	b
23	a	s	s	a	300	n	n	g	g	g	g	g	g	g	g	g	g	g	g	a	a	a	b	b
24	a	b	a	b	b	b	b	g	g	g	g	g	g	g	g	g	g	g	g	330	310	320	a	a
25	b	b	b	b	b	g	g	g	g	g	g	g	g	g	g	g	g	g	c	320	300	s	s	b
26	a	a	a	320	b	b	g	g	g	g	g	g	g	g	g	g	g	g	c	a	290	300	a	s
27	s	s	320	c	b	290	280	250	g	g	g	g	g	g	g	330	350	320	320	c	a	a	s	b
28	a	b	b	a	a	b	c	c	c	c	c	c	c	c	c	c	c	c	310	a	a	a	a	a
29	b	b	b	a	b	300	260	g	g	g	g	g	g	g	g	g	320	300	330	b	b	280	c	a
30	a	b	b	b	b	b	b	b	b	b	g	g	g	g	g	410	340	320	a	a	a	a	a	b
31	b	a	350	320	280	300	g	g	c	c	g	g	g	g	g	g	340	320	310	300	280	300	s	s
Median	335	(320)	320	320	300	290	g	g	g	g	g	g	g	g	g	g	345	320	310	320	300	300	315	(320)
No.	10	7	10	10	13	19	24	26	22	22	27	27	28	28	28	28	22	26	18	19	18	13	10	8

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: $157.5^oE.M.T.$

HOURLY VALUES OF h'F1 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

Hour / Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1		b	240	b	b	210	200	200	200	200	200h	220	220	a	a
2		230	220	200	220	200	c	c	c	200	190	c	c	c	b
3		b	250	200	170h	180	200	170h	200	190h	210	a	220	c	220
4		q	200	180	180h	200	200	200	190	200	210	200	210	210	c
5		230	200	170h	180h	210	200	200	190	b	a	c	c	c	c
6		q	230	230	210	220	210h	200h	200	210	200	210	a	a	a
7		250	240	220	200	180	180	200	210	180h	220	200	220	200	240
8		a	b	240	210	200	200	200	200	200	200	210	220	c	q
9		220	210	200	a	200	200	200	200	200h	180h	200h	200	220	a
10	300	b	260	200	210	200	200h	a	200	220	220	b	a	a	a
11		240	220	200	180h	200	220	220	190	170	240	200	210	260	260
12		240	a	230	200	190	a	b	200	200	200	c	250	a	a
13		c	c	c	c	c	c	c	c	c	c	c	c	c	a
14		240	b	b	b	b	b	b	200	200	b	b	a	a	a
15		220	240	b	b	b	200	200	200	200h	b	c	220	c	q
16		b	240	220h	220h	200	200	210	200	200	220	210	200	c	q
17		240	220	c	c	c	210	210	200	200	200	c	210	b	q
18		q	200	200	190	190	190	200	180	190	200	190	220	220	q
19		q	220	200	210	200	220	200	200	210	160	c	210	200	q
20		220	210	190	180	180	190	200	190	190	200	190	230	a	q
21		b	200	190	200	190h	200	a	180h	200	190h	220	210	c	250
22	200	220	200	190	180	180	180h	200	210	200	200	200	a	230	250
23		n	220	210	220	240	200	200	200	200	210	200	220	260	a
24		b	b	200h	200	200	220	220	220	230	a	a	230	250	q
25	b	260	220	220	210	200	180	200	180	200	200	a	210	c	240
26		220	210	200	190	210	180	200	200	210	200	220	200	c	a
27		q	200	200	190	190h	200	190	190	190	200	200	200	260	c
28		c	c	c	c	c	c	c	c	c	c	c	c	250	a
29		q	200	200	210h	200	200	210	200	190	200	200h	170h	a	a
30		b	b	b	b	b	b	220	210	210	a	a	280	a	a
31		250	240	c	c	200	180h	190	200	200	200	210	220	220	q
Median	*	235	220	200	200	200	200	200	200	200	200	200	220	225	245
No.		14	24	23	22	25	25	24	28	28	24	17	23	12	6

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF h'E OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

Hour / Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1		b	b	b	b	b	b	b	b	b	b	a	100	100	a	a
2		b	b	a	100	100	100	c	c	c	b	100	c	c	c	b
3	b	100	b	a	100	a	a	a	a	100	a	a	a	100	c	110
4		100	100	100	a	a	100	100	a	100	a	b	b	100	100	c
5		a	100	100	100	100	a	100	100	100	b	a	c	c	c	c
6		b	100	100	100	100	b	b	100	b	b	100	100	a	a	a
7		a	100h	100	100	100	100	100	100	100	100	100	100	100	100	a
8		a	a	b	b	a	100	100	a	100	100	100	100	100	c	100
9		a	100	100	100	a	a	a	a	a	a	100	100	100h	100	a
10		100	b	b	100	100	100	100	a	a	a	a	b	a	a	a
11		b	100	100	100	b	b	b	b	100	100	b	100	100	a	a
12		b	a	a	100	100	a	b	b	a	a	b	c	a	a	a
13		c	c	c	c	c	c	c	c	c	c	c	c	c	c	a
14		b	b	b	b	b	b	b	b	b	100	b	b	a	a	a
15		b	b	b	b	b	b	b	100	b	100	b	c	100	c	a
16		b	b	100	100	a	100	a	a	a	a	100	100	100	c	a
17		100	a	100	c	c	c	100	100	100	100	100	c	a	b	a
18		100	100	100	100	100	a	a	a	100	100	a	b	b	a	a
19		100	100	100	100	100	a	a	a	a	a	100	c	100	a	100
20		100	100	a	a	a	a	a	a	100	100	100	100	a	a	a
21	b	a	b	b	a	100	a	a	a	a	a	a	a	a	c	120
22		100	a	a	a	a	a	a	a	100	a	100	100	a	100	100
23		a	100	100	100	100	100	100	100	100	100	100	100	a	a	a
24		b	b	b	a	100	a	a	a	a	a	a	a	a	a	100
25		b	100	a	100	a	a	a	100	100	a	100	a	a	c	130
26		b	a	a	a	a	a	100	100	a	100	100	a	100	c	a
27		a	a	a	100	100	100	100	100	100	100	100	100	100	100	c
28		b	c	c	c	c	c	c	c	c	c	c	c	c	a	a
29		b	100	100	100	100	100	100	100	100	100	100	100	100	a	a
30		b	b	b	b	b	b	b	a	a	100	a	a	a	a	a
31		100	b	a	c	c	a	100	a	a	a	100	a	a	100	a
Median		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
No.		9	12	12	16	13	9	11	10	14	13	16	12	13	6	7

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF h'Es OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

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	90	90	90	90	b	b	b	b	b	b	b	b	b	b	b	100	g	120	110	100	110	100	c	100
2	100	100	100	b	b	b	b	100	g	g	g	c	c	c	b	g	c	c	c	b	110	110	100	110
3	100	100	100	c	g	100	b	100	110	100	100	100	100	100	100	100	100	120	c	120	110	110	100	100
4	100	100	100	100	110	90	100	g	100	100	100	110	100	100	100	b	b	g	160	c	120	110	110	100
5	100	100	100	100	100	90	g	g	g	130	100	100	100	100	80	90	c	c	c	c	c	c	c	c
6	100	90	100	100	b	b	120	150	130	130	b	b	g	b	b	g	120	100	100	110	b	100	100	b
7	100	100	100	b	b	100	g	120	160	140	100	100	140	130	100	g	g	g	g	110	c	c	c	100
8	90	100	b	b	b	110	120	b	110	110	110	120	100	g	100	120	g	120	c	g	100	b	b	100
9	100	110	100	100	b	100	130	100	120	100	100	100	100	100	100	100	g	g	g	110	130	110	100	100
10	100	100	100	100	100	100	b	b	100	100	g	120	100	100	100	100	b	100	110	100	100	100	90	100
11	90	90	100	b	b	b	110	g	g	b	b	b	b	g	g	b	120	g	110	100	100	100	100	100
12	100	100	100	100	b	100	100	100	100	100	100	100	b	100	100	b	c	100	110	110	100	b	b	100
13	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	110	110	100	b	b
14	90	90	90	b	b	b	b	b	b	b	b	b	b	b	g	b	b	100	100	100	100	90	90	c
15	100	b	b	b	b	b	100	b	b	b	b	b	g	b	g	b	c	g	c	120	100	100	90	90
16	100	b	b	b	b	b	b	g	110	110	100	110	100	100	100	g	120	150	c	120	100	120	100	100
17	100	100	100	100	100	g	100	g	c	c	c	100	110	120	110	g	c	110	b	110	110	e	140	100
18	100	100	100	100	100	g	100	g	100	100	100	100	100	100	100	100	b	b	120	120	120	e	120	120
19	110	100	100	90	100	120	100	100	100	100	100	100	100	100	100	100	c	110	100	100	100	120	110	s
20	100	90	100	110	g	100	100	100	100	100	100	100	100	g	g	g	100	100	100	120	b	110	120	b
21	b	e	100	100	100	100	b	b	100	100	100	110	100	100	100	100	100	100	c	140	b	140	100	100
22	100	100	100	100	110	130	100	100	100	100	100	100	100	100	100	g	110	110	100	100	110	100	100	100
23	100	s	100	100	100	100	100	100	100	g	g	120	g	g	g	140	100	110	110	110	110	110	100	100
24	100	b	100	100	b	b	b	b	100	100	100	100	100	120	110	100	100	100	100	120	110	100	100	100
25	100	b	100	100	b	b	150	100	100	100	100	100	100	g	100	120	120	120	c	g	160	s	140	90
26	100	100	100	100	b	100	100	100	100	100	100	100	100	100	130	120	100	c	c	110	e	110	100	100
27	s	e	130	150	b	100	100	100	g	100	110	g	g	g	g	110	150	c	100	c	100	100	s	b
28	100	b	100	100	100	b	c	c	c	c	c	c	c	c	c	c	c	c	100	100	110	110	100	100
29	100	90	b	100	b	b	g	g	g	100	g	100	g	g	g	g	g	g	110	110	b	100	c	100
30	100	b	b	110	b	b	b	110	b	b	120	b	100	100	g	100	100	100	110	100	100	100	100	b
31	100	100	100	110	100	g	b	100	c	c	100	100	100	100	110	g	140	110	110	110	e	e	110	100
Median	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	105	110	110	110	110	100	100	100
No.	28	21	25	22	11	15	16	15	18	20	19	21	19	17	18	15	14	18	18	25	23	23	23	23

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF (M3000)F2 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

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	b	b	b	b	b	b	g	b	b	g	g	2.1	2.8	2.8	2.8	3.0	3.0	3.0	2.8	a	b	c	b
2	2.9	3.0	3.2	3.2	3.0	3.4	3.1	3.4	3.5	3.3	3.2	c	c	c	3.0	3.0	c	c	c	3.0	3.3	3.2	(3.0)	3.1
3	2.9	3.0	3.1	3.2	3.2	3.0	3.3	3.4	3.5	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.1	c	3.2	3.1	3.1	(3.1)	3.1
4	2.7	2.9	3.1	3.1	3.2	3.1	3.4	3.3	3.1	3.1	3.1	3.1	3.0	3.0	3.1	3.1	3.2	3.1	2.9	c	3.3	3.1	3.1	3.0
5	a	a	a	b	3.1	3.3	3.2	3.0	2.8	2.8	2.7	3.1	2.9	3.0	b	f	c	c	c	c	c	c	c	c
6	a	b	b	b	b	3.0	3.2	2.7	3.0	2.6	2.9	2.7	2.8	2.8	2.9	2.7	3.0	3.1	a	2.7	b	b	c	b
7	a	a	b	b	b	3.0	2.6	2.5	3.2	2.8	2.6	2.6	2.8	3.0	2.7	2.9	2.9	3.0	3.2	3.2	c	c	c	a
8	b	b	b	b	b	3.3	2.9	f	3.4	3.1	3.1	3.2	3.1	2.9	2.9	2.9	3.0	3.0	c	3.3	3.0	b	b	b
9	2.9	s	2.8	3.1	3.1	3.3	3.3	3.3	3.0	2.8	3.2	2.9	3.0	3.0	3.2	2.9	3.0	2.8	3.1	3.0	3.0	3.0	(2.8)	s
10	s	s	(3.0)	b	b	2.2	g	g	2.1	g	g	2.9	2.8	2.8	2.6	2.7	3.0	2.7	f	2.5	3.2	3.1	a	a
11	b	b	a	b	b	b	2.3	g	g	2.4	g	2.3	g	2.5	2.8	2.6	3.0	3.2	2.9	3.0	2.9	a	a	a
12	a	b	b	b	b	a	g	g	2.3	2.2	g	2.6	g	2.3	2.9	2.9	c	3.0	3.0	a	b	b	b	a
13	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.0	3.0	b	b	b
14	b	b	b	b	b	b	g	b	b	b	b	b	2.6	2.8	2.5	2.4	b	2.7	3.1	2.9	a	b	b	c
15	b	b	b	b	b	b	2.0	g	b	b	2.8	2.9	2.6	3.0	2.7	2.8	c	3.2	c	2.7	2.9	2.9	b	b
16	b	b	b	b	b	b	b	2.4	g	g	g	g	g	2.4	2.5	2.8	3.0	3.2	c	3.0	3.0	3.1	2.9	2.7
17	(2.8)	a	a	b	3.0	3.3	3.3	3.3	c	c	c	2.9	2.9	3.0	2.8	3.0	c	3.2	3.5	3.2	3.0	3.1	2.9	2.9
18	3.1	3.0	3.1	b	3.4	3.4	3.3	3.1	(2.6)	2.9	2.9	2.8	3.1	2.8	2.9	2.9	2.9	3.1	3.2	3.2	3.2	3.0	3.0	3.1
19	2.9	3.0	f	3.1	3.1	3.5	3.6	3.3	f	3.2	3.1	3.0	3.0	2.9	3.0	3.0	c	3.1	3.1	3.1	3.1	s	3.0	(2.9)
20	2.8	b	3.1	2.9	(3.5)	3.1	3.2	3.3	3.2	3.0	2.9	3.0	3.2	3.1	3.0	2.9	3.0	3.1	3.2	3.3	3.2	s	3.1	2.9
21	2.9	(2.9)	2.9	3.0	3.2	3.4	3.2	3.2	3.3	3.4	3.2	3.0	3.2	3.2	2.9	3.0	3.1	3.0	c	3.0	3.1	3.0	(2.9)	2.8
22	2.8	2.8	b	2.8	2.9	2.8	3.1	3.2	3.1	f	3.2	3.1	3.1	3.0	3.0	3.0	3.1	3.0	3.0	3.1	s	s	s	b
23	a	s	s	3.9	3.1	n	n	3.1	2.8	2.5	2.3	2.0	g	g	2.6	2.5	2.6	3.0	2.8	a	a	a	b	b
24	a	b	a	b	b	b	b	2.0	2.1	g	g	g	g	g	2.6	3.2	2.9	2.6	3.1	2.9	3.1	3.0	a	a
25	b	b	b	b	b	g	3.0	2.9	3.2	2.7	2.3	2.3	2.8	2.9	3.2	3.2	3.0	3.1	c	2.9	3.0	s	s	b
26	a	a	a	3.0	b	3.1	2.9	3.1	3.1	2.9	3.0	2.6	2.9	2.9	3.0	2.8	2.9	3.1	c	a	3.1	3.0	a	s
27	s	s	3.0	c	b	3.2	3.1	3.6	3.5	3.2	3.1	3.0	3.1	3.0	2.9	3.0	2.9	3.1	3.0	c	a	a	s	b
28	a	b	b	a	a	b	c	c	c	c	c	c	c	c	c	c	c	c	3.1	a	a	a	a	a
29	b	b	b	a	b	3.1	3.3	3.2	2.9	3.0	3.2	3.0	3.1	3.2	3.3	3.1	3.2	3.1	3.0	a	b	3.1	c	a
30	a	b	b	b	b	b	b	b	b	b	g	g	2.3	2.4	2.5	2.6	3.0	2.9	a	a	a	a	a	b
31	b	3.0	2.6	2.9	3.1	3.0	3.3	3.0	c	c	2.9	2.9	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	s	s
Median	2.9	(3.0)	3.0	3.0	3.1	3.1	3.2	3.1	3.0	2.8	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.1	3.1	3.0	3.1	3.1	3.0	(2.9)
No.	10	8	10	11	13	20	24	26	22	22	27	27	28	28	28	28	22	27	18	22	19	14	10	9

Sweep: 1.0 - 13.0 Mc/s in 1m55s Time used: 157.5°E.M.T.

HOURLY VALUES OF (M3000)F1 OBSERVED DURING JANUARY 1952 AT MACQUARIE ISLAND

Day \ Hour	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1		b	3.5	b	b	3.8	3.8	3.9	3.8	3.6	3.6	3.5	3.7	3.4	a
2		3.5	1	3.6	3.6	3.7	c	c	c	3.8	3.9	c	c	c	b
3		b	3.6	4.1	3.8	3.8	4.0	3.7	3.6	3.9	3.8	3.7	1	c	1
4		q	3.8	3.5	3.6	3.8	3.8	3.8	3.8	3.7	3.6	3.8	3.7	3.7	c
5		1	3.7	3.8	3.6	3.6	3.6	3.8	3.7	b	a	c	c	c	c
6		q	3.3	3.6	3.7	3.6	3.5	3.9	3.8	3.7	3.9	3.5	a	a	a
7		3.4	3.6	3.7	3.9	4.1	4.0	3.9	3.8	3.9	3.8	3.7	3.6	3.6	1
8		3.5	b	3.5	3.7	3.8	3.7	3.8	3.8	3.9	3.8	3.8	3.7	c	q
9		1	1	3.8	3.6	3.8	3.8	3.8	4.0	3.8	3.8	3.9	3.7	1	a
10	3.2	3.3	3.5	3.7	3.8	3.9	3.6	a	3.9	3.7	3.6	b	3.5	a	a
11		3.6	3.7	3.6	3.9	3.9	3.7	3.8	4.0	4.0	3.7	3.7	3.5	3.4	3.4
12		3.3	3.9	3.7	3.8	4.0	3.7	3.7	3.8	3.8	4.0	c	3.5	a	a
13		c	c	c	c	c	c	c	c	c	c	c	c	c	a
14		3.5	b	b	b	b	b	3.8	3.9	3.9	b	b	3.4	a	a
15		3.5	3.6	b	b	b	4.0	3.9	3.7	3.8	3.8	c	3.7	c	q
16		b	3.6	3.6	3.7	3.9	3.8	3.8	3.9	3.9	3.7	3.5	3.6	c	q
17		3.6	3.5	c	c	c	3.8	3.8	3.7	3.8	3.7	c	3.8	b	q
18		q	3.5	3.9	3.8	3.9	3.8	3.9	4.0	3.8	3.8	3.7	3.7	3.7	q
19		q	3.6	3.9	3.7	4.1	3.8	3.8	3.9	3.8	3.9	c	3.7	1	q
20		3.5	1	3.8	3.9	3.8	3.8	3.8	3.9	3.8	3.8	3.6	3.7	a	q
21		b	3.7	3.7	3.7	3.8	3.8	3.7	3.9	3.9	3.7	3.5	3.8	c	3.5
22	3.3	3.5	3.8	3.8	f	3.8	3.6	3.7	3.7	3.8	3.8	3.7	3.6	3.6	1
23		n	3.7	3.8	3.8	3.7	3.8	3.9	3.8	3.9	3.7	3.7	3.7	3.5	a
24		b	3.3	3.5	3.8	3.8	3.9	3.9	3.9	3.8	3.7	3.6	3.8	3.5	q
25	b	3.5	3.8	3.7	3.8	4.0	4.0	4.0	3.9	3.8	3.7	3.6	3.7	c	3.5
26		3.5	3.6	3.6	4.0	3.8	3.8	3.9	3.8	3.8	3.7	3.7	3.5	c	a
27		q	3.7	3.7	3.9	4.1	3.9	3.9	3.9	3.9	3.8	3.6	3.5	3.4	c
28		c	c	c	c	c	c	c	c	c	c	c	c	3.4	a
29		q	3.6	3.8	3.6	3.6	3.8	3.7	3.8	3.8	3.8	3.7	3.6	3.5	a
30		b	b	b	b	3.6	3.7	3.8	3.7	3.7	3.5	a	3.4	a	a
31		3.5	3.6	c	c	4.0	3.9	4.2	3.8	3.7	3.8	3.8	3.6	3.6	q
Median	*	3.5	3.6	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.5	*
No.		14	23	23	22	26	27	27	28	28	27	20	25	12	

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF f°F2 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11
1	a	b	b	b	b	c	4.1	4.7	4.9	5.4	5.7	5.8
2	b	3.2	b	b	b	b	b	g	b	4.7	4.9	4.8
3	a	b	b	b	b	3.8	4.4	5.0z	5.5z	5.8	5.8	5.8
4	4.4	3.8	3.3f	2.6f	2.8	3.8	4.4v	4.7f	4.9f	5.4	5.5	5.8
5	s	s	3.8f	3.5f	2.6	3.7	4.3	5.0f	c	c	c	c
6	s	s	3.3	2.9	c	c	c	c	c	c	c	c
7	b	a	c	b	b	b	b	b	b	b	b	5.3
8	b	b	b	b	c	c	c	c	c	c	c	c
9	b	b	b	b	2.6	2.9	b	b	4.4	4.8	4.6	5.0
10	b	b	b	b	3.3	3.9	b	4.7	5.0	5.3	5.6	5.9
11	a	b	c	c	c	c	c	c	c	c	c	c
12	4.7	4.4f	3.8	b	b	b	b	b	b	4.5	4.6	b
13	b	b	b	b	b	2.8	c	c	c	c	c	c
14	c	b	c	c	c	c	c	c	c	c	c	c
15	b	b	b	b	b	b	b	c	6.6	6.9	c	c
16	a	a	a	b	b	3.2	4.1	4.3f	4.7f	5.2f	5.6	6.0
17	b	b	b	b	b	2.9	3.5	3.8	4.3	4.3	4.5	4.8
18	b	b	a	2.7f	2.5	3.3	3.9	4.8f	5.5	5.5	5.8	5.9z
19	4.2	4.7	b	3.9	3.3f	3.5f	4.1	b	4.9	5.6	5.8	5.8
20	c	a	4.2	3.1f	b	b	b	5.0	b	5.6	6.5	6.6
21	b	b	3.4	b	b	3.8f	4.5v	5.7	5.9	6.6	6.6	6.7
22	b	a	4.0	s	3.3f	3.3	4.3	5.0	5.4	5.5	5.6	5.8z
23	s	f	f	3.2f	a	b	4.2	5.0f	5.1	5.7	6.3	6.1
24	4.8f	f	4.8f	4.9f	1.7	2.9	4.0z	4.6z	5.3	5.9z	6.2	6.9
25	b	b	b	b	b	b	b	b	g	b	b	4.3
26	b	b	3.4f	(3.0)f	2.3f	2.5	3.9z	4.9	5.4z	5.8	5.9v	c
27	2.6f	a	a	b	b	b	3.3	3.8v	4.1	4.4f	4.8	4.7
28	b	b	3.1	b	2.5	c	c	c	c	c	c	5.4z
29	b	b	b	b	b	b	b	4.1	c	c	c	5.7v
Median No.	(4.4) 5	*	3.6 10	(3.1)f 9	2.6 10	3.3 14	4.1 14	4.7 17	5.0 17	5.5 19	5.6 18	5.8 20

Sweep: 1.0 - 13.0 Mc/s in 1m55s Time used: 157.5°E.M.T.

HOURLY VALUES OF foF2 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

Hour / Day	12	13	14	15	16	17	18	19	20	21	22	23
1	6.2	6.4	6.1z	5.9z	5.9	5.6	5.7	a	b	b	b	b
2	5.2	5.3	5.3	6.0v	5.8f	7.0f	5.9	4.7	4.4z	4.2	4.6	4.8
3	6.0	6.1	6.3z	c	7.0	7.1	6.3	6.1	4.7f	5.5	4.9	4.5
4	a	a	5.8	5.8z	5.8	5.9	5.9	5.5	5.5	a	4.8	4.0
5	c	c	c	c	c	c	5.6	5.7	c	a	4.6	s
6	c	c	c	c	c	c	c	6.7	5.5	4.7f	f	b
7	5.3	c	c	5.7	6.9v	5.5	c	4.1	4.2	b	b	b
8	c	c	c	c	c	c	c	b	b	a	b	b
9	5.2	5.4	5.2	5.6	7.1	6.5p	c	5.3	4.3	4.7	b	b
10	5.8	5.9	6.3z	6.3z	6.0	6.1	c	4.3f	4.5	b	4.4	b
11	c	c	c	c	c	5.3	5.5v	4.6f	b	a	b	b
12	5.4	5.2	5.2	5.4	5.1	5.6	c	c	3.9f	a	a	b
13	c	c	c	c	5.8	c	c	c	c	4.1	b	c
14	c	c	c	c	6.1	5.8	6.4	4.8	b	4.6	4.9	b
15	c	c	c	c	c	6.2	7.5	4.7f	4.3	4.7	4.8	3.0
16	6.6	6.2	7.0	7.3	b	5.6	c	b	a	a	a	a
17	4.7	4.9	5.2f	5.0	4.8v	4.9	c	5.0	c	4.0	b	a
18	6.3	c	5.9z	6.2	5.8	6.0	6.4	6.0	5.9	a	b	b
19	6.3p	6.8	6.9f	6.8	6.8	5.5	4.8	a	a	a	a	b
20	6.8v	6.5f	6.7f	7.7	7.5	6.5v	5.2	4.9	b	b	b	b
21	6.9	6.7	6.7	6.6	6.8z	6.5	c	7.0	6.1	5.8	4.9	4.4
22	5.6	5.9	5.5	5.8	5.9	5.8	5.8	c	(6.0)s	(5.5)	(3.8)s	s
23	6.2z	6.3v	6.3	6.1	6.4	6.3	6.4	5.9	5.5f	4.5	3.3	a
24	8.0	D7.7	5.4	5.0f	4.8	3.9	c	c	3.5	b	3.9	b
25	5.0	b	b	4.9f	4.6f	4.6f	c	c	c	c	4.0	b
26	6.0	6.5	6.3	6.3	5.8	6.3	7.0f	4.9	a	4.1	3.8	a
27	5.1	5.5	5.4	5.5	a	5.5	b	b	3.5	3.9	b	b
28	6.0	6.0	6.4f	6.9	5.4f	4.7	c	b	b	4.9	b	b
29	5.7	5.9	6.1	6.0	6.2z	c	4.6f	4.2f	3.8f	4.0f	b	b
Median	6.0	6.0	6.1	6.0	5.9	5.8	5.9	5.0	4.4	4.6	4.6	(4.4)
No.	21	18	20	21	22	24	15	18	16	15	13	5

Sweep: 1.0 - 13.0 Mc/s in 1m55s Time used: 157.5°E.M.T.

HOURLY VALUES OF foF1 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	1	3.9	4.2	4.2	4.4	4.5	4.5	4.4	4.5	4.4	4.3	4.0	a	b
2	b	4.1	b	4.1	4.2h	4.4	4.4h	4.4	4.3	4.1	4.0f	3.9	3.5	2.9
3	3.6	3.9	4.1	4.3	4.3	4.4	4.5	4.5	4.5	4.3	4.3h	4.0	3.1	a
4	q	4.0	4.2h	4.2	4.2	a	a	a	4.4	4.3	4.2	3.8	1	q
5	q	4.1	c	c	c	c	c	c	c	c	c	c	c	q
6	c	c	c	c	c	c	c	c	c	c	c	c	c	a
7	b	b	b	b	b	4.3	4.4	c	c	4.2	4.2	4.0	c	a
8	c	c	c	c	c	c	c	c	c	c	c	c	c	b
9	b	b	4.0	4.2	4.3	4.3	b	4.3	4.3	4.3	4.1	3.9	c	q
10	b	1	4.2	4.3	4.4	4.5	4.6	4.4	4.5	4.4	4.3	4.0	c	3.0
11	c	c	c	c	c	c	c	c	c	c	c	3.9	3.5	a
12	b	b	b	4.2	4.2	b	4.4	4.3	4.3	4.2	4.0	a	c	c
13	c	c	c	c	c	c	c	c	c	c	4.0	c	c	c
14	c	c	c	c	c	c	c	c	c	c	4.2	3.9	q	q
15	b	c	4.6	4.4	c	c	c	c	c	c	c	3.9	1	q
16	q	q	4.1	4.3	4.5	4.7	4.6	4.4	4.6	4.4	b	a	c	b
17	q	3.6	3.8	3.9	4.2h	4.3	4.3h	4.3	4.3	4.2	4.0	3.9	c	a
18	q	3.9f	4.1	4.2	4.3	4.4	4.6	c	4.4	4.4	4.2	3.9	1	q
19	b	b	4.1	4.2	4.4	4.4h	4.4	4.3	4.3	4.5	4.1	3.8	a	a
20	b	b	b	4.4	4.4	b	4.4	4.4	4.4	4.5	4.2	3.7	a	a
21	q	3.7	4.1	4.3	4.4	4.5	4.6	4.6	4.4	4.3	4.2	1	c	q
22	q	q	4.0	4.2	4.3	4.4	4.4	4.3	4.3	4.2	4.0	3.8	q	c
23	q	3.8	1	4.3	4.3	4.5	4.4	4.4	4.3	4.2	4.0	1	q	q
24	q	q	4.1	4.2	4.3	4.4	4.5	4.4	c	a	a	a	c	c
25	b	b	3.5	b	b	4.0	4.1	b	b	4.1	4.0	q	c	c
26	q	q	4.0	4.2	4.2	c	4.3	4.3	4.3	4.2	4.1	3.7	a	a
27	a	q	3.8	3.9	4.1	4.1	4.1	4.2	4.1	b	a	a	a	b
28	c	c	c	c	c	4.2	4.2	4.2	4.2	a	a	a	c	b
29	b	b	c	c	c	4.1	4.1	4.2	4.1	4.1	4.1h	c	q	a
Modian	*	3.9	4.1	4.2	4.3	4.4	4.4	4.4	4.3	4.3	4.1	3.9	*	*
No.		9	16	19	18	18	20	18	19	19	20	16		

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T. MACQUARIE ISLAND foF1, FEBRUARY 1952 234.

HOURLY VALUES OF $f^{o}E$ OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

Day \ Hour	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	2.6	c	a	a	a	a	a	a	3.3	3.2	3.0	2.6	a	b
2	b	b	b	b	c	3.3	3.3	3.3	3.3	b	b	a	a	1.9
3	2.4	2.6	3.3	a	a	3.4	b	3.4	3.3	3.1	2.9	2.6	a	a
4	2.1	a	a	a	a	a	a	a	a	a	a	2.6	a	a
5	a	a	c	c	c	c	c	c	c	c	c	c	c	a
6	c	c	c	c	c	c	c	c	c	c	c	c	c	a
7	b	b	b	b	b	b	b	c	c	b	3.2	a	c	a
8	c	c	c	c	c	c	c	c	c	c	c	c	c	b
9	b	b	b	b	3.2	b	b	b	3.2z	b	b	2.6	c	a
10	b	b	b	b	b	b	b	b	b	b	b	b	c	2.0
11	c	c	c	c	c	c	c	c	c	c	c	2.9	2.4	a
12	b	b	b	b	b	b	b	b	b	b	c	a	c	c
13	c	c	c	c	c	c	c	c	c	c	c	c	c	c
14	c	c	c	c	c	c	c	c	c	c	3.0	a	2.1	a
15	b	c	b	b	c	c	c	c	c	c	c	b	2.1	a
16	2.2h	a	a	2.9	a	a	a	a	3.1	a	b	a	c	b
17	2.2	a	b	3.0	3.3	a	3.3	b	b	b	b	a	c	a
18	a	a	a	a	a	a	a	c	a	a	a	a	2.1	1.7
19	b	b	b	a	b	3.2	b	3.3	3.3	a	a	a	a	a
20	b	b	b	b	b	b	b	3.3	3.1	b	a	a	a	a
21	a	a	2.6	2.9	a	3.2	3.2	3.2	a	3.0	2.8	2.4	o	a
22	a	a	a	a	2.9	a	a	a	3.2	a	2.7	2.5	a	c
23	2.1	a	a	a	a	a	3.2	3.2	3.2	2.9	2.8	a	a	a
24	2.0	2.4	a	a	a	a	a	a	c	a	a	a	c	c
25	b	b	a	b	b	b	b	b	b	2.9	a	a	c	c
26	1.9	a	2.7	2.8	3.0	c	a	3.3	3.0	2.9	2.6	b	a	a
27	a	2.3	2.6	2.8h	b	b	a	b	2.9	b	a	a	a	a
28	c	c	c	c	c	3.0	a	b	a	a	a	a	c	b
29	b	b	c	c	c	2.9	3.0	3.0	2.9	2.8h	2.5	c	a	a
Median	2.2	*	*	2.9	*	3.2	3.2	3.3	3.2	2.9	2.8	2.6	*	*
No.	8			5		6	5	8	12	7	9	7		

Sweep: 1.0 - 13.0 Mc/s in $1^{m}55^{s}$ Time used: 157.5^{o}E.M.T.

HOURLY VALUES OF fEs OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

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	D4.5	3.5	5.2	5.7	b	c	3.5	g	3.1	6.0	5.5	6.0	3.5	5.2	4.5	3.3	5.7	g	4.9	5.8	b	4.8	4.7	6.1
2	5.0	4.7	5.3	3.4	3.8	b	b	b	b	b	g	g	g	g	g	b	b	4.4	4.8	2.7	2.7	4.5	4.8	D4.8
3	5.5	b	b	b	b	2.9	2.8	3.0	4.0	4.1	4.1	g	b	g	g	g	3.0	2.8	4.3	4.0	e	2.1	e	4.1
4	5.7	3.5	3.0	e	e	3.0	2.7	3.1	3.5	6.0	5.9	D7.7	D7.7	D7.7	D7.7	3.7	6.5	4.8	5.8	5.7	7.5	D7.7	D4.7	4.8
5	D4.8	D4.8	4.5	3.0	4.3	3.6	4.2	4.9	c	c	c	c	c	c	c	c	c	c	c	2.5	c	e	3.0	D3.2
6	D3.2	4.7	2.3	2.0	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	5.6	5.9	4.5	5.5	5.0
7	5.3	5.7	c	4.0	b	b	b	b	b	b	b	b	b	c	c	b	g	4.6	c	4.0	5.1	b	5.7	5.8
8	4.1	b	5.1	4.7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	4.8	4.5	4.6	5.0
9	4.8	3.6	4.5	3.2	2.6	2.2	b	b	b	b	g	b	b	b	g	b	b	4.9	c	3.2	6.0	4.7	4.8	b
10	4.5	b	b	b	3.3	b	b	b	b	3.4	b	b	b	b	4.0	b	h	b	c	2.3	5.0	6.0	5.3	4.5
11	4.8	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.0	3.3	4.3	b	6.0	b	5.1
12	5.2	4.4	3.1	4.2	4.1	b	b	b	b	b	g	b	b	b	b	b	g	5.1	c	c	3.1	5.0	5.5	4.3
13	b	b	4.3	4.8	4.4	4.2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	5.7	b	c
14	c	D4.4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	3.0	2.4	2.9	5.7	4.8	3.0	b
15	5.6	b	3.3	4.6	b	b	b	b	b	b	c	c	c	c	c	c	c	b	2.3	2.7	3.5	5.2	4.8	4.6
16	6.2	6.5	4.8	a	2.6	e	2.2	2.6	3.2	3.4	3.3	3.2	3.2	3.2	3.3	3.2	b	6.6	c	b	D7.7	D	D7.7	5.2
17	5.2	4.5	4.9	5.2	4.9	2.9	2.9	2.9	b	3.1	g	4.8	g	b	b	b	b	3.1	c	4.4	c	3.3	4.7	5.7
18	4.8	5.8	5.5	4.0	4.1	2.6	2.9	3.2	5.7	D7.7	4.4	5.3	5.0	c	5.2	4.2	3.1	3.1	3.6	2.5	3.2	5.0	4.8	D4.7
19	5.2	4.8	b	5.5	2.5	2.1	b	b	b	3.3	b	g	b	g	4.5	5.7	5.1	4.0	5.3	6.0	5.5	4.8	D7.7	4.9
20	c	6.7	5.1	3.8	3.5	b	b	b	b	b	b	b	b	g	g	b	3.2	2.8	4.8	6.2	5.7	5.3	6.2	b
21	5.3	4.0	3.3	b	4.0	b	2.8	4.3	3.7	3.2	3.6	3.8	4.1	g	4.0	g	g	3.5	c	3.1	e	3.4	e	D4.5
22	5.5	5.4	6.2	6.5	5.4	3.2	2.6	2.8	4.3	4.8	4.8	3.5	3.5	3.4	g	3.2	g	4.2	3.1	c	e	e	e	e
23	e	6.7	4.7	3.9	5.4	3.4	2.5	4.0	4.9	5.0	4.3	4.2	g	g	g	3.0	3.4	5.0	3.4	5.1	5.1	2.6	2.5	4.5
24	5.2	4.8	3.2	2.5	2.3	e	2.5	3.3	5.3	3.1	3.3	4.4	3.2	4.7	c	D7.7	D7.7	6.0	c	c	D7.7	5.8	7.0	h
25	4.0	4.8	7.0	b	4.9	5.8	b	b	3.1	b	b	b	b	b	b	3.0	4.3	5.2	c	c	ö	c	7.5	b
26	b	4.8	2.9	1.7	e	e	2.1	3.4	2.8	3.0	3.2	c	4.3	3.5	g	g	g	b	5.8	4.1	6.0	5.7	3.8	5.0
27	2.4	6.3	5.5	5.6	b	b	4.2	g	g	3.0	b	b	3.3	b	g	b	D7.7	4.4	7.4	4.8	4.8	4.7	b	5.8
28	7.5	5.5	4.8	b	b	c	c	c	c	c	c	g	3.3	b	3.1	5.4	3.4	4.1	c	b	5.8	5.4	b	5.8
29	4.9	b	4.3	4.5	3.1	b	b	b	c	c	c	g	g	g	g	g	2.6	c	2.3	4.0	4.2	5.0	b	5.0
Median	5.0	4.8	4.7	4.0	3.8	2.9	2.8	3.1	3.6	3.4	3.4	3.6	3.3	**	**	3.2	3.2	4.2	4.3	4.0	5.1	4.8	4.8	4.9
No.	25	22	23	21	19	14	13	13	12	14	14	14	14	13	17	14	18	21	15	21	23	27	24	23

Sweep: 1.0 - 13.0 Mc/s in 1m55s

Time used: 157.5°E.M.T.

HOURLY VALUES OF h'F2 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

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	b	b	b	b	c	1	320	340	310	310	340	320	300	320	310	270	320	340	a	b	b	b	b
2	b	a	b	b	b	b	b	g	b	350	380	400	400	390	380	340	320	250	280	300	280	a	a	300
3	a	b	b	b	b	250	300	260	290	300	290	300	330	300	310	c	290	260	240	230	230	270	260	260
4	a	270	260	250	240	240	210	290	290	310	310	a	a	a	310	330	310	290	270	240	240	a	250	a
5	340	290	240	230	240	240	220	290	c	c	c	c	c	c	c	c	c	c	240	220	c	240	270	300
6	270	290	250	270	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	300	a	300	330	b
7	b	a	c	b	b	b	b	b	b	b	b	380	370	c	c	450	300	350	c	a	a	b	b	b
8	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	a	b	b
9	b	b	b	b	360	290	b	b	430	350	500	420	440	350	450	410	310	320	c	250	a	a	b	b
10	b	b	b	b	310	b	b	1	380	340	410	330	360	360	330	320	320	330	c	340	a	b	a	b
11	a	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	350	280	a	b	a	b	b
12	a	a	a	b	b	b	b	b	b	500	420	b	400	450	420	370	400	290	c	c	a	a	a	b
13	b	b	b	b	b	a	c	c	c	c	c	c	c	c	c	c	340	c	c	c	c	a	b	c
14	c	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	300	300	240	290	b	a	260	b
15	b	b	b	b	b	b	b	c	320	300	c	c	c	c	c	c	c	320	1	290	300	280	290	290
16	a	a	a	b	b	260	230	230	270	320	350	330	320	310	340	350	b	a	c	b	a	a	a	a
17	b	b	b	b	b	a	270	550	430	440	470	450	540	430	400	410	360	360	c	270	c	290	b	a
18	b	b	a	a	a	260	240	300	290	320	310	330	320	c	320	310	330	290	260	250	260	a	b	b
19	a	340	b	290	300	250	260	b	370	350	350	380	360	340	300	340	280	300	a	a	a	a	a	b
20	c	a	a	a	b	b	b	b	b	360	320	320	320	300	340	300	290	280	310	310	b	b	b	b
21	b	b	a	b	b	b	250	250	260	280	280	300	290	310	300	290	280	1	c	230	230	240	250	a
22	b	a	280	s	290	250	250	230	280	300	300	300	320	300	340	310	280	280	250	c	230	250	280	300
23	300	300	280	290	a	b	240	250	1	300	270	290	300	300	290	290	270	270	250	240	250	240	270	a
24	330	300	350	310	b	240	240	230	300	290	320	350	330	380	400	a	a	a	c	c	350	b	a	b
25	b	b	b	b	b	b	b	b	g	b	b	580	450	b	b	300	350	240	c	c	c	c	a	b
26	b	b	290	230	b	290	240	250	300	280	300	c	300	300	300	290	300	290	300	a	a	a	320	a
27	a	a	a	b	b	b	a	250	460	400	360	450	370	350	400	350	a	290	b	b	a	a	b	b
28	b	b	a	b	b	c	c	c	c	c	c	310	320	320	330	360	270	a	c	b	b	a	b	b
29	b	b	b	b	b	b	b	b	c	c	c	300	320	290	290	270	300	c	240	260	290	a	b	b
Median	*	(295)	(280)	(270)	(295)	250	240	255	310	320	320	330	330	315	330	325	300	290	260	260	255	(260)	270	(300)
No.		6	7	7	6	10	12	14	16	19	18	19	21	18	20	20	21	20	13	15	10	8	10	5

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF hpF2 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

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	b	b	b	b	c	g	g	g	g	g	g	320	300	320	310	280	320	340	a	b	b	b	b
2	b	a	b	b	b	b	b	g	b	g	g	g	g	g	g	340	320	300	300	310	310	a	a	320
3	a	b	b	b	b	280	300	260	290	300	290	300	g	300	310	c	300	280	270	280	270	310	300	300
4	320	300	300	270	270	250	280	g	g	g	g	a	a	a	g	330	310	300	280	280	280	a	300	340
5	s	s	260	260	250	250	260	g	c	c	c	c	c	c	c	c	c	c	270	270	c	s	300	s
6	s	s	250	300	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	310	310	310	f	b
7	b	a	c	b	b	b	b	b	b	b	b	g	g	c	c	450	320	350	c	a	a	b	b	b
8	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	a	b	b
9	b	b	b	b	360	300	b	b	g	g	g	g	g	g	g	410	340	430	c	280	330	330	b	b
10	b	b	b	b	320	330	b	g	g	g	g	330	g	360	330	320	320	340	c	340	a	b	350	b
11	a	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	350	310	a	b	a	b	b
12	a	320	360	b	b	b	b	b	b	g	g	b	g	g	g	g	g	290	c	c	310	a	a	b
13	b	b	b	b	b	330	c	c	c	c	c	c	c	c	c	c	340	c	c	c	c	a	b	c
14	c	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	310	320	310	310	b	350	280	b
15	b	b	b	b	b	b	b	c	320	300	c	c	c	c	c	c	c	320	330	300	300	300	320	310
16	a	a	a	b	b	290	260	270	g	g	g	330	320	310	350	360	b	a	c	b	a	a	a	a
17	b	b	b	b	b	a	300	g	g	g	g	g	g	g	g	g	g	360	c	300	c	300	b	a
18	b	b	a	320	a	300	280	300	290	320	310	330	320	c	320	320	330	290	300	310	320	a	b	b
19	a	350	b	300	310	270	280	b	g	350	350	g	360	350	300	340	300	310	a	a	a	a	a	b
20	c	a	a	320	b	b	b	b	b	360	330	330	330	310	350	310	320	310	320	320	b	b	b	b
21	b	b	a	b	b	300	290	270	280	290	300	320	300	320	300	300	300	300	c	300	300	300	300	320
22	b	a	300	s	300	280	300	290	280	300	300	300	g	300	g	310	290	290	280	c	(290)	(310)	(310)	s
23	s	f	f	290	a	b	260	250	280	300	270	290	300	300	300	300	280	290	270	270	270	300	300	a
24	360	f	350	350	b	250	250	270	300	290	320	370	360	c	420	a	a	a	c	c	420	b	440	b
25	b	b	b	b	b	b	b	b	g	b	b	g	g	b	b	g	g	310	c	c	c	c	a	b
26	b	b	300	(250)	400	310	260	280	300	280	300	c	300	320	300	300	300	320	320	330	a	a	330	a
27	a	a	a	b	b	b	320	290	g	g	g	g	g	350	400	350	a	300	b	b	a	420	b	b
28	b	b	a	b	350	c	c	c	c	c	c	310	320	320	330	380	270	a	c	b	b	a	b	b
29	b	b	b	b	b	b	b	b	c	c	c	300	320	290	290	280	310	c	260	270	300	a	b	b
Median	*	*	(300)	(300)	(315)	290	280	290	g	360	350	330	360	320	340	315	310	310	300	300	300	310	300	(320)
No.			7	9	8	13	14	15	17	19	18	19	21	17	20	20	21	21	14	16	13	10	11	5

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF h'F1 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

Day \ Hour	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	220	210	180	200	200	200	200	200	200	210	200	210	a	b
2	b	b	b	210	200h	200	170h	180	200	200	200	200	220	280
3	240	220	200	200	200	180	190	200	200	200	200h	200	230	a
4	q	200	200h	a	a	a	a	a	200	200	a	210	220	q
5	q	230	c	c	c	c	c	c	c	c	c	c	c	q
6	c	c	c	c	c	c	c	c	c	c	c	c	c	a
7	b	b	b	b	b	200	220	c	c	220	230	a	c	a
8	c	c	c	c	c	c	c	c	c	c	c	c	c	b
9	b	b	230	220	200	b	b	200	220	220	b	220	c	q
10	b	240	230	220	b	230	220	200	220	220	220	b	c	290
11	c	c	c	c	c	c	c	c	c	c	c	270	270	a
12	b	b	b	230	200	b	b	b	b	b	240	a	c	c
13	c	c	c	c	c	c	c	c	c	c	230	c	c	c
14	c	c	c	c	c	c	c	c	c	c	220	200	q	q
15	b	c	200	200	c	c	c	c	c	c	c	240	250	q
16	q	q	210	200	190	190	190	200	200	220	b	a	c	b
17	q	250	230	210	200h	230	210h	220	230	b	230	240	c	a
18	q	220	220	220	200	a	200	c	200	200	220	220	240	q
19	b	b	b	220	230	220h	220	220	240	220	250	a	a	a
20	b	b	b	b	b	b	b	210	200	b	220	220	a	a
21	q	250	230	200	190	210	220	200	200	220	230	220	c	q
22	q	q	220	200	200	210	210	200	200	210	210	220	q	c
23	q	230	220	200	200	200	200	200	210	210	220	a	q	q
24	q	q	a	210	200	200	200	a	c	a	a	a	c	c
25	b	b	a	b	b	b	230	b	b	220	220	q	c	c
26	q	q	220	210	200	c	200	210	210	210	220	280	a	a
27	a	q	230	220	220	200	200	200	220	b	a	a	a	b
28	c	c	c	c	c	200	200	220	210	a	a	a	c	b
29	b	b	c	c	c	200	200	190	200	200	200h	c	q	a
Median	*	230	220	210	200	200	200	200	200	210	220	220	235	*
No.		9	14	17	15	15	18	16	18	16	18	14	6	

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF h'E OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	100	100	a	a	a	a	a	a	100	100	100	100	a	b
2	b	b	b	b	100	100	100	100	100	b	b	a	a	a
3	120	100	100	a	a	100	b	100	100	100	100	100	a	a
4	100	a	a	a	a	a	a	a	a	a	a	100	a	a
5	a	a	c	c	c	c	c	c	c	c	c	c	c	a
6	c	c	c	c	c	c	c	c	c	c	c	c	c	a
7	b	b	b	b	b	b	b	c	c	b	100	a	c	a
8	c	c	c	c	c	c	c	c	c	c	c	c	c	b
9	b	b	b	b	100	b	b	b	100	b	b	110	c	a
10	b	b	b	b	b	b	b	b	b	b	b	b	c	100
11	c	c	c	c	c	c	c	c	c	c	c	110	a	a
12	b	b	b	b	110	b	b	b	b	b	110	a	c	c
13	c	c	c	c	c	c	c	c	c	c	c	c	c	c
14	c	c	c	c	c	c	c	c	c	c	100	a	100	a
15	b	c	b	b	c	c	c	c	c	c	c	b	100	a
16	100h	a	a	110	a	a	a	a	a	a	b	a	c	b
17	a	a	b	100	100	a	100	b	b	b	b	a	c	a
18	a	a	a	a	a	a	a	c	a	a	a	a	a	a
19	b	b	b	a	b	100	b	110	100	a	a	a	a	a
20	b	b	b	b	b	b	b	100	100	b	a	a	a	a
21	a	a	110	110	a	100	100	100	a	100	100	100	c	a
22	a	a	a	a	100	a	a	a	100	a	100	a	a	c
23	a	a	a	a	a	a	100	100	100	100	100	a	a	a
24	110	100	a	a	a	a	a	a	c	a	a	a	c	c
25	b	b	a	b	b	b	b	b	b	100	a	a	c	c
26	120	a	100	100	100	c	a	100	100	100	100	b	a	a
27	a	100	100	100h	b	b	a	b	100	b	a	a	a	a
28	c	c	c	c	c	100	a	b	a	a	a	a	c	b
29	b	b	c	c	c	100	100	100	100	100h	100	c	a	a
Median	105	*	*	100	100	100	100	100	100	100	100	100	*	*
No.	6			5	6	6	5	8	11	7	10	6		

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF h'Es OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

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	100	100	100	100	b	c	120	g	100	100	100	100	100	100	100	100	140	g	110	110	b	100	90	100
2	100	120	100	120	100	b	b	b	b	b	g	g	g	g	g	b	b	120	100	110	110	110	110	100
3	100	b	b	b	b	110	140	120	110	100	100	g	b	g	g	g	120	100	110	120	e	180	e	100
4	100	100	100	e	e	120	150	100	100	100	100	100	100	100	100	100	100	100	110	110	110	100	100	100
5	100	100	100	120	100	100	100	100	c	c	c	c	c	c	c	c	c	c	c	120	c	e	120	120
6	120	100	100	100	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	110	110	100	100	100
7	100	100	c	100	b	b	b	b	b	b	b	b	b	c	c	b	g	110	c	110	110	b	90	100
8	100	b	100	90	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	1b	100	100	100	100
9	100	100	90	100	100	100	b	b	b	b	g	b	b	b	g	b	b	110	c	120	110	100	100	b
10	100	b	b	b	110	b	b	b	b	110	b	b	b	b	120	b	b	b	c	100	110	100	100	100
11	100	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	150	120	110	b	100	b	100
12	100	100	100	100	100	b	b	b	b	b	b	b	b	b	b	b	g	100	c	c	100	100	100	100
13	b	b	100	100	100	100	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100	b	c
14	c	110	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	110	150	130	110	100	100	b
15	100	b	100	100	b	b	b	c	b	b	c	c	c	c	c	c	c	b	100	100	100	100	100	100
16	100	100	100	b	100	e	100	110	100	110	100	100	100	100	100	100	b	100	c	b	120	100	100	100
17	100	100	100	100	100	100	100	120	b	140	g	110	g	b	b	b	b	120	c	110	c	110	130	100
18	120	100	100	100	100	100	100	100	100	110	100	100	100	c	100	100	100	110	120	120	120	100	100	100
19	100	100	b	100	100	110	b	b	b	100	b	g	b	g	150	120	120	130	110	110	110	110	100	100
20	c	100	100	110	110	b	b	b	b	b	b	b	b	g	g	b	100	100	110	110	100	100	100	b
21	100	100	100	b	100	b	110	120	130	130	120	120	110	g	110	g	g	120	c	110	e	100	e	100
22	100	100	100	100	100	100	100	110	100	100	100	100	100	100	g	100	g	100	100	c	e	e	e	e
23	e	100	100	100	100	100	100	120	110	100	100	100	g	g	g	100	100	100	110	100	110	100	100	100
24	100	100	100	100	100	e	140	120	100	100	100	100	100	100	c	100	100	100	c	c	100	90	110	b
25	100	100	100	b	90	90	b	b	100	b	b	b	b	b	b	170	100	110	c	c	c	c	120	b
26	b	100	100	130	e	e	140	100	140	120	120	c	110	110	g	g	g	b	100	110	100	100	110	100
27	100	110	100	100	b	b	100	g	g	120	b	b	100	b	g	b	100	100	100	100	100	100	b	100
28	100	100	100	b	b	c	c	c	c	e	c	g	100	b	110	110	100	100	c	b	100	100	b	100
29	100	b	90	90	b	b	b	c	c	c	c	g	g	g	g	g	110	c	120	100	100	110	b	100
Median	100	100	100	100	100	100	100	110	100	105	100	100	100	100	105	100	100	105	110	110	110	100	100	100
No.	24	22	23	20	16	11	13	11	11	14	10	9	10	6	8	10	12	20	15	21	20	25	21	22

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T.

HOURLY VALUES OF (M3000)F2 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

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	b	b	b	b	c	3.0	3.3	3.2	3.2	3.2	3.1	3.2	3.1	3.2	3.2	3.3	3.1	3.0	a	b	b	b	b
2	b	2.8	b	b	b	b	b	g	b	3.2	3.1	2.9	2.9	2.9	2.9	3.1	3.0	3.1	3.2	3.0	2.9	2.7	2.8	3.1
3	a	b	b	b	b	3.4	3.3	3.5	3.3	3.3	3.3	3.2	3.1	3.2	3.1	c	3.0	3.1	3.3	3.0	3.0	2.9	3.1	3.1
4	2.8	3.0	3.0	3.1	3.3	3.5	3.3	3.4	3.3	3.3	3.2	3.2	a	a	3.2	3.1	3.1	3.2	3.3	3.2	3.3	a	3.1	3.0
5	s	s	3.2	3.2	3.4	3.5	3.4	3.3	c	c	c	c	c	c	c	c	c	c	3.2	3.2	c	s	3.2	s
6	s	s	3.0	3.1	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.1	3.1	3.0	f	b
7	b	a	c	b	b	b	b	b	b	b	b	2.9	2.9	c	c	2.6	3.0	3.0	c	2.6	2.8	b	b	b
8	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	a	b	b
9	b	b	b	b	2.8	3.2	b	b	2.8	3.2	2.6	2.8	2.8	3.1	2.7	2.7	2.9	2.9	c	3.3	2.9	3.0	b	b
10	b	b	b	b	3.1	2.9	b	3.1	2.9	3.1	2.7	3.1	2.9	3.0	3.1	3.0	3.0	2.9	c	2.8	3.0	b	2.9	b
11	a	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.0	3.1	3.1	b	a	b	b
12	2.9	3.0	2.9	b	b	b	b	b	b	2.6	2.9	b	2.8	2.7	2.8	2.9	2.7	3.0	c	c	2.9	a	a	b
13	b	b	b	b	b	3.0	c	c	c	c	c	c	c	c	c	c	2.9	c	c	c	c	3.0	b	c
14	c	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.1	3.0	3.0	3.0	b	2.8	3.2	b
15	b	b	b	b	b	b	b	c	3.1	3.2	c	c	c	c	c	c	c	3.0	3.0	3.0	3.0	3.0	2.9	2.9
16	a	a	a	b	b	3.2	3.4	3.2	3.6	3.3	3.1	3.1	3.1	3.1	3.0	2.9	b	3.0	c	b	a	a	a	a
17	b	b	b	b	b	2.9	3.0	2.4	2.8	2.8	2.7	2.8	2.5	2.8	2.8	2.8	3.0	2.9	c	3.2	c	3.1	b	a
18	b	b	a	2.9	2.9	3.2	3.2	3.3	3.4	3.1	3.2	3.1	3.0	c	3.1	3.2	3.1	3.2	3.1	3.0	3.1	a	b	b
19	2.9	2.9	b	3.0	3.1	3.5	3.3	b	3.0	3.0	3.1	2.8	2.9	2.9	3.1	2.9	3.2	3.1	2.9	a	a	a	b	b
20	c	a	2.8	3.1	b	b	b	3.0	b	2.9	3.1	3.0	3.0	3.1	2.9	3.0	3.0	3.0	3.1	3.1	b	b	b	b
21	b	b	2.8	b	b	3.1	3.2	3.3	3.3	3.3	3.2	3.0	3.2	3.1	3.2	3.1	3.1	3.2	c	3.2	3.1	3.0	3.2	3.0
22	b	a	3.2	s	3.1	3.4	3.2	3.3	3.4	3.3	3.2	3.3	3.1	3.3	3.1	3.1	3.3	3.2	3.2	c	(3.2)	(3.0)	(2.9)	s
23	s	f	f	3.0	a	b	3.3	3.2	3.2	3.3	3.5	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.0	3.1	a
24	2.9	f	2.9	2.9	2.9	3.2	3.5	3.2	3.3	3.2	3.0	2.7	2.8	c	2.6	a	a	a	c	c	2.5	b	2.5	b
25	b	b	b	b	b	b	b	b	g	b	b	2.4	2.7	b	b	3.2	2.9	3.0	c	c	c	c	3.2	b
26	b	b	3.2	(3.4)	2.5	3.0	3.5	3.3	3.3	3.4	3.2	c	3.2	3.1	3.1	3.2	3.1	3.0	3.1	3.1	a	2.9	3.0	a
27	2.8	a	a	b	b	b	3.1	3.1	2.7	2.9	3.0	2.7	3.0	3.0	2.7	3.0	a	3.2	b	b	2.8	2.6	b	b
28	b	b	2.8	b	3.0	c	c	c	c	c	c	3.2	3.1	3.1	2.9	2.7	3.4	2.8	c	b	b	2.8	b	b
29	b	b	b	b	b	b	b	3.3	c	c	c	3.3	3.1	3.2	3.2	3.2	3.1	c	3.3	3.3	3.2	3.0	b	b
Median	(2.9)	*	3.0	(3.1)	3.0	3.2	3.3	3.3	3.2	3.2	3.1	3.0	3.0	3.1	3.1	3.0	3.1	3.0	3.1	3.1	3.0	3.0	3.1	(3.0)
No.	5		10	9	10	14	14	17	17	19	18	20	21	17	20	20	21	23	15	18	16	15	13	5

Sweep: 1.0 - 13.0 Mc/s in 1m55s Time used: 157.5°E.M.T.

HOURLY VALUES OF (M3000)F1 OBSERVED DURING FEBRUARY 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	1	3.4	3.6	3.8	3.9	3.8	3.8	3.7	3.6	3.8	3.8	4.0	a	b
2	b	3.1	b	3.7	3.9	3.8	3.9	3.9	3.8	3.7	3.7	3.6	3.7	3.4
3	3.6	3.8	3.8	3.7	3.9	3.8	3.7	3.6	3.7	3.7	3.6	3.7	1	a
4	q	3.5	3.7	3.7	3.8	a	a	a	3.8	3.8	a	3.7	1	q
5	q	3.6	c	c	c	c	c	c	c	c	c	c	c	q
6	c	c	c	c	c	c	c	c	c	c	c	c	c	a
7	b	b	b	b	b	3.7	3.7	c	c	3.5	3.5	a	c	a
8	c	c	c	c	c	c	c	c	c	c	c	c	c	b
9	b	b	3.7	3.6	3.7	b	b	4.0	3.5	3.5	3.6	3.4	c	q
10	b	1	3.5	3.6	b	3.6	3.7	3.8	3.5	3.6	3.6	3.5	c	3.2
11	c	c	c	c	c	c	c	c	c	c	c	3.4	1	a
12	b	b	b	3.6	3.9	b	b	3.7	3.6	3.5	3.4	a	c	c
13	c	c	c	c	c	c	c	c	c	c	3.6	c	c	c
14	c	c	c	c	c	c	c	c	c	c	3.7	3.6	q	q
15	b	c	3.8	3.9	c	c	c	c	c	c	c	3.6	1	c
16	q	q	3.8	3.7	3.9	3.6	3.6	3.9	3.6	3.6	b	a	c	b
17	q	3.5	3.4	3.6	3.7	3.6	3.6	3.7	3.6	3.5	3.4	3.5	c	a
18	q	3.5	3.6	3.8	3.8	3.7	3.7	c	3.7	3.7	3.6	3.7	1	q
19	b	b	3.4	3.5	3.7	3.6.	3.4	3.6	3.7	3.5	3.5	3.5	a	a
20	b	b	b	3.5	b	b	3.7	3.7	3.6	3.6	3.7	1	a	a
21	q	1	1	3.6	3.8	3.6	3.6	3.7	3.7	3.7	3.7	1	c	q
22	q	q	3.7	3.8	3.9	3.6	3.7	3.8	3.8	3.7	3.7	1	q	c
23	q	1	1	3.7	3.7	3.5	3.6	3.7	3.7	3.7	3.7	1	q	q
24	q	q	3.6	3.7	3.7	3.7	3.5	3.0	c	a	a	a	c	c
25	b	b	3.4	b	b	3.6	3.7	b	b	3.5	3.5	q	c	c
26	q	q	3.6	3.7	3.7	c	3.8	3.7	3.6	3.7	3.6	3.5	a	a
27	a	q	3.5	3.6	3.5	3.7	3.8	3.6	3.5	b	a	a	a	b
28	c	c	c	c	c	3.8	3.6	3.7	3.6	a	a	a	c	b
29	b	b	c	c	c	3.8	4.0	3.7	3.7	3.8	3.5	c	q	a
Median	*	3.5	3.6	3.7	3.8	3.7	3.7	3.7	3.6	3.7	3.6	3.6	*	*
No.		7	15	19	16	17	19	18	19	19	19	13		

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5°E.M.T. MACQUARIE ISLAND (M3000)F1, FEBRUARY 1952

HOURLY VALUES OF f°F2 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11
1	b	b	b	b	b	3.0f	3.5	4.0	4.6	4.9	5.3v	5.8f
2	a	b	b	(2.5)f	(2.1)f	2.6f	4.1	4.9v	5.5	5.5	5.5	5.6z
3	f	f	3.2f	f	2.1f	2.6f	4.0z	5.2	5.6	6.5	6.3	6.3
4	b	b	b	a	5.5	b	b	g	g	g	b	b
5	b	a	b	b	b	b	b	b	b	b	b	b
6	b	b	b	b	b	b	b	b	b	b	b	b
7	c	c	c	b	b	b	b	b	b	b	4.5	4.5
8	b	b	b	b	b	b	b	g	g	g	b	b
9	b	b	b	b	b	b	b	b	b	b	g	b
10	b	b	b	b	b	b	b	b	b	b	b	c
11	b	b	b	b	b	b	b	b	b	b	b	b
12	b	a	b	b	b	b	b	4.2	4.8	5.1	5.5z	5.5
13	b	b	b	3.0	a	b	b	4.0	4.8	5.2	5.5	5.8
14	c	c	c	2.6f	2.2f	2.3f	3.3	3.8	4.4	4.8	c	c
15	a	a	3.0f	2.7f	2.3f	2.0f	3.2	3.3	4.9	5.4	5.6	6.2
16	a	b	b	b	b	b	3.3	b	b	4.7	4.6	5.0
17	a	a	a	a	a	c	3.0	3.8	4.3	4.7	4.8	5.3
18	b	b	b	b	b	b	3.2f	4.0	5.0	5.1	5.8v	6.0
19	b	3.3f	b	b	c	2.4f	3.5	4.0	4.4	4.8	5.3	5.1
20	b	f	b	b	b	2.1f	3.1	5.5	4.5	4.9	5.3	5.8z
21	f	c	c	c	c	c	c	5.0	4.6	4.9	5.2	5.6
22	b	b	b	b	b	b	b	3.3	3.6	g	b	b
23	b	b	b	b	b	b	b	b	b	b	c	c
24	b	b	b	b	b	b	b	b	g	3.9	4.2	4.5
25	b	b	b	b	b	b	b	3.3	b	b	4.7	4.7
26	c	c	c	c	c	c	c	c	c	c	5.6	c
27	c	c	c	c	c	c	c	c	c	4.8	5.4	6.0
28	c	c	c	c	c	c	c	c	5.1	4.5f	5.1	5.2
29	c	c	c	c	c	c	c	(4.5)j	4.6	5.1	5.4	5.5
30	c	f	f	f	c	c	c	5.0	4.8	5.5	5.8	6.5
31	c	c	c	c	c	c	c	c	c	c	c	5.6
Median		*	*	*	(2.2)f	(2.4)f	3.3	4.0	4.6	4.9	5.3	5.6
No.					5	7	10	18	19	21	21	20

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T.

HOURLY VALUES OF f°F2 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

Day \ Hour	12	13	14	15	16	17	18	19	20	21	22	23
1	6.3z	6.5	6.7	6.0	5.8	5.6f	5.6vf	4.7f	4.7f	a	4.8f	a
2	5.8z	5.7f	6.3f	6.3f	6.3fz	5.9f	5.8	c	(5.5)f	4.8f	(3.5)f	2.8f
3	6.4z	6.9	c	6.5z	6.3z	6.5	6.2	5.7	5.4	4.4f	b	f
4	4.5	4.6f	4.8f	a	a	a	c	a	a	a	b	a
5	b	4.2	4.6f	c	c	a	a	a	a	b	b	b
6	a	b	b	a	a	a	a	a	b	c	c	c
7	4.4	g	g	4.4	4.5	4.4	c	3.8f	3.6	b	a	b
8	b	4.4	4.5	d4.5	c	a	c	c	c	b	b	b
9	b	(5.4)f	b	c	5.2	5.4	c	a	a	b	b	b
10	b	b	4.7f	b	5.4	4.6	4.2	c	a	a	a	a
11	b	5.8	5.7	5.6	5.4f	4.8f	4.7	a	b	b	b	b
12	5.5	5.5	5.5f	6.0	6.2	4.5f	4.9	(3.6)f	3.6f	3.3f	3.2	a
13	5.8	6.1z	6.2	6.4z	6.2z	5.8	5.7f	3.6f	3.0f	3.5f	f	2.7f
14	c	c	5.5	c	c	c	5.3	5.5	5.0	3.8f	a	a
15	6.2	6.5	6.2	5.9	6.5f	6.1	4.7	4.6	c	c	a	a
16	5.1	5.2	5.5	5.6	5.5	5.8	c	f	a	3.3	b	b
17	5.5z	6.3	6.5	6.5z	c	c	c	b	b	b	b	b
18	6.0	6.0	6.1	6.0	6.0vz	4.5f	c	c	b	3.6f	b	b
19	5.5	5.5z	5.4z	5.8	5.2	5.3	5.5	c	4.8	f	f	2.1f
20	5.8z	5.9z	5.7	5.9	5.6	5.4	5.5	5.6f	f	b	b	f
21	5.7z	5.5	5.6	6.0	5.6	5.6f	f	(4.5)f	(4.5)f	b	b	b
22	4.6	b	b	(5.2)f	b	3.6	c	3.5f	f	b	b	b
23	c	c	c	5.6v	4.5f	c	c	b	3.0f	b	b	b
24	4.5	4.5	4.6f	(4.5)f	4.0	3.5f	c	c	c	c	c	c
25	4.7	5.1f	5.2f	5.4	5.0	5.0f	4.8f	c	c	b	c	c
26	c	4.6	5.0	5.1f	4.8f	4.7	c	5.5	4.5	c	c	c
27	6.0z	6.5z	6.5z	6.3z	f	(4.6)f	f	f	f	f	c	c
28	5.3	5.6z	5.7z	b	b	5.5	5.5z	5.3	4.5f	(4.2)j	c	c
29	5.5	5.5	c	c	c	c	c	c	6.0	f	c	f
30	6.8	6.9	c	c	7.1	c	5.9f	c	c	c	c	c
31	5.8	5.9	c	c	c	(4.5)f	c	c	c	c	c	c
Median	5.6	5.6	5.5	5.9	5.6	5.2	5.5	4.6f	4.5f	(3.7)f	*	*
No.	22	26	23	21	20	22	14	12	13	8		

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T.

HOURLY VALUES OF f°F1 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

Hour / Day	07	08	09	10	11	12	13	14	15	16	17
1	q	3.8	3.9	4.1	4.2	4.2	4.2	4.1	4.0	3.6	1
2	q	3.8	4.1	4.2	4.3	4.3	4.3	4.2	4.1	3.6	1
3	1	3.9	4.2	4.3	4.3	4.3	4.3	c	4.1	3.8	3.5
4	3.5	3.3	3.6	b	b	4.0	4.0	4.0	a	a	a
5	b	b	b	b	b	b	3.8	3.9	c	c	a
6	b	b	b	b	b	a	b	b	a	a	a
7	b	b	b	4.0	4.2	4.1	4.0	4.0	3.9	3.7	3.6
8	3.3	3.7	3.8	b	b	b	4.0	4.0	4.0	c	a
9	b	b	b	4.0	b	b	4.2	b	3.9	3.9	1
10	b	b	b	b	c	b	b	4.1	b	3.8	b
11	b	b	b	b	b	b	b	b	3.9	3.8	3.7
12	q	3.7	4.1	4.2	4.3	4.1	b	4.1	3.8	3.8	3.7
13	b	4.0	4.1	4.2h	4.3	b	4.2	4.2	4.0	3.8	q
14	b	3.7	3.9	c	c	c	c	c	c	c	c
15	q	3.7	4.3	4.2	4.2	4.2	4.3	4.2	4.2	1	3.5
16	b	b	4.0	b	b	4.2	4.2	4.1	3.9	3.7	q
17	q	3.7	3.9	4.1	4.2	4.1	4.1	4.1	3.9	c	c
18	q	3.5	4.0	4.0	4.2	4.2	4.2	4.1	4.0	3.7	a
19	q	3.5	3.8	4.0	4.1	4.2z	4.1	4.0	3.8	1	1
20	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	3.5	3.2
22	q	b	3.8	b	b	b	b	b	c	b	b
23	b	b	3.7	c	c	c	c	c	3.8	b	c
24	b	3.6	3.7	3.8	3.8	3.8	3.9	3.8	3.3	3.3	1
25	q	b	b	3.9	4.0	4.1	4.0	3.9	3.8	c	c
26	c	c	c	c	c	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c
30	q	c	c	c	c	c	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c
Median	*	3.7	3.9	4.1	4.2	4.2	4.2	4.1	3.9	3.7	3.6
No.		13	16	13	12	13	16	16	17	13	6

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T.

HOURLY VALUES OF f°E OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

Day \ Hour	06	07	08	09	10	11	12	13	14	15	16	17	18
1	1.9	2.2	2.5	2.7h	3.0	3.0	b	b	b	b	2.7	2.5h	1.8
2	1.9h	2.2h	2.5	2.8h	2.9	3.1	3.2	3.0	a	2.8	2.6	2.4h	b
3	1.9	2.3	2.6	2.9	2.9	2.9	3.0	3.0	c	2.9	2.7	2.6h	a
4	b	a	b	b	b	b	b	3.2	b	a	a	a	c
5	b	b	b	b	b	b	b	2.9	b	c	c	a	a
6	b	b	b	b	b	b	a	b	b	a	a	a	a
7	b	b	b	b	b	b	b	b	2.9	b	2.5	a	c
8	b	b	b	b	b	b	b	b	3.1h	3.0h	c	a	c
9	b	b	b	b	b	b	b	3.3	b	b	2.6	b	c
10	b	b	b	b	b	c	b	b	b	b	b	b	a
11	b	b	b	b	b	b	b	b	b	b	2.5	b	a
12	b	b	b	b	2.8	b	b	b	b	2.8	b	2.2	1.9
13	b	b	2.5	b	b	b	b	b	b	b	b	2.3h	1.5
14	b	b	2.5	b	c	c	c	c	c	c	c	c	b
15	b	2.2	2.6	b	3.0	3.1	a	3.0	a	b	2.6	b	a
16	b	b	b	c	b	b	b	3.2	3.0	c	c	a	c
17	1.7	b	c	c	c	c	c	c	c	c	c	c	c
18	b	2.1	(2.4)	c	c	c	a	c	c	c	(2.4)	a	c
19	b	2.1	(2.4)	2.7	a	3.0	3.0h	3.0	2.8	2.7	2.4	2.2	b
20	b	c	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	2.2	a	a
22	b	b	b	b	b	b	b	b	b	c	b	b	c
23	b	b	b	b	c	c	c	c	c	a	b	c	c
24	b	b	b	b	a	a	a	a	3.3	b	a	a	c
25	b	b	b	b	c	c	c	2.8	2.7	2.6	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	e
29	e	c	c	c	c	c	c	c	c	c	c	c	c
30	e	1.9h	c	c	c	c	c	c	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c	c	c
Median	1.8	2.2	2.5	*	2.9	3.0	*	3.0	3.0	2.8	2.6	2.4	*
No.	6	7	8		5	5		9	6	6	10	6	

Sweep: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

HOURLY VALUES OF fEs OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

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	4.2	5.5	b	3.4	e	2.8	2.8	2.9	3.1	g	g	g	g	b	b	g	g	2.2	4.3	(5.3)s	(5.0)s	(5.0)s	5.2
2	5.3	b	b	2.8	e	e	2.1	2.7	2.9	3.0	3.2	g	g	g	3.8	g	g	g	b	c	2.7	e	2.0	e
3	4.2	3.0	3.0	e	e	e	g	2.6	2.8	3.1	3.2	3.1	3.3	3.4	c	g	g	g	1.9	2.3	2.8	4.1	4.2	7.6
4	b	5.6	5.5	7.3	4.2	4.9	b	4.1	b	b	b	b	b	3.5	b	d7.7	d7.7	d7.7	c	d7.7	6.0	5.2	b	5.4
5	4.7	5.4	3.4	d7.7	b	b	b	b	b	b	b	b	b	g	3.5	c	c	5.0	5.0	6.0	d7.7	b	b	b
6	b	3.4	5.3	6.0	b	b	b	b	b	b	b	b	4.3	b	b	7.5	d7.7	4.3	5.0	4.7	5.1	c	c	c
7	c	c	c	4.2	b	b	b	b	b	b	b	b	b	b	g	b	3.1	2.4	c	4.3	d4.4	b	d4.4	b
8	b	b	b	3.9	b	b	b	b	b	b	b	b	b	b	g	g	c	d4.4	c	c	c	b	b	b
9	b	4.4	4.6	b	b	b	b	b	b	b	b	b	b	4.0	b	b	b	b	c	4.6	4.5	b	b	b
10	b	b	b	b	b	b	b	b	b	b	b	c	b	b	b	b	b	6.0	4.5	c	5.1	4.7	5.9	3.1
11	5.5	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	2.6	3.1	5.4	5.5	b	6.0	b	5.7
12	5.0	6.2	b	3.1	3.8	b	b	b	b	3.1	3.0	b	b	b	b	3.5	3.5	g	g	4.5	5.7	4.8	5.2	7.0
13	4.3	4.2	b	5.0	4.0	b	b	b	g	b	b	b	b.	b	b	b	b	g	1.7	e	2.6	d7.7	d7.7	3.1
14	c	c	c	3.1	2.5	1.7	g	b	g	b	c	c	c	c	c	c	c	c	b	3.8	2.3	4.1	5.2	5.3
15	5.5	4.0	3.3	3.2	2.3	2.1	2.3	g	g	b	g	g	3.3	g	3.1	b	g	b	3.3	e	c	c	6.0	6.5
16	4.0	b	3.5	3.8	4.8	5.5	b	b	b	c	b	b	b	g	g	g	3.6	3.9	c	7.5	5.3	4.3	5.5	7.2
17	6.0	5.0	5.5	3.9	4.2	2.5	g	b	c	c	c	c	c	c	c	c	c	c	c	5.3	6.2	5.5	6.0	b
18	b	b	b	b	b	b	b	g	2.7	c	c	c	3.6	c	3.2	g	g	3.0	c	c	5.8	4.0	4.7	5.0
19	4.8	3.6	5.2	4.8	4.2	e	b	g	c	3.4	3.0	g	g	g	3.1	g	g	g	b	c	4.8	e	e	e
20	5.6	2.2	b	b	b	2.3	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	3.5	5.5	d7.5	d7.5	5.7	6.0	4.7
22	b	4.0	b	4.7	4.3	b	b	b	b	b	b	b	b	b	b	c	3.9	b	c	2.5	2.2	4.1	b	b
23	4.0	3.8	b	b	4.5	b	b	b	b	b	c	c	c	c	c	4.5	b	c	c	5.2	4.0	6.0	7.5	5.5
24	6.0	5.8	6.0	5.6	b	b	b	b	b	2.8	3.1	3.2	3.8	3.3	g	b	2.2	2.5	c	c	c	c	c	c
25	4.0	b	b	b	5.6	b	b	b	b	b	c	c	c	g	g	g	c	c	c	5.7	5.6	b	5.9	5.0
26	c	5.5	5.5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	e	e	c	4.9	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
28	5.9	5.8	4.8	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	c	e	e	5.5	c
29	c	c	c	c	c	c	g	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	6.0
30	c	c	c	1.6	e	e	g	g	c	c	c	c	c	c	c	c	c	c	5.8	c	c	c	d7.5	c
31	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	7.5	7.5	5.2	5.7	c	c	c	c	c
Median	5.0	4.2	5.2	3.9	4.0	1.7	**	2.6	2.7	3.1	3.0	**	3.3	**	3.1	**	2.4	3.0	4.5	4.6	5.0	4.7	5.5	5.3
No.	15	17	13	17	15	11	8	8	7	6	7	6	8	11	10	12	16	18	13	19	22	17	19	17

Sweep: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

HOURLY VALUES OF h'F2 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

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	b	b	b	b	b	270	260	230	330	350	340	330	300	300	260	290	270	270	250	280	300	a	a	a
2	a	b	b	a	310	260	240	230	260	280	300	300	290	310	280	270	250	250	240	c	240	240	270	300
3	300	260	250	260	250	250	220	250	250	260	280	270	290	260	c	260	250	250	240	230	240	280	b	260
4	b	b	b	a	270	b	b	g	g	g	b	b	450	450	400	a	a	a	c	a	a	a	b	a
5	b	a	b	b	b	b	b	b	b	b	b	b	b	600	490	c	c	a	a	a	a	b	b	b
6	b	b	b	b	b	b	b	b	b	b	b	b	a	b	b	a	a	a	a	a	b	c	c	c
7	c	c	c	b	b	b	b	b	b	b	390	400	530	g	g	500	300	380	c	a	a	b	a	b
8	b	b	b	b	b	b	b	g	g	g	b	b	b	500	420	370	c	a	c	c	c	b	b	b
9	b	b	b	b	b	b	b	b	b	b	g	b	b	400	b	c	300	1	c	a	a	b	b	b
10	b	b	b	b	b	b	b	b	b	b	b	c	b	b	400	b	310	340	350	c	a	a	a	a
11	b	b	b	b	b	b	b	b	b	b	b	b	b	330	320	300	350	320	300	a	b	b	b	b
12	b	a	b	b	b	b	b	b	290	330	330	330	350	b	340	280	260	310	260	300	300	300	320	a
13	b	b	b	330	a	b	b	b	1	320	320	320	300	290	290	270	250	240	260	260	290	260	300	300
14	c	c	c	350	300	300	280	250	290	370	c	c	c	c	c	c	c	c	250	250	270	270	a	a
15	a	a	a	a	a	320	250	240	300	270	300	320	300	290	290	300	270	280	250	250	c	c	a	a
16	a	b	b	b	b	b	b	b	b	400	b	b	360	350	330	300	270	250	c	f	a	a	b	b
17	a	a	a	a	a	c	260	300	350	340	400	340	340	310	300	300	c	c	c	b	b	b	b	b
18	b	b	b	b	b	b	290	250	310	360	320	310	310	320	330	300	300	300	c	c	b	b	b	b
19	b	b	b	b	330	b	240	240	270	320	300	350	310	300	330	290	280	1	230	c	240	250	260	(300)
20	b	b	b	b	b	b	250	c	c	c	310	300	300	290	300	280	c	c	c	c	c	b	b	b
21	c	c	c	c	c	c	c	c	c	c	c	300	300	310	300	280	270	340	300	a	400	b	b	b
22	b	b	b	b	b	b	b	250	b	g	b	b	b	b	b	c	b	b	c	300	350	b	b	b
23	b	b	b	b	b	b	b	b	b	b	c	c	c	c	c	320	b	c	c	b	a	b	b	b
24	b	b	b	b	b	b	b	b	g	590	420	360	390	410	390	b	450	300	c	c	c	c	c	c
25	b	b	b	b	b	b	b	c	b	b	340	370	380	350	370	300	c	c	c	c	c	b	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	240	250	c	c	c
27	c	c	c	c	c	c	c	c	c	c	290	260	250	250	250	230	260	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	300	280	270	b	b	c	230	c	240	240	c	c
29	c	c	c	c	c	c	250	c	c	c	290	270	280	300	c	c	c	c	c	c	c	c	c	c
30	c	c	c	250	250	250	250	c	c	c	240	260	270	270	c	c	240	230	250	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c	370	c	c	c	c	c	c	c	c	c	c	c	c
Median	*	*	*	*	(285)	(265)	250	250	305	350	320	320	300	310	330	295	270	290	250	(255)	270	(260)	*	*
No.					6	6	11	11	12	15	17	18	20	23	21	18	17	14	13	8	11	7		

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T.

HOURLY VALUES OF hpF2 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

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	b	b	b	b	b	280	280	290	g	g	340	330	300	300	280	290	280	290	300	300	300	a	a	a
2	a	b	b	a	(310)	270	260	260	260	280	300	300	290	310	290	280	270	260	280	c	(270)	290	(310)	330
3	f	f	280	f	300	260	250	250	270	260	280	270	290	270	c	270	260	260	260	250	290	300	b	f
4	b	b	b	a	290	b	b	g	g	g	b	b	g	g	g	a	a	a	c	a	a	a	b	a
5	b	a	b	b	b	b	b	b	b	b	b	b	b	g	g	c	c	a	a	a	a	b	b	b
6	b	b	b	b	b	b	b	b	b	b	b	b	a	b	b	a	a	a	a	a	b	c	c	c
7	c	c	c	b	b	b	b	b	b	b	g	g	g	g	g	g	g	g	c	a	a	b	a	b
8	b	b	b	b	b	b	b	g	g	g	b	b	b	g	g	c	c	a	c	c	c	b	b	b
9	b	b	b	b	b	b	b	b	b	b	g	b	b	g	b	c	300	340	c	a	a	b	b	b
10	b	b	b	b	b	b	b	b	b	b	b	c	b	b	g	b	310	350	350	c	a	a	a	a
11	b	b	b	b	b	b	b	b	b	b	b	b	b	330	320	300	350	320	300	a	b	b	b	b
12	b	a	b	b	b	b	b	b	290	330	330	340	350	b	340	280	260	310	270	(300)	300	300	320	a
13	b	b	b	350	a	b	b	300	300	330	320	320	300	290	290	280	270	300	300	270	290	300	f	300
14	c	c	c	350	320	320	300	250	g	g	c	c	c	c	c	c	c	c	300	290	280	270	a	a
15	a	a	a	a	300	320	260	290	300	270	300	320	300	290	290	300	290	310	290	260	c	c	a	a
16	a	b	b	b	b	b	b	b	b	g	b	b	g	g	330	310	280	280	c	f	a	a	b	b
17	a	a	a	a	a	c	270	300	g	g	g	g	340	320	300	320	c	c	c	b	b	b	b	b
18	b	b	b	b	b	b	300	280	340	370	330	310	310	320	330	300	330	300	c	c	b	300	b	b
19	b	330	b	b	c	300	260	270	280	g	300	350	310	300	330	290	300	290	290	c	290	f	f	320
20	b	f	b	b	b	320	260	c	c	c	310	300	300	290	300	290	290	300	290	290	f	b	b	f
21	c	c	c	c	c	c	c	c	c	c	c	300	300	310	300	290	290	370	f	f	400	b	b	b
22	b	b	b	b	b	b	b	290	b	g	b	b	b	b	b	c	b	b	c	300	f	b	b	b
23	b	b	b	b	b	b	b	b	b	b	c	c	c	c	c	320	b	c	c	b	a	b	b	b
24	b	b	b	b	b	b	b	b	g	g	g	g	g	g	g	b	g	300	c	c	c	c	c	c
25	b	b	b	b	b	b	b	c	b	b	350	g	g	350	370	310	c	c	c	c	c	b	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	300	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	290	260	250	260	270	300	f	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	270	300	290	270	b	b	290	300	300	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	290	270	280	300	c	c	c	c	c	c	300	f	c	c
30	c	c	c	c	c	c	c	c	c	260	260	290	300	290	c	c	250	c	260	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c	370	c	400	c	c	c	c	c	c	c	c	c	c
Median		*	*	*	(300)	(300)	(260)	290	340	g	320	320	300	315	330	300	290	300	290	295	(290)	(300)	*	*
No.					5	7	9	12	13	16	17	19	20	24	21	17	17	17	13	10	9	6		

Sweep: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

HOURLY VALUES OF h'F1 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

Hour / Day	07	08	09	10	11	12	13	14	15	16	17
1	q	230	220	230	220	220	210	b	b	220	240
2	q	230	220	220	200	220	190	a	220	220	230
3	220	200	200	180	180	200	200	c	210	220	220
4	280	b	240	b	b	b	230	250	a	a	a
5	b	b	b	b	b	b	220	220	c	c	a
6	b	b	b	b	b	a	b	b	a	a	a
7	b	b	b	b	220	210	220	220	230	220	270
8	270	250	240	b	b	b	230	220	230	c	a
9	b	b	b	230	b	b	230	b	b	240	260
10	b	b	b	b	c	b	b	220	b	220	b
11	b	b	b	b	b	b	b	b	220	240	260
12	q	b	240	220	230	220	b	200	220	230	230
13	b	220	200	200h	b	b	220	200	220	220	q
14	b	220	220	c	c	c	c	c	c	c	c
15	q	210	220	210	200	220	210	210	210	200	240
16	b	b	200	b	b	200	240	220	230	240	q
17	q	250	230	230	230	210	210	220	220	c	c
18	q	240	230	220	210	210	200	210	220	240	a
19	q	220	200	200	200	200	210	200	210	230	210
20	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c
22	q	b	240	b	b	b	b	b	c	b	b
23	b	b	b	c	c	c	c	c	240	b	c
24	b	b	240	230	240	a	240	300	b	250	260
25	q	b	b	240	220	200	200	230	220	c	c
26	c	c	c	c	c	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c
30	q	c	c	c	c	c	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c
Median	*	225	220	220	220	210	215	220	220	225	240
No.		10	15	12	11	11	16	14	14	14	10

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T. MACQUARIE ISLAND h'F1.MARCH 1952

HOURLY VALUES OF h'E OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17	18
1	b	100	100	100h	100	100	b	b	b	b	110	110h	b
2	150h	110h	100	100h	100	100	100	100	a	110	110	120h	b
3	130	100	100	100	100	100	100	100	c	100	100	100h	a
4	b	a	b	b	b	b	b	a	b	a	a	a	c
5	b	b	b	b	b	b	b	110	b	c	c	a	a
6	b	b	b	b	b	b	a	b	b	a	a	a	a
7	b	b	b	b	b	b	b	b	100	b	110	a	a
8	b	b	b	b	b	b	b	b	b	b	120h	c	a
9	b	b	b	b	b	b	b	a	b	b	b	b	c
10	b	b	b	b	b	c	b	b	b	b	b	b	a
11	b	b	b	b	b	b	b	b	b	b	110	b	a
12	b	b	b	b	110	b	b	b	b	100	b	b	130
13	b	b	100	b	b	b	b	b	b	b	b	110h	b
14	b	b	100	b	c	c	c	c	c	c	c	c	b
15	b	120	120	b	120	100	a	100	a	b	b	b	a
16	b	b	b	c	b	b	b	110	100	100	100	a	c
17	100	b	110	100	100	100	c	100	100	100	c	c	c
18	b	b	100	100	100	100	a	100	100	110	110	a	c
19	b	100	100	100	a	100	100h	100	100	100	100	100	b
20	b	c	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	110	a	a
22	b	b	b	b	b	b	b	b	b	c	b	b	c
23	b	b	b	b	c	c	c	c	c	a	b	c	c
24	b	b	b	b	a	a	a	a	100	b	a	a	c
25	b	b	b	b	c	c	100	100	100	110	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	e
29	e	c	c	100	c	c	c	c	c	c	c	c	c
30	e	100h	100	c	c	c	c	c	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c	c	c
Median	150	100	100	100	100	100	*	100	100	100	110	110	*
No.	5	6	10	7	7	7		9	7	9	9	5	

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T. MACQUARIE ISLAND h'E, MARCH 1952

HOURLY VALUES OF h'Es OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

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	b	b	100	b	100	e	140	130	120	120	g	g	g	g	b	b	g	g	150	120	110	100	110	100
2	100	b	b	100	e	e	150	130	120	120	130	g	g	g	100	g	g	g	b	c	120	e	130	e
3	120	100	100	e	e	e	g	150	120	110	120	120	110	120	c	g	g	g	150	120	150	120	120	100
4	b	100	100	100	120	120	b	130	b	b	b	b	b	110	b	100	100	100	c	100	100	100	b	100
5	100	100	110	140	b	b	b	b	b	b	b	b	b	g	130	c	c	120	110	100	120	b	b	b
6	b	100	110	110	b	b	b	b	b	b	b	b	100	b	b	100	120	100	100	100	100	c	c	c
7	c	c	c	100	b	b	b	b	b	b	b	b	b	b	g	b	150	150	c	110	100	b	100	b
8	b	b	b	100	b	b	b	b	b	b	b	b	b	b	g	g	c	100	c	c	c	b	b	b
9	b	100	110	b	b	b	b	b	b	b	b	b	b	100	b	b	b	b	c	110	100	b	b	b
10	b	b	b	b	b	b	b	b	b	b	b	c	b	b	b	b	b	110	120	c	100	100	100	120
11	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	120	120	100	110	b	100	b	100
12	100	100	b	140	110	b	b	b	b	130	120	b	b	b	b	130	130	g	g	110	110	100	100	100
13	100	100	b	100	100	b	b	b	g	b	b	b	b	b	b	b	b	g	160	e	120	120	100	100
14	c	c	c	100	100	100	g	b	g	b	c	c	c	c	c	c	c	c	b	100	120	120	100	100
15	100	100	100	100	100	100	100	g	g	b	g	g	100	g	100	b	g	b	120	e	c	c	120	110
16	130	b	100	100	100	100	b	b	b	c	b	b	b	g	g	g	150	100	c	130	100	110	100	100
17	100	100	100	100	100	110	g	b	c	c	c	c	c	c	c	c	c	c	c	120	120	100	100	b
18	b	b	b	b	b	b	b	g	100	c	c	c	100	c	100	g	g	130	c	c	110	120	110	100
19	100	100	100	100	100	e	b	g	c	100	100	g	g	g	100	g	g	g	b	c	110	e	e	e
20	100	100	b	b	b	100	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	110	110	110	100	100	100	120
22	b	100	b	100	100	b	b	b	b	b	b	b	b	b	b	c	100	b	c	120	120	100	b	b
23	100	100	b	b	100	b	b	b	b	b	c	c	c	c	c	120	b	c	c	100	110	100	100	100
24	100	100	100	110	b	b	b	b	b	100	100	100	100	100	g	b	110	120	c	c	c	c	c	c
25	130	b	b	b	100	b	b	b	b	b	c	c	c	g	g	g	c	c	c	120	100	b	100	c
26	c	110	120	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	e	e	c	100	c
27	c	c	c	c	100	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100	100	100	c	c
28	100	100	100	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	c	e	e	100	c
29	c	100	c	c	c	c	g	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100
30	c	100	100	120	e	e	g	g	c	c	c	c	c	c	c	c	c	c	110	c	c	c	100	c
31	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100	100	100	100	c	c	c	c	c
Median	100	100	100	100	100	100	*	*	*	115	120	*	100	*	100	100	120	110	110	110	110	100	100	100
No.	15	18	14	16	13	6				6	5		5		5	5	9	12	11	17	21	15	18	14

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T.

HOURLY VALUES OF (M3000)F2 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

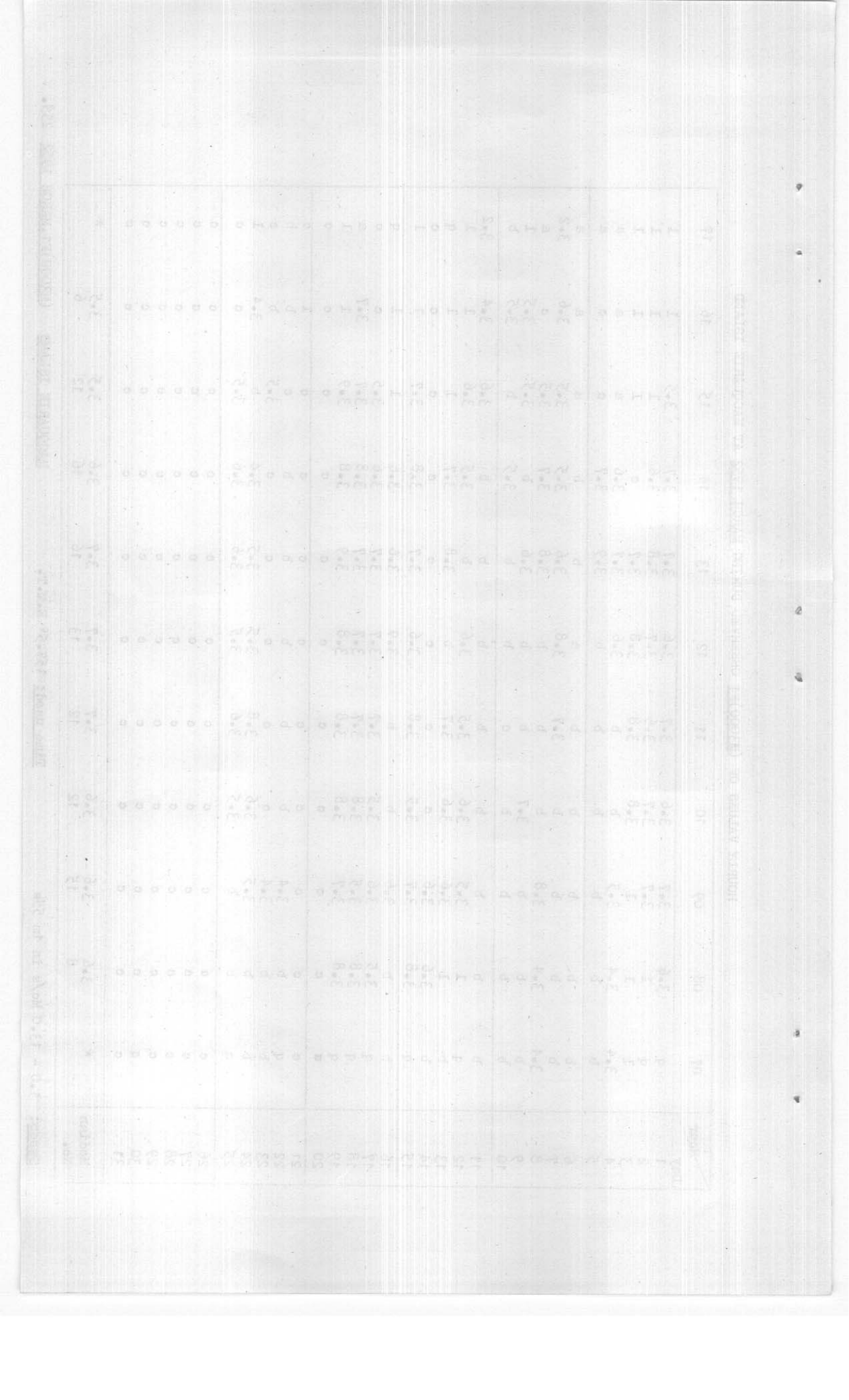
Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	b	b	b	b	b	3.1	3.3	3.3	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.3	3.2	3.1	3.0	3.1	a	2.8	a
2	a	b	b	(3.0)	(2.9)	3.3	3.5	3.4	3.5	3.3	3.2	3.2	3.3	3.2	3.3	3.4	3.3	3.3	3.3	c	(3.2)	3.2	(2.9)	3.0
3	f	f	(3.2)	f	3.2	3.5	3.5	3.6	3.5	3.4	3.2	3.4	3.3	3.4	c	3.3	3.5	3.3	3.3	3.3	3.2	3.1	b	f
4	b	b	b	a	3.1	b	b	g	g	g	b	b	2.8	2.7	2.8	a	a	a	c	a	a	a	b	a
5	b	a	b	b	b	b	b	b	b	b	b	b	b	2.3	2.5	c	c	a	a	a	a	b	b	b
6	b	b	b	b	b	b	b	b	b	b	b	b	a	b	b	a	a	a	a	a	b	c	c	c
7	c	c	c	b	b	b	b	b	b	b	3.0	3.0	2.5	g	g	2.5	3.4	3.0	c	3.2	a	b	a	b
8	b	b	b	b	b	b	b	g	g	g	b	b	b	2.5	2.9	c	c	a	c	c	c	b	b	b
9	b	b	b	b	b	b	b	b	b	b	g	b	b	2.8	b	c	3.0	2.9	c	a	a	b	b	b
10	b	b	b	b	b	b	b	b	b	b	b	c	b	b	2.9	b	3.0	2.8	2.9	c	a	a	a	a
11	b	b	b	b	b	b	b	b	b	b	b	b	b	3.1	3.1	3.1	2.9	3.1	3.2	a	b	b	b	b
12	b	a	b	b	b	b	b	3.3	3.3	3.1	3.1	3.2	3.1	2.8	2.9	3.3	3.2	3.2	3.3	(2.9)	3.0	3.0	2.9	a
13	b	b	b	2.8	a	b	b	3.1	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.1	3.0	2.9	2.8	3.0	f	2.8
14	c	c	c	2.8	2.9	2.9	3.2	3.2	3.3	3.0	c	c	c	c	3.2	c	c	c	3.2	3.2	3.2	2.9	a	a
15	a	a	2.7	2.8	2.9	3.0	3.3	3.2	3.2	3.4	3.3	3.1	3.1	3.3	3.3	3.2	3.1	3.0	3.2	3.3	c	c	a	a
16	a	b	b	b	b	b	3.2	b	b	2.9	b	3.0	3.0	3.1	3.0	3.1	3.2	3.2	c	f	a	a	b	b
17	a	a	a	a	a	c	3.0	3.1	3.1	3.1	2.9	3.0	3.1	3.1	3.2	3.0	c	c	c	b	b	b	b	b
18	b	b	b	b	b	b	3.3	3.4	2.8	2.7	2.9	3.1	3.1	3.0	3.0	3.2	3.0	3.3	c	c	b	3.2	b	b
19	b	2.9	b	b	c	3.1	3.3	3.5	3.3	3.3	3.3	3.1	3.2	3.3	3.2	3.2	3.3	3.2	3.2	c	3.3	f	f	3.0
20	b	f	b	b	b	3.0	3.4	3.4	c	(3.5)	3.3	3.3	3.3	3.3	3.2	3.3	3.4	3.2	3.3	3.3	f	b	b	f
21	c	c	c	c	c	c	c	3.5	c	3.4	3.5	3.4	3.3	3.3	3.3	3.2	3.2	2.7	f	f	(2.8)	b	b	b
22	b	b	b	b	b	b	b	3.2	b	g	b	b	2.8	b	b	(3.0)	b	2.8	c	3.3	f	b	b	b
23	b	b	b	b	b	b	b	b	b	b	c	c	c	c	c	3.2	3.0	c	c	b	2.8	b	b	b
24	b	b	b	b	b	b	b	b	g	2.4	2.9	3.1	3.1	2.9	2.8	b	2.8	3.3	c	c	c	c	c	c
25	b	b	b	b	b	b	b	3.1	b	b	2.9	3.0	2.9	3.0	3.1	3.0	3.0	c	c	c	c	b	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.1	3.0	3.2	c	c	3.2	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	3.4	3,5	3.6	3.4	3.3	3.1	f	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	3.3	c	3.3	3.4	3.4	3.4	3.4	b	b	3.2	3.2	3.2	c	c	c	c
29	c	c	c	c	c	c	c	c	c	3.4	3.4	3.5	3.4	3.3	c	c	c	c	c	c	3.1	f	c	c
30	c	c	c	c	c	c	c	3.4	3.5	3.5	3.3	3.2	3.2	3.2	c	c	3.3	c	3.4	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c	2.9	2.5	2.6	c	c	c	c	c	c	c	c	c	c
Median		*	*	*	(2.9)	(3.1)	3.3	3.3	3.2	3.1	3.2	3.2	3.2	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.1	(3.0)	*	*
No.					5	7	10	17	15	19	19	20	22	25	23	19	20	18	13	11	10	6		

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T.

HOURLY VALUES OF (M3000)F1 OBSERVED DURING MARCH 1952 AT MACQUARIE ISLAND

Hour / Day	07	08	09	10	11	12	13	14	15	16	17
1	q	3.6	3.7	3.6	3.7	3.6	3.7	3.7	3.5	1	1
2	q	1	3.7	3.7	3.6	3.7	3.8	3.6	1	1	1
3	1	1	1	3.8	3.8	3.8	3.7	c	1	1	1
4	3.4	3.4	3.5	b	b	3.6	3.7	3.6	a	a	a
5	b	b	b	b	b	b	3.9	3.7	c	c	a
6	b	b	b	b	b	a	b	b	a	a	a
7	b	b	b	b	3.7	3.8	3.6	3.5	3.5	3.6	3.2
8	3.4	3.4	3.8	b	b	b	3.8	3.7	3.5	c	a
9	b	b	b	3.7	b	b	3.6	b	3.5	3.5	1
10	b	b	b	b	c	b	b	3.5	b	3.5	b
11	b	b	b	b	b	b	b	b	3.6	3.4	3.2
12	q	1	3.5	3.6	3.5	3.6	b	3.5	3.6	1	1
13	b	1	3.6	3.6	3.7	b	3.8	3.7	1	1	q
14	b	3.6	3.6	c	c	c	c	c	c	c	c
15	q	3.8	3.7	3.9	3.8	3.6	3.7	3.8	3.7	1	1
16	b	b	3.6	b	b	3.9	3.6	3.6	1	1	q
17	q	3.5	3.6	3.5	3.7	3.7	3.7	3.6	3.5	c	c
18	q	3.8	3.5	3.8	3.7	3.7	3.7	3.8	3.7	3.7	a
19	q	3.8	3.7	3.8	3.8	3.8	3.9	3.8	3.9	1	1
20	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	1	c
22	q	b	3.4	b	b	b	b	b	c	b	b
23	b	b	3.4	c	c	c	c	c	3.5	b	c
24	b	b	3.5	3.6	3.8	3.5	3.5	3.4	b	3.4	1
25	q	b	b	3.5	3.6	3.5	3.6	3.6	3.5	c	c
26	c	c	c	c	c	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c
30	q	c	c	c	c	c	c	c	c	c	c
31	c	c	c	c	c	c	c	c	c	c	c
Median	*	3.6	3.6	3.6	3.7	3.7	3.7	3.6	3.5	3.5	*
No.		8	15	12	12	13	16	16	12	6	

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T.



HOURLY VALUES OF f°F2 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

Day \ Hour	00	01	02	03	04	05	06	07	08	09	10	11
1												
2												
3												
4												
5												
6	NO RECORD 1st - 10th AUGUST 1952 INCLUSIVE											
7												
8												
9												
10												
11	c	c	c	c	c	c	c	c	c	c	c	c
12	a	a	a	(2.6)s	(2.4)s	s	s	2.0s	3.1	3.6f	4.2	4.3
13	a	a	a	a	2.2f	1.9	a	b	3.2	4.1	4.4	4.8
14	a	a	a	a	a	a	1.7	2.3	3.7	4.4	4.3	4.6
15	1.9	1.6	2.0	2.2	(1.8)f	1.6	(1.4)f	3.0	3.6	4.2	4.2	5.2
16	1.5s	1.4	1.4	1.3	1.5	1.4	1.5	2.6	4.0z	4.3	c	c
17	c	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c
22	a	2.0	2.0	a	a	a	b	b	b	4.0	4.4	4.7
23	2.2	2.0	1.8	c	b	b	a	a	b	2.5	3.8	4.2
24	c	c	c	c	c	c	c	c	c	c	c	5.2
25	b	b	b	b	b	b	1.6	3.2z	4.3	c	c	5.5
26	2.9	2.7	2.0	2.0	2.0	1.8	1.8	3.7	4.8	5.6	5.5	5.6
27	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c	c
30	3.0	(3.0)	a	a	a	2.7	3.0	b	b	b	5.0	4.8
31	2.9	(3.3)f	2.7	2.4	b	b	b	3.2	c	c	c	6.0
Median.	(2.6)	(2.0)	(2.0)	(2.2)	(2.0)	(1.8)	(1.6)	(3.0)	(3.7)	(4.2)	(4.4)	4.8
No.	6	7	6	5	5	5	6	7	7	8	8	11

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F2 AUGUST 1952

HOURLY VALUES OF f°F2 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

Day \ Hour	12	13	14	15	16	17	18	19	20	21	22	23
1												
2												
3												
4												
5												
6	NO RECORD 1st - 10th AUGUST 1952 INCLUSIVE											
7												
8												
9												
10												
11	c	c	c	c	c	c	c	c	a	a	a	a
12	4.7h	4.8	f	4.7	4.5	3.5f	c	c	c	b	a	b
13	5.1	5.2	5.3	5.0	4.8	3.6h	c	2.4f	a	3.2f	a	c
14	4.8	5.0	5.2	5.1	5.1	4.8z	c	c	1.9f	1.8	2.5	a
15	4.7	4.8	5.1	5.1	[5.1]	c	c	c	2.6z	2.2	2.0	1.8
16	c	c	c	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c	c	c	c
20	c	4.2	4.6	4.7	[4.7]	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	3.7z	3.1	c	2.0	a
22	4.7	5.1	5.1	5.1	5.3	c	c	c	4.6	4.6	c	c
23	4.5	c	c	c	c	c	c	c	c	c	c	c
24	5.5	5.6	5.5	5.5	5.4	5.0	c	c	3.0f	2.6f	2.0f	1.8f
25	5.7	5.5	5.6	6.0	5.6	5.5	c	c	c	3.0h	2.6	2.5h
26	6.3	6.4	6.6	6.6	6.2z	5.8h	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	4.0	3.2	2.4	2.2	1.8
30	5.6z	5.7	6.0	a	a	4.6	c	3.2	3.0	a	a	a
31	6.0	c	c	c	c	4.6	c	a	b	a	a	a
Median.	5.1	5.2	(5.3)	(5.1)	(5.1)	(4.7)	*	*	(3.0)	(2.6)	(2.1)	*
No.	11	10	9	9	9	8			7	7	6	

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F2 AUGUST 1952

HOURLY VALUES OF f°F1 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

Hour / Day	08	09	10	11	12	13	14	15	16
1									
2									
3									
4									
5									
6	NO RECORD 1st - 11th AUGUST 1952 INCLUSIVE								
7									
8									
9									
10									
11									
12	q	q	3.5	3.5	3.8	3.6	f	3.5	q
13	q	q	3.5	4.0f	4.0f	3.9	3.6	3.5	q
14	q	3.1	3.5	3.7h	4.0	4.0	3.5	3.3	q
15	q	q	3.8	3.8	4.0	3.8	3.5	3.2	c
16	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	3.8	3.7	3.6	c
21	c	c	c	c	c	c	c	c	c
22	q	3.5	3.7	3.8	3.8	3.7	3.5	3.3	3.0
23	q	q	q	3.5	3.5	c	c	c	c
24	c	c	c	4.0	4.0	4.0	4.0	3.5f	q
25	3.0	c	c	4.0z	4.0	4.0	4.0	3.5	q
26	q	4.0	4.0	3.8	4.2	4.0	3.9	3.5	q
27	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c
30	b	b	4.0	4.0f	4.0z	3.9	3.8	a	a
31	c	c	c	4.0	4.0	c	c	c	c
Median.	*	*	3.7	3.8	4.0	3.9	3.7	3.5	*
No.			7	11	11	10	9	9	

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$ Time used: 157.5E.M.T. MACQUARIE ISLAND f°F1 AUGUST 1952

HOURLY VALUES OF fEs OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

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																								
2																								
3																								
4																								
5	NO RECORD 1st -- 10th AUGUST 1952 INCLUSIVE.																							
6																								
7																								
8																								
9																								
10																								
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	5.2	3.6	3.6	6.2
12	3.5	3.5	3.3	3.0	3.0	s	s	s	3.0	g	3.0	3.7	4.5	g	3.3	2.8	2.3	2.0	c	c	c	b	5.5	b
13	5.2	5.5	4.4	4.2	2.5	2.8	2.9	b	b	b	g	3.5	g	g	3.4	3.6	g	e	c	3.0	3.0f	3.5	4.4	c
14	4.4	3.1	2.6	2.1	3.4	2.6	2.1	2.1	2.5	g	g	g	g	3.1	3.0	g	g	e	c	c	3.1h	3.2	2.9	4.5
15	4.6	3.5	3.1	2.0	e	e	e	g	2.0	3.2	2.9	3.5	g	b	b	b	c	c	c	c	e	e	o	e
16	e	e	e	e	e	e	e	2.5	g	g	c	c	c	c	c	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c	c	g	g	g	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	e	e	c	3.5	3.5
22	3.5	2.2	2.2	2.2	2.2	1.8	b	b	b	b	b	3.5	b	b	g	g	g	c	c	c	e	e	c	c
23	e	3.0	2.1	c	b	b	1.8	3.3	b	b	g	g	g	c	c	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	g	g	g	g	g	g	e	c	c	3.5	2.3	2.2	2.2
25	b	2 2	b	2.0	b	b	2.2	g	g	c	c	g	g	g	g	g	g	e	c	c	c	e	3.4	3.4
26	4.4	3.5	3.3	3.1	e	e	e	g	g	g	g	g	g	4.0	3.4	g	g	e	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
30	e	4.8'	5.2	3.5	5.2	4.0	b	b	b	b	g	g	g	g	4.5	6.6	6.0	5.3	c	3.4	4.0	4.4	4.4	4.4
31	3.5	3.0y	1.6	3.4y	b	b	b	b	c	c	c	g	g	c	c	c	c	e	c	3.5	4.0y	4.4	4.4	5.3
Modian.	3.5	3.1	2.8	2.6	2.4	1.8	1.8	**	2.0	**	**	**	**	**	3.2	**	**	**	*	3.0	3.0	2.8	3.5	3.5
No.	10	11	10	10	8	7	7	7	6	5	7	11	10	8	9	9	8	8	-	5	10	10	11	9

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5°E.M.T. MACQUARIE ISLAND fEs AUGUST 1952

HOURLY VALUES OF f°E OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

Hour / Day	07	08	09	10	11	12	13	14	15	16	17
1											
2											
3											
4											
5											
6				NO RECORD		1st.	--	11th AUGUST 1952		INCLUSIVE	
7											
8											
9											
10											
11											
12		1.9	2.0	2.1z	2.5z	2.5	2.5	2.3	2.0	a	a
13		b	b	2.3	2.5	2.5	2.4	2.3	b	1.8	e
14		1.6	2.1	2.4	2.5	2.6	2.6	2.4	2.0	1.8	e
15	(1.4)	2.0	2.2	2.4	2.5	2.7	b	b	b	c	c
16		1.8	2.0	c	c	c	c	c	c	c	c
17		c	c	c	c	c	c	c	c	c	c
18		c	c	c	c	c	c	c	c	c	c
19		c	c	c	c	c	c	c	c	c	c
20		c	c	c	c	c	2.7	b	2.5	c	c
21		c	c	c	c	c	c	c	c	c	c
22		b	b	b	a	b	b	2.5	2.4	2.0	c
23		b	b	1.8	2.2	2.5	c	c	c	c	c
24		c	c	c	2.8	2.7	2.8	2.6	2.5	2.0	e
25		2.0	c	c	2.7z	2.9z	2.8z	2.5z	2.1	1.9	1.4
26	1.7	2.0	2.5	2.6z	2.9	3.0	3.0	2.9	2.5z	2.1	1.7
27		c	c	c	c	c	c	c	c	c	c
28		c	c	c	c	c	c	c	c	c	c
29		c	c	c	c	c	c	c	c	c	c
30		b	b	3.0	2.8	2.9	2.7	3.0	a	a	a
31		c	c	c	3.0	2.9	c	c	c	c	1.8
Median.	*	2.0	2.1	2.4	2.6	2.7	2.7	2.5	2.4	2.0	1.4
No.		6	5	7	10	10	8	8	7	6	6

Sweep: 1.0 -13.0 Mc/s in 1^m 55^s

Time used: 1575°E.M.T.

MACQUARIE ISLAND f°E AUGUST 1952

HOURLY VALUES OF hpF2 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

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																								
3																								
4																								
5																								
6					NO RECORD 1st- 10th AUGUST 1952 INCLUSIVE																			
7																								
8																								
9																								
10																								
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	a	a	a	a
12	a	a	a	s	s	s	s	u	250	250	u	u	u	290	f	u	260	300	c	c	c	b	a	b
13	a	a	a	a	u	u	a	b	b	260	u	u	u	u	u	290	270	270	c	330	a	u	a	c
14	a	a	a	a	a	a	300	290	250	u	u	u	u	u	u	280	290	290	c	c	300	320	u	a
15	u	330	360	330	300	300	u	260	u	290	u	u	u	u	270	280	c	c	c	c	290	300	310	300
16	310	310	310	c	320	300	300	290	250	240	c	c	c	c	c	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c	c	u	u	u	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	300	320	c	a	a
22	a	a	450	a	a	a	b	b	b	u	u	u	u	u	u	280	270	c	c	c	260	280	c	c
23	330	340	c	c	b	b	a	a	b	280	250	260	u	c	c	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	u	u	u	260	u	270	220	c	c	290	280	300	350
25	b	b	b	b	b	b	330	270	u	c	c	u	u	260	260	250	240	250	c	c	c	290	300	290
26	330	310	u	310	280	280	300	250	240	u	u	u	260	290	270	260	250	250	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	250	280	320	310	300
30	380	a	a	a	a	a	310	b	b	b	u	u	u	u	360	a	a	a	c	320	350	a	a	a
31	(370)	360	340	350	b	b	u	290	c	c	c	u	u	c	c	c	c	250	c	a	b	a	a	a
Median.	(330)	(330)	*	*	*	*	(300)	(280)	*	(260)	*	*	*	*	(270)	(280)	(270)	(250)	*	*	(290)	(295)	*	*
No.	5	5					5	6		5					5	6	7	7			7	6		

Sweep: 1.0 -13.0 Mc/s in 1^m 55^s Time used: 1575°E.M.T. MACQUARIE ISLAND. hpF2 AUGUST 1952

HOURLY VALUES OF h'F2 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

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																								
2																								
3																								
4																								
5																								
6																								
7					NO RECORD				1st - 10th AUGUST 1952 INCLUSIVE															
8																								
9																								
10																								
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	a	a	a	a
12	a	a	a	s	s	s	s	320	240	(230)	310f	f	350	280	f	300	230	280	c	c	c	b	b	b
13	a	a	a	a	280	300	a	b	b	240	270	280	260	270	270	280	240	240h	c	300	a	300	a	c
14	a	a	a	a	a	a	280	260	240	250	280	290	270	270	280	270	250	250	c	c	280	300	350	a
15	300	320	350	300	290	290	(300)	230	250	230	1	300	280	240	250	270	c	c	c	c	250	260	280	290
16	300	300	e	e	e	e	e	240	240	230	c	c	c	c	c	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c	c	330	340	300	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	250	250	c	a	a
22	a	a	400	a	a	a	b	b	b	300	330	320	320	270	280	260	250	c	c	c	240	230	c	c
23	310	a	c	c	b	b	a	a	b	240	240	250	250	c	c	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	280	260	300	250	250	250	200	c	c	280	260	(270)	e
25	b	b	b	b	b	b	(310)	230	250	c	c	250	260	250	250	240	220	220	c	c	c	270h	280	280h
26	320	300	300	280	250	250	e	220	230	240	250	230	250	270	260	240	230	230h	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	230	250	280	290	e
30	350	a	a	a	a	a	b	b	b	b	400	350	340	360	350	a	a	a	c	300	(320)	a	a	a
31	(360)	350	320	320	b	b	b	260	c	c	c	280	300	c	c	c	c	240	c	a	b	a	a	a
Median.	(315)	*	(350)	*	*	*	(310)	(240)	(240)	(240)	(280)	290	270	270	(270)	(270)	(240)	(240)	*	*	(250)	(270)	(280)	*
No.	6		5				5	7	6	8	7	10	11	10	9	9	7	7	-		7	7	5	

262. Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$ Time used: 157.5°E.M.T. MACQUARIE ISLAND h'F2 AUGUST 1952

HOURLY VALUES OF h'F1 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

Hour / Day	08	09	10	11	12	13	14	15	16
1									
2									
3									
4									
5									
6	NO RECORD 1st - 11th AUGUST 1952 INCLUSIVE								
7									
8									
9									
10									
11									
12	q	q	220	240	a	200	f	230	q
13	q	q	200	(200)	200	210	220	210	q
14	q	230	200	180	230	230	200	240	q
15	q	q	200	200	230	220	220	200f	c
16	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	220	230	240	c
21	c	c	c	c	c	c	c	c	c
22	b	210	200	230	200	200	200	220	230
23	q	q	q	220	220	c	c	c	c
24	c	c	c	210	230	200	220	220	q
25	230	c	c	230	230	220	210	230	q
26	q	220	210	190	230	220	210	200	q
27	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c
30	b	b	250	230	240	230	250	a	a
31	c	c	c	210	200	c	c	c	c
Median.	*	*	200	210	230	220	220	220	*
No.			7	11	10	10	9	9	

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$ Time used: 157.5°E.M.T. MACQUARIE ISLAND h'F1 AUGUST 1952

HOURLY VALUES OF h'E OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

Day \ Hour	07	08	09	10	11	12	13	14	15	16	17
1											
2											
3											
4											
5				NO RECORD 1st --- 11th AUGUST 1952 INCLUSIVE							
6											
7											
8											
9											
10											
11											
12		100	100	100	100	100	100	100	100	a	a
13		b	b	100	100	100	100	120	b	100	e
14		100	100	100	100	100	100	100	100	140	e
15		a	100	100	100	100	b	b	b	c	c
16		160	130	c	c	c	c	c	c	c	c
17		c	c	c	c	c	c	c	c	c	c
18		c	c	c	c	c	c	c	c	c	c
19		c	c	c	c	c	c	c	c	c	c
20		c	c	c	c	c	130	b	110	c	c
21		c	c	c	c	c	c	c	c	c	c
22		b	b	b	a	b	b	110	120	100	c
23		b	b	100	100	100	c	c	c	c	c
24		c	c	c	100	100	110	100	100	120	e
25		120	e	e	100	100	110	100	110	120	e
26	170	110	100	100	100	100	100	100	100	(100)	b
27		c	c	c	c	c	c	c	c	c	c
28		c	c	c	c	c	c	c	c	c	c
29		c	c	c	c	c	c	c	c	c	c
30		b	b	100	100	100	100	100	a	a	a
31		c	c	c	100	120	c	c	c	c	150
Median.	*	110	100	100	100	100	100	100	100	110	e
No.		5	5	7	10	10	8	8	7	6	5

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$ Time used: 1575°E.M.T. MACQUARIE ISLAND h'E AUGUST 1952

HOURLY VALUES OF h'Es OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

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																								
2																								
3																								
4																								
5																								
6	NO RECORD 1st - 10th AUGUST 1952 INCLUSIVE																							
7																								
8																								
9																								
10																								
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100	110	100	110
12	100	100	100	100	100	s	s	s	100	g	140	120	100	g	100	140	140	150	c	c	c	b	100	b
13	100	100	100	100	100	100	110	b	b	b	g	100	g	g	140	100	g	e	c	160	150	140	110	c
14	100	100	110	120	120	120	130	130	100	g	g	g	g	120	130	g	g	e	c	c	100	100	160	120
15	120	100	110	110	e	e	e	g	110	140	150	140	g	b	b	b	c	c	c	c	e	e	e	e
16	e	e	e	e	e	e	e	110	g	g	c	c	c	c	c	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c	c	g	g	g	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	e	e	c	100	100
22	100	100	100	100	100	100	b	b	b	b	b	100	b	b	g	g	g	c	c	c	e	e	c	c
23	e	130	140	c	b	b	110	110	b	b	g	g	g	c	c	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	g	g	g	g	g	g	e	c	c	100	130	140	140
25	b	100	b	100	b	b	120	e	g	c	c	g	g	g	g	g	g	g	c	c	c	e	150	140
26	100	100	90	90	e	e	e	g	g	g	g	g	g	100	100	g	g	g	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	cc	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	e	e	e	e	e
30	e	100	100	110	100	90	b	b	b	b	g	g	g	g	120	100	90	100	c	100	120	110	100	100
31	100	100	120	100	b	b	b	b	c	c	c	g	g	c	c	c	c	g	c	100	110	100	100	100
Median.	100	100	100	100	100	*	*	*	*	*	*	*	*	*	120	*	*	*	*	*	105	110	100	110
No.	7	10	9	9	5										5						6	6	9	7

265. Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 15 7.5 E.M.T. MACQUARIE ISLAND h'Es AUGUST 1952

HOURLY VALUES OF (M3000) F2 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

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																								
2																								
3																								
4																								
5																								
6						NO RECORD			1st - 10th AUGUST 1952 INCLUSIVE															
7																								
8																								
9																								
10																								
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	a	a	a	a
12	a	a	a	s	s	s	s	(2.9)	3.3	3.2	3.2f	f	3.1	3.1	f	3.2	3.2	(3.0)	c	c	c	b	a	b
13	a	a	a	a	3.1	3.1	a	b	(3.4)	3.4	3.4	3.2	3.4	3.3	3.4	3.2	3.3	2.[illegible]	c	2.9	a	2.9	a	c
14	a	a	a	a	a	a	3.0	3.2	3.6	3.6	3.5	3.4	3.3	3.5	3.5	3.3	3.3	3.1	c	c	3.0	3.0	2.9	a
15	3.0	3.0	2.9	2.6	2.8	3.1	3.2	3.2	3.5	3.6	n	3.2	3.5	3.7	3.6	3.3	c	c	c	c	3.2	3.0	3.0	3.1
16	(2.9)	3.0	2.9	2.9	3.0	3.1	3.3	3.0	3.6	3.7	c	c	c	c	c	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c	c	3.3	3.2	3.0	c	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.1	3.0	c	a	a
22	a	a	2.3	a	a	a	b	b	b	3.5	3.1	3.3	3.3	3.4	3.3	3.3	3.3	c	c	c	3.3	3.2	c	c
23	3.0	2.8	c	c	b	b	a	a	b	3.2	3.5	3.5	3.7	c	c	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	3.5	3.5	3.4	3.5	3.3	3.2	3.4	c	c	(2.7)	(3.0)	2.9	(2.6)
25	b	b	b	b	b	b	2.9	3.3	3.4	c	c	3.2	3.4	3.4	3.4	3.6	3.6	3.4	c	c	c	3.0	3.0	3.0
26	2.9	3.0	3.0	2.8	3.2	3.2	3.0	3.4	3.7	3.5	3.5	3.7	3.7	3.2	3.2	3.5	3.4	3.3	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.5	3.1	2.9	2.9	3.1
30	2.5	a	a	a	a	a	3.0	b	b	b	2.8	2.9	2.9	2.7	2.8	a	a	a	c	3.0	2.6	a	a	a
31	(2.6)	(2.8)	2.8	2.9	b	b	2.8	3.1	c	c	c	3.4	3.3	c	c	c	c	3.5	c	a	b	a	a	a
Median.	(2.9)	(3.0)	(2.9)	*	*	*	(3.0)	(3.2)	(3.5)	(3.5)	(3.4)	3.4	3.4	3.4	(3.4)	(3.3)	(3.3)	(3.3)	*	(*	(3.0)	(3.0)	(2.9)	*
No.	6	5	5				7	7	7	8	7	10	11	10	9	9	7	7	-		7	7	5	

266.

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5°E.M.T.

MACQUARIE ISLAND (M3000)F2 AUGUST 1952

HOURLY VALUES OF(M3000) F1 OBSERVED DURING AUGUST 1952 AT MACQUARIE ISLAND

Hour / Day	08	09	10	11	12	13	14	15	16
1									
2									
3									
4									
5									
6			NO RECORD 1st - 11th AUGUST 1952 INCLUSIVE						
7									
8									
9									
10									
11									
12	q	q	3.6f	f	a	3.7	f	3.5	q
13	q	q	3.9	3.4	3.5	3.7	3.7	3.4	q
14	q	q	3.7	3.7	3.6	3.8	4.0	q	q
15	q	q	3.6	3.6	3.7	3.9	4.0	3.4	c
16	c	c	c	c	c	c	c	c	c
17	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c
19	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	3.5	3.6	3.5	c
21	c	c	c	c	c	c	c	c	c
22	b	3.8	3.5	3.9	4.0	3.7	3.9	q	q
23	q	q	q	q	q	c	c	c	c
24	c	c	c	3.5	3.6	4.0	q	q	q
25	q	c	c	3.7	3.7	3.9	3.9	q	q
26	q	q	q	q	3.8	3.9	3.9	3.9	q
27	c	c	c	c	c	c	c	c	c
28	c	c	c	c	c	c	c	c	c
29	c	c	c	c	c	c	c	c	c
30	b	b	3.5	3.5	3.6	3.4	3.4	a	a
31	c	c	c.	3.9	3.8	c	c	c	c
Median.		*	3.6	3.6	3.7	3.8	3.8	3.5	
No.	-		6	8	9	10	8	5	-

Sweep: 1.0- 13.0 Mc/s in $1^m/55^s$ Time used: 157.5°E.M.T. MACQUARIE ISLAND(M3000)F1 AUGUST 1952

HOURLY VALUES OF f°F2 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11
1	a	2.5	1.8	1.6	1.7	1.5	1.8	3.5	4.2	4.4	4.8	c
2	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	c	c	c	c	c	c
5	b	b	b	a	2.3	2.1	2.6	4.1	4.6	4.6	c	c
6	b	b	b	c	c	c	c	c	c	c	c	4.5
7	c	c	c	c	c	c	c	c	c	c	c	c
8	a	2.2	b	a	3.0	b	3.3	3.5	3.9	4.2	b	c
9												
10												
11				NO RECORD		9th - 15-th	SEPTEMBER 1952	INCLUSIVE				
12												
13												
14												
15												
16	c	c	c	c	c	c	c	c	c	c	c	b
17	a	2.4	1.9	a	b	1.9	2.9	3.8	4.2	4.3	4.5	c
18	a	a	2.0	1.8	b	2.1	3.4z	4.5z	5.1	5.0z	5.5z	5.6
19	1.6f	1.4f	c	c	c	1.9	2.9	3.9	4.4	4.4	c	5.1
20	a	b	3.0f	b	b	(2.4)	3.5	4.2z	4.6	5.0	5.1	5.6
21	(1.4)	b	b	b	b	2.6	3.4	3.9	4.2	c	5.5	6.1
22	3.3	(2.8)f	(2.4)f	2.1	1.7	(1.8)f	3.3	4.2	4.6	4.6	5.1	5.5
23	c	c	c	c	2.7	2.6	3.8z	4.7z	5.2	5.5	5.6	5.8
24	(3.6)f	(3.0)f	(3.4)f	b	3.2	1.9	3.6	4.6	5.2	5.5h	c	c
25	3.6	3.5	b	b	3.8	2.6	3.5z	4.0z	4.6	4.8	5.2	5.1
26	2.5f	1.8f	1.7f	1.8	c	1.8	3.0	3.8	4.5	4.8	5.3	6.3
27	a	a	a	a	a	2.4	3.0	3.4	3.8	4.2	c	4.4
28	a	a	b	b	a	2.0	3.1	3.7z	4.0	4.1	4.3	4.4
29	b	b	a	a	b	b	b	b	b	g	g	4.5
30	b	b	a	a	b	1.9	3.0	3.7	b	b	5.5	b
Median.	(2.9)	(2.4)	(2.0)	(1.8)	(2.3)	2.0	3.2	3.9	4.5	4.6	5.2	5.3
No.	6	8	8	5	9	15	16	16	15	15	12	12

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used 157.5° E.M.T. MACQUARIE ISLAND f°F2 SEPTEMBER 1952

HOURLY VALUES OF f°F2 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	12	13	14	15	16	17	18	19	20	21	22	23
1	(5.0)	(5.0)	5.6	a	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c
4	s	5.0s	s	5.1	5.5	5.8	4.7	2.5	3.0	a	c	a
5	c	c	c	c	c	c	c	c	c	a	b	b
6	(5.3)s	5.4	5.5	5.2	a	3.6	c	b	a	2.5	a	a
7	4.8	4.9	4.9z	4.5	c	c	c	c	c	2.6	a	a
8	5.0	c	c	c	c	c	c	c	c	c	c	c
9												
10												
11	NO RECORD 9th - 15th SEPTEMBER 1952 INCLUSIVE											
12												
13												
14												
15												
16	4.3	4.3	m	4.5	4.4	4.3	3.8f	3.2f	2.7f	a	2.8	3.2
17	c	c	4.5	5.2z	5.2z	4.8	c	c	c	c	c	c
18	c	5.8	5.5	5.8	5.8	5.0h	c	c	(3.4)s	(3.3)f	(3.0)f	(2.0)f
19	5.3	5.3	5.5	5.8	5.7z	5.4z	c	c	4.5z	c	c	2.1
20	6.1	6.0	6.0z	5.5z	5.5	5.2	c	(2.6)	(2.5)	c	a	3.0
21	6.1	c	c	c	c	c	c	c	c	c	2.7f	3.0
22	5.8	6.1	6.3	6.0	6.1	5.8	c	c	c	c	c	c
23	6.1	6.2	6.5	6.3z	6.4z	5.8	c	c	c	c	c	c
24	c	6.2	6.1z	5.9z	5.7z	5.8f	c	3.4	3.0	3.0f	4.1	3.7
25	5.1	5.4	5.3z	5.4z	5.4z	5.2z	c	5.2	3.9	(2.7)	2.6f	2.6f
26	7.0	6.4	5.6	(4.8)	(5.2)	a	c	c	a	c	c	c
27	4.7	4.8	4.7	5.4	5.6	a	a	c	a	c	a	a
28	4.7	4.5	4.7	4.6	4.6	5.0	b	b	b	b	b	a
29	4.7	(5.0)f	5.2	c	4.8	a	c	c	a	a	b	a
30	6.1	5.6	4.8	(4.6)	(4.1)f	4.5	c	c	2.5	b	2.8	a
Median.	(5.8)	(5.4)	(5.5)	(5.3)	(5.5)	5.2		(3.2)	(3.6)	(2.7)	(2.8)	(3.0)
No.	16	17	16	16	15	13		5	8	5	6	7

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F2 SEPTEMBER 1952

HOURLY VALUES OF f°F1 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	08	09	10	11	12	13	14	15	16
1	3.5	3.8	4.0	c	4.0	4.0	4.0	a	c
2	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c
4	c	c	c	c	4.1	4.1	4.1	3.5	3.2
5	3.3	4.0	c	c	c	c	c	c	c
6	c	c	c	(4.0)	4.0	4.0	4.0	3.5	a
7	c	c	c	c	3.8	a	3.7	3.5	c
8	3.5	3.8	b	c	4.0	c	c	c	c
9									
10									
11	NO RECORD - 9th - 15th SEPTEMBER 1952 INCLUSIVE								
12									
13									
14									
15									
16	c	c	c	b	4.0	3.9	m	3.7	(3.6)1
17	3.7	4.0	4.0	c	c	c	3.7	3.7	q
18	3.8	(4.0)	4.1	4.1	c	4.1	4.0	3.5	1
19	3.6	4.0	c	4.0	4.2h	4.1	3.9	3.8	q
20	3.5	3.9	3.8	(4.1)f	4.2	4.1	4.0	3.5	q
21	(3.8)	c	4.0	4.0	4.1	c	c	c	c
22	(4.0)1	4.2	4.1	4.3	4.4	4.3	4.2	3.7	3.6
23	3.9	4.2	4.3	4.4	4.1	4.2	4.0	4.0	3.7
24	3.9	4.1	c	c	c	4.0	3.9	3.9	3.7
25	3.7	4.0	4.1	4.2	4.2	4.1	4.0	4.0	3.4
26	3.6	4.0	4.1	4.1	4.2	b	a	a	a
27	3.5	3.9	c	4.0h	4.0 h	4.0	3.8	3.6	3.5
28	3.7	3.9	4.0	4.0	4.0	4.0	3.9	3.8	3.6
29	b	3.6	3.8	4.0	4.0	4.0f	3.8	c	a
30	b	b	4.1	b	4.0	4.0	3.9	3.7	3.3
Median.	3.7	4.0	4.0	4.0	4.0	4.0	4.0	3.7	3.6
No.	15	15	12	12	17	15	16	15	9

Sweep: 1.0 - 13.0 Mc/s 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F1 SEPTEMBER 1952

HOURLY VALUES OF f°E OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

Day \ Hour	06	07	08	09	10	11	12	13	14	15	16	17	18
1	e	b	b	b	b	c	3.0	3.0	a	a	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	b	2.8	b	b	b	e	e
5	a	a	2.4	2.5	c	c	c	c	c	c	c	c	c
6	c	c	c	c	c	b	b	b	2.6	2.2	a	2.2	c
7	c	c	c	c	c	c	3.0	a	2.2	b	c	c	c
8	b	b	b	b	b	c	b	c	c	c	c	c	c
9													
10													
11													
12				NO RECORD		SEPTEMBER 8th - 15th 1952 INCLUSIVE							
13													
14													
15													
16	c	c	c	c	c	b	b	b	m	2.5	b	b	b
17	a	a	2.4	2.6	(2.8)b	c	c	c	(2.3)	2.4	s	c	c
18	(1.8)	2.2	2.4	2.7z	2.9	3.0	c	2.9	2.8	2.3	2.2	e	c
19	e	2.2	2.5	2.7	c	2.9	3.0	3.0	a	2.6	2.1	1.9	c
20	e	2.0	2.5	2.6	2.8	2.9	3.0	a	2.8	2.5	2.3	e	c
21	1.6	c	(2.4)	c	3.0	3.0	2.9	c	c	c	c	c	c
22	1.6	2.0	2.3	3.0	3.0	3.3	a	3.0	2.9	2.4	2.0	1.8	c
23	1.8	2.1	2.6	2.8	3.0	3.0	3.0	3.0	2.8	2.7	2.4	2.0	c
24	1.6	2.2	2.5	2.6	c	c	c	3.0	2.7	2.5	2.3	a	c
25	a	a	2.6	2.8	2.9	b	b	3.0	2.9	2.6	2.4	2.0	c
26	b	b	2.6	b	2.5	3.0	b	b	a	a	a	a	c
27	e	b	2.5	2.6	c	3.0z	3.0	2.8	a	2.7	a	a	a
28	a	a	2.5	2.6	2.8	3.0	3.0	2.9	2.8	2.8	a	a	b
29	b	b	b	b	b	b	b	2.9	b	c	a	a	c
30	b	b	b	b	b	b	b	3.3	a	b	b	a	c
Median.	1.6	2.2	2.5	2.6	2.9	3.0	3.0	3.0	2.8	2.5	2.3	1.8	*
No.	9	6	13	11	9	9	8	12	10	12	7	8	

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND f°E SEPTEMBER 1952

HOURLY VALUES OF fEs OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

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	3.8	2.1	1.8	e	e	e	g	g	b	b	b	c	g	g	3.8	4.5	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	c	c	c	c	c	c	b	g	b	b	b	g	g	2.6	3.5	4.0	c	4.4
5	b	b	b	3.5	2.0	2.5	2.0	3.1	g	g	c	c	c	c	c	c	c	c	c	c	c	4.8	b	4.4y
6	b	b	b	c	c	c	c	c	c	c	c	b	b	b	b	g	3.9	3.6y	c	b	5.0	3.5	4.5	4.5
7	c	c	c	c	c	c	c	c	c	c	c	c	g	4.8	3.3	g	c	c	c	c	c	2.5	3.5	3.2
8	3.0	2.2	3.0y	4.5	3.5	b	3.3	b	b	b	b	c	b	c	c	c	c	c	c	c	c	c	c	c
9																								
10																								
11																								
12					NO RECORD 9th – 15th SEPTEMBER 1952 INCLUSIVE																			
13																								
14																								
15																								
16	c	c	c	c	c	c	c	c	c	c	c	b	b	b	m	g	b	b	4.8	e	3.5	(4.0)s	(3.5)	4.0
17	5.0	2.3	2.1	2.0	1.8	b	2.0	2.1	g	g	g	c	c	c	g	g	s	g	c	c	c	c	c	c
18	4.5	3.5	3.0	3.5	b	e	g	g	g	g	g	g	c	g	3.5	g	g	g	c	c	e	4.4	4.0y	e
19	e	e	e	e	e	e	g	g	g	g	c	g	g	g	3.5	3.2	g	g	c	c	e	c	c	e
20	4.5	e	e	e	e	e	g	g	g	g	g	g	3.6	3.3	g	g	g	g	c	e	e	c	4.6	e
21	e	b	b	b	b	e	g	c	g	c	g	g	g	c	c	c	c	c	c	c	c	c	4.5	4.4
22	6.0	4.2	e	e	e	e	g	g	g	g	g	3.5	3.3	g	g	2.9	g	g	c	c	c	c	c	c
23	c	c	c	c	3.0	2.0	g	g	g	g	g	g	g	g	g	g	g	g	c	c	c	c	c	c
24	4.0y	e	2.8	4.0y	3.2	1.9	2.0	g	g	g	c	c	c	g	g	3.0	g	3.6	c	1.9	3.0y	4.5	4.6	4.0
25	4.2	4.2	4.4	4.2	4.5	2.7	2.7	2.0	3.0	3.3	3.3	b	b	3.1	b	g	g	g	c	e	e	e	3.5	e
26	4.0	e	e	e	e	e	g	b	g	g	g	g	b	b	5.2y	5.2y	5.2	6.0	c	c	5.4	c	c	c
27	4.6	4.4	4.0	3.3	2.5	b	b	b	g	3.6	c	g	5.0	3.0	3.0	g	4.0	5.0	4.5	c	6.0	c	4.0	4.1
28	4.5	b	b	b	3.1	2.4	4.4	2.8	3.0	g	g	g	g	g	2.8	5.0	4.8	5.2	b	b	b	b	b	4.5
29	b	4.5	4.7	4.6	5.5	b	b	b	b	b	b	b	b	g	b	c	5.2	5.5	c	c	5.7	5.2	b	3.5
30	b	b	4.0	3.6	b	b	g	b	b	b	b	b	4.0	4.5	3.5	b	b	3.1	c	c	7.0	b	4.0	3.8y
Median.	4.2	2.2	2.8	3.4	2.2	**	**	**	**	**	**	**	**	**	3.0	**	**	**	*	**	3.5	4.0	4.0	4.0
No.	13	12	13	14	14	12	15	11	13	12	9	9	10	14	13	15	12	15		5	12	9	10	15

Sweep: 1.0 -13.0 Mc/s in 1^m55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND fEs SEPTEMBER 1952

HOURLY VALUES OF h'F2 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

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	a	320	320	310	c	c	c	250	310	320	(320)	c	350	(360)	(370)	a	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	c	c	c	c	c	c	s	320	s	270	260	250	230	350	240	a	c	a
5	b	b	b	a	300	(320)	280	250	280	300	c	c	c	c	c	c	c	c	c	c	c	a	b	b
6	b	b	b	c	c	c	c	c	c	c	c	430	330	340	300	270	a	300	c	b	a	a	a	a
7	c	c	c	c	c	c	c	c	c	c	c	c	350	350	350	350	c	c	c	c	c	a	a	a
8	a	a	b	a	300	b	300	(270)	(420)	500	b	c	370	c	c	c	c	c	c	c	c	c	c	c
9																								
10																								
11					NO RECORD - 9th - 15th SEPTEMBER 1952 INCLUSIVE																			
12																								
13																								
14																								
15																								
16	c	c	c	c	c	c	c	c	c	c	c	b	550	500	m	320	1	260	250	270	a	a	320	(320)
17	a	a	a	a	b	300	240	240	1	380	380	c	c	c	300	280	230	240	c	c	c	c	c	c
18	a	a	(280)	(280)	b	(280)	250	230	250	280	280	280	c	280	260	260	260	240	c	c	(320)	(300)	(280)	(250)
19	e	e	e	e	e	s	250	230	300	1	c	310	300	300	280	270	250	230	c	c	240	c	c	300
20	a	b	b	b	b	(350)	250	230	250	290	330	300	280	280	270	250	240	240	c	240	240	c	a	320
21	s	b	b	b	b	260	250	250	370	c	(360)	350	320	c	c	c	c	c	c	c	c	c	(300)	300
22	290	280	(300)	300	e	280	250	250	350	500	350	300	300	300	280	250	240	250	c	c	c	c	c	c
23	c	c	c	c	270	290	240	250	310	280	290	300	270	280	260	270	230	220	c	c	c	c	c	c
24	260	230	320	b	(300)	280	230	220	250	270	c	c	c	270	300	260	260	280	c	240	250	f	a	330
25	280	300	b	b	a	b	250	230	320	370	350	350	370	320	290	300	270	240	c	230	280	250	270	260
26	300	290	e	e	e	350	280	280	300	330	410	380	340	370	a	a	a	a	c	c	a	c	c	c
27	a	a	a	a	a	b	290	250	550	680	c	500	500	350	380	400	500	a	a	c	a	c	a	a
28	a	a	b	b	a	290	280	250	1	1	550	550	400	440	380	400	380	a	b	b	b	b	b	a
29	b	b	a	a	b	b	b	b	b	g	g	450	460	330	390	c	(320)	a	c	c	a	a	c	a
30	b	b	a	a	b	b	250	250	b	b	400	b	350	320	380	440	(400)	370	c	c	a	b	a	a
Median.	(290)	(295)	(320)	(310)	(300)	290	250	250	310	350	350	350	350	320	300	270	260	245	*	(240)	(245)	*	*	(300)
No.	5	6	6	5	8	11	16	16	13	12	12	12	16	17	15	15	13	12		5	6			7

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND h'F2 SEPTEMBER 1952

HOURLY VALUES OF hpF2 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

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	350	u	u	e	e	e	280	u	u	u	c	u	u	u	a	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	c	c	c	c	c	c	s	u	s	u	270	290	290	u	250	a	c	a
5	b	b	b	a	340	u	300	270	u	u	c	c	c	c	c	c	c	c	c	c	c	a	b	b
6	b	b	b	c	c	c	c	c	c	c	c	u	u	u	u	u	a	340	c	b	a	a	a	a
7	c	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	c	c	c	c	c	300	a	a
8	a	a	b	a	320	b	320	300	u	u	b	c	u	c	c	c	c	c	c	c	c	c	c	c
9																								
10																								
11	NO RECORD 9th - 15th SEPTEMBER 1952 INCLUSIVE.																							
12																								
13																								
14																								
15																								
16	c	c	c	c	c	c	c	c	c	c	c	b	u	u	m	u	u	u	300	300	440	a	u	350
17	a	a	a	a	b	310	280	280	u	u	u	c	c	c	u	u	u	280	c	c	c	c	c	c
18	a	a	300	300	b	300	270	260	u	u	u	u	c	290	280	280	280	260	c	c	360	u	u	u
19	s	s	e	e	e	s	300	270	u	u	c	u	u	u	u	280	260	250	c	c	250	c	c	320
20	a	b	b	b	b	(u)f	280	250	u	u	u	u	u	300	280	270	260	280	c	270	250	c	a	380
21	s	b	b	b	b	300	280	280	u	c	u	u	330	c	c	c	c	c	c	c	c	c	u	310
22	320	300	330	320	300	310	280	280	u	u	u	u	u	u	290	280	260	u	c	c	c	c	c	c
23	c	c	c	c	u	300	260	260	u	u	u	u	u	290	u	u	250	240	c	c	c	c	c	c
24	300	250	350	b	u	u	250	240	u	u	c	c	c	u	310	290	310	290	c	320	320	f	a	350
25	310	350	b	b	a	290	280	270	u	u	u	u	u	u	u	u	280	260	c	270	310	280	290	f
26	u	u	300	300	e	400	320	300	350	u	u	400	350	380	a	a	a	a	c	c	a	c	c	c
27	a	a	a	a	a	b	320	280	u	u	c	u	u	u	u	410	520	a	a	c	a	c	a	a
28	a	a	b	b	a	300	300	280	u	u	u	u	u	u	u	u	u	a	b	b	b	b	b	a
29	b	b	a	a	b	b	b	b	b	g	g	u	u	u	u	c	400	a	c	c	a	a	b	a
30	b	b	a	a	b	b	280	280	b	b	u	b	370	u	u	u	u	u	c	c	a	b	a	a
Median.	*	*	(330)	*	(340)	(300)	280	280	*	*	*	*	*	*	*	(280)	(275)	(280)	*	*	(310)	*	*	(350)
No.			5		6	9	16	16								6	10	9			7			5

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$ Time used: 157.5° E.M.T. MACQUARIE ISLAND hpF2 SEPTEMBER 1952

HOURLY VALUES OF h'F1 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	08	09	10	11	12	13	14	15	16
1	240	230	220	c	200	260	250	a	c
2	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c
4	c	c	c	c	230	200	230	200	220
5	220	200	c	c	c	c	c	c	c
6	c	c	c	300	230	230	230	240	a
7	c	c	c	c	230	a	210	230	c
8	260	240	b	c	b	c	c	c	c
9									
10									
11	NO RECORD - 9th - 15th SEPTEMBER 1952 INCLUSIVE								
12									
13									
14									
15									
16	c	c	c	b	230	200	m	220	250
17	230	200	200	c	c	c	200	200	q
18	220	180	220	200	c	200	200	200	220
19	230	200	c	200	180	220	200	200	q
20	230	200	200	160	f	210	200	200	q
21	(260)	c	c	200	230	c	c	c	c
22	(200)f	200	200	200	200	200	200	220	230
23	200	200	200	230	190	180	200	200	200
24	200	190	c	c	c	200	f	200	210
25	200	220	200	b	210	180	180	200	210
26	220	200	220	220	240	b	a	a	a
27	230	240	a	200	a	220	240	250	a
28	240	240	230	250	210	230	220	250	a
29	b	280	250	210	200	(250)	240	c	a
30	b	b	220	b	230	230	a	230	240
Median.	230	200	220	200	220	210	205	200	220
No.	15	15	11	11	14	15	14	15	8

Sweep: 1.0 - 13.0 Mc/s in 1^m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'F1 SEPTEMBER 1952

HOURLY VALUES OF h'E OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17	18
1	e	b	b	b	b	c	100	100	a	a	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	b	110	b	b	b	e	e
5	a	a	100	100	c	c	c	c	c	c	c	c	c
6	c	c	c	c	c	b	b	b	b	120	a	120	c
7	c	c	c	c	c	c	100	a	100	b	c	c	c
8	b	b	b	b	b	c	b	c	c	c	c	c	c
9													
10													
11													
12			NO	RECORD		SEPTEMBER	9th - 15th	INCLUSIVE					
13													
14													
15													
16	c	c	c	c	c	b	b	b	m	120	b	b	b
17	a	a	100	100	(100)	c	c	c	b	100	s	c	c
18	e	100	100	100	100	100	c	100	100	100	100	e	c
19	e	120	100	100	c	100	100	110	120	100	100	100	c
20	e	100	100	c	c	c	100	a	100	100	100	e	c
21	150	c	c	c	c	100	100	c	c	c	c	c	c
22	e	110	100	110	100	100	100	100	100	100	100	100	c
23	100	110	100	100	100	100	100	100	100	100	100	110	c
24	100	100	100	100	c	c	c	100	100	110	110	a	c
25	a	a	100	100	100	b	b	100	b	100	100	110	c
26	b	b	100	b	100	100	b	b	a	a	a	a	c
27	e	b	120	120	c	120	110	120	110	110	a	a	a
28	a	a	110	b	100	110	110	110	110	110	a	a	b
29	b	b	b	b	b	b	b	120	b	c	a	a	c
30	b	b	b	b	b	b	b	110	a	b	b	a	c
Median.	e	105	100	100	100	100	100	105	100	100	100	115	*
No.	9	6	12	9	7	8	9	12	9	12	7	8	

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'E SEPTEMBER 1952

HOURLY VALUES OF h'Es OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

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	90	90	110	e	e	e	g	g	b	b	b	c	g	g	100	100	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	c	c	c	c	c	c	b	g	b	b	b	g	g	150	120	100	c	100
5	b	b	b	100	100	100	100	100	g	g	c	c	c	c	c	c	c	c	c	c	c	120	b	100
6	b	b	b	c	c	c	c	c	c	c	c	b	b	b	b	g	100	130	c	b	100	110	110	100
7	c	c	c	c	c	c	c	c	c	c	c	c	g	100	120	g	c	c	c	c	c	130	120	100
8	100	100	120	100	100	b	110	b	b	b	b	c	b	c	c	c	c	c	c	c	c	c	c	c
9																								
10																								
11	NO RECORD 9th - 15th SEPTEMBER 1952 INCLUSIVE																							
12																								
13																								
14																								
15																								
16	c	c	c	c	c	c	c	c	c	c	c	b	b	b	m	g	b	b	120	e	100	100	140	100
17	100	115	100	100	100	b	100	110	g	g	g	c	c	c	g	g	s	g	o	c	c	c	c	c
18	100	100	90	90	b	e	g	g	g	g	g	g	c	g	110	g	g	g	c	c	e	110	100	e
19	e	e	e	e	e	e	g	g	g	g	c	g	g	g	110	110	g	g	c	c	e	c	c	e
20	100	e	e	e	e	e	g	g	g	g	g	g	110	100	g	g	g	g	c	e	e	c	100	e
21	e	b	b	b	b	e	g	c	g	c	g	g	g	c	c	c	c	c	c	e	e	c	100	e
22	120	120	e	e	e	e	g	g	g	g	g	120	120	g	g	130	g	g	c	c	c	c	c	c
23	c	c	c	c	110	100	g	g	g	g	g	g	g	g	g	g	g	g	c	c	c	c	c	c
24	110	e	110	100	100	120	130	g	g	g	c	c	c	g	g	110	g	110	c	150	140	100	100	110
25	100	100	100	100	100	100	100	100	100	100	100	b	b	100	b	g	g	g	c	e	e	e	120	e
26	130	e	e	e	e	e	g	b	g	g	g	g	b	b	100	100	100	110	c	c	110	c	c	c
27	120	130	150	140	100	b	b	b	g	120	c	g	120	120	120	g	120	120	100	c	100	c	100	100
28	100	b	b	b	100	100	120	110	110	g	g	g	g	g	100	120	110	110	b	b	b	b	b	110
29	b	100	100	120	120	b	b	b	b	b	b	b	b	g	b	c	110	100	c	c	100	100	b	100
30	b	b	100	100	b	e	b	b	b	b	b	b	140	140	120	b	b	140	c	c	100	b	100	130
Median.	100	100	100	100	100	100	105	*	*	*	*	*	*	100	110	110	110	110	*	*	100	105	100	100
No.	11	8	9	9	9	5	6							5	8	6	5	7			8	8	10	11

277. Sweep: 1.0 -13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND h'Es SEPTEMBER 1952.

HOURLY VALUES OF(M3000)F2 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

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	2.8	2.9	3.0	3.0	e	3.3	3.3	3.2	2.9	3.0	c	2.8	2.9	2.8	a	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
4	c	c	c	c	c	c	c	c	c	c	c	c	s	s	s	3.4	3.3	3.2	3.0	2.8	2.8	a	c	a
5	b	b	b	a	2.8	2.6	3.1	3.4	3.2	3.3	c	c	c	c	c	c	c	c	c	c	c	a	b	b
6	b	b	b	c	c	c	c	c	c	c	c	2.6	s	3.1	3.2	3.3	a	2.9	c	b	a	a	a	a
7	c	c	c	c	c	c	c	c	c	c	c	c	3.0	3.1	2.9	2.7	c	c	c	c	c	2.9	a	a
8	a	a	b	a	2.9	b	3.0	3.1	2.9	2.6	b	c	3.0	c	c	c	c	c	c	c	c	c	c	c
9																								
10																								
11						NO	RECORD		SEPTEMBER	9th	-	15th.	1952		INCLUSIVE									
12																								
13																								
14																								
15																								
16	c	c	c	c	c	c	c	c	c	c	c	b	2.6	2.6	m	3.3	3.4	3.4	3.1	3.0	2.7	a	3.3	3.0
17	a	3.2	3.1	a	b	3.0	3.3	3.3	3.2	2.9	3.0	c	c	c	3.2	3.2	3.2	3.2	c	c	c	c	c	c
18	a	a	3.2	3.2	b	2.8	3.4	3.4	3.4	3.3	3.3	3.3	c	3.2	3.4	3.2	3.4	3.2	c	c	(2.9)	f	f	f
19	s	s	e	e	e	s	3.2	3.3	3.2	3.2	c	3.3	3.2	3.2	3.4	3.3	3.3	3.5	c	c	3.2	c	c	2.9
20	a	b	f	b	b	f	3.2	3.4	3.4	3.2	3.2	3.0	3.4	3.2	3.3	3.4	3.4	3.3	c	3.0	3.0	c	a	2.7
21	s	b	b	b	b	2.9	3.2	3.4	3.1	c	2.8	3.0	3.1	c	c	c	c	c	c	c	c	c	3.1	2.9
22	2.9	2.9	2.8	2.8	3.0	2.9	3.2	3.2	3.1	2.7	3.0	3.1	3.3	3.3	3.4	3.2	3.3	3.3	c	c	c	c	c	c
23	c	c	c	c	3.2	3.1	3.4	3.5	3.4	3.3	3.3	3.1	3.3	3.4	3.4	3.3	3.4	3.6	c	c	c	c	c	c
24	2.9f	f	2.8	b	3.0	3.1	3.4	3.6	3.4	3.3	c	c	c	3.1	3.1	3.2	3.1	3.2	c	2.8	2.9	f	a	2.7
25	2.9	2.9	b	b	a	2.9	3.3	3.3	3.1	2.9	2.8	3.0	2.9	3.1	3.3	3.3	3.2	3.3	c	3.1	2.8	(2.8)	(2.6)	(3.0)
26	3.0	3.0	3.1	3.0	e	2.7	3.0	3.1	3.0	3.1	2.7	2.7	2.7	2.6	a	a	a	a	c	c	a	c	c	c
27	a	a	a	a	a	b	3.0	3.1	2.5	2.3	c	2.6	2.8	3.0	2.9	2.6	2.3	a	a	c	a	c	a	a
28	a	a	b	b	a	3.1	3.1	3.1	2.7	2.9	2.4	2.5	2.9	2.9	2.9	2.8	2.8	a	b	b	b	b	b	a
29	b	b	a	a	b	b	b	b	b	g	g	2.7	2.7	(3.0)	2.7	c	2.7	a	c	c	a	a	b	a
30	b	b	a	a	b	b	3.3	3.3	b	b	2.7	b	2.7	2.7	2.8	2.5	2.6	2.5	c	c	a	b	(2.6)	a
Median.	*	(2.9)	(3.0)	*	(3.0)	2.9	3.2	3.3	3.2	2.9	2.9	3.0	2.9	3.1	3.2	3.2	3.2	3.2	*	(3.0)	(2.9)	*	*	(2.9)
No.		5	6		6	10	16	16	15	15	12	12	15	16	15	15	14	12		5	7			6

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND(M3000)F2 SEPTEMBER 1952.

HOURLY VALUES OF (M3000)F1 OBSERVED DURING SEPTEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	08	09	10	11	12	13	14	15	16
1	3.5	1	3.6	c	4.2	3.6	f	a	c
2	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c
4	c	c	c	c	3.7	3.6	3.6	3.6	q
5	q	3.4	c	c	c	c	c	c	c
6	c	c	c	3.3	3.6	3.4	3.4	3.5	a
7	c	c	c	c	3.8	a	3.4	3.5	c
8	3.1	3.5	b	c	b	c	c	c	c
9									
10									
11	NO RECORD - 9th - 15th SEPTEMBER 1952 INCLUSIVE								
12									
13									
14									
15									
16	c	c	c	b	3.5	3.8	m	3.5	l
17	3.6	3.5	3.7	c	c	c	3.6	c	q
18	3.8	3.8	3.6	3.7	c	3.8	3.8	3.9	l
19	3.7	3.7	4.1	3.7	4.0	4.0	3.9	3.8	q
20	3.8	3.8	3.8	3.7	3.7	3.8	3.7	q	q
21	3.5	c	3.5	3.9	3.7	c	c	c	c
22	(3.5)	3.8	3.9	3.7	3.5	3.7	3.6	3.9	c
23	3.9	3.4	3.7	3.6	4.0	3.7	3.8	3.8	q
24	4.0	3.7	c	c	c	3.8	f	3.7	q
25	3.7	3.5	3.7	3.5	3.7	4.0	3.8	3.7	c
26	3.4	3.4	3.4	3.5	3.4	b	a	a	a
27	3.5	3.5	c	3.9	a	3.4	3.5	3.3	a
28	3.2	3.4	3.6	3.7	3.7	3.6	3.6	3.4	a
29	b	3.6	3.6	3.7	3.7	3.6	3.7	c	a
30	b	b	3.5	b	3.7	3.3	a	3.5	3.7
Median.	3.6	3.5	3.6	3.7	3.7	3.7	3.6	3.6	*
No.	14	14	13	12	15	15	13	13	

Sweep: 1.0 - 13.0 Mc/s 1m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (M3000) F1 SEPTEMBER, 1952

HOURLY VALUES OF f°F2 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11
1	a	a	b	b	a	a	c	3.7	4.0	4.2	4.2	4.4
2	2.6	c	c	c	c	c	c	c	c	c	c	c
3	a	a	(2.6)	2.2	1.8	2.7	3.3	b	4.3	4.5	4.5z	4.7z
4	a	a	b	b	c	c	c	c	c	g	4.4	c
5	a	b	b	a	2.3	b	3.6	b	(4.2)b	4.5	b	b
6	(3.5)	(2.6)	b	b	b	b	b	c	c	c	4.5	5.0
7	b	b	b	b	b	(3.2)	3.6	g	g	g	g	4.3
8	b	a	a	(2.0)	(1.9)	2.9	3.7	4.2	4.4	4.5	4.6	4.6
9	c	b	a	a	1.8	2.6	3.5	3.8	4.0	4.2	4.4	4.5
10	a	2.9	2.3	1.7	1.6	2.8	3.5z	g	4.0	4.3	4.5	4.5
11	2.0	a	a	b	b	3.0	3.4	g	4.1	g	4.2	g
12	a	a	1.8	c	a	b	3.5	g	g	g	g	b
13	b	(2.0)	2.1	a	1.8	2.7	3.5	3.7	g	b	4.3	4.3
14	1.8	(2.0)	(1.8)s	a	(1.9)	2.6	3.0z	4.3	4.6	4.7z	5.1z	5.1f
15	2.6	(1.9)	2.5f	b	a	2.6	3.5	g	4.2	4.5	4.5	4.7
16	2.0	1.6	c	1.6	1.8	3.1	3.5	4.2	4.3f	(4.8)s	4.9s	(5.0)s
17	3.0f	c	c	c	c	c	c	c	c	c	c	c
18	3.6	(3.?)s	(2.5)s	(2.3)s	s	s	g	g	c	c	c	4.7
19	b	b	c	c	c	c	c	c	c	o	5.0	4.8
20	3.3	3.5	3.0	(2.0)	(2.5)	3.3	g	4.1	4.3	(4.7)	4.6z	4.7z
21	a	a	a	a	(2.5)	3.3	3.8	4.3	4.3	4.5	s	(4.8)
22	a	a	a	3.8	3.0	a	3.4	g	g	g	g	g
23	(2.5)s	(3.5)f	(1.8)s	(1.8)s	(2.5)s	3.6	4.0s	4.5	(5.2)s	(5.2)s	5.5	5.5
24	c	c	c	c	c	c	c	c	c	c	c	c
25	2.6	2.0	1.9	1.8	2.7	3.5z	4.3	4.6f	(5.0)	s	5.0	(5.2)
26	c	c	c	c	c	c	c	c	c	c	c	c
27	3.2	b	a	a	a	3.5	3.6	3.7	g	4.0	g	c
28	2.9	(2.7)b	2.3	2.1	2.6	3.5	4.0	4.1	4.3	4.5	4.5	4.8
29	c	(2.8)	(2.6)s	b	(2.8)s	3.4	4.0	4.4	4.5z	4.8	5.0	5.0
30	a	b	b	a	b	b	3.6	3.7	g	s	c	4.9
31	2.7	b	b	b	b	3.6	b	b	g	b	b	b
Median.	2.6	(2.6)	2.3	2.0	2.3	3.2	3.5	3.7	4.2	4.5	4.5	4.7
No.	14	12	13	11	15	18	22	21	23	20	22	22

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

TOWNSVILLE f°F2 OCTOBER 1952.

HOURLY VALUES OF f°F2 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

Hour / Day	12	13	14	15	16	17	18	19	20	21	22	23
1	4.5	5.0	5.0	5.0	6.0	5.0	c	3.5f	a	3.1f	3.0	2.5
2	5.2	5.5z	5.3z	c	c	5.0	5.0	3.5	3.3	3.7	a	a
3	4.6z	4.6z	4.7z	4.6	4.5f	(4.3)	3.7	(3.5)	3.0	c	a	a
4	c	c	5.4	4.7	5.0f	4.5	c	c	c	c	c	c
5	6.0	6.1	6.0	4.8	5.1	4.0f	(3.5)	b	3.1f	a	b	b
6	5.6	5.7	6.0	5.0	4.4	a	b	a	a	a	a	b
7	4.3	4.3	4.4	4.3	4.3	4.4	3.8	3.7	3.1	(3.0)	a	a
8	4.6	4.8	4.8	4.8	4.7	4.8	4.6z	4.0	3.0f	a	a	a
9	4.7	4.4	4.3	4.6	4.6	4.5	4.5	4.5	3.0	a	a	a
10	4.6	4.7	4.7z	4.7	4.9	5.0	5.0	(3.3)	2.8	2.8	(3.2)	1.8
11	c	4.4	4.4	4.3	4.3	4.3	4.5	(4.3)	a	a	(3.0)	a
12	b	4.2	4.4	5.2	a	4.2	3.5z	3.5	a	a	a	a
13	4.4	4.5	4.6	4.6	4.8	4.6	4.5	4.6z	4.5	3.8	3.1	2.3
14	5.0	5.1	5.5	5.5	5.4	4.1	3.8	4.0z	3.5	(2.7)f	2.5f	3.0
15	4.6	4.5	4.7	4.7	4.7	4.6z	4.6	4.2	4.0	3.8	2.9	2.3
16	(5.3)s	5.2z	s	5.5z	5.5	5.6	5.2z	4.5	4.4	3.8	2.7f	2.6f
17	5.0	5.3	5.5	5.8f	6.0	(6.1)	c	3.9	b	a	(3.5)	a
18	4.7	4.7z	5.1z	5.3f	(5.5)	4.5	a	a	b	c	a	a
19	5.0z	5.0	5.1z	5.1	5.1	4.9	4.0	4.1	b	b	b	b
20	4.8	5.2	5.2	5.2	5.4	5.1	5.1	4.8	(3.7)s	a	b	a
21	4.8z	4.7	4.7z	4.6	4.7z	4.7	4.6	4.7	4.5h	3.5	a	a
22	4.5z	4.6	4.6z	4.8	5.0	4.9	4.6	4.6	4.5	3.7	2.7	(2.6)
23	5.8	5.6	5.6	c	c	c	c	c	c	c	c	c
24	5.4z	5.4	5.5	5.6	5.5	5.3z	5.2z	5.1	5.1z	4.6s	(3.2)s	3.2b
25	5.4	5.5	5.6	5.7	5.5	c	(5.2)s	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	3.5	3.2
28	4.6	4.7	4.8	5.0f	4.8f	4.8f	5.2	5.2	4.4	(3.6)s	3.6	a
29	5.2	c	5.1	4.9	5.0	5.0	5.0	5.0	4.6f	a	3.6	a
30	4.8	c	c	c	c	c	c	c	c	c	a	a
31	(4.7)s	(4.6)s	(4.7)s	4.6	4.1	(4.3)	a	a	a	a	3.5	a
Median.	4.8	4.8	5.0	4.8	5.0	4.7	4.6	4.2	3.7	3.6	3.2	2.6
No.	26	26	27	26	25	25	21	21	17	12	14	9

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND f°F2 OCTOBER 1952.

HOURLY VALUES OF f°F1 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17
1		q	3.6	3.9	4.0	3.9	4.0	4.0	4.0	3.8	3.6	q
2		c	c	c	c	c	4.2	4.1z	4.0z	c	c	q
3		b	3.8	4.0	4.0z	4.2z	4.2z	4.0z	4.0z	3.8	3.5	a
4		c	c	(3.8)	4.0	c	c	c	3.9	3.8	f	a
5		b	(3.9)	(3.9)	b	b	4.3	4.2	4.0	3.8	a	a
6	c	c	c	c	4.0	4.0	4.2	4.3	4.0	3.8	3.6	a
7		3.8	3.8	3.9	3.9	4.0	4.0	4.0	4.0	3.8	3.6	3.3
8		3.6	3.8	4.0	4.1	4.1	4.2	4.0z	4.1z	4.0	3.7	3.4
9		3.5	3.8	3.9	3.9z	4.0	4.0	4.0	4.0	3.8	3.6	3.5
10		3.7	3.8	4.0	4.0	4.0	4.0	4.0	4.0z	3.9	3.6	3.4
11		3.7	3.8	3.9	4.0	4.1	c	4.0	4.0	4.0	3.5	3.3
12		3.5	3.8	(3.8)	4.0	b	b	3.9	3.9	3.8	a	3.3
13		3.6z	3.8	b	4.0	4.1	4.0	4.2	4.0	3.9	3.7	3.5
14		3.5	4.0	4.0z	4.2z	4.2	4.3	4.2	4.1h	4.0	3.7	3.5
15		3.9	4.0	4.0	4.1	4.2	4.2	4.2	4.1	4.0	3.7	3.2
16		3.8f	4.0	4.1	4.2	4.0	4.3	4.2z	4.2z	4.0z	3.9	3.3
17		c	c	c	c	c	4.2	4.3	4.1	4.2	3.8	a
18	(3.6)s	(3.8)s	c	c	c	4.2	4.1	4.1z	4.0z	4.0f	3.9	3.4
19		c	c	c	4.2	4.3	4.3z	4.3	4.1z	4.0	3.6	3.5
20	3.8	3.9	4.0	4.1	4.2z	4.2z	4.3f	4.3	4.2	4.0	3.9	3.6
21		3.8	4.0	4.0	(4.2)s	4.2	4.2z	4.2	4.1z	4.1	3.7z	3.5
22		3.5	3.6	3.8	3.9	4.0	4.3z	4.1	4.1z	4.0	3.9	3.5
23		4.0s	4.0s	4.3	4.4	4.4s	4.3h	4.3	4.2	c	c	c
24		c	c	c	c	c	4.3z	4.2	4.2	4.1	4.0	3.5
25	3.5	3.8	4.1	4.3	4.3	4.4	4.4	4.4	4.3	4.2	4.0	c
26		c	c	c	c	c	c	c	c	c	c	c
27		q	3.8	3.9	4.0h	c	c	c	c	c	c	c
28	3.5	3.8	4.0	4.1	4.2	4.2	4.2	4.2	4.1	4.0	3.8f	3.7
29		3.8	4.0z	4.2	4.2	4.2f	4.3	c	4.3	4.1	3.9z	3.8
30		b	3.8	4.0	c	4.0	4.0	c	c	c	c	c
31		b	3.7	b	b	b	(4.3)	4.0f	(4.0)s	4.0	3.7	a
Median.	*	3.8	3.8	4.0	4.0	4.2	4.2	4.2	4.0	4.0	3.7	3.5
No.		18	23	22	23	22	26	26	28	26	23	18

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F1 OCTOBER 1952.

HOURLY VALUES OF f°E OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

Day \ Hour	05	06	07	08	09	10	11	12	13	14	15	16	17
1	c	b	b	b	b	2.2	2.9	3.0	b	b	b	b	b
2	c	c	c	c	c	c	c	a	3.0	2.7	c	c	(2.5)
3	c	b	b	b	b	3.0	3.0	2.9	2.9	2.8	b	b	b
4	c	c	c	c	b	b	c	c	c	3.0	a	a	a
5	b	b	b	b	b	b	b	b	3.0	2.8	a	a	b
6	c	c	c	c	c	3.1	b	b	b	b	2.8	a	a
7	b	b	b	b	b	3.0	3.0	3.1	3.0	2.9	2.8	2.5	2.2
8	c	2.0	2.5	b	b	a	3.1	3.0	3.0	2.8	2.6	b	c
9	b	b	b	b	2.8	2.9	2.9	3.1	3.0	2.8	2.7	2.4	c
10	1.6	1.8	2.5	2.7	3.0	3.0	3.0	3.0	3.0	2.9	2.8	2.5	a
11	b	2.0	b	b	b	b	3.0	c	3.0	2.9	b	b	b
12	b	b	2.7	3.0	b	3.0	b	b	3.0	3.0	a	a	2.3
13	1.7	2.1	2.5	b	b	3.0	3.0	3.0	3.0	3.0	2.8	2.5	b
14	c	1.9	2.4	2.6	2.8	3.0	3.0	3.0	3.0	3.0	b	2.6	b
15	b	1.8f	2.4	3.0	3.0	3.1	3.1	3.1	3.2	a	b	b	c
16	b	b	2.7	2.9	2.8	3.0	3.0	b	3.0	s	2.7	2.6	2.4
17	c	c	c	c	c	c	c	3.0	3.0	3.0	2.8	b	a
18	c	c	c	c	c	c	3.0	3.1	3.0	2.9	2.9	b	c
19	c	c	c	c	c	3.1	3.1	3.0	3.0	3.0	2.8	2.6	2.3
20	1.9	2.4	2.7	2.8	3.0	3.0	3.0	3.1	3.0	3.0z	2.8	2.7	b
21	1.7	2.0	2.5	2.8	3.0	3.1	3.1	3.0	2.9	2.9	2.9	2.6	2.3
22	a	a	a	a	3.1	3.1	3.2	3.2	3.0	3.0	2.8	2.7	2.5
23	2.1	2.4	2.5	(2.9)s	3.0	(2.9)s	s	3.0	3.2	3.0	c	c	c
24	c	c	c	c	c	c	c	3.1	3.1	3.0	2.9	2.7	c
25	1.7	s	2.5	2.8s	s	s	s	3.2	3.2	3.0	2.8	a	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c
27	b	b	b	b	b	b	c	c	c	c	c	c	c
28	1.9	2.5	2.7	2.8	3.0	3.0	3.1	3.4	3.0	a	2.9	2.6f	(2.4)
29	b	2.3	2.6	2.8	a	3.1	3.1	3.1	c	3.0	3.0	2.6	2.5
30	b	b	b	b	c	c	3.0	b	c	c	c	c	c
31	b	b	b	a	b	b	b	b	a	a	2.8	a	a
Median.	1.7	2.0	2.5	2.8	3.0	3.0	3.0	3.0	3.0	3.0	2.8	2.6	2.4
No.	10	11	13	11	10	18	19	20	23	22	18	13	9

283.

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T.

HOURLY VALUES OF fEs OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

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	5.6	5.5	b	b	3.7	3.5	c	b	b	b	3.5	g	g	b	b	b	b	b	c	3.0	3.8	4.0	3.4	4.0
2	4.0y	c	c	c	c	c	c	c	c	c	c	c	3.4	g	3.1	c	c	g	e	1.9	3.7	4.0	4.5	5.7
3	4.5	4.2	4.0	2.8	e	g	g	b	b	b	g	g	g	g	g	b	b	4.4	3.5	e	4.5	c	4.5	4.5
4	4.6	5.5	4.5	4.5	c	c	c	c	c	c	b	c	c	c	g	3.3	7.6	8.0	c	c	c	c	c	c
5	4.6	b	b	4.3	4.2	b	b	b	b	b	b	b	b	g	g	3.3	5.7	7.6	4.3	b	3.2	5.9	4.0	b
6	3.8	4.0	5.0	b	b	b	b	c	c	c	g	b	b	b	b	g	3.4	4.8	b	4.6	4.5	5.0	4.5	b
7	b	b	b	b	b	b	b	b	b	b	g	g	g	g	g	3.4	g	g	e	e	e	3.0	4.5	3.5
8	b	4.5	3.6	2.0	2.0	g	g	b	b	b	3.2	g	g	g	g	g	b	c	2.4	3.5	3.5	5.8	5.5	5.3
9	c	4.1	4.0	4.5	2.2	g	g	b	b	g	g	3.6	4.2	4.3	4.0	b	g	c	e	e	4.0	5.8	4.6	5.6
10	5.5	3.7	2.0	e	e	g	g	g	g	3.2	g	3.5	g	g	g	g	g	3.5	3.6	e	4.6	5.8	4.4	4.0
11	3.5	4.5	2.0	2.0	2.3	b	g	b	b	b	b	g	c	g	g	b	b	b	4.0	5.3	5.5	4.5	3.5	4.5
12	5.5	4.3	3.8	2.3	4.0	b	b	g	b	b	g	b	b	g	g	3.7	5.8	2.5	2.4	3.6	5.0	4.4	4.3	4.5
13	b	4.1	4.6	4.5	1.9	g	g	3.5	b	b	g	g	g	g	g	g	3.6	b	e	e	e	e	e	1.9
14	4.2	1.8	2.0	4.6	2.3	g	g	g	g	g	g	g	3.6	g	3.3	b	b	b	e	e	e	e	e	4.5
15	4.5	2.0	3.0	b	4.5	2.0	g	3.4	g	g	g	4.0	4.1	g	3.4	b	b	c	e	e	e	e	e	3.0
16	e	e	e	e	e	b	b	g	g	g	g	g	b	g	s	g	g	g	e	e	e	e	3.6	3.5
17	3.5	c	c	c	c	c	c	c	c	c	c	c	g	g	3.4	4.3	b	3.8	c	4.0	4.3	3.5	4.3	4.3
18	3.6	s	s	s	s	s	s	s	c	c	c	3.6	g	g	3.6	3.5	b	c	3.3	4.5	4.0	c	4.5	4.5
19	4.3	4.5	c	c	c	c	c	c	c	c	g	g	3.5	3.6	g	g	b	b	b	4.4	4.5	4.5	4.5	4.5
20	4.5	3.8	5.0	2.1	e	1.9	g	g	g	g	g	3.4	g	3.3	g	g	g	b	o	4.3	4.6	4.5	b	5.0
21	4.5	5.5	4.0	3.8	2.0	1.9	1.9	g	g	g	g	g	g	g	g	g	g	g	e	e	e	4.5	6.0	6.0
22	5.5	6.0	6.2	4.3	4.5	5.8	3.6	6.0	3.5	g	g	g	g	g	g	g	g	g	2.6	3.5	e	e	e	(5.0)
23	(4.5)	e	2.0	e	e	g	g	g	g	g	g	s	g	g	g	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	c	3.6	g	3.6	g	5.2	g	e	e	e	e	e	e
25	e	e	e	e	e	g	g	g	3.6	g	g	g	g	g	g	3.6	4.5	c	e	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
27	2.7	b	4.8	6.0	7.0	g	g	g	b	b	b	b	c	c	c	c	c	c	c	c	c	c	4.2	4.4
28	4.0	3.8	3.0	e	e	g	g	g	g	g	g	g	g	3.6	3.6	g	3.8	3.3	3.3	4.6	4.2	3.5	4.5	4.8
29	c	4.0	1.9	e	e	g	3.2	3.1	3.6	4.3	g	g	g	c	3.6	g	3.0	g	e	e	e	4.0	3.3	4.3
30	4.3	b	b	4.5	b	b	4.4	b	b	c	c	g	b	c	c	c	c	c	c	c	c	c	4.2	4.5
31	2.8	4.6	4.6	4.7	e	g	b	b	3.6	b	b	b	b	3.6	3.5	g	3.7	7.6	6.1	4.5	3.8	4.3	5.1	4.5
Median.	4.3	4.1	3.8	2.3	2.0	**	**	**	**	**	**	**	**	**	**	**	3.4	2.9	**	2.4	3.8	4.0	4.3	4.5
No.	24	22	21	21	21	17	17	14	12	12	20	20	21	24	25	20	17	16	22	24	25	23	26	25

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

HOURLY VALUES OF h'F2 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

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	b	b	a	a	c	280	(480)	440	500	490	390	360	350	350	300	260	c	270h	a	300	a	300
2	(350)	c	c	c	c	c	c	c	c	c	c	c	360	320	330	c	c	250	250	230	280	a	a	a
3	a	a	a	280	b	250	250	b	430	410	450	410	440	400	400	440	400	a	250	250	300	c	a	a
4	a	a	b	b	c	c	c	c	c	g	480	480	c	c	c	330	360	f	a	c	c	c	c	c
5	a	b	b	a	a	b	(280)	b	l	420	b	b	310	300	300	400	a	(250)	f	b	340	a	b	b
6	b	(330)	b	b	b	b	b	c	c	c	450	400	350	380	360	310	l	a	b	a	a	a	a	b
7	b	b	b	b	b	b	250	g	g	g	g	680	540	550	420	380	370	330	310	270	240	a	a	a
8	b	a	a	b	b	260	250	l	340	450	420	380	450	380	360	350	320	300	300	250	330	a	a	a
9	c	b	a	a	(350)	280	290	l	l	550	500	440	400	500	470	410	330	300	250	250	300	a	a	a
10	a	a	a	300	c	270	250	g	l	650	450	450	390	370	400	350	330	270	250	250	380	(320)	a	a
11	a	a	a	b	b	(250)	250	g	l	g	l	g	c	450	480	l	380	330	280	a	a	a	a	a
12	a	a	a	c	a	b	270	g	g	g	g	b	b	l	500	400	a	300	270	300	a	a	a	a
13	b	a	a	a	a	280	250	l	g	b	480	550	430	460	400	370	330	290	250	250	250	270	300	270
14	s	s	s	a	a	280	240	280	l	350	320	350	350	340	310	300	300	350	250	250	260	f	f	a
15	b	b	f	b	a	250	250	g	l	400	f	380	450	430	400	360	320	280	250	260	280	270	300	300
16	b	b	c	c	c	f	240	l	350	350	(350)	330	(330)	320	s	310	300	280	250	250	260	270	f	f
17	f	c	c	c	c	c	c	c	c	c	c	c	400	370	330	310	300	300	c	270	b	a	a	a
18	a	s	s	s	s	s	g	g	c	c	c	410	410	450	370	300	300	330	a	a	b	c	a	a
19	b	b	c	c	c	c	c	c	c	c	350	400	370	400	400	350	340	300	300	230	b	b	b	b
20	a	350	330	b	280	270	g	l	l	400	400	400	390	350	340	330	300	280	250	250	s	a	b	a
21	a	a	a	a	f	240	250	l	l	440	s	s	400	430	400	400	350	280	270	250	270	270	a	a
22	a	a	a	a	a	a	a	g	g	g	g	g	550	600	420	430	350	280	250	230	250	(280)	s	s
23	s	f	s	s	250	250	280	l	(320)	310	310	300	320	300	300	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	c	350	330	330	310	300	300	250	250	250	250	b	b
25	280	300	300	300	270	230	260	270	320s	s	340	350	360	340	320	320	280	c	s	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
27	270	b	a	a	a	a	300	250	g	l	g	c	c	c	c	c	c	c	c	c	c	c	a	350
28	340	(380)	300	280	270	240	l	l	500	480	550	500	480	440	370	400	350	320	280	260	270	(380)	320	a
29	c	a	s	b	280	250	230	l	350	380	370	370	360	c	370	370	330	310	240	250	260	a	360	a
30	a	b	b	a	b	b	a	b	g	s	c	380	390	c	c	c	c	c	c	c	c	c	a	a
31	a	b	b	b	b	280	b	b	g	b	b	b	500	650	550	450	580	a	a	a	a	a	f	a
Median.	*	*	*	(300)	(280)	250	250	g	500	440	450	405	390	380	370	350	330	300	250	250	270	(270)	*	*
No.				6	8	15	19	11	15	19	20	22	26	25	26	25	23	22	19	20	16	9		

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T.

HOURLY VALUES OF hpF2 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND.

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	b	b	a	a	c	310	u	u	u	u	u	u	u	u	320	320	c	290	a	u	a	u
2	370	c	c	c	c	c	c	c	c	c	c	c	u	u	u	c	c	u	270	260	u	310	a	a
3	a	a	a	u	b	280	280	b	u	u	u	u	u	u	u	u	u	a	260	270	u	c	a	a
4	a	a	b	b	c	c	c	c	c	g	u	c	c	c	u	u	f	a	c	c	c	c	c	c
5	a	b	b	a	a	b	300	b	u	u	b	b	u	u	u	u	a	(280)	f	b	u	a	b	b
6	b	f	b	b	b	b	b	c	c	c	u	u	u	u	u	u	u	a	b	a	a	a	a	b
7	b	b	b	b	b	b	u	g	g	g	g	u	u	u	u	u	u	u	330	300	250	a	a	a
8	b	a	a	b	b	290	280	u	u	u	u	u	u	u	u	u	u	320	350	280	340	a	a	a
9	c	b	a	a	370	300	300	u	u	u	u	u	u	u	u	u	u	320	300	300	310	a	a	a
10	a	a	a	310	300	300	270	g	u	u	u	u	u	u	u	u	u	280	260	260	400	360	a	a
11	a	a	a	b	b	320	280	g	u	g	u	g	c	u	u	u	u	340	300	a	a	a	a	a
12	a	a	a	e	a	b	280	g	g	g	g	b	b	u	u	u	a	u	300	u	a	a	a	a
13	b	a	a	a	a	300	290	u	g	b	u	u	u	u	u	u	u	u	290	300	310	310	310	310
14	s	s	s	a	a	300	260	u	u	u	u	u	u	u	u	u	u	u	260	280	280	f	f	330
15	330	b	f	b	a	280	270	g	u	u	u	u	u	u	u	u	u	290	300	310	300	310	310	330
16	b	b	e	320	320	280	250	u	u	u	u	u	u	u	s	315	310	290	300	290	300	320	f	f
17	f	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	320	320	c	290	b	a	a	a
18	400	s	s	s	s	s	g	g	c	c	c	u	u	u	u	u	u	u	a	a	b	c	a	a
19	a	b	c	c	c	c	c	c	c	c	u	u	u	u	u	u	u	310	320	300	b	b	b	b
20	a	360	340	350	320	290	g	u	u	u	u	u	u	u	u	u	310	300	300	280	s	a	b	a
21	a	a	a	a	f	280	280	u	u	u	s	s	u	u	u	u	u	u	290	300	310	280	a	a
22	a	a	a	a	370	a	a	g	g	g	g	g	u	u	u	u	u	290	280	300	290	330	s	s
23	s	f	s	s	300	270	280	u	u	u	u	u	u	u	u	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	u	u	300	300	320	270	b	b
25	320	310	340	310	290	260	u	u	u	s	u	u	u	u	u	u	u	c	s	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
27	u	b	a	a	a	a	310	260	g	u	g	c	c	c	c	c	c	c	c	c	c	c	a	u
28	350	400	310	310	300	280	u	u	u	u	u	u	u	u	u	u	u	u	300	300	300	410	350	a
29	c	a	s	b	300	280	270	u	u	u	u	u	u	c	u	u	u	u	290	290	300	a	380	a
30	a	b	b	a	b	b	290	b	g	s	c	u	u	c	c	c	c	c	c	c	c	c	a	a
31	a	b	b	b	b	300	b	b	g	b	b	b	u	u	u	u	u	a	a	a	a	a	f	a
Median.	(350)	*	*	(310)	(300)	285	280	g	g	*	*	*	*	*	*	*	*	305	300	290	300	(310)	*	*
No.	5			5	9	16	18	9	6									12	19	19	13	9		

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND hpF2 OCTOBER 1952.

HOURLY VALUES OF h'F1 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17
1		q	210	230	200	220	200	b	200	230	230	q
2		c	c	c	c	c	250	230	220	c	c	q
3		b	230	200	190	230	230	200	210	b	(200)	a
4		c	c	b	200	c	c	c	240	240	f	a
5		b	b	(240)b	b	b	(220)	230	200	a	a	a
6		c	c	c	230	220	220	250	220	240	a	a
7		230	230	220	210	200	200	200	200	230	230	230
8		240	230	(200)b	230	210	230	200	200	200	b	240
9		230	230	200	200	200	200	200	200	230	220	240
10		240	200	180	200	180	200	180	180h	200	230	1
11		240	b	200	210	170	c	200	220	230	b	250
12		250	220	220	210	b	b	240	240	b	a	230
13		230	210	b	200	200	200	200	210	210	210	230
14		210	200	200	200	200	200	190	200	220	200	240
15		240	(220)	200	210	190	190	200	200	230	230	230
16		230	200	180	200	180	200	200	200	220	220	240
17		c	c	c	c	c	200	210	220	200	230	a
18		s	c	c	c	210	200	220	220	220	240	250
19		c	c	c	200	200	200	220	200	200	230	230
20	240	240	230	220	200	190	170	200	200	200	230	250
21		240	200	200	200	190	200	200	200	200	230	230
22		240	(230)	220	220	220	200	180	200	220	240	230
23		230	210	210	200	210	200	180	200	c	c	c
24		c	c	c	c	c	200	210	210	200	200	220
25	(250)	(210)	200	200	200	200	200	200	210	220	220	c
26		c	c	c	c	c	c	c	c	c	c	c
27		q	250	230	220	c	c	c	c	c	c	c
28	250	230	230	210	230	200	220	230	200	210	230	240
29		220	200	190	200	220	230	c	200	200	200	230
30		b	230	210	c	230	220	c	c	c	c	c
31		b	a	b	b	b	(220)	(210)	210	220	240	a
Median.	*	230	220	200	200	200	200	200	200	220	230	230
No.		17	20	21	23	22	26	25	28	23	20	17

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'F1 OCTOBER 1952.

HOURLY VALUES OF h'E OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

Hour / Day	05	06	07	08	09	10	11	12	13	14	15	16	17
1	c	b	b	b	b	100	100	100	b	b	b	b	b
2	c	c	c	c	c	c	c	a	100	110	c	c	150
3	e	b	b	b	b	100	100	100	110	110	b	b	b
4	c	c	c	c	b	b	c	c	c	110	110	a	a
5	b	b	b	b	b	b	b	b	100	110	a	a	b
6	c	c	c	c	c	110	b	b	b	b	110	a	a
7	b	b	b	b	b	100	100	100	100	100	100	120	c
8	e	100	100	b	b	a	100	100	100	100	100	b	c
9	b	b	b	b	100	100	100	100	100	110	(120)	110	c
10	120	100	100	100	100	100	100	100	100	100	100	120	a
11	b	100	b	b	100	b	100	c	110	100	b	b	b
12	b	b	b	110	b	100	b	b	100	110	a	a	b
13	120	100	100	b	b	100	100	100	100	100	110	100	b
14	e	100	100	100	100	100	100	100	100	110	b	b	b
15	b	100	100	100	100	100	100	110	110	a	b	b	c
16	b	b	100	100	100	100	100	b	100	s	100	100	c
17	c	c	c	c	c	c	c	110	100	100	100	b	a
18	c	c	c	c	c	c	100	100	100	100	100	b	c
19	c	c	c	c	c	100	100	100	100	100	110	100	b
20	a	100	100	100	100	100	100	100	100	100	100	100	b
21	b	180	100	100	100	100	100	100	100	100	100	120	b
22	a	a	a	a	100	100	100	100	100	100	100	b	100
23	120	100	100	100	100	100	s	100	100	100	c	c	c
24	c	c	c	c	c	c	c	100	120	110	110	120	c
25	130	100	100	100	100	100	100	100	100	110	110	a	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c
27	b	b	b	b	b	b	c	c	c	c	c	c	c
28	100	100	100	100	100	100	100	100	100	a	100	100	110
29	b	100	100	100	a	100	100	100	c	110	100	110	100
30	b	b	b	b	c	c	100	b	c	c	c	c	c
31	b	b	b	a	b	b	b	b	a	a	110	120	a
Median.	125	100	100	100	100	100	100	100	100	100	100	110	*
No.	8	12	12	11	12	19	20	20	23	22	19	12	

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'E OCTOBER 1952.

HOURLY VALUES OF h'Es OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

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	100	100	b	b	100	100	c	b	b	b	110	g	g	b	b	b	b	b	c	130	110	100	100	100
2	100	c	c	c	c	c	c	c	c	c	c	c	120	g	130	c	c	g	e	130	120	120	100	100
3	100	100	100	100	e	e	g	b	b	b	g	g	g	g	g	b	b	110	140	e	120	c	100	100
4	100	100	100	100	c	c	c	c	c	c	b	c	c	c	g	110	120	140	c	c	c	c	c	c
5	100	b	b	100	110	b	b	b	b	b	b	b	b	g	g	110	100	140	100	b	100	120	100	b
6	100	130	180	b	b	b	b	c	c	c	g	b	b	b	b	g	120	100	b	100	100	100	100	b
7	b	b	b	b	b	b	b	b	b	b	g	g	g	g	g	110	g	g	e	e	e	100	100	100
8	b	100	100	100	100	g	g	b	b	b	100	g	g	g	g	g	b	c	130	130	120	100	100	100
9	c	100	100	100	100	g	g	b	b	g	g	110	110	120	110	b	g	c	e	e	140	100	100	100
10	100	100	100	e	e	120	g	g	g	110	g	100	g	g	g	g	g	130	130	e	100	100	100	100
11	110	100	100	100	100	b	g	b	b	b	b	g	c	g	g	b	b	b	140	120	100	100	130	100
12	100	100	120	100	120	b	b	g	b	b	g	b	b	g	g	120	110	140	140	120	110	100	130	100
13	b	100	100	100	110	g	g	150	b	b	g	g	g	g	g	g	130	b	e	e	e	e	e	100
14	100	100	100	100	100	g	g	g	g	g	g	g	130	g	100	b	b	b	e	e	e	e	e	100
15	100	100	120	b	100	100	g	150	g	g	g	110	140	g	110	b	b	c	e	e	e	e	e	100
16	e	e	e	e	e	b	b	g	g	g	g	g	b	g	s	g	g	g	e	e	e	e	100	100
17	100	c	c	c	c	c	c	c	c	c	c	c	g	g	100	100	b	120	c	120	120	120	120	100
18	100	s	s	s	s	s	s	s	c	c	c	100	g	g	100	130	b	c	100	130	100	c	110	100
19	100	100	c	c	c	c	c	c	c	c	g	g	100	100	g	g	b	b	b	110	100	100	100	110
20	100	100	100	100	e	100	g	g	g	g	g	120	g	110	g	g	g	b	e	150	120	100	b	100
21	100	100	100	100	100	100	100	g	g	g	g	g	g	g	g	g	g	g	e	e	e	120	110	100
22	110	100	100	90	100	100	100	100	110	g	g	g	g	g	g	g	g	g	120	110	e	e	e	100
23	100	e	120	e	e	g	g	g	g	g	g	s	g	g	g	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	c	140	g	120	g	100	g	e	e	e	e	e	e
25	e	e	e	e	e	g	g	g	100	g	g	g	g	g	g	100	100	c	e	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
27	110	b	100	100	100	g	g	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	100	100
28	100	100	100	e	e	g	g	g	g	g	g	g	g	150	100	g	140	140	140	130	140	110	120	100
29	c	110	120	e	e	g	130	120	150	100	g	g	g	c	120	g	110	g	e	e	e	100	110	110
30	100	b	b	100	b	b	100	b	b	c	c	g	b	c	c	c	c	c	c	c	c	c	100	100
31	120	100	100	100	e	g	b	b	100	b	b	b	b	110	110	g	150	110	110	100	110	130	100	100
Median.	100	100	100	100	100	100	*	*	*	*	*	110	125	110	110	110	115	130	130	120	110	100	100	100
No.	22	19	19	15	12	6						5	6	5	10	7	10	9	10	13	16	17	21	24

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'Es OCTOBER 1952.

HOURLY VALUES OF (M3000)F2 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

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	b	b	a	a	c	2.9	2.5	2.8	2.7	2.6	3.0	3.0	3.0	3.0	3.1	3.0	c	3.0	a	2.7	a	2.8
2	2.7f	c	c	c	c	c	c	c	c	c	c	c	3.0	3.1	3.0	c	c	3.4	3.1	3.0	2.9	2.9	a	a
3	a	a	a	3.3	3.1	3.3	3.2	b	2.8	2.8	2.7	2.8	2.8	3.0	2.9	2.7	2.7	a	3.1	3.0f	2.9	c	a	a
4	a	a	b	b	c	c	c	c	c	c	c	c	c	c	3.0	2.7	f	3.2	c	c	c	c	c	c
5	a	b	b	a	a	b	3.0	b	2.9	2.9	b	b	3.0	3.0	3.1	2.7	a	3.1	f	b	2.7	a	b	b
6	b	f	b	b	b	b	b	c	c	c	2.8	2.8	2.9	2.8	2.8	3.0	2.9	a	b	a	a	a	a	b
7	b	b	b	b	b	3.2	3.1	g	g	g	g	2.3	2.5	2.5	2.9	3.1	3.0	3.0	2.8	2.9	2.9	a	a	a
8	b	a	a	b	b	3.2	3.2	3.2	3.1	2.8	2.9	3.0	2.8	2.9	2.9	2.9	3.1	3.0	2.9	2.9	2.9	a	a	a
9	c	h	a	a	2.9	3.1	3.0	2.9	2.5	2.5	2.4	2.8	2.8	2.7	2.7	2.7	3.1	3.2	3.1	3.0	2.9	a	a	a
10	a	a	a	2.8	2.9	3.0	3.2	g	2.8	2.7	2.8	3.0	3.0	2.9	2.9	3.0	3.0	3.2	3.0	3.1	2.8	2.8	a	a
11	a	a	a	b	b	3.0	3.1	g	2.7	g	n	g	c	2.8	2.7	2.4	2.8	2.9	3.0	a	a	a	a	a
12	a	a	a	e	a	b	3.1	g	g	g	g	b	b	2.5	2.5	2.6	a	3.0	3.2	3.3	a	a	a	a
13	b	a	a	a	2.9	3.2	3.2	n	g	b	2.7	2.5	2.9	2.7	3.0	3.0	3.1	3.2	3.2	3.1	3.1	3.1	2.7	2.9
14	s	s	s	a	a	2.9	3.4	3.4	3.2	2.9	3.1	2.9	3.1	3.0	3.1	3.0	3.1	2.8	3.2	3.1	3.0	f	f	2.9
15	3.0	b	f	b	a	3.1	3.2	g	2.5	2.8	(2.6)	3.0	2.8	2.9	3.0	3.2	3.2	3.1	3.2	3.0	3.2	2.9	3.0	2.9
16	b	b	e	2.8	2.6	3.2	3.3	2.8	2.9	3.2	2.8	3.2	s	3.0	s	3.0	3.0	3.3	3.2	3.2	3.2	3.0	f	f
17	f	c	c	c	c	c	c	c	c	c	c	c	2.8	2.9	3.0	2.9	3.0	3.0	c	3.0	b	a	a	a
18	2.6	s	s	s	s	s	g	g	c	c	c	2.9	2.8	2.8	3.0	2.9	3.2	3.1	a	a	b	c	a	a
19	b	b	c	c	c	c	c	c	c	c	3.0	2.7	2.9	2.9	2.8	3.0	3.1	3.1	2.8	2.9	b	b	b	b
20	a	2.8	3.0	2.8	2.7	3.2	g	2.3	2.7	2.8	3.0	2.8	3.0	2.9	3.1	3.1	3.2	3.2	3.2	3.0	s	a	b	a
21	a	a	a	a	f	3.2	3.3	2.9	2.8	2.7	s	s	2.9	2.9	2.9	3.0	3.0	3.3	3.1	3.1	3.1	3.0	a	a
22	a	a	a	a	2.6	a	a	g	g	g	g	g	2.5	2.5	2.9	2.7	2.9	3.2	3.3	3.2	3.2	2.8	s	s
23	s	f	s	s	(2.9)	3.0	3.0	3.1	(3.0)	3.2	3.2	3.2	3.1	3.2	3.2	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	c	2.9	3.1	3.1	3.1	3.2	3.2	3.3	3.1	3.1	3.2	b	b
25	(2.8)	2.9	2.8	3.0	3.2	3.2	3.2	3.1	(3.1)	s	3.1	3.1	3.1	3.1	3.2	3.1	3.1	c	c	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
27	3.2	b	a	a	a	a	3.0	3.4	g	n	g	c	c	c	c	c	c	c	c	c	c	c	a	2.8
28	2.8	2.8	3.0	2.9	3.1	3.2	3.2	2.8	2.6	2.6	2.4	2.7	2.7	2.7	2.9	2.7	3.0	3.0	3.0	3.0	2.9	2.7	2.8	a
29	c	a	s	b	3.2	3.1	3.1	2.8	3.0	2.9	2.9	3.0	3.0	c	2.8	2.9	3.0	3.1	3.1	3.2	2.9	a	2.8	a
30	a	b	b	a	b	b	3.2	b	g	s	c	2.9	2.8	c	c	c	c	c	c	c	c	c	a	a
31	(2.6)	b	b	b	b	2.9	b	b	g	b	b	b	(2.6)	(2.3)	(2.4)	2.6	2.4	a	a	a	a	a	f	a
Median	(2.8)	*	*	(2.8)	2.9	3.2	3.2	2.8	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.0	2.9	2.9	*	(2.9)
No:	7			6	11	17	21	19	23	18	20	21	25	26	27	26	23	23	19	20	16	10		5

290 Sweep: 1.0 - 13.0 Mc/s. in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (M3000)F2 OCTOBER 1952

HOURLY VALUES OF (M3000) F1 OBSERVED DURING OCTOBER 1952 AT MACQUARIE ISLAND

Hour / Day	06	07	08	09	10	11	12	13	14	15	16	17
1		q	3.9	3.5	3.5	3.8	3.8	b	3.5	3.7	q	q
2		c	c	c	c	c	3.6	3.7	3.7	c	c	q
3		b	3.4	3.5	3.7	3.7	3.7	3.9	3.8	3.6	3.4	a
4		c	c	b	3.7	c	c	c	3.5	3.4	f	a
5		b	b	3.5	b	b	3.7	3.6	3.8	3.7	a	a
6		c	c	c	3.7	3.7	3.7	3.5	3.6	3.5	a	a
7		3.4	3.5	3.7	4.0	3.9	4.0	3.9	3.8	3.8	3.5	q
8		3.4	3.6	3.5	3.7	4.0	3.5	3.8	3.6	3.5	3.5	q
9		3.5	3.5	3.8	3.7	3.8	3.7	3.7	3.7	3.6	3.6	q
10		3.5	3.6	4.0	3.7	3.9	3.7	3.7	3.7	3.5	3.5	1
11		3.3	3.3	3.4	3.6	3.4	c	3.7	3.6	3.7	3.2	q
12		3.4	3.7	3.9	3.5	b	b	3.8	3.9	b	a	q
13		3.4	3.6	b	3.9	3.8	3.8	4.0	3.9	3.7	3.6	q
14		3.9	3.5	3.8	3.7	3.7	3.8	4.0	3.9	3.7	3.6	3.5
15		3.3	3.3	3.6	3.7	3.7	3.9	3.8	3.6	3.7	3.6	q
16		3.3	3.7	3.7	4.0	3.9	3.9	3.7	3.7	3.6	3.6	q
17		c	c	c	c	c	3.7	3.7	3.7	3.5	3.4	a
18		s	c	c	c	3.7	3.8	3.8	3.7	3.5	3.5	3.4
19		c	c	c	3.7	3.8	4.0	3.8	3.8	3.7	3.6	3.5
20	3.2	3.5	3.7	3.8	3.8	3.9	3.8	3.8	3.8	3.8	3.7	3.7
21		3.5	3.5	3.6	3.7	3.9	3.8	3.8	3.8	3.7	3.5	3.7
22		3.2	3.5	3.9	3.9	3.9	4.0	4.0	3.8	3.5	3.5	q
23		3.4	3.3	3.7	3.5	3.6	3.9	3.9	3.9	c	c	c
24		c	c	c	c	c	3.8	3.7	3.8	3.6	3.5	3.7
25		3.4f	3.5f	3.5f	3.6f	3.8	3.7	3.7	3.9	3.8	3.6	3.4
26		c	c	c	c	c	c	c	c	c	c	c
27		q	3.4	3.5	3.7	c	c	c	c	c	c	c
28	3.4	3.5	3.8	3.8	3.6	4.0	3.6	3.5	3.8	3.7	3.5	3.4
29		3.4	3.6	3.7	4.0	4.0	3.7	c	3.5	3.8	3.6	3.5
30		b	3.4	3.5	c	3.7	3.7	c	c	c	c	c
31		b	a	b	b	b	3.7	3.0	3.9	3.6	3.4	a
Median.	*	3.4	3.5	3.7	3.7	3.8	3.8	3.8	3.8	3.7	3.5	3.5
No.		17	21	21	23	22	26	25	28	25	21	9

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (M3000)F1 OCTOBER 1952.

HOURLY VALUES OF f°F2 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11
1	b	b	b	b	b	2.8	3.3	g	g	g	g	g
2	a	c	c	c	c	c	c	c	c	c	c	b
3	2.8	b	b	b	b	3.2	3.9	4.2	4.5	4.5f	4.7	4.8s
4	a	a	3.5	3.2f	3.1	3.6z	4.1f	4.5	4.9	5.2	5.4	5.5
5	(2.8)	(2.6)	(2.0)	(1.7)	2.8	3.7	4.4z	4.5	4.8	5.5z	5.5	5.7z
6	(3.3)s	a	2.9f	2.5f	2.9	3.7	4.2	4.5	4.9	(5.0)s	5.3f	5.5
7	a	a	c	c	c	c	c	c	c	c	c	4.3z
8	2.8	c	c	c	c	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c
10	2.9	b	b	b	3.2	3.9	4.4	5.1	5.5	6.0	6.3z	6.4
11	2.8f	2.5f	2.3f	(3.0)	3.0	4.0	4.3	4.5z	4.7z	5.1	5.7	6.0z
12	3.1	2.5	2.2	2.0f	3.5	3.8	4.2z	4.5	4.5z	4.7	4.9	4.8
13	1.8	1.6	2.3f	c	c	c	c	c	c	c	c	6.0f
14	3.3f	2.2f	1.8	1.9	2.9	3.8	4.5z	5.3z	5.8z	6.0z	6.1	6.3z
15	4.0f	3.5f	2.7f	2.5f	3.3	3.7	4.3	4.5f	5.0	5.2	5.2	5.8z
16	3.0f	2.9f	2.7f	2.6	3.3	4.2	4.7	5.5	5.9	6.1	6.2	6.3z
17	4.2	b	b	(4.0)f	(4.0)f	4.4	4.5z	4.5	4.8	5.2	5.3	5.4z
18	(3.2)	3.4f	a	(1.7)f	2.9	3.7	g	g	g	g	g	c
19	3.0	(2.3)f	(2.3)f	2.0f	3.2	3.8z	4.1z	4.8	5.5	5.5f	5.5	6.0
20	a	3.2f	3.4f	2.7f	3.3	3.8	4.2z	4.9f	5.4	5.4	6.0	5.9
21	(3.2)f	(2.7)f	2.4	2.6	3.5f	c	c	c	c	c	c	c
22	a	a	a	3.1	3.2	3.8	4.2	4.5z	4.7z	4.8	4.8	5.3
23	b	a	b	b	3.5	4.2	4.4f	4.5	5.0	5.0	4.9	4.9
24	4.1	(3.6)f	3.4	3.3	3.7	4.0	c	c	c	c	c	5.2
25	b	a	a	3.6f	3.6	4.0z	4.8	5.2	5.3	5.4f	5.9	5.8
26	(4.0)f	(3.3)f	(3.2)f	3.3	3.4	4.0	4.2	4.7	5.0	5.2	5.5	5.5
27	a	a	a	a	a	4.0	4.5	b	4.5f	4.5f	g	5.0
28	b	a	a	b	b	g	3.8	4.1	4.2	4.6	c	5.5
29	b	a	a	(4.0)f	3.9	3.5	3.5	4.0	4.1	4.4f	4.5	4.9
30	b	4.1	4.8	3.7	3.7	4.0	4.4	5.2	5.4z	5.5	5.7z	6.0
Median.	3.1	2.8	2.7	2.7	3.3	3.8	4.2	4.5	4.9	5.2	5.5	5.5
No.	17	14	15	19	21	24	23	22	22	22	21	25

Sweep: 1.0 - 13.0 Mc/s.

Time used: 157.5° E.M.T.

HOURLY VALUES OF f°F2 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	12	13	14	15	16	17	18	19	20	21	22	23
1	4.6	4.5	4.3	b	4.3	4.3	4.6	4.7	5.0	a	a	a
2	b	4.6	4.6	4.5	4.6	5.2	4.0	4.0	3.7	3.6f	b	b
3	4.9s	5.0	5.3	5.3	5.2	5.6	5.5f	c	a	b	a	a
4	5.8	6.0	5.9	5.5	5.2z	5.3z	5.6z	5.0	4.7	4.4	3.6	2.9
5	(6.0)	(6.0)	6.2z	5.6	5.9z	5.6z	5.6	5.5	5.6	3.3f	3.5f	3.5s
6	5.5	5.6	5.5z	5.9	5.6	4.3	a	a	3.5f	a	c	a
7	4.5z	4.6	4.4z	4.4z	4.3z	4.6f	4.5f	4.8	4.3	3.4	c	a
8	c	c	c	c	c	c	c	c	c	c	c	c
9	4.9	4.7z	4.8	5.0	5.5	5.8	5.5	5.1	4.2	3.6s	3.1f	3.0
10	(6.2)	(6.3)s	s	6.2	s	s	(6.1)s	6.0	6.0	c	3.5	3.1
11	6.1z	6.3z	6.2z	6.2	5.9z	5.9z	6.0	5.4	5.5	b	b	b
12	5.0f	c	5.0z	4.8	5.0	5.2	5.0	4.6	c	3.4	c	2.1
13	6.2z	6.1	6.0z	5.9z	5.8z	5.5	5.4	3.2	5.1	5.0f	4.0	3.5
14	6.5	6.2	6.5	6.2	6.5	6.1z	c	4.5	4.5f	a	4.9	(4.5)s
15	6.0	6.0	5.9	5.8	c	c	c	c	c	b	a	a
16	6.2	6.2z	6.5	6.5	6.3	6.2	c	c	c	5.0	c	b
17	5.7z	5.5z	5.5	5.2z	5.3	5.4	5.3	a	a	a	a	3.2
18	c	c	c	(4.6)	(4.5)	c	c	c	c	a	a	3.2
19	6.3	6.2	6.1	5.9z	6.0	5.9	5.8z	5.8	5.7	b	b	c
20	c	6.2	6.1z	6.0z	6.0	6.0	6.0z	5.6	g	5.2	4.6s	3.6s
21	c	c	c	c	c	c	c	c	c	c	a	5.0f
22	5.4	5.4f	5.6	5.3f	5.5	5.8f	5.2f	4.3	4.0	a	a	b
23	4.9	5.2	5.5	5.5	5.8	5.6f	5.5	5.2f	4.2f	3.1f	b	a
24	5.3	5.2	5.5	a	5.5	5.3	5.2	5.0	a	4.9	(5.5)	b
25	6.2	6.3z	6.4	6.5z	6.4z	6.1	5.7	5.7	4.7	(4.6)b	5.1	(4.6)b
26	5.4	5.7	5.5	5.5	6.0	5.9	5.8z	b	a	b	a	a
27	5.3	5.2	5.0	5.5	5.4	4.6f	a	(4.0)f	c	b	(4.0)	b
28	5.8	5.5	6.0	5.8f	5.8f	6.0f	5.0	4.6	(4.0)	4.5	a	(4.5)f
29	5.2z	5.2z	5.2	5.2	5.3	5.01	c	(4.9)a	a	4.6	(4.5)	3.3f
30	6.0z	6.2z	6.2z	5.8	5.9z	6.1f	5.7f	4.7	4.8	5.1f	4.6	3.7f
Median.	5.7	5.6	5.6	5.6	5.6	5.6	5.5	4.9	4.7	4.5	4.2	3.5
No.	25	26	26	26	26	25	21	21	18	15	12	15

Sweep: 1.0 - 13.0 Mc/s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F2 NOVEMBER 1952

HOURLY VALUES OF f°F1 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1	b	b	3.5	3.7	3.8	3.8	4.3	4.3	4.1	4.1	b	3.8	3.7	3.5
2	c	c	c	c	4.0	4.0	b	b	4.1	4.0	4.0	3.7	3.6	q
3	b	3.7	3.9	4.0	4.2	4.2f	4.3	4.3	4.2	4.0	4.0	3.9	3.6	q
4	q	3.6	3.9	4.1	4.2	4.3	4.4	4.1	4.3	4.2	4.0	3.9	3.7s	q
5	q	3.8	3.9	4.2	4.3z	4.5	4.3	4.4	c	c	c	c	c	c
6	q	3.7	3.8	4.1z	4.2z	4.3	4.3	4.3	4.4	4.2z	4.1	3.9	3.7	a
7	c	c	c	c	c	c	4.1z	4.2z	4.1	4.1z	4.0z	4.0z	3.7f	q
8	c	c	c	4.2	4.3	4.2	4.2	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	4.2	4.2z	4.1	4.0	3.8	3.6	q
10	b	3.9	4.2f	4.3	4.3	4.4z	4.2f	(4.4)s	(4.4)s	4.3	4.4f	s	s	q
11	q	4.0	3.9f	4.1z	4.3	4.3z	4.5z	4.5z	4.5z	4.4z	4.2	4.0	(3.5)	q
12	q	3.8z	3.8z	4.1z	4.2	4.3	4.3	4.4	c	4.2z	4.0z	3.8	3.5	3.0
13	c	c	c	c	c	c	4.0	4.3	4.4	4.4	4.3	4.0	3.7	q
14	q	3.9z	4.0z	4.2z	4.4z	4.1	4.5z	4.5	4.5	4.5	4.3	4.2	4.0	c
15	q	4.0	4.0z	4.2	4.3	4.4	4.5z	4.4	4.4	4.3	4.3	c	c	c
16	q	4.0	4.1	4.2	4.4	4.5	4.5	4.5	4.5z	4.5	4.4	4.2	4.0	c
17	q	3.8	4.0	4.2	4.3	4.4	4.5z	4.4z	4.5z	4.4	4.3z	4.0	3.8	s
18	3.5	3.8	3.7	3.9	4.1	4.2	c	c	c	c	4.2	4,1	c	c
19	q	4.0z	4.2	4.5	4.5	4.4	4.5	4.5	4.5	4.4	4.3z	4.3	4.0	(3.3)
20	3.7	3.8z	4.0	4.3	4.4	4.5	4.4	c	4.4	4.3z	4.2z	4.1	3.9	q
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c
22	q	3.7	3.9z	4.1z	4.3	4.3f	4.4	4.4	4.4	4.3	4.3f	4.0	4.0f	3.5f
23	3.7	3.9	4.0	4.1	4.3	4.4	4.3	4.4	4.3	4.3	4.2f	4.0	3.7	3.5
24	c	c	c	c	c	c	4.4	4.3	4.4	4.4	a	4.0	4.0	3.5
25	q	3.6	4.0	4.2	4.3	4.5	4.3	4.5	4.5z	4.4	4.3z	4.0z	3.6	a
26	q	3.8	4.0	4.3	4.3	4.4	4.4	4.5	4.4	4.3	4.1f	4.0f	4.0f	3.9
27	q	3.8	b	4.0	4.1f	4.3	4.4	4.5	4.4	4.3f	4.3	a	a	a
28	3.5	3.7	3.8	4.0	4.0	c	4.3	4.4	4.3	4.3	4.2f	4.2f	4.0f	3.5f
29	q	q	q	3.8	4.0	4.0	4.2	4.3	4.3	4.3	4.2	4.0	4.0	c
30	q	q	4.2	4.2z	4.4	4.4z	4.5	4.4	4.4	4.3	4.2	4.2	4.1	3.5f
Median	*	3.8	4.0	4.2	4.3	4.3	4.4	4.4	4.4	4.3	4.2	4.0	3.7	3.5
No.		20	21	24	25	24	26	25	25	26	25	24	23	9

Sweep: 1.0 - 13.0 Mc/s. in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F1 NOVEMBER 1952

HOURLY VALUES OF $f^{\circ}E$ OBSERVED DURING NOVE BER 1952 AT MACQUARIE ISLAND

Hour / Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1		b	b	b	2.8	2.9	3.0	b	b	b	b	b	b	b	c
2		c	c	c	c	b	c	b	b	b	3.0	2.9	b	a	c
3		b	b	b	b	3.1	3.1	3.2	3.2	3.1	3.0	2.8	2.7	2.4	c
4		2.0	2.4	2.6	2.9	3.0	3.2	3.1	3.1	3.0	3.0	2.8	b	f	e
5		2.4	2.4	2.7	3.0	3.0	3.3	3.2	3.2	c	c	c	c	c	c
6		e	2.4	2.5	2.8	(3.0)s	a	3.1	3.1	3.1	2.7	2.9	2.8	2.6	a
7		c	c	c	c	c	c	3.2z	3.2z	3.1	3.0	2.8	2.6	2.5z	c
8		c	c	c	c	3.3	3.2	3.1	c	c	c	c	c	c	c
9		c	c	c	c	c	c	c	3.2	3.1	3.0	b	b	a	a
10		b	b	s	s	3.0	b	3.2	a	3.1	s	2.9	s	s	s
11		1.9	2.4	s	b	s	3.2	3.2	3.2	3.2	3.0	3.0	2.7	b	b
12		a	2.5z	2.6z	2.9z	3.0	3.1	3.2	3.2	c	3.0	3.0z	2.7	2.5	b
13		c	c	c	c	c	c	3.2	a	a	3.2	3.1	2.8	2.5	b
14		2.0	2.4z	2.7z	3.0z	3.3z	3.3	3.3z	3.2	3.2	3.2	3.2	2.8	2.6z	c
15		2.3	2.6	2.7	3.0	3.1	3.2	a	a	3.3	a	a	c	c	c
16		2.3	2.6	b	3.1	3.2	3.3	3.3	3.3	3.2	3.2	3.1	3.0	2.6	c
17		c	2.6	2.7	3.0	3.2	3.3	3.4	3.3	3.3	3.2	3.1	2.8	s	s
18	(1.7)	2.2	b	b	3.0	3.2	b	b	b	b	b	b	b	b	b
19	1.8f	2.2	2.6z	3.0z	3.1	3.0	3.2	3.3	3.3	3.3	3.1	3.0	2.9	2.7	a
20	1.8	2.3	2.6z	2.8z	3.0z	3.2	3.2	3.3	c	3.2	3.2	3.1	3.0	2.6	2.2
21	1.6	c	c	c	c	c	c	c	c	c	c	c	c	c	c
22		b	2.6	2.8z	3.0	3.1	3.2	3.3	3.1	3.2	3.2	3.2	3.2	f	f
23		b	2.6	2.7	2.9	3.0	3.1	3.2	3.2	3.2	3.2	3.0	2.8	a	2.4
24		2.5	c	c	c	c	c	3.3	3.3	3.3	3.1	3.0	2.8	2.5	2.2
25		2.3	2.6	3.0	3.0	3.1	3.2	3.2	a	3.2	3.0	3.0	3.0	a	a
26		2.3	2.7	2.8	3.0	3.2	3.2	3.3	b	a	3.1	2.9	2.7	2.6	2.5
27		a	a	b	b	b	b	b	3.2	3.2	b	a	a	a	a
28		a	b	b	3.0	3.1	c	b	3.4	b	3.1	b	2.9	2.7z	2.4z
29		b	b	b	b	3.0	3.1	3.1	3.1	3.1z	3.3	a	b	b	c
30		b	b	b	3.0z	3.1	3.1	3.2	3.2	3.1	3.1	3.0	2.8	b	b
Median.	*	2.3	2.6	2.7	3.0	3.1	3.2	3.2	3.2	3.2	3.1	3.0	2.8	2.6	2.3
No.		12	15	13	18	22	19	22	19	20	22	20	18	12	6

Sweep: 1.0 - 13.0 Mc/s in 1^{m} 55^{s} Time used: 157.5 E.M.T. MACQUARIE ISLAND $f^{\circ}E$ NOVE BER 1952

HOURLY VALUES OF fEs OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

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	b	4.5	4.5	3.5	b	b	b	b	g	g	g	b	b	b	b	b	b	3.1	2.5	4.0	4.5	3.3	4.3	4.5
2	4.6	c	c	c	c	c	c	c	c	b	c	b	b	b	g	g	b	3.0	4.5	3.1	3.5	e	3.5	b
3	3.3	b	b	3.1	3.2	3.5	b	b	b	3.5	3.5	6.0	4.0	4.0	4.3	g	g	2.8	c	c	4.5	b	4.5	4.5
4	4.5	4.5	4.0	3.5	3.0	2.7	3.5f	3.6	4.2	4.5	4.5	5.2	3.7	g	g	g	b	g	e	e	e	e	e	4.5
5	e	e	e	e	e	g	g	g	g	g	g	g	c	c	c	c	c	c	c	c	c	e	e	e
6	3.5	3.2	3.0	e	e	g	g	3.8	3.7	s	4.0f	g	g	g	3,2	g	g	3.8	5.5	5.8	4.5	4.5	c	4.3
7	4.5	3.0	c	c	c	c	c	c	c	c	c	4.3	g	g	g	g	3.5	g	e	e	3.5	3.3	c	4.3
8	3.5	c	c	c	c	c	c	c	g	g	3.6	c	c	c	c	c	c	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c	g	g	g	b	b	5.5	3.8	o	e	e	e	e
10	e	b	4.1y	3.2	4.4	b	b	s	s	s	b	g	4.0	g	s	g	s	s	e	3.1	e	c	e	e
11	e	e	e	b	b	g	3.2	s	b	s	g	g	3.8	g	g	g	g	b	2.7	e	e	4.5	4.5	3.3
12	e	e	e	1.7	4.0	3.1	3.3	g	g	g	3.5	3.6	3.4	c	4.1	3 6	g	g	e	e	c	e	c	e
13	4.0y	3.4	e	c	c	c	c	c	c	c	c	3.5	4.0	3.7	g	3.6	3.3	g	e	4.5	4.5	e	e	e
14	e	2.2	3.3	1.7	1.7	2.0	g	3.3	g	g	3.6	g	3.6	3.5	g	g	3.1	3.2	c	4.0	3.2	5.5	3.5	e
15	e	e	e	e	e	g	g	3.3	3.5	3.6	4.3	3.8	4.5	4.1	4.1	3.6	c	c	c	c	c	4.5	5.5	4.0
16	3.4	e	e	3.2	e	g	g	b	4.5	4.5	4.1	3.7	g	g	3.6	3.5	4.0f	4.6	c	c	c	5.7	c	4.0
17	7.6	b	4.5y	4.0	e	g	g	g	4.0f	4.4	g	g	g	g	g	g	g	s	s	6.0	4.5	4.5	4.5	3.2
18	3.2	3.4	3.3	1.8	e	g	b	b	g	g	b	b	b	b	b	b	b	b	b	b	b	4.3	4.5	3.6
19	5.0	3.0f	4.0	3.3f	e	g	g	4.2	4.4	g	g	g	3.6	3.8	3.5	g	3.5	g	4.0	e	3.8	3.5	3.5f	c
20	4.8	e	2.0	2.7	e	g	g	g	3.6	5.0	5.4	3.8	c	4.5	g	g	g	5.0	5.8	5.0	c	5.0	3.4y	e
21	e	e	e	e	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	4.6	4.6
22	4.9	4.7	4.5	3.6	2.7	b	g	g	g	4.4	3.6	4.4	3.6	4.2y	4.1y	4.5	6.6	5.8	f	3.5	3.1y	4.3	4.4y	3.6
23	4.0	3.6	3.1	b	b	3.6	3.1	4.0	5.5	3.5	4.0	5.0	g	g	g	g	g	4.3	4.4	4.8z	4.3	3.5	3.3f	4.6
24	4.3	3.2	e	e	e	g	c	c	c	c	c	3.6	3.5	g	4.2	7.6	5.7	5.2	2.6	3.5	4.5	4.0	5.5	4.5
25	4.0y	5.3	4.5	3.6	e	g	g	g	g	3.8	3.6	3.7	7.6	5.5	4.8	4.0	5.4	7.0	5.3	3.6	4.2	4.5	5.6	5.6
26	4.7	3.2	3.3	3.3	e	3.6	g	g	g	g	3.6	3.9	4.6	4.5	4.5	g	g	g	o	b	5.5	3.9y	4.2	4.4
27	4.3	4.6	4.5	4.0	4.3	4.0	4.2	3.2	b	b	b	b	g	g	b	4.6	5.7	7.6	5.8	4.4	c	b	4.0f	b
28	4.5	4.5	6.0	b	b	2.4	b	b	3.5	3.4	c	b	g	3.7	4.2f	b	4.5	3.7	3.5	e	4.5	4.7	4.5	4.0
29	4.3	4.7	4.0	4.0	3.6v	2.0	b	b	b	g	g	3.5	3.4	3.3	g	3.4	3.1	b	c	4.2	4.5	3.6	4.3	3.4
30	7.0y	4.5	4.0	3.5	o	b	b	5.6y	4.3	g	3.4	3.4	4.4	3.6	g	g	g	3.6	b	o	o	e	3.1f	4.1
Median.	4.0	3.2	3.3	3.2	**	**	**	3.3	3.5	3.4	3.6	3.6	3.6	3.3	**	**	3.1	3.6	3.1	3.5	4.2	4.0	4.2	4.0
NO.	28	24	25	22	21	20	16	15	19	20	20	22	23	23	23	23	20	21	18	22	21	24	25	26

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND fEs NOVEMBER 1952

HOURLY VALUES OF h'F2 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

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	b	b	b	b	b	450s	b	g	g	g	g	g	550	530	550	b	480	400	320	280	260	a	a	a
2	a	c	c	c	c	c	c	c	c	c	c	b	b	430	450	500	400	300	250	300	300	290	b	b
3	a	b	b	b	b	a	400	1	430	460	420	400	400	350	350	330	320	330	250	c	a	b	a	a
4	a	a	a	290	a	250	320	350	350	350	350	330	300	300	300	300	300	280	280	250	250	270	280	300
5	f	f	f	f	250	250	320	350	350	350	330	300	300	300	330	270	(280)	300	270	270	280	240	300	300
6	320	a	a	280	270	230	(300)	380	340	360	380	330	340	330	350	300	300	300	a	a	350	a	c	a
7	a	a	c	c	c	c	c	c	c	c	c	650	440	440	500f	440	450	380	250	250	280	300	c	a
8	330f	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c	350	450	450	350	320	280	250	260	380	300	300	300
10	300	b	b	b	260	240	1	s	s	s	300	300	280	290	s	280	s	s	250	240	250	c	250	(300)f
11	270	260	250	b	250	230	(600)	s	s	s	320	300	320	300	300	280	280	260	240	230	250	b	b	b
12	250	280	280	300f	300	250	1	400f	450f	360	380	380	400	c	360	350	320	300	300	250	c	300	c	300
13	300	e	250	c	c	c	c	c	c	c	c	320	280	300	300	300	280	270	250	250	250	250	280	240
14	250	250	290	300	250	230	1	300	280	280	300	300	300	300	310	300	280	290	c	300	280	a	300	300
15	300	300	300	300	270	280	330	310	350	360	400	330	320	340	320	340	c	c	c	c	c	b	a	a
16	350	310	(280)	a	280	250	(320)	300	300	300	300	280	320	320	300	300	300	300	c	c	c	300	c	b
17	a	b	b	320	270	250	320	400	350	350	350	380	320	350	340	370	330	290	300	a	a	a	a	(320)
18	a	320	a	f	280	1	g	g	g	g	g	c	c	c	c	c	c	c	c	c	c	a	a	a
19	360	(340)	(340)	300	250	250	1	350	310	310	360	350	320	320	240	300	300	300	250	240	260	b	b	c
20	a	300	250	a	270	1	1	300	320	350	320	350	c	320	300	300	300	300	250	240	c	250	250	250
21	250	290	280	240	210	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	a	a
22	a	a	a	a	300	b	1	400	400	500	450	400	390	370	320	350	350	250	280	300	280	a	a	a
23	b	a	b	b	320	400	350	400	380	390	430	480	500	400	350	360	330	330	280	a	a	a	b	a
24	350	290	280	220	250	250	c	c	c	c	c	380	400	380	350	a	300	300	280	280	a	320	310	b
25	b	a	a	a	250	230	280	350	320	300	320	350	300	310	300	280	260	280	250	250	350	300	280	300
26	a	a	a	320	250	240	1	350	340	350	360	350	350	340	300	300	280	300	310	b	a	b	a	a
27	a	a	a	a	a	a	350s	b	500	500	g	460	320	340	350	420	370	400	a	a	c	b	a	b
28	b	a	a	b	b	g	530	630	550	450	c	380	350	340	360	340	350	300	300	330	a	300	a	350
29	b	a	a	a	300	300	b	b	530	480	470	370	370	380	350	370	330	1	c	a	a	300	350	a
30	b	300	250	260	260	260	b	340	530	370	330	310	300	320	300	300	300	300	300	260	250	230	280	a
Median.	300	300	280	300	265	250	330	350	350	360	355	350	320	340	335	300	300	300	270	255	280	300	280	300
No.	12	12	11	11	20	19	13	18	21	21	22	25	25	26	26	25	25	24	21	18	15	14	11	11

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'F2 NOVEMBER 1952

HOURLY VALUES OF hpF2 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

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	b	b	b	b	s	b	g	g	g	g	g	u	u	u	b	u	u	u	330	310	a	a	a
2	a	c	c	c	c	c	c	c	c	c	c	b	b	u	u	u	u	u	260	330	340	300	b	b
3	a	b	b	b	b	a	u	u	u	u	u	u	u	u	u	u	u	340	280	c	a	b	a	a
4	a	a	300	300	300	u	u	u	u	u	u	u	u	u	u	u	u	300	310	260	300	300	310	330
5	f	f	f	f	u	g	u	u	u	u	u	u	u	u	u	u	u	u	300	300	290	250	u	u
6	340	a	a	u	280	280	u	u	u	u	u	u	u	u	u	u	u	u	a	a	u	a	c	a
7	a	a	c	c	c	c	c	c	c	c	c	u	u	u	u	u	u	u	280	270	330	320	c	a
8	u	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	290	280	310	300	330	u	u
10	u	b	b	b	280	270	u	u	u	u	u	u	u	u	s	u	s	s	280	270	280	c	300	u
11	300	300	300	b	250	280	u	u	u	u	u	u	u	u	u	290	300	290	260	270	280	b	b	b
12	340	340	300	330	u	280	u	u	u	u	u	u	u	c	u	u	u	u	310	300	c	u	c	350
13	u	280	300	c	c	c	c	c	c	c	c	u	u	u	u	u	u	290	290	300	280	290	300	290
14	c	300	u	u	260	250	u	u	u	u	u	u	u	u	u	310	290	320	c	u	300	a	330	320
15	320	u	u	u	300	g	u	u	u	u	u	u	u	u	u	u	c	c	c	c	c	b	a	a
16	310	u	300	a	290	300	u	u	u	u	u	u	u	u	u	u	u	340	c	c	c	320	c	b
17	a	b	b	340	290	300	u	u	u	u	u	u	u	u	u	u	u	300	320	a	a	a	a	u
18	a	340	a	f	300	u	g	g	g	g	g	c	c	c	c	c	c	c	c	c	c	a	a	380
19	380	350	350	u	300	280	u	u	u	u	u	u	u	u	u	u	310	320	280	270	300	b	b	c
20	a	u	260	330	u	u	u	u	u	u	u	u	c	u	u	310	310	u	280	290	c	270	280	290
21	300	320	320	270	230	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	a	a
22	a	a	a	a	320	b	u	400	u	u	u	u	u	u	u	u	u	290	290	u	300	a	a	b
23	b	a	b	b	340	u	u	u	u	u	u	u	u	u	u	u	u	u	u	a	370	a	b	a
24	360	300	300	300	280	280	c	c	c	c	c	u	u	u	u	a	310	u	300	320	a	350	320	b
25	b	a	a	300	270	320	u	u	u	u	u	u	u	u	u	u	u	290	290	310	360	330	300	u
26	a	a	a	u	280	280	u	u	u	u	u	u	u	u	u	u	290	u	320	b	a	b	a	a
27	a	a	a	a	a	a	u	b	u	u	g	u	u	u	u	u	u	f	a	a	c	b	a	b
28	b	a	a	b	b	g	u	u	u	u	c	u	u	u	u	350	u	u	310	340	a	a	a	u
29	b	a	a	a	320	u	b	300	u	u	u	u	u	u	u	u	u	u	c	330	a	320	360	a
30	b	310	280	280	280	300	b	u	u	u	u	u	u	u	u	u	u	310	310	310	300	250	310	a
Median.	(330)	(310)	300	(300)	285	280	*	*	*	*	*	*	*	*	*	*	(305)	300	290	300	300	310	(310)	(325)
No.	8	9	10	8	18	15											6	12	19	17	15	12	9	6

Sweep: 1.0 - 13.0 Mc/s.

Time used: 157.5° E.M.T.

MACQUARIE ISLAND hpF2 NOVEMBER 1952.

HOURLY VALUES OF h'F1 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1	b	b	(260)	220	230	240	200	200	230	200	b	220	230	260
2	c	c	c	c	220	220	b	b	210	200	230	230	230	q
3	b	b	230	250	230	200	210	200	200	200	210	210	220	q
4	q	230	210	210	210	200	200	200	200	200	200	s	(250)	q
5	q	230	230	200	200	210	200	200	c	c	c	c	c	c
6	q	250	220	210	200	200	200	200	200	200	230	230	250	a
7	c	c	c	c	c	c	200	210	200	200	210	200	230	q
8	c	c	c	210	200	200	200	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	200	200	200	200	220	230	q
10	b	220	210	210	a	200	200	200	200	200	200	s	s	q
11	q	210	(200)	200	200	200	200	200	200	200	220	220	220	q
12	q	250	220	200	200	200	210	220	c	200	200	220	240	230
13	c	c	c	c	c	c	190	180	180	200	200	200	200	q
14	q	230	220	200	200	190	180	200h	200	200	200	220	230	c
15	q	240	230	230	200	210	200	200	200	210	210	c	c	c
16	q	240	250	200	200	200	200	200	200	220	230	220	240	c
17	q	250	220	200	210	210	200	200	200	200	200	200	230	s
18	230	200	b	210	230	220	c	c	c	c	c	c	c	c
19	q	230	230	210	220	200	200	200	200	220	200	200	230	240
20	250	240	200	210	200	200	190	c	200	200	200	200	230	q
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c
22	q	240	220	200	200	200	210	240	230	f	210	220	200	240
23	(280)	260	250	220	200	200	200	200	200	210	210	200	a	280f
24	q	c	c	c	c	c	200	210	200	210	a	a	230	230
25	q	210	(200)	200	180	200	200	a	200	220	230	(220)	a	a
26	q	230	220	200	200	200	210	200	200	190	200	200	200	220
27	q	280	b	240	200	b	b	200	210	160	a	a	a	a
28	270	280	250	240	240	a	220	210	200	200	b	250	240	250
29	q	q	q	(230)	230	(230)	230	210	200	210	200	220	240	c
30	q	q	240	200	200	200	190	210	190	180	200	220	220	250
Median.	*	240	220	210	200	200	200	200	200	200	200	220	230	240
No.		19	20	24	24	23	25	24	25	25	22	21	21	9

 Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$. Time used: 157.5° E.M.T. MACQUARIE ISLAND h'F1 NOVEMBER 1952

HOURLY VALUES OF h'E OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1		b	b	b	100	100	100	b	b	b	b	b	b	b	a
2		c	c	c	c	b	c	b	b	b	100	110	b	c	c
3		b	b	b	b	110	100	100	100	100	100	100	110	100	c
4		100	100	100	100	100	100	100	100	100	100	100	b	f	e
5		140	100	100	100	100	100	100	c	100	100	c	c	c	c
6		e	130	120	100	(100)s	a	100	110	110	110	110	100	150	a
7		c	c	c	c	c	c	100	100	100	100	100	100	100	c
8		c	c	c	c	100	100	100	c	c	c	c	c	c	c
9		c	c	c	c	c	c	c	100	100	100	b	b	a	a
10		b	b	s	s	100	b	100	100	100	s	100	s	s	s
11		e	100	s	b	s	110	100	100	100	100	110	110	b	b
12		a	100	100	100	100	100	100	100	c	100	100	100	c	b
13		c	c	c	c	c	c	100	a	a	100	100	100	c	b
14		100	100	100	100	100	100	100	100	100	100	100	100	100	c
15		c	100	110	100	100	110	a	a	100	a	a	c	c	c
16		c	110	b	110	100	100	100	100	100	100	100	100	110	c
17		c	110	100	100	100	100	100	100	100	100	100	100	s	s
18		100	b	b	(100)s	100	b	b	b	b	b	b	b	b	b
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	a
20	100	100	100	100	100	100	100	100	c	100	100	100	100	110	110
21	120	c	c	c	c	c	c	c	c	c	c	c	c	c	c
22		b	100	100	100	100	100	100	100	b	b	120	120	f	f
23		b	100	100	100	100	100	100	100	100	100	100	100	a	100
24		c	c	c	c	c	c	100	100	100	100	100	100	100	c
25		c	120	110	100	100	100	100	a	a	a	b	b	a	a
26		c	110	110	100	100	100	100	b	a	100	120	120	100	130
27		a	a	b	b	b	b	b	b	100	b	a	a	a	a
28		a	b	b	100	100	c	b	100	b	110	b	b	100	a
29		b	b	b	b	100	100	100	100	100	100	b	b	b	c
30		b	b	b	100	100	110	100	110	110	100	110	110	b	b
Median.	*	100	100	100	100	100	100	100	100	100	100	100	100	100	*
No.		8	15	13	18	22	19	22	18	19	21	19	16	10	

Sweep: 1.0 - 13.0 Mc/s. in 1m 55s Time used: 157.5. E.M.T.

HOURLY VALUES OF h'Es OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

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	120	100	100	b	b	b	b	g	g	g	b	b	b	b	b	b	140	150	120	120	100	100	110
2	100	c	c	c	c	c	c	c	c	b	c	b	b	b	g	g	b	130	130	140	140	e	100	b
3	100	b	b	100	100	120	b	b	b	130	130	130	110	110	100	g	g	120	c	c	100	b	100	100
4	100	100	100	100	100	150	120	120	120	110	110	120	120	g	g	g	b	g	e	e	e	e	e	100
5	e	e	e	e	e	g	g	g	g	g	g	g	c	c	c	c	c	c	c	c	c	e	e	e
6	120	100	100	e	e	g	g	110	110	s	100	g	g	g	110	g	g	120	110	120	100	100	c	100
7	100	100	c	c	c	c	c	c	c	c	c	100	g	g	g	g	100	g	e	e	110	100	c	110
8	100	c	c	c	c	c	c	c	c	g	g	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	c	g	g	g	b	b	100	130	e	e	e	e	e
10	e	b	100	100	100	b	b	s	s	s	b	g	100	g	s	g	s	s	e	130	e	c	e	e
11	e	e	e	b	b	g	130	s	b	s	g	g	120	g	g	g	g	b	120	e	e	100	100	100
12	e	e	e	100	100	120	130	g	g	g	120	120	110	c	110	110	g	g	e	e	c	e	c	e
13	110	100	e	c	c	c	c	c	c	c	c	110	100	100	g	120	120	g	e	120	110	e	e	e
14	e	100	100	100	100	100	g	120	g	g	130	g	120	110	g	g	130	150	c	140	150	120	150	e
15	e	e	e	e	e	g	g	130	130	110	110	100	100	110	110	110	c	c	c	c	c	110	100	100
16	110	e	e	100	e	g	g	b	110	130	120	110	g	g	110	100	100	150	c	c	c	120	c	100
17	100	b	100	100	e	g	g	g	100	110	g	g	g	g	g	g	g	s	s	110	110	100	100	100
18	100	100	100	100	e	g	b	b	g	g	b	b	b	b	b	b	b	b	b	b	b	110	110	100
19	120	100	110	100	e	g	g	130	100	g	g	g	130	120	120	g	100	g	130	e	120	100	100	c
20	100	e	160	100	e	g	g	g	120	110	110	120	c	110	g	g	g	130	110	130	c	110	110	e
21	e	e	e	e	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	130	100
22	100	100	100	100	100	b	g	g	g	120	100	110	110	130	140	140	140	140	f	110	130	100	100	100
23	100	120	100	b	b	100	170	140	130	140	140	100	g	g	g	g	g	110	140	120	120	130	140	100
24	100	120	e	e	e	g	c	c	c	c	c	130	160	g	130	115	110	100	140	140	110	140	100	100
25	100	100	100	100	e	g	g	g	g	100f	130	130	100	110	110	110	120	130	120	150	120	130	110	100
26	100	100	100	100	e	100	g	g	g	g	120	120	110	100	120	g	g	g	e	b	100	100	120	100
27	100	100	100	100	100	100	100	120	b	b	b	b	g	g	b	130	120	120	110	130	c	b	100	b
28	100	100	100	b	b	130	b	b	140	130	c	b	g	120	140	b	150	130	120	e	100	100	100	100
29	130	100	100	100	100	100	b	b	b	g	e	120	120	120	g	110	110	b	c	120	110	100	100	120
30	100	100	110	130	e	b	b	120	100	g	130	120	110	110	g	g	g	150	b	a	a	10-	100	100
Median.	100	100	100	100	100	100	130	120	110	110	120	120	110	110	110	110	120	130	125	125	110	100	100	100
No.	21	17	17	17	8	9	5	8	10	10	13	16	15	12	11	9	11	15	12	14	16	18	20	19

301. Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'Es NOVEMBER 1952

HOURLY VALUES OF (M3000) F2 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

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	b	b	b	b	b	(2.5)	3.1	g	g	g	g	g	2.5	2.5	2.6	b	2.7	2.8	3.0	2.9	2.9	a	a	a
2	a	c	c	c	c	c	c	c	c	c	c	b	b	2.8	2.7	2.5	2.8	3.1	3.3	3.1	2.9	3.0	b	b
3	a	b	b	b	b	3.4	3.0	2.8	2.8	2.7	2.9	2.9	2.9	2.9	2.9	3.1	3.1	3.0	3.2	c	a	b	a	a
4	a	a	3.0	2.7	3.1	3.1	(3.1)	3.1	3.1	3.0	3.0	3.1	3.1	3.1	3.1	3.3	3.1	3.2	3.1	3.2	3.2	3.1	3.0	2.9
5	f	f	f	f	3.3	3.4	3.1	3.2	3.1	3.3	3.3	3.2	3.4	3.2	3.3	3.3	3.3	3.3	3.4	3.2	3.3	3.0	(3.0)	(3.0)
6	2.8	a	a	3.1	3.4	3.3	3.2	3.2	3.1	3.1	2.9	3.1	3.1	3.2	3.0	3.2	3.1	3.0	a	a	(2.8)	a	c	a
7	a	a	c	c	c	c	c	c	c	c	c	2.3	2.8	2.8	2.6	2.8	2.8	3.0	3.2	3.2	3.0	2.8	c	a
8	2.9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c	3.0	2.7	2.7	2.9	2.8	3.0	3.5	3.0	3.0	3.0	3.0	2.9
10	3.0	b	b	b	3.2	3.2	2.9	(3.1)	s	s	3.0	3.2	3.3	3.1	s	3.2	s	s	3.4	3.4	3.4	c	3.0	2.8
11	3.0	3.0	3.0	b	3.2	3.2	2.5	3.0	s	s	3.1	3.0	3.0	3.3	3.2	3.3	3.3	3.3	3.4	3.2	3.1	b	b	b
12	3.0	2.7	2.9	2.8	3.0	3.2	2.5	2.7	2.8	2.9	2.9	2.9	2.8	c	3.0	2.8	3.0	3.1	3.1	3.3	c	3.2	c	2.8
13	3.0	3.6	3.0	c	c	c	c	c	c	c	c	3.1	3.2	3.1	3.3	3.2	3.2	3.1	3.2	3.2	3.2	(3.3)	3.1	3.0
14	c	3.0	3.0	3.0	3.4	3.5	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.1	c	3.2	3.1	a	3.0	3.1
15	2.8	2.7	3.0	f	3.2	3.5	3.2	3.2	2.9	3.0	2.9	3.1	3.0	2.9	3.1	3.0	c	c	c	c	c	b	a	a
16	2.7	2.9	(2.9)	(2.8)	3.3	3.3	3.2	3.2	3.2	3.3	3.2	3.3	3.1	3.2	3.2	3.2	3.1	3.2	c	c	c	3.1	c	b
17	a	b	b	3.0	3.1	3.2	3.0	2.7	3.0	3.0	3.0	2.9	3.2	3.0	3.0	2.9	3.1	3.1	3.1	a	a	a	a	2.9
18	a	2.8	a	f	3.1	n	g	g	g	g	g	c	c	c	c	c	c	c	c	c	c	a	a	2.7
19	2.6	f	f	f	3.2	3.2	n	3.2	3.2	3.1	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.3	3.1	b	b	c
20	a	3.0	2.6	2.8	3.4	n	3.3	3.5	3.2	3.0	3.1	3.0	c	3.1	3.1	3.1	3.3	3.1	3.2	3.2	c	3.2	3.0	2.9
21	3.0	2.9	3.0	3.1	3.2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	a	f
22	a	a	a	2.8	3.1	2.8	2.9	3.0	2.9	2.6	2.7	2.9	2.9	2.9	3.0	2.8	2.9	3.1	3.2	3.1	3.0	a	a	b
23	b	a	b	b	2.8	2.7	2.9	3.0	2.9	2.9	2.7	2.6	2.5	2.8	2.9	2.8	2.9	2.8	3.3	a	2.7	a	b	a
24	2.9	3.1	2.8	3.1	3.4	3.3	c	c	c	c	c	2.9	2.8	2.9	3.0	a	3.1	3.2	3.2	3.0	a	2.8	3.0	b
25	b	a	a	3.0	3.3	3.2	3.2	3.0	3.1	3.0	3.0	3.0	3.3	3.1	3.1	3.1	3.3	3.1	3.1	3.1	2.9	(3.0)	3.0	3.1
26	a	a	a	2.9	3.3	3.3	3.0	3.0	3.0	3.0	2.9	3.1	3.0	3.0	3.2	3.1	3.3	3.1	2.9	b	a	b	a	a
27	a	a	a	a	a	a	s	b	2.5	2.6	g	2.7	3.1	3.0	2.8	2.7	2.9	f	a	a	c	b	a	b
28	b	a	a	b	b	g	2.5	2.4	2.4	2.6	c	2.8	2.8	2.9	2.8	3.0	2.8	3.1	3.0	3.0	a	a	a	2.6
29	b	a	a	a	2.7	3.2	b	3.2	2.5	2.6	2.7	3.0	3.0	2.9	3.1	2.9	3.0	3.0	c	3.1	a	2.9	2.8	f
30	b	2.9	3.0	3.2	3.3	3.1	3.2	3.0	3.0	2.9	3.1	3.2	3.3	3.3	3.2	3.1	3.1	3.2	3.1	2.9	3.1	3.0	3.1	a
Median.	2.9	2.9	3.0	3.0	3.2	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.0	3.0	3.0	2.9
No.	11	11	11	13	21	21	20	22	21	21	22	25	25	26	26	25	25	24	21	19	16	13	11	12

Sweep: 1.0 - 13.0 Mc/s in 1^m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (M3000) F2 NOVEMBER 1952.

HOURLY VALUES OF (M3000) F1 OBSERVED DURING NOVEMBER 1952 AT MACQUARIE ISLAND

Day \ Hour	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1	b	b	3.4	3.5	3.6	3.8	3.8	3.7	3.9	3.9	b	3.6	3.4	3.1
2	c	c	c	c	(3.6)	3.4	b	b	3.9	3.8	3.7	3.6	3.4	q
3	b	3.3	3.4	3.5	3.7	3.9	3.9	3.8	3.8	3.8	3.6	3.6	3.7	q
4	q	3.3	3.4	3.5	3.6	3.7	3.7	4.1	3.9	3.8	3.9	s	s	q
5	q	3.4	3.6	3.8	3.8	3.8	3.9	3.7	c	c	c	c	c	c
6	q	3.5	3.5	3.7	3.9	3.9	3.8	4.0	3.8	3.7	3.7	3.7	3.5	a
7	c	c	c	c	c	c	3.9	3.8	4.0	3.7	3.7	3.6	3.5	q
8	c	c	c	3.8	3.7	3.9	3.8	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	4.0	3.8	3.9	3.7	3.7	3.4	q
10	b	3.4	(3.3)f	3.7	f	3.8	4.0	3.8	3.9	3.8	3.6	s	s	q
11	q	3.4	3.5	3.9	3.6	3.8	3.6	3.8	3.9	3.8	3.7	3.7	q	q
12	q	3.5	3.8	3.8	3.7	3.8	3.8	3.7	c	3.7	3.8	3.3	3.4	3.6
13	c	c	c	c	c	c	4.2	4.0	3.8	3.8	3.6	3.7	3.7	q
14	q	3.6	3.8	4.0	4.0	4.1	4.0	3.8	3.8	3.8	3.7	3.5	3.6	c
15	q	3.4	3.7	3.6	3.5	3.4	3.7	3.7	3.8	3.8	3.6	c	c	c
16	q	3.4	3.6	3.8	3.8	3.7	3.9	3.9	3.8	3.7	3.5	3.7	3.4	c
17	q	3.5	3.5	3.5	3.7	3.8	3.9	3.9	3.7	3.8	3.8	3.7	3.6	s
18	3.4	3.4	b	3.7	3.7	3.8	c	c	c	c	c	c	c	c
19	q	3.4	3.6	3.5	3.8	4.1	s	3.6	3.7	3.7	3.7	3.4	3.4	q
20	3.3	3.7	3.7	3.9	3.9	3.8	3.9	c	3.9	3.8	3.8	3.8	3.8	q
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c
22	q	3.5	3.7	3.9	3.8	3.8	3.9	3.7	3.8	f	3.7	3.6	(3.7)	f
23	3.0	3.2	3.5	3.7	3.7	3.6	3.9	3.8	3.7	3.9	3.8	3.7	a	f
24	q	c	c	c	c	c	3.6	3.9	3.7	3.7	a	3.7	3.6	3.6
25	q	3.5	3.5	3.8	3.8	3.7	4.0	a	4.0	3.9	3.6	3.7	a	a
26	q	3.6	3.7	3.6	3.7	3.7	3.7	3.7	3.9	3.9	3.9	3.6	3.8	3.4
27	q	3.2	b	3.7	3.7	3.5	3.6	3.6	3.9	3.7	a	a	a	a
28	3.1	3.2	3.4	3.7	3.8	c	3.6	3.9	3.9	3.8	b	3.3	3.4	q
29	q	q	q	3.4	3.6	3.6	3.8	3.8	3.8	4.0	3.8	3.6	3.5	c
30	q	q	3.4	3.5	3.6	3.8	3.9	4.0	3.8	3.9	3.9	3.6	3.5	3.4
Median.	*	3.4	3.5	3.7	3.7	3.8	3.9	3.8	3.8	3.8	3.7	3.6	3.5	3.4
No.		20	20	24	24	24	25	24	25	25	22	22	19	5

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND (M3000)F1 NOVEMBER 1952

HOURLY VALUES OF f°F2 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	00	01	02	03	04	05	06	07	08	09	10	11
1	3.5f	3.5f	3.5	3.3	3.5	4.1	4.8	5.3	5.5	5.9	6.1z	6.0
2	c	c	c	c	c	c	c	c	c	c	c	5.8
3	a	a	a	a	3.0	3.3	g	g	g	g	g	4.8
4	a	a	a	2.6	3.1	g	4.1	4.6z	4.8	[illegible]	5.1	5.1
5	a	b	a	(3.3)	3.2	b	g	g	g	4.4	4.6	5.3
6	3.8	3.7	3.0	2.9	3.5	g	g	b	4.4	4.6	4.7h	c
7	c	c	c	c	c	c	c	c	c	c	c	c
8	3.4	2.8	2.6f	(3.0)f	3.5	3.9	4.5	g	(5.0)s	5.4	5.3	5.8
9	3.0	2.8	(4.0)	3.2	3.3	g	4.1	4.6	5.0	5.0	5.2	5.5
10	c	c	c	c	c	c	c	c	c	c	c	5.8
11	(4.5)b	b	b	b	a	4.5	4.3f	4.8	5.5	4.8f	5.2	5.3
12	a	a	3.6	3.1	3.6	4.0	4.9	5.4	5.4	5.6	5.7	6.1
13	c	a	b	3.2	(3.8)	(4.0)	g	(4.6)	c	5.2	5.3	5.4
14	a	a	a	3.6	(3.7)	a	4.0	4.2	4.3	4.5	4.6	4.8
15	(3.7)f	3.5	3.4	3.5	4.0z	c	c	c	c	c	6.0	5.8
16	a	a	2.1	2.2	2.8	g	4.0	4.2f	4.5	5.0	4.8	5.0
17	a	a	a	a	3.3	3.8	4.3	4.8	5.0	5.1	5.5	5.7
18	c	c	c	c	c	c	c	c	c	c	5.8	6.1
19	3.5	2.6	3.6f	3.5f	4.1	4.5	b	5.2	5.6	6.0	6.0	6.2
20	4.0	3.3	3.3	3.2	3.5	4.4	5.0z	5.5	5.8	6.3	6.4	6.8
21	(4.6)a	4.3	4.1	3.8	4.0z	4.5	5.3	5.6	5.5	6.0	6.1	6.2
22	(5.1)s	(4.7)s	4.0	4.2	4.1	4.6f	4.8f	5.2	5.5	5.7	5.8	5.8
23	a	a	a	b	4.3	4.2	4.5	4.6f	5.0	5.3	5.8	5.9
24	4.0s	3.4s	3.0	3.3	3.5f	4.0	4.5	4.8	5.3	5.4	5.5	5.7
25	a	a	b	3.5	3.6	4.0	g	b	4.5f	4.4f	[illegible]	5.0s
26	a	a	3.8f	3.9	3.3	3.8	4.0	4.2f	4.5	4.6	c	c
27	4.5	(3.8)s	3.4	3.0	3.5	g	4.3	4.2	4.4	4.8	(4.8)	5.0
28	(3.8)s	3.5	2.9	3.0	3.4	3.8	4.1	4.5	4.5	g	g	b
29	a	a	a	a	b	g	g	g	g	g	4.3	4.3
30	a	a	a	b	b	b	b	b	b	b		c
31	b	a	a	b	b	3.2	g	g	g	g	g	g
Median.	3.8	3.5	3.4	3.2	3.5	3.9	4.1	4.6	4.9	5.0	5.2	5.7
No.	13	12	15	20	23	23	24	23	24	25	27	26

Sweep: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F2 DECEMBER 1952.

HOURLY VALUES OF f°F2 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	12	13	14	15	16	17	18	19	20	21	22	23
1	6.6	6.1z	6.2	6.0z	5.6z	6.3z	c	c	c	c	c	c
2	5.5	5.9	5.8z	6.5	6.0	6.0z	6.5f	5.2	a	a	a	a
3	4.8	4.8	5.0	4.8	6.1	5.2	4.5f	4.2	c	a	c	b
4	5.8	c	c	c	c	c	(4.4)	4.0	a	a	c	a
5	c	4.9	5.4	4.8	5.6	5.9	6.5	4.5	4.0	a	a	3.4
6	c	c	c	c	c	c	c	c	c	c	c	c
7	6.5	6.3	c	c	c	c	c	5.9f	5.5f	5.0f	4.3f	3.6f
8	5.5	5.9	5.8	6.0	5.8	5.8	c	4.5	4.5s	4.5	4.1f	3.2
9	5.6	5.8	6.0z	5.7	5.6	6.0	c	c	c	c	c	c
10	5.9	5.8	6.1z	6.1	6.1	6.3	6.0	5.7	5.0	c	3.6	b
11	(5.1)	a	5.7	5.3	5.5	5.5	5.0	5.0	a	a	a	a
12	5.8	6.1	6.5	6.3	6.1	6.0	5.7z	5.1	a	b	b	a
13	5.3	5.8	5.8	5.8	a	c	4.3	4.0	a	4.6	a	a
14	4.9	4.7	5.0	5.0	4.9	5.3	5.5z	5.5	5.3	4.6	4.0	3.6f
15	6.1	6.0	6.0	6.5	6.3f	6.4	6.4	5.0	a	a	a	a
16	5.0	5.1	5.0f	5.5z	5.5	5.6	5.8	5.2	a	a	a	a
17	5.8	c	c	c	c	c	c	c	c	c	c	c
18	6.3z	6.2z	6.2z	6.1	6.1	(6.5)f	(6.0)	5.9	5.5	5.5	4.5f	4.4f
19	6.3	6.5	6.2	6.2	5.8	5.7	6.0	6.2	6.1	5.9f	5.5	4.3
20	6.8	6.8	6.6	6.4	6.2	6.5z	6.6	6.3	6.1	6.8	5.5	5.5
21	6.4	6.4	6.2	6.3	6.3	6.2	6.6	c	4.7	(5.1)	(5.0)	(5.0)s
22	6.0	6.3	6.1	6.2	6.0	6.3f	6.9	6.1	5.0	c	c	4.8
23	6.0	5.8	5.7	5.5	5.5	c	c	c	5.3f	4.5	4.2	4.1
24	c	5.8	6.0	6.5	6.0h	5.7	4.6f	4.5f	4.5	a	b	b
25	5.4	5.7	5.7	5.7	5.4	5.6	c	c	c	a	a	b
26	c	c	c	c	c	c	c	5.0	4.6	4.1	a	a
27	5.2	5.2	5.2	5.3	5.9	5.8	5.8	4.6	4.7	4.4	(4.5)s	4.3
28	g	g	g	g	g	4.4f	4.1	4.3	4.3	4.1	a	a
29	b	g	4.5f	4.8	5.0f	5.0	4.7z	4.5	a	a	a	a
30	c	c	g	4.6	5.3f	5.5	5.0	4.9f	4.3f	a	c	b
31	(4.7)	b	(4.6)	5.0	5.0f	5.3	4.6f	4.0z	4.0	(3.9)s	a	(3.6)
Median.	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.0	4.7	4.6	4.4	4.2
No.	25	24	26	26	25	24	22	24	17	13	10	12

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

HOURLY VALUES OF f°F1 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND.

Day \ Hour	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	3.5	4.0	4.0	4.2	4.3	4.4z	4.5	4.5	4.5z	4.3z	4.3	4.0	4.0	c	c
2	c	c	c	c	c	c	4.3	4.4	4.2	4.2z	4.3	4.0	4.0f	(2.6)f	q
3	q	q	3.7	3.9	3.9	4.0b	4.3	4.3	4.2	4.2	4.2	4.0	3.8	3.5	q
4	3.5	3.7	4.0z	4.2	4.2	4.3	4.3	4.3	c	c	c	c	c	a	a
5	b	(3.7)	3.8	4.0	4.1	4.2	4.3	c	4.3	4.3	4.2f	4.0	3.9	q	q
6	3.6	3.7	b	4.0	4.1	4.3	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	4.5	4.5	c	c	c	c	c	3.0
8	(3.0)f	4.2	4.5	4.3	4.4	4.4	4.5	4.5	4.5	4.5	4.4	4.2	4.0	c	3.0
9	3.8	3.9	4.2h	4.2	4.4	4.5	4.5	4.5z	4.5z	4.5z	4.5	4.3	4.1	c	c
10	c	c	c	c	c	c	4.5	4.5	4.5	4.5z	4.4	4.1	3.8	3.5	q
11	3.7	4.0	4.1h	4.3	4.3	4.3	4.5	(4.5)	a	(4.5)a	4.3	4.1	3.9	q	q
12	q	4.0	4.2	4.5f	4.5	4.5	4.6	4.5	4.5	4.5	4.5h	4.5	4.2f	3.5	3.5f
13	c	4.3	4.3	4.3	4.5	4.5	4.5z	4.5z	4.4z	4.3z	a	a	c	a	q
14	a	3.8	4.0	4.0	4.1	4.3	4.5	4.4	4.5	4.4	4.3	4.2z	4.0	3.7	q
15	c	c	c	c	c	4.4f	4.5z	4.5z	4.5	4.5	4.4z	4.0	3.9	3.7	a
16	3.5	3.7	4.0	4.1f	4.4	4.4	4.5	4.4	4.4	4.5	4.4z	4.2	4.0	3.5	3.4
17	q	3.9	4.2	4.3	4.4	4.4	4.4	4.5	c	c	c	c	c	c	c
18	c	c	c	c	c	4.5	4.5	4.6z	4.5z	4.5z	4.5	4.0	4.0	(4.0)	q
19	q	b	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.4f	4.1	a	q
20	3.6	4.0	4.4	4.4	4.4	4.5	4.4	4.5	4.5	4.5	4.5	4.4	4.0	3.8	q
21	q	4.1	4.4	4.4	4.4	4.5	4.6	4.5f	4.3f	4.4f	4.4f	4.2f	4.1	4.0	c
22	3.5f	3.9f	4.3f	4.4	4.4	4.5	4.5	4.5	4.5	4.4	4.3	4.3	4.1	(3.6)l	q
23	q	3.8f	4.1	4.2	4.4	4.5	4.5	4.5	4.4	4.3	4.3	4.1	c	c	c
24	3.7	4.1	4.2	4.3	4.4	4.4	4.5	c	4.3	4.4	4.4	4.1	4.0	3.8f	3.5f
25	q	3.7	b	4.0	4.1	4.2	4.3	4.3	4.4	4.3	4.3	4.2	3.9	c	c
26	3.5	3.7	4.0	4.0f	4.0	4.2	c	c	c	c	c	c	c	c	c
27	3.7	3.8	4.0	4.1	4.2	4.3	4.3	4.3	4.4	4.3	4.3	4.0	3.9f	3.7	3.0
28	q	3.8	3.9	4.2	3.8f	4.0	b	4.1	4.2	4.0f	4.0	4.0f	3.6f	3.5f	q
29	3.5	3.5f	3.7	4.0	4.1	4.1	4.2	b	4.2f	4.0f	4.1	4.0	3.9	3.7	3.5
30	b	b	3.6f	b	b	4.0	c	c	c	4.2	4.0	4.0	4.0f	3.6	q
31	b	3.6	(3.8)	3.9	4.0	4.2	4.2	4.3	4.3	4.3	4.1	4.0	3.8	3.5	3.0
Median.	3.5	3.8	4.0	4.2	4.3	4.4	4.5	4.5	4.4	4.4	4.3	4.1	4.0	3.6	3.2
No.	13	23	24	25	25	28	26	25	25	26	25	25	24	27	8

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$ Time used: 157.5° E.M.T. MACQUARIE ISLAND f°F1 DECEMBER 1952.

HOURLY VALUES OF f°E OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
1	e	2.0	2.5	2.7	3.0	3.1	3.2	3.2	3.2	3.2	3.0	3.0	2.8	2.4	c	c	
2	c	c	c	c	c	c	c	a	b	b	3.1	(3.1)	3.0	b	b	b	
3	b	b	b	b	3.0	3.0	b	b	b	3.1	3.0z	2.9	b	2.6	b	b	
4	e	2.1	2.4	2.8z	b	b	b	b	b	c	c	c	c	c	a	a	
5	b	b	b	b	b	b	b	b	c	b	b	3.0	b	b	2.1	b	
6	1.8	2.0	2.5	b	b	3.1	3.3	c	c	c	c	c	c	c	c	c	
7	c	c	c	c	c	c	c	c	a	a	c	c	c	c	c	c	
8	e	f	(2.5)f	a	a	b	b	3.3	3.2	3.1	3.0	3.0	2.9	2.6	c	1.7	
9	1.7f	2.1	2.5	2.7	3.0	3.2	3.3	3.4	3.3	3.3	3.1	3.0	2.8	c	c	c	
10	c	c	c	c	c	c	c	3.4	a	a	a	3.2	3.1	2.8	2.3	1.7	
11	a	a	a	a	3.1	3.3	3.5	3.4	a	3.3	3.3	3.1	3.0	3.0	3.2	a	
12	2.0	2.6	2.9	2.9	2.9	3.2	3.3	3.3	3.4	3.4	3.3	3.2	3.0	2.8	2.4	(2.0)	
13	c	c	c	c	c	c	3.3	3.4	3.3	3.3	3.2	a	a	c	c	c	
14	1.8	a	2.8	2.8z	3.0	3.0	3.2	3.5	3.5	3.3	3.1	3.0	3.0	2.8	2.4z	2.1	
15	2.1	c	c	c	c	c	3.4	3.4	3.5	3.4	3.3	3.2	3.0	3.0	2.6	a	
16	e	2.0	2.5	a	2.9	3.1	3.3	3.3	3.2	a	a	3.2	3.0	2.8	2.3	1.9	
17	(2.4)a	2.6	2.7	3.0	3.2	b	3.3	3.3	3.4	c	c	c	c	c	c	c	
18	c	c	c	c	c	c	3.2	3.3	3.5	3.5	3.2	3.1	3.0	3.0	a	a	
19	1.9	b	b	3.0	a	3.3	b	a	a	3.3	3.2	3.0	3.0	2.7	a	1.9	
20	1.5	(2.0)s	2.5	2.9	3.0	3.2	3.3	3.3	3.2	3.3	3.4	3.2	3.0	2.8	2.5	1.9	
21	1.9f	a	a	2.9	3.1	3.2	a	3.3	3.3	3.2	3.2	3.2	3.1	2.8	2.4	c	
22	a	2.2	2.5f	2.8	3.0	3.1	3.3	3.3	a	3.4	3.3	(3.1)a	2.9	2.8	(2.4)a	2.3	1.7
23	a	a	3.0	3.3	3.0	3.1	3.2	3.4	3.3	a	3.1	3.0	2.9	c	c	c	
24	1.7	2.2	2.6	a	a	(3.2)	a	3.5	c	3.4	3.2	3.1	3.0	2.8	(2.5)f	2.6f	
25	a	2.4	2.6	b	3.2	(3.0)a	3.2	b	3.2	3.2	3.2	b	2.9	2.7	c	c	
26	1.8	(2.3)b	(2.6)h	2.8	3.0	3.1	c	c	c	c	c	c	c	c	c	2.0	
27	e	b	2.5	2.8	3.0	3.1	3.2	3.3	3.3	3.3	3.0	3.0	2.7	(2.5)a	2.4	a	
28	(1.6)e	2.0	b	b	b	2.9	b	b	b	b	b	a	b	f	2.6	a	
29	b	a	2.6	2.8	3.0	3.1	b	b	b	3.1	b	3.0	2.8	2.7	2.3	c	
30	b	b	b	b	b	b	b	c	c	c	3.0	3.0	a	a	2.6	a	
31	c	c	2.6	b	b	b	b	b	b	b	b	3.0	a	2.8	a	2.0	
Median.	1.7	2.1	2.6	2.8	3.0	3.1	3.3	3.3	3.3	3.3	3.2	3.0	3.0	2.8	2.4	2.0	*
No.	17	13	18	14	16	19	16	18	15	18	20	23	20	19	15	11	

Sweep. 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T. MACQUARIE ISLAND f°E DECEMBER 1952

HOURLY VALUES OF fEs OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND.

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	4.0	3.3	1.8	b	g	g	3.1	3.4	3.5	4.0	g	g	g	g	g	3.5	4.4y	g	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	4.5	b	b	g	g	g	b	b	5.0	4.8	4.2	5.0	4.5
3	4.0	6.0	5.5	4.2	3.5	b	b	b	g	b	b	b	b	4.0	g	3.5	b	3.3	b	4.3	c	4.5	c	3.5
4	5.5	4.3	4.5	2.0	2.1	g	g	g	b	b	b	b	b	c	c	c	c	c	4.4	3.6	5.5	4.0	c	4.5
5	4.6	b	4.5	4.3	4.1	b	b	b	b	b	b	b	c	b	b	3.9	b	b	g	4.5	3.3	5.6	4.4	3.5
6	4.6	1.7	1.7	2.6	1.9	2.0	g	b	b	g	g	c	c	c	c	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	c	c	c	c	c	6.0	4.5	c	c	c	c	c	3.0f	o	o	o	2.1
8	o	4.1	3.3	(3.0)	2.8	f	f	3.5	3.6	b	4.0	4.2	3.7	3.6	3.6	3.6	g	g	c	g	o	o	4.1	o
9	o	o	4.0	2.5	1.8	g	g	3.6	3.6	g	g	g	g	g	4.0	3.7	3.5	c	c	c	c	c	c	c
10	e	c	c	c	c	c	c	c	c	c	c	3.7	4.2	3.8	4.6	g	g	4.5	4.4	3.5	4.4	c	o	3.1
11	3.0	3.5y	4.0	4.1	4.5	4.1	5.5	4.4	6.0	g	3.8	4.4	3.7	7.6	7.6	4.2	4.5	4.5	3.5	5.0	5.2	4.5	4.5	4.7
12	4.7	4.8	3.5	2.0	3.6	4.0	g	4.5	4.4	g	g	3.6	3.6	g	4.4	g	g	4.4	g	3.6	4.2	b	3.3f	4.2
13	c	4.0	b	4.2	c	c	c	c	c	c	g	g	g	g	3.8	5.8	5.5	c	5.0	8.0	5.0	5.6	c	6.0
14	4.5f	5.0	4.2	3.3	5.2	6.0	5.5	4.7	4.3	4.4	4.4f	4.2	4.4	g	g	g	g	3.3	4.3	2.5	2.1	3.5	5.3	3.3
15	3.5	4.4	3.4	3.0	g	c	c	c	c	c	g	g	g	g	g	3.5	4.4	4.4	4.4	5.0	5.7	4.0	5.0	4.5
16	5.5	5.2	3.2y	1.8	3.0y	g	g	4.4	3.8	4.4	5.6	5.3	6.0	6.5	3.5	g	4.5	3.6	g	3.6	5.5	6.8	4.5	4.0
17	4.4	5.8y	5.6	5.2	4.5	g	g	g	g	b	g	g	g	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	4.3	4.0	4.1	g	g	g	4.0	7.5	7.6f	5.5	4.4	3.5	3.2	3.2
19	3.1	4.1	4.1	3.1	4.2f	4.4	b	g	4.1	4.4	b	4.4	4.4	4.0	g	3.3	4.4	4.3	6.1	3.5	4.4	4.1	o	2.8
20	2.5	1.8	o	e	g	g	g	g	3.5	5.5	4.1y	3.2	4.0	3.7	3.7	4.1	4.1	4.4	3.1	3.8	4.4	o	o	o
21	4.6	4.0	3.3	3.4	4.0	4.6	4.4	4.3	4.4	4.0	3.6	4.0	4.4	g	g	3.6	g	5.5	6.5	c	o	o	4.5	o
22	5.0	3.4	2.8	o	2.8f	4.4f	4.4f	4.5f	5.8	4.4	5.5	4.8	4.4	4.0	g	3.6	g	3.6	4.4	4.4	4.3y	c	c	3.4
23	4.5	3.5	3.3	3.6	4.4	4.2	4.5	4.1	3.6	4.3	3.7	g	g	3.3	4.0f	3.8	g	c	c	c	3.2	3.3f	3.5f	3.1
24	o	3.3	o	o	g	3.6	3.3	4.0	5.8	6.2	7.0	6.1	c	3.6	g	3.6	g	3.6	4.2f	4.5	5.5	5.0	b	3.8
25	4.4	5.5	b	b	3.5	g	3.6y	4.2y	4.4	3.5	4.2	b	g	g	3.7	4.1	g	g	c	c	c	4.4	4.7	b
26	4.3	4.1	4.1	2.7	g	2.8	3.0	g	g	4.5	c	c	c	c	c	c	c	c	c	g	2.0	3.6	4.4	4.6
27	3.6	4.1	3.4	o	g	g	g	g	g	g	4.1y	3.8	3.8	3.6	3.6	g	3.1	2.9	g	2.1	3.0	o	3.3	3.1
28	2.4	o	o	o	g	g	b	b	b	b	b	b	b	b	4.4	3.5	b	f	7.0f	6.8	6.4	7.6	4.5	4.1
29	4.5	4.5	4.3	4.0	b	4.2	g	g	3.5	3.5	b	b	b	g	b	3.6	4.4	4.4	3.0	3.8	4.5	3.5	4.5	4.5
30	3.3	4.5	4.0	b	b	b	b	b	b	b	b	c	c	c	g	g	4.4	4.4	4.0	4.4	3.6	4.2	c	b
31	b	4.0	4.4	b	b	3.0	g	b	b	b	3.5	4.2	4.3	b	b	4.4	5.5	g	2.8	3.5	3.3	3.5	4.2	3.6
Modian.	4.3	4.1	3.5	3.0	2.8	2.8	**	3.6	3.6	4.0	3.8	4.0	4.0	3.4	3.5	3.6	3.5	4.0	4.2	3.8	4.3	4.0	4.4	3.6
No.	25	26	25	23	23	21	19	19	19	17	20	21	21	22	23	26	23	20	20	24	25	24	21	25

Sweep: 1.0 -13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND fEs DECEMBER 1952.

HOURLY VALUES OF h'F2 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND.

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	300	280	300	280	300	300	300	280	300	300	330	290	300	280	280	300	320	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	300	380	350	300	300	300	300	280	300	a	a	a	a
3	a	a	a	a	a	250	g	g	g	g	g	470	440	450f	380	400f	300	280	370	330	c	a	c	b
4	a	a	a	f	300	g	(600)	380	400	430	350	400	400	c	c	c	c	c	a	380	a	a	c	a
5	a	b	a	a	a	b	g	g	g	460	440	370	c	410	380	400	350	300	250	300	340	a	a	a
6	300	300	280	300	260	g	g	b	470	400	f	c	c	c	c	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	c	c	c	c	c	330	290	c	c	c	c	c	250	260	250	260	270
8	270	280	250	(250)	250	f	500	g	(400)	350	(340)	300	350	350	330	320	300	290	c	300	290	280	250	270
9	250	300	a	340	240	g	480	380	320	370	380	380	360	320	320	300	300	300	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	330	340	320	320	300	300	280	250	240	240	c	280	b
11	300	b	b	b	a	330	400	430	400	450	370	360	a	a	320	370	380	350	350	320	a	a	a	a
12	a	a	a	300	250	280	300	320	320	330	350	320	370	320	320	290	320	300	280	300	a	b	b	a
13	c	a	b	300	c	c	g	c	c	360	400	430	480	350	350	a	a	c	a	a	a	a	a	a
14	a	a	a	320	a	a	770	800	700	700	500	500	480	670	450	400	430	380	350	250	250	280	300	290
15	a	a	a	320	250	c	c	c	c	c	330	350	310	340	370	330	300	300	300	(370)	a	a	a	a
16	a	a	310	340	300	g	600	600	500	400	620	500	530	470	520	380	360	320	310	300	a	a	a	a
17	a	a	a	a	300	270	400	430	410	380	400	380	380	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	400	350	300	320	350	340	(300)	300	280	280	270	260	300	300
19	270	350	320	280	270	250	b	300	350	350	340	340	320	300	320	290	340	310	280	250	240	250	250	280
20	260	250	250	250	250	300	250	320	250	300	330	300	300	300	300	280	300	300	280	250	240	220	240	280
21	a	280	260	250	250	230	260	280	310	300	330	300	300	300	300	300	300	300	270	c	270	230	250	270
22	280	300	270	230	250	270	250	300	300	300	310	310	320	300	300	300	300	300	250	240	250	c	c	280
23	a	a	a	b	(340)	1	350	420	400	350	330	300	300	300	320	360	330	c	c	c	250	290	300	300
24	250	250	260	240	250	(400)	380	360	350	350	340	320	c	360	300	320	300	300	300f	320	320	a	a	b
25	a	a	b	a	310	270	g	b	550	550	600	450	370	340	350	370	320	280	c	c	c	a	a	b
26	a	a	a	a	250	400	500	550	430	450	c	c	c	c	c	c	c	c	c	240	240	260	a	a
27	330	300	(300)	300	280	g	350	450	500	350	460	450	360	410	400	370	290	310	280	240	240	250	a	290
28	300	280	260	280	260	250	310	440	420	g	g	b	g	g	g	g	g	580	420	320	250	290	a	a
29	a	a	a	a	b	g	g	g	g	g	550	530	b	g	450	380	330	320	300	350	a	a	a	a
30	a	a	a	b	b	b	b	g	b	b	g	c	c	c	g	450	450	350	320	300	270	a	c	b
31	b	a	a	b	b	b	g	g	g	g	g	g	400	b	(560)	500	350	350	350	380	280	400	a	a
Median.	280	300	270	300	260	300	490	430	405	380	390	355	360	340	340	340	300	300	290	300	260	260	(260)	280
No.	11	11	11	16	19	19	24	23	24	25	26	26	24	24	26	25	25	24	26	23	19	12	9	10

309.

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$ Time used: 157.5° E.M.T. MACQUARIE ISLAND h'F2 DECEMBER 1952.

HOURLY VALUES OF hpF2 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

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	u	u	300	u	290	u	u	u	u	u	u	u	300	u	u	u	u	340	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	u	310	300	320	a	a	a	a
3	a	a	a	a	a	260	g	g	g	g	g	u	u	u	u	u	320	u	u	u	c	a	c	b
4	a	a	a	a	300	g	u	u	u	u	u	u	u	c	c	c	c	c	a	c	a	a	c	a
5	a	b	a	a	a	b	g	g	g	u	u	u	c	u	u	u	u	u	u	320	u	a	a	a
6	u	320	u	330	330	g	g	b	g	g	u	c	c	c	c	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	c	c	c	c	c	u	u	c	c	c	c	c	290	u	310	300	300
8	300	300	280	f	260	f	u	g	u	u	u	u	u	u	u	u	u	300	c	320	300	310	300	320
9	300	320	a	u	300	g	u	u	u	u	u	u	u	u	u	u	u	310	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	u	u	270	260	260	c	350	b
11	(320)	b	b	b	a	u	u	u	u	u	u	u	u	a	u	u	u	u	360	330	a	a	a	a
12	a	a	310	270	300	u	u	u	u	u	u	u	u	u	u	u	u	u	300	310	a	b	b	a
13	c	a	b	u	c	c	g	c	c	u	u	u	u	360	u	a	a	c	a	a	a	a	a	a
14	a	a	a	340	a	a	u	u	u	u	u	u	u	u	u	u	u	u	u	320	290	310	u	300
15	330	a	350	330	280	c	c	c	c	c	u	u	u	u	u	350	310	320	310	u	a	a	a	a
16	a	a	330	370	330	g	u	u	u	u	u	u	u	u	u	u	u	330	330	330	a	a	a	a
17	a	a	a	a	u	290	u	u	u	u	u	u	u	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	u	330	u	290	330	300	300	300	330
19	300	370	u	290	300	280	b	u	u	u	u	u	u	310	u	u	u	320	310	300	320	300	300	310
20	320	300	300	300	280	u	260	u	260	u	u	310	u	u	u	290	310	u	300	300	280	290	280	360
21	a	300	280	290	300	270	270	u	u	u	u	u	u	u	u	u	u	u	300	c	280	260	280	300
22	310	u	300	280	280	u	u	u	u	u	u	u	u	u	u	u	310	u	280	260	290	c	c	300
23	a	a	a	b	350	330	u	u	u	u	u	u	u	u	u	u	u	c	c	c	280	340	320	310
24	300	280	280	300	u	u	u	u	u	u	u	u	c	u	u	330	320	u	u	u	340	a	b	b
25	a	a	b	a	330	320	g	b	u	u	u	u	u	u	u	u	u	u	c	c	c	a	a	b
26	a	a	a	290	310	u	u	u	u	u	c	c	c	c	c	c	c	c	c	300	300	310	a	a
27	350	u	340	320	290	g	u	u	u	u	u	u	u	u	u	u	300	330	320	290	290	300	a	340
28	320	300	290	310h	300	290	u	u	u	g	g	b	g	g	g	g	g	u	u	u	300	330	a	a
29	a	a	a	a	b	g	g	g	g	g	u	u	b	g	u	u	u	u	u	u	a	a	a	a
30	a	a	a	b	b	b	b	g	b	b	g	c	c	c	g	u	u	u	u	u	300	a	c	b
31	b	a	a	b	b	b	g	g	g	g	g	g	u	b	u	u	u	u	u	u	310	u	a	a
Median.	315	(300)	300	310	300	325	g	g	g	g	*	*	*	*	*	*	(315)	(320)	300	310	300	310	(300)	310
No.	10	8	10	13	17	14	9	6	6	5							8	8	12	15	15	11	8	10

310.

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s Time used: 157.5° E.M.T. MACQUARIE ISLAND hpF2 DECEMBER 1952.

HOURLY VALUES OF h'F1 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

Day \ Hour	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	250	240	210	210	220	200	200	200	200	200	200	200	210	c	c
2	c	c	c	c	c	c	240	(230)b	(210)b	200	200	210	(200)f	250	q
3	q	q	230	210	220	(220)b	230	200	200	200	210	(210)b	230	300	q
4	250	250	230	240	230	210	210	220	c	c	c	c	c	a	a
5	b	280	b	240	240	220	230	c	200	210	200	230	230	q	q
6	240	220	b	230	220	200	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	220	200	c	c	c	c	c	f
8	f	220	210	220	230	220	200	210	200	210	200	200	220	c	250
9	220	200	200	200	220	200	200	200	200	200	200	200	200	c	c
10	c	c	c	c	c	c	200	200	180	180	200	200	220	220	q
11	250	280	200	220	220	210	200	a	a	a	(200)a	210	a	q	q
12	q	250	220	200	200	200	200	300	200	180	180	200	220	230	250
13	c	c	c	c	200	200	200	200	210	210	a	a	c	a	q
14	a	(250)	230	230	f	230	210	200	200	180	200	210	a	230	q
15	c	c	c	c	c	200	200	200	200	190	210	(210)	230	240	a
16	260	250	230	220	200	230	210	200	200	220	210	220	230	250	250
17	q	250	230	230	230	220	210	200	c	c	c	c	c	c	c
18	c	c	c	c	c	200	210	200	200	200	200	200f	220	a	q
19	q	b	210	220	200	200	(210)a	220	200	200	200	200	220	a	q
20	220	220	220	220	200	200	200	200	190	200	190	190	230	220	q
21	q	220	200	200	200	180	180	190	190	160f	190	200f	200	240	c
22	210	210	210	220	200	200	170	200	190	200	200	200	220	220	q
23	q	250	230	220	200	220	200	190	200	200	200	200	c	c	c
24	250	250	a	a	a	a	a	c	200	200	200	220	240	250	280
25	q	240	b	220	200	200	(200)	200	220	200	a	200	200	c	c
26	250	220	180	230	200	c	c	c	c	c	c	c	c	c	c
27	260	240	220	200	200	210	200	180	200	200	220	210	220	230	q
28	q	230	230	230	190	b	b	220	220	230	200	250	f	a	q
29	250	250	250	230	220	b	240	b	200	200	210	250	200	220	(300)
30	b	b	250	b	b	220	c	c	c	200	200	a	280	250f	q
31	b	250	240	230	210	230	220	(220)	(200)	200	210	220	230	260	270
Median.	250	245	220	220	200	200	200	200	200	200	200	205	220	240	260
No.	12	22	21	23	23	24	25	23	25	25	24	24	21	15	6

311.

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'F1 DECEMBER 1952

HOURLY VALUES OF h'E OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
1	e	100	100	100	100	100	100	100	100	100	100	100	100	100	c	c	
2	c	c	c	c	c	c	c	100	b	b	100	(110)b	b	b	b	b	
3	b	b	b	b	100	100	b	b	b	100	100	100	b	100	b	b	
4	e	100	100	100	b	b	b	b	b	c	c	c	c	c	a	a	
5	b	b	b	b	100	100	100	b	c	b	b	100	b	b	100	b	
6	100	100	100	b	b	100	c	c	c	c	c	c	c	c	c	c	
7	c	c	c	c	c	c	c	c	100	100	c	c	c	c	c	c	
8	e	e	100	100	100	b	b	100	100	100	100	100	100	100	c	120	
9	100	100	100	100	100	100	100	100	100	100	100	100	100	100	c	c	
10	c	c	c	c	c	c	c	100	100	100	100	100	100	100	100	e	
11	a	a	a	a	100	100	100	150	a	100	100	100	100	100	100	a	
12	120	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
13	c	c	c	c	c	c	100	100	100	100	100	100	a	c	c	c	
14	100	a	100	100	100	100	100	100	100	100	100	100	100	100	100	130	
15	100	c	c	c	c	c	100	100	100	100	100	100	100	100	100	a	
16	e	100	100	100	100	100	100	100	100	100	100	100	100	100	110	110	
17	100	100	100	100	100	b	100	100	100	c	c	c	c	c	c	c	
18	c	c	c	c	c	c	100	100	100	100	100	100	100	100	(100)	a	
19	250	b	b	100	100	100	100	100	100	100	100	100	100	100	110	120	
20	e	100	100	100	100	100	100	100	100	100	100	100	100	100	100	120	
21	e	a	100	100	100	100	100	100	100	100	100	100	100	100	100	c	
22	a	100	100	100	100	100	100	100	100	100	100	100	100	100	100	110	130
23	a	100	100	100	100	100	100	100	100	100	100	100	100	c	c	c	
24	100	100	100	100	100	100	a	100	c	100	100	100	100	100	100	100	
25	a	100	100	b	100	100	100	b	100	(100)	100	b	100	100	c	c	
26	100	100	100	100	100	100	c	c	c	c	c	c	c	c	c	110	
27	e	110	100	100	100	100	100	100	100	100	100	100	100	100	150	110	
28	e	100	b	b	b	100	b	b	b	b	b	100	b	f	100	a	
29	b	a	100	100	100	100	b	b	b	100	b	100	100	100	100	100	
30	b	b	b	b	b	b	b	c	c	c	100	100	a	a	100	100	
31	100	b	b	b	b	b	b	b	b	b	b	100	100	100	100	100	
Median.	185	100	100	100	100	100	100	100	100	100	100	100	100	100	100	110	*
No.	18	15	18	17	20	20	18	20	19	22	22	25	20	20	18	14	

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'E DECEMBER 1952

HOURLY VALUES OF h'Es OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND.

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	100	100	120	b	e	g	130	120	120	110	g	g	g	g	g	100	110	g	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	120	b	b	g	g	g	b	b	130	110	100	100	100
3	100	100	100	100	100	b	b	b	g	b	b	b	b	130	g	110	b	130	b	100	c	120	c	100
4	100	100	100	100	100	g	g	g	b	b	b	b	b	c	c	c	c	c	120	100	110	100	c	100
5	100	b	100	100	100	b	b	b	b	b	b	b	b	b	b	150	b	b	g	100	110	110	110	100
6	100	120	100	120	100	100	g	b	b	g	g	c	c	c	c	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	c	c	c	c	c	100	100	c	c	c	c	c	150	e	e	e	100
8	e	100	100	100	100	f	f	120	100	b	130	120	120	100	100	100	g	g	c	g	e	e	130	e
9	e	e	100	100	100	g	g	100	100	g	g	g	g	g	120	120	120	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	100	100	100	100	g	g	120	120	120	100	c	e	100
11	100	100	100	100	100	100	100	100	100	g	120	120	100	110	100	150	140	100	120	110	100	100	110	100
12	100	100	100	100	100	100	g	100	100	g	g	130	130	g	100	g	g	120	g	150	110	b	100	100
13	c	100	b	100	c	c	c	c	c	c	g	g	g	g	100	110	110	c	110	100	100	100	100	100
14	110	100	100	100	130	140	140	140	130	110	110	120	110	g	g	g	g	140	130	130	120	110	100	100
15	110	100	100	100	g	c	c	c	c	c	g	g	g	g	g	120	130	120	130	100	100	100	100	100
16	100	110	100	100	100	g	g	100	120	110	120	100	100	100	110	g	100	130	g	120	110	100	100	100
17	100	100	100	100	100	g	g	g	g	b	g	g	g	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	110	110	110	g	g	g	120	120	110	110	100	110	110	120
19	110	100	100	110	100	100	b	g	110	100	b	100	100	120	g	100	130	130	110	150	110	120	e	110
20	100	120	e	e	e	g	g	g	130	110	120	110	100	120	100	100	110	100	120	120	110	e	e	e
21	100	100	100	100	100	100	100	100	100	100	100	100	100	g	g	100	g	100	120	c	e	e	110	e
22	100	100	100	e	100	100	110	120	110	100	100	100	100	100	g	100	g	100	110	110	120	c	c	110
23	100	100	100	100	100	100	100	100	130	110	130	g	g	100	120	100	g	c	c	c	120	120	120	120
24	e	120	e	e	g	100	150	140	120	120	120	120	c	120	g	100	g	130	90	110	100	100	b	120
25	100	100	b	b	100	g	120	120	120	120	100	b	g	g	120	130	g	g	c	c	c	100	100	b
26	100	100	100	110	g	120	110	g	g	100	c	c	c	c	c	c	c	c	c	g	120	120	110	100
27	100	100	100	e	g	g	g	g	g	g	100	120	120	120	120	g	130	110	g	130	130	e	100	110
28	100	e	e	e	g	g	b	b	b	b	b	b	b	b	120	120	b	f	130	120	120	120	110	100
29	100	100	100	100	b	130	g	g	120	110	b	b	b	g	b	140	120	120	140	120	100	100	100	100
30	100	100	100	b	b	b	b	b	b	b	b	c	c	c	g	g	120	120	110	110	120	100	c	b
31	b	100	100	b	b	100	g	b	b	b	120	110	140	b	b	130	130	g	130	160	100	100	100	100
Median.	100	100	100	100	100	100	110	110	120	110	120	110	100	105	105	110	120	120	120	120	110	100	100	100
No.	22	24	22	18	16	12	9	12	15	12	13	15	14	12	12	18	13	16	16	22	22	19	18	22

Sweep: 1.0 - 13.0 Mc/s in 1^m55^s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'Es DECEMBER 1952.

HOURLY VALUES OF (M3000) F2 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

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	2.8	2.7	2.8	2.9	3.2	3.2	3.0	3.2	3.2	3.3	3.1	3.0	3.2	3.1	3.2	3.1	3.2	2.9	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	3.2	2.7	2.9	3.0	3.3	3.0	2.9	3.1	3.0	a	a	a	a
3	a	a	a	a	a	3.1	g	g	g	g	g	2.6	2.8	2.6	2.9	2.7	2.9	3.2	2.9	3.0	c	a	c	b
4	a	a	a	a	2.9	g	2.4	2.8	2.9	2.7	3.0	2.7	2.8	c	c	c	c	c	a	2.8)	a	a	c	a
5	a	b	a	a	a	b	g	g	g	2.6	2.7	2.9	c	2.9	2.8	2.7	2.9	3.0	3.3	2.9	2.9	a	a	a
6	2.8	3.0	3.0	3.0	3.1	g	g	b	2.7	2.9	f	c	c	c	c	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	c	c	c	c	c	3.0	3.3	c	c	c	c	c	2.8	f	(3.0)f	2.9	3.2
8	3.0	3.1	3.2	f	3.1	f	2.6	g	s	3.1	s	3.2	3.0	3.0	3.0	3.1	3.1	3.2	c	2.9	3.0	3.0	2.9	3.0
9	2.8	2.8	a	2.9	3.0	g	2.7	3.0	3.3	2.9	2.9	2.8	3.0	3.1	3.1	3.2	3.0	3.2	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	3.1	3.0	3.0	3.0	3.0	3.2	3.3	3.3	3.4	3.3	c	2.8	b
11	(3.2)	b	b	b	a	3.0	2.7	2.6	2.7	2.5	2.9	2.9	a	a	3.2	2.8	2.7	2.8	2.8	2.9	a	a	a	a
12	a	a	a	2.9	3.2	3.0	3.2	3.0	3.1	3.1	3.0	3.0	2.7	3.0	3.0	3.1	3.1	3.1	3.1	2.8	a	b	b	a
13	c	a	b	2.7	c	(3.2)	g	c	c	3.0	2.8	2.7	2.4	2.8	2.8	2.7	a	c	a	a	a	a	a	a
14	a	a	a	2.9	a	a	2.0	2.0	2.2	2.2	2.6	2.6	2.7	2.2	2.6	2.8	2.7	2.8	2.8	3.0	2.9	2.9	2.9	2.7
15	2.9	2.8	3.0	3.0	3.3	c	c	c	c	c	3.0	3.0	3.1	3.0	2.8	2.9	3.1	3.0	3.1	2.6	a	a	a	a
16	a	a	2.5	2.9	3.0	g	(2.8)	(2.7)	2.5	2.9	2.4	2.6	2.5	2.9	2.5	2.9	2.9	3.0	3.0	2.9	a	a	a	a
17	a	a	a	a	3.1	3.0	2.9	2.8	2.8	2.8	2.8	2.9	2.9	c	c	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	2.8	2.9	3.2	2.9	2.9	2.9	2.8	3.2	3.3	2.9	3.1	3.1	3.1	3.0
19	2.8	2.7	2.8	2.9	3.0	3.3	b	3.1	3.0	3.1	3.0	3.0	3.0	3.0	3.1	3.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.8
20	2.8	2.9	2.9	3.2	3.3	3.0	3.1	3.1	3.3	3.1	3.1	3.1	3.1	3.1	3.1	3.4	3.1	3.1	3.2	3.3	3.3	2.9	3.1	2.7
21	a	3.0	3.3	3.2	3.2	3.3	3.4	3.3	3.0	3.1	2.9	3.2	3.1	3.1	3.2	3.1	3.1	3.1	3.2	c	(3.5)	(3.2)	(3.0)	(2.9)
22	3.0	3.2	3.0	3.1	3.2	3.2	s	3.3	3.1	3.2	3.2	3.0	3.0	3.1	3.2	3.2	3.1	3.2	3.3	3.3	3.0	c	c	3.1
23	a	a	a	b	2.8	2.7	2.8	2.8	2.9	2.9	3.0	3.1	3.1	3.0	3.1	2.9	3.0	c	c	c	3.1	2.8	3.0	2.9
24	2.7	3.0	3.0	3.0	3.0	2.7	3.0	3.4	3.0	3.0	3.1	3.0	c	2.9	3.1	3.0	2.9	3.0	2.7	2.8	2.8	a	b	b
25	a	a	b	a	2.8	3.0	g	b	2.3	2.5	2.6	2.7	2.8	2.9	2.9	2.8	3.0	3.2	c	c	c	a	a	b
26	a	a	a	3.0	3.0	3.0	2.6	2.3	2.7	2.7	c	c	c	c	c	c	c	c	c	3.0	3.1	3.0	a	a
27	3.0	3.0	2.9	3.1	3.1	g	3.0	2.8	2.6	3.0	2.7	2.6	3.0	2.7	2.8	2.8	3.1	3.0	3.0	3.3	3.2	3.0	a	3.0
28	2.8	3.0	3.1	3.0	3.1	3.2	3.2	2.8	2.7	g	g	b	g	g	g	g	g	2.3	2.6	3.0	2.9	2.9	a	a
29	a	a	a	a	b	g	g	g	g	g	2.5	2.5	b	g	2.7	2.9	3.0	2.8	3.2	2.9	a	a	a	a
30	a	a	a	b	b	b	b	g	b	b	g	c	c	c	g	2.7	2.7	2.7	2.9	2.9	3.0	a	c	b
31	b	a	a	b	b	3.2	g	g	g	g	g	g	2.5	b	2.5	2.6	2.9	2.9	2.9	2.7	2.8	s	a	a
Median.	2.8	3.0	3.0	3.0	3.1	3.0	2.7	2.8	2.7	2.9	2.8	2.9	3.0	3.0	3.0	2.9	3.0	3.0	3.0	2.9	3.0	3.0(3.0)		3.0
No.	12	12	12	16	19	22	23	23	23	25	25	26	24	24	26	26	25	24	20	23	16	11	9	10

Sweep: 1.0 - 13.0 Mc/s in 1^m 55^s

Time used: 157.5° E.M.T.

HOURLY VALUES OF (M3000) F1 OBSERVED DURING DECEMBER 1952 AT MACQUARIE ISLAND

Hour / Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	3.3	3.2	3.5	3.8	3.7	3.8	3.8	3.7	3.8	3.9	3.8	3.8	3.5	c	c
2	c	c	c	c	c	c	3.7	3.6	3.8	4.0	3.8	3.5	3.5	q	q
3	q	q	3.6	3.5	3.5	(3.6)b	3.8	3.8	3.9	3.8	3.6	3.5	3.5	3.0	q
4	3.4	3.4	3.5	3.5	3.8	3.7	3.8	3.7	c	c	c	c	c	a	a
5	b	b	b	3.5	3.7	3.8	3.8	c	3.8	3.7	3.7	3.6	3.5	q	q
6	3.3	3.5	b	3.8	3.7	3.7	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	3.7	3.7	c	c	c	c	c	q
8	f	3.2	3.2	3.6	3.7	4.0	3.7	4.0	3.7	3.7	3.7	3.5	3.6	c	q
9	3.3	3.4	3.5	3.7	3.7	3.9	4.0	4.0	4.0	3.9	3.8	3.6	3.6	c	c
10	c	c	c	c	c	c	3.8	4.0	3.6	3.6	3.5	3.9	3.7	q	q
11	3.3	3.4	3.4	3.6	3.8	3.8	3.7	a	a	3.6	3.8	3.6	3.4	q	q
12	q	3.4	3.5	3.5	3.8	3.9	3.7	4.0	3.8	3.7	3.5	3.6	3.6	q	q
13	c	c	c	c	3.8	3.9	3.8	3.8	3.8	3.9	a	a	c	a	q
14	a	3.3	3.3	3.5	4.0	3.6	3.9	4.0	3.7	3.8	3.8	3.9	3.5	3.4	q
15	c	c	c	c	c	4.0	3.9	3.9	4.1	3.8	3.6	3.8	3.6	3.5	a
16	3.2	3.5	3.5	3.6	3.7	3.9	3.9	3.7	3.9	3.7	3.6	3.6	3.6	3.4	3.4
17	q	3.3	3.7	3.6	3.8	3.8	3.8	3.9	c	c	c	c	c	c	c
18	c	c	c	c	c	3.8	3.8	3.7	3.9	3.7	3.7	(3.8)	3.6	a	q
19	q	b	3.5	3.5	3.8	4.0	3.9	3.8	3.7	3.7	3.7	(3.6)f	3.5	a	q
20	(3.6)q	(3.7)q	3.6	3.7	3.8	3.9	4.1	4.0	3.9	4.0	3.9	3.7	3.7	3.7	q
21	q	3.6	3.4	3.8	4.0	4.1	3.9	3.8	4.2	3.6	3.6	3.6	3.7	q	c
22	q	3.7	3.5	3.5	3.8	4.0	3.9	3.9	4.0	3.8	4.0	3.6	3.6	q	q
23	q	3.4	3.5	3.6	3.7	3.7	4.0	3.9	3.9	3.9	3.8	3.9	c	c	c
24	3.2	3.5	3.7	a	a	a	a	c	3.9	4.0	3.7	3.7	3.5	3.4	3.2
25	q	3.5	b	3.5	3.6	3.7	3.7	3.7	3.7	3.9	(3.8)a	3.8	(3.7)f	c	c
26	3.3	3.5	3.5	3.6	3.8	c	c	c	c	c	c	c	c	c	c
27	3.3	3.4	3.6	3.8	3.7	3.9	4.0	3.8	3.8	3.8	3.6	3.7	3.6	q	q
28	q	3.5	3.6	3.6	3.8	b	b	3.8	4.0	3.9	3.8	3.5	3.5f	3.3f	q
29	q	f	3.5	3.8	3.8	3.5	3.7	b	4.0	3.9	3.7	3.5	3.5	3.5	3.1
30	b	b	3.4	b	b	3.8	c	c	c	n	3.8	a	3.1	3.4	q
31	b	3.4	3.6	3.8	3.6	3.8	4.0	3.8	3.9	3.7	3.6	3.7	3.8	3.3	3.0
Median.	3.3	3.4	3.5	3.6	3.8	3.8	3.8	3.8	3.9	3.8	3.7	3.6	3.6	3.4	*
No.	10	20	22	23	24	25	25	24	25	25	25	24	24	10	

Sweep: 1.0 - 13.0 Mc/s in $1^m\ 55^s$

Time used: 157.5° E.M.T.