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DEPARTMENT OF EXTERNAL AFFAIRS

AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITIONS



INTERIM REPORTS

10

Hourly Measurements of Ionospheric Characteristics
Macquarie Island, 1953

By

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INTRODUCTION

Routing h'f ionospheric soundings were commenced in June 1950 at Macquarie Island (Geographic Latitude $54^{\circ}29'S.$, Longitude $158^{\circ}58'E.$, Geomagnetic Latitude $61^{\circ}S.$, Longidute $243^{\circ}E.$). Hourly values for 1950, 1951 and 1952 were the subjects of ANARE Interim Reports Numbers 2, 6 and 9. The following Report presents hourly values of ionospheric characteristics observed during 1953. No data was obtained during September 1953.

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 1.5 kw and the receiver sensitivity about 10 micro-volt. The record obtained is photographic, on standard 35 mm film, and is normally made six times per hour. Height marks at 50 km intervals, frequency marks at every 0.5 mc/s from 1 to 10 mc/s and 11, 12 and 13 mc/s, and the times are included on each record. The frequency 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.S.I.R.) in Stockholm, 1948, and later by Commission III of U.R.S.I. at its 1950 Assembly at Zurich:

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

f^oE

f^oEs - 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
 $h'F1$) wave branch for the F2, F1 and E layers
 $h'E$) respectively.

$h'Es$ - 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) - minimum useable frequency factor for
) a path of 3000 km for transmission by
(M3000)F1) 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 :-

- 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, 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 considered doubtful
- x no median given because of too few values
- xx median value of fEs less than the median value of f⁰E

S U M M A R Y

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.

A C K N O W L E D G E M E N T S

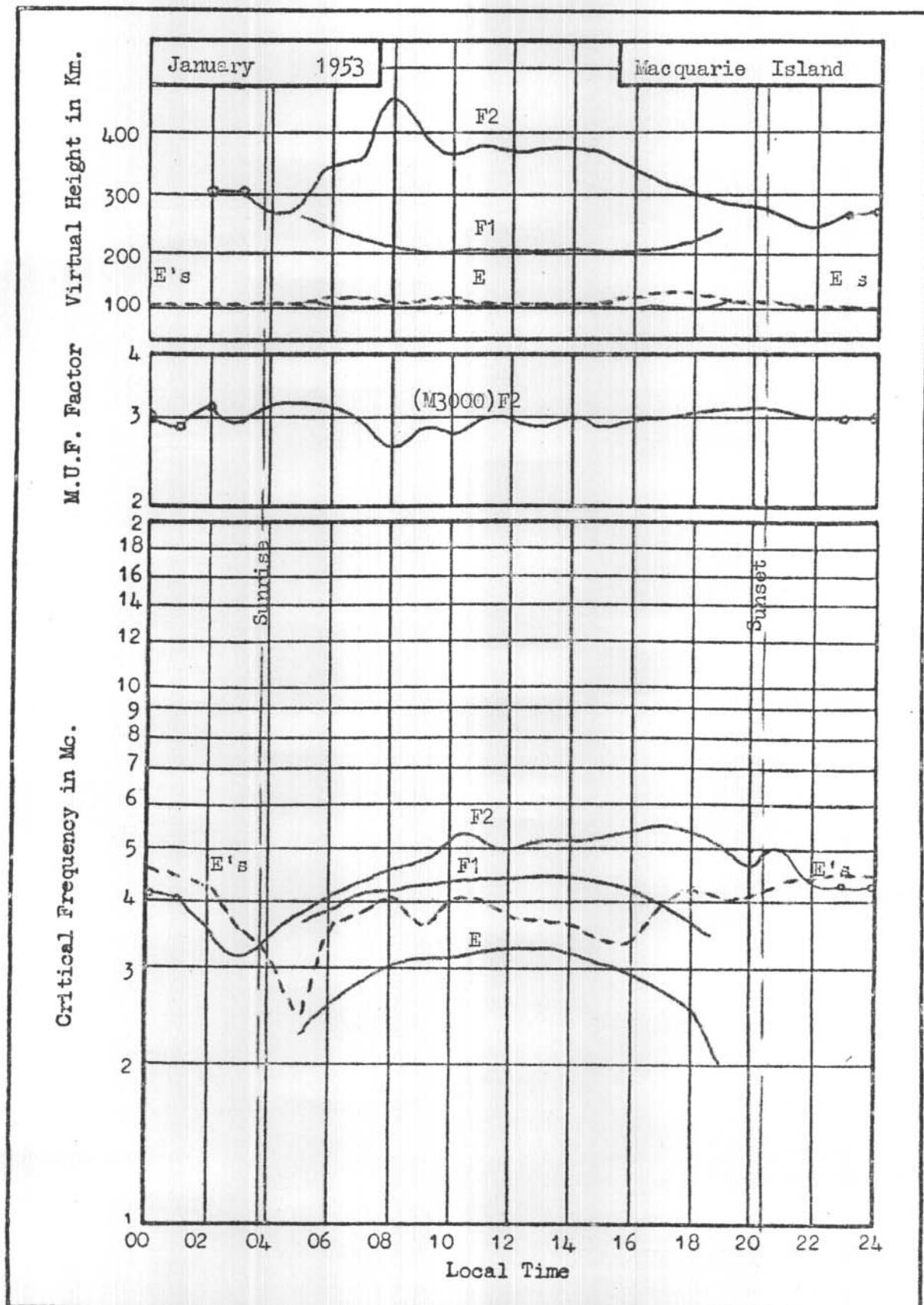
Acknowledgement is made to the Ionospheric Prediction Service of the Commonwealth Observatory for the loan of the equipment and for help in the reduction of results. Special thanks are due to Mrs.M.Harrison and the I.P.S. Publications Section for the preparation of the results for publication.

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GRAPHICAL
REPRESENTATION
OF
IONOSPHERIC
CHARACTERISTICS

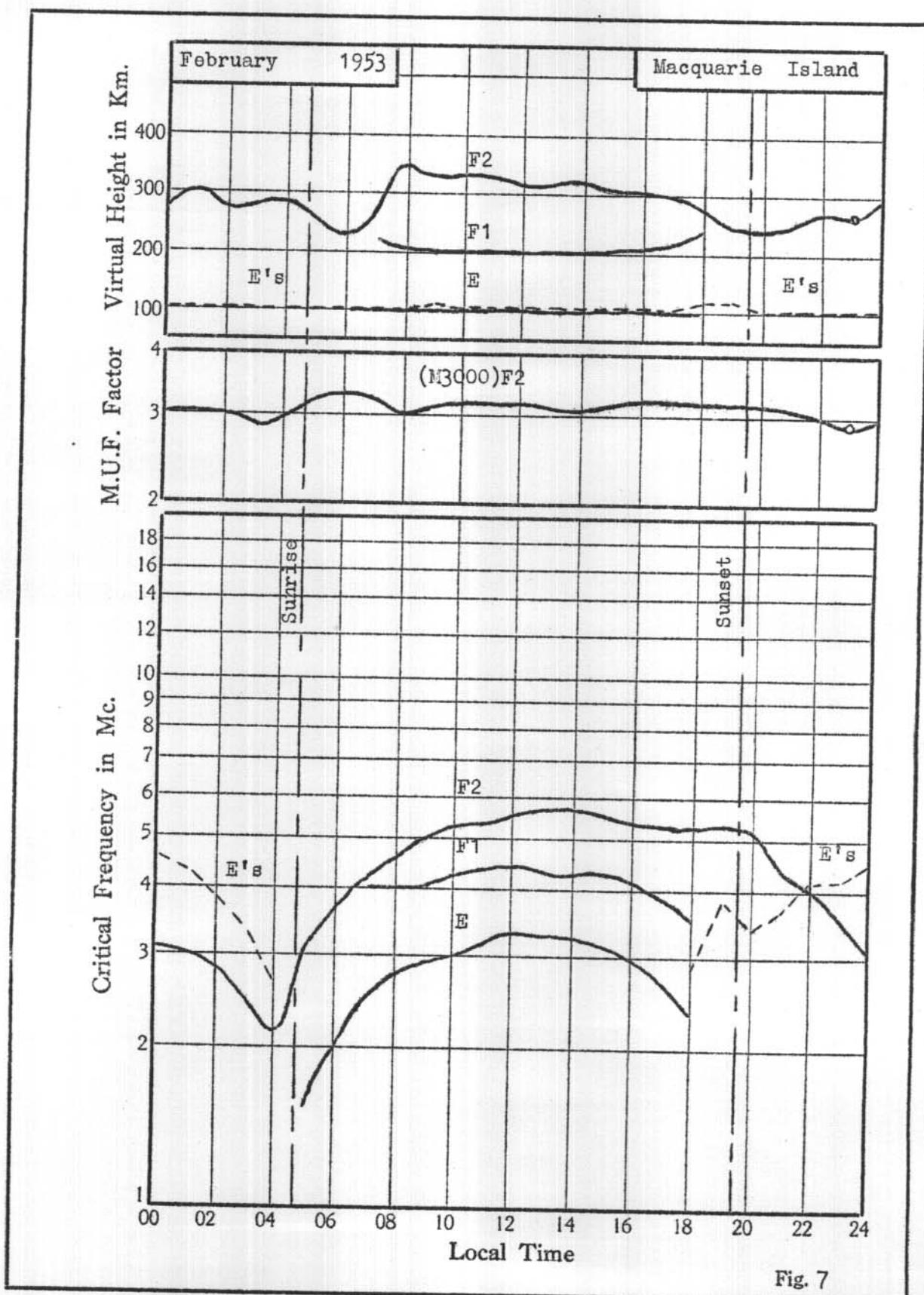


Fig. 7

GRAPHICAL
REPRESENTATION
OF
IONOSPHERIC
CHARACTERISTICS

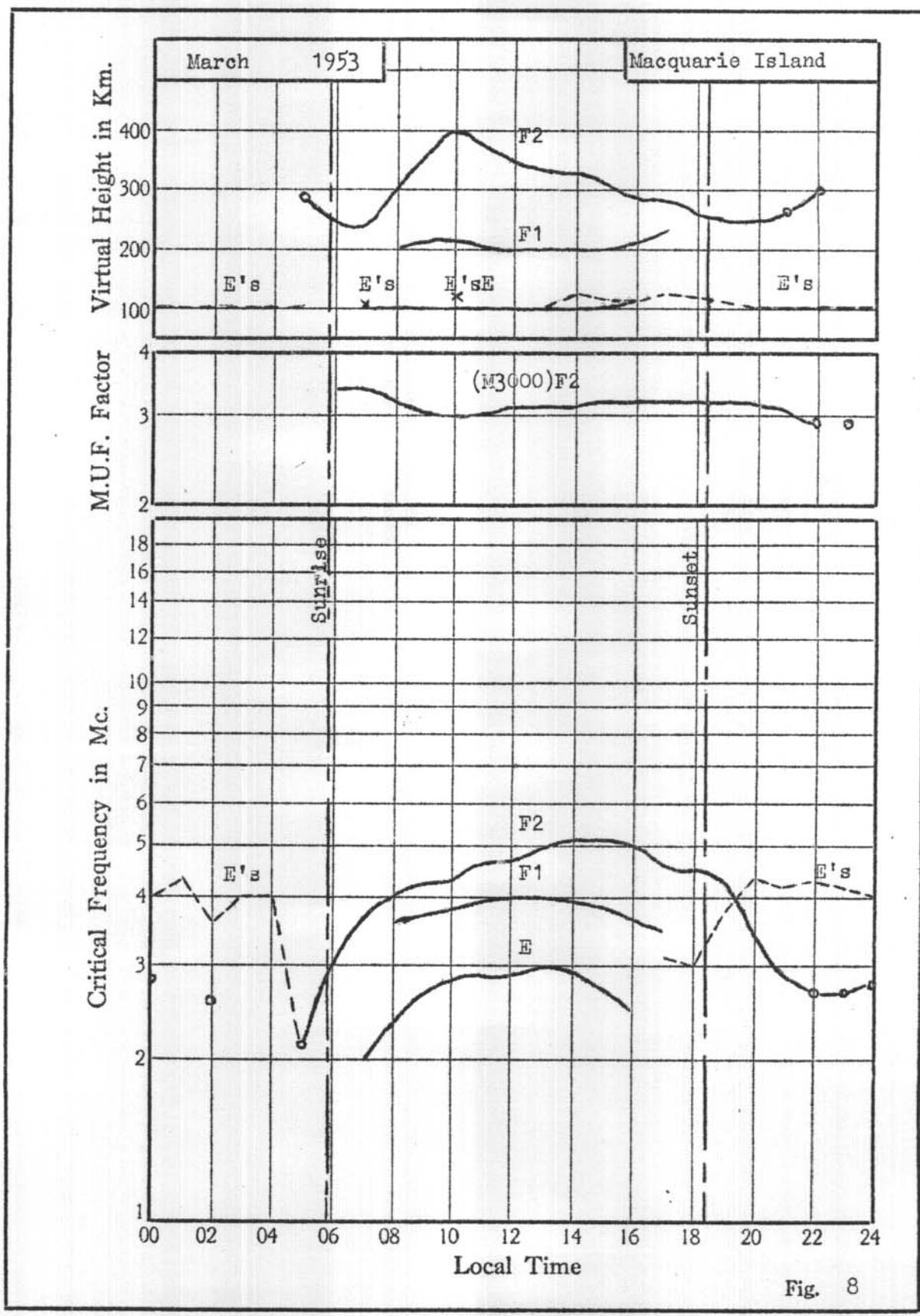
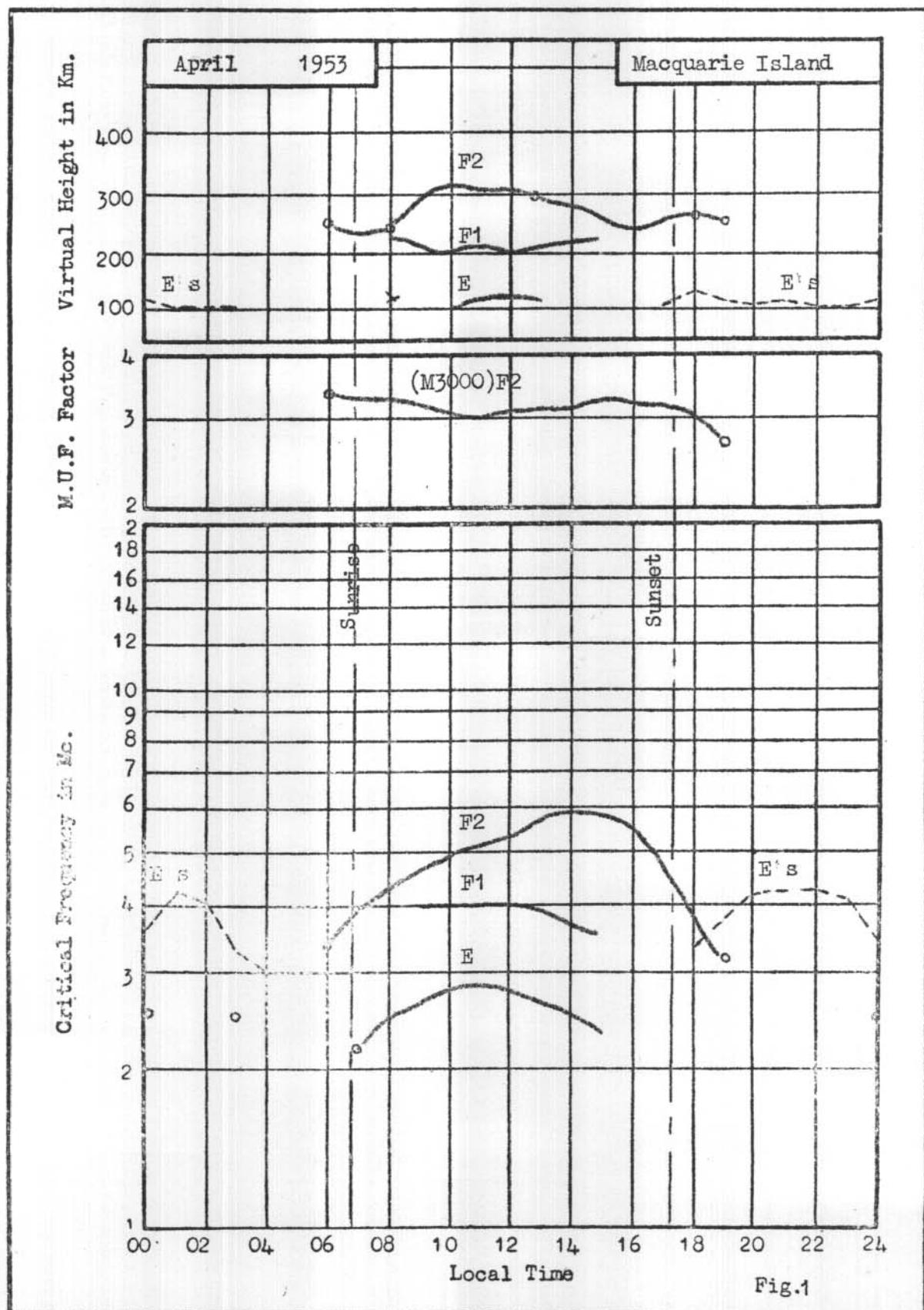


Fig. 8

GRAPHICAL
IONOSPHERIC
REPRESENTATION
OF
CHARACTERISTICS



GRAPHICAL
REPRESENTATION
OF
IONOSPHERIC
CHARACTERISTICS

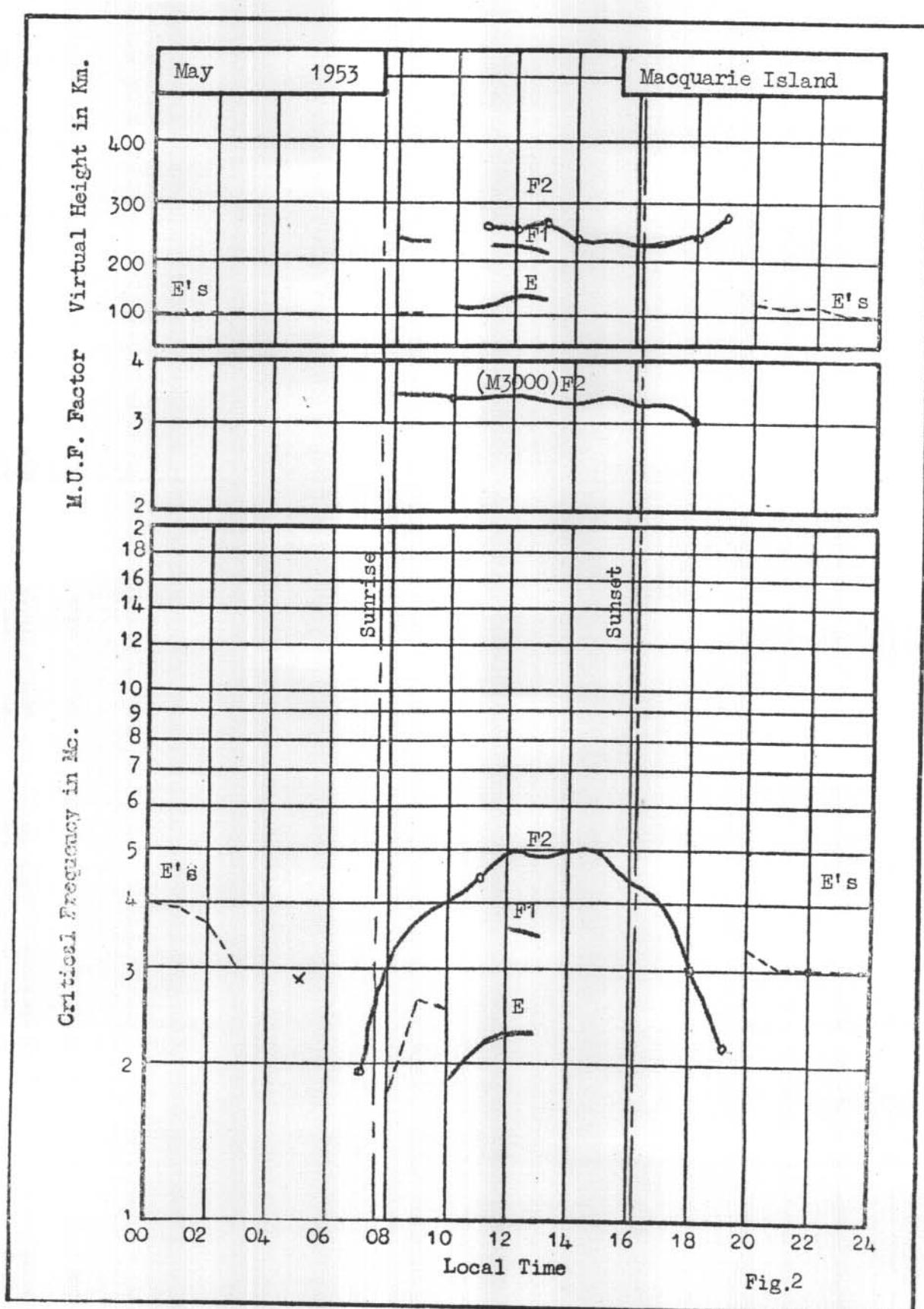
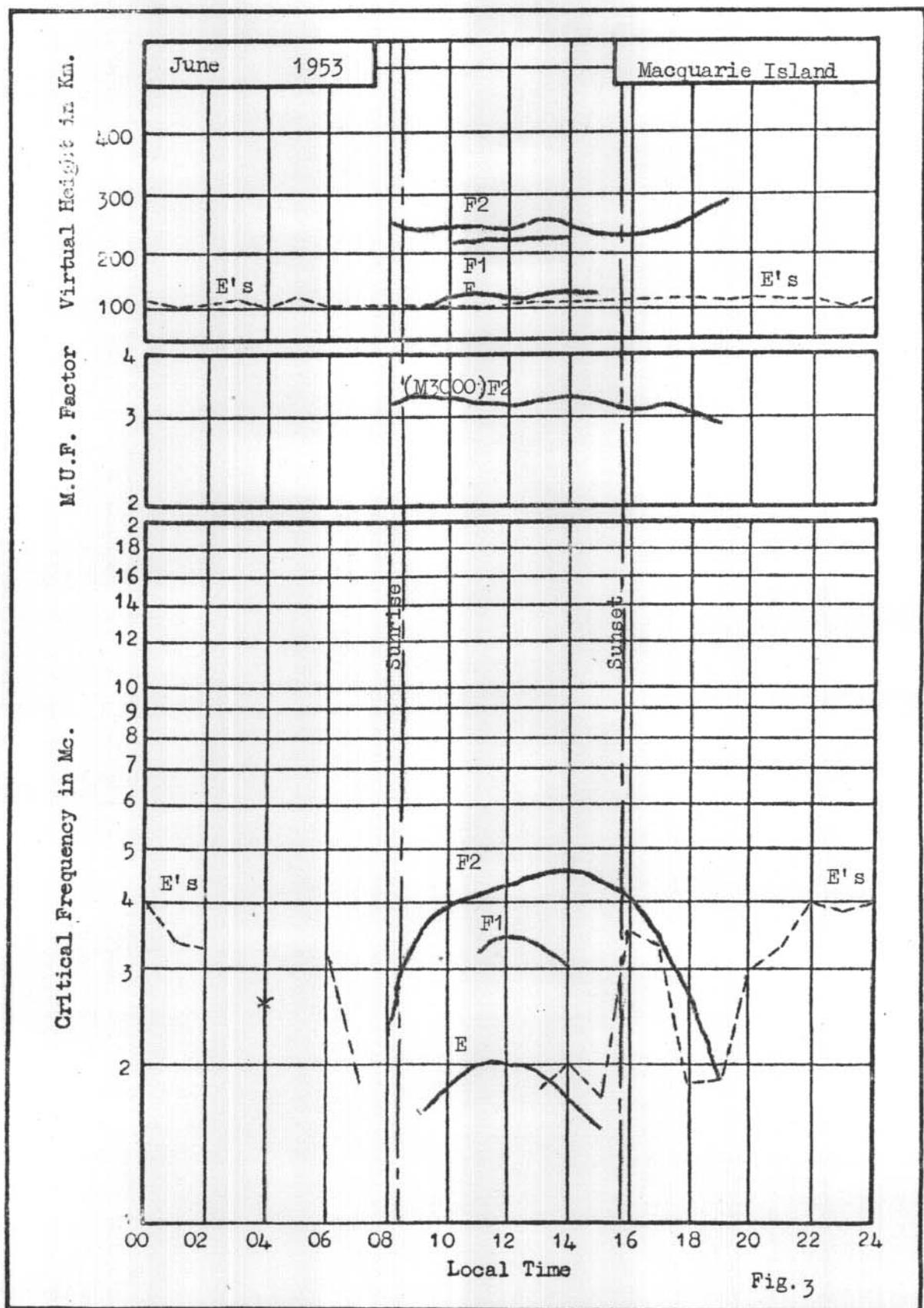
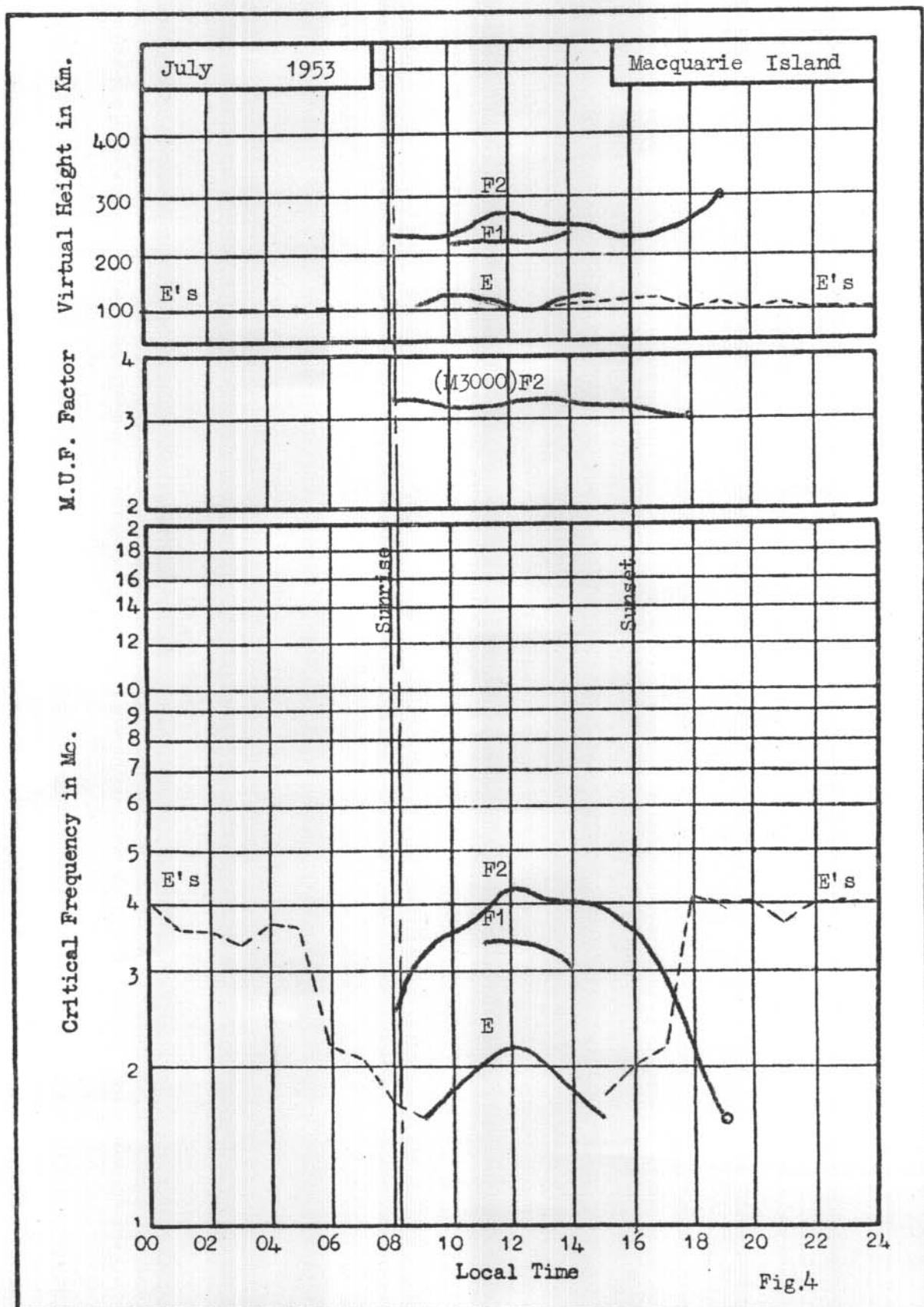


Fig.2

GRAPHICAL
IONOSPHERIC
REPRESENTATION
OF
CHARACTERISTICS



GRAPHICAL
REPRESENTATION
OF
IONOSPHERIC
CHARACTERISTICS



GRAPHICAL
REPRESENTATION
OF
IONOSPHERIC
CHARACTERISTICS

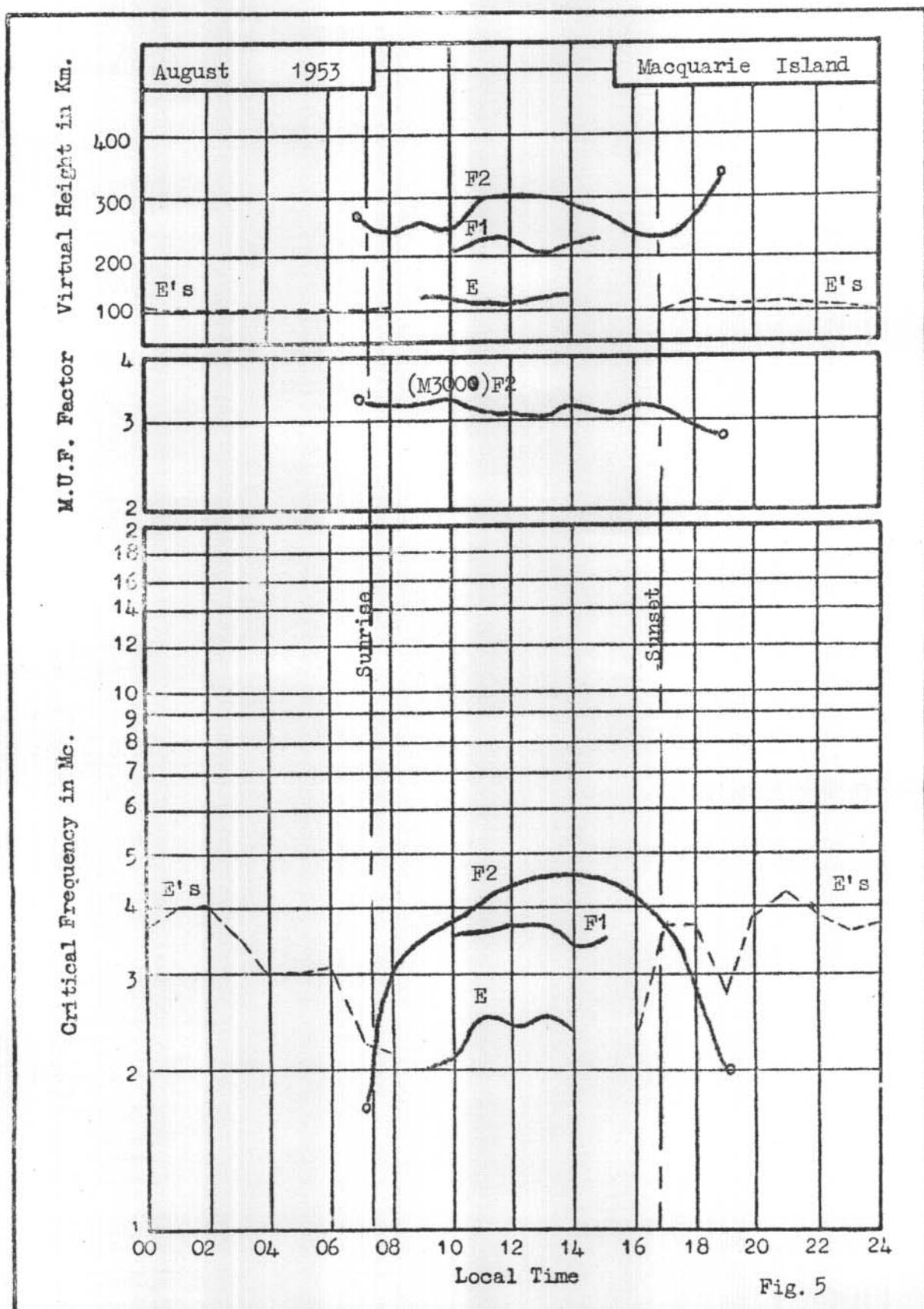
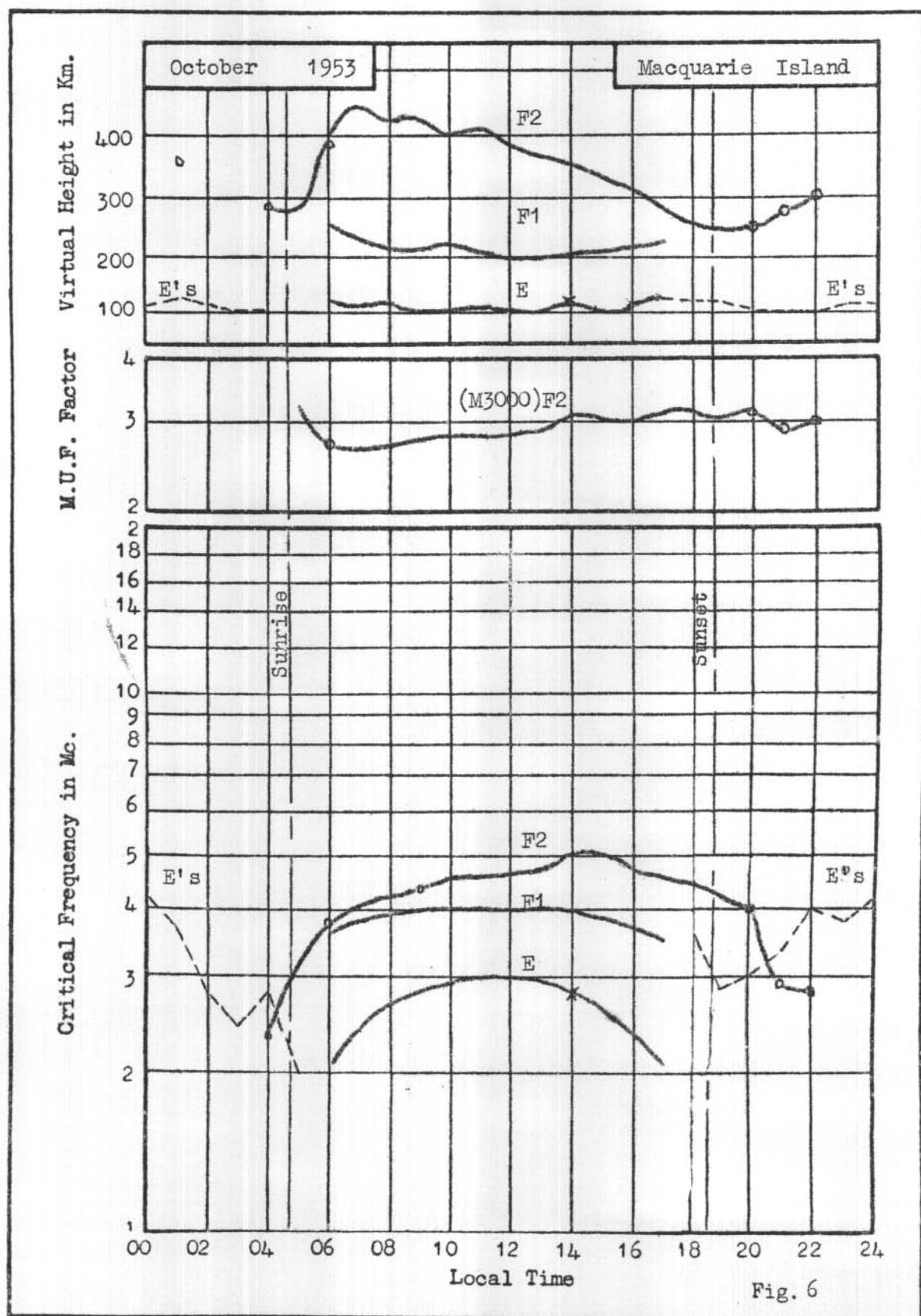
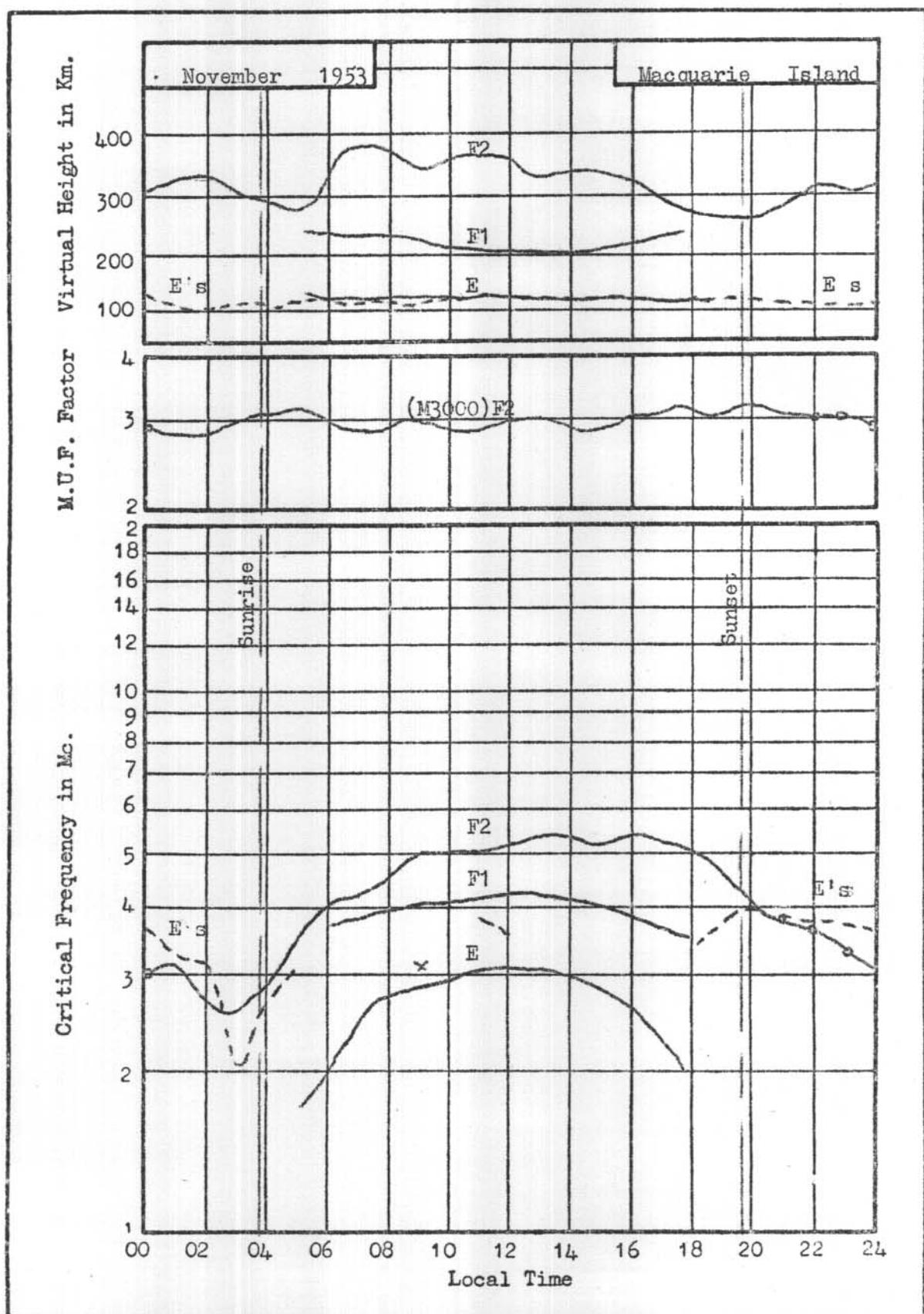
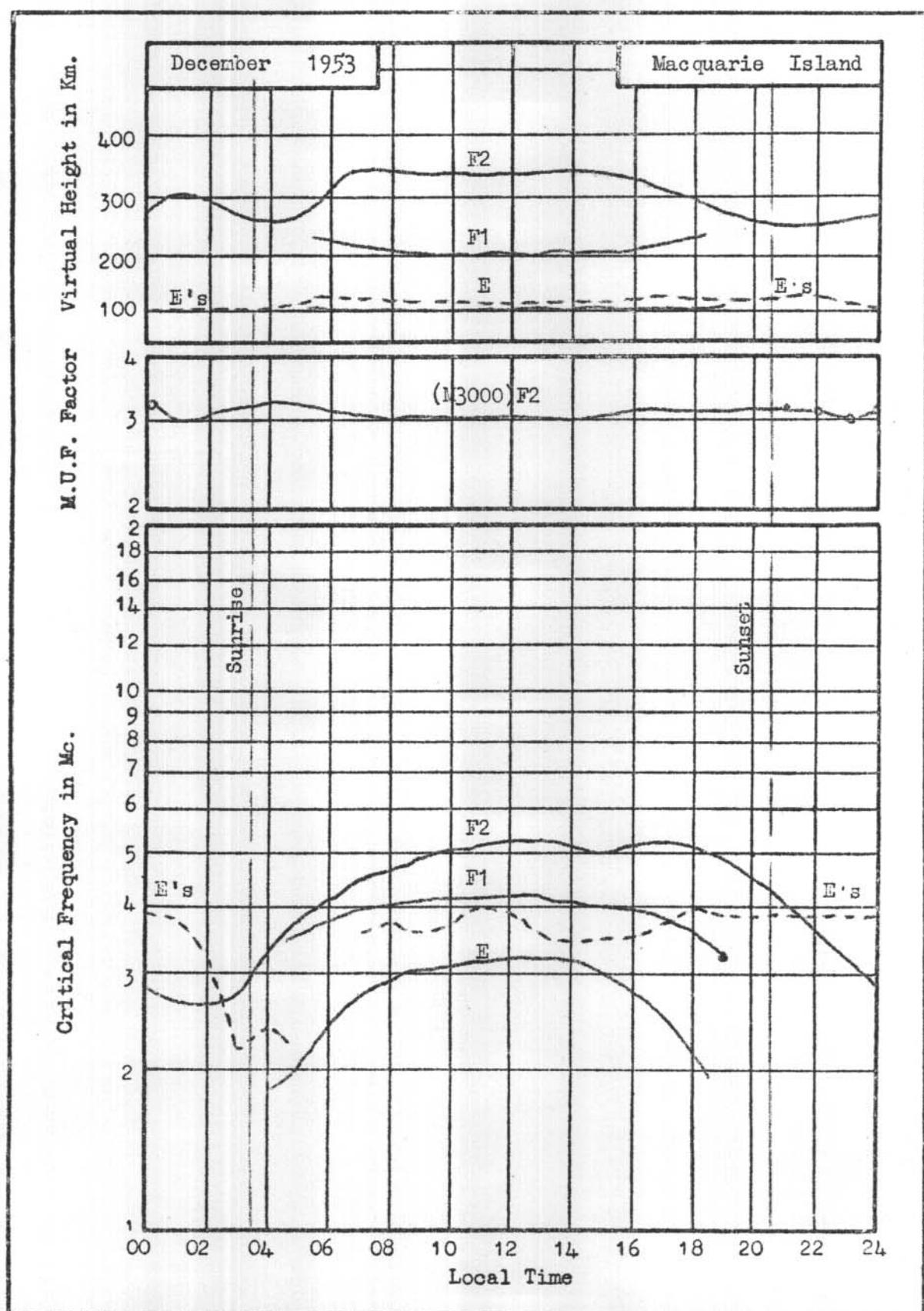


Fig. 5

GRAPHICAL
REPRESENTATION
OF
IONOSPHERIC
CHARACTERISTICS







HOURLY VALUES OF F_{OF2} OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND.

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

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

MACQUARIE ISLAND F_{OF2} JANUARY 1953.

HOURLY VALUES OF $^{\circ}\text{F}2$ OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND.

Hour Day	12	13	14	15	16	17	18	19	20	21	22	23
1	(4.8)	(4.8)	5.1	5.5	c	c	4.2	4.0f	b	c	a	
2	5.1	5.0	5.0	(5.0)b	5.1	5.2	5.0	4.5	a	3.6	b	
3	5.0	5.0	5.0	5.0	5.1	5.2	c	c	4.8	3.9s	4.0s	
4	6.1	6.0	5.7	6.0	5.6	5.6	a	5.6	5.2f	4.6	(4.0)s	
5	5.5	5.6	5.9	5.7	5.6	5.7	a	a	a	a	a	
6	8	8	c	c	c	c	4.6	(4.5)	a	b	c	
7	c	c	c	c	c	c	c	c	c	c	c	
8	c	c	c	c	c	c	c	c	c	c	c	
9	c	c	c	c	c	c	c	c	c	c	c	
10	5.5	5.6	5.8	5.3	5.7	5.7	a	5.6	5.6	5.6	4.2	4.6
11	6.3	6.0	5.8	6.1	6.2	6.7	5.4	5.0f	4.5	a	a	
12	5.5	5.3f	5.5	5.6	5.3	5.4	5.5	c	5.0	4.5	a	
13	5.3	5.0	5.0	5.6	5.5	5.5	5.6	5.8	a	a	b	
14	4.8	c	c	8	4.8	b	5.8	5.3	4.4	4.0	c	
15	c	c	c	c	c	c	5.8	5.8	5.3	c	4.5	
16	6.0	5.5	5.5	5.5f	5.9	6.2	6.0	5.9	5.7	5.8	5.3	
17	5.7	5.7	5.7	5.8	5.8	5.7	5.8	5.8	5.9	5.6	(5.1)f	
18	5.7	5.8	5.6	5.6	5.5	5.5	5.6	6.0	5.5	a	a	
19	4.8	5.2	5.1	b	a	a	a	5.6	5.5	a	a	
20	c	b	c	c	4.6	c	c	c	3.3	3.8	a	
21	c	c	c	c	4.7	4.9	c	5.3	5.7	5.8	4.5	
22	4.8	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	5.2	5.2	4.8	4.4	4.3	3.4	
24	5.0	5.1	5.1	5.2	5.3	5.1	c	c	a	a	2.8	
25	4.5	4.6	4.5	4.4	4.5	4.5	c	4.2	(3.6)a	a	a	
26	b	(4.8)b	b	4.4	4.4	5.0f	5.2f	a	4.6	b	a	
27	b	(4.8)	c	4.6	4.6f	4.8	4.3	3.7	3.5	a	a	
28	8	8	8	4.3	a	4.8	4.1	3.3	3.0	c	c	
29	b	b	5.0	5.0	5.2	4.1	4.0	a	a	a	2.9	
30	4.6	4.7	5.0	4.9	5.0	4.5f	5.0	a	b	a	2.8	
31	4.8	5.2	5.0	5.3	5.5	b	5.6	4.9z	4.0	a	a	
Median.	5.0	5.1	5.1	5.2	5.4	5.4	5.0	5.4	5.0	4.5	4.2	(4.2)
No.	21	23	19	22	20	20	19	18	19	11	10	9

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

Time used: 157.50 E.M.T.

MACQUARIE ISLAND $^{\circ}\text{F}2$ JANUARY 1953.

HOURLY VALUES OF $f^{\circ}\text{F}_1$ OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND.

Hour	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
Day															
1	c	3.6	3.9	4.0	4.1	4.2	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.2	2.8
2	q	3.8	4.0	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	3.5
3	b	3.5	3.9	4.2	4.3	4.3	4.4	4.3	4.2	4.1	4.0	4.0	4.0	3.9	c
4	q	3.8	4.1	4.3	4.4	4.4	4.4	4.4	4.4	4.3	4.0	4.0	4.0	4.0	3.6
5	3.5f	4.0f	4.3f	4.0	4.5	4.5	4.4	4.4	4.4	4.3	4.2	4.2	4.1	4.1	a
6	3.6	3.9	4.1	4.1	4.0	4.0	4.0	4.3	(4.3)a	4.3	c	c	c	3.6	a
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
8	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	c	c	c
10	c	3.9	4.3f	4.4	4.5	4.6	4.6	4.6	4.5	4.4	4.3	4.0	4.0	(3.7)a	a
11	(3.8)	4.0	4.5	a	4.5	4.5	4.6	4.6	4.6	4.6	4.5	4.3	4.1	3.9	3.5
12	q	3.9	4.0	4.2	(4.2)s	4.4	4.5	4.4	4.5	4.4	4.4	4.4	4.0f	4.0	c
13	3.7	3.9	4.0	4.2	4.4	4.5	4.5	4.5	4.6	4.5	4.5	4.1	4.2	4.0	3.5
14	3.5	3.6	4.0	4.2	4.3	4.3	4.4	4.4	4.4	4.4	4.3	b	4.1	3.6	q
15	c	c	c	c	c	c	c	c	c	c	c	c	c	(3.9)q	(3.5)q
16	3.8	4.2	4.2	4.4	4.5	4.4	4.5	4.5	4.5	4.5	4.5	4.3	4.1	3.7	3.3
17	(3.5)1	3.8	4.2	4.3	4.4	4.4	4.5f	4.5	4.5	4.5	4.4	4.4	4.0	3.8	q
18	c	3.8	4.0	4.3	4.4	4.4	4.4	4.5	4.4	4.4	4.4	4.2	4.0	3.6	3.0
19	b	q	4.0	4.0	4.0	4.2f	4.3	4.1	4.3	4.3	4.3	b	a	c	a
20	q	q	3.8	4.0	4.0	4.0	4.1	4.2	4.3	4.2	4.2	4.1	4.0	c	c
21	q	3.6	4.0	4.1	4.1	4.3	4.3	4.3	4.1	4.1	4.1	4.1	4.1	4.1	q
22	c	q	4.0	4.0	c	4.2	4.2	4.2	c	c	c	c	c	c	c
23	c	c	c	c	c	c	c	c	c	c	c	4.0	3.5	c	
24	q	q	3.8	4.0	4.0	4.1	4.2	4.4	(4.4)f	4.3	4.2	4.2	4.0	3.7	q
25	a	3.5	3.8	3.8	3.9	4.0	c	4.0	4.2	4.1	4.1	3.9	3.8	c	3.3
26	c	c	c	c	c	c	c	4.1	4.1	4.2	b	(4.0)b	a	a	
27	b	b	b	4.2	b	c	c	4.1	4.3	c	4.0	3.8	3.5	3.5	q
28	a	a	a	3.6	4.0	4.0	4.2	4.2	4.2	4.1	4.0	c	3.5	3.5	a
29	b	b	b	3.8	b	4.1	b	4.2	4.2	b	4.0	c	3.8	3.5	q
30	a	3.5	3.7	3.8	3.8	4.1	4.2	4.1	4.2	4.0	4.1	4.0	3.8f	3.5	c
31	q	3.5	3.7	3.9	4.1	4.2	4.2	4.3	4.2	4.2	4.1	4.0	b	3.5	3.0
Median.	3.6	3.8	4.0	4.1	4.2	4.3	4.3	4.3	4.3	4.3	4.2	4.1	4.0	3.6	3.4
No.	7	18	22	24	22	21	21	25	24	24	23	20	19	18	10

318.

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F₁

JANUARY 1953.

HOURLY VALUES OF $\frac{E^{\circ}}{E}$ OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND

Day	Hour	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	2.2	b	b	b	b	3.1	b	b	3.2	3.0	b	c	c	c	c	1.8	
2	b	a	b	2.9	3.0	3.0	3.0	3.0	3.0	a	(3.0)a	3.0	2.6	a	a	1.8f	
3	b	b	2.9	3.0	3.1	3.1	3.1	3.4	3.4	3.3	b	b	b	c	c	c	
4	2.5	b	3.0	3.1	3.3	3.4	3.5	3.5	3.4	3.4	3.3	3.2	b	b	b	b	
5	2.2	2.5f	2.8	2.9	3.1	3.3	3.4	3.4	3.3	3.3	3.2	3.0	2.9	2.5	c	c	
6	a	a	3.0	3.1	3.2	c	3.3	3.3	3.2	c	c	c	c	2.6	a	a	
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
8	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	c	c	c	c	
10	2.2	2.5	a	3.0	3.2	3.1	3.2	a	a	a	3.4	a	(3.1)b	2.9	a	a	
11	a	2.9	3.1	3.3	a	a	b	b	b	(3.2)s	3.2	3.1	2.9	2.5	2.0	2.0	
12	1.9	2.4	2.7	2.8	2.9	(3.0)a	3.1	3.4	3.4	3.4	3.4	3.3	3.2	3.0	2.6	2.6	
13	1.9	2.5	2.7	a	a	3.4	3.3	(3.2)a	a	a	3.3	3.2	2.9	2.5	2.2	2.2	
14	2.0	2.2	a	a	b	a	3.2	3.4	3.3	a	a	b	b	2.8	a	a	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	2.5	(2.2)a		
16	1.9	2.5	2.8	2.7	2.7	a	a	a	3.4	3.4	3.2	2.4	3.1	2.8	2.2	2.0	
17	(2.2)a	2.5	2.7	a	3.3	a	3.4	3.5	a	a	a	a	3.1	2.9	2.6	2.0	
18	2.2	2.5	2.8	3.0	3.2	a	3.2	3.2	a	3.4	3.4	a	a	2.7	2.2	1.9	
19	b	2.9	b	3.0	3.0	3.3	3.3	3.4	3.4	3.3	3.3	b	a	c	a	a	
20	2.2	2.5	2.8	3.0	3.1	a	3.2	b	b	b	b	b	2.8	c	c	c	
21	2.0	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	2.8	2.5	2.5	c	
24	1.8	2.2	2.5	3.0	(3.1)a	a	(3.1)a	3.1	(3.1)a	3.0	3.0	(3.1)f	3.0	2.6	2.2	2.2	
25	a	a	2.9	2.9	c	2.9	c	c	3.0	3.0	3.0	3.0	3.0	2.6	2.6	c	
26	c	c	c	c	c	c	b	b	b	b	b	b	(3.1)a	a	a	a	
27	b	b	b	b	b	b	b	b	b	b	b	b	2.9	2.4	2.2	a	
28	b	b	b	2.9	1.0	3.1	3.1	3.1	3.0	3.0	3.1	c	c	a	a	a	
29	b	b	b	b	b	b	b	b	b	b	c	c	c	2.2	2.2	1.8	
30	b	b	2.6	b	3.0	3.0	3.1	3.1	3.2	3.0	b	3.0	b	(2.3)	2.1	c	
31	b	b	b	2.8	3.0	3.1	3.1	3.1	3.1	b	b	b	b	b	2.5	2.0	
Median*	*	2.2	2.5	2.8	3.0	3.1	3.1	3.2	3.2	3.2	3.0	3.0	3.0	2.6	2.5	2.0	
No.	13	9	14	15	18	13	16	15	14	13	12	14	16	12	12	12	

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND F.E. JANUARY 1953.

HOURLY VALUES OF FES OBSERVED DURING JANUARY 1953 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	4.8	4.0	4.2	4.1	4.5	5	b	b	g	b	b	g	b	g	b	c	c	3.4	3.5	b	c	4.6	b	
2	4.0	4.5	4.4	4.3	3.0	5	b	3.6	b	6	3.6	3.8	4.0	4.5	4.0	3.4	3.0	4.4	8	5.0	4.5	3.6	2.0	
3	4.5	4.5	b	3.5	e	b	b	g	g	g	g	4.4	4.4	4.4	4.4	b	c	c	c	3.4	c	2.0	4.8	
4	4.6	4.0	e	b	5	b	3.3	4.6	g	4.4	4.4	3.8	4.4	4.4	4.4	b	c	c	c	4.3	4.5	2.0	e	
5	4.5	3.1y	4.5y	2.0	3.2	3.5	3.6	4.1	4.0	5.0	5.2	4.5	3.6	4.0	3.7	4.0	3.6	3.1	(6.0)	(6.0)	(6.0)	(6.0)	(6.5)	
6	4.6	5.5	5.8	7.6	4.5	4.5	3.6	4.5	3.6	3.4	c	g	4.4	4.4	c	c	c	6.5	5.0f	5.0	5.0	4.4	c	
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
8	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	c	c	c	c	c	c	c	c	c	c	c	
10	3.6	4.5	3.6	3.3	3.4	3.3	3.3	4.1y	4.2y	3.5	4.0	4.5	4.2	4.6	g	3.4	g	5.7	5.6	5.6	4.0	0	0	4.5
11	6.5y	4.3	3.6	e	2.1	3.6	4.5	6.0	7.6	5.9	4.6	4.1	b	b	b	g	g	g	g	3.4	4.7	5.5	5.5	5.5
12	4.4	4.0	3.0	e	2.4	4.1	2.4	4.0	4.5	6.0	4.4	4.0	4.4	4.4	4.4	4.0	4.0	5.0	4.5	4.7	4.3y	5.0	4.7	4.3
13	6.0	4.3	3.6	4.4	4.4	4.4	4.4	4.4	4.5	3.0	4.5	4.1	3.9	3.6	4.4	7.6	4.5y	b	4.3	4.4	4.0	7.6	4.5	c
14	4.5	4.4	4.6	4.6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.4	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	4.6	4.3	4.4	5.0	3.6	3.5	4.2	3.5	4.8	4.6	4.2	4.1	3.5	g	4.0	g	g	3.3	6.0	2.6	2.0	0	4.5	6.0
17	6.5	7.6	6.0	4.4	2.8	4.4	3.3	6.0y	4.5	4.2	4.4	5.1	4.5	4.5	3.3	g	g	3.6	2.4	e	e	3.0	4.5	4.5
18	5.6	3.3	e	1.8	1.8	8	8	5.0y	5.0y	5.4	4.4	4.0	4.4	3.6	4.5	3.3	4.4	4.4	4.2	3.4	4.5	4.9	4.5	4.5
19	4.0	4.7	4.2	4.3	3.4	4.0y	3.6	b	b	g	4.1	g	3.6	g	b	7.6	6.0	c	7.6	4.3	4.5	c	4.5	c
20	4.5	4.5	4.2	3.0y	g	4.4	5.2	4.5	g	4.6	g	b	b	b	b	4.5	c	c	c	c	c	c	c	
21	c	c	2.3	e	e	g	b	b	c	c	c	4.0	3.6	3.5	c	c	c	c	c	4.5	c	b	b	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
24	4.1	2.7	b	e	4.2	4.3	4.2	4.5	4.2	g	3.5	6.0	4.0	5.5	5.6	3.6	4.5	4.4	4.1	c	4.1	4.5	4.6	4.3
25	4.5	4.4	5.0	4.3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	5.6	
26	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	5.8	6.1	7.6	4.5	5.6	4.6	
27	c	4.5	4.0	b	b	b	b	b	c	b	c	b	c	b	c	3.3	g	g	3.0	3.2	4.6	5.5	b	
28	4.3	b	4.0	3.2	3.5	3.0	b	3.4	b	g	4.0	4.1	3.7	3.8	g	b	c	4.0	3.7	e	c	c	c	
29	b	4.0	4.4	4.5	3.2	3.5	b	b	b	b	b	b	b	b	b	c	3.3	2.8	3.4	4.3	3.5	2.5	4.4	
30	b	4.2	4.0	4.5	4.5	4.5	b	b	b	b	b	4.0	4.0	3.4	3.5	b	b	b	2.3	3	3.7	3.2	3	3
31	Median.	4.5	4.4	4.2	3.5	3.1	2.4	3.6	3.8	4.1	3.5	4.0	4.0	3.7	3.7	3.6	3.4	4.0	4.0	4.4	4.4	4.5	4.5	4.5
No.	20	22	21	23	20	19	16	18	18	21	19	20	17	16	19	20	20	23	24	24	19	20	19	20

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

MACQUARIE ISLAND FES JANUARY 1953.

HOURLY VALUES OF $\text{h}'\text{F}2$ OBSERVED DURING JANUARY 1953 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	a	(350)	(250)	250	g	600	630	450	530	290	450	470	420	370	c	c	c	300	270	b	c	a	
2	a	a	a	a	320	(250)	450	400	500f	450	400	350	450	400	350	380	330	400	330	330	350	a	340	b	
3	a	a	b	320	280	b	350	f	450	450	450	380	370	340	350	310	c	c	c	c	260	270	260		
4	a	a	340	310	260	250	330	340	320	330	360	350	300	310	350	300	290	300	300	260	250	250	230	270	
5	280	280	a	300	280	300f	300f	270f	300	400	320	320	340	350	310	330	320	300	300	320	300	a	a	a	
6	a	a	a	a	a	500	600	g	g	g	g	g	g	g	g	g	c	c	c	320	a	a	b	a	
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
8	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	c	c	c	c	c	c	c	c	c	c	c		
10	300	300	300	250	250	250	400	350	300	380	340	350	330	350	330	340	330	300	280	270	240	250	240	250	
11	270	300	250	250	250	300	300	350	320	320	350	300	300	340	380	350	320	280	300	300	300	300	a	a	
12	a	a	280	350	270	250	g	350	450	360	340	320	360	370	380	410	370	350	300	c	250	250	a		
13	270	b	330	300	270	g	400	(350)	s	s	320	300	350	350	350	350	330	320	320	300	300	a	a	b	
14	a	b	(330)	280	g	350	470	470	500	500	480	480	450	g	550	b	320	300	300	300	270	270	c		
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	290	250	240	c	250	
16	a	a	300	300	250	g	g	320	300	310	320	320	320	340	340	390	330	300	270	250	250	240	250	260	
17	200	a	a	(350)	280	290	280	300	350	350	300	340	340	340	340	330	330	330	290	280	260	250	240	250	260
18	260	250	250	230	240	240	300	350	350	360	340	350	350	300	350	330	330	320	320	300	250	280	a	a	
19	a	a	a	a	(309)	300	250	s	500	500	500	400	400	400	400	b	a	a	c	a	270	a	a		
20	a	a	a	a	320	270	250	s	700	500	550	550	c	b	c	c	380	c	c	c	c	c	c	c	
21	c	c	300	290	290	240	350	400	510	450	c	c	c	c	c	430	400	c	250	300	320	c	b	b	
22	c	c	c	c	c	c	c	g	c	c	400	400	c	c	c	c	c	c	c	c	c	c	c		
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	350	300	300	c	220	250	250	260		
24	a	b	(270)	250	220	230	340	350	320	350	300	350	320	370	380	350	330	330	c	270	a	a	a		
25	a	a	a	a	a	500	420	450	450	450	c	c	400	480	450	500	430	360	c	310	(320)	a	b		
26	c	c	c	c	c	c	c	c	c	c	b	b	b	b	g	b	500	450	(350)	320	a	a	b		
27	c	a	b	b	b	b	b	b	g	b	b	b	b	b	250	c	430	400	330	320	300	(290)	a		
28	a	b	b	b	b	b	b	(250)	a	300	g	g	g	g	g	g	600	c	300	250	260	c	c		
29	b	a	b	b	b	b	b	280	b	g	b	b	b	b	400	b	350	c	380	300	300	a	300	a	
30	b	a	a	a	b	a	b	(290)	g	g	g	550	250	500	450	380	360	350	340	400	b	280	270	a	a
31	a	a	a	a	b	a	a	b	(290)	g	g	650	320	450	500	400	330	350	350	340	320	300	270	(300)	a
Median.	(270)	*	(300)	300	270	280	350	350	450	390	355	370	350	370	370	365	340	320	300	280	250	250	(260)		
No.	6	8	14	17	19	22	23	20	18	22	21	23	20	19	22	20	19	19	18	11	11	10	7		

MACQUARIE ISLAND h'F2 JANUARY 1953.

Time used: 157.5° E.M.T.

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

HOURLY VALUES OF hpF2 OBSERVED DURING JANUARY 1953 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	a	a	300	250	g	u	u	u	u	u	u	u	u	c	c	c	290	280	b	c	a	
2	a	a	a	a	330	300	u	u	a	u	u	u	u	u	u	340	u	u	a	350	b			
3	a	a	b	u	300	b	u	f	u	u	u	u	u	u	u	c	c	c	300	300	300			
4	a	a	350	330	280	290	u	u	u	u	u	u	u	u	u	290	390	300	300	300	260	300		
5	300	u	a	u	290	u	u	u	u	u	u	u	u	u	u	310	a	a	a	a	a	a		
6	a	a	a	a	a	u	u	g	g	g	g	g	g	g	g	c	c	c	a	b	a	c	c	
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
8	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	c	c	c	c	c	c	c	c	c	c	c	
10	330	320	310	290	260	300	u	u	u	u	u	u	u	u	u	310	310	340	a	a	a	a	a	
11	300	320	280	280	u	u	u	u	u	u	u	u	u	u	u	310	300	280	300	260	260	290		
12	a	a	300	330	320	280	g	u	u	u	u	u	u	u	u	340	290	u	u	u	u	u	u	
13	u	b	340	310	280	g	u	u	s	s	u	u	u	u	u	b	330	310	340	a	290	290	a	
14	a	b	350	290	g	u	u	u	u	u	u	u	u	u	u	c	300	290	300	u	u	c	b	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	300	290	300	290	
16	a	a	u	300	g	g	u	u	u	u	u	u	u	u	u	340	u	280	270	280	310	300	300	
17	320	a	a	360	290	280	u	u	u	u	u	u	u	u	u	u	300	300	300	300	290	290	300	
18	u	290	290	280	280	260	u	u	u	u	u	u	u	u	u	u	330	280	330	a	a	a	a	
19	a	a	a	a	u	u	260	s	u	u	s	u	u	u	u	b	a	a	320	320	c	a	a	
20	a	a	a	a	340	300	280	u	u	u	u	c	b	c	c	c	c	c	c	c	c	c	c	
21	c	c	u	300	300	280	u	u	u	u	c	c	c	c	u	u	270	u	350	c	c	c	c	
22	c	c	c	c	c	c	g	c	c	u	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
24	a	b	300	260	260	260	u	u	u	u	u	u	u	u	u	u	u	u	250	280	300	300	300	
25	a	a	a	a	a	a	u	u	u	u	u	u	u	u	u	u	u	u	u	340	a	a	a	
26	c	c	c	c	c	c	c	c	c	c	b	b	b	b	f	u	350	a	a	a	a	b	a	
27	c	a	b	b	b	b	b	b	g	b	c	u	u	u	u	u	u	u	300	a	a	a	b	
28	a	b	b	b	b	b	b	a	3.6	g	g	g	g	g	g	u	u	u	u	u	u	u	b	
29	b	a	b	b	b	b	u	b	b	b	b	b	b	b	b	u	u	u	u	u	u	u	u	
30	b	a	a	b	b	a	g	g	g	u	u	u	u	u	u	u	u	u	u	320	a	a	a	
31	a	a	a	a	b	g	g	g	g	u	u	u	u	u	u	b	290	290	a	a	a	a	a	
Median.	*	*	(305)	305	290	300	g	*	*	*	*	*	*	*	*	*	(300)	295	300	300	(300)	9	12	
No.	6	10	16	13	8												14	11	9	7				

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND hpF2 JANUARY 1953.

HOURLY VALUES OF h^*F_1 OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND

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

Time used: 157.5° E.M.T.

323. Swoop: 1.0 - 13.0 Mc/s in 1st 55s

JANUARY 1953.

HOURLY VALUES OF H'E OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND.

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

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.N.T. MACQUARIE ISLAND h'E JANUARY 1953.

HOURLY VALUES OF WIND OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND

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	
Day																									
1	100	100	100	100	100	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
2	100	100	100	100	100	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
3	100	100	b	100	a	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c	c	c	c	
4	120	100	a	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
5	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
6	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
8	c	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	c	c	c	c	c	c	c	c	c	c	c	c	
10	110	100	100	100	100	130	120	120	110	110	120	110	110	110	110	100	100	100	100	100	110	110	110	100	
11	100	100	100	e	100	120	120	110	110	110	120	110	110	110	110	100	100	100	100	100	120	100	100	100	
12	100	100	120	a	9	8	110	g	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
14	100	100	110	100	g	g	g	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
17	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
18	100	100	e	o	o	120	g	g	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
20	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
21	c	c	100	o	o	o	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
24	100	100	b	b	e	o	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	b	b	b	
27	c	100	100	100	b	b	b	b	b	b	b	b	b	b	b	b	100	110	100	100	130	110	100	100	
28	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
29	b	100	100	100	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
30	b	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
31	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Median.	100	100	100	100	100	100	100	100	110	100	100	110	100	100	100	100	100	100	100	100	100	100	100	100	100
No.	20	22	19	17	15	10	14	11	14	14	13	14	13	16	15	14	10	10	12	15	18	20	18	15	20

Time used: 157.5° E.M.T.

MACQUARIE ISLAND hrs JANUARY 1953

HOURLY VALUES OF (M3000) F2 OBSERVED DURING JANUARY 1953 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	a	a	3.0	3.3	g	2.2	2.6	2.5	2.9	2.7	2.5	2.8	c	c	3.0	b	c	a				
2	a	a	a	a	3.0	3.0	2.8	2.9	2.6	2.9	3.0	3.1	2.9	3.0	3.1	2.8	3.0	a	2.9					
3	a	a	b	a	2.9	3.0	b	3.2	f	2.7	(2.3)	2.8	2.7	3.0	3.2	3.0	c	3.1	3.1	3.0				
4	a	a	2.9	2.9	3.2	3.2	3.2	2.9	3.0	3.2	2.8	3.0	3.2	2.9	3.1	3.2	3.2	3.3	3.2	3.1	3.0			
5	2.9	3.2	a	3.1	3.3	3.1	3.3	3.5	3.5	3.0	3.1	3.2	3.1	3.0	3.1	3.0	3.1	3.1	3.0	3.1	3.2	(3.2)		
6	a	a	a	a	a	2.5	2.5	g	g	g	g	g	g	g	c	c	3.0	a	a	a	a	a	a	
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
8	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	c	c	c	c	c	c	c	c	c	c	c	
10	2.8	3.0	3.1	3.0	3.5	3.1	3.0	3.2	3.3	2.9	3.0	3.1	2.9	3.0	3.1	3.0	3.2	3.2	3.0	3.1	3.2	3.0	3.1	
11	3.0	2.9	3.2	3.1	3.3	3.3	3.1	3.0	3.2	3.0	3.0	3.0	3.2	3.0	3.0	3.2	3.0	3.4	3.1	3.2	3.0	3.1	3.0	
12	a	2.8	2.8	2.9	3.0	3.0	3.3	g	3.0	2.6	2.9	3.0	2.9	3.0	2.6	2.9	3.0	c	3.1	3.2	a	a	a	
13	(3.2)	b	2.9	2.8	3.1	g	2.8	s	s	s	3.0	3.4	3.0	3.0	3.0	3.0	3.0	3.0	3.8	a	a	b	a	
14	a	b	b	2.8	3.0	3.3	g	3.1	2.6	2.6	2.3	2.6	2.9	2.7	2.7	2.6	b	3.0	3.1	2.9	c	2.8	2.9	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.1	3.2	3.1	c	3.1	3.2	
16	a	a	3.3	3.0	3.1	3.1	g	3.1	3.2	3.2	3.0	3.2	3.0	3.1	3.1	3.2	3.0	3.4	3.4	3.2	3.1	3.0	3.1	
17	2.9	a	2.8	3.2	3.2	3.4	3.2	3.1	3.1	3.2	3.0	3.1	3.0	3.1	3.0	3.1	3.2	3.1	3.2	3.0	3.0	3.0	3.0	
18	3.1	2.9	3.1	3.1	3.2	3.4	(3.0)	3.0	2.9	3.1	3.0	3.0	3.2	3.0	3.1	3.2	3.0	3.0	3.2	3.0	3.2	3.0	3.0	
19	a	a	a	a	a	3.1	3.2	3.3	g	2.4	g	3.1	3.2	2.8	2.9	2.8	b	a	a	a	a	a	a	
20	a	a	a	a	a	3.0	3.3	3.1	s	2.2	2.6	2.5	2.5	c	b	c	c	3.1	c	c	c	c		
21	c	c	3.3	(2.8)	3.2	3.3	3.3	2.4	2.4	2.7	c	c	c	c	c	c	2.7	c	3.1	3.0	2.8	c	b	
22	c	c	c	c	c	c	c	3.1	g	c	c	c	c	c	c	c	c	c	c	c	c	c	b	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	2.9	3.3	3.3	3.5	3.2	2.9	3.0	
24	a	b	b	3.0	3.4	3.4	3.3	3.0	3.4	3.3	3.0	3.4	3.1	3.2	3.0	3.0	3.0	c	3.0	3.2	a	a	a	
25	a	a	a	a	a	a	a	2.7	2.8	2.5	2.8	c	c	3.3	2.7	2.8	2.8	2.8	3.1	c	3.0	3.1	a	a
26	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	2.4	2.8	2.6	a	a	a		
27	c	a	b	b	b	b	b	b	g	b	b	c	2.5	c	2.7	2.9	3.0	3.0	3.3	3.0	a	a	b	
28	a	b	b	b	b	3.3	a	3.3	g	g	g	g	g	g	g	2.6	c	3.3	3.1	3.2	c	c	c	
29	b	a	b	b	b	3.2	b	b	g	b	b	b	b	b	b	3.0	c	2.8	2.9	3.1	a	a	3.1	
30	b	a	a	b	a	2.2	3.4	2.6	g	2.6	2.8	2.3	2.9	2.9	2.9	3.0	3.0	2.9	3.0	3.1	b	a	a	
31	a	a	a	a	b	g	g	g	g	g	g	g	g	g	g	g	2.9	3.2	3.2	a	a	a	a	
Median.	(3.0)(2.9)(3.1)	2.9	3.2	3.1	2.9	2.6	2.9	2.8	3.0	2.9	3.0	2.9	3.0	2.9	3.0	2.9	3.0	3.0	3.1	3.1	3.0	(3.0)		
No.	6	5	8	13	17	19	23	18	23	19	22	21	23	19	22	19	20	19	19	17	11	10	8	

Time used: 157.5° E.M.T.

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

MACQUARIE ISLAND (M3000) F2 JANUARY 1953.

HOURLY VALUES OF (M3000) F1 OBSERVED DURING JANUARY 1953 AT MACQUARIE ISLAND

Hour Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	c	3.8	3.8	3.7	3.8	4.0	3.9	4.0	4.1	3.8	3.8	c	c	q	q
2	q	3.6	3.6	3.9	3.7	3.7	3.8	3.9	4.0	3.9	3.8	3.7	3.8	3.4	3.4
3	b	4.0	2.8	3.7	3.7	3.9	3.8	4.0	4.0	4.0	4.0	3.8	3.8	c	c
4	q	3.3	3.7	3.8	3.9	4.0	4.0	4.1	4.1	4.0	3.8	3.9	3.7	a	q
5	(3.3)f	3.5	3.7	3.9	4.0	4.2	4.0	3.9	3.7	3.7	3.7	3.8	3.7	a	a
6	3.4	3.6	3.7	3.9	3.7	c	3.8	(3.7)a	3.8	c	c	c	a	a	a
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
8	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	c	c	c
10	c	3.4	3.4	3.6	3.6	3.8	3.8	3.9	4.1	3.8	4.0	4.0	3.7	3.7	a
11	q	3.5	3.6	a	3.9	3.9	3.9	3.8	3.8	3.8	4.0	3.9	3.8	3.6	q
12	q	3.3	3.7	4.0	3.9	3.7	3.9	4.0	4.0	4.0	4.0	3.9	3.9	3.4	c
13	3.2	3.5	3.5	3.7	3.7	3.9	3.9	4.3	4.1	3.9	4.0	3.8	3.5	1	q
14	3.3	3.4	3.6	3.7	3.7	3.8	3.9	3.9	3.9	3.9	3.8	3.8	3.5f	3.7	q
15	c	c	c	c	c	c	c	c	c	c	c	c	c	q	q
16	3.2	3.3	3.6	3.9	4.0	4.1	3.9	4.0	4.0	4.0	4.0	3.8	3.7	3.7	(3.8)
17	1	3.5	3.4	3.6	3.6	3.6	4.0	(4.0)f	(4.1)f	(4.0)a	4.0	3.8	3.7	3.7	3.8
18	c	3.6	3.9	3.7	3.7	3.9	4.0	4.0	4.1	3.8	3.8	3.6	3.7	3.5	q
19	b	q	3.5	3.9	3.9	3.9	4.0	4.5	3.9	3.7	b	a	a	c	a
20	q	q	3.6	3.7	3.7	3.7	3.7	3.8	3.8	3.8	b	3.8	3.6	c	c
21	q	3.6	3.5	3.8	3.9	4.1	3.7	3.8	3.8	3.8	4.0	c	c	q	q
22	c	q	3.5	c	c	3.8	4.4	c	c	c	c	c	c	c	c
23	c	c	c	c	c	c	c	c	c	c	c	3.8	3.8	q	c
24	q	q	3.6	3.6	3.9	4.1	4.2	3.9	a	4.0	3.9	3.8	3.8	c	q
25	a	3.3	3.7	3.6	3.8	c	c	3.9	3.8	4.1	4.0	3.8	3.7	c	q
26	c	c	c	c	c	c	3.9	3.8	3.6	b	3.8	a	a	a	a
27	b	b	b	3.9	b	b	c	3.7	3.9	c	3.6	3.6	3.6	3.6	q
28	c	a	a	4.0	3.9	4.0	3.8	4.0	4.0	3.8	3.9	3.9	a	a	a
29	b	b	b	4.0	b	b	4.0	b	3.9	3.9	3.8	3.8	c	3.5	q
30	a	3.3	3.7	4.0	4.1	3.9	3.9	3.8	4.1	4.0	3.9	3.8	3.5	3.3	c
31	c	3.2	3.6	3.7	3.7	3.6	4.2	4.2	4.1	4.0	3.9	3.9	3.8	b	q
327.	Median.	3.3	3.5	3.6	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.8	3.7	3.6	3.6
No.	5	18	22	23	22	21	24	25	23	21	22	18	18	11	

Sweep: 1.0 - 13.0 Mc/s in 1° 55'

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (M3000) F1 JANUARY 1953.

HOURLY VALUES OF $\text{f}^{\circ}\text{F2}$ OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND

Hour	00	01	02	03	04	05	06	07	08	09	10	11
Day	b	a	2.5	2.3	2.1	3.2z	3.8z	4.4z	4.7z	5.1	5.5	5.1
1	c	(1.8)a	1.8	b	2.6	3.3	3.7z	4.2	4.8	5.2	5.5	5.3
2	a	4.0	3.1	a	2.9	3.3	4.5z	(4.7)s	5.0	5.1	5.5	5.5
3	(4.1)f	4.3	3.9	b	2.7f	3.2	3.7	4.3z	4.7	5.3z	5.8	5.6
4	(4.5)b	b	3.2							5.0h	5.4	5.4
5												
6	4.0	3.0f	2.5f	2.4	3.0	3.5z	4.3z	4.9	5.1	5.1	5.6	5.5
7	2.7f	3.0	3.1z	3.1fz	2.2f	3.3	4.1z	4.7	5.1	5.6	5.3	5.8
8	c	3.2	2.9f	2.4f	(2.2)s	3.5	4.2	4.8	5.3	5.5	5.5	5.7
9	(3.0)a	(3.0)a	(3.1)a	a	(2.2)a	3.4	4.2z	4.6	5.3	5.5	5.8	6.1
10	b	b	3.7	b	3.3	3.5	3.8	4.2	4.5	s	4.8	b
11	(3.8)b	b	3.3	a	2.0	3.2	3.8	4.3	4.7	4.3	4.5	s
12	(3.1)	3.0	2.5	a	1.8	3.2	3.8	4.3	4.7	5.3	5.5	6.1
13	a	a	a	a	1.9	3.3z	3.8z	4.3	4.7	5.2	5.7	5.8
14	3.3	3.0f	2.6f	2.0f	1.8	3.4z	3.8z	4.5	5.2	5.8	6.0	6.0
15	3.1f	3.4	3.2	4.0f	2.5f	3.2	3.8	4.2	4.6	5.0	5.1	
16	2.7	(2.3)a	(3.2)f	3.3f	2.5f	3.0	3.9	4.0	4.2	4.6	4.5	5.0
17	a	a	b	b	1.8	(2.2)f	3.0	3.7	4.3	4.5	4.6	4.5
18	a	2.9	2.5f	2.8f	(2.7)f	2.1f	2.6f	3.6	4.1	4.5	4.7	4.9
19	3.1f	3.2f	2.6	b	2.0f	2.5	3.4	3.7	4.0	5.0	4.8	5.5
20	(3.0)a	2.3f								4.3	4.5	5.0
21	(3.0)a	(3.0)b	b	b	(1.8)b	3.0	3.6	4.2z	4.5	4.5	5.5	5.5
22	a	b	a	a	a	2.4f	3.2	3.6	g	4.4	4.7	4.8
23	2.8	a	a	a	a	3.3f	3.2	b	b	g	b	b
24	a	a	a	b	b	b	b	3.3	g	a	a	a
25	b	b	b	b	b	b	b	b	b	b	b	b
26	b	b	b	b	b	b	g	g	g	(4.0)	4.2f	
27	b	b	b	b	b	b	b	b	b	b	4.5	c
28	b	b	b	b	b	b	2.8	c	c	c	c	
Median.	3.1	3.0	2.9	2.6	2.2	3.2	3.7	4.2	4.6	5.0	5.3	5.4
No.	14	15	17	12	18	23	25	24	24	23	23	22

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND, FEBRUARY 1953.

FEBRUARY 1953.

HOURLY VALUES OF $f^{\circ}T_2$ OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND

No.	Day	Hour	12	13	14	15	16	17	18	19	20	21	22	23
1	1	5.1	5.4	5.3	5.1	5.3	5.0	5.3	5.4	c	4.6	4.0	3.0	
2	2	5.6	5.7	6.1	5.5	5.2	5.2	5.1	5.2	3.3	3.8	4.2f	3.7	
3	3	5.6	6.0	6.0	5.9	5.3	5.1	5.5	5.2	4.5	4.5	a	a	
4	4	5.8h	5.8	5.3	5.3	5.7	5.5	5.5	5.7	5.7	5.7	4.5	b	
5	5	5.5	5.8	5.6	5.5	5.5	5.5	5.5	5.3	5.2	4.2	3.6f	3.6	
6	6	5.5	5.6	5.9	5.8	5.8	5.8	5.7	5.7	5.7	5.7	4.7f	3.8f	
7	7	6.1	6.0	6.0	5.8	6.0	5.7	5.5	5.8	c	c	c	c	
8	8	5.8	5.8	6.2	6.2	6.0	6.1z	5.6z	5.8	5.6	5.0	3.4	3.2	
9	9	6.1	6.2	6.2	6.3	6.0	5.8	6.0	6.3	6.0	4.3	3.6	a	a
10	10	b	5.5	5.5	5.5	5.5	5.2	5.2	4.8	4.7	5.3	(4.8)f	(4.4)f	3.6
11	11	s	5.2	5.2	5.2	4.5	c	c	c	c	c	c	a	a
12	12	6.1	5.9	5.6	5.6	5.5	5.3	5.5	5.6	5.6	(6.0)s	4.2f	(3.8)f	a
13	13	6.1	6.0	6.0	6.0	6.0	5.6	5.5	5.6	5.6	5.1	4.5	3.8	
14	14	6.3	6.2	6.3	6.3	6.0	5.8	6.0	5.7	5.3	a	a	a	
15	15	5.2	5.4h	5.2	5.2	5.3	5.3	5.4	5.4	4.5	4.7	3.8f	4.2	3.4
16	16	5.7	6.3	5.8	5.3	5.3	5.5	5.0	4.8	4.9	a	a	a	
17	17	(5.1)h	(5.1)h	5.0	5.0	5.0	5.0	5.0	5.0	5.0	a	a	a	
18	18	5.4	5.2	5.0	5.0	5.1	5.1	5.3	5.2	5.2	c	c	3.6f	b
19	19	6.0	5.6	5.6	5.6	5.6	5.6	c	c	c	c	3.0	(3.0)	
20	20	5.5	5.3	5.1	5.1	5.2	5.1z	5.1z	5.0z	5.3	5.5	4.6f	4.0	(3.6)a
21	21	5.6	5.9	5.6	5.5	6.3	c	c	c	c	a	a	a	
22	22	4.9	5.1	4.8	4.7	5.0	4.9	5.1	3.6f	3.3f	3.3	3.0	2.3f	f
23	23	b	8	b	c	a	(4.1)f	c	c	a	a	a	b	b
24	24	8	b	4.3	4.4	4.6	c	b	b	b	b	b	b	b
25	25	b	4.3	b	c	c	c	b	b	b	b	b	b	b
26	26	c	4.8	5.0	b	(4.8)f	a	a	b	b	b	b	b	
27	27	b	c	c	c	4.4	b	b	b	b	b	b	b	
28	28	b	6	6	4.3	4.6	(4.3)f	4.6	a	4.0	3.2	(2.8)f	b	b
Median.	No.	5.6	5.6	5.6	5.5	5.4	5.2	5.3	5.3	5.3	5.3	4.3	4.0	3.6
No.	21	26	25	23	22	22	22	17	17	17	14	15	15	11

Sweep: 1.0 - 13.0 Mc/s in 1st 55s T.M.T.

Macquarie Island f°T2 February 1953

HOURLY VALUES OF $\frac{f^{\circ}F}{10}$ OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND

Hour Day	07	08	09	10	11	12	13	14	15	16	17	18
1	3.7	3.9	4.0	4.3	4.3	4.4	4.3	4.2	4.2	4.0	4.0	3.7
2	4.0	4.0	4.3	4.3f	4.4	4.3	4.4	4.3	4.3	3.8	3.8	6
3	4.0	4.1	4.2	4.3	4.3	4.4	4.5	4.5	4.4	4.2	4.0	(3.5)
4	4.0	4.2	4.1	4.2	4.5	4.4	4.4	4.3f	4.3	4.2	4.0	3.5
5	4.0	4.1	4.2	4.3	4.4	4.5	4.5	4.4	4.4	4.2	4.0	3.5
6	4.0	4.3	4.4	4.4	4.5	4.5	4.5	4.4	4.4	4.2	4.0	3.5
7	4.0	4.2	4.4	4.3	4.3	4.4	4.5	4.4	4.4	4.3	4.0	4.0
8	3.9	4.2	4.3	4.5	4.5	4.4	4.4	4.4	4.3	4.2	3.9	3.8
9	4.0	4.1	4.2	4.3	4.3	4.4	4.4	4.3	4.2	4.2	3.5	3.0
10	4.0	4.0	4.0	4.0	b	4.2	4.2	4.3	4.2	4.0	4.0	3.5
11	3.7	3.9	3.9	4.0	4.3	4.3	4.2	4.2	4.0	4.0	4.0	(3.2)
12	3.7	4.0	4.1	4.2	4.3	4.4	4.3	a	4.2	4.1	3.7	3.5
13	q	4.1	4.2	4.3	4.5	4.4	4.4	4.3	4.2	4.0	4.0	3.3
14	3.7	4.0	4.2	4.2	4.4	4.4	4.4	4.3	4.3	4.0	3.8	q
15	(3.5)q	4.0	4.0	4.0	4.2	4.2	4.4	4.3	4.1f	4.0	4.0	3.5
16	3.5	3.9	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.0	3.8	q
17	3.7	3.9	4.0	4.0	4.2	4.2	4.2	4.0	4.0	3.8	3.7	a
18	q	3.9	4.0	4.1	4.1	4.1	4.1	4.1	4.0	3.9	3.7	3.6
19	q	4.1	4.0	4.0	4.3	4.3	4.3	4.2	4.2	c	c	q
20	q	3.7	4.0	4.0	4.1	4.2	4.2	4.2	4.2	4.0	3.5	3.4
21	q	4.0	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.0	3.5	q
22	q	4.0	3.9	4.0	4.2	4.1	4.1	4.0	4.0	3.8	3.6	3.5
23	b	b	b	3.7	b	b	4.0	b	c	a	c	c
24	b	3.5	a	a	a	3.9	b	3.9	3.9	3.5	c	c
25	b	b	b	b	b	b	4.0	b	c	c	b	b
26	3.4	3.6	3.8	3.8	3.8	4.4	4.0	4.0	b	3.7	q	a
27	b	b	c	c	c	b	c	c	c	6	(3.5)f	a
28	c	c	c	c	c	23	24	26	24	22	20	13
Median. No.	4.0 17	4.0 24	4.0 23	4.2 24	4.3 23	4.4 23	4.2 26	4.2 24	4.2 22	4.0 22	3.8 20	3.5 13

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND 20°1 FEBRUARY 1953

330.

HOURLY VALUES OF $f^{\circ}\text{E}$ OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND.

Day	Hour	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1		1.8	2.2	2.5	2.7	3.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.0	0
2		1.5	2.0	2.5	2.7	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	(1.9)g	
3	1.6	1.9	2.4	2.6	2.7	3.0	3.2	3.4	3.4	3.5	3.5	3.5	3.5	3.4	3.4	a	
4		1.9	2.3	2.6	2.7	3.0	3.2	3.4f	3.5	3.4	3.4	3.4	3.4	3.1	3.1	a	
5		1.8	2.2	2.5	2.8	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	1.8
6		1.6	2.1	2.5	2.8	3.0	3.1	3.4	3.4	3.4	3.4	3.4	3.4	3.1	3.1	2.9	
7		a	2.3	2.5	2.9	3.0	3.0	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	2.6	a
8		1.8	1.8	a	2.9	3.1	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.1	3.1	2.9	c
9		1.5	2.1	2.4	2.9	3.0	3.3	a	3.4	3.3	3.2	3.2	3.2	3.1	3.1	2.5	a
10		1.9f	2.3	2.4	2.8	b	b	b	b	b	b	b	b	3.0	3.0	2.9	a
11		b	b	b	b	b	b	b	b	b	b	b	b	3.0	3.1	c	c
12		a	2.0	(2.7)a	a	a	a	a	a	a	a	a	a	a	a	2.8	a
13		a	2.4	2.7	2.9	3.0	3.0	3.3	a	3.3	3.3	3.3	3.3	3.1	3.1	2.8	a
14	(1.5)c	1.9	2.5	2.9	2.9	3.1	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.0	3.0	2.3	a
15	a	2.0	2.4	2.6	2.8	3.0	a	3.4	a	3.1	3.1	3.0	3.0	2.7	2.7	2.6f	a
16		0	2.0	2.4	2.8	2.9	3.0	b	b	b	b	b	b	3.0	3.1	c	c
17		a	2.1	2.5	2.8	3.0	3.0	3.0	3.2	3.1	3.1	3.1	3.1	3.0	3.0	2.5	a
18		1.7	2.2	2.5	2.6	2.8	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.0	3.0	2.5	a
19		a	2.0	2.3	2.5	2.7	2.9	3.1	3.2	3.2	3.2	3.2	3.2	(3.0)c	c	2.4	c
20		a	1.6	b	2.5	b	(3.0)a	3.0	3.1	3.1	3.0	3.0	3.0	3.0	2.7	2.5	a
21		0	2.0	2.3	2.5	2.8	3.0	3.0	3.1	3.0	3.2	3.0	3.0	3.0	3.0	c	c
22		c	1.8	2.3h	a	a	a	3.0	a	a	3.0	a	a	2.7	2.4	1.8	o
23		a	a	b	b	b	b	3.0	b	b	b	b	b	a	a	c	c
24		b	b	b	a	a	a	b	b	b	b	b	b	c	2.9	c	a
25		b	b	b	b	b	b	b	b	b	b	b	b	c	c	a	b
26		b	b	b	b	a	b	b	b	b	b	b	b	2.9	a	a	b
27		b	b	b	b	b	b	b	b	b	c	c	c	c	b	b	
28		b	b	c	c	c	c	b	b	b	3.0	2.8	a	a	3.3	a	a

Median. * 1.6 2.0 2.5 2.8 3.0 3.1 3.3 3.2 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7
No. 16 20 19 19 19 19 16 17 17 19 19 18 20 20 19 12

Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.N.T. MACQUARIE ISLAND f_E FEBRUARY 1953.

HOURLY VALUES OF FES OBSERVED DURING FEBRUARY 1953 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	4.0	e	e	e	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g				
2	c	4.6	4.5	4.2	4.0	2.7	2.8	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g				
3	5.3	3.2	1.3	4.2	4.2	e	g	g	g	g	g	4.3	g	g	g	g	g	g	g	g	g	2.9	4.1	e				
4	7.0	5.5	4.5	4.0	3.2	g	g	g	4.0y	3.5	g	g	4.4	g	g	g	4.2	4.0	7.5	4.2	5.8	4.5	5.5	4.0				
5	4.5y	b	3.6y	3.5	3.0	g	g	g	g	g	g	4.2	4.0	g	g	g	g	7.5	g	g	g	g	2.3	4.6	4.0			
6	g	3.5	3.5	3.5y	e	g	g	g	g	g	g	5.0	g	g	g	g	g	g	3.6	g	g	g	g	3.5	g			
7	4.7	3.3f	3.3	3.3	3.3y	e	g	g	g	g	g	3.8	3.5	g	g	g	g	4.0	4.4	4.2	g	3.4	4.4	3.4	g			
8	c	6	e	e	e	g	g	g	g	g	g	3.5	g	3.5	g	g	g	3.8	4.3	2.5	g	g	g	g	c			
9	3.2	4.5	4.5	3.3	3.4	3.0	3.4	3.0	3.0	3.0	3.0	3.5	4.4	3.6	g	g	g	3.6	3.4	3.2	g	3.5	3.3	3.1	3.2			
10	4.6	4.5	4.5	4.5	3.2	3.2	3.0	3.0	3.0	3.0	3.0	b	b	b	b	b	b	b	4.2	4.0	3.6	3.3	3.6	4.1	2.8			
11	4.5y	b	3.5	4.5	4.3	3.2	4.4	4.0y	b	4.3y	b	b	4.2	3.5	4.2	b	b	5.7	5.5	7.6	7.6	3.5	5.2	4.6	4.5			
12	5.2	3.5	4.1	4.1	4.1	2.1	g	4.5	3.5	3.5	4.2	4.0	5.0	g	g	g	4.5	4.4	4.4	g	4.3	4.3	4.2	4.5				
13	4.4	4.4	4.4	4.4	5.0	4.5	8	4.5	5.0	5.0	3.5	4.2	4.2	3.5	3.4	3.4	3.6	3.4	3.2	g	3.8	4.3	2.5	4.0y				
14	3.0	4.2	e	e	e	g	g	2.0	2.0	2.0	3.5	4.2	4.2	3.5	3.4	3.4	3.4	3.6	3.2	3.0y	7.0y	4.6	6.0	5.0	3.8			
15	3.8	4.5	3.8	3.8	3.5	2.0	1.9	2.0	2.0	2.0	3.4	3.4	3.4	3.5	3.5	3.5	4.0	4.0	3.1	7.6	4.4	3.3	5.5	4.4f	3.2	2.4		
16	3.6	4.5	4.2	4.1	3.1	g	g	g	3.5	3.8	g	3.5	3.8	g	g	g	3.5	3.3	3.0	g	4.4	4.4	4.5	4.5	4.0	3.7	4.6	
17	4.4	4.4	5.0	b	b	3.5	2.6	2.6	g	g	g	3.5	3.8	g	g	g	3.5	3.3	3.0	g	3.5	3.5	4.6	4.6	4.4	6.6	4.6	
18	4.5	3.3	3.5	3.3	2.0	2.0	g	g	g	g	g	3.5	3.5	g	g	g	3.5	3.4	3.2	g	4.5	4.5	4.5	4.5	4.4	4.4	4.6	
19	4.2	4.5	3.2	3.2	2.0	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.7	3.4	3.4	4.4	4.0	4.5	4.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
20	4.4	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
21	4.5	3.5	2.2	0	2.2	g	g	g	g	g	g	3.6	3.5	3.5	3.7	3.7	3.6	3.1	3.1	4.2	4.1	4.1	4.1	4.1	4.1	4.1	4.1	
22	4.2	4.2	b	3.3	3.2	4.1	2.0	2.0	4.4	4.4	4.4	4.5	b	b	b	b	b	b	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
23	5.6	4.5	6.0	5.0	5.0	5.0	4.4	4.4	4.4	4.4	4.4	4.5	b	b	b	b	b	b	4.3	7.6	c	c	c	4.5	4.5	4.5	4.2	
24	6.0	6.0	5.0	5.0	4.4	b	b	b	b	b	b	3.0	3.6	5.5	4.5	b	b	b	b	c	c	c	c	4.5	4.5	6.5	b	
25	b	b	b	4.5	3.5	b	b	b	b	b	b	b	b	b	b	b	b	b	c	c	c	c	4.6	b	4.4	b		
26	b	3.5	4.2	2.2	3.4	b	b	b	b	b	b	3.4	b	b	b	b	b	3.3	b	b	4.5	7.4	b	b	b	b	b	
27	b	b	b	5.0	4.5	b	b	b	b	b	b	4.0	4.0	4.0	7.5	3.3	3.3	3.3	3.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
28	4.7	b	b	2.8	3.3	b	b	b	b	b	b	c	c	c	c	b	b	b	b	5.2	4.4	5.8	5.8	4.0	4.4	4.4	4.4	4.4
Median.	4.5	4.3	3.8	3.3	2.6	**	**	**	**	**	**	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	
No.	22	22	25	26	23	23	22	22	22	23	23	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21

Sweep: 1.0 - 13.0 No/s in 1m 55s Time used: 157.5° E.M.T. MACQUARIE ISLAND FEBRUARY 1953.

332.

HOURLY VALUES OF $\text{h}^{\circ}\text{F}2$ OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND

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
Day	b	a	320	300 ^e	280	250	240	500 ^f	600	300	s	350	370	330	330	330	340	360	270	250	240	250	270	
1	c	e	300	270	240	230	220	330	380	330	290	350	300	340	300	320	360	270	250	240	250	270		
2	a	d	270	260	240	230	220	310	370	320	330	300	340	300	320	300	360	270	250	240	250	270		
3	b	c	300	330	270	250	240	230	220	310	370	320	300	320	310	300	360	270	250	240	250	270		
4	b	b	230	300	270	300	270	230	230	260	370	320	300	320	300	320	300	360	270	250	240	250	270	
5	b	b	270	270	270	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	
6	b	b	270	250	250	250	250	230	230	230	250	300 ^f	300	300	340	320	330	300	300	(270)	240	220	230	
7	b	b	240	300	250	240	250	230	230	230	280	280	280	280	280	320	300	300	300	300	300	300	300	
8	c	c	280	260	280	280	280	230	220	220	(280)	300	320	300	300	300	300	310	300	290	250	240	230	
9	a	a	250	250	240	240	230	250	250	250	250	320	320	300	300	300	300	300	300	300	300	290	260	
10	b	b	250	300	250	250	230	230	230	280	400	s	420	b	350	340	350	320	320	300	240	250	270	
11	(280)	b	a	a	a	(300)	a	a	530 ^f	600	440	400	s	s	330	340	340	400 ^f	s	s	s	s	a	
12	a	a	320	300	260	(300)	250	230	370	420	330	340	300	300	300	330	300	300	320	280	270	240	230	
13	a	a	250	270	250	280	280	250	250	220	300	300	290	290	300	300	300	280	280	280	240	240	(250)	
14	250	270	250	250	280	260	220	220	250	250	300	300	300	300	300	300	300	280	280	280	a	a	260	
15	250	300	300	300	310	260	250	220	1	350	310	330	340	330	330	330	360	340	340	310	280	270	270	
16	300	(300)	a	300	280	240	230	1	350	300	400	400	380	270	280	270	270	260	260	a	a	a	a	
17	a	a	a	a	a	320	b	290	250	320	330	320	350	400	450	400	400	320	350	320	a	a	a	a
18	a	a	310	300	260	260	a	260	250	230	340	350	330	340	320	340	350	320	310	290	c	c	290	
19	a	a	a	(270)	300	b	280	280	280	(280)	1	400	350	330	300	300	300	310	c	c	c	c	300	
20	b	b	280	(290)	b	b	b	b	b	b	b	b	b	b	b	b	460	b	c	c	c	b	b	
21	a	b	(350)	a	a	a	a	a	a	280	220	300	280	300	320	280	320	330	280	c	c	c	270	
22	b	b	b	a	a	a	a	a	a	280	250	240	g	400	350	340	300	330	350	300	300	270	260	f
23	a	a	a	a	a	a	a	a	a	370	a	b	b	b	b	b	470	300	a	c	a	a	b	
24	a	a	b	a	a	a	b	b	b	b	b	b	b	b	b	b	460	b	c	380	c	a	b	
25	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c	c	b	b	b	b	b	
26	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	370	370	b	350	a	b	b	
27	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	500	500	c	300	b	b	b	
28	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	380	380	a	300	a	250	320	
Median.	280	300	270	280	275	250	230	280	350	320	330	325	310	310	300	300	300	270	270	22	22	17	17	9
No.	11	13	13	11	16	23	23	20	22	23	23	22	21	25	25	22	22	22	22	22	17	17	15	15

MACQUARIE ISLAND h[°]F2
FEBRUARY 1953.

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

333.

HOURLY VALUES OF hpF_2 OBSERVED DURING FEBRUARY 1953 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	a	340	320	300	270	260	u	u	s	u	u	u	u	u	u	u	u	u	290	280	c	270	280	250	
2	c	300	u	b	290	250	250	u	u	u	u	u	u	u	u	u	u	u	u	c	270	300f	310	310	300	
3	a	290	290	a	280	270	240	u	u	u	u	u	u	u	u	u	u	u	u	290	280	260	280	280	a	
4	320	330	290	280	330	280	250	u	u	u	u	u	u	u	u	u	u	u	u	300	290	280	290	320	b	
5	300	b	b	(320)	300	290	250	u	u	u	u	u	u	u	u	u	u	u	u	270	300	300	300	330f	320	
6	320	280	270	260	260	250	260	u	u	u	u	u	u	u	u	u	u	u	u	280	260	270	250	240	250	
7	300	u	290	290	280	260	250	u	u	u	u	u	u	u	u	u	u	u	u	310	290	c	c	c	c	
8	c	300	280f	300	290	260	250	u	u	u	u	u	u	u	u	u	u	u	u	280	280	270	250	280	300	
9	a	a	a	a	300	250	250	u	u	u	u	u	u	u	u	u	u	u	u	300	u	270	250	270	300	
10	b	b	a	b	320	280	280	u	u	s	u	b	u	u	u	u	u	u	u	u	280	280	280	280	320	
11	300	b	350	a	a	320	a	u	u	u	u	u	u	u	u	u	u	u	u	s	u	c	c	c	c	
12	a	u	310	300	310	280	260	u	u	u	u	u	u	u	u	u	u	u	u	290	290	300	260	280	320	
13	a	a	a	a	a	290	280	280	260	u	u	u	u	u	u	u	u	u	u	290	300	290	260	260	280	
14	300	290	280	300	300	270	230	u	u	u	u	u	u	u	u	u	u	u	u	280	280	300	a	a	a	
15	u	u	340	330	u	270	270	u	u	u	u	u	u	u	u	u	u	u	u	290	320	280	300	310	320	
16	u	a	a	a	320	290	270	270	1	u	u	u	u	u	u	u	u	u	u	280	280	a	a	a	a	
17	a	a	a	a	b	b	u	280	u	u	u	u	u	u	u	u	u	u	u	u	330	a	a	a	a	a
18	400	330	s	a	280	280	260	u	u	u	u	u	u	u	u	u	u	u	u	c	c	c	c	c	b	
19	320	u	300	300	280	260	250	270	g	u	u	u	u	u	u	u	u	u	u	280	260	260	260	250	290	
20	a	u	u	b	300	300	260	u	u	u	u	u	u	u	u	u	u	u	u	290	300	310	310	300	320	
21	320	350	b	b	b	280	260	250	u	u	u	u	u	u	u	u	u	u	300	u	290	c	c	280	280	
22	a	b	a	a	a	u	260	250	g	u	u	u	u	u	u	u	u	u	280	270	270	f	f	a	a	
23	a	a	a	a	a	380	a	b	g	b	b	c	a	a	c	a	a	a	c	a	a	a	a	b	b	
24	a	a	a	a	b	b	b	b	g	g	a	g	b	u	c	u	c	u	c	u	c	a	a	b	b	
25	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c	c	c	b	b	b	b	b	b	b	b	
26	b	b	b	b	b	b	b	g	g	g	g	u	u	c	u	u	b	u	a	b	b	b	b	b	b	
27	b	b	b	b	b	b	b	b	b	b	b	b	b	c	c	c	c	c	u	b	b	b	b	b	b	
28	b	b	b	b	b	b	b	270	c	c	c	c	b	g	u	a	u	u	a	270	320	350	b	b	b	b
Median. No.	(320)	(300)	290	300	295	270	260	(260)	*	*	*	*	*	*	*	*	*	*	(325)	*	*	(300)	280	270	280	300
	9	8	11	11	16	21	23	5	5	5	7	15	16	14	15	13	9									

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND TIME

FEBRUARY 1953

HOURLY VALUES OF h'F1 OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND

Day	Hour	07	08	09	10	11	12	13	14	15	16	17	18	19
1	220	200	200	200	200	190	210	200	200	200	200	200	220	(230)
2	220	220	220	200	190	180	210f	200	200	200	200	220	220	q
3	220	210	200	200	200	170f	180f	200	190	190	190	210	220	q
4	230	210	200f	200	200	180	160f	190	200	190	190	200	230	q
5	210	200	200	180	200	200	180	200	190	190	190	220	230	230
6	220	200	200	200	200	200	200	200	200	200	190	200	200	(230)
7	220	200	200	180	170	200	240	200	200	200	200	220	230	q
8	200	200	200	200	200	190	180	200	200	200	200	210	220	c
9	200	200	200	190	190	180	200	200	200	200	230	230	q	q
10	200	200	200	200	(200)b	b	200	190	200	200	220	220	230	q
11	a (240)a	240	200	b	220	220	220	200	200	200	200	c	c	c
12	q	230	200	200	200	190	200	200	200	200	200	210	230	q
13	210	200	200	200	200	190	200	200	200	200	210	(210)a	230	q
14	200	240	200	210	210	210	210	200	200	200	210	220	230	q
15						a	(200)a	190	200	200	200	(200)a	210	210
16	210	220	200	190	200	200	(200)a	200	210	200	200	c	c	c
17	230	200	210	200	230	200	200	200	200	200	220	220	220	q
18	q	240	220	200	190	190	190	200	200	200	220	230	240	c
19	q	200	210	180	200	200	210	200	200	200	200	c	c	c
20	q	230	220	a	200	200	200	200	200	200	200	210	210	q
21	q	200	200	200	100	200	200	210	200	200	210	210	c	c
22	q	200	200	190	200	190	190	200	200	200	210	220	240	250
23	b	b	220	b	b	b	b	b	b	b	b	a	c	c
24	b	230	a	a	a	b	b	b	b	b	220	200	300	c
25	b	b	b	b	b	b	b	b	b	b	c	c	b	b
26	230	240	210	230	230	220	200	210	200	200	210	210	c	c
27	b	b	b	230	b	c	c	b	c	c	240	q	a	b
28	c	c	c	c	c	b	200	210	a	(200)a	250	c	b	q
Median.	220	200	200	200	200	200	200	200	200	200	200	220	230	*
No. •	16	24	23	22	23	21	23	24	21	21	22	19	12	

MACQUARIE ISLAND h'F1 FEBRUARY 1953.

Time used: 157.5° E.M.T.

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

335.

HOURLY VALUES OF H'E OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND.

Hour	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
Day	o	(110)s	100	100	100	100	100	100	100	100	100	100	100	100	9
1	o	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	a	b	100	100	100	100	100	100	100	100	100	100	100	100	100
3	o	(100)s	100	100	100	100	100	100	100	100	100	100	100	100	100
4	(120)s	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5	(120)s	100	100	100	100	90	100	100	100	100	100	100	100	100	100
6	120	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	a	100	100	100	100	100	100	100	100	100	100	100	100	100	a
8	140	100	a	100	100	100	100	100	100	100	100	100	100	100	c
9	o	100	100	100	100	100	100	100	100	100	100	100	100	100	a
10	a	100	100	100	100	b	b	b	b	b	b	b	b	b	a
11	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c
12	a	100	100	100	100	a	a	a	a	a	a	a	a	a	a
13	o	a	100	100	100	100	100	100	100	100	100	100	100	100	a
14	o	100	100	100	100	100	100	100	100	100	100	100	100	100	a
15	a	a	100	100	100	100	100	100	100	100	100	100	100	100	a
16	o	100	100	100	100	100	100	b	b	b	b	b	b	b	c
17	a	100	100	100	100	100	100	100	100	100	100	100	100	100	a
18	140	100	100	100	100	100	100	100	100	100	100	100	100	100	c
19	c	100	100	100	100	100	100	100	100	100	100	100	100	100	c
20	a	100	b	100	100	100	100	100	100	100	100	100	100	100	a
21	o	100	100	100	100	100	100	100	100	100	100	100	100	100	c
22	o	100	100h	a	a	a	100	a	a	100	a	a	100	100	9
23	a	a	b	b	b	b	b	b	b	b	b	b	b	b	c
24	b	b	b	a	a	a	a	b	b	b	b	b	b	b	a
25	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
26	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c
27	b	b	b	c	c	c	c	b	b	c	c	c	c	b	b
28	b	b	c	c	c	c	c	b	b	b	b	b	b	b	a
Median.	o	100	100	100	100	100	100	100	100	100	100	100	100	100	*
No.	15	18	19	19	18	19	19	17	19	20	18	20	19	10	

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND H'E FEBRUARY 1953.

HOURLY VALUES OF H'ES OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND

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

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

Time used 157.5° E.M.T.

MACQUARIE ISLAND h'ES FEBRUARY 1953

HOURLY VALUES OF (M3000)F2 OBSERVED DURING FEBRUARY 1953 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	a	2.7	2.7f	3.0	3.1	3.2(2.5)	(2.3)	3.2	s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.2	3.3	c	3.2	3.0	3.0		
2	c	2.9	3.0	b	2.9	3.4	3.3	2.9	2.6	3.0	3.1	3.0	3.2	3.0	3.2	3.1	3.0	3.0	3.1	3.3	2.8	2.8	3.0f(2.6)			
3	a	3.0	2.9f	a	3.2	3.2	3.3(2.2)	3.2	3.2	2.9	2.9	2.9	3.0	3.1	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.0	a	a		
4	2.9	3.0	3.1	2.9	(3.0)	3.2	3.3	3.1	3.1	(3.0)	3.1	3.0	3.2	3.2	3.1	3.1	3.2	3.2	3.1	3.1	3.1	3.2	3.1	b		
5	(3.1)	b	(2.8)	2.8	3.1	3.4	3.0	(2.7)	(2.8)	3.1	3.1	3.2	3.4	3.1	3.2	3.1	3.2	3.1	3.1	3.1	3.1	3.2	3.0	2.6f 2.7		
6	2.6	3.1	3.0	3.1	3.2	3.4	3.5	3.5	3.1	3.1	3.3	2.9	3.1	3.0	3.1	3.0	3.1	3.1	3.1	3.0	3.5	3.3	3.0	(2.8)		
7	2.8	(3.0)	2.9	2.8	3.3	3.4	3.3	3.1	3.3	3.0	3.0	3.1	3.1	3.0	3.1	3.0	3.0	3.1	c	c	c	c	c			
8	c	2.9	3.0	2.9	3.3	3.5	3.5	3.4	3.2	3.3	3.2	3.4	3.3	3.2	3.3	3.2	3.3	3.1	3.2	3.3	3.5	(3.0)	3.0	2.9		
9	a	a	a	a	3.0	3.5	3.4	3.4	3.2	3.2	3.0	3.0	3.3	3.3	3.4	3.2	3.0	3.1	3.2	3.5	3.2	3.4	3.2	2.8	a	
10	b	b	a	b	3.0	3.2	3.2	3.0	3.7	s	2.8	b	3.0	3.0	2.9	3.1	3.1	3.2	3.2	3.0	3.0	3.1	3.1	2.8		
11	3.2	b	2.8	a	a	3.2	3.0	2.4	2.2	2.5	2.8	s	3.0	3.0	3.0	3.0	3.0	2.8	c	c	c	c	c	a	a	
12	a	2.9	2.8	3.0	3.1	3.2	3.3	2.6	2.6	3.1	3.0	3.2	3.0	3.1	3.2	3.1	3.2	3.1	3.2	3.3	3.2	3.4	3.4	2.8	a	
13	a	a	a	a	a	3.3	3.4	2.9	2.9	3.3	3.4	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.2	3.2	3.2	3.4	3.4	3.0	3.0	
14	2.9	3.1	2.8	2.8	2.9	3.3	3.3	3.5	3.3	3.4	3.4	3.2	3.2	3.2	3.3	3.1	3.3	3.2	3.2	3.2	3.2	2.9	a	a		
15	3.4	3.0	3.3	2.6	3.0	3.2	3.2	(3.3)	3.2	3.1	3.1	3.2	3.1	3.1	3.2	3.1	3.1	3.1	3.1	3.1	3.4	3.2	2.9	2.9		
16	3.0	a	a	2.9	2.9	3.3	3.3	(3.3)	2.9	3.4	3.0	3.0	3.0	2.8	3.2	3.2	3.4	3.4	3.4	3.4	3.4	3.2	a	a	a	
17	a	a	a	b	b	3.2	3.3	3.2	3.1	3.2	(3.2)	(3.2)	2.9f	(2.9)	2.8	3.2	3.1	3.0	2.8	a	a	a	a	a	a	
18	f	2.7	3.0	s	3.0	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.0	3.2	3.2	3.2	3.2	c	c	c	c	3.1	b	
19	3.0	3.0	3.0	(3.0)	3.0	3.1	3.5	3.3	3.5	3.8	3.3	3.2	3.4	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.2	c	c	3.2	b	
20	a	3.2	3.0	b	2.7	3.1	3.4	3.2	(2.9)	3.0	3.0	3.2	3.2	3.3	3.2	3.2	3.3	3.4	3.4	3.4	3.4	3.3(3.2)	3.0	a		
21	3.0	2.6	b	b	b	3.1	3.4	3.5	3.4	3.4	3.0	3.3	3.2	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.0	
22	a	b	a	a	a	3.2	3.5	3.5	3.5	3.0	3.0	3.3	3.4	3.3	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.1	f	f	a	
23	2.8	a	a	a	a	2.6	2.9	b	b	g	b	g	b	g	b	g	b	g	a	a	a	a	a	b		
24	a	a	a	a	b	b	b	b	b	b	b	b	b	b	b	b	b	2.7	c	c	c	3.1	b	b		
25	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c	c	c	b	b	b	b		
26	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	2.6	2.8	2.9	b	3.2	a	b	b		
27	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c	2.8	b	b	b	b	b	b		
28	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	g	2.5	2.7	n	3.2	a	3.4	2.9		
Median.	3.0	3.0	3.0	2.9	3.0	3.2	3.3	3.2	3.0	3.1	3.1	3.2	3.1	3.1	3.1	3.2	3.1	3.2	3.2	3.2	3.2	3.1	3.0	(2.9)		
No.	11	13	14	11	17	23	25	24	23	22	22	21	26	24	23	21	21	21	17	17	14	15	15	15	g	

HOURLY VALUES OF (M3000) ET1 OBSERVED DURING FEBRUARY 1953 AT MACQUARIE ISLAND

Day	Hour	07	08	09	10	11	12	13	14	15	16	17	18
1	3.4	3.8	3.8	3.8	3.8	4.0	4.0	3.7	3.8	3.9	3.7	3.5	(3.6)
2	3.4	3.7	3.8	3.8	3.8	4.1	4.0	3.7f	3.8	3.9	3.7	3.6	c
3	3.5	3.6	3.9	3.9	3.9	4.0	4.0	3.7f	3.8	3.6	3.7	3.6	1
4	3.5	3.8	3.8	3.7	3.6	4.0	4.0	3.9	3.9	3.6	3.5	3.5	3.7
5	3.3	3.8	3.9	3.9	3.7	3.7	3.7	4.5	4.0	3.9	3.8	3.6	1
6	3.7	3.6	3.7	3.8	3.8	3.8	3.8	3.9	3.8	3.7	3.8	3.5	
7	3.5f	3.7	3.8	4.1	4.1	4.1	4.1	3.8	3.6	3.8	3.5	3.6	
8	3.9	3.8	3.8	3.8	3.9	4.0	4.0	4.1	4.1	3.7	3.7	3.6	c
9	3.7	3.8	4.0	4.1	4.1	4.1	3.9	3.9	4.0	4.1	3.6	3.7	1
10	3.4	3.6	3.9	3.8	b	b	b	3.9	3.9	3.8	3.9	3.3	1
11	3.4	3.8	3.8	3.8	4.0	4.0	3.8	3.7	3.7	3.9	c	c	
12	3.5	3.8	4.0	4.0	3.9	4.0	3.9	a	a	3.6	3.8	3.8	1
13	3.9	4.0	4.0	4.0	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.6	
14	3.8	3.5	3.7	3.7	3.9	3.8	4.0	3.7	3.8	3.8	3.8	3.8	1
15	3.9	3.5	3.9	3.8	4.1	a	3.9	4.0	4.0	3.8	3.7	3.7	q
16	3.8	3.6	3.6	3.8	3.8	3.9	3.8	3.7	3.7	3.9	c	c	
17	3.5	3.7	3.7	4.1	4.1	3.8	4.0	3.9	4.0	3.8	3.7	3.8	a
18	3.7	3.7	3.7	3.8	3.8	4.1	3.9	3.9	3.6	3.7	3.6	3.7	
19	3.6	3.6	3.8	4.2	4.2	3.9	4.0	4.0	3.9	c	c	c	
20	3.7	3.7	3.7	3.8	3.8	3.9	3.9	3.9	3.9	4.0	3.7	3.9	q
21	q	3.7	3.8	3.8	4.0	3.8	3.8	3.8	3.7	3.8	3.7	3.8	q
22	q	3.6	3.9	4.1	4.0	3.9	3.9	3.9	4.0	3.9	3.8	3.8	3.4
23	b	b	b	4.0	b	b	3.8	b	b	c	a	a	c
24	b	3.5	a	a	a	3.9	b	3.9	3.8	3.9	c	c	c
25	b	b	b	b	b	b	3.9	b	c	c	c	c	b
26	3.4	3.5	3.8	3.8	3.7	3.8	3.6	3.8	b	3.8	3.8	c	c
27	b	b	c	c	b	3.9	c	c	c	3.8	3.8	3.8	
28	c	c	c	c	b	4.1	3.8	a	3.8	3.5	3.5	3.3	a
Median.	3.5	3.7	3.8	3.8	3.9	3.9	3.9	3.9	3.8	3.8	3.7	3.6	*
No.	16	24	23	24	23	22	25	25	24	21	22	18	

339. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (M3000) ET1 FEBRUARY 1953

HOURLY VALUES OF $f^{\circ}\text{F2}$ OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND

Hour	00	01	02	03	04	05	06	07	08	09	10	11
Day	b	a	a	a	b	b	2.8	g	g	g	4.2	g
1	a	a	a	a	a	2.0	3.0z	3.5	g	c	c	c
2	a	a	a	b	a	b	b	4.0	g	b	5.5	g
3	a	a	b	c	b	b	4.0	b	c	c	5.5	5.4
4	a	a	a	n	b	2.2	3.5z	4.1	4.5h	5.1	5.0f	4.8f
5	3.0	2.4	2.8	n	b	2.5	3.5z	4.0z	4.3	4.8	5.0	5.3
6	3.0f	a	2.5	2.5	a	2.8	3.5z	4.0	4.5	4.6	5.2	5.5
7	2.8f	2.5	2.7	b	a	a	b	4.0	4.1	4.3	4.3	4.3
8	a	a	a	a	b	b	a	b	c	c	c	4.5
9	a	a	b	b	b	a	b	3.8	b	b	b	b
10	a	a	b	b	a	b	a	3.0	3.5	4.4f	4.3	4.6
11	b	a	a	b	a	b	c	c	c	c	c	c
12	c	c	c	c	b	b	2.8	3.5	4.0	4.3	4.5	4.7
13	b	a	a	a	a	a	b	3.0	3.8	5.0	5.1	5.2
14	2.2f	b	a	a	a	a	b	c	c	c	c	4.6
15	c	c	c	c	c	c	c	c	c	c	c	c
16	a	a	a	a	a	b	c	c	c	c	4.2	4.5
17	2.8	2.4	1.8	1.6	0	0	3.1	3.6	4.0h	4.4h	4.5h	4.7
18	a	a	2.1	2.0f	2.0f	2.0f	3.0	4.0	4.5	c	c	c
19	3.5	3.1	3.2	3.1	a	b	3.0	4.0	4.4	5.3	5.1	5.5
20	b	b	b	b	b	b	b	3.4	3.8	4.0	4.3	4.3
21	a	a	b	b	b	b	b	3.5	4.0	4.0f	4.4f	4.5f
22	a	a	a	a	a	a	b	b	b	4.0	4.0	4.1
23	a	b	a	a	b	b	b	2.7	3.2	b	4.0	b
24	b	b	b	b	b	b	b	b	b	g	c	c
25	c	c	c	c	c	c	c	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c
27	b	b	b	b	b	b	b	(2.0)b	3.2	3.6	b	4.4
28	b	b	b	b	a	a	b	b	b	g	b	4.5
29	b	a	a	b	c	c	c	c	c	c	c	c
30	2.6	b	b	a	a	a	b	b	3.9	4.2	4.4	4.7
31	a	a	a	a	a	a	b	b	b	b	b	b
Median.	(2.8)	*	(2.5)	*	*	(2.2)	3.0	3.6	4.0	4.3	4.3	4.6
No.	7	6	6	6	14	17	17	17	17	21	21	21

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

Time used: 157.5° E.I.T.

MACQUARIE ISLAND $f^{\circ}\text{F2}$ MARCH 1953

HOURLY VALUES OF $^{\circ}\text{F}2$ OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND

Hour	12	13	14	15	16	17	18	19	20	21	22	23
Day												
1	4.3	4.5	4.4	4.3	4.5	4.4	4.5	4.7	4.5	4.3	4.3	a
2	5.0	5.5	5.7	6.3	5.8	5.4	5.0	5.1	5.0	5.6f	5.0f	a
3	c	s	b	5.3	5.5	5.0z	5.1z	4.8	4.6	4.5	3.8f	a
4	5.6	5.6	5.2	5.3	5.0	5.5	5.0	5.1	5.0	5.6f	3.0f	b
5	c	f	b	5.2	5.3	5.5	5.0z	5.1z	4.8	4.6	3.8f	a
6	5.2	5.5	5.5	5.3	5.3	5.5	5.2	5.0	5.0	5.0	3.0f	2.5f
7	b	b	5.5	5.5	4.6	4.5h	4.5	4.3	4.2z	4.1	a	a
8	4.4	4.5	4.5	4.6	4.6	4.6	4.6	4.4	4.0	4.0	a	3.0f
9	5.5f	b	5.5f	5.5	5.1	4.5f	5.1	4.0	4.0	4.0	a	a
10	b	b	b	5.0f	5.0	4.5f	5.0	4.0	4.0	4.0	a	b
11	4.6	b	b	4.5	4.5	4.4f	4.5	4.5	4.0h	5.1	4.5	3.0
12	5.3	5.5	5.1	5.3	5.3	5.3z	4.6	4.4	4.6	4.6	3.4	2.5f
13	4.7	4.8	4.6	4.6	4.6	4.6	4.7	5.1	5.1	5.1	5.1	c
14	5.5	5.3	5.3	5.3	5.3	5.3	4.8	4.5	4.5f	4.5	4.4	2.5f
15	5.8	4.8	4.6	4.9	4.8	4.8	4.8	5.1	5.1	5.1	5.0	c
16	4.6	4.6	4.5	4.9	4.9	4.9	5.0	5.0	4.0h	5.0	5.0	c
17	4.6	4.5	4.8	5.0	5.0	5.0	5.2	5.2	5.2	5.2	5.2	c
18	5.4	5.5	5.3	5.3	5.2	5.2	5.1	5.1	5.1	5.1	5.1	b
19	6.0	6.5	6.2z	6.0	5.5	6.0	5.5	4.6f	4.0	3.1	3.0f	3.0f
20	4.6	b	4.5	4.5	4.5	4.3	4.2z	4.2	4.2	4.3h	3.2f	a
21	4.3f	4.8	b	6.0	4.0f	3.5	a	4.0h	3.5	2.9f	2.7	2.5
22	4.5	(6.0)b	b	(4.6)b	6.0f	4.0z	4.5	(3.0)f	a	3.0f	2.3f	a
23	b	4.3	4.5	5.5	5.0	b	3.5	a	a	3.8	3.0f	3.2
24	6	3.9	4.5	c	c	c	c	c	c	c	a	a
25	c	c	c	c	c	c	c	c	c	c	c	c
26	c	5.0	5.1	b	b	..2	2.6f	(2.5f)	a	b	b	b
27	4.3	b	4.8	4.7	b	4.0	a	a	a	b	b	b
28	5.0	5.1	5.1	5.1	5.6	4.5	4.5	4.0f	a	b	a	a
29	4.4	b	b	4.5h	4.5	4.5	4.7	(5.0)f	3.0f	2.8	2.2	2.7
30	c	c	5.2	5.0	5.3	5.3	5.0	4.9h	4.6s	3.0	2.7f	a
31	5.0	5.0	5.2	5.1	5.0	4.8s	4.8s	4.8s	4.6s	3.5	2.6	a
Median.	4.7	5.0	5.1	5.1	5.0	4.5	4.5	4.3	3.4	3.0	(2.7)	(2.7)
No.	23	22	22	26	24	21	21	17	12	11	9	7

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F2 MARCH 1953.

HOURLY VALUES OF $f^{\circ}\text{F1}$ OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND

Day	Hour	07	08	09	10	11	12	13	14	15	16	17	18
1	b	3.5	3.7	3.9	4.0	4.0	4.0	4.0	4.0	4.0	3.8	3.5	3.0
2	3.5	3.8	c	4.0	4.0	4.1	4.0	4.0	b	a	a	a	a
3	q	3.5	b	3.8	(3.8)s	c	s	4.0	(3.8)b	a	a	a	a
4	b	c	(4.0)s	4.1	4.2	4.3	4.1	b	4.1	3.8	3.6	3.4	3.2
5	3.5	3.8	4.0	4.0	4.1	4.2	4.0	4.0	4.0	3.8	3.5	3.4	3.2
6	q	4.0z	4.0	4.1	4.1z	4.2	4.2	4.1	4.1	4.0	4.0	4.0	4.0
7	q	3.8	4.0	4.1	4.0	4.0	b	b	4.1	4.0	4.0	4.0	4.0
8	3.6	3.6	3.8	4.0	4.0	4.0	4.0	4.0	4.0h	3.8	3.8	3.5	3.5
9	q	c	c	c	b	b	4.0f	4.0f	4.1f	3.9	3.8	a	q
10	q	b	b	b	b	b	b	b	b	3.8f	b	a	a
11	q	3.7	3.9	3.9	3.9	3.9	3.9	3.9	b	b	3.8	3.7	3.5
12	c	c	c	c	c	c	c	4.0	4.1	4.0	3.9	3.6	3.5
13	q	q	4.0	4.0	4.0	4.0	4.0	4.0f	4.1f	4.0	3.9	3.8	3.5
14	q	3.8	4.0	4.0f	4.0f	4.1f	4.0f	4.0f	4.0	4.0	3.9	3.8	3.5
15	c	c	c	c	c	c	c	4.0	4.0	4.0	3.9	3.8	3.5
16	c	c	c	3.8	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.7	3.5
17	q	3.4	3.7	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.5
18	q	(3.5)1	c	c	c	c	c	4.0	4.0	4.0	3.9	3.6	3.5
19	q	(3.5)1	4.0	4.1	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.8	3.5
20	q	q	3.8	3.8	4.0	4.0	4.0	b	4.0	4.0	3.8	3.5	3.5
21	q	3.5	3.8	3.8f	3.8	3.9	3.8	3.8	b	b	3.5f	3.5	3.5
22	b	b	3.6	3.7	3.8	3.8	3.8	b	b	b	a	q	q
23	q	q	b	b	b	b	b	3.8	b	b	q	q	q
24	q	q	3.6	3.9	c	3.7	3.7	3.7	c	c	c	c	c
25	c	c	c	c	c	c	c	c	c	c	c	c	c
26	c	c	c	c	c	c	c	3.9	3.9	b	b	q	q
27	q	q	b	b	b	b	b	b	(3.9)b	3.8	b	q	q
28	q	b	b	b	b	3.9	4.0	4.0	4.0	b	3.5	3.5	3.5
29	q	q	3.8	3.8	c	b	b	b	b	3.9	3.5	3.0	3.0
30	c	c	c	c	c	c	c	c	c	4.0	3.5	3.5	3.5
31	q	q	3.7	4.0	4.0	4.0	4.0	4.0	4.0	3.8	3.6	3.3	3.3
Median.	*	3.6	3.8	3.9	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.6	3.5
No.	13	16	21	20	21	21	21	21	23	23	24	20	10

Sweep: 1.0 - 13.0 Mc/s in 1st 55s Time used: 157.5° E.M.T.MACQUARIE ISLAND F[°]F1 MARCH 1953

HOURLY VALUES OF F_{OE} OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND

Hour Day	06	07	08	09	10	11	12	13	14	15	16	17
1	b	b	b	b	2.8	3.0	3.0	3.0	2.9	2.8	c	c
2	a	2.4	2.4	c	c	c	b	b	b	b	a	a
3	a	b	b	b	c	b	c	s	s	b	b	b
4	b	b	b	c	2.9	2.9	b	b	b	b	2.5	2.5
5	2.0	2.0	2.5	2.8	2.9	2.9	c	3.0	2.8	2.7	2.5	2.0
6	0	2.2	2.5	2.8	2.9	3.0	3.0	3.0	3.0	2.8	2.6	c
7	0	2.2	2.5	2.8	3.0	3.0	b	b	b	b	2.6	2.4
8	a	b	b	2.5	2.7	2.9	3.0	2.9	2.8	2.7	2.7	a
9	c	c	c	c	c	b	b	3.2	3.0	b	2.9	a
10	0	b	b	b	b	b	b	b	a	a	a	a
11	a	a	a	a	2.7	b	b	b	b	b	a	a
12	c	c	c	c	c	c	c	3.0	3.0	b	2.5	b
13	e	a	a	a	2.6	3.0	(3.0)s	3.0	2.9	2.8	a	a
14	1.5	2.0	b	b	2.7	2.9	3.0	3.1	3.2	3.0	b	a
15	c	c	c	c	c	c	2.9	2.8	3.0	2.9	2.7	2.5
16	c	c	c	c	c	2.8	3.0	2.9	2.8	2.7	2.5	c
17	0	a	2.4	2.4	2.4	2.7	2.8	2.7	a	3.0	2.6	(2.4)f
18	1.6	2.0	2.3	2.3	c	c	c	2.9	2.9	2.9	2.8	c
19	0	1.9	2.2	2.2	2.6	2.8	2.9	2.9	3.0	a	2.8	2.5
20	b	1.9	b	(2.5)b	b	b	(2.0)b	b	b	b	2.4	1.9
21	b	b	b	b	b	2.8	2.9	2.8	a	b	2.8	c
22	b	b	b	b	b	2.8	c	b	b	b	b	b
23	b	b	b	b	b	b	b	b	b	b	b	b
24	b	b	b	b	b	b	b	c	c	c	c	c
25	c	c	c	c	c	c	c	c	c	c	c	c
26	c	c	c	c	c	c	c	b	b	b	b	b
27	b	b	b	b	b	b	b	b	b	b	b	b
28	b	a	b	b	b	b	b	b	b	2.6	b	b
29	b	b	b	b	b	b	b	b	b	b	b	b
30	c	c	c	c	c	c	c	c	c	2.4	c	b
31	b	b	b	b	2.6	2.8	2.8	2.8	2.7	2.5	c	b
Median.	0	2.0	2.4	2.7	2.9	2.9	2.9	3.0	2.9	2.7	2.5	*
No.	9	8	8	10	13	15	15	13	12	13	13	13

343. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND F.E. MARCH 1953.

HOURLY VALUES OF F_{ES} OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND.

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
D.Y.	4.8	4.5	4.0	4.0	4.6	e	e	1.0	b	b	b	g	g	g	g	4.0	c	c	6	4.5	4.3	4.5	4.0	
1	3.8	3.3	3.3	3.3	4.0	0	1.7	g	c	3.1	c	3.1	b	b	b	7.6	6.5	7.5	7.0	6.0	c	6.2	4.5	
2	6.0	4.5	4.2	b	7.0	b	4.0	b	b	b	c	b	s	s	s	4.5	4.5	4.5	4.8	4.5	4.3	4.3	b	
3	3.8	3.0	b	c	b	b	b	c	c	c	c	3.5	4.0	3.0	b	4.5	4.5	4.2	3.4	0	e	4.0f	3.5	
4	3.2	3.2	3.3	4.3	e	g	g	g	g	g	g	g	g	g	g	3.1	g	g	g	g	0	0	0	0
5	5.6	4.5	4.5	4.6	3.6	0	4.6	3.3	g	g	g	g	g	g	g	3.0	3.0	3.3	3.1	3.2	4.3	4.5	b	
6	3.3	4.5	e	4.1	3.0y	e	g	g	g	g	g	g	g	g	g	3.5	c	c	c	c	c	c	3.8	
7	3.3	e	e	e	3.6	4.0	3.6	0	g	g	g	g	g	g	g	2.3	4.5	5.0	4.6	4.3	4.2	4.2	b	
8	4.2	3.2	3.6	4.0	4.0	3.6	0	g	b	g	g	g	g	g	g	3.1	3.5	4.3	4.3	4.8	4.8	4.3	b	
9	4.2	b	b	b	4.5	g	4.6	3.3	g	g	g	g	g	g	g	4.5	4.5f	5.0	7.6y	4.8	b	4.3	b	
10	b	4.2	4.0	4.0	0	4.1	3.0y	e	g	g	g	g	g	g	g	3.1	3.1	4.6	4.5	4.3	5.6	5.6	b	
11	b	4.2	4.5	0	4.0	b	3.8	3.5y	2.8	g	b	b	b	b	b	4.5	4.5	c	c	c	c	c	c	
12	c	5.5	3.3	b	5.0	4.8	4.3	2.2	g	3.5	4.8	3.7	3.5	3.6	3.5	3.0	3.0	2.5	5.5	4.4	e	e	b	
13	3.0	e	5.0	4.8	4.8	3.6	0	g	b	3.1	g	5	5	5	5	3.7	3.7	c	c	c	c	c	e	
14	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	2.7	2.7	3.6	3.3	3.4	4.4	4.4	e	
15	4.2	5.3	4.4	3.8	4.1	b	c	c	c	c	c	c	c	c	c	4.0	4.5	c	c	c	c	c	c	
16	3.5	3.0	1.8	0	3.1	2.2	2.6	g	3.2	5.6	5.3	4.0	3.2	3.1	g	c	c	c	c	3.6	6.5	4.3	3.6	
17	3.0	3.3	3.2	2.3	0	3.5	3.5	g	g	g	c	c	c	c	g	3.2	3.2	3.2	3.2	3.2	0	0	0	
18	4.0	4.5y	4.5	4.4	4.4	4.4	4.4	3.0	g	g	g	g	g	g	g	3.0	3.5	3.6	3.5	3.5	3.1f	3.8f	b	
19	4.8y	4.4y	b	b	g	b	b	g	b	b	b	b	b	b	b	4.8	4.8	4.0	4.5	4.5	4.8	4.5	b	
20	b	4.8y	4.4y	b	b	b	b	g	b	b	b	b	b	b	b	2.4	4.0	4.0	4.0	4.0	5.3	4.0	b	
21	4.4	3.2	b	b	4.0	4.0	4.0	4.3	b	3.3	g	b	g	g	g	3.0y	b	b	3.0	5.5	4.5	4.5	b	
22	4.0y	4.4	4.4	4.4	3.5	b	b	b	b	b	b	b	b	b	b	4.1	4.1	4.6	4.5	4.6	4.6	4.4	b	
23	4.4	b	b	b	b	b	b	b	b	b	b	b	b	b	b	0	0	4.0	4.0	4.5	4.5	4.5	b	
24	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
25	6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
26	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	4.2	c	e	b	b		
27	3.8	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	4.4	4.1	4.1	b	b		
28	b	4.5	3.3	3.0	4.5	b	b	b	b	2.1	b	b	b	b	b	3.0	6	4.0	4.5	4.5	6.0	4.5	b	
29	3.0f	b	b	b	b	b	b	b	b	b	b	b	b	b	b	4.3	4.3	0	0	0	3.5	4.2	b	
30	4.7	4.4	4.1	4.6	4.6	4.6	4.6	4.1	b	b	b	b	b	b	b	3.0y	g	g	g	g	0	3.2	3.3	b
31	Median.	4.0	4.4	3.6	4.0	4.0	2.2	**	**	**	**	**	**	**	**	**	**	**	**	**	3.1	3.0	3.8	4.2
No.	23	21	19	17	17	14	15	13	12	9	14	14	14	14	14	14	24	23	26	26	22	22	21	21

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

Time used: 157.5° E.M.T.

MARCH 1953.

HOURLY VALUES OF $h^{\prime}F_2$ OBSERVED DURING MARCH 1953 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	a	a	a	b	b	260	g	g	g	g	g	460	400	400	380	350f	300	250	a	(290)	a	a	a
2	a	a	a	a	a	a	(300)	250	200	g	c	600	350	310	340	370	g	a	a	a	c	a	a	a
3	a	a	a	b	a	b	b	b	g	b	g	g	340	340	320	320	350	s	b	a	a	a	b	b
4	a	a	b	c	b	b	240	b	c	c	o	320	340	340	320	350	350	300	280	1	240	240	250	300
5	300	a	300	a	b	280	250	280	280	280	300	320	350	350	350	320	290	290	280	240	240	250	270	300
6	350	a	c	a	b	c	230	210	350	330	350	330	330	330	300	300	280	280	280	270	270	270	270	260
7	c	c	c	b	b	270	250	230	300	350	350	340	340	340	300	300	300	320	(310)	270	a	a	a	
8	a	a	a	a	a	a	a	b	420	300	400	450	450	450	400	420	370	350	1	250	230	b	a	
9	a	a	a	b	b	b	a	b	b	c	c	b	420f	300	320	350	320	a	360	a	a	a	a	
10	a	a	b	b	b	a	b	b	b	b	b	b	400	400	380	380	380	a	320	a	a	b	a	
11	b	a	a	b	a	b	a	a	240	g	400	420	400	400	400	b	350	320	300	c	c	c	c	
12	c	c	c	c	c	c	c	b	280	230	230	330	350	350	350	350	300	280	230	250	230	250	230	
13	b	a	a	b	a	a	a	b	230	220	300	300	300	320	320	320	300	300	250	240	230	c	c	
14	c	c	c	c	c	c	c	c	c	c	c	c	350	350	350	350	330	320	230	c	c	c	c	c
15	c	c	c	c	c	c	c	c	c	c	c	c	330	330	330	330	320	320	(280)	330f	290	250	a	300
16	a	a	a	a	a	a	b	b	c	c	c	c	420	420	360	350	350	320	c	c	c	c	c	c
17	a	300	a	c	c	c	c	c	230	230	320	330	350	360	350	350	370	330	300	280	280	270	280	320
18	a	a	(290)	c	b	(270)	230	220	250	c	c	280	280	280	280	280	280	280	280	280	280	(240)	(230)	a
19	300	300	(290)	a	b	230	230	220	270	240	300	300	300	300	300	280	270	270	270	270	270	270	270	280
20	b	b	b	b	b	b	240	b	400f	420	430	350	b	350	350	350	340	340	300	250	300	260	260	290
21	a	a	b	b	b	b	b	b	270	1	470	470	420	400	400	b	260	(380)	280	a	a	a	a	
22	a	a	a	a	a	a	a	b	280	250	b	b	400	500	460	b	400	280	250	a	a	a	a	
23	a	b	a	a	a	b	b	b	b	b	b	g	600	600	600	600	360	c	b	320	a	a	a	a
24	b	b	b	b	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	330	330	b	320	300	300	300	
27	b	b	b	b	b	b	b	b	a	b	b	b	400	450	400	400	330	330	320	b	300	a	b	
28	b	b	b	b	b	b	b	b	250	b	b	b	370	310	330	330	b	270	300	a	a	b	b	
29	b	a	a	a	a	a	a	b	b	b	b	g	600	430	b	400	310	300	300	300	a	a	a	a
30	350	b	b	b	b	c	c	c	c	c	c	c	340	360	360	360	320	320	260	230	230	230	270	290
31	a	a	a	a	a	a	a	b	240	340	360	360	360	300	300	300	260	270	240	240	250	250	250	(260)
Median.	*	*	*	*	*	*	*	(230)	245	240	300	350	365	350	330	330	300	290	280	250	250	250	250	250
No.	5	12	17	14	15	21	20	23	21	22	25	23	19	21	22	25	23	19	21	16	16	16	16	16

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

Time used: 157.5° E.N.T.

MARCH 1953.

HOURLY VALUES OF hpF2 OBSERVED DURING MARCH 1953 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	a	a	a	b	b	280	p	g	g	g	g	g	g	g	g	u	u	u	u	u	310	270	a	a	
2	a	a	a	a	a	a	(350)	280	c	g	c	c	c	c	s	s	320	350	400	a	a	a	c	a		
3	a	a	a	b	a	b	b	b	d	g	b	g	g	g	g	g	u	u	b	a	a	a	b	b		
4	a	a	a	b	c	b	b	c	b	c	c	u	u	u	u	u	u	u	u	u	u	290	1	270	320	
5	320	300	320	a	b	310	280	u	u	u	u	u	u	u	u	u	300	u	300	280	270	280	280	300	u	
6	u	a	c	a	b	c	c	c	290	280	270	u	u	u	u	u	u	u	u	u	300	o	c	c	c	
7	c	c	a	a	a	b	a	b	b	u	u	u	u	u	u	u	u	u	u	u	u	280	a	a	a	
8	a	a	a	b	a	b	b	a	b	u	u	u	u	u	u	u	u	u	u	u	320	280	b	a	a	
9	a	a	a	b	b	b	a	b	c	c	c	b	b	b	b	b	u	u	u	u	u	330	a	a	b	
10	a	b	b	b	a	b	c	b	b	b	b	b	b	b	b	b	u	u	u	u	u	330	a	a	a	
11	b	a	b	a	b	a	b	a	290	g	u	u	u	u	u	u	u	u	u	u	u	290	250	270	260	
12	c	c	c	c	c	c	c	c	290	260	250	u	u	u	u	u	u	u	u	u	260	270	280	260	300	
13	b	a	a	b	b	b	b	b	260	240	u	u	u	u	u	u	u	320	u	u	280	270	c	c	c	
14	c	c	c	c	c	c	c	c	260	240	u	u	u	u	u	u	u	300	u	u	u	320	c	c	c	
15	c	c	c	c	c	c	c	c	260	240	u	u	u	u	u	u	u	u	u	u	u	320	280	a	320	c
16	a	a	a	a	a	a	a	a	260	250	u	u	u	u	u	u	u	u	u	u	u	280	300	u	330	340
17	a	u	a	a	e	e	e	e	260	250	u	u	u	u	u	u	u	u	u	u	u	270	260	c	280	b
18	a	a	300	320	b	300	320	b	300	250	240	u	c	c	c	c	290	u	u	280	280	280	270	260	280	
19	310	320	310	350	a	b	b	b	b	240	240	240	u	u	u	u	u	290	280	280	u	280	300	300	300	a
20	b	b	b	b	b	b	b	b	270	b	u	u	u	u	u	u	u	u	u	u	u	280	280	300	300	a
21	a	a	b	b	b	b	b	b	280	1	u	u	u	u	u	u	u	u	u	u	u	300	a	a	b	a
22	a	a	a	a	b	a	b	b	300	260	b	b	b	b	b	b	u	u	u	u	u	290	300	280	a	a
23	a	b	a	b	b	b	b	b	b	240	240	b	g	g	g	g	u	u	u	u	u	280	300	a	c	c
24	b	b	b	b	b	b	b	b	b	270	270	b	c	c	c	c	u	u	u	u	u	290	270	250	280	300
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	270	290	270	300	f
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	290	270	250	280	300
27	b	b	b	b	b	b	b	b	290	b	b	b	b	b	b	b	u	u	u	u	u	280	310	u	u	c
28	b	b	b	b	b	b	b	b	b	290	b	b	b	b	b	b	u	u	u	u	u	290	270	250	280	300
29	b	a	a	a	a	a	a	a	b	b	b	g	u	u	u	u	u	u	u	u	u	310	290	270	290	c
30	u	b	b	b	c	c	c	c	b	b	b	c	c	c	c	c	u	u	u	u	u	270	290	270	300	a
31	a	a	a	a	a	a	a	a	b	b	b	280	u	u	u	u	u	u	u	u	u	270	290	270	300	a
Median.	*	*	*	*	*	*	*	*	(310)	280	260	g	*	*	*	*	*	(290)	(290)	280	270	(275)	280	*	*	*
No.	5	10	13	7	7	9	13	18	13	18	13	18	13	18	13	18	13	7	7	9	13	18	13	8	10	

346.

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

Time used: 157.5° E.L.T.

MACQUARIE ISLAND hpF2

MARCH 1953.

HOURLY VALUES OF H'F1 OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND

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

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

MARCH 1953.

347.

Time used: 157.5° E.M.T.

MACQUARIE ISLAND H.F1

HOURLY VALUES OF H.E OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND

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

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

Time Used: 157.5° E.M.T. MARCH 1953

HOURLY VALUES OF H'ES OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND

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	
DAY	100	100	100	100	o	o	100	b	b	g	g	g	g	g	g	100	o	o	o	100	100	100	100		
1	100	120	110	100	100	o	110	g	c	100	b	b	b	b	100	110	100	100	100	100	100	100	100		
2	100	90	90	b	130	b	b	b	b	b	c	c	c	c	s	100	100	100	100	100	100	100	100	100	
3	100	100	b	c	b	b	b	b	b	b	c	c	c	c	b	130	120	120	120	120	120	120	120	120	
4	100	100	100	100	o	o	100	o	o	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	
5	100	100	100	100	100	o	o	o	o	o	g	g	g	g	g	g	g	g	g	g	g	g	g	g	
6	100	100	e	100	e	100	o	g	g	g	100	g	g	g	g	g	110	g	g	g	g	g	g	g	
7	100	o	o	o	o	o	o	o	o	o	100	o	o	o	o	o	100	110	110	110	110	110	110	110	
8	100	100	100	100	100	100	100	o	g	g	g	110	g	g	g	g	140	130	110	110	110	110	110	110	
9	100	100	100	100	e	100	100	g	g	g	g	100	g	g	g	g	120	110	110	110	110	110	110	110	
10	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	110	110	100	100	100	100	100	100		
11	b	100	100	e	100	b	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	100	100	100	100	b	b	b	b	b	b	110	g	130	110	s	100	130	120	100	100	100	100	100	100	
14	o	o	o	o	100	100	100	100	100	100	100	100	100	100	100	100	100	110	110	110	110	110	110	110	110
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	130	130	130	100	120	100	100	100	
16	100	100	100	110	110	100	100	b	c	c	c	c	c	c	120	120	120	120	120	120	120	120	120		
17	100	110	110	o	100	100	100	100	100	100	120	g	130	120	120	120	120	120	120	120	120	120	120	120	
18	100	120	110	120	o	120	o	100	g	g	120	g	g	g	g	g	110	110	110	110	110	110	110	110	
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
20	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
21	100	100	b	b	b	b	b	b	b	b	100	100	100	100	100	100	110	110	110	110	110	110	110	110	
22	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	110	g	g	g	100	100	100	100	100	
23	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	110	100	100	100	100	
24	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
28	100	b	b	b	b	b	b	b	b	b	100	b	b	b	b	b	140	g	120	110	b	100	100	100	
29	b	100	100	100	100	100	100	100	100	100	100	b	b	b	b	b	120	150	g	g	g	g	g	g	g
30	170	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	100	5	5	5	5	5	5	5	5
31	100	100	100	100	100	100	100	100	100	100	100	b	b	b	b	b	120	g	g	g	g	g	g	g	g
Median.	100	100	100	100	100	100	100	100	100	100	*	110	*	*	*	*	100	120	110	115	110	100	100	100	100
No. 22	19	17	13	13	7	7	6	6	5	5	5	5	5	5	5	5	16	14	14	13	13	17	17	18	18

349.

Swoop: 1.0 - 13.0 Mc/s in 1st 55s

Time used: 157.5° E.M.T. MARCH 1953.

MARSH ISLAND h'Es MARCH 1953.

HOURLY VALUES OF (M3,0,0) F2 OBSERVED DURING MARCH 1953 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	a	a	a	b	b	3.3	E	E	E	E	E	E	E	E	E	2.6	3.0	2.9	3.0	3.2	a	a	a
2	a	a	a	a	a	a	2.9	2.3	3.7	E	c	2.4	c	3.1	3.1	2.6	a	a	a	a	a	a	a	a
3	a	a	a	a	b	a	b	b	E	E	b	E	E	E	E	s	b	a	a	a	b	b	b	
4	a	a	a	b	c	b	b	c	b	c	c	c	c	3.2	3.0	3.1	3.2	3.3	3.2	3.2	2.6	(2.3)	2.5	
5	3.3	3.0	3.1	3.2	a	b	3.3	3.0	3.4	3.6	3.1	3.4	3.1	3.0	3.1	3.2	3.3	3.2	3.3	3.3	3.2	2.9	2.9	
6	n	a	c	a	b	c	3.5	n	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.4	3.3	3.3	3.3	c	c	c	3.0	
7	n	n	c	b	b	3.3	3.4	3.4	3.1	3.0	3.1	3.0	3.1	3.0	3.1	3.2	3.2	3.3	3.3	a	a	a	a	
8	a	a	a	a	a	b	2.3	2.3	3.4	2.8	2.8	2.8	2.8	2.8	2.7	(3.0)	3.1	3.2	3.4	b	a	a	2.6	
9	a	a	a	b	b	a	b	b	c	c	b	b	b	b	b	2.4	3.0	3.0	3.1	a	a	a	b	
10	a	b	b	b	b	a	b	a	b	b	b	b	b	b	b	2.9	(3.0)	a	3.0	a	a	a	b	
11	b	a	a	b	a	b	a	b	a	3.3	E	2.7	2.7	2.8	2.8	b	b	3.1	(3.1)	3.2	c	c	c	
12	c	c	c	c	c	b	b	b	3.2	3.4	3.5	3.3	3.1	3.2	3.1	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.0	
13	b	a	a	a	a	a	a	a	3.4	3.5	3.5	3.3	3.3	3.2	3.2	3.2	3.3	3.4	3.4	3.3	3.4	3.4	3.0	
14	c	b	a	a	b	a	a	a	3.5	3.5	3.5	3.3	3.2	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.2	3.1	3.0	3.0	3.0	c	c	c	
16	a	a	a	a	a	a	b	b	c	c	c	c	c	c	c	3.2	2.8	3.0	3.1	3.1	3.1	3.0	3.2	
17	3.0	3.2	a	a	a	a	a	a	a	3.4	(3.0)	3.2	3.2	3.1	3.1	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.5	
18	a	a	3.3	3.0	3.0	b	b	b	3.7	3.5	c	c	c	c	c	3.3	3.3	3.4	3.4	3.4	3.3	3.3	2.9	
19	3.1	3.2	3.2	2.9	a	b	3.6	3.7	3.7	3.4	3.7	3.7	3.7	3.7	3.2	3.2	3.3	3.3	3.3	(3.1)	3.2	2.9	a	
20	b	b	b	b	b	b	3.4	3.2	2.6	2.6	2.6	2.8	2.8	2.8	3.2	3.0	3.1	3.2	3.3	3.3	3.2	3.1	a	
21	a	a	b	b	b	b	b	b	3.0	2.6	2.6	2.6	2.5	2.5	2.6	b	3.2	3.2	3.1	3.0	a	a	b	
22	a	a	a	a	a	a	a	b	a	b	b	b	b	b	b	2.9	b	b	f	a	a	a	a	
23	a	b	a	a	b	b	b	b	b	b	b	b	b	b	b	2.7	2.7	2.9	b	a	a	a	b	
24	b	b	b	b	b	b	b	b	c	c	c	c	c	c	c	2.3	2.3	2.3	c	c	c	c	c	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.0	3.0	3.0	b	a	2.9	2.9	b	
27	b	b	b	b	b	b	b	b	3.2	3.2	b	b	b	b	b	2.7	2.7	2.9	2.9	a	a	b	b	
28	b	b	b	b	b	b	b	b	a	a	a	a	a	a	a	3.0	3.0	3.0	3.0	a	a	a	a	
29	2.9	b	a	a	a	a	a	a	b	b	b	b	b	b	b	2.3	2.3	2.3	2.3	c	c	c	c	
30	a	a	a	a	a	a	a	a	c	c	c	c	c	c	c	c	c	c	c	f	a	a	a	
31	Median. No.	*	*	*	*	*	*	*	3.4	3.2	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.1	3.0	3.0	
32	11	17	16	15	21	20	23	21	22	24	23	21	20	23	21	18	15	15	15	15	15	15	15	15

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

Time used: 157.50 E.M.T.

350.

MACQUARIE ISLAND (13000) F2 MARCH 1953

HOURLY VALUES OF (M3000) F1 OBSERVED DURING MARCH 1953 AT MACQUARIE ISLAND.

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

MACQUARIE ISLAND (M3000) F1 MARCH 1953.

Time used: 157.5° E.M.T.

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

351.

HOURLY VALUES OF F[°]F2 OBSERVED DURING APRIL 1953 AT MACQUARIE ISLAND

Hour Day	12	13	14	15	16	17	18	19	20	21	22	23
1	5.2	5.3	5.3	5.5	5.0	3.7	3.9	3.7f	a	a	b	a
2	5.3	5.5	5.5	5.8	4.3	3.4	2.6	a	a	a	a	3.2
3	5.4	5.6	5.6	5.7	4.5	2.7f	2.3	2.6	a	f	a	b
4	6.9	7.5	7.1f	5.5	(5.5)	a	2.6	a	a	a	a	b
5	5.1	5.7	5.6	5.7	5.7	(5.5)	4.6	2.7f	3.05	a	a	a
6	6.6	7.1	6.2z	6.5	6.1	(4.0)	3.0f	3.3	a	a	a	a
7	6.0	5.9	6.0	6.0	(5.6)	5.4	4.7	3.8	3.4	2.7f	a	a
8	6.1	6.0	5.8	6.1	(5.8)	4.5	4.0	a	a	b	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c	c	c	c
12	4.5	4.5	4.5	4.6	4.7	4.7	3.5	3.2f	a	a	a	a
13	4.3	4.5	4.8	4.8	4.7	4.9z	4.5	a	a	b	3.6	3.5
14	c	c	c	c	c	c	c	c	c	c	c	c
15	c	5.5	5.8	5.8	6.0	6.4	c	c	c	c	a	a
16	5.0z	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	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	c	c	c	c	c	c	c	c	c	c	c	c
23	c	c	c	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	c
25	c	c	c	c	c	c	c	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	c	c
28	c	c	c	c	c	c	c	c	c	c	c	c
29	6.1	6.1	6.1	5.8	5.6	5.3	4.6	3.6f	2.8f	3.0f	a	a
30	6.7	(6.5)	6.5p	6.0f	4.6f	3.3f	2.7f	b	a	a	a	*
Median No.	5.4	5.8	5.8	5.8	5.5	4.6	3.6	(3.2) 6	*	*	*	*

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND F[°]F2 APRIL 1953

HOURLY VALUES OF F_1° OBSERVED DURING APRIL 1953 AT MACQUARIE ISLAND

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

353.

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

Time used: 15.5° E.M.T.

MACQUARIE ISLAND F₁[°] APRIL 1953

HOURLY VALUES OF f_{OE} OBSERVED DURING APRIL 1953 AT MACQUARIE ISLAND

Hour Day	07	08	09	10	11	12	13	14	15	16
1	c (2.0)	(2.4) 2.6	2.9 2.6	2.8z 2.9	2.9 2.9	b 2.8	(2.8) 2.8	(2.5) (2.6)	a (2.3)	2.2
2	(2.2)	2.5	2.6	2.8	2.8	b 2.8	b 2.8	b 2.8	(2.2)	2.6
3	2.2	2.4	2.6	2.8	2.8	b 2.9	b 2.9	b 2.9	a 2.7	2.6
4	2.2	b	2.7	b	2.9	b 2.9	b 2.9	b 2.9	a 2.7	2.2
5										
6	(2.1)	b 2.3	b 2.5	b 2.5	2.7 3.0	2.9 2.9	2.8 2.9	2.6 2.7	b 2.5	b
7	2.2	2.5	2.5	2.5	2.8	c c	c c	2.2	2.5	c
8	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 c	c
10	c	c	c	c	c	c c	c c	c c	c c	c
11	c	c	c	c	c	c c	c c	c c	c c	c
12	c	c	c	c	c	c 2.2	c 2.4	c 2.7h	2.6 2.6	2.4
13	c	c	c	c	c	c c	c c	c c	c c	2.3
14	c	c	c	c	c	c c	c c	c c	c c	c
15	c	c	c	c	c	c c	c c	c c	c c	2.4
16	(1.4)	1.7	a 3.4	a 3.2	a 3.2	2.5z 3.3	2.5z 3.3	c 3.3	c 3.3	c 3.3
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29	c b	c b	c s	c b	c b	b b	b b	b b	b b	b b
30										
Median No.	(2.2) 7	2.5 7	2.6 8	2.6 8	2.8 8	2.9 11	2.8 9	2.6 9	2.3 7	*

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

Time used: 157.5° E.M.T.

MAGNETIC RECORDING APPARATUS

APRIL 1953

HOURLY VALUES OF FES OBSERVED DURING APRIL 1953 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	4.7	3.3	e	0	0	0	0	0	0	0	0	0	b	b	b	4.0	0	0	3.2	3.5	5.0	5.0	b	3.7
2	3.2	4.5	b	3.3	0	0	0	0	0	0	0	0	g	g	g	0	0	2.8	3.4	4.5	4.0	4.2	3.5	
3	3.1	0	4.0	4.5	4.2	0	0	b	3.0	3.0	0	0	g	g	g	0	3.6	3.5	0	4.0	3.2	4.2	b	
4	3.3	4.5	4.5	3.2	b	b	b	b	g	g	0	0	g	g	g	0	2.5	5.5	5.2	4.0	5.5	4.5	b	
5	b	b	b	4.2	4.2	b	b	b	b	b	b	b	7.6	4.6	4.6	0	0	5.0	5.0	0	6.2	3.3	3.1	
6	b	b	5.5	4.0	b	0	0	g	b	b	3.0	0	g	g	g	0	0	0	0	0	0	0	0	
7	4.0	b	b	3.2	b	0	0	2.6	3.0	4.0	4.2	3.5	4.4	4.4	4.4	0	2.7	0	0	0	0	0	0	
8	b	4.2	3.6	2.5	b	0	0	2.8	3.3	4.2	6	5	g	g	g	0	0	3.6	4.5	3.2	3.0	b	4.5	
9	2.5	0	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	c	c	c	c	c	c	c	c	c	c	c	c	g	g	g	3.2	3.7	3.0	0	0	4.0	3.7	4.5	
13	4.5	4.0	3.2	b	3.0	b	b	5	5	5	5	5	g	g	g	0	0	0	0	4.1	3.3	b	3.5	
14	b	b	4.2	4.2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	b	4.2	4.0	0	0	b	0	g	g	3.2	2.3	g	g	g	0	0	0	0	0	0	0	0	0	
17																								
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27																								
28																								
29																								
30																								
Median.	3.6	4.2	4.0	3.2	3.0	*	**	**	**	**	**	**	b	b	b	3.1	2.5	0	0	0	3.5	0	5.1	
No.	8	9	9	9	10	8	6	9	8	9	9	11	9	10	8	11	11	12	11	12	10	12	10	

Time used: 157.5° E.L.T.

355

MACQUARIE ISLAND FES APRIL 1953

HOURLY VALUES OF h'F2 OBSERVED DURING APRIL 1953 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	A (340)(340)	c	c	c	c	c	c	c	250	260	1	350	310	330	300	270	300	250	250	250	a	a	b	a	
3	(300) a	b	a	c	c	c	c	c	260	220	1	(370)	340	350	320	300	260	240	260	260	a	a	a	a	
4	320 c	a	a	b	b	b	b	b	270	250	300	320	320	300	290	300	250	250	280	c (300)	a	f	a	b	
5	c a	b	b	b	a	a	b	b	240	320	300	310	300	300	350	270	300	250	a	a	a	a	b		
6	b b	b	b	b	b	b	b	b	230	220	220	270	280	280	240	270	250	250	240	240	290	320	a	a	
7	c c	c	c	c	b	b	b	b	250	220	1	300	280	290	250	250	240	230	240	250	250	250	270 (320)	a	c
8	b a	b	b	b	b	b	b	b	230	220	1	280	280	280	280	280	250	250	240	250	300	a	a	b	c
9	c c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
10	c c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	c c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	a a	a	a	a	a	a	a	a	b	240	240	280	330	350	340	330	310	280	280	250	250	260	a	a	b
14	b a	b	a	a	a	a	a	a	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	c c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	b a	a	a	260	280	b	b	b	240	260	250	290	300	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	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	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	c	
20	c c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
21																									
22																									
23																									
24																									
25																									
26																									
27																									
28																									
29																									
30																									
Median. No.	*	*	*	*	*	*	*	*	(250)	230	300	310	300	300	280	270	250	240	250	(260)	(250)	*	*	*	

356. Swoop: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T. MACQUARIE ISLAND h'F2 APRIL 1953

HOURLY VALUES OF hpF2 OBSERVED DURING APRIL 1953 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	u	u	c	c	c	280	270	300	u	u	u	u	u	u	280	280	300	u	280	280	300	u	a
2	310	a	b	a	c	c	290	250	290	u	u	u	u	u	u	310	300	280	270	280	280	270	280	a
3	u	c	a	a	a	c	280	280	u	u	u	u	u	u	u	290	260	u	u	u	u	u	u	b
4	c	a	b	b	b	b	b	270	u	u	315	310	350	u	300	310	260	u	u	u	u	u	u	b
5	b	b	a	a	b	b	b	b	u	u	u	u	u	u	u	280	280	280	290	300	270	300	330	a
6	b	b	b	b	b	b	b	250	250	270	280	300	290	250	300	300	300	270	300	f	360	350	u	a
7	c	c	c	c	b	b	b	300	270	280	u	290	u	260	300	270	270	260	280	260	260	290	f	a
8	b	a	b	b	b	b	b	250	280	280	290	290	290	300	310	310	280	280	u	u	u	u	b	c
9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	a	a	c	c	a	b	b	b	280	260	u	u	u	u	u	285	270	290	270	290	300	290	300	350
14	b	b	a	a	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	b	a	a	300	310	b	b	260	250	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
17																								
18																								
19																								
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21																								
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26																								
27																								
28																								
29	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	250	250	250	250	250	250	250	250	
30	s	a	a	300	280	b	250	240	240	240	240	240	240	240	240	270	270	250	250	250	250	250	250	250
Median. No.	*	*	*	*	*	*	(230)	270	(275)	*	(290)	*	(265)	(280)	280	250	250	250	250	250	250	250	250	*
							7	10	8	5	6	7	6	7	10	12	13	9	8	7	10	12	*	

357. Swoop: 1.0 - 13.0 Mc/s in 1m

Time used: 157.5° E.M.T.

APRIL 1953

HOURLY VALUES OF h_{TF1} OBSERVED DURING APRIL 1953 AT MACQUARIE ISLAND

Hour Day	08	09	10	11	12	13	14	15
1	220	240	220	210	b	200	(210)	200
2	230	200	220	200	200	200	210	220
3	220	210	200	210	200	220	220	210
4	210	200	210	220	(240)	a	250	250
5	b	220	200	200	200	230	220	230
6	q	b	200	220	210	210	220	240
7	200	210	210	200	200	200	200	240
8	220	200	200	210	200	210	210	q
9	c	c	c	c	c	c	c	240
10	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c
12	c	c	c	c	200	230	220	230
13	q	220	200	220	220	210	210	220
14	c	c	c	c	c	c	c	c
15	c	c	c	c	c	c	c	240
16	q	230	200	200	200	c	c	c
17								
18								
19								
20								
21						NO RECORD 17th - 28th April 1953 INCLUSIVE		
22								
23								
24								
25								
26								
27								
28								
29	c	c	c	220	200	200	220	q
30	q	q	200	200	220	s	b	q
Median. No.	220 6	210 9	200 11	210 13	200 12	210 11	220 11	230 10

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h^{TF1} APRIL 1953

HOURLY VALUES OF H.E OBSERVED DURING APRIL 1953 AT MACQUARIE ISLAND

Hour Day	07	08	09	10	11	12	13	14	15
1	c	c	100	100	110	b	b	b	a
2	c	110	100	100	100	110	110	110	130
3	100	a	a	120	120	b	b	b	c
4	c	110	110	110	110	b	a	a	110
5	b	b	b	b	110	110	b	b	c
6	c	b	b	a	120	a	110	b	b
7	a	110	a	100	100	a	120	b	b
8	c	110	110	110	110	a	110	c	c
9	c	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c
12	c	c	c	c	c	c	c	c	c
13	c	c	c	c	100	100	100	a	a
14	c	c	c	c	c	110	100	110	c
15	c	c	c	c	c	c	c	c	c
16	e	140	a	a	100	a	100	c	110
17	400	400	a	a	100	a	100	c	110
18	c	c	c	c	c	c	c	c	c
19	p	400	c	c	c	c	c	c	c
20	450	450	p	p	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c
22	c	c	c	c	c	c	c	c	c
23	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c
25	c	c	c	c	c	c	c	c	c
26	p	400	400	p	p	p	p	p	p
27	c	400	400	p	p	p	p	p	p
28	c	450	450	c	c	b	b	b	b
29	b	450	450	b	b	b	b	b	b
30	*	110	*	*	100	110	110	*	*
Median. No.	5	5	5	7	7	7	7	7	*

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND H.E APRIL 1953

HOURLY VALUES OF h'ES OBSERVED DURING APRIL 1953 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	120	c	c	c	c	c	c	c	c	c	c	b	b	b	b	120	c	c	130	100	100	b	100
2	110	100	b	100	c	c	c	c	c	c	c	c	b	b	b	b	120	c	c	120	100	110	100	100
3	120	c	100	100	100	c	c	b	100	100	c	c	b	b	b	b	150	140	c	130	110	100	b	
4	150	100	110	120	b	b	b	b	b	b	b	b	b	b	b	b	100	100	b	110	100	100	100	
5	b	b	100	100	b	b	b	b	b	b	b	b	b	b	b	b	120	100	b	110	100	100	b	
6	b	b	100	100	b	c	c	c	c	c	c	c	b	b	b	b	120	c	c	130	c	100	100	
7	130	b	b	100	b	c	c	c	c	c	c	c	b	b	b	b	110	c	c	140	c	100	100	
8	b	100	100	110	b	b	c	c	c	c	c	c	b	b	b	b	110	c	c	140	c	100	100	
9	110	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	110	c	c	120	c	100	100	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	c	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	120	c	c	150	c	110	100	
13	100	120	140	b	100	b	b	c	c	c	c	c	b	b	b	b	120	c	c	100	c	110	110	
14	b	b	100	100	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	b	100	100	c	c	b	c	c	c	c	c	c	b	b	b	b	120	c	c	c	c	c	c	
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27																								
28		c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	100	100	c	c	110	100		
29	100	100	100	0	0	b	b	b	b	b	b	b	b	b	b	b	190	c	c	b	110	110	120	
30	Median.	110	100	100	100	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	110	135	110	105
	No.	8	7	8	7												5	8	8	10	8	12	9	

NO RECORD 17th - 28th APRIL 1953 INCLUSIVE

MACQUARIE ISLAND h'Es APRIL 1953

Time used: 157.5° E.L.T.

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

360.

HOURLY VALUES OF (W3000)F2 OBSERVED DURING APRIL 1953 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	c	c	c	c	3•3	3•2	3•0	3•0	3•0	3•1	3•0	3•2	2•8	3•0	3•0	3•0	3•0	a	a	b	a			
2	2•7	a	b	a	c	3•1	3•3	n	2•9	3•1	3•0	2•9	3•0	3•0	3•1	3•1	3•0	2•8	a	a	a	a			
3	2•7	c	a	a	a	3•3	3•2	3•2	3•1	3•0	3•0	3•0	3•1	3•1	3•0	3•0	3•0	2•7	a	f	a	b			
4	c	a	b	b	b	b	3•2	3•0	3•1	3•0	3•1	3•0	2•6	2•6	3•0	2•9	n	a	a	a	a	b			
5	b	b	b	a	a	b	3•0	3•0	2•8	2•9	2•9	3•1	3•1	3•3	3•2	3•3	3•2	3•2	(3•1)	2•5	2•6	a	a		
6	b	b	b	b	b	b	3•3	3•3	3•2	3•2	3•2	3•1	3•1	3•1	3•1	3•1	3•1	3•1	f	(2•5)	2•7	a	a		
7	c	c	c	c	b	b	3•2	3•1	(3•0)	3•2	3•0	3•1	3•1	3•1	3•1	3•1	3•1	3•1	3•1	3•1	3•0	f	a		
8	b	a	b	b	b	b	3•4	3•3	3•2	3•1	3•1	(3•2)	3•1	3•1	3•1	3•1	3•1	3•1	3•1	3•1	3•1	a	b		
9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c			
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c			
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c			
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c			
13	a	a	c	c	a	b	b	3•1	3•4	3•3	3•0	3•0	2•8	3•0	3•0	3•0	3•0	3•0	3•1	3•1	3•1	a	a		
14	b	b	a	a	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c			
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c			
16	b	a	a	(2•8)	(2•8)	b	b	3•2	3•6	3•6	3•4	3•0	3•0	3•0	3•0	3•0	3•0	3•0	3•0	3•0	3•0	3•0	3•0		
17																									
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28																									
29																									
30																									
Median No.	*	*	*	*	*	(3•3)	3•2	3•1	3•0	3•0	3•1	3•1	3•1	3•4	3•4	3•4	3•4	3•3	3•2	(3•0)	(2•8)	a	a		
						7	11	10	11	13	13	13	13	13	13	13	13	13	12	11	9	5	*	*	

361. Sweep: 1•0 - 13•0 Mc/s in 1^m 55s

Time used: 157•5° E.W.T.

MACQUARIE ISLAND (M3000)F2 APRIL 1953

HOURLY VALUES OF (M3000)F1 OBSERVED DURING APRIL 1953 AT MACQUARIE ISLAND

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

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

Time used: 157.5° E.W.T.

MACQUARIE ISLAND (M3000) F1 APRIL 1953

HOURLY VALUES OF $f^{\circ}F_2$ OBSERVED DURING MAY 1953 AT MACQUARIE ISLAND												
Hour	00	01	02	03	04	05	06	07	08	09	10	11
Day												
1	b	b	b	b	b	1.7f	b	(4.5)	4.9	(5.2)	b	5.5
2	a	c	c	c	b	2.0	c	c	4.2	5.0	5.7	5.8
3	c	c	c	c	c	2.0	c	c	c	c	c	c
4	c	c	c	c	c	2.0	c	c	c	c	c	c
5	b	b	b	b	b	2.0	b	3.6	4.4	5.0	c	c
6	a	b	b	1.8f	c	b	c	c	c	c	c	c
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19	c	c	c	c	c	c	c	c	c	c	c	c
20	a	a	a	a	a	b	b	b	2.0f	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c
22	c	c	c	c	c	c	c	c	c	c	c	c
23	a	a	a	a	a	b	b	b	3.0	3.3	3.8f	4.0
24	a	a	a	a	a	b	b	b	3.0f	3.6z	3.8	4.0
25	b	2.7f	f	1.9f	b	b	b	1.8f	3.2z	3.9z	4.2	4.9z
26	f	f	f	f	a	a	a	1.7f	3.3f	4.0	4.4	4.4z
27	c	c	c	c	c	c	c	c	c	c	c	5.0
28	c	c	c	c	c	b	b	b	2.7f	3.5f	3.8	3.7f
29	b	b	b	b	b	b	a	a	3.0f	3.7f	4.0	4.0
30	a	a	a	a	a	(1.6)	a	1.7f	3.2h	3.8z	4.0	4.3
31	a	a	a	b	b	(2.8)	b	b	3.1	3.9	4.5	5.4
Median.	*	*	*	*	*	*	*	(1.9)	3.2	3.9	(4.0)	4.4
No.								6	11	11	9	11

Time used: 157.5° E.L.T.

363. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

MACQUARIE ISLAND f°F2 MAY 1953

HOURLY VALUES OF $f^{\circ}\text{F2}$ OBSERVED DURING MAY 1953 AT MACQUARIE ISLAND

Hour	12	13	14	15	16	17	18	19	20	21	22	23
Day	(5.6)	b	5.7	c	c	5.0	4.5	c	c	a	a	a
1	6.0	6.2	b	6.3	c	6.0	2.5f	b	b	b	b	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	(4.2)	b	a	a	a	a
5	c	c	c	c	c	c	5.3	a	a	a	a	2.5f
6	c	c	c	c	c	c	5.0h	a	a	a	a	3.5f
7	c	c	c	c	c	c	5.3	a	a	a	a	3.5f
8	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
10	c	c	c	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c	c	c	c
12	c	c	c	c	c	c	c	c	c	c	c	c
13	c	c	c	c	c	c	c	c	c	c	c	c
14	c	c	c	c	c	c	c	c	c	c	c	c
15	c	c	c	c	c	c	c	c	c	c	c	c
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	c	c	c	c	c	c	c	c	c	c	c
21	c	5.0z	5.0	4.3	3.5f	3.0f	2.8f	b	1.9f	a	2.2f	3.5
22	c	4.0	4.2	4.3	4.8z	4.3z	4.4z	3.2f	1.9f	a	a	a
23	c	4.3f	4.9	4.9	5.2	4.3z	3.8s	3.6z	f	b	b	b
24	c	5.0z	5.0z	5.0	5.6	4.5	4.4	3.1f	2.4f	2.0f	1.7f	f
25	c	c	c	c	c	c	c	c	c	c	c	c
26	c	5.3	4.9	5.0	5.1	4.7f	4.0	c	c	c	c	c
27	c	4.9	4.9z	5.1	5.0f	b	a	a	a	a	c	c
28	c	4.0	4.0	3.9	4.0	3.9	3.3	2.8	2.2	b	b	2.7
29	c	4.2	4.3	4.5	4.0	3.6	3.1f	2.5f	b	a	s	b
30	c	4.4	4.2z	c	c	4.2	c	2.7f	2.1f	a	s	(2.1)
31	c	5.3	5.4	c	5.0	4.5f	4.0f	3.0f	f	s	s	3.0f
Median.	5.0	4.9	5.0	5.0	4.3	4.0	(3.0)	(2.1)	*	*	(3.0)	*
No.	12	11	10	11	11	11	9	5	5	5	5	5

364. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°F2

MAY 1953.

HOURLY VALUES OF $F^{\circ}T_1$ OBSERVED DURING MAY 1953 AT MACQUARIE ISLAND

Hour Day	10	11	12	13	14
1	b	3.5	3.5	b	
2	c	c	c	c	c
3	c	c	c	c	c
4	c	c	c	c	q
5	c	c	c	c	c
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22	c	c	(4.0)	4.0	3.1
23	b	3.5	1	3.1	q
24	1	1	3.6	3.5	q
25	1	1	3.3	1	1
26	1	a	1	1	q
27	c	3.5	1	3.5	q
28	q	q	1	1	q
29	q	q	3.4	3.4	a
30	1	1	3.5	3.4	3.1
31	q	q	1	q	c
Median. No.	*	*	3.5	3.4	*
			6	6	

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

MACQUARIE ISLAND $F^{\circ}T_1$ MAY 1953.

HOURLY VALUES OF $F^{\circ}E$ OBSERVED DURING MAY 1953 AT MACQUARIE ISLAND

Hour Day	08	09	10	11	12	13	14	15	16
1	b	b	b	b	b	b	c	c	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	c	c	c	c	c
5	1.8	c	b	c	c	c	c	c	c
6	c	c	c	c	c	c	c	c	c
7	c	c	c	c	c	c	c	c	c
8	c	c	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c
12	c	c	c	c	c	c	c	c	c
13	c	c	c	c	c	c	c	c	c
14	c	c	c	c	c	c	c	c	c
15	c	c	c	c	c	c	c	c	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	c	c	c	c
21	c	c	c	c	b	b	b	b	b
22	b	b	a	b	b	b	b	b	b
23	a	2.0	(2.3)	2.3	2.2	2.2	2.2	2.2	a
24	1.7	1.9	2.1	2.3	2.2	2.2	2.2	2.2	1.6
25	a	a	a	b	b	b	b	b	b
26	a	1.9	2.1	2.3	2.4	2.4	2.4	2.4	1.6
27	c	c	2.1	2.1	2.0	2.0	2.0	2.0	1.7f
28	a	a	b	b	b	a	a	a	b
29	a	b	b	b	b	b	b	b	b
30	1.7	2.0	2.1	2.1	2.1	2.1	2.1	2.1	c
31	a	1.7	a	a	a	b	b	b	c
Median. No.	*	1.9	2.1	2.2	2.2	2.2	2.2	2.2	*
		5	5	6	5	5	5	5	*

366. Sweep: 1.0 - 13.0 Mc/s in 1m 55sTime used: 157.5° E.H.T.MACQUARIE ISLAND $F^{\circ}E$ MAY 1953

HOURLY VALUES OF FES OBSERVED DURING MAY 1953 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	b	b	b	b	b	b	b	b	c	c	c	c	c	c	c	c			
2	3.9	c	3.3	b	4.0	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	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			
4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	e	c	c	c	e	e			
5	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b			
6	5.0	b	e	1.9	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c			
7	8	8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
8	9	9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
9	10	10	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
11	11	11	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
12	12	12	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
13	13	13	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
14	14	14	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
15	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
16	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
17	17	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
18	18	18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
19	19	19	4.0	4.0	3.8	3.6	b	b	b	b	b	b	b	b	b	c	c	c	c	c	c	c	c	c		
20	20	20	4.0	4.0	3.8	3.6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
21	21	21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
22	22	22	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	b	b	b		
23	23	23	4.3	4.0	4.5	4.0	4.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	b	b	b	b	b	b	b	b	b	b	
24	24	24	3.4	3.6	3.7	3.5	3.5	1.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	e	e	e	e	e	e	e	e	e	e	
25	25	25	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	e	e	e	e	e	e	e	e	e	e	
26	26	26	3.2	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
27	27	27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
28	28	28	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
29	29	29	3.9	3.8	3.0	4.1	2.9	3.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	b	b	b	b	b	b	b	b	b	b	
30	30	30	4.4	4.4	3.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	b	b	b	b	b	b	b	b	b	b	
31	31	31	7.0	5.1	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Median.	Median.	Median.	4.0	3.9	3.5	2.9	**	2.9	**	2.9	**	2.9	**	2.9	**	1.7	2.6	2.5	**	**	**	**	**	**	**	**
No.	No.	No.	10	8	10	9	9	8	8	8	8	8	8	8	8	9	8	7	7	7	9	10	12	11	9	

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

367.

Time used: 157.5° E.M.T.

MACQUARIE ISLAND fes

MAY 1953

HOURLY VALUES OF $\text{h}^{\circ}\text{F}_2$ OBSERVED DURING MAY 1953 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	260	b	b	250	240	240	b	270	250	b	230	c	250	250	c	c	c	a	a	
2	a	c	c	c	b	c	c	c	230	220	250	250	250	b	240	c	c	b	b	b	b	c		
3	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	c	c	c	c	c	c	c	c	c	c		
5	b	b	b	b	b	b	b	220	210	230	c	c	c	c	c	c	c	c	c	c	c	c		
6	a	b	270	o	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
23	a	a	a	a	a	a	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
24	a	a	a	a	a	a	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
25	b	340	290	280	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
26	f	f	f	f	a	a	a	a	320	220	210	1	1	240	1	1	220	220	e	e	e	e	e	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	a	a	a	a	c		
28	c	c	c	c	c	c	b	b	b	b	b	b	b	b	b	b	250	250	260	270	330	320		
29	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	210	210	220	230	300	300		
30	a	a	a	a	350	b	b	b	300	240	220	1	1	1	1	c	210	230	250	290	(330)	f		
31	a	a	a	b	(440)	b	(350)	b	b	220	230	240	250	250	240	c	220	200	230	240	s	280		
Median. No.	*	*	*	*	*	*	*	*	230	220	*	(250)	(255)	(230)	230	220	230	(235)	(270)	*	*	*		
	11	11	11	11	11	11	11	11	7	9	8	7	7	7	7	11	11	11	8	6	6	6		

Time used: 157.5° E.U.T. MAY 1953

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

368.

MACQUARIE ISLAND HF2 MAY 1953

HOURLY VALUES OF HDF^2 OBSERVED DURING MAY 1953 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	u	b	b	270	240	u	b	280	270	b	260	c	280	260	c	6	c	a	a	
2	a	c	c	a	c	c	c	240	240	260	270	270	270	b	250	c	c	b	b	b	b	a		
3	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	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
5	b	b	b	b	b	b	b	250	230	260	c	c	c	c	c	c	270	260	b	a	220	a	250	
6	a	b	300	0	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	300	a	a	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	240	250	260	270	280	290	290	
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	320	330	340	
16	17	18	19	20	21	22	23	24	25	26	27	28	29	20	21	22	23	24	25	26	27	28	29	
21	c	c	c	a	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
22	c	c	c	a	a	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
23	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a		
24	a	a	a	f	280	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
25	b	340	f	280	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
26	f	f	a	a	a	n	250	240	250	240	240	240	230	250	240	260	250	250	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		
28	c	c	b	b	b	b	b	240	250	250	250	250	270	270	280	280	280	280	300	n	b	b	320	
29	b	b	b	b	a	a	a	250	250	270	270	270	280	280	275	250	300	n	b	s	b	s		
30	n	n	n	n	n	n	n	250	250	260	260	280	280	270	c	240	260	250	250	290	f	n		
31	a	b	n	b	b	b	b	240	240	250	260	240	240	280	c	240	250	270	260	s	s	280		
Median. No.	*	*	*	*	*	*	*	240	240	(250)	265	(270)	(270)	(260)	*	250	260	270	(260)	*	*	*		
	11	10	8	10	8	10	8	7	8	7	8	11	10	7										

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

Tide record: 157.56 m.m.t.

Macquarie Island May 1953

May 1953

369.

HOURLY VALUES OF $h^{\circ}F_1$ OBSERVED DURING MAY 1953 AT MACQUARIE ISLAND

Hour Day	10	11	12	13	14
1	b	250	b	b	q
2	c	c	c	c	c
3	c	c	c	c	c
4	c	c	c	c	q
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21	c	200	210	230	
22	b	220	200	q	
23	220	220	220	q	
24	190	220	210	q	
25		200	210	q	
26	220	a	200	q	
27	c	220	240	230	
28	q	q	210	250	
29	q	q	240	230	
30	220	230	(240)	200	
31	220	230	(240)	e	
	*	220	220	210	*
		5	9	9	

370.

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

Time used:- 157.5° E., I.T.

MACQUARIE ISLAND h°T1 MAY 1953.

HOURLY VALUES OF h' E OBSERVED DURING MAY 1953 AT MACQUARIE ISLAND

Hour Day	08	09	10	11	12	13	14	15	16
1	b	b	b	b	b	b	b	b	b
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	c	c	c	c	c
5	(100)	b	c	c	c	c	c	c	c
6	400	400	450	400	400	400	400	400	400
7	40	0	0	0	0	0	0	0	0
8	400	400	400	400	400	400	400	400	400
9	400	400	400	400	400	400	400	400	400
10	400	400	400	400	400	400	400	400	400
11	c	c	c	c	c	c	c	c	c
12	c	c	c	c	c	c	c	c	c
13	c	c	c	c	c	c	c	c	c
14	c	c	c	c	c	c	c	c	c
15	c	c	c	c	c	c	c	c	c
16									
17									
18									
19									
20									
21	c	c	c	b	b	b	b	b	b
22	b	b	b	(130)	130	100	100	100	a
23	a	110	100	130	130	130	130	130	130
24	b	100	100	100	100	100	100	100	100
25									
26	p	a	a	120	110	130	130	130	130
27	p	p	a	c	100	120	100	110	120
28	p	p	a	b	b	b	a	110	b
29	c	c	a	b	b	c	b	120	c
30	a	a	a	120	130	a	a	a	c
31	a	a	a	100	a	100	c	c	c
Median. No. 311	*	*	*	110	110	120	*	*	*
				5	5	5	5	5	

NO RECORD 6TH - 21ST MAY 1953 INCLUSIVE

MACQUARIE ISLAND h' E MAY 1953

Time used: 150.5° E.M.T.

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

371.

HOURLY VALUES OF H'ES OBSERVED DURING MAY 1953 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	e	b	b	b	b	b	b	b	b	c	c	c	c	c	c	c	c	c	110	100
2	100	c	120	b	100	c	c	c	c	90	c	c	c	c	c	c	b	b	b	b	b	b	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	
4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
5	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
6	100	b	c	100	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
7	8																							
8																								
9																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
20	100	100	100	b	b	b	b	b	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	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	b	b	
23	100	100	100	100	90	100	90	100	e	e	e	e	e	e	e	b	b	b	b	b	b	b	b	
24	100	100	100	100	100	100	100	100	110	0	0	0	100	100	100	100	100	100	100	100	100	100	100	100
25	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	100	100	100	0	0	120	0	120	100	100	90	g	g	g	g	g	g	g	g	g	g	g	g	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100	90	g	g	g	g	g	g	
28	c	c	c	c	c	c	c	c	120	130	b	100	100	100	b	b	120	b	100	100	100	100	100	100
29	120	120	130	130	120	0	110	110	140	110	b	b	b	b	b	120	120	120	120	120	120	120	120	
30	100	100	100	130	0	0	100	0	0	0	0	0	0	0	0	100	120	c	c	c	c	c	c	c
31	110	100	0	0	0	0	0	0	0	0	0	0	0	0	0	110	100	130	100	120	120	120	120	120
Median.	100	100	100	100	*	*	*	*	*	*	*	*	*	*	*	100	100	*	*	*	*	*	*	*
No.	10	7	7	5												5	6							

372. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND H'ES MAY 1953.

HOURLY VALUES OF (M3000)F2 OBSERVED DURING MAY 1953 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	3.1	b	3.5	3.5 (3.1)	b	3.4	3.3	c	3.3	3.2	c	3.3	3.2	c	c	a	a	a	a		
2	a	c	b	c	c	c	c	3.7	3.6	3.5	3.3	3.4	b	3.3	c	c	f	b	b	b	b	b	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		
4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
5	b	b	b	b	b	b	b	3.4	3.7	3.4	c	c	c	c	c	c	3.5	3.4	3.1	3.1	3.1	3.1	3.1	3.1	
6	a	b	3.3	e	b	c	c	c	c	c	c	c	c	c	c	c	(3.2)	3.3	a	a	a	a	a	a	
7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									
17																									
18																									
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	a	a	a	a	a	b	b	b	b	b	b	b	b	b	b	b	3.3	3.5	3.2	3.4	3.0	3.0	3.0	3.0	
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.5	(3.3)	3.2	3.3	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.4	3.0	3.0	3.0	b	a	a	a	
23	a	a	a	a	a	b	b	b	b	b	b	b	b	b	b	b	3.3	3.3	3.3	3.2	3.4	a	a	a	
24	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	3.4	3.4	3.3	3.3	f	b	b	b	
25	b	2.7	f	3.02	b	b	b	b	b	f	3.5	3.5	3.03	3.03	3.05	3.05	3.03	3.03	3.04	3.02	3.02	3.01	3.1	a	f
26	f	f	f	f	a	a	a	a	n	a	3.4	3.3	3.3	3.4	3.4	3.4	3.4	3.3	3.2	3.2	3.2	c	c	c	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.4	3.4	3.3	3.2	b	a	a	c	
28	c	c	c	c	c	c	c	c	b	b	3.3	3.1	3.0	3.0	3.0	3.0	3.0	3.4	2.9	2.9	3.1	2.8	b	3.2	b
29	b	b	b	b	b	b	b	a	a	a	3.3	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.0	3.0	3.0	3.0	s	s	b
30	a	a	a	a	n	b	b	b	b	b	3.1	3.2	3.3	3.1	3.1	3.2	3.2	3.2	3.0	3.0	3.0	3.0	f	n	f
31	a	a	a	b	n	b	b	b	3.0	b	3.5	3.5	3.6	3.4	3.5	3.4	3.4	3.0	3.1	3.0	3.1	3.1	3.0	3.1	
Median:	*	*	*	*	*	*	*	*	*	*	3.4	3.4	(3.3)	3.3	3.4	3.3	3.2	3.2	3.2	3.2	(3.0)	*	*	*	
No:	From:	11	11	9	11	11	10	11	12	11	10	11	11	10	11	11	10	11	11	10	8	*	*	*	

NO RECORD MAY 7th - 18th INCLUSIVE.

HOURLY VALUES OF (M3000)F1 OBSERVED DURING MAY 1953 AT MACQUARIE ISLAND.

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

374. Swoop: 1.0 - 13.0 Mc/s in 1^m 55s

Time used: 157.5° E.L.T.

MACQUARIE ISLAND (M3000) F1 MAY 1953.

HOURLY VALUES OF $^{\circ}\text{F}2$ OBSERVED DURING JUNE 1953 AT MACQUARIE ISLAND

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11
1	a	a	a	a	a	a	a	a	b	3.5f	4.2	4.5f
2	f	b	a	a	b	a	a	a	2.8	3.7	4.0	4.0
3	a	a	a	a	a	b	b	b	3.3	3.5	b	b
4	a	a	a	a	a	b	a	b	2.5	3.3	3.5z	4.0
5	b	b	a	a	a	c	a	c	2.4	3.2	3.6	3.7f
6	b	b	a	b	b	b	a	b	3.5f	b	4.3	
7	f	a	a	a	f	b	b	b	2.6	3.5z	4.0	4.1
8	f	f	b	f	f	b	b	b	2.5f	3.5	4.0z	4.4z
9	b	f	b	2.5f	f	1.7f	b	b	2.2f	3.8	4.1	4.3
10	b	b	b	b	b	b	b	b	1.9f	3.8	4.1f	5.0
11	a	f	b	a	b	b	b	b	1.8f	3.3	3.8	4.1z
12	c	b	c	b	b	b	b	b	1.9f	3.2f	3.5	3.8
13	c	c	a	a	b	c	c	c	c	c	3.5	3.8z
14	a	a	a	b	b	b	b	b	2.3f	3.3z	3.5z	4.0
15	b	a	b	b	a	b	b	a	2.1f	3.0v	3.8z	4.0
16	a	f	f	f	f	b	b	b	2.3f	3.6	4.2z	4.4z
17	c	c	c	c	c	c	c	c	c	c	c	c
18	a	a	a	a	a	1.7f	a	a	2.5f	3.6z	4.0z	4.1
19	a	b	b	b	b	b	b	b	2.5f	3.7z	4.2	4.2
20	a	b	b	b	b	b	b	c	c	c	c	c
21	a	a	a	a	2.5f	1.8f	b	a	2.7	b	4.3k	4.4k
22	a	a	a	a	b	b	b	b	2.0f	3.2	3.7	4.1z
23	a	a	a	a	f	b	b	b	c	3.5	3.9z	4.2
24	a	a	a	a	a	a	f	b	c	c	c	c
25	c	c	c	c	c	c	c	c	c	c	c	c
26	b	a	a	b	a	a	b	a	1.9f	3.3z	3.9z	4.4z
27	c	c	c	c	c	c	c	c	c	c	c	c
28	b	a	b	b	b	b	b	b	1.6f	3.5	4.0z	4.4z
29	a	a	a	b	b	b	b	b	2.5f	3.6	3.8	4.0
30	a	a	a	a	a	a	a	a	2.1	3.3	3.5	4.1
Median. No.	*	*	*	*	*	*	*	*	2.3	3.5	3.9	4.1
									20	23	24	24

375. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND $^{\circ}\text{F}2$ JUNE 1953.

HOURLY VALUES OF F_2 OBSERVED DURING JUNE 1953 AT MACQUARIE ISLAND

Hour Day	12	13	14	15	16	17	18	19	20	21	22	23
1	4.9f	5.1	5.1P	5.0	4.5f	3.9f	2.7f	b	b	f	f	2.0f
2	4.1z	4.4h	4.5	5.0f	a	a	a	a	a	a	a	a
3	3.7	b	3.5	c	c	c	c	c	c	a	a	a
4	4.0	4.3	4.4z	b	1.7f	b	1.9f	1.8f	1.8f	a	a	a
5	4.4f	4.2	4.4f	4.3h	3.5f	f	f	f	1.7f	a	a	a
6	c	4.9	5.3	3.5f	3.0f	f	1.9f	f	f	a	a	a
7	4.0	4.2	4.5	4.4	3.7f	b	a	a	a	1.9f	f	f
8	5.0z	4.9z	5.3	5.4	4.5	3.9z	2.4f	1.4f	f	f	f	b
9	5.0	s	4.5	4.4	4.4z	3.4f	2.5f	2.0f	f	f	a	f
10	4.6f	5.0	5.4	4.5f	4.0v	3.0v	2.9f	1.9f	1.8f	1.6f	1.6f	f
11	4.3z	4.4z	4.3z	4.2z	4.0z	3.2f	2.0f	f	b	b	a	a
12	4.0	3.9	4.2	c	c	c	c	c	c	c	c	c
13	3.9	3.9f	4.0	3.9	3.3	2.0f	f	a	a	a	a	a
14	4.2	4.3	b	c	f	f	2.1f	1.9f	a	b	b	b
15	4.4	4.3z	4.4z	4.3z	c	3.4z	2.1f	1.6f	b	a	a	a
16	5.2s	5.0z	4.9	4.4z	c	c	c	c	c	c	c	c
17	c	c	c	c	4.3	3.6	2.5f	f	f	a	f	f
18	4.3	4.4	4.4	4.1f	3.7f	3.5f	2.7f	2.0f	b	a	b	b
19	4.7	4.5z	4.5z	4.3	3.5f	2.7f	2.0f	f	b	a	a	a
20	c	c	4.5	4.5z	4.3	3.6f	2.7f	1.7f	b	b	a	a
21	4.1k	4.3z	4.3z	4.4z	3.4f	a	1.9f	1.9f	a	f	1.6f	a
22	4.4z	4.6z	4.3z	4.3	4.0z	4.0	a	f	a	2.0f	a	a
23	4.3z	4.5	4.7	c	4.5f	4.5z	4.5f	4.5f	f	2.0f	f	f
24	c	c	c	c	c	c	c	c	c	c	c	c
25	4.0z	4.4h	4.3f	4.5f	4.0f	2.8f	b	f	f	b	b	b
26	4.2f	4.8	4.0	3.7f	4.4f	3.5f	a	a	c	c	c	c
27	4.8z	4.8z	4.6f	4.5	4.2f	3.8f	2.7f	1.7f	a	a	a	a
28	4.4z	4.5	4.6f	4.1z	4.0z	3.0f	2.5f	2.0f	b	b	b	f
29	4.5	4.6	4.5	4.4	4.1f	(2.5f)	2.8f	1.7f	f	a	a	a
30	b	c	4.5	3.0f	a	2.4f	a	a	b	a	b	a
Median. No.	4.3 25	4.4 24	4.5 27	4.4 23	4.0 22	3.4 18	2.5 17	1.8 12	*	*	*	*

376. Sweep: 1.0 - 13.0 cc/s in 1m 55s

Time used: 157.5° E.L.T.

MACQUARIE ISLAND F2 JUNE 1953

TIME: 100 - 1300 W.G.T. THU
HOURLY VALUES OF FOF1 OBSERVED DURING JUNE 1953 AT MACQUARIE ISLAND

Hour Day	10	11	12	13	14	15
1	q	1 (3.4)	q	1	q	q
2	q	q	3.3	3.3	q	q
3	q	q	3.3	3.3	a	c
4	q	q	3.3	3.3	p	b
5	q	q	3.2	3.2	3.0	q
6	q	q	3.2	3.2	3.5	q
7	1	1	1	1	1	1
8	q	1	1	1	q	q
9	1	1	1	1	q	q
10	q	1	1	1	3.0	q
11	q	1	1	1	3.0	q
12	q	1	1	1	3.2	q
13	q	1	1	1	3.0	q
14	q	1	3.3	3.3	b	c
15	1	1	1	1	1	q
16	q	q	1	1	3.0	q
17	q	1	1	1	3.2	q
18	1	1	1	1	3.0	q
19	q	1	1	1	3.0	q
20	c	1	1	1	3.2	q
21	3.3	3.2	3.1	3.1	3.0	q
22	q	1	1	1	3.0	q
23	q	q	1	1	3.0	q
24	c	1	1	1	c	c
25	c	1	1	1	3.5f	q
26	q	a	1	1	2.9	q
27	c	3.2	q	q	q	q
28	q	3.2f	q	q	q	q
29	q	3.2f	q	q	q	q
30	q	3.2f	q	b	b	b
Median No.	*	3.2	3.4	3.2	3.0	*
	40	7	7	10	6	

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND FOF1
JUNE 1953.

HOURLY VALUES OF $f^{\circ}\text{E}$ OBSERVED DURING JUNE 1953 AT MACQUARIE ISLAND.

Hour Day	09	10	11	12	13	14	15
1	b	1.6	1.9	2.0	2.0	a	b
2	b	1.6	b	2.0	2.1	1.7	1.6
3	b	1.6	d	b	b	a	c
4	b	1.6	1.7	s	2.0	b	d
5	b	1.7	2.1	a	b	b	b
6	b	b	b	c	b	b	b
7	b	1.7	b	b	b	b	b
8	a	1.8	c	b	2.0	c	b
9	1.5	1.9	b	2.0	2.0	1.9	1.9
10	1.8	1.8	b	1.8	1.9	1.8	1.8
11	a	2.0	b	2.0	2.0	1.9	1.7
12	a	1.8	b	2.0	2.0	1.9	b
13	b	1.6	b	b	b	b	c
14	a	1.6	1.6	2.0	b	b	b
15	1.5	1.5	1.8	1.9	1.9	2.0	c
16	a	a	2.0	2.0	s	a	a
17	c	c	c	c	c	c	c
18	a	1.6	2.0	2.0	1.9	a	a
19	1.6	1.9	2.0	2.0	2.0	1.9	b
20	c	c	c	c	c	c	b
21	b	b	b	1.6	1.6	1.6	1.5
22	a	1.7	1.7	1.9	1.9	1.9	a
23	c	c	c	1.7	b	1.7	c
24	c	c	c	c	c	c	c
25	c	c	c	2.0	2.0	1.7	1.5
26	1.6	1.6	2.0	s	a	a	a
27	c	c	c	2.0	s	1.9	b
28	1.6	1.9	1.7	a	b	a	a
29	1.4	1.6	1.7	1.7	1.9	1.7	1.5
30	b	b	b	b	b	b	b
Median. No.	1.6	1.8	2.0	2.0	1.5	1.9	1.5
	12	16	15	16	16	14	11
							6

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f°E JUNE 1953.

HOURLY VALUES OF FES OBSERVED DURING JUNE 1953 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	4.3y	3.3	4.4	4.0	3.3	6.0y	3.3	0	8	8	8	2.9	3.1	8	0	4.0	7.0y	0	0	4.3	0	3.2	
2	0	4.2	0	4.4	4.4	5.4	3.8	0	3.4	3.1	8	8	2.6	2.0	8	4.4	5.3h	7.0	7.0	7.2	4.0	6.5	5.5	
3	5.5	4.4	4.4	5.4	3.2	3.2	2.7	0	4.4	0	b	b	5.6	c	c	c	0	4.3z	4.4	4.4	4.2	4.4	4.4	
4	5.5	4.3	2.7	3.1	0	3.7	0	0	0	8	8	8	5.6	0	0	0	2.0	2.9	3.2	4.4	4.1	2.2	2.3	
5	4.4	0	3.6	4.4	3.3	0	0	0	0	8	8	8	3.05	b	b	8	0	0	0	3.3	4.1	2.2	2.3	
6	0	0	3.3	0	0	0	3.3	0	0	8	8	8	0	b	b	8	0	0	0	4.0	3.4	4.3	3.9	
7	2.6	3.2	4.3	3.3	3.2	0	0	0	3.1	8	8	8	0	b	b	8	0	0	0	4.0	3.1	0	0	
8	0	0	3.3	0	0	0	0	0	1.7	3.3	3.2	8	0	8	8	0	0	0	0	4.4	0	0	0	
9	0	3.4	0	0	0	0	0	0	0	8	8	8	2.5	8	8	0	b	b	b	0	3.2	4.0	0	
10	4.0	0	0	0	b	b	b	b	0	8	8	8	1.8	b	b	8	b	b	b	0	2.4	3.0	3.3y	
11	3.3y	3.6	0	2.6	0	0	b	b	1.8	1.9	8	1.8	2.0y	1.3	8	1.7	1.6	0	4.4	0	0	0		
12	2.5	0	b	b	b	b	b	b	1.7	3.3	2.0y	1.6	1.6	8	0	5.6	3.3	0	0	0	0	0	0	
13	4.4	0	0	0	2.7	0	0	0	0	b	b	b	7.1	0	0	0	1.9	3.9	3.9	3.3	3.3	3.3	3.3	
14	4.0	3.3	3.3	0	0	0	b	b	1.6	1.7	1.7	b	b	c	c	0	0	0	4.4	2.0	0	0		
15	0	2.2	0	0	3.2	0	0	0	3.2	0	1.7	1.6	g	4.4	2.5	g	0	0	0	0	6.0	3.6	4.0	
16	4.0	1.7	1.7	0	0	0	0	0	b	2.4	2.1	g	8	4.2	4.4	3.8	c	c	c	c	c	c	c	
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	2.8	3.9	c	3.2	4.0	0	0	
18	4.0	4.1	3.7	0	3.3	0	3.1	0	3.1	3.9	0	2.2	2.1	g	2.3	2.2	b	b	b	4.3	4.3	0	0	
19	3.5	0	0	c	3.1	0	0	0	b	b	3.2	2.1	g	4.2	2.6	2.2	2.2	4.4	3.7	0	3.5	4.0	3.4	
20	4.4	0	0	0	0	0	0	0	c	c	c	c	c	c	c	1.6	3.5	b	b	b	3.3	4.4	0	
21	5.6	4.4	4.0	2.0	0	0	b	b	2.5	b	b	2.2	1.7	1.6	3.6	4.3	1.7	2.2	4.6	3.2	4.4	4.5	4.5	
22	4.4	6.0	4.0	0	0	b	b	b	1.7	3.3	3.1	b	1.7	1.7	3.6	2.7	3.5	2.2	0	2.9	3.5	1.8	4.4	
23	4.0	3.6	4.0	0	3.3y	b	b	b	1.6	g	g	b	c	c	c	c	5.3	1.7	1.5	b	b	b	b	
24	4.2	4.1	4.3	4.0	3.1	0	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	g	b	b	b	b	b	b	
26	b	4.0	4.0	0	0	0	3.2	3.2	b	1.7	1.7	2.6	3.2	4.4y	4.3	4.2	4.0	4.3y	6.0	6.7	c	c	c	
27	c	c	c	c	c	c	c	c	c	c	c	c	3.1	s	g	b	b	b	b	4.2	6.0	4.4	4.4	4.4
28	0	3.2	b	b	b	b	b	b	3.4	3.3	g	3.1	2.5	3.0	3.6	1.8	b	3.6	3.1	b	0	b	2.8	
29	4.5	3.3	3.3	b	b	b	b	b	2.8	0	1.7	b	3.2	2.8	g	3.5y	3.5	3.3	b	4.2	4.1	4.0	4.3	
30	2.2	5.5	4.5	6.1	0	4.0	3.1	2.8	1.7	15	19	19	18	17	17	17	2.0	2.0	5.9	8.0	4.0	0	4.3	
Median.	4.0	3.3	3.3	**	2.7	**	3.1	1.7	**	1.6	**	**	1.8	2.0	1.7	3.5	3.2	1.8	1.9	3.1	3.4	4.0	3.9	3.9
No. No.	26	27	25	23	22	20	15	15	19	18	20	20	17	18	17	20	22	19	22	24	24	25	25	25

Time used: 157.5° E.M.T. Time used: 157.5° E.M.T.

379.

MACQUARIE ISLAND FES JUNE 1953.

HOURLY VALUES OF $h'F2$ OBSERVED DURING JUNE 1953 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	a	a	a	a	a	b	250	240	1	1	250	240	230	240	300	b	b	f	f	290		
2	f	b	a	b	a	b	a	b	250	220	200	260	1	1	240	250	a	a	a	a	a	a		
3	a	a	a	a	a	a	b	b	300	250	b	540	b	460	c	c	c	c	c	c	a	a		
4	a	a	a	a	a	a	b	a	280	240	250	310	350	300	b	350	b	330	300	a	a	a		
5	a	b	a	a	a	a	c	c	250	240	240	230	240	230	250	250	410	f	300	280	a	a	a	
6	b	b	a	b	b	a	b	b	230	b	250	c	1	1	250	1	350	f	310	f	f	a	a	
7	f	a	a	a	a	a	b	b	290	240	1	270	1	1	240	240	230	240	b	a	a	a		
8	f	f	b	f	b	f	b	b	240	240	250	230	250	230	230	230	220	220	260	260	320	f		
9	b	f	f	280	280	f	b	b	220	200	230	240	230	s	230	230	210	220	250	270	f	b		
10	f	b	b	b	b	b	b	b	250	220	210	210	210	1	1	220	230	220	250	a	f	300		
11	a	f	b	a	b	b	b	b	250	230	230	1	1	250	250	240	220	220	320	f	320	300		
12	a	a	b	b	b	b	b	b	250	220	240	1	1	250	250	c	c	c	c	c	c	c		
13	c	c	c	c	c	c	c	c	c	250	1	1	250	300	280	230	260	a	a	a	a	a		
14	a	a	a	b	b	b	b	b	250	220	230	1	270	b	c	c	f	a	a	a	a	a		
15	b	a	b	b	a	b	a	b	240	230	250	1	240	1	200	c	210	220	270	b	a	b	a	
16	a	f	f	f	f	b	b	b	220	200	220	220	230	230	200	c	c	c	c	c	c	c		
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	220	250	250	250	a	f		
18	a	a	a	a	300	a	a	f	a	240	220	250	1	220	230	210	210	230	240	b	a	b		
19	a	a	b	b	b	a	b	b	220	220	230	210	230	230	240	220	210	240	250	b	a	a		
20	a	a	b	b	b	b	c	c	c	c	c	c	c	c	c	240	230	220	210	220	290	b		
21	a	a	a	a	260	300	290	b	a	280	b	310	290	250	250	250	240	a	300	270	a	f	350	
22	a	a	a	a	b	b	b	b	b	230	240	240	270	250	240	250	220	220	a	f	n	280		
23	a	a	a	a	f	b	b	b	250	230	200	200	230	1	240	c	240	250	240	220	b	a		
24	a	a	a	a	a	a	a	f	b	c	c	c	c	c	c	c	c	c	c	c	c	f		
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	250	250	200	220	220	250	b	b	
26	b	a	a	b	b	a	a	b	270	240	240	1	250	240	200	240	240	a	a	a	a	c		
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	230	230	200	220	230	240	a	c	
28	b	a	b	b	b	b	b	b	240	230	230	230	220	250	240	230	240	270	250	280	b	b		
29	a	a	a	a	a	a	a	b	240	220	230	230	230	240	240	240	240	220	220	300	f	a		
30	a	a	a	a	a	a	a	b	260	270	250	290	b	b	350	270	a	a	330	a	a	b		
Median No.	*	*	*	*	*	*	*	*	250	230	240	240	240	240	230	225	240	250	275	*	*	*	*	
380.	Sweep:	1.0 - 13.0 Mc/s in 1m 55s																						

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'F2 JUNE 1953

HOURLY VALUES OF HF2 OBSERVED DURING JUNE 1953 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	a	a	b	a	a	a	b	260	250	240	260	240	240	240	280	330	b	b	f	f	290		
2	f	b	a	b	a	b	a	b	270	250	260	250	290	250	260	c	a	a	a	a	a	a	a		
3	a	a	a	a	a	a	b	b	310	280	b	u	b	u	c	c	c	c	c	c	c	c	c		
4	a	a	a	a	a	a	b	a	290	260	280	ü	u	310	300	b	350	b	330	300	c	a	a	a	
5	a	b	a	a	a	a	c	c	270	260	250	240	270	240	u	260	290	f	300	a	f	c	a		
6	b	b	a	b	b	b	a	b	b	250	b	270	c	280	280	300	350	f	310	f	f	a	a	a	
7	f	a	a	a	a	a	b	b	290	250	260	270	260	290	250	250	260	f	b	g	a	a	310	f	
8	f	f	b	f	f	b	b	b	260	250	250	260	250	250	250	250	260	250	270	270	320	f	b	f	
9	b	f	f	f	f	b	b	b	240	230	230	240	230	240	s	240	240	240	250	280	280	f	c	f	f
10	f	b	b	b	b	b	b	b	250	220	220	220	240	240	250	250	250	240	270	a	f	320	300	f	f
11	a	f	b	a	b	b	b	b	250	240	250	260	260	250	250	260	260	250	340	f	b	b	a	a	
12	a	b	b	b	b	b	b	b	260	250	250	250	250	250	250	250	250	250	250	c	c	c	c	c	
13	c	c	c	c	c	c	c	c	c	c	c	c	280	250	280	280	300	280	260	280	f	a	a	a	a
14	a	a	a	a	b	b	b	b	270	250	250	270	270	270	b	b	c	f	f	a	260	a	b	b	
15	b	a	b	b	a	b	b	a	250	250	u	u	270	240	270	230	c	250	240	270	270	270	270	a	a
16	a	f	f	f	b	b	b	b	250	210	220	230	230	230	230	230	230	250	240	c	c	c	c	c	
17	c	c	c	c	c	c	c	c	270	250	300	260	260	270	250	250	250	270	280	280	f	310	c	f	
18	a	a	a	a	300	a	f	a	b	250	250	240	240	250	240	250	250	250	260	290	f	b	a	b	
19	a	b	b	b	b	b	b	b	c	c	c	c	c	c	c	c	c	250	270	270	f	b	a	a	
20	a	b	b	b	b	b	b	c	270	300	290	b	310	290	290	290	290	290	290	290	b	b	a	a	
21	a	a	a	a	270	300	290	b	a	300	b	310	290	290	250	250	270	270	270	270	270	270	a	f	
22	a	a	a	a	b	b	b	b	b	260	250	240	240	270	260	250	250	250	240	240	a	n	a	280	
23	a	a	a	a	f	b	b	b	250	260	240	250	250	270	260	c	250	260	250	250	250	260	f	f	
24	a	a	a	a	a	a	f	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	250	300	260	250	260	b	f	b	
26	b	a	a	b	b	a	a	b	270	250	250	260	250	250	250	250	250	230	240	a	a	c	c	c	
27	c	c	c	c	c	c	c	c	c	240	250	240	240	240	240	250	250	250	250	250	260	a	a	a	
28	b	a	b	b	b	b	b	b	250	230	240	230	240	230	240	250	250	250	260	280	300	b	b	f	
29	a	a	a	a	a	a	a	a	270	280	280	290	b	b	u	300	a	240	230	240	300	f	a	a	a
30	a	a	a	a	*	*	*	*	*	260	250	250	250	250	250	250	250	250	250	260	280	*	*	*	
Median No.	*	*	*	*	*	*	*	*	*	20	23	23	21	23	23	23	23	23	22	21	23	22	17	11	

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

Time used: 157.5° E.W.T. 1953

MACQUARIE ISLAND HF2 JUNE 1953

HOURLY VALUES OF $h^{\prime}F_1$ OBSERVED DURING JUNE 1953 AT MACQUARIE ISLAND

Day	Hour	10	11	12	13	14	15
1	q	210	200	180	q	q	q
2	q	210	q	200	q	q	q
3	q	200	b	b	a	320	310
4	p	230	240	270	250	310	300
5	q	230	240	230	240	310	300
6	q	220	230	230	240	240	250
7	q	240	230	240	240	240	250
8	180	200	210	210	210	210	210
9	q	q	q	s	q	q	q
10	q	(230)	210	210	210	210	210
11	q	230	230	210	200	200	200
12	q	(200)	190	190	190	190	190
13	q	220	200	200	200	200	200
14	q	220	230	230	250	250	250
15	210	200	180	180	b	b	b
16	q	q	q	q	200	200	200
17	c	c	c	c	220	220	220
18	200	210	210	210	210	210	210
19	q	q	q	q	220	220	220
20	c	c	c	c	220	220	220
21	230	b	b	b	210	210	210
22	q	p	200	220	230	230	230
23	q	p	q	q	200	200	200
24	c	c	c	c	220	220	220
25	c	c	c	c	190	190	190
26	q	p	a	200	220	220	220
27	c	c	c	200	200	200	200
28	q	p	200	200	200	200	200
29	q	p	q	q	210	210	210
30	q	p	240	240	b	b	b
Median. No.	210 5	210 15	15	15	210 17	210 17	220 9

382. Sweep: 1.0 - 13.0 Mc/s in 1^m 55s Time in hrs. Time used: 157.5° E.M.T. obtained at Macquarie Island h 1 JUNE 1953.

HOURLY VALUES OF $H^{\ast}E$ OBSERVED DURING JUNE 1953 AT MACQUARIE ISLAND

Hour Day	09	10	11	12	13	14	15
1	b	b	130	a	100	b	140
2	100	100	130	110	100	100	140
3	b	b	b	b	a	c	b
4	120	110	80	110	b	b	b
5	100	100	a	b	b	b	b
6	b	b	b	c	b	b	b
7	100	b	b	b	b	b	b
8	a	110	b	140	140	130	b
9	130	100	100	100	110	120	e
10	100	100	110	100	120	120	e
11	a	100	b	130	130	130	b
12	a	100	140	120	130	b	c
13	b	b	b	b	b	b	b
14	a	140	140	100	b	b	c
15	100	120	100	100	100	100	q
16	a	a	120	130	a	a	a
17	c	c	c	c	c	c	c
18	a	120	120	100	120	a	a
19	120	110	100	110	100	b	b
20	c	c	c	c	c	130	b
21	b	b	b	120	120	120	140
22	a	b	100	130	140	100	a
23	100	100	100	b	100	b	c
24	c	c	c	c	c	c	c
25	c	c	c	100	90	90	130
26	100	120	110	s	a	a	a
27	c	c	c	110	s	120	b
28	100	120	120	a	a	a	a
29	120	120	120	110	120	120	110
30	b	b	b	b	b	b	b
Median. No.	100 12	110 16	120 15	110 16	120 14	120 12	120 6

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

Time used: 157.5° E.N.T.

MACQUARIE ISLAND $H^{\ast}E$ JUNE 1953.

HOURLY VALUES OF H'ES OBSERVED DURING JUNE 1953 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	110	120	150	100	120	120	100	100	e	e	e	e	e	e	e	e	130	150	e	e	170	e	120		
2	e	110	e	120	100	100	110	100	100	100	100	100	100	100	100	100	110	110	100	100	120	110	100	90	
3	100	100	100	100	120	90	e	b	b	b	b	b	b	b	c	c	c	c	c	c	110	110	110	110	
4	110	100	120	120	110	e	100	e	e	e	e	e	e	e	e	e	e	e	e	e	150	110	140	110	
5	110	e	120	110	110	e	c	c	e	e	e	e	e	e	e	e	e	e	e	e	130	110	120	120	
6	e	120	120	100	110	e	e	120	e	e	e	e	e	e	e	e	e	e	e	e	110	120	100	100	
7	e	120	120	100	110	100	e	e	100	g	b	b	b	b	b	b	b	b	b	e	110	110	e	e	
8	o	120	o	o	o	e	e	e	e	110	100	100	b	g	g	g	b	b	b	b	o	o	o	o	
9	o	100	o	o	o	e	e	e	e	o	g	g	g	g	g	g	110	g	g	g	e	e	120	e	
10	o	120	o	o	b	b	b	b	o	g	g	g	g	g	g	g	100	g	g	g	b	b	100	120	
11	120	100	e	120	e	e	b	b	100	90	g	g	g	g	g	g	g	100	100	100	120	100	120	120	
12	110	e	b	b	b	b	b	b	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
13	120	o	o	o	100	e	e	e	o	b	b	b	b	b	b	b	120	o	120	o	140	100	100	100	
14	100	100	100	c	9	o	o	b	b	100	100	100	b	b	b	b	o	o	o	o	100	110	100	100	
15	o	100	c	o	o	100	o	o	o	100	o	o	100	o	o	o	100	o	o	o	o	o	130	110	100
16	100	100	140	c	e	e	e	e	b	100	100	g	100	100	g	100	100	100	100	100	100	100	100		
17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
18	100	100	100	c	100	o	100	o	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
19	120	o	o	o	100	o	o	b	b	g	100	100	g	100	100	g	100	110	110	110	120	120	120	9	
20	100	o	o	o	o	o	e	c	c	c	c	c	c	c	c	c	100	140	120	120	o	160	100	100	
21	110	100	100	o	o	110	o	o	b	100	b	b	b	b	b	b	100	110	110	120	120	120	100	100	
22	110	110	120	o	b	b	b	b	100	100	130	b	100	100	100	100	120	120	120	120	130	110	110	100	
23	100	100	100	o	90	b	b	b	100	g	g	b	b	b	b	b	110	120	120	120	b	b	b	b	
24	130	110	100	100	90	o	b	b	c	c	c	c	c	c	c	c	110	120	120	120	b	b	b	b	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	g	g	g	b	b	b	b	
26	b	100	100	o	o	100	100	b	100	100	150	110	110	100	100	100	100	100	100	100	100	100	100	100	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	110	110	110	110	110	110	c	c	
28	o	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	130	120	110	110	130	120	110	100	
29	100	100	110	b	b	b	b	b	100	100	140	g	g	g	g	g	120	130	110	120	b	o	110	100	
30	110	100	100	100	o	110	100	100	o	110	100	100	o	b	b	b	150	100	130	100	130	100	110	100	
Median. No.	110	100	105	110	100	120	100	100	100	100	100	100	100	100	100	100	105	110	110	120	115	120	110	100	
384.	Sweep:	1.00 - 13.0 Mc/s	in 1 ^m	55s													8	12	12	12	14	13	18	19	

 Time used: 157.5° E.M.T. MACQUARIE ISLAND H'ES JUNE 1953

HOURLY VALUES OF (M3000)F2 OBSERVED DURING JUNE 1953 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	a	a	a	a	a	a	b	b	3.1	3.5	3.2	3.0	3.1	3.2	3.0	2.9	b	b	f	f	3.1			
2	f	b	a	a	b	a	a	a	3.2	3.4	3.2	3.0	2.8	3.4	3.4	a	a	a	a	a	a	a	a			
3	a	a	a	a	a	a	a	b	b	3.0	3.0	b	2.3	2.5	c	c	c	c	c	c	c	c	c			
4	a	a	a	a	a	a	a	b	3.1	3.2	3.1	3.0	2.7	3.1	3.0	b	2.8	b	2.8	a	f	a	a			
5	a	b	a	a	a	a	a	c	c	3.1	3.3	3.3	2.9	2.7	3.2	2.7	3.3	2.9	f	f	3.0	a	a			
6	b	b	a	b	b	a	b	b	b	3.0	b	3.2	c	3.2	3.1	2.9	2.6	f	f	f	f	a	a	a		
7	f	a	a	a	a	a	b	a	b	3.1	3.4	3.3	3.3	3.2	3.4	3.3	b	a	a	a	a	a	a	a		
8	f	f	b	f	b	b	b	b	b	3.2	3.3	3.4	3.4	3.3	3.3	3.4	3.4	3.3	3.0	f	f	b	b	b		
9	b	f	f	b	3.0	b	b	b	b	2.1	3.5	3.4	3.0	3.4	s	3.5	3.5	3.2	3.0	2.9	f	a	a	a		
10	f	b	b	b	b	b	b	b	b	3.4	3.4	3.3	3.4	3.4	3.3	3.4	3.3	3.4	3.2	a	2.9	3.0	2.8	f		
11	a	f	b	a	b	b	b	b	b	3.0	3.5	3.3	3.3	3.2	3.4	3.3	3.2	3.4	3.2	a	2.9	3.0	2.8	f		
12	a	b	b	b	b	b	b	b	b	3.0	3.3	3.3	(2.9)	3.2	3.2	2.9	c	c	c	c	c	c	c	c		
13	c	c	c	c	c	c	c	c	c	0	3.2	3.3	3.1	3.1	3.0	2.8	3.1	f	a	a	a	a	a	a		
14	a	a	a	b	b	b	b	b	b	3.2	3.3	3.4	3.2	3.4	3.3	3.2	3.4	f	a	a	a	a	a	a		
15	b	a	b	b	a	b	b	a	b	3.1	3.2	3.5	3.3	3.2	3.8	3.1	3.5	c	3.4	3.2	3.0	b	b	b		
16	a	f	f	f	b	b	b	b	b	3.3	3.8	3.5	3.7	3.9	3.5	3.5	3.5	c	c	c	c	c	c	c		
17	c	c	c	c	c	c	c	c	c	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
18	a	a	a	3.0	a	f	a	a	a	3.3	3.4	3.2	3.2	3.2	3.3	3.2	3.1	3.1	3.0	f	f	2.9	a	f		
19	a	a	b	b	b	b	b	b	b	3.1	3.4	3.4	3.4	3.5	3.5	3.4	3.5	3.3	3.1	3.0	b	a	a	b		
20	a	b	b	b	b	b	c	c	c	c	c	c	c	c	c	3.5	3.4	3.4	3.4	3.2	3.0	b	a	a		
21	a	a	2.7	2.8	3.0	b	a	3.0	b	3.1	3.4	3.2	3.0	3.2	3.2	a	3.0	3.0	a	f	2.7	a	a	a		
22	a	a	a	a	b	b	b	b	b	3.1	3.3	3.4	3.2	3.3	3.3	3.0	3.3	a	3.2	3.2	2.8	a	3.0	a		
23	a	a	a	a	f	b	b	b	b	3.2	3.3	3.4	3.2	3.4	3.2	3.3	3.1	3.2	3.2	3.2	3.2	2.9	f	f		
24	a	a	a	a	a	f	a	a	b	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
25	c	c	c	c	c	c	c	c	c	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
26	b	a	a	b	a	a	b	2.9	3.2	3.2	3.2	3.1	3.4	3.4	3.1	3.0	3.1	3.0	2.8	b	b	b	b	b		
27	c	c	c	c	c	c	c	c	c	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
28	b	a	b	b	b	b	b	b	b	3.2	3.4	3.4	3.6	3.6	3.6	3.4	3.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2		
29	a	a	a	b	b	b	b	b	b	3.3	3.6	3.3	3.3	3.7	3.7	3.6	3.4	3.3	3.0	3.0	3.0	2.9	b	b		
30	a	a	a	a	a	a	a	b	a	3.2	3.1	3.0	3.2	3.2	3.0	b	b	3.0	3.4	3.4	3.0	2.8	a	a		
Median No.	*	*	*	*	*	*	*	*	*	3.02	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.2	3.2	3.2	3.2	*	*	*	
No.										20	23	24	24	25	24	25	23	22	17	17	17	17	17	*	*	*

HOURLY VALUES OF (13000)F1 OBSERVED DURING JUNE 1953 AT MACQUARIE ISLAND

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

386. Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.H.T. MACQUARIE ISLAND (M3000)F1 JUNE 1953

HOURLY VALUES OF $f^{\circ}F2$ OBSERVED DURING JULY 1953 AT MACQUARIE ISLAND

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11
1	a	b	b	b	a	a	a	b	b	$3^{\circ}52$	$3^{\circ}52$	$3^{\circ}52$
2	a	b	a	b	a	a	a	a	1.8f	2.7	3.3	3.5
3	b	c	c	c	c	c	c	c	c	c	c	c
4	a	a	a	a	a	a	a	b	2.1	$3^{\circ}02$	5.5	$3^{\circ}02$
5	a	b	a	a	b	a	b	b	2.0f	$3^{\circ}02$	3.4	5.5
6	a	a	a	b	b	b	b	b	2.1f	3.3k	3.5k	$3^{\circ}32$
7	b	a	a	b	b	b	b	b	1.7f	3.0f	3.4f	3.7
8	a	a	a	a	b	b	b	b	2.0f	3.0f	3.5f	3.5f
9	a	a	c	c	c	c	c	c	c	c	c	c
10	a	f	a	a	a	b	b	b	2.1f	3.3	3.6	3.8
11	a	b	a	a	b	b	b	b	2.2f	3.2	3.52	3.72
12	f	a	a	c	c	c	c	c	c	c	c	c
13	a	a	a	a	b	a	a	b	2.5f	3.3	3.6	4.0
14	b	a	a	a	a	b	b	b	2.5	3.32	3.64	3.9
15	b	b	b	a	b	a	b	b	b	2.5	3.32	3.64
16	a	a	a	a	a	a	a	a	2.5f	3.32	3.52	4.1z
17	a	a	a	a	a	a	b	b	1.9f	3.4	3.9z	4.7
18	c	c	c	c	c	c	c	c	c	c	c	4.4z
19	a	a	1.7f	1.6f	b	b	b	b	2.8	3.8	3.8z	4.5
20	h	b	b	b	b	b	b	b	2.8	3.7z	3.8	4.4
21	a	a	b	b	b	b	a	a	2.5f	3.4f	3.5f	4.0f
22	a	f	a	b	b	b	b	1.5f	2.7f	3.3f	3.7	4.4
23	2.5f	2.3f	1.7f	a	1.5f	a	f	f	2.2f	3.5f	4.1	4.5
24	b	a	a	b	a	a	b	a	3.0f	b	b	b
25	a	a	a	a	a	a	a	f	2.6f	3.5f	3.7z	3.6z
26	a	a	a	a	a	a	a	a	2.6f	3.4z	3.6z	4.0f
27	a	a	a	a	a	a	b	b	3.3f	3.4h	3.3h	3.3h
28	b	a	b	b	b	a	c	c	c	c	c	c
29	b	a	f	a	a	a	a	a	2.5	3.1	b	b
30	b	a	b	b	a	a	b	b	3.5	3.5	b	b
31	a	a	a	b	a	a	a	a	2.8f	b	b	b
Median No.	x	x	x	x	x	x	x	x	2.5	3.5	3.5	3.8
									21	24	23	22

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

MACQUARIE ISLAND f°F2 JULY 1953

HOURLY VALUES OF $f^0 F_2$ OBSERVED DURING JULY 1953 AT MACQUARIE ISLAND

Hour Day	12	13	14	15	16	17	18	19	20	21	22	23
1												
2	5.7	3.7k	4.5k	3.9k	3.5k	3.7f	3.6f	3.6f	3.6f	b	a	b
3	6	4.2	4.2	b	D	2.6f	2.6f	a	a	a	a	a
4	4.3	4.2	4.0	4.0	3.5	2.5	2.5	a	a	a	a	a
5	5.8z	4.0	4.0v	4.0v	4.0	4.0	4.0	4.0	4.0	a	a	a
6	b	b	3.9k	3.7k	3.7k	3.7f	3.6f	3.6f	3.6f	1.7f	a	b
7	s	3.5f	4.0	a	a	2.8f	2.8f	a	a	a	a	a
8	b	b	3.5	3.5	3.5	3.5	3.5	3.5	3.5	a	a	a
9	c	c	0	0	0	0	0	0	0	a	a	a
10	4.0h	4.2	3.9f	3.9f	3.9	3.9	3.9	3.9	3.9	2.7f	a	a
11	4.6z	4.4f	4.0f	4.3f	4.3f	3.7f	3.2f	3.2f	3.2f	1.7f	a	a
12	0	0	4.1f	4.3	4.3	3.7	3.0	3.0	3.0	1.8f	b	b
13	4.3f	4.3f	4.3	c	c	c	c	c	c	c	c	a
14	c	c	c	c	c	c	c	c	c	a	a	a
15	c	c	c	c	c	c	c	c	c	a	a	a
16	4.5z	5.0	4.6	4.5v	4.5v	4.5z	4.5z	4.5z	4.5z	3.6f	f	f
17	(4.6)	5.0	4.8	4.5z	4.5z	4.7	3.7	3.7	3.7	2.5z	a	a
18	4.8z	5.1	4.7	5.0z	5.0z	4.5z	3.4f	3.4f	3.4f	1.7f	1.7f	1.7f
19	4.5v	4.6	4.6	4.7	4.7	3.9	(3.5)	(3.5)	(3.5)	1.6f	b	b
20	4.3	4.6z	4.6z	4.3	4.3	4.2f	c	c	c	a	a	a
21	4.5	4.0f	4.0f	4.3f	4.3f	3.8f	3.6f	3.6f	3.6f	2.0f	f	f
22	4.5f	4.6	4.5	4.5f	4.5f	4.0f	3.2f	3.2f	3.2f	a	a	f
23	4.6	5.0	4.0	3.0f	3.0f	a	a	a	a	a	a	a
24	b	3.5	3.7f	3.6f	3.6f	3.5f	3.1f	3.1f	3.1f	a	a	b
25	3.9	3.6	3.6	3.7	3.7	3.3f	2.8f	2.8f	2.8f	a	a	a
26	3.9	4.0f	4.2	3.6f	3.6f	a	1.6f	1.6f	1.6f	a	a	a
27	3.6h	b	3.7	b	b	2.6f	2.5f	2.5f	2.5f	f	f	f
28	c	3.8	b	3.7h	b	b	a	a	a	a	a	a
29	b	b	3.7h	3.5h	3.5	2.7f	1.7f	1.7f	1.7f	b	b	b
30	3.7	3.7h	3.5h	(3.8)	3.5	3.3f	f	f	f	b	a	b
31	4.0	4.0	3.8	3.8	3.8	3.3f	b	b	b	a	a	a
Median No.	4.5	4.0	4.0	3.8	3.8	3.5	3.0	3.0	3.0	2.2	(1.6)	2.2
No.	19	25	26	21	22	17	12	12	12	8	x	x

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

Time used: 157.5° E.M.T.

 MACQUARIE ISLAND f⁰F₂

JULY 1953

HOURLY VALUES OF $\text{F}^{\text{OF}}\text{T}_1$ OBSERVED DURING JULY 1953 AT LACQUARIE ISLAND

Hour Day	10	11	12	13	14	15
1	b	3.0	b	b	b	b
2	q	q	1	2	2	q
3	c	c	c	0	0	b
4	q	3.0	3.2	3.0	3.0	3.0
5	q	q	1	0	0	q
6	1	3.1	b	b	3.0	3.0f
7	q	q	s	q	q	3.0f
8	q	q	b	b	q	q
9	c	c	c	c	c	c
10	q	1	1	(3.5)	3.0	3.0
11	q	q	3.4	3.3	3.0	3.0
12	c	c	0	c	q	q
13	3.0	3.0	3.5f	3.4	q	q
14	c	c	0	c	c	c
15	q	1	0	c	c	c
16	q	q	3.5	3.2	q	q
17	q	3.4	3.5	3.4	q	q
18	c	1	3.5	3.5	q	q
19	q	3.4	3.4	3.4	q	q
20	q	(3.4)	3.4	3.5	1	1
21	q	3.5	3.5	3.3	q	q
22	3.5	3.5	3.5f	3.2f	3.1f	3.1f
23	1	3.3	3.5	3.5	3.0	3.0
24	b	b	b	b	b	b
25	1	1	3.4f	1	q	q
26	q	3.5	1	3.3	3.3	3.3
27	1	1	3.3	3.3	3.2	3.2
28	c	c	0	3.3	3.2	3.2
29	b	b	b	3.3	3.1f	3.1f
30	q	b	3.3	3.3	3.3	3.2
31	b	b	3.3	3.3	3.3	3.2
Median. No.	*	3.4	3.4	3.3	3.0	*
		10	15	19	12	

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

Time used: 157.5° E.K.T.

LACQUARIE ISLAND FOF1 JULY 1953

f_{ce} OBSERVED DURING JULY 1953 AT MACQUARIE ISLAND

Day	Hour	08	09	10	11	12	13	14	15
1		b	b	b	b	b	b	b	b
2		1.6	b	b	2.2	b	b	b	1.6
3		c	c	c	c	c	b	b	b
4		1.7	b	1.7	b	b	b	b	b
5		a	a	b	b	b	b	b	b
6		b	1.7	1.7	b	b	b	b	b
7		1.6	1.7	1.7	s	1.7	1.7	b	b
8		1.6	a	2.0	b	b	b	b	q
9		c	c	c	c	c	c	c	c
10		q	b	1.7	1.7	b	b	b	b
11		1.6	1.7	1.8	1.7	1.7	1.7	1.7	1.6
12		c	c	c	c	c	c	1.7	1.5
13		b	1.7	b	1.7	1.7	2.0	b	c
14		1.5	1.6	2.0	c	c	c	c	c
15		1.6	1.6	1.8	a	c	c	c	c
16		1.6	1.6	2.3	2.3	2.2	1.8	1.6	1.6
17		1.4	1.8	1.8	a	a	2.3	1.7	1.8
18		c	c	2.2	2.3	2.0	1.9	1.6	1.6
19		1.7	1.8	2.1	1.9	1.9	1.8	1.8	1.8
20		1.7	2.0	a	2.2	2.2	1.9	1.9	1.6
21		1.5	a	2.2	2.2	a	a	a	1.6
22		1.5	1.6	a	2.5	2.3	2.3	b	1.6
23			1.7	a	2.3	b	b	b	1.6
24			b	b	b	b	b	b	b
25		1.6	2.0	2.5	a	2.6	2.2	1.9	1.6
26		1.5	1.9	1.8	2.2	2.3	2.0	1.8	b
27		1.7	1.7	2.2	b	b	b	2.2	b
28		c	c	c	c	b	b	b	b
29		b	b	b	b	b	b	b	b
30		b	b	b	b	b	b	1.9	b
31		b	b	b	b	b	b	b	b
Median.	*	1.6	1.8	2.0	2.2	2.0	1.8	1.6	1.6
No.	10	17	13	14	12	12	13	9	9

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

Line used: 157.5° E.M.T.

MACQUARIE ISLAND f_{ce} JULY 1953

HOURLY VALUES OF FES OBSERVED DURING JULY 1953 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	4.4	4.4	4.5	4.5	3.3	3.6	4.0	3.8	b	b	b	b	b	b	c	b	b	1.7	4.5	3.9	3.9	3.6	3.5	
2	5.6	4.5	4.5	b	2.1	2.1	2.2	3.2	1.8	1.7	3.0	b	3.2	b	b	b	b	b	1.7	4.5	3.3	3.3	4.4	
3	3.5	3.5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	1.7	3.3	3.2	3.2	4.4
4	4.0	4.4	4.4	2.2	3.3	2.8	1.7	1.8	b	g	b	b	b	b	b	b	b	b	b	3.4	3.4	3.2	3.2	5.5y
5	e	e	3.2	4.1	4.3	b	b	b	b	1.7	1.7	b	b	b	b	b	b	b	4.2	3.8	4.2	3.7	3.3	
6	2.6	2.5	2.4	2.4	e	b	b	b	b	b	b	b	b	b	b	b	b	1.7	b	b	e	3.2y	e	
7	b	3.1y	3.6	e	4.1	e	b	b	b	1.7	1.7	1.6	1.7	s	g	g	4.4	4.4	4.4	5.2	5.4	4.7	4.0	
8	4.0	4.4	4.3	4.0	b	b	b	b	b	1.7	1.7	1.7	b	b	b	b	b	b	4.4	4.4	3.2	4.4	7.0	
9	4.4	4.8	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	4.3	4.3	
10	4.0	1.6	1.7	4.4	4.4	b	b	b	b	g	g	b	g	b	b	b	b	1.7	3.6	4.3	4.0	4.0	4.3	
11	3.9	e	3.9	1.7	3.3y	b	b	b	b	1.7	1.7	1.6	1.7	g	2.2	g	g	b	b	b	3.3	3.3	e	4.2
12	4.3	3.2	3.3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	e	e	b	b	
13	5.7	4.5	5.7	3.48	e	3.2	4.0	1.7	b	b	g	b	3.7	5.7	4.0	c	c	c	c	6.0	4.5	c	c	4.2
14	b	4.5	4.3	4.2	4.2	e	e	e	b	b	g	g	c	c	c	c	c	c	c	2.2y	b	3.2y	3.6	2.0
15	b	b	b	b	3.1	b	b	b	b	2.0	2.6	2.5	c	c	c	c	c	c	1.8	e	1.8	3.8	3.6	3.8
16	4.6	3.9	3.5	3.9	3.8	3.5	e	3.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	
17	2.0	e	1.9	1.8	e	b	b	b	g	g	g	g	g	g	g	g	g	2.5	b	2.0	b	2.6	3.4	b
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	1.7	1.8	b	b	b	1.8	
19	4.0	2.0	b	b	b	b	b	b	b	g	g	g	g	g	g	g	g	2.3	s	5.5	s	2.0	3.4	5.5
20	b	b	b	b	b	b	b	b	b	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.8	c	b	b	3.6	3.5	4.0
21	2.4	e	e	e	b	b	b	b	2.9	b	g	2.0	g	g	2.8	2.1	2.0	1.8	e	e	4.3	4.0	4.0	4.5
22	4.0	3.1	e	b	2.0	1.7	1.8	b	1.7	1.8	2.2	g	1.7	g	2.2	1.7	b	1.7	b	1.8	2.0	3.0	3.0	b
23	b	b	b	4.1	2.0	1.8	b	1.9	3.8	1.7	b	3.7	b	b	b	3.0	3.6	4.6	4.6	4.5	4.7	4.1	4.2	
24	4.0	4.0	1.8	b	1.9	3.5	3.0	4.0	3.5	3.2	1.7	1.9	1.7	2.0	2.0	2.0	2.5	1.8	1.8	2.0	3.7	4.5	3.8	3.3
25	4.0	3.9	4.0	3.8	4.0	b	b	b	b	b	b	b	b	b	b	b	1.8	b	3.9	5.5	4.0	3.2	3.0	3.3
26	4.3	5.0	5.0	3.8	4.0	3.0	2.6	2.0	1.8	1.6	g	g	g	g	g	g	1.8	5.2	5.5	5.5	4.1	3.9	4.3	3.7
27	4.3	4.0	4.2	4.2	4.0	3.6	1.8	b	b	2.0	2.0	g	g	g	g	g	b	5.1	4.9	5.5	5.5	4.3	3.5	
28	e	4.3	e	e	3.5	c	c	c	c	c	c	c	c	c	c	c	b	2.7	b	1.7	3.0	4.5	b	b
29	b	4.0	3.0	2.0	3.8	4.6	2.0	3.0	b	b	b	b	b	b	b	b	4.5	5.0	4.0	4.0	4.0	4.0	b	b
30	b	4.0	b	b	b	4.2	3.0	3.5	b	b	b	b	b	b	b	b	b	1.9	4.0	3.3	b	4.5	4.0	5.0
31	4.0	3.5	4.0	b	3.9	3.9	3.5	2.0	b	b	b	b	b	b	b	b	3.1	b	b	5.0	5.5	5.0	5.0	
Median.	4.0	3.5	3.5	3.4	3.6	3.5	2.1	2.0	1.7	1.6	1.8	xx	xx	xx	xx	xx	xx	1.8	2.0	2.2	4.1	3.9	4.0	4.0
No.	23	27	23	19	21	17	14	11	10	19	18	14	13	15	10	14	18	20	23	25	24	23	25	

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND FES JULY 1953

HOURLY VALUES OF h'F1 OBSERVED DURING JULY 1953 AT MACQUARIE ISLAND

Day	Hour	10	11	12	13	14	15
		b	b	b	b	b	b
1	1	q	q	200	200	210	210
2	2	p	q	p	p	220	220
3	3	p	c	p	c	200	200
4	4	p	q	p	220	200	200
5	5	p	q	q	200	220	230
6	6	200	230	230	220	220	230
7	7	q	q	q	q	q	q
8	8	q	q	520	520	520	520
9	9	c	c	520	520	520	520
10	10	q	q	240	530	530	530
11	11	p	q	q	230	230	230
12	12	p	c	230	240	230	250
13	13	230	230	240	240	250	250
14	14	p	q	c	c	520	520
15	15	p	q	200	530	530	530
16	16	p	q	q	230	230	230
17	17	p	q	230	210	220	210
18	18	p	c	200	230	230	230
19	19	p	q	190	200	210	210
20	20	p	q	190	190	220	220
21	21	q	(210)	230	210	220	220
22	22	p	200	220	230	230	230
23	23	p	cb	p	230	230	230
24	24	p	c	b	b	b	b
25	25	p	c	200	240	240	240
26	26	p	q	230	210	220	220
27	27	p	240	250	240	250	240
28	28	p	c	p	250	250	270
29	29	p	b	c	b	b	b
30	30	p	q	c	c	c	c
31	31	p	b	b	b	b	b
Median.	No.	6	6	15	18	20	20

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h'F1 JULY 1953

HOURLY VALUES OF h' E OBSERVED DURING JULY 1953 AT MACQUARIE ISLAND

Day	Hour	08	09	09 45	10	10 45	11	12	13	14	15
1		b	b	b	b	b	b	b	b	b	b
2		150	b	b	b	100	b	b	b	b	100
3		c	c	c	c	c	c	c	c	b	b
4		100	b	b	100	b	b	b	b	b	b
5		a	a	a	b	b	b	b	b	b	b
6		150	b	100	100	b	b	b	b	b	b
7		150	130	130	s	s	s	s	s	b	b
8		100	a	130	b	b	b	b	b	b	b
9		c	c	c	c	c	c	c	c	c	c
10		b	b	b	100	100	b	b	b	b	b
11		120	110	110	110	110	110	110	110	120	120
12		c	c	c	c	c	c	c	c	130	140
13		b	b	b	120	120	b	120	b	b	c
14		120	120	120	c	c	c	c	c	c	c
15		140	100	100	a	a	c	c	c	c	c
16		100	100	100	130	110	110	100	100	100	120
17		b	b	110	a	a	100	100	100	120	120
18		c	c	c	110	110	110	120	120	120	130
19		100	100	100	100	100	100	100	100	110	110
20		a	a	a	130	a	100	100	100	120	120
21		100	100	100	a	110	100	100	100	100	120
22		100	100	100	a	110	100	100	100	100	120
23		100	100	100	a	110	b	b	b	b	140
24		100	100	100	b	b	b	b	b	b	150
25		100	100	100	a	150	a	110	130	120	120
26		170	130	110	100	100	100	100	100	100	100
27		110	100	100	b	b	b	b	b	b	b
28		c	c	c	c	c	c	c	c	b	b
29		b	b	b	b	b	b	b	b	b	b
30		b	b	b	b	b	b	b	b	130	130
31		b	b	b	b	b	b	b	b	b	b
Median No.	*	105	110	110	100	100	100	100	100	120	120
		14	12	13	12	12	12	12	12	12	9

MACQUARIE ISLAND h'E JULY 1953

Time used: 157.5° E.N.T.

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

395.

MAGNETIC OBSERVATIONS
HOURLY VALUES OF H'ES OBSERVED DURING JULY 1953 AT MACQUARIE ISLAND

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	
Day	100	o	100	100	100	100	100	o	b	b	b	c	c	b	b	b	b	b	b	b	100	100	b	b	
1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
2	o	100	o	100	o	100	o	c	c	c	c	c	c	c	c	c	c	c	c	c	110	110	110	100	
3	o	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
5	o	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
6	100	120	120	o	120	o	120	o	b	b	b	b	b	b	b	b	b	b	b	b	130	b	b	b	
7	b	110	110	o	120	o	120	o	b	b	b	b	b	b	b	b	b	b	b	b	120	110	110	110	
8	120	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
9	100	100	o	100	o	100	o	c	c	c	c	c	c	c	c	c	c	c	c	c	130	130	130	130	
10	150	130	130	120	120	110	110	b	b	b	b	b	b	b	b	b	b	b	b	160	120	130	130	120	
11	130	o	120	120	140	b	b	b	130	g	100	g	120	g	100	g	130	g	100	g	b	140	150	b	130
12	130	110	100	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	o	b	b	b	
13	120	130	110	100	o	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
14	b	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
15	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	130	130	130	130	
16	100	100	100	100	100	100	100	o	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
17	o	o	110	110	o	110	o	b	b	b	b	b	b	b	b	b	b	b	b	b	140	140	140	120	
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100	100	100	b	
19	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	130	120	100	120	
20	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	130	130	130	100	
21	110	o	o	o	b	b	b	b	100	b	g	100	100	100	100	100									
22	100	130	o	b	110	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	150	150	b	
23	b	b	b	b	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	100	100	100	100	
24	100	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
25	100	100	150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
26	100	100	100	100	100	100	100	100	110	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
27	100	o	120	100	100	100	100	100	120	b	b	100	100	100	100	100	100	100	100	100	100	100	100	100	
28	o	100	o	o	o	100	o	100	o	e	e	e	e	e	e	e	e	e	e	e	150	130	100	100	
29	b	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
30	b	100	b	b	b	b	b	b	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
31	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Median.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
No. •	20	21	18	15	18	15	18	14	12	9	8	10	12	7	6	5	6	7	13	14	16	22	21	23	

396. Scoop: 1.0 - 13.0 Mc/s in 1st 55^s Time used: 157.5° E.M.T.

MAGNETIC ISLAND H'ES JULY 1953

HCURRY VALUES OF (M3000)F2 OBSERVED DURING JULY 1953 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	b	b	a	a	a	b	b	b	3.01	2.9	3.01	b	3.0	2.7	c	3.1	b	b	a	a	a	b	a	
2	a	b	a	b	a	a	a	a	3.03	3.03	3.04	3.02	2.7	2.9	3.02	3.00	f	a	a	a	a	a	a	a	
3	b	b	c	c	c	c	c	c	c	c	c	c	3.02	b	3.04	3.00	b	a	a	a	a	a	a	a	
4	a	a	a	a	a	a	b	b	3.05	3.03	3.01	3.00	3.01	3.03	3.02	3.04	f	a	a	a	a	a	a	a	
5	a	b	a	a	a	b	b	b	3.03	3.03	3.01	3.02	3.02	3.04	3.02	3.00	b	a	a	a	a	a	a	a	
6	a	a	b	b	b	b	b	b	3.04	3.04	3.01	3.00	b	b	3.04	3.04	3.01	3.00	2.07	2.06	a	f	a		
7	b	a	a	b	b	b	b	b	3.01	3.02	3.03	3.03	b	3.03	3.00	a	a	a	a	a	a	a	a		
8	a	a	a	a	b	b	b	b	3.03	3.00	2.9	2.9	b	3.02	3.03	2.09	b	a	a	a	a	a	a	a	
9	a	a	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
10	a	f	a	a	a	b	b	b	3.04	3.01	3.00	3.01	2.8	3.02	3.01	3.00	2.09	2.07	a	f	a	a	a	a	
11	a	b	a	a	b	b	b	b	3.02	3.04	3.04	3.05	3.02	3.03	3.02	3.03	3.01	3.02	2.08	f	a	b	a		
12	a	f	a	a	c	c	c	c	c	c	c	c	c	c	c	c	3.04	3.04	3.04	3.00	3.01	b	b		
13	a	a	a	a	b	a	a	a	b	b	b	b	b	b	b	b	3.01	3.05	3.02	c	c	c	a		
14	b	a	a	a	b	b	b	b	3.04	3.04	3.04	3.04	c	c	c	c	c	c	c	c	b	a	a		
15	b	b	b	b	a	b	b	b	3.04	3.04	3.04	3.05	c	c	c	c	c	c	c	f	a	a	a		
16	a	a	a	a	a	a	a	b	3.03	3.05	3.05	3.02	3.05	3.06	3.03	3.03	3.01	3.02	2.08	f	a	b	a		
17	a	a	a	a	a	a	b	b	3.02	3.05	3.05	3.05	3.03	3.05	3.04	3.04	3.04	3.04	3.04	3.04	3.01	3.00	3.00		
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.05	3.05	3.06	3.05	3.04	3.03	3.01		
19	a	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.05	3.06	3.05	3.06	3.04	3.04	3.05	3.05	3.06	3.05	3.05	3.05	3.04	3.03	3.02		
20	b	b	b	b	b	b	b	b	3.03	3.06	3.06	3.03	3.02	3.04	3.04	3.03	3.03	3.04	3.04	3.04	3.04	3.03	3.02		
21	a	a	b	b	b	b	b	a	3.01	3.04	3.04	3.01	3.05	3.05	3.05	3.05	3.01	3.03	3.03	3.01	3.02	2.07	f		
22	a	f	a	b	b	b	b	f	3.03	3.03	(2.08)	3.03	3.04	3.04	3.04	3.04	3.05	3.04	3.04	3.04	3.04	3.01	2.09	f	
23	2.07	2.06	2.08	a	f	a	b	b	3.03	3.03	3.06	3.06	b	3.04	3.04	3.01	(3.04)	3.00	a	a	a	a	b	a	
24	b	a	a	b	a	a	b	a	3.02	b	b	b	b	b	b	3.04	3.04	3.04	3.09	3.01	3.00	2.06	e		
25	a	a	a	a	a	a	a	a	3.03	3.02	3.03	3.00	3.03	3.06	3.06	3.03	3.03	3.02	3.02	3.03	3.00	a	a		
26	a	e	a	a	a	a	a	a	3.02	3.04	3.02	3.01	2.07	2.07	3.00	(3.02)	3.03	a	a	a	a	a	a		
27	a	a	a	a	a	a	b	b	3.03	2.07	n	(2.06)	b	2.06	b	a	a	a	a	a	a	a	a		
28	b	a	b	b	b	b	c	c	c	c	c	c	b	b	b	3.01	f	e	a	a	b	b	b		
29	b	a	a	f	a	a	a	a	3.03	3.01	b	b	b	b	b	2.07	b	a	a	a	b	b	b		
30	b	a	b	b	b	a	a	a	3.04	b	b	b	b	b	b	3.03	(3.02)	2.05	b	3.00	2.07	a	b		
31	a	a	a	b	a	a	a	a	3.04	b	b	b	b	b	b	3.03	2.08	2.09	3.01	2.08	f	b	a		
Median No.	M	H	M	M	M	M	M	M	3.03	3.03	3.02	3.02	3.03	3.03	3.02	3.02	3.00	(3.00)	M	M	M	M	M		

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

MACQUARIE ISLAND (M3000) F2 JULY 1953

397

HOURLY VALUES OF (M3000)F1 OBSERVED DURING JULY 1953 AT MACQUARIE ISLAND

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

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

Time used: 157.5° E.H.T.

MACQUARIE ISLAND (M3000)F1 JULY 1953

398.

HOURLY VALUES OF f_{MF2} OBSERVED DURING AUGUST 1953 AT MACQUARIE ISLAND

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11
1	b	a	a	a	b	b	b	1.5f	2.9	3.5	3.6v	3.9h
2	a	a	a	1.9f	b	a	a	a	2.3	3.7	4.0	
3	b	a	a	a	b	b	b	1.7f	3.3	3.5f	4.0h	
4	b	f	f	a	a	a	a	1.6f	3.5f	3.8z	3.7z	4.5
5	a	a	a	a	a	a	a	f	3.1f	3.7	3.9f	4.0z
6	b	b	b	f	b	b	b	b	c	c	c	c
7	f	f	f	b	b	f	b	b	3.0f	3.8f	4.2f	4.2f
8	a	a	b	b	b	b	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c	c	c	c
12	b	b	a	a	a	a	b	b	2.7f	3.4	b	b
13	a	a	a	b	a	a	b	b	3.4	3.6h	3.7	
14	b	a	a	b	b	b	b	b	2.7	3.5	g	
15	b	b	b	a	a	a	a	1.7f	3.3	4.0	4.3	4.3
16	a	a	a	a	a	f	1.0f	a	3.4	4.0	4.2	4.3
17	a	a	a	a	a	b	b	2.3f	3.5z	4.0	4.0z	5.0
18	c	c	c	c	c	c	c	c	c	c	c	c
19	b	b	b	b	b	b	b	2.5	3.6	4.0z	4.3	4.5
20	b	b	a	a	b	b	b	2.7f	3.9f	4.2	4.5	5.0
21												
22												
23												
24												
25												
26	c	c	c	c	c	c	c	c	c	c	c	b
27	a	a	a	a	b	b	b	b	2.5f	3.4	b	b
28	b	b	b	b	b	b	b	b	b	g	g	b
29	b	b	a	b	b	b	b	b	2.9	g	g	3.7
30	a	b	b	b	c	c	c	c	c	c	c	c
31	b	a	a	b	b	b	b	b	3.2	3.5	b	b
Median No.	*	*	*	*	*	*	*	(1.7)	3.2	3.5	3.7	4.1
No. 15								7	16	17	14	14

399. Sweep: 1.0 - 13.0 Mc/s in 1m 55s Time used: 157.5° E.M.T. AUGUST 1953

Hour Day	12	13	14	15	16	17	18	19	20	21	22	23
1	4.0	4.0	4.0	3.9	4.1f	3.3f	2.6f	2.3f	a	a	a	a
2	4.2	4.2z	4.7	b	s	b	f	f	a	a	a	a
3	4.5	4.5	4.5	4.3	3.8f	f	f	f	f	f	f	f
4	5.0z	4.6	5.2	4.5	4.3z	3.6f	2.0f	f	a	b	b	b
5	4.1z	4.3z	4.5z	3.4z	4.2	3.5z	2.7f	a	a	a	a	a
6	c	c	c	c	c	c	c	c	c	c	c	c
7	4.3z	4.1f	b	4.9	4.3	3.7	2.7f	1.7f	a	b	a	f
8	c	c	c	c	c	c	c	c	c	a	a	a
9	c	c	c	c	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	c
11	b	4.5	b	3.0	2.6	a	a	a	a	a	b	c
12	4.1	b	a	b	4.1f	3.8	3.7	2.5f	a	a	a	b
13	w	4.0	b	4.2	4.4	3.8	3.5z	2.9f	a	a	a	a
14	g	4.0f	4.02	5.1	4.5	4.3z	2.5f	2.0f	b	b	a	b
15	5.0	5.0	5.1	5.1	5.1	4.3z	2.5f	2.0f	b	b	f	2.0f
16	5.0	4.4f	4.3	4.7	4.2z	4.4	3.9z	2.7f	a	a	a	a
17	4.8f	4.9f	4.6	c	c	c	c	c	c	c	c	c
18	c	c	c	c	c	c	c	c	c	c	c	c
19	4.4	4.4	4.4	4.3	4.5	4.4	4.3	3.9f	2.5f	1.8	a	b
20	4.9	5.0	c	c	c	c	c	c	c	c	c	c
21												
22												
23												
24												
25												
26	b	b	b	b	3.0f	3.5	a	f	b	b	b	b
27	3.8	3.9	b	4.9	3.1	3.4	2.0	2.0	a	a	a	a
28	b	b	b	3.8	4.0	3.4	a	2.0f	b	b	b	b
29	b	c	c	c	c	c	a	a	a	a	a	a
30	c	c	b	w	g	w	2.3f	c	b	a	b	b
31	3.9	3.9	11	14	16	12	11	7	*	*	*	*
Median.	4.3	4.4	4.5	4.3	4.0	3.6	2.7f	(2.0)	*	*	*	*
No.	15	15	11	14	16	12	11	7				

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND FORT AUGUST 1953.

HOURLY VALUES OF f_{FT1} OBSERVED DURING AUGUST 1953 AT MACQUARIE ISLAND

Hour Day	09	10	11	12	13	14	15	16
1	q	3.4	3.5	3.3	3.4	3.4	q	q
2	q	3.4	3.4	3.5	3.5	3.3	b	b
3	q	3.5	3.5	3.5	3.5	3.2	q	q
4	q	3.5	3.5	3.5	3.5	3.2	q	q
5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
6	6	(3.4)	3.5f	3.5	3.6h	6	6	6
7	c	c	c	c	c	c	c	c
8	c	c	c	c	c	c	c	c
9	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c
11	c	b	b	b	3.5	b	q	q
12	b	3.5	3.5	3.7	b	a	a	a
13	q	3.5	3.5	3.8	3.6	b	3.1	3.1
14	3.0	3.5	3.5f	3.6	3.6	3.6	3.5	3.5
15	3.2	3.5	3.5f	3.8	3.4	q	q	q
16	3.5	3.7	3.7	3.7	3.7	1	3.3	3.3
17	q	3.8f	3.8	3.7f	3.7	3.5	6	6
18	6	6	6	6	6	6	6	6
19	3.5	3.8	3.7	3.7	3.8	3.7	3.2	3.2
20	3.3	3.7	3.8	3.7	3.6	6	6	6
21	p	p	p	p	p	p	p	p
22	p	p	p	p	p	p	p	p
23	p	p	p	p	p	p	p	p
24	p	p	p	p	p	p	p	p
25	p	p	p	p	p	p	p	p
26	3.6	b	b	b	b	b	b	b
27	3.3	b	3.5	3.6	3.6	b	b	3.0
28	3.2	b	3.5	b	b	b	3.5	3.5
29	3.4	c	c	b	b	c	c	3.0
30	c	b	b	c	c	b	b	3.0
31	b	b	b	b	b	b	b	b
Median. No.	*	3.5	3.5	3.6	3.6	3.6	3.6	3.6
	7	7	7	7	7	7	7	7

NO RECORD 21st - 25th AUGUST 1953 INCLUSIVE

HOURLY VALUES OF f_{OE} OBSERVED DURING AUGUST 1953 AT MACQUARIE ISLAND

Hour Day	08	09	10	11	12	13	14	15	16	17
1		a	a	b	b	b	b	b	b	b
2		b	b	b	b	b	b	b	b	b
3	1.6	b	a	b	b	b	b	b	b	b
4		1.9	1.9	2.1	2.3	2.3	2.3	1.9	b	b
5		a	2.2	2.3	2.4z	2.4z	2.4z	2.2	b	b
6		c	c	c	c	c	c	c	c	c
7	1.4	1.9	1.9	1.9	2.4	2.4	2.4	b	b	b
8		c	c	c	c	c	c	c	c	c
9		c	c	c	c	c	c	c	c	c
10		c	c	c	c	c	c	c	c	c
11		c	c	c	b	b	b	b	b	b
12		b	b	b	b	b	b	b	b	b
13		2.0	2.0	2.0	2.5	2.5	a	b	b	b
14		b	b	2.3	2.5	2.5	2.6	2.4	b	b
15	1.8	2.0	2.0	2.3	2.5	2.5	2.5	2.0	b	b
16		b	b	b	2.5	2.5	2.5	2.4	b	b
17		1.9	2.1	2.1	2.5	2.5	2.6	2.5	b	b
18		c	c	c	c	c	c	c	c	c
19		b	b	2.0	2.0	2.4z	2.5z	2.0	b	b
20			2.0	2.4	2.5	2.4	2.5	c	c	c
21										
22										
23										
24										
25										
26		c	b	b	b	b	b	b	b	b
27		b	b	b	b	b	b	b	b	b
28	2.0	2.0	b	b	b	b	b	2.2	b	b
29		c	c	c	c	c	c	2.4	b	b
30		b	b	b	b	b	b	c	c	c
31		*	2.0	2.1	2.5	2.4	2.5	2.3	b	b
Median. No.		7	9	10	9	9	9	8	*	*

402.

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

Time used: 157.5° E.L.T.

MACQUARIE ISLAND from AUGUST 1953

HOURLY VALUES OF FEES OBSERVED DURING AUGUST 1953 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	e	1.9	1.8	e	3.5	3.5	3.5	2.4	2.8	1.8	1.9	b	b	b	b	b	3.3	b	3.3	4.7	5.3	8.0				
2	4.0	3.3	3.0	2.4	b	b	b	2.0	2.8	b	b	b	b	b	b	b	2.0	b	3.7	5.6	4.0	2.0	b	b		
3	b	b	4.0	3.0	b	b	b	3.3	3.0	1.8	2.0	b	b	b	b	b	b	b	b	1.8	3.5	1.8	1.8	b	b	
4	b	b	b	3.4	3.4	3.3	1.8	3.0	2.6	3.6	3.6	b	b	b	b	b	b	b	b	1.8	3.5	1.8	1.8	b	b	
5	3.5	4.0	4.0	4.6	2.9	2.9	2.6	3.6	3.6	3.0	3.0	b	b	b	b	b	b	b	b	b	1.8	3.2	e	e		
6	e	3.9	3.8	e	b	b	2.9	3.0	b	c	c	c	c	c	c	c	c	c	c	c	c	b	4.6	e		
7	3.2	4.2	e	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.2	3.8		
8	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	b	6.6	6.6	4.2	4.1	3.8	3.8	b	b	b	b	b	b	b	b	b	b	b	4.3	3.3	4.5	4.5	3.8	4.2	
12	4.0	7.3	4.4	b	3.3	3.8	b	b	b	b	b	b	b	b	b	b	b	b	b	5.2	5.4	3.5	4.0	b	3.4	
13	b	5.5	4.2	1.4	e	b	3.1	b	b	b	b	b	b	b	b	b	b	b	b	3.3	3.8	3.9	4.5	b	3.8	
14	2.0	3.8	4.0	3.4	3.0	3.2	3.2	b	b	b	b	b	b	b	b	b	b	b	b	3.7	b	3.3	5.9	b	3.2	
15	4.6	3.8	5.5	5.2	5.8	3.7	1.7	1.4	b	3.3	b	b	b	b	b	b	b	b	b	1.4	2.0	4.0	3.6	b	b	
16	4.0	3.8	3.9	3.9	1.7	1.7	1.4	b	2.9	1.9	b	b	b	b	b	b	b	b	b	b	b	b	4.2	4.3	4.5	
17	c	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	c	c		
18	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
19	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
20	b	b	b	b	4.0	3.3	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b		
21																										
22																										
23																										
24																										
25																										
26	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	3.4	b		
27	3.0	4.0	4.0	3.4	2.9	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	4.1	4.5	5.7	
28	b	b	b	4.3	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	3.8	3.6	
29	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	6.5	5.8	
30	3.9	b	5.7	b	3.5	2.4	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	3.2	b	
31	b	12	13	16	11	10	7	6	5	4	3	2	1	0	9	12	10	11	11	9	6	7	8	9	12	14

NO RECORD 21st - 25th AUGUST 1953 INCLUSIVE

403. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.W.T.

Macquarie Island Log Book No. 1253

HOURLY VALUES OF h'F2 OBSERVED DURING AUGUST 1953 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	a	a	b	b	b	300	270	230	230	340	300	300	340	230	240	240	240	250(350)	a	a	a	a
2	a	a	330	b	a	a	a	240	270	220	250	270	300	280	b	260	b	b	a	a	a	a	f	
3	b	420	a	a	b	b	b	280	230	250	200	300	250	240	250	230	230	f	f	f	f	b	b	
4	b	f	f	a	a	a	a	240	220	200	190	210	260	240	270	250	230	220	250	250	250	a	a	a
5	a	a	a	a	a	a	a	300	250	230	1	1	310	280	250	240	240	240	240	250	a	f	f	f
6	b	b	b	a	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	b	a	f	
7	f	f	b	b	b	f	b	210	1	230	300	280	300	b	250	230	240	250	300	a	b	a	a	
8	a	a	b	b	b	b	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	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	b	b	a	a	a	a	a	b	300 (300)	b	b	380	w	470	b	330	300	280	320	a	a	a	b	
13	a	a	a	b	a	a	b	b	b (250)	250	550	400	290	330	270	250	260	260	330	b	a	a	b	
14	b	a	a	a	a	b	b	b	260	b	240	g	280	280	250	240	240	300	210	350	b	a	a	b
15	b	b	b	a	a	a	a	a	280	240	290	260	300	280	250	240	240	240	340	b	b	b	f	
16	a	a	a	a	a	f	a	250	a	250 (270)	320	300	1	280	250	250	250	250	260	a	a	a	a	
17	a	a	a	a	a	a	a	b	250	230 (240)	220	290	280	300	250	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	
19	b	b	b	b	b	b	b	b	250	240	230	280	300	330	290	270	220	220	240	330	230	c	c	b
20	b	b	a	a	b	b	b	b	240	240	260	290	260	270	260	c	c	c	c	c	c	c	c	
21																								
22																								
23																								
24																								
25																								
26	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	250	280	a	f	b	b	b	b	
27	a	a	a	a	a	b	b	b	b	260	260	b	w	500	480	b	390	a	400	400	a	a	a	
28	b	b	b	b	b	b	b	b	b	b	230	g	b	450	b	340	220	310	310	b	b	b	b	
29	b	b	a	b	b	b	b	b	c	c	c	c	c	c	c	c	a	a	a	a	a	a	a	
30	a	b	b	b	b	b	b	b	b	250	230	b	b	530	w	b	g	w	330	b	b	b	b	
31	b	a	a	a	a	a	a	a	*	*	(265)	240	250	240	300	300	275	265	240	245	250 (340)	*	*	*
Median. No.																								

404. Swoop: 1.0 - 13.0 Mc/s in 1m 55s

Time used: 157.5° E.L.T.

MACQUARIE ISLAND HF2 AUGUST 1953

HOURLY VALUES OF hF_2 OBSERVED DURING AUGUST 1953 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	a	a	b	b	b	f	270	250	250	330	u	u	u	250	250	270	270	f	a	a	a	a
2	a	a	a	u	b	a	a	a	240	270	240	u	u	u	280	b	s	b	a	a	a	a	a	a
3	b	f	a	a	b	b	b	280	250	250	200	u	u	u	250	250	240	240	f	f	f	b	b	f
4	b	f	f	f	a	a	a	240	240	230	220	260	240	270	250	250	250	250	250	250	a	a	a	a
5	a	a	a	a	a	a	a	f	250	250	250	300	u	u	250	250	250	250	250	280	a	f	f	f
6	b	b	b	a	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	b	f	f	
7	f	f	f	b	b	b	b	b	240	240	230	u	u	u	b	250	240	260	260	300	a	b	a	a
8	a	a	b	b	b	b	b	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	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	b	u	b	260	b	a	a	a	c	b	f	
12	b	b	a	a	a	a	a	b	300	(300)	b	b	u	b	a	b	a	a	a	a	a	b	c	
13	a	a	a	b	a	a	b	b	b	250	u	w	u	b	330	300	290	320	a	a	a	a	b	
14	b	a	a	a	a	b	b	b	270	b	240	g	g	u	330	280	280	300	330	b	b	q	b	
15	b	b	b	a	a	a	a	280	260	u	u	u	u	280	270	260	260	310	310	350	b	b	340	
16	a	a	a	a	a	a	a	f	250	a	270	260	u	u	u	280	280	270	260	260	a	a	a	a
17	a	a	a	c	c	c	c	b	280	260	260	250	u	u	250	c	c	c	c	c	c	c	c	
18	c	b	b	b	b	b	b	b	250	250	250	u	u	u	270	230	230	270	250	250	290	a	b	
19	b	b	a	a	a	a	b	b	250	250	250	u	u	u	270	250	250	250	250	c	c	c	c	
20	b	b	a	a	a	a	b	b	250	250	250	u	u	u	270	c	c	c	c	c	c	c	c	
21																								
22																								
23																								
24																								
25																								
26	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	280	300	a	f	f	b	b	
27	a	a	a	a	a	a	a	b	b	b	b	w	u	u	u	u	u	u	u	u	a	a	a	
28	b	b	b	b	b	b	b	b	b	b	b	g	b	b	b	b	230	b	a	400	b	b	b	
29	b	b	a	b	b	b	b	b	b	b	b	g	b	u	u	u	u	u	u	a	a	a	a	
30	a	b	b	b	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	b	a	b	b	
31	b	a	a	a	b	b	b	b	250	240	b	b	u	w	b	g	w	330	b	b	b	b	b	
Median. No.	*	*	*	*	*	*	*	(265)	255	(250)	(330)	*	*	(270)	260	250	265	270	(315)	*	*	*	*	*

NO RECORD 21st - 25th AUGUST 1953 INCLUSIVE

* Swoop: 1.0 - 13.0 Mc/s. inclm5s

Time used: 157.5°E.M.T. EQUIPMENT USED: AUTOM. QSL. REC'D. CLOUDS

MACQUARIE ISLAND. hpi2. AUGUST 1953.

HOURLY VALUES OF $h^{\prime}T_1$ OBSERVED DURING AUGUST 1953 AT MACQUARIE ISLAND

Hour	09	10	11	12	13	14	15	16
Day								
1			q	230	230	200	230	230
2			q	230	230	240 (SAO)	240	240
3			q	230	230	200	b	b
4			q	230	230	200	230	230
5			p 275	230	230	200	230	230
6			c (200)	230	200	200	210	210
7			c	220	200	200	200	200
8			c	220	200	200	200	200
9			c	220	200	200	200	200
10			c	220	200	200	200	200
11			c	220	200	200	200	200
12			b	240	240	220	b	q
13			q	250	a	b	a	a
14			q	250	a	b	a	a
15		210	200	190	200	250	230	240
16			200	200	240	230	220	230
17			q	190	200	190	200	200
18			c	240	240	210	200	200
19			240	240	210	200	200	200
20			220	190	200	190	200	200
21								
22								
23								
24								
25								
26			230	b	b	b	b	b
27			b	230	240	220	b	b
28			b	230	b	b	250	200
29			b	240	b	b	230	240
30			c	240	c	c	c	c
31			b	240	c	c	c	c
Median.	*	225	220	220	220	220	220	220
No.	8	8	14	15	15	15	15	15

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

Macquarie Island 1953 Aug 15-16 1953

HOURLY VALUES OF h^{TE} OBSERVED DURING AUGUST 1953 AT MACQUARIE ISLAND

Day	Hour	08	09	10	11	12	13	14	15	16	17
1	1	a	a	b	b	b	b	b	b	b	b
2	2	b	b	b	b	b	b	b	b	b	b
3	3	b	a	b	b	b	b	b	b	b	b
4	4	130	120	120	110	110	120	120	130	130	130
5	5	a	a	a	a	120	120	120	110	110	a
6	6	c	c	c	c	c	c	c	c	c	c
7	7	100	100	100	110	110	120	120	b	b	b
8	8	c	c	c	c	c	c	c	c	c	c
9	9	c	c	c	c	c	c	c	c	c	c
10	10	c	c	c	c	c	c	c	c	c	c
11	11	c	c	c	b	b	b	120	b	b	a
12	12	b	b	b	b	b	b	b	b	b	a
13	13	120	120	120	120	120	a	b	b	b	a
14	14	b	b	b	130	130	130	130	b	b	b
15	15	110	110	110	110	110	110	110	120	120	120
16	16	b	b	b	110	110	120	120	(130)	140	b
17	17	120	120	110	120	120	120	120	120	c	c
18	18	c	c	c	c	c	c	c	c	c	c
19	19	b	b	100	100	100	100	100	c	c	b
20	20	120	120	120	120	110	110	110	100	120	120
21	21	c	c	c	c	c	c	c	c	c	c
22	22	c	c	c	c	c	c	c	c	c	c
23	23	c	c	c	c	c	c	c	c	c	c
24	24	c	c	c	c	c	c	c	c	c	c
25	25	130	100	90	80	70	60	50	40	30	20
26	26	c	b	b	b	b	b	b	b	b	b
27	27	b	b	b	b	b	b	b	b	b	b
28	28	110	100	100	110	b	b	b	b	b	b
29	29	100	100	100	100	b	b	b	120	b	b
30	30	c	c	c	c	c	c	c	c	c	c
31	31	b	b	b	b	b	b	b	b	b	b
Median.	No.	*	120	115	110	110	110	120	120	*	*
		7	65	8	9	9	9	8	8	7	6

NO RECORD 21st - 25th AUGUST 1953 INCLUSIVE

407. Sweep: 1.0 - 13.0 Mc/s in 1m 55s starting at 0800 hrs Time used: 157.5° E.M.T.

MACQUARIE ISLAND h^{TE} AUGUST 1953

HOURLY VALUES OF H'ES OBSERVED DURING AUGUST 1953 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	e	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	110	100	110	110
2	100	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	110	100	130	120
3	b	b	120	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
4	b	b	b	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	130	110	110	110
5	110	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	110	110	110	110
6	e	b	100	100	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	b	130	150	140
7	100	100	e	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	120	e	110	110
8	130	100	e	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	100	b	100	b
9	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
10	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	120	100	100	120
12	b	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
13	110	130	110	b	100	100	50	b	b	b	b	b	b	b	b	b	b	b	b	b	100	b	100	b
14	b	120	110	120	e	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	140	130	120	120
15	110	110	100	100	100	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	120	120	120	120
16	100	100	100	100	100	100	5	100	b	b	b	b	b	b	b	b	b	b	b	b	100	100	100	100
17	100	100	100	100	100	100	100	b	110	b	110	b	120	b	b	b	b	b	b	b	120	120	110	100
18	e	c	c	c	c	c	c	c	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
19	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
20	b	b	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
21																								
22																								
23																								
24																								
25																								
26	e	e	e	e	e	e	e	e	e	e	e	e	e	e	b	b	b	b	b	b	100	b	b	b
27	120	100	100	100	100	140	b	b	b	b	b	b	b	b	b	b	b	b	b	b	150	110	130	110
28	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
29	b	b	b	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	120	120	120	120
30	100	b	b	b	100	110	e	e	e	e	e	e	e	e	e	e	e	e	e	e	100	120	110	100
31	b	100	b	110	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Median.	105	100	100	100	100	100	100	100	100	100	100	100	100	100	110	*	*	*	*	*	120	110	115	110
No.	10	12	14	15	9	8	10	6	5	8	10	6	5	5	5	5	5	5	5	5	11	11	14	10

408. Sweep: 1.0 - 13.0 Mc/s

Time used: 157.5° E.W.T.

Macquarie Island, 1953

HOURLY VALUES OF (M3000)F2 OBSERVED DURING AUGUST 1953 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	a	a	b	b	b	f	3.2	3.2	3.2	3.1	3.2	2.8	3.2	3.1	3.1	2.9	f	a	a	a	a	
2	a	a	a	f	a	a	a	a	3.6	3.5	3.3	3.5	3.2	3.2	3.0	3.2	b	b	b	a	a	a	a	
3	b	f	a	a	b	b	b	b	3.5	3.3	3.7	3.0	3.5	3.4	3.5	3.4	3.2	f	f	f	b	b	b	
4	b	f	f	a	a	a	a	a	3.4	3.3	3.4	3.2	3.5	3.3	3.5	3.3	3.4	3.3	3.2	f	a	a	a	
5	a	a	a	a	a	a	a	a	3.4	3.2	3.2	3.2	3.1	3.2	3.1	3.2	3.4	3.4	2.7	a	f	f	f	
6	b	b	b	a	b	b	b	b	c	c	c	c	3.2	3.2	3.5	3.1	c	c	c	c	b	a	a	f
7	f	f	b	b	b	b	b	b	c	c	c	c	3.2	3.2	3.1	3.0	b	3.4	3.5	3.0	3.0	a	a	a
8	a	a	b	b	b	b	b	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	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	b	b	b	a	a	a	a	b	3.2	2.9	b	b	2.9	2.9	2.5	2.5	w	2.5	2.5	3.1	3.0	2.6	a	a
13	a	a	a	b	a	a	b	b	2.9	2.9	b	b	2.8	2.8	2.5	2.5	3.1	2.8	2.8	3.2	3.1	2.8	a	a
14	b	a	a	a	a	a	b	b	3.2	3.2	3.1	3.5	3.2	3.2	3.1	3.1	3.1	3.1	3.0	2.8	2.8	b	b	
15	b	b	b	b	a	a	a	a	3.0	3.2	3.1	3.5	3.2	3.2	3.1	3.1	3.0	3.0	2.8	2.7	b	b	2.9	
16	a	a	a	a	a	f	f	3.1	3.1	3.2	3.3	3.0	3.0	3.0	3.0	3.0	3.1	3.0	3.2	3.3	3.1	2.9	a	
17	a	a	a	a	a	b	b	2.8	3.3	3.2	3.1	3.1	3.1	3.2	3.0	3.0	3.0	2.9	3.0	3.0	3.1	2.9	a	
18	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
19	b	b	b	b	b	b	b	b	3.3	3.4	3.4	3.3	3.2	3.2	3.0	3.0	3.2	3.6	3.3	3.3	3.0	2.8	b	
20	b	b	b	a	a	b	b	b	3.3	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.5	3.5	3.1	3.3	3.3	c	c	
21																								
22																								
23																								
24																								
25																								
26	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	b	b	3.0	3.1	a	f	b	
27	a	a	a	a	a	a	b	b	3.3	3.4	b	b	2.5	2.6	b	b	b	b	2.6	2.5	a	a	b	
28	b	b	b	b	b	b	b	b	b	3.2	g	g	b	b	b	b	3.0	3.4	b	a	b	b		
29	b	a	a	b	b	b	b	b	b	3.2	g	b	2.7	b	b	b	2.5	2.9	3.1	a	a	a		
30	a	b	b	b	b	c	c	c	c	3.2	3.3	b	c	c	c	c	c	c	c	b	a	b		
31	b	a	a	b	a	b	b	b	b	3.2	3.3	b	b	2.5	w	b	g	w	2.7	b	b	b		
Medians. No.	*	*	*	*	*	*	*	*	(3.3)	3.2	3.3	3.1	3.1	3.0	3.2	3.1	3.0	2.9	(2.8)	*	*	*		

409. Sweep: 1.0 - 13.0 Mc/s in 1m 55s NORTHERN AVERAGING TIME used: 157.5 E.F.T. NOVEMBER 1953

MACQUARIE ISLAND (13000) F2 AUGUST 1953

HOURLY VALUES OF (M3000)E1 OBSERVED DURING AUGUST 1953 AT MACQUARIE ISLAND

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

Time used: 157.5° E.M.T. MACQUARIE ISLAND (M3000) 1 AUGUST 1953

410.

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

HOURLY VALUES OF $F^{\circ}F_2$ OBSERVED DURING OCTOBER 1953 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	b	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	c	c	c	c	c	c	c	c	c	c	c	c
5	c	c	c	c	c	c	c	c	c	c	c	c
6	c	c	c	c	c	c	c	c	c	c	c	c
7	2.7f	2.3f	2.0f	1.8f	2.5f	3.6f	4.1	4.2	4.7	c	4.8	5.1
8	c	c	c	c	c	c	c	c	c	c	c	5.0
9	c	c	c	c	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c	c	c	c
12	a	b	b	a	2.3f	3.0	c	c	c	c	5.0	5.2
13	c	c	c	c	c	c	c	c	c	c	4.5	4.4
14	c	c	c	c	c	c	c	c	c	c	c	c
15	f	b	b	b	b	2.8f	c	c	c	c	4.5	4.5
16	a	b	b	a	b	b	b	b	b	w	4.5	4.5
17	a	b	b	b	b	b	b	b	b	b	8	4.2
18	a	a	b	b	b	2.6	b	b	b	b	8	8
19	c	c	c	c	c	c	c	c	c	c	c	c
20	b	b	b	b	b	b	b	b	b	b	b	b
21	c	c	c	c	c	c	c	c	c	c	c	c
22	c	c	c	c	c	c	c	c	c	c	c	4.4
23	2.5f	2.5f	a	a	b	3.5	3.8	4.0	4.0	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	c
25	b	a	2.9	f	3.3	3.7	4.0	4.3	4.5	4.5	4.5	4.7
26	f	f	f	2.2f	3.4	g	4.0	4.4	4.4	4.5	4.5	4.5
27	c	c	c	c	c	c	c	c	c	c	c	c
28	a	a	a	a	a	b	b	4.1	4.2	c	c	c
29	2.5f	2.3	0	f	3.3	3.7	4.1	4.4	4.4	4.52	4.7	4.8
30	a	2.8	2.5f	2.2f	1.7f	2.7f	f	4.4	4.4	4.3	4.6	5.0
31	a	2.8	2.5f	2.0f	2.3	3.0f	g	g	g	4.5	4.5	5.0
Median. No.	*	*	*	(2.3)	3.2	(3.7)	4.0	4.2	(4.3)	4.5	4.5	15
				5	10	9	10	12	9	13		

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND F[°]F2 OCTOBER 1953

HOURLY VALUES OF $F^{\circ}F_2$ OBSERVED DURING OCTOBER 1953 AT MACQUARIE ISLAND

Hour Day	12	13	14	15	16	17	18	19	20	21	22	23
1	c	c	c	c	c	c	c	c	c	c	c	c
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	c	c	c	c	c	c	c	c	c	c	c	c
6	c	c	c	c	5.2	5.1	5.0	5.0	4.0f	2.7f	3.0f	b
7	5.0	5.3	5.3	5.0	5.3	5.0	5.0	5.0	5.0	5.0	5.0	c
8	5.2	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	c	c	c	c	c	c	c	c	c	c	c	c
11	5.2	5.0	5.0	5.1	5.0	4.8	4.7	(4.7)	(4.3)	2.9f	a	5.2
12	4.5	4.4	c	c	c	c	c	c	c	c	c	c
13	c	c	c	c	c	c	c	c	c	c	c	c
14	c	4.5	4.5	4.6	4.5	4.8	4.5	4.0	4.0	3.7f	3.2f	2.0f
15	4.5	4.5	4.6	4.5	4.4	4.4	4.3	4.1	3.7	a	a	2.5f
16	4.5	4.7f	4.6f	5.2	4.4	4.0f	3.0f	a	a	b	b	b
17	4.8	b	5.0f	4.5	4.1	4.0	a	a	b	a	a	a
18	4.4	a	(4.4)	4.3	3.6f	a	b	b	b	b	3.0	c
19	c	b	c	a	a	b	b	b	a	a	a	b
20	g	4.0	5.2	5.3	4.7	c	c	c	c	c	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c
22	4.8	4.6	4.6	5.3	4.8f	4.0f	4.0f	a	a	b	b	b
23	c	c	c	c	c	c	c	c	c	c	c	c
24	c	4.3	4.3	4.2	4.3	4.2	4.2	4.1	3.5	a	a	a
25	5.0	5.0	5.0	5.0	5.0	5.5	5.0f	5.2	3.7f	f	s	2.5f
26	4.6	c	c	c	c	c	c	c	c	c	c	c
27	c	c	c	c	b	a	a	a	a	b	s	a
28	b	c	b	c	5.0	4.5	4.4	4.0f	3.7	2.5f	3.0f	2.7f
29	4.6	4.8	4.6	4.7	4.7f	5.0f	5.1f	4.7f	4.0f	3.0f	2.0f	a
30	4.6	4.6	5.0	5.0	4.7	5.0	5.3	4.7	4.5	2.6	c	a
31	5.0	5.0	5.0	5.3	5.3	5.5	4.5f	4.3f	4.5	4.0	c	c
Median.	4.6	4.6	5.0	5.0	4.7	4.5	4.5	4.0	(4.0)	(2.9)	(2.9)	*
No.	15	14	13	15	16	15	12	10	7	7	7	6

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

Time used: 157.5° E.R.T.

MACQUARIE ISLAND FREQ. OCTOBER 1953

253

HOURLY VALUES OF F_{FI} OBSERVED DURING OCTOBER 1953 AT MACQUARIE ISLAND

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

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND °F1 OCTOBER 1953

413.

HOURLY VALUES OF $f^{\circ}\text{E}$ OBSERVED DURING OCTOBER 1953 AT MACQUARIE ISLAND

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

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND 1953

OCTOBER 1953

HOURLY VALUES OF FEES OBSERVED DURING OCTOBER 1953 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	b	3.2	b	3.3	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	
4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
7	3.3	3.0	e	e	e	e	e	e	e	e	e	e	b	b	b	b	b	b	b	b	b	4.0	b	
8	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	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	4.3	e	e	2.7	2.1	b	g	g	g	g	g	g	5.5	g	g	g	3.5	g	g	b	b	4.0	4.0	
13	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	b	b	b	b	b	b	b	3.4	g	g	g	g	g	3.4	g	g	g	g	g	g	g	6.5	4.0	3.1
16	4.0	b	b	b	4.3	b	b	b	b	b	b	b	3.5	b	3.3	4.0	b	4.1	4.2	4.2	4.1	b	b	
17	4.1	b	b	b	b	2.1	b	b	b	b	b	b	5.3	b	b	b	4.3	5.0	3.9	4.1	3.9	3.9	3.9	
18	3.9	3.7	b	b	b	b	b	b	b	b	b	b	g	g	4.0	g	3.5	3.4	5.0	b	b	3.5	6.0	
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	3.5	6.5	b	b	4.3	3.0	
20	b	b	b	4.0	b	3.9	b	b	b	b	b	b	g	b	g	b	g	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	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	3.9	g	3.5	g	b	g	g	3.9	4.0	4.0	b	
23	3.9	3.5	3.4	3.8	b	b	b	b	b	b	b	b	c	c	c	c	c	c	c	c	c	c	c	
24	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
25	b	b	4.0	3.0	b	b	b	b	b	b	b	b	g	g	g	g	g	g	g	b	2.9	b	s	
26	3.0	2.3	2.7	e	e	g	g	g	g	g	g	g	g	g	g	g	c	c	c	c	c	c	c	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	4.0	4.1	3.8	b	3.8		
28	4.0	4.0	3.8	3.9	3.9	b	b	b	b	b	b	b	3.7	b	3.7	5.6	3.6	3.0	3.9	3.0	4.0	4.0		
29	3.5	2.3	2.0	2.0	2.0	b	g	g	g	g	g	g	3.4	b	b	3.5	b	2.1	2.7	b	2.8	3.7		
30	3.7	4.5	3.8	2.4	2.8	2.0	2.9	g	b	b	b	b	3.0	g	2.8	g	3.3	3.3	5.0	3.1	4.0	4.3		
31	4.8	3.5	2.6	e	e	g	g	g	g	g	g	g	3.5	g	g	g	g	g	g	2.4	1.8	2.1	c	
Median No.	4.0	3.5	2.7	2.4	2.8	2.0	**	**	**	**	**	**	**	**	**	**	**	**	**	**	3.0	3.4	3.8	
	12	9	11	9	9	6	8	7	8	7	9	11	11	14	12	13	15	15	13	13	10	8	9	10

Time used: 157.50 E.T.

MCCOURT ISLAND 1953 OCTOBER 1953

HOURLY VALUES OF h^*F2 OBSERVED DURING OCTOBER 1953 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	b	b	b	250	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
2	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
7	300	300	300	310	270	270	240	260	340	c	340	330	320	300	280	260	250	250	240	250	250	290	b	c	
8	c	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	c	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	a	b	b	a	a	300	g	g	1	440	380	420	400	300	280	330	320	300	260	1	250	250	300	a	a
13	c	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	b	b	b	b	b	250	g	(400)	400	400	410	400	360	350	340	310	300	250	250	250	250	250	300	f	a
16	a	b	b	b	a	b	b	b	b	v	550	510	480	340	350	310	370	270	a	a	a	b	b	b	
17	a	b	b	b	b	b	b	b	b	b	500	390	390	b	270	350	420	260	a	a	a	a	a	a	
18	a	a	b	b	b	340	b	b	b	b	g	450	450	a	450	1	a	b	b	b	b	f	s		
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	600	a	b	b	a	a		
20	b	b	b	b	b	b	b	b	b	b	g	520	380	340	380	380	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	c	c	c	c	c	
22	c	c	c	c	c	c	c	b	290	390	450	500	c	c	c	c	c	320	340	280	a	a	b	b	
23	400	400	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	b	c	
24	c	c	c	c	c	c	c	c	280	260	250	310	370	400	350	330	330	300	270	250	270	a	a	b	a
25	b	b	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	
26	350	350	300	f	270	250	g	1	420	410	400	400	400	400	400	400	400	400	400	400	400	400	400	400	
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	a	a	a	a	a	a	a	b	270	240	320	360	390	360	380	350	390	340	330	290	250	250	250	300	
29	300	300	300	f	350	290	330	430	480	450	350	380	410	320	350	380	410	310	280	300	340	a	a	a	
30	a	a	a	f	310	320	300	320	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	
31	a	370	320	320	300	260	g	g	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	
Median.	* (350)	*	*	(280)	270	(390)	450	420	425	400	405	380	360	350	330	310	280	250	(250)	(280)	(300)	*	*	*	
No.	5	5	5	10	9	10	11	10	13	14	15	15	13	16	13	12	10	10	8	7	5	10	10	10	

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

MACQUARIE ISLAND h*F2 OCTOBER 1953.

HOURLY VALUES OF h_{pF2} OBSERVED DURING OCTOBER 1953 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	b	270	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	
4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	270	260	260	260	f	300	300	
7	310	310	310	f	290	u	u	u	u	u	u	u	u	u	u	u	270	260	a	c	c	c	c	
8	c	c	c	c	c	c	c	c	c	c	c	c	b	u	a	c	c	c	c	c	c	c	c	
9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	e	e	e	e	e	e	e	e	e	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	a	b	b	a	a	300	g	g	u	u	u	u	u	u	u	u	300	270	280	280	290	290	330	a
13	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	b	b	b	b	b	260	g	g	u	u	u	u	u	u	u	u	u	280	260	260	260	250	260	300
16	a	b	b	a	b	b	b	g	b	w	u	u	u	u	u	u	300	270	280	280	270	300	a	
17	a	b	b	b	b	340	b	b	b	g	u	u	u	u	u	u	u	260	a	a	b	a	a	
18	a	a	b	b	b	b	b	b	b	b	g	g	g	g	g	g	300	320	a	b	b	b	350	
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	g	a	a	b	b	b	c	
20	b	b	b	b	b	b	b	g	g	g	g	g	g	g	g	g	u	u	u	u	u	u	u	
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	u	u	u	u	u	u	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	f	400	a	a	b	290	g	g	g	g	g	g	g	g	g	g	300	310	300	a	a	a	a	
24	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
25	b	b	a	a	f	290	270	u	u	u	u	u	u	u	u	u	310	280	280	270	270	f	s	330
26	f	f	f	f	270	270	g	u	u	u	u	u	u	u	u	u	c	c	c	c	c	c	c	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	a	a	a	b	a	
28	a	a	a	a	a	a	b	u	u	u	u	u	u	u	u	u	330	300	270	270	270	290	320	330
29	320	300	f	b	270	250	u	u	u	u	u	u	u	u	u	u	u	290	270	270	280	290	340	a
30	a	a	f	350	290	u	u	u	u	u	u	u	u	u	u	u	310	330	330	310	330	330	c	a
31	a	u	320	320	310	270	g	g	g	u	u	u	u	u	u	u	310	330	290	300	270	270	270	c
Median. No.	*	*	*	*	*	(290)	g	g	*	*	*	*	*	*	*	(305)	280	280	270	(285)(300)(325)	*	6	7	
417.	Sweep:	1.0 - 13.0 Mc/s in 1 ^m 55s															8	10	11	10	6	7	6	

Time used: 157.5° E.L.T. MACQUARIE ISLAND h_{pF2} OCTOBER 1953.

HOURLY VALUES OF $h'F_1$ OBSERVED DURING OCTOBER 1953 AT MACQUARIE ISLAND

Hour Day	06	07	08	09	10	11	12	13	14	15	16	17	18
1	c	c	c	c	c	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c
3	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	c
5	c	c	c	c	c	c	c	c	c	c	c	c	c
6	c	c	c	c	c	c	c	c	c	c	c	c	c
7	q	q	210	c	240	200	210	210	c	c	200	210	q
8	c	c	c	c	c	c	b	200	a	c	c	c	c
9	c	c	c	c	c	c	c	c	c	c	c	c	c
10	c	c	c	c	c	c	c	c	c	c	c	c	c
11	c	c	c	c	200	190	200	200	200	200	210	210	230
12	250	230	200	200	200	210	200	200	c	c	c	c	c
13	c	c	c	c	c	c	c	c	c	c	c	c	c
14	c	c	c	c	c	c	c	c	c	c	c	c	c
15	250	220	200	200	200	200	200	200	200	200	200	200	200
16	b	260	b	240	230	270	250	200	1	220	230	a	a
17	b	b	b	b	250	210	230	b	180	220	240	q	q
18	b	b	b	b	220	230	230	220	a	250	240	q	q
19	c	c	c	c	c	c	c	c	b	250	a	a	a
20	b	250	250	240	220	200	190	200	(210)	220	b	c	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c
22	c	c	c	c	c	180	200	200	200	210	250	270	270
23	260	240	230	c	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	200	200	210	220	240	240
25	q	220	220	200	220	200	200	200	220	190	200	200	200
26	250	200	230	210	210	210	c	c	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	b	b
28	b	b	250	240	220	210	b	b	230	230	240	270	270
29	q	200	200	200	200	200	200	190	200	200	210	210	210
30	230	220	200	200	200	200	180	190	200	220	230	250	250
31	240	230	210	210	200	200	200	200	210	200	210	250	260
Median.	250	225	210	205	215	200	200	200	200	210	220	235	*
No.	6	10	11	10	14	15	15	14	13	17	15	10	10

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND H.F.1 OCTOBER 1953

HOURLY VALUES OF H'E OBSERVED DURING OCTOBER 1953 AT MACQUARIE ISLAND

Hour Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1	c	c	c	c	c	c	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	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	c	c
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c
6	c	c	c	c	c	c	c	c	c	c	c	c	c	c
7	100	c	c	c	c	c	c	b	100	100	a	c	c	c
8	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	c	c
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c
12	100	c	c	c	c	c	c	c	c	c	c	c	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	c	c	c	c
15	100	c	c	c	c	c	c	c	c	c	c	c	c	c
16	b	b	b	b	b	b	b	100	a	b	a	110	100	a
17	b	b	b	b	b	b	b	b	b	b	b	b	110	n
18	b	b	b	b	b	b	b	b	b	b	a	120	g	p
19	c	c	c	c	c	c	c	c	c	c	b	100	a	a
20	b	b	b	b	b	b	b	110	100	b	100	b	b	c
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c
23	b	b	b	b	110	c	c	c	c	c	c	c	c	c
24	c	c	c	c	c	c	c	c	c	c	c	c	c	c
25	120	c	130	110	110	120	110	110	110	110	a	100	100	b
26	150	120	110	110	100	100	100	100	110	c	c	c	c	c
27	c	c	c	c	c	c	c	c	c	c	c	c	c	b
28	b	b	b	b	110	a	b	b	b	b	b	b	a	a
29	110	110	110	110	110	110	a	a	a	a	b	b	b	120
30	120	120	120	120	120	b	b	b	b	b	130	110	a	130
31	130	130	130	120	100	110	110	110	110	130	130	120	120	120
Median.	*	115	110	110	100	100	105	100	105	100	105	100	110	120
No. 8	8	7	7	7	9	9	10	10	12	8	11	12	9	*

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

MACQUARIE ISLAND H'E OCTOBER 1953

HOURLY VALUES OF H'ES OBSERVED DURING OCTOBER 1953 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	b	100	b	110	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	
4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
7	100	100	e	e	e	g	c	g	c	b	g	g	g	g	g	g	g	g	g	g	120	c	c	
8	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	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
12	100	e	e	100	b	100	b	g	g	g	g	100	g	g	g	g	g	g	g	g	130	g	g	
13	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	b	b	b	b	b	b	b	g	100	g	g	g	g	g	g	g	g	g	g	g	g	g	g	
16	110	b	b	b	b	100	b	b	b	b	b	b	b	b	b	b	100	110	g	g	110	110	100	
17	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
18	110	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	g	110	120	110	b	b	110	
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	110	100	b	b	b	100	
20	b	b	100	b	100	b	b	b	b	b	b	b	b	b	b	b	g	b	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	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	100	120	g	g	110	110	110	
23	100	120	100	100	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
24	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
25	b	b	110	100	b	b	b	b	b	b	b	b	b	b	b	b	g	g	g	g	120	120	120	
26	110	120	110	e	e	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
28	100	110	100	100	100	110	b	b	b	b	b	b	b	b	b	b	140	120	130	120	150	110	160	
29	150	150	140	130	b	b	g	g	g	g	g	120	100	110	b	b	g	120	150	150	150	140	100	110
30	110	150	e	100	140	130	100	g	g	g	g	b	b	b	b	b	120	130	g	g	150	150	100	
31	110	120	110	e	e	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	160	150	140	
Median.	105	120	105	100	100	*	*	*	*	*	*	*	*	*	*	*	115	*	*	120	120	120	100	110
No. from	12	8	8	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	9	

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

Time used: 15°5° E.M.T.

MACQUARIE ISLAND H'ES OCTOBER 1953

HOURLY VALUES OF (M₀₀₀) F₂ OBSERVED DURING OCTOBER 1953 AT MACQUARIE ISLAND

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
Day	b	b	b	b	b	b	b	b	3.2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
1	b	c	c	c	c	c	c	c	3.2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	
4	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
6	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.4	3.4	3.3	3.3	3.0	3.0	b	
7	(3.0)(2.8)	f	f	3.1	3.3	3.2	3.4	3.1	c	c	c	c	c	c	c	c	3.4	3.4	3.3	3.3	3.0	3.0	b	
8	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	f	a	c	c	c	c	c	
9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
10	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
11	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.2	3.1	3.1	3.0	2.9	2.9	a	
12	a	b	b	a	3.0	3.1	3.2	3.1	b	g	n	3.0	3.0	3.0	3.0	3.0	3.2	3.1	3.1	3.0	2.9	2.9	a	
13	c	c	c	c	3.3	3.0	3.0	3.0	c	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	c	c	c	c	c	c	3.1	3.2	3.1	3.1	3.2	3.2	f	
15	b	b	b	b	b	b	b	b	3.4	g	2.7	(2.7)	2.9	(2.8)	2.8	2.7	3.1	3.1	3.2	3.2	3.2	3.2	a	
16	a	b	b	b	b	b	b	b	b	w	2.4	2.4	2.5	2.5	2.5	3.0	3.0	3.1	3.1	3.2	3.1	3.0	a	
17	a	b	b	b	b	b	b	b	b	b	2.6	2.6	2.7	2.7	2.7	3.3	3.3	2.8	2.8	2.8	2.8	2.8	a	
18	a	a	b	b	b	2.8	b	b	b	b	g	2.7	2.7	2.7	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	a	
19	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	a	b	b	b	b	a	
20	b	b	b	b	b	b	b	b	g	g	g	g	g	g	g	g	2.5	2.9	2.8	2.8	c	c	c	
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	2.7	2.7	2.7	2.7	2.7	2.7	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	3.0	3.0	3.0	3.0	3.0	3.0	c	
23	2.6	2.6	a	a	3.2	2.7	2.6	2.5	c	c	c	c	c	c	c	c	2.7	2.7	2.7	2.7	2.7	2.7	c	
24	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	2.7	2.7	2.7	2.7	2.7	2.7	c	
25	b	b	a	2.8	f	3.1	3.1	3.3	2.7	2.8	3.0	3.1	2.9	2.9	3.1	3.0	2.9	2.9	2.9	2.9	2.9	2.9	a	
26	f	f	f	f	3.0	3.3	3.6	2.9	2.6	2.8	2.8	2.9	3.0	3.0	3.0	3.0	c	c	c	c	c	c	c	
27	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	a	a	b	b	b	a	
28	a	a	a	a	a	a	a	b	2.7	2.7	c	c	b	b	b	b	3.1	3.1	3.1	3.1	3.1	3.1	9	
29	2.8	3.1	3.2	3.2	3.2	3.4	3.4	3.4	3.3	2.8	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	9	
30	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
31	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Motion	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
No.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

421. Sweep: 1.0 - 13.0 Mc/s in 1st 55

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (1953) 32 OCTOBER 1953

HOURLY VALUES OF (M3000) F1 OBSERVED DURING OCTOBER 1953 AT MACQUARIE ISLAND

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

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

Time used: 157.5° E.I.T.

MACQUARIE ISLAND (13000) F1 OCTOBER 1953

HOURLY VALUES OF F₀F₂ OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

Hour Day	00	01	02	03	04	05	06	07	08	09	10	11
1	1.4f	c	1.4f	1.4f	2.3f	3.5	4.0	4.2	4.3	4.5	4.5	
2	c	c	c	c	c	c	c	c	c	c	c	
3	c	c	3.5f	3.5f	3.8f	3.5f	c	c	c	c	c	
4	2.8f	3.5f	c	c	2.7f	c	c	c	c	c	c	
5	c	c	c	c	c	c	c	c	c	c	c	
6	a	a	a	a	3.5	3.6f	4.0z	8	w	4.2	4.3	
7	a	a	a	a	2.5f	2.9f	3.8f	4.3	5.0	4.9	5.0	
8	3.0f	3.0f	2.5f	2.5f	2.3f	3.0	3.5	4.0	4.5	5.0	5.0	
9	3.7f	2.5f	2.7f	f	f	3.0f	3.7	4.0z	4.3	4.5	5.0	
10	f	f	f	f	f	2.4f	3.3z	3.8	4.6	5.0	5.0	
11	2.3f	2.2f	2.5	f	2.7f	3.7	3.8	4.4	4.9	5.1	5.1p	
12	c	c	c	c	c	c	c	c	c	c	c	
13	c	c	c	c	c	c	c	c	c	c	c	
14	c	c	c	c	c	c	c	c	c	c	c	
15	b	3.3f	3.2f	3.2f	2.5f	b	c	c	c	c	c	
16	a	b	b	b	3.2	b	b	3.9	c	c	c	
17	c	3.3f	c	c	c	c	c	c	c	c	c	
18	a	3.7f	3.1f	f	b	3.5	3.8	4.0	4.4	c	c	
19	3.7f	3.2f	2.8f	a	2.9f	3.6	3.8	4.0	4.3	b	b	
20	c	c	c	c	c	c	c	c	c	4.5	4.5	
21	c	c	c	c	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	
24	a	a	2.4f	2.5f	2.7f	3.1f	3.8f	4.0	4.5	5.5	5.3	
25	a	2.3f	1.7f	2.0f	3.1f	3.8f	4.0	4.6	4.7	5.0	4.1	
26	a	a	3.0f	2.5f	3.0f	3.5	4.0	4.0	4.5z	5.0	5.3	
27	a	3.0f	f	1.7f	2.9	3.5	8	4.2	4.2	4.5	5.0	
28	3.7f	3.7f	2.6f	2.7f	b	3.8z	4.1	4.9	5.0	4.8		
29	2.8f	2.8f	2.4f	2.4f	3.7	4.2	4.3	4.7	5.0	5.5		
30	2.2	2.5f	1.5f	2.5f	3.5f	4.5	4.5	4.7	5.0	5.5		
Median No.	(3.0)	3.0	2.5	2.5	3.0	3.6	4.0	4.3	4.5	5.0	5.0	
	9	12	13	12	16	17	16	15	15	12	12	

423. Sweep: 1.0 - 13.0 Mc/s in 1w 55s

Time used: 197.5° E.i.t.

MACQUARIE ISLAND NOVEMBER 1953.

HOURLY VALUES OF F₂ OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

Hour Day	12	13	14	15	16	17	18	19	20	21	22	23
1	4.8	c	c	c	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	5.3	5.5	5.4	5.0	4.9	5.0	5.0	5.3	5.0	4.0f	3.5f	3.3
5	c	5.5f	5.4f	5.52	6.0f	5.0f	a	f	a	c	c	c
6	4.3	4.3	4.3	4.3	4.3	5.0	4.0f	f	3.8f	a	a	a
7	5.3	5.3	5.0	5.3	5.5	5.0	4.9f	4.8f	a	a	a	a
8	5.4	5.2	5.2	5.0	5.1	5.0	5.0	5.0	4.5f	a	a	a
9	5.0	5.5z	5.4	5.2	5.5	5.1	5.2	4.5f	3.7f	3.0f	2.2f	2.0f
10	(5.7)	5.6	5.5	5.5	5.3	(4.7)	(4.6)	a	s	4.0	3.0f	3.0f
11	5.7	5.5	c	c	c	c	c	c	c	c	c	c
12	c	c	c	c	c	c	c	c	c	c	c	c
13	c	c	c	c	c	c	c	c	c	c	c	c
14	c	c	c	c	c	c	c	c	c	b	b	b
15	5.0	n	4.7	6.0	a	3.5f	b	s	a	b	b	b
16	c	c	c	c	c	c	c	c	c	c	c	c
17	c	5.5	5.8z	6.2	6.5	5.0	5.0	4.9	4.6	3.5f	3.5f	3.5f
18	5.0	5.0	5.2	c	c	c	c	c	a	a	a	a
19	5.0	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	c	5.3	5.5z	6.0z	6.0	5.5	4.9	4.4f	a	3.7f	a	a
23	5.0	b	4.5	4.7f	5.1	5.5f	4.5f	4.0f	4.1f	3.7f	a	(3.3f)
24	6.0	c	c	c	5.9	6.0f	5.5f	4.5f	4.0f	3.8f	a	a
25	c	c	c	c	c	c	c	c	c	c	c	c
26	5.0	5.5	5.3	5.1	5.0	5.5	4.5	4.3	4.0	3.7f	3.6f	3.4f
27	4.6	5.0	4.7	4.7	5.0	5.2	4.7f	4.5f	4.0f	3.7f	a	a
28	5.2	5.5	5.4	5.4	5.5	6.0	5.7	5.5	5.0f	4.8f	3.7f	3.5f
29	5.5	5.5	5.5	5.0f	5.5	5.5	5.5	5.0f	3.8f	3.8f	3.7f	3.5f
30	5.4	5.2	5.3	5.4	5.3	5.4	5.5	5.5	a	5.0	5.5	4.0
Median.	5.1	5.4	5.4	5.2	5.4	5.2	5.0	4.0f	4.0	3.7	(3.6)	(3.4)
No.	18	18	16	18	16	16	16	14	12	11	8	8

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND f₀F2 NOVEMBER 1953.

HOURLY VALUES OF $^{\circ}\text{F}1$ OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

Hour Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	3.5z	3.7z	3.9z	4.0z	4.0z	4.0	c	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
4	3.8	4.0	4.0	4.2	4.2	4.0	4.1	4.0	4.0	4.0	4.0	3.8	3.7	3.5	3.2
5	c	c	c	c	c	c	c	4.1h	4.0	4.0	4.0	a	a	a	a
6	3.5	3.6	3.8	3.8z	3.9	4.0	4.0z	4.0	3.9	3.9	3.9	3.8	3.7	3.2	
7	3.7	3.8	3.9	4.0	4.0	4.0	4.0	4.1	4.0	4.0	3.9	3.9	3.5	3.4	
8	1.1	4.1z	4.0	4.0	4.1	4.2	4.2	4.1	4.0	4.0	3.9	3.8	3.5	3.4	
9	q	1	4.0	4.1	4.1	4.2	4.2	4.2	4.0	4.0	3.9	3.9	3.7	3.4	
10	q	3.7	4.0	4.2	3.9	4.1	(4.1)	4.1	4.1h	4.0	4.0	3.8	3.5	3.0	
11	2.6	3.8	4.0	4.0	4.3	4.2	4.3	4.1	c	c	c	c	c	c	c
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
13	c	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	c	c	c	c	c
15	c	c	c	c	3.8	3.9	n	(3.9)	3.9	c	3.9	3.8	a	q	
16	c	3.7	c	c	c	c	c	c	c	c	c	c	c	c	c
17	c	3.7	3.9	4.0	b	4.2	4.2	4.0	4.0z	4.0	4.0	3.8	b	3.4	
18	q	3.8	3.8	4.0	4.0	4.0	4.1	4.0	4.0	c	4.0	3.8	3.7	3.4	
19	q	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	c	
21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	3.7	3.8	3.8	3.9	3.9	b	4.3	4.1	4.0h	4.0	3.9	3.6	b	
24	3.5	3.7	4.0	4.2	4.2z	4.1	4.1	4.0	4.0	4.0z	4.0	a	3.7	3.4	
25	3.5f	3.8f	3.9	4.0	4.2	4.2z	4.1	4.1	c	c	c	3.8	3.7	3.4	
26	3.8	3.9	4.0z	4.0	4.0	4.1	4.2	4.1	4.0	3.9	3.9	3.6	3.5		
27	3.7	3.7f	3.9	4.0	a	4.2	4.1h	4.1	4.0	4.0	3.9	3.6	3.5	2.7	
28	1	3.9	4.0	4.0z	4.1	4.2	4.2	4.2	4.2z	4.1	4.1	4.0	3.7	3.2	
29	3.7z	3.9	4.0	4.0	4.1	4.2h	4.2	4.2	4.2	4.1	4.0	3.9	3.7f	3.1	
30	3.8	4.0z	4.0	4.0	4.0	4.3	4.2z	4.2	4.1h	4.0z	4.0z	3.9	3.7	3.4	
Median. No.	3.7	3.8	4.0	4.0	4.0	4.2	4.1	4.1	4.0	4.0	4.0	3.8	3.7	3.4	*
	10	17	17	18	17	18	18	18	18	18	18	16	16	14	

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND FPT1 NOVEMBER 1953

HOURLY VALUES OF fo_E OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

Day	Hour	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	1	1.8	2.3	2.7	3.0	3.0	3.0	c	c	c	c	c	c	c	c	c	c
2	2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
4	4	1.6	2.0	2.6	2.6	2.8	3.0	3.0	2.0	2.7	2.9	2.7	2.7	2.3	2.1	2.0	2.1
5	5	c	c	c	c	c	c	c	c	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
6	6	a	a	2.4	a	2.8	3.0	3.1	3.0	3.1	2.9	2.7	2.7	2.7	2.7	2.7	2.7
7	7	1.6	1.7	2.1	2.4	2.7	2.9	3.0	3.0	3.0	3.0	2.8	2.8	2.8	2.8	2.8	2.8
8	8	1.7	2.0	2.5	2.8	2.8	2.9	2.8	2.8	2.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0
9	9	1.6	1.7	2.0	a	a	a	a	a	a	a	a	a	3.0	3.0	3.0	3.0
10	10	1.6	b	2.5	2.7	2.9	3.1	2.9	a	a	a	a	a	2.6	2.6	2.6	2.6
11	11	q	2.2	2.4	2.9	2.9	2.9	2.9	3.1	3.0	c	c	c	c	c	c	c
12	12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
13	13	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
14	14	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
15	15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
16	16	b	b	b	c	c	c	c	c	c	c	c	c	2.6	2.6	b	b
17	17	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
18	18	b	b	b	b	b	b	b	b	b	b	b	b	3.0	2.9	b	b
19	19	b	2.1	2.5	2.7	2.8	3.1	a	3.3	a	b	b	b	c	c	c	c
20	20	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
21	21	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
22	22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
23	23	c	c	c	c	c	c	b	b	b	3.3	3.0	b	b	2.6	2.1	b
24	24	1.5	2.0	2.5	b	3.0	b	b	b	b	3.0	3.0	b	b	2.0	1.9	b
25	25	1.8	2.0	2.7	3.2	3.0	3.0	3.1	3.1	c	c	c	c	c	c	c	c
26	26	a	2.0	2.7	3.0	3.0	3.2	a	3.3	3.2	3.1	3.1	3.0	b	2.3	1.7	
27	27	1.6	a	2.3	2.9	2.9	3.0	3.1	3.1	3.1	2.8	a	3.0	3.0	2.8	2.4	2.0
28	28	a	2.4	2.7	2.9	3.0	3.1	3.0	3.1	3.1	3.0	3.0	3.0	2.9	2.7	2.5	2.1
29	29	1.8	2.4	2.7	2.9	a	a	a	a	a	3.1	3.1	3.1	3.0	3.0	2.5	2.0
30	30	2.3	2.5	2.7	2.8	a	b	3.2	3.0	3.0	3.0	2.4	2.2	1.8	a	a	
Median No.		1.7	2.0	2.5	2.8	3.0	3.0	3.1	3.0	3.0	3.0	3.0	3.0	2.8	2.6	2.3	1.9
Sweep:		1.0 - 13.0	Mc/s in 1m 55s														

Time used: 157.5° E.M.T.

MACQUARIE ISLAND fo_E NOVEMBER 1953

426.

HOURLY VALUES OF FES OBSERVED DURING NOVEMBER 1953 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	e	c	e	e	b	3.6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	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	
3	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
4	3.9	4.1	3.8	e	e	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	b	b	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	5.5	
6	4.1	4.1	5.5	5.5	5.5	4.3	4.2	4.7	3.7	5.0	3.8	3.8	3.8	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
7	4.3	4.2	3.8	2.1	e	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	4.2
8	3.7	e	e	3.8	e	3.3	3.3	3.7	3.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
9	2.9	3.0	3.7	e	e	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	3.5
10.	e	e	e	e	3.7	3.2	b	8	3.5	3.8	3.5	3.8	3.5	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
11	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e	
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	e	e	e	e	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	e	3.8	e	e	3.6	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
17	c	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
18	3.3	2.9	3.0	3.4	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	
19	3.6	3.2	3.2	4.0	3.7	b	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
20	c	c	c	c	c	c	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	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
24	5.5	3.9	3.5	2.8	e	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
25	5.5	3.2	3.2	e	3.8	3.7	2.8	8	3.8	3.7	2.8	8	8	8	3.8	4.0	b	c	c	c	c	c	c	
26	4.0	3.8	3.3	3.2	3.7	3.8	8	8	8	8	8	8	8	8	3.4	3.5	4.1	4.1	4.1	4.1	4.1	4.1	4.1	
27	7.0	7.0	2.0	2.7	2.1	2.7	3.8	3.7	3.8	3.9	3.1	3.9	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
28	4.6	4.4	4.0	4.0	5.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
29	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
30	Median	3.5	3.2	3.2	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	
No.	12	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	

427. Sweep: 1.0 - 13.0 Mc/s in 1^o 55s

Time used: 157.5° E.H.T.

NOVEMBER 1953

HOURLY VALUES OF h^{*F2} OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

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
Day																								
1	340	c	340	350	290	260	g	400	440	500	430	460	400	c	c	c	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	
4	350	350	350	300	270	260	250	370	360	370	330	350	320	300	320	1	c	c	c	c	c	c	c	c
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
6	a	a	a	a	360	310	380	s	w	600	480	460	440	450	460	410	360	320	300	f	320	a	a	a
7	a	a	a	a	360	300	260	340	350	330	340	370	350	320	360	340	300	290	260	270	a	a	a	a
8	300	300	300	300	300	250	250	1	g	370	330	380	350	330	350	330	320	290	250	f	280	a	a	a
9	320	340	330	280	260	250	230	1	340	350	340	300	350	310	340	350	300	260	270	250	260	260	310	340
10	300	f	300	240	250	240	250	340	330	280	290	300	300	300	300	300	300	280	250	250	250	250	250	300
11	340	370	(400)	390	290	250	250	310	300	340	330	320	300	310	c	c	c	c	c	c	c	c	c	c
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	b	350	310	350	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	b	b	b	
16	b	a	b	b	340	b	b	450	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
17	c	390	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
18	a	320	300	f	b	300	280	410	37c	b	380	290	450	410	350	340	350	330	300	300	280	250	290	300
19	280	320	330	a	310	290	230	650	310	280	280	w	w	w	w	w	w	w	w	w	w	w	w	
20	c	c	c	c	c	c	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	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
24	a	a	400	310	280	280	280	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	
25	a	300	340	340	320	320	320	370	360	330	350	340	300	c	c	c	c	c	c	c	c	c	c	
26	a	a	290	(360)	300	1	460	420	370	340	390	350	350	340	350	350	330	320	300	290	280	260	290	380
27	a	330	f	250	250	250	g	340	450	390	a	380	400	380	380	400	340	330	260	250	260	300	a	a
28	310	290	320	250	b	250	1	300	310	280	360	330	310	300	340	320	280	250	250	250	250	270	300	300
29	270	a	a	260	260	1	350	400	320	320	310	300	340	320	300	340	320	290	260	250	270	a	320	280
30	260	280	260	250	1	1	360	320	320	320	350	340	340	350	340	340	320	290	260	250	a	260	270	270
Median.	305	325	330	300	290	260	350	385	360	340	355	350	350	345	345	340	320	290	260	260	260	290	(305)	(300)
No. 10	12	13	15	15	14	15	16	17	16	16	18	18	18	16	18	15	15	15	15	15	12	12	8	8

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND h*F2 NOVEMBER 1953

HOURLY VALUES OF hpF2 OBSERVED DURING NOVEMBER 1953 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	340	c	340	350	320	290	8	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	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	270	350	350	300	290	270	260	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	270	300	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
6	a	a	a	a	a	360	350	8	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	
7	a	a	a	a	360	310	300	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
8	310	310	300	300	290	280	290	g	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
9	320	340	350	f	f	280	270	270	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
10	f	f	f	f	250	260	250	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
11	340	370	(400)	f	300	280	250	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	c	c	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	b	350	310	350	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
16	b	a	b	b	340	b	b	u	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
17	c	390	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
18	a	320	300	f	b	300	280	u	u	b	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
19	280	320	330	a	310	290	260	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	
20	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
24	a	400	510	290	280	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	
25	a	310	340	340	320	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
26	a	a	290	(360)	300	250	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
27	a	330	f	250	300	260	g	u	u	u	a	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
28	330	300	320	250	b	260	260	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
29	300	a	a	270	300	240	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
30	300	300	260	270	270	260	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u	u
Median.	(320)	325	330	320	300	275	275	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	(320)	300	290	285
No.	9	12	13	12	16	16	12																9	13	15	14

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

 Time used: 151.5° E.M.T. MACQUARIE ISLAND NOVEMBER 1953

HOURLY VALUES OF $\text{h}^{\circ}\text{F}1$ OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

Day	Hour	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1		230	250	230	230	220	210	210	c	c	c	c	c	c	c	c
2		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
4		q	230	230	230	210	200	200	200	200	200	200	200	210	250	c
5		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
6		a	250	220	220	230	200	200	200	180	200	200	200	250	270	
7		250	240	230	210	200	200	200	210	220	230	230	230	250	q	
8		240	230	230	200	200	200	230	220	200	200	200	200	210	240	q
9		q	220	230	220	200	200	200	200	200	200	200	200	220	230	240
10		q	220	230	200	190	200	220	200	200	210	200	210	220	220	
11		220	240	230	220	230	240	230	210	200	c	c	c	c	c	c
12		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
13		c	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	c	c	c	c	c
15		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
16		b	260	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
18		q	220	230	230	b	220	200	230	200	220	c	c	c	c	c
19		q	220	220	210	190	200	210	200	220	c	c	c	c	c	c
20		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
22		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
23		c	c	c	c	c	c	200	210	200	190	210	200	220	240	b
24		250	250	220	220	230	230	200	200	200	200	200	200	220	240	240
25		250	230	a	200	220	200	200	c	c	c	c	c	230	230	
26		220	230	200	210	200	210	200	200	210	200	200	200	230	a	a
27		230	240	220	220	a	200	210	210	210	220	220	220	240	230	
28		240	240	220	220	200	210	200	210	200	200	200	200	250	220	
29		220	230	210	230	220	200	200	220	210	220	210	220	240	240	
30		210	230	230	220	210	220	200	200	200	200	200	200	210	220	a
Median.	*	230	230	220	230	220	200	200	200	200	200	210	220	240	235	
No.		5	11	17	17	17	18	19	18	18	18	16	16	15	14	8

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

Time used: 157.5 o E.M.T. MACQUARIE ISLAND h 151 NOVEMBER 1953

HOURLY VALUES OF $h^{\circ}\text{E}$ OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

Hour Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1	q	120	120	120	120	120	120	120	120	c	c	c	c	c	c
2	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
4	150	130	120	120	130	120	130	120	120	110	130	110	110	b	c
5	c	c	c	c	c	c	c	c	c	c	c	c	c	a	a
6	a	a	a	110	a	110	110	110	120	120	120	120	120	a	a
7	150	130	120	110	110	110	120	120	120	120	120	120	110	110	110
8	130	120	110	110	120	120	120	120	120	120	130	130	120	120	140
9	120	110	110	110	a	a	a	a	a	a	110	120	120	120	130
10	130	b	120	130	120	120	120	120	120	a	130	130	a	110	110
11	q	120	110	120	120	120	120	120	120	120	120	120	130	130	150
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
13	c	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	c	c	c	c	c
15	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
16	b	b	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
18	c	c	c	c	c	c	c	c	c	c	c	c	b	b	q
19	b	100	100	100	110	110	120	120	120	a	120	a	130	b	100
20	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
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
23	c	c	c	c	c	c	c	c	b	120	120	b	120	120	c
24	120	110	(130)	b	130	b	b	b	120	120	120	110	110	110	b
25	100	a	110	110	120	120	120	120	110	c	c	c	a	110	110
26	a	100	100	110	100	100	110	100	110	a	100	100	100	b	110
27	120	a	a	110	110	110	100	100	100	110	100	100	a	120	120
28	a	a	a	a	a	a	120	120	120	110	110	110	120	110	100
29	a	110	120	120	a	a	a	a	a	a	a	a	120	120	110
30	s	s	s	110	a	a	b	a	a	s	110	120	110	a	120
Median. No.	*	130	120	110	120	120	120	120	120	120	120	120	120	120	115
Sweep:	7	10	14	12	12	12	12	10	13	12	12	12	12	12	10

NOVEMBER 1953

Time used: 157.5° E.M.T.

431 • Sweep: 1.0 - 13.0 Mc/s in 1st 55s

NOVEMBER 1953

Time used: 157.5° E.M.T.

431 • Sweep: 1.0 - 13.0 Mc/s in 1st 55s

HOURLY VALUES OF $h^{\circ}\text{E}$ s OBSERVED DURING NOVEMBER 1953 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	e	c	e	e	e	c	c	c	110	g	g	g	g	g	g	g	g	g	g	g	g	g	g	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	100	
4	140	140	120	e	e	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	5	
6	120	120	120	110	110	110	120	150	100	110	110	110	120	120	120	120	120	120	120	120	120	120	120	110	
7	120	100	110	110	g	g	g	g	g	g	g	g	120	130	g	g	g	120	g	g	140	120	130	120	110
8	110	e	e	e	e	e	110	120	110	g	g	g	130	130	130	130	130	g	g	g	160	140	140	130	110
9	110	110	130	e	e	g	g	g	100	100	100	100	100	120	100	100	100	100	g	g	110	b	b	100	100
10	e	e	e	e	e	110	110	b	g	120	130	120	120	120	120	120	120	120	120	120	120	110	120	100	
11	e	e	e	e	e	e	e	e	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	e	
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	c	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
15	e	e	e	e	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	e	e	e	
16	e	120	e	e	100	b	b	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
17	c	e	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
18	100	120	100	100	b	b	b	b	b	b	b	b	140	130	130	120	120	b	g	g	150	120	130	110	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	b	b	b	b	b	b	b	b	b	b	b	b	b	
24	120	120	130	130	g	g	g	b	g	b	b	b	120	120	120	b	g	g	120	g	g	120	120	120	100
25	100	100	100	e	100	100	100	110	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	
26	100	100	100	100	100	100	100	g	g	100	100	100	g	100	120	120	120	120	g	g	120	110	110	110	110
27	100	100	110	110	110	110	110	110	110	120	120	120	110	110	100	100	100	100	g	g	130	140	100	100	100
28	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
29	110	100	100	100	110	110	120	g	120	100	100	100	110	120	110	110	110	110	110	110	110	110	110	110	100
30	e	140	110	110	100	100	g	g	g	100	100	100	b	g	g	g	g	g	g	110	110	110	110	110	120
Median.	110	100	100	110	100	100	110	110	5	5	5	7	8	6	11	9	8	*	*	*	120	120	120	110	100
No.	13	13	13	10	10	10	9	5	5	5	7	8	6	11	9	8	7	11	13	13	14	14	14	16	

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND TIME NOVEMBER 1953

HOURLY VALUES OF (13000) F2 OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

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	
Day																									
1	2.6	c	2.6	2.6	2.7	3.0	g	2.8	2.6	2.5	2.7	2.6	2.7	c	c	c	c	c	c	c	c	c	c	c	
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	2.8	2.8	2.8	2.8	2.9	3.0	3.2	3.1	2.8	3.0	2.9	2.8	3.1	3.0	3.0	3.2	3.1	2.9	2.9	c	c	c	c	c	
5	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
6	a	a	a	a	2.8	2.8	2.7	s	w	n	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.9	2.8	2.8	f	2.8	a	a	
7	a	a	a	a	2.8	3.1	3.1	3.0	3.0	3.1	3.0	2.9	2.8	2.8	2.9	3.1	3.0	3.0	3.0	3.0	a	a	a	a	
8	2.8	2.8	2.8	2.8	2.9	3.2	3.1	3.0	2.8	2.9	2.8	2.9	2.8	2.9	3.0	3.0	3.2	3.2	3.0	f	3.0	a	a	a	
9	3.0	3.0	2.7	f	3.2	3.3	3.3	3.2	2.8	3.0	3.1	3.0	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	2.8	2.8	
10	f	f	f	f	3.1	3.0	3.1	3.2	3.2	3.5	3.2	3.4	3.3	3.3	3.2	3.0	3.0	3.4	3.4	3.0	a	3.3	3.0	3.0	
11	3.0	2.7	2.8	f	3.1	3.4	3.2	3.4	3.3	3.1	3.3	3.2	3.1	3.3	3.2	3.2	3.2	3.2	3.2	c	c	c	c	c	
12	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
13	c	c	c	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	c	c	c	b	b	b	
15	b	2.7	2.9	3.0	b	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	a	b	b	
16	b	a	b	b	b	b	b	2.7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
17	c	2.7	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
18	a	3.2	3.2	f	b	3.0	2.9	2.8	2.9	b	b	b	3.1	3.0	2.9	2.7	2.8	2.8	3.0	3.0	3.2	3.1	2.9	a	a
19	3.1	2.9	3.1	a	3.1	3.0	3.1	n	2.8	2.8	2.7	2.8	2.8	2.9	2.8	2.6	c	c	c	c	c	c	c	c	
20	c	c	c	c	c	c	c	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	c	c	c	c	c	c	c	c	
22	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
23	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
24	a	a	2.8	3.0	3.1	3.2	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	
25	a	2.9	2.9	2.8	2.9	2.9	2.8	2.8	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	
26	a	a	2.9	2.7	2.9	3.0	2	2.7	2.8	3.0	2.7	3.0	2.7	3.0	2.9	2.7	2.8	2.8	3.0	2.9	3.0	3.2	3.3	2.9	
27	a	2.7	f	3.1	2.9	3.1	g	3.1	2.6	2.6	2.8	a	2.9	2.7	2.9	2.7	2.8	2.9	3.0	3.0	3.1	3.0	3.0	a	
28	2.9	3.0	3.0	2.8	b	3.0	3.1	3.1	3.3	2.9	2.9	2.8	2.8	3.0	2.9	2.8	3.0	3.2	3.3	3.3	3.0	3.0	2.9	3.0	
29	2.9	2.9	a	a	3.1	3.1	3.4	2.7	2.7	3.0	3.0	3.0	3.1	2.9	3.0	3.1	2.8	3.0	3.1	3.3	3.2	3.0	a	3.1	
30	3.0	3.0	f	3.2	3.2	3.1	3.0	3.1	3.0	3.1	3.3	3.1	2.9	2.9	2.9	2.9	3.0	3.1	3.2	3.2	a	3.3	a	3.0	
Median.	(2.9)	2.8	2.8	2.9	3.1	3.1	3.0	3.0	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	3.0	3.0	3.1	3.0	3.2	3.0	(3.0)	
No.	9	12	12	12	16	17	16	17	16	15	17	16	17	18	18	18	16	16	15	14	12	11	8	8	

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

Time used: 157.5° E.M.T. NOVEMBER 1953

MACQUARIE ISLAND (13000) F2 NOVEMBER 1953

HOURLY VARIANCE OF (MEAN) OBSERVED DURING NOVEMBER 1953 AT MACQUARIE ISLAND

Day	Hour	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1		2.95	3.22	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
2		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
4		3.03	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04
5		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
6		3.02	3.04	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
7		3.02	3.04	3.05	3.07	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
8		1	3.02	3.04	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
9		q	1	3.04	3.04	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
10		q	3.07	3.07	3.07	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09	3.09
11		3.08	3.05	3.05	3.05	3.07	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
12		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
13		c	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	c	c	c	c	c
15		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
16		c	3.03	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
18		q	3.05	3.05	3.07	b	3.05	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
19		q	3.04	3.06	3.05	3.05	3.05	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
20		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
22		c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
23		c	c	c	c	c	3.07	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
24		3.03	3.05	3.04	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
25		3.05	3.03	3.06	3.04	3.04	3.04	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
26		3.03	3.03	3.03	3.04	3.06	3.05	3.05	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
27		3.04	3.04	3.05	3.06	a	3.09	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07
28		1	3.04	3.07	3.07	3.09	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
29		3.02	3.04	3.03	3.06	3.06	3.06	3.05	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
30		3.03	3.04	3.06	3.07	3.06	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07
Median		x	3.04	3.05	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
No.		10	17	17	17	17	17	17	18	18	18	18	18	18	18	18

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND (M3000) FL NOVEMBER 1953

434

HOURLY VALUES OF F_0F_2 OBSERVED DURING DECEMBER 1953 AT MACQUARIE ISLAND.

Day	Hour	00	01	02	03	04	05	06	07	08	09	10	11
1	3.5f	3.7f (2.3)	2.1f (2.4)	2.7f	3.6z	4.2	4.5	5.0	c	c	c	c	c
2	c	a	c	a	a	3.8j	4.2j	4.9	5.0	5.4	5.6z	5.7	5.7
3	a	c	c	c	c	c	c	5.0	(5.0)	5.3	5.5	b	b
4	c	c	c	c	c	c	c	c	c	c	c	c	5.2
5	2.8s	b	1.7f	2.4	2.8	3.2	3.6	4.0	4.5f	4.5	4.7	5.0	5.0
6	a	a	a	2.1	3.3	4.1f	g	g	(4.8)	5.0	5.5	5.8	5.8
7	a	a	a	3.0f	3.5f	3.2f	g	4.0	4.2	5.0	5.0f	4.9	4.9
8	3.3f	2.6	2.4f	2.5	3.1	3.3	g	4.5	4.5	4.8	4.8f	5.0	5.0
9	c	c	c	c	c	c	c	c	c	4.8f	5.0	5.0	5.0
10	2.7f	2.2f	f	2.3f	3.0f	3.3	4.0	4.1	4.4	4.8	5.1	5.1	5.0
11	2.8	2.8	2.4f	2.6	3.5	4.0	4.1f	4.5f	4.9z	5.0	5.0	5.2	5.2
12	a	a	a	a	b	a	3.5f	3.9	g	g	g	4.3	4.3
13	a	a	a	b	3.0f	3.2	3.5	4.0	4.3	4.5	4.5	4.8	4.8
14	a	a	a	2.7f	2.9f	3.2h	3.5	4.0	4.4	4.6	4.8	4.9	4.9
15	3.5f	2.7f	2.6f	2.7z	3.3	3.8	4.3	5.0	5.0	4.9	5.4	5.4	5.4
16	c	c	c	c	c	c	c	c	c	c	c	c	c
17	3.3	3.3f	2.7f	2.8	3.4	3.8	4.2	4.1	4.3	4.3	4.7	5.0	5.0
18	2.6	3.3	3.5	3.0	3.7	g	4.1	4.6	(4.6)	4.8	4.7	5.0	5.0
19	a	3.5	3.2h	3.2	3.3	3.5	4.0	4.3	4.6	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c	c
21	a	3.0	3.2f	3.5f	3.6f	4.0	4.5f	4.7	4.9	4.9	c	c	c
22	s	2.2	2.3	s	3.3	3.8	4.2	5.2	4.9	5.2	5.2	5.5	5.5
23	2.8	2.7	a	a	3.3	3.4	3.6	3.8	4.3	4.3	4.7	4.7	4.7
24	s	2.9	3.0	3.1	3.1	3.7	4.3p	4.4	4.8	5.0	5.2	5.5	5.5
25	c	c	c	c	c	c	c	c	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c
27	2.8	2.7	2.7	2.6	3.5	4.0	4.3	4.5	c	c	c	c	c
28	NO RECORD	28th - 31st INCLUSIVE	THROUGH 00										
29													
30													
31	Median No.	2.8 10	2.7 12	2.6 14	2.8 16	2.8 18	3.6 19	4.0 20	4.4 21	4.6 19	4.8 19	5.0 18	5.0 18

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

Time used: 157.50 E.M.T.

MACQUARIE ISLAND f0F2 DECEMBER 1953.

HOURLY VALUES OF FOF2 OBSERVED DURING DECEMBER 1953 AT MACQUARIE ISLAND

Day	12	13	14	15	16	17	18	19	20	21	22	23
Hour												
1	5.5	5.6	5.5	5.5z	5.5z	5.5	5.5	(5.8)	(5.7)	c	c	c
2	6.0	5.2	5.6	5.5z	5.4	5.5f	6.0	(6.0)	c	c	c	c
3	5.5	5.6	5.6	5.5	5.8	c	c	c	c	c	c	c
4	5.6	5.3z	5.1	5.0	5.2	4.7	4.1	c	(3.9)	3.2s	3.3	3.0f
5	5.1	5.3	5.0	5.1	5.0	5.5	5.0	5.0	3.7f	3.0f	2.9f	
6	5.8	5.6	5.2	5.3	5.0	5.2	5.3s	(4.6)	4.7s	4.5s	4.5	s
7	5.2	5.5	5.4	5.0	5.4	5.5	4.4	4.2	(4.4)	3.6	3.2f	
8	5.5	5.2	5.2	5.3	5.3	c	c	c	c	c	c	c
9	4.9	4.6	4.7	5.0	5.9	4.8	4.7	(4.7)	s	3.7	s	
10	5.5	5.3	5.0	5.0	5.0	5.2	5.0f	(4.3)	a	4.2	f	
11	5.5	5.5	5.4	5.5	5.5z	5.0z	4.5f	a	a	a	a	a
12	4.3	4.5	4.6	4.5f	4.5f	a	3.8	a	3.5f	f	a	a
13	5.0	5.0	5.0	5.0	5.2	5.1f	5.5f	5.0	4.0f	4.0f	3.5f	a
14	4.8	5.0	5.2	5.1	5.2	5.5	5.1	4.8	(3.8)	3.5f	(3.2)	(3.3)
15	5.2	5.3	5.3	(5.0)	5.5	5.7	5.5f	5.0	5.0	4.5f	f	
16	c	c	c	c	c	4.8	5.0	5.0	(4.0)	a	3.7	(3.6)
17	5.0	5.0	5.0	5.0	5.0	5.0	5.1	4.3f	(4.5)	(4.0)	3.8	3.3f
18	4.9	5.0	4.9	5.0	5.0	5.0	4.5	4.5	3.7h	2.9f	3.0s	
19	c	c	c	c	c	c	c	c	c	c	c	c
20	c	4.6	4.8	5.0	4.8	5.1f	4.7	4.5	4.0f	(3.5)	3.1	2.5f
21	c	5.2	5.5	5.5	5.4	5.4	5.2	4.7	4.5	4.2	s	s
22	5.2	5.2	5.3	5.4	5.5	5.7	5.7	4.9	s	s	s	s
23	4.9	4.9	4.6	4.8	5.3	5.2	5.6	4.8	4.6	s	s	s
24	5.3	5.6	5.7	5.7	6.2	6.1	5.6	a	a	a	a	c
25	c	c	c	c	c	c	c	c	c	c	c	c
26	4.9	4.8	4.8	4.9	4.8	4.7	4.7	4.3	4.3	s	s	s
27	c	c	c	c	c	c	c	c	c	c	c	c
28												
29												
30												
31												
Median	5.2	5.2	5.2	5.0	5.2	5.1	5.1	4.8	4.5	4.0	3.6	3.5
No.	21	23	25	23	21	21	20	18	13	13	13	8

NO RECORD 28th - 31st INCLUSIVE

HOURLY VALUES OF $f^{\circ}\text{F}1$ OBSERVED DURING DECEMBER 1953 AT MACQUARIE ISLAND

Hour Day	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	1	3.9	4.0	c	c	c	c	c	c	c	c	c	c	c	c
2	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
3	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	c	c	c
5	q	3.5	3.8	4.0	4.0z	4.0	4.1	4.1	4.1	4.1	4.0z	4.0	4.0	4.0	4.0
6	q	3.8z	4.0	4.1	4.0	4.0	4.2	4.2h	4.1	4.1	4.0z	4.0	4.0	4.0	4.0
7	q	3.5	3.7	3.9	4.0	4.0	4.0f	4.2h	4.1	4.1	4.0z	4.0	4.0	4.0	4.0
8	q	3.8	3.8	4.0	4.0	4.0	4.2	4.1	4.1	4.2h	4.1	4.0h	4.0	4.0	4.0
9	q	c	c	c	c	4.0	4.0	4.0	4.0	4.0	4.0z	4.0	4.0	4.0	4.0
10	q	q	3.9	4.0z											
11	3.5f	3.8	4.0f	4.0z	4.0f	4.0f	4.0	4.0	4.1	4.0	4.0h	4.0	4.0h	4.0	4.0
12	q	3.7	3.7	3.7	3.8	3.8	4.0h	4.0h	4.0h	4.0h	4.0	4.0	4.0f	4.0f	4.0f
13	q	3.7	3.7	3.9h	4.0z	4.0z	4.0z	4.1	4.1	4.2	4.2	4.1h	4.0h	3.7	3.6f
14	q	3.5	3.8	3.9h	4.0z	4.0z	4.0	4.2	4.2	4.2	4.1h	4.0	4.0	3.7	3.5
15	3.7	3.8	3.9	4.0	4.0h	4.0h	4.1	4.1	4.1	4.1	4.0z	4.0h	4.0	3.8	3.6
16	c	c	c	c	c	c	c	c	c	c	c	c	c	3.9	3.5
17	3.4	3.6	3.8h	4.0z	4.0z	4.0	4.1	4.0	4.0	4.0	4.0z	4.0z	4.0	3.7h	3.3
18	3.3	3.8	4.0z	4.0z	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.7	3.5
19	3.4	3.8	4.0	4.0	4.0	c	c	c	c	c	c	c	c	c	c
20	c	c	c	c	c	c	c	c	c	c	c	c	c	3.8f	3.6
21	q	3.8	3.9s	4.0	4.0	c	c	c	c	c	4.1	4.0	4.0	4.0	3.9
22	q	3.7	3.7p	4.0	4.0	4.0	s	4.3	4.1	4.2	4.2	4.2	4.2	3.9	3.4p
23	q	3.5	b	4.0	4.0	3.8	4.2	4.1	4.1	4.0	4.0	4.0	4.0	3.8	3.4
24	q	3.6p	3.9	3.9	4.1	4.2	4.2	4.2	4.2	4.1	4.0	4.0	4.0	3.8	3.8
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	4.1	4.2	4.0	3.9	3.8	3.7
27	q	3.8	3.9	c	c	c	c	c	c	c	c	c	c	c	c
28															
29															
30															
31															
Median. No.	3.5	3.8	3.9	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.0	4.0	4.0	3.8	3.2
Sweep:	1.0 - 13.0	1.0c/s in 1m 55s												1.9	6
Time used:	157.5° E.M.T.														
	MACQUARIE ISLAND f°T1	DECEMBER 1953													

HOURLY VALUES OF F°E OBSERVED DURING DECEMBER 1953 AT MACQUARIE ISLAND

Hour Day	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	
1	1.6	a	2.5	2.8	c	c	c	c	c	c	c	c	c	2.2	2.2	1.7	
2	q	1.9	(2.5)	2.7	c	c	c	c	c	c	c	c	c	1.8	1.8	1.6	
3	q	c	c	c	2.5	(2.5)	c	b	c	c	c	c	2.6	c	c	c	
4	q	c	c	c	c	c	c	a	b	3.22	3.2	3.0z	2.8	2.5z	2.1	1.7	
5	q	(1.9)	2.3	2.5z	3.0z	3.0	3.1	3.1	3.2	3.2	3.0	3.0	2.8	2.5	2.2	1.7	
6	q	q	2.6z	2.8	3.0	3.1	3.2	(3.2)	3.2	3.1	3.1	a	2.7z	2.5z	2.1	1.8	
7	q	q	2.0	2.1	2.6	3.0	3.1	3.0	a	3.2z	3.0	2.9	2.7	2.5	2.1	q	
8	s	(2.0)s	2.5	2.8	3.0z	3.0	3.3	3.2	3.1	2.9	a	a	c	c	c	c	
9	c	c	c	c	c	3.1z	3.0s	2.9z	a	3.1	3.0	3.0	2.7	2.5	2.0	q	
10	q	q	2.0	2.5	3.0	3.0	3.2	3.2	3.2	a	3.1z	3.0z	2.8z	2.6	2.0	q	q
11	s	2.1	2.4	2.6z	2.9z	3.0z	3.2z	3.1	a	3.2	3.0	3.0z	2.7z	2.3	s	a	
12	q	a	2.7	2.8	b	b	3.2	3.2	b	3.0	3.0	3.0	a	a	a	a	
13	q	b	b	a	a	3.0	3.0	b	b	2.9	2.7	2.6	2.1	1.8	1.8	1.8	
14	1.6s	2.0	b	b	3.0	3.0z9	3.1	3.2	3.1	3.0	2.8	(2.7)	2.5	2.1	1.8	1.8	
15	2.0	2.3	2.4	2.8	2.7	2.7	3.0z	3.0z	3.0z	3.1z	3.0z	3.0z	2.8	2.6z	2.1	a	
16	c	c	c	c	c	c	c	c	c	3.1	3.0	3.0	3.0	2.7	2.4	1.8	
17	q	2.0	2.5	2.7	2.8	3.0	3.2	3.1	3.1	3.1	3.0z	2.8	2.7	2.3	2.2	2.2	
18	2.1	(2.1)	2.6	2.6z	2.6	3.0z	3.2	3.2	3.1	3.1	3.0	3.0z	2.7	2.3	2.0	q	
19	q	2.3	2.5z	2.7	3.0z	c	c	c	c	c	c	c	c	2.0	a	a	
20	c	c	c	c	c	c	c	c	c	3.2	3.1	3.0	3.0	2.7	c	c	
21	q	2.1	2.3z	2.6f	2.9	2.9	c	c	c	3.6	3.3	3.4	3.1	2.6	2.4	q	
22	1.7p	1.7p	2.2	2.2	3.0	3.3	s	3.2	3.5	3.6	3.2	3.0	2.9	2.7	2.6	2.6	
23	2.6	2.4	a	b	3.0	3.0	3.2	3.2	(3.1)	3.3	3.3	3.1	3.0	2.7	2.4	2.4	
24	q	2.0	b	2.8	2.8	3.0	3.2	3.4	3.4	3.3	3.2	3.0	2.7	2.0	q	q	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
26	c	c	c	c	c	c	c	c	3.3	3.3	3.2	3.1	2.8	2.7	2.1	2.1	
27	b	2.1	2.6	2.8	c	c	c	c	c	c	c	c	c	c	c	c	
28																	
29																	
30																	
31																	
Median.	1.8	2.0	2.5	2.7	3.0	3.0	3.2	3.2	3.2	3.1	3.0	2.8	2.6	2.1	1.8	1.8	
No.	6	14	16	17	16	16	14	15	12	18	18	19	20	20	12	12	

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND FOR DECEMBER 1953

HOURLY VALUES OF FEES OBSERVED DURING DECEMBER 1953 AT MACQUARIE ISLAND

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND FEE DECEMBER 1953

HOURLY VALUES OF H'F2 OBSERVED DURING DECEMBER 1953 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	240	300	230	250	210	1	320	320	c	c	c	c	300	300	300	290	270	270	270	270	260	250	240	c	
2	c	260	260	2	a	s	s	c	c	c	c	c	290	300	300	320	300	300	300	300	300	290	250	240	240
3	a	s	c	c	c	c	c	c	c	c	c	c	340	340	340	340	340	340	340	340	340	340	340	340	340
4	c	c	c	c	c	c	c	c	c	c	c	c	380	380	380	380	380	380	380	380	380	380	380	380	380
5	240	300	300	300	270	220	220	220	220	220	220	220	230	230	230	230	230	230	230	230	230	230	230	230	
6	a	a	a	a	300	280	300	35	340	310	300	290	230	230	230	230	230	230	230	230	230	230	230	230	
7	a	a	a	a	250	240	220	8	350	400	350	300	380	340	340	300	300	300	300	300	300	300	300	300	
8	250	300	280	260	250	230	230	8	320	330	330	330	320	320	320	320	320	320	320	320	320	320	320		
9	c	c	c	c	c	c	c	c	c	c	c	c	330	330	340	340	340	340	340	340	340	340	340	340	340
10	250	250	260	280	250	260	280	a	230	350	350	340	340	340	340	340	340	340	340	340	340	340	340		
11	280	300	290	240	250	250	300	300	280	300	300	300	320	320	320	320	320	320	320	320	320	320	320	320	
12	a	a	a	a	b	a	a	a	290	500	g	g	g	460	480	400	430	370	350	370	370	370	370	370	a
13	a	a	b	a	320	290	290	8	400	380	390	420	430	350	350	350	350	300	(300)	270	260	280	280	280	a
14	g	a	250	250	250	230	430	360	360	360	360	360	350	350	350	350	350	350	350	350	350	350	350	350	a
15	310	270	260	270	260	270	260	8	300	300	340	330	330	310	330	330	330	320	320	320	320	320	320	320	
16	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
17	310	290	250	250	250	250	1	260	350	350	(350)	300	340	340	340	340	340	330	330	330	330	330	330	330	
18	260	300	270	270	230	230	8	340	300	400	320	320	320	320	320	320	320	320	320	320	320	320	320	320	
19	a	290	350	250	230	230	1	1	330	310	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	c	c	c	c	c	c	c	c	c	c	c	
21	a	a	280	280	260	230	(280)	310	290	c	c	c	360	350	300	300	300	300	300	300	300	300	300	300	300
22	300	300	280	s	270	250	350	360	380	330	350	330	330	340	340	350	340	330	330	330	330	320	320	320	
23	300	290	a	a	300	290	260	1	370	330	380	400	350	340	340	370	330	300	300	300	300	300	300	300	
24	s	s	300	280	1	260	330	350	300	300	330	300	320	320	320	320	320	320	320	320	320	320	320	320	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
26	c	c	c	c	c	c	c	c	c	c	c	c	350	380	370	370	350	330	330	330	330	330	330	330	330
27	270	300	290	260	240	240	310	310	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
28																									
29																									
30																									
31																									

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

Time used: 157.5° E.I.T.

Macquarie Island, December 1953.

HOURLY VALUES OF hpF2 OBSERVED DURING DECEMBER 1953 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	320	300	270	260	290	u	u	c	c	c	c	u	u	u	u	u	u	u	270	270	c	c	c
2	c	u	250	a	c	c	c	u	u	u	u	u	u	u	u	u	300	310	o	c	c	c	c	c
3	a	c	c	c	c	c	c	u	c	u	u	u	u	u	u	u	300	3	o	o	o	o	o	o
4	c	c	c	c	c	c	c	u	c	c	c	c	u	u	u	u	350	360	u	260	280	270	a	300
5	300	b	u	290	260	230	u	u	u	u	u	u	u	u	u	u	310	310	u	290	280	300	300	300
6	a	a	a	30	u	300	u	g	g	u	u	u	u	u	u	u	510	u	u	340	340	(250)	260	a
7	a	a	a	280	280	250	g	u	u	u	u	u	u	u	u	u	300	300	s	300	300	300	300	a
8	u	310	f	260	240	240	g	u	u	u	u	u	u	u	u	u	300	300	a	300	300	300	300	a
9	c	c	c	260	250	250	u	u	u	u	u	u	u	u	u	u	550	u	u	280	280	280	280	s
10	290	u	f	290	260	250	u	u	u	u	u	u	u	u	u	u	550	u	u	270	270	270	270	f
11	290	u	300	250	u	u	u	u	u	u	u	u	u	u	u	u	510	u	u	340	340	340	340	a
12	a	a	a	a	b	300	u	u	g	g	u	u	u	u	u	u	300	300	a	340	340	340	340	a
13	a	a	a	b	u	300	g	u	u	u	u	u	u	u	u	u	300	300	u	290	290	290	290	a
14	a	a	a	u	280	250	250	u	u	u	u	u	u	u	u	u	260	260	u	270	270	270	270	u
15	u	290	300	290	270	270	g	500	u	u	u	u	u	u	u	u	310	310	u	300	300	300	300	f
16	c	c	c	460	460	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	a
17	310	300	270	270	270	260	u	u	u	u	u	u	u	u	u	u	500	u	u	340	340	340	340	a
18	280	a	300	270	270	250	3	300	u	u	u	u	u	u	u	u	300	300	u	270	270	270	270	a
19	a	u	u	260	250	250	u	u	u	u	u	u	u	u	u	u	300	300	u	270	270	270	270	a
20	c	c	c	c	c	c	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	280
21	a	a	250	u	250	250	u	u	u	u	u	u	u	u	u	u	510	u	u	340	340	340	340	c
22	s	c	300	300	300	300	u	u	u	u	u	u	u	u	u	u	310	310	u	270	270	270	270	s
23	u	u	a	a	u	300	u	u	u	u	u	u	u	u	u	u	310	310	u	270	270	270	270	s
24	s	s	u	u	u	u	u	u	u	u	u	u	u	u	u	u	310	310	u	270	270	270	270	s
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	
27	300	u	u	270	250	260	u	u	u	u	u	u	u	u	u	u	510	u	u	340	340	340	340	s
28																	310	310	u	310	310	310	310	s
29																	310	310	u	310	310	310	310	s
30																	310	310	u	310	310	310	310	s
31	Medium.	(300)	*	(300)	280	260	260	g	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
No.	7	7	8	11	14	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

NO. RECORD 2555 - 2425 TIMEZONE.

HOURLY VALUES OF h'F1 OBSERVED DURING DECEMBER 1953 AT MACQUARIE ISLAND

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

Sweep: 1.0 - 13.0 Mc/s in 1m 5s

Time used: 157.5° E.M.T.

MACQUARIE ISLAND DECEMBER 1953

442

HOURLY VALUES OF $H^{\circ}\text{E}$ OBSERVED DURING DECEMBER 1953 AT MACQUARIE ISLAND

Day	Hour	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
1	100	a	100	100	c	c	c	100	c	c	c	c	c	100	100	120	120
2	q	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	110
3	q	c	100	100	100	100	100	100	b	100	100	100	100	100	100	100	100
4	q	c	c	c	c	c	c	c	c	100	100	100	100	100	100	100	100
5	q	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	110
6	q	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	q	q	a	100	100	100	100	100	a	100	100	100	100	100	100	100	q
8	a	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
9	c	c	c	c	c	c	c	c	c	100	100	100	100	100	100	100	100
10	q	q	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
11	s	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
12	q	a	100	100	b	b	a	a	120	120	b	b	b	120	110	110	110
13	q	b	b	b	a	a	a	a	110	110	100	100	100	100	100	100	100
14	s	100	b	b	b	100	100	100	100	100	100	100	100	100	100	100	100
15	130	110	100	100	100	a	a	100	110	100	100	100	100	100	100	110	a
16	c	3	c	c	c	c	c	c	c	c	c	c	c	c	c	100	130
17	q	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	q
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	q	100	100	100	100	100	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	c	c	c	c
21	q	s	100	100	100	100	100	100	c	c	c	c	c	100	110	100	100
22	n	f	100	100	100	100	100	100	s	100	a	a	a	100	100	100	100
23	120	130	a	b	100	100	100	100	110	110	100	100	100	100	100	100	100
24	q	110	b	100	100	100	100	100	100	110	100	100	100	100	100	100	100
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
26	c	c	c	c	c	c	c	c	c	c	c	c	c	100	100	100	100
27	b	100	s	120	c	c	c	c	c	c	c	c	c	c	c	c	c
28																	
29																	
30																	
31																	

25th - 31st INCLUSIVE

NO RECORD

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND 15° E. DECEMBER 1953.

HOURLY VALUES OF h'Es OBSERVED DURING DECEMBER 1953 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	e	110	e	e	120	100	g	100	g	130	c	c	c	c	c	c	c	c	c	c	100	100	110	110		
2	110	110	e	120	100	g	100	g	120	110	110	c	c	c	c	c	c	c	c	c	c	c	c	c		
3	100	100	100	100	100	c	c	c	130	c	c	c	b	c	c	c	c	c	c	c	c	c	c	c		
4	c	c	c	c	c	c	c	c	130	110	110	c	c	c	c	c	c	c	c	c	c	c	c	c		
5	150	b	130	e	130	110	110	110	110	110	100	100	100	b	g	g	g	110	110	110	110	110	110	110	110	
6	100	100	100	100	100	100	100	100	120	120	120	120	100	100	100	100	100	140	130	120	120	120	120	120	120	
7	100	100	100	100	120	100	100	100	130	120	130	100	100	100	100	100	100	g	140	140	150	120	120	120	120	
8	110	100	e	e	100	g	g	100	110	110	110	110	100	100	100	100	100	100	100	100	100	100	100	100	100	
9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
10	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
11	100	100	100	100	100	100	100	100	100	130	110	120	120	120	100	100	100	100	100	100	100	100	100	100	100	
12	100	100	100	100	100	100	100	100	b	100	120	b	b	b	b	b	b	130	130	120	120	120	120	120	120	
13	100	100	e	100	100	100	100	b	b	b	100	g	g	g	g	g	g	150	150	140	140	140	140	140	140	
14	100	110	100	100	100	100	100	b	b	b	120	g	110	100	100	100	100	100	100	100	100	100	100	100	100	
15	100	100	100	100	100	100	100	110	g	g	g	g	100	120	120	120	120	120	100	100	100	100	100	100	100	100
16	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
17	e	e	e	110	100	100	100	b	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
18	e	100	100	100	100	100	100	100	g	g	g	g	g	110	110	110	110	110	110	110	110	110	110	110	110	110
19	100	100	100	100	110	100	100	100	130	g	g	g	g	130	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	c	c	c	c	c	c	c	c	c	c	c		
21	100	120	100	100	100	100	100	100	120	120	100	150	g	150	c	c	c	c	c	c	160	110	110	110	110	
22	120	150	150	180	150	150	150	140	120	120	100	150	s	130	f	f	f	f	f	f	150	150	150	150	150	
23	b	100	110	110	120	140	130	b	100	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120		
24	s	120	120	e	120	120	120	120	g	100	120	120	120	130	110	110	110	110	110	110	110	110	110	110	110	
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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	b	b	b	b	160	100	130	120	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
28																										
29																										
30																										
31																										

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

Time used: 157.5° E.M.T.

MACQUARIE ISLAND HITS DECEMBER 1953

NO RECORD 28th - 31st INCLUSIVE.

HOURLY VALUES OF (WIND) AS RECEIVED DURING DECEMBER 1953 AT MAGUARIE ISLAND

Day	Hour	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.6	2.9	2.7	3.2	2.3	3.1	3.3	3.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	c	3.2	3.1	a	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
3	a	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	c	c	c	c	c	c	c	c	c	c	c	
5	c	3.3	b	3.1	3.1	3.2	3.2	3.5	2.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	
6	a	a	a	3.6	3.6	(3.2)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
7	a	a	a	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
8	f	(3.1)	f	3.1	3.3	3.4	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
9	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	
10	c	(3.1)	f	3.1	(3.0)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
11	c	2.9	2.9	3.1	3.2	(3.3)	2	3.4	3.2	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
12	a	a	a	a	b	a	3.1	2.4	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
13	a	a	b	3.0	3.2	3.0	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
14	a	a	3.3	3.2	3.3	3.3	2.7	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9		
15	a	3.0	3.0	3.1	3.2	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
16	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
17	3.0	3.0	3.1	3.1	3.3	3.2	3.3	(2.8)	(2.9)	3.1	(2.9)	3.1	3.2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
18	3.0	3.0	3.2	3.1	3.1	3.4	3.2	3.5	(2.3)	(2.3)	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
19	a	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	
20	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c		
21	a	a	3.0	(2.9)	(3.2)	3.0	2.3	2.5	3.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
22	s	3.2	3.2	s	3.1	2.9	3.0	2.7	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
23	3.02	2.9	a	3.0	3.0	3.0	3.3	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8		
24	s	s	2.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
25	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	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		
27	3.1	2.9	2.5	3.0	3.2	3.05	3.05	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02		
28																								
29																								
30																								
31																								

NO RECORD 23rd - 31st NOVEMBER

445. 3000: 1.0 = 13.0 Mc/s in 1m 55s Time used: 197.30 NOV. 1953

MAGUARIE ISLAND, 6300ft 2 DECEMBER 1953

HOURLY VALUES OF (13,000) F₁ OBSERVED DURING DECEMBER 1953 AT MAGQUARIE ISLAND

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

446. Sweep: 1-0 - 13.0 1c/s in 1m 55s

Time used: 157.5° E. L. T.

MACQUARIE ISLAND (13000) E1 DEC 1953