

MELBOURNE OBSERVATORY GROUP
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Box 2831AA. G.P.O.
MELBOURNE. VIC.

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON



TOOLANGI

January 1968

1	eP	Z	22	38(53)
2	aP	N Z	00	27 43
	e	N Z		28 04
	e	Z		30 27
	e	Z		30 44
	e(S)	NE		32 56
	e	Z		34 07
	e	N Z		39.4
2	eP	N Z	02	15 06
2	e	Z	11	50 48
2	eP	N Z	21	24(07)
3	eP	Z	03	12 21
	i	N Z		12 23
	i	N Z		12 30
	i	N Z		12 33
4	eP	N Z	01	11 16
	e(ScS)	E		22 37
	eSS	NEZ		29.3
	eLQ	NE		38.6
	eLR	N Z		45.6
	e	N Z		48.7
4	eP	N Z	10	33 27
	e	NEZ		33 31
	e	Z		33 53
	e(PcP)	Z		36 33
	e	Z		36 39
	eS	N		38 13
	e	N Z		40.6
	e	N		43.6
	e	N Z		46.6
4	eP	NEZ	20	30 12
4	no S.P. - E.W. record from 00 hrs. 29.12.67 to 06 25 hrs. on 4.1.68.			
5	eP	EZ	08	05 37
	e	EZ		08 00
5	e(P)	EZ	08	08 00
6	iP	NEZ	15	25 00.7
6	e(S)	NE	23	22 08
	e	E		23.5
	e	N Z		25 12
	e	N	24	00.3
	e	N Z		01 08
	e	NE		11.8
	e	N Z		16.3
7	iP	NEZ	10	03 08.0 comp. S
	i	EZ		03 36
	e	NEZ		03 40
	eS	NE		08 20
	e	NEZ		10.7
	e	E		11.7
	e	Z		12.7

TOOLANGI (continued)

January 1968

7	e(P)	EZ	19	25 08
8	iP	NEZ	03	23 01.3 comp. S.W. 2.7
	e	Z		26 38
	e(S)	N Z		27 41
	e	Z		28 13
	e	NE		30.8
	e	N Z		33.7
8	e(P)	Z	03	28 13
8	eP	NEZ	03	42 38
8	eP	NEZ	05	43 50
8	eP	EZ	18	30 57
8	eP	Z	20	42 03
	e	NEZ		42 07
	e	NEZ		42 13
8	eP	NEZ	21	21 30
8	eP	NEZ	22	02 10
	e	NEZ		02 14
	e	NEZ		04 00
	e	Z		04 27
	e(S)	NE		08 26
	e	NE		11.6
	e	N		12.4
	e	NEZ		14.0
	M	Z		17.3
9	eP	NEZ	00	33 34
9	eP	NEZ	09	33 57

MACQUARIE ISLAND

January 1968

5	iP		08	01 39.6
7	eP		10	05 21
7	iP		21	01 44.6
7	iP		21	09 02.8

MAWSON

January 1968

7	iP		10	09 06.9
8	iP		18	57 02.7
8	iP		22	07 15.5

C.A. van der WAAL
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11. 1. 68

JAN 29 1968



TOOLANGI						TOOLANGI (continued)					
January 1968						January 1968					
10	eP	NEZ	00	50	09	regional	14	e	E	18	07.4
	e	NEZ		50	24			e	E		09.5
	e	NEZ		51	09			e	NE		14.7
	e	N		51	12			e	NE		24.3
	e	N		51	17			e	Z		31.3
10	iP	NEZ	09	38	01.5		15	eP	NEZ	02	08 31
	i	EZ		38	03		15	eP	NEZ	02	20 35
	i	Z		38	10.5		15	eP	EZ	07	09 02
	e(S)	N		45.3			15	iP	NEZ	07	33 35
	e	EZ		46.8				iS	NEZ		33 37
10	iP	N Z	10	10	35.0	comp. 1.8	15	eP	NEZ	08	06 17
	e	Z		12	20		15	eP	NEZ	10	42 59
11	eP	NEZ	00	12	48	regional	15	eP	NEZ	11	54 06
11	eP	NEZ	03	51	04	local	15	e(P)	Z	17	37 33
	eS	NEZ		51	19		15	eP	EZ	19	46 06
	e	N		51	21		16	eP	EZ	17	02 17
11	eP	NEZ	04	48	35		17	e(P)	Z	08	59 53
	e	Z		48	39		17	e(P)	NEZ	09	09 24
11	iP	NEZ	07	02	59	local		e	Z		09 34
	iS	NEZ		03	01			e	Z		20.2
11	eP	NEZ	16	24	07			e	N Z		25.2
11	eP	NEZ	17	03	54		17	iP	NEZ	09	54 09.5
	e	Z		04	03			i	N Z		54 19
	e	Z		04	09			e	N Z		54 25
11	eP	Z	18	34	41			e(S)	N Z		57 45
12	eP	NEZ	03	11	47			e	EZ		59 04
12	eP	NEZ	04	28	56		17	eP	Z	10	27 46
12	eP	NEZ	21	17	57		18	eP	NEZ	12	11 04
13	eP	NEZ	02	22	04			e	Z		11 13
13	eP	NEZ	04	28	30			e	EZ		12 36
13	eP	NEZ	07	14	23			eS	NE		17 09
	eS	NEZ		23	08			e	N		20.7
	e	NE		23	42			e	EZ		22.7
	e	N		27.0			MAWSON				
	e	NEZ		30.4			January 1968				
13	eP	NEZ	08	32	21		13	iP		16	19 00.0
13	eP	NEZ	16	25	22			iS			33 55.0
	e	Z		26	16		14	eP		12	36 33
	eS(KS)	NE		35	38		19	iP		06	17 05.5
	e	NE		36	32			iS			27 30.5
	e	NE		36	57		19	iP		18	34 54.0
	e	N		37.8			20	iP		16	53 58.7
	e	N		41.7				eS		17	04 27
14	iP	NEZ	08	07	21.1	dil. N. 2.4	20	iP		21	32 19.4
	iS	NE		12	01			iS			41 10.6
	iScP	Z		12	34		MACQUARIE ISLAND				
	e	NE		15	17		January 1968				
	e	Z		15	37		14	iP		12	34 19.4
14	eP	NEZ	12	31	44		C.A. van der WAAL				
	eS	NE		36	57		OFFICER-IN-CHARGE				
	e	NEZ		39.4			22. 8. 67				
	e	NEZ		41.4			IAN 0 0 1800				
	e	Z		46.2							

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON



TOOLANGI

January 1968

19	eP	N Z	00	35	51		
19	eP	NEZ	06	10	49		
	eS	NEZ		15	54		
	e	NE		18.5			
19	iP	N Z	14	20	06.5		
	i	N Z		21	44		
19	eP	N Z	14	52	46		
	ò	N Z		52	55		
19	eP(KP)	Z	18	33	47		
	e	Z		35	01		
	e	Z		44	09		
	e	Z		48	02		
19	e(P)	Z	18	44	09		
19	e(P)	Z	18	48	02		
20	eP	N Z	01	15	05		
20	iP	NEZ	16	48	27.6	dil. N.	2.3
	e	NEZ		49	56		
	eS	NE		54	10		
	e	NEZ		57.1			
	e	NEZ		48.9			
20	eP	N Z	17	40	23		
20	iP	N Z	20	16	18.3		
20	iP	N Z	21	27	10.6	dil.	2.4
	e	Z		28	22		
	e	Z		28	27		
	i	Z		30	02		
	iS	NEZ		31	42		
	e	NEZ		33	45		
	e	E		34.1			
	i	N Z		37	03		
21	eP	NEZ	00	34	39		
	e	N Z		35	10		
	e	E		39	53		
	e	N Z		42.2			
	e	N Z		46.5			
21	iP	N Z	01	28	03.6	dil. N.	
	e	Z		28	42		
	e(ScP)	N Z		33	42		
21	eP	N Z	05	03	06		
21	iP	N Z	23	01	53.0	comp. S.	2.4
	e	Z		08	05		
22	eP	Z	00	04	07.5		
22	eP	N Z	00	44	13		
22	eP	N Z	07	31	07		
22	eP	Z	18	22	38		
	e	N Z		22	40		
	e	Z		22	58		
	eS	N Z		28	29		
	e	N		29.7			
22	iP	N Z	18	46	13.5	comp.	
23	eP	N Z	03	34	39		
23	eP	N Z	21	46	31		

TOOLANGI (continued)

January 1968

24	eP	NEZ	01 19 13	
24	eP	NEZ	05 20 21	
24	iP	NEZ	09 37 07.5 comp.	
26	iP	NEZ	04 52 46.7 dil.	2.9
	e	NEZ	54 20	
	e	NEZ	54 33	
	eS	N	58 25	
	e	NE	05 01.9	
26	iP	NEZ	12 18 48.0	
26	eP	NEZ	13 01 51	
26	eP	EZ	16 24 52	
26	iP	NEZ	19 06 11.4	
27	eP	NEZ	03 25 27	
27	eP	NEZ	12 57 40	
27	eP	NEZ	14 06 57	
	i	Z	07 03	
	e	Z	07 07	
28	iP	NEZ	11 46 30.6 dil. N.	
28	eP	NEZ	18 39 39	
28	eP	Z	22 39 54	
29	eP	NEZ	04 25 14	
29	eP	NEZ	09 28 51	
	e	Z	28 58	
29	eP	N Z	10 19 44	
	e	EZ	19 50	
	e	EZ	22 29	
	e	Z	26 11	
29	e(P)	EZ	10 22 29	
29	e(P)	Z	10 26 11	
29	eP	N Z	10 31 17	
	e	N Z	31 29	
	e	Z	31 39	
	eS(KS)	E	41 23	
	e	Z	47.7	
	e	E	52 43	
	e	N Z	57.3	
	e	N Z	59.5	
	e	NEZ	11 17 17	
29	e(P)	NEZ	11 17 17	
29	eP	NEZ	15 49 18	
	e	Z	50 10	
	e	E	54 03	
	e	EZ	57.0	
29	eP	NEZ	16 09 21	
	e	EZ	10 03	
29	eP	NEZ	16 15 28	
29	eP	NEZ	16 55 02	
	e	Z	55 10	
	e	Z	55 15	
	eS(KS)	NE	17 05 07	
	e	E	16.3	
	e	Z	23.4	

TOOLANGI (continued)

January 1968

29	eP	EZ	21 27 55
30	eP	NEZ	02 00 07
30	eP	EZ	03 13 57
30	eP	EZ	03 34 13
30	iP	NEZ	03 51 33.6 dil. NW. 2.7
	i	Z	53 10
	e	EZ	53 22
	e	Z	53 28
	iS	NEZ	57 17
	e	Z	59.2
	e	N	04 00.1
	e	N	00.3
	e	EZ	01.1
30	eP	NEZ	05 44 04

MACQUARIE ISLAND

January 1968

26	eP		04 55 12
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MAWSON

January 1968

23	iP		16 26 34.5
26	iP		04 56 52.7
	iS		05 05 13.2
29	iP		10 38 06.7

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BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES:
TOOLANGI---MACQUARIE ISLAND---MAWSON



TOOLANGI

January 1968

31	iP	NEZ	03 06 11.5
	e	NE	06 37
	e	E	11 55
31	eP	NEZ	11 20 31
	e	Z	20 45
31	eP	NEZ	11 57 49
31	eP	EZ	13 36 31
	e	N Z	36 34
31	eP	NEZ	15 39 44

February 1968

1	iP	NEZ	05 06 14.8	
1	eP	Z	12 59 35	
	e	Z	59 48	
1	eP	NEZ	13 34 30	
1	eP	Z	23 19 19	
2	eP	NEZ	00 50 24	
2	eP	NEZ	08 41 59	local
	eS	NEZ	42 18	
2	eP	NEZ	09 46 03	
	e	EZ	56 14	
2	e	Z	18 35 52	
2	iP	NEZ	18 53 01.7	
2	eP	Z	19 36 26.5	
2	eP	NEZ	21 22 47	
2	eP	NEZ	23 22 30	
	e	Z	22 42	
3	eP	NEZ	05 22 59	
	eS	NE	28 30	
	e	NE	30 51	
3	eP	NEZ	15 59 28	
4	eP	NEZ	00 49 45	local
	eS	NEZ	50 00	
4	eP	EZ	11 13 06	
	e	N Z	13 14	
	eS	NE	23 05	
	e	NE	28 05	
	e	E	34.2	
4	eP	NEZ	16 33 23	
	e	EZ	33 36	
5	e(P)	NEZ	05 50 19	
5	eP	EZ	09 48(16)	
5	iP	EZ	20 49 26.7 dil.	
6	eP	NEZ	04 13 22	
6	iP	NEZ	04 45 02.7 dil.	
6	eP	EZ	12 00 28	

MACQUARIE ISLAND

January 1968

30 iP 03 53 40.7

February 1968

5 iP 09 02 42.6

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MELBOURNE OBSERVATORY GROUP
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI---MACQUARIE ISLAND---MAWSON

Box 2831AA, G.P.O.
MELBOURNE, VIC.
International
Seismological
Centre

TOOLANGI

February 1968

7	iP	NEZ	00 31	57.6
7	iP	NEZ	06 11	55.6
7	iP	NEZ	13 16	34.6 comp.
	e	EZ	16	58
	e(S)	NE	21	09
8	iP	EZ	01 59	04.7 (regional)
8	eP	NEZ	10 30	38
8	eP	NEZ	18 21	46
	e	Z	22	04
9	eP	NEZ	05 09	23 (regional)
9	eP	NEZ	16 41	08
9	eP	Z	18 13	35
10	iP	NEZ	00 38	23.6 dil.
10	iP	NEZ	05 35	49.2 dil.
10	eP	N Z	10 12	25
	e	Z	12	49
11	eP	NEZ	12 24	02
11	eP	EZ	18 48	(53)
11	eP	NEZ	20 18	33
11	eP	EZ	20 51	47
12	eP	NEZ	01 34	33
	e	NEZ	36	06
12	i(P)	NEZ	01 36	06.4
12	iP	NEZ	05 51	13.7 2.9
	i	NEZ	51	19
	i	NEZ	51	29
	eS	NEZ	56.5	
12	eP	NEZ	07 44	19
12	iP	NEZ	07 55	09.7
12	eP	EZ	20 44	14
12	eP	NEZ	20 56	13
13	iP	NEZ	02 19	16.0 dil. N.W. 2.5
13	iP	Z	14 12	48
13	eP	EZ	18 57	18

MAWSON

February 1968

12	iP	05 57	17.0
	iS	06 07	41.1

MACQUARIE ISLAND

February 1968

10	iP	09 04	16.4
10	eP	12 36	11
12	eP	05 53	31

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FEB 28 1968

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BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS
PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI---MACQUARIE ISLAND---MAWSON

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International
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Centre

TOOLANGI

February 1968

14	eP	NEZ	00 04 43	
14	eP	NEZ	03 53 03	
14	eP	NEZ	04 11 45	(regional)
14	eP	NEZ	06 56 18	
14	eP	NEZ	11 41 16	
14	eP	NEZ	12 06 32	
15	eP	NEZ	04 33 42	
	e	NEZ	33 49	
15	eP	Z	05 59 41	
	e	EZ	59 50	
	e(S)	NE	06 06 02	
15	eP	NEZ	15 37 31	
15	eP	NEZ	18 59 03	
16	eP	NEZ	00 17 19	
16	iP	NEZ	14 35 27.1	comp.
17	eP	NEZ	02 58 12	
17	eP	NEZ	13 06 32	
	e	N Z	06 37	
	e	E	10.6	
	e	E	11.5	
	e	N	12.5	
17	iP	NEZ	17 27 38.8	comp. 1.9
17	iP	NEZ	19 52 20.4	comp.SW. 1.9
17	eP	NEZ	21 43 49	
18	iP	NEZ	04 11 34	
18	iP	NEZ	09 35 41.6	dil. 2.1
	e	NEZ	37 09	
	e	NEZ	37 15	
	e	Z	38 00	
	iS	NEZ	40 41	
	e	NE	43 17	
18	eP	NEZ	14 50 19	
18	eP	NEZ	20 18 47	
18	eP	NEZ	22 00 05	strong local
	e(S)	NEZ	00 21	
	e	NEZ	00 24	
18	eP	EZ	23 29 26	
19	iP	NEZ	01 18 13.8	dil.
19	eP	NEZ	14 01 35	
	e	N	07.0	
	e	NE	10.8	
	e	N Z	15.2	
	e	N Z	18.5	

TOOLANGI (continued)

February 1968

19	e	EZ	23 05 01	
	e	Z	05 05	
	e	N Z	05 34	
	e	N	08 38	
	e	NE	25.4	
20	eP	Z	00 36 55	
	e	EZ	37 16	
	e	Z	37 35	
	e	EZ	37 47	
20	eP	NEZ	02 39 41	
	e	NEZ	39 58	
20	eP	NEZ	09 33 18	

MACQUARIE ISLAND

February 1968

16	eP		05 47 52	
16	eP		10 58 46	
19	eP		23 05 26	

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23. 2. 68

MELBOURNE OBSERVATORY GROUP
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

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International
Seismological
Centre

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON

TOOLANGI

February 1968

21	eP	EZ	01 56 04.5	
21	eP	NEZ	05 29 09	
21	iP	NEZ	09 04 59.4	
	e	NEZ	06 23	
	eS	NE	10.8	
	e	E	12.7	
	e	N Z	17.7	
	e	N Z	20.8	
21	eP	NEZ	12 43 21	
21	iP	NEZ	19 33 22.2 comp.	
	e	Z	36 14	
21	iP	NEZ	21 12 12.5	
22	eP	NEZ	02 06 56	
	eS	NE	09 30	
	e	NEZ	10.2	
	e(T)	NEZ	20.7	
22	e(P)	NEZ	02 20 29	
	e	NEZ	20 44	
22	iP	NEZ	09 19 43.3 comp. 2.2	
22	eP	N Z	19 22 13	
	e	NEZ	22 19	
	eS	NE	26 34	
	e	E	27.6	
	e	Z	28.7	
23	eP	NEZ	02 19 00	
	e	E	23.6	
	e	NE	23 56	
	e	Z	26.0	
23	eP	NEZ	07 21 40	local
23	eP	NEZ	09 36 15	local
23	eP	NEZ	14 15 54	
23	iP	NEZ	16 21 16.5 dil. N.	
24	eP	NEZ	01 17 26	
	e	Z	20 24	
24	eP	NEZ	04 49 38	
	T Max.	NEZ	05 05.8	
24	eP	NEZ	08 27 27	
	T Max.	NEZ	43.7	
25	eP	NEZ	12 54 08	
25	iP	NEZ	16 00 31.5	
25	eP	NEZ	20 12 07	
	e	NEZ	12 24	
26	eP	NEZ	06 01 29	
	T Max.	NEZ	17.8	
26	iP	NEZ	11 00 51.8 dil. 2.7	
	e	E	03 11	
	e	E	04.6	
	eS	NE	09 27	
	e	NE	16.0	

TOOLANGI (continued)

February 1968

27	eP	N Z	02 21 32	
27	iP	NEZ	05 27 54.4	
	i	NEZ	28 05	
	e	Z	29 10	
	eS	NE	35 17	
	e	E	38.8	
	e	E	42.1	
27	e(P)	NEZ	06 39 17	
27	eP	NEZ	11 03 30	
	e	N Z	03 40	
	eS	N	10 48	
	e	N	14.2	

MAWSON

February 1968

21	iP		03 03 40.8	
21	iP		14 49 35.5	
21	iP		22 36 16.7	
22	iP		01 01 33.9	
22	iP		22 41 29.4	
23	eP		20 09 09	
24	eP		08 37 00	
25	eP		08 04 43	
26	eP		19 42 23	

MACQUARIE ISLAND

February 1968

26	eP		11 02 45	
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29. 2.68

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PRELIMINARY EARTHQUAKE PHASES AT :
TOOLANGI--MACQUARIE ISLAND---MAWSON



TOOLANGI

February 1968

28	eP	Z	02	53	03	
	e	Z		53	06	
28	iP	NEZ	12	18	41.2	Comp. S. 2.3
	i	EZ		19	01	
	iS	E		27	28	
	e	E		28	18	
	e	E		29	38	
	e	NE		34.1		
	e	NE		37	22	
	e	E		41.4		
28	eP	NEZ	23	53	07	regional
29	eP	NEZ	05	40	51.5	regional
29	eP	NEZ	06	08	00	
29	iP	NEZ	09	16	06.0	dil.
29	eP	NEZ	10	27	35	
	e	N Z		27	48	
29	eP	NEZ	12	04	37	
	e	Z		04	57	
	e(S)	NE		10.2		
	e	NE		12.2		
29	eP	EZ	15	59	05	
	e	Z		59	43	
29	eP	NEZ	16	39	21	
	e	Z		39	46	
	eS	NE		45	43	
	e	N		46	18	
	e	NE		48	42	
	e	N Z		51	52	
29	iP	NEZ	23	42	00.8	
	i	Z		45	00	
	eS	NE		49.6		

March 1968

1	iP	NEZ	00	39	03.6	regional
1	eP	Z	10	29	36	
	e	Z		29	50	
	e	NE		36.8		
	e	NEZ		46.0		
1	eP	NEZ	11	21	51	
	e	NEZ		23	11	
2	eP	Z	11	26	17	
	e	N Z		26	21	
2	eP	NEZ	22	13	58	
	e	Z		14	03	
	eS(KS)	N		23.7		
	e	N		32.5		
2	eP	NEZ	23	45	15	
	e	Z		45	20	
3	eP	NEZ	03	38	27	
	e	NEZ		39	13	
3	e(P)	NEZ	03	39	13	

TOOLANGI (continued)

March 1968

3	iP	NEZ	12	09	16.8	
3	eP	NEZ	23	02	08	
3	iP	NEZ	23	03	09.0	comp. SE. 2.8
	e	E		04	58	
	i	N Z		05	01	
	iS	NEZ		09	14	
	e	E		11.6		
4	eP	NEZ	05	51	07	local
	eS	NEZ		51	13	
5	iP	NEZ	14	44	02.7	
	eS	NE		54	02	
5	iP	NEZ	18	25	31.3	
	i	NEZ		25	36	
	eS	NE		32	40	
	e	NE		36	08	
	e	N		41.8		
5	eP	NEZ	18	39	56	
5	iP	NEZ	18	46	58.0	
5	eP	NEZ	21	11	44	
5	eP	NEZ	21	26	25	
5	eP	NEZ	21	26	44	

MAWSON

February 1968

27	eP		04	54	03	
27	eP		06	12	28	
27	eP		06	28	42	
28	eP		09	45	02	

March 1968

2	eP		20	40	42	
3	eP		05	44	52	
3	eP		06	02	43	
3	eP		07	45	11	
3	eP		10	08	46	
3	eP		13	44	27	
3	iP		13	56	47.6	
3	iP		19	30	00.7	

MACQUARIE ISLAND

March 1968

3	iP		23	05	25.0	
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TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

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MELBOURNE, VIC.

PRELIMINARY EARTHQUAKE PHASES AT :
TOOLANGI - MACQUARIE ISLAND - MAWSON



TOOLANGI

March 1968

TOOLANGI (Continued)

March 1968

6	eP	NEZ	00	24	(02)	
6	eP	NEZ	07	29	40	
	e	NEZ		29	49	
7	eP	NEZ	03	02	00	
	e	NE		10.4		
7	eP	NEZ	13	28	42	
	e	Z		29	01	
	e(S)	NE		33	45	
	e	E		36	15	
	e	N Z		37	46	
7	iP	NEZ	17	45	34.1	comp.
8	iP	NEZ	11	49	56.3	
	e	NEZ		50	12	
	e(S)	NEZ		51	07	
	e	NEZ		51	13	
9	iP	NEZ	00	56	56.7	
9	eP	NEZ	01	18	15	
9	iP	NEZ	03	25	50.5	
	e(S)	N	03	31.1		
9	iP	NEZ	06	34	15.5	dil.
9	eP	NEZ	08	31	51	
	e	Z		32	00	
9	eP	EZ	21	07	26	
	e	Z		07	51	
9	eP	N Z	22	10	18	
9	eP	NEZ	22	36	17	
9	eP	EZ	22	42	25	
10	eP	NEZ	03	10	49	
10	eP	EZ	04	02	51	
10	iP	NEZ	06	44	35.3	dil.
10	iP	NEZ	07	16	59.5	
	e	NEZ		17	56	
	i	Z		20	17	
	e	E		22	23	
	e	NE		23	18	
	e(ScP)	Z		23	51	
10	e(P)	Z	07	20	17	
10	eP	NEZ	13	11	52	local
	eS	NEZ		12	08	
11	eP	NEZ	06	58	04	
11	iP	NEZ	08	34	10.4	comp.W.2.4
	i	NEZ		34	37	
	i	NEZ		36	22	
	e	Z		39	50	
	eS	E		40	16	
	e	NE		40	57	
	e	NEZ		43.7		
	e	EZ		46	44	
12	eP	EZ	05	54	35	
12	iP	NEZ	18	31	09.3	
	e	Z		31	22	
	eSKS	N		41	21	
12	iP	NEZ	19	05	01.2	
12	eP	NEZ	21	30	47	
	e	Z		33	39	
	e(S)	N		35.9		
	e	N Z		41.9		
13	eP	NEZ	09	44	22	
13	eP	EZ	10	39	44	
13	iP	NEZ	10	40	05.3	
13	iP	NEZ	20	31	49.8	dil.E 2.4
	iS	NE		36	51	
13	eP	EZ	21	18	31	
14	iP	NEZ	00	45	35.1	strong local
	eS	NEZ		45	47	
14	eP	NEZ	03	32	15	
14	eP	NEZ	07	43	52	
	e	NEZ		44	00	
14	eP	NEZ	18	51	47	
	e	EZ		51	58	
	eS	N		59.7		
	e	EZ	19	01.2		
15	eP	NEZ	00	00	11	regional
	e	NEZ		01	21	
15	eP	Z	02	46	01	
	e	EZ		46	05	
15	eP	NEZ	06	42	34	
	e	EZ		42	49	
	eS	E		49	08	
	e	N		52.4		
	e	NEZ		55.2		
15	eP	EZ	09	40	48	
	e	NEZ		40	54	
15	eP	EZ	18	03	30	
	e	NEZ		03	35	
16	e(P)	EZ	12	38	20	
17	iP	NEZ	04	09	25.0	
	e	NE		16.6		
	e	Z		18.3		
17	iP	NEZ	04	09	25.0	
	e	NE		16.6		
	e	Z		18.3		
17	eP	NEZ	20	22	34	
	e	NEZ		22	55	
	e	N Z		24	35	
	e	Z		28	01	
	e	NE		29.4		
	e	NE		32.8		
	e	N Z		35.4		

MAWSON

March 1968

5	eP	18	22	09
5	eP	21	24	53
6	eP	02	10	46
6	eP	05	55	23
6	eP	09	50	36
7	iP	01	45	43.4
7	eP	05	42	10
7	eP	19	36	37
7	eP	21	36	28
8	eP	04	46	25
8	eP	21	36	28
9	iP	04	42	02.0
9	iP	06	50	10.0
9	eP	20	38	43
10	iP	04	09	11.5
10	iP	07	22	03.2
11	iP	08	39	08.0
11	eP	13	18	02
12	eP	09	43	22
13	iP	15	22	01.7
13	iP	13	20	45.9
13	iP	23	05	11.8
13	eP	23	24	28
14	iP	05	35	26.6
14	eP	06	36	16
14	iP	10	26	20.3
14	iP	17	07	41.6
15	iP	03	49	41.5
15	iP	10	32	12.0
15	eP	11	30	23
15	iP	13	15	14.9
15	eP	19	00	15
15	iP	21	47	45.9
15	iP	23	02	05.4
15	iP	23	51	09.3
16	eP	04	08	02
16	iP	05	10	19.0
16	eP	06	08	16
17	eP	01	30	12
17	iP	01	59	35.1
17	iP	02	45	35.0

MACQUARIE ISLAND

March 1968

7	iP	03	59	33.3
10	iP	07	16	24.2
10	iP	18	49	34.4

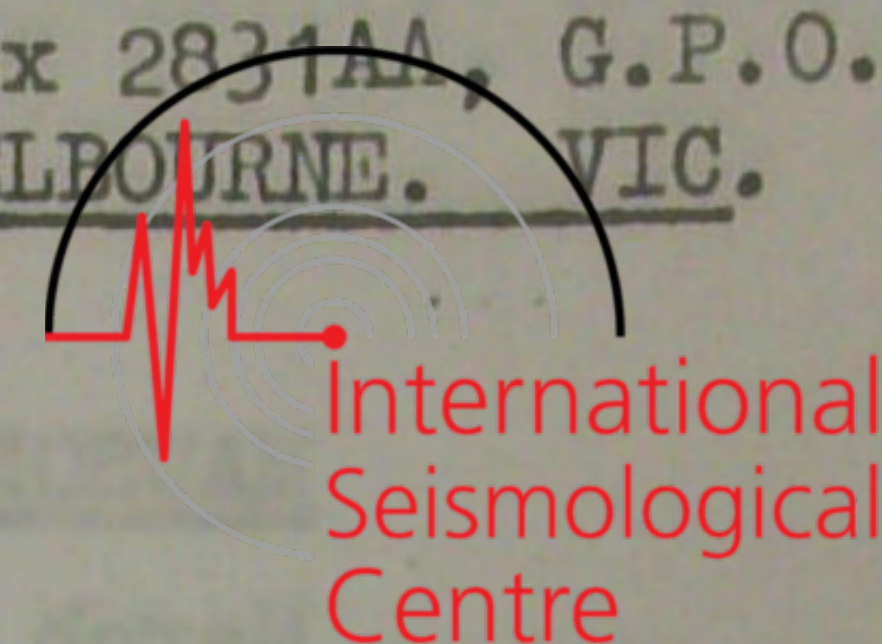
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19.3.1968.

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Box 2831AA, G.P.O.
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PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON



TOOLANGI

March 1968

18	eP	NEZ	01	34	24 (regional)
18	iP	NEZ	07	28	55.3 2.4
	e	EZ		30	37
	iS	NEZ		33	35
	e	NE		36	35
18	eP	NEZ	18	22	23
19	eP	NEZ	01	43	36.5
	e	NE		49.9	
	e	N		53	45
	e	EZ		56.2	
19	eP	NEZ	02	38	52
	e	Z		38	57
	e	Z		39	09
19	eP	NEZ	13	12	35
19	eP	NEZ	13	16	02
19	eP	NEZ	13	33	29
19	eP	NEZ	18	30	51
	e	EZ		31	13
19	eP	EZ	19	16	09
	e	Z		16	18
19	eP	NEZ	19	24	25
19	(Tmax)	NEZ	23	58.0	
20	eP	NEZ	04	21	35
	e	NEZ		21	43
20	iP	NEZ	10	12	24.3 dil. N
20	eP	Z	12	26	19
	e	Z		26	33
20	e(P)	EZ	12	26	33
20	eP	EZ	13	01	54
	e	EZ		01	57
20	eP	EZ	22	11	35
21	iP	N Z	01	12	54.6
21	eP	N Z	03	50	42 (regional)
21	eP	N Z	07	16	36
	e	Z		16	48
	e	Z		17	03
21	eP	N Z	20	45	20
22	iP	NEZ	09	24	07.8
	e	Z		24	19
	e	Z		25	07
	e(S)	E		31	22
	e	N		32	18
22	eP	NEZ	19	26	16
	e	N Z		26	20
	eS	N		31	52
23	eP	NEZ	02	55	25
24	Nil				

TOOLANGI (Continued)

March 1968

25	eP	NEZ	01	12	17 (regional)
25	eP	Z	03	02	18
	e	NEZ		02	26
	e	Z		02	41
	e(S)	NE		07.0	
	e	Z		09.9	
25	e(P)	NEZ	03	02	26
25	iP	NEZ	07	12	27 local
	iS	NEZ		12	32.5
25	eP	NEZ	20	47	41
25	eP	NEZ	21	22	34
26	iP	NEZ	00	48	54.4 comp.S.E.2
	i	N Z		50	37
	i	NEZ		50	42
	iScP	NEZ		53	39
	iS	NEZ		54	26
	e	NEZ		57	36
26	eP	NEZ	04	57	02
	e	Z		57	14
26	iP	NEZ	19	49	21.2 dil.N.W.2.
	e	Z		49	43
	e	N Z		49	50
	e	Z		51	43
	e(S)	NE		56	18
	e	E		59.7	
26	eP	NEZ	21	31	14

MAWSON

March 1968

17	iP		04	15	38.9
17	eP		10	46	24
17	eP		11	07	18
17	iP		18	23	43.6
17	iP		19	36	16.3
17	eP		22	17	34
21	iP		07	04	45.7
21	iP		22	49	46.7
22	eP		06	41	06
22	iP		08	32	39.0
23	eP		04	26	07
23	iP		08	31	12.0
23	eP		21	00	51
24	iP		02	01	55.5
24	eP		03	46	44
24	eP		10	07	44
24	iP		12	16	06.5
24	iP		12	50	53.0

MAWSON (Continued)

March 1968

25	eP	13	53	48
26	eP	00	52	15
26	iP	04	59	31.1
26	eP	06	27	13
26	iP	10	27	11.3
26	eP	11	31	17

C.A. van der WAAL
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28-3-1968

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

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PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON

TOOLANGI

March 1968

26	eP	NEZ	23	52	33
27	eP	EZ	12	38	58
	e	EZ		39	48
27	eP	NEZ	15	29	35
27	e(P)	EZ	19	05	32
27	eP	EZ	21	16	40
	e	EZ		18	08
	e	EZ		18	16
27	eP	NEZ	22	43	35
	e	NEZ		43	44
	eS	NE		49	08
	e	E		51.8	
	e	N		54.5	
28	eP	EZ	01	04	03
28	eP	EZ	04	39	30
28	eP	NEZ	05	51	34
	e	NEZ		51	48
	eS	NE		56	46
	e	NE		59	11
	e	Z	06	00.8	
28	iP	NEZ	07	33	40.6
28	eP	EZ	07	59	23
28	eP	NEZ	13	11	40
28	eP	NEZ	17	03	12
	e(S)	NEZ		04	43
29	eP	NEZ	17	51	02
29	eP	EZ	20	51	41
30	iP	NEZ	00	50	19.1 dil.
30	iP	NEZ	03	04	07.1 dil.
30	eP	Z	11	40	16
31	eP	NEZ	03	27	30
	e	Z		27	48
31	eP	NEZ	08	28	42
31	eP	NEZ	13	56	19

MACQUARIE ISLAND

March 1968

26	iP		00	51	06.8
29	iP		14	01	39.3

MAWSON

March 1968

27	eP		07	51	36
27	eP		19	07	44
27	eP		19	59	07
27	iP		21	12	35.5
27	iP		21	32	07.6
27	eP		22	43	55
28	eP		02	30	10
28	eP		02	33	02
28	iP		02	34	49.6
28	iP		05	57	39.4
28	iP		13	48	54.9
28	eP		15	44	56
28	iP		22	08	56.2
28	eP		22	20	13
29	eP		07	18	27
29	eP		21	20	33
30	eP		19	36	53
30	iP		23	30	12.0
30	iP		23	35	53.0
31	eP		09	28	49
31	eP		11	46	05

C.A. van der WAAL
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2-4-1968

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Box 2831AA, G.P.O.
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PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI---MACQUARIE ISLAND---MAWSON



TOOLANGI

April 1968

1	eP	NEZ	00 53 19	
	e	NEZ	53 27	
	e	NEZ	53 35	
	eS	NE	01 02 39	
	e	Z	06 19	
	e	E	18.5	
1	e(P)	Z	01 06 19	
1	eP	NEZ	02 30 28	
	e	N Z	30 32	
1	iP	NEZ	06 42 49	dil.
	e	Z	42 53	
1	eP	NEZ	07 24 32	
	e	NEZ	24 41	
	eS	NEZ	33 48	
	e	E	34 41	
	e	E	41.7	
2	iP	NEZ	18 16 53.0	dil. 2.3
	e(S)	NEZ	20 23	
	e	NEZ	21.2	
	T max	NEZ	33.5	
2	iP	NEZ	10 47 20.0	1.8
2	iP	NEZ	18 05 28	dil. 1.9
	T max	NEZ	22.0	
2	eP	EZ	20 10 43	
3	e(P)	NEZ	06 53 35	
3	eP	EZ	08 07 33	
3	iP	NEZ	10 53 49.5	comp. 2.3
	e	Z	54 12	
	eS	E	57.5	
	e	EZ	58.5	
4	iP	NEZ	09 18 38.4	
	e	NE	28.0	
4	iP	NEZ	13 41 03.2	comp.
5	eP	NEZ	02 07 38	
5	iP	NEZ	08 25 35.7	dil.
5	iP	NEZ	23 09 51	local
	eS	NEZ	10 00	
6	iP	NEZ	04 12 35.6	local
	e	NEZ	12 54	
6	iP	NEZ	04 34 56.1	local
	e	NEZ	35 15	
6	iP	NEZ	04 47 23.6	local
	e	NEZ	47 42	
6	eP	NEZ	17 04 34	
6	eP	NEZ	21 50 05	
7	eP	NEZ	01 39 19	
7	eP	NEZ	04 59 36	
	eS	E	05 04 37	
	e	NE	09.3	

TOOLANGI (continued)

April 1968

8	iP	NEZ	02 05 45.4	
8	iP	NEZ	06 17 17.4	
8	iP	NEZ	11 51 28.5	local
	eS	NEZ	51 38.5	
8	iP	NEZ	14 56 50.8	
9	eP	Z	02 48(48)	
	eS	NE	58 38	
	e	NE	03 04.6	
	e	NE	17.2	
	e	EZ	22.4	
9	iP	NEZ	11 34 01.1	dil.
	iS	NEZ	39 10	
9	eP	NEZ	17 03 14	
9	eP	NEZ	19 44 46	
10	iP	NEZ	05 07 06.0	
10	e(P)	NEZ	08 16(13)	
10	iP	NEZ	13 13 30.3	
10	eP	NEZ	13 35 12	
10	eP	NEZ	18 37 47	
	e	EZ	37 53	
	e	NEZ	38 13	
	eS	NE	42 35	
	e	NEZ	42 48	
10	eP	NEZ	18 46 05	
11	iP	NEZ	00 27 02.3	comp.
	e	Z	27 10	
11	eP	NEZ	01 43 45	
11	iP	NEZ	11 41 27.6	comp.
11	eP	NEZ	12 21 07	
	e	NEZ	21 10	
11	eP	NEZ	20 12 17	
12	eP	NEZ	06 23 24	
12	eP	NEZ	13 06 45	
	i	EZ	07 00	
12	eP	NEZ	16 42 01	
12	eP	NEZ	19 57 13	
13	eP	NEZ	01 35 09	
13	iP	NEZ	17 39 18.0	dil.
13	eP	Z	21 22 34	
14	eP	EZ	02 15 09	
14	iP	NEZ	08 48 25.9	
14	eP	NEZ	13 16 22	
14	eP	Z	14 43 55	
14	iP	NEZ	14 47 07.6	
14	iP	NEZ	14 53 40.6	dil. 2.3
	iS	NE	58 48	

P.T.O.

TOOLANGI (continued)

April 1968

15	eP	NEZ	03 14 48	
15	eP	NEZ	12 03 54	
16	iP	NEZ	19 05 06	very strong local
	iS	NEZ	05 21	

MACQUARIE ISLAND.

1	eP		00 55 14
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MAWSON

April 1968

1	eP		06 15 52
2	iP		01 19 38.0
2	iP		08 11 13.6
2	iP		10 53 26.8
2	eP		18 05 13
3	eP		13 53 35
3	eP		15 44 14
4	eP		09 24 38
6	eP		08 32 36
6	eP		09 47 38
6	eP		13 49 12
7	iP		04 59 51.9
7	eP		05 22 32
8	eP		03 54 21
8	iP		06 39 24.1
8	iP		07 02 23.1
8	eP		23 52 33
9	eP		01 46 40
9	eP		02 48 38
9	eP		18 46 26
12	eP		09 57 53
12	iP		23 41 52.7
13	eP		05 08 05
13	eP		07 28 51
13	iP		17 04 07.9
14	eP		16 33 51
14	iP		16 51 09.5
14	iP		17 39 49.2
14	iP		18 21 45.1

C.A. van der WAAL,
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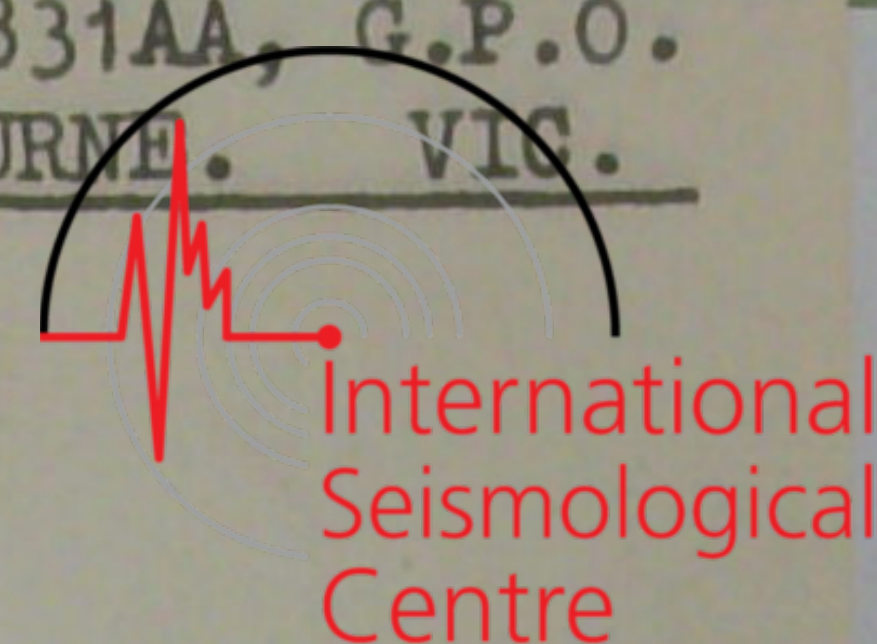
18. 4. 68



TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

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PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON



TOOLANGI

April 1968

17	eP	N Z	15 21 01	
	e	EZ	21 23	
18	eP	NEZ	04 40 34	
	e	Z	46 17	
18	e(P)	Z	04 46 17	
18	eP	N Z	06 58 23	
	e	NE	07 05.7	
18	eP	NEZ	09 34 00	
18	iP	NEZ	10 05 11.3 comp.	
18	eP	NEZ	12 40 00	
18	eP	NEZ	20 37 58	
19	eP	NEZ	09 55 50	
19	eP	N Z	12 48 54	
19	iP	NEZ	23 34 36.3	
20	eP	NEZ	01 13 54	
20	eP	NEZ	07 42 09	
	e	Z	42 18	
20	eP	NEZ	12 33 07	
	e	EZ	33 24	
	e	EZ	33 41	
	e	EZ	33 52	
	e	EZ	35 17	
	eS	NE	39 25	
	e	NE	43 12	
	e	EZ	46.0	
20	e(P)	NEZ	19 19(14)	
	eS	NE	24 56	
20	eP	NEZ	22 47 42	
21	eP	NEZ	06 16 30	
21	eP	EZ	08 45 48	
	e	NEZ	45 56	
	eS	E	55 30	
	e	N	09 00 16	
	e	E	09.0	
21	iP	NEZ	16 47 57.2 comp. N. 2.7	
	eScP	Z	51 54	
	eS	NE	51 58	
	e	N Z	53 05	
22	eP	Z	08 54(23)	
	e	N	09 04.8	
22	iP	NEZ	14 30 42.7 dil. N. 1.9	
22	eP	NEZ	22 11 55	
	e(S)	NE	13 05	
22	eP	NEZ	23 09 55	
	e(S)	NE	11 05	
23	eP	N Z	04 30 43	
	i	NEZ	30 49	

TOOLANGI (continued)

April 1968

23	iP	NEZ	16 05 14.6	
23	eP	NEZ	16 56 30	
	e	EZ	56 40	
23	eP	NEZ	19 23 41	
	e	N Z	24 09	
23	e	NE	20 45.0	
	e	Z	48 16	
	e	Z	54.0	
	e	E	21 23.7	
	e	N Z	33.4	

MAWSON

April 1968

16	eP		11 32 46	
16	eP		19 36 46	
18	eP		09 21 15	
18	eP		11 15 20	
20	eP		04 54 48	
20	eP		12 23 15	
20	eP		12 37 57	
21	eP		02 10 28	
21	iP		04 18 35.2	
21	eP		06 07 01	
22	eP		04 24 05	
22	eP		14 21 32	

MACQUARIE ISLAND

April 1968

20	eP		12 33 19	
20	eP		19 15 31	
21	eP		16 43 47	

C.A. van der WAAL
OBSERVER-IN-CHARGE

26. 4. 68

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON

Box 2841AA, G.P.O.
MELBOURNE, VIC.
 International
 Seismological
 Centre

TOOLANGI

April 1968

MAWSON

April 1968

24	iP	NEZ	14	05	05.2	dil. N.	2.0	25	eP	17	54	01
	e	Z		06	37			25	eP	19	52	56
	i	Z		06	44			25	eP	22	25	07
	i	N Z		06	47			26	eP	15	19	46
24	eP	NEZ	23	51	26			26	iP	16	45	51.0
25	eP	NEZ	17	20	17			27	eP	11	10	50
25	eP	NEZ	17	48	14			27	eP	15	24	23
25	iP	NEZ	21	33	30.7			27	iP	17	16	35.6
	eS	NE		40	08			27	eP	23	21	05
	e	NE		43	24			28	eP	00	00	51
	e	Z		46.4				28	iP	16	25	23.7
26	eP	NEZ	00	50	29			28	iP	18	57	34.0
	eS	NE		57	08							
	e	NE	01	00.5								
	e	EZ		04.2								
26	eP	Z	15	18	46							
	e	NEZ		19	56							
26	eP	NEZ	15	19	56							
27	eP	EZ	06	41	24							
27	iP	NEZ	11	04	44.5							
	e	Z		04	56							
27	iP	NEZ	12	57	50.5							
27	iP	NEZ	14	03	48.9							
27	eP	NEZ	16	35	26							
28	iP	NEZ	02	56	12.3							
28	iP	NEZ	04	30	53.7							
29	iP	NEZ	00	52	04.2	dil. N.	2.1					
	e	E		59	11							
	e	N	01	00	25							
29	e(S)	NE	09	17	13							
29	eP	NEZ	09	38	54							
30	NIL.											

C.A. van der WAAL
OBSERVER-IN-CHARGE

2. 5. 68

TOOLANGI GEOPHYSICAL OBSERVATORY

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON

Box 2831AA G.P.O.

MELBOURNE, VIC.

International
Seismological
Centre

TOOLANGI					TOOLANGI (continued)				
May 1968					May 1968				
1	eP	NEZ	00 04 47		7	e(P)	NEZ	09 22 41	
1	eP	NEZ	03 06 42		7	eP	NEZ	09 52 10	
1	iP	NEZ	04 38 28.4		7	eP	NEZ	10 31 24	
	e	N Z	38 40		7	iP	NEZ	11 49 56.8	comp. S. 2.0
	e(S)	NE	44 14		7	eP	NEZ	18 00 21	
	e	N	44 39						
	e	E	52.1						
	e	Z	54.8						
	e	Z	05 02.3						
1	iP	NEZ	06 02 47.3						
1	eP	NEZ	08 55 32						
	e	E	55 40						
1	iP	NEZ	14 43 33.2						
2	iP	NEZ	05 49 03.2						
	e	Z	49 11						
	i	Z	49 31						
	e(PcP)	Z	52 37						
2	e(P)	Z	05 52 37						
2	iP	NEZ	13 09 44	dil.					
2	eP	NEZ	23 32 39						
	e	Z	33 26						
	eS	NE	37 55						
3	eP	EZ	00 58 05						
3	eP	NEZ	01 49 43						
3	iP	NEZ	05 43 19.7	2.3					
3	eP	NEZ	11 43 17						
4	iP	NEZ	03 44 54.7						
4	eP	NEZ	03 31 33						
4	eP	NEZ	17 17 48						
5	iP	NEZ	03 13 10.5						
5	eP	EZ	09 10 44						
	e	Z	11 28						
5	e(P)	Z	09 11 28						
6	eP	NEZ	07 44 18						
6	eP	NEZ	12 24 42	regional					
	e	NEZ	25 52.5						
6	eP	EZ	17 43 06						
	e	E	48.0						
	e	N	49.2						
	e	Z	51.0						
7	eP	EZ	04 45 49						
	e	N Z	46 10						
7	e(P)	N Z	04 46 10						
7	eP	Z	09 19 16						
	e	NEZ	19 28						
	e	NEZ	22 41						

MACQUARIE ISLAND

May 1968

2 eP 23 35 13

MAWSON

April 1968

30 eP 20 42 54

30 eP 23 55 01

May 1968

1 eP 02 02 43

1 iP 14 15 55.3

2 eP 02 46 20

2 eP 19 16 04

2 iP 19 37 22.5

2 iP 20 36 23.9

2 eP 23 37 30

5 eP 04 12 29

6 iP 04 51 34.5

6 iP 10 51 31.2

C.A. van der WAAL,
OBSERVER-IN-CHARGE

9.5.68

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Box 2834AA, B.P.O.
MELBOURNE, VIC.
International
Seismological
Centre

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON

TOOLANGI

May 1968

8	iP	NEZ	00 22 31.6	
8	iP	NEZ	07 21 31.4	
8	iP	NEZ	11 05 00.0	
	i	NEZ	05 11	
	e	Z	06 13	
	e	N Z	06 37	
	eS	N	09 07	
	e	N Z	10 35	
	e	Z	15.0	
8	e(P)	Z	12 35(50)	
	e	Z	36 01	
	eS(KS)	NE	46 10	
	e	NEZ	52.3	
	e	N Z	54.1	
	e	NE	56.2	
	e	NE	13 04.0	
	e	Z	08.7	
9	eP	NEZ	07 26 04	
9	eP	NEZ	10 32 13	
9	eP	NEZ	12 34 40	
9	eP	NEZ	14 59 17	
9	eP	NEZ	19 35 40	
10	eP	NEZ	00 12 03	
10	eP	N Z	05 48 23	
	e	NEZ	48 26	
10	eP	NEZ	06 03 40	
	e	EZ	03 52	
	e	EZ	04 13	
10	eP	NEZ	09 34 14	
	e	NEZ	34 30	
10	eP	NEZ	13 30 52	
10	eP	NEZ	15 20 02	
10	eP	NEZ	20 43 56	
	e	Z	44 10	
10	iP	NEZ	22 55 23.8 dil.E.	1.9
	eS	NE	23 00 49	
11	iP	NEZ	15 39 53.3 comp.	
	e	N Z	40 35	
	e	Z	42 48	
	eS	NE	44 52	
	e	Z	46 34	
	e	N Z	48.7	
11	eP	NEZ	17 03 07	
11	eP	NEZ	20 34 40	
	e	NEZ	35 51	
11	e(P)	NEZ	20 35 51	

TOOLANGI (continued)

May 1968

12	eP	NEZ	01 17 41	local
	eS	NEZ	17 57	
12	e(P)	NEZ	18 45(05)	
13	eP	EZ	04 02 26	
	e	NE	07.1	
	e	N Z	10.1	
13	eP	NEZ	08 11 20	
14	eP	NEZ	01 23 08	
14	eP	NEZ	05 43 47	
14	eP	NEZ	06 28 32	
14	eP	NEZ	07 34 19	
14	iP	NEZ	14 15 53.0 comp.	2.2
	e	N Z	16 10	
	e	NEZ	16 30	
	iS	NEZ	24 47	
	e	NE	25 35	
	e	NE	32.5	
	e	E	37 15	
14	eP	N Z	14 44 06	
	e	Z	44 13	

MAWSON

May 1968

7	eP		06 19 50
7	eP		12 51 35
8	eP		05 27 09
9	eP		03 15 25
9	eP		06 45 36
9	eP		07 08 55
11	eP		15 45 54
11	eP		17 44 13
12	eP		18 17 07
13	eP		17 19 07
13	eP		17 49 11
14	eP		05 48 56
14	eP		18 16 01

C.A. van der WAAL,
OBSERVER-IN-CHARGE

17. 5. 68

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Box 2831AA, G.P.O.,
MELBOURNE, VIC.

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON



TOOLANGI

May 1968

15	eP	NEZ	12 45 12	
15	eP	NEZ	15 06 43	
	e	Z	06 52	
	e(S)	E	10 52	
	e	NE	11 52	
	e	N	13 31	
16	eP	NEZ	01 00 58	
	e	Z	01 03	
	e	Z	01 30	
	e	Z	01 50	
16	eP	NEZ	06 48 52	
16	eP	NEZ	08 01 03	
16	eP	NEZ	08 21 10	
16	eP	NEZ	09 10 16	
16	eP	NEZ	10 51 05	
	i	Z	51 07	
16	eP	NEZ	16 25 43	
16	eP	NEZ	17 40 17	
16	eP	NEZ	18 55 18	
16	eP	NEZ	19 28 49	
16	eP	NEZ	19 54 05	
16	eP	NEZ	20 07 31	
16	eP	NEZ	20 34 18	
16	eP	NEZ	23 16 45	
17	eP	NEZ	07 25 31	
17	eP	NEZ	08 03 04	
17	eP	NEZ	10 54 38	
17	eP	NEZ	13 09 20	
17	eP	NEZ	13 14 37	
17	eP	NEZ	18 28 57	
18	NIL			
19	eP	NEZ	17 02 46	
20	iP	NEZ	07 19 19.8	2.6
	eS	E	24 19	
	e	E	24 57	
	e	NE	26 21	
	e	EZ	27 33	
20	iP	NEZ	20 12 02.7	2.7
	eS	NE	17 05	
20	eP	NEZ	20 26 35	
20	eP	NEZ	21 22 12	
21	eP	NEZ	08 32 23	
	eSKS	E	42 38	
21	eP	NEZ	11 02 33	
21	eP	N Z	21 24 40	

TOOLANGI (continued)

May 1968

22	eP	NEZ	00 24 20	
	e	Z	24 29	
22	eP	NEZ	06 16 03	
22	eP	NEZ	11 03 55	
22	eP	NEZ	19 41 20	
	eS	NE	51 09	
23	e(P)	NEZ	02 19 50	
23	eP	NEZ	17 28 59	
24	eP	NEZ	04 39 00	
24	eP	EZ	14 18 27	
	eS	NE	28 14	
24	iP	NEZ	15 50 31.9	comp. SE. 2.6
	ePcP	NEZ	52 19	
	eScP	Z	55 16	
	e	Z	55 33	
	eS	NEZ	55 49	
	e	NE	59.0	
	e	NE	59 16	
24	eP	NEZ	17 45 35	
	eS	N	49 36	
	T max.	NEZ	18 04.6	
24	eP	NEZ	21 02 08	
	eS	NE	06 10	
	T max.	NEZ	20.9	
25	eP	NEZ	11 22 59	
	T max.	NEZ	42.0	
25	eP	NEZ	23 53 57	
	T max.	NEZ	24 12.9	
26	eP	NEZ	01 16 02	
26	eP	NEZ	04 09 40	
	e	Z	10 00	
26	eP	NEZ	14 48(06)	
	e(S)	NE	53 02	
	e	E	54 27	
	e	NEZ	54 49	
27	eP	NEZ	02 27 16	
28	eP	NEZ	01 34 39	
28	eP	EZ	02 16 04	
28	eP	NEZ	03 40 08	
	e	EZ	40 22	
28	iP	NEZ	09 12 47.8	
	e	Z	15 40	
	e(S)	NEZ	18 07	
	e	N	19.8	
	e	Z	21.6	
28	iP	NEZ	13 34 07.8	comp. S.
	eS	NEZ	39 33	
28	eS	NE	22 54 16	
	e	E	55 30	
29	iP	NEZ	04 44 33.3	

TOOLANGI (continued)

May 1968

29	iP	NEZ	17 27 25.7
	e	Z	28 16

MACQUARIE ISLAND

May 1968

20	eP	20 11 47
23	eP	17 27 54
28	eP	13 36 38

MAWSON

May 1968

15	eP	08 01 00
16	eP	01 07 54
16	eP	10 57 59
16	eP	22 57 34
17	eP	08 09 01
17	eP	13 15 18
18	eP	01 10 09
18	eP	08 06 52
18	eP	10 56 34
20	eP	07 24 25
20	iP	20 17 08.2
20	eP	21 50 42
22	eP	21 58 27
23	eP	05 21 53
23	iP	17 34 13.6
23	eP	18 54 18
24	eP	05 40 18
24	iP	15 54 14.4
24	eP	16 00 50
24	eP	17 50 49
24	eP	21 07 22
24	iP	21 56 47.0
25	eP	15 55 56
25	eP	15 58 49
26	eP	14 39 42
27	iP	07 04 06.2
27	eP	10 11 57

MAWSON (continued)

May 1968

27	iP	16 39 06.9
27	iP	22 08 37.4
28	eP	09 17 51
28	eP	12 24 33
28	eP	13 39 35
28	eP	17 07 39
28	iP	17 09 18.2
28	iP	17 28 16.0
28	iP	17 45 44.2
28	eP	18 02 32
28	eP	21 38 26
28	eP	22 49 29

C.A. van der WAAL
OBSERVER-IN-CHARGE

31. 5. 68

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON



TOOLANGI

May 1968

30	iP	NEZ	00 34 16.0 comp.
30	eP	NEZ	00 29 39
	T max.	NEZ	48.6
30	eP	NEZ	05 36 22
	e	Z	36 30
	eS(KS)	NE	46 22
30	eP	NEZ	10 02 15
	e	NEZ	03 20
	eS	NE	07 40
	e	E	08 57
	e	EZ	12 02
30	eP	NEZ	16 11 26
30	eP	EZ	17 59 36
30	iP	EZ	18 02 59.4
30	eP	NEZ	18 06 57
	e	Z	08 44
30	iP	NEZ	18 30 49.4
30	iP	NEZ	19 48 41.6
	i	EZ	48 56
	eS	NE	53.9
	M	NEZ	59.9
31	eP	NEZ	01 42 26
31	eP	NEZ	12 04 08
31	eP	NEZ	17 32 46
31	eP	NEZ	18 26 40
June 1968			
1	e(P)	NEZ	04 11 01
1	iP	NEZ	05 11 04.7 dil.
1	iP	NEZ	09 16 33.4
1	eP	NEZ	11 28 51
1	eP	NEZ	13 28 38
2	iP	NEZ	01 17 46.3
2	iP	NEZ	08 24 57.6 comp. 2.2
	e	Z	27 48
3	e(P)	NEZ	05 36 34
3	eP	NEZ	08 30 03 regional
	e	NEZ	30 54
3	iP	NEZ	09 23 56.4 comp. S.
	e	N Z	25 11
	e	Z	25 27
	e(S)	N	29.0
	e	EZ	31.4
3	eP	NEZ	14 28 28
4	eP	NEZ	13 40 45 regional
4	iP	NEZ	17 25 39.2 comp.

TOOLANGI (continued)

June 1968

No record from 22 13 00 on 4. 6.68 to
06 16 00 on 5. 6.68 ;
power failure and loss of time control.

5	eP	NEZ	07 26 15
5	eP	NEZ	12 47 57
	T max.	NEZ	13 07.0

MACQUARIE ISLAND

June 1968

5	iP	02 20 30.1
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MAWSON

May 1968

29	eP	04 43 39
29	eP	17 33 34
29	eP	20 57 49
30	eP	10 07 12
30	eP	19 53 45
31	eP	14 02 14
31	eP	14 20 03
31	eP	18 32 45

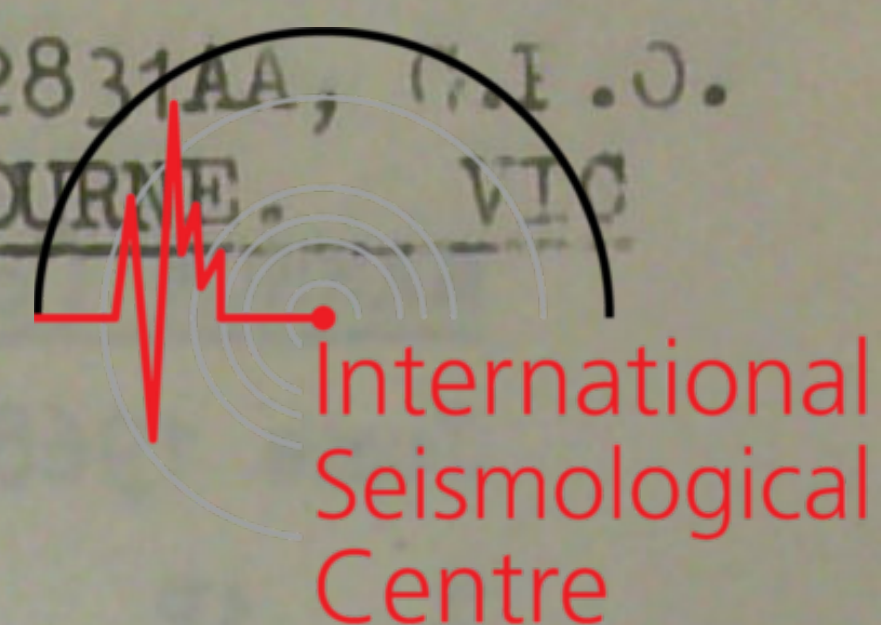
June 1968

1	iP	00 15 01.6
1	eP	07 18 27 *
1	iP	18 03 21.1
2	eP	06 49 39
2	eP	08 31 06
3	iP	01 50 38.0
3	iP	09 29 49.7
4	eP	07 57 15
4	eP	10 31 28
4	eP	12 53 36
5	eP	00 14 55
5	eP	12 53 13
5	iP	21 44 39.6
5	eP	23 25 07
1	eP	11 33 55 *

C.A. van der WAAL,
OBSERVER-IN-CHARGE
7. 6. 68

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS
PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON

Box 2834AA, G.P.O.
MELBOURNE, VIC



TOOLANGI

June 1968

6	iP	NEZ	16 51 33.6	dil.
6	iP	NEZ	19 53 49.5	
6	iP	NEZ	20 39 39.5	
6	eP	NEZ	21 29 14	
7	eP	NEZ	07 33 59	
7	iP	NEZ	12 05 26.1	dil. N.
	i	Z	05 29	
	eS	NE	11 50	
	e	N	15 10	
7	eP	NEZ	11 39 58	
7	eP	NEZ	18 30 08	
7	eP	NEZ	21 38 43	
	e	NEZ	38 47	
	e	NEZ	40 23	
	e	Z	40 29	
	eS	NE	45 06	
	e	E	47 45	
	e	Z	51.4	
	e	E	54.0	
8	eP	NEZ	00 22 53	
	e	Z	25 51	
	eS	N	27 56	
	e	E	30 07	
	e	E	31 27	
8	iP	NEZ	03 19 51.1	dil.
8	eP	NEZ	05 41 58	
8	eP	Z	10 32 56	
	e	NEZ	32 59	
8	eP	NEZ	21 06 16	
	e	EZ	06 58	
8	eP	NEZ	21 37 29	
8	iP	NEZ	23 35 51.0	
	i	NEZ	35 54	
	eS(KS)	N	45 39	
	e	E	46 28	
	e	Z	59 16	
9	iP	NEZ	00 32 39.5	
9	eP	NEZ	04 18 00	
9	eP	NEZ	04 23 41	
9	eP	NEZ	08 59 18	
9	iP	NEZ	09 23 06.3	comp. SW. 2.3
	iS	NE	27 34	
	i(SoP)	Z	28 35	
9	eP	NEZ	11 02 02	
9	iP	NEZ	13 09 09.2	
	e	Z	10 37	
9	iP	NEZ	22 08 12.3	
	e	Z	08 26	
	e	Z	14 53	
	e	EZ	17.0	

TOOLANGI (continued)

June 1968

10	eP	NEZ	01 14 18	
10	eP	Z	14 30 27	
	e	NEZ	30 30	
10	eP	NEZ	15 35 31	
11	eP	NEZ	10 32(59)	
11	eP	NEZ	13 13 35	regional
	e	NEZ	14 10	
11	eP	NEZ	19 52 28	
11	eP	NEZ	23 20 59	
12	iP	NEZ	01 38 00	strong local
	eS	NEZ	38 23	
12	eP	NEZ	04 41 29	
12	eP	NEZ	06 17 51	
12	eP	NEZ	13 53 39	
	i	N Z	53 42	
	i	N Z	53 51	
	eS	N	03 28	
	e	E	03 37	
12	eP	NEZ	14 23 15	
	e	NEZ	23 36	
12	eP	Z	14 50 01	
12	eP	Z	15 20 43	
12	eP	Z	15 35 43	
12	eP	Z	18 03 49	
12	iP	NEZ	20 23 09.1	comp. 2.4
	e	Z	23 23	
	i	Z	24 41	
	eS	NE	29 04	
	e	NE	31.8	
	e	NE	33.8	
12	eP	NEZ	22 09 29	
	eS(KS)	E	19 16	
	e	E	30.0	
	e	N Z	40.8	

MACQUARIE ISLAND

June 1968

7 eP 12 07 49

MAWSON

June 1968

6	eP	08 21 18
6	eP	15 08 17
6	eP	19 57 09
7	eP	09 19 37
7	eP	10 39 06
7	eP	11 34 37
7	eP	12 09 19

MAWSON (continued)

June 1968

7	iP	12 30 19.0
7	eP	13 28 51
8	eP	15 21 29
8	iP	15 34 28.5
9	iP	14 29 32.9
9	eP	15 10 59
9	iP	16 02 23.8
9	iP	16 13 23.6
9	eP	17 03 14
9	eP	17 47 27
9	iP	18 07 24.7
10	eP	18 08 59
10	eP	19 57 50

JUN 21 1968

C.A. van der WAAL
OBSERVER-IN-CHARGE

14. 6.68



TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:
TOOLANGI---MACQUARIE ISLAND---MAWSON

Box 2831AA, G.P.O.
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TOOLANGI

June 1968

12	eP	NEZ	23	35	59	
	e	Z		36	29	
13	e(P)	NEZ	02	10	04	
	e	Z		10	16	
13	eP	EZ	02	17	33	
13	eP	NEZ	06	49	01	
13	eP	NEZ	09	00	01	
13	eP	NEZ	10	31	35	
13	eP	NEZ	12	08	11	
13	eP	NEZ	21	22	25	
14	eP	NEZ	00	30	17	
14	iP	NEZ	02	54	48.2	dil.
14	eP	EZ	03	30	09	
14	eP	NEZ	09	36	47	
14	eP	NEZ	19	08	09	
	e	Z		08	16	
	eS	E		12	11	
	e	NE		13	12	
	T max.	NEZ		27.2		
14	eP	EZ	23	09	22	
15	eP	NEZ	03	43	09	
15	iP	NEZ	06	09	41.9	comp.
	e	Z		10	12	
15	eP	NEZ	06	38	17	
15	eP	EZ	07	27	51	
15	eP	NEZ	07	46	19	
15	eP	NEZ	11	40	29	
15	iP	NEZ	13	40	07.2	
	e	NEZ		40	12	
	e	Z		40	16	
	eS	NE		44	45	
	e	N		46	13	
	e	EZ		47.5		
	e	N		49.4		
15	eP	NEZ	20	05	13	
	e	Z		05	28	
16	iP	NEZ	02	36	45.9	
16	eP	NEZ	06	03	18	
16	eP	NEZ	19	26	25	
	e	Z		26	34	
	e	Z		26	41	
	eS	NE		36	43	
	e	E		42.0		
	e	NE		48.0		
	e	N Z		52.4		
17	iP	NEZ	04	37	02.7	
17	eP	NEZ	10	30	03	
17	eP	NEZ	10	55	20	

TOOLANGI (continued)

June 1968

17	eP	NEZ	12	04	58	
	eS	NE		14	51	
	e	NE		19	49	
	e	E		25.9		
	e	N Z		30.3		
17	eP	EZ	17	08	21	
17	iP	NEZ	17	55	53.7	comp. S. 2.2
	i	N Z		56	13	
	e(S)	N	18	02	08	
17	iP	NEZ	18	15	55.0	2.2
	i	EZ		16	21	
	eS	NE		21	00	
	e	NE		22	57	
	e	NEZ		24.6		
18	eP	NEZ	05	45	15	
18	eP	NEZ	05	47	19	
18	iP	NEZ	06	48	19.4	dil. N.E. 2.2
	e	Z		53	29	
18	eP	NEZ	17	35	05	
	i	NEZ		35	08	
	T max.	NEZ		51.6		
19	ePKP	NEZ	08	32	29	
	e	Z		33	55	
	ePP	NEZ		34	01	
	eSKKS	N		40	17	
	eSS	NE		50.6		
	eLQ	NE	09	04.5		
	eLR	N Z		11.1		
19	e(P)	Z	08	42	30	
19	eP	NEZ	11	32	12	
19	eP	NEZ	20	11	04	
	e	NEZ		11	12	

MACQUARIE ISLAND

June 1968

12	eP		20	25	39
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MAWSON

June 1968

12	eP		14	00	41
12	iP		14	18	04.0
12	eP		20	28	06
12	eP		22	16	33
13	eP		15	12	09
14	eP		19	13	23
15	eP		13	46	22
15	eP		14	19	46
15	eP		19	29	42
15	iP		21	35	19.5

TOOLANGI GEOPHYSICAL OBSERVATORY
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PRELIMINARY EARTHQUAKE PHASES AT:
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TOOLANGI

June 1968

20	eP	NEZ	21 55 28
	e	E	22 00.4
	e	N	03.8
21	eP	NEZ	22 16 12
22	iP	NEZ	00 40 35.5
22	eP	NEZ	01 24 30
	eS(KS)	E	34 19
22	iP	NEZ	08 15 11.7
	e	EZ	15 47
22	e(P)	EZ	08 15 47
22	eP	NEZ	12 41 13
22	eP	NEZ	21 07 25
23	eP	NEZ	08 11 12
23	eP	NEZ	11 19(28)
23	eP	NEZ	11 36(37)
24	NIL		
25	eP	NEZ	08 56 54
	e(S)	N	59 11
25	eP	NEZ	09 12 02
	e(S)	NEZ	14 47
26	iP	NEZ	08 33 06.7 comp.
26	eP	Z	10 35 53
26	iP	NEZ	15 46 07.4 dil.
	e	EZ	46 51
	e	E	50 41
	e	EZ	53 23

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24 iP 05 23 03.4

MAWSON

June 1968

21	eP	07 04 07
21	eP	13 04 59
22	iP	00 35 32.4
22	eP	14 04 30
22	eP	16 52 50
24	eP	18 16 38
25	eP	15 14 40
25	eP	19 21 01
25	eP	22 45 08
26	eP	12 57 56

C.A. van der WAAL,
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28. 6. 68

TOOLANGI GEOPHYSICAL OBSERVATORY
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MAWSON

June 1968

June 1968

27	iP	NEZ	02 08 45.5	dil.
27	iP	NEZ	22 21 08.0	comp.
	e	NEZ	21 38	
	e	Z	26 57	
28	e	N Z	11 33 09	
29	iP	NEZ	11 13 55.6	
30	eP	NEZ	09 44 24	
	e	NEZ	44 39	
30	iP	EZ	19 44 41.1	comp.

26	eP	15 52 12
26	eP	18 26 06
27	iP	22 25 07.0
28	eP	07 39 50
28	eP	12 41 50
28	iP	18 06 31.9
30	eP	17 46 25
30	aP	23 32 22

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1	iP	NEZ	10 56 39.8	dil.
	e	NEZ	57 29	
	e(L)	N	11 06 05	
2	eP	NEZ	04 37 11	
	e	NEZ	37 30	
	e(L)	NEZ	40 06	
2	eP	NEZ	18 47 01	comp.
	e(S)	EZ	54 07	
	e(L)	NEZ	59 33	
3	NIL			

1	eP	01 29 23
1	eP	11 03 51
1	eP	23 35 51
2	eP	04 03 48
2	iP	04 42 17.7
2	iP	18 52 26.4
3	eP	01 21 57

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July 1968

4	iP	Z	12 46 08.1 comp.
	e	NEZ	54 33
	e	NEZ	13 04.1
4	eP	N Z	13 37 22
	eS	N Z	37 40
4	iP	Z	16 55 30.5 comp.
5	eP	N Z	11 39 56
	eS	NEZ	49 35
	(LR)	NEZ	12 04 46
5	eP	NEZ	13 24 46 ***
5	eP	NEZ	13 44 11 comp.
6	eP	NEZ	17 32 53
	e	NEZ	33 58
6	eP	Z	17 40 23
6	iP	NEZ	19 35 29.3 dil.
	e	NEZ	35 44
	e	NE	40 43
7	eP	NEZ	03 27 50
	e(S)	NEZ	29 05
	e	EZ	29 51
7	e(P)	Z	09 15 14
7	eP	EZ	14 30 44
	e	NEZ	39 27
7	eP	NEZ	16 59 29
	e	NE	17 10 31
7	eP	NEZ	21 43 00
	e	NEZ	43 10
8	iP	Z	00 12 47.8
8	iP	NEZ	04 15 19.7 dil.
8	iP	NEZ	06 41 47.9 comp.
8	eP	NEZ	11 51 31
	e(S)	NEZ	52 34
8	iP	NEZ	12 15 20.4 dil.
8	iP	NEZ	14 13 44.1 comp.
8	iP	NEZ	21 35 33.7 dil.
	e	N Z	35 45
9	eP	NEZ	03 48 51
9	iP	NEZ	04 00 07.9
	e	N Z	02 11
9	eP	NEZ	07 03 01
9	eP	EZ	23 23 42
10	eP	NEZ	00 49 27
	e	N Z	49 38
	e	N	56 34
	eM	NEZ	01 13.1
5	eP	NEZ	13 39 57 ***

TOOLANGI (continued)

July 1968

10	eP	NEZ	03 07 57
	eS	NEZ	08 07
10	eP	Z	06 15 17
	eS	NEZ	16 03
10	iP	NEZ	07 46 22.8
	e	NEZ	47 52
10	eP	NEZ	10 09 30
10	iP	N Z	11 25 56.5 dil.
	e	NEZ	26 08
	e(S)	EZ	33 28
	e(LR)	NEZ	41.2
10	eP	Z	13 24 37
10	eP	Z	13 39 59
10	eP	NEZ	17 58 01

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July 1968

5	eP		11 47 02
5	eP		13 49 17
5	eP		14 32 53
6	eP		14 29 59
6	iP		19 40 47.0
7	eP		16 02 20
7	eP		16 23 39
7	iP		17 59 45.1
7	eP		21 39 48
7	eP		22 54 26
8	eP		07 23 44
8	iP		11 35 34.4
8	iP		17 07 30.4
8	eP		17 31 33
8	eP		17 54 59
8	eP		18 46 24
8	eP		19 22 05
8	iP		21 35 10.8
8	eP		21 47 04
9	iP		05 48 10.9
9	eP		14 36 08
9	eP		16 16 47
9	eP		17 09 28
9	eP		17 24 34
9	eP		19 02 47

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July 1968

11	iP	NEZ	03	12	29.7	
	eS	NEZ		12	53	
11	eP	EZ	06	37	06	
11	iP	NEZ	06	42	14.8	
	eS	NEZ		42	38	
11	eP	NEZ	10	10	33	
	e(S)	NEZ		10	57	
11	iP	NEZ	10	12	48.3	
11	iP	NEZ	19	32	23.1	dil.
	e(S)	NEZ		33	15	
12	eP	NEZ	00	56	28	
	e	E	01	06	16	
12	eP	N Z	04	08	19	
	e	E		19.0		
12	eP	EZ	07	13	10	
12	eP	NEZ	07	20	37	
12	eP	EZ	09	21	09	
12	iP	NEZ	11	33	37.8	
13	eP	N Z	06	44	46	
	e	NE		46	20	
13	e(P)	N Z	09	27	28	
14	eP	Z	07	40	45	
14	eP	NEZ	08	04	28	comp.
14	iP	NEZ	10	55	12.0	comp. Local
	eS	NEZ		55	29	
(14	eP	NEZ	23	58	37	
(15	e	N Z	00	00	18	
15	iP	NEZ	04	18	49.9	dil.
15	iP	NEZ	10	13	10.1	comp.
	e	EZ		13	39	
16	eP	NEZ	03	15	37	local
16	iP	EZ	05	46	03.8	dil.
	e	Z		47	25	
16	e(P)	NEZ	21	31	40	
	e	EZ		32	30	
17	eP	NEZ	04	06	44	local
	eS	NEZ		07	01	
17	eP	NEZ	05	31	01	
	e(S)	NEZ		36	37	
	e	NEZ		39	38	
	eM	NEZ		47.5		
17	eP	Z	12	30	11	
	e	N Z		30	27	
	e	NEZ		31	23	

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10	eP	11	23	10
10	iP	17	40	45.1
11	eP	08	23	45
13	eP	06	11	56
13	eP	08	49	59
16	eP	09	52	11
16	eP	15	12	15

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TOOLANGI GEOPHYSICAL OBSERVATORY
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PRELIMINARY EARTHQUAKE PHASES AT:
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18	iP	NEZ	00	34	20.6	comp.	
	e	Z		34	34		
18	iP	NEZ	05	11	57.4	comp.	
	e	Z		12	47		
19	iP	NEZ	05	07	17.5	comp.	1.9
	e	Z		07	47		
19	eP	EZ	06	18	22		
19	iP	NEZ	09	27	20.2	comp.	1.9
	e	Z		30	17		
20	eP	NEZ	08	31	02		
20	iP	NEZ	20	42	13.6		
21	iP	NEZ	01	36	11.6	dil.	
21	eP	NEZ	05	59	02		
	eS	NE	06	04	26		
	e	E		04	35		
	e	E		07.0			
	e	N Z		09.2			
21	eP	NEZ	06	16	30		
21	iP	NEZ	17	32	55.7		
	iS	NEZ		36	50		
	e	NEZ		37.5			
	e	E		37.7			
22	eP	NEZ	05	21	48		
22	e(S)	E	05	37	34		
	e	E		43.4			
	e	E		44.7			
22	iP	NEZ	06	26	45.0	dil.	
22	iP	NEZ	18	04	11.4		
	e	NEZ		04	18		
	e	NEZ		04	23		
	eS	NE		08	47		
	e	NEZ		11.7			
23	eP	NEZ	04	45	56	local	
	eS	NEZ		46	16		
23	iP	NEZ	07	10	59.7		
24	eP	NEZ	04	41	54		
24	eP	EZ	08	42	01		
24	iP	NEZ	08	56	40.4		
24	iP	EZ	18	40	05.5		
24	iP	NEZ	20	28	43.0		
	i	EZ		28	59.5		
25	eP	NEZ	06	48	44		
25	iP	NEZ	07	29	19.4	comp. S.	3.0
	eS	NE		34	18		
25	eP	NEZ	11	02	57		
	e	Z		02	06		

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17	iP		05	07	29.3
17	eP		05	35	36
17	iP		22	10	25.3
18	eP		08	35	31
18	iP		22	15	39.5
19	eP		05	08	31
20	eP		06	37	30
20	iP		16	08	45.4
21	eP		01	38	20
22	eP		04	59	37
22	eP		05	15	30
22	eP		05	41	56
22	eP		18	10	25
22	eP		18	47	03
22	eP		19	08	25
23	eP		14	53	45
23	eP		17	09	52
25	iP		07	34	25.0
26	eP		07	21	08
26	eP		18	15	47
26	eP		19	51	11

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TOOLANGI GEOPHYSICAL OBSERVATORY
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26	eP	NEZ	07	19	45
26	eP	NEZ	21	52	21
27	eP	NEZ	03	08	25
27	iP	NEZ	10	10	24 local
	eS	NEZ		10	44
27	eP	NEZ	10	58	01
27/28 No time control from 12 35.0 to 01 30.0 on the 28th due to power failure.					
28	eP	NEZ	11	05	37
	e(S)	N		14.4	
	e	NEZ		18.0	
29	eP	NEZ	11	19	09
	eS	NE		25.0	
	e	NE		27	51
	e	N		31.3	
29	eP	NEZ	12	26	57
29	eP	NEZ	13	37	19
	e	N		38	33
	eS	N		42	48
	e	N Z		47.2	
29	eP	EZ	15	27	15
29	iP	NEZ	23	59	41.0 comp. S.
	eS	NE	00	05	29
	e	NE		08	15
	e	Z		10.3	
30	eP	NEZ	04	17	(21)
	e(S)	N		26	52
	e	N		30.0	
31	eP	NEZ	13	52	12

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27	eP		11	03	45
28	eP		11	10	38
28	eP		21	31	20
29	eP		11	24	11
30	eP		00	04	39
30	eP		04	22	23
30	iP		21	46	43.1

C.A. van der WAAL
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2-8-1968

August 1968

1	iP		00	25	51.0
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August, 1968

1	iP	NEZ	00	20	42.0
	e(S)	E		26	30
	e	N		28	22
	e	N		28.7	
	e	EZ		29.9	
1	eP	Z	07	44	40
	e	N Z	08	00	20
1	eP	NEZ	20	29	13
	e(S)	E		37	12
1	eP	EZ	23	14	49
2	ePKP	Z	14	25	33
	ePP	EZ		27	05
	eSKS	E		32	33
	eSKKS	E		34	04
	eSP	EZ		36.7	
	eSS(SPS)	E		44.0	
	eLR	E	15	02.7	
2	eP	NEZ	20	50	00
3	iP	NEZ	05	05	13.7 comp.S
	e	NEZ		05	28
	eS	NE		13	55
	e	NE		21.1	
	e	N Z		25.3	
	e	N Z		30.8	
3	eP	NEZ	06	34	56
	e(S)	NE		42	58
3	eP	NEZ	14	27	22
3	eP	NEZ	14	48	23
3	eP	NEZ	19	29	(01)
4	eP	NEZ	11	49	50
	e	Z		50	13
	eS	NE		56	37
	e	N	12	00	03
	e	N Z		03.8	
	e	E		07.2	
5	eP	NEZ	15	00	58
5	iP	NEZ	16	28	24.0 dil N
	ePcP	NEZ		28	41
	eS	NE		37	42
	eSS	N		42	08
	eSSS	NE		45	22
	e	N Z		50.5	
	ePKPPKP	Z		56	17
6	iP	NEZ	02	43	14.7
6	eP	NEZ	03	16	20
6	eP	NEZ	03	26	13
	e	Z		26	22
6	eP	NEZ	04	32	23
6	eP	NEZ	05	02	50
6	iP	NEZ	10	18	40.2
	i	NEZ		18	51.2
6	i(P)	NEZ	10	18	51.2
6	eP	NEZ	23	54	22

TOOLANGI (Continued)

August, 1968

7	eP	NEZ	04	03	14
7	eP	N Z	08	12	21
	e	N Z		12	37
	e(S)	N		22	23
7	eP	N Z	12	19	09
7	eP	NEZ	17	08	44 LOCAL
	eS	NEZ		08	59

MACQUARIE ISLAND

July, 1968

30eP 00 02 10

August, 1968

4 eP 11 52 09

MAWSON

August, 1968

1 eP 20 32 35

C. A. van der WAAL

OBSERVER-IN-CHARGE

12th August, 1968

Address:

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8	eP	NEZ	05	06	40
	e	Z		06	52
8	iP	NEZ	09	30	32.5
	i	N Z		30	44
8	No record from 13 24.0 to 23 23.0 due power failure				
9	eP	N Z	01	00	55
9	eP	Z	03	20	40
	ePcP	Z		20	44
	eSKS	NE		31	14
	e	NE			42.4
9	eP	NEZ	21	43	42
10	iP	NEZ	02	15	00.3
	eS	NE		21	32
10	eP	NEZ	04	06	26
10	eP	NEZ	04	13	45
10	eP	NEZ	05	59	44
	e	NEZ	06	01	24
	eS	NE		06	07
	e	N		09	28
10	eP	NEZ	08	18	13
	e	Z		19	22
10	iP	NEZ	10	13	50.7
	e	NEZ		15	28
10	eP	NEZ	10	24	01
10	eP	NEZ	14	08	37
10	eP	NEZ	15	29	39
10	eP	NEZ	15	53	34
10	iP	NEZ	16	51	13.3
10	eP	NEZ	17	56	02
10	iP	NEZ	19	54	12.8
11	eP	Z	02	53	54
11	eP	NEZ	06	17	06
11	eP	NEZ	09	08	23
	e	Z		10	04
11	eP	NEZ	10	10	37
	e	Z		12	16
11	eP	NEZ	11	44	38
11	eP	NEZ	12	07	55
11	eP	NEZ	12	50	28
11	eP	NEZ	15	15	50
11	eP	NEZ	16	32	13

TOOLANGI

August 1968

11	eP	NEZ	20	08	39
	e	NEZ		10	24
	eS	NE		15	02
	e	E		18.1	
	e	N		18	19
	e	EZ		19.4	
11	eP	NEZ	21	12	44
12	iP	NEZ	05	34	39.9
12	eP	NEZ	07	07	10
12	eP	NEZ	09	18	09
12	iP	NEZ	13	51	43.2
	e	NEZ		53	22
12	eP	NEZ	14	42	42
12	eP	NEZ	14	44	54
12	eP	NEZ	17	34	22
12	eP	NEZ	18	13	23
	e	NEZ		16	20
	e	Z		20	02
	e	N		20.6	
	e	N		21.0	
	e	NEZ		23.0	
12	e(P)	Z	18	20	02
12	eP	NEZ	20	43	51
13	eP	NEZ	00	24	45
13	eP	NEZ	00	41	18
13	iP	NEZ	03	00	48.8 comp.
	e	NEZ		02	27
13	eP	NEZ	04	13	(24)
13	eP	NEZ	06	50	47
13	eP	NEZ	12	50	00
13	eP	NEZ	16	03	47 regional
	e	NEZ		03	53
13	eP	NEZ	19	41	14
	e	Z		41	41
	e(S)	N		46.0	
	e	NE		48.0	
13	eP	NEZ	22	00	10
13	eP	NEZ	22	27	27
14	eP	NEZ	00	32	23
14	iP	NEZ	08	06	21.3 dil.
14	eP	NEZ	22	22	31
	e	NEZ		24	22
	eS	E		29	11
	e	E		32	28

MACQUARIE ISLAND

August 1968

11	eP	20	11	02
<u>MAWSON</u>				
August 1968				
2	eP	13	43	40
2	eP	14	25	44
2	eP	15	07	51
2	eP	16	31	21
3	eP	06	38	22
3	eP	15	31	10
3	eP	15	31	49
4	eP	11	17	05
4	eP	11	53	56
4	eP	15	34	51
4	eP	16	58	41
4	iP	17	58	56.3

MAWSON

August 1968

5	eP	16	26	06
5	eP	17	05	07
7	eP	18	44	50
10	iP	02	19	20.1
10	eP	02	49	20
10	eP	04	18	06
10	eP	06	04	03
11	eP	01	44	08
11	eP	12	56	51
11	iP	20	12	59.2
12	eP	06	14	16
12	eP	13	56	03
12	eP	17	27	43
12	eP	18	17	59
13	eP	03	05	08
13	eP	19	47	24

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TOOLANGI GEOPHYSICAL OBSERVATORY
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PRELIMINARY EARTHQUAKE PHASES AT:-
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August 1968

15	eP	EZ	02	52	16	
15	eP	NEZ	05	13	16	
	e	Z		14	56	
15	iP	NEZ	06	57	11.8	
	i	NEZ		57	56	
	e(S)	N		02	24	
	e	E		03	12	
	e	N		03	44	
	e	N Z		05.3		
15	iP	NEZ	17	47	48.6	
	e	Z		47	56	
	e(S)	N		52.9		
	e	Z		58.7		
15	eP	NEZ	21	34	08	
	e	EZ		35	49	
15	eP	NEZ	21	52	49	
16	iP	NEZ	03	38	00.5 dil.	
16	iP	NEZ	09	28	12.2	
16	eP	NEZ	10	25	58	
16	eP	NEZ	10	51	04	
16	eP	NEZ	11	16	34	
	e	NEZ		18	11	
16	iP	NEZ	11	40	16.1 dil NE 2.0	
	iS	NE		45	01	
	eScP	Z		45	19	
16	eP	NEZ	13	06	51	
16	eP	NEZ	15	14	24	
17	iP	NEZ	04	08	31.6 comp. S	
	i	NEZ		10	09	
	eS	NE		14	50	
	e	N		18	14	
	e	N		26.1		
17	eP	NEZ	04	49	04	
17	eP	NEZ	12	14	53	
17	eP	NEZ	13	36	52	
17	eP	NEZ	16	28	13	
17	eP	NEZ	17	22	30	
17	eP	NEZ	18	55	29	
17	eP	NEZ	21	54	54	
18	eP	NEZ	02	18	15	
18	eP	NEZ	03	03	10	
	T max	NEZ		19.6		
18	eP	NEZ	05	37	48	
18	eP	NEZ	05	51	53	
18	eP	NEZ	15	25	36	
18	iP	NEZ	17	43	33.4	
18	iP	NEZ	18	43	58.2	
	e	NEZ		45	28	
	eS	NE		48	21	
	eScP	Z		49	35	
	e	NE		51	05	

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August 1968

19	iP	NEZ	06	05	40.2	
	eS	EZ		05	49	
19	eP	NEZ	07	09	30	
19	iP	NEZ	15	50	04.3 comp.	
	e	N	16	00	08	
19	iP	N Z	17	11	41.9 dil.	
19	iP	NEZ	18	56	19.3 comp.	
20	eP	NEZ	03	21	16 dil.	
	i	Z		24	12.8	
20	i(P)	Z	03	24	12.8	
20	eP	EZ	08	09	09	
20	iP	N Z	11	24	56.7 dil.	
	e	N		34	36	
20	iP	NEZ	15	31	44.1 dil.	
21	eP	EZ	18	02	59	
	e	NEZ		08	10	
	e	N		09	41	

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August 1968

14	eP		08	57	50	
14	eP		17	20	02	
14	eP		22	26	17	
15	eP		07	02	21	
15	eP		11	52	25	
15	eP		21	37	57	
16	iP		10	20	48.9	
17	eP		04	12	51	
18	iP		18	50	02.7	
19	eP		15	55	00	
19	eP		17	04	47	
20	eP		15	35	41	
20	eP		17	00	37	
20	eP		17	38	31	
20	eP		17	50	21	

MACQUARIE ISLAND

August 1968

14	eP		22	24	49	
17	eP		04	10	54	
18	iP		17	45	57.1	
18	iP		18	45	53.4	
18	eP		19	07	06	

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22	eP	NEZ	14	10	58	
	e	N Z		13	33	
	e	E		24.5		
22	iP	NEZ	16	25	13.1	
	e	Z		25	49	
	e	NE		31	56	
22	eP	NEZ	16	52	02	
23	iP	N Z	06	52	44.1 comp.	
23	iP	Z	08	43	13.2 comp.	
23	eP	Z	08	46	22	
24	eP	NEZ	04	17	12 local	
	eS	NEZ		17	26	
25	iP	NEZ	11	22	58.4 Dil.	
25	eP	NEZ	13	31	03	
	e(PcP)	N Z		32	40	
	e	EZ		33	08	
26	eP	NEZ	06	06	59	
26	eP	NEZ	06	19	19	
26	eP	EZ	09	25	17	
26	iP	NEZ	09	32	58.1 Dil.	
	e	N Z		33	27	
26	iP	NEZ	14	42	42.8 Dil.	
26	eP	EZ	15	48	44	
27	eP	NEZ	06	55	16 local	
27	iP	NEZ	07	00	00.6 dil	
27	iP	NEZ	13	54	40.7 dil	
27	eP	NEZ	19	59	24	
28	iP	NEZ	10	55	10.6 dil	
28	iP	NEZ	11	56	56 dil	
	e(LQ)	NE	12	02	16	
	e(LR)	NEZ		04	05	
28	eP	Z	15	11	30	
28	eP	N Z	15	34	27	
28	iP	NEZ	20	52	04.6	
	e(S)	NE	21	00	02	
	e	NEZ		04	26	

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August 1968

21	eP		18	08	13	
21	iP		19	51	20.0	
22	eP		14	13	20	
22	eP		14	19	36	
22	eP		16	31	24	
22	iP		16	50	45.0	
23	iP		22	48	18.0	
23	iP		23	26	19.0	
24	eP		18.	14	18	
25	eP		11	28	02	

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19	iP		15	50	23.6	
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August 1968

29	eP	N Z	01	46	07	
29	iP	NEZ	21	17	56.4	comp.
				18	09	
30	eP	NEZ	06	26	25	
		N Z		28	04	
30	eP	NEZ	07	02	25	
30	eP	NEZ	07	20	11	local
	eS	NEZ		20	22	
30	eP	NEZ	09	42	16	dil.
30	eP	NEZ	12	38	57	
31	eP	EZ	08	54	33	
	e	NE		59	20	
31	ePKP	N Z	11	02	15	
	e(PP)	E		03	47	
	e(PPP)	NEZ		06	25	
	e(SKS)	E		09	06	
	e(SS)	NEZ		20	08	
31	iP	EZ	14	18	54.5	dil.
31	iP	NEZ	20	01	15.3	comp.

September 1968

01	iP	N Z	20	45	02.0	comp.
01	eP	NEZ	21	59	44	
02	iP	NEZ	15	26	44.9	dil.
03	ePKP	N Z	08	39	06	
	ePP	N Z		41	52	
	ePKS	EZ		42	29	
	e(PPS)	NEZ		54	14	
	e(SSS)	NE	09	04.2		
	eLQ	N		16.2		
	eLR	NEZ		24.5		
03	eP	Z	15	56	46	
03	iP	NEZ	19	14	45.0	dil.
03	e(P)	N Z	23	36	06	
04	iP	NEZ	00	44	43.6	comp.
	e	NEZ		46	34	
04	iP	NEZ	04	06	37.0	comp.
	e	NEZ		07	35	
04	eP	NEZ	08	02	57	
		NE		12	07	
04	iP	EZ	09	00	14.3	dil.
04	eP	EZ	12	14	31	
04	e(P)	NEZ	20	48	19	
	e	NEZ		48	31	

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August 1968

28	iP		12	02	38.3
28	eP		20	55	31
29	eP		23	04	46
31	eP		11	01	40
31	iP		14	49	57.4

September 1968

01	eP		14	38	19
01	iP		15	03	53.8
01	eP		15	38	53
01	eP		16	02	03
02	iP		17	00	52.1

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September 1968

5	eP	Z	02 13 56
5	eP	EZ	10 46 46
5	ePKP	Z	17 18 10
	ePP	NEZ	20 26
	e(PKS)	NEZ	21 57
	ePPP	Z	23 14
	e(SKS)	EZ	25 23
	e(PS)	N	30 20
	ePPS	N Z	32 35
6	e	EZ	07 47 11
	e	NEZ	50 06
6	iP	NEZ	19 33 54.4 dil.
	e	NEZ	34 07
7	iP	NEZ	02 08 12.3 dil.
	e	NEZ	08 21
7	eP	NEZ	06 54 27
7	iP	NEZ	16 04 40.1 comp.
8	eP	NEZ	15 19 06
	eS	NE	24 30
	eLQ	E	26 46
	eLR	Z	28.5
8	iP	NEZ	19 51 58.7 comp.
9	eP	NEZ	04 13 22
9	eP	NEZ	05 40 18
9	eP	NEZ	05 53 01
9	eP	NEZ	16 08 03 regional
9	eP	NEZ	16 49 36
10	iP	NEZ	04 04 21.4
10	eP	Z	05 16 21
10	eP	NEZ	05 31 42
	e	N Z	46 16
10	eP	NEZ	05 46 42
	e	N Z	06 01 16
10	eP	NEZ	07 22 54 local
10	iP	NEZ	15 21 35.6
	e	Z	21 50
10	iP	NEZ	21 33 14.1
	i	N Z	33 44
	e	EZ	33 58
10	iP	NEZ	22 58 46.6
11	eP	NEZ	02 10 29
11	eP	NEZ	05 14 40
11	eP	NEZ	18 39 41
	e	NEZ	39 51
	e	Z	40 03

MAWSON

September 1968

3	eP	12 57 27
3	eP	18 46 55
4	eP	08 44 01
4	eP	17 15 04
4	eP	17 45 55
6	eP	19 37 58
7	eP	07 00 19
7	iP	15 59 26.4
10	iP	04 16 54.1
10	eP	12 54 36

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SEP 16 1968

TOOLANGI GEOPHYSICAL OBSERVATORY
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PRELIMINARY EARTHQUAKE PHASES AT:-
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TOOLANGI

September 1968

12	iP	NEZ	22	50	04.3
	i	NEZ		50	09
	i(S)	NE		54	48
	i(ScP)	Z		55	10
	e	E		58	14
	i(ScS	NEZ		59	13
13	eP	NEZ	05	07	59
	e	Z		08	05
	eS	E		13	06
	e	NEZ		16	10
	e	E		19.3	
13	e(P)	EZ	06	54	03
13	eP	NEZ	12	56	12
	e	Z		59	05
14	iP	NEZ	01	34	59.0
14	iP	NEZ	07	03	00.0 dil.
	e	Z		03	24
	e	N		10	00
14	e(P)	NEZ	23	30	02
15	iP	NEZ	03	15	39.1
15	iP	NEZ	11	02	12.0
	e	Z		02	24
	e(S)	E		11	54
15	iP	NEZ	12	06	31.0
15	eP	NEZ	17	35	23
16	eP	NEZ	14	01	53
	i	NEZ		01	57
	eS	NE		07.0	
	e	NE		07	13
	e	E	0	09.4	
	e	E		10.5	
16	iP	NEZ	14	17	53.5
16	eP	NEZ	15	01	35
16	eP	NEZ	15	06	58
16	eP	NEZ	15	51	21
16	iP	NEZ	16	07	10.2
	eS	E		12	17
17	eP	N Z	14	29	56
17	eP	NEZ	17	55	05
	e	Z		55	13

TOOLANGI (continued)

September 1968

17	eP	NEZ	17	57	27
	e	Z		57	44
	eS	NE		03	37
	e	N		07.5	
	e	EZ		09.3	
18	eP	N Z	09	18	06
18	eP	N Z	09	32	50
18	eP	NEZ	11	49	27
	e	Z		49	36
	e	EZ		49	40
	eS	N		54	04
	e	NE		55.5	
	e	N Z		56.9	
18	iP	NEZ	14	17	11.5
	e	NEZ		17	24
	eS	N		22	24
	e	N		23	23

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September 1968

8	iP	13	11	46.7
8	eP	15	03	48
8	eP	15	24	47
11	eP	18	37	16
12	iP	22	55	14.1
15	eP	01	36	58
16	eP	14	07	54

MACQUARIE ISLAND

September 1968

12	eP	22	50	26
16	eP	14	04	23

20th September, 1968

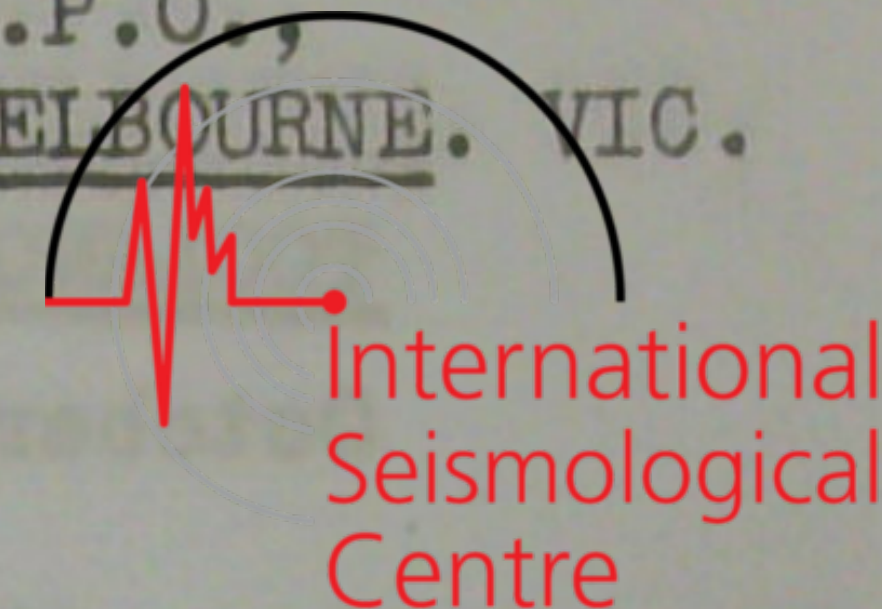
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<u>TOOLANGI</u>					
September 1968					
19	NIL				
20	eP	NEZ	06	19	25
	e	NEZ		22	55
	e	N		23.0	
20	eP	NEZ	18	35	41
	eS	E		41.4	
	e	N		43.5	
21	eP	NEZ	13	18	03
	eS	NEZ		27	59
	eLQ	EZ		39	05
22	iP	NEZ	08	06	51.9
	eS	NEZ		11	53
22	eP	N Z	09	30	15
22	eP	Z	20	18	27
22	eP	Z	17	13	06
23	NIL				
24	eP	Z	08	52	21
25	eP	NEZ	07	06	58
	e(S)	NEZ		10	24
	eT	NEZ		21.1	
25	eP	EZ	10	57	23
9	e	Z		57	59
	e	EZ		59	13
	e	EZ		36	17
25	eP	EZ	14	41	21
	e	NEZ		42	10
26	iP	NEZ	02	46	21.0 dil
26	eP	EZ	08	15	37
26	iP	Z	08	47	46.9 dil
	e	Z		52	46
	e	NEZ		52	53
26	iP	NEZ	14	44	28.8 dil
	e	Z		46	48
	e	NE		54	18
26	iP	NEZ	18	09	06.4
	eS	NEZ		14	10
26	iP	NEZ	18	51	46.1 dil
27	eP	NEZ	04	05	28
	eS	NE		10	41
	e(SS)	NE		119	39
27	iP	NEZ	16	47	27.0 comp
	e	N Z		52	35
	e	Z		54	04
27	eP	N Z	19	13	27
	eS	NE		18	54
	e	E		21	11
27	eP	NEZ	21	05	41

<u>TOOLANGI</u>					
September 1968					
27	eP	NEZ	22	53	53
	e	N		56.3	
	e	EZ	23	02.4	
28	e(P)	EZ	07	45	11
28	eP	NEZ	10	04	29
29	eP	NEZ	05	20	15
	e	Z		20	40
29	eP	NEZ	13	34	46
29	eP	NEZ	17	25	05
	eS(KS)	E		35	08
	e	N		40	30
29	eP	NEZ	19	48	19
	e(ScP)	Z		54	23
29	e(P)	Z	19	54	23
29	eP	NEZ	22	01	16
29	e(P)	Z	22	48	49
30	eP	NEZ	11	43	46
30	eP	NEZ	14	23	47
	e	Z		24	21
30	eP	NEZ	16	28	54*
	e	NEZ		28	55*
* REGIONAL					
October, 1968					
1	eP	Z	00	58	49
1	eP	NEZ	07	30	09
1	eP	EZ	21	17	26
2	iP	NEZ	13	28	21.0
2	eP	NEZ	14	46	24
2	eP	NEZ	17	42	07
3	iP	NEZ	08	11	59.0 comp SE
	i	NEZ		13	24
	e(ScP)	Z		17	50
3	eP	Z	12	23	59
	e	EZ		24	07
3	eP	NEZ	12	35	27
3	eP	NEZ	14	57	36
3	eP	NEZ	18	20	47
3	eP	NEZ	23	30	08
4	eP	NEZ	00	52	02
4	iP	NEZ	06	17	07.3 dil N
	e	NEZ		20	33
	eS(KS)	N		27	22
	e	EZ		27	32
	e	E		28	17
	e	E		33.4	
	e	E		39.8	
	e	N Z		45.9	



TOOLANGI

October 1968

4	iP	NEZ	06	57	26.6
	e	NEZ		58	27
	e	Z		58	35
4	eP	NEZ	07	34	05
	i	NEZ		34	18
	eS	NE		39	39
	e	N		44.2	
	e	NE		46	37
5	eP	NEZ	04	57	56
5	eP	NEZ	09	31	56
5	eP	NEZ	14	33	43
5	eP	NEZ	22	12	(07)
	e	Z		12	17
6	eP	NEZ	02	59	32
6	eP	NEZ	05	22	59
	e	Z		23	06
	e	E		29.3	
	e	NE		33.0	
6	iP	NEZ	07	53	13.2 comp
6	eP	NEZ	08	54	45
	e	NEZ		54	50
	e	Z		54	55
	e(S)	NE	09	00.8	
	e	N		06.6	
6	eP	NEZ	09	22	44

MACQUARIE ISLAND

September, 1968

25	eP		07	05	04
25	eP		07	14	59
26	iP		14	44	44.9
27	iP		04	08	02.9
27	eP		19	15	58

MAWSON

September 1968

19	eP		17	55	36
20	eP		06	18	29
20	eP		17	42	15
22	iP		22	04	55.1
24	eP		01	37	06
24	eP		03	08	16
25	eP		04	52	54
25	eP		07	12	04
25	eP		10	57	24
26	iP		08	10	33.9
26	iP		08	52	53.4
26	iP		14	49	37.2
26	eP		18	14	12
27	iP		04	10	22.8
27	eP		16	52	29
27	eP		19	19	08
28	iP		14	06	48.0
30	eP		10	56	12

October, 1968

1	eP		17	10	21
2	eP		14	30	27
2	eP		17	37	56
4	eP		06	12	02
4	eP		07	02	26
6	eP		02	09	38

C. A. van der WAAL

OBSERVER-IN-CHARGE

8.10.1968

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON

Box 2831AA, G.P.O.,
MELBOURNE. VIC.



TOOLANGI

October 1968

7	eP	EZ	00	06	41	
7	iP	NEZ	19	30	01.8	
	i	NEZ		30	08	
	e	N Z		31	51	
	iS	NE		37	58	
	e	E		41.1		
	e	Z		44	05	
7	eP	EZ	21	01	05	
7	eP	NEZ	23	57	03	
8	eP	NEZ	01	02	04	
8	iP	EZ	07	51	32.8	
	e	EZ		51	41	
	eS	NEZ		58	11	
	e	NE	08	01.5		
	e	NEZ		04.2		
8	eP	NEZ	10	25	05	Strong local
	e(S)	NEZ		24	17	

No record from 23 00 hrs on 8.10.68 to
 05 47 hrs on 9.10.68 due power off.

9	iP	NEZ	14	35	37.4	
9	eP	NEZ	17	18	20	
	i	NEZ		18	28	
	e(SKs)	N		28.5		
10	eP	NEZ	01	26	10	
10	eP	NEZ	06	43	12	
10	eP	NEZ	15	11	54	
	i	N Z		12	12	
	eS	NE		17	00	
	e	N Z		21.4		
10	eP	NEZ	16	20	54	
11	eP	NEZ	15	19	31	
11	eP	NEZ	17	17	53	
	e	Z		18	13	
11	eP	NEZ	23	13	20	strong local
	e	NEZ		13	44	
12	eP	NEZ	06	07	25	
12	iP	NEZ	08	10	18.7	
12	iP	NEZ	14	27	19.7	dil
12	iP	NEZ	19	23	46.8	comp. w
	is	NEZ		28	37	
	eScP	Z		28	52	
	e	NE		31	50	
	e	NE		32	02	
	eScS	NE		32	56	
12	iP	NEZ	20	33	43.3	
13	eP	NEZ	08	11	21	
13	iP	NEZ	17	17	24.5	local
	eS	N		17	43	

TOOLANGI
 October 1968

14	iP	NEZ	03	04	07.7	
	i	EZ		04	08.3	
	eS	NE		08.5		
14	eP	NEZ	05	33	47	
	i	NEZ		33	55	
14	eP	NEZ	05	57	57	
14	eP	NEZ	07	37	35	
15	iP	NEZ	02	03	30.5	
15	iP	NEZ	02	20	00.0	dil
	e	Z		22	03	
	e(ScP)	Z		24	46	
15	eP	Z	02	24	16	
15	eP	NEZ	03	35	24	
15	eP	NEZ	17	36	31	
15	eP	NEZ	17	58	10	
15	ip	NEZ	20	17	55.0	dil N
	eS	NE		25	01	
	e	E		28.7		
16	eP	NEZ	02	15	04	
16	eP	NEZ	04	44	04	(regional)
16	eP	NEZ	07	56	48	
16	eP	Z	10	07	(10)	
16	iP	NEZ	17	13	52	
	eS	NEZ		14	09	
17	iP	NEZ	05	15	51.8	
	e	NEZ		15	58	
	eS	NE		21	15	
	e	E		23.8		
	e	N Z		25.8		
17	iP	NEZ	07	02	49.8	
	e	Z		02	57	
17	eP	NEZ	15	46	34	
17	eP	NEZ	21	04	24	
	e	Z		04	34	
	eS	N		10	03	
	e	N		12.4		
18	iP	NEZ	02	56	44.3	comp.
18	eP	NEZ	03	33	46	
18	eP	NEZ	04	05	17	
18	eP	NEZ	05	49	44	
18	eP	NEZ	06	04	49	
	e	EZ		04	58	
18	eP	NEZ	06	22	16	
18	iP	NEZ	11	28	51.3	
18	eP	NEZ	17	52	(34)	regional
	e	NEZ		53	49	
18	eP	NEZ	19	04	14	
	e	Z		04	22	



MAWSON

October 1968

6	eP	07	43	33
7	eP	02	06	14
7	eP	03	16	32
7	eP	14	33	15
7	eP	19	33	45
8	eP	07	49	37
8	eP	15	05	35
10	eP	15	17	54
12	iP	19	28	54.1
14	eP	00	23	26
14	eP	03	07	29
15	eP	20	21	55

MACQUARIE ISLAND

October 1968

7	eP	19	31	49
10	eP	15	14	28
12	eP	19	24	08

C. A. van der WAAL
OBSERVER-IN-CHARGE

21.10.68

TOOLANGI GEOPHYSICAL OBSERVATORY

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT: -
TOOLANGI - MACQUARIE ISLAND - MAWSON



TOOLANGI

October 1968

19	eP	NEZ	00	28	01
19	eP	NEZ	17	36	38
	e	EZ		36	49
	e(S)	N		46.7	
	e	N		47.4	
	e	EZ		49.4	
19	eP	NEZ	21	44	06
20	eP	NEZ	07	19	04
	e	Z		19	13
	eS	N		28	15
21	eP	NEZ	00	35	06
21	eP	NEZ	07	22	18
	e	EZ		22	26
22	eP	NEZ	07	24	47
22	eP	NEZ	14	05	58
22	eP	N Z	18	18	01
23	eP	NEZ	01	57	52
	eS	NEZ	02	00	56
	e	N		02	02
23	eP	NEZ	13	33	55
	e	Z		35	39
23	iP	NEZ	21	11	28.9
	eS	E		16	51
	e	E		18.6	

MAWSON

October 1968

18	eP	15	58	06
19	eP	14	24	16
19	eP	17	41	32
19	eP	21	38	48

C. A. van der Waal
OBSERVER-IN-CHARGE

25th October, 1968

Box 2831AA, G.P.O.,
MELBOURNE, Vic. 3001

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON



TOOLANGI

October 1968

TOOLANGI (CONT'D.)

24	eP	NEZ	00	50	53.3 dil
	e	Z		50	59
	e	Z		51	07
24	iP	NEZ	02	09	09.6 dil
	e	Z		11	47
	e	N		15.0	
	e	E		18.3	
	e	E		21.6	
24	eP	Z	05	19	44
24	iP	NEZ	12	08	23.1 dil
24	eP	NEZ	13	09	44
	e	E		13	33
24	eP	NEZ	14	06	30
24	eP	EZ	15	59	41
	i	NEZ		59	46
	e	N	16	01	35
	eS	NE		06	24
	e	NE		09.8	
25	eP	NEZ	01	24	37
25	eP	NEZ	03	56	(08)
25	eP	NEZ	07	03	03
25	eP	NEZ	10	19	38
25	iP	NEZ	10	39	46.5 comp.
	e	Z		40	00
25	iP	NEZ	16	03	18.8
	e	Z		03	37
26	e(P)	NEZ	04	35	50
27	eP	NEZ	12	22	15
27	iP	NEZ	13	50	40.8
	e	NEZ		50	57
27	iP	NEZ	20	05	49.0 comp.
28	eP	NEZ	14	51	54
28	iP	NEZ	23	38	45.5
	e	NEZ		39	47
	eS	NE		43	45
	e	NE		46.2	
	e	NEZ		47.5	
29	eP	NEZ	04	17	08
	e	Z		17	25
29	eP	NEZ	06	56	17
29	iP	NEZ	07	27	40.0 dil. N.E.
	iS	NE		32	46
29	iP	NEZ	12	49	41.4 comp.
29	eP	NEZ	17	08	39
	e(S)	NE		15	03
30	eP	NEZ	00	15	15
	e	N Z		16	58

30	eP	NEZ	00	51	19
30	eP	NEZ	05	38	36
30	eP	NEZ	09	47	46
	e	EZ		49	03
	e	EZ		50	41
	e	Z		53	46
	eS	NE		54.6	
30	e(P)	Z	09	53	46
30	eP	NEZ	12	43	14
31	eP	NEZ	00	37	18
31	iP	NEZ	05	16	01.9 Local
31	iP	NEZ	09	14	30.5 comp. SE
	i	Z		14	52
	e	EZ		15	00
	e	NEZ		16	08
	e	Z		16	29
	e	NE		20	53
	e	NE		21	41
	e	NE		24	10
	e	NE		25.7	
31	eP	NEZ	11	50	25
31	eP	Z	14	50	32

November 1968

1	eP	NEZ	01	37	28
	e	Z		37	45
	eS	NE		41	39
	e	N		42	10
1	eP	NEZ	03	20	52
1	eP	NEZ	13	25	54
	e	NE		30	28
	eS	NE		31	44
1	eP	NEZ	13	51	24
1	eP	NEZ	20	08	36
2	eP	NEZ	01	50	09
	e	Z		50	22
2	eP	NEZ	16	59	35 Regional
2	eP	NEZ	22	40	19
	e(S)	N		47.2	
	e	N		53.7	
2	eP	NEZ	23	12	18
3	eP	NEZ	03	17	28
3	iP	NEZ	05	55	20.3
3	iP	NEZ	08	18	03.1 comp.
	i	N Z		18	15
3	eP	NEZ	15	46	36
4	eP	NEZ	01	55	25
	e	EZ		55	33

TOOLANGI (CONT'D.)

November 1968

4	eP	NEZ	03	23	55	
4	iP	NEZ	09	13	29.6	comp.
	i	Z		14	21	
	iS	NEZ		18	08	
	e	E		21	15	
	i(ScS)	NE		22	48	
	e	N		23.8		
4	iP	NEZ	09	39	14.5	
4	iP	NEZ	10	42	12.4	comp.
	i	Z		42	21	
4	iP	NEZ	10	53	01.8	
5	iP	NEZ	00	16	15.3	
5	eP	Z	02	33	34	
6	eP	NEZ	00	51	25	
6	eP	NEZ	05	35	19	
6	eP	NEZ	07	19	59	
6	iP	EZ	10	38	25.7	

MAWSON

October 1968

22	iP		10	29	50.8	
23	eP		05	39	55	
23	eP		21	17	09	
24	eP		02	14	51	
24	eP		04	29	51	
24	eP		05	13	30	
24	eP		06	33	01	
24	eP		06	35	45	
24	eP		16	03	52	
24	eP		17	03	52	
24	iP		17	46	14.0	
25	eP		05	26	13	
25	eP		06	15	22	
25	eP		07	00	25	
25	eP		10	00	06	
25	iP		11	57	46.7	
26	eP		17	08	41	
28	iP		14	16	58.0	
28	eP		13	44	52	
29	iP		07	32	48.0	
29	eP		17	12	58	
29	eP		22	36	21	
31	iP		09	18	51.1	
31	eP		09	28	42	

MAWSON (CONT'D.)

November 1968

1	eP		01	42	28	
1	eP		12	32	02	
1	eP		13	30	21	

MACQUARIE ISLAND

October 1968

23	iP		21	13	57.0	
28	iP		23	40	21.1	

November 1968

4	iP		09	14	37.3	
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TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON

Box 2831AA, G.P.O.,
MELBOURNE. VIC.



TOOLANGI

November 1968

7	iP	NEZ	02	30	36.2	
7	eP	NEZ	03	40	41	
	e(S)	NE		47.0		
	e	NE		50.7		
7	iP	NEZ	04	57	43.3	
7	iP	NEZ	06	20	05.9	dil
7	iP	NEZ	10	21	09.2	dil
7	eP	NEZ	14	22	27	
8	eP	NEZ	02	59	39	
	e	NEZ	03	00	35	
8	iP	NEZ	07	48	57.8	comp. s.w.
	e	NE		55.1		
	e	Z		55	16	
8	e(P)	Z	07	55	16	
8	eP	NEZ	12	50	15	
	e	Z		50	48	
	e	Z		51	14	
8	iP	NEZ	18	33	33.5	comp. w
	e(S)	N		38	23	
	e(ScP)	Z		38	27	
9	eP	Z	02	07	54	
9	iP	NEZ	02	26	18.6	
	e	N Z		28	03	
9	eP	NEZ	04	39	36	
	e	N Z		41	13	
9	iP	NEZ	13	19	41.0	comp.
9	eP	NEZ	17	20	53	
	e	Z		21	04	
	e	Z		22	53	
9	iP	NEZ	20	38	42.8	
	eS	NE		45	11	
	e	E		48	18	
	e	E		51.6		
10	iP	NEZ	17	12	15.9	comp.
10	iP	NEZ	21	34	02.9	dil.
11	iP	NEZ	02	04	47.5	comp. w
11	iP	NEZ	08	34	25.5	
11	3P	NEZ	08	43	26	
	e	Z	44	44	15	
11	iP	NEZ	09	40	06.8	dil
	e	Z		41	04	
	e(S)	E		46	47	
11	eP	NEZ	14	53	05	
	eS(KS)	NEZ	15	03	00	
	e	E		15.0		
	e	NEZ		18.8		

TOOLANGI

November 1968

11	eP	NEZ	15	41	14	
	e	EZ		44	27	
	T max	NEZ		57.5		
11	eP	NEZ	17	14	46	
12	iP	NEZ	00	55	00.9	
	i	NEZ		55	14	
	eS	N	01	03	51	
12	e(P)	NEZ	05	18	52	
12	eP	NEZ	05	54	55	
12	eP	NEZ	06	33	35	
12	iP	NEZ	10	04	42.2	
	e	Z		04	47	
12	eP	NEZ	22	08	32	
	e(S)	E		15.2		
	e	E		18.7		
13	eP	NEZ	02	04	40	
13	eP	NEZ	03	30	29	
13	iP	NEZ	15	55	33.3	comp.
13	eP	NEZ	18	53	(41)	
13	iP	NEZ	21	42	14.2	

MAWSON

November 1968

4	iP		09	19	09.3	
5	eP		04	21	05	
5	eP		16	49	19	
7	eP		10	21	29	
8	iP		07	55	02.8	
8	eP		15	40	52	
9	eP		06	38	34	
9	iP		17	21	17.8	
9	eP		20	43	06	

Macquarie Island

November 1968

7	iP		10	21	44.7	
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C. A. van der WAAL
OBSERVER-IN-CHARGE

18.11.1968

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON

Box 2831AA, M.P.O.,
MELBOURNE. VIC. International
 Seismological
 Centre

TOOLANGI

November, 1968

14	iP	NEZ	01	45	35	strong local
	e	NEZ		45	56	
	e	Z		46	00	
14	eP	N Z	05	49	(08)	
14	eP	N Z	06	03	21	
14	eP	Z	10	03	32	
14	eP	N Z	11	42	08	
14	eP	Z	12	23	(08)	
14	iP	NEZ	23	14	25.3	
	i	NEZ		15	07	
	e(S)	NEZ		19.0		
15	iP	NEZ	13	47	00.2 dil	
15	iP	NEZ	15	04	44.0 comp.	
16	eP	NEZ	00	29	17	
16	eP	NEZ	03	40	05	
	e	Z		40	17	
	eS	E		51	27	
	e	NEZ	04	06.0		
16	eP	NEZ	07	28	13	
16	iP	NEZ	07	52	31.5	
	e	NEZ		53	50	
	e	E		56	13	
	eS	NEZ		58	02	
	e	EZ	08	00	34	
	e	NEZ		02	07	
16	eP	NEZ	11	41	16 regional	
16	eP	NEZ	18	16	14	
16	eP	Z	21	21	47	
16	iP	NEZ	23	11	52.4 local	
	e(S)	NEZ		12	16	
17	eP	NEZ	00	35	11	
	e	Z		35	20	
	e	Z		38	26	
17	e(P)	Z	00	38	26	
17	eP	EZ	03	36	35	
17	iP	NEZ	04	32	09	
17	eP	NEZ	05	26	09	
17	iP	NEZ	08	31	15.7 (local)	
	e(S)	E		31	40	
17	eP	Z	13	11	06	
17	eP	NEZ	13	14	15	
17	eP	NEZ	13	51	29	
17	eP	NEZ	15	34	09	
	e	NE		36	30	
17	e(P)	NEZ	23	08	20	
18	eP	NEZ	01	45	57	
	e	NEZ		46	14	

TOOLANGI

November 1968

18	eP	N Z	02	48	14
	e	Z		48	32
18	iP	NEZ	04	24	46.6
19	eP	NEZ	06	21	20
20	e(P)	NEZ	06	59	34
20	iP	NEZ	12	38	00.7 dil.

MACQUARIE ISLAND

November 1968

12	eP		00	56	49
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MAWSON

November 1968

12	eP		22	13	24
13	iP		02	09	33.4
13	eP		19	32	16
14	eP		10	28	03
14	eP		23	20	36
16	eP		00	35	29
16	eP		07	58	11

(C. A. van der WAAL)
OBSERVER-IN-CHARGE

25.11.1968

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS



PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI

TOOLANGI

November 1968

21	eP	NEZ	03	43	46	
21	eP	NEZ	05	34	51	Regional
21	iP	NEZ	14	41	23.6	
21	eP	NEZ	23	38	46	
22	eP	Z	03	48	50	
	e	NEZ		48	53	
22	eP	NEZ	06	26	06	
22	eP	NEZ	07	25	50	
22	eP	NEZ	09	09	13	
	e	N Z		14	38	
	eS	NE		17	12	
	e	N		17	46	
	e	E		20	36	
22	eP	NEZ	10	39	48	
	e	NEZ		41	25	
	eS	NEZ		46	09	
	e	NE		49.2		
22	iP	NEZ	11	47	48.8	
22	iP	NEZ	15	49	55.3	comp.
	e	Z		50	50	
	iS	NEZ		54	34	
22	eP	NEZ	16	19	32	
22	eP	NEZ	19	51	05	local
23	e(P)	NEZ	02	12	33	

TOOLANGI

November 1968

24	eP	NEZ	02	24	22	
24	eP	NEZ	21	17	27	
	e(S)	N		23	36	
	e	NE		26.8		
	e	NE		27.40		
24	eP	Z	21	32	52	
	e	Z		33	05	
25	eP	Z	02	09	04	
25	eP	NEZ	18	45	15	
	e	NEZ		48	51	
	eS	NE		51	55	
	e	NEZ		55	20	
	e	E		58.5		
26	iP	NEZ	01	16	40.0	
	e	Z		23	06	
	e	E		24.5		
26	iP	NEZ	01	55	52.8	
26	eP	NEZ	05	31	46	
26	eP	NEZ	10	59	45.3	
27	iP	NEZ	00	20	54.7	
27	eP	NEZ	05	13	25	regional
27	eP	NEZ	22	12	07	

(C. A. van der WAAL)
OBSERVER IN CHARGE

2.12.1968

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON



TOOLANGI

November, 1968

28	e(P)	Z	10	56	36
	e	E	11	04	50
	e	EZ		06	38
	e	E		13.4	
	e	E		18.2	
	e	EZ		33.0	
28	eP	NEZ	15	22	13
	e	Z		23	42
28	eP	NEZ	16	36	45
	e	Z		39	30
	eS	N		41	45
	e	N Z		46.3	
	e	E		46.7	
29	eP	NEZ	04	36	52
29	iP	NEZ	06	56	32.4
29	iP	NEZ	17	04	17
29	eP	NEZ	21	58	19
30	eP	NEZ	02	29	19
30	eP	NEZ	02	50	24
30	eP	NEZ	03	00	19
30	eP	NEZ	04	18	59
30	eP	NEZ	04	30	43
30	eP	NEZ	06	13	07
30	eP	NEZ	06	56	23

December 1968

1	iP	NEZ	01	58	11.0 dil
1	eP	NEZ	05	33	53
	e	Z		33	58
	eS	N		39	24
	e	NE		41.5	
1	iP	NEZ	20	42	12.8 dil N.E.
	e	Z		42	22
	eS	NE		47	18
2	eP	NEZ	11	25	16
2	eP	NEZ	13	00	12
2	eP	Z	13	36	49
2	eP	NEZ	14	57	20
	e(S)	E	15	00	18
	e	N Z		00	23
	e	N		00	47
	e	N		01	55
3	eP	NEZ	12	11	20
3	eP	EZ	12	48	45
3	eP	NEZ	19	35	03
	e	EZ		35	06
	e(S)	NE		41.8	
	e	NE		45.2	
	e	N		49.4	

TOOLANGI (Continued)

4	e(P)	NEZ	05	01	(02)
	e	NEZ		01	21
4	iP	NEZ	05	10	31.8 comp. S.W.
DECEMBER 1968					
5	iP	NEZ	06	01	37.8 dil
5	eP	NEZ	10	04	12
	e	EZ		04	22
5	eP	NEZ	15	16	48 regional
5	iP	NEZ	22	34	14.1 comp
6	eP	NEZ	00	18	13
6	eP	NEZ	06	32	55
6	eP	EZ	08	17	25
6	iP	NEZ	08	31	38.5
6	eP	NEZ	09	52	16
6	eP	NEZ	11	14	11 regional
	e	NEZ		14	16.5
6	eP	Z	15	38	14
6	eP	EZ	22	07	01
7	eP	NEZ	02	30	23.5 local
	e	NEZ		30	28.5
7	eP	NEZ	05	04	34.5
	e	Z		04	56
	e	N Z		05	05
	eS	NE		10	01
	e	E		12	25
7	eP	EZ	06	17	03
7	eP	NEZ	17	16	00
	e	Z		16	18
	e	Z		16	25
	eS	NE		20	55
	e	NE		22.8	
	e	NEZ		24.8	
7	eP	NEZ	20	48	09
	e	Z		48	17
7	iP	NEZ	21	41	20.0 dil
	i	Z		41	35
	e	N Z		41	41
	eS	NE		45	52
	e	NEZ		48.3	
8	eP	NEZ	07	31	00
	i	NEZ		31	04
	e	NE		34	09
8	eP	NEZ	09	19	21
	e	Z		19	35
8	iP	NEZ	13	18	26.0 comp. S
	e	Z		19	47
	e	NEZ		19	52
	e	NE		23	43
8	eP	NEZ	15	02	23
	eS	NEZ		02	31
8	iP	NEZ	18	39	01.5

TOOLANGI (Continued)

2.



8	eP	EZ	20	06	22
	e(S)	N		16.2	
	e	NE		16.5	
8	eP	Z	20	59	17

MACQUARIE ISLAND

November 1968

28	eP		16	38	54
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MAWSON

November 1968

24	iP		21	39	50.9
25	eP		16	46	41
25	eP		28	49	26
26	eP		00	09	38
26	iP		01	22	41.6
27	eP		10	17	44
27	eP		22	36	01
28	eP		09	03	05
28	eP		16	42	50
28	eP		20	22	24
29	eP		19	14	02
30	eP		22	44	33

DEC 1 6 1968

December 1968

1	eP		05	34	43
1	eP		13	28	27
2	eP		02	43	45
2	eP		15	21	44
4	eP		04	02	00
4	eP		04	43	46

C.A. van der WAAL
OBSERVER-IN-CHARGE

11-12-1968

TOOLANGI GEOPHYSICAL OBSERVATORY
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MAWSON



TOOLANGI

December 1968

9	Nil				
10	eP	NEZ	03	08	37
	e	N Z		08	42
10	iP	NEZ	04	32	01.6 dil.N
10	eP	NEZ	05	50	30 Regional
10	iP	NEZ	15	06	29.7 dil.
11	eP	NEZ	02	58	18
	e	N	03	06.8	
	e	N		07	20
11	eP	NEZ	02	58	18
	e	N	03	06.8	
	e	N		07	20
11	eP	NEZ	11	56	50
	e	N Z		57	00
11	eP	NEZ	21	40	56
	e(S)	E		47	04
	e	N		49.3	
11	eP	NEZ	23	28	25
12	eP	NEZ	00	32	05
	e	EZ		32	10
	e	EZ		33	43
	e(S)	E		37	50
	e	NE		41	06
12	iP	NEZ	05	34	25.9 dil.N
	e	N Z		34	48
	e	N Z		34	58
12	iP	NEZ	07	26	31.7 dil.
	i	NEZ		26	36
	e	Z		28	18
	e	NEZ		28	21
	iS	NE		31	58
	e	N		34	30
	e	E		34	46
12	eP	Z	11	30	44
12	eP	NEZ	16	10	21
12	eP	NEZ	22	07	48
13	eP	NEZ	02	54	05
13	eP	NEZ	05	51	04
13	iP	NEZ	11	46	28.5
13	eP	NEZ	20	53	27 local
	eS	E		53	38
14	eP	NEZ	05	08	58
14	e(S)	E	10	23	19
	e	N		29	53
14	iP	NEZ	13	24	35.6

TOOLANGI (Continued)

December 1968

15	iP	NEZ	02	27	27
	eSKS	N		37	56
	e	E		38	34
	e	E		52	50
	e	E		53.6	
	e	E	03	08.4	
15	iP	NEZ	09	08	51.0 comp.
15	eP	NEZ	21	59	19
16	eP	NEZ	10	52	34
	eS	NE		57	12
	e	NE		58.6	
	e	NEZ	11	00.6	
16	iP	NEZ	11	32	52.0 dil
16	eP	NEZ	18	26	07
17	eP	NEZ	00	23	17
17	eP	NEZ	06	09	07 local
	e	N Z		09	21
	e	EZ		09	23
17	eP	NEZ	07	16	21
17	eP	NEZ	12	16	45
	e	NEZ		20	37
	e	N Z		21	07
	e	NE		27	00
	e	NE		28	46
	e	Z		30.5	
	e	NE		36.3	
	e	NE		47.7	
	e	E		48.3	
17	e(P)	NEZ	12	20	37
17	iP	NEZ	16	54	55.5
17	eP	NEZ	17	15	12
18	eP	NEZ	01	26	50
18	eP	NEZ	04	43	27
18	iP	NEZ	05	44	57.2 local
	eS	NEZ		45	01
18	eP	NEZ	14	07	54 local
	eS	NEZ		08	11
18	iP	NEZ	17	35	44.0
18	iP	NEZ	20	10	17.8 comp. SW
	eS	NE		15	32
	iScP	Z		15	46
	iScS	NE		19	52
18	eP	Z	20	21	10

JAN 6 1969



MAWSON

November 1968

19	eP	16	58	36
20	eP	04	30	48
21	eP	04	26	04
22	eP	03	53	58
22	eP	07	17	16
22	eP	10	44	04

Mawson

December 1968

5	eP	10	03	47
6	eP	05	16	07
6	eP	11	24	24
6	eP	19	10	39
7	eP	05	10	19
7	eP	16	00	27
7	iP	20	45	55.1

Mawson (Continued)

December 1968

7	eP	21	47	33
8	eP	01	06	48
8	eP	01	32	20
10	eP	04	37	01
11	iP	04	53	01.2
11	eP	09	25	07
11	iP	15	44	42.1
11	iP	19	00	46.3
11	eP	21	01	12
11	eP	21	46	03
12	eP	06	42	14
12	eP	07	31	38
13	eP	12	12	01
14	eP	10	18	33
14	eP	22	04	28
15	eP	00	07	58
15	eP	02	33	49
15	eP	02	48	03

C. A. van der WAAL
OBSERVER-IN-CHARGE

23.12.68

PRELIMINARY EARTHQUAKE PHASES AT:-
TOOLANGI - MACQUARIE ISLAND - MAWSON



TOOLANGI

December 1968

19	iP	NEZ	00	34	28.2
	e	NEZ		34	38
	i	Z		36	22
19	eP	NEZ	02	37	26
19	eP	Z	05	35	33
	e	NEZ		35	38
19	iP	NEZ	11	33	35.8
19	eP	NEZ	15	29	01
	e(S)	NE		40	01
	e	N		46.0	
	e	E		52.9	
19	eP	N Z	16	48	46
	e	Z		49	56
19	i(P)	Z	16	49	55.8
19	e(P)	Z	17	03	08
19	eP	EZ	20	31	27
19	eP	NEZ	23	15	15
20	eP	NEZ	06	58	03
20	iP	NEZ	13	36	10.2 dil
20	iP	NEZ	14	39	35.6
20	eP	NEZ	15	18	02 local
20	eP	NEZ	21	50	48
	e	NEZ		50	52
	e(S)	N		58.0	
	e	N Z		01.7	
20	iP	NEZ	23	54	06.0 comp.
21	eP	NEZ	06	03	56
21	iP	NEZ	08	03	53.5 strong local
	eS	NEZ		04	06
21	eP	NEZ	22	13	34
22	eP	NEZ	01	53	01
22	eP	NEZ	09	19	05
22	iP	NEZ	15	34	02.4 comp.
	e	N Z		36	26
	eS	NE		39	24
	e	E		41.9	
	e	N Z		44.1	
22	eP	NEZ	17	01	50
22	eP	EZ	17	46	32
	e	NEZ		46	38
	eS	NE		52	15
	e	E		54.9	
23	iP	NEZ	06	00	48.3 comp.
	i	NEZ		02	29
	eS	NE		07	10
	e	E		10	10
23	eP	NEZ	15	52	54
	i	N Z		53	11

TOOLANGI

December 1968

24	iP	NEZ	13	09	44.1 compl
24	iP	NEZ	15	03	16.0
24	iP	NEZ	15	49	27.4 dil.
	e	N Z		50	54
24	iP	NEZ	18	51	23.6
25	iP	NEZ	04	08	41.4
	e	Z		09	10
25	eP	NEZ	08	31	41
25	iP	NEZ	19	03	05.7 dil.
	e	Z		03	15
25	eP	NEZ	22	47	30
	e	Z		47	39
26	iP	NEZ	01	29	40.8 comp.
26	eP	NEZ	02	46	59
	e(S)	NE		50.5	
	Tmax	NEZ	03	05.7	
26	iP	NEZ	13	29	56.4
26	iP	NEZ	18	28	06.3
26	iP	NEZ	21	13	46.0
	i	NEZ		15	24
27	eP	NEZ	00	19	17
27	eP	NEZ	00	37	(34)
27	eP	NEZ	10	13	16
27	iP	NEZ	22	38	29.0 comp SE
	i	N Z		39	55
	i	NEZ		39	59
	e	NE		40	54
28	iP	NEZ	03	04	01.9 dil
28	eP	NEZ	06	34	(09)
	e	NE		43.0	
	e	N		45.9	
	e	N Z		49	03
28	eP	NEZ	19	54	13
28	eP	NEZ	20	07	49
29	eP	NEZ	02	01	47
	e(S)	NE		08	46
29	eP	NEZ	04	14	14
	e	EZ		23.5	
29	eP	NEZ	05	21	12
29	eP	NEZ	07	25	27
	e	NEZ		25	39
	e	NEZ		25	54
	e	Z		26	14
	e(S)	NE		33	13
	e	N		40	10
29	eP	NEZ	07	55	17
29	eP	NEZ	08	45	21
	e	Z		48	08
	e	E		53	17
	e	Z		54	20

TOOLANGI

December 1968

29	iP	NEZ	17	55	23.5	
29	eP	EZ	18	03	58	
29	iP	NEZ	20	09	36.0	comp.
29	eP	EZ	21	36	48	
30	eP	NEZ	00	26	38	
30	iP	NEZ	01	41	26.0	
30	eP	NEZ	04	56	34	
	e	EZ		56	47	
30	eP	NEZ	09	55	12	
	e	N Z		56	50	
31	iP	NEZ	00	13	39.6	Local
	eS	NEZ		13	56	
31	eP	NEZ	06	44	15	
31	eP	Z	13	45	(32)	
	e	NEZ		46	04	
31	iP	NEZ	16	10	22.2	comp SW
						Regional
31	iP	NEZ	18	00	21.7	

January 1969

1	iP	NEZ	06	58	31.7	
	e	NEZ		58	56	
	e	N Z	59	16		
	eS	NE	07	02	45	
	e	E		03	40	
	e	N Z		04.6		
1	iP	NEZ	09	31	59.1	dil E
	e	NEZ		42.5		
1	eP	NEZ	17	41	28	
1	iP	EZ	18	55	32.5	
1	eP	NEZ	23	59	15	
2	eP	NEZ	03	20	46	
2	eP	NEZ	04	16	28	
2	eP	EZ	06	04	38	
	e	NEZ		04	49	
2	eP	NEZ	10	29	26.6	Comp. N.W.
	Tmax	NEZ		46.3		
2	iP	NEZ	14	47	16.6	dil
2	iP	NEZ	15	53	36.9	
2	eP	NEZ	17	27	37	
2	eP	NEZ	17	40	03	
2	eP	NEZ	18	03	22	
	e	N Z		03	42	
	e	N Z		03	58	
	e	NEZ		06	43	
	e(S)	E		14	25	
3	iP	NEZ	23	42	48.5	comp.
4	eP	NEZ	22	20	45	
4	iP	NEZ	22	43	22.3	comp. S.E.
	e	NE		55	20	

TOOLANGI

January 1969

5	iP	NEZ	01	40	51.1	
	e	EZ		41	01	
5	iP	NEZ	07	37	11.2	comp.
	eS	NE		47	11	
5	iP	NEZ	13	33	02.2	comp. W
	eS	NEZ		38	04	
	e	NE		40.6		
5	eP	NEZ	16	22	27	
5	eP	NEZ	16	57	34	
	e	Z		58	00	
6	iP	NEZ	01	11	16.6	
6	eP	NEZ	11	56	19	strong local
	eS	NEZ		56	44	felt
6	iP	NEZ	12	34	58.8	comp.
6	iP	NEZ	15	36	36.7	comp. W.
6	iP	NEZ	15	45	25.3	dil
	eS	E		50	40	
6	eP	NEZ	17	12	38	
6	eP	NEZ	17	40	04	
6	eP	NEZ	20	56	25	
6	eP	NEZ	21	06	20	
7	iP	NEZ	01	20	26.1	comp.
7	iP	NEZ	04	46	20.0	dil
	eS	NE		51	10	
	e	E		52.8		
	e	N		53	03	
	e	N		54.5		
7	eP	NEZ	06	43	41	
7	iP	NEZ	07	12	32.0	
7	iP	NEZ	17	53	09.5	
	e	Z		53	30	
	e(S)	NE	18	00.3		
8	iP	NEZ	14	03	36.4	comp.
8	iP	NEZ	22	04	35.3	comp.

MAWSON

December 1968

16	eP		07	00	39	
16	eP		10	58	48	
16	eP		19	01	29	
16	eP		20	18	38	
17	eP		01	06	39	
17	eP		03	16	08	
17	eP		04	15	09	
17	eP		12	22	06	
18	eP		03	55	19	
18	eP		07	04	53	
18	eP		20	15	27	

MAWSON

December 1968

19	eP	05	42	02
19	iP	16	49	49.7
20	eP	06	34	54
21	eP	05	56	48
22	eP	06	40	46
23	eP	06	05	08
23	eP	22	46	44
24	eP	14	00	33
26	eP	21	18	05
26	eP	23	41	16
27	eP	22	43	09
28	eP	07	01	53
29	eP	08	51	10
29	eP	16	41	26
30	eP	03	40	19
30	eP	10	51	15
30	iP	14 ⁰	06	21.8
31	eP	04	09	32
31	eP	04	24	26

January 1969

1	eP	16	37	32
2	eP	05	22	28
2	eP	07	40	18
2	iP	17	58	17.4
3	eP	03	20	40
3	eP	04	59	03
3	eP	05	19	26
3	eP	07	30	18
3	eP	13	47	49
3	eP	22	13	58
4	eP	06	39	45
4	eP	07	40	09
4	iP	22	48	20.3
5	eP	05	28	21
5	eP	13	39	11
5	eP	17	01	59
6	eP	06	29	19
6	eP	15	41	42
6	eP	15	51	34

MACQUARIE ISLAND

December 1968

24	iP	14	47	34.7
26	iP	02	42	48.0 felt
27	iP	00	15	07.7

January 1969

5	iP	13	35	04.5
9	iP	22	09	07.5



C.A. van der WAAL
OBSERVER-IN-CHARGE

13.1.1969