

Period 12 secs. Damping ratio 20:1 Tilt 1" = 41.6mm
Universal

Date	Time	Phase	A	Period	Remarks.
1933	h m s		"	secs.	
Jan. -1	8 54 43	iP			
	55 30	PR1			
	57 37	i			
	59 18?	S			$\Delta 26.4?$ (Jeffreys' Tables 1932)
	9 1.7?	L			
	2.9	M	232	20	
-4	1 43 47	i			p preceded by very small waves
	51 9	i			
	53 40	L			
	56.6	M	13	23	
-5	14 3 13	e			
	8 31	L			
	17.6	M	6	13	
7	4 28 30	e			
	29 12	i			small
	33 26	i			
	41.4	L			
9	2 19 16	i			small throughout
	25 27	i			
	29 35	i			
	33 35	i			main feature in trace
11	20 13 21	e			severe at Dunning N.S.W.
	13 25	i	6	4	
	13 40	L			
13	15 2 52	e			very small
	4 48	i			
	6 10	L			
	6.6	M	5	10	
-15	18 9 15?	e			extremely small
	13 28	i			
	14 5	S			
	18.4	L			
	21.7	M	28	11	
-17	19 7 48	e			very small
	8 46	e			
	19 52	L			
	22.5	M	7	20	
-21	19 32 19	P			
	35 10	PR1			
	36 40	PR2			
	41 19	S			$\Delta 68.2$
	41 53	PS			
	42 18	S			
	49 3	SR2			probably SR3 at 50 32
	53 10	L			
	55.4	M	192	20.5	

Period 15 sec. Damping ratio 20:1 Tilt 1" = 51.0ms

Date	Time	Phase	A Period	Remarks
Jan 4	5 54 45	1P	15	
	5 54 50	1P	15	
	5 54 55	1P	15	
	5 55 00	1P	15	
	5 55 05	1P	15	
	5 55 10	1P	15	
	5 55 15	1P	15	
	5 55 20	1P	15	
	5 55 25	1P	15	
	5 55 30	1P	15	
	5 55 35	1P	15	
	5 55 40	1P	15	
	5 55 45	1P	15	
	5 55 50	1P	15	
	5 55 55	1P	15	
	5 56 00	1P	15	
	5 56 05	1P	15	
	5 56 10	1P	15	
	5 56 15	1P	15	
	5 56 20	1P	15	
	5 56 25	1P	15	
	5 56 30	1P	15	
	5 56 35	1P	15	
	5 56 40	1P	15	
	5 56 45	1P	15	
	5 56 50	1P	15	
	5 56 55	1P	15	
	5 57 00	1P	15	
	5 57 05	1P	15	
	5 57 10	1P	15	
	5 57 15	1P	15	
	5 57 20	1P	15	
	5 57 25	1P	15	
	5 57 30	1P	15	
	5 57 35	1P	15	
	5 57 40	1P	15	
	5 57 45	1P	15	
	5 57 50	1P	15	
	5 57 55	1P	15	
	5 58 00	1P	15	
	5 58 05	1P	15	
	5 58 10	1P	15	
	5 58 15	1P	15	
	5 58 20	1P	15	
	5 58 25	1P	15	
	5 58 30	1P	15	
	5 58 35	1P	15	
	5 58 40	1P	15	
	5 58 45	1P	15	
	5 58 50	1P	15	
	5 58 55	1P	15	
	5 59 00	1P	15	
	5 59 05	1P	15	
	5 59 10	1P	15	
	5 59 15	1P	15	
	5 59 20	1P	15	
	5 59 25	1P	15	
	5 59 30	1P	15	
	5 59 35	1P	15	
	5 59 40	1P	15	
	5 59 45	1P	15	
	5 59 50	1P	15	
	5 59 55	1P	15	
	5 60 00	1P	15	
	5 60 05	1P	15	
	5 60 10	1P	15	
	5 60 15	1P	15	
	5 60 20	1P	15	
	5 60 25	1P	15	
	5 60 30	1P	15	
	5 60 35	1P	15	
	5 60 40	1P	15	
	5 60 45	1P	15	
	5 60 50	1P	15	
	5 60 55	1P	15	
	5 61 00	1P	15	
	5 61 05	1P	15	
	5 61 10	1P	15	
	5 61 15	1P	15	
	5 61 20	1P	15	
	5 61 25	1P	15	
	5 61 30	1P	15	
	5 61 35	1P	15	
	5 61 40	1P	15	
	5 61 45	1P	15	
	5 61 50	1P	15	
	5 61 55	1P	15	
	5 62 00	1P	15	
	5 62 05	1P	15	
	5 62 10	1P	15	
	5 62 15	1P	15	
	5 62 20	1P	15	
	5 62 25	1P	15	
	5 62 30	1P	15	
	5 62 35	1P	15	
	5 62 40	1P	15	
	5 62 45	1P	15	
	5 62 50	1P	15	
	5 62 55	1P	15	
	5 63 00	1P	15	
	5 63 05	1P	15	
	5 63 10	1P	15	
	5 63 15	1P	15	
	5 63 20	1P	15	
	5 63 25	1P	15	
	5 63 30	1P	15	
	5 63 35	1P	15	
	5 63 40	1P	15	
	5 63 45	1P	15	
	5 63 50	1P	15	
	5 63 55	1P	15	
	5 64 00	1P	15	
	5 64 05	1P	15	
	5 64 10	1P	15	
	5 64 15	1P	15	
	5 64 20	1P	15	
	5 64 25	1P	15	
	5 64 30	1P	15	
	5 64 35	1P	15	
	5 64 40	1P	15	
	5 64 45	1P	15	
	5 64 50	1P	15	
	5 64 55	1P	15	
	5 65 00	1P	15	
	5 65 05	1P	15	
	5 65 10	1P	15	
	5 65 15	1P	15	
	5 65 20	1P	15	
	5 65 25	1P	15	
	5 65 30	1P	15	
	5 65 35	1P	15	
	5 65 40	1P	15	
	5 65 45	1P	15	
	5 65 50	1P	15	
	5 65 55	1P	15	
	5 66 00	1P	15	
	5 66 05	1P	15	
	5 66 10	1P	15	
	5 66 15	1P	15	
	5 66 20	1P	15	
	5 66 25	1P	15	
	5 66 30	1P	15	
	5 66 35	1P	15	
	5 66 40	1P	15	
	5 66 45	1P	15	
	5 66 50	1P	15	
	5 66 55	1P	15	
	5 67 00	1P	15	
	5 67 05	1P	15	
	5 67 10	1P	15	
	5 67 15	1P	15	
	5 67 20	1P	15	
	5 67 25	1P	15	
	5 67 30	1P	15	
	5 67 35	1P	15	
	5 67 40	1P	15	
	5 67 45	1P	15	
	5 67 50	1P	15	
	5 67 55	1P	15	
	5 68 00	1P	15	
	5 68 05	1P	15	
	5 68 10	1P	15	
	5 68 15	1P	15	
	5 68 20	1P	15	
	5 68 25	1P	15	
	5 68 30	1P	15	
	5 68 35	1P	15	
	5 68 40	1P	15	
	5 68 45	1P	15	
	5 68 50	1P	15	
	5 68 55	1P	15	
	5 69 00	1P	15	
	5 69 05	1P	15	
	5 69 10	1P	15	
	5 69 15	1P	15	
	5 69 20	1P	15	
	5 69 25	1P	15	
	5 69 30	1P	15	
	5 69 35	1P	15	
	5 69 40	1P	15	
	5 69 45	1P	15	
	5 69 50	1P	15	
	5 69 55	1P	15	
	5 70 00	1P	15	
	5 70 05	1P	15	
	5 70 10	1P	15	
	5 70 15	1P	15	
	5 70 20	1P	15	
	5 70 25	1P	15	
	5 70 30	1P	15	
	5 70 35	1P	15	
	5 70 40	1P	15	
	5 70 45	1P	15	
	5 70 50	1P	15	
	5 70 55	1P	15	
	5 71 00	1P	15	
	5 71 05	1P	15	
	5 71 10	1P	15	
	5 71 15	1P	15	
	5 71 20	1P	15	
	5 71 25	1P	15	
	5 71 30	1P	15	
	5 71 35	1P	15	
	5 71 40	1P	15	
	5 71 45	1P	15	
	5 71 50	1P	15	
	5 71 55	1P	15	
	5 72 00	1P	15	
	5 72 05	1P	15	
	5 72 10	1P	15	
	5 72 15	1P	15	
	5 72 20	1P	15	
	5 72 25	1P	15	
	5 72 30	1P	15	
	5 72 35	1P	15	
	5 72 40	1P	15	
	5 72 45	1P	15	
	5 72 50	1P	15	
	5 72 55	1P	15	
	5 73 00	1P	15	
	5 73 05	1P	15	
	5 73 10	1P	15	
	5 73 15	1P	15	
	5 73 20	1P	15	
	5 73 25	1P	15	
	5 73 30	1P	15	
	5 73 35	1P	15	
	5 73 40	1P	15	
	5 73 45	1P	15	
	5 73 50	1P	15	
	5 73 55	1P	15	
	5 74 00	1P	15	
	5 74 05	1P	15	
	5 74 10	1P	15	
	5 74 15	1P	15	
	5 74 20	1P	15	
	5 74 25	1P	15	
	5 74 30	1P	15	
	5 74 35	1P	15	
	5 74 40	1P	15	
	5 74 45	1P	15	
	5 74 50	1P	15	
	5 74 55	1P	15	
	5 75 00	1P	15	
	5 75 05	1P	15	
	5 75 10	1P	15	
	5 75 15	1P	15	
	5 75 20	1P	15	
	5 75 25	1P	15	
	5 75 30	1P	15	
	5 75 35	1P	15	
	5 75 40	1P	15	
	5 75 45	1P	15	
	5 75 50	1P	15	
	5 75 55	1P	15	
	5 76 00	1P	15	
	5 76 05	1P	15	
	5 76 10	1P	15	
	5 76 15	1P	15	
	5 76 20	1P	15	
	5 76 25	1P	15	
	5 76 30	1P	15	
	5 76 35	1P	15	

Seismological
Bulletin No.21contd.

MELBOURNE OBSERVATORY
SOUTH YARRA S.E.1 VICTORIA.

Date 1933	Universal Time			Phase	A μ	Period secs.	Remarks
	h	m	s				
Jan.23	18	25	48	i			amplitudes small throughout
		29	0	e			
→27	22	44	44	eP			
		44	56	i			
		46	42	PR1			
		51	14	S			Δ 43.7
		54	59	iSR1			
		57	40	L			
	23	4.2		M	100	19	
→29	11	5	29	e			
		9.9		L			
		10.4		M	6	18	
Feb →9	15	46	55	i			S?
		49	13	i			SR1?
		52	50	L			
		56.3		M	14	10.5	
13	7	51.3		L			
		52.2		M	4	15	
→14	4	39	5	e			small and preceded by micros
		41	47	i			
		43	54	L			
		46.4		M	8	16	
15	9	17ca		e			
		17	45	e			three waves of very long period
		19.4		e			
		23.2		L			
16	9	22	45	e			small throughout
		32.5		L			
→19	8	41	7	i			P?
		46	5	i			S? Δ 29.4?
		50.5		L			
		52.6		M	24	18	
21	3	9.5ca		e			small
		10.7		L			
→23	8	29	23	e			micros very strong throughout day
		34	34	i			
		38	13	i			some larger waves
		44	25	i			
		51	50	e			
		56.9		e			
	9	1		L			
		7		M	58	20	
25	1	33ca		e			small
		40.4		L			

Date 1933	Universal Time			Phase	A μ	Period secs.	Remarks
	h	m	s				
Feb 14	4	59	5	e			small and preceded by micros
		41	47	i			
		42.5?		L			
		43.5		M	15	7	
14	5	40.2		e			obscured by irregular micros
		42.25		i			
		43.54		L			
		46.4		M	8	16	
27	14	59	15	e			
	15	0	56	L			
		1.8		M	7	11	
27	16	15.3?		e			
		17.29		i	56	19	
		18.22		i			
		19.20		L			
		19.7		M	68	12	
28	9	13		i			
		15.1		M	3	14	
Mar. 1	20	42	15	i			
		45.5		M	5	10	
2	4	22.3		e			small and obscured by micros
		24.2		L			
		26.8		M	8	12	
2	17	42	57	eP			record much confused by overlapping
		43	7	iP			
		47	27	i			
		49	52	i			
		52	40	S			Δ 76.1
	18	3.3		L			
		8.3		M	1320	24	
5	8	33	15	e			
		40	29	i			
		42	32	i			
		46?		L			
		47.3		M	22	23	
9	20	39.6		e			extremely small
		44	0	i			
		48.3		L			
		50.4		M	7	16	
11	2	19	37	e			very small
		30	20	e			one wave
		47.5		L			
	3	1		M	3	20	Press reports Southern California
11	7	33	0	i			small but distinct
		39		L			

Seismological
Bulletin No. 21 contd.MELBOURNE OBSERVATORY
SOUTH YARRA S.E.1 VICTORIA

Date	Universal Time	Phase	A	Period	Remarks
Mar. 11	14 44 24	i	μ		
	15 3	L			
11	19 50 33	i			any earlier phases lost in micros
	51 37	i			
	53 33	i			
	20 4 57	i			may be L
13	16 46 25	i			small
	50.7	L			
	52.8	M	12	20	
15	5 15.5?	e			earlier phases lost in micros
	18 42	iL			
	21.9	M	16	16	
17	16 19 47	i			earlier phases lost in strong micros which obscure whole record
	38	L			
	55.5	L			
	17 0	M	14	20	
17	19 42 0	i			small and obscured by micros
	47 55	i			
	51 18	i	42	14	
	20 0ca	L			
	2.3	M1	74	20	
	5.8	M2	33	12	
18	3 28 6	e			small
	36 54	i			
	38 56	e	73	30	
	41.3	L			
	46.8	M	29	20	
29	18 51 53	i			
	52 25	e			
	54 30	e			
	55.6	M	5	9	

Small and undecipherable shocks were recorded as follows:-

Jan. 10a 16h; 18d 9h; 19d 19h; 20d 4h; 24d 3h; 25d 12h; 27d 12h, 17h; 31d 6h

Feb. 5d 22h; 19d 4h; 20a 2h; 27d 18h, 20h, 23h.

Mar. 2d 3h; 3d 9h; 18d 18h; 26d 17h.

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Government Astronomer.

Date	Time	Phase	Period	Remarks
1951.11	14 00 24	1		
	14 00 25	1		
	14 00 26	1		
	14 00 27	1		
	14 00 28	1		
	14 00 29	1		
	14 00 30	1		
	14 00 31	1		
	14 00 32	1		
	14 00 33	1		
	14 00 34	1		
	14 00 35	1		
	14 00 36	1		
	14 00 37	1		
	14 00 38	1		
	14 00 39	1		
	14 00 40	1		
	14 00 41	1		
	14 00 42	1		
	14 00 43	1		
	14 00 44	1		
	14 00 45	1		
	14 00 46	1		
	14 00 47	1		
	14 00 48	1		
	14 00 49	1		
	14 00 50	1		
	14 00 51	1		
	14 00 52	1		
	14 00 53	1		
	14 00 54	1		
	14 00 55	1		
	14 00 56	1		
	14 00 57	1		
	14 00 58	1		
	14 00 59	1		
	14 01 00	1		
	14 01 01	1		
	14 01 02	1		
	14 01 03	1		
	14 01 04	1		
	14 01 05	1		
	14 01 06	1		
	14 01 07	1		
	14 01 08	1		
	14 01 09	1		
	14 01 10	1		
	14 01 11	1		
	14 01 12	1		
	14 01 13	1		
	14 01 14	1		
	14 01 15	1		
	14 01 16	1		
	14 01 17	1		
	14 01 18	1		
	14 01 19	1		
	14 01 20	1		
	14 01 21	1		
	14 01 22	1		
	14 01 23	1		
	14 01 24	1		
	14 01 25	1		
	14 01 26	1		
	14 01 27	1		
	14 01 28	1		
	14 01 29	1		
	14 01 30	1		
	14 01 31	1		
	14 01 32	1		
	14 01 33	1		
	14 01 34	1		
	14 01 35	1		
	14 01 36	1		
	14 01 37	1		
	14 01 38	1		
	14 01 39	1		
	14 01 40	1		
	14 01 41	1		
	14 01 42	1		
	14 01 43	1		
	14 01 44	1		
	14 01 45	1		
	14 01 46	1		
	14 01 47	1		
	14 01 48	1		
	14 01 49	1		
	14 01 50	1		
	14 01 51	1		
	14 01 52	1		
	14 01 53	1		
	14 01 54	1		
	14 01 55	1		
	14 01 56	1		
	14 01 57	1		
	14 01 58	1		
	14 01 59	1		
	14 02 00	1		

Station on unassigned time were recorded as follows:

1951.11.14 14 00 24; 14 00 25; 14 00 26; 14 00 27; 14 00 28; 14 00 29; 14 00 30; 14 00 31; 14 00 32; 14 00 33; 14 00 34; 14 00 35; 14 00 36; 14 00 37; 14 00 38; 14 00 39; 14 00 40; 14 00 41; 14 00 42; 14 00 43; 14 00 44; 14 00 45; 14 00 46; 14 00 47; 14 00 48; 14 00 49; 14 00 50; 14 00 51; 14 00 52; 14 00 53; 14 00 54; 14 00 55; 14 00 56; 14 00 57; 14 00 58; 14 00 59; 14 01 00; 14 01 01; 14 01 02; 14 01 03; 14 01 04; 14 01 05; 14 01 06; 14 01 07; 14 01 08; 14 01 09; 14 01 10; 14 01 11; 14 01 12; 14 01 13; 14 01 14; 14 01 15; 14 01 16; 14 01 17; 14 01 18; 14 01 19; 14 01 20; 14 01 21; 14 01 22; 14 01 23; 14 01 24; 14 01 25; 14 01 26; 14 01 27; 14 01 28; 14 01 29; 14 01 30; 14 01 31; 14 01 32; 14 01 33; 14 01 34; 14 01 35; 14 01 36; 14 01 37; 14 01 38; 14 01 39; 14 01 40; 14 01 41; 14 01 42; 14 01 43; 14 01 44; 14 01 45; 14 01 46; 14 01 47; 14 01 48; 14 01 49; 14 01 50; 14 01 51; 14 01 52; 14 01 53; 14 01 54; 14 01 55; 14 01 56; 14 01 57; 14 01 58; 14 01 59; 14 02 00.

J. M. Balfour

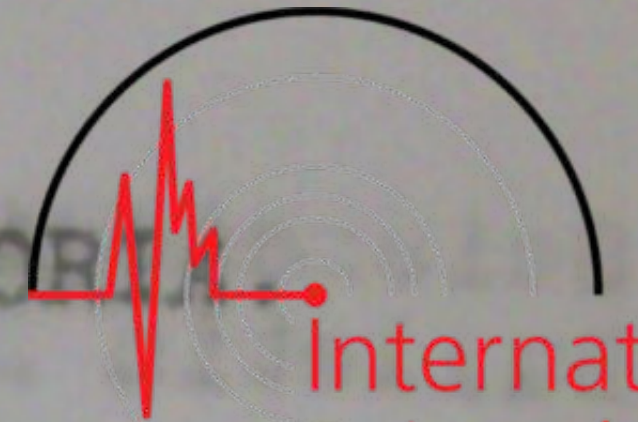
Government Astronomer

Period 12 secs. Damping ratio 20:1 Tilt 1" = 44.7 mm.
Universal

Date	Time	Phase	A	Period	Remarks.
1953	h m s		μ	secs.	
Apr. 9	3 8 18	S			or [S]
	9 0	PS			or Σ
	13 23	SR1			
	22 50	i			may be L
9	4 34 31	e			very small; may be SR1
	52 22	L			
11	5 56.4	e			extremely small
	59 50	i			
	6 0 48	L			
13	2.3	M	6	12	
	22 2 30	e			may be P
	5 28	S			
	6 22	L			
16	7 9	M	13	11	
	6 7 29	PR1			identification of phases uncertain
	11 34	S			
	14 43	SR1			
16	16 52	L			
	18.2	M	17	15	
	19 24 42	e			PR1?
	28 52	S			
	31 25	SR1			
19	33 32	L			
	36.1	M	235	15	
	2 10 28	i			small
	18.5	e			
19	19.5	L			
	7 4 7	i			small
21	18.3	L			
	22 40 47	i			small and obscured by micros.
23	41 8	i			" " " " "
	6 19 6	e			very small
	20 13	i			small
	31 15	i			"
	42 0	e			
	7 4.7	e			long period
	7.7	e			
26	10.4	e			
	13.7	L			
	22 45.4	i			small
	51.3	e			"



Date 1933	Universal Time			Phase	A "	Period secs.	Remarks
	h	m	s				
Apr. 27	2	55	18	e			very small
	3	3	45	i			small
		5	12	i			
		6	10	i			
		11	26	SR1			
		15	32	SR2			
		23.5		e			longer period
		25	20	i			
	30		L				
	37.2		M	67	20		
May 1	13	38.7	e				very small
	14	1 18	i				small but distinct.
1	19	14 35	e				small and obscured by micros
		34	L				apparently from distant source
		36	M	3	20		
	20	13 43	i				
8	10	54 13	e				very small
		59 34	i				small
	11	3 50	i				
		5 7	i				
		10 57	i				
		15 2	e				
		29 15	L				
	34	M	15	22			
10	3	1 9	P				
		5 32	S				largest wave in trace
		8 14	L				4.26%0 (Jeffrey's Tables 1932)
		11.4	M	7	13		
11	14	19ca	e				
		26.5	i				
		27.6	M	3	17		
16	1	31.7	i				obscured by heavy micros throughout
		35 42	i				
		39 51	i				
		43 22	i				
		49.2	L				
		53.7	M	23	18		
19	18	27 33	e				? all amplitudes small
		38 13	SR1				
		43 17	SR2				
	19	0ca	L				
20	4	51 48	e				very small
		55 0	e				
		57 50	L				
	5	1.5	M	13	20		
20	8	21.9ca	e				very small
		27.5	L				
		30.4	M	5	18		



Date 1933	Universal Time			Phase	A μ	Period secs.	Remarks
	h	m	s				
May 21	8	20.9?		e			very small
		24 11		i			
		24 52		i			
		26.9		L			
	30.0		M	15	19		
21	12	4 4		S			
		5 38		i			
		6 43		i			
		7 55		i			
	10 0		i			largest wave in trace	
21	21	35 37		i			
		37 3		i			
		37 32		i			
		39.6?		L			
	41.1		M		6		
28	4	26 45		e			
		27 25		L			
29	10	30 8		i			
		35.5		L			
		38.6		M	12	20	
June 2	7	59 9		i			
		59 21		i			
2	12	39 15		i			
		40 10		L			
		44.6		M	19	13	
4	13	51 28		e			small
		53 36		i			"
		55.3?		L			
5	21	28 25		S			
		31 50		L			
		34.3		M	8	12	
6	0	48 16		I			
		51 43		L			
		54.3		M	10	14	
6	2	45 46		i			small
		52 3		e			
		59.2		m	5	11	
7	6	1 29		i			small
		4.8		L			
		8.6		M	14	14	
7	12	8 0		e			very small
		17 50		i			" "
		26.1		i			" "
		30.5?		L			

Date	Universal Time	Phase	A	Period	Remarks
	h m s		μ	secs.	
1933 June 11	13 22 6	e			very small
	27.4	L			
	31.4	M	6	20	
12	18 46 31	i			small
	48.6?	L			
	49.5	M	3	18	
18	4 3 45	e			very small
	8 38	e			long period
	11 45	e			
	13 47	e			
	15 43	L			
	20.2	M	14	14	
18	21 51 23?	e			very small
	50 0	iS	8	25	largest wave in trace
	22 3 45	SR1			
	9 42	L			
21	13 57 30	i			
	14 9.2	L			small
22	5 50 11	i			small
	54 9	e			"
	55 13	L			
	56.7	M	5	15	
24	22 3 38	P			
	6 31	PR2			
	10 40	S			$\Delta = 48.8$
	15 17	SR2			
	17.9	L			
	25.8	M	527	20	
27	3 27 25	i			small
	35 40	L			

Small and undecipherable disturbances recorded as follow

Apr. 1d 8h; 2d 9h; 7d 22h; 11d 10h; 11d 23h; 12d 4h; 12d 6h; 12d 12h;
17d 3h; 21d 23h; 23d 14h.

May 6d 6h; 11d 2h; 16d 17h; 28d 16h; 29d 12h.

June 3d 17h; 18d 6h; 19d 6h; 25d 6h, 18h.

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Period 12 secs. Damping ratio 20:1 Tilt 1" = 4.2mm.
Universal

Date	Time	Phase	A	Period	Remarks.
1933	h m s		"	secs.	
July 9	1 52 45	iS			small, but larger than all following waves
	58 57	i			
	2 4 33	e			
	34.7	M	3	20	
-9	12 49 8	e			very small largest wave of trace.
	53 13	iS			
	58 45	e			
	13 5 0	e			
	15.6	M	12	16	
-10	10 39 53	eP			32.4 Jeffreys' Tables 1932
	41 3	PR1			
	45 11	S			
	45 26	i			
	48 48	L			
	51.7	M	58	9	
-13	14 46.5ca	L			
	50.4	M	7	n 22	
-14	1 44 48	i			small
	48 31	e			
	50 20	i			
	54ca	L			
	55.5	M	4	11	
18	19 24 46	i			
	25 53	i			
	32 12	L			
-21	20 30 2	i			very small indications earlier, but times not observable. few long waves.
	35 50	e			
	42 30	i			
	46.3	e			
	49.9	L?			
	21 1.7	M	17	17	
-22	21 19 32	e			[S]?
	20 21	S			
	27 3	SR1			
	30 40	SR2			
	36 34	SR3			
	43	L			
	47.2	M	49	22	
-24	19 3 43?	P			46.3?
	10 30	S			
	13 32	SR1			
	16 20	L			
	22.0,	M	33	14	

Date	Universal Time	Phase	A	Period	Remarks
1933	h m s		μ	secs.	
July 30	17 21 35	i			
	22 27	i			
	27 30	SP			small, but larger waves
	29 26	i			
	29.6	m	17	13	
Aug. 5	0 50 37	P			
	55 52	S			very small
	57 18	SR1			largest wave of group
	58 48	L			
	1 1.5	M	78	14	
8	4 50 7	e			
	51 33	L			
	53.1	M	97	16	
11	9 15 42	e			very small
	24 53	e			
	30.5	L			
	41	M	6	21	
13	10 0.5 ca.	L			small and obscured by micros.
	2.5	M	7	20	
20	11 57 53	i			small
	12 2 10	i			
	5 50	i			
	14.5	L			
	23.3	M	5	15	
25	8 2 33	eP			Chiu-feng reports West China.
	3 2	i			
	12 42	S			80.8
	13 10	PS			
	18 5	SR1			
	22 3	SR2			
	28	L			few long waves
	33.5	M	62	20	
28					Lamp out 1h5m to 5h 33m.
28	22 32 10	eP			
	36 59	i			
	42 29	S			83.0
	42 30	i			
	47 22	i			
	48.0	n			
	51.2	i			
	52 48	i			
	54.8	m	872	34	much the largest amplitude. group of long waves
	55-59				
31	12 36 52	e			
	41 30	i			
	42.6	L			
	46.0	M	3	12	

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Universal

MELBOURNE OBSERVATORY
SOUTH YARRA S. E. 1 VICTORIA.

Date	Time	Phase	Δ	Period	Remarks
1933	h m s		μ	secs.	
Sept. 1	19 10 59	i			small throughout.
	14 16	L			
	15.4	M	6	18	
2	16 51 10	i			small
	59 55	iS			
17	0 55	i			
	2 34	i			
	3 50	i			
	9 37	i			little evidence of surface waves.
5	0 46 18	i			small
	47 55	L			
	48.7	M	5	11	
6	1 20 47	i			small
	23 56	S			
	24 42	i			
	25 0	L			
	26.5	M	36	10	
6	17 40 32	i			
	47 53	L			
	50.0	M	12	20	
6	22 14 35	iP			28.0
	16 10	i			
	17 22	i			
	19 23	iS			
	22 58	i			
	23 30	i			
	23 47	i			
9	21 26 18	P			30.0
	27 23	PR1			
	31 20	S			
	34 13	L			
	36.5	M	40	19	
13	13 47 12	e			small
	50.5	M	3	9	
16	3 31 12	L			
	33.9	M	9	11	
22	11 45 36	e			small
	49 42	S			
	53 42	L			
	55.4	M	16	19	
24	15 40 24	e			very small
	41 49	e			" "
	44 17	i			well marked
	44 40	i			

Seismological BULLETIN No. 23 contd. MELBOURNE OBSERVATORY SOUTH YARRA S.E.1 VICTORIA.

Table with columns: Date, Universal Time (h m s), Phase, A, Period (secs), Remarks. Entries include Sept. 25, 27, 28, 30 with various seismic observations and magnitudes.

Small undecipherable disturbances were recorded as follows:- July 9d 6h; 9d 9h; 10d 4h; 12d 16h; 15d 17h; 19d 14h, 15h;

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D

Period 12 secs. Damping ratio 20:1 Tilt 1" = 43.8 mm.

Date 1933	Universal Time			Phase	A μ	Period secs.	Remarks.
	h	m	s				
Oct. 2	6	13	21	i			small and obscured by micros.
		14	48	L			
		15.7		M	15	14	
-2	14	11	12	i			
		13	55	e			
		15	25?	L			
		19	6	L			
		21.4		M	10	15	
-2	15	50	17	PR1			identification dependent upon USCGS report.
		53	0	PR2			
		55	22	S			
		59	57	PS			
	16	6	42	SR1			
		29	15	L			
		30.5		M	35	25	
3	18	32.8?		e			
		39.4		M	2	10	
4	17	40	33	i			small
		41	7	i			
		41	46	i			
		43	30	L			
		46.9		M	6	10	
5	14	24.8?		e			very small throughout
		30.5		L			
		36.3		M	5	20	
-7	2	17	47	S			nothing definite earlier
		18	45	L			
		20.5		M	18	11	
7	11	58.6		e			small
	12	0.1		M	3	14	
17	10	17.6		e			very small
		18.8		M	2	15	
-17	12	35	42	iS			followed by short period waves till 42m.
		36	57	iL			
		42.2		M	9	10	
-19	18	0.0		e			small
		3.7		L			
		5.3		M	2	20	
23	4	0		e			obscured by irregular micros.
		10	36	e			
		11	32	L			
		13.1		M	10	18	

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MELBOURNE OBSERVATORY
SOUTH YARRA S.E.1 VICTORIA.

Date	Universal Time			Phase	A μ	Period secs	Remarks.
	h	m	s				
1933							
Oct. 25	23	52	55	e			very small
		54	33	i			
		56	14	e			
26	0	2	30	i	8	20	largest amplitude.
		4	0	i			
26	12	19	40	P?			small
		20	26	e			
		29	20	S			75.5?
		34	45	i			
		40	47	L			four waves of about 40s period.
		44.0		M	82	32	
30	7	5	48	e			very small, may be P
		7	34	e			
		10	44	S			
		13	10	L	20	15	
		17.2		M			
31	16	41	29	L	9	14	
		43.6		M			
Nov 2	10	35	15	i			small
		35	41	i			
2	12	51	6	e			very small
		51	38	i			small
		58	7	i			
13	1	48		i			
		15.5?		L			
		18.5		M	6	22	
2	17	27.5		L			
		29.5		M	4	15	
11	18	12.8		L			
		15.9		M	3	12	
12	19	6	7	e			
		8	5	e			
		9.5		M	7	7	
18	4	5	27?	e			small and obscured by micros.
		9	0	i			
		11	20	L			
		12.4		M	11	12	
18	16	55.3		e			very shallow waves
		17	15	i			
		23.5		L			
19	3	17	20	P			
		21	35	i			
		22	12	S			28.6
		25.5		L			
		30.5		M	42	15	

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MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA.

Date	Universal Time	Phase	A	Period	Remarks
1933	h m s		μ	secs.	
Nov.19	14 16 24	i			small
	19 5	i			
	26.3	M	3	12	
20	23 41 0	P			In collaboration with Dr C.E.Adams of Wellington, N.Z.
	43 52	P'			
	46 45	PR1			
	49 25	PA2			
	52 8	PR3			
	56 51	PS			
	58 5	PPS			
21	0 4 30	SR1			
	24 +	L			
22	12 49 24	P			
	54 6	S		27.3	
	56.3	L			
	59.0	M	90	12	
26	14 18 22	e			very small
	23.5	L			
	26.5	M	2	16	
27	20 39 13	e			very small
	42 33	i			small
	50.4	M	3	14	
28	11 43.6	e			very small
	12 4.5	eL			small
	9.1	M	7	20	
Dec. 1	7 0 15	e			shallow train.
1	10 31.8?	e			very small
	33 36	i			
	38 28	i			
	40.7	L			
	42.3	M	4	17	
2	5 21 29	iP			
	24 58	S		19.2	
	26 42	L			
	27.2	M	192	10	
2	20 28 34	e			possible traces earlier
	29 27	e			
	35 24	i			
	42 40	L			
4	19 55 45	i			
	58 5	i			followed by train of shallow waves.
12	14 17 59	P			felt at Rabaul
	23 28	S		34.0	
	26.5	L			
	30.2	M	52	13	

Date 1933	Universal Time			Phase	A μ	Period secs.	Remarks
	h	m	s				
Dec. 13	21	53	35	i			
	22	0	23	i			
		18	30	L			
		32		M	5	16	
21	0	16.0	i			very small	
		21.3	L			small	
21	10	23	42	i			
		24.6		L			
		26.0		M	6	11	
-24	10	58	3	S			
	11	0	42	i			
		4	3	L	16	11	
27	11	36	17	e			
		40	7	L			
		45.3		M	7	14	
30	5	41	20	i		very small	
		44	15	e		" "	
		49	40	L			
30	12	41	45	i		very small	
		44	3	i		small	
		45	22	L			
		47	10	M	6	12	

Small disturbances without definite phases were recorded
as follows:-

Oct. 23d 14h;

Nov. 9d 7h; 19d 8h; 29d 6h.

Dec. 1d 7h; 3d 7h; 14d 6h; 17d 12h; 18d 20h.

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