

Seismological

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

Bulletin No.45

Milne-Shaw Seismograph No.41 E-W Component.

Period 12 secs. Damping ratio 20 : 1. Tilt 1"=45.6mm.

Universal

Date	Time	Phase	A	t	Δ	Remarks
1939	h m s		μ	s	°	
Jan. 5	11 25 14	eP				
	29 37	eS			25	
	30 7	i				
	32 55	L				
	34.7	M	11	15		
9	3 19 38	e	vs			
	23 42	i				
	27 2	L				
	28.8	M	7	10		
-10	11 19 43	e	vs			
	23 16	e	vs			
	28 40	L				
	29.5	M	3	12		
15	8 5 7	iS	s			
	8 59	L				
	12.3	M	8	12		
16	2 25 54	e	vs			irregular and small throughout.
	26 46	i	vs			
	34 54	i	vs			
	38.3	L?				
20	21 1 5	e	vs			all amplitudes very small
	11 0	e	vs			
	18 35	i	vs			
	39.5	L				
-22	13 39 28	e	vs			
	42 8	e				
	45 3	i				
	46 2	i				
	48 12	i				
	49 0	L				
56.7	M	69	12			
-22	18 53 40	i	s			
	55 4	i				
	19 0.3	M	8	11		
22	22 45 53	e	s			
	46 22	i	s			
	47 43	i				
	49ca	L				
	51.3	M	8	20		
-25	3 45 50	eP	vs			destructive in Chil.
	50 10	PP				
	56 15	SKS				
	57 0	SKKS				
	57 20	i				
	57 40	i				
	58 33	PS				

Stationed at ...
 ...
 ...
 ...
 ...

Time	Phase	Amplitude	Frequency	Remarks
09.45	P	50	0.7
10.10	M	58.8	0.2
10.58	P	53	0.4
11.10	M	50.7	0.2
11.32	P	53	0.4
11.32	M	50.7	0.2
11.45	P	53	0.4
11.45	M	50.7	0.2
12.10	P	53	0.4
12.10	M	50.7	0.2
12.40	P	53	0.4
12.40	M	50.7	0.2
13.02	P	53	0.4
13.02	M	50.7	0.2
13.22	P	53	0.4
13.22	M	50.7	0.2
14.18	P	53	0.4
14.18	M	50.7	0.2
15.22	P	53	0.4
15.22	M	50.7	0.2
16.22	P	53	0.4
16.22	M	50.7	0.2
17.22	P	53	0.4
17.22	M	50.7	0.2
18.22	P	53	0.4
18.22	M	50.7	0.2
19.22	P	53	0.4
19.22	M	50.7	0.2
20.22	P	53	0.4
20.22	M	50.7	0.2
21.22	P	53	0.4
21.22	M	50.7	0.2
22.22	P	53	0.4
22.22	M	50.7	0.2

destructive in Chile



MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA.

Seismological
Bulletin No. 45 contd.

Universal

Date	Time	Phase	A	t	Δ	Remarks
1939	h m s		μ	s	°	
Jan. 25	4 30	SS				continued from previous sheet
	9 43	S3S				
	13 52	L				long waves
	20 5	L				
	26.3	M	116	17		
25	17 30 23	i	vs			
	31 3	i	vs			
	34 20	L				
	38.5	M	14	13		
26	10 39 38	e	vs			
	42 37	i	s			
	47.3	M	3	13		
26	17 37 27	e	vs			
	39 28	i	s			39m
	45 20	i	s			
	50.8	M	8	16		
27	5 39 27	i	vs			very doubtful; in irregular micros.
	42 17	S				
	45 43	L				
	49.9	M	15	11		
30						record lost; clock stopped.
30	23 56 43	eP				
31	0 0 20	i				
	1 20	S				26.9
	1 50	m	27	9		
	3 36	L				
	7.0	M	96	10		
31	4 26 12	e	vs			
	28 24	i	s			
	29 33	L				
	31.8	M	4	14		
31	5 32 5	L				
	34.6	M	3	12		
Feb. 1	1 51 5	P	s			
	54 0	S				15.8
	54 55	L				
	57.7	M	27	8		
2	23 27 20	e	s			
	29 43	i	s			
	31 15	L				
	35.3	M	13	10		
3	5 31 47	eP				
	33 7	i				
	35 33	i				

MEMORANDUM OBSERVATORY
 SOUTH YAKIMA 2.2.1 VICTORIA

Time	Phase	Amplitude	Duration	Remarks
17 30 27	I	1.0	1.0	av
17 30 28	I	1.0	1.0	av
17 30 29	I	1.0	1.0	av
17 30 30	I	1.0	1.0	av
17 30 31	I	1.0	1.0	av
17 30 32	I	1.0	1.0	av
17 30 33	I	1.0	1.0	av
17 30 34	I	1.0	1.0	av
17 30 35	I	1.0	1.0	av
17 30 36	I	1.0	1.0	av
17 30 37	I	1.0	1.0	av
17 30 38	I	1.0	1.0	av
17 30 39	I	1.0	1.0	av
17 30 40	I	1.0	1.0	av
17 30 41	I	1.0	1.0	av
17 30 42	I	1.0	1.0	av
17 30 43	I	1.0	1.0	av
17 30 44	I	1.0	1.0	av
17 30 45	I	1.0	1.0	av
17 30 46	I	1.0	1.0	av
17 30 47	I	1.0	1.0	av
17 30 48	I	1.0	1.0	av
17 30 49	I	1.0	1.0	av
17 30 50	I	1.0	1.0	av
17 30 51	I	1.0	1.0	av
17 30 52	I	1.0	1.0	av
17 30 53	I	1.0	1.0	av
17 30 54	I	1.0	1.0	av
17 30 55	I	1.0	1.0	av
17 30 56	I	1.0	1.0	av
17 30 57	I	1.0	1.0	av
17 30 58	I	1.0	1.0	av
17 30 59	I	1.0	1.0	av
17 30 60	I	1.0	1.0	av
17 30 61	I	1.0	1.0	av
17 30 62	I	1.0	1.0	av
17 30 63	I	1.0	1.0	av
17 30 64	I	1.0	1.0	av
17 30 65	I	1.0	1.0	av
17 30 66	I	1.0	1.0	av
17 30 67	I	1.0	1.0	av
17 30 68	I	1.0	1.0	av
17 30 69	I	1.0	1.0	av
17 30 70	I	1.0	1.0	av
17 30 71	I	1.0	1.0	av
17 30 72	I	1.0	1.0	av
17 30 73	I	1.0	1.0	av
17 30 74	I	1.0	1.0	av
17 30 75	I	1.0	1.0	av
17 30 76	I	1.0	1.0	av
17 30 77	I	1.0	1.0	av
17 30 78	I	1.0	1.0	av
17 30 79	I	1.0	1.0	av
17 30 80	I	1.0	1.0	av
17 30 81	I	1.0	1.0	av
17 30 82	I	1.0	1.0	av
17 30 83	I	1.0	1.0	av
17 30 84	I	1.0	1.0	av
17 30 85	I	1.0	1.0	av
17 30 86	I	1.0	1.0	av
17 30 87	I	1.0	1.0	av
17 30 88	I	1.0	1.0	av
17 30 89	I	1.0	1.0	av
17 30 90	I	1.0	1.0	av
17 30 91	I	1.0	1.0	av
17 30 92	I	1.0	1.0	av
17 30 93	I	1.0	1.0	av
17 30 94	I	1.0	1.0	av
17 30 95	I	1.0	1.0	av
17 30 96	I	1.0	1.0	av
17 30 97	I	1.0	1.0	av
17 30 98	I	1.0	1.0	av
17 30 99	I	1.0	1.0	av
17 30 00	I	1.0	1.0	av

Record lost; check stop ed.

32m

very doubtful; in irregular motion

no data from previous sheet

Remarks

Station
 Victoria
 2.2.1

MELBOURNE OBSERVATORY

SOUTH YARRA 3.E.1 VICTORIA

Seismological
Bulletin No. 45 contd
Universal

Date	Time	Phase	Δ	t	Δ	Remarks
1939	h m s		μ	s	$^{\circ}$	
Feb. 3	5 36 47	eS				30.1 continued from previous sheet
	37 0	i				
	38 40	L				
	43.8	M	485	15		
	3 15 33 4	e	vs			
	35 33	i				
	36.4	M	3	13		
-3	20 20 17	i	vs			
	22 0	i	s			
	26 18	i	s			
	28 54	i	s			
	31 58	L				
	33.8	M	12	15		
-4	5 27 52	e	vs			
	30 53	i	s			
	31 11	i				
	32 42	i				
	33 50	L				
	34.7	M	36	20		
-4	6 21 33	L				in coda of preceding
	25.1	M	12	12		
4	11 49 41	i	s			
	52 44	e	vs			remainder insignificant
7	7 17 0	i	vs			
	18 50	i	s			
	23 18	L				
	24.3	M	4	15		
-9	2 42 47	e	vs			
	45 11	i	vs			
	46 34	L				
	47.9	M	6	15		
-9	12 2 49	i	vs			
	15.5	L				
	21.3	M	5	19		
16	19 12 16	i	s			
	16 49	e	s			
	28na	L	s			
17	15 54.5	L				earlier phases obliterated by irregular disturbances
-20	3 56 15	e	vs			
	57 20	i	s			
	59 7	i				
	4 0 42	i				
	1 23	L				
	4.4	M	19	12		

SOUTH YARRA 3.E.1 VICTORIA

MELBOURNE OBSERVATORY

MELBOURNE OBSERVATORY
SOUTH YARRA, S.E. 1, VICTORIA

Station No. 4500
Instrument

Date	Time	Phase	Amplitude	Remarks
19 12	1 53	P	1.5	
	1 54	P	1.5	
	1 55	P	1.5	
	1 56	P	1.5	
	1 57	P	1.5	
	1 58	P	1.5	
	1 59	P	1.5	
	2 00	P	1.5	
	2 01	P	1.5	
	2 02	P	1.5	
	2 03	P	1.5	
	2 04	P	1.5	
	2 05	P	1.5	
	2 06	P	1.5	
	2 07	P	1.5	
	2 08	P	1.5	
	2 09	P	1.5	
	2 10	P	1.5	
	2 11	P	1.5	
	2 12	P	1.5	
	2 13	P	1.5	
	2 14	P	1.5	
	2 15	P	1.5	
	2 16	P	1.5	
	2 17	P	1.5	
	2 18	P	1.5	
	2 19	P	1.5	
	2 20	P	1.5	
	2 21	P	1.5	
	2 22	P	1.5	
	2 23	P	1.5	
	2 24	P	1.5	
	2 25	P	1.5	
	2 26	P	1.5	
	2 27	P	1.5	
	2 28	P	1.5	
	2 29	P	1.5	
	2 30	P	1.5	
	2 31	P	1.5	
	2 32	P	1.5	
	2 33	P	1.5	
	2 34	P	1.5	
	2 35	P	1.5	
	2 36	P	1.5	
	2 37	P	1.5	
	2 38	P	1.5	
	2 39	P	1.5	
	2 40	P	1.5	
	2 41	P	1.5	
	2 42	P	1.5	
	2 43	P	1.5	
	2 44	P	1.5	
	2 45	P	1.5	
	2 46	P	1.5	
	2 47	P	1.5	
	2 48	P	1.5	
	2 49	P	1.5	
	2 50	P	1.5	
	2 51	P	1.5	
	2 52	P	1.5	
	2 53	P	1.5	
	2 54	P	1.5	
	2 55	P	1.5	
	2 56	P	1.5	
	2 57	P	1.5	
	2 58	P	1.5	
	2 59	P	1.5	
	3 00	P	1.5	
	3 01	P	1.5	
	3 02	P	1.5	
	3 03	P	1.5	
	3 04	P	1.5	
	3 05	P	1.5	
	3 06	P	1.5	
	3 07	P	1.5	
	3 08	P	1.5	
	3 09	P	1.5	
	3 10	P	1.5	
	3 11	P	1.5	
	3 12	P	1.5	
	3 13	P	1.5	
	3 14	P	1.5	
	3 15	P	1.5	
	3 16	P	1.5	
	3 17	P	1.5	
	3 18	P	1.5	
	3 19	P	1.5	
	3 20	P	1.5	
	3 21	P	1.5	
	3 22	P	1.5	
	3 23	P	1.5	
	3 24	P	1.5	
	3 25	P	1.5	
	3 26	P	1.5	
	3 27	P	1.5	
	3 28	P	1.5	
	3 29	P	1.5	
	3 30	P	1.5	
	3 31	P	1.5	
	3 32	P	1.5	
	3 33	P	1.5	
	3 34	P	1.5	
	3 35	P	1.5	
	3 36	P	1.5	
	3 37	P	1.5	
	3 38	P	1.5	
	3 39	P	1.5	
	3 40	P	1.5	
	3 41	P	1.5	
	3 42	P	1.5	
	3 43	P	1.5	
	3 44	P	1.5	
	3 45	P	1.5	
	3 46	P	1.5	
	3 47	P	1.5	
	3 48	P	1.5	
	3 49	P	1.5	
	3 50	P	1.5	
	3 51	P	1.5	
	3 52	P	1.5	
	3 53	P	1.5	
	3 54	P	1.5	
	3 55	P	1.5	
	3 56	P	1.5	
	3 57	P	1.5	
	3 58	P	1.5	
	3 59	P	1.5	
	4 00	P	1.5	

in case of preceding
remains insignificant
earlier phases obliterated by
the higher disturbance

South Yarra, S.E. 1, Victoria.



MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

Seismological
Bulletin No. 45 contd

Date	Universal Time	Phase	A	t	Δ	Remarks
1939	h m s		μ	s	°	
Feb. 23	0 47 18?	e	vs			
	48 7	i	s			
	52 14	L				all amplitudes small
23	10 23 25	e	vs			
	30 50	i	vs			
	34 17	i	s			
24	11 26 28	e	vs			
	29 6	i	vs			
	31 0	L				
24	14 57 15	e	vs			record greatly disturbed on 25th & 26th
	15 1 39	i	s			bt flooding of vault; trace lost at tim.
	2.8	m	2	7		
→ 28	2 44 13	i	vs			
	45 30	i	s			
	47 40	i				
	48 3	i				
	49 50	L				
	52.5	M	14	10		
Mar. → 2	7 8 22	i	s			
	9 10	i	s			
	12 13	i				S?
	15 7	i				
	18 52	L				
	20.2	M	30	12		
4	6 10 30	e	vs			barely visible
	14 23	e	vs			L?
	22.9	M	6	10		
4	20 19 12	e	vs			
	22 36	i	s			
	31 16	i	s			
7	17 +					record too faint to read
→ 8	22 5 5	e	vs			record very faint
	10 5	L				
	12 27	i				
	13 9	L				
	14.5	M	23	10?		
11 to 13						recording beam of light out of adjustment
20	3 42 57	S				earlier phases lost in large micros
	50 43	L?	s			
	57.5	S?				
20	22 19 54	e	vs			
	23 38	i	s			
	25 43	i	s			

Date	Time	Phase	Remarks
h m s			
1932 Feb. 23	0 47 18.7	a	
	48 7	a	
	52 14	a	all amplitudes small
	10 23 25	va	
	30 20	va	
	34 17	a	
	11 26 28	va	
	29 6	va	
	31 0	a	
	12 27 15	va	
	1 32	a	
	2.8	m	at flooding of vent; grade lost at this point
	2 44 13	va	
	45 30	a	
	47 40	a	
	48 3	a	
	49 20	a	
	52.2	M	
	14 10	M	
	7 8 25	a	
	9 10	a	
	12 13	a	
	13 7	a	
	18 25	a	
	20.2	M	
	30 12	M	
	6 10 30	va	
	14 23	va	
	22.2	M	
	6 10	M	
	20 18 15	va	
	22 36	a	
	31 16	a	
	7 11 +	a	record too faint to read
	8 22 2	va	
	10 2	a	
	12 27	a	
	13 2	a	
	14.2	M	
	23 102	M	
	11 to 12		recording beam or light out or adjustment
	3 42 24	a	
	50 47	a	
	51 2	a	
	52 19 24	va	
	53 36	a	
	55 43	a	

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

Seismological
Bulletin No. 45 contd
Universal

Date	Time	Phase	A	t	Δ
	h m s		μ	s	o
Mar 21	1 21 47	eP			
	22 5	i			
	24 0	i			
	25 22	i			
	30 7	eS		42.4	
	30 30	i			
	31 6	i			much stronger than S
	37 10	i			
	38 30	L1			
	41 30	L2			
	47	M	268	18	
21	8 0 45	e	vs		
	5 11	e	vs		
	6 0	i	vs		
	8 36	L			
	13.4	M	14	14	
22	3 53 33	e	vs		
	55 39	i	s		
	56 58	iS			
	59 0	i			
4	0 2	i			
	2 25	L?			
	5.3	M	33	13	
22	7 28 50	i	vs		
	34 50	i	s		
	38 0	e			
	42 12	L			
	44.9	M	17	13	
23	16 26 34	i	s		
	28 32	i			
	33 43	e			
	36 18	L			
	36.8	M	21	22	
25	5 53 39	e	vs		
	55 27	e	vs		
6	1 48	i	s		
	6.8	L			
	8.8	M	2	10	
26	3 58 7	e	s		may be large micro
	58 43	i	s		" " "
	59 42	i			
	59 50	i			short period movement begins
4	0 3	i			
	0 8	L			
	0 35	i			amplitude increases
	1.4	M	12	5?	origin probably in South Australia

LABOURATORY OBSERVATIONS

SOUTH YARRA S.S.I. VICTORIA

Seismological
Observations
Journal

Time of day
Date
Station

much stronger than 3

M. 268 18

8 0 42 e va

11 0 11 e va

14 0 0 e va

14 14 14 14

2 22 22 e va

11 22 22 e va

13 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

1 22 22 e va

may be large micro
short period movement begins

amplitude increases
... obtain probably in South Australia

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

Seismological
Bulletin No. 45 contd

Date	Universal Time			Phase	A	t	Δ	Remarks
	h	m	s					
1939								
Mar. 29	0	29	43	i	vs			
		31	28	i	vs			
		32	43	i				
		37.5		M	5	7		
31	7	55	20	i				local shock; felt in suburbs of Melbourne
		55	23	m	12	?		

Insignificant disturbances recorded as follows:-

- Jan. 11d 21h; 12d 6h; 13d 6h; 17d 13h; 19d 10h; 27d 3h; 15h; 29d 19h.
- Feb. 9d 16h; 19d 9h, 13h; 21d 17h; 23d 6h;
- Mar. 23d 20h; 25d 20h.

Small and very small disturbances are indicated by s and vs respectively

J. M. Baldwin

J. M. Baldwin,

Government Astronomer.

MELBOURNE OBSERVATORY
 SOUTH YARRA 3. E. 1. VICTORIA

Geological
 Bulletin No. 500
 University

Time	Phase	Remarks
11.55	M	
11.56	M	
11.57	M	
11.58	M	
11.59	M	
12.00	M	
12.01	M	
12.02	M	
12.03	M	
12.04	M	
12.05	M	
12.06	M	
12.07	M	
12.08	M	
12.09	M	
12.10	M	
12.11	M	
12.12	M	
12.13	M	
12.14	M	
12.15	M	
12.16	M	
12.17	M	
12.18	M	
12.19	M	
12.20	M	
12.21	M	
12.22	M	
12.23	M	
12.24	M	
12.25	M	
12.26	M	
12.27	M	
12.28	M	
12.29	M	
12.30	M	

Indefinite disturbance recorded as follows:-
 11.55-12.00; 12.01-12.05; 12.06-12.10; 12.11-12.15; 12.16-12.20; 12.21-12.25; 12.26-12.30

Small and very small disturbances recorded by a and y respectively

L. M. Baldwin

Government Astronomer

MELBOURNE OBSERVATORY

Seismological Bulletin No. 46 Milne-Shaw Seismograph No. 41 E-W Component. SOUTH YARRA S.E. 1 VICTORIA.
 Period 12 secs. Damping ratio 20:1. Tilt 1" = 43.1mm.

Date	Time	Phase	A	t	Δ	Remarks
1939	h m s		μ	s	°	
Apr. 1	2 15 43	e	vs			
	18 59	i	vs			also 20 39 i vs
	24 42	L				
	26.8	M	4	13		
-3	15 56 40	e	vs			
	56 52	i	s			
	16 0 20	L				
	1.5	M	7	15		
3	21 51 40?	i	vs			
	53 5	i	s			
	54.3	M	7	15		
3	23 16 40	i	vs			
	17 15	L	s			
-4	10 16 10	i				
	21 39	i				
	24 9	L				
	27.0	M	30	20		
4	11 46 12	i	s			
	47 4	I				
	50.7	M	5	8		
5	12 59 52	i				local shock felt throughout eastern and south-eastern suburbs of Melbourne also in Geelong district.
	13 0 0	i				
	0 2	m	30ca ?			
-5	16 48 24	P				larger than P 27.3
	48 35	i				
	53 3	S				
	55 40	L				
	58.2	M	366	18		
8	10 36 14	e	s			obscured by micros.
	39 55	L				
	40.8	M	7	20		
15	20 8 51	i	vs			in micro. largest amplitudes. amplitudes diminish steadily after this.
	12 52	S				
	13 33	i				
	14 43	e				
16	18 5 40	i	s			
	6 43	L	s			
-18	6 36 23	i	vs			continued on next sheet.
	41 20	i	s			
	41 33 0	i	s			
	42 8	i	s			
	48 56	i	s			

UNIVERSITY OF VICTORIA
 DEPARTMENT OF GEOPHYSICS
 VICTORIA, BRITISH COLUMBIA

Date	Time	Phase	Station	Remarks
1957. 1	12 55 40	a	1	
	12 55 32	a	1	
	12 55 24	a	1	
	12 55 16	a	1	
	12 55 08	a	1	
	12 55 00	a	1	
	12 54 52	a	1	
	12 54 44	a	1	
	12 54 36	a	1	
	12 54 28	a	1	
	12 54 20	a	1	
	12 54 12	a	1	
	12 54 04	a	1	
	12 53 56	a	1	
	12 53 48	a	1	
	12 53 40	a	1	
	12 53 32	a	1	
	12 53 24	a	1	
	12 53 16	a	1	
	12 53 08	a	1	
	12 53 00	a	1	
	12 52 52	a	1	
	12 52 44	a	1	
	12 52 36	a	1	
	12 52 28	a	1	
	12 52 20	a	1	
	12 52 12	a	1	
	12 52 04	a	1	
	12 51 56	a	1	
	12 51 48	a	1	
	12 51 40	a	1	
	12 51 32	a	1	
	12 51 24	a	1	
	12 51 16	a	1	
	12 51 08	a	1	
	12 51 00	a	1	
	12 50 52	a	1	
	12 50 44	a	1	
	12 50 36	a	1	
	12 50 28	a	1	
	12 50 20	a	1	
	12 50 12	a	1	
	12 50 04	a	1	
	12 50 00	a	1	
	12 49 52	a	1	
	12 49 44	a	1	
	12 49 36	a	1	
	12 49 28	a	1	
	12 49 20	a	1	
	12 49 12	a	1	
	12 49 04	a	1	
	12 49 00	a	1	
	12 48 52	a	1	
	12 48 44	a	1	
	12 48 36	a	1	
	12 48 28	a	1	
	12 48 20	a	1	
	12 48 12	a	1	
	12 48 04	a	1	
	12 48 00	a	1	
	12 47 52	a	1	
	12 47 44	a	1	
	12 47 36	a	1	
	12 47 28	a	1	
	12 47 20	a	1	
	12 47 12	a	1	
	12 47 04	a	1	
	12 47 00	a	1	
	12 46 52	a	1	
	12 46 44	a	1	
	12 46 36	a	1	
	12 46 28	a	1	
	12 46 20	a	1	
	12 46 12	a	1	
	12 46 04	a	1	
	12 46 00	a	1	
	12 45 52	a	1	
	12 45 44	a	1	
	12 45 36	a	1	
	12 45 28	a	1	
	12 45 20	a	1	
	12 45 12	a	1	
	12 45 04	a	1	
	12 45 00	a	1	
	12 44 52	a	1	
	12 44 44	a	1	
	12 44 36	a	1	
	12 44 28	a	1	
	12 44 20	a	1	
	12 44 12	a	1	
	12 44 04	a	1	
	12 44 00	a	1	
	12 43 52	a	1	
	12 43 44	a	1	
	12 43 36	a	1	
	12 43 28	a	1	
	12 43 20	a	1	
	12 43 12	a	1	
	12 43 04	a	1	
	12 43 00	a	1	
	12 42 52	a	1	
	12 42 44	a	1	
	12 42 36	a	1	
	12 42 28	a	1	
	12 42 20	a	1	
	12 42 12	a	1	
	12 42 04	a	1	
	12 42 00	a	1	
	12 41 52	a	1	
	12 41 44	a	1	
	12 41 36	a	1	
	12 41 28	a	1	
	12 41 20	a	1	
	12 41 12	a	1	
	12 41 04	a	1	
	12 41 00	a	1	
	12 40 52	a	1	
	12 40 44	a	1	
	12 40 36	a	1	
	12 40 28	a	1	
	12 40 20	a	1	
	12 40 12	a	1	
	12 40 04	a	1	
	12 40 00	a	1	
	12 39 52	a	1	
	12 39 44	a	1	
	12 39 36	a	1	
	12 39 28	a	1	
	12 39 20	a	1	
	12 39 12	a	1	
	12 39 04	a	1	
	12 39 00	a	1	
	12 38 52	a	1	
	12 38 44	a	1	
	12 38 36	a	1	
	12 38 28	a	1	
	12 38 20	a	1	
	12 38 12	a	1	
	12 38 04	a	1	
	12 38 00	a	1	
	12 37 52	a	1	
	12 37 44	a	1	
	12 37 36	a	1	
	12 37 28	a	1	
	12 37 20	a	1	
	12 37 12	a	1	
	12 37 04	a	1	
	12 37 00	a	1	
	12 36 52	a	1	
	12 36 44	a	1	
	12 36 36	a	1	
	12 36 28	a	1	
	12 36 20	a	1	
	12 36 12	a	1	
	12 36 04	a	1	
	12 36 00	a	1	
	12 35 52	a	1	
	12 35 44	a	1	
	12 35 36	a	1	
	12 35 28	a	1	
	12 35 20	a	1	
	12 35 12	a	1	
	12 35 04	a	1	
	12 35 00	a	1	
	12 34 52	a	1	
	12 34 44	a	1	
	12 34 36	a	1	
	12 34 28	a	1	
	12 34 20	a	1	
	12 34 12	a	1	
	12 34 04	a	1	
	12 34 00	a	1	
	12 33 52	a	1	
	12 33 44	a	1	
	12 33 36	a	1	
	12 33 28	a	1	
	12 33 20	a	1	
	12 33 12	a	1	
	12 33 04	a	1	
	12 33 00	a	1	
	12 32 52	a	1	
	12 32 44	a	1	
	12 32 36	a	1	
	12 32 28	a	1	
	12 32 20	a	1	
	12 32 12	a	1	
	12 32 04	a	1	
	12 32 00	a	1	
	12 31 52	a	1	
	12 31 44	a	1	
	12 31 36	a	1	
	12 31 28	a	1	
	12 31 20	a	1	
	12 31 12	a	1	
	12 31 04	a	1	
	12 31 00	a	1	
	12 30 52	a	1	
	12 30 44	a	1	
	12 30 36	a	1	
	12 30 28	a	1	
	12 30 20	a	1	
	12 30 12	a	1	
	12 30 04	a	1	
	12 30 00	a	1	
	12 29 52	a	1	
	12 29 44	a	1	
	12 29 36	a	1	
	12 29 28	a	1	
	12 29 20	a	1	
	12 29 12	a	1	
	12 29 04	a	1	
	12 29 00	a	1	
	12 28 52	a	1	
	12 28 44	a	1	
	12 28 36	a	1	
	12 28 28	a	1	
	12 28 20	a	1	
	12 28 12	a	1	
	12 28 04	a	1	
	12 28 00	a	1	
	12 27 52	a	1	
	12 27 44	a	1	
	12 27 36	a	1	
	12 27 28	a	1	
	12 27 20	a	1	
	12 27 12	a	1	
	12 27 04	a	1	
	12 27 00	a	1	
	12 26 52	a	1	
	12 26 44	a	1	
	12 26 36	a	1	
	12 26 28	a	1	
	12 26 20	a	1	
	12 26 12	a	1	
	12 26 04	a	1	
	12 26 00	a	1	
	12 25 52	a	1	
	12 25 44	a	1	
	12 25 36	a	1	
	12 25 28	a	1	
	12 25 20	a	1	
	12 25 12	a	1	
	12 25 04	a	1	
	12 25 00	a	1	
	12 24 52	a	1	
	12 24 44	a	1	
	12 24 36	a	1	
	12 24 28	a	1	
	12 24 20	a	1	
	12 24 12	a	1	
	12 24 04	a	1	
	12 24 00	a	1	
	12 23 52	a	1	
	12 23 44	a	1	
	12 23 36	a	1	
	12 23 28	a	1	
	12 23 20	a	1	
	12 23 12	a	1	
	12 23 04	a	1	
	12 23 00	a	1	
	12 22 52	a	1	
	12 22 44	a	1	
	12 22 36	a	1	
	12 22 28	a	1	
	12 22 20	a	1	
	12 22 12	a	1	
	12 22 04	a	1	
	12 22 00	a	1	
	12 21 52	a	1	
	12 21 44	a	1	
	12 21 36	a	1	
	12 21 28	a	1	
	12 21 20	a	1	
	12 21 12	a	1	
	12 21 04	a	1	
	12 21 00	a	1	
	12 20 52	a	1	
	12 20 44	a</		

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA.

Seismological
Bulletin No.46 contd.
Apr-18

6	50	38	i			
	52	0	i			
	56	30	i			
	57	14	i			
7	4					
	7.5		L ₁			
	14.3		M	75	21	

few longer waves
also L₂ at 11 50

19	12	49	35	e	vs	
		50	50	i	s	
		51	52	L		
		52.3		M	75	21

20	22	10	52	P		
		14	18	S		18,8
		15	20	L		
		17.7		M	61	12

21	4	44	10	e	vs	
		50	37	i	s	
		53	55	e	s	

remainder insignificant.

24	12	47	51	i	vs	
		50	52	e	vs	
		52	13	L?	s	

remainder insignificant.

24	21	17	10	i	vs	
		19	20	i	vs	
		19	50	L	s	
		21.6		M	6	18

30	3	1	45	P		
		8.5ca		L		

very large disturbance; very difficult to read owing to overlapping and to indistinct time marks

30	9	26	19	e	s	
		27	20	L		
		30.7		M	10	12

30	14	14	4	e	s	
		14	37	i	s	
		16	58	i		
		18	32	L		
		21.2		M	25	11

May	1	4	42	9	e	s	
			42	52	i	s	
			44	0	L		
			47.2		M	11	13

time marks indistinct

1	6	16	42	e	vs	
		21	33	i	s	
		25	26	i	s	
		28	8	i		
		34.5?		L		
		44.2		M	31	13

STATION OF OBSERVATION
 SOUTH YAKA 2.1.1 VICTORIA

Station
 1. 20 20
 1. 20 20
 1. 20 20
 1. 20 20

new design waves
 also 2.1.1 20

12.3 12.3 12.3 12.3

12 12 12 12
 12 12 12 12
 12 12 12 12
 12 12 12 12

18.8

12 12 12 12
 12 12 12 12
 12 12 12 12
 12 12 12 12

remains insignificant.

12 12 12 12
 12 12 12 12
 12 12 12 12
 12 12 12 12

remains insignificant.

12 12 12 12
 12 12 12 12
 12 12 12 12
 12 12 12 12

very large disturbance; very slight
 to read owing to overlapping and to
 indistinct time marks

12 12 12 12
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time marks indistinct

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MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

Seismological
Bulletin No.46contd.

May 5	12	25 10	e	vs	doubtful
		26 21	i	vs	
		26 50	i	s	
		29 40	i		
		30 30	i		
		33 30	L		
		36.4	M	2	13
	6	6 38 42	i	vs	
		59ca	L	vs	
	7	20ca	L	s	
-6	17	18 0	e	vs	
		24 2	i	vs	
		28 24	L		
		30.6	M	5	14
-6	20	15 49	i	s	
		17 55	i		probably L
		19 50	i		
		22.0	M	70	17
	8	2 7 0?	e	vs	
		8 22	i	s	
		8 50	i	s	
		12 2	e	s	
		12 17	i		
		16 8	i	s	
		19 0	i		
		23 32	e		
		24 15	e		
		34 6	i		long waves
		39 53	i		" "
		41.2	m	30	20 largest wave of trace.
		44	L		
	3	16	L		regular, sinusoidal waves begin.
-10	8	8 45	e	s	
		15 47	i	s	
		24 10	L		
		33.7	M	5	15
-11	17	50 23	e	vs	
		51 52	L		
		56.1	M	3	10
14	18	20ca			small disturbance; no time marks.
17	0	31 3ca	e	vs	
		34 23	e	s	
		35 46	e		
17	15	25ca			preliminary phases completely obscured by air currents
	18	56ca			

WILSON'S OBSERVATORY
SOUTH YARRA 2.2.1 VICTORIA

Station No. 4600

Station No.	Time	Phase	Amplitude	Remarks
1	12 55 10	e	10	
2	12 55 10	e	10	
3	12 55 10	e	10	
4	12 55 10	e	10	
5	12 55 10	e	10	
6	12 55 10	e	10	
7	12 55 10	e	10	
8	12 55 10	e	10	
9	12 55 10	e	10	
10	12 55 10	e	10	
11	12 55 10	e	10	
12	12 55 10	e	10	
13	12 55 10	e	10	
14	12 55 10	e	10	
15	12 55 10	e	10	
16	12 55 10	e	10	
17	12 55 10	e	10	
18	12 55 10	e	10	
19	12 55 10	e	10	
20	12 55 10	e	10	
21	12 55 10	e	10	
22	12 55 10	e	10	
23	12 55 10	e	10	
24	12 55 10	e	10	
25	12 55 10	e	10	
26	12 55 10	e	10	
27	12 55 10	e	10	
28	12 55 10	e	10	
29	12 55 10	e	10	
30	12 55 10	e	10	
31	12 55 10	e	10	
32	12 55 10	e	10	
33	12 55 10	e	10	
34	12 55 10	e	10	
35	12 55 10	e	10	
36	12 55 10	e	10	
37	12 55 10	e	10	
38	12 55 10	e	10	
39	12 55 10	e	10	
40	12 55 10	e	10	
41	12 55 10	e	10	
42	12 55 10	e	10	
43	12 55 10	e	10	
44	12 55 10	e	10	
45	12 55 10	e	10	
46	12 55 10	e	10	
47	12 55 10	e	10	
48	12 55 10	e	10	
49	12 55 10	e	10	
50	12 55 10	e	10	
51	12 55 10	e	10	
52	12 55 10	e	10	
53	12 55 10	e	10	
54	12 55 10	e	10	
55	12 55 10	e	10	
56	12 55 10	e	10	
57	12 55 10	e	10	
58	12 55 10	e	10	
59	12 55 10	e	10	
60	12 55 10	e	10	
61	12 55 10	e	10	
62	12 55 10	e	10	
63	12 55 10	e	10	
64	12 55 10	e	10	
65	12 55 10	e	10	
66	12 55 10	e	10	
67	12 55 10	e	10	
68	12 55 10	e	10	
69	12 55 10	e	10	
70	12 55 10	e	10	
71	12 55 10	e	10	
72	12 55 10	e	10	
73	12 55 10	e	10	
74	12 55 10	e	10	
75	12 55 10	e	10	
76	12 55 10	e	10	
77	12 55 10	e	10	
78	12 55 10	e	10	
79	12 55 10	e	10	
80	12 55 10	e	10	
81	12 55 10	e	10	
82	12 55 10	e	10	
83	12 55 10	e	10	
84	12 55 10	e	10	
85	12 55 10	e	10	
86	12 55 10	e	10	
87	12 55 10	e	10	
88	12 55 10	e	10	
89	12 55 10	e	10	
90	12 55 10	e	10	
91	12 55 10	e	10	
92	12 55 10	e	10	
93	12 55 10	e	10	
94	12 55 10	e	10	
95	12 55 10	e	10	
96	12 55 10	e	10	
97	12 55 10	e	10	
98	12 55 10	e	10	
99	12 55 10	e	10	
100	12 55 10	e	10	

long waves
" "
largest wave or trace.
regular, sinusoidal waves begin.

small disturbance; no time marks.

in primary phase completely obscured
by air currents

Seismological
Bulletin No. 46 contd

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

May-22	1	47	13	i	s			
		49	39	i				
		51.5		L				
		55.1		M		27	6	
	24	19	23 40	e	vs			
			27 12	L				
	26	17	53 5	i	s			
			55 11	i	s			
	18	2	47	i				
			4 30	L				
			11.4	m		100	10?	very faint
	27	4	7 32	i	vs			
			13 13	i	vs			
			25?	L				small throughout.
	27	12	45 40	e	vs			
			48 47	i	s			
			50 46	i	s			remainder insignificant
June-2	3	41	35	iP				
		43	19	PP				
		48	10	S				44.7
		51	13	SS				
		51	48	m		90	13	largest wave
			55ca	L				
	4	1.4		M		48	18	
-4	0	36	16	e	s			
		38	5	i	s			
		38	53	i	s			
		39	35	i	s			
		47.0		M		11	10	
	4	12	20ca	L	s			time marks missing
	4	15	30ca	i				" " "
			38ca	L				
	7	1	12 22	i	s			minutes may be in error
			19.5	L				
			21.3	M		7	20	
								5d 11 25 7 L
-8	15	35	27	i	vs			25.9 M 9 7
		39	10	i	vs			
		40	10	i	s			
		42	47	L				
		43.7		M		10	18	
-8	20	54	46	i				very sharp single wave
		55	30	i				
		56	29	i				
	21	1	33	i				longer period
		4	43	i				very sharp single wave
		5	18	i				
		17.0		M		18	15	

WILSONS OBSERVATORY
 SOUTH ISLAND S.E. 1 VICTORIA

Station No. 4400

Time	Phase	Amplitude	Remarks
18 15	M	1.0	
18 16	M	1.0	
18 17	M	1.0	
18 18	M	1.0	
18 19	M	1.0	
18 20	M	1.0	
18 21	M	1.0	
18 22	M	1.0	
18 23	M	1.0	
18 24	M	1.0	
18 25	M	1.0	
18 26	M	1.0	
18 27	M	1.0	
18 28	M	1.0	
18 29	M	1.0	
18 30	M	1.0	
18 31	M	1.0	
18 32	M	1.0	
18 33	M	1.0	
18 34	M	1.0	
18 35	M	1.0	
18 36	M	1.0	
18 37	M	1.0	
18 38	M	1.0	
18 39	M	1.0	
18 40	M	1.0	
18 41	M	1.0	
18 42	M	1.0	
18 43	M	1.0	
18 44	M	1.0	
18 45	M	1.0	
18 46	M	1.0	
18 47	M	1.0	
18 48	M	1.0	
18 49	M	1.0	
18 50	M	1.0	
18 51	M	1.0	
18 52	M	1.0	
18 53	M	1.0	
18 54	M	1.0	
18 55	M	1.0	
18 56	M	1.0	
18 57	M	1.0	
18 58	M	1.0	
18 59	M	1.0	
19 00	M	1.0	

very faint
 small throughout
 remains faint

time marks missing
 " " "
 minutes may be in error

very sharp single wave
 longer period
 very sharp single wave

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

Seismological
Bulletin No. 46 contd.

Jun-9	19	21	10	P			
		23	45	S		14.0	
		25	3	i			
		26	87	L			
		28	6	M	47	9	
		31	0	M2	56	10	

10	9	57	27	e	vs		
		58	45	i	s		
		59	25	i	s		
	10	2	6	M	9	8	

13	20	47	40	e	vs		
		48	46	e	vs		
		50	50	i	s		
		53	44	i			
		54	40	i			
		57	0	L			

16	6	3	22	e	vs		
		3	56	i	s		
		5	13	L	s		

16	11	29	27	e	vs		
		32	2	L	vs		

17	13	17	26	e	s		
		20	42	e	s		
		24	45	L			
		28	7	M	9	17	

22	20	26	2	e	vs		
		28	ca	L	vs		

27 23ca record excessively faint.

The records have been interrupted on various occasions by defects in the driving clock and the time-marking system. the chief of these are as follow:-

Apr. 2d 22h30m-23h30m; 23d 22h45m-23h18m;
 May 1d 12h-23h, 2d most of day ; 3d 2h-5d 6h; 13d 18h35m-22h35m; 14d 0h-3h33m-4h33m-8h33m, 10h 33m-12h25m; 17d 12h-23h; 18d 16h15m-23h30m; 21d all; 25d all; 28d 19h40m-23h30m; 31d 11h40m-23h20m.
 June 2d 10h50m-22h10m; 11d 0h-2h40m; 12d 0h-1h30m; 20d 9h30m-23h5m; 23d 2h10m-23d 9h10m-23h20m.

J. M. Baldwin.

J. M. Baldwin,

Government Astronomer.

Seismological
Bulletin No. 47

MELBOURNE OBSERVATORY

SOUTH YARRA S.E. 1 VICTORIA.

Milne-Shaw Seismograph No. 41 E-W Component.

Period 12 secs. Damping ratio 20:1. Tilt 1"=41.4mm.

Universal

Date Time Phase A t Δ Remarks,

1939 h m s μ s °
July 2 17 3 17 e vs
4 37 i s
5 2 L
8.7 M 7 13



5 22 47 3 1P s
47 6 1
50 17 1 s
51 48 i s
55 0 i
56 13 i
23 2 33 L

28.1 largest movements of train
no large surface waves

7 2 30 17 i vs
32 8 L s
32.7 M 6 20

-12 23 5 31 e vs
10 42 i
13 27 i
14 40 i
14 57 i
19ca
20.2 M 379 16

doubtful owing to large micros.

paper changed at 23h 17m
amplitude becomes large

16 8 37 48 e vs
39 5 i vs
40 20 L
44.9 M 9 17

19 13 53 52 i
55 0 L
56.3 M 4 13

-20 2 31 20 e s
33 55 e s
34 13 i
37 10 e
37.8 M 7 11

Aug.-2 1 29.4 eL vs
45.3 M 10 22

2 5 32 48 i vs
36 39 i vs
38 16 i s
40.4 M 4 15

-3 2 41 4 i vs
42 10 i vs
45 51 i s
48 47 i s
50 43 i s
57.2 M 6 17

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA.

Seismological
Bulletin No. 47 contd

Aug. 5 17 47 30 i
48 37 i
49.8 M 6 11

-8 20 9 45 L vs
13.6 M 3 8

13 4 23 20 i vs
27 27 e s
31 37 i s
34.5 M 4 13

-18 22 21 47? eP vs
21 53 i s
24 3 i
26 35 S
29 53 L
32.7 M 122 20

28.4?

-19 0 58 13 S
1 2.4 M 42 22

earlier phases lost in microa.

-23 4 49 27 i s
49 45 i
52 22 i
56 25 L
57.4 M 16 14

uncertain

-25 4 1 15 1S
4 17 L
8.6 M 15 22

27 11 27 57 i s
29 44 i s
33 23 i s

Sept. 2 5 23 23 i vs
24 0 i s
25 58 L s

-2 9 4 3 vs
5 12 i vs
10 20 S
12 13 i
15.9 M 44 20

micro?

may be L

7 13 56 53 i vs
58 50 e s
14 0 0 i s
0 20 i s
0 34 i s
1 57 L
2.7 M 7 10

8 12 20 50 e s
28 28 i s
29.7 S
35 0 i
35 12 i

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA

Seismological
Bulletin No. 47 contd.

1939	h	m	s		Δ	s
Sept: 8	12	40	52	L	μ	
		43	23			
		46	0	M	188	22
-12	12	12	33	i	vs	
		14	12	i	vs	
		17	40	e	vs	
		21	47	L		
		23	.2	M	12	20
15	12	1	53	i	vs	
		5	16	i	vs	
		8	23	i	s	
		10	49	M	10	18
-17	19	24	27	i	s	
		27	13	e	vs	
		28	0	i		
		28	41	i		
		31	.2	M	12	10
18	10	10	13	i	vs	
		22	51	i	s	
-20	7	32	31	P		
		36	3	S		
		38	12	i		
		39	.5	M	19	10
24	3	46	24	e	vs	
		49	10	e	vs	
		51	25	i	vs	

continued from last sheet
wave of very long period

in strong micros

obscured by micros

identification suggested by reports
from other stations

Small and insignificant disturbances were recorded as follows:-

July 2d 8h; 4d 19h; 8d 8h; 12d 13h;

Aug. 11d 16h; 16d 18h; 21d 9h.

Sept. 14d 9h, 18h; 16d 7h; 22d 1h.

Records were lost or defective on the following days:-

July 1, 11, 18, 21, 22, 24, 25.

Aug. 12, 15.

Sept. 28

J. M. Baldwin,

Government Astronomer.

Seismological
Bulletin No. 40

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA.

Milne-Shaw Seismograph No. 41 E-W Component.
Period 12 secs. Damping ratio 20:1. PERS 18 - 40.1mm.

Date 1939	Universal Time			Phase	A μ	t s	Δ °	Remarks
	h	m	s					
Oct. 4	13	53	0	i	s			
		56	32	i				
7	20	50	43?	i				very doubtful; lines overlapping
		54	25?	i				" " " "
		55	4?	i				
		57	37	i				
	21	0	3	L				
		2.5		M	63	11		
9	2	24	8	i	s			
		24	40	i	s			
		28	28	e	s			
		28	43	i	s			
		30	2	L				
		34.1		M	40	16		
10	18	53	25	i				S?
		58	18	o				small waves of longer period
16	17	33	47	L				
		35.9		M	7	10		
17	6	28	14	iP				
		33	7	iS				29.1
		35	0	L				
		35.5		M	189	14		
17	9	5	33	i	vs			
		10	24	i	vs			
		12	19	L				
26	21	32	37	e	vs			
		36	27	i	s			
		39	20	i	s			
		40	23	eL				
		44.7		M	9	16		
29	13	24	22	i				local shock felt at Armadale, Camberwell, Cowes, Dalyston.
		24	24	m	&	?		
30	13	14	2	i	vs			visible only because of absence of micros.
		20	15	i	vs			
		22	0	i	s			
		22	32	i	s			
		27	26	e	s			
		30	7	e	s			
		35	6	e	s			may be L
30	22	7	30?	e	vs			
		12	15	i	s			
		16	5	L				
		19.9		M	13	17		

MELBOURNE
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BETWEEN
1940 and 1955!

Seismological
Bulletin No. 48606A

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA.

Date	Time	Phase	A	t	Δ	Remarks
1939	h m s		W	s	°	
Nov. 1	6 2 40	1	vs			
	3 52	1	vs			
	5 53	e	s			
	15 23	e	s			
	19 8	1	s			
	19 50	1	s			
	20 20	1	s			
	21 47	L				
	31.2	M	7	15		
-3	19 50 28	1	s			
	53 7	1	s			
	55 14	L	s			
	57.8	M	3	12		
9	19 10 44	1	vs			
	11 25	e	s			
	16 17	1	s			
	17 50	1	s			
	20 22	L				
	23.5	M	4	13		
10	16 53 55	e	vs			
	54 5	1P				
	57 28	eS				
			18.5			record very faint and partly fogged
-10	20 31 40	1S				nothing earlier can be distinguished
	34 40	L				
	39.7	M	16	12		
-14	12 43 47	1	s			
	44 30	1	s			
	48 36	e	s			
	54 23	1P				
	57.0	M	9	17		
15	17 15 17	1	vs			
	16 7	1	vs			
	24 47	L	s			
17	18 45 47	1	vs			
	50 39	1	vs			
	55 52	L	vs			
-18	0 18 22	e	vs			
	22 10	e	vs			
	25 39	1	s			
	31.4	M	4	16		
18	1 50 0	L	vs			
	56 29	1	vs			
	56 52	1	vs			

STATION 1.3.3.2

Time	Phase	Amplitude	Velocity	Acceleration
18.5	1	2.0	1.0	0.5
19.0	1	2.5	1.2	0.6
19.5	1	3.0	1.5	0.7
20.0	1	3.5	1.8	0.8
20.5	1	4.0	2.0	0.9
21.0	1	4.5	2.2	1.0
21.5	1	5.0	2.5	1.1
22.0	1	5.5	2.8	1.2
22.5	1	6.0	3.0	1.3
23.0	1	6.5	3.2	1.4
23.5	1	7.0	3.5	1.5
24.0	1	7.5	3.8	1.6
24.5	1	8.0	4.0	1.7
25.0	1	8.5	4.2	1.8
25.5	1	9.0	4.5	1.9
26.0	1	9.5	4.8	2.0
26.5	1	10.0	5.0	2.1
27.0	1	10.5	5.2	2.2
27.5	1	11.0	5.5	2.3
28.0	1	11.5	5.8	2.4
28.5	1	12.0	6.0	2.5
29.0	1	12.5	6.2	2.6
29.5	1	13.0	6.5	2.7
30.0	1	13.5	6.8	2.8
30.5	1	14.0	7.0	2.9
31.0	1	14.5	7.2	3.0
31.5	1	15.0	7.5	3.1
32.0	1	15.5	7.8	3.2
32.5	1	16.0	8.0	3.3
33.0	1	16.5	8.2	3.4
33.5	1	17.0	8.5	3.5
34.0	1	17.5	8.8	3.6
34.5	1	18.0	9.0	3.7
35.0	1	18.5	9.2	3.8
35.5	1	19.0	9.5	3.9
36.0	1	19.5	9.8	4.0
36.5	1	20.0	10.0	4.1
37.0	1	20.5	10.2	4.2
37.5	1	21.0	10.5	4.3
38.0	1	21.5	10.8	4.4
38.5	1	22.0	11.0	4.5
39.0	1	22.5	11.2	4.6
39.5	1	23.0	11.5	4.7
40.0	1	23.5	11.8	4.8
40.5	1	24.0	12.0	4.9
41.0	1	24.5	12.2	5.0
41.5	1	25.0	12.5	5.1
42.0	1	25.5	12.8	5.2
42.5	1	26.0	13.0	5.3
43.0	1	26.5	13.2	5.4
43.5	1	27.0	13.5	5.5
44.0	1	27.5	13.8	5.6
44.5	1	28.0	14.0	5.7
45.0	1	28.5	14.2	5.8
45.5	1	29.0	14.5	5.9
46.0	1	29.5	14.8	6.0
46.5	1	30.0	15.0	6.1
47.0	1	30.5	15.2	6.2
47.5	1	31.0	15.5	6.3
48.0	1	31.5	15.8	6.4
48.5	1	32.0	16.0	6.5
49.0	1	32.5	16.2	6.6
49.5	1	33.0	16.5	6.7
50.0	1	33.5	16.8	6.8
50.5	1	34.0	17.0	6.9
51.0	1	34.5	17.2	7.0
51.5	1	35.0	17.5	7.1
52.0	1	35.5	17.8	7.2
52.5	1	36.0	18.0	7.3
53.0	1	36.5	18.2	7.4
53.5	1	37.0	18.5	7.5
54.0	1	37.5	18.8	7.6
54.5	1	38.0	19.0	7.7
55.0	1	38.5	19.2	7.8
55.5	1	39.0	19.5	7.9
56.0	1	39.5	19.8	8.0
56.5	1	40.0	20.0	8.1
57.0	1	40.5	20.2	8.2
57.5	1	41.0	20.5	8.3
58.0	1	41.5	20.8	8.4
58.5	1	42.0	21.0	8.5
59.0	1	42.5	21.2	8.6
59.5	1	43.0	21.5	8.7
60.0	1	43.5	21.8	8.8
60.5	1	44.0	22.0	8.9
61.0	1	44.5	22.2	9.0
61.5	1	45.0	22.5	9.1
62.0	1	45.5	22.8	9.2
62.5	1	46.0	23.0	9.3
63.0	1	46.5	23.2	9.4
63.5	1	47.0	23.5	9.5
64.0	1	47.5	23.8	9.6
64.5	1	48.0	24.0	9.7
65.0	1	48.5	24.2	9.8
65.5	1	49.0	24.5	9.9
66.0	1	49.5	24.8	10.0
66.5	1	50.0	25.0	10.1
67.0	1	50.5	25.2	10.2
67.5	1	51.0	25.5	10.3
68.0	1	51.5	25.8	10.4
68.5	1	52.0	26.0	10.5
69.0	1	52.5	26.2	10.6
69.5	1	53.0	26.5	10.7
70.0	1	53.5	26.8	10.8
70.5	1	54.0	27.0	10.9
71.0	1	54.5	27.2	11.0
71.5	1	55.0	27.5	11.1
72.0	1	55.5	27.8	11.2
72.5	1	56.0	28.0	11.3
73.0	1	56.5	28.2	11.4
73.5	1	57.0	28.5	11.5
74.0	1	57.5	28.8	11.6
74.5	1	58.0	29.0	11.7
75.0	1	58.5	29.2	11.8
75.5	1	59.0	29.5	11.9
76.0	1	59.5	29.8	12.0
76.5	1	60.0	30.0	12.1
77.0	1	60.5	30.2	12.2
77.5	1	61.0	30.5	12.3
78.0	1	61.5	30.8	12.4
78.5	1	62.0	31.0	12.5
79.0	1	62.5	31.2	12.6
79.5	1	63.0	31.5	12.7
80.0	1	63.5	31.8	12.8
80.5	1	64.0	32.0	12.9
81.0	1	64.5	32.2	13.0
81.5	1	65.0	32.5	13.1
82.0	1	65.5	32.8	13.2
82.5	1	66.0	33.0	13.3
83.0	1	66.5	33.2	13.4
83.5	1	67.0	33.5	13.5
84.0	1	67.5	33.8	13.6
84.5	1	68.0	34.0	13.7
85.0	1	68.5	34.2	13.8
85.5	1	69.0	34.5	13.9
86.0	1	69.5	34.8	14.0
86.5	1	70.0	35.0	14.1
87.0	1	70.5	35.2	14.2
87.5	1	71.0	35.5	14.3
88.0	1	71.5	35.8	14.4
88.5	1	72.0	36.0	14.5
89.0	1	72.5	36.2	14.6
89.5	1	73.0	36.5	14.7
90.0	1	73.5	36.8	14.8
90.5	1	74.0	37.0	14.9
91.0	1	74.5	37.2	15.0
91.5	1	75.0	37.5	15.1
92.0	1	75.5	37.8	15.2
92.5	1	76.0	38.0	15.3
93.0	1	76.5	38.2	15.4
93.5	1	77.0	38.5	15.5
94.0	1	77.5	38.8	15.6
94.5	1	78.0	39.0	15.7
95.0	1	78.5	39.2	15.8
95.5	1	79.0	39.5	15.9
96.0	1	79.5	39.8	16.0
96.5	1	80.0	40.0	16.1
97.0	1	80.5	40.2	16.2
97.5	1	81.0	40.5	16.3
98.0	1	81.5	40.8	16.4
98.5	1	82.0	41.0	16.5
99.0	1	82.5	41.2	16.6
99.5	1	83.0	41.5	16.7
100.0	1	83.5	41.8	16.8

nothing earlier can be estimated and
 record very faint and partly
 fogged

MELBOURNE OBSERVATORY

SOUTH YARRA S.E.1 VICTORIA.

Seismological

Bulletin No. 48 contd

1959

Nov. 21

Day	h	m	s					
	11	16	0	e	vs			barely visible
		19	22	i	s			
		20	31	i	s			
		24	30	e	s			
		25	26	i	s			
		27	7	i	s			
		28	32	i	s			
		33	42	i				
		34	52	i				remainder small lar.
21	21	36	11	1P				
		39	9	e	s			amplitudes increasing
		40	50	3P		27.39		
		43	8	L				
		44.2		M	26	10		
24	23	30	22	e	vs			paper changed at 35m.
		39	38	L				
		45.0		M	30	18		
27	3	16	24	e	vs			
		20	24	i	s			
		22	9	i				possibly a local shock superposed
29	15	3	7	i	s			local shock felt at Gowes, Wonthaggi, Surrey Hills, Malvern
		5	12	i				
Dec. 1	6	46	56	e	vs			
		47	47	i	vs			
		52	39	i				
		53	37	sL				
	7	4.0		M	6	14		
1	16	40	3	i	vs			
		47	24	i	vs			
5	3	51	23	i	vs			
		56	18	i	s			
	9	1	4	11	vs			
		2	25	i	vs			
		7	57	i				few larger waves of longer period
		12	40	e				
		23	12	L				
		32.1		M	26	25		
7	11	38	6	e	vs			may be only micros.
		41	0	e	vs			
		45	5	L				
		46.3		M	8	12		
9	20	24	49	i	vs			
		27	22	i	vs			
		30	37	L	s			
		31.7		M	5	8		
15	0	25	5	i				local shock
		25	11	m				

Date	Time	Mag	Depth	Duration	Phase	Amplitude	Period	Remarks
16	8	1	32	6	i	vs		
		3	7	1	i	vs		
		4	17	1	i	s		
		5	17	1	i	s		
		8.4		M			7	11
17	11	8	52	13				
		9	21	1				
		14	3	1		s		PS?
		22	52?	1				SS?
		30.5		M			14	22
18	6	34	28	1	i	vs		time marks indistinct
		37	43	1	i	vs		
		39	15	1	e	w		
		42	2	1	i	s		
		45.6		M			7	14
18	10	32	35	1				
		33	22	1		vs		
		35	12	1		s		
		36	55	1				
		38	20	1				
		43	20	M			8	12
21	21	8	33	0P				very large disturbance
		8	34	1P				large impulse
		8	40	1	i			
		11	0	m			180	9
		14	50	s				41.9
		15+		m				off paper
		21+		L				" "
	27.5		M				" "	
22	5	3	50	1	i	vs		very small irregularities for some time earlier.
		6	35	1	i	s		
		10	22	1	i	s		
		12	5	1	i	s		
		16	50	1	i	s		
		22	53	1	i	s		
		43	24	L				
	6	6.6	M			13	16	
25	16	31	30	1	i	vs		barely visible
		36	30	1	s			
		40	20	1	L			
		42	40	1	i			
		46.3		M			22	12
27	0	18	22	1	i	vs		
		23	13	1	i	s		
		23	38	1	i	s		
		27	40	1	i	s		
		28	25	1	i	s		
		1	10.2	M			123	22

1952

Time marks indicated

Very large disturbances

Large impulse

off paper
" "
" "

Very small irregularities for some time earlier

Large impulse

Large irregularities

2.12

Time	Station	Phase	Amplitude	Frequency	Remarks
00:00	1000	M	20	10	
00:05	1000	M	25	12	
00:10	1000	M	30	15	
00:15	1000	M	35	18	
00:20	1000	M	40	20	
00:25	1000	M	45	22	
00:30	1000	M	50	25	
00:35	1000	M	55	28	
00:40	1000	M	60	30	
00:45	1000	M	65	32	
00:50	1000	M	70	35	
00:55	1000	M	75	38	
01:00	1000	M	80	40	
01:05	1000	M	85	42	
01:10	1000	M	90	45	
01:15	1000	M	95	48	
01:20	1000	M	100	50	
01:25	1000	M	105	52	
01:30	1000	M	110	55	
01:35	1000	M	115	58	
01:40	1000	M	120	60	
01:45	1000	M	125	62	
01:50	1000	M	130	65	
01:55	1000	M	135	68	
02:00	1000	M	140	70	
02:05	1000	M	145	72	
02:10	1000	M	150	75	
02:15	1000	M	155	78	
02:20	1000	M	160	80	
02:25	1000	M	165	82	
02:30	1000	M	170	85	
02:35	1000	M	175	88	
02:40	1000	M	180	90	
02:45	1000	M	185	92	
02:50	1000	M	190	95	
02:55	1000	M	195	98	
03:00	1000	M	200	100	
03:05	1000	M	205	102	
03:10	1000	M	210	105	
03:15	1000	M	215	108	
03:20	1000	M	220	110	
03:25	1000	M	225	112	
03:30	1000	M	230	115	
03:35	1000	M	235	118	
03:40	1000	M	240	120	
03:45	1000	M	245	122	
03:50	1000	M	250	125	
03:55	1000	M	255	128	
04:00	1000	M	260	130	
04:05	1000	M	265	132	
04:10	1000	M	270	135	
04:15	1000	M	275	138	
04:20	1000	M	280	140	
04:25	1000	M	285	142	
04:30	1000	M	290	145	
04:35	1000	M	295	148	
04:40	1000	M	300	150	
04:45	1000	M	305	152	
04:50	1000	M	310	155	
04:55	1000	M	315	158	
05:00	1000	M	320	160	
05:05	1000	M	325	162	
05:10	1000	M	330	165	
05:15	1000	M	335	168	
05:20	1000	M	340	170	
05:25	1000	M	345	172	
05:30	1000	M	350	175	
05:35	1000	M	355	178	
05:40	1000	M	360	180	
05:45	1000	M	365	182	
05:50	1000	M	370	185	
05:55	1000	M	375	188	
06:00	1000	M	380	190	
06:05	1000	M	385	192	
06:10	1000	M	390	195	
06:15	1000	M	395	198	
06:20	1000	M	400	200	
06:25	1000	M	405	202	
06:30	1000	M	410	205	
06:35	1000	M	415	208	
06:40	1000	M	420	210	
06:45	1000	M	425	212	
06:50	1000	M	430	215	
06:55	1000	M	435	218	
07:00	1000	M	440	220	
07:05	1000	M	445	222	
07:10	1000	M	450	225	
07:15	1000	M	455	228	
07:20	1000	M	460	230	
07:25	1000	M	465	232	
07:30	1000	M	470	235	
07:35	1000	M	475	238	
07:40	1000	M	480	240	
07:45	1000	M	485	242	
07:50	1000	M	490	245	
07:55	1000	M	495	248	
08:00	1000	M	500	250	
08:05	1000	M	505	252	
08:10	1000	M	510	255	
08:15	1000	M	515	258	
08:20	1000	M	520	260	
08:25	1000	M	525	262	
08:30	1000	M	530	265	
08:35	1000	M	535	268	
08:40	1000	M	540	270	
08:45	1000	M	545	272	
08:50	1000	M	550	275	
08:55	1000	M	555	278	
09:00	1000	M	560	280	
09:05	1000	M	565	282	
09:10	1000	M	570	285	
09:15	1000	M	575	288	
09:20	1000	M	580	290	
09:25	1000	M	585	292	
09:30	1000	M	590	295	
09:35	1000	M	595	298	
09:40	1000	M	600	300	
09:45	1000	M	605	302	
09:50	1000	M	610	305	
09:55	1000	M	615	308	
10:00	1000	M	620	310	
10:05	1000	M	625	312	
10:10	1000	M	630	315	
10:15	1000	M	635	318	
10:20	1000	M	640	320	
10:25	1000	M	645	322	
10:30	1000	M	650	325	
10:35	1000	M	655	328	
10:40	1000	M	660	330	
10:45	1000	M	665	332	
10:50	1000	M	670	335	
10:55	1000	M	675	338	
11:00	1000	M	680	340	
11:05	1000	M	685	342	
11:10	1000	M	690	345	
11:15	1000	M	695	348	
11:20	1000	M	700	350	
11:25	1000	M	705	352	
11:30	1000	M	710	355	
11:35	1000	M	715	358	
11:40	1000	M	720	360	
11:45	1000	M	725	362	
11:50	1000	M	730	365	
11:55	1000	M	735	368	
12:00	1000	M	740	370	

MELBOURNE OBSERVATORY

SOUTH YARRA S.E. & VICTORIA.

Seismological

Bulletin No. 48

1939

Dec 27

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record lost.

Small and insignificant disturbances were recorded as follows:-

Oct. 21d 8h; 27d 6h, 11h, 21h; 29d 1h; 30d 17h, 20h.

Nov. 1d 9h; 9d 11h, 13h; 15d 4h; 17d 9h; 18d 12h; 21d 9h; 23d 7h; 25d 7h; 27d 14h

Dec. 6d 9h; 9d 19h; 10d 18h; 14d 1h; 22d 2h; 24d 23h; 25d 3h, 21h; 26d 22h.

J. M. Baldwin,

Government Astronomer.

