

# ADELAIDE OBSERVATORY,

SOUTH AUSTRALIA.

## SEISMOLOGICAL BULLETIN

Seismological Bulletin No. 1 1923 1923 January, 1923

φ. 34°. 55'. 38 0". S. λ. 9°. 14". 20 1'. E. Height above Mean Sea Level—134 feet.

SITUATION.—5 miles West of Mount Lofty Ranges, 5 miles East of Sea Coast.

FOUNDATION.—Marly Limestone and Clay of Adelaide Plains, to depth of 40 feet. Miocene Sandstone probably below. Depth of bedrocks not known, probably 1,000 to 2,000 feet.

INSTRUMENT.—Milne's Horizontal Pendulum, No 50, 1904 Pattern. E.—W. Component Recorded.

No.	Date	Time	Instrument	Phase	Time	Amplitude	Duration	Remarks	
1	Jan. 5	17 55.4	II <sub>r</sub>	ePR <sub>1</sub>	18 00.5	3500	0.32	18.3	Phases obscured to a certain extent by micros.
				eS	02.0				
				e	04.5				
				iL	06.0				
				M <sub>1</sub>	08.5		0.8		
				M <sub>2</sub>	10.5		0.8		
				M <sub>3</sub>	11.7		0.9		
2	6	11 25.0	?	M			0.32	18.3	May be heavy micros. Micros frequent Jan. 6 to 9 and 11-18.
3	21	13 50.7	I <sub>r</sub>	iS	14 00.5	4700	0.28	18.2	Microseismic in character but appears to correspond with EQ recorded at Sydney.
				eL					
				M			0.5		
4	22	1 02.0	II <sub>r</sub>	eP	04.0	3900	0.27	18.2	Light out Jan 22 5h. to 12h.30m.
				ePR <sub>2</sub>	08.0				
				iS	13 ?				Beam off level Jan 24 11h. to Jan 27 2h.
				eL	17.3		1.0		
				M <sub>1</sub>	20.5?		0.6		
				M <sub>2</sub>	2 11 ?				
				F					
5	27	16 35.5?	I <sub>r</sub>	e?	40 ?		0.24	18.3	Beginning in micros
				e?	42.5				
				e	47.6				commencement of spindle shaped maximum.
				e	50.2		0.9		
				M					
6	27	23 20.3?	I <sub>r</sub>	e?	24 ?		0.24	18.3	Amp. small, phases indistinct
				e	25.0				
				e	30 ?				
				eL	32.5		0.5		
				M					
7	27	18 08.0	I <sub>r</sub>	e	13.5		0.24	18.3	Record similar to No. 5. Earlier phases obscured by micros.
				M					



Seismological Bulletin No. 1983  
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Station	Time	Amplitude	Phase	Frequency	Remarks
0300	1983.01.10	0.1	S	0.1	
0300	1983.01.10	0.2	S	0.1	
0300	1983.01.10	0.3	S	0.1	
0300	1983.01.10	0.4	S	0.1	
0300	1983.01.10	0.5	S	0.1	
0300	1983.01.10	0.6	S	0.1	
0300	1983.01.10	0.7	S	0.1	
0300	1983.01.10	0.8	S	0.1	
0300	1983.01.10	0.9	S	0.1	
0300	1983.01.10	1.0	S	0.1	
0300	1983.01.10	1.1	S	0.1	
0300	1983.01.10	1.2	S	0.1	
0300	1983.01.10	1.3	S	0.1	
0300	1983.01.10	1.4	S	0.1	
0300	1983.01.10	1.5	S	0.1	
0300	1983.01.10	1.6	S	0.1	
0300	1983.01.10	1.7	S	0.1	
0300	1983.01.10	1.8	S	0.1	
0300	1983.01.10	1.9	S	0.1	
0300	1983.01.10	2.0	S	0.1	
0300	1983.01.10	2.1	S	0.1	
0300	1983.01.10	2.2	S	0.1	
0300	1983.01.10	2.3	S	0.1	
0300	1983.01.10	2.4	S	0.1	
0300	1983.01.10	2.5	S	0.1	
0300	1983.01.10	2.6	S	0.1	
0300	1983.01.10	2.7	S	0.1	
0300	1983.01.10	2.8	S	0.1	
0300	1983.01.10	2.9	S	0.1	
0300	1983.01.10	3.0	S	0.1	
0300	1983.01.10	3.1	S	0.1	
0300	1983.01.10	3.2	S	0.1	
0300	1983.01.10	3.3	S	0.1	
0300	1983.01.10	3.4	S	0.1	
0300	1983.01.10	3.5	S	0.1	
0300	1983.01.10	3.6	S	0.1	
0300	1983.01.10	3.7	S	0.1	
0300	1983.01.10	3.8	S	0.1	
0300	1983.01.10	3.9	S	0.1	
0300	1983.01.10	4.0	S	0.1	
0300	1983.01.10	4.1	S	0.1	
0300	1983.01.10	4.2	S	0.1	
0300	1983.01.10	4.3	S	0.1	
0300	1983.01.10	4.4	S	0.1	
0300	1983.01.10	4.5	S	0.1	
0300	1983.01.10	4.6	S	0.1	
0300	1983.01.10	4.7	S	0.1	
0300	1983.01.10	4.8	S	0.1	
0300	1983.01.10	4.9	S	0.1	
0300	1983.01.10	5.0	S	0.1	
0300	1983.01.10	5.1	S	0.1	
0300	1983.01.10	5.2	S	0.1	
0300	1983.01.10	5.3	S	0.1	
0300	1983.01.10	5.4	S	0.1	
0300	1983.01.10	5.5	S	0.1	
0300	1983.01.10	5.6	S	0.1	
0300	1983.01.10	5.7	S	0.1	
0300	1983.01.10	5.8	S	0.1	
0300	1983.01.10	5.9	S	0.1	
0300	1983.01.10	6.0	S	0.1	
0300	1983.01.10	6.1	S	0.1	
0300	1983.01.10	6.2	S	0.1	
0300	1983.01.10	6.3	S	0.1	
0300	1983.01.10	6.4	S	0.1	
0300	1983.01.10	6.5	S	0.1	
0300	1983.01.10	6.6	S	0.1	
0300	1983.01.10	6.7	S	0.1	
0300	1983.01.10	6.8	S	0.1	
0300	1983.01.10	6.9	S	0.1	
0300	1983.01.10	7.0	S	0.1	
0300	1983.01.10	7.1	S	0.1	
0300	1983.01.10	7.2	S	0.1	
0300	1983.01.10	7.3	S	0.1	
0300	1983.01.10	7.4	S	0.1	
0300	1983.01.10	7.5	S	0.1	
0300	1983.01.10	7.6	S	0.1	
0300	1983.01.10	7.7	S	0.1	
0300	1983.01.10	7.8	S	0.1	
0300	1983.01.10	7.9	S	0.1	
0300	1983.01.10	8.0	S	0.1	
0300	1983.01.10	8.1	S	0.1	
0300	1983.01.10	8.2	S	0.1	
0300	1983.01.10	8.3	S	0.1	
0300	1983.01.10	8.4	S	0.1	
0300	1983.01.10	8.5	S	0.1	
0300	1983.01.10	8.6	S	0.1	
0300	1983.01.10	8.7	S	0.1	
0300	1983.01.10	8.8	S	0.1	
0300	1983.01.10	8.9	S	0.1	
0300	1983.01.10	9.0	S	0.1	
0300	1983.01.10	9.1	S	0.1	
0300	1983.01.10	9.2	S	0.1	
0300	1983.01.10	9.3	S	0.1	
0300	1983.01.10	9.4	S	0.1	
0300	1983.01.10	9.5	S	0.1	
0300	1983.01.10	9.6	S	0.1	
0300	1983.01.10	9.7	S	0.1	
0300	1983.01.10	9.8	S	0.1	
0300	1983.01.10	9.9	S	0.1	
0300	1983.01.10	10.0	S	0.1	

## ADMIRALTY OBSERVATORY

Bulletin No. 2. 1923.

February, 1923.

No.	Date 1923	Char.	Phase	Time (Greenh.) h. m.	Ampl <sup>e</sup> S-W Cpt. in mms.	Δ in Kms	Instrumental Constants		Remarks.
							Sens.	Per. in Secs.	
8	1	Iir	is ISR <sub>2</sub> eL M	19 36.4 39.3 40.7 44.4	1.7	3600	0.27	18.4	P. in micros.
9	2	Iu	e(s) s(SR <sub>1</sub> ) s(SR <sub>2</sub> ) eL? e M	1 30.5 37.0 43.0 56.5 2 01.5 07 ?	1.0	11600	0.28	18.4	Beginning of long spindle shaped max spread over 10 minutes.
10	2	IITu	es ISR <sub>1</sub> esR <sub>2</sub> eL M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> M <sub>6</sub> M <sub>7</sub> M <sub>8</sub> M <sub>9</sub>	5 25.2 31.6 36.4 44.5 53.5 57.2 59.0 6 03.8 05.4 07.5 13.8 19.2 25.2	1.7 1.7 1.8 3.0 3.0 2.5 1.5 1.5 1.5	9800	0.27	18.4	P in micros.
11	3	IIITu	iP ePR <sub>1</sub> is ISR <sub>1</sub> i ISR <sub>2</sub> ISR <sub>3</sub> i iL i iX M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> M <sub>6</sub> M <sub>7</sub> F	16 15.2 18.8 25.8 32.5 35.1 36.6 38.7 40.75 43.8 48.0 51.25 55.8 59.4 17 01.3 03.9 08.2 10.9 12.9 22 35.0	17.5 17.5 16.0 14.0 7.0 10.0 10.0	8400	0.29	18.4	Aleutian Islands  Approx. only, boom against stops.
12	8	Iir	e is e eL M	00 02.2 09.2 13.4 16.5 19.0	1.0	4400?	0.34	18.5	
13	8	Iir	e eL? e M	2 14.8 20.5 22.0 24.5	0.6	5000	0.34	18.5	Similar character to No. 12.



Bulletin No.2 (continued)

February, 1923.

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No.	Date	Char.	Phase	Time (Greenh.) h. m.		Ampl <sup>e</sup> . E-W Cpt. in mms.	△ in Kms.	Instrumental Constants		Remarks
								Sens.	Per. in secs.	
14	Feb. 23	IIIr	iS eL M F	6	04.8 12.0 17.05 ???	2.0	5000 N.E. Borneo	0.24	18.5	Boom off level Feb.12, 8h. to Feb.14, 6h.30m. In Micros. Other phases not clearly indicated.
15	24	IIIu	eP? iS SR <sub>1</sub> SR <sub>2</sub> i iL M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> M <sub>6</sub> M <sub>7</sub> M <sub>8</sub> F	7 8	48.4 59.0 05.0 08.8 10.7 18.6 24.5 26.5 28.2 34.5 39.5 41.0 46.0 48.0 ???	1.5 2.0 2.0 2.0 1.5 1.4 1.4 1.4	9500	0.24	18.3	In Micros.
16	27	Ir	M	13	56.5	0.6				Small max. Phases lost in micros.

NOTE:- Light out from Feb. 14, 13h. to Feb.21, 7h.30m.



Bulletin No.3. 1923

March, 1923.

No.	Date Mch.	Char.	Phase	Time (Green <sup>n</sup> .)		Ampl <sup>e</sup> . E-W Cpt. in mms.	△ in Kms.	Instrumental Constants		Remarks
				h.	m.			Sens.	Per.in secs.	
17	2	IIIr	iS eSR <sub>1</sub> eSR <sub>2</sub> eL (M <sub>1</sub> (M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> M <sub>6</sub> M <sub>7</sub> M <sub>8</sub> F	17	03.1 06.5 09.0 11.8 13.5) 14.6) 16.0 18.3 22.0 24.0 26.3 29.9 18 56 ?	1.3 1.8 2.0 2.3 1.8 2.2 2.0 1.6	5000	0.28 18.1	Celebes  Several spread out maxima M <sub>3</sub> probably corresponds with interval from iS phase	
18	3	IIr	eS eSR <sub>1</sub> eL <sub>1</sub> eL <sub>2</sub> M <sub>1</sub> M <sub>2</sub>	22	11.4 15.0 18.5 20.9 24.2 25.8	1.5 1.5	5500	0.29 18.2	W. coast Sumatra  Double shock	
19	4	IIr	P eS <sub>1</sub> eS <sub>2</sub> eL <sub>1</sub> (iSR <sub>2</sub> ) eL <sub>2</sub> M <sub>1</sub> M <sub>2</sub>	in micros			4500?	0.30 18.2	Double shock Phases of sec- ond interfere with first identification problematical	
	9	IIr	eL M	23	33.6? 36.5?	0.8 1.2 1.0		0.34 18.5	Few long waves Possibly large micro.	
21	10	IIr	eS eSR <sub>2</sub> eL M	8	17.5 23.1 25.0 29.1	1.2	5000?	0.35 18.4	Not well defin- ed.  Boom off level (large level movement) from Mch. 11, 6h.30m. to 14, 5h.30m. 5	
22	14	IIr	eS iSR <sub>1</sub> eSR <sub>2</sub> eL M <sub>1</sub> M <sub>2</sub> M <sub>3</sub>	20	58.4 21 01.4 3.0 05.8 10.2 14.7 16.5	1.3 1.0 0.8	5000	0.36 18.3		



ADELAIDE OBSERVATORY

Bulletin No.3 1923 (Continued) March, 1923.

No.	Date	Char.	Phase	Time (Greenh.) h. m.	Ample. E-W Cpt. in mms.	△ in Kms.	Instrumental Constants		Remarks
							Sens.	Per.in " secs.	
	1923								
	Mch.								
23	16	IIIr	eP ePR <sub>1</sub> IS eSR <sub>1</sub> eSR <sub>2</sub> eL M <sub>1</sub> M <sub>2</sub> M <sub>3</sub> M <sub>4</sub> M <sub>5</sub> M <sub>6</sub> F	22 09.6 11.2 16.3 18.8 20.7 22.7 27.8 30.1 32.2 34.0 35.3 37.1 24 01.7		4600	0.37	18.2	Near Mindanao
24		IIItu	1st shock ISR <sub>1</sub> eL M <sub>1</sub> 2nd shock eSR <sub>1</sub> eSR <sub>2</sub> eL M <sub>2</sub> 3rd shock eSR <sub>1</sub> eL M <sub>3</sub> 4th shock IS eSR <sub>1</sub> eSR <sub>2</sub> eL M <sub>4</sub> 5th shock eSR <sub>1</sub> eSR <sub>2</sub> eL M <sub>5</sub> 6th shock eS eSR <sub>1</sub> eSR <sub>2</sub> eL M <sub>6</sub> 7th shock eS eSR <sub>1</sub> eL M <sub>7</sub> also maxima at M <sub>8</sub> M <sub>9</sub> M <sub>10</sub> F	13 01.5 11.0 18.3 13 03.0 06.2 12.5 20.3 13 05.0 15.0 23.0 13 01.5 07.5 11.0 17.0 25.4 13 10.2 13.5 21.0 28.2 13 07.5 13.5 17.0 23.5 30.9 13 08.8 14.5 24.5 32.2 13 36.4 43.2 47.5 in micros.		8500	0.34	18.0	S. China.  Several shocks The first phase on the record is very sharp and seems to be a coincidence between SR <sub>1</sub> of the 1st shock with S of the 4th. The record suggests that other phases interfere with one another, and the identi- fications given are those which seem best to correspond with the shocks indicated by the various maxima.



ADELAIDE OBSERVATORY

Bulletin No.3.1923. (Continued)

March, 1923.

No.	Date 1923 Mch.	Char.	Phase	Time (Greenh.) h. m.	Ample. E-W Cpt. in mms.	$\Delta$ in Kms.	Instrumental Constants		Remarks
							Sens.	Per.in " secs.	
25	28	IIr	<u>1st shock</u>		1.0	3500	0.31	18.2	Near Timor
			ss	4 39.0					
			eSR <sub>2</sub>	41.3					
			eL	42.3					
			M <sub>1</sub>	45.6					
			<u>2nd shock</u>						
			iS	4 39.8					
			eSR <sub>2</sub>	42.3					
			M <sub>2</sub>	46.5					
			also						
M <sub>3</sub>	49.1	0.7							
26	28	Ir	eSR <sub>1</sub>	20 40.0	0.5	4000	0.31	18.2	Mcluccas
			e	41.2					
			e	45.0					
			M <sub>1</sub>	46.2					
			M <sub>2</sub>	47.4					

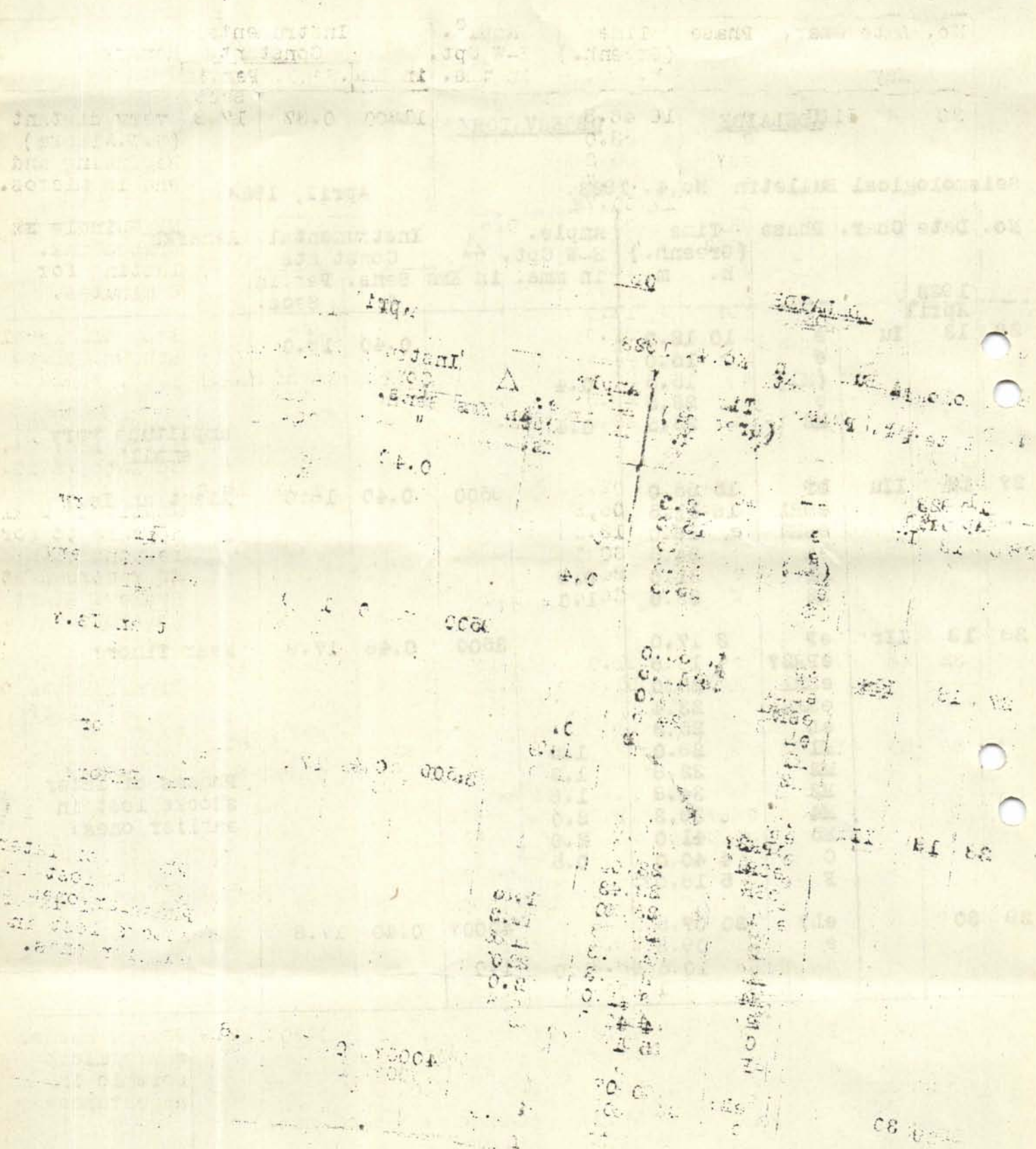
ADELAIDE
OBSERVATORY

Seismological Bulletin No. 4. 1923.

April, 1923.

No.	Date	Char.	Phase	Time (Greenh.) h. m.	Ample. E-W Cpt. in mms.	$\Delta$ in Kms	Instrumental Constants		Remarks
							Sens.	Per. in Secs.	
	1923 April								
26	13	Iu	e e (M1) e M2	10 12.0 15.0 15.5 23.5 25.5	0.4 0.4		0.40	18.0	amplitude very small
27	13	IIu	eP eSR1 eSR2 eL M1 M2	15 55.0 16 11.5 16.0 24.5 31.0 33.0	0.9 1.0	9500	0.40	18.0	Aleutian Is.?
28	19	IIr	eP ePR2? eSR1 eSR2 eL M1 M2 M3 M4 M5 C F	3 17.0 18.8 22.0 23.4 25.3 28.0 32.8 34.8 39.3 41.0 4 40.0 5 18.0?	1.5 1.2 1.6 2.0 2.0 0.5	3500	0.48	17.9	Near Timor?  Phases of later shocks lost in earlier ones.
29	30		eL? e m	20 07.5 09.8 10.5	1.0	4000?	0.40	17.8	







ADELAIDE OBSERVATORY.

Seismological Bulletin No.5. 1923.

May, 1923.

No.	Date May	Char.	Phase	Time (Greenh.) h. m.	Ampl <sup>e</sup> . E-W Cpt. in mms.	Instrumental Constants		Remarks.	
						in Kms.	Sens. Per.in secs.		
30	4	IIIU	e	16 46.8		11200	0.37	17.8	very distant (S.W.Alaska) Beginning and end in micros.
			e	53.0					
			eS?	55.2					
			e	58.7					
			e	17 00.7					
			SR1	02.2	0.8				
			eSR2	06.6					
			e	10.8					
			e	14.7					
			1L?	19.0					
			i	21.0					
			i	22.4					
			e	26.5	(commencement of max.)				
		M1	29.5	3.2				Light failed 11th, 12h.30m. to 15th, 7h.10.	
		M2	37.2	1.5					
31	16	Ir	e	18 02.0			0.31	18.0	Amplitude small appears to cor- respond with EQ recorded at Sydney. Start possibly in micros.
			e	05.8					
			e	13.0					
			e	20.0					
			e	24.5					
		M	26.8	1.0					
32	23	I	e	23 01.0			0.30	17.9	Final phases of 32 interfere with 33.
			M	01.6	0.5				
33	23	IIu	P	in 32		9200?	0.30	17.9	N. Japan?
			S	" "					
			e	23 14.1					
			eSR?	19.0	2nd shock?				
			eSR2	22.6	" "				
			e	25.2					
			e	26.2					
			eL	31.0	2nd shock?				
			M1	34.0	1.0				
			M2	39.3	1.3				
		M3	46.3	1.0					
		F	1 00						
34	26	I	e?	8 48.3			0.30	17.9	Phases marked e are micro- seismic in appearance.
			e?	52.8					
			eL?	56.7					
			e?	57.9					
			i	59.0	(Commencement of max.)				
		M	9 00.5	1.0					
35	28	IIu?	No.1			9200?	0.29	17.9	2 shocks close together. Indian Ocean
			eS?	1 42.0					
			eSR1	47.0					
			eL?	53.5					
		M	2 00.0	1.5					



Table with multiple columns and rows, containing faint text and numbers, possibly a ledger or data record. The text is mostly illegible due to fading and bleed-through.



ADELAIDE      OBSERVATORY.

Seismological Bulletin No.5. 1923 (Contd.)

May, 1923.

No.	Date	Char.	Phase	Time (Greenh.) h. m.	Ampl <sup>e</sup> E-W Cpt. in mms.	$\Delta$ in Kms.	Instrumental Constants		Remarks	
							Sens.	Per. in secs.		
So Continued.										
			<u>No.2 shock</u>							
			eP?	1 35.4						Record suggests double shock
			iS?	43.5						
			eSR1?	48.8						
			eL	53.0						
			e	53.5				(marked change of period)		
			M	2 01.8	2.1					
			F	2 50.0						



Bulletin No. 6. 1922 (continued)

June, 1923.

ADELAIDE . OBSERVATORY

No.	Date 1923 June	Char.	Phase	Time (Greenh.) h. m.	Ample. E-W Cpt. in mms.	△ in Kms.	Instrumental Constants		Remarks
							Sens.	Per. in secs.	
43	22	IIIu P		in micros		7000	0.27	17.9	S. of Japan.
			<u>1st shock.</u>						
			es	7 04.7					
			SR1	10.0					
			eSR2	12.7					
			eL	17.5					
			M1	24.0	2.3				
			<u>2nd shock.</u>						
			es	7 09.2					
			e(SR1)	14.0					
			eSR2	17.0					
			eL	21.8					
			M2	27.6	5.6				
			<u>3rd shock.</u>						
			es	7 14.2					
			eSR1	19.5					
			eSR2	22.2					
			eL3	26.2					
			M3	33.0	3.0				
44	22	Ir	e	20 57.6			0.27	17.9	
			e	59.0					
			e	21 04.4					
			M	06.0	0.6				

Boom off level June 28th, 10h. 30m. to 30th, 3h.



Bulletin No. 7

JULY 1923.

SEISMOGRAPH REGISTER

Adelaide

Observatory

No	Date	Char.	Phase	Time (Greenh.) H. M.	Ampl <sup>o</sup> . E-W Cpt. in mms.	Δ in Kms	Instrumental Constants		Remarks
							Sens	Per in Secs	
Boom off level July 1st 10 h. 30 mins. to July 4th 6 hrs.									
" " " " 5th 18 h. 30 mins " " 7th 3 hrs. 5 mins.									
<del>XXXXX</del>									
" " " " 9th 18 h. 30 mins " " 10th 1 hr.									
45	Jly 12	llr	eS eL N	3 30 3 36 3 40.5	1.7	4200	.33	19.0	
46	"	l	e e M	9 28 9 35 9 39	0.4		.33	19.0	Ampl. small times approx.
47	" 13	lllu	eS eSR1 eSR2 L M1 M2 M3 M4	11 34 11 39 11 41.7 11 45.6 11 46.5 11 49 11 52.6 11 57.3	0.5 0.6 1.2	7100?	.33	19.0	
48	"	l	M	16 24	0.3		.33	19.0	
49	" 15	lr ks	eP is L M	13.45? 13.50.6 13 54.7 13 58.7	0.8	4200	.34	19.1	record faint
50	" 20	l	M	16 18.0	0.3		.33	19.1	
51	" 22	l	e e e e e M M	14 42.2 14 48 14 50.1 14 56.8 15 04.5 15 12 15 17.5 15 26.1	0.5 0.5		.33	19.1	ampl. small phases indis- tinguishable
52	" 26	l	e(L)	7 45.1			.37	19.2	
53	" 26	l	e	10 10.5			.37	19.2	
54	" 27	l	e	11 42.5			.37	19.2	Light out Jly. 29th 17 hrs.30 mins to Jly. 30th 6 hrs.



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AUGUST 1923

SEISMOGRAPH

REGISTER

Adelaide

Observatory

No	Date	Char.	Phase	Time (Greenh.) H. M.	Ampl <sup>3</sup> . E-W Cpt. in mms.	△ in kms	Instrumental Constants		Remarks
							Sens	per.in Secs	
55	Aug 4	1	e M	16 30 16 35	0.5		.36	19.3	
56	" 10	1	es e eL M	22 25 22 27.9 22 28.65 22 32.4	1.0		.34	19.3	
57	" 11	1	es1 es2 es3 eL1 eL2 e	01 09.3 01 12.8 01 17.0 01 19.5 01 23.7 01 30.5			.34	19.3	Max inde- terminate
58	" 12	1	e e	10 36 10 42.7			.34	19.3	
59	" 15	1	eP pR2? eL M1 M2	06 56 06 58.6 07 06.1 07 07 07 09.2	0.8 0.8		.33	19.3	
60	" 17	1r	iP iS eL? e? M1 M2	12 16.3 12 22.0 12 25.3? 12 28.5 12 29.5 12 32	1.5 1.2	3600	.33	19.3	
61	" 18	1	es esR1 eL M1 M2	12 35.1 12 37 12 39 12 42.5 12 44.3	2.5 1.6		.33	19.3	
62	" 20	1	es srl eL	18 20.7 18 23.1 18 25.5			.33	19.3	
63	" 20	1	eL M	19 30 19 31.8	1.1		.33	19.3	other phases indistinguish- able
64	" 31	1	e e e M	11 22.5 11 33.6 11 34.5 11 35.7	1.1		.35	19.3	



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No.	Date	Char.	Phase	Time		Ampl <sup>o</sup> . E-W Cpt in mms.	4 in Kms	Instrumental Constants		Remarks
				(Greenh) H.	m.			Sens	per.in secs	
65	sept 1	llu	eP	3	10		7000	.35	19.3	P. waves barely percept ible
			PR2	3	14.5					
			iS	3	18.5					
			M1(S)	3	21.1	5.7				
			M2(S)	3	26.0	3.5				
			M3(S)	3	27.5	5.5				
			L	3	31.5					
			M1	3	36.6	16				
			M2	3	42.5	9				
			M3	3	47.2	8				
			M4	3	48.6	9				
			M5	3	51.8	10				
			M6	3	56	5				
			M7	4	00	4.5				
			M8	4	04	5.3				
M9	4	09	6.5							
M10	4	13.2	3.5							
M11	4	15	4							
M12	4	30.5	3.1							
66	" 2	llu	eP	2	57.8		7500	.35	19.3	M2 on edge of record. Not well defined
			PRL	3	00.8					
			iS	3	06.9					
			L?	3	14.5					
			M1	3	17.2	3.0				
			M2	3	21.1	2.1				
			M3	3	22.7	1.7				
			M4	3	26.0	1.5				
M5	3	30.5	2.1							
M6	3	34.2	2.4							
67	" 9	lu	eP	22	15.5?		8000?	.36	19.3	Amplitude small and times of some phases problematical
			ePRL?	22	19?					
			e	22	22?					
			eS	22	25.1					
			e	22	34?					
			eL	22	39.4?					
			M1	22	44.5?	0.7				
			M2	22	49.6	0.7				
M3	22	56.1	1.0							
Light out sept 13th 5 hrs 10 mins to Spt. 13th 7 hrs 20 mins										
" " " " 22 " 15 " " " 14th 0 " 40 "										
" " " " 14th 5 hrs 15 mins to Sept 14th 5 hrs 45 mins.										
" " " " 22 " 45 " " " " 23 " 50 "										
Boom off level Sept 16th 6 hrs 10 mins to 9 hrs 30 mins.										
68	Spt. 16th	lr	eP	16	47.0		3300	.34	19.3	
			e	16	49.0					
			iS	16	52.0					
			L	16	54.9					
			M	16	58.0	6.5				
Boom off level Sept. 17th 6 hrs 10 mins to 8 hrs 30 mins.										



SEPTEMBER 1923 Continued.

No.	Date	Char.	Phase	Time		Ampl <sup>e</sup> . E-W Cpt In mms.	△ in kms.	Instrumental Constants		Remarks.
				(Greenh) H.	M.			Sens	per. in Secs.	
69	Spt22	1	e	15	09			.32	19.3	ampl. small & phases unre- cognisable
			e	15	13					
			M	15	14.7	1.0				
70	"	lu	e?	21	14.8		8000?	.32	19.3	ampl. small phases unre- cognisable
			e	21	19.5					
			eS?	21	27					
			SR1?	21	33					
			L?	21	42					
			M	21	48.6	1.0				
"	27	1	M	7	27.4	0.5		.30	19.2	ampl small phases masked by micros
72	"	llu	eS	2	47.6		8400	.30	19.2	M2 may be a minute out either way.
			e?	2	48.6					
			SR1	2	53.4					
			e	2	55.5					
			eSR2	2	56.5					
			eSR3	2	58.0					
			e	3	01.0					
			eL	3	02.7					
			M1	3	04.4	0.7				
			M2	3	11	1.0				



October 1923.

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No.	Date	Char.	Phase	Time (Greenh)		Ampl <sup>e</sup> E-W Cpt in mms.	△ in kms.	Instrumental Constants		Remarks.
				H.	M.			Sens	per.in Secs	
73	Oct. 1	lu	S SR L M	22 36.4 22 40.2 22 44.5 22 50.2		1.5	5650	.30	19.2	
74	" 7	lllr	iS iSR1 iSR2 iL M1 M2 M3 M4 M5 F	3 41.9 3 45.3 3 46.6 3 48.7 3 49.9 3 51.4 3 54.2 3 57.3 4 01.3 in micros			5000	.30	19.2	M2 against stops approx. amp. given  Strong A.T. on Oct. 10.
75	" 15	llr	S eL M F	7 43.3 7 48.8? 7 52.0 in 76		1.8	4200?	.30	19.2	
76	" 15	ll	S L M1 M2 F	8 10.2(?) 8 15.1? 8 18.1 8 22.3 9 10.0		1.6 1.3		.30	19.2	Preliminaries of 76 lost in 75.
77	" 22	lr	iP S iL M	5 35.35 5 35.35 5 36.5 5 37.5		1.0		.32	19.2	



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Observatory

No.	Date	Char.	Phase	Time (Greenh)		Ampl <sup>e</sup> . E-W Cpt in mms	△ in kms	Instrumental Constants		Remarks.
				H.	M.			Sens	Per.in Secs	
78	Nov 2	llr	P S L M1 M2 M3 M4 M5	21	14.65 19.8 23(?) 26 29.1 33 35 38	24 15 72.5 6 5	3350	.33	19.4	New Guinea M1 against stops amp. estimated
79	" 3	1	e L M	5	02.5 05.9 09.2	1		.33	19.4	preliminar- ies lost in micros
80	" 3	1	es e e(?) eL M1 M2 M3 M4	16.	38.5 44.0 48.5 50.0 52.5 54.2 56.5 59.3	0.7 0.8 0.8 1.2		.33	19.4	
81	" 4	llu	e i i M1 M2 F	00	11.2 16.3 19.7 22.5 25.2	4.8 3.0		.34	19.4	M2 rather problem- atical.
82	" 5	1	M	20	23.5	2.0		.34	19.4	beginning and end in micros
83	" 5	llu	1S1 es3 S? M1 M2 M3	21	47.2 52.4 54.8 03 05.6 08.0	3.3 1.8 3.5	6300	.34	19.4	P.undiscern- able
84	" 1		M	22	08.3	0.4		.34	19.7	ampl. too small to discern prelimin- aries



December 1928

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SEISMOGRAPH REGISTER

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Observatory.

No.	Date	Char.	Phase	Time (Greenh)		Ampl. E-W Cpt. in mms.	△ in kms.	Instrumental Constants		Remarks
				H.	M.			Sens	Per. in Secs	
85	Dec 5	llr	es	22	47.9		4400 N.Celebes	.33	19.7	Light out Dec <del>3</del> 3rd- 0 hrs 30 mins to 4th 10 hrs 30 mins.
			iSr		50.0					
			L		53.2					
			M		56.6	3.0				
86	" 7	lr	e(S)	23	48.6			.33	19.6	Amp. very small and time of pha- ses problem- atical
			e(L)		51.0					
			M		55.0	0.6				
AIR TREMORS pronounced from Dec. 9th 11 hrs 30 mins to 21 hrs 30 mins, and Dec, 10th 13 hrs 30 mins to 21 hrs 30 mins.										
87	" 11	l	e	5	22.8			.33	19.6	Times of phases prob- lematical
			e		25.6					
			e		28.5					
			i		31.8					
			M		33.0	0.5				
Air tremors pronounced Dec 17th-11 hrs 30 mins to 21 hrs. Boom off level Dec 29th-2 hrs 30 mins to Dec. 30th-6 hrs.										