

No.

January 1 to 31

 19¹²

Riverview College Observatory, SYDNEY, N.S.W.

Seismological Bulletin.

 $\phi = 33^{\circ} 49' 49'' \text{ S.}$
 $\lambda = 151^{\circ} 9' 30'' \text{ E.}$
 $h = 41.9 \text{ m.}$

Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

 1912
July-Dec.

	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
$A_y(1)$	178	8.0	>20	0.02
$A_y(1)$	194	6.5	4.3	0.02
$A_y(2)$	74	3.5	2.5	0.08

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_z μ		
1	1912 Jan. 2	II	eP?	6	20.0		3				9600	Short wave-lengths.
			e		21.2		5	8	-			
					23.0		7	16	8	21		
			MN		25 23		8	16				
			ME		26 11		8		11			
			MZ		26 50		9			8		
2	" 4	I_u	F	7	50						9600	Aleutian Islands.
			eP	15	59.6		4	$1\frac{1}{4}$	-			
			iS	16	10 15		7	-	4			
			i		10 37		7	6	-			
			PS?		11 51		8	-	$4\frac{1}{2}$			
			cL		22.8		16					
			MN		31 48		19	13				
			ME		34 15		19		12			
				18	20 58		16	$2\frac{1}{4}$	-			
			F	18	30							
3	" 5	I	e(S?)	23	35.4		7	6	2	340	P lost in changing papers.	
			M		38.8		8	7	$4\frac{1}{2}$			
			F		0 10							
4	" 6	I	c	17	57.9					340	Felt at Cooma, Bega, Eden, Nimitybelle and other towns, (III-IV F.M.), with well-	
			MN		59 53		12	$2\frac{3}{4}$				
			ME		18 00 14		16		$2\frac{3}{4}$			
			F		18 10							
5	" 8	I	eP	22	44.5					340	Felt at Cooma, Bega, Eden, Nimitybelle and other towns, (III-IV F.M.), with well-	
					45 06		4	$2\frac{3}{4}$	$2\frac{3}{4}$			
			M		47 38		10	5	1			
			F		23 00							
6	" 17	I_v	iP	20	10 05		$\frac{1}{2}$			340	Felt at Cooma, Bega, Eden, Nimitybelle and other towns, (III-IV F.M.), with well-	
					10 11		4	$3\frac{1}{2}$				
					10 20		4		3			
			S		10 42		5	$\frac{3}{4}$	$3\frac{1}{4}$			
			F		20 14							

marked sound-phenomena in some cases. Epicentre probably situated in steeply-shelving sea-floor, somewhat East of Bega.

At 20h 10m 8s, waves of 4s. period appeared, on which the shorter waves were superposed.

(Continued on next sheet)

No 1 (Continued)

January 1 to 31

19 12

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Seismological Bulletin.

 $\phi = 33^{\circ} 49' 49''$ S. $\lambda = 151^{\circ} 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T _o	ε : 1	r T _o ²
A _N				
A _E	(See last sheet)			
A _Z				

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
							s.	μ	μ	μ	km.	
7.	1912 Jan. 18	I	e	23	13.1							
			ME		14 56	11			1			
			NN		17 42	8	1½					
8	" 20	II _r	F	23	25							
			cP	4	05.5						3000	Chronograph rearranged on Z.
					6.5	13	23	1½				
			iS		10 14	10	-20	+8				
			PS		10 40	10	56	11				
			eL		15.3	16						
			H		17.1	14	53	125				
			MZ ₁		?	15				24		
			MZ ₂		?	10				20		
9	" 20	I _r	F	5	52							
			eP	8	27.5						2900	Probably a second shock of No 8.
			eS		32.1							
			PS?		32.4	8	4	-				
			cL		36.3	18						
			ME		38 49	14		16				
			NN		42 14	12	6					
10	" 20	I	F	9	10							
			e	9	33.3				3			
			i(S?)		35 54	5	-					
			F	9	50							
	" 21	I	e	19	41.8							
			NN		44 49	14	7					
			ME		49 58	12		4½				
			F	20	10							
12	" 28	I	e(P?)	1	29.4							
			S?		32 31							
			e(L?)		34.8	9						
			NN		39 35	10	3					
			ME		43 05	9		3½				
			F	2	20							
13	" 31	I _u	e(S?)	20	38.1	10?	-	3		12000	Alaska.	
			e(SR ₁ ?)		45.5	12?	-	4½				
			e(L?)	21	00.5	30						
			NN		8 38	20	14					
			ME		21 38	16		11				
			F	22	25							

E. F. Pigot

No 2

February 1 to 23

19 12

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 $\lambda = 151^{\circ} 9' 30'' \text{ E.}$
 $h = 41.9 \text{ m.}$

Foundation : Triassic sandstone.

INSTRUMENTS :

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
$A_N(1)$	173	8.0	20	0.02
$A_E(1)$	194	6.5	3.7	0.03
$A_Z(2)$	74	3.5	2.4	0.08

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A_N	A_E	A_Z		
							s.	μ	μ	μ	km.	
14	1912 Feb. 1	I_r	cP	20	37.1		3				1860	
			iS		40	17		4	$3\frac{1}{2}$	-		
			oL		42	5		6				
			ME		43	23		7		2		
			MN		46	26		6	1			
15	" 12 13	I	e(S?)	21	25							
			eL	23	25.4							
			ME		29	6		18				
			MN ₁		31	48		11		10		
			MN ₂		32	44		12	4			
16	" 16	II_r	F	35	52		12	5			2100	Friction on N.S. from 7h 44m, to 11h 12m.
			cP	0	10							
			cS	9	32.6							
			eL		36	1		6				
			ME ₁		38	0		12				
17	" 17	I	ME ₂		43	26		12		36		
			ME ₃		45	24		12		41		
			ME ₄		48	37		6		14		
			F		52	17		9		21		
			e	11	55							
18	" 18	I	e(L?)	0	49.2							
			MN	1	04	04		9	1			
			ME		4	36		9		$\frac{3}{4}$		
			F	1	35							
			e	4	25.8		12			$1\frac{1}{2}$		
19	" 25	I_r	e		33.0		12		$1\frac{1}{2}$	3040		
			MN		48	43		12	$1\frac{1}{2}$			
			F	5	05							
			iP	2	45	55		5				$2\frac{1}{4}$
			cS		50	7		10	5			11
20	" 25	I	eL		52	33		10	19	$3\frac{1}{2}$		
			ME		53	1		?				
			MN		53	35		8		$4\frac{1}{2}$		
			F		54	19		8	5			
			e	4	05							
21	" 25	I	c	6	34.6		12?					
			F		38	2		14	11			8
			F	7	05							

(Continued on next sheet)

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2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T ₀	ε : 1	r T ₀ ²
A _N				
A _E	(See last sheet)			
A _Z				

2

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
							s.	μ	μ	μ	km.	
21	1912 Feb. 25	I _r	cP	8	54.7		3				2750	
			eS		59.1		7	1½	1½			
			eL	9	02.4		15?					
			ME		4 36		14		6			
			MN		7 15		12	4				
22	" 29	I _r	F	9	40						2600	
			eP	1	04.6		4	-	1			
			eS		8.8		7	2	2½			
			eL		11.1		13					
			ME		13 03		11		7			
3	" 29	I _r	MN		14 04		12	8			2400	Azim. N. 55.7 E. Lat. 20½ S. Long. 170 E.
			F	2	15							
			iP	3	19 10		4	-6	-8	±6		
			iPR ₁		20 10		5	6	7			
			iS		23 07		6	-19	+11			
			PS		23 44		7	7	5			
			eL		26.5		15					
			ME		27 14		14		8			
MN		27 55		12	4							
F		4 15										

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	V	T_0	$\epsilon : l$	$\frac{r}{T_0^2}$
$A_N(1)$	168	8.0	>20	0.02
$A_E(1)$	194	6.5	3.6	0.03
$A_Z(2)$	73	3.5	2.4	0.08

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_Z μ		
24	1912 Mar. 11	I	e.	9	49.9						Friction on N.S.	
			e		52.6							
			e		53.9	4		3				
			eL		54.6	12						
			ME		55 40	9		4				
25	" 11	II	e(P?)	10	10						F. lost in N ^o 25.	
			e	12	17.5							
			e		20.4	5		2				
			e		21.4	5		6				
			e		21.8	5	14	19				
			eL		22.3	12						
			ME		22 48	11		46				
			MN		24 24	11	47					
26	" 11	I	F	13	25						F. lost in N ^o 25.	
			e	12	44.5							
			e		44 38	4		3				
			ME		45 33	12		6				
27	" 13	I _r	eP	19	15.7				3240			
			eS		20.7	6		2				
			eL		23.4	12						
			ME		24 40	8		5				
28	" 16	I	F	20	30							
			eS	13	21.7	5		$\frac{1}{4}$				
			eL		31 50	17						
			ME		38 47	13		5				
			F	15	40							
29	" 16	I	e?	14	57.9							
			e	15	08.5							
			ME		10 34	18		4				
			F	15	40							
30	" 21	I	e(P?)	15	00.9	3						
			S?		6 44	7	2					
			M		13.9	4	3	$3\frac{1}{4}$				
			F	15	25							
31	" 25	I _r	iP	4	54 05	3	$-5\frac{1}{2}$	$-5\frac{1}{2}$	+13	2260	Azim. N. 45° E.	
			PR ₁		54 59	5	$4\frac{1}{2}$	13	$3\frac{1}{2}$			
			iS ₁		57 50	4	-11				Lat. 18 $\frac{1}{2}$ ° S.	
			iS		57 57	4		+11				
			SR ₁		59 18	6		14	6		Long. 166° E.	
			eL ₁	5	01.5	17						
			ME		2 30	13		31				
			F	6	30							
32	" 26	I	eP	6	24.7	2						
			e		32.8	3		1				
			e		33 04	6		$1\frac{1}{2}$				
			e		33.8	3		$\frac{1}{2}$				
			e		39.4	4	$3\frac{1}{4}$	$3\frac{3}{4}$				
			F	7	00							

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3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
A_N (1)	164	8.0	> 20	0.02
A_N (3)	178	6.3	1.8	0.04
A_E (1)	194	6.5	3.5	0.05
A_E (3)	129	5.9	2.8	0.03
A_Z (2)	73	3.5	2.4	0.08

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.	
				h.	m.	s.		A_N	A_E	A_Z			
							μ	μ	μ	km.			
33	1912 Apr. 14 15	II _r	iP	22	37	46	4	$-3\frac{1}{2}$	-		2720		
			iS _E	42	08		6		$+2\frac{1}{2}$				
			iS _N	42	13		6	$+10$					
				42	20		6			15			
				42	34		5		13				
			eL	43.5		24							
			ME	47	00		13			74			
34	" 15	II _r	iP	16	08	50	5	-8	-	+2	2640	Due North. Lat. $10\frac{1}{2}^{\circ}$ S. Long. 151.2° E.	
			iS	13	06		8	$+19$	$-2\frac{1}{2}$	6			
				13	16		8	38	6	6			
			eL	14.6		20							
			MN	17	42		13	108	220				
			ME ₁)	18	18		12	106					
			MN ₂	18	23		12			30			
			MZ ₁	19	12		10		92				
			ME ₂	19	57		9	49					
			MN ₃	25	29		8		25				
			ME ₃	25	42		9	74		32			
			MN ₄)	25	42		9						
35	" 20	I _u	F ₂	18	20					6000	Other phases lost in N ^o 36.		
			eP	1	29.6		6	$\frac{1}{2}$	-				
			ePR ₁	32.4		6		$\frac{1}{2}$	1				
			e(S?)	37.2		10		2	1				
36	" 20	II _r	eL	41.9		?				2620			
			iP	1	37	58	4 $\frac{1}{2}$	+6	$\frac{1}{2}$				
			iS	42	13		8	-33	-7				
			eL?	45.3		26							
			MN ₁	46	33		19	80					
			ME ₁	48	00		15		60				
			ME ₂	54	09		11		30				
			MN ₂	54	38		10	31					
37	" 24	I	MZ ₂	55	10		10			20			
			F	3	20								
			e	2	26.2		9	2	$\frac{3}{4}$				
			eL	31.1		19							
38	" 27	I _r	MN	33	20		12	7		1060? Short wave- lengths.			
			ME	35	23		11		10				
			F	3	00								
			eP?	3	54.5		3	$\frac{1}{2}$	$\frac{1}{2}$				
			S?	56.4		6	$1\frac{1}{4}$	$\frac{1}{4}$					
			eL?	58.1		?							
			ME	59	54		10		7				
			MN	4	00	00	10	13					
			F	5	00								

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	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
A_N (1)	123	8.6	11.3	0.01
A_E (3)	177	6.3	1.6	0.04
A_E (1)	127	8.3	5.9	0.02
A_Z (3)	129	5.9	2.8	0.03
A_Z (2)	72	3.5	2.4	0.08

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.	
				h.	m.	s.		A_N μ	A_E μ	A_Z μ			
39	1912 May 3	II _r	iP	19	08	13	4	1½	3		3350	Short wave-lengths.	
			S		13	20	7	1	1½				
			eL		17	4	14						67
			MZ ₁		19	10	6						
			MN ₁		19	20	6	30		45			
			ME ₁		19	33	6						64
			MZ ₂		20	30	6						
			MN ₂		22	33	8	45		69			
			ME ₂		23	08	8						
			F		21	10							
0	" 6	I	eP	19	16	8	?		3		Analyses from Seismograph N ^o 3.		
			o(SR ₂)		45	3	13	-					
			eL		20	27	2	30		6			
			ME ₁		28	45	18			5			
			ME ₂		33	47	16			6			
			ME ₃		40	28	18						
			MN		40	49	18	3					
			F		22	35							
			eL		18	02	44	18					
			MN		10	27	20	5		16			
" 11	" 11	I	ME		11	52	20				2500	"	
			F		18	25				3			
			iP		0	09	37	4	-	4½			
			eS		13	7		7	+8				
			iS		13	52		8	+63	-19			
			iSR ₁		15	41		20					
			eL		16	0		12		25			
			ME ₁		17	05		13	65				
			MN ₁		17	19		13	66				
			MN ₂		18	21		13					18
" 15	" 15	II _r	MZ		21	42	15				18	"	
			ME		22	09	10			18			
			ME		22	20	10		6				
			V		1	30							
			eL		13	57	5	17					
			eL		14	04	2	13		3½			
			eL		5	28	13						
			eL		5	36	13	10					
			eL		14	30							

(continued on next sheet)

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2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
A_N				
A_E	(See last sheet)			
A_Z				

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A_N	A_E	A_Z		
44	1912 May 23	II _u	eP	2	35.7						8700	Burmah.
			PR ₁		38 40	6	3	-				
			eS ₁		45.6	7						
			iS		45 43	7	+7	+3				
			SR ₂		51 04	21	47	41				
					52 09	21	61	51				
			eL		58.9	38						
			ME ₁	3	03 11	35		364				
			MN ₁		3 15	35	337					
			MZ ₁		?	22			53			
			MN ₂		7 20	21	230					
			ME ₂		8 08	21		138				
			LN ₃		9 00	21	235					
			ME ₃		9 49	21		198				
			C		16 36	15	51	46				
F	5	50										
45	" 26	I _r	eP	6	38.2					2300	Analysis from seismograph N ^o 3.	
			eS		42.0	7	-	$\frac{1}{2}$				
			eL		43.7	19						
			M		44 07	16	16	10				
46	" 28	I	F	7	05					Chronograph de- ranged for some hours: time approximate.		
			e	12	32							
			MN		36	15	$2\frac{1}{4}$					
47	" 28	I	ME		38	11		$1\frac{1}{4}$				
			F	12	45							
			eP	12	52	3	$\frac{3}{4}$	-				
			e(S?)	13		6	-	$3\frac{1}{4}$				
			e		02	7	-	$2\frac{3}{4}$				
			eL		5	23						
			ME ₁		7	20		38				
			ME ₂		9	16		18				
			MN ₁		9	16	14					
			MN ₂		16	16	14					
ME ₃		19	13		10							
F	14	10										

E. F. Pigot

Riverview College Observatory,

SYDNEY, N.S.W.

Seismological Bulletin.

$\phi = 33^{\circ} 49' 49''$ S. $\lambda = 151^{\circ} 9' 30''$ E. $h = 41.9$ m. Foundation : Triassic sandstone.

INSTRUMENTS :

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
A_N (1)	112	7.4	6.3	0.02
A_N (3)	177	6.3	1.8	0.04
A_E (1)	121	5.6	3.4	0.01
A_E (3)	129	5.9	2.8	0.03
A_Z (2)	71	3.5	2.4	0.08

6

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A_N	A_E	A_Z		
48	1912 June 2	II _r	eP	12	05.1	2	1	1	-	3600		
			eS		10.5	8	1 $\frac{1}{4}$	7	-			
			eL		14.7	13						
			M ₁		17.5	6	51	40	12			
			MN ₂		20 34	10	198		53			
			MZ ₂									
			ME ₂		21 05	10		263				
			MN ₃		21 14	10	203					
			ME ₃		21 57	8	83	185				
			MN ₄									
			MZ ₃		22 07	8			61			
			MZ ₄		23 19	8			61			
			ME ₄		23 24	7		114				
			C		25 03	8	31	54				
F	14	05										
49	" 5	II _r	eP	11	20.7	4	1	3 $\frac{3}{4}$	3900			
			S		26.4	8	5	7				
			SR ₁		28 48	9	8	5				
					29.00	9	14	15				
			eL		31.2	19						
50	" 6	I	M		34 28	15	193	281				
			F	12	55							
			e(P?)	17	32.4	5	-	3 $\frac{3}{4}$				
			eL		41.2	13						
51	" 7	I	MN		42 44	10	7					
			ME		45 12	10		3				
			F	18	00							
			eP	3	34.8	5	2	1 $\frac{1}{2}$				
			e		41.8	4	1	(A)			Perhaps the P of a 2 nd . " " S " }shook	
			e		46.4	8		2				
			i		46 48	9	-23	-				
eL		50.1	17									
ME ₁		52 14	14		67							
MN ₁		52 25	14	22								
MN ₂		55 53	13	19								
ME ₂		56 02	13		34							
52	" 7	I	F	5	00							
			e?	18	50.1	5						
			e(S?)		55.9	10	5	6				
			e(SR ₁)		59.6	12	-3	10				
			eL	19	03.3	20						
			MN		6 17	18	37					
ME		8 24	16		63							
F	19	55										

Riverview College Observatory, SYDNEY, N.S.W.

Seismological Bulletin.

$\phi = 33^{\circ} 49' 49''$ S, $\lambda = 151^{\circ} 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T _o	ε : 1	$\frac{r}{T_o^2}$
A _N				
A _E	(See last sheet)			
A _Z				

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
							μ	μ	μ	km.		
53	June 8	I	eP?	7	53.3	?						Alaska.
			e	8	00.3	9	3	-				
				1	43	6	2	5				
			eL	24.8	19							
			MN ₁	29 08	17	11						
			ME ₁	33 04	18		12					
			ME ₂	41 34	19		13					
			MN ₂	44 23	18	6						
			ME ₃	47 13	17		11					
			MN ₃	50 37	17	5						
			C ₁	9 39 09	21	10	-					
			C ₂	53 28	21	10	-					
			F ₂	10 25								
54	" 8	I _u	eP	13	23.1	6	1	-		13000	Alaska.	
			i	25 15	5½	-3	+5					
			eS	36.0	?							
			eL	52 38	22							
			MN ₁	57 44	17	6						
			MN ₂	14 05 00	17	6						
55	" 10	I	F	15 00							Alaska.	
			e	16 24.0								
			e	30.7	5	1	-					
			e	31.7	5	4	4					
			e	38.5	9	1½	-					
			eL	54.0	30							
			MN ₁	56 34	22	19						
			ME ₁	17 01 38	17		11					
			MN ₂	5 18	18	12						
			ME ₂	11 27	17		16					
56	" 12	I	MN ₃	13 35	17	6				Mexico?		
			eV ₂	23.5	20	8	-					
			F ₂	18 55								
			e	12 59.7								
			e(S?)	13 11.2	10	2	3					
			e?	23.9								
			e?	24.3	12	2½						
			eL	40.3	22							
			ME ₁	42 05	21		17					
			MN ₁	46 28	18	6						
			ME ₂	48 57	18		24					
			MN ₂	54 57	15	4						
			F ₂	14 45								

(Continued on next sheet)

Riverview College Observatory, SYDNEY, N.S.W.

Seismological Bulletin.

$\phi = 33^{\circ} 49' 49''$ S. $\lambda = 151^{\circ} 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T _o	ε : 1	r T _o ²
A _N				
A _E	(See last sheet)			
A _Z				

6

No.	Date.	Char.	Phase.	Time (Greenwich)		Per.	Amplitude.			Δ	Remarks.
				h.	m. s.		A _N	A _E	A _Z		
57	1912 Jun. 14	I _r	eP	16	02.5					3800	Banda Sea ?
			eS		8.1	8	5	3			
			SR ₁		10 43	9	8	7			
			eL ₁		13.8	17					
			M ₁		15 28	14	61	87			
			M ₂		18 00	10	22	43			
			MZ		18 43	10			11		
58	" 18	I _u	F	17	15					8700	
			eP	12	01.8	5	2	$\frac{3}{4}$			
			PR ₁		4 52	7	$4\frac{1}{2}$	-			
			eS		11.7	7	$4\frac{1}{2}$	$2\frac{1}{2}$			
					12 08	7	11	16			
			SR ₂		17 44	15	25	31			
			eL		23.7	26					
			MZ		38 19	18			57		
			MN ₁		39 03	17	97				
			ME ₁		39 53	17		42			
			MN ₂		41 19	16	53				
MN ₃		46 40	14	43							
ME ₂		48 03	13		17						
59	" 20	I	e(P?)	13	56.0						
			eL	14	03.5	14					
			ME		5 40	10		6			
			MN		6 00	10	4				
			F	14	30						
60	" 22	I	eP	0	30.2	5	1	$\frac{3}{4}$			
			eL		38.6	14					
			MN		40 14	12	5				
			ME		42 05	13		6			
61	" 29	I	F	1	10						
			e	2	49.2						
			eL		58.7	17					
			ME	3	00 43	13		29			
			MN		3 38	12	11				
F	3	25									

E.F. Pigot

No.

Riverview College Observatory

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

$\phi = 33^\circ 49' 49''$ S. $\lambda = 151^\circ 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.) (NS, EW)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. ~~Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)~~

	V	T ₀	$\epsilon:1$	$\frac{r}{T_0^2}$
A _N				
A _E				
A _Z				

No.	Date.	Phase.	Time		Per.	Amplitude.			Δ	Remarks.
			h.	m. s.		A _N	A _E	A _Z		
			(Greenwich)		s.	μ	μ	μ	km.	
21	1912		20h. NOT		8h					
23	Feb. 25		03	19 10	4	+2	+2	-2	2710	Dilatation.
	" 29	ipNEZ		19 12	4	-7	-8	+5	(24.4)	h 0.05?
		ipPNE		20 11	4	+4	+3			H 03 14 21
		MNE		20 14	4	7	4			
		iSNE		23 03	7	-22	-3			
		MNE		23 08	7	34	15			
		iNE		23 42	7	+7	-7			
		eL		26.8	16					
		NE		27 14	14		8			
		MN		27 55	14	6				
31	Mar. 25	IP	04	54 05	3				2470	h 0.03
		MNEZ		54 07	3	-7	-6	+13	(22.2)	H 04 49 27
		ipPNE		54 48	5	-6	-7			
		iNE		54 57	5	-2	-5			
		iSN		57 50	6	-13				
		i(PoP)NE		57 58	5	-25	+11			
		MNE		58 04	5	12	19			
		iN		58 30	7	+26				
		iN		59 10	6	+10				
		iE		59 14	7		-21			
		eL	05	01.5	18					
		NE ₁		02 30	17		56			
		MN		08 34	14	13				
		NE ₂		09 07	10		9			
		P	06	30						
32	" 26	e?	06	23.9						
		e		24.7						
		iSNE		29 41	4	+3	+7			
		e		32 45	4					
		MN		39 21	5	5				
		iE		39 32	6		-4			
42	May 15	IPNEZ	00	09 37	1		-3	+1	2950	Compression.
		ipPE		10 23	6		-7		(26.5)	h 0.03
		iE		10 54	8		+6			H 00 04 18
		e		13.7	7					
		iSN		13 53	8	+8				
		iE		14 20	8		+11			
		iN		14 28	7	+27				
		iSN		15 22	8	-40				
		iNE		15 45	6	+70	-17			
		eL		15.9	20					

No. 7

1912, July.

Riverview College Observatory

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

 $\phi = 33^\circ 49' 49''$ S. $\lambda = 151^\circ 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.) (NS, EW)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. ~~Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)~~

	V	T_0	$\epsilon:1$	$\frac{r}{T_0^2}$
A_N (1)	123	8.6	11.3	0.018
(3)	174	6.3	1.8	0.043
A_E (1)	127	8.3	5.9	0.019
(3)	127	5.9	2.8	0.034
A_Z (2)	71	3.8	2.4	0.06

No.	Date.	Phase.	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
							A_N	A_E	A_Z		
							μ	μ	μ		
62	1912 July 3	e	05	15	15						
		eL		17.3	20						
		ME		20 39	13		7				
		MN		21 04	13	6					
63	" 7	F	05	40							
		iPPN	08	16	24	5	-4			107° ca	
		e(PPN) _E		19 04							
		i(SKS) _N		22 50	10	-18					
		e(S) _E		24 10	11						
		eN		25 43	10						
		i(PS) _E		25 51	6	+8					
		iN		26 27	6	+5					
		eSS		31 17	17						
		e	31.50	35	20	18					
		e(SSS) _E		35 50	17						
		eE		38 30	18						
		eLQ _E		41.8	37						
		ME ₁		45 19	28		90				
		eLR _N		47.6	35						
		MN ₁		51 11	26	100					
		ME ₂		53 44	23		175				
		MN ₂		55 00	21	72					
		ME ₃		59 46	19	61					
		ME	09	00	11	20		23			
		ME ₃		01 55	18		50				
		eLQ ₂ [?] _E		48.5	35						
		ME		49 51	24		24				
		eLQ ₂		58.8	35						
		MN	10	02	56	26	23				
		F		10 50							
	" 8	eL		17 13.0							
		MN		15.0	18	3					
		F		17 25							
	" 8	eL		22 49.8							
		MN		51.5	21	14					
		ME		53.8	23		23				
		F		23 20							
	" 13	ePN	05	20	05					2660	
		iSNE		24 11	7	+3	-6			(23°9)	
		eL		25.1	14						
		MNE		27 27	11	6	11				
		F		06 20							
	" 17	eN	12	25	05						
		eN		33 21	7						
		eL		38.1	23						
		ME		39 19	18		50				
		MN		40 29	17	19				R 13 20	

No. 7 (concluded)

1912, July.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

2

No.	Date.	Phase.	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N μ	A _E μ	A _Z μ		
68	1912 July 18	e(PFS)	21	39	18	21					
		eL		52.5		29					
		MNE		55.5		22	31	41			
		F	22	50							
69	" 24	e?E	12	11	52						
		ePP		19	40	6					
		e(SKS)		25	42	7					
		e(PS)		29	03	17					
		MNE		29	39	15	-377	+37			
		eSS _E		36	22	22					
		eN		43	15	14					
		e(LQ) _E		46.2		22					
		MN		46	40	13	15				
		ME		47	08	22		26			
		eLR		53.8		32					
		ME		54	40	32		58			
		F	13	30							
70	" 25	e?N	23	13	07						Depth greater than normal.
		eNZ		13	21						
		iN		13	39	5	-13				
		iN		14	00	5	-13				
		iE		15	28	5		+13			
		iE		15	51	5		-14			
		i(S) _N		17	40	5	+12				
		i(SS) _{ME}		18	26	7	+29	-7			
		i(SS) _N		18	56	9	+58				
		iN		19	08	9	-29				
		eL _E		20.1		33					
		ME ₁		23	33	11		49			
		MN		24	24	19	110				
		ME ₂		26	56	15		44			
		F	00	50							
71	" 26	eN	02	34.9							
		e(SS) _N		39	24	20					
		eL		42.3		29					
		ME		45	31	20		680			
		MN		45	56	20	490				
		ME		48	40	13			74		
		F	Lost in No. 72								
72	" 26	eL	03	12.1							Beginning lost in preceding shock.
		ME		15	57	15		140			
		MN		16	26	15	120				
		ME		18	39	13			28		
		F	05	00							
73	" 26	e	05	59.5							
		MN	06	05	05	11	8				
		ME		05	41	11		6			F 06 16
74	" 26	e?N	07	47.8							
		eN		52	56	15					
		eL _E		55.1		28					
		ME ₁		59	12	20		380			
		ME ₁	08	00	45	18	360				
		ME ₂		02	52	12		280			
		ME		02	59	12			80		
		MN ₂		03	03	13	330				F 09 42
75	" 26	eL	11	02.3							
		ME		03	07	20		21			
		MN		03	28	20	21				
76	" 31	eN	07	21	01	5					
		eN		25	33	9					
		eE		27	20	8					
		eLN		31.9		17					
		MN		32	35	18	8				
		ME		35	31	13					F 08 00

Riverview College Observatory

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

$\phi = 33^\circ 49' 49''$ S. $\lambda = 151^\circ 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.) (NS, EW)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)

	V	T ₀	$\epsilon:1$	$\frac{r}{T_0^2}$
A _N (1)	202	7.6	6.9	0.028
A _N (3)	174	6.3	1.8	0.043
A _E (1)	206	7.5	4.3	0.035
A _E (3)	127	5.9	2.8	0.034
A _Z (2)	82	3.3	2.4	0.091

8

No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N μ	A _E μ	A _Z μ		
77	1912 Aug. 4	eN	19	08	15						
		e		12	45						
		MNE		13	24	8	+6	+1			
		eL		16	7	20					
		ME		18	17	14			12		
		MN		18	39	13		9			
78	" 6	F	20	13							
		1P _{HEZ}	21	16	19	2	-13	-12	+15	2790 (25:1)	Compression. h 0.03
		MZ		16	22	2			-30		
		1P _{HEZ}		17	08	2	-16	-12	+9		
		iNE		17	12	2	-11	-20			
		iNE		18	17	5	+18	+22			
		iSE		20	25	8	-36	+8			
		iNE		20	30	8	+40	-24			
		1aSE		21	50	6		+16			
		1SS _E		22	11	9		-35			
		1SS _N		22	15	9	-48				
		eL		24	1	15					
		ME ₁		25	15	9			21		
		MN ₁		26	34	9	23				
ME ₂		29	16	9			27				
MN ₂		33	06	14	22						
79	" 9	F	23	02							
		eE	01	52	18	9					
		eE		57	30	9					
		e		04	5	15					
		e(SS)		09	08	19					
		eE		09	6	55					
		e(SSS) _E		14	1	26					
		eL _H		24	5	37					
		eL _H		28	8	39					
		MN ₁		37	37	32	100				
		ME ₁		37	59	30			150		
MN ₂		49	46	16	60						
MZ		49	56	17				48			
ME ₂		50	12	18			160				
(w ₂) MNE		03	19	6	20	19	19				
80	" 15	F	05	19							
		eN	11	29	6						
		ME		35	45	16			4		
		MN		36	19	12	2				
F		12	05								

(Continued on next sheet)

No. 8 (continued)

1912, August.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		s.	A _N μ	A _E μ		
81	1912 Aug. 15	1PNE	13	47	18	4	+2	-2	4510 (40°6)	h 0.00 H 13 39 40	
		1PPN	48	53		4	-1				
		e	49	31		4					
		1SNE	53	25		4	+1	-2			
		1SSE	56	42		5		-6			
		1E	14	00	51	5		+2			
		ME	02	45		14		3			
		MN	06	44		10	4				
		F	14	33							
		82	" 15	e	17	30.9					
		e		34.7							
		ME	36	42	12		5				
		MN	36	49	12	3					
		F	18	30							
83	" 17	e?	02	43.8							
		1N	47	53	5	-3					
		MN	49	18	8	2					
		ME	49	53	7		1				
		F	03	08							
84	" 17	1PN	19	19	58	4	+2		5000 (45°0)		
		1(PN)NE	20	08		5	-10	+6			
		1PPN	22	06		4	+5				
		1SN	26	32		11	-23	+23			
		1SE	26	35		11		+24			
		1(SN)NE	26	57		9	+26	-14			
		1SSNE	29	48		10	-12	-27			
		MN	29	59		10	-39				
		eL	32.5		39						
		ME	40	30		18		220			
		MNZ	40	39		18	150	118			
		F	22	35							
85	" 18	eE	07	58.4		9					
		eLE	08	04.8		22					
		ME	06	55		21		11			
		eLN	07.8		20						
		MNE	09	12		20	13	6			
86	" 18	F	08	25							
		eP	13	26	20	2					
		e	27	03		2					
		epP	28	02		4					
		e	28	31		2					
		1SNE	31	24		4	-1	-9			
		MN	31	31		6	+7				
		ME	31	33		4		+24			
		1SSNE	34	35		5	-5	-2			
		1E	34	42		6		+11			
		1N	34	51		5	-4				
		1N	35	24		4	+6				
		MN	42	31		5	3				
F	14	05									
87	" 18	eE	18	47.3							
		eLE	51.1		20						
		ME	51	35		20		5			
		MN	51	54		20	6				
F	19	10									
88	" 18	eLE	22	04.7		22					
		ME	08	00		16		4			
		MN	08	14		12	1				
		F	22	30							

(Continued on next sheet)

Riverview College Observatory

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

$\phi = 33^\circ 49' 49''$ S. $\lambda = 151^\circ 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.) (NS, EW)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. ~~Galitzin Aperiodic Seismometer, with galvanometer registration~~ (NS, EW, Vert.)

	V	T ₀	$\epsilon:1$	$\frac{r}{T_0^2}$
Δ_N (1)	202	7.7	6.5	0.031
Δ_N (3)	174	6.3	1.8	0.043
Δ_E (1)	204	7.6	4.5	0.031
Δ_E (3)	127	5.9	2.8	0.034
Δ_Z (2)	80	3.4	2.4	0.084

No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
			h.	m.	s.		μ	μ	μ		
96	1912 Sept. 1	iP _N	04	15	28	4	+2			3160 (28.4)	h 0.06
		ip _N	16	45		4	-5				
		i (FP) _N	16	57		4	-2				
		i _N	17	47		5	+2				
		iS _{NE}	19	49		5	+14	-16			
		is _{NE}	22	24		5	+8	+7			
		i _E	23	44		5		-11			
		eL	24	0		18					
		i _E	24	20		6		+9			
		iSc _{SE}	25	21		7		-20			
		i _E	27	05		7		+21			
		i _E	28	04		5		-13			
		ME	30	54		10		10			
		MN	34	50		8	13				
97	" 3	F	05	40		9					
		e	21	32	31						
		e	32	58		7					
		eL	35	5		22					
98	" 4	MNE	37	26		17	9	11			
		F	22	05							
		e	02	39	33						
		e	43	53		8					
		eL	46	8		22					
99	" 5	ME	51	32		11		1			
		MN	54	32		13	3				
		F	03	18							
		eL _{EN}	18	25	7	20					
		MN	26	16		20	19				
100	" 11	eLR	30	0		21					
		MNE	31	49		18	13	13			
		F	19	01							
		e _N	00	28	21	7					
		eL _N	34	31		17					
101	" 11	MN	35	54		15	5				
		ME	36	26		15		3			
		F	00	49							
		e?E	01	02	42						
		eE	04	42							
		eS _N	06	38		8					
		eL	20	7		28					
MN	23	54		26	27						
ME	25	13		21			17				
F	02	07									

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RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N μ	A _E μ	A _Z μ		
102	1912 Sept. 11	eFN	19	50	27	4				Deep focus. h 0.10	
		e?N		52	20						
		iSNE		54	32	4	-1	-5			
		eN		57	27	5					
		e(sB)E		57	44	6					
		iN	20	02	16	5	+3				
		iN		03	47	4	+5				
		MN		05	41	10	1				
		ME		08	17	10		1			
		F	20	20							
103	" 17	iPEZ	18	56	43	4		-2	+1	3160 (28°4) Compression. h 0.09 H 18 51 34	
		ipPE		58	18	5		-4			
		iN		58	30	5	+2				
		iSE	19	00	50	7		+7			
		iN		01	16	4	-5				
		iE		01	19	4		+8			
		iE		02	01	4		+7			
		iN		03	56	7	-5				
		iSSE		04	04	7		-2			
		ME		04	11	7		4			
		iScSE		06	19	7		+3			
		MN		08	00	9	2				
		ME		10	31	7		2			
		F	19	30							
104	" 19	e	04	06.	.6						
		eE		07	55	10					
		eLN		12.	1	16					
		MN		13	53	10	2				
		ME		17	33	10		1			
F	04	25									
105	" 22	eE	04	46	25						
		eL		52.	9	20					
		ME		53	11	10		4			
		MN		53	41	18	13				
F	05	40									
106	" 26	eE	19	24	22	13					
		eL		32.	6	20					
		MNE		33.	2	20	16	9			
F	20	20									
107	" 29	iFN	20	59	25	5	-2			4840 (43°5) h 0.007 H 20 51 28	
		ipFN		59	44	5	+6				
		iN	21	00	09	5	+12				
		MN(F)		01	30	7	+19				
		iPPME		01	43	6	-13	+8			
		iNE		05	33	6	+16	-14			
		iSNE		05	47	7	+22	-14			
		iSN		06	19	11	+53				
		iE		06	33	7		-34			
		iSSN		09	05	11	-40				
		iScSE		09	41	9	-62	+42			
		MNE		09	49	9	+100	-88			
		eL		11.	8	23					
		ME		17	35	16		360			
		MN1		18	30	18	370				
		MN2		20	44	16	290				
		eL(w ₂)	23	35.9		26					
MN		38	34	25	20						
ME		47	43	20		15					
F	01	00									

This may be another quake.

No. 10

1912, October.

Riverview College Observatory

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

 $\phi = 33^\circ 49' 49'' \text{ S.}$
 $\lambda = 151^\circ 9' 30'' \text{ E.}$
 $h = 41.9 \text{ m.}$

Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.) (NS, EW)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)

	V	T ₀	$\epsilon:1$	$\frac{r}{T_0^2}$
A _N (1)	202	7.7	6.2	0.035
(3)	175	6.3	1.8	0.043
A _E (1)	202	7.6	4.7	0.026
(3)	127	5.9	2.8	0.034
A _Z (2)	77	3.4	2.5	0.078

A.O.

No.	Date.	Phase.	Time		Per.	Amplitude.			Δ	Remarks.		
			(Greenwich)			s.	A _N	A _E			A _Z	
			h.	m.			μ	μ			μ	
108	1912 Oct. 2	eLN	02	29.0	20							
		eLN		31.2	18							
		ME	32	53	14		3					
		MN	33	00	15	4						
		F	02	58								
109	" 12	e?N	15	34 40	8				93° ca			
		e?N		36 17	8							
		e(SKS)	44	34	16							
		e _N	53	38	16							
		eLN	58.5		30							
		eLN	16	04.3	23							
		MNE	13.8		19	6	6					
		F	17	00								
110	" 16	eE	04	07 53	2				Deep focus.			
		eE		08 06	2							
		eE		08 36	2							
		iE		08 57	6		-2					
		iN		11 49	6	+3						
		iNE		12 44	9	+9	+2					
		eN		14 35	12							
		eLN		16.8	13							
		MN		17 30	13	3						
		ME		18 00	13		4					
		F	04	32								
		111	" 17	e?N	09	50 45	2					
				eN		55 05	2					
eE				56 06	2							
eN				58 59	23							
MN				59 28	23	56						
eLN	10			02.6	27							
MNE				03.9	23	47		26				
ME				04 22	20		37					
112	" 18	F	11	05					89° ca S or SKS.			
		eE	12	18 20	10							
112	" 18	eSS _N	24	24	28							
		e(SSS) _N	28	05	17							
		eE	29	55	14							
		eLN	32.5		40							
		eLN	35.8		35							
		MN ₁	37	13	31	26						
		ME	38	38	20		9					
		MN ₂	41	12	22	16						
		F	13	55								

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No. 10 (concluded)

1912, October.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date.	Phase.	Time		Per.	Amplitude.			Δ	Remarks.	
			(Greenwich)			A _N	A _E	A _Z			
			h.	m.	s.	μ	μ	μ	km.		
113	1912 Oct. 19	iNE	10	32	41	9	+3	+3			
		eN		35	25	15					
		eLN		37.3		16					
		ME		37	46	16		4			
		MN		40	00	14	2				
114	" 20	F	10	55							
		eE	09	39	55						
		eE		40	27	8					
		eE		44	47	16					
		eLN		46.7		22					
115	" 26	MNZ		49.5		15	12	22			
		ME		49	54	16		27			
		F	11	12							
		iPN	09	09	11	3	+2			5350	Felt on Guam,
		iPPN	09	35		4	-4			(48°1)	Marianas.
116	" 29	iPPN	11	07		7	+2				h 0.01
		iSE	16	01		7		-5			H 09 00-39
		iScS ₂	18	53		8		-7			
		eLN		23.8		40					
		ME		25	11	16		19			
		MN ₁		25	34	28	30				
		MN ₂		27	17	19	14				
		F	10	20							
		eN	06	29	10						
		eE		30	20	7					
117	" 31	eE		31	12	9					
		eLN		32.7		28					
		MN		33	49	22	16				
		ME		34	02	20		12			
		F	07	06							
		ePN	17	31	46					4780	heavy microseisms.
		iPPN		33	35	6	-8			(43°)	
		iSNE		38	11	4	-3	+4			
		MNE		38	20	17	29	13			
		i(SS)N		41	25	10	-8				
i(ScS)N		41	30	10	+24						
117	" 31	eN		42	33	12					
		eLN		45.8		22					
		MN ₁		50	44	17	74				
		ME		51	44	15		67			
		MN ₂		52.7		15	81		24		
		F	18	50							

Riverview College Observatory

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

$\phi = 33^\circ 49' 49''$ S. $\lambda = 151^\circ 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.) (NS, EW)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)

	V	T ₀	$\epsilon:1$	$\frac{r}{T_0^2}$
A _N (1)	202	7.7	8.3	0.034
(3)	175	6.3	1.8	0.043
A _E (1)	199	7.7	4.2	0.032
(3)	127	5.9	2.8	0.034
A _Z (2)	73	3.5	2.3	0.082

M

No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N μ	A _E μ	A _Z μ		
118	1912 Nov. 2	e?	12	12.7							
		e		14 04	8						
		eL		18.8	11						
		ME		18 55	11	3					
		ME		19 12	10		2				
119	" 2	F	13	00							
		ePN	13	27 45						3100	Probably in Solomon Is., in region of 7°S., 160°E.
		ePP		28 40						(28°)	
		iSN		32 27	8	-6					
		iNE		32 41	7	-5	-5				
		eLN		36.0	16						
		MN ₁		38 40	13	9					
		ME		39 15	13		14				
		MN ₂		41 29	12	14					
		F	15	04							
120	" 3	eL	06	36.8							
		ME		41.5	18		2				
121	" 3	eH	16	29.9							
		eH		31 43	11						
		eLQ		35.2	21						
		ME		35 54	20		12				
		ME		36 19	20	6					
122	" 6	F	16	55							
		e ₂	14	18 45	15						
		eLN		21.6	20						
		ME		22 53	20	8					
123	" 7	F	14	45							
		ePN	07	54 16	4						Focus deeper than normal. h 0.01
		epPN		54 44	4						
		iPPH		58 31	4	+2					
		iH		58 52	4	+4					
		eSKS _H	08	04 38	7						
		iSNE		05 31	10	-9	-6				
		iNE		06 04	6	+10	-4				
		i(es) _H		06 22	7		+15				
		iE		06 40	7		+30				
		iPS _H		07 46	6	+10					
		iNE		07 58	8	-5	-8				
		iN		12 55	11	-7					
		iSS _H		13 18	14	+17					
		MNE		13 31	14	-20	-14				
eLQ ₂		22 44	25								

(Continued on next sheet)

No. 11 (continued)

1912, November.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date.	Phase.	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A_N μ	A_E μ	A_Z μ		
123 cont.	1912 Nov. 7	ME ₁	08	23	01	25					
		MN ₁	23	53	25	25					
		eLN _N	28.2		31						
		ME ₂	29	02	27			54			
		MN ₂	30	41	24	41					
		MZ	35	12	19				12		
		MN ₃	35	19	19	26					
		ME ₃	36	27	19			24			
		W ₂ eL _E	09	28.8	25						
		ME	32	24	21			7			
		eLN	44	56	30						
		MN	45	54	30	15					
		ME	47	04	27			12			
		F	10	30							
124	" 7	eL	17	11.7	27						
		MN	28	03	19	3					
		F	Lost in No. 125								
125	" 7	eL _E	17	42.5	27						
		ME	18	02	27			4			
		F	Lost in No. 125								
126	" 7	eLN	18	06.2	27					A few long waves.	
127	" 7	eL	18	28.3	26						
		ME ₁	28	52	26			11			
		MN	39	17	17	2					
		ME ₂	39	46	16			5			
		F	19	12							
128	" 8	eE	07	21	33						
		e	24.9								
		eLN	29.0		17						
		MN ₁	29	43	16	8					
		MN ₂	31	36	13	7		7			
		ME	32	28	17			11			
		F	08	06							
129	" 8	eE	08	19.8						A few long waves.	
130	" 12	1PNE	04	45	22	4	-1	-3	2470	h 0.02	
		1PPE	45	43	2			-2	(22°2)	H 04 40 38	
		eSN	49	11	7						
		eSN	49	45	46						
		eLN	52.4		13						
		MNE	53.2		13	3		2			
		F	05	09							
131	" 12	1PNE	15	16	17	3	+1	+2	2480	h 0.025	
		1PPE	16	52	4			-2	(22°3)	H 15 11 35	
		1SN	20	04	5		-5				
		MNE	20	12	5	+10		-4			
		1N	20	27	5	+9					
		1SSNE	21	11	5	+1		+5			
		1N	21	27	5	+6					
		MN	24	35	12	2					
		ME	30	55	8			1			
		F	15	45							
132	" 13	eE	00	38.1							
		eL	51.2		15						
		MN	51	32	15	3					
		ME	53	35	16			4			
		F	01	30							
133	" 13	eLN	15	44.1	27						
		MN	48	49	15	2					
		F	16	00							

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No. 11 (concluded)

1912, November

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date.	Phase.	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A_N μ	A_E μ	A_Z μ		
134	1912 Nov. 14	e [?] N	06	40	05						
		iN		40	39	4	-1				
		iE		47	08	5		+2			
		MN		47	58	8	1				
		ME		50	28	7		1			
		F		07	00						
135	" 17	eN	01	26.2		9					
		eL		33.4		18					
		MN		34	28	15	5				
		F		01	56						
136	" 19	eE	14	27.0		18					
		eLQ ^N		43.8		25					
		MN		44.8		23	4				
		eLR		49.0		33					
		ME		51.1		24		9			
		F		15	40						
137	" 22	eLN	02	54.9		15					
		MN		56	24	12	1				
		F		03	12						
138	" 27	iP ^{NE}	09	38	36	4	-2	+1			Deep focus. Practically no surface waves.
		iE		39	21	7		-4			
		ME		46	17	10		1			
		MN		46	20	11	5				
		F		10	00						

Riverview College Observatory

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

$\phi = 33^\circ 49' 49''$ S. $\lambda = 151^\circ 9' 30''$ E. $h = 41.9$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

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2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. ~~Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)~~

	V	T ₀	$\epsilon:1$	$\frac{r}{T_0^2}$
A _N (1)	197	7.8	6.5	0.033
A _N (3)	174	6.3	1.8	0.043
A _E (1)	201	7.8	3.9	0.030
A _E (3)	127	5.9	2.8	0.034
A _Z (2)	75	3.5	2.4	0.082

A2

No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N μ	A _E μ	A _Z μ		
139	1912 Dec. 1	eN	08	43	13	11					
		eLg		51.8		23					
		MNE		55.5		20	6	12			
140	" 1	F	09	30							
		e	12	23.5		9					
		MNE		24.0		9	1	1			
141	" 4	F	12	40							
		eN	05	14	42						From Mainka, Deep focus
		iNE		15	23	4	+1	-5			" "
		iE		15	55	4		+5			" "
		e		16	05	11					" "
		MNE		16	52	11	5	11			" "
		iE		16	46	7		-5			From Wiechert.
		ME		16	51	7		+13			" "
		iN		17	51	8	-13				" "
		iN		18	41	8	+12				" "
142	" 6	ME	20	15	12			15		" "	
		MN	20	33	11	8				" "	
		eN	14	38	28	13					F 05 54
		eLg		41.8		24					Heavy microseisms.
		ME		43	52	12	40	67			
143	" 7	MN	44	02	10						
		HZ	46	16	10			11			F 16 00
		e(PP) _N	23	04	40						
		eN		06	22	7					
		e(SKS) _N		10	20						
		eN		11	11	8					
		e(PS)		13	49	19					
		MNE		14.1		19	6	8			
144	" 9	eL		37.1		23					
		ME		37	26	23		8			
		MN		43	40	18	3				F 00 20
		iNE	00	10	10	5	-1	-12			
		eLN		26.8		23					
145	" 9	MNE		29.6		22	11	11			F 01 15
		e?	08	51	20						
		e		54	09	5					
		e(SKS)		59	27	17					
		e(PS)	09	02	15	13					
		e		03	14	22					
		eSS		08	58	27					
		eLg		27.6		31					
		ME		33	46	19		10			
		MN		35	28	18	10				
W2		eLN	10	35.1		30					
		MN		47	39	19	4				
		ME		51	12	19		3			F 11 15

No. 12 (concluded)

1912, December.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date.	Phase.	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A_N μ	A_E μ	A_Z μ		
146	1912 Dec. 13	eE	10	11	51					Deep focus. Similar to No. 14N!	
		e		12	13						
		iN		13	13	4	+5				
		iN		14	09	4	+8				
		e		14	59	11					
		MN		15	17	11	6				
		ME		15	37	11		4			
147	" 16	F	10	45							
		eE	06	34	51						
		e		38	44	8					
		eL		40.7		22					
		ME		41	55	17		4			
		MN		42	19	14	6				
148	" 16	F	07	10							
		e(P)E	10	04	02	7					
		eN		04	35						
		e(S)E		08	00	7					
		eLN		09.3		21					
		ME		11	10	17		8			
		MN		11	21	14	8				
149	" 16	eE	23	32	52	7				F 10 40	
		iE		35	11	4		+4			
		iNE		35	46	7	+2	+1 $\frac{1}{2}$			
		ME		35	58	7		5			
		iN		36	20	7	+4				
		iN		36	54	6	+9				
		eL		38.5		20					
		ME		41	47	17		24			
		MN		43	22	13	25				
		eLN		00	47.6						
		MN		49	05	16	3				
150	" 17	F	01	08						F 00 40	
		eLN		01	08						
		MN		49	05	16	3				
151	" 20	eLN	20	24.7		20					
		MN		27	13	17	6				
		ME		35	17	14		1			
152	" 24	F	21	00						H 23 56 24	
		eP	00	04	07						
		iNEZ		04	09	4	+5	-2			+1
		iN		04	25	4	+3				
		iPPE		05	45	4		-5			
		iSN		10	18	7	-6				
		iNE		10	24	6	+11	+7			
		iSSN		13	17	8	+3	-5			
		ME		13	40	9		+14			
		MN		13	41	8	11				
		eL		10.9		22					
		ME		22	10	18		55			
		MN		22	56	19	42				
		MZ		26	00	18					18
153	" 24	F	01	00						A few long waves.	
		eL	18	41.5		24					
154	" 28	eP?N	08	08	53					52°	
		eP?N		11	00	6					
		iSN		16	12	6	-3				
		eN		16	16	22					
		eSS		19	36	15					
		eSSS		21	58	12					
		eL		24.7		26					
		ME		26	57	18		12			
		MN		30	10	20	6				
		F	09	21							