

No 1

January 1 to 31

19 14

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)	206	7.8	5.5	0.02
A_E (3)	128	10.5	4.0	0.02
A_E (1)	200	7.7	5.5	0.02
A_Z (3)	116	11.5	11.0	0.015
A_Z (2)	76	5.3	6.3	0.03

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A_N	A_W	A_Z		
1	Jan. 3	I	e(S?)	12	22.9	9					km.	
			eL		27.1	18						
			MN									
			MZ		31 42	12	7			6		
			ME		33 18	10			11			
2	" 3	I	F	13	35							
			S?	18	26.0	10	$1\frac{1}{4}$	-				
			eL		30.4	18						
			ME		31 20	17			$4\frac{1}{2}$			
3	" 7	I_r	MN		31 32	17	4					
			F	19	00							
			eP	19	07.3						2700	
			eS		11.7	10	$1\frac{1}{2}$	-				
			PS		12 09	11	$3\frac{1}{4}$	-				
			eL		15.5	22						
			MN ₁		17 32	20	12					
			ME ₁		18 06	13			11			
4	" 11	I_r	MN ₂		22 12	13	$4\frac{1}{2}$					
			ME ₂		22 57	15			7			
			F	20	00							
			iP	9	12 42	$1\frac{1}{2}$	-	$-1\frac{1}{4}$	$-1\frac{1}{4}$	2540		
			iS		16 50	4	-4	$+3\frac{3}{4}$	-			
					16 53	4	8	$1\frac{1}{4}$	1			
			eL		20.5	13						
			MN		21 16	11	$1\frac{1}{2}$					
			ME		26 20	12			1			
			F	9	40							
5	" 12	I_u	eP	9	39.2	5				7500	Kagoshima (Japan)	
			S		48.5	7	$\frac{3}{4}$	-				
			iPS		49 16	7	+3	$1\frac{1}{2}$				
			e(SR ₂ ?)		55.8	15	-	$3\frac{1}{2}$				
			eL	10	03.3	23						
			ME		4 56	18			5			
			MN		5 03	18	5					
6	" 13	I	F	10	45							
			i	3	08 57	6	-6	+4				
			i		14 10	8	+10	+5				
			F	3	30							

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

Foundation : Triassic sandstone.

INSTRUMENTS :

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

	V	T _o	ε : 1	r T _o ²
A _N				
A _E				
A _Z				

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N μ	A _E μ	A _Z μ		
7	Jan. 15	II _r	eP	19	13.8	5				3900		
			S		18	29	9	2½	3½			
			eL		20.6	18						
			MN ₁		21	51	16	117				
			MN ₂		23	05	13	83				
			ME ₁		24	25	13		41			
			MN ₃		25	39	11	78				
			ME ₂		26	10	11		27			
			C		35	33	11	17	13			
			F	21	25							
8	" 16	I _r	eP	12	24.4	3	-	1	2600			
					25	32	4	2½			10	
			e(S?)		28	38	6	4			2	
			eL		31.6	13						
			LN		31	41	9	1				
			ME		34	08	10				1½	
			F	12	50							
9	" 18	I	e(L?)	10	42.7	25						
			ME		46	25	20				3	
			LN		48	30	13	1				
			F	11	00							
10	" 18	I	e	12	37.6	9	½	-				
			e?		54.6	?						
			LN		13	15	50	17			2	
			ME		16	30	16				2	
			F	13	35							
11	" 20	I _u	eP	12	13.0	5	1¼	-	9400	Kamtchatka		
			eS		23	29	7	2			2¼	
			eL		40.0	35						
			MN ₁		42	30	26	21				
			ME		45	09	22				11	
			MN ₂		47	30	18	7				
			F	13	40		1½					
				22	25.3	8	3	1½			2½	2850
iS		29	50	10	3	-13						
PS		30	00	10	6	14						
eL		30.9	19									
MN ₁		32	30	15	24							
ME ₁		33	16	15		12						
MN ₂		33	37	13	16							
MN ₃		35	45	13	19							
ME ₂)		37	33	10		18	4½					
MZ												
F	23	45										

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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				
A _Z				

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
13	Jan. 29	I	e	0	09.5							
			LN		17	00	10	3				
			ME		18	25	9		2½			
14	" 30	I _u	F	0	40							
			eP	3	47.9		5	3½	¾		11,000	Chile
			S		59.3		?					
			PS	4	00.7		12	7	3			
			e(SR1?)		8.4		20	6	12			
			eL		18.5		33					
			M1		23	26	32	32	34			
			ME2		37	35	15		7			
			MN2		40	35	15	6				
			ME3		50	07	15		5			
			MN3		52	16	13	3½				
			eW2	6	01.6		30					
			F		8.7		21	13	17			
15	" 30	I	e(SR1?)	8	25.1		20	3	6			
			e		51.3							
			LN1		51	32	13	2¼				
			ME1		57	12	12		2			
			MN2		57	23	12	2				
			MN3	9	02	30	11	1½				
			ME2		6	32	13		1¼			
			F	10	00							
16	" 31	I	e(P?)	13	28.8		5	¾	¾			
			eL		39.2		18					
			LN		42	20	13	2				
			ME		45	34	19		6			
			F	14	30							
17	" 31	I	eP	14	41.6							
			eL		48.8		23					
			M		50.4		17	2	5			
			F	15	25							

E. F. Pigot

No²

February 1 to 28

 19¹⁴

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3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T ₀	$\epsilon : 1$	$\frac{r}{T_0^2}$
A _N (1)	209	7.7	5.5	0.03
A _E (3)	121	10.7	5.2	0.02
A _E (1)	198	7.7	5.3	0.02
A _Z (3)	118	11.4	12.2	0.01
A _Z (2)	76	5.3	5.5	0.03

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.	
				h.	m.	s.		A _N	A _E	A _Z			
18.	Feb. 4	I _r	eP	18	53.0		5	μ	μ	μ	2660		
			S		57.3		10	$1\frac{1}{4}$	$\frac{3}{4}$				
			eL	19	01.2		23						
			ME		4 20		13		11				
			MN MZ)		5 30		15	6		10			
		F	19	40									
19	" 7	I	e (PR ₁ ?)	7	05.5		?						
			S?		11.4		13	-	$2\frac{1}{2}$				
			eL		28.3		24						
			MN		31 50		21	3					
			ME ₁ ME ₂		34 34 45 15		15 16		2 4				
		F	8	50									
20	" 8	I _r	eP	0	07.3		5	$\frac{3}{4}$	$1\frac{1}{4}$		2300		
			iS		11 06		7	$-1\frac{1}{2}$	-5				
			PS		11 28		7	2	2				
			eL		12.5		22						
			MN ME		13 57 14 17		12 12	2		2			
		F	0	25									
21	" 8	I	eL	16	06.0		19						
			MN		9 53		17	4					
			ME		11 12		13		$1\frac{1}{4}$				
		F	16	20									
22	" 12	I	e	18	10.4		16						
			MN		10 46		13	1					
			ME		12 25		13		1				
		F	18	40									
23	" 14	I	e?	6	49.2								
			e?		56.3								
			eL	7	09.1		17						
			ME		21 20		13		5				
			MN		22 41		13	$2\frac{1}{2}$					
		F	8	40		(1							
24	" 15	I _r	iP	1	21 27		(5	$-\frac{3}{4}$	-5	+5	2640	Azim. (from iP) N.81° E. Lat. 27° S. Long. 179° E.	
			iS		25 43		8	-9	-20	-			
			e		28.8		6	3	$2\frac{1}{2}$				
					29 02		8	6					
			i		30 54		8	+10	+6				
			ME ₁		31 20		10		2				
			MN		32 38		10	2					
			ME ₂		35 27		10		2				
			F	2	25								

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3. Mainka Conical Pendulum Seismometer (450 kilo.)

	V	T ₀	ε : 1	r T ₀ ²
A _N				
A _E				
A _Z				

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N μ	A _E μ	A _Z μ		
25	Feb. 16	I _r	eP	11	32.6						2900	
			eS		37.4							
			eL		41.3	13						
			ME	44	13	13		8				
			KN	44	20	13	17					
			MZ	44	26	12				6		
26	" 16	I _r	F	12	30						2500	
			eP	12	51.2	4						
			eS		55.3	8	1	3				
					55.30	8	8	3				
			eL		57.1	20						
			MN ₁	58	42	10	7					
			MN ₁	58	52	10		17				
			MZ	59	53	10				4		
27	" 17	I _r	M ₂	13	01.8	9	12	9			2660	
			F	14	15							
			eP	19	44.0	2						
			S		48.18	6	1½	1¼				
			eL		50.0	15						
			ME	51	40	9		2				
28	" 20	I	MN	54	27	9	1					
			F	20	25							
			e?	8	56.3							
			eL	9	03.6	30						
			M		6.0	17	4	7				
29	" 22	I	F	9	30							
			e(S?)	23	02.0	9	-	½				
			eL		7.0	17						
			MN	7	20	13	2½					
			ME	8	30	13		2½				
30	" 26	I _u	F	23	30						13,000	Arequipa (Peru)
			ePR ₁	5	17.4	6	¾	¾				
					18.1	6	1¼	1¼				
			S?		27.1	9	3	2				
			PS	27	40	9	6	4				
			SR ₁	34	04	16	-	10				
			eL		45.8	26						
			MN ₁	51	17	25	14					
			ME ₁	51	22	25		15				
			ME ₂	54	34	19		11				
			MZ	54	52	19				16		
			MN ₂	54	55	19	11					
			F	7	25							

E. F. Priest

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March 1 to 31

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INSTRUMENTS :

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

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

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
							s.	μ	μ	μ	km.	
35	Mar. 6	I _u	eP	19	18.0		?				9600	Kamtchatka
			eS		28.7		9	$\frac{1}{2}$	-			
			SR ₁		34 07		11	2	-			
			eL		46.9		31					
			MN		53 47		18	8				
			ME		55 00		19		9			
			F	20	45							
36	" 6	I	eL	21	20.2		22					
			MN		21 35		22	4				
			ME		26 35		18		3			
37	" 7	I _r	iP	11	28 39		3	-2 $\frac{1}{4}$	+2 $\frac{1}{2}$	+7	3500	Az. N. 45 $\frac{1}{2}$ ° W. Lat. 10° S. Long. 129° E. Remarkably short wave-lengths.
			iS		33 54		5	-3	-3			
			eL		36.9		10					
			MN ME)		42 30		8	1 $\frac{1}{2}$	1			
			F	12	05							
38	" 12	I	e	19	44.2		8	$\frac{1}{2}$	$\frac{1}{2}$			
			F	20	35							
39	" 14	I _u	eP	20	12.4		5				8200	Akita Japan.
			iP		12 32		5	-1	-	-1		
			eS		22.0		8	-1	1			
			eL		30.4		22					
			ME ₁		35 30		18		5			
			MN ₁		36 20		20	6				
			MN ₂		39 53		20	6				
			ME ₂		42 28		14		3			
			F	21	40							
				22	53.4							
40	" 16	I _u	S	23	01 19		?				6300	
			eL		5.2		18					
			ME		13 35		11		3			
			MN		13 56		11	3				
			F	23	35							
41	" 18	I _u	eP	4	33.8						8900	
			eS		43.9		9	$\frac{1}{2}$	1			
			eL		58.0		27					
			ME ₁	5	06 38		18		5			
			MN ₁		8 37		18	8				
			MN ₂		15 28		16	2				
			ME ₂		18 35		14		3			
F	6	00										

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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 (1)	199	7.8	5.3	0.03
A_N (3)	127	10.5	4.5	0.02
A_E (1)	193	7.8	5.5	0.02
A_E (3)	114	11.7	>20	0.01
A_z (2)	77	5.3	5.8	0.03

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A_N	A_E	A_z		
31	Mar. 4	I _r	iP	13	20	19	4	$-2\frac{1}{2}$	-1	$+1\frac{1}{4}$	2760	
			S	24	44	7	$1\frac{1}{4}$	-				
			PS	25	09	8	4	$2\frac{1}{2}$				
			eL	27.2		16						
			M ₁	31.3		12	5	6				
			ME ₂	34	47	12		5				
			MN ₂	35	12	12	5					
			MN ₃	38	10	12	6					
			F	14	55							
32	" 4	II _r	eP	15	26.7		2/4				2800	
			eS	31.2		8	$1\frac{1}{2}$	$\frac{1}{2}$				
				32	28	8	10	-				
				32	35	8	-	12				
			eL	33.6		22						
			ME ₁	37	54	12		16				
			MN ₁	38	15	11	18					
			ME ₂	39	09	10		17				
			ME ₃	41	39	14		39				
			MN ₂	42	12	14	29					
33	" 4	II _r	eP	15	52.4		4			2800	F lost in No. 33.	
			S	56.9		8	8	8				
				58.0		9	27	12				
			eL	59.1		27						
			M ₁	16	00.0	18	57	25				
			ME ₂		2 00	13		34				
			MN ₂		3 03	13	41					
			ME ₃		5 39	13		44				
			MN ₃		7 26	13	30					
			ME ₄		12 11	11		32				
34	" 4	II _r	C		15.9		10	13	15	2800	N.B. Nos 31/34 Phase-features strikingly similar; probably movement along same fault-plane.	
			F	18	15							
			iP	18	36	27	4	-4	$-2\frac{1}{4}$			
			PR ₁		38	00	6	-	$1\frac{1}{4}$			
			iS		40	55	7	+7	-2			
			eL		43.7		19					
			MN ₁		45	13	13	31				
			ME ₁		46	05	13		39			
			MN ₂		47	05	11	29				
			ME ₂		47	35	12		29			
ME ₃		49	45	11		28						
MN ₃		51	30	11	25							
F	20	50										

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

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

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)		Per.	Amplitude.			Δ	Remarks.
				h.	m. s.		A _N	A _E	A _Z		
42	Mar. 18	I _u	eP	6	30.5	5	-	$\frac{1}{2}$		9600	
			eS		41.2	?					
			eL	7	04.3	22					
			MN		10 15	17	2				
			ME		14 22	18		$2\frac{1}{2}$			
43	" 20	I	F	7	55						Strong micro-seismic movement all day.
			e	8	08.5	?					
			eL		11.7	13					
			ME		12 25	10		$3\frac{1}{2}$			
			MN		12 44	10	2				
44	" 20	I	F	8	35					A few long waves.	
			e	11	31.1	30					
45	" 20	I	e	15	10.3	25				" " " "	
46	" 20	I	e	22	19.8	?				" " " "	
47	" 27	I	e	1	44.5	22					" " " "
			e		51.7	18					
			e	2	03.2	18					
			e		3.5	18					
			e	16	45.1	13					
48	" 27	I	e		48.2	19	-	3			Burmah ?
			e		56.9	20					
			F	17	10						
			eS	11	06.9	10	-	$\frac{3}{4}$			
			eL		29.1	27					
49	" 28	I _u	M		37.2	18	5	5			
			F	12	05						
			eP	0	58.0	6	-	$\frac{1}{2}$	13,000		
			eS	1	11.1	15	2	14			
			eSR ₁		17.5	18	$2\frac{1}{2}$	5			
		18 03	18	10	20						
		35.6	29								
50	" 30	I _u	ME ₁		40 20	22		15			
			MN ₁		41 37	17	5				
			MN ₂		46 08	16	8				
			ME ₂		47 39	16		8			
			MN ₃		57 00	14	3				
			ME ₃		57 20	14		8			
			F	3	50						
			eL	21	08.1	20					
			ME		10 18	17		5			
			MN		11 24	16	2				
51	" 30	I	F	21	45						

E. F. Pigot

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SYDNEY, N.S.W.

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$\phi = 33^{\circ} 49' 49''$ 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)	204	7.7	5.5	0.02
A_E (3)	118	10.5	5.1	0.03
A_N (1)	193	7.7	5.8	0.02
A_Z (3)	123	11.2	6.7	0.03
A_Z (2)	76	5.3	4.8	0.03

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A_N	A_E	A_Z		
52	Apr. 3	I	iP	3	20	14	4	-	$-1\frac{1}{2}$	2	km.	
			i		25	05	7	-3	-5	-		
			i		30	03	9	-	-3	-		
			eL		30.6		13					
			ME		32	43	10		1			
			MN		33	54	10	1				
53	" 3	I	e(S?)	21	54.6		?					
			eL		57.2		16					
			ME		59	20	11		4			
			MN		22	03	10	10	4			
			F		22	40						
54	" 9	I_r	eP	3	41.7					3000		
			iS		46	22	7	-3	-6			
			eL		48.4		22					
			LN		50	47	18	60				
			ME		52	18	12		22			
			F		5	25						
55	" 9	I_r	eP	9	26.7		2			2550		
			PR ₁		28	25	5	$\frac{1}{2}$	-			
			iS		30	52	8	-9	$\diamond 9$			
			i(SR ₁)		33	18	8	-5	-			
			e(SR ₂ ?)		34.2		8					
			i		34	17	8	-17	-15			
			i(SR ₄ ?)		36	02	7	-9	-20			
			eL		37.7		11					
			ME		39	34	11		3			
			MN		39	46	11	1				
			F		10	25						
			56	" 10	I	e(S?)	4	02.3		6		
		3				00	7	3	$\frac{1}{2}$			
eL		4.1					18					
MN		5				42	13	7				
ME		6				09	13		3			
F		4				45						
57	" 11	III_r	eP	16	35.7		5	7	$3\frac{1}{2}$	2770	Azimuth (computed from iP), N. 34° E. Lat. $12\frac{1}{2}^{\circ}$ S. Long. 165° E.	
			iP		35	47	5	-21	-14	$\diamond 15$		
			iPR ₁		37	06	6	-19	-14			
			eS ₁		40.0		8					
			iS		40	13	8	-44	$\diamond 20$			
			PS		40	45	8	71	66	25		
			eL		43.8		25					
			MN ₁		44	29	16	420				
			ME ₁		45.2		16		420	125		
			MZ ₁		48	34	12		341			
			ME ₂									

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$\phi = 33^{\circ} 49' 49''$ 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	ε : 1	r T ₀ ²
A _N				
A _E	(See last sheet)			
A _Z				

4

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A _N μ	A _E μ	A _Z μ		
57	(Cont'd.)		MZ ₂	16	50	04	10			82		
			ME ₃		50	32	10		230			
			MN ₂		51	12	10	180				
			ME ₄		53	00	10		227			
			MZ ₃		54	29	11			97		
			MN ₃		55	27	11	213				
			MZ ₄		59	49	10			123		
			MN ₄	17	01	56	10	183				
			C		16	17	10	38	39			
			F	20	55							
58	" 13	I	eP?	3	34.4							
			e(S?)		39.3	7	½	-				
			eL		44.3							
			MN		47 53	12	2					
			ME		49 20	13		4				
59	" 14	I	F	5	10							
			eP?	2	51.7							
			e(S?)		56.0	7	½	-				
					56.8	7	1					
			eL		59.8	15						
60	" 14	I	MN	3	02 03	11	2					
			ME		4 12	10		2				
			F	3	45							
			e	19	09.0	5	½	-				
			eL		15.5	12						
60 _a	" 15	I _r	ME		17 05	10		2		2600		
			MN		21 07	10	1					
			F	19	50							
			eP	3	56.7	7	?	1				
			S	4	00 57	7	4	8				
60 _b	(20)	I	eL		2.5	22						
			ME		3 37	17		14				
			MN		4 50	13	23					
			F	5	10							
			(PR ₁)	13	51.1	7	-	1				
			eS	14	01.1	10	-	¼				
			eL		22.7	40						
			MN ₁		38 30	19	6					
			ME ₁		39 20	18		8				
			ME ₂		48 06	16		4				
60 _c			MN ₂	15	09 08	20	6					
			MN ₃		22 10	17	7					
			ME ₃		41 48	16		2				
			F	17	15							

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INSTRUMENTS :

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
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				

No.	Date.	Char.	Phase.	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A _N μ	A _E μ	A _Z μ		
60 _c	Apr. 23	I _r	eP	16	25.0	5	1	2		2350		
			PR ₁ ?	25	30	6	3	3				
			iS ₁ ?	26	08	6	2	4				
				28	52	9	6	-8				
				29	05	9	7	14				
			eL	30.	1	23						
			ME ₁	31	40	18		23				
			MN ₁	32	08	13	18					
			MN ₂ ¹	37	07	11	8					
ME ₂	38	35	11		4							
F	18	10										
61	" 24	I	eL	5	38.8	40						
			MN	49	09	13	3					
			ME	50	20	14		2				
61 _a	" 25	I	F	6	40							
			e(P?)	7	37.0							
			eL	43.8	23							
			MN ₁	47	15	13	7					
			ME	48	00	17		11				
61 _b	" 26	I	MN ₂	50	15	10	6					
			F	8	50							
			e	10	54.3	14						
			MN	11	04 49	13	1					
61 _c	" 26	I _r	ME	5	26					2900	Severely felt at Woodlark Id. 9° S., 152° E.	
			F	11	20	1½						
			eP	23	54.3	4	1	½				
			eS	58.9	6	4	1					
			PS	59	15	6	1	2				
61 _d	" 27	I	eL	0	02.2	17						
			M	4.3	12	4	4					
			F	1	15							
			eP	2	16.5	5						
			eL	29.2	?							
			MN ₁	36	00	13	2					
61 _e	" 27	I	ME ₁	40	12	11		2		2100?		
			MN ₂	42	00	10	1					
			F	3	20							
			e(P?)	4	26.4		½	1				
			e(S?)	30.0	8	½						
62	" 30	I	eL	32.8	15							
			MN	39	12	10	¾					
			ME	41	04	?						
			F	5	05							
			e	22	54.0	6						
			eL	23	04.4	13						
			MN	6	30	10	2					
			ME	7	33	11		1				
			F	23	20							

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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 (1)	201	7.7	5.3	0.03
A_E (3)	120	10.4	5.5	0.03
A_E (1)	190	7.7	4.5	0.03
A_z (3)	123	11.2	6.5	0.02
A_z (2)	79	5.2	4.2	0.03

S

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_z μ		
63	May 1	II _r	eP	5	35.9	9	1.2)				2230	
			iS	35	56	9	7	2	6			
			PS	39	39	9	+7	+16	-			
			eL	40	08	9	31	36	12			
			M ₁	41	1	29						
			M ₂	41	39	18	132	216	58			
			MZ	43	0	10	75	105				
			MN	44	3	10			48			
			ME	44	47	11	143					
			ME	45	12	9		78				
			ME	45	34	3			53			
			ME	47	15	7		56				
C	53	40	8	14	20	5						
F	7	45										
63 _a	" 3	I	e(SR ₁)	23	47.9	13	2.2)					
			eL	23	56.4	25						
			MN ₁	0	11 15	13	2.2)					
			ME ₁	13	08	18		5				
			MN ₂	48	46	17	5					
			LE ₂	51	10	14		2				
F	2	20										
63 _b	" 7	I	e	21	06.4	20						
			M	21	57	25	10					
			F	21	40							
63 _c	" 8	I _r	eP	11	48.2	5			1/2	3300		
			S	53	16	?						
			eL	56	0	14						
			ME	57	18	13		5				
			MN	57	45	12	11					
F	13	25										
63 _d	" 8	I	e(P?)	18	20.9							
			e	46	9	22	4					
63 _e	" 9	I _r	e	19	19.2	20						
			eP	0	42.9	2				3200		
			PR ₁	44	47	4	2.2)	1/2				
			iS	47	49	6	+5	+4				
			SR ₁	49	27	7	5	10				
			SR ₂	50	24	7	2	10				
			eL	51	0	27						
			ME	54	17	13		49				
			MN	57	16	10	17					
			MZ	57	23	10			12			
			F	1	45							
			e	13	29.3	?						
			M	49	03	18	2.2)					
F	14	05										

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Riverview College Observatory,

SYDNEY, N.S.W.

Seismological Bulletin.

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INSTRUMENTS:

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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				
A _Z				

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)		Per.	Amplitude.			Δ	Remarks.
				h.	m. s.		A _N	A _E	A _Z		
64 _a	May 14	I	eS	21	6.7	8	$\frac{1}{2}$	-	-	4900	Java.
			eL		17.6	21					
			ME	28	35	?					
			MN	43	35	22	4				
64 _b	" 15	I	F	22	00						
			eL	20	16.3	27					
			ME ₁	24	10	16		2			
			MN ₁	24	48	17	$2\frac{1}{4}$				
			MN ₂	31	26	15	$1\frac{3}{4}$				
64 _c	" 18 19	I _r	ME ₂	36	14	13		$2\frac{1}{2}$		4750	Celebes.
			F	21	35						
			e	23	47.3						
			eS		52.9	15	10	2			
			PS		53 33	15	19	3			
			eL		55.5	22					
			ME ₁		58 20	18		23			
			MZ		58 36	18			14		
			MN ₁		58 50	18	42				
			ME ₂	0	03 26	14		15			
64 _d	" 19	I _r	MN ₂	4	25	13	17			2700?	
			F	1	00						
			e(P?)	4	45.3	?					
			eS		49.6	14	3	$1\frac{1}{2}$			
			PS		50 15	14	7	-			
			eL		53.8	20					
			ME		55.3	18		13	14		
64 _e	" 19	I	MZ		55 30	18	17				
			F	5	50						
			e?	6	29.2	6					
			e(SR1?)		48.2	18	7	-			
			eL		52.5	23					
			ME		54 15	16		10			
64 _f	" 19	I	MN		54 28	18	13				
			MZ		58 36	12			6		
			F	7	20						
			e	7	32.2						
			ME		34 40	16		$2\frac{1}{2}$			
64 _g	" 19 20	I	MN		35 25	17	$2\frac{1}{4}$				
			F	7	45						
			e?	23	57.2						
			e	0	03.9	16	2	-			
			eL		8.7	24					
			ME		10 07	20		13			
			MN		10 16	20	22				
			F	1	00						

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INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.)
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				
A _Z				

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
				h.	m.	s.	s.	μ	μ	μ	km.	
64 _h	May 21	I	eP	5	04.5		6					
			e		12.6		10					
			ME		17	10	10		1½			
			MN		19	40	?					
			F	5	45							
64 _i	" 21	I	e?	8	55.0							
			e	9	01.6							
			ME		11	35	22		4			
			MN		12	44	20	3				
			F	9	25							
64 _j	" 26	III _r	eP	14	29.4		5	1½	¾	1	4450	Az. N.19.3W.
			iP		29	41	5	-17	+6	+15		
			i		30	42	5	-22	+12	+38		Lat. 4½° N.
			PR ₁		31	52	6	13	14	14		Long. 139° E.
			eS		35.6		9	26	17	12		
			iS		35	49	9	-49	+56	-		
			iSR ₁		38	43	10	-60	+90	8		
			eL		39.2		35?					
			MZ ₁		41	47	12			192		
			ME ₁		42	34	12		560			
			MN ₁		42	45	12	600				
			M ₂		44.0		13	1200	1120	940		
			M ₃		46.1		13	1085	1350	1490		
			M ₄		48.1		11	750	800	1300		
			M ₅		52.1		11	580	635	925		
			M ₆		55.5		11	595	515	350		
			C	15	12	40	10	172	62	24		
			F	22	15							
64 _k	" 26	I	e	20	48.2		18	2½	-			
			e	21	03.2		35	10	11			
			e		19.2		?					
64 _l	" 26	I	e	23	59.1							F. lost in N ^o 64 _j .
	27		eL	0	05.2		20					
			ME		9	05	17		7			
			MN		9	22	11	2½				
			F	0	30							
64 _m	" 28	I _r	eP	2	50.7		2				2500?	
			e(S?)		54.8		7	-	½			
			M		57.6		7	¾	¾			
			F	3	10							
64 _n	" 28	I	e	4	20.1		5	-	¾			
			MN		30	12	19	3				
			ME		32	05	19		6			
			F	4	50							

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

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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				
A _Z	(See last sheet)			

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A _N μ	A _E μ	A _Z μ		
64 _o	May 28	I	e	9	58.1	5	-	$\frac{3}{4}$				
			e		46.2	7	$\frac{1}{2}$	$\frac{1}{2}$				
			eL		51.7	22						
			ME		52 30	17		39				
			MN		55 18	12	17					
64 _p	" 28	I	F	10	30							
			e	18	17.7	?						
64 _q	" 28	I	e		33.4	?						
			e	18	38.5	23?						
			e(S?)	19	15.6	11	$\frac{3}{4}$	-				
64 _r	" 29	II _u	e	19	54.1	22	$1\frac{3}{4}$	-	4			
			eP _Z	4	57 24	4	-		1	6700		
			eP _E		57 27	4	-	$1\frac{1}{2}$				
					57 40	4	$1\frac{1}{4}$	$2\frac{3}{4}$	5			
			eS	5	05.6	7	$1\frac{1}{4}$	$1\frac{1}{2}$	-			
			i		5 39	7	-11	+4	-			
					6 00	8	9	7	-			
			eL		17.2	35						
			MN ₁		21 15	26	308					
			ME ₁		23 33	18		91				
MZ ₁		25 00	18			73						
ME ₂		25 49	18		133							
MN ₂		26 13	18	115								
C		38 10	14	22	17	-						
64 _s	" 31	I	F	7	25							
			e(P?)	9	01.0	5	$\frac{1}{2}$	-				
			e		2.2	6	$1\frac{1}{4}$	$2\frac{1}{2}$				
			eL		5.2	14						
			ME		5 55	13		6				
			MN		6 30	12	9					

E. F. Pigot

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INSTRUMENTS :

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

	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
$A_N(1)$	208	7.6	4.8	0.03
(3)	146	10.0	5.3	0.03
$A_E(1)$	198	7.6	4.2	0.03
(3)	122	11.0	10.5	0.02
$A_Z(2)$	77	5.2	4.0	0.04

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per.	Amplitude.			Δ km.	Remarks.	
				h.	m.	s.		A_N μ	A_E μ	A_Z μ			
65	June 3	I	e(P?)	6	52.6	2							
			S		54	52	8?						
			eL		57.6		18						
			ME		58	38	12		5				
			MN		59	09	14	14					
66	" 4	I	F	7	30								
			e	18	02.5	7							
			ME		6	27	14		$2\frac{1}{2}$				
67	" 8	I	MN		7	26	17	$4\frac{1}{2}$					
			F	18	30								
			eL	9	13.9	25							
68	" 18	I	ME		17	23	15		$3\frac{1}{2}$				
			MN		22	10	12	2					
			F	9	55								
			eL	20	36.6	19							
69	" 20	III _r	MN ₁		41	25	13	12					
			MZ		42.5		15		15	10			
			ME ₁		46	31	14	11					
			MN ₂		51	19	14		14				
			ME ₂		21	45							
			F	7	25.3	4					2850	Azimuth(from	
			eP		25	25	4	+16	+13	-11		iP), N. 39° E.	
			iP		26	23	5	31	26				
			iS		29	56	8	+22	-34				Lat. 12½° S.
			i		30	07	8	-88	+110	+45			Long. 167½° E.
70	" 20	II _r			30	17	8	117	88				
			eL		31.7		25						
			M ₁		33.0		19	634	495				
			MZ ₁		33	09	19				348		
			MZ ₂		36	37	16				232		
			MZ ₂		36.9		14	210	178				
			MZ ₃		43	39	10		66				
			MZ ₃		46	37	10				37		
			MN ₃		47	00	12	150					
			ME ₄		47	30	10				73		
			C		8	03	56	10	31	34			
			F		10	00							
70	" 20	II _r	eP	10	29.5	5				2700			
			eS		33.9	7	$3\frac{1}{2}$	2					
			PS		34	29	8	14	11				
			eL		35.7		24						
			M ₁		38	39	19	30	31				
			MN ₂		41	53	12	20					
			ME ₂		43	23	10		9				
			F		12	10							

(Continued on next sheet)

No. 6 (continued)

June 1 to 30

19 14

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

6

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A _N μ	A _E μ	A _Z μ		
71	June 20 21	II _r	eP	23	39.9	5					2400	
			iP		39	58	5	-2	-7			
			PR ₁		41	20	6	5	2½			
			eS		43.8		7					
			iS		43	53	7	-16	+16			
			PS		44	18	8	12		24		
			eL		44.8		25					
			MN		47	25	14	106				
			MZ		47	30	13			7		
			ME		49.09		12		44			
			F		1	25						
72	" 21	I _r	eP	8	10 42	4				2800		
					11	18	5	3	1½			
			S		15	12	7	2	2			
			PS		15	41	8	2¾	4			
			eL		18.1		22					
			ME		19	17	15		7			
			MN		20	44	19	13				
73	" 22	I _r	eP	16	33.0					2000		
			S		36	22	9	2¼	2			
			eL		37.9		18					
			MN		40	15	11	12				
			ME		45	33	10		5			
74	" 23	I	F	18	15							
			e		4	18.2	3					
			M			22.3	10	2½	2			
			F		4	45						

(Continued on next sheet)

Riverview College Observatory,

SYDNEY, N.S.W.

Seismological Bulletin.

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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 km.	Remarks.	
				h.	m.	s.		A _N	A _E	A _Z			
75	June 25	II _u	iP	19	18	46	4	$\mu_{\frac{3}{4}}$	$\mu_{\frac{3}{3}}$	$\mu_{\frac{2}{2}}$	6000	Benkoelen (Sumatra)	
			i		17	16		5	-6	+12			+20
			PR ₁		19	10		5	$4\frac{1}{2}$	11			8
			iS		24	23		8	-13	+12			5
			i		24	29		8	40	87			
			PS		25	01		10	37	47			12
			SR ₁		28	34		12	54	102			
			eL		32	5		30					
			MN ₁		33	41		22	533				
			ME ₁		34	6		25	813	464			
			MN ₂										
			ME ₂		35	25		26		420			
			MZ ₁		35	36		26					192
			ME ₃		36	29		26		476			
			MN ₃		36	54		26	896	453			
			ME ₄										
			ME ₅		37	29		26		526			
			ME ₆		38	43		22		300			
			MZ ₂		38	53		22					184
MN ₄		39	06		22	507							
ME ₇		41	20		20		279						
MZ ₃		41	28		20			112					
C		48	13		11	26	29						
F		23	20										
76	" 26	I	eP	3	15	9							
			i		16	06	4	+2	+1 $\frac{3}{4}$				
			e		20	5	7	1 $\frac{1}{2}$	-				
					20	57	8	5	-				
					21	17	9	-	8				
			eL		23	3	18						
			MN		23	47	14	8					
ME		26	44	12		5							
77	" 26	II _r	F	4	15								
			iP	4	55	39	4	+4 $\frac{1}{2}$	+4	-4	2970	Azimuth (from iP), N. 43° E.	
			PR ₁		57	09	5	4	16				
			iS		5	00	20	9	+38	+33			
			PS			045	9	44	54				
			eL		02	4	26						
			MZ		03	00	24			110			
			ME ₁		03	17	22		216				
			MN ₁		03	37	18	180					
			ME ₂		06	31	12		48				
MN ₂		07	52	12	70								

F Obscured by
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Riverview College Observatory,

SYDNEY, N.S.W.

Seismological Bulletin.

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INSTRUMENTS :

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

	V	T ₀	ε : 1	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			
78	June 26	II _r	eP	5	58.2	42) μ	μ	μ	2500	Azim. N.28½E.		
			iP		58.14	4						-11	-6
			eS	6	02.3	7						1½	1½
					3.17	9						19	-
					3.29	9						-	17
					eL							4.8	22
79	" 26	I	M		9.4	11	20	5					
			F	7	45								
			eP	12	44.5	4							
80	" 28	I _r	e?		48.9	6							
			i		49.25	6	-3	+3					
			F	13	45								
81	" 29	I	eP	11	10.7				2700				
			S		15.00	8	1	½					
			i		15.14	8	-	+2½					
			iPS		15.27	8	+4	-3½					
			i		15.37	8	-	-4					
			eL		17.4	18			2½				
			MN		18.02	15	5						
			ME		18.35	15		3½					
82	" 29 30	I	F	12	05								
			e	4	28.3								
			M		38.2	22	7	11					
83	" 30	I	F	4	55								
			e	23	20.1	7							
			ME		21.12	17		11					
83	" 30	I	MN		24.9	13	2½						
			F	0	10								
			e	8	01.2	5							
			e		8.4	10							
			eL		10.0	18							
83	" 30	I	MN		13.40	13	5						
			ME		14.02	15		7					
			F	8	55								

E. F. Pigot

No. 7

July 1 to 31

1914

Riverview College Observatory,

SYDNEY, N.S.W.

Seismological Bulletin.

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INSTRUMENTS :

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

	V	T_0	$\epsilon : 1$	$\frac{r}{T_0^2}$
$A_N(1)$	200	7.6	4.8	0.03
$A_N(3)$	128	10.3	5.9	0.02
$A_E(1)$	187	7.6	4.5	0.03
$A_E(3)$	117	11.0	6.8	0.03
$A_Z(2)$	77	5.2	4.2	0.06

7

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_Z μ		
84	July 3	I	e	10	2.8							
			ME		5	32	12		1			
			MN		8	15	14	$1\frac{1}{2}$				
			F	10	15							
85	" 3	I	e	20	03.3							
			eS		6.6	9	$4\frac{1}{2}$	$\frac{1}{2}$				
			eL		9.4	18						
					10	17	18		21			
			MN ₁		12	09	15	8				
			ME ₁		12	29	12		21			
			ME ₂		17	08	14		13			
			MN ₂		17	19	14	21				
			ME ₃		23	05	10		9			
			NZ		23	13	10				4	
			MN ₃		23	20	10	10				
			F	22	00							
			86	" 4	I	e	10	25.2				
eL		32.2				?						
MN		34				17	10	2				
ME		34				22	10		2			
F	10	55										
87	" 4	II	eP	11	13.7							
			i		13	52	3	5	7			
					14	12	3	5	7			
			i		14	54	4	8	4			
			eL		17.6	18						
			ME		19	17	13		61			
			MN		20	07	11	30				
			NZ		25	35	11				5	
			F	12	40							
			e(P?)	17	57.1							
88	" 4	I	iS	18	07	23	7	+7	+1			
					7	29	7	8	$1\frac{1}{4}$			
			iPS		8	31	8	$-2\frac{1}{4}$	+3			
					8	38	8	9	5			
			eL		18.5	20						
			MN		24	06	18	5				
			ME		27	17	14		$1\frac{1}{2}$			
			F	19	00							

(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. Manka 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 km.	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
89	July 4) 5)	II _r	iP	23	45	35	4	-4½	+2½	μ	3500	Azimuth, N. 28° W. Lat. 5° S. Long. 137° E.
			PE ₁		46	50	5	-4	1½			
			eS		50.8		8					
			iS		50	50	8	-7	+11			
					50	54	8	9	5			
			eL		54.1		17					
			MN ₁)		55	31	10	32	28			
			ME ₁)									
			MZ		57	52	10			20		
			MN ₂		58	41	10	43				
ME ₂		59	56	10		33						
F		1	20									
90	" 5	II _r	eP	21	57.9		4				3500	Very probably from same or- igin as No. 89
			S	22	03	12	7	1½	2			
			eL		6.8		20					
			ME ₁		10	46	15		279			
			MN ₁		11	16	12	126				
			i		12	00	12			+ 90		
			ME ₂		13	19	12		165			
			MZ ₁		13	30	10			56		
			MN ₂)		14	20	10	89		60		
			MZ ₂)									
F		23	50									
91	" 14	I	eS	3	26.9		8	2½	1½			
			eL		36.7		22					
			MN ₁		40	00	13	30				
			ME ₁		40	06	13		6			
			MN ₂		45	36	10	28				
			ME ₂		5	56	20	11		9		
92	" 29	Ir	eP	14	20.2		2				2800	Severely felt at Woodlark Island, Lat. 9° S. Long. 152° E.
			S		24	46	9	6	1			
			PS		25	03	9	3	5			
			eL		27.1		21					
			MN ₁)		30	05	13	6	38			
			ME									
			MN ₂		36	23	9	4				
			MZ		36	34	9			3		
F		15	20									

E. F. Pigot

No 8

August 1 to 31

1914

Riverview College Observatory,

SYDNEY, N.S.W.

Seismological Bulletin.

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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(1)	196	7.7	5.1	0.03
A(1)	181	7.6	5.0	0.03
A(2)	80	5.0	3.9	0.06

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_Z μ		
93	Aug. 4	I	e	4	22	.1						
			eL		28	41	25					
			ME		29	30	21		7			
			MN		30	08	18	7				
94	" 4	I	F	5	05							
			eP	9	04	.5						
			e(S?)		8	.0	10					
			eL		11	.6	30					
95	" 4	I _u	MN		13	08	21	17				
			ME ₁		14	14	21		42			
			ME ₂		17	06	18		40			
			F	10	40							
			eP	22	54	.1	5				10,300	Cashmere ?
			eS	23	05	.3	8	1½	1			
96	" 6	II _r	eL		12	.5	20					
			MN ₁		24	02	20	16				
			ME ₁		24	15	20		17			
			ME ₂		31	08	22		25			
			MN ₂		31	15	22	19				
			MN ₃		38	53	18	27				
			ME ₃		41	54	18		38			
			C		51	37	17	9	7			
			F	1	05							
			iP	4	16	50	2½	1½	2½	3300		
97	" 22	I _r	PR ₁		18	33	5	1½	1½			
			iS		21	53	7	+40	-11			
			iSR ₂		25	09	9	-18	+20	7		
			eL		28	.2	?					
			M (N, E)		31	.3	9	15	17			
			MZ		33	54	9		3½			
			F	6	40							
eP	15	08	.5	5	-	1		2400				
eS		12	.5	?								
eL		16	.8	27								
MN		20	17	20	13							
MZ		21	28	17			16					
ME		22	00	18			30					
F	16	40										

E. F. Pigot

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

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INSTRUMENTS :

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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 (1)	193	7.8	5.5	0.03
(3)	127	9.7	5.5	0.02
A_E (1)	178	7.6	5.5	0.02
(3)	117	11.0	-	0.03
A_Z (2)	82	4.7	3.6	0.06

No.	Date.	Char.	Phase.	Time. (Greenwich.)	Per.	Amplitude.			Δ	Remarks.
						A_N	A_E	A_Z		
98	Sept. 2	I	e	13 ^h 34.1 ^s	4	μ	μ	μ	km.	
			e	35 39	4					
			i(E)	36 19	5		5			
			i(N)	37 06	6	4				
			eL	38.3	14					
			ME	39 23	10		4			
			MN	39 33	10	3½				
			F	14 05						
99	" 2	I_u	eP	20 27.2	5				6700	
			eS	35.4	?					
			eL	40.8	22					
			M	44.8	15	13	23			
			F	21 30						
100	" 4	I	e	17 12.1						
			eL	30.7	20					
			MN	35 10	11	1¾				
			ME	36 00	13		6			
			F	18 30						
101	" 5)	I	e(S?)	23 33.2	12	-	1½			
	6)		MN	43 28	14	12				
			ME	43 45	13		10			
			F	0 15						
102	" 7	I	eL	21 16.1	14					
			MN ₁	19 09	10	1½				
			MN ₂	25 08	10	1½				
			ME	25 36	10		1½			
			F	21 40						
103	" 7	I_r	iP	21 59 14	4	-6	-10		2300	Azim. N.59° E.
			eS	23 03 02	6					Lat. 22° S.
			i	3 07	6	7	10			Long. 170° E.
			eL	6.1	13					
			MN	9 15	10	2				
			ME	10 08	9		6			
			F	22 40						
104	" 9	I	e	14 48.8	5					
			e	52.5	8					
			ME	57 07	13		3			
			MN	58.30	12	3				
			F	15 15						
105	" 11	I_u	e(S?)	12 15.9	?				13,000	Arequipa
			e(L?)	41.9	30					(Peru)
			ME	44 00	25		6			
			MN	44 11	25	5				
			F	13 40						

(Continued on next sheet)

No.9 (continued)

September 1 to 30

1914

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

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A _N μ	A _E μ	A _Z μ		
106	Sept. 12	I	eP	14	35.5	5						
			i		35	50	5	-	+5			
			e(S?)		39.6		9	1	-			
			eL		42.4		18					
			MN		45	38	14	15				
			ME		45	48	14		8			
107	" 13	II _r	F	15	40							
			iP	17	16	30	4	+3	+1		1900	
					16	50	5	6	2			
			eS		19	43	6					
			iS(E)		19	46	6		+5			
			iS(N)		19	49	6	-5				
					19	54	6	19	17			
			eL		20.7		18					
			M ₁		21	24	14	24	24			
			ME ₂		25	19	10		30			
108	" 14 15	II	MN ₂		28	18	10	20				
			F	18	25							
			e(S?)	23	55.0	?						
			eL		58.1	22						
			ME ₁	0	02	04	15		38			
			MN ₁		2	41	15	39				
			MN ₂		4	34	13	53				
			ME ₂) MZ		4	39	14		80	22		
109	" 17	I	F	1	05							
			e	15	41.4	7	3	½				
			e		44.7	8	2½	3½				
					44	51	8	5	3			
			eL?		49.0	25						
			ME		51	53	23		10			
110	" 20	I	MN		54	00	18	2½				
			F	16	05							
			e	8	44	28	5	1½				
			MN		48	55	9	5				
111	" 29	I _r	ME		49	22	9		7			
			F	9	00							
			eP	18	55.1					3800		
			eS	19	00.7	8	4	1½				
			PS		1	03	8	5	6			
			eL		3.6	18						
			ME		5	10	13		21			
MN		7	05	13	10							
F	19	55										

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$\phi = 33^{\circ} 49' 49''$ 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	$\epsilon : 1$	$\frac{r}{T_0^2}$
$A_N(1)$	188	8.0	5.8	0.03
$A_N(3)$	127	9.5	5.2	0.03
$A_E(1)$	170	7.6	6.0	0.02
$A_E(3)$	118	11.0	>20	0.04
$A_Z(2)$	84	4.5	3.3	0.06

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per. s.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_Z μ		
112	Oct. 2	I	e	3	08.9							Amplitudes too small for accurate measurement.
			e		16.7	8						
113	" 3	I_u	F	3	35							16,300 Azim. (computed from iP), S.60°E. Felt in Martinique (West Indies). iP, computed time, 17h 40.2m (Ottawa, La Paz, Cartuja). P waves unusually distinct.
			eB	17	40 54	5	-7	+12	+6			
			eS		55.1	10	$\frac{3}{4}$	$3\frac{1}{2}$				
			i		57 09	10	3	-				
			eL	18	24.1	35						
			ME ₁		34 09	26		19				
			MN ₁		34 33	26	11					
			ME ₂		52 26	22		9				
			MN ₂		52 35	22	11					
			EN ₃	19	08 42	20	9					
			ME ₃		9 00	20		7				
			F	20	20							
114	" 3) 4)	I_u	e (PR ₁)	22	28.8	6	-	$\frac{1}{2}$			15,000	Destructive earthquake in Asia Minor. S waves absent. (cf. Δ)
			i		29 08	6	-2	+5				
			eL		59.7	26						
				23	09 38	28	13	7				
			ME ₁		16 12	26		25				
			MN ₁		18 08	22	18					
			MN ₂		23 34	18		17				
			MZ		25 19	18			36			
			ME ₂		25 52	18		61				
			F		0 50							
	Oct. 5 to 9,			see next sheet.								
115	" 13	I_r	eP	9	08.4						2800	
			iS		12 55	8	-3	-				
			eL		15.9	15						
			MN ₁		19 53	10	2					
			ME		21.0	10		$\frac{3}{2}$				
			MN ₂		23 51	13	$3\frac{1}{2}$					
			F	10	00							
116	" 14	II_r	eP	3	04.0	5	$\frac{1}{2}$	-			4000	
			eS		9.8	8	2	-				
			eL		14.4	?						
			MN ₁)		17 34	10	17	19				
			ME ₁									

No.10 (continued)

October 1 to 31

1914

Riverview College Observatory,

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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				
A_E	(See last sheet)			
A_Z				

10

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_Z μ		
117	Oct. 21	II _r	MN ₂	3	20	02	11	26			2300	EW. component of No. 1 deranged.
			ME ₂		21	24	11		11			
			MN ₃		21	30	10	28				
			MZ		21	43	10			10		
			F	4	20							
			eP	15	39.9	5	2 $\frac{1}{2}$	-				
			iP		40	06	5	-9				
			iS		43	45	8	+12				
			iPS		44	03	8	+20				
			eL		44.5	33	(Angenheister)					
			MN ₁		45	13	22	133				
MN ₂		45	57	20	139							
MN ₃		48	15	11	68							
MN ₄		50	15	9	34							
MN ₅		52	08	8	26							
118	" 23	II _r	F	17	45						4700	
			eP	6	27.1	5						
			i		27	33	5	+4 $\frac{1}{2}$	-3			
			iS		33	31	8	+6	-			
					34	30	10	18	12			
			eL		36.6	14						
			MN ₁		37	36	12	80				
			ME ₁		37	41	12		51			
			ME ₂		44	24	15		76			
			MN ₂		45	03	15	45				
			MN ₃)		47	36	13	60	67			
ME ₃)												
F	8	30										
119	" 28	II _r	iP	0	21	30	4 $\frac{1}{2}$	-10	+25	-15	2660	East of North Island, New Zealand.
					21	55	5	13	26	21		
			iS		25	48	8	-15	-28			
			PS		26	21	9	30	38			
					26	33	10	77	36			
			eL		27.5	30						
			ME ₁		28	10	20		155			
			MZ		28	46	19			60		
			MN ₁		28	53	14	57				
			MN ₂		31	24	12	43				
			ME ₂		31	45	12		27			
C		43	00	11	9	16						
F	1	25										

N.B. During my absence, from Oct. 5, 23h 52m to Oct. 9, 0h 1m, no registration, owing to illness of one Assistant, and departure of another for the war.

E. F. Pigot

No. 10

November 1 to 30

1914

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. Manka Conical Pendulum Seismometer (450 kilo.)

	V	T_o	$\epsilon : 1$	$\frac{r}{T_o^2}$
A_N (1)	183	8.2	6.0	0.03
A_N (3)	126	9.3	5.0	0.03
A_E (1)	164	7.7	6.5	0.02
A_E (3)	118	11.0	> 20	0.04
A_Z (2)	87	4.2	3.0	0.06

No.	Date.	Char.	Phase.	Time. (Greenwich.)			Per.	Amplitude.			Δ km.	Remarks.
				h.	m.	s.		A_N μ	A_E μ	A_Z μ		
120	Nov. 5	I	e	15	24.4							
			ME		35 00	15		2				
			MN		36 32	15	$1\frac{1}{2}$					
121	" 6	I_r	F	15	55							
			eP	1	56.5						2600?	
			e(S?)	2	00.7							
			eL		2.8							
			ME		6 00	12		7				
			MN		7 32	13	$2\frac{1}{2}$					
122	" 7	II_r	F	2	35							
			eP	6	43.0	5	$\frac{3}{4}$				3500	
			eS		48.3	7	$1\frac{1}{4}$		4			
			eL		50.4							
			ME		55 46	12		38				
			MN		55 55	12	51					
123	" 8	I_r	F	7	50							
			eP	11	27.3						2500	
			PS		31 30	11	9	$4\frac{1}{2}$				
			eL		33.6	17						
			MN		35 57	13	12					
124	" 8	II_r	ME		36 11	13		16				F. lost in No. 124
			eP	12	00.2	6	$\frac{3}{4}$	1			2700	
			iS		04 29	10	-6	$\frac{1}{4}$				
			PS		04 50	11	13	$4\frac{1}{2}$				
			eL		7.7	18						
			MN		9 17	13	30					
			ME ₁		9 30	13		37				
			ME ₂		11 09	9		26				
125	" 8	I_r	F	14	05							
			eP	20	09.5	5					2800	
			S		14 03	9	$1\frac{1}{4}$	2				
			PS		14 22	9	6	$1\frac{1}{2}$				
			eL		17.3	17						
			M		18 52	14	10	11				
126	" 10	I	F	21	20							
			eL	5	48.6	22						
			MN ₁		52 16	10	$1\frac{1}{2}$					
			ME ₁		54 11	11		$2\frac{1}{2}$				
			MN ₂	6	07 57	11	2					
			ME ₂		09 02	11		$1\frac{1}{4}$				F lost in No. 127

(Continued on next sheet)

No 11 (continued)

November 1 to 30 19 14

Riverview College Observatory,

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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	$\frac{r}{T_o^2}$
A _N				
A _E				
A _Z				

(See last sheet)

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A _N	A _E	A _Z		
							s.	μ	μ	μ	km.	
127	Nov. 10	II _r	eP	6	37.6		4	-	1		1550?	
			e(S?)		40	19	6	$\frac{3}{4}$	$2\frac{1}{2}$			
			eL		42.0		13					
			MN ₁		42	45	12	45				
			MN ₂		45	53	13	136				
			ME ₁		46	16	13		33			
			MN ₃		47	55	12	140				
			ME ₂		48	04	12		73			
			C		55	20	11	17	16			
			F		8	55						
	" 17			Large microseisms all day, masking any faint seismic motion possibly present.								
128	" 18	I	e?	10	18.5							
			eL		35.7		22					
			MN ₁		38	30	20	6				
			ME ₁		39	47	17		8			
			MN ₂		48	50	15	$3\frac{1}{4}$				
			ME ₂		50	40	15		4			
			F		11	40						
129	" 21	I	e(L?)	15	08.0		17					Chronograph de- ranged for some hours: time cor- rect to $\frac{1}{2}$ m only } N ^o 129
			ME		15.5		17		$5\frac{1}{2}$			
			MN		19.0		12	3				
130	" 22	II _r	iP	8	18	54	4	$+4\frac{1}{4}$	$-7\frac{3}{4}$	+2		
			iPR ₁		19	51	5	-13	-33	-4		
			e		20.2		5					
							16				2200	
			iS		22	33	7	-35	$3\frac{1}{2}$	-5		Felt strongly in North Island New Zealand (up to F.M. VI or VII)
			eL		22.9		21	(Angenheister)				
			SR ₁		23	54	8	+53				
			ME ₁		24	05	9		27			
			MN ₁		24	26	9	47				
			ME ₂		24	56	9		21			Az. (from iP)
			ME ₃		28	19	10		21			S. 70° E.
			MN ₂		28	28	10	32		$5\frac{1}{2}$		Lat. 38° S.
			MZ		28	28	10					Long. 174 $\frac{1}{2}$ ° E.
			F		9	40						
131	" 24	I	e(P?)	7	45.1		9	$1\frac{3}{4}$				No. 130 & 131:-
			e(S?)		49.5		9					N. & E. from
			eL		53.8		14					Seismom. No. 3.
			MN		8 00	56	10	6				
			ME		2	43	10		$3\frac{1}{4}$			
			F		8	15						

(Continued on next sheet)

No. ¹¹/₁₂ (continued)

 November 1 to 30, 19 14
 December 1 " 31)

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.)

	V	T ₀	$\epsilon : 1$	$\frac{r}{T_0^2}$	
December constants	A_N (1)	138	7.8	6.8	0.01
	A_E (3)	126	9.3	5.0	0.03
	A_E (1)	148	7.3	5.3	0.02
	A_Z (3)	118	11.0	>20	0.04
	A_Z (2)	87	4.2	3.0	0.06

No.	Date.	Char.	Phase.	Time (Greenwich)			Per.	Amplitude.			Δ	Remarks.
				h.	m.	s.		A_N	A_E	A_Z		
132	Nov. 24	III _u	eP	12	02.9	4				5700	North of Guam, Ladrone Islands	
			iP		3 00	4	+18	-	-7			
			iPR ₂		6 58	5	-12	-2½	2			
			i		7 25	6	-	9	19		 (See note, A)
			eS		10.2	9						
			iS		10 21	9	-294	+78	-70			
					10 30	9	87	-	198			
			i		12 06	9	+59	-73	-		 (See note, B)
			eL		16.4	50	(Angenheister)					
			MZ ₁		18 24	22			155			
			ME ₁		19 09	30		820				
			MN ₁		20 10	20	277					
			ME ₂		21 12	16		270				
			LN ₂		22 45	16	200	232				
ME ₃												
MZ ₂		22 54	16			96						
C		28 44	10	15	16							
F		13 50										
133	Dec. 15	I	e(P?)	9	03.8	5	-	3				
			eL		12.8	18						
			MN		13 50	13	14					
			ME		14 54	14		22				
			MZ		15 08	14					12	
			F		10 20							
134	" 20	II _r	eP	14	16.0				3900	Tonga Group.		
			iPR ₁		17 46	5½	+5½	+17				
			S		21 41	10	7	6				
			PS		22 16	10	12	16				
			eL		24.6	18						
			M1		25 06	18	290	65				
			MN ₂		27 50	12	80					
			ME ₂		29 32	14		77				
			MZ		32 50	14					18	
			F		16 40							

E. F. Pigot