

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. Weichert 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	s : 1	$\frac{r}{T_0^2}$
A _N (1)	227	8.5	3.9	0.02
A _N (3)	84	13.0	9.6	0.003
A _E (1)	237	9.4	4.0	0.02
A _E (3)	75	9.6	5.0	0.009
A _Z (2)	88	5.0	2.9	0.036

No.	Date	Phase	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N	A _E	A _Z		
1	1930 Jan. 5	eP	01	31	58	4	1			8890 (80°0)	Very small. iS largest phase on record. Osaka Δ 2428 km. P 01 23 57 Koti Ep. Kamtchatka
		iS		42	10	5	+6	+4			
		MN		53	35	13	1				
		F	02	10							
2	" 5	e	19	04.4						Manila Δ 1670 km. P 19 00 00	
		eS		14	04	7	1				
		eL		30.4		17					
		MN		34	34	17	3				
3	" 5	F	19	50						A few waves.	
		e	20	36.4							
4	" 7	MN, ME	39	55		15	1	1		La Paz Δ 7060 km. P 00 00 12 Melbourne e 07 52 L 16 00 Fordham e 15 00	
		e	00	04.8		4					
		e		07	16	7	1				
		eS?		07	36	8	1	2			
		e		13	29	16	4				
		eL		14.5		18					
		ME ₁		19	40	13		1			
		MN ₁		19	54	13	2				
		MN ₂		22	36	13	2				
		F	00	55							
5	" 14	e	06	26.2						Wellington L 06 31 Melbourne L 32 23	
		eL		29.9	16?						
		ME ₁		31	31	12		3			
		MN ₁		32	32	12	3				
		ME ₂		34	37	13		2			
		MN ₂		36	06	13	2				
		F	07	00							
		eP	22	08	28				4300 (38°7)		
		PR ₁		10	04	6		1			
		PR ₂		10	33	6		3			
6	" 14	eS		14	30	14		5		O, 22 00 48 Wellington Δ 34°5 O 21 59 52 P 22 07 05 Felt at Apia R-F 4 Melbourne Δ 43°0 P 22 09 20 Manila e 22 13 Batavia i 22 14 44	
		eSR ₂		17	48	14	6				
		eSR ₃		18	10	14	12				
		eL		19.7		20					
		mN		20	33	13	17				
		mE		21	08	16		12			
		MN ₁		22	58	10	6				
		ME ₁		23	28	16		12			
		MN ₂		26	04	10	6				
		ME ₂		26	40	14		14			
		ME ₃		30	04	12		8			
		MN ₃		31	30	10	7				
		F	23	45							

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No.

Riverview College Observatory

SYDNEY, N.S.W.

PRELIMINARY BULLETIN January 1930. 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 (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N μ	A _E μ	A _Z μ		
	1930										
	Jan. 5	e	1	32.0							
		i		42 11							
		M		58 35							
	" 5	e	19	04.4							
		e		14.1							
		M		34 23							
	" 7	eL	0	12.0							
		L		16							
		M		19 54							
		M		22 24							
	" 14	e	6	26.2							
		eL		29.9							
		M ₁		32 28							
		M ₂		35 58							
		M ₃		41 28							
	" 14	eP	22	08 28							
		eL		17.5							
		M ₁		19 55							
		M ₂		22 58							
	" 16	e	11	58.7							
		M	12	31 29							
	" 18	iP	7	10 01							Galitzin Z.
		iS		14 49							
		i		17 31							
		M		19 55							
	" 20	iP	7	17 19							
		iS		21 55							
		iSR ₁		23 37							
		M		26 54							
	" 21	P	18	29 34							
		S		34 08							
		L		36.8							
		M		39 34							
	" 24	e	1	42.6							
	" 25	e	1	46.8							
	26	i	16	54 10							
		L		58.0							
	" 28	e	6	25.1							
		S?		29 30							
		eL		32.6							
		M		39 05							
	" 29	e	0	25.1							
		eL		42.6							

No. 1 (continued)

1930, January.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)	Per	Amplitude.			Δ km.	Remarks.
					A _N	A _E	A _Z		
			h. m. s.	s.	μ	μ	μ		
11	1930 Jan. 24	e	01 40 51	4	1	1		Melbourne i 01 43 12 L 44 35	
		e	42 47	4		1/2			
		i	44 23	6		6			
		e(L)	44.6	12?					
		m	44 55	8	2	3			
		m	45 15	8	2	4			
		m	45 55	6	2	4			
		MN	47 47	9	3				
ME	47 55	8		3					
12	" 24	F	01 55					A few long waves.	
		eL?	02 30.9	18					
		M	33.1	15					
13	" 25		21 30 to 21 37		and			Small waves on Galitzin Vertical. eP from Galitz.Z Manila Δ 730 km. O 01 38 47 P 40 25 Hong Kong P 42 48 Melbourne i 54 45	
			23 22 to 23 40		Small waves on Galitzin Vertical.				
		eP _Z	01 46 48						
		S	53 47	8	2				
		SR ₁	57 02	12		7			
		eL?	02 03.0						
		MN ₁	06 39	14	7				
		ME	08 44	14		2			
14	" 26	MN ₂	11 58	14	2				
		F	02 30						
		i	16 54 09	2	1	2			
		i	57 56	4	4	1			
15	" 28	m	58 05	5	6	3		Largest wave. Following very small. Manila Δ 5800 km O 06 19 25 P 28 44 Hong Kong P? 29 29 Batavia i 29 29	
		F	17 03						
		e	06 24.8	4	1 1/2				
		e	25.5	5	2	2			
		eS	29 39	6		2			
		m	30 05	8	3	2			
		eL	31.6	20					
		MN ₁	34 15	12	3				
16	" 29	MN ₂	39 07	12	2				
		MN ₃	44 45	12	3				
		F	07 10						
		e	00 35.1						
		eL	42.5	20					
ME	44 10	10		1					
MN	49 52	10	1						
F	01 00								

WM. O'LEARY S.J.

1930, February.

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. Weichert 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	s:1	$\frac{r}{T_0^2}$
A _N (1)	217	9.0	4.8	0.01
(3)	83	13.3	7.3	0.005
A _E (1)	226	9.3	3.6	0.01
(3)	74	10.0	4.5	0.012
A _Z (2)	96	5.2	3.4	0.033

No.	Date	Phase	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N μ	A _E μ	A _Z μ		
17	1930 Feb. 1	eP	17	38	28	2	$\frac{1}{2}$	$\frac{1}{2}$		Small rapid vibrations, well marked. Origin near?	
		i		38	48	4	2	3			
		i		39	04	4	4	3			
		eL?		41	42	10					
18	" 2	F	17	52						9280 (83.5) O, 14 56 22 J.S.A. Ep. 49°N. 177°E. Hong Kong P 15 05 51 Manila Δ 6678 km. O 14 55 51 P 15 06 01 St. Louis P 06 17 Copenhagen Δ 8150 P 07 25 Strasbourg Δ 8840? P 08 12 Batavia Δ 9120 P 08 39	
		eP	15	08	49	2	2				
		i		09	05	3	3				
		iS		19	17	6	4				
		i		19	35	5		-4			
		ScPcPcS		19	37	7		4			
		PS		20	03	8		4			
		eL		38.2		26					
		MN ₁		41	09	20	6				
		ME ₁		43	00	20		7			
		MN ₂		48	05	16	8				
		ME ₂		49	35	18		3			
		ME ₃		53	45	20		4			
		MN ₃		56	21	20	3				
MN ₄	16	05	45	20	4						
F	16	55									
19	" 3	e?	02	46.3					Melbourne i 02 50 20 L 56 35 Manila e 50 48		
		e		48.3	4						
		eL		54.8	20						
		xME	03	00	06	10		3			
20	" 7	MN	03	01	05	10	3		Wellington e 06 32 40 Melbourne e 34 22 L 42 10		
		F	03	30							
		e	06	28.6							
		e		33.2	?						
		eL		35.6	20						
		MN ₁		40	06	12	4				
		ME ₁		42	00	14		4			
		MN ₂		42	39	14	4				
ME ₂		44	06	15		4					
21	" 7	F	07	20				Wellington Δ 14° O 11 58 10 Ep. approx. 30°S., 175°E.			
		e	12	04.5							
		eL		12.8	20						
		MN		15	38	12	3				
22	" 7	ME		16	19	14		2	Batavia Δ 1030 km., Sumatra. P 16 35 53 Hong Kong P 40 13		
		F	12	50							
		e	16	52.1							
		eL	17	05.5	20						
		ME		08	10	17		4			
		MN		09	18	15	3				

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No. 2 (continued)

1930, February.

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		
23	1930 Feb. 12	iP	06	26	19	4	+1½	-4½		2560 (23°0)	0, 06 2h 06
		iPR ₁		26	37	6	+4	-12			Felt in Hawkes
		iPR ₂		26	49	4	+4	-9			Bay District, New
		iPR ₃		27	03	6	+5	-11			Zealand,
		iSN		30	22	8	-6				Wellington Ep.:
		iSE		30	25	6		-15			41°S., 177°E.
		i		30	34	6		+17			0 06 21 35
		i		30	37	6	+13				P 21 58
		i		30	41	8		-16			Δ 1°4
		i		30	53	7	11	10			Melbourne Δ 24°7
		i		31	52	6	-7				P 26 50
		eL		32	2	19					Perth
		MN ₁		32	53	12	40				P 30 30
		ME ₁		33	16	13		25			
		MN ₂		34	11	12	51				
		ME ₂		34	31	13		48			
		MN ₃		35	39	12	38				
ME ₃		36	57	12		45					
MN ₄		37	25	11	28						
ME ₄		39	53	12		44					
MN ₅		42	11	11	25						
F		08	30								
24	" 14	e	19	00	.1					3610 (32°5)	Small. On Galit-
		M	20	17					zin Vertical only.		
25	" 14	iP	20	47	37	4		1½		3610 (32°5)	Melbourne
		i		48	50	4		1½			i 20 48 25
		eS		52	50	5	1	1			M 21 05.6
		eL		55	.3	18					
		MN ₁		58	26	13	16				
MN ₂ , ME		59	46	14	53	16					
26	" 18	F	22	30						2990 (26°9)	La Plata Δ 3470 km
		e	02	11	.7	4					0 01 52.77
		e		15	.9	4					P 59.42
		eS?		21	.4	15					La Paz Δ 3950 km.
		eL		39	.5	24					Ep. 60°S., 25°W.
		MN ₁		42	55	18	5				P 02 02 12
		MN ₂		47	26	17	3				
		ME		50	28	18		3			
MN ₃		51	43	16	2						
27	" 18	F	03	40						2990 (26°9)	0, 06 06 57
		eP	06	12	53	4	1	½			
		eS		17	27	8	7	2			
				18	09	8	5	2			
		eL		19	.9	16					
		MN ₁		21	25	14	9				
		ME ₁		21	41	14		4			
		ME ₂		25	09	12		2			
		MN ₂		25	59	11	5				
		F		07	15						

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No. 2 (continued)

1930, February.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)			Per	Amplitude.			Δ km.	Remarks.
							A _v	A _z	A ²		
			h.	m.	s.	s.	"	"	"		
28	1930 Feb, 24	iP	20	58	27	3	+4	-4		5330?	Manila Δ 1330 km. Ep. 3°N., 118°E. O 20 51 14 P 54 07 Amboina Δ 620 km. P 54 14 Phases small af- ter mNE.
		e(S?)	21	05	22	5	2	3			
		iE		07	52	5		-5			
				08	35	9	3	3			
				09	08	7	3	3			
		mNE		12	30	6	8	4			
29	" 25	F	21	45							
		e	10	27	09	6					
		eL?		28	30	16					
		L		32	30	17					Small.
30	" 25	M		38	35	12	1				
		F	10	50							
		e	17	53	00	6					
		e		53	40	10?					Small.
31	" 28	e		56	49	12					
		M	18	00	15	12	1				
		F	18	15							
		e	02	24	.6						
32	" 28	e		26	.6	12					
		eL		27	.4	16					
		MN		28	49	12	1				
		ME		29	57	14			1		
		F	02	55							
		eP?	18	08	07	3	1	1			Preliminary phases small and very indef- inite.
		e		08	20	4		2			
		e(S?)		11	28	6	1				
e(SR ₁)		12	.6	7?							
eL		14	.1	16							
MN ₁		16	30	14	7						
ME ₁		17	28	16			8				
MN ₂		17	41	12	10						
ME ₂		18	53	14			5				
MN ₃		19	36	11	6						
ME ₃		22	25	13			2				
F	19	15									

 WM. O'LEARY S.J.
Director.

No. 3

1930, March.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN

 $\phi = 33^{\circ} 49' 49''$ S. $\lambda = 151^{\circ} 9' 30''$ E. $h = 41.0$ m. Foundation: Triassic sandstone.

INSTRUMENTS:

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

	V	T ₀	s:1	$\frac{r}{T_0^2}$
A _N (1	203	8.9	4.2	0.02
3	76	14.0	6.4	0.003
A _E (1	231	9.5	3.9	0.01
3	82	9.5	4.5	0.01
A _Z (2	91	5.0	3.5	0.03

No.	Date	Phase	Time (Greenwich)			Per.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A _N	A _E	A _Z		
33	1930 Mar. 1	e?	01	27	27						
		e		32	03	4	1				Harvard
		eL		34	6	16					eL 01 29 0
		MN		36	30	12	2				Ottawa
34	" 6	F	02	00							L 32
		P	15	40	6					3300?	P in minute mark.
		i		40	43	2		1			
				40	50	5		2			
		PR ₁ ?		41	09	9		4			
		PR ₂ ?		41	17	9	1	4			
		m		41	39	9	2	4			
		e(S?)		45	08	6	2	2			
		iS		45	26	6	7	10			
		m		45	40	6	6	6			
		m		46	39	10	11				
		eL		47	6	16					
		MN ₁		49	05	16	59				
		ME ₁		49	25	18		26			
		ME ₂		50	36	15		38			
		MN ₂		51	09	12	12				
ME ₃		51	27	16		32					
MN ₃		55	38	12	20						
ME ₄		56	29	13		9					
MN ₄		57	29	12	15						
F		17	30								
35	" 10	i	03	54	11	3	2	2			
		eL?		56	0	14?					Small and obscured by micros.
36	" 10	e	04	52	6	?					Obscured by micros
		e		55	5	5?					
37	" 10	L?		57	0	12					
		e	05	27	0	3					" " "
38	" 10	eL		34	6	14					
		e	16	48	23	4	2				" " "
		e		48	42	5		3			
39	" 10	e		51	36	11					U.R.S.S. Ep.,
		eL		52	6	14?					55°N., 138½°E.
		i(P?)	20	22	29	4		+4		2000?	Manila Ep.,
		i(S?)		26	21	5		+4			44°N., 147°E.
SR ₁ ?		27	11	5		3				Subsequent waves small and indefinite.	

(Continued on next sheet)

No. 3 (Continued)

1930, March.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)			Per s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A ₁ "	A ₂ "	A ₃ "		
40	1930 Mar. 12	eE	05	34.7							
		eN		36.4							
		eN		37.3	6 ^o						Adelaide Δ 3000 km
		eS?		38.6	6						P 05 38 14
		eL		41.6	24						Melbourne
		ME ₁		43 47	10			1			e 39 50
		MN ₁		44 15	10		1				
		ME ₂		45 37	10				3		
		MN ₂		46 41	10		2				Wellington
		ME ₃		47 09	10				4		e 40
41	" 12	MN ₃		48 40	10		2				
		F	06	25							
		e?	19	35.8							
		e		36 39							Osaka
		e		42 09	12						P 19 30 21
42	" 15	eL		44 00	13						L 31 04
		MN		46 05	12		1				Wellington
		F	20	00							e 40
		e	07	08 22							Obscured by micros
		e		15 07							Batavia Δ 310 km.
43	" 18	eL		20.6	15						P 06 55 41
		MN ₁		25 35	12		7				Manila Δ 4190 km
		ME		26 05	12			2			O 06 53 05
		MN ₂		27 15	10		3				P 07 00 37
		F	08	20							U.R.S.S. Ep.;
44	" 20	e	01	07.4							9 ^o 5 S., 104 ^o 5 E.
		M		09.5 to 9							A few waves masked by heavy micros
45	" 25	e	11	01.7	4						
		eL		04.6	12						Very small.
		F	11	15							Wellington
		e	11	41.9	2						L 11 05 0
		e		43 15	8						
		eL		43x17	20						
46	" 25	MN ₁		44 09	14		3				Osaka
		MN ₂		45 45	12		1				P 11 29 06
		F	12	05							L 31 09

(Continued on next sheet)

No. 3 (continued)

1930, March.

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 "	A_E "	A^Z "		
47	1930 Mar. 26	ePN	07	18	57	2	2			4260 (38°3)	0, 07 11 20
		iP		18	58	2	+2	-2 $\frac{1}{2}$			
		i		18	59	2	-4	+5			
		i		19	01	5	+10	-10	-3		
		m		19	08	5	17	20	18		
		PR ₁		20	10	5	4	6			
		PR ₂		20	34	5	8	11			
		PR ₃		20	43	5	7	8			
		P _c P?		21	13	4	7	7			
		i(S?)		24	34	6	+13	+15			
		i		24	40	5	+24	-13			
		iS		24	46	7	+32	29			
		m		24	57	7	32	20			
		m		25	06	24	250	170			
		i _E		25	59	6	13	+37			
		SR ₁		27	06	6	14	20			
		SR ₂		27	44	7	24	19			
		SR ₃		28	06	8	30	21			
		m		28	46	8	32	29			
		m		29	28	8	34	35			
		eL		29	35	36					
		MZ ₁		30	25	7			38		
		ME ₁		30	38	20		410			
		MN ₁		30	48	20	540				
		MZ ₂		30	54	6			44		
		ME ₂		31	40	16		540			
		MN ₂		31	44	16	490				
		MN ₃		33	22	12	265				
		ME ₃		33	28	12		230 \pm			
		MN ₄		34	24	12	280				
		MZ ₃		34	36	11			260		
		ME ₄		34	48	12		260			
		MN ₅		35	46	12	265				
		ME ₅ , MZ ₄		36	01	11		260	170		
MZ ₅		37	25	10			160				
MN ₆		37	36	11	205 \pm						
MN ₇		39	04	9	130						
MZ ₆		39	40	11			110				
ME ₆		39	48	10		115					
MN ₈		40	46	8	86						
ME ₇		41	29	9		81					
ME ₈		43	30	10		106					
MN ₉		44	28	10	110						
ME ₉		46	36	8		61					
MN ₁₀		47	52	8	63						
ME ₁₀		49	18	9		60					
MN ₁₁		56	06	10	78						
ME ₁₁		57	54	10		51					
CE ₁	08	23	40	12		10					
CN ₁		28	24	10	9						
CN ₂		28	24	12	14						
CE ₂		32	14	12		10					
F	10	30.									

(Continued on next sheet)

No. 3 (Continued)

1930, March.

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		
48	1930 Mar. 26	eP	11	38	59					4010 (36.1)	O, 11 31 40 Amboina Δ 340 km. P 11 34 07 Batavia i 36 35 Manila Δ 2665 km. O 31 47 P 37 11 U.R.S.S. Ep.; 7½°S., 214°E.
		iP		39	01	4	4	4			
		iS		44	34	8	6	8			
		eL		48.	6	12					
		ME ₁		50	43	4		6			
		MN ₁		51	32	4	18				
		MN ₂		52	55	5	18				
		ME ₂		53	14	6		10			
		ME ₃		56	06	8		12			
		MN ₃		56	32	8	11				
		F	13	25							
49	" 26	P?	20	22	35	5		2		Amboina Δ 730 km. P 20 17 50 Batavia i 20 10 Manila Δ 2665 km. O 15c22 P 20 46 U.R.S.S. Ep., 8½°S., 126½°E.	
		S?		28.	2	6		1			
		eL?		32.	4	12					
		ME ₁		34	00	5		2			
		MN ₁		35	06	4	5				
		MN ₂		38	40	10	3				
		ME ₂		40	04	10		2			
F	21	10									
50	" 30	e	00	45	13	8					
		eL		47.	8	20					
		ME		50	53	17		2			
		MN		53	13	16	4				
51	" 30	F	01	20						U.R.S.S. Ep., 55°S. 27½°W. Adelaide P 08 39 10 Manila Δ 2733 km. O 08 39 59	
		e?	08	39	05						
		e		49	54	8	2				
		eL	09	17.	6	16					
		ME		18	44	16		1			
52	" 30	MN		19	44	16	2			3290 (29.6)	
		F	Lost in No. 52.								
		eP	09	22	42	4					
		i		23	38	6	3				
		S		27	34	6	2	2			
		i		28	37	8		6			
		eL		32.	0	20					
		M ₁		32	48	18	31	31			
		ME ₂		35	00	10		6			
		MN ₂		35	36	10	8				
53	" 30	F	10	20							
		iP	15	26	16	5	4	3	1		
		S		31	31	5	2	3			
		m		31	53	6	4	4			
		m		35	50	5	10				
		m		36	35	5		8			
		eL		37.	1	20					
		MN ₁		38	37	16	108				
		ME ₁		38	44	16		66			
		MN ₂		40	06	5	23				
		ME ₂		40	53	8		18			
		MZ ₁		41	00	9			8		
		MN ₃		42	21	10	28				
		MZ ₂		42	25	12			27		
ME ₃		42	35	10		26					
54	" 30	F	17	02						Waves of 4s. per. superposed. Manila Δ 2655 Km. O 15 19 10 P 24 32 Adelaide Δ 3050 P 25 28 St Louis Ep.; 8°S., 128°E. U.R.S.S. Ep. 1 8½°S., 123½°E. A few small waves.	
		e	17	05.	6	3					
		e		07.	7	4					
		F	17	22							

 WM. C. LEARY S.J.
Director.

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. Weichert 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	$s:1$	$\frac{r}{T_0^2}$
A_N (1)	210	8.9	3.8	0.020
(3)	85	13.0	8.2	0.004
A_E (1)	222	9.5	3.8	0.010
(3)	75	9.5	3.9	0.005
A_z (2)	103	5.0	3.0	0.040

No.	Date	Phase	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A_N μ	A_E μ	A_z μ		
55	1930 April 2	e	20	10.1						Manila Δ 1220 km. O 19 54 58 P 57 38 Ep. 8° N., 130° E. Batavia Δ 2600 km P 59 53	
		e		12.7	8	2					
		eL		20.7	20						
		ME		23 22	16			4			
		MN ₁		24 16	18	3					
		MN ₂		26 10	17	3					
		F	20	50							
56	" 4	iPE	02	15 50	4			+3	2256 (26.3°)	U.S.S.R. Ep. 5° N., 127 Disturbed by vis- if from 2 16 15 to 2 17 00 O, 02 11 09 Wellington says felt strongly in both Islands N.Z. O, 09 24 15 Amboina Δ 3610? P 09 31 33 Manila Δ 2620 km. Ep. Solomons. O 09 28 04 P 33 24 Osaka Δ 5490 km. P 33 59 Batavia Δ 5740 km P 34 13	
		iSE		19 31	5			+5 $\frac{1}{2}$			
		i		19 37	5	+8		+16 $\frac{1}{2}$			
		eL		22.2	11						
		ME		24 16	8			1			
		MN		24 45	10	2					
		F	02	50							
57	" 4	iPN	09	30 20	2	1 $\frac{1}{2}$			3090 (27.8°)	Amboina Δ 3610? P 09 31 33 Manila Δ 2620 km. Ep. Solomons. O 09 28 04 P 33 24 Osaka Δ 5490 km. P 33 59 Batavia Δ 5740 km P 34 13	
		ePE		30 23	4						
		PR ₁		31 03	5	5		2			
		iS		34 58	5	5		1 $\frac{1}{2}$			
		m		35 14	8	2		2			
		mE		35 48	6			6			
		mN		36 04	6	6					
		SR ₁		36 22	7	3		6			
		SR ₂		36 53	5	5		5			
		eL		37.0	16						
		ME ₁		39 58	13			8			
		MN		40 45	12	6					
		F	10	25							
58	" 13	e	04	52.0	3				Very small.		
		eL		54.2	16						
		MN		56 05	13	1 $\frac{1}{2}$					
		ME		58 10	13			1			
59	" 15	F	05	15					Manila Δ 1060 km. O 10 34 18 P 36 37 Irkutsk Δ 6790 km P 42 01 U.S.S.R. Ep. 4° 5S., 132° E.		
		e(P?)	10	44 15	6	2		2			
		e		49 09	12?						
		e		51 35	11?						
		MN ₁		53 00	11			4			
		ME ₁		54 03	12	3					
		ME ₂		55 01	16			8			
F	11	35					6				
60	" 15	e?	22	11.9					Amboina Δ 810 km. P 22 02 58 Manila P 06 50 Adelaide P 13 00		
		e		14 41	4						
		eL		22.7	18						
		ME		25 17	13			2			
		MN		26 33	13	2					

F 22h 45m.

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)			Per s.	Amplitude.			Δ km.	Remarks.
							A_N "	A_E "	A^2 "		
61	1930 April 16	e M	15	11.2						J.S.A.Ep. 50°N. 132°W O 14 30 12 U.S.S.R.Ep. 47°N., 130°W.	
62	" 20	iPZ iPE iSN iSE m eL ME F	01	48 26 48 28 52 15 52 21 52 25 55.0 57 06	3 3 6 6 8 ? 10			$\frac{3}{4}$ 1 8 1	2440 (22.0)	Manila e 01 54	
63	" 20	iP iSN S SR ₁ SR ₂ mN eL ME MN F	16	27 21 31 34 31 42 32 24 32 34 33 00 34.0 36 08 37 48 17 10	3 4 6 8 8 8 16 14 14	2 5 5 6 4 5 4	1 2 7 2	4 (24.5)	2720 (24.5)	O, 16 21 51 Manila Δ 2910 km. O 16 25 51 P 31 36 Batavia i 32 16 ZiKaWei Δ 6900 km. P 32 36 Medan P 35 26	
64	" 21	eP? e (ScPc ₅) eN eE eN eE eL ME ₁ MN ₁ ME ₂ MN ₂ MN ₃ ME ₃ MN ₄ F	12	04 00 13.9 14 39 16.4 17.5 26.5 27.3 36.1 41 10 41 30 43 06 43 56 48 58 51 08 52 44 14 30	4 9 8 15 14 12 12 20 20 18 20 18 16 14 14			1 5 11 2		La Plata Δ 3290 km P 11 57 09 La Paz Δ 5645 km. P 59 58 Ep. 62°S., 38°W. Wellington Δ 81° O 11 50 42 P 12 03 07 St. Lois Ep. 55°S. 28°W. ePR ₁ 09 45 Pulkovo PR ₁ 09 58 U.S.S.R.Ep. 41°S. 51°W	
65	" 23	eP iS eSR ₁ eL MN ₁ ME ₁ MN ₂ ME ₂ MN ₃ ME ₃ MN ₄ ME ₄ F	22	01 03 10 58 16 19 22.3 28 10 29 37 30 55 32 37 36 44 39 00 42 54 48 14 00 20	4 24 32 24 18 22 20 20 20 18 18	1	4		8530 (76.8)	U.S.S.R.Ep. 40°N. 145°E Vladivostock P 21 52 15 Osaka Δ 1611 Km. Kanasiri Is. P 52 40 Irkutsk Δ 3850 km. P 55 13 Hong Kong P 56 11 Manila Δ 6400 km. O 46 35 P 56 30	
66	" 25	iPN iSE eL MN ₁ , ME ₁ MN ₂ , ME ₂ F	11	36 41 40 41 42.6 43 48 44 36 12 35	4 8 12 9 8	2 2	5 11 7		2530	Adelaide Δ 2200 km P 11 36 13 Wellington Δ 5° P 42 00 Manila Δ 2010? km P 47 55?	

(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. Mainska Conical Pendulum Seismometer (450 kilo.) (NS, EW)
4. Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)

	V	T_0	$\epsilon:1$	$\frac{P}{T_0^2}$
A_N (1)	200	9.1	4.4	0.019
(3)	89	12.8	8.8	0.005
A_E (1)	222	9.6	4.4	0.018
(3)	72	9.5	5.7	0.010
A_z (2)	92	5.0	3.2	0.04

No.	Date	Phase	Time (Greenwich)			Per. s.	Amplitude.			Δ km.	Remarks.
			h.	m.	s.		A_N "	A_E "	A_z "		
72	1930 May 1	i	01	18	12	5					Osaka Δ 513 Km. P 00 59 03
		m		18	20	6		$1\frac{1}{2}$			
		eL		30	.3	16		$2\frac{1}{2}$			Hong Kong P 03 30
		F	02	00							Manila Δ 4080 km
73	" 1	eP	10	23	34	3	1	$\frac{1}{2}$		2910 (26.2)	P 01 03 36
		eS		27	56	6		2			
		iS		28	03	7	5	2			
		eL		31	.0	16					
		MN		32	42	12	2				
		ME		33	12	10		1			
		F	11	30							
74	" 1	e	10	36	28	4					A few small waves.
		F	10	45							
75	" 2	P	01	46	52					2810 (25.3)	P in minute mark. O 01 41 13
		PR ₁		47	35	5	3	4			Adelaide Δ 3350 km
		iSN		51	13	9	4	4			P 48 09
		iSE		51	15	5		4			Melbourne Δ 3000
		m		51	23	11	10				P 48 20
		eL		53	.1	18					Manila Δ 5980 km.
		MN ₁		54	23	15	16				O 41 18
		ME ₁		54	52	13		10			P 50 48
		MN ₂		56	25	12	6	7			U.S.S.R. Ep., 13°S., 170°E.
		ME ₂		59	52	10					
		MN ₃	02	01	52	9	7				
		F	03	00							
76	" 2	iP	06	07	07	4	+6	+6	$-3\frac{1}{2}$	2810 (25.3)	O 06 01 28
		PR ₁		07	38	8	7	4			L hard to identify
		PR ₂		07	46	8	6	4			Wellington Δ 26°
		m		08	12	6	5	5			O 01 38
		m		10	42	6	4	5			P 07 26
		iS		11	28	6	7	5			Ep. 15°S. 171°E. appr.
		m		12	08	6	22	19			Adelaide P 08 00
		SR ₁		12	44	8	8	24			Melbourne P 08 05
		m		12	53	10	11	23			Manila Δ 6200 km
		m		13	04	9	10	15			O 01 32
		m		13	13	9	9				P 11 15
		MN ₁ , ME ₁		15	04	10	10	8			Batavia P 12 11
		ME ₂		15	17	8		11			Vladivostock Δ 7420
		MN ₂		16	21	10	12				P 13 32
		ME ₃		17	54	8		8			Sverdlovsk Δ 12400
		MN ₃		18	15	11	10				P 16 17
		MN ₄		20	17	9	9				U.S.S.R. Ep., 13°S., 172°E.
		MN ₅		23	00	9	12				
		ME ₄		23	52	8		10			
		ME ₅		25	54	8		9			
		F	07	40							

