Riverview College Observatory.

SYDNEY. N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 49′ 49″ S. λ = 151° 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_o	ε:1	$\frac{r}{T_o^2}$
A^N	(1)	207	8.2	3.7	0.020
	(3)	87	18.5	6.5	0.013
A^E	(1)	218	8.7	3.6	0.017
	(3)	82	12.9	2.4	0.020
A^Z	(2)	61	5.1	4.0	0.042

	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
	Jan. 2	ePZ	17 34 09	3				3910	
		ePE	34 11	3		0.5		(35°2)	
		iS_{NE}	39 51	6	-1.6	+1.1			
		e	42.3	3					Beginning of a second shock?
		m_N	48 01	6	1.8				
		m_E	48 20	9		1.7			
		eL_N	48.8	16					
		MN	51 05	15	1.1				
		F	18 45						
		iPE_Z	22 44 28	3		-1.0	-0.5	6420	
		iS_{NE}	52 33	4	+1.4	+1.2		(57°8)	
		iPS_N	52 55	3	+3.3				
		eL	23 05.3	32					
		MN	08 35	16	1.3				
		ME	09 04	22		3.0			
		MZ	09 29	21			0.05		
		F	01 05						
3	" 9	$e?_N$	23 23.0						
		e_E	26.0						
		eL	32.4	18					
		MN	34 00	11	0.7				
		ME	34 34	7		0.8			
		F	00 05						
4	" 13	e_N	18 39.7						
		eL	42.9	15					
		MN	46 35	12	0.2				
	4	F	18 55						
5	" 15	e_N	05 49 26						
		e_E	59 34						Early phases obscured by microseisms.
		$i(S)_N$	59 36	5	-1.5				
		$i(S)_E$	59 39	5		+3.4			
	e	$(SR_1)_{NE}$	06 05 04	16					
		eL_E	10.9	32					
		m_E	11 35	32		2.0			
		ME	18 15	21		0.5			
		MN	19 26	21	0.7				
		F	07 20						
6	" 14	e_E	12 19.0						
		e_N	22.9						
		eL	25.5	19?					
		MN	28 30	16	0.2				
		ME	31 02	16		0.2			
7	" 14	$e?_E$	14 36.5						F 12 40
		$e(L)_N$	39.7	?					
		ME	45 14	14		0.1			
		MN	45 38	14	0.2				F 15 00

RIVERVIEW COLLEGE OBSERVATORY,

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date.	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
8	Jan. 14	iPNEZ	17 45 56	3	+2.5	+3.1	-0.2	2445	
		iZ	45 58	3			+2.4	(22°0)	
		mE	46 20	5		5.4			
		mE	46 28	5		5.9			
		iS_N	50 00	7	-8.4				
		iS_E	50 02	8		+12.9			
		m_N	50 06	8	16.5				
		m_Z	50 11	7			1.1		
		eL	51.6	17					
		ME	53 25	13		10.2			
		MN	54 04	13	11.5				
		MZ	56 31	12			0.2		
		F	19 35						
9	" 15	e_N	10 09.8						
		eL	15.8	16					
		ME	17 45	16		0.1			
		MN	17 54	14	0.2				
		F	10 30						
10	" 15	PNEZ	14 48 12					2365	P in minute mark.
		iNE	48 15	7	-2.5	-5.0		(21°3)	
		m_N	48 55	7	3.0				
		m_E	49 00	7		2.8			
		iS_{NE}	52 07	7?	-2.0	-3.0			
		m_N	52 15	8	2.2				
		~~mE~~	~~03 02~~	~~8~~	~~2.3~~				
		m_{EZ}	52 20	8		7.5	0.4		
		m_N	53 02	8	2.3				
		eL	53.5	21					
		MNZ	55 30	15	3.3		0.1		
		ME	55 32	16		3.1			
		F	16 20						
11	" 15	eP_{NE}	16 43 00	6	0.2	0.5		2380	
		eS_E	46 56	5		0.9		(21°4)	
		eS_N	46 59	5	0.6				
		eL	49.2	14					
		MN	50 30	14	0.5				
		ME	50 51	14		0.2			
		F	17 25						
12	" 16	e_N	02 31.4						A few small waves.
13	" 16	e_N	05 03.4						" " " "
14	" 16	iP_E	07 14 51	3		-1.0		2465	
		iS_E	18 54	4		-1.5		(22°2)	
		eL_N	21.2	16					
		MN	22 33	11	0.2				
		F	07 40						
15	" 16	e_N	12 44.8						Small shallow waves
16	" 19	e(S)	22 49 57	8					
		eL	54.5	19					
		ME	56 45	13		0.3			
		MN	58 14	14	0.2				
		F	23 20						

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RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
17	Jan.20	eP_Z	17 04 38					4965	
		i_{NE}	04 51	5	+1.0	-1.0		(44°7)	
		i_Z	04 56	3			-0.5		
		S_{NE}	11 21	10	2.0	1.5			
		i_E	11 43	10		+4.5			
		m_N	11 48	12	2.5				
		i_E	14 43	10		+5.7			
		m_N	15 06	13	3.0				
		m_E	15 14	11		7.2			
		eL	21.2	24					
		ME	23 56	21		3.0			
		MN	24 47	21	2.0				
		F	18 35						
18	" 21	e_N	01 39.3						
		MN	43 41	10	0.2				
		F	01 50						
19	" 22	e	00 48.3						
		eL	50.2	16					
		MN	51 36	10	0.3				
		F	01 10						
20	" 23	eE	00 13.3						
		e(L)	14.6	10					
		MN	16 22	9	0.4				
		F	00 30						
21	" 23	e?	10 10.7						
		eL	16.4	15					
		ME	17 42	10		0.4			
		MN	19 05	7	0.8				
		F	10 45						
					----oOo----				
1936,	Jan.31.								WM. O'LEARY, S.J. Director.

Riverview College Observatory.

SYDNEY. N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 49′ 49″ S. λ = 151° 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_o	ε:1	$\frac{r}{T_o^2}$
A^N	1	219	7.6	4.0	0.019
	3	85	11.9	4.9	0.014
A^E	1	204	8.8	3.8	0.015
	3	94	12.5	2.6	0.022
A^Z	2	60	5.2	4.1	0.037

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm.	mm.	mm.	km.	
22	Febry. 3	e_E	03 47.6						
		eL_N	54.3	18					
		MN	56 24	11	0.2				
		F	04 15						
23	" 5	ME	07 14 18	?					Obscured by heavy microseisms.
		F	07 30						
24	" 6	e	04 33.3						
		MN	36 55	11	0.3				
		F	04 45						
25	" 7	e_E	00 56 19	6					
		m_E	56 37	6		1.0			
		eL	01 05.5	23					
		ME	07 04	18		0.5			
		MN	07 24	14	0.4				
		F	01 45						
26	" 7	e_E	09 10.8						
		e_{NE}	19.1	8					
		eL	36.3	24					
		ME	46 31	20		0.4			
		MN	49 41	20	0.5				
		F	10 50						
27	" 8	eP_{NZ}	12 17 08	4				3400	
		S_N	22 18	10	1.1			(30°6)	
		m_N	23 07	9	2.6				
		eL	25.9	16					
		MN	28 22	16	3.7				
		ME	29 07	11		5.8			
		F	13 35						
28	" 10	iP_{EZ}	18 11 16	3		-1.3	-0.3		Deep focus.
		i_{NE}	15 52	6	+1.2	+2.0			
		i_{NE}	20 53	5	-1.8	+3.6			
		i_{NE}	24 41	5	-1.4	+2.0			
		F	19 00						
29	" 12	e	05 01.5						Masked by micro-seisms.
		MN	09 00	13	0.2				
		ME	09 07	14		0.2			
		F	05 20						
30	" 12	i_N	09 47 26	4	-0.5				
		i_E	47 27	4		-1.4			
		i_N	50 39	4	+1.2				
		m_E	50 57	7		0.7			
		MN	57 33	5	0.5				
		F	10 10						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)	Per	Amplitude.			Δ	Remarks.
					A_N	A_E	A_Z		
	1936		h. m. s.	s.	mm.	mm.	mm.	km.	
31	Feb.14	e	23 21.4						
		eL	25.6	13					
		MN	27 00	11	0.4				
		ME	28 20	10		0.5			
		F	23 40						
32	" 15	iP_{NE}	12 53 38	4	+2.2	-1.7		3620	Vertical driving clock stopped.
		iS_E	59 02	8		+3.7			
		m_{NE}	59 10	10	4.8	4.1			
		eL	13 01.8	49?					
		ME_1	06 42	16		34.0			
		ME_2	07 59	14		44.0			
		MN_1	10 02	16	39.5				
		ME_3	12 35	16		54.0			
		MN_2	14 16	14	44.5				
		F	15 55						
33	" 16	iP_Z	14 21 40	3			+0.5		Deep focus.
		iP_{NE}	21 43	4	-1.2	-2.0			
		i_{NE}	22 ~~XX~~25	3	-1.3	-1.8			
		iE	22 51	4		-3.0			
		i_N	25 31	3	-2.2				
		iS_N	25 35	7	+6.1				
		iE	25 41	7		-5.5			
		mE	26 26	7		4.6			
		MN	29 35	14	0.5				
		F	15 00						
34	" 21	ePN_Z	17 03 24	3	0.7			3465	
		iS_N	08 38	8	-1.7			(31°2)	
		eL	12.2	36					
		ME	14 45	17		7.7			
		MN	16 41	14	6.0				
		MZ	16 46	15			0.4		
		F	18 35						
35	" 22	e	12 08.2	3					Small irregular waves.
		F	12 15						
36	" 22	eP_{NZ}	15 36 14	3	1.0		0.1	2000	Deep focus?
		iEZ	36 17	3		+0.5	-0.7	(18°0)	
		i_N	36 18	3	-4.0				EW. readings from Mainka. Wiechert EW. out of commission.
		iE	36 20	3		+1.5			
		i_N	36 24	5	+28.3				
		m_Z	36 25	4			1.8		
		iE	36 26	7		-8.5			
		m_Z	36 33	5			2.6		
		iS_N	39 38	14?	+11.0				
		iS_E	39 41	14		+14.4			
		mE	39 55	16		31.8			
		eL_Z	40.9	25					
		MN_1	41 14	12	34.5				
		MEZ	41 49	12		27.3	1.7		
		MN_2	42 43	12	36.6				
		F	19 20						
37	" 22	ePN_N	19 27 03	7				2055	Replica of No.36
		ePZ	27 06					(18°5)	
		iP_{NE}	27 07	7	+5.0	-0.7			EW. from Mainka.
		eS_N	30 34	12?					
		iS_E	30 35	12		-8.4			
		eL_Z	31.2	13					
		m_N	31 26	13	10.7				
		mE	31 33	12		14.7			
		MZ	33 17	10			0.5		F lost in No.39

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
38	Feb. 22	e_Z	19 34.5						A few small short period waves superimposed on No. 37.
39	" 22	$e(P)_N$	21 19 20	4					
		e_{EZ}	19 22	4					
		$e(S)_E$	22 55	?					
		$e(S)_N$	22 58	?					
		m_N	23 26	11	0.6				
		F	22 00						
40	" 27	iP_Z	10 10 42	4			+0.6	3445 (31°0)	Depth of focus 400 km. H = 10 04 20
		iP_{NE}	10 43	4	-1.5	+1.6			
		i_{NE}	11 56	4	+1.9	-2.2			
		i_E	15 54	4		-4.0			
		i_N	15 57	4	-5.7				Short periods throughout. No long waves.
		i_E	18 28	5		+7.1			
		m_E	18 32	6		13.0			
		m_Z	18 35	6			1.2		
		MN	18 38	6	9.5				
		MNZ	22 21	5	26.2		3.5		
		ME	22 42	6		25.0			
		F	11 40						
41	" 28	e_{NE}	16 30.6	6					Masked by micro-seisms.
		i_N	33 52	6	+1.3				
		eL	39.1	23					
		ME	44 10	10		0.7			
		MN	45 06	12	0.6				
		F	17 10						

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WM. O'LEARY, S.J.
Director.
1936, March 14.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 49′ 49″ S. λ = 151° 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_o	ε : 1	$\frac{r}{T_o^2}$
A^N	1	209	8.0	3.8	0.019
	3	89	12.0	3.2	0.013
A^E	1	232	8.6	4.0	0.015
	3	94	12.9	2.6	0.022
A^Z	2	61	5.2	3.9	0.033

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
42	March 1	eP_E	10 35 23	4				4790	
		e_N	35 30	4				(43°1)	
		e_Z	35 34	3					
		iS_E	41 56	?					iS in minute mark.
		m_N	42 06	11	0.8				
		m_E	42 10	11		3.0			
		eL_E	48.4	29					
		eL_Z	49.4	22					
		MN	51 28	7	6.2				
		MZ	52 42	7			0.5		
		ME	53 25	7		6.4			
		F	12 35						
43	" 2	$e?_N$	03 31.4						
		e_E	39.5	6					Masked by micro-seisms.
		e_N	40.6	5					
		eL_E	50.2	24					
		MN	59 17	24	0.3				
		ME	59 37	23		0.2			
		F	05 10						
44	" 4	e_N	06 42.6	3					Small short period waves.
		e_E	45.2	3					
		e_Z	45.3	3					
		F	07 00						
45	" 6	e_N	09 28.2						
		eL_N	35.2						
		F	09 45						
46	" 6	e_N	14 38.2						
		eL	43.0	20					
		MN	44 43	15	0,5				
		ME	44 52	16		0.5			
		F	15 20						
47	" 8	$e?_E$	15 38.4						
		e_N	43,5						
		MN	45 06	13	0.3				
		ME	49 27	13?		0.2			
		F	16 00						
48	" 11	e_E	17 01.1						
		e_N	05.9						
		eL	08.9	10					
		ME	11 27	15		0.2			
		MN	12 08	16	0.3				
		F	17 30						

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RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
49	March 14	e_E	09 08.3	4					
		e_N	08.5	4					
		eL	18.2	14					
		MN	20 47	13	0.2				
		ME	21 14	14		0.2			
		F	09 50						
50	" 17	i_E	11 15 26	4		+1.6			
		i_N	15 32	4	-0.5				
		i_N	17 06	5	+1.2				
		i_E	17 07	5		+1.3			
		i_E	18 08	5		-0.8			
		F	11 25						
51	" 18	eP_Z	11 53 52					2780	
		e_{NE}	53 55					(25°0)	
		i_{NE}	54 05	5	-0.7	-1.2			
		m_N	55 11	5	0.9				
		iS_E	58 19	6		-1.3			
		iS_N	58 24	6	-1.5				
		m_N	58 49	7	1.3				
		i_E	59 32	6		-2.0			
		eL	12 01.6						
		MN	05 49	8	0.5				
		F	12 45						
52	" 18	e_E	13 54 30						
		i_E	57 16	5		-1.7			
		i_N	57 46	4	+0.8				
		i_E	14 01 27	5		+2.0			
		i_N	02 18	5	-1.8				
		i_E	02 24	5		-2.0			
		F	14 20						
53	" 22	eP_{NE}	12 21 35	3?				2800	
		e_Z	21 43	3				(25°2)	
		i_N	21 44	5	+3.1				
		i_{NE}	22 17	5	+2.0	-2.3			
		iS_N	26 04	7	+3.5				
		i_E	26 07	7		-3.8			
		i_N	26 12	7	-5.0				
		m_E	26 18	12		6.5			
		eL	28.2	20					
		ME_1	32 13	13		11.5			
		MN	31 27	10	5.8				
		MZ	32 30	10			0.2		
		ME_2	33 09	10		16.8			
		F	13 30						
54	" 25	e_N	02 13.7						
		eL	15.9	18					
		MN	18 21	13	0.4				Masked by micro-seisms.
		ME	18 39	13		0.4			
		F	02 35						

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WM. O'LEARY, S.J.
Director.
1936, April 1.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 49′ 49″ S. λ = 151° 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_o	ε:1	$\frac{r}{T_o^2}$
A^N	1	218	7.9	3.8	0.016
	3	95	11.6	2.5	0.018
A^E	1	227	8.4	3.7	0.018
	3	82	12.1	3.6	0.025
A^Z	2	63	5.1	3.7	0.050

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
55	April 1	eP_Z	02 17 30	3				4855	
		eP_{NE}	17 33	3				(43°7)	
		iP_Z	17 36	4			-1.0		
		iP_{NE}	17 38	4	+2.4	-1.6			
		m_{NE}	17 58	11	4.8	4.3			
		iS_{NE}	24 07	10	-26.5	+46.2			
		i_E	27 20	10		+29.6			
		i_N	27 28	10	+34.7				
		m_E	27 40	11		42.9			
		eL_Z	32.3	29					
		L_N	32.7	24					
		ME	35 48	23		33.0			
		MZ_1	36 01	23			2.2		
		MN	37 09	20	46.0				
		MZ_2	37 53	22			4.2		
		eW_2	04 50.8	20?					
		ME	05 05 24	24		0.2			
		MN	06 08	25	0.3				
		F	06 00						
56	" 1	e	20 07.2	7					
		eL	12.0	21					
		MN	13 55	15	0.5				
		ME	15 15	12		2.2			
		F	Lost in No.57						
57	" 1	iP_{NE}	20 19 05	3	+1.3	-1.2		4735	
		iP_Z	19 06	3			-0.5	(42.6)	
		iS_N	25 35	7	-1.1				
		iS_E	25 40	7		-3.1			
		i_E	28 50	6		-3.3			
		m_N	29 05	7	2.1				
		eL	37.1	24					
		ME	41 10	13		1.3			
		MN	41 48	12	1.2				
		F	23 00						
58	" 2	$e(P)_N$	06 23 06	5					Preliminaries obscured by microseisms.
		i_N	24 05	3	-1.0				
		iS_N	28 12	10	-3.8				
		iS_E	28 14	7		-2.0			
		i_E	29 49	9					
		i_E	30 50	9					
		m_E	31 20	10		9.0			
		eL_E	32.3	24					
		eL_N	33.2	21					
		MZ	34 08	21			0.4		
		MN	35 20	14	8.2				
		ME	36 28	12		19.3			
		F	07 40						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
59	April 7	e_E	01 45.3	5					
		eL	51.2	19					
		MN	52 50	14	0.8				
		ME	53 03	16		0.3			
		F	02 15						
60	" 9	e_N	07 23.0	4					
		eL	28.3	16					
		ME	29 44	16		0.3			
		MN	30 07	13	0.5				
		F	07 50						
61	" 9	$e(P)_N$	16 07 36	4					
		e_Z	07 40	4					
		iS_E	12 13	7		-1.6			
		iS_N	12 17	7	+3.0				
		m_N	12 34	8	2.8				
		m_E	12 39	7		3.6			
		m_E	13 42	7		2.6			
		m_N	14 00	8	2.5				
		i_E	16 31	7		+2.3			
		i_N	17 03	7	-4.1				
		eL_N	18.2	24					
		m_N	18 51	8	4.3				
		ME	19 52	11		3.0			
		MN	21 31	10	2.8				
		F	17 25						
62	" 12	eP_N	20 59 10	4				4800	
		$ePEZ$	59 12	7				(43°2)	
		iP_N	59 13	5	+1.5				
		e_N	21 00 52	13					
		iS_N	05 44	13	+8.3				
		iS_E	05 46	13		-4.5			
		e_N	08 50	11					Very striking group of waves.
		i_{NE}	09 07	8	-15.8	+5.0			
		eL	13.9	28					
		MN	19 03	14	9.0				
		ME	19 40	13		9.8			
		MZ	19 43	13			0.9		
		F	22 45						
63	" 19	iP_N	05 12 55	7	+3.0			2735	
		$iNEZ$	13 03	7	-12.4	-1.5	+0.3	(24°6)	
		m_{NE}	13 30	6	8.2	2.8			
		m_E	13 42	6		3.9			
		m_N	13 47	6	11.1				
		iS_N	17 20	8	+22.2				
		iS_E	17 22	8		+8.3			
		i_{NE}	17 48	11	-75.5	-28.3			
		m_E	18 30	8		31.3			
		i_N	19 07	9	+56.4				
		i_E	19 15	10		-47.0			
		i_E	20 02	10		+54.6			
		i_N	20 05	10	+40.5				
		i_E	20 45	11		>-68.5			
		i_E	21 59	11		+29.0			
		m_E	22 09	11		44.3			
		i_N	22 59	10	-33.2				
		ME	24 05	11		>50			
		i_N	24 48	11	-48.2				
		MZ	25 03	12			1.0		
		MN	25 34	11	57.5				
		ME_2	33 26	11		>67			
		eW_2?	08 03.6	27?					F h 08 m 35

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per. s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
64	April 19	i_N	09 24 35	8	+3.2				Obscured by micro-seisms.
		eL	37.0	30					
		ME	47 25	22		1.2			
		MN	47 47	16	1.2				
		F	10 15						
65	" 24	eP_{NE}	12 54 19	4					
		e_N	13 00 37	6					
		m_{NE}	01 39	6	2.0	1.1			
		m_N	02 30	6	2.2				
		eL	05.0	16					
		F	13 25						
66	" 26	iP_N	08 49 52	5	+1.0			2610	
		iS_N	54 07	6	-1.2			(23°5)	
		i_{NE}	54 26	6	-1.8	-2.1			
		eL	56.9	29					
		ME	09 00 49	13		2.7			
		MZ	01 51	15			0.1		
		MN	02 07	15	2.5				
		F	09 40						
67	" 27	e_N	00 37.5						
		MN	45 20	22	0.3				
		F	01 00						
68	" 28	eP_{NE}	05 44 32	4				2735	
		eP_Z	44 33	4				(24°6)	
		iP_{NE}	44 34	5	+1.5	+0.6			
		iS_{NE}	48 56	8	+3.0	-3.1			
		i_N	49 06	9	-5.5				
		i_E	49 23	7		-2.8			
		eL	51.0	17					
		MN	53 31	14	5.5				
		ME	53 43	14		7.4			
		MZ	06 00 57	9			0.2		
		F	07 20						
69	" 28	$e?_{NEZ}$	13 42 14	2					Phases very hard to identify. May be more than one shock.
		e_Z	42 52	2					
		e_{NE}	43 02	2					
		i_N	48 01	3	+0.5				
		e_E	48 04	5					
		i_E	49 55	5		-2.7			
		MN	53 11	7	6.6				
		MZ	53 36	4			1.3		
		ME	54 24	8		6.4			
		F	14 30						
70	" 29	eP_{NE}	08 19 22	4	0.5	0.2		2835	
		iS_N	23 53	5	+1.5			(25°5)	
		i_N	24 10	6	+0.7				
		$SR_L?_R$	24 37	10		0.7			
		eL	25.8	16					
		ME	26 13	12		0.6			
		MN	26 32	16	0.4				
		F	09 15						

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Addition to March Bulletin.

53a	March 21	e?	00 06.2						
		eL	09.0	27					
		ME	13 19	17		0.5			
		MN	13 36	12	0.5				
		F	00 25						

WM. O'LEARY, S.J.
Director.
1936, May 2nd.

1936, May.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

φ = 33° 49' 49" S. λ = 151° 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_o	ε:1	$\frac{r}{T_o^2}$
A^N	(1)	218	7.7	3.5	0.017
	(3)	86	11.9	3.3	0.014
A^E	(1)	218	8.5	3.7	0.018
	(3)	80	13.4	3.5	0.020
A^Z	(2)	85	5.2	3.7	0.043

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
71	May 1	e_E	00 05.2	4					
		e_N	10.2	8					
		eL	12.3	23					
		MN	14 19	15	0.5				
		ME	16 17	14		0.2			
		F	00 40						
72	" 5	$e(P)_N$	19 50 29	7					
		e_N	54 31	6	0.6				
		e_E	58 18	7		0.8			
		e_N	59 12	9	0.6				
		eL_E	20 00.4	17					
		eL_N	00.9	18					
		ME_1	02 09	15		2.0			
		MN	05 31	12	2.0				
		ME_2	05 55	10		3.3			
		F	20 55						
73	" 8	e_N	05 56.0						
		ME	06 00 39	10		0.2			
		MN	00 44	10	0.3				
		F	06 10						
74	" 8	i_{EZ}	09 19 02	3		-0.5	-0.2		
		i_{NE}	24 58	3	-0.7	-2.3			
		i_N	27 50	4	-1.1				
		eE	28 23	6					
		i_N	34 19	6	-1.7				
		i_N	35 03	6	+1.9				
		m_N	35 36	6	2.1				
		F	10 00						
75	" 9	e_N	06 58.3						
		eL	07 00.4	16					
		MN	02 05	13	0.4				
		ME	02 55	12		0.2			
		F	07 20						
76	" 10	eL	20 59.2	15					
		MN	21 00 27	12	0.3				
		F	21 10						
77	" 11	eP_N	17 33 22					3020	
		iP_{NZ}	33 25	3	-0.8		+0.3	(27?2)	
		iS_N	38 10	7	-3.4				
		i_N	38 34	17	+8.0				
		eL	42.0	33					
		ME_1	43 19	18		6.1			
		MN_1	43 49	20	6.1				
		MZ_1	44 13	19			0.5		
		ME_2	48 00	16		6.0			
		MN_2, MZ_2	48 48	15	5.0		0.4		
		F	19 20						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
78	May 11	e_N	20 31.0						
		eL	35.2	21					
		MN	41 00	21					
		ME	44 55	15		0.3			
		F	21 10						
79	" 14	$e?_E$	05 04.2						
		eE	05.1	5					
		e_N	10.7	8					
		eL_N	11.8	20					
		ME	13 43	17		0.3			
		F	05 35						
80	" 16	e_N	07 27 17						
		i_N	27 26	7	+3.5				
		i_E	27 31	5		-1.0			
		e_N	36.0	11					
		eL	43.9	27					
		ME	49 14	22		0.3			
		MN	55 49	18	0.3				
		F	08 20						
81	" 18	e_E	20 33.1	5					Small waves. No definite phases.
		e_N	34.1	5					
		F	20 45						
82	" 20	eL	02 56.1	15					
		MN	03 00 32	15	0.4				
		ME	01 02	14		0.5			
		F	Lost in No.83						
83	" 20	iP_{NEZ}	03 10 46	4				2710 (24°4)	iP in minute mark.
		iZ	10 48	4			+1.2		
		iNE	10 52	4	-4.2	-3.2			
		iE	11 01	4		-3.0			
		iNE	11 17	5	+4.0	+2.7			
		iNE	11 44	5	-7.0	-3.9			
		iS_{NE}	15 09	7	-7.6	+7.0			
		iE	15 16	7		-9.2			
		i_N	15 23	10	-40.5				Most outstanding phase.
		mE	15 26	11		16.0			
		mZ	15 30	14			0.6		
		iMN	18 13	13	+23.0				
		MN	19 49	14	46.5				
		ME	20 04	14		47+			
		MZ	20 09	12			1.0		
		F	06 45						
84	" 21	$e(S)_N$	03 00.9	14					Early phases masked by microseisms.
		eL	05.8	25					
		ME	06 00	20		0.9			
		MN	06 29	20	1.0				
		F	03 35						
85	" 22	P_{NE}	23 25 43					2355 (21°2)	P in minute mark.
		i_{NE}	25 52	4	+1.4	+2.7			
		iSE	29 37	5		-3.6			
		iS_N	29 40	7	+3.5				
		eL	31.4	23					
		ME	32 28	17		2.0			
		MN	32 57	15	3.3				
		F	00 10						
86	" 23	e_N	15 38.8						A few small waves
		m_N	40 36	8	1.1				

(Continued on next sheet.)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
87	May 23	eE	19 24.0						Masked by micro-seisms.
		eE	26.9						
		MN	27 53	10	0.4				
		ME	29 48	12		0.6			
		F	19 40						
88	" 25	i(P)$_{NE}$	03 14 00	5	-1.0	-0.7			
		e(S)$_E$	17 48	10?					
		eL	19.3	20					
		ME	22 48	13		6.5			
		MN	25 18	12	3.6				
		F	04 05						
89	" 25	e	13 42.0						
		eL	46.2	18					
		MN	48 15	12	0.4				
		ME	48 57	12		0.7			
		F	14 00						
90	" 26	eE	12 56.0						
		eN	13 00.3	8					
		MN	03 35	15	0.6				
		ME	05 00	15		0.2			
		F	13 15						
91	" 27	eEZ	06 32.2						
		eN	35.8						
		eNE	42 39	5	0.4	0.7			
		iE	43 00	9		-4.8			
		iNE	44 03	7	+3.2	-3.1			
		eL	07 04.0	32					
		ME$_1$	08 53	30		0.5			
		MN	10 17	23	0.8				
		ME$_2$	16 00	20		1.2			
		F	08 30						
92	" 28	eNE	19 23.1						
		eE	23.5	13					
		eL$_N$	33.7	33					
		eL$_E$	38.8	32					
		MN	43 51	20	0.3				
		ME	46 46	18		0.6			
		F	20 45						
	ADDITION.								
A	May 19	iN	07 35 50	3	-0.8				WM. O'LEARY, S.J. Director. 1936, June 3rd.
		iE	35 53	3		-1.4			
		iZ	36 00	3			+0.2		
		eN	39 12	5					
		F	08 00						
B	" 19	iPNZ	20 56 58	2	+0.5	-0.7	-0.3		
		iNZ	58 19	3	+1.1	-1.4	-0.1		
		i(S)$_E$	21 02 27	4		+1.7			
		iN	04 37	3	-2.1				
		iE	04 56	3		+1.4			
		mZ	07 28	3			0.5		
		mN	10 01	6	5.8				
		mE	11 30	7		5.1			
		ME	14 29	11		3.3			
		F	22 20						

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

φ = 33° 46′ 49″ S. λ = 151° 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_o	s:1	$\frac{r}{T_o^2}$
A^N	(1	211	7.8	3.5	0.014
	(3	95	11.7	5.8	0.012
A^E	(1	224	8.3	3.9	0.016
	(3	80	13.1	3.3	0.020
A^Z	(2	66	5.0	3.6	0.052

No	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N + mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
83	June 1	e_E	11 30.7						
		e_N	31.3						
		i_N	34 35	5	+0.7				
		i_{NE}	36 45	7					In minute mark.
		F	11 50						
84	" 5	iP_{NE}	14 45 14	3	+0.5	-0.3		8055	
		iS_{NE}	54 43	4	+1.3	-1.3		(72°5)	
		m_N	59 39	8	1.3				
		F	15 20						
85	" 8	e_{NE}	17 04 18						
		i_N	08 00	3	-0.3				
		m_N	08 31	7	0.5				
		m_E	08 33	6		0.6			
		F	17 15						
86	" 9	e_{NE}	16 54.6	3					
		e_N	17 05.9	6					
		eL_E	11.0	25					
		M_E	15 00	18		0.2			
		F	17 35						
87	" 10	iP_{NZ}	08 29 05	3	-0.7		+0.3	2890	
		i_N	29 44	5	+3.8			(26°0)	
		i_{NZ}	30 04	5	+10.8		-1.2		
		iS_E	33 39	6		+9.8			
		iS_N	33 41	6	-10.0				
		i_{NE}	34 13	7	+14.6	-7.7			
		i_N	34 58	8	-9.6				
		i_E	35 10	7		+9.5			
		M_E	36 52	8		40.4			
		M_Z	37 12	7			2.3		
		M_N	37 18	9	18.3				
		F	10 35						
88	" 11	e_N	13 04.9						
		eL	09.2	22					
		M_E	11 53	13		0.3			
		M_N	12 55	10	0.3				
		F	13 35						
89	" 13	e?	09 06.9						
		e_{NE}	09.8						Obscured by micro seisms.
		F	09 25						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
100	June 16	eN	00 45.0						Earlier phases obscured by microseisms.
		eL	48.7	17					
		MN	52 21	11	1.5				
		ME	55 18	17		0.8			
		F	01 40						
101	" 22	e	10 57 43						
		i_N	11 00 39	8	+1.3				
		eL	03.8	13					
		MNE	05 12	12	0.3	0.2			
		F	1120						
102	" 22	eNE	22 16 43	7					
		eL	19.8	17					
		ME	20 41	13		0.3			
		MN	21 15	12	0.3				
		F	22 45						A few small waves.
103	" 23	eNE	01 38.8	3					
		F	01 50						
104	" 28	eL	06 57.7	17					
		MN	58 55	10	0.4				
		ME	59 49	10		0.5			
		F	07 10						
105	" 30	[illegible]	[illegible]						
		iP_Z	15 19 [illegible]	4			+0.7	9220 (83°0)	
		iPNE	19 17	5	-1.7	-1.0			
		iS_N	29 37	6	+1.6				
		i_E	30 10	7		+4.0			
		eL	41.5	50					
		MN	48 57	27	3.1				
		ME	52 00	18		2.1			
		F	18 10						

WM. O'LEARY, S.J.
Director.
1936, July 3.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

φ = 33° 49' 49" S λ = 151° 3' 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	ε:1	$\frac{\varepsilon}{T_0^2}$
A^w	1	210	7.8	3.5	0.016
	3	92	11.8	4.9	0.014
A^E	1	232	8.3	3.4	0.019
	3	79	13.2	3.8	0.022
A^4	2	64	5.1	3.7	0.073

No	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks
	1936		h. m. s.	s.	mm	mm	mm	km.	
106	July 2	e_{NE}	19 53 24	3					
		e_{NE}	53 55	3					
		e_{NE}	57 26	4					
		e_{NE}	58 06	4					
		m_N	58 44	8	0.4				
		m_E	58 48	5		0.3			
		F	20 10						
107	" 3	eP_{NE}	03 04 10					27°0	
		eP_Z	04 11					(25°1)	
		iP_{NE}	04 11	5	+1.8	+1.1			
		iS_E	08 38	6		+1.8			
		iS_N	08 39	6	-2.3				
		i_N	08 49	6	+4.0				
		m_E	09 04	7		3.2			
		i_N	09 44	7	+3.5				
		eL	11.4	17					
		MN	12 54	17	2.3				
		ME	14 10	17		2.4			
		F	04 20						
108	" 5	$e(P)_{NE}$	19 03 36	4				3620?	Heavy microseisms
		i_{NE}	03 48	5	+1.6	-1.0		(32°6?)	present.
		i_Z	03 50	3			+0.3		
		eS_{NE}	10 12						
		i_N	10 38	8	-5.3				
		i_E	10 40	8		+6.0			
		i_{NE}	13 38	8	-4.1	+5.5			
		i_N	13 58	9	+7.9				
		i_E	14 08	11		-20.0			Very striking
		eL_E	19.8	24					phase.
		ME	22 52	23		5.0			
		MN	23 43	21	2.5				
		F	20 55						
109	" 12	e?	02 50.8						Masked by micro-
		eL	58.8	20					seisms.
		MN	03 02 28	12	0.6				
		F	03 30						
110	" 13	e_N	11 26 54						Destructive earth-
		e_{NE}	31 15	7					quake in Chile.
		m_{NE}	31 38	7	1.5	0.7			
		e_{NE}	37 23	11					
		e_{NE}	40 31	14					
		i_{NE}	41 20	9	-5.9	+3.5			
		e_{NE}	46.3	40					
		m_E	46 37	35		2.6			
		m_N	46 44	35	0.9				
		m_{NE}	47 13	32	2.3	3.3			

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)	Per	Amplitude.			Δ	Remarks.
					A_N	A_E	A_Z		
	1936		h. m. s.	s.	mm	mm	mm	km.	
110	July 13	m_{NE}	11 47 45	30	1.9	2.7			
(cont.)		eL_E	58.0	43					
		eL_N	58.3	43					
		MZ_1	12 03 51	23			0.2		
		MN_1ME_1	03 55	26	3.9	5.2			
		MN_2	08 08	18	5.0				
		MZ_2	08 24	20			0.5		
		ME_2	08 31			9.0			
		F	15 00						
111	" 14	e	09 59.2						
		eL	10 04.8	15					
		MNE	06.2	15	0.2	0.2			
		F	10 25						
112	" 15	e_N	11 20.7						
		e_E	25.8						
		eL	26.4	20					
		ME	29 50	8		0.7			
		MN	31 19	9	1.0				
		F	11 50						
113	" 21	e_{NE}	00 04 42	3					
		e_E	08 15	9		1.0			
		m_N	08 25	9	1.1				
		m_E	08 28	9		2.3			
		MN	12 00	15	0.4				
		F	00 20						
114	" 22	e	06 34.2						
		e	37.0	9					
		eL	38.5	17					
		MN	40 48	12	0.3				
		ME	41 18	15		0.2			
		F	06 55						
115	" 23	e_E	06 28 13	5					
		e_N	28 18	5					
		e_E	32 03	7					
		eL	38.0	17					
		MN	39 25	13	0.2				
		F	07 00						
116	" 26	$e?_N$	08 00.4						Obscured by micro-seisms. Shallow long waves till 09 05
		e_E	02.4						
		eL	28.8	25					
		F	09 05						
117	" 28	$e(P)_N$	05 24 46	5					
		$e(S)_N$	30 48	11					
		eL	34.9	23					
		ME	36 38	17		8.2			
		MN	37 18	17	5.1				
		F	06 55						
118	" 28	$e?_N$	07 59.0						
		e_{NE}	08 04 04	6					
		eL	10.6	22					
		MN	15 05	11	5.5				
		ME	15 19	12		6.9			
		F	09 25						
119	" 30	e	14 15.9						
		eL	22.2	15					
		ME	25 00	15		0.2			
		MN	27 22	13	0.2				
		F	15 05						

WM. O'LEARY, S.J.
Director.
1936, August 3rd.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

φ = 33° 48′ 49″ S. λ = 151° 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_o	ε:1	$\frac{r}{T_o^2}$
A^N	1	211	7.2	3.3	0.017
	3	90	11.9	4.0	0.013
A^E	1	237	8.2	4.0	0.018
	3	99	13.1	4.2	0.024
A^Z	2	61	5.1	3.5	0.050

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude A_N mm	Amplitude A_E mm	Amplitude A_Z mm	Δ km.	Remarks.
	1936								
120	August 13	e_{NN}	20 10 24	4				6290?	
		eZ	11 26					(5636?	
		i_N	13 22	3	-0.7				
		eS_N	18 21	8					
		eE	18 26	8					
		i_N	18 28	8	+1.8				
		i_N	21 55	8	-1.4				
		ME	22 08	11		1.1			
		eL	27.1	22					
		ME	29 10	18		0.8			
		MN	30 28	14	0.9				
		F	21 20						
121	" 14	e	04 11.2						
		MN	18 24	12	0.3				
		F	04 30						
122	" 15	e	02 40.8						
		MN	45 03	12	0.3				
		F	03 10						
123	" 15	e	05 40.2						
		eL	46.0	13					
		F	06 00						
124	" 16	$_{+}$NE	13 16 10	5	-1.3	+0.9			
		eZ	16 11						
		iE	21 38	7		-3.2			
		MN	21 55	13	1.5				
		ME	21 58	13		1.7			
		F	14 00						
125	" 17	e(L)	06 31.6	15					
		MN	33 38	13	0.3				
		ME	35 52	12		0.2			
		F	06 45						
126	" 17	e(P)	14 05 57					2790?	
		eS_N	10 25	10				(2531?)	
		eS_E	10 30	12					
		$_{+}$N	10 42	10	+2.5				
		MN	12 19	7	2.0				
		eL	12.7	25					
		ME	15 19	17		3.7			
		MZ	16 03	19			0.1		
		MN	16 37	17	3.9				
		F	15 40						
127	" 17	e_N	17 01.4						
		$e(S)_N$	05.1	13					
		eL	08.5	23					
		ME	10 24	17		0.2			
		MN	10 53	17	0.2				
		F	17 30						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h.	m.	s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936										
128	August 22	ePZ	07	02	01	2				6755	Masked by micro-
		e_{NE}		02	05	4				(60°8)	seisms on NS & EW.
		iS_{NE}		10	25	6	+1.6	-2.0			
		m_N		10	33	6	2.2				
		i_{NE}		11	52	6	+3.2	-1.7			
		eL		20.4		27					
		ME		27	35	20		2.9			
		MN		27	58	20	2.4				
		MZ		28	05	18			0.1		
		F	10	15							
129	" 23	eP?NE	21	22	49	4				7200?	
		eN		22	53	5				(64°8?)	
		i_{EZ}		22	58	4		+0.8	+0.7		
		i_Z		23	19	4			-1.0		
		iS_{NE}		31	37	6	+5.5	+12.0			Most outstanding
		i_{NE}		32	49	7	-8.1	+7.2			phase.
		i_N		36	05	6	+4.9				
		eL		42.3		36					
		MN		47	39	12	6.7				
		MZ		49	17	14			0.1		
		ME		49	39	18		3.3			
		F	23	40							
130	" 24	i(S)	22	26	28	5	+1.5	-2.2			Earlier phases ob-
		eL		30.2		27					scured by heavy
		ME		35	05	8		5.0			microseisms.
		MN		35	33	8	3.8				
		F	23	45							
131	" 25	eL	17	00.5		17					Obscured by micro-
		MN	18	02	18	13	0.5				seisms.
		F	17	30							
132	" 28	eP_{NZ}	06	44	22					3135	Heavy micros.
		eSE		29	14	8				(28°2)	
		iS_N		49	15	8	-2.4				
		eL		52.9		18					
		ME		54	13	10		1.8			
		F	07	15							

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WM. O'LEARY, S.J.
Director.
1936, August 3.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 46′ 49″ S. λ = 151° 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_o	ε : i	$\frac{r}{T_o^2}$
A^N	1	215	7.7	3.5	0.018
	3	86	11.9	4.1	0.012
A^E	1	238	8.2	4.4	0.022
	3	92	13.1	5.3	0.026
A^Z	2	60	5.1	3.7	0.042

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
133	Sept. 3	e?	11 54.1						
		eL	59.0	17?					
		ME	12 01 34	13		0.4			
		MN	04 04	13	0.3				
		F	12 20						
134	" 3	$e(P)_N$	12 28 24	2					
		S_{NE}	32 50	7	1.1	0.5			
		eL	34.5	?					
		ME	36 33	14		0.4			
		MN	37 02	15	0.4				
		F	13 05						
135	" 3	e	14 41.8						
		eL	44.0	18					
		MN	45 04	17	0.3				
		ME	46 02	15		0.3			
		F	15 00						
136	" 4	e_E	08 29 01	7					
		e_N	29 04	7					
		eL	46.8	17					
		MN	49 00	17	0.2				
		ME	50 53	17		0.2			
		F	09 20						
137	" 5	e_E	17 32 40	3					
		e_N	32 59	3					
		MN	43 06	13	0.3				
		ME	43 17	12		0.2			
		F	18 10						
138	" 5	e	22 01.1						
		eL	05.2	22					
		MN	09 54	12	1.0				
		ME	10 06	12		0.7			
		F	22 25						
139	" 6	e_{NE}	17 47 06						
		eL	55.7	23					
		ME	57 51	18		0.9			
		MN	58 09	13	2.4				
		F	19 05						
140	" 7	eL	00 14.0	17					
		ME	16 19	13		0.3			
		MN	17 57	13	0.2				
		F	00 30						
141	" 17	iP_E	17 20 05	3		-0.7		2564?	
		$e(S)_E$	24 16	7				(23°1?)	
		eL	26.5	17					
		MN	27 42	14	0.8				
		ME	30 03	10		0.3			
		F	17 50						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
142	Sept.18	e	02 20.7						
		M	27 00	12	0.4	0.4			
		F	02 35						
143	" 18	e	17 46.0						
		eL	52.5	17					
		MN	54 08	12	0.3				
		ME	54 13	12		0.2			
		F	Lost in No.144						
144	" 18	$i(P)_E$	18 07 10	3		-0.5			
		eL	14.4	15					
		MN	17 22	11	0.3				
		F	18 35						
145	" 18	e	19 06.0						
		eL	14.2	16					
		MN	17 46	15	0.2				
		F	19 35						
146	" 19	ePN_E	01 12 11	3	0.3	0.3		6790	
		ePZ	12 12	3			0.3	(61°1)	
		iZ	12 18	3			-0.6		
		iS_{NE}	20 37	5	+6.5	-2.0			
		eL	28.4	25					Periods increasing to 49s.
		MN	35 39	21	23.5				
		ME	38 44	21		19.4			
		MZ	39 30	21			0.6		
		F	04 20						
147	" 19	$e(P)_{NE}$	06 49 18	5					
		eL	07 01.7	25					
		MN	03 58	23	0.4				
		ME	07 33	21		0.3			
		F	07 35						
148	" 23	e_{NE}	06 43.0						
		eL	49.0	14					
		MN	50 50	12	0.4				
		F	07 15						
149	" 25	e_N	13 42.2						
		eL	47.1	21					
		ME	56 23	18		0.3			
		F	14 25						
150	" 29	ePZ	16 40 41	3				2365	
		iPN_E	40 43	3	+0.6	-0.5		(21°3)	
		i_E	41 03	3		-1.5			
		iS_N	44 36	5	+0.9				
		iS_E	44 39	5		-1.2			
		mN_E	44 48	7	2.3	2.7			
		eL	47.2	14					
		MN	49 05	12	0.3				
		F	17 10						

WM. O'LEARY S.J.
Director.
1936, Oct.11.

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 49′ 49″ S. λ = 151° 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_o	ε:1	$\frac{r}{T_o^2}$
A^N	1	220	7.9	3.9	0.016
	3	97	11.7	4.9	0.011
A^E	1	233	8.4	3.8	0.022
	3	85	13.5	2.4	0.020
A^Z	2	67	5.0	3.3	0.056

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm.	mm.	mm.	km.	
151	Octbr. 2	e	13 04.2						
		MN	10 17	10					
		F	13 25						
152	" 3	eP_{NE}	21 58 19	7				4800	
		eS_N	22 04 53	7				(43°2)	
		m_E	05 07	12		1.6			
		e_E	08 15	8					
		i_N	08 24	8	+4.5				
		eL_E	10.4	41					
		ME	15 24	24		1.0			
		MN	17 42	20	2.1				
		MZ	18 23	16			0.1		
		F	23 20						
153	" 4	iP_E	23 59 13	4		-1.4		3390?	Heavy micro-seisms.
		i_Z	59 15	3			-0.8		
		i_E	00 00 09	5		-7.8			
		i_N	01 09	5	+1.8				
		$i(S)_N$	04 22	5	+1.5				
		eL	06.0	24					
		MZ	08 00	17			0.2		
		MN	08 07	15	2.3				
		ME	08 24	17		3.0			
		F	01 30						
154	" 5	eP_Z	09 52 16					4455	
		iP_{NEZ}	52 18	3	+2.2	-2.0	-0.5	(40°1)	
		i_{NE}	54 24	7	+2.5	-2.0			
		iS_{NE}	58 31	7	-5.2	+2.5			
		i_N	10 01 38	8	+5.1				
		i_E	01 49	5		-3.6			
		m_N	01 57	7	7.1				
		m_E	02 05	7		6.5			
		eL?	03.1	24					
		eL	05.0	36					
		ME_1	08 51	24		6.6			
		MN	11 57	17	4.6				
		ME_2	12 43	12		6.3			
		F	11 25						
155	" 12	e	07 08.1						
		eL	10.1	13					
		MN	13 00	10	0.3				
		F	07 30						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per	Amplitude. A_N	A_E	A_Z	Δ	Remarks.
	1936			s.	mm	mm	mm	km.	
156	Oct.14	eP_{EZ}	22 20 12	5				2365	
		e_N	20 18	7				(21?3)	
		iS_N	24 08	8	+4.0				
		iS_E	24 10	7		+3,7			
		i_E	24 29	7		+4.5			
		eL	25.6	24					
		ME	27 14	21		0.7			
		F	22 50						
157	" 15	ME	21 07 53	13		0.2			
		MN	09 48	10	0.3				
		F	21 20						
158	" 16	iP_N	12 02 23	3	-0.5			2965	
		eS_E	07 04	5				(26?7)	
		eS_N	07 08	8					
		e_N	07 33						
		eL_E	09.2	26					
		eL_N	10.2	26					
		ME	12 21	14		1.6			
		MN	14 10	16	1.5				
		F	13 00						
159	" 18	e_N	06 38 21						
		e_N	40 19	9					
		e_E	40 22	7					
		e_{NE}	45 19	10					
		eL	48.7	17					
		MN	52 34	12	0.2				
		F	07 20						
160	" 19	iP_{NEZ}	12 11 55	5	+2.0	-2.5	-0.5	4180	
		i_{NE}	13 22	5	+2.1	-2.7		(37?6)	
		iS_{NE}	17 54	7	+3.2	-1.6			
		$eL?_N$	24.0	?					
		eL_E	25.4	34					
		MN_1	26 15	16	4.7				
		ME_1	27 05	15		9.1			
		MZ_1	27 50	16			0.2		
		MZ_2	29 05	19			0.3		
		ME_2	29 17	17		8.1			
		MN_2	30 07	15	6.2				
		F	13 20						
161	" 22	e(P)	10 03.1					2610?	
	"	eS_E	07 21	5		0.8			
		iN	07 45	5	-0.6				
		ME	12 25	10		0.7			
		MN	12 37	12	0.5				
162	" 22	e	16 19						A few small waves
163	" 23	eN	06 49.3						
		i_{NE}	50 50	5	+0.8	-1.5			
		eL	07 15.4	24					
		ME	19 52	20		0.2			
		MN	20 49	20	0.2				
		F	lost in No.164						
164	" 23	e?	08 06.6						
		eL	32.1	26					
		MN	36 04	24	0.2				
		ME	41 21	22		0.1			
		F	09 20						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude. A_N mm	A_E mm	A_Z mm	Δ km.	Remarks.
	1936								
165	Oct. 23	eP_{NE}	19 35 15	?				2455	
		eS_E	39 17	7				(22°1)	
		eS_N	39 19	8					
		eL	40.9	18					
		MN	42 57	8	3.8				
		MZ	43 06	10			0.2		
		ME	43 34	9		5.5			
		F	20 30						
166	" 24	e_N	18 09.3						
		e_E	09.4						
		eL	11.1	14					
		MN	12 23	14	0.3				
		F	18 40						
167	" 26	e	19 49.6						Times approximate only. Minute marks failed.
		eL	58.7	38					
		ME	20 05.8	24		0.4			
		MN	06.1	19	0.5				
		F	20 50						
168	" 29	eP_N	18 47 32					5290	
		iS_E	54 31	7		+1.2		(47°6)	
		iS_N	54 35	6	-2.0				
		eL	19 00.2	34					
		ME	05 55	17		5.5			
		MN	07 20	15	4.3				
		F	20 55						
169	" 31	eL	15 12.0	20					
		MN	15 09	15	0.2				
		F	15 45						

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WM. O'LEARY S.J.
Director.
1936, November 9

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 49′ 49″ S. λ = 151° 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_o	ε:1	$\frac{r}{T_o^2}$
A^N	(1)	217	8.1	4.0	0.018
	(3)	92	12.0	5.3	0.012
A^E	(1)	222	8.6	3.9	0.025
	(3)	87	12.8	4.6	0.019
A^Z	(2)	76	5.1	3.2	0.054

No.	Date	Phase	Time (Greenwich) h. m. s.	Per	Amplitude. A_N	A_E	A_Z	Δ	Remarks.
	1936			s.	mm	mm	mm	km.	
170	Nov. 2	eP_Z	15 10 03	2			0.1	8955	
		eP_N	10 05	?				(80°6)	
		e_{NE}	10 44	4					
		eS_{NE}	20 12	6	0.3	0.4			
		mE	20 32	10		0.6			
		eL	31.2	27					
		MN	40 42	21	1.0				
		ME	41 58	18		0.4			
		MZ	43 11	21			0.1		
		F	16 45						
171	" 2	eP_{NZ}	20 57 20	3	0.2		0.1	7945	
		iS_{NE}	21 06 43	9	-4.3	-3.5		(71.5)	
		m_N	07 17	9	2.1				
		$eL(Q)_E$	16.5	34					
		$eL(R)_N$	20.4	34					
		MZ	23 35	22			0.1		
		MN	23 55	24	2.5				
		ME	24 28	21		2.8			
		F	23 50						
172	" 4	e_N	13 59 32	6					
		$e(S)_N$	14 02 44	7					
		$e(S)_E$	02 59	7					
		MN	07 05	10	0.3				
		F	14 20						
173	" 8	e_N	12 30.4						
		$e(S)_N$	32·03	10					
		eL	35.8	20					
		ME	37 23	13		0.3			
		MN	38 56	15	0.4				
		F	13 05						
174	" 10	e	04 33.5 to 05	25					Small waves. No definite phases.
175	" 10	eE	05 24 34	3					
		eN	24 35	3					
		MN	26 37	12	0.3				
		F	05 45						
176	" 12	e_N	02 32.0						
		eL	40.5	21					
		MN	45 07	15	0.2				
		F	03 10						
177	" 12	e(L)	08 50.0	17					
		MN	56 53	11	0.3				
		ME	57 30	10		0.4			
		F	09 20						

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RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h. m. s.	Per s.	Amplitude A_N mm	Amplitude A_E mm	Amplitude A_Z mm	Δ km.	Remarks.
	1936								
178	Nov. 13	iP_{NZ}	12 44 34	3	+1.0		-0.7	9510	
		iE	44 56	3		-1.0		(85°6)	
		iS_N	55 08	8	+1.5				
		eE	55 27	7					
		iN	55 35	8	-2.2				
		$eL(Q)_E$	13 09.7	34					
		$eL(R)_N$	13.8	32					
		MZ	16 18	27			0.1		
		MN	16 42	26	1.8				
		ME	18 34	17		1.4			
		F	15 25						
179	" 22	iP_{EZ}	14 49 20	2		-0.3	+0.1		
		eN	54 28	8					
		eL	56.5	23					
		MN	58 20	17	0.4				
		ME	58 58	17		0.7			
		F	15 30						
180	" 24	e_N	17 17.8						
		eL	21.5	17					
		MN	22 18	14	0.3				
		ME	24 23	13		0.2			
		F	17 40						
181	" 26	$i(\overline{P})_E$	08 39 08	2		+0.6			Small local shock
		$i(\overline{P})_N$	39 09	2	+0.5				
		MN	40 33	5	0.2				
		ME	40 44	5		0.3			
		F	08 43						
182	" 29	eP_N	08 30 39					2345	
		eP_E	30 40					(21°1)	
		$iNEZ$	30 55	4	-1.6	-2.0	+0.4		
		eSE	34 32	5					
		iS_N	34 35	5	+2.0				
		iZ	34 39	4			-0.4		
		iSS_N	34 55	5	+3.4				
		$iSSS_E$	35 00	5		-3.7			
		eL	36.2	17					
		MN_1	38 16	12	3.3				
		ME	38 41	12		1.7			
		MN_2	40 32	10	8.8				
		F	10 15						
183	" 30	e_N	17 22.0						
		eL	27.0	19					
		MN	27 40	14	0.3				
		ME	28 15	14		0.2			
		F	17 45						
184	" 30	$ePNEZ$	23 53 17						
		$iPNEZ$	53 19	4	+1.5	-1.0	-0.2		
		eNE	54 49	12					
		$S?_N$	58 53						
		$e(L)$	00 08.0	?					
		ME_1	08 15	19		2.1			
		MN	08 24	17	2.5				
		ME_2	10 39	17		3.1			
		MZ	11 03	15			0.1		
		F	01 20						

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WM. O'LEARY S.J.
Director.
1936, December 3,

Riverview College Observatory.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

Φ = 33° 49′ 49″ S. λ = 151° 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_o	ε : 1	$\frac{r}{T_o^2}$
A^N	1	233	7.7	4.2	0.017
	3	79	12.0	5.1	0.012
A^E	1	230	8.7	3.4	0.037
	3	88	12.9	2.6	0.020
A^Z	2	66	5.1	3.0	0.118

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
185	Dec. 1	e?	17 17.1						
		e_N	19.4						
		eL	27.3	17					
		MN	29 42	14	0.2				
		F	17 50						
186	" 2	e_N	18 21 53						
		eL	27.9	21					
		ME	29 12	9		0.5			
		MN	29 22	8	0.9				
		F	19 05						
187	" 3	e_N	03 15.4						
		eL	21.2	15					
		ME	22 15	13		0.2			
		MN	22 41	13	0.4				
		F	03 50						
188	" 4	eP_E	22 30 59	4				2310	
		eP_{NZ}	31 02	4				(20°8)	
		iS_E	34 50	4		-1.8			
		iS_N	34 54	4	+2.8				
		eL	36.5	17					
		MN	38 19	13	2.6				
		ME	38 56	13		0.7			
		F	Lost in No.189.						
189	" 4	e(L)	23 08.0	?					
		MN	10 28	14	1.0				
		ME	11 07	14		0.3			
		F	23 40						
190	" 5	e_N	14 43.6						
		eL	44.5	11					
		MN	48 02	11	0.3				
		F	15 00						
191	" 5	e_E	19 03 03						
		e_N	07 34	10					
		eL	09.5	16					
		MN	10 39	14	1.1				
		ME	11 41	14		0.3			
		F	19 45						
192	" 5	e_N	22 38.7						
		eL	42.0	17					
		MN	43 18	14	0.3				
		ME	43 37	10		0.2			
		F	23 05						
193	" 5	e_N	23 28.8						
		eL	30.0	17					
		MN	31 27	12	0.6				
		F	23 45						

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RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich)	Per	Amplitude. A_N	Amplitude. A_E	Amplitude. A_Z	Δ	Remarks.
	1936		h. m. s.	s.	mm	mm	mm	km.	
194	Dec. 6	e_N	02 56.9						
		e_N	58.9						
		eL	03 02.2	14					
		MN	04 12	12	0.3				
		F	03 15						
195	" 9	eL	18 11.1	15					
		MN	12 07	14	0.2				
		F	18 25						
196	" 13	e_N	21 39.3						
		eNE	41.9						
		e_N	46.6	17					
		eL	52.7	26					
		ME	57 13	16		0.3			
		MN	57 22	16	0.4				
		F	22 35						
197	" 16	e_N	19 43.1						
		MN	53.0	11	0.2				
		F	20 05						
198	" 17	e_N	03 51.3						
		e_N	53.5						
		eL	55.3	17					
		MN	57 16	14	0.5				
		ME	58 02	14		0.2			
		F	04 15						
199	" 17	e_N	13 41.1						
		eL	42.7	14					
		MN	44 05	13	0.3				
		ME	44 14	13		0.2			
		F	Lost in No.200.						
200	" 17	eL	14 09.9	14					
		ME	10 31	13		0.2			
		MN	11 19	14	0.3				
		F	14 25						
201	" 17	e_N	21 13.1						
		eL	17.2	15					
		MN	18 53	13	0.4				
		ME	21 12	14		0.2			
		F	21 30						
202	" 17	e_N	23 11.2						
		eL	13.4	14					
		MN	14 10	14	0.2				
		F	23 20						
203	" 19	e_{NE}	10 53 02	3					
		MN	47 28	8	0.6				
		F	21 03						
204	" 20	e_N	03 16.4						
		e(L)	18.7	14					
		ME	18 48	10		0.3			
		MN	20 04	11	0.3				
		F	03 35						
205	" 20	$i(P)_N$	18 45 53	4	+0.7				
		$i(P)_E$	45 55	4		-1.1			
		e_N	48 20	5					
		eL	58.3	17					
		MNE	19 02 13	17	0.4	0.3			
		F	19 30						

(Continued on next sheet)

RIVERVIEW COLLEGE OBSERVATORY.

SYDNEY, N.S.W.

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (Greenwich) h.	m.	s.	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks.
	1936					s.	mm	mm	mm	km.	
206	Dec. 21	$i(P)_{NEZ}$	17	23	49	2	-0.3	-0.3	+0.1	2490?	
		$e(S)_N$		27	54	5				(22°.4?)	
		mN		29	27	8	1.0				
		F	17	45							
207	" 22	eN	08	39.6							
		$e(S)_N$		42	33	7					
		eL		45.9		20					
		MNE		49	35	15	0.7	0.4			
		F	09	20							
208	" 23	$e(P)_N$	06	39	40	4				2655?	
		$e(S)_{NE}$		43	59	9				(23°.9?)	
		eL		46.3		12					
		ME		47	53	9		0.6			
		MN		48	39	9	0.5				
		F	07	05							
209	" 26	iP_E	22	58	09	3		-1.5		2700	
		ePNZ		58	09	3				(24°.3)	
		i_Z		58	11	3			-0.7		
		i_E		59	07	5		-6.1			
		eSE	23	02	31	12					
		iE		03	01	7		+3.2			
		i_N		03	22	7	+3.7				
		eL		04.8		31					
		MN		06	38	15	2.6				
		ME		08	37	15		6.3			
		F	01	00							
210	" 27	eN	08	49	05	3					
		e_N		54	27	9					
		MN		58	21	12	0.3				
		ME		59	05	14		0.3			
		F	09	20							
211	" 29	iP_Z	14	53	49	3			+0.8	2980	
		iP_N		53	50	3	-3.0			(26°.8)	
		iP_E		53	51	3		+0.6			
		iPP_N		54	28	7	-3.8				
		S_E		58	31	9		3.5			
		S_N		58	36	8	6.0				
		i_N		59	01	10	+14.0				
		i_E		59	14	10		-4.6			
		mN		59	36	14	14.8				
		$e(SS)_Z$		59	39	23					
		eL	15	00.0		24					
		i_N		00	42	9	+18.1				
		i_E		00	56	7		-21.8			
		MZ_1		02	14	32			1.0		
		MN		02	39	32	25.0				
		MZ_2		03	40	20			2.0		
		ME		04	07	15		46.8			
		F	17	55							

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WM. O'LEARY, S.J.
Director.
1937, Jan. 6.