

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

	V	$T_0$	$\epsilon:1$	$\frac{r}{T_0^2}$
$A_x$ (1)	151	8.7	6.8	0.02
$A_x$ (2)	121	9.0	4.0	0.02
$A_x$ (3)	164	8.7	5.8	0.03
$A_x$ (4)	151	10.5	2.3	0.05
$A_z$ (1)	80	5.3	4.6	0.06



No.	Date.	Phase.	Time (Greenwich)			Per. s.	Amplitude			$\Delta$ km.	Remarks.
			h.	m.	s.		$A_x$ $\mu$	$A_E$ $\mu$	$A_z$ $\mu$		
224	1920 Dec. 1	e	5	36	31	18					A few long waves.
224	" 1	e(S?)	14	18	15	8	1	-			
		eL		20.3	15						
		ME		22	25	10		12			
		MN		23	36	10	4				
		F		15	00						
225	" 5	eP?	22	03	20	?					
		e(S?)		08	01	14	3	-			
		eL		10.9	24						
		MN		12	12	22	20				
		ME		13	08	13		5			
		F		22	45						
227	" 7	iP	15	20	11	5	-4	-4		2740	
				20	43	4	3	2			
		eS		24	35	8	4	1			
		PS		25	08	8	5	3			
		eL		26.5	25						
		ME <sub>1</sub>		27	39	20		17			
		MN <sub>1</sub>		27	51	20	9				
		MZ		28	12	18			10		
		ME <sub>2</sub>		32	20	12		6			
		MN <sub>2</sub>		33	16	12	4				
		F		16	20						
228	" 10	e(P?)	4	49	57	?				5880?	Strong gale: heavy microseisms.
		e(S?)		57	27	15	8	10			
		e		5	06	35	26	25			
				07	06	22	12	-			
		eL		10.1	26						
		MN <sub>1</sub> , MZ <sub>1</sub>		13.3	20		60		36		
		ME <sub>1</sub>		14	06	18		60			
		ME <sub>2</sub> , MZ <sub>2</sub>		17.8	17			30	17		
		MN <sub>2</sub>		18	14	16	65				
		ME <sub>3</sub>		27	37	14		13			
		MN <sub>3</sub>		29	26	14	6				
		MZ <sub>3</sub>		34	08	15			9		
		MN <sub>4</sub>		34	16	15	27				
		ME <sub>4</sub>		34	27	13		7			
		CE		45	31	14		6			
		CN		45	52	14	6				
		F		8	00						

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	V	$T_0$	$\epsilon : 1$	$\frac{r}{T_0}$
$A_N$				
$A_x$	(See last sheet)			
$A_z$				



No.	Date.	Phase.	Time (Greenwich)			Per. s.	Amplitude			$\Delta$ km.	Remarks.				
			h.	m.	s.		$A_x$ $\mu$	$A_x$ $\mu$	$A_z$ $\mu$						
229	1920 Dec. 13	eP	3	46	27	4	1 1/2	-		3030	Felt at Kieta (Bougainville Island)				
		S		53	12	14	9	6							
		PS		53	59	16	30	10							
		eL		54	1	25									
		MN <sub>1</sub> , ME <sub>1</sub>		56	6	24	205	90							
		MZ <sub>1</sub>		57	17	24			70						
		ME <sub>2</sub>		58	25	15		12							
		MN <sub>2</sub>		58	56	15	75								
		MZ <sub>2</sub>		59	24	16			22						
		ME <sub>3</sub>		59	31	12		60							
		F	4	15											
		230	" 16	eP	12	18	15	3						9040	Destructive earthquake in Kan-su
				iP		18	21	3							
				18	36	3									
PR <sub>1</sub>				21	32	4	5	2 1/2							
iS				28	28	8	-	-18							
i				28	35	8	-29								
i				28	42	8		+130							
				28	43	8	70	15							
PS				29	17	8	22	40							
eSR <sub>1</sub>				33	20	30									
				34	30	32	560	370							
eL				39	3	49									
MN <sub>1</sub> , ME <sub>1</sub>				41	5	30	910	870							
MN <sub>2</sub> , ME <sub>2</sub>				44	7	24	390	690							
MN <sub>3</sub>				48	19	24	570								
ME <sub>3</sub>				50	12	20		390							
MN <sub>4</sub>				52	32	23	620								
MZ <sub>1</sub>				52	39	24			290						
ME <sub>4</sub>		55	56	17		320									
MZ <sub>2</sub>		58	19	18			170								
MZ <sub>3</sub>	13	00	33	18			140								
MN <sub>5</sub>		02	04	23	800										
ME <sub>5</sub>		04	28	18		290									
MZ <sub>4</sub>		06	15	21			190								
MN <sub>6</sub>		06	26	20	460										
ME <sub>6</sub>		09	54	18		90									

(Analysis of this seism continued on next sheet)

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4. Galitzin Aperiodic Seismometer, with galvanometer registration (NS, EW, Vert.)

	V	T <sub>0</sub>	$\epsilon: 1$	$\frac{r}{T_0^2}$
A <sub>x</sub>				
A <sub>y</sub>	(See last sheet)			
A <sub>z</sub>				



No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude			$\Delta$ km.	Remarks.
			h.	m.	s.		A <sub>x</sub> $\mu$	A <sub>y</sub> $\mu$	A <sub>z</sub> $\mu$		
230 (continued)	1920 Dec. 15	CN <sub>1</sub>	13	14	45	16	135				
		CE <sub>1</sub> , CZ <sub>1</sub>	20	1	16		105	37			
		CN <sub>2</sub>	20	16	16		70				
		CE <sub>2</sub>	28	04	16		120				
		CN <sub>3</sub>	29	32	16		55				
		CE <sub>3</sub>	32	36	17		60				
		CE <sub>4</sub>	44	08	16		50				
		CN <sub>4</sub>	53	02	20		50				
		2 waves (L rep. 1)	eW <sub>2</sub>	14	25	3	28				
		MN <sub>1</sub>	27	12	18		23				
		ME <sub>1</sub>	32	54	22			30			
		ME <sub>2</sub>	37	16	22			65			
		LN <sub>2</sub>	40	05	18		50				
		ME <sub>3</sub>	42	50	20			30			
F	17	55									
231	" 16	eP	21	15	32	5	$3\frac{1}{2}$	-		2850	
		iS	20	04	7		-10	-			
		eL	22	1	24						
		MN	23	04	20		26				
		ME <sub>2</sub>	24	10	20				12		
232	" 18	F	21	50							
		eP?	10	11	39						
		e(S?)	18	00							
		e(SR <sub>1</sub> ?)	20	56	?						
		eL	28	2	20						
		ME <sub>1</sub>	31	49	15			6			
		MN	32	08	15		17				
ME <sub>2</sub>	34	08	15			7 $\frac{1}{2}$					
233	" 18	F	11	35							
		eP	10	38	10	2					
		MN	45	41	14		4 $\frac{1}{2}$				
		ME	46	20	14			4			
234	" 19	F	lost in No. 232.								
		eP?	3	23	09						
		eL	32	4	20						
		ME <sub>1</sub>	33	00	15			4 $\frac{1}{2}$			
		LN <sub>1</sub>	34	04	16		8				
		LN <sub>2</sub>	42	11	12		10				
		ME <sub>2</sub>	43	08	11			5			
F	lost in No. 235.										

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	V	T <sub>0</sub>	$\epsilon:1$	$\frac{r}{T_0^2}$
A <sub>N</sub>				
A <sub>E</sub>	(See last sheet)			
A <sub>Z</sub>				



No.	Date.	Phase.	Time (Greenwich)			Per.	Amplitude			$\Delta$	Remarks.
			h.	m.	s.		A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>		
						s.	$\mu$	$\mu$	$\mu$	km.	
235	1920 Dec. 19	e	4	00	00	8	1				
		eL		01.	4	16					
		MN		02	07	13	2½				
		ME <sub>1</sub>		03	08	12		2			
		MN <sub>2</sub>		09	04	12	3½				
		F	4	25							
236	" 19	e (P?)	20	31.	3	6	1½	2			
		eL		45.	2	20					
		ME		49	12	18		2½			
		MN		52	09	18	2½				
		F	22	05							
237	" 24	eL	17	57.	7	16					
		MN		59	14	12	1½				
		ME	18	03	50	?					
		F	18	25							
238	" 24	e (P?)	22	22	50	?					
		e (S?)		26	30	7	½				
		eL		29.	8	16					
		ME		29	14	12		1			
		MN		29	46	13	2				
		F	22	55							
239	" 25	eP	11	45	40	3	2	3½		9160	Kansou (China)
		eS		55	59	9	1½	½			
		eL	12	19.	5	28					
		MN <sub>1</sub>		23	27	23	13				
		ME <sub>1</sub>		24	43	18		4½			
		MN <sub>2</sub>		26	15	16	8				
		ME <sub>2</sub> , MN <sub>3</sub>		30.	0	18	8	3½			
		ME <sub>3</sub>		37	36	16		5			
		F	13	45							
				F	10	45					
240	" 31	eL	10	11.	5	18					
		M		12.	8	14	4½	2½			
		F	10	45							

*E. F. Pigot*