Riverview College Observatory

RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	ε : 1	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^2	V_s
N	1 3	203	7.9	6.8	0.002	4	12.2	12.2	-0.01	457
E	1 3	224	7.3	4.3	0.009	4	12.3	12.2	-0.02	490
Z	2					4	11.9	12.0	+0.02	466

No.	Date	Phase	Time (G.M.T.) h. m. s.	Per	Amplitude A_N	A_E	A_Z	Δ	Remarks
Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables (1940) are used, unless stated otherwise.									
	1946		h m s	s	μ	μ	μ	km.	
1	Jan. 1	eL_E	01 13.7	14					
		ME	15 40	12		1			
		MN	16 43	12	1				
		MZ	17 31	12			1		
		F	01 30						
2	" 2	MZ	06 59.2	14			2		A few waves.
		F	07 00						
3	" 2	eL_Z	09 51.6	24					
		ME	52 38	20		5			
		MZ	54 08	20			5		
		MN	55 30	15	3				
		F	Merged in No 4						
4	" 2	MEZ	10 17.0	14		3	2		
		MN	17.5	17	6				
		F	10 35						
5	" 2	ePN_Z	15 17 40					3190 (28°7)	H 15 11 44
		eS_N	22 25						
		$i(sS)_N$	22 39	13	-16				
		eLR_Z	25.2	30					
		ME	27 48	16		13			
		MN	29 57	16	25				
		MZ	30 08	16			24		
		F	16 35						
6	" 2	eL_Z	20 30.8	16					
		MN	31 40	15	1				
		F	20 35						
7	" 2	eL_N	21 30.9	18					
		MZ	33 12	16			1		
		MN	33 22	16	1				
		F	21 40						
8	" 3	eL_E	12 35.6	20					
		ME	38 43	14		2			
		MZ	40 13	14			1		
		MN	40 58	14	1				
		F	12 50						
9	" 4	$e(L)_E$	20 42.9						
		F	21 00						
10	" 5	eZ	01 45 03	10					
		F	02 30						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
11	Jan. 5	eL_E	15 26.4	20					Heavy micro-
		MN	29 01	12	8				seisms.
		ME	29 29	12		3			
		MZ	30 15	15			5		
		F	16 05						
12	" 5	eL_Z	16 31.9	16					
		F	16 35						
13	" 5	iP_{NEZ}	20 02 31	8	-33	-27	+62	2710	Compression.
		ipP_{NEZ}	02 48	8	-133	-132	+225	(24°4)	h 0.01
		$iPcP_N$	06 04	6	+35				H 19 57 21
		iS_N	06 41	10	-160				From 20 06 04
		iE	06 45	10		69			NS & EW measure-
		iNZ	06 49	10	+380		+440		ments from the
		iE	06 56	10		-190			Wiechert.
		$i(sS)_E$	07 08	8		+140			
		ME	08 53	24		820			
		MN	09 12	18	370				
		MZ	09.5	24			670ca		
		eW_2N	22 55.8						
		MEZ	58.5	21			8		
		MN	59.0	20	6				
		F	00 00						
14	" 6	eE	08 52.5	14					Masked by micro-
		MNZ	54.8	16	3		3		seisms.
		F	09 05						
15	" 6	eN	13 38.1						
		eL_E	41.0	16					
		F	13 50						
16	" 6	eE	15 34.7	14					
		ME	44 26	16		8			
		MN	45 00	16	6				
		MZ	45 56	14			4		
		F	Merged in	No.17					
17	" 6	$i(P)_Z$	16 08 16	7			-6		Dilatation.
		$e(S)_N$	12 27	8					
		iE	12 35	10		-5			
		iN	12 54	8	+6				
		eL_E	13.8	26					
		ME	14 48	19		6			
		MN	15 27	22	8				
		MZ	15 32	17			9		
		F	16 35						
18	" 6	$e(S)_E$	22 50 23	10		+6			
		iN	50 25	12	+16				
		iN	50 53	12	+13				
		eL_E	52.7	18					
		MN	53 25	18	7				
		MZ	53 31	16			5		
		ME	53 53	16		5			
		F	23 30						
19	" 7	iP_{NEZ}	06 22 19	6	+11	-6	-19	5000	Dilatation.
		iZ	22 52	7			+10	(45°0)	H 06 14 05
		$iPPZ$	24 05	7			-8		
		eNE	24 35	14					
		iS_N	28 55	10	+10				
		iPS_E	29 06	11		+10			
		iGE	32 19	18		-39			
		iN	32 21	18	-39				
		iZ	32 35	12			+16		
		eL_E	35.7	36					
		eL_Z	36.8	36					
		MN	38 41	26	35				
		MZ	40 47	22			32		
		ME	41 39	20		34			
		F	07 55						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
20	Jan. 7	iP_Z	14 14 44	4			+3	2600	Compression
		iZ	16 31	7			+5	(23°4)	H 14 09 37
		iS_N	18 51	9	-7				
		iE	18 57	10		+6			
		iN	19 16	7	-10				
		eLR_Z	20.4	28					
		ME	21 39	16		4			
		MN	21 54	16	7				
		MZ	26 16	14			3		
		F	15 25						
21	" 7	eN	22 08.3						A few waves.
		eL_Z	10.6	16					
		F	22 20						
22	" 8	eL_N	03 37.1	22					
		MN	45 22	14	1				
		F	04 00						
23	" 8	eN	08 11,6						
		$eLNZ$	18.0	22					
		F	08 25						
24	" 8	eL_Z	09 14.5	22					
		MN	17 43	14	1				
		MZ	18 49	14			1		
		F	09 35						
25	" 8	eN	14 21.4						
		eL_Z	23.2	28					
		F	14 25						
26	" 9	MEZ	02 36.3	15		2	1		
		F	02 45						
27	" 9	eNE	06 36.3						
		F	06 50						
28	" 9	$e?_{NE}$	14 12.5						
		ME	22 56	15		2			
		MN	23 03	14	2				
		F	14 55						
29	" 9	eL_E	15 52.5	18					
		MZ	54 18	14			1		
		ME	54 37	14		1			
		F	16 05						
30	" 9	$e(L)_E$	21 19.0						
		MNEZ	22.2	12	1	1	1		
		F	21 25						
31	" 10	e_{NE}	14 21.1	13					
		eL_Z	23.5	20					
		F	14 35						
32	" 10	eL_Z	15 36.6	24					
		MNZ	38.0	20	5		5		
		F	16 00						
33	" 11	iP_{NZ}	01 44 44	4	-4		+14	9000	Compression
		$iPcP_{NZ}$	44 51	6	-2		+7	(81°0)	h 0.09
		ipP_Z	46 49	6			-5		H 01 33 30
		iPP_Z	47 51	8			+11		
		iS_N	54 04	8	-8				
		iS_E	54 06	8		+13			
		$iSKS_{NE}$	54 12	9	-25	-23			
		$iScS_N$	54 32	8	-8				
		isS_E	57 44	10		-7			
		iE	58 14	10		-7			
		MZ	02 06 27	20			9		
		MN	06 47	20	7				
		ME	08 45	21		6			
		F	03 50						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per s	Amplitude AN μ	AE μ	AZ μ	Δ km.	Remarks
	1946								
34	Jan. 11	eNZ	17 14 33	5					
		eNZ	19 11	13					
		eLZ	23.6	16					
		MN	26 47	14	5				
		MZ	27 09	16			6		
		ME	27 45	16		7			
		F	18 30						
35	" 12	eLZ	04 27.8	22					
		F	04 40						
36	" 12	ePZ	20 39 52	4				11780 (106°)	H 02 25 42
		iSKS$_N$	50 16	9	+7				
		iSKS$_E$	50 19	9		+4			Gutenberg's tables give; Δ 12,000 km. (108°) H 20 25 29
		i(SKKS)$_{NE}$	51 18	8	+10	+4			
		i(SKKKS)$_N$	51 37	9	+7				
		i(S)$_E$	51 59	10		+12			
		eNZ	53 06	14					
		iSS$_N$	59 05	10	-14				
		iSS$_E$	59 07	10		+11			
		iE	21 00 08	15		+8			
		eN	02 47	15					
		iSSS$_E$	03 03	14		-7			
		eLQ$_E$	08.8	40					
		eLR$_Z$	14.1	36					
		MN	17 01	22	11				
		MZ	20 21	22			17		
		ME	22 26	23		14			
		eW$_2$N	22 31.1	26					
		ME	38 31	20		5			
		MNZ	39.9	22	8		10		
	13	F	00 00						
37	" 13	iPZ	11 03 27	6			+3	2770 (24°9)	Compression H 10 58 06
		iS$_N$	07 45	9	+7				
		eLQ$_N$	08.3	20					
		eLR$_N$	09.1	22					
		eLR$_Z$	10.5	24					
		MN	11 03	16	9				
		ME	13 41	12		3			
		MZ	13 53	14			4		
		F	12 05						
38	" 13	eL$_E$	19 28.7	20					
		F	19 50						
39	" 13	eL$_E$	21 28.6	20					
		F	21 45						
40	" 13	eL$_E$	23 43.1	16					
		F	00 00						
41	" 14	e(L)Z	05 27.1						
		F	05 40						
42	" 14	eE	12 03 22	10					
		eLN	05.4	20					
		MN	06 42	16	1				
		MEZ	08.5	15		1	1		
		F	12 40						
	" 16	05h to 07h irregular waves, possibly non-seismic.							
43	" 16	eLZ	13 07.1	15					
		F	13 15						
44	" 16	eLZ	19 09.0	16					
		MZ	12.3	14			2		
		F	19 15						
45	" 17	iPNEZ	09 45 16	8	-17	+4	+32	3280 (29°5)	Compression h 0.015 H 09 39 22
		ipPZ	45 45	8			+36		
		iPPNZ	46 11	8	+44		-37		
		iS$_N$	50 00	13	+46				
		iN	50 12	12	+56				
		isS$_N$	50 44	14	+94				
		iE	51 01	12		-68			
		iN	51 22	9	-130				
		iE	52 43	10		-170			
		eLZ	52.9	26					
		MN	54 23	22	155				
		MEZ	54.4			180	110		F Merged in No. 46

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude AN μ	AE μ	AZ μ	Δ km.	Remarks
	1946								
46	Jan.17	eLZ	10 59.7	32					Early phases
		MZ	11 01 38	30			10		masked by No.45
		MNE	02 18	17	6	6			F 12 10
47	" 18	eEZ	15 41.5	14					
		eE	42.9	14					Small & obscured
		eNE	45.0	14					by microseisms.
		eLNE	49.9	20					
48	" 18	eNE	16 03.9	14					Obscured by mi n
		iNE	04 53	9	+5	+6			seisms.
		MN	08 48	14	2				
		ME	11 08	12		3			F 16 40
		MZ	13 06	13			3		
49	" 19	iPZ	13 44 24	5			+7	2570	Compression
		iSN	48 29	10	+12			(23°1)	Large micro-
		iSEZ	48 32	10		+6	-5		seisms.
		iNE	48 48	10	+11	+12			
		iZ	48 49	10			+11		
		iN	49 03	9	+11				
		eLZ	50.2	24					
		MEZ	51 45	17		6	6		
		MN	52 27	17	4				
		F	14 30						
50	" 20	iPNEZ	16 59 29	8	-9	-8	+16	2760	Compression
		i(PPP)N	17 00 19	8	+14			(24°8)	H 16 54 09
		iSN	03 46	6&14	+23				
		iE	03 50	9		+39			
		iE	04 09	9		+35			
		iN	04 13	7	-60				
		mE	04 22	9		23			
		eLQN	04.5	18					
		iSSZ	04 32	12			+36		
		iE	04 48	10		-54			
		eLREZ	05.8	22					
		ME	07 08	15		48			
		MN	07 17	14	63				
		MZ	09 47	15			47		
		F	Merged in No.51						
51	" 20	iPZ	19 01 21	5			+5	2710	Compression
		iNE	01 23	5	+4	+4		(24°4)	
		eSN	05 36	11					
		iN	05 47	6&11	+6				
		iE	05 49	6		+5			
		i(SS)N	06 23	10	+14				
		eLZ	07.7	24					
		MZ	08 26	18			5		
		MN	09 19	14	10				
		ME	09 29	14		6			
		F	Merged in No.52						
52	" 20	eL	20 02.0	20					
		F	20 25						
53	" 21	eLZ	16 02.4						
		MZ	06 51	24			3		
		ME	10 41	20		2			
		F	16 25						
54	" 21	ePZ	18 12 15	7				2650	
		eSN	16 25	10				(23°8)	
		iNE	16 33	9	+11	+6			
		iZ	16 3[illegible]	10			+7		
		iE	16 47	11		+10			
		iZ	16 49	12			+11		
		iN	16 56	5	+4				
		iE	17 06	11		+6			
		eLRE	18.2	22					
		MEZ	20.6	18		5	6		
		MN	21 15	17	5				
		F	19 10						

RIVERVIEW COLLEGE OBSERVATORY,

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude AN μ	AE μ	AZ μ	Δ km.	Remarks
	1946								
55	Jan.22	e(S)N	03 19 04	12					Masked by large microseisms.
		eE	19 14	12					
		eLN	21.7	24					
		MZ	23 15	20			7		
		MN	24 59	15	8				
		ME	26 15	16		7			
		F	04 30						
56	" 22	e(L)Z	12 14.7	16					
		MN	22.8	13	1				
		F	12 45?						
57	" 24	eLZ	02 37.6						
		F	02 55						
58	" 24	iPZ	06 27 14	9			+6	4970	Compression
		i(PcP)Z	28 32	9			+5	(44°7)	H 06 19 02
		iSE	33 48	14		+7			
		iE	34 10	5		+4			
		iSSE	37 08	12		-4			
		iN	37 42	8	+8				
		iE	37 47	8		+6			
		iE	38 31	8		+8			
		ME	48 20	13		7			
		MZ	51 15	18			9		
		MN	51 33	15	6				
		F	Merged in	No.59					
59	" 24	eLZ	08 12.3	18					
		F	08 25						
60	" 25	eLE	02 08.5	16					
		F	02 20						
61	" 25	MZ	19 01.1	20			1		
		F	19 30						
62	" 26	eLZ	01 22.3	25					A few long waves
		F							
63	" 26	eLE	02 58.8	30					
		MZ	03 03 00	28			2		
		F	03 15						
64	" 26	eZ	07 19.8						
		eLZ	26.3	25			7		
		MZ	29 39	22					
		ME	30 21	22		7			
		F	07 50						
65	" 27	ME	14 36 55	12		1			A few small waves.
		MZ	37 18	12			1		
		F	14 40						A few waves.
66	" 27	eLZ	18 18.1	20					
		F	18 25						A few waves.
67	" 27	eL	19 44.6	20					
		F	19 55						A few long waves
68	" 30	eL	12 38.2						
		F							Beginning lost on Galitzin while record was being changed. Except for M all measurements are from Wiechert.
69	" 31	e?N	23 16 12	2					
		eN	18 07	8					
		iN	20 47	5	+4				
		iE	21 17	5		+4			
		iE	24 17	5		-6			
		iE	24 49	6	+	+6			
		eLZ	25.3	17					
		MNEZ	27 38	16	5	7	7		
	Feb. 1	F	00 00						

D.J.K.O'CONNELL,S.J.
Director.

T.N.BURKE-GAFFNEY,S.J.
P.F.RHEINBERGER.

No. 2

1946, February.

Riverview College Observatory

RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kilo.) (NS. EW)
2. Wiechert Vertical Seismometer (80 kilo.)
3. Mainka Conical Pendulum Seismometer (460 kilo.) (NS, EW)
4. Galitzin Aperiodic Seismometer with Galvanometer registration (NS, EW, Vert.)

		V	T_o	ε : 1	$\frac{\varepsilon}{T_o}$		T_1 (Galv.)	T (Pend)	μ^2	V_s
N	1/3	200	8.1	6.8	0.002	4	12.2	12.2	-0.01	457
E	1/3	226	7.3	4.3	0.011	4	12.3	12.2	-0.02	490
Z	2					4	11.9	12.0	+0.02	466

No.	Date	Phase	Time (G.M.T.)	Per	Amplitude			Δ	Remarks
			h. m. s.	s.	A_N	A_E	A_Z	km.	
	Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables (1940) are used, unless stated otherwise.								
	1946		h m s	s	μ	μ	μ	km.	
70	Feb. 1	eL_Z	01 57.9	16					
		F	02 10						
71	" 1	e_N	02 42.2						
		eL_E	44.0	18					
		F	02 55						
72	" 1	iP_Z	05 16 45	6			+5	2660 (23°9)	Compression H 05 11 32
		iS_E	20 56	10		-5			
		iS_N	21 00	11	+6				
		iZ	21 07	10			+6		
		isS_{NE}	21 11	8	+5	+13			
		iE	21 33	10		+9			
		iSS_{NZ}	21 41	9	+8		-6		
		eLR_{NE}	22.4	22					
		MZ	23 44	20			7		
		ME	24 24	16		8			
		MN	24 40	14	9				
		F	06 20						
73	" 1	$i(P)_Z$	20 23 29	4			+3		Compression
		iS_{NE}	27 09	8	+4	+4			
		eL_N	29.4	17					
		MNZ	30 18	16	4		3		
		ME	30 38	14		2			
		F	20 55						
74	" 1	$e(L)_N$	23 47.2	22					
		ME	51 03	12		1			
		MNZ	51 41	14	2		1		
		F	00 ca.						
75	" 2	eL_Z	09 27.8	20					
		F	09 35						
76	" 2	eL	10 09.5	22					
		F	10 20						
77	" 3	i_N	02 46 06						
		eL_N	47.9	16					Masked by heavy microseisms.
		MN	49 39	15	4				
		MZ	52 55	18			5		
		ME	53 19	18		5			
		F	03 05						
78	" 3	eN	10 46.9						Masked by heavy microseisms.
		F	11 05						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude AN μ	AE μ	AZ μ	Δ km.	Remarks
	1946								
79	Feb. 4	eN	09 46 51						
		eL$_N$	51.6	26					
		ME	52 35	14		3			
		MZ	52 50	18			5		
		MN	53 13	18	4				
		F	10 15						
80	" 4	iPZ	21 52 55	6			+4	2480	Compression
		iE	53 01	6		+3		(22°3)	H 21 48 00
		ipPZ	53 05	6			+5		
		iE	53 18	6		+5			
		iZ	53 47	6			+7		
		eS$_N$	56 53	15					
		eE	56 55	12					
		eLQ$_N$	57.1	22					
		eLR$_Z$	58.3	25					
		MN$_1$	59 35	20	10				
		ME	59 51	18		7			
		MZ	22 00 04	19			9		
		MN$_2$	01 37	12	13				
		F	23 00						
81	" 5	eN	18 41.5						
		eL$_E$	43.[illegible]	24					
		MZ	44 31	20			5		
		ME	46 11	16		3			
		MN	46 45	14	3				
		F	19 20						
82	" 7	ePNZ	04 45 45	9				3200	H 04 39 55
		iZ	46 20	10			+5	(28°8)	
		eS$_N$	50 31	10					
		iNZ	50 51	9	-15		+5		
		i$_N$	51 13	8	-11				
		eSS$_N$	52 04	14					
		eLR$_Z$	53.5	27					
		ME	56 29	14		13			
		MN	57 31	14	10				
		MZ	57 35	14			13		
		F	06 00						
83	" 9	eL$_E$	01 08.9	20					Masked by heavy microseisms.
		ME	10 43	18		5			
		MN	12 27	12	3				
		MZ	13 03	13			3		
		F	01 30						
84	" 12	eN	00 02.6						
		ME	06.7	12		2			
		F	00 10						
85	" 12	eZ	00 44 52	6					
		eNE	48 40	14					
		eL$_Z$	50.3	20					
		MZ	52 08	18			5		
		MNE	52 32	15	4	3			
		F	01 20						
86	" 12	iPZ	06 20 34	4			-12	2340	Dilatation
		iPNE	20 55	4	-4	+6		(21°0)	h 0.01
		ipPNE	21 12	5	-7	+10			H 06 16 17
		isPZ	21 27	3			+11		
		iS$_N$	24 37	7	+8				Gutenberg's tables give:
		iE	24 40	6		-7			Δ 2300km. (20°7)
		eE	24 50	14					h, 100 km.
		eN	25 03	14					H 06 16 21
		iSS$_N$	25 14	11	-18				
		iSSS$_E$	25 37	7		+12			
		MN	28 11	11	3				
		MZ	28 17	11			3		
		ME	28 23	12		4			
		F	07 05						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
87	Feb.12	eL_Z	12 03.9	16					
		ME	06 17	14		1			
		MNZ	06 24	14	2		2		
		F	12 20						
88	" 12	$e(P)_Z$	13 16 26	8					
		$e(PP)_E$	17 16	8					
		$e(S)_N$	21 08	8					
		$e(SS)_N$	22 13	12					
		e_N	23 27	16					
		m_N	24 00	14	4				
		eL_Z	24.2	24					
		MZ	26 45	19			9		
		ME	26 50	13		8			
		MN	28 18	15	13				
		F	Merged in No.89						
89	" 12	i_N	14 23 37	4	+5				
		eL_E	26.4	28					
		ME_1	28 57	20		9			
		MN_1	29 09	24	10				
		ME_2	31 33	14		11			
		MN_2	32 06	14	14				
		MZ	32 15	14			12		
		F	15 10						
90	" 13	eL_{EZ}	11 59.7	18					
		ME	12 03 15	11		2			
		MZ	04 45	14			2		
		F	12 25						
91	" 14	eL_{EZ}	07 31.8	16					
		F	07 45						
92	" 15	e_E	10 48 20	5					
		e_E	51 47	10					
		eL_E	54.5	19					
		MN	56 54	14	4				MN from Wiechert
		ME	57 50	15		2			
		F	11 25						
93	" 16	eE_Z	20 13 38	8					
		$e(S)_E$	18 06	14					
		$e(SS)_Z$	20 46	14					
		eLR_E	22.8	27					
		MN	25 39	13	12				Mn from Wiechert
		ME	27 09	16		6			
		MZ	27 29	16			7		
		F	21 20						
94	" 16	$i(PP)_Z$	21 32 48	6			+4		
		$e(S)_E$	37 11	12					
		eN	39 52	14					
		eZ	40 01	14					
		eL_E	40.6	20					NS readings from the Wiechert.
		eL_Z	42.0	22					
		ME1	44 30	17		6			
		MN	44 36	13	8				
		MZ	46 19	15			6		
		ME2	47 05	15		7			
		F	Merged in No.95						
95	" 16	iPP[illegible]	22 05 11	5		+8	+5		
		$e(S)_E$	09 29	14					
		i_E	09 43	14		+11			
		eL_N	12.0	21					NS readings from the Wiechert.
		i_Z	12 34	10			+8		
		MN	14 12	16	16				
		ME1	15 19	19		13			
		MZ_1	15 35	19			10		
		MEZ_2	18 42	16		16	14		
		F	23 20						
96	" 17	e_E	09 49 38	11					Masked by micro-seisms.
		eL_Z	50.6	24					
		MEZ	53.8	18		4	5		
		F	10 10						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
97	Feb.17	$i(P)_N$	17 40 32	5	+3				NS readings from Wiechert.
		eZ	44 41						Masked by micro-seisms.
		eN	44 48	10					
		eL_Z	48.5	25					
		eL_N	48.7	23					
		ME_1	49 41	16		12			
		MN	50 56	16	14				
		ME_2MZ	51 17	14		15	10		
		F	18 35						
98	" 18	ePZ	00 22 31	5				3240	H 00 16 28
		iZ	23 11	5&15			-11	(29°1)	Microseisms present.
		eSN	27 22	10					
		iNZ	27 36	14	+11		+17		NS readings from Wiechert.
		iE	28 36	9		+18			
		iE	29 11	9		+20			
		iN	29 20	7	+10				
		iE	29 33	8		-19			
		iE	29 59	8		+31			
		eLR_N	30.1	24					
		$eLREZ$	30.4	36					
		MN	31 48	24	95				
		ME	32 24	16		37			
		MZ	34 19	14			43		
		F	02 05						
99	" 18	eL_E	04 27.0	20					
		MZ	29 00	14			3		
		ME	29 33	13		2			
		MN	35 29	11	5				NS reading from Wiechert.
		F	04 00						Masked by micro-seisms.
100	" 19	eL_E	06 06.2	20					
		ME	09 05	14		4			
		MZ	10 18	14			3		
		MN	16 08	13	8				MN from Wiechert
		F	06 30						
101	" 19	eZ	09 20 50						Masked by micro-seisms.
		iZ	25 17	10			+7		
		iN	25 21	6	-3				NS readings from Wiechert.
		eL_E	26.4	30					
		eLZ	28.7	28					
		ME	30 16	16		11			
		MZ_1	31 56	14			8		
		MN	32 54	13	9				
		MZ_2	37 32	13			12		
		F	10 20						
102	" 19	eE	16 41 16						Masked by micro-seisms.
		eL_E	44.2	30					
		eL_Z	45.9	24					
		ME_1	47 35	16		9			
		MZ	48 50	20			14		
		ME_2	50 20	14		12			
		MN	50 32	13	13				MN from Wiechert
		F	17 30						
103	" 20	eZ	03 52 12						Masked by micro-seisms.
		eN	59 36						
		eL_Z	04 07.3	20					NS readings from Wiechert.
		MN_1	12 37	22	42				
		ME_1	13 34	20		17			
		MZ_1	15 23	20			12		
		MNE_2	17 10	20	28	15			
		MZ_2	18 02	22			14		
		F	05 10						
104	" 21	eZ	08 08.2						
		ME	11 13	16		2			
		MZ	11 24	16			3		
		F	08 25						

1946, February.

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
105	Feb.21	eE	15 18 49	12					
		eL_E	23.9	20					
		MZ	28 14	16			3		
		ME	28 20	16		3			
		F	15 55						
106	" 21	eE_Z	16 53.8	20					A few waves.
		F	17 10						
107	" 22	e	04 21.8						A few waves.
		F	04 30						
108	" 22	eL	14 55.5	24					A few long waves.
		F	15 05						
109	" 22	eL_E	19 45.1	20					
		MN	49 14	11	2				MN from Wiechert
		MZ	49 22	14			2		
		ME	50 03	14		2			
		F	20 10						
110	" 24	iP_{EZ}	09 37 11	5		-2	+2	5150	Compression
		eP_N	37 11	5				(46°3)	H 09 28 47
		i_{NEZ}	37 15	6	-1	-5	+7		
		iPP_Z	39 04	8			-8		
		i_Z	39 34	?					
		eS_N	43 55	10					NS readings
		i_E	44 11	14		-26			from Wiechert.
		iSS_{NE}	47 12	16	+9	+13			
		iZ	47 32	10			-16		
		i_{EN}	47 36	8	+9	-10			
		eL_E	50.7	36					
		eL_Z	52.2	30					
		MN	55 04	25	24				
		MZ	55 47	24			32		
		ME	56 28	20		20			
		eW_2Z	12 17.8	24					
		F	12 35						
111	" 24	eZ	23 50 16	6					Deep focus?
		i_E	53 48	6		+3			
		F	00 00						
112	" 25	$e(P)_Z$	01 52 58	6					
		$i(S)_E$	02 03 22	7&14		+5			
		$e(SS)_E$	08 52	32					
		eLQ_E	14.8	32					
		ME	26 48	20		5			
		MNZ	28 25	22	10		9		MN from Wiechert
		F	03 35						
113	" 25	$e(L)_Z$	06 54.3						A few waves.
114	" 25	eE	09 37.1	8					
		ME	40 18	10		1			
		F	09 45						
115	" 26	e_{EZ}	05 35.9	6					
		eZ	39 28	12					
		iE	40 11	8		+5			
		F	06 05						
116	" 26	eE	06 21.9						Afew waves.
117	" 27	eE	00 23.2	10					Masked by very
		ME	27.0	13		5			large microseism
		F	00 40						
118	" 28	iP_{NEZ}	02 30 58	6		+3	+6	5060	Compression
		ePP_E	32 44	16				(45°5)	H 02 22 40
		mEZ	33 25	18		4	8		
		eS_N	37 37	10					
		iPS_E	37 47	10		+8			NS readings
		$iPPS_E$	37 59	10		+16			from Wiechert.
		iSS_E	40 54	14		+16			
		i_N	41 01	10	+12				
		iZ	41 12	10			-14		
		eL_E	45.1	30					
		eL_{NZ}	47.0	29					
		MN	48 46	25	18				
		MEZ	50 15	22		29	27		
		F	04 10						

D.J.K.O'CONNELL,S.J.
Director.

T.N.Burke-Gaffney,S.J.
P.F.Rheinberger.

No. 3 1946. March.

Riverview College Observatory

RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	ε : 1	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^2	V_s
N	1/3	206	7.8	6.6	0.003	4	12.2	12.2	-0.01	457
E	1/3	223	7.3	4.3	0.016	4	12.3	12.2	-0.02	490
Z	2					4	11.9	12.0	+0.02	466

No.	Date	Phase	Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
			h. m. s.	s.				km.	
Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables (1940) are used, unless otherwise stated.									
	1946		h m s	s	μ	μ	μ	km.	
119	Mar. 2	iE	23 32 52	8		+3			
		eE	33 42	14					
		eE	36 02	12					
		eZ	36 05	10					
		e(L)Z	37.1	17					
		MZ	45 58	18			4		Max. of another shock?
		F	00 05						
120	" 3	eE	20 50 06	12					
		eLE	56.7	22					
		ME	57 44	20		9			
		MNZ	21 01 02	13	8		7		MN from Wiechert.
		F	01 15						
121	" 4	eZ	00 51 56	7					
		eLZ	57.4	26					
		MEZ	58.5	22		6			
		MN	59 40	16	5				MN from Wiechert.
		F	01 15						
122	" 6	ePEZ	23 34 55	8				2270	
		eSE	38 37	8				(20°4)	
		eLRZ	40.2	24					
		MZ	42 43	17			2		
		ME	42 49	15		1			
		F	00 00						
123	" 7	e(P)Z	15 19 02	10					
		e(S)E	24 02	8					
		e(SS)E	25 39	15					
		eLZ	28.1	22					
		ME	30 36	16		6			
		MZ	31 09	18			6		
		MN	31 47	15	5				MN from Wiechert.
		F	16 00						
124	" 7	eL	17 18.0	16					
		F	17 35						
125	" 8	eL	11 41.4	16					Heavy microseisms.
		F	11 50						
126	" 8	eE	18 40 34						Masked by micro-seisms.
		eLE	45.0	20					
		ME	46 56	16		4			
		MZ	54 13	14			2		
		F	19 15						

1946, March.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date 1946	Phase	Time (G.M.T.) h m s	Per. s	Amplitude AN μ	AE μ	AZ μ	Δ km.	Remarks
127	Mar. 8	eEZ	21 40 41	7					Masked by micro-
		i_{NE}	40 51	6	+2	+4			seisms.
		eLZ	47.0	25					NS reading from
		MZ	48 11	22			6		Wiechert.
		ME	48 34	26		11			F 22 00
128	" 9	eE	16 47.6						
		eLRZ	17 03.7	28					Masked by large
		MZ	07 38	22			7		microseisms.
		ME	08 00	20		4			F 17 30
129	" 10	eZ	19 33.1						Masked by very
		eL_N	36.0	13					heavy microseism
		ME	38 40	11		5			
		MZ	38 48	12			6		
		F	19 45						
130	" 12	iP_Z	00 14 11	8			-5	9000 (81°0)	Dilatation
		eS_E	24 16	10					H 00 01 58
		$iSKS_{NE}$	24 22	11	+4	-			NS readings from
		iPS_E	25 09	16		+11			Wiechert.
		PPS_E	25 27	16		4			
		iSS_E	29 46	16		+10			
		i_E	30 02	16		15			
		eLRZ	39.1	30					
		MN	42 35	20	20				
		MEZ	43.3	20		10	14		
131	" 12	eLZ	03 16.0	24					
		ME	27 18	20		6			
		MZ	27 24	20			7		F 04 00
132	" 12	eE	06 31.5						
		iE	33 07	6		+5			
		eLE	33.4	20					
		ME	35 43	14		2			
		MZ	36 43	14			3		F 06 40
133	" 12	eLEZ	08 56.2	16					
		ME	58 37	16		3			
		MZ	58 49	16			3		F 09 15
134	" 13	$i(S)_E$	00 02 30	10		+11			
		i_Z	02 35	9			+9		
		$i(SS)_E$	03 11	10		+15			
		eLE	04.8	20					
		iE	05 56	9		-10			
		MN	05 57	15	9				
		iE	06 30	10					MN fromWiechert
		ME	08 51	17		10			
		MZ	09 41	15			8		
		Σ	Merged in	No.135					
135	" 13	e	01 12.8						
		eLN	15.3	18					
		F	01 35						
136	" 13	iP_{NEZ}	08 45 11	8	+6	+6	+14	2300 (20°7)	Compression.
		ipP_N	45 19	8	+10				H 08 40 31
		iS_E	48 55	10		+28			
		i_Z	49 03	10			+18		NS readings
		i_N	49 12	6	+16				from Wiechert.
		$iPcP_Z$	49 17	8			+51		
		$iSSS_E$	49 36	8		-29			
		eLR_Z	50.1	24					
		iE	50 16	14		+35			
		eLN	50.3	25					
		MZ_1	50 38	24			93		
		ME_1	50 59	12		45			
		MN_1ME_2	52 15	10	42	47			
		MZ_2	53 13	10			45		
		MN_2	54 01	9	55				
		F	10 20						
137	" 14	iE	00 40 17	8		-5			
		eLN	42.1	19					
		ME	43 12	16		4			
		MN	43 36	16	8				Mn from Wiechert
		MZ	44 05	18			6		
		F	01 15						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
138	Mar.14	e_E	02 32.0						
		ME	34 51	12		2			
		F	02 50						
139	" 15	iP_Z	03 12 21	5			+3	6070	Compression
		ipP_Z	12 28	5			+5	(54°6)	H 03 02 54
		iS_E	19 57	8		+6			
		ePS_E	20 09	12					
		$i(ScS)_E$	22 20	8		+7			
		eL_Z	27.2	24					
		ME	28 49	16		8			
		MN	34 00	16	6				MN from Wiechert
		MZ	34 16	16			5		
		F	04 40						
140	" 15	iP_{NEZ}	07 51 09	6	-3	-10	+22	2750	Compression
		ipP_{NEZ}	51 19	5	-9	-17	+38	(24°7)	H 07 45 50
		iPP_Z	51 43	8			+32		
		$i(PPP)_Z$	52 00	7			+25		NS readings
		$iPcP_{EZ}$	54 50	8		+11	+10		from Wiechert
		iS_N	55 26	8	-19				
		iE_Z	55 29	9		-18	+35		
		isS_Z	55 41	10			+68		
		isS_E	55 43	8		-55			
		iN_E	55 53	5	+20	-58			
		i_Z	55 57	7			+50ca		
		i_N	56 09	5	+10				
		iSS_{EZ}	56.22	8		+41	+38		
		eLR_{EZ}	57.4	25					
		MZ	58 49	22			115		
		ME	59 22	18		55			
		MN	59 51	17	55				
		eW_2Z	10 30.4	20					F 11 20
141	" 15	e_E	14 15.1						
		e_E	22.5	16					Heavy Micro-
		e_E	24.4	18					seisms.
		eLR_Z	42.2	20					
		MZ	50 15	18			4		
		ME	53 33	18		3			F 15 25
142	" 16	eL_E	12 04.5	18					
		ME	07 28	18		3			
		MZ	08 16	18			4		
		F	12 20						
143	" 17	MZ	20 23.6	14			4		
		ME	23.7	14		4			
		F	Merged in No.144						
144	" 17	e_E	20 59.2	15					
		$e(L)_E$	21 01.5	24					
		eL_{EZ}	04.4	20					
		MN	11 18	16	13				MN from Wiechert
		ME	12 00	16		3			
		F	21 40						
145	" 20	iP_Z	04 35 27	7			+4	2900	Compression
		i_E	35 31	6		+5		(26°1)	H 04 29 55
		iS_E	39 54	9		-8			
		i_N	39 59	7	+3				NS readings
		i_E	40 39	7		+14			from Wiechert.
		iSS_N	41 05	8	+7				
		eL_E	41.8	28					
		MN	42 56	16	18				
		MZ	43 24	18			12		
		ME	44 03	17		13			
		F	06 00						
146	" 20	e_E	11 18.9						
		eL_E	22.6	17					
		MZ	26.3	15			3		
		F	11 35						

RIVERVIEW COLLEGE OBSERVATORY,
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No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km	Remarks
	1946								
147	Mar.20	e_E	16 35.9						
		eLZ	38.1	22					
		ME	40 15	15		3			
		MZ	41 16	15			3		F 16 55
148	" 21	eL_{EZ}	06 27.2	19					
		ME	28 14	19		5			
		MZ	28 47	19			6		F 06 40
149	" 22	iP_Z	12 43 18	5			+5	2380 (21°.4)	Compression
		iS_N	47 09	5	+6				
		$i(PcP)_E$	47 16	6		+5			
		$i(PcP)_Z$	47 18	6			+5		NS readings
		i_E	47 24	5		+7			from Wiechert
		$e(LQ)_E$	47.7	12					
		eLR_N	48.3	23					
		MN	50 01	15	10				
		MZ	50 32	16			6		
		ME	51 24	15		8			
		F	13 55						
150	" 24	iPZ	15 37 46	8			+16	2380 (21°.4)	Compression H 15 32 59
		iS_N	41 37	8	+4				
		iS_E	41 41	8		-21			Exceptionally
		iPcPZ	41 47	7			+15		large micro-
		iSS_E	42 02	10		+29			seisms present.
		iSSZ	42 04	9			+28		
		eLR_E	43.0	25					NS readings
		ME	43 48	22		31			from WIechert.
		MZ	44 05	22			33		
		MN	45 08	14	20				
151	" 26	ePZ	17 18 41	12?				5960 (53°.6)	H 17 09 21
		ePE	18 42	12?					Very heavy micro
		iPcPZ	19 47	5			+7		seisms.
		PPZ	20 40	12					
		iS_N	26 10	8	+5				NS readings
		iE	26 17	8		-23			from Wiechert.
		iZ	26 19	8			+8		
		$iPPS_E$	26 30	9&19		+38			
		$iScS_N$	28 16	6	-5				
		$iScS_E$	28 24	9		-16			
		eSS_E	29 53	21					
		eSS_N	29 59	22					
		iE	31 01	6		+11			
		eLQ_E	31.3	28					
		eLR_E	34.1	29					
		eLR_N	34.2	32					
		MN	39 09	22	90				
		MZ	40 17	28			120		
		ME	40 37	25		100			F 20 00
152	" 27	eN	23 49.0						Readings from
		ME	00 29 15	19		15			Wiechert.
		F	00 40						
153	" 28	eE	17 47 39						
		eLE	57.7	22					
		MEZ	18 02.2	20		8	8		F 18 20
154	" 29	eE	07 52.0					13,300ca (120°)ca	Early phases
		$eSKKS_E$	53 17	18					masked by
		iPS_E	56 10	15		+6			microseisms.
		iZ	56 17	15			+8		
		$iPPS_E$	56 29	16		+9			
		eSS_E	08 02 47	20					
		eLR_Z	21.8	32					
		ME	23 10	27		12			
		MZ	23 32	27			17		
		MN	26 53	21	20				
		eW_2Z	09 33.5	25					F 10 20
155	" 30	ME	21 53 45	11		2			A few waves.
		F	22 00						

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Riverview College Observatory

RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	$\varepsilon : 1$	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^2	V_s
N	1/3	210	7.7	7.3	0.004	4	11.9	12.1	-0.01	430
E	1/3	225	7.2	5.7	0.014	4	12.3	12.2	-0.02	490
Z	2					4	10.9	11.0	-0.04	450

No.	Date	Phase	Time (G.M.T.) h. m. s.	Per s.	Amplitude A_N	A_E	A_Z	Δ km.	Remarks
Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables (1940) are used, unless otherwise stated.									
156	1946 Apr. 1	iPZ	h m s 12 42 25	s	μ	μ	μ	km.	
		iPcPZ	42 28	11			+5	10,870 (97°8)	H 12 28 52 Compression.
		iZ	46 12	8			+5		
		ePPN	46 23	13					NS readings are from the Wiechert
		iZ	48 21	9			+9		
		iSKSNE	53 01	10	+13	+11			
		iSE	53 45	20		-92			
		e(PS)N	55 02	27					
		iZ	13 00 00	16			-22		
		iSSE	00 17	24		+115			
		eSSN	00 19	26					
		iSSPE	00 36	21		-70			
		eE	03 34						
		e(LQ)E	06.3	31					
		LE	08.4	50		360			
		eLQN	08.5	37					
		eLRZ	13.2	37					
		MN	17 08	22	98				
		ME	19 15	22		57			
		MZ	20 13	22			80		
		eG2NE	14 19.4	38					
		e(W2)N	36.2	26					
157	" 1	MN	15 01 00	16	27				F 17 00
		eE	17 24 02	8					
		iE	25 09	7		+4			
		eLZ	44.1	31					
		ME	48 43	25		10			
		MZ	50 28	21			8		
158	" 1	eP?Z	19 11 05						F 18 25
		iZ	11 15	7			-4		
		eN	22 10	8					
		iSE	22 30	10		-17			NS readings from the Wiechert.
		e(SS)E	29 28	25					
		eLQE	37.2	30					
		eLREZ	42.0	30					
		ME	47 32	22		14			
		MZ	48 30	22			12		
		MN	49 18	18	30				
		eW2E	21 14.7	26					
		F	21 55						

RIVERVIEW COLLEGE OBSERVATORY,

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
159	Apr. 2	iSE	04 38 27	9		+4			
		eLQE	52.9	25					
		eLRE	58.3	25					
		ME	05 02 25	24		12			
		MZ	03 45	24			8		
		F	05 40						
160	" 2	eSE	06 03 10	10					
		eLQE	16.7	21					
		e(LR)E	23.6	21					
		ME	29 06	18		3			
		F	Merged in	No.161					
161	" 2	iSE	06 22 07	9		+6			
		e(LQ)E	35.7	19					
		e(LR)E	40.7	20					
		eLZ	44.7	20					
		MZ	49 30	19			4		
		ME	51 25	20		5			
		F	07 20						
162	" 2	e(L)E	07 57.1	16					
		MZ	08 09 15	15			3		
		F	08 25						
163	" 2	eE	16 54 33	13					
		e(S)E	55 08	9					
		eLE	17 15.0	21					
		MZ	17 39	16			3		
		ME	20 57	16		3			
		F	18 00						
164	" 2	eE	18 34.0						
		F	18 55						
165	" 3	eLE	03 43.7	30					
		ME	48 00	21		12			
		MZ	51 53	20			11		
		F	04 20						
166	" 3	iSE	09 23 25	9		+4			
		eLE	43.3	18					
		MZ	57.20	17			3		
		ME	10 02 08	18		3			
		F	10 20						
167	" 4	eLZ	21 44.6	15					
		F	22 05						
168	" 6	eLREZ	03 42.7	20					
		ME	46 48	18		4			
		MZ	49 36	18			4		
		F	04 15						
169	" 6	eSE	05 17 27	12					
		eLE	41.4	18					
		MZ	53 42	20			7		
		F	06 10						
170	" 6	eE	10 02.5						
		eE	07 32	12					
		eLE	08.9	24					
		ME	13 39	16		7			
		MN	18 00	14	7				MN from Wiechert
		F	10 50						
171	" 6	eE	14 09 35	10					
		eE	15 32	15					Perhaps more than one shock.
		eNE	21 56	22					
		eE	32 08	12					
		ME	36 12	19		7			
		MN	38 38	16	8				MNfrom Wiechert
		F	15 45						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date 1946	Phase	Time (G.M.T.) h	m	s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km	Remarks
172	Apr.11	iPKPZ	02	12	30	8			-6	15,500ca	Dilatation
		iZ		13	06	8			+9	(140°ca)	Preceded by
		iZ		14	00	9			+18		large micro-
		iZ		15	29	8			+14		seisms.
		eSSE		33	50	25					
		e_N		35	13	35					
		$e(SSS)_N$		38	38	29					
		e_E		39	09	32					
		$e(LQ)_E$		49	.6	42					
		eLQ_E		51	.5	70					
		e_E		53	.8	70					
		L_E		55	.7	47		110			
		eLR_Z		58	.5	34					
		ME_1	03	01	24	31		43			
		MN_1		02	14	42	173				
		MN_2		06	56	22	46				
		MZ		07	00	222			57		
		ME_2		08	13	21		28			
		F	07	10							
173	" 11	eP_{NEZ}	13	25	31	3&10				2510	
		iZ		25	38	6			+8	(22°6)	
		i_{NZ}		26	06	7	-4		+6		
		$ePcP_N$		29	27	8					
		iS_N		29	32	10	-24				
		i_{NE}		29	40	11	+10	+			iNE from Wiechert
		eLQ_N		30	.3	23					
		eLZ		30	.5	23					
		eLR_{EZ}		31	.1	21					
		MZ		32	15	18			14		
		ME		32	38	16		12			
		MN		32	45	14	24				
		F	14	20							
174	" 13	iP_{EZ}	06	49	45	6		+3	-5	2450	Dilatation
		i_{NEZ}		49	50	8	-5	-8	+10	(22°0)	H 06 44 52
		iPP_Z		50	02	8			+4		
		iS_E		53	41	5		-7			
		$iPcP_{NEZ}$		53	45	6	+27	-10	+18		
		isS_{NE}		53	55	7	+20	-12			
		eLR_{EZ}		55	.1	24					
		eL_N		55	.6	16					
		MN		56	37	16	9				
		ME		57	18	18		14			
		MZ		57	37	18			16		F 08 10
175	" 13	iP_Z	19	04	06	5			-4	3810	h 0.06
		ipP_Z		05	24	4			-4	(34°3)	H 18 57 55
		i_{EZ}		05	33	7		-7	+9		
		iS_N		09	03	6	-6				Gutenberg's tab-
		$i(sS)_N$		11	40	7&15	9				les give:
		iSS_Z		11	52	12			-9		▲ 3800km. (34°3)
		iSS_N		11	55	12	-30				h 400km.
		$i(ScS)_{NE}$		14	11	6	+17	+17			H 18 57 54
		MN		16	08	12	3				
		ME		19	20	16		4			
		MZ		19	49	14			2		
		F	19	55							
176	" 14	ME	01	10	.2	12		1			
		F	01	20							
177	" 14	eL_N	10	44	.1	21					
		ME		46	.9	13		2			
		MNZ		47	.1	15	3		2		
		F	11	00							
178	" 15	iP_{NEZ}	23	16	19	5	+21	-6	+28	2080	Compression
		iS_E		19	43	6&12		+10		(18°7)	H 23 12 01
		i_N		19	54	6&12	-13				Exceptionally
		$i(SS)_{NE}$		19	59	13	+26	+26			heavy microseisms
		ME		22	00	10		10			present.
		MNZ		22	.2	10	11		6		
		F	00	00							

RIVERVIEW COLLEGE OBSERVATORY,

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
179	Apr.16	eE	21 27 37	14					Masked by very heavy microseism
		eLEZ	30.8	21					
		MN	32 49	15	10				
		ME	33 01	15		5			
		F	21 50 ca.						
180	" 17	iPEZ	15 55 03	8		-10	+16	2350 (21°1)	Compression H 15 50 19
		iN	55 09	8	+9				
		iPPE	55 27	9		+6			
		iSN	58 51	6	-14				
		eN	58.9	21					Long waves begin on NS.
		iE	59 00	6		-14			
		iPcPE	59 12	6		+16			
		eLRN	59.8	18					
		MN1	16 01 11	16	41				
		MZ	01 20	16			13		
		ME	01 55	16		14			
		MN2	03 08	12	31				
		F	17 10						
181	" 18	e?Z	07 09.3	8					Masked by microseisms.
		eNE	10 52	10					
		i(S)E	14 55	11		+10			
		eN	14 57	11					
		i(SS)N	17 31	16	-10				
		eLREZ	19.1	27					
		MZ	20 30	22			15		
		ME	20 37	24		21			
		MN	21 06	15	13				
		F	08 20						
182	" 20	eLE	22 23.5	27					
		MEZ	26.5	16		5	5		
		MN	27.0	15	4				
		F	22 50						
183	" 21	iPEZ	06 15 07	7		-4	+5	2380 (21°4)	Compression H 06 10 20
		ipPZ	15 15	7			+6		
		iPPE	15 32	6		+3			
		iSN	18 57	6	+5				
		eE	18 59						
		i(PcP)E	19 04	6		-3			
		iZ	19 07	6			+5		
		iSSNE	19 13	8	+7	+5			
		eLN	20.1	22					
		MN1	21 14	16	7				
		MZ	21 40	16			4		
		ME	22 06	16		4			
		MN2	23 44	12	6				
		F	07 10						
184	" 22	eN	09 54.4	9					
		eN	58.4	16					
		eLE	10 02.0	26					
		ME	04 25	18		6			
		MN	06 29	14	5				
		F	10 40						
185	" 23	eE	00 59 50	7					
		e(S)E	01 04 10	14					
		eLN	06.5	18					
		eLE	07.7	30					
		ME	10 00	20		7			
		MN	10 56	14	5				
		F	01 45						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	
	1946								
186	Apr.23	iP_{NEZ}	05 00 19	7	+23	+10	+	2170 (19°5)	Compression H 04 55 52
		ipP_N	00 27	7	-38				
		$iPPP_N$	00 46	7	-40				
		iN	02 25	6	-41				
		iS_E	03 52	13		+74			
		isS_E	04 05	8		+21			
		eLQ_E	04.2	27					
		$i(SS)_N$	04 15	7	+44				
		$i(SSS)_E$	04 21	10		+64			
		eLR_N	04.7	29					
		iE	05 06	6		-63			
		ME_1	05 56	21		220			
		MN_1	06 13	21	360				NS max. from
		ME_2	06 52	12		165			Wiechert.
		MN_2	07 53	11	200				
		eW_2	07 51.5	23					
		F	08 20						
187	" 23	$ePNE$	10 47 05	10				4410 (39°7)	H 10 39 35
		iPP_{NE}	48 36	6	+4	-10			
		iE	48 51	6		-10			
		eS	53 06	12					
		ePS_E	53 23	18					
		eL_N	55.5	25					
		eLR_E	57.4	25					
		ME	58 31	22		16			
		MN	11 00 30	14	9				
		F	12 20						
188	" 23	eE	13 54.0						
		eL_N	56.4	18					
		ME	57 02	13		3			
		MN	58 37	11	3				
		F	14 10						
189	" 24	eE	14 41.0						
		$e(L)_E$	49.7						
		F	15 15						
190	" 25	$e?_E$	01 24.8						
		i_N	28 39	8	+4				
		ME	31 49	19		4			
		MN	32 11	19	5				
		F	01 40						
191	" 25	eL_E	22 14.1	20					
		ME	15 27	18		7			
		F	22 30						
192	" 26	$e(L)_N$	04 57.1	18					
		ME	05 01 56	19		5			
		MN	02 56	20	6				
		F	05 15						
193	" 26	eL_E	14 59.9	22					
		F	15 15						
194	" 26	e_Z	19 42 18						
		eN	43 17						
		iS_N	46 33	9	+9				
		iS_E	46 34	9		-11			
		$eLNE$	47.8	20					
		ME	49 28	16		8			
		MN	49 53	16	16				
		F	21 00						
195	" 30	eNZ	07 24 56	9					Heavy micro-
		$e(S)_N$	29 39	13					seisms.
		iNZ	29 58	9	-16		+9		
		eL_E	32.0	30					
		MZ	36 11	19			19		
		MNE	36 17	17	9	19			
		F	08 10						

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RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude AN μ	AE μ	AZ μ	Δ km.	Remarks
	1946								
200	May 4	$e(S)_N$	13 30 18	11					
		eL_N	34.1	18					
		ME	37 14	13		3			
		MZ	39 40	14			4		
		MN	40 53	13	3				F 14 10
201	" 5	eE	08 37.1						
		eL_E	39.6	15					F 08 50
202	" 5	$e(S)_E$	09 11 14	12					
		eL_E	16.2	20					
		MN	17 42	13	4				
		MZ	19 31	16			7		
		ME	19 51	16		6			F 10 05
203	" 6	eL_Z	00 44.0	19					
		F	01.0						
204	" 6	eE	18 08.7						May be more than one shock. No definite phases.
		eE	11.2						
		eE	14.4						
		iE	20 27	5		+5			
		iN	22 33	5	+4				
		MNEZ	24 20	13	3	3	4		F 18 35
205	" 8	iP_E	05 30 22	8		+6		6450	
		ePN	30 24					(58°9)	H 05 20 24
		ipP_{NE}	30 31	5	+8	+9			
		$iPcP_N$	31 06	7	+8				
		iS_E	38 24	8&14		+33			
		iPS_{NE}	38 35	10	-94	-124			
		$iScS_N$	40 17	10	+44				
		eN	43 05	18					
		eL_{QE}	45.2	30					
		eLR_N	46.9	33					
		eLR_E	47.8	33					
		MN	52 44	27	320ca				
		ME	54 41	24		260			F 09 20
206	" 8	eP_N	09 51 44	9				3560	
		iN	51 51	7	-11			(32°0)	H 09 45 20
		iS_{NE}	56 52	13	+42	+22			
		iSS_N	58 35	15	+50				
		$iSSS_N$	59 02	15	-72				
		eLR_E	59.7	36					
		MN	10 04.5	19	300ca				
		ME	04.8	19		290			
		eW_2E	12 41.7	22					
		MN	48 23	20	5				
		ME	50 17	20		3			F 13 15
207	" 8	$e(S)_E$	15 18 06	12					
		$e(S)_N$	18 08	11					
		eL_E	20.5	21					
		MN	22 18	15	4				
		ME	22 51	16		3			F 15 50
208	" 9	eP_{EZ}	04 15 26	7				2570	
		eS_E	19 31	9				(23°1)	H 04 10 22
		iE	19 42	11		+5			
		iZ	19 45	10			+6		
		eL_{QN}	20.0	14					
		ME	22 08	14		4			
		MNZ	23 09	18	9		8		F 05 20
209	" 9	eNE	15 41 03	5					
		iN	43 31	6	-6				
		eL_E	45.7	15					
		F	16 00						
210	" 10	eL_E	04 28.8	15					
		ME	30 24	12		2			F 04 40
211	" 11	$e(S)_E$	10 43 52						
		eL_N	46.1	20					
		MZ	48 27	16			5		
		MN	48 31	16	5				
		ME	49 07	14		4			
		F	11 10						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks.
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
212	May 11	iPZ	17 24 16	6			+3	4000	Compression
		iS_N	29 52	8	+5			(36°0)	H 17 17 16
		iS_E	29 55	8		+4			
		eLQ_N	32.4	20					
		$iSSS_N$	32 42	15	-16				
		eLR_Z	34.0	19					
		MN	37 58	11	13				
		MZ	39 41	18			17		
		ME	39 47	18		14			
		F	18 40						
213	" 11	eL_E	23 34.7	15					
		MN	37,6	12	2				
		F	23 45						
214	" 13	eZ	10 57.7						
		ME	11 01 21	9		2			
		F	11 05						
215	" 13	$e(P)_Z$	13 38 20	5					
		iS_N	41 55	7	+4				
		eLQ_N	42.0	15					
		eLR_N	43.3	24					
		ME	44 24	20		8			
		MNZ	44 37	19	10		8		
		F	14 20						
216	" 15	$e(PKP)_E$	22 29 27						Masked by micro-seisms.
		ePP_Z	30 39	14					
		$eSKS_E$	36 26						Δ by Gutenberg's Tables 13,100Km.ca. (118°ca)
		$eSKKS_E$	37 25						
		ePS_E	40 32	12					
		eSS_E	46 24	20					
		eLR_E	23 04.6	30					
		MZ	13 44	18			12		
		ME	15 16	18		10			
		F	? ?						
217	" 16	iP_{NZ}	05 30 50	4	+4		-5	2920	Dilatation
		i_{NZ}	31 06	4	+7		-11	(26°3)	H 05 25 16
		iE	31 11	4		+7			
		iPP_Z	31 31	8			+4		
		$iPPP_Z$	31 57	6			+7		
		$iPcP_N$	34 15	5	+6				
		iS_E	35 18	7		+6			
		iS_N	35 19	7	+10				
		isS_{NE}	35 32	8	-19	-16			
		eLQ_N	36,1	20					
		i_N	36 57	5	-14				
		eLR_Z	37.5	21					
		MN	38 48	21	35				
		MZ	39 44	19			31		
		ME	40 57	16		19			
		F	? ?						
218	" 17	i_Z	07 21 59	5			+5		
		eL_Z	26.5	26					
		MZ	28 14	18			9		
		ME	28 30	15		6			
		MN	29 31	11	5				
		F	07 50						
219	" 20	iP_{NZ}	03 39 27	2	+4		+4	2410	Compression
		i_{NZ}	39 32	5	+6		+6	(21°7)	
		iS_N	43 19	5	+6				
		eLQ_E	43.6	14					
		ME	44 38	12		10			
		MZ	45 11	12					
		MN	45 19	11	7				
		F	04 50						
220	" 20	e	13 52.2						A few waves.
		F	14 15						
221	" 20	eL_E	22 09.2	22					
		MN	12 16	14	2				
		F	22 20						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
222	May 21	$iPKP_{NEZ}$	09 36 22	4	+4	-5	+28	16,100ca	Compression
		$i(pPKP)_Z$	36 44	5			+20	(145°ca)	H 09 16 44
		iPP_Z	39 39	6			+7		Probably slightly deeper than normal
		eN	44 16	6					
		$iSKKS_E$	46 30	5		+4			
		$iSKKKS_E$	46 53	5		-3			
		$iSKSP_Z$	49 55	5			-4		Δ from Gutenberg's tables.
		eE	50 35	8					
		$ePPS_Z$	52 38	15					
		$ePPS_E$	52 48	21					
		$ePPPS_E$	54 02	10					
		eE	55 30	21					
		$ePSPS_E$	59 44	22					
		eE	10 11.4	21					
		eLR_{EZ}	27.1	30					
		ME	29 20	27		17			
		MNZ	29.6	27	21		25		
		eW_2Z	11 03.7	22					
		MZ	10 22	22			8		F 11 35
223	" 22	eNZ	05 17 33						
		eLE	22.0	20					
		ME	23.9	15		3			
		MNZ	25.6	14	3		3		F 05 50
224	" 22	iP_{NEZ}	09 39 13	5	+3	+2	-4		Dilatation
		iPP_Z	39 50	6			+3		
		iPP_E	39 51	6		+4			
		iE	42 56	6		+3			
		eN	43 07	7					
		$i(SS)_E$	44 51	8		+5			
		$i(SSS)_N$	45 13	10	+9				
		eL_N	45.4	22					
		MEZ	47.4	21		9	13		
		MN	48 22	13	4				F 10 45
225	" 23	iPZ	01 34 30	6			-4	3210	Dilatation
		eSE	39 17	9				(28°9)	H 01 28 32
		iN	39 39	7	-4				
		eLE	41.2	24					
		$MNEZ$	44.3	22	19	20	39		F 02 40
226	" 23	$e?N$	11 13 04						
		eL_{NZ}	16.4	22					
		ME	21 35	18		6			
		MZ	21 49	22			12		
		MN	22 11	20	9				F 11 45
227	" 23	iE	11 51 [illegible]/46	6		+4			
		ME	55 05	15		2			F 12 00
228	" 24	eE	18 07.4	15					
		eLE	11.7	22					
		MZ	17 08	16			3		
		ME	18 42	16		3			F 18 35
229	" 29	iZ	19 34 04	3			+2		A few waves
		iZ	34 38	5			-5		masked by microseisms.
230	" 30	eLE	11 53.2	37					
		iNE	54 34	8	+9	+14			Masked by
		iE	55 08	6		-15			large micro-
		iN	55 11	6	+15				seisms.
		eE	55.4	19					
		iNE	55 45	11	+16	+43			
		ME	57 51	18		20			
		MNZ	58 17	18	29		25		F 12 30
231	" 31	$eNEZ$	01 16.4	12					Masked by
		eLE	20.8	27					microseisms.
		MEZ	24 04	14		16	6		
		MN	24 28	15	13				F 02 15
232	" 31	eLE	06 24.0	28					
		ME	26 26	20		8			
		MN	29 13	15	4				
		F	06 40						

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RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	ε : 1	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^2	V_s
N	13	202	7.7	6.1	0.005	4	11.8	11.9	+0.04	410
E	13	223	7.2	4.7	0.019	4	12.3	12.2	-0.02	490
Z	2					4	10.7	10.9	+0.03	460

No.	Date	Phase	Time (G.M.T.) h. m. s.	Per s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables (1940) are used, unless otherwise stated.								
	1946		h m s	s	μ	μ	μ	km.	
233	June 1	e(S)N	09 00 52	7					
		iE	01 45	4		+6			
		eE	01 52	12					
		eLE	04.1	19					
		ME	06 01	16		7			
		MN	07 00	13	3				
		MZ	07 18	16			6		
		F	09 30						
234	" 1	i(P)Z	16 22 27	5					
		e(S)N	31 02						
		MN	46 33	22	13				
		ME	48 23	20		7			
		F	17 15						
235	" 2	iN	00 19 57	10	+8				Masked by micro-seisms.
		eLZ	25.0	21					
		MNE	27 21	19	17	14			
		MZ	28 03	19			12		
		F	01						
236	" 2	e(S)E	01 28 08	10					Masked by micro-seisms.
		i(S)N	28 09	7	-5				
		iE	29 30	9		+7			
		eN	29 34	12					
		eLE	41.4	27					
		ME	44 14	22		9			
		MN	45 13	22	16				
		MZ	45 51	22			15		
		F	02 20						
237	" 2	i(S)E	14 47 51	8		-8			Masked by micro-seisms.
		iZ	47 52	6			+6		
		eLN	49.1	24					
		MNEZ	50.5	18	9	7	9		
		F	15 20						
238	" 4	iSNE	04 55 09	5	-12	+8			Very deep focus. P obscured by very heavy microseisms.
		iScSNE	5 00 14	5	+12	+7			
		MN	03 28	12	3				
		F	05 10						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude AN μ	AE μ	AZ μ	Δ km.	Remarks
	1946								
239	June 4	e?N	17 47.4						
		eZ	48 27	9					
		eN	52 26	8					
		eLN	53.4	18					
		MN	54 40	19	10				
		MZ	55 09	15			6		
		ME	55 36	18		5			
		F							
240	" 5	e(P)Z	00 58 49	5				3300ca.	
		iZ	58 59	5			+9	(30°ca.)	
		iPPNZ	59 43	6	-10		+8		
		iN	01 03 13	12	-12				
		iN	03 32	20	+39				
		iNZ	03 53	15	-68		-36		
		eE	03 56	24					
		iE	05 56	6		-17			
		eLE	06.9	21					
		eLN	07.2	25					
		MZ	08 54	21			75		
		MN1	09 00	21	73				
		ME	09 22	18		56			
		MN2	10 02	20	78				
		F	02 10						
241	" 6	eZ	10 59.3						
		e(L)Z	11 41.8	20					
		MN	52 07	20	8				
		F	13 00						
242	" 6	eLZ	15 21.0	20					
		MN	22 12	19	5				
		MEZ	23.1	16		7	7		
		F	15 40						
243	" 7	ePPZ	04 33 24	15				13,300ca	Heavy micro-seisms. h 0.01
		epPPZ	33 52	16				(120°)ca	
		eSKKSE	39 40	14					
		eSE	41 08	12					
		iE	41 13	12		+14			Gutenberg's tables give: Δ 118° h 100 km.
		ePSE	43 17	17					
		epPSE	43 38	17					
		i(SPP)E	44 05	17		+33			
		e(PPS)N	44 20	19					
		iSSN	49 34	16	+13				
		iE	49 52	16		+14			
		esSSE	50 28	17					
		mE	51 06	20		17			
		eE	53 11	22					
		eGE	05 01.3	22					
		eLQN	03.6	30					
		eLRE	08.4	30					
		eLRZ	08.6	33					
		LE	09 05	35		56			
		ME	12 30	22		12			
		MZ	12 45	22			19		
		MN	17 24	20	9				
		F	07 20						
244	" 8	eLZ	23 33.3	20					
		ME	35 26	14		4			
		MZ	35 44	14			5		
		MN	35 56	12	4				
		F	23 50						
245	" 9	eE	10 36.0	10					
		eLE	38.2	18					
		MN	40 47	14	3				
		MEZ	41.0	14		7	6		
		F	11 10						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
246	June 12	iP_Z	16 16 48	7			+5	5220 (47°0)	Compression H 16 08 18
		eP_N	16 48						
		iPP_Z	18 37	6			+5		
		S_{NE}	23 36	8					
		$e(PS)_E$	23 43	19					
		$e(PPS)_N$	23 51	20					
		iSS_E	26 49	10		+11			
		i_N	27 12	9	+11				
		i_E	29 04	8		+14			
		eLR_E	29.5	24					
		M_E	35 29	15		11			
		M_N	35 33	16	15				
		M_Z	35 47	17			18		
		F	18 10						
247	" 13	eL_E	21 00.8	18					
		M_E	03.5	18		6			
		M_N	04.6	18	9				
		M_Z	06.1	16			4		
	5	F	21 25						
248	" 13	iP_{NEZ}	18 36 32	5	-4	+4	+9	4210 (37°9)	Compression H 18 29 16
		ipP_Z	36 42	5			+7		
		iPP_{NEZ}	38 00	5	-8	+8	+15		
		i_Z	38 08	5			+14		
		iS_N	42 21	8	-14				
		iS_E	42 25	8		-17			
		eE	42 57	22					
		i_N	43 16	10	+17				
		iSS_Z	44 58	7&13			-16		
		iSS_N	45 04	7	-16				
		i_Z	45 08	9			+12		
		eLR_N	46.4	28					
		$iScS_E$	46 42	7		-28			
		i_Z	49 17	7			+23		
		M_{E1}	50 16	25		67			
		M_{N1}	51 17	19	53				
		M_{E3}	52 29	19		43			
		M_{Z1}	53 25	23			56		
		MNZ_2	57 45	17	55		33		
		F	21 ca						
249	" 21	eE	12 32.1	10					Heavy micro-seisms.
		eL_N	35.5	21					
		MNZ	38.6	16	10		6		
		M_E	38.7	18		9			
		F	13 00						
250	" 23	eE	15 13.7						Masked by heavy microseisms.
		M_N	18.1	12	5				
		F							
251	" 23	iPP_Z	17 32 57	7			+10	12,400ca (112°ca)	Compression Masked by exceptionally large micro-seisms.
		$eSKS_E$	38 47	11					
		e_N	39 09	15					
		$e(S)_E$	40 30	15?					
		i_{NE}	40 45	8	+14	-17			
		ePS_Z	42 06	14					
		e_N	42 36	28					
		i_N	43 04	8	+9				
		$i(PPS)_N$	43 36	12	+20				
		eSS_E	48 03	27					
		e_{NE}	48 36	30					
		eLQ_E	58.6	30					
		eG_E	59.3	48					
		eG_N	59.6	45					
		eLR_{EZ}	18 04.7	36					
		M_E	07 51	24		30			
		M_Z	10 19	22			28		
		M_N	14.7	19	19				
		eW_2Z	19 08.4	27					
		M_Z	17 15	22			17		
		M_E	22.0	22		14			F

RIVERVIEW COLLEGE OBSERVATORY,

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
252	June 25	iP_{NE}	00 01 25	4	-2	+1		3900ca	h 0.02 ca.
		ipP_{NE}	02 02	4	-3			(35°ca)	All readings
		iSS_N	09 05	7	+4				from Mainka.
		i_N	09 35	4	-4				
		i_N	11 56	4	-16				
		ME	12 45	5		11			
		i_N	13 05						
		F							
253	" 26	iP_{NEZ}	12 38 53	2	-19	+14	-13	2080	Dilatation
		i_{NEZ}	38 57	2	+11	-10	+23	(18°7)	H 12 34 35
		ipP_{NEZ}	38 59	2	+59	-63	+90		
		iPP_{EZ}	39 05	7		+44	+40		
		eS_N	42 17	10					
		i_{EZ}	42 27	9		-51	-75		
		isS_N	42 31	7	+64				
		$iSSS_E$	42 55	14		+68			
		$iSSS_N$	42 56	14	+54				
		eLR_Z	43,2	27					
		ME	43 43	18		81			
		MN_1	43 47	15	76				
		MZ	48 11	14			49		
		MN_2	50 47	14	72				
		F	14 50						
254	" 27	iP_Z	21 45 20	5			+3	2990	Compression
		i_E	45 23	5		+3		(26°9)	h 0.005
		ipP_Z	45 34	5			+3		H 21 39 43
		i_Z	45 43	7			+6		
		e_E	45 45	8					
		i_{EZ}	46 22	5		-7	+6		
		eS_E	49 50	9					
		esS_E	50 16	9					
		i_{NE}	50 39	6	+3	+5			
		eLR_Z	52.3	26					
		MN	53 10	15	4				
		MZ	54 19	20			17		
		ME	54 25	20		13			
		F	22 40						
255	" 28	iP_{NEZ}	07 16 57	3	-3	+5	-6	2080	Dilatation
		ipP_{NEZ}	17 03	3	+27	-29	+40	(18°7)	Repetition of
		iPP_Z	17 09	6					No.253
		eS_N	20 21						H 07 12 39
		i_Z	20 28	7			+7		
		i_{EZ}	20 30	8		-5	-20		
		isS_N	20 33	7	+13				
		i_E	20 36	9		+15			
		eL_E	21.1	21					
		eL_{EZ}	21.3	27					
		ME	21 38	14		22			
		MN_1	21 51	14	11				
		MZ	21 54	21			37		
		MN2	28 25	12	20				
		F	09 20						
256	" 30	$i?_Z$	21 12 00	3			+4		Masked by micro-
		i_Z	15 32	?					seisms.
		i_E	15 36	4		+5			
		eL_N	15.8	21					
		MNE	16.6	15	7	5			
		MZ	17 13	20			8		
		F	21 45						

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RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	ε : 1	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^3	V_s
N	1	200	7.8	6.3	0.003	4	11.8	11.9	+0.04	410
	3	142	9.3	5.5	0.017					
E	1	220	7.2	4.8	0.017	4	12.3	12.2	-0.02	490
	3	165	8.7	5.6	0.020					
Z	2					4	11.0	11.0	+0.03	460

No.	Date	Phase	Time (G.M.T.) h. m. s.	Per s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables (1940) are used, unless stated otherwise.									
257	1946 July 1	e_N	08 54 21						
		eL_N	56.0	18					Masked by micro-seisms.
		MN	58 11	13	4				F 09 05
258	" 1	eL_Z	10 30.8	30					Masked by micro-seisms.
		ME	33 21	23		9			
		MZ	33 36	22			10		
		MN	33 51	22	8				F 10 50
259	" 1	e_E	14 33.1						Masked by micro-seisms.
		eL_Z	35.5	20					F 14 45
		MN	36 32	15	5				Masked by micro-seisms.
260	" 1	e_E	15 09.8						
		eL_Z	12.1	16					
		F	15 20						
261	" 1	iP_{NZ}	22 41 35	6	-5		+8	2980	Compression.
		ipP_Z	41 51	6			+9	(26°8)	h 100km.
		iPP_N	42 28	6	-13				H 22 36 00
		i_N	42 35	7	+22				(▲, h & H from Gutenberg's tables)
		i_Z	42 39	8			+23		
		iS_N	46 09	12	+20				
		i_N	46 22	16	+88				
		isS_{EZ}	46 45	14		-30	-54		
		isS_N	46 47	16	+153				
		eL_{NE}	49.8	32					
		MZ_1	50 32	27			102		
		ME	51 54	16		42			
		MZ_2	53 05	18			78		
		MN	53 26						
		F							
262	" 4	ePZ	07 05 48	6				2800	Gutenberg's tables
		ipP_Z	06 26	5			+4	(25°2)	used.
		iPP_N	06 37	6	+4				h 200 km.
		isP_Z	06 41	6					H 07 00 33
		isP_E	06 43	6		-4			Microseisms present.
		iS_N	10 00	7	-4				
		iS_E	10 01	7		-4			
		i_{NE}	10 43	7	+7	-7			
		isS_N	11 05	6	+8				
		isS_{EZ}	11 07	7		+10	+6		
		i_N	11 28	7	-7				
		F	07 30						

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
285	July 24	eL_E	10 43.3	19					
		F	Merged in	No.286					
286	" 24	e_N	11 07 06	11					Masked by micro-
		eS_N	10 37	12					seisms and coda
		e_E	10 51	15					of No.285
		i_N	10 55	16	+18				
		isS_E	11 17	14		-6			Replica of No.261.
		isS_N	11 20	15	+32				
		eL_E	14.5	30					
		MN	15 09	27	30				
		ME	16 27	9		8			F 16 20
287	" 24	$e(L)_N$	19 44.6	18					
		ME	49 23	16		5			F 20 05
288	" 25	$i(P)_Z$	14 17 41	3			+5		Compression
		MZ	39,10	18			4		F 14 55
289	" 25	PZ?	16 55 01						Masked by large
		iS_N	17 05 35	9	-7				microseisms.
		eEZ	05 38	11					
		i_E	05 52	7		-6			
		iNE	05 57	9	+8	+15			
		i_E	06 16	9		+7			
		iPS_N	06 55	9	+7				
		eSS_E	11 37	15					
		eLQ_N	18.0	20					
		eLR_E	23.7	26					
		MN	27 26	22	13				
		ME	28 44	21		9			
		MZ	30 40	20			12		
		eW_2Z	19 08.1	18					F 19 20
290	" 26	i?Z	06 59 19	7			-8		Masked by very
		i?Z	07 02 26	7			-8		large microseisms.
		i?E	03 15	7		+6			
		eLR_{NEZ}	37.8	27					F 07 55
291	" 26	ePZ	22 36 33	3				2440	
		i_E	36 37	4		-5		(21°9)	h 0.01
		iNE	36 49	5	-4	-4			H 22 31 47
		ipP_Z	36 55	4			+7		
		iPP_{NEZ}	37 03	5	-9	-13	+15		
		iS_E	40 24	5		-15			
		$iPcP_N$	40 28	5	-22				
		$iPcP_E$	40 29	5		+68			
		iZ	40 32	6			+30		
		isS_{NE}	41 03	6	+10	+18			
		iSSZ	41 08	6			+18		
		eLN	43.0	18					
		MN	43 43	16	9				
		MZ	44 10	15			5		
		ME	44 33	15		6			F 23 20
292	" 27	iZ	18 32 59	5					
		eL_{NE}	38.1	17					
		MZ	40 15	15			4		F 18 55
293	" 27	ePZ	21 48 05					3180	
		epP_{NZ}	48 15	8				(28°6)	H 21 42 10
		iZ	48 29	5			+6		
		iN	48 53	5	-5				
		iS_{NE}	52 48	9	-9	-6			
		isS_{NE}	53 02	7	+12	+6			
		i_{NE}	53 49	7	+9	+6			
		eLR_{NZ}	55.2	26					
		MN	55 55	22	15				
		MZ	56 12	22			15		
		ME	57 35	19		9			F 22 20
294	" 30	eL_E	17 02.1	20					
		MZ	06 21	13			3		F 17 15
295	" 31	eL_E	13 24.6	18					
		eL_N	25.5	21					Masked by heavy
		MNE	26.8	19	10	10			microseisms.
		MZ	26 58	19			15		
		F	13 40						

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RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. 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	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^2	V_s
N	1	215	7.6	6.4	0.002	4	11.9	11.9	+0.04	410
	3	148	9.4	6.2	0.023					
E	1	221	7.2	4.6	0.011	4	12.3	12.2	-0.02	490
	3	175	8.0	6.9	0.017					
Z	2					4	11.0	11.0	0.00	460

No.	Date	Phase	Time (G.M.T.) h. m. s.	Per s.	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
		Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables (1940) are used, unless otherwise stated.							
	1946		h m s	s	μ	μ	μ	km.	
296	Aug. 2	eN	11 29.4						
		eL_N	44.8	16					
		eL_E	46.7	18					
		ME	48 16	16		4			F 12 00
297	" 2	ePZ	19 33 13	10				12,000	h 100 km.
		ePP_Z	37 38	16				(108°)	H 19 18 59
		$iSKS_N$	43 45	8	-5				Δ, h & H from Gutenberg's Tables.
		e_E	43 55	18					
		$iSKKS_N$	44 13	8	+5				Large microseisms present.
		eS_E	45 15	19					
		isS_E	45 54	12		+8			
		ePS_E	47 03	15					
		iPS_N	47 05	15	-14				
		$epPS_E$	47 23	12		10			
		$ipPS_Z$	47 26	12			-8		
		$iSPP_N$	47 51	11	+7				
		$ePPS_E$	47 55	20					
		$ePPS_N$	48 01	20					
		iSS_E	52 53	17		+12			
		iSS_N	52 54	15	+15				
		isS_E	53 30	14		+7			
		$iSSS_E$	57 05	20		-19			
		e_{NE}	57 14	33					
		eLQ_{NE}	20 03.9	33					
		eLR_{NZ}	08.5	30					
		MN	09 19	26	23				
		MZ	09 27	27			45		
		ME	09 34	27		25			
		eW_2E	21 29.9	27					h
298	" 3	eLN	13 45.1	25					F 22.0
		MZ	47 36	20					
299	" 4	iP_{EZ}	15 30 29	4		-4	11 +9	2950	F 14 00
		ipP_Z	31 53	4			+4	(26°5)	Compression
		iS_{NEZ}	34 25	5	-6	+7	+4		h 0.08
		i_E	34 55	4		+5			H 15 25 32
		i_N	36 07	7	-7				
		i_N	37 06	7	-5				Gutenberg's Tables give: Δ 26°1, h 500 km. H 15 25 29
		i_N	37 38	7	+11				
		$iScS_N$	40 20	6	-10				
		F	15 50						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date 1946	Phase	Time (G.M.T.) h m s	Per s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
300	Aug. 4	iPKP$_{EZ}$	18 10 35	12	...	+8	-23ca	15,560ca	Dilatation
		i$_Z$	11 14	7			+29	(140°ca)	
		i$_E$	11 23	9		+12			Galitzin records badly entangled, Hard to decipher.
		iPP$_E$	13 44	18		-28			
		i$_E$	14 14	18		+35			
		i$_{EZ}$	14 35	6		+28	-51		
		i$_E$	14 55	8		+17			
		i$_E$	15 08	7		+36			
		iSKS$_E$	17 41	10		+21			
		iSKKS$_E$	20 27	11		+15			
		i(SKKKS)$_E$	20 40	7		+17			
		i(S)$_E$	21 43	11		+30			
		i(PS)$_E$	24 09	16		-60			
		i$_E$	24 30	16		-73			
		i(PPS)$_E$	25 52	12		+23ca			
		i$_E$	29 30	12		-34			
		i$_E$	31 16	13		+30			
		i(SSP)$_E$	32 30	13		+22			
		e$_E$	33 09	60					2 long period waves on EW Wiechert.
		i(SSS)$_E$	37 01	16		+37			
		i$_E$	38 21	18		+75			
		i$_E$	38 41	18		+97			
		i$_E$	39 55	13		+59			Some of these impulses perhaps belong to No.301.
		i$_E$	42 55	13		+53			
		i$_E$	45 15	15		+59			
		eLQ$_N$	49.0	32					
		eLR$_E$	56.5	27					
		ME	19 02 35	21		80			Max. from Wiechert.
		MN	06 09	20	66				
		F	Merged in No.301						
301	" 4	i(PKP)$_Z$	18 23 15	12			-43		Dilatation
		i(PP)$_E$	26 19	12		-34			
		i(SKKKS)$_E$	33 29	15		+84			
		i$_E$	34 04	12		-60			
		i(S)$_E$	34 30	16		+93			
		i(PS)$_Z$	37 53	12			+40		
		i(PS)$_E$	37 57	12		+48			
		i(SSS)$_E$	50 56	18		-59			
		F	21 45						
302	" 5	iP$_Z$	04 08 17	6			-7	3350	Dilatation
		i$_Z$	09 41	6			-4	(30°1)	
		iS$_N$	13 12	10	+8				
		eL$_E$	15.6	25					
		ME$_1$	18 08	16		12			
		MZ$_1$	18 39	17			9		
		MN$_1$	18 44	17	9				
		ME$_2$	20 22	12		8			
		MZ$_2$	25 15	11			11		
		MN$_2$	25 44	11	13				
		F	04 50						
303	" 5	eL$_{EZ}$	19 13.5	22					
		ME$_Z$	16.1	15		3	4		
		F	19 25						
304	" 6	iPN$_{EZ}$	02 52 33	4	-9	-4	+14	2890	Compression
		ipP$_N$	52 42	4	-4			(26°0)	H 02 47 01
		ipP$_{EZ}$	52 44	5		+3	-9		
		iPP$_{NZ}$	53 15	6	+4		-4		
		iPPP$_E$	53 26	5		+4			
		iS$_N$	56 59	6	+12				
		iS$_E$	57 06	6		-17			
		i$_N$	57 12	7	+31				
		i$_N$	57 38	9	+35				
		i$_E$	57 47	8		-22			
		eLR$_Z$	59.2	26					
		MNZ$_1$	03 02 22	14	23		17		
		i(ScS)$_E$	03 15	9		+13			
		ME	03 53	12		28			
		MNZ$_2$	05 02	13	30		21		
		F	04 35						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km	Remarks
	1946								
305	Aug. 8	i(PKP)$_{EZ}$	13 48 21	12		+5	-6		Dilatation.
		i_Z	48 36	6			+18		Aftershock of
		i_E	52 15	12		+15			No.300
		i_Z	52 18	6			+18		
		i_E	52 28	12		+15			
		i_Z	52 44	11			-16		
		iPS_Z	14 01 22	10			-10		
		eSSE	09 10	16					
		e_E	10.8	45					
		$eL(Q)_N$	28.6	32					
		eLR_Z	32.5	30					
		eLR_E	33.3	30					
		MN	37 00	27	17				
		ME	39 08	22		15			
		MZ	40 02	21			22		F 17 00
306	" 11	iP_Z	02 00 01	3			+5	2820	Compression
		iPN_Z	00 03	6	+27		-33	(25°4)	H 01 54 35
		i_{NZ}	00 07	6	-45		+69		
		iPP_N	00 38	6	+40				
		$iPPP_N$	00 58	8	+28				
		i_{NZ}	01 41	7	+40		-25		
		$iPcPN_Z$	03 37	8	-16		+29		
		iS_N	04 23	9	+26				
		i_N	04 32	6	-48				
		i_N	04 37	10	+100				
		iE_Z	04 49	7		-52	-43		
		i_E	04 54	9		-180			
		eLQ_E	05.1	18					
		eLQ_N	05.3	21					
		iSS_N	05 24	8	+110				
		iSS_E	05 25	8		-175			
		$iSSS_E$	05 47	9		+94			
		eLR_N	06.3	30					
		ME_1	08 37	17		255			
		MNZ_1	08.9	17	154		87		
		MEZ_2	11.2	13		155	98		F 04 20
307	" 12	eL_N	01 05.3	15					
		MNE	06.9	14	4	4			F 01 15
308	" 12	e_E	03 39.5						
		eL_E	57.0	26					
		ME	04 04 13	18		7			
		eW2?E	41.3	20					
		ME	48.5	16		4			F 05 30
309	" 12	$e?_Z$	07 00 35						
		MZ	18 20	17			8		F 07 40
310	" 15	iPN_{EZ}	15 28 49	7	+9	+21	-19	2410	Dilatation
		$ipPN_{EZ}$	29 12	7	+11	+14	-15		h 100 km.
		i_Z	29 16	8			+31	(21°7)	H 15 24 06
		isP_N	29 25	7	+10				Interpretation
		iPP_E	29 30	10		+31			from Gutenberg's
		iS_{NE}	32 43	10	+29	-58			tables.
		$iPcP_Z$	32 48	8			-56		
		i_E	33 06	10		+143			
		i_Z	33 08	8					
		$i(sS)_E$	33 29	9		-51			
		iSS_N	33 39	14	+83				
		eLQ_E	33.7	23					
		eLR_N	34.2	18					
		MN	36 22	13	97				
		MZ	37 27	15			72		
		ME	38 05	13		67			
311	" 15	eLE	20 20.1	22					F 17 35
		ME	25 15	19		6			
312	" 20	ePZ	22 15 18	10					F 20 40
		$i(S)_N$	20 20	11	+10				
		eL_E	22.8	22					
		MN	26 42	16	13				
		MZ_1	26 53	15			17		
		ME	27 11	12		10			F 23 30
		MNZ_2	33 00	11	18		20		

RIVERVIEW COLLEGE OBSERVATORY, SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
313	Aug.21	iP_Z	18 06 17	7			-7	3210	Dilatation
		ipP_{EZ}	06 38	7		+7	-8	(28°9)	h 0.01
		iPP_{EZ}	07 16	6		-11	+13		H 18 00 25
		i_E	07 35	5		+10			
		$isPP_E$	08 00	6		+11			Gutenberg's tables give:
		eE	10 26	14					Δ 27°7
		iS_N	10 59	7	-8				h 100 km
		esS_N	11 33	13					H 18 00 34
		isS_E	11 37	13		-11			
		$i(G)_N$	12 13	12	-20				
		i_N	12 45	12	+27				
		$iScP_N$	13 06	9	+12				
		i_N	13 18	8	-16				
		eL_N	14.2	24					
		eL_E	14.5	25					
		MEZ	15 01	20		17	23		
		MN	15 06	15	25				
		$iScS_N$	16 52	8	+100				
		$iScS_E$	16 53	8		-23			
		i_{NE}	17 36	8	+77	-11			
		F	20 00						
314	" 21	eL_Z	20 30.8	19					F 21 30
		MZ	38 09	19			10		Masked by large microseisms.
315	" 22	e_{NE}	16 48 30	14					
		eN	55 39	15					
		eL_Z	57.2	23					
		MN	58 47	15	4				
		MZ	58 53	18			6		
		ME	59 01	15		4			F 17 25
316	" 28	eL_{EZ}	01 52.4	22					Masked by micro-seisms.
		MN	53 38	16	5				
		MZ	53 58	17			7		
		ME	54 04	17		5			
		F	02 20						
317	" 28	ePE_Z	20 14 05	7		2	4		Masked by micro-sisms.
		$e(S)_E$	18 52	10		3			
		eLQ_N	20.2	15					
		$e(SS)_N$	20 22	10	4				
		eLR_{NE}	21.2	21					
		MZ	24 37	18			24		
		ME	24 42	18		14			
		MN	25 41	12	12				
		F	21 45						
318	" 28	ePP_Z	22 46 46	7				12,500	h 600 km.
		$iSKS_N$	51 43	7	+3			(112°5)	Interpretation from Gutemberg's tables.
		$e(S)_E$	53 32						
		iSP_Z	55 24	10			+8		
		eZ	58 12	16					
		F	23 20						
319	" 29	eZ	00 13 46	9					
		eE	18 35	8					
		wL_E	20.9	22					
		MN	22 12	15	5				
		ME	22 46	17		6			
		MZ	23 17	16			7		
		F	00 50						
320	" 29	iP_E	23 00 21						
		iPP_N	00 47					2460	H 22 55 27
		iS_{EZ}	04 18	7		-16	-5	(22°1)	
		iS_N	04 22	7	+13				
		isS_Z	04 33	7			+21		
		iSS_N	04 57	8	-7				
		eLR_N	05 45	18					
		eLR_E	05 52	21					
		MZ	07 19	19			13		
		ME	07 24	18		12			
		MN	07 45	15	8				
		F	23 50						
321	" 30	eZ	20 20 11						
		eL_Z	30.1	21					
		F	20 55						

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SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	ε : 1	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^2	V_s
N	1	220	7.7	6.3	0.003	4	11.8	11.9	+0.04	410
	3	165	9.3	6.6	0.027					
E	1	219	7.3	5.3	0.009	4	12.3	12.2	-0.02	490
	3	158	8.2	8.5	0.015					
Z	2					4	11.0	11.0	0.0	450

No.	Date	Phase	Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
			h. m. s.	s.				km.	
Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Bullen's Tables are used, unless otherwise stated.									
	1946		h m s	s	μ	μ	μ	km.	
322	Sept. 3	iP_{NZ}	04 23 07	6	-8		+10		Compression
		$i(S)_E$	28 13	7		-7			
		i_E	29 36	6		+5			
		eL_N	30.4	24					
		eL_E	30.7	22					
		MN	31 43	18	8				
		ME	31 48	17		8			
		MZ	32 29	10			2		
		F	04 45						
323	" 4	eL_E	08 44.4	20					
		MZ	46 29	17			8		
		ME	46 52	15		5			
		MN	47 01	15	5				
		F	09 00						
324	" 7	$i?_Z$	12 26 20	4			+5		Masked by heavy microseisms.
		$i(S)_N$	30 18	7	-8				
		i_{NE}	30 24	8	+20	+18			
		i_Z	30 26	9			+9		
		eL_E	31.8	21					
		MNZ	33 22	18	10		12		
		ME	33 29	20		11			
		F	12 50						
325	" 9	eZ	07 34.5						
		eL_Z	38.8	17					
		ME	39 34	13		2			
		MN	40 28	14	3				
		MZ	40 37	14			3		
		F	07 50						
326	" 9	ePZ	10 47 25	5					
		eS_N	55 41	12					
		e_E	55 50	12					
		$iScS_E$	57 01	9		-3			
		eL_E	11 06.5	20					
		MNZ	11 33	18	6		8		
		ME	13 04	21		9			
		F	12 00						
327	" 9	e_N	16 58.3						A few waves.
		F	17 05						

RIVERVIEW COLLEGE OBSERVATORY,

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No.	Date	Phase	Time (G.M.T.) h m s	Per.	Amplitude A_N μ	Amplitude A_E μ	Amplitude A_Z μ	Δ km.	Remarks
	1946								
328	Sept.9	e_E	19 22 35	7					
		e_E	23 06	10					
		i_Z	24 10	4			+4		
		i_{NE}	24 19	4	+4	+11			
		i_{NE}	25 19	6	+6	+10			
		eL_N	25.7	14					
		MNZ	27.3	13	12		8		
		ME	27 35	12		7			
		F	19 55						
329	" 10	e_N	00 42 24	10					
		e_E	47 51	21					
		e_N	48 18	9					
		eL_Z	59.8	24					
		MZ	01 03 13	18			11		
		MN	08 00	16	5				
		ME	08 27	16		9			
		F	01 45						
330	" 11	eL_Z	02 03.6	18					A few shallow waves.
		F	02 15						
331	" 11	eL_E	10 59.5	18					A few shallow
		MZ	11 05 39	15			5		waves.
		F	11 20						
332	" 11	e_N	12 34 01						Masked by large
		eL_{EZ}	37.8	21					microseisms.
		MZ	39 26	19			11		
		ME	39 32	18		7			
		MN	39 52	18	10				
		F	Merged in	No.333					
333	" 11	$i\binom{P}{S}_N$	13 06 37	6	-4				Masked by large
		$e\binom{P}{S}_N$	11 15	9					microseisms.
		i_Z	11 39	15			-10		
		i_N	11 42	18	+14				
		e_E	12 31	15					
		eL_E	15.1	24					
		eL_N	15.9	25					
		ME	16 55	20		9			
		MZ	17 27	19			15		
		MN	17 33	20	18				
		F	14 00						
334	" 11	eL_{NZ}	18 25.5	22					
		MZ	26 41	15			5		
		F	18 40						
335	" 12	eP_Z	14 01 32	9					Large microseisms
		i_{NZ}	01 47	6	-7		+7		
		i_N	02 38	6	+8				Record badly
		eS_{NE}	06 22	13					tangled with No.336
		i_N	06 43	12	+56				and No.337
		i_E	07 36	9		+14			
		SS_E	07 52	18		13			
		i_N	08 12	11	+25				
		eL_N	10.3	27					
		ME	11 55	19		39			
		MN	12 32	19	48				
		F	? ?						
336	" 12	eP_E	15 29 22	10				8890 (80°0)	H 15 17 14
		$iPcP_{NEZ}$	29 30	7	+11	-10	-46		Dilatation
		iS_{NE}	39 22	9	-55	-49			Large microseisms
		$iScS_E$	39 59	9		+66			Galitzin records
		eLR_E	53.3	43					badly tangled.
		ME	16 00 54	32		820			
		MZ	01 18	30			720		
		MN	02 09	24	460				
		F	? ?						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
337	Sept.12	iP_{NEZ}	15 32 13	6	+13	+8	-33	8950	Dilatation
		$iPcP_{NE}$	32 25	8	+26	-29		(80°5)	H 15 20 03
		iPP_E	35 24	9		-19			
		iS_E	42 16	9		-110			Galitzin records
		iS_N	42 17	9	-80				badly tangled.
		iE	42 29	8		+40			
		$iPPS_E$	43 15	8		+88			
		eE	45.1	22					
		iN	45 09	16	-80				
		eN	45.7	33					Many of the
		iN	46 31	13	+82				unidentified
		iN	47 03	10	+45				waves listed in
		iSS_E	47 16	16		+85			No.337 may belong
		iSS_N	47 23	16	+117				to No.336.
		mNE	48 02	25	250	240			
		eNE	48.7	30					
		iN	50 21	14	+95				
		iE	50 23	17		+110			
		iN	50 47	17	-140				
		$iSSS_E$	51 09	13		+110			
		mN	51 20	16	120				
		eLQ_N	52.4	33					
		eG_E	53.3	44					
		iN	54 05	21	+190				
		iN	54 33	21	+320				
		eLR_E	56.7	35					
		eLR_Z	56.9	35					
		MZ_1	16 03 21	27			500		
		MN_1	04 17	21	550				
		MN_2	06 24	19	530				
		ME	06 50	21		590			
		MZ_2	08 06	24			560		
		eW_2E	17 46.5						
		MN	51 58						
		F	Merged in	No.338					
338	" 12	e_N	18 50.4	23					
		eL_Z	53.9	28					
		ME	55 55	19		21			
		MZ	56 10	21			31		
		MN	56 33	19	29				
		F	19 40						
339	" 13	iP_{NEZ}	15 52 04	6	+4	+8	-11	2400	Dilatation
		iZ	52 07	8			+31	(21°7)	H 15 47 20
		ipP_E	52 23	5		+18			h 0.01 ca
		iPP_N	52 33	5	+14				
		iPP_Z	52 35	5			-15		
		iS_{NE}	55 53	8	-12	+6			
		$iPcP_N$	56 01	9	+45				
		$iPcP_{EZ}$	56 03	9		+49	+35		
		eLR_{NEZ}	57.3	23					
		MZ_1	58 24	19			33		
		ME	58 58	18		30			
		MN	59 18	15	32				
		MZ_2	59 45	16			23		
		F	17 10						
340	" 13	$e(P)_Z$	19 11 57						
		$iSKS_N$	22 07	7	+6				Masked by micro-
		$e(ScS)_{NE}$	22 23	7					seisms.
		eS_N	22 31	11					
		eSS_N	27 44	16					
		eLR_Z	39.2	30					
		MNE	41.7	28	33	26			
		MZ	43 19	24			20		
		F	20 10						

RIVERVIEW COLLEGE OBSERVATORY,

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
341	Sept.14	$i(S)_N$	02 56 05	7	+4				Preliminaries obscured by microseisms.
		i_N	56 52	6	-8				
		i_N	57 14	6	-8				
		$e(LQ)_N$	57.3	16					
		eLR_N	58.4	15					
		MN	03 01 10	10	5				
		F	03 20						
342	" 14	eL_E	11 04.5	18					
		F	11 10						
343	" 14	P_nN	19 50 22	0.6				730	H 19 48 44
		P^*N	50 41					(6°6)	
		$(LQ)_E$	51 29	15					Felt in Tasmania and Eastern Victoria.
		iS_nNZ	51 39	2.5	+9		+16		
		LR_E	51 52	15					
		iS^*N	52 01	3	+32				
		ME	53 04	9		68			
		MN	53 30	11	116				
		MZ	53 34	12			88		
		F	21 30						
344	" 14	ePEZ	22 02 44	6				2500	h 0.005
		ipPEZ	03 02	6		-4	+5	(22°6)	H 21 57 48
		iPPZ	03 11	6			+5		
		iPPN	03 13	5	-4				
		iS_E	06 43	8		+5			
		esS_{NE}	07 07	9					
		eLR_E	07.9	24					
		eLRZ	08.2	24					
		MZ	10 06	18			7		
		ME	10 12	18		6			
		MN	10 29	15	5				
		F	22 45						
345	" 15	$e(P)_Z$	10 50 36	6					
		i_N	51 12	4	+4				
		eS_N	55 11	10					
		isS_E	55 26	6		-5			
		iSS_E	56 30	8		+5			
		i_N	56 37	4	+5				
		eL_N	58.5	18					
		ME	59 18	15		5			
		MN	11 01 43	13	4				
		MZ	02 54	12			2		
		F	11 25						
346	" 15	e_N	14 09 33						
		MN	12 39	14	4				
		F	14 20						
347	" 15	eL_E	16 30.0	22					
		eLZ	30.8	22					
		F	16 45						
348	" 20	eL_E	21 01.3	19					Obscured by very heavy microseisms
		ME	02 33	15		8			
		MNZ	05.1	14	7		8		
		F	? ?						
349	" 20	e_N	21 28.4	9					Obscured by very heavy microseisms
		eL_E	30.6	20					
		MNE	32.2	16	7	5			
		MZ	32 18	18			10		
		F	21 50 ca						
350	" 21	e_E	21 42.3						
		e_N	44.8	16					
		ME	49 06	16		4			
		MZ	49 16	16			6		
		MN	49 55	14	4				
		F	22 05						
351	" 22	eL_E	19 47.0	22					
		ME	48 42	21		11			
		MN	49 32	16	5				
		MZ	51 40	16			5		
		F	20 10						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1945		h m s	s	μ	μ	μ	km	
352	Sept.23	e_E	15 57.1						
		eL_N	59.3	21					
		ME	16 00 16	16		6			
		F	16 15						
353	" 23	iP_Z	21 58 57	7			+8	2790	Compression
		iP_{NE}	59 00	7	+7	+8		(25°1)	H 21 53 34
		ipP_Z	59 05	6			+20		
		i_{NE}	59 21	6	-8	-10			
		iPP_{NEZ}	59 35	6	+10	+8	-10		
		iS_N	22 03 17	8	-25				
		i_Z	03 20	7			+13		
		i_E	03 22	7		+24			
		i_N	03 28	7	+42				
		isS_E	03 32	8		-48			
		eLQ_{NE}	04.2	22					
		iSS_Z	04 22	9			+15		
		eLR_{EZ}	05.1	25					
		ME	06 57	18		21			
		MN	07 22	18	36		3		
		MZ	07 54	18			34		
		F	23 10						
354	" 23	i_N	23 36 10	6	-5				On Galitzin, beginning lost while changing record. Readings from Wiechert until 23 40 42. Impulses from 40m 02s superimposed on irregular long waves. All NS amplitudes from Wiechert, and EW at 38m 40s.
		i_N	36 36	6	-22				
		i_N	37 05	6	-29				
		i_E	38 40	4		+12			
		i_N	40 03	7	+13				
		i_{NE}	40 17	7	+24	-52			
		i_{NZ}	40 42	10	+60		+160		
		i_N	41 16	7	-59				
		i_E	41 39	15		+140			
		$(LQ)_E$	41.9	30					
		ME	44 36	19		290			
		MN_1	48 50	13	200				
		MZ	49.0	14			250		
		MN_2	51 07	13	250				
		F	03 05						
355	" 24	eL_N	05 40.8	16					
		ME	41 34	15		4			
		F	05 50						
356	" 25	e_E	09 21.7						
		eL_E	23.4	19					
		MN	26 52	15	5				
		MZ	27 24	15			7		
		ME	27 32	14		4			
		F	09 45						
357	" 26	iP_{EZ}	10 57 56	5		-17	+	2850	Compression
		i_N	58 03	4	+5			(25°6)	h 0.09
		$i(pP)_N$	59 47	4	+8				H 10 53 11
		i_N	11 00 13	5	+8				
		isP_{EZ}	00 37	5		-11	+20		Gutenberg's Tables give:
		$iPcP_N$	01 10	5	-6				Δ 25°0
		iS_{NE}	01 44	5	+15	+8			h 600 km.
		i_E	02 38	5		+13			H 10 53 11
		$iScP_Z$	03 57	5			+15		
		isS_E	04 22	8		+11			
		eN	04 22	16					
		$iPcS_E$	04 36	6		+15			
		$iPcS_N$	04 37	6	-9				
		$iPcS_Z$	04 39	6			+16		
		i_N	04 46	6	-17				
		eL_{EZ}	05.5	19					
		$iScS_Z$	07 43	5			+17		
		$iScS_{NE}$	07 48	5	+37	-44			
		MNE	08 27	12	6	4			
		MZ	09 34	12			7		
		F	11 55						
358	" 28	eL_Z	14 10.3	15					
		F	14 25						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks.
	1946		h m s	s	μ	μ	μ	km.	
359	Sep.28	e(P)Z	19 37 44	4					
		iZ	38 23	5			-5		Perhaps deeper
		iZ	39 15	4			-4		than normal.
		iEZ	43 54	4		+7	-5		
		iN	43 55	4	+4				
		i(S)NE	44 01	7	-7	+5			
		eN	46 57	15					
		i(ScS)E	47 08	7		-7			
		i(ScS)N	47 14	9	+9				
		eLZ	55.1	21					
		MNE	58.6	15	2	2			
		MZ	59 55	15			4		F 20 25
360	" 28	eZ	23 43.5						
		ME	49 14	14		4			
		MZ	51 08	13			4		
		MN	52 22	12	4				F 00 05
361	" 29	iPNZ	03 07 59	8	-51		+75	3280	Compression
		ePE	07 59	5				(29.5°)	H 03 01 56
		iN	08 13	5	+24				
		iN	08 43	7	+42				After iP all
		iN	09 11	11	+64				readings are
		iN	09 52	6	+44				from Wiechert.
		iN	12 12	8	-48				
		iSN	12 50	13	+77				
		iE	12 58	8		-39			
		iN	13 10	7	+45				
		iN	13 17	15	+420				
		iE	13 26	8		+110			
		iN	14 04	10	-110				
		iE	14 23	13		+290			
		eLNE	15.3	29					
		MN1	18 19	18	980				
		ME	18 42	15		1600ca			
		MN2	21 14	14	1300ca				F 07 20
362	" 29	eN	08 58 58						
		eLE	09 02.0	25					
		ME	04 30	16		7			
		MN	05 11	19	7				
		MZ	05 25	19			10		F merged in 363
363	" 29	iZ	09 17 23	7			-9		
		eLN	20.6	18					Probably more
		iE	22 29	7		-6			than one shock.
		iN	22 43	7	+9				
		eLE	23.0	20					
		ME	26 55	14		12			
		MZ	28 17	14			8		
		MN	30 31	14	9				F 10 10
364	" 29	eE	14 56.4						
		ME	15 00 26	13		4			
		MN	03 58	13	5				
		MZ	05 01	13			5		F 15 20
365	" 30	eE	01 29.3	21					Masked by micro-
		eE	35.5	15					seisms.
		eLN	43.1	27					
		eLZ	44.5	23					
		MZ	45 45	19			9		
		ME	48 46	20		6			F 02 15
366	" 30	e(P)Z	11 43 16						Masked by micro-
		iZ	53 45	5			+6		seisms.
		eLNE	12 23.5	24					
		eLZ	24.0	24					
		MEZ	27.8	19		8	13		
		MN	28 40	19	10				
		F	13 05						

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RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	ε : 1	$\frac{r}{T_o^2}$		T_1 (Galv.).	T (Pend)	μ^3	V_s
N	1	210	7.9	7.4	0.002	4	11.8	11.9	+0.04	410
	3	154	9.3	9.0	0.025					
E	1	230	7.2	4.9	0.004	4	12.3	12.2	-0.02	490
	3	170	8.2	4.5	0.019					
Z	2					4	11.0	11.0	0.0	460

No.	Date	Phase	Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
			h. m. s.	s.				km.	
Unless stated otherwise, readings are from the Galitzins. The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method. Jeffreys' & Buller's Tables (1940) are used, unless otherwise stated.									
	1946		h m s	s	μ	μ	μ	km.	
367	Oct. 1	e_E	10 48.1	8					Masked by micro-seisms.
		e_E	49 34	10					
		e_N	52 00	15					
		eL_N	53.9	17					
		eL_E	54.7	18					
		MN	57 09	13	5				
		MEZ	58.5	15		5	5		
		F	11 10						
368	" 1	eL_N	18 12.6	16					Masked by micro-seisms.
		eL_Z	13.0	16					
		MN	14 17	15	5				
		F	18 25						
369	" 2	ePZ_Z	04 58 51	8				9500 (85°5)	H 04 46 15 Large microseisms present.
		$eSKS_N$	05 09 07	9					
		$iSKKS_N$	09 14	9	-8				
		iS_E	09 19	9		-5			
		i_N	09 35	11	-11				
		eSS_{NE}	14 49	15					
		eLQ_E	22.7	30					
		eLR_{NZ}	26.0	30					
		MZ	28 39	27			43		
		MN	29 12	25	28				
		ME	30 24	24		16			
		F	Merged in No. 370						
370	" 2	ePZ_Z	06 56 00	7					Replica of No.369. Large microseisms.
		$iSKS_N$	07 06 17	7	+4				
		eS_E	06 25	9					
		i_N	06 43	9	-15				
		eLQ_E	19.8	28					
		eLR_N	23.0	26					
		MZ	25 42	28			43		
		MN	25 48	28	30				
		ME	27 29	25		19			
		F	08 20						
371	" 2	e_N	11 56 04	10					Large microseisms mask earlier phases
		e_N	58 30	18					
		eLR_{NZ}	12 02.6	22					
		ME	03 34	17		5			
		MNZ	04.5	19	8		12		
		F	13 05						

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
372	Oct. 3	iP_{NZ}	06 45 34	7	-4		+6	3220	Compression
		eZ	45 58	11				(29°0)	
		iPPZ	46 25	8			+5		
		iPP_N	46 28	8	+5				
		iS_N	50 21	9	+7				
		i_N	50 45	11	-16				
		eLQ_N	51.5	18					
		eSS_N	51 49	14					
		eLRZ	53.2	20					
		ME	56 57	11		9			
		MZ_1	56 59	16			8		
		MN	57 49	15	10				
		MZ_2	07 00 11	14			11		
		F	07 50						
373	" 3	iP_{NEZ}	15 41 59	9	-7	-5	+12	2920	Compression.
		ipP_{NEZ}	42 25	5	+10	+9	-16	(26°3)	h 0.015
		$iPcP_E$	45 23	5		+9			H 15 36 34
		iS_{NE}	46 20	7	+10	-14			
		i_{NEZ}	46 33	10	+65	-81	+25		Gutenberg's
		i_{NE}	46 56	9	+40	+18			Tables give:
		isS_N	47 07	9	+32				Δ 24°8
		isS_E	47 11	8		-20			h 100 km.
		eLQ_N	47.5	19					H 15 36 43
		i_E	47 32	6		+8			
		iSS_N	47 41	9	-35				
		$iSSS_E$	48 04	8		-32			
		eLRZ	48.2	23					
		i_N	48 42	7	+26				
		$i(PcS)_E$	49 11	10		+30			
		ME	50 57	14		22			
		MN	51 14	13	32				
		MZ	51 41	15			29		F 17 45
374	" 4	i_Z	15 08 40	5			-6		
		i_E	09 06	5		+4			
		eLQ_E	43.5	22					
		MZ	56 41	22			17		
		ME	57 08	21		9			
		MN	59 38	21	10				F 17 05
375	" 6	eL_{NE}	15 59.0	21					
		MNE	59.8	16	6	4			
		MZ	16 03.1	15			5		
		F Merged in No.376							
376	" 6	eL_E	16 12.2	21					
		MNE	14.2	16	7	6			
		MZ	17.8	16			7		
		F	16 45						
377)	" 7	eZ	06 53 16						Two shocks which
378		i_E	58 37	5		+4			seem to be inex-
		i_E	58 54	7		-9			tricably mixed
		eL_{NE}	59.0	23					one with the
		eLZ	59.1	24					other.
		MZ	59 43	21			11		
		ME	59 48	21		12			
		MN	59 58	21	12				
		i_E	07 00 55	5		-4			
		i_Z	01 20	6			+14		
		i_N	02 30	5	+8				
		i_Z	04 36	6			-9		
		i_N	05 13	6	+15				
		i_Z	05 25	6			+8		
		i_E	05 36	6		+13			
		i_E	06 33	7		+28			
		mN	06 35	8	18				
		i_Z	06 56	6			+21		
		eLZ	08.4	21					
		ME	08 48	12		40			
		MZ	09 04	12			50		
		MN	09 54	12	52				F 08 30

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
379	Oct. 8	iP_{EZ}	14 01 04	4		-4	+7	2820	Compression
		$i(pP)_Z$	02 47	4			+5	(25°4)	h 0.10
		isP_{EZ}	03 49	7		-12	+13		H 13 56 23
		iS_{NZ}	04 48	7	-18		+16		
		iS_E	04 49	7		+24			Gutenberg's
		$i(sS)_N$	08 01	9	+12				Tables give:
		MZ	10 06	14			6		Δ 24°3
		ME	10 09	15		6			h 600 km.
		$iScS_N$	10 51	7	+21				H 13 56 28
		MN	11 02	13	7				
		F	14 55						
380	" 9	i_N	00 44 43	4	-4				Masked by micro-
		i_E	44 59	5		-6			seisms.
		i_N	46 22	5	+8				
		i_Z	47 01	4			-5		
		i_E	47 08	5		+6			
		m_N	47 39	8	5				
		i_E	47 42	5		-11			
		i_Z	47 49	4			-9		
		i_N	49 14	5	+9				
		F	00 55						
381	" 9	iP_Z	05 28 37	6			-5	3190	Dilatation
		eS_N	33 22	16				(28°7)	Large micro-
		m_N	33 53	20	13				seisms.
		eLQ_E	34.7	22					
		eLR_E	36.3	23					
		eLR_N	36.4	22					
		MZ	39 16	19			21		
		MN	39 22	19	14				
		ME	39 45	14		14			F 06 20
382	" 9	eL_Z	09 04.6	22					Masked by micro-
		ME	05 42	16		3			seisms.
		MNZ	06.0	19	9		10		
		F	Merged in No.383						
383	" 9	e_N	09 23 40	10					
		eL_E	26.3	20					
		ME	28 43	16		4			
		MNZ	31.5	15	3		6		F 09 55
384	" 10	$e(S)_N$	00 56 25	15					Masked by micro-
		eLRNEZ	01 00.4	24					seisms.
		ME	01 46	18		5			
		MZ	01 59	19			12		
		MN	02 07	18	6				F 01 25
385	" 10	ePZ	04 29 09						
		i_{NZ}	30 33	7	+7		-5		
		iS_N	33 46	12	+6				
		i_{NE}	34 17	19	+50	+11			
		eLR_Z	37.2	30					
		ME	39 32	19		31			
		MZ	39 47	21			62		
		MN	39 52	18	35				
		F	06 10						
386	" 11	iZ	06 44 58	8			+5		Masked by large
		eL_E	50.8	20					microseisms.
		ME	52 18	15		5			
		MZ	53 20	15			5		
		F	07 10						
387	" 14	iP_Z	04 50 22	9			+5		Compression
		$i(PP)_Z$	51 02	7			+15		
		iE	51 07	9		+13			S cannot be
		iE	55 10	8		-12			identified.
		i_N	56 28	11	+24				
		eLR_{EZ}	57.8	26					
		MN	59 22	16	26				
		mMZ	05 01 10	16			53		
		ME	01 31	16		42			
		F	06 50						

RIVERVIEW COLLEGE OBSERVATORY

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
388	Oct.14	e_{NE}	23 24.0	9					
		e_{NE}	27 00	17					
		i_N	27 55	7	-11				
		ME	34 48	18		6			
		MZ	37 15	18			7		
		MN	38 23	15	5				
		F	? ?						
389	" 15	$ePNEZ$	06 44 05	7				2460	Large micro-
		i_{EZ}	44 45	5		-6	-13	(22°1)	seisms.
		eS_{NE}	48 02						
		i_E	48 08	10		-21			
		iSS_E	48 45	10		+21			
		i_N	48 50	7	+30				
		eLR_N	49.5	19					
		MN	51 55	15	7				
		ME	52 30	16		8			
		MZ	52 41	15			9		
		F	07 40						
390	" 15	$i(P)_Z$	07 53 01	6			+7		Compression
		$e(S)_E$	57 05	9					
		i_E	57 11	9		+18			
		eL_E	08 00.0	24					
		MZ	01 08	22			18		
		ME	01 15	22		19			
		MN	04 17	13	10				
		F	08 40						
391	" 15	e_E	13 49.2						Obscured by
		F	14 05						microseisms.
392	" 15	i_{NE}	20 45 22	7	-9	+9			Masked by very
		eL_E	48.7	18					large microseisms
		F	21 05						
393	" 16	e_E	09 46 01	18					
		eLR_{NZ}	47.5	20					
		MN	49 09	16	6				
		MZ	49 45	16			5		
		ME	51 29	10		4			
		F	10 15						
394	" 18	eL_N	02 55.1	15					
		MN	56 38	13	3				
		F	03 00						
395	" 18	eL_Z	23 18.2	18					
		ME	21.8	15		4			
		F	? ?						
396	" 19	MNZ	14 38.8	12	2		2		A few waves.
		ME	38.9	12		2			
		F	14 40						
397	" 20	e_N	02 42.6	9					
		eL_Z	46.9	20					
		ME	47 31	18		6			
		MZ	48 24	20			13		
		MN	48 29	19	10				
		F	03 05						
398	" 20	e_Z	11 36.4						
		eL_Z	40.7	22					
		ME	41 45	19		6			
		MN	42 22	19	10				
		MZ	42 35	18			9		
		F	12 10						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km	
399	Oct.22	iP_Z	10 05 19	5&11			+11	2780	Compression
		iP_{NE}	05 20	5&11	-14	-14		(25°0)	h 0.03
		i_Z	05 29	5&11			+19		H 10 00 14
		ipP_{EZ}	06 02	4		+9	+10		
		iPP_N	06 07	5	+14				Gutenberg's
		iPP_Z	06 08	5			+29		Tables give:
		$iPPP_Z$	06 18	7			-43		Δ 24°5
		$iPPP_N$	06 19	7	+20				h 200 km.
		i_E	06 23	5		-30			H 10 00 13
		$iPcP_Z$	08 49	6			-18		
		eS_E	09 18	11					
		iS_N	09 25	10	-42				
		i_E	10 06	6		+17			
		i_E	10 17	9		+42			
		isS_E	10 34	6		+36ca			
		isS_N	10 38	6	-23				
		iSS_N	10 45	8	+47				
		iSS_E	10 48	6		+57ca			
		$iSSS_N$	11 04	9	-110				
		eL_E	11.1	22					
		i_N	12 41	5	+32				
		ME	13 21	16		25			
		MN	13 45	16	27				
		MZ	13 57	16			19		
		F	Merged in No.400						
400	" 22	eL_Z	11 44.8	22					
		MZ	49 51	15			6		
		ME	50 50	15		4			
		MN	51 57	15	5				
		F	12 15						
401	" 22	eL_Z	13 52.6	20					
		MZ	54 39	18			7		
		ME	54 44	16		4			
		MN	55 10	13	5				
		F	14 15						
402	" 22	iP_Z	17 31 55	3			-7	2500	Dilatation
		iP_N	31 56	3	+4			(22°5)	H 17 26 57
		ipP_{NEZ}	32 07	3	+6	+5	-7		Slightly deeper
		iS_N	35 55	7	-22				than normal.
		iS_E	35 57	7		+17			
		mNE	36 21	10	35	22			
		eL_N	37.2	20					
		ME_1MZ	38 13	22		15	15		
		MN	40 13	13	22				
		ME_2	40 44	13		12			
		F							
403	" 24	$i(P)_Z$	08 44 02	4			-5		Dilatation
	-	eL_N	51.4	16					
		F	09 05						
404	" 24	eP_Z	10 10 09	8				2360	H 10 05 24
		eS_N	13 58	8				(21°2)	
		e_E	14 04						
		isS_{NE}	14 11	5	+5	-6			
		eLQ_N	14.3	13					
		eSS_Z	14 31	10					
		eLR_E	15.1	22					
		MN	18 17	12	3				
		F	10 30						
405	" 24	e_N	18 40 51	12					
		eL_N	43.1	22					
		MN	45 24	15					
		ME	45 30	16					
		MZ	45 59	16					
		F	19 05						

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
406	Oct.25	$i(pP)_Z$	22 03 29	4			+7		
		$i(SKS)_N$	13 10	6	+7				
		$i(S)_N$	13 29	8	-5				
		$i(S)_E$	13 30	8		-4			
		$e(PS)_N$	15 08	12					
		eG_N	27.5	30					
		eG_E	27.8	30					
		F	23 00						
407	" 26	iP_Z	00 33 46	4			-6	9450	Dilatation
		iP_N	33 48	5	+3			(85°0)	H 00 21 13
		ePP_{NZ}	37 05	13					
		iS_N	44 11	7	+6				
		eS_E	44 11	9					
		$iScS_N$	44 21	7	-11				
		m_E	44 30	14		6			
		iPS_N	45 09	7&20	+6				
		$iPPS_N$	45 34	7&20	-15				
		eSS_Z	49 53	21					
		m_{NE}	50 18	16	12	5			
		eLQ_E	56.2	27					
		eLR_E	59.8	27					
		eLR_Z	01 02.0	30					
		MN_1	06 32	21	15				
		ME	07 09	18		6			
		MZ_1	11 20	18			12		
		MN_2	15 41	18	13				
		MZ_2	16 39	16			42		
		eW_2	02 41.6	27					
		F	03 00						
408	" 26	$i(S)_N$	11 53 22	9	-8				
		$eL(Q)_E$	57.6	21					
		eLR_Z	59.6	26					
		ME	12 00 56	20		11			
		MZ	01 30	22			10		
		MN	03 17	18	8				
		F	12 55						
409	" 28	eL_E	19 47.7	21					
		ME	51 18	15		4			
		MZ	51 35	14			4		
		MN	51 52	15	5				
		F	20 05						
410	" 30	ePZ	08 00 56	11				10,800	
		i_Z	01 09	5			-6	(97°2)	
		ePP_Z	04 54	9					Gutenberg's
		$iSKS_{NE}$	11 31	9	+9	+4			Tables give:
		iS_E	12 14	10		-13			Δ 96°3
		i_N	12 18	7	+11				H 07 47 26
		eSS_E	18 29	24					
		eSS_N	18 36	24					
		$eSSS_E$	22 32	24					
		eLR_Z	32.1	30					
		MZ	37 18	21			11		
		MN	37 48	23	18				
		ME	38 39	22		14			
		eW_2E	10 05.7	24					
		MZ	10 17	19			11		
		MN	10 52	20	11				
		ME	12 27	18		7			
		F	10 50						

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RIVERVIEW. N.S.W

SEISMOLOGICAL BULLETIN

$\Phi = 33° 49' 46''$ S. $\lambda = 151° 9' 30''$ E h = 25m. Foundation : Triassic sandstone.

INSTRUMENTS:

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

		V	T_o	ε : 1	$\frac{r}{T_o^2}$		T_1 (Galv.)	T (Pend)	μ^3	V_s
N	1	207	7.7	6.5	0.002	4	11.8	11.9	+0.04	410
	3	146	9.4	7.5	0.025					
E	1	229	7.2	5.2	0.002	4	12.3	12.2	-0.02	490
	3	172	8.2	4.1	0.016					
Z	2					4	11.0	11.0	0.0	450

Unless stated otherwise, readings are from the Galitzin.
The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method.
Jeffreys' & Bullen's Tables (1940) are used, unless otherwise stated.

No.	Date	Phase	Time (G.M.T.) h. m. s.	Per s.	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
411	1946 Nov. 1	eP_Z	11 27 24					10,180	
		iP_Z	27 28	9			-11	(91°6)	Dilatation
		iPP_Z	31 12	8			+6		H 11 14 19
		$iSKS_N$	37 56	10	+17				
		$iSKS_E$	37 57	10		+7			Gutenberg's Tables
		iS_E	38 19	12		-22			give: Δ 91°4
		iPS_{NZ}	39 27	12	+17		-16		H 11 14 15
		$e(SS)_E$	43 57	18					
		m_{NE}	44.4	20	13	13			
		m_Z	44 34	22			17		
		e_E	46 11	19					
		$i(SSS)_E$	47 47	15		+18			
		i_E	51 09	16		-20			
		i_N	51 12	15	+15				
		eLQ_E	52.4	27					
		MZ	58 43	23			47		
		MN	59 37	22	24				
		ME	12 02 35	21		22			
		$e(W_2)_E$	13 33.3	27					
		MNE	39 49	19	9	8			
		MZ	39 56	20			12		
		F	15 30						
412	" 1	iP_Z	20 14 56	6				3170	Compression
		i_{NE}	14 59	4	+7	+5		(28°5)	H 20 09 02
		ipP_{NZ}	15 11	6	+7		-8		
		eS_N	19 40	10					
		iS_E	19 42	9		-7			
		isS_E	20 10	5		-7			
		eL_Z	21.4	30					
		eK_E	21.5	27					
		ME_1	22 12	25		16			
		MN_1	22 16	23	19				
		MZ_1	22 34	24			30		
		MNZ_2	25.5	16	6		8		
		ME_2	25 48	15		6			
		F	21 10						

RIVERVIEW COLLEGE OBSERVATORY
RIVERVIEW, N.S.W.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
413	Nov. 2	iP_{NZ}	14 12 27	6	+6		-8	4960	Dilatation
		i_E	12 30	6		+6		(44°.7)	H 14 04 15
		i_Z	12 35	7			-19		
		iPP_Z	14 09	6			+6		
		iPP_N	14 11	6	-7				
		iS_N	19 01	10	-18				
		iS_E	19 06	7		+8			
		ePS_E	19 12	14					
		iSS_{NE}	22 16	7	-11	-8			
		$iScS_{NE}$	22 26	10	+23	+45			
		iE	23 27	8		+9			
		MN	32 49	20	11				
		ME	33 00	20		15			F 15 30
		MZ	33 06	20			19		
414	" 2	iP_Z	18 42 39	6			+6	11,670	Compression
		ipP_Z	42 51	6			+8	(105°)	H 18 28 34
		ePP_E	47 06	12					
		iN_Z	47 15	7	-11		+25		Gutenberg's
		i_E	47 17	6		+10			Tables give:
		$iSKS_{NE}$	53 20	6&16	+13	-17			Δ 106°
		iPS_{NZ}	56 17	?					H 18 28 26
		m_E	56 42	14		15			
		$iPPS_{NE}$	57 11	11	+28	-25			
		i_E	57 41	14		+34			
		eSS_E	19 02 15	15		8			
		$iPSPS_N$	02 39	16	-43				
		$iPSPS_E$	02 42	16		+44			
		eE	03.0	41					
		eE	05 23	24					
		eLQ_E	14.3	34					
		eLR_N	20.0	41					
		eLR_E	20.3	47					
		eLR_Z	20.5	50					
		L_E	22 56	47		510			
		L_Z	23 01	50			630		
		MN_1	29 37	22	110				
		MN_2EZ	35.2	20	83	93	92		
		F	22 45						
415	" 3	$iPKP_{NZ}$	19 52 14	5	-4		-29	15,900	Dilatation
		i_Z	52 21	5			-22	(143°)	Δ from Guten-
		i_E	52 59	6		+6			berg's Tables.
		iN_Z	53 29	5	+7		+12		
		iPP_Z	55 27	6			+5		
		i_Z	58 42	6			+6		
		$eSKS_E$	59 14	11					
		$ePcPPKP_E$	20 00 27	12					
		$eSKKS_E$	01 47	8					
		$eSKKKS_N$	02 35	11					
		ePS_N	05 57	12					
		$ePPS_N$	07 57	15					
		eSS_N	14 28	15					
		$ePSPS_{NE}$	14 45	11					
		$eSSS_E$	19 19	20					
		$eSSS_N$	19 29	17					
		eLR_{NE}	36.4	30					
		eLR_Z	41.0	33					
		MN_1	46 12	27	26				
		MZ_1	46 35	27			33		
		ME_1	46 50	24		15			
		ME_2	49 14	20		9			
		MZ_2	49 34	20			12		
		MN_2	50 07	19	10				
		eW_2EZ	21 19.4	30					
		ME	23 51	24		12			
		MZ	24 50	22			15		
		MN	25 57	22	12				
		F	22 10						

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
416	Nov. 4	eP_Z	22 02 35	7				12,700 (114°3)	H 21 47 45
		ePKP	06 29	6					
		ePP_{NEZ}	07 12	7					Δ & H from Gutenberg's Tables.
		iPP_{EZ}	07 29	7		+6	+12		
		$iPPP_Z$	09 58	8			+9		
		$eSKS_E$	13 19	6					
		$eSKS_E$	13 37	6					
		$eSKKS_E$	14 20	10					
		iS_N	15 08	9	+8				
		iPS_E	17 05	7		-8			
		e_N	17 34	16					
		$ePPS_Z$	18 17	11					
		e_E	18 27	16					
		iZ	22 31	13			-14		
		iSS_{NE}	23 21	13	13	+15			
		$eSSS_N$	27 34	18					
		eLR_{EZ}	40.6	33					
		ME	53 31	25		53			
		MZ	53 36	25			80		
		MN	54 57	23	30				
		F	01 30						
417	" 8	e_E	06 35 11	10					
		eL_{EZ}	37.0	20					
		F	06 45						
418	" 8	e_Z	21 54.3						
		e_{NE}	58.6	13					
		MN	22 02 12	16	8				
		ME	02 30	16		4			
		F	22 25						
419	" 9	e_E	21 53 04						
		eL_N	56.5	21					
		MZ	56.6	15			5		
		MN	57 51	15	6				
		F	22 10						
420	" 10	eP_Z	17 58 02	10				13,100 (118°)	H 17 42 54
		e_Z	18 01 43	8					
		iPP_{EZ}	02 54	8		+2	-4		
		i_{NEZ}	03 13	8	-4	+6	-10		
		$eSKS_N$	08 43	10					
		$iSKKS_E$	09 34	11		-5			
		i_E	10 02	8		+4			
		iPS_N	12 47	17	+17				
		iPS_E	12 52	17		-18			
		eSS_E	19 04	19					
		e_E	19 20	18					
		i_E	19 42	20		+64			
		m_N	19 55	20	23				
		eLR_{EZ}	37.1	30					
		eLR_N	37.6	30					
		e_Z	40.6	19					
		MZ_1	42 55	19			62		Sinusoidal waves begin.
		MN	42 59	19	34				
		ME	46 24	17		40			
		MZ_2	46 35	17			56		
		eW_2N	19 43.0	28					
		MN	49 24	19	12				
		MZ	49 39	19			13		
		ME	50 27	19		11			
		F	22 30						
421	" 11	eN	22 59 50	6					
		e_E	59 52	6					
		MN	23 02 42	15	6				
		F	23 20						
422	" 12	$i(S)_E$	06 21 09	8		+6			
		e_E	28 13						
		MZ	50 18	21			12		
		F	07 25						

RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
423	Nov.12	ePE_Z	17 35 30	4				3780	H 17 28 47
		iPE_Z	35 32	4		-8	+15	(34°0)	Compression
		ipP_{NEZ}	35 39	6	+5	+20	-24		
		iPP_{EZ}	36 45	7		+9	-8		
		$iPcP_{EZ}$	38 06	6		-15	+18		
		iS_N	40 52	11	-25				
		iS_E	40 54	11		-40			
		mZ	41 07	18			40		
		m_E	41 12	18		67			
		$iSSS_{NE}$	43 21	16	+43				
		eLR_E	44.6	28					
		MN	44 47	18	67				
		ME	48 06	20		128			
		MZ	48 19	18			130		
		eW_2EZ	20 17.1	27					
		MZ	26 30	21			13		
		MNE	27.1	21	11	11			
		F	21 10						
424	" 13	eL_E	00 23.3	20					
		ME	27 33	16		6			
		MZ	30 23	16			7		
		F	00 40						
425	" 13	eL_Z	04 12.5						
		MNEZ	16.1	16	5	5	7		
		F	04 35						
426	" 13	MZ	09 04.4	15			5		
		F	09 15						
427	" 15	eL	02 57.0	17					
		F	03 10						
428	" 16	eP_{EZ}	11 57 34	6					
		eL_E	12 05.0	22					
		eLR_Z	05.2	23					
		MN	05 45	16	8				
		MEZ	07.0	18		9	10		
		F.	13 05						
429	" 17	iP_Z	02 55 38	5			-4	3700	Dilatation
		iP_N	55 39	4	-4			(33°3)	H 02 49 08
		ipP_{NEZ}	56 03	4	-4	+4	+7		h 0.01
		isP_Z	56 17	5			-4		
		iS_N	03 00 50	8	-16				Gutenberg's
		iS_E	00 51	8		+6			Tables give:
		esS_N	01 26	10					Δ 32°4
		$iSSS_{NE}$	03 27	6	+5	+13			h 100 km.
		$iScS_N$	04 57	4	+27				H 02 49 13
		$iScS_E$	05 00	4		+15			
		MZ_1	06 51	5			21		
		ME_1	07 15	5		18			
		MN	07 43	6	20				
		MEZ_2	10.8	11		18	14		
		F	04 50						
430	" 17	$e?_Z$	13 09 01						
		e_{NE}	12 21	9					
		eL_E	13.6	21					
		eL_Z	16.0	24					
		ME	16 35	20		11			
		MZ	17 28	20			11		
		MN	17 56	20	13				
		F	13 40						
431	" 17	$e?_E$	22 44 30						
		e_E	49 31						
		iSS_{NE}	56 29	11	+6	+5			
		eL_E	23 07.6	23					
		MN	09 56	22	16				
		MZ	15 54	23			19		
		ME	16 37	24		15			
		F	00 05						

RIVERVIEW COLLEGE OBSERVATORY.
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
432	Nov.18	iP_Z	02 45 41	3			-4	3080	Dilatation
		iS_N	49 48	4	-6			(27°7)	h 600 km.
		$i(sS)_E$	52 52	8		-8			H 02 40 37
		eL_Z	53.0	15					Δ, h & H from
		$iScS_E$	55 20	5		+6			Gutenberg's
		$iScS_N$	55 22	5	+6				Tables.
		F	03 15						
433	" 18	i_N	13 42 03	9	-7				
		e_E	42 04	9					
		e_E	46 03	13					
		eL_E	51.6	24					
		eL_Z	51.7	24					
		MN	53 37	19	8				
		MEZ	53.8	20		9	15		
		F	Merged in	No.434					
434	" 18	eL_E	14 04.5						
		MN	05 55	19	10				
		MEZ	09.1	17		14	16		
		F	15 10						
435	" 19	eL_E	19 34.9	22					
		ME	37 15	20		11			
		MNZ	40.1	14	6		6		
		F	20 10						
436	" 20	eL_E	09 47.9	18					
		MN	50 51	15	8				
		MEZ	51.1	13		5	6		
		F	10 20						
437	" 21	$e(PP)_{NZ}$	03 22 43	8					
		iS_E	26 36	9		+11			
		eS_N	26 37	9					
		$e(SS)_E$	27 41	20					
		eL_N	27.9	18					
		m_E	28 18	16		70			
		eLR_{NZ}	28.9	23					
		MN_1	29 31	21	85				
		MZ_1	30 51	17			85		
		ME	30 55	10		42			
		MN_2	31 50	10	46				
		MZ_2	32 44	11			53		
		F	05 20						
438	" 21	eE	06 07 08						
		MNE	10.5	10	3	2			
		F	06 20						
439	" 22	$e(S)_E$	16 26 58	8					
		$e(S)_N$	27 00	8					
		eL_E	39.1	24					
		eL_Z	39.6	25					
		MN	42 03	18	9				
		MZ	43 25	23			18		
		ME	44 04	20		10			
		F	17 25						
440	" 23	MN	17 08 11	15	5				
		ME	09 55	15		4			
		MZ	10 25	15			5		
		F	17 30						
441	" 24	$e?_Z$	13 35.6						
		eL_{NE}	43.6	20					
		MN	55 10	18	9				
		ME	55 29	18		5			
		MZ	14 03.0	14			5		
		F	14 40						
442	" 25	$e?_Z$	14 59 40						
		eN	15 03 19						
		eE	06 38	7					
		eN	06 41	10					
		eL_E	12.6	23					
		ME	16 15	19		9			
		MNZ	16.7	19	8		12		

F 15 35

RIVERVIEW COLLEGE OBSERVATORY,

SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
443	Nov.25	e_Z	16 32.7	7					
		e_N	36 55	6					
		eL_Z	39.5	18					
		eL_N	39.6	18					
		F	17 05						
444	" 28	iP_{NEZ}	15 57 54	5	+4	+11	-20	3750	Dilatation
		ipP_{EZ}	58 51	4		+3	-3	(33°7)	h 300 km.
		iPP_{NEZ}	59 22	5	+6	+15	-16		H 15 51 34
		i_Z	59 59	6			-16		Δ, h & H from
		$isPP_{EZ}$	16 00 35	5		+7	+7		Gutenberg's
		iS_{NE}	02 57	8	-26	+8			Tables.
		isS_E	04 48	8		+12			
		iSS_{NE}	05 43	8	-23	+13			
		iSS_Z	05 47	9			+19		
		$iSSS_N$	06 10	8	+34				
		$iScS_{NE}$	07 52	7	+38	+35			
		MZ	11 21	19			12		
		ME	11 28	18		7			
		F	17 20						
445	" 29	iP_Z	19 18 08	3&6			+6	2440	Compression
		iPNE	18 10	6	+3	+5		(21°9)	
		iNEZ	18 19	6	+5	+8	-12		
		iS_N	22 03	7	+7				
		iS_E	22 05	7		46			
		i_N	22 14	8	+18				
		i_E	22 17	8		+13			
		eLQ_E	22.4	15					
		iSS_{NE}	22 42	8	+14	+7			
		eLR_Z	23.5	24					
		ME_1	24 12	20		14			
		MZ	24 49	18			14		
		ME_2	25 29	16		8			
		MN	25 34	14	16				
		F	20 30						
446	" 30	$e(L)_E$	12 11.6						
		MN	19 22	18	77				
		ME	19 42	18		6			
		F	12 30						

D.J.K.O'CONNELL,S.J.
Director

T.N.BURKE-GAFFNEY,S.J.
P. F.RHEINBERGER.

1946, December.

RIVERVIEW COLLEGE OBSERVATORY,
RIVERVIEW, N.S.W.

SEISMOLOGICAL BULLETIN.

φ 33° 49' 46" S. λ 151° 9' 30" E. h 25m.

Foundation : Triassic Sandstone.

INSTRUMENTS:

1. Wiechert Astatic Pendulum Seismometer (1000 kg.) (NS, EW)
2. Wiechert Vertical Seismometer (30 kg.)
3. Mainka Conical Pendulum (450 kg.) (NS, EW)
4. Galitzin Aperiodic Seismometer with Galvanometer registration (NS,EW,V)

		V	T_o	ε:1	r/T_o^2		T_1 (Galv)	T (Pend)	μ^2	V_s
N	1	207	7.8	6.1	0.004	4	11.8	11.9	+0.04	410
	3	158	9.3	6.5	0.028					
E	1	230	7.2	8.4	0.011	4	12.3	12.2	-0.02	490
	3	176	8.2	5.3	0.014					
Z	2					4	11.0	11.0	0.0	450

Unless stated otherwise, readings are from the Galitzins.
The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method.
Jeffreys' & Bullen's Tables (1940) are used, unless otherwise stated.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
	1946		h m s	s	μ	μ	μ	km.	
447	Dec. 1	eL_{NE}	12 13.7	19					
		ME	15 04	18		6			
		MZ	15 17	18			8		F 12 30
448	" 2	e	19 31.8	16					
		F	19 50						
449	" 2	eLZ	20 12.7	18					
		ME	14 23	13		3			
		F	20 30						
450	" 2	e_E	21 11 57	12					
		eL_E	13.7	20					
		MZ	15 35	21			9		
		MN	15 39	18	7				
		F	21 30						
451	"v 2	eL_E	22 38.0	20					
		MNZ	40.1	18	7		9		
		ME	40 47	15		4			
		F	23 00						
452	" 3	eL_E	14 07.6	20					
		ME	09 53	18		5			Masked by micro-seisms.
		F	14 15						
453	" 4	e_E	22 12 05						
		$e(L)_E$	28.9	18					
		MZ	37 49	18			7		
		ME	37 55	18		6			
		MN	42 35	18	7				
		F	Merged in	No.454					
454	" 4	$e(P)_Z$	22 57 34						
		iS_{NE}	23 06 03	7	-7	-4			
		$e(L)_Z$	13.8						
		ME	18 48	18		7			
		MN	19 46	20	11				
		MZ	22 49	18			10		
		F	01 10						
455	" 5	iP_{NZ}	06 50 38	4&8	-4		+7	3240	Compression
		i_Z	51 17	6			+6	(29:1)	H 06 44 38
		iPP_{NZ}	51 32	4	+5		-6		
		iS_N	55 26	9	-15				
		i_N	55 56	11	+17				
		i_N	56 24	8	+21				
		i_Z	57 21	8			+13		
		eL_N	59.4	30					
		ME	07 01 31	16		21			
		MN	04 56	11	18				
		MZ	05 04	11			24ca		
		F	08 25						

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
456	Dec. 5	eL_N	20 22.5	18					
		ME	24 04	13		3			
		MN	26 05	15	5				F 20 35
457	" 7	$e(P)_Z$	17 23 23	8					
		$e(PP)_N$	24 08	12					h 100 km.ca,
		$i(PP)_Z$	24 09	9			-9		Masked by micro-
		iS_N	27 26	7	-12				seisms.
		iE_Z	27 29	8		-8	+7		
		iE	27 39	10		-17			
		$i(sS)_N$	28 04	9	+23				
		iE	28 23	10		+16			
		$i(SS)_N$	28 56	11	+34				
		iE	29 01	9		+12			
		MZ	31 07	15			6		
		ME	31 11	15		4			
		MN	31 32	13	7				F 18 10
458	" 8	e_N	12 37 04						
		e_E	43 01						
		eL_Z	54.9	22					F 13 15
459	" 8	e_E	16 08 34	10					
		ME	11 25	15		4			
		MN	11 32	15	5				
		MZ	11 53	15			6		F 16 20
460	" 9	eL_Z	00 59.4	19					
		F	01 05						
461	" 9	eL_{EZ}	09 06.2	20					
		F	09 25						
462	" 10	eP_Z	16 38 24	7				3100	h 600 km.
		ipP_{EZ}	39 59	6		-3	+4	(27°9)	H 16 33 15
		e_E	41 10	7					Δ, h & H from
		$iPcP_Z$	41 11	7			-5		Gutemberg's
		iS_E	42 31	8		+5			Tables.
		iS_N	42 34	7	+7				
		iE	43 02	6		+3			
		iE	43 43	4		+4			
		isS_N	45 34	8	+6				
		eL_Z	45.7	16					
		$i(SS)_E$	45 51	7		+7			
		$iScS_E$	47 59	8		+5			
		MN	49 45	12	3				
		MEZ	50.5	15		3	4		F 17 20
463	" 10	e_N	18 50 39						
		eL_N	53.6	14					
		eL_E	54.6	19					
		MN	55 45	13	3				
		MEZ	56.6	15		4	5		F 19 30
464	" 11	$e(L)_N$	15 33.8	14					
		e_E	34.5	13					
		eL_Z	35.4	18					F merged in 465
465	" 11	e_E	15 50.3						
		F	Merged in	No.466					
466	" 11	eL_{NE}	15 59.1	15					
		eL_Z	16 00.6	16					F 16 15
467	" 13	e_N	10 07.9						
		MN	13 12	18	7				
		ME	14 17	16		4			F 10 25
468	" 13	eL_Z	13 44.0	20					
		ME	47 16	19		8			
		MZ	47 32	19			7		
		MN	47 45	18	8				F 14 10
469	" 15	$e(P)_{EZ}$	00 34 35						
		iZ	34 53	4			-6		
		eS_N	38 41	9					
		iN	38 47	9	+12				
		iE	38 50	7		+6			
		eL_N	40.3	12					
		MN	41 25	18	9				F 01 10
		ME	42 04	17		6			
		MZ	42 35	18			9		

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
	1946		h m s	s	μ	μ	μ	km.	
470	Dec.15	eL_{NE}	20 07.7	15					
		MN	08 42	12	3				
		ME	08 52	11		3			
		MZ	09 39	12			4		
		F	20 25						
471	" 17	iP_Z	22 46 38	5			-4	3410 (30°7)	Dilatation h 0.10 H 22 41 12
		iS_N	50 59	8	-8				
		iS_E	51 03	9		-9			
		$e(sS)_N$	54 10	10					
		i_E	54 25	8		+5			Gutenberg's Tables give: Δ 29°8 h 600 km H 22 41 13 F 23 30ca
		$iScS_N$	56 07	7	-13				
		$iScS_E$	56 09	6		+5			
		i_E	23 00 12	7		-5			
		i_N	00 15	9	-8				
		MZ	00 19	18			7		
		ME	01 07	18		7			
472	" 18	iP_Z	01 56 46	4			-4	2850 (25°6)	Dilatation
		i_E	56 47	4		+3			
		iN_Z	56 59	5	-4		+6		
		iS_E	02 01 09	7		+5			
		i_N	01 18	8	+5				
		eL_Z	02.6	24					
		MZ	04 13	21			12		
		MN	04 39	18	7				
		ME	05 59	16		5			
		F	02 55						
473	" 18	eL_Z	17 51.6	20					
		F	18 05						
474	" 18	MNE	22 06.7	14	4	4			
		F	22 15						
475	" 19	iP_Z	00 50 46	4			-9	3860 (34°7)	Dilatation H 00 43 57
		$iPNE$	50 48	4	+5	-4			
		ipP_Z	50 56	4			+9		
		i_Z	51 16	7			-8		
		iS_E	56 13	7		+16			
		i_E	58 35	5		-6			
		i_N	01 00 16	6	-17				
		$iScS_E$	01 11	6		+20			
		eL_E	01.7	24					
		MNE	03 15	15	48	46			
		MZ	05 54	12			37		
		F	02 55						
476	" 19	iP_Z	03 07 47	6			-6	7210 (64°9)	Dilatation h 0.01 H 02 57 16
		ipP_{NZ}	08 12	6	-5		+11		
		$iPcP_Z$	08 20	6			-11		
		$i(PP)_{NZ}$	10 30	6	-5		+6		
		iS_E	16 19	8		+13			
		iS_N	16 20	8	-8				
		iPS_E	16 55	9		-13			
		isS_N	16 58	9	+17				
		$iScS_N$	17 35	7	+10				
		i_E	18 14	7		-7			
		eSS_E	20 49	18					
		i_N	20 59	13	-4				
		$e(SSS)_E$	23 38	19					
		MNZ	34.1	21	12		15		
		ME	34 55	19		6			
		F	04 40						
477	" 20	e_E	00 20 32						
		i_E	24 40	5		+6			
		eL_Z	26.1	20					
		ME	27 03	12		4			
		MNZ	27 14	10	9		11		
		F	Merged in No.478						
478	" 20	MN	00 44 25	17	6				
		ME	45 47	14		3			
		MZ	47 27	15			6		
		F	01 15						

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
479	Dec.20	iPNZ	19 30 08	8	+8		-17	7640 (68°7)	Dilatation
		iS_{NE}	39 17	18	-74	-50			After iP all readings from Wiechert. Galitzin records too tangled to be deciphered.
		i_{NE}	39 30	18	+280	+200			
		e_E	39 34	32					
		i_N	40 00	23	+790				
		i_E	40 15	18		+360			
		i_N	40 21	21	+720				
		i_N	40 41	18	+590				
		i_E	40 57	12		-200			
		i_N	41 26	18	+470				Δ from Macelwane's Tables.
		i_E	41 37	11		+180			
		i_E	42 03	12		+120			
		i_N	42 35	19	+280				
		i_N	43 16	12	+80				
		i_N	44 01	12	+110				
		i_N	44 53	17	+290				
		i_E	44 58	13		-100			
		i_N	45 42	15	+160				
		e_E	46 59	39					
		eLQ_N	48.1	32					
		L_E	49 26	37		2700			
		L_N	49.7	37	1340				
		MN_1	54 59	25	1160				
		ME_1	57 45	19		640			
		MN_2	58 02	23	1320				
		ME_2	20 02 31	19		880			
		eW_2N	21 56.3	30					
		MN	22 01 22	19	76				
		F	00 45						
480	" 21	e_E	04 13.0						
		MN	25 45	18	7				
		MZ	25 57	19			9		F 04 55
481	" 21	eNZ	05 20.3						
		MNE	23.5	16	6	5			
		MZ	25 09	14			4		F 05 40
482	" 21	e	07 50 31						A few irregular waves.
		F	08 10						
483	" 21	iP_Z	10 30 50	5			-8	8560	Dilatation
		$i(PcP)_Z$	31 13	4			+18	(77°0)	H 10 18 49
		iS_E	40 35	12		-13			Heavy microseisms throughout
		i_{NE}	40 44	13	+25	+29			
		$iScS_N$	40 58	8	+14				
		ePS_E	41 17	?					
		eSS_E	45 17	27					
		$eSSS_E$	48 33	27					
		eLQ_E	50.9	32					
		eL_N	52.4	30					
		eL_Z	53.1	36					
		MNZ	11 00.6	21	29		40		
		ME	06 20	20		32			F 14 05
484	" 21	$i(P)_Z$	20 00 48	4			-5		Dilatation
		e_N	10 31	6					Masked by very heavy microseisms.
		i_E	10 38	6		+9			
		$e(SS)_N$	15 30	20					
		$e(G)_E$	21.4	25					
		eL_Z	26.0	30					
		ME	28 43	18		7			
		MN	29 22	25	25				
		MZ	30 06	23			12		F 22 00
485	" 21	e_N	22 21 34						Masked by microseisms.
		MN	45 57	15	6				
		ME	48 15	16		5			F 23 20
486	" 22	e_N	02 36 33	16					
		eL_{EZ}	37.9	21					
		MZ	39 36	19			13		F 02 50
487	" 22	iP_Z	13 32 22	6			+6	7480 (67°3)	Compression
		eS_N	41 13						
		ePS_{NE}	41 49	13					
		eL_{RE}	53.0	20					
		MNZ	58.3	22	15		9		F 14 15

RIVERVIEW COLLEGE OBSERVATORY
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.) h m s	Per. s	Amplitude A_N μ	A_E μ	A_Z μ	Δ km.	Remarks
	1946								
488	Dec.24	ePN_Z	04 06 10	10				3370 (30°3)	H 04 00 00
		$ePPN$	07 09	10					
		iZ	07 11	10			+9		
		iS_N	11 07	11	+8				
		i_E	11 11	7		+6			
		eL_E	14.4	23					
		$eLNZ$	15.6	28					
		ME_1	17 11	20		58			
		MN_1	18n21	20	64				
		MZ_1	19 00	20			82		
		MNE_2	20.1	13	37	57			
		MZ_2	21 17	13			60		F 06 10
489	" 24	$e(S)_N$	09 55 20						
		$e(PS)_N$	55 45						
		ME	10 16 24	17		6			
		MN	16 37	18	8				
		MZ	18 21	16			5		F 10 35
490	" 24	$e(P)_Z$	16 49 30						
		$e(S)_{NE}$	59 16	11					
		eL_E	17 12.8	20					
		MNZ	20.9	20	10		11		
		ME	22 20	20		9			F 18 25
491	" 25	iPZ	11 25 59	3			+3	9950 (89°5)	Compression
		i_N	36 26	5	+3				H 11 13 03
		iS_E	36 45	6		-3			
		eLR_Z	56.2	22					
		ME	12 00 22	20		6			
		MN	05 24	19	10				
		MZ	o5 39	19			7		F 12 15
492	" 26	eLZ	08 44 10	19					A few long waves
		F	08 50						
493	" 26	eNE	14 54 25	12					
		eLZ	55.4	18					
		MN	15 00 47	16	5				
		MZ	01 11	16			6		F 15 25
494	" 26	$iPEZ$	16 57 50	6		+2	+5	4000 (36°0)	Compression
		iPN	57 53	4	+3				
		$iPPEZ$	59 13	7		+4	+7		
		$ePPPE$	59 29	12					
		eS_N	17 03 26	8	2				
		iS_E	03 32	8		-6			
		$eNEZ$	03.6	27					
		i_E	04 30	9		+11			
		e_E	05 59	11					
		$iSSSEZ$	06 13	11		+9	-11		
		eLN	10.5	25					
		MN	14 05	19	35				
		MEZ	14.6	16		30	49		F 18 50
495	" 28	eL_E	05 55.3	22					
		MEZ	57.5	22		8	9		
		MN	58 00	21	9				F 06 15
496	" 28	ePZ	10 21 22	9				8710 (78°4)	H 10 09 23
		iS_E	31 14	12		+5			
		eS_N	31 16	11					
		$ePSE$	31 59	16					
		eSS_E	36 19	15					
		eN	36 27	15					
		$eLQE$	41.9	23					
		MZ	51 05	21			8		
		ME	51 58	21		6			
		MN	52 36	21	7				
497	" 30	eZ	16 12.0						F 12 15
		F	16 25						A few waves.
498	" 31	eN	12 48 25						
		MN	54 32	14	4				
		F	13 05						

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