

RIVERVIEW COLLEGE OBSERVATORY

SEISMOLOGICAL BULLETIN

1953

JANUARY - DECEMBER.



RIVERVIEW, SYDNEY, AUSTRALIA

Unless otherwise stated, readings are from the Galitzins; and Jeffrey's & Bullen's Tables (1940) are used.

The amplitudes of initial impulses on the Galitzins are computed by Galitzin's method.

Riverview College Observatory

RIVERVIEW, N.S.W.

SEISMOLOGICAL BULLETIN

 $\phi = 33^{\circ} 49' 46''$ S. $\lambda = 151^{\circ} 9' 30''$ 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 ₀	$\epsilon : l$	$\frac{r}{T_0^2}$	T ₁ (Galv.)	T (Pend)	μ^2	V _B	
N	205	7.5	5.3	0.011	4	12.0	12.1	+0.03	540
	178	8.7	5.5	0.021					
E	221	7.0	5.0	0.013	4	12.3	12.5	-0.02	530
	137	10.9	6.2	0.013					
Z					4	10.9	10.8	-0.03	460

No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks	
							A _N	A _E	A _Z			
			h.	m.	s.	s.	μ	μ	μ	km.		
1	1953 Jan. 1	i (PP)Z	04	41	43	4			+2			
		iSN		45	10	4	-5					
		iSE		45	11	4		+5				
		iZ		45	13	4			+3			
		iN		45	23	6	+4					
2	" 1	(P)Z	10	07	04							
		eLE		12.2		18						
		ME		13.6		13		5				
		MN		13.8		12	3					
3	" 1	(i)Z	18	07	41	4			+2		Masked by microseisms	
		eN		11	38	13						
		eE		11	40	13						
		eLE		15.8		18						
		MZ		19.1		13		3				
		ME		19.2		13		3				
		MN		19.9		13	3					
6	" 2	ePSE	11	52	31	18						
		eSSNE		59	37	18						
		eLE	12	20.3		21						
7	" 2	eE	18	42	30							
		eLN		47.2		19						
		MN		49.7		13	2					
8	" 3	(P)N	14	36	04	$\frac{1}{2}$					Felt at Gunning, New South Wales.	
		(P)E		36	06	$\frac{1}{2}$						
		iSnNE		36	26	1	+4	-5				
		iSgZ		36	29	1			+7			
		MN		36	37	4	7					
		eLZ		36	39	4						
		ME		36	50	4		5				
		MZ		36	56	3			10			
		ePZ	17	53	03					3470		H 17 46 45
		ePPZ		54	03					31:2		
9	" 3	iSN		58	06	7	-7					
		iSSN		59	50	7	+5					
		iSSSN	18	00	16	7	+5					
		iE		00	21	7		+3				
		iE		01	05	7		+14				
		eLRE		01.6		28						
		(ScS)NE		03	40	6	-10	+6				
		MN		06.4		13	10					
		MZ		07.1		15			13			
		ME		07.4		12			15			

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
			h	m	s	s	"	μ	μ		
10	1953 Jan. 4	e(P)Z	09	21	44						
		iz		22	14	3			-2		
		i(S)N		26	16	3	+4				
		iN		26	29	5	-8				
		iE		26	41	3		-4			
		i(SS)N		27	28	4	-3				
		ME		31.2			16		3		
		MN		31.9			16	4			
11	" 4	MZ		32.4		13			2		
		i(P)Z	11	23	18	3			+2		Compression
		iSE		28	32	4		-2			
		iSN		28	34	4	-1				
		iN		28	44	4	+3				
		MN		32.2			18	3			
		eLRE Z		32.5			24				
		ME		34.0			19		3		
12	" 5	MZ		34.3		21			3		
		iPNZ	08	01	29	4	+4		-5	10,050	Dilatation
		iN		04	54	5	-4			90:4	H 07 48 30
		iz		04	58	5			-7		
		iSE		12	19	7		-9			
		iN		12	27	7	+12				
		iE		12	39	8		-10			
		iN		13	36	?	+				
		iN		14	13	10	-20				
		iN		14	58	9	-27				
		iN		16	33	10	+26				
		iSSN		18	32	10	-28				
		iE		18	35	10		+22			
		iN		18	48	14	-52				
		eLQE		24.7			30				
		eGE		25.6			42				
		eLN		25.7			30				
		13	" 5	iN		28	48	7	+12		-5
iE				29	02	7		-5			
eLRZ				30.2			30				
ME				31.3			13		50		
MZ				32.4			27			100	
MN				33.0			24	95			
iPNZ	10			18	56	4	-7		+14	9210	Compression
ipPNZ				19	07	4	-9		+23	82:9	H 10 06 33
iSE				29	11	6		-22			
iKSN				29	12	5	-16				
iN				29	22	5	+10				
iN				29	30	6	+11				
14	" 5	iE		29	33	6		+10			
		iN		30	00	7	+14				
		iN		30	16	7	+20				
		iz		30	29	7			-17		
		iN		34	07	6	-6				
		iNE		34	20	8	+12		-9		
		eN		34	54	22					
		eLQE		41.5			30				
		eLN		42.6			30				
		eLRZ		45.8			30				
		ME		48.4			27		28		
		MN		51.0			22	50			
		MZ		51.3			21			48	
		eW ₂ N		12	23		27				
(iP)Z		15	57	38	4			+3		Compression	
14	" 5	e(S)NE		16	07	48	13				
		eLN		17.6			21				

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		AN	AE	AZ		
17	1953 Jan. 7	ePZ	14	14	27		u	u	u	km.	Compression.
		iPZ		14	32	3			+3		
		iN		14	34	7	+9				
		iZ		14	38	7			+24		
		iN		14	47	8	+21				
		iZ		14	48	4			-14		
		iNZ		15	09	6	-8		-12		
		iN		15	17	7	-20				
		iZ		15	22	6			-21		
		iE		15	28	7		+5			
		iSN		19	01	6	+14				
		iN		19	26	10	-110				
		iZ		19	29	7			+20		
		iE		19	36	6		-10			
		eZ		19	39	24					
		eE		19.9		23					
		iE		21	06	7		-36			
iE		21	44	7		-70					
ME		24.9		19		96					
MNZ		25.5		18	133		115				
19	" 10	iPZ	14	32	22	5			+4	2440 21:9	Compression H 14 27 30
		ipPZ		32	30	6			+6		
		ipPNE		32	31	6	-4	-5			
		iPPZ		32	48	6			-5		
		iSNE		36	17	5	+5	-2			
		iPcPZ		36	23	5			-7		
		isSNE		36	31	5	+4	-4			
		iZ		36	39	7			-13		
		iN		36	40	5	-5				
		iE		36	47	7		+7			
		eLREZ		37.7		24					
		MN		39.5		15	10				
		ME		39.7		15		4			
MZ		40.0		16			4				
23	" 11	(eP)Z	17	48	47						
		e(S)N		52	44	7					
		e(sS)N		52	55	6					
		eN		53	23						
		ME		56.5		17		1			
25	" 12	MN		56.8	16	1					
		e(S)NE	06	24	37	6					
27	" 12	eLN		27.5	18					9300 83:7	Compression h 0.005 ca. H 17 23 45
		iPZ	17	36	09	3			+1		
		iPcPZ		36	12	4			+5		
		iN		36	13	4	-2				
		i(pP)Z		36	29	4			+4		
		iSN		46	26	5	+3				
		iN		46	32	5	+4				
		iScSe		46	35	5		-5			
		iN		46	52	7	-10				
		iE		47	03	5		-9			
		iPSN		47	20	7	-9				
		iE		47	24	7		-8			
		eSSN		52	19	24					
		eGE		58.4		48					
		eLRN	18	02.5		36					
		eLRZ		03.0		34					
		MNZ		13.9		21	5		4		
ME		15.5		19		2					
29	" 14	eW2N	19	45		25					
		(P)Z	01	49	02						
		e(S)N		52	54						
		eLN		54.4		19					
		MN		56.2		15	5				
ME		56.8		13		2					

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
			h	m	s		AN	AE	AZ		
30	1953 Jan.14	(eP)Z	20	59	32						
		e(S)N	21	04	31						
		eLE		06.6							
		ME		09.17	19			1			
31	" 15	MNZ		09.9	19		2		3		
		e(S)E	12	25	49	9					
		e(S)N		25.52	10						
		eLE		39.7	24						
33	" 16	MEZ		45.2	17			1	1		
		MN		45.8	16		1				
		i(P)Z	12	35	28	4			-2		Dilatation
		i(PPP)NZ		36.50	4	+2			-2		
34	" 16	eSE		40.38	7						
		iN		40.44	5	+3					
		MZ		47.2	6				2		
		MNE		47.4	7		3	2			
		PnE	21	20	42					200	H 21 20 09
		iS ₁ NE		21.06	1	+2	+1			1:8	Felt at Gunning, New South Wales.
		iSgZ		21.08	2				+1		
		eLZ		21.17	8						
35	" 17	MNE		21.18	4		3	2			
		MZ		21.38	2				4		
		iN	08	08	47	4	-1				
		eLN		11.1	16						
37	" 17	MN		14.0	12		1				
		ME		15.0	12			1			
		eSN	17	52	31	7					
39	" 18	eSE		52.34	7						
		e(sS)E		53.33	7						
		e(S)N	18	31	27						
40	" 19	eLN		50.3	28						
		e(S)E	05	18	54	8					
		e(SKS)N		19.14							
		e(SS)N		23.56	25						
		eLQE		28.9	25						
		eLRN		32.4	28						
		MN		36.3	21		1				
		ME		36.6	21			1			
		MZ		41.3	21				2		
		eLN		50.3	28						
41	" 19	(iP)Z	14	53	01	2			-1		Dilatation
		eZ		53.16							
		i(PP)NZ		53.49	3	+3			-3		
		iSN		57.44	5	-4					
		iN		58.05	6	-6					
		eLZ	15	01.6	25						
		MZ		03.1	19				9		
		MN		03.2	22		9				
		ME		03.9	19			6			
		ePE	02	41	09						
42	" 20	eN		41.16							
		iSN		45.10	5	+1*					*Readings from Wiechert.
		eLE		46.4	22						
		MN		48.1	14	9*					
		ME		48.6	13			4*			
44	" 20	(P)E	17	41	07						
		(P)N		41.10							
		i(PP)N		42.48	2	+2					
		i(PP)E		42.49	2			-1			
		iN		43.34	3	+2					
		iSN		47.23	4	-5					
		iSE		47.25	5			+4			
		iN		48.04	4	+4					
		i(SS)N		50.32	5	+4					
		i(ScS)E		50.41	4				-5		
		ME	18	01.2	16				17		
		MN		01.6	13		10				

1953, January.
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
46	1953 Jan. 21	(P)Z	h	m	s	s	μ	μ	μ	km.			
		iSE	01	55	26								
		eLZ	02	05	48	4		-2					
		MN		23.1		25							
47	" 21	e(S)N	05	28	43	8	2						
		eLE		30.3		22							
		MN		32.0		14	1						
		ME		32.3		17		1					
48	" 23	(iP)Z	09	34	32	3			+2	2420	Compression		
		i(S)N		39 02		5	-4						
49	" 23	iSnN	09	40	12	3	+3			21:8	Felt at Gunning, New South Wales.		
		iS*E		40 13		4		+4					
		iSgZ		40 14		4			+3				
51	" 23	ePZ	13	02	43					2420			
		iSN		06 37		5	+3						
		eLZ		08.0		22							
		MNE		09.8		15	3	1					
52	" 23	iSnNE	17	09	49	4	+	+		21:8	Felt at Gunning, N.S.W.		
		iSgEZ		09 51		1		+1	+2				
55	" 25	e(P)Z	15	43	25								
		e(S)N		47 17		10							
		eLE		48.6		22							
		ME		50.6		16		1					
		MN		50.8		15	1						
		MZ		51.4		15			1				
		e(S)N	01	52 25	7								
57	" 26	eLE		54.1		20							
		MNE		55.6		14	1	1					
		MZ		56.4		14			1				
		iPZ	03	31 08	4				-5			3240	
61	" 27	iz		31 22		4			-4	3240	Dilatation H 03 25 07		
		iz		31 36		4			+5			29:2	
		iz		31 56		4			+5				
		iN		32 05		4	+4						
		iN		35 45		?	-						
		iSN		35 57		8	-11						
		eE		35 57		23							
		iz		36 21		9							+14
		iN		36 24		12	+51						
		iE		36 27		7		+14					
		iN		37 21		6	+13						
		eLE		38.5		30							
		eLNZ		39.4		30							
		MN		41.1		18	22						
		ME		41.5		16		20					
		iScSN		41 48		6	+22						
		MZ		42.9		17			25				
62	" 28	iPZ	12	31	21	3			-3	2500	Dilatation H 12 26 23		
		iNEZ		31 25		3	-2	-3	+5			22:5	
		ipPZ		31 29		4			-6				
		iSNE		35 21		4	+5	-2					
		iz		35 22		5			+4				
		iSN		35 33		5	+6						
		iN		35 41		5	-6						
		eLN		36.6		24							
		eLE		36.8		24							
		eLZ		36.9		23							
		MN		38.3		16	13						
		ME		38.4		15		5					
		MZ		39.4		13			3				
65	" 30	eZ	15	08	37								
		i(S)N		12 15		5	-2						
		eLE		13.6		17							
		MN		15.3		15	3						
		ME		15.9		13		2					

1953, January-February.
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
66	1953 Jan.30	iPz	h	m	s	s	μ	μ	μ	km. 3010 27°1	Compression h 0.01 H 21 46 43 Gutenberg graph gives: Δ 26°1 h 100 km., H 21 46 51
		iNEZ	21	52	19	3			+5		
		isPNEZ		52	27	3	+8	+6	-15		
		iN		52	55	4	+6	+2	-5		
		iPPZ		53	07	7	+8				
		iz		53	10	7			+7		
		iSN		55	49	5			+7		
		iz		56	48	5	-8				
		iN		56	50				+		
		iE		56	52	9	+37				
		iE		56	53	9		+9			
		iN		57	05	5	+14				
		iz		57	11	6			-10		
		iE		57	25	6		+8			
		isSN		57	26	7	+11				
		iz		57	28	7			+10		
		eZ		57	36	26					
		iE		57	51	6		+12			
iN		58	12	7	+15						
iN		58	57	7	+9						
eLZ		59	3	27							
Minor shocks: 2d 04.6h, 07.9h; 7d 06.0h, 06.7h, 20.7h; 11d 01.4h, 05.0h, 10.9h, 23.8h; 12d 07.3h; 13d 17.6h; 15d 21.1h; 17d 12.3h; 20d 16.3h; 21d 01.6h; 23d 12.2h; 24d 06.8h, 12.9h; 25d 20.7h; 26d 09.2h, 16.4h; 27d 00.4h, 05.9h; 30d 04.4h											
67	Feb. 1	eN	14	25	13						
		iN		25	21						
68	" 2	e(S)N	03	38	51						
		e(LQ)E		40.5		22					
		eLZ		42.9		24					
		ME		44.8		15		7			
		MZ		45.0		19			4		
		MN		45.4		17	6				
69	" 2	e(S)N	08	42	41						Repetition of No.68
		eLz		46.6		25					
		ME		48.6		14		4			
		MZ		48.8		19			3		
		MN		49.3		16	4				
70	" 2	(i)Z	10	20	20						
		eE		26	48						
		eE		27	12						
		iNE		28	25	3	-2	-2			
		MNE		31.5		6	2	1			
	" 6	iPZ	13	24	58	3			-2	8340	Dilatation H 13 13 18
		iz		25	04	3			+3	75°0	
		iPPZ		27	43	3			+6		
		iSNE		34	32	6	-6	-5			
		iSKSN		35	00	4	+4				
		iScSE		35	03	4		+6			
		iPSE		35	11	6		+5			
		eSSNE		39	36	19					
		eE		42	29	16					
		eLQE		44.4		27					
		eLRZ		49.4		27					
		MNE		52.0		22	12	14			
		MZ		56.2		20			10		
	" 7	iSN	07	46	56	4	-2				
		eLRNE		47.6		14					
		ME		48.8		12		5			
		MN		49.0		11	5				
		iScSE		56	13	5		+5			
75	" 7	ePz	18	35	51					9170	
		iSE		46	04	4			+4	82°5	
		e(SS)N		51	44						
		eLQE		57.9		27					
		MNZ	19	07.0		22	4				
		ME		08.1		22		1			

1953, February.
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
77	1953 Feb. 9	(iPP)Z	03	16	48	3			+2		Masked by micro-seisms.
		e(S)E		20	28						
		eLE		23.2		23					
		MNEZ		25.1		18	4	2	3		
78	" 10	iPZ	13	43	03	3			+3	2470	Compression
		iNZ		43	11	4	+2		+7	22:2	H 13 38 08
		iE		43	12	5		-3			
		iE		43	21	5		-3			
		iZ		43	23	4			-5		
		iN		43	29	4	+2				
		iE		43	33	4		+3			
		iSNE		47	01	5	+3	+3			
		iN		47	21	5	-4				
		iE		47	28	4		-2			
		iN		47	48	4	+5				
		eLE		48.3		20					
		eLNZ		48.5		20					
		MN		50.2		13	3				
79	" 10	i(P)Z	13	57	10	4			-5		Dilatation
		iN	14	01	31	6	+6				
80	" 10	iPZ	14	02	36	5			-11	2450	Dilatation
		iZ		03	17	4			-7	22:0	H 13 57 43
		iZ		03	32	4			+5		
		iN		04	05	4	+5				
		iSN		06	32	5	+12				
		iEZ		06	33	5		+8	+6		
		iE		06	44	5		+25			
		iN		06	54	6	+19				
		iSSNE		07	09	7	+7	-9			
		eLREZ		08.0		24					
		ME		10.1		16		16			
		MN		10.2		14	15				
		MZ		10.3		16			14		
81	" 10	iN	17	26	43	3	-1				
82	" 12	iZ	08	34	21	4			-2		
		iPPZ		34	59	5			-3		
		iZ		35	09	5			-4		
		e(SKS)E		40	55	9					
		eE		44	21	12					
		iPSN		44	38	7	-3				
		iPSE		44	39	7		+4			
		iZ		44	46	7			+4		
		iPPSEZ		45	45	8		-4	-6		
		eLN		59.7		24					
		eLN	09	05.9		30					
		MN		12.3		26	9				
		MEZ		18.0		24		11	15		
83	" 13	ePZ	10	46	14	5				2450	H 10 41 21
		iPZ		46	22	6			+3	22:0	
		eSN		50	10	7					
		iSE		50	13	5		+2			
		esSN		50	22						
		iE		50	39	5			-2		
		iSSN		50	50	7	+2				
		eLRE		51.6		24					
		MNE		53.4		14	3	1			
		MZ		54.2		15			1		
84	" 13	iPZ	14	59	48	2			+2	4170	Compression
		ePPZ	15	01	19	6				37:5	H 14 52 36
		eSE		05	34	7					
		iE		07	38	3			-2		
		iSSN		08	05	7	-3				
		iSSE		08	06	7			-3		
		MNE		13.6		13	6	6			
85	" 13	i(P)Z	21	52	49	4			+2		Compression
		i(S)N		57	28	4	+2				
		eLE		59.1		21					
		MNEZ	22	01.2		13	1	2	2		Per.MEZ 16s.

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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
					AN	AE	AZ			
86	Feb.14	iPNZ	21 57 27	3	-3		+4	4870 52:8	Compression h 0.01 H 21 48 19	
		ipPZ	57 51	3			+5			
		inZ	57 58	3	-4		+5			
		inZ	22 00 45	6	-4		+5			
		iSN	04 46	7	+10					
		ieZ	04 49	5		-6	-5			
		iPPSN	05 19	4	+3					
		ie	05 26	6		-3				
		isSN	05 27	4	+2					
		in	05 45	5	-3					
		iScSN	07 06	4	+2					
		ine	07 12	5	+5	-5				
		in	07 34	6	+2					
		ie	07 54	6		-4				
		in	09 03	4	-2					
		in	10 03	4	-4					
		ME	14.6	15		6				
		MN	16.2	15	4					
87	" 15	e(S)E	02 57 37	6	+2					
		in	58 29	6	+2					
		eLN	59.8	21			1			
		ME	03 03.3	13						
89	" 15	MN	03.4	13	2					
		eN	20 10 23	7	+4					
90	" 19	in	10 47	7	+4			2920 26:3	Dilatation h 0.05 ca H 13 06 14	
		eLE	14.0	22						
		eLZ	14.3	23						
		MNZ	16.2	19	2		2			
		ME	16.4	13			2			
		iPEZ	13 11 21	3		+1	-4			
		ipPZ	12 21	3			-4			
		ipPEZ	12 25	4		-8	+9			
		ieZ	12 28	4		+20	-23			
		in	12 33	4	+2					
		ieZ	13 08	6		+20	-23			
		iz	13 15	5			-19			
in	13 25	4	-6							
iz	13 41	4			-7					
ipCpZ	14 38	4			-4					
ipCpE	14 40	4		+5						
in	15 26	4	-9							
ise	15 27	6		+13						
in	15 33	5	-15							
ie	15 50	6		-9						
ie	17 18	6		-6						
ie	17 27	6		-10						
iScPEZ	17 44	6		-8	-14					
iScSN	21 36	5	-8							
91	" 19	i(PKP)Z	15 37 36	4			+5	3600 32:4	Compression	
		iz	38 08	3			-3			
		iz	38 32	3			-3			
		iz	38 38	3			+3			
		e(PP)E	40 44	8						
		ie	46 39	3			-2			
		eSSE	59 34							
		eE	16 02 00	13						
		eGE	17.8	45						
		eLRN	26.2	22						
		ME	39.5	19		2				
94	" 20	MNZ	42.5	16	3		2	3600 32:4	Compression h 200 km. H 23 22 44 (From Gutenberg graph)	
		ipZ	23 29 05	3			+3			
		iz	29 16	3			-3			
		ipPZ	29 46	3			+2			
		ippZ	30 23	3			+3			
		eSN	34 05							
		in	34 19	4	+3					
		iScPE	35 00	4			-2			
iScSE	39 06	4			+3					

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
95	1953 Feb.22	(P)Z	h	m	s	s	μ	μ	μ	km.	
		eN	08	22	18						
		eLE		30	55						
		MEZ		33.2		25		4	5		
		MN		35.9		16					
101	" 23	(iP)Z	23	30	24	3	2		+2		Compression
		iSE		34	33	7		-2			
		iSN		34	34	7	+2				
		isSE		34	47	7		-5			
		eLRE		36.2		16					
		MZ		37.9		13			4		
		MN		38.4		11	5				
		ME		38.6		11		3			
103	" 25	iSNE	21	41	40	5	-5	-3			
		iE		42	04	6		+5			
		iE		42	22	4		-2			
		eSSN		48	49						
		eLRE	22	03.6		24					
		ME		08.2		19		1			
104	" 26	iSE	00	55	20	4		-3			
		eSSE	01	00	48	14					
106	" 26	iPZ	10	17	56	3			-3	2450	Dilatation
		iE		18	02	4		-4		22:0	H 10 13 03
		iZ		18	04	3			-7		
		iNE		18	06	7	+6	-6			
		iZ		18	08	7			+15		
		iPPE		18	22	6		+4			
		iE		18	42	5		-6			
		iN		18	45	5	+5				
		iSN		21	52	7	-10				
		iP _c PEZ		21	55	5		-8	-5		
		iE		21	58	7		+19			
		iE		22	12	7		-20			
		iN		22	16	8	-21				
		eLRE		23.2		27					
		MZ		24.7		19			14		
		ME		24.9		19		12			
		MN		26.3		13	5				
107	" 26	iPNEZ	11	48	00	7	+50	+27	-51	2910	Compression
		iP _c NEZ		48	14	5	+52	+33	-47	26:2	H 11 42 27
		iNEZ		48	25	6	+23	+12	-33		
		iNE		48	32	6	-44	-21			
		iNEZ		49	02	6	+42	+31	-57		
		iN		49	15	7	+49				
		iZ		49	24	8			-100		
		iE		49	27	7		+56			
		iN		49	28	7	+80				
		iE		49	59	7		+82			
		iE		50	09	8		+54			
		iP _c PZ		51	27	7			-31		
		iE		52	13	5		-23			
		iE		52	25	5		-22			
		iSN		52	28	8	+36				
		iE		52	32	7		-67			
		iE		52	44	8		-145			
		iZ		52	47	8			+72		
		iN		53	01	7	-200				
		iE		53	03	8		-160			
		iN		53	48	8	+190				
		iE		53	49	8		-140			
		eLE		54.7		23					
		eLZ		54.9		23					
		MZ		55.9		19			195		
		MNE		59.6		13	200*	190			*From Wiechert
		F	15	35							

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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks				
					AN	AE	AZ						
114	1953 Feb.27	PZ	h m s	s	μ	μ	μ	km. 3170 28:5	H 05 45 11				
		eSE	05 51 05										
		iN	55 49										
		eLE	56 10	6	-3								
		ME	58.9	20		7							
118	" 28	MNZ	06 02.3	11	10		9		Compression				
		iPZ	18 43 38	3			+2						
		iN	47 36	3	+1								
		eLN	48.3	15									
Minor shocks; 3d 02.0h, 21.3h; 8d 09.5h; 15d 13.3h; 19d 18.6h; 20d 10.4h; 23d 06.4h, 09.2h, 10.4h, 13.3h, 16.5h; 25d 10.0h; 26d 02.3h, 16.2h, 17.4h, 18.0h, 19.8h; 27d 00.9h, 11.4h, 20.1h; 28d 05.3h, 22.7h.													
121	Mar. 1	e(PP)Z	23 03 30										
		e(S)N	07 15										
		iE	07 19	4		-1							
		iE	08 09	5		+2							
		i(SS)N	08 15	5	-5								
		MN	11.7	14	2								
		ME	12.3	14		2							
		122	" 2	iPZ	02 18 32	3					-3	3020 27:2	Dilatation H 02 12 49
				iZ	18 36	4					+5		
				iPPN	19 16	4	+4						
iSN	23 07			6	-4								
iSE	23 09			5		-3							
iE	23 21			5		+3							
iN	23 30			5	-3								
iE	23 34			5		+5							
iN	23 43			4	-4								
iN	24 09			5	+3								
124	" 3	iE	24 27	6			+3	2400 21:6	Dilatation H 11 26 54				
		iE	25 16	6			+8						
		iE	25 30	6			+8						
		eLZ	26.0	30									
		iPNEZ	11 31 43	4	+7	+11	-15						
		iNEZ	31 49	4	-33	-48	+47						
		iNEZ	31 55	6	+100	+125	-180						
		iPPPNE	32 18	5	+57	+79							
		iZ	32 24	6			+80						
		iN	32 27	6	-38								
		iE	32 31	6		+37							
		iE	32 48	6		-10							
		iNZ	33 04	6	+71		-39						
		iE	33 06	8		-63							
		iZ	33 12	7			-90						
		iZ	33 30	6			-35						
		iZ	34 00	7			-62						
		iSNE	35 35	5	+26	-5							
		iN	35 42	5	-62								
		iE	35 46	5		+28							
iPcPZ	35 49	4			-27								
iN	35 53	5	+160										
iZ	35 55	6			-59								
iE	36 02	7		+180									
iNZ	36 07	5	-120		-190								
eLQE	36.2	27											
eLRN	37.3	18											
MEZ	39.8	16		240	300								
MN	40.7	13	250*										
125	" 3	iPZ	13 46 04	2			+4	2440 21:9	*From Wiechert Compression H 13 41 12				
		eSN	49 59										
		iPcPZ	50 02	5			+5						
		iN	50 03	7	-13								
		iE	50 05	5		+3							
		iN	50 10	7	+10								
		eLRE	51.3	20									
		MN	53.0	13	4								
		MEZ	53.5	17		6	6						

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
			h	m	s		AN	AE	AZ		
127	1953 Mar. 3	e(S)E	23	16	38						
		iE		16	59	6		-2			
		eLN		36.3		21					
		MNE		45.2		19	1	1			
		MZ		45.9		18			1		
128	" 4	e(P)Z	07	18	38						
		iZ		19	08	3			-2		
		e(S)E		22	27						
		eLZ		24.1		18					
		ME		25.9		16		1			
		MZ		26.4		16			2		
		MN		26.5		13	1				
129	" 4	iZ	14	58	02	4			-3		
131	" 5	iPZ	07	34	03	3			+3	2510	Compression
		iE		34	06	4		-1		22:6	H 07 29 02
		iZ		34	11	4			+5		
		iPPPZ		34	37	6			+4		
		iSE		38	04	5		+4			
		iN		38	10	6	+6				
		eLE		39.5		24					
		MEZ		41.7		15		2	4		
		MN		42.4		13	3				
132	" 5	i(SKS)E	19	17	03	6		+4			
		i(S)E		17	32	6		+5			
		eLQE		29.8		24					
		MNZ		44.1		20	3		2		
133	" 5	iPZ	21	13	58	4			-3	9450	Dilatation
		ipPZ		14	14	4			-5	85:0	h 0.005 ca.
		iSN		24	20	5	+3				H 21 01 28
		iE		24	28	7		-4			
		iN		24	32	7	+9				
		iE		24	42	5		-3			
		iN		24	45	6	-9				
		iE		24	54	5		+4			
		iE		25	29	5		+4			
		eSSN		29	51	15					
		eLQE		37.2		30					
		eLRNZ		41.1		36					
		MNEZ		43.3		30	13	7	10		
134	" 6	iZ	04	26	26	3			+3		
		e(S)E		31	07	8					
		eLE		33.8		28					
		MNE		35.3			2	4			Per.MN 16s.,
		MZ		35.5		18			3		ME 21s.
137	" 8	iN	18	20	38	4	-4				
138	" 9	iPNZ	10	09	45	2	+1		-2	3210	Dilatation
		ipPZ		09	57	3			+4	28:9	H 10 03 45
		iN		10	02	6	+6				
		iNZ		10	11	5	+7		-4		
		iN		10	18	5	-3				
		iN		10	27	5	-5				
		iZ		10	28	5			+4		
		iN		10	45	6	-6				
		iN		10	55	5	-6				
		iZ		12	11	5			+10		
		iSN		14	32	5	+9				
		iSE		14	33	5		+23			
		iN		14	39	5	+11				
		iN		14	49	5	+7				
		iE		14	52	6		+19			
		iN		15	16	6	+10				
		iN		15	28	5	-8				
		iE		15	42	5		+9			
		iSSE		15	55	7		-24			
		iZ		15	59	4			+11		
		iZ		16	05	5			+17		

(Continued overleaf)

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
			h	m	s		AN	AE	AZ		
138 cont.	1953 Mar. 9	eLE	10	16.3	30						
		iN		16 35	6	-30					
		iE		16 44	6		-16				
		iE		17 13	6		+37				
		iN		17 23	6	-19					
		iE		17 27	6		-39				
		iN		17 46	6	+34					
		iE		17 55	7		-13				
		iE		18 11	7		-50				
		iE		18 24	7		+42				
		ME		23.1	10		24				
139	" 10	MNZ	06	23.7	13	20		14	2490	Dilatation	
		iPEZ		03 50	2		+3	-2	22:4	H 05 58 53	
		ipPEZ		04 00	5		+3	-4			
		iZ		04 05	3			+3			
		iN		04 06	5	+5					
		iZ		04 12	3			+4			
		iPPPE		04 27	4		-2				
		iNE		04 37	5	+4	+3				
		iZ		04 57	4			+3			
		iSN		07 49	9	-13					
		iSE		07 51	4		+3				
		iZ		07 56	6			+14			
		isSN		08 02	9	-26					
		iE		08 09	7		+14				
		iSSSN		08 46	7	+7					
		eLRZ		09.5	24						
		MEZ		11.6	18		16	11			
		MN		11.9	15	13					
140	" 10	e(S)N	07	52 25							
		eLE		54.6	18						
141	" 10	e(SKS)E	22	26 46							
		eLE		49.3	46						
		MNEZ		58	22	11	4	12			
142	" 12	iE	01	02 47	5		+4				
		iE		03 02	5		+4				
143	" 14	ipZ	17	09 05	3			+2	5260	Compression	
		ineZ		09 09	3	+2	+1	-2	47:3	H 17 00 33	
		iN		09 13	5	+2					
		iZ		09 15	4			+7			
		iE		09 16	5		+5				
		iZ		09 19	4			-7			
		iZ		09 29	5			-5			
		iNE		09 46	4	-2=	+3				
		iZ		09 48	5			-4			
		iPPNZ		11 00	4	-2		+2			
		ineZ		11 07	4	-3		+8			
		iN		11 25	4	-3					
		iSN		15 55	8	-5					
		iSE		15 56	7		+4				
		ipSN		16 08	8	-11					
		iE		16 17	7		-4				
		iN		16 27	5	-4					
		iN		16 38	5	+4					
		iE		16 39	5		+6				
		iN		17 03	5	+5					
		iE		17 04	5		-3				
		iScSN		18 55	5	-4					
		iSSE		19 19	7		-5				
		iSSN		19 23	7	-7					
		iZ		19 33	7			+6			
		iE		19 38	7		+16				
		iE		19 47	7		-24				
		eZ		20.0	27						
		iSSSN		20 22	8	-18					
		iN		24 00	5	+6					
		iE		24 14	7		-7				
		eLE		25.1	27						
		M		34	16	15	8	10			

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks	
			h	m	s		AN	AE	AZ			
146	1953 Mar.16	iPZ	08	27	23	3				km. 2480 22:3	Dilatation H 08 22 27	
		iNE		27	26	4	+1	+1				
		iz		27	28	3			+2			
		iN		27	33	4	+2					
		iz		27	38	3			+2			
		iE		27	40	6		+4				
		iz		28	10	4			-3			
		eSN		31	21							
		iN		31	25	7	-7					
		iE		31	26	5		-10				
		iz		31	30	6			+9			
		iN		31	37	7	-14					
		iE		31	43	6		+6				
		iN		31	47	7	-15					
		iE		31	53	5		-6				
		eLN		32.1			21					
		eLE		33.2			22					
		ME		35.1			16		8			
		MNZ		35.6			16	9				6
		148	" 17	i(P)Z	11	17	37	3				
eLE				22	08	18						
eLRZ				24	10	24						
MNZ				26.0		17	3		2			
149	" 17	ME		26.3		16		2				
		(P)Z	13	17	08							
		iz		17	28	3			+2			
		iSE		27	29	4		+4				
		iE		28	02	8		+5				
150	" 18	MZ		49.7		19			1			
		MN		49.8		22	2					
		ePPZ	19	28	20							
		iz		29	10	4			+6			
		iE		29	11	7		+3				
		iz		32	06	5			+10			
		iE		32	14	7		-5				
		iN		32	15	7	+7					
		iz		32	26	5			-4			
		iE		32	29	7		-5				
151	" 19	iz		40	30	7			+8			
		iE		40	57	8		+13				
		iE		42	34	8		+12				
		eN		50	34	22						
		eLQNE	20	02.9		36						
		eLRN		09.2		41						
		MN		19.8		23	28					
		MEZ		21.5		27		32	58			
		iPKPZ	08	47	12	3			-28	16,080 144:7 Dilatation. h 200 km. H 08 27 58 (from Gutenberg graph)		
		iNEZ		47	17	7	+18	-22	+110			
		iNEZ		47	30	8	+15	-9	+19			
		iz		47	48	6			+12			
		iz		47	59	6			+33			
		ipPKPZ		48	03	7			-31			
		iz		48	11	7			+29			
iz		48	39	4			+11					
iz		49	21	6			-26					
iz		49	57	6			+20					
iPKSNE		51	00	6	-14	+21						
iE	09	09	11	9		+15						
iN		11	04	12	-16							
iE		11	13	13		-16						
iN		13	47	12	-15							
iN		23	44	9	+19							
152	" 19	eGN		28.4		48						
		iz	13	14	20	3			-2			
		eZ		14	51	11						
		eLN		20.4		18						
		MN		21.6		16	4					
ME		22.8		18		3						

1953 March.
 RIVERVIEW COLLEGE OBSERVATORY,
 SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
153	1953 Mar.19	(P)Z	h	m	s		μ	μ	μ	km.	
		eE	18	11	57						
		iN		12	37						
		eE		13	09	4	-3				
		eLN		16	55						
		MNZ		19.0		18					
		ME		21.0		16	5		4		
154	" 19	iPEZ	18	58	09	3		4		2700 24:3	Compression h 600 km., H 18 53 33 (from Gutenberg graph)
		ipPZ		59	36	3		-3	+4		
		esPE	19	00	45	7			+2		
		isPZ		00	49	7			+6		
		iSNE		01	51	4	-5	-4			
		isSN		04	42	4	-3				
		iScSNE		08	01	4	+3	-4			
155	" 19	ePZ	23	32	19					2760 24:8	
		eSE		36	37	7					
		eE		37	13	4					
		eLE		39.6		18					
		MN		41.4		15	3				
		MZ		41.5		16			2		
		ME		41.6		15		2			
156	" 19	iPEZ	23	50	24	4		-3	+3	2810 25:3	Compression H 23 44 59
		iz		50	30	6			+7		
		iz		50	59	5			-4		
		iz		51	21	4			-4		
		iEZ		51	45	5		+5	-5		
		iSNE		54	46	6	-4	+4			
		iN		55	17	6	+4				
		iN		55	35	6	+3				
		eLZ		57.6		22					
		MN		59.2		16	13				
		ME		59.7		16		10			
161	" 23	MZ	24	00.0		17			10	Masked by microseisms.	
		iz	04	49	31	3			+3		
		iN		52	36	3	-3				
164	" 28	eLN		55.5		24					
		i(S)N	20	12	11	6	+5				
		eLE		13.6		19					

Minor shocks: 1d 06.6h; 2d 09.1h; 3d 16.8h; 5d 06.2h; 6d 20.3h; 7d 14.1h;
 15d 09.2h; 16d 05.6h, 11.8h; 20d 05.9h, 10.0h, 10.8h, 20.6h; 26d 14.6h;
 28d 03.1h; 30d 00.9h.

T.N.BURKE-GAFFNEY, S.J.
 Director.

P.F.RHEINBERGER.

Riverview College Observatory

RIVERVIEW, N.S.W.

SEISMOLOGICAL BULLETIN

 $\phi = 33^{\circ} 49' 46'' \text{ S.}$
 $\lambda = 151^{\circ} 9' 30'' \text{ E.}$
 $h = 25\text{m.}$

Foundation : Triassic Sandstone.

INSTRUMENTS :

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

	V	T ₀	e:l	$\frac{r}{T_0^3}$		T ₁	T	μ^3	V ₀
						(Galv.)	(Pend)		
N	1 3	206	7.3	5.1	0.022	4 12.0	12.1	+0.03	540
E	1 3	224	6.9	5.0	0.023	4 12.3	12.5	-0.02	530
Z	2					4 10.9	10.8	-0.03	460

No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks
							A _N	A _E	A _Z		
			h.	m.	s.	s.	μ	μ	μ	km.	
167	1953 Apr. 1	eE	11	20	16						
		e(SS)E		27	19						
		eLZ		49.0							
168	" 2	iPNZ	04	02	00	3	-6		+6	3190	Compression h 0.005 H 03 56 07
		ipPZ		02	19	3			+7	28:7	
		iZ		02	28	3			+7		
		iSE		06	41	6		-4			
		iSN		06	43	6	-6				
		iE		06	44	6		+11			
		isSN		07	11	8	-16				
		iE		07	26	7		-7			
		iN		08	38	10	+13				
		iE		08	47	10		+21			
		iE		09	16	7		-25			
		iE		09	28	7		+49			
		eLZ		10.2		30					
		iE		10	17	7		+31			
		ME		13.4		12		23			
		MN		13.7		14	31				
		MZ		14.1		15			27		
169	" 3	(iP)Z	04	24	33	3			+3		
		eE		30	17						
		eLE		33.7		25					
		MN		35.2		14	7				
		MEZ		37.3		17		7	7		
171	" 4	iSNE	06	12	36	5	-3	-3			
		iE		13	02	6		+4			
		iE		13	36	5		+4			
		eLE		24.8		24					
		MEZ		31.1		21		2	4		
		MN		31.3		24	5				
172	" 5	iPZ	08	59	48	2			+2	2750	Compression H 08 54 31
		iZ	09	00	06	4			+4	24:7	
		eSE		04	05	10					
		iN		04	37	4	+3				
		iE		04	39	4		+3			
		eLE		06.1		27					
		MN		07.7		16	3				
		MEZ		07.9		19		3	4		

1953, April.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks				
			h	m	s		AN	AE	AZ						
174	1953 Apr. 6	iPNEZ	00	42	47	3	+4	-3	-15	3590 32°3	Dilatation H 00 36 19				
		iNE		43	01	4	+3	-3							
		iZ		43	03	4			+11						
		iEZ		43	27	4		+3	+5						
		iSNE		47	57	7	+19	-15							
		iS SN		48	15	6	+10								
		iN		48	24	7	-24								
		iE		48	25	7	-17								
		iE		48	49	5		-7							
		iE		49	21	7		-17							
		iN		49	31	6	+6								
		iE		51	07	7		+43							
		iN		51	53	7	+38								
		iE		51	57	7		-42							
		iE		53	16	9		+100							
		iE		53	49	9		-150							
		MNE		54.2		7	93	74							
		MZ		54.8		8			190						
		175	" 6	iPZ	03	58	33	3					+3	5590 50°3	Compression h 0.02 H 03 49 51
				ipPZ		59	05	4					-2		
ipPN				59	06	4	+1								
iPPZ	04			00	30	3			+3						
iPPN				00	32	4	+4								
iN				00	59	4	+4								
iZ				01	18	4			+3						
iSN				05	32	5	+3								
iSE				05	33	6		-4							
iN				06	26	5	-2								
iSSE				06	31	6		-3							
iN				06	37	6	-4								
iSSN				09	03	7	+4								
iN				09	18	7	+4								
iE				09	25	7		+3							
iN				09	28	7	+5								
eZ				09.6		21									
iN				10	06	7	+3								
MN				15.7		14	3								
MEZ				16.2		19		5	4						
176	" 6	(P)N	12	27	28										
		MNZ	13	01		21	2		1						
177	" 6	e(S)N	15	40	46										
		eLN		45.5											
		MNZ		48.0		19	4		3						
179	" 7	(iP)Z	17	33	25	2			+6	2900ca. 26°1ca.	Compression h 600 km.ca., H 17 28 32 (from Gutenberg graph)				
		iPcPZ		36	34	3			-1						
		iSN		37	19	6	-13								
		iSE		37	20	6		+4							
		iN		39	01	6	+4								
		iE		40	07	6		-3							
		iN		40	16	6	+3								
		iE		40	18	7		-4							
		iN		40	30	6	+4								
		iE		40	34	8		-5							
		iN		40	40	11	-6								
		iScSN		43	13	5	-8								
		iScSE		43	14	5		+4							
		(i)Z	20	39	48	3			+1						
iN		44	27	5	-2										
eN		47	12	13											
180	" 7	(i)Z	20	39	48	3			+1						
		iN		44	27	5	-2								
181	" 8	iPZ	00	06	10	3			+3	4800 48°2	Compression H 23 58 10, Apr. 7				
		iPcPZ		07	59	5			+4						
		iSN		12	34	5	-2								
		eN		13	07	19									
		iE		15	49	7		-3							
		iE		16	01	7		-7							
		iE		16	15	8		+5							
		iE		16	30	6		+4							
		iN		17	03	4									
		eLN		21.2		19									
		MNEZ		26.4		18									
							5	6	5						

1953, April.
RIVERVIEW COLLEGE OBSERVATOR
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
			h	m	s		AN μ	AE μ	AZ μ		
183	1953 Apr.10	iPZ	17	06	08	3			+2	3160 28°4	Compression H 17 00 15
		eSE		10	51	6					
		iN		11	14	5	+3				
		eLQE		12.1		20					
		iE		13	21	8		+5			
		eLRE		13.5		24					
		iN		13	36	5	-4				
		ME		16.2		14		3			
184	" 11	MNZ		17.5		17	4		4	2210 19°9	Compression H 10 28 02
		iPZ	10	32	33	3			+2		
		iPPZ		32	54	5			+4		
		iSE		36	10	6		-1			
185	" 14	iSSN		36	38	5	+2			13,700 123°3	Compression h 700 km. H 13 29 25 (from Gutenberg graph)
		MN		39.0		13	1				
		iPKPZ	13	47	13	3			+2		
		iPPZ		49	01	3			-2		
		iPPPZ		51	13	4			-2		
		iz		51	35	5			-2		
		iSKSN		53	18	5	+4				
		iSKSE		53	19	5		-5			
		iNE		54	54	5	+9	-10			
		iSPNEZ		57	58	5	+4	-3	+5		
		iSPPNE		59	22	6	-3	+4			
		iSPPZ		59	26	6			+8		
		iE	14	00	43	9			-6		
		iE		02	04	8			+4		
		iSSN		04	58	10	-8				
eN		07	55	24							
iN		08	18	10	-4						
iSSE		08	38	10		-4					
iE		09	09	15		-20					
186	" 15	ePPSN	01	40	54						
		eLN		57.3							
187	" 15	MN	02	01.8		22	2				
		iz	08	59	16	4			+2		
188	" 16	eLN	09	03.3		21				2350 21°1	H 05 34 07
		MNEZ		05		15	2	1	1		
		ePZ	05	39	01						
		iSN		42	58	6	+2				
		iSE		43	00	6		-4			
		iz		43	10	6			+4		
		iN		43	15	5	-2				
		iSSE		43	36	5		+2			
190	" 17	eL		44.1		21				3290 29°6	Dilatation H 11 10 20
		MEZ		46.4		16		2	2		
		MN		47.2		13	4				
		iPZ	11	16	24	3			-3		
		iz		16	37	3			+3		
		iPPZ		17	21	5			+3		
		iN		17	24	5	+4				
		iz		17	38	5			+3		
iSN		21	16	8	+12						
191	" 18	eNZ		21.5		23				4720 42°5	H 03 09 26
		iN		21	55		+				
		eLE		22.8		22					
		iE		23	18	7		+7			
		eLRE		24.1		25					
		ME		25.9		19		19			
		MNZ		27.7		19	24		23		
		ePZ	03	17	19						
		iSN		23	39	8	+4				
		iSE		23	40	8		+5			
193	" 19	iSSN		26	43	8	+4				
		iE		26	50	7		+4			
		eLRZ		29.7		26					
		M		31		20	15	12	10		
		e(S)N	12	23	42						
		iN		23	52	5	+6				
		eLE		27.3		22					
197	" 17	ME		28.5		17		5			
		iE		31.1		15	4		5		

1953, April.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN μ	AE μ	AZ μ		
194	1953 Apr. 20	eE iN eLz MNEZ	h m s 11 14 38 17 37 20.0 22.0	s 9 22					
195	" 21	iN eN iE MNEZ	17 41 31 45 27 47 09 51	6 8 11	-2 10	-8 8			MN T=15s, EZ=19s.
196	" 22	iPz iZ iZ iZ iE iN iE iN iN eLN MEZ MN	10 08 17 08 21 08 29 08 36 12 53 13 09 13 13 13 43 14 05 16.0 18.1 18.8	3 5 3 3 7 7 7 6 18 16 13		-3 -3 +2 +2 -3 +3 -4 -4			Dilatation
197	" 22	iN eLN	10 57 56 11 01.1						
200	" 23	iPN iN iN iN iN iN iSN iN iN iE iN iE iE iE iE iE iE iE eLN MNE	16 30 32 30 56 31 24 31 32 31 52 32 28 35 25 35 35 35 43 35 54 36 01 36 07 36 16 36 21 36 40 36 54 37 32 38 01 38 17 38.8 42.4	5 5 5 5 10 5 7 7 11 8 11 6 11 6 5 5 8 9 8 33 16	+4 +86 +38 -77 +160 -110 -59 -200 +140* +250* -230* +58 -80 -97 +120 +340 -490 + 1000*			3310 29:8	H 16 24 26 Galitzin Z record lost, owing to failure of light spot. *Amplitudes from Wiechert.
202	" 26	e(S)NE iN iE MN ME eW2N	19 07 01 45 08 45 22 45 23 48.9 51.0	30 6 5 16 15					
203	" 26	iPz iSE eSE eLEZ MNZ	12 25 43 29 54 30 10 30.8 32.4	3 7 20 17		-3 -5		2660 23:9	Dilatation H 12 20 31
204	" 29	iPNEZ iPN iZ iPPz iSN iSE iZ isSN isSE iZ iN iN isSE iN eLRZ MN MEZ	03 36 47 36 58 37 17 37 32 41 17 41 20 41 24 41 32 41 34 41 35 41 53 42 00 42 25 42 40 43.9 44.9 46.3	4 4 4 4 8 6 6 8 7 7 6 6 7 7 24 18 16	+7 +6 +13 +45 +14 -21 29	+4 -14 +8 +9 +13 +14		2950 26:5	Dilatation H 03 31 11

1953, April-May.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		AN	AE	AZ		
205	1953 Apr.30	iPNEZ	06	31	29	3	+	+	-16	2370 21:3	Dilatation H 06 26 43
		INEZ	31	31	3	+13	+20	-18			
		INEZ	31	36	4	-29	-44	+37			
		INEZ	31	42	6	-62	-93	+140			
		iPPNE	31	54	5	+9	+20				
		iz	31	56	4			+32			
		iPPPNEZ	32	02	5	+21	+30	-38			
		iE	32	11	5		+53				
		iN	32	17	8	+27					
		iE	32	22	5		-22				
		iz	32	25	5			-40			
		iN	32	31	5	+12					
		iE	32	43	5		-14				
		iN	32	48	5	+31					
		iE	32	53	6		-36				
		iE	33	05	5		+6				
		iN	33	10	5	+18					
		iE	34	19	4		+17				
		SN	35	19							
		i(PcP)Z	35	25	6			-75			
		INE	35	26	8	-94	-120				
		INE	35	47	7	+65	+				
		iSSZ	35	53	6			+115			
		iE	36	01	6		+70				
		iN	36	04	5	-57					
		iSSSZ	36	10	7			+110			
		iN	36	15	6	+78					
eLE	36.6		24								
eLZ	36.8		25								
MZ	39.4		16			120					
ME	39.5		16		110						
MN	39.6		14	63							

Minor shocks: 1d 07.9h; 3d 20.0h; 5d 10.8h; 7d 10.9h; 10d 13.7h; 17d 01.1h;
19d 00.3h; 23d 04.5h, 12.9h; 24d 01.0h.

209	May 4	(iPKP)Z	15	43	59	3			+2	11,000 99:0	Compression h 0.01
210	" 6	ePZ	17	30	28				+6		
		iNZ	30	41		6	+4		+6		
		ipPN	30	54		6	+4				
		eN	33	44					-2		
		iPPNE	34	30		4	+4				
		iPPZ	34	32		4			-6		
		iNZ	34	43		8	+7		+12		
		iSKSNE	40	56		5	-8	+8			
		INE	41	02		6	-16	+7			
		eNE	41.2			21					
		iN	41	32		6	+16				
		i(S)N	41	38		6	+12				
		i(S)E	41	41		6		+7			
		iE	41	52		6		-13			
		i(sS)N	42	18		6	+5				
		iPSNE	43	24		10	-18	+13			
		iPSZ	43	25		10			-8		
		eN	47	18		28					
		eSSEZ	48	44		24					
		eSSSE	52	30		30					
		i(P'P')Z	55	07		7			+16		
		eLQE	58.2			30					
		eLQN	58.3			30					
		eLRN	18	02.1		32					
		eLRZ		02.3		30					
		MNEZ		03.7		24	67	49	20		
212	" 9	e(S)NE	17	49	28						
		eLE		50.8		21					
		ME		55.0		13					
		MNZ		55.4		14	3		2		

1953, May.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ	km.	
213	1953 May 10	ePZ	05	15	42					2500	H 05 10 44
		ipPE		15	52	5		+3		22:5	
		iz		15	58	5			-4		
		iSN		19	42	6	-5				
		iE		19	45	5		-8			
		iz		19	49	7			+4		
		isSN		19	57	6	-5				
		eE		20	00	15					
		eLRN		21.1		22					
		MNEZ		23.5		16	4	5	4		
214	" 11	ipNEZ	10	21	16	5	-13	-23	+25	2350	H 10 16 32
		iz		21	25	4			-53	21:1	
		ipPNEZ		21	27	4	+32	+57	-51		
		ippNEZ		21	39	4	+50	+58	-79		
		ipPPZ		21	48	4			+40		
		iE		21	54	4		-14			
		iN		21	57	4	+20				
		iN		22	10	5	+42				
		iSNE		25	04	5	+33	+65			
		iz		25	05	9			+66		
		iN		25	13	9	+125				
		ipcPE		25	21	7		+120			
		iSSNZ		25	35	7	-65		-95		
		iN		25	42	9	-107				
		eLNZ		26.4		21					
		ME		27.9		16		87			
		MNZ		28.6		15	110		100		
215	" 13	ePEZ	11	58	59					3210	H 11 53 01
		iE		59	42	7		-2		28:9	
		iz		59	51	4			+5		
		eSNE	12	03	46						
		iE		03	56	6		-4			
		iN		04	05	5	+3				
		iSSSE		05	33	9		+6			
		eLRE		06.5		25					
		MN		09.0		15	13				
		MEZ		11.6		15		22	23		
216	" 17	ipZ	13	21	19	4			-4	5560	Dilatation
		ippZ		23	15	5			+4	50:0	H 13 12 26
		iSN		28	21	5	+3				
		iN		28	30	5	+5				
		iSSN		32	00	5	-2				
		MNE		41		14	5	2			
217	" 18	iz	07	58	10	4			-2		
		eN	08	02	46						
		iN		03	37	6	+4				
218	" 18	ipZ	08	24	49	4			-2	5800	Dilatation
		iSN		32	10	6	+4			52:2	H 08 15 39
		iNE		33	30	7	+9	+5			
		eLN		37.7		22					
		MN		44.5		16	11				
		ME		45.5		14		4			
219	" 19	i(P)Z	03	23	55	4			-2		Dilatation
		e(S)N		34	06						
		eN		39	01	18					
		eLQE		45.9		22					
		eLRE		50.7		21					
		MNEZ		58.6		19	5	2	4		
221	" 20	eN	07	14	29				-2		Very small nearby
		ieZ		14	31	1/2			+2		shock.
222	" 20	ipZ	07	54	58	3			-3	6150	Dilatation
		eSN	08	02	38					55:3	H 07 45 25
		eE		02	46	14					
		eN		02	50	14					
		iE		03	00				-		
		eSSSN		08	25	15					
		eLNE		09.8		19					
		eLRNZ		10.9		27					
		MNEZ		12.3		23	13	11	18		

1953, May-June.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks			
			h	m	s		AN	AE	AZ					
223	1953 May 20	iPZ	10	51	40	4				4900 44:1 km.	Dilatation h 0.03 H 10 43 52			
		iz		52	06	3								
		iz		52	17	4								
		ipPZ		52	29	3								
		PPPZ		54	18	8								
		iSEZ		57	55	6		+14	-3					
		iN		58	00	6	+11							
		iE		58	02	7		+14						
		iE		58	31	5		+6						
		iN		58	44	6	+7							
		iE		58	48	7		+8						
		iN		58	54	7	+6							
		iScSE	11	01	10	5		+6						
		iSSN		01	17	9	+10							
		(iP)Z	11	03	13	3			+2					
224	" 22	iz		05	25	3			+2	Masked by micro-seisms.				
		eN		09	54				+2					
		eLE		17.6		21								
		MNE		19.1		16	5	3						
		iPZ	20	20	04	2			-2		3440 30:9	Dilatation h 0.08 H 20 14 30		
iSE		24	31	4		+5								
225	" 22	iScSE		29	32	4		+3		Masked by micro-seisms.				
		iSSN		29	33	4	-2							
		i(P)Z	18	22	47	3			+2					
231	" 27	eLZ		28.9		22				Masked by micro-seisms.				
		MNEZ		31.4		19	5	4	5					
232	* 28	iSN	18	12	34		+							
		isSN		12	58		+							
		eLZ		16.1		24								
234	" 31	MNEZ		18.2		20	4	3	4	4360 39:2	Dilatation H 05 00 11			
		iPZ	05	07	38	4			-4					
		iNEZ		07	42	5	-6	+7	+14					
		iz		07	58	4			+7					
		iPPNEZ		09	12	6	-7	+11	+14					
		iz		09	55	3			-4					
		iSN		13	36	5	+3							
		iE		13	41	6		+15						
		iN		13	44	7	+20							
		iE		13	52	6		+15						
		iN		14	01	9	+8							
		iE		14	04	6		-8						
		iN		14	28	8	-12							
		iSSN		16	26	5	+10							
		iz		16	32	5			+11					
		iSSSN		17	04	8	+19							
		iN		17	25	6	-11							
		eLN		20.2		30								
		eLE		20.9		30								
		eLZ		21.9		30								
MNE		22.9		18	150	76								
MZ		26.5		13			37							
235	" 31	i(PKP)Z	20	18	09	6			+5	Compression				
		i(PP)Z		21	08	4			-4					
		i(EKKS)E		28	11	5		+5						
		iE		28	22	4		-5						
		ePSE		31	39	15								
		eSSE		39	45	16								
		eE		40	41	30								
		eSSSE		44	46	27								
		eLE	21	05.6		30								
		MNEZ		15.2		19	4	8	7					
		Minor shocks: 1d 00.6h; 2d 19.4h; 3d 07.4h; 7d 18.5h; 19d 16.4h; 23d 20.0h 24d 01.9h; 25d 13.1h, 19.8h; 26d 02.3h; 30d 20.8h.												
		240	June 8	ePZ	02	55	49	6						
				iz		56	08	5						
				iE		56	13	5						
				e(S)NE	03	00	15				+3	+3		
eLE				03.0		22								
MNEZ		05.6		16	7	5	5							

1953, June.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ	km.	
241	1953 June 8	e(S)NE	12	03	52						
		eSSN		09	44						
		eLQE		17.2		27					
		eLRN		21.9		27					
		MN		26.6		25	5				
		MZ		26.9		22			2		
244	" 9	PZ	08	00	23						
		iN		05	03	7	+4				
		iE		05	06	6		+3			
		iN		05	39	7	+5				
		eLE		07.4		23					
		MZ		10.1		17			5		
		MN		10.3		15	5				
		ME		10.7		15		5			
247	" 10	iPZ	18	30	56	3			+2		Compression
		ipPZ		31	10	3			-2		
		iZ		32	01	5			+5		
		iZ		32	23	5			+6		
		iN		32	34	6	+4				
		i(S)E		36	31	6		+4			
		en		36	43	10					
		i(sS)E		36	51			+			
		iN		37	58	5	-7				
		iE		39	03	7		-7			
		iZ		39	30	7			+7		
		i(ScS)N		41	18	5	+11				
		MNE		45.2		16	19	20			
		MZ		47.8		9			9		
248	" 11	(i)Z	13	31	48	4			+4		
		eLN		33.2		16					
251	" 13	iPZ	22	53	36	3			-4	2460	Dilatation
		iE		57	19	3		+3		22:2	H 22 48 47
		iPcPNZ		57	28	3	-10		-2		h 100 km.
		iSN		57	34	5	+30				(from Gutenberg
		iE		57	36	5		-10			graph)
		iN		57	48	6	+12				
		iZ		57	52	5			+5		
		iE		57	58	6		-5			
		isSN		58	10	7	+10				
		iE		58	23	4		-5			
		iZ		58	30	5			+7		
		iE		59	15	5		+5			
		iScSNE	23	04	41	4	-2	+4			
252	" 14	ee	10	23	23	10					
		iN		23	26	4	+3				
		eLE		27.1		24					
253	" 15	iSKSN	18	11	48	5	+3				Microseisms
		iSE		12	53	7		-9			present.
		iSN		12	55	7	-9				
		isSE		13	10	7		-9			
		eSSE		20	05	18					
		eSSN		20	34	16					
		ee		23	17	24					
		eLQE		29.4		30					
		eLRZ		33.8		23					
		MN		39.1		21	8				
		MZ		40.9		21			9		
		ME		43.2		21		8			
		eW ₂ E	19	49.6		23				72:50	
254	" 16	iPZ	10	03	50	3			+2	70:50	Compression
		iZ		03	56	3			+2	65:2	H 09 53 10
		iSNE		12	29	5	+1	-2			
		iNE		12	37	5	+2	+3			
		iPSEZ		12	55	4		+1	-4		
		iE		13	03	5		+2			
		iE		13	53	5		+5			
		eLRE		23.4		20					
		ME		29.1		21		2			

1953, June.
RIVERVIEW COLLEGE OBSERVATOR
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
255	1953 June 16	iPEZ	h	m	s		μ	μ	μ	3160ca 28.4ca	Compression h 0.01	
		ipPZ	16	07	55	2		-3	+3			
		ispZ		08	13	3			+3			
		in		08	25	3			+3			
		iScSN		13	03	6	+2					
		iScSE		18	28	4	-5					
256	" 16	iSE	20	13	25	5		+3				
		i(Pg)Z	04	57	27	1/2		-2				
257	" 18	ipZ	10	10	33	3			-3	3090	From Sprengnether Dilatation H 10 04 45	
258	" 18	iz		10	48	4			+5	27.8		
		iz		11	06	3			-7			
		in		11	10	5						
		iz		11	12	5			+16			
		inZ		11	25	5	+5		-9			
		iE		12	31	4		-3				
		in		12	50	5	-5					
		iSNE		15	12		-19	+6			TN=7s, TE=4s.	
		isSNE		15	27	4	-18	+3				
		iz		15	34	10			-37			
		in		15	36	10	+80					
		iE		15	38	10		+36				
		in		16	05	7	-33					
		iz		16	07	5			-15			
		in		16	13	6	+17					
		iSSE		16	35	7		-29				
		iSSSN		16	53	7	-8					
		iSSSE		16	54	6		+15				
		in		17	08	8	-14					
		iE		17	15	7		-25				
		eLN		17.4		25						
		iE		17	24	7		+27				
		iz		17	51	6			+20			
		eLNZ		18.5		24						
		in		19	18	6	-11					
		eLN		19.5		19						
		ME		19.8		15		30				
		MN		21.0		13	46					
		MZ		21.3		15			44			
263	" 23	e(P)Z	14	06	12							
		iz		06	24	3				-2		
		iSKSN		16	30	5	+4					
		iSN		16	40	5	+5					
		iSE		16	41	5			+3			
		eLQE		29.4		24						
		eLRN		33.4		34						
		MN		36.2		25	5					
		ME		37.7		24			2			
		264	" 23	i(P)Z	21	13	01	2				-1
ippZ				13	46	3				+2		
iE				16	31	3			+2			
iSN				17	33	5	-3					
in				17	58	5	+10					
iE				18	00	5			+7			
eN				18.2		18						
ME				22.2		15			4			
MN				23.4		13	7					
MZ				23.6		16				8		
265	" 25	(P)Z	06	05	38							
		(S)E		11	02							
		e(S)N		11	03							
		in		11	11	4	+2					
		MN		19.5		18	28					
267	" 25	in		20	35	5	+21					
		MEZ		21.4		15		20	17			
		(P)Z	07	12	59							
		in		17	55	6	+4					
		MNE		22.5		13	4		4			

1953, June.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		AN	AE	AZ		
269	1953 June 25	iPNEZ	10	50	58	3	-3	+4	+9	4000	Compression H 10 43 58
		iz	51	02		3			-12	36°0	
		iPPNEZ	52	18		5	-9	+9	+62		
		iPPPEZ	52	39		6		-20	+38		
		iSE	56	34		6		-12			
		LN	58.0			30					
270	" 25	LE	58.9			27					Compression H 10 45 01
		iPNEZ	10	52	01	4	-7	+9	+26	4000	
		ipPNEZ	52	11		4	-39	+44	+60	36°0	
		iN	53	31		5	-20				
		iz	57	20		4			+34		
		iSE	57	37		7		-46			
		iE	57	57		7		+64			
		iE	58	25		7		+86			
		iN	59	07		7	+100				
		ME	11	08.3		10		220*			
271	" 25	MZ	08.4			13			230+	*Amplitude from Wiechert.	
		MN	09.2			9	220*				
		e(L)N	15	34.2		16					
		iN	35	03		5	+6				
272	" 26	iz	35	06		6			-2	Compression H 05 42 54	
		iN	35	17		6	+6				
		iz	35	26		6			+8		
		iN	35	30		6	+6				
		iE	35	34		6		-3			
		iN	04	01	02	5	+4				
		iN	01	09		6	+5				
273	" 26	eLN	02.8			19				Compression H 05 42 54	
		MN	04.5			15	12				
		MEZ	05.5			18		6	7		
		iPZ	05	49	51	4			+3		3970
		iNEZ	49	55		4	+6	-7	-12		35°7
		iNEZ	49	59		4	-18	+21	+45		
		iNEZ	50	04		4	+16	-15	-32		
		iz	50	15		4			-13		
		iPPE	51	15		4		+9			
		iPPNZ	51	16		4	+7		-12		
		iSN	55	25		6	+7				
		iSE	55	27		6		-16			
		iE	55	42		6		-19			
		isSN	55	43		6	+10				
		eN	55.8			30					
		iE	55	56		7		+19			
		iE	56	51		6		+30			
iE	57	36		6		+29					
iE	57	49		7		-23					
iz	58	00		6			+62				
iE	58	01		7		-52					
iN	58	07		5	+35						
iE	59	02		7		+70					
iN	59	30		6	+51						
MN	06	04.2		15	220						
ME	05.9			16		220					
MZ	06.3			16			240				
276	" 27	iPZ	07	48	01	2			+3	2920	Compression H 07 43 05 h 0.075
		iz	51	57		3			+5	26°3	
		iSE	51	58		4		+3			
		iScSE	57	52		4		-3			
277	" 27	iz	09	54	15	2			-2		
		eSN	58	49							
		eLN	10	02.4		26					
		MZ	04.5			19			7		
		MNE	04.6			20					

Minor shocks: 6d 07.6h, 11.1h, 12.9h; 7d 05.2h; 9d 01.1h, 02.4h, 21.2h;
10d 03.8h; 11d 21.2h; 13d 13.4h; 19d 01.7h; 20d 03.9h; 21d 18.7h; 22d 00.5h;
25d 06.7h, 08.5h; 26d 12.7h, 22.9h.

Riverview College Observatory

RIVERVIEW, N.S.W.

SEISMOLOGICAL BULLETIN

$\phi = 33^{\circ} 49' 46''$ S.

$\lambda = 151^{\circ} 9' 30''$ 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. Gailitzin Aperiodic Seismometer with Galvanometer registration (NS, EW, Vert)
- 5 Sprengnether Vertical.

	V	T _v	e:l	r T _v ²	T ₁		μ^2	V _s	
					(Galv.)	(Pend)			
N	1 3	202	7.3	5.1	0.003	4 12.0	12.1	+0.03	540
E	1 3	230	6.9	4.7	0.007	4 12.3	12.5	-0.02	530
Z	2					4 10.9	10.8	-0.03	450
					5	1.6	1.6		

No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks
			h.	m.	s.		A _N	A _E	A _Z		
276	July 71	iPZ	03	12	06	4			+5	9380 34.4	Compression H 02 59 34
		iSN		22	29	8	-11				
		iSE		22	32	8		-6			
		iNE		22	36	8	+12	+7			
		iE		23	11	9		+3			
		iN		28	19	8	-10				
		iN		28	30	6	+6				
		eLQE		34.3		30					
		eLRNZ		39.1		35					
		MN		43.6		25	20				
279	" 72	iPNEZ	07	01	35	6	+52	+66	-120	2450 22.0	Dilatation h 0.03 H 06 56 58 *Amplitudes from Wiechert.
		iNEZ		01	47	6	+47	+45	-120		
		iNEZ		02	08	7	+46	+91	-100		
		iPNEZ		02	17	5	-220	-240	+230		
		iN		02	23	5	+37*				
		iNEZ		02	34	7	-74	-120	+260		
		iNE		02	47	7	+29*	-65*			
		iN		03	03	5	-46*				
		iSE		05	13	7		+69			
		iSN		05	20	7	+110				
		iz		05	21	7			-47		
		iE		05	25	7		-120			
		iNEZ		05	35	8	230*	150*	98		
		iN		05	47	7	+63*				
		iz		05	48	7			+39		
		iN		05	59	7	+110*				
		iE		06	01	7		-75*			
mZ		06	02	8			100ca				
iz		06	13	7			+50				
iE		06	22	7		-48*					
iN		06	24	6	+38*						
iz		06	31	8			+410				
iE		06	40	6		-34*					
iN		06	50	8	-140*						
280	" 73	(iP)Z	18	42	23	2			+2	Compression	
		iSKSN		52	43	3	+2				
		iSN		53	05	5	-3				
		eE		53	41	10					
		e(SS)N		59	23	12					
		eLQE	19	07.0		22					
		eLN		14.2		23					
		MN		20.0		18	2				
MZ		21.0		19			2				

1953, July.
RIVERVIEW COLLEGE OBSERVATORY.
SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
							AN μ	AE μ	Az μ		
281	1953 July 4	i(P)Z	02	12	13	3			+1		Compression Microseisms present
		iz		12	19	3			+4		
		i(S)N		16	04	5	+2				
		iE		16	10	4		-1			
		iE		16	20	6		+3			
		MN		20.0		13	3				
		ME		20.4		13		2			
282	" 5	eN	08	14	19						
		iE		16	06	6		-3			
		iN		16	17	5	+2				
		ME		18.8		15		3			
		MN		19.8		12	3				
284	" 6	ePZ	22	01	24	6				2935 26:4	H 22 55 49 Dilatation
		iPNEZ		01	28	5	+3		-4		
		iPPNZ		02	07	5	-3		+2		
		iZ		02	22	4			+3		
		iN		02	23	4	-5				
		iSN		05	53	6	+4				
		iN		06	12	5	-2				
		iN		06	21	8	-14				
		iN		06	28	12	+35				
		iz		06	33	9			+15		
		iN		06	42	8	+18				
		eLEZ		09.1		31					
		MN		11.1		20	33				
		ME		11.2		16		42			
		iz		12	38	4			+13		
		MZ		14.1		11			15		
		285	" 7	ePZ	04	17	26	4			
eSE				25	09						
iNE				25	13	4	+4	+6			
eLQE				31.0		23					
eLN				35.7		25					
MN				37.4		16	7				
286	" 7	iSNE	17	47	47	4	-1	-3			
		eLE		58.4		24					
		ME	18	04.3		19		1			
292	" 10	iPZ	15	17	53	3			+4		Compression Microseisms present
		iz		18	15	3			+5		
		iz		18	18	3			-4		
		iE		24	10						
		iN		24	13	4	-6				
		iN		24	17	4	+5				
		eE		27	09						
		iE		27	29	6		+5			
		iE		28	00	4		+4			
		iN		32	55	5	-6				
		iN		33	17	5	+4				
		iN		33	35	6	+6				
		iN		34	01	6	+6				
iN		34	08	4	-6						
293	" 12	iPZ	06	49	50	5			+4	3910 35:2	Compression H 06 42 53
		iPN		49	51	5	-3				
		iPPZ		50	00	4			-9		
		iPPN		50	01	4	+4				
		iNE		51	16	5	-3	+4			
		iSN		55	20	7	+11				
		iE		55	33	7		-10			
		isSN		55	37	7	+9				
		eN		55.7		23					
		iSSSN		58	03	7	+9				
		iSSSE		58	05	7		+11			
		iE		58	19	7		+12			
		eLN		59.3							
		iE	07	00	43	7		+31			
		iNE		02	12	9	+51	+120			
		ME		03.4		14		71			
		MNEZ		05.1		12	79	63	75		

1953, July.
 RIVERVIEW COLLEGE OBSERVATORY,
 SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		AN	AE	AZ		
300	1953 July 13	iPNEZ	21	33	37	2	+4	+4	-7	4km. 20:50 22:00	Dilatation h 0.02 H 21 28 55
		iE		34	00	4		-3			
		ipPZ		34	11	3			-2		
		iNE		34	17	4	-3	-4			
		iz		34	19	3			-4		
		iSN		37	24	5	-5				
		iPcPN		37	30	4	-6				
		iPcPE		37	32	4		+3			
		iz		37	33	5			+4		
		iN		37	54	4	+2				
		iN		38	01	4	+6				
		iE		38	15	5		+4			
		eLN		38.5		22					
		iE		38	48	5		+5			
		iE		39	10	4		-5			
i(ScS)E		44	29	5		+3					
301	" 15	ee	13	41	04				Large microseisms present.		
		ee		45	56						
		iN		51	42	5	+7				
		MNE		52.8		14	2	2			
		iN		53	05	6	+8				
		iE		53	14	4		+5			
		MZ		53.7		14				2	
303	" 20	(iP)Z	08	14	30				-	Dilatation	
		iE		14	34			+			
		iz		14	38	4			-5		
		iEZ		14	49	4		+5	-6		
		iz		15	27	5			-7		
		iE		15	39	5		+6			
		iE		15	52	6		+8			
		iz		16	54	4			+7		
		iEZ		16	08	5		+10	-7		
		iE		16	27	5		+5			
		ee		18	49	18					
		i(S)N		18	54	5	-2				
		iN		19	26	7	+7				
		iN		19	33	8	+11				
		iN		20	11	8	-17				
		iN		20	50	9	-18				
		iz		21	07	7			+14		
		MN		21	11	12	37				
eLEZ		22.0		25							
iScSE		25	33	6		+33					
MN		25.7		12	30						
305	" 22	i P Z	05	23	46	6			+9	9400 84:6	Compression H 05 11 15
		iz		24	00	6			-8		
		iz		24	10	6			+13		
		iSN		34	09	9	-19				
		iSE		34	12	9		-13			
		iN		34	25	9	+10				
		iN		39	58	7	-12				
		eLN		47.9		32					
		eLRZ		50.7		36					
		ME		52.9		25		18			
306	" 24	MNZ		53.3		30	31		37		
		(P)Z	10	57	14						
		iz		57.26		3				-2	
		iN	11	02	01	7	+4				
309	" 26	iE		02	08	7			-3		
		eLE		04.6		21					
		iPNZ	17	02	09	5	-9		+15	5600	Compression h 0.02 H 16 53 26
		ipPNZ		02	47	4	-4		+2	50:4	
		iNZ		03	09	5	+2		-4		
		ippZ		04	05	5			-4		
		iN		05	02	5	-5				
		iz		05	08	4			-5		
iNZ		05	14	7	-7		+7				
iSN		09	09	7	+4						
iE		09	12	8			-8				

(Continued overleaf)

1953, July-August.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



No.	Date 1953	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks.	
			h	m	s		AN μ	AE μ	Az μ			
309 (cont.)	July 26	iN	17	09	57	4	-4					
		iScSN		11	41	4	-4					
		iScSE		11	45	4		+6				
		iE		14	59	8		+4				
		iE		15	12	9		+13				
		iZ		15	23	9				-10		
		eLE		16.8			27					
		ME		20.0		14						
310	" 28	iPZ	07	45	12	2				-3	3290 29:6 Dilatation h 0.075 H 07 39 41 Compression	
		iSE		49	32	5		+6				
		iScSN		54	49	4	-4					
311	" 28	iZ	18	11	15	3				+3	Compression	
		eE		20	52	14						
312	" 29	iEZ	13	56	14	4		+2		+3		
		i(SKS)E		59	01	4		+3				
314	" 29	iPZ	23	25	14	3				+2	Compression S lost while changing paper.	
		ipPZ		25	29	3				+2		
		iPPPZ		26	55	4				+4		
		eLQN		33.8			22					
		eLRE		35.8			30					
		MEZ		40.5			16		6	6		
317	" 30	iPZ	23	53	42	3				-2	Dilatation	
		iSN	24	00	55	4	+4					
		iE		03	38	4		+2				
		eLE		07.2			22					
Minor shocks: 5d 13.3h; 8d 15.6h, 16.7h; 9d 20.0h, 22.2h; 10d 08.3h; 11d 11.0h 15.9h; 12d 09.1h, 16.7h, 18.9h, 21.8h; 17d 17.3h; 21d 18.0h; 25d 17.7h; 26d 11.8h; 29d 19.3h; 30d 06.3h, 07.1h.												
318	Aug. 1	i(PPP)E	00	38	29	6		+2				
		i(S)E		42	15	6		+3				
		eLN		45.8			18					
		eLE		48.2			24					
		MEZ		50.8			16		4	6		
		MN		51.3			12	4				
319	" 1	eE	18	24	40							
		iE		26	46	7		-3				
		iN		27	23	7	-6					
		iE		27	37	7		-7				
		iZ		27	38	5				+7		
		MNE		29.5			11	2	2			
		MZ		30.7			13			3		
321	" 2	PZ	08	49	33						2360 21:2 H 08 44 48	
		iZ		49	37	4				+6		
		iZ		49	41	5				-8		
		iNE		49	43	5	+4	+4		+3		
		iZ		50	03	5				+3		
		eSE		53	22					-4		
		iZ		53	30					-4		
		iN		53	31	8	+9					
		iE		53	34	8		+11		+7		
		iPcPZ		53	37	5				+7		
		iE		53	43	5		-7				
		iE		54	02	5		+3				
		eLRN		54.7			24					
		MEZ		56.5			19		6	7		
		MN		56.8			13	5				
322	" 2	iPEZ	17	24	44	3		+2		-4	2370 21:3 Dilatation H 17 19 58 iN T=8s, EZ T=5s.	
		iZ		24	48	4				-12		
		ipPNEZ		24	54	5	+5	+8		+13		
		iE		25	03	5		+7				
		iPPPZ		25	17	5				-7		
		iZ		25	22	4				+4		
		eSNE		28	34							
		iE		28	37	5		-12				
		iNEZ		28	41		+41	-12		-5		
		iPcPZ		28	47	5				+18		
		iSSSN		29	23	7	+13					
		eLN		29.5			22					
		MEZ		31.2			20		18	20		
MN		31.8			13	20						

1953, August.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks.				
			h	m	s		AN	AE	AZ						
324	1953 Aug. 4	iPEZ	13	58	10	3	μ	μ	μ	2620 29:6	Compression h 0.03 H 13 53 18				
		iSN	14	02	05	4	+3	-2	+3						
		iE		02	07	5		+5							
		iN		02	14	5	-11								
		iE		02	16	4		+7							
		iE		02	22	6		+12							
		iN		02	47	6	+19								
		iE		02	49	5		-8							
		iN		03	09	5	+16								
		iE		03	13	6		+14							
		iN		03	33	5	-17								
		iE		03	37	5		+7							
		iE		03	55	5		-5							
		iE		05	06	5		+5							
		iScSN		08	51	4	+4								
		329	" 11	iNE	03	09	02	4	-4			+7		15,000 140:4	Compression H 03 32 29 From Gutenberg graph.
				iPKPZ	51	54	4					+3			
iZ	52			01	4			-4							
iZ	55			13	5			-4							
iZ	55			35	6			+5							
iN	55			37	7	-4									
iE	55			43	6			-5							
eE	56			17											
iNE	56			33	5	+3	-3								
i(SKS)E	58			52	4		-2								
i(SKKS)N	04			01	34	6	-3								
i(SKKS)E	01			47	6		+5								
iNE	03			27	7	-4	+3								
iPSN	04			13	6	+7									
iSSNE	13			22	9	+9	+6								
eSSSE	19			08	26										
eN	25			03	35										
eLQN	29.5				29										
eLQE	29.9				35										
MN	51.7				23	8									
ME	52.6				22		8								
MZ	53.1				22			8							
332	" 12			iPZ	06	45	56	2			-3	3480 31:3	Dilatation h 0.08 H 06 40 19		
		iSN	50	26	5	+4									
333	" 12	iScSE	09	55	24	3		+3		Dilatation					
		iPKPZ	43	25	4			-4							
		iZ	43	28	4			+5							
		iE	47	01	4			-3							
		iZ	47	10	4			-7							
		iZ	47	29	4			+6							
		iZ	48	16	4			-5							
		iNE	48	22	4	+4	-3								
		iN	49	53	4	+4									
		iZ	50	23	4			-6							
		iZ	50	44	5			-5							
		iE	50	52	4		+2								
		iE	51	03	4		-3								
		e(SKKS)E	53	15	8										
		iN	54	59	6	-6									
		iE	56	32	5		-3								
		iZ	56	38	4			+4							
		e(PPS)Z	58	46	20?										
		eE	59	22	14?										
		iN	10	01	34	4	+5								
		iN	04	47	7	-6									
		e(SSS)E	10	20	32										
		eLQE	21.2		30										
eLRN	28.0		42												
MZ	38.5		26			15									
MNE	38.8		27	10	11										

1953, August.
RIVERVIEW COLLEGE OBSERVATORY,
SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks	
			h	m	s		AN	AE	AZ			
335	1953 Aug. 12	ePZ	17	00	09					3680 33°1	H 16 59 34	
		iz		01	31	4			-4			
		iE		01	40	4			-3			
		iE		01	57	5			+3			
		iSN		05	25	5	+4					
		iE		05	27	7			+5			
		iE		06	51	5			-4			
		iN		07	15	5	+3					
		iE		07	50	6			+6			
		eLRZ		09.4		23						
		ME		12.3		16			32			
		MZ		12.5		18						45
		MN		12.6		13	47					
336	" 13	iz	01	28	23	3			+2			
		iE		28	36	4			-3			
		MN		31.5		16	6					
337	" 13	MZ		31.7		14			4			
		iPNEZ	09	28	01	4	+5	+11	-16	2520	Dilatation	
337	" 13	ineZ		28	05	4	+28	+50	-67	22°7	h 0.02	
		ineZ		28	11	4	-35	-31	+11		H 09 23 13	
		iz		28	15	5			-49			
		iz		28	23	4			-40			
		iN		28	25	6	+23					
		ipPEZ		28	34	6			-93	+80		
		iN		28	36	4	-27					
		iPPNZ		28	42	6	+34			+80		
		iPPPN		28	51	6	+27					
		iE		28	53	4			+25			
		iN		29	03	5	+16					
		iE		29	10	7			-52			
		iz		29	11	6				+23		
		iN		29	12	7			-44			
		iSNEZ		31	54	4	+22		-60	+23		
		ine		31	56	4	+58		-100			
		iz		32	03	7				+74		
		iE		32	15	5			+68			
		iz		32	16	8				+100		
		iN		32	22	7			-33			
		iz		32	29	4				+52		
		iE		32	33	7				-85		
		iz		32	39	7				+89		
		iN		32	40	5			+9			
		iN		32	55	5			+100			
		iN		33	09	8			-68			
		iE		33	10	6				+36		
LRNZ		33.3		25								
LRE		33.4		25								
MN		35.6		13	59							
ME		36.3		13				27				
i(ScS)N		39	23	5	+19							
i(ScS)E		39	25	4				+6				
338	" 15	iz	05	35	40	4			+4		Confused by microseisms.	
		iE		42	52	5			-3			
		ME		46.3		15			7			
		MZ		48.8		16				6		
		MN		49.4		14	7					
339	" 17	ipZ	03	22	42	2			-2	4680	Dilatation	
		iz		22	51	3			+2	42°1	H 03 14 51	
		ippZ		24	23	3			+2			
		iSE		28	59	5			+6			
		iE		29	08	4			+5			
		iSSN		32	01	5			-5			
		iN		32	22	4			+5			
		iScSN		32	36	5			+6			
		iScSE		32	37	6				+5		
		eLE		37.0		25						
		ME		39.2		19				3		
		MN		39.8		19			8			

1953, August-September.
RIVERVIEW COLLEGE OBSERVATORY.
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per. s	Amplitude			Δ km.	Remarks
			h	m	s		AN μ	AE μ	AZ μ		
340	1953 Aug.22	iPZ	00	27	00	3			-4	3150 28.2	Dilatation H 00 21 09
		iz		27	05	3			+6		
		iPPNZ		27	53	4	+5		-4		
		iE		31	27	5		+3			
		iSN		31	42	5	-4				
		iN		31	46	5	+8				
		eE		32.7		15					
		iE		32	54	7		-13			
		iz		33	14	4			-9		
		iz		33	22	4			-8		
		iSSSE		33	23	5		-12			
		eLN		35.5		22					
		ME		37.0		13		13			
		MNZ		40.1		15	9		10		
341	" 25	iPZ	02	10.2		2			+4	3110 2890	Compression H 02 04.4
		iNZ		10.4		4	-9		-6		
		iSNE		14.9		7	+6	-5			
		iz		15.2		?			+		
		iNZ		15.3		18	-66		-34		
		iN		15.7		16	+75				
		iSSE		16.2		16		+19			
		eLN		18.3		27					
343	" 26	MNEZ		20.6		18	60	31	48		
		eN	19	27	10						
		iE		33	09	5		-2			
346	" 27	eLE		43.8		24				6920 6293	Compression H 20 46 03
		iPZ	20	56	25	3			+2		
		eSN	21	04	46	8					
348	" 28	iE		05	01	5		+3			
		MNE		22.8		18	3	2			
		iSSNE	00	01	33						
		eLE		07.7		25					
350	" 29	MNEZ		23.0		19	6	2	5	2740 2496	Compression H 16 08 49
		iPNZ	16	14	07	4	+4		+5		
		eN		18	23						
		iSN		18	43	5	-2				
		eE		18	44						
		eLQE		19.1		17					
		iE		19	12	10	+11				
		MNEZ		20.3		12	11	18	4		
351	" 31	e(S)N	06	56	17						
		eLN		59.1		22					
		ME	07	01.1		15		4			
		MNZ		03.0		14	3		3		
352	" 31	(P)Z	08	05	33						
		eSN		16	14	13					
		eE		16	15						
		eLN		36.4		21					

Minor shocks: 2d 03.1h; 3d 14.6h; 9d 00.5h, 09.0h; 10d 01.5h, 10.9h; 11d 14.1h; 12d 06.7h, 13.5h; 26d 05.1h; 27d 18.5h, 22.0h; 29d 02.8h.

354	Sept.1	iPEZ	17	42	21	5		-5	+9	2460 2291	Compression H 17 37 27
		iE		42	36	5		+6			
		iPPE		42	47	5		-6			
		iSNZ		46	18	5	+10		+8		
		iSE		46	19	6		+6			
		iz		46	26	5			+12		
		iz		46	33	7			+11		
		iN		46	38	5	-7				
		iE		46	42	8		-7			
		iN		46	54	8	+11				
		iz		46	55	6			-13		
		iN		47	11	5	-5				
		iN		47	21	6	+13				
		iE		47	25	5		-5			
		eLRE		47.8		22					
		iN		47	53	5	-9				
		ME		48.8		18		5			
MNZ		49.6		15	14		5				

1953, September.
RIVERVIEW COLLEGE OBSERVATORY.
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks.
			h	m	s		AN	AE	AZ		
356	1953 Sept. 4	ipZ	07	35	36	6			+11	9320 83°9	Compression h 0.005 H 07 23 12
		ipN		35	37	6	-4				
		ipPZ		35	51	6			-5		
		iSN		45	54	8	+11				
		iScSE		46	00	7		-10			
		isSN		46	24	8	+18				
		iE		46	26	7		+8			
		iSSE		51	25	10		+11			
		iN		51	44	9	-23				
		eLQE		58.3		46					
		eLQN		59.5		38					
		eLRZ	08	02.5		33					
		MNZ		04.0		31	50		41		
		ME		04.5		29		30			
358	" 4	eSKSE	14	31	47	5					
		eSKSN		31	51	5					
		eN		32	06	5					
		eE		32	10	5					
		ePSN		34	40	12					
		eN		36	13	16					
		eSSSE		44	02	19					
		eLQE		50.7		30					
		eLRN		54.8		28					
		eLRZ		54.9		30					
		MNEZ		59.5		19	3	2	5		
359	" 5	eZ	19	11	02						
		(S)N		21	17						
		eLN		35.4		24					
		MZ		39.7		24			4		
360	" 6	MNE		39.8		27	6	3			
		e(S)N	07	48	33	8					
		iN		48	57	9	+6				
		eLE		52.0		26					
361	" 7	MEZ		54.0		15	3	2			
		MN		55.1		13	3				
		eLN	05	03.2							
		MN		12.1		21	4				
363	" 10	MEZ		14.4		21		7	8		
		e(PP)E	04	37	52						
		(SKKS)N		33	59	8					
		iSSN		44	55	10	-6				
365	" 12	eLRN	05	06.1		31					
		MEZ		20.7		21		12	14		
		MN		20.8		19	8				
		iz	15	03	31	4			+3		
366	" 14	e(S)N		12	06						
		eLE		16.2		17			1		
		MNZ		18.5		17	2				
		iPEZ	20	32	34	3		+3	-3	3200	Dilatation H 00 26 37
iz		32	39	3			+6	28°8			
iNE		32	41			+12					
iz		32	47	4			+14				
368	" 14	ippN		33	25	5	+5				
		ippEZ		33	26	4		+10	-10		
		ippPEZ		33	38	5		-8	+10		
		ieZ		34	01	6		+13	-12		
		ieZ		34	22	5		-11	+16		
		ieZ		34	38	6		+15	-14		
		iN		35	14	6	+9				
		iE		35	27	6		+16			
		iSN		37	20	7	-5				
		iN		38	26	8	+26				
		iSSE		38	47	8		+27			
		iN		39	02	10	+60				
		eLE		39.6		21					
		ME		41.6		19		53			
		MN		41.7		15	80				
		MZ		41.9		19			50		

1953, September.
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From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per s	Amplitude			Δ km.	Remarks
			h	m	s		AN μ	AE μ	AZ μ		
369	1953 Sep.14	eE	09	51	31						
		eLN		55.5							
		ME		55.5				2			
		MN		55.7							
370	" 14	(SKS) _N	10	36	35						
		(SKS) _E		36	37						
		eLQ _E		48.1							
371	" 14	iPZ	11	24	22				+2	9060	Compression
		iz		24	42				-4	81:5	H 11 12 09
		iSKS _{NE}		34	35		+2	+3			
		iScS _{NE}		34	46		+6	+3			
		ePSE		35	17						
		eN		39	25						
		eE		39	38						
		eLQ _{NE}		46.0							
		eLRZ		51.0							
		MN		54.1							
		MZ		54.4							
373	" 15	iPNZ	11	07	04		+3				
		iSE		11	27			+3		2840	Dilatation
		iE		11	34			-4		25:6	H 11 01 36
		iN		11	35		+5				
		iS _{NE}		11	42		-12	-11			
		iSSE		12	31			-13			
		iSSN		12	32		+12				
		iSSSE		12	49			-12			
		eLRZ		13.5							
		ME		17.1							
		MNZ		18.1							
374	" 16	PZ	01	55	50		14			4020	H 01 48 49
		iPPPE		57	32			+2		36:2	
		iPPPZ		57	33				+4		
		iSE	02	01	27			-2			
		iSSSN		04	15		-4				
		eLREZ		05.7							
		MN		08.6			4				
		MEZ		11.5				8	9		
377	" 17	iz	18	26	09						
		e(S) _N		30	30						
		iN		30	53		+2				
		eLE		34.3							
		MNE		35.8			2	3			
378	" 17	iPZ	21	18	24				+6	3740	Compression
		iPPE		19	39				-3	33:7	H 21 11 44
		iPPZ		19	40				+2		
		iPPPEZ		19	57			+4	-4		
		eSE		23	44						
		iN		23	44		+3				
		eLN		26.6							
		MN		32.0			22				
		MEZ		32.8				39	47		
381	" 19	(iP)Z	03	49	53				+2		Masked by micro-
		(iS) _N		55	13						seisms.
		iz		56	01				+4		
		iN		57	59		-2				
		iN		58	18		+3				
		iNE		59	15		+2	-3			
		iN	04	00	31		-6				
		ME		05.7				1			
382	" 20	iN	19	18	58		+6				
		iN		19	12		-9				
		iN		25	12		+5				
		iN		25	33		-6				
		eLE		40.0							
		ME		42.7				4			
		MZ		43.2					7		
		MN		43.4			7				

1953, September.
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No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks
			h	m	s		AN	AE	AZ		
383	1953 Sep.23	iPZ	02	27	03	6			+5	9260 83:3 Compression H 02 14 38 Perhaps slightly deeper than normal.	
		iN		27	05	4	-4				
		iPcPZ		27	06	7			-12		
		ipPZ		27	19	6			+9		
		iSE		37	20	6		+2			
		iSN		37	22	6	+6				
		iz		37	27	4					
		iScSE		37	28	4		-6			
		isSNE		37	48	9	-11	+5			
		iz		37	53	4					
		iE		38	13	8		+12			
		eN		38	21	19					
		iz		38	32	6					
		eSSN		42	47	16					
		iN		43	04	8	+4				
		eLQE		49.5		43					
		eLRNZ		53.7		36					
		MZ		55.1		30			18		
		ME		55.9		25		17			
		MN		57.3		25	22				
eW2N		04	36.2		26						
384	" 23	iz	04	51	54	3			+2	Masked by Coda of No.383.	
		eLE	05	03.4		21					
		MNE		05.0		13	7	4			
385	" 23	iz	05	06	14	4			+4		
		iEZ		06	20	4		+5		-4	
		iN		06	42	5	+5				
386	" 23	iE	06	43	37	1		-1		Felt in Adelaide and York Peninsula, South Australia.	
		i(S)N		43	41	2	+3				
		iE		43	45	2		+3			
		i(L)N		43	49	6	+9				
		MN		44.0		8	6				
		MZ		44.7		5			2		
		ME		45.3		4		2			
387	" 25	(iP)Z	03	02	39	3			+2		
		i(S)E		07	48	3		-2			
		eLEZ		11.1		25					
		MZ		13.7		16			3		
		MNE		14.0			2	3		MN T=12s, ME T=16s.	
388	" 25	PZ	13	51	32				6980		
		iSN		59	57	4	+4		62:8	H 13 41 07	
		iE	14	00	00	4		-3			
		eLE		09.4		30					
		ME		14.1		16		2			
389	" 26	iPZ	01	15	02	4			+4	9390	
		iSN		25	22	6	+3		84:5	H 01 02 35	
		iN		25	43	6	+2				
		iN		25	51	6	+3				
		iN		26	17	6	+6				
		eLQN		37.9		22					
		eLRN		41.6		30					
390	" 26	iPNZ	19	41	17	3	+2		-3	3410	
		iN		41	49	3	+2		30:7	H 19 35 03	
		iSE		46	16	6		+3			
		iN		47	41	4	+3				
		SSE		47	57						
		eLE		49.0		27					
		eLN		49.2		27					
		ME		54.0		13		24			
		MN		54.6		15	14				
		MZ		56.7		13			12		
391	" 27	(iPKP)Z	06	25	25	3			-2		
		e(SS)N		47	48	17					
		eLE	07	17.4		30					

1953, September.
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
392	1953 Sep.28	iPNZ	h	m	s	s	μ	μ	μ	2770 24:9 H 03 45 23	Compression
		i(pP)Z	03	50	44	4	+3		+4		
		iN		51	08	4			-3		
		iSE		51	11	4	-2				
		iN		55	02	9		+3			
		iE		55	13	5	-3				
		eLNZ		55	23	7		+3			
		MZ		56.6		22					
		ME		58.4		16			4		
		MN		58.7		13		3			
395	" 28	(P)Z		59.0		12	5				
		e(S)E	23	41	20						
		eLE		46	48	9					
		MEZ		50.7		25					
		MN		53.0		18		7	6		
396	" 29	iPNEZ	01	41	13	4	-16	+40	-55	2:80	Dilatation h 300 km., H 01 36 47 (from Gutenberg graph)
		iz		41	30	4			+36	21:4	
		iE		41	32	4		+7			
		iN		41	39	4	+13				
		iE		41	48	4		-8			
		iN		41	49	4	-17				
		iNE		41	59	4	+20	-33			
		iNE		42	07	4	-12	+15			
		ippZ		42	10	4			+58		
		ipPE		42	11	4		+105			
		iN		42	15	5	+35				
		ippZ		42	35	5			+63		
		ippNE		42	38	5	+20	+130			
		iN		42	45	6	+				
		mZ		42	46	6			185		
		iz		42	53	4			+24		
		iN		43	06	6	+				
		iz		43	09	7			+125		
		iE		43	10	6		+53			
		iz		43	23	6			+170		
		iE		43	25	6		-90			
		iE		44	02	8		+81			
		iE		44	18	6		+57			
		iSE		44	49	7		-70			
		ipcPNZ		44	59	5	-95		-26		
		iN		45	14	5	+				
		iz		45	16	7			-105		
		iE		45	19	5		+69			
		iE		45	25	8		-110			
		iz		46	12	7			+64		
iE		46	18	7		+44					
iN		46	25	8	+						
iE		46	34	8		-120					
iNE		46	51	9	-	-110					
iScSN		51	56	4	+35						
iScSE		51	58	6		+45					
397	" 29	ipZ	18	47	33	3			+2	3500	Compression H 18 41 12
		ippZ		48	40	3			+2	31:5	
		eSE		52	38	7					
		iSSN		54	26	4	+2				
398	" 30	eLN		56.8		21					
		MNEZ		59.0		13	3	2	3		
		(iP)Z	05	04	03	3			+2		Masked by micro- seisms.
i(S)E		11	23	5		+3					
MN		25.5		13	3						
399	" 30	e(PS)E	23	33	11						
		eLQN		50.8		30					
		eLREZ		55.9		27					
		MEZ		59.2		21		20	21		
		eW2E	01	14		27					

 Minor shocks: 1d 15.1h; 2d 08.0h; 4d 12.6h; 9d 16.4h; 10d 17.4h; 13d 14.2h, 21.3h
 14d 17.8h; 16d 04.5h, 12.7h; 18d 15.4h, 22.6h; 28d 19.7h, 21.6h.

Riverview College Observatory

RIVERVIEW, N.S.W.

SEISMOLOGICAL BULLETIN

$\phi = 33^{\circ} 49' 46'' S.$

$\lambda = 151^{\circ} 9' 30'' E.$

$h = 25m.$

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. Gailitzin Aperiodic Seismometer with Galvanometer registration (NS, EW, Vert)
5. Sprengnether Vertical.

	V	T ₀	$\epsilon : l$	$\frac{r}{T_0^2}$		T ₁ (Galv.)	T (Pend)	μ^3	V _s	
N	1 3	213	7.4	5.0	0.007	4	12.0	12.1	+0.03	540
E	1 3	228	7.0	5.1	0.011	4	12.3	12.5	-0.02	530
Z	2					4	10.9	10.8	-0.03	460
						5	1.6	1.6		

No.	Date	Phase	Time (G.M.T.)			Per s.	Amplitude			Δ km.	Remarks
			h.	m.	s.		A _x μ	A _y μ	A _z μ		
400	1953 Oct. 1	iPZ	14	01	44	3			+4	2950 26:5	Compression H 13 56 08
		iSN		06	14	5	-2				
		iN		06	21	5	+4				
		iN		06	47	4	-1				
		eLE		08	.8	17					
		MN		09	.8	16	2				
		ME		10	.9	15		3			
401	" 2	iPNZ	01	09	08	5	-6		-8		Dilatation
		iPPNEZ		09	42	5	+9	-2	+8		
		i(S)N		13	06	5	+3				
		iE		13	41	8		+6			
		iE		13	51	7		+8			
		iN		13	53	7	-11				
		iz		13	56	5			+6		
		eLE		14	.5	20					
		iE		14	45	11		-26			
		iN		15	02	8	-14				
		eLZ		15	.4	24					
		eLN		15	.7	25					
		MN		16	.9	13	18				
403	" 3	ME		17	.1	13		16			
		MZ		17	.3	16			17		
		iz	01	10	54	3			+2		
		iE		14	07	5		+2			
404	" 3	eLN		15	.2	18					Compression
		MN		18	.3	14	1				
		i(P)Z	15	06	16	3			+2		
		i(S)N		10	13	4	+1				
		iN		10	28	6	-2				
		eLN		11	.5	16					
		ME		14	.1	9		1			
405 407	" 4	MN		14	.3	10	1				
		MZ		15	.1	8			1		
		iPZ	00	24	03						
		iPNZ	14	43	33	4	+3		-		
407	" 4	iN		44	20	3	+3			25:7	Dilatation PZ from Sprengnether. H 14 38 04
		iSN		47	57	6	+3				
		iE		48	00	6		-3			
		iN		48	14	6	-5				
		iE		48	36	6		-4			
		eLRE		50	.0	20					
		ME		52	.6	13			14		
		MN		52	.8	13	13				

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From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks				
			h	m	s		AN	AE	AZ						
408	1953 Oct. 5	i(P)Z	04	44	37	2				km.	Compression (P)Z & iZ from Sprongnether.				
		iz		44	49	2									
		iSN		55	00	7	+3								
		ine		55	21	5	-3	-2							
		ine		55	28	5	+2	+3							
		in		56	42	6	-3								
		in		56	55	8	-3								
		en	05	00	48	12									
		en		01	10	19									
		eLQN		08.3		24									
		eLE		10.2		30									
		MN		17.8		22	5								
		ME		18.4		22		3							
		410	" 5	*iPN	23	21	44	3	+2					2750 24:7	H 23 16 25 *Until 23h 31m all readings from Wiechert.
iPE				21	45	3		-1							
ipPN				21	54	4	+6								
ippN				22	24	5	+3								
in				25	58	4	+2								
eSN				26	01										
ie				26	13	5		+2							
in				26	14	6	-9								
in				26	20	6	+13								
ie				26	23	6		+6							
ie				26	33	6		+11							
iSSSN				27	13	6	+6								
ie				27	18	6		+4							
ie				27	24	6		-7							
eINE				28.4		24									
ME				31.3		12		110							
411	" 6			MNZ		31.6		14	45		40				
		(P)Z	09	07	51										
		ez		08	01										
		e(S)N		12	33	11									
		eLE		15.2		24									
		ME		17.6		15		3							
413	" 6	MN		20.5		15	2			3660 30:2	H 21 38 18				
		ePNZ	21	44	27										
		in		44	57	4	+4								
		ippZ		45	26	7			+5						
		inZ		46	14	4	+11		-7						
		in		47	18	6	+9								
		iSN		49	23	6	-4								
		in		49	35	6	-16								
		en		49.6		26									
		ie		49	51	5		+5							
		in		50	40	7	-17								
		eLE		51.3		32									
		eLN		52.1		27									
		ME		52.9		32		250							
414	" 6	MN		56.7		15	37			2360 21:2	Dilatation H 22 53 30				
		ME		57.1		12		41							
		ipNEZ	22	58	15	4	+3	+8	-11						
		iz		58	18	4			+18						
		ippNZ		58	42	4	-6		+8						
		ie		58	44	4		+11							
		ie		59	24	5		+7							
		iz		59	25	6			+12						
		iSN	23	02	04	6	-5								
		in		02	10	6	-21								
		ie		02	14	7		-25							
		ipcPNZ		02	17	6	+36		-25						
		iSSZ		02	42	6			*14						
		eLN		03.1		18									
		ME		05.6		16		19							
		415	" 7	MZ		06.0		15					21		
				MN		06.4		12	43						
iz	11			42	22	4			+4						
in				46	14	4	+4								
eLN				48.0		17									

1953, October.
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SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
	1953		h	m	s	s	μ	μ	μ	km.	
417	Oct.10	i(S)N	00	39	58	4	+5				
		i(S)E		39	59	4		-3			
		iE		40	22	4		+4			
		iN		40	24	3	-5				
418	" 10	iPZ	22	01	13	2			+2	2970	Compression
		iSE		05	44	4		+2		26:7	H 21 55 35
		iN		05	46	5	-2				
		e(L)N		06.5		23					
		iSSE		06	58	4		+3			
		eLE		07.6		17					
		MNEZ		10.3		13	.3	4	1		
419	" 11	iPZ	13	21	00	?			-	9320	Dilatation
		iZ		21	16	5			+7	83:9	H 13 08 32
		iN		21	18	6	-4				
		iN		21	36	6	-5				
		iPPZ		24	15	5			-4		
		iSN		31	20	6	+4				
		iSE		31	22	8		-11			
		iN		31	38	9	+6				
		iSSE		31	47	8		-16			
		iE		32	08	7		+7			
		PSN		32	20	12					
		iZ		32	22	6			-4		
		iZ		32	34	7			+10		
		iN		32	55	5	+5				
		iN		36	23	8	+7				
		iNE		36	33	10	+6	-4			
		eLQE		43.1		45					
		iN		43	31	6	+4				
		eLRZ		47.5		36					
		ME		50.0		20		7			
		MNZ		53.3		22	15		14		
420	" 11	e(SKKS)NE	17	31	49	10					
		e(SS)E		38	37	12					
		eLNE		52.2		18					
422	" 13	MNE	18	00.8		16	6	5			
		e(SS)E	09	28	41						
		eLRE		45.3		25					
		MEZ		52.4		18		3	3		
		MN		53.4		18	2				
423	" 13	(i)Z	13	58	44	2			-2		
		(i)Z	14	02	45	3			+3		
		iNE		07	05	4	+2	+2			
		iZ		07	34	4			-3		
		iZ		07	58	4			-4		
		iE		08	32	5		+3			
		iZ		08	35	5			+4		
		iNE		09	03	5	+4	+3			
		iZ		09	37	5			-6		
		iEZ		09	47	6		-12	+9		
		iN		09	48	6	+21				
		LE		09.9		18					
		iN		10	06	6	+18				
		iN		10	20	5	-16				
		iN		10	46	5	-15				
		MNEZ		13.4		13	10	9			
424	" 14	iPNZ	14	59	04	4	+2		-4	8600	Dilatation
		iPcPZ		59	15	4			+3	77:4	h 0.01
		iPPZ		59	33	4			+4		H 14 47 18
		iSN	15	08	45	6	-4				
		iSKSN		09	03	6	-3				
		eE		09	11	6					
		iPSN		09	42	6	+2				
		iN		10	21	5	+3				
		eLE		19.8		21					
426	" 16	iZ	07	20	14	2			+2		Masked by micro-
		i(S)N		23	35	5	-2				seisms.
		eLE		25.4		22					

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From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
						AN	AE	AZ			
			h	m	s	s	μ	μ	μ	km.	
429	1953 Oct.18	(i)Z	03	42	01						Masked by micro-seisms.
		eN		46	30						
		eLE		49.0		16					
432	" 19	MNE		50.2		13	2	2			
		eE	13	42	19	8					
		eN		43	43	10					
		iE		44	11	7		+3			
433	" 21	MN		47.3		13		5			
		iPZ	03	41	24	4			+7	2260	Compression
		iSE		45	05	7		+7		20:3	H 03 36 48
		iE		45	12	7		-9			
		eLR _e		46.3		17					
		ME		47.1		15			13		
		MN		50.0		12	9				
434	" 21	iPEZ	03	45	22	7		-8			Dilatation
		iZ		45	31	5					Aftershock of
		MN		53.9		10	14				No.433
437	" 24	iPNEZ	23	24	57	5	+3	-3	+6	2710	Compression
		iEZ		25	14	4		-7	+7	24:4	H 23 19 41
		iEZ		25	23	4		-6	+11		
		iPPNE		25	36	5	-3	+9			
		iPPPE		25	47	6		+10			
		iZ		25	51	5			+9		
		iE		25	59	5		+6			
		iZ		26	20	5			+6		
		iZ		29	10	4			+5		
		iSE		29	12	6		-3			
		iZ		29	20	6			-6		
		iZ		29	30	6			-3		
		iN		29	42	7	+7				
		iZ		29	48	5			+7		
		iN		29	52	8	+12				
		eN		30.2		18					
		eLRZ		31.1		27					
		eLRE		31.2		27					
		MZ		33.1		19				29	
440	" 27	MNE		33.5		16	24	21			P from Sprengnether
		PZ	10	47	35						
		eN		53	04	12					
		eLE		56.0		24					
		ME		58.4		15		4			
		MN		59.3		13	2				
441	" 27	iSKSN	18	45	26	4	-1				
		iSKKSN		46	38	4	+1				
		ePSN		49	29	16					
		eSSN		51	02	15					
445	" 28	iPPZ	13	50	47	4			+2		
		e(S)E		54	07	8					
		iSSN		56	38	8	+3				
446	" 28	e(S)N	14	45	53	8					
		e(SS)E		49	42	13					
		eLNE		55.1		25					
		eLZ		55.7		25					
		MZ		58.6		18				4	
		ME		58.8		17		3			
448	" 29	e(S)E	17	21	30	9					
		iN		21	44	7	+2				
		iN		21	55	8	+5				
		eLE		24.8		23					
		MNEZ		27.5		16	6	5	5		

Minor shocks: 3d 00.7h; 4d 00.7h; 5d 10.4h; 6d 18.0h; 8d 22.7h; 12d 06.6h;
14d 17.5h; 16d 10.8h; 17d 21.6h; 18d 04.3h, 08.0h; 22d 07.6h; 23d 19.3h;
25d 08.0h; 27d 04.3h; 28d 02.6h, 12.6h; 29d 16.4h; 30d 17.3h.

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
452	1953 Nov. 4	iPZ	h	m	s	s	μ	μ	μ	km.	Compression H 03 49 10
			03	54	35	2			+3	2820	
		iNEZ		54	37	4	+13	+11	-23	25:4	
		iPPZ		54	45	4			+36		
		iNZ		54	50	5	+46		-64		
		iE		54	54	5		+18			
		iNEZ		55	03	5	+42	+35	-53		
		iPPNEZ		55	14	5	-33	-19	+65		
		iZ		55	22	5			+46		
		iPPPNE		55	24	5	+25	+26			
		iZ		55	29	5			-83		
		iZ		58	06	6			-50		
		iSN		58	58	7	-130				
		iSE		59	00	6		-62			
		isSNZ		59	14	8	-190		+110		
		isSE		59	16	6		-100			
		iN		59	27	6	+				
		iE		59	30	6		+54			
		iE		59	36	6		+125			
		iN		59	44	7	-150				
		iZ		59	52	7			+12		
		iE		59	57	6		+120			
		iE		04 00	39	6			-145		
eLE		01.5		29							
MN		06.6		14	320*						
MEZ		07.3		14		380*	300ca				
453	"	4	06	16	02	8		+		From Sprengnether	
454	"	4	08	52	46	1		-		From Sprengnether	
				52	48	3		-3	2720	Dilatation	
				56	59	5	+3	+3	24:5	h 0.005	
				57	17	6		+5		H 08 47 32	
				57	18	7	-7				
				57	25	6		+8			
				59.3		21					
			09	00.8		18		6			
				01.1		16	7				
				01.6		17		7			
455	"	4	09	37	38	4		+3		Compression	
				42	13						
456	"	4	11	47	42				2900	H 11 42 09	
				52	15	9			26:1		
				52	22	7	-6				
				52	38	7		+5			
				54.3		19					
				59.0		13	4				
457	"	4	12	33	14	2			2780	Compression	
				33	16	6	-7	-4	25:0	H 12 27 52	
				33	17	6					
				33	34	6	-13	-9			
				34	04	6	+10	+10			
				37	33	8	+				
				37	41	8		-19			
				38	15	7		+6			
				38	41	7	+37				
				38.9		22					
				40.8		27					
				41.3		20		43	45		
				41.7		18	49				
			15.4			22					
459	"	5	04	35	26	1			2760	From Sprengnether	
				35	31	3			24:8	H 04 30 06	
				36	16	3					
				39	44						
				40	10	8	+6				
				40	12	5		+5			
				41	11	5	+5				
				42.1		19					
				43.0		14	4	3			
				47.1		14			3		

*From Wiechert.

From Sprengnether
From SprengnetherDilatation
h 0.005
H 08 47 32

Compression

2900
26:1
H 11 42 09Compression
H 12 27 52From Sprengnether
H 04 30 06

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No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks
							AN	AE	AZ		
463	1953 Nov. 6	i(S)N	h m s				μ	μ	μ	km.	Masked by non-seismic disturbances
464	" 6	i(?)Z	07 02 37	6			-3				
		e(S)N	12 32 10	3					+3		
		iNE	36 33	5							
		iN	36 43	6			+7	+4			
		iE	36 56	5			+4				
		eLN	37 00	5				-5			
		MNEZ	38.6	21							
465	" 7	iPZ	41.1	13			4	2	1		
		iSE	13 13 19	4					+3	6550	Compression H 13 03 21
		iN	21 21	6				+4		58:9	
		iPSNE	21 25	5			-5				
		iN	21 40	6			+5	+3			
		eLN	22 11	5			+5				
		MNEZ	32.8	27							
466	" 7	iPZ	39.8	23			11	7	11		Dil. Sprengnether. H 16 00 50
		iz	16 06 23	1					-	2900	
		iSN	06 38	2					+2	26:1	
		iSE	10 50	4			+4				
		iz	10 51	4				+5			
		eWE	10 57	4					-3		
		iz	11 02	19							
		iE	11 29	6					+7		
		eLE	11 38	5				-5			
		eLZ	13.1	22							
		MNE	13.5	21							
		MZ	15.4	16			7	4			
468	" 8	iPZ	15.9	16					6		Dil. Sprengnether H 15 25 25
		iz	15 30 18	1					-	2450	
		iSE	30 21	2					+1	32:0	
		iPcPZ	34 14	6				-3			
		iz	34 15	4					-3		
		iSSSN	34 22	5					+3		
		eLE	35 07	6			+4				
		MNEZ	36.1	18							
469	" 9	iPZ	37.5	16			3	2	2		Dilatation H 17 25 42
		iz	17 38 24	3					-3	9640	
		iSKSN	38 35	5					+2	86:7	
		iSE	38 42	5					+4		
		iN	48 42	6			+35				
		iSSE	48 57	5				-4			
		iN	49 11	6			-4				
		eSSN	49 14	5				-2			
		eLQE	49 18	6			+4				
		eLRNZ	54 35	20							
		MNZ	18 02.3	30							
		ME	06.5	29							
470	" 10	iPZ	12.0	22			7		7		Dil. Sprengnether H 09 53 55
		iz	09 59 29	1					-	2920	
		iz	59 36	3					+2	26:3	
		iz	59 43	3					+2		
		eS	59 55	3					-2		
		iN	10 03 57								
		eE	04 00	7			+3				
		iz	04 27	23							
		eLRE	04 35	4					+5		
		ME	06.3	23							
		MN	07.6	18							
		MZ	08.6	16			2				
			08.7	16							

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
471	1953 Nov.10	iPZ	h	m	s	s	μ	μ	μ	km. 9420 8428	Compression H 23 40 22
		iN	23	52	54	3			+3		
		iz		52	59	5	+3				
		iz		53	00	7			+15		
		iz		53	12	8			+9		
		iN		53	16	7	+3				
		iPPNZ		56	17	6	-4		+7		
		iE		57	50	5		+3			
		iSN	00	03	18	7	+9				
		iNE		03	26	8	-14	+6			
		iE		03	53	9		+11			
		iN		04	05	8	-15				
		iE		04	13	9		-15			
		iN		04	35	6	-11				
		eSSN		08	50	12					
		iE		09	11	9		-6			
		eLQE		15.5		30					
		eLRZ		20.0		30					
		ME		22.6		24		22			
		MZ		22.8		24			25		
MN		23.4		28	35						
eW2Z	02	01.3		22							
473	" 12	iPZ	15	37	53	3			+2	2440 2129	Compression H 15 33 01
		iE		37	57	5		+3			
		iN		37	58	4	+2				
		iz		38	57	5			+5		
		iPPE		38	19	6		+4			
		iNZ		38	23	4	-3		+5		
		iPPPE		38	30	5		-3			
		iz		38	44	4			-3		
		eSN		41	48	10					
		iPcPZ		41	51	4			-3		
		iN		41	59	7	+5				
		iz		42	08	6			+5		
		iE		42	10	4		-3			
		eLN		42.7		19					
		eLZ		42.9		20					
		MZ		44.7		17			4		
		ME		45.1		17		4			
		MN		45.4		17	5				
475	" 13	ePZ	11	19	17					5210 4629	Compression H 11 10 48
		iPZ		19	20	4			+3		
		iz		19	28	4			+3		
		eN		25	54	12					
		iSN		26	05	8	-4				
		eSSE		29	37	14					
		iN		29	38	7	+3				
		eLN		31.5		23					
		ME		37.4		19		11			
		MZ		40.1		18			14		
476	" 13	MN		40.5	16	11					
		e(P)E	16	11	02						
		eLEZ		18.2		23					
477	" 13	MN		20.1	15	4					
		MEZ		20.8	16			4	6		
477	" 13	iPZ	16	27	40	2			+	6920 6323	Compression H 16 17 12
		iz		28	01	3			+5		
		iSN		36	08	4	-1				
		iN		36	41	6	+4				
		eLN		47.8		32					
		MNE		53.9		23	3	6			
		MZ		54.3		24			7		

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No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks				
			h	m	s		AN	AE	AS						
478	1953 Nov.13	iPNEZ	19	21	04	6	+8	+6	-11	2790 25:1	Dilatation H 19 15 41				
		INEZ		21	11	4	-17	-13	+29						
		INEZ		21	18	4	-19	-16	+26						
		IZ		21	25	4			-39						
		INEZ		21	32	5	-23	-16	+41						
		iPPZ		21	44	6			-29						
		IZ		21	51	5			+43						
		iNE		23	30	5	+26	+10							
		iNE		23	50	6	+26	+23							
		IZ		24	40	7			-33						
		iSE		25	24	8		+19							
		IZ		25	35	6			+20						
		iN		25	36	8	+59								
		isSE		25	40	7		+23							
		IZ		25	43	8			+45						
		iE		25	54	7		+64							
		iN		26	05	8	-77								
		iN		26	14	8	-62								
		iN		26	36	8	-48								
		iN		27	06	8	+76								
		iE		27	28	7		+53							
		eLRZ		27.7		22									
		MZ		29.0		21			100						
MN		30.0		13	73										
ME		30.4		13		53									
479	" 14	eW ₂ Z	22	16		18									
		(P)Z	00	49	17										
		eSE		53	50										
		iN		53	59	4	-1								
		eLN		55.9		17									
		ME		57.6		13		1							
		MN		57.9		15	2								
		481	" 14	iPZ	05	04	02	2					+1	2790 25:1	Compression H 04 58 39
				iPPZ		04	42	3					+2		
				iSE		08	22	7							
iN				08	36	8	-5								
eLN				10.6		21									
482	" 14	MNEZ		13.2		13	3	2	2						
		e(S)N	10	32	28	7									
		eLN		35.2		24									
		MEZ		37.9				1	2						
483	" 14	MN		38.0		14	3								
		(eP)Z	20	16	20										
		iSKSN		26	37	4	+2								
		iSN		26	46	5	+3								
		iE		26	49	5		-1							
		eSSN		32		15									
		eLE		40.6		23									
		eLN		47.1		24									
		MN		49.6		20	2								
		MZ		49.8		19			2						
484	" 16	iPZ	09	47	17	1			+	3080 27:7	Compression P from Sprengnether				
		iSN		51	55	4	-2								
485	" 16	iPEZ	16	05	29	5		-3	+4	2360 21:2	Compression H 16 00 44				
		iEZ		05	35	5		+4	+9						
		ePPZ		05	57	10									
		iSE		09	18	6		+6							
		IZ		09	20	8			+5						
		iN		09	29	6	+4								
		iE		09	36	6		+6							
		eLRN		10.6		23									
		ME		12.4		15		5							
		MN		12.5		16	9								
		MZ		12.6		17			5						

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks			
							AN	AE	AZ					
486	1953 Nov.16	iPZ	h	m	s	s	μ	μ	μ	km.	Dilatation H 16 16 36 Begins on Cont. of no.485.			
		in	16	21	23	6			-10	2380				
		INEZ		21	25	6	+5			21:4				
		iPPNZ		21	36	5	+5	-5	+3					
		iz		21	47	6	+6		-4					
		iSE		25	04	6								
		iE		25	40	6		-7						
		eLE		25	27	7		+7						
487	" 16 f	iPEZ	17	22	04	5		-5	+5	2340	Compression H 17 17 22			
		INEZ		22	10	5	+8	+12	-19	21:0				
		iEZ		22	22	5		-17	+15					
		in		22	23	5	-9							
		iPPZ		22	27									
		iE		22	32	6		+14						
		in		22	41	5	-11							
		eN		25	33	26								
		iSE		25	51	7		-12						
		iz		25	58	6			+9					
		in		26	01	5	-12							
		iE		26	02	5		-12						
		in		26	08	5	-14							
		iz		26	12	9				-40				
		eLE		26.3		27								
		eLRZ		27.2		30								
488	" 17	MN		28.4		16	28				Compression H 04 19 27			
		ME		29.0		16		35						
		MZ		29.5		16			34					
		iPZ	04	24	13	3			+2	2370				
		INEZ		24	19	4	-2	-4	+5	21:3				
		iz		24	26	4			+5					
		iPPNE		24	38	5	+3	+4						
		iz		24	41	4			+4					
		inZ		24	48	4	-3		-4					
		iSNE		28	03	4	+2	+6						
		iz		28	10	6			-7					
		in		28	13	5	+6							
		iE		28	19	5		+4						
		iz		28	27	5			+7					
		iSSE		28	41	6		+5						
		eLE		29.0		21								
eLZ		29.2		24										
489	" 17	ME		31.1		16		5			Dilatation			
		MN		31.2		15	4							
		MZ		31.3		16			4					
		i(P)Z	05	33	51	3			-2					
		eLE		40.6		19								
		ME		44.3		16			2					
		490	" 17	iPZ	07	28	22	4				+2	2390	Compression H 07 23 34
				iz		28	34	4				-2	21:5	
				iPPZ		28	44	4				+3		
				iSE		32	13	4		+2				
				iEZ		32	19	5		+3		-2		
				iz		32	28	4				-2		
				eLRZ		33.5		20						
				ME		35.2		16				2		
				MZ		35.7		16					2	
				MN		36.1		15	2					
491	" 17			PZ	09	11	42					2510		
				eSE		15	43					22:6		
				eLZ		18.0		17						
				ME		18.6		15			1			
				MN		18.9		15	1					
				MZ		19.0		16				2		

1953, November.
 RIVERVIEW COLLEGE OBSERVATORY,
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
492	1953 Nov.17	iPNEZ	h	m	s	s	μ	μ	μ	km. 2350 21:1	Compression H 09 45 19	
		INEZ	09	50	03	5	-4	-5	+6			
		iPPNE		50	10	6	-5	-8	+17			
		iPPZ		50	23	6	+6	+9				
		iz		50	25	6			+13			
		iN		50	31	5			+7			
		iSE		50	39	6	-6					
		iSN		53	51	5		-3				
		iz		53	53	5	-9					
		iN		53	56	5			+5			
		iz		53	59	7	+14					
		isSE		54	01	7			+26			
		iN		54	06	7		-10				
		isSE		54	18	7			+8			
		eLN		54	27	9			+5			
		iSSSE		54.6	23							
		eLEZ		54	42	6			+5			
		MN		55.0	25							
		ME		56.3	15		17					
		493	" 17	MZ		56.9	16					13
(PKP)Z	13			48	39							
iPPZ				50	04	4			+6			
iSKSE				55	46	9		+5				
iE				57	32	9		+4				
iPSE	14			00	01	8		+4				
iE				00	15	10		+6				
iPPSZ				01	15	9			+11			
iE				01	30	11		+25				
eSSE				06	27	?						
iE				07	00	22		+66				
eSSSE				10	47	30						
eLQN				20.2	36							
eLRE				24.3	36							
eLRZ				24.8	30							
MN				41.9	16		15					
MZ				43.3	16			19	26			
eW2Z	15			27.0	36							
eW2E				29.1	40							
494	" 18			iPEZ	03	03	21	3		-3	+4	2800
		iPPZ		04	02	4			+3	25:2		
		iPPZ		04	16	4			-3			
		iSN		07	28	4	-5					
		iE		07	30	4		-3				
		iN		08	14	5	+6					
		iE		08	15	4		-3				
		isSN		08	38	5	-4					
		iN		12	27	4	-3					
		iE		12	28	4		+3				
		isNE	09	03	30	4	+3	-2				
		iE		03	37	4		-3				
496	" 18	eLz		04.9	19						P masked by micro-seisms.	
		iPZ	10	11	54	1						
497	" 18	iz		12	00	3				2380	Compression P from Sprengnether H 10 07 07	
		iSE		15	45	5		-3		21:4		
		iz		15	49	5						
		iz		15	57	6						
		eLN		17.4	18							
		MZ		19.2	15					3		
		MNE		19.6	15		2	1				
		iN		25	16	4	+3					

1953, November.
 RIVERVIEW COLLEGE OBSERVATORY,
 SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks				
			h	m	s		AN	AE	AZ						
498	1953 Nov.20	iPNZ	03	17	40	4	+4		+3	2690 24:2 3450 31:0 2340 21:0 3120 28:1 7590 68:3	Compression H 03 12 26 Comp.Sprengnether. H 17 22 44 Compression H 17 35 57 Compression H 17 48 53				
		ipPZ		17	50	4			+5						
		iN		17	57	5	-7								
		INEZ		18	03	6	+6	+4	+6						
		iPPZ		18	18	5			-4						
		IPPN		18	19	5	+5								
		iPPP N		18	28	5	-8								
		iz		18	54	5			-4						
		iSE		21	53	8		+13							
		iN		22	03	5	-13					-8			
		iz		22	09	7						-8			
		iN		22	24	5	-9								
		iSSE		22	47	9		+10							
		iSSSN		23	03	6	+18								
		iz		23	04	9			+16						
		iE		23	08	10			-28						
		eLN		23.3		24									
		MNE		25.6		10	26	21							
		MZ		25.9		13						17			
		499	" 20	ipZ	21	10	24	3					+2	3450 31:0	Compression H 21 04 07
eSN				15	2'										
eN				17	26	15									
eLZ				18.6		27									
eLE				18.7		27									
MN				18.9		21	6								
iScSE				20	59	5			-5						
iE				21	43	5			-4						
501	" 21			i(S)E	07	17	03	6			+2				
				iN		17	07	5	-4						
		eLNZ		18.3		25									
		MNEZ		20.7		14	2	2	2						
502	" 23	(iP)Z	03	50	29	3			+3	2340	Compression				
		eSE		57	13	8									
504	" 24	eLE	04	03.1		25				21:0					
		e(S)E	17	42	32	7									
506	" 25	iN		42	36	4	+3			2340	Comp.Sprengnether.				
		MNE		46.9		15	1	3							
507	" 25	ipZ	17	27	14	1			+	21:0	H 17 22 44				
		iSN		31	01	6	+3								
508	" 25	iPEZ	17	41	48	5			-4	3120 28:1	Compression H 17 35 57				
		iz		41	56	4			+5						
		iez ^A		42	05	6			+6			-12			
		iE		42	33	6			+5						
		iPPZ		42	37	6						+6			
		iE		43	06	6						-6			
		iN		43	38	6	+7								
		iz		43	40	6						+9			
		iz		44	02	7						-8			
		iSN		46	28	7	-12								
		iE		46	34	7			+7						
		iN		46	35	10	+23								
		iE		46	38	10						-12			
		iSSE		47	55	13						+20			
		eLE		49.3		24									
		MN		50.7		16	32								
		MEZ		51.0		20			26			32			
		508	" 25	ipNZ	17	59	53	6	-22				+44	7590 68:3	Compression H 17 48 53
				iNZ	18	00	01	6	+47				-62		
				iPcPNZ		00	22	6	+60						
iz				00	41	5				+31					
iPPZ				02	25	6				+43					
iE				03	19	6			+22						
iz				03	31	5				+29					
iz				04	24	7				-52					
iE				06	14	9			+26						
iSN				08	50	8	-60								
iSE				08	51	8				-270					

1953, November.
 RIVERVIEW COLLEGE OBSERVATORY,
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks		
			h	m	s		AN	AE	AZ				
508 (cont.)	1953 Nov.25	iN	18	09	25	7	+49	μ	μ				
		iN		09	54	8	-220						
		iE		09	55	8		-127					
		iE		10	04	9		-290					
		iE		10	49	7		-13*					
		iE		11	39	7		+18*					
		iN		13	06	8		+16*					
		iN		13	19	8		-21*					
		iN		13	42	7		+26*					
		iE		14	17	8		-17*					
		iE		16	08	10		-126*					
		iE		16	19	11		+54*					
		eLE		18.3		32							
		MEZ		26.0		24			500*		620		
		MN		27.1		23		970*					
		509	" 26	eW ₂ N	20	09		33					7670 69°0 Compression.From Sprengnether H 00 03 31
				iPZ	00	14	35	1				+	
iz				14	42	5			-7				
iz				14	51	4			+5				
iPcPZ				15	00	4			-5				
iSNE				23	36	8		+13	-13				
iSSE				23	53	6			-6				
iPSE				24	06	8			+6				
iN				24	13	8		-7					
iN				24	35	7		-14					
iE				24	42	10			+16				
iN				24	51	5		-9					
iE				25	35	6			+6				
iN				24	40	7		+8					
SSE				27	42	12							
SSN				28	11	12							
SSSE				31	04	13							
ME				35.6		17			19				
ME				40.4		16			13				
510	" 26			MNZ	41.6		21		33		22	7620 68°6 Compression H 01 47 33	
		iPZ	01	58	35	4			+3				
		iSE	02	07	34	6			-4				
		iN		07	44	6		+4					
		iN		08	35	6		-4					
		ME		24.5		17			2				
		ME		29.2		18			3				
511	" 26	MNZ	32.3		18		5		6				
		eSE	04	41	43								
512	" 26	eLE	53.8							7670 69°0 Compression H 08 14 14			
		iPZ	08	25	18	3			+7				
		iNZ		25	26	7		+6			-10		
		iz		25	32	4					+10		
		iz		25	38	3					+6		
		iz		25	53	4					-9		
		iSNE		34	19	7		+12	-11				
		iN		34	26	7		+5					
		iE		34	29	4			+16				
		iSSN		34	41	8		+15					
		iPSE		34	48	8			+16				
		iN		34	57	10		+27					
		iN		35	11	10		+21					
		iE		35	24	5			-8				
		iN		35	29	6		+21					
		iE		35	55	5			+11				
		eSSN		38	56	20							
		eLE		43.8		22							
		ME		46.3		18			14				
514	" 27	MNZ	52.3		22		59		43	Dilatation. From Sprengnether.			
		i(P)Z	11	41	22	2							
		iSN		50	10	4		+4					
		iE		50	13	4			+4				
		MN		12	08.4	21		3					

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
			h	m	s	s	μ	μ	μ	km.		
515	1953 Nov.27 ✓	iPZ	23	07	12	2			+	3160 28:4	Compression, from Sprengnether H 23 01 19	
		iEZ		07	16	3		-2	+4			
		iEZ		07	29	3		-2	+3			
		iPPEZ		08	00	5		-12	+5			
		iN		08	02	5		-4				
		iE		08	09	7			+7			
		iz		08	14	5			+7			
		iE		08	24	4			+7			
		eSN		11	55	8		*				
		iSSN		13	14	8		+5*				
		eLE		14.8		25			*			
		MN		17.0		13		27				
		ME		19.2		12			12			
517	" 28	i(P)Z	23	20	41	4			+3		Compression	
		iz		23	52	5			-4			
		e(S)E		28	22							
		iE		28	32	7			-5			
518	" 29	i(P)Z	02	58	11	1			-		Dil. From Sprengnether	
		i(S)E	04	27	35	5			+2			
519	" 29	eLE		38.6								
		MN		47.7	19		3					
521	" 30 ✓	(eP)Z	05	48	30						P masked by micro-seisms.	
		eSN		53	06	9						
		iE		53	23	5			+5			
		iN		53	26	5		+6				
		iSSN		54	29	7		-7				
		eLNE		54.9	21							
		iN		55	04	7		-15				
		iN		55	34	8		+15				
		MNEZ		57.5	16			8	3			
		iz	06	04	32	4						+5
522	" 30	(i)Z	06	48	09	3			+2		Masked by micro-seisms.	
		iz		50	10	3			+2			
		iN		54	41	4		-2				
		eLE		56.1	21							
Minor shocks: 1d 18.8h, 21.6h; 4d 21.3h; 5d 07.3h, 07.7h; 6d 04.9h; 8d 12.6h; 13d 00.8h; 18d 06.9h; 21d 03.9h; 24d 00.2h; 25d 05.7h; 26d 16.0h; 28d 13.5h; 29d 12.2h; 30d 14.4h.												
524	Dec. 1	iPz	04	28	05	2			-		Dilatation. From Sprengnether.	
		e(PFS)N		40	31							
		eLE		49.7	20							
525	" 1	iPNEZ	05	19	17	4	+3		-6	7410 66.7	Dilatation h 0.03 H 05 08 48	
		iPPNZ		20	07	4	+4		-7			
		iz		20	11	4			+16			
		iz		22	28	4			-5			
		iSN		27	50	6		-17				
		iSE		27	52	6			-3			
		iz		27	54	7			+9			
		iPPSNE		28	58	6	+9		-8			
		iSSE		32	07	7			+6			
		eSSSNE		35	17	21						
526	" 1	LQE		36.8	33						Compr. On Coda of 52	
		LRE		39.1	27							
527	" 1 ✓	iPZ	05	47	56	5			+7	2950 26:5	Dilatation h 0.07 H 21 22 29	
		iPEZ	21	27	29	3			+3			
		iE		29	45	5			+2			
		iEZ		29	52	6			+4			
		iPcPZ		30	36	5			+4			
		iSN		31	29	5		-6				
		iz		33	31	3			+2			
		iz		34	02	4			+3			
		iEZ		34	05	5			-5			
		iN		34	13	8		-6				
		iE		34	17	7			-5			
		iE		34	33	7			-6			
		iScSNE		37	25	4	+3	+11				
		iN		37	28	5	+7					
iE		40	58	8			+8					

RIVERVIEW COLLEGE OBSERVATORY



From the ISC collection scanned by SISMOS

NO.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
528	1953 Dec. 2	ipNZ	04 31 15	?	-	μ	μ	km.	Compression H 04 24 50
		iz	31 17	3			+	3550	
		ippNZ	31 24	4	-9		+13	31:9	
		iz	31 31	4			+6		
		in	31 34	5	+12				
		in	32 29	5	+10				
		ieZ	32 31	5		+8	+24		
		inz	32 37	6	+25		-22		
		isNE	36 23	7	-15	-19			
		ie	36 32	5		+18			
		i	36 34	7	-35				
		ine	36 45	7	+24	+21			
		in	37 13	8	+17				
		in	37 22	9	+44				
		in	37 40	8	+32				
		ie	38 05	8		+20			
		issZ	38 15	10			-27		
		ie	38 18	5		+9			
		issSE	38 32	11		-83			
		issSN	38 34	10	-45				
ie	39 08	7		+31					
eLE	39.7	22							
MNE	43.6	10	68*	140			*From Wiechert		
MZ	48.2	13			190				
530 32	" 2 " 3	i(P)Z	07 02 56	2			+	3990 35:9	Comp.From Sprengnether Compression H 01 09 35
		ipZ	01 16 34	3			+2		
		isN	22 09	5	-2				
		ME	29.1	13		4			
		MN	30.6	13	6				
533	" 3	i(P)Z	15 07 14	2			+	Compression. From Sprengnether	
		e(S)E	17 33						
		ie	17 55	4		+2			
		e(SS)E	24 02	18					
		eLRE	36.7	39					
534	" 4	MNEZ	45.6	22	3	3	2	Compression	
		(iPKP)Z	15 13 17	3			+1		
		iz	13 28	2			+2		
		ee	21 33	16					
		eSSE	28 59	21					
		eSSSN	33 08						
		eLRNEZ	44.8	30					
536	" 5	MNEZ	55.2	18	2	2	4	(P)from Sprengnether	
		eW2N	17 00	27					
		(P)Z	09 52 25						
		ise	10 01 25	4		-2			
		ene	01 59	13					
537 538	" 6 " 6	eLE	11.4	21				4810 43:3	Dil.From Sprengnether Compression h 0.015 H 17 23 57
		ME	18.2	16		1			
		MNZ	25.8	18	3		3		
		ipZ	08(45 16)	1			-		
		ipZ	17 31 48	2			+3		
539	" 7	ipPZ	32 18	2			+4	12,500 112:5ca. Dilatation h 100 km., H 02 05 40 (from Gutenberg graph)	
		ippZ	33 35	3			-2		
		iz	38 04	4					
		isNE	38 05	4	-4	+4			
		issNE	41 25	6	-3	+5			
		e(P)Z	02 20 15						
		ipKPZ	24 04	4			-2		
		iz	24 41	4			+4		
		ippNZ	24 52	7	-7		-12		
		ippe	24 53	7		+6			
		iz	24 57	7			+16		
		in	25 28	8	+7				
ieZ	25 31	6		-3	+9				
inz	26 00	5	-5		-4				
ippPN	27 28	9	+7						
in	28 01	9	+7						
ee	29 52	19							
E(SKS)N	30 30	12							

Continued over leaf.

No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ km.	Remarks
			h	m	s		AN	AE	AZ		
539 ont.	1953 Dec. 7	iN	02	30	57	9	+9	μ	μ		
		eE		31	12	18					
		iNE		31	36	9	-13	+9			
		iN		32	32	10	+8				
		iE		32	36	8		-5			
		eSPZ		34	26	19					
		iSPE		34	30	10		+16			
		iSPN		34	31	10	-12				
		iN		34	33	8	+14				
		ipPSEZ		34	48	10		+16	+12		
		eN		34	57	26					
		iz		35	08	11			+16		
		iNE		35	30	9	+17	-11			
		eSSN		40	20	26					
		isSSE		41	15	13		+9			
		iE		45	29	10		-12			
		eLN		51.4		27					
		eLE		52.7		27					
		MN	03	03.7		19	8				
		MEZ		05.0		18		5	9		
540	" 7	i(P)Z	14	23	12	4		+5	Compression Masked by large microseisms.		
		i(S)E		32	23	4		+5			
		eLQE		42.3		23					
541	" 7	MN		49.6		21	2		Masked by large microseisms.		
		eE	18	52	14						
		eE		56	37						
542	" 8	eLN		58.9		21			Dilatation. From Sprengnether H 02 10 46		
		MN	19	02.6		15	6				
		MEZ		03.5		18		14		14	
		ipZ	02	21	20	2				-	
		iSN		29	54	4	-4				
543	" 8	iSE		29	57	5		+7	Comp.from Spreng. Comp.from Spreng.		
		iE		30	05	4		-5			
		isSE		30	12	5		-3			
		iE		30	29	4		+5			
		iE		30	37	4		+6			
		eLRE		40.6		23					
		MN		48.8		18	3				
		ME		51.7		17		3			
		ipZ	03	21	00	1				+	
		ipZ	20	24	24	1				+	
		iz	21	02	43	3				-2	
544	" 9	i(S)E		06	29	5		-2	Dilatation H 01 30 21		
		iN		06	32	6	+5				
		ME		11.7		15		1			
		MN		12.7		14	2				
		ipZ	01	35	57	3				-2	
		iSNE		40	27	4	+1	-2			
		isSN		40	41	7	+5				
545	" 10	iN		41	55	5	-5		Dilatation H 01 30 21		
		eLRN		42.8		24					
		MEZ		45.1		16		5		3	
		MN		45.6		13	5				
		eZ	12	41	19						
		iz		41	42	4				-1	
		iz		42	12	4				-2	
546	" 11	iE		42	16	5		-2	Dilatation H 01 30 21		
		(S)N		46	06						
		eN		46	43						
		eLN		48.0							
		eLEZ		48.9		21					
		MNEZ		50.5		16	5	3		3	
		i(S)N	05	47	13	4	-1				
550 551	" 12	ipZ	09	03	44	1			+	Comp.,from Spreng- nether.	
		eSE		08	04						
		eSN		08	05						
		eLE		10.3		20					
		MNEZ		13.0		12	3	3	1		



1953, December.
RIVERVIEW COLLEGE OBSERVATORY.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
552	1953 Dec.12	(P)Z	h m s	s	μ	μ	μ	km.	(P) from Spreng- nether. Repetition of 551
		e(S)E	09 48 46	1					
		eLE	53 03						
		MNE	55.2	20					
553	" 12	e(P)Z	17 46 52	7	1	2		13,200ca	
		ePPE	51 30	9				118°8ca	
		iPPZ	51 33	7			-4		
		iNE	51 44	7	-3	+3			
		iz	51 45	7			+19		
		ize	52 01	7		+7	-10		
		eSKSE	56 53						
		iNE	57 01	9	+5	-7			
		iNE	57 13	10	+17	-32			
		iE	58 35	10		+19			
		iPSNEZ	18 01 25	9	-25	+31	-11		
		iN	01 41	8	+				
		iE	01 45	10		+72			
		iN	02 08	11	+15				
		iE	02 12	12		+50			
		iE	02 46	10		+20			
		iE	03 42	13		+38			
		iN	03 52	18	+36				
		iE	04 05	15		+42			
		iE	06 54	13		+21			
		iSSE	07 53	16		+56			
		iSSN	07 56	13	+27				
		iN	08 20	19	+84				
		iE	08 29	19		+150			
		iz	08 38	19			-46		
		iN	10 39	18	+36				
		iN	11 25	16	+24				
		iE	12 45	13		+33			
		eG	20.9	45					
		eLRNEZ	26.6	30					
		MN	33.0	18	110				
		MEZ	33.6	19		155	165		
554	" 13	iPZ	07 08 36	2			-		Dil. Sprengnether.
		(S)N	18 55	6					
		eLE	35.3	18					
		ME	42.2	13		1			
555	" 13	iPZ	08 23 46	2			+		Comp. Sprengnether.
		MN	32.9	13	1				
556	" 14	iPZ	00 17 01	2			-	3500	Dil. Sprengnether.
		iz	17 32	4			+4	22°5	
		iN	17 39	4	+4				H 00 12 03
		iSE	21 01	6		+5			
		iN	21 03	6	-11				
		iz	21 08	6			+10		
		iNE	21 16	6	-16	-8			
		eLE	22.8	23					
		ME	24.7	15		13			
		MNZ	25.4	15	15				
558	" 15	(iP)Z	18 44 30	5			11		Masked by micro- seisms.
		eE	51 49	11			+3		
		eLE	53.6	24					
		MNEZ	56.1	13	6	7	3		
559	" 16	(i)NE	02 48 38	4	-2	+3			Masked by micro- seisms.
		i(S)N	03 03 21	7	+4				
		eLQE	16.0	22					
		eLZ	22.4	28					
		MNEZ	29	17	6	2	5		
560	" 16	i(P)Z	17 02 13	3			-3		
		eLE	09.7	20					
		ME	11.0	15		3			
		MN	11.8	13	4				

1953, December.
RIVERVIEW COLLEGE OBSERVATORY,
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks	
			h	m	s		AN μ	AE μ	AZ μ			
562	1953 Dec.19	i(PP)Z	23	40	40	2					Sprengether.	
		eN		45	44							
		MN		48.6		15	2					
		MEZ		49.5		15		1				
563	" 20	iPZ	00	32	30	3					Compression Comp.Sprengether	
564	" 20	iPZ	06	44	50	2						
		(S)N		52	50							
		eE		54	42	10						
		ME	07	06.5		12		1				
565	" 20	(iP)Z	09	33	48	2					Comp.Sprengether.	
		e(SKS)		44	25							
		e(PS)E		47	13							
		e(SS)E		52	53							
		eLREZ	10	08.0		26						
		MNE		12.5		18	7	3				
		MZ		13.4		16						
566	" 20	iPZ	21	31	16	2				7800	Comp.Sprengether H 21 20 05	
		iPcPZ		31	39	4				70:2		
		iSE		40	24	6		+2				
		ePSZ		40	56	7						
		ePSE		40	58	7						
		ME		57.2		15		2				
		MZ		58.0		22						
567	" 21	eSE	17	37	39							
		eLE	18	09.5		23						
568	" 22	iPZ	01	04	09	1				2360		Comp.Sprengether H 00 59 24
		ipPZ		04	19	4				21:2		
		iSE		07	58	4		+4				
		iz		08	04	6						
		iz		08	10	6						
		isSE		08	12	4		+2				
		eLE		10.2		18						
		MEZ		11.0		16		2				
		MN		11.7		13	2					
569	" 22	iPZ	03	25	58	3				2300	Dilatation 20:7	
		iSN		29	42	4	-3					
		iSE		29	43	4		+2				
		iz		29	51	4						
		eLRN		31.1		19						
		ME		33.0		18		1				
		MN		33.1		16	2					
570	" 22	iPZ	04	38	49	3						Compression
		(S)N		42	57							
		iN		45	59	7	+3					
		iE		46	09	4		+2				
572	" 22	PZ	18	55	14					6440	H 18 45 23	
		iSN	19	03	10	6	+3			57:9		
		iE		05	13	8		+5				
		MN		17.8		14	3					
		iN		18	18	4	+7					
574	" 23	ePZ	19	03	49					2540	22:8	
		ipPZ		04	00	3						
		iz		04	08	3						
		iSE		07	51	6		-4				
		iz		08	11	4						
		eLRE		09.4		21						
		MEZ		11.0		18		3				
		MN		11.1		13	1					
575	" 24	ez	02	47	17							
		eSNE		56	58							
		eLQE	03	09.5		31						
		MNEZ		25		18	6	5				
576	" 24	e(S)N	23	44	22							
		e(SS)E		50	03							
		eLE		57.8		32						
		MNZ	24	07.2		22	8					
		ME		15.2		18		2				

1953, December.
RIVERVIEW COLLEGE OBSERVATOR.,
SEISMOLOGICAL BULLETIN.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
577	1953 Dec.25	iPz	h	m	s	s	μ	μ	μ	km.	Compression H 01 51 29
		ipPz	02	04	13	4			+4	9680	
		iz		04	25	5			+6	87:1	
		iSKSN		04	35	5			+8		
		iN		14	35	6	+5				
		iSE		14	46	6	-6				
		iScSNE		14	48	5		-6			
		isSE		14	56	6	+14	+18			
		ePSZ		15	09	5		-18			
		iPPSN		15	58	16					
		eSSN		16	22	7	-17				
		isSE		20	27	18			+8		
		mN		20	29	12					
		eE		20	56	20	24				
		eLQE		23	21	20					
		eLQN		27.8		33					
		eLRN		28.1		33					
		eLRZ		32.4		33					
		MN		32.7		33					
		MZ		37.6		20	49			38	
ME		38.3		21							
578	" 26	i(P)Z	01	48	07	3					Compression
		eE		53	49	10					
		eLN		54.7		19					
		eLz		54.9		18					
579	" 28	MNE		57.5		15	5	4			200 1:8 190 1:7 190 1:7
		iPnz	00	38	07	1			+	200	
580	" 28	iSnNEZ		38	31	1			+	1:8	Comp.Sprengnether. H 00 37 35
		iPnz	01	03	36	1			-	190	
581	" 28	iSnNEZ		03	59	1			-	1:7	Dil.Sprengnether. H 01 03 05
		iPnz	02	21	59	1			-	190	
582	" 28	iSnNEZ		22	22	1			-	1:7	Dil.Sprengnether. H 02 21 28
		iz		22	23	1			+		
583	" 28	iz		22	25	1			-		200 1.8
		iPnz	02	34	12	1			+	200	
588	" 31	iSnNEZ		34	36	1			+	1.8	Comp.Sprengnether H 02 33 40
		eE	06	47	01	20					
589	" 31	eLE		49.4		14			4		2440 21:9 -4 +11 +8 6 6 +2 -3 1 1
		ME		51.0		12	3			1	
		MNZ		52.0		12				1	
		iPEZ	09	24	00	3			-2	2440	
		iz		24	16	3				-3	
		eSN		27	55	7					
		eSE		27	56	7					
		iz		28	02	4				-4	
		iE		28	07	7				+11	
		iN		28	07	7		+8			
589	" 31	eN		28	45	7					2920 26:3
		eLN		29.4		17					
		MN		31.0		15	6				
		MEZ		32.6		15			6	6	
		iPz	18	02	37	3				+2	
		iSE		07	05	7				-3	
589	" 31	eLNZ		08.7		21					Compression
		ME		10.0		13			1		
		MNZ		10.1		16	1			1	

Minor shocks: 2d 06.6h, 08.2h; 4d 22.0h; 8d 11.7h; 11d 09.4h; 14d 11.0h; 18d 08.5h; 22d 08.1h; 23d 17.0h; 28d 23.8h; 30d 08.6h; 31d 04.7h, 05.8h, 21.7h.

T.N.BURKE-GAFFNEY, S.J.
Director.

P.F.RHEINBERGER.

CORRECTION TO 1952 BULLETIN: 1952 May 9 No.225 for i(P)Z 18 14 06
read i(P)Z 14 14 06

