

RIVERVIEW COLLEGE OBSERVATORY

SEISMOLOGICAL BULLETIN

1956

JANUARY - DECEMBER .



RIVERVIEW, SYDNEY, AUSTRALIA

The symbol V after a phase indicates that the reading is from the Sprengnether; other readings are from the Galitzins.

Jeffrey's & Bullen's Tables (1948) are used.

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



## RIVERVIEW COLLEGE OBSERVATO

## Bulletins and Publications received January-December, 1957.

Adelie Land.....	1957	August, September.
Algiers.....	1954	January-August, 1956 August-December; 1957 Jan.-May P
Apia.....	1956	July-1957 September Preliminary.
Azores.....	1956	July-1957 June.
Barcelona.....	1954	
Beograd.....	1956	March-July, October-December, 1957 January-May.
Bermuda-C.....	1956	October-December.
Bratislava.....	1956	December-1957 October Preliminary.
Erebeuf (Montreal).....	1956	April-1957 June.
Brisbane.....	1956	December 19-1957 December 22 Provisional.
Bucarest.....	1956	August-1957 September Provisional.
Budapest.....	1955	Rapport Micro. 1956 January-July, Sept., Oct.
California (University).....	1954	January-1955 June.
Canada.....	1955, 1956.	
Charters Towers.....	1957	Sept.15-Dec.14 Provisional.
Cheb.....	1956	April-November, 1957 January-May Preliminary.
Chile.....	1956	July-1957 June.
Cleveland.....	1956	September, October.
Coimbra.....	1957	January, February.
De Bilt.....	1950.	1956 August-1957 July Preliminary.
Ebro.....	1956	October, December, 1957 January Provisional.
Fayetteville.....	1956	July-1957 June.
Fordham.....	1956	November, December.
Helwan.....	1948	
Hong Kong.....	1956	June-1957 February.
Hurbanovo.....	1956	May, June, December, 1957 January-June Preliminary.
India.....	1953	November-1954 February.
I.S.S. ....	1948	
Istanbul (Tech.Univ.).....	1956	June, July, 1957 January.
(Cine).....	1956	June, July, 1957 January.
J.M.A. ....	1956	April-1957 February.
Jerusalem.....	1956	August-1957 July.
J.S.A. ....	1956	*2 1-3, *3 1.4, *4 1-3, *5 1-4, *6 1-8, *7 1-7, *8 1-6 *9 1-6, *10 1-12, *11 1-6, *12 1-12; 1957 *1 1-11
Kalocsa.....	1956	January-October.
Kecskemet.....	1956	January-October.
Kew.....	1956	October-1957 September.
Kiruna.....	1955	
Kobenhavn.....	1955	
Ksara.....	1956	July-1957 August Provisional. Annales 1956 Jan.-Sept.
Kyoto (Abuyama).....	1956	
La Paz.....	1953	
La Plata.....	1952	
Lisboa.....	1956	September-1957 June.
Lwiro.....	1956	November-1957 August, October, November Preliminary.
Macquarie Island.....	1956	January-November. 1956 June-October, 1957 Jan.-Nov.Pr
Malaga.....	1956	January-1957 February.
Manila (Baguio).....	1956	November-1957 October.
Martinique.....	1957	May-November.
Melbourne.....	1956	June-1957 October Provisional.
Mizusawa.....	1948, 1954, 1955.	
Noumea.....	1956	August-1957 September Preliminary.
Osaka.....	1956	
Palisades.....	1956	
Pasadena.....	1955	September-December. Prelin.No.88,89. Local shocks 1956 July-1957 June. Provis.(by air) 1956 Dec.18- 1957 Dec.20.
Pennsylvania.....	1954, 1955.	
Perth.....	1956	October-1957 September.
Pittsburgh.....	1956	
Praha.....	1956	May-1957 June Preliminary.
Quetta.....	1956	July, October-December, 1957 January, February.
Rabaul.....	1956	December, 1957 February-December Provisional. Tremors reported 1956 November-1957 November.
Rathfarnham.....	1956	July-December.
Relizane.....	1956	August-December. 1957 January-May Preliminary.
Reykjavik.....	1956.	1957 July, August Preliminary.
Rome.....	1956	June-September, 1957 January-June.
Santa Clara.....	1956	July-1957 June.
Scoresby-Sund.....	1952	
Skalnate Pleso.....	1956	May, June, December, 1957 January-June Preliminary.
Sofia.....	1949-1953.	

Strasbourg B.C.I.S.....1956 June-1957 March 10.  
 I.P.G.....1956 October-1957 September.  
 Switzerland.....1955  
 Szeged.....1956 January-July.  
 Taiwan.....1956 January-June.  
 Tamanrasset.....1954 January-August, 1956 August-December. 1957 Jan.-May 1  
 Tananarive.....1956 January-September.  
 Timisoara.....1950 June-1955 December. 1956 January-June Provisional.  
 Toledo.....1956 September-1957 September. 1956 October-1957 July Pro  
 Tsukuba & Hongo.....1956 May-August, 1957 January-August.  
 U.S.C.G.S. ....1956 September-1957 June. Cards 1956 nos.102-107, 1957 1-1  
 Data sheets 1956 December 9-1957 December 16.  
 U.S.S.R. ....1955 April-December.  
 U.S.S.R. (Ukraine).....1954 January-December.  
 Vienna.....1956 August-1957 June.  
 Warsaw.....1950. 1956 September-1957 September.  
 Zagreb.....1955.

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 A.A.Day, M.N.Hill, A.S.Leighton & J.C.Swallow.  
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 Study of a series of Japanese Earthquakes. G.R.Lapwood.  
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No.

1956, January.

1

# 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 <sub>0</sub>	ε : l	$\frac{r}{T_0^2}$		T <sub>1</sub>	T	μ <sup>2</sup>	V <sub>s</sub>
						(Galv.)	(Pend)		
N	1				4	11.7	12.1	+0.02	560
	3	155	8.6	5.3					
E	1			0.023	4	12.3	12.2	+0.08	490
	3	151	8.5	5.2					
Z	2			0.014	4	10.9	10.6	+0.1	460
					5	1.6	1.6		

No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks
							A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>		
1	1956 Jan. 1	iPNZ	23	15	03	3	+7		-11	34°0	Dilatation h 0.03 H 23 08 39
		iE		15	05	3		+6			
		iN		16	16	3	+3				
		iPPNZ		16	23	3	+5		-7		
		iE		16	25	4		+5			
		iN		16	32	4	+6				
		i(sPP)NZ		17	17	4	+4		-5		
		iN		18	48	3	+5				
		iSN		20	11	4	+10				
		iN		21	56	5	+7				
		iN		22	21	4	+10				
		iE		22	27	4		+12			
		iN		22	36	4	+6				
		iSSE		22	39	5		-(14)			
		iSSZ		22	41	4			+8		
		i(SSS)N		23	17	4	+19		+10		
		iz		23	32	4			+10		
iN		23	38	3	+14						
iN		23	50	3	-14						
3	4	iPZ	14	21	31	3			+2	Compression Masked by micro- seisms.	
		i(S)N		26	13	4	-2				
4	5	eLE		30.3		18			-2	Compression. Masked by microseisms.	
		iE		33	05	4			+2		
5	8	(iP)Z	01	07	57	3			+2	Compression Compression	
		eLN		41.3		18					
		i(PKP)V	7	29	50	1					+
		e(PP)Z		31	22						
		eSKSE		36	59	5					
		eN		37	19						
		ePSE		40	54	16					
		eSSE		47	25	19					
		eN		50	39	12					
		eE		51	20	16					
		eLREZ	08	04.8		30					
		6	8	MZ		09.4		19			
ME				10.1		19			2		
MN				12.2		19	2				
iv	18			52	57	1½				+	
eZ				52	57						
		eE		57	27						
		eN		58	03						
		ME	19	02.1		14			1		
		MN		04.4		15	1				
		MZ		04.5		15				1	



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
			h	m	s		AN	AE	AZ		
7	1956 Jan. 8	ez	21	09	21		$\mu$	$\mu$	$\mu$	114°	Dilatation H 20 54 15
		iPPZ		13	55	4			-4		
		iz		14	07	4			-5		
		i(SKS)N		19	33	4	+2				
		iSKSN		19	43	5	+2				
		iN		20	02	5	-2				
		iSKKSN		20	50	5	-1				
		iNE		20	53	6	+3	-2			
		iN		21	12	5	-2				
		e(S)E		21	38	9					
		iN		21	42	5	+2				
		iN		21	59	5	-3				
		ePSN		23	28	12					
		iz		23	38	6			+4		
		iE		23	46	7		+4			
		iz		23	51	7			+9		
		eSSE		29	49	18					
		eN		30	29	13					
		eSSSN		34	05	18					
		eLQN		42.2		30					
eLRZ		47.4		30							
eLRE		47.6		27							
MEZ		56.4		18		3	4				
MN		57.7		17	3						
8	9	iPZ	12	10	49	3			-2	26:5	Dilatation h 0.08 H 12 05 53
		iNEZ		10	52	3	+2	+6	-13		
		iz		10	56	3			-11		
		i(pP)Z		12	16	3			-4		
		iN		13	37	4	+3				
		iSN		14	46	4	+6				
		iSE		14	47	4		+32			
		iN		14	52	5	+18				
		iE		14	54	8		+80			
		iE		15	33	4		+15			
		iE		15	55	3		+11			
		iScSN		20	32	4	+11				
		iScSE		20	33	4		+15			
		9	9	iPZ	12	13	38	4			
iPE				13	39	4		-12	31		
mNEZ				13	43	5	5	21	31		
iE				14	01	4		+15			
iz				14	03	3			+11		
iN				14	07	5	-15				
iE				14	12	4		+20			
iPPZ				14	44	4			-19		
iSN				17	51	5	+12				
iSE				17	53	5		-7			
mNE				17	58	6	23	14			
iN				18	11	6	+36				
iN				20	06	6	+15				
10	9	iPZ	12	20	29	3			+3	(27:5)	Compression Deep focus? Confused by nos. 8&9.
		iSE		24	45	7		-11			
11	10	iN		24	48	7	-13			29:5	H 08 52 40 Preliminaries super- imposed on waves of 20s period.
		ePEZ	08	58	48						
		iEZ		58	55	4		+7	-6		
		iEZ		59	24	6		-12	+18		
		iE		59	32	7		+16			
		iE		59	54	5		+21			
		iz	09	00	02	5			-14		
		iEZ		00	09	5		+	-22		
		iE		00	15	5		+32			
		iz		00	16	4			+13		
		iz		00	27	5			+8		
		iE		00	38	5		+19			
		iz		00	39	5			+20		
		iE		00	54	6		-11			
		iE		01	11	6		+18			

Continued on next page.



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
11 cont.	1956 Jan.10	iE	h	m	s	s	μ	μ	μ		
		iE	09	01	38	6		+38			
		iE		01	50	7		+27			
		iE		02	15	6		-12			
		iE		03	01	6		-17			
		iSE		03	42	11		+40			
		eNZ		03	50	27					
		iE		04	13	6		+11			
		iE		04	59	6		+42			
		eLE		05.4		30					
		iE		05	55	12		-48			
		MN		06.8		20					
		iMEZ		07	41	13		+130	+45		
MEZ		09.2		19		360	260+				
F		13.3									
12	10	(iP)V	09	33	33	1½					
16	11	iPZ	05	44	41	2					21°ca. Dilatation h 0.025 ca.
		iEZ		44	45	2		-1	+2		
		i(PP)Z		45	14	4			+2		
		iZ		45	43	4			+3		
		iSNE		48	18	4	+1	-2			
		iE		48	29	4		-2			
17	11	iE		49	43	4		+2			
		ePZ	06	21	12					68:7	H 06 10 05 Compression
		iPcPZ		21	37	3			+2		
		eSE		30	15						
		iPSE		30	39	5		+2			
		eE		34	18						
		eSSSE		37	48	18					
		eLRN		42.1		30					
MN		47.9		16	3						
18	11	MEZ		54.2		20	15	6			
		iPZ	06	49	42	2			+1		Compression.
19	11	i(pP)Z		50	32	3			+3		
		(iP)V	10	51	02	1½			+		Compression
20	11	eE		56	24						
		eLN		59.1		20					
		eLE		59.7							
		ME	11	01.9		16		4			
		MZ		02.3		16			2		
		MN		03.0		12	2				
		iPv	12	00	50	1			+		Compression
ipPv		01	13	1			+				
21	11	eLE		06.9		20			2		
		ME		10.6		11					
		eSNE	20	40	35						
22	11	eLRE		42.1		27			2		
		ME		44.5		16					
		MN		44.8		13	1				
		(iP)V	21	16	43	1½			+		Compression
		eSE		21	08						
23	12	eE		22	24	14					
		eLN		24.1		16					
		ME		26.7		11		3			
		MN		27.6		11	1				
		i(PP)V	02	27	20	1½					Dilatation
iv		27	24	1½			-				
25	12	eE		30	31				+		
		eLE		33.9							
		ME		38.5		16		1			
26	12	e(PP)EZ	06	08	30						
		iz		09	00	4			+2		
26	12	eLE		15.7		22					
		e(P)Z	06	13	35						
		eLE		25.1		22					
		ME		26.7		16		1			
		i(ScS)E		27	14	4		+3			
MN		27.6		12	1				Masked by coda of 25		



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
28	1956 Jan.12	(i)v e(S)NE i(SS)N eLE MNE	12	49	51	1½ 8 7 24 15					Masked by micro- seisms.
30	13	ev eLE	00	50	54		1	1			
31	13	in in ie eLE	02	33	07	4 4 4 19	+1 -1		+2		
33	✓ 13	i(S)N in i(PPS)N	03	51	27	7 5 5	-2 +3 +2				
34	✓ 13	iPEZ iz ieZ iz ie iz in ie eSN iz in ie iz in eLRE eLRN ME MNZ	06	19	47	4 4 4 4 4 4 4 6 4 6 6 5 6 21 19 13 13		+3 -5 +5 +5 +4	-2 +3 +6 -4 +5 -2 -5	15:4	Dilatation
35	13	ee eLE	12	23	53						
36	✓ 14	iz eSKKSN ee iScSN ee en ee in eSSE eSSSE eLQE eLRE MN ME	14	22	06	4 7 4 10 8 9 7 16 16 24 20 19 19			+2		Compression. Masked by microseisms.
39	14 15	(i)v e(PP)E ee eLRE MN ME	21 10	46 23	53	1½ 24 12 15				+	Compression
40	15	eeZ e(S)E eLRN ME MN	18 19	48 00	56		1 2	1 2			
41	16	(eP)Z i(S)N ee i(sS)N eNE eLE eLN ME MN	02	06	19	4 10 4 12 21 24 16 18	-1 -1			2	
							1				



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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
42	Jan.16	iPPEZ	23 58 10	4		-2	-5	121°ca Dilatation	
		iSKSE	24 03 33	7		+5			
		iN	03 37	6	+6				
		iSKKSE	04 56	7		+3			
		iSKKKSE	05 04	8		+16			
		iE	05 21	9		+12			
		iPSE	07 57	12		+10			
		iNZ	08 05	9	+6				
		iE	08 15	12		+23			
		iN	08 24	9	+7				
		iE	09 04	10		+12			
		eE	09 43	13					
		iSSE	14 41	10		+11			
		iSSN	14 44	7	+7				
		iSSPE	14 57	13		+13			
eLQN	28.3	33							
eLREZ	34.0	37							
MNEZ	37.6	20	19	57	27				
43	17	eSKSN	08 25 31						
		iSN	25 55	4	+1				
		eN	26 57	9					
		eSSN	32 45	15					
44	17	eLRE	46.6	24					
		ME	50.4	21		2			
		(eP)Z	19 05 24						
		iSN	09 37	4	-1				
		iN	09 43	4	-1				
		iE	09 46	4		+1			
45	18	iSSN	10 25	4	-1				
		cLE	11.8	24					
		MNE	14.0	15	1	1			
47	20	e(PS)N	08 35 50						
		eLRE	58.7	22					
49	21	(iP)Z	23 29 58	3		+4	Compression. Obscured by very large microseisms.		
		(i)Z	30 41	3		+5			
		(i)N	34 12	4	+3				
50	23	(iP)V	13 45 05	1		+	(90°8) Compression h 0.005 ca. H 03 47 27? P masked by micro- seisms.		
		(iP)V	04 00 24	1½		+			
		iSE	11 13	4		+3			
		iE	11 21	4		+3			
		isSE	11 44	5		+3			
		eLE	24.1						
		ME	34.0	20		1			
51	23	iPZ	07 44 04	3		+2	Compression. Compression. Obscure by microseisms.		
		(iP)V	08 11 54	2		+			
53	24	eLE	21.6	20					
		ME	23.6	16		1			
		e(S)E	08 58 27	10					
		iN	58 28	6	+3				
		iN	58 38	6	+3				
55	25	eLE	09 00.9	18					
		ME	02.5	13		1			
		(iP)V	10 53 38	1½			+		
		(iPP)V	54 44	1½			+		
		i(S)E	58 44	4		+2			
		iE	59 33	4		+2			
		eLREZ	11 01.7	27					
56	26	MEZ	05.2	16		6	4		
		MN	06.0	13		3			
		i(P)Z	10 31 47	3			+2		
		eLE	42.7	20					
57	26	MNE	46.4	14	1	1			
		iPZ	15 42 36	3			+3		
		e(S)E	49 44	6					
		iSN	49 48	5	+3				
		eSSE	53 17	13					
		eE	54 49	12					
eLRE	56.8	15							



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
58	1956 Jan.27	e(Pg)V	13	22	56	<1/2					Small local shock. *From Mainka.
		i(Sg)N		23	30	1/2	-1/2*				
		iNE		23	37	1	-2*	-2*			
59	✓ 27	iPZ	13	44	51	3			+3	29:6	Compression H 13 38 42
		iZ		45	27	3			-3		
		iPPZ		45	49	4			+2		
		eE		45	50	10					
		iE		46	09	4		+3			
		iE		46	20	4		+4			
		iZ		46	42	5			-4		
		iE		46	50	4		+5			
		iZ		47	00	4			+4		
		iZ		47	39	4			-4		
		iZ		48	03	4			-4		
		iN		48	31	4	-2				
		iE		49	07	4		+3			
		iSE		49	46	6		+4			
		eLN		51.6		19					
		iN		51	54	5	-6				
		MEZ		56.7		16		21	13		
		MN		57.0		12	19				
		MZ		59.0		15			17		
60	27	i(P)Z	14	15	45	4			+9		
61	✓ 28	iPZ	07	48	48	3			+5		
		iZ		49	06	3			+4		
		iZ		50	33	4			+5		
		iZ		51	01	4			-5		
		iN		51	50	4	-3				
		e(S)E		53	44	6					
		iE		53	56	5		+5			
		iN		54	19	4	+5				
		iNE		54	30	5	+4	+7			
		iE		54	40	6		+9			
		iN		54	53	4	+6				
		iE		54	59	6		+6			
		iN		55	06	5	+7				
		eLE		55.8		32					
		iZ		56	49	4			+7		
		MNE	08	00.7		13	17	52			
		MZ		01.9		15			17		
62	28	iE	21	24	25	4		+4			
		iE		24	35	4		+6			
		iN		24	42	5	-4				
		eLN		27.0		18					
		ME		28.5		15		2			
		MN		29.3		12	1				
65	29	iZ	22	32	03	3			-2		Masked by microseisms
		iZ		32	30	3			+4		
		eLE		51.8		?					
66	✓ 30	ePEZ	08	47	57					23:5	h 0.00 H 08 42 49 Compression
		iN		47	58	4	+2				
		iEZ		48	02	5		+17	-13		
		iPPZ		48	06	3			+23		
		iE		48	19	9		+35			
		iZ		48	23	3			+11		
		iN		48	27	4	+7				
		iPPZ		48	30	5			-18		
		iE		48	37	5		+17			
		iN		48	38	4	-8				
		iPPPZ		48	40	4			+20		
		iZ		49	48	4			-7		
		iSE		52	05	9		+57			
		iSN		52	06	7	+11				
		iNZ		52	11	9	-67		-31		
		i(sS)E		52	17	10		+115			
		iZ		52	50	6			+26		
		iSSN		52	55	10	+44				
		eLE		53.0		22					

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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
66 cont.	1956 Jan.30	iSSSN	08 53 09	7	-32	μ	μ		
		iN	53 26	8	-33				
		eLZ	53.5	24					
		iE	53 40	8		+58			
		iz	53 43	6			+26		
		eLN	53.8	21					
		iMN	54 18	13	+90				
		iME	54 28	12		-43			
		MEZ	55.2	16			110	56	
		MN	55.7	13		95ca			
		iME	56 49	11			+47		
		iMN	56 55	11		-80			
		MN	57.3	13		120ca			
		69	30	(iP)Z	19 13 59	2			+1
iN	17 38			4	+2				Obscured by micro-
iE	18 14			6		+3			seisms.
iN	18 33			4	-1				
i(ScS)E	24 12			4		+3			
70 71	31	iPv	00 44 11	1			-		Dilatation
	31	iPZ	09 22 52	2			-2	30:3	Dilatation
		iz	23 56	3			-3		h 0.06
		ipPv	24 07	1½			-		H 09 17 15
		iNZ	24 12	4	+9		-9		
		iPPNZ	24 16	4	-8		+10		
		isPZ	24 56	4			+4		
		iN	26 42	6	+4				
		iSNEZ	27 22	4	+4	-2	-4		
		iN	27 33	4	+7				
		iE	27 48	5		-2			
		iN	28 14	4	+3				
		iN	28 59	4	+2				
		isSN	29 35	4	+3				
		eE	29.6	12					
		iN	29 51	6	+6				
		iSSEZ	29 54	9		-19	+6		
		iz	30 00	4			-5		
		iN	30 09	6	+7				
		iE	30 12	4		-7			
		iE	30 32	4		+7			
		iz	30 35	4			+5		
		iE	30 53	5		-5			
		iz	30 58	4			-4		
		iN	31 08	4	+9				
		iE	31 16	5		+10			
		iN	31 18	6	+9				
		iz	31 25	5			+13		
		iE	32 07	7		+7			
		iN	32 31	5	-10				
		iN	32 47	5	-9				
		iE	32 51	5		+19			
Minor activity: 3d 16.4h; 10d 15.4h, 21.5h, 22.1h; 12d 04.7h, 12.3h, 22.6h; 13d 03									
14d 22.4h; 15d 01.6h; 19d 18.3h; 21d 12.6h; 25d 07.7h; 29d 09.5h, 19.1h; 30d 10.2, 12.									
72	Feb. 1	iPZ	01 37 47	3			-2	21:9	Dilatation
		iPN	37 48	3	+2				h 0.005 ca.
		iz	37 53	3			-5		H 01 32 58
		iE	37 55	7		+5			
		iz	38 00	4			+6		
		i(pP)Z	38 04	4			-8		
		iE	38 05	4		+8			
		iN	38 06	4	+4				
		i(sP)NZ	38 13	5	+4		-5		
		iE	38 25	5		-8			
		iN	38 27	6	+4				
		iz	38 39	4			+7		
		iSN	41 40	8	-5				
		iSE	41 42	5		-10			
i(PcP)E	41 49	5		+17					

(Continued on next page)



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
							AN	AE	AZ		
72 cont.	1956 Feb. 1	iz	h	m	s	s	$\mu$	$\mu$	$\mu$		
		isSN	01	41	50	5			-7		
		isSE	42	01		5	-6				
		iz	42	02		5		-16			
		iz	42	05		4			-6		
		in	42	30		7	+5				
		eLEZ	43.	0		23					
		ME	44.	4		20		11			
73	1	iScSN	49	01		4	-3				
73	1	(iP)V	08	33	00	1 $\frac{1}{2}$			+		Compression
		iv	33	54		1 $\frac{1}{2}$			+		Masked by microseisms
74	1	iz	34	08		4			+3		
		iPZ	13	50	30	3			-4	52:5	Dilatation
74	1	inZ	50	35		3	-6		+4		h 0.05
		in	51	10		4	+3				H 13 41 50
		iv	51	35		1			+		
		iPcPZ	51	39		3			+4		
		ipPNZ	51	46		4	+4		-9		
		in	51	52		4	+3				
		in	52	19		4	+3				
		iz	52	27		4			-4		
		iz	52	35		4			-4		
		iv	52	41		1 $\frac{1}{2}$			-		
		iz	52	53		4			-5		
		in	53	03		4	-4				
		iz	53	09		3			+4		
		iz	54	39		5			-3		
		isN	57	23		5	+10				
		iz	57	32		6			-8		
		ine	57	33		6	-17	-12			
		ie	57	40		6		+10			
		in	57	43		6	-8				
		isSE	59	43		7		-19			
		in	14	01	08	4	+5				
		iz	01	53		4			-5		
		ie	02	23		5		-6			
		iz	02	37		4			+4		
		ie	02	47		6		+11			
		in	03	02		6	-4				
		iz	03	07		5			-5		
eLE	05.	5		30							
ie	06	34		7		+13					
in	07	20		7	+8						
ie	08	16		8		-11					
ie	08	29		9		-18					
iz	09	12		5			+7				
MN	11.	0		15	6						
MEZ	11.	2		18		15	8				
ine	12	06		8	-10	+12					
in	13	02		7	+5						
in	14	47		7	+10						
75	2	iPv	20	40	45	1			+	0:2	Compression
76	3	iPgv	01	53	54	1 $\frac{1}{4}$			-		Dilatation
81	9	iSgv	58	57		1 $\frac{1}{2}$			-		H 01 53 50
		i(P)V	06	45	29	1			+		Compression
82	9	iPv	14	47	04	1 $\frac{1}{2}$			+		Compression
82	9	i(S)E	58	59		5		+3			
		eE	15	01	16	12					
		eN	01	56		12					
		eE	02	10		22					
		e(SS)N	07	17		24					
		e(SS)E	07	23		15					
		eLRE	22.	6		33					
		eLZ	23.	0		33					
		LE	23.	7		31		34			
		MNEZ	31.	1		19	6	10	13		
		eW2Z	16	47.	6	22					



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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
83	1956 Feb.10	(iP)V	h m s 18 49 24	s 1½	μ	μ	μ		Compression Masked by large microseisms.
		(i)Z	51 34	3			+		
		(i)Z	52 24	3			-3		
		(iS)N	56 49	5	-4		+6		
85	12	iPNZ	11 59 39	5	+5		-7	59:1	Dilatation h 0.00 H 11 49 40  TN=7s, TE=4s, TZ=6s
		ipPNEZ	59 49	5	+6	-3	-11		
		iN	12 00 06	4	-4				
		iE	00 08	4		+4			
		ePcPz	00 28						
		iE	01 11	6		-3			
		iZ	02 41	5			+7		
		iZ	02 58	4			-5		
		iZ	03 23	4			+7		
		iSN	07 42	7	+4				
		iN	07 50	7	+13				
		iE	07 51	6		-3			
		iPSZ	07 59	6			+9		
		iPTSNEZ	08 10		-13	-3	+11		
		i(ScS)E	09 27	4		-5			
		iNE	09 39	6	-8	+11			
		iN	10 51	5	+6				
		iE	11 01	4		+5			
		iN	11 10	6	+6				
		iE	11 17	6		-5			
		iN	11 19	7	+6				
		eSSE	11 42	10					
		iN	11 45	7	-6				
		iE	11 57	6		+7			
		iE	12 35	6		+7			
		iSSSN	14 07	4	+6				
		eLE	15.7	25					
		iE	16 42	5		+6			
		iN	16 52	7	+8				
		ME	20.7	20		8			
86	12	i(P)Z	12 19 15	4			+7		Compression. Masked by coda of 8
		iN	24 39	5	+11				
87	13	iZ	14 31 20	4			+3		Compression
		iZ	31 51	3			-3		
		iN	38 48	4	-2				
		eN	39 16	7					
		e(SS)E	43 20	10					
		eLE	49.1						
		iE	52 38	3		-2			
88	14	iPz	01 04 16	3			-2		Dilatation
		e(S)E	13 23						
89	14	iZ	12 44 55	3			+2		Compression, Masked by microseisms.
		iZ	45 50	4			+2		
		e(S)N	52 20						
		e(PS)N	52 35						
		eE	55 20	10					
		eLE	13 02.8	22					
		ME	06.7	20		1			
		MZ	10.0	15					
		MN	12.4	16	1		1		
90	14	e(PS)E	19 02 16						
		e(SS)E	08.2	16					
		eLRE	24.4	30					
91	15	eE	01 49 20						
		eE	55 32	16					
		eLRE	02 11.5	30					
93	15	ez	20 49 21						
		eSE	59 38	5					
		ePPSE	21 01 09	7					
		e(SS)E	05 50	16					
		eLE	17.9	27					
		ME	26.7	25		2			
94	16	iPz	00 27 29	2			+1		Compression h 0.01 ca.
		ipPz	27 54	3			+2		



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
			h	m	s		AN	AE	AZ		
96	1956 Feb.17	(iP)Z	10	07	42	4	$\mu$	$\mu$	$\mu$		Compression. Masked by microseisms.
		iN		07	51	4	+1				
		e(PP)Z		12	00	9					
		e(SKS)N		18	17	12					
		e(S)E		18	54	10					
		iE		19	05	5		+4			
		iE		19	17	5		+2			
		e(SS)E		25	15	12					
		e(SS)E		25	45	12					
		e(SSS)E		29	23	16					
		eE		33	23	21					
		eLE		36.8		?					
		eLRE		37.8		40					
		ME		47.4		22			4		
97	18	MNZ		49.5		18	3		6		64°9 Dilatation h 0.07, H 07 34 24  Gutenberg Tables give: $\Delta$ 65°, h 450 km.ca., H 07 34 24
		iPNZ	07	44	17	3	+13		-36		
		iE		44	23	3		+4			
		iPcPZ		44	46	4				-14	
		iN		44	57	4		-15			
		iNE		45	08	4		+5	+7		
		iN		45	28	4		-7			
		iZ		45	41	4				-10	
		ipPZ		45	57	6				+22	
		ipPN		45	58	4		-13			
		iE		46	15	3			+9		
		ipPcPZ		46	35	4				-10	
		isPZ		46	45	4				+17	
		iPPNZ		46	50	7		+22		-34	
		i(pPP)N		47	57	4		+9			
		iPPPNZ		48	30	4		+9		-12	
		iSNEZ		52	20	6		+120	+72	+30	
		iNE		52	30	6		+66	+52		
		iNZ		52	41	6		-87		+66	
		iE		52	42	7			+29		
		iE		53	08	5			+14		
		iZ		53	15	5				+21	
		i(ScS)E		53	25	4			+12		
		iNZ		53	28	5		-25		+20	
		iE		53	29	6			+62		
		iEZ		53	57	4			-13	+13	
		iN		54	10	4		+11			
		iN		54	50	4		-24			
		iN		54	59	6		-29			
		iN		55	09	6		+33			
		isSNEZ		55	18	6		-27	-33	+25	
		ME		55	25	9			51		
		iN		55	39	6		-39			
		iE		55	43	5			+13		
iZ		56	03	4				-19			
iE		56	07	5			-28				
iN		56	14	4		+26					
iSSN		56	42	9		-44					
iSSE		56	47	7			+42				
iN		57	24	6		-21					
iN		57	42	6		-45					
iE		59	37	7			-27				
iE		59	49	7			-49				
iN		08	00	05	7	+32					
iN			00	21	7	+40					
iN			00	40	7	+24					
iE			01	07	6		+32				
iN			01	08	7	-31					
iE			02	55	8		-41				
iN			02	56	8	+11					
iN			03	21	7	+37					
iE			04	10	9		+74				
i(P'P')Z			13	05	5			-24			

1956, February-March.  
 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		
98	1956 Feb. 19	e(SSS)E	02 56 37						Masked by very large microseisms.
		eLRE	03 09.0	27					
		ME	16.8	21		5			
100	21	(iP)Z	03 06 05	2			+4		Masked by microseis Masked by large microseisms.
101	21	(iP)V	20 38 15	1½			+		
		iz	40 54	3			+2		
		i(S)N	42 22	4	-1				
		i(ScS)NE	47 44	4	-1	+2			
102	22	ez	10 12 10						Masked by microseis
		e(S)E	22 09						
		iE	22 26	4		+2			
		eE	23 23						
		eE	26 11						
		eLE	39.1	24					
103	24	iPE	09 24 09	5		-4		25°0	Dilatation h 0.00 H 09 18 47
		iPZ	24 11	5			-12		
		ipPEZ	24 19	5		-4	-5		
		iE	24 27	6		-7			
		iz	24 34	5			+13		
		iE	24 35	5		-7			
		ipPEZ	24 45	5		-8	+12		
		iN	24 48	4	-4				
		iE	24 59	6		+11			
		iz	25 08	4			-2		
		iz	25 29	6			+8		
		iSNE	28 28	6	-3	+7			
		isSE	28 44	7		+6			
		iN	28 55	6	+5				
		iE	28 56	7		-8			
		iz	29 00	6			+9		
		iN	29 05	6	+7				
		iE	29 15	7		+7			
		iSSE	29 23	8		-8			
		iN	29 33	6	+6				
		iSSSNE	29 43	7	+7	-2			
		eLZ	30.4	25					
		eLRE	30.5	27					
		iN	30 50	5	+6				
		MN	32.5	17	13				
		MEZ	33.0	17		15	16		
		iScSE	35 03	6		+9			
104	29	(iP)Z	21 03 16	4			+6		Masked by large microseisms.
		iE	08 06	5		+6			
Minor activity: 5d 05.3h, 16.7h, 20.9h; 7d 07.8h; 11d 22.8h; 15d 10.1h; 16d 13.8h; 20d 21.7h.									
105	Mar. 3	iPZ	00 12 39	3			+2		Compression
		eE	12 41						
		iE	13 53	6		+3			
		ipPPZ	14 08	5			+6		
		iNE	14 11	5	+5	+10			
		ipPPZ	14 25	4			+14		
		iE	14 26	4		-10			
		iN	14 35	4	-3				
		iz	14 53	4			+7		
		e(S)E	18 21						
		eLN	21.2	25					
		eLZ	22.8	23					
		eLRE	22.9	27					
		i(ScS)N	23 01	5	+7				
		MEZ	25.4	17		5	3		
		MN	26.5	13	4				
106	3	iPZ	10 25 41	4			+5		Compression
		ipPv	25 54	1½			+		
		isPZ	26 00	4			-5		
107	6	i(PKP)V	09 14 20	1½			+		Compression Galitzin record los



1956, March.  
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		
108	1956 Mar. 7	iPZ	12	19	58	3			+1	32:5	Compression h 0.01 ca. H 12 13 35
		iz		20	08	4			+2		
		iz		20	12	5			+4		
		i(PP)Z		21	04	4			+2		
		iSE		25	05	5			-3		
		iN		25	17	5	+3				
		iE		25	18	5		+3			
		isSE		25	39	5		-4			
		iE		27	10	6		+4			
		iN		27	55	4	+5				
		iE		28	05	6		-5			
		iE		28	25	7		+4			
		iScSN		30	15	3	+3				
109	8	(iP)Z	08	11	21	3			+4	Compression. Masked by large microseisms.	
		iSN		15	40	5	-4				
		iE		15	58	4		+5			
		i(ScS)N		22	16	3	+4				
110	10	(iP)Z	03	49	20	4			+5	Compression. Masked by large microseisms.	
		(i)Z		49	42	3			+3		
		(iPP)Z		50	41	4			+5		
111	10	eLN	04	01.	3					Masked by large microseisms.	
		(i)Z	19	39	52	4			+6		
		iz		40	29	3			+3		
		e(S)E		45	10						
		eLN		47.	3	19					
		iN		49	53	5	+9				
		iN		50	09	5	+10				
112	10	MEZ		50.	4	18		8	5	42:4	Compression H 21 36 57 Large microseisms present.
		iPZ	21	44	55	3			+9		
		iPPV		46	37	1½			-		
		iz		46	40	3			+5		
		iSE		51	17	3		+4			
		iz		54	34	3			+5		
		iNE		54	39	4	+5	+5			
113	12	i(P)Z	11	32	15	3			+3	Masked by microseisms	
		e(S)E	20	03	19	13					
114	12	eLE		07.	7	24					
		ME		12.	7	18		3			
115	13	(iPKP)Z	13	32	09	2			-1	Dilatation. Micro- seisms present.	
		iz		36	01	2			+1		
		e(PPP)N		36	29	7					
		e(SKKS)E		40	55	7					
		eE		44	24	10					
		eT		46	51	15					
		e(SS)E		50	37	15					
		eLRE	14	12.	1	30					
116	13	(iP)V	23	38	--	1½			+		
		eLE		46.	7	20					
		iE		49	03	4		+3			
		ME		49.	8	12		2			
118	14	i(P)Z	11	12	03	2			+1	Compression. Waves very small & indefinite.	
		e(PP)Z		14	46	4					
		e(S)E		21	23	7					
		e(S)N		21	25	6					
120	14	iPZ	15	43	38	3			+3	21:7	Compression H 15 38 44
		iPPEZ		44	02	4		+3	-2		
		eSE		47	34	8					
		eSSE		48	14	10					
		MNEZ		52.	9	11	3	3	2		
121	14	i(P)Z	15	48	15	4			+3	Compression. Confused by preced- ing shock.	
		iEZ		48	26	6		+4	-3		
		iz		48	42	3			-4		
		iE		48	43	4		+6			
		iN		48	48	3	-1				
		iz		49	28	3			+4		
		iE		52	43	6		+9			
		eLZ		54.	1	16					
		MNEZ		57.	6	12	6	8	2		





1956, March.  
RIVERVIEW COLLEGE OBSERVATORY.  
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>		
122	1956 Mar.14	i(P)Z	h	m	s	s	μ	μ	μ		Compression Masked by coda of No.121.
		iz	16	18	52	3			+2		
		iz		19	05	3			-3		
		iz		19	15	4			-4		
		iE		19	16	4			+4		
		iE		20	00	4			-3		
		e(S)E		22	50	7					
		iE		22	56	5			-3		
		iz		23	19	4			+4		
		iNE		23	21	7	+3	+5			
		eLE		24.5		19					
		MNE		27.9		12	4	5			
125	16	iN		28	05	7	+12			21:5	Compression H 08 40 39 Large microseisms present.
		iPZ	08	45	31	2			+3		
		ePPZ		45	56	2					
		iSE		49	35	4			-4		
		eSSE		50	02	5					
		eSSSN		50	17	6					
		eLNE		52.3		18					
		MNE		54.9		12	2	3			
		i(ScS)E		57	08	3			+4		
		iz		13	35	10	3		+3		
127	16	i(S)E		38	52	4			+5		Masked by large microseisms.
		eLE		41.0		19					
128	17	iPZ	20	00	16	2			+5	25:0	Compression H 19 54 49
		iz		00	19	2			-5		
		iz		01	08	3			-3		
		iSE		04	38	4			+5		
		iE		04	44	4			-5		
		iN		04	45	4	+6				
		eLQE		05.2		22					
		iSSE		05	38	4			+5		
		iE		05	48	4			-5		
		iN		06	01	4	+3				
		eLE		07.0		22					
		MNEZ		09.5		12	6	17	6		
129	17	iPv	23	47	03	1½			+	24:2	Compression H 23 41 44
		iv		47	09	2			+		
		iSN		51	19	4	+4				
		iE		51	30	4			-3		
		iN		51	32	5	+4				
		iE		51	52	4			+3		
		eN		52	05	?					
		iE		52	56	5			-8		
		eLE		53.8		21					
		MNE		56.1		13	7	13			
130 131	18 19	(iP)V	08	28	38	1½			+	26:9	Large microseisms Dilatation Multiple Shock?
		ePZ	17	41	54						
		iz		42	01	3			-4		
		iNZ		42	05	3	-3		+7		
		iNZ		42	10	3	-4		+7		
		i(PP)NZ		42	39	4	-3		+5		
		i(PPP)NZ		42	50	4	+6		-5		
		iz		44	46	3			+7		
		iSE		46	30	5			-4		
		iN		46	41	4	+7				
		iN		46	55	5	-9				
		iE		47	04	4		+10			
iN		47	05	4	+7						
iN		47	35	4	+5						
i(SS)N		47	42	5	+8						
iE		48	03	4			+7				
iE		48	21	5			-11				
iN		48	22	4	+11						
iE		49	01	4		+14					
iN		49	02	4	-6						
iz		49	08	3			+7				
iz		49	23	4			-5				
iE		49	31	4			+14				

+14 (continued on next page.)



1956, March.  
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		
31 cont.	1956 Mar.19	eLE	17	51.0		20					
		eLZ		51.2		22					
		iN		51	55		4	+5			
		ME		53.2			12		14		
		MNZ		59.9			12	7		10	
32	20	iSN	09	52	23	4	+3				Masked by microseisms
		i(sS)N		52	42	4	-3				
		iE		53	08	4			+3		
		iE		53	25	5			+3		
		iE		53	43	4			+3		
		iN		54	43	4	+3				
		iE		54	48	4			+3		
		eLE		55.7			23				
		MNEZ		58.3			19	4	5	5	
		iE	10	00	13	4			+3		
		iE		04	19	4			+4		
		iE		05	34	4			-3		
		33	20	iz		05	37	4			
i(P)Z	20			23	07	4				+4	
i(S)E				27	26	4			+3		
eLN				28.4			16				
MN				30.8			12	2			
ME				32.2			16		1		
(i)N	21			16	37	01	4	-3			
34	21	(iP)Z	17	49	03	4				+5	Compression. Masked by microseisms.
		i(P)Z	18	01	16	4				+4	
		iz		01	30	4				+3	
		iE		01	36	4			-3		
		iN		01	43	4	+3				
		e(S)E		04	13	9					
		eLNE		04.6			15				
		ME		05.0			13		5		
		iN		05	34	4	+4				
		MN		05.8			11	1			
		iE		12	04	4			+3		
		iN		12	10	4	+4				
		35	21	(i)Z	18	47	05	3			
i(S)E				51	38	5			+3		
eLE				55.0			13				
36	22	(iP)Z	06	49	06	4				+2	
		iz		54	43	4					
		eE	07	00	59	6					
		e(PS)E		03	59	?					
37	22	i(sPS)NE		04	32	6				-3	Microseisms present.
		i(P)Z	15	44	11	4				+4	
		i(PP)Z		47	57	4				-3	
		e(S)E		55	20	7					
		eN	16	03	14	10					
38	23	eLRE		12.1						27	Masked by microseisms
		MNE		17.8				2	2		
		(eP)Z	05	16	50						
		iz		16	58	4				+2	
		i(PP)Z		17	41	4				+2	
		e(S)N		21	29						
		iNE		21	36	5	+3		+2		
		iN		21	58	4	-1				
		iN		22	12	4	-1				
		eE		22	42						
		iN		23	16	4	+3				
		iN		23	40	4	+2				
		iN		24	02	4	-3				
		iE		24	03	4			+3		
		iE		24	18	5			+8		
		iE		24	59	4			+4		
		eLE		25.4			21				
MZ		26.8			21			5			
MN		27.9			19	4					
ME		28.0			13		5				
iN		28	22	4		-4					



1956, March-April.  
RIVERVIEW COLLEGE OBSERVATORY.



From the ISC collection scanned by SISMOS

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
141	1956 Mar.27	iPv	h	m	s	s	μ	μ	μ	39:6 Compression H 16 51 37	
		iSN	16	59	12	1½			+		
		iz	17	05	16	4	+2				
		i(ScS)N		06	09	4			+3		
		iN		09	15	4	+2				
		iE		09	29	4	+2				
		iE		09	51	4		-2			
		iN		10	01	4	-2				
		eLE		10.6		17					
		iN		10	52	4	+1				
		iE		11	28	4		+3			
		iE		12	03	4		-3			
		iN		12	25	6	+4				
		iE		12	42	4		-2			
		MZ		12.8		13			1		
		iE		13	03	5		-3			
		iN		13	45	6	+5				
		iE		14	56	6		+5			
144	30	(iP)V	22	21	52	1½				Masked by microseis	
Minor activity: 14d 10.0h;15d 15.5h,18.2h;16d 11.4h;23d 15.3h,20.3h;28d 08.5h;30											
145	Apr. 1	iNZ	11	05	49	4	-2		-2		
		eN		11	22						
		eLNEZ		19.7		24					
146	2	iPZ	11	00	22	3			+2	62:5 Compression H 10 49 54 Large microseisms present.	
		eSE		08	49						
		iN		08	52	4	-6				
		iE		08	54	4		-2			
		iN		09	02	5	+5				
		iPSE		09	05	4		+5			
		iPPSE		09	13	4		+5			
		iScSN		10	12	4	+4				
		iN		10	31	4	-4				
		eLN		20.5		24					
		eLE		25.1		27					
		MN		25.4		24	5				
		ME		27.1		25		10			
	2	(iP)Z	14	34	11	4			-5	Dilatation	
147	6	iz	07	28	04	3			+3	Masked by microseis	
		e(SS)N		43	58	12					
		iE		44	23	4		+3			
148	6	(iP)V	16	32	59	1½			+	Compression. Masked by microseisms.	
		eLE		39.2		13					
149	7	(i)V	04	43	26	1½				Masked by microseis	
		iz		43	54	4			+3		
150	7	iPv	18	05	48	1			+	Compression	
		(S)NE		09	38	6					
151	7	iPZ	18	09	37	3			+4	22:3 Compression H 18 04 37	
		iz		09	41	3			-5		
		iE		09	42	7		+11			
		iz		09	44	3			-5		
		iNEZ		09	50	5	-3	+10	-6		
		iv		09	59	1½			-		
		iPPV		10	04	1½			-		
		iz		10	07	3			+3		
		iE		10	09	6		+7			
		iv		10	11	1½			+		
		iz		10	13	3			+5		
		iv		10	21	1½			+		
		iz		10	24	4			-5		
		iz		10	32	4			-5		
		iE		10	35	6		-4			
		iz		10	38	4			-5		
		iE		11	02	6		-3			
		iE		11	58	4		+3			
		eSE		13	38	10					
		iN		13	47	6	+7				
		iz		13	52	5			+16		
		iN		14	01	4	+6				
		iEZ		14	02			-9	+8		
		eLZ		14.9		23					

(Continued on next page)  $T_E=7s, T_Z=4s.$



No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			$\Delta$	Remarks
					AN	AE	AZ		
151 cont.	Apr. 7	iE	18 14 56	6		+8			
		iN	15 12	6	-5				
		eLE	15.5	24					
		iN	15 56	5	+10				
		iN	16 30	7	+16				
		MNEZ	18.8	12	29	22	6		
		iZ	33 58	4			-3		
		iN	37 54	4	+4				
153	8	iv	07 56 55	1½			+		
		iv	57 50	1½			+		
		e(S)E	59 34						
		iN	08 01 55	4	+2				
		eLN	02.5	20					
154	8	MN	04.3	15	2				
		iN	10 46 00	5	+3				
		eLN	46.6	20					
155	10	MN	13 48 26	15	3				
		iPV	25 27	3			+	55:7ca	
		iPZ	25 27	3			+2	Compression	
		iPE	25 28	3		+2		h 0.02 ca.,	
		ipPV	26 01	1½			+	H 13 16 04	
		iZ	26 09	3			+4		
		iE	26 11	5		-3			
		i(P2)Z	26 13	4			+16	Possibly 2 shocks.	
		i(PcP)Z	26 29	4			-4	(2nd shock: $\Delta 58^{\circ}8$ ,	
		iZ	27 16	4			+5	h 0.09, H 13 17 10)	
		iPPV	27 35	1½			+		
		i(pP2)NZ	28 14	6	+4		-8		
		i(pP2)E	28 15	6		-6			
		iPPPZ	28 50	4			+3		
		iZ	29 01	4			-3		
		i(sP2)Z	29 18	5			-4		
		iSE	32 58	6		+7			
		iN	33 03	4	+5				
		iZ	33 07	4			-5		
		i(S2)E	33 33	6		+8			
		iE	33 49	6		+9			
		iN	33 58	5	+8				
		isSEZ	34 01	5		+5	-5		
iE	36 04	5		-3					
isSE	36 43	5		+4					
i(sS2)E	36 53	7		+7					
158	12	iPZ	05 05 29	2			-1	26:1 Dilatation	
		iSE	09 59	4		+2			
		iSN	10 00	4	+1				
		eN	10 52	9					
		iSSSE	11 21	4		+2			
		eLE	12.6	16					
		ME	16.8	16			1		
		MNZ	19.1	15	1		1		
		iPV	10 56 15	1			+	Compression	
		ePV	11 13 20						
159 160 161	16 18 20	iPZ	15 22 29	2			-2	33:7 Dilatation	
		ipPV	23 02	1½			-	h 0.02,	
		isPV	23 24	1½			+	H 15 16 01	
		iv	23 41	1			+		
		iv	23 44	1½			+		
		iPPV	23 47	1½			-		
		iPPPZ	24 08	3			-3		
		iSE	27 39	4		+7			
		eE	28 29	9					
		isSE	28 39	6		+6			
		iE	29 47	4		-3			
		iZ	29 54	4			+8		
		iZ	30 08	4			+8		
		iE	30 14	3		+7			
		iZ	30 34	4			+7		
		iN	31 09	4	+17				
		iE	31 11	3		+8			
		iEZ	31 16	3		+11	+6		

(Continued on next page)



1956, April.  
RIVERVIEW COLLEGE OBSERVATORY.  
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
161 cont.	1956 Apr. 20	iNZ	h	m	s	s	μ	μ	μ		
		iE	15	31	36	3	+11		+12		
		MNEZ		32	48	4		+18			
162	20	(i)Z	16	48	02	3	15	14	10		Masked by microseisms
		i(P)Z		49	12	4			+4		
		iv		49	18	1½			-		
		i(PPP)V		53	57	2			+		
163	21	(iP)Z	00	09	13	5			+5		Masked by microseisms
164	22	(iP)V	03	53	17	1			+		
		(iS)N		57	18	4	+3				
165	22	ePZ	04	46	48					27:6	H 04 40 57
		iZ		46	54	5			-2		
		iN		47	29	4	-1				
		iZ		47	31	4			-2		
		iZ		47	43	4			+2		
		iN		49	15	4	-2				
		iSN		51	29	5	-3				
		iN		51	39	4	+3				
		eN		51	52	18					
		iEZ		51	55	6		+4	-5		
		eZ		51	58	18					
		iE		54	06	7		+7			
		eLZ		55.6		32					
		ME		57.7		17		4			
		MZ		58.2		17					
		MN		58.3		17	6				
166	22	(eP)Z	17	35	28					(97:1)	
		iSE		46	49	5		-2			
		iN		47	05	4	+1				
167	23	eLZ	18	07.4		21					
		iPv	03	43	36	1½			+	76:5	Compression
		iPcPv		43	50	1½			+		1 42
		eSN		53	21						
		eE		53	31						
		e(SS)N		58	00						
		eLQE	04	03.7		18					
		eLRZ		07.7		22					
		MNZ		13.5		20	2				
168	23	(P)Z	08	41	41	2					
		MZ	09	20.3		20					
		MN		20.9		19	3				
169	25	iPZ	08	35	43	3					
		iZ		35	49	3					
		ePPZ		36	30						
		iZ		38	20	6					
		i(PcP)Z		38	59	5					
		iSN		40	23	7	+3				
		iE		40	29	5			-2		
		iE		40	37	6			-6		
		iE		40	59	6			+5		
		iN		41	32	5	-3				
		iE		41	37	6			+4		
		eLE		42.9		30					
		eLZ		43.1		25					
		MEZ		44.5		18					
		MN		47.6		10	8	5	10		
170	26	eZ	07	47	56						
		eZ		50	19						
		i(PcP)Z		50	54	4			+8		Obscured by very large microseisms.
		e(S)E		52	14	7					
		i(SS)N		53	24	4	+6				
		MZ		56.3		17					
		ME		58.4		15		3	8		
		MN		59.5		12	5				
171	26	(iP)V	11	49	40	1½			+		Masked by large microseisms.

2 Shows



1956, April-May.  
RIVERVIEW COLLEGE OBSERVATORY.  
SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
172	1956 Apr.28	i(P)Z	15	00	18	3			μ		Compression. Masked by microseisms.		
		iz		00	21	3				μ		+2	
		iv		00	53	1½						+4	
		iv		01	08	1½						+	
		i(S)N		04	46	4						-	
		eLEZ		06.7		24							
		MN		07.8		18							
		MEZ		08.0		21						2 5	
Minor activity: 7d 22.6h; 11d 14.7h, 18.2h.													
173	May 1	iPv	02	51	26	1					+ 43°9	Compr. Masked by large microseisms. Masked by large microseisms.	
174	1	(i)v	11	10	03	1½					+ 43°9		
		iz		10	27	4					+5	Masked by large microseisms.	
		in		10	41	4				+5			
		eLE		13.9		17				3	5		
		MNE		16.1		10						Masked by large microseisms.	
175	1	(i)v	13	03	48								+ 43°9
		(i)v		04	12								+ 43°9
		iv		04	33								+ 43°9
		i(S)N		09	55	4						-2	Compr. Masked by large microseisms. Masked by microseism
		eLN		12.3		16							
176	2	(iP)v	02	51	52	1½						+ 43°9	Compr. Masked by large microseisms. Masked by microseism
		e(S)N		57	02								
177	4	(P)Z	14	20	59	3							
		eLN		29.6		18							Compression. Masked by large microseisms
		ME		33.0		18					2		
178	5	iPZ	03	29	28	3						+2	Compression. Masked by large microseisms
		eLE		40.6		25							
		MN		42.7		12					2		
		ME		43.7		17					4		
179	7	iPZ	11	06	23	4						+5	43°9 Compression H 10 58 13
		isPZ		06	29	4						+12	
		iPPPZ		03	47	5						+7	
		iSE		12	55	7						-12	
		iSN		12	56	7						-5	
		iz		13	03	7						+13	
		ME		13	03	11						16	
		in		13	19	7						-5	
		ie		13	20	7						-5	
		ie		15	19	7						+7	
		ie		16	15	5						+8	
		iScSN		16	24	7						+15	
		eN		16.5		20							
		in		17	15	6						-9	
		eLN		17.4		30							
		eLREZ		18.8		30							
		MN		20.7		19						26	
		MZ		21.3		19							
		ME		21.6		18						46	
180	7	(iP)Z	18	47	00	4						+4	Compression. Masked by microseisms.
		e(S)N		53	35	6							
		eLE		59.5		25							Masked by microseism
		ME		19	02.9	18						3	
181	8	i(S)N	03	25	55	4						+3	
182	8	i(P)v	12	52	58	1							Compression Compression
183	10	iPgnv	02	20	08	¼							
		iSgv		20	11	½							+ 0°2
184	11	e(S)E	16	00	20								Compression H 02 20 04
		eLN		17.4		23							
		ME		27.0		20						1	
		MN		28.1		18						2	
185	12	Pv	23	47	23	¼							1°9 Felt at Gunning, New South Wa es.
		iSNEV		47	48	½							
187	14	(iP)v	05	31	28	1½							Compression. Masked by microseisms.
		(iP)Z		31	29	3							
		eN		36	06								



1956, May.  
 RIVERVIEW COLLEGE OBSERVATORY.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
			h	m	s		AN	AE	AZ		
188	1956 May 19	(iP)V	00	26	51	1			+		Compression. Masked by microseisms.
		iv		26	54	1			-		
		i(PP)V		27	28	1			+		
		iE		31	14	4					
		e(S)E		31	26	12					
		iN		31	33	5	+4				
		iNE		33	39	5	-6	+			
		eLE		33.9		20					
		MZ		35.1		19			8		
		MNE		35.4		15	6	3			
189	19	iPZ	01	36	24	2			+4	27° ca Compression H 01 30 39	
		i(sP)V		36	38	1½			+		
		iNZ		37	01	4	+4		-9		
		iN		40	51	5	-4				
		iE		40	53	4		+5			
		iSNE		41	00	7	-16	+10			
		iE		41	14	6		+6			
		i(sS)N		41	18	5	+12				
		iZ		41	21	5			+11		
		iN		41	36	5	+16				
		iE		41	38	7		+8			
		iN		41	51	9	+34				
		iN		42	01	6	+9				
		iE		42	08	8		-25			
		iN		42	09	6	+27				
		iN		42	26	4	+14				
		iZ		42	40	6			+10		
		iN		42	41	7	-23				
		iE		42	43	7		+29			
		iN		43	10	6	-24				
eLN		43.6		26							
eLE		43.8		26							
eLZ		44.4		28							
ME		45.9		15		18					
MNZ		46.9		16	28		27				
190	19	(eP)Z	20	14	30					81° ca Compression	
		iPZ		14	33	4			+4		
		iNZ		16	08	5	+6		+5		
		iPPZ		17	47	4			+7		
		iN		24	27	5	+4				
		eSN		24	39	?					
		eE		25	04	21					
		ePSZ		25	25	16					
		ePPSNE		25	47	18					
		iE		27	12	6		+7			
		iSSNE		29	59	10	-13	-7			
		iN		32	51	4	+6				
		eSSSN		33	19	25					
		eLQE		35.8		33					
		eLRZ		39.8		30					
MNEZ		44.1		19	25	13	20				
191	21	(P)Z	22	56	10						
		(S)N	23	01	34						
		eLE		03.7		20					
		MNE		05.4		16	2	2			
		MZ		05.9		18			3		
192	22	(iP)V	02	13	27	1			+		
		iPZ	03	08	16	3			+3		
193	22	iPPEZ		09	45	4			-4	37° 0 Compression H 03 01 03	
		iPPPN		10	04	5	+4		+5		
		eSNE		14	02	6					
		iE		14	26	12			-10		
		eN		16	46	21					
		eSSSN		16	59	?					
		iN		17	08	9	-8				
		eLRE		18.3		28					
		ME		22.9		16		11			
		MNZ		25.2		14	6		11		



1956, May.  
RIVERVIEW COLLEGE OBSERVATORY.  
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
194	1956 May 22	iPNEZ	h	m	s	s	μ	μ	μ	29:8	Dilatation pP partly obscured  h 0.075, H 13 36 15
		ipPNZ	13	41	41	2	+8	+2	-17		
		iv		43	08	2	-		+(13)		
		iz		43	12	1½			+		
		isPN		43	17	2			+4		
		isPV		44	07	3	+4				
		iz		44	08	1½			+		
		iz		44	13	4			-4		
		iz		44	25	3			+7		
		iNZ		44	37	4	+6		-5		
		iz		44	47	4			-11		
		iN		44	59	6	+7				
		iz		45	08	5			-9		
		iE		45	21	3		+4			
		iz		45	30	4			-6		
		iNE		45	31	4	+8	+5			
		iz		45	46	3			+10		
		iz		46	01	4			+6		
		iSNE		46	02	5	+17	-29			
		iNZ		46	09	5	+13		-9		
		iz		47	26	5			-9		
		iN		47	36	5	+11				
		iz		47	55	4			+6		
		iz		48	38	7			+16		
		isSN		48	39	6	+13				
		iSSE		48	44	6		+20			
		iN		48	53	6	+42				
		iE		48	55	4		+14			
		iN		49	04	5	+16				
		iE		49	38	6		-21			
		iN		49	56	5	+13				
		iz		49	57	5			+7		
		iE		50	05	6		-16			
		iN		50	47	4	+7				
		iE		50	55	6					
		iScSN		51	19	4	+8				
		iE		51	23	6		+21			
		iz		51	25	4			+18		
		iE		51	48	5		-15			
		iE		52	09	7		+22			
iN		53	37	7	-32						
iN		53	48	8	-24						
iE		53	50	6		-10					
iN		54	05	8	-31						
MZ		54.2		16			29				
iN		54	22	9	-39						
197	23	iPNEZ	20	54	28	4	+11	+24	-37	32:9	Dilatation h 0.065, H 20 48 31
		iz		55	46	4			-42		
		ipPNE		55	50	4	+12	-59			
		ipPE		55	58	4		+52			
		ipPN		56	00	4	+23				
		iE		56	08	4		+53			
		iE		56	16	4		+42			
		iN		56	30	4	+31				
		isPZ		56	37	4			+		
		isPE		56	40	5		-25			
		iz		57	08	4			+35		
		iN		57	13	4	-23				
		iE		57	50	6		+60			
		iE		57	57	6		-62			
		iSNE		59	14	8	>+270	-250			
		iN	21	02	09	6	-29*				
		iNE		02	12	9	-52*	-70*			
iN		02	27	9	-100*						
iScSN		04	00	6	-12*						
iN		04	08	8	-28*						
iE		04	15	9		-62*					

\*From Mainka.



1956, May.  
 RIVERVIEW COLLEGE OBSERVATORY.  
 SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks		
					AN	AE	AZ				
198	1956 May 24	iPv	h m s 13 59 24	s 1½	μ	μ	μ	22:3	Compression		
		eSN	14 03 25				+				
		eLN	04.2	20							
201	25	MNE (P)Z	07.1 12 13 56	15	1	1		37:7	Masked by microseis		
		eLE	26.3	21							
203	26	MNEZ	27.7	16	1	1	2	37:7	H 08 30 27 Microseisms present		
		ePz	08 37 46	3							
		iPPN	39 15	5	+3						
		i(PP)Z	39 19	5			+3				
		iE	39 54	5		+5					
		eE	43 26	14							
		iSN	43 35	5	+3						
		iE	43 44	5		+4					
		iN	43 45	5	-3						
		iN	44 00	5	+2						
		iZ	45 00	4			-4				
		eSSN	46 08	13							
		eE	46 16	11							
		iN	46 27	7	+5						
		iN	46 55	5	+4						
		eLZ	49.3	27							
		MN	52.4	18	12						
		MEZ	54.5	14		18	15				
204	26	iPZ	20 26 58	2			+5			30:4	Compression h 0.09 H 20 21 32
		iPNE	26 59	2	+3	+4					
		iEZ	27 10	2		+3	-2				
		ipPE	28 35	3			-2				
		ipPNZ	28 36	3	+3		-3				
		iZ	28 44	3			+7				
		iE	28 47	4		+6					
		iN	29 05	4	+4						
		iZ	29 14	3			-5				
		iZ	29 51	3			+7				
		iSNEZ	31 19	5	-44	+29	+11				
		iN	31 34	5	+15						
		iN	31 40	5	+22						
		iZ	31 48	4			-7				
		iE	31 51	5		+20					
		iZ	32 00	4			+8				
		iN	32 22	6	-13						
		iZ	32 26	4			-13				
		iN	32 45	8	-18						
		iN	33 36	7	-14						
		i(SS)N	34 06	7	-11						
		iZ	34 26	9			+16				
		iSSE	34 28	6		+15					
		iN	34 29	7	+24						
		iNE	34 36	8	+45	-40					
		iE	34 51	7		-50					
		iNZ	34 54	8	-45		-22				
		iE	35 01	7		+29					
		iZ	35 10	7			-23				
		iN	35 49	8	-19						
		iScSNE	36 22	3	+61	-8					
		iN	36 33	10	+42						
		iN	36 56	8	-39						
205	27	iPv	17 03 16	1½			-	Dilatation			
		iPPV	04 36	1½			+				
		iV	04 44	1½			+				
		iSN	08 20	3	+3						
		i(SS)E	10 34	4		+5					
		iNE	10 49	4	+3	-3					
		iN	11 11	5	+5						
		iZ	11 36	4			-4				
		iNE	11 53	3	+4	-5					
		iNE	12 04	5	-7	-5					
		iZ	12 17	3							

+4 (Continued on next page)



1956, May-June.  
RIVERVIEW COLLEGE OBSERVATORY.  
SEISMOLOGICAL BULLETIN.



No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
205 cont.	1956 May 27	iZ	17 12 31	4	μ	μ	μ		
		iE	12 36	4		+10			
		iN	12 41	4	+9				
		iN	12 55	4	+9				
		iE	12 56	4		+6			
		iZ	13 02	4				+5	
		iN	13 03	4	-6				
		iE	13 11	4		+9			
		iE	13 22	4		+7			
		iE	13 37	4		+5			
		iE	13 44	3		+13			
		iZ	13 45	4				+5	
		iN	13 47	4	-11				
		iN	13 54	4	-10				
		iN	14 01	4	-10				
		iZ	14 03	4				+7	
		iE	14 05	3			+6		
		iE	14 17	4			+7		
		iN	14 23	3		+5			
		iZ	14 32	4				+7	
iN	14 35	3		+5					
MNE	15.2	8		12	10				
206	23	(eP)V	09 24 23						
		iv	24 43	1½					
		iv	26 09	1½					
207	28	iPZ	13 31 23	3				44:5	Compression
		iPcPZ	33 06	3					h 0.01,
		iPPV	33 11	1					H 13 23 20
		iSE	37 50	5		-3			
		iNE	37 58	5	-3	+3			
		esSE	38 31	9					
		iN	38 36	8	-3				
		iSSN	41 05	7	+5				
		MNE	47.1	18	3	2			
208	30	(iP)V	04 46 02	1½					Compression
		(iPP)V	46 53	1½					Masked by microseisms
		(eS)N	50 54						& non-seismic waves.
		(eL)N	54.0						
		MN	58.3	18	4				
		ME	58.9	16		4			
210	30	iPZ	15 47 29	2					Compression
		i(pP)V	48 39	1½					h 0.05 ca.
		i(PP)V	48 45	1½					Masked by microseism
		i(S)NE	51 51	4	-2	+2			
		iE	54 22	5		-2			
		iNZ	54 27	5	-3				
		iN	55 56	5	-2				
		iN	57 39	6	-2				
		iN	58 46	4	+3				
212	31	iPgV	02 08 35	¼				0:3	Compression
		iSgV	08 39	¼					H 02 08 29
		iv	08 43	¼					
Minor activity: 13d 08.8h; 23d 03.8h, 10.9h; 24d 20.3h; 25d 01.5h, 19.2h; 30d 06.5h, 18.9h									
213	June 3	PZ	18 57 59					(27:5)	H (18 52 09)
		e(S)N	19 02 39						Masked by microseism
		eLQN	03.6	18					
		eLRE	04.7	23					
		MNZ	06.3	19	5		8		
		ME	06.7	18		6			
215	4	e(SKS)N	07 33 03	5					
		eE	33 10	6					
		e(SKKS)E	33 20	10					
		e(S)E	33 30	?					
		eSSE	39 50	17					
		eLE	50.8	19					



1956, June.  
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No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			$\Delta$	Remarks.					
							AN	AE	AZ							
			h	m	s	s	$\mu$	$\mu$	$\mu$							
216	1956 June 4	iPZ	22	11	26	2			-2	26°1	Dilatation H 12 04 50  TE=7s, TZ=4s.					
		iZ		11	30	3			+7							
		iEZ		11	36	3		-4	+7							
		iZ		11	57	4			+5							
		iPPE		12	07	8		+8								
		iPPPNZ		12	20	4	+3		+4							
		iEZ		12	32			+7	-4							
		iSNE		15	56	6	+2	-2								
		iE		16	13	6		+3								
		iN		16	19	7	+6									
		iE		16	39	7		-5								
		iN		16	50	9	-7									
		iE		16	57	7		-3								
		iSSSN		17	18	9	+14									
		iE		17	47	9		-6								
217	4	eLE	18.4			22				68°6	Dilatation H 05 59 37					
		MNEZ	20.8			16	16	19	7							
		(eP)Z	18	42	51											
		i(sP)Z		43	16	2			+3							
		i(S)N		47	17	4	+2									
219	5	eLN	50.8			15				27°6	Compression Compression H 12 29 47 Microseisms present.					
		iPZ	06	10	44	4			-2							
		eSN		19	46	9										
		ePSE		20	09	7										
		eE		20	17	21										
		iN		20	52	7	+5									
		iE		24	35	6		+5								
		eN		24	37	7										
		eLRE		31.1			26									
		MNEZ		35.9			18	7	7			5				
		i(P)V	15	40	42	1						+				
		iPZ	12	35	38	2						+3				
		iPPZ		36	32	3						+2				
		eSN		40	19											
		iN		40	35	4	+2									
iE		42	25	5			+3									
eLN		43.0			26											
222	8	MZ	44.5			22			4	21	Compression Masked by microseism					
		ME	44.8			17		3								
		MN	46.1			16	3									
		iScSE	46	18	6			+3								
		iPZ	21	04	15	3						+1				
		i(PP)Z		05	03	4						-2				
		e(S)N		09	05											
		iN		09	33	6	+4									
		iN		09	51	7	-3									
		iE		10	15	6			-3							
		iN		10	29	7	+5									
		eLN		11.4			20									
		MNEZ		14.1			16	4	2			4				
		223	9	(P)Z	05	42	59							105°ca	Compression h 0.00 Microseisms present	
				iN		47	38	4					-3			
eN				47	55											
iN				48	19	3	-2									
iE				50	20	6			-3							
eLE				51.4			20									
eLZ				52.0			24									
MNEZ				54.0			19	3	4	4						
224	9			iPZ	10	22	33	3			+4	105°ca	Compression h 0.00 Microseisms present			
				iEZ		23	00	4			+2					
				iN		25	37	4	+4							-2
				iPPZ		27	07	4								+7
				iN		31	05	5	-3							
				iSKSNE		33	15	5	+8		-6					
				iN		33	38	5	+4							
		eNE		36	04											
		iPSN		36	09	4	-4									

(Continued on next page)



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
224 cont.	1956 June 9	iPSEZ	10	36	12	6		-4	+6		
		iN		36	22	4	+3				
		iE		36	25	5		+4			
		iN		37	09	4	+3				
		eE		39	44	16					
		eN		39	47	15					
		eSSE		41	38	12					
		iE		41	51	4		+5			
		iE		42	19	4		+5			
		eSSSE		45	42	13					
		iE		45	54	5		-5			
		eN		45	56	16					
		eE		47.3		30					
		eGE		52.2		43					
		eLNE		52.9		30					
eLRNZ		56.7		28							
MNEZ		11 02.2			19	12	13	17			
225	9	(iP)Z	23	27	(56)	4			+5	104.4	Compression H 23 13 (49) P confused by large microseisms.  No time marks until 23h 56m.
		iZ		28	(22)	4			-7		
		iE		28	(43)	5		-4			
		iPPZ		32	(17)	5			+14		
		iPPE		32	(18)	6		+11			
		iZ		33	(07)	5			-16		
		iPPPZ		34	(33)	4			-11		
		iSKSE		38	(40)	6			-13		
		iNE		38	(48)	10	-15	+22			
		iSN		39	(51)	6	+13				
		iPSE		41	(28)	9		-			
		iPSN		41	(29)	9	+14			+35	
		iZ		41	(35)	7					
		iE		41	(46)	9		+20			
		iPPSN		42	(18)	7	+19				
		iPPSE		42	(19)	9		-23			
		iZ		42	(25)	7			+26		
		iN		44	(20)	6	+12				
		iSSE		47	(11)	12		+26			
		iSSN		47	(14)	7	+19				
		iZ		47	(18)	7			-19		
		iE		47	(33)	9			-37		
		iZ		47	(43)	6			+16		
		eE		47.6		35					
		iN		49	(53)	6	-18				
		i(SSS)E		51	(17)	10			-20		
		iN		51	(37)	7	-21				
eN		51.7		30							
eE		51.8		30							
eLQN		56.3		35							
eLE		57.5		30							
eLN		24 03.2		30							
eLEZ		04.5		40							
MN		14.8		19	49						
MEZ		16.8		21		120	120				
226	12	(iS)E	03	35	08	4		+3		Masked by large microseisms. Dilatation	
		eLE		46.3		20			-6		
229	13	iPZ	12	15	19	3			+10	Masked by large microseisms. h 0.04 ca.	
		iZ		15	23	3			+7		
		iZ		15	44	4			+6		
		iPPZ		16	16	3			+5		
		i(sP)Z		16	45	4			+6		
		iZ		16	57	4			+5		
		i(PP)Z		17	06	4					
		iE		21	48	6		+6			
		iE		24	56	6		+8			
		eLEZ		29.4		30			9		12
230 231	13 14	MEZ		33.0		24			+1	Masked by large microseisms.	
		(iP)Z	17	16	07	2					
		e(S)E	17	05	32						
		eLE		08.4		24					



1956, June.  
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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
232	1956 June 15	iPZ	15	41	31	4			-4	(28°6)	Dilatation h (0.00), H (15 35' 36)
		i(pP)Z		41	41	4			-2		
		iZ		42	15	5			-3		
		i(S)E		46	16	6		+3			
		i(sS)E		46	34	7		+5			
		iZ		46	43	5			-5		
		iE		46	59	9		-6			
		iZ		47	10	5			+5		
		iE		47	11	7		-5			
		iN		47	17	4	+3				
		e(L)E		47.4		20					
		iN		47	40	5	-3				
		eLREZ		48.9		31					
		iN		49	11	6	-4				
		MNEZ		50.9			6	10	11		
		i(ScS)E		52	16	6		+7			
233	16	(iP)Z	06	30	05	4			+3		
		(S)N		38	45	6					
		eN		45	38	16					
235	16	i(PP)Z	18	18	35	3			-2		Masked by microseisms
		iSN		22	32	6	+4				
		eLN		24.1		?					
		MN		29.5		12	1				
		iN		32	30	4	-1				
		iN		32	45	4	+3				
236	16	iZ	18	36	45	3			-2		Masked by micro- seisms & coda of no.235.
		iZ		37	48	3			+3		
		iN		40	45	4	-2				
		iN		42	15	5	+3				
		MNE		46.0			1	1			TN=13s, TE=16s.
		iN		47	29	4	+3				
237	16	iZ	19	42	47	4			+2		Masked by microseisms
		eE		47	10						
		iE		47	33	8		-3			
		iN		48	12	6	-3				
		iN		48	41	7	+3				
		eLEZ		49.5		30					
		MNEZ		51.4			2	5	5		TN=15s, TEZ =20s. Masked by microseisms h 0.03 ca.
238	17	(P)Z	03	06	39						
		ipPNE		07	24	4	+2	-2			
		iEZ		07	29	4		-4	+4		
		iN		07	46	3	+2				
		iSN		10	49	4	+3				
		iSE		10	51	4		+2			
		iN		11	09	4	+3				
		iN		11	20	5	+6				
		i(SS)NZ		12	12	7	-3		+4		
		iE		12	25	5		+4			
		iN		16	32	4	+2				
		iE		16	37	4		-3			
239	19	(iP)V	00	28	48	1			+		Compression. Masked by non-seismic wave
		MN		49.2		16	2				
		MEZ		52.1		16		2	3		
240	20	i(S)N	16	42	13	4	+2				Masked by microseisms
		eLE		46.8		20					
		ME		48.5		19		1			
		MN		50.2		12	1				
241	21	iN	11	23	47	4	+2				Beginning obscured by microseisms.
		iN		24	05	5	+4				
		iE		24	16	5		+3			
		eLNE		24.3		27					
		iZ		24	46	4			+4		
		iN		25	57	4	+6				
		iN		27	12	5	-3				
		iE		27	18	5		+6			
		iN		28	43	5	+5				
		iN		28	56	5	+7				
		MEZ		29.0		14		3	3		
		MN		29.6		12	3				



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No.	Date	Phase	Time (G.M.T.)		Per	Amplitude			$\Delta$	Remarks	
			h	m		s	AN	AE			AZ
242	1956 June 21	(iP)Z	19	48	02	3				Compression. Masked by microseisms.	
		(iS)N		54	15	6	+2				
		(iScS)N		58	01	5	-2				
		eLE	20	01.9		25					
		ME		03.9		19		3			
		MN		05.1		15	5				
		MZ		07.3		14			1		
243	21	(eP)Z	20	39	40					Masked by microseism & coda of no.242.	
		e(S)NE		45	39						
		e(SS)N		48	34						
		eLE		53.9		27					
244	23	MNEZ		57.3		17	3	4	4	91:0 Dilatation H 02 13 01	
		iPz	02	31	08	3					-3
		iv		31	13	1½					
		iz		31	15	5					+5
		iN		41	27	5	-3				
		iSKSN		41	39	7	-4				
		eSE		42	03	6					
		iScSN		42	06	4	+3				
		iNE		42	11	9	-4	+7			
		iN		42	27	7	-4				
		iPSN		43	15	7	-3				
		iN		43	34	8	+5				
		eSSE		48	08	?					
		eE		50	53	18					
		eLE		55.0		23					
		eLE		57.6		36					
		MNEZ	03	08.3		20	8	5	10		
245	23	iPPZ	13	50	52	3				Masked by microseism	
		MN	14	00.5		12	1				
246	23	(iP)V	23	23	12	1				Compression	
		eZ		24	23						+
		iSN		28	17	4	+4				
		iE		28	19	5					-3
		iN		28	44	5	+4				
		eLE		29.7		27					
		MN		30.7		17	2				
		MEZ		33.2		16		2	2		
247	24	ePNE	21	04	23					26:9 Masked by large microseisms. H 20 53 38	
		iz		04	25	4					-4
		iPPPZ		05	20	4					+5
		eSE		08	59						
		iE		09	05	?					-
		iN		09	19	6	+7				
		iN		09	26	7	+14				
		iSSE		10	09	6					-9
		iSSSN		10	26	6	+16				
		iE		10	34	6					+10
		eLE		11.5		16					
		ME		13.7		13					16
		MN		14.8		12	13				
249	26	(iP)V	00	05	18	1				Dilatation. Masked by large microseism	
		iv		06	08	1					-
		(iS)N		09	22	3	-2				
		i(sS)N		09	52	3	+3				
250	26	(iP)Z	13	52	39	4				Compression. Masked by microseisms.	
		(iP)Z		53	03	3					+3
		(iP)Z		53	03	3					+2
251	27	(iS)E		57	33	3				+3	
		(iP)Z	20	47	15	3				+2	
		e(S)N		52	14						
252	28	eLE		56.0		22				Compression. Masked by microseisms.	
		MNEZ		58.3		16	3	3	3		
		iz	04	01	23	4					+3
		iSN		06	21	4	+3				
252	28	MNZ		13.0		12	4			Masked by microseism	
		MNZ		13.0		12	4				4

Minor activity: 4d 05.0h; 5d 05.9h; 8d 14.8h; 12d 05.2h, 09.7h; 16d 17.8h; 25d 12.9h.

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

P.F.RHEINBERGER.



# Riverview College Observatory

RIVERVIEW. N.S.W.

## SEISMOLOGICAL BULLETIN

 $\phi = 33^{\circ} 49' 46''$  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 <sub>o</sub>	$\epsilon : l$	$\frac{r}{T_o^2}$	T <sub>1</sub> (Galv.)	T (Pend)	$\mu^2$	V <sub>s</sub>	
N	1				4	11.7	12.1	+0.02	560
	3	143	8.5	6.2					
E	1			0.023	4	12.3	12.2	+0.03	490
	3	138	9.1	6.8					
Z	2			0.014	4	10.9	10.6	+0.1	460
					5	1.6	1.6		

No.	Date	Phase	Time (G.M.T.)				Per	Amplitude			$\Delta$	Remarks
			h.	m.	s.	s.		A <sub>N</sub>	A <sub>E</sub>	A <sub>Z</sub>		
253	1956 July 2	iPZ	14	33	35	3			-2	(35:8)	Dilatation H (14 26 32) Perhaps deeper than normal.	
		iz		34	13	3			+3			
		iPPv		34	57	1			+			
		iPPZ		34	58	4			+2			
		e(S)N		39	13							
		iN		39	38	4	-1					
		iE		39	45	5		-2				
		iN		41	56	4	+2					
		iN		42	05	4	+3					
		eE		42	08	7						
		iN		42	19	4	+4					
		iN		42	40	4	-3					
		iN		45	49	3	-3					
256	4	iPZ	00	45	39	2			+1	31:0	Compression h 0.06, H 00 39 56	
		iSNE		50	14	4	-4	+2				
		iN		50	31	4	-1					
257	4	iScSNE		55	25	5	-2	-2		26:4	H 03 04 21	
		ePZ	03	10	01							
		iz		10	21	4			+2			
		iz		10	34	5			+3			
		iSN		14	33	7	-3					
		eSE		14	36							
		iE		14	52	8		-4				
		iN		14	54	10	+13					
		iN		15	11	9	+10					
		eLE		16.2		24						
		MNZ		20.5		15	7		5			
		ME		21.3		15			6			
		258	4	ePZ	03	48	36	2				
iNZ				48	45	3	+3		-3			
iz				48	56	4			+4			
iNZ				49	09	4	+3		+5			
iPPNZ				49	16	5	+4		-2			
iPPPN				49	30	4	+3					
iN				49	44	6	+3					
iSN				53	03	7	-3					
iN				53	19	6	-9					
iE				53	20	7		-4				
iz				53	24	5			-2			
iN				53	25	4	+9					
iE				53	29	7		-5				
iN				53	37	7	-16					
iz				53	48	6			-6			
iE				53	53	7		-4				
iSSN				54	18	6	-7					
iz		54	22	6			+3					
iE		54	32	7		-6						



1956, July.  
RIVERVIEW COLLEGE OBSERVATORY.  
SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
58 ont.	1956 July 4	iE	h m s 03 54 40	s 4	μ	μ	μ		
		iz	55 10	5		+6			
		iN	55 11	6	+6		+6		
		iE	55 19	7		+11			
		eLZ	56.3	25					
		MNZ	59.0	15	11		7		
		ME	04 00.0	14		7			
59	4	ez	07 24 58						Repetition of No.253
		eSN	29 27						
		iN	29 44	4	+2				
		iN	29 55	7	-3				
		iSSN	30 37	6	-2				
		eLZ	32.6	27					
		MN	35.2	15	2				
		MZ	35.4	15			2		
		ME	36.0	16		2			
60	4	eN	16 21 07	6					
		iN	22 37	5	-1				
61	4	iPv	23 43 49	1			+	20:3	Compression
		eSN	47 32	7					H 23 39 09
		eSSNZ	47 59	7					
		eLN	48.9	19					
		ME	50.9	16		1			
		MN	51.0	13	2				
64	8	iv	20 35 36	1			+		Compression
65	9	(iPKP)Z	03 31 01	3			-2	136° ca	Dilatation
		iPKPZ	31 13	4			+4		Compression
		iz	31 40	4			-4		
		iPPZ	33 44	4			+4		
		iNE	33 49	6	+4	-3			
		iz	33 53	4			+9		
		i(PKS)EZ	34 47				-23		T <sub>E</sub> =9s, T <sub>Z</sub> =5s.
		iN	34 51	6	+5		-7		
		iE	35 41	7			-7		
		iz	35 43	4			+6		
		iN	37 32	7	+6				
		i(SKS)E	38 07	6			-6		
		eE	38 17	18					
		i(SKKS)E	40 44	6			-10		
		iN	42 11	6	-8				
		eSKSPE	43 46						
		iPSE	44 06	12			+23		
		iN	45 00	7	+8				
		ePPSE	45 51						
		iE	46 01	12			-34		
		iN	46 03	7	+8				
		iE	47 35	7			-16		
		iE	48 02	8			+16		
		iE	48 51	10			+20		
		iE	51 19	9			+18		
		eSSN	51 39	19					
		iE	52 49	9			+13		
		eE	54 15	22					
		iE	55 22	7			-25		
		iSSSN	56 43	9	+11				
		iE	57 08	12			-24		
		eLE	04 09.9	31					
		eLE	11.5	48					
		eLRN	13.9	42					
		eLRE	16.0	46					
		MNZ	29.3	21	30		41		
		ME	29.4	22			120		
66	9	iz	03 43 48	4			+6		Compression
		iPPZ	46 13	4			+6		
		i(SKS)E	50 43	7			-13		



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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
267	1956 July 9	e(SS)E	h m s	s	μ	μ	μ		
		e(SS)N	10 36 26						
		e(SSS)E	36 44						
		eLRE	41 45						
		ME	11 01.5	22					
268	9	iz	14.9	20		1			
269	10	i(P)Z	20 45 30	3			+2		Masked by micros.
		iE	15 14 41	3			+2		Dilatation. Masked
		eN	18 18	3		-2			by microseisms.
		eN	20 13	11					
		eLNE	21 12	11					
		MN	22.5	20					
		ME	25.7	11	5				
		iv	26.1	14		2			
270	10	(iP)v	18 04 56	1			+		Compression
271	11	iPv	19 00 49	1			+	48°4	Compression
	12	iv	17 04 49	1			+		Compression
		iN	05 08	1			±		Large microseisms
		iSN	11 41	5	-3				present.
		eE	11 52	6	-9				H 16 56 00
		iNE	11 55	?					
		iE	11 59	6	+16	-7			
		iE	12 05	6		+13			
		iN	14 51	4		+4			
		eN	16 21	5	+4				
		eE	16 33	18					
		eLN	16 43	13					
		MN	17.4	24					
		ME	19.0	16	5				
		MZ	19.5	13		6			
272	15	(P)v	19.7	20					
		i(PcP)Z	13 01 51	1					Masked by micro-
		i(S)N	02 32	4			+2		seisms.
273	16	iPv	09 32	4	+3			90°	Compression
		iSN	09 37 37	1			+		H 09 24 34
		iPSE	48 29	4	-1				
		eLN	49 36	4		+2			
274	16	iPZ	10 06.0	25					
		iPcPZ	15 19 03	4				78°0	Dilatation
		eE	19 10	3					H 15 07 10
		ipPZ	19 12	7					Slightly deeper
		eZ	19 13	3			+6		than normal.
		iz	20 10	5					
		iz	20 23	4			+2		
		iz	20 48	4			+4		
		iz	21 18	4			-4		
		iPPZ	21 58	5			-4		
		iz	22 06	5			-4		
		iz	22 56	4			-2		
		iSE	28 50	7		-6			
		iN	29 00	7	-5				
		iN	29 20	5	-3				
		isSE	29 21	9		-8			
		iN	33 26	5	+5				
		eZ	34 17	27					
		eNE	34 36	27					
		eN	38 50	22					
		eLN	40.2	28					
		eLN	44.4	31					
		eLE	45.2	45					
		eLZ	45.3	50					
		MN	53.4	16	7				
		MZ	58.6	19					
		ME	58.9	19					
275	16	iPv	21 47 02	1		12	11		Compression



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No	Date	Phase	Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks				
							AN	AE	AZ						
76	1956 July 17	iPNEZ	07	40	28	3	$\mu$ -9	$\mu$ -9	$\mu$ +25	35:6	Compression h 0.065, H 07 34 08  Gutenberg Tables give: $\Delta$ 35:5, h 450 km., H 07 34 08				
		iN		41	07	3	+3								
		ipPz		41	49	3			+6						
		iz		41	54	3			+4						
		iPPNZ		42	02	3	-5		+10						
		i(sP)Z		42	36	3			+7						
		iN		42	43	4	-8								
		i(PcP)Z		42	49	3			+4						
		iz		42	59	3			+11						
		iz		43	31	3			+9						
		iz		45	08	3			+7						
		iN		45	10	4	+9								
		iE		45	12	4		+16							
		iSNEZ		45	32	4	-42	+62	-11						
		iNE		45	33	4	+67	-33							
		iNZ		45	42	4	-34		+14						
		iN		46	02	4	+14								
		iN		46	13	4	+10								
		iE		46	30	5		+10							
		iN		46	35	3	-11								
		isSN		47	52	4	+15								
		isSE		47	56	4		-10							
		iNZ		48	18	4	+24		+9						
		iSSE		48	26	4		-11							
		iz		48	32	4			-37						
		ME		48	37	4		41							
		iScSN		49	53	4	+23								
		iE		50	00	4		+26							
		iE		50	05	4		+36							
		277	18	iPv	00	33	22	1					-	28:9	Dilatation H 00 27 19
iz				33	23	2			+1						
iz				33	46	3			+3						
iz				33	49	4			-3						
iz				33	59	4			+6						
iPPv				34	15	1			+						
iN				34	18	4	+4								
iz				34	22	3			+1						
iSNZ				38	12	5	-6		-4						
iN				38	18	5	+7								
iN				38	42	5	+9								
eN				38	45	16									
iN				39	11	7	+7								
iN				39	27	6	-6								
iSSN				39	40	6	-5								
iE				39	51	5		+7							
SSSN				39	59	9									
iE				40	41	5		-9							
iN				40	53	4	+5								
iN				41	03	5	+6								
eLE				42.1		21									
eLZ				42.2		25									
eLN				42.7		25									
ME				44.7		14		9							
278	18			iPv	05	23	05	1			+	21:1	Compression H 05 18 17		
				iv		23	23	1			-				
				iPPZ		23	28	4			+5				
		iPPPv		23	39	1			+						
		iE		23	46	5		+4							
		iz		23	48	5			+7						
		iN		24	00	4	+2								
		iSE		26	56	5		+2							
		iPcPE		27	10	4		+4							
		iN		27	50	6	+3								
		eLE		28.3		21									
		eLN		28.4		21									
		MN		30.5		13	5								
		ME		31.2		12		3							



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
							AN	AE	AZ		
			h	m	s	s	$\mu$	$\mu$	$\mu$		
279	1956 July 18	iPZ	06	26	11	5			-11	34:8	Dilatation h 0.02, H 06 19 34
		iPNE		26	12	5	+5	-4			
		iz		26	20	2			+11		
		iz		26	37	2			-11		
		ipPNEZ		26	44	4	-12	+10	+26		
		iNEZ		26	54	4	+12	+20	+51		
		isPN		27	04	4	+15				
		iE		27	22	4		+8			
		iN		27	23	5	-13				
		iz		27	24	4			-18		
		iE		27	30	4					
		iN		27	31	4	+13				
		iz		27	36	3			+9		
		iN		27	41	4	+12				
		mN		27	52	12	19				
		ipCpZ		28	39	3			+17		
		iSE		31	29	?					
		iN		31	36	4	-52				
		iE		31	40	3		-36			
		iN		31	41	7	+98				
		iE		31	43	5		-35			
		iE		32	19	7		+45			
		iN		32	20	7	-71				
		isSE		32	29	9		+69			
		iN		32	43	6	+49				
		iE		32	50	6		+51			
		iE		33	04	7		+54			
		iN		33	21	7	+57				
		iN		33	37	7	-77				
		isSE		33	56	7		+71			
iE		34	05	8		-72					
iz		34	07	6			+62				
iN		34	46	7	+89						
iE		34	48	7		+115					
MNE		38.6			15	195*	260*				
280	19	(i)V	20	51	00	1			+		*MNE from Mainka.
		iN		59	15	6	+3				
		iE		21	00	34	4		+3		
282	20	eN		03	43						Masked by micro-seisms.
		(iP)Z	13	24	36	4			+2		
		iz		24	59	4			+2		
		iSN		30	44	4	+2				
		iSSN		33	30	5	+2				
		iSSSN		34	09	5	+2				
		ME		43.6			15		1		
MNZ		43.8			16	1		2			
283	20	iN		44	53	6	+4				Masked by micro-seisms.
		eZ	17	40	43						
		iN		48	48	6	+3				
284	21	iN		50	41	5	+3				Very small & masked by micro-seisms.
		MNEZ		59.8		17	3	3	4		
		(P)Z	15	02	38						
285	21	(pP)Z		04	49						Dilatation  $T_E=6s, T_Z=4s.$
		(sP)Z		05	40						
		iz		08	59	4			+2		
		iPZ	15	26	20	4			-3		
		iPNE		26	21	4	+1	+3			
		i(pP)Z		26	30	3			+2		
		iE		26	32	4		+3			
		ePPZ		26	45						
		iPPPZ		26	55	4			+5		
		iEZ		27	58			-5	+3		
		iN		28	00	4	-2				
iz		28	23	4			+3				
iN		28	24	4	-2						
e(S)E		30	18	?							
eN		30	24								
iN		30	29	6	-7						

(Continued on next page)



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks			
							AN	AE	AZ					
			h	m	s	s	μ	μ	μ					
285 cont.	1956 July 21	iE	15	30	32	6		-5						
		iZ		30	38	6			+6					
		iN		30	41	4	+6							
		iE		30	54	7		-5						
		iN		31	06	9	+6							
		iE		31	12	7		+4						
		eLE		32.0			24							
		MEZ		33.1			19		7	7				
		MN		33.5			16	6						
286	21	iPPZ	15	49	52	4			-1		Masked by coda of no.285			
		iN		50	49	5	+3							
		i(SKS)N		56	30	7	+4							
		i(PS)Z		58	30	6			+5					
		eLN	16	16.6			24							
		MN		27.3			20	2						
		MZ		28.2			20			3				
		ME		28.8			20		3					
		288	23	(iP)V	14	31	56	1						Compression
iv				32	04	1 $\frac{1}{2}$								
iz				32	09	3			+2					
eSN				36	47									
e(SS)E				38	11	12								
eL(Q)E				38.4		22								
eLRE				39.4		26								
ME				42.9		13			3					
MN				43.6		13		1						
MZ				44.1		12				1				
289	23			iPZ	19	38	29	4			-2	82°0	Dilatation H 19 26 06	
				ez		38	40	7						
		iz		38	52	5			-4					
		ePPE		41	45	7								
		iSNE		48	43	7	+3	+3						
		iNE		48	54	6	-2	+3						
		iN		49	07	6	+2							
		iE		49	40	6		+2						
		iN		49	41	6	-3							
		eSSN		54	04	13								
		eLQNE	20	00.3			31							
		eLRE		04.9			28							
		MEZ		07.7			20		6	9				
MN		07.9			19	7								
290	23	iPZ	22	02	49	3			-2	27°0	Dilatation H 21 56 04			
		iz		02	54	3			+3					
		iPPPZ		03	48	4			-3					
		iSN		07	26	4	+2							
		iN		07	54	6	+3							
		iN		08	04	4	+4							
		iSSSN		08	56	7	-4							
		eLN		11.6			26							
		ME		12.8			15		3					
		MZ		14.9			14			2				
291	24	i(P)V	07	10	20	1					Compression Compression. Obs- cured by micros. Dilatation H 18 56 37			
		(iP)Z	13	10	16	3			+1					
		(iS)N	18	16	4		+2							
293	24	iPv	19	04	36	1				42°5				
		iPPZ		06	13	4			+2					
		iPcPZ		06	28	3			+2					
		eSE		10	59	?								
		eLN		20.6			25							
		eLE		20.8			25							
		ME		25.2			16		4					
		MZ		25.3			17			8				
		MN		25.4			16	7						
294	26	(iP)Z	06	24	57	2					Masked by micro- seisms.			



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			$\Delta$	Remarks
							AN	AE	AZ		
	1956		h	m	s	s	$\mu$	$\mu$	$\mu$		
295	July 26	iPv	17	53	48	1			-	24:6	Dilatation
		esPZ		56	22						h 0.085,
		iSNE		57	30	5	-1	+2			H 17 49 10
		iN	18	03	35	4	+1				
		iScSE		03	39	4			+4		
296	26	iPv	18	08	47	1			-		Dilatation
		iSN		12	25	4	+1				
		iN		12	29	4	-1				
297	27	e(S)N	16	24	38	8					
		iN		25	11	6	+2				
		iN		25	58	6	+3				
		eLN		26.4		20					
		MN		28.0		14	2				
		ME		30.0		13			1		
298	28	(P)V	02	07	43						
		iPZ		07	45	2			+2		Compression
		i(pP)Z		08	07	2			-2		
		i(sP)Z		08	16	2			+3		
		iSN		12	41	4	+1				
		iN		14	46	6	+2				
		eLE		15.6		24					
		eLNZ		15.8		30					
		ME		17.5		13			3		
		MN		18.0		13	2				
299	28	(P)Z	11	18	02						Obscured by micro
300	29	(i)Z	07	24	49	3			+1		Masked by micro-
		iN		37	45	5	+3				seisms.
		eLRN		44.0		29					
		MN		48.6		13	2				
301	30	iE	09	45	08	4			+4		
		ME	10	34		19			1		
Minor activity: 3d 00.6h, 13.1h; 5d 05.9h; 8d 06.4h; 20d 00.7h; 22d 06.3h.											
303	Aug. 2	(i)Z	20	05	57	4			+2		Masked by micro-
		(P)Z		08	51	3					seisms.
		i(PP)E		10	01	4			+2		
		i(PPP)E		10	14	4			+2		
		iN		10	39	4	+2				
		i(S)N		14	04	4	+2				
		iE		15	06	4			+2		
		eLZ		17.7		25					
		MN		18.7		18	2				
		MEZ		19.1		19			3	3	
304	4	(iP)V	09	54	41	1 $\frac{1}{2}$			+		Compression.
		eSE		59	24	6					Masked by very
		eN		59	43	10					large microseisms
		MNE		10	05.3	18	1*	4*			*From Mainka.
305	6	i(S)NE	17	42	08	5	+3	+3			Large microseisms
306	7	(P)Z	00	41	36						Masked by micros
307	9	iv	01	44	28	1			+		Compression
308	9	i(PP)V	03	11	06	1 $\frac{1}{2}$			+		Masked by micros
309	9	i(P)V	07	25	03	1 $\frac{1}{2}$			+		Masked by micros
310	9	i(P)Z	09	40	18	4			+3		Masked by micros
		iv		40	32	1 $\frac{1}{2}$			+		
		i(S)NE		44	17	4	-2	+2			
311	9	iPZ	21	51	19	5			+3		Compression.
		iE		51	56	5			+3		Microseisms pres
		iZ		52	09	5			+6		
		iE		52	12	5			-4		
		(S)N		55	55	7					
		iN		56	22	5	+4				
		i(SS)N		56	53	8	-5				
		eLZ		58.3		24					
		eLE		58.5		23					
		MN		59.7		17	8				
		MEZ	22	00.4		18			10	12	



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
312	1956 Aug. 9	iPV	h	m	s	s	μ	μ	μ	34°4	Compression h 0.02 ca., H 23 00 42
		iz	23	07	16	2			+		
		ie		07	18	2			+5		
		iz		07	20	3		+8			
		iz		07	31	3			+10		
		in		07	48	3	+7				
		ipPZ		07	51	3			+6		
		ieZ		07	54	3		-9	+10		
		iz		08	19	3			+9		
		iz		08	27	4			-6		
		iz		08	47	4			+7		
		iz		08	50	4			+13		
		iPPPE		08	57	4		+15			
		iPPPZ		08	58	4			+11		
		in		09	01	4	+6				
		ie		09	04	4		+12			
		in		09	16	6	+8				
		iz		09	23	4			+13		
		ie		10	26	7		+19			
		iz		10	30	6			+19		
		in		10	34	5	-6				
		isNE		12	31	5	+8	+3			
		in		13	03	5	-7				
		isSE		13	33	5		+6			
		in		13	35	5	-8				
		in		14	19	7	-11				
		in		14	27	9	+14				
		iSSN		14	52	7	-9				
iSSSN		15	30	9	-23						
iSSSZ		15	31	7			-14				
iScSE		17	11	5		+14					
MN		17.5		18	16						
ie		19	22	7		-13					
314	12	(iP)Z	00	06	55	3			+2	Compression. Masked by micro- seisms.	
		(ipP)Z		07	27	3			+2		
		ee		23	27	19					
315	12	eLN	33.4			27				Compression. Masked by micro- seisms & coda of no.314.	
		(iP)Z	00	31	46	4			+4		
		iz		32	12	4			+3		
		(eS)N		36	54						
		in		38	28	4	-3				
316	12	i(SS)E		39	08	5		+3		Masked by micro- seisms.	
		in		39	28	5	-4				
		(iP)Z	05	46	06	2			+1		
317	12	in		46	10	4	-2			68°0 Dilatation H 16 59 38	
		iPZ	17	10	41	4			-2		
		eSE		19	40						
		eSN		19	41						
		ie		19	47	6		-4			
		in		19	48	4	+3				
		ie		20	00	6		-3			
		ePSN		20	04	8					
		iScSE		20	38	3		+2			
		SSN		24	03						
		eLN		27.6		21					
		eLE		29.5		34					
		eLZ		33.2		40					
		ME		35.1		18		5			
		MN		36.8		20	5				
		MZ		37.4		19			3		
		318	13	in	18	00	39	4	+4		
(iP)v	09			13	35	1½			+		
(iPP)v				14	14	1½			+		
(iPPP)v				14	30	1½			+		
e(S)E				18	06	9					
eN				19	37	13					
eLNE				20.3		20					
MNE				22.8		16	4	3			
MZ				23.3		16			4		



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks.		
							AN	AE	AZ				
			h	m	s	s	μ	μ	μ				
319	1956 Aug.14	(iP)V	03	02	30	1½			+		Compression Masked by large microseisms.		
		(iPP)V	05	07		1½			+				
		i(S)N	12	29		6	+2						
		i(SKS)N	12	44		6	+4						
		i(ScS)E	12	49		4		+3					
		iN	13	21		5	-3						
		eLE	24.	1		30							
		ME	31.	4		21		5					
		MNZ	32.	8		19	5		5				
		321	15 15	(iP)V	05	28	02	1½				+	57:1 Compression Compression h 0.04, H 05 20 40
iPv	05			29	59	1½			+				
iN	30			34		3	+2						
iPcPv	30			50		1½			+				
ipFN	31			03		4	+3						
ipPZ	31			04		3			+4				
iPPE	32			11		5		+3					
iSE	37			30		7		+4					
iSN	37			31		5	+5						
iN	38			09		4	-2						
isSN	39			18		4	+2						
eSSSN	43			58		13							
iE	44			17		5		+3					
iN	44			29		5	+6						
iN	45			36		5	-3						
eLE	47.			3		?							
iN	48			30		5	5						
iN	49			29		7	-6						
322	15			iN	50	21		4	+5			43:4 Dilatation h 0.01, H 10 51 14	
				ipZ	10	59	09	4			-11		
		ipNE	59	10		4	+6	-5					
		ipPZ	59	32		4			+9				
		isPZ	59	45		5			+13				
		iN	11	00	23	5	+7						
		iPPZ	00	54		5			+14				
		ipPPZ	01	12		5			+8				
		iPPPZ	01	35		5			-10				
		iPPPNE	01	36		5	+9	-7					
		iN	01	45		5	+3						
		iE	01	55		5		+6					
		iScPv	04	33		1½			+				
		iPcSV	04	43		1½			+				
		iPcSZ	04	44		5			+9				
		iSN	05	29		6	-17						
		iSEZ	05	30		6		+31		-7			
		iN	05	36		6	+17						
		iE	05	37		7		+29					
		isSN	06	06		6	-5						
		isSE	06	07		5		+21					
		iN	06	14		5	+8						
		iE	06	20		5		+6					
		iE	07	28		6		-8					
		iSSE	08	36		8		+10					
		iSSN	08	39		8	+10						
		iN	08	48		8	-19						
		iScSE	08	54		7		-31					
		iz	08	55		8			+11				
		ieZ	09	19		7		+24		+15			
		iN	09	24		7	-13						
		iSSSE	09	32		8		+19					
		iz	09	35		8			+14				
		iz	10	25		8			-7				
		iNE	10	53		7	+13	+9					
		iN	11	04		7	+19						
		iN	11	30		4	+10						
		iE	11	31		7		+14					
		iz	11	48		6			-10				
		iN	12	20		6	-13						
iNE	12	35		7	-13								

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks.
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
322 cont.	1956 Aug. 15	iN	11	12	58	5	+9				
		iE		13	08	6		+15			
		iZ		13	32	7			-17		
		iE		13	34	6		+12			
		iN		13	41	7	-16				
		iE		14	06	6		-14			
		iZ		14	07	6			-14		
		iN		14	09	7	+16				
		iN		14	26	6	+7				
		iE		14	34	6		+11			
		iE		14	51	7		+22			
		iZ		14	54	6			+16		
		iE		15	31	7		+12			
		iN		15	32	7	+18				
		iZ		15	37	7			-12		
		MNEZ		18.5		15	14	17	14		
323	15	iPV	13	24	20	1½			+	78:7	Compression H 13 12 14
		iV		28	21	2			+		
		iSNE		34	17	6	-2	-4			
		iN		34	22	4	+5				
		i(ScS)N		34	44	4	+3				
		iN		34	52	5	-3				
		iE		35	10	4		+3			
		iN		35	24	4	-3				
		eSSN		39	30	13					
		eN		42	21	20					
		eLQE		45.2		33					
		eLN		51.3		30					
		MNE		55.9		21	4	5			
324	15	ev	16	43	50						Small tremor, felt at Orange. N.S.W.
325	17	(iP)v	11	48	20	1½			+		Microseisms present.
		iE		58	29	5		-3			
		iE		59	54	4		-2			
		iN	12	00	02	4	+3				
		iZ		00	18	4					
		iN		00	21	4	+5				
		iN		01	00	4	-4				
		iN		01	25	6	+7				
		MNEZ		03.0		12	5	3	5		
326	17	iPV	14	22	03	1½			-	29:9	Dilatation H 14 15 51
		iSE		27	00	4		+2			
		iSN		27	01	5	+3				
		eN		27.2		18					
		e(LQ)N		28.2		18					
		eSSE		28	39	15					
		iE		29	03	8		+5			
		iN		29	04	8	+3				
		eLE		29.5		25					
		eLN		30.9		24			9		
		ME		33.1		16					
		MNZ		33.7		18	7				
327	17	iPv	15	16	21	1½			+		Compression
		iV		16	55	1½			+		
		eLN		25.7		22					
		ME		27.4		13			2		
		MN		28.1		16	3				
328	19	iPv	05	23	28	2			+		Compression
		i(pP)v		23	57	1½			+		
		iSN		28	05	4	-2				
		eE		28	19						
		iN		28	53	4	-2				
		iN		29	23	8	-3				
		iN		29	48	7	-5				
		eLE		31.1		22					
		MN		32.9		14	14				
		MZ		33.3		16				5	
		ME		34.8		14		5			



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
329	1956 Aug.19	(P)v	08	55	20						Masked by microseisms.
331	22	(ipP)v		55	38	1½			+	22:1 Dilatation h 0.02, H 11 26 25	
		iPZ	11	31	08	2			-4		
		iSE		34	56	4		-3			
		iPcPN		35	01	3	-3				
		iScSN		42	05	3	+3				
332	24	(P)v	00	06	23	1					Large microseisms
333	24	iPv	04	40	28	1					Large microseisms
335	25	(iP)Z	00	30	34	3			+2		Masked by micros
336	25	(iP)Z	07	36	01	3			+2		Masked by micros
337	25	(iP)Z	22	08	36	2			+2		Masked by micros
338	26	(iP)v	08	53	50	1½			+		Masked by microseisms.
		(S)N		58	43						
		(SS)N	09	00	17						
		eLN		01.0		20					
		MN		02.8		13	4				
339	30	i(P)Z	04	37	57	3			+2		Compression
		e(S)E		49	09	6					
340	31	iPv	22	11	48	1			+		Compression
341	31	i(P)v	23	15	10	1			+		Compression
Minor activity: 1d 20.5h; 10d 15.7h; 14d 12.0h; 20d 23.9h; 24d 08.6h.											
344	Sept.6	(iP)Z	00	01	26	4			-2		Masked by large microseisms.
		(iPP)Z		02	24	3			+2		
		i(S)N		06	26	4	-2				
		eLN		10.0		20					
		ME		13.4		16		2			
		MN		14.1		15	2				
		MZ		15.4		15				2	
346	7	(iP)Z	04	00	32	4			+2		Masked by microseisms.
		iZ		00	55	4			-4		
		iN		05	09	4	+3				
347	9	iPv	01	38	50	1½			+	25:7	Compression
		PPv		39	28	2					H 01 33 17
		iSN		43	17	4	+2				
348	9	(iP)v	15	24	48	1½			+		Masked by micros
349	9	iPv	17	42	57	1½			+	42:4	Compression
		ipPV		43	20	1½			+		h 0.01,
		iZ		43	23	4			+4		H 17 35 11
		eSN		49	11	?					
		iE		49	13	7		+3			
		iE		49	44	5		+3			
		isSN		49	47	5	+3				
		eSSE		52	21	?					
		eN		52	28	9					
		iE		52	35	4		+3			
		iScSE		52	48	4		+3			
		iSSSE		53	08	4		+3			
		eN		55	24	13					
		eE		55	35	13					
		eLE		57.8		23					
		MNE		59.9		21	3	7			
		MNEZ	18	02.5		16	4	6			
350	10	iPv	02	16	19	1½			+	52:2	Compression
		iZ		16	40	4			+2		H 02 07 04
		iPcPZ		17	30	4			+2		
		eSE		23	43	8					
		iN		23	48	8	-6				
		iN		24	02	8	-3				
		eLRZ		31.3		24					
		ME		33.8		20		4			
		MN		33.9		20	4				
		MZ		34.3		20				7	
351	10	iPv	12	41	19	1			+		Compression.



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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
353	Sept.10	iPZ	23 57 56	47			+	29:9 Compression H 23 51 44	
		ePPZ	58 54						
		iPPPE	59 07	5		+3			
		iE	59 16	6		+3			
		iE	59 26	6		-3			
		eSE	24 02 53	7					
		eLN	04.6	24					
		iE	08 28	7		-7			
		iE	08 45	5		-7			
		MN	10.2	12	7				
		MZ	10.5	15			5		
		ME	10.7	14			5		
		354	11	iPZ	02 38 43	4			
iPE	38 44			4		+2			
iPPPE	39 59			4		+3			
iSNE	43 47			7	-5	-7			
iE	43 57			8		-8			
iN	45 00			7	-6				
iSSE	45 27			7		-9			
eN	45 43			20					
iSSSE	45 51			7		+4			
MN	46 10			20	15				
iN	46 37			7	+7				
eLE	46.9			30					
MZ	47.8			22			14		
MN	48.2			17	18				
ME	48.3	21			20				
356	11	iPZ	15 49 09	3			+3	23:6 Compression h 0.00, H 15 44 00	
		iPE	49 10	3		-2			
		ipPZ	49 18	3			+4		
		isPNEZ	49 23	4	-5	-6	+10		
		inZ	49 35	4	+5		+5		
		eSN	53 18				+5		
		iz	53 22	4					
		iE	53 26	5		+8			
		iN	53 27	7	-22				
		iN	53 41	7	-22				
		iE	53 42	7		-15			
		iN	53 55	6	+13				
		iSSE	54 07	8		+14			
		iN	54 28	7	-13				
		iN	54 46	8	-19				
		iE	54 54	9		-14			
		eLREZ	55.1	27					
		MZ	56.3	20			21		
ME	57.9	14			14				
MN	58.3	13	27						
357	11	(i)v	20 45 44	1			+	Masked by micro- seisms.	
		eE	54 13						
		eN	54 51						
		eLN	56.1	18					
		ME	58.9	16			4		
		MN	59.0	13	3				
		MZ	59.1	18			5		
358	11	(iP)v	21 16 27	1			+	Compression. Masked by micro- seisms & coda of no.357	
		iv	16 35	1			+		
		e(S)E	26 45						
359	13	eLE	44.2	25				19:1 Compression H 14 00 20	
		iPNZ	14 04 47	4	+1		+1		
		iPPFZ	05 10	4			+1		
		eSE	08 17						
		eLRN	09.4	25					
		eLz	09.7	28					
		ME	10.4	21			7		
MNZ	10.7	20	6			8			





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No.	Date	Phase	Time (G.M.T.)	Per	Amplitude			Δ	Remarks
					AN	AE	AZ		
360	1956 Sept.13	iPNZ	h m s	s	μ	μ	μ	13°5	Compression H 14 30 20
		eSE	14 34 39	4	+3		+2		
		iEZ	38 05						
		eLZ	38 20	7		-3	+2		
		eLN	39.2	27					
		MZ	39.3	25					
		ME	40.6	21			9		
361	13	MN	41.1	11		5		30°2	Dilatation h 0.06, H 10 33 14
		MNZ	41.9	10	6		5		
		e(S)E	13 53 04						
		e(S)N	53 06						
		iN	53 14	4	-2				
		iNE	53 24	5	-3	-4			
		iN	53 50	4	+2				
		eLE	54.8	26					
		ME	56.5	18			3		
		MN	57.1	15	4				
364	15	MZ	58.4	15			1	30°2	Dilatation h 0.06, H 10 33 14
		iPv	10 38 50	1½			-		
		ipPN	40 08	3	-1				
		iSN	43 19	3	-2				
		eSSN	45 45	9					
		eSSE	45 48	7					
		iSN	16 35 49	7	-2				
365	15	iN	38 07	6	+2			102°ca	
		eLE	38.2	21					
		MN	40.4	13	2				
		(eP)Z	08 51 15						
366	16	ePPZ	55 34	5				102°ca	
		eE	09 01 37	9					
		iSN	02 58	4	+1				
		ePSN	04 36	10					
		eE	08 31	16					
		eSSN	10 01	12					
		eSSE	10 10	9					
		eLQN	19.5	25					
		eLRN	25.3	39					
		ME	33.2	25			9		
		MN	34.5	25	8				
		MZ	38.4	24			6		
		367	16	iPv	13 33 01	1			
eSN	38 05								
eLN	41.0			18					
iScSE	43 08			4		+2			
368	16	iPv	23 36 43	1			-	32°8	Dilatation Masked by micro- seisms.
		(iP)v	23 59 39	1			+		
370	19	iv	24 00 35	1½			+	32°8	Obscured by very large microseism
		iN	07 02 13	4	+2				
371	22	iN	02 26	4	+5			32°8	
		iN	03 16	4	+6				
		iN	05 58	4	+6				
		i(P)v	00 39 53	1			+		
372	23	iv	40 06	1			-	32°8	Compression
		(iP)v	06 11 59	1½			-		
373	24	iv	12 09	1			+	32°8	Dilatation Masked by micro- seisms.
		i(P)E	13 27	4		-2			
		i(P)Z	13 28	5			-3		
		e(S)E	17 58	13					
		i(SS)N	20 38	?	+				
		eLQN	20.9	23					
		eLRE	22.5	27					
		MN	24.4	15	2				
		MZ	25.3	16			4		
		ME	25.4	16			3		



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
74	1956 Sept. 24	iPv	h	m	s	s	μ	μ	μ	24:8	Dilatation
		isPEZ	07	07	30	1					
		iPPN	07	37		4	+5	+5	-5		
		iPPE	08	04		4					
		iE	08	05		3		+3			
		iSN	08	09		4		+3			
		iE	11	51		6	+5				
		iN	11	58		9		+8			
		iZ	12	03		6	+8				
		iE	12	05		4			+5		
		iE	12	12		9		+16			
		iE	12	22		5		-15			
		eLN	12.9			26					
		MN	14.9			16	33				
		MZ	15.8			16			18		
		ME	16.4			15			19		
75	24	(iP)v	10	34	38	1½			+		Compression
		ME	11	20.8		23			2		
76	26	(iP)v	01	28	40	1			+		Compression
77	26	i(S)N	14	10	09	4	-2				
		iN	12	21		6	+3				
79	29	iPv	04	03	03	1			+		Compression
		eNE	12	44							
80	29	iPv	09	14	39	1½			+		Compression
		iz	14	46		3			+2		
		i(ScS)E	24	36		4		+2			
		eLRN	35.9			33					
		MEZ	42.0			22			4	4	
		MN	42.6			16	5				
		MEZ	47.0			19			6	5	
81	29	(S)N	21	41	44						
82	29	(P)v	22	30	43						Masked by micro-
		e(S)E	37	07							seisms.
		i(SS)N	40	10		7	-3				
		iE	40	17		5		+4			
		iN	40	28		7	+3				
		iE	40	41		5		+3			
		iN	41	13		5	+2				
83	29	iPz	23	31	59	2			+2	68:9	Compression
		ipPz	32	18		2			+2		h 0.005,
		iSN	41	01		6	+2				H 23 20 53
		sSN	41	31		?					
		iPSE	41	41		5		-3			
		iSKSN	41	50		5	-2				
84	30	iPv	14	50	17	1½			-		Dilatation
Minor activity: 1d 00.7h; 3d 18.3h; 7d 01.1h; 10d 15.0h; 11d 08.9h; 15d 08.1h & 09.3h; 18d 02.7h; 27d 13.0h.											
85	Oct. 2	(iP)v	15	09	08	1			+		Compression
		(SKS)N	19	26							
		(S)E	19	45							
		eLRN	38.3			30					
86	3	e(Pg)v	06	55	37	½					
87	3	i(PKP)z	08	37	01	3			+2		Compression
88	3	(P)v	14	56	33	1					
		ME	15	03.2		9			1		
89	4	(P)v	02	28	44	1					Masked by micro-
		e(S)N	33	10		7					seisms.
		eE	33	25		14					
		eLE	35.3			20					
		MZ	37.5			18				1	
		MNE	38.3			13	2		3		
	4	iv	07	33	35	1½			-		
92	5	iPv	21	48	33	1			+		Compression
93	6	iPv	06	24	06	1			+		Compression
		eE	34	16							
		ME	44.2			16			1		
		MNZ	44.6			15	1			1	



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No.	Date	Phase	Time (G.M.T.)			Per	Amplitude			Δ	Remarks	
							AN	AE	AZ			
			h	m	s	s	μ	μ	μ			
394	1956 Oct. 7	iPv	21	33	10	1			+	25:5	Compression h 0.01, H 21 27 49	
		iv		33	26	1			+			
		ipPv		33	35	1			+			
		iPPv		33	53	1			+			
		iSN		37	28	4	+3					
		iE		37	34	4		+3				
		iE		37	42	4		+3				
		isSN		38	11	4	-3					
		iSSN		38	34	5	-3					
		iN		38	43	5	-4					
		eLE		39.7			26					
397	8	iE	44	35		4		+3		34:3	Compression H 14 55 43 Microseisms pres- ent.	
		iPZ	15	02	33	3			+3			
		iz		02	39	4			+3			
		iPPZ		03	43	4			+3			
		iSE		08	00	7		-3				
		iN		08	02	4	-2					
		iz		09	02	3			+3			
		eLQN		10.1			17					
		eLZ		12.7			20					
		MN		14.2			13	6				
		MZ		15.8			17					9
398	9	ME	16.6			16		10		0:3	Masked by micro- seisms.	
		(eP)v	06	26	14							
		iz		26	57	4			+2			
		eN		32	59							
		eN		34	49	13						
		eLE		37.2			21					
400	10	MN	39.9			12	4			0:3	Compression H 02 12 18	
		MEZ	40.8			16		4	5			
		iPgv	02	12	24				+			
401	10	iSgv	12	27	$\frac{1}{2}$	$\frac{1}{2}$			+			
		ee	02	15	12							
402	11	iE	15	43		4		+2		79:5	Dilatation h 0.01., H 02 24 34	
		eLN	16.6			16						
		iE	18	33		3			+2			
		iPZ	02	36	32	5		+12	+3			-31
		iNE		36	34	4						
		iz		36	44	4						-26
		iN		36	52	5		-10				
		ipPZ		37	01	5						-6
		isPZ		37	08	4						-30
		isPN		37	09	5		+15				
		iz		37	18	8						+47
		iz		39	18	5						-12
		i(PP)Z		39	30	7						-16
		iz		39	44	7						+28
		iz		40	01	7						-12
		iN		40	09	5		-10				
		iz		40	19	4						+18
		iN		46	16	7		+6				
		iSE		46	24	6						-11
		iE		46	30	8						-41
		iSKSN		46	34	9		+80				
iz		46	36	6				+22				
ME		46	37	10				36				
iScSN		46	46	7		-64						
iz		47	06	10				-21				
isSN		47	16	8		+75						
iE		47	25	6				+9				
iN		47	33	8		+68						
eLE		03	01.4		27							
ME		09.1			19			29				
MN		09.6			16	18						
MZ		09.9			19			33				
403	11	eSSE	17	22	40	13						
		eLQN		32.4			36					
		eLRZ		37.9			30					



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No.	Date	Phase	Time (G.M.T.)				Amplitude			Δ	Remarks
			h	m	s	Per.	AN	AE	AZ		
425 cont.	1956 Oct.24	ePSE	15	12	41	20					
		iE		13	43	5		+7			
		ePPSNE		14	14	18					
		eE		18	43	19					
		eSS		19	55	28					
		iE		23	00	7		-11			
		eLQN		34.2			31				
		eLRZ		39.7			30				
		MNEZ		41.8			23	12	16	20	
		MEZ		54.1			17		13	13	
426	24	eW2E	16	42.6		30					
		i(P)Z	17	23	45	3			+5		Compression Masked by micro- seisms.
		iN		33	45	6	+3				
		iN		34	31	5	+4				
		eLN		35.6			21				
		ME		37.9			18		5		
MN		40.6			13	2					
429	26	ePZ	02	52	52					27:2	H 02 47 05
		iz		52	57	4			-2		
		iz		56	24	5			-4		
		eSN		57	30	7					
		eE		57	37	8					
		iz		57	39	4			-3		
		eSSN		58	43	9					
		iSSSN		59	12	8	+				
		eLE		59.8			27				
		MZ	03	01.1			19		4		
430	26	ME		01.5		20		5			
		MN		02.5		12	2				
		iN		04	04	6	+6				
		iPZ	09	01	16	3			-3	34:1	Dilatation h 0.02, H 03 54 45
		iPPZ		01	49	3			+2		
		iz		01	55	4			-3		
		iSE		06	29	6		+5			
		iN		06	34	7	+4				
		isSNE		07	26	6	-3	-3			
		iN		08	24	4	-4				
iE		08	23	4		+5					
iN		08	32	4	-4						
iE		08	40	7		+4					
432	26	iN		09	00	6	+10				
		iE		09	01						
		iE		09	57	3		+6			
		MNE		13.6		10	9				
		iPV	22	55	48	1			+	24:6	Compression Compression H 22 50 25
		iPNEZ		55	49	4	-9	-8	+14		
		ineZ		56	01	4	-7	-7	+6		
		ineZ		56	03	4	-9	-9	+14		
		iz		56	17	4			+11		
		ine		56	19	4	+14	+12			
iPPPN		56	34	5	+15						
iz		56	35	5			+16				
iz		56	40	5			+13				
iE		56	43	4		-12					
		iN		56	44	4	+3				
		iN		56	43	4	+6				
		iE		56	49	4		-3			
		iz		56	53	4			+5		
		iz		57	01	4			+12		
		iN		57	03	5	-9				
		iz		57	09	5			-7		
		iN		57	11	4	+3				
		iz		57	23	5			+11		
		iN		57	42	6	+11				
		iE		57	44	4		+9			
		iN		58	16	6	+3				
		iSNZ		23	00	07	7	-45			

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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		AN	AE	AZ		
432 cont.	1956 Oct. 26	iz	23	00	22	6			+31		
		ie		00	23	7		-38			
		ie		00	34	6		-28			
		in		00	36	6	+27				
		inZ		00	45	6	+58		+23		
		ie		00	49	7		-46			
		in		00	54	7	-60				
		ie		00	56	7		+37			
		in		01	11	7	+18				
		in		01	21	14	+93				
		iz		01	27	7			+13		
		ie		01	29	9		-43			
		LEZ		02.1		25					
		ME		03.4		21		88			
		MZ		03.5		20			87 ca		
MN		04.6		16		41					
436	27	Pv	19	43	36					19:5	
		in		43	38	4	+2				
		ie		43	39	4		-2			
		eSE		47	11	6					
		eLQE		47.3		17					
		eLN		47.4		17					
		ME		48.3		13		3			
		MN		48.6		11	2				
437	28	MZ		49.1	13				1		
		Tv	20	02.9		$\frac{1}{2}$					
438	28	(ipP)v	03	01	51	$1\frac{1}{2}$					Obscured by large microseisms.
		in		04	15	4	+2				
438	28	i(ScS)E		10	41	4		+2			
		iPEZ	03	34	08	3		-14	+21	24:7	Compression h 0.00, H 03 28 49
		ipN		34	09	4	+4				
		iz		34	12	3			-22		
		ipPZ		34	16	3			+14		
		ipPEZ		34	18	3		-10	+12		
		iz		34	25	4			-12		
		ie		34	26	3		+6			
		ie		34	29	4		-16			
		iz		34	37	4			+9		
		ipPEZ		34	45	4		-25	+39		
		in		34	48	5	-7				
		iz		35	05	4			+19		
		in		35	13	4	-13				
		ie		35	14	6		+19			
		iz		35	21	3			+14		
		iz		35	30	4			+14		
		in		35	36	4	+6				
		ie		35	46	3		+8			
		ipPv		37	45	2					
		ie		38	20	5		+9			
		isN		38	25	4	+7				
		in		38	29	5	+18				
		ie		38	30	5		-12			
		isSN		38	44	6	+21				
		iz		38	45	7			-13		
		ie		38	46	5		-19			
		in		38	54	6	+22				
		iz		38	57	6			-27		
		ie		39	05	6		-22			
		isSN		39	19	7	+24				
		isSEZ		39	21	6		-21	+20		
isSSN		39	36	7	+40						
in		39	54	7	-38						
eLRZ		40.5		36							
MN		41.7		19	57						
ME		42.0		25		94					
MZ		42.1		23			94				
iScSN		45	08	5	-11						



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					AN	AE	AZ				
440	1956 Oct. 28	iz	06 50 17	3			+2	Masked by micro- seisms.			
		iz	51 42	3			+2				
		eSE	55 37	6							
		eLZ	59.6	24							
		ME	07 02.3	18		2					
441	28	MNZ	03.6		2		1	TN=13s, Tz= 18s. Dilatation H 10 45 06			
		iPz	10 54 39	3			-2				
		iz	54 44	4			+3				
		eSN	11 02 19								
		iSE	02 20	4		+2					
		ePSE	02 31								
		iN	02 45	4	-2						
		iE	03 12	5		-3					
		iE	04 17	4		-2					
		eSSN	06 02	14							
		eSSE	06 08	18							
		ME	13.4	22		7					
		MN	15.1	18	6						
		443	30	(P)Z	00 51 14						
				eLN	01 06.4	20					
444	31	iv	14 22 26	1			+	Compression			
		iPPz	22 47	4			-2				
		iz	24 24	4			+2				
		iSKSE	28 57	7		+3					
		iN	29 01	5	+1						
		iSN	30 27	7	+4						
		ePSE	32 22	7							
		iN	32 25	7	+3						
		e(PPS)Z	33 11	13							
		e(PPS)E	33 13	13							
		eN	33 25	10							
		iz	33 26	6			-4				
		eSSN	38 05	18							
		eSSE	38 12	11							
		eSSSN	42 27	13							
eLQN	49.5	33									
eLN	51.5	40									
MNEZ	15 01.3	23	6	6	9						
Minor activity: 3d 15.6h, 21.5h; 8d 00.5h, 04.9h; 9d 17.2h; 13d 15.4h; 14d 04.2h, 21.4h; 15d 04.0h; 22d 19.0h; 23d 10.3h; 25d 06.3h, 19.4h; 26d 21.9h; 27d 12.3, 13.7h, 16.6h; 28d 05.7h; 29d 12.3h; 31d 22.8h.											
447	Nov. 2	iPv	01 09 17	1			+	Compression			
		iv	10 20	1½			+				
448	3	iPz	18 07 09	3			-5	26:9 Dilatation h 0.07, H 18 02 07			
		iPE	07 10	3		+1					
		i(pP)Z	08 32	3			+3				
		i(sP)EZ	09 33	4		-2	+4				
		iNZ	10 02	4	-3		+4				
		iz	10 12	3			+3				
		iEZ	10 22	4		-3	+4				
		iSE	11 12	5		+6					
		iSN	11 13	4	-2						
		iE	11 20	5		+6					
		iN	13 50	5	-2						
		iE	13 59	7		+4					
		iN	14 01	5	-3						
		iScSE	17 03	4		+6					
		iN	17 06	5	+3						
iE	20 07	5		+3							
iE	20 39	7		+6							
449	4	(iP)Z	05 48 14	3			+2	Compression			
		iN	58 16	4	+1						
450	4	iPv	06 23 30	1½			+	26:1 Compression			
		iN	24 02	4	-2						
		eSN	28 00	9							
		eLE	29.9	25							
MNEZ	33.5	13	4	5	3						



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					AN	AE	AZ		
451	1956 Nov. 4	iPEZ	07 12 05	4				31:2	Dilatation H 07 05 42
		ieZ	12 35	5		+2	-3		
		iz	13 13	4		+3	-3		
		iz	13 28	4			+2		
		ie	13 44	4		+5	-2		
		iz	13 45	4			-2		
		ie	13 54	4		-3			
		iz	13 55	4			-3		
		in	14 48	5					
		iSNE	17 11	6	+3				
		ee	17 29	16	-6	-5			
		e(L)N	19.0	?					
		in	19 17	6	+6				
		in	19 28	10	+10				
		in	19 45	11	+24				
		ie	19 48	7		+6			
		eLE	20.2	30					
		MN	21.4	16	37				
		MEZ	22.1	19		24	22		
		iScSE	22 41	5		+7			
456	6	MEZ	24.7	18		28	26	Compression Masked by micro- seisms.	
		(iP)V	14 19 05	1½			+		
		iv	19 14	1½			+		
		iz	19 16	3			+1		
		eSNE	24 22	10					
		ee	24 30	15					
		en	24 31	18					
		e(SS)E	26 13	5					
		e(SSS)E	26 41	10					
		ie	26 57	4		-3			
		eLN	27.3	21					
		ie	27 39	4		-3			
		in	27 41	4	+4				
		iz	29 29	4			-4		
		in	29 34	4	+7				
		ie	29 40	7		-7			
		iz	29 52	4			-4		
		in	29 57	4	+5				
		iz	30 11	4			+7		
		ie	30 12	4		+14			
ie	30 23	4		+21					
in	30 30	4	+12						
457	7	MNEZ	33.4	12	21	21	30	(0:5)	
		e(Pg)V	02 04 06				+		
		iv	04 10	1					
		in	04 11	1	+1				
459	8	iSgv	04 13	1½			+	Dilatation Masked by micro- seisms.	
		iPv	03c50 48	1½			-		
		i(sP)EZ	53 25	4		+3	-2		
460	8	iSE	54 42	4		+2			
		i(ScP)V	56 42	1½			+		
461	8	iPv	06 56 10	1½			+	32:0 Compression h 0.075, H 06 50 25	
		ipPZ	57 40	4			+3		
		ipPE	57 41	4		-2			
		iz	58 16	4			+2		
		isPZ	58 33	4			-2		
		iSNEZ	07 00 46	4	+2	+6	+4		
		i(ScP)N	01 33	4	+3				
		iScSE	05 50	4		+4			
		iScSN	05 51	4	+4				
		iPv	15 53 46	1½			+		
461	8	eSN	16 00 54				49:6	Compression H 15 44 51	
		e(PS)E	01 05	13					
		e(PPS)N	01 11	16					
		eSSN	04 29	13					
		eE	04 38	11					
		eLN	09.5	24					
		MNE	11.2	15	1	1			



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						AN	AE	AZ			
			h	m	s	s	μ	μ	μ		
465	1956 Nov. 9	(P)v	12	03	38					Masked by micro-seisms.	
		e(S)E		10	09						
		eLN		13.7		16					
		MN		22.1		14	1				
		ME		22.9		16		1			
466	9	ePPE	13	26	11	13					
		ePPZ		26	15	13					
		eSKSE		31	35	7					
		e(SKKS)E		32	39	13					
		iE		34	09	10			-4		
		ePSE		36	00	10					
		iE		36	15	9			+4		
		ez		36	45	18					
		iPPSE		37	01	11			-9		
		eSSN		42	21	22					
		eE		42	40	18					
		eSSSN		46	51	30					
		eLQN		56.7		27					
		eLRE	14	01.8		27					
467	9	ipPEZ	18	02	45	5			+2		Compression
		isSN		07	52	7	+5				
		eLN		08.2		20					
468	10	iPv	14	49	52	1½			+	58:2 Compression H 14 39 54	
		eSE		57	53						
		eLE	15	08.8		19					
		MN		16.3		19	3				
469	10	i(P)v	15	53	03	1½			+	Masked by micros. Dilatation. Masked by large micros. Compression	
470	11	iPv	03	19	23	1			-		
		iN		19	49	4	+4				
471	12	(iP)Z	08	41	17	4				+4	
		ME		58.5		12			1		
472	12	(iP)Z	15	19	52	4				+3	Masked by micro-seisms.
		(i)Z		20	20	4				+3	
		e(S)N		26	01						
		iN		26	26	6	+4				
		eLE		29.0		21					
		MN		31.8		15	2				
		ME		32.5		13			3		
473	13	iPv	03	23	39	1½			+	49:3 Compression H 03 19 46	
		iSN		35	44	6	+2				
		iSE		35	45	5			+2		
		i(ScS)N		38	22	7	+2				
		e(LQ)N		40.6		15					
		MN		46.6		20	2				
474	13	iPZ	07	46	10	3				-2	24:1 Dilatation H 07 40 52
		iE		46	12	3			-2		
		iEZ		46	18	3			-2	+5	
		iN		46	20	3	+2				
		iz		46	32	3				+5	
		iPPN		46	43	4	+3				
		iPPZ		46	44	4				+4	
		iPPPE		46	53	4			+4		
		iPPPZ		46	54	4			+2	+4	
		iE		47	02	4			+2		
		iz		47	18	4				+3	
		iE		48	17	6			-3		
		iz		48	25	6				+5	
		eSE		50	25						
		eN		50	30						
		iNE		50	37	7	+11		-7		
		iSSe		51	13	6			-7		
		iN		51	19	6	+9				
		eLRN		51.9		19					
		eLREZ		52.1		30				7	
		MZ		53.5		18					
		MN		53.6		15	20				
		ME		53.9		16			7		
		iScSE		57	14	7			-3		



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No.	Date	Phase	Time (G.M.T.)	Per	Amplitude			Δ	Remarks
					AN	AE	AZ		
475	1956 Nov.13	(iP)V	h m s	s	μ	μ	μ		Compression Masked by micro- seisms & coda of no.474.
		iSN	03 41 25	1			+		
		iN	45 47	4	+1				
		eLN	45 59	4	+3				
		eLE	47.1	21					
476	13	MN	48.5	16	5			25:8	Dilatation H 09 55 25
		iPZ	10 00 59	4			-2		
		iNZ	01 01	5	+3		+5		
		iE	01 02	5		+2			
		iPPZ	01 42	4			+2		
		iPPPZ	01 53	5			-5		
		eSE	05 27	9					
		iN	05 41	8	-8				
		iz	05 48	7			+7		
		iN	05 56	7	-10				
		iE	06 14	7		+9			
		iSSN	06 33	9	+9				
		iSSSN	06 46	5	+11				
		eLN	07.1	22					
		iN	07 19	5	+6				
		eLRN	07.4	21					
		477	13	ME	09.2	10			
MN	10.1			9	14				
MZ	10.7			9			14		
iz	13 24 12			3			+2		
eN	30 22			12					
479	14	MN	34.6	13	3			19:6	Dilatation Large microseisms present.
		MEZ	35.8	16		2	2		
		iPZ	09 42 16	4			-2		
		iSE	45 52	5		-2			
		eLN	47.0	25					
481	15	MNEZ	48.7	15	3	4	4		
		iE	49 12	4		+5			
		iN	53 20	4	+3				
		e(S)E	17 53 25						
		eSSE	18 00 25	20					
482	16	eLRE	15.5	27		1	1		Masked by large microseisms.
		MEZ	24.7	17					
		MN	26.0	17	1				
		ez	08 54 56						
		i(S)E	59 32	4		+3			
483	16	iE	09 02 40	3		+5			Obscured by micro- seisms.
		ME	05.7	9		9			
		MN	06.5	9	6				
		eSE	12 00 53						
		eSSN	04 32	15					
484	16	ME	11.9	16		2			Masked by micro- seisms.
		MN	12.5	16	2				
		ePE	16 21 16						
		iSE	25 10	4		+7			
		iN	25 13	4	+4				
486	18	iE	25 32	4		-4			Microseisms pres- ent. H 18 16 35
		eLRN	26.6	19					
		eLRE	26.7	21					
		iN	27 39	3	+3				
		ePZ	18 22 32						
487	19	iPPEZ	23 24	6		+5	-5		Obscured by micro- seisms.
		eSN	27 18						
		iN	27 38	4	+3				
		eN	28 41	17					
		eLZ	30.3	22					
487	19	MEZ	32.8	16		9	10		
		MN	34.4	14	16				
		eN	03 03 28						
		iN	07 41	3	+3				
		iE	07 44	4		-5			
		MNZ	10.9	12	8		8		
		ME	12.7	10		5			



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
			h	m	s		AN	AE	AZ		
508	1956 Nov.27	iPEZ	06	22	06	4	μ	μ	μ	21°ca.	Compression H 06 17 20
		i(pP)Z		22	16	4		-3	+3		
		iN		22	19	4	-2		-3		
		iPPE		22	29	4		-3			
		iPPZ		22	32	4			-3		
		iN		22	33	4	+3				
		iSE		25	56	4		+3			
		iz		26	00	6			-5		
		iN		26	03	6	+5				
		iEZ		26	15	6		-5	+5		
		eLE		26.8		25					
		eLZ		27.1		26					
509	27	MN		29.9		12	3			28°0	
		ePZ	17	05	34						
		iNZ		05	52	4	+3		-3		
		iN		06	04	4	-3				
		iz		06	05	4			-4		
		iSN		10	13	5	-3				
		iN		10	32	6	-5				
		iN		10	53	6	-4				
		eLE		13.3		20					
		ME		16.2		13		6			
		MZ		18.2		15			6		
		MN		18.3		15	7				
511	27	(iP)V	09	48	38	1			+	21°ca.	Compression
		(i)V		49	08	1			+		
512	27	iPv	13	23	43	1			+	21°ca.	Compression
		iz		23	43	4			-7		
		ie		23	49	4		+3			
		iNZ		23	54	4	-3		+3		
		iEZ		23	53	4		+7	-3		
		iEZ		24	10	4		-2	+5		
		iEZ		24	21	6		+10	-11		
		iN		24	23	6	-8				
		ieZ		24	29	6		-3	+3		
		i(S)NE		27	33	6	+5	+6			
		iz		27	36	7			+10		
		ie		27	39	5		+12			
		iz		27	43	9			+31		
		ine		27	50	8	-16	+19			
		eLE		28.0		23					
		iN		28	16	7	+13				
		eLRE		28.6		24					
		MN		31.3		13	20				
		MEZ		31.5		14		10	8		
		513	27	(eP)Z	15	57	00				
iz				57	05	5			+3		
iN				16	00	53	5	+3			
514	28	eLE		01.6		24					Local. Felt in Sydney MM.I.
		ev	00	26	53				+		
515	28	iv		26	55	4					
		(iP)Z	03	47	48	3			-2		
516	28	eLE		53.2		18					Local. Felt in Sydney MM.I.
		ev	04	52	05				+		
517	28	iv		52	07	4					
		iz	07	04	04	3			+3		
518	28	iPv	15	17	32	1			+	27°0	Compression
		iN		18	15	3	+2				
		eSN		22	09						
		ie		22	55	5		+2			
		eLE		24.9		28					
		MN		25.8		15		2			
		ME		27.8		16			1		
		MZ		28.0		16					



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks				
			h	m	s		AN	AE	AZ						
519	1956 Nov.28	iPZ	19	39	37	4			+4	83:7	Compression h 0.00, H 19 27 10				
		ipPZ		39	50	4			+6						
		iPPZ		42	49	3			-2						
		iSE		49	56	6		-3							
		iN		49	58	4	+3								
		iN		50	14	4	+3								
		ip		50	16	6		+2							
		ePSN		50	53	10									
		eSSN		55	23	19									
		eLE	20	01.7	40										
		eLN		03.7	37										
		MN		11.0	22		7								
		MEZ		11.9	22			2	10						
		520	29	iPv	04	26	24	1½					+	62° ca.	Compression Compression
iPZ				26	25	3			+3						
ipPv				26	28	1½			+						
iPPZ				29	45	5			+4						
iE				36	36	?		+							
iSKSN				36	46	5	+3								
eN				37	42	11									
eSSN				42	40	16									
eLRN				53.8	30										
MZ	05			06.1	16				2						
MN				07.8	16		3								
521	29			iPZ	09	25	40	4			-4	62° ca.	Dilatation h (0.00), H 09 15 20 ca.		
				iN		25	42	5	-2						
				iZ		25	47	3			+6				
		iN		25	49	5	+4								
		i(pP)Z		25	52	5			+9						
		iZ		26	01	5			+7						
		iN		26	23	5	-3								
		iZ		26	25	5			-5						
		iN		26	46	5	+5								
		iN		27	18	6	+5								
		iPPZ		27	57	5			+6						
		iZ		28	15	4			-4						
		iNZ		28	21	5	+4		-7						
		iN		30	54	5	+4								
		iN		31	13	5	+4								
		iSN		34	01	6	-5								
		iE		34	09	5		-5							
		i(sS)N		34	17	6	+9								
		iE		34	25	5		+3							
		iE		34	38	8		+6							
		iE		35	01	5		+7							
		iN		35	16	6	+6								
		iE		35	25	6									
		iE		35	39	5		+4							
		iN		35	52	5	-4								
		iN		36	37	6	+5								
		iE		36	40	7		-6							
		iN		37	27	6	+4								
		iE		37	31	6		+3							
		iSSE		38	03	5		-3							
		iSSSE		40	52	8		-5							
eLE		41.5	27												
iE		43	54	6		-6									
eLN		44.2	27												
iE		44	47	10		-17									
ME		46.5	15			7									
MNZ		47.5	16		5		3								
522	29	iN	10	10	28	6	+5								
523	29	(iP)Z	14	46	36	3									
		eN		59	27						Obscured by microseisms.				

Minor activity: 1d 08.2h; 4d 10.5h, 11.3h; 6d 00.3h; 7d 15.6h; 8d 07.3h; 9d 07.8h, 10.1h; 13d 15.1h; 15d 15.1h; 18d 10.0h; 23d 18.2h; 25d 02.0h, 02.4h, 12.3h, 15.0h; 27d 03.9h, 08.29d 23.7h; 30d 11.7h, 17.1h.







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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
540	1956 Dec.13	(iP)v	19	42	53	1			+		
		eL <sub>E</sub>			55.9	20					
		MNE	20	00.	8	16	1	1			
541	14	PgV	06	37	17					0:3	H 06 37 11
		iSgV		37	20 <sup>1/2</sup>				-		
		iNV		37	21 <sup>1/2</sup>				-		
544	14	(P)v	19	31	39		+4				
		eN		38	44	12					
		eLN			39.7	19					
546	15	iPz	13	58	40	3			+3		Compression
		e(L)N	14	09.	3						
547	15	iPv	17	29	42	1			+	25:3	Compression
		iPz		29	43	3			+5		Compression
		iPv		30	12	1			+		h 0.02 ca.,
		iZ		30	25	3			+6		H 17 24 30
		iE		30	29	4		+5			
		iN		30	30	3	+3				
		iPPz		30	31	4			+3		
		iPPZ		30	46	3			+6		
		iSN		33	55	7	-7				
		iNE		34	10	6	+14	+5			
		iN		34	47	6	+8				
		iN		34	59	6	+9				
		iSSE		35	09	7		+11			
		iN		35	15	7	-15				
		iN		35	27	4	+7				
		iN		35	40	4	-11				
		i(ScS)E		40	30	4		+4			
		i(ScS)N		40	31	4	-6				
548	15	i(P)v	20	12	26	1			+		Compression
550	16	(iP)v	10	44	57	1			+		Compression
		i(SS)N		49	42	4	-1				
		MN		53.	3	14	2				
553	18	(iPKP)v	02	49	33	1			+		Compression
		i(PP)z		50	02	3			-5		Confused by micro
		(SKS)E		56	08						seisms & non-seis
		(SKS)N		56	12						mic disturbances.
		(PS)z		59	33						
		e(SSS)N	03	09	43	25					
		eLQE		17.	0	42					
		eLRE		21.	8	30					
		eLRNZ		22.	0	30					
		MZ		27.	0	18					
		MNE		29.	4	20	3	4	5		
554	18	iPz	19	30	11	4				60:2	Dilatation
		iz		30	25	4			-2		H 19 19 59
		iz		30	37	4			+3		
		iz		30	44	4			-2		
		iz		30	44	4			-4		
		iPcPv		30	57	1			+		
		iSN		38	24	7	-3				
		iN		38	34	6	-3				
		iScSN		40	02	5	-2				
		eSSN		42	24	12					
		eSSSN		44	54	12					
		eLQN		45.	1	22					
		eLRz		48.	2	25					
		MNEZ		51.	7	19	3	7	8		
555	20	ez	11	06	14						P masked by micro
		iE		06	27	5		+5			seisms.
		i(PPP)E		07	02	5		+7			
		iz		07	05	4					
		eLN		12.	1	?			-4		
		eLz		13.	1	25					
		eLE		13.	9	27					
		MN		18.	0	13	37				
		ME		18.	4	15		36			
		MZ		18.	6	15			30		



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No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
					AN	AE	AZ			
			h m s	s	μ	μ	μ			
57	1956 Dec. 21	(i)Z e(PS)E eN e(SS)E e(SS)N eLQN eLRZ MEZ MN eW <sub>2</sub> Z	09 21 11 27 20 31 14 32 53 33 09 44.4 48.8 53.0 55.7 11 05.1	12 15 15 30 30 22 19 22					Masked by micro-seisms.	
558	21	iSN iSE eLE MN	20 30 14 30 17 41.1 48.0	4 4 22 17	+3 1	+3				
559 560	21 22	i(P)V iPv isPv iZ iZ iEZ iPPPE iSE iE iE iN eLQN eLRN eLz MNEZ iScSNE	22 48 33 22 43 52 43 59 44 14 41 24 44 31 44 53 43 30 43 49 49 11 49 12 49.5 50.8 51.2 53.1 54 41	1 1 1 4 4 4 6 4 7 6 22 21 24 18 5				27:2	Compression Compression H 22 38 05	
561	22	i(P)V eLE	23 23 46 43.2	1½ 30					Dilatation. Obscured by micros.	
562	23	iPNZ iv i(sP)V iN eE eLE	08 47 00 47 01 47 40 56 44 09 01 28 03.6	3 2 1½ 4 11 18	-2 -2		+3 - +		Compression Dilatation	
564	24	(e)N (e)N eE eE eLE	08 27 39 31 34 31 37 34 58 42.6						Confused by non-seismic waves.	
567	26	(iP)V e(SS)N i(ScS)E MEZ MN	07 42 35 52 13 52 27 59.8 08 00.4	1½ 9 4 24 19					Compression Masked by micro-seisms.	
568	26	iv iE e(S)N	07 52 29 52 42 56 53	1½ 6 8					Confused by preceding shock.	
569	27	iPZ iE iEZ iEZ i(pP)Z iEZ iE i(sP)Z i(PPP)E i(PPP)N iE iE iN iE iE iN iE	00 20 01 20 04 20 08 20 19 20 32 20 38 20 51 21 00 21 16 21 19 21 26 21 43 21 54 22 01 22 15 22 31 22 41	3 4 3 4 4 4 4 4 5 5 4 6 5 6 4 4 5 6 5 5					29:2ca.	Compression h 0.02 ca., H 00 14 13 ca.  Vertical trace very faint.
					+9 +12 +18	-7 +16 +10 +20 +13 -40 +25 +28 +42 +25	7 +			
									-22(Continued on next page)	



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 SEISMOLOGICAL BULLETIN.

No.	Date	Phase	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks.
					AN	AE	AZ		
569	1956 Dec.27	iE	00 22 57	5		+20			
		i(PcP)E	23 04	7		+55			
		iN	23 31	5	+28				
		iE	23 56	7		+41			
		iE	24 26	6		+12			
		iE	24 37	6		+28			
		iSN	24 40	7	+34				
		iN	24 48	6	-46				
		iN	24 56	6	-79				
		iN	25 07	5	+22				
		iE	25 09	6		+70			
		i(sS)N	25 37	6	+38				
		iE	26 06	7		-32			
		i(SS)E	26 23	7		-48			
		iN	26 29	7	+42				
		i(PcS)E	26 36	6		+38			
		i(SSS)N	26 47	9	-85				
		iN	27 07	10	+77*				
		iE	27 16	12		+63*			
		LN	27.4	24					
		iN	27 40	11	+88*				
		iMN	28 39	9	-73*				
		ME	29.8	19		94			
MZ	30.0	15				64			
MN	30.2	12	170*						
i(ScS)E	30 29	6		+87					
iE	31 00	9		+135					
571	27	(iP)N	21 40 02	2	+1				
		e(S)N	47 10	10					
		eSSE	50 37	15					
573	28	MNE	58.7	15	1	1			
		eSN	13 56 09						
574	28	eSSN	59 40						
		iPZ	14 29 28	4			+4	(23:3)	
		iE	29 30	4		+6		Compression Surface focus.	
		iN	29 31	4	-3				
		iz	29 32	4			+12		
		i(PPP)NEZ	30 08	4	+10	-16	+23		
		iz	33 08	4			+16		
		i(S)N	33 37	5	+8				
		eE	33 51						
		iN	33 54	6	-18				
		iE	34 19	6		+26			
		iz	34 20	6			-14		
		i(SS)N	34 23	9	+28				
		iN	34 33	9	-54				
		iE	34 42	7		+42			
		iE	34 57	7		+25			
		iN	35 03	7	+46				
		iN	35 13	7	-50				
		eLRE	35.4	22					
		iN	35 32	8	-44				
		MZ	37.6	16			49		
		MNE	38.2	14	210ca	105			
575	28	(iP)V	21 18 54	1			+	Compression Masked by micro- seisms.	
		e(S)N	24 29						
		eE	24 31						
		eN	27 15	13					
		eLN	28.0	18					
		MN	30.6	14	1				
		ME	33.8	16		2			



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No.	Date	Phase	Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
			h	m	s	s	μ	μ	μ		
579	1956 Dec.29	iE	20	29	39	4		-2			P obscured by microseisms.
		i(PP)E		29	51	4		-2			
		iZ		29	59	3			+4		
		iE		30	01	5		-4			
		i(PPP)E		30	06	4		+4			
		iSN		33	52	5	-3				
		iN		33	58	6	+5				
		iE		34	00	5		+5			
		eLQN		35.7		26					
		(SSS)N		36	09	12					
		eLN		36.7		20					
		eLZ		37.6		25					
		MN		40.2		13	17				
		MZ		41.0		18			18		
ME		41.2		16		20					
iE		56	18	6		+10					
582	31	i(S)N	04	29	01	5	+3				
		iE		29	13	5		-3			
		eLE		31.0		22					
		MN		34.7		13	1				

Minor Activity: 2d 03.4h; 6d 02.0h; 7d 20.9h; 8d 06.1h; 14d 17.6h, 18.3h;  
15d 07.1h; 16d 02.7h, 12.5h, 22.3h; 20d 21.7h; 23d 17.9h; 25d 04.8h, 13.8h;  
27d 14.5h; 28d 02.6h; 29d 03.8h, 07.0h, 20.2h; 30d 05.4h; 31d 03.6h.

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Director.

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