

20 SEP 1972

RIVERVIEW COLLEGE OBSERVATORY

SEISMOLOGICAL BULLETIN

1968



RIVERVIEW, SYDNEY, AUSTRALIA

RIVERVIEW COLLEGE OBSERVATORY.

WORLD WIDE STANDARD SEISMOGRAPH NETWORK

STATION RIV.

SEISMOLOGICAL BULLETIN JANUARY-DECEMBER, 1968.

Lat. 33° 49' 46" S. Long. 151° 09' 30" E. h 21m. Foundation : Triassic Sandstone.

INSTRUMENTS:

U.S.C.G.S. World-Wide Standardized Seismometers:

Benioff Variable Reluctance Seismometer NS, EW, Z.
T₀ 1.0s, T_g 0.75s, Magnification 12,500 at 1.0s.
Sprengnether Long-Period Seismometer NS, EW, Z.
T₀ 15s, T_g 10s, Magnification 750 at 15s.

Galitzin Aperiodic Seismometer NS, EW, Z.

N.B. Benioff readings designated N E Z → S
Sprengnether N' E' Z'
Galitzin N" E" Z" → B
* Amplitudes from Galitzin

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
1	1968 Jan. 2	oP	Z	00 27 02	1.0	μ	μ	μ	km.	Microseisms present USCGS: 5.1 S, 153.4 E H 00 21 10.8 h 55 km. Mag. 5.5 5½-5¾ Golden 5.7-6.0 Berkeley
		e	Z'	27 12					3170	
		i	Z'	27 30	6			-2	2895	
		i	N'N"	27 31	6	+2				
		eS	N'E'	31 46	12	2	2			
		i	N'Z'	32 12	22	+7		-5		
		eL	E'	33 45	34		13			
		eL	N'	33 56	32	7				
		eLR	Z'	34 54	32			5		
		M	N'	37 06	22	10				
		M	Z'	37 23	21			17		
M	E'	38 07	14		12					
2	2	oP	Z	11 49 56		Feeble & masked by microseisms				USCGS: 15.0 S, 167.6 E, H 11 44 51.6 h 127 km., Mag. 4.7
		eS	N'	54 05						
5	3	(P)	Z'	03 11 56						Masked by microseisms USCGS: 4.5 S, 145.1 E, H 03 05 47.7 h 33 km. Mag. 4.8
		e(S)	N'	16 54	14					
		eL	E'	18 55	42					
		eL	N'	19 50	38					
		eL	Z'	20 16	36					
		M	E'	23 34	20		12			
		M	N'Z'	26 42	14	5		8		
8	4	iP	Z	01 10 50.4	0.8			+0.10		Compression. Microseisms present. USCGS: 52.2 N, 171.3 W, H 00 57 44.4 h 36 km. Mag. 5.7 5.6-5.9 Berkeley 6-6½ Palisades, Pasadena
		eP	Z'	10 51	14			1		
		e	N'	21 26	12	½				
		e(S)	E'	21 40	14		½			
		iS	E'	21 52	11		-2			
		e	N'	23 27	20	½				
		e	Z'	23 36	19			1		
		eSS	E'	27 48	26		2			
		eSSS	E'	31 18	28		1			
		eL	E'	35 08	36					
		eL	N'	35 20	40					
M	N'Z'	42.8	24	3		5				
M	E'	47 03	20		3					
9	4	iP	Z	10 32 55.5	1.4			+0.85	2770	Compression. Microseisms present. N' defective. USCGS: 9.9 S, 148.9 E H 10 27 37.7 h 19 km. Mag. 5.4
		iP	N'Z'N'Z"	32 56	9	-3*		+2	2499	
		e	Z'	33 25	14					
		iS	E'	37 14	14		+2			
		i	N'N"	37 16	11*	+16*				
		i	Z'	37 21	14			+4		
		i	E"	37 42	9*		+5*			

Continued

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
9 cont.	Jan. 4	eL Z'	10 39 02	34			6		
		eL N'	39 18	28					
		eL E'	39 29	28		6			
		M E'	42 02	14		29			
		M Z'	43 38	14			23		
		M N''	46 25	11*	20*				
10	6	eP Z'	23 41 42	14					Masked by microseisms
		ePP Z'	46 08	16					
		iSKS N'E'N''E''	52 15	20-	-3	-4			USCGS: 27.8 S, 71.1 W, H 23 27 21.2 h 33 km. Mag. 5.8
		e Z'	55 06	20					
		iPS N'E'	55 21	22	+4	+4			
		i (PPS) Z'	55 26	22			-5		
		i (PPS) Z'	56 14	22			-3		
		e E'	56 16	22			2		
		e N'	56 22	22	2				
		e N'	24 08 17	36					
		e E'Z'	08 30	30			3	3	
		eLQ E'	12 02	48			9		
		eLQ N'	12 08	46	7				
		eLR N'	16 06	32					
		eLR Z'	16 14	32				6	
M N'E'Z'	23 09	20	5	6	9				
11	7	iP Z	10 02 28.5	0.8			+0.12		Compression
		iP N'Z'N''Z''	02 29	10	-2		+3		
		ipP N'Z'	02 56	8	-1		+3		USCGS: 5.1 S, 153.9 E, H 09 56 40.3 h 118 km. Mag. 5.6
		i Z''	03 00	4*			-8*		
		isP N'Z'N''Z''	03 06	8	-3		+4		
		i N'Z'N''Z''	03 33	8	+2		+2		
		e(S) N'E'	07 03	12	2	2			
		i N'	07 20	16	+5				
		i Z'	07 32	10				+3	
		i N'E'	07 42	16	+8	+5			
		i Z'	08 14	18				+4	
		iL E'	09 21	34		+12			
		iL Z'	10 27	36				+27	
		iL N'	10 36	36	+20				
		M E'	11 18	24			16		
M N'Z'	12 32	20	7			10			
M E'	12 39	16			7				
M N'	14 24	16	8						
M Z'	14 36	16				10			
12	7	e Z'	11 23 50		Masked by coda of No. 11				USCGS: 33.5 N, 141.6 E, H 11 12 33.9 h 48 km. Mag. 5.5
		iS E'	32 27	12		-2			
		M E'	51 04	20		3			
		M Z'	51 18	22			4		
		M N'	53 13	20	2				
15	8	iP Z	03 22 10.5	1.0			+0.33	3030	Compression h 0.095
		iP Z'Z''	22 11	5			+3	2793	
		i Z	23 10	1.5			+0.20		USCGS: 13.7 S, 171.5 E, H 03 17 12.6 h 630 km. Mag. 5.2
		i Z	23 28	1.4			+0.19		
		esP Z'	24 57	14			2		
		e N'E'	25 04	18	1	1			
		eS N'	26 09	8	1				5.2-5.6 Berkeley
		e Z'	28 59	16				2	
		e E'	29 02	20			2		
		e N'	29 03	20	1				
M E'Z'	31 16	18			3	4			
M N'	31 58	16	3						
18	8	e Z'	18 45 30						Masked by microseisms
		e E'Z'	19 13 30	16			1		
		e E'	20 08	36					
		eL E'	31 42	36					
		eL Z'	37 28	32					
		M Z'	46 03	16				½	
		M N'	46 16	15	½				
		M E'	47 31	16		½			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
20	1968 Jan. 8	oP	Z'	h	m	s	s	μ	μ	μ	km.	Microseisms present USCGS: 14.8 S, 174.8 W, H 21 54 20.8 h 16 km. Mag. 5.5 6-6 $\frac{1}{4}$ Golden 6.2-6.4 Berkeley
		iPP	Z'	22	01	26					4010	
		i	Z'		02	45	10				3691	
		e	Z'		03	44	7					
		e(S)	E'		06	45	13					
		iS	E'		07	02	13					
		i	Z'		07	06	18				-5	
		i	E'		07	10	16		+8			
		i	Z'		09	46	16				+6	
		iL	N'		09	48	24	-33				
		eiL	E'		09	52	24		+10			
		iL	Z'		11	22	32				+21	
		iL	E'		11	26	32		+18			
		M	N'		11	58	16	21				
L Max.	E'Z'		12.1		32			27	31			
M	E'Z'		17	16	17			21	26			
25	10	(P)	Z	00	49	44						Masked by microseisms
		e	Z		49	49						
		i(S)	NEZ		50	12.8	0.6	-0.10	-0.07	+0.08		
		i	N		50	20.5	0.5	+0.07				
26	10	(P)	Z'	09	37	20	4					Masked by microseisms USCGS: 29.2 S, 177.6 W, H 09 31 40.3 h 64 km. Mag. 5.0
		e	Z'		37	38	12					
		e	Z'		42	19	18					
		e	N'		42	47	9					
		e	N'		43	34	16	2				
		eL	Z'		44	02	28					
		L Max.	Z'		44	46	27				4	
		L Max.	E'		44	54	26		3			
M	N'		45	10	18	2						
M	E'Z'		46	38	18			3	3			
27	10	e(S)	N'	13	59	20	18	$\frac{1}{2}$				Masked by microseisms USCGS: 53.7 S, 134.3 W, H 13 42 06* h 33 km Mag. 4.8
		e	E'		59	24	19		$\frac{1}{2}$			
		e	E'		14	06	09	19		$\frac{1}{2}$		
		eL	Z'		07	12	32					
		M	N'E'Z'		08.7		22	$\frac{1}{2}$	$\frac{1}{2}$		1	
28	11	e(S)	N'	17	10	42		Masked by microseisms				USCGS: 6.9 N, 126.1 E, H 16 55 20.7 h 58 km. Mag. 5.3
		e(SS)	E'		14	02	10		1			
		e	Z'		14	30	16				$\frac{1}{2}$	
		eL	E'		21	02	30					
30	11	(i)	Z	20	58	08.5						Local. Masked by microseisms.
		i	NZ		58	13.5						
		i	N		58	27.3	0.6	+0.16				
		i	E		58	27.6	0.6		+0.23			
		m	Z		58	33	0.8				0.10	
32	13	oP	Z'	07	14	14	7				7110	Microseisms present USCGS: 24.1 N, 122.2 E, H 07 03 39.2 h 8 km. Mag. 5.7 6-6 $\frac{1}{4}$ Golden
		i	Z'		14	21	12				6420	
		eS	N'		22	50	10	2				
		i	Z'		22	52	14				-5	
		i	E'		22	55	14		+3			
		iPPS	N'N''		23	19	4*	+4*				
		e	E'		23	23	24				3	
		i	N'		30	18	18	-3				
		eLQ	E'		30	19	30					
		eL	E'Z'		34	41	38				5	
		M	Z'		40	03	22				5	
M	N'		41	10	19	5						
M	E'		42	16	19				7			
34	13	iPP	Z'Z''	16	26	06	4				-3	Microseisms present USCGS: 24.2 S, 66.9 W, H 16 07 04.2 h 192 km. Mag. 5.7 5 $\frac{1}{2}$ Palisades
		e(SKS)	N'		31	52	20					
		e	N'		33	12	24	1				
		e	E'		33	16	24				1	
		ePS	E'Z'		35	40	18				2	
		e	N'		35	42	18	2				
		ePPS	N'		36	38	18	2				
		e	Z'		36	44	30				2	
e	N'		42	57	26	2						

Continued

No.	Date	Phase & Component	Time (G.M.T.)	Per	Amplitude			Δ	Remarks
					AN	AE	AZ		
			h m s	s	μ	μ	μ	km.	
34 Cont.	1968 Jan. 13	o E'	16 46 56	22		2			
		o N'	46 58	22	2				
		o E'	50 26	32		2			
		o N'E'	54 06	72	8	10			
		o N'	17 01.2	72					
		o Z'	01.3	72					
36	14	iP Z	08 06 35.5	1.5			+0.64	3100	Compression Microseisms present h 0.09 ca.
		ipP Z	08 09	1.5			+0.40	2799	
		osP Z'	09 18	9			2		USCGS: 22.5 S, 179.6 W, H 08 01 27.8 h 610 km. Mag. 5.2
		o Z'	10 32	20			2		
		iS N'N''	10 39	10	+2				
		i E'E''	10 41	10		+3			
		isS N'N''	13 42	16	+4				
		i E'	13 46	7		+1			
		o Z'	13 53	22			3		
		i E'	13 56	10		-2			
		iScS E'E''	16 12	8		+2			
		M Z'	17 54	15			1		
		37	14	iP Z	12 31 44.0				
IP N'E'Z'N'E'Z'	31 45			8	+4	-4	-10	3490	
m <i>AmB</i> Z	31 47			1.2				1.15	USCGS: 7.5 S, 127.9 E, H 12 25 09.7 h 115 km. Mag. 5.9 6 Palisados 6-6 1/2 Pasadona
ipP N'E'Z'	32 06			18	+5	-4	-10		
iPP Z'	32 59			10			+10		
iS N'N''	37 01			18	-36				
i E'E''	37 03			18		+49			
i Z'	37 12			20			+15		
i E'	37 46			18		+24			
i N'	37 57			18	+20				
i Z'	38 17			20			+36		
m N'E'	38.4			20	37	36			
i Z'	39 20			12			+23		
M N'	43.0			20ca	210 ca				
M E'	44.0	20ca		210ca					
M Z'	46.5	20ca			210ca				
38	14	P Z	17 56 19						Masked by microseisms
		i Z	56 24 1/2	0.8			+		
		o(S) E'	18 07 22	14			1		USCGS: 52.7 N, 171.2 W, H 17 43 10.0 h 34 km. Mag. 5.5 Mag 6 - 6 1/2 Golden 6 1/2 Pasadona, Palisades.
		o Z'	08 59	22				2	
		o N'E'	13 50	24	2	2			
		oL E'	20 53	40			3		
		oL Z'	25 24	36				4	
		M Z'	27 42	26				5	
		M E'	27 48	24			2		
		M N'	28 40	24	4				
39	15	(P) Z	02 07 31		Masked by microseisms				USCGS: 12.6 S, 165.6 E, H 02 02 17.9 h 41 km. Mag. 5.0
		o N'	12 10						
		o Z'	12 24	10			2		
		o N'E'	12 26	10	2	2			
40	15	oPKP Z	02 20 50	1.5			0.40		Masked by microseisms
		o E'	34.4						
		o N'	42 06						USCGS: 37.9 N, 13.1 E H 02 01 08.5 h 33 km. Mag. 5.4
		oSS N'E'	43 12						
		oL N'	03 04 14	40					
		M N'E'Z'	18.0	28	1	2	2		
43	16	oPKP Z	17 02 27	1.3			0.14		Masked by microseisms N'E'Z' feeble & masked by microseisms
		o Z'	02 48						
		oSS N'	24 34						USCGS: 37.9 N, 13.1 E, H 16 42 44.3 h 14 km. Mag. 5.1
		(o) E'	28 16						
		o Z'	45 09						
		o N'	46 38						
		oL E'	58 38	34					
44	17	(iP) Z	09 08 09.5	1			+0.12		Masked by microseisms
		e(S) N'	13 11	10					
		o N'	13 23	12	1				USCGS: 10.2S, 150.2 E H 09 03 40.7 h 36 km. Mag. 5.3
		oL E'	14 38	28					
		M N'E'Z'	18.5	13	1	2	1		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
45	19 68 Jan. 17	iP	N'Z'	h m s	s		μ	μ	μ	km.	Compression. Microseisms present USCGS: 56.4 S, 147.0 E, H 19 49 50.7 h 33 km.
		e	Z	09 54 52	8	+1		+1			
		i	Z	55 17							
		iS	E'	55 32.5	1.5			+0.20			
		e	E'	59 07	11		+2				
		eL	Z'	59 36	16		2				
		eL	N'	59 56	27						
		M	N'Z'	10 00 18	24						
		M	E'	01 20	19	5		7			
		M	E'	01 46	17			3			
48	18	e	E'	12 03 21	9			1		Masked by microseisms USCGS: 12.2 S, 166.0 E H 11 53 08* h 38 km. Mag. 5.3	
		e	N'Z'	03 26	9	½		½			
		e	E'	11 28	13			1			
		e	E'	15 42	14			3			
		e	Z'	15 47	20				2		
		eL	N'	18 22	26	4					
		eL	E'	19 34	32			10			
		eL	Z'	19 40	32				11		
		M	N'	20 22	17	4					
		M	E'	21 25	19			7			
M	Z'	21 40	19				10				
49	19	eP	N'Z'Z"	06 10 04	?					P confused by quarry blast on short-period records. USCGS: 9.4 S, 158.4 E H 06 04 38.2 h 33 km. Mag. 6.0 6½-6¾ Golden 6¾ Pasadena, Palisados	
		i	N'E'Z'N"E"Z"	10 10	10	+17	+6	-27			
		i	N'E'Z'	10 58	7	+9	+7	-21			
		i	N'	14 18	10	+8					
		i	E'E"	14 36	16		+42				
		i	Z'Z"	14 45	14			+86			
		i	E'E"	14 47	16		-104				
		m	N'	14 48	16	150ca					
		e(L)	N'	15 22	25	165					
		i	E'	15 36	24			-115			
		eL	Z'	15 51	26						
		L Max.	Z'	16 58	28				120		
		M	N"	18.5	15*	210*ca					
		M	Z'	18 38	18				110		
		M	E'	19 00	15			130ca			
56	20	iP	Z	16 47 37.5	1.0				-0.20	Dilatation USCGS: 16.2 S, 178.1 E H 16 41 27.1 h 21 km. Mag. 5.6 6-6.2 Berkeley	
		iP	N'E'Z'N"E"	47 38	5	+1	+3		-6		
		e	Z	47 42	2.0				0.92		
		i	E'Z'	47 44	5		-2		+4		
		i	Z	47 47	1.3				+0.28		
		iPP	E'	48 34	8			-3			
		i	E'Z'	48 42	11			+4	+4		
		e	N'	52 22	?						
		iS	E'	52 33	14			+11			
		i	N'	52 35	9	+3					
		i	N'	52 45	10	+7					
		i	Z'	52 49	20				+8		
		i	E'	53 00	11			-9			
		i	N'	53 47	14	+7					
		i	Z'	53 53	11				+3		
		iL	N'E'	54 32	22	-35	+22				
		i	Z'	54 36	16				+12		
L	N'	54 52	22	55							
iL	Z'	55 45	30				+31				
L Max.	E'Z'	56 24	26			56	68				
M	N'	57 08	12	30							
58	20	iP	Z	21 26 29.8	0.8				-0.62	2820 2524 USCGS: 29.9 S, 179.5 W H 21 21 31.6 h 349 km. Mag. 5.8 6.3-6.5 Berkeley	
		iP	E'Z'E"Z"	26 30	4		+1	+2			
		i	NE	26 31	0.6	+0.05	+0.16				
		iPP	E'Z'E"Z"	27 34	6		-8	+10			
		iSP	E'Z'E"Z"	28 16	9		-7	+11			
		i	E'	30 26	9		-7				
		iS	N'E'N"E"	30 30	9	-4	-9				
		i	N'	30 48	2.0	+1.56					
		i	Z'	31 00	10				+7		
		i	N'Z'N"Z"	32 34	18	+15			-15		
		i	E'	32 35	12			-6			
		iScS	N	36 44	2.0	-0.41					

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks						
								AN	AE	AZ								
59	1968 Jan. 21	iP	Z	h	m	s	s	μ	μ	μ	km. 3170 2895	Dilatation h 0.01 USCGS: 5.2 S, 154.0 E H 00 28 12.5 h 113 km. Mag. 5.1						
				00	33	59.7	0.7			-0.11								
				i	Z'Z''	34	00 $\frac{1}{2}$	5					+3					
				i	N'N''	34	02	5	-1									
				iSP	Z'Z''	34	31	10					-2					
				oS	E'	38	39	12		2								
				e	N'	38	44	18	2									
				e	Z'	38	51	38										
				oL	E'	40	42	32		7								
				iLR	Z'	41	56	36					+10					
60	21	iP	Z	01	28	15.9	1.0				-0.12	Dilatation USCGS: 8.0 S, 117.6 E, H 01 20 49.7 h 134 km. Mag. 5.3						
				63	21	ePKP	Z'	17	02	08						USCGS: 1.2 S, 14.0 W H 16 42 29.2 h 33 km. Mag. 6.2 Pasadena 6 $\frac{1}{2}$ Palisades 6.5-6.9 Berkeley		
				iSS				E'	23	41			24		+4			
				e				N'	23	49			22	2				
				e				E'	24	58			40		4			
				e				N'	25	00			40	5				
				eSSS				E'	29	00			30		5			
				e				E'	32	53			36		3			
				oL				E'	39	38			50		5			
				e				N'	41	18			50	8				
e	E'	41	30	70					22									
64	21	iP	NZ	23	01	17.0	1.0	-0.06			+0.18	Compression USCGS: 5.0 S, 150.8 E, H 22 55 35.8 h 185 km., Mag. 5.0						
				oS	N'	05	56	22										
				M	E'	11	36	16		1								
				66	22	iP	Z	18	22	04.5			1.3			+0.35	Compression USCGS: 9.8 S, 149.0 E H 18 16 49.8 h 27 km. Mag. 5.3	
				iP				N'Z'N''Z''	22	05			6	-1				+2
				i				N	24	57			1.0	-0.06				
				i(S)				N'N''	26	26			12	+3				
				oL				Z'	28	09			34					
				M				N'E'Z'	32	50			14	5	6			9
				67				22	i	N'N''			19	09	46			10
e	Z'	09	50	14									1					
oL	Z'	11	56	32														
M	N'	13	30	21							3							
M	E'	13	46	19		3												
M	Z'	14	22	20			5											
68	23	(P)	Z	16	20	02		Foeblo.			Microseisms present USCGS: 52.1 N, 171.3 W H 16 06 50.1 h 53 km. Mag. 5.2 5.0-5.4 Berkeley 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades							
				oS	E'	30	56	22										
				e	N'	31	12	12										
				oSS	E'	37	03	24										
				e	N'	37	06	24										
				oL	E'	44.0		36										
				oL	N'	45.0		32										
				M	N'	53	28	21	$\frac{1}{2}$									
				M	Z'	54	08	21				1						
				M	E'	55	09	18		1								
75	26	iP	Z	04	52	56.5	1.0				+0.20	Compression Microseisms present USCGS: 8.8 S, 120.4 E H 04 45 41.4 h 29 km. Mag. 5.9 6 $\frac{1}{2}$ Pasadena 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ Golden 6.5-6.9 Berkeley 6 $\frac{3}{4}$ -7 Palisades						
				i	N'E'Z'	53	12	8	+2	-3			-7					
				i	Z'	54	30	12					+6					
				i	N'	54	36	12	+6									
				o	E'	58	10	22										
				o(S)	N'	58	39	20	6									
				i	N'E'	59	00	12	-26	-13								
				e	E'	59.4		32										
				i	N'	59	43	28	+24									
				m	Z'	05	00	28					32					
m	N'	00	54	26	33													

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
75 cont.	1968 Jan. 26	m	E'	05	01	06	24		37			
		LQ	N'		01.6		55	110ca				
		L	E'		02.0		52		94			
		eL	Z'		03.0		55			61		
		M	N'E'Z'		06.3		26-30	210ca	125	76		
		M	E'		08.4		22		125			
		M	Z'		12.1		14			105		
	26	(P)	Z	19	04	55						Masked by microseisms
79	27	iP	Z	12	56	48.4	0.8			+0.06		Compression
		eL	Z'	13	03.4		24	Feeblo.	Masked by microseisms.			USCGS: 12.5S, 166.5E, H 12 51 23.8 h 57 km. Mag. 4.5
80	27	eP	Z'	14	06	48	10			1		Microseisms present
		eS	N'	15	11		16					USCGS: 23.2 N, 121.6 E
		e	Z'	20	07		18					H 13 56 23.8
		M	N'Z'	32	32		21	1		2		h 53 km.
		M	E'	32	42		20		1			Mag. 5.2
83	29	e	Z	09	28	50						Feeblo. Masked by microseisms.
		e(S)	N'	38	30		10					USCGS: 24.0 S, 115.7 W
		e	N'	49	26		24					H 09 16 31*
		e	E'	49	30		24					h 33 km.
84	29	M	Z'	58	10		20			$\frac{1}{2}$		Mag. 5.0
		eP	Z	10	19	05	1				3170	Microseisms present. N'E'Z' confused
		e	Z'	19	14		11			1	2825	by coda of no.83.
		i	Z	19	21		1			-0.09		
		eS	N'	23	49		16	2				USCGS: 5.6 S, 153.9 E
		e	Z'	23	58		22			2		H 10 13 16.5
		i	N'	24	10		18	-4				h 70 km.
		eL	E'	25	32		34		3			Mag. 5.3
		eL	Z'	27	12		28					
		M	Z'	28	38		22			6		
85	29	M	N'E'	29	08		20	4	4			
		iP	Z	10	30	57.4	2.0			+1.15	8610	Compression
		iP	N'Z'Z''	30	58		14	-4		+12	7725	
		pP	Z	31	08		1.5			0.52		USCGS: 43.6 N, 146.7 E
		i	Z''	31	09		6*			+22*		H 10 19 05.6
		e	NZ	31	12		2.0	0.37		1.93		h 40 km.
		i	N'Z'	31	18		14	-11		+14		Mag. 7.0 Pasadena, Golden
		i	Z''	31	22		5*			+28*		7-7 $\frac{1}{2}$ Palisades
		i	N'Z'	31	24		15	+9		-21		7.7-7.9 Berkeley
		i	N'	40	26		16	+12				
		iS	E'Z'E''	40	45		30		-63	-36		
		i	N'	40	47		30	-40				
		i	N''	41	14		9*	+19*				
		iPS	N'Z'	41	26		22	+65		-39		
		i	N''	41	28		9*	+30*				
		i	N'Z'	42	14		16	+30		-25		
		i	E'	45	16		28			+43		
		iSS	N'	45	40		32	+106				
		i	Z'	45	56		34			+44		
		i	E'	46	15		28			+50		
iLQ	E'	51	40		38			+270				
iL	N'	52	10		32	+60						
L	N'	53	26		26	95						
iL	E'	55	20		25			+110				
i	N'	55	35		22	+53						
iLR	Z'	56	22		32			-127				
L	N'	56	52		26	103						
M	E'	59	26		24			160				
M	Z'	11	00	24	22			200				
M	N'	00	40		22	125						
M	E'	01	36		21			160				
86	29	eP	Z'	15	48	42	7			1		USCGS: 33.8 S, 179.3 W, H 15 43 19*
		eS	E'	53	00		12		1			h 33 km. Mag. 5.1
		e	Z'	53	16		18			1		
		eL	E'	54	41		30					

Continued

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
86 cont.	1968 Jan.29	oLR	Z'	h m s	s	μ	μ	μ	km.	
		M	N'	15 55 04	30			7		
		M	Z'	56 25	19	3				
		M	E'	56 52	19			8		
88	29	oP	Z	57 32	17		6		0.04	USCGS: 5.2 S, 154.2 E, H 16 09 00.9 h 111 km. Mag. 5.0
89	29	oP	Z'	16 14 49	0.8				8640 7728	Microseisms present
		iS	N'E'	16 54 42	5					
		oPS	Z'	17 04 31	13	-1	-1			
		o	E'	05 16	14			½		
		oSS	N'	09 16	24		1			
		oLQ	E'	09 33	22	2				
		M	N'Z'	15 07	26		2			
		M	E'	23 45	22	2		3		
91	30	o(P)	Z'	24 54	22		3			USCGS: 43.5 N, 147.2 E H 16 42 50.4 h 36 km. Mag. 5.7
		oS	E'	02 00 26	10					
		M	E'	10 02	14		1			
		M	N'	27 22	22	1				
		M	Z'	28 32	20					
92	30	o	Z'	29 34	22			1	Masked by coda of no.91	USCGS: 43.3 N, 147.7 E H 18 44 28.6 h 33 km. Mag. 5.1
		oS	E'	03 13 45	4					
		o(L)	E'	23 23	22		1			
		M	E'	34 00	38		3			
		M	N'	38 48	22	1				
		M	Z'	41 24	22					
93	30	iP	Z	41 40	21			1	Dilatation h 0.09	
		iP	Z'Z''	03 51 47.0	0.8			-1.17		
		i	NE	51 47	4			-3		
		iPcP	Z''	51 47.3	0.8	+0.08	-0.26			
		i	Z	53 16	3*			-1*		
		iPP	Z'Z''	53 16.5	1.0			-0.40		
		i	N'N''	53 40	5			+2		
		i	Z'	57 40	3*	+2*				
		i	Z'	57 41	8			+3		
		iS	NEZ	57 41.5	1.3	-0.56	-1.23	+0.32		
		i	E'E''	57 42	12			-6		
		i	Z	57 46.8	1.3			-0.70		
		i	N'N''	57 47	4	+3				
		i	N'	04 00 43	12	-2				
iSS	E'	01 06	12			-4				
o	Z'	01 36	16			3				
M	N'	09 44	14	4						
96	31	(P)	Z'	03 05 14		Feeble.	Masked by microseisms.		USCGS: 6.9 S, 130.3 E H 02 58 29.8 h 22 km. Mag. 5.5	
		oS	N'	10 23						
		M	E'	16 34	20		4			
		M	N'	16 44	20	2				
102	31	o	Z'	22 40 44		Feeble.	Masked by microseisms.			
		o	N'	54 58	22					
		o	N'	23 00 32	20					
		o	E'	07 38	22					
		oLQ	N'E'	08 16	44		2			
		oLR	Z'	12 44	40			2		
M	N'E'Z'	15 48	22	1	1	1				
106	Feb. 1	iP	Z	05 06 21.8	0.8			-0.06	Dilatation. Microseisms present. USCGS: 9.1 S, 123.8 E, H 04 59 24.5 h 13 km. Mag. 5.0	
110	1	(P)	Z	13 34 35		Superposed on large microseisms				
		oT	N	52 25						
112	1	iP	EZ	23 18 26.8	1.0	0.05	+0.09	-0.32	Dilatation. Microseisms present USCGS: 18.5 S, 169.0 E, H 23 13 47.2 h 228 km. Mag 5.1	
		o	E'	22 20	10					
		o	N'	22 23	10					
120	4	o	Z	09 22 46		Masked by microseisms			USCGS: 43.2 N, 147.2 E H 09 10 25.3 h 33 km. Mag. 5.4	
		oS	N'	32 04		Feeble & masked by microseisms				
		oL	N'	49 08		"	"	"		

RIVERVIEW COLLEGE OBSERVATORY

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No.	Date	Phase & Component		Time (G.M.T.)			Por.	Amplitudo			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
121	1968 Feb. 4	a(P)	Z'	11	12	47						Masked by microseisms USCGS: 43.0 N, 147.1 E H 11 00 50.1 h 33 km. Mag. 5.5 5.6-5.8 Berkeley 6 Palisades 6 1/2 Pasadena
		iS	E'	22	27		20		-3			
		e	N'	22	28		20	2				
		o	Z'	22	31		18			1		
		o	E'	27	12		22		2			
		oSS	N'	27	33		20	2				
		e	E'	32	50		22		6			
		oL	E'	33	48		34		6			
		M	E'	43	42		19		3			
		M	N'	45	36		16	3				
		M	Z'	45	48		18			5		
128	7	(P)	Z'	06	11	28		Masked by large microseisms				
		M	NIZ'	19	16			Feeble				
	8	(P)	Z	10	30	50		Masked by microseisms				
140	10	(iP)	Z	16	27	52.2				+		Masked by microseisms USCGS: 17.5 S, 167.8 E, H 16 22 53.8 h 22 km. Mag. 4.2
		e	N'	32	02			Feeble				
		oL	E'Z'	33	48							
145	12	oP	Z	01	34	50		Masked by microseisms				USCGS: 6.5 S, 108.5 E, H 01 26 28* h 180 km. Mag. 5.6
147	12	iP	Z	05	50	35.3	1.0			+0.18		
		iP	N'Z'	50	36		3	-4		+10		Compression USCGS: 5.5 S, 153.2 E H 05 44 47.6 h 74 km. Mag. 7-7 1/2 Pasadena, Palisades 7-7.5 Berkeley
		i	NEZ	50	36.6		1.0	+0.09	+0.05	-0.41		
		m	NEZ	50	41		1.0	0.32	0.12	1.62		
		i	N'E'Z'	50	41		16	+67	+8	-89		
		i	N'E'Z'	51	48		14	+43	+10	-41		
		i	E'	52	40		12		+17			
		o	N'	54	58		18	27				
		i(S)	E'	55	21		20ca		+74			
		i	Z'	55	26		22ca			+240ca		
		i	N'	55	28		22ca+220ca					
		iSS	Z'	56	42		16			-73		
		iSSS	E'	57	05		32ca		+250ca			
		LR	E'	58	04		34ca		300ca			
		M	Z'	06	01.2		20ca			220		
		M	N'E'	04.0			14	200ca	115			
		M	E'	06			14		160			
		F	Z'	12	20	ca						
149	13	iP	Z	02	19	09.2	1.0			-0.24		Dilatation USCGS: 5.5 S, 131.1 E, H 02 12 31.5 h 67 km. Mag. 5.8
		M	E'	30	52		18		1			
		M	Z'	32	52		16			1		
157	14	o(S)	E'	11	50	08		Masked by microseisms				USCGS: 37.2 S, 78.0 E, H 11 32 03* h 33 km. Mag. 5.4
		oL	N'	56	24		26					
		oL	Z'	59	20		30					
		M	N'E'Z'	12	01.0		23	1	1	1		
159	15	o(S)	N'	02	34	14	10	Masked by microseisms				
		oL	Z'	35	10		32					
		M	E'	36	36		24		1			
		M	Z'	36	52		24			1		
		M	N'	37	24		18	1				
161	15	oP	Z'	05	59	06		Masked by microseisms				USCGS: 32.5 S, 179.6 W, H 05 53 41* h 6 km. Mag. 4.8
		o(S)	N'	06	03	28						
		o	N'	03	41		13	2				
		oL	E'	04	12		32					
		oL	Z'	05	10		32					
		M	E'	06	02		22		3			
		M	Z'	06	18		22			3		
		M	N'	06	34		18	2				
164	16	(P)	Z	14	35	10		Masked by microseisms				USCGS: 49.7 N, 147.7 E, H 14 23 42.6 h 582 km. Mag. 4.7
		i	Z	35	10.7		1.0			-0.05		
166	17	oP	Z	17	27	32		Masked by microseisms				USCGS: 4.4 N, 127.7 E, H 17 19 31.8 h 98 km. Mag. 5.6
		oL	E'	42.1			24	Feeble				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
					AN	AE	AZ			
168	1968 Feb. 18	iP	Z	h m s				km.	Compression	
		i	NZ	09 35 44.7	1.0					+0.14
		i		37 16	1.0	+0.05				-0.08
		iPP	N'E'Z'	37 18	5	-1	+1			+1
		e	Z'	40 18	5					1
		e	Z'	40 38	7					1
		iS	N'	40 44	14	+3				
		i	E'	40 47	14		-4			
		o	Z'	41 08	(30)					
		e(sS)	E'	43 11	13		1			
		e	N'	43 17	12	1				
		e	N'	43 35	12	1				
		e	Z'	43 40	12					2
		m	N'Z'	44 00	18	2				3
		eL	Z'	49.2	30					
M	N'	51 30	19	1						
M	E'Z'	52.0	19		2	2				
173	19	eP	Z	14 01 01				3170 2895	Microseisms present	
		i	Z'	01 05	12					+1
		e	N'Z'	02 02	12	1				1
		eS	N'	05 45	14	1				
		e	E'	05 53	11		1			
		e	Z'	06 05	12					
		i	N'	06 08	16	+5				
		i	Z'	06 13	14					+4
		e(LQ)	E'	07 14	32		2			
		M	E'	11 16	16		6			
M	N'Z'	11 51	18	5		8				
174	19	ePKP	Z'	23 04 56	14				USCGS: 39.4 N, 25.0 E H 22 45 41.2 h 7 km. Mag. 6.4-6.7 Borkoloy 7 1/2-7 1/2 Golden, Palisados, Pasadena.	
		ePKS	Z'	08 36	12					+4
		e	E'	08 49	20		2			
		i	E'	09 51	22		+4			
		o	E'	21 15	34					
		i	Z'	21 18	26					-10
		e	E'Z'	23 09	32		9			8
		iSS	Z'	25 41	20					-10
		e	E'	25 44	20		10			
		i	N'	25 45	22	-12				
		e	N'	26 18	62	21				
		i	E'	26 44	60		-35			
		iSSS	E'	31 25	30		-20			
		i	E'	32 40	34		+22			
		i	E'	35 00	26		+20			
		i	Z'	38 46	30					+17
		eL	E'	41 05	60		41			
		iL	E'	43 56	56		+77			
		L	N'	49 56	40	82				
		LR	Z'	51 16	48					58
L	E'	52 16	46		72					
L	Z'	53 40	40			67				
M	N'	24 05 28	21	39						
M	E'	05 42	21		54					
M	Z'	06.0	21			64				
F	Z'	28.2								
178	21	e(S)	E'	02 04 56	14	Masked by microseisms			USCGS: 32.0 N, 130.6 E H 01 44 50.5 h 3 km. Mag. 5.0	
		e	N'	05 02	14					
		e(PPS)	N'	05 38	30					
		eL	Z'	13 06	27					
		eL	E'	14 54	38		2			
		M	N'Z'	22 00	24	2		2		
		M	E'	22 50	20		2			
M	N'Z'	23 42	22	2		3				
180	21	(iP)	Z'	09 04 55				Masked by microseisms USCGS: 4.0 S, 128.5 E H 08 57 49.1 h 18 km. Mag. 5.2		
		eS	E'	10 42	10		2			
		e	N'	10 44	10	1				
		e	N'	12 24	28	1				
		eL	N'	14 14	48					

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RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitudo			Δ	Remarks
							AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.
180 cont.	1968 Feb. 21	oL	E'	09	14	22	46				
		oL	Z'		14	54	46				
		M	N'E'		17	22	22	2	4		
		M	N'E'		19	00	16	3	4		
		M	Z'		20	30	20			4	
181	21	(pP)	Z	12	43	22		Masked by microseisms			USCGS: 7.0 N, 126.8 E H 12 34 42.7 h 39 km. Mag. 5.3
		oS	N'		50	03	10	1			
		M	N'Z'		13	05	40	18	1	1	
		M	E'		06	10	18		1		
182	21	iP	EZ	19	32	41.0	1.0		+0.06	-0.19	Dilatation Microseisms present USCGS: 30.2 S, 179.0 W, H 19 27 30.0 h 228 km. Mag. 5.0
		i	Z		32	45.6	1.0			+0.19	
		o	N'		38	40	?				
184	22	iP	N'E'Z'	02	05	37	6	-5	+5	-5	Dilatation Large microseisms on all records. USCGS: 44.4 S, 167.6 E H 02 01 46.1 h 33 km. Mag. 5.6
		i	NEZ		05	42	2.0	+0.78	-0.83	+1.75	
		i	N'E'Z'		05	44	10	+4	-4	+5	
		i	E		08	33	1.5		+0.30		
		o(S)	N'		08	53	?				
		o	E'		08	56	16		3		
		o(LQ)	N'		08	57	28	11			
		o	Z'		08	58	28			11	
		i	E'		09	11	10		-6		
		iLR	E'		09	24	19		+21		
		iLR	Z'		09	26	23			-31	
		i	N'		09	40	16	+22			
		LR Max.	Z'		09	48	22			35	
		i	E'		09	54	16		+21		
T Max.	E		22	16	0.6		1.00				
T Max.	NZ		22	26	0.6	2.08		2.45			
185	22	(o)	Z	02	17	27		Masked by large microseisms			
		o	Z		18	00					
		T Max.	E		33	36	0.6		0.11		
		T Max.	N		33	39	0.6	0.20			
		T Max.	Z		33	43	0.6			0.18	
186	22	P	Z	09	18	55		Masked by microseisms			USCGS: 21.8 S, 179.7 E, H 09 13 47.8 h 566 km. Mag. 4.7
		o	N'		26	04					
188	22	o(P)	N'Z'	19	22	41	6	Masked by microseisms			
		o	N'		27	06					
		oL	E'		27	49	32				
		L Max.	E'		28	34	20		4		
		oL	Z'		28	50	34				
		M	E'		33	45	11		4		
189	23	oP	Z'	02	18	03	8			1	Microseisms present USCGS: 22.2 S, 170.2 E H 02 13 24.5 h 20 km. Mag. 4.9
		o	N'E'		18	04	8	1/2	1		
		o	E'		18	27	8		1		
		o(S)	N'		21	49	16	1			
		i	Z'		22	02	10			-3	
		i	E'		22	05	14		+2		
		oL(Q)	N'		22	12	32	2			
		oL	Z'		22	36	32				
		oL	E'		22	54	28				
		L Max.	Z'		23	30	26			4	
		L Max.	E'		23	36	28		4		
M	N'		25	39	13	3					
192	24	o(P)	Z'	01	16	51		Masked by microseisms			USCGS: 32.5 S, 177.7 W H 01 11 11.6 h 21 km. Mag. 5.4
		o	E'Z'		21	24	(16)				
		o	N'		21	36	12	1			
		o	N'		22	16	30	2			
		oL	E'		23	13	32				
		oLR	Z'		23	26	32				
		L Max.	E'		24	00	28		3		
		L Max.	Z'		24	23	26			4	
		M	N'Z'		26	20	19	2		4	
		M	E'		26	28	19		3		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
193	1968 Feb.24	(P)	Z	04 49 24		Masked by microseisms				
		o	Z'	53 23	20					
		T Max.	NE	05 06 05	0.6	0.41	0.21			
		T Max.	Z	06 13	0.6			0.40		
195	24	iP	Z	19 51 00.3	1.0			+0.06		Compression Microseisms present
		i	Z	51 21	1.3			+0.17		USCGS: 14.8 S, 166.0 E, H 19 45 51.9
		o	N'	55 51	18	Fooble				h 23 km. Mag. 4.7
196	25	o(SKS)	N'	18 31 40	12	Masked by microseisms				USCGS: 51.4 N, 176.0 W
		o	E'	32 13	12					H 18 08 19.9 h 50 km.
		M	N'Z'	53 08	20	½		½		Mag. 5.3
										5½-5½ Palisades, Goldon
198	26	P	Z	06 01 11		Masked by microseisms				
		i	Z	01 21						USCGS: 44.5 S, 167.5 E
		oL	Z'	05 18	20	Fooble				H 05 57 19*
		T Max.	NEZ	18 05	0.6	0.14	0.07	0.13		h 33 km.
199	26	iP	Z	11 00 44.8	1.5			+	6980	Compression
		iP	Z'	00 45	15			+25	6298	
		iP	N'E'	00 46	15	-12	+20			USCGS: 22.7 N, 121.5 E
		i	Z	00 48.3	1.4			+1.04		H 10 50 16.7
		isP	Z	01 00	?			-		h 24 km.
		iPP	N'E'	03 04	16	-6	+4			Mag. 6.7-6.8 Borkoley
		iPP	Z'	03 05	16			+7		6½ Pasadona
		iPPP	N'E'	04 38	16	-4	+4			6½-7 Palisades
		iS	N'E'	09 10	13	+5	+6			7½-7½ Goldon
		i	N'E'	09 30	25	+41	+30			
		iSSS	E'Z'	16 06	26		+23	+19		
		iSSS	N'	16 12	26	+22				
		M	E'	23 06	20		48			
		M	N'	24 30	20	30				
		M	Z'	24 44	22			43		
		M	N'	32 16	20	41				
		M	Z'	32 32	22			48		
		M	E'	33 08	18		31			
202	27	o	Z	05 27 43		Masked by microseisms				
		o	N'	34 19	22	2				USCGS: 12.2 N, 140.7 E
		o	E'	38 08	24		3			H 05 19 00.5
		o	Z'	39 02	20			2		h 19 km.
		oL(Q)	E'	39 26	42					Mag. 5.5
		L	N'E'	40 32	52&38	10	13			
		oL	Z'	42 03	37			5		
		M	N'	42 36	22	6				
		M	E'	44 15	19		7			
		M	Z'	48 30	16			6		
203	27	o	Z	11 03 17		Masked by microseisms				
		oS	N'	10 00	16	2				USCGS: 12.1 N, 140.6 E
		o	N'	10 14	22	2				H 10 54 38.5
		o	N'	13 30	15	2				h 33 km.
		o	Z'	13 36	20			2		Mag. 5.4
		oL	E'	15 51	32		4			
		oL	N'	16 25	(32)					
		oL	Z'	16 58	40					
		L	N'	18 10	34	6				
		L	Z'	18 38	34			7		
		M	Z'	20 52	22			6		
		M	N'	21 22	21	6				
		M	E'	21 33	18		4			
204	28	iP	Z	12 18 23.5	1.0			-0.22		Dilatation
		i	Z'	18 24	10			+1½		USCGS: 32.9 N, 137.7 E,
		iS	E'	26 55	12		+6			H 12 08 01.5
		i	E'	27 55	12		+4			h 349 Km.
		o	E'	29 02	20		3			Mag. 5.8
										5.8-6.2 Borkoley
206	29	iP	Z	10 26 53.3	1.5			-0.26		Dilatation
		o	N'	31 32	?					USCGS: 6.9 S, 155.7 E, H 10 21 15.8
		o	N'	32 06	12	1				h 80 km. Mag. 5.0

continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
206 cont.	1968 Feb. 29	θ L	Z'	10	33	02	30					
		θ L	E'		33	12	28		1			
		M	Z'		34	48	24				2	
		M	N'		35	28	22	1				
207	29	θ (S)	E'	12	10	34	10		1			Masked by microseisms
		θ (S)	N'		10	35	10	1				
		θ L	Z'		13	17	22					
		M	E'		13	18	18		6			
		M	N'		13	27	18	2				
		M	Z'		15	14	20				2	
208	29	θ P	Z	14	25	14		Microseisms present				
		θ	N'		29	45	12	1				USCGS: 9.0 S, 153.7 E H 14 19 48.4 h 14 km. Mag. 4.9
		θ	E'		30	04	11		$\frac{1}{2}$			
		θ L	E'		31	20	26					
		θ L	Z'		31	40	30					
		M	N'Z'		33	42	18	1			1	
		M	E'		34	07	14		2			
209	29	iP	Z	16	39	28.7	1.5			-0.24		
		θ S	E'		45	47	11					
		i	N'E'		45	56	13	+2	-2			
		θ	N'E'Z'		46	22	24	3	3		1	
		θ	E'		49	08	12		2			
		θ L	E'		51	34	50					
		θ L	Z'		51	52	46				5	
		θ L	N'		52	10	42					
		M	N'E'		56	38	24	7	6			
		M	E'Z'		17	00	00	17	6		6	
		211	29	iP	Z	23	41	09.2	0.8			+0.34
i	NE				41	09.5	0.8	+0.04	+0.08			
P	Z'				41	09.2	6				1	
θ	N'				45	18	10	1				
θ	E'Z'				45	32	10				1	
Following phases confused by calibration pulses												
212	March 1	(θ P)	Z'	10	29	40		Masked by microseisms			USCGS: 54.9 S, 131.9 W H 10 19 58* h 33 km. Mag. 4.9	
		(θ S)	N'		37	23						
		θ	N'E'Z'		37	36	16	1	1			
		θ LR	Z'		45	36	31					
		L Max.	N'E'Z'		46.4		28	2	1			3
214	2	(P)	Z	11	26	44		All records feeble & masked by microseisms			USCGS: 60.7 S, 25.5 W H 11 14 01.1 h 33 km. Mag. 5.3	
		θ	N'		38	15						
		θ	N'		44	06						
		θ	E'		49	22						
		M	N'		12	01	24	22				
216	2	θ P	Z	22	14	23		Masked by microseisms			USCGS: 6.1 S, 71.4 E H 22 02 24.8 h 33 km. Mag. 5.6	
		i	Z		14	25	1.0					+0.07
		θ SKS	E'		24	24	10		1			
		θ	N'		24	27	10	1				
		θ L	N'		36	00	36	2				
		M	N'		38	58	22	3				
		M	Z'		42	36	18					2
		M	E'		46	10	19		2			
217	2	θ (P)	Z	23	45	13		Confused by calibration pulse			USCGS: 4.0 N, 128.0 E, H 23 37 15.2 h 129 km. Mag. 5.2	
218	3	iP	Z	03	37	34.2	0.9			-0.10	Dilatation USCGS: 19.4 S, 169.5 E, H 03 32 57.1 h 211 km. Mag. 5.1 5.2-5.4 Bork.	
		i(pP)	Z		38	14.2	1.2			+0.10		
219	3	θ P	Z	12	08	30		Masked by microseisms			USCGS: 23.5 S, 179.9 E, H 12 03 29.3 h 556 km. Mag. 4.9	
220	3	iP	Z	23	03	09.2	0.8			+0.26	5160	Compression h 0.09 USCGS: 1.6 N, 122.6 E H 22 55 36.8 h 435 km. Mag. 5.5
		iP	N'E'Z'		03	10	8	-4	+4	+11	4694	
		i	NEZ		03	10.8	1.2	+0.19	-0.24	-1.60		
		i(pP)	N'E'Z'		04	58	8	+5	-6	-14		

continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.
220	1968										
cont.	March 3	i	Z	23	04	59	2.0			+6.67	
		iS	N'E'	09	14		10	+12	+17		
		i	Z'	09	16		8			+10	
		i(sS)	E'	12	20		10		+5		
		i	E'	12	38		11		+7		
		i(SS)	Z'	12	46		16			+9	
		i	Z'	14	31		10			-5	
		i	Z'	14	45		18			-8	
		M	E'	19	09		22		12		
		M	Z'	22	28		20			12	
		M	N'	22	50		16	12			
223	5	oP	Z'	18	25	24					5500
		o	Z'	25	33		8				4995
		iS	N'	32	28		21	-11			
		i	E'	32	34		16		+3		
		o	N'	35	50		15	6			
		oSS	E'	35	53		20				
		i	E'	36	08		13		+7		
		i	Z'	36	13		18			+8	
		i	E'	36	37		20		+6		
		oL	Z'	40	44	(36)					
		M	N'	43	00		22	11			
		M	E'	45	08		20		12		
		M	Z'	47	46		20			12	
224	5	(iS)	Z	21	25	56					
		i(S)	N'	29	22		10	+2			
		oL	E'Z'	30	53		26		1	2	
229	7	oP	N'Z'	13	28	06	9	1		3	3090
		iS	N'Z'	28	20		10	-7		+8	2728
		iPP	N'	28	53		10	-2			
		i	N'Z'	28	58		10	+2		-2	
		i	N'Z'	29	08		14	+3		-3	
		o	E'	29	23		14		1		
		iS	N'	32	45		14	+22			
		i	E'	33	04		18		+6		
		i	Z'	33	06		20			+48	
		m	N'	33	24		22	78			
		iSS	Z'	34	03		16			+10	
		i	E'	35	07		18		+30		
		LR	Z'	35	55		40			48	
		M	E'Z'	39	06		18		63	85	
		M	N'	39	24		18	64			
230	8	iP	Z	11	49	17.8	0.5			+0.04	
		i	NEZ	49	18.5		0.5	-0.16	-0.38	+0.68	
		m	NEZ	49	20		0.5	0.86	1.08	1.10	
		i	E'Z'	49	22		5		+4	+3	
		iS	E'	49	40		2		-20		
		iS	N'	49	41		2	+26			
		i	Z'	49	42		2			-11	
		L	Z'	49	48		7			8	
		M	N'	49	49		4	14			
		M	E'	49	52		6		8		
231	8	o(P)	Z	11	58	22					
		o(S)	N	58	44						
		i	N	58	45.5		0.5	-0.05			
		i	E	58	46		0.5		+0.09		
232	8	o(P)	Z	12	50	48					
		o(S)	NE	51	11						
233	8	iP	EZ	13	25	11.0	0.4		-0.02	-0.04	
		iS	NE	25	33.5		0.5	+0.04	+0.05		
		i	NE	25	35.5		0.5	+0.09	+0.09		
235	8	iP	EZ	15	49	11.5	0.4		+0.04	+0.08	
		oS	E	49	34		0.5				
		m	NEZ	49	36		0.6	0.24	0.20	0.15	

Compression.
Felt at Orango, Bathurst, Canberra
& Sydney.
USCGS: 34.1 S, 149.0 E
H 11 48 45.7
h 6 km.

Very small & masked by microseisms
Aftershock of no. 230

Aftershock of no. 230

Aftershock of no. 230

Aftershock of no. 230

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
							μ	μ	μ	km.		
237	1968 March 8	e(P)	Z	18 57 08.2			Masked by microseisms				Aftershock of no. 230	
		e(S)	N	57 31								
		m	NE	57 33	0.4	0.08	0.08					
238	8	(P)	Z	20 05 56.2			Masked by microseisms				Aftershock of no. 230	
		m	NE	06 21	0.4	0.10	0.08					
240	9	iP	Z	03 25 10.7	0.8				+0.19		Compression Larga microseisms	
		i	Z	25 16	1.0				+0.26		on N'E'Z'	
		i	Z'	25 22	5				+2			
		o	N'	29 58	24	2					USCGS: 5.6 S, 154.0 E	
		o	Z'	30 08	22					2	H 03 19 23.7	
		o	E'	31 48	20			2			h 86 km.	
		o	N'	31 58	24						Mag. 5.7	
		oLR	Z'	32 43	34							
		M	Z'	34 04	27					5		
		M	N'	34 10	27	4						
		M	E'	35 06	16			3				
244	10	iP	Z	04 02 28.3	1.1				-0.25		Dilatation	
		oS	N'	13 15	12	Fooble					USCGS: 52.1 N, 177.3 W	
		o	N'	14 56	22	"					H 03 49 25.0 h 7 km.	
		oL	Z'	30 38	32	"					Mag. 5.4	
		oL	E'	30 44	32	"					4.8-5.1 Berkeley	
		oL	N'	30 50	32	"					5.4-5.3 Palisades	
245	10	iP	Z	07 16 26.5	2.0				+0.28	2620	Compression h 0.01 ca.	
		iP	E'Z'	16 27	6		-2		+3	2396		
		i(pP)	Z	16 44.0	1.8				+0.70		USCGS: 36.3 S, 179.4 E	
		e	Z'	16 50	8				1		H 07 11 22.1	
		i(sP)	Z	16 59.5	1.2				+0.29		h 76 km.	
		i(PP)	E	17 06	1.7		+0.39				Mag. 5.7	
		e	E'	17 07	13		1				5.4-5.7 Berkeley	
		oS	N'	20 30	?							
		o	Z'	20 40	25							
		o	E'	20 56	22			2				
		iS	N'	21 07	14	+3						
		iSS	Z'	21 24	10				+2			
		i	N'	21 28	12	-4						
		oL	Z'	21 58	38							
		M	N'E'	23 01	28	3		4				
		M	Z'	23 08	25					6		
247	11	iP	Z	08 33 24.0	1.2				+0.30	3960	Compression h 0.01	
		iP	E'Z'	33 24	8		-1		+2	3596		
		ipP	Z'	33 47	6				+4		USCGS: 16.2 S, 173.9 W	
		i	Z	33 49.5	1.0				+0.16		H 08 26 32.8	
		iPP	E'Z'	34 52	7		-7		+9		h 112 km.	
		i	N'	34 54	7	-2					Mag. 6.0	
		i	Z'	35 12	7				+8		6-6.3 Berkeley	
		i	N'E'	35 16	7	+2	+9				6.2-6.4 Pasadena	
		i(S)	Z'	38 52	20				+6			
		iS	E'	38 54	18			+7				
		i	E'	39 22	15			-7				
		o	N'	39 35	15	4						
		i	Z'	39 44	16				+6			
		i	N'Z'	41 43	17	+9			+11			
		i	E'	42 13	14			+8				
		i	Z'	42 20	17					-25		
		i	N'	42 28	18	+18						
		iL	E'	43 58	38			-21				
		iL	Z'	44 04	42				+38			
		M	N'	46 28	12	18						
		M	Z'	48 44	15					11		
249	12	oP	Z'	18 30 20							Masked by microseisms	
		o(S)	N'	35 54	10	1/2						
		oL	N'	38 14	28	4					USCGS: 14.9 S, 176.9 W	
		M	Z'	40 14	20				2		H 18 23 34.1	
		M	E'	41 14	20			1			h 33 km.	
		M	N'	41 58	13	3					Mag. 5.3	

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
							μ	μ	μ		
250	1968 March 12	oP	N'	h	m	s	Masked by microseisms				USCGS: 6.1 S, 150.3 E H 21 24 27.1 h 47 km. Mag. 4.8
		o	Z'	21	30	14					
		o(S)	N'	34	56	20	3				
		o	Z'	35	10	16			2		
		oL	Z'	37	54	34					
		oL	N'	38	04	34					
		M	E'	39	40	17		2			
		M	N'	39	50	21	3				
		M	Z'	41	42	16			4		
251	13	iP	Z'	00	04	16.0	0.5		+0.02		Aftershock of no. 230
		i	E	04	16.5	0.5		+0.02			
		o(S)	N	04	38	0.6					
		i	NE	04	39.5	0.4	-0.07	-0.06			
		i	NE	04	40.5	0.4	+0.14	-0.13			
		i	Z	04	41.2	0.6			+0.06		
255	13	oP	Z	20	31	03.5					Microseisms present USCGS: 20.5 S, 178.1 W H 20 25 32.1 h 520 km. Mag. 5.0 5.1 -5.5 Borkoley
		i	Z	31	04.4	1.0			+0.16		
		iPP	E'Z'	32	32	6		+1	-1		
		iS	E'	35	28	10		+2			
		M	E'	38	27	16		1			
		M	Z'	38	48	12					
256	14	o	E	00	46	45	0.7	Very small			Victoria ?
		o	NEZ	47	01	0.8	0.02	0.03	0.03		
257	14	o	N	18	03	41	Very small.	Masked by microseisms			Aftershock of no.230
258	14	o(P)	Z'	18	51	05	Masked by microseisms				USCGS: 27.9 S, 176.8 W H 18 45 11.6 h 30 km. Mag. 5.2
		o	Z'	51	12						
		o	E'	55	58	16					
		o	Z'	56	07	18					
		oL	Z'	58	10	36					
		M	E'Z'	59	32	23		3	4		
		M	E'Z'	19	00	48	18	3	4		
		M	N'	01	00	14	3				
259	14	iP	EZ	23	59	32.6	0.4	-0.10	-0.19		Dilatation Aftershock of no. 230
		S	N	59	55		Confused by time pips				
		i	Z	59	55.5	0.5			+0.16		
		i	E	59	56.0	0.5		-0.35			
		m	NEZ	59	58	0.5	0.62	0.57	0.30		
261	15	o(P)	Z'	06	43	25	Feeble				USCGS: 41.9 S, 88.4 E H 06 34 31.9 h 33 km. Mag. 5.2
		i(S)	E'	50	34	19		+3			
		i	N'Z'	50	38	14	+1		1		
		o(SS)	Z'	54	12	14			1		
		o	N'	55	45	28					
		oLR	Z'	57	28	30					
		LR Max.	E'Z'	58	20	30		4	5		
		M	N'	59	10	21	4				
		M	E'Z'	07	01	24	18	4	4		
262	15	(P)	Z	09	39	55	Masked by microseisms				USCGS: 21.3 S, 169.5 E H 09 35 10.5 h 50 km. Mag. 4.8
		o	Z'	40	02	6			$\frac{1}{2}$		
		o(S)	N'	43	42	11	1				
		o	Z'	43	54	16			1		
		M	Z'	45	30	21			1		
		M	E'	45	35	24		1			
		M	N'	45	58	18	$\frac{1}{2}$				
264	17	i	NE	00	19	29.3	0.5	+0.02	0.01		Aftershock of no. 230
265	17	o	NE	03	18	54.2	0.5	0.02	0.02		Aftershock of no. 230
266	17	(oP)	Z'	04	08	34	Feeble. Masked by microseisms				USCGS: 10.5 S, 161.4 E H 04 03 13.3 h 39 km. Mag. 5.4
		iP	Z	08	36.7	1.1			+0.15		
		o	Z'	08	49	6			1		
		o	N'Z'	13	10	14	1		1		
		oL	E'	14	02	30		1			
		oL	N'	14	15	30	2				
		oL	Z'	14	38	28					
		M	E'	15	24	22		1			
		M	N'Z'	16	13	21	2		2		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitudo			Δ	Remarks
						AN	AE	AZ		
267	March 17	o	Z'	20 22 47						Masked by microseisms
		i	Z	22 48.8	1.0			+0.06		
		o	Z'	24 24	14			½		USCGS: 3.4 N, 128.1 E
		o	N'	24 35	14	½				H 20 14 32.8
		o	N'	28 44	(28)					h 62 km.
		o	E'	32 24	12		1			Mag. 5.7
		o	N'	32 26	12	1				
		oL	Z'	34 42	52					
		M	E'	39 13	19		2			
268	18	iP	Z	07 28 09.6	1.0			+0.13		Compression. Microseisms present
		o	Z'	30 52	?					USCGS: 23.2 S, 179.8 W
		iS	E'	32 13	10		+1			H 07 23 02.6
		o	N'	32 16	8	½				h 522 km.
		i	N'	35 06	18	-2				Mag. 5.0
271	19	oP	Z'	01 42 50	8				1	Microseisms present
		o	N'	48 39	8	1				
		i	E'	48 42	20		+2			USCGS: 17.4 S, 172.8 W
		o	Z'	48 46	20				2	H 01 35 49.2
		oSSS	N'	51 17	22	2				h 33 km.
		oL	Z'	52 42	24					Mag. 5.2
		i	E'	53 21	10		+3			6½-6¾ Goldon
		L	E'	53 34	23		4			
		M	Z'	57 24	17				9	
		M	E'	57 30	17		8			
274	19	(PKP)	Z	02 38 56		Masked by microseisms				USCGS: 15.1 N, 60.5 W, H 02 19 12.7
		(P)	Z	13 15 16		Masked by microseisms				h 55 km. Mag. 5.1
		oP	Z'	19 23 40		Masked by microseisms				Masked by microseisms
276	20	o(S)	N'	28 28						USCGS: 26.4 S, 177.4 W
		o	Z'	28 32	14					H 19 17 46.8
		oL	E'Z'	30 44	30		1		2	h 23 km.
		L Max	E'Z'	31 30	26		1			Mag. 5.1
		M	E'	34 54	16					
		M	N'	35 01	12	2				
		M	Z'	37 20	15				2	
278	21	P	Z	06 10 51		Masked by microseisms				USCGS: 5.8 N, 125.6 E, H 06 02 40*
		o(P)	Z	12 25 56	Fooble. Masked by microseisms					USCGS: 51.4 N, 177.7 E
		o	Z	26 10	0.8				0.03	H 12 13 08.4
		oL	Z'	54 10	26					h 45 km.
280	21	M	N'	13 10 00	20	1				Mag. 5.1
		M	E'Z'	12 30	21		½		½	
		M	Z	06 10 51		Masked by microseisms				USCGS: 5.8 N, 125.6 E, H 06 02 40*
281	22	oP	Z'	15 03 43		Fooble. Masked by microseisms				USCGS: 21.1 S, 174.0 E
		o	E'	08 10	14					H 14 58 31.6
		oL	E'Z'	10.0	25					h 41 km.
		M	N'	10 40	20	½				Mag. 4.4
282	22	M	Z'	11 22	20				½	
		oS	E'	09 30 32	12		1			Masked by microseisms
		o	N'	30 42	10					
		o	Z'	35 13	20					USCGS: 13.1 N, 145.5 E
		oL	E'	35 30	28					H 09 15 12.3
		M	E'	37 14	26		4			h 50 km.
		M	N'Z'	41 16	18	1			2	Mag. 5.4
282	22	M	N'Z'	43 26	18	2			2	4.9-5.3 Berkeley
		oS	N'	19 30 38	12	1				Masked by microseisms
		o	Z'	31 03	20					
		oL	Z'	33 46	34					USCGS: 3.7 S, 152.0 E
		M	Z'	35 34	24				4	H 19 19 29.3
		M	N'	35 40	25	3				h 14 km.
M	E'	37 08	15		4			Mag. 5.0		

No.	Date	Phase & Component		Time (G.M.T.)		Par.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
285	1968 March 24	(PKP)	Z	07	32	30		Masked by microseisms				USCGS: 1.3 S, 24.2 W, H 07 12 47.4
		eL	Z'	08	20	6		"	"	"		H 33 km. Mag. 5.4
286	24	eS	E'	16	18	56		Masked by microseisms				USCGS: 32.1 N, 130.6 E
		oL	E'		28	56	36					H 15 58 49.0
		M	E'		36	46	20		1			h 4 km.
		M	N'Z'		37	40	22	1		1		Mag. 4.9
289	25	iP	EZ	01	11	38.5	0.5		+0.03	+0.04		Compression. Aftershock of No.230
		eS	N	12	00	5	0.5	0.03				Canberra: 34°11'S, 149°09'E, Mag.3½
		i	NE	12	01	5	0.4	-0.04	-0.07			
		i	NE	12	02	2	0.4	-0.21	+0.11			
290	25	iP	Z'	03	01	23.3	1.3			+0.21		Compression Microseisms present
		e	Z'		01	26	?					
		o	E'		01	44	16					USCGS: 20.0 S, 169.8 E
		iS	N'		05	18	14	-2				H 02 56 37.1
		i	Z'		05	22	17			-1		h 21 km.
		M	Z'		07	05	24			2		Mag. 5.0
		M	N'		07	33	18	1				
		M	E'		08	01	20		2			
292	26	iP	NEZ	00	49	06.5	0.8	+0.12	-0.34	-1.60	4680ca	Dilatation h 0.08 ca.
		iP	Z'		49	07	3			-1	4291ca	
		i	Z		50	04.7	0.7			-0.22		USCGS: 6.6 S, 116.1 E
		iPcP	Z		50	47.3	1.0			+0.36		H 00 41 56.9
		i(ScP)	Z		53	45	1.3			+0.28		h 520 km.
		iS	NN'Z'		54	48	8	-4		+3		Mag. 5.9
		iS	EE'		54	49	8		-8			
		i	Z		54	50	2.0			-0.92		
		i	Z		54	54	2.0			+1.10		
		i	N'		58	04	11	-4				
		iSS	E'		58	12	9		+6			
		i	Z'		58	20	12			+5		
		M	E'		01	07	16		2			
		M	Z'		07	54	16			2		
		M	N'		08	21	16	2				
293	26	P	Z	04	56	09		Masked by microseisms				USCGS: 16.3 S, 167.8 E
		i	Z		56	10.5						H 04 51 03*
		oL	E'		05	01	38					h 22 km.
		M	Z'		03	06	20			1		Mag. 5.1
294	26	iP	Z	19	49	14.5	0.9			-0.20	5300	Dilatation h 0.01
		ipP	Z		49	36.5	1.0			+0.10	4797	
		iPcP	Z		50	43	0.9			-0.08		USCGS: 8.1 N, 126.3 E
		oS	N'		56	02	13	1				H 19 40 42.1
		osS	N'		56	39	10	1				h 83 km.
		e	E'		59	20	22					Mag. 5.4
		i	E'		59	44	14		-2			
		e	Z'		59	46	18			1		
		e	N'		59	49	18	1				
		oL	Z'		20	03	04					
		M	E'		07	16	16		1			
		M	Z'		08	06	16			1		
295	26	(P)	Z	21	30	34		Masked by microseisms				USCGS: 30.3 S, 178.0 W
		oL	E'Z'		37	28	28					H 21 24 59.3
		M	E'Z'		39		20		1	1		h 60 km. Mag. 4.9
297	27	o(P)	Z	22	43	30		Masked by microseisms				USCGS: 4.3 S, 133.3 E
		e	Z		43	31	2.0			0.73		H 22 36 43.3
		oS	N'E'		48	48	16	3	1			h 33 km.
		m	N'Z'		49	21	27	5		4		Mag. 5.5
		m	E'		49	35	22		3			
		oL	E'		51	11	48		9			
		oL	N'		52	02	48	8				
		oL	Z'		53	02	40			8		
		M	N'E'		54	48	24	16	22			
		M	N'		23	00	14	15	22			
		M	E'Z'		00	20	15		35	37		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	μ	μ	μ	km.		
300	1968 March 28	oP	Z	05	50	44	1.2		0.16		Microseisms present USCGS: 10.8 S, 166.0 E H 05 45 06.6 h 42 km. Mag. 5.2	
		i	Z		50	57	1.2		+0.18			
		i	Z		51	06	1.3		+0.25			
		o	N'		55	10	9	1				
		o	Z'		55	26	24			2		
		o	N'		55	30	13	2				
		o	E'		55	32	12		2			
		oL	E'		56	29	28					
		M	Z'		58	22	24			4		
M	E'		58	26	24		2					
M	N'		58	29	24	2						
303	28	iP	EZ	17	02	58.3	0.6		-0.02		Local	
		o	N		04	15.2	0.4					
		i	N		04	17.5	0.4	+0.02				
		i	E		04	18.0	0.5		+0.02			
	30	(P)	Z	00	49	51					Masked by microseisms	
306	31	iP	Z	13	55	27.0	1.0		+0.10		Compression USCGS: 16.3 S, 168.4 E, H 13 50 37.8 h 243 km. Mag. 4.9	
		i	Z		55	28.5	1.2		-0.24			
		o	N'		14	00	41	26				Largo microseisms on N'E'Z'
308	April 1	oP	Z	00	53	05					Microseisms present Dilatation USCGS: 32.5 N, 132.2 E H 00 42 04.2 h 33 km. Mag. 7 $\frac{1}{2}$ -7 $\frac{3}{4}$ Goldon 7.3-7.7 Berkoley 7 $\frac{1}{2}$ -7 $\frac{3}{4}$ Pasadena	
		iP	N'E'Z'		53	06	20	+23	-5	-45		7720
		i	Z		53	12	1.0			+0.15		6995
		iPeP	Z		53	19	1.5			+0.92		
		iPP	Z'		55	40	20			-27		
		iPP	N'		55	41	20	+15				
		i	N'		56	12	20	+14				
		i	Z'		01	02	06	26				-155ca
		iS	E'		02	09	26		-195ca			
		i	N'		02	11	26	-160ca				
		SS	E'		06	36	26			80ca		
		SSS	E'		09	40	30			180ca		
		LQ	E'		11	36	40ca			320ca		
		M	Z'		20	0	22			380ca		
		i	Z		21	32	2.0			-0.50		
		oX	E'		02	44.0	70			40		
	1	i(P)	Z	01	21	32	2.0		-0.50			
309	1	oP	Z	06	42	38					Microseisms present USCGS: 2.9 S, 133.9 E H 06 35 48.0 h 33 km. Mag. 5.5	
		oL	E'		53	04	35					
		M	N'E'		55	10	20	2	3			
		M	Z'		58	40	12			3		
310	1	oP	Z	07	24	17				7590	Microseisms present USCGS: 32.3 N, 132.1 E H 07 13 17.6 h 32 km. Mag. 5.7 5.9-6.3 Berkoley	
		o	Z'		24	18				6893		
		i	Z'		24	25	14			+3		
		oS	N'E'		33	14	10					
		i	N'E'		33	20	10	-7	-5			
		i	Z'		33	21	12			+4		
		iPS	N'Z'		33	43	12	-3		-3		
		oPPS	E'		33	55	26			4		
		i	N'		34	00	20	-10				
		i	N'E'		34	26	16	-10	-8			
		SS	E'		37	44	20			5		
		i	E'		41	00	20			+6		
		oLQ	E'		42	36	40					
		oL	N'		46	44	32	5				
		oL	Z'		46	52	28					9
M	N'Z'		48	43	28	13			16			
M	N'E'Z'		51.1		22	14	12		17			
311	2	iP	Z	08	16	36.8	0.7		+0.02		Compression USCGS: 45.1 S, 166.8 E H 08 12 44.2 h 15 km. Mag. 5.2	
		i	Z		16	38.5	1.0		+0.08			
		i	N'E'Z'		16	39	4	-2	+2	-3		
		i	NEZ		16	39.7	1.4	+0.22	-0.17	+0.71		
		i	Z		16	43	1.5			-0.70		
		o	N'E'Z'		16	46	18	2	2	2		
		o(S)	N'		19	45	14	1				

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km.		
311 cont.	1968 April 2	o	E'	08	19	46	14		1				
		iSS	E'Z'	20	00		13		-2	-2			
		oL	Z'	20	17		28						
		o	N'	20	18		18	3					
		oL	E'	20	28		24						
		L	N'	20	50		25	5					
		M	Z'	21	56		18				8		
		M	E'	22	00		16			6			
		M	N'	22	26		16	6					
		oT	NZ	32	7								
T Max	E	33	27	0.6				0.34					
T Max	NZ	33	32	0.6			0.42		0.61				
312	2	iP	Z	10	46	28.1	0.8			+0.23	2760	Compression h 0.025 ca.	
		iPP	Z	47	11		1.0			+0.06	2498	N'E'Z' records fooble & masked by	
		isP	Z	47	29		1.0			-0.10		microseisms.	
		oS	N'	50	34		10	$\frac{1}{2}$				USCGS: 14.3 S, 167.3 E	
		o	E'	51	35		14		$\frac{1}{2}$			H 10 41 26.0	
		o	Z'	51	38		14					h 198 km.	
		o	N'	51	46		13	$\frac{1}{2}$				Mag. 5.0	
		i	E'Z'	51	54		7			-1	-1		
		o	N'	52	02		14	1					
o	E'	52	07		18			1					
314	2	oP	Z	18	05	13	0.8	Very fooble. Microseisms present					
		o	Z	05	14		1.2			0.16		USCGS: 45.2 S, 166.7 E	
		o	N'E'Z'	05	16		20	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$		H 18 01 19.0	
		o	E'	08	22		14					h 8 km.	
		o	N'	08	52		16					Mag. 5.0	
		oL	Z'	08	52		26						
		M	Z'	10	32		18				2		
		M	E'	10	38		16			1			
		M	N'	10	47		16	1					
		T Max	E	21	59	0.6				0.18			
T Max	N	22	03	0.6		0.31							
T Max	Z	22	05	0.6				0.40					
316	3	(P)	Z	06	25	20 $\frac{1}{2}$						Aftershock of No.230	
		i	Z	25	43.3	0.5				-0.03		Mag. 2 $\frac{3}{4}$ Canberra	
		i(S)	E	25	43.7	0.5				-0.01			
		i(S)	N	25	43.8	0.5		+0.07					
		i	EZ	25	45	0.5				+0.04	-0.04		
317	3	o(P)	Z'	10	54	28	8				1	Microseisms present	
		o	E'	58	46		14			2			
		o	E'	59	16		20			2			USCGS: 56.7 S, 147.4 E
		oL	Z'	59	35		30						H 10 49 25.3
		L	N'Z'	11	00	00	26	3			4		h 17 km.
		M	Z'	01	25		18				3		
		M	E'	01	29		16			2			
		M	N'	01	55		17	3					
320	3	o	N'	16	43	28	14	All phases fooble & masked by microseisms.					
		o(S)	N'	48	11		14						USCGS: 51.7 N, 174.2 E
		o	E'	48	21		14						H 16 24 45.7
		o(SS)	N'	54	14		16						h 38 km.
		oL	Z'	17	05	27	30						Mag. 5.3
322	4	iP	Z	09	17	59.2	0.8				+0.12	Compression	
		oS	N'	22	42		?						
		o	N'	23	02		18	1					USCGS: 5.3 S, 154.0 E
		oL	E'	24	40		30			1			H 09 12 10.5
		oL	Z'	25	44		34				2		h 96 km.
		oL	N'	25	57		34	2					Mag. 4.9
		M	E'	26	44		24			1			
		M	N'Z'	28	20		18	1			1		
325	6	iP	Z	21	50	06.4	1.4				+0.20	5470	
		oS	E'	57	12		14			$\frac{1}{2}$		4992	Compression
		o	E'	58	10		16			$\frac{1}{2}$			USCGS: 7.4 N, 124.3 E,
		oL	N'	22	02	28	48						H 21 41 17.9
		M	E'	06	22		30			1			h 17 km.
		M	N'	07	50		28	1					Mag. 5.1

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN μ	AE μ	AZ μ		
326	1968 April 7	e(S)	N'	01 43 36	14	Masked by microseisms			USCGS: 16.9 S, 177.2 W H 01 31 57.0 h 33 km. Mag. 5.0		
		e	N'	46 22	20	1					
		eL	E'	46 28	25						
		M	N'	50 08	13	2					
		M	Z'	50 10	18			1			
		M	E'	50 30	16		1				
327	7	eSKS	N'	05 03 29	14	Masked by microseisms			USCGS: 51.5 N, 176.5 E H 04 40 19.3 h 33 km. Mag. 5.3		
		eS	E'	03 51	14		1				
		eL	E'	09 50	32		4				
		eL	N'	10 02	24	2					
		eL	Z'	11 13	29			2			
328	8	P	Z	14 56 49	1.0			0.10	Masked by microseisms USCGS: 6.7 S, 129.4 E, H 14 50 16.7 h 125 km., Mag. 5.4		
		M	E'	15 08 40	19		1				
329	9	ePP	Z	02 48 05	All	records masked by microseisms			USCGS: 33.1 N, 116.1 W H 02 28 58.9 h 20 km. Mag. 6.1 6.4 Golden 6.5 Pasadena 6.8-7.2 Berkeley		
		e	N'	55 54	14	2					
		iPS	E'	57 34	16		+3				
		i	E'	57 50	16		+2				
		ePPS	E'	58 48	22		3				
		e	E'	03 00 16	30		3				
		eSS	N'Z'	03 26	22	4		3			
		i	E'	03 57	22		+7				
		m	N'Z'	04 06	32	7		4			
		eL	N'	14 00	60						
		eL	Z'	14 34	42						
		iL	E'	14 58	36		+16				
		L Max.	N'	15 26	34	33					
		M	N'	20 22	30	12					
M	E'Z'	21 17	25		28	31					
M	E'Z'	27 22	18		25	30					
M	N'	28 22	19	11							
F	Z'	06.9									
330	9	iP	Z	11 33 15.0	1.0			+0.08	Microseisms present USCGS: 17.8 S, 178.2 W H 11 27 39.0 h 650 km. Mag. 5.2		
		iS	E'	37 41	7		+2				
		e	N'	40 57	16						
		e	E'	41 03	20						
331	10	e	EZ	04 25 05.2					Local. Aftershock of No.230		
		e	N	25 26	0.5						
		i	NE	25 26.8	0.6	+0.06	-0.03				
m	EZ	25 28.2	0.7		0.05	0.03					
333	10	iP	Z	18 36 53	1.3			+0.11	Compression. Microseisms present USCGS: 22.6 S, 171.5 E H 18 32 09.6 h 60 km. Mag. 5.1		
		i	N'E'Z'	36 55	6	+1	+2	-3			
		i	Z	36 56	1.1			+0.13			
		i	E'Z'	37 01	8		+3	-4			
		e	Z'	37 12	14			2			
		i(S)	E'	40 49	10		+7				
		i	N'	40 51	10	+6					
		i	N'	41 01	12	+8					
		i	Z'	41 02	10			+10			
		m	E'	41 02	10		14				
		eL	N'	41 20	26	9					
		i	E'	41 44	14		+4				
		eLR	Z'	42 28	26			6			
		eL	E'	42 32	21		7				
M	N'	42 36	20	9							
M	Z'	43 41	18			10					
M	E'	44 03	17		9						
335	11	P	Z	01 43 20		Microseisms present			USCGS: 18.0 N, 145.7 E, H 01 34 28.9 h 185 km., Mag. 5.0		
336	11	eP	Z	11 40 37		Feeble and masked by microseisms			USCGS: 11.6 S, 166.3 E, H 11 35 04.4 h 45 km., Mag. 4.6		
		eL	E'Z'	47.4	28						
343	12	e(S)	N'E'	13 13 24		Feeble and masked by microseisms			USCGS: 1.7 N, 122.6 E, H 12 58 34.7 h 40 km., Mag. 5.1		
		eL	N'	18 50							
344	12	eP	Z	16 41 16		Microseisms present			USCGS: 20.3 S, 177.9 W, H 16 35 38.3 h 459 km., Mag. 4.6		
		eL	N'	48 46							

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
			h m s	s	μ	μ	μ	km.	
346	1968 April 13	(P) e(S) M	Z N' E'	17 39 00 43 26 48.0					Masked by microseisms U.S.C.G.S. 5.4 S, 146.9 E H 17 33 11.0 h 225 km., Mag. 5.0
347	14	eS e e e eL M M	E' N' E' N' E' E' N'Z'	08 57 04 57 09 58 13 09 03 04 07 12 12 13	14 14 10 18 22 18 18				Masked by microseisms USCGS: 33.4 N, 141.4 E H 08 37 12.2 h 44 km. Mag. 5.4
348	14	(P) iS e e eSSS eL M M	Z' E' N' E' E' E' N'	13 16 11 25 01 25 03 26 08 32 24 34 16 40 00 41 00					Masked by microseisms USCGS: 33.4 N, 141.4 E H 13 05 08.0 h 41 km. Mag. 5.4
349	14	iP	Z	14 52 53.6	1.2			+0.13	Microseisms present USCGS: 17.5 S, 178.8 W, H 14 47 14.9 h 550 km., Mag. 4.6
350	15	iP e (eL)	Z Z N'E'	03 14 06.7 14 39 27.1	0.8 0.8 34				+0.05 Compression USCGS: 6.1 S, 154.9 E, H 03 08 34.7 h 189 km., Mag. 4.9
352	15	ePS e e e eL M M	E' Z' N' E' Z' E' Z'	08 17 16 17 24 24 10 24 14 42 14 45 40 45 56	20 20 20 20 30 20 20				Masked by microseisms USCGS: 5.8 S, 80.9 W H 07 47 40.3 h 35 km. Mag. 4.9
354	16	(e) o	NE NE	19 07 31 07 47					Very small. Masked by microseisms. Victoria?
355	17	e	NEZ	11 33 45	0.5				Local. Very small.
358	18	eP	Z	04 39 49	0.8			0.05	Microseisms present USCGS: 25.7 S, 179.5 W, H 04 34 40.6 h 379 km., Mag. 4.7
359	18	eP e e eL L Max M	Z' E' N' E' N'E' Z'	06 58 28 07 04 08 04 11 06.0 06.9 07 26					Very small & masked by microseisms 1 3 1
360	18	(P) eP eL	Z Z N'	09 31 48 10 04 28 10.6					Microseisms present Microseisms present USCGS: 25.5 S, 177.9 W, H 09 58 53* h 230 km., Mag. 5.1
362	18	e(P) e(S) i	EZ NE NE	13 16 41.2 17 03.2 17 05.0	0.3 0.5 0.4				0.03 0.03 +0.06 +0.06 Aftershock of No.230
363	18	eP e e(L) e M	Z N' N' E' N'E'	20 37 19 42 06 43 45 44 07 46 18					Microseisms present USCGS: 6.9 S, 156.6 E H 20 31 32.7 h 39 km. Mag. 5.3
364	19	eP	Z	01 18 12.2	0.7			0.03	USCGS: 15.0 S, 167.4 E, H 01 13 09.0 h 123 km.
366	19	ePS e(SS) e e eLR M M	N' N' N'Z' E' N' E' N'Z'	09 31 28 37 41 41 24 47 14 53 38 59 10 59 36					Feeble USCGS: 42.6 S, 16.0 W H 09 04 27.3 h 33 km. Mag. 5.6
					2			3	

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)			Per. s	Amplitude			Δ km.	Remarks
								AN μ	AE μ	AZ μ		
368	1968 Apr. 20	eP	Z	01	14	13	1.0			0.08	4080	USCGS: 56.1 S, 27.4 W, H 01 01 31.2 h 186 km., Mag. 5.1
370	20	(eP)	Z	10	06	44					3697	Local
		e	Z	06	45	$\frac{1}{2}$	0.4					
		i(S)	NE	07	11.0		0.4	+0.03	+0.03			
		i	N	07	11.4		0.4	+0.17				
		i	E	07	12.0		0.4		+0.13			
		i	NZ	07	13.0		0.4	+0.11		-0.07		
371	20	iP	Z'	12	32	19	10				4080	Compression
		iPP	Z'	33	49		7				3697	
		i	Z'	34	09		7					
		i	E'	34	20		7		+3			
		eS	N'E'	38	00		18	1	2			USCGS: 15.7 S, 172.6 W H 12 25 10.1 h 30 km. Mag. 5.7
		e	Z'	38	06		22			5		
		m	E'	38	28		18		5			5.8-6 Berkeley
		i	N'	40	48		16	-4				6 Pasadena
		i	Z'	40	55		20			+6		6-6 $\frac{1}{2}$ Golden
		eL	E'	41	10		28		5			
		M	N'	41	21		25	25				
		M	Z'	43	27		25			21		
		M	E'	43	32		25		16			
		M	Z'	44	16		22			21		
		M	E'	44	22		22		18			
373	21	eP	Z	02	39	58	0.3					Local
		eS	N	40	19.7		0.6	0.02				
		i	Z	40	20.5		0.6			+0.03		
		i	E	40	20.8		0.5		+0.06			
		m	N	40	21 $\frac{1}{2}$		0.5	0.07				
		i	E	40	22.0		0.5		+0.07			
		m	Z	40	22 $\frac{1}{2}$		0.7			0.04		
374	21	(P)	Z	06	15	55		Microseisms present				USCGS: 31.6 S, 177.7 W, H 06 10 19.1 h 57 km., Mag. 4.7
		eL	Z'	22	8		26					
		M	E'Z'	25	12		17		$\frac{1}{2}$	1		
		M	N'	25	44		15	$\frac{1}{4}$				
375	21	eP	Z'	08	45	34					8000	Feeble. Masked by microseisms
		eS	N'	54	52		14	1			7290	
		iS	E'	54	53		14		-2			USCGS: 38.6 N, 143.0 E H 08 34 03.5 h 42 km. Mag. 5.3
		e	Z'	54	57		14			$\frac{1}{2}$		
		ePPS	E'	55	43		16		1			
		eLQ	E'	09	04	50	34					
		eLR	Z'	08	23		34					
		M	E'	11	30		22		2			
		M	N'	11	56		22	2				
		M	Z'	12	59		19			2		
376	21	iP	NZ	16	48	23.0	1.6	+0.45		+1.67		Compression
		iP	N'Z'	48	23		6	+4		+5		
		e	NZ	48	29		2.0	0.55		0.92		USCGS: 56.4 S, 158.0 E H 16 43 17.2 h 27 km. Mag. 5.8
		i	NZ	48	34		2.0	+0.60		+1.47		
		i	Z	48	46.5		1.7			-1.14		
		e(S)	N'	52	31		13	2				
		i	N'E'	52	42		11	-8	-4			
		i	Z'	52	47		13			-8		
		i	E'	53	06		22		+22			
		l	N'	53	11		15	+8				
		i	E'	53	40		14		+10			
		eLR	Z'	54	07		26			8		
		M	N'Z'	55	02		19	7		8		
		eT	NE	17	08.9		0.5					
377	21	e	NE	20	11	34						Regional. Very feeble.
379	22	eP	Z	14	30	35	1.5			0.18		USCGS: 4.4 N, 127.7 E, H 14 22 35.0 h 97 km., Mag 5.3
		e	N'	40	18		20	Feeble				
	23	(P)	Z	16	04	44		Masked by microseisms				USCGS: 14.1 N, 145.0 E, H 15 56 19.8 h 126 km., Mag. 4.5

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km		
387	1968. Apr. 23	eP	Z'	20	43	25						Masked by microseisms	
		e	N'	44	52		18	1					
		e	E'	44	55		18		1				USCGS: 58.7 N, 150.0 W.
		e	Z'	45	02		20			1			H 20 29 14.5
		e	N'	51	44		24	1					h 23 km.
		e	Z'	53	50		28			1			Mag. 6.3
		eSKS	E'	54	06		28		1				5.1-6.1 Berkeley
		e	N'	54	21		26	1					6-6 1/2 Pasadena, Golden
		eSS	E'	21	02	19	28						
		e	N'Z'	03	01		26	1					
		eL	E'	12	10		40						
		M	N'	21	28		20	1					
		M	E'	21	46		21		2				
M	Z'	24	08		19			3			F 23h 30m		
391	24	iP	Z	14	04	32.5	0.8			-0.05		Dilatation. Microseisms present	
		ipP	Z	06	06		0.8			-0.05			
		e(S)	N'	08	47		22	1					USCGS: 4.6 S, 149.4 E
		e	E'	11	41		22		1				H 13 59 14.5
		e	N'	11	51		16	1					h 565 km.
		M	E'	16	22		14		1				Mag. 5.0
		M	N'	17	06		16	1					
		M	Z'	17	22		16			1			
395	24	(P)	Z	23	51	32						Masked by microseisms	
		i	E'	56	50		8		+2				
		e	Z'	57.5			26						USCGS: 6.9 S, 129.2 E.
		M	E'	24	03	25	16		19				H 23 44 46.2
		M	N'	03	44		16	17					h 52 km.
396	25	M	Z'	04	27		15			5		Mag. 5.1	
		iP	Z	17	19	34.8	1.0			+0.10		Compression	
		(eS)	E'	23	50								Masked by microseisms
		e	Z'	25	52		16						USCGS: 7.1 S, 156.2 E
		e	N'	25	58		14						H 17 14 27.7
397	25	m	Z'	26	07		16			3		h 419 km.	
		i	N'	26	17		8	+2				Mag. 5.0	
		eP	Z	17	47	34	0.5						USCGS: 4.5 S, 155.1 E
		i	Z	47	34.8		0.8			+0.09			H 17 42 08.7
		e	N'	52	08								h 476 km., Mag. 4.7
398	25	N'E'Z' masked by microseisms											
		eP	Z'	21	32	44							Large microseisms present
		e(S)	N'	38	35		16	1					USCGS: 15.2 S, 173.1 W
		i	E'	38	44		16		+3				H 21 25 36.1
		i	Z'	38	46		16			+2			h 33 km.
		i	N'	41	19		20	-					Mag. 5.2
		i	Z'	41	26		17			+3			
		m	N'	41	34		20	11					
		eL	E'	42	46		40						
		M	Z'	47	40		16			11			
399	26	M	E'	47	59		16		9				
		M	N'	48	45		14	4					
		eP	Z'	00	49	42	12			2			Microseisms present
		e	E'	49	46		12		1				
		e	N'E'	50	47		16	1	1				USCGS: 15.3 S, 173.1 W
		iPP	Z'	51	11		8			+2			H 00 42 34.9
		iS	N'	55	26		9	+2					h 33 km.
		e	Z'	55	40		22			5			Mag. 5.3
		fsS	N'	55	42		16	+2					
		i	E'	55	45		17		+5				
		e	N'	58	08		?						
		i	N'	58	18		22	-18					
		iSSS	Z'	58	28		16			+5			
		eL	E'	58	34		(36)						
		M	E'Z'	01	01	32	19		9	10			
M	N'	02	47		13	10							
M	E'Z'	06	40		16		15	18					
26		e	Z'	15	21	16						Feeble. Masked by microseisms	
		e	E'	35	24		24						(USCGS: Nevada test site Boxcar.
		eLQ	N'	46	44		(40)					h 0 km., Mag. B 6.3, S 5.4) Cont.	

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ		
	1968									
	Apr. 26	eLR	Z'	15 51 34	(30)					Mag. 6.4 Berkeley
	cont.	M	E'Z'	58 44	18		1	1		6 1/2 Golden
341	26	ePS	Z'	18 17 03	16			1		Earlier phases masked by microseisms
		e	E'	17 04	16		1			
		e	Z'	21 30	22					USCGS: 18.7 N, 103.3 W
		eSS	E'	23 20	24		1			H 17 48 02.3
		e	Z'	23 30	24			1		h 65 km.
		eSSS	E'	27 10	26					Mag. 5.5
		eLQ	N'	35 10	30					5.5-5.9 Berkeley
		eLR	E'Z'	40 00	32					
		M	N'E'Z'	49.0	18	1	2	2		
342	27	eP	Z	11 03 57						USCGS: 10.5 S, 165.1 E, H 10 58 21.5
		eL	Z'	10.8						h 75 km., Mag. 5.1
344	28	iP	Z	04 30 29.2	1.0			+0.12		Compression. Microseisms present
348	29	(eP)	Z'	00 52 12						USCGS: 14.0 N, 144.7 E
		eS	E'	58 24	12					H 00 43 14.2
		e(L)	E'	01 05 06	24		1			h 164 km.
		M	Z'	08 48	18			1/2		Mag. 5.0
354	May 1	(eP)	N'E'Z'	00 03 32						Small & masked by microseisms
		eL	Z'	36.5						
356	1	(P)	Z	04 38 30						Feeble. Masked by microseisms
		eS	N'	44 18	14	1				USCGS: 2.9 S, 128.0 E
		e	E'	44 22	16		1			H 14 31 09.7
		eL	E'	48 20	44					h 26 km.
		eL	N'	48 56	45					Mag. 5.4
		M	N'E'	51 36	25	5	7			
		M	E'Z'	55 40	16		5	5		
		M	N'Z'	05 00 16	15	5		5		
358	1	(P)	Z	08 55 11						Feeble. Masked by microseisms
		e(S)	E'	09 04 41	12					USCGS: 38.6 N, 143.1 E
		e	N'	05 03	20					H 08 43 47.4
		eL	E'	14 32	36					h 36 km.
		M	E'	21 14	18		1/2			Mag. 5.3
		M	N'Z'	22 42	15	1/2		1		
360	2	ePKP	Z	05 48 54	0.8					Feeble. Masked by microseisms
										USCGS: 18.8 N, 69.6 W, H 05 29 38.2
										h 82 km. Mag. 5.8
361	2	P	Z	11 50 45						Masked by microseisms
		eS	E'	55 26	26					USCGS: 5.5 S, 153.6 E
		e	N'	55 28	26					H 11 44 58.1
		M	N'	12 00 06	20	1/2				h 91 km.
		M	Z'	00 24	20			1/2		Mag. 5.0
364	2	eP	Z	23 32 35	1.0					Microseisms present
		i	Z	32 37	1.2			+0.23		USCGS: 6.4 S, 129.9 E
		e	Z'	33 40	9			1		H 23 26 03.6
		iS	N'E'	37 44	12	+5	+7			h 128 km.
		e	Z'	37 58	18			3		Mag. 5.5
		e	N'	38 26	28	3				
		i	E'	39 52	14		+5			
		i	Z'	39 55	14			+3		
		eL	Z'	42 06	44			14		
		i	N'	42 50	7	+14				
		i	Z'	43 14	6			+11		
		M	E'	44 01	24		33			
		M	N'	44 22	20	20				
		M	Z'	47 24	18			22		
367	3	iP	Z	05 43 10.7	1.3			+0.49	7200	Compression
		iP	Z'	43 11	6			+2	6498	
		e(sP)	Z'	43 44	14			1		USCGS: 25.1 N, 124.6 E
		eS	N'	51 42	?					H 05 32 45.7
		e(PS)	N'Z'	52 14	16	1		1		h 98 km.
		eLR	Z'	06 03 13	45					Mag. 5.8
		M	N'	06 46	28	2				
		M	Z'	07 05	27			3		

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks
								AN	AE	Az		
				h	m	s	s	μ	μ	μ		
368	1968 May 3	iP	Z	11	42	32.2	0.8			+0.08		Compression USCGS: 26.2 S, 178.5 E, H 11 37 57* h 678 km., Mag. 4.7
369	3	θ (P)	Z	17	59	51	0.3	Very feeble				Local
		i	E	18	00	16.0	0.4		+0.04			
		i	NZ	00	16.5		0.5	-0.10		+0.03		
		m	EZ	00	18		0.8		0.10	0.06		
371	3	θ (S)	N'	20	26	30	14	1				USCGS: 54.5 S, 135.8 W H 20 09 24* h 33 km. Mag. B 4.2
		θ	E'	26	37		14		1			
		θ LR	Z'	34	06		30					
		θ LR	N'	34	14		30					
		LR max	N'E'Z'	35			28	2	2	3		
	4.	(iP)	Z	01	07	21.5		Microseisms present				USCGS: 22.5 S, 171.4 E, H 01 02 36* h 127 km., Mag 4.3
372	4	(P)	Z	03	14	46		Masked by microseisms				USCGS: 6.9 S, 129.4 E, H 03 08 10.6 h 18 km., Mag. 5.5
		θ	N'	24	27		?					
		i	N'	26	34		10	+2				
		t	E'	26	40		10		-3			
373	4	iP	Z	03	31	15.3	0.6			-0.04		Dilatation. Microseisms present USCGS: 29.7 N, 138.0 E, H 03 21 26.3 h 484 km., Mag. 4.4
374	4	θ P	Z	03	38	39.5	0.4					Local
		θ (S)	N	39	04.5		0.5					
		i	E	39	04.8		0.5		+0.04			
		t	Z	39	05.0		0.5			+0.04		
		i	N	39	05.3		0.5	+0.19				
		i	E	39	05.7		0.5		+0.12			
		m	N	39	14 $\frac{1}{2}$		0.7	0.08				
378	4	θ (S)	NZ	23	22	24	0.5			0.02		Local
		i	N	22	24.7		0.5	-0.08				
		m	E	22	25 $\frac{1}{2}$		0.4		0.07			
380	6	i(Pg)	EZ	06	45	28.5	0.3		Very small			Local
		i(Sg)	E	45	36.3		0.6		+0.06			
		m	E	45	40		0.7		0.06			
		m	NZ	45	44		0.6	0.03		0.03		
381	6	iP	NEZ	12	24	04.2	0.4	0.02	-0.06	-0.09		Local. Felt at Goulburn and Crookwell.
		i	N	24	25.0		0.6	-0.05				
		iS	N	24	26.5		0.5	+0.10				
		i	Z	24	26.7		0.5			+0.10		
		i	E	24	27.3		0.5		-0.23			
		m	NEZ	24	29		0.5	0.43	0.33	0.20		
382	6	(θ)	Z'	17	41	32		Masked by microseisms				USCGS: 34.5 S, 179.3 W H 17 37 22* h 155 km. Mag. 4.4
		θ	E'	42	34							
		θ (S)	E'	46	34							
		θ	N'	46	48							
		θ	Z'	47	09		18			1		
		θ L	E'	48	22		(36)					
		θ L	Z'	48	46		26					
		M	Z'	50	42		19			3		
		M	N'	51	13		16	3				
		M	E'	51	42		17		3			
387	7	(θ P)	Z'	11	16	22		Very feeble and masked by microseisms.				USCGS: 32.7 S, 178.6 W H 11 10 57* h 33 km. Mag. B 4.2
		θ	Z'	16	31							
		θ (L)	Z'	23	0							
		M	Z'	27.3			18			$\frac{1}{2}$		
390	8	iP	N'Z'	11	05	27	6	+2		+3		Compression
		i	Z	05	27.6		1.3			+0.38		
		iP	NZ	05	36		1.5			+0.56		USCGS: 58.0 S, 157.7 E H 11 00 07.4 h 33 km. Mag. 5.7 5 $\frac{3}{4}$ Golden
		θ	NZ	06	13		2.5			1.10		
		i	Z	06	18		2.0			+0.83		
		θ (S)	N'E'	09	50		8	1	1			
		i	N'Z'	10	02		10	+3		-4		
		i	E'	10	12		10		+2			
		θ LQ	E'	10	37		20		6			

Continued

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
390 cont.	1968 May 8	e	Z'	11 11 13	14			2		
		eLR	Z'	11 30	24			6		
		M	N'	12 20	19	6.				
		M	Z'	12 26	19			7		
		M	E'	15 04	12		7			
391	8	ePP	Z'	12 35 51	8			1		Masked by microseisms 7 coda of 390 USCGS: 43.6 N, 127.9 W H 12 17 13.4 h 33 km. Mag. 6.1 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisades
		eSKS	N'	42 09	12	1				
		e	E'	42 10	12		1			
		ePS	E'Z'	45 06	14		1	1		
		e	N'	45 12	16	1				
		ePPS	E'	46 06	22		2			
		e	N'	46 08	22	2				
		e	E'	47 41	18		1			
		e	N'	47 44	18	1				
		iSS	N'	51 00	14	-3.				
		iSS	E'	51 03	20		+7			
		eLQ	N'	13 00 52	44					
		eL	E'	01 18	44			6		
		L	N'	02.0	38	6				
		eLR	E'Z'	05 44	40					
		L	Z'	06 30	32				10	
		L	N'E'	06 38	32	5.	6			
L	Z'	07 30	26				10			
L	N'E'	07 35	26	3.	7					
M	E'Z'	20.0	18		7	7				
394	9	e(SS)	E'	03 37 14	18	Feeble & masked by microseisms			USCGS: 43.4 N, 127.0 W, H 03 03 01.8 h 33km., Mag.5.2; 5-5 $\frac{1}{4}$ Golden	
		eL	Z'	51.5	38					
395	9	e(P)	Z'	07 25 34	10	Masked by microseisms			USCGS: 31.8 S, 178.7 W H 07 19 55.0 h 12 km. Mag. 5.0	
		eLR	Z'	31 35	34					
		LR max	E'Z'	32 26	30		2	2		
		M	N'	33 32	15	1				
396	9	e(P)	Z'	09 36 50	6			$\frac{1}{2}$	Masked by microseisms USCGS: 34.6 S, 179.1 W H 09 31 30.3 h 35 km. Mag.B 4.7	
		e	Z'	41 32	12			$\frac{1}{2}$		
		e	N'	42 05	20	$\frac{1}{2}$				
		eL	Z'	43 22	28					
		M	Z'	46 04	17			2		
		M	E'	46 24	16		2			
		M	N'	47 08	13	2				
397	9	(P)	Z	10 31 55					Masked by microseisms	
		e	N'	36 44	14					
		e	N'	37 02	18					
		eL	E'	37 55	30					
		M	N'E'Z'	40.1	18	$\frac{1}{2}$	$\frac{1}{2}$	1		
398	9	iP	Z'	12 34 02	6			+1	Compression Masked by microseisms USCGS: 32.7 S, 178.1 W H 12 28 31* h 33 km. Mag.B 4.8	
		e	E'	38 42	13		$\frac{1}{4}$			
		e	Z'	38 49	18			$\frac{1}{2}$		
		e	N'	39 22	20	$\frac{1}{2}$				
		eL	E'	40 26	30					
		eL	Z'	40 30	32					
		M	N'	42 26	17	2				
		M	E'Z'	43 10	19		2	2		
399	9	e(PS)	Z'	13 22 04		Feeble. Confused by coda of 398			USCGS: 5.3 S, 81.7 W H 12 52 24.4 h 35 km. Mag. 5.6	
		e	Z'	22 15						
		e	E'	35 18						
		eL	Z'	46 10	28					
400	9	(e)	Z'	14 33 04		Feeble. Masked by microseisms.			USCGS: 34.2 N, 136.8 E H 14 22 08.7 h 18 km. Mag. 4.9	
		e(S)	N'E'	42 22	14					
		eL	E'	52 07	32					
		eL	N'	57 14	28					
		M	Z'	15 06 49	20			2		
		M	N'E'	07 14	18	1	2			
402	10	iP	Z	06 02 47.5	1.0			-0.06	Dilatation. Microseisms present USCGS: 22.3 S, 171.6 E H 05 58 07.2 h 123 km., Mag.B 4.9	
		i	Z	02 53.0	1.0			-0.10		
		i(S)	N'	06 44	7	+1				

Continued

No.	Date	Phase & Component		Time (G.M.T.)	Per	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
402 cont.	1968 May 10	i	E'	06 06 46	7		-1			
		o	Z'	06 47	12			$\frac{1}{2}$		
		oL	Z'	08.0	30					
403	10	eP	Z'	09 34 08		Feeble. Masked by microseisms				USCGS: 24.3 N, 121.8 E
		eS	N'	42 51						H 09 23 31.5
		e	N'	50 07						h 21 km.
		M	N'	59 42	22					Mag. 4.8
		M	E'Z'	10 00 22	22					
405	10	o(S)	N'	15 28 42		Feeble. Masked by microseisms.				USCGS: 24.3 N, 121.9 E
		o	E'	29 13	16					H 15 09 20.6
		oL	E'	40 06	28					h 26 km.
		oL	N'	40 34	24					Mag. 4.8
		oL	Z'	41 06	?					
		M	N'E'Z'	46 25	21	1	1	2		
407	10	iP	Z	22 54 41.0	0.8			+0.10		USCGS: 21.2 S, 176.6 W, H 22 48 36.7 h 203 km., Mag. 5.1
409	11	eP	Z'	15 39 22	8			1	3080	Microseisms present
		o	N'	39 24	13	$\frac{1}{2}$			27:7	
		i	Z	39 26	1.1			-0.12		USCGS: 6.4 S, 147.3 E
		e	Z'	39 39	13			1		H 15 33 41.2
		i	Z	39 39.5	1.0			+0.12		h 76 km.
		i	Z	39 49	1.5			+0.26		Mag. 5.5
		i	Z	39 58.5	1.2			+0.20		
		iPP	Z	40 13	1.2			+0.20		
		o	N'Z'	40 27	14	2		1		
		iS	N'	44 00	18	-3				
		o	Z'	44 13	16				2	
		oL	E'	45 56	36					
		oLR	Z'	46 37	45					
		L	N'	47 08	36	11				
M	Z'	48 20	30				12			
M	E'	48 48	20			8				
M	N'Z'	49 14	23	9			10			
410	11	(P)	Z	17 02 13		Feeble. Masked by microseisms				USCGS: 22.2 S, 170.0 E
		o	E'	06 12						H 16 57 30.2
		oL	E'	07 06	26					h 15 km.
		oL	Z'	07 27	26					
413	12	eP	Z'	18 44 11	5			1		Microseisms present
		ePPP	Z'	44 49	8			2		
		o(S)	E'	48 18	10		3			USCGS: 19.0 S, 169.8 E
		o	N'	48 19	10	2				H 18 39 10.8
		o	Z'	48 23	11			2		h 16 km.
		oL	E'Z'	49 40	33					Mag. 5.1
		oL	N'	49 45	24					
		L	E'Z'	50 26	24		4	4		
		M	N'	52 36	13	2				
		M	E'Z'	53 05	16		2	2		
415	12	(P)	Z	19 01 36		Masked by microseisms				
415	13	(i)	Z	01 23 17		Masked by large microseisms				
		o(S)	N'	27 18	20	1				USCGS: 3.9 S, 151.6 E
		o	E'	29 01	20					H 01 16 10.5
		oL	E'	30 03	34ca					h 33 km.
		L	N'E'Z'	31.4	32	3	3	3		Mag. 4.8
		M	E'Z'	33 24	20		4	5		
		M	N'	33 48	19	3				
416	13	o(P)	Z'	04 01 12		Masked by large microseisms				
		o	Z'	01 41	10			3		USCGS: 19.0 S, 169.6 E
		iS	E'	05 17	10		+5			H 03 56 09.2
		iS	N'	05 18	10	+5				h 13 km.
		i	Z'	05 26	10			-4		Mag. 5.1
		i	E'	05 35	10		+5			
		oL	Z'	06 37	32					
		L	E'Z'	07.4	22		10	10		
		M	N'	09 36	14	3				
		M	E'Z'	10.0	16		4	4		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Par.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
420	1968 May 14	eP	Z	05 43 02		Large microseisms present				USCGS: 23.8 S, 176.9 W, H 05 37 05.3 h 122 km., Mag. 4.9
421	14	P	Z'	14 15 42	(10)				7470	Large microseisms present h 0.02 USCGS: 29.9 N, 129.4 E H 04 05 06.0 h 168 km. Mag. 5.9 5 $\frac{1}{2}$ Palisades 5.6-6 Berkeley 6 $\frac{1}{2}$ Pasadena
		ipP	N'E'Z'	16 18	12	+5	+2	-10	6792	
		isP	Z'	16 43	8			-3		
		ePP	N'	18 12						
		e	N'Z'	18 48	10	3		3		
		iS	Z'	24 21	18			-10		
		iS	N'E'	24 22	18	-21	-16			
		ei	Z'	25 19	20			+9		
		isS	E'	25 26	10		+21			
		isS	N'	25 29	12	+20				
		i	N'	26 22	12	-7				
		i	E'	26 38	16		+12			
		eSS	E'	28 36	12		7			
		eSS	N'	28 41	14	7				
		iSSS	N'E'Z'	31 54	22	+12	+21	+10		
		i(sSSS)	E'Z'	32 57	18		+9	+10		
		eL	N'E'	33 44	44-48	10	24			
		M	E'	35 36	26		25			
		eL	Z'	36 50	40			15		
		M	E'	39 08	20		14			
		M	Z'	39 11	20			13		
		M	N'	39 16	20	14				
424	15	iP	E'Z'	15 06 03	10		+6	-7		Dilatation. Large microseisms on S.P.Z record. USCGS: 29.8 S, 179.0 W H 15 00 29.9 h 33 km. Mag. 5.1 6.6-6.9 Berkeley
		i	Z'	06 28	5			+8		
		e	Z'	07 21	12			6		
		e	E'	07 30	11		4			
		i	N'	10 37	14	+24				
		i	E'	10 39	16		+16			
		L	E'	11 04	28		27			
		i	N'	11 17	18	+34				
		L	Z'	13.0	21			34		
		M	N'E'	14.1	18	105	28			
		M	Z'	14 40	18			30		
		M	N'	16.9	12	66				
		M	E'Z'	17 20	22		33	51		
425	16	eP	Z'	01: 00 39		Microseisms present.				Records mainly indecipherable. USCGS: 40.8 N 143.2 E H 00 48 55.4 h 7 km. Mag. 7.9 7.9 Berkeley 8.0 Golden 8.2 Pasadena 8.4 Palisades
		i	N'Z'	00 48	10	+6		-6		
		i	Z'	01 30	25			+76		
		i	N'	01 33	20	-38				
		i	Z'	04 38	22			+42		
		i	N'	04 43	20	-25				
		iS	E'	10 16	26		-42			
		M	N'E'Z'	28 ca.	21	(155)	(140)	(175)		
		eX	E'	05 21	140ca					
		X	N'E'	32	85ca	40ca	30ca			
		eX	Z'	06 18	180ca					
426	16	P	Z	08 20 19		Masked by microseisms				USCGS: 10.5 S, 164.8 E H 08 14 42.3 h 31 km. Mag. 4.9
		e(S)	E'	24 44	8					
		L	N'E'Z'	27.5	26					
		M	N'E'Z'	30	16	4	4	3		
428	16	iP	Z	10 50 45.8	1.2			-0.67	8411	Dilatation. Microseisms present USCGS: 41.5 N, 142.7 E H 10 39 01.6 h 33 km. Mag. 7 Pasadena, Palisades 7.3 Berkeley
		i	N'Z'	50 46	11	-9		+23	7597	
		i	Z	50 53	1.4			-0.95		
		i	Z'	50 57	1.1			+0.60		
		iPcP	N'Z'	50 58	11	+26		-58		
		ePP	N'	53 41	18	11				
		i	Z'	55 08	20			+19		
		i	N'	55 14	18	+10				
		e	N'	11 00 08	20	12				
		iS	E'Z'	00 24	26		+135	+80		
		i	N'	00 26	22	+(160)				
		iPS	Z'	00 54	16			+41		
		iSS	E'	05 08	28		+94			
		i	N'	05 17	28	-78				
		i	Z'	05 29	30			-70		

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
							μ	μ	μ		
428 cont.	1968 May 16	i	Z'	11	08	14	28		+58		
		L	E'		12		38	>370			
429	16	σ P	Z'	16	25	22	8			1	8210 7399
		iS	E'		34	50	14		-4		
		σ	N'		34	56	16	2			
		σ SKS	N'		35	20	22	4			
		σ	E'		37	46	18		3		
		σ SS	E'		39	28	24		3		
		σ L	N'E'		45	24	32	3	6		
		M	E'		51	18	20		6		
		M	N'Z'		56	00	20	5		4	
432	16	(σ P)	Z'	20	06	26		Masked by microseisms			
		σ	Z'		06	32					
		iS	N'E'		10	44	10	+2	+5		
		i	Z'		10	47	10			+3	
		M	N'E'Z'		13	06	20	4	5	4	
434	16	(P)	Z	23	16	30		Masked by microseisms			
		σ	Z'		16	34					
		i	Z'		16	44	7			-4	
		iS	N'E'Z'		25	56	22	+12	-17	-6	
		i	N'		26	31	22	+23			
		i	E'		26	42	18		-12		
		σ	Z'		26	50	16			3	
		σ SS	E'		30	34	20		-9		
		i	Z'		30	56	20			+5	
		iLQ	E'		36	14	36		+24		
		σ L	N'		36	32	32	10			
		σ LR	Z'		39	46	36			18	
		M	Z'		43	16	23			19	
		M	E'		44	28	22		20		
		M	N'		44	52	22	21			
435	17	(P)	Z'	07	25	14		Masked by microseisms			
		i	N'E'		37	13	8	+2	+2		
		i	N'		37	30	8	+2			
436	17	σ P	Z'	08	02	10	6			2	Microseisms present
		σ	Z		02	18	1.5			0.36	
		σ	E		02	37	1.5		0.18		
		σ PP	Z		02	41	2			0.55	
		i	Z:		02	47	3			+2.80	
		σ (S)	N'		06	18					
		i	E'		06	20	11		-17		
		i	Z'		06	26	10			-11	
		i	N'		06	28	10	+6			
		i	N'		06	47	10	-11			
		i	N'		07	05	10	+7			
		σ L	E'		07	45	24				
		σ L	Z'		08	01	26				
		i	Z'		08	17	22			+11	
		M	E'Z'		09.1		20		12	13	
		M	N'		09.3		16	11			
		M	N'		10.7		14	13			
437	17	σ (S)	E'	11	03	47	12	Masked by microseisms			
		σ	N'		03	52	12				
		σ	N'		04	16	18				
		σ (PPS)	N'		04	40	14				
		M	Z'		22	27	20			1	
438	17	σ (P)	Z'	13	08	35	6			1	Microseisms present
		(σ)	N'		12	37	9				
		i	N'E'		12	45	10	+2	+4		
		i	Z'		12	47	9			+3	
		i	N'		13	03	10	-3			
		σ L	Z'		14	20	24				
		M	Z'		15	18	20			3	
		M	E'		15	27	20		3		
		M	N'		15	36	14	4			

Mag. B 5.7 B = Body-wave.

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks	
								AN	AE	AZ			
								μ	μ	μ	km.		
439	1968 May 17	(i)	Z'	16 14 28	6	Masked by microseisms					USCGS: 40.6 N, 144.0 E H 16 02 24.0 h 33 km. Mag.B 5.0, S 5.5 B = Body wave, S = surface wave.		
		o(S)	N'	23 40	16	1							
		e	E'	23 42	16		1						
		M	N'	49 36	19	3							
		M	Z'	50 08	18			4					
440	17	(eP)	Z	18 28 41	Masked by microseisms						USCGS: 39.6 N, 143.0 E H 18 17 07.3 h 32 km. Mag.B 5.2, S 5.3		
		oS	E'	38 10	18		1						
		e	N'	38 11	16	1							
		oL(Q)	E'	48 51	36		2						
		M	Z'	56 28	21			2					
		M	E'	56 34	19		1						
443	19	P	Z'	04 23 52	Masked by microseisms						USCGS: 35.6 N, 141.7 E H 04 12 40.3 h 46 km. Mag.B 5.1 5.5-5.9 Borkoley		
		oS	E'	32 58	12		3						
		e	N'Z'	33 02	12	1		1/2					
		oL	Z'	45 40	36								
		M	E'	51 46	20		2						
445	19	iS	E'	21 47 00	4		+4			Large microseisms present USCGS: 6.8 S, 129.5 E, H 21 35 01.2 h 43 km., Mag.B 5.3			
		M	N'E'	53.5	16	4	5						
446	20	iP	EZ'	07 18 41.0	1.3			+1.57	2870	Compression L.P.Z straight line trace. USCGS: 30.9 S, 178.3 W H 07 13 03.0 h 22 km. Mag.B 6.0 5.4-5.8 Borkoley			
		iP	E'	18 41	5		-4		2528				
		i	E'	18 56	12		+4						
		i	E'	19 32	14		+5						
		oS	N'	23 06	16	2							
		i	N'	23 55	11	+5							
		oL	E'	25 12	34								
		L. max.	E'	25 56	30		26						
		M	N'	27 14	18	9							
447	20	oS	N'	10 56 53	12	1/2				Early phases masked by microseisms. USCGS: 48.8 N, 154.7 E H 10 34 16.8 h 40 km. Mag.B 5.4			
		oS	SS	N'	11 02 14	24	1						
		oLQ	E'	08.6	38								
		e	N'	10 18	27								
		oLR	N'	13 04	35								
		M	N'	17 13	23	2							
		M.	N'E'	18 43	21	2	2						
449	20	iP	Z	20 11 22.8	1.2			+0.48	2930	Compression. Preceded by microseisms USCGS: 30.7 S, 178.4 E H 20 05 49.1 h 46 km. Mag.S 7.0 6.7-7 Pasadona 6.8-7.2 Borkoley			
		iP	N'E'	11 23	20	+4	-38		2624				
		i	EZ	11 26	1.3		0.49	+2.74					
		i	Z	11 33	1.2			+0.82					
		i	E'	12 14	18		-45						
		i	N'	12 20	20	-10							
		iS	E'	15 52	36		-66						
		i	N'	15 54	14	+18							
		e	N'	16 20	20	19							
		iSS	N'	16 58	18	+27							
		i	E'	17 22	22		+39						
		m.	N'	17 26	18	58							
		iLR	E'	18 03	36		+110						
450	20	iP	Z	20 25 55.5	1.2			+0.24		Compression. Microseisms present USCGS: 31.0 S, 178.1 W, H 20 20 23* h 59km., Mag.B 5.0			
		L max.	N'	18 32	26	76							
		L max.	E'	18 50	26		240 ca						
		M	N'E'	22 56	17	27	71						
451	20	(P)	N'	21 21 48	Confused by coda of No.249					USCGS: 44.8 N, 150.3 E H 21 09 44.8 h 38 km. Mag.B 5.8			
		iS	E'	31 35	13		+22						
		i	N'	31 38	13	+13							
		i	N'E'	32 02	13	+12	-15						
		i	E'	36 25	27		-8						
		iSS	N'	36 51	24	+14							

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks
							AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.
451 cont.	1968 May 20	oL	N'	21	46	20	60	16			
		M	N'E'		50	10	22	23	12		
453	21	oP	Z'	08	32	02	?	Microseisms present			8760
		o	Z'		32	06	8			1	7898
		iSP	Z'		32	16	8			+1	
		iS	N'E'		41	58	20	-3	-6		
		o	Z'		42	03	20			2	
		o	E'		42	29	20		4		
		o	N'		42	40	20	4			
		o	E'		46	20	26		2		
		oSS	N'		47	04	23	4			
		oL	E'		52	28	28		4		
		L max.	E'		53	11	42		15		
		o	N'		53	22	30	2			
		oL	Z'		57.	0	40				
		M	N'Z'	09	00	23	21	10		7	
		M	E'		00	50	21		5		
454	21	(P)	Z'	11	02	18		Masked by microseisms & coda of 453			USCGS: 20.2 N, 122.0 E
		o(L)	Z'		21	08					H 10 52 16.6
		M	E'		22	56	20		2		h 30 km.
		M	Z'		25	07	20			2	Mag.B 5.1
		M	N'		26	40	20	2			
460	22	(oP)	Z	00	23	42		Masked by microseisms			USCGS: 30.4 S, 177.8 W
		i	Z		23	49	1.2			+0.16	H 00 18 05.9
		oL	Z'		30	14	28				h 43 km.
		M	E'Z'		31.4		23		2	2	Mag.B 4.7
462	22	oP	Z	11	03	37		Masked by microseisms			USCGS: 41.5N, 142.8 E
		oS	E'		13	12	18		1		H 10 51 53.3
		o	N'		14	12	30				h 40 km.
		o	E'		18	00	24				Mag.B 5.9, S 6.3
		oL(Q)	E'		23	49	41		3		5½-5¾ Palisades, Golden
		oL	N'		24	20	34				6.2-6.6 Borkoley
		oLR	Z'		27	41	32				
		M	N'E'Z'		30	47	26	1	1	2	
464	22	(oP)	Z	19	41	01½		Very Feeble. Microseisms present			USCGS: 40.2 N, 142.3 E
		o	Z		41	05	1.0				H 19 29 25.7
		o	Z'		41	11					h 40 km.
		iS	E'		50	32	10		-2		Mag.B 5.3, S 5.5
		o	N'		50	34	18	1			5½-6 Palisados
		o	Z'		50	36	18			1	
		oSKS	N'E'		51	01	18	1	1		
		oSS	N'		55	10	30	1			
		oSS	E'Z'		55	15	30		1	1	
		oLQ	E'	20	00	38	44				
		LQ max.	E'		01	36	40		5		
		L	E'		04	32	24		3		
		oLR	N'Z'		04	41	34	1		3	
		L	Z'		06	54	25			4	
		L	N'		07	01	25	3			
		M	N'E'Z'		09	21	22	3	2	3	
465	22	oP	Z	21	18	45		Microseisms present			USCGS: 2.9 N, 126.5 E, H 21 10 45.3
		o	N'E'		32.4			Feeble			h 58 km. Mag.E 5.1
467	23	iP	NEZ	17	28	32.5	1.5	+0.58	0.72	+1.72	Compression. After iP L.P. records mainly indecipherable. M turning points off paper.
		iP	N'E'Z'		28	33	6	+66	-98	+71	USCGS: 41.7 S, 171.9 E
		i	NEZ		28	37	1.3	+0.66	-0.94	+2.60	H 17 24 15.7
		iPP	NEZ		28	45	2.0	+3.59	-5.80	+16.56	h 21 km.
		iPPP	NEZ		28	54	2.0	+5.51	-8.28	+11.50	Mag.B 6.1, S 7.1
		i(S)	E'		31	34	(18)		+(75)		6.6-7.0 Borkoley (BKS)
		M	EZ		34.0		19				7.0 Golden
		M	N		35.0		15				7½-7¾ Palisados
		oT	E		41.4		0.6				
		T max	EZ		46.7		0.5		0.60	0.50	
		T max	N		46.8		0.5	0.50			
		oX	N'	20	07.6		80				
		oX	E'Z'		08.0		88				
		oX	N'		50.0		60				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ km.	Remarks
							AN μ	AE μ	AZ μ		
473	1968 May 24	o(P)	Z'	14 18 08	7		Masked by microseisms				
		o	Z'	18 50	17				1		USCGS: 40.9 N, 143.0 E
		o	Z'	27 34	18				2		H 14 06 24.2
		iS	E'	27 39	20			-4			h 38 km.
		iS	N'	27 40	20		-3				Mag.B 5.6, S 6.2
		β	N'	28 06	26		4				61-62 Palisados
		oSS	N'	32 16	30		2				
		oSS	E'	32 23	26				3		
		oLQ	E'	38 08	36				8		
		oL	Z'	41 10	36						
		M	N'E'Z'	47.5	22		6	4	7		
474	24	iP	Z	15 50 41.7	1.2			+0.56	4430	Compression. h 0.09	
		i	Z	52 25	1.2			-0.12	3999		
		iP	Z	52 26.5	1.5			+0.40		USCGS: 6.8 S, 118.9 E	
		i(PcP)	Z	52 29	1.3			+0.64		H 15 43 54.2	
		iPP	Z'	52 30	8			+3		h 609 km.	
		i	Z	52 44 (1.2)	7			+		Mag.B 6.0	
		i	Z'	53 26	7			+2			
		iS	Z'	56 06	6			-6			
		iS	NE	56 07	2.0		-1.47	-3.04			
		iS	N'E'	56 07	8		(+)4	-14			
		i	Z	56 12	2.0			+1.23			
		i	N'E'	56 19	6		+4	+5			
		i	N'E'	59 16	10		+4	-4			
i	E'	59 28	10			+7					
i	Z'	59 36	14				+4				
475	24	oP	Z	17 45 07			Fooble. Masked by microseisms				
		i	E'Z'	45 16	7			+3	-2		USCGS: 41.9 S, 171.8 E
		oPP	Z	45 23	2.0				0.83		H 17 40 54*
		(o)	E'	48 32	?						h 27 km.
		i(S)	N'	48 38	14		-3				Mag.B 5.3
		i	E'	48 40	8			+2			
		i	Z'	48 44	12				-5		
		i	E'	48 55	10			-4			
		o	Z'	49 07	12				2		
		oL	E'	49 09	20				3		
		M	N'	50 11	14		8				
		M	E'	50 23	17				8		
		M	Z'	50 57	19				10		
		oT	E	18 00.2							
T max.	E	03 07	0.6				0.20				
T max.	N	03 18	0.6		0.09						
T max.	Z	03 24	0.6				0.14				
476	24	iP	N'Z'	21 01 40	8		+3		+7	2000	Compression
		i	E'	01 44	8			+5		1820	
		i	Z	01 46.5	1.3				+0.36		USCGS: 41.8 S, 172.0 E
		i	Z	01 52.5	1.3				+0.24		H 20 57 27.3
		oPP	Z'	01 54	9				2		h 33 km.
		o	E'	02 06							
		oS	N'	04 57	?						Mag.B 5.7, S 5.7
		i	N'	05 16	8		-5				
		i	E'Z'	05 18	10			-5	-12		
		oL	N'	05 48	28		6				
		oL	Z'	05 55	29				9		
		M	N'E'	07.0	13		12	10			
		M	Z'	08 23	16				8		
		T max.	E	19 43	0.5				0.12		
T max.	N	19 57	0.5		0.05						
T max.	Z	20 06	0.5				0.09				
483	26	oP	Z	14 48 10			Fooble. Masked by microseisms				USCGS: 63.3 S, 170.7 E
		o	Z'	48 28	5				1		H 14 41 52*
		o(S)	E'	53 18	12			1			h 9 km.
		o	N'	53 35	14		2				MAG.B 5.5, S 5.9
		o	E'	53 38	12			-2			
		o	Z'	53 43	18				2		
		o(LQ)	E'	54 54	24						
		i(SS)	N'E'	55 11	18		-6	-15			Continued

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN	AE	AZ		
			h m s	s	μ	μ	μ		
483	1968 May 26	m N'E'	14 55 45	16	10	22			
cont.		i Z'	56 12	14			+5		
		oL Z'	56 26	26			9		
		M N'	56 38	11	11				
484	27	(P) Z'	02 27 08		Masked by microseisms				USCGS: 6.9 S, 129.5 E, H 02 20 34.7 h 37 km. Mag.B 4.7
		o Z'	41 20	18					
487	28	iP Z'	01 34 00	5			+2	Large microseisms present	
		o N'	40 11	11	1				
		oL Z'	41 16	24				USCGS: 30.9 S, 177.4 W H 01 28 22.1 h 33 km.	
		M N'	42 50	15	3			Mag.B 4.8	
		M N'	44 24	15	3				
		M E'	45 00	15		2			
		M Z'	45 12	16			3		
489	28	(P) Z	03 39 29		Masked by microseisms				USCGS: 31.1 S, 177.3 W H 03 33 49* h 33 km. Mag.B 4.7
		M N'	48 18	15	2				
		M E'	50 27	15		2			
		M Z'	50 40	15			3		
490	28	P Z'	09 12 04		Masked by microseisms				USCGS: 30.9 S, 177.8 W H 09 06 29.9 h 33 km. Mag.B 5.5, S 5.7 5.8-6.0 Berkoloy 6-6 $\frac{1}{2}$ Palisados
		i E'Z'	12 08	4		-2	+2		
		i E'Z'	12 14	10		+1	-3		
		i Z	12 40	1.2			+0.18		
		i Z	12 44	1.3			-0.28		
		o Z'	17 00	15			3		
		oL N'	17 48	24	4				
		oL E'	18 48	30					
		oLR Z'	19 00	28					
		M N'	21 02	15	15				
		M E'Z'	21 34	18		12	16		
492	28	iP Z	13 33 49.0	1.0			+0.24	3600 3294	
		iP N'Z'	33 49	4	-		+		
		m Z	33 53	1.0			0.82		
		i N'E'Z'	33 54	4.26	-34	+12	+59		
		m NEZ	34 01	1.0	0.88	0.69	(2.74)		
		i N'E'Z'	34 16	16	-15	+7	+26		
		i N'E'Z'	34 32	14	-22	+10	+34		
		PP N'E'Z'	34 57	24	26	12	26		
		iS E'	39 00	24ca			+		
		i Z'	39 02	?					
		i N'E'	39 06	30ca	-160ca	+115ca			
		i Z'	39 34	26ca			+110ca		
		i Z'	40 06	28ca			-145ca		
		iSS Z'	40 54	36ca			+185ca		
		i Z'	41 24	28ca			+190ca		
		(L) Z'	42 11	36ca					
		(L) E'	42 30	?					
		M Z'	45.5	?					
		oX N'	15 01	40	41				
		oX N'	05.0	60	50				
		oX Z'	11.0	70			54		
		oX N'	29.3	85	48				
		oX E'	41.0	80					
		X N'E'	47.0	70	40	81			
493	28	o(P) N'	22 53 13	7	1			Masked by microseisms	
		o N'Z'	53 35	12	1		1		
		o E'	53 39	14		1			
		o E'	59 20	14		1			
		o N'	59 28	14	1				
		oL N'Z'	23 10 46	36					
		M N'Z'	15.0	24	3		2		
494	29	(P) E	06 13 16		Masked by microseisms				USCGS: 41.9 S, 172.0 E H 06 09 05.9 h 11 km.
		oL Z'	18.7						
		T EZ	31.3						
495	29	(iP) Z'	13 40 45		Masked by microseisms				USCGS: 6.9 S, 129.5 E H 13 34 24* h 41 km. Mag.B 5.2
		(oL) N'	51 20						
		M Z'	55 18	16			1		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN μ	AE μ	AZ μ		
497	1968 May 29	(oP) Z	17 26 34						
		i Z	26 35.3	0.8			+0.08		USCGS: 18.6 S, 169.0 E
		o E'	30 27	10		1			H 17 21 52.9
		o Z'	30 30	8			1		h 214 km.
		o N'	30 35	(6)					Mag.B 5.1
		o N'	31 09	14	1				
		o E'	31 22	12		1			
502	30	o(L) N'Z'	31 24	22	3		1		
		iP Z'	04 29 13	6			+1		Microseisms present
		o N'	32 50	12					
		o Z'	32 53	9			1		USCGS: 41.9 S, 172.0 E
		oL Z'	33 24	22			1		H 04 24 59.1
		L N'	33 31	22	1				h 30 km.
		M N'	34 44	12	2				Mag.B 5.3
		M Z'	34 47	19			2		
		M E'	35 10	18		1			
		oT NZ	45.0						
		T max. NE	47.4	0.6	0.05	0.06			
		T max. Z	47 33	0.6			0.04		
503	30	oP Z'	05 35 51	6			1	8710	Microseisms present
		oS E'	45 43	12		-2		7894	
		o N'	45 44	12	1				USCGS: 44.7 N, 150.3 E
		o N'	46 12	12	1				H 05 23 48.9
		o E'	46 16	12		1			h 49 km.
		o N'	46 26	12	1				Mag.B 5.5, S 5.8
		oSS N'	51 12	20	1				5.4-5.8 Berkeley
		oLQ E'	56 34	36		3			
		oL N'	57 04	30					
		oL Z'	06 00 14	(52)					
		M N'	04 04	20	3				
504	30	M N'E'Z'	11.5	19		3	3		
		E Z'	10 02 40						Masked by microseisms
		o N'	07 28						USCGS: 6.7 S, 129.5 E
		oS N'E'	07 34	12	1	1			H 09 55 32.0
		o Z'	07 45	28					h 38 km.
		oL E'	10 58	40		3			Mag.B 5.4
		oL Z'	11 31	48					
		M N'E'	14 26	16	9	11			
M E'Z'	15.1	16			14	7			
508	30	M Z'	17 08	12			9		
		o E'	18 13.6						USCGS: 35.5 N, 28.0 E
		o(SS) N'	20.0						H 17 40 24.4
		oL Z'	44.4	36					h 21 km.
509	30	M E'Z'	58	22		1	1		Mag.B 5.3, S 5.5
		iP E'Z'	13 48 02	12		-5	+8		Compression
		i Z	48 06	1.2			+0.18		
		i(pP) Z	48 16	1.3			+0.36		USCGS: 31.0 S, 177.6 W
		o(sP) E'Z'	48 22	10					H 19 42 25.1
		i Z'	48 36	9			-6		h 42 km.
		i E'	48 38	9		+8			Mag.B 5.5, S 6.2
		o(S) E'	52 34	10		6			5.5-5.9 Berkeley
		i N'	52 36	12	+5				6 1/2-6 1/2 Pasadena
		i Z'	52 54	15			+13		
		(LQ) N'	53 40	24	11				
		oL E'	54 04	32		9			
		oLR Z'	54 45	32					
		M N'	57 04	16	38				
		M Z'	57 28	18				54	
M E'	57 42	18			44				
M N'E'Z'	20 00 06	15	24	61	80				
517	31	iP Z	18 25 48.6	0.8			+0.13		Compression
		o Z'	31 06	15					USCGS: 13.6 S, 167.2 E, H 18 20 42.7
								h 205 km., Mag.B 4.9	

No.	Date	Phase & Component		Time (G.M.T.) h m s	Per. s	Amplitude			Δ km.	Remarks
						AN μ	AE μ	AZ μ		
522	1968 June 1	oS	N'E'	10 52 56		Masked by microseisms				USCGS: 40.2 N, 142.3 E H 10 31 49.3 h 50 km. Mag.B 5.4 5.0-5.4 Borkoloy
		oL	E'	11 03 15	36		1			
		oL	Z'	06 15	38					
		M	Z'	09 16	26			1		
		M	N'	09 22	24	1				
523	1	(P)	Z	11 28 20		Masked by microseisms				N'E'Z' confused by coda of No.522 USCGS: 31.0 S, 177.7 W H 11 22 35.1 h 33 km. Mag.B 4.5
		o	Z'	33 03	16			1		
		o	N'	33 52	22	1				
		oL	E'Z'	34 46	30					
		M	N'Z'	36 57	17	4		5		
		M	E'	38 16	16		4			
		M	Z'	39 58	16			6		
525	2	(P)	Z	04 43 41		Masked by microseisms				USCGS: 6.8 S, 129.6 E H 04 37 06* h 38 km. Mag.B 4.6
		o(L)	E'	53 44	34					
		i	N'	55 30	10	+2				
		i	E'	55 37	10		-2			
526	2	P	Z	05 23 18		Masked by microseisms				USCGS: 8.9 S, 120.6 E H 05 16 01.0 h 19 km. Mag.B 5.4
		oL	N'	34 20	30					
		M	N'	36 24	26	1				
		M	E'	38 22	18		1			
527	2	iP	Z'	08 24 12	8					Compression. Microseisms present USCGS: 8.1 S, 158.6 E H 08 18 36.2 h 35 km. Mag.B 5.6, S 5.2
		i	Z	24 13	1.2			+0.34		
		o(S)	N'	28 58	16	1				
		o	N'	29 29	10	2				
		o	E'	29 31	8		1			
		o	Z'	29 32	8			2		
		oL	N'	30 30	40					
		oL	Z'	31 12	32					
		L max.	N'Z'	31 36	32	7		8		
		M	E'	34 00	11		6			
M	N'	35 57	10	3						
529	2	oS	N'	12 04 24		Foglio. Masked by microseisms				USCGS: 41.7 S, 172.5 E, H 11 56 48* h 62 km.
		T	EZ	18 50	0.4	Foglio				
530	3	iP	Z	08 29 20.5	0.3			+0.07		Compression. Local Felt at Gunning and Crookwell, N.S.W.
		iS	E	29 45.0	0.4		+0.13			
		iS	NZ	29 45.3	0.5	+0.12		+0.08		
531	3	oP	Z	09 23 26		Microseisms present				N'E'Z' confused by long-period wanderings. USCGS: 5.4 S, 170.0 E H 09 17 46.2 h 190 km. Mag.B 5.6
		i	Z'	23 28	5			+2		
		iS	E'	28 00	6		+1			
		o	E'Z'	29 34	13		2	1		
		o(LQ)	E'	31 00	22		4			
		oL	N'	31 27	26					
		M	N'	32 30	20	3				
		M	E'	32 58	19		4			
		M	Z'	36 28	17			2		
			(iP)	Z	16 20 26.5				+	
538	5	P	Z	12 47 32		Masked by microseisms				USCGS: 41.8 S, 172.0 E H 12 43 22* h 66 km. Mag.B 5.2
		M	N'E'Z'	52.7	18	2	2	3		
		T max.	E	13 05 25	0.5		0.04			
		T max.	N	05 31	0.5	0.04				
		T max.	Z	05 40	0.6			0.04		
540	6	iPPP	Z'	01 27 39	5			+2		Microseisms present USCGS: 17.9 S, 167.5 E, H 01 22 12.3 h 12 km., Mag.B 5.0
		o(S)	N'	31 11	8	1				
		M	N'E'Z'	33 40	17	1	1	2		
545	7	iP	Z	12 05 31.3	2.0			-1.15	4880	Dilatation USCGS: 1.8 S, 120.1 E H 11 57 29.4 h 20 km. Mag.B 5.9, S 6.7 7.0 Pasadana
		iP	N'E'Z'	05 32	10	+5	-6	-14	4399	
		i	Z	05 34.5	2.5			-8.03		
		iP	Z	05 42	1.5			+1.32		
		i	Z'	06 00	10			+15		
		i	Z	07 12	2.0			-1.70		
		iPP	Z'	07 14	11			-11		
		iPcP	Z	07 18	2.0			+2.39		
		i	N'E'Z'	07 20	8	-11	+10	+15		

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
545 cont.	1968 June 7	iPPP	N'E'Z'	12 07 50	11	-7	+8	+14			
		iS	N'	12 00	12	-45					
		i	E'	12 02	14		-85				
		i	N'	12 24	20	+67					
		i	E'	12 30	16		+50				
		i	Z'	12 46	24			+39			
		i	N'	13 07	22	+52					
		i	E'	13 19	22		+73				
		i	N'	14 24	22	-57					
		i	E'	14 38	7		+				
		i	E'	14 51	23		-120				
		iSS	N'	15 08	34	+185					
		iSS	Z'	15 12	24			-53			
		(LQ)	E'	15.7	40						
		L	N'	17.4	40						
		eLR	E'Z'	18.0	40						
		M	N'E'	21ca	28ca	>270	>270				
M	Z'	24 30	22			230ca					
eX	N'E'	14 09.0	60								
eX	N'E'	47.5	80								
547	7	iP	N'E'Z'	21 38 52	8	-2	+3	+4	4690	Compression	
		i	Z	38 56.5	1.3			+0.35	4292		
		e	Z'	40 20	20			2		USCGS: 2.1 S, 120.5 E	
		e	E'	40 22	20		2			H 21 30 50.3	
		i	Z'	40 38	16			-4		h 23 km.	
		i	N'E'	40 40	16	+3	-3			Mag.B 5.5 S5.9	
		iS	E'	45 10	14		+9			6 1/2 Palisades	
		i	N'	45 12	14	-9					
		e	Z'	45 28	30			7			
		i	N'	45 38	22	+13					
		i	E'	45 44	22		-15				
		i	N'E'	46 14	22	+9	-5				
		e	N'	47 46	22	4					
		i	Z'	48 22	18			+8			
		i	E'	48 30	12		+12				
		eL	E'Z'	51 12	45		22	22			
		M	N'E'	54.6	20	41	45				
M	Z'	56 56	25			25					
M	Z'	58 02	19			30					
548	8	iP	N'E'Z'	00 22 08	9	+3	-1/2	-4		Dilatation	
		i	Z	22 26	1.0			+0.10			
		iS	E'	26 37	10		+3			USCGS: 8.8 S, 157.6 E	
		i	N'	26 39	10	-11				H 00 16 39.5	
		i	E'Z'	26 48	10		+11	+5		h 33 km.	
		i	N'	27 39	10	+6				Mag.B 5.4 S5.7	
		(SS)	E'	27 52	13		7				
		e	N'	28 00	26	5					
		i	N'	28 16	10	+8					
		eL	Z'	28 48	(40)						
M	N'E'Z'	31 50	13	12	28	7					
M	Z'	33 16	13			17					
550	8	P	Z	05 41 42		Masked by microseisms				USCGS: 43 5.4 N, 147.1 E	
		e(S)	N'E'	51 30	22					H 05 29 46.5 h 43 km.	
		eL	E'	06 02 16	36					Mag.B 5.3 S5.3	
		M	N'Z'	08 50	24	1		1		4.8-5.2 Berkeley	
		M	E'	09 44	24		1			5 1/2-5 1/2 Golden, Palisades	
556	8	eP	Z'	23 36 27	8			1		Microseisms present	
		e	N'E'	47.4		On calibration pulso				USCGS: 48.8 S, 31.5 E	
		e	N'	48 02	32	6				H 23 24 05.2	
		e	E'	51 39	30		2			h 33 km.	
		e	Z'	51 42	30			3		Mag.B 5.6 S6.0	
		e	N'	51 45	30	6				6 1/2 Palisades	
		e	E'	58 06	36		9				
		M	N'E'	24 03 40	24	10	6				
M	Z'	03 48	25			13					
9	(P)	Z	02 47 13						Perhaps only large microseism.		

No.	Date	Phase & Component		Time (G.M.T.)	Por.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
558	1968 June 9	(P)	Z	08 58 33		Masked by microseisms				USCGS: 30.4 S, 178.0 W H 08 53 10* h 79 km. Mag.B 4.5
		eL	Z'	09 05 36	26					
		M	E'	06 50	21		1			
		M	N'Z'	07 22	19	1		1		
559	9	(iP)	Z	09 22 21.5		Microseisms present +				USCGS: 24.1 S, 178.5 E. H 09 17 31.7 H 580 km., Mag.B 5.1
		M	Z'	29.3		Fooble				
564	9	(P)	Z	09 28 19		Masked by microseisms				Microseisms present USCGS: 31.3 S, 177.8 W H 22 01 58* h 33 km. Mag.B 5.0, S 4.9
		eP	Z'	22 07 29	10			1		
		e	E'	07 36	10		$\frac{1}{2}$			
		e	E'	11 20	10		1			
		e	Z'	12 22	16			1		
		eL	Z'	14.0	32					
		eL	E'	14.2	30					
575	12	eP	N'Z'	13 53 22	6				8240 7492	USCGS: 39.5 N, 142.7 E H 13 41 50.7 h 44 km. Mag.B 6.0, S 7.0 6.6-6.9 Berkeley 7 $\frac{1}{2}$ Pasadena, Palisados
		i	Z	53 23	1.3			+0.18		
		i	N'Z'	53 29	10	-6		+15		
		iPcP	Z	53 34	1.3			+0.73		
		iPPP	N'Z'	57 59	14	-5		+8		
		eiS	N'E'	14 02 52	12	+11	-7			
		i	E'	03 00	16		-43			
		i	N'Z'	03 11	14	+15		+11		
		i	E'	03 26	10		-27			
		i	Z'	03 30	16			-16		
		i	N'Z'	03 37	24	+54				
		iPS	E'	03 41	18		+38			
		i	E'	07 11	15		+13			
		(SS)	E'	07 36	18		13			
		(SS)	N'	07 39	19	13				
		(SS)	Z'	07 52	26			18		
		iLQ	E'	13 09	42		+89			
		iLR	N'	17 04	38	+47				
		M	N'E'Z'	21.8	21	55	37	76		
M	E'	22 12	19		53					
M	N'Z'	25 40	20	91		91				
M	N'Z'	28 16	19	64		100				
576	12	eX	E'	16 43.8	60		17			Masked by microseisms USCGS: 0.6 S, 132.8 E H 20 15 47.8 h 33 km. Mag.B 5.6, S 5.5
		eP	Z	20 23 00						
		epP	Z'	23 10	5					
		PP	Z	24 27	1.6			0.40		
		i	Z'	24 35	9			+1		
		e	E'	28 40	10					
		iS	N'Z'	28 43	9	+3		+1		
		e	N'	29 01	32	2				
		e	Z'	29 15	30			2		
		i	E'	31 22	12		+4			
		i	N'	31 24	10	+3				
		eL	E'	32.1	(50)					
		eLR	Z'	33 35	40					
		M	N'	35 52	29	9				
		M	E'	35 58	28		12			
M	Z'	36 20	30			7				
M	N'E'Z'	40 04	17	25	22	39				
577	12	(eP)	Z'	22 09 03						Masked by microseisms USCGS: 39.3 N, 142.8 E H 21 57 41.3 h 36 km. Mag. B 5.7, S 5.3 5.0-5.4 Berkeley
		e	Z'	09 15	7					
		iS	E'	18 39	8		-1			
		e	N'	19 18	20	1				
		eL	E'	28 52	40		5			
		eL	N'	29 18	32	1				
		M	E'	35 08	24		2			
		M	N'	35 38	22	2				
584	13	i(P)	Z'	16 04 54	6			+1		Masked by microseisms
		e	E'	14 19	10		1			
		e	E'	20 26	14		1			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
586	1968 June 14	θ P	Z	02	53	54	0.7	Microseisms present				USCGS: 21.5 S, 170.5 E, H 02 49 14* h 94 km.
592	14	θ P	Z	19	07	47	1.2	Microseisms present				
		i	Z	07	49		1.5			+0.34		USCGS: 41.9 S, 171.9 E
		θ (S)	N'	11	16		12	1				H 19 03 27.8
		i	Z'	11	17		10			+2		h 25 km.
		θ	E'	11	48		20		1/2			Mag. B 5.3
		M	N'	12	44		14	3				
		M	E'	12	58		18		3			
		M	Z'	13	32		19			3		
		T max.	E	25.7			0.5		0.04			
		T max.	NZ	25.9			0.5	0.03		0.04		
594	15	θ (PS)	E'	04	49	24	14	Feeble and masked by microseisms.				USCGS: 0.4 S, 91.4 W
		θ	Z'	55	12		20					H 04 20 02.6 h 33 km.
		θ	E'	55	28		20					Mag. B 5.4
		θ L	Z'	05	12.6		28					5/4 Palisades
595	15	θ (P)	Z	06	09	31		Feeble and masked by microseisms.				USCGS: 27.0 N, 126.5 E
		θ	N'	18	44							H 05 58 59.0 h 88 km.
		θ L	Z'	30.1								Mag. B 5.7; 5.0-5.4 Berkeley
596	15	θ PKP	Z	07	27	48	0.7	Very small. Microseisms present.				
		θ PP	Z'	29	24		6			1		USCGS: 5.6 N, 82.6 W
		θ	Z'	29	37		8			1		H 07 08 48.1
		θ SKKS	E'	36	26		16		1			h 16 km.
		i	N'	37	41		6	+2				Mag. B 6.0, S 6.0
		θ PS	Z'	39	30		18			1		6-6 1/2 Golden
		θ PS	E'	39	32		18		2			6.2-6.6 Berkeley
		θ	N'	39	38		16	1				
		θ	E'	41	47		18		1			
		θ	E'	45	44		38					
		θ SS	N'	46	26		22	1				
		θ	Z'	46	36		24			1		
		i	E'	46	42		22		+4			
		θ SSS	Z'	50	26		28			2		
		θ SSS	E'	50	42		24		2			
		θ LQ	N'	08	00	18	40	2				
		θ L	Z'	05.1			30					
		θ LR	E'	06.5			28					
		LR max	E'Z'	07.2			24		2	2		
		M	N'	08	18		22	1				
		M	E'	08	28		22		2			
		M	Z'	09	09		22			3		
		θ (G ₂)	E'	09	01.3		50					
598	15	θ P	Z	13	39	07		Microseisms present			2400	
		iP	N'E'Z'	39	08		20	+7	+8	-12	2196	Dilatation
		i	NEZ	39	15		1.5	+0.20	+0.22	-0.68		
		i	NEZ	39	21		2.0	+0.51	+0.74	+2.21		USCGS: 18.3 S, 167.9 E
		i	NEZ	39	27		3	+1.75	+2.97	-7.17		H 13 34 14.4
		i	EZ	39	31		2.5		+2.20	+3.63		h 11 km.
		θ S	N'	43	02							Mag. B 5.5, S 6.0
		i	N'	43	10		14	-33				
		i	E'Z'	43	14		14		-28	-27		
		(L)	E'	44.0			(40)					
		M	E'	45	26		21		46			
		M	N'Z'	45	30		20	50		72		
		M	N'	46	24		16	60				
		M	E'Z'	47	13		17		59	69		
		M	N'	47	34		16	51				
		(W ₂)	Z'	16	32							
603	16	θ P	Z	02	36	21		Microseisms present				USCGS: 18.6 N, 145.4 E, H 02 27 29.6 h 227 km., Mag. B 4.9
605	16	θ SS	E'	05	30	42	22					USCGS: 36.2 S, 15.9 W
		θ	N'	30	54		22					H 04 55 57*
		θ	E'	34	26		36					h 33 km.
		θ	E'	37	58		28					
		θ	E'	41	32		34		4			Mag. B 5.1, S 6.1
		θ (LQ)	E'	42	06		66					
		M	N'E'Z'	54.4			21	2	1	2		

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
						AN μ	AE μ	AZ μ		
606	1968 June 16	(P)	Z	06 02 50						
		T	NEZ	21						
612	16	(P)	Z	19 26 30						
		o(S)	N'	37 26	14	1				USCGS: 53.9 S, 8.7 E
		o	E'	37 30	14		2			H 19 14 05*
		o	N'	38 30	16	1				h 33 km.
		o(SS)	N'	42 56	24	1				Mag. B 5.7, S 5.7
		o	E'	42 58	24					
		oLQ	N'	50 36	48	2				
		L	E'	50 50	48		8			
		oL(R)	Z'	53 18	42					
		L max.	N'	55 54	38	5				
		L max.	Z'	56 10	38			5		
		M	N'E'Z'	20 02 44	17	2	1	3		
617	17	oP	Z'	12 04 40	8			1	8370	
		o	Z'	04 52	10			1	7523	
		o	N'	14 11	12	2				USCGS: 41.0 N, 143.0 E
		o	Z'	14 13	18			3		H 11 53 00.4
		iS	N'E'	14 16	20	-5	-8			h 48 km.
		o	Z'	14 46	13			2		Mag. B 5.7, S 6.1
		oPS	N'	14 53	22	5				6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Golden
		oPPS	E'	15 12	22		3			6 $\frac{1}{2}$ Palisados
		o	N'	15 19	20	2				
		oSS	N'	19 00	28	3				
		SS	E'	19 02	26		4			
		o	Z'	19 14	26			3		
		oG	E'	24 48	40		15			
		oL	N'	25 02	38	3				
		oLR	Z'	28 24	38					
		M	N'E'Z'	31.8	24	9	6	10		
		M	N'E'Z'	34.3	22	9	6	10		
620	17	iP	Z	17 55 23.6	1.2			+0.18		Microseisms present
		i	Z	55 26.8	1.0			+0.12		USCGS: 6.3 S, 146.6 E, H 17 49 43.6
		i(pP)	Z	55 40.8	0.7			+0.06		h 110 km., Mag. B 5.1
621	17	iP	Z	18 15 03.4	1.1			+0.85	2910	Compression
		iP	N'E'Z'	15 04	8	-3	-2	+6	2622	
		iSP	N'Z'	15 18	10	+4		-7		USCGS: 12.3 S, 166.7 E
		iPP	Z'	15 43	6			+3		H 18 09 34.1
		o	N'Z'	15 52	15			3		h 33 km.
		o	Z'	19 22	?					Mag. B 5.5, S 6.1
		iS	N'	19 31	10	-3				6 Pasadena
		i	E'	19 32	10		-6			6 $\frac{1}{2}$ Palisados
		oi	Z'	19 40	24			+17		
		i	N'	19 43	20	+13				
		i	E'	19 46	20		+10			
		oLQ	N'	20 16	32	13				
		oL	E'	20 35	38		14			
		i	N'	20 50	18	-15				
		SSS	Z'	20 54	20			6		
		oLR	Z'	21 38	30			24		
		oLR	N'	21 41	32	15				
		M	E'	22 29	25		21			
		M	N'	22 32	25	18				
		M	Z'	22 38	25			29		
		M	Z'	23 12	21			27		
		M	N'	23 18	21	20				
622	17	oP	Z'	19 08 58	12			1	8080	USCGS: 38.7 N, 143.6 E
		iS	E'	18 23	12		-2		7227	H 18 57 27.5
		o	N'	18 24	18	1				h 17 km.
		M	N'E'Z'	38 32	18	2	2	3		Mag. B 4.9 S 5.8
628	18	P	Z	06 47 33						USCGS: 21.7 S, 179.6 W, H 06 42 21.9
		(oS)	E'	51 39						h 600 km., Mag. B 5.0
631	18	iP	Z	17 34 50.0	0.6			-0.09		Dilatation. Large microseisms.
		o	E'	37 54						USCGS: 44.5 S, 167.8 E, H 17 30 49*
		oL	N'Z'	38 33						h 37 km.
		T max.	NEZ	51 46	0.6	0.35	0.20	0.25		

No.	Date	Phase & Component		Time (G.M.T.)		Per	Amplitudo			Δ	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km.		
636	1968 June 19	oP	Z'	08	28	53	16			1	13,300ca	Diffracted P 120°ca USCGS: 5.6 S, 77.2 W H 08 13 35.0 h 28 km. Mag. B 6.4, S 6.9 6.8 Berkeley 7 Pasadena	
		oPKP	Z'		32	27	14			1			
		iPP	N'E'Z'		33	51	20	+2	-4	+9			
		o	E'		35	34	18		2				
		oPPP	Z'		36	25	20			4			
		oSKS	N'		39	29	16	1					
		o	E'		39	39	12		2				
		oiSKKS	E'		40	50	15		+3				
		o	Z'		43	25	18						
		iPS	Z'		43	40	19				-15		
		i	N'E'		43	48	16	+12	-17				
		i	M'		45	18	15	-5					
		o	Z'		45	24	16				5		
		i	N'		45	52	18	-5					
		i	E'		45	54	16		+7				
		i	N'		47	42	22	+7					
		o	E'		49	44	40						
		oSS	N'		50	16	44	21					
		i	E'		50	40	32		+79				
		i	Z'		50	52	32				+27		
i	N'		51	06	24	+38							
o	Z'		58	22	34				16				
LQ	N'E'		09	04	22	36	26	15					
oLR	Z'		09	28	25								
oL	E'		10	06	60								
M	N'E'Z'		17.8		18	28	38	63					
640	20	(o)	Z'	21	54	56		Masked by microseisms					
		o	Z'		55	54	10						
		o	N'		58	40							
		i	E'		58	54	7		+2				
		oL	Z'	22	00	21	28						
		M	N'E'		03	36	15	2	2				
M	Z'		03	48	15			2					
641	21	o	E'	00	56	24	14		1		USCGS: 5.7 S, 77.3 W		
		o(SS)	E'	01	03	18	24		1		H 00 26 07.8		
		o	N'		03	33	22				h 22 km.		
		oL	E'Z'		22.4		30				Mag. B 5.6		
		M	N'E'Z'		27.5		20	1/2	1	1			
644	22	(PKP)	Z'	00	40	46		Feeble and masked by microseisms			USCGS: 0.1 S, 91.6 W, H 00 22 02.6		
		(o)	Z'		40	50					h 33 km., Mag. B 4.6		
645	22	oP	Z'	01	24	12	10				8260		
		iS	E'		33	46	14		-2		7493		
		o	N'		33	50	14	1					
		o	N'		34	12	16	1					
		oPS	E'		34	24	14		1				
		oL	E'		44	05	30		2				
		M	N'E'Z'		57.0		18	1	1	2			
646	22	P	Z	21	06	38.5		Large microseisms present			USCGS: 17.9 S, 178.1 W, H 21 01 02.5 h 650 km., Mag. B 4.6		
648	23	(oP)	Z	00	40	24		Masked by microseisms			USCGS: 5.9 S, 147.6 E, H 00 34 33.1 h 88 km., Mag. B 5.0		
		M	Z'		52			Feeble					
649	23	P	Z	08	11	24.1		Masked by microseisms			USCGS: 8.3 S, 118.2 E, H 08 03 57* h 70 km., Mag. B 4.9		
650	23	(P)	Z	09	50	26		Feeble. Masked by microseisms			USCGS: 18.3 S, 167.6 E H 09 45 25.7 h 12km. Mag. B 4.6		
		o(S)	N'		54	22	10	1					
		M	N'Z'		56	52	18	1		1			
		M	E'		57	14	16		1				
651	23	(oP)	Z	11	18	59		Feeble. Masked by microseisms					
		i	Z		19	17.0				+			
		oL	N'		22	28	26						
		M	N'E'		23	32	14	2	2				
		M	Z'		24	10	14			1			
		T max.	E		36.9		0.5	Superposed on microseisms					
		T max.	NZ		37.3		0.5						

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
654	1968 June 25	o	Z	08	57	17		Masked by large microseisms				USCGS: 26.0 S, 137.5 E H 08 53 43.1 h 33 km. Mag. B 4.8
		o	N'	09	02	08						
		o	E'	02	10							
		o	Z'	02	46							
664	26	iP	EZ	15	45	13.5	1.2		+0.30	-1.26		Dilatation
		iP	N'E'Z'	45	14		4	+2	+4	-6		
		m	EZ	45	19		1.0		0.34	0.86		USCGS: 22.2 S, 171.4 E H 15 40 31.1 h 90 km. Mag. B 5.6
		i	NEZ	45	21		1.0	-0.18	+0.41	+0.38		
		o	Z'	45	31		8			3		
		o(PP)	N'E'	45	35		12	1	3			
		oPP	Z'	45	41		12			3		
		i(S)	E'	49	03		10					
		i	N'E'	49	09		8	+6	-23			
		i	Z'	49	12		10			-9		
		i	Z'	49	37		16			+9		
		iSS	N'	49	41		12	+4				
		oL	Z'	50	26		30			11		
		oL	E'	50	34		28		11			
		M	N'	52	36		14	5				
		M	E'	53	17		15		4			
		M	Z'	53	28		16			4		
667	27	iP	Z	22	18	48.2	1.2			+0.16		Compression Microseisms present USCGS: 6.1 N, 120.9 E, H 22 10 03.8 h 60 km., Mag. B 5.3
668	27	iP	Z	22	21	18.1	1.0			+0.24		Compression
		isP	Z	21	49		1.1			+0.22		USCGS: 8.2 S, 119.7 E H 22 14 01.3 h 86 km. Mag. B 5.4
		i	Z	23	07		0.8			-0.05		
		o	E'	26	03		(14)	Feeble & masked by microseisms				
		o	N'	26	08		14	"	"	"		
		oL	N'	33	00		36	"	"	"		
669	27	o(P)	Z'	23	49	40		Masked by microseisms				USCGS: 16.3 S, 167.3 E H 23 44 25.2 h 8 km. Mag. B 4.6
		o(S)	N'	53	42							
		o	Z'	53	49		12			1		
		i	N'E'	53	50		10	+2	+2			
673	29	P	Z	11	13	08		Masked by microseisms				USCGS: 11.6 S, 166.4 E, H 11 07 40.5 h 123 km., Mag. B 5.0
		o	N'	19	04			Feeble				
675	30	P	Z	09	44	02		Masked by microseisms				USCGS: 13.0 N, 145.2 E H 09 35 29.4 h 38 km. Mag. B 5.2, S 5.4
		oS	N'E'	50	48		12	1	1			
		oS	E'	54	14		16		2			
		oL	E'	56	48		25		7			
		M	N'E'Z'	10	02.0		18	2	4	3		
678	July 1	(oP)	Z'	10	56	20		Masked by microseisms				USCGS: 36.0 N, 139.3 E H 10 45 11.9 h 67 km. Mag. B 5.9
		(P)	Z	56	22							
		o	Z	56	31							
		o	Z'	11	05	28	15			1		
		i(S)	N'	05	30		16		-2			
		i	Z'	05	52		9			+2		
		oS	Z'	10	11		30			1		
		oS	E'	12	58		28					
		o	Z'	13	32		40			2		
		oL	E'	15	56		40					
		M	E'	17	28		26		2			
		oL	Z'	19	13		30					
		M	N'Z'	22	40		24	2		4		
		M	N'Z'	24	42		22	3		4		
	2	iP	NEZ	03	54	19.0	0.4	0.02	0.02	+0.04		Compression. Local. Seismic??
		iS	NZ	54	33.0		0.4	+0.31		-0.10		
		iS	E	54	33.3		0.4		-0.09			
		m	NEZ	54	35		0.5	0.42	0.23	0.10		
679	2	oPP	Z'	04	04	24		Masked by microseisms				USCGS: 17.6 N, 100.3 W H 03 44 48.9 h 41 km. Mag. B 5.9 6.0 Borkoloy, Pasadona
		o	Z	04	31							
		(SKS)	E'	10	21							
		oPS	E'Z'	14	10		26		3	4		
		oPPS	Z'	15	20		28			1		
		o	E'	15	34		26		3			

Continued

RIVERVIEW COLLEGE OBSERVATORY



From the ISC collection scanned by SISMOS

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
						μ	μ	μ		
679 cont.	1968 July 2	oSS	N'	04 20 22	30	1				
		o	Z'	20 33	28					
		o	E'	20 53	28			3		
		oSSS	E'	24 34	26			1		
		oLQ	N'	31 43	38	2				
		oLR	Z'	37 40	30				10	
		oLR	E'	37 48	30			9		
		M	Z'	43 50	24				8	
		M	E'	43 58	24			6		
		M	N'	44 20	18	4				
		oW2	Z'	05 41.8	38					
680	2	oP	Z	04 36 29		Microseisms present				USCGS: 29.7 S, 177.9 W, H 04 30 52.7 h 53 km. Mag.B 5.6
		i	Z	36 30.8	1.0			+0.14		
		i	Z	36 46.5	1.3			+0.24		
681	2	iP	Z	18 46 41.5	1.3			+1.05	Compression Microseisms present	
		iP	Z'	46 42	3			+1		
		i(pP)	Z	46 55	1.2			+0.22	USCGS: 2.7 S, 138.9 E H 18 40 10.1 h 62 km. Mag.B 5.7	
		i(sP)	Z	47 04	1.2			+0.22		
		oS	E'	51 55	?					
		oL	E'	54 42	46					
		oL	Z'	55 50	38					
		M	E'	57 58	26		4			
		M	Z'	59 06	23			2		
M	N'	59 14	24	3						
682	2	oP	Z	19 53 10		Masked by microseisms			USCGS: 45.0 S, 167.0 E H 19 49 17* h 27 km. Mag.B 5.0	
		o	Z'	53 13						
		oL	N'	57 02	20					
		oL	Z'	57 08	(20)					
		M	Z'	58 48	12			1		
		M	E'	58 54	11		1			
		M	N'	59 16	12	1				
		T max.	N	20 09 52	0.6	0.16				
		T max.	E	09 57	0.6		0.16			
T max.	Z	10 00	0.6			0.13				
683	3	(P)	Z'	01 16 16		Fooble & masked by microseisms			USCGS: 31.0 S, 176.8 W H 01 10 35* h 33 km. Mag.B 4.9	
		oL	Z'	23 28	26					
		M	N'	25 50	15	1				
		M	E'Z'	28 16	16		1	1		
685	4	(oP)	Z	12 46 06		Masked by microseisms				
		(o)	N'	54 11	8					
		o	Z'	54 16	16					
		o	N'	54 19	14	1				
		o	N'E'Z'	54 38	20	2	2	1		
		o	Z'	58 20	24					
		o	E'	13 01 20	20		2			
		o	N'	01 26	20	2				
		oLR	Z'	03 26	28					
		oL	N'	03 29	28					
		L max.	E'	03 56	26		2			
L max.	N'	04 12	26	2						
L max.	Z'	04 20	26			3				
686	4	(SKS)	N'	22 14 34		Fooble & masked by microseisms			USCGS: 37.8 N, 23.2 E H 21 47 55.6 h 33 km. Mag.B 5.3	
		oL	Z'	58 18						
		M	E'Z'	23 07.4	20		½	½		
687	5	(P)	Z'	07 01 41		Masked by microseisms			USCGS: 0.1 N, 125.5 E, H 06 54 02.9 h 108 km.	
688	5	oP	Z'	11 39 37	6				8100	
		i	N'Z'	39 45	8	+2		+4	7209	
		i	Z	39 49.5	1.3			-0.17		
		i	Z	39 51.6	1.2			-0.25		
		o	Z'	41 34	15			1		
		iS	N'E'Z'	49 00	14	-6	-8	-3		
		isS	N'E'	49 24	14	-5	-6			
		i	N'	49 42	8	-4				
		i	E'	49 46	14		-5			

Continued

No.	Date	Phase & Component		Time (G.M.T.)			Por.	Amplitude			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
688 cont.	1968 July 5	o	N'	11	49	55						
		oSS	N'	53	29		30	4				
		oSS	Z'	53	52		28			3		
		oLQ	E'	58	58		44		16			
		oL	N'	59	26		36	4				
		oLR	Z'	12	02	40	40				13	
		oLR	N'	02	44		40	10				
		M	N'Z'	06	06		24	7			8	
		M	E'	06	46		22		7			
		M	Z'	07	40		24				9	
		M	N'	07	48		24	6				
W ₂ M	N'Z'	13	58.7		24	$\frac{1}{2}$			1			
689	5	oP	Z	13	24	25		Masked by microseisms			USCGS: 44.0 S, 168.0 E, H 13 20 30.9 h 40 km.	
		oT	NEZ	40.7								
		T max.	NE	41	21		0.6	0.15	0.10			
		T max.	Z	41	25		0.6			0.12		
690	5	iP	Z	13	43	31.5	1.1			+0.33	Compression USCGS: 30.2 S, 178.1 W, H 13 37 55.7 h 53 km., Mag.B 5.2	
		oL	N'	50.1		24						
		M	Z'	52.5		22				1		
693	6	oS	N'	13	40	25	12	1			Masked by microseisms USCGS: 6.4 S, 133.8 E H 19 28 55.3 h 27 km. Mag.B 5.7	
		(oL)	E'	43	23	(48)						
		oL	Z'	44	28		32					
		M	N'E'	46	22		18	2	3			
		M	Z'	49	04		18			3		
694	7	iP	EZ	03	27	11.0	0.5			+0.04	Compression Local	
		iS	EZ	27	34.5		0.5			-0.10		
		iS	N	27	34.8		0.5	+0.08		+0.07		
		i	N	27	35.7		0.5	+0.19				
		m	E	27	39		0.7		0.11			
697	7	oS	N'	17	06	30	12	Masked by microseisms			USCGS: 9.8 N, 126.2 E H 16 50 31.0 h 36 km. Mag.B 4.8	
		M	E'	20	12		18		1			
		M	N'	20	28		18	1				
		M	Z'	21	16		18			1		
698	7	(P)	Z	21	42	52		Masked by microseisms			USCGS: 9.6 N, 126.5 E H 21 34 07.8 h 69 km. Mag.B 5.1	
		oS	N'	49	56		16	$\frac{1}{2}$				
		oSS	N'	53	21		14	$\frac{1}{2}$				
		oSS	E'	53	23		18		$\frac{1}{2}$			
		M	E'Z'	22	03	32	16		1	1		
		M	N'	04	00		16	1				
698	8	(iP)	Z	00	12	25.2				+	Masked by microseisms USCGS: 22.4 N, 143.1 E H 00 02 54* h 123 km. Mag.B 4.4	
		(i)	Z'	12	27		5			-2		
		(iP)	EZ	04	14	40	1.0		-0.03	+0.06		
700	8	iP	NEZ	11	50	30.3	0.6	-0.38	-0.27	-0.61	Dilatation Slight damage in Moss Vale and Goulburn, New South Wales.	
		iS	NE	50	42.5		0.6	+0.73	-0.53			
		m	Z	50	46		0.6			2.00		
		m	NE	50	48		0.6	1.80	(1.8)			
		(P)	Z	12	14	36		Very feeble. Masked by microseisms				
700	8	(P)	Z	14	12	58		Very feeble. Masked by microseisms				
											USCGS: 19.4 S, 177.4 W, H 14 07 05* h 356 km. Mag.B 4.3	
705	10	oS	N'	00	55	51	16	2			Early phasas masked by microseisms USCGS: 10.5 N, 138.6 E H 00 40 45.9 h 33 km. Mag.B 5.1 S 5.3	
		o	E'	59	20		14		2			
		oL	E'	01	01	14	32			3		
		oL	Z'	02	48		40					
		oL	N'	03	04		36	3				
		L max	Z'	03	48		40			4		
		M	E'	06	38		16		4			
		M	Z'	07	11		21			3		
M	N'	08	08		15	3						

RIVERVIEW COLLEGE OBSERVATORY



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No.	Date	Phase & Component	Time (G.M.T.)	Por.	Amplitude			Δ km.	Remarks			
					AN μ	AE μ	Az μ					
708	1968 July 10	(cP) Z'	11 26 38						Masked by microsoisms USCGS: 36.8 S, 78.5 E H 11 16 44.6 h 33 km. Mag.B 5.7, S 6.1 6 Pasadona			
		o Z'	26 44									
		iS N'Z'	34 42	15	+2		+2					
		i E'	34 46	20		-6						
		o E'	35 20	36								
		oSS E'	38 40	14		2						
		oLQ N'	41 08	34	6							
		oL E'	41 11	32		3						
		oLR E'Z'	43 50	32		10	13					
		M N'	45 20	24	9							
		M E'Z'	46 00	22		12	13					
		M E'Z'	47 51	18		11	13					
		M Z'	49 20	17			13					
710	10	(W ₂) E'Z'	13 42	28	7	10			Masked by microsoisms USCGS: 40.2 N, 143.2 E H 20 40 31.2, h 33 km. Mag.B 5.3			
		e(S) N'E'	21 01 42	16								
		oL E'	12.0	32								
		M N'E'Z'	20.4	21	1	1	1					
		711	11	iP Z	10 11 57.8	1.0				-0.13	Dilatation Microsoisms present USCGS: 11.9 S, 167.6 E, H 10 06 46.2 h 320 km., Mag.B 4.7	
				o E'	18 22							
		712	11	iP NEZ	19 31 45.0	0.5	+0.08	+0.17		+0.30	Compression Felt in Dalton & Blaynoy districts, New South Wales.	
				iS N	32 05.8	0.6	+0.11					
				m E	32 09	0.5		0.79				
				m NZ	32 11	0.5	0.83			0.48		
		716	11 12	(P) Z	23 25 14						Masked by microsoisms USCGS: 2.6 S, 138.4 E, H 23 18 36* h 33 km., Mag.B 4.8 Compression Microsoisms present USCGS: 39.5 N, 143.2 E H 00 44 36.5 h 28 km. Mag.B 6.0, S 5.8 6 Golden 6 1/2 Pasadona	
				iP Z'	00 56 09	7				+2		8240
				i Z	56 10.5	1.3				+0.17		7492
i Z	56 17.5			1.7			+0.30					
i Z'	56 18			8			+2					
PcP Z	56 23			2.0			0.51					
iS E'	01 05 39			15			-4					
oPS E'	06 06			20			2					
iPPS N'	06 26			14	+3							
oL E'	15 40			40								
oLR Z'	18 52			30								
oL N'Z'	21.2			30	4		4					
M N'E'Z'	27 42			20	4	2	5					
M N'	28 28	20	5									
M E'	30 09	20			3							
717	12	(oP) Z'	04 08 00					Masked by microsoisms USCGS: 39.5 N, 143.2 E, H 03 56 27.5 h 26 km., Mag.B 5.5, S 5.5				
		oL N'E'	32.0	40								
		M N'Z'	40.3	18	2		2					
719	12	iP Z	11 32 57.5	1			-0.13	Dilatation Microsoisms present USCGS: 30.8S, 179.0 E, H 11 28 25.2 h 545 km., Mag.B 4.8				
720	13	(P) Z'	06 44 08					Masked by microsoisms USCGS: 6.4 S, 149.7 E H 06 38 26.2 h 36 km. Mag.B 5.1				
		o E'	50 12	26								
		oL E'	50 30	36								
		oL N'	51 08	30								
		L max. N'E'	52 08	25	2	5						
		M N'Z'	53.6	21	2		2					
722	14	oP Z	08 03 42					Masked by microsoisms USCGS: 19.5 S, 173.6 W, H 07 57 01.1 h 86 km., Mag. B 5.1				
		L N'Z'	13									
723	15	iP Z	00 26 28.0	0.8			+0.03	Compression USCGS: 12.7 S, 166.7 E, H 00 21 03* h 51 km., Mag.B 4.4				
724	15	iP Z	04 18 02.0	1.0			+0.12	Compression USCGS: 18.0 S, 178.6 W, H 04 12 26.3 h 585 km., Mag.B 5.3				
728	16	P Z	21 30 48	0.8			0.06	Microsoisms present USCGS: 13.5 S, 167.1 E, H 21 25 41.9 h 215 km., Mag.B 4.4				
		oS N'	34 48	10	1/2							

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ km.	Remarks	
							AN μ	AE μ	AZ μ			
729	1968 July 16	o(P)	Z'	21 31 25	6						USCGS: 13.6 S, 166.1 E H 21 26 25* h 215 km. Mag.B 4.8	
		oS	N'Z'	35 26	16	1						
		o	E'Z'	36 02	11							
		o	E'	36 21	11			1				
		o(L)	E'	36 30	22							
731	17	oP	Z	05 31 06	1.2					3890	USCGS: 8.8 S, 125.0 E H 05 24 15.6 h 25 km. Mag.B 5.7, S 5.6	
		i	Z'	31 10	6					3590		
		i	Z	31 11	1.0							
		o	Z'	32 18	8							
		iS	E'	36 38	13							
		o	N'	36 39	14	2		+3				
		o	N'Z'	37 02	26	3						
		o	E'	37 12	24					4		
		oL	N'	39 20	50	9						
		oL	E'	40 00	44							
		oL	Z'	40 48	40							12
		M	N'E'Z'	44 28	22	32		27		11		
M	E'	45 56	16			36						
M	N'Z'	47 20	17	32				47				
733	18	(oP)	Z'	00 34 14							US CGS: 2.4 N, 128.3 E, H 00 26 26.0 h 69 km., Mag.B 5.5	
		M	N'E'Z'	53.7	18	1	1	1				
735	19	(P)	Z	05 07 32							USCGS: 8.7 N, 93.6 E H 04 56 27.2, h 33 km. Mag.B 5.3, S 5.5	
		oL	N'	27.0	46							
		M	N'E'Z'	32.5	32	4	4	7				
736	19	iP	Z	09 26 28.5	1.0						Compression Microsoisms present USCGS: 13.0 S, 166.5 E H 09 21 04.8, h 29 km. Mag.B 5.1, S 5.3 5 $\frac{1}{2}$ Golden 5 $\frac{3}{4}$ Palisados	
		oS	N'	30 52	20					+0.29		
		oL	Z'	32 52	28							
		M	N'	34 03	20	3						
		M	Z'	34 18	20					5		
		M	E'	34 22	20			3				
738	20	iP	Z	01 35 25.5	1.0						Compression Microsoisms present USCGS: 21.9 S, 179.4 W, H 01 30 14.3 h 600 km., Mag.B 4.6	
										+0.06		
739	21	oP	Z'	05 58 28	8					3400	USCGS: 3.2 S, 150.7 E H 05 52 10.4 h 5 km. Mag.B 5.3, S 5.7 5 $\frac{1}{2}$ Palisados 6 Pasadona	
		iPP	Z'	59 27	11					+2		3096
		iPP	N'	59 28	11	-2						
		iS	N'	06 03 30	18	+7						
		i	E'	03 32	18			+2				
		o	Z'	03 56	22							5
		oLR	Z'	06 40	40							
		oLR	E'	06 42	40							
		oL	N'	07 04	36							
		L max.	Z'	07 40	34							20
		L max.	N'E'	07 50	34	15		11				
		M	N'	09 14	22	27						
		M	Z'	09 29	22							31
		M	E'	09 35	20			20				
M	N'E'	10 34	17	23		28						
M	Z'	11 04	17						27			
742	21	oP	Z	17 33 34							USCGS: 58.1 S, 148.3 E H 17 28 17.6 h 33 km. Mag.B 4.9, S 5.9	
		i	N'Z'	33 36	9	+2				+5		
		o(S)	N'	37 46	13							
		i	E'	38 01	12			+16				
		i	Z'	38 06	8							-8
		i	E'	38 44	18			+11				
		oL	Z'	39 04	30							
		M	N'	40 06	21	25						
M	Z'	40 32	20						29			
M	E'	40 52	19			19						
744	22	o	N'	05 32 35							USCGS: 54.6 S, 1.7 E H 05 09 15.7 h 33 km. Mag.B 5.6, S 5.5	
		o	E'	32 50	15					2		
		o	N'	33 04	16	2						
		o	E'	38 46	20					2		
		oLQ	E'	45 28	32					8		
		oL	N'	46 36	42	4						
		M	N'Z'	59 05	18	6						7

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
							μ	μ	μ	km.			
745	1968 July 22	iP	Z	18 03 14.5	1.3			+0.49		Compression Microseisms present USCGS: 20.1 S, 169.0 E H 17 58 30.3 h 34 km. Mag.B 5.4, S 5.5 5½ Palisados 5.6-5.9 Borkoloy			
		i	N'E'Z'	03 20	8	-3	-6	+8					
		i	Z	03 27	1.2			+0.96					
		i(S)	N'	07 10	8	-15							
		i	E'	07 12	8		-9						
		i	Z'	07 13	8			-11					
		i	Z'	07 24	8			+16					
		i	E'	07 30	9		-14						
		i	N'	07 34	10	+9							
		oL	E'	08 29	26		9						
M	E'Z'	10.2	18		12	13							
747	23	oS	E'	23 23 53	12		1			USCGS: 40.3 N, 143.3 E H 23 02 35.5, h 14 km. Mag.B 5.2, S 5.6 5¾ Golden			
		oL	N'	32 50	28								
		M	N'E'Z'	42 42	22	1	2	2					
752	25	iP	Z	07 28 40.0	1.6			+2.75		Compression USCGS: 30.8 S, 178.4 W H 07 23 07.8 h 60 km. Mag.B 6.4 6.5-6.9 Borkoloy 6¾-7 Palisados, Golden 7-7¾ Pasadona			
		iP	N'E'Z'	28 40½	20	+8	-72	+100					
		i	Z	28 44	1.6			-6.12					
		i	N'E'Z'	28 58	20	+12	+105	+105					
		iPP	Z	29 21	2.0			+6.35					
		i(S)	N'	33 09	16	+47							
		i	N'	34 14	20	+180							
		L)		Indecipherable on N'E'Z'									
		oX	N'	09 35	90								
		oX	N'	10 04	100								
753	25	(P)	Z	11 02 40						USCGS: 45.7 N, 146.7 E, H 10 50 31.5 h 16 km., Mag.B 5.9, S 5.5			
		i	Z	02 47.3	1.5			-0.26					
755	26	(P)	Z	12 33 05						USCGS: 20.4 S, 168.7 E H 12 28 25.0 h 33 km. Mag.B 4.8			
		o	N'Z'	37 07	8	1		1					
		oL	Z'	38 31	21			2					
		M	N'	39 30	16	1							
		M	E'	40 18	16		1						
		M	Z'	40 46	16			1					
760	28	oP	Z'	21 25 36	6			1		Microseisms present USCGS: 55.4 N, 166.6 E H 21 12 38.1 h 27 km. Mag.B 5.4, S 5.8 5¼ Palisados 5.5-5.7 Borkoloy 5¾ Golden			
		e	Z'	25 51	6			1					
		o(SKS)	N'	36 11	(10)								
		o	N'	36 38	16	1							
		oPS	N'	37 44	16	2							
		oSS	N'	42 28	24	1							
		oSS	Z'	42 34	20			1					
		o	E'	43 04	20		1						
		oLR	N'	54 03	38								
		oLR	Z'	54 08	40								
762	29	LR max.	N'Z'	54.8	38	6		8		USCGS: 22.5 S, 175.0 W H 11 11 59.5 h 33 km. Mag.B 5.6, S 6.0			
		M	N'E'Z'	57.4	26	7	3	10					
		oP	Z'	11 18 23	10			1	3530				
		oPP	Z'	19 30	12			2	3198				
		o	E'	19 38	12			2					
		oS	E'	23 30	10			2					
		iS	N'	23 35	12	+2							
		o	Z'	23 52	21			3					
		o	E'	24 08	18			3					
		oSS	N'	25 18	16	2							
763	29	oL	N'	25 33	32					USCGS: 22.4 S, 174.9 W, H 12 19 46.6 h 33 km., Mag.B 5.3			
		oLR	Z'	26 47	22								
		M	E'Z'	29 34	20		23	31					
		M	N'	29 46	14	19							
		P	Z	12 26 09									
									Microseisms present				
									Microseisms present				
									Microseisms present				
									Microseisms present				
									Microseisms present				
764	29	oP	Z	13 36 44	1.5				3420	USCGS: 3.2 S, 150.6 E H 13 30 31.9 h 28 km. Mag.B 5.4, S 5.7			
		oP	Z'	36 45					3098				
		i	Z	36 46	2.5			+1.10					
		iPP	N'Z'	37 45	8	-2		+3					
		oS	E'	41 44	(12)								
		iS	N'	41 46	12	+6							

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Poz.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
				h	m	s		μ	μ	μ	
764	1968 July 29	i	Z'	13	41	58	20			+4	
		i	N'		42	05	22	+9			
		o	E'		44	12	26		6		
		oL	N'		44	36	30				
		oLR	Z'		45	06	36				
		M	N'		47	15	22	17			
		M	E'		47	40	20		16		
		M	Z'		47	43	22			22	
		M	E'		49	04	16		26		
		M	N'Z'		49	20	18	15		23	
766	29	iP	Z'	23	59	29	?			+	4110
		i	Z'		59	32	?			-	3790
		m	Z		59	33	2.0			3.31	
		iP	Z		59	38	2.0			+4.60	
		iS	E'	24	05	12	12		-22		
		i	N'		05	13	10	+12			
		i	Z'		05	18	7			-11	
		iSS	Z'		07	44	14			-16	
		i	E'		07	50	14		-17		
		i	N'		07	55	13	-17			
		oL	N'		09	08	46				
		oL	Z'		10	18	42				
		M	N'E'		12.6		26	97ca	130ca		
		M	Z'		13.8		25			59ca	
768	30	(oPP)	Z'	20	59	10		Masked by microseisms			
		o	E'	21	04	13					
		o(SKS)	N'		04	20					
		o	E'		05	04					
		o	N'		05	28					
		oPS	Z'		08	13	20			5	
		o	E'		08	18	20		4		
		o	N'		08	31	20	2			
		o	N'		14	43	12	2			
		oSS	Z'		14	57	26			4	
		oiSS	N'E'		15	00	22	-7	+8		
		oG	E'		27	12	65				
		oLR	N'Z'		33	03	30	3		8	
		oLR	E'		33	07	30		6		
		M	E'Z'		39.3		19		3	6	
		M	N'		39	29	19	3			
770	Aug. 1	iP	E'Z'	00	20	00	8		-2	+3	
		i	Z		20	01.0	1.5			+0.30	
		iSP	Z		20	31	2.2			+1.30	
		o	E'		20	41	12		2		
		o(PP)	Z'		20	46	12			3	
		o	Z'		21	19	14			2	
		o	E'		21	28	14		4		
		o(S)	N'		24	28	10				
		i(SS)	N'		25	59	12	+4			
		o(L)	N'		26	12	34				
		o	Z'		26	48	26			6	
		o	E'		26	52	16		4		
		oL	E'		27	11	40				
		L max.	Z'		27	58	36			14	
		L max.	E'		28	11	40				
		M	N'		30	09	12	5			
		M	E'Z'		30.7		14		7	6	
772	1	iP	Z'	20	29	10				+	6320
		i	N'E'Z'		29	12	14	+17	-11	-29	5699
		i	Z		20	17	1.2			+0.48	
		iS	N'E'		37	00	14	-98ca	-74		
		i	E'		37	16	24		+190ca		
		i	Z'		37	22	16			+52	
		i	Z'		38	00	26			-95	
		iSS	E'		40	56	26		+115ca		
		LQ	E'		43.3		34		130ca		
		LR	Z'		47.0		40			250ca	

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
				h	m	s	μ	μ	μ	km.	
772 cont.	1968 Aug. 1	M	E'	20	51.0	20		210ca			
		M	Z'		52.0	20			220ca		
		M	N'		57.0	20	200ca				
		oX	N'	22	26.4	68	38				
		oX	Z'		44.7	80				34	
773	2	(oP)	Z'	14	21 42	7	Microseisms present				
		o	Z'		21 54	12			1		
		oPP	Z'		26 25	20			5		
		o	E'		26 30	20		3			
		i	Z'		28 26	18			-4		
		o	E'		28 57	24		2			
		iSKS	E'		32 18	16		-9			
		iSKKS	E'		33 26	16		+12			
		o	N'		33 31	12	2				
		i	Z'		33 35	20				+6	
		o	N'		34 28	20	4				
		iPS	E'		36 21	23		+49			
		i	Z'		36 28	27				+47	
		iPPS	Z'		37 31	30				-21	
		PPS	E'		37 42	26			33		
		iSS	N'		42 44	26		-24			
		i	E'		42 57	27			+71		
		iSSS	Z'		47 01	26				+31	
		iSSS	N'		47 05	25		+10			
		oLQ	N'		53 40	60					
		L	N'		56 00	68		81			
		oLR	E'		59 07	38					
		oLR	Z'		59 42	34					
LR Max.	Z'	15	01 02	30				85			
LR max.	E'		01 10	30			70				
M	N'		06 10	20		18					
M	E'		07 46	19			14				
M	Z'		07 50	20				34			
W2 M	Z'	16	18 18	23				42			
W2 M	N'E'		18 24	23		17	31				
774	2	iP	Z	20	50 15.4	0.5			+0.02		
		M	N'		56 30	12	1				
775	3	oP	Z	05	05 04	1.2			0.47	7030	
		iP	N'Z'		05 04	6	+4		+8	6393	Compression
		i(PcP)	Z'		05 38	9			+3		
		i	Z'		13 29	16			+10		
		iS	E'		13 32	18			+8		
		i	N'		13 34	18	+23				
		i	N'		13 49	22	-47				
		i	E'Z'		13 51	26			+27	9	
		i(ScS)	E'		14 58	14			+11		
		i	N'		15 02	16	+11				
		i	Z'		16 36	16				+5	
		i	N'		17 17	16	+7				
		oi	N'Z'		17 54	22	-12			7	
		o(SSS)	Z'		20 31	18				7	
		o(LQ)	E'		20 34	36	31				
		i	Z'		20 54	22				+22	
		oLR	N'		24 05	52	25				
		oLR	Z'		24 35	52				51	
M	N'E'Z'		28 52	24	39	21	35				
M	E'		30 30	20		45					
M	N'Z'		31 36	20	38		57				
M	N'Z'		32 36	20	43		69				
M	E'		32 48	20		31					
776	3	o	Z	06	35 07		Very small & masked by microseisms				
		iS	N'E'		42 46	13	-6	-4			
		i	E'		43 06	20		-6			
		iSS	N'		46 42	20	-6				
		oL	Z'		52 46	28				4	
		M	N'Z'	07	01.4	18	6			11	
M	E'		01 50	16			7				

USCGS: 16.6 N, 97.7 W
 H 14 06 43.9
 h 40 km.
 Mag.B 6.3, S 7.1
 6.8 Borkoloy
 6 $\frac{3}{4}$ -7 Palisados
 7-7 $\frac{1}{4}$ Pasadona
 7 $\frac{1}{4}$ Goldon

Compression. Microseisms present
 USCGS: 22.9 S, 133.1 E, H 20 45 48.5
 h 30 km., Mag.B 4.8

Compression
 USCGS: 25.6 N, 128.5 E
 H 04 54 32.7
 h 19 km.
 Mag.B 6.4, S 6.7
 6 $\frac{3}{4}$ Pasadona
 6.7-6.9 Borkoloy

USCGS: 16.5 N, 122.3 E
 H 06 25 05.8
 h 37 km.
 Mag.B 5.9, S 5.9

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km.		
778	1968 Aug. 3	oS	N'	19	36	46		Masked by microseisms				USCGS: 16.3 N, 122.4 E H 19 19 01.6 h 22 km. Mag.B 5.2	
		oL	E'		47	20	20						
		M	N'Z'		56.3		16	1		1			
780	4	iP	Z	11	49	44.5	0.9			+0.11	5110	Compression h 0.01	
		o	N'Z'		49	47	11	1		2	4690		
		o	N'		52	04	20	2				USCGS: 6.6 N, 126.8 E	
		iS	N'		56	21	16	+17				H 11 41 24.8	
		i	E'		56	25	8		+3			h 107 km.	
		i	N'		56	52	18	+15				Mag.B 5.7	
		i(sS)	E'		57	00	14		+7			6 $\frac{1}{2}$ Pasadona	
		i	E'		59	32	15		-7			6.3-6.5 Borkoloy	
		iSS	E'		59	46	15		-21				
		i	N'		59	49	18	+12					
		i	N'Z'	12	00	22	16	+9		+6			
		i	E'		00	24	18		+25				
		i(SSS)	N'		00	45	16	+7					
		oL	Z'		03	13	54			37			
		oL	N'		03	32	50	27					
		M	E'		09	56	22		20				
		M	N'Z'		10	06	22	16		17			
782	5	iP	Z	16	28	09.0	1.5			-0.44	7770	Dilatation	
		iP	N'		28	09	10	+2			6999	Z' not recording.	
		(sP)	Z		28	22	2.5			1.76			
		oPcP	N'		28	30	8	2				USCGS: 33.3 N, 132.2 E	
		iS	E'		37	15	12		-3			H 16 17 04.8	
		isS	N'E'		37	34	12	+3	+8			h 41 km.	
		o	N'		37	51	20	9				Mag.B 6.3, S 6.1	
		o	E'		37	53	20		4			6.4-6.6 Borkoloy	
		i	N'E'		38	32	13	+4	+7			7-7 $\frac{1}{2}$ Pasadona	
		o(SSS)	E'		44	50	20		4				
		i	E'		45	16	20		-9				
		oLQ	E'		46	18	50						
		oL	N'		47	20	40						
		L	E'		47	46	38		18				
		M	N'		52	32	27	18					
		M	E'		55	16	21		15				
787	7	(oP)	Z	08	12	03		Masked by microseisms				USCGS: 43.1 N, 144.6 E H 08 00 13.4 h 54 km. Mag.B 5.6	
		(oS)	E'		21	40							
		o	N'		21	48							
		o	N'		26	51							
		oLQ	E'		32	30	40						
		oL	N'		35	58	34						
		oL	Z'		36	26	32						
		M	Z'		42	08	20			$\frac{1}{2}$			
		M	N'		42	12	20	$\frac{1}{2}$					
789	8	(P)	Z	05	06	26 $\frac{1}{2}$		Feeble & masked by microseisms				USCGS: 36.4 N, 141.4 E H 04 55 10.0 h 41 km. Mag.B 5.4	
		oS	E'		15	38							
		o	E'		16	34							
		(oL)	N'		26	56							
		oL	Z'		31	26	30						
		M	Z'		33	36	23			1			
		M	N'		33	42	23	1					
790	8	(P)	Z	22	15	55		Masked by microseisms					
		o	N'		20	00							
		M	E'Z'		23	14	20		$\frac{1}{2}$	1			
		M	N'		24	40	19	1					
792	9	(P)	Z'	03	20	22		Feeble. All records masked by microseisms				USCGS: 22.4 S, 113.0 W H 03 08 04.2 h 33 km. Mag.B 5.4, S 5.8 5.8-6.0 Borkoloy 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Pasadona	
		o(S)	N'		30	44	13						
		o(SS)	N'		35	54	22	2					
		o	Z'		42	26	31						
		iLQ	N'		42	32	42	+15					
		iLQ	E'		42	37	38		+9				
		oLR	Z'		46	16	(32)						
		oL	N'		47	20	(40)						
		M	N'		51	36	18	2					
		M	Z'		51	43	18			4			
		M	E'		51	46	18		4				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitudo			Δ	Remarks	
							AN	AE	AZ			
							μ	μ	μ	km.		
793	1968 Aug. 10	iP	Z	02 14 56.3	1.7			+1.20		4720 4295	Compression	
		i	Z	15 03.7	1.0			+0.36			Aftor 02 15 04 N'E'Z' indocipherable	
		i	N'E'Z'	15 04 18		-61	+45	+77ca				
		iPP	NEZ	15 06	0.8	-0.21	+0.15	+0.76			USCGS: 1.4 N, 126.2 E	
		i	NEZ	15 13	1.6	+1.77	-1.77	-6.30			H 02 07 04.3	
		PP	E'	16 41	(28)						h 33 km.	
		i	E'	21 06	(20)						Mag.B 6.3, S 7.6	
		M	E	35.6	15						7 $\frac{1}{2}$ -7 $\frac{1}{2}$ Pasadona	
		M	Z	35.7	15						7.5 Palisados	
		M	N	35.8	15						7.6-8 Borkoloy	
10	(P)	Z	02 30 51						Masked by coda of No. 793			
794	10	iP	Z	04 13 41.0	1.4			-0.37			Dilatation	
		i	Z	13 52	1.3			-0.45		USCGS: 1.3 N, 126.5 E, H 04 05 50.6		
795	10	iP	Z	05 59 40.0	1.2			+			Compression	
		iP	Z'	59 41	4			+				
		i	Z	59 41.2	1.3			+0.98			USCGS: 1.5 N, 126.2 E	
		iPP	Z	06 01 26	1.5			+1.24			H 05 51 47.9	
		i	N'	05 52	16	+31					h 33 km.	
		(S)	N	06 01	3	2.3					Mag.B 6.2, S 6.6	
		o	Z'	06 10	38				31			
		iSS	E'	09 04	20			+27				
		SS	N'	09 05	20	30						
		i	Z'	09 20	20				-49			
		oL	N'	10 06	60	82						
		oL	E'	10 18	50			75				
		oL	Z'	12 28	46							
		M	E'	15 10	22			41				
		M	Z'	17 00	24					58		
M	N'	18.6	19	46ca								
796	10	(P)	Z	08 18 14							USCGS: 1.6 N, 126.2 E	
		oS	N'	24 30	36						H 08 10 16.3	
		o	Z'	24 45	34						h 33 km.	
		oL	E'	28 56	46			4			Mag.B 5.6	
		M	N'E'Z'	37 06	22	3	4	5				
M	N'E'Z'	39.0	16	7	5	6						
797	10	P	Z	10 13 46						USCGS: 1.6 N, 126.3 E, H 10 05 52.1		
										h 24 km., Mag.B 5.4		
799	10	P	Z	14 08 34						USCGS: 1.6 N, 126.3 E, H 14 00 40.2		
										h 33 km., Mag.B 4.9		
800	10	iP	Z	15 53 30.0	?			+		USCGS: 1.5 N, 126.3 E, H 15 45 37.2		
		oL	N'E'Z'	16 08		Fooble				h 33 km., Mag.B 5.4		
801	10	P	Z	16 51 08	1.3			0.21			USCGS: 15.5 N, 121.6 E	
		o(S)	N'	58 52		Microseisms present					H 16 41 25.4	
		oL	E'	17 09 46	32						h 33 km.	
		M	N'E'Z'	14.0	23	1	2	2			Mag.B 5.4, S 5.2	
803	10	iP	Z	19 23 18.5	0.9			-0.06			Dilatation	
		i	Z	23 19.7	0.9			-0.15			USCGS: 21.5' S, 170.4 E	
		oS	E'	27 04	8						H 19' 18 43.0	
		i	N'E'	27 10	8	+2	-2				h 136 km.	
		M	N'	30 28	14	1					Mag.B 5.1	
805	11	(P)	Z	09 08 29							USCGS: 1.8 N, 126.1 E, H 09 00 24.5	
		oL	E'	25.1	25						h 33 km., Mag.B 5.2	
808	11	iP	Z	12 50 08.6	0.8			-0.11			Dilatation	
										USCGS: 52.1 N, 179.9W, H 12 37 28.1		
										h 159 km., Mag.B 5.5		
										5.1 Borkoloy		
809	11	(iS)	E'	15 22 05	7			-1			Masked by microseisms	
		M	N'E'	32 20	20	$\frac{1}{2}$	1				USCGS: 1.8 N, 126.3 E, H 15 07 53.0	
										h 33 km., Mag.B 5.1		
811	11	iP	Z	20 08 34.5	1.3			+0.32			Compression	
		o	Z'	08 38	?						USCGS: 1.6 N, 126.1 E	
		oPP	Z'	10 28	14			4			H 20 00 43.4, h 33 km.	
		o	N'E'	10 32	14	3	2				Mag.B 5.9, S 6.0	
		iS	N'	14 54	18	-5					5.9 Borkoloy, 6 $\frac{1}{2}$ Pasadona	

Continued

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitudo			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
811 cont.	1968 Aug. 11	o	Z'	20	14	58	42			6		
		i	E'		14	59	14		+2			
		o	N'		15	34	38	7				
		oSS	E'		17	58	22		6			
		i	N'		18	04	14	+5				
		i	Z'		18	10	14				+6	
		i	N'		18	48	15	+6				
		oL	N'		19	06	54					
		oL	E'		19	12	50					
		L	N'E'		22	00	40	18	18			
		M	N'		25	28	20	13				
		M	E'		25	52	24		25			
M	Z'		25	55	24				10			
M	N'E'Z'		29.0		19		28	23	33			
813	12	(P)	Z	11	55	27		Masked by microseisms			USCGS: 1.7 N, 126.7 E, H 11 47 33.4* h 33 km.	
		oL	N'	12	08.0							
814	12	(P)	Z	13	51	39		Masked by microseisms			USCGS: 1.7 N, 126.3 E, H 13 43 45.9 h 33 km., Mag.B 5.4	
		oL	N'Z'	14	06.0							
818	13	(P)	Z	03	00	45		Masked by microseisms			USCGS: 2.0 N, 126.3 E H 02 52 51.9 h 33 km. Mag.B 5.8	
		(o)	Z		00	48						
		o	Z'		10	26	16					
		M	N'E'		17	20	20	1	2			
		M	Z'		18	32	24			2		
820	13	(P)	Z'	06	50	41		Masked by microseisms			USCGS: 1.8 N, 126.6 E, H 06 42 48.9 h 33 km., Mag.B 4.8	
		o(L)	Z'	07	10.2		22	Foolbo				
		(iP)	Z	06	57	01.5	?			+	Masked by microseisms	
822	13	P	Z	19	40	22		Microseisms present			USCGS: 15.5 S, 167.5 E H 19 35 20.9 h 125 km. Mag.B 5.2	
		i	Z		40	27				+		
		opP	Z		40	49						
		i	Z'		41	00	6			-3		
		oS	E'		44	19	14					
		i	N'		44	28	6	-2				
		o	E'		44	34	12		2			
		i	N'		44	36	8	+3				
		i	Z'		44	38	12			+2		
		o	Z'		45	00	20					
		isS	E'		45	06	6			-3		
		i	E'		45	18	10			-3		
		i(SS)	Z'		45	21	8				-3	
		i	N'		45	22	8	+2				
		oL	Z'		46	22	28				3	
		oL	E'		46	37	28			2		
		M	E'Z'		48.2		18		3	1		
825	14	oS	N'	08	14	05		Masked by microseisms			USCGS: 15.1 N, 122.5 E H 07 56 35.5 h 8 km. Mag.B 5.4	
		oL	E'		23	17	30					
		M	N'Z'		32.4		18	1		1		
		M	E'		32.6		18		1			
827	14	iP	Z'	22	22	38	15			-42	Dilatation. Procoded by microseisms	
		i	N'E'		22	40	15	+15	-18			
		i	NEZ		22	50	2.5	+3.08	-4.40	-12.10	USCGS: 0.2 N, 119.8 E H 22 14 19.4 h 23 km. Mag.B 6.0, S 7.4 6.8-7.2 Berkeley 7 $\frac{1}{2}$ -7 $\frac{1}{2}$ Palisades 7 $\frac{1}{2}$ Pasadena	
		i	Z'		23	20	14			-24		
		(PP)	Z		24	18	2.5			2.75		
		i	N'E'Z'		24	26	22	-33	+39	+50		
		i	Z		24	27	2.0			+5.43		
		i(S)	N'		29	08	?	-				
		i(S)	E'		29	14	?					
		i	NE		29	21	4	+9.6	+9.6			
		i	Z'		29	25	32			-87	N'E' records difficult to read after 22 24 26	
		iSS	Z'		32	26	16			-98ca		
		i	Z'		33	00	14			+100ca		
		M	N'Z'		35.2ca		20	220ca		210ca		
		M	E'		35.6ca		20		250ca			
		o	E'		39	27	20					
		o	N'		39	44	20					
		oX	N'	24	27.9		60	12				
		oX	E'		29.8		80		50			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)				Per.	Amplitude			Δ			
									AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km.				
829	1968 Aug. 15	iP	Z	06	56	27.0	1.0			+0.26		Compression. Microseisms present USCGS: 23.8 S, 177.4 W H 06 50 38.7 h 188 km. Mag.B 5.5			
		oP	E'Z'		56	27	8			2	1				
		o	Z		57	10	2.0				+1.24				
		i	Z'		57	14	6				-3				
		o	E'		57	23	14			2					
		iPP (sP)	Z'		57	28	9				-5				
		i	E'		58	18	14			+3					
		i	Z'		58	20	8				-3				
		oS	N'	07	01	06	10	2							
		oS	Z'		02	48	22				4				
		i	N'		03	20	16	-9							
		i	Z'		03	31	24				+7				
		oL	E'		03	33	28			4					
		M	N'		05	44	16	7							
		iScS	E'		06	46	8			+6					
isScS	E'		08	14	14			5							
831	15	iP	Z	17	46	57.3	1.2			+0.22		Compression. Microseisms present USCGS: 12.7 S, 166.2 E H 17 41 28.1 h 4 km. Mag.B 5.4, S 5.5			
		i	Z'		47	00	7				+3				
		i	N'		51	32	11	+4							
		i	E'		51	36	10			+3					
		i	Z'		51	38	8				+4				
		i	N'		52	13	7	+3							
		i	N'		52	44	10	+4							
		o	E'		52	52	12								
		i	Z'		52	54	11				-3				
		i	E'		53	08	12			+3					
		oL	Z'		53	14	26								
		oL	E'		53	42	26			3					
		M	Z'		55	48	18				4				
		M	N'		55	54	16	3							
		M	E'		56	48	14			4					
833	15	(P)	Z'	21	34	12		Masked by microseisms				USCGS: 0.1 N, 120.0 E H 21 26 00.0 h 33 km. Mag.B 5.3, S 4.7			
		o	N'		41	02	20								
		o	N'		44	12	20	1							
		oL	Z'		47	48	34								
		oL	E'		49	16	30			3					
		M	N'		50	48	24	2							
		M	E'Z'		53.2		24			3	2				
		(iP)	Z	21	52	01.5		Masked by microseisms					USCGS: 10.9 S, 163.3 E, H 21 46 34.8 h 57 km., Mag.B 5.1		
		(iP)	Z	03	37	13		Large microseisms							
		(P)	Z	03	37	13		Large microseisms							
		834	16	(P)	Z'	10	50	44		Feeble. Masked by microseisms				USCGS: 38.5 N, 143.3 E, H 10 39 16.8 h 22 km., Mag.B 5.6, S 5.3 5 1/2 - 5 1/2 Golden 5.5-5.9 Borkoley	
				oS	N'E'	11	00	08							
		835	16	iP	Z	11	39	27.5	1.3				+0.28		Compression. Microseisms present USCGS: 21.1 S, 179.3 W, H 11 34 16.4 h 640 km., Mag.B 5.1
				iS	E'		43	40	8				+2		
			16	(P)	Z	15	13	31		Masked by microseisms				USCGS: 21.2 S, 179.3 W, H 15 08 25.8* h 667 km. Mag.B 4.2	
836	17	iP	Z	04	08	26.2	1.3			+0.35	4660	Compression N'E'Z' not operating during shock. USCGS: 1.4 N, 126.3 E H 04 00 36.3 h 33 km. Mag.B 5.7, S 5.9 5.5-5.9 Borkoley 6-6 1/2 Golden			
		iP	Z"		08	27	6*			+6*	4199				
		pP	Z		08	35	1.5				0.38				
		i	Z		10	07	1.3				+0.24				
		i	Z"		10	24	5*								
		i	Z		10	35	2.0				+1.33				
		iS	N"		14	50	7*	+4*							
		i	N"		23	51	7*	+6*							
		oL	Z"		25	08	25*								
		M	E"		29	03	15*			7*					
M	Z"		29	11	15*				12*						
M	N"		29	33	15*	16*									
842	18	(oS)	N'	02	24	24		Feeble & masked by microseisms				USCGS: 0.0 S, 125.7 E H 02 10 27.2* h 33 km.			
		oL	E'		29	56	42								
		oL	Z'		32	09	38				2				
		M	N'E'Z'		36		24	1	1	1					

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	
							AN	AE	AZ		
							μ	μ	μ		
844	1968 Aug. 18	(iP)	Z	05 37 19.5				+			Masked by microseisms
		o(L)	E'	45.0	26						USCGS: 7.1 S, 148.4 E, H 05 31 39.4
		M	N'Z'	49.5	15	1		1			h 56 Km., Mag.B 5.0
845	18	o(S)	N'	05 58 06			Masked by microseisms				USCGS: 1.4 N, 126.4 E
		o(SS)	Z'	06 01 11	20			1	1		H 05 43 58*
		o(SSS)	E'	01 56	20						h 33 km.
		oL	E'	04 48	38						Mag.B 5.4
		M	E'	10 04	20			2			
		M	Z'	10 16	22				3		
		M	N'	10 42	22	3					
847	18	iP	Z	15 24 48.0	0.8				+0.05		Compression. Microseisms present
		o	N'E'	29 24	?						USCGS: 11.0 S, 162.2 E, H 15 19 27.6
		o	N'	29 56	22	1					h 57 km., Mag.B 4.8
849	18	iP	N'E'Z'	13 14 00	12	+2	+2	-3		2830	Dilatation. Microseisms present
		i	Z	14 05	1.1				+0.26	2595	
		i	N'E'	14 25	11	+3	+3				USCGS: 12.7 S, 166.2 E
		m	Z'	14 32	10				5		H 18 08 35.3
		iS	N'	18 23	14	-6					h 34 km.
		i	E'	18 33	13			+6			Mag.B 5.2
		i	N'	18 40	13	+20					
		i	E'	18 42	13			-21			
		i	Z'	18 43	13				+16		
		i	N'	19 06	14	-10					
		i	N'	19 36	18	-15					
		iSSS	Z'	19 42	14				+13		
		L	Z'	20 50	30				21		
		L	E'	20 54	28			18			
		M	E'	22 18	18			14			
		M	Z'	22 35	20				22		
		M	N'	22 40	19	24					
850	18	P	Z	18 34 49			Microseisms present				USCGS: 12.6 S, 166.3 E, H 18 29 21.8
											h 38 km., Mag.B 4.7
851	18	iP	Z	18 43 11.0	0.7				+0.03	2790ca	Compression. Microseisms present
		i	Z	43 13	1.0				+0.64	2591ca	h 0.08 ca.
		i	N'Z'	43 16	18	-7			+15		N'E'Z' irregular complex waves, 6s
		i	Z	43 17.5	1.0				+1.06		to 8s periods superposed on waves
		i	Z	44 36	2.0				+4.83		of 12s to 36s periods.
		i	Z	44 50	1.2				+1.45		
		i	Z'	44 52	7				+18		USCGS: 10.1 S, 159.9 E
		i	N'E'	44 54	7	+13	+10				H 18 38 30.6
		iS	N'Z'	45 38	6&18	+49			+59		h 538 km.
		i	E'	45 44	6&18			-21			Mag. B 6.2
		iS	N'E'Z'	46 58	6&20	-		+	+		
		i	N'Z'	47 04	12&20	-45			+60		
		i	E'	47 06	20			+59			
		i	Z'	47 22	6&20				-51		
		m	N'E'	47 28	20	100		70			
		i	Z'	49 25	6				-		
		i	E'	49 26	6&18			+48			
		i	N'E'	49 50	6&20	+31	+92				
		m	Z'	49 50	36				118		
		i	N'	50 00	6&22	+94					
		m	E'	50 16	24			130			
		M	E'	58 57	18			45			
		M	Z'	59 14	18				60		
		M	N'	59 22	18	62					
852	18	iP	Z	19 04 39.6	1.7				+0.99		Compression
		i	Z'	04 43	6				+7		
		i	Z'	14 15	16				-19		USCGS: 1.2 N, 126.1 E
		oL	E'	16 14	46			32			H 18 56 48.2
		oL	N'	16 18	44						h 33 km.
		oL	Z'	17 44	42						Mag.B 5.7
		L max.	Z'	19 38	34				31		
		M	E'	23 58	22			22			
		M	Z'	25 32	20				27		
		M	N'	25 36	20	28					

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitudo			Δ km.	Remarks
							AN μ	AE μ	AZ μ		
854	1968 Aug. 19	iP	Z	15 49 18.0	1.0			+0.13	Compression. Microsoisms present USCGS: 15.9 S, 174.0 W H 15 42 29.7 h 151 km Mag.B 5.3		
		iP	Z'	49 18	?			+			
		PP	Z'	50 46	?						
		i(PcP)	Z'	51 45	7			+1			
		oS	N'	54 42	14	1					
		o(sS)	N'	55 48	12	1					
		o	N'	57 28	22	4					
		o	Z'	58 07	22			3			
		o	N'	58 14	30						
		i	N'	58 30	22	+6					
	19	(P)	Z	17 11 36		Masked by microsoisms		USCGS: 11.8 N, 125.6 E, H 17 02 29* h 33 km. Mag.B 5.3			
857	20	(P)	Z	03 20 37		Masked by microsoisms		USCGS: 31.1 S, 179.9 E, H 03 15 46.1 h 361 km., Mag.B 4.8			
		M	Z'	26 46	16			1			
858	20	(P)	Z	08 08 24		Masked by large microsoisms		USCGS: 25.2 S, 179.9 W H 08 03 22.7* h 448 km. Mag. B 4.3			
		(S)	E'	12 27							
		i	Z'	12 49	7			-1			
		i	N'	12 50	7	1					
859	20	(P)	Z	11 24 30		Masked by large microsoisms		USCGS: 5.6 N, 146.9 E H 11 16 59.3 h 33 km. Mag.B 5.6			
		(S)	N'	30 34				4			
		(SS)	E'	33 28	20			2			
		o	Z'	33 40	14						
		M	E'	35 40	23			5			
		M	Z'	39 15	22			4			
		M	N'	39 40	21	4					
862	21	iP	Z	18 02 18.0	1.6			-0.43	Dilatation. Microsoisms present USCGS: 30.9 S, 179.1 W H 17 56 48.0 h 33 km. Mag.B 5.3, S 6.4 6.4-6.6 Borkoley 6.2 Pasadana 6.2-6.4 Goldon 6.2 Palisados		
		ip	Z'	02 18	12			-4			
		i	Z	02 34	1.5			+0.50			
		i	E'Z'	02 39	12			-3			
		iPP	Z	02 50	2.5			+3.63			
		i	Z'	04 56	10			-15			
		i	Z'	05 32	8			+12			
		o	E'	06 08	24			7			
		i	E'	06 44	14			+21			
		i	N'	06 48	14	+23					
		i	Z'	07 01	10			+18			
		iSS	N'	07 36	16	+100					
		i(LQ)	E'	07 38	28			-23			
		iLR	E'	09 08	22			-55			
		LR	Z'	09 10	22			77			
		M	E'	10 30	18			60			
M	N'Z'	10 44	16	104		70					
M	E'	11 40	16			64					
866	22	(P)	Z	14 13 04		Masked by microsoisms			USCGS: 53.0 N, 171.0 E H 14 00 06.8 h 33 km. Mag.B 5.4, S 6.0 5.2 Palisados 5.2-6 Goldon 6.0-6.4 Borkoley		
		oS	N'	23 22	8						
		iS	N'	23 36	8	-2					
		oPS	N'	24 46	14	2					
		oSS	Z'	29 32	24						
		o	N'	29 41	22						
		m	N'	30 12	22	5					
		oLR	Z'	41 03	38			5			
		oLR	N'	41 12	38	3					
		M	N'	46 38	22	5					
M	Z'	46 55	22			8					
867	22	iP	NEZ	16 24 19.5	0.5	-0.06	-0.09	+0.25	Compression. Microsoisms present USCGS: 19.1 S, 169.1 E H 16 19 39.5 h 166 km. Mag.B 5.1		
		i	N'Z'	24 20	8	+1		-3			
		i(pP)	Z'	24 45	7			+3			
		i(PP)	Z	24 50	1.0			+0.11			
		i(sP)	Z'	25 04	10			-3			
		(oS)	N'	28 04	?						
		i	N'	28 12	12	-8					
		i(sS)	N'	28 54	16	+4					
		iSS	Z'	28 58	16			+6			
		i(ScS)	N'	35 24	6	+1					
876	25	oP	Z	11 22 13		Masked by microsoisms		USCGS: 20.0 S, 175.3 W, H 11 15 46.3 h 96 km., Mag.B 5.5			
		oL	Z'	30 42	36						

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
							μ	μ	μ		
878	1968 Aug. 26	(P)	Z	09 32 07.2	s		Masked by microseisms				USCGS: 16.3 S, 178.0 E H 09 25 58.7 h 25 km. Mag.B 5.7, S 5.1 4.8-5.4 Borkoley
		oL	N'	39 00	23		4				
		oL	Z'	40 18	28						
		L max.	Z'	41 02	23				3		
		L max.	E'	41 08	22			2			
879	27	P	Z	06 59 14			Microseisms present				USCGS: 19.2 S, 177.7 W, H 06 53 41.4* h 631 km., Mag.B 4.0
881	27	o(S)	N'	14 01 18	20		Masked by microseisms				USCGS: 12.3 N, 144.3 E, H 13 45 47.8 h 16 km., Mag.B 5.6, S 5.1 4.9-5.3 Brk. 6 Goldon
		oL	Z'	07.8	(32)						
		M	N'Z'	11.2	21		1		1		
		M	E'	11.9	20			2			
882	28	iP	Z	11 56 05.8	1.2				-0.24		Dilatation. Microseisms present
		iP	E'Z'	56 06	8			+2	-3		
		i	E'Z'	56 34	8			-2	+3		USCGS: 20.0 S, 176.3 E H 11 50 30.4 h 36 km. Mag.B 5.7, S 5.6 5.4-5.2 Goldon 5.7 Palisados 5.7-6.0 Borkoley 6-6.4 Pasadona
		i	E'Z'	57 22	8			+2	-3		
		o	E'	12 00 26	20						
		i	N'	00 28	8		+1				
		i	N'E'	00 44	12		+4	-2			
		i	N'	02 08	12		+8				
		oL	E'	02 14	22			7			
		iLR	N'	02 32	20		+19				
		M	N'	03 36	19		23				
		M	Z'	04 32	19				21		
		M	E'	04 44	19			18			
883	28	iP	Z	15 10 38.0	1.0				-0.16		Dilatation. Microseisms present
		o	Z	11 02	1.3				0.17		USCGS: 14.7 S, 167.3 E H 15 05 31.5 h 123 km. Mag.B 4.8
		o(PP)	Z'	11 14	6				1		
		o	N'	14 57	10		1				
		o	N'	16 16	18		1				
885	28	iP	Z	20 52 02.0	1.3				+0.52	6270	Compression
		iP	N'Z'	52 02	12		-2		+3	56.94	
		i	Z	52 11.5	1.5				+0.52		USCGS: 15.6 N, 122.0 E H 20 42 16.7 h 15 km. Mag.B 5.7, S 6.1 5.6-5.8 Borkoley 6 Palisados, Goldon 6-6.4 Pasadona
		i	Z'	52 12	6				+4		
		o	Z'	54 08	10				2		
		iS	E'	59 52	14			-4			
		i	N'	59 54	16		-6				
		o	Z'	21 00 08	18				2		
		i	E'	00 10	10			-4			
		i	N'	00 14	30		+14				
		i	E'	00 29	14			+6			
		o(SS)	N'	03 34	26		6				
		o	E'	03 52	20			5			
		i	N'	04 18	18		-9				
		i	Z'	04 30	20				+9		
		oL	Z'	09 35	44				10		
		M	N'Z'	12 00	19		11		9		
		M	E'	13 15	20			13			
887	31	i(P)	Z''	08 53 54	6*				+4*		Large microseisms present
		i	Z''	54 31	6*				+4*		Readings from Galitzins. No WWSS records until Sept. 4. Timing system out of order.
		i	N''	57 46	9*		+4*				
		o(S)	E''	57 51	9*			5*			
		i	N''	57 59	9*		+9*				
		oL	Z''	09 00.1	15*						USCGS: 22.9 S, 172.9 E H 08 48 44.7 h 30 km. Mag.B 4.9, S 5.1
		M	N'Z''	03.1	12*		4*		3*		
		M	N''	04.4	12*		4*				
		M	E''	04.8	13*			3*			
888	31	(P)	Z''	11 01 58	6*				3*		Microseisms present
		oPP	Z''	06 47	12*				2*		
		i	Z''	11 08	9*				+9*		USCGS: 34.0 N, 59.0 E H 10 47 37.4 h 13 km. Mag.B 6.0, S 7.3 7-7.4 Pasadona 7.4 Goldon 7.7 Borkoley
		o	E''	13 00	8*			4*			
		o	E''	13 52	9*			5*			
		o	N''	14 33	13*		6*				
		i	E'Z''	16 19	7*		+6*		+9*		
		i	N''	16 21	7*		-6*				
		i	Z''	18 09	9*				+11*		
		i	N''	21 45	12*		-10*				

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.
888 cont.	1968 Aug.31	o	E"	11	22	25	24*		17*		* from Galitzins.
		o	Z"		26	55	19*			11*	
		oL	Z"		40	54	33*			55*	
		M	Z"		49	25	24*			110*	
		M	N"		49	58	23*	70*			
		M	E"		50	07	23		68*		
		M	Z"		52	54	21*			165*	
		M	E"		53	09	21		110*		
		M	N"		53	29	18*	45*			
890	Sopt.1	oPKP	Z"	07	46	06		Masked by microseisms			USCGS: 34.0 N, 58.2 E H 07 27 30.2 h 15 km. Mag.B 5.9, S 6.3 6.2 Pasadona 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Golden 7.0 Berkeley
		o	Z"		56	58	8*				
		oL	N"	08	20	32	21*				
		oL	Z"		25	42	20*				
		M	N"		32	49	18*	2*			
		M	E"		34	44	19*		3*		
		M	Z"		34	49	19*			7*	
893	3	(PKP)	Z"	08	39	11	4*	Masked by microseisms			USCGS: 41.8 N, 32.3 E H 08 19 52.2 h 5 km. Mag.B 5.7, S 6.6 6 $\frac{1}{2}$ Pasadona, Golden 6.7 Berkeley 6 $\frac{3}{4}$ Palisados
		(PKS)	Z"		42	37	6*			2*	
		o(L)	Z"	09	24	06	?				
		oLR	Z"		28	28	30*				
		M	N"		32	12	24*	6*			
		M	E"		33	22	25*		3*		
		M	Z"		33	32	25*			15*	
		M	E"		37	40	21*		4*		
894	3	(oP)	Z"	23	35	15		Masked by microseisms			USCGS: 17.7 S, 167.7 E H 23 30 13.6 h 11 km. Mag.B 4.9
		i(S)	N"		39	13	7*	-3*			
		M	N"		42	02	15*	2*			
		M	Z"		42	30	16*			4*	
895	4	i	NE	04	06	46.0	0.6	+0.01	-0.02		USCGS: 6.9 S, 129.0 E, H 04 00 01.2 h 108 km., Mag.B 5.0
		oL	N'E'		21.2		38	Masked by microseisms			
897	4	o	EZ	08	02	14 $\frac{1}{2}$	1.4	Masked by microseisms			USCGS: 22.7 S, 172.9 E H 07 57 09.4 h 34 km. Mag.B 4.4
		i(S)	N'E'		06	09	8	-1	+2		
		i	N'		06	24	8	+2			
		oL	N'		06	38	25				
		oL	Z'		06	42	28				
		M	N'		08	00	17	2			
900	5	iP	Z	02	13	07.6	1.0			+0.14	Compression. Microseisms present USCGS: 10.9S, 165.0 E H 02 07 31.2 h 33 km. Mag.B 4.9
		i	Z		13	10.2	1.0			+0.12	
		o	N'		17	36	7				
		oL	Z'		20	06	24				
901	5	(oSKS)	E'	03	06	22		Masked by microseisms			USCGS: 45.1 S, 80.1 W H 02 43 02.6 h 33 km. Mag.B 5.0, S 5.3
		o	N'		06	46	8	2			
		oPS	N'		07	46	16	1			
		o	E'		07	50	24		2		
		o	N'		08	10	16	1			
		oLR	Z'		23	30	28				
		LR max.	N'E'Z'		24.1		28	2	2	4	
M	N'E'Z'		27		20	2	2	3			
903	5	P	Z	17	08	47		Microseisms present			USCGS: 6.1 S, 142.8 E H 17 02 49.8* h 33 km. Mag.B 5.4, S 5.2
		o	N'		13	46					
		i	Z'		14	06	12			-2	
		i	N'		14	08	12	+4			
		oL	E'		15	36	39		5		
		oL	N'		16	18	36				
		oL	Z'		16	50	34				
		M	N'E'Z'		19	32	12	12	12	6	
M	Z'		21	19	16			13			
904	6	(P)	Z	03	26	56	1.5			0.20	Masked by microseisms USCGS: 17.8 S, 167.8 E H 03 21 56.1 h 24 km. Mag.B 5.1
		i	Z		27	05	1.1			+0.08	
		o	N'		30	56	10	1			
		oL	N'		32	10	20				
		M	N'E'		34.1		17	1	2		
		M	Z'		34.3		16			2	

No.	Date	Phase & Component		Time (G.M.T.)	Peri. s	Amplitude			Δ km.	Remarks
						A_N μ	A_E μ	A_Z μ		
905	1968 Sept.6	eP	Z	07 41 01						Microseisms present USCGS: 07.8 S, 167.8 E H 07 36 06.4 h 28 km. Mag.B 5.3, S 5.1 4.8 Berkeley
		i	Z	41 06	1.5			+0.40		
		e	Z'	41 08						
		i	N'	45 02	14	-4				
		i	E'	45 06	8		+5			
		i	Z'	45 12	12			+3		
		i	E'	45 24	10		+4			
		eL	N'	46 18	18					
		L	Z'	47 02	22			8		
		L	E'	47 07	22		7			
		L	N'	47 12	20	6				
M	E'	48 16	19		5					
M	N'	48 20	17	6						
M	Z'	48 30	18			7				
906	6	eP	Z	19 33 39	1.0			0.09	Microseisms present USCGS: 31.0 N, 131.9 E H 19 22 47.8 h 39 km. Mag.B 5.7, S 5.7 5.4 Palisades	
		(eS)	E'	42 34						
		eL	E'	50 28	36					
		M	N'Z'	59.0	22	3		3		
		M	E'	59.5	22		2			
		M	N'E'Z'	20 02.5	20	4	3	4		
907	7	eP	Z	02 07 25					Masked by microseisms USCGS: 19.0 S, 178.3 W H 02 01 56.2 h 649 km., Mag.B 4.6	
910	8	iP	Z	00 21 34.0	1.0			-0.08	Dilatation. Microseisms present USCGS: 17.6 S, 167.7 E H 00 16 38.0 h 20 km., Mag.B 5.0	
		i	Z'	21 38	4			-3		
		i	Z'	21 48	6			+2		
		i	N'E'	25 40	9	-6	+3			
		i	Z'	25 44	9			+4		
		i	N'E'	25 55	14	-5	-2			
		LR	E'Z'	27 22	22		6	7		
		LR	N'	27 42	22	6				
		M	N'	28 50	16	5				
		M	E'Z'	29 05	17		4	6		
912	8	e(P)	Z'	13 35 03					Masked by microseisms USCGS: 17.5 S, 167.8 E H 13 30 05.9 h 28 km. Mag.B 4.7	
		i	E'	39 08	8		+2			
		i	N'	39 10	8	-4				
		i	Z'	39 15	8			+3		
		i	N'	39 25	8	-3				
		eL	E'	40 39	22		3			
		eL	Z'	40 54	22	4		4		
		M	N'	42 04	15	3				
		M	E'Z'	43 34	18		3	4		
915	8	iP	N'Z'	15 18 41	7	-3		+6	Compression. Microseisms present USCGS: 3.7 S, 143.0 E H 15 12 23.8* h 29 km. Mag.B 6.0, S 6.1 6.0 Golden 6.1 Pasadena 6.7 Palisades	
		i	Z	18 46	1.6			+1.05		
		i	N'Z'	18 51	7	-3		+4		
		ePP	N'	19 46	14	4				
		i	Z'	19 54	14			+5		
		iS	N'	23 42	18	-8				
		i	E'	23 44	12		-5			
		e	Z'	23 56	26			9		
		f	N'	24 22		+				
		m	Z'	24 38	28			12		
		i	N'	24 44	15	-26				
		eL	E'	25 58	48		70			
		eL	N'	26 45	50	24				
		L max.	E'	28 24	28		60			
		L max.	Z'	28 36	38			43		
		L max.	N'	28 42	32	41				
M	N'E'	31.0	18	105	130					
M	Z'	32 14	17			155				
M	N'	32 24	16	140						
M	Z'	34 42	14			170				

RIVERVIEW COLLEGE OBSERVATORY

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No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A_N	A_E	A_Z		
927	1968 Sept. 11	eP	Z 18 39 43	6			1	km.	Masked by microseisms USCGS: 43.0 S, 75.2 W H 18 26 36.8 h 31 km. Mag.B 5.7, S 5.5
		ePP	Z 43 33	10					
		e(SKKS)	N 50 24	10					
		e	E 50 55	11		1			
		ePS	N 52 08	16	1				
		e	E 52 18	16					
		e(SS)	N 56 34						
		eSS	E 57 02	18					
		e	Z 57 08	18			1		
		eLQ	N 79 04 54	32					
		eLR	Z 08 54	28					
		L	N 10 38	22	1				
L	Z 10 44	22			2				
L	E 10 50	22		1					
930	12	iP	Z 22 49 18.6	1.2			+0.18	3160 2824	Compression. Microseisms present USCGS: 21.6 S, 179.4 W H 22 44 06.5 h 635 km Mag.B 5.9
		i	Z 50 54	7			+1		
		iPcP	Z 52 08.0	0.8			+0.20		
		i	Z 52 09	9			+2		
		i	N'Z 52 56	8	+1		-2		
		iS	N'E 53 26	11	+2	+4			
		i(ScP)	Z 54 52	1.0			+0.21		
		i	N 56 30	15	+5				
		i	E 56 34	14		-8			
		i	Z 56 38	14			-7		
		i	E 56 49	14		+8			
		iScS	N 58 44	9	+3				
i	N 58 49.5	1.5	+0.26						
M	E'Z 23 04 25	18		2	2				
931	13	eP	Z 05 07 18					Masked by microseisms USCGS: 30.8 S, 179.1 W H 05 01 50.3 h 38 km Mag.B 5.0, S 5.6 5 1/2 - 5 1/2 Golden	
		e	Z 07 24	6					1
		ePP	E 07 53						
		(S)	N 11 38						
		e	E'Z 11 58	10					2
		eLR	Z 12 26	32					2
		eLR	E 12 37	32					
		L max.	E'Z 14 25	23					5
		M	N 14 57	16	4				6
		M	E'Z 15 22	19					4
M	E'Z 16 20	17			5				
M	N 16 28	13	7		6				
933	13	iP	Z 12 55 22.0	1.5			+0.32	Compression. USCGS: 11.1 S, 166.6 E H 12 49 54.8 h 59 km Mag.B 5.4	
		e	N'E 13 00 03	14	1	1			
		M	N 05 05	14	1				
		M	E'Z 05 30	14			1		
934	14	eP	Z 01 35 35				Microseisms present.	USCGS: 24.5 S, 80.4 E H 01 25 19.1 h 33 km. Mag.B 5.5	
		e	N'E 40 40						
935	14	iP	EZ 07 03 06.7	0.8			-0.02	USCGS: 8.9 S, 124.0 E H 06 56 11.7 h 33 km. Mag.B 5.3	
		eL	Z 13.0	36			-0.12		
937	15	eP	Z 03 15 12				Masked by microseisms	USCGS: 6.4 S, 146.6 E H 03 09 29.6 h 111 km. Mag.B 5.2	
		eL	N 23 09	26					
		M	E 23 34	22					1
		M	N 24 26	20	1				
939	15	e	Z 11 11 30				Masked by microseisms USCGS: 40.9 N, 143.2 E H 10 50 11.8 h 15 km. Mag.B 5.4, S 5.6		
		eS	E 11 34	14				1/2	
		eS	N 11 36	14	1/2				
		eLQ	E 22.0	34					
		M	E 30 36	22				1	
		M	N'Z 31.0	22	1			1	

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						A_N	A_E	A_Z		
				h m s	s	μ	μ	μ	km.	
942	1968 Sept. 16	iP	Z	14 01 25.6	1.0			+0.28		Compression. Microseisms present USCGS: 6.1 S, 148.7 E H 13 55 36.1 h 59 km. Mag.B 5.8 6-6 $\frac{1}{2}$ Palisades 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Pasadena 6.3-6.7 Berkeley
		i	N'Z'	01 26	6	+13		-1		
		iP	Z	01 34	1.2			+0.85		
		i	N'Z'	01 36	22	+56		-77		
		i	N'Z'	03 28	20	-48		-42		
		e	N'	05 22	24	25				
		e	Z'	05 28	36					
		(S)	E'	05 59	24ca					
		i	Z'	06 09	24 ca			-240 ca		
		i	N'	06 12	24 ca+240 ca					
		iL	Z'	09 13	30			+270 ca		
		M	N'E'Z'	12.0	20	210 ca	220 ca	250 ca		
		eX	N'	15 31 14	64	25				
eX	N'	47.5	90	32						
943	16	iP	Z	14 17 05.8	1.2			+0.24		Compression. Superposed on coda of preceding USCGS 17.4 S, 178.8 W H 14 11 29.4 h 583 km. Mag.B 5.1
946	16	eP	Z	16 06 37						N'E'Z' confused by coda of preceding shocks USCGS 6.0 S, 148.5 E H 16 00 53.1 h 71 km. Mag.B 5.3
		i	NZ	06 44.0	1.1	-0.17		+0.57		
		i	Z	06 56	1.0			+0.10		
		i(S)	N'	11 17	16	-7				
		i	N'Z'	11 34	20	+18		+14		
		eLQ	E'	12 34	34		12			
		eL	N'	13 38	31	9				
		iLR	E'	14 00	28		+22			
		i	Z'	14 22	24			+10		
		M	N'E'Z'	18 00	16 E		23			
			20 NZ	12		17				
947	17	eP	Z	07 36 37						Microseisms present USCGS 6.4 S, 148.7 E H 07 30 51.9 h 36 km. Mag.B 5.1
		e(S)	N'	41 18	18	1				
		e	Z'	41 32	16			1		
		eLR	Z'	44 04	28					
		eLR	E'	44 08	27		2			
		M	E'Z'	48 00	18		1	2		
		M	N'	48 20	18	2				
		M	N'Z'	52 00	14	2		3		
950	17	eP	Z	17 56 44						Masked by microseisms USCGS 15.0 S, 175.7 W H 17 49 47.6 h 17 km. Mag.B 5.2, S 5.6 5.4-5.6 Berkeley 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Golden
		ePP	Z'	58 04	14			1		
		e	N'	18 02 02	14	1				
		e	E'	02 04	14					
		i	Z'	02 18	14			-3		
		eS	E'	02 20	14		3			
		eL	N'	04 42	30	4				
		eLR	Z'	06 03	40					
		eLR	E'	06 24	32					
		L-max.	E'Z'	07 04	26		7	9		
		M	N'	08 48	12	6				
		M	E'Z'	11 23	18		7	10		
951	18	eP	Z'	11 48 32						Microseisms present USCGS 18.2 S, 167.1 E H 11 43 45.6 h 33 km. Mag.B 5.7 6.4-6.6 Berkeley
		e	E'	48 37	8		1			
		i	Z'	48 39	8			-2		
		e	N'	48 40	10	1				
		ePP	N'E'	48 56	10	1				
		ePPP	Z'	49 04	10			2		
		i	N'	52 26	14	+4				
		i	E'	52 29	14			-3		
		i	E'	52 42	8			+3		
		eLR	E'Z'	53 50	32		6	8		
		M	N'Z'	54 40	21	5		8		
		M	E'	55 00	20		7			
M	E'Z'	56 12	17		5	7				
H	N'	56 26	14	8						

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per. s	Amplitude			Δ km.	Remarks
							A _N μ	A _E μ	A _Z μ		
952	1968 Sept. 18	eP	Z	14 16 41	1.2			0.12	Microseisms present USCGS 6.3 S, 148.8 E H 14 10 57.8 h 68 km Mag.B 5.0		
		i	Z	16 57	1.1			+0.15			
		eS	N'	21 24	12						
		i	N'	21 39	10	-1					
		eL	E'	23 04	36						
		M	N'Z'	24 26	16 N'	1		1			
		M	E'	24 32	18 Z'	28		3			
		M	N'E'Z'	27.9	17	2	3	4			
957	20	(ePKP)	Z'	06 19 16	8				Microseisms present USCGS 10.7 N 62.7 W H 06 00 03.5 h 107 km. Mag.B 6.2 6.1-6.3 Berkeley 6 1/2 Golden 7 Pasadena		
		ePKP	Z	19 23							
		i	Z	19 26	1.0			+0.10			
		i	Z'	19 28	5			+1			
		iPKP	Z'	19 53	8			+4			
		i	Z'	22 50	8			+5			
		i	Z	22 53	1.0			+0.29			
		i	Z'	22 58	11			-5			
		e	Z'	23 40	10			2			
		e	N'	23 42	11	2					
		e	E'	23 46	8		1				
		i	E'	24 40	12		+3				
		i	Z'	26 52	12			-2			
		e	N'	29 03	12	1					
		i	Z'	32 23	16			-3			
		e	Z'	34 16	16			5			
		ePPS	E'	34 47	16		3				
		iPPS	Z'	34 58	14			-5			
		i	E'	35 40	16		+4				
		iSS	N'	40 56	16	-4					
		i	N'	41 30	20	-5					
		i	N'	42 38	16	+5					
		i	E'	42 40	14		-4				
eSSS	N'	46 10	24	5							
i	N'	46 50	22	+7							
e	N'	53 12	58	9							
eLQ	E'	56 48	54		21						
eL	N'	57 00	46	10							
i	N'	59 36	20	+5							
eLR	Z'	07 06 08	36								
M	N'	08 42	40	14							
M	Z'	08 48	40			16					
M	E'	08 58	32		13						
960	20	(iP)	Z	18 34 57.7				Masked by microseisms USCGS 28.1 S 176.7 W H 18 29 09.8 h 70 km. Mag.B 5.3 5-5.5 Berkeley 5 1/2-5 1/2 Golden			
		e	Z'	35 02	14						
		e	E'	39 44	18						
		e	N'	39 50	22						
		e	Z'	39 55	22						
		eLR	Z'	42 15	26						
		L	E'Z'	43.0	26		5		7		
		M	E'Z'	44.4	18		8		10		
		M	N'	44 46	14	10					
M	E'Z'	47.4	16		9	13					
963	21	eP	Z'	13 17 42				8500	USCGS 42.2 N 142.6 E H 13 05 58.2 h 33 km. Mag.B 5.9 S 6.4 5.7-6.2 Berkeley 6.2 Pasadena 6 1/2-6 3/4 Golden		
		iPcP	Z'	17 58	9			+7		769 5	
		i	N'	18 00	12	+3					
		e	Z'	27 12	18			6			
		iS	N'E'	27 24	22	-13	-14				
		iScS	N'E'	27 55	14	+6	+10				
		i	Z'	27 56	16			+6			
		i	N'	28 36	26	-16					
		iSS	N'	32 20	34	+23					
		iSS	Z'	32 28	34			+15			
		eSSS	N'	35 40	30	8					
		eLQ	E'	37 57	44						
		e	Z'	38 07	22			10			
eL	N'	38 18	52	21							

Continued

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
					A _N	A _E	A _Z			
			h m s	s	μ	μ	μ	km		
963 cont.	1968 Sept. 21	LQ max. E'	13 38 54	44		73				
		i. Z'	39 56	28			+14			
		eLR Z'	41 20	38						
		eL N'	41 26	38						
		L max. N'	42 28	38	48					
		L max. Z'	42 55	36				48		
		M E'	43 32	25			21			
		M N'Z'	44.4	28	29			45		
		M N'E'	45 40	24	35		20			
		M Z'	46 00	24				43		
		M N'Z'	48.1	22	36			44		
		M E'	48 56	22			27			
F Z'	17 15									
964	22	(eP) Z	08 06 07						Masked by microseisms	
		e Z'	06 10						USCGS 18.1 N 178.6 W	
		iS N'	10 30	10	-3				H 08 00 32.8	
		e E'	10 32	8		1			h 630 km	
		e N'E'	13 44	12	1	1			Mag. B 4.8	
		e N'	15 06	14	1					
		iScS N'E'	15 29	10	-2	+1				
		M E'Z'	20 04	20		1	1			
965	22	eP Z'	09 30 12	5					Microseisms present	
		(eS) E'	38 04	8		1			USCGS 15.7 N 121.9 E	
		eS N'	38 06	30	1				H 09 20 26.4	
		e N'	38 48	20	1				h 20 km	
		eSS E'	41 58	18		1			Mag. B 5.3	
		e N'	42 04	22	1					
		e Z'	42 10	21						
		eL Z'	47 50	40						
		M E'	52 04	24		2				
M Z'	52 10	24				2				
M N'	52 20	24	2							
970	22	(iS) E'	20 34 18	7		+1			Masked by microseisms	
		e E'Z'	34 35	18		1	1		USCGS 15.4 S 175.2 W	
		eL N'	37 03	28					H 20 22 00.7	
		eL Z'	38 34	30					h N	
		eL E'	38 40	30					Mag. B 4.6 S 5.1	
		L max. E'Z'	39.3	26		3	4			
		M N'	42 28	12	3					
		M E'Z'	44 00	18		3	6			
971	23	e(S) N'E'	05 25 04	18					Masked by large microseisms	
		(LQ) N'	35.3						USCGS 40.3 N 143.5 E	
		eL E'	39 27	35		3			H 05 03 50.0	
		M Z'	47 23	18			1		h 30 km	
		M N'E'	48.4	18	1/2	1			Mag. B 4.8 S 5.2	
974	24	eP Z	08 51 29						Large microseisms present	
		i Z	51 33	1.0			-0.12		USCGS 11.0 S 164.4 E	
		e N'	56 14						H 08 46 02.1 h 40 km	
		M N'E'	09 02 39	14	2	2			Mag. B 5.1 S 4.9	
976	25	iP N'E'Z'	07 06 50	5	-6	+3	-4	1820	Dilatation	
		i NEZ	06 51.0	1.2	+0.10	-0.08	+0.20	1694	USCGS 46.4 S 166.8 E	
		i NEZ	06 55.5	1.0	0.12	0.10	-0.34		H 07 02 51.8 h N	
		i N'E'Z'	06 58	22	+12	-10	+7		Mag. B 5.5 S 6.3	
		iS N'	09 50	20	+10				ML 6.3, Wellington	
		iS E'	09 51	20		+12				
		LR Z'	10 24	30				27		
		M N'E'	11.0	13	115	115				
		M Z'	11 34	20				40		
		T max NEZ	24.0	0.6	0.43	0.43	0.30			
977	25	e(P) Z'	10 53 53						Masked by microseisms	
		ePP Z'	58 38	18			2			
		e E'	58 44	18		1				

Continued

No.	Date	Phase & Component		Time (G.M.T.)	Per. s	Amplitude			Δ km	Remarks
						AN μ	AE μ	AZ μ		
977 cont.	1968 Sept. 25	e	E'	10 59 02	20		2		USCGS 15.6 N 92.6 W H 10 38 38.4 h 138 km Mag. B 5.7 5 1/2 - 5 3/4 Golden 5.8-6.2 Berkeley 6 Pasadena 6 1/2 - 6 1/2 Palisados	
		e	Z'	59 14	20			5		
		e	E'	59 23	22			3		
		iSKS	E'	11 04 10	16			+3		
		i	E'	05 40	16			+4		
		i	E'	06 36	16			+4		
		ePS	Z'	08 30	18					-8
		i	Z'	09 02	20					+10
		i	E'	09 24	24			+12		
		ePPS	Z'	10 02	16					4
		i	E'Z'	10 39	24			8		7
		e	Z'	15 22	26					4
		e	E'	15 26	24			4		
		i	E'	15 54	24			-11		
		e	E'	17 23	30			6		
		i	E'	18 36	24			+7		
		i(SSS)	E'	19 16	24			+5		
		e	Z'	19 32	20					4
		e	N'	27 07	40	3				
		eL	N'	27 30	44	5				
L	N'	29 36	42	9						
iLR	Z'	33 50	34				+16			
L	Z'	34 38	34				29			
L	E'	34 46	34			22				
i	Z'	35 24	28				+15			
e	E'	36 16	44			11				
e	E'	37 28	90 ca			26 ca				
979	26	iP	Z	02 45 35.2	1.3			+0.17	Microseisms present USCGS 19.3 S 177.6 W H 02 39 56.5 h 560 km Mag. B 5.2	
		eS	N'	50 06	10					
		e	Z'	53 08	12					
		iScS	N'	55 04	8	-1				
981	26	iP	Z	08 47 00.0	1.0			-0.13	Microseisms present. Dilatation USCGS 17.7 S 178.5 W H 08 41 22.0 h 578 km D Mag. B 5.1	
		i	Z	47 02	0.6			+0.08		
		e	Z'	49 30	14					
		(iPcP)	Z	49 35	0.6			-0.04		
		o	Z'	51 24	14			1		
		iS	N'E'	51 29	12	+1	+1			
		i	N	51 48.5	1.0	+0.06				
		i	E	52 22.5	1.2		+0.08			
		e	N'	54 25	18	1				
eL	Z'	54 42	28				2			
982	26	iP	Z	14 43 43.5	1.4			+0.56	Compression h 0.035 USCGS 20.9 S 177.0 W H 14 37 46.2 h 251 km Mag. B 5.8 6-6 1/4 Pasadena 6.0-6.4 Berkeley	
		i	E'Z'	43 44	6		+1	-1 1/2		3460 3191
		isP	E'Z'	45 03	10		-1	+2		
		e	E'	46 10	11		-1			
		iS	E'	48 29	8		+2			
		iS	N'	48 30	8	-2				
		esS	N'	49 58	14	2				
		e	E'	50 06	12			1		
		i	N'	50 26	16	+2				
		e	Z'	51 00	20					5
		i	N'E'	51 02	10	-4	+4			
		i	N'	51 26	14	-7				
iScS	N'	53 45	12	+4						
i	E'	53 54	10		+2					
983	26	iP	EZ	18 08 27.8	1.2		-0.54	+2.06	Compression USCGS 30.5 S 178.2 W H 18 02 50.1 h 33 km R Mag. B 5.8 S 6.8 6 3/4 - 7 Palisados, Golden 7 Pasadena	
		iP	N'E'Z'	08 28	18	+4	-42	+52		2890 2690
		ipP	Z	08 37.5	1.0			+0.38		
		isP	Z	08 42	1.0			+0.55		
		i	EZ	08 46	2.5			-3.52		+10.45
		iPP	Z	09 09	2.0					+2.53
		i	N'E'Z'	09 12	18 NE	+65	-57			
		i	Z'	11 06	18					-39 +20
i	E'	11 26	20			-24				

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
983	1968 Sept. 26	iS'	N'E'	h	m	s	s	μ	μ	μ	km	
cont.		i	Z'	18	12	54	24	+34	-59			
		L	N'	13	13		26			-115		
		i	Z'	14	04		32	105				
		i	Z'	14	24		22			+64		
		i	E'	14	27		20		+61			
		M	N'E'Z'	16	.1		24	81	210 ca	250 ca		
		M	E'Z'	18	.5		18		170 ca	210 ca		
985	27	iP	Z	04	05	26.0	1.3			-0.49	3730ca	Dilatation
		iP	N'E'Z'	05	27		6	+4	-4	-12	3396ca	USCGS 6.8 S 129.1 E
		i	NEZ	05	27.8		1.3	-0.24	+0.31	+1.89		H 03 58 55.1
		ipP	Z'	05	58		10			-5		h 127 km
		i	N'E'	06	00		10	+3	-2			Mag. B 6.1
		iPP	Z'	06	46		10			+5		5 $\frac{1}{2}$ -6 Palisados
		i	N'	06	47		10	+3				
		i	E'	06	48		10		+3			
		iS	N'	10	36		10	+8				
		i	E'	10	38		10		-3			
		isS	N'	11	28		14	-7				
		e	Z'	11	34		16			5		
		i	N'	12	08		20	+12				
		i	E'	12	19	(24)			+ (9)			
		i	Z'	12	38		16			+13		
		eL	E'	14	29		48		20			Short period waves 4-8 sec
		eL	Z'	14	54		44			34		superposed on long period
		M	E'	17	22		20		67			surface waves
		M	N'	17	54		8	77				
		M	Z'	18	28		14			31		
987	27	eP	Z	16	46	47	2.0					Microseisms present
		i	E'Z'	46	48		12		-2	+3		USCGS 30.7 S 178.2 W
		e	Z	46	49		2.5			1.87		H 16 41 07.8
		ipP	Z	46	56		1.3			+0.28		h 33 km
		iPP	E'	47	23		10		+2			Mag. B 5.4
		iPPP	Z	47	32		2.0			+0.73		5.7-5.8 Berkeley
		e	E'	50	04		14		2			6 Pasadena
		e	Z'	50	07		14			1		
		e	E'	50	54		24		2			
		e(S)	N'	51	12							
		e	Z'	51	37		18			4		
		e	E'	51	40		14					
		e(L)	N'	52	30		24	6				
		e	E'	52	56		26		4			
		eLR	Z'	53	21		30					
		eLR	E'	53	25		30					
		M	E'	55	20		19		15			
		M	Z'	55	35		19			22		
		M	N'	55	48		16	14				
988	27	eP	Z'	19	13	02	10			1		Microseisms present
		i	N'Z'	13	52		10	+1		-2		USCGS 3.7 S 143.3 E
		i	N'Z'	14	18		10	-2		+2		H 19 06 42.2
		iS	N'	18	02		18	-6				h 7 km
		i	E'	18	08		10		+5			Mag. B 5.9 S 6.5
		i	N'	18	22		16	-11				5 $\frac{1}{2}$ -6 Palisados
		i	N'E'Z'	18	42		16	-28	+7	+16		6-6 $\frac{1}{2}$ Berkeley
		iLR	E'	20	40		40		+71			6.2 Pasadena
		eL	N'	21	20		46	30				
		eL	Z'	21	58		40			47		
		M	N'E'	25	.0		20	160 ca	180 ca			
		M	Z'	26	12		18			100 ca		
		M	N'	26	20		16	180 ca				
994	28	e(PP)	Z'	14	13	04	8			1		Microseisms present
		i	Z'	13	34		7			+2		USCGS 13.2 S 76.4 W
		e(SKS)	E'	19	23		10		1			H 13 53 35.3
		e	N'	19	27		10	1				h 70 km G Mag. B 6.0
		e	E'Z'	22	52		24		1			5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisados 6 Pasadena
		e	N'E'	23	15		26	3	3			6.5-6.6 Berkeley

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ km	Remarks	
								AN μ	AE μ	AZ μ			
994 cont.	1968 Sept. 28	oSS	E'	h	m	s	s						
		e	N'	14	29	09	14		1				
		e	E'	29	10		16	1					
		o	N'	29	48		28		3				
		oL	E'	30	14		16	1					
		oL	N'	46	48		32						
		L	N'E'	47	13		32						
996	29	(P)	Z	48	28		28	3	3				
		(oS)	N'	48	38		28			5			
		oL	Z'	13	34	37						Masked by microseisms	
		M	E'Z'	41	02		23		$\frac{1}{2}$	1		USCGS 1.6 N 126.2 E H 13 26 47.5 h 33 km Mag. B 5.4	
999	29	(P)	Z	19	48	21						Masked by microseisms	
		oL	Z'	58.1			40					USCGS 7.3 S 128.4 E	
		M	N'E'	20	00.3		20	2	3			H 19 41 40.9	
		M	N'E'Z'	03.3			18	2	2	3		h 86 km Mag. B 5.0	
1000	29	o(S)	N'	22	05	58						Masked by microseisms	
		o(LQ)	E'	07	36		30					USCGS 3.7 S 143.5 E	
		oL	Z'	09	36		40					H 21 54 35.2	
		oL	N'	09	44		40					h 44 km Mag. B 5.4	
		M	E'	12	18		22		10				
		M	N'Z'	14	30		15	6		6			
1001	29	o(S)	E'	22	53	27						Masked by microseisms	
		oL	E'	55	10		(32)					USCGS 3.7 S 143.4 E	
		oL	N'	56	13		(44)					H 22 42 06.0	
		M	N'E'	23	00	10	20	2	6			h 43 km Mag. 5.2	
		M	E'Z'	01	12		14 E		8				
		M	N'	01	49		18 Z			3			
		M	N'Z'	03	10		16	4		5			
1010	Oct 3	oP	Z	08	11	56						Microseisms present	
		iPP	NEZ	13	23.4		1.0	+0.06	-0.06	-0.14			USCGS 3.8 S 128.5 E
		oS	N'	17	32		(20)					H 08 04 55.6	
		e	N'	18	14		(20)					h 97 km	
		oSS	Z'	20	08		14			1		Mag. B 5.6	
		oL	N'	22	04		44						
		oL	E'	22	44		40						
		oL	Z'	22	47		40						
		M	N'E'	24	50		22	2	4				
1014	4	iP	Z	06	17	27.0	1.0			+0.30	9970	Compression	
		iP	Z'	17	27		12			+2	8927	USCGS 56.2 S 27.0 W	
		oS	Z'	17	52		16			2		H 06 04 31.9	
		iPP	Z'	21	01		12			-2		h 63 km	
		i	N'	21	06		12	+2				Mag. B 5.9	
		iSKS	N'	27	47		20	+3					
		iS	N'E'	28	11		18	2	-3				
		oS	N'	28	41		18	2					
		o	E'	28	55		16		2				
		oS	N'	29	22		18	4					
		oPS	Z'	29	26		16			2			
		iPPS	N'	30	02		20	+3					
		oLQ	E'	41	38		30		14				
		oLR	N'	47	10		50						
		oLR	Z'	47	16		50						
		LR max.	N'Z'	48.5			50	11			11		
		M	E'	49	39		24		4				
M	N'Z'	50	15		26	5			7				
M	E'	57	48		18		2						
M	N'Z'	58	20		19	2			4				
1015	4	iP	Z	07	34	06.8	1.3			+0.11		Microseisms present	
		oP	Z'	34	07		6						

Continued

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km	Remarks
					A _N μ	A _E μ	A _Z μ		
1030 cont.	1968 Oct 8	i E'Z'	07 52 20	10			+3	USCGS 39.9 S 87.7 E H 07 43 23.1 h N Mag. B 6.0 S 5.8 6 Pasadena	
		i Z	52 26.8	1.0			+0.08		
		oPP Z'	54 12	16			1		
		iS E'	59 31	15		+5			
		iS N'	59 32	15	+3				
		i Z'	59 36	14			+5		
		m N'E'	59 50	18	9	18			
		oSS N'	08 02 53	16	3				
		SS E'	03 02	18		6			
		oLR Z'	06 56	36			18		
		oL E'	07 00	36			13		
		M N'E'Z'	09.2	19 N	7				
				21 EZ		7	9		
1032	9	(P) Z	03 45 43					Masked by microseisms USCGS 14.7 S 175.5 W H 03 38 39.9 h 11 km Mag. B 5.2 S 5.6 5.4-5.8 Berkeley 6 Golden	
		oS N'	51 16	10	1				
		o Z'	51 22	16			1		
		o E'	51 24	14		1			
		o N'	53 58	22	6				
		o E'	54 08	18		2			
		oL Z'	55 48	27			6		
		M E'	56 43	20		5			
		M N'	59 20	13	7				
		M E'Z'	04 00 46	19		11	14		
1033	9	iP Z	17 17 32.8				Microseisms present USCGS 15.0 S 175.5 W H 17 10 37.2 h N Mag. B 5.0 S 5.3		
		o E'	23 18	14		1/2			
		o Z'	23 20	14					
		oL N'	25 50	22	4				
		oL E'	26 02	22		1			
		oL E'Z'	27 56	26		2		2	
		M N'	29 13	14	3				
		M E'Z'	32 38	18		3		3	
1036	10	oP N'Z'	15 11 22				Microseisms present USCGS 6.0 S 148.6 E H 15 05 37.1 h 72 km Mag. B 5.0		
		i NZ	11 28.7	1.0	-0.13			+0.58	
		i Z'	11 29	5				+2	
		i N	11 34	1.0	+0.18				
		i N'	11 34	10	+2				
		i Z	11 35	1.2				+0.36	
		i Z	11 39	1.2				+0.36	
		i Z'	11 39	9				+3	
		i N	11 40	1.0	+0.14				
		o NZ	11 46	1.4	0.26			0.65	
		i Z	11 57	1.2				+0.48	
		i Z	12 06	1.2				+0.36	
		oS N'	15 54	12	3				
		o Z'	16 14						
		i N'	16 18	20	+14				
		i Z'	16 23	20				+10	
		o Z'	17 07	25				4	
		oLQ E'	17 17	34					
		i N'	17 18	10	-3				
		i N'	17 36	10	+5				
		oL N'	18 22	30					
		oL Z'	18 58	28					
		L max. E'	19 20	28				16	
		L max. Z'	19 34	30				10	
L max. N'	19 41	28	12						
M E'	21 30	17			19				
M N'Z'	22 40	17	9		12				
M N'E'Z'	24 16	16	10		9				
1037	10	(oP) Z'	16 20 22				Masked by microseisms and coda of preceding USCGS 6.2 S 148.6 E H 16 14 38.2 h 74 km Mag. B 5.0		
		o Z	20 28	1.0				0.09	
		o Z	20 39	1.3				0.15	
		o N'	25 06	20					
		oL E'	28 02	30					

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						A _N	A _E	A _Z		
				h m s	s	μ	μ	μ	km	
1040	1968 Oct 11	(oP)	Z'	17 17 12						Microseisms present USCGS 30.5 S 178.0 W H 17 11 44.4 h 99 km Mag. B 4.8
		o	Z	17 14	0.8			0.04		
		o(sP)	Z	17 44	1.2			0.07		
		o	E'	18 03	14					
		o	Z'	22 10	18					
		oLR	Z'	24 16	24			1		
		oLR	E'	24 22	24			1		
		M	Z'	26 32	18			1		
		M	E'	26 38	18					
1042	12	(P)	Z	12 25 22						Microseisms present USCGS 29.6 N 129.2 E H 12 14 34.0 h 27 km Mag. B 5.0
		o(S)	E'	34 17	14					
		o	N'	34 20	14					
		oL	Z'	47.1						
		M	N'	51 20	22	1/2				
		M	E'Z'	52 20	21			1	1	
1043	12	iP	Z	19 23 02.0	1.2			+0.16	3260	Compression USCGS 20.9 S 178.8 W H 19 17 39.9 h 607 km D Mag. B 5.7
		ipP	Z	24 37	1.3			-0.17	2993	
		i	Z	24 45	1.3			+0.17		
		oPcP	Z'	25 44						
		o	E'	25 46						
		iS	N'E'	27 16	15	-2	+3			
		oS	E'	30 11	14		2			
		o	Z'	30 14	20			2		
		i	E'	30 36	10		+3			
		iScS	N'	32 26	10	+3				
		o	NE	32 30	1.5	0.20	0.14			
		i	N'	36 40	12	+2				
		M	E'	36 50	21			1		
		M	Z'	37 06	21			2		
1044	13	iP	Z	08 10 41.7	1.0			+0.08		Compression USCGS 30.6 S 178.2 W H 08 05 09.3 h 60 km D Mag. B 4.8
		oL	Z'	17 36	24					
1045	14	iP	Z	03 04 50.7	1.0			-0.10		Small dilatation followed by large compression USCGS 31.5 S 117.0 E H 02 58 47.8 h 1 km Mag. B 6.0 S 6.8 6.5-6.9 Berkeley 7-7 1/2 Golden 7 1/2 Palisados 7 1/2-7 1/2 Pasadena Mackering W.A. Surface waves illegible on N'E'Z'
		ipP	Z'	04 51				-		
		i	E'Z'	04 52	6		+16	+26		
		i	Z	04 52.3	1.2			+0.28		
		i	EZ	04 55.8	3.5		+8.5 ca	+26 ca		
		i	E'Z'	05 01	6		11	+16		
		i	E'Z'	05 13	16		-5	-8		
		ipP	E'Z'	05 40	16		10	+10		
		i(S)	N'	09 36	16	+				
		i	E'	09 38	16					
		i	N'	09 42	16	-34				
		i	Z'	09 58	22				+115 ca	
		LR	E'Z'	12.6	40 ca		310 ca	350 ca		
M	Z	16 14	6				440 ca			
1046	14	iP	Z	05 57 08.7	1.3			+0.34		Compression USCGS 11.1 S 163.1 E H 05 51 42.3 h N Mag. B 5.2
		i	Z	57 37.4	1.6			+0.25		
		M	N'Z'	06 05.2	20	3		4		
		M	E'	07.3	16		4			
1050	15	(oP)	Z	02 03 34						Masked by microseisms USCGS 0.9 N 119.9 E H 01 55 16.3 h 34 km Mag. B 5.0 S 5.5
		i	Z	03 36.0	1.2			+0.10		
		o(S)	E'	10 20	16					
		o	N'	11 00	20					
		o	N'	13 45	20	1				
		o	E'	13 48	20			1		
		oL	E'	15 16	52					
		oL	Z'	17 22	42					
		M	N'	18 34	30	2				
		M	E'	19 00	24			2		
		M	E'	22 20	22			2		
M	Z'	22 50	22				1			



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						A _N	A _E	A _Z		
				h m s	s	μ	μ	μ	km	
1054	1968 Oct 15	oP	Z	20 17 48	0.8			0.10		Masked by microseisms USCGS 9.0 N 126.3 E H 20 09 08.7 h 63 km Mag. B 5.2
		oS	E'	24 46	12		½			
		oS	N'	24 48	14	½				
		o	N'	27 40	18					
		oSS	E'	28 15	22		1			
		oL	Z'	32 56	32					
		oL	N'	33 04	32					
		oL	E'	33 32	30					
		M	N'E'Z'	36.6	22	1	1	1		
1055	16	(P)	Z	07 56 29						Masked by microseisms USCGS 29.3 N 129.4 E H 07 45 46.8 h 13 km Mag. B 5.6 S 5.4
		o	Z	56 46						
		oS	E'	08 05 26	9		½			
		o	N'	05 51	24	1				
		o	E'	12 50	20		½			
		oL	Z'	17 22	40					
		oL	N'	17 44	35					
		M	N'Z'	21.1	23	2		3		
		M	E'	22 00	20		3			
		M	N'Z'	23.1	22	2		3		
1058	17	(oP)	Z	05 15 14						Masked by microseisms USCGS 3.8 S 152.2 E H 05 09 06.2 h 22 km Mag. B 5.3
		o	Z	15 21	1.5			0.22		
		o	Z'	15 22	6			1		
		o	N'	16 16	11	½				
		oS	E'	20 10	14		1			
		i	N'	20 18	14	+2				
		o	N'Z'	20 32	22	5				
		o	E'	22 00	24		2			
		oLR	Z'	23 24	36			5		
		oLR	N'	23 35	34	5				
		M	E'	24 24	22		8			
		M	N'Z'	25 12	24	7	10			
		M	N'E'Z'	27 19	16	7	10	7		
1059	17	(P)	Z	07 02 30						Masked by microseisms USCGS 18.7 N 146.4 E H 06 53 16.7 h 70 km Mag. B 4.9
		o	N'	09 45	20					
		oL	E'	16 05	34					
		oL	Z'	19 20	30					
		M	Z'	22 46	20			½		
1060	17	(P)	Z	15 46 07						Masked by microseisms USCGS 5.8 S 146.6 E H 15 40 16.0 h 73 km Mag. B 4.9
		o	N'	50 54						
		o	N'	51 12	10	½				
		oL	E'	52 48						
		oL	Z'	54 28	30					
		M	N'E'Z'	56 08	24 NZ	1		1		
			22 E							
1061	17	o(S)	E'	21 10 02	10		1			Earlier phases masked by microseisms
		iS	N'	10 04	10	+1				
		o	E'	12 38	18		1			
		o	N'	12 40	18	1				
		oL	N'E'	13 35	48					
		L	N'E'	15 32	34	4	4			
		M	N'E'	17 27	18	4	6			
		M	Z'	18 20	18		2			
1063	18	o P	Z	02 56 21						Masked by microseisms USCGS 18.9 N 145.3 E H 02 47 25.5 h 222 km D Mag. 4.8
		o	N'	03 06 21	20					
		o	Z'	09 32	20					
		M	E'	12 50	16		1			
1068	18	iP	NEZ	17 51 28.8	0.5	-0.09	-0.04	-0.09		Dilatation Canberra 34° 31' S 150° 27' E Mag. 3½ Felt Bowral
		o	NEZ	51 30.3	0.5	+0.10	+0.08	+0.20		
		iS	NEZ	51 41.2	0.5	+0.29	-0.10	-0.16		
		m	N	51 42½	0.6	0.34				
		m	EZ	51 44	0.6		0.50	0.44		
1073	Oct 20	(oP)	Z'	07 19 03					Masked by microseisms	

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km	Remarks
							A _N μ	A _E μ	A _Z μ		
1073 cont	1968 Oct 20	eS	N'	07 27 42	12	1					USCGS 25.0 N 122.5 E H 07 08 17.1 h 15 km G Mag. B 5.4 S 5.7
		e	Z'	28 06	16			1/2			
		e	N'	28 08	24	2					
		e	Z'	35 18	16			1			
		eLQ	N'	36 06	39						
		eL	Z'	39 00	42						
		L	E'	40 00	30		3				
		M	E'	43 43	25		3				
		M	N'E'Z'	45.2	22	3	1	5			
1077	23	iP	N'Z'	01 58 45	10	+1		+2			Compression. Preceded by microseisms USCGS 53.5 S 140.3 E H 01 54 01.9* h N Mag. B 4.7
		i(S)	E'	02 02 44	15		+10				
		i	N'	02 57	10	+7					
		i	E'	03 09	20		-9				
		e	Z'	03 38	32						
		eLR	N'	03 57	30	13					
		iLR	Z'	04 08	28			+15			
		i	E'	04 42	14		+8				
		M	E'	05 55	10		14				
M	N'Z'	06 20	13	11		9					
1079	23	iP	N'Z'	21 11 02	4	-6		+8	3480	Compression USCGS 3.3 S 143.3 E H 21 04 41.3 h 12 km Mag. B 6.1 S 6.8 6.6-6.9 Berkeley 6.8 Pasadena 7-7 1/2 Palisados	
		e	Z	11 05	2.5				3193		
		m	Z	11 08	2.5			2.97			
		i	N'E'Z'	11 09	18	-13	+3	+19			
		i	E'Z'	12 12	18		+5	+20			
		i	N'	12 20	18	+18					
		i	Z'	16 08	(30)			+			
		iS	E'	16 09	12		+15				
		i	N'	16 16	22	+48					
		i	E'	16 36	12		-32				
		i	E'	16 46	26		+88				
		m	N'Z'	16 54	24	185 ca		155 ca			
		i	Z'	18 04	28			+60			
		iLR	Z'	19 56	40 ca			+480 ca			
		M	NEZ	27.0	10						
		e	E'	23 17.0	84						
X	E'	24.6	80		43						
1081	24	eP	Z	00 50 51						Microseisms present Long periods masked by coda of previous. USCGS 7.2 N 126.6 E H 00 42 21.9 h 77 km Mag. B 5.4	
		i	Z	51 01.0	1.0			+0.08			
		e(S)	N'	57 40	24	2					
		e(SS)	N'	01 00 56	12	2					
1084	24	(eS)	E'	05 30 22	8					Masked by microseisms USCGS 45.6 S 34.1 E H 05 07 53.9 h N Mag. B 5.3 S 5.5	
		e	Z'	31 30	16						
		(LQ)	E'	41 48	(40)						
		eLR	Z'	46 12	32						
		M	Z'	48 36	22			1			
1086	24	(P)	Z	14 06 25	1.5					Masked by microseisms USCGS 1.5 N 126.4 E H 13 58 35.1 h 47 km Mag. B 5.4	
		(eS)	N'	12 50							
		eL	N'E'Z'	19 24	42						
		M	E'Z'	23 12	24		2	1			
		M	N'E'Z'	25 18	24	1	1	2			
1087	24	(eP)	Z	15 59 39						P masked by microseisms USCGS 5.9 N 127.0 E H 15 51 18.5 h 70 km G Mag. B 5.4	
		i	N'Z'	59 41	8	+1		-2			
		i	Z	59 54	1.7			-0.75			
		i	Z	16 00 21	1.3			-0.20			
		i(S)	N'	06 11	12	+4					
		iS	N'	06 16	22	-12					
		e	Z'	06 24	28			3			
		e	E'	06 28	20		4				
		i	N'	06 56	18	+7					
		i(SS)	E'	09 35	14			-8			
		i	N'	09 38	13	+7					
		i	N'E'	09 52	18	+7	+9				
	Z'	10 02	18			+6					

Continued



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
					A _N	A _E	A _Z			
			h m s	s	μ	μ	μ	km		
1087 cont.	1968 Oct 24	i N'	16 10 11	18	+7					
		i E'Z'	10 24	20		-9	+7			
		M E'	19 24	22		30				
		M N'E'Z'	20 42	20	35	27	42			
1092	25	iP Z	16 03 14.0	1.3			+0.15		Compression. Microseisms present USCGS 3.5 N 126.0 E H 15 55 11.9 h 80 km G Mag. B 5.2	
1096	27	iP Z	13 50 36.4	1.0			-0.05		Dilatation. Microseisms present	
		i Z	51 41	1.4			-0.14		USCGS 5.9 N 125.6 E	
		eS N'	57 07	8					H 13 42 26.1	
		e N'	57 12	14	1				h 193 km	
		ei N'E'	14 00 44	10	1	+1			Mag B 5.5	
		e Z'	01 06	18				1/2		
1102	28	eiP N'E'Z'	23 37 53	8	+2	+1	-4		Dilatation	
		i Z	37 54.0	0.8			+0.49		USCGS 12.5 S 166.5 E	
		i Z	38 02.5	1.0			+0.52		H 23 32 28.7	
		ipP N'E'Z'	38 04	7	+5	+5	-7		h 60 km G	
		i Z	38 07	1.1			+0.73		Mag. B 5.9	
		m N'E'Z'	38 18	10	7	6	14		6.4-6.6 Berkeley	
		i N'E'Z'	38 26	7	-9	-9	+15		6.5 Pasadena	
		iS E'	42 12	11		+13			7.0 Golden	
		iS N'	42 13	10	+41					
		i N'E'	42 30	11	+24	21				
		i Z'	42 32	20			+32			
		i N'E'	42 52	10	+18	-20				
		i Z'	43 05	12			+34			
		m N'E'	43 06	12	43	26				
		eL E'	43 38	40		31				
		i N'	43 56	19	-36					
		i Z'	44 04	16			+29			
		iLR N'Z'	44 26	32	+90 ca		+93 ca			
		iL E'	44 38	30						
		LR max N'E'Z'	45.2	27	68 ca	73 ca	115 ca			
M E'	47 58	14		40						
M N'	48 30	14	30							
M Z'	49 26	14			43					
29	F	Z'	03.3							
1103	29	P Z	04 16 48						Masked by microseisms	
		e(S) E'	25 36	12					USCGS 31.2 N 141.6 E	
		eSS N'	30 02	25					H 04 06 04.1 h 17 km	
		eL Z'	39 24	28					Mag. B 5.7	
		M N'	42 22	20	1/2					
		M E'	43 07	18		1/2				
		M Z'	46 30	17			1			
1104	29	iP Z	07 26 52.2	1.2			-0.56		Dilatation	
		e Z'	28 58		Feeble				USCGS 17.8 S 178.8 W	
		e E'	34 24		Masked by microseisms				H 07 21 16.7	
		e Z'	34 26						h 567 km D Mag. B 5.5	
1106	29	(P) Z	17 08 37						Masked by microseisms	
		e Z'	10 45	10					USCGS 1.8 N 126.4 E	
		e E'	14 50	12					H 17 00 40.4 h N	
		e N'	14 52	12					Mag. B 5.5	
		e Z'	17 54	26			1			
		eL E'	18 02	38						
		e N'	18 14	18						
		eLR Z'	21 22	36						
M N'E'Z'	25 10	25	3	5	2					
1107	29	e Z	22 34 01	1.2					Masked by microseisms	
		ePP Z'	35 13	(16)						
		eSKS N'	41 26	28						
		e Continued E'	43 14	16		1				



No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AF	AZ		
				h m s	s	μ	μ	μ	km	
1107 cont.	1968 Oct 29	ePS	N'Z'	22 44 36	24	2		1	4690 4292	USCGS 65.4 N 150.1 W H 22 16 15.6 h 7 km Mag. B 6.0 S 6.5 L 7.1 6.3-6.5 Berkeley 6.7-7 Pasadena 7.0 Golden
		ePPS	Z'	45 36	24			2		
		e	N'	45 51	24	3				
		eSS	N'	50 30	26	3				
		eSS	E'	50 36	24		3			
		m	N'E'Z'	51.4	30	N, Z 5		5		
					46	E		6		
		eSSS	N'	54 34	32	4				
		eSSS	Z'	54 38	32			4		
		eLQ	E'	23 00 30	36					
		eLR	Z'	06 28	46					
		LR max	N'E'Z'	07.7	42	10	11	13		
		M	N'E'Z'	16.1	23	8	3	11		
		M	E'	18 26	21		6			
		M	N'Z'	20.0	21	6		10		
30	W ₂ M	N"Z"	00 15.8	23*	6*	16*				
1108	30	(P)	Z	09 47 07	Masked by microseisms				USCGS 31.0 S 179.9 W H 09 42 10.8 h 328 km Mag. B 4.9	
		e	Z'	48 50	12					
		e	E'	51 02	8		1			
		e	Z'	53 02	18			2		
		i	N'E'	53 06	18	+2	-1			
1113	Oct 31	iP	Z	09 14 26.4	1.6			+0.58	4690 4292	Compression USCGS 1.2 N 126.3 E H 09 06 36.4 h N Mag. B 6.1 S 6.0
		iP	N'E'Z'	14 27	6	-1	+1	+3		
		iSP	Z	14 41	1.3			+0.28		
		i	Z	14 43.4	1.5			+0.56		
		i	N'E'Z'	14 46	8	-1	+1	+3		
		ePP	N'	16 08	16	1				
		ePcP	E'Z'	16 20	12		1	3		
		i	Z'	20 31	7			-1		
		iS	N'E'	20 44	12	-2	+2			
		e	Z'	20 52	40			6		
		e	E'	20 56	40		6			
		isS	N'	21 02	12	-1				
		e	N'	21 14	34	9				
		eSS	N'	23 50	36	10				
		iSS	Z'	23 52	18			+6		
		e	E'	24 04	24		7			
		eLQ	N'	24 51	60	17				
		eL	E'	25 18	60		16			
		L	N'E'	26 20	48	13	16			
		eL	Z'	27 02	44					
M	N'E'Z'	33.5	24	13	16	19				
M	N'E'Z'	35.3	19	25	7	24				
M	E'	37 28	18		14					
1114	Nov 1	(P)	Z	01 36 59.5					Microseisms present USCGS 41.6 S 175.0 E H 01 32 23.3 h 29 km Mag. B 5.5	
		e	Z	37 03	1.3			0.10		
		e	Z	37 13.5	1.2			0.10		
		e	Z'	37 16	8			1		
		eIS	N'	40 46	16	+4				
		e	E'	40 49	16		9			
		i	Z'	40 57	8			+2		
		i	N'E'	41 07	14	+4	+2			
		i	Z'	41 14	10			+2		
		e(L)	N'	41 27	(26)					
		eLR	Z'	42 08	24					
		M	N'	42 38	16	3				
M	E'Z'	43 26	20		4	5				
1116	1	iP	Z'	13 25 57	5			+1	Compression. Microseisms present USCGS 5.5 S 124.8 E H 13 18 47.1 h 53 km Mag. B 5.6	
		iS	N'	31 47	9	-2				
		i	E'	31 53	10		+1			
		eL	E'Z'	35 35	44					
		M	N'E'	39 24	18	7	7			
		M	Z'	43 11	14			4		
1118	2	(iP) Continued	Z	03 24 44.0				+	Microseisms present	



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Par.	Amplitude			Δ	Remarks	
						A _N	A _E	A _Z			
						μ	μ	μ	km		
1159	1968 Nov 12	(P)	Z	00 54 49		Masked by microseisms				USCGS 27.5 N 128.4 E H 00 44 12.8 h 48 km D Mag. B 5.8 S 5.6	
		i	Z	55 01.5	1.1			+0.22			
		iS	N'	01 03 31	12	-2					
		e	Z'	11 06	22						
		eLR	Z'	15 50	32						
		M	N'E'Z'	21 14	22	3	3	4			
1161	12	(oS)	E'	10 13 35		Masked by microseisms				USCGS 29.2 N 129.4 E H 09 53 42.2 h 22 km Mag. B 5.4 S 5.1	
		e	N'	13 52	20						
		eL	Z'	25.4	36						
		M	N'E'Z'	30.0	20	1	1	1			
1162	12	P	Z'	23 07 47	5			2	Large microseisms present USCGS 15.6 S 172.8 W H 22 00 39.1 h 47 km Mag. B 5.2		
		eS	N'Z'	13 43	18			1			
		e	E'	13 48	15		1				
		iL	N'	16 31	24	+3					
		M	N'E'Z'	22 00	12 N 17 EZ	6	5	6			
1164	13	P	Z	03 30 31		Masked by microseisms				USCGS 0.2 S 123.0 E H 03 22 38.8 h 81 km Mag. B 5.1	
1165	13	eS	N'E'	19 02 56	22	Masked by large microseisms				USCGS 40.2 N 142.5 E H 18 41 47.9 h 49 km Mag. B 5.5 S 5.8	
		e	N'	07 28	26						
		eLQ	E'	13.3	36						
		eLR	N'Z'	17.0	32						
		M	N'E'Z'	21.6	22	2	2	3			
1166	14	P	Z	11 41 22		Microseisms present				USCGS 20.0 S 176.0 W H 11 35 12.0 h 220 km G Mag. B 5.1	
		e	N'	48 55	20						
1169	14	iP	Z	23 13 30.2	1.3			-1.05	Dilatation USCGS 21.5 S 170.1 E H 23 08 54.4 h 103 km Mag. B 5.4		
		iP	NE	13 30.4	1.3	+0.17	+0.31				
		iP	N'E'Z'	13 30.2	10	+2	+4	-5			
		i	Z	13 44	1.0			+0.22			
		i	Z	13 46	1.2			+0.68			
		i	Z	13 51.5	1.4			+0.86			
		i	N'E'	13 55	10	+2	+5				
		iS	Z	13 57.5	1.0			+0.26			
		i	Z'	13 58	10			+4			
		i(S)	N'	17 19	8	+4					
		i	E'	17 23	10		-19				
		i	Z'	17 26	16			-8			
		i	N'	17 28	8	+6					
		e	E'	17 41	14		5				
		e(LQ)	N'	17 45	26	5					
		i(SS)	Z'	17 50	14			+11			
i	E'	17 52	11		+8						
eLR	Z'	18 28	32			13					
eL	E'	18 38	32		11						
M	N'	20 44	14	7							
1171	16	iP	Z	00 28 24.5	1.3			+0.21	Compression USCGS 18.0 S 168.5 E H 00 23 40.7 h 173 km Mag. B 5.3 L.P. records masked by microseisms		
		e	N'	32 22	10	2					
		i	E'	32 28	8		+2				
		e	Z'	32 30	10			1			
		e	Z'	33 09	16			1			
		eL	E'Z'	34 12	22						
1172	16	eS	E'	03 50 16	12		1		Masked by microseisms USCGS 35.8 S 102.2 W H 03 27 39.6 h N Mag. B 4.8 S 5.4		
		e	N'	50 24	18	1					
		e	N'	51 07	18	1					
		e	E'	55 02	36		3				
		e	N'	55 50	16	1					
		e	Z'	55 57	16			1			
		eLR	Z'	04 05 16	32						
		LR max	E'Z'	06.1	32	1	3	3			
		M	Z'	13 04	15			1			
1173	16	(iP)	Z	07 51 41.3	1.5			+0.18	Continued Compression		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km	Remarks
							AN μ	AE μ	AZ μ		
1173 cont.	1968 Nov 16	iP	E'Z'	07 51 42	8		+3	-6		Dilatation Microseisms present USCGS 16.6 S 175.9 E H 07 45 51.7 h 66 km Mag. B 5.6 6-6 $\frac{1}{2}$ Golden 6.1 Pasadena 6.3-6.5 Berkeley	
		i	N'	51 44	8	+2					
		iPP	E'Z'	52 26	15		-6	+5			
		i	N'	52 30	15	+2					
		e(S)	E'Z'	56 24	(14)						
		iS	N'E'	56 30	9	+6	+17				
		i	Z'	56 44	9			+6			
		i	N'	58 09	20	-11					
		i	Z'	58 29	16			-11			
		eL	N'Z'	58 52	40						
		L max	Z'	59 44	24			56			
L max	N'E'	59 50	24	22	40						
1176	17	(PKP)	Z	00 35 09 $\frac{1}{2}$			Masked by microseisms			USCGS 9.6 N 72.6 W H 00 16 08.6 h 172 km D Mag. B 5.7 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ Pasadena	
		i	Z	35 16.8	1.0			-0.06			
1178	17	eSS	E'	08 22 28	18		2			Early phases masked by microseisms USCGS 1.3 S 13.6 W H 07 41 16.1 h N Mag. B 5.3 S 5.8 5.8 Pasadena 6 $\frac{1}{2}$ Golden	
		eSS	N'	22 34	18	1					
		eSSS	E'	27 46	25		2				
		e(LQ)	E'	38 28	54		4				
		eL	N'	39 52	50						
		eG	E'	40 18	62						
		M	N'Z'	56.0	20	3		4			
1188	22	e	NE	03 20 30		A few very small waves superposed on microseisms				Canberra 34°15'S 149°16'E Mag. 2	
1189	22	eP	Z	09 09 11		Masked by microseisms		6340		USCGS 16.3 S 122.3 E H 08 59 23.1 h 26 km Mag. B 5.3 S 5.8	
		e	Z'	09 12	8			2			5791
		e	E'Z'	11 05	12		1	2			
		e	N'	11 12	12	1					
		PP	Z'	11 21	12			2			
		iS	N'	17 02	12	-5					
		iS	E'	17 03	12		-3				
		e	N'E'	17 30	22	3	3				
		i	N'	19 00	14	2					
		i	E'	19 01	14		-3				
		e	N'	20 43	20	2					
		e	E'	21 12	20		3				
		e	Z'	21 20	20			2			
		iSSS	N'	23 10	18	+3					
M	N'E'	28 46	18	5	6						
M	N'Z'	31.0	20	5		7					
M	E'	31.1	24		3						
1190	22	iS	N'	10 46 02	11	-2				Early phases masked by coda of preceding shock USCGS 1.5 N 125.6 E H 10 31 45.1 h 7 km Mag. B 5.7	
		e	E'	46 05	10		1				
		eSS	E'	49 04	16		1				
		e	N'	49 10	12	1					
		e	Z'	49 38	26			1			
		eL	Z'	53 08	36						
		eL	N'	53 20	36						
		eL	E'	53 34	36						
		L max	N'E'Z'	55.3	32	1	2	2			
M	N'Z'	56.5	26	1		2					
1192	22	iP	Z	15 49 09.4	0.8			+0.05		Compression Microseisms present USCGS 23.6 S 180.0 W H 15 44 05.0 h 516 km Mag. B 5.3	
		e	Z'	51 29	12						
		iS	E'	53 12	10		+1				
		e	N'	56 04	14	1					
		e	E'	56 12	14		1				
1194	24	iS	N'	21 22 10	14	-2				Early phases masked by microseisms USCGS 15.6 S 176.0 W H 21 09 47.9 h N Mag B 5.3	
		e	Z'	22 19	16			1			
		e	E'	22 32	14		1				
		eL	N'	24 44	24	6					
		M	N'	27 49	13	8					
		M	E'Z'	31.9	19		6	8			

RIVERVIEW COLLEGE OBSERVATORY



From the ISC collection scanned by SISMOS

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks	
								A _N	A _E	A _Z			
				h	m	s	s	μ	μ	μ	km		
1195	1968 Nov 24	oP	Z	21	32	34		Masked by microseisms			5020	USCGS 4.3 N 142.3 E H 21 20 59.9 h 51 km D Mag. B 5.9	
		i	Z	32	47.5		0.9		+0.06				
		M	N'Z'	58.5		22	2		2				
1196	24	iP	Z	23	54	57.3	0.8			+0.06		Compression USCGS 14.9 S 167.4 E H 23 49 51.3 h 114 km Mag. B 4.7	
1198	25	oP	Z	18	45	09		Microseisms present			4522	USCGS 5.0 N 126.9 E H 18 36 53.0 h 31 km Mag. B 5.4 S 6.2	
		i	N'Z'	45	11		6		-3				
		i	Z'	45	31		7		+3				
		i	Z'	46	32		9		+3				
		iS	N'E'	51	46		14	-10	-6				
		o	N'E'	52	13		30						
		i	E'	52	32		12		+5				
		i	N'	52	36		14	+4					
		iSS	N'	54	56		14	+9					
		o	Z'	55	04		16		5				
		i	E'	55	06		15		-20				
		i	N'	55	28		12	-11					
		i	E'	55	42		15		+8				
		oSSS	E'Z'	56	01		14		7				
		i	N'	58	29		15	+7					
		i	E'	58	30		15		+10				
		oL	E'	58	56		34						
		M	N'E'	19	01	12	25	13	18				
M	N'	02	56		23	15							
M	Z'	03	16		25			14					
M	N'E'	06	07		19	14	23						
M	N'	11	32		14	18							
M	Z'	12	10		14			25					
1199	26	oP	Z	00	16	02	1.5			0.14	5020	USCGS 57.5 S 6.8 W H 00 03 14.3 h N Mag. B 5.6 S 5.3	
		o	Z	16	05		2.0		0.55				
		o	E'	26	43		12						
		o(PS)	N'	27	43		16						
		o(SS)	N'	32	20		14						
		oL	N'Z'	45.2		42							
		L max	N'Z'	47.5		34	2		3				
		M	N'E'Z'	50.8		22	1	1	2				
1200	26	iP	Z	01	16	02.5	1.0			+0.08	5020	Compression USCGS 5.3 S 152.0 E H 01 10 12.9 h 68 km Mag. B 5.5	
		oS	N'E'	20	48		10		1				
		oL	E'	22	22		34						
		oL	N'	22	29		36						
		L max	E'	23	14		32		9				
		L max	N'	23	30		30	3					
		M	N'E'Z'	26.0		20	3	2	4				
1201	26	(P)	Z	01	55	05		Masked by microseisms			5020	USCGS 21.3 S 179.5 W H 01 49 56.3 h 672 km Mag. B 5.0	
		o	Z	55	08								
1209	28	oPP	Z'	10	56	14		Masked by microseisms			5020	USCGS 15.4 N 94.6 W H 10 36 07.7 h 33 km Mag. B 5.2 S 6.4 6.1 Pasadena	
		oS	E'	11	01	50	10		2				
		oS	E'	03	11		16		2				
		i	Z'	03	20		9			+2			
		oPS	E'Z'	05	56		14		3	2			
		o	E'Z'	06	20		16		6	5			
		oPPS	E'	07	22		18		4				
		o	Z'	07	31		16			3			
		oSS	Z'	12	10		32			3			
		iSS	N'	12	27		16	+4					
		i	E'	12	50		24		+7				
		o	N'	16	38		24	2					
		oSSS	Z'	16	56		22			4			
		oLQ	N'	24	58		40						
		oLR	Z'	30	18		32						
LR max	E'Z'	31.2		30			6	8					
M	N'E'Z'	39.8		18	3	3	6						
o	E'	12	30.4		42								

Continued



RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						A _N	A _E	A _Z		
				h m s	s	μ	μ	μ	km	
1235 cont.	1968 Dec 7	i	E'	05 09 38	20		-14			
		i	N'	09 41	14	+27				
		i	Z'	09 45	16			+19		
		i	N'	10 06	20	+24				
		i	Z'	10 09	22			+15		
		iSS	Z'	10 49	18			-8		
		eL	E'	11 26	48					
		L max	E'	12 32	34		110			
		iLR	N'	13 00	32	+78				
		LR	Z'	13 08	36					
		M	Z'	14 36	28			94		
		M	E'	14 44	22		115			
		M	N'	15 11	23	93				
		M	E'	17 04	18		128			
M	Z'	18 28	17			116				
M	N'	19 10	16	107						
F	Z'	09 00								
1236	7	oP	Z'	15 53 46		Feeble and masked by microseisms				USCGS 51.6 N 175.7 E H 15 40 57.9 h N Mag. B 5.3 S 5.4
		oSKS	N'	16 04 10	9	½				
		o	N'E'	04 31	15	½	½			
		oSP	N'	05 30	12	½				
		oSS	N'E'	10 14	20	½	½			
		oLR	Z'	20 30	36					
		M	Z'	29 52	24			½		
		M	N'	30 24	22	½				
1237	7	oP	Z	17 15 09	1.0			0.10	Masked by microseisms USCGS 14.0 S 166.8 E H 17 09 52.5 h 56 km Mag. B 5.1	
		i	N'E'Z'	15 18	9	+1	+1	-1		
		o	Z	15 25	1.0			0.14		
		o(S)	N'E'	19 22	11	1	½			
		i	N'E'Z'	19 38	12	N,E +5	+3			
				18 Z'				+5		
		o	N'E'	19 52	20		2			
		o	Z'	20 16	34					
oLR	E'Z'	21 22	30			5				
M	N'E'Z'	23 00	19	4	5	7				
1238	7	oP	Z'	20 48 12	8				Feeble and masked by microseisms USCGS 45.0 S 80.3 W H 20 35 21.2 h N Mag. B 5.6	
		oSKS	N'	58 34				½		
		o	Z'	58 58	12					
		o	N'E'	59 04	16	1	1			
		oPS	N'	21 00 05	18	1				
		o	E'Z'	00 17	20		1	1		
		oPPS	N'	00 34	20	1				
		o	N'	04 28	22					
		oSS	Z'	04 46	20			1		
		oLR	N'Z'	15 51	30	1		2		
M	N'E'Z'	18 24	21	1	1	2				
1239	7	iP	NEZ	21 40 24.6	1.5	+0.26	+0.58	-2.32	Dilatation USCGS 20.7 S 169.4 E H 21 35 44.8 h 61 km D Mag. B 5.6 6 Pasadena, Berkeley	
		iP	N'E'Z'	40 25	10	+5	+6	-9		
		i	N'	40 41	8	+2				
		i	EZ	40 42.5	1.0		-0.28	+0.40		
		iPP	EZ	40 50.3	1.2		-0.48	+0.74		
		iPPP	N'	40 58	6	+4				
		i	N'	44 18	12	-23				
		i	E'Z'	44 20	8		-13	-11		
		i	N'Z'	44 34	11	+22		-15		
		i	E'	44 38	6		+3			
		i	E'	44 44	6		+17			
		oLR	E'Z'	45 24	30					
		L	N'	45 34	32	11				
L max	E'Z'	46.2	26		23	33				
1241	8	oP	N'Z'	07 31 56	5		Feeble, microseisms present		USCGS 53.7 S 140.2 E H 07 27 10.0 h N	
		o	E'	35 56	12		1			
		i	N'Z'	36 06	8	N	+1			
				6 Z				+1		
		eSS	E'	36 22	20		1			

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km	
1241	1968	eLR	N'Z'	07	37	07	24	1		1		
cont.	Dec 8	M	N'E'Z'		39	06	12	1	1½	1		
1246	8	eP	Z	13	18	23		Microseisms present			3910	USCGS 5.4 S 129.0 E
		esP	Z		19	44					3502	H 13 11 51.3 h 253 km
		eS	N'E'	23	37		10	½	½			Mag. B 5.5
		eSS	Z'	26	06		12			1		
		e(ScS)	N'	28	15		8	½				
		eL	E'	30	14		24					
		M	N'Z'	34	12		18	½		¾		
1247	8	eP	Z'	20	05	40		Feeble			4070	USCGS 16.5 S 172.8 W
		eS	N'E'	11	19		14				3696	H 19 58 32.2
		e	Z'	11	34		16			½		h N
		eL	N'	14	12		20	1				Mag. B 4.9
		M	N'	18	20		13	2				
		M	E'Z'	19	40		17		3	3		
1248	9	e	Z	09	51	32		Masked by microseisms				USCGS 5.5 S 151.6 E
		eS	N'	56	04		20	2				H 09 45 26.2
		e	Z'	56	20		18			1		h 54 km
		eL	Z'	59	15		28					Mag. B 5.1
		M	N'E'Z'	10	01	40	19	2	2	3		
1250	10	iP	Z	04	31	57.0		Compression, microseisms present				USCGS 6.3 S 130.4 E
		eS	N'	37	12							H 04 25 25.5 h 107 km
		eL	E'	42.7			24					Mag. B 5.5
1252	10	iP	Z	16	39	22.5		Compression, microseisms present				USCGS 21.5 S 169.6 E
		eL	E'Z'	45.2			16					H 16 34 42.3 h 29 km
1255	11	P	Z	11	56	39		Microseisms present				USCGS 33.6 N 134.0 E
		i	Z	56	45							H 11 45 30.8 h 32 km D
		e	N'	12	06	20						Mag. B 5.4
		eL	N'Z'	19.1			26					
		M	N'Z'	24.0			20	1		1		
1257	11	e(P)	Z'	21	40	12		Masked by coda of preceding				USCGS 23.9 S 176.1 W
		e	Z'	45	35		18			1		H 21 34 07.5
		eL	N'E'	47	04		30					h 95 km
		eLR	Z'	48	30		28					Mag. B 5.4
		M	N'	49	38		16	8				
		M	E'Z'	50	42		19		8	11		
1258	12	eP	Z	00	31	21	1.6			0.28		Microseisms present
		iS	N'	36	38		8	+1				USCGS 15.8 S 177.8 W
		i	E'	36	43		10		+1			H 00 24 39.0 h 20 km G
		e	Z'	36	44		16			1		Mag. B 5.1 S 5.5
		eL	N'	39	02		22	3				
		eL	E'	40	23		26		5			
		iL	Z'	40	27		22			+5		
		M	N'	42	17		15	3				
		M	E'Z'	42	56		18		4	4		
1259	12	iP	Z	05	34	19.3	0.8			+0.13	5530	Compression. L.P. records
		iPP	Z	34	41		1.2			+0.10	4908	masked by microseisms
		isP	Z	34	55		1.3			+0.10		USCGS 9.7 N 125.7 E
		e	Z	36	09		0.5			0.02		H 05 25 37.2
		eS	N'	41	20		10	1				h 113 km
		esS	N'	41	58		11	1				Mag. B 5.6
		eL	Z'	49.6			(32)					
		M	Z'	52	20		18			½		
1260	12	iP	N'E'Z'	07	25	46	6	+1		-6		Dilatation
		iPP	E'Z'	27	16		6		+3	-6		USCGS 16.0 S 177.8 W
		i	Z	27	16.5		1.5			+0.26		H 07 19 44.8
		e	E'	27	20		2.5		1.32			h 431 km D
		i	Z	27	22		2.5			+2.97		Mag. B 5.5
		i	Z'	30	31		6			+3		

Continued

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					A _N	A _E	A _Z		
1260 cont.	1968 Dec 12	iS E'	07 30 34	16	μ	μ	μ	km	
		e Z'	30 42	12		-7			
		e N'Z'	32 56	22	3		2		
		i N'E'	33 26	14	+7	+4			
		i N'	34 11	12	+4				
		e N'	35 16	14	5				
		i E'	35 30	10		+4			
M E'Z'	37 04	18		4	5				
1262	12	e(S) N	16 18 06	16	Feeble and masked by microseisms			USCGS 16.4 N 122.2 E H 16 00 30.0 h 50 km Mag. B 5.0	
		M Z'	36 40	16			1/2		
1263	13	e(S) E'	02 59 46		Masked by microseisms			USCGS 5.3 S 126.6 E H 02 46 58.2* h 17 km Mag. B 4.7	
		e N'E'	03 02 22	20					
		eL N'	03 16	44					
		eL E'	04 12	38					
		M N'E'	07 08	18	2	2			
		M Z'	07 18	20			1/2		
1265	13	e(S) N'	19 36 52	16	Feeble and masked by microseisms			USCGS 7.5 S 156.1 E H 19 26 42.4 h 76 km Mag. B 4.7	
		eL Z'	39.5	26					
1270	14	(P) Z'	10 11 48		Small and masked by microseisms			USCGS 51.5 N 175.7 E H 09 59 02.3 h N Mag. B 5.2 S 5.8 6 1/2 Pasadena	
		e Z'	12 03	11			1/2		
		eSKS N'	22 16	11	1				
		iS E'	22 34	14		-1			
		e N'Z'	22 40	12	1		1/2		
		eSS E'	28 21	14		1			
		eG E'	35 03	56					
		eLR Z'	39 35	38			2		
		eL N'	39 50	36	2				
		M N'E'Z'	42 24	26	2	1	2		
1273	15	eP Z	02 27 07		Microseisms present			9740 8797 USCGS 51.6 N 175.8 E H 02 14 17.5 h N Mag. B 5.7 S 6.2 5 3/4 Berkeley 6 1/4 - 6 1/2 Pasadena	
		e Z'	27 08	8			1		
		e Z	27 20	2.0			0.41		
		iSKS N'	37 31	14	+2				
		iS E'	37 45	13		+3			
		i N'	37 54	15	+2				
		i Z'	37 56	12			1		
		e N'	39 10	18	2				
		eSS E'	43 55	16		2			
		i N'	43 46	14	+3				
		i N'	44 10	14	+2				
		eG E'	50 22	50		3			
		eL N'	50 32	40					
eLR Z'	54 36	40			6				
M N'E'Z'	58.0	24	4	2	4				
1274	15	(P) Z	02 41 24		Microseisms present			L.P. records masked by coda of preceding USCGS 51.7 N 175.8 E H 02 28 32.4 h N Mag. B 5.4 S 6.1	
		i(S) N'	52 10	13	+2				
		eL Z'	03 09 14	34			3		
		M N'E'Z'	10.7	18	3	3	4		
1278	16	P Z'	10 51 39	5	Microseisms present			USCGS 18.0 S 168.1 E H 10 46 46.6 h 49 km Mag. B 5.1 S 5.4	
		e Z	51 45	1.2			0.17		
		i N'E'Z'	51 48	10	+2	+2	-3		
		iPP N'E'Z'	52 02	10	-1	-3	+3		
		(S) E'	55 35						
		i N'Z'	55 41	11	-11		-8		
		i E'	55 43	9		-11			
		i N'	55 53	11	+13				
		i N'	56 41	14	+7				
		eLR Z'	57 12	26					
		iL E'	57 20	24		+7			
		L max N'E'Z'	57 45	20 N	7				
		M N'E'Z'	59.4	24 E, Z	18	9	10		13
1281	16	eS E'	21 44 03	14	Feeble, masked by microseisms				

Continued

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ km	Remarks	
								A_N μ	A_E μ	A_Z μ			
1281 cont.	1968 Dec 16	eL	E'	h	m	s	s					USCGS 39.8 N 143.6 E H 21 22 57.1 h 26 km D Mag. B 4.7 S 5.1	
		M	E'	21	54	12	28						
		M	N'	22	00	26	16						
		M	Z'	05	15		18						
1283	17	eP	Z'	12	16	12	11			1		L.P. N galvanometer out 11 h to 15 h USCGS 60.2 N 152.8 W H 12 02 15.0 h 86 km Mag. B 5.9 6 $\frac{1}{2}$ Pasadena, Berkeley	
		iPP	Z'	20	29		12			-2			
		isPP	Z'	21	09		10			-2			
		iSKS	E'	26	44		11		-2				
		iS	E'	28	01		12		-10				
		eSP	Z'	29	30		20			2			
		e	E'	33	16		24		3				
		iSS	E'	35	14		22		-11				
		isSS	E'	35	58		22		+4				
		e	E'	38	58		24		4				
		i	E'	40	07		18		-5				
		iG	E'	45	06		50		-26				
		M	Z'	51	26		24			7			
e	E'	13	49.0		62		9						
1284	18	iP	Z	04	42	31.2	1.0			+0.10		Compression, microseisms present USCGS 21.8 S 169.9 E H 04 37 50.7 h 24 km Mag. B 4.8	
		e	E'	46	18								
		e	N'Z'	46	25		12	1		1			
		eL	Z'	47	49		24						
		M	N'E'Z'	49	13		18	1	1	1			
1288	18	iP	Z	20	09	31.4	1.3			+0.70	3440	Compression h 0.05 USCGS 19.9 S 177.6 W H 20 03 43.9 h 367 km D Mag. B 5.5	
		iP	E'Z'	09	31 $\frac{1}{2}$		6		-1	+2	3120		
		e	E'Z'	10	50		7		2				
		iPP	Z'	10	56		7			+2			
		iS	E'	14	10		10		+3				
		e	Z	15	36		1.5			0.26			
		e	E'	16	32		15		1				
		i	N'Z'	16	48		8	+2		+2			
		i	E'Z'	16	58		10		-2	+5			
		i	N'	17	20		13	+4					
iScS	N'	19	22		5	-1							
1289	18	eP	Z	20	20	41		Very small, masked by microseisms				USCGS 6.1 S 148.7 E H 20 14 53.6 h 74 km Mag. B 4.9	
		i	Z	20	45.3		1.0			+0.03			
1290	19	(P)	Z	00	34	28		Masked by microseisms				USCGS 0.2 S 124.3 E H 00 26 37.9 h 46 km Mag. B 5.5	
		e	Z'	44	06		16						
		eL	Z'	48	49		30						
		M	N'E'Z'	51.0		24	1	1	1				
1292	19	(P)	Z	11	33	32		Masked by microseisms				USCGS 5.0 N 126.9 E H 11 25 17.3 h 65 km Mag. B 5.0	
		(eS)	E'	40	12								
		eL	E'	49.2		20							
		M	N'E'Z'	53.7		16	1	1	1				
1294	19	iP	Z'	15	28	42	5			+2	9740	Compression USCGS 53.3 N 160.1 E H 15 15 55.7 h N Mag. B 5.4 S 5.6	
		eSKS	N'	39	03		7	1			8727		
		eS	E'	39	20		12		1				
		e	N'	39	28		12	1					
		e	Z'	40	28		22						
		e	N'	40	40		20	1					
		eSS	E'	45	03		24		1				
		eSS	N'	45	10		24	1					
		e	Z'	45	20		28			1			
		eL	E'	51	12		36						
		eL	Z'	52	25		36						
		eLQ	N'	52	44		36	1					
		L	E'	53	26		32		2				
		eLR	E'Z'	56	12		38						
M	N'E'Z'	58.8		26	3	1	3						
M	N'E'Z'	16	02.3		22	2	1	3					
1295	19	(PKP)	Z	16	48	31		Microseisms present				A.E.C. 37°13'53.3"N 116°28'24.9"W H 16 30 00.0 Elev. 512.1 meters	
		eLContinued	N'	17	16	39	40						

RIVERVIEW COLLEGE OBSERVATORY



From the ISC collection scanned by SISMOS

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	Az			
				h	m	s	s	μ	μ	μ	km	
1295 cont.	1968 Dec 19	M	N'E'Z'	17	27.4		19	1/2	1	1		USCGS Mag. B 6.3 S 5.6 Berkeley 6.4 Nevada Test Site, "Benham"
1301	20	o(S)	N'	21	57.52		20	Masked by microseisms				USCGS 9.2 N 125.4 E
		o	N'Z'	22	01 32		16	1		1		H 21 41 59.5 h 93 km
		M	Z'		15.0		18			1		Mag. B 5.2
1309	22	oP	Z'	15	33 30		6			1	3488	USCGS 3.4 S 148.8 E
		i	Z		33 31.7	1.0				+0.08	3194	H 15 27 18.9
		iPP	N'		34 34	8		-1				h N
		iPP	Z'		34 35	8				+2		Mag. B 5.1 S 5.5
		oS	E'		38 34	10			2			
		iS	N'		38 36	19		+5				
		o	Z'		38 46	22						3
		oSS	N'E'		40 12	24		3	4			
		oL	E'		40 42	42			15			
		oLR	N'		42 08	40		7				
		iL	Z'		42 17	36						-15
		M	N'E'Z'		44 45	17		16	18	15		
1310	22	oP	Z'	17	46 18		6			1	3960	USCGS 1.8 S 134.4 E
		i	Z		46 19.0	1.3				+0.14	3596	H 17 39 18.2
		oPP	Z'		47 36	8				1		h 25 km
		o	Z'		51 46	30						Mag. B 5.2
		iS	N'		51 51	19		+3				
		o	E'		52 06	15			1			
		o	E'Z'		52 15	30			1	2		
		o	E'		54 21	11			3			
		oL	N'		54 34	54		6				
		i	Z'		54 44	10				+2		
		oL	E'		55 03	48			6			
		oL	Z'		55 38	36						5
		M	E'		18 00 18	15			30			
		M	N'E'Z'		02 02	15		21	29	26		
1311	23	oP	Z'	06	00 44		4	Microseisms present			4700	USCGS 1.7 N 126.6 E
		oP	Z		00 44	1.3				0.14	4293	H 05 52 51.1
		iPP	Z'		02 28	1.5				+0.26		h 36 km
		o	Z'		02 36	16				1		Mag. B 5.6
		oS	N'		07 02	14		1				
		o	Z'		07 32	32						
		oSS	N'		10 10	16		1				
		oL	E'		11 36	44						
		oLR	Z'		14 03	40						
		L	E'		14 30	38			5			
		M	N'Z'		15 40	31		3		3		
		M	E'		17 28	25			4			
		M	N'E'Z'		20.5	25		3	3	3		
1317	24	oP	Z'	13	09 40			Masked by microseisms				USCGS 18.1 N 120.1 E
		o	N'		09 45							H 12 59 39.0 h 53 km
		M	E'Z'		28.3	18			1	1		Mag. B 5.1
1318	24	iP	Z	15	49 34.0	1.0				+0.09		Compression, superposed on microseisms
												USCGS 7.6 S 123.0 E
												H 15 42 43.5 h 218 km
												Mag. B 5.2
1320	24	iP	Z	18	50 43.5	1.0				-0.07		Dilatation, superposed on microseisms
												USCGS 30.6 S 178.3 W
												H 18 45 18.5 h 130 km
												Mag. B 4.6
1321	25	(P)	Z	04	08 30			Masked by large microseisms				USCGS 41.7 N 142.8 E
		M	N'		38.0	20		1/2				H 03 56 39.2 h 36 km
												Mag. B 5.3 S 4.8
1323	25	iP	EZ	19	02 25.3	0.8			-0.02	+0.09		Compression
		oL	E'Z'		09 28	23						USCGS 30.2 S 177.9 W
		M	E'Z'		11 26	18			1/2	1/2		H 18 56 49.4 h 50 km
												Mag. B 4.9
1325	25	P	Z	22	46 51			Masked by microseisms				USCGS 30.7 S 178.1 W
		oL	Z'		53 40	24						H 22 41 16.1 h 43 km
		M	N'E'Z'		55.4	20		1/2	1/2	1/2		Mag. B 4.9



No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ km	Remarks
								A _N	A _E	A _Z		
								μ	μ	μ		
1326	1968 Dec 26	iP	Z	02 47 22.0	1.2				+0.06		Microseisms present	
		o	N'	51 24	20	½						
		e	E'	51 29	16		1					
		oLR	Z'	52 10	22							
		M	Z'	53.1	20				2			
		oT	NE	03 06.1	0.5							
1328	26	P	Z	21 13 42	0.9				0.05		Microseisms present USCGS 1.7 N 126.3 E H 21 05 48.3 h N Mag. B 5.2	
		oPP	Z	15 22	0.9				0.05			
		(oS)	E'	20 04								
		oL	N'Z'	27 20	32							
		M	E'Z'	32.0	22		½		1			
1331	27	iP	Z	22 38 25.5	1.0				+0.08		Compression Masked by microseisms USCGS 3.5 S 128.2 E H 22 31 15.8 h N Mag. B 5.4	
		oPP	Z	39 51	1.5				0.24			
		e	Z'	46 46	8							
		oL	N'	47 30	36							
		oL	Z'	48 18	40							
		M	N'E'	51 26	22	1		2				
1335	28	(P)	Z'	21 45 34		Masked by microseisms				USCGS 5.4 S 152.6 E H 21 39 38.7 h 58 km Mag. B 5.0		
		oS	N'	50 18	18	1						
		oL	Z'	53 26	27							
		M	N'E'Z'	55 50	16	1	1	1				
1336	29	oP	Z	02 01 08		Microseisms present				USCGS 29.9 S 178.2 W H 01 55 33.5 h 66 km D Mag. B 5.1		
		i	Z	01 10.5	1.0				+0.08			
		e	N'	06 26	10							
		oLR	Z'	07 06	24							
		oL	E'	07 28	34							
		M	N'E'Z'	08 32	19	1	1	2				
1338	29	(oP)	Z'	07 25 30		Masked by microseisms				USCGS 13.6 N 120.5 E H 07 15 50.5 h N Mag. B 5.4		
		oS	E'	33 04	16		1					
		e	N'E'Z'	33 40	36	2	2					
		oSS	N'Z'	36 55	22							
		oL	Z'	42 17	48							
		L	Z'	43 36	42				3			
		M	N'E'	45 09	24	3	2					
		M	N'E'Z'	48 44	23	2	2	2				
1339	29	(oP)	Z'	08 44 35		Masked by microseisms				USCGS 5.2 S 151.8 E H 08 38 41.3 h 65 km Mag. B 5.2		
		i	Z	44 44.6	1.2				+0.12			
		oS	N'	49 20	25	2						
		e	Z'	49 40	16				1			
		e	E'	50 14	16		½					
		oL	Z'	52 46	30							
		M	N'E'Z'	55.0	20	2	2	3				
1340	29	o(PP)	Z'	18 06 18		Masked by microseisms				USCGS 0.5 S 99.2 E H 17 54 15.3 h N Mag. B 4.6		
		e	E'	06 30	14							
		e	Z'	06 41	14				1			
		e	E'	13 25	26		1					
		oL	Z'	31 31	32							
		M	E'Z'	36.3	20		1	1				
1341	30	oP	Z'	04 55 49		Small and masked by microseisms				USCGS 16.3 S 172.6 W H 04 48 40.9 h N Mag. B 5.2		
		e	E'	05 01 44								
		e	N'	04 08	(20)							
		oL	E'Z'	06 22	28		1	1				
		M	N'E'Z'	10.2	13 N	1						
				16 E, Z	2	2						
1343	30	(oP)	Z	09 22 01		Microseisms present				USCGS 55.2 S 129.0 W H 09 12 14.8 h N Mag. B 4.8		
		oS	E'	30 04	18		1					
		e	Z'	30 15	18							
		e	N'	30 20	13	1						
		oLR	N'E'Z'	38 30	29							
		LR max	N'E'Z'	39.4	25	1	1	2				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								A_N	A_E	A_Z		
				h	m	s	s	μ	μ	μ	km	
1344	1968 Dec 30	(eP)	Z	09	55	07						USCGS 1.6 N 126.4 E H 09 47 14.3 h 27 km Mag. B 5.0
		e(S)	N'	10	01	24						and coda of preceding earthquake
1349	31	i	EZ	06	44	08	0.4		+0.5			Canberra 34°46'S 149°02'E Mag. 2.7 Felt Dalton
		m	NE		44	15	0.4	0.5	0.5			
1350	31	e(P)	Z'	13	44	51	6					Microseisms present USCGS 11.4 S 162.8 E H 13 39 26.3 h 22 km Mag. B 5.0
		i	N'		49	22	7	+1				
		i	E'		49	24	10		+1			
		e	N'		49	54	24	2				
		eL	E'		50	08	26					
		e	Z'		50	23	10				1	
		eL	Z'		50	42	32					
		L	E'Z'		51	36	25		2	3		
		M	N'Z'		52	32	18	3		2		
		M	E'		53	42	14		3			
1351	31	iP	Z	16	09	26.3	0.7				+0.07	Compression
		i	NEZ		09	27.5	0.6	+0.18	+0.05	+0.39		Canberra 31°02'S 149°16'E Mag. 5 Felt Coonabarabran
		i	NEZ		09	35	0.5	+0.34	+0.15	+0.63		
		i	N'E'Z'		09	36	2	+2	-1.5	-3		
		m	NEZ		09	38	0.6	0.50	0.44	1.08		
		eS	N'E'		10	06	4	1	1			
		i	E'Z'		10	18	3		+2	+5		
		i	N'E'		10	21	3	+7	+9			
		eL	N'E'		10	24	10	3	6			
		eL	Z'		10	38	8				6	
		M	N'E'Z'		10	44	6	7	5	10		
1352	31	e	NEZ	17	59	52						Canberra 34°46'S 148°58'E Mag. 3 Felt Yass
		i	NE	18	00	15.5	0.5	-0.04	+0.05			
		m	NEZ		00	20	0.5	0.05	0.08	0.05		

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