

RIVERVIEW COLLEGE OBSERVATORY

SEISMOLOGICAL BULLETIN

1 9 6 5



RIVERVIEW, SYDNEY, AUSTRALIA



WORLD WIDE STANDARD SEISMOGRAPH NETWORK

STATION RIV.

SEISMOLOGICAL BULLETIN, JANUARY-DECEMBER, 1965.

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.
To 1.0s, Tg 0.75s, Magnification 12,500 at 1.0s.
Sprengnother Long-period Seismometer NS, EW, Z.
To 30s, Tg 100s, Magnification 750 at 30s.
-To 15s, Tg 100s, Magnification 750 at 15s from April 22nd-

Galitzin Aperiodic Seismometer NS, EW, Z.

N.B. Benioff readings designated N E Z
Sprengnother N' E' Z'
Galitzin N" E" Z"
Amplitudes from Galitzin response *

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km.		
4	1965 Jan. 2	eP	N'Z'	13	53	23	(7)				5740	Microseisms on all records. Long-period wanderings on N' E' USCGS: 19.1 N, 145.4 E, H 13 44 18.9 h 142 km. ca. Magnitude 6.1 5 1/2-6 Palisades.	
		i	Z	53	23.5	0.6					5197		
		m	Z	53	27	0.6							
		ePP	Z'	55	21								
		e	Z'	56	36	7				2			
		o	N'	56	39	7	1						
		o	Z'	14	00	37	18						
		oS	N'	00	41	24	3						
		eS	E'	00	43	24			2				
		ePS	Z'	00	55	20							
		ePPS	N'	01	03	16				2			
		eScS	E'	03	03	9							
		e	Z'	07	15	24							
		eLR	N'	09.8		42	7						
		eLR	Z'	10.0		42				8			
M	N'	13.0		17	4								
M	Z'	14.0		17									
M	E'	14.7		17				2					
9	4	iP	Z	07	13	08.8	0.8				-0.07	Dilatation USCGS: 19.1 S, 177.5 W, H 07 07 31.1 h 570 km. Mag. 5.5	
		e	N	13	53.8	0.6							
		i	EZ	13	57.8	0.7			+0.05	+0.03			
		i	N	14	01.7	0.7	+0.05						
i	Z	14	02.2	0.8						+0.08			
10	4	(P)	Z	11	37	37						Masked by microseisms. USCGS: 1.8 N, 127.2 E, H 11 29 48.2 h 84 km. ca. Mag. 5.8	
		e	N'	44.4									
		e	Z'	47	19	13				1			
		eL	Z'	50.4		40							
	eL	E'	51.7		30								
	5	P	NZ	06	59	30.8	0.4						Local. Seismic ??
		i	Z	59	32.5	0.3					+0.05		
		iS	N	59	47.3	0.4	+0.03						
iS		E	59	47.7	0.4			+0.03					
m	NE	59	52	0.3	0.12		0.22						
m	Z	59	53	0.3						0.09			
13	5	eS	N'	13	56	52	19					USCGS: 6.3 S, 154.3 E, H 13 46 16.2 h 10 km. ca. Mag. 5.1	
		e	E'	56	56	15							
		eL	Z'	59.8		30							
		M	E'	14	01.5	15				2			
		M	N'Z'	02.5		16	2				2		

N.B. USCGS Epicentres. Where H is given to nearest second and followed by * it indicates an estimated accuracy of 1/2° in Latitude and Longitude and 50 km. in depth.

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks			
							AN	AE	AZ					
				h	m	s	s	μ	μ	μ	km.			
14	1965 Jan. 5	eP	E'Z'	18	12	38	10		1	3	3730	USCGS: 20.3S, 174.1W, H 18 05 58.6 h 33 km. ca., Mag. 6.0 6½ Berkeley 6¾ Pasadena		
		ePPP	E'	14	05		10				3326			
		eS	N'	17	57		15	3						
		e	Z'	18.1			21				4			
		e(L)	N'	20.3		(36)								
		M	N'	23.0			15	19						
		M	E'	26.6			16		35					
		M	Z'	27.3			16				48			
		W2M	N'E'Z'	21	05		20			1				
15	6	iP	Z	01	01	56.5	1.0			-0.16	4310	Dilatation. Microseisms present. h 0.08 ca. USCGS: 7.0S, 122.9E, H 00 55 27.4 h 546 km.ca. Mag. 5.4		
		PcP	Z	04	01						3722			
		eS	N'	07	06		9	1						
		eiS	E'	07	07		11		-3					
		e(SS)	Z'	10	04		10							
		e	E'	10	06		11							
		X	N'E'	10.4			14	3	2					
		e	Z'	10.5			25				1			
31	8	eP	Z'	19	02	28	5					USCGS: 59.4S, 24.0W, H 18 49 46.0 h 39 km. ca. Mag. 5.9		
		ePS	N'	14.2			16							
		eL	E'	25.3			26							
		M	N'Z'	39.6			18	½			½			
33	8	e	Z'	21	22.1		25					USCGS: 13.2S, 112.0W, H 21 08 06.0 h 33 km. ca. Mag. 4.9 5 Berkeley 5½-5¾ Pasadena.		
		e	E'	32.0			16			1				
		eS	E'	33.0			22			1				
		e	E'	37.7			20			1				
		eL	N'E'	45.0			30							
		eLR	N'E'Z'	49			34							
		LR Max.	N'E'Z'	50			30	3	3		5			
		W2	N'E'Z'	23	27		25							
35	9	eP	Z	04	34	06						Masked by microseisms. USCGS: 34.2S, 179.9E, H 04 28 56* h 74 km. ca. Mag. 4.9		
		e(S)	N'	38	20		8							
		e	E'	38.5										
		eL	Z'	39.9			28							
		M	N'	41.6			16	3						
		M	E'Z'	42.0			17		2		2			
37	9	(P)	NZ	11	25	36						USCGS: 3.5S, 150.3E, H 11 19 22.2 h 32 km. ca. Mag. 4.7		
		e(S)	N'	30.5			14							
		eL	E'	32.8			33							
		eL	N'Z'	34.2			32							
		M	N'	36.3			20	2						
		M	E'Z'	37			18		1		1			
39	9	iP	Z	13	41	54.0	1.0			+0.05	5710	Compression USCGS: 11.9N, 126.2E, H 13 32 46.4 h 5 km. ca. Mag. 6.1		
		i	Z'	41	55		6			-3	5124			
		m	Z	41	56½		1.1				0.62			
		i	Z'	42	20		6				-4			
		iPP	Z'	43	54		7				-3			
		eS	N'	49	13		11	3						
		eSS	N'	52	48		11	3						
		e	Z'	53	13		11				2			
		M	N'	14	01.0		20	4						
		M	E'	02.0			20		2					
		M	N'Z'	06.0			18	4			4			
				iP	Z	21	09	01.2	0.3				-0.05	Dilatation. Local.
				i	NEZ	09	02.0		0.3	+0.05	+0.04		+0.06	
				iS	N	09	17.5		0.4	+0.04				
		iS	E	09	18.0		0.4		+0.05					
		m	N	09	18½		0.4	0.09						
10		iP	Z	00	59	15.2	0.5			+0.04	Compression. Local.			
		iP	NE	59	15.3		0.5	+0.02	(-)					
		i(S)	N	59	33.5		0.6	-0.04						
41	10	(P)	Z	07	43	19						Masked by microseisms. Long-period wanderings on N'E'Z' USCGS: 5.8S, 147.3E, H 07 37 35.1, h 113 km. ca., Mag. 6.5		
		i(sP)	Z	43	49									
		(e)	N'	48	09									
		e	N'	48	55		9							

Continued on next page.

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No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ Km.	Remarks
					AN	AF	AZ		
41 cont.	1965 Jan. 10	eL E'	07 51.5	28					
		eL N'	51.9	30					
		M N'	53.0	21	2				
		M E'	53.5	16		2			
42	10	iP Z	13 41 51				+	2740	Compression. Preceded by microseisms USCGS: 13.5S, 166.6E, H 13 36 30.7 h 32 km. ca. Mag. 6.5 6 $\frac{2}{3}$ Pasadena.
		iP N'E'Z'N'E'Z'	41 52	26	-21	-14	+29	2427	
		i Z	41 54	1.2			+1.03		
		m Z	41 56	1.2			1.46		
		i Z'	42 12	30			+26		
		e N'E'	42.5	30	14	13			
		e Z'	46 00	20			26		
		iS N'	46 08	18	+38				
		i E'	46 15	18			-53		
		i Z'	46 22	25			+137		
		iSS N'E'	47 05	30	+175ca	-115			
		SSS Z'	47 24	24			54		
		LR Z'	48.0	30					
		LR Max. N'E'Z'	48.7	30	113	118	195		
		e N'E'	15 13.4	60					
		e N'E'	27	80					
(W2) Z'	16 17	(36)							
M N'E'Z'	25	26	3	2	3				
54	12	(eP) Z	13 45 02						Masked by microseisms. USCGS: 27.6N, 88.0E, H 13 32 24.0 h 23 km. ca. Mag. 6.1
		eS E'	55 31	14		2			
		ePS Z'	56.5	13					
		eSS E'	14 01.0	20					
		eSS N'	01.2						
		eSSS E'	04.4	20					
		eLR N'E'	13.1	40					
		eLR Z'	14.9	44					
M N'E'Z'	26	20	1	1	1				
56	12	eP Z'	19 00 46						Masked by microseisms. USCGS: 34.2S, 179.3E H 18 55 53.6 h 187 km. ca. Mag. 5.2
		e N'	05.2						
		e E'	05.4						
		e N'	05.5	20	3				
		eL Z'	06.7	28					
		M N'	08.3	16	5				
		M E'Z'	08.8	16		2	2		
61	14	eP Z'	08 34 34	7				1	USCGS: 6.2S, 149.9E H 08 28 45.3 h 63 km. ca. Mag. 5.6
		eS N'	39 07	20					
		e Z'	39 25	18				4	
		m N'	39.5	22	4				
		eL E'	40.8	40					
		eL N'	41.4	30					
		L N'E'	42.4	30	2	3			
		M N'E'Z'	44.1	20	4	4	4		
62	14	e(SKS) N'	08 50 43						Confused by coda of no. 61 USCGS: 5.5S, 81.3W H 08 25 17.5 h 32 km.ca. Mag 5.3
		e(PS) E'	54.9						
		eSS E'	09 01.3						
		eLR Z'	20.1	28					
		M N'E'Z'	34.0	17	1	2	3		
		M N'E'Z'	37.4	16	2	2	4		
70	15	eP Z	21 12 52						Microseisms present. USCGS: 13.3S, 166.3E H 21 07 35.1 h 85 km. ca. Mag. 5.2
		e(S) N'E'	17 23	9	2	1			
		e Z'	17 27	10			1		
		eL Z'	19.5	26					
		M N'E'Z'	22	15	1	1	1		
71	15	iP N'E'Z'N'E'Z'	23 23 02	10	+2	+1	-3	2730	Dilatation USCGS: 13.3S, 166.3E h 8 km. ca. H 23 17 36.0 Mag. 5.5
		i Z	23 03					2426	
		m Z	23 04	0.8			0.10		
		i Z'	23 10	6*			+6*		
		i Z'	23 13	5			-4		
		e N'E'	23 18	9	2	2			
		i N'E'Z'	23 28	8*	+4*	+2*	-10*		
		e Z'	23 48	10			3		

Continued.

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
71 cont.	1965 Jan. 15	oS	E"	23 27 21	7*					On N'E' S confused by calibration pulse.
		i	N"	27 30	10*	+12*				
		i	Z"	27 34	10*			+17*		
		m	N"E"	27 43	10*	21*	17*			
		oLR	Z'	29.6	27			10		
		M	N'E'Z'	32.3	15	24	12	21		
72	16	iP	Z	01 28 41	1.0			+0.05	Compression. Microseisms present. Long-period wanderings on N'E'Z'	
		i	Z	28 47	1.2			+0.10		
		oS	N'	33 08	14	2				
		e	Z'	33 12	11			1		
		oL	Z'	34.5	24					
		M	N'E'Z'	36.3	20	2	$\frac{1}{2}$	1		
73	16	oP	Z	05 35 30	1.0				Microseisms present. Long-period wanderings on N'E'Z'	
		e	Z'	35 32	5					
		e	Z	35 38	0.8					
		e(S)	N'	40 02	9	1				
		oL	Z'	42.0	22					
		M	N'	43.2	15	2				
74	16	(P)	Z	06 40 11					Microseisms present. USCGS: 5.7S, 151.3E, H 06 34 16.6 h 60 km.ca., Mag. 5.7	
		e	N'	45 07	23					
		e	Z'	45 09	23					
		oLR	Z'	48.9	25					
75	16	M	N'E'Z'	50.5	19	3	2	3		
		oP	Z	11 45 27 $\frac{1}{2}$	1				Microseisms present. USCGS: 56.6S, 27.4W, H 11 32 37.4 h 101 km. ca. Mag. 6.1	
oSKS	N'	55 47	(10)							
e(S)	N'	56 11	20							
e(sS)	E'	56 52	20			1				
e(PS)	Z'	57.3	20							
e	N'	58 00	20	2						
e(SS)	Z'	12 02.3	20							
e	N'	02.5	20	1						
oLQ	E'	09.5	30			2				
oL	N'Z'	16.2	?							
M	E'	20.3	18			$\frac{1}{2}$				
M	N'Z'	22.9	21	2			2			
80	17	iP	Z	10 48 03.5	1.7			+1.4	2810 2593 Compression h 0.08 USCGS: 24.5S, 178.4E H 10 43 17.5 h 568 km. ca. Mag. 5.5	
		iP	E'Z'E"Z"	48 04	4			+13		
		m	EZ	48 06	1.7			0.48		2.0
		i	N	48 09.7	1.3	+				
		i	Z	48 13.8	1.7					+
		e	E	48 14.5	1.7			0.6		
		i	N	48 15.5	1.6	+				
		i(sP)	Z	50 45	1.2					+
		iS	E'	51 52	6			-2		
		iScP	Z	54 03	1.4					+0.26
		iScP	Z'Z"	54 03	(5)					+
		e	Z'	54.2	20					
		i	Z	54 16.5	1.5					+
		e	N'	54 33	16					
		iPcS	E'	54 48	7			-4		
		m	N'Z'	54.8	16	5				3
		i	N"E"Z"	54 50	8*	+7*	+7*	+6*		
		iScS	E	57 55	1.8			-		
iScS	N'E'N"E"	57 56	8	+	-5					
82	17	iP	Z'Z'Z"	21 05 53	(1.2)			-0.78	5330 4890 Dilatation. Microseisms present. h 0.03 ca. USCGS: 6.8S, 109.1E H 20 57 41.3 h 242 km. ca. Mag. 6.5	
		(pP)	Z	06 48 $\frac{1}{2}$	5			-6		
		i(PcP)	Z	07 20 $\frac{1}{2}$				+		
		oS	E'	12 30	?					
		oSS	E'	15 56	12			2		
		oSS	N'	15 58	12	2				
		e	E'	16 15	12			2		
		m	N'Z'	16.4	16	3				3
		oL	E'	20	30					
		M	N'E'	21.8	20			2		

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ	Remarks
								AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.	
115	1965 Jan. 30	iP	NEZ	17	47	04.3	0.8	+0.04	+0.05	-0.25	2910	Dilatation h 0.10 USCGS: 13.0S, 169.4E, H 17 42 12.3 h 647 km. ca. Mag. 5.2
		iPcP	Z	50	05	5.5	0.7			+0.02	2692	
		eS	N'	50	54							
		eL	N'E'Z'	53.9			20					
		M	N'E'Z'	56			16	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$		
116	30	iP	Z	18	11	15.2	1.0			+0.15		Compression USCGS: 12.9S, 169.5E, H 18 06 21.2 h 649 km. ca. Mag. 5.4
		eS	NE	15	08		1.8	0.18	0.24			
		eS	N'	15	08 $\frac{1}{2}$							
		eL	N'E'	18.2			20					
		M	N'	20.2			13	$\frac{1}{2}$				
120	Feb. 1	iP	NEZ	05	32	47.0	0.7	-0.02	-0.06	+0.20	3440	Compression h 0.065 USCGS: 18.6S, 178.1W, H 05 27 04.5 h 472 km. ca. Mag. 5.6
		iS	N'N''	37	20		8	-6			3190	
		eL	N'	40.2			25	3				
		eL	Z'	40.3			20				2	
		iScS	N'N''	42	27		8	-6				
				(P)	Z	10	15	47	1			
121	1	e	N'	21.5								Masked by microseisms. USCGS: 5.8S, 147.4E, H 19 27 12*, h 80 km. ca., Mag. 5.0
		eLR	Z'	24.8			26					
		M	N'E'Z'	27.2			18	1	1	1		
122	1	eS	N'	19	37	42						Masked by microseisms. USCGS: 5.8S, 147.4E, H 19 27 12*, h 80 km. ca., Mag. 5.0
		eL	N'Z'	41.2			35					
		M	E'	43.1			18		1			
		M	N'Z'	44.5			19	1		1		
123	2	eP	Z	08	05	01						Microseisms present. USCGS: 2.1S, 138.9E H 07 58 15.6 h 12 km. ca. Mag. 6.1
		i	Z	05	05	7	1.2			+0.16		
		e(S)	N'E'	10	28							
		e	N'Z'	11.1			24					
		eL	N'E'	14.2			34					
		M	N'E'Z'	20.1			14	9	8	8		
124	2	(P)	Z	10	04	27						Masked by microseisms. USCGS: 21.4S, 176.2W, H 09 58 17.7 h 171 km. ca., Mag. 5.1
		eL	N'	11.6			24					
125	2	e	E'	16	20	12						USCGS: 37.5N, 73.4E H 15 56 51.0 h 33 km. ca. Mag. 5.8
		e(SS)	N'E'	29.8								
		e(SSS)	N'	34.5			26					
		e(LQ)	N'E'	39.3			30					
		e	N'	41.8			42					
		eLR	N'E'	45.2			45					
		LR Max.	N'E'	47.8			34	2	2			
		M	N'Z'	57			24		2	2		
127	3	(P)	Z	18	31	07						Masked by microseisms. USCGS: 14.2S, 172.7E, H 18 26 05.3 h 634 km. ca.
127	4	eP	Z	03	29	30					2320	Preceded by microseisms on NEZ Compression USCGS: 51.8S, 139.7E H 03 25 00.8 h 33 km. ca. Mag. 5.9
		iP	Z'Z''	29	31		10			+25	2099	
		iP	N'E'N''E''	29	32		10	+21	+9			
		m	NEZ	29	35		1.8	0.75	0.51	2.5		
		PP	N'E'Z'	29	50		10	16	7	13		
		iS	E'E''	33	16		14		+40			
		i	Z'	33	24		10			+38		
		i	N''	33	24		8*	+20*				
		i	N'	33	34		9	+27				
		i	Z''	33	37		8*			+50		
		iSSS	N'Z'	34	05		?	-		+		
		iSSS	E'	34	07		?		+			
		eLR	N'Z'	34.3			27					
		LR Max.	N'Z'	34.9			27	75			100ca	
128	4	iP	Z	05	14	11.0	1.0			+0.10		Compression. Preceded by microseisms After 05h 14m 38s N'E'Z' indecipherable until 15h, N''E''Z'' until 11h. USCGS: 51.3N, 178.6E, H 05 01 21.8 h 40 km., Mag. 7.5
		e	Z	14	18		2.0			1.2		
		e	Z'	14	20							
		i	N'E'Z'	14	38		9	+8	+2 $\frac{1}{2}$	-24		
		m	Z	14	52		2			6.8		

No.	Date	Phase & Component		Time (G.M.T.)		Per	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
129	1965 Feb. 4	θ P	Z	08	53	34					Masked by microseisms. N'E'Z' & N'E'Z' illegible. USCGS: 51.3N, 179.5E, H 08 40 40.9 h 40 km., Mag. 6.4 6 $\frac{1}{2}$ -7 Pasadena.	
		i	Z		53	35.5	1.5			-1.32		
		m	Z		53	57	2.0					3.7
130	4	i(P)	Z	12	19	06.5	2.2			+1.2	Masked by microseisms. N'E'Z' illegible. USCGS: 52.6N, 172.1E, H 12 06 04.3 h 25 km., Mag. 5.8 6 $\frac{1}{2}$ Pasadena.	
		i	Z"		19	09	5*			-8*		
		i(SKS)	N"		29	23	7*	+6*				
		i(S)	N"E"		29	52	7*	-6*	-6*			
		M	N"Z"		52		22	10*				20*
131	4	i(SKS)	N"	14	41	49	?				USCGS: 53.0N, 171.0E, H 14 18 27.9 h 30 km. Mag. 5.7 6 $\frac{1}{2}$ Pasadena.	
		iS	E'N"E"		42	05	13*	-7*	-6*			
		θ SS	E'		47	58	24					
		iSS	N'		48	10	23	+9				
		θ LQ	E'		55.6		40					
		θ L	Z'		58.7		44					
		θ LR	N'Z'		59.6		40	10				9
		M	N'E'Z'		15	05	22	14	4			17
132	4	P	Z	16	04	15	1.6			0.43	Masked by microseisms. USCGS: 53.1N, 170.8E H 15 51 25.5, h 40 km., Mag. 5.7 6 $\frac{1}{2}$ Pasadena.	
		θ (S)	N'		14	56						
		θ SS	N'		21.0		22	2				
		θ L	Z'		32.5		35					
		M	N'E'Z'		38		22	4	1			4
135	5	θ (SKS)	N'	07	03	02					Masked by microseisms & long-period wanderings. USCGS: 51.8N, 175.1E, H 06 39 49.6 h 25 km.ca. Mag. 5.7, Palisades Mag. 5 $\frac{1}{2}$, Pasadena 6 $\frac{1}{2}$ -6 $\frac{1}{2}$	
		θ L	N'		20.0		36					
		θ L	Z'		20.4		40					2
		M	N'Z'		23.5		26	2				2
136	5	θ P	Z'	09	44	58					9820 88 $\frac{1}{4}$ Microseisms present. USCGS: 52.3N, 174.3 E H 09 32 09.3 h 41 km. Mag. 5.9 5 $\frac{1}{2}$ Berkeley 6 $\frac{1}{2}$ Pasadena	
		θ P	Z		44	59	0.7					0.06
		θ SKS	N'		55	22	?					
		θ S	E'		55	39	8			3		
		θ	N'E'Z'		55	48	18	3	4			2
		θ PS	Z'		56	41	20					1
		θ SS	E'	10	01	34	27			2		
		θ SS	N'Z'		01	42	27	5				2
		θ	Z'		05.7		27					
		θ (G)	E'		08.4		60ca					
		θ LQ	N'		09.1		37	3				
		θ LR	Z'		12.6		38	5				6
		M	E'		15.6		25			3		
		M	N'Z'		17		24	6				6
W ₂	Z'		11	54	24							
1 37	5	θ (P)	Z'	21	00	10					Masked by microseisms USCGS: 51.9N, 174.6E H 20 47 13.3 h 35 km. Mag. 5.7	
		θ SKS	N'		10	28	12	2				
		θ S	N'E'		10	46	14	2	2			
		θ PS	N'		11	47	15					
		θ SS	E'		16	34	20			1		
		θ	N'		16.8		20	2				
		θ LQ	E'		23.5		40			2		
		θ LR	N'Z'		27.5		38					
		M	N'E'Z'		31		23	3	1			3
139	6	iP	Z'	01	53	58	6			-4	10,890 98 $\frac{1}{2}$ Dilatation. Preceded by microseisms USCGS: 53.2N, 161.9W H 01 40 33.2 h 33 km. Mag. 6.4	
		θ PP	Z'		57	51	(18)					
		iSKS	N'E'N'E"		02	04	35	11	-8	-4		
		i	Z'		05	18	10					+3
		iS	N'E'N'E"		05	19	10	+7	+6			
		θ PS	Z'		06	33	18					4
		θ PPS	N'E'		07	26	18	4	2			
		θ SS	N'		11	59	20	6				
		θ SS	E'		12	11	20			5		
		θ L	N		20.1		30	5				
		θ LR	N'E'Z'		24.8		30					
		M	E'Z'		27.3		23			3		9
		M	N'		28.2		22	8				
		W ₂ M	N'Z'		03	58	20	1				2

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks	
								AN	AE	AZ			
				h	m	s	s	μ	μ	μ			
140	1965 Feb. 6	iS	N'N"	04	26	06	7*	+3*				Earlier phases obscured by microseisms and coda of no. 139 USCGS: 52.1N, 175.7E H 04 02 53* h 35 km. ca. Mag 5.9 6 Palisados.	
		esS	E'E"		26	25	11						
		i	N'N"		26	34	7*	+2*					
		e(SS)	E'		32	16	26		3				
		e(SS)	N'Z'		32	21	26	6		2			
		eLR	Z'		43.2		40						
		LR Max.	N'Z'		44.2		40	5		6			
		M	N'Z'		47		25	5		5			
		M	E'		50	20		2					
141	6	eSKS	N'	09	10	06	7				Earlier phases obscured by microseisms USCGS: 51.9N, 174.0E H 08 46 51.2 h 30 km. Mag. 6.0		
		eS	N'		10	22	10						
		ePS	N'		11	27	14						
		eSS	N'		16.3		20						
		eLR	Z'		27.2		40						
		M	N'Z'		31		24	1		1			
142	6	P	EZ	12	08	20					Microseisms present.		
		i	Z		08	39	1.0		+0.08				
		eL	N'E'		11	34	16						
		M	N'E'		12.6		13	5	4				
		M	Z'		13.2		12			1			
		T Max.	Z		25	30	0.6			0.08			
			E		25	41	0.6	0.07					
			N		25	48	0.6	0.07					
143	6	iP	Z'	17	03	55	8			-3	10,920 9823 Dilatation USCGS: 53.3N, 161.8W H 16 50 29* h 33 km. ca. Mag. 6.1 6-6 $\frac{1}{2}$ Palisades 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Berkeley 6 $\frac{1}{2}$ Pasadena		
		iPP	Z'		07	49	7			-4			
		iSKS	N'N"		14	33	7	-4					
		iS	N'N"		15	17	7	+6					
		eSP	Z'		16	32	20			3			
		ePS	N'		16	50	27						
		PPS	N'E'		17.5		27	3	2				
		eSS	N'E'		21.9		22						
		iSS	N'E'		22	09	22	+7	+6				
		eSSS	N'E'		25.6		30	1					
		eLQ	E'		29.3		42						
		LQ	N'E'		29.9		35-40	6	5				
		eLR	E'		35.1		32						
		M	N'Z'		40.6		22	3		4			
M	E'		41.4		18		2						
145	7	eP	Z'	02	29	53	5			3	9820 8824 Microseisms & long-period wanderings on N'E'Z'		
		eSKS	N'		40	21	?						
		iS	N'N"		40	34	7*	+2*					
		ePPS	N'		42	08	13	2					
		eSS	N'		46	32	22	3					
		eLR	N'Z'		57.2		40						
		LR	N'Z'		58.2		40	5		5			
		M	N'E'Z'		03	05.5	20	2	2	3			
146	7	e(SKS)	N'	04	34	31					USCGS: 51.9N, 175.3E H 04 11 19.3 h 25 km. Mag. 5.5		
		eSS	N'		41.0		24						
		eLR	Z'		52.2		40						
		M	N'Z'		55.3		22	1		1			
		M	E'		57.3		22		1				
147	7	eP	Z'	09	38	41	?				9970 8927 Microseisms present. USCGS: 51.4N, 179.1E H 09 25 51.1 h 30 km. Mag. 5.3		
		eSKS	N'		49	07	12	1					
		eS	E'		49	28	20		2				
		e	N'Z'		49	32	15	1		1			
		ePS	N'		50	30	20						
		ePS	Z'		50	35	20			1			
		e	N'		51	16	22	1					
		eSS	E'		55	16	26		1				
		eSS	Z'		55	26	25			1			
		eSS	N'		55	30	25	2					
		eLR	N'Z'		10	06.9	34						
		M	N'Z'		11.4		22	2		2			
M	E'		13.1		22		2						
W2	N'Z'		11	47	22								

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)				Amplitude			Δ	Remarks	
								AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.		
150	1965 Feb. 8	iP	Z'Z''	15	59	45	5			-3	10,100	Dilatation USCGS: 55.1N, 165.7E, H 15 46 49.9 h 40 km. Mag. 5.6	
		i	Z				5			+0.16	9029		
		ipP	Z'Z''				5			+2			
		e	N'	16	10	22	9						
		eS	E'				25						
		ePS	N'Z'				10	2					
		ePPS	N'				13	1					
		eSS	N'				25	1					
		e(G)	E'				23.3						
		eLQ	N'				24.4	3					
		eLR	Z'				28.0	42					
M	N'E'Z'				31	25	3	1	3				
153	9	iP	Z	05	46	44.9	1.0			-0.14	2610	Dilatation. h 0.03 USCGS: 18.8S, 169.2E, H 05 42 06.8 h 223 km. Mag. 5.5	
		ipP	Z				1.2			+0.12	2325		
		iS	N'				6	-2					
		e	E'				6		1				
		eSS	Z'				12			2			
		eS	E'				6		1				
155	9	eP	Z	16	58	10	1.0			0.04	2400	Microseisms present. USCGS: 22.2S, 170.6E H 16 53 28.8 h 29 km. Mag. 4.9	
		f	Z				0.9			+0.06	2126		
		eS	N'	17	02	02	10	$\frac{1}{2}$					
		e	E'				10		1				
		e	Z'				8			2			
		eLQ	N'				26						
		eL	Z'				03.1	26					
M	N'E'Z'				05.3	16	$\frac{1}{2}$	$\frac{1}{2}$	1				
156	9	eP	Z	17	50	05 $\frac{1}{2}$						Microseisms present. USCGS: 52.8N, 171.9E, H 17 37 15.9 h 41 km. Mag. 5.7	
		eSKS	N'	18	00	30	7	1					
		e(S)	N'				10	1					
		ePPS	N'				?						
		eSS	N'				21						
		eSS	E'				22						
		eLQ	E'				50						
		eLR	Z'				38						
		M	N'Z'				27.0	20	1		2		
159	10	P	Z	06	43	00						N'E'Z' confused by microseisms & long-period wanderings. USCGS: 14.7S, 167.2E, H 06 37 58.0 h 156 km. Mag. 4.6	
		f	Z				0.9			+0.10			
		i	N				43 56.5 (0.7)	+					
		eS	N'				(7)						
		e	N'				8	2					
160	11	iP	Z	02	39	33.0	0.9			+0.12		Compression. Microseisms on all records. USCGS: 21.8S, 176.4W, H 02 33 29.3 h 174 km., Mag. 5.8	
		X	N'				20	2					
162	12	eSKS	N'	01	18	18	14	2				Masked by microseisms. USCGS: 52.2N, 172.8E H 00 55 06.2 h 25 km. Mag. 5.5 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades 6.0 Pasadena	
		e(S)	N'E'				16	2	3				
		ePS	N'				16						
		eSS	N'				20	2					
		eLQ	E'				50		3				
		eLR	N'				40						
		eLR	Z'				40						
		LR Max.	N'Z'				36.3	36	4		4		
		M	E'				38.6	20		2			
		M	N'Z'				40.2	22	5		5		
164	15	e(P)	Z	01	38	09						Masked by microseisms. N'E'Z' also confused by long-period wanderings. USCGS: 51.4N, 179.4E, H 01 25 08.8 h 42 km. Mag. 5.8	
		e	Z'				10						
		eSKS	N'				24						
		eS	E'				37						
		e	Z'				12						
		e(SS)	Z'				20						
		eL	N'Z'				02 06	28					
		M	N'Z'				10	21	1		1		

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
166	1965 Feb. 15	eP	Z	10 51 24					4810	Microseisms present. On N'E'Z' preceded by irregular long waves (seismic ?)
		ePcS	Z	56 56					4393	
		iS	N'E'N'E'	57 49	9	+3				
		i	N'	58 12	11	+3				
		e	E'	58 18	12					
		iSS	E'E'	11:01 06	12		+8			
		iSS	N'N'	01 07	12	-7				
		iScS	N'N'	01 18	7	+				
		i	N'N'	01 50	7	+				
		eL	E'	03.1	50					
		eL	Z'	04.1	50					
		M	N'Z'	06.8	38	4		4		
		M	E'	08.9	28		6			
169	17	eSKS	N'	10 42 03	10					Masked by microseisms & long-period wanderings.
		eS	N'	42 23	15	2				
		ePS	N'	43.4	18	1				
		eSS	N'	48.1	24					
		eL	N'	59.1	36					
		eLR	Z'	59.6	35					
		M	E'	11 08.7	18		1/2			
		M	N'Z'	09.4	19	1		1		
170	18	eP	Z'	22 46 35	5				3910	Microseisms present.
		e	Z	46 42					3592	
		i	Z	46 58.3				+		
		eS	E'	52 05	11		2			
		iS	N'	52 07	10	+4				
		e	Z'	52 16	32					
		e	N'	53 22	20					
		eL	N'E'	54.6	55					
		eL	Z'	55.9	50					
		M	N'E'	59.0	18	37	30			
		M	N'Z'	23 02.0	15	19		17		
172	19	iP	Z	10 14 05.0	0.8				+0.10	Compression
		m	Z	14 07	0.7				0.13	
		eS	E'	18 29	7		1			
		e	N'Z'	18.7	16			1		
		e	N'	19.4	26	1				
		eLR	Z'	20.1	28					
		M	E'	21.8	22		2			
		M	N'Z'	22.2	20	2		3		
173	19	eP	Z	19 05 30						Masked by microseisms & l.p.wanderings
		eL	Z'	35.5	?					
		M	Z'	45.8	18			1		
176	20	P	Z	10 00 00	0.8					Masked by microseisms.
		e	N'	14 56						
		e(L)	Z'	16.2	21					
178	21	eP	Z'	11 21 29					4190	Masked by microseisms.
		eS	N'	27 20	?				3797	
		e	Z'	27 23	22					
		e	E'	27 28	16		1			
		eLQ	N'	29.9	35	9				
		eL	E'	30.4	?					
		eL	Z'	31.3	28					
		M	E'	32.5	24		3			
		M	N'	35.4	12	8		4	5	
179	21	eP	Z	14 04 13 1/2						Masked by microseisms.
		ePP	N'	05 12						
		eS	N'	09 12	20	2				
		eL	E'	11.3	35		3			
		eL	N'Z'	12.3	32			3		
		L	N'Z'	13.3	32	3		3		
		M	N'Z'	14.6	21	3		3		
		M	E'	15.9	16		5			

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.
180	1965 Feb. 21	iP	Z	17	13	23.0	1.0			+0.07	Compression USCGS: 13.8S, 166.0E, H 17 08 07.2, h 20 km., Mag. 5.2
		e	N'	17	50		13				
		eL	Z'	20.6			18				
		M	N'Z'	22.6			16	$\frac{1}{2}$		$\frac{1}{2}$	
182	22	eP	Z'	21	44	01					Microseisms present.
		e	E'	48	53		9		5		
		X	N'	50	34		15	5			
		eL	E'	51.4			30		4		
		eL	Z'	51.6			30			6	
		M	E'Z'	52.7			22		4	7	
		M	N'	53.6			15	5			
183	23	ePP	Z	07	42	25					Microseisms present.
		e(S)	N'	46	07		11	2			
		e	Z'	46.2			?				
		eLR	N'Z'	47.9			22	1		2	
		M	N'E'Z'	50			17	1	1	2	
184	23	eP	Z'	22	26	12	11				12,000ca 108°ca. Diffracted P USCGS: 25.7S, 70.5W, H 22 11 50.2 h 80 km.ca. Mag. 6.2 6 $\frac{3}{4}$ Berkeley 6 $\frac{3}{4}$ -7 Palisades 7 $\frac{1}{4}$ Pasadena
		e	Z'	26	26		24			2	
		ePP	N'Z'	30	35		10	2		3	
		e	E'	30	40		24			6	
		e	N'Z'	31	00		24	3			
		iSKS	N'	36	46		14	-5			
		iSKS	E'	36	47		14		+3		
		e	N'E'	37	20		20	6		3	
		iS	N'	38	08		17	+6			
		e	E'	38.4			36				
		e	N'	38	30		40	9			
		ePS	E'	40	07		34			8	
		ePS	N'	40	10		34	11			
		ePS	Z'	40	13		22			6	
		ePPS	Z'	41	17		30			9	
		iSS	N'	45	55		16	-14			
		iSS	E'	46	02		38		+33		
		e	Z'	46	13		33			10	
		i	N'	46	19		16	+18			
		e	N'	49	04		34	7			
e	E'	50	06		34			8			
e	N'E'	54.0			58	17		11			
iLQ	N'E'	57	12		44	+33		+29			
eLR	N'Z'	23	02.2		30						
LR Max.	N'E'Z'	03			28	21	22	33			
188	25	e(pP)	Z'	01	38	26	?				Masked by microseisms.
		eS	N'	43	01		20				
		e	Z'	43	20		20			3	
		m	N'	43.5			20	7			
		eL	N'Z'	46.3			40	4		4	
		M	N'E'Z'	49			19	8	6	10	
189	25	eP	Z'	04	57	15	7				Microseisms present.
		i	Z	57	27.5		1.2			+0.16	
		i	Z	57	31.8		1.5			+0.36	
		i	N'Z'	57	32		15	-7		+9	
		iS	N'N''	05	02	06	22	-53			
		e	E'	02	12		20			7	
		i	Z'	02	22		22			+53	
		m	N'E'	02.6			22	107	15		
		eL	E'	03.9			34			39	
		eLR	Z'	05.0			36				
		L	N'Z'	05.7			36	55		55	
M	N'E'Z'	08.0			20	103	72	120ca.			
191	25	e(P)	Z'	10	25	12	?				Masked by microseisms.
		e(S)	N'	29	55		20	5			
		e	Z'	30	08		19			2	
		e	N'	31	05		14	3			
		eLR	N'Z'	33.0			38				
		M	N'E'Z'	36			18	6	3	7	

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN	AE	AZ		
195	1965 Feb. 25	eP	Z'	19 29 02	7			2	Microseisms present. USCGS: 11.4S, 166.1E, H 19 23 33.0 h 86 km. ca. Mag. 5.7
		f	Z	29 03	1.6			-0.70	
		i	E'Z'Z''	29 19	8		+1	+4	
		f	N'N''	29 21	8	-3			
		e(S)	N'E'	33 37	9				
		e	Z'	33.7	24			5	
		f	N'	33 46	11	+6			
		f	E'	33 47	11		+6		
		e	N'	34 40	20	6			
		eLQ	E'	34.7					
		e	Z'	35.0	20			3	
eLR	E'Z'	35.9	28		5	9			
eLR	N'	36.1	26	7					
196	26	iP	Z	04 49 05.2	1.4			+0.26	Compression. Microseisms present. Long-period wanderings on N'E'Z' USCGS: 18.8S, 176.1W, H 04 42 28.3 h 33 km. ca. Mag 5.3
		e	Z'	54 27	18				
		eL	Z'	57.2	22				
		L Max.	Z'	58.2	28			4	
		M	N'E'	05 00.0	15	3	4		
		M	Z'	01.1	17			4	
197	26	(eP)	Z	05 42 29					Masked by microseisms. Long-period wanderings on N'E' USCGS: 18.9S, 176.3W, H 05 36 01.1 h 61 km. ca. Mag. 5.4
		e(S)	N'Z'	47 52	16	2		4	
		e	E'	47 58	17		4		
		eL	Z'	50.3	25				
		L Max.	E'Z'	51.8	30		13	18	
		M	E'Z'	54.7	17		8	11	
M	N'	55.0	12	6					
198	26	eP	Z'	09 04 54					Microseisms present. Long-period wanderings on N'E' USCGS: 6.7S, 102.7E, H 08 55 42.2 h 33 km. ca. Mag. 6.1
		f	Z	05 01	1.0			+0.14	
		eS	N'	12 19	14				
		e	E'	12 40	10				
		eL	Z'	20.4	40				
		M	N'E'	25.3	13	35	9		
M	Z'	26.0	15			11			
202	27	e(PS)	Z'	08 15.2					USCGS: 28.5N, 112.1W, H 07 46 29.1 h 33 km. ca. Mag. 5.3
		eSS	N'	21.0					
		eLR	E'Z'	37.0	40				
		LR Max.	E'Z'	38	40		2	4	
		M	E'Z'	42	20		2	3	
		W ₂ M	E'Z'	10 01	20		$\frac{1}{2}$	1	
203	Mar. 1	eP	Z	07 26 49				3080	Microseisms present. USCGS: 5.5S, 152.1E, H 07 20 55.3 h 35 km. ca. Mag. 5.7 5 $\frac{1}{2}$ -5 $\frac{1}{2}$ Berkeley 5 $\frac{1}{2}$ -6 Palisades
		ePP	N'	27 41	12	2		27 $\frac{7}{8}$	
		eS	N'	31 27	13				
		f	N'	31 35	20	-9			
		i	Z'	31 53	20			+9	
		m	N'	32.0	20	20			
		eL	Z'	34.4	35			7	
		f	N'	34 29	20	+7			
M	N'E'Z'	38.3	18	17	14	16			
204	1	eP	Z	07 52 33	1.0			0.06	N'E'Z' confused by coda of no.203 USCGS: 5.2S, 152.1E, H 07 46 57.5 h 33 km. ca. Mag. 5.7
		f	Z'	57 59	16			+4	
		eL	E'	59.4	35				
		eL	Z'	08 00.7	35				
		M	N'E'	03.6	18	7	7		
		M	Z'	04.2	19			5	
205	1	eP	Z	09 14 39				3090	USCGS: 5.4S, 152.0E, H 09 08 45.0 h 29 km. ca. Mag. 5.6
		eS	N'	19 18	12			27 $\frac{8}{8}$	
		e	Z'	19 41	18			4	
		m	N'	20.0	18	7			
		eL	Z'	22.3	35				
		M	N'E'Z'	26.0	18	8	4	9	
206	1	eP	Z	13 31 13 $\frac{1}{2}$					Microseisms present. USCGS: 21.2N, 121.2E, H 13 20 56.7, h 42 km.ca., Mag. 5.5
		f	Z	31 29	1.0			+0.06	
		M	N'E'Z'	58	17	$\frac{1}{2}$	$\frac{1}{2}$	1	

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	
207	1965 Mar. 1	eS	N'	16	18.1		16				USCGS: 41.4S, 85.6W, H 15 54 24.5 h 33 km. ca. Mag. 5.2
		ePS	N'		19.1		18				
		eLR	N'Z'		34.9		30				
		LR Max.	N'E'Z'		36		25	2	1	2	
209	1	eP	Z	19	34	51.3	0.8			0.03	USCGS: 52.2N, 173.9E, H 19 22 01.6 h 30 km., Mag. 5.5
210	1	iP	Z	20	08	25.0	0.7			+0.04	Compression USCGS: 12.3S, 166.7E, H 20 03 09.8 h 190 km.ca., Mag. 4.8
212	1	ePP	Z'	21	52	23	18				USCGS: 15.4N, 92.5W, H 21 32 11.8 h 93 km. ca. Mag. 5.9 5½ Berkeley 5½-6 Palisades 6 Pasadena.
		ePS	Z'	22	02	11	17			3	
		e	E'		02.9		20		2		
		e	Z'		03.9		22			3	
		e	E'		04.2		20		2		
		e	Z'		13.0		(40)				
		eLR	Z'		27.0		32				
		LR Max.	E'Z'		28.1		32		4	6	
213	1	iP	Z	21	57	01.2	0.7			+0.04	2940 2695 Compression. h 0.08, H 21 52 05 USCGS: 23.5S, 179.0E, H 21 52 04.4, h 541 km. ca. Mag. 5.2
		m	Z		57	04	0.7			0.10	
		iSP	Z'		59	35	6			+3	
		iS	E'	22	00	58	8		+3		
		iScS	N'		06	47	6	+3			
217	2	eP	Z	06	03	26½					Microseisms present
		e	E'		08	08	11				USCGS: 27.3S, 177.5W, H 05 57 36.8 h 33 km. ca. Mag. 5.2
		eLR	E'Z'		10.4		30				
		LR Max.	E'Z'		11.1		28		4	6	
		M	N'		13.8		12	8			
		M	E'Z'		14.4		15		4	6	
218	2	eP	Z	06	40	32					Microseisms present.
		e	E'		45	19	11				USCGS: 61.0S, 154.8E, H 06 34 48* h 33 km.ca.
		e	E'		46.2		20		7		
		eL	Z'		46.8		32				
		L Max.	N'Z'		47.6		27	8		8	
220	2	eP	Z	09	25	29	1.8			0.25	Microseisms present.
		i	Z'		25	31	6			-4	USCGS: 27.2S, 177.9W, H 09 19 41.6 h 39 km.ca. Mag. 5.6 6 - 6 ¼ Berkeley.
		m	Z		25	32	2.1			0.60	
		ePP	Z'		26	15	12			1	
		e	Z'		30	12	18			2	
		e	N'		30.6		16	2			
		i	E'		30	43	10		-3		
		eLR	E'Z'		32.7		30		5	7	
		M	N'		36.0		12	9			
		M	E'Z'		36.9		20		5	8	
224	2	eP	Z'	14	28	56	4				Microseisms present.
		eL	E'Z'		36.2		28		2	1	USCGS: 27.3S, 177.7W, H 14 23 08.6, h 34 km.ca., Mag. 5.1
		M	N'		39.0		12	3			
		M	E'Z'		40.2		20		1	2	
225	2	iP	NEZ	15	21	36.0	0.8	-0.02	+0.05	+0.14	Compression
		i	E		22	48	0.7		+0.08		USCGS: 30.5S, 138.4E, South Australia H 15 18 53.2 h 33 km. ca. Mag. 5.1
		i	NE		22	55	0.7	+0.07	+0.08		
		iS	N		23	38	0.8	+0.10			
		iSS	E		23	51	0.8		+0.09		
		M	Z		25	05	1.4			1.9	
		M	N'		25	08	7	13			
		M	NE		25	10	1.0	0.96	1.04		
		M	E'Z'		25	47	7		15	20	
227	2	eP	Z	16	40	11½					Microseisms present
		e	Z'		45.0		16			1	USCGS: 27.0S, 177.7W, H 16 34 26.9 h 70 km. ca. Mag. 4.9
		e	N'		45	20	14	1			
		eLR	E'Z'		47.4		30		2	3	
		M	N'		50.7		12	7			
		M	E'Z'		51.6		19		2	4	

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
			h m s	s	μ	μ	μ	km.	
233	1965 Mar. 2	eP Z	23 36 24	2.5			0.83		USCGS: 26.7S, 178.0W, H 23 30 42.8 h 109 km. ca. Mag. 4.9
		eP Z'	36 25	6			2		
		ePP Z'	37 09	10			1		
		e E'	37 18	10		1			
		e N'	41 06	10	1				
		e Z'	41 17	12			3		
		e N'	41 30	13	2				
		e E'	41 35	11		2			
		eL N'	42.6	20	3				
		eL E'Z'	43.5	30		5	7		
M E'Z'	47.1	19		4	7				
M N'	47.5	11	12						
236	3	eP Z Z'Z"	03 22 53	1.5			0.10		Microseisms present USCGS: 27.2S, 177.6W, H 03 17 04.1 h 33 km. ca. Mag. 5.4 Berkeley 5½
		ePP Z'	23 41	11			4		
		e Z'	27 37	16			3		
		i N'	27 40	7	+4		6		
		i N'	28 02	16	+5				
		i E'	28 07	12		-5			
		i N'	29 03	15	-8				
		i N'	29 1 5	16	-9				
		eLR E'Z'	30.0	30					
		LR Max. E'Z'	30.7	30		16	19		
M Z'	33.6	18			16				
M N'	34.0	11	29						
M E'Z'	34.5	20		9	15				
237	3	eP Z	03 33 07	1.0			0.03	Microseisms present. USCGS: 6.0S, 128.3E, H 03 26 43.9 h 340 km.ca., Mag. 5.3	
		e Z	34 09	1.2					
239	3	eP Z	05 58 45					Microseisms present. USCGS: 27.2S, 177.6W, H 05 52 57.4 h 33 km. ca. Mag. 4.7	
		e Z'	06 03.4	16					
		e N'	03.8	15					
		eLR E'Z'	06.0	30		2	3		
		M Z'	09.1	18			3		
		M N'	09.9	12	7				
242	3	eP Z	09 12 28					Microseisms present.	
		e Z'	17.3	16					
		e N'E'	17.6						
		eLR E'Z'	19.6	28		2	2		
		M N'	23.2	12	3				
243	3	M E'Z'	23.8	19		1	2	Microseisms present. USCGS: 27.2S, 177.6W, H 11 36 28.3 h 33 km. ca. Mag. 5.0	
		eP Z'	11 42 18						
		e Z'	47 11	14			2		
		e N'	47 24	16	1				
		e(SSS) N'	48 33	18	2				
		eLR E'Z'	49.6	28		3	4		
245	3	M N'	52.0	13	7			USCGS: 27.0S, 177.8W, H 14 39 05.0 h 43 km. ca. Mag. 5.6 5½ Berkeley	
		M E'Z'	54.0	20		3	5		
		eP Z'	14 44 51	7			3		
		ePP Z'	45 41	10			2		
		i N'	49 39	8	+4				
		e Z'	49 46	15			4		
		i N'	50 02	14	+4				
		eLR E'Z'	52.0	30					
246	3	LR MAX. E'Z'	52.6	30		10	13	Dilatation USCGS: 5.5S, 151.9E, H 15 14 09.7 h 44 km. ca. Mag. 6.0 6½-6¾ Berkeley 6¾-7 Pasadena	
		M N'	54.6	12	17				
		M E'Z'	55.5	18		7	10		
		eIP N'Z'N'Z"	15 20 02	21	+14		-15		3180
		i Z	20 09	1.8			-1.6		2896
		iPP N'N"	20 53	16	+14				
		iPPP N"	21 06	9*	+13*				
		iS N'N"	24 47	22	+115				
		iS E'	24 48	23		-14			
		i Z'	25 02	21			+107		
i E'	25 59	20							

Continued +31

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Por.	Amplitude			Δ	Remarks
					AN	AE	AZ		
246 cont.	1965 Mar. 3	SSS E'	15 26 28	40	μ	μ	μ	km.	Mag. 7 $\frac{1}{2}$ -7 $\frac{1}{2}$ Palisades
		eLR Z'	27.5	45		73			
		LR Max. N'E'Z'	28.4	40	115		125		
		M N'E'Z'	30.6	20	>160	140	>190		
		W ₂ M N'	18 07.6	14	14				
248	3	(P) Z	17 00 18					Masked by microseisms. N'E'Z' obscured by coda of no. 246. USCGS: 53.1N, 171.2E, H 16 47 25.7 h 23 km., Mag. 5.6	
		i Z	00 29	0.9			+0.06		
249	3	eP Z'	21 18 03					Microseisms present. USCGS: 27.2S, 177.7W, H 21 12 16.5 h 33 km. Mag. 5.0	
		e Z'	23 00						
		e N'	23 09						
		e E'	23 23						
		e(SSS) N'	24 23						
		eLR E'Z'	25.0	30					
		LR Max. E'Z'	25.8	30		4	5		
		M N'	28.6	12	10				
252	4	eP Z	01 54 34	1.8				Large microseisms present USCGS: 5.4S, 147.0E, H 01 48 54.1 h 191 km. Mag. 6.4	
		iS E'	59 08	7		+5			
		i E'	02 00 45	13		+4			
		M N'E'Z'	04.1	18	10	8	6		
256	5	(P) Z	06 27 54					Masked by microseisms. USCGS: 51.2N, 179.3E, H 06 15 01.1, h 25 km., Mag. 5.6	
		(i) Z	28 10.5				+		
		eL Z'	56.2	28					
		M N'	07 00.2	20	1				
		M Z'	07.5	18			1		
257	5	eP Z	10 10 06					Microseisms present. USCGS: 5.1S, 134.4E, H 10 03 34.2 h 33 km. Mag. 5.9	
		e N'	15 41	20					
		eL E'	19.3	35		11			
		Lg E'	21 05	6			7		
		Lg Z'	21 07	6					
		M N'E'	21.6	16	12	12			
		M N'E'Z'	24.9	11	12	8	16		
259	5	(eP) Z	13 55 33					Masked by microseisms. USCGS: 52.3N, 174.9E, H 13 42 44.1 h 35 km.ca. Mag. 5.3	
		eS E'	14 06 20						
		eSS E'	12.2						
		eSS N'	12.3						
		eLR Z'	23.2	40					
		M N'Z'	27.3	22	1		1		
261	5	eP Z	18 12 03					Masked by microseisms. USCGS: 52.3N, 174.2E, H 17 59 13.5 h 35 km.	
		e(S) E'	22 50						
		eSS N'	28.7	26	1				
		eLR E'Z'	40	30					
		M N'Z'	44.3	22	1		1		
262	5	eP Z'	19 42 35	12				Microseisms present USCGS: 27.5S, 177.0W, H 19 36 43* h 33 km. Mag. 5.3	
		i Z	42 53.4	1.2			+0.12		
		ePP Z'	43 23	12					
		e N'	47 25	8	3				
		e Z'	47 33	14			2		
		e N'	47 45	17	3				
		eSS N'	48 40	16	3				
		e Z'	48 52	18			2		
		eLR E'Z'	49.9	30		6	7		
		M E'	52.0	16		4			
		M Z'	53.0	18			6		
264	5	iP Z	21 47 02.8	1.5				Dilatation. N'E'Z' masked by micros. USCGS: 12.0S, 166.3E, H 21 41 34.7 h 58 km. Mag. 4.9	
		e N'	51.6						
		eL Z'	53.8	24					

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
267	1965 Mar. 6	iP	Z	08	32	22.5				+		Microseisms present.
		eS	E'			43.2						
		eSS	N'			49.1	24					USCGS: 52.4N, 174.2E,
		eLR	N'	09	00.	1	35					H 08 19 30.5
		eLR	Z'			00.7	37					h 25 km.
		M	E'			03.1						Mag. 5.1
		M	N'E'Z'			04.1	24	$\frac{1}{2}$		$\frac{1}{2}$		
271	6	eP	Z	20	34	06 $\frac{1}{2}$						Microseisms present. On N'E'Z' long-
		eP	Z'			34 07						period wanderings also.
		eS	E'			42.4						USCGS: 20.1N, 121.3E,
		eL	N'			53.1						H 20 23 49.5
		eL	Z'			56.2	26					h 8 km. ca.
		M	N'E'Z'	21	00		18					Mag. 5.8
272	7	iP	Z	01	48	46.4	0.8			+0.05		Compression
		iP	Z'Z''			48 46 $\frac{1}{2}$	13			+5		
		m	EZ			48 49	0.8		0.08	0.25		USCGS: 30.3S, 177.9W,
		o	E'			48.9	18		4			H 01 43 11.4
		i	Z''			48 58	5*			+6*		h 60 km. ca.
		eP	Z'			49 06	10			6		Mag. 5.6
		PPP	E'			49 40	14		7			5 $\frac{1}{2}$ Berkeley
		o	E'			53 17	17		4			
		o	N'			53 18						
		i	Z'			53 44	21			+10		
		i	N'E'			54 05	9	+4	+5			
		iSSS	N'			54 44	16	-5				
		eLR	E'Z'			55.6	30					
		LR Max.	E'Z'			56.1	30			17	29	
		i	N'			56 22	17	+11				
		M	N'E'Z'			57.7	18	11	16	25		
276	8	iP	Z	12	35	34.8						Dilatation. Microseisms present.
		eL	E'			55.0	24					USCGS: 20.ON, 121.3E, H 12 25 25.3
												h 64 km.ca., Mag. 4.6
277	8	iP	Z	15	09	51.7	1.0			+0.06		Compression
		i	Z			10 03	0.9			+0.04		USCGS: 17.7S, 178.9W, H 15 04 16.2
												h 589 km.ca., Mag. 5.0
												4 $\frac{1}{2}$ -4 $\frac{3}{4}$ Brk.
278	8	iP	Z	19	27	26.2	0.8			+0.04	2370	Compression. h 0.01 ca.
		eS	N'			31 12	7				21:3	USCGS: 22.3S, 171.4E,
		i	N'			31 21	9	+4				H 19 22 45.6
		eSS	N'			31 50						h 125 km. ca.
		eL	Z'			33.1	20					Mag. 5.4 ; 5 $\frac{1}{2}$ -6 Berkeley
279	9	iP	Z	01	42	46.1	1.0			-0.21		Dilatation N'E'Z' masked by micro-
												seisms & long-period wanderings.
												USCGS: 17.0S, 177.4W, H 01 36 45.4
												h 386 km.ca., Mag. 5.5; 5 $\frac{3}{4}$ -6
												Masked by microseisms and l.p.
												wanderings.
281	9	o(PKS)	Z'	18	20	55	15					
		ePPS	Z'			32.4	?					
		eSS	E'			38.7	24					
		(LQ)	N'			56.4	44					USCGS: 39.4N, 24.0E,
		eLR	E'	19	01.7		38					H 17 57 53.7
		L Max	N'E'			02.4	38	4	2			h 18 km. ca.
		eL	Z'			03.0	42					Mag. 5.7
		eX	Z'			06.5	56					6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Berkeley, Palisades
		M	E'Z'			18	22		5	6		
283	10	iP	EZ	15	58	44.9	0.7			-0.06	+0.14	Compression
		i	N			58 46.0	0.7	+0.03				
		m	Z			58 47	1.0				0.28	USCGS: 21.9S, 179.6E,
		eS	E'	16	02	48	9		2			H 15 53 37.8
		iScP	Z			04 29.6	0.8			+0.05		h 547 km.ca.
		e	E'			05 49	16		2			Mag. 5.7
286	11	o(S)	E'	17	30	38	14					Masked by microseisms.
		eSS	N'E'			36.2	26					USCGS: 54.7S, 0.7E,
		eLQ	N'			44.4	45					H 17 07 06*
		L	N'E'			45.5	45	2	5			h 33 km. ca.
		M	N'E'Z'			56.6	19	4	2	4		Mag. 5.4

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
							μ	μ	μ		
293	1965 Mar. 13	iP	Z	14 00 10.0	1.2			-0.28		Dilatation. N'E'Z' masked by micros. USCGS: 20.4S, 177.6W, H 13 54 33.0 h 470 km.ca., Mag. 5.7	
		i	Z	00 24	2.0			+0.70			
		e	Z'	07.8							
294	14	iP	EZ	12 50 17.7	0.8			+0.07		Compression USCGS: 31.9S, 138.8E, South Australia H 12 47 42.2 h 26 km. ca. Mag. 5.0	
		e(S)	E	52 26	1.0			0.08			
		e(SS)	Z	52 39	1.0			0.16			
		e(SS)	NE	52 41	1.0	0.17	0.16				
		M	E	53 37	1.1		0.78				
		M	N	53 45	1.0	0.74					
		M	N'	53.9	6	5					
295	14	iP	N'E'Z'	16 06 41	14	-2	+3	+16	11,380ca. 102½°ca. USCGS: 36.3N, 70.7E, H 15 53 06.6 h 219 km. ca. Mag. 6.6 7½-7¾ Pasadena 7¾ Berkeley		
		iP	Z'	07 35	16			-15			
		iP	N'E'	07 36	16	+4	-4				
		iPP	N'E'Z'	11 01	20	-8	+9	+23			
		iPPP	N'E'Z'	11 47	20	+13	-14	-29			
		iPPP	Z'	13 11	10			-19			
		iSKS	E'	16 58	11			+23			
		iSKS	N'	17 02	12	+26					
		iS	N'	18 01	20	+42					
		isS	N'	19 31	?	-					
		iSP	Z'	19 38	20			+29			
		i(PS)	Z'	20 18	25			+32			
		i(pPS)	Z'	20 45	22			+42			
		i	N'E'	20 47	20	-30	+26				
		i	E'	21 38	28		+34				
		i	E'	25 02	22		+21				
		iSS	E'	25 23	22		+66				
		iSS	N'	25 27	27	+86					
		iSS	Z'	25 35	?			-			
		X	N'E'	25.9	42&24	134	91				
		i	Z'	26 05	15			+			
		isSS	N'	26 50	30	+62					
		i	E'	27 02	32		+84				
X	N'	32.1	30	110							
e	N'	34.6	36								
(G)	N'E'	35.4	32	150ca	99						
eLQ	N'	37.8	60								
iLR	Z'	42.5	70			+160					
LR Max.	N'	43.2	62	135							
" "	E'Z'	43.9	70		136	190ca.					
M	Z'	52.6	22			39					
298	15	iP	Z	04 58 16.7	1.2			+0.10	Compression. Microseisms present. USCGS: 4.2N, 126.4E, H 04 50 09.5 h 102 km.ca., Mag. 5.1 Local.		
		e(P)	Z	12 16 58							
		i	Z	16 59.8	0.5			+0.05			
		e	N	17 11½	0.6						
		i	E	17 12	0.6		+0.03				
		i	Z	17 14	0.5			+0.04			
		m	NE	17 15	0.6	0.06	0.05				
299	15	(iP)	Z	14 08 29					All records masked by microseisms. USCGS: 6.5S, 153.2E, H 14 02 42.1 h 38 km. ca. Mag. 5.4		
		e	N'	13 25							
		e	Z'	13 30	15						
		e(L)	E'	14.5	25						
		M	E'	18.2	15		3				
301	16	eP	Z	10 44 38½					Microseisms present. USCGS: 23.7S, 179.8E, H 10 39 40.5 h 580 km.ca. Mag. 5.5		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h m s	s		μ	μ	μ	km.		
302	1965 Mar. 16	eP	Z	16 57 56	1.6				0.15	8310	Microseisms present. USCGS: 40.8N, 142.9E, H 16 46 15.5 h 34 km. ca. Mag. 5.6 6½ Pasadena 6½-6¾ Palisades	
		e	Z'	58 00						7498		
		epP	Z'	58 05	4					6		
		ePcP	Z	58 10	1.5					0.24		
		e	Z'	17 07 25	22					3		
		eIS	N'E'	07 29	20	-5	-6					
		eScS	N'	08 02	20	7		3				
		eSS	E'	12 06	23							
		eSS	N'	12 18	30	3						
		eSS	Z'	12 27	25					3		
		eG	E'	18.0	42			13				
		eLQ	N'	18.3	35	3						
		eLR	N'Z'	21.5	37					7		
		M	N'Z'	25.1	24	11				10		
M	N'E'Z'	27.2	22	11	5			11				
W2M	N'Z'	19 20	23	1				1				
303	17	eS	E'	12 55.1	12						Masked by microseisms. USCGS: 1.2N, 126.8E, H 12 41 08.8 h 68 km.ca., Mag. 5.1	
		eSS	N'	58.3	7							
		M	E'	13 05.5	21			½				
304	17	eS	E'	14 50 50	16				½		Masked by microseisms. USCGS: 52.8N, 171.9E, H 14 27 12.4 h 23 km. ca. Mag. 6.0	
		eSS	E'	56 42	16				½			
		(eLQ)	E'	15 03.3	(50)							
		eLQ	N'	04.2	37							
		eLR	Z'	08.4	30							
		M	N'Z'	13.6	21	½			½			
305	18	iP	Z	06 28 20.4	1.3				+	3520	Compression. Preceded by microseisms. Dilatation. h 0.02 USCGS: 19.9S, 176.1W, H 06 22 02.9 h 151 km.ca. Mag. 5.5	
		iP	E'Z'E"Z"	28 20½	6				+4	-9		3127
		m	EZ	28 22	1.5			0.26		0.88		
		isP	Z	29 09	1.6					+0.35		
		ePP	Z'	29 34	8							
		i	N'E'Z'N"E"Z"	29 41	7	+3	+8			-11		
		iS	N'E'N"	33 17	7	-18	-5					
		i	Z'	34 26	8					+4		
		i	N'	34 44	13	+5						
		i	N'N"	35 58	16	+25						
		e	Z'	36 06	23					4		
		X	Z'	37.4	24					8		
		M	N'	38 09	14	11						
		iScS	E'E"	38 31	8			+12				
M	E'Z'	42.7	15			5		8				
307	18	eP	Z	16 21 37	1.1					0.11	Microseisms present. USCGS: 17.7S, 178.9W, H 16 15 56.1 h 507 km.ca., Mag. 5.1	
		eS	E'	26 07	7							
		e	Z'	29 07								
308	18	e	Z	18 11 08							Regional. Masked by microseisms.	
		(S)	N	12 16								
		m	Z	12 56	0.7					0.08		
		m	NE	12 58	0.7	0.11	0.18					
309	19	iP	Z	16 28 52.8	1.3				-0.24	4820	Dilatation. Microseisms present. USCGS: 2.0S, 119.8E, H 16 20 51.4 h 46 km. ca. Mag. 5.0	
		iP	Z'Z"	28 53	6				-3	4324		
		i	Z	28 55.8	2.0					+1.3		
		ipP	Z'Z"	29 03	5					+2		
		ePP	E'Z'	30 34	18							
		e	N'	30 45	18							
		eS	N'	35 18	13	4						
		i	E'	35 21	13			+5				
		e	E'	35.7	30			5				
		e	N'Z'	35.8	32					2		
		eL	N'	40.5	52	8						
		eLR	Z'	41.6	46					6		
M	N'E'	44.7	20	30	22							
M	Z'	48.6	20					18				
310	19	i	Z	23 06 53.0	1.4					+0.61	All records masked by microseisms. N'E'Z' confused by calibration pulses USCGS: 0.0N, 123.4E, H 22 58 34.9, h 173 km.ca., Mag. 5.6	
		e(S)	E"	12 25	9							

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
312	1965 Mar. 21	iP	Z	h m s	s		μ	μ	μ	km.	Compression. Microseisms present. USCGS: 1.5S, 126.5E, H 11 08 16.2 h 33 km. ca. Mag. 6.2 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisades 6 $\frac{1}{2}$ Pasadena, Berkeley.
		e	Z'	11 15 47.5	1.3				+0.28	4440	
		i	Z'	15 51	8				4	4000	
		i	Z'	16 00	9				+13		
		i	N'E'	16 02	12	-5	+3				
		i	Z'	16 07	1.2				-0.30		
		m	Z	16 09	1.2				0.91		
		iPP	N'E'Z'	17 32	16	-7	+4		+7		
		eS	N'	21 51	22						
		i	E'	21 59	13			+16			
		i	N'	22 03	18	+18					
		i(SS)	N'	24 21	30	+17					
		i	Z'	25 00	15				+16		
		eL	N'E'	26.4	45	27	18				
		eL	Z'	27.3	45				25		
M	N'	29.3	36	46							
M	E'	33.1	20		43						
M	N'Z'	34.4	17	53			50				
313	22	iP	Z	02 51 53.1	1.0				+0.14	Compression	
		eP	E'Z'	51 53 $\frac{1}{2}$	(6)						
		iPP	Z	52 04.5	1.0				+0.12		
		iPP	E'Z'	53 22	6		-10	+13			
		e(S)	N'	57 26	12	2					
		f	E'Z'	57 57	18		+7	+6			
		iLQ	N'	03 00 26	27	+30					
		i(SSS)	Z'	00 41	18				+11		
		iLR	Z'	02 30	27				-31		
		iLR	E'	02 36	27			-31			
		LR Max.	E'Z'	03.1	27			38	49		
		M	N'	04.2	15	20					
		M	Z'	05.2	17				30		
M	E'	05.6	16			23					
W2 M	E'Z'	05 43	20			1	2				
315	22	ePS	Z'	23 23 45						USCGS: 31.9S, 71.5W, H 22 56 26.5	
		eSS	E'	29.4						h 46 km.ca., Mag. 6.0; 6 Pasadena & Berkeley; 5 $\frac{1}{2}$ Palisades	
		eLR	Z'	43.7	30						
		LR Max.	N'E'Z'	45	29	3	2	5			
318	23	iP	Z	24 01 12.8	1.4				-0.19	Dilatation. N'E'Z' masked by calibration pulses.	
		e	E''	07 14	13*			2*			
		i	N''	07 37	13*	+4*					
		iLQ	N'	09 47	26	+14					
		i(SSS)	Z'	10 00	18				+6		
		iLR	Z'	11 48	30				-18		
		iLR	E'	11 55	30			-17			
		M	E'Z'	14.8	17			12	16		
M	N'	15.2	13	8							
319	24	iP	Z	08 04 31.5	0.8				+0.10	2610ca. Compression. Microseisms present.	
		(eS)	E'	08 22					23 $\frac{1}{2}$ ca	Long-period wanderings on N'E'Z'	
		iS	N'E'N'E''	08 29	8	-7	+3			h 0.02	
		i	N	08 36	2.4	+2.6					
		i	N'E'N'E''	08 37	9	-12	+8				
		i	N'E'	09 07	7	-13	+5				
		i	N''E''	09 09	9*	+10*	-7*				
		iSS	N'Z'N''	09 30	15	+11			+4		
iSSS	N'	09 47	15	+20							
iScS	E'E''	15 24	8			+4					
320	24	P	Z	09 46 36						Microseisms present.	
										USCGS: 13.4S, 167.1E, H 09 41 30.4 h 210 km.ca., Mag. 4.7	
324	24	iP	Z	19 41 40.3	0.7				+0.08	Compression. Microseisms present.	
										USCGS: 8.8S, 121.4E, H 19 34 42* h 154 km.ca., Mag. 4.9	
325	24	e(S)	N'	22 57 47	17	2				USCGS: 8.4N, 126.6E,	
		eL	Z'	23 05	40					H 22 42 09.6	
		M	E'	08	25			2		h 51 km. ca. Mag. 5.8	

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
326	1965 Mar. 25	iP	Z	07	22	22.5	0.8			-0.08		Dilatation. Microseisms present. USCGS: 14.3S, 167.4E, H 07 17 21.4 h 205 km.ca., Mag. 5.8
		m	NEZ		22	24	0.0	0.06	0.08	0.36		
328	25	eP	Z	18	38	22						Microseisms present. USCGS: 7.4S, 153.9E, H 18 32 50.5 h 96 km. ca. Mag. 5.6
		e	N'		43	00						
		e	N'Z'		43	18	12					
		eLR	N'Z'		45	.4	33					
		M	N'E'Z'		47	.1	22	2	1	3		
330	26	iP	Z	00	26	27.5	1.0			+0.07		Compression. USCGS: 20.0S, 178.1W, H 00 20 56.3 h 567 km.ca., Mag. 5.8
334	27	e(P)	Z	24	04	28 $\frac{1}{2}$						Microseisms present. USCGS: 2.6S, 126.2E, H 23 56 57.3 h 33 km. ca. Mag. 6.2
		ePP	Z'		05	55	9			2		
		e(S)	N'		10	23	19					
		m	N'E'		10	.8	19	2	1			
		e(SS)	Z'		13	02	14			4		
		(eL)	E'		13	.3	60					
		M	N'E'Z'		19	.3	18	11	10	7		
337	28	iP	Z	13	35	53.5	0.9			+0.11	10,030	Compression USCGS: 55.1N, 162.1E, H 13 22 57.6 h 33 km. ca. Mag. 5.9
		eSKS	N'		46	18	8	1			90 $\frac{3}{4}$	
		eS	E'		46	43	24			$\frac{1}{2}$		
		e	N'		46	46	14	1				
		ePS	Z'		47	.9	25					
		eSS	E'		52	.6						
		eLQ	N'	14	00	.6	35					
		eLR	Z'		04	.2	38					
		M	N'E'Z'		09	.0	23	2	1	2		
338	28	iP	N'E'Z'Z''	16	47	07	16	-4	+2	-12	11,390ca	Dilatation USCGS: 32.4S, 71.2W, H 16 33 14.6 h 61 km. ca. Mag. 6.4 7-7 $\frac{1}{4}$ Pasadena.
		iSP	N'Z'Z''		47	32	20	+5		+15	102 $\frac{1}{2}$ ca	
		iPP	N'Z'Z''		51	16	18	+12		+20		
		i	N'Z'		51	45	18	+19		+29		
		iSKS	N'E'N'E''		57	41	24	-50	+26			
		iSKKS	N'		58	13	24	+44				
		iSKKS	E'		58	14	24		-26			
		i	N'E''		58	18	10*	-33*	+26*			
		iPS	Z'	17	00	20	18			+22		
		iPS	N'N''		00	29	22	+55				
		iPS	E'E''		00	32	32		+55			
		i	Z'		00	52	24			+33		
		i	N'		00	54	40	+105				
		iPPS	E'		01	19	32		+36			
		i	Z'		01	40	32			+49		
		SS	N'		05	.9	34	39				
		iSS	E'E''		05	58	38		-41			
		i	E'E''		06	30	38		-74			
		iSSS	E'		09	57	40		+35			
		i	E'		13	42	40		-44			
		iLQ	N'E'		16	21	48	+	+			
		LQ Max.	N'E'		17	.1	48	112	150ca.			
		iLR	Z'		20	24	34			+110ca		
		iLR	E'		20	32	34		+71			
		LR Max.	N'E'Z'		21	.3	32	200ca	150ca	200ca		
		M	N'E'Z'		26	.0	19	49	46	98		
340	29	iP	N'Z'	10	59	22	4	+5		-5	8220	Dilatation USCGS: 40.8N, 142.8E, H 10 47 37.6 h 33 km. ca. Mag. 6.1
		i	Z'		59	28	4			+7	74 $\frac{0}{10}$	
		e	Z'	11	00	.4	16					
		e	Z'		08	47	20			2		
		iS	N'E'N'E''		08	51	20	-4	-5			
		eSS	E'		13	26	24		2			
		eSS	N'		13	38	24	3				
		e	Z'		13	50	24			2		
		eLQ	E'		19	20	40		10			
		eLR	N'		22	.4	38					
		eLR	Z'		22	.7	38					
		M	N'E'Z'		28	.5	22	10	5	17		
		W ₂ M	N'Z'	13	21		22	1		1		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ km.	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ			
341	1965 Mar. 29	eS	E'	14	56	14	20		$\frac{1}{2}$			USCGS: 52.2N, 175.4E, H 14 32 41.2 h 34 km. ca. Mag. 5.0	
		e	N'		56	21	15	$\frac{1}{2}$					
		eSS	E'	15	02	04	23						
		eSS	N'		02	14	22	$\frac{1}{2}$					
		eLQ	E'		08	.7	(48)						
		eLR	Z'		13	.4	38						
		M	N'Z'		16	.6	25	1		1			
		M	E'		19	.7	20		$\frac{1}{2}$				
343	29	iP	EZ	24	02	54.0	0.6		+0.03	-0.06		Dilatation USCGS: 28.7S, 178.4W, H 23 57 33.5 h 228 km.ca., Mag. 5.2 4.4 BRK.	
		e	E'		04	06	11						
		eL	N'Z'		08	.5	35	5					
344	30	eP	Z'	00	27	39	7			3		USCGS: 20.0S, 173.9W, H 00 21 00.2 h 33 km. ca. Mag. 5.5	
		eS	N'		33	02	11	2					
		eL	N'		35	.4							
		M	E'Z'		39	.0	20		8	10			
		M	N'		39	.4	14	11					
345	30	iP	Z	02	39	49.4	1.5			-0.42	9890ca	Dilatation N'E'Z' difficult to read owing to overlapping of traces. USCGS: 50.6N, 177.9E, H 02 27 07.2 h 51 km. ca. Mag. 6 $\frac{2}{3}$ -7 Berkeley 7-7 $\frac{1}{2}$ Pasadena 7 $\frac{3}{4}$ Palisades.	
		iP	Z'Z''		39	50	20			-33	89 $^{\circ}$ ca		
		iP	N'E'N''E''		39	51	20	+12	+4				
		iPcP	Z		39	53.3	1.5				+2.5		
		iP	Z		39	58.3	1.6				+2.4		
		isP	Z		40	04	1.6				+1.4		
		isP	Z''		40	04	6*				+14*		
		i	N''Z''		40	20	7*	+10*			-26*		
		i	N''Z''		40	34	11*	+20*			-51*		
		iPP	Z'		43	24	20				+21		
		iSKS	E'		50	14	(22)						
		iSKS	N'		50	16	28	-48					
		i	Z'		50	23	24				+67		
		i(S)	E'E''		50	33	22			+35			
		iSP	Z'		51	25	24				+68		
		iPS	E'		51	36				-			
		m	N'		51	.7	48	350ca					
		i	E'		51	58	34		+100ca				
		i	N'E'		55	33	33	-150ca	+45				
		i(SS)	Z'		56	17	28				+71		
		i	Z'		56	49	28				+70ca		
eLR	N'	03	05	.9	40								
eL	E'		06	.5	48								
L Max.	N'E'Z'		07	.5	48	300ca	160ca	340ca					
M	N'		09	.0	23	200ca							
M	E'		09	.5	26		130ca						
M	Z'		10	.5	23			160ca					
M	Z'		17	.1	20			150ca					
M	N'E'		19	.5	19	130ca	67						
F			07	05									
347	31	ePKP	Z'	10	06	36	10					USCGS: 38.6N, 22.4E, H 09 47 30.7 h 78 km. ca. Mag. 6.3 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ Palisades 6 $\frac{3}{4}$ Pasadena 6 $\frac{3}{4}$ -7 Berkeley.	
		i	Z'Z''		06	50	10			+5			
		ePP	Z'		09	26	18			3			
		iPKS	Z'		10	21	7			-6			
		i	E'		10	27	9			-5			
		i	N'		10	28	9	+4					
		e	Z'		10	39	10						
		i	E'Z'Z''		10	46	10			+5	+7		
		e	Z'		13	27	12						
		e	Z'		14	29	14				3		
		e(SKKS)	N'		15	57	10	3					
		PPS	Z'		22	25	20				9		
		iSS	N'		27	52	25	-13					
		i	N'		28	17	25	+13					
		i	E'		28	25	20			+8			
		X	N'		36	.4	35	12					
		eLQ	N'		43	.9	45	15					
L	N'		48	.4	34	23							
eLR	Z'		53	.4	150								
M	N'E'Z'		11	01	31-34	16		15	15				

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
348	1965 Mar. 31	eS	E'	19	02	02	8		2			Masked by microseisms. USCGS: 21.4S, 174.3E, H 18 52 46* h 33 km. ca.
		M	N'	04.		4	15	1				
349	Apr. 1	iP	Z	07	17	25.5	0.9			+0.17		Compression USCGS: 9.9N, 125.8E, H 07 08 38.3 h 91 km.ca., Mag. 6.4
350	1	eP	N'	21	31	38	6	1				Microseisms present.
		ePP	Z'	34	14		8			1		
		e(S)	N'E'	40	42		13	2				USCGS: 50.0S, 114.1W, H 21 20 43.8
		ei	N'	41	04		20	+5				h 33 km. ca.
		iPPS	N'E'Z'	41	10		24	-7	+5	-3		Mag. 5.3
		eSS	N'	44	52		22					
		eLQ	N'E'	49.		1	28					
		eLR	N'	51.		9	32					
		eLR	E'Z'	52.		0	32					
		LR Max.	N'E'Z'	53.		5	24	9	7	14		
		M	N'E'Z'	56.		8	18	7	5	10		
351	2	iP	Z	13	13	20	1.1			+0.16		Microseisms on all records. USCGS: 12.5N, 123.5E, H 13 04 01.8, h 33 km.ca. Mag. 5.6
		eL	E'	29.		4	24					
		M	N'	35.		5	20	1				
		M	E'	36.		2	16		$\frac{1}{2}$			
352	2	iP	Z	15	50	09	1.1			+0.10		Microseisms on all records.
		e	Z'	51	08		10			1		
		eS	N'E'	53	12		10	1	1			USCGS: 27.1S, 179.2W, H 15 44 01.0
		e	Z'	55	24		15			2		h 382 km. ca.
		e	N'E'	55	31		15	2				Mag. 4.7
		iScS	N'	59	13		6	-2				
353	2	iP	Z	16	48	11.0	0.8			-0.10		Dilatation. Microseisms. USCGS: 14.8S, 167.3E, H 16 43 05.8 h 123 km.ca., Mag. 4.1
357	3	(eP)	Z'	08	45	32						Masked by microseisms.
		e(PP)	Z'	46	28							
		e	E'	50	27		10					USCGS: 26.8S, 176.4W, H 08 39 40.8 h 109 km.ca., Mag. 4.9
		eL	Z'	53.		6	24					
		M	N'E'Z'	57			13-16	4	2	3		
358	3	e(PS)	E'	11	50.	3	20					Masked by microseisms.
		e	Z'	50	27							
		e	E'	12	05.	2	28					USCGS: 16.ON, 97.9W, H 11 20 43.5, h 16 km.ca. Mag. 5.5; 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades, 5 Berkeley, 6 Pasadena.
		eL	E'Z'	14.		2	28					
		eL	N'	17.		1	(44)					
		M	N'E'Z'	23			18	$\frac{1}{2}$	1	2		
361	4	eP	Z	13	43	25						Microseisms present. N'E'Z' confused by long-period wanderings.
		eS	E'	54	10		8					USCGS: 51.9N, 175.2E, H 13 30 37.8, h 40 km.ca. Mag. 5.7
		(eLQ)	E'	14	06.	5	36					
		e(L)	Z'	09.		1	25					
		eL	N'Z'	11.		5	30					
		M	E'	15.		8	16		1			5.4 Berkeley
		M	N'	18.		5	18	1				6 Pasadena
		M	Z'	20.		2	18			1		6-6 $\frac{1}{2}$ Palisades.
362	4	eP	Z'	15	42	07	12			1		Microseisms present.
		ePP	E'	43	10		12		2			
		ePP	Z'	43	12		11			3		USCGS: 26.9S, 176.1W, H 15 36 11.9
		e(S)	N'	47	02							h 33 km. ca.
		e	E'	47	14		12		3			Mag. 5.6
		eLR	E'Z'	50.		0	30		4	7		
		M	N'E'Z'	53.		1	13-17	18	10	14		5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Berkeley
		M	N'	54.		3	12	26				6 Pasadena.
		M	E'Z'	55.		1	16		12	17		
363	5	iPKP	Z'	03	32	14				+		Compression. Masked by microseisms and long-period wanderings.
		e	E''	40.		2	18					
		eLR	Z'	04	23.	1	35					USCGS: 37.7N, 21.8E, H 03 12 54.2, h 34 km. ca. Mag. 5.7
		M	E'Z'	34.		6	20		2	4		5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h	m	s	s	μ	μ	μ	km.		
364	1965 Apr. 5	ePP	Z'	06	28	55						Masked by microseisms. USCGS: 3.2S, 148.4E, H 06 21 34.2 h 10 km. ca. Mag. 5.0	
		iS	N'		32	57	16	+4					
		eSS	N'		34	37	18	3					
		eG	E'		35	.1	44			10			
		eLR	Z'		36	.3	36						
		M	N'Z'		39	.9	20	14			14		
		M	E'		40	.8	15		14				
365	5	(eP)	Z'	14	04	08						Masked by microseisms and long-period wanderings. USCGS: 44.6N, 151.1E, H 13 52 13.4, h 81 km. ca. Mag. 5.7 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades 5 Berkeley	
		eSS	N'		19	.4	20						
		eLQ	E'		25	.1	36			2			
		eLR	Z'		28	.3	35						
		M	N'		31	.2	24	2					
		M	Z'		31	.9	24				3		
		M	E'		32	.4	20		1				
370	6	iP	Z'	09	50	39					5000	Dilatation 45 \pm 0 USCGS: 0.5S, 119.9E, H 09 42 28.2 h 33 km. ca. Mag. 5.3 6 Palisades	
		i	Z		50	40.7	1.3				+0.29		
		i	Z'Z''		50	41	8						+3
		iPP	Z'		52	21	7						-3
		iS	N'		57	15	16	+8					
		iSS	N'	10	00	20	16	+6					
		i(ScS)	E'		00	41	14			+5			
		i	N'		00	42	16	+7					
		i	N'		01	51	17	+5					
		eL	N'		03	.8	37						
		eL	E'		04	.4	35						
		M	E'		07	.2	23			11			
		M	N'		08	.6	20	28					
				M	Z'		09	.6	23				9
		M	E'Z'		12	.0	16		14	17			
		M	N'		12	.6	16	17					
374	8	iP	Z	12	57	05.0	1.2				-0.50	Dilatation. Microseisms present. USCGS: 17.6S, 178.7W, H 12 51 27.8 h 575 km. ca. Mag. 5.2 5 $\frac{1}{4}$ -5 $\frac{1}{2}$ Berkeley	
		i	Z		57	13.7	1.2				+0.18		
		eS	Z'		13	01	32	16					
		eoS	N'		04	26	22	2					
		e	Z'		04	28	22				2		
		ScS	E'		06	35	5			1			
375	8	eP	Z	13	56	42						Masked by microseisms. USCGS: 52.2N, 173.5E, H 13 43 52.8 h 46 km. ca. Mag. 5.4 5 $\frac{3}{4}$ Pasadena 6 Palisades	
		eSKS	N'	14	07	07	10	1					
		eS	N'E'		07	29	20	1	2				
		ePS	N'		08	29	13	2					
		eSS	E'		13	12	26			1			
		eSS	N'		13	14	13	1					
		e	Z'		13	.4	25				2		
		eLQ	N'E'		20	.2	48	1	2				
		eLR	N'		24	.2	35						
		eLR	Z'		24	.8	35				4		
		M	N'Z'		29	.0	22	3		4			
376	8	iP	Z	14	54	02.9	0.8				+0.12	Compression USCGS: 5.8S, 154.6E, H 14 48 21.8 h 125 km.ca., Mag. 5.5	
		i	Z		54	07.5	0.8				+0.12		
379	9	iP	Z	10	50	57.0					2830ca	Compression 25 $\frac{1}{2}$ ca USCGS: 32.6S, 178.3W, H 10 45 29.4 h 52 km. ca. Mag. 5.1	
		iP	E'Z'E''Z''		50	57	9			-4	+6		
		m	Z		51	00	1.3				0.29		
		e(eP)	Z'		51	14	7				3		
		e	E'		51	20	7			2			
		m	E'Z'		51	24	9			3	6		
		PP	E'Z'		51	37	9			6	6		
		e	Z'		55	36	24				5		
		i	Z'		56	16	12				+7		
		iSS	N'E'		56	21	20	+8	5				
		eLR	Z'		57	.3	30						
		eLR	E'		57	.4	30						
		M	N'E'Z'	11	00	.7	17	22	20	32			

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
					AN	AE	AZ			
380	Apr. 9	e(PPS) N'	18 39 25	18	μ	μ	μ	Km.	USCGS: 54.8S, 118.4W, H 18 20 01.5 h 33 km. ca. Mag. 5.3	
		eLR Z'	49.2	38						
		M N'E'Z'	52.4	18	½	½	2			
381	9	eP Z'	22 59 02						Masked by microseisms.	
		e Z'	23 04.4	22						
		eS N'E'	04 27	12	3	2			USCGS: 4.2S, 134.1E, H 22 52 24.3	
		m E'Z'	05.0	28	5	3			h 33 km. ca.	
		eLR Z'	08.2	45ca			7		Mag. 5.6	
		M E'	12.3	13		44				
		M N'Z'	14.6	13	70ca		80ca			
382	9	ePP Z'	23 55 06						Masked by coda of no. 381	
		M E'	24 06.4	16		16			USCGS: 4.0S, 134.2E, H 23 47 12.5	
		M N'Z'	09.4	15	31		34		h 33 km.ca., Mag. 5.2	
386	10	eS E'	17 18 37						USCGS: 53.1N, 170.9E, H 16 54 55.8	
		eLR Z'	36.0	34					h 8 km. ca., Mag. 5.8	
387	10	eP Z	22 38 23.5	0.8				3480		
		iPN'E'Z'N'E"Z"	38 24	7	+2	+5	-12	3193	Dilatation	
		m Z	38 26	1.2			1.2		h 0.08 H 22 32 46	
		iPp Z'Z"	39 52	7			+6			
		i E'E"	39 56	7		+5			USCGS: 17.8S, 178.8W, H 22 32 46.6	
		iS N'N"	42 53	7	+4				h 543 km. ca.	
		iS E'E"	42 54	7		-6			Mag. 5.9	
		eScP Z	43 57	1.3					5½-5¾ Berkeley	
		m Z	44 00	1.3			0.38		6 Pasadena	
		eISS Z'	45 39	23			+16			
		iSS N'	45 42	12	-5					
		i N"	45 46	8*	+7*					
		iS E'E"	45 48	16		+11				
		i E"	46 17	9*		+10*				
		i N'N"	46 18	9	+9					
		iScS N'E'N"E"	47 59	12	+16	+4				
388	10	eP Z	22 57 57.7					2940		
		iP NEZ	57 58.5	1.0	-0.12	-0.14	+0.76	2695	Compression h 0.09	
		iP Z'Z"	57 59	5			+5			
		m Z	58 00	1.0			0.96		USCGS: 13.4S, 170.3E, H 22 53 04.8	
		iS N'E'N"E"	23 01 52	7	-12	+14			h 644 km. ca.	
		iScP Z	03 43	0.8			-0.08		Mag. 6.2	
		e N'	04.8	24	5					
		e E'	05 09	8						
		i N'	05 48	12	-6					
		iScS N'E'N"E"	07 38	8	-6	+6				
389	11	eP Z	00 15 47	0.8					Microseisms present.	
		i Z	15 48	0.8			+0.08			
		i Z	15 52	1.3			-0.35		USCGS: 42.7S, 173.9E, H 00 11 08.8	
		i N'E'Z'N'E"Z"	15 57	4	-10	+13	-19		h 7 km. ca.	
		i Z	15 58	1.3			+0.67		Mag. 6.2	
		e Z'	19.5	21			8			
		i(S) N'	19 33	14	+16					
		i(S) E'	19 34	14		+8				
		i(sS) N'E'E"	19 45	10	-10	+14				
		e N'E'	20.1	30	16					
		eLR Z'	20.8	26			13			
		M N'	22.4	14	22					
		M E'Z'	22.8	18		17	26			
		eT N	33 18	0.6						
393	11	eP Z	16 59 37	1.3			0.21		Microseisms present.	
		i Z	59 50	1.3			+0.18			
		o N'	17 04 04	15					USCGS: 11.5S, 166.1E, H 16 53 53.9	
		o E'	04 06	12					h 75 km. ca.	
		e N'	04 58	19						
		eLR E'Z'	06.2	24			1		Mag. 5.4	
394	11	eP Z	17 09 17.5	1.3			0.20		Microseisms present.	
		i Z	09 21	1.2			+0.17		USCGS: 30.7S, 178.1W, H 17 03 45.8 h 67 km. ca. Mag. 5.3	

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
395	1965 Apr. 11	iP	EZ	18 56 18.2	1.0			+0.27	2780 25.0	Compression h 0.08	
		iP	Z"	56 19	4*			+2*			
		isP	Z"	58 50	4*			+2*			
		i	Z"	59 01	4*			-3*			
		eS	E'E"	19 00 05	8		2				
		e	N'	02 40	15	1					
		e	E'	02 58	8		1				
		eScS	E'	06 13	9		1			USCGS: 26.2S, 178.5E, H 18 51 38.1 h 581 km. ca. Mag. 5.6	
396	12	eP	Z'	08 56 51	8				2	Masked by microseisms.	
		e	E'	09 01 25	13						
		eSS	N'	02 19	19	2				USCGS: 32.5S, 178.1W, H 08 51 16.7 h 22 km. ca. Mag. 4.9	
		eLR	Z'	03.2	30						
		M	N'	05.3	17	4					
		M	E'	05.8	17		4				
		M	Z'	06.3	18			6			
		(iP)	Z	16 01 45				+		Masked by microseisms. USCGS: 36.0N, 139.5E, H 15 50 39.8 H 77 km.ca., Mag. 4.9	
400	12	o(S)	E'	17 39 18	15				2790 25.1	Masked by microseisms.	
		e	Z'	39 21	15						
		e	N'	41.9	24	3					
		eLR	Z'	43.7	25			2			
		M	N'	45.8	13	3					
		M	E'Z'	48.4	19		2	2			
401	12	eP	E'Z'	20 31 30	10			2	2790 25.1	Microseisms present. h 0.02	
		i	Z	31 32.6	1.5			+0.36			
		iP	Z	32 02	1.5			+0.32			
		e	E'	32 12	10			3			
		eS	E'	35 40	13						
		i	N'	36 02	10	+2					
		e	Z'	36 12	23						
		e	E'	36 16	11			3			
		i	N'	36 25	7	-4					
		i	Z'	36 32	10			+4			
		iSS	N'	36 56	20	-5					
		eLR	Z'	37.9	30						
		M	N'E'	40.2	17	12	10				
		M	Z'	41.0	18			18			
402	12	eP	Z'	21 33 30	11			2	2790 25.1	Confused by coda of no. 401 USCGS: 32.6S, 178.0W, H 21 27 59* h 33 km.ca., Mag. 4.7	
		e	N'	39.0	20						
		M	N'E'Z'	43.0	14-18	8	7	12			
403	13	eP	Z'	17 28 40					2790 25.1	USCGS: 26.8S, 175.9W, H 17 22 38.6 h 33 km. ca. Mag. 5.0	
		ePP	Z'	29 35	9			1			
		e	E'	29 39	12			1/2			
		e	E'Z'	33 40	12			2			
		eL	E'Z'	36.4	26						
		M	N'	40.8	13	9					
M	E'Z'	41.4	16		6	8					
405	14	iP	Z	10 10 31	0.8			+0.05		Compression. Microseisms present. USCGS: 4.2S, 153.1E, H 10 04 35.1 h 107 km.ca., Mag. 5.2	
408	14	iP	Z	22 58 02.9	0.7			+0.03	3600 32.4	Compression. USCGS: 15.4S, 167.5E, H 22 53 00.2 h 126 km.ca., Mag. 4.9	
		i	Z	23 00 08.5	0.7			+0.03			
410	15	eP	Z'	22 16 16					3600 32.4	Masked by microseisms and long-period wanderings.	
		eS	N'E'	21 27	16	3	2				
		e	Z'	21 36							
		e	Z'	23 17	9						
		eLR	N'	25.0	30	9					
		eLR	E'Z'	25.2	30		7	13			
		M	N'Z'	26.6	19	9		11			
M	E'	27.4	17			8					
414	18	iP	Z	08 12 27.5	0.8			+0.11		Compression. USCGS: 4.7S, 151.7E, H 08 06 39.5 h 142 km.ca., Mag. 5.2	

No.	Date	Phase & Component		Time (G.M.T.)	Per. s	Amplitude			Δ km.	Remarks
						AN μ	AE μ	AZ μ		
415	1965 Apr. 18	iP	Z	09 52 01.5	1.5			+0.22	9640 8628	Compression. Microseisms present. USCGS: 59.8S, 26.8W, H 09 39 18.7 h 29 km. ca. Mag. 5.9 5 $\frac{1}{2}$ Berkeley
		eP	Z'	52 02	16			3		
		eS	E'	10 02 37						
		iS	N'	02 38	15	+4				
		ePS	Z'	03 35	20			2		
		ePS	N'	03 39	26	4				
		eSS	N'	07 51	34	3				
		eSS	Z'	08 18	25			3		
		eLQ	E'	14.7	30		6			
		eL	N'E'	21.2	45					
		M	E'	28.0	20		5			
M	N'Z'	30.6	18	15		16				
416	18	iP	Z'	12 54 38	15			+3	9640 8628	Compression. Large microseisms. USCGS: 59.7S, 26.4W, H 12 41 54.9 h 25 km. ca. Mag. 5.8 6 Palisados
		ePP	Z'	57 58	16					
		eS	N'	13 05 12	20	2				
		ePS	N'	06 26	20	4				
		eSS	Z'	10 58	22					
		eLQ	E'	17.0	30		3			
		eL	Z'	22.8	(40)					
		M	E'	30.8	19		4			
M	N'Z'	31.7	19	11		10				
417	18	eSS	N'	14 20 17	9	3			6	Microseisms & coda of no. 416 mask earlier phases. USCGS: 26.9S, 176.1W, H 14 08 01.4 H 33 km.ca., Mag. 5.2
		M	Z'	25.1	17					
		M	N'	26.1	13	14				
		M	E'	26.8	15		5			
420	19	eP	Z	17 06 03	0.8			0.04	0.04	USCGS: 13.5S, 170.3E, H 17 01 10.5 h 647 km.ca., Mag. 4.9
421	19	iS	N''	24 02 14	5*	-2*			6	N'E'Z' confused by calibration pulse USCGS: 34.9N, 138.0E, H 23 41 58.8 h 36 km.ca., Mag. 5.6
		i	N''	02 41	5*	-2*				
		eL	E'	12.1	27					
		M	N'Z'	18.3	27	2		2		
424	22	iP	Z	01 10 51.6	0.7			+0.21	+0.21	Compression USCGS: 14.5S, 167.3E, H 01 05 50.2 h 204 km.ca., Mag. 5.3
		i	N''	16 27	9*	+4*				
425	22	iP	Z	14 57 07.5	0.8			-0.05	-0.05	Dilatation. Microseisms present. USCGS: 14.6S, 167.3E, H 14 52 04.9 h 167 km. ca., Mag. 4.5
426	24	e(PP)	E'	00 10 42					10	Masked by microseisms. USCGS: 32.8S, 178.4W, H 00 04 33* h 33 km.ca., Mag. 4.7
		e(SS)	N''	15 26						
		M	N'E'Z'	19	18	6	6			
428	24	eS	N'	22 10 33	25	3			3	Earlier phases obscured by microseisms USCGS: 11.4N, 140.1E, H 21 55 26.5 h 59 km. ca. Mag. 5.7
		eSS	Z'	13 59	22					
		eL	E'	15.4	44					
		eLR	Z'	18.6	32					
		M	N'Z'	23.0	19	7		9		
		M	E'	25.0	16		6			
430	25	eP	Z Z'	01 10 19	1.2			0.22	0.22	Confused by microseisms & coda of earlier shock. USCGS: 24.5N, 142.7E, H 01 00 11.6, h 15 km. ca. Mag. 5.6 5 $\frac{1}{2}$ -6 Pasadena
		e(S)	N'	18 17						
		eLQ	E'	25.7	35		4			
		eL	Z'	29.9	30					
		M	E'	34	20		3			
		M	N'Z'	35	20	2		3		
432	25	eS	N'	07 03 22	22	2			3	Masked by microseisms. USCGS: 5.4S, 151.8E, H 06 52 43.1 h 49 km.ca., Mag. 5.4
		e	Z'	03 38	20			1		
		eL	Z'	07.2	26					
		M	N'E'Z'	09.2	19	3	2	3		
434	26	iP	Z	09 54 58.5	1.5			+0.20	4330 3920	Compression USCGS: 1.7S, 126.6E, H 09 47 25.1 h 15 km. ca. Mag. 5.7 5 $\frac{1}{2}$ -6 Palisados.
		eP	Z'	54 59	7			2		
		ePP	Z'	56 36	9			2		
		ePPP	Z'	57 02	8			2		
		eS	N'	10 01 04	10	2				
		e	E'	01 07	10		1			

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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.				
434 cont.	1965 Apr.26	oSS	Z'	10	03.9	15				2					
		oI	N'E'	04	13	11	+2	+3							
		oL	N'	08.1		26									
		oL	E'	08.3		24									
		M	N'	09.9		16	8								
		oL	Z'	10.1		28									
		M	E'Z'	12.8		15		5	5						
	26		iP	NZ	14	05:17.5	0.5	+0.04			-0.08		Dilatation. Local. Seismic ??		
			iP	E	05	17.7	0.5		+0.03						
			i	NEZ	05	19.2	0.5	-0.07	-0.05			+0.17			
			iS	NZ	05	31.3	0.7	+0.10				+0.08			
			i	Z	05	34.0	0.6					+0.13			
			i	NE	05	34.5	0.5	-0.18	-0.27						
			i	Z	05	38.0	0.7					+0.13			
i			Z	05	41.5	0.8					-0.24				
i			Z	05	46.6	0.7					+0.33				
M			NZ	06	07	1.3	0.52				0.80				
M			NEZ	06	20	1.5	0.48	0.56			0.92				
437			26	iP	Z	22	26 02.4	1.0				+0.06	6970	Compression	
				i	Z'Z''	26	04	6					+2	6227	
				iP	Z'	26	12	6					+3		USCGS: 21.1N, 120.7E,
	i	Z		26	14.5	1.2					-0.26		H 22 15 42.5		
	iS	N'N''		34	27	8	+3						h 33 km .ca.		
	oS	E'		34	28	12			2				Mag. 5.9		
	i	E'E''		35	56	10			+3						
	oSS	N'		38	35	20	3								
	oSSS	E'		41	12	20			4						
	M	E'		52.2		19			4						
	M	N'Z'		53.5		19	5					9			
	440	27		oP	Z	11	01 03	1.3				0.18		Microseisms present	
				oS	N'	06	07	9							USCGS: 7.0S, 129.5E,
				o	E'	06	08	13							H 10 54 28.0
i			Z'	12	04	4					-6		h 67 km. ca		
i			Z'	12	12	4					+10		Mag, 5.9		
M			N'E'	12.8		9	12	10							
M			N'E'Z'	16.7		12	6	3			6				
444			28	oP	Z'	10	32 41	7						Microseisms present.	
	oPP	Z'		33	36	13					1		USCGS: 27.1S, 176.5W,		
	o	N'E'		37	41	9	1/2	1					H 10 26 44*, h 33 km.ca.		
	oL	Z'		40.7		26							Mag. 5.4		
	M	N'E'Z'		43.8		13-16	6	4			5				
449	29	iP	EZ	09	49 41.7	0.7				-0.05		Compression			
		i	Z	49	43	0.8					+0.14		USCGS: 22.1S, 179.8E,		
		iS	N	53	44.4	1.2	+0.08						H 09 44 34.2		
		oS	N'	53	45	(4)							h 540 km.ca.		
		o	N	54	51.5	1.2	0.05						Mag. 5.2		
451	29	oP	Z'	15	43 19	10					1				
		iPKP	Z	47	14	0.8					+0.03		Compression.		
		iPP	Z'Z''	47	54	8					+4				
		o	Z'	48	13	7						2	USCGS: 47.4N, 122.4W,		
		o	N'E'Z'	48.4		20	1	1			2		H 15 28 43.3		
		o(SKS)	N'E'	53	54	9	1	2					h 57 km. ca.		
		oS	N'E'	54	22	12	3	3					Mag. 6.5		
		iS	N'E'	55	25	9	-3	-3					6.6 Pasadena		
		i	N''	55	29	8*	+5*						6 3/4 Berkeley		
		i	E''	55	30	8*		+4*					7 1/4 Palisades		
		oPS	Z'	57	26	15						2			
		o	N'	57	46	14	+7								
		i	E'E''	57	47	14					+8				
		i	N''	57	51	10*	-10*								
		i	Z'	58	03	15						+6			
		o	N'E'	58.1		30	9	9							
		i	Z''	58	13	7*						-6*			
		oPPS	Z'	58	39	14						3			
		oSS	Z'	16	03 40	22						4			

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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.	
470	1965 May 9	(iP)	Z	22 32 54.4						Masked by microseisms. USCGS: 6.4S, 148.0E, H 22 27 09.3 h 63 km. ca., Mag 4.5
		M	N'E'Z'	43						
472	12	P	Z	08 12 24	1.2			0.14		Microseisms present. USCGS: 3.5S, 137.9E, H 08 05 57.2 h 78 km. ca. Mag. 5.5 Felt in Darwin.
		e	E'	20 06.						
		eL	Z'	22.1						
		M	E'	24.3	14		2			
		M	N'Z'	26.5	14	2		2		
473	12	iP	Z	10 40 14.7	1.1			-0.30	3730	Dilatation
		i	Z'Z''	40 15	3*			-3*	3396	h 0.015 ca.
		ipP	Z	40 44.5	1.7			+0.48		
		i	Z'Z''	44 50	3*			+7*		USCGS: 6.2S, 130.3E, H 10 33 43.5 h 125 km. ca. Mag. 5.7 5½-5½ Palisades
		iS	E'E''	45 27	9		-2			
		eS	N'N''	45 29	8	2				
		isS	E'E''	46 17	10		+3			
		eL	E'	50.3	32					
		eL	N'	50.9	30					
		L Max.	N'E'	52.0	22	17	20			Felt in Darwin.
		M	N'	54.3	15	13				
		M	Z'	55.0	16			11		
474	12	iP	Z	17 17 18.3	1.0			-0.08		Dilatation USCGS: 26.2S, 178.4E, H 17 12 37.3 h 560 km.
477	15	eP	Z'	16 43 09	5			1	2000	
		i	Z	43 12	1.3			+0.15	1890	
		i	N'E'Z'	43 14	9	+2	-2	+2		USCGS: 48.0S, 165.6E, H 16 39 02* h 15 km.
		iPP	Z	43 24	1.3			-0.21		Mag. 5.6 Wellington
		eS	E'	46 28	10					
		iLQ	N'E'	46 33	16	+10	+13			
		iSS	Z'	46 52	13			+7		
		eLR	Z'	47.1	25			12		
		M	N'E'	47.5	13	23	23			
		M	Z'	48.4	13			14		
		eT	Z	59 42	0.5					
		T Max.	N	17 00 48	0.6	0.22				
			Z	00 53	0.5			0.23		
			E	00 55	0.6			0.22		
478	16	(P)	Z	00 04 52						Confused by calibration pulses & microseisms.
		eS	E'	10 28	9					
		e	N'	10 52	18					
		eL	E'	14.6	30					USCGS: 4.1S, 135.1E, H 23 58 34.4 May 15 h 33 km. Mag. 5.8
		eL	N'	15.2	28					
		iLg	Z'	16 27	5			-11		
		M	N'E'	17	16	49	53			
		M	N'Z'	20	12	42		43		
479	16	P	Z	06 01 19	1.0					Microseisms present. USCGS: 12.7S, 166.4E, H 05 56 06* h 172 km., Mag. 4.4
480	16	P	Z	11 44 09.5					5130	Microseisms present.
		i	Z	44 40.4	1.2			-0.16	4692	
		i	Z'	44 42	5			+2		USCGS: 5.3N, 125.7E, H 11 35 46.0 h 36 km. Mag. 6.2
		ePP	Z	45 54	2.6			0.90		
		eS	N'	50 53	9	2				
		i(PS)	E'E''	51 06	11		-2			
		esS	N'	51 09	10	2				
		iScS	N'N''	54 00	8	+3				
		eSS	Z'	54 15	21			2		
		eSS	E'	54 17	15		5			
		i	N'	54 20	16	-4				
		m	N'E'	54 32	22	6	9			
		eL	N'	56.3	48					
		M	E'	12 01.2	22		5			
		M	N'E'Z'	05.4	22	4	6	8		

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.	
482	1965 May 17	iP	Z	17 29 52.7	1.3			+0.14	7000	Compression USCGS: 22.5N, 121.3E, H 17 19 25.9 h 21 km. Mag. 6.2 6½ Pasadena 5¾-6 Berkeley
		i	Z'	29 56	8			-5	6320	
		i	Z	29 56.5	1.5			+0.54		
		i	Z'	30 20	14			+6		
		iPcP	Z''	30 29	5*			-6*		
		i	Z'	30 36	14			+7		
		ePP	Z'	32 14	13			3		
		eS	E'	38 19						
		i	E'E''	38 23	18		+15			
		i	Z'	38 25	16			+7		
		isS	N'	38 39	16	-13				
		i	E'	38 50	13			-8		
		e	N'	38 58	40	17				
		e	E'	42 06	34			5		
		o	Z'	42 54	34					
		eSSS	N'	45 15	30	8				
		e(LQ)	E'	45 20	45			10		
i	Z'	45 29	26			-9				
eL	N'	47 04	34	12						
M	N'E'Z'	56.0	22	20	12	22				
eW2	N'Z'	19 50.6	25							
M	N'E'Z'	56	25	3	1	3				
483	18	eP	Z	08 22 17½					Microseisms present. USCGS: 0.1N, 123.8E, H 08 14 36.2, h 178 km., Mag. 4.7	
		eL	Z'	36						
484	18	e(P)	Z	08 56 48½					USCGS: 18.0S, 168.5E, H 08 52 01.5, h 143 km., Mag. 5.0	
		e	N	09 14 09	0.5					
486	19	P	Z	02 20 40					Masked by microseisms. Long-period wanderings also on N'E'Z'	
		i	Z	20 49	1			+		
		eL	N'	31.7	26					
		i	Z'	32 17	6			+3		
		M	N'	32.4	18	5				
M	E'Z'	35.4	17		2	3				
487	19	iP	Z	03 06 25.5	0.9			+0.13	Compression USCGS: 9.2S, 159.0E, H 03 00 59.0 h 50 km. Mag. 5.6	
		i	N	06 26	1.0	+0.06				
		i	NEZ	06 27.4	1.0	+0.09	+0.10	-0.40		
		e	N'	11 07	7	2				
		e	Z'	11 15	15					
		eL	N'	12.4	28					
		eL	Z'	12.9	28			3		
M	N'E'Z'	15.0	17	2	2	2				
488	19	eP	Z	04 27 41.7					Microseisms present. Long-period wanderings on N'E'	
		eL	N'	35.4	21					
		M	N'	36.3	17	2				
		M	Z'	36.7	22			1		
489	19	iP	Z	06 12 50.1	1.0			+0.06	Compression. Microseisms present. USCGS: 6.5S, 105.4E H 06 03 58.9, h 74 km., Mag. 6.3	
		eL	N'	27.0						
		eL	Z'	28.3	38					
		M	N'	30.5	25	2				
		M	E'Z'	33.2	23		2	3		
490	19	o	Z	14 06 11					Masked by microseisms. USCGS: 4.8S, 152.3E, H 13 59 55.2 h 70 km. Mag. 5.6	
		eS	N'	10 40	24	3				
		e	Z'	11 03	25			2		
		eL	E'	12.6	30					
		eLR	Z'	14.1	30					
		M	N'E'Z'	16.0	20	4	3	6		
491	19	iP	Z	23 37 37.0	1.0			+0.14	Compression. h 0.075 USCGS: 20.8S, 178.5W, H 23 32 14.0 h 552 km. Mag. 5.4 4-4½ Berkeley	
		iPcP	Z'Z''	39 04	6			-4		
		iPcP	Z	40 25.8	0.8			+0.10		
		iS	E'E''	41 58	10			+4		
		i	N'E'	44 57	9	+2	+2			
		oScS	N	47 18	1.7	0.24				

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
492	1965 May 20	iP Z	00 45 30.0	1.2				km. 2690	Compression N'E'Z' & N'E'Z' difficult to read owing to overlapping traces. USCGS: 14.7S, 167.4E, H 00 40 10.9, h 16 km., Mag. 5.6 6 $\frac{3}{4}$ -7 Pasadena 7 Berkeley
		i N'E'Z'	45 32	9	+21	17	-43	2492	
		i NE	45 34	1.0	+0.29	+0.41			
		i N'E'Z'	45 34	5*	+14*	+17*	-36*		
		m Z	45 35	1.0			2.12		
		PP Z'	46 03	9			39		
		iS E"	49 46	9*		+35*			
		M N'E'Z'	52.5ca	22ca	390ca	290ca	370ca		
		F	04 40						
493	20	P Z	01 10 10.5						
		m Z	10 21	1.0			0.25		
495	20	P Z	14 17 01 $\frac{1}{2}$					Microseisms present. USCGS: 1.8N, 99.1E, H 14 06 55.6 h 73 km. Mag. 4.8	
		eL N'	34.1	44					
		eL Z'	36.4						
		M N'	39.3	23	1				
496	20	M E'Z'	41.4	22		1	2		
		iP NZ	20 41 33.2	1.6	+0.15		+0.53	1890ca	Compression h 0.01 ca. USCGS: 45.1S, 167.6E, H 20 37 41.4 h 105 km. Mag. 5.5 6.35 Wellington
		i NEZ	41 34.3	1.7	-0.42	+0.45	-1.8	17 ^o ca	
		i N'E'Z'N'E'Z'	41 34 $\frac{1}{2}$	7	-5	+5	-8		
		e E'	41 55	14		3			
		osP Z'	42 02	10			5		
		e N''	42 03	14	4				
		iS N	44 37	0.7	+0.13				
		e N'	44 43						
		i E'E"	44 51	8		-3			
		i N'N"	44 52	9	+5				
		i Z'Z"	44 53	9			-9		
		eL Z'	45 08	26					
		i E'	45 09	13		+4			
		L Max. N'Z'	45.5	26	10		13		
eT N	55 13	0.6			0.22				
T Max. E	58 31	0.6							
	Z	58 38	0.6			0.46			
	N	58 44	0.6	0.42					
497	21	eP Z	15 58 34					Microseisms present USCGS: 48.5S, 166.7E, H 15 54 20* h 33 km. Mag. 5.6 Wellington	
		o(S) N'	16 01 48						
		e E'	01 49	8					
		e N'	01 57	15	1				
		eL E'	02 02	15		1			
		eL Z'	02.5	20					
		T Max. NEZ	15.9	0.6	0.10	0.08	0.08		
499	22	oP Z	03 13 36	0.9				Microseisms present. USCGS: 1.3N, 126.3E, H 03 05 43.6 h 25 km. Mag. 5.5	
		PcP Z	15 20				4710 4294		
		eS N'	19 55	7	1				
		eL Z'	27.5	35					
		M E'	30.1	20		1			
		M N'Z'	34.8	19	2		2		
500	22	iP EZ	10 37 02.5	1.0			+0.67	3280	Compression h 0.08 USCGS: 21.1S, 178.7W H 10 31 39.5 h 578 km. Mag. 5.8 6 $\frac{3}{4}$ -7 Berkeley
		iP Z'Z"	37 02 $\frac{1}{2}$	5			+3	2995	
		ipP Z	38 32	2.0			+1.38		
		i Z'Z"	38 32 $\frac{1}{2}$	8			+2		
		i Z	38 40	2.0			+1.38		
		isP Z'Z"	39 36	15			+3		
		iPcP Z	39 50	0.8			-0.10		
		i Z'	41 19	17			+4		
		iS Z'	41 19	17			+4		
		iS E	41 19	2.0		+1.20			
		iS E'E"	41 20	12		+8			
		i Z	41 20.5	2.0			-0.74		
		eL Z'	44 07	24					
		i Z'	44 22	16			+8		
		i N'N"	44 24	11	+5				
		i E'E"	44 25	16		+5			
		oScS N	46 37.7	1.5	0.24				
iScS N'N"	46 39	9	-5						

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN	AE	Az		
501	1965 May 22	iP Z	13 24 24.0	1.2			+0.12	Compression. Microseisms present. USCGS: 14.5S, 167.1E H 13 19 04.5 h 27 km. Mag. 5.1	
		iP Z'Z"	24 24.2	4			+1		
		i Z	24 25	1.1			+0.30		
		e N'	28 48	10	1				
		i E'E"	28 54	6		-2			
		e N'	29 35	14	1				
		eL Z'	30.6	28					
		M E'	31.8	16			1/2		
502	22	M N'	32.2	15	1			Compression. Microseisms present. USCGS: 14.7S, 167.4E H 14 10 45.0 h 17 km. Mag. 4.7	
		M Z'	32.5	16			1		
		iP Z	14 16 06.8	0.8			+0.04		
		eP Z'	16 07	5					
		i Z	16 11	0.8			-0.06		
		i Z"	16 13	5*			-4*		
		e Z'	20 31	14			2		
		i N'	20 32	14	+4				
		i E'	20 53	11		-4			
		i Z'	21 02	12			+3		
		i N'	21 19	15	-6				
		eL Z'	21.7	36					
503	22	i N'	22 04	13	+5			P masked by microseisms. USCGS: 14.7S, 167.5E H 19 53 23.8 h 24 km. Mag. 4.6	
		i L Max.	Z' 22.7	25			5		
		M E'	23.2	20			4		
		M N'Z'	24.0	17	7		5		
		i Z	19 58 52	1.1			+0.11		
		e N'	20 03 10	13					
		eL Z'	05.1	26			1/2		
		M E'	07.2	15			1		
		M N'Z'	07.7	15	1		1		
		505	23	eP Z'	23 59 03	7			
eS N'E'	24 09 49			16	1	1			
i N"	11 01			4*		-2*			
eSS N'Z'	15 47			23	2				
eLR N'Z'	27.5			30			3		
M N'Z'	30.4			24	2				
M E'	33.8			22			2		
506	24			iP Z	05 10 04.5	0.8			+0.02
		e(L) N'	24.4						
508	24	iP Z'Z"	23 30 29	4*			+3*	5910 5322 Compression USCGS: 13.0N, 124.5E H 23 21 10.6 h 33 km. Mag. 5.9 5 1/2-6 Palisades	
		iP Z'Z"	30 39	4*			+4*		
		i Z	30 39.5	2.5			-1.87		
		i Z'Z"	30 58	4*			+4*		
		eIS N'N"	37 56	10	4				
		eS N'E'Z'	38 13	8	3	2	2		
		i N'	38 22	10	-3				
		eSS E'	41 42	16		1			
		e N'	41 48	18					
		e N'Z'	42.4	20	2		3		
		eL E'	45.8	35					
		M N'	50.7	24	3				
		M Z'	51.8	20			4		
		M E'	53.2	23			4		
509	25	eP Z	13 20 39.7	1.5				9900 8921 Microseisms present. USCGS: 51.3N, 178.7E H 13 07 49.7 h 40 km. Mag. 5.5 5 Berkeley 5 1/2-6 Palisades	
		iP Z	20 51.2	1.5			-0.16		
		eSKS N'	31 08	13	1/2				
		eS E'Z'	31 24	16			1		
		eSP N'	32 20	20					
		ePS Z'	32 30	18					
		ePPS N'	33 03	22					
		eSS N'	37 17	18					
		eLR N'Z'	48.5	32					
		M N'	53.6	21	1				
		M E'	55.5	22			2		
		M Z'	14 01.0	18			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.	
510	1965 May 25	eP	Z	18	40	20	1.1			0.06		Microseisms present. USCGS: 17.0S, 175.9E H 18 34 28.4 h 16 km. Mag. 5.2
		i(S)	N'	45	09		10	+2				
		i	E'	45	10		11		-2			
		eL	E'	46	26		30		4			
		eL	N'	46	34		24	13				
		L Max. M	N' N'E'Z'	47.0 48.4	24 20-25		7		7	10		
511	25	o(S)	N'	20	44	57	14	1				Masked by microseisms.
		e	E'	45	03		14		$\frac{1}{2}$			
		o(L)	N'	49	45							
		eL	Z'	51.8	28							
		M	Z'	54.0	21					2		
512	26	iP	Z'	06	48	07	9			+2		Compression USCGS: 35.7S, 180.0E H 06 42 53.9 h 63 km. Mag. 5.1; 5.8 Wellington.
		oPP	Z'	48	35		9			2		
		e	Z'	52	41		16			2		
		e	N'	53	04		18	1				
		oLR	Z'	54.4	27							
		M	N'E'Z'	56.7	16-19	10	6	8				
513	26	iP	Z	08	38	38	1.3			+0.15		Compression. Microseisms present. USCGS: 35.7S, 179.9E, H 08 33 26.5 h 48 km., Mag. 4.9; 5.45 Wellington.
		M	N'E'Z'	47.2	16-19	2	1	2				
515	26	iP	Z	19	57	00.3	1.0			+0.25	10,000	Compression. USCGS: 56.1S, 27.6W H 19 44 10.9 h 120 km. Mag. 6.7
		iP	Z'Z''	57	00 $\frac{1}{2}$		4*			+3*	90°	
		i	z	59	49.5		1.3			-0.11		
		oPP	Z'	20	00	37	6			1		
		oS	E'	07	43		16					
		oPS	N'	09	03		18	$\frac{1}{2}$				
		eLQ	E'	21.2	30							
		eL	Z'	26.8	46							
		eL	N'	27.5	44							
M	N'Z'	37.6	17			$\frac{1}{2}$		1				
518	29	iP	Z	01	37	01.6	1.4			+0.26	4910 4492	Compression. Microseisms present. USCGS: 45.3S, 95.9E H 01 28 59.0 h 66 km. Mag. 5.5
		oS	N'	43	31		11	3				
		oS	E'	43	32		11		2			
		oSS	N'	46	42		16	1				
		eLQ	N'	47.4	30							
		eLR	E'Z'	49	36		30			4		
		i	N'N''	50	22		9	+5				
		M	E'Z'	52.4	18				4	4		
520	29	iP	Z	15	45	07.7	1.3			+0.22	5290 4796	Compression. Microseisms present. USCGS: 57.8S, 147.3W H 15 36 31.9 h 33 km. Mag. 5.5
		iS	N'	52	00		11	+4				
		i	E'	52	05		14		+2			
		e	Z'	52	08		11			1		
		esS	N'	52	16		8					
		o	N'	56	24		18	3				
		e	E'	56	26		18		3			
		eLR	Z'	58.1	30							
		LR Max.	N'Z'	58.7	30		7			10		
		M	Z'	16	01	15	19			9		
		M	N'	01	30		18	6				
M	E'	03	39		16		4					
521	29	iP	Z	19	22	01.4	1.7			+0.39		Compression. Large microseisms. USCGS: 1.7S, 126.7E H 19 14 25.6 h 17 km.
		eL	N'	35.1	28							
		M	N'Z'	38.6	16		1			1		
		M	E'	39.7	13				1			
524	30	iP	NEZ	21	11	16.0	0.3	(+)	+0.04	+0.05		Compression. Local.
		o(S)	E'	11	38.4		0.7		0.04			
		o	N	11	39.4		0.7					
		i	Z	11	40		0.7			+0.08		
		m	NE	11	41		0.6	0.16	0.21			
525	31	iP	Z	08	49	08.5	1.0			-0.07		Dilatation. Microseisms present. USCGS: 35.7N, 139.6E, H 08 38 07.5 h 124 km., Mag. 5.5

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	Az		
				h	m	s		μ	μ	μ	
526	1965 May 31	iP	Z	11	45	06.8	1.3			-0.20	Dilatation. Microseisms present. USCGS: 7.5S 128.7E H 11 38 28.0 h 37 km. Mag. 6.0
		fP	Z'Z''		45	07	5			-3	
		i	Z'		45	24	5			-4	
		f	Z''		45	25	5*			+9*	
		i	Z		45	28.5	1.2			+0.32	
		f	E		45	29	1.0		+0.09		
		i	Z'		46	29	7			+3	
		e(S)	E'		50	20	13		1		
		e	N'		50	29	7	2			
		i(sS)	N'		50	42	9	+2			
		e	N'		51	07	14	3			
		o	Z'		51	11	25				
		i	N'		51	49	12	+4			
		i(SSS)	N'		52	57	8	+4			
		i	Z'		52	59	6			+5	
		oL	Z'		54	16	46			+16	
		i	Z'		55	33	6				
L Max.	E'		56.5		26		37				
L Max.	Z'		56.7		32			42			
L Max.	N'		56.9		25	48					
M	E'		59	25	20		31				
M	N'Z'		59	30	18	30		50			
528	June 1	iP	Z	01	56	03	0.7			+0.06	Compression. Microseisms present. USCGS: 14.9S, 167.1E, H 01 51 07.0 h 197 km., Mag. 4.8
529	1	(P)	Z	13	11	12					Masked by microseisms.
		e(S)	N'		16	02	14	1			USCGS: 5.6S 152.0E H 13 05 15* h 48 km., Mag. 4.9
		eL	Z'		19.1		(34)				
		M	N'Z'		22.3		18	2		3	
		M	E'		24.0		15		2		
533	2	eP	Z	05	18	02.2					Microseisms present. USCGS: 23.5S, 180.0E, H 05 12 59.1 h 539 km., Mag. 5.6; 5 $\frac{1}{2}$ Brk.
		fPcP	Z		21	05.2					
534	2	iP	Z	14	51	23.5	1.3			+0.13	3440ca 31 $^{\circ}$ ca Compression. h 0.10 ca. Large microseisms on N'E'Z' USCGS: 17.9S, 179.5W H 14 45 55.8 h 637 km. Mag. 5.1
		m	Z		51	25	1.3			0.45	
		iP	Z'Z''		51	25 $\frac{1}{2}$	3*			+3*	
		i	Z		51	27.2	1.0			+0.48	
		e	Z'		53	34	18				
		iS	E'		55	46	9		+2		
		f	N'		55	49	8	-2			
		iScP	Z		56	48.7	1.3			+	
		eL	Z'		58.9		24				
		i	N'		59	03	9	+2			
		i	E'		59	12	10			+3	
M	Z'		15	02.8	16			2			
535	2	iP	Z	15	04	01.0	1.2			-0.34	Dilatation USCGS: 18.0S, 179.4W, H 14 53 31.9 h 621 km., Mag. 5.1; 4 $\frac{1}{2}$ Brk.
		iS	E'		08	22	7		+2		
536	2	fPKP	Z	24	00	46.8	1.7			+0.42	Compression. Microseisms on all records.. L.P. wanderings on N'E'Z' USCGS: 16.0N, 46.8W, H 23 40 24.4 h 33 km., Mag. 5.6
		e	Z'		30.5		24				
		eL	Z'		53.7		47				
		M	Z'		25	00.3	21			2	
537	3	(P)	Z	04	50	46	1.0				Masked by microseisms.
		e(S)	N'		55	10	12	2			USCGS: 8.8S 157.1E H 04 45 13* h 50 km. Mag. 5.3
		eL	N'		56.6		25				
		eL	Z'		56.9		32				
		M	E'		05	00.3	13		2		
		M	N'		00.6		13	2			
538	3	iP	Z	14	43	42.0	0.7			+0.03	Compression. Microseisms present. USCGS: 6.2S, 155.0E, H 14 38 03.8 h 123 km., Mag. 4.2
539	3	eP	Z	22	01	23 $\frac{1}{2}$					Masked by microseisms.
		i	Z		01	41	0.6			+0.04	Felt at Goondiwindi, Queensland.

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.			
539 cont.	1965 June 3	i	N	22	01	42.5	0.6	+0.04				USCGS: 28.1S 150.1E H 21 59 58.5 h 33 km. Mag. 4.4		
		i	Z		01	49	0.6			-0.17				
		i	Z		01	57	0.7				+0.15			
		i(S)	N		02	26.3	0.6	+0.15						
		M	NZ		03	09	0.7	1.43					0.74	
		M	E		03	13	0.7			0.95				
540	4	σ (P)	Z	10	47	45						Masked by microseisms. Felt in Adelaide, South Australia.		
		i(S)	N		49	32	1	+0.06						
		M	N		51	01	1	0.13						
		M	Z		51	05	1				0.14			
		M	E		51	08	1			0.14				
541	4	iP	Z	15	32	08	1.0				-0.09	Dilatation. Large microseisms. USCGS: 29.9S, 178.8W, H 15 26 54.7 h 225 km., Mag 5.3		
543	5	σ P	EZ	00	21	46	0.8				0.04	Microseisms present. USCGS: 15.6S, 167.7E, H 00 16 44.6 h 125 km.m Mag. 5.2		
544	5	(P)	Z	03	56	32	1.0					Masked by microseisms. USCGS: 1.6S, 126.7E, H 03 49 03.1 h 33 km., Mag 5.5		
		M	E'	04	12.3		18		1					
		M	N'Z'		13.3		16	1			$\frac{1}{2}$			
550	9	iP	Z	19	11	33.5	1.0					-0.07	Dilatation. Microseisms present. USCGS: 8.6S, 127.3E H 19 04 55.2 h 33 km. Mag. 5.1	
		σ	N'E'		17	14	20	1	1					
		σ L	Z'		21.2		35							
		M	E'		25.7		12			5				
		M	N'Z'		26.0		12	8			12			
		M	E'Z'		28.1		15			4		6		
553	11	iP	Z'Z''	03	45	42	5				+4	8760 7828 Compression USCGS: 44.7N, 148.7E H 03 33 44.9 h 47 km. Mag. 6.0 6 $\frac{1}{2}$ Berkeley 6 $\frac{1}{2}$ Pasadena		
		i	Z'		45	49	7						-5	
		iSP	Z''		45	58	4*							-8*
		i	Z'Z''		46	03	9							+6
		i	Z'		46	24	13							-9
		i	N'		46	25	13	+2						
		σ PP	N'		48	39	12	2						
		iS	E'E''		55	36	14						-9	
		i	N'N''Z'		55	38	13	-10						-9
		iSKS	N'E''		55	49	12	+7						-11*
		iSS	E'		55	56	20							+21
		i	E''		56	08	9*							-11*
		iSP	N'N''E''		56	16	14	-23						+13*
		i	N''		56	29	11*	-15*						
		σ SS	E'	04	00	39	28						14	
		iSS	N'		00	44	28	+22						
		iSSS	E'		03	56	25						+12	
		LQ	E'		06	38	38						72	
		σ L	N'		07	09	30	25						
		σ L	N'		10	25	50	26						
σ L	Z'		11	26	34						26			
M	E'		14	09	24					20				
M	N'Z'		16	10	21	22					30			
W ₂ M	Z'	06	01		20						6			
"	N'E'		04		21	5				4				
554	12	iPKP	Z	19	08	56	1.3				+0.17	Compression. Microseisms on all records. USCGS: 20.3S, 68.9W, H 18 50 11.3 h 103 km. Mag. 5.8 6 $\frac{1}{2}$ Pasadena		
		σ PS	Z'		19	14	18						$\frac{1}{2}$	
		σ PS	E'		19	15	16				$\frac{1}{2}$			
		σ	N'		19	23	16		$\frac{1}{2}$					
		σ	E'		26	07	(20)							
		σ	N'		26	09	15							
		σ G	E'		37.6		(40)							
		σ LR	N'		43	06	30							
		σ LR	Z'		43	12	32						2	
550	13	σ P	Z	07	17	59 $\frac{1}{2}$	1.3				0.10	8380 7524 Microseisms present. USCGS: 41.9N, 143.4E H 07 06 13.6, h 32 km., Mag. 5.7		
		σ S	E'		27	36	20				1			
		σ S	N'		27	37	20	1						
		σ	Z'		27	39	17	Continued						

No.	Date	Phase & Component		Time (G.M.T.)			Per.	Amplitude			Δ km.	Remarks		
								AN	AE	AZ				
				h	m	s		μ	μ	μ				
560 cont.	1965 June 13	eSS	N'	07	32	34	22	1				Mag. 6 Palisades 6-6 $\frac{1}{2}$ Berkeley		
		eLQ	E'		38	13	38		3					
		eL	N'		38.9		26	1						
		eLR	Z'		42.1		30			1				
		M	N'E'Z'		45	06	22	2	2	2				
565	13	iP	Z	23	11	01.5	1.2			+0.14	Compression. Microseisms present.			
		e	N'		15.2									
		T	E		29	05								
566	14	eP	Z'	07	42	50					Masked by microseisms. USCGS: 39.8S, 45.8E, H 07 30 43.6 h 33 km. Mag. 5.5			
		eSKS	N'		52	55								
		e	E'		53	06								
		e	N'		54	11								
		e	N'		58	05								
		eLQ	E'	08	03.9		(32)							
		e	N'		04.2		(50)							
		eLR	Z'		08.1		32							
		LR Max.	N'E'Z'		09		28	4	2	5				
		568	15	iP	Z'Z"	09	25	20	7				+3	2390ca 21 $\frac{1}{2}$ °ca Compression h 0.00 USCGS: 37.9S, 177.5E H 09 20 29.8 h 58 km. Mag. 6.2 5 $\frac{1}{2}$ Palisades 6.6 Wellington
i	Z				25	23.3	1.0			+0.15				
iPP	Z'				25	30	9			+3				
iPP	Z				25	42.5	1.9			-1.04				
e(S)	N'				29	14								
eLQ	N'				29	40	18	3						
iSS	Z'				29	48	10			+4				
eLR	Z'				30	32	30							
LR MAX	N'E'Z'				31.3		25	4	8	12				
569	15			eP	Z	23	15	40					Compression USCGS: 20.9S, 173.7E H 23 10 25.2 h 22 km., Mag. 5.7 6 Berkeley 6 $\frac{1}{2}$ Pasadena 6 $\frac{1}{2}$ Palisades	
				iP	N'E'Z'N"E'Z"		15	40	9	-5	-8	+16		
				m	Z		15	42	1.5			2.10		
				i	N"E'Z"		15	42	5*	-7*	-11*	+		
		i	E'Z'E"		16	06	8		+8	-11				
		iS	N'N"		19	58	8	+11						
		m	E'		20	15	14		35					
		m	N'Z'		21	21	12	39		22				
		m	N'		21	00	10	67						
		iLR	E'Z'		21	44	28			+				
		LR Max.	E'Z'		22.1		25			70ca	90ca			
		M	N'		22	45	17	60ca						
		M	E'Z'		23	28	18		49	70ca				
W2	Z'		26	09.6	18									
571	16	e(S)	E'	04	16	44					Masked by microseisms. USCGS: 34.3S, 112.2W H 03 55 17.6 h 33 km. Mag. 5.7			
		ePPS	E'		17	43	22							
		eSS	E'		21	34	22							
		eLQ	N'E'		26.7		28							
		eLR	Z'		30.0		34							
		LR Max.	N'E'Z'		31.8		25	3	3	5				
		M	N'E'Z'		37.1		17	2	4	5				
573	17	iP	Z	04	23	48.3	1.0			-0.06	Dilatation. Microseisms present. USCGS: 20.9S, 174.0E, H 04 18 34.3 h 33 km. Mag. 4.3			
		eL	Z'		29.9		25			3				
		M	E'Z'		31.6		17			1		2		
574	17	iP	Z'Z"	10	56	58	7			+2	2720ca 24 $\frac{1}{2}$ °ca Compression. Microseisms present. USCGS: 33.9S, 179.5W, H 10 51 37* h 33 km. Mag. 5.3			
		i	Z		57	02.2	1.2			-0.11				
		isP	Z'		57	13	7			+2				
		eS	Z'	11	01	13	18							
		esS	E'		01	31	15			1				
		e	N'		01	40	16	1						
		eSS	N'		02	06	19	2						
		eLR	E'Z'		03	06	27			3		5		
		M	N'		04.4		20	2						
		M	E'Z'		04.9		18			3		5		
578	18	eP	Z	08	29	45	1.0				Microseisms present USCGS: 25.0N, 93.8E, H 08 17 37.6 h 46 km., Mag. 5.9			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
				h m s	s		μ	μ	μ	km.			
580	1965 June 19	eP	Z'	06 50 58							Masked by microseisms.		
		eSKS	N'	07 01 21	11								
		ePS	N'	02 47	11							USCGS: 52.3N, 172.0E,	
		eSS	N'	07 37	20							H 06 38 12.6, h 54 km.	
		eLR	Z'	19.6	(25)							Mag. 5.5	
		M	N'Z'	27.2	19		$\frac{1}{2}$		$\frac{1}{2}$		5 $\frac{1}{2}$ -5 $\frac{1}{2}$ Palisades		
585	22	eP	Z'	13 18 28							Masked by large microseisms.		
		i	Z	18 28.5	1.0				-0.10				
		i	Z	18 35	1.5					-0.46		USCGS: 20.9S, 173.2E,	
		e	Z'	22 52	15					2		H 13 13 23.1	
		e	N'E'	22 56	12	2	3					h 80 km.	
		i	N'N''	23 40	9	+5						Mag. 4.7	
		eLR	Z'	24 26	28					8			
		M	N'	25 31	18	5							
		M	E'Z'	26 15	18		6		7				
587	22	iP	Z	23 56 55.8	1.6				+1.12		Compression. Large microseisms.		
		e(sS)	N'	24 04 09	16	7						USCGS: 7.1N, 123.5E,	
		e	E'	04 14	15		3					H 23 48 07.1	
		e	N'E'	07 58	15	5	6					h 60 km.	
		eL	Z'	11 10	49					8		Mag. 5.6	
		M	E'	18 33	22		8						
		M	N'	19 25	19	7							
		M	Z'	19 40	19				8				
588	23	iSKS	N'	11 33 48	7	+3					Earlier phases obscured by large microseisms.		
		iS	E'	34 55	9		-5						
		isS	E'E''	35 11	9		+7					USCGS: 56.6N, 152.9W,	
		i	N'	35 12	9	+3						H 11 09 15.3	
		e	N'	40 37	20							h 36 km.	
		eSS	E'	41 53	17		4					Mag. 5.7	
		eLR	Z'	56.9	28					5		5 $\frac{1}{2}$ Berkeley	
		M	N'Z'	12 03 27	20	6				10		6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Pasadena	
				M	E'	04 48	20		5				
				M	N'Z'	06 17	20	6			10		
		W ₂ M	N'E'Z'	13 25	21	4	3		5				
590	24	iP	Z	07 53 43.5	0.8				+0.06	5220	Compression. Large microseisms.		
		eS	E'	08 00 32	9		2			4790			
		e	N'	00 38	17	1						USCGS: 7.0N, 126.2E,	
		eScS	N'	03 33	7	2						H 07 45 13.6	
		eSS	N'	03 55	10							h 50 km.	
		i	E'	03 58	8			-2				Mag. 6.0	
		i	N'	04 00	10	-4							
		e	Z'	04 06	15								
		i	E'	04 21	11			+3					
		m	Z'	04 33	20					3			
		eL	Z'	08.0	40								
		M	E'	13 26	23		6						
		M	N'Z'	13 58	23	4			4				
591	24	iP	Z	14 14 33.3	0.9				+0.10		Compression. Microseisms present:		
		eL	N'	21 12	?						USCGS: 23.6S, 176.7W, H 14 08 31.2		
		M	N'	22 40	20	2					h 91 km.		
		eL	E'Z'	22 42	28		1		2		Mag. 5.5		
594	27	eP	Z'	01 00 37	6						USCGS: 33.7S, 179.0W,		
		e	Z'	05 03	14				1		H 00 55 10.4		
		e	N'E'	05 05	14	1	1				h 33 km.		
		eLR	E'Z'	06 30	30						Mag. 4.8		
		M	N'	08 24	16	3							
		N	E'Z'	09 00	18		2		4				
597	27	(P)	Z	09 58 34							Masked by microseisms.		
		eS	N'	10 09 02	8								
		eL	N'Z'	27.6	40							USCGS: 54.5S, 5.6E,	
		eLR	N'	28 26	30							H 09 45 48.0	
		eLR	Z'	28 32	30							h 33 km.	
		LR Max.	N'E'Z'	30.2	25	2	1		3			Mag. 5.9	
		M	E'	34 12	19		1						
		M	N'Z'	34 32	19	1			2				

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
598	1965 June.27	(eP)	N'	11	46	44						Masked by microseisms.
		e	Z'	46	54		10			1		
		eS	N'	55	19		17	2				USCGS: 23.8N, 121.5E,
		e	E'	55	23		22		1			H 11 36 08.6
		e(SS)	E'	59	44		18					h 24 km.
		e	N'	59	53		18					Mag. 5.6
		e(LQ)	N'E'	12	02	06	32					
		e(SSS)	Z'	02	30		22					
		M	N'E'	12	36		22	2	2			
		M	Z'	13	08		20			4		
599	28	eP	Z'	03	39	28	5			2½	3210	
		e	Z'	39	36		6			2	2899	
		iS	N'	44	15		13	+4				USCGS: 5.1S, 153.0E,
		e	Z'	44	32		20					H 03 33 36.5
		esS	E'	44	41		20					h 50 km.
		m	N'E'Z'	44.9			20	22	5	11		Mag. 6.1
		eL	E'	46	09		31					5¼-5½ Berkeley
		eL	N'	46	57		26					6¼-6½ Palisades
		i	N''	46	58		6*	+7*				
		eLR	Z'	47	44		30					
		M	E'	49	59		19		16			
		M	N'Z'	50	36		19	27		39		
		eW2	Z'	06	24		20					
600	30	iP	Z	03	00	44.3	1.3			+0.17	4470	Compression. Microseisms present.
		i	N'E'Z'	00	47		9	-1	+1	+3	4092	
		ePP	N'E'Z'	02	18		10	1	1	3		USCGS: 1.6S, 126.7E,
		ePPP	N'Z'	02	47		10	1		3		H 02 53 14.0
		iS	E'	06	49		12		-2			h 33 km.
		e	E'	07	25		13		2			Mag. 5.2
		i	N'	07	32		11	-3				
		eSS	Z'	09	40		15			3		
		i	N'E'	09	58		12	+4	+3			
		eL	E'	13.5			28					
		eL	N'	13.9			28					
		M	E'	14	37		18		10			
		M	N'	14	57		18	11				
		M	Z'	16	28		18			7		
601	30	(P)	Z	08	46	23						Masked by microseisms.
		eS	E'	56	51							
		e(SS)	N'	09	03	06						USCGS: 51.7N, 126.7E, H 08 33 31.8
		eL	Z'	15.2			25					h 60km., Mag. 6.0
602	July 1	iP	Z	23	20	23.0	1.8			+0.35		Compression
		iP	N'E'Z'Z''	20	23		6	+1	-1	+3		
		iP	Z	20	32.0		1.8			+0.49		USCGS: 63.0S, 163.7W,
		i	N'Z'Z''	22	05		7	-2		-3		H 23 12 45.4
		e	E'	26	39		9		1			h 33 km.
		i	N'Z'	26	44		10	+3		-3		Mag. 5.5
		eLR	Z'	30	54		30					
		M	E'Z'	32	46		20		9	18		
		M	N'	33	23		20	11				
604	2	iP	Z	21	11	52.0	1.2			-0.42	10,440	Dilatation
		iP	N'E'Z'Z''	11	52		7	2	1	-10	9490	
		i	Z'Z''	11	57		7			+10		USCGS: 53.1N, 167.7W,
		i	Z	12	00		1.0			-0.41		H 20 58 40.0
		i	Z'Z''	12	14		8			+8		h 59 km.
		iPP	Z'Z''	15	39		8			-7		Mag. 6.6
		i	Z'	22	21		16			+8		6¼ Palisades
		iSKS	N'E'N''E''	22	23		13	+25	+11			6¼-7 Pasadena, Berkeley
		iS	N'N''	22	57		13	+19				
		iS	E'E''	23	00		22		-48			
		i	Z'	23	02		15			-10		
		i	N'N''	23	10		12	+18				
		i	Z'	24	11		30			-18		
		e	N'	24	13		30			34		
		i	N'	25	18		32	+36				

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.		
604	1965 July 2	o	N'	21 28.6	40	20				
		iSS	E'	29 04	20		+14			
		m	E'	29 30	20		27			
		iSSS	E'	32 49	22		+24			
		oSSS	N'	33 00	36	28				
		e	E'	34.6	30		18			
		i	E'	36 39	32		+42			
		iLR	Z'	41.5	38				+	
		LR Max.	N'E'Z'	42.5	38	135ca	78		160ca	
		M	N'Z'	44.2	27	64			100	
		M	E'	46.3	25		43			
		F	25 10							
606	3	P	N	11 37 44					Microseisms present. N'E'Z' confused by coda of no. 605	
		oL	N'	12 00.1	36				USCGS: 22.6N, 101.4E,	
		oL	E'	00.7	32				H 11 26 11.6	
		M	E'	06.1	25		2		h 33 km.	
		M	N'	07.7	25	2			Mag. 5.2	
		M	Z'	11.4	21			2		
607	3	(P)	Z	12 29 07					Masked by microseisms.	
		oS	N'	34 44	10				USCGS: 4.7S, 133.8E,	
		oL	E'	37.6	(42)				H 12 22 28.6	
		oL	N'	39.1	28				h 14 km.	
		M	N'E'	40 48	20	10	11		Mag. 5.5	
		M	Z'	44 12	17			11		
610	5	o(SS)	N'	09 18.0					USCGS: 52.9N, 34.2W,	
		o	E'	22.6					H 08 31 58.9	
		o	N'	31.6	38				h 33 km.	
		oLQ	E'	39.4	32				Mag. 5.7	
		oLR	Z'	48.2	(34)				5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades	
		M	E'Z'	10 03.2	21		$\frac{1}{2}$	1		
612	6	iP	Z'Z''	03 09 16	7			+5	2420	Compression
		iP	N'E'N''E''	09 17	7	-1	-2		2198	
		oS	E'	13 10	12		1			USCGS: 22.6S, 172.9E,
		isS	N'E'N''	13 29	9	+7	-6			H 03 04 19.8
		i	E''	13 30	9*		+13*			h 41 km.
		i	Z'Z''	13 32	10			+6		Mag. 5.9
		iSS	N''	13 49	7*	+4*				6 Borkoley
		i	N'N''	14 00	11	+6				
		oL	Z'	14.1	36					
		oL	E'	14 58	23					
		M	N'E'Z'	15 52	17-21	8	9	16		
614	6	iP	Z	18 42 10.6	1.0			-0.05	3280	Dilatation
		i	NEZ	42 11.5	1.0	+0.35	+0.10	-1.58	2995	h 0.075
		i	N'Z'N''Z''	42 11 $\frac{1}{2}$	4	+4		-8		USCGS: 4.5S, 155.1E,
		m	Z	42 12 $\frac{1}{2}$	1.0			1.92		H 18 36 47.3
		iP	Z	43 36	2.2			-2.6		h 510 km.
		iP	N'Z'N''Z''	43 36	6	+5		-9		Mag. 6.5
		i	N'Z'	44 41	12	+3		-4		6-6 $\frac{1}{4}$ Pasadena
		iS	Z'Z''	46 29	7			+9		6 $\frac{1}{4}$ Borkoley
		iS	N	46 29.7	1.7	+1.3				
		iS	N'N''	46 30	8	+17				
		i	Z	46 30.5	2.5			-2.2		
		e	N'E'Z'	46 44	20	12	4	8		
		i	N'N''	47 28	9	-8				
		iScP	Z	47 56	2.0			-1.2		
		isS	N'	49 07	15	+8				
		i	N''	49 14	4*	+7*				
		i	E'E''	49 17	7		-4			
		m	N'Z'	49 25	15	12		8		
		i	E'	50 45	8		+4			
		i	E'	51 02	11		+6			
i	E'	51 43	11		+8					
iScS	N'N''	51 47	11	+11						

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
616	1965 July 7	e(S)	E'	12 19 38	13		μ	μ	μ	Masked by microseisms. USCGS: 49.7S, 117.1E, H 12 08 34.3 h 33 km. Mag. 5.3	
		e(S)	N'	19 40	13	1					
		eL	E'	21.0	32						
		eL	N'	21.3	29						
		M	Z'	23 44	23				3		
		M	N'	24 00	20	2					
617	7	eS	N'	15 50 18						Masked by microseisms USCGS: 15.0S, 173.0W, H 15 37 21.5 h 33 km. Mag. 4.9	
		e(LQ)	N'	53 10	25	4					
		eLR	Z'	54 32	20						
		M	N'	57 25	14	2					
		M	E'	57 34	18		2				
		M	Z'	57 48	17				2		
618	7	(fP)	Z	23 08 38						Masked by microseisms. USCGS: 6.9S, 105.6E, H 23 00 06.8 h 109 km., Mag. 5.8	
619	8	e	E'	23 15.4						Masked by microseisms. USCGS: 14.1S, 172.6W, H 23 02 29.5, h 33 km., Mag. 5.1	
		eSS	N'	18 13	21	2					
		M	N'	22 27	14	1					
		M	E'Z'	22 35	18		1	1			
619	8	eS	E'	13 15 46	11					Masked by microseisms. USCGS: 15.8S, 179.2W, H 13 04 05.4, h 33 km. Mag. 4.9	
		e	N'	18 08							
		eLR	Z'	19.2	30						
		LR Max.	E'Z'	20.0	26		2	2			
		M	Z'	21.7	18				2		
637	13	eP	Z'	14 49 04						USCGS: 1.0S, 121.5E, H 14 41 07.9 h 96 km. Mag. 5.6	
		e	Z'	50 40	15						
		e	N'	50 48							
		e(S)	E'	55 31	16		1				
		e	N'	55 33	16	$\frac{1}{2}$					
		e	E'	58 37	18		1				
		eL	N'	15 00 20	50						
		eL	E'	01 20	41						
		eL	Z'	01 28	45						
		M	N'	04 02	20	3					
		M	E'	04 23	21		2				
M	Z'	09 20	16				4				
638	13	iP	Z	19 43 15.7	1.4				+0.24	Compression USCGS: 4.2S, 143.3E, H 19 37 11.3 h 101 km., Mag. 6.0	
		eL	Z'	52 20	30						
		M	N'Z'	56.0	17	1			1		
642	15	iP	Z	18 41 26.3	0.8				+0.08	Compression. N'E'Z' masked by micros. USCGS: 7.7N, 123.8E, H 18 33 29.9 h 588 km., Mag. 5.8	
		eS	N'	47 49							
		e(sS)	N'	51 16							
644	16	eP	Z	22 38 50 $\frac{1}{2}$						Masked by microseisms. USCGS: 11.8S, 166.1E, H 22 33 16* h 30 km. Mag. 4.6	
		f	Z	38 53.3	0.8				-0.06		
		e(S)	N'	43 22	18						
		f	E'	43 34	12		-4				
		f	N'	43 36	12	-6					
		f	Z'	43 38	12				-4		
		M	N'E'Z'	47.0	17	4	3		4		
645	17	(eP)	Z	07 25 57 $\frac{1}{2}$	1.2					Microseisms present. Compression USCGS: 9.7S, 159.8E, H 07 20 30.5 h 23 km. Mag. 6.4	
		iP	Z	25 59.5	0.8				+0.09		
		f	Z	26 00.5	0.8				+0.30		
		f	Z'Z''	26 01	3				-5		
		f	Z'	26 05	10				+4		
		eS	N'	30 27							
		f	Z'	30 29	10				+3		
		f	N'	30 31	14	+20					
		f	E'	30 35	13		+9				
		m	Z'	30 42	13				13		
		f	Z'	32 03	9				+5		
		f	Z'	32 27	9				+8		
		eL	Z'	32 42	30				13		
		M	N'E'Z'	37.5	15	14	14		18		

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.		
646	1965 July 17	iP	Z	12	53	30.0	1.3			+0.42	2980	Compression. Large microseisms present. USCGS: 7.2S, 153.6E, H 12 47 49.4 h 28 km. Mag. 5.7	
		i	Z		53	43.3	1.1			+0.30	2698		
		eS	N'		58	02		14	4				
		e	E'		58	19		18		3			
		i	N'		58	23		15	+9				
		i	Z'		58	28		13			+5		
		eL	E'		59	31		33		8			
		eLR	Z'		13	00	42	32					7
		M	E'		03	02		14		14			
M	N'Z'		06	38		15	9			11			
650	19	e(P)	Z	16	51	37						Masked by large microseisms. USCGS: 12.0s, 165.9E, H 16 46 05.3, h 55 km. Mag. 4.6	
		e	N'E'		56	12		13	3		3		
		eL	Z'		58	33		24					
		M	E'Z'		17	01	41	16		2			3
651	20	iP	Z	13	27	13.7	1.0				+0.16	5410 4827 Compression. Large microseisms on all records. USCGS: 7.5N, 124.3E, H 13 18 27.4 h 45 km. Mag. 5.8	
		eS	N'		34	13			2				
		eSS	N'		37	40		14					
		e(L)	E'		41.5								
		M	N'E'		47	51		21	3	2			
M	Z'		48	18		19				2			
652	21	iP	EZ	02	57	58.7	1.2			+0.14	-0.35	Dilatation. Large microseisms present. USCGS: 20.8S, 175.8W, H 02 51 39.0 h 57 km. Mag. 5.7	
		e(S)	N'	03	03	08		13	2				
		e	E'		03	30		12		2			
		e(SS)	N'		05	02		17	4				
		e	Z'		05	36		23					
		i	N'		05	41		15	+10				
		eLR	E'Z'		06	51		27		6			9
		M	N'		10	02		12	11				
M	E'Z'		10	30		17		10		17			
654	21	e(S)	N'	18	16	11		14				Masked by large microseisms. USCGS: 53.3N, 170.4E, H 17 52 30.5, h 26 km. Mag. 5.7	
		e(SS)	N'		22	25		22	2				
		eL	Z'		34	15		30					
		M	Z'		39	24		22			2		
656	25	(P)	Z'	03	50	28						Masked by large microseisms. USCGS: 2.0N, 99.3E, H 03 40 40.4 h 98 km. Mag. 5.3	
		(iS)	N'		58	49							
		eL	N'	04	06	55		50					
		M	N'		13	02		23	5				
		M	E'		15	03		24		5			
M	Z'		16	26		24			6				
657	25	e(S)	N'	13	54	33						Masked by large microseisms. USCGS: 41.3N, 146.6E, H 13 33 05.2 h 33 km. Mag. 5.9	
		eLR	Z'	14	08	23		32					
		M	N'		11	14		26	1				
		M	Z'		11	30		25			2		
		M	E'		12	22		23		1			
659	26	iP	Z	10	48	41.5	0.7				-0.03	Dilatation. Microseisms present. USCGS: 14.3S, 166.8E, H 10 43 28* h 49 km. Mag. 4.5	
		e	E'		55	04		12					
		e	N'		57	28		15					
		eL	Z'		11	00	20	20					
		M	E'Z'		03	08		15		1			1
660	26	eP	Z'	15	30	58						Masked by microseisms. USCGS: 15.8S, 172.9W, H 15 23 46.1 h 25 km. Mag. 4.9 5 $\frac{1}{2}$ Berkeley	
		e	N'Z'		36	52		16					
		e	E'		37	11		16		2			
		e	Z'		39	27		15					
		eLQ	N'		39	30		22	4				
		eL	Z'		40	51		28					
		M	E'Z'		44	32		17		3			5
		M	N'		45	30		12	3				
661	27	iP	Z	08	02	58.6	1.0				+0.08	Compression. Microseisms present. USCGS: 6.0N, 126.0E, H 07 54 35.2 h 83 km., Mag. 5.2	
663	27	P	Z	15	59	21 $\frac{1}{2}$						Microseisms present. USCGS: 6.8S, 155.1E, H 15 53 44.1 h 86 km., Mag. 5.5	

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
664	1965 July 28	iP	Z	22 38 31.4	0.8				km.	Dilatation. Microseisms present. USCGS: 2.2S, 101.8E, H 22 29 04.9, h 110 km., Mag. 5.8
		e	N'	47 02	8					
		eL	N'	53 48	36					
		M	N'	56 54	22	2				
666	29	(eP)	Z	08 42 26.8	1.0				10,160	Microseisms present. Dilatation. USCGS: 51.2N, 171.3W, H 08 29 22.1 h 23 km. Mag. 6.4 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Berkeley 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ Pasadena 6 $\frac{3}{4}$ -7 Palisades
		iP	Z	42 29.2	1.3			-0.42	9194	
		iP	N'Z'	42 29 $\frac{1}{2}$	7	+2		-10		
		i	Z	42 32	1.0			+0.68		
		e	N'	42 48	10	2				
		i	Z'	42 56	10			+5		
		ePP	Z'	46 09	10			4		
		iSKS	N'E'N'E"	53 03	10	-29	-10			
		iS	N'E'N'E"	53 27	12	+22	+13			
		i	N'N"	54 31	16	+18				
		i	Z'	54 34	13			+18		
		i	Z'	54 56	13			+16		
		e	E'	55 03	25		9			
		eL	N'	55 10	20	+18				
		eSS	N'E'	59 21	22	10	12			
		i	N'E'	59 47	23	+27	22			
		i	Z'	59 53	15			+12		
		eSSS	Z'	09 03 18	19			10		
		eL	E'	06 19	27		16			
		eG	N'	06 32	42	27				
		eLR	N'Z'	10 54	37					
		M	N'E'Z'	13 20	24	23	18	31		
		eG2	N'	10 21.5	50					
		e	E'	23.8	50					
		W2M	N'E'Z'	53	21	5	2	6		
667	29	e	Z	15 49 53						Masked by microseisms.
		eS	N'	54 19	16	1				USCGS: 6.2S, 148.8E, H 15 43 49.6, h 50 km. Mag. 4.6
		eL	E'	57 11	23		2			
		M	E'	16 00 25	17					
		M	N'	00 48	18	1				
		M	Z'	01 00	17			2		
668	30	iP	Z	11 28 58.2	0.8			+0.05		Compression. USCGS: 45.2S, 167.6E, H 11 25 03.4, h 37 km.
		T Max.	E	45 53	0.6		0.05			
			N	46 00	0.7	0.05		0.07		
			Z	46 14	0.7					
672	31	iP	Z	14 31 22.1	0.7			+0.03		Compression. USCGS: 26.0S, 179.7E, H 14 26 26.6, h 464 km., Mag. 4.4
675	Aug. 1	iP	Z	15 14 27.5	0.8			+0.09		Compression. USCGS: 46.9N, 143.8E, H 15 02 56.1, h 400 km., Mag. 5.7
		e	E'	42 16	28					
		M	N'Z'	55 18	18	1		1		
676	1	eP	Z	20 39 37.5	0.7			0.03	2760	USCGS: 13.3S, 165.8E, H 20 34 19.6 h 28 km. Mag. 5.9
		i	Z	39 41.8	1.0			+0.10	2498	
		eS	N'	43 55	13	1				
		e	N'Z'	44 12	13	2		1		
		eL	Z'	46 13	24					
		M	Z'	47 38	17			2		
		M	E'	47 44	14		1			
		M	N'	48 06	14	2				
677	1	eP	Z	22 18 46.3	0.8			0.03		USCGS: 15.4S, 167.6E, H 22 13 44.4 h 125 km., Mag. 4.5
		eL	Z'	37 38	26					
678	1	iP	Z'Z"	23 49 52	9			+2		Compression. USCGS: 32.5S, 178.9W, H 23 44 28.3 h 44 km. Mag. 5.8
		i	Z'	50 12	9			+2		
		e	E'	50 36	15		2			
		e	Z'	50 45	10			2		
		i	N'N"	54 55	11	+4				
		eLR	E'Z'	56 07	30					
		M	E'	57 14	23		10			
		M	N'	57 47	19	7				
		M	Z'	57 52	21			16		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
679	1965 Aug. 2	eP Z	13 24 56.5	1.6				km.	Compression N'E'Z' N'E'Z' indcipherable after iP. USCGS: 56.2S, 158.2E H 13 19 54.7 h 33 km. Mag. 6.7 7 Palisades 7-7 ¹ / ₂ Pasadena 7 ¹ / ₂ Berkeley.
		iP N'Z'N'Z"	24 58	14	+91		+110		
		i Z	24 59.5	2.0			-6.3		
		i E"	25 04	5*		+9*			
		m NEZ	25 06	1.3	1.42	0.38	3.66		
		i N'	25 40	22	+115				
		(S) E'	28 58	21					
		e N	29 15	8	240ca				
		e Z	29 21	8			300ca		
		M E	32 15	10		800ca			
		M N	32 26	10	480ca				
		M Z	34 01	10			650ca.		
		T Max. NEZ	47 36	0.5	0.18	0.16	0.18		
		e N'	14 57.5	52					
e E'	15 41.8	72							
F	18 05								
680	3	(PKP) Z	02 20 35 ¹ / ₂				Masked by microseisms USCGS: 7.7S, 81.3W, H 02 01 52.2 h 49 km., Mag. 5.8 5 ¹ / ₂ -5 ¹ / ₂ Berkeley, 5 Palisades.		
		ePS E'	31 16	14					
		eSS E'	38 02	16					
		eLR Z'	55 46	26					
682	3	iP Z	18 05 34.4	0.8		+0.05	Compression. Microseisms present. USCGS: 15.5S, 167.5E, H 18 00 32.4 h 126 km., Mag. 4.9		
		e(S) N'	09 39	12					
683	4	iP Z	08 52 17.5	1.0		+0.20	2760 2498 Compression h 0.03 ca. USCGS: 13.2S, 167.0E H 08 47 12.4 h 237 km. Mag. 5.7		
		iP Z'Z"	52 18	3		+2			
		m NEZ	52 19	1.0	0.10	0.10		0.62	
		e Z'	53 15	8				1	
		e PcP Z	55 46	1.0				0.06	
		eS N'	56 21	11	1				
		eSS Z'	57 45	19				2	
		i E'	57 56	8		+2			
		e E'	58 09	20		3			
		e N'	58 14	19	4				
684	5	eP Z	00 13 45.2	1.0		0.09	3090 2798 Calibration pulse masks P on N'E'Z' USCGS: 5.3S, 151.7E H 00 07 50.5 h 47 km. Mag. 6.3 5 ¹ / ₂ -6 Berkeley 6 ¹ / ₂ Pasadena 6 ¹ / ₂ -6 ¹ / ₂ Palisades		
		iP N'Z"	13 55 ¹ / ₂	8*	+7*	-15*			
		i Z	13 56.3	1.5				+0.86	
		PP N'Z'N'Z"	14 29	?					
		iPPP N'Z'N'Z"	14 43	13	-13			+14	
		iS N'N"	18 24	12	+21				
		tsS N'	18 39	21	+93				
		i Z'	18 45	25				+76	
		i E'	19 04	23		+25			
		iL E'	20 14	33		+54			
		iLR Z'	22 03	30				+79	
		iL N'	22 13	30	+76				
		M Z'	24 06	20				120ca	
		M N'E'	25 01	17	92ca	81ca			
F	03 50								
692	10	(PP) Z	00 26 30				Masked by microseisms. USCGS: 20.1S, 170.1E H 00 21 15.3 h 3 km. Mag. 4.5		
		e(S) N'	30 13	12					
		eL Z'	31 29	28					
		M N'Z'	33 01	17	2			2	
		M E'	33 25	16		1			
695	11	eP Z	03 15 15	1.0		0.06	Microseisms present USCGS: 15.5S, 166.9E H 03 10 07.1 h 37 km. Mag. 4.8		
		eS N'	19 23	7					
		i N'	19 34	14	+4				
		i Z'	19 36	16				+3	
		eL E'	21 20	22					
		M Z'	22 52	18				3	
M N'E'	23 12	17	2	2					
696	11	iP NEZ	03 46 04.5	1.0	+	+	-0.14	Dilatation USCGS: 15.4S, 166.9E H 03 40 56.2 h 26 km. Mag. 6.3 7 Pasadena	
		iP N'E'Z'	46 05	5	+3	+2	-9		
		i NEZ	46 05.8	1.0	-0.14	-0.15	+0.96		
		i N'E'Z'	46 11	22	+72	+58	-105		
		m NEZ	46 12	1.0	0.38	0.45	1.84		

Continued on next page.

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
				h	m	s	s	μ	μ	μ	km.
696 cont.	1965 Aug. 11	iPP	N'E'	03	46	31	22	+50	+45		
		i	Z'		46	50	22			+59	
		i	Z'		50	05	24			+77	
		i(S)	N'E'		50	19	?	-	-		
		i(SS)	N		50	43	3	+9			
		i(SS)	E		50	44	4		+20		
697	11	iP	Z'	07	23	51	5			-2	Dilatation
		i	Z'		24	02	6			+5	
		iS	N'		28	05	13	-13			
		i	E'		28	07	13			-5	
		i	Z'		28	13	16			+14	
		i	E'		28	30	12			+6	
		i	N'		28	33	8	+5			
		i	Z'		29	34	13			-6	
		M	E'Z'		31	27	18			7	9
M	N'		31	36	15	6					
699	11	oP	Z'	10	10	28.5	1.2			0.08	USCGS: 15.7S, 167.1E
		o	N'E'		14	40	13				H 10 05 17.9 h 33 km. Mag. 4.5
702	11	iP	Z'	19	52	49	5			-2	Dilatation
		i	Z		52	50	1.2			+0.20	USCGS: 15.8S, 167.1E
		o	E'		57	06	14			3	H 19 47 44.0 h 36 km.
		i	N'		57	07	14	+4			Mag. 5.2
		o	Z'		57	10	13				3
703	11	oP	Z	19	57	34					Dilatation
		iP	N'E'Z'		57	35	?	+	+	-	USCGS: 15.7S, 167.1E
		i	Z		57	35.5	2.3			+2.2	H 19 52 29.8 h 33km.
		i	Z		57	41.3	1.0			+0.90	Mag. 5.6; 6½ Pasadena
		i	N'E'Z'		57	47	?	-	-	+	
704	11	o(P)	Z	20	13	47				After 19 57 47 N'E'Z' indecipherable.	
705	11	oP	Z	20	19	02	1.0				
		i	Z		19	05.3	1.2			+0.40	
706	11	oP	Z	20	59	10½	1.0			USCGS: 15.7S, 167.4E, H 20 54 04* h 33 km., Mag. 4.3	
707	11	oP	Z	21	00	16	2.5				USCGS: 15.8S, 166.9E, H 20 55 12.3
		i	Z		00	33.5	1.2			+0.21	h 25 km., Mag. 4.7
708	11	iP	N'E'Z'	22	36	54	?	+	+	-	Dilatation. After iP N'E'Z' indecipherable until 02h Aug. 12
		i	Z		36	55	1.5			+0.96	
		i	NEZ		37	07	1.7	+1.20	+1.50	-3.69	
		o	E		41	24	6			15	
		oL	Z		44	46	17				
		(G2)	E'		24	10	64				
		X	N'		24.3		70	175			
709	11	o(P)	Z	23	03	59					
710	11	o(P)	Z	23	07	08	1.0				
711	11	o(P)	Z	23	18	42					
712	11	oP	Z	23	43	12	1.0				
713	12	oP	Z	00	36	06.5	1.0				
714	12	oP	Z	00	59	10				USCGS: 16.0S, 167.2E, H 00 54 03.8 h 28 km., Mag. 5.0	
715	12	oP	Z	01	25	50					USCGS: 16.2S, 167.2E, H 01 20 48.1
		i	Z		25	52.7	1.2			+0.08	h 18 km., Mag. 4.7
716	12	iP	Z	01	41	24.8	1.0			+0.06	Compression USCGS: 1.6N, 126.5E, H 01 33 35.1 h 55 km., Mag. 5.8
717	12	iP	Z	02	26	39.0	1.0			-0.06	Dilatation
		i	E'		30	55	9		+3		USCGS: 16.1S, 167.5E, H 02 21 34.2
		i	N'		30	57	9	+3			h 46 km., Mag. 5.0
718	12	oP	Z	03	18	46					USCGS: 15.9S, 167.1E
		i	Z		18	46.8	1.0			+0.05	H 03 13 42* h 33 km
		o	N'		23	02	12				Mag. 4.6
		M	N'		26	14	15	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.	
719	1965 Aug. 12	oP	Z	03 49 34.2	0.8			0.02		USCGS: 16.0S, 167.3E H 03 44 29* h 33 km., Mag. 4.0
720	12	oP	Z	04 44 03						
721	12	iP	Z	04 45 27.4	1.2			+0.10		Compression
		eS	N'	48 18	10	1				
		M	N'	51 25	14	1				
722	12	iP	Z	04 52 42.7	1.3			+0.14		Compression
723	12	oP	Z	04 56 03.7						USCGS: 16.0S, 167.0E H 04 50 59* h 33 km. Mag. 4.4
724	12	iP	Z	05 41 37.8	0.8			+0.05		Compression
		m	Z	41 40	0.8			0.08		
		i	Z	41 46.5	0.8			+0.05		USCGS: 49.5S, 164.0E
		eS	E'	45 04	15		3			H 05 37 22.9
		e	N'	45 06	15	2				h 33 km.
		M	E'	46 51	11		3			Mag. 5.3
		M	Z'	47 21	11			3		
		T Max.	NE	06 00 11	0.5	0.06	0.04			
			Z	00 17	0.5			0.07		
725	12	oP	Z	06 02 49	1.0			0.04		USCGS: 15.7S, 167.0E H 05 57 38* h 78 km.
726	12	o(P)	Z	06 19 44						USCGS: 16.3S, 167.3E H 06 14 36* h 34 km.
		e	Z	19 52						
727	12	oP	Z	07 32 11						USCGS: 15.6S, 167.1E H 07 27 04.6 h 33 km. Mag. 4.9
		e	Z	32 18	1.0			0.03		
728	12	iP	Z	08 06 50.5	1.5			+0.24	2580	Compression
		iP	N'Z'Z''	06 51	3	-		+12	2322	
		i	NEZ	06 53.8	1.0	-0.07	-0.07	+0.42		USCGS: 15.9S, 167.5E H 08 01 43.3 h 25 km. Mag. 6.3
		m	Z	06 58	1.0			1.72		6 1/2 Palisades
		i	N'E'Z'N''E''Z''	07 00	22	+27	+23	-41		6 3/4 Pasadena
		m	NE	07 01	1.1	0.48	0.50			
		i	Z'	07 41	16			+28		
		i	E'	07 42	16		-22			
		iPcP	Z	10 41	0.7			+0.05		
		iS	E'E''	10 59	13		+30			
		i	N'N''	11 03	16	-140				
		i	Z'Z''	11 12	20			+195ca		
		m	E'	11 18	18			100ca		
		i	N'	11 28	27	+155				
		iLR	Z'	12 39	30			-170		
		M	E'Z'	13 30	23			185ca	230ca	
		M	N'	14 40	16	125ca				
		iScS	NE	18 07	1.8	+0.35	+0.59			
		W2 M	N'E'Z'	11 03	20	1	1	2		
729	12	oP	Z	09 18 27.2	1.2			0.04		
730	12	oP	Z	10 38 49	1.1			0.04		
731	12	oP	Z	13 03 02.5	1.1			0.03		USCGS: 5.3S, 152.2E H 12 57 09.7 h 41 km. Mag. 5.9 6 1/2 - 6 3/4 Pasadena 7 1/4 Palisades
		e	N'Z'	03 03	20					
		i	Z'	03 23	14			+4		
		(S)	E'	07 55						
		i	N'	08 00	30	+67				
		i	Z'	08 06	32			+60		
		oL	E'	09 24	42					
			E'	10 30	40			62		
		M	E'	13 40	20			80		
		M	Z'	13 55	20				150	
		M	N'	14 00	20	120				
		e	N'Z'	15 34	40					
732	12	iP	Z	18 10 01.2	1.0			+0.18		Compression
		i	N'E'Z'N''E''Z''	10 02	5	-2	-2	+4		
		i(pP)	Z'	10 11	5			-6		USCGS: 16.0S, 167.4E H 18 04 56.1 h 45 km. Mag. 5.3
		i	N''E''Z''	10 13	4*	-4*	-4*	+12*		
		i	Z	10 15.5	1.5			-0.44		
		i	N'E'	10 17	6	+4	+4			

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No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks	
					AN	AE	Az			
					μ	μ	μ	km.		
732 cont.	1965 Aug. 12	i Z	18 10 18.6	2.5			-4.18			
		oS E'	14 08	9		3				
		i N'N"	14 13	12	-18					
		i Z'	14 18	12				-11		
		i N"	14 19	9*	+31*					
		i E'E"	14 20	8		+9				
		oLQ N'	14 32	26	15					
		i Z'E"Z"	14 37	8*		+24*		-16*		
		iLR Z'	15 46	30					-14	
		M E'	16 39	23			17			
M Z'	16 59	23					24			
M N'	17 47	15	15							
733	12	1P Z	19 33 29.1	1.1			+0.07	Compression.		
734	12	1P Z'Z"	19 33 46	5				-3	Dilatation.	
		e N'	38 02						USCGS: 16.1S 167.0E	
		e Z'	39 02	17					H 19 28 44.0	
		M N'	40 55	15	3				h 33 km	
		M E'Z'	41 26	15			1	2	Mag. 4.9	
737	13	o(P) Z	01 12 17½						USCGS: 17.6S 178.4W H 01 06 32*	
		oL Z'	50		Feoble. 2nd shock ?				h 514 km Mag. 5.7	
739	13	1P Z	04 46 02.4	1.6			+0.92	2580	Compression	
		iPN'E'Z'N"E"Z"	46 03	3*	-1*	-1*	+5*	2392		
		m NEZ	46 05	1.6	0.24	0.25	1.50		USCGS: 15.9S 167.5E	
		iPp N'E'Z'Z"	46 12	5	+1	+2	-5		H 04 40 55.3	
		oS E'	50 08	8					h 34 km	
		i N'N"	50 13	12	-9				Mag. 5.7	
		i Z'Z"	50 18	11					-5	
		i N"	50 19	9*	+17*					
		i E'E"	50 20	9		+5				
		oLQ N'	50 32	27	9					
		i Z'Z"	50 36	9*						-9*
		iLR Z'	51 47	30						-6
		M E'	52 38	23			10			
M Z'	52 57	22						12		
M N'	53 04	17	7							
742	13	oP Z	11 29 54.5	1.1						
		i Z	29 56.5	1.0					-0.18	
		i N'E'Z'N"E"Z"	29 57	6	+6	+6	-10		USCGS: 16.0S 167.0E	
		iPp N'E'Z'	30 05	6	-6	-6	+8		H 11 24 51.8	
		i N'E'Z'	31 04	7	-4	-5	+7		h 33 km	
		iS E'E"	34 05	7*		+5*			Mag. 5.5	
		i N'N"	34 07	12	-25					
		i E'	34 12	11		+18				
		i Z'	34 21	13						-12
		i N'	34 35	20	+48					
		M E'	36 57	16			20			
M N'	37 06	16	45							
M Z'	37 33	16						11		
743	13	1PN'E'Z'N"E"Z"	12 45 10	6	+6	+5	-16		Dilatation	
		iPpN'E'Z'N"E"Z"	45 20	8	+15	+12	-34		After 12 45 31 N'E'Z'N"E"Z" indecipherable.	
		i N'E'Z'N"E"Z"	45 31	13	+84	+73	-95			
		m Z	45 46	2.5					USCGS: 15.9S 166.8E	
		m Z	45 53	2.0					H 12 40 08.3 h 33 km.	
		X N'E'Z'	15 47	110					Mag. 5.6	
		X N'E'	16 15	110ca					7 Pasadena, 7-7½ Berkeley	
744	13	o(P) Z	13 18 39							
		i Z	18 44.5	1.1					+0.15	
745	13	oP Z	13 58 27½					USCGS: 16.2S 167.2E H 13 53 27*		
746	13	oP Z	14 08 20						h 33 km Mag. 4.8	
		oP Z	14 08 20						USCGS: 15.8S 167.1E H 14 03 15*	
747	13	oP Z	15 28 23½						h 33 km Mag. 4.9	
		i Z	28 25.3	1.3					USCGS: 16.9S 167.7E H 15 23 20.8	
								h 45 km Mag. 5.0		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
						AN	AE	AZ		
748	1965 Aug. 13	oP	Z	16 19 25 $\frac{1}{2}$	s	μ	μ	μ		USCGS: 16.4S 167.1E H 16 14 23* h 24 km
749	13	iP	Z'Z''	18 01 28	3			+3		Compression
		i	Z'Z''	01 34	3			+5		
		ipP	N'E'	01 38	5	-3	-3			USCGS: 16.6S 167.6E
		i	N'E''	01 40	5*	+4*	+5*			H 17 56 27.6
		isP	Z'Z''	01 42	4			-13		h 39 km
		m	Z	01 44	2.6			4.63		Mag. 5.4
		i	N'E'Z'	03 28	11	+4	+2	-6		
		e(S)	E'	05 39						
		f	E'	05 50	11		+15			
		i	N'	06 00	11	+11				
		eSS	Z'	06 24	23			15		
		i	N'	06 27	18	-6				
		i	E'	06 28	10		+29			
		eL	E'	07 20	30		39			
		iL	Z'	07 21	25			+49		
		M	Z'	09 04	18			38		
		M	E'	09 26	14		42			
		M	N'	09 40	14	69				
750	13	oP	Z	18 06 10						USCGS: 16.4S 167.6E H 18 01 09* h 72 km Mag 5.0
751	13	oP	Z	18 12 38						
752	13	oP	Z	18 28 34						USCGS: 16.7S 167.6E H 18 23 31.8 h 33 km Mag. 4.6
753	13	oP	Z	19 23 30						USCGS: 16.2S 167.0E H 19 18 27.9 h 33 km. Mag. 5.2
		eL	Z'	29 28	22					
754	13	oP	Z	20 12 41						USCGS: 16.7S 167.9E H 20 07 35.8 h 33 km Mag. 4.9
		eL	Z'	18 30	22					
755	13	oP	Z	22 03 20						
		oP	N'Z'	03 21	12	2		2		USCGS: 6.4S 148.5E H 21 57 38.7
		m	Z	03 26	0.8			0.25		h 51 km
		i	N'	08 08	18	+16				Mag. 5.2
		of	Z'	08 12	20			+13		5 $\frac{1}{2}$ Berkeley
		eLQ	E'	09 13	28					
		eLR	E'	10 24	28					
		eL	Z'	10 50						
		M	E'	12 28	23		31			
		M	Z'	14 46	18			29		
		M	N'	15 45	17	21				
		M	N'Z'	19 00	13	31		45		
756	14	(P)	Z	00 37 39.3						Masked by microseisms
		e	Z	37 44						
		e	N'	38 21	9					USCGS: 30.7S 177.9W H 00 32 03.1
		e	E'	41 03	15					h 33 km
		e	N'	41 08	15					Mag. 4.7
		eL	Z'	44 03	28					
		M	E'	46 41	18		$\frac{1}{2}$			
		M	N'Z'	46 52	17	1		1		
757	14	(P)	Z	03 48 31						Masked by microseisms.
		L	Z'	55.5						USCGS: 16.0S 167.3E H 03 43 25.3 h 33 km Mag. 3.8
759	14	iPN'E'Z'N'E''Z''		11 12 50	7	+3	+2	-6		Dilatation
		f	N''E''	12 57	4*	+	+			
		e	N'E'	13 07	8	2	2			USCGS: 15.8S 166.8E H 11 07 47.1
		i	Z'	13 10	8			+5		h 33 km
		i(S)	N'N''	17 00	12	+6				Mag. 5.5
		f	E'E''	17 11	13		+10			6 Palisades
		i	Z'	17 14	13			+8		
		m	N'	17 15	12	17				
		iSS	N'N''	17 37	15	+22				
		e	E'	17 42	20					
		eL	E'	18 30	27		9			
		eL	Z'	18 47	29			19		
		M	N'E'Z'	20	16-20	18	12	18		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
				h	m	s	s	μ	μ	μ	
760	1965 Aug. 14	iP	Z	13	23	39.2	1.3			+0.35	Compression USCGS: 11.5S 166.3E H 13 18 06.0 h 49 km Mag. 5.6
		iP	Z'Z''		23	39.2	5			+2	
		m	Z		23	43	1.3			0.63	
		ipP	Z		23	54	1.0			+0.33	
		i	Z		23	59.5	1.0			+0.22	
		eS	E'		28	14	11				
		e	Z'		28	17	23				
		e	N'		28	23	11	2			
		e	E'		28	49	11		2		
		e	N'		28	50	11	3			
		e	N'		29	17	20	3			
		eL	E'		29	19	30				
		eLR	Z'		30	00	30				
LR Max.	E'		31	04	26		5				
	N'		31	08	25	4					
	Z'		31	13	26			8			
761	14	e(S)	N'E'	23	21	06	8	1	$\frac{1}{2}$		
		M	N'E'		24	32	13	1	$\frac{1}{2}$		
762	15	eP	Z	14	26	07					Microseisms present
		e(S)	N'		30	15	10	1			
		eL	Z'		32	03	22			1	USCGS: 16.8S 167.2E
		M	E'		33	04	17		1		H 14 21 06.8
		M	N'		33	26	16	2			h 13 km
	Z'		36	03	15			1		Mag. 4.8	
767	16	iPKP	Z	12	56	00.5	1.1			-0.18	Dilatation USCGS: 0.6S 19.9W H 12 36 23.3 h 33 km. Mag. 6.1
		m	Z		56	02	1.1			0.22	
		ipPKP	Z		56	11	1.5			+0.50	
		i	Z'		56	11.2	3			+3	
		m	Z		56	13	1.4			0.88	
		i	Z		56	18.5	1.2			+0.19	
		e	Z'		57	12	13			2	
		eSS	E'	13	18	06	24		3		
		eSS	N'		18	10	22	1			
		eSSS	E'		23	30	27		2		
		eLQ	E'		36	20	30		5		
		eG	N'E'		37	24	58	5	9		
		eLR	N'Z'		43	45	34				
M	N'		51	55	21	1					
M	Z'		52	00	21			2			
768	16	eP	Z	14	49	48.5					Microseisms present
		e(S)	N'		53	57	12	2			USCGS: 17.4S 167.7E
		e	E'		54	07	16		1		H 14 44 48*
		eL	E'		55	22	25				h 20 km
		eL	Z'		55	36	26			2	
		M	E'Z'		56	43	20		2	2	Mag. 4.8
		M	N'		58	52	15	3			
769	16	iP	Z	16	42	07.0	1.0			+0.10	Compression USCGS: 19.0S 167.6E H 16 37 12.4 h 14 km Mag. 5.0
		i	Z		42	10.2	1.3			+0.14	
		e(S)	N'		45	47	14				
		e	E'		46	08					
		eL	Z'		47	30	23			2	
		M	E'		47	50	20		2		
		M	N'		49	47	14	3			
M	Z'		51	14	16			2			
770	16	iP	Z	17	07	13	1.3			+0.17	Compression USCGS: 61.4S 154.3E H 17 01 26.8 h 33 km
		eP	Z'		07	14	10			1	
		i	Z		07	18	1.3			+0.28	
		e	N'		08	13	14	2			
		e(S)	N'E'		12	04	11	3	2		
		iL	E'		12	59	19		-14		
		e	N'		13	08	16	5			
		eLR	N'Z'		14	02	27	16		18	
		M	Z'		16	03	16			12	
M	N'		16	16	13	12					
M	E'		18	30	10			14			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
771	1965 Aug. 16	iP	Z	17 56 40	1.5			+0.30	km.	Compression	
		eL	E'	18 02 11	23						
		eL	Z'	02 28	25			2			
		M	N'	03 06	15	2					
		M	Z'	04 05	18			3			
		M	E'	04 12	17		2				
772	16	iP	Z	23 04 27	1.5			+0.18	km.	Compression	
		e(S)	N'N"	08 24	7	2					
		i	E'E"	08 31	9		-2				
		i	N'N"	08 32	9	+3					
		e	Z'	08 35	10			3			
		i	N'N"	08 51	8	+2					
		eL	Z'	09 54	26						
		eL	E'	10 08	26						
		M	N'	11 26	16	3					
		M	Z'	11 39	20			5			
		M	E'	12 00	17		3				
773	17	eP	Z	07 45 29	1			0.08	km.	Microseisms present	
		eS	N'	52 49	15	½					
		e	N'	56 51	12	½					
		e	Z'	57 10	12			½			
		(eL)	E'	08 01.5	25						
		M	Z'	06 25	18			½			
774	17	eP	Z	10 45 42					km.	Microseisms present	
		m	Z	45 49	1.3			0.22			
		eS	E'	54 21	13		2				
		eScS	N'	54 30	6	4					
		e	N'	58 11							
		e	Z'	59 06							
		eSSS	E'	11 01 36	26		1				
		e	N'	01 41	30						
		eL	Z'	03 31	36						
		eL	N'	03 50	50	17					
		eL	E'	04 03	52		6				
		eLR	Z'	06 24	42			8			
		M	N'	10 03	23	26					
		M	N'	12 18	19	25					
M	E'Z'	13 25	22		19	22					
M	E'Z'	15 02	20		20	22					
775	17	iP	Z	13 10 11.3	0.8			+0.24	km.	Compression	
		e	N'	15 16	16						
		eL	Z'	18 27	27						
		M	E'	19 59	13		1				
776	17	iP	Z	16 22 53.3	0.8			+0.05	km.	Compression	
		i	Z	22 55.8	1.2			+0.24			
		ePP	Z'	23 29	7			2			
		eS	E'	27 05							
		i	N'	17 07	13	-6					
		i	N'E'	27 12	14	+8	+8				
		i	Z'	27 15	14			+6			
		i	N'	27 42	14	+6					
		eLQ	E'	27 49	23						
		eL	Z'	28 50	?						
		M	E'Z'	30 45	18		5	9			
M	N'	31 42	15	6							
777	17	eP	E'Z'	22 23 32	6				km.		
		e	Z'	23 36	11			2			
		i	Z	23 42	1.4			+0.24			
		e(S)	N'	27 28	9	3					
		i	E'	27 33	6		-3				
		eL	Z'	28 52	24			5			
		e	E'	29 06	17		3				
		M	Z'	31 09	16			4			
		M	N'	31 16	13	2					
		M	E'	31 48	16		4				

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
778	1965 Aug. 18	(P)	Z'	03 24 56						Masked by microseisms.
		e	Z'	25 25						
		eS	E'	29 08	10		1			USCGS: 15.2S 166.6E
		eS	N'	29 09	10	1				H 03 19 43.2
		esS	N'E'	29 24	10	1	1			h 42 km
		M	Z'	32 24	15			1		Mag. 4.8
779	18	P	Z	06 01 51						Masked by microseisms.
		e	Z'	02 21						
		e(S)	N'	05 58	9	1				USCGS: 17.4S 167.6E
		e	N'	06 17	16					H 05 56 54.8
		eL	Z'	07 43	20					h 24 km
		M	Z'	09 33	16			1		Mag. 4.7
		M	E'	09 40	14		1			
		M	N'	09 59	13	2				
781	18	e(PPP)	Z'	14 22 04	7					Masked by microseisms.
		e	N'	28 10	14					
		eLR	Z'	29 38	23					USCGS: 23.3S 175.3W H 14 14 28.6
		M	N'	31 29	14	4				h 20 km Mag. 5.0
		M	E'Z'	32 32	18		3	4		
783	18	iP	Z	14 56 37.5	1.6			+0.32		Compression
		iP	N'E'Z'	56 38	6	-7	-5	+13		USCGS: 16.0S 167.0E
		i	Z	56 40.2	1.6			+0.40		H 14 51 29.3
		i	Z	56 45	1.6			-0.60		h 5 km
		i	N'	15 00 26	12	+7				Mag. 5.7
		is	N'E'	00 59	13	+16	+20			5 1/2-6 Pasadena
		iLR	E'	02 31	27		+77			6 Berkeley
		LR Max.	Z'	02 59	27			120		
		M	N'	03 53	18	64				
		M	Z'	04 02	18			99		
		M	E'	04 26	18			57		
785	19	(P)	Z	08 37 10 1/2	1.2			0.10		Masked by microseisms
		M	E'	47 49	17			1/2		
		M	Z'	48 23	18			1/2		
		M	N'	49 22	18	1/2				
787	20	iP	Z'Z"	06 01 15	6			-8	3840	Dilatation
		i	Z	01 15.5	0.8			+0.22	3496	h 0.04
		iP	N'E'N"E"	01 16	6	+2	-2			
		m	Z	01 18 1/2	1.3			2.02		USCGS: 5.7S 128.6E
		opP	Z'	02 16						H 05 54 50.0
		i	Z	02 20.5	1.7			+2.97		h 326 km
		i	Z'Z"	02 21	8			+12		Mag. 6.2
		i	N'E'N"E"	02 22	8	-6	+4			
		isP	Z'Z"	02 45	11			+16		
		i	N'E'N"E"	02 46	11	-9	+6			
		e	Z'	03 09	20			9		
		is	E'E"	06 22 1/2	13			-27		
		i	N'N"	06 25 1/2	8	+12				
		e	N'	06 39	25	10				
		isS	E'	08 05	12			-10		
		i	N'	08 20	15	-20				
		i	Z'	08 50	7			+16		
		iss	N'E'	08 59	15	+54	+35			
		i	Z'	09 03	10			-25		
		m	N'E'	09 19	15	80	62			
		m	Z'	09 25	20			50		
		M	E'	13 38	18			81		
		M	N'	13 54	18	81				
		M	Z'	14 07	14			36		
		M	Z'	16 12	15			49		
788	20	ePP	Z'	10 02 18						Masked by microseisms
		e(pPP)	Z'	02 49						
		eSKS	E'	07 57	7		1			USCGS: 19.0S 69.1W
		ePS	Z'	11 52	16			3		H 09 42 48.5
		e	N'	12 09	18	1				h 129 km
		o	E'	12 16	20		1			Mag. 6.0

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RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ km.	Remarks
					AN	AE	AZ		
788 cont.	1965 Aug. 20	e(sPS) Z'	10 12 30	18			3	Mag. 6½ Pasadena 5¾ Berkeley	
		ePPS N'	13 04	20	2				
		eSS E'	18 46	25		2			
		eLQ N'	29 26	35					
		eL E'	30 04	35					
		eLR N'	36 08	38					
		eLR Z'	36 20	40			4		
790	20	iP Z	21 28 01.8	0.9			+0.08	3380 3094 Compression h 0.01 ca. USCGS: 22.9S 176.3W H 21 21 50.9 h 77 km Mag. 6.2 5¾ Berkeley 6-6¾ Palisades	
		m Z	28 04½	0.9			0.14		
		isP Z	28 29	1.0			+0.12		
		i(PP) E'Z'E"Z"	29 08	10		+3	-4		
		i Z'	29 40	8			-4		
		i E'E"	29 41	7		+3			
		iS N'N"	32 54	6	+4				
		i E'E"	32 59	13		-4			
		e Z'	33 04	20			3		
		i(SS) N'	34 37	14	+4				
		eL Z'	35 20	30					
		M N'	36 38	18	23				
		M Z'	37 08	27			37		
		M E'	37 15	26		25			
800	22	P Z	10 45 40	1.0				Masked by microseisms. USCGS: 28.9S 175.9W H 10 39 41.9 h 15 km Mag. 5.2	
		eSS N'	51 48	20					
		eL Z'	53 13	30					
		M N'	55 18	15	1				
		M E'Z'	59 15	15		1	2		
801	23	eP Z'	20 01 13	16			2	Diffracted P Microseisms present USCGS: 16.3N 95.8W H 19 46 02.9 h 28 km Mag. 6.7 7¼ Pasadena, Palisades 7½-7¾ Berkeley	
		ePP Z'	05 52						
		iPP E'Z'	06 04	20		+6	-13		
		ePPP E'	08 35	20			5		
		iSKS E'	11 45	16		+13			
		iSKKS N'E'	13 03	16	+5		-14		
		i Z'	13 06	16			+13		
		iPS E'	15 54	24		+77			
		i Z'	16 03	20			+43		
		i N'	16 28	20	+9				
		iPPS Z'	17 20	20			+36		
		i N'	21 05	20	+				
		ei Z'	22 08	25			+30		
		iSS N'	22 21	28	-47				
		eiSS E'	22 24	28		+90ca			
		i Z'	22 42	22			+51		
		i E'	26 03	30			+29		
		e N'	26 14	30					
		iSSS E'	26 22	30		+48			
		i Z'	26 41	28			+31		
LQ N'	34 08	30	36						
i N'	35 42	26	+41						
eLR E'	40 00	34			55				
iLR Z'	40 18	30			+110ca				
LR Max. E'Z'	41 00	30			110ca 150ca				
M N'	48 40	18	23						
M E'Z'	50 50	17		47	78 ca.				
W2M E"Z"	22 04.8	19*		25*	75*				
F	25 00								
805	24	eP Z	14 09 41.6	1.2			0.08	Masked by microseisms. USCGS: 3.2S 141.0E H 14 03 14.9 h 44 km	
		eL E'	18 56	28					
		M N'	22 20	15	2				
		M E'	23 00	11		2			
		M Z'	24 30	11			2		
807	24	iP Z	19 31 53.2	1.0			+0.10	Compression USCGS: 10.8S 162.4E H 19 26 32.2 h 76 km mag. 5.1	

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
808	1965 Aug. 24	eP	Z	22 27 35						Masked by microseisms USCGS: 25.1S 179.0W H 22 22 20.6 h 384 km Mag. 4.2
811	28	(See below no. 813)								
813	29	eP	Z	12 51 41					2710	
		iP	Z'Z''	51 43	3			+2½	2494	Compression
		m	Z	51 45	2.0			1.47		
		eS	E'	55 56						USCGS: 15.7S, 167.6E
		i	E'	56 06	11		-6			H 12 46 30.1
		e	N'	56 12						h 10 km.
		i	E''	56 13	9*		+13*			Mag. 6.0
		i	Z'	56 14	11			-5		
		i	E'	56 27	10		+6			
		i	N'N''	56 30	12	-8				
		e	Z'	56 38	26					
		iSS	E'	56 41	11		-9			
		iSS	N'N''	56 43	17	-19				
		e	E'	57 10	26					
		e iLR	Z'	57 38	26			+13		
		M	Z'	59 03	18			9		
		M	E'	59 27	15		12			
		M	N'	59 35	14	22				
811	28	iP	Z	00 29 16.5	0.5			+0.02		Compression. Felt in South Australia
		eP	N	29 17	0.5					
		i(S)	N	31 33	0.7	+0.04				USCGS: 32.3S 138.1E
		m	E	32 45	1.0		0.86			H 00 26 38.1
		m	N	32 49	1.1	1.27				h 33 km
		m	Z	32 53	1.0			0.56		Mag. 4.9
814	29	iP	Z	13 00 44.0	1.3			-0.56		Dilatation USCGS: 15.7S 167.5E H 12 55 35.5 h 33 km Mag. 5.7
815	29	e(P)	Z	13 53 05						Masked by microseisms
		e(L)	N'	57 45	17					USCGS: 15.8S 167.5E H 13 47 50*
		M	N'	14 00 35	14	3				h 33 km
816	29	iP	Z	14 02 56.3	1.0			-0.25		Dilatation USCGS: 17.7S 178.9W H 13 57 20.2 h 571 km Mag. 5.4
817	29	iP	Z	14 13 12.5	1.5			+0.24		Compression
		i	Z	13 20.0	1.5			+0.30		USCGS: 15.8S 167.5E H 14 08 02.8
		e	N'	18.0	18					h 15 km Mag. 4.7
		M	N'	20 36	15	2				
818	29	iP	Z	18 36 35.8	1.0			-0.10		Dilatation USCGS: 15.7S 167.6E H 18 31 25.0 h 18 km. Mag. 5.1
819	29	eP	Z	18 43 34	1.2			0.11		
821	30	iP	N'E'Z'	01 01 06½	5	+2	+1	-4		Dilatation
		P	Z	01 07	1.2			0.12		
		iPP	N'E'	01 28	6	+1	+2			USCGS: 16.9S 167.2E
		e	Z'	01 37	9			1		H 00 56 05.3
		eS	N'	05 07	10					h 8 km
		e	E'	05 15	7		2			Mag. 5.0
		m	N'	05 22	9	5				
		eSS	E'	05 43	16		2			
		e	N'	05 53	15	2				
		M	N'Z'	08 36	14	5		2		
		M	E'	09 00	15		2			
822	30	eP	Z	01 31 04	1.0			0.05		USCGS: 16.9S 167.4E H 01 26 03.5
		M	N'	38 20	14	2				h 22 km Mag. 4.7
823	30	eP	Z	02 21 36	1.3					USCGS: 17.1S 167.2E H 02 16 39.9
		m	Z	21 48	1.3			0.14		h 18 km Mag. 5.4
824	30	iP	NEZ	03 37 04.5	1.2	+0.05	+0.06	-0.32	2590	Dilatation
		iP	N'E'Z'	37 04½	4	+1	+2	-4	2393	USCGS: 16.9S 167.4E H 03 32 02.2
		i	Z	37 10.4	1.2			+0.22		h 15 km Mag. 5.5
		iP	Z	37 16	1.2			+0.25		5¼-5½ Berkeley

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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.	
824 cont.	1965 Aug. 30	i N'E'	03 37 16	6	-2	-2			
		isP Z'	37 21	4			-6		
		i Z'	37 27	5			+6		
		i N'E'	37 34	7	+3	+3			
		ePP Z'	37 35	10			3		
		iS N'E'	41 11	13	-10	+4			TE 7s
		i E'	41 19	7		+8			
		i Z'	41 20	13			+6		
		i E'	41 31	7		+13			
		i N'	41 39	14	+10				
		eLQ E'	41 44	25		7			
		eLR Z'	42 50	26			15		
		M N'	44 38	15	23				
		M Z'	44 50	17			15		
M E'	44 57	14			11				
825	30	e(P) Z	03 53 01.2					USCGS: 16.8S 167.4E H 03 47 59* h 4 km	
		e Z	53 04.2	1.2			0.06		
828	30	iP Z	09 35 51.1	0.8			+0.06	Compression USCGS: 8.8S 117.5E H 09 28 21.0 h 55 km Mag. 5.1	
829	30	P Z	14 09 09.2	1.0			0.06	USCGS: 5.5N 126.0E H 14 00 55.5 h 115 km Mag. 5.3	
831	31	iP Z	16 41 41.5	1.5			+0.68	Compression	
		i Z	41 46.7	1.5			+0.42		
		isP Z	41 56.5	1.5			+0.26		
		eS N'E'	45 58	13	2	2		USCGS: 15.5S 166.8E H 16 36 35.7 h 33 km Mag. 5.6	
		eL Z'	47 29	28					
		M E'	49 50	16		2			
		M Z'	50 04	17			2		
M N'	50 10	16	2						
832	Sept. 1	i(P) Z	04 41 01.8				+	Microseisms present. USCGS: 51.3N 150.6E H 04 29 21.8 h 537 km Mag. 5.1	
833	1	iP E'Z'E"Z"	04 52 38	8		-2	+4	2660	Compression
		i Z	52 41	1.1			+0.13	2399	h 0.01
		pP Z	53 00	1.6			0.38		
		esP E'	53 10	8		3			USCGS: 34.6S 179.6E H 04 47 34.9 h 107 km Mag. 6.2 64 Berkeley
		e Z'	53 12	9					
		ePP Z	53 17	2.0			0.83		
		i Z'Z"	53 19	7			-3		
		PcP Z	56 18	0.8					
		eS E'	56 44	12		2			
		esS E'	57 20	12		2			
		e N'	57 23	16	3				
		eSS Z'	57 43	12			2		
		LR Z'	58 55	25			7		
		eL N'	59 02	25	4				
		ScP Z	59 43.5						
		i Z	59 46.3	1.0			+0.09		
		M N'	05 01 00	14	2				
		eScS N	03 29	1.3	0.06				
		e(pScS) N	04 08.2	1.3	0.05				
		834	1	iP Z	06 43 38.3	1.1			+0.74
iP NE	43 38.5			0.8	-0.07	-0.08		2496	h 0.02 ca
iP Z'Z"	43 38.2			6			+2		
ipP Z	44 12			1.2			-0.13		USCGS: 14.5S, 167.4E H 06 38 36.2 h 159 km Mag. 5.6
iPP Z'	44 21			7			-2		
iPPP N'E'Z'	44 34			8	+2	+1	-4		
e E'	47 40			10					
iS N'N"	47 45			9	-3				
e Z'	47 58			10			3		
i N'E'	48 32			8	+3	-2			
iSS N'	48 53			6	+3				
m N'E'	49 15			16	6	4			

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
835	1965 Sept. 1	iP	Z	20 14 08.6	1.3	μ	μ	μ	km.	Microseisms present USCGS: 20.2S 173.8W H 20 07 31* h 106 km Mag. 5.0
		eL	E'Z'	24.5				+0.10		
836	2	iS	E'	03 11 05	8		-2			Masked by microseisms
		e	N'	11 08	7	1				
		e	N'	11 39	8	1				USCGS: 16.3S 167.0E H 03 01 45.1
		eL	Z'	12 32	25					h 19 km Mag 4.6
		M	E'Z'	13 36	18		1	2		
		M	N'	14 21	15	1				
839	2	i(P)	Z	23 13 55.8	1.2					Microseisms present
		e	N'	18 17	10	2				
		e	Z'	18 25	13			2		USCGS: 16.3S 167.2E
		e	E'	18 26	14		1			H 23 09 03.7
		e	N'	18 58	15	2				h 19 km
		eL	Z'	20 06	27			1		Mag. 5.3
		M	N'	21 18	15	2				
840	3	eP	Z	10 41 13						Masked by microseisms USCGS: 13.1S 166.7E H 10 36 07.4 h 233 km Mag. 4.3
841	3	iP	Z	20 38 43.5	1.5					Microseisms present
		e	N'	42 58						USCGS: 16.0S 167.4E
		eL	Z'	44 31	26					H 20 33 37*
		M	E'Z'	45 40	22		1	1		h 44 km
		M	N'	46 26	16	1				Mag. 4.5
842	3	P	Z	21 44 48						Microseisms present
		eS	N'	49 35	22	2				
		eLQ	E'	51 24	30					USCGS: 5.2S 153.7E
		eL	N'	52 12	28					H 21 38 53.6
		M	Z'	54 06	23			3		h 54 km
		M	N'E'	54 13	23	2	1			Mag. 5.9
843	4	eP	Z'	10 32 03					8970	Microseisms present
		eS	E'Z'	42 07	14		1	$\frac{1}{2}$	8097	
		e	N'	42 09	14	$\frac{1}{2}$				USCGS: 46.6N 153.5E
		ePS	N'	42 53	14	1				H 10 19 51.3
		eSS	N'	47 15	21	1				h 27 km
		eLQ	E'	53 17	38					Mag. 5.5
		eLR	Z'	57 17	32					
		M	N'Z'	11 02 44	22	2		1		
		M	E'	03 05	20		1			
844	4	eP	Z'	14 46 57	16			1		
		ePP	Z'	51 12	16			2		
		ePP	N'	51 15	16					USCGS: 58.2N 152.6W
		i	Z''	51 25	7*			+5*		H 14 32 47.9
		eSKS	N'E'	57 27	22	7	4			h 19 km
		i	N''E''	57 40	9*	-7*	-3*			Mag. 6.1
		eS	N'	58 37	22	6				6 $\frac{1}{2}$ -7 Palisades Pasadena
		i	E'	58 52	26			+26		7 Berkeley
		i	N'N''	59 09	9*	+10*				
		i	E''	59 10	9*		-16*			
		ePS	Z'	15 00 13	25			12		
		e	N'	00 16	25	9				
		iSS	N'E'	05 53	25	-9	+24			
		e	E'	09 21	36		14			
		e	N'	09 39	30	9				
		eG	N'	15 02	52					
		eG	E'	15 21	52					
		eLQ	N'E'	16 12	34	23	38			
		eLR	Z'	19 42	38			12		
		M	N'	26 14	22	16				
		M	E'	27 36	21		18			
		M	Z'	28 10	21			33		
		F		18.9						
845	4	eP	NEZ	17 05 49.7						Regional.
		iS	E	06 12.3	0.5		0.03			
		i	NEZ	06 13.3	0.5	-0.04	+0.11	+0.08		

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.		
845	1965 Sept. 4	oS	E'	22	00	22	15	1/2	1/2		Masked by microseisms. USCGS: 36.1S 98.8W H 21 37 26.6 h 33 km Mag. 5.1		
		e	N'		00	25	15	1/2					
		e	N'		01	24	20	1					
		e	E'		01	26	20		1/2				
		e	E'		06	06	16		1/2				
		e	Z'		06	09	16			1/2			
		oLR	N'Z'		16	20	30					1	
		M	N'Z'		20	24	19	1/2					
853	7	oP	Z	08	34	06	0.8			0.04	Microseisms present USCGS: 15.6S 167.1E H 08 28 51.2 h 29 km Mag. 4.7		
		e(S)	N'		38	10	10	2					
		e	Z'		38	18	16			2			
		oL	E'		40	01	22						
		M	N'		40	58	20	1					
		M	Z'		41	13	20			2			
		M	E'		41	36	18		1				
854	7	fP	Z	11	20	00.4	1.0			+0.26	Compression Microseisms present USCGS: 18.5S 177.3W H 11 14 06.4 h 391 km Mag. 5.3		
855	8	oP	Z	07	10	39					Masked by microseisms USCGS: 19.2N 145.3E H 07 01 31.8 h 139 km Mag. 5.4		
857	8	oP	Z'	14	18	19					Masked by microseisms. USCGS: 15.5S 166.6E H 14 13 15.4 h 33 km Mag. 5.1		
		f(S)	E'		22	42	12		-2				
		f	N'		22	48	12	+2					
		oL	Z'		24	08	26						
		M	N'		25	18	16	1					
859	9	oPS	E'	10	32	58	14			3	Masked by microseisms. USCGS: 6.5N 84.4W H 10 02 25.4 h 27 km Mag. 5.5 6 1/4 Pasadena, Berkeley		
		e	N'		33	06	13						
		eSS	N'E'		39	55	30			4			
		eSSS	N'E'		44	22	22	2		1			
		eLQ	N'		54	10	32	7					
		oLR	E'Z'		59	36	34			5		7	
		M	N'E'Z'		11	08.0	18	2		3		6	
		861	11	fP	NZ	06	58	51.5	2.0	+1.34			-6.67
fP	N'Z'N'Z''				58	51 1/2	15	+6		-8	2893		
o(pP)	N'				59	05	14	5					
fsP	Z'				59	15	1.2				+0.43		
fS	N'			07	03	32	10			-4			
e	E'				03	36	11				2		
fsS	N'				03	56	13	-14					
e	Z'				04	00	18					11	
i	N'				04	12	15	-17					
oL	E'				05	28	31				41		
oL	N'				05	45	28	25					
oL	Z'				06	06	36					17	
M	E'				09	16	19				53		
M	Z'				09	28	20					105	
M	N'				09	35	19	70					
862	12	(fP)	Z	16	02	25	1.2				+0.12	Microseisms present	
		o(pP)	Z	07	04	26.5	1.1					Masked by microseisms.	
		f	Z		04	32.6	1.0				+0.07	USCGS: 11.2S 166.4E H 06 58 33.8 h 124 km Mag. 5.3	
863	12	oL	Z'		12	.1	21						
		fP	NZ	08	45	55.7	1.6	-0.25		+1.08	2990	Compression USCGS: 6.3S 151.6E H 08 40 12.8 h 48 km Mag. 6.2 6-6 1/4 Berkeley	
		fP	N'Z'N'Z''		45	56	5	-4		+5	2699		
		fP	N'Z'		46	03	8	+12		-19			
		i	N'Z''		46	05	8*	-12*		+41*			
		ePP	E'		46	40	7			2			
		iPPP	N'Z'		46	51	9	+5			-6		
		fPcP	Z		49	15	1.5						-0.30
		fS	N'		50	31	12	+7					
		e	E'		50	35	10				4		
		f	N'		50	51	14	+54					
		i	Z'		50	53	19						+38

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	Az			
				h	m	s	s	μ	μ	μ	km.	
863 cont.	1965 Sept. 12	iSS	Z'	08	51	46	16			+13		
		iSSS	E'	52	09		12		+11			
		eL	E'	52	19		30		40			
		eL	Z'	52	23		40					
		M	E'	56	28		17		67			
		M	Z'	56	42		18			140		
		M	N'	57	04		17	105				
865	12	iP	Z	22	14	34.8	1.5			-0.54	8760	Dilatation
		iP	E'Z'E'Z'	14	35 $\frac{1}{2}$		10		-1 $\frac{1}{2}$	-6	7898	
		eIS	N'	24	32		12	-3				USCGS: 6.4S 70.8E
		e	E'	25	22		24		2			H 22 02 34.3
		eSS	E'	29	39		25					h 33 km
		e	N'	34	10		25	4				Mag. 6.1
		eG	N'	35	03		60	15				
		eLQ	N'	36	10		36	15				
		M	N'	39	03		22	17				
		eLR	Z'	39	28		36					
		LR Max.	E'Z'	40	40		30		6	9		
		M	E'Z'	47	48		18		13	16		
		866	13	iP	Z	13	20	54.6	1.0			+0.10
eSKS	N'			31	26		12					USCGS: 55.5N 165.7E
eS	E'			31	54		12					H 13 07 48.3
eLQ	N'			45	5		40					h 23 km
eLR	Z'			49	47		24					Mag. 5.4
M	E'			52	7		17		1			
M	Z'			53	0		24			2		
867	13	eP	Z'	16	28	20						Masked by microseisms
		e	E'Z'	38	50		18		2	1		
		e	N'	38	53		18	3				USCGS: 36.5S 97.5W
		e	N'E'	39	52		20	3	3			H 16 15 44.5
		e	E'	43	47		24					h 33 km
		e	N'E'	51	30		26	3	3			Mag. 5.4
		eLR	Z'	54	45		30					
		LR Max.	N'E'Z'	55	6		30	4	4	7		
		M	Z'	58	47		19			3		
		M	N'E'	59	25		19	3	1			
868	14	iP	Z'	08	35	55	6			-2	5360	Dilatation Microseisms present
		iPP	Z'	37	45		6			-2	4892	
		e	N'	42	38		14					USCGS: 8.4N 126.8E
		iS	N'	42	51		12	-4				H 08 27 15.9
		eSS	E'	46	18		16		3			h 33 km
		m	N'	46	29		10	3				Mag. 5.7
		M	E'	53	22		21		2			
		M	N'Z'	55	04		18	2		3		
		M	E'	59	42		17		3			
		M	N'Z'	09	01	23	15	3		4		
		869	14	e	E	12	36	49				
e	N			37	25							Felt Melbourne, Geelong, Ballarat & King Island in Bass Strait.
m	N			38	38		1.0	0.74				
m	Z			38	44		1.0			0.68		
m	E			38	49		1.0			0.82		USCGS: 38.7S 144.2E
M	N'E'			38	54		6	2 $\frac{1}{2}$	1 $\frac{1}{2}$			H 12 34 36.3
M	Z'			39	28		5			4		h 33 km
870	14	e(P)	Z	12	55	09						Masked by microseisms.
		f	N'	57	04		2	+3				Felt Melbourne, Geelong, Ballarat & King Island.
		f	N'E'	57	08		4	+5	-3			
		eL	N'	57	12		10					
		m	N	57	13		1	2.06				USCGS: 38.7S 144.3E
		eL	E'	57	16		10					H 12 53 13*
		m	EZ	57	25		1		2.44	1.54		h 33 km
		M	N'E'	57	26		8	14	9			Mag. 5.0
M	Z'	58	02		5			13				

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No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks		
							AN	AE	AZ				
							μ	μ	μ	km.			
871	1965 Sept. 14	oP	Z	14	13	48	1.0					Masked by microseisms	
		e	N'E'	18	09		18	2	4				
		oL	Z'	18	48		26						USCGS: 55.0S 159.1E
		M	N'Z'	20	30	11-18	11	5		4			H 14 08 52.6
		M	E'	20	50		11		5				h 33 km
		T Max.	E	35	30		0.5						
872	14	oP	Z	22	02	53	1.3					Masked by microseisms. USCGS: 8.6N 127.1E H 21 54 13.5 h 33 km Mag. 5.4	
873	14	iP	Z	23	39	22.9	1.0			+0.11		Compression USCGS: 20.2S 168.7E H 23 34 41.4 h 46 km Mag. 4.6	
874	16	iP	Z	00	47	50.8	1.1			-0.13		Dilatation. Large microseisms. USCGS: 5.5S 154.2E H 00 42 06.7 h 133 km Mag. 5.3	
875	16	oP	Z	13	58	32.1						Masked by large microseisms.	
		iP	Z	59	07	5	1.3				-0.24		
		o(S)	E'	14	05	04	12		2				USCGS: 7.1N 126.5E
		e	N'	08	03		11	1					H 13 50 11.8
		o(SS)	E'	08	43		14		2				h 179 km
		M	E'	17	47		18		2				Mag. 6.0
		M	N'	18	50		18	2					
875	17	M	Z'	19	53		17				3		
		iPKP	Z	11	32	31.0	0.8				+0.10		Compression
		iPP	Z'	34	06		7				+4		
		esPP	Z'	35	11		14				3		USCGS: 1.4S 77.6W
		oSKKS	N'	40	40								H 11 13 56.4
		oPS	N'E'	44	12		16	2	1				h 190 km
		epPS	Z'	44	43		16				4		Mag. 6.0
		e	N'E'	44	52		16	3	2				6 1/2 Pasadena
		m	N'E'	45	16		16	5	5				5 1/2-6 Berkeley
		oSS	E'	50	58		22		2				
		osSS	N'	52	19		26	5					
		oSSS	N'	55	12		22	2					
		oL	Z'	12	04	22	40						
		oL	E'	05	10		40						
M	Z'	13	28		20					4			
880	17	iP	Z	15	54	00.7	0.7			+0.08		Compression USCGS: 13.7S 167.2E H 15 48 54.2 h 200 km Mag. 4.8	
881	17	oP	Z	16	32	32.6					7870		
		i	Z	32	36	7	2.0				+0.55	7098	USCGS: 36.3N 141.1E
		o	N'Z'	32	39		11	1				3	H 16:21 21.9
		o	Z'	33	47		11					3	h 72 km
		IS	N'E'Z'N'E"	41	43		19	-11	-13			-6	Mag. 5.8
		e	N'N"	42	04		19	6					
		oPS	E'	42	13		26		7				
		i	E'E"	42	38		11		-13				
		i	N'	42	41		21	-12					
		i	Z'	42	43		21					-10	
		i	E'E"	43	44		11		-8				
		i	N'	43	53		18	-7					
		i	E'E"	44	06		11		-4				
		i	E'	45	58		13		+6				
		oSS	Z'	46	27		26					5	
		i	Z'	49	42		21					-7	
		oLQ	E'	51	24		38			23			
		oL	N'	51	50		36	11					
		M	E'	54	24		26			18			
M	N'Z'	59	50		24	31				34			
M	E'	17	00	03	20								
W ₂ M	N'Z'	19	02		20	3				3			
882	17	iP	Z	22	59	52.2	0.8			+0.16		Compression	
e	N'	23	04	18	18	3						USCGS: 12.7S 166.3E H 22 54 30.0	
o	E'	04	25		17			3				h 65 km Mag. 5.1	
o	Z'	04	33		18					3			

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
882	1965 Sept. 17	eL	Z'	23	06	43	27					
cont.		M	Z'	07	50		21			5		
		M	E'	08	12		16		3			
		M	N'	08	16		16	5				
884	18	eP	Z'	22	11	50	7			2	5330	
		i	Z	11	53.4		1.1			+0.15	4890	USCGS: 8.2N, 126.8E
		e	Z'	12	03		7			2		H 22 03 18.8
		iS	N'E'	18	46		10	-6	2			h 85 km.
		SS	E'	22	13		19		5			Mag. 5.6
		i	N'	22	20		9	+4				
		M	E'	29	17		18		4			
		M	N'	30	31		19	5				
		M	E'	37	19		15		5			
		M	N'Z'	39	32		16	6		8		
885	19	eP	Z'	01	33	18	6			1		
		iS	N'N''	38	38		7	-2				USCGS: 22.1S, 174.9W
		e	Z'	38	48		18			1		H 01 26 52.5
		e	N'	40	54		16	3				h 33 km.
		eLR	E'Z'	42	17		28		2	3		Mag. 5.4
		M	N'	45	01		14	10				
		M	E'Z'	45	54		16		10	18		
886	19	eP	Z	08	57	35	0.9			0.04		Microseisms present
		i	Z	09	00	06.8	1.2			+0.10		USCGS: 0.9S, 99.7E, H 08 47 49.4
		eL	Z'	18	36							h 93 km. Mag. 5.3
887	19	iP	Z	09	49	25.8	0.9			-		Dilatation. Microseisms present.
												USCGS: 20.6S, 169.8E, H 09 44 46.6
												h 126 km. Mag. 5.0
889	19	(eP)	Z'	14	05	06						Masked by microseisms
		eS	E'	12	40		15		1			
		eS	N'	12	41		15	2				USCGS: 54.4S, 135.7W
		eLR	Z'	20	03		30					H 13 55 39.9
		M	Z'	23	11		18			5		h 33 km. Mag. 4.8
893	21	iP	Z	00	31	02.0	1.0			+0.06		Compression
		eL	Z'	36	06		25					USCGS: 22.5S, 170.4E
		M	N'E'	37	18		18	1	1			H 00 26 24*
		M	Z'	37	52		17			1		h 30 km. Mag. 4.3
894	21	iP	Z	01	49	01.0	1.5			+0.28	7370	Compression
		iP	Z'Z''	49	01		4*			+4*	6693	h 0.02 ca.
		ipP	Z'Z''	49	41		12			+9		
		ipP	N'N''	49	42		12	-4				USCGS: 29.1N, 128.2E
		e.	N'	57	26		11	4				H 01 38 30.2
		iS	N'E'Z'N'E''Z''	57	36		15	+28	+9	+18		h 197 km.
		iScS	N'N''	58	32		14	+9				Mag. 6.0
		isS	N'E'N'E''	58	44		14	-24	+20			6-6 $\frac{1}{2}$ Berkeley
		iSS	N'	02	01	40	11	+8				6 $\frac{1}{2}$ Pasadena
		e	E'	05	05		24		13			
		e	N'Z'	05	40		24	11		15		
		eL	E'	07	00		40					
		ipKPPKP	Z'Z''	17	36		18			+16		
		e	Z	17	44		2.0			0.46		
898	22	eP	Z	09	42	30						Microseisms present
		eS	N'	48	22		30					
		e	Z'	48	30		30					USCGS: 1.3S, 134.0E
		eL	E'	52	46		40					H 09 35 25.3
		eL	Z'	53	36		30					h 14 km.
		M	E'	55	16		23		10			Mag. 5.8
		M	N'	55	37		22	7				
		M	N'Z'	58	52		15	17		19		
900	22	eP	Z'	17	17	39						Microseisms present
		e	Z	17	39.5							
		eS	N'	22	03							USCGS: 11.2S, 162.1E
		e	E'	22	10		11		2			H 17 12 18.1
		i	N'	22	12		11	+4				h 33 km.
												mag. 5.5

Continued

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
917 cont.	1965 Sept. 28	i	N'Z'	05	18	26	19	+34		+12		
		i	E'		18	31	17		+15			
		eLR	E'Z'		19	09	30					
		LR Max	E'Z'		19	50	26			52	78	
		M	N'		21	40	13	110				
		M	Z'		22	55	17				82	
		M	E'		23	01	15			60		
923	30	eSKS	N'	24	12	58	12					Confused by calibration pulse. Earlier phases masked by microseisms. USCGS: 59.7N, 143.4W H 23 47 40.7 h 19 km. Mag. 4.8 5 $\frac{1}{2}$ -5 $\frac{1}{2}$ Berkeley 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisados
		ePS	N'		16	09	12					
		e	Z'		16	12	14					
		eSS	E'		21	42	22					
		e	N'		21	56	25					
		eG	E'		32	04	44			5		
		eLR	N'		37	00	37					
		eL	Z'		37	22	35					
		M	Z'		42	44	23				2	
		M	N'		42	50	23	2				
M	E'		44	33	20			2				
924	Oct. 1	iP	Z	09	04	49.9	1.6			+0.42	9820	Compression 88 $\frac{1}{4}$ USCGS: 50.1N, 178.3E H 08 52 05.8 h 32 km. Mag. 6.0 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Berkeley 6 $\frac{1}{2}$ Pasadena 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisados
		i	Z		04	53.0	1.6			+1.0		
		i	Z'Z''		04	53	5			+6		
		opP	Z		05	00.5	1.4				0.34	
		i	Z''		05	08	5*				+7*	
		e	Z		05	40	14				4	
		iSKS	N'N''		15	15	12	-7				
		iS	N'E'N''E''		15	31	10	+9	+8			
		i	Z'		15	32	10				+5	
		i	N'		15	40	13	-10				
		i	Z'		15	56	5				-4	
		i	N'N''		16	27	16	+18				
		i	Z'		16	28	16				+4	
		e	N'		20	46	14					
		iSS	N'		21	23	16	-9				
		eSSS	N'		24	57	21	6				
		eLR	Z'		31	53	41				20	
LR Max	N'E'Z'		33	41	27	12	8	16				
M	N'E'Z'		38	41	22	9	6	8				
eW2	Z'	11	02.2	35								
M	N'Z'		18.4	22	2				2			
925	1	iP	EZ	13	27	11.9	0.6		-0.07	+0.18	2790	Compression. Microseisms present. h 0.08 USCGS: 20.0S, 174.4E H 13 22 28.5 h 553 km. Mag. 6.2 5.9 Berkeley
		m	EZ		27	14	0.6		0.13	0.32	25 $\frac{1}{2}$	
		ipP	E'Z'		28	35	9		+2	-3		
		e	N'		29	41	12	2				
		isP	E'Z'		29	43	12		+2	-4		
		iS	N'E'N''E''		30	59	9	-3	-2			
		e	E'		31	31	16					
		iScP	N'Z'		33	15	11	-2		+2		
		i	E'		33	26	11			-2		
iScS	N'N''		37	06	7	-4						
926	1	eP	Z'	19	48	49	8					Masked by microseisms. USCGS: 52.7S, 140.0E H 19 44 14.2 h 33 km. Mag. 4.9
		e	N'E'		52	46	9			2		
		eL	N'		53	45	27	4				
		eLR	Z'		53	57	26				3	
		M	E'		55	20	11			2		
		M	N'Z'		56	39	12	3			2	
931	3	eP	Z'	14	57	58					9260	Microseisms present 83 $\frac{3}{4}$ USCGS: 49.5N, 156.5E H 14 45 26.8 h 33 km. Mag. 5.9 5 $\frac{1}{2}$ -5 $\frac{1}{2}$ Berkeley 6 Pasadena
		eS	E'Z'	15	08	13	22			1		
		eS	N'		08	14	20	2				
		ePS	N'		09	09	16	1				
		eSS	N'		13	45	24					
		e(G)	E'		20	17	44					
		eLR	N'		23	53	36	4				
		eLR	Z'		24	07	37				5	
		M	E'		26	26	26			3		
		M	N'E'		29	40	22	3		2		
M	Z'		30	06	22				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.	
932	1965 Oct. 3	iP	Z'	16	28	06	8			-2	10,530	Dilatation 94°8 USCGS: 42.9S, 75.4W H 16 14 54.9 h 28 km. Mag. 6.0 6-6½ Berkeley
		ePP	Z'	31	53		14					
		eSKS	N'	38	48		10	2				
		eS	E'	39	14		12		2			
		eS	N'	39	16		12	1				
		ePS	N'	40	31		16	2				
		eSS	N'	45	33		20	1				
		eSS	Z'	45	44		16			2		
		eSSS	Z'	49	19		20					
		eG	E'	52	33		42					
		eLQ	N'	53	21		31					
		eLR	Z'	57	28		30			3		
		M	N'	59	23		22	3				
		M	E'	17	00	49	19		2			
M	Z'	01	05		20			5				
933	4	eP	Z	00	19	09	0.8			0.04		Microseisms present USCGS: 6.4S, 147.4E H 00 13 25.8 h 75 km. Mag. 5.8
		eP	Z'	19	10							
		e	N'	19	32		14					
		iPP	N Z	19	55		1.5	+0.16		+0.20		
		eS	N'	23	41		14					
		e	Z'	24	02		12					
		i	N'	24	18		16	+2				
		eLR	Z'	26	52		34					
		M	E'	28	42		20		6			
		M	N'	29	14		19	4				
M	Z'	30	30		18			6				
936	5	iP	Z	00	59	26.8	1.0			-0.21		Dilatation USCGS: 5.8S, 130.5E, H 00 52 49.9 h 86 km. Mag. 5.7
		eL	Z'	01	09.3							
939	5	(e)	Z	16	45	12½						Masked by microseisms. Local.
		i(S)	N	45	53½		0.5	+0.04				
		m	Z	46	17		0.7			0.16		
		m	NE	46	19		0.7	0.58	0.44			
944	7	iP	Z	01	15	41.7				+		Microseisms present USCGS: 21.7S, 174.3W H 01 09 07.2 h 48 km. Mag. 5.1
		M	E'	27	04		20		2			
		M	Z'	27	19		20			4		
		M	N'	27	59		13	4				
945	7	iP	Z'Z''	03	45	53	4*			+4*	6480	Compression. Microseisms present. Long-period wanderings on N'E'Z' USCGS: 12.6N, 114.5E, H 03 35 59.6 h 17 km. Mag. 5.9
		i	Z	45	53.8		0.8			-0.05	5893	
		iS	N'N''	53	55		6*	-2*				
		eL	Z'	04	04	08						
		M	N'E'Z'	09	06		15	2	2	3		
946	7	iP	Z	08	45	33.8	1.2			+0.10		Microseisms present USCGS: 17.5S, 167.6E H 08 40 32.6 h 25 km. Mag. 4.8
		iS	N'	49	33		8	-2				
		i	E'	49	38		10		-1			
		e	Z'	49	40		10			1		
		eL	E'	51	03		23					
		eL	Z'	51	09		26					
		M	E'	52	27		21		2			
		M	N'Z'	52	41		19	1		2		
947	7	iP	Z	09	24	25.1	1.2			+0.53		Compression USCGS: 17.5S, 167.9E H 09 19 21.5 h 24 km. Mag. 4.8
		iS	N'N''	28	26		12	-2				
		i	E'E''	28	30		10		-2			
		i	Z'	28	35		14			+3		
		eL	E'	29	59		24					
		eL	Z'	30	03		25					
		M	E'	31	18		19		2			
		M	N'	31	24		16	2				
M	Z'	31	35		18			3				
948	7	(P)	Z	17	10	23.1						Masked by microseisms USCGS: 31.4S, 177.5W H 17 04 34.4 h 33 km. Mag. 4.8
		e	Z'	15	05							
		eL	Z'	17.3			24					
		M	N'	20	35		13	1				
		M	E'Z'	22	01		15		1	2		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ km.	Remarks
							AN	AE	AZ		
949	1965 Oct. 8	e(S)	N'	03 43 08	21					Masked by microseisms.	
		e	E'	43 11							
		eL	Z'	45 58	28						
		M	N'Z'	48 57	16	2		3			
		M	E'	49 14	13		1			USCGS: 7.1S, 154.9E H 03 32 52.8 h 85 km. Mag. 5.1	
955	10	eP	Z	17 38 27					9720 8725	Microseisms present.	
		e	Z'	38 39	5						
		i	Z	38 47.3	1.5			+0.12			
		eSKS	N'	48 54	18	1					
		eS	E'	49 04	8		2				
		e	N'	49 22	18	1					
		ePS	N'	50 13	22	1					
		eSS	N'	54 52	16	1					
		eLR	N'Z'	18 07.2	42						
		M	N'Z'	13 18	23	1		2			
		M	E'	14 30	23		1			USCGS: 59.1S, 24.8W H 17 25 44.0 h 55 km. Mag. 5.7 5 $\frac{1}{2}$ Palisades	
958	12	iP	Z	07 32 23.3	1.7					Compression Microseisms present	
		i	Z'	32 23.5	6			-1			
		iP	Z	32 33.9	1.2			-0.12			
		eS	N'	36 14	10	1					
		eS	E'	36 17	11		1				
		eL	E'	37 19	23						
		eL	Z'	37 33	25						
		M	Z'	39 15	17			1			
		M	E'	39 38	16		$\frac{1}{2}$				
		M	N'	39 56	13	3					
									USCGS: 22.9S, 171.0E H 07 27 42.1 h 48 km. Mag. 4.8		
959	12	iP	Z	08 29 05.0	1.0					Compression	
960	12	eSKS	N'	14 05 33						USCGS: 56.3N, 153.7W H 13 40 55.9 h 11 km. Mag. 5.3 5 $\frac{1}{2}$ Berkeley	
		eS	E'	06 39	15		$\frac{1}{2}$				
		eSS	E'	13 30	17						
		e	N'	14 03	18						
		eL	E'	22 41	30						
		M	E'	35 00	20		1				
962	12	M	N'Z'	35 36	21	1		2			
		iP	Z	24 00 16.8	0.7				-0.04	Dilatation	
		i	E	01 10.0	0.6			-0.03			
		i	N	01 11.2	0.8	+0.03				USCGS: 2.1N, 125.3E H 23 52 35* h 229 km. Mag. 5.0	
		i	E	01 22.7	0.6		+0.03				
		i	N	01 23.0	0.7	-0.03					
		i	E	01 25.5	0.6		+0.04				
		i	E	01 32.4	0.7		+0.04				
963	13	i	Z	01 33.7	0.7				+0.03		
		eP	E'Z'	14 51 07							USCGS: 22.6S, 171.0E H 14 46 25.0 h 24 km. Mag. 5.6 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Berkeley
		i	Z	51 08.6	2.0				-1.66		
		i	E'Z'	51 11	3		+2		-4		
		iP	Z	51 17	2.0				-1.38		
		i	E'Z'E'Z"	51 39	8		-2		+3		
		i	N'N"	51 43	8	+2					
		i	Z'Z"	52 01	9				+4		
		iS	N'N"	55 01	11	+6					
		i	E'E"	55 05	12		-10				
		i	Z'Z"	55 06	8				-		
		i	Z'Z"	55 14	8				+9		
		i	E'	55 22	13		-6				
		e	N'	55 22	27	12					
		i	Z'	55 28	9				+8		
		i	N'N"	55 53	14	-12					
		e	E'	56 04	24		7				
eL	Z'	56 17	25				12				
M	N'	58 44	13	19							
M	E'	59 03	17		7						
M	Z'	15 00 01	16				8				

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.			
964	1965 Oct. 13	iP	Z"	15	18	38	5*			-8*		Dilatation. Masked by coda of no. 963 on N'E'Z'		
		i	N'N"			22	53	11	+6					
		i	E'E"			22	57	7		+3				
		i	E'			23	09	9		+4				
		oL	E'			24	25	24						USCGS: 16.4S, 167.1E
		i	Z'Z"			24	42	9			+8			H 15 13 36.9
		M	N'			25	43	15	8					h 33 km.
		M	E'			26	32	14		4				Mag. 4.5
		M	Z'			27	37	13		5				
966	15	iP	Z	07	39	17.6	1.2			+0.14		Compression. N'E'Z' masked by micros. USCGS: 18.0S, 169.0E, H 07 34 36.2 h 232 km. Mag. 4.6		
967	16	iP	Z	08	30	33.5	0.8			+0.14		Compression. Microseisms present. USCGS: 3.1N, 128.5E, H 08 22 56.1 h 213 km. Mag. 5.7		
		iPcP	Z			32	21.9	0.8		+0.05				
		oL	N'E'			46			Fooble					
971	17	iP	Z	01	59	09.6	1.5			+0.32		Compression. Large microseisms. USCGS: 8.0S, 155.9E H 01 53 42.7 h 93 km. Mag. 5.5		
		i	N'Z'			59	11	6	+1		-2			
		i	Z			59	16.9	1.3			+0.32			
		i	Z			59	20.5	1.7			+0.99			
		isP	N'Z'			59	42	8	-1½		+2			
		oS	N'	02	03	36	12	2						
		e	E'			03	43	13						
		i	N'E'			03	57	9	-3	+6				
		i	E'			04	30	12		+4				
		m	N'			04	44	9	9					
		oL	Z'			05	12	28						
		M	E'Z'			09	12	12	11	5				
		M	N'			09	24	12	9					
974	18	iP	Z'Z"	02	46	02	3*			+3*		Compression. Large microseisms. USCGS: 7.5S, 128.5E, H 02 39 40.2 h 168 km. Mag. 5.3		
975	18	(iP)	Z	12	46	30				+		Masked by very large microseisms. USCGS: 4.1S, 137.2E, H 12 40 41.3 h 58 km. Mag. 4.9		
		M	E'			59.0	16		3					
		i	N'			13	00	32	6	+3				
976	18	(oP)	Z'	21	57	29½						Large microseisms present. Compression USCGS: 1.1S, 127.9E H 21 50 04.5 h 33 km. Mag. 5.9 6½-6¾ Palisades 6¾ Pasadena		
		iP	Z			57	33.4	1.3		+0.39	4360			
		iP	Z'			57	34.5	8		+6	3992			
		i	Z			57	39.9	1.2		+0.54				
		i	Z'			58	07	6		+9				
		o	E'Z'			58	59	17		3	6			
		iPP	N'			59	05.5	1.5	+0.38					
		i	N'Z'			59	16	12	+7		-11			
		iPPP	Z			59	27.0	1.5			-0.70			
		e	Z'	22	03	29	22				9			
		iS	E'			03	31	12		+7				
		iS	N'			03	32	12	+8					
		i(sS)	N'			03	45	11	-20					
		i	E'			03	50	11		+11				
		i	E'			04	12	16		+16				
		i	N'			04	23	16	+17					
		SS	E'			06	18	19		10				
SSS	N'			06	58	22	21							
oL	Z'			08	49	46			52					
M	N'			11	51	25	73							
M	N'E'Z'			15	18	20	90ca	70ca	80ca					
978	19	oP	Z	21	01	36						Microseisms present USCGS: 52.3N, 174.3E H 20 48 47.4 h 48 km. Mag. 5.6 5-5¼ Borkoley 5¾-6 Palisades		
		oS	N'E'			12	23	17	1	2				
		e	Z'			12	38							
		e	N'			14	14	18						
		oS	E'			18	11	25						
		e	N'			18	16	25	2					
		o(G)	E'			25	03	(50)						
		oLR	Z'			29	36	35						
		M	E'			32	37	25		3				
M	N'Z'			33	21	23	3		4					

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
975	1965 Oct.20	iP	Z	10 42 38.7	1.2			+0.10		Compression. Microseisms present. USCGS: 8.7S, 123.7E, H 10 35 48.5 h 112 km. Mag. 4.9
980	20	ePKP	Z	24 13 21						Microseisms present.
		eSKS	E'	20 20						USCGS: 12.5N, 87.4W H 23 54 29.9 h 70 km.
		ePS	Z'	25 02						Mag. 5.4
		ePPS	Z'	26 34						5-5 $\frac{1}{2}$ Berkeley
		eLR	Z'	51 12	32					5 $\frac{3}{4}$ Palisades
		LR Max.	N'E'	52 36	25	1	1 $\frac{1}{2}$			
		LR Max.	Z'	52 56	25			2		
982	22	eP	Z	02 12 58.4	0.8					USCGS: 28.9N, 141.8E, H 02 02 40.1 h 112 km. Mag. 4.9
983	22	iP	Z	03 15 16.2	1.0			+0.06		Compression.
985	22	iP	Z	20 24 58.1	1.0			+0.04		Compression. USCGS: 15.0S, 173.8W, H 20 17 52* h 33 km. Mag. 4.6
		eL	Z'	38.5	20					
986	23	iP	Z	08 19 47.9	1.0			+0.10		Compression.
		eP	N'Z'	19 49	10	1		1		
		i	NZ	19 53.9	1.5	+0.26		+0.80		USCGS: 54.9S, 146.1E H 08 15 02.3 h 33 km. Mag. 5.4
		eS	E'	23 50	13		4			
		i	N'N"	24 00	10	+2				
		eSS	E'	24 14	18		4			
		eL	Z'	24 41	27					
		L	N'Z'	25 13	24	5		4		
		M	N'E'	27 16	11	6	6			
		M	Z'	27 39	11			5		
987	23	iP	N'Z'	08 38 35	9	+1		+2 $\frac{1}{2}$		Compression. Replica of No.986
		eIS	E'	42 36	13		+8			
		eISS	E'	43 01	17		+7			USCGS: 55.1S, 146.0E H 08 33 49* h 43 km. Mag. 5.3
		eL	Z'	43 29	27					
		L	N'Z'	44 01	24	19		19		
		M	N'E'	46 03	11	9	8			
		M	Z'	46 26	12			7		
988	24	i(P)	Z	12 35 45	1.2			+0.11		Microseisms present.
989	24	eP	Z	14 40 11						Microseisms present.
		iS	N'	46 38	10	-2				
		iS	E'	46 39	10		-2			USCGS: 4.1N, 125.9E H 14 32 13,7 h 175 km. Mag. 5.8
		iSS	N'	49 55	12	-3				
		i	E'	49 56	12		-5			
		i	N"	50 01	6*	+4*				
		i	N"	50 10	7*	-5*				
		M	N'E'	56 33	20	1	1			
		M	Z'	15 01 15	14			2		
991	24	iP	Z	21 15 25.6	1.0			+0.14		Compression. USCGS: 17.7S, 178.5W, H 21 09 44.3 h 515 km. Mag. 4.7
992	25	iP	EZ	08 43 09.3	1.0		+0.05	-0.10	2310	Dilatation.
		eP	N'E'Z'	43 10	7	$\frac{1}{2}$	1	2	20 $\frac{9}{8}$	
		i	Z	43 16.2	1.0			+0.14		USCGS: 22.2S, 170.3E, H 08 38 30.6 h 33 km. Mag. 5.0
		ePP	N'E'Z'	43 34	10	$\frac{1}{2}$	1	2		
		e	N'Z'	43 46	10	1		2		
		eS	N'	46 58	12	1				
		i	E'E"	47 05	12		-4			
		i	Z'Z"	47 07	9			-4		
		i	N'N"	47 08	?	-				
		iPcP	Z'Z"	47 14	9			+6		
		eSS	N'	47 21	28	2				
		e	E'	47 40	25					
		eLR	E'	48 07	27		2			
		M	E'Z'	50 26	18		3	4		
		M	N'	50 32	14	3				

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.	
993	1965 Oct.25	oP N'Z'	17	59	24.2	10	+1		+1		USCGS: 60.5S, 154.0E H 17 53 45* H 33 km. Mag. 5.1
		e N'	18	00	19	11	1				
		e(S) N'	03	47		14	1				
		e E'	04	05		11		1			
		e N'	04	09		11	1				
		e N'	05	07		13	3				
		m E'	05	12		17		7			
		eL Z'	05	37		27					
M	N'Z'	08	52		13	7		9			
	E'	10	21		10		9				
994	25	iP N'Z'N'Z"	22	46	05	7	+3		-7	8700	Dilatation h 0.02 USCGS: 44.2N, 145.3E H 22 34 24.3 h 180 km. Mag. 6.2 6-6½ Berkeley 6½ Pasadena 7-7¼ Palisades
		i Z	46	05.5	0.8			+0.13	7893		
		i Z	46	06.8	0.8				+0.15		
		iPcP Z	46	11.8	1.3				+0.52		
		iPcP Z'Z"	46	12	4*				+5*		
		iPp Z'Z"	46	43	10				-10		
		iPp N'	46	44	10	+4					
		esP N'Z'	47	02	11	3			6		
		i Z"	47	07	7*				-12*		
		iPP Z"	49	00	5*				-6*		
		isPP Z'Z"	50	16	7				+3		
		iS N'E'N'E"	55	45	7*	-12*	-7*				
		oi Z'	55	45	23				-8		
		i N'E'N'E"	55	54	6*	+6*	+4*				
		iScS N'N"	56	05	7	+20					
		i N'	56	23	18	-11					
		i Z'	56	28	14				-8		
		i N'	56	46	18	-14					
		iPS Z'	56	50	14				+8		
		esS E'	56	53	10			3			
		e E'	57	29	11			3			
		e E'	23	00	14	25		5			
		iSS N'	00	50	30	+17					
LQ E'	06	40	28								
LQ Max. E'	08	30	30			19					
eL Z'	10	52	48				24				
eL N'	11	00	48	19							
997	26	iP Z	10	26	28.8	1.0			-0.10		Dilatation USCGS: 20.1S, 168.8E H 10 21 46.1 h 37 km. Mag. 5.2
		oS N'	30	25	11	2			2		
		e Z'	30	27	15			1			
		e E'	30	30	8						
		eL Z'	31	57	24						
		eL E'	32	03	25						
		M N'	33	26	15	1		2	3		
M	E'Z'	33	35	18							
998	26	oP Z	12	25	24.5					Microseisms present. USCGS: 7.8S, 123.6E, H 12 18 39* h 229 km. Mag. 5.4	
999	26	iP Z	20	26	11.9	0.8			+0.05		Compression USCGS: 10.5S, 161.2E, H 20 20 51.8 h 72 km. Mag. 5.6 5½-6 Berkeley
		e E'	30	51	10						
		eL N'Z'	32	44	27						
1000	26	iP Z	23	23	49.3	1.1			+0.10		Compression USCGS: 5.8N, 126.3E, H 23 15 35* h 135 km. Mag. 5.7
		o(SS) E'	33	54	11						
1001	27	iP Z	15	48	37.1	1.0			+		Compression. Microseisms present USCGS: 1.1N, 127.1E, H 15 41 01.1 h 142 km. Mag. 5.3
1002	27	oP Z	17	59	39						Microseisms present. USCGS: 17.8S, 178.7W, H 17 53 59.8 h 556 km. Mag. 4.3
1003	28	iP Z	05	50	53.2	0.8			+0.05		Compression. Microseisms present USCGS: 12.7S, 165.7E, H 05 45 34.3 h 76 km. Mag. 4.7
		i Z	51	02.7	0.8				+0.04		
		o(S) N'	55	27	9	1					
		eL Z'	57	26	25						
		M N'	59	50	13	1					
		M E'Z'	06	00	21	15		1	1		

No.	Date	Phase & Component		Time (G.M.T.)	Por.	Amplitude			Δ	Remarks
						AN	AE	AZ		
1004	1965 Oct.28	oP	Z'	h m s	s	μ	μ	μ	km.	USCGS: 1.3S, 127.7E H 08 58 25.9 h 33 km. Mag. 5.8
			oS	N'	09 05 53	9	$\frac{1}{2}$			
		e	N'	11 54	21	1				
		oL	Z'	15 17	31					
		M	N'E'Z'	18 41	20	4	3	5		
1006	28	(P)	Z	17 20 37						Microseisms present. USCGS: 21.6S, 170.7E, H 17 15 50.8 h 41 km.
1007	29	(P)	Z	03 46 31					17	Masked by microseisms. USCGS: 28.5N, 127.7E, H 03 36 10* h 212 km. Mag. 4.9
			e	Z'	04 01.4					
1008	29	o(P)	Z	04 12 52						Masked by microseisms. USCGS: 33.4S, 178.6W, H 04 07 26.2 h 33 km.
1009	29	oP	Z	04 14 15					17	Microseisms present. USCGS: 33.3S, 178.7W, H 04 08 49* h 33 km. Mag. 4.8
			M	N'E'Z'	23 32		$1\frac{1}{2}$	$2\frac{1}{2}$		
1010	29	oP	Z	12 29 15	1.0			0.04		USCGS: 6.2S, 149.8E H 12 23 25.8. h 59 km.
			i	Z	29 29	1.0				
		e	N'	33 53	17					
		oL	E'	36 28	25					
		M	N'E'Z'	40 26	16	$\frac{1}{2}$	$\frac{1}{2}$	1		
29	iP	Z	21 12 53.7	0.9			+0.15		Compression. Nuclear explosion "Operation Longshot". USCGS: 51°26'17"N, 179°10'57"E H 21 00 00.1, Elevation -660m. Mag. 6.1, $5\frac{1}{2}$ Berkeley $5\frac{1}{2}$ - $5\frac{3}{4}$ Palisades.	
		iPcP	Z	12 55.5	0.8					+0.10
1011	30	oP	Z'	07 04 46	(12)					USCGS: 16.5S, 173.3W H 06 57 39.7 h 33 km. Mag. 5.3 $5\frac{1}{2}$ -6 Berkeley
			e	E'	04 47	12				
		oPP	E'	06 19	7			1		
		e	Z'	10 28	13					
		o(S)	E'Z'	10 43	13			1		
		e	Z'	13 13	20			1		
		oSS	N'	13 15	22	4				
		oLR	Z'	14 50	30					
		M	E'Z'	17 00	19		4	5		
		M	N'	21 12	13	2				
1012	30	oP	Z	19 40 49						Microseisms present USCGS: 15.8S, 167.6E H 19 35 40.2 h 33 km. Mag. 4.9
			oP	Z'	40 50	3				
		i	Z	40 53.5	1.5			+0.4)		
		oS	E'	45 04	9			1		
		e	N'	45 09	10	1				
		e	N'	45 15	11	2				
		e	N'	45 44	12	4				
		M	E'	48 16	15		2			
		M	N'	48 39	14	5				
M	Z'	48 52	15			3				
1014	31	iP	Z	06 47 39.8	1.0			+0.06		Large microseisms present USCGS: 11.6S, 165.8E H 06 42 07.4 h 68 km. Mag. 4.8
			i	Z	47 48.3	1.0				
		o(S)	E'	52 12						
		e	Z'	52 19	11					
		e	N'	52 27	8	1				
		M	E'Z'	59 53	15		$\frac{1}{2}$	1		
M	N'	07 03 01	13	1						
1016	31	oS	E'	17 41 10	17					Masked by microseisms & wanderings. USCGS: 14.2S, 95.2E H 17 24 06.4 h 33 km. Mag. 5.4
			e	Z'	41 12	15				
		o(SS)	E'	44 57	12					
		e	Z'	45 05	20					
		M	N'E'	54.1	16	7	4			
		M	Z'	55.1	18			6		

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
1018	1965 Nov. 1	iP	Z	18 08 02.6	0.9				2880	Dilatation. Microseisms present. h 0.08	
		isP	Z'Z''	10 36.5	6				2599		
		iS	N'N''	11 57	8	-4					
		iS	E'E''	11 58	8		+3				
		e	Z'	14 23	18						
		i(PcS)	N''	14 42	7*	+3*					
		i	N'	14 48	9	+2					
		iScS	N'N''	17 52	10	-3					
		i	E'E''	17 54	9		+2				
M	Z'	20 38	20				2				
1019	2	iP	Z	00 54 18.5	1.5				-0.34	Dilatation. Microseisms present. USCGS: 23.7S, 179.8W H 00 49 13.4 h 522 km. Mag. 5.2	
		i	Z	54 35.8	1.0				+0.10		
		eS	N'	58 22	(7)						
		i	N'	01 01 10	15	-2					
		e	E'	01 12	13			1			
1022	3	iPKP	Z	01 56 51.5	0.8				-0.06	Dilatation h 0.09 ca. 13,300ca 120°ca	
		m	Z	56 53	0.8				0.24		
		e	Z'	56 54	7				1		
		i	Z	56 55.7	0.8				+0.11		
		ePP	Z'	58 40	18				1		
		i	Z	59 33	0.7				-0.05		
		opPP	Z'	02 00 24	16				1		
		oPPP	Z'	01 41	(17)						
		iSKS	N'E'N''E''	02 58	7*	+3*	-3*				
		iSKKS	N'E'N''E''	04 31	7*	+5*	-7*				
		iPKKP	Z	06 57.8	0.8				+0.08		
		e	N'N''	07 20	8	2					
		iSP	Z'Z''	07 24	11					-4	
		eSP	E'	07 25	11			2			
		i	N'N''	07 32	8	+3					
		i	N'E'Z'	08 56	9	-3	+4	-5			
		i	N''E''Z''	09 00	8*	+4*	-5*	+13*			
		i	Z'	10 12	15					+6	
		eSS	N'	14 13	21						
i	E'	14 25	13			+4					
m	N'E'Z'	14 50	24	7	6	6					
e	E'	18 02	17								
i	N'	18 07	15	+5							
SSS	N'E'	18 48	22	8	12						
oLQ	N'	29 06	32								
oLR	Z'	36 04	26								
1024	3	iP	Z	16 47 38.5	0.9				+0.04	Compression USCGS: 4.7S, 126.6E H 16 41 06.1 h 450 km. Mag. 5.7	
		m	Z	47 40	0.9				0.32		
		i	Z	49 12	1.2				-0.16		
		iS	N'	52 54	7	+1					
		e	Z'	55 54	9				1		
		e	N'	55 57	9	1					
		M	E'Z'	17 02	14			1	1		
1025	3	(e)	Z	18 33 11½						Masked by microseisms. USCGS: 22.3S, 114.1W H 18 21 05.0 h 12 km. Mag. 5.8 5.9 Berkoley 6 Palisades 6¼ Pasadona	
		eP	Z'	33 25							
		eSKS	N'	43 44	10	2					
		e	E'	43 47	10			1			
		eSS	E'	48 27	18						
		e	N'	48 49	18						
		oL	N'E'Z'	55 12	30	7	4				
M	N'E'Z'	19 04 18	19	2	3	4					
1026	4	eP	Z'	01 14 09						USCGS: 17.0S, 167.5E H 01 09 08.4 h 23 km. Mag. 4.8	
		e	E'	18 17	8						
		e	N'	18 22	10	1					
		oL	Z'	20 09	23						
		M	E'	21 48	15			1			
		M	N'	22 09	14	2					
M	Z'	22 36	16				1				

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
1027	1965 Nov. 4	(P)	Z	04	04	51						Masked by microseisms.
		e(S)	N'	08	36		11	$\frac{1}{2}$				
		e	E'	08	42		12		$\frac{1}{2}$			USCGS: 17.1S, 167.9E
		e	Z'	08	44		13			$\frac{1}{2}$		H 03 59 28.1
		eL	Z'	10	24		27					h 42 km.
		M	N'E'Z'	11	30		20	$\frac{1}{2}$	$\frac{1}{2}$	1		Mag. 4.9
1034	5	iP	Z'Z''	19	07	31	5			+1	3600	Compression
		ePP	N'Z'	08	39		8	$\frac{1}{2}$		1	3294	
		e	E'	12	31		8		$\frac{1}{2}$			USCGS: 3.1S, 143.8E
		eS	N'	12	42		19	1				H 19 01 04.3
		eL	E'	14	54		42					h 31 km.
		M	E'	19	37		16		6			Mag. 5.7
		M	N'Z'	21	50		15	9		10		
1037	6	eS	N'	09	17	27	(15)					USCGS: 34.0N, 138.9E
		eLQ	E'	27	22		32		1			H 08 57 12.3
		eL	N'	29	48		35					h 15 km.
		M	E'	30	14		23		1			Mag. 5.0
		eL	Z'	30	25		34			2		
		M	N'	34	15		16	1				
		M	Z'	36	14		19			1		
1039	7	iP	NEZ	03	12	18.5	(0.2)	+	+	+		Compression.
		iS	NE	12	31.9		0.4	+0.04	-0.03			
		i	Z	12	32.1		0.5			+0.03		
		m	NEZ	12	34		0.7	0.09	0.16	0.06		
1040	7	iP	Z	21	32	24.6	1.0			+0.08		Compression
		i	Z	32	28.6		1.0			+0.06		
		i	Z	32	30.6		1.0			+0.10		USCGS: 22.4S, 171.5E
		iS	N'N''	36	19		8	+2				H 21 27 45.1
		e	E'E''	36	20		8		+2			h 117 km.
		i	E'E''	36	25		8					Mag. 5.0
		e	N'	36	43		20					
		eL	Z'	37	39		26					
1043	11	i(S)	N'	01	41	56	8	+3				Obscured by large microseisms
		i	E'	42	04		8		+3			
		M	Z'	44	32		18			3		USCGS: 22.8S, 172.6E,
		M	N'	44	51		15	5				H 01 32 59.3
		M	N'	48	20		14	3				h 62 km.
		M	E'Z'	48	35		14		3	4		Mag. 5.4
1044	11	eP	Z'	02	57	05	(9)				2970	Confused by large irregular micros.
		e	N'Z'	57	13		(16)				2697	
		eS	N'	03	01	36	(20)					USCGS: 60.7S, 154.0E
		e	E'	01	48		(36)					H 02 51 25*
		e	E'	02	32		18					h 33 km.
		iSS	N'	02	56		16	+4				Mag. 5.1
		X	E'	03	23		24		18			
		iL	N'	04	03		20	-10				
		L	N'Z'	04	28		25	17		21		
		M	E'	05	00		11		7			
		M	Z'	06	30		11			6		
		M	N'	07	45		11	7				
1045	11	e	N'	16	59	09						Masked by large irregular microseisms
		e(L)	E'	17	03	19	(38)					
		e	N'	04	05							USCGS: 61.3S, 154.5E
		M	E'	04	10		15		4			H 16 52 23.4
		eL	Z'	04	25		(35)					h 33 km.
		L Max.	N'Z'	05	18		24	8		10		
1047	12	e(PS)	N'	02	23	02						Masked by microseisms.
		e	N'E'	23	16		20	4	2			
		e	Z'	23	19		20			2		USCGS: 56.0S, 121.5W
		eLQ	N'E'	30	13		25	6	5			H 02 04 19.5
		eLR	N'Z'	32	17		28					h 33 km.
		M	N'	35	30		20	6				Mag. 4.9
		M	Z'	35	55		18			13		
		M	E'	36	00		18		5			

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks
							AN	AE	AZ		
1050	1965 Nov. 12	iP	Z'Z''	18 03 05	5*			+9*	7310 6598	Compression USCGS: 30.5N, 140.2E H 17 52 24.1 h 40 km. Mag. 6.6 6-6 1/2 Palisades 6 1/2 Berkeley 6 3/4 Pasadena	
		e	Z'	04 34	18			2			
		iS	E'E''	11 48	10		+4				
		eLQ	E'	21 09	35						
		LQ Max.	E'	23 32	25		16				
		eLR	Z'	24 10	34	14		17			
		LR Max.	N'Z'	25 00	34						
		M	E'	27 54	17		8				
		M	Z'	32 42	18			7			
M	N'	36 26	17	7							
1051	13	iP	Z Z'Z''	04 47 19.0	1.4 6			+0.42 +4		Compression USCGS: 43.8N, 87.8E H 04 33 53.0 h 59 km. Mag. 6.3 6 3/4 Pasadena 6 3/4-7 Palisades 7 Berkeley	
		ePP	Z'	51 09							
		eSKS	N'E'	57 51	10	2	1				
		e(S)	E'	58 10	10		2				
		i(S)	N'N''	58 12	10	-4					
		i	E'E''	59 00	7*		+4*				
		e	N'	59 54	15	3					
		i	N'	05 00 24	24	+5					
		e	E'	00 25	17		3				
		e	N'	05 27	30						
		e	E'	05 49	21						
		e	Z'	13 07	26						
		eL	N'	16 20	44						
		eL	N'	21 53	40						
		eL	Z'	22 35	41						
		M	E'	24 09	36		6				
		M	Z'	24 57	36			9			
		M	N'	25 40	33	7					
		M	Z'	30 59	25			11			
M	N'	32 57	25	8							
M	E'	33 05	23		6						
W2 M	N'E'Z'	06 57	21	2	2	3					
1056	14	iP	Z	16 25 56.2	1.1			-0.12	Dilatation USCGS: 10.6S, 163.5E H 16 20 21.1 h 23 km. Mag. 5.4		
		m	Z	26 01	1.2			0.28			
		eS	E'	30 24							
		e	N'	30 36	9						
		e	N'	31 13	22	4					
		M	E'	33 36	17		2				
		M	N'	34 00	17	4					
		M	Z'	34 17	18			2			
1059	15	eP	Z	00 21 24.5	1.3			0.11	Microseisms present USCGS: 10.6S, 163.4E H 00 15 52.4 h 33 km. Mag. 5.2		
		e	N'	26 45	22						
		M	N'	29 31	16	1					
		M	E'	31 47	12		1				
1060	15	ePKP	Z	11 38 34	1.3			0.11	Microseisms present USCGS: 0.3S, 18.7W H 11 18 49.9 h 24 km. Mag. 5.6 6 1/2 Palisades 6 1/2 Pasadena		
		e	Z	38 57	1.6			0.35			
		i	Z	39 05.7	1.3			+0.24			
		e	N'	39 55	14						
		ePKS	Z''	42 36	8*			7*			
		eSS	N'	12 00 41	20	1					
		eSS	E'	00 43	20		1				
		e	N'	01 16	14	2					
		e	E'	02 11	13		2				
		e	N'	02 50	42						
		eSSS	E'	06 02							
		eLQ	E'	16 20	60						
		(G)	E'	19 38	60		26				
		L	N'	20 27	50	9					
1063	18	iP	Z	17 23 45.2	1.3			+0.18	Compression USCGS: 7.1S, 129.5E H 17 17 23.1 h 208 km. Mag. 5.4		
		eS	N'E'	28 55	15	2	1				
		e	Z'	29 02	17						
		M	N'Z'	38 56	15	3		4			
		M	E'	39 06	17		3				

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks				
							AN	AE	AZ						
				h	m	s	s	μ	μ	μ	km.				
1064	1965 Nov. 18	iP	Z	20	06	06.5	1.3			+0.36	3490	Compression. h 0.06 ca. USCGS: 18.8S, 177.9W H 20 00 19.0 h 421 km. Mag. 5.6			
		opP	Z		07	23	(1.5)				3194				
		fsP	Z		08	10	1.6			+0.28					
		iS	N'N"		10	44	7	-9							
		e	E'E"		10	45	9		2						
		f	N'		11	02	6	-2							
		fsS	N'N"		13	05	10	+6							
		f	N"		13	28	7*	-4*							
		f	N'N"		13	41	10	-8							
		f	N'N"		13	51	10	+7							
		iScS	N'N"		15	53	10	-16							
		iScS	N		15	53.5	2.0	-0.51							
		iScS	E		15	54.5	2.0		+1.47						
		f	N		15	56	1.8	+0.63							
		1065	18	iP	Z	22	11	03.1	1.3				+0.25	9820	Compression USCGS: 53.9N, 160.7E H 21 58 12.4 h 12 km. Mag. 6.0 6½ Palisades
eS	N'E'				21	48	13	1	1		8894				
eSS	N'				27	41	18								
eLQ	N'				35	3	35								
eLR	Z'				39	23	33								
M	N'Z'				44	40	23	1		2					
M	E'				47	30	19		½						
1066	19			eP	Z'	01	20	03	8			1	2900	USCGS: 29.6S, 178.5W H 01 14 25* h 24 km. Mag. 4.6	
				eS	N'		24	33	13	1			2691		
				e	E'		24	44	7						
				eLQ	N'		25	20	20						
				eLR	E'Z'		26	46	25						
				M	N'		27	43	16	5					
				M	E'		28	22	19		2				
				M	Z'		28	35	17			3			
1068	19	e(P)	Z'	07	13	49	10			2		Microseisms present USCGS: 29.6S, 178.6W H 07 08 10.8 h 33 km. Mag. 5.0 6-6½ Palisades			
		iS	N'		18	23	15	+8							
		iS	E'		18	24	10			-6					
		i	N'		19	02	18	+11							
		eLQ	E'		19	14	25								
		M	N'		21	45	15	31							
		M	E'Z'		27	00	16		12	20					
1071	20	(iP)	Z	07	00	05.5	1.0			-0.06		Microseisms present USCGS: 3.3S, 143.0E H 06 53 58* h 34 km. Mag. 5.6			
		e	N'		06	12	18	1							
		eL	E'		07	46	48								
		eL	Z'		10	09	31								
		eL	N'		10	15	30								
		M	E'		12	19	19		10						
		M	N'		12	49	19	10							
		M	Z'		14	00	17			6					
1072	20	eP	Z'	10	02	32						Microseisms present USCGS: 5.8S, 153.2E H 09 56 38.6 h 36 km. Mag. 4.9			
		e(S)	N'		07	18	14								
		eL	Z'		10	21	29								
		eL	N'		10	31	27								
		M	N'		12	00	22	3							
		M	Z'		12	17	20			4					
		M	E'		12	45	17		2						
1074	20	eP	Z	15	12	07.5	1.0				3730	h 0.016 ca. USCGS: 7.3S, 129.2E H 15 05 39.0 h 132 km. Mag. 6.1			
		ipP	Z'Z"		12	37	6			-3	3396				
		iS	N'E'N"E"		17	19	12	-4	+3						
		e	Z'		17	31	17								
		e	N'N"		18	04	12	4							
		fsS	E'E"		18	10	9		+3						
		e	E'		18	28	23		3						
		e	Z'		19	13	18			4					
		M	N'E'		23	53	17	32	27						
		M	Z'		27	12	14			26					

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
1077	1965 Nov.21	iP NEZ	10 38 25.5	1.3	+0.49	-0.50	-3.10	km. 3710	Dilatation h 0.015 USCGS: 6.1S, 130.4E H 10 31 49.7 h 93 km. Mag. 6.3 6 Pasadena 6-6 1/2 Palisades
		iP N'E'Z'N"E'Z"	38 25 1/2	3*	+6*	-4*	-27*	3394	
		iPp Z"	38 53	5*			+1 0*		
		i Z'	38 57	5			+		
		i N'Z'N"Z"	39 44	8	+4		-7		
		iS N'N"	43 36	10	-22				
		i E'E"	43 38	8		-6			
		e N'Z'	43 46	30					
		i N'	44 17	10	+13				
		iS E'E"	44 24	10		+14			
		i N"	44 25	7*	-16*				
		i N'	44 34	8	-13				
		eL Z'	47 41	45			64		
		eL E'	48 20	35			59		
		M N'E'	49 48	25	85	105			
M Z'	53 11	18			80				
1080	22	iP Z	14 13 24.5	0.7			-0.04	USCGS: 52.0N, 176.1W, H 14 00 27.0 h 49 km. Mag. 5.5	
1081	22	eP Z	20 38 21	0.9			0.08	10,010	USCGS: 51.3N, 179.8W H 20 25 30.4 h 40 km. Mag. 5.9
		ePcP Z'	38 23	(3)				9091	
		eSKS N'	48 47	10	1				
		iS E'	49 10	9		-2			
		e Z'	50 16	11			1		
		eSS E'	54 59	18					
		eSS N'Z'	55 08	20					
		eLQ E'	21 01 41						
		eLR Z'	06 13	32					
		M N'Z'	11 07	22	2		2		
M E'	11 44	20		1					
1082	23	eP Z	01 25 40					5000	Microseisms present 4590 USCGS: 3.0N, 124.8E H 01 17 31.2 h 45 km. Mag. 5.6
		e Z'	25 48	6			1		
		e Z'	27 41	12			2		
		iS N'N"	32 16	12	-3				
		e E'	32 17	15		3			
		i N'N"	32 28	12	+4				
		e N'	33 23	22	4				
		eSS E'	35 28	20					
		i N'N"	35 34	18	+14				
		i E'E"	35 37	18		+12			
		e Z'	35 40	24			5		
		i N"	35 49	11*	+6*				
		eG N'	36.5	63					
		eG E'	36.6	63					
		L N'E'	38.2	44	11	10			
eLR Z'	39 16	37							
L Z'	41 33	31			8				
M N'E'	43 25	20	7	7					
M Z'	44 20	15			4				
M Z'	46 39	21			8				
1083	23	eP Z	02 30 39.5	0.8			0.04	9900	Microseisms present 8991 USCGS: 51.4N, 179.7W H 02 17 49.4 h 48 km. Mag. 5.6 5 1/2 Palisades
		i Z	30 42.4	1.0			-0.07		
		eSKS N'	41 07	7	1				
		eS E'	41 27	9		1			
		eL E'	59 05	30					
		eL Z'	59 34	27					
		M N'	03 03 28	21	1				
		M E'	05 48	19		1/2			
M Z'	05 58	19			1				
1084	23	iP Z	16 39 15	1			+0.10	Compression. Microseisms present. USCGS: 8.7S, 111.0E, H 16 31 10.0 h 100 km., Mag. 5.8	
		e N'	49 02	8					
		eL Z'	56 15	22					
1088	25	iP Z	11 47 54.6	1			+0.08	Compression. Large microseisms on N'E'Z'N"E'Z" USCGS: 16.2S, 167.9E, H 11 43 01.7 h 183 km. Mag. 5.4	
		e N'	52 02						
		M N'	53 16	13	2				

No.	Date	Phase & Component		Time (G.M.T.)		Por.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
1090	1965 Nov.25	iP	NZ	22 41 06.7	0.9		μ	μ	μ	km.	Dilatation. Microseisms present. USCGS: 3.9S, 150.3E H 22 35 37.2 h 457 km. Mag. 5.5	
		i	Z	42 13	1.2				-0.20			
		e(SS)	E'	48 06	11			2				-0.17
		e	Z'	48 18	18							
		M	E'	51 14	17			2				
1091	27	iP	Z	01 35 41.8	1.2					+0.18	Compression. Microseisms present USCGS: 6.1S, 148.5E H 01 29 49.5 h 56 km. Mag. 5.8	
		e(S)	N'	40 20	18	2						
		e	Z'	40 35	18				2			
		eLQ	E'	42 06	36							
		eLR	N'Z'	43 25	30							
		L Max.	E'	43 33	28			5				
		M	E'	47 01	13			4				
		M	N'Z'	49 06	15	3			4			
1092	27	eS	N'	03 23 46							Masked by microseisms. USCGS: 30.6N, 140.2E H 03 04 20.6 h 60 km Mag. 5.2	
		eLQ	E'	32.8	40							
		eLR	N'Z'	35.3	47							
		L Max.	E'	35 48	24			2				
		L Max.	Z'	37 41	28				2			
1093	27	P	Z	12 07 14 $\frac{1}{2}$							Microseisms present USCGS: 9.7S, 159.7E H 12 01 51.9 h 51 km. Mag. 6.3 5 $\frac{3}{4}$ Berkeley 6 $\frac{3}{4}$ Pasadena, Palisades	
		i	Z'	07 20						2830		
		i	N'Z'	07 26	6	-2				+3		2595
		ePP	N'Z'	07 53	8	1 $\frac{1}{2}$				2		
		ePPP	N'	08 06	8	3						
		i	Z'	08 13	7							-3
		iS	N'N"	11 37	11	+5						
		i	E'E"	11 44	8			+4				
		i	Z'	11 46	10							+4
		i	N'N"	11 56	14	+19						
		i	E'	11 59	14							-11
		i	N'	12 32	10	+17						
		eL	N'	12 49	26							
		M	N'E'	16 32	14	34		23				
M	Z'	17 34	15						13			
1095	28	eP	Z'	04 09 47	7						Microseisms present USCGS: 45.6S, 72.4W H 03 56 45.9 h 33 km. Mag. 5.8 6-6 $\frac{1}{2}$ Palisades	
		eSKS	N'	20 22	8	1						
		e	E'	20 29	18							
		e	N'	20 57	14	1						
		ePS	N'	22 02	16	1						
		eSS	Z'	26 49	21							
		e	N'	27 06	19	1						
		e	Z'	30 41	21							
		eK	N'E'	34 13	38			4				
		eL	Z'	34 54	34							
		eLR	Z'	38 23	27							
		LR Max.	N'Z'	39 04	27	4						7
		M	E'	41 53	21			3				
		M	N'Z'	42 05	21	3						6
M	N'E'Z'	48 00	16	5		3			7			
eW2	N'	06 22.5	30									
M	E'Z'	32.5	20						1			
1099	28	P	Z	21 40 58							Masked by microseisms. USCGS: 4.9S, 103.2E, H 21 31 47.3 h 87 km. Mag. 5.9	
		eL	N'	56.3	30							
		M	N'	22 00.8	24	$\frac{1}{2}$						
1099	29	(P)	Z	10 29 09							Masked by microseisms USCGS: 4.7N, 124.3E, H 10 21 27.1 h 490 km. Mag. 5.0	
1115	Dec. 1	e(S)	E'	17 25 09	15						USCGS: 42.0S, 87.9E H 17 09 06.4 h 33 km. Mag. 5.2	
		eLR	Z'	32 38	29							
		M	N'	34 27	19	1						
		M	Z'	35 13	19					1		
		M	E'	36 20	16					1		
1115	2	ePP	Z'	23 46 51							Masked by microseisms USCGS: 15.3S, 173.1W, H 23 38 13.3 h 20 km. Mag 5.5	
		e	N'	53 59	20							
		eLR	E'Z'	56 12	25			2		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.	
	1965											
	Dec. 3	(iP)	Z	00	20	15.6	1.1			+		Microseisms present
1119	3	eP	Z'	06	51	47						Microseisms present
		e	Z		51	48						
		e	Z'		53	24	12					USCGS: 20.4S, 174.2W
		eS	N'		57	12						H 06 45 02.5
		e	Z'		57	13	21					h 33 km.
		e	E'		57	34	12					Mag. 5.4
		eL	N'		59	20	25					
		M	N'	07	01	47	15	2				
		M	E'		03	01	18		3			
		M	Z'		03	47	17			5		
1120	3	eP	Z'	15	29	06					4470	Microseisms present
		eS	N'E'		35	14	13	1	2		4022	
		e	Z'		35	16						USCGS: 47.4S, 100.0E
		e	N'		38	13	15					H 15 21 23.5
		eLR	N'Z'		40	34	32					h 33 km.
		M	E'Z'		42	39	20		6	9		Mag. 5.5
		M	N'		42	54	18	5				
1121	3	eP	Z'	20	39	44					6430	Microseisms present
		eS	N'		47	40	13	1			5799	
		esS	N'E'		48	00	16	2	1			USCGS: 55.9S, 127.6W
		e	Z'		54	18	20					H 20 29 51*
		e	N'E'		54	20	20	2	1			h 33 km.
		eLR	N'		56	14	30					Mag. 4.7
		LR max.	N'E'Z'		57.0		26	4	3	6		
		M	E'Z'	21	00	26	17		1	2		
		M	N'		02	02	15	2				
1122	4	iP	Z	02	24	55.0	0.8			+0.05		Compression. Microseisms present
												USCGS: 51.3N, 170.6W, H 02 11 49.9
												h 18 km. Mag. 5.5
1123	4	e(S)	N'	03	23	27						USCGS: 36.1S, 103.1W
		e(SS)	N'		28	45	15					H 03 00 46.8
		e	E'		28	47	15					h 33 km.
		eLR	Z'		38	12	30					Mag. 4.8
1127	5	iP	Z	18	27	40	1.5			+0.26		Large microseisms present
		eS	E'		38	30						
		e(SP)	N'		39	23						USCGS: 52.6N, 173.2E
		eSS	N'		44	24	22					H 18 14 50.2
		eLR	Z'		55	58	31					h 36 km.
		M	N'Z'	19	00	36	24	½		1		Mag. 5.5
		M	E'		02	42	20		½			5¼-5½ Palisades
1129	6	ePP	E'Z'	11	53	54	16			1		
		eSKS	E'	12	00	07	(12)					USCGS: 18.9N, 107.1W
		ePS	E'		03	24	18		4			H 11 34 53.7
		iPS	Z'		03	33	18			+5		h 37 km.
		iPPS	E'Z'		04	31	18		5	+6		Mag. 5.9
		i	Z'		05	02	15			+4		6½-6¾ Palisades
		i	E'		05	07	18		+5			6¾ Pasadena
		e	E'		05	56	27					7-7.5 Berkeley
		eSS	E'		08	53	30		5			
		eSS	Z'		08	56	30			4		
		i	E'		09	39	21		-12			
		eLQ	N'		20	08	37	5				
		eLR	E'Z'		24	41	32					
		iL	Z'		25	18	30			+20		
		iL	E'		25	22	30		+20			
		M	E'Z'		27	40	23		27	45		
		M	N'		29	35	21	11				
		M	E'		37	00	16		24			
		M	Z'		38	33	16			31		
		e	Z'	13	34	19	36					

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
1130	1965 Dec. 6	e(PS)	E'	19 11 12						
		eSS	Z'	17 11	27					
		eSS	E'	17 26	25			1		
		eLR	Z'	32 55	30					
		eLR	E'	33 07	30					
		M	E'Z'	35 22	23			2	3	
		M	N'	37 17	20	$\frac{1}{2}$				USCGS: 18.8N, 107.0W H 18 42 33.2 h 40 km. Mag. 5.1 5 $\frac{1}{2}$ Pasadena, Palisades
1132	7	iP	Z	08 31 42.5	0.8			-0.06		
		i	Z	31 51.5	1.2			+0.12		
		i	Z	31 57	1.0			+0.08		
		eS	N'	35 29	12	1				
		e	Z'	35 37	12				1	
										Dilatation. Microseisms present USCGS: 38.4S, 176.1E H 08 27 09.9 h 141 km. Mag. 4.6
1134	7	iP	Z	22 24 54.2	1.2			+0.10	3070	
		iP	Z'	24 54 $\frac{1}{2}$	7			+2	2796	
		i	Z	25 00	1.2			+0.18		
		e	Z'	25 36	7			2		
		ePP	N'	25 42	7	1				
		i	Z	25 52	1.2			+0.24		
		iPPP	N'Z'	25 55	7	+1		-3		
		iS	N'N"	29 31	7	+4				
		i	N"	29 44	7*	+5*				
		i	N'Z'N"	29 54	8	+6		-5		
		e	N'E'	30 36	11		4			
		i	N'	30 46	12	-7				
		i	Z'	30 57	11			+4		
		eL	Z'	32 26	48					
		M	E'	33 46	21		15			
M	N'	34 16	20	10						
M	Z'	38 32	13				13			
									Compression USCGS: 6.4S, 146.3E H 22 19 14.8 h 109 km. Mag. 6.4	
1135	9	iP	Z	18 10 08.0	1.5			+1.36		
		iP	N'E'Z'N"E'Z"	10 08	8	+2	-5	+10		
		i	Z	10 23.5	1.0			+0.39		
		iP	N'E'Z'N"E'Z"	10 39	8	-2	+4	-5		
		i	E'	10 53	11		+8			
		i	N'Z'	10 54	11	-3		-14		
		iSP	Z"	10 58	9*			+31*		
		e	E'	14 06	8		2			
		i	N'N"	14 08	10	+3				
		i	Z'Z"	14 12	12			+9		
		i	N'	14 31	16	+10				
		i	Z'Z"	15 00	10			+6		
		i	E'	15 05	8		-6			
		X	N'	15 18	16	16				
X	Z'	15 20	20				11			
M	Z'	18 45	15				4			
									Compression USCGS: 37.1S, 177.5E H 18 05 26.1 h 165 km. Mag. 5.8 5 $\frac{1}{2}$ -5 $\frac{3}{4}$ Palisades	
1137	9	ePP	E'Z'	06 27 26	16					
		eSKS	E'	33 16	14		1			
		eSKKS	E'	34 26	15		1			
		ePS	Z'	37 06	18				4	
		ePS	E'	37 09	20			3		
		e	Z'	38 27	16				2	
		e	E'	41 43	22		1			
		eSS	Z'	43 16	26				2	
		eSS	E'	43 40	26		6			
		eSSS	E'	47 34	20		2			
		eSSS	Z'	47 44	20				3	
		eLQ	N'	54 23	40					
		eG	N'	55 05	40	4				
		eLR	Z'	07 00 29	30					
		LR max.	E'Z'	01.2	27			5	8	
		M	E'Z'	05 16	19			4	7	
		M	N'	08 06	18	3				
W ₂ M	E'Z'	08 22	23			2	2			
									Microseisms present USCGS: 17.3N, 100.0W H 06 07 48.6 h 57 km. Mag. 6.0 6 Berkeley 6 $\frac{1}{2}$ Pasadena 6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisades	

RIVERVIEW COLLEGE OBSERVATORY

No.	Date	Phase & Component	Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
					AN	AE	AZ		
1138	1965 Dec. 9	iP Z	13 18 30.9	2.0			+1.33	3460	Compression h 0.09 USCGS: 18.0S, 178.2W H 13 12 55.5 h 650 km. Mag. 5.6 6 Berkeley
		iP Z'Z''	18 31	5			+4	3121	
		iS N'E'N''E''	22 57	10	-5	+5			
		i N'N''	26 14	15	+5				
		e Z'	26 17	22			2		
		i E'E''	26 21	12		+2			
		iScS N'N''	27 52	8	+2				
1139	10	iP Z	21 58 50.9	2.0			+1.06	2970	Compression USCGS: 11.4S, 166.2E H 21 53 17.4 h 55 km. Mag. 5.8
		iP Z'Z''	58 51	7			+2	2697	
		iP Z	52 04.3	1.0			+0.42		
		e N'E'	52 06	9	2	1			
		i Z'Z''	52 08	8			+4		
		eS N'	22 03 21	10					
		e Z'	03 23	27					
		f N'	03 35	10	+5				
		f E'	03 36	12		+5			
		f Z'	03 40	12			+5		
		eLQ N'	04 24	23	5				
		e Z'	04 49	20					
		eLR Z'	05 43	25					
		LR max. Z'	06 23	27			14		
LR max. N'E'	06 28	25	9	7					
1140	11	e Z	22 45 22						Masked by microseisms USCGS: 33.1S, 178.8W H 22 39 50* h 33 km Mag. 5.1
		e Z'	45 28						
		e Z'	49 56	23					
		e N'	50 08						
		eLR Z'	51 42	28					
		M N'E'Z'	53.3	20	2	3	6		
1141	12	e Z	07 27 06						Masked by microseisms USCGS: 27.9S, 177.9W H 07 20 53.7 h 10 km. Mag. 4.9
		e Z'	31 17	18					
		e(S) N'	31 25	9	1				
		e E'	31 36	14					
		e N'	32 36	13					
		eL E'	33 08	36					
		eLR Z'	33 45	25					
		M E'Z'	35 29	19		1	2		
		M N'	36 29	12	4				
1142	12	ePPP Z'	16 47 47	6					USCGS: 23.3S, 175.5W H 16 40 14.3 h 32 km. Mag. 5.0
		e E'	52 50	8					
		eSSS N'	53 38	12					
		eL Z'	55 16	23					
		M N'	58 00	13	4				
		M E'Z'	58 10	17		3	4		
1144	13	e Z	03 51 07.5						Masked by microseisms USCGS: 5.7S, 133.8E H 03 44 49.0 h 33 km. Mag. 5.2
		e Z'	57 02	20					
		e E'	57 07	20					
		M E'	04 02 50	13			5		
		M N'E'Z'	05 21	15	6	4	6		
1146	13	eP Z'	11 04 12					8730	Microseisms present USCGS: 44.7N, 150.1E H 10 52 08.5 h 35 km. Mag. 5.7 6 Palisades
		iPcP Z	04 23.3	1.3			+0.21	7896	
		eS N'E'	14 05	15	1	1½			
		e Z'	14 08	17					
		ePPS Z'	15 12	12					
		eSS N'	19 07	18					
		eLQ E'	24 58	(35)					
		eL N'	31 26	24					
		M E'	36 07	20		1			
		M Z'	38 13	20			3		
M N'	38 58	20	2						
1147	13	eP Z'	14 58 15					8690	Microseisms present USCGS: 44.7N, 150.2E H 14 46 10.2 h 33 km. Mag. 5.4
		eS N'	15 08 06	14	½			7892	
		e E'Z'	08 08	14		½			
		eLQ E'	19 02	(34)					
		M N'	26 28	21	1				
		M Z'	32 15	18			1		

No.	Date	Phase & Component		Time (G.M.T.)		Per.	Amplitude			Δ	Remarks	
							AN	AE	AZ			
				h	m	s	s	μ	μ	μ	km.	
1148	1965 Dec. 13	iP	Z	15	21	13.0	1.0			+0.05		Compression. Microseisms present. USCGS: 56.1S, 27.6W, H 15 08 27* h 157 km. Mag. 5.2
1149	13	iP	Z	16	55	05.6	1.0			-0.06		Dilatation. Microseisms present. USCGS: 14.1S, 170.2E, H 16 50 16.8 h 638 km. Mag. 5.0
1155	15	iP	Z	08	30	04.6	1.0			+0.10		Compression. Microseisms present USCGS: 0.0N, 123.7E, H 08 22 21.9 h 162 km. Mag 5.9
		o(S)	E'	36	19		6					
		e	Z'	40	11		18					
1156	15	epP	Z'	12	18	41						Masked by microseisms.
		oS	N'	25	40		13					
		e	Z'	25	45		25			3		USCGS: 57.0S, 141.5W H 12 09 36.4 H 33 km.
		esS	N'	25	55		16	4				
		o	E'	26	00		21		3			
		M	N'Z'	33.5			30	9		14		
		M	E'	33	43		22		6			
1158	15	oPPP	Z'	23	28	41						Masked by microseisms.
		e	N'	34	28		13	2				
		oPS	Z'	36	18		13			1		USCGS: 7.5N, 82.2W, H 23 05 20.7 h 33 km. Mag. 6.0
		e	N'E'	36	20		13	1 $\frac{1}{2}$	2			
		e	Z'	38	02		12			1		
		oSS	N'	43	15		30	4				
		e	E'	43	30		30		5			
		oSSS	Z'	47	21		30			3		6 $\frac{1}{2}$ -6 $\frac{1}{2}$ Palisades 6 $\frac{3}{4}$ Pasadona
		M	N'E'Z'	24	06	40	22	4	6	12		
1159	16	o(S)	E'	10	23	15	11		1			P obscured by microseisms.
		e	N'	26	19		13					
		oLR	N'Z'	28	36		30					USCGS: 47.4S, 99.7E H 10 09 23.3 h 33 km. Mag. 5.6
		M	E'Z'	30	40		20		3	5		
		M	N'	30	58		18	3				
1160	16	o(P)	E'	22	22	05						Masked by microseisms
		e	Z'	22	53		10					
		iS	N'	26	05		9	+3				USCGS: 23.0S, 171.8E H 22 17 19.8 h 24 km. Mag. 4.6
		i	E'	26	07		9		-3			
		e	N'	26	14		26					
		i	Z'	26	17		9			+2		
		oL	E'Z'	27	05		28					
		M	E'Z'	29	12		17		2	3		
		M	N'	29	35		13	4				
1161	16	iP	Z	23	12	18.0	1.0			+0.38		Compression
		i	Z'Z''	12	18 $\frac{1}{2}$		6			-3		
		oPP	Z'	13	47		6			2		USCGS: 17.5S, 179.1W H 23 06 42.4 h 573 km. Mag. 5.5
		iS	E'	16	47		8		-3			
		o(SS)	Z'	19	35		18			2		
		i(ScS)	N''	21	51		6*	+3*				
1162	19	oP	Z'	22	16	35	6			1		Microseisms present
		oS	E'	24	49		10		2			
		oS	N'	24	50		10	2				USCGS: 32.2S, 78.8E H 22 06 32.7 h 33 km. Mag. 5.8
		oPS	E'	25	08		13					
		oLQ	N'	31	24		30	5				
		M	E'Z'	37	37		18		3	4		
		M	N'	38	10		11	3				
1165	21	iP	Z	10	43	30.6	0.7			+0.04		Compression
		o	N'	49	23		16	1				USCGS: 30.0S, 179.3W, H 10 38 23.7 h 288 km. Mag. 5.4
1166	21	iP	Z	17	56	00.8	0.9			+0.05		Compression
		e	N'	18	03	29	8					USCGS: 19.1S, 177.6W, H 17 50 10.2 h 366 km. Mag. 5.1
1168	22	oS	E'	00	52	11						Confused by long-period wanderings
		e	N'	52	13							USCGS: 52.4N, 160.5E H 00 28 46.2 h 5 km. Mag. 5.1
		oL	Z'	01	09	45						
		M	N'	14	20		21	1				
		M	Z'	14	39		20			1		5 Berkeley

No.	Date	Phase & Component		Time (G.M.T.)	Per.	Amplitude			Δ	Remarks
						AN	AE	AZ		
				h m s	s	μ	μ	μ	km.	
1184	1965 Dec.28	e(S)	N'	12 25 03	12					Masked by microseisms.
		e	E'	25 12	12					
		e	E'	28 20						USCGS: 3.2N, 127.0E, H 12 10 31.4 h 53 km. Mag. 5.3
		M	N'E'Z'	40.1	16	2	4	3		
1185	28	eS	E'	20 51 06	18		2			Masked by microseisms.
		e	N'Z'	51 07	18	2		1		
		eL	E'	59 23	40					USCGS: 27.8N, 141.8E, H 20 32 24.7 h 36 km.
		eLR	Z'	21 01 52	38					Mag. 5.9
		M	E'	01 57	26		3			6 Pasadona
		M	N'Z'	05.9	24	3		4		
1186	29	(P)	Z	04 22 36 ¹						Masked by microseisms.
		e	N'	28 48	16	2				
		e	Z'	29 12	18			1		USCGS: 3.3S, 143.1E
		e	E'	29 53	20					H 04 16 28.9
		eLQ	E'	30 34	40		6			h 23 km.
		eLR	E'	32 02	28		7			Mag. 5.4
		eL	Z'	32 42	32			2		
		eL	N'	32 51	30	3				
		M	N'E'	35.3	20	21	23			
		M	Z'	36 34	15			12		
1188	29	e(P)	Z	18 45 29						Masked by microseisms.
		e	N'	50 16	17					USCGS: 6.6S, 155.0E, H 18 39 47.2 h 68 km. Mag. 5.4
		eL	N'Z'	53.3	25					
1190	30	e(SKS)	N'	02 30 25	10					USCGS: 54.1N, 164.3W
		e	N'	31 17	10	1				H 02 06 31.1
		e	N'	38 02	21	1				h 28 km.
		eLR	Z'	50 16	38					Mag. 5.6
		M	N'E'Z'	56	23	1	1	1		5 ³ Berkeley, Palisades
1192	30	P	Z	16 50 55.5						Masked by microseisms
		e	N'	56 11						USCGS: 16.3S, 168.0E, H 16 46 02.7 h 191 km. Mag. 4.9
1193	30	iP	Z	17 10 26.8	0.8					Compression
		i	E	10 27.2	0.8		+0.05	+0.11		USCGS: 15.3S, 167.0E, H 17 05 27* h 112 km. Mag. 4.9
1196	31	e(S)	N'	21 12 58	19					Masked by microseisms
		e(SS)	E'	15 57	14					USCGS: 2.4N, 128.8E
		eL	Z'	22 10	25					H 20 58 53.4
		M	N'E'Z'	26 06	16	6	7	10		h 96 km. Mag. 5.6

L. HESSON, S. J.
Acting Director.

P. F. RHEINBERGER.